Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

*DDA **01** 00:16:23, 34°.61N×27°.47E, h27km, MD3.5*
*IDC **01** 00:16:28.5±1.7, 34°.88N×27°.83E, h0km, mb3.2/2, mb1 3.2/3, mb1mx3.0/24, mbtmp3.2/3, ML2.6/1, Error ellipse: s-maj=170.8km s-min=23.9km az=140.0*
*ISCJB **01** 00:16:29.9±0.9, 35°.14N±0°.04×27°.76E±0°.03, h3km±6km, mb3.2/2, Error ellipse: s-maj=7.1km s-min=3.2km az=162.2*
*ISK **01** 00:16:29.8, 34°.90N×27°.78E, h53km, MD3.7*
*CSEM **01** 00:16:30.7±0.2, 35°.10N×27°.79E, h5km, ML2.8/1, Error ellipse: s-maj=5.9km s-min=2.6km az=161.0*
*THE **01** 00:16:34.8, 35°.35N×27°.54E, h0km, ML2.8/1, Error ellipse: s-maj=1.7km s-min=0.8km az=149.0*
*ATH **01** 00:16:34.7, 35°.36N×27°.55E, h30km, MD3.7/13*
ISC 01 00:16:30.6±1.3**, 35°.14N**±0°.04×**27°.75E**±0°.03**, h9**km±9km**, n91,** σ**1s.44**/120**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.63	310	P	Pg	00 16 42.6	-0.2
KARP				S	Sg	00 16 49.1	-1.9
KARP	Karpathos	0.63	310	*e*PB	Pg	00 16 42.9	+0.1
KARP				*e*SB	Sg	00 16 49.6	-1.4
KARP	Karpathos	0.63	310	P	Pg	00 16 42.6	-0.2
ARG	Arkhangelos	1.11	16	P	Pn	00 16 53.9	+1.6
ARG				S	Sn	00 17 09.1	+1.4
ARG	Arkhangelos	1.11	16	*e*PN	Pn	00 16 53.6	+1.3
ARG				*e*SN	Sg	00 17 07.2	+0.8
ARG	Arkhangelos	1.11	16	P	Pn	00 16 53.9	+1.6
ARG				S	Sn	00 17 09.1	+1.4
ZKR	Zakros	1.26	269	P	Pg	00 16 55.2	+0.5
ZKR				S	Sg	00 17 12.4	+1.3
ZKR	Zakros	1.26	269	*e*PN	Pg	00 16 55.8	+1.1
ZKR				*e*SN	Sn	00 17 11.2	-0.2
ZKR	Zakros	1.26	269	P	Pg	00 16 55.2	+0.5
ZKR				S	Sg	00 17 12.4	+1.3
NPS	Neapolis	1.76	274	P	Pb	00 17 02.8	-0.2
NPS	Neapolis	1.76	274	*e*PN	Pb	00 17 02.8	-0.2
NPS				*e*SN	Sn	00 17 22.7	-1.0
NPS	Neapolis	1.76	274	P	Pb	00 17 02.8	-0.2
FETY	Fethiye	1.84	36	*e*PN	Pn	00 17 02.6	+0.3
FETY				*e*SN	Sb	00 17 27.2	-0.2
FETY	Fethiye	1.84	36	*e*Pn	Pn	00 17 02.6	+0.3
FETY				*e*Sn	Sb	00 17 27.3	-0.2
TURN	Turunc	1.86	22	*i* P	Pn	00 17 00.4	-2.2
TURN				*i* S	Sn	00 17 26.7	+0.6
TURN	Turunc	1.86	22	*i* P	Pn	00 17 00.4	-2.2
TURN				*i* S	Sn	00 17 26.7	+0.6
AKAS	Kas	1.86	54	*i* P	Pn	00 17 02.9	+0.2
AKAS				*i* S	Sn	00 17 26.7	+0.3
AKAS	Kas	1.86	54	*i* P	Pn	00 17 02.9	+0.2
AKAS				*i* S	Sn	00 17 26.7	+0.3
LAST	Lasithi	1.86	271	P	Pb	00 17 04.0	-0.8
LAST	Lasithi	1.86	271	*e*PB	Pb	00 17 04.1	-0.8
LAST				*e*SN	Sn	00 17 25.6	-0.8
LAST	Lasithi	1.86	271	P	Pb	00 17 04.0	-0.8
BODT	Bodrum	1.95	350	*e*PN	Pb	00 17 05.6	-0.6
BODT				*e*SN	Sb	00 17 30.6	0.0
BODT	Bodrum	1.95	350	*e*Pn	Pb	00 17 05.6	-0.6
BODT				*e*Sn	Sb	00 17 30.6	0.0
YER	Yerkesik	2.03	12	*e*PN	Pn	00 17 06.0	+1.0
YER				*e*SN	Sb	00 17 33.1	0.0
YER	Yerkesik	2.03	12	*e*Pn	Pn	00 17 06.0	+1.0
YER				*e*Sn	Sb	00 17 33.1	0.0
MLSB	Milas	2.15	0	*e*PN	Pn	00 17 08.0	+1.4
MLSB	Milas	2.15	0	*e*Pn	Pn	00 17 08.0	+1.4
THR1	Thera Island	2.23	304	P	Pn	00 17 08.5	+0.8
THR1	Thera Island	2.23	304	P	Pn	00 17 08.5	+0.8
SANT	Santorini	2.23	304	*e*PB	Pn	00 17 08.3	+0.6
SANT				*e*SN	Sn	00 17 32.5	-2.9
THR3	Thira Island,	2.29	304	P	Pn	00 17 08.7	+0.2
THR3	Thira Island,	2.29	304	P	Pn	00 17 08.7	+0.2
IDI	Anoyia	2.35	274	P	Pn	00 17 11.0	+1.7
IDI	Anoyia	2.35	274	*e*PN	Pn	00 17 11.1	+1.7
IDI	Anoyia	2.35	274	P	Pn	00 17 11.0	+1.7
ELL	Elmali	2.37	47	*e*PN	Pn	00 17 10.0	+0.3
ELL	Elmali	2.37	47	*e*Pn	Pn	00 17 10.0	+0.3
SIVA	Sivas	2.42	268	P	Pn	00 17 12.2	+2.0
SIVA	Sivas	2.42	268	*e*PN	Pn	00 17 12.0	+1.8
SIVA	Sivas	2.42	268	P	Pn	00 17 12.2	+2.0
GLHS	Glhisar (BURDU	2.46	35	*e*PN	Pn	00 17 11.5	+0.6
GLHS	Glhisar (BURDU	2.46	35	*e*Pn	Pn	00 17 11.5	+0.6
APE	Apeiranthos	2.63	318	*e*PN	Pn	00 17 14.8	+1.5
APE	Apeiranthos	2.63	318	P	Pn	00 17 13.2	-0.1
APE	Apeiranthos	2.63	318	*e*PN	Pn	00 17 13.5	+0.2
APE				*e*SN	Sn	00 17 42.0	-3.3
APE	Apeiranthos	2.63	318	P	Pn	00 17 13.2	-0.1
APE	Apeiranthos	2.63	318	*e*Pn	Pn	00 17 14.8	+1.5
DENT	Denizli	2.80	21	*e*PN	Pn	00 17 16.6	+1.0
DENT	Denizli	2.80	21	*e*Pn	Pn	00 17 16.6	+1.0
KORT	Korkueli	2.80	48	*i* P	Pn	00 17 16.5	+0.8
KORT				*i* S	Sb	00 17 54.7	-0.6
KORT	Korkueli	2.80	48	*i* P	Pn	00 17 16.5	+0.8
KORT				*i* S	Sb	00 17 54.7	-0.6
VAM	Vamos	2.92	276	P	Pn	00 17 18.7	+1.5
VAM	Vamos	2.92	276	*e*PN	Pn	00 17 19.0	+1.8
VAM	Vamos	2.92	276	P	Pn	00 17 18.7	+1.5
ANTB	Antalya	2.93	52	*e*PN	Pn	00 17 17.7	+0.4
ANTB	Antalya	2.93	52	*e*Pn	Pn	00 17 17.7	+0.4
GVD	Gavdhos	3.02	265	P	Pn	00 17 20.6	+2.0
GVD	Gavdhos	3.02	265	*e*PN	Pn	00 17 20.5	+2.0
GVD	Gavdhos	3.02	265	P	Pn	00 17 20.6	+2.0
KULA	Kula-Manisa	3.44	12	*e*PN	Pn	00 17 25.4	+1.0
KULA	Kula-Manisa	3.44	12	*e*Pn	Pn	00 17 25.4	+1.0
KHL	Karahalli	3.48	24	*e*PN	Pn	00 17 25.8	+0.9
KHL	Karahalli	3.48	24	*e*Pn	Pn	00 17 25.8	+0.9
ISP	Isparta	3.48	39	*e*PN	Pn	00 17 26.2	+1.2
ISP	Isparta	3.48	39	*e*Pn	Pn	00 17 26.2	+1.2
ANKY	Antikythira Is	3.70	283	*e*PN	Pn	00 17 29.6	+1.7
GAZI	Gazipasa	3.87	72	*i* P	Pn	00 17 28.0	-2.3
GAZI				*i* S	Sn	00 18 12.1	-3.7
GAZI	Gazipasa	3.87	72	*i* P	Pn	00 17 28.0	-2.3
GAZI				*i* S	Sn	00 18 12.1	-3.7
KYTH	Kithira	4.00	288	*e*PN	Pn	00 17 33.0	+0.9
SHUT	Suhut-Afyon	4.08	33	*e*PN	Pn	00 17 34.3	+1.1
SHUT	Suhut-Afyon	4.08	33	*e*Pn	Pn	00 17 34.3	+1.1
VLI	Veliai	4.21	293	P	Pn	00 17 36.3	+1.4
VLI	Veliai	4.21	293	*e*PN	Pn	00 17 35.6	+0.7
VLI	Veliai	4.21	293	P	Pn	00 17 36.3	+1.4
DID	Didima	4.34	304	*e*PN	Pn	00 17 38.0	+1.3
ERMK	Ermenek	4.45	69	*i* P	Pn	00 17 39.0	+0.7
ERMK				*i* S	Sn	00 18 34.6	+4.3
ERMK	Ermenek	4.45	69	*i* P	Pn	00 17 39.0	+0.7
ERMK				*i* S	Sn	00 18 34.7	+4.3
TVSB	Tavsanli	4.51	17	*e*PN	Pn	00 17 40.8	+1.7
TVSB	Tavsanli	4.51	17	*e*Pn	Pn	00 17 40.8	+1.7
CSS	Prodhromos	4.58	91	*e*PN	Pn	00 17 39.3	-0.7
CSS	Prodhromos	4.58	91	*e*Pn	Pn	00 17 39.3	-0.7
KONT	Konya--Tatoy	4.64	52	*e*PN	Pn	00 17 42.2	+1.3
KONT	Konya--Tatoy	4.64	52	*e*Pn	Pn	00 17 42.2	+1.3
DYR	Agios Nikonas	4.68	292	*e*PN	Pn	00 17 42.6	+1.2
LADK	Ladik-KONYA	4.80	49	*e*PN	Pn	00 17 44.4	+1.3
LADK	Ladik-KONYA	4.80	49	*e*Pn	Pn	00 17 44.4	+1.3
KIZT	Kizilcal	4.98	40	*e*PN	Pn	00 17 47.1	+1.6
KIZT	Kizilcal	4.98	40	*e*Pn	Pn	00 17 47.2	+1.6
BRTR	Keskin Array B	6.54	44	Pn	Pn	00 18 08.4	+1.4
	0.1nm,0.3s,baz=220,slow=14,SNR=9.3						
BRTR				Sn	Sn	00 19 24.7	+2.8
	0.1nm,0.3s,baz=208,slow=24,SNR=3.7						
TORD	Torodi Ar. Bea	32.15	234	P	P	00 22 56.9	-1.7
	0.5nm,0.9s,baz=41,slow=8.6,SNR=5.7						
MKAR	Makanchi Array	42.01	57	P	P	00 24 22.3	+0.2
	0.2nm,0.5s,baz=287,slow=6.3,SNR=2.6						

KRSC 01 00:19:09.2±1.5**, 48°.22N**×**157°.25E, h20**km±20km**, ML4.2, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.57	344	P	Pn	00 19 50.4	+0.7
SKR				*e*S	Sn	00 20 20.3	-0.1
MIPR	Malaya Ipel'ka	4.07	356	P	Pn	00 20 12.6	+2.3
MIPR				S	Sn	00 20 59.2	+1.8
ASAK	Asacha	4.19	5	*e*P	Pn	00 20 14.3	+2.3
ASAK				S	Sn	00 21 02.3	+1.9
RUS	Russkaya	4.29	10	*e*P	Pn	00 20 15.1	+1.8
RUS				*e*S	Sn	00 21 03.9	+1.1
MTVR	Mutnovka	4.31	8	*e*P	Pn	00 20 15.9	+2.1
MTVR				*e*S	Sn	00 21 05.5	+2.0
UGLR	Uglovaya	5.09	11	*e*P	Pn	00 20 27.0	+2.5
NLC	Nalytchevo	5.13	14	S	Sn	00 21 25.2	+1.8
AVH	Avacha	5.14	10	*e*P	Pn	00 20 28.3	+3.2
SMAR	Somma	5.14	10	*e*P	Pn	00 20 28.1	+2.8
SDLR	Sedlovina	5.17	11	*e*P	Pn	00 20 27.5	+2.0
KRER	Koryakskii	5.18	10	P	Pn	00 20 28.3	+2.5
SPN	Mys Shipunski	5.19	19	*e*P	Pn	00 20 28.6	+2.9
SPN				*e*S	Sn	00 21 27.8	+2.9
GNL	Ganaly	5.50	4	*e*P	Pn	00 20 33.4	+3.3
MKZ	Mys Kozlova	6.94	22	*e*P	Pn	00 20 51.7	+2.2

CASC 01 00:32:04.7±2.5**, 9°.91N**×**83°.88W, h5**km±7km**, MD3.7, 1D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJS	Escuela Geolog	0.18	280	*e*P	Pg	00 32 08.2	-0.3
BUS	Buena Vista	0.37	162	*e*P	Pg	00 32 12.6	+0.1
QCR	Quepos	0.56	211	*e*P	Pb	00 32 16.3	-0.7
QCR				*e*S	Sb	00 32 25.9	+0.7
CGA2	Cerro Gallo 2	0.59	280⇓	*e*P	Pg	00 32 15.6	-0.6
CGA2				*e*S	Sb	00 32 25.6	-0.8
JCR	Jicaral	1.22	267	*e*P	Pg	00 32 26.6	-1.6
PTEN	Parque Tenorio	1.35	306	*i* S	Sb	00 32 48.4	0.0
ACR	Cerro Adams	1.43	151	*e*P	Pn	00 32 30.5	-0.8
ACR				*e*S	Sn	00 32 50.6	0.0
CUI	Cuipilapa	1.47	301	*i* P	Pn	00 32 30.6	-1.3
CUI				*i* S	Sg	00 32 52.6	+0.5
COLC	Colonia	1.51	300	*i* P	Pn	00 32 31.1	-1.3
COLC				*i* S	Sg	00 32 53.6	+0.3
LIM1	Limonal	1.56	300	*i* P	Pn	00 32 32.4	-0.8
LIM1				*i* S	Sb	00 32 54.2	-0.2
TBS2		1.64	133	*e*P	Pn	00 32 34.9	+0.5
TBS2				*e*S	Sn	00 32 55.8	-0.1
GPS1	Guardaparques	1.69	301	*i* P	Pn	00 32 34.0	-0.9
GPS3	Bodega del ICE	1.69	300	*i* P	Pn	00 32 34.2	-0.7
GPS3				*i* S	Sb	00 32 57.7	-0.2
BRU	Baru	1.70	130	*e*P	Pn	00 32 36.2	+0.7
BRU				*e*S	Sg	00 32 59.7	-0.6
LAPC	Finca la Perla	1.75	299	*i* P	Pn	00 32 35.1	-0.7
LAPC				*i* S	Sb	00 32 59.5	-0.3
GBS3	Finca Las Imˆ¡	1.78	299	*i* P	Pn	00 32 35.7	-0.4
NY14	Universidad de	1.79	294	*i* P	Pn	00 32 35.5	-0.8
PTP	Ponta Puerca	19.54	63	*e*P	x	00 32 43.9	
PTP				*e*S	x	00 33 07.0	

IDC 01 00:33:17.1±5.3**, 6°.50S**×**129°.92E, h110**km±46km**, mb3.7**/4**, mb1 3.9**/7**, mb1mx3.6**/21**, mbtmp3.8**/7**, Error ellipse: s-maj=55.5km s-min=24.4km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.27	200	P	Pn	00 36 08.4	+0.4
	1.0nm,0.3s,baz=31,slow=10,SNR=30						
FITZ				S	Sn	00 38 15.8	-7.3
	3.6nm,0.3s,baz=76,slow=13,SNR=7.7						
WRA	Warramunga Arr	14.04	163	P	Pn	00 36 29.7	-1.5
	3.1nm,0.3s,baz=340,slow=14,SNR=65						
WRA				S	Sn	00 38 56.7	-9.2
	4.4nm,0.3s,baz=324,slow=24,SNR=11						
ASAR	Alice Springs	17.49	168	P	Pn	00 37 14.9	+0.7
	1.4nm,0.3s,baz=352,slow=15,SNR=44						
ASAR				S	Sn	00 40 21.7	-7.7
	0.6nm,0.3s,baz=350,slow=31,SNR=5.5						
NWAO	Narrogin (SRO)	28.82	203	P	P	00 39 06.0	+1.0
	2.9nm,0.3s,baz=40,slow=8.3,SNR=10						
MKAR	Makanchi Array	67.77	327	P	P	00 44 03.1	+0.1
	0.7nm,0.6s,baz=128,slow=7.4,SNR=11						
VNDA	Vanda	72.95	173	P	P	00 44 33.7	-0.4
	0.3nm,0.5s,baz=326,slow=3.2,SNR=4.6						
MAW	Mawson	75.39	201	P	P	00 44 47.9	-0.4
	1.3nm,0.7s,baz=72,slow=10,SNR=7.2						

IDC 01 00:52:14.8±15.0**, 20°.94S**×**178°.29W, h465**km±84km**, mb3.3**/4**, mb1 3.5**/6**, mb1mx3.1**/21**, mbtmp3.4**/6**, Error ellipse: s-maj=227.0km s-min=39.9km az=49.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.25	263	P	P	00 55 18.8	+0.9
	1.2nm,0.3s,baz=82,slow=19,SNR=9.1						
URZ	Urewera	17.72	192	P	P	00 55 53.7	-0.2
	2.0nm,0.3s,baz=61,slow=9.7,SNR=12						
CTA	Charters Tower	33.17	265	P	P	00 58 11.1	-0.7
	2.3nm,0.4s,baz=85,slow=13,SNR=4.3						
STKA	Stephens Creek	37.35	245	P	P	00 58 45.2	-1.4
	1.1nm,0.4s,baz=77,slow=9.9,SNR=3.4						
ASAR	Alice Springs	44.15	257	P	P	00 59 42.0	+0.8
	4.0nm,0.6s,baz=96,slow=8.3,SNR=62						
WRA	Warramunga Arr	44.27	263	P	P	00 59 42.0	-0.2
	0.6nm,0.3s,baz=96,slow=7.4,SNR=27						

*ISCJB **01** 00:53:31.2±0.8, 17°.15S±0°.06×71°.28W±0°.08, h83km, mb3.7/3, Error ellipse: s-maj=11.2km s-min=7.4km az=150.2*
*NEIC **01** 00:53:31.7±1.1, 16°.95S×71°.17W, h96km±22km, MG3.9(ARE), Error ellipse: s-maj=17.2km s-min=13.7km az=223.0*
NEIC Felt [II] at Torata.
*IDC **01** 00:53:33.2±6.1, 17°.92S×70°.81W, h45km±46km, mb3.5/2, mb1 3.8/4, mb1mx3.4/19, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=58.8km s-min=44.4km az=167.0*
ISC 01 00:53:31.3±1.1**, 17°.07S**±0°.07×**71°.23W**±0°.08**, h83**km**, n12,** σ**1s.54**/11**, mb3.7**/3**, 1D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	0.66	337⇓	*i*P	Pn	00 53 47.8	+0.6
ARE				*i* S	Sn	00 54 00.0	+1.1
LPAZ	La Paz	3.07	76	*e*Pn	Pn	00 54 18.6	+0.3
LPAZ				*e*Sn	Sn	00 54 55.8	+1.5
LPAZ	La Paz	3.07	76	P	Pn	00 54 19.1	+0.9
	3.6nm,0.3s,baz=260,slow=9.6,SNR=55						
LPAZ				S	Sn	00 54 55.5	+1.3
	1.9nm,0.3s,baz=344,slow=20,SNR=3.5						
LVC	Limon Verde	5.93	159	*e*Pn	Pn	00 54 58.4	+1.5
	16nm,0.4s						
LVC				*e*Sn	Sn	00 56 03.4	-0.1
NNA	Nana	7.42	312	Pn	Pn	00 55 17.3	+0.2
SIV	San Ignacio	9.80	85	P	Pn	00 55 47.1	-2.3
	0.5nm,0.3s,baz=282,slow=14,SNR=10						
SAML	Samuel	11.25	45	*e*Pn	Pn	00 56 07.0	-2.2
	1.6nm,0.6s						
DBIC	Dimbokro	69.69	76	P	P	01 04 41.7	+9.0
	2.6nm,0.8s,baz=210,slow=11,SNR=4.4						
TORD	Torodi Ar. Bea	78.01	72	P	P	01 05 26.1	+4.8
	0.8nm,0.8s,baz=254,slow=4.9,SNR=15						
YKA	Yellowknife Ar	86.31	341	P	P	01 06 13.6	+10
	0.4nm,0.7s,baz=129,slow=4.5,SNR=7.4						
ZALV	Zalesovo Beam	138.76	21	PKP	PKPdf	01 12 55.0	+7.3
	0.3nm,0.3s,baz=264,slow=1.4,SNR=3.2						
SONM	Songino Array	149.26	3	PKPbc	PKPab	01 13 20.6	+5.3
	0.8nm,0.6s,baz=326,slow=1.9,SNR=8.6						

*ISCJB **01** 01:07:58.5±0.8, 38°.82N±0°.02×26°.09E±0°.04, h15km±5km, Error ellipse: s-maj=5.9km s-min=3.7km az=155.7*
*DDA **01** 01:07:58.4, 38°.88N×26°.23E, h7km, MD3.1*
*ATH **01** 01:07:58.5, 38°.91N×26°.00E, h21km, MD3.1/5*
*ISK **01** 01:07:59.3, 38°.87N×26°.21E, h3km, MD2.9*
*CSEM **01** 01:07:59.5±0.3, 38°.86N×26°.19E, h2km, ML1.7/1, Error ellipse: s-maj=6.7km s-min=4.1km az=67.0*
*THE **01** 01:07:59.5, 38°.87N×26°.20E, h9km±2km, ML1.7/1, Error ellipse: s-maj=2.4km s-min=0.8km az=65.0*
ISC 01 01:07:58.6±1.0**, 38°.87N**±0°.02×**26°.15E**±0°.03**, h12**km±8km**, n43,** σ**0s.79**/65**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.39	14	P	Pg	01 08 06.7	+0.3
PRK				S	Sb	01 08 13.0	-0.4
PRK	Paraskevi	0.39	14	*e*PB	Pg	01 08 06.7	+0.3
PRK				*e*SB	Sg	01 08 12.8	+1.2
PRK	Paraskevi	0.39	14	P	Pg	01 08 06.7	+0.3
PRK				S	Sb	01 08 13.0	-0.4
SIGR	SIGRI	0.41	327	P	Pb	01 08 08.4	+0.6
SIGR				S	Sb	01 08 14.4	+0.4
SIGR	SIGRI	0.41	327	P	Pb	01 08 08.4	+0.6
SIGR				S	Sb	01 08 14.4	+0.4
CHOS	Chios island	0.49	189	P	Pb	01 08 09.1	0.0
CHOS	Chios island	0.49	189	*e*PN	Pb	01 08 09.1	0.0
CHOS				*e*SN	Sb	01 08 16.9	+0.6
CHOS	Chios island	0.49	189	P	Pb	01 08 09.1	0.0
AYVA	Ayvalik	0.61	44	*i* P	Pg	01 08 09.3	-1.2
AYVA				*i* S	Sg	01 08 17.6	-0.9
AYVA	Ayvalik	0.61	44	*i* P	Pg	01 08 09.3	-1.2
AYVA				*i* S	Sg	01 08 17.6	-0.9
URLA	Izmir	0.62	145	*i* P	Pg	01 08 09.3	-1.3
URLA				*i* S	Sg	01 08 19.7	+0.9
URLA	Izmir	0.62	145	*i* P	Pg	01 08 09.3	-1.3
URLA				*i* S	Sg	01 08 19.7	+0.9
BLCB	Balcova	0.85	124	*e*PG	Pg	01 08 15.6	+0.6
BLCB				*e*SG	Sb	01 08 27.7	+1.0
BLCB	Balcova	0.85	124	*e*Pg	Pg	01 08 15.6	+0.6
BLCB				*e*Sg	Sb	01 08 27.7	+1.0
EZN	Ezine	0.97	8	*e*PG	Pn	01 08 18.4	+0.4
EZN				*e*SG	Sn	01 08 32.3	+0.6
EZN	Ezine	0.97	8	*e*Pg	Pn	01 08 18.4	+0.4
EZN				*e*Sg	Sn	01 08 32.3	+0.6
BOZC	Bozcaada	0.97	356	*i* P	Pb	01 08 17.6	+0.2
BOZC				*i* S	Sn	01 08 31.9	0.0
IZM	Izmir	0.99	118	*e*PG	Pg	01 08 18.4	+0.7
IZM	Izmir	0.99	118	*e*Pg	Pg	01 08 18.4	+0.7
LIA	Limnos Island	1.27	324	P	Pb	01 08 22.6	+0.1
LIA	Limnos Island	1.27	324	*e*PN	Pn	01 08 20.6	-1.6
LIA				*e*SN	Sb	01 08 37.1	-1.7
LIA	Limnos Island	1.27	324	P	Pb	01 08 22.6	+0.1
AKHS	Akhisar	1.30	89	*i* P	Pn	01 08 21.1	-1.5
AKHS				*i* S	Sn	01 08 40.7	+0.7
AKHS	Akhisar	1.30	89	*i* P	Pn	01 08 21.1	-1.5
AKHS				*i* S	Sn	01 08 40.7	+0.7
BALY	Balya	1.44	52	*i* P	Pn	01 08 23.9	-0.6
BALY				*i* S	Sn	01 08 43.8	+0.4
BALY	Balya	1.44	52	*i* P	Pn	01 08 23.9	-0.6
BALY				*i* S	Sn	01 08 43.8	+0.4
GELI	Tayfur-Gelibol	1.55	9	*e*PN	Pg	01 08 28.5	+0.2
GELI	Tayfur-Gelibol	1.55	9	*e*Pn	Pg	01 08 28.5	+0.2
BALB	Balikesir	1.55	60	*e*PN	Pb	01 08 28.3	+1.0
BALB	Balikesir	1.55	60	*e*Pn	Pb	01 08 28.3	+1.0
SMTH	Samothraki Isl	1.67	344	*e*PN	Pn	01 08 27.5	-0.2
SMTH				*e*SN	Sn	01 08 49.0	-0.1
GONE	Gonen-Balikesi	1.68	45	*e*PN	Pb	01 08 29.9	+0.5
GONE	Gonen-Balikesi	1.68	45	*e*Pn	Pb	01 08 29.9	+0.5
KRBG	Karabiga-Canak	1.76	30	*e*PN	Pb	01 08 31.4	+0.5
KRBG	Karabiga-Canak	1.76	30	*e*Pn	Pb	01 08 31.4	+0.5
AOS	Alonnisos	1.79	280	*e*PN	Pn	01 08 28.8	-0.5
ERIK	Erikli-Kesan	1.82	9	*e*PN	Pb	01 08 32.1	+0.2
ERIK	Erikli-Kesan	1.82	9	*e*Pn	Pb	01 08 32.1	+0.2
ALN	Alexandroupoli	2.03	358	*e*PN	Pn	01 08 33.2	+0.6
ALN				*e*SN	Sn	01 08 57.8	-0.1
DST	Dursunbey	2.06	68	*e*PN	Pb	01 08 35.4	-0.5
DST	Dursunbey	2.06	68	*e*Pn	Pb	01 08 35.4	-0.5
KCTX	Karacabey (Bur	2.21	50	*e*PN	Pb	01 08 37.2	-1.2
KCTX	Karacabey (Bur	2.21	50	*e*Pn	Pb	01 08 37.2	-1.2

*ISCJB **01** 01:40:44.1±0.7, 26°.38N±0°.08×89°.67E±0°.08, h10km, mb3.7/10, MS2.4/1, Error ellipse: s-maj=12.0km s-min=9.3km az=150.7*
*IDC **01** 01:40:48.5±1.0, 26°.42N×89°.77E, h26km±5km, mb3.5/10, mb1 3.7/10, mb1mx3.5/27, mbtmp3.5/10, MS2.6/1, Ms1 2.6/1, ms1mx1.8/40, Error ellipse: s-maj=35.0km s-min=18.0km az=58.0*
ISC 01 01:40:46.7±0.6**, 26°.41N**±0°.09×**89°.80E**±0°.05**, h10**km**, n20,** σ**2s.15**/22**, mb3.6**/10**, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	Shillong	2.05	114	*e*PKP9	Pn	01 41 22.6	+1.1
SHL				*e*S	Sn	01 41 46.7	-0.5
SHL				AML	AML	01 41 57.8	
	comp=E,592nm,0.1s						
SHL				AML	AML	01 41 58.0	
	comp=N,915nm,0.2s						
IMP	Imphal	4.07	113	*e*PKP	Pg	01 42 03.0	-1.6
IMP				*e*S	Sg	01 42 57.0	-0.4
BOK	Bokaro	4.40	235	*e*PKP	Pn	01 41 55.9	+2.3
BOK				*e*S	Sn	01 42 41.5	-3.4
BOK				AML	AML	01 43 07.5	
	comp=N,147nm,0.3s						
BOK				AML	AML	01 43 07.7	
	comp=E,118nm,0.3s						
JBP	Jabalpur	9.49	252	*e*x	Sn	01 44 50.8	+0.6
JBP				*e*x	x	01 45 50.8	
BHPL	Bhopal	11.67	257	*e*S	Sn	01 45 27.9	-16
SMLA	Simla	12.04	296	*e*PKP	Pn	01 43 37.1	-1.2
SMLA				*e*S	Sn	01 45 36.7	-16
SMLA				AML	AML	01 45 52.4	
	comp=N,17nm,0.3s						
SMLA				AML	AML	01 45 52.8	
	comp=E,13nm,0.3s						
DHRM	DHARAMSHALA	13.13	299	*e*S	Sn	01 46 02.1	-18
AAK	Ala-Archa	20.46	326	LR	LR	01 53 17.9	
	comp=E,17nm,19.8s,baz=317,slow=37						
MKAR	Makanchi Array	21.20	346	P	P	01 45 31.5	-0.8
	comp=E,1.2nm,0.6s,baz=161,slow=10,SNR=15						
SONM	Songino Array	25.05	27	P	P	01 46 11.1	-0.1
	comp=E,0.7nm,0.6s,baz=213,slow=9.6,SNR=8.8						
KURBB	Kurchatov Arra	25.67	343	P	P	01 46 15.3	-1.3
	comp=E,0.9nm,0.7s,baz=164,slow=8.7,SNR=11						
KURBB				pP	pP	01 46 24.9	+5.2
	comp=E,0.7nm,0.6s,baz=162,slow=9.4,SNR=7.5						
FINES	FINESS Array B	54.64	328	P	P	01 50 14.6	-0.7
	comp=E,1.1nm,0.6s,baz=97,slow=7.9,SNR=7.0						
ARCES	ARCESS Array B	56.57	338	P	P	01 50 28.9	-0.3
	comp=E,6.2nm,1.0s,baz=101,slow=7.0,SNR=9.0						
GERES	GERESS Array B	61.68	313	P	P	01 51 04.0	-0.9
	comp=E,0.4nm,0.7s,baz=79,slow=6.9,SNR=4.4						
NOA	NORSAR Array B	61.78	327	P	P	01 51 03.8	-1.6
	comp=E,0.4nm,0.6s,baz=107,slow=4.2,SNR=3.4						
WRA	Warramunga Arr	63.17	132	P	P	01 51 15.2	+0.1
	comp=E,0.2nm,0.4s,baz=325,slow=7.0,SNR=7.6						
WRA				pP	pP	01 51 22.2	+3.9
	comp=E,0.9nm,0.6s,baz=324,slow=6.9,SNR=6.4						
ASAR	Alice Springs	65.55	135	pP	pP	01 51 38.1	+4.2
	comp=E,0.8nm,0.6s,baz=315,slow=6.4,SNR=12						
TORD	Torodi Ar. Bea	82.60	281	P	P	01 53 10.3	-0.3
	comp=E,0.2nm,0.6s,baz=66,slow=3.6,SNR=2.8						
YKA	Yellowknife Ar	89.28	11	P	P	01 53 41.6	-1.2
	comp=E,0.3nm,0.7s,baz=334,slow=4.9,SNR=4.3						
TXAR	Lajitas Array	123.09	14	PKP	PKPdf	01 59 43.4	-0.8
	comp=E,0.1nm,0.4s,baz=96,slow=0.9,SNR=3.2						
TXAR				pPKP	pPKPdf	01 59 51.3	+3.7
	comp=E,0.1nm,0.4s,baz=297,slow=0.6,SNR=1.6						

*ATH **01** 01:46:04.8, 41°.29N×22°.71E, h4km, MD3.0/6*
*CSEM **01** 01:46:04.9±0.1, 41°.27N×22°.70E, h2km, ML1.4, Error ellipse: s-maj=2.5km s-min=2.1km az=70.0*
*SKO **01** 01:46:04.4, 41°.29N×22°.70E, h10km, M1.1, ML1.5*
*ISCJB **01** 01:46:04.6±0.5, 41°.28N±0°.02×22°.71E±0°.03, h1km±5km, Error ellipse: s-maj=3.7km s-min=3.4km az=139.8*
*THE **01** 01:46:05.1, 41°.27N×22°.71E, h2km±1km, ML1.7/7, Error ellipse: s-maj=1.8km s-min=0.6km az=230.0*
*BEO **01** 01:46:05.4±1.2, 41°.24N×22°.62E, h3km±2km, ML1.4/5*
ISC 01 01:46:05.0±1.0**, 41°.27N**±0°.02×**22°.70E**±0°.02**, h3**km±9km**, n39,** σ**0s.53**/66**, 2C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.11	297	P	Pg	01 46 06.9	-0.2
VAY				S	Sg	01 46 08.8	+0.2
VAY	Valandovo	0.11	297	*e*Pg	Pg	01 46 06.9	-0.2
VAY				*e*Sg	Sg	01 46 09.1	+0.5
VAY	Valandovo	0.11	297⇑	*i*Pg	Pg	01 46 06.9	-0.2
VAY				*i* Lg	Lg	01 46 08.8	
	comp=E,311nm,0.5s						
VAY				*i* Sg	Sg	01 46 08.8	+0.2
VAY				*i* Lg	Lg	01 46 08.9	
	comp=N,314nm,0.2s						
VAY	Valandovo	0.11	297	*i* Sg	Sg	01 46 01.2	-7.3
VAY	Valandovo	0.11	297⇑	*i*Pg	Sg	01 46 01.3	-7.3
VAY				*i* Lg	Lg	01 46 01.4	
	comp=N,314nm,0.2s						
VAY	Valandovo	0.11	297	P	Pg	01 46 06.9	-0.2
VAY				S	Sg	01 46 08.8	+0.2
KNT	Kendrikon	0.19	126	P	Pg	01 46 08.9	+0.2
KNT				S	Sg	01 46 11.7	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KNT	**Kendrikon**	**0.19**	**126**	P	**Pg**	**01 46 08.9**	**+0.2**
KNT				S	**Sg**	**01 46 11.7**	**+0.5**
GRG	**Griva**	**0.39**	**215**	P	**Pg**	**01 46 12.6**	**+0.2**
GRG				S	**Sg**	**01 46 18.4**	**+0.9**
GRG	**Griva**	**0.39**	**215**	*e*PG	**Pg**	**01 46 12.6**	**+0.2**
GRG				*e*SG	**Sg**	**01 46 17.8**	**+0.3**
GRG	**Griva**	**0.39**	**215**	P	**Pg**	**01 46 12.6**	**+0.2**
GRG				S	**Sg**	**01 46 18.4**	**+0.9**
SOH	**Sokhos**	**0.67**	**132**	P	**Pg**	**01 46 17.4**	**-0.5**
SOH				S	**Sg**	**01 46 27.0**	**+0.4**
SOH	**Sokhos**	**0.67**	**132**	*e*PG	**Pg**	**01 46 17.4**	**-0.5**
SOH				*e*SG	**Sg**	**01 46 26.8**	**+0.2**
SOH	**Sokhos**	**0.67**	**132**	P	**Pg**	**01 46 17.4**	**-0.5**
SOH				S	**Sg**	**01 46 27.0**	**+0.4**
SRS	**Serrai**	**0.69**	**103**	P	**Pg**	**01 46 18.0**	**-0.3**
SRS				S	**Sg**	**01 46 27.8**	**+0.5**
SRS	**Serrai**	**0.69**	**103**	P	**Pg**	**01 46 18.0**	**-0.3**
SRS				S	**Sg**	**01 46 27.8**	**+0.5**
HORT	**Hortiatis**	**0.74**	**155**	P	**Pg**	**01 46 19.0**	**-0.2**
HORT				S	**Sg**	**01 46 29.3**	**+0.5**
HORT	**Hortiatis**	**0.74**	**155**	P	**Pg**	**01 46 19.0**	**-0.2**
HORT				S	**Sg**	**01 46 29.3**	**+0.5**
NVR	**Nevrokopi**	**0.88**	**85**	P	**Pg**	**01 46 21.5**	**-0.5**
NVR				S	**Sg**	**01 46 33.7**	**+0.3**
NVR	**Nevrokopi**	**0.88**	**85**	*e*PB	**Pg**	**01 46 21.4**	**-0.5**
NVR				*e*SG	**Sg**	**01 46 33.2**	**-0.2**
NVR	**Nevrokopi**	**0.88**	**85**	P	**Pg**	**01 46 21.5**	**-0.5**
NVR				S	**Sg**	**01 46 33.7**	**+0.3**
PLG	**Polygyros**	**1.06**	**147**	P	**Pg**	**01 46 24.8**	**-0.6**
PLG				S	**Sg**	**01 46 39.8**	**+0.6**
PLG	**Polygyros**	**1.06**	**147**	*e*PG	**Pg**	**01 46 24.8**	**-0.6**
PLG				*e*SG	**Sg**	**01 46 39.4**	**+0.2**
PLG	**Polygyros**	**1.06**	**147**	P	**Pg**	**01 46 24.8**	**-0.6**
PLG				S	**Sg**	**01 46 39.8**	**+0.6**
FNA	**Florina**	**1.11**	**244**	P	**Pg**	**01 46 26.1**	**-0.2**
FNA	**Florina**	**1.11**	**244**	*e*PG	**Pg**	**01 46 25.8**	**-0.5**
FNA				*e*SB	**Sb**	**01 46 41.9**	**+0.1**
FNA	**Florina**	**1.11**	**244**	P	**Pg**	**01 46 26.1**	**-0.2**
OUR	**Ouranopolis**	**1.35**	**133**	P	**Pn**	**01 46 30.4**	**-0.4**
OUR				S	**Sg**	**01 46 48.4**	**-0.1**
OUR	**Ouranopolis**	**1.35**	**133**	P	**Pn**	**01 46 30.4**	**-0.4**
OUR				S	**Sg**	**01 46 48.4**	**-0.1**
VTS	**Vitosha**	**1.37**	**16**	P	**Pn**	**01 46 31.1**	**-0.1**
VTS	**Vitosha**	**1.37**	**16**	*e*Pg	**Pn**	**01 46 30.8**	**-0.4**
VTS				*e*Sg	**Sn**	**01 46 51.1**	**+1.1**
VTS	**Vitosha**	**1.37**	**16**	*e*Pg	**Pn**	**01 46 30.8**	**-0.4**
VTS	**Vitosha**	**1.37**	**16**	P	**Pn**	**01 46 31.1**	**-0.1**
VTS				*e*Sg	**Sn**	**01 46 51.1**	**+1.1**
BARS	**Barje**	**1.68**	**337**	*e*Pn	**Pb**	**01 46 36.0**	**-0.5**
BARS				*e*Sn	**Sn**	**01 46 57.2**	**0.0**
BARS	**Barje**	**1.68**	**337**	*e*Pn	**Pb**	**01 46 36.0**	**-0.5**
BARS				*e*Sn	**Sn**	**01 46 57.2**	**0.0**
PLD	**Plovdiv**	**1.72**	**60**	*e*Sg	**Sg**	**01 47 01.7**	**+1.5**
PLD	**Plovdiv**	**1.72**	**60**	*e*Sg	**Sg**	**01 47 01.7**	**+1.5**
THL	**Klokotos Trika**	**1.78**	**197**	*e*PB	**Pg**	**01 46 38.8**	**-0.4**
ZAPS	**Zavoj**	**2.00**	**359**	*e*Sn	**Sn**	**01 47 05.9**	**+0.6**

IDC 01 01:54:19.2±2.6**, 4°.59S×101°.75E, h0^{km}, mb3.7**/7**, mb1 3.7**/7**, mb1mx3.6**/24**, mbtmp3.7**/7**, Error ellipse: s-maj=124.6km s-min=17.7km az=54.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**35.21**	**118**	P	P	02 01 14.4	-1.2
	0.4nm,0.6s,baz=310,slow=9.3,SNR=8.0						
ASAR	**Alice Springs**	**36.34**	**125**	P	P	02 01 25.4	+0.1
	0.2nm,0.5s,baz=301,slow=7.9,SNR=3.6						
STKA	**Stephens Creek**	**46.14**	**131**	P	P	02 02 46.3	+0.6
	0.7nm,0.7s,baz=328,slow=15,SNR=2.8						
SONM	**Songino Array**	**52.36**	**4**	P	P	02 03 33.4	+0.2
	0.7nm,0.7s,baz=179,slow=9.5,SNR=6.8						
MKAR	**Makanchi Array**	**53.98**	**344**	P	P	02 03 45.4	+0.4
	0.7nm,0.5s,baz=148,slow=8.2,SNR=13						
ZALV	**Zalesovo Beam**	**60.03**	**349**	P	P	02 04 27.5	-0.2
	1.1nm,0.4s,baz=179,slow=5.9,SNR=7.2						
BVAR	**Borovoye Array**	**63.20**	**339**	P	P	02 04 48.4	-0.8
	0.3nm,0.4s,baz=119,slow=8.1,SNR=2.9						
TXAR	**Lajitas Array**	**145.58**	**42**	PKPbc	PKPdf	02 14 00.1	-0.3
	1.0nm,0.7s,baz=292,slow=1.1,SNR=15						

*DDA **01** 01:56:48.2, 37°.58N×36°.17E, h8^{km}, MD3.1*
*ISCJB **01** 01:56:49.0±0.6, 37°.50N±0°.04×36°.12E±0°.03, h1^{km}±6^{km}, Error ellipse: s-maj=7.2km s-min=3.9km az=177.0*
*CSEM **01** 01:56:49.4±0.3, 37°.53N×36°.09E, h2^{km}, MD3.1, Error ellipse: s-maj=9.5km s-min=6.2km az=179.0*
*ISK **01** 01:56:49.1, 37°.53N×36°.10E, h5^{km}, MD2.7*
ISC 01 01:56:48.7±0.9**, 37°.54N**±0°.03×**36°.14E**±0°.02**, h12**^{km}±6^{km}**, n27, σ1^s.10**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.17**	**75**	*i* P	**Pg**	**01 56 52.3**	**-0.3**
ANDN				*i* S	**Sg**	**01 56 56.8**	**+1.4**
ANDN	**Andirin**	**0.17**	**75**	*i* P	**Pg**	**01 56 52.3**	**-0.3**
ANDN				*i* S	**Sg**	**01 56 56.8**	**+1.4**
KOZT	**Kozan**	**0.25**	**257**	*e*PG	**Pg**	**01 56 53.7**	**-0.2**
KOZT				*e*SG	**Sg**	**01 56 57.8**	**+0.3**
KOZT	**Kozan**	**0.25**	**257**	*e*Pg	**Pg**	**01 56 53.7**	**-0.2**
KOZT				*e*Sg	**Sg**	**01 56 57.8**	**+0.3**
AYKD	**Aykdinkavak**	**0.55**	**103**	*i* P	**Pg**	**01 56 58.8**	**-0.5**
AYKD				*i* S	**Sg**	**01 57 06.4**	**-0.3**
CEYT	**Ceyhan**	**0.61**	**211**	*e*PG	**Pg**	**01 57 01.1**	**+0.6**
CEYT	**Ceyhan**	**0.61**	**211**	*e*Pg	**Pg**	**01 57 01.1**	**+0.6**
KMRS	**Kahramanmaras**	**0.61**	**93**	*e*PG	**Pn**	**01 57 01.7**	**-1.5**
KMRS				*e*SG	**Sb**	**01 57 10.5**	**+0.7**
KMRS	**Kahramanmaras**	**0.61**	**93**	*e*Pg	**Pn**	**01 57 01.7**	**-1.5**
KMRS				*e*Sg	**Sb**	**01 57 10.5**	**+0.7**
SARI	**SarD1z-Kayseri**	**0.90**	**14**	*e*PG	**Pn**	**01 57 07.2**	**-0.1**
GAZ	**Gaziantep**	**0.93**	**113**	*e*PG	**Pn**	**01 57 08.0**	**+0.4**
GAZ	**Gaziantep**	**0.93**	**113**	*e*Pg	**Pn**	**01 57 08.0**	**+0.4**
KUZU	**Kuzuini**	**1.07**	**135**	*i* P	**Pg**	**01 57 08.4**	**-0.8**
KUZU				*i* S	**Sn**	**01 57 24.5**	**+0.2**
KUZU	**Kuzuini**	**1.07**	**135**	*i* P	**Pg**	**01 57 08.4**	**-0.8**
KUZU				*i* S	**Sn**	**01 57 24.5**	**+0.2**
GULE	**Gulek**	**1.11**	**257**	*i* P	**Pg**	**01 57 07.4**	**-2.6**
GULE				*i* S	**Sn**	**01 57 26.0**	**+0.5**
KRTS	**Karatas**	**1.14**	**213**	*e*PN	**Pn**	**01 57 10.9**	**+0.5**
KRTS	**Karatas**	**1.14**	**213**	*e*Pn	**Pn**	**01 57 10.9**	**+0.5**
GZT	**Gaziantep**	**1.15**	**99**	*i* P	**Pg**	**01 57 09.9**	**-0.9**
GZT				*i* S	**Sn**	**01 57 30.0**	**+3.5**
BNN	**Bunyan**	**1.33**	**350**	*e*PN	**Pg**	**01 57 15.0**	**+0.7**
BNN	**Bunyan**	**1.33**	**350**	*e*Pn	**Pg**	**01 57 15.0**	**+0.7**
NIG	**Nigde**	**1.34**	**296**	*e*PN	**Pg**	**01 57 14.3**	**-0.1**
NIG	**Nigde**	**1.34**	**296**	*e*Pn	**Pg**	**01 57 14.3**	**-0.1**
HTY	**Hatay**	**1.41**	**180**	*e*PN	**Pg**	**01 57 16.4**	**+0.6**
HTY	**Hatay**	**1.41**	**180**	*e*Pn	**Pg**	**01 57 16.4**	**+0.6**
DARE	**Darende-Malaty**	**1.48**	**45**	*e*PN	**Pg**	**01 57 17.9**	**+0.7**
ILIC	**ilic-Erzincan**	**2.70**	**44**	*e*PN	**Pb**	**01 57 35.3**	**-1.7**
ILIC	**ilic-Erzincan**	**2.70**	**44**	*e*Pn	**Pb**	**01 57 35.3**	**-1.7**

IDC 01 02:00:27.9±5.9**, 28°.19S×178°.17W, h170**^{km}±49^{km}**, mb3.5**/7**, mb1 3.7**/8**, mb1mx3.6**/19**, mbtmp3.6**/8**, Error ellipse: s-maj=30.4km s-min=21.3km az=53.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**10.79**	**200**	P	Pn	02 02 56.7	-1.1
	0.5nm,0.3s,baz=273,slow=4.3,SNR=3.7						
URZ				S	Sn	02 04 51.7	-5.9
	2.1nm,0.3s,baz=289,slow=24,SNR=9.6						
STKA	**Stephens Creek**	**34.89**	**254**	P	P	02 07 02.9	-0.3
	0.5nm,0.4s,baz=111,slow=15,SNR=5.0						
ASAR	**Alice Springs**	**43.12**	**265**	P	P	02 08 11.8	+0.1
	0.6nm,0.5s,baz=95,slow=7.1,SNR=12						
WRA	**Warramunga Arr**	**43.91**	**270**	P	P	02 08 17.6	-0.3
	1.4nm,0.3s,baz=108,slow=6.3,SNR=65						
VNDA	**Vanda**	**50.28**	**186**	P	P	02 09 08.2	+1.9
	0.7nm,0.7s,baz=345,slow=9.1,SNR=6.3						
FITZ	**Fitzroy Crossi**	**52.24**	**268**	P	P	02 09 21.8	-0.1
	2.8nm,0.8s,baz=89,slow=7.8,SNR=5.6						
MAW	**Mawson**	**74.32**	**200**	P	P	02 11 45.6	-0.6
	1.3nm,0.7s,baz=126,slow=9.7,SNR=4.2						
MJAR	**Matsushiro Arr**	**76.34**	**325**	P	P	02 11 59.1	+1.0
	1.9nm,0.7s,baz=158,slow=4.8,SNR=5.6						
MKAR	**Makanchi Array**	**116.22**	**311**	PKP	PKPdf	02 18 49.5	-1.2
	0.3nm,0.4s,baz=91,slow=2.1,SNR=3.6						
BVAR	**Borovoye Array**	**124.70**	**317**	PKP	PKPdf	02 19 06.2	-0.6
	1.0nm,0.6s,baz=117,slow=2.7,SNR=5.3						
AKTO	**Aktyubinsk**	**132.48**	**314**	PKP	PKPdf	02 19 21.3	-0.4
	1.0nm,0.7s,baz=42,slow=2.8,SNR=5.4						
FINES	**FINESS Array B**	**143.02**	**341**	PKhKP	PKPpre	02 19 36.6	
	0.7nm,0.4s,baz=41,slow=4.6,SNR=7.5						
NB2	**NORSAR Subarra**	**146.55**	**352**	PKP	PKPbc	02 19 48.0	-0.6
	comp=Z,1.3nm,0.6s,baz=10,slow=2.9						
NOA	**NORSAR Array B**	**146.55**	**352**	PKPbc	PKPbc	02 19 48.0	-0.6
	comp=Z,1.5nm,0.6s,baz=14,slow=4.5,SNR=7.6						
HFS	**Hagfors**	**147.05**	**349**	PKPbc	PKPbc	02 19 49.3	-0.7
	comp=Z,2.6nm,0.6s,baz=29,slow=3.4,SNR=17						
AKASG	**Malin Array Be**	**149.43**	**325**	PKPbc	PKPbc	02 19 55.6	-0.8
	comp=Z,3.4nm,0.6s,baz=48,slow=3.3,SNR=9.5						
MMAI	**Mount Meron Ar**	**150.78**	**288**	PKPbc	PKPbc	02 20 00.3	0.0
	comp=Z,4.5nm,0.7s,baz=91,slow=4.4,SNR=6.1						
EIL	**Elat**	**151.02**	**281**	PKPbc	PKPbc	02 20 01.2	+0.2
	comp=Z,4.1nm,0.8s,baz=308,slow=9.9,SNR=3.6						
BRTR	**Keskin Array B**	**151.36**	**302**	PKPbc	PKPbc	02 20 00.5	-1.1
	comp=Z,0.7nm,0.5s,baz=144,slow=6.2,SNR=6.9						
EKA	**Eskdalemuir Ar**	**152.63**	**6**	PKPbc	PKPbc	02 20 03.1	-0.6
	comp=Z,0.2nm,0.5s,baz=335,slow=3.1,SNR=2.8						
EKA				PKPab	PKPab	02 20 15.3	+0.3
	comp=Z,0.5nm,0.5s,baz=343,slow=3.2,SNR=5.3						
TORD	**Torodi Ar. Bea**	**165.04**	**180**	PKPab	PKPab	02 21 08.3	-1.3
	comp=Z,0.6nm,0.8s,baz=168,slow=3.6,SNR=8.1						

*CSEM **01** 02:08:10.2±0.2, 42°.82N×13°.48E, h20^{km}, ML2.9/6, Error ellipse: s-maj=5.1km s-min=4.7km az=119.0*
ROM 01 02:08:10.4±0.1**, 42°.80N×13°.42E, h23**^{km}±2^{km}**, Md2.2**/12**, Ml2.2**/8**, Error ellipse: s-maj=1.7km s-min=1.1km az=77.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TERO	**Teramo**	**0.22**	**142**	Pg	Pb	02 08 16.0	-0.2
TERO				Sg	Sb	02 08 20.3	+0.1
	214nm,0.1s						
TERO	**Teramo**	**0.22**	**142**	Pg	Pb	02 08 16.0	-0.2
TERO				Sg	Sb	02 08 20.3	+0.1
	214nm,0.1s						
NRCA	**Norcia**	**0.23**	**280**	Pg	Pb	02 08 16.3	-0.1
NRCA				Sg	Sb	02 08 20.6	+0.1
	1μm,0.1s						
NRCA	**Norcia**	**0.23**	**280**	Pg	Pb	02 08 16.3	-0.1
NRCA				Sg	Sb	02 08 20.6	+0.1
	1μm,0.1s						
OFFI	**Offida**	**0.24**	**54**	Pg	Pb	02 08 16.8	+0.4
	203nm,0.5s						
OFFI	**Offida**	**0.24**	**54**	Pg	Pb	02 08 16.8	+0.4
	203nm,0.5s						
CAMP	**Campotosto**	**0.26**	**182**	Pg	Pb	02 08 16.9	0.0
CAMP				Sg	Sb	02 08 21.8	+0.5
CAMP	**Campotosto**	**0.26**	**182**	Pg	Pb	02 08 16.9	0.0
CAMP				Sg	Sb	02 08 21.8	+0.5
LNSS	**Leonessa**	**0.34**	**236**	Pg	Pb	02 08 18.2	+0.1
LNSS				Sg	Sb	02 08 24.3	+1.0
	397nm,0.3s						
LNSS	**Leonessa**	**0.34**	**236**	Pg	Pb	02 08 18.2	+0.1
LNSS				Sg	Sb	02 08 24.3	+1.0
	397nm,0.3s						
FDMO	**Fiordimonte**	**0.34**	**314**	Pg	Pb	02 08 17.8	-0.3
FDMO				Sg	Sb	02 08 23.4	+0.1
	97nm,0.2s						
FDMO	**Fiordimonte**	**0.34**	**314**	Pg	Pb	02 08 17.8	-0.3
FDMO				Sg	Sb	02 08 23.4	+0.1
	97nm,0.2s						
CESI	**CESI - Serrava**	**0.43**	**299**	Pg	Pb	02 08 19.6	0.0
CESI				Sg	Sb	02 08 26.6	+0.8
	16nm,0.2s						
CESI	**CESI - Serrava**	**0.43**	**299**	Pg	Pb	02 08 19.6	0.0
CESI				Sg	Sb	02 08 26.6	+0.8
	16nm,0.2s						
GUMA	**Gualdo di Mace**	**0.46**	**55**	Pg	Pb	02 08 16.9	-3.1
GUMA				Sg	Sb	02 08 22.0	-4.5
	1μm,0.2s						
GUMA	**Gualdo di Mace**	**0.46**	**55**	Pg	Pb	02 08 16.9	-3.1
GUMA				Sg	Sb	02 08 22.0	-4.5
	1μm,0.2s						
SNTG	**Esanatoglia**	**0.58**	**323**	Pg	Pb	02 08 21.9	-0.1
	12nm,0.2s						
SNTG	**Esanatoglia**	**0.58**	**323**	Pg	Pb	02 08 21.9	-0.1
	12nm,0.2s						
CING	**Cingoli**	**0.60**	**344**	Pg	Pb	02 08 22.2	-0.2
CING				Sg	Sn	02 08 31.8	-0.9
CING	**Cingoli**	**0.60**	**344**	Pg	Pb	02 08 22.2	-0.2
CING				Sg	Sn	02 08 31.8	-0.9
MNS	**Montasola**	**0.68**	**233**	Pg	Pb	02 08 23.8	0.0
MNS	**Montasola**	**0.68**	**233**	Pg	Pb	02 08 23.8	0.0
PIEI	**Pieia**	**0.98**	**319**	Pg	Pb	02 08 28.9	0.0
	27nm,1.3s						
PIEI	**Pieia**	**0.98**	**319**	Pg	Pb	02 08 28.9	0.0
	27nm,1.3s						
NVLJ	**Novalja**	**2.06**	**30**	*e*Pn	Pn	02 08 44.3	+0.8
NVLJ				Sn	Sn	02 09 08.5	+0.1
NVLJ	**Novalja**	**2.06**	**30**	*e*Pn	Pn	02 08 44.3	+0.8
NVLJ				Sn	Sn	02 09 08.4	0.0

*CSEM **01** 02:08:12.2, 42°.36N×13°.38E, h8^{km}, MD2.2/10, After ROM*
ROM 01 02:08:12.2±0.1**, 42°.36N×13°.38E, h8**^{km}±1^{km}**, Md2.2**/10**, Ml1.7**/4**, Error ellipse: s-maj=1.7km s-min=1.3km az=19.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.02**	**112**	Pg	Pg	02 08 13.8	+0.1
AQU				Sg	Sg	02 08 14.8	+0.1
	253nm,0.2s						
AQU	**L'Aquila**	**0.02**	**112**	Pg	Pg	02 08 13.8	+0.1
AQU				Sg	Sg	02 08 14.8	+0.1
	253nm,0.2s						
FAGN	**Fagnano**	**0.18**	**122**	Pg	Pg	02 08 16.6	+0.6
FAGN				Sg	Sg	02 08 20.0	+1.4
	113nm,0.3s						
FAGN	**Fagnano**	**0.18**	**122**	Pg	Pg	02 08 16.6	+0.6
FAGN				Sg	Sg	02 08 20.0	+1.4
	113nm,0.3s						
FIAM	**Fiamignano**	**0.21**	**244**	Pg	Pg	02 08 17.1	+0.4
FIAM				Sg	Sg	02 08 20.8	+1.1
	43nm,0.3s						
FIAM	**Fiamignano**	**0.21**	**244**	Pg	Pg	02 08 17.1	+0.4
FIAM				Sg	Sg	02 08 20.8	+1.1
	43nm,0.3s						
PTQR	**Pietraquaria**	**0.34**	**177**	Pg	Pb	02 08 20.6	-0.1
PTQR	**Pietraquaria**	**0.34**	**177**	Pg	Pb	02 08 20.6	-0.1
VCEL	**Villa Celiera**	**0.34**	**84**	Pg	Pg	02 08 19.6	+0.5
VCEL	**Villa Celiera**	**0.34**	**84**	Pg	Pg	02 08 19.6	+0.5
CERT	**Cerreto**	**0.51**	**216**	Pg	Pg	02 08 22.3	+0.2
CERT	**Cerreto**	**0.51**	**216**	Pg	Pg	02 08 22.3	+0.2

*SKO **01** 02:41:43.6, 41°.31N×22°.70E, h15^{km}, M1.6, ML2.0*
*ATH **01** 02:41:43.6, 41°.32N×22°.71E, h11^{km}±5^{km}, MD2.9/5*
*ISCJB **01** 02:41:43.9±0.4, 41°.30N±0°.02×22°.72E±0°.03, h7^{km}±3^{km}, Error ellipse: s-maj=3.8km s-min=3.2km az=168.5*
*THE **01** 02:41:44.5, 41°.31N×22°.73E, h2^{km}±1^{km}, ML2.0/8, Error ellipse: s-maj=1.5km s-min=0.4km az=185.0*
*CSEM **01** 02:41:44.3±0.1, 41°.30N×22°.72E, h5^{km}, ML1.5, Error ellipse: s-maj=2.3km s-min=2.0km az=49.0*
*BEO **01** 02:41:45.7±0.5, 41°.36N×22°.58E, h6^{km}±5^{km}, ML1.5/4*
ISC 01 02:41:44.6±0.9**, 41°.31N**±0°.02×**22°.71E**±0°.02**, h9**^{km}±5^{km}**, n41, σ0^s.64**/74**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.11**	**277**	P	**Pg**	**02 41 46.9**	**-0.2**
VAY				S	**Sg**	**02 41 48.9**	**-0.1**
VAY	**Valandovo**	**0.11**	**277**	*e*Pg	**Pg**	**02 41 46.7**	**-0.4**
VAY				*e*Sg	**Sg**	**02 41 48.8**	**-0.1**
VAY	**Valandovo**	**0.11**	**277**	*i* Pg	**Pg**	**02 41 46.7**	**-0.4**
VAY				*i* Sg	**Sg**	**02 41 48.8**	**-0.1**
VAY				*e*Lg	Lg	02 41 48.9	
	comp=N,843nm,0.5s						
VAY				*e*Lg	Lg	02 41 48.9	
	comp=E,899nm,0.3s						
VAY	**Valandovo**	**0.11**	**277**	*e*Pg	**Pg**	**02 41 46.7**	**-0.4**
VAY				*e*Sg	**Sg**	**02 41 48.8**	**-0.1**
VAY				*e*Lg	Lg	02 41 49.4	
	comp=E,899nm,0.3s						
KNT	**Kendrikon**	**0.20**	**136**	P	**Pg**	**02 41 48.5**	**-0.2**
KNT				S	**Sg**	**02 41 51.3**	**-0.2**
KNT	**Kendrikon**	**0.20**	**136**	P	**Pg**	**02 41 48.5**	**-0.2**
KNT				S	**Sg**	**02 41 51.3**	**-0.2**
GRG	**Griva**	**0.42**	**214**	P	**Pg**	**02 41 52.4**	**-0.4**
GRG				S	**Sg**	**02 41 58.4**	**+0.1**
GRG	**Griva**	**0.42**	**214**	*e*PB	**Pg**	**02 41 52.4**	**-0.4**
GRG				*e*SB	**Sg**	**02 41 57.6**	**-0.7**
GRG	**Griva**	**0.42**	**214**	P	**Pg**	**02 41 52.4**	**-0.4**
GRG				S	**Sg**	**02 41 58.4**	**+0.1**
SOH	**Sokhos**	**0.69**	**135**	P	**Pg**	**02 41 57.1**	**-0.7**
SOH				S	**Sg**	**02 42 07.2**	**+0.5**
SOH	**Sokhos**	**0.69**	**135**	P	**Pg**	**02 41 57.1**	**-0.7**
SOH				S	**Sg**	**02 42 07.2**	**+0.5**
SRS	**Serrai**	**0.69**	**106**	P	**Pg**	**02 41 57.1**	**-0.8**
SRS				S	**Sg**	**02 42 07.1**	**+0.2**
SRS	**Serrai**	**0.69**	**106**	P	**Pg**	**02 41 57.1**	**-0.8**
SRS				S	**Sg**	**02 42 07.1**	**+0.2**
THE	**Thessaloniki**	**0.70**	**164**	P	**Pg**	**02 41 57.8**	**-0.3**
THE				S	**Sg**	**02 42 07.4**	**+0.2**
THE	**Thessaloniki**	**0.70**	**164**	P	**Pg**	**02 41 57.8**	**-0.3**
THE				S	**Sg**	**02 42 07.4**	**+0.2**
HORT	**Hortiatis**	**0.77**	**157**	P	**Pg**	**02 41 58.9**	**-0.4**
HORT				S	**Sg**	**02 42 09.9**	**+0.6**
HORT	**Hortiatis**	**0.77**	**157**	P	**Pg**	**02 41 58.9**	**-0.4**
HORT				S	**Sg**	**02 42 09.9**	**+0.6**
NVR	**Nevrokopi**	**0.87**	**87**	P	**Pg**	**02 42 00.5**	**-0.7**
NVR				S	**Sg**	**02 42 12.6**	**+0.1**
NVR	**Nevrokopi**	**0.87**	**87**	*e*PB	**Pg**	**02 42 00.5**	**-0.7**
NVR				*e*SB	**Sg**	**02 42 11.3**	**-1.2**
NVR	**Nevrokopi**	**0.87**	**87**	P	**Pg**	**02 42 00.5**	**-0.7**
NVR				S	**Sg**	**02 42 12.6**	**+0.1**
PLG	**Polygyros**	**1.08**	**149**	P	**Pg**	**02 42 04.4**	**-1.0**
PLG				S	**Sb**	**02 42 20.5**	**+0.7**
PLG	**Polygyros**	**1.08**	**149**	*e*PN	**Pg**	**02 42 04.5**	**-1.0**
PLG				*e*SB	**Sg**	**02 42 19.1**	**-0.4**
PLG	**Polygyros**	**1.08**	**149**	P	**Pg**	**02 42 04.4**	**-1.0**
PLG				S	**Sb**	**02 42 20.5**	**+0.7**
FNA	**Florina**	**1.14**	**243**	P	**Pg**	**02 42 05.4**	**-1.0**
FNA				S	**Sb**	**02 42 22.2**	**+0.8**
FNA	**Florina**	**1.14**	**243**	*e*PB	**Pg**	**02 42 05.2**	**-1.2**
FNA	**Florina**	**1.14**	**243**	P	**Pg**	**02 42 05.4**	**-1.0**
FNA				S	**Sb**	**02 42 22.2**	**+0.8**
LIT	**Litokhoron**	**1.22**	**188**	*e*PN	**Pg**	**02 42 06.1**	**-1.8**
LIT				*e*SB	**Sg**	**02 42 22.9**	**-0.8**
VTS	**Vitosha**	**1.34**	**16**	P	**Pn**	**02 42 09.7**	**+0.1**
VTS				S	**Sn**	**02 42 28.2**	**+0.6**
VTS	**Vitosha**	**1.34**	**16**	*e*Pg	**Pn**	**02 42 09.9**	**+0.3**
VTS				*e*Sg	**Sg**	**02 42 27.4**	**-0.1**
VTS	**Vitosha**	**1.34**	**16**	P	**Pn**	**02 42 09.7**	**+0.1**
VTS				*e*Sg	**Sg**	**02 42 27.4**	**-0.1**
VTS				S	**Sn**	**02 42 28.2**	**+0.6**
OUR	**Ouranopolis**	**1.37**	**135**	P	**Pn**	**02 42 09.7**	**-0.1**
OUR	**Ouranopolis**	**1.37**	**135**	P	**Pn**	**02 42 09.7**	**-0.1**
KAVA	**Kavala**	**1.40**	**102**	P	**Pn**	**02 42 10.2**	**0.0**
KAVA	**Kavala**	**1.40**	**102**	P	**Pn**	**02 42 10.2**	**0.0**
NEST	**Nestorio**	**1.54**	**235**	P	**Pn**	**02 42 12.5**	**+0.1**
NEST	**Nestorio**	**1.54**	**235**	P	**Pn**	**02 42 12.5**	**+0.1**
BARS	**Barje**	**1.65**	**336**	*e*Pn	**Pn**	**02 42 14.6**	**+0.8**
BARS				*e*Sn	**Sn**	**02 42 34.3**	**-0.8**
BARS	**Barje**	**1.65**	**336**	*e*Pn	**Pn**	**02 42 14.6**	**+0.8**
BARS				*e*Sn	**Sn**	**02 42 34.3**	**-0.8**
THL	**Klokotos Trika**	**1.82**	**197**	*e*PG	**Pn**	**02 42 17.4**	**+1.3**
ZAPS	**Zavoj**	**1.97**	**358**	*e*Pn	**Pn**	**02 42 19.2**	**+1.1**
ZAPS				*e*Sn	**Sn**	**02 42 42.4**	**-0.5**
AGG	**Agios Georgios**	**2.30**	**187**	*e*PB	**Pn**	**02 42 23.3**	**+0.6**

*ISK **01** 02:47:05.9, 40°.06N×27°.77E, h18^{km}, MD2.1*
*ISCJB **01** 02:47:06.7±0.9, 40°.09N±0°.04×27°.79E±0°.07, h11^{km}±8^{km}, Error ellipse: s-maj=9.5km s-min=5.3km az=26.9*
*DDA **01** 02:47:06.6, 40°.09N×27°.76E, h7^{km}, MD2.8*
*CSEM **01** 02:47:06.5±0.1, 40°.07N×27°.77E, h15^{km}, MD2.1, Error ellipse: s-maj=2.5km s-min=2.0km az=117.0*
ISC 01 02:47:06.9±1.3**, 40°.07N**±0°.03×**27°.78E**±0°.04**, h15**^{km}±8^{km}**, n18, σ0^s.42**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GONE	**Gonen-Balikesi**	**0.08**	**251**	*e*PG	**Pg**	**02 47 09.6**	**-0.3**
GONE				*e*SG	**Sg**	**02 47 12.2**	**+0.3**
GONE	**Gonen-Balikesi**	**0.08**	**251**	*e*Pg	**Pg**	**02 47 09.6**	**-0.3**
GONE				*e*Sg	**Sg**	**02 47 12.2**	**+0.3**
BNT	**Bandirma**	**0.30**	**21**	*e*PG	**Pg**	**02 47 13.2**	**0.0**
BNT	**Bandirma**	**0.30**	**21**	*e*Pg	**Pg**	**02 47 13.3**	**0.0**
BALY	**Balya**	**0.35**	**200**	*i* P	**Pg**	**02 47 14.1**	**-0.1**
BALY				*i* S	**Sg**	**02 47 19.4**	**+0.3**
BALY	**Balya**	**0.35**	**200**	*i* P	**Pg**	**02 47 14.1**	**-0.1**
BALY				*i* S	**Sg**	**02 47 19.4**	**+0.3**
BALB	**Balikesir**	**0.44**	**170**	*e*PG	**Pg**	**02 47 14.9**	**-0.8**
BALB				*e*SG	**Sg**	**02 47 21.6**	**-0.1**
BALB	**Balikesir**	**0.44**	**170**	*e*Pg	**Pg**	**02 47 14.9**	**-0.8**
BALB				*e*Sg	**Sg**	**02 47 21.6**	**-0.1**
KCTX	**Karacabey (Bur**	**0.48**	**66**	*e*PG	**Pg**	**02 47 16.1**	**-0.4**
KCTX				*e*SG	**Sg**	**02 47 22.7**	**-0.3**
KCTX	**Karacabey (Bur**	**0.48**	**66**	*e*Pg	**Pg**	**02 47 16.1**	**-0.4**
KCTX				*e*Sg	**Sg**	**02 47 22.7**	**-0.3**
KRBG	**Karabiga-Canak**	**0.49**	**311**	*e*PG	**Pg**	**02 47 16.1**	**-0.6**
KRBG	**Karabiga-Canak**	**0.49**	**311**	*e*Pg	**Pg**	**02 47 16.1**	**-0.6**
DURS	**Dursunbey**	**0.71**	**131**	*i* P	**Pg**	**02 47 20.5**	**-0.3**
DURS				*i* S	**Sb**	**02 47 31.4**	**+0.6**
DURS	**Dursunbey**	**0.71**	**131**	*i* P	**Pg**	**02 47 20.5**	**-0.3**
DURS				*i* S	**Sb**	**02 47 31.4**	**+0.6**
MDNY	**Mudanya-Bursa**	**0.90**	**70**	*e*PG	**Pg**	**02 47 24.3**	**0.0**
MDNY	**Mudanya-Bursa**	**0.90**	**70**	*e*Pg	**Pg**	**02 47 24.3**	**0.0**
ARMT	**Armutlu**	**0.96**	**59**	*e*PG	**Pg**	**02 47 25.3**	**-0.3**
ARMT	**Armutlu**	**0.96**	**59**	*e*Pg	**Pg**	**02 47 25.3**	**-0.3**

IDC 01 02:52:30.6±6.5**, 6°.41S×147°.96E, h92**^{km}±47^{km}**, mb3.5**/3**, mb1 3.6**/5**, mb1mx3.3**/19**, mbtmp3.5**/5**, Error ellipse: s-maj=57.3km s-min=49.1km az=84.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.08**	**195**	P	Pn	02 53 16.2	-1.1
	9.2nm,0.3s,baz=37,slow=6.5,SNR=13						
PMG				S	Sn	02 53 54.3	+0.9
	8.1nm,0.3s,baz=12,slow=8.0,SNR=5.3						
WRA	**Warramunga Arr**	**18.87**	**223**	P	P	02 56 42.9	-0.9
	0.3nm,0.3s,baz=48,slow=11,SNR=13						
ASAR	**Alice Springs**	**21.84**	**217**	P	P	02 57 16.2	+0.3
	1.7nm,0.6s,baz=56,slow=8.8,SNR=19						
FITZ	**Fitzroy Crossi**	**24.68**	**240**	P	P	02 57 43.1	-0.1
	2.6nm,0.6s,baz=59,slow=7.1,SNR=17						
STKA	**Stephens Creek**	**26.03**	**192**	P	P	02 57 55.8	+0.5
	1.5nm,0.8s,baz=353,slow=12,SNR=4.2						
TORD	**Torodi Ar. Bea**	**146.11**	**284**	PKPbc	PKPdf	03 12 00.5	+0.3
	0.2nm,0.6s,baz=58,slow=4.2,SNR=2.6						

IDC 01 02:55:26.6±2.3**, 3°.72N×126°.81E, h0**^{km}**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/23**, mbtmp3.3**/3**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.1**/18**, Error ellipse: s-maj=175.9km s-min=27.8km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.72**	**183**	LR	LR	03 08 15.6	
	comp=Z,27nm,19.1s,baz=282,slow=35						
WRA	**Warramunga Arr**	**24.66**	**163**	P	P	03 00 47.9	-1.3
	0.8nm,0.8s,baz=342,slow=10,SNR=5.1						
ASAR	**Alice Springs**	**28.09**	**166**	P	P	03 01 21.4	+1.1
	0.1nm,0.4s,baz=345,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**57.60**	**325**	P	P	03 05 18.4	-0.1
	0.2nm,0.4s,baz=124,slow=8.5,SNR=4.4						

IDC 01 03:02:16.8±1.8**, 14°.73S×166°.82E, h0**^{km}**, mb3.5**/4**, mb1 3.8**/5**, mb1mx3.6**/21**, mbtmp3.6**/5**, ML3.6**/1**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.8**/17**, Error ellipse: s-maj=49.8km s-min=30.6km az=134.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.31**	**183**	Pn	Pn	03 04 05.1	+0.1
	1.0nm,0.3s,baz=95,slow=22,SNR=7.6						
DZM				Sn	Sn	03 05 23.6	-5.2
	0.2nm,0.3s,baz=47,slow=19,SNR=2.9						
WRA	**Warramunga Arr**	**31.40**	**256**	P	P	03 08 39.6	-0.3
	0.6nm,1.0s,baz=82,slow=7.2,SNR=2.8						
ASAR	**Alice Springs**	**32.26**	**249**	P	P	03 08 46.8	-0.6
	0.2nm,0.8s,baz=75,slow=9.4,SNR=3.0						
ASAR				LR	LR	03 22 16.7	
	comp=Z,54nm,18.2s,baz=319,slow=37						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
FITZ	Fitzroy Crossi	39.58	259	P	P	03 09 50.7	+0.6
	2.5nm,0.9s,baz=80,slow=12,SNR=3.2						
ILAR	Eielson Array	86.67	18	P	P	03 15 01.9	0.0
	0.2nm,0.6s,baz=224,slow=6.3,SNR=8.9						

IDC 01 03:11:03.5±1.7, 17°.11S×178°.11W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.8/19, mbtmp3.8/5, Error ellipse: s-maj=149.9km s-min=24.2km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.27	240	P	P	03 18 34.8	+0.8
	0.6nm,0.4s,baz=94,slow=15,SNR=5.0						
WRA	Warramunga Arr	45.06	259	P	P	03 19 21.0	-0.6
	0.5nm,0.6s,baz=96,slow=7.3,SNR=15						
ASAR	Alice Springs	45.28	253	P	P	03 19 22.9	-0.4
	5.2nm,0.5s,baz=88,slow=8.0,SNR=78						
NVAR	Mina Array Bea	78.65	44	P	P	03 23 08.2	+0.4
	0.1nm,0.4s,baz=226,slow=8.7,SNR=3.7						
TXAR	Lajitas Array	85.33	58	P	P	03 23 42.6	-0.3
	0.2nm,0.9s,baz=202,slow=6.3,SNR=4.0						

ISCJB 01 03:15:16.3±0.5, 24°.52N±0°.03×122°.76E±0°.02, h95km±5km, Error ellipse: s-maj=5.1km s-min=2.8km az=172.4
TAP 01 03:15:16.8, 24°.55N×122°.70E, h100km, ML3.7, C
JMA 01 03:15:17.0±0.1, 24°.64N×122°.77E, h92km±1km, M2.6
ISC 01 03:15:15.7±1.2, 24°.51N±0°.04×122°.77E±0°.03, h103km±8km, n52, σ1s.13/94, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.23	103	P	Pn	03 15 30.6	+0.3
YOJ				eS	Sn	03 15 41.0	-0.3
EGS		0.83	294	eP	Pn	03 15 34.9	+0.3
	baz=292						
EGS				eS	Sn	03 15 47.7	-1.1
	baz=292						
TWC	Suao	0.84	277	P	Pn	03 15 34.8	+0.1
	baz=277						
TWC				S	Sn	03 15 47.7	-1.3
	baz=277						
TWB1	Santiao Chiao	0.86	305	eP	Pn	03 15 35.4	+0.4
	baz=305						
TWB1				S	Sn	03 15 48.3	-1.1
	baz=305						
IRIF	Iriomote-Funau	0.89	101	P	Pn	03 15 36.1	+0.9
IRIF				eS	Sn	03 15 50.4	+0.5
ENA	Nanau	0.94	265	P	Pn	03 15 36.1	+0.4
	baz=257						
TWE	Neicheng	1.02	282	P	Pn	03 15 37.1	+0.5
	baz=279						
TWE				S	Sn	03 15 51.8	-0.5
	baz=279						
HATJ	Hateruma jima	1.05	115	P	Pn	03 15 38.3	+1.5
HATJ				eS	Sn	03 15 53.8	+1.0
NWF	Wu-fen Shan	1.06	302	i P	Pn	03 15 37.8	+0.7
	baz=296						
NWF				S	Sn	03 15 52.2	-0.9
	baz=296						
ENTT	Nioudou	1.10	277	eP	Pn	03 15 38.4	+0.9
	baz=271						
ENTT				eS	Sn	03 15 53.2	-0.7
	baz=271						
TWD	Chiawan	1.15	248	P	Pn	03 15 38.1	+0.1
	baz=239						
TWD				eS	Sn	03 15 54.1	-0.8
	baz=239						
JKRS	Kuro-shima	1.16	103	P	Pn	03 15 39.6	+1.5
JKRS				eS	Sn	03 15 55.9	+0.8
HWA	Hwalien	1.19	244	eP	Pn	03 15 38.8	+0.4
	baz=239						
HWA				eS	Sn	03 15 54.8	-0.8
	baz=239						
JIJ	Ishigaki jima	1.26	96	P	Pn	03 15 40.3	+1.1
JIJ				eS	Sn	03 15 57.1	0.0
NNS	Nan Shan	1.27	267	eP	Pn	03 15 40.1	+0.5
	baz=258						
NNS				eS	Sn	03 15 56.9	-0.7
	baz=258						
PCYT	Pengchaiyu	1.28	331	eP	Pn	03 15 40.6	+1.1
	baz=332						
NSK	Sanguang	1.29	278	P	Pn	03 15 40.5	+0.8
	baz=268						
NSK				eS	Sn	03 15 57.2	-0.7
	baz=268						
TWY	Chenhua	1.30	306	P	Pn	03 15 40.7	+1.0
	baz=306						
TWY				eS	Sn	03 15 57.6	-0.4
	baz=306						
TWS1	Kuangyinshan	1.36	296	eP	Pn	03 15 41.4	+1.0
	baz=288						
TWS1				eS	Sn	03 15 58.7	-0.4
	baz=288						
ESL	Shilin	1.40	241	eP	Pn	03 15 40.8	-0.2
	baz=236						
ESL				eS	Sn	03 15 58.6	-1.5
	baz=236						
WHF	Hehuan Shan	1.42	255⇓	i P	Pn	03 15 42.0	+0.4
	baz=257						
WHF				S	Sn	03 16 00.2	-0.9
	baz=257						
TWT	Tachien	1.48	260	eP	Pn	03 15 43.2	+1.3
	baz=255						
TWT				eS	Sn	03 16 01.9	0.0
	baz=255						
NCU	National Centr	1.51	288	eS	Sn	03 16 03.4	+1.1
	baz=286						
NSTT	Nanjuang	1.61	275	eP	Pn	03 15 44.6	+1.1
	baz=272						
NSTT				eS	Sn	03 16 04.8	+0.1
	baz=272						
EHY	Hungye	1.66	233	P	Pn	03 15 44.1	0.0
	baz=236						
EHY				eS	Sn	03 16 05.2	-0.4
	baz=236						
JTJ	Tarama	1.77	85	P	Pn	03 15 46.8	+1.4
JTJ				eS	Sn	03 16 08.8	+0.8
TWF1	Yuli	1.77	230	P	Pn	03 15 45.8	+0.3
	baz=234						
TWF1				eS	Sn	03 16 07.8	-0.4
	baz=234						
SMLT	Sun Moon Lake	1.82	250	eP	Pn	03 15 47.3	+1.1
	baz=242						
SMLT				eS	Sn	03 16 10.6	+1.2
	baz=242						
TWQ1	Liyutan	1.83	265	eP	Pn	03 15 47.2	+1.1
	baz=262						
TWQ1				eS	Sn	03 16 09.9	+0.5
	baz=262						
NSY	Sanyi	1.83	267	eP	Pn	03 15 47.7	+1.5
	baz=265						
NSY				eS	Sn	03 16 10.4	+0.8
	baz=265						
TYC	Yuchr	1.85	251	P	Pn	03 15 47.8	+1.3
	baz=243						
TYC				eS	Sn	03 16 10.8	+0.9
	baz=243						
CHKT	Chengkung	1.91	223	eP	Pn	03 15 48.8	+1.6
	baz=213						
CHKT				eS	Sn	03 16 10.0	-1.2
	baz=213						
YUS	Yu-Shan	1.95	239	P	Pn	03 15 49.4	+1.2
	baz=230						
YUS				eS	Sn	03 16 12.3	-0.6
	baz=230						
ALS	Alishan	2.05	241	P	Pn	03 15 51.1	+1.7
	baz=232						
ALS				eS	Sn	03 16 15.4	+0.3
	baz=232						
ELDTW	Lidau	2.08	231	eP	Pn	03 15 49.9	+0.4
	baz=231						
CHN5	Tsauling	2.12	245	eP	Pn	03 15 51.5	+1.5
	baz=241						
CHN5				eS	Sn	03 16 17.4	+1.2
	baz=241						
TWG	Pinlang	2.29	223	eP	Pn	03 15 52.4	+0.2
	baz=219						
TWG				eS	Sn	03 16 18.6	-1.5
	baz=219						
CHN4	Tsaushan	2.30	240	eP	Pn	03 15 54.5	+2.2
	baz=236						
CHN4				eS	Sn	03 16 21.6	+1.3
	baz=236						
WTP	Ta-pu	2.34	238	eP	Pn	03 15 54.8	+1.9
	baz=243						
WTP				eS	Sn	03 16 21.5	+0.1
	baz=243						
JOGS	Gusukube	2.41	84	P	Pn	03 15 53.3	-0.4
TWK	Hsinying	2.43	240	eP	Pn	03 15 56.1	+2.1
	baz=236						
TWK				eS	Sn	03 16 24.5	+1.2
	baz=236						
CHN1	Nanshi	2.44	238	eP	Pn	03 15 56.3	+2.2
	baz=243						
CHN1				eS	Sn	03 16 25.7	+2.1
	baz=243						
SSD	Sandimen	2.63	229	eP	Pn	03 15 59.3	+2.6
	baz=225						
SSD				eS	Sn	03 16 29.1	+1.0
	baz=225						
LAY	Lan-yu	2.71	205	eP	Pn	03 15 57.5	-0.1
	baz=195						
LAY				eS	Sn	03 16 27.1	-2.8
	baz=195						
EAST	Anshuo	2.76	220	eP	Pn	03 15 58.9	+0.6
	baz=216						
EAST				eS	Sn	03 16 31.6	+0.4
	baz=216						
PNG	Penghu	3.08	253	eP	Pn	03 16 02.7	0.0
	baz=250						
WDGT	Dungji	3.11	247	eP	Pn	03 16 03.3	+0.4
	baz=243						
WDGT				eS	Sn	03 16 38.3	-1.1
	baz=243						
JKE	Kume jima 2	4.06	63	P	Pn	03 16 16.6	+0.9
JOW	Kunigami	5.48	64	P	Pn	03 16 34.4	-0.5
JTK	Tokunoshima	6.44	58	P	Pn	03 16 47.1	-0.9
JTK				eS	Sn	03 17 57.5	-2.5
JAMN	Amaminishikomi	6.84	56	P	Pn	03 16 51.6	-1.8
JAM	Amami Oshima	7.25	56	P	Pn	03 16 57.5	-1.5

IDC 01 03:18:47.4±1.9, 42°.87S×72°.72W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.8/16, mbtmp3.7/3, ML4.0/1, MS3.4/2, Ms1 3.4/2, ms1mx2.8/23, Error ellipse: s-maj=45.6km s-min=21.2km az=136.0
GUC 01 03:18:49.0±0.4, 42°.85S×72°.64W, h9km±17km, ML3.5
ISC 01 03:18:48.1±1.6, 42°.85S±0°.04×72°.71W±0°.08, h1km±11km, n9, σ0s.95/14, 1D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUTA	Futaleufœ	0.71	119⇓	eP	Pg	03 19 01.7	0.0
FUTA				eS	Sg	03 19 11.2	+0.2
FUTA				AML	AML	03 19 13.9	
	comp=N,1µm,0.3s						
CNTO	Contao	1.05	360	eP	Pg	03 19 08.3	+0.3
CNTO				i S	Sb	03 19 22.9	-0.1
CNTO				AML	AML	03 19 27.9	
	comp=E,4µm,0.6s						
PUEL	Puelo Alto	1.22	15	eP	Pg	03 19 10.9	-0.6
PUEL				eS	Sn	03 19 28.6	-0.7
PMCH	Puerto Montt	1.36	354	eP	Pg	03 19 14.4	+0.2
PMCH				eS	Sn	03 19 33.0	+0.1
PMCH				AML	AML	03 19 43.4	
	comp=N,2µm,0.4s						
PLCA	Paso Flores	2.66	38	Pn	Pn	03 19 33.3	+1.2
	comp=N,6.8nm,0.3s,baz=214,slow=14,SNR=91						
PLCA				Pg	Pb	03 19 36.6	+0.1
	comp=N,9.4nm,0.3s,baz=220,slow=17,SNR=120						
PLCA				Lg	Lg	03 20 11.5	
	comp=N,53nm,0.3s,baz=122,slow=9.3,SNR=26						
PLCA				LR	LR	03 20 45.5	
	comp=N,328nm,20.8s,baz=6.0,slow=44						
COYC	Coyhaique	2.76	171	eP	Pn	03 19 35.2	+1.8
COYC				eS	Sg	03 20 15.1	-1.6
COYC				AML	AML	03 20 18.9	
	comp=E,100nm,0.6s						
BDFB	Brasilia	34.38	45	LR	LR	03 40 50.7	
	comp=E,147nm,18.1s,baz=216,slow=38						
TXAR	Lajitas Array	77.27	333	P	P	03 30 43.5	-0.4
	comp=E,0.5nm,0.9s,baz=163,slow=7.6,SNR=3.9						
TORD	Torodi Ar. Bea	87.74	70	P	P	03 31 38.0	-0.8
	comp=E,1.0nm,1.1s,baz=213,slow=5.0,SNR=3.1						

IDC 01 03:38:09.3±3.7, 16°.48S×178°.58W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/19, mbtmp4.0/4, Error ellipse: s-maj=162.2km s-min=32.7km az=137.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.19	240	P	P	03 45 39.7	+0.4
	2.0nm,0.4s,baz=87,slow=10,SNR=21						
WRA	Warramunga Arr	44.75	258	P	P	03 46 24.5	-0.5
	0.3nm,0.3s,baz=94,slow=7.9,SNR=11						
ASAR	Alice Springs	45.04	253	P	P	03 46 26.9	-0.4
	5.0nm,0.5s,baz=88,slow=8.1,SNR=62						
ILAR	Eielson Array	84.54	13	P	P	03 50 44.0	0.0
	0.1nm,0.4s,baz=222,slow=5.2,SNR=5.9						

SKO 01 03:47:59.6, 41°.79N×22°.87E, h15km, M1.5, ML1.9
CSEM 01 03:47:59.5±0.1, 41°.82N×22°.87E, h10km, ML1.9/4, Error ellipse: s-maj=4.2km s-min=2.1km az=92.0
ISCJB 01 03:47:59.4±0.6, 41°.84N±0°.02×22°.81E±0°.07, h15km±7km, Error ellipse: s-maj=8.5km s-min=3.8km az=13.4
THE 01 03:47:59.5, 41°.81N×22°.88E, h2km±37km, ML1.9/4, Error ellipse: s-maj=37.5km s-min=0.7km az=0.0
BEO 01 03:48:02.2±0.4, 41°.87N×22°.76E, h0km, ML1.5/4
ATH 01 03:48:03.1, 40°.30N×22°.52E, h10km, MD2.9/3
ISC 01 03:47:59.4±1.0, 41°.81N±0°.02×22°.87E±0°.03, h9km±10km, n27, σ0s.40/45, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.54	205	P	Pg	03 48 10.0	+0.1
VAY				S	Sg	03 48 17.2	+0.2
VAY	Valandovo	0.54	205	ePg	Pn	03 48 12.9	-0.4
VAY				eSg	Sb	03 48 19.6	+0.7
VAY	Valandovo	0.54	205	i Pg	Pb	03 48 10.6	-0.5
VAY				i Sg	Sg	03 48 17.1	+0.2
VAY				eLg	Lg	03 48 17.6	
	comp=N,32nm,0.2s						
VAY				eLg	Lg	03 48 17.9	
	comp=E,79nm,0.4s						
VAY	Valandovo	0.54	205	P	Pg	03 48 10.0	+0.1
VAY	Valandovo	0.54	205	i Pg	Pb	03 48 11.0	0.0
VAY				S	Sg	03 48 17.2	+0.2
VAY				eLg	Lg	03 48 18.4	
	comp=E,79nm,0.4s						
KNT	Kendrikon	0.65	178	P	Pg	03 48 12.2	+0.2
KNT				S	Sg	03 48 20.9	+0.4
KNT	Kendrikon	0.65	178	P	Pg	03 48 12.2	+0.2
KNT				S	Sg	03 48 20.9	+0.4
VTS	Vitosha	0.82	18	P	Pg	03 48 15.1	-0.1
VTS				S	Sg	03 48 26.1	+0.2
VTS	Vitosha	0.82	18	ePg	Pn	03 48 16.9	-0.4
VTS				eSg	Sb	03 48 27.4	+0.3
VTS	Vitosha	0.82	18	P	Pg	03 48 15.1	-0.1
VTS	Vitosha	0.82	18	ePg	Pn	03 48 16.9	-0.4
VTS				S	Sg	03 48 26.1	+0.2
VTS				eSg	Sb	03 48 27.4	+0.3
NVR	Nevrokopi	0.87	122	P	Pg	03 48 16.1	-0.1
NVR				S	Sg	03 48 28.0	+0.4
NVR	Nevrokopi	0.87	122	P	Pg	03 48 16.1	-0.1
NVR				S	Sg	03 48 28.0	+0.4
SRS	Serrai	0.88	142	P	Pg	03 48 16.1	-0.2
SRS				S	Sb	03 48 28.5	-0.2
SRS	Serrai	0.88	142	P	Pg	03 48 16.1	-0.2
SRS				S	Sb	03 48 28.5	-0.2
GRG	Griva	0.93	203	P	Pg	03 48 17.0	-0.2
GRG				S	Sg	03 48 29.5	+0.2
GRG	Griva	0.93	203	ePB	Pg	03 48 15.7	-1.5
GRG	Griva	0.93	203	P	Pg	03 48 17.0	-0.2
GRG				S	Sg	03 48 29.5	+0.2
SOH	Sokhos	1.05	160	P	Pg	03 48 19.6	-0.1
SOH	Sokhos	1.05	160	ePB	Pg	03 48 18.7	-1.0
SOH	Sokhos	1.05	160	P	Pg	03 48 19.6	-0.1
HORT	Hortiatis	1.23	172	P	Pn	03 48 22.7	-0.1
HORT				S	Sn	03 48 39.9	+0.4
HORT	Hortiatis	1.23	172	P	Pn	03 48 22.7	-0.1
HORT				S	Sn	03 48 39.9	+0.4
BARS	Barje	1.27	322	ePg	Pn	03 48 23.4	0.0
BARS	Barje	1.27	322	ePg	Pn	03 48 23.4	0.0
ZAPS	Zavoj	1.47	353	ePg	Pg	03 48 27.8	+0.1
ZAPS				eSg	Sg	03 48 46.4	-0.4
FNA	Florina	1.53	228	ePB	Pn	03 48 21.9	-5.0

ISCJB 01 03:52:13.0±0.4, 39°.13N±0°.02×29°.06E±0°.03, h1km±4km, Error ellipse: s-maj=3.6km s-min=3.4km az=179.5
DDA 01 03:52:12.8, 39°.13N×29°.06E, h16km, MD3.1
ISK 01 03:52:12.8, 39°.12N×29°.05E, h5km, MD2.9
CSEM 01 03:52:13.3±0.1, 39°.12N×29°.05E, h5km, MD3.1, Error ellipse: s-maj=1.6km s-min=1.5km az=43.0
ISC 01 03:52:13.6±0.9, 39°.12N±0°.02×29°.06E±0°.02, h10km±9km, n72, σ0s.48/91, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.28	254	i P	Pg	03 52 19.4	+0.2
DEMI				i S	Sg	03 52 23.4	+0.5
DEMI	Demirci	0.28	254	i P	Pg	03 52 19.4	+0.2
DEMI				i S	Sg	03 52 23.4	+0.5
GDZ	Gediz	0.33	95	i P	Pg	03 52 20.1	-0.2
GDZ				i S	Sg	03 52 24.6	-0.1
GDZ	Gediz	0.33	95	i P	Pg	03 52 20.1	-0.2
GDZ				i S	Sg	03 52 24.6	-0.1
TVSB	Tavsanli	0.46	43	ePG	Pg	03 52 22.1	-0.5
TVSB				eSG	Sg	03 52 28.4	-0.2
TVSB	Tavsanli	0.46	43	ePg	Pg	03 52 22.1	-0.5
TVSB				eSg	Sg	03 52 28.5	-0.2
DST	Dursunbey	0.59	325	ePG	Pg	03 52 24.8	-0.3
DST				eSG	Sg	03 52 33.0	+0.1
DST	Dursunbey	0.59	325	ePg	Pg	03 52 24.8	-0.3
DST				eSg	Sg	03 52 33.0	+0.1
DURS	Dursunbey	0.66	317	i P	Pg	03 52 26.1	-0.3
DURS				i S	Sg	03 52 34.9	-0.2
DURS	Dursunbey	0.66	317	i P	Pg	03 52 26.1	-0.3
DURS				i S	Sg	03 52 34.9	-0.2
KULA	Kula-Manisa	0.68	207	ePG	Pg	03 52 26.0	-0.7
KULA	Kula-Manisa	0.68	207	ePg	Pg	03 52 26.0	-0.7
MANT	Manisa	0.74	212	i P	Pg	03 52 27.8	-0.1
MANT				i S	Sg	03 52 37.8	+0.3
MANT	Manisa	0.74	212	i P	Pg	03 52 27.8	-0.1
MANT				i S	Sg	03 52 37.8	+0.3
KHAL	Karahalli	0.82	155	i P	Pg	03 52 29.0	-0.5
KHAL				i S	Sg	03 52 39.7	-0.4
KHAL	Karahalli	0.82	155	i P	Pg	03 52 29.0	-0.5
KHAL				i S	Sg	03 52 39.7	-0.4
ALT	Altintas	0.82	94	ePG	Pb	03 52 30.1	+0.1
ALT	Altintas	0.82	94	ePg	Pb	03 52 30.1	+0.1
KHL	Karahalli	0.87	155	ePG	Pg	03 52 29.8	-0.6
KHL	Karahalli	0.87	155	ePg	Pg	03 52 29.8	-0.6
ORLT	Orhaneli	0.94	352	ePG	Pg	03 52 31.1	-0.4
ORLT	Orhaneli	0.94	352	ePg	Pg	03 52 31.2	-0.4
AKHS	Akhisar	1.00	257	i P	Pg	03 52 31.4	-1.4
AKHS				i S	Sb	03 52 46.7	+0.6
AKHS	Akhisar	1.00	257	i P	Pg	03 52 31.4	-1.4
AKHS				i S	Sb	03 52 46.7	+0.6
BALB	Balikesir	1.05	300	ePG	Pg	03 52 33.1	-0.6
BALB	Balikesir	1.05	300	ePg	Pg	03 52 33.2	-0.6
CAVI	Cavuskoy	1.24	29	ePN	Pn	03 52 36.8	-0.2
CAVI	Cavuskoy	1.24	29	ePn	Pn	03 52 36.8	-0.2
MDNY	Mudanya-Bursa	1.26	354	ePN	Pn	03 52 37.1	-0.1
MDNY	Mudanya-Bursa	1.26	354	ePn	Pn	03 52 37.1	-0.1
KCTX	Karacabey (Bur	1.27	335	ePN	Pn	03 52 37.2	-0.1
KCTX	Karacabey (Bur	1.27	335	ePn	Pn	03 52 37.3	-0.1
BALY	Balya	1.27	300	i P	Pn	03 52 37.6	+0.1
BALY				i S	Sb	03 52 54.4	+0.2
BALY	Balya	1.27	300	i P	Pn	03 52 37.6	+0.1
BALY				i S	Sb	03 52 54.4	+0.2
SHUT	Suhut-Afyon	1.30	115	ePN	Pn	03 52 38.0	+0.1
SHUT	Suhut-Afyon	1.30	115	ePn	Pn	03 52 38.0	+0.1
GONE	Gonen-Balikesi	1.41	312	ePN	Pb	03 52 39.6	-0.3
GONE	Gonen-Balikesi	1.41	312	ePn	Pb	03 52 39.6	-0.3
ADVT	Abdulvahap	1.42	22	ePN	Pn	03 52 39.6	+0.2
ADVT	Abdulvahap	1.42	22	ePn	Pn	03 52 39.6	+0.2
ESKT	Eskisehir	1.45	73	ePN	Pb	03 52 40.8	+0.1
ESKT	Eskisehir	1.45	73	ePn	Pb	03 52 40.8	+0.1
ARMT	Armutlu	1.45	354	ePN	Pb	03 52 40.4	-0.3
ARMT	Armutlu	1.45	354	ePn	Pb	03 52 40.4	-0.3
YLV	Yalova	1.47	9	ePN	Pb	03 52 40.9	-0.1
YLV	Yalova	1.47	9	ePn	Pb	03 52 40.9	-0.1
BNT	Bandirma	1.52	325	ePN	Pn	03 52 41.2	+0.4
BNT	Bandirma	1.52	325	ePn	Pn	03 52 41.2	+0.4
GPA	Golpazari	1.52	39	ePN	Pn	03 52 41.3	+0.5
GPA	Golpazari	1.52	39	ePn	Pn	03 52 41.3	+0.5
AYDN	Tasoluk	1.72	213	i P	Pb	03 52 44.8	-0.6
AYDN				i S	Sg	03 53 09.9	+0.9
AYDN	Tasoluk	1.72	213	i P	Pb	03 52 44.8	-0.6
GULT	Gulveren	1.73	40	ePN	Pn	03 52 44.2	+0.4
GULT	Gulveren	1.73	40	ePn	Pn	03 52 44.2	+0.4
BUY	Buyukada	1.73	2	ePN	Pn	03 52 44.4	+0.7
BUY	Buyukada	1.73	2	ePn	Pn	03 52 44.4	+0.7
KRBG	Karabiga-Canak	1.86	314	ePN	Pn	03 52 46.0	+0.5
KRBG	Karabiga-Canak	1.86	314	ePn	Pn	03 52 46.0	+0.5
MRMT	Marmara Adasi	1.86	323	ePN	Pn	03 52 46.6	+1.0
MRMT	Marmara Adasi	1.86	323	ePn	Pn	03 52 46.6	+1.0
SVRH	Sivrihisar-ESK	1.94	79	ePN	Pn	03 52 47.3	+0.6
SVRH	Sivrihisar-ESK	1.94	79	ePn	Pn	03 52 47.3	+0.6
ISK	Istanbul-Kandi	1.94	0	ePN	Pn	03 52 46.9	+0.2
ISK	Istanbul-Kandi	1.94	0	ePn	Pn	03 52 46.9	+0.2
RKY	Sarkoy-Tekirda	2.13	318	ePN	Pn	03 52 49.5	+0.2
RKY	Sarkoy-Tekirda	2.13	318	ePn	Pn	03 52 49.5	+0.2
MDUB	Mudurnu	2.13	50	ePN	Pn	03 52 50.0	+0.7
MDUB	Mudurnu	2.13	50	ePn	Pn	03 52 50.0	+0.7
MFT	Murefte	2.15	321	ePN	Pn	03 52 50.3	+0.7
MFT	Murefte	2.15	321	ePn	Pn	03 52 50.3	+0.7
CTKS	Kestanelik-??a	2.16	349	ePN	Pn	03 52 50.2	+0.6
CTKS	Kestanelik-??a	2.16	349	ePn	Pn	03 52 50.2	+0.6

IDC 01 03:53:14.3±2.1, 0°.93N×127°.37E, h0km, mb3.3/3, mb1 3.6/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=173.4km s-min=25.5km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.84	162	P	P	03 58 06.8	-1.9
	0.7nm,0.6s,baz=341,slow=11,SNR=7.4						
ASAR	Alice Springs	25.26	166	P	P	03 58 44.0	+1.5
	0.7nm,0.8s,baz=347,slow=10,SNR=5.3						
MKAR	Makanchi Array	60.21	326	P	P	04 03 24.2	-0.2
	0.3nm,0.8s,baz=117,slow=8.2,SNR=3.1						

JMA 01 03:54:41.8±0.3, 37°.74N×134°.44E, h405km±4km, M3.1
ISCJB 01 03:54:42.5±0.5, 37°.82N±0°.06×134°.48E±0°.07, h385km, mb2.8/4, Error ellipse: s-maj=8.1km s-min=7.3km az=3.9
IDC 01 03:54:43.0±1.1, 37°.71N×134°.47E, h396km±16km, mb2.5/4, mb1 2.8/9, mb1mx2.6/31, mbtmp2.7/9, Error ellipse: s-maj=30.5km s-min=16.9km az=169.0
ISC 01 03:54:42.6±0.8, 37°.73N±0°.08×134°.52E±0°.07, h385km, n23, σ1s.19/26, mb2.8/4, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	Kaga	2.05	134	P	Pn	03 55 39.1	+1.5
JWT	Wachi	2.55	164	P	Pn	03 55 42.5	+1.4
JWT				eS	S	03 56 29.7	+1.4
JGM	Miyama	2.69	138	P	Pn	03 55 43.4	+1.1
JHS	Saijyo	2.95	203	P	Pn	03 55 45.0	+0.6
JSD	Sado	2.98	83	P	Pn	03 55 45.9	+1.5
MAT	Matsushiro	3.18	111	P	Pn	03 55 47.3	+1.1
MAT	Matsushiro	3.18	111	P	Pn	03 55 48.0	+1.8
MJAR	Matsushiro Arr	3.18	111	P	Pn	03 55 47.9	+1.6
	2.0nm,0.3s,baz=288,slow=11,SNR=46						
JGT	Gotsu	3.22	214	P	Pn	03 55 47.2	+0.6
JIE	Ise	3.78	151	P	Pn	03 55 52.9	+1.2
JRY	Ryogami san	3.91	115	P	Pn	03 55 55.0	+2.0
JOD2	Odawara 2	4.43	122	P	Pn	03 55 58.8	+0.7
KSRS	Korea Array	5.25	269	P	Pn	03 56 08.2	+1.8
	0.2nm,0.3s,baz=90,slow=12,SNR=6.2						
JMK	Ichinoseki	5.41	75	P	Pn	03 56 08.8	+0.6
JMK				eS	S	03 57 17.4	-0.3
JNU	Nakatsue	5.48	214	P	Pn	03 56 09.3	+0.2
	1.0nm,0.3s,baz=88,slow=7.6,SNR=8.2						
BSO1	Boso 1	6.06	119	P	Pn	03 56 14.2	-0.6
BSO1				eS	S	03 57 28.3	-1.6
JOT	Ohata	6.22	52	P	Pn	03 56 17.9	+0.9
USRK	Ussuriysk Arra	6.74	344	P	P	03 56 23.8	+0.2
	0.3nm,0.3s,baz=182,slow=13,SNR=4.5						
ASAJ	Asahikawa	8.83	41	P	P	03 56 47.2	-0.2
	2.7nm,0.3s,baz=237,slow=9.5,SNR=12						

SONM	**Songino Array**	**22.86**	**305**	P	**P**	**03 59 13.2**	**-0.9**
	0.4nm,0.4s,baz=113,slow=10,SNR=4.8						
MKAR	**Makanchi Array**	**39.06**	**300**	P	**P**	**04 01 33.2**	**-0.8**
	0.2nm,0.4s,baz=78,slow=10,SNR=2.6						
ILAR	**Eielson Array**	**51.84**	**32**	P	**P**	**04 03 12.4**	**-0.1**
	0.3nm,0.6s,baz=285,slow=9.3,SNR=7.3						
YKA	**Yellowknife Ar**	**65.89**	**28**	P	**P**	**04 04 47.6**	**-0.3**
	0.1nm,0.6s,baz=299,slow=7.8,SNR=3.9						

IDC 01 04:05:22.8±3.8**, 16°25N×87°22W, h0**km**, mb3.5**/2**, mb1 3.8**/4**, mb1mx3.5**/22**, mbtmp3.5**/4**, ML3.7**/1**, Error ellipse: s-maj=99.1km s-min=58.3km az=78.0, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	**Tepich**	**4.08**	**346**	Pn	Pn	04 06 27.4	+0.9
	4.5nm,0.3s,baz=179,slow=2.1,SNR=35						
TEIG				Sn	Sn	04 07 14.5	-0.5
	9.7nm,0.3s,baz=252,slow=20,SNR=12						
TXAR	**Lajitas Array**	**19.95**	**314**	P	P	04 09 56.5	-0.2
	0.0nm,0.3s,baz=140,slow=10,SNR=7.2						
YKA	**Yellowknife Ar**	**50.04**	**344**	P	P	04 14 18.9	+0.1
	0.4nm,0.5s,baz=139,slow=7.7,SNR=13						
ILAR	**Eielson Array**	**62.67**	**335**	P	P	04 15 48.8	-0.2
	0.5nm,0.8s,baz=139,slow=4.7,SNR=8.1						

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*ISCJB **01** 04:08:53.3±0.7, 36°71N±0°05×70°5E±0°1, h250km, mb2.7/2, Error ellipse: s-maj=15.9km s-min=6.5km az=179.9*

*IDC **01** 04:08:55.1±5.0, 36°64N×70°88E, h273km±39km, mb2.6/2, mb1 2.9/8, mb1mx2.7/32, mbtmp2.9/8, Error ellipse: s-maj=66.3km s-min=29.7km az=144.0*

ISC 01 04:08:54.5±0.9**, 36°67N**±0°07×**70°6E**±0°2**, h250**km**, n13, σ1§43**/14**, 3C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.03**	**160**	⇓P	**Pn**	**04 09 48.5**	**+1.0**
CEP				S	**S**	**04 10 29.0**	**-0.4**
THW	**Thamme Wali**	**3.97**	**166**	⇓P	**Pn**	**04 09 58.8**	**+0.7**
SARP	**Sargodha**	**5.03**	**160**	P	**Pn**	**04 10 10.6**	**-0.1**
KK31	**Karatay Array**	**6.42**	**359**	Pn	Pn	04 10 25.2	-2.6
	1.7nm,0.5s,baz=178,slow=11,SNR=17						
KK31				⇓Pg		04 10 41.4	
	0.4nm,0.3s,baz=180,slow=12,SNR=5.1						
KK31				⇑Lg	Lg	04 11 44.5	
	0.5nm,0.3s,baz=248,slow=17,SNR=2.7						
AAK	**Ala-Archa**	**6.66**	**25**	P	**Pn**	**04 10 33.1**	**+2.2**
	0.8nm,0.3s,baz=176,slow=4.1,SNR=3.7						
AAK				S	**S**	**04 11 46.5**	**-1.6**
	0.8nm,0.3s,baz=117,slow=23,SNR=10.0						
TKM2	**Tokmak 2**	**7.32**	**30**	⇓Pn	**Pn**	**04 10 40.8**	**+1.5**
	0.9nm,0.5s						
TKM2				⇑Sn	S	04 11 51.5	-12
	3.0nm,1.2s						
TKM2				⇑Lg	Lg	04 12 25.2	
	4.2nm,1.4s						
MKAR	**Makanchi Array**	**13.33**	**37**	P	**P**	**04 11 55.0**	**-0.7**
	0.1nm,0.3s,baz=212,slow=12,SNR=5.0						
KURBB	**Kurchatov Arra**	**15.06**	**20**	P	**P**	**04 12 13.7**	**-1.0**
	0.1nm,0.3s,baz=210,slow=11,SNR=7.8						
BVAR	**Borovoye Array**	**16.35**	**359**	P	**P**	**04 12 29.9**	**+0.9**
	0.6nm,0.3s,baz=173,slow=13,SNR=8.0						
AKTO	**Aktyubinsk**	**16.49**	**331**	P	**P**	**04 12 31.9**	**+1.5**
	0.6nm,0.3s,baz=150,slow=9.1,SNR=9.8						
ZALV	**Zalesovo Beam**	**19.88**	**25**	P	**P**	**04 13 04.8**	**-2.1**
	0.6nm,0.3s,baz=215,slow=12,SNR=4.3						
TORD	**Torodi Ar. Bea**	**65.43**	**268**	P	**P**	**04 19 10.0**	**-1.0**
	0.2nm,0.7s,baz=45,slow=5.3,SNR=7.1						
YKA	**Yellowknife Ar**	**81.09**	**2**	P	**P**	**04 20 40.5**	**-0.9**
	0.1nm,0.7s,baz=344,slow=5.2,SNR=4.1						

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*ROM **01** 04:09:56.8±0.1, 45°12N×15°97E, h10km, Ml2.7/9, Error ellipse: s-maj=14.2km s-min=1.6km az=25.0*

*ISCJB **01** 04:09:57.1±0.5, 45°16N±0°02×15°80E±0°03, h5km±3km, Error ellipse: s-maj=4.6km s-min=2.8km az=41.5*

*CSEM **01** 04:09:58.6±0.2, 45°17N×15°69E, h10km, MD2.9, Error ellipse: s-maj=5.6km s-min=3.8km az=40.0*

*PRU **01** 04:09:58.8, 45°28N×15°81E, h1km, M2.5*

*BEO **01** 04:09:59.0±0.5, 45°12N×15°81E, h0km, ML2.5/5*

*VIE **01** 04:09:59.6±0.5, 45°30N×15°80E, h10km±1km, mb2.1/6, ML2.4/6, Error ellipse: s-maj=2.7km s-min=1.7km az=152.0 29 km SE of Karlovac*

*SZGRF **01** 04:10:00.6, 45°33N×15°98E, h10km, mb2.5, Northwestern Balkan Peninsula*

ISC 01 04:09:57.5±1.1**, 45°18N**±0°02×**15°82E**±0°02**, h8**km±9km**, n93, σ1§40**/145**, 13C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOJS	**Bojanci**	**0.51**	**309**	i Pg	**Pb**	**04 10 08.5**	**-0.2**
BOJS				i Sg	**Sb**	**04 10 16.6**	**+0.3**
BOJS							
	comp=Z,196nm,0.1s						
BOJS	**Bojanci**	**0.51**	**309**	i Pg	**Pb**	**04 10 08.5**	**-0.2**
BOJS				i Sg	**Sb**	**04 10 16.6**	**+0.3**
CRES	**Cresnjev**	**0.69**	**339**	i Pg	**Pb**	**04 10 12.0**	**+0.2**
CRES				i Sg	**Sb**	**04 10 22.3**	**+0.8**
CRES							
	comp=Z,19nm,0.1s						
CRES	**Cresnjev**	**0.69**	**339**	i Pg	**Pb**	**04 10 12.0**	**+0.2**
CRES				i Sg	**Sb**	**04 10 22.3**	**+0.8**
GCIS	**Gornji Cirnik**	**0.70**	**349**	i Pg	**Pb**	**04 10 12.2**	**+0.3**
GCIS				i Sg	**Sb**	**04 10 22.5**	**+0.8**
GCIS							
	comp=Z,39nm,0.1s						
GCIS	**Gornji Cirnik**	**0.70**	**349**	i Pg	**Pb**	**04 10 12.2**	**+0.3**
GCIS				i Sg	**Sb**	**04 10 22.5**	**+0.8**
GBRS	**Gornja Briga**	**0.79**	**297**	i Pg	**Pb**	**04 10 13.4**	**-0.1**
NVLJ	**Novalja**	**0.91**	**228**	ePg	**Pg**	**04 10 13.6**	**-1.5**
NVLJ				Sg	**Sg**	**04 10 25.6**	**-1.2**
NVLJ	**Novalja**	**0.91**	**228**	ePg	**Pg**	**04 10 13.5**	**-1.5**
NVLJ				Sg	**Sg**	**04 10 25.6**	**-1.2**
VISS	**Visnje**	**0.93**	**312**	i Pg	**Pb**	**04 10 15.9**	**+0.1**
VISS				i Sg	**Sb**	**04 10 28.3**	**+0.1**
VISS							
	comp=Z,130nm,0.3s						
VISS	**Visnje**	**0.93**	**312**	i Pg	**Pb**	**04 10 15.9**	**+0.1**
VISS				i Sg	**Sb**	**04 10 28.3**	**+0.1**
BLY	**Banja Luka**	**1.06**	**114**	⇑iPg	Pg	04 10 14.5	-3.3
BLY				eSg	**Sg**	**04 10 31.6**	**0.0**
BLY	**Banja Luka**	**1.06**	**114**	Pg	Pg	04 10 14.5	-3.3
	comp=Z,97nm,0.4s						
LJU	**Ljubljana**	**1.25**	**314**	ePg	**Pg**	**04 10 22.2**	**+0.8**
LJU				eSg	**Sn**	**04 10 38.0**	**-0.3**
LJU	**Ljubljana**	**1.25**	**314**	ePg	**Pg**	**04 10 22.2**	**+0.8**
LJU				eSg	**Sn**	**04 10 38.0**	**-0.3**
BEHE	**Becsehely**	**1.45**	**27**	⇑ePn	**Pn**	**04 10 23.8**	**-0.2**
BEHE				eSn	**Sg**	**04 10 46.7**	**+2.5**
TRI	**Trieste**	**1.54**	**291**	⇑ePg	**Pb**	**04 10 26.4**	**+0.2**
TRI	**Trieste**	**1.54**	**291**	Pg	**Pb**	**04 10 26.3**	**+0.1**
TRI				Sn	**Sg**	**04 10 48.3**	**+1.4**
	comp=Z,58nm,0.6s						
TRI	**Trieste**	**1.54**	**291**	Pg	**Pb**	**04 10 26.3**	**+0.1**
TRI				Sn	**Sg**	**04 10 48.3**	**+1.4**
	comp=Z,58nm,0.6s						
SOKA	**Soboth**	**1.59**	**340**	⇓iPn	**Pn**	**04 10 26.4**	**+0.4**
SOKA				⇓iSn	**Sb**	**04 10 47.0**	**-0.5**
SOKA	**Soboth**	**1.59**	**340**	⇓iPn	**Pn**	**04 10 26.4**	**+0.4**
SOKA				i Sn	**Sb**	**04 10 47.0**	**-0.5**
OBKA	**Obir**	**1.60**	**327**	ePn	**Pb**	**04 10 27.3**	**0.0**
OBKA				eSg	**Sg**	**04 10 50.3**	**+1.5**
OBKA	**Obir**	**1.60**	**327**	⇑ePn	**Pb**	**04 10 27.2**	**0.0**
	SNR=6.9						
OBKA				⇓iSn	**Sb**	**04 10 46.9**	**-0.7**
OBKA				⇓iSg	**Sg**	**04 10 49.6**	**+0.8**
	comp=Z,98nm,0.5s						
OBKA	**Obir**	**1.60**	**327**	Pn	**Pb**	**04 10 27.2**	**0.0**
	SNR=6.9						
OBKA				Sn	**Sb**	**04 10 46.9**	**-0.7**
OBKA				Sg	**Sg**	**04 10 49.6**	**+0.8**
	comp=Z,98nm,0.5s						
VOY	**Vojsko**	**1.60**	**303**	ePn	**Pb**	**04 10 27.4**	**+0.2**
VOY	**Vojsko**	**1.60**	**303**	ePn	**Pb**	**04 10 27.4**	**+0.2**
VOY				i Sn	**Sn**	**04 10 46.9**	**0.0**
SABO	**M.te Sabotino**	**1.75**	**298**	ePg	**Pb**	**04 10 29.9**	**+0.1**
SABO	**M.te Sabotino**	**1.75**	**298**	Pg	**Pb**	**04 10 30.0**	**+0.1**
SABO				Sn	**Sg**	**04 10 53.5**	**-0.2**
	comp=Z,85nm,0.3s						
SABO	**M.te Sabotino**	**1.75**	**298**	ePg	**Pb**	**04 10 29.9**	**+0.1**
SABO				Sn	**Sg**	**04 10 53.5**	**-0.2**
	comp=Z,85nm,0.3s						
DRE	**Drenchia**	**1.82**	**304**	⇑ePg	**Pn**	**04 10 29.5**	**+0.4**
DRE	**Drenchia**	**1.82**	**304**	ePg	**Pn**	**04 10 29.5**	**+0.4**
COLI	**Coloredo**	**1.96**	**300**	⇑ePg	**Pb**	**04 10 33.0**	**-0.4**
COLI	**Coloredo**	**1.96**	**300**	ePg	**Pb**	**04 10 33.0**	**-0.4**
VINO	**Villanova**	**2.08**	**302**	⇑ePg	**Pn**	**04 10 33.8**	**+1.2**
VINO	**Villanova**	**2.08**	**302**	Pg	**Pn**	**04 10 33.7**	**+1.1**
	comp=Z,31nm,0.5s						
VINO	**Villanova**	**2.08**	**302**	Pg	**Pn**	**04 10 33.7**	**+1.1**
	comp=Z,31nm,0.5s						
ARSA	**Arzberg**	**2.08**	**354**	ePn	**Pn**	**04 10 33.5**	**+0.8**
ARSA				ePg	**Pg**	**04 10 37.3**	**0.0**
ARSA	**Arzberg**	**2.08**	**354**	ePn	**Pn**	**04 10 33.2**	**+0.5**
	SNR=7.0						
ARSA				⇓iPg	**Pg**	**04 10 37.3**	**0.0**
ARSA				⇓iSn	**Sn**	**04 10 58.2**	**-0.5**
ARSA	**Arzberg**	**2.08**	**354**	ePn	**Pb**	**04 10 35.1**	**-0.3**
ARSA	**Arzberg**	**2.08**	**354**	Pn	**Pn**	**04 10 33.2**	**+0.5**
	SNR=7.0						
MYKA	**Terra Mystica**	**2.10**	**314**	⇓iPn	**Pn**	**04 10 33.7**	**+0.7**
MYKA				⇓iSn	**Sn**	**04 11 00.3**	**+1.0**
MYKA	**Terra Mystica**	**2.10**	**314**	⇓iPn	**Pn**	**04 10 33.7**	**+0.7**
MYKA				i Sn	**Sn**	**04 11 00.3**	**+1.0**
ACOM	**Acomizza, Ital**	**2.11**	**311**	⇑ePg	**Pn**	**04 10 34.3**	**+1.1**
ACOM	**Acomizza, Ital**	**2.11**	**311**	Pg	**Pn**	**04 10 34.3**	**+1.1**
	comp=Z,66nm,0.5s						
ACOM	**Acomizza, Ital**	**2.11**	**311**	Pg	**Pn**	**04 10 34.3**	**+1.1**
	comp=Z,66nm,0.5s						
PTCC	**Patocco-Chiusa**	**2.11**	**306**	Pg	**Pn**	**04 10 34.1**	**+0.9**
	comp=Z,20nm,0.5s						
PTCC	**Patocco-Chiusa**	**2.11**	**306**	Pg	**Pn**	**04 10 34.1**	**+0.9**
	comp=Z,20nm,0.5s						
GEPF	**Gemona**	**2.17**	**301**	Pg	**Pn**	**04 10 35.1**	**+1.2**
	comp=Z,32nm,0.4s						
PKS9	**Tamasi**	**2.22**	**50**	epn	**Pg**	**04 10 39.4**	**-0.6**
PKS9				esn	**Sg**	**04 11 07.7**	**-1.1**
PKSM	**Moragy**	**2.23**	**61**	ePn	**Pb**	**04 10 37.8**	**-0.2**
PKSM				eSn	**Sb**	**04 11 06.3**	**+0.6**
PKSM	**Moragy**	**2.23**	**61**	ePn	**Pn**	**04 10 32.8**	**-1.9**
PKSM				eSn	**Sn**	**04 10 57.9**	**-4.5**
PKSM	**Moragy**	**2.23**	**61**	ePn	**Pb**	**04 10 37.8**	**-0.2**
PKSM				eSn	**Sb**	**04 11 06.3**	**+0.6**
FUSE	**Fusea**	**2.32**	**303**	⇓ePn	**Pb**	**04 10 38.3**	**-1.3**
FUSE	**Fusea**	**2.32**	**303**	⇓ePn	**Pb**	**04 10 38.3**	**-1.3**
ZOU	**Zoufplan**	**2.42**	**306**	ePn	**Pn**	**04 10 39.5**	**+2.0**
POLC	**Polcenigo**	**2.48**	**291**	Pg	**Pn**	**04 10 38.9**	**+0.8**
	comp=Z,67nm,0.4s						
POLC	**Polcenigo**	**2.48**	**291**	⇑ePn	**Pn**	**04 10 39.2**	**+1.1**
PKST	**T"s**	**2.59**	**36**	ePn	**Pn**	**04 10 38.6**	**-1.0**
PKST				esn	**Sn**	**04 11 06.2**	**-5.0**
STON	**Ston**	**2.68**	**149**	ePn	**Pn**	**04 10 41.0**	**+0.1**
STON				Sn	**Sn**	**04 11 13.2**	**-0.3**
STON	**Ston**	**2.68**	**149**	ePn	**Pn**	**04 10 40.9**	**+0.1**
STON				Sn	**Sn**	**04 11 13.1**	**-0.3**
PKS2	**Kecel**	**2.71**	**60**	ePn	**Pn**	**04 10 39.5**	**-1.8**
TEKS	**Tekeris**	**2.71**	**102**	ePn	**Pn**	**04 10 44.0**	**+2.6**
TEKS	**Tekeris**	**2.71**	**102**	ePn	**Pn**	**04 10 44.0**	**+2.6**
CONA	**Conrad Observa**	**2.75**	**1**	ePn	**Pn**	**04 10 42.5**	**+0.6**
	SNR=26						
CONA				⇓iSn	**Sn**	**04 11 15.3**	**0.0**
CONA	**Conrad Observa**	**2.75**	**1**	Pn	**Pn**	**04 10 42.5**	**+0.6**
	SNR=26						
CONA				Sn	**Sn**	**04 11 15.3**	**0.0**
MOA	**Molln**	**2.88**	**339**	ePn	**Pn**	**04 10 45.1**	**+1.5**
MOA				eSn	**Sn**	**04 11 19.5**	**+1.1**
MOA	**Molln**	**2.88**	**339**	⇑ePn	**Pn**	**04 10 44.3**	**+0.7**
	SNR=9.6						
MOA				⇓iSn	**Sn**	**04 11 18.8**	**+0.4**
MOA	**Molln**	**2.88**	**339**	Pn	**Pn**	**04 10 44.3**	**+0.7**
	SNR=9.6						
MOA				Sn	**Sn**	**04 11 18.8**	**+0.4**
BBLS	**Lazići**	**2.88**	**116**	ePn	**Pn**	**04 10 46.2**	**+2.5**
BBLS	**Lazići**	**2.88**	**116**	ePn	**Pn**	**04 10 46.2**	**+2.5**
DIVS	**Divibare**	**3.17**	**109**	ePn	**Pn**	**04 10 50.4**	**+2.7**
DIVS				eSn	**Sn**	**04 11 28.1**	**+2.4**
DIVS	**Divibare**	**3.17**	**109**	ePn	**Pn**	**04 10 50.4**	**+2.7**
DIVS				eSn	**Sn**	**04 11 28.1**	**+2.4**
RJOB	**Jochberg**	**3.30**	**322**	ePn	**Pn**	**04 10 51.7**	**+2.2**
RJOB				eSn	**Sn**	**04 11 31.9**	**+3.0**
DDS	**Dosso del Somm**	**3.33**	**284**	⇑ePn	**Pn**	**04 10 50.9**	**+0.9**
DDS	**Dosso del Somm**	**3.33**	**284**	⇑ePn	**Pn**	**04 10 50.8**	**+0.9**
ABSI	**Aberstueckl**	**3.50**	**298**	Pg	**Pn**	**04 10 54.0**	**+1.7**
ABSI	**Aberstueckl**	**3.50**	**298**	⇑ePn	**Pn**	**04 10 53.8**	**+1.5**
WTTA	**Wattenberg**	**3.57**	**307**	ePn	**Pn**	**04 10 55.4**	**+2.1**
WTTA				eSn	**Sb**	**04 11 40.2**	**-4.3**
WTTA				eSg	**Sg**	**04 11 50.7**	**-1.4**
GRUS	**Gruza**	**3.73**	**109**	ePn	**Pn**	**04 10 58.2**	**+2.9**
GRUS				eSn	**Sn**	**04 11 41.7**	**+2.2**
GRUS	**Gruza**	**3.73**	**109**	ePn	**Pn**	**04 10 58.2**	**+2.9**
GRUS				eSn	**Sn**	**04 11 41.7**	**+2.2**
GEC2	**GERESS Array S**	**3.94**	**339**	ePn	**Pn**	**04 10 59.1**	**+0.8**
GEC2				eSn	**Sn**	**04 11 44.4**	**-0.3**
VRAC	**Vranov**	**4.16**	**7**	ePn	**Pn**	**04 11 01.5**	**+0.2**
KHC	**Kasperske Hory**	**4.24**	**340**	ePN	**Pn**	**04 11 02.8**	**+0.5**
KHC				eSN	**Sn**	**04 11 50.1**	**-1.8**
KHC	**Kasperske Hory**	**4.24**	**340**	Pn	**Pn**	**04 11 02.8**	**+0.5**
KHC				Sn	**Sn**	**04 11 50.1**	**-1.8**
WET	**Wettzell**	**4.44**	**334**	ePn	**Pn**	**04 11 06.5**	**+1.4**
WET				eSn	**Sn**	**04 11 56.2**	**-0.8**
PRU	**Pruhonice**	**4.89**	**350**	eSN	**Sn**	**04 12 06.5**	**-1.4**
PRU	**Pruhonice**	**4.89**	**350**	Sn	**Sn**	**04 12 06.5**	**-1.4**
ROTZ	**Rotzenmuhle**	**5.20**	**333**	eSn	**Sn**	**04 12 13.2**	**-2.4**
MANZ	**Manzenberg**	**5.42**	**334**	eSn	**Sn**	**04 12 19.2**	**-1.9**
NKC	**Novy Kostel**	**5.54**	**337**	eSN	**Sn**	**04 12 22.0**	**-2.1**
TANN	**Tannenbergstha**	**5.70**	**338**	eSn	**Sn**	**04 12 25.8**	**-2.3**
BFO	**Black Forest**	**6.03**	**304**	eSn	**Sn**	**04 12 36.2**	**+0.1**
MOX	**Moxa**	**6.15**	**334**	eSn	**Sn**	**04 12 36.7**	**-2.4**

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*IDC **01** 04:22:43.2±2.4, 6°81N×72°82W, h144km±20km, mb3.3/7, mb1 3.6/8, mb1mx3.4/24, mbtmp3.3/8, Error ellipse: s-maj=30.8km s-min=17.8km az=75.0*

*ISCJB **01** 04:22:44.1±0.5, 6°78N±0°07×72°96W±0°06, h166km, mb3.3/6, Error ellipse: s-maj=11.3km s-min=6.1km az=147.2*

*FUNV **01** 04:22:52.3, 7°06N×72°65W, h137km, MW3.5*

ISC 01 04:22:45.5±0.7**, 6°88N**±0°08×**72°86W**±0°08**, h166**km**, n27, σ1§88**/36**, mb3.3**/6**, 1C-12D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.12**	**29**	⇑eP	**Pn**	**04 23 13.7**	**+0.6**
CAPV				eS	**Sn**	**04 23 31.1**	**-3.2**
SOCV	**Socops**	**2.42**	**55**	⇓iP	**Pn**	**04 23 28.0**	**+1.5**
SOCV				eS	**Sn**	**04 23 53.3**	**-5.1**
VIGV	**El Vigia**	**2.45**	**37**	⇓eP	**Pn**	**04 23 28.3**	**+1.5**
VIGV				eS	**Sn**	**04 23 54.5**	**-4.4**
ROSC	**El Rosal**	**2.49**	**216**	P	**Pn**	**04 23 25.9**	**-1.8**
	38nm,0.3s,baz=303,slow=1.0,SNR=139						
ROSC				S	**Sn**	**04 23 55.3**	**-5.0**
	77nm,0.3s,baz=78,slow=23,SNR=22						
ELOV	**Elorza**	**3.35**	**88**	⇓iP	**Pn**	**04 23 40.2**	**+2.3**
SANV	**Sanarito**	**4.19**	**51**	⇓eP	**Pn**	**04 23 50.2**	**+1.4**
CURV	**Curarigua**	**4.23**	**42**	⇓iP	**Pn**	**04 23 50.6**	**+1.4**
DABV	**Dabajuro**	**4.58**	**28**	⇓iP	**Pn**	**04 23 54.5**	**+0.8**
TEPV	**Terepaima**	**4.75**	**50**	⇓iP	**Pn**	**04 23 57.5**	**+1.6**
SIQV	**Siquisique**	**4.81**	**39**	⇓iP	**Pn**	**04 23 57.7**	**+1.0**
MAPV	**Macapo**	**5.25**	**56**	⇓iP	**Pn**	**04 24 04.0**	**+1.5**
MONV	**Montecano**	**5.79**	**29**	eP	**Pn**	**04 24 10.2**	**+0.6**
TURV	**Turiamo**	**6.10**	**54**	⇓eP	**Pn**	**04 24 14.5**	**+0.9**
MERV	**Las Mercedes**	**6.91**	**70**	⇓eP	**Pn**	**04 24 24.9**	**+0.4**
BIRV	**Birongo**	**7.43**	**61**	eP	**Pn**	**04 24 32.1**	**+0.8**
CUPV	**Cœpira**	**7.67**	**65**	⇓iP	**Pn**	**04 24 35.1**	**+0.5**
PRGV	**PARIAGUAN**	**8.35**	**77**	eP	**Pn**	**04 24 43.3**	**-0.2**
PCRV	**Puerto La Cruz**	**8.76**	**67**	eP	**Pn**	**04 24 50.4**	**+1.3**
TEIG	**Tepich**	**19.99**	**313**	P	**P**	**04 27 05.8**	**+0.5**
	3.8nm,0.4s,baz=114,slow=23,SNR=8.6						
TXAR	**Lajitas Array**	**36.62**	**311**	P	**P**	**04 29 36.4**	**+0.2**
	0.5nm,0.4s,baz=130,slow=9.4,SNR=11						
TXAR				PcP	**PcP**	**04 31 57.7**	**+2.0**
	0.2nm,0.7s,baz=141,slow=5.8,SNR=3.6						
PDAR	**Pinedale Array**	**48.19**	**324**	P	**P**	**04 31 09.1**	**-0.4**
	0.5nm,0.5s,baz=132,slow=10,SNR=4.1						
NVAR	**Mina Array Bea**	**51.63**	**314**	P	**P**	**04 31 36.1**	**+0.6**
	0.3nm,0.6s,baz=125,slow=6.0,SNR=3.6						
NVAR				PcP	**PcP**	**04 32 48.3**	**+1.3**
	0.1nm,0.3s,baz=132,slow=5.4,SNR=2.7						
YKA	**Yellowknife Ar**	**63.30**	**340**	P	**P**	**04 32 56.9**	**+0.5**
	1.7nm,0.5s,baz=133,slow=6.6,SNR=70						
TORD	**Torodi Ar. Bea**	**73.47**	**78**	P	**P**	**04 34 00.1**	**-0.3**
	0.4nm,1.0s,baz=287,slow=7.1,SNR=4.3						
ILAR	**Eielson Array**	**77.02**	**335**	P	**P**	**04 34 20.4**	**+0.5**
	0.2nm,0.6s,baz=111,slow=4.7,SNR=5.5						
ASAR	**Alice Springs**	**149.36**	**234**	PKP	**PKPdf**	**04 42 11.4**	**+0.3**
	1.2nm,0.5s,baz=118,slow=3.6,SNR=9.7						
ASAR				PKPbc	**PKPbc**	**04 42 15.2**	**-0.5**
	1.2nm,0.5s,baz=118,slow=3.6,SNR=17						
ASAR				PKPab	**PKPab**	**04 42 21.4**	**+0.6**
	0.4nm,0.5s,baz=105,slow=3.8,SNR=5.3						
WRA	**Warramunga Arr**	**150.59**	**241**	PKP	**PKPdf**	**04 42 13.0**	**-0.1**
	0.4nm,0.8s,baz=107,slow=2.6,SNR=4.0						
WRA				PKPbc	**PKPbc**	**04 42 18.2**	**-0.5**
	1.2nm,0.4s,baz=108,slow=2.6,SNR=52						

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*ISCJB **01** 04:27:07.0±0.6, 35°94N±0°04×70°50E±0°09, h110km, mb3.0/1, Error ellipse: s-maj=11.4km s-min=4.3km az=157.6*

*IDC **01** 04:27:07.4±16.0, 35°84N×70°36E, h96km±152km, mb3.4/2, mb1 3.3/6, mb1mx3.0/31, mbtmp3.3/6, ML3.6/4, Error ellipse: s-maj=115.8km s-min=51.1km az=165.0*

*NNC **01** 04:27:14.5±4.2, 36°46N×70°23E, h88km±57km, mb3.2, mpv3.8, Error ellipse: s-maj=31.2km s-min=27.0km az=12.0*

ISC 01 04:27:07.2±0.9**, 35°97N**±0°06×**70°4E**±0°1**, h110**km**, n27, σ2§27**/29**, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.49**	**149**	P	**Pn**	**04 27 48.0**	**+1.3**
CEP				S	**Sn**	**04 28 17.0**	**0.0**
CHCP	**Chirah Chowk**	**3.33**	**133**	P	**Pn**	**04 27 59.5**	**+1.9**
THW	**Thamme Wali**	**3.37**	**160**	P	**Pn**	**04 27 59.0**	**+0.8**
SARP	**Sargodha**	**4.47**	**154**	P	**Pn**	**04 28 10.4**	**-2.5**
SARP				S	**Sn**	**04 29 02.0**	**-2.0**
KK31	**Karatay Array**	**7.13**	**1**	P	**Pn**	**04 28 50.3**	**+1.4**
	2.7nm,0.3s,baz=190,slow=12,SNR=49						
KK31				⇓S	**Sn**	**04 30 05.0**	**-3.3**
	3.6nm,0.4s,baz=191,slow=26,SNR=5.9						
TKM2	**Tokmak 2**	**8.04**	**29**	⇑P	**Pn**	**04 29 02.5**	**+1.1**
	2.4nm,0.5s						
TKM2				⇓S	**Sn**	**04 30 28.8**	**-2.0**
	2.7nm,0.6s						
DANN	**Dangsing**	**13.66**	**120**	eP	Pn	04 30 13.0	-3.6
KOLN	**Koldanda**	**13.90**	**122**	eP	Pn	04 30 16.1	-3.6
	3.9nm,0.3s						
MK31	**Makanchi Array**	**14.03**	**36**	P	**P**	**04 30 25.1**	**-0.3**
	0.5nm,0.7s,baz=201,slow=7.9,SNR=4.1						
MKAR	**Makanchi Array**	**14.03**	**36**	P	**Pn**	**04 30 23.1**	**+2.0**
	0.1nm,0.3s,baz=228,slow=14,SNR=4.5						
DMN	**Daman**	**15.05**	**119**	eP	**Pn**	**04 30 32.5**	**-1.9**
	6.6nm,0.4s						
KKN	**Kakani**	**15.07**	**119**	eP	**Pn**	**04 30 32.8**	**-1.8**
	5.9nm,0.5s						
PKIN	**Phulchoki**	**15.28**	**119**	eP	**Pn**	**04 30 35.3**	**-2.0**
PKI	**Pulchoki**	**15.29**	**119**	eP	**Pn**	**04 30 36.0**	**-1.5**
AB31	**Akbulak array**	**15.31**	**333**	P	**P**	**04 30 39.0**	**-0.5**
	0.9nm,0.4s,baz=155,slow=14,SNR=44						
AB31				S	Sn	04 33 19.6	-6.7
	1.1nm,0.5s,baz=152,slow=22,SNR=7.7						
GUN	**Gumba**	**15.43**	**117**	eP	**Pn**	**04 30 38.5**	**-0.7**
KURBB	**Kurchatov Arra**	**15.80**	**19**	P	**Pn**	**04 30 44.0**	**+0.7**
	0.1nm,0.3s,baz=210,slow=11,SNR=5.8						
RAMN	**Ramite**	**16.51**	**118**	eP	**Pn**	**04 30 50.3**	**-2.2**
	6.7nm,0.6s						
VOSK	**Vostochnaya**	**16.76**	**1**	⇑P	**P**	**04 30 56.4**	**+0.9**
	2.2nm,1.3s						
AKTO	**Aktyubinsk**	**16.99**	**332**	P	**P**	**04 31 01.3**	**+3.2**
	0.5nm,0.3s,baz=132,slow=12,SNR=6.8						
AKTO				S	**Sn**	**04 34 01.8**	**-5.1**
	0.2nm,0.3s,baz=338,slow=19,SNR=4.3						
ZRNK	**Zerenda**	**17.01**	**357**	⇑P	**P**	**04 31 02.3**	**+4.0**
	1.4nm,0.6s						
BVA0	**Borovoye Array**	**17.06**	**0**	P	**P**	**04 31 03.2**	**+4.4**
	0.2nm,0.9s,baz=163,slow=12,SNR=4.0						
BVAR	**Borovoye Array**	**17.06**	**0**	P	**P**	**04 30 59.9**	**+1.1**
	0.4nm,0.3s,baz=186,slow=9.8,SNR=4.6						
TAPN	**Taplejung**	**17.08**	**115**	eP	**P**	**04 30 59.7**	**+0.1**
ODAN	**Odare**	**17.13**	**117**	eP	**P**	**04 31 00.4**	**+0.3**
	6.5nm,0.4s						
ZALV	**Zalesovo Beam**	**20.62**	**25**	P	Pn	04 31 40.5	-0.3
	2.6nm,0.4s,baz=217,slow=11,SNR=9.4						
TORD	**Torodi Ar. Bea**	**65.17**	**268**	P	**P**	**04 37 38.5**	**+1.6**
	0.1nm,0.4s,baz=38,slow=7.7,SNR=4.3						

IDC 01 04:29:36.7±3.7**, 5°31S×150°20E, h0**km**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.4**/18**, mbtmp3.4**/3**, Error ellipse: s-maj=132.0km s-min=49.6km az=119.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.21**	**225**	P	P	04 34 24.8	+0.6
	0.4nm,0.3s,baz=50,slow=10,SNR=3.6						
ASAR	**Alice Springs**	**24.08**	**219**	P	P	04 34 53.1	-1.0
	0.2nm,0.5s,baz=58,slow=7.9,SNR=2.9						
FITZ	**Fitzroy Crossi**	**27.16**	**240**	P	P	04 35 22.2	+0.1
	1.9nm,0.9s,baz=48,slow=12,SNR=3.5						
TORD	**Torodi Ar. Bea**	**147.98**	**286**	PKPbc	PKPbc	04 49 24.7	-0.6
	0.6nm,0.5s,baz=72,slow=2.4,SNR=7.2						

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*ISCJB **01** 04:33:49.8±1.3, 19°59N±0°03×63°43W±0°02, h20km±10km, mb4.2/52, MS3.6/1, Error ellipse: s-maj=5.0km s-min=3.6km az=13.1*

*RSPR **01** 04:33:51.2, 19°88N×63°48W, h46km±15km*

*TRN **01** 04:33:51.2, 19°52N×62°74W, h3km*

*IDC **01** 04:33:54.0±0.5, 19°52N×63°42W, h42km±4km, mb3.7/24, mb1 3.9/25, mb1mx3.9/32, mbtmp3.8/25, ML3.4/1, MS3.7/1, Ms1 3.7/1, ms1mx3.4/9, Error ellipse: s-maj=12.1km s-min=10.0km az=42.0*

*NEIC **01** 04:33:54.0±0.8, 19°48N×63°53W, h36km±9km, mb4.5/31, Error ellipse: s-maj=10.1km s-min=4.4km az=208.0*

ISC 01 04:33:54.1±0.4**, 19°55N**±0°05×**63°47W**±0°03**, h41**km±4km**, n165, σ1§40**/188**, mb4.3**/52**, 10C-22D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	**Tortola**	**1.56**	**224**	⇓iP	**Pn**	**04 34 18.6**	**-0.7**
TBVI	**Tortola**	**1.56**	**224**	⇓iP	**Pn**	**04 34 18.6**	**-0.7**
STVI	**Saint Thomas**	**1.84**	**230**	⇑eP	**Pn**	**04 34 22.6**	**-0.6**
STVI	**Saint Thomas**	**1.84**	**230**	eS	**Sn**	**04 34 46.9**	**+1.7**
STVI	**Saint Thomas**	**1.84**	**230**	ePn	**Pn**	**04 34 22.5**	**-0.6**
STVI				eS	**Sn**	**04 34 45.5**	**+0.3**
SEUS	**St. Eustatius**	**2.10**	**167**	⇑eP	**Pn**	**04 34 27.4**	**+0.6**
SEUS	**St. Eustatius**	**2.10**	**167**	⇑eP	**Pn**	**04 34 27.4**	**+0.6**
CDVI	**St. Croix**	**2.17**	**215**	⇓iP	**Pn**	**04 34 28.1**	**+0.4**
CDVI	**St. Croix**	**2.17**	**215**	eS	**Sn**	**04 34 56.4**	**+3.0**
CDVI	**St. Croix**	**2.17**	**215**	ePn	**Pn**	**04 34 28.4**	**+0.7**
CDVI				eS	**Sn**	**04 34 56.5**	**+3.2**
MTP	**Monte Pirata**	**2.44**	**234**	⇓eP	**Pn**	**04 34 30.9**	**-0.5**
MTP	**Monte Pirata**	**2.44**	**234**	eS	**Sn**	**04 35 01.7**	**+1.6**
MTP	**Monte Pirata**	**2.44**	**234**	ePn	**Pn**	**04 34 30.6**	**-0.9**
MTP				eS	**Sn**	**04 35 02.3**	**+2.2**
ANWB	**Willy Bob**	**2.46**	**139**	ePn	**Pn**	**04 34 28.8**	**-2.9**
ANWB				eS	**Sn**	**04 34 59.6**	**-1.0**
NEV	**Hard Times**	**2.55**	**160**	eP	**Pn**	**04 34 33.2**	**+0.3**
NEV	**Hard Times**	**2.55**	**160**	e	**Sn**	**04 35 05.1**	**+2.4**
NEV	**Hard Times**	**2.55**	**160**	eP	**Pn**	**04 34 33.2**	**+0.3**
CBYP	**Canovanas**	**2.59**	**241**	⇑eP	**Pn**	**04 34 32.3**	**-1.2**
CBYP	**Canovanas**	**2.59**	**241**	⇑eP	**Pn**	**04 34 32.3**	**-1.2**
HUMP	**Col San Antoni**	**2.65**	**239**	⇓eP	**Pn**	**04 34 33.5**	**-0.8**
HUMP	**Col San Antoni**	**2.65**	**239**	eS	**Sn**	**04 35 05.8**	**+0.6**
HUMP	**Col San Antoni**	**2.65**	**239**	⇓eP	**Pn**	**04 34 33.5**	**-0.8**
HUMP				eS	**Sn**	**04 35 05.8**	**+0.6**
CPD	**Cerro la Pandu**	**2.76**	**237**	⇑eP	**Pn**	**04 34 35.1**	**-0.7**
CPD	**Cerro la Pandu**	**2.76**	**237**	eS	**Sn**	**04 35 08.7**	**+0.7**
CPD	**Cerro la Pandu**	**2.76**	**237**	⇑eP	**Pn**	**04 34 35.1**	**-0.7**
CPD				eS	**Sn**	**04 35 08.7**	**+0.7**
SJG	**San Juan**	**2.91**	**241**	⇓eP	**Pn**	**04 34 36.6**	**-1.2**
SJG	**San Juan**	**2.91**	**241**	⇑iP	**Pn**	**04 34 36.5**	**-1.4**
SJG				eS	**Sn**	**04 35 12.4**	**+0.8**
SJG	**San Juan**	**2.91**	**241**	ePn	**Pn**	**04 34 36.5**	**-1.4**
SJG				eS	**Sn**	**04 35 10.8**	**-0.8**
BPA	**Boggy Peak**	**2.92**	**148**	eP	**Pn**	**04 34 37.5**	**-0.7**
BPA				eS	**Sn**	**04 35 10.0**	**-2.1**
BPA	**Boggy Peak**	**2.92**	**148**	eP	**Pn**	**04 34 37.5**	**-0.7**
BPA				eS	**Sn**	**04 35 10.0**	**-2.1**
CELP	**Cerrillos**	**3.29**	**244**	⇑eP	**Pn**	**04 34 41.9**	**-1.2**

CELP	Cerrillos	3.29	244	ePn	Pn	04 34 41.9	-1.2
CELP				eS	Sn	04 35 17.4	-3.5
OBIP	Obispado Ponce	3.32	244⇓	eP	Pn	04 34 42.5	-1.1
OBIP	Obispado Ponce	3.32	244	eS	Sn	04 35 22.8	+0.9
OBIP	Obispado Ponce	3.32	244⇓	eP	Pn	04 34 42.5	-1.1
OBIP				eS	Sn	04 35 22.8	+0.9
AOPR	Arecibo Observ	3.33	249⇓	eP	Pn	04 34 42.0	-1.6
AOPR	Arecibo Observ	3.33	249⇓	eP	Pn	04 34 42.0	-1.6
LRS	Lares	3.43	249⇓	eP	Pn	04 34 43.1	-1.9
LRS	Lares	3.43	249	ePn	Pn	04 34 43.2	-1.9
GBPR	Guanica, Bosqu	3.59	245⇑	eP	Pn	04 34 46.4	-0.8
GBPR	Guanica, Bosqu	3.59	245⇑	eP	Pn	04 34 46.4	-0.8
AGPR	Aguadilla, PR	3.61	253⇓	eP	Pn	04 34 45.8	-1.6
AGPR	Aguadilla, PR	3.61	253⇓	eP	Pn	04 34 45.8	-1.6
SEG	Port Louis	3.65	149	eP	Pn	04 34 46.1	-1.9
AGP	Aguadilla	3.65	252	ePn	Pn	04 34 46.5	-1.6
LSP	Las Mesas	3.68	249⇓	eP	Pn	04 34 47.3	-1.2
LSP	Las Mesas	3.68	249	ePn	Pn	04 34 47.3	-1.2
MPR	Mayaguez	3.72	250⇓	iP	Pn	04 34 47.5	-1.5
MPR	Mayaguez	3.72	250⇓	iP	Pn	04 34 47.5	-1.5
LZG	Guadaloupe-1	3.76	154	eP	Pn	04 34 48.4	-1.2
CRPR	Cabo Rojo, PR	3.77	247⇓	eP	Pn	04 34 48.5	-1.2
CRPR	Cabo Rojo, PR	3.77	247	ePn	Pn	04 34 48.4	-1.2
CRPR				eS	Sn	04 35 33.0	+0.2
BCG	Bois Riant Cap	3.87	153	eP	Pn	04 34 50.1	-1.1
SCG	Saint Claude	3.90	154	eP	Pn	04 34 50.5	-1.1
DEG	La Desirade	3.96	144	eP	Pn	04 34 49.3	-3.1
MDN	Morne-Daniel	4.65	154	eP	Pn	04 35 01.5	-0.4
MDN	Morne-Daniel	4.65	154	e	Sn	04 35 55.9	+1.2
MDN	Morne-Daniel	4.65	154	eP	Pn	04 35 01.5	-0.4
DPMT	Pointe Michel	4.71	155	eP	Pn	04 35 03.1	+0.5
DPMT	Pointe Michel	4.71	155	eP	Pn	04 35 03.1	+0.5
DBCT	Belle View Cho	4.71	154	eP	Pn	04 35 02.6	-0.1
DBCT	Belle View Cho	4.71	154	eP	Pn	04 35 02.6	-0.1
DSTT	Stowe	4.75	154	eP	Pn	04 35 03.7	+0.4
DSTT	Stowe	4.75	154	eP	Pn	04 35 03.7	+0.4
DSHT	Scott's Head	4.75	155	eP	Pn	04 35 03.5	+0.3
DSHT	Scott's Head	4.75	155	eP	Pn	04 35 03.5	+0.3
FDF	Fort de France	5.28	155	ePn	Pn	04 35 09.0	-1.6
	83nm,0.4s						
SMN1	Samana, DR	5.49	267⇓	eP	Pn	04 35 10.9	-2.5
DR12	Loma Pena Alta	5.63	263⇓	eP	Pn	04 35 13.3	-2.1
DR12	Loma Pena Alta	5.63	263⇓	eP	Pn	04 35 13.3	-2.1
SLB	Belfond	6.15	157	eP	Pn	04 35 22.4	-0.1
SLPE	Piton Saint Es	6.15	157	eP	Pn	04 35 22.9	+0.4
SLPE	Piton Saint Es	6.15	157	eP	Pn	04 35 22.9	+0.4
MCLT	Moule a Chique	6.29	157	eP	Pn	04 35 24.9	+0.5
MCLT	Moule a Chique	6.29	157	eP	Pn	04 35 24.9	+0.5
SVV	Soufriere Volc	6.56	160	eP	Pn	04 35 29.5	+1.3
SVB	Belmont	6.60	161	eP	Pn	04 35 27.9	-0.7
SVB	Belmont	6.60	161	eP	Pn	04 35 27.9	-0.7
BHS	Barnard House	6.61	160	eP	Pn	04 35 29.0	+0.2
BHS	Barnard House	6.61	160	eP	Pn	04 35 31.3	+2.5
SDDR	Presa de Saban	7.40	267⇓	eP	Pn	04 35 38.2	-1.4
SDDR	Presa de Saban	7.40	267	ePn	Pn	04 35 38.4	-1.3
GRGR	Grenville	7.58	166	ePn	Pn	04 35 39.5	-2.5
TOSP	Speyside	8.68	161	eP	Pn	04 35 57.5	+0.4
GTBY	Guantanamo Bay	10.97	274	ePn	Pn	04 36 22.7	-5.7
	33nm,0.8s						
SDV	Santo Domingo	12.66	214	ePn	Pn	04 36 52.2	+0.3
BBSR	BB Station	12.82	355	ePn	Pn	04 36 44.5	-9.2
MTDJ	Mount Denham	13.37	267	ePn	Pn	04 36 58.8	-2.7
ROSC	El Rosal	18.03	217	ePn	Pn	04 38 00.6	-1.6
ROSC	El Rosal	18.03	217	P	P	04 38 03.2	+0.9
	2.4nm,0.3s,baz=93,slow=12,SNR=21						
NHSC	New Hope	20.12	315	eP	P	04 38 24.6	0.0
	54nm,0.5s						
CNNC	Cliffs of the	20.16	324	eP	P	04 38 23.8	-1.2
	29nm,0.3s						
JSRW	J. Sargeant Re	22.01	328	eP	P	04 38 46.4	+1.5
GOGA	Godfrey	22.55	312	eP	P	04 38 53.0	+2.3
	38nm,1.1s						
JTS	JuntasAbangare	22.68	249	eP	P	04 38 52.7	+0.4
	77nm,1.1s						
TEIG	Tepich	23.33	276	eP	P	04 38 59.0	+0.2
	42nm,1.4s						
TEIG	Tepich	23.33	276	P	P	04 38 59.7	+0.9
	5.7nm,0.9s,baz=236,slow=15,SNR=2.9						
TGUH	Tegucigalpa,Un	23.42	260	eP	P	04 39 00.0	+0.3
	108nm,1.6s						
TKL	Tuckaleechee C	24.03	316	P	P	04 39 04.8	-0.6
	2.9nm,1.1s,baz=152,slow=6.2,SNR=3.0						
TKL				S	S	04 43 36.7	+17
	11nm,0.3s,baz=225,slow=23,SNR=6.5						
OTAV	Otavalo	24.16	219	eP	P	04 39 06.6	-0.6
	35nm,1.0s						
CPCT	Cooper Cave	24.40	315	eP	P	04 39 10.6	+1.9
TZTN	Tazewell	24.42	318	eP	P	04 39 11.1	+2.2
	10nm,1.0s						
LRAL	Lakeview Retre	24.93	307	eP	P	04 39 15.4	+1.9
	6.1nm,0.4s						
SWET	Sewanee	25.23	313	eP	P	04 39 18.4	+2.1
	28nm,1.1s						
ACSO	Alum Creek Sta	26.55	325	eP	P	04 39 27.6	-0.5
	5.9nm,1.0s						
WVT	Waverly	27.03	313	eP	P	04 39 34.5	+2.0
	7.3nm,0.4s						
OXF	Oxford	27.39	308	eP	P	04 39 36.4	+0.7
	15nm,0.5s						
SAML	Samuel	28.32	179	eP	P	04 39 41.4	-2.7
	1.5nm,0.4s						
SCHQ	Schefferville	35.31	357	P	P	04 40 45.9	+0.7
	2.1nm,0.9s,baz=157,slow=13,SNR=3.1						
SIV	San Ignacio	35.40	176	P	P	04 40 45.0	-1.3
	1.7nm,0.4s,baz=14,slow=7.7,SNR=11						
LPAZ	La Paz	35.91	188	eP	P	04 40 49.8	-1.5
	3.1nm,0.8s						
LPAZ	La Paz	35.91	188	P	P	04 40 50.2	-1.1
	2.2nm,0.7s,baz=12,slow=9.2,SNR=5.0						
ECSD	EROS Data Cent	36.72	318	eP	P	04 40 58.2	+0.8
	8.8nm,0.9s						
RCBR	Riachuelo	37.05	130	LR	LR	04 55 22.7	
	comp=Z,93nm,18.6s,baz=129,slow=35						
TXAR	Lajitas Array	37.71	293	P	P	04 41 07.1	+1.1
	1.0nm,0.8s,baz=104,slow=10,SNR=11						
TXAR				pP	pP	04 41 17.5	+0.2
	2.6nm,0.9s,baz=98,slow=9.8,SNR=10						
BDFB	Brasilia	38.13	155	P	P	04 41 10.8	+1.2
	8.4nm,0.8s,baz=347,slow=10.0,SNR=12						
AGMN	Agassiz Nation	38.80	325	eP	P	04 41 15.3	+0.5
	6.4nm,0.9s						
MNTX	Cornudas Mount	39.45	296	eP	P	04 41 19.1	-1.4
	2.5nm,1.1s						
ULM	Lac du Bonnet	39.99	328	P	P	04 41 25.4	+0.7
	3.8nm,0.5s,baz=122,slow=8.2,SNR=4.8						
ULM				pP	pP	04 41 35.6	-0.5
	4.8nm,0.5s,baz=126,slow=9.2,SNR=3.9						
SDCO	Great Sand Dun	40.70	306	eP	P	04 41 32.1	+0.9
	2.4nm,1.0s						
ANMO	Albuquerque	40.85	301	P	P	04 41 33.8	+1.5
	0.9nm,0.8s,baz=106,slow=8.9,SNR=3.9						
ANMO				pP	pP	04 41 45.0	+1.3
	2.1nm,0.9s,baz=103,slow=9.6,SNR=5.6						
BNM	Barren Site	40.85	300	eP	P	04 41 33.9	+1.5
	4.6nm,0.9s						
TUC	Tucson	44.08	297	eP	P	04 41 60.0	+1.5
	2.3nm,0.8s						
PDAR	Pinedale Array	45.03	311	P	P	04 42 06.5	+0.4
	0.8nm,0.8s,baz=110,slow=8.0,SNR=6.0						
BW06	Boulder Array	45.03	311	eP	P	04 42 02.9	-3.2
	4.3nm,1.0s						
RLMT	Red Lodge	45.54	315	eP	P	04 42 09.2	-0.8
	16nm,1.3s						
HWUT	Hardware Ranch	46.18	309	eP	P	04 42 13.1	-2.1
	14nm,1.3s						
QLMT	Earthquake Lak	46.91	314	eP	P	04 42 19.2	-1.6
SFJD	Kangerlussuaq	48.15	7	P	P	04 42 29.5	-0.3
	5.6nm,0.8s,baz=148,slow=9.5,SNR=3.8						
HLID	Hailey	48.67	311	eP	P	04 42 35.2	+0.7
	1.4nm,0.9s						
SLMT	Seeley Lake	48.98	316	eP	P	04 42 36.5	-0.3
SWMT	Swartz Lake	49.38	316	eP	P	04 42 40.7	+0.8
	4.0nm,0.9s						
YBMT	Yellow Bay	49.49	317	eP	P	04 42 43.0	+2.3
MFID	Camas Ranch	49.65	311	eP	P	04 42 43.0	+1.1
	5.6nm,1.1s						
NVAR	Mina Array Bea	50.76	304	P	P	04 42 51.3	+0.8
	0.6nm,0.8s,baz=96,slow=7.3,SNR=4.8						
CFAA	Coronel Fontan	51.07	185	P	P	04 42 51.3	-1.2
	0.1nm,0.4s,baz=346,slow=8.3,SNR=6.0						
NEW	Newport	51.61	317	eP	P	04 42 56.2	-0.3
	3.3nm,1.0s						
MDT	Midelt	53.84	63	P	P	04 43 13.5	+0.2
	3.0nm,1.0s,baz=278,slow=7.9,SNR=8.8						
MDT				pP	pP	04 43 26.2	+1.2
	3.0nm,0.9s,baz=293,slow=7.9,SNR=5.5						
ESDC	Sonseca Array	54.49	55	P	P	04 43 17.5	-0.4
	0.1nm,0.3s,baz=260,slow=4.4,SNR=5.8						
HUMO	Hull Mountain	54.70	309	P	P	04 43 19.4	+0.1
	0.6nm,0.6s						
SUMG	Summit	54.93	9	eP	P	04 43 21.5	+0.6
	5.1nm,0.9s						
SUMG	Summit	54.93	9	iP	P	04 43 22.1	+1.2
	6.0nm,0.9s						
YKA	Yellowknife Ar	55.29	334	P	P	04 43 22.3	-0.9
	1.2nm,0.6s,baz=106,slow=7.5,SNR=25						
YKA				pP	pP	04 43 34.5	-0.4
	4.9nm,0.9s,baz=109,slow=7.4,SNR=19						
YKW3	Yellowknife Ar	55.33	334	eP	P	04 43 24.8	+1.4
DBIC	Dimbokro	58.25	94	P	P	04 43 44.4	-0.6
	3.7nm,0.8s,baz=275,slow=7.8,SNR=3.9						
PLCA	Paso Flores	60.33	186	P	P	04 43 58.8	-0.1
	3.2nm,0.8s,baz=8.6,slow=9.2,SNR=6.7						
TOA0	Torodi Ar. Sit	62.55	85	eP	P	04 44 13.3	-1.0
TORD	Torodi Ar. Bea	62.55	85	P	P	04 44 12.9	-1.4
	2.2nm,0.6s,baz=286,slow=6.9,SNR=22						
TORD				pP	pP	04 44 25.9	-0.4
	2.2nm,0.5s,baz=286,slow=6.7,SNR=9.3						
NB2	NORSAR Subarra	65.68	31	P	P	04 44 34.6	+0.4
	comp=Z,3.5nm,1.1s,baz=264,slow=6.5						
NOA	NORSAR Array B	65.68	31	P	P	04 44 35.0	+0.8
	comp=Z,0.5nm,0.6s,baz=264,slow=6.5,SNR=2.4						
NOA				pP	pP	04 44 47.2	+1.0
	comp=Z,1.8nm,0.8s,baz=267,slow=6.5,SNR=6.6						
GERES	GERESS Array B	67.17	44	P	P	04 44 43.3	-0.7
	comp=Z,0.3nm,0.6s,baz=264,slow=7.8,SNR=3.3						
GERES				pP	pP	04 44 56.7	+0.6
	comp=Z,0.6nm,0.7s,baz=264,slow=5.4,SNR=5.2						
ILAR	Eielson Array	69.70	333	P	P	04 44 58.5	-0.9
	comp=Z,0.8nm,0.7s,baz=102,slow=3.8,SNR=16						
ILAR				pP	pP	04 45 11.0	-0.5
	comp=Z,1.8nm,0.8s,baz=98,slow=4.9,SNR=10						
TRF	Thorofare Moun	71.29	332	eP	P	04 45 09.5	+0.1
	comp=Z,5.2nm,0.8s						
FINES	FINESS Array B	72.83	30	P	P	04 45 20.5	+2.1
	comp=Z,0.5nm,0.3s,baz=261,slow=7.9,SNR=3.1						
FINES				pP	pP	04 45 30.7	+0.2
	comp=Z,1.9nm,0.8s,baz=251,slow=4.3,SNR=2.5						
AKASG	Malin Array Be	76.79	41	P	P	04 45 40.8	-0.7
	comp=Z,0.2nm,0.2s,baz=308,slow=3.2,SNR=4.5						
BRTR	Keskin Array B	83.01	50	P	P	04 46 15.6	0.0
	comp=Z,0.9nm,0.8s,baz=289,slow=3.8,SNR=6.9						
BRTR				pP	pP	04 46 27.8	-0.1
	comp=Z,1.4nm,0.7s,baz=280,slow=4.3,SNR=6.8						
WMQ	Urumqi	111.62	22	ePKP	PKiKP	04 52 20.9	-3.6
WMQ				LR	LR		
	comp=Z,180nm,21.0s						
GTA	Gaotai	119.30	15	ePKP	PKPdf	04 52 39.8	+0.3
GTA				sPKP		04 52 54.2	
HHC	Hu-ho-hao-te	119.74	4	ePKP	PKPdf	04 52 40.6	+0.4
HHC				PP	PP	04 54 07.2	+5.1
HHC				PKS	PKSdf	04 56 15.6	-1.4
HHC				SKS	SKSdf	04 59 47.3	-2.1
HHC				SKKS	SKKSac	05 00 56.3	-4.2
HHC				SS	SS	05 10 25.8	+2.8
HHC				AMB	AMB		
	comp=Z,110nm,10.7s						
HHC				LR	LR		
	comp=N,150nm,19.6s						
HHC				LR	LR		
	comp=E,210nm,19.0s						
HHC				LR	LR		
	comp=Z,180nm,21.4s						
LZH	Lanzhou	123.38	12	ePKP	PKPdf	04 52 48.3	+0.8
LZH				sPKP		04 53 02.7	
LZH				LR	LR		
	comp=N,400nm,17.6s						
LZH				LR	LR		
	comp=E,240nm,15.7s						
LZH				LR	LR		
	comp=Z,600nm,19.0s						
CD2	Chengdu	128.35	14	ePKP	PKPdf	04 52 57.0	0.0
WHN	Wuhan	130.15	2	PKPbc	PKPdf	04 52 51.5	-8.8
GYA	Guiyang	133.28	12	ePdif	Pdif	04 50 01.2	-2.5
GYA				PP	PP	04 55 34.5	+2.5
GYA				AMB	AMB		
	comp=Z,70nm,7.6s						
KMI	Kunming	133.61	17	PKP	PKPdf	04 53 09.0	+1.7
ASAR	Alice Springs	163.33	253	PKPab	PKPab	04 54 43.4	-0.5
	comp=Z,0.4nm,0.8s,baz=91,slow=5.6,SNR=3.7						
ASAR				pPKPab	pPKPab	04 54 53.9	-2.5
	comp=Z,0.6nm,0.8s,baz=103,slow=4.7,SNR=3.1						

*ISCJB **01** 04:35:08.7±0.5, 19°.57N±0°.03×63°.46W±0°.02, h48km±6km, mb4.6/78, MS4.0/6, Error ellipse: s-maj=5.5km s-min=3.2km az=15.0*

*RSPR **01** 04:35:09.9, 19°.80N×63°.56W, h25km±16km, MD4.7/17*

*GCMT **01** 04:35:09.5±0.3, 19°.91N×63°.55W, h19km±1km, MW5.0, Moment Tensor Solution. s22,c25; s75,c124; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.56±.18; $M_{\theta\theta}$3.99±.15; $M_{\phi\phi}$-3.43±.15; $M_{r\theta}$-0.07±.25; $M_{\theta\phi}$-2.08±.10; $M_{\phi r}$0.94±.33; Best double couple: $M_0$4.40000×10^{16} NP1:ϕ_s240.00000°, δ78.00000°, λ-173.00000°. NP2:ϕ_s149.00000°, δ83.00000°, λ-12.00000°. Principal axes: T 4.5500, Plg4.0000°, Azm195.0000°; N -0.3600, Plg76.0000°, Azm299.0000°; P -4.1900, Plg14.0000°, Azm104.0000°; Data Used: II G CN IC IU.*

*NEIC **01** 04:35:09.9±0.5, 19°.57N×63°.48W, h41km±5km, mb4.8/47, MD4.6(RSPR) Error ellipse: s-maj=4.8km s-min=3.3km az=204.0*

NEIC Felt at Cul de Sac, Saint Martin and on Saint Thomas, U.S. Virgin Islands.

*IDC **01** 04:35:10.7±0.4, 19°.50N×63°.40W, h43km±4km, mb4.0/28, mb1 4.2/29, mb1mx4.2/34, mbtmp4.1/29, ML3.9/1, MS4.1/6, Ms1 4.0/6, ms1mx3.9/11, Error ellipse: s-maj=9.4km s-min=7.2km az=85.0*

*BJI **01** 04:35:10.3, 19°.60N×63°.40W, h40km, mB5.2/3*

*SZGRF **01** 04:35:20.3, 20°.67N×62°.09W, h33km, mb5.0, MS4.1, North Atlantic Ocean*

ISC 01 04:35:10.6±0.4**, 19°.55N**±0°.04×**63°.47W**±0°.03**, h43**km±3km**, n256,** σ1°**18**/295**, mb4.7**/79**, MS4.0**/6**, 20C-7D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABV	Anegada	1.15	225⇑	eP	Pn	04 35 30.2	-0.1
ABV	Anegada	1.15	225	eS	Sn	04 35 46.0	+1.2
ABVI	Anegada Island	1.15	225⇑	eP	Pn	04 35 30.2	-0.1
ABVI				eS	Sn	04 35 46.0	+1.2
TBVI	Tortola	1.56	224⇓	iP	Pn	04 35 35.7	-0.2
TBVI	Tortola	1.56	224⇓	iP	Pn	04 35 35.7	-0.2
STVI	Saint Thomas	1.84	230⇑	eP	Pn	04 35 39.6	-0.1
STVI	Saint Thomas	1.84	230	eS	Sn	04 36 02.3	+0.5
STVI	Saint Thomas	1.84	230	ePg	Pn	04 35 39.3	-0.4
STVI				eS	Sn	04 36 02.6	+0.8
CDVI	St. Croix	2.17	215⇑	eP	Pn	04 35 45.4	+1.1
CDVI	St. Croix	2.17	215	eS	Sn	04 36 12.5	+2.6
CDVI	St. Croix	2.17	215	ePn	Pn	04 35 45.2	+1.1
CDVI				eS	Sn	04 36 11.5	+1.6
MTP	Monte Pirata	2.44	234⇑	eP	Pn	04 35 48.0	0.0
MTP	Monte Pirata	2.44	234	ePn	Pn	04 35 47.6	-0.4
MTP				eS	Sn	04 36 16.6	-0.1
ANWB	Willy Bob	2.46	139	ePn	Pn	04 35 45.7	-2.6
ANWB				eS	Sn	04 36 15.8	-1.4
NEV	Hard Times	2.55	160	eP	Pn	04 35 50.3	+0.8
NEV	Hard Times	2.55	160	e	Sn	04 36 14.4	-4.9
NEV	Hard Times	2.55	160	eP	Pn	04 35 50.3	+0.8
CBYP	Canovanas	2.59	241⇑	eP	Pn	04 35 49.3	-0.8
CBYP	Canovanas	2.59	241	eS	Sn	04 36 19.7	-0.7
CBYP	Canovanas	2.59	241	ePn	Pn	04 35 49.1	-0.9
CBYP				eS	Sn	04 36 19.8	-0.6
HUMP	Col San Antoni	2.65	238⇑	eP	Pn	04 35 50.4	-0.4
HUMP	Col San Antoni	2.65	238	eS	Sn	04 36 22.1	+0.3
HUMP	Col San Antoni	2.65	238⇑	eP	Pn	04 35 50.4	-0.4
HUMP				eS	Sn	04 36 22.1	+0.3
CPD	Cerro la Pandu	2.76	237⇓	eP	Pn	04 35 52.3	-0.1
CPD	Cerro la Pandu	2.76	237	eS	Sn	04 36 25.2	+0.7
CPD	Cerro la Pandu	2.76	237⇓	eP	Pn	04 35 52.3	-0.1
CPD				eS	Sn	04 36 25.2	+0.7
SJG	San Juan	2.91	241⇓	eP	Pn	04 35 53.9	-0.5
SJG	San Juan	2.91	241	eS	Sn	04 36 27.6	-0.6
SJG	San Juan	2.91	241⇓	iP	Pn	04 35 53.9	-0.5
SJG	San Juan	2.91	241	ePn	Pn	04 35 53.9	-0.5
SJG				eS	Sn	04 36 27.4	-0.8
BPA	Boggy Peak	2.93	148	eP	Pn	04 35 54.5	-0.2
BPA				eS	Sn	04 36 28.3	-0.4
BPA	Boggy Peak	2.93	148	eP	Pn	04 35 54.5	-0.2
BPA				eS	Sn	04 36 28.3	-0.4
CELP	Cerrillos	3.29	244⇑	eP	Pn	04 35 59.0	-0.6
CELP	Cerrillos	3.29	244	ePn	Pn	04 35 59.0	-0.6
OBIP	Obispado Ponce	3.33	244⇑	eP	Pn	04 35 59.6	-0.5
OBIP	Obispado Ponce	3.33	244	eS	Sn	04 36 38.0	-0.4
OBIP	Obispado Ponce	3.33	244	ePn	Pn	04 35 59.6	-0.5
OBIP				eS	Sn	04 36 38.3	-0.1
AOPR	Arecibo Observ	3.33	249⇑	eP	Pn	04 35 59.5	-0.7
AOPR	Arecibo Observ	3.33	249	eS	Sn	04 36 37.9	-0.7
AOPR	Arecibo Observ	3.33	249⇑	eP	Pn	04 35 59.5	-0.7
AOPR				eS	Sn	04 36 37.9	-0.7
LRS	Lares	3.43	249⇑	eP	Pn	04 36 00.6	-1.0
LRS	Lares	3.43	249	ePn	Pn	04 36 00.6	-1.0
GBPR	Guanica, Bosqu	3.59	245⇑	eP	Pn	04 36 03.1	-0.6
GBPR	Guanica, Bosqu	3.59	245⇑	eP	Pn	04 36 03.1	-0.6
AGPR	Aguadilla, PR	3.61	253	ePn	Pn	04 36 02.5	-1.5
LSP	Las Mesas	3.69	249⇑	eP	Pn	04 36 04.5	-0.6
LSP	Las Mesas	3.69	249⇑	eP	Pn	04 36 04.5	-0.6
MPR	Mayaguez	3.72	250⇑	eP	Pn	04 36 04.8	-0.7
MPR	Mayaguez	3.72	250	eS	Sn	04 36 47.2	-0.8
MPR	Mayaguez	3.72	250⇑	eP	Pn	04 36 04.8	-0.7
MPR				eS	Sn	04 36 47.2	-0.8
CRPR	Cabo Rojo, PR	3.77	247	eS	Sn	04 36 49.4	0.0
CRPR	Cabo Rojo, PR	3.77	247⇓	eP	Pn	04 36 05.6	-0.6
CRPR	Cabo Rojo, PR	3.77	247	ePn	Pn	04 36 05.3	-0.9
CRPR				eS	Sn	04 36 49.4	0.0
FDF	Fort de France	5.28	155	eP	Pn	04 36 26.2	-0.8
FDF				eS	Sn	04 37 25.5	-1.2
FDF	Fort de France	5.28	155	ePn	Pn	04 36 26.3	-0.8
FDF				eS	Sn	04 37 25.8	-0.9
MVM	Montagne Vaucl	5.55	153	eP	Pn	04 36 29.7	-1.0
SLW	Petit Monier	6.01	156	e	Pn	04 36 38.2	+1.1
SLB	Belfond	6.15	157	eP	Pn	04 36 38.7	-0.3
SLB	Belfond	6.15	157	e	Sn	04 37 49.3	+1.1
SLB	Belfond	6.15	157	e	Sx	04 37 58.0	
SLB	Belfond	6.15	157	eP	Pn	04 36 38.7	-0.3
SLPE	Piton Saint Es	6.16	157	eP	Pn	04 36 39.7	+0.7
MCLT	Moule a Chique	6.30	157	e	Pn	04 36 36.8	-4.2
MCLT	Moule a Chique	6.30	157	e	Sn	04 37 53.1	+1.4
SVV	Soufriere Volc	6.57	160	e	Pn	04 36 47.9	+3.2
SVB	Belmont	6.60	161	e	Pn	04 36 45.6	+0.4
BHS	Barnard House	6.62	160	e	Pn	04 36 48.1	+2.8
BBGH	Gun Hill	7.40	149	ePn	Pn	04 36 54.5	-1.6
BBGH				eS	Sn	04 38 19.9	+1.1
SDDR	Presa de Saban	7.40	267⇑	eP	Pn	04 36 55.3	-0.9
SDDR	Presa de Saban	7.40	267	ePn	Pn	04 36 55.3	-0.9
SDDR				eS	Sn	04 38 15.0	-3.9
GRTK	Grand Turk	7.44	286	ePn	Pn	04 36 50.8	-5.8
	233nm,0.3s						
GRGR	Grenville	7.58	166	ePn	Pn	04 36 58.5	-0.1
	287nm,0.7s						
GRGR				eS	Sn	04 38 41.5	+18
TOSP	Speyside	8.68	161	e	Pn	04 37 15.0	+1.3
TOSP	Speyside	8.68	161	e	Px	04 37 47.0	
GTBY	Guantanamo Bay	10.97	274	ePn	Pn	04 37 39.0	-6.0
	58nm,0.5s						
BBSR	BB Station	12.81	355	ePn	Pn	04 38 00.8	-9.2
	40nm,0.4s						
MTDJ	Mount Denham	13.38	267	ePn	Pn	04 38 14.0	-4.0
MTDJ				eS	Sn	04 40 44.0	-1.3
ROSC	El Rosal	18.04	217	ePn	P	04 39 19.5	+0.9
ROSC				eS	Sn	04 42 39.5	+0.4
ROSC	El Rosal	18.04	217	P	P	04 39 19.3	+0.7
	8.1nm,0.3s,baz=98,slow=7.5,SNR=15						
ROSC				S	Sn	04 42 40.9	+1.8
	0.7nm,0.3s,baz=79,slow=19,SNR=3.2						
BCIP	Isla Barro Col	18.90	239	eP	P	04 39 27.4	-0.3
	29nm,0.7s						
NHSC	New Hope	20.12	315	eP	P	04 39 38.7	-2.1
	104nm,0.6s						
CNNC	Cliffs of the	20.16	324	eP	P	04 39 39.4	-1.8
JSRW	J. Sargeant Re	22.01	328	P	P	04 39 56.0	-5.1
CBN	Corbin	22.17	330	eP	P	04 40 03.1	+0.3
	75nm,0.4s						
JTS	JuntasAbangare	22.68	249	eP	P	04 40 08.5	-0.1
	288nm,1.2s						
SDMD	Soldier's Deli	22.91	333	eP	P	04 40 12.9	+2.2
	35nm,0.5s						
CPNY	Central Park	22.99	339	eP	P	04 40 12.3	+0.8
TEIG	Tepich	23.33	276	eP	P	04 40 11.4	-3.6
	32nm,1.1s						
TEIG	Tepich	23.33	276	P	P	04 40 16.4	+1.4
	9.3nm,0.9s,baz=21,slow=17,SNR=3.5						
TEIG				LR	LR	04 49 46.1	
	comp=Z,657nm,18.3s,baz=120,slow=37						
TGUH	Tegucigalpa,Un	23.42	260	eP	P	04 40 15.2	-0.8
	164nm,1.4s						
TKL	Tuckaleechee C	24.03	316	P	P	04 40 29.3	+7.8
TKL				S	S	04 44 49.0	+13
TKL	Tuckaleechee C	24.03	316	P	P	04 40 29.3	+7.8
	12nm,0.6s,baz=126,slow=11,SNR=5.8						
TKL				S	S	04 44 49.0	+13
	25nm,0.4s,baz=92,slow=6.9,SNR=4.6						
OTAV	Otavalo	24.17	219	eP	P	04 40 24.1	+0.6
	45nm,0.6s						
CPCT	Cooper Cave	24.40	315	eP	P	04 40 24.5	-0.5
LRAL	Lakeview Retre	24.93	307	eP	P	04 40 28.9	-0.9
	6.7nm,0.5s						
SWET	Sewanee	25.23	313	P	P	04 40 36.4	+3.9
SADO	Sadowa	28.32	336	P	P	04 40 59.4	-0.8
SADO	Sadowa	28.32	336	P	P	04 40 59.4	-0.8
	3.2nm,0.6s,baz=141,slow=6.3,SNR=3.1						
SAML	Samuel	28.32	179	eP	P	04 40 58.0	-2.4
	6.4nm,0.8s						
GNAR	Gosnell	28.49	311	P	P	04 41 01.8	0.0
ATAH	Atahualpa	30.32	210	P	P	04 41 17.5	-1.1
ATAH	Atahualpa	30.32	210	P	P	04 41 17.5	-1.1
	4.9nm,0.7s,baz=35,slow=12,SNR=2.6						
ATAH				LR	LR	04 55 06.6	
	comp=Z,642nm,18.1s,baz=194,slow=40						
NNA	Nana	34.00	204	P	P	04 41 49.4	-1.1
NNA	Nana	34.00	204	P	P	04 41 49.4	-1.1
	11nm,0.6s,baz=4.1,slow=9.1,SNR=6.1						
WMOK	Wichita Mounta	34.66	303	eP	P	04 41 54.9	-1.2
	1.7nm,0.4s						
SCHQ	Schefferville	35.31	357	P	P	04 42 02.8	+1.5
SCHQ	Schefferville	35.31	357	P	P	04 42 02.8	+1.5
	2.3nm,0.5s,baz=176,slow=7.7,SNR=9.3						
SIV	San Ignacio	35.40	176	P	P	04 42 02.3	-0.2
SIV	San Ignacio	35.40	176	P	P	04 42 02.3	-0.2
	6.2nm,0.5s,baz=27,slow=9.3,SNR=14						
LPAZ	La Paz	35.91	188	eP	P	04 42 05.1	-2.5
	8.5nm,0.8s						
LPAZ				S	S	04 47 41.0	-2.3
LPAZ	La Paz	35.91	188	P	P	04 42 07.1	-0.4
	8.4nm,0.8s,baz=68,slow=2.1,SNR=8.8						
LPAZ				S	S	04 47 41.0	-2.3
	0.8nm,0.8s,baz=136,slow=19,SNR=3.3						
ECSD	EROS Data Cent	36.72	318	eP	P	04 42 13.2	-0.4
	11nm,0.5s						
TXAR	Lajitas Array	37.71	293	P	P	04 42 23.7	+1.4
TXAR	Lajitas Array	37.71	293	P	P	04 42 23.7	+1.4
	0.7nm,0.4s,baz=105,slow=9.7,SNR=12						
BDFB	Brasilia	38.14	155	P	P	04 42 26.9	+1.0
BDFB	Brasilia	38.14	155	P	P	04 42 26.9	+1.0
	22nm,0.8s,baz=329,slow=7.6,SNR=20						
BDFB				LR	LR	04 58 48.8	
	comp=Z,248nm,18.8s,baz=156,slow=37						
AGMN	Agassiz Nation	38.79	325	eP	P	04 42 28.5	-2.5
	5.8nm,0.5s						
MNTX	Cornudas Mount	39.45	296	eP	P	04 42 35.2	-1.6
	1.1nm,0.6s						
ULM	Lac du Bonnet	39.98	328	P	P	04 42 41.6	+0.7
ULM	Lac du Bonnet	39.98	328	P	P	04 42 41.6	+0.7
	3.9nm,0.4s,baz=129,slow=6.3,SNR=5.0						
ULM				LR	LR	04 57 09.6	
	comp=Z,205nm,18.0s,baz=124,slow=33						
SDCO	Great Sand Dun	40.70	306	eP	P	04 42 42.7	-4.7
	7.7nm,1.1s						
ANMO	Albuquerque	40.85	301	eP	P	04 42 48.1	-0.4
	13nm,1.3s						
ANMO	Albuquerque	40.85	301	P	P	04 42 50.3	+1.7
	1.9nm,0.8s,baz=90,slow=11,SNR=4.5						
BNM	Barren Site	40.85	300	eP	P	04 42 48.5	0.0
	26nm,1.3s						
ISCO	Idaho Springs	41.34	309	eP	P	04 42 53.0	+0.4
	8.9nm,1.3s						
PHWY	Pilot Hill	41.68	311	eP	P	04 42 53.7	-1.6
	12nm,1.0s						
SMCO	Snowmass	42.18	307	eP	P	04 42 57.0	-2.7
	12nm,1.4s						
LVC	Limon Verde	42.24	187	eP	P	04 42 58.5	-1.5

	11nm,0.6s						
PV01	Paradox Valley	43.15	305	P	P	04 43 05.9	-1.5
	2µm,1.6s						
PDAR	Pinedale Array	45.03	311	P	P	04 43 23.6	+1.2
PDAR				pP	pP	04 43 35.7	+1.3
PDAR	Pinedale Array	45.03	311	P	P	04 43 23.6	+1.2
	1.8nm,0.6s,baz=117,slow=8.5,SNR=4.8						
PDAR				pP	pP	04 43 35.7	+1.3
	3.9nm,0.6s,baz=120,slow=8.9,SNR=6.2						
RLMT	Red Lodge	45.53	315	eP	P	04 43 26.6	+0.3
	21nm,1.2s						
CPUP	Villa Florida	46.00	172	P	P	04 43 28.8	-1.0
CPUP	Villa Florida	46.00	172	P	P	04 43 28.8	-1.0
	3.3nm,0.6s,baz=341,slow=9.4,SNR=11						
LOHW	Long Hollow	46.00	312	eP	P	04 43 28.7	-1.3
HWUT	Hardware Ranch	46.17	309	eP	P	04 43 31.6	+0.2
	17nm,1.1s						
TPAW	Teton Pass	46.21	312	eP	P	04 43 29.4	-2.3
	6.1nm,0.9s						
SWMT	Swartz Lake	49.38	316	eP	P	04 43 53.0	-3.0
YBMT	Yellow Bay	49.49	317	eP	P	04 43 56.5	-0.3
	3.5nm,0.7s						
JTMT	Jette	49.63	317	eP	P	04 43 57.3	-0.7
MFID	Camas Ranch	49.64	311	eP	P	04 43 56.7	-1.3
	7.1nm,1.1s						
NVAR	Mina Array Bea	50.76	304	P	P	04 44 09.2	+2.5
NVAR	Mina Array Bea	50.76	304	P	P	04 44 09.2	+2.5
	0.8nm,0.6s,baz=91,slow=7.1,SNR=5.1						
CFAA	Coronel Fontan	51.07	185	P	P	04 44 08.4	-0.3
CFAA	Coronel Fontan	51.07	185	P	P	04 44 08.4	-0.3
	0.5nm,0.5s,baz=345,slow=7.5,SNR=7.7						
NEW	Newport	51.61	317	eP	P	04 44 12.6	-0.2
	7.8nm,0.7s						
MDT	Midelt	53.84	63	P	P	04 44 30.1	+0.6
MDT				pP	pP	04 44 42.8	+1.0
MDT	Midelt	53.84	63	P	P	04 44 30.1	+0.6
	8.3nm,0.9s,baz=277,slow=7.3,SNR=15						
MDT				pP	pP	04 44 42.8	+1.0
	4.7nm,0.8s,baz=259,slow=7.3,SNR=5.7						
ESDC	Sonseca Array	54.49	55	P	P	04 44 34.5	+0.4
ESDC				pP	pP	04 44 45.6	-0.8
ESDC	Sonseca Array	54.49	55	P	P	04 44 34.5	+0.4
	0.3nm,0.4s,baz=272,slow=8.1,SNR=6.9						
ESDC				pP	pP	04 44 45.6	-0.8
	0.6nm,0.4s,baz=266,slow=7.6,SNR=1.9						
SUMG	Summit	54.92	9	eP	P	04 44 36.5	-0.6
	20nm,1.1s						
YKA	Yellowknife Ar	55.29	334	P	P	04 44 38.8	-0.6
YKA				pP	pP	04 44 51.5	-0.3
YKA	Yellowknife Ar	55.29	334	P	P	04 44 38.7	-0.6
	2.5nm,0.5s,baz=105,slow=7.3,SNR=16						
YKA				pP	pP	04 44 51.4	-0.3
	4.8nm,0.6s,baz=105,slow=7.4,SNR=8.9						
SJPF	Ste Jean	56.76	51	eP	P	04 44 50.4	+0.1
	15nm,0.7s						
SJPF	Ste Jean	56.76	51	eP	P	04 44 50.4	+0.1
	15nm,0.7s						
ETSF	Etsaut	57.24	51	eP	P	04 44 53.9	+0.2
ETSF	Etsaut	57.24	51	eP	P	04 44 53.9	+0.2
GRR	Gorron	57.51	45	eP	P	04 44 55.0	-0.4
	42nm,1.3s						
GRR	Gorron	57.51	45	eP	P	04 44 55.0	-0.4
	42nm,1.3s						
MFF	Saint Martin d	57.80	47	eP	P	04 44 56.7	-0.8
MFF	Saint Martin d	57.80	47	eP	P	04 44 56.7	-0.8
EPF	Esparros	57.90	51	eP	P	04 44 58.4	0.0
	15nm,0.8s						
EPF	Esparros	57.90	51	eP	P	04 44 58.4	0.0
	15nm,0.8s						
LDF	La Druitiere	58.02	44	eP	P	04 44 58.5	-0.5
	52nm,1.5s						
LDF	La Druitiere	58.02	44	eP	P	04 44 58.5	-0.5
	52nm,1.5s						
LIC	Lamto	58.23	95	eP	P	04 45 00.5	-0.5
	5.8nm,0.5s						
LIC				eR			
	149nm,22.5s						
LIC	Lamto	58.23	95	eP	P	04 45 00.5	-0.5
	5.8nm,0.5s						
DBIC	Dimbokro	58.25	94	P	P	04 45 00.7	-0.5
DBIC	Dimbokro	58.25	94	P	P	04 45 00.7	-0.5
	8.0nm,0.8s,baz=260,slow=9.6,SNR=7.2						
LFF	La Frestale	58.29	49	eP	P	04 45 00.7	-0.3
LFF	La Frestale	58.29	49	eP	P	04 45 00.7	-0.3
RJF	Les Rejaudoux	58.86	48	eP	P	04 45 04.4	-0.6
	23nm,1.3s						
RJF				eR			
	121nm,20.2s						
RJF	Les Rejaudoux	58.86	48	eP	P	04 45 04.4	-0.6
	23nm,1.3s						
CAF	Calviac	59.23	49	eP	P	04 45 07.0	-0.6
CAF	Calviac	59.23	49	eP	P	04 45 07.0	-0.6
MTLF	Montolieu	59.29	51	eP	P	04 45 07.4	-0.5
	11nm,1.0s						
MTLF	Montolieu	59.29	51	eP	P	04 45 07.4	-0.5
	11nm,1.0s						
TCF	Toulx Ste Croi	59.40	47	eP	P	04 45 08.1	-0.6
	25nm,1.4s						
TCF	Toulx Ste Croi	59.40	47	eP	P	04 45 08.1	-0.6
	25nm,1.4s						
AVF	Avril sur Loir	60.22	47	eP	P	04 45 13.5	-0.8
	13nm,1.1s						
AVF	Avril sur Loir	60.22	47	eP	P	04 45 13.5	-0.8
	13nm,1.1s						
SSF	Saint Saulge	60.34	46	eP	P	04 45 14.3	-0.8
SSF	Saint Saulge	60.34	46	eP	P	04 45 14.3	-0.8
PLCA	Paso Flores	60.34	186	eP	P	04 45 15.7	+0.6
	8.0nm,0.8s						
PLCA	Paso Flores	60.34	186	P	P	04 45 15.8	+0.7
	8.4nm,0.7s,baz=4.5,slow=7.3,SNR=17						
PLCA				LR	LR	05 14 54.5	
	comp=Z,133nm,21.3s,baz=5.8,slow=40						
LASF	Ste Croix	60.49	50	eP	P	04 45 16.5	+0.3
LASF	Ste Croix	60.49	50	eP	P	04 45 16.5	+0.3
SMF	Signal de Mont	60.55	47	eP	P	04 45 15.7	-0.9
	33nm,1.4s						
SMF	Signal de Mont	60.55	47	eP	P	04 45 15.7	-0.9
	33nm,1.4s						
LOR	Lormes	60.59	46	eP	P	04 45 15.9	-0.9
	6.4nm,0.7s						
LOR				eR			
	194nm,21.0s						
LOR	Lormes	60.59	46	eP	P	04 45 15.9	-0.9
	6.4nm,0.7s						
BAIF	Baives	60.98	43	eP	P	04 45 18.5	-0.9
BAIF	Baives	60.98	43	eP	P	04 45 18.5	-0.9
VIVF	Saint-Julien-l	61.08	49	eP	P	04 45 20.5	+0.2
VIVF	Saint-Julien-l	61.08	49	eP	P	04 45 20.5	+0.2
DLBC	Dease Lake	61.29	327	eP	P	04 45 21.4	-0.1
SFTF	Sexfontaines	61.42	45	eP	P	04 45 21.6	-0.8
SFTF	Sexfontaines	61.42	45	eP	P	04 45 21.6	-0.8
MEZF	Maizieres J'vi	61.44	45	eP	P	04 45 22.0	-0.6
MEZF	Maizieres J'vi	61.44	45	eP	P	04 45 22.0	-0.6
HAU	Haudompre	62.29	45	eP	P	04 45 27.4	-0.9
	7.9nm,0.8s						
HAU				eR			
	149nm,19.5s						
HAU	Haudompre	62.29	45	eP	P	04 45 27.4	-0.9
	7.9nm,0.8s						
LPL	La Plagne	62.54	48	eP	P	04 45 30.4	+0.1
	13nm,1.0s						
LPL	La Plagne	62.54	48	eP	P	04 45 30.4	+0.1
	13nm,1.0s						
TOA0	Torodi Ar. Sit	62.55	85	eP	P	04 45 29.5	-1.0
TORD	Torodi Ar. Bea	62.55	85	P	P	04 45 29.9	-0.6
TORD				pP	pP	04 45 43.0	-0.1
TORD	Torodi Ar. Bea	62.55	85	P	P	04 45 29.9	-0.6
	5.5nm,0.8s,baz=287,slow=6.9,SNR=25						
TORD				pP	pP	04 45 43.0	-0.1
	3.4nm,0.5s,baz=288,slow=6.9,SNR=7.3						
LPG	La Plagne	62.55	48	eP	P	04 45 30.6	+0.1
	4.7nm,0.7s						
LPG	La Plagne	62.55	48	eP	P	04 45 30.6	+0.1
	4.7nm,0.7s						
HINF	Hinteralfeld	62.63	46	eP	P	04 45 29.3	-1.3
	2.8nm,0.5s						
HINF	Hinteralfeld	62.63	46	eP	P	04 45 29.3	-1.3
	2.8nm,0.5s						
CDF	Champ du Feu	62.92	45	eP	P	04 45 31.6	-1.0
CDF	Champ du Feu	62.92	45	eP	P	04 45 31.6	-1.0
BFO	Black Forest	63.62	45	eP	P	04 45 35.7	-1.5
	comp=Z,10.0nm,1.9s						
TNS	Taunus Mts	63.71	43	eP	P	04 45 39.4	+1.7
	comp=Z,25nm,2.1s						
TAM	Tamanrasset	63.89	74	eP	P	04 45 38.4	-1.1
	comp=Z,5.3nm,1.1s						
STU	Stuttgart	64.19	45	eP	P	04 45 41.9	+1.0
	comp=Z,11nm,1.4s						
UBBA	Unterbreizbach	64.70	42	eP	P	04 45 44.3	+0.3
	comp=Z,13nm,1.9s						
BSEG	Bad Segeberg	64.92	39	eP	P	04 45 45.3	-0.1
	comp=Z,39nm,2.0s						
KEST	Kesra	65.16	59	LR	LR	05 10 47.0	
	comp=Z,52nm,19.1s,baz=252,slow=33						
GRF	Grafenberg Arr	65.50	44	eP	P	04 45 50.0	+0.6
	comp=Z,22nm,1.9s						
GRF				eL	L	05 07 44.2	
	comp=Z,98nm,21.7s						
NB2	NORSAR Subarra	65.68	31	P	P	04 45 51.2	+0.8
	comp=Z,3.9nm,0.8s,baz=268,slow=6.5						
NOA	NORSAR Array B	65.68	31	P	P	04 45 50.8	+0.4
NOA				pP	pP	04 46 03.6	+0.6
NOA	NORSAR Array B	65.68	31	P	P	04 45 50.7	+0.4
	comp=Z,1.3nm,0.9s,baz=268,slow=6.7,SNR=2.9						
NOA				pP	pP	04 46 03.6	+0.6
	comp=Z,2.9nm,0.8s,baz=267,slow=6.6,SNR=7.2						
MOX	Moxa	65.73	42	eL	L	05 08 42.3	
	comp=Z,160nm,19.0s						
ROTZ	Rotzenmuhle	66.14	43	eP	P	04 45 55.2	+1.7
	comp=Z,29nm,2.1s						
TANN	Tannenbergstha	66.28	43	eP	P	04 45 53.8	-0.6
	comp=Z,53nm,3.0s						
GERES	GERESS Array B	67.17	44	P	P	04 46 00.1	-0.1
GERES				pP	pP	04 46 12.7	-0.2
GERES	GERESS Array B	67.17	44	P	P	04 46 00.1	-0.1
	comp=Z,0.3nm,0.6s,baz=283,slow=6.7,SNR=4.6						
GERES				pP	pP	04 46 12.7	-0.2
	comp=Z,0.9nm,0.6s,baz=272,slow=5.4,SNR=7.1						
BRG	Berggiesshubel	67.20	42	e(P)	PcP	04 46 30.9	+3.0
	comp=Z,5.2nm,0.9s						
BRG							
	comp=N,96nm,18.3s						
BRG							
	comp=E,182nm,21.6s						
BRG							
	comp=Z,262nm,27.1s						
ILAR	Eielson Array	69.70	333	P	P	04 46 14.8	-0.8
ILAR				pP	pP	04 46 28.0	-0.3
ILAR	Eielson Array	69.70	333	P	P	04 46 14.8	-0.8
	comp=Z,1.4nm,0.6s,baz=112,slow=3.5,SNR=13						
ILAR				pP	pP	04 46 28.0	-0.3
	comp=Z,3.1nm,0.6s,baz=103,slow=4.0,SNR=9.0						
VYHS	Vyhne	70.59	44	eP	P	04 46 22.1	+0.8
TRF	Thorofare Moun	71.29	332	eP	P	04 46 25.1	-0.4
	comp=Z,14nm,1.0s						
ARCES	ARCESS Array B	71.50	22	P	P	04 46 26.8	+0.4
ARCES				pP	pP	04 46 39.9	+0.6
ARCES	ARCESS Array B	71.50	22	P	P	04 46 26.8	+0.4
	comp=Z,1.8nm,0.6s,baz=282,slow=4.5,SNR=4.8						
ARCES				pP	pP	04 46 39.9	+0.6
	comp=Z,4.1nm,0.8s,baz=260,slow=4.8,SNR=2.0						
STHS	Stebnicka Huta	72.02	43	eP	P	04 46 31.6	+1.6
CRVS	Cervenica-Dubn	72.25	44	eP	P	04 46 31.0	-0.3
KOLS	Kolonicke sedl	72.77	44	eP	P	04 46 35.9	+1.4
FINES	FINESS Array B	72.82	30	P	P	04 46 34.8	+0.3
FINES				pP	pP	04 46 47.7	+0.5
FINES	FINESS Array B	72.82	30	P	P	04 46 34.8	+0.3
	comp=Z,1.1nm,0.5s,baz=264,slow=5.7,SNR=3.5						
FINES				pP	pP	04 46 47.7	+0.5
	comp=Z,3.1nm,0.6s,baz=279,slow=3.9,SNR=2.9						
AKASG	Malin Array Be	76.79	41	P	P	04 46 57.2	-0.4
AKASG	Malin Array Be	76.79	41	P	P	04 46 57.2	-0.4
	comp=Z,0.4nm,0.4s,baz=278,slow=5.7,SNR=4.0						
BRTR	Keskin Array B	83.01	50	P	P	04 47 32.0	+0.3
BRTR	Keskin Array B	83.01	50	P	P	04 47 32.0	+0.3
	comp=Z,2.8nm,0.9s,baz=270,slow=3.7,SNR=8.6						
GTA	Gaotai	119.30	15	ePKP	PKPdf	04 53 55.2	-0.4
GTA				sPKP		04 54 09.7	
HHC	Hu-ho-hao-te	119.73	4	ePKP	PKPdf	04 54 00.8	+4.4
HHC				sPKP		04 54 17.3	
HHC				PP	PP	04 55 28.7	+10
HHC				PKS	PKSdf	04 57 35.9	+2.7
HHC				SKS	SKSdf	05 01 07.6	+2.4
HHC				SKKS	SKKSac	05 02 16.6	+0.3
HHC				AMB	AMB		
	comp=Z,110nm,9.5s						
CD2	Chengdu	128.35	14	ePKP	PKPdf	04 54 15.4	+2.3
WHN	Wuhan	130.15	2	PKP	PKPdf	04 54 14.6	-1.8
GYA	Guiyang	133.27	12	ePdif	Pdif	04 51 15.6	-4.2
GYA				PKP	PKPdf	04 54 20.0	-2.6
GYA				sPKP		04 54 37.3	
GYA				PP	PP	04 56 49.9	+1.7
GYA				AMB	AMB		
	comp=Z,90nm,7.9s						
STKA	Stephens Creek	154.37	236	PKPbc	PKPbc	04 55 07.5	+0.8
STKA				PKPab	PKPab	04 55 20.6	-0.3
STKA	Stephens Creek	154.37	236	PKPbc	PKPbc	04 55 07.5	+0.8
	comp=Z,1.4nm,0.8s,baz=63,slow=2.3,SNR=3.7						
STKA				PKPab	PKPab	04 55 20.6	-0.3
	comp=Z,1.6nm,0.6s,baz=77,slow=0.6,SNR=6.3						
WRA	Warramunga Arr	163.23	266	PKPab	PKPab	04 55 59.8	0.0
WRA	Warramunga Arr	163.23	266	PKPab	PKPab	04 55 59.8	0.0
	comp=Z,0.8nm,0.8s,baz=85,slow=4.0,SNR=2.8						
ASAR	Alice Springs	163.33	253	PKP	PKPdf	04 55 10.4	+1.2
ASAR				PKPab	PKPab	04 56 00.1	-0.1
ASAR	Alice Springs	163.33	253	PKP	PKPdf	04 55 10.4	+1.2
	comp=Z,0.7nm,1.0s,baz=74,slow=3.4,SNR=3.5						
ASAR				PKPab	PKPab	04 56 00.1	-0.1
	comp=Z,0.8nm,0.7s,baz=98,slow=4.2,SNR=5.1						

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*TEH **01** 04:50:09.2, 27°.24N×56°.28E, h19km, ML3.6*
*IDC **01** 04:50:09.9±1.4, 27°.39N×56°.22E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/27, mbtmp3.6/7, Error ellipse: s-maj=34.6km s-min=24.8km az=179.0*
*ISCJB **01** 04:50:10.3±0.8, 27°.31N±0°.06×56°.19E±0°.05, h15km, mb3.5/7, Error ellipse: s-maj=9.0km s-min=5.9km az=4.0*
*CSEM **01** 04:50:10.4±0.7, 27°.24N×56°.24E, h2km, ML3.6, Error ellipse: s-maj=16.5km s-min=9.1km az=167.0*
*KISR **01** 04:50:10.8±0.5, 28°.41N×55°.90E, h34km, ML3.5*
ISC 01 04:50:11.3±0.9**, 27°.27N**±0°.08×**56°.21E**±0°.04**, h15km, n30, σ1s66**/39**, mb3.5**/7**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	0.13	343	ePg	Pg	04 50 12.6	-2.6
BNDS				eSg	Sg	04 50 13.9	-3.9
IBND	Bandar-abas	0.34	58	ePg	Pg	04 50 16.8	-1.5
IBND				eSg	Sg	04 50 22.4	-0.7
IBND				e		04 50 37.9	
	comp=Z,86µm,0.2s						
IBND	Bandar-abas	0.34	58	ePg	Pg	04 50 16.8	-1.5
IBND				eSg	Sg	04 50 22.4	-0.7
KRBR	Kerman	2.75	10	ePn	Pn	04 50 56.3	+1.2
ISRV	Sarvestan	3.45	308	ePn	Pn	04 51 06.7	+1.9
ISRV				e		04 52 38.8	
	comp=Z,1µm,0.4s						
ISRV	Sarvestan	3.45	308	ePn	Pn	04 51 06.7	+1.9
IMEH	Mehriz	4.34	342	ePn	Pn	04 51 18.1	+1.2
IMEH				e		04 51 21.3	
	comp=Z,512nm,0.2s						
IMEH	Mehriz	4.34	342	ePn	Pn	04 51 18.1	+1.2
ISAD	Sadrabad	5.12	335	ePn	Pn	04 51 29.1	+1.3
ISAD				e		04 51 32.9	
	comp=E,501nm,0.1s						
ISAD				eSg	Sg	04 52 58.9	+3.0
ISAD	Sadrabad	5.12	335	ePn	Pn	04 51 29.1	+1.3
ISAD				eSg	Sg	04 52 58.9	+3.0
ICHK	Chekchek	5.20	343	ePn	Pn	04 51 29.5	+0.7
ICHK				e		04 51 44.8	
	comp=Z,215nm,0.2s						
ICHK	Chekchek	5.20	343	ePn	Pn	04 51 29.5	+0.7
IKOO	Kooshah	5.68	25	ePn	Pn	04 51 36.1	+0.7
IKOO	Kooshah	5.68	25	ePn	Pn	04 51 36.1	+0.7
NASN	Na'in	6.25	333	ePn	Pn	04 51 44.0	+0.7
IGAR	Gharneh	6.27	326	ePn	Pn	04 51 44.2	+0.7
IGAR				e		04 51 47.2	
	comp=Z,520nm,0.1s						
IZEF	Zefreh	6.54	330	ePn	Pn	04 51 47.6	+0.4
IZEF				e		04 51 50.4	
	comp=Z,140nm,0.1s						
IZEF	Zefreh	6.54	330	ePn	Pn	04 51 47.6	+0.4
RDF	Al-Radifah	7.83	284	eP	Pn	04 52 05.7	+1.0
RDF				eS	Sn	04 53 31.0	-2.0
RDF				AML	AML	04 53 36.1	
	comp=Z,13nm,0.6s						
RDF	Al-Radifah	7.83	284	eP	Pn	04 52 05.7	+1.0
RDF				eS	Sn	04 53 31.0	-2.0
	comp=Z,13nm,0.6s						
NAY	Al-Naaiem	8.15	286	eP	Pn	04 52 09.1	-0.1
NAY				eS	Sn	04 53 38.5	-2.6
NAY				AML	AML	04 53 41.5	
	comp=Z,2.4nm,0.4s						
NAY	Al-Naaiem	8.15	286	eP	Pn	04 52 09.1	-0.1
NAY				eS	Sn	04 53 38.5	-2.6
	comp=Z,2.4nm,0.4s						
ASAO	Ashtian	8.99	325	ePn	Pn	04 52 21.9	+1.0
BRTR	Keskin Array B	22.48	309	P	P	04 55 10.2	0.0
	comp=Z,1.1nm,0.8s,baz=133,slow=11,SNR=6.4						
MKAR	Makanchi Array	28.30	40	P	P	04 56 03.1	-1.2
	comp=Z,0.5nm,0.6s,baz=220,slow=7.4,SNR=5.3						
ZALV	Zalesovo Beam	33.95	30	P	P	04 56 52.9	-1.0
	comp=Z,0.3nm,0.3s,baz=235,slow=6.8,SNR=2.7						
GERES	GERESS Array B	39.14	315	P	P	04 57 39.6	+1.3
	comp=Z,0.2nm,0.5s,baz=102,slow=9.2,SNR=3.6						
FINES	FINESS Array B	39.68	338	P	P	04 57 43.6	+1.0
	comp=Z,0.4nm,0.5s,baz=150,slow=11,SNR=3.3						
TORD	Torodi Ar. Bea	52.68	266	P	P	04 59 25.1	-0.3
	comp=Z,0.8nm,0.5s,baz=62,slow=6.8,SNR=11						
WRA	Warramunga Arr	88.98	113	P	P	05 03 08.4	+2.5
	comp=Z,0.4nm,0.7s,baz=317,slow=4.1,SNR=3.7						

IDC 01 05:25:57.7±1.8**, 9°.35S×125°.24E, h0km, mb3.6**/1**, mb1 4.0**/4**, mb1mx3.6**/20**, mbtmp3.8**/4**, ML3.9**/3**, Error ellipse: s-maj=94.7km s-min=27.5km az=66.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	8.71	178	Pn	Pn	05 28 04.3	-0.7
	1.4nm,0.3s,baz=10.0,slow=10,SNR=62						
FITZ				Sn	Sn	05 29 32.8	-11
	3.4nm,0.3s,baz=346,slow=13,SNR=14						
WRA	Warramunga Arr	13.72	141	Pn	Pn	05 29 14.5	+0.9
	0.7nm,0.3s,baz=319,slow=13,SNR=43						
WRA				Sn	Sn	05 31 39.1	-7.8
	1.6nm,0.3s,baz=310,slow=24,SNR=16						
ASAR	Alice Springs	16.47	151	Pn	Pn	05 29 50.2	-0.1
	0.3nm,0.3s,baz=320,slow=11,SNR=18						
ASAR				Sn	Sn	05 32 43.2	-11
	0.5nm,0.3s,baz=322,slow=18,SNR=11						
MKAR	Makanchi Array	67.72	330	P	P	05 36 57.1	0.0
	0.4nm,0.5s,baz=138,slow=7.4,SNR=5.3						

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*IDC **01** 05:27:50.0±0.8, 29°.82N×88°.08E, h0km, mb3.7/10, mb1 3.9/12, mb1mx3.8/28, mbtmp3.8/12, ML4.0/2, Error ellipse: s-maj=31.8km s-min=16.7km az=55.0*
*ISCJB **01** 05:27:54.0±0.7, 29°.9N±0°.1×88°.0E±0°.2, h37km, mb3.8/11, Error ellipse: s-maj=24.1km s-min=10.9km az=148.2*
ISC 01 05:27:55.8±0.7**, 29°.91N**±0°.10×**88°.2E**±0°.1**, h37km, n18, σ1s51**/17**, mb3.9**/11**, 1D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	5.43	142	⇓iP	Pn	05 29 17.0	+2.6
SHL				i x	Sn	05 30 41.0	+25
SMLA	Simla	9.58	280	ex	Pn	05 30 11.4	+0.3
SMLA				AMB	AMB	05 30 13.6	
	comp=Z,35nm,0.4s						
DHRM	DHARAMSHALA	10.45	286	ex	Pn	05 30 18.6	-4.7
DHRM				AMB	AMB	05 30 32.0	
	comp=Z,21nm,0.9s						
BHPL	Bhopal	11.69	238	ex	Pn	05 30 39.3	-0.9
CMAR	Chiang Mai Arr	15.04	137	Pn	Pn	05 31 22.2	-3.4
	comp=Z,0.4nm,0.3s,baz=310,slow=14,SNR=7.0						
MKAR	Makanchi Array	17.47	346	P	Pn	05 31 55.0	-1.4
	comp=Z,0.1nm,0.3s,baz=158,slow=10,SNR=12						
KURBB	Kurchatov Arra	21.92	343	P	P	05 32 45.5	-0.2
	comp=Z,4.5nm,0.8s,baz=157,slow=11,SNR=25						
SONM	Songino Array	22.73	33	P	P	05 32 55.2	+0.6
	comp=Z,1.4nm,0.8s,baz=221,slow=12,SNR=12						
ZALV	Zalesovo Beam	24.14	355	P	P	05 33 08.1	-0.1
	comp=Z,0.3nm,0.3s,baz=170,slow=8.8,SNR=2.3						
BRTR	Keskin Array B	45.23	298	P	P	05 36 12.2	+2.6
	comp=Z,0.6nm,0.6s,baz=99,slow=10.0,SNR=3.7						
AKASG	Malin Array Be	48.12	313	P	P	05 36 30.4	-1.4
	comp=Z,1.0nm,0.5s,baz=83,slow=6.2,SNR=4.7						
FINES	FINESS Array B	50.93	327	P	P	05 36 53.8	+0.7
	comp=Z,1.3nm,0.5s,baz=124,slow=9.9,SNR=6.5						
NB2	NORSAR Subarra	58.08	326	P	P	05 37 44.4	-0.7
	comp=Z,1.7nm,0.8s,baz=86,slow=7.4						
NOA	NORSAR Array B	58.08	326	P	P	05 37 45.0	-0.1
	comp=Z,1.3nm,0.7s,baz=86,slow=7.2,SNR=7.8						
GERES	GERESS Array B	58.27	312	P	P	05 37 47.0	+0.3
	comp=Z,0.8nm,0.9s,baz=102,slow=6.2,SNR=5.7						
WRA	Warramunga Arr	66.57	132	P	P	05 38 42.4	0.0
	comp=Z,0.7nm,0.5s,baz=323,slow=6.5,SNR=4.8						
ASAR	Alice Springs	69.04	135	P	P	05 38 57.8	-0.1
	comp=Z,0.4nm,0.5s,baz=311,slow=4.8,SNR=2.8						
TORD	Torodi Ar. Bea	80.56	280	P	P	05 40 04.3	-0.6
	comp=Z,0.8nm,0.6s,baz=56,slow=4.7,SNR=6.4						

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*BJI **01** 05:30:58.0, 0°.04N×126°.43E, h35km, mB4.9/21, mb4.7/29, Ms4.4/15, Ms7 4.2/15*
*ISCJB **01** 05:31:04.6±0.3, 0°.75N±0°.03×126°.22E±0°.03, h44km, mb4.5/37, MS3.8/9, Error ellipse: s-maj=4.7km s-min=4.3km az=172.3*
*DJA **01** 05:31:06.4±0.9, 1°N±3°×12°6E±°, h29km±12km, M4.6/4, mb5.0/4, mB4.9/2, MLv4.4/4, Mw(mB)4.2/2*
*IDC **01** 05:31:09.1±2.9, 0°.67N×126°.08E, h74km±27km, mb4.0/19, mb1 4.1/21, mb1mx4.0/27, mbtmp4.0/21, MS3.3/3, Ms1 3.3/3, ms1mx2.7/30, Error ellipse: s-maj=21.3km s-min=9.0km az=76.0*
*NEIC **01** 05:31:09.8±1.6, 0°.69N×126°.13E, h81km±15km, mb4.4/9, Error ellipse: s-maj=12.0km s-min=6.3km az=64.0*
ISC 01 05:31:06.2±0.3**, 0°.75N**±0°.04×**126°.24E**±0°.04**, h44km, n93, σ1s71**/129**, mb4.4**/37**, MS3.8**/9**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.13	89	P	Pn	05 31 25.6	0.0
TNTI				S	Sn	05 31 40.9	+1.0
MNI	Manado	1.56	296	P	Pn	05 31 30.5	-1.0
MNI				S	Sn	05 31 52.2	+1.7
LBMI	Labuha	1.87	138	P	Pn	05 31 36.4	+0.6
GAMI	Galela, Maluku	1.89	55	P	Pn	05 31 37.6	+1.6
GAMI				S	Sn	05 31 57.5	-1.1
KMSI	Cibinong	2.27	265	P	Pn	05 31 41.3	+0.1
KMSI				S	Sn	05 32 09.6	+1.7
LUWI	Luwuk	3.90	243	P	Pn	05 32 07.6	+3.9
NLAI	Namlea	4.06	168	P	Pn	05 32 07.9	+2.0
MRSI	Marisa	4.31	266	P	Pn	05 32 11.5	+2.2
SKSI	Soroako, Sulaw	5.89	236	P	Pn	05 32 32.0	+0.9
	110nm,0.6s,929nm						
TTSI	Tana Toraja	7.45	240	P	Pn	05 32 53.5	+1.1
	61nm,0.7s						
BKSI	Bulukumba	8.59	225	P	Pn	05 33 10.6	+2.5
	58nm,0.5s,650nm						
KAPI	Kappang	8.65	228	ePn	Pn	05 33 09.7	+0.8
KAPI				S	Sn	05 34 44.7	-0.5
KAPI				eSn	Sn	05 34 51.1	+5.9
KAPI	Kappang	8.65	228	P	Pn	05 33 09.9	+1.0
KAPI	Kappang	8.65	228	P	Pn	05 33 08.6	-0.3
	6.5nm,0.3s,baz=229,slow=1.8,SNR=14						
KAPI				S	Sn	05 34 44.7	-0.5
	1.7nm,0.3s,baz=185,slow=18,SNR=3.0						
MYLDM	Lahad Datu	8.89	300	P	Pn	05 33 15.2	+3.0
KSM	Kuching	15.94	273	ePn	P	05 34 50.3	-0.3
	15nm,0.8s						
FITZ	Fitzroy Crossi	18.75	182	P	P	05 35 20.6	-1.0
FITZ	Fitzroy Crossi	18.75	182	P	P	05 35 20.6	-1.0
	0.3nm,0.3s,baz=14,slow=7.6,SNR=5.3						
FITZ				LR	LR	05 43 14.4	
	comp=Z,56nm,19.9s,baz=359,slow=39						
WRAB	Tennant Creek	22.04	159	eP	P	05 35 56.5	-0.9
WRA	Warramunga Arr	22.05	159	P	P	05 35 56.7	-0.7
WRA				S	S	05 39 56.3	-1.9
WRA	Warramunga Arr	22.05	159	P	P	05 35 56.7	-0.7
	15nm,0.7s,baz=337,slow=11,SNR=25						
WRA				S	S	05 39 56.3	-1.9
	2.0nm,0.9s,baz=334,slow=17,SNR=4.8						
COEN	Coen	22.25	132	eP	P	05 36 02.1	+2.5
TPUB	Ta-pu	23.06	347	eP	P	05 36 05.4	-2.7
	24nm,0.7s						
SSLB	Suanglung	23.46	348	eP	P	05 36 11.5	-0.5
QIZ	Qiongzhong	24.26	319	P	P	05 36 19.6	+0.2
QIZ				S	S	05 40 39.6	+4.3
QIZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
QIZ				pmax	pmax		
	comp=Z,42nm,5.2s						
QIZ				LR	LR		
	comp=N,120nm,21.5s						
QIZ				LR	LR		
	comp=Z,95nm,21.7s						
ASAR	**Alice Springs**	**25.39**	**163**	P	**P**	**05 36 29.9**	**+0.2**
ASAR				S	**S**	**05 40 58.4**	**+4.9**
ASAR	**Alice Springs**	**25.39**	**163**	P	**P**	**05 36 29.9**	**+0.2**
	comp=Z,4.3nm,0.3s,baz=346,slow=11,SNR=36						
ASAR				S	**S**	**05 40 58.4**	**+4.9**
	comp=Z,0.6nm,0.9s,baz=340,slow=13,SNR=4.0						
IPM	**Ipoh**	**25.45**	**279**	*e*P	**P**	**05 36 30.4**	**0.0**
	comp=Z,7.4nm,0.7s						
JOW	**Kunigami**	**26.00**	**4**	*e*P	**P**	**05 36 36.6**	**+1.5**
	comp=Z,9.0nm,0.8s						
FORT	**Forrest**	**31.41**	**177**	*e*P	**P**	**05 37 22.9**	**-0.4**
	comp=Z,30nm,0.8s						
WHN	**Wuhan**	**31.70**	**340**	P	**P**	**05 37 26.3**	**+0.4**
GYA	**Guiyang**	**31.75**	**325**	*e*P	**P**	**05 37 28.7**	**+2.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	**Nanjing**	**31.90**	**348**	*e*P	**P**	**05 37 29.1**	**+1.5**
NJ2				pP	**pP**	**05 37 37.0**	**-2.4**
NJ2				sP	**sP**	**05 37 41.0**	**-3.6**
NJ2				PP	**PP**	**05 38 41.0**	**+0.7**
NJ2				S	**S**	**05 42 39.0**	**+3.4**
NJ2				sS	**sS**	**05 42 54.0**	**-1.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,32nm,3.5s						
NJ2				LR	LR		
	comp=N,330nm,15.7s						
NJ2				LR	LR		
	comp=E,220nm,16.8s						
NJ2				LR	LR		
	comp=Z,510nm,18.1s						
CMAR	**Chiang Mai Arr**	**32.05**	**305**	P	**P**	**05 37 28.5**	**-0.6**
CMAR	**Chiang Mai Arr**	**32.05**	**305**	P	**P**	**05 37 28.5**	**-0.6**
	comp=Z,1.0nm,0.3s,baz=144,slow=8.2,SNR=4.4						
JNU	**Nakatsue**	**32.49**	**7**	LR	LR	05 48 15.1	
	comp=Z,79nm,21.1s,baz=303,slow=32						
KMI	**Kunming**	**33.20**	**319**	P	**P**	**05 37 42.4**	**+3.0**
KMI				pP	**pP**	**05 37 51.9**	**+0.7**
KMI				S	**S**	**05 42 59.3**	**+2.8**
KMI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,94nm,4.9s						
KMI				LR	LR		
	comp=N,130nm,13.9s						
KMI				LR	LR		
	comp=E,120nm,13.9s						
KMI				LR	LR		
	comp=Z,130nm,23.8s						
NWAO	**Narrogin (SRO)**	**34.56**	**193**	P	**P**	**05 37 50.6**	**-0.1**
NWAO	**Narrogin (SRO)**	**34.56**	**193**	P	**P**	**05 37 50.6**	**-0.1**
	comp=Z,3.0nm,0.5s,baz=315,slow=2.9,SNR=5.2						
STKA	**Stephens Creek**	**35.57**	**157**	*e*P	**P**	**05 37 59.7**	**+0.2**
	comp=Z,1.1nm,0.9s						
STKA	**Stephens Creek**	**35.57**	**157**	P	**P**	**05 37 59.5**	**0.0**
	comp=Z,3.4nm,0.6s,baz=335,slow=6.9,SNR=11						
KSAR	**Wonju Array Be**	**36.54**	**2**	P	**P**	**05 38 08.4**	**+0.8**
KSRS	**Korea Array**	**36.55**	**2**	P	**P**	**05 38 08.4**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=184,slow=9.8,SNR=8.4						
CD2	**Chengdu**	**36.79**	**327**	*e*P	**P**	**05 38 11.0**	**+0.9**
CD2				pP	**pP**	**05 38 21.6**	**-0.4**
CD2				sP	**sP**	**05 38 25.6**	**-1.6**
CD2				S	**S**	**05 43 53.7**	**+2.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,30nm,5.4s						
CD2				LR	LR		
	comp=N,130nm,17.8s						
CD2				LR	LR		
	comp=Z,130nm,13.2s						
MJAR	**Matsushiro Arr**	**37.30**	**16**	P	**P**	**05 38 15.1**	**+0.9**
MJAR	**Matsushiro Arr**	**37.30**	**16**	P	**P**	**05 38 15.1**	**+0.9**
	comp=Z,1.1nm,0.5s,baz=190,slow=9.6,SNR=5.1						
BJI	**Beijing**	**40.16**	**348**	P	**P**	**05 38 37.8**	**-0.3**
BJI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	**Lanzhou**	**40.84**	**332**	*e*P	**P**	**05 38 45.2**	**+1.2**
LZH				pP	**pP**	**05 38 54.2**	**-1.9**
LZH				sP	**sP**	**05 38 58.5**	**-2.8**
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
LZH				pmax	pmax		
	comp=Z,93nm,4.0s						
LZH				LR	LR		
	comp=N,230nm,14.8s						
LZH				LR	LR		
	comp=E,140nm,11.2s						
LZH				LR	LR		
	comp=Z,280nm,18.0s						
HHC	**Hu-ho-hao-te**	**42.07**	**343**	*e*P	**P**	**05 38 55.3**	**+1.3**
HHC				pP	**pP**	**05 39 05.4**	**-0.7**
HHC				sP	**sP**	**05 39 09.8**	**-1.5**
HHC				PP	**PP**	**05 40 36.4**	**+4.4**
HHC				S	**S**	**05 45 12.4**	**+2.0**
HHC				sS	**sS**	**05 45 30.2**	**-0.4**
HHC				ScS	**ScS**	**05 48 52.4**	**-0.5**
HHC				pmax	pmax		
	comp=Z,48nm,0.7s						
HHC				pmax	pmax		
	comp=Z,100nm,5.1s						
HHC				LR	LR		
	comp=N,170nm,19.0s						
HHC				LR	LR		
	comp=E,250nm,17.8s						
HHC				LR	LR		
	comp=Z,250nm,16.9s						
CN2	**Changchun**	**42.87**	**359**	*e*P	**P**	**05 39 01.7**	**+1.5**
USRK	**Ussuriysk Arra**	**43.56**	**6**	P	**P**	**05 39 06.7**	**+0.9**
	comp=Z,2.9nm,0.5s,baz=192,slow=5.9,SNR=5.6						
MDJ	**Mudanjiang**	**43.78**	**3**	P	**P**	**05 39 10.2**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,11nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,56nm,6.6s						
GTA	**Gaotai**	**45.41**	**331**	*e*P	**P**	**05 39 20.7**	**-0.2**
GTA				pP	**pP**	**05 39 30.6**	**-2.5**
GTA				sP	**sP**	**05 39 34.5**	**-3.8**
GTA				PcP	**PcP**	**05 41 01.4**	**+1.8**
GTA				S	**S**	**05 45 59.4**	**+0.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,55nm,4.5s						
GTA				LR	LR		
	comp=N,110nm,18.5s						
GTA				LR	LR		
	comp=E,81nm,17.1s						
GTA				LR	LR		
	comp=Z,88nm,20.0s						
TAPN	**Taplejung**	**45.43**	**309**	*e*P	**P**	**05 39 19.8**	**-1.6**
	comp=Z,3.2nm,0.3s						
ODAN	**Odare**	**45.45**	**308**	*e*P	**P**	**05 39 20.5**	**-1.0**
	comp=Z,12nm,0.7s						
RAMN	**Ramite**	**46.11**	**308**	*e*P	**P**	**05 39 25.8**	**-1.0**
	comp=Z,11nm,0.6s						
GUN	**Gumba**	**47.13**	**309**	*e*P	**P**	**05 39 32.7**	**-2.1**
	comp=Z,26nm,0.7s						
PKI	**Pulchoki**	**47.34**	**308**	*e*P	**P**	**05 39 35.0**	**-1.5**
PKIN	**Phulchoki**	**47.35**	**308**	*e*P	**P**	**05 39 35.4**	**-1.1**
KOLN	**Koldanda**	**48.86**	**307**	*e*P	**P**	**05 39 47.0**	**-1.1**
	comp=Z,17nm,0.6s						
DANN	**Dangsing**	**48.99**	**308**	*e*P	**P**	**05 39 47.6**	**-1.6**
	comp=Z,20nm,0.6s						
PYUN	**Piuthan**	**49.49**	**307**	*e*P	**P**	**05 39 51.5**	**-1.4**
	comp=Z,19nm,0.7s						
SONM	**Songino Array**	**49.96**	**343**	P	**P**	**05 39 55.9**	**-0.1**
SONM				PcP	**PcP**	**05 41 15.7**	**0.0**
SONM	**Songino Array**	**49.96**	**343**	P	**P**	**05 39 55.9**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=155,slow=8.1,SNR=14						
SONM				PcP	**PcP**	**05 41 15.7**	**0.0**
	comp=Z,0.2nm,0.5s,baz=177,slow=2.2,SNR=3.8						
WMQ	**Urumqi**	**54.89**	**327**	*e*P	**P**	**05 40 31.5**	**-1.1**
WMQ				pP	**pP**	**05 40 41.0**	**-4.1**
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
WMQ				pmax	pmax		
	comp=Z,120nm,6.0s						
PETK	**Petropavlovsk-**	**58.35**	**22**	P	**P**	**05 40 58.1**	**+1.2**
PETK	**Petropavlovsk-**	**58.35**	**22**	P	**P**	**05 40 58.1**	**+1.2**
	comp=Z,1.9nm,0.7s,baz=194,slow=5.5,SNR=3.8						
MK31	**Makanchi Array**	**59.73**	**326**	*e*P	**P**	**05 41 05.9**	**-0.7**
MKAR	**Makanchi Array**	**59.73**	**326**	P	**P**	**05 41 05.7**	**-0.9**
MKAR				PcP	**PcP**	**05 41 53.0**	**-0.1**
MKAR	**Makanchi Array**	**59.73**	**326**	P	**P**	**05 41 05.7**	**-0.9**
	comp=Z,3.6nm,0.4s,baz=122,slow=8.7,SNR=63						
MKAR				PcP	**PcP**	**05 41 53.0**	**-0.1**
	comp=Z,2.0nm,0.5s,baz=122,slow=3.7,SNR=6.3						
MKAR				LR	LR	06 07 54.8	
	comp=Z,32nm,20.5s,baz=258,slow=37						
ZALV	**Zalesovo Beam**	**63.01**	**334**	P	**P**	**05 41 27.3**	**-1.3**
ZALV	**Zalesovo Beam**	**63.01**	**334**	P	**P**	**05 41 27.3**	**-1.3**
	comp=Z,1.2nm,0.4s,baz=142,slow=3.3,SNR=7.6						
KURBB	**Kurchatov Arra**	**63.98**	**328**	P	**P**	**05 41 34.4**	**-0.7**
	comp=Z,6.6nm,0.6s,baz=129,slow=6.1,SNR=91						
KURK	**Kurchatov**	**63.99**	**328**	*e*P	**P**	**05 41 33.9**	**-1.2**
	comp=Z,12nm,0.7s						
BVAR	**Borovoye Array**	**69.55**	**328**	P	**P**	**05 42 09.9**	**-0.6**
BVAR	**Borovoye Array**	**69.55**	**328**	P	**P**	**05 42 09.9**	**-0.6**
	comp=Z,1.2nm,0.5s,baz=134,slow=10,SNR=9.7						
BRVK	**Borovoye**	**69.62**	**328**	*e*P	**P**	**05 42 09.9**	**-1.0**
	comp=Z,5.2nm,0.9s						
ABKAR	**Akbulak array**	**74.14**	**321**	*e*P	**P**	**05 42 37.3**	**-0.8**
	comp=Z,2.9nm,0.8s						
VNDA	**Vanda**	**80.56**	**173**	P	**P**	**05 43 13.0**	**-0.5**
VNDA	**Vanda**	**80.56**	**173**	P	**P**	**05 43 13.0**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=318,slow=5.2,SNR=11						
KBZ	**Khabaz**	**84.66**	**314**	P	**P**	**05 43 34.0**	**-1.5**
KBZ	**Khabaz**	**84.66**	**314**	P	**P**	**05 43 34.0**	**-1.5**
	comp=Z,2.2nm,0.8s,baz=159,slow=3.7,SNR=5.8						
ILAR	**Eielson Array**	**87.98**	**25**	P	**P**	**05 43 49.7**	**-1.7**
ILAR	**Eielson Array**	**87.98**	**25**	P	**P**	**05 43 49.7**	**-1.7**
	comp=Z,0.4nm,0.7s,baz=238,slow=4.8,SNR=3.3						
BRTR	**Keskin Array B**	**91.53**	**310**	P	**P**	**05 44 07.8**	**-1.0**
BRTR	**Keskin Array B**	**91.53**	**310**	P	**P**	**05 44 07.8**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=110,slow=5.4,SNR=5.0						
ARCES	**ARCESS Array B**	**93.05**	**340**	P	**P**	**05 44 14.2**	**-0.8**
ARCES	**ARCESS Array B**	**93.05**	**340**	P	**P**	**05 44 14.2**	**-0.8**
	comp=Z,8.9nm,1.2s,baz=30,slow=7.6,SNR=3.5						
NB2	**NORSAR Subarra**	**101.21**	**333**	P	**Pdif**	**05 44 56.8**	**+4.8**
	comp=Z,0.7nm,0.8s,baz=349,slow=7.9						
TORD	**Torodi Ar. Bea**	**123.32**	**286**	PKP	**PKPdf**	**05 49 58.4**	**-1.2**
TORD	**Torodi Ar. Bea**	**123.32**	**286**	PKP	**PKPdf**	**05 49 58.4**	**-1.2**
	comp=Z,0.6nm,0.6s,baz=73,slow=1.4,SNR=4.7						
TXAR	**Lajitas Array**	**123.78**	**53**	PKP	**PKPdf**	**05 50 01.0**	**+0.8**
TXAR	**Lajitas Array**	**123.78**	**53**	PKP	**PKPdf**	**05 50 01.0**	**+0.8**
	comp=Z,0.2nm,0.6s,baz=180,slow=1.1,SNR=4.7						

ISCJB ***01*** *05:35:36.4±0.3, 64.°82N±0.°02×148.°04W±0.°05, h20km±2km, mb3.8/11, MS2.8/1, Error ellipse: s-maj=4.0km s-min=3.6km az=27.8*

IDC ***01*** *05:35:37.3±2.9, 64.°72N×147.°95W, h16km±15km, mb3.7/8, mb1 3.8/11, mb1mx3.6/29, mbtmp3.6/11, ML3.3/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/33, Error ellipse: s-maj=27.8km s-min=14.9km az=42.0*

NEIC ***01*** *05:35:37.2, 64.°79N×148.°03W, h15km, mb4.3/2, ML3.9(AEIC), After AEIC.*

NEIC Felt [III] at Fairbanks and Fort Wainwright and [II] at North Pole. Also felt at Clear, Eielson AFB, Ester, Healy and Nenana.

ISC 01 05:35:36.7±0.8**, 64.°77N**±0.°03**×148.°09W**±0.°03**, h13**km±5km**, n64, σ1.^{s}36**/81**, mb4.0**/11**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COLA	**College**	**0.14**	**45**	P	**Pg**	**05 35 39.7**	**-0.5**
COLA				S	**Sg**	**05 35 42.5**	**-0.3**
CCB	**Clear Creek Bu**	**0.18**	**136**	P	**Pg**	**05 35 41.1**	**+0.4**
CCB				S	**Sg**	**05 35 44.2**	**+0.7**
MDM	**Murphy Dome**	**0.20**	**342**	P	**Pg**	**05 35 41.0**	**-0.1**
MDM				S	**Sg**	**05 35 44.0**	**-0.2**
WRH	**Wood River Hil**	**0.30**	**180**	P	**Pb**	**05 35 43.9**	**-0.1**
GLM	**Gilmore Dome**	**0.37**	**54**	P	**Pg**	**05 35 44.1**	**-0.1**
GLM				S	**Sg**	**05 35 48.9**	**-0.2**
NEA	**Nenana**	**0.47**	**246**	P	**Pg**	**05 35 46.8**	**+0.8**
ILAR	**Eielson Array**	**0.52**	**90**	Pg	**Pg**	**05 35 47.0**	**+0.2**
ILAR				Lg	Lg	05 35 53.8	
ILAR	**Eielson Array**	**0.52**	**90**	Pg	**Pg**	**05 35 47.0**	**+0.2**
	663nm,0.3s,baz=274,slow=17						
ILAR				Lg	Lg	05 35 53.8	
	772nm,0.3s,baz=268,slow=30,SNR=35						
HDA	**Harding Lake**	**0.61**	**126**	P	**Pg**	**05 35 49.0**	**+0.3**
HDA				S	**Sb**	**05 35 57.1**	**-0.8**
BWN	**Browne**	**0.85**	**225**	P	**Pb**	**05 35 53.0**	**-0.3**
MCK	**McKinley**	**1.11**	**200**	P	**Pn**	**05 35 58.3**	**+0.3**
MCK				S	**Sn**	**05 36 12.8**	**-0.4**
MLY	**Manley**	**1.16**	**284**	P	**Pn**	**05 35 58.3**	**-0.5**
PRP	**Porcupine Dome**	**1.32**	**54**	P	**Pn**	**05 36 00.8**	**-0.2**
DDM	**Donnelly Dome**	**1.39**	**134**	P	**Pn**	**05 36 01.9**	**0.0**
TRF	**Thorofare Moun**	**1.64**	**217**	P	**Pn**	**05 36 05.2**	**-0.2**
TRF				S	**Sb**	**05 36 28.4**	**+0.8**
DHY	**Denali Highway**	**1.73**	**169**	P	**Pb**	**05 36 08.2**	**-0.3**
DOT	**Dot Lake**	**2.09**	**121**	P	**Pn**	**05 36 10.6**	**-1.0**
DOT				S	**Sb**	**05 36 41.1**	**+0.7**
PAX	**Paxson**	**2.15**	**146**	P	**Pn**	**05 36 13.3**	**+1.0**
COLD	**Coldfoot**	**2.61**	**342**	P	**Pn**	**05 36 18.9**	**+0.2**
IM3	**Indian Mountai**	**2.66**	**300**	P	**Pn**	**05 36 19.0**	**-0.4**
MENT	**Mentasta**	**2.67**	**132**	*e*Pn	**Pn**	**05 36 19.2**	**-0.3**
MENT				*e*Sn	**Sn**	**05 36 52.9**	**+1.1**
HARP	**HAARP**	**2.71**	**150**	P	**Pn**	**05 36 21.1**	**+1.1**
EGAK	**Eagle**	**2.97**	**87**	*e*Pn	**Pn**	**05 36 23.0**	**-0.5**
EGAK				*e*Sn	**Sn**	**05 36 57.8**	**-1.2**
SML	**Sawmill**	**2.98**	**182**	*e*Pn	**Pn**	**05 36 24.5**	**+0.8**
SML				*e*Sn	**Sn**	**05 36 56.7**	**-2.6**
BM3	**Burnt Mountain**	**3.01**	**27**	P	**Pn**	**05 36 24.0**	**-0.2**
PMR	**Palmer**	**3.23**	**189**	*e*Pn	**Pn**	**05 36 27.7**	**+0.6**
PMR				*e*Sn	**Sn**	**05 37 03.2**	**-2.2**
BCA3	**Beaver Creek A**	**3.27**	**119**	P	**Pn**	**05 36 26.6**	**-1.2**
SUA	**Susitna One**	**3.53**	**201**	P	**Pn**	**05 36 32.9**	**+1.4**
RC01	**Rabbit Creek A**	**3.77**	**192**	*e*Pn	**Pn**	**05 36 36.3**	**+1.7**
RC01				*e*Sn	**Sb**	**05 37 24.4**	**-4.3**
DIV	**Divide**	**3.81**	**163**	*e*Pn	**Pn**	**05 36 36.2**	**+1.1**
DIV				*e*Sn	**Sn**	**05 37 20.5**	**+0.7**
DAWY	**Dawson**	**3.84**	**97**	P	**Pn**	**05 36 34.3**	**-1.3**
TT01	**Tatalina**	**3.98**	**246**	P	**Pn**	**05 36 36.5**	**-0.9**
SEW	**Seward**	**4.73**	**188**	*e*Pn	Pn	05 36 51.3	+3.7
SEW				*e*Sg	**Sg**	**05 38 06.1**	**-2.3**
RSO	**Redoubt South**	**4.83**	**209**	*e*Pn	**Pn**	**05 36 49.3**	**-0.1**
RSO				*e*Sn	**Sn**	**05 37 46.0**	**+0.9**
INK	**Inuvik**	**6.80**	**52**	Pn	**Pn**	**05 37 16.4**	**+0.2**
INK				Sn	**Sn**	**05 38 31.0**	**-2.3**
INK				Lg	Lg	05 39 03.9	
INK	**Inuvik**	**6.80**	**52**	Pn	**Pn**	**05 37 16.4**	**+0.2**
	0.8nm,0.3s,baz=229,slow=13,SNR=16						
INK				Sn	**Sn**	**05 38 31.0**	**-2.3**
	1.7nm,0.3s,baz=268,slow=31,SNR=3.4						
INK				Lg	Lg	05 39 03.9	
	0.7nm,0.3s,baz=266,slow=14,SNR=2.8						
KDAK	**Kodiak Island**	**7.34**	**199**	*e*Pn	**Pn**	**05 37 22.5**	**-1.0**
KDAK				Sn	**Sn**	**05 38 41.6**	**-5.0**
KDAK	**Kodiak Island**	**7.34**	**199**	Pn	**Pn**	**05 37 26.4**	**+2.9**
	0.9nm,0.3s,baz=160,slow=19,SNR=9.5						
KDAK				Sn	**Sn**	**05 38 41.6**	**-5.0**
	0.7nm,0.3s,baz=355,slow=12,SNR=2.7						
TNA	**Tin City**	**8.38**	**284**	*e*Pn	**Pn**	**05 37 38.6**	**+0.9**
	4.3nm,0.5s						
TNA				*e*Sn	**Sn**	**05 39 10.6**	**-1.5**
DLBC	**Dease Lake**	**10.66**	**118**	Pn	**Pn**	**05 38 09.0**	**-0.1**
DLBC				Lg	Lg	05 41 10.9	
DLBC	**Dease Lake**	**10.66**	**118**	Pn	**Pn**	**05 38 09.0**	**-0.1**
	0.2nm,0.3s,baz=163,slow=19,SNR=3.8						
DLBC				Lg	Lg	05 41 10.9	
	1.2nm,0.3s,baz=41,slow=19,SNR=6.1						
YKA	**Yellowknife Ar**	**14.94**	**83**	Pn	Pn	05 39 03.7	-3.7
YKA				Sn	**Sn**	**05 41 54.0**	**+1.4**
YKA	**Yellowknife Ar**	**14.94**	**83**	Pn	Pn	05 39 03.7	-3.7
	0.1nm,0.3s,baz=294,slow=13,SNR=8.8						
YKA				Sn	**Sn**	**05 41 54.0**	**+1.4**
	0.1nm,0.3s,baz=302,slow=21,SNR=3.2						
YBH	**Yreka Blue Hor**	**27.25**	**136**	LR	LR	05 51 24.9	
	comp=Z,31nm,21.6s,baz=73,slow=35						
NVAR	**Mina Array Bea**	**31.64**	**132**	P	**P**	**05 41 59.8**	**+0.2**
NVAR	**Mina Array Bea**	**31.64**	**132**	P	**P**	**05 41 59.8**	**+0.2**
	0.1nm,0.3s,baz=358,slow=12,SNR=2.7						
GLA	**Glamis**	**37.68**	**131**	*e*P	**P**	**05 42 51.5**	**-0.1**
	1.2nm,0.3s						
TXAR	**Lajitas Array**	**44.96**	**120**	P	P	05 43 55.3	+3.9
TXAR	**Lajitas Array**	**44.96**	**120**	P	P	05 43 55.3	+3.9
	0.3nm,0.7s,baz=333,slow=6.4,SNR=6.9						
NOA	**NORSAR Array B**	**53.55**	**12**	P	**P**	**05 44 57.0**	**+0.4**
NOA	**NORSAR Array B**	**53.55**	**12**	P	**P**	**05 44 57.0**	**+0.4**
	0.7nm,0.7s,baz=350,slow=7.7,SNR=3.8						
FINES	**FINESS Array B**	**54.02**	**3**	P	**P**	**05 45 00.5**	**+0.5**
FINES	**FINESS Array B**	**54.02**	**3**	P	**P**	**05 45 00.5**	**+0.5**
	2.2nm,0.7s,baz=12,slow=9.8,SNR=4.3						
ZALV	**Zalesovo Beam**	**54.83**	**325**	P	**P**	**05 45 06.5**	**+0.5**
ZALV	**Zalesovo Beam**	**54.83**	**325**	P	**P**	**05 45 06.5**	**+0.5**
	0.7nm,0.5s,baz=46,slow=6.2,SNR=3.5						
BVAR	**Borovoye Array**	**58.84**	**334**	P	**P**	**05 45 35.7**	**+1.2**
BVAR	**Borovoye Array**	**58.84**	**334**	P	**P**	**05 45 35.7**	**+1.2**
	1.3nm,0.6s,baz=40,slow=8.0,SNR=8.3						
KURK	**Kurchatov**	**59.30**	**327**	P	**P**	**05 45 38.7**	**+1.1**
KURBB	**Kurchatov Arra**	**59.40**	**327**	P	**P**	**05 45 38.7**	**+0.3**
	0.4nm,0.5s,baz=35,slow=6.0,SNR=4.1						
MKAR	**Makanchi Array**	**62.05**	**323**	P	**P**	**05 45 56.3**	**-0.2**
MKAR	**Makanchi Array**	**62.05**	**323**	P	**P**	**05 45 56.3**	**-0.2**
	0.3nm,0.5s,baz=50,slow=6.4,SNR=5.5						
ABKAR	**Akbulak array**	**64.23**	**340**	*e*P	**P**	**05 46 12.3**	**+1.4**
	0.6nm,0.2s						
AKASG	**Malin Array Be**	**64.84**	**2**	P	**P**	**05 46 15.1**	**+0.2**
AKASG	**Malin Array Be**	**64.84**	**2**	P	**P**	**05 46 15.1**	**+0.2**
	0.8nm,0.4s,baz=355,slow=6.2,SNR=5.7						

IDC 01 05:43:16.9±39.0**, 22.°49N**×**142.°94E, h427**km±277km**, mb3.0**/6**, mb1 3.1**/7**, mb1mx2.8**/27**, mbtmp3.0**/7**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.5**/15**, Error ellipse: s-maj=410.2km s-min=27.9km az=173.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**19.75**	**322**	P	P	05 47 17.2	0.0
	0.2nm,0.3s,baz=149,slow=8.9,SNR=6.8						
ASAJ	**Asahikawa**	**21.57**	**359**	LR	LR	05 55 59.7	
	comp=Z,55nm,19.6s,baz=188,slow=35						
MKAR	**Makanchi Array**	**53.99**	**312**	P	P	05 51 59.0	-0.3
	0.3nm,0.5s,baz=90,slow=9.4,SNR=4.2						
KURBB	**Kurchatov Arra**	**56.79**	**317**	P	P	05 52 18.8	0.0
	1.1nm,0.4s,baz=94,slow=7.4,SNR=16						
ILAR	**Eielson Array**	**61.44**	**27**	P	P	05 52 49.8	-0.2
	0.2nm,0.6s,baz=259,slow=5.4,SNR=3.7						
BVAR	**Borovoye Array**	**61.92**	**319**	P	P	05 52 53.6	+0.3
	1.8nm,0.3s,baz=98,slow=7.8,SNR=13						
YKA	**Yellowknife Ar**	**75.86**	**28**	P	P	05 54 18.0	+0.3
	0.2nm,0.5s,baz=293,slow=5.7,SNR=7.0						
FINES	**FINESS Array B**	**82.37**	**334**	P	P	05 54 51.8	-0.6
	0.9nm,0.5s,baz=38,slow=7.0,SNR=3.7						

IDC 01 05:45:48.0±11.0**, 7.°14S**×**130.°40E, h108**km±123km**, mb3.6**/2**, mb1 3.8**/5**, mb1mx3.4**/21**, mbtmp3.6**/5**, ML4.0**/3**, Error ellipse: s-maj=74.0km s-min=50.0km az=30.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.84**	**203**	P	Pn	05 48 34.2	+0.6
	1.2nm,0.3s,baz=37,slow=12,SNR=45						
FITZ				S	Sn	05 50 43.8	-0.1
	0.4nm,0.3s,baz=270,slow=13,SNR=4.4						
WRA	**Warramunga Arr**	**13.29**	**164**	P	Pn	05 48 51.1	-1.5
	0.7nm,0.3s,baz=345,slow=12,SNR=54						
WRA				S	Sn	05 51 14.9	-4.0
	0.9nm,0.3s,baz=346,slow=24,SNR=6.3						
ASAR	**Alice Springs**	**16.77**	**169**	P	P	05 49 38.1	+1.1
	0.7nm,0.3s,baz=346,slow=9.5,SNR=34						
ASAR				S	Sn	05 52 43.1	0.0
	0.2nm,0.3s,baz=350,slow=25,SNR=4.2						
MKAR	**Makanchi Array**	**68.56**	**327**	P	P	05 56 39.4	+0.2
	1.1nm,0.5s,baz=115,slow=8.2,SNR=11						
KURBB	**Kurchatov Arra**	**72.84**	**328**	P	P	05 57 04.8	-0.3
	0.3nm,0.8s,baz=123,slow=5.4,SNR=6.6						

IDC ***01*** *05:51:26.3±2.0, 9.°31N×82.°68W, h0km, mb3.8/9, mb1 4.2/10, mb1mx4.0/24, mbtmp3.9/10, ML4.3/1, MS3.4/3, Ms1 3.3/3, ms1mx2.8/26, Error ellipse: s-maj=60.6km s-min=25.2km az=30.0*

NEIC ***01*** *05:51:27.0±0.8, 9.°19N×82.°72W, h10km, mb4.4/1, ML4.7(UCR), Error ellipse: s-maj=21.3km s-min=10.0km az=212.0*

NEIC Felt at Buenos Aires and Palmital, Costa Rica.

CASC ***01*** *05:51:30.3±2.5, 9.°63N×82.°46W, h19km±17km, MD4.7, mb4.4(NEIC)*

ISCJB ***01*** *05:51:31.2±0.7, 9.°62N±0.°06×82.°45W±0.°04, h34km±10km, mb3.7/10, MS3.4/3, Error ellipse: s-maj=10.3km s-min=5.6km az=26.2*

ISC 01 05:51:32.5±0.9**, 9.°52N**±0.°06×**82.°49W**±0.°04**, h37**km±1km**, n148, σ0.^{s}82**/152**, mb3.9**/10**, MS3.5**/3**, 53C-48D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU	**Baru**	**0.71**	**186**	*i* P	**Pn**	**05 51 46.8**	**+0.3**
TBS2		**0.74**	**193**	⇓*i*P	**Pn**	**05 51 45.9**	**-0.7**
TBS2				*e*S	**Sn**	**05 51 57.1**	**+0.5**
ACR	**Cerro Adams**	**1.09**	**218**	⇓*i*P	**Pn**	**05 51 52.0**	**+0.7**
BUS	**Buena Vista**	**1.25**	**272**	*e*P	**Pn**	**05 51 52.4**	**-1.5**
SJS	**Escuela Geolog**	**1.60**	**285**	*e*P	**Pn**	**05 51 57.2**	**-1.2**
SJS				*e*S	**Sn**	**05 52 19.0**	**+1.2**
QCR	**Quepos**	**1.66**	**267**	⇑*e*P	**Pn**	**05 51 58.8**	**-0.2**
CGA2	**Cerro Gallo 2**	**2.01**	**284**	⇑*e*P	**Pn**	**05 52 03.5**	**-0.6**
CGA2				*e*S	**Sn**	**05 52 28.3**	**+0.3**
JCR	**Jicaral**	**2.60**	**277**	*e*P	**Pn**	**05 52 12.6**	**+0.4**
JCR				*e*S	**Sn**	**05 52 43.9**	**+1.3**
BCIP	**Isla Barro Col**	**2.64**	**97**	*e*P	**Pn**	**05 52 12.5**	**-0.1**
BCIP				*e*S	**Sn**	**05 52 42.3**	**-1.1**
BCIP	**Isla Barro Col**	**2.64**	**97**	*e*Pn	**Pn**	**05 52 12.7**	**+0.1**
BCIP				*e*Sn	**Sn**	**05 52 44.4**	**+0.9**
TGUH	**Tegucigalpa,Un**	**6.50**	**314**	*e*Pn	**Pn**	**05 53 04.4**	**-1.2**
	74nm,0.6s						
TGUH				*e*Sn	**Sn**	**05 54 20.9**	**+2.3**
TEIG	**Tepich**	**12.02**	**333**	Pn	**Pn**	**05 54 20.2**	**-1.1**
TEIG	**Tepich**	**12.02**	**333**	Pn	**Pn**	**05 54 20.3**	**-1.1**
	2.0nm,0.3s,baz=122,slow=4.2,SNR=13						
PTP	**Ponta Puerca**	**18.52**	**60**	⇓*i*P	x	05 51 57.2	
732A	**Laxson Ranch,**	**25.19**	**322**	⇓P	**P**	**05 56 54.0**	**-0.7**
	baz=25						
KMSC	**Kings Mountain**	**25.53**	**2**	⇓P	**P**	**05 56 59.0**	**+1.3**
	baz=26						
632A	**Uvalde**	**25.65**	**323**	⇓P	**P**	**05 56 58.4**	**-0.4**
	baz=26						
SWET	**Sewanee**	**25.77**	**354**	*e*P	**P**	**05 56 59.8**	**-0.1**
	5.9nm,0.7s						
CPCT	**Cooper Cave**	**25.88**	**356**	*e*P	**P**	**05 57 01.7**	**+0.8**
TKL	**Tuckaleechee C**	**26.05**	**358**	P	**P**	**05 57 03.0**	**+0.5**
TKL	**Tuckaleechee C**	**26.05**	**358**	P	**P**	**05 57 03.0**	**+0.5**
	3.2nm,0.8s,baz=176,slow=9.1,SNR=5.9						
TKL				LR	LR	06 06 36.7	
	comp=Z,33nm,21.0s,baz=64,slow=35						
631A	**Perdido Creek**	**26.05**	**322**	⇓P	**P**	**05 57 02.7**	**+0.2**
	baz=26,SNR=6.5						
532A	**Rocksprings**	**26.17**	**324**	⇑P	**P**	**05 57 03.7**	**0.0**
	baz=26						
JCT	**Junction City**	**26.38**	**325**	⇓P	**P**	**05 57 07.2**	**+1.7**
	baz=27						
332A	**Millersview**	**27.02**	**326**	⇓P	**P**	**05 57 12.9**	**+1.6**
	baz=27						
530A	**J-C Ranch, Com**	**27.04**	**322**	⇑P	**P**	**05 57 12.6**	**+1.1**
	baz=27						
331A	**San Angelo**	**27.35**	**325**	⇑P	**P**	**05 57 15.2**	**+1.0**
	baz=28						
TXAR	**Lajitas Array**	**27.97**	**318**	P	**P**	**05 57 19.3**	**-0.6**
TXAR	**Lajitas Array**	**27.97**	**318**	P	**P**	**05 57 19.3**	**-0.6**
	0.1nm,0.5s,baz=132,slow=7.8,SNR=3.1						
Y32A	**R-V Farms, Ver**	**28.92**	**330**	⇑P	**P**	**05 57 28.3**	**+0.1**
	baz=29						
Z30A	**Sanderson Ranc**	**29.23**	**327**	⇓P	**P**	**05 57 31.6**	**+0.6**
	baz=30						
U30A	**WK&E Inc. Balk**	**31.54**	**331**	⇑P	**P**	**05 57 51.3**	**-0.1**
	baz=32						
T30A	**Plains**	**31.90**	**332**	⇑P	**P**	**05 57 54.9**	**+0.4**
	baz=32						
U27A	**Thompson Grove**	**32.53**	**329**	⇑P	**P**	**05 57 59.4**	**-0.7**
	baz=33						
S28A	**Manter**	**32.98**	**331**	⇓P	**P**	**05 58 04.1**	**+0.1**
	baz=33						
Q30A	**Quinter**	**33.36**	**334**	P	**P**	**05 58 07.4**	**+0.1**
	baz=34						
R28A	**Tribune**	**33.54**	**332**	⇑P	**P**	**05 58 08.9**	**-0.1**
	baz=34						
Q29A	**Oakley**	**33.61**	**333**	P	**P**	**05 58 09.6**	**+0.1**
	baz=34						
P30A	**Selden**	**33.84**	**335**	P	**P**	**05 58 11.8**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=34						
Q28A	Sharon Springs	34.13	333	⇓P	P	05 58 14.5	+0.4
	baz=34						
R26A	Arlington	34.29	330	⇓P	P	05 58 16.0	+0.5
	baz=35						
KSCO	Kaye Shedlock'	34.46	332	P	P	05 58 17.0	+0.1
	baz=35						
Q26A	Hugo	34.82	331	⇑P	P	05 58 20.7	+0.6
	baz=35						
O27A	Beecher Island	35.34	333	P	P	05 58 25.4	+0.8
	baz=36						
P25A	Willow Gulch B	35.59	331	⇓P	P	05 58 27.3	+0.6
	baz=36						
Q24A	Divide	35.66	329	P	P	05 58 27.9	+0.4
	baz=36						
O26A	Horse Wrangler	35.76	332	P	P	05 58 28.7	+0.6
	baz=36						
N27A	Anderson Farm,	35.87	334	⇑P	P	05 58 29.6	+0.6
	baz=36						
Q22A	Crested Butte,	36.50	327	⇑P	P	05 58 35.5	+0.8
	baz=37						
O24A	Longmont	36.50	330	⇑P	P	05 58 35.2	+0.7
	baz=37						
N24A	Carr	36.96	331	⇑P	P	05 58 39.8	+1.4
	baz=37						
O22A	Kremmling	37.27	329	⇓P	P	05 58 42.6	+1.4
	baz=38						
K27A	Flueckinger Fa	37.31	336	P	P	05 58 41.6	+0.4
	baz=38						
M24A	Cheyenne	37.43	332	⇑P	P	05 58 43.5	+1.0
	baz=38						
K25A	Mack Ranch, Ha	37.92	334	⇓P	P	05 58 47.3	+0.8
	baz=38						
L23A	Garrett	38.34	332	⇓P	P	05 58 50.5	+0.3
	baz=39,SNR=5.2						
SRU	San Rafael	38.69	324	P	P	05 58 53.0	0.0
	baz=39						
L21A	Rawlins	39.03	330	⇓P	P	05 58 56.5	+0.6
	baz=39						
K22A	Casper	39.15	332	⇓P	P	05 58 57.6	+0.7
	baz=39						
K21A	Alcova	39.48	331	⇓P	P	05 58 60.0	+0.4
	baz=40						
J22A	Midwest	39.71	332	⇓P	P	05 59 00.8	-0.7
	baz=40						
H24A	Dirks Ranch, A	39.94	335	⇑P	P	05 59 03.2	-0.1
	baz=40,SNR=7.0						
I22A	9 Mile Ranch,	40.09	333	⇑P	P	05 59 04.0	-0.6
	baz=40						
M17A	Scullys Gap (B	40.38	327	⇑P	P	05 59 07.2	+0.1
	baz=41						
I21A	Big Trails, Te	40.40	332	⇓P	P	05 59 07.0	-0.2
	baz=41						
H22A	Clearmont	40.58	334	⇓P	P	05 59 08.9	+0.3
	baz=41						
G23A	Biddle	40.66	335	⇑P	P	05 59 09.1	-0.2
	baz=41						
PDAR	Pinedale Array	40.71	329	P	P	05 59 10.1	+0.1
PDAR	Pinedale Array	40.71	329	P	P	05 59 10.1	+0.1
	0.5nm,0.6s,baz=134,slow=8.5,SNR=3.7						
J19A	Crowheart	40.83	330	⇓P	P	05 59 11.3	+0.5
	baz=41						
I20A	Worland	40.89	331	⇑P	P	05 59 11.9	+0.6
	baz=41						
G22A	Birney	41.05	334	⇑P	P	05 59 13.0	+0.4
	baz=41						
F23A	Volborg	41.09	335	⇓P	P	05 59 12.8	+0.1
	baz=41						
H20A	Greybull	41.24	332	⇓P	P	05 59 14.4	+0.3
	baz=42						
F22A	Rosebud	41.49	335	⇑P	P	05 59 16.2	+0.1
	baz=42						
E23A	Ismay	41.68	336	⇑P	P	05 59 17.6	+0.1
	baz=42						
D24A	Glendive	41.81	338	⇑P	P	05 59 18.7	0.0
	baz=42,SNR=6.3						
E22A	Miles City	41.89	336	P	P	05 59 19.4	+0.1
	baz=42						
G20A	Bridger	41.90	333	⇓P	P	05 59 19.0	-0.5
	baz=42						
C24A	Savage	42.19	338	⇓P	P	05 59 22.1	+0.3
	baz=42						
D23A	Lindsay	42.19	337	⇑P	P	05 59 22.0	+0.2
	baz=42,SNR=12						
BDFB	Brasilia	42.32	126	LR	LR	06 17 47.7	
	comp=Z,67nm,18.6s,baz=348,slow=37						
F20A	Billings	42.32	333	⇑P	P	05 59 22.9	0.0
	baz=43						
E21A	Keefer Ranch,	42.44	335	⇓P	P	05 59 24.2	+0.4
	baz=43						
I16A	Newdale	42.49	329	⇓P	P	05 59 23.9	-0.5
	baz=43						
D22A	Cohagen	42.56	336	⇓P	P	05 59 24.8	0.0
	baz=43,SNR=11						
C23A	Lambert	42.70	337	⇓P	P	05 59 26.0	+0.1
	baz=43,SNR=5.4						
F19A	Roth Farm, Mol	42.72	333	⇓P	P	05 59 26.0	-0.1
	baz=43						
E20A	Meyer Farm, Mu	42.86	334	⇑P	P	05 59 27.5	+0.3
	baz=43,SNR=8.0						
DGMT	Dagmar	42.90	339	⇑P	P	05 59 27.3	-0.1
	baz=43						
F18A	Big Timber	43.11	332	⇓P	P	05 59 29.3	0.0
	baz=43						
E19A	Rath Farm, Rou	43.11	333	⇑P	P	05 59 29.5	+0.2
	baz=43						
NVAR	Mina Array Bea	43.12	318	P	P	05 59 30.1	+0.5
NVAR	Mina Array Bea	43.12	318	P	P	05 59 30.1	+0.5
	0.4nm,0.6s,baz=126,slow=6.9,SNR=5.0						
J14A	Carey	43.18	327	⇑P	P	05 59 30.1	+0.1
	baz=43						
B23A	Brockton	43.18	338	⇑P	P	05 59 29.9	+0.1
	baz=44,SNR=5.8						
A24A	Westby	43.22	339	P	P	05 59 30.9	+0.8
	baz=44						
D20A	Manuel Ranch,	43.32	334	⇓P	P	05 59 31.3	+0.4
	baz=44						
B22A	Reddig Ranch S	43.42	337	⇑P	P	05 59 32.2	+0.4
	baz=44,SNR=6.5						
C21A	Desert Coulee	43.47	336	⇑P	P	05 59 32.3	+0.2
	baz=44						
F17A	Fitzpatrick Pl	43.55	331	⇑P	P	05 59 33.6	+0.7
	baz=44						
H15A	Lima	43.60	329	⇓P	P	05 59 34.8	+1.3
	baz=44						
D19A	Cripps Ranch,	43.70	334	⇓P	P	05 59 34.2	+0.2
	baz=44						
E18A	Harlowton	43.70	333	⇓P	P	05 59 33.3	-0.8
	baz=44						
C20A	Veseth Ranch,	43.75	335	⇑P	P	05 59 34.4	0.0
	baz=44						
HLID	Hailey	43.83	326	⇑P	P	05 59 35.5	+0.3
	baz=44						
I13A	Wildhorse Cree	43.90	327	⇓P	P	05 59 36.3	+0.5
	baz=44						
A22A	Carney Farms,	43.96	338	⇑P	P	05 59 36.6	+0.5
	baz=44,SNR=6.7						
H14A	Leadore	43.98	328	⇑P	P	05 59 37.2	+0.7
	baz=44						
E17A	Martinsdale	44.05	332	⇑P	P	05 59 37.5	+0.5
	baz=44						
D18A	Linhart Farms,	44.12	333	⇑P	P	05 59 38.2	+0.8
	baz=44						
C19A	Slack Wire Ran	44.21	334	⇑P	P	05 59 38.5	+0.5
	baz=44						
A21A	Bergtoll Ranch	44.34	337	⇓P	P	05 59 39.8	+0.7
	baz=45,SNR=5.3						
F15A	Butte	44.39	330	⇓P	P	05 59 40.3	+0.6
	baz=45						
D17A	Six Diamond Ra	44.49	333	⇑P	P	05 59 40.7	+0.3
	baz=45						
E16A	East Helena	44.49	331	⇑P	P	05 59 41.4	+1.0
	baz=45						
A20A	Cobblestone Ra	44.65	336	⇑P	P	05 59 42.0	+0.5
	baz=45						
D16A	Dana Ranch, Ca	44.79	332	⇓P	P	05 59 43.1	+0.3
	baz=45						
E15A	Deer Lodge	44.87	330	⇑P	P	05 59 43.6	+0.1
	baz=45						
C17A	Wharram Farm,	44.88	333	⇑P	P	05 59 43.8	+0.3
	baz=45						
A19A	Klindworth Far	45.01	336	⇑P	P	05 59 44.6	+0.1
	baz=45						
B18A	Beardsley Farm	45.03	334	⇑P	P	05 59 45.1	+0.5
	baz=45						
D15A	Lincoln	45.26	331	⇓P	P	05 59 46.6	0.0
	baz=46						
C16A	Fuhringer Ranc	45.45	332	⇓P	P	05 59 47.7	-0.3
	baz=46						
A18A	Metzger Ranch,	45.46	335	⇓P	P	05 59 48.2	+0.1
	baz=46						
E13A	Victor	45.65	329	⇑P	P	05 59 49.5	-0.1
	baz=46						
F12A	Elk City	45.73	328	⇓P	P	05 59 50.4	+0.1
	baz=46						
MSO	Missoula	45.80	330	⇓P	P	05 59 51.3	+0.6
	baz=46						
C15A	Salmond Ranch,	45.83	332	⇑P	P	05 59 51.9	+0.9
	baz=46						
B15A	Bradely Ranch,	46.20	332	⇑P	P	05 59 54.1	+0.3
	baz=46						
D12A	Red Ives Fores	46.65	329	⇑P	P	05 59 57.6	+0.2
	baz=47						
B13A	Whitefish	47.13	331	⇓P	P	06 00 01.6	+0.5
	baz=47						
YKA	Yellowknife Ar	57.76	343	P	P	06 01 18.8	-0.8
YKA	Yellowknife Ar	57.76	343	P	P	06 01 18.8	-0.8
	0.8nm,0.7s,baz=137,slow=7.0,SNR=26						
DLBC	Dease Lake	60.66	334	P	P	06 01 40.5	+0.7
DLBC	Dease Lake	60.66	334	P	P	06 01 40.5	+0.7
	2.3nm,0.7s,baz=116,slow=3.6,SNR=4.1						
PNL	Peninsula	65.49	332	*e*P	P	06 02 12.1	+0.3
ILAR	Eielson Array	70.66	336	P	P	06 02 43.9	-0.3
ILAR	Eielson Array	70.66	336	P	P	06 02 43.9	-0.3
	1.6nm,0.8s,baz=118,slow=4.5,SNR=22						
ESDC	Sonseca Array	75.17	51	P	P	06 03 13.1	+1.6
ESDC	Sonseca Array	75.17	51	P	P	06 03 13.1	+1.6
	0.5nm,0.5s,baz=278,slow=5.1,SNR=7.3						
TORD	Torodi Ar. Bea	82.27	78	P	P	06 03 51.8	+0.9
TORD	Torodi Ar. Bea	82.27	78	P	P	06 03 51.8	+0.9
	0.4nm,0.6s,baz=286,slow=6.1,SNR=3.9						
GERES	GERESS Array B	86.96	41	LR	LR	06 38 56.5	
	comp=Z,27nm,20.2s,baz=83,slow=33						
ASAR	Alice Springs	142.52	243	PKP	PKPdf	06 10 59.3	-3.1
ASAR	Alice Springs	142.52	243	PKP	PKPdf	06 10 59.3	-3.1
	0.7nm,0.8s,baz=90,slow=3.9,SNR=5.2						
WRA	Warramunga Arr	142.99	250	PKP	PKPdf	06 11 00.7	-2.6
WRA	Warramunga Arr	142.99	250	PKP	PKPdf	06 11 00.7	-2.6
	0.5nm,0.8s,baz=94,slow=3.5,SNR=4.4						

*ISCJB **01** 05:56:53.9±0.3, 13°.90N±0°.03×119°.93E±0°.04, h57km, mb4.2/23, Error ellipse: s-maj=5.4km s-min=4.2km az=165.5*
*MAN **01** 05:56:54, 13°.92N×119°.94E, h55km, mb4.8, ML3.8, MS3.8*
MAN INTENSITY II - LUBANG OCCIDENTAL MINDORO.
*IDC **01** 05:56:58.1±0.8, 13°.95N×120°.43E, h90km±7km, mb3.9/17, mb1 4.0/18, mb1mx3.9/28, mbtmp3.9/18, MS3.2/1, Ms1 3.2/1, ms1mx2.6/26, Error ellipse: s-maj=23.0km s-min=10.6km az=69.0*
*NEIC **01** 05:56:58.2±0.6, 13°.97N×120°.46E, h91km±5km, mb4.2/6, Error ellipse: s-maj=9.2km s-min=5.1km az=73.0*
NEIC Felt [II PIVS] on Lubang Island.
ISC 01 05:56:55.0±0.5**, 13°.91N**±0°.04×**120°.00E**±0°.05**, h57km, n67, σ1^{s}26**/72**, mb4.2**/23**, 6C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.93	78⇓	*i*P	Pn	05 57 12.9	+0.9
TGY	Tagaytay City	0.93	78	P	Pn	05 57 13.0	+0.9
TGY				S	Sn	05 57 26.4	+1.7
TGY	Tagaytay City	0.93	78	P	Pn	05 57 13.0	+0.9
	1μm,0.3s,baz=265,slow=2.9,SNR=68						
TGY				S	Sn	05 57 26.4	+1.7
	3μm,0.3s,baz=16,slow=20,SNR=30						
PGP	Puerto Galera	1.01	113⇑	*i*P	Pn	05 57 12.9	-0.2
LQP	Lukban	1.51	82⇑	*e*P	Pn	05 57 20.3	+0.4
SJMP	San Jose	1.80	143	*e*P	Pn	05 57 24.5	+0.7
BOAC	Boac	1.85	104	*e*P	Pn	05 57 25.5	+1.2
SCZP	Santa Cruz	1.86	357	*e*P	Pn	05 57 23.1	-1.4
SCZP				*e*S	Sn	05 57 48.7	+1.7
PCPH	Palayan	1.96	33⇑	*e*P	Pn	05 57 25.2	-0.6
GQP	Guinayangan	2.38	90⇑	*e*P	Pn	05 57 32.8	+1.2
GQP				*i* S	Sn	05 58 01.4	+1.9
BALP	Baler	2.38	40	*e*P	Pn	05 57 32.3	+0.7
BOLP	Bolinao	2.46	358	*e*P	Pn	05 57 32.8	0.0
OTRP	Odiongan	2.50	128	*e*P	Pn	05 57 33.6	+0.4
ENPP	El Nido	2.74	192	*e*P	Pn	05 57 37.5	+0.9
CUYO	Cuyo Island	3.20	162	*e*P	Pn	05 57 42.9	+0.1
CAUP	Cauayan	3.49	30	*e*P	Pn	05 57 48.1	+1.2
RCP	Roxas	3.55	131⇑	*e*P	Pn	05 57 48.6	+0.9
APYP	Conner	4.11	17	*e*P	Pn	05 57 56.7	+1.4
PPR	Puerto Princes	4.29	197⇑	*i*P	Pn	05 58 01.3	+3.5
PPR				*i* S	Sn	05 58 47.6	+1.1
PAGZ	Pagadian	6.88	151	*e*P	Pn	05 58 36.1	+2.9
DAV	Davao City (W)	8.73	141	LR	LR	06 03 20.0	
	comp=Z,141nm,18.5s,baz=222,slow=45						
KSM	Kuching	15.64	219	P	P	06 00 37.0	+2.0
	4.3nm,0.4s						
KAPI	Kappang	18.80	181	P	Pn	06 01 12.5	+1.5
KAPI	Kappang	18.80	181	P	Pn	06 01 12.5	+1.5
	0.6nm,0.3s,baz=11,slow=5.2,SNR=3.7						
CMAR	Chiang Mai Arr	20.72	285	P	Pn	06 01 35.6	+1.9
CMAR	Chiang Mai Arr	20.72	285	P	Pn	06 01 35.6	+1.9
	1.3nm,0.4s,baz=89,slow=9.5,SNR=5.3						
KSAR	Wonju Array Be	24.47	15	P	P	06 02 07.4	-1.2
KSRS	Korea Array	24.49	15	P	P	06 02 07.4	-1.4
	1.9nm,0.4s,baz=197,slow=11,SNR=7.3						
USRK	Ussuriysk Arra	31.89	16	P	P	06 03 13.9	-0.9
	2.9nm,0.7s,baz=209,slow=8.9,SNR=6.7						
FITZ	Fitzroy Crossi	32.29	170	*e*P	P	06 03 19.0	+0.4
	1.4nm,0.4s						
SONM	Songino Array	35.67	344	P	P	06 03 48.1	+0.3
SONM				PcP	PcP	06 06 15.5	+0.3
SONM	Songino Array	35.67	344	P	P	06 03 48.1	+0.3
	1.7nm,0.5s,baz=164,slow=10,SNR=21						
SONM				PcP	PcP	06 06 15.5	+0.3
	0.5nm,0.5s,baz=148,slow=2.6,SNR=3.7						
WRAB	Tennant Creek	36.47	157	*e*P	P	06 03 53.2	-1.6
	1.5nm,0.6s						
WRA	Warramunga Arr	36.48	157	P	P	06 03 53.2	-1.6
WRA	Warramunga Arr	36.48	157	P	P	06 03 53.2	-1.6
	4.5nm,0.5s,baz=335,slow=9.6,SNR=64						
ASAR	Alice Springs	39.74	160	P	P	06 04 21.6	-0.7
ASAR	Alice Springs	39.74	160	P	P	06 04 21.6	-0.7
	2.3nm,0.5s,baz=337,slow=7.1,SNR=34						
CTA	Charters Tower	42.52	142	P	P	06 04 42.7	-2.4
CTA	Charters Tower	42.52	142	P	P	06 04 42.7	-2.4
	1.6nm,0.3s,baz=326,slow=15,SNR=2.8						
MK31	Makanchi Array	45.46	324	P	P	06 05 10.2	+1.7
MKAR	Makanchi Array	45.46	324	P	P	06 05 10.1	+1.6
MKAR				PcP	PcP	06 06 47.2	+0.5
MKAR	Makanchi Array	45.46	324	P	P	06 05 10.1	+1.6
	2.3nm,0.6s,baz=131,slow=9.2,SNR=29						
MKAR				PcP	PcP	06 06 47.2	+0.5
	2.2nm,0.7s,baz=110,slow=3.8,SNR=14						
ZALV	Zalesovo Beam	48.56	333	P	P	06 05 32.8	+0.3
ZALV				PcP	PcP	06 06 56.4	-1.0
ZALV	Zalesovo Beam	48.56	333	P	P	06 05 32.8	+0.3
	1.6nm,0.4s,baz=106,slow=9.7,SNR=7.4						
ZALV				PcP	PcP	06 06 56.4	-1.0
	0.8nm,0.4s,baz=110,slow=4.0,SNR=3.9						
KURBB	Kurchatov Arra	49.64	326	P	P	06 05 42.1	+1.3
	1.5nm,0.4s,baz=119,slow=9.0,SNR=20						
KURK	Kurchatov	49.64	327	P	P	06 05 42.1	+1.3
STKA	Stephens Creek	50.01	156	P	P	06 05 42.5	-1.3
STKA	Stephens Creek	50.01	156	P	P	06 05 42.5	-1.3
	1.1nm,0.4s,baz=338,slow=7.2,SNR=8.6						
KKAR	Karatay Array	51.35	315	*e*P	P	06 05 55.5	+1.7
	1.7nm,0.6s						
BRVK	Borovoye	55.29	326	P	P	06 06 24.3	+1.8
	9.0nm,1.0s						
ABKAR	Akbulak array	60.13	319	*e*P	P	06 06 57.9	+1.3
	1.3nm,0.3s						
KBZ	Khabaz	71.24	312	P	P	06 08 09.2	+1.0
KBZ	Khabaz	71.24	312	P	P	06 08 09.2	+1.0
	2.5nm,0.9s,baz=183,slow=3.6,SNR=4.2						
JOF	Joensuu	77.14	332	*e*p	P	06 08 42.2	-0.1
	1.7nm,0.3s						
KEV	Kevo	78.10	339	*e*p	pP	06 09 11.6	+8.2
	0.8nm,0.3s						
ARCES	ARCESS Array B	78.65	339	P	P	06 08 50.9	+0.3
ARCES	ARCESS Array B	78.65	339	P	P	06 08 50.9	+0.3
	1.5nm,0.4s,baz=84,slow=7.0,SNR=12						
ILAR	Eielson Array	78.86	26	P	P	06 08 49.0	-2.8
ILAR	Eielson Array	78.86	26	P	P	06 08 49.0	-2.8
	0.2nm,0.4s,baz=278,slow=4.1,SNR=8.3						
KAF	Kangasniemi	79.55	332	*e*p	P	06 08 55.9	+0.3
	1.1nm,0.3s						
FINES	FINESS Array B	79.77	331	P	P	06 08 56.8	0.0
FINES	FINESS Array B	79.77	331	P	P	06 08 56.8	0.0
	1.2nm,0.5s,baz=56,slow=6.1,SNR=12						
NB2	NORSAR Subarra	86.77	333	P	P	06 09 31.7	-1.2
	comp=Z,6.6nm,0.9s,baz=68,slow=4.8						
NOA	NORSAR Array B	86.77	333	P	P	06 09 32.1	-0.7
NOA	NORSAR Array B	86.77	333	P	P	06 09 32.1	-0.7
	comp=Z,4.0nm,0.7s,baz=67,slow=4.7,SNR=26						
YKA	Yellowknife Ar	92.84	22	P	P	06 10 00.1	-1.1
YKA	Yellowknife Ar	92.84	22	P	P	06 10 00.1	-1.1
	comp=Z,0.5nm,0.5s,baz=307,slow=4.4,SNR=22						

*ISCJB **01** 06:09:18.1±0.5, 41°.30N±0°.04×22°.70E±0°.04, h8km±5km, Error ellipse: s-maj=7.3km s-min=4.4km az=36.3*
*THE **01** 06:09:18.2, 41°.32N×22°.70E, h3km±2km, ML2.2/4, Error ellipse: s-maj=2.8km s-min=0.5km az=200.0*
*CSEM **01** 06:09:18.5±0.2, 41°.30N×22°.70E, h2km, ML2.2/4, Error ellipse: s-maj=5.8km s-min=4.7km az=42.0*
*SKO **01** 06:09:18.3, 41°.30N×22°.68E, h6km, M1.4, ML1.9*
*BEO **01** 06:09:22.7±1.5, 41°.50N×22°.34E, h0km, ML1.4/3*
ISC 01 06:09:18.3±0.9**, 41°.33N**±0°.04×**22°.68E**±0°.03**, h7km**±7km**, n25, σ0^{s}65**/39**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	267	P	Pg	06 09 20.0	-0.3
VAY				S	Sg	06 09 21.7	-0.1
VAY	Valandovo	0.09	267	*i* Pg	Pg	06 09 20.0	-0.3
VAY				*i* Sg	Sg	06 09 21.6	-0.1
VAY				*e*Lg	Lg	06 09 21.7	
	comp=E,875nm,0.4s						
VAY				*e*Lg	Lg	06 09 21.8	
	comp=N,930nm,0.2s						
VAY	Valandovo	0.09	267	P	Pg	06 09 20.0	-0.3
VAY	Valandovo	0.09	267	*i* Pg	Pg	06 09 20.4	+0.1
VAY				S	Sg	06 09 21.7	-0.1
VAY				*i* Sg	Sg	06 09 22.1	+0.3
VAY				*e*Lg	Lg	06 09 22.3	
	comp=N,930nm,0.2s						
KNT	Kendrikon	0.23	135	P	Pg	06 09 22.8	-0.1
KNT				S	Sg	06 09 25.8	-0.1
KNT	Kendrikon	0.23	135	P	Pg	06 09 22.8	-0.1
KNT				S	Sg	06 09 25.8	-0.1
GRG	Griva	0.43	210	P	Pg	06 09 26.3	-0.3
GRG				S	Sg	06 09 32.2	+0.1
GRG	Griva	0.43	210	P	Pg	06 09 26.3	-0.3
GRG				S	Sg	06 09 32.2	+0.1
SOH	Sokhos	0.71	135	P	Pg	06 09 31.6	-0.4
SOH				S	Sg	06 09 41.5	+0.2
SOH	Sokhos	0.71	135	P	Pg	06 09 31.6	-0.4
SOH				S	Sg	06 09 41.5	+0.2
SRS	Serrai	0.72	107	P	Pg	06 09 31.9	-0.2
SRS				S	Sg	06 09 41.6	+0.2
SRS	Serrai	0.72	107	P	Pg	06 09 31.9	-0.2
SRS				S	Sg	06 09 41.6	+0.2
HORT	Hortiatis	0.79	156	P	Pg	06 09 32.9	-0.6
HORT	Hortiatis	0.79	156	P	Pg	06 09 32.9	-0.6
NVR	Nevrokopi	0.89	88	P	Pg	06 09 34.1	-1.2
NVR	Nevrokopi	0.89	88	P	Pg	06 09 34.1	-1.2
VTS	Vitosha	1.32	17	P	Pn	06 09 42.7	-0.7
VTS	Vitosha	1.32	17	*e*Pg	Pb	06 09 44.7	+1.1
VTS	Vitosha	1.32	17	P	Pn	06 09 42.7	-0.7
VTS	Vitosha	1.32	17	*e*Pg	Pb	06 09 44.7	+1.1
BARS	Barje	1.62	337	*e*Pn	Pb	06 09 48.8	+0.2
BARS				*e*Sn	Sn	06 10 07.8	-0.7
BARS	Barje	1.62	337	*e*Pn	Pb	06 09 48.8	+0.2
BARS				*e*Sn	Sn	06 10 07.8	-0.7
ZAPS	Zavoj	1.95	359	*e*Pn	Pb	06 09 55.2	+1.1
ZAPS				*e*Sn	Sn	06 10 18.5	+2.0
GELI	Tayfur-Gelibol	3.02	107	*e*PN	Pn	06 10 06.2	-0.3
GELI	Tayfur-Gelibol	3.02	107	*e*Pn	Pn	06 10 06.2	-0.3

*ISK **01** 06:09:36.8, 39°.28N×27°.95E, h7km, MD2.9*
*ISCJB **01** 06:09:37.1±0.6, 39°.27N±0°.03×27°.89E±0°.05, h5km±6km, Error ellipse: s-maj=6.9km s-min=4.0km az=143.7*
*DDA **01** 06:09:38.0, 39°.30N×27°.96E, h7km, MD2.8*
*CSEM **01** 06:09:37.5±0.1, 39°.28N×27°.91E, h10km, MD2.8, Error ellipse: s-maj=3.7km s-min=2.5km az=61.0*
ISC 01 06:09:37.5±1.4**, 39°.29N**±0°.03×**27°.93E**±0°.03**, h8km**±12km**, n32, σ0^{s}38**/44**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALY	Balya	0.51	332	*i* P	Pg	06 09 47.9	+0.4
BALY				*i* S	Sb	06 09 55.8	-0.5
BALY	Balya	0.51	332	*i* P	Pg	06 09 47.9	+0.4
BALY				*i* S	Sb	06 09 55.8	-0.5
DEMI	Demirci	0.66	111	*i* P	Pg	06 09 50.5	+0.3
DEMI				*i* S	Sb	06 10 00.8	+0.2
DEMI	Demirci	0.66	111	*i* P	Pg	06 09 50.5	+0.3
DEMI				*i* S	Sb	06 10 00.8	+0.2
GONE	Gonen-Balikesi	0.78	346	*e*PG	Pg	06 09 52.6	0.0
GONE				*e*SG	Sb	06 10 04.0	-0.1
GONE	Gonen-Balikesi	0.78	346	*e*Pg	Pg	06 09 52.6	0.0
GONE				*e*Sg	Sb	06 10 04.0	-0.1
KULA	Kula-Manisa	0.96	143	*e*PG	Pg	06 09 55.7	-0.3
KULA				*e*SG	Sb	06 10 08.9	-0.4
KULA	Kula-Manisa	0.96	143	*e*Pg	Pg	06 09 55.7	-0.3
KULA				*e*Sg	Sb	06 10 08.9	-0.4
IZM	Izmir	1.03	211	*e*PG	Pg	06 09 57.0	-0.3
IZM	Izmir	1.03	211	*e*Pg	Pg	06 09 57.0	-0.3
KCTX	Karacabey (Bur	1.03	19	*e*PG	Pg	06 09 56.8	-0.6
KCTX	Karacabey (Bur	1.03	19	*e*Pg	Pg	06 09 56.8	-0.6
BNT	Bandirma	1.07	360	*e*PG	Pg	06 09 57.6	-0.4
BNT	Bandirma	1.07	360	*e*Pg	Pg	06 09 57.6	-0.4
BLCB	Balcova	1.14	218	*e*PN	Pg	06 09 59.0	-0.3
BLCB	Balcova	1.14	218	*e*Pn	Pg	06 09 59.0	-0.3
KRBG	Karabiga-Canak	1.21	336	*e*PN	Pb	06 10 00.5	0.0
KRBG	Karabiga-Canak	1.21	336	*e*Pn	Pb	06 10 00.5	0.0
GDZ	Gediz	1.22	99	*i* P	Pn	06 10 01.7	+0.7
GDZ				*i* S	Sn	06 10 17.9	+0.2
GDZ	Gediz	1.22	99	*i* P	Pn	06 10 01.7	+0.7
GDZ				*i* S	Sn	06 10 17.9	+0.2
ULDT	Uludag	1.26	47	*i* P	Pn	06 10 01.7	+0.1
ULDT				*i* S	Sb	06 10 17.8	-0.4
ULDT	Uludag	1.26	47	*i* P	Pn	06 10 01.7	+0.1
ULDT				*i* S	Sb	06 10 17.8	-0.4
MRMT	Marmara Adasi	1.34	349	*e*PN	Pn	06 10 02.5	0.0
MRMT	Marmara Adasi	1.34	349	*e*Pn	Pn	06 10 02.5	0.0
KHL	Karahalli	1.57	127	*e*PN	Pn	06 10 05.7	-0.1
KHL	Karahalli	1.57	127	*e*Pn	Pn	06 10 05.7	-0.1
CAVI	Cavuskoy	1.74	58	*e*PN	Pn	06 10 08.1	+0.2
CAVI	Cavuskoy	1.74	58	*e*Pn	Pn	06 10 08.1	+0.2
ERIK	Erikli-Kesan	1.76	322	*e*PN	Pn	06 10 08.7	+0.5
ERIK	Erikli-Kesan	1.76	322	*e*Pn	Pn	06 10 08.7	+0.5
ENEZ	Enez	1.99	317	*e*PN	Pn	06 10 12.1	+0.7
ENEZ	Enez	1.99	317	*e*Pn	Pn	06 10 12.1	+0.7

IDC 01 06:29:29.3±3.5**, 16°.45N×86°.90W, h0km, mb3.6**/5**, mb1 4.0**/6**, mb1mx3.7**/23**, mbtmp3.6**/6**, ML3.6**/1**, MS2.8**/2**, Ms1 2.8**/2**, ms1mx2.4**/25**, Error ellipse: s-maj=74.7km s-min=57.4km az=68.0, North of Honduras**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG	Tepich	3.98	341	Pn	Pn	06 30 32.6	+1.1
	4.1nm,0.3s,baz=162,slow=1.7,SNR=30						
TEIG				Sn	Sn	06 31 19.3	+0.4
	14nm,0.3s,baz=283,slow=17,SNR=8.5						
TEIG				Lg	Lg	06 31 42.1	
	13nm,0.3s,baz=114,slow=23,SNR=4.0						
ROSC	El Rosal	16.88	132	LR	LR	06 39 53.5	
	comp=Z,27nm,20.9s,baz=192,slow=37						
TXAR	Lajitas Array	20.04	313	P	P	06 34 02.3	-1.9
	1.8nm,0.8s,baz=138,slow=8.3,SNR=21						
TXAR				LR	LR	06 42 33.3	
	comp=Z,36nm,18.2s,baz=235,slow=39						
ANMO	Albuquerque	25.41	320	P	P	06 34 58.9	0.0
	0.7nm,0.6s,baz=152,slow=15,SNR=3.1						
NVAR	Mina Array Bea	35.17	315	P	P	06 36 26.4	+1.1
	0.2nm,0.4s,baz=127,slow=6.9,SNR=2.5						
YKA	Yellowknife Ar	49.93	344	P	P	06 38 24.6	+0.1
	0.7nm,0.5s,baz=139,slow=7.7,SNR=25						
ILAR	Eielson Array	62.61	335	P	P	06 39 54.6	-0.5
	0.8nm,0.7s,baz=120,slow=5.5,SNR=13						

*ISCJB **01** 06:44:39.8±0.8, 25°.57N±0°.07×100°.03E±0°.06, h10km, mb3.5/4, Error ellipse: s-maj=9.8km s-min=8.1km az=25.3*
*IDC **01** 06:44:40.2±1.2, 25°.67N×100°.31E, h0km, mb3.6/4,*

mb1 3.8/5, mb1mx3.5/27, mbtmp3.6/5, ML4.1/1, Error ellipse: s-maj=42.7km s-min=18.4km az=81.0
*BJI **01** 06:44:41.8, 25°.64N×99°.93E, h10km, ML3.5/5*
ISC 01 06:44:41.4±0.9**, 25°.59N**±0°.06×**99°.95E**±0°.08**, h10km, n7, σ1s.32**/10**, mb3.7**/4**, Yunnan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI	Kunming	2.56	100	Pg	Pb	06 45 28.2	+0.5
KMI				Sg	Sg	06 46 03.5	-0.3
KMI				smax	smax		
	comp=N,470nm,0.8s						
KMI				smax	smax		
	comp=E,370nm,0.6s						
CD2	Chengdu	6.28	31	Pg	Pg	06 46 52.4	+11
CD2				Sn	Sn	06 47 27.2	+1.2
CD2				Sg	Sg	06 48 01.4	-1.6
CD2				smax	smax		
	comp=N,30nm,1.7s						
CD2				smax	smax		
	comp=N,30nm,1.3s						
CD2				LR	LR		
	comp=N,410nm,7.1s						
CD2				LR	LR		
	comp=E,540nm,7.2s						
CD2				LR	LR		
	comp=Z,350nm,4.8s						
CMAR	Chiang Mai Arr	7.16	188	Pn	Pn	06 46 28.1	+1.9
	comp=Z,0.9nm,0.3s,baz=1.4,slow=12,SNR=4.6						
CMAR				Pg	Pg	06 46 56.7	-1.8
	comp=Z,1.4nm,0.3s,baz=360,slow=18,SNR=4.7						
CMAR				Lg	Lg	06 48 32.0	
	comp=Z,1.4nm,0.3s,baz=8.6,slow=30,SNR=9.5						
SONM	Songino Array	22.78	11	P	P	06 49 43.7	-0.5
	comp=Z,0.2nm,0.4s,baz=194,slow=8.9,SNR=3.6						
MKAR	Makanchi Array	25.41	331	P	P	06 50 09.7	+0.6
	comp=Z,1.2nm,0.7s,baz=139,slow=10,SNR=15						
ZALV	Zalesovo Beam	30.49	342	P	P	06 50 54.6	+0.2
	comp=Z,0.4nm,0.3s,baz=158,slow=9.0,SNR=5.8						
WRA	Warramunga Arr	56.26	140	P	P	06 54 21.6	-0.6
	comp=Z,0.5nm,0.6s,baz=329,slow=7.6,SNR=6.7						

IDC 01 06:46:27.9±1.3**, 0°.73N×127°.07E, h0km, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.7**/22**, mbtmp3.8**/5**, Error ellipse: s-maj=129.5km s-min=19.1km az=69.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.74	161	P	P	06 51 20.9	-0.2
	3.2nm,0.7s,baz=340,slow=11,SNR=21						
ASAR	Alice Springs	25.14	165	P	P	06 51 55.0	+0.1
	3.4nm,0.8s,baz=345,slow=8.6,SNR=25						
SONM	Songino Array	50.24	342	P	P	06 55 25.5	-0.4
	0.4nm,0.6s,baz=164,slow=7.2,SNR=3.8						
MKAR	Makanchi Array	60.21	326	P	P	06 56 38.1	+0.3
	0.5nm,0.6s,baz=124,slow=8.2,SNR=8.1						
KURBB	Kurchatov Arra	64.44	328	P	P	06 57 05.9	-0.1
	1.0nm,0.6s,baz=125,slow=6.3,SNR=10.0						

*ISCJB **01** 06:51:26.7±0.8, 25°.55N±0°.08×100°.05E±0°.06, h10km, mb3.6/5, MS2.7/2, Error ellipse: s-maj=12.3km s-min=7.4km az=24.6*
*IDC **01** 06:51:27.2±1.1, 25°.61N×100°.09E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/28, mbtmp3.7/6, ML4.0/1, MS2.8/2, Ms1 2.8/2, ms1mx2.3/29, Error ellipse: s-maj=39.6km s-min=17.5km az=77.0*
*BJI **01** 06:51:29.2, 25°.63N×99°.93E, h12km, ML3.4/6*
ISC 01 06:51:28.5±0.9**, 25°.66N**±0°.06×**100°.06E**±0°.08**, h10km, n9, σ1s.07**/10**, mb3.8**/5**, Yunnan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMI	Kunming	2.48	102	Pg	Pg	06 52 15.7	-0.5
KMI				Sg	Sg	06 52 49.1	+0.7
KMI				smax	smax		
	comp=N,280nm,0.9s						
KMI				smax	smax		
	comp=E,300nm,0.8s						
CD2	Chengdu	6.16	31	Pn	Pb	06 53 08.1	-7.8
CD2				Pg	Pg	06 53 24.6	-1.9
CD2				Sg	Sg	06 54 47.3	+1.0
CD2				Sn	Sb	06 55 06.8	+37
CD2				smax	smax		
	comp=N,30nm,1.9s						
CD2				smax	smax		
	comp=E,40nm,1.6s						
CD2				LR	LR		
	comp=N,490nm,5.5s						
CD2				LR	LR		
	comp=E,740nm,7.1s						
CD2				LR	LR		
	comp=Z,460nm,5.9s						
CMAR	Chiang Mai Arr	7.25	188	Pn	Pn	06 53 13.9	-0.6
	comp=Z,0.7nm,0.3s,baz=5.7,slow=13,SNR=4.1						
CMAR				Lg	Lg	06 55 16.1	
	comp=Z,1.7nm,0.3s,baz=3.5,slow=26,SNR=5.9						
LZH	Lanzhou	10.88	16	eP	Pn	06 54 07.1	+2.6
LZH				pP		06 54 10.4	
LZH				sP		06 54 13.1	
SONM	Songino Array	22.69	11	P	P	06 56 31.0	+0.7
	comp=Z,0.5nm,0.8s,baz=189,slow=18,SNR=2.7						
SONM				LR	LR	07 06 11.7	
	comp=Z,36nm,20.6s,baz=70,slow=39						
MKAR	Makanchi Array	25.38	331	P	P	06 56 56.9	+1.0
	comp=Z,1.8nm,0.7s,baz=138,slow=10.0,SNR=16						
ZALV	Zalesovo Beam	30.44	342	P	P	06 57 41.9	+0.8
	comp=Z,0.5nm,0.3s,baz=140,slow=7.7,SNR=5.0						
ZALV				LR	LR	07 09 36.3	
	comp=Z,14nm,20.4s,baz=63,slow=36						
AKTO	Aktyubinsk	40.56	319	P	P	06 59 08.3	+0.3
	comp=Z,1.4nm,0.7s,baz=44,slow=8.7,SNR=4.7						
WRA	Warramunga Arr	56.26	140	P	P	07 01 09.0	-0.3
	comp=Z,0.6nm,0.6s,baz=328,slow=7.6,SNR=10						

IDC 01 06:52:42.8±4.0**, 16°.27N×87°.08W, h0km, mb3.0**/3**, mb1 3.5**/4**, mb1mx3.4**/22**, mbtmp3.2**/4**, ML3.2**/1**, Error ellipse: s-maj=105.7km s-min=59.5km az=75.0, North of Honduras**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG	Tepich	4.09	344	Pn	Pn	06 53 48.1	+1.4
	1.5nm,0.3s,baz=303,slow=24,SNR=22						
TEIG				Sn	Sn	06 54 35.0	-0.3
	5.7nm,0.3s,baz=249,slow=17,SNR=14						
TXAR	Lajitas Array	20.04	313	P	P	06 57 17.1	-0.5
	0.2nm,0.6s,baz=116,slow=12,SNR=4.7						
YKA	Yellowknife Ar	50.05	344	P	P	07 01 38.4	-0.6
	0.2nm,0.5s,baz=139,slow=7.6,SNR=5.7						
ILAR	Eielson Array	62.70	335	P	P	07 03 09.5	+0.3
	0.3nm,0.9s,baz=126,slow=6.1,SNR=4.4						

MAN 01 06:56:33, 12°.13N×122°.40E, h25km, mb3.5, ML2.2, MS1.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OTRP	Odiongan	0.43	302	eP	Pn	06 56 43.7	0.0
OTRP				eS	Sn	06 56 51.3	+0.5
RCP	Roxas	0.66	149⇑	eP	Pn	06 56 46.5	-0.4
RCP				eS	Sn	06 56 56.6	+0.2
SJMP	San Jose	1.29	285	eP	Pn	06 56 55.9	+0.4
CUYO	Cuyo Island	1.85	227	eP	Pn	06 57 03.4	+0.2
ENPP	El Nido	3.05	253	eP	Pn	06 57 21.1	+1.4

MEX 01 07:25:32.3±0.4**, 15°.97N×97°.05W, h12km**±8km**, MD3.5, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.93	102	i P	Pg	07 25 47.9	-2.3
HUIG				i S	Sg	07 25 58.9	-3.5
PNIG	Pinotepa	1.12	292	i P	Pb	07 25 50.0	-3.7
PNIG				i S	Sb	07 26 04.2	-4.0
VHO	Vista Hermosa	1.14	15	i P	Pb	07 25 50.2	-4.1
VHO				i S	Sb	07 26 04.7	-4.5
UTMO	Huajuapan	1.98	339	i P	Pn	07 26 03.5	-2.6
UTMO				i S	Sn	07 26 26.1	-5.1
PCIG		3.70	94	i P	Pn	07 26 27.5	-1.8
PCIG				i S	Sn	07 27 09.0	-3.9

MEX 01 07:30:23.0±0.5**, 15°.83N×96°.91W, h10km**±11km**, MD3.5, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.78	95	eP	Pg	07 30 35.8	-2.2
HUIG				i S	Sg	07 30 46.6	-1.6
VHO	Vista Hermosa	1.25	8	i P	Pn	07 30 43.5	-3.3
VHO				i S	Sb	07 30 58.3	-5.0
PNIG	Pinotepa	1.29	296	eP	Pn	07 30 43.4	-3.8
PNIG				i S	Sb	07 30 59.6	-4.6
UTMO	Huajuapan	2.16	337	i P	Pn	07 30 56.9	-2.5
UTMO				i S	Sn	07 31 22.4	-4.1

*MOS **01** 07:41:56.2±1.1, 48°.01N×155°.78E, h10km, mb4.2/1, Error ellipse: s-maj=99.9km s-min=19.3km az=74.9*
KRSC 01 07:41:56.2±2.3**, 48°.01N×155°.78E, h10km**±10km**, ML4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.69	5	P	Pn	07 42 40.2	+0.8
PAU	Pauzhetka	3.52	11	eP	Pn	07 42 52.1	+1.1
PAU				i S	Sn	07 43 32.9	+0.2
PAU	Pauzhetka	3.52	11	PN	Pn	07 42 52.1	+1.1
MIPR	Malaya Ipel'ka	4.32	8	P	Pn	07 43 02.9	+1.0
ASAK	Asacha	4.58	16	eP	Pn	07 43 07.6	+1.9
MTVR	Mutnovka	4.74	18	eP	Pn	07 43 09.3	+1.5
MTVR				eS	Sn	07 44 02.9	0.0
RUS	Russkaya	4.76	21	eP	Pn	07 43 09.0	+1.0
RUS				eS	Sn	07 44 02.4	-0.8
RUS	Russkaya	4.76	21	PN	Pn	07 43 09.0	+1.0
APC	Apacha	5.00	10	P	Pn	07 43 12.8	+1.6
APC				i S	Sn	07 44 08.5	-0.5
UGLR	Uglovaya	5.55	19	P	Pn	07 43 20.6	+1.6
AVH	Avacha	5.59	19	P	Pn	07 43 21.0	+1.6
SDLR	Sedlovina	5.63	19	P	Pn	07 43 21.9	+1.8
SPN	Mys Shipunski	5.77	26	P	Pn	07 43 23.7	+1.9
SPN				i S	Sn	07 44 27.6	-0.3
SPN	Mys Shipunski	5.77	26	PN	Pn	07 43 23.7	+1.9
GNL	Ganaly	5.86	13	P	Pn	07 43 25.6	+2.5
MKZ	Mys Kozlova	7.54	27	P	Pn	07 43 47.3	+1.3
MKZ	Mys Kozlova	7.54	27	PN	Pn	07 43 47.3	+1.3
KBTR	Krutoberegovo	9.28	25	P	Pn	07 44 11.6	+1.7
KBTR	Krutoberegovo	9.28	25	PN	Pn	07 44 11.6	+1.7

IDC 01 07:50:23.0±7.6**, 13°.13N×91°.62W, h0km, mb3.4**/3**, mb1 3.8**/5**, mb1mx3.6**/23**, mbtmp3.5**/5**, ML4.3**/1**, Error ellipse: s-maj=127.4km s-min=43.6km az=147.0, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG	Tepich	7.75	24	Pn	Pn	07 52 19.1	+1.9
	4.8nm,0.3s,baz=219,slow=3.2,SNR=34						
TEIG				Sn	Sn	07 53 45.8	+0.1
	0.9nm,0.3s,baz=51,slow=23,SNR=2.7						
TXAR	Lajitas Array	19.62	327	P	P	07 54 52.5	-0.8
	0.0nm,0.3s,baz=146,slow=12,SNR=5.6						
ANMO	Albuquerque	25.54	331	P	P	07 55 53.5	-0.3
	0.3nm,0.4s,baz=127,slow=10,SNR=5.6						
NVAR	Mina Array Bea	34.58	322	P	P	07 57 15.3	+1.4
	0.3nm,0.6s,baz=129,slow=9.4,SNR=3.2						
YKA	Yellowknife Ar	51.95	347	P	P	07 59 32.2	-1.4
	0.2nm,0.5s,baz=152,slow=7.5,SNR=7.5						

*NIED **01** 07:53:00, 27°.70N×140°.60E, h400km, Mw4.6 Best double couple: M0 8.16000×10¹⁵ NP1:φs143.00000°, δ78.00000°, λ-27.00000°. NP2:φs239.00000°, δ63.00000°, λ-167.00000°.*
*MOS **01** 07:53:09.2±0.6, 27°.53N×139°.97E, h375km, mb4.0/13, Error ellipse: s-maj=23.9km s-min=10.0km az=104.4*
*JMA **01** 07:53:09.5±0.3, 27°.75N×140°.64E, h359km±5km, M3.8*
*IDC **01** 07:53:10.6±1.5, 27°.58N×140°.05E, h369km±15km, mb3.4/13, mb1 3.5/18, mb1mx3.4/29, mbtmp3.4/18, Error ellipse: s-maj=17.9km s-min=11.8km az=84.0*
ISC 01 07:53:09.0±0.6**, 27°.69N**±0°.07×**140°.33E**±0°.09**, h350km, n51, σ1s.55**/60**, mb3.9**/21**, 1C-4D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.96	122	P	Pn	07 54 00.3	+0.2
JHHJ				S	S	07 54 40.6	-0.4
JHJ2	Mitsune	5.42	355	P	Pn	07 54 34.5	+1.3
JHJ2				eS	S	07 55 39.0	-2.3
JHJ	Hachijo jima 2	5.43	355	P	Pn	07 54 36.1	+2.8
	9.8nm,0.3s,baz=250,slow=22,SNR=7.7						
JHJ				S	S	07 55 38.9	-2.7
	31nm,0.3s,baz=233,slow=22,SNR=6.4						
TTO5	TONANKAI O.B.S	6.91	342	P	Pn	07 54 52.9	+2.8
TTO5				eS	S	07 56 12.7	+0.4
BSO1	Boso 1	6.96	4	P	Pn	07 54 51.6	+1.3
BSO1				eS	S	07 56 10.2	-2.5
JWZ	Kozaga	7.05	327	P	Pn	07 54 54.3	+2.5
JIE	Ise	7.37	336	P	Pn	07 54 58.4	+2.9
JIE				S	S	07 56 22.0	-0.3
JOD2	Odawara 2	7.62	352	P	Pn	07 54 59.8	+1.2
JOD2				eS	S	07 56 25.4	-2.5
JRY	Ryogami san	8.39	352	P	P	07 55 09.4	-1.0
JRY				eS	S	07 56 41.9	-2.6
MJAR	Matsushiro Arr	9.01	349	P	P	07 55 17.7	+0.4
	2.0nm,0.3s,baz=264,slow=12,SNR=11						
MAT	Matsushiro	9.01	349	P	Pn	07 55 16.1	+1.1
MAT				eS	S	07 56 59.2	+1.2
MAT	Matsushiro	9.01	349	P	Pn	07 55 16.1	+1.1
JHS	Saijyo	9.54	322	P	P	07 55 24.5	+1.2
JNU	Nakatsue	9.79	306	P	P	07 55 26.1	0.0
	1.7nm,0.3s,baz=96,slow=4.9,SNR=14						
JSJ	Shimokoshiki	10.05	296	P	P	07 55 30.2	+1.3
JMK	Ichinoseki	11.26	4	P	P	07 55 43.6	+1.4
KSRS	Korea Array	14.27	316	P	Pn	07 56 20.1	+2.8
	1.5nm,0.3s,baz=132,slow=12,SNR=36						
ASAJ	Asahikawa	16.49	6	P	Pn	07 56 42.2	-0.7
	0.8nm,0.3s,baz=216,slow=24,SNR=3.6						
USRK	Ussuriysk Arra	17.78	340	P	P	07 56 54.4	+0.9
	5.1nm,0.3s,baz=140,slow=9.8,SNR=55						
KLR	Kul'dur	22.50	345	eP	P	07 57 36.2	-3.3
SONM	Songino Array	33.15	317	P	P	07 59 13.1	-0.6
	1.8nm,0.6s,baz=130,slow=8.6,SNR=12						
SEY	Seymchan	36.12	9⇓	eP	P	07 59 40.2	+1.6
BILL	Bilibino	43.26	14⇑	iP	P	08 00 38.8	+2.1
BILL				e		08 02 21.9	
BILL				pmax	pmax		
	comp=Z,14nm,2.0s						
TIXI	Tiksi	44.46	355⇓	eP	P	08 00 46.4	+0.3
TIXI				pmax	pmax		
	comp=Z,13nm,2.9s						
WRA	Warramunga Arr	47.71	188	P	P	08 01 10.3	-1.5
	comp=Z,0.4nm,0.4s,baz=6.3,slow=8.0,SNR=18						
ZALV	Zalesovo Beam	47.96	319	P	P	08 01 12.5	-0.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	47.96	319	P	P	08 01 12.5	-0.9
	comp=Z,0.7nm,0.4s,baz=104,slow=4.6,SNR=2.9						
MK31	Makanchi Array	48.82	309	i P	P	08 01 18.7	-1.4
MKAR	Makanchi Array	48.82	309	P	P	08 01 19.0	-1.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	48.82	309	P	P	08 01 19.0	-1.1
	comp=Z,0.8nm,0.5s,baz=91,slow=8.9,SNR=11						
MKAR				ScP	ScP	08 05 57.8	-1.8
	comp=Z,0.4nm,0.6s,baz=96,slow=5.4,SNR=4.2						
KURK	Kurchatov	51.39	314	deP	P	08 01 37.7	-1.3
KURK				pmax	pmax		
	comp=Z,21nm,5.0s						
ASAR	Alice Springs	51.43	188	P	P	08 01 38.1	-1.5
	comp=Z,0.2nm,0.5s,baz=10,slow=5.7,SNR=3.5						
BVA0	Borovoye Array	56.49	317	i P	P	08 02 14.5	-1.0
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	Borovoye	56.55	317	deP	P	08 02 15.0	-0.9
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KK31	Karatay Array	57.40	305	i P	P	08 02 20.9	-1.1
KK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ILAR	Eielson Array	57.99	29	P	P	08 02 26.4	+0.8
	comp=Z,1.4nm,0.9s,baz=259,slow=5.7,SNR=14						
AB31	Akbulak array	63.49	314	eP	P	08 02 57.9	-4.8
AB31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
YKA	Yellowknife Ar	72.40	28	P	P	08 03 58.4	+1.0
	comp=Z,1.7nm,0.6s,baz=297,slow=6.0,SNR=28						
ARCES	ARCESS Array B	72.43	340	P	P	08 03 57.9	+0.4
	comp=Z,4.2nm,0.6s,baz=79,slow=8.8,SNR=16						
JOF	Joensuu	73.81	333	ep	P	08 04 05.3	-0.3
	comp=Z,2.2nm,0.3s						
JOF	Joensuu	73.81	333	eP	P	08 04 05.3	-0.3
JOF				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KAF	Kangasniemi	76.22	334	ep	P	08 04 18.9	-0.3
	comp=Z,1.9nm,0.3s						
KAF	Kangasniemi	76.22	334	eP	P	08 04 18.9	-0.3
KAF				pmax	pmax		
	comp=Z,2.0nm,0.3s						
FINES	FINESS Array B	76.68	333	P	P	08 04 21.3	-0.5
	comp=Z,4.3nm,0.3s,baz=73,slow=4.9,SNR=42						
AKASG	Malin Array Be	81.16	323	P	P	08 04 45.5	-0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	81.16	323	P	P	08 04 45.5	-0.6
	comp=Z,0.7nm,0.3s,baz=55,slow=4.8,SNR=3.4						
NVAR	Mina Array Bea	81.44	51	P	P	08 04 50.0	+1.9
	comp=Z,0.8nm,0.7s,baz=297,slow=6.1,SNR=6.2						
HFS	Hagfors	82.22	336	P	P	08 04 50.2	-1.3
	comp=Z,1.8nm,0.4s,baz=119,slow=1.9,SNR=29						
NB2	NORSAR Subarra	82.44	338	P	P	08 04 51.4	-1.2
	comp=Z,1.3nm,0.5s,baz=51,slow=4.6						
NOA	NORSAR Array B	82.44	338	P	P	08 04 51.4	-1.2
	comp=Z,2.2nm,0.6s,baz=46,slow=5.0,SNR=14						
PLCA	Paso Flores	151.50	125	PKPbc	PKPbc	08 12 23.1	+1.0
	comp=Z,0.8nm,0.5s,baz=225,slow=2.2,SNR=4.5						

*CSEM **01** 08:02:48.3, 42°.36N×13°.35E, h8km, MD1.8/1, After ROM*
ROM 01 08:02:48.3±0.1**, 42°.36N×13°.35E, h8km, Md1.8**/1**, Ml1.3**/2**, Error ellipse: s-maj=1.4km s-min=1.0km az=176.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	100	Pg	Pg	08 02 50.2	+0.2
AQU				Sg	Sg	08 02 51.6	+0.3
	429nm,0.1s						
AQU	L'Aquila	0.04	100	Pg	Pg	08 02 50.2	+0.2
AQU				Sg	Sg	08 02 51.6	+0.3
	429nm,0.1s						
CAMP	Campotosto	0.18	15	Pg	Pg	08 02 52.4	+0.1
CAMP				Sg	Sg	08 02 55.6	+0.7
	26nm,0.5s						
CAMP	Campotosto	0.18	15	Pg	Pg	08 02 52.4	+0.1
CAMP				Sg	Sg	08 02 55.6	+0.7
	26nm,0.5s						
FIAM	Fiamignano	0.19	241	Pg	Pg	08 02 52.7	+0.3
FIAM				Sg	Sg	08 02 55.9	+0.7
FIAM	Fiamignano	0.19	241	Pg	Pg	08 02 52.7	+0.3
FIAM				Sg	Sg	08 02 55.9	+0.7
FAGN	Fagnano	0.20	118	Pg	Pg	08 02 52.9	+0.4
FAGN				Sg	Sg	08 02 56.1	+0.8
	126nm,0.3s						
FAGN	Fagnano	0.20	118	Pg	Pg	08 02 52.9	+0.4
FAGN				Sg	Sg	08 02 56.1	+0.8
	126nm,0.3s						
LNSS	Leonessa	0.33	317	Pg	Pg	08 02 55.6	+0.6
LNSS				Sg	Sb	08 03 01.7	-0.6
LNSS	Leonessa	0.33	317	Pg	Pg	08 02 55.6	+0.6
LNSS				Sg	Sb	08 03 01.7	-0.6
VCEL	Villa Celiera	0.37	85	Pg	Pg	08 02 56.3	+0.6
VCEL				Sg	Sb	08 03 02.8	-0.5
VCEL	Villa Celiera	0.37	85	Pg	Pg	08 02 56.3	+0.6
VCEL				Sg	Sb	08 03 02.8	-0.5

*BEO **01** 08:03:35.3±0.6, 40°.99N×22°.93E, h0km, ML4.1/1*
*ISCJB **01** 08:03:38.6±0.3, 41°.29N±0°.01×22°.69E±0°.01, h8km±2km, mb4.1/31, MS3.4/12, Error ellipse: s-maj=1.8km s-min=1.5km az=35.6*
*PDG **01** 08:03:38.9±0.7, 41°.27N×22°.74E, h2km±1km, ML3.7/8, Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*IDC **01** 08:03:38.9±0.7, 41°.27N×22°.69E, h0km, mb3.9/18, mb1 4.1/26, mb1mx4.0/37, mbtmp3.9/26, ML3.8/7, MS3.3/17, Ms1 3.3/17, ms1mx3.0/46, Error ellipse: s-maj=12.4km s-min=10.6km az=159.0*
*SKO **01** 08:03:38.9, 41°.28N×22°.70E, h10km, M3.3, ML3.8*
*SOF **01** 08:03:38.5, 41°.27N×22°.73E, h5km, MD4.0*
*MOS **01** 08:03:38.0±1.1, 41°.27N×22°.57E, h10km, mb4.2/18, Error ellipse: s-maj=4.7km s-min=3.3km az=103.0*
*NEIC **01** 08:03:39.6, 41°.27N×22°.71E, h2km, mb4.2/10, ML4.3(THE), ML3.8(SKO), ML4.0(BEO), ML3.8(PDG), After THE.*
NEIC Felt at Strumica. Also felt at Kilkis, Greece and at Sofia, Bulgaria.
*ATH **01** 08:03:39.1, 41°.26N×22°.71E, h19km, MD4.1/30, ML3.8*
*CSEM **01** 08:03:39.4±0.1, 41°.27N×22°.69E, h2km, mb4.1/27, Ms2.7, Error ellipse: s-maj=2.4km s-min=1.9km az=23.0*
*THE **01** 08:03:39.6, 41°.27N×22°.71E, h2km±1km, ML4.3/10, Error ellipse: s-maj=1.2km s-min=0.4km az=234.0*
*PDA **01** 08:03:40.9, 41°.20N×22°.80E, h10km, mb4.4*
*PRU **01** 08:03:41.0, 41°.28N×22°.78E, h0km, M4.2*
*SZGRF **01** 08:03:44.0, 41°.48N×22°.80E, h10km, mb4.2, Northwestern Balkan Peninsula*
*TIR **01** 08:03:50.5, 41°.39N×22°.60E, h23km, ML4.2*
ISC 01 08:03:39.6±0.8**, 41°.28N**±0°.01×**22°.70E**±0°.01**, h5km**±5km**, n661, σ1s.26**/756**, mb4.1**/31**, MS3.4**/12**, 63C-39D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.11	295	P	Pg	08 03 41.7	-0.1
VAY				S	Sg	08 03 43.4	+0.1
VAY	Valandovo	0.11	295	P	Pg	08 03 41.7	-0.1
VAY				S	Sg	08 03 43.4	+0.1
VAY	Valandovo	0.11	295	P	Pg	08 03 41.7	-0.1
VAY				S	Sg	08 03 43.4	+0.1
VAY	Valandovo	0.11	295⇑	iPg	Pg	08 03 41.3	-0.5
VAY				i Sg	Sg	08 03 43.3	-0.1
VAY				i Lg	Lg	08 03 43.5	
	comp=N,56μm,0.2s						
VAY				i Lg	Lg	08 03 43.5	
	comp=E,30μm,0.4s						
VAY	Valandovo	0.11	295⇑	iPg	Pg	08 03 41.8	-0.1
VAY				S	Sg	08 03 43.4	+0.1
VAY				i Lg	Lg	08 03 44.0	
	comp=E,30μm,0.4s						
KNT	Kendrikon	0.19	127	P	Pg	08 03 43.5	+0.2
KNT				S	Sg	08 03 46.4	+0.6
KNT	Kendrikon	0.19	127	P	Pg	08 03 43.5	+0.2
KNT				S	Sg	08 03 46.4	+0.6
KNT	Kendrikon	0.19	127	P	Pg	08 03 43.5	+0.2
KNT				S	Sg	08 03 46.4	+0.6
KNT	Kendrikon	0.19	127	P	Pg	08 03 43.5	+0.2
KNT				S	Sg	08 03 46.4	+0.6
GRG	Griva	0.39	215	P	Pg	08 03 47.1	-0.1
GRG				S	Sg	08 03 52.9	+0.6
GRG	Griva	0.39	215	ePB	Pg	08 03 47.0	-0.1
GRG				eSB	Sg	08 03 52.5	+0.2
GRG	Griva	0.39	215	P	Pg	08 03 47.1	-0.1
GRG				S	Sg	08 03 52.9	+0.6
GRG	Griva	0.39	215	P	Pg	08 03 47.1	-0.1
GRG				S	Sg	08 03 52.9	+0.6
GRG	Griva	0.39	215	P	Pg	08 03 47.1	-0.1
GRG				S	Sg	08 03 52.9	+0.6
KKB	Krupnik	0.66	26	i Pg	Pg	08 03 51.9	-0.3
KKB	Krupnik	0.66	26	i Pg	Pg	08 03 51.9	-0.3
SOH	Sokhos	0.67	132	P	Pg	08 03 51.9	-0.6
SOH				S	Sg	08 04 01.4	+0.2
SOH	Sokhos	0.67	132	ePN	Pg	08 03 52.0	-0.6
SOH				eSN	Sg	08 04 01.5	+0.2
SOH	Sokhos	0.67	132	P	Pg	08 03 51.9	-0.6
SOH				S	Sg	08 04 01.4	+0.2
THE	Thessaloniki	0.68	163	P	Pg	08 03 52.2	-0.3
THE				S	Sg	08 04 01.4	+0.1
THE	Thessaloniki	0.68	163	P	Pg	08 03 52.2	-0.3
THE				S	Sg	08 04 01.4	+0.1
THE	Thessaloniki	0.68	163	P	Pg	08 03 52.2	-0.3
THE				S	Sg	08 04 01.4	+0.1
THE	Thessaloniki	0.68	163	P	Pg	08 03 52.2	-0.3
THE				S	Sg	08 04 01.4	+0.1

SRS	Serrai	0.69	103	P	Pg	08 03 52.5	-0.4
SRS	Serrai	0.69	103	P	Pg	08 03 52.5	-0.4
HORT	Hortiatis	0.74	156	P	Pg	08 03 53.6	-0.3
HORT				S	Sg	08 04 03.5	0.0
HORT	Hortiatis	0.74	156	P	Pg	08 03 53.6	-0.3
HORT				S	Sg	08 04 03.5	0.0
MMB	Musomiste	0.83	68	i Pg	Pg	08 03 55.1	-0.5
MMB	Musomiste	0.83	68	i Pg	Pg	08 03 55.1	-0.5
NVR	Nevrokopi	0.88	85	P	Pg	08 03 55.9	-0.6
NVR				S	Sb	08 04 08.8	-0.6
NVR	Nevrokopi	0.88	85	ePN	Pg	08 03 55.9	-0.6
NVR				eSN	Sg	08 04 07.9	0.0
NVR	Nevrokopi	0.88	85	P	Pg	08 03 55.9	-0.6
NVR				S	Sb	08 04 08.8	-0.6
PLG	Polygyros	1.06	148	P	Pg	08 03 59.7	-0.3
PLG				S	Sb	08 04 14.6	-0.1
PLG	Polygyros	1.06	148	ePN	Pg	08 03 59.1	-0.9
PLG				eSN	Sg	08 04 12.7	-1.1
PLG	Polygyros	1.06	148	P	Pg	08 03 59.7	-0.3
PLG				S	Sb	08 04 14.6	-0.1
BIA	Bitola	1.07	257	P	Pg	08 03 58.9	-1.2
BIA				S	Sb	08 04 15.0	+0.1
BIA	Bitola	1.07	257	ePg	Pg	08 03 58.9	-1.2
BIA	Bitola	1.07	257	P	Pg	08 03 58.9	-1.2
BIA				S	Sb	08 04 15.0	+0.1
FNA	Florina	1.11	244	P	Pg	08 04 00.4	-0.6
FNA				S	Sb	08 04 16.8	+0.6
FNA	Florina	1.11	244	ePN	Pg	08 04 00.2	-0.8
FNA				eSN	Sg	08 04 15.5	+0.1
FNA	Florina	1.11	244	P	Pg	08 04 00.4	-0.6
FNA				S	Sb	08 04 16.8	+0.6
SKO	Skopje	1.17	307	P	Pg	08 04 01.4	-0.7
SKO				S	Sg	08 04 16.6	-0.7
SKO	Skopje	1.17	307	eSg	Sn	08 04 21.5	+2.5
SKO	Skopje	1.17	307	ePg	Pg	08 04 01.8	-0.3
SKO				eSg	Sb	08 04 18.3	+0.5
SKO				i Lg	Lg	08 04 19.3	
	comp=E,1μm,0.6s						
SKO				i Lg	Lg	08 04 20.5	
	comp=N,2μm,0.6s						
SKO	Skopje	1.17	307	P	Pg	08 04 01.4	-0.7
SKO				S	Sg	08 04 16.6	-0.7
SKO				eSg	Sn	08 04 18.8	-0.2
SKO				i Lg	Lg	08 04 21.0	
	comp=N,2μm,0.6s						
KZN	Kozani	1.20	216	P	Pg	08 04 01.6	-1.0
KZN				S	Sb	08 04 19.2	+0.6
KZN	Kozani	1.20	216	ePN	Pg	08 04 01.3	-1.3
KZN				eSN	Sb	08 04 19.1	+0.5
KZN	Kozani	1.20	216	P	Pg	08 04 01.6	-1.0
KZN				S	Sb	08 04 19.2	+0.6
OUR	Ouranopolis	1.35	134	P	Pn	08 04 04.2	-0.9
OUR				S	Sn	08 04 24.3	+0.9
OUR	Ouranopolis	1.35	134	P	Pn	08 04 04.2	-0.9
OUR				S	Sn	08 04 24.3	+0.9
VTS	Vitosha	1.37	16	P	Pn	08 04 05.2	-0.2
VTS				S	Sn	08 04 24.9	+0.9
VTS	Vitosha	1.37	16	⇓P	Pn	08 04 05.3	-0.2
VTS	Vitosha	1.37	16	i P	Pn	08 04 05.0	-0.5
VTS	Vitosha	1.37	16	ePg	Pn	08 04 05.3	-0.2
VTS				eSg	Sn	08 04 25.8	+1.8
VTS	Vitosha	1.37	16	ePg	Pn	08 04 05.3	-0.2
VTS				eSg	Sn	08 04 24.8	+0.8
VTS	Vitosha	1.37	16	⇓iP	Pn	08 04 05.3	-0.2
VTS	Vitosha	1.37	16	P	Pn	08 04 05.2	-0.2
VTS				eSg	Sn	08 04 24.8	+0.8
KAVA	Kavala	1.40	101	P	Pn	08 04 05.2	-0.5
KAVA				S	Sg	08 04 25.2	+0.7
KAVA	Kavala	1.40	101	P	Pn	08 04 05.2	-0.5
KAVA				S	Sg	08 04 25.2	+0.7
NEST	Nestorio	1.52	236	P	Pn	08 04 07.5	0.0
NEST	Nestorio	1.52	236	P	Pn	08 04 07.5	0.0
RZN	Rozhen	1.57	74	i Pg	Pb	08 04 09.0	-0.2
RZN	Rozhen	1.57	74	i Pg	Pb	08 04 09.0	-0.2
KBN	Korca	1.59	246	ePG	Pn	08 04 08.2	-0.2
KBN				i SG	Sn	08 04 26.1	-3.2
KBN	Korca	1.59	246	P	Pn	08 04 08.4	0.0
KBN	Korca	1.59	246	P	Pn	08 04 08.4	0.0
KBN				i Sg	Sn	08 04 26.1	-3.2
BARS	Barje	1.67	337	ePn	Pn	08 04 09.5	0.0
BARS				eSn	Sg	08 04 35.6	+2.2
BARS	Barje	1.67	337	ePn	Pn	08 04 09.5	0.0
BARS				eSn	Sg	08 04 35.6	+2.2
PGB	Panagyurishte	1.68	40	i P	Pn	08 04 09.6	-0.1
PGB	Panagyurishte	1.68	40	i P	Pn	08 04 09.6	-0.1
PLD	Plovdiv	1.71	60	P	Pn	08 04 09.8	-0.3
PLD				S	Sn	08 04 32.7	+0.4
PLD	Plovdiv	1.71	60	eP	Pb	08 04 11.4	-0.1
PLD	Plovdiv	1.71	60	P	Pn	08 04 09.8	-0.3
PLD				S	Sn	08 04 32.7	+0.4
PHP	Peshkopia	1.75	284	ePN	Pn	08 04 10.2	-0.3
PHP				ePN	Sn	08 04 33.5	+0.3
PHP	Peshkopia	1.75	284	ePn	Pn	08 04 10.2	-0.3
THL	Klokotos Trika	1.79	197	ePN	Pn	08 04 10.9	-0.2
THL				eSN	Sn	08 04 34.4	+0.3
XOR	Xorichti	1.94	169	P	Pn	08 04 12.4	-0.9
XOR	Xorichti	1.94	169	P	Pn	08 04 12.4	-0.9
ZAPS	Zavoj	2.00	359	ePn	Pn	08 04 14.5	+0.5
ZAPS				eSn	Sg	08 04 43.8	+0.1
NEO	Neokhori	2.01	168	P	Pn	08 04 13.3	-0.8
NEO	Neokhori	2.01	168	ePB	Pn	08 04 13.3	-0.8
NEO				eSN	Sn	08 04 39.1	-0.5
NEO	Neokhori	2.01	168	P	Pn	08 04 13.3	-0.8
KDZ	Kurdzhali	2.08	79	i P	Pn	08 04 15.2	+0.1
KDZ	Kurdzhali	2.08	79	i P	Pn	08 04 15.2	+0.1
TIR	Tirane	2.14	273	i SN	Pn	08 04 17.9	+2.0
TIR	Tirane	2.14	273	eP	Pn	08 04 16.4	+0.5
TIR	Tirane	2.14	273	ePn	Pn	08 04 15.4	-0.5
TIR	Tirane	2.14	273	ePn	Pn	08 04 16.4	+0.5
TIR	Tirane	2.14	273	eP	Pn	08 04 16.4	+0.5
JAN	Janina	2.15	222	P	Pn	08 04 15.8	-0.2
JAN	Janina	2.15	222	ePN	Pn	08 04 16.6	+0.6
JAN				eSN	Sn	08 04 42.5	-0.5
JAN	Janina	2.15	222	P	Pn	08 04 15.8	-0.2
RDO	Rodhopi	2.15	93	P	Pn	08 04 15.9	-0.1
RDO	Rodhopi	2.15	93	ePB	Pn	08 04 15.5	-0.5
RDO	Rodhopi	2.15	93	P	Pn	08 04 15.9	-0.1
SKIA	Skiathos	2.19	164	P	Pn	08 04 16.1	-0.5
SKIA	Skiathos	2.19	164	P	Pn	08 04 16.1	-0.5
MPEP	Malo Peshtene	2.22	20	i P	Pn	08 04 17.6	+0.6
PUK	Puka	2.24	291	i SN	Pn	08 04 17.5	+0.2
BCI	Bajram Curri	2.25	300	ePN	Pn	08 04 17.8	+0.4
BCI	Bajram Curri	2.25	300	ePn	Pn	08 04 17.8	+0.4
DIM	Dimitrovgrad	2.26	69	i P	Pn	08 04 18.5	+0.9
DIM	Dimitrovgrad	2.26	69	i P	Pn	08 04 18.5	+0.9
SELS	Selova	2.27	329	⇓iPn	Pn	08 04 17.1	-0.6
SELS				eSn	Sg	08 04 51.3	-1.2
AGG	Agios Georgios	2.27	187	P	Pn	08 04 17.7	0.0
AGG	Agios Georgios	2.27	187	ePB	Pn	08 04 17.6	-0.1
AGG	Agios Georgios	2.27	187	P	Pn	08 04 17.7	0.0
AOS	Alonnisos	2.29	156	P	Pn	08 04 16.9	-1.0
AOS	Alonnisos	2.29	156	ePB	Pn	08 04 17.0	-1.0
AOS				eSN	Sn	08 04 45.9	-0.6
AOS	Alonnisos	2.29	156	P	Pn	08 04 16.9	-1.0
SMTH	Samothraki Isl	2.29	110	ePN	Pn	08 04 18.1	+0.1
SMTH				eSN	Sn	08 04 47.4	+0.8
LIA	Limnos Island	2.34	125	ePB	Pn	08 04 18.1	-0.5
LIA				eSN	Sn	08 04 47.8	+0.1
PVY	Plav	2.43	304	⇑iPn	Pn	08 04 20.7	+0.6
PVY				eSn	Sb	08 04 53.5	-0.7
PVY	Plav	2.43	304	⇑P	Pn	08 04 20.6	+0.6
PVY				S	Sb	08 04 54.0	-0.2
PVY	Plav	2.43	304	⇑P	Pn	08 04 20.6	+0.5
EVR	Evrytania	2.45	196	ePN	Pn	08 04 20.4	+0.1
SRN	Sarande	2.48	237	ePN	Pb	08 04 23.1	-1.5
SRN				i SN	Sb	08 04 54.2	-1.3
SRN	Sarande	2.48	237	ePn	Pb	08 04 23.1	-1.5
SRN				i Sn	Sb	08 04 54.2	-1.3
IGT	Igoumenitsa	2.51	227	P	Pb	08 04 23.6	-1.5
IGT	Igoumenitsa	2.51	227	P	Pb	08 04 23.6	-1.5
ALN	Alexandroupoli	2.56	97	P	Pn	08 04 21.5	-0.1
ALN	Alexandroupoli	2.56	97	ePN	Pn	08 04 21.5	-0.1
ALN	Alexandroupoli	2.56	97	P	Pn	08 04 21.5	-0.1
BOLS	Boljevac	2.61	348	ePn	Pn	08 04 22.8	+0.4
BOLS				eSn	Sb	08 04 58.6	-0.6
BOLS	Boljevac	2.61	348	ePn	Pn	08 04 22.8	+0.4
BOLS				eSn	Sb	08 04 58.6	-0.6
BEY	Berane	2.63	308	⇑iPn	Pn	08 04 23.6	+0.9
BEY				eSn	Sb	08 04 58.4	-1.3

IVA	Berane	2.63	308	⇑iPn	Pn	08 04 23.6	+0.9
IVA				eSn	Sb	08 04 58.4	-1.3
ENEZ	Enez	2.67	101	eP	Pn	08 04 22.5	-0.7
ULC	Ulcinj	2.68	286	ePn	Pn	08 04 25.1	+1.7
ULC				eSn	Sb	08 04 59.4	-1.8
ULC	Ulcinj	2.68	286	⇓P	Pn	08 04 24.8	+1.4
ULC				S	Sb	08 05 00.0	-1.2
ULC	Ulcinj	2.68	286	⇓P	Pn	08 04 24.8	+1.4
ULC				S	Sb	08 04 60.0	-1.2
ULC	Ulcinj	2.68	286	P	Pn	08 04 24.8	+1.4
ULC	Ulcinj	2.68	286	ePn	Pn	08 04 25.1	+1.7
ULC				eSn	Sb	08 04 59.4	-1.8
ULC				S	Sb	08 05 00.0	-1.2
KEK	Kerkira	2.71	236	ePB	Pn	08 04 25.1	+1.4
PVL	Pavlikeni	2.75	44	i P	Pn	08 04 23.4	-0.9
PVL	Pavlikeni	2.75	44	i P	Pn	08 04 23.4	-0.9
PDG	Podgorica	2.82	295	ePn	Pn	08 04 26.4	+1.2
PDG				eSn	Sb	08 05 02.5	-2.6
PDG	Podgorica	2.82	295	ePn	Pn	08 04 26.4	+1.2
PDG				eSn	Sb	08 05 02.5	-2.6
TTG	Podgorica	2.82	295	⇑iPn	Pn	08 04 26.6	+1.4
TTG				eSn	Sb	08 05 03.1	-2.0
SJES	Sjenica	2.83	315	ePn	Pn	08 04 27.1	+1.6
EFP	Efpalio	2.91	192	ePN	Pn	08 04 27.0	+0.5
KALE	Kalithea	2.91	189	ePN	Pn	08 04 26.5	-0.1
BOZC	Bozcaada	2.93	118	i P	Pn	08 04 27.9	+1.2
ERIK	Erikli-Kesan	2.95	101	eP	Pn	08 04 26.3	-0.7
GRUS	Gruza	2.99	331	eSn	Sb	08 05 08.2	-2.0
GRUS	Gruza	2.99	331	eSn	Sb	08 05 08.2	-2.0
GELI	Tayfur-Gelibol	3.00	106	eP	Pn	08 04 27.3	-0.4
BUM	Brajici-Budva	3.02	291	⇑iPn	Pn	08 04 29.9	+1.8
BUM				eSn	Sn	08 05 08.0	+3.3
BUM	Brajici-Budva	3.02	291	⇑iPn	Pn	08 04 29.9	+1.8
BUM				eSn	Sn	08 05 08.0	+3.3
LAKA	Lakka	3.08	191	ePN	Pn	08 04 29.9	+1.0
EDRB	Edirne	3.09	78	eP	Pn	08 04 28.3	-0.7
ZIMR		3.09	39	⇓P	Pn	08 04 30.6	+1.6
ZIMR		3.09	39	⇓iP	Pn	08 04 30.6	+1.6
SZH	Strazhica	3.12	49	i P	Pn	08 04 30.5	+1.1
SZH	Strazhica	3.12	49	i P	Pn	08 04 30.5	+1.1
EZN	Ezine	3.12	116	eP	Pn	08 04 29.1	-0.3
JMB	Yambol	3.13	66	P	Pn	08 04 29.9	+0.3
JMB	Yambol	3.13	66	i P	Pn	08 04 30.9	+1.3
JMB	Yambol	3.13	66	P	Pn	08 04 29.9	+0.3
NKY	Niksic	3.16	300	ePn	Pn	08 04 31.4	+1.4
NKY				eSn	Sn	08 05 11.0	+2.9
NKY	Niksic	3.16	300	ePn	Pn	08 04 31.4	+1.4
NKY				eSn	Sn	08 05 11.0	+2.9
SVIS	Svilajnac	3.18	340	ePn	Pn	08 04 30.3	+0.1
SVIS				eSn	Sb	08 05 13.0	-2.6
LPK	Lapseki	3.21	105	eP	Pn	08 04 30.3	-0.3
KLV	Kalavryta, Ach	3.26	188	ePN	Pn	08 04 32.3	+1.0
LTK	Loutraki	3.26	176	ePN	Pn	08 04 31.8	+0.5
GUR	Goura	3.35	185	ePN	Pn	08 04 33.8	+1.2
HCY	Herceg Novi	3.35	292	⇑iPn	Pn	08 04 34.0	+1.4
HCY				eSn	Sn	08 05 15.6	+2.9
HCY	Herceg Novi	3.35	292	⇑iPn	Pn	08 04 34.0	+1.4
HCY				eSn	Sn	08 05 15.6	+2.9
RLS	Riolos of Patr	3.35	197	ePB	Pn	08 04 35.3	+2.7
RMGR	Halanga-Turnu	3.38	360	⇓iP	Pn	08 04 34.2	+1.2
RMGR	Halanga-Turnu	3.38	360	⇓iP	Pn	08 04 34.2	+1.2
DJES	Djerdap	3.39	358	ePn	Pn	08 04 32.6	-0.5
DJES				eSn	Sn	08 05 17.3	+3.6
ATH	Athens Observa	3.39	166	ePN	Pn	08 04 33.5	+0.4
PRK	Paraskevi	3.40	125	ePN	Pn	08 04 34.2	+0.9
UPM	Unac-Piva	3.41	306	⇑iPn	Pn	08 04 34.6	+1.0
UPM				eSn	Sn	08 05 17.4	+2.9
UPM	Unac-Piva	3.41	306	⇑iPn	Pn	08 04 34.6	+1.0
UPM				eSn	Sn	08 05 17.4	+2.9
RKY	Sarkoy-Tekirda	3.44	98	eP	Pn	08 04 33.6	-0.3
SART	Tekirdag	3.44	98	i P	Pn	08 04 33.6	-0.3
SART	Tekirdag	3.44	98	i P	Pn	08 04 33.6	-0.3
DIVS	Divibare	3.45	326	⇑iPn	Pn	08 04 33.7	-0.4
DIVS	Divibare	3.45	326	⇑iPn	Pn	08 04 33.7	-0.4
BRY	Bratogost	3.50	299	ePn	Pn	08 04 36.6	+1.9
BRY				eSn	Sn	08 05 19.4	+2.9
BRY	Bratogost	3.50	299	ePn	Pn	08 04 36.6	+1.9
BRY				eSn	Sn	08 05 19.4	+2.9
MFT	Murefte	3.50	97	eP	Pn	08 04 34.7	0.0
BBLS	Lazići	3.55	318	ePn	Pn	08 04 35.9	+0.5
BBLS	Lazići	3.55	318	ePn	Pn	08 04 35.9	+0.5
KRBG	Karabiga-Canak	3.60	103	eP	Pn	08 04 36.0	+0.1
AYVA	Ayvalik	3.63	121	i P	Pn	08 04 37.4	+1.0
AYVA	Ayvalik	3.63	121	i P	Pn	08 04 37.4	+1.0
HUMR	Humele	3.66	27	⇑iP	Pn	08 04 38.4	+1.6
HUMR	Humele	3.66	27	⇑iP	Pn	08 04 38.4	+1.6
MRMT	Marmara Adasi	3.77	99	eP	Pn	08 04 37.6	-0.8
DID	Didima	3.79	174	ePN	Pn	08 04 38.7	+0.1
CHOS	Chios island	3.87	137	ePN	Pn	08 04 40.4	+0.6
BEO	Beograd	3.89	336	ePn	Pn	08 04 40.5	+0.5
VLX	Vlachokerasia	3.91	184	ePN	Pn	08 04 41.2	+0.9
GONE	Gonen-Balikesi	3.99	106	eP	Pn	08 04 41.4	+0.1
STON	Ston	4.05	295	ePn	Pn	08 04 42.4	+0.2
STON				Sn	Sn	08 05 30.6	+0.7
STON	Ston	4.05	295	ePn	Pn	08 04 42.3	+0.2
STON				Sn	Sn	08 05 30.5	+0.7
BALY	Balya	4.05	111	i P	Pn	08 04 43.9	+1.6
BALY	Balya	4.05	111	i P	Pn	08 04 43.9	+1.6
BNT	Bandirma	4.07	101	eP	Pn	08 04 42.3	-0.1
ITM	Ithomi	4.13	189	ePN	Pn	08 04 45.4	+2.0
SLVT	Silivri	4.16	89	eP	Pn	08 04 43.5	-0.2
URLA	Izmir	4.18	133	i P	Pn	08 04 44.7	+0.7
URLA	Izmir	4.18	133	i P	Pn	08 04 44.7	+0.7
CTYL	Yal??k??y-??at	4.21	85	eP	Pn	08 04 44.6	+0.2
LOT	Lotru	4.24	10	⇓iP	Pn	08 04 45.6	+0.7
LOT	Lotru	4.24	10	⇓iP	Pn	08 04 45.6	+0.7
BALB	Balikesir	4.28	111	eP	Pn	08 04 45.8	+0.5
SULR		4.29	36	⇓iP	Pn	08 04 47.9	+2.5
SULR		4.29	36	⇓iP	Pn	08 04 47.9	+2.5
MTUR	Matau	4.31	23	⇑P	Pn	08 04 48.2	+2.4
MTUR	Matau	4.31	23	⇑iP	Pn	08 04 48.2	+2.4
MTUR	Matau	4.31	23	P	Pn	08 04 48.2	+2.4
CTKS	Kestanelik-??a	4.38	89	eP	Pn	08 04 47.0	+0.3
BZS	Buzias	4.41	350	⇓P	Pn	08 04 45.8	-1.3
BZS	Buzias	4.41	350	⇓iP	Pn	08 04 45.8	-1.3
BZS	Buzias	4.41	350	P	Pn	08 04 45.8	-1.3
BZS				eSn	Sn	08 05 41.8	+3.0
KCTX	Karacabey (Bur	4.41	101	eP	Pn	08 04 47.5	+0.3
FGSL	Fruska Gora	4.42	332	ePn	Pn	08 04 47.8	+0.6
FRGS	Fruska Gora	4.42	332	ePn	Pn	08 04 47.8	+0.6
SECR		4.49	32	⇑iP	Pn	08 04 50.2	+1.9
SECR		4.49	32	⇑iP	Pn	08 04 50.2	+1.9
VOIR		4.50	22	⇑P	Pn	08 04 49.2	+0.8
VOIR		4.50	22	⇑iP	Pn	08 04 49.2	+0.8
VOIR		4.50	22	P	Pn	08 04 49.2	+0.8
DYR	Agios Nikonas	4.52	184	ePN	Pn	08 04 50.1	+1.5
IZM	Izmir	4.54	128	eP	Pn	08 04 49.4	+0.4
VLI	Veliai	4.56	178	ePN	Pn	08 04 49.7	+0.6
BGKT	Bogazkoy	4.58	89	eP	Pn	08 04 49.8	+0.3
DEV	Deva	4.61	2	⇓P	Pn	08 04 50.8	+1.0
DEV	Deva	4.61	2	⇓iP	Pn	08 04 50.8	+1.0
DEV	Deva	4.61	2	P	Pn	08 04 50.8	+1.0
DURS	Dursunbey	4.71	109	i P	Pn	08 04 52.1	+0.7
DURS	Dursunbey	4.71	109	i P	Pn	08 04 52.1	+0.7
APE	Apeiranthos	4.74	151	eP	Pn	08 04 50.7	-1.0
APE	Apeiranthos	4.74	151	⇑P	Pn	08 04 51.7	0.0
APE	Apeiranthos	4.74	151	⇑iP	Pn	08 04 51.7	0.0
APE	Apeiranthos	4.74	151	P	Pn	08 04 51.7	0.0
ISR	Istrita	4.76	35	⇓P	Pn	08 04 54.4	+2.4
ISR	Istrita	4.76	35	⇓iP	Pn	08 04 54.4	+2.4
ISR	Istrita	4.76	35	P	Pn	08 04 54.4	+2.4
AMRR	Amara	4.76	44	⇑P	Pn	08 04 54.4	+2.5
AMRR	Amara	4.76	44	⇑iP	Pn	08 04 54.4	+2.5
AMRR	Amara	4.76	44	P	Pn	08 04 54.4	+2.5
KLYT	Kilyos	4.78	88	eP	Pn	08 04 52.5	+0.3
PGOR	Pogoanele	4.80	39	⇑iP	Pn	08 04 54.3	+1.9
PGOR	Pogoanele	4.80	39	⇑iP	Pn	08 04 54.3	+1.9
ISK	Istanbul-Kandi	4.80	90	eP	Pn	08 04 53.0	+0.4
DST	Dursunbey	4.82	108	eP	Pn	08 04 53.2	+0.5
MLR	Muntele Rosu	4.83	28	Pn	Pn	08 04 54.6	+1.6
MLR				Lg	Lg	08 06 15.7	
MLR	Muntele Rosu	4.83	28	⇓iP	Pn	08 04 55.0	+2.0
MLR	Muntele Rosu	4.83	28	Pn	Pn	08 04 54.6	+1.6
	comp=N,3.3nm,0.3s,baz=250,slow=3.6,SNR=43						
MLR				Lg	Lg	08 06 15.7	
	comp=N,1.7nm,0.3s,baz=161,slow=15,SNR=3.8						
MLR	Muntele Rosu	4.83	28	P	Pn	08 04 54.6	+1.6
	comp=N,3.0nm,0.3s						
MLR				Lg	Lg	08 06 15.7	

ORLT	Orhaneli	4.87	103	eP	Pn	08 04 54.0	+0.5
BUY	Buyukada	4.87	93	eP	Pn	08 04 53.4	0.0
BUY	Buyukada	4.87	93	i P	Pn	08 04 52.6	-0.8
BUY	Buyukada	4.87	93	i P	Pn	08 04 52.6	-0.8
GEMT	Gemlik	4.99	98	eP	Pn	08 04 55.6	+0.5
MDB	Medias	5.01	14	⇓iP	Pn	08 04 58.7	+3.3
MDB	Medias	5.01	14	⇓iP	Pn	08 04 58.7	+3.3
DOPR	Dopca	5.08	22	⇑iP	Pn	08 04 57.2	+0.9
DOPR	Dopca	5.08	22	⇑iP	Pn	08 04 57.2	+0.9
DEMI	Demirci	5.12	114	i P	Pn	08 04 58.3	+1.3
DEMI	Demirci	5.12	114	i P	Pn	08 04 58.3	+1.3
HARR	Harsova	5.13	47	⇑P	Pn	08 04 58.2	+1.2
HARR	Harsova	5.13	47	⇑iP	Pn	08 04 58.2	+1.2
HARR	Harsova	5.13	47	P	Pn	08 04 58.2	+1.2
GRER		5.15	36	⇓iP	Pn	08 04 59.7	+2.4
GRER		5.15	36	⇓iP	Pn	08 04 59.7	+2.4
SILT	Sile	5.24	89	eP	Pn	08 04 58.5	0.0
TIRR	Tirgusor	5.27	51	⇓P	Pn	08 05 01.6	+2.7
TIRR	Tirgusor	5.27	51	ePn	Pn	08 04 59.0	+0.1
TIRR	Tirgusor	5.27	51	⇓iP	Pn	08 05 01.6	+2.7
TIRR	Tirgusor	5.27	51	ePn	Pn	08 04 59.0	+0.1
TIRR	Tirgusor	5.27	51	P	Pn	08 05 01.6	+2.7
BLY	Banja Luka	5.33	312	ePn	Pn	08 05 00.5	+0.8
BLY	Banja Luka	5.33	312	ePn	Pn	08 05 00.5	+0.8
KULA	Kula-Manisa	5.35	119	eP	Pn	08 05 00.4	+0.2
CUC	Castrocucco	5.39	258	ePn	Pn	08 05 01.0	+0.3
CUC	Castrocucco	5.39	258	ePn	Pn	08 05 01.0	+0.3
AYDN	Tasoluk	5.39	130	i P	Pn	08 05 01.7	+1.0
AYDN	Tasoluk	5.39	130	i P	Pn	08 05 01.7	+1.0
PLOR	Plostina	5.40	31	⇑P	Pn	08 05 02.8	+2.1
PLOR	Plostina	5.40	31	⇑iP	Pn	08 05 02.8	+2.1
PLOR	Plostina	5.40	31	P	Pn	08 05 02.8	+2.1
ADVT	Abdulvahap	5.40	97	eP	Pn	08 05 01.0	+0.3
VRI	Vrincioaia	5.44	31	⇓P	Pn	08 05 03.0	+1.7
VRI	Vrincioaia	5.44	31	⇓iP	Pn	08 05 03.0	+1.7
VRI	Vrincioaia	5.44	31	P	Pn	08 05 03.0	+1.7
TVSB	Tavsanli	5.48	107	eP	Pn	08 05 02.1	+0.2
DRGR		5.51	0	⇑iP	Pn	08 05 03.4	+1.1
DRGR		5.51	0	⇑iP	Pn	08 05 03.4	+1.1
PETR	Petresti	5.53	35	⇑iP	Pn	08 05 04.2	+1.7
PETR	Petresti	5.53	35	⇑iP	Pn	08 05 04.2	+1.7
GDZ	Gediz	5.63	111	i P	Pn	08 05 05.3	+1.2
GDZ	Gediz	5.63	111	i P	Pn	08 05 05.3	+1.2
PKSM	Moragy	5.74	331	⇑P	Pn	08 05 05.0	-0.4
PKSM	Moragy	5.74	331	ePn	Pn	08 05 05.0	-0.4
PKSM	Moragy	5.74	331	⇑iP	Pn	08 05 05.0	-0.4
PKSM	Moragy	5.74	331	⇓ePn	Pn	08 05 05.1	-0.4
PKSM	Moragy	5.74	331	⇑iP	Pn	08 05 05.0	-0.4
PKS6	Bocsa	5.78	338	⇓ePn	Pn	08 05 05.6	-0.3
PKS2	Kecel	5.79	335	⇑ePn	Pn	08 05 04.4	-1.6
TLCR		5.94	47	⇑P	Pn	08 05 09.7	+1.7
TLCR		5.94	47	⇑iP	Pn	08 05 09.7	+1.7
TLCR		5.94	47	P	Pn	08 05 09.7	+1.7
TESR	Tescani	5.96	27	⇑iP	Pn	08 05 10.9	+2.5
TESR	Tescani	5.96	27	⇑iP	Pn	08 05 10.9	+2.5
PKSN	Nyarlorinc	5.98	341	⇑epPn	Pn	08 05 10.8	+2.2
KHAL	Karahalli	5.98	117	i P	Pn	08 05 10.5	+1.7
KHAL	Karahalli	5.98	117	i P	Pn	08 05 10.5	+1.7
GULT	Gulveren	5.99	96	eP	Pn	08 05 08.8	-0.1
YER	Yerkesik	5.99	132	eP	Pn	08 05 08.8	-0.1
KHL	Karahalli	6.03	117	eP	Pn	08 05 09.6	+0.1
CEL	Celeste	6.05	242	ePn	Pn	08 05 08.9	-0.7
CEL				eSn	Sn	08 06 19.3	+0.1
CEL	Celeste	6.05	242	ePn	Pn	08 05 08.9	-0.7
CEL				eSn	Sn	08 06 19.3	+0.1
DNZL	Cakiroluk	6.08	124	i P	Pn	08 05 11.4	+1.2
DNZL	Cakiroluk	6.08	124	i P	Pn	08 05 11.4	+1.2
ALT	Altintas	6.09	109	eP	Pn	08 05 10.4	0.0
PKS9	Tamasi	6.19	330	⇓ePn	Pn	08 05 11.5	-0.1
HENT	Hendek	6.22	91	i P	Pn	08 05 12.6	+0.6
HENT	Hendek	6.22	91	i P	Pn	08 05 12.6	+0.6
IDI	Anoyia	6.22	163	Pn	Pn	08 05 13.6	+1.5
IDI	Anoyia	6.22	163	Pn	Pn	08 05 13.6	+1.5
MDUB	Mudurnu	6.49	94	eP	Pn	08 05 15.9	0.0
BUR08	Bucovina Ar. S	6.61	15	ePn	Pn	08 05 17.9	+0.4
BUR08	Bucovina Ar. S	6.61	15	ePn	Pn	08 05 17.9	+0.4
BEHE	Becsehely	6.73	322	⇑ePn	Pn	08 05 20.0	+1.1
FETY	Fethiye	6.80	131	eP	Pn	08 05 19.5	-0.4
BOLV	Bolvadin	6.83	109	i P	Pn	08 05 22.6	+2.1
BOLV	Bolvadin	6.83	109	i P	Pn	08 05 22.6	+2.1
PKSG		6.85	335	⇑ePn	Pn	08 05 20.5	-0.1
PKST	T˜'s	6.85	332	⇓ePn	Pn	08 05 20.8	+0.1
TRPA	Tarpa	6.85	359	⇑iP	Pn	08 05 20.4	-0.2
TRPA	Tarpa	6.85	359	⇑iP	Pn	08 05 20.4	-0.2
PSZ	Piszkesteto	6.94	344	eP	Pn	08 05 21.5	-0.4
PSZ	Piszkesteto	6.94	344	ePn	Pn	08 05 21.5	-0.4
PSZ	Piszkesteto	6.94	344	⇓iP	Pn	08 05 21.4	-0.4
PSZ	Piszkesteto	6.94	344	⇑ePn	Pn	08 05 23.2	+1.3
PSZ	Piszkesteto	6.94	344	eP	Pn	08 05 21.5	-0.4
CRES	Cresnjev	6.95	313	ePn	Pn	08 05 22.3	+0.3
CRES	Cresnjev	6.95	313	ePn	Pn	08 05 22.3	+0.3
GOLS	Golise	6.98	315	ePn	Pn	08 05 23.7	+1.3
GOLS	Golise	6.98	315	ePn	Pn	08 05 23.7	+1.3
SVRH	Sivrihisar-ESK	6.98	102	eP	Pn	08 05 22.3	-0.3
LEGS	Legarje	7.11	314	ePn	Pn	08 05 24.4	+0.3
LEGS	Legarje	7.11	314	ePn	Pn	08 05 24.4	+0.3
UZH	Uzhgorod	7.36	358	eP	Pn	08 05 27.3	-0.3
UZH				eS	Sn	08 06 50.5	-0.9
UZH	Uzhgorod	7.36	358	eP	Pn	08 05 27.3	-0.3
UZH				eS	Sn	08 06 50.5	-0.9
KECS	Kecovo	7.38	348	eP	Pn	08 05 29.7	+1.9
KECS	Kecovo	7.38	348	ePN	Pn	08 05 29.6	+1.8
KECS	Kecovo	7.38	348	eP	Pn	08 05 29.7	+1.9
KIZT	Kizilcal	7.44	106	eP	Pn	08 05 28.7	-0.1
KOLS	Kolonicke sedl	7.66	358	eP	Pn	08 05 32.2	+0.4
KOLS				MLR	MLR		
	comp=Z,100nm,1.1s						
KOLS	Kolonicke sedl	7.66	358	ePN	Pn	08 05 32.2	+0.4
KOLS	Kolonicke sedl	7.66	358	eP	Pn	08 05 32.2	+0.4
	comp=Z,100nm,1.1s						
KOLS				eSg	Sg	08 07 47.5	+2.0
CRVS	Cervenica-Dubn	7.67	354	eP	Pn	08 05 31.3	-0.7
CRVS	Cervenica-Dubn	7.67	354	ePN	Pn	08 05 31.3	-0.7
CRVS	Cervenica-Dubn	7.67	354	eSG	Sg	08 07 50.6	+4.7
CRVS	Cervenica-Dubn	7.67	354	eP	Pn	08 05 31.3	-0.7
VYHS	Vyhne	7.72	341	eP	Pn	08 05 33.3	+0.7
VYHS				e		08 06 51.3	
VYHS	Vyhne	7.72	341	ePN	Pn	08 05 33.2	+0.7
VYHS				eSN	Sn	08 06 51.3	-9.0
VYHS				eSG	Sg	08 07 50.2	+2.9
VYHS	Vyhne	7.72	341	eP	Pn	08 05 33.3	+0.7
VYHS				eSg	Sg	08 07 50.2	+2.9
SOKA	Soboth	7.72	317	⇓iPn	Pn	08 05 32.9	+0.2
SOKA	Soboth	7.72	317	Pn	Pn	08 05 32.9	+0.2
KDHN	Kadinhani	7.75	108	i P	Pn	08 05 34.3	+1.3
KDHN	Kadinhani	7.75	108	i P	Pn	08 05 34.3	+1.3
TRI	Trieste	7.86	307	eP	Pn	08 05 34.2	-0.3
TRI	Trieste	7.86	307	ePn	Pn	08 05 34.2	-0.3
TRI	Trieste	7.86	307	eP	Pn	08 05 34.2	-0.3
OBKA	Obir	7.87	314	ePn	Pn	08 05 35.2	+0.5
ARSA	Arzberg	7.88	322	ePn	Pn	08 05 35.6	+0.8
ARSA				eSn	Sn	08 06 59.1	-5.3
ARSA	Arzberg	7.88	322	⇓iPn	Pn	08 05 35.4	+0.6
	SNR=36						
ARSA	Arzberg	7.88	322	Pn	Pn	08 05 35.4	+0.6
	SNR=36						
VOY	Vojsko	7.96	310	ePn	Pn	08 05 36.8	+0.9
VOY				e		08 05 56.8	
VOY				e		08 06 05.2	
VOY				e		08 07 08.0	
VOY	Vojsko	7.96	310	ePn	Pn	08 05 36.8	+0.9
ZST	Bratislava	7.98	332	eP	Pn	08 05 34.8	-1.3
ZST				e		08 06 59.0	
ZST	Bratislava	7.98	332	ePN	Pn	08 05 34.8	-1.3
ZST				eSN	Sn	08 06 59.0	-7.7
ZST	Bratislava	7.98	332	eP	Pn	08 05 34.8	-1.3
SMOL	Smolenice	8.14	334	eP	Pn	08 05 39.0	+0.6
SMOL	Smolenice	8.14	334	ePN	Pn	08 05 39.0	+0.6
SMOL	Smolenice	8.14	334	eP	Pn	08 05 39.0	+0.6
CONA	Conrad Observa	8.24	326	⇓iPn	Pn	08 05 40.5	+0.7
	SNR=24						
CONA	Conrad Observa	8.24	326	Pn	Pn	08 05 40.5	+0.7
	SNR=24						
BR131	Keskin Array S	8.48	97	ePn	Pn	08 05 41.9	-1.2
BR131	Keskin Array S	8.48	97	ePn	Pn	08 05 41.9	-1.2
BRTR	Keskin Array B	8.48	97	Pn	Pn	08 05 43.8	+0.6
BRTR				Sn	Sn	08 07 16.4	-2.8
BRTR				Lg	Lg	08 08 15.6	
BRTR	Keskin Array B	8.48	97	Pn	Pn	08 05 43.8	+0.6
	comp=Z,0.3nm,0.3s,baz=275,slow=14,SNR=7.1						

BRTR Sn **Sn** **08 07 16.4 -2.8**
comp=Z,0.3nm,0.3s,baz=4.2,slow=33,SNR=2.9
BRTR Lg Lg 08 08 15.6
baz=286,slow=37,SNR=2.8
BRTR Keskin Array B 8.48 97 P **Pn** **08 05 43.8 +0.6**
SEV Sevastopol' 8.69 64 *e*P **Pn** **08 05 44.9 -0.9**
SEV *e*S **Sn** **08 07 18.4 -5.7**
SEV Sevastopol' 8.69 64 *e*P **Pn** **08 05 44.9 -0.9**
KBA Koelnbreinsper 8.87 314 *e*Pn **Pn** **08 05 50.2 +1.7**
KBA Koelnbreinsper 8.87 314⇓ *i*Pn **Pn** **08 05 50.2 +1.7**
SNR=8.0
KBA Koelnbreinsper 8.87 314 Pn **Pn** **08 05 50.2 +1.7**
SNR=8.0
MOA Molln 8.91 320 *e*Pn **Pn** **08 05 50.6 +1.7**
MOA *e*Sn **Sn** **08 07 25.7 -3.8**
MOA Molln 8.91 320⇑ *i*Pn **Pn** **08 05 50.2 +1.3**
SNR=21
MOA Molln 8.91 320 Pn **Pn** **08 05 50.2 +1.3**
SNR=21
VRAC Vranov 9.11 334 Pn **Pn** **08 05 53.1 +1.5**
VRAC Vranov 9.11 334 Pn **Pn** **08 05 53.1 +1.5**
comp=Z,0.3nm,0.3s,baz=144,slow=11,SNR=3.9
VRAC Vranov 9.11 334 P **Pn** **08 05 53.1 +1.5**
SIM Simferopol' 9.12 62 P Pn 08 05 41.2 -11
SIM pmax pmax
comp=Z,58nm,0.3s
ABTA Abfaltersbach 9.15 310⇑ *i*Pn **Pn** **08 05 52.4 +0.2**
SNR=23
ABTA Abfaltersbach 9.15 310 Pn **Pn** **08 05 52.4 +0.2**
SNR=23
MORC Moravsky Berou 9.24 339 *e*P **Pn** **08 05 52.3 -1.1**
MORC Moravsky Berou 9.24 339 *e*Pn **Pn** **08 05 52.3 -1.1**
MORC Moravsky Berou 9.24 339 *e*P **Pn** **08 05 52.3 -1.1**
TREC Trest 9.49 330 AMS AMS 08 09 50.0
comp=Z,200nm,7.3s
RJOB Jochberg 9.57 316 *e*Pn **Pn** **08 05 58.9 +0.9**
RJOB *e*Sn **Sn** **08 07 43.5 -2.5**
SUDU Sudak 9.70 64 *e*P **Pn** **08 05 59.8 +0.2**
SUDU *e*S **Sn** **08 07 44.1 -4.8**
SUDU Sudak 9.70 64 *e*P **Pn** **08 05 59.8 +0.2**
GEC2 GERESS Array S 9.88 323 *e*Pn **Pn** **08 06 03.7 +1.4**
GEC2 GERESS Array S 9.88 323 *e*P **Pn** **08 06 03.7 +1.4**
GEC2 GERESS Array S 9.88 323 *e*P **Pn** **08 06 03.7 +1.4**
GERES GERESS Array B 9.88 323 Pn **Pn** **08 06 02.6 +0.4**
GERES GERESS Array B 9.88 323 Pn **Pn** **08 06 02.6 +0.4**
comp=Z,0.7nm,0.3s,baz=139,slow=12,SNR=23
GERES LR LR 08 10 22.1
comp=Z,130nm,18.6s,baz=132,slow=41
GERES GERESS Array B 9.88 323 P **Pn** **08 06 02.7 +0.4**
comp=Z,130nm,18.6s
WTTA Wattenberg 9.93 311 *e*Pn **Pn** **08 06 04.1 +1.0**
WTTA Wattenberg 9.93 311⇑ *i*Pn **Pn** **08 06 03.3 +0.2**
SNR=10
WTTA Wattenberg 9.93 311 Pn **Pn** **08 06 03.3 +0.2**
SNR=10
WATA Walderalm 10.01 311 *i* Pn **Pn** **08 06 05.6 +1.6**
SNR=12
WATA Walderalm 10.01 311 Pn **Pn** **08 06 05.6 +1.6**
SNR=12
DPC Dobruska-Polom 10.10 336 AMS AMS 08 10 20.0
comp=Z,200nm,10.2s
KHC Kasperske Hory 10.15 324 *e*P **Pn** **08 06 06.8 +0.9**
KHC *e* 08 07 57.5
KHC MLR MLR
comp=Z,300nm,8.3s
KHC Kasperske Hory 10.15 324 *e*PN **Pn** **08 06 06.8 +0.9**
KHC *e*SN **Sn** **08 07 57.5 -2.5**
KHC AMS AMS 08 10 10.0
comp=Z,300nm,8.3s
KHC Kasperske Hory 10.15 324 *e*Pn **Pn** **08 06 06.6 +0.7**
KHC Kasperske Hory 10.15 324 *e*Pn **Pn** **08 06 06.6 +0.7**
MOTA Moosalm 10.28 310⇑ *i*Pn **Pn** **08 06 08.6 +0.8**
SNR=11
MOTA Moosalm 10.28 310 Pn **Pn** **08 06 08.6 +0.8**
SNR=11
PGF Pioggiola 10.29 282 *e*P **Pn** **08 06 07.1 -0.8**
PGF Pioggiola 10.29 282 *e*P **Pn** **08 06 07.1 -0.8**
PGF Pioggiola 10.29 282 *e*P **Pn** **08 06 07.1 -0.8**
PGF Pioggiola 10.29 282 *e*P **Pn** **08 06 07.1 -0.8**
PRU Pruhonice 10.41 330 AMS AMS 08 10 10.0
comp=Z,200nm,10.2s
AK02 Malin Array Si 10.41 24 *e*Pn **Pn** **08 06 10.1 +0.7**
AK02 Malin Array Si 10.41 24 *e*Pn **Pn** **08 06 10.1 +0.7**
AKASG Malin Array Be 10.46 23 P **Pn** **08 06 10.4 +0.4**
AKASG Malin Array Be 10.46 23 Pn **Pn** **08 06 10.4 +0.4**
AKASG Malin Array Be 10.46 23 Pn **Pn** **08 06 10.4 +0.4**
baz=206,slow=13,SNR=3.3
AKASG Malin Array Be 10.46 23 P **Pn** **08 06 10.4 +0.4**
DAVOX Davos/Dischmat 10.74 305 Pn **Pn** **08 06 15.0 +0.9**
DAVOX Sn **Sn** **08 08 16.5 +1.7**
DAVOX Davos/Dischmat 10.74 305 Pn **Pn** **08 06 15.0 +0.9**
comp=Z,1.9nm,0.3s,baz=135,slow=14,SNR=18
DAVOX Sn **Sn** **08 08 16.5 +1.7**
baz=282,slow=24,SNR=4.1
DAVOX LR LR 08 10 30.7
comp=Z,130nm,19.1s,baz=263,slow=38
DAVOX Davos/Dischmat 10.74 305 P **Pn** **08 06 15.0 +0.9**
comp=Z,2.0nm,0.3s
DAVOX S **Sn** **08 08 16.5 +1.7**
comp=Z,130nm,19.1s
TUE Stuetta 10.94 303 *e*Pn **Pn** **08 06 17.6 +0.7**
TUE *e*Sn **Sn** **08 08 17.3 -2.5**
TUE Stuetta 10.94 303 *e*Pn **Pn** **08 06 17.6 +0.7**
DAVA Damuels 10.97 307 *e*Pn **Pn** **08 06 19.6 +2.3**
ANN Anapa 11.34 67 *e*P Pn 08 06 10.9 -11
ANN pmax pmax
comp=Z,31nm,1.7s
NKC Novy Kostel 11.46 325 AMS AMS 08 10 30.0
comp=Z,200nm,12.8s
FRF La Foret Royal 12.08 286 *e*P **Pn** **08 06 30.7 -1.6**
comp=Z,7.8nm,0.6s
FRF La Foret Royal 12.08 286 *e*P **Pn** **08 06 30.7 -1.6**
FRF pmax pmax
comp=Z,8.0nm,0.6s
FRF La Foret Royal 12.08 286 *e*P **Pn** **08 06 30.7 -1.6**
comp=Z,7.8nm,0.6s
FRF La Foret Royal 12.08 286 *e*P **Pn** **08 06 30.7 -1.6**
comp=Z,3.9nm,0.6s
MBDF Montbardon 12.16 292 *e*P **Pn** **08 06 31.5 -2.0**
comp=Z,7.8nm,0.5s
MBDF Montbardon 12.16 292 *e*P **Pn** **08 06 31.5 -2.0**
MBDF pmax pmax
comp=Z,8.0nm,0.5s
MBDF Montbardon 12.16 292 *e*P **Pn** **08 06 31.5 -2.0**
comp=Z,7.8nm,0.5s
LPG La Plagne 12.34 295 *e*P **Pn** **08 06 34.5 -1.6**
comp=Z,10nm,0.4s
LPG La Plagne 12.34 295 *e*P **Pn** **08 06 34.5 -1.6**
LPG pmax pmax
comp=Z,10.0nm,0.4s
LPG La Plagne 12.34 295 *e*P **Pn** **08 06 34.5 -1.6**
comp=Z,10nm,0.4s
LPG La Plagne 12.34 295 *e*P **Pn** **08 06 34.5 -1.6**
comp=Z,5.1nm,0.4s
LPL La Plagne 12.36 295 *e*P **Pn** **08 06 35.0 -1.3**
comp=Z,11nm,0.6s
LPL La Plagne 12.36 295 *e*P **Pn** **08 06 35.0 -1.3**
LPL pmax pmax
comp=Z,11nm,0.6s
LPL La Plagne 12.36 295 *e*P **Pn** **08 06 35.0 -1.3**
comp=Z,11nm,0.6s
LPL La Plagne 12.36 295 *e*P **Pn** **08 06 35.0 -1.3**
comp=Z,5.6nm,0.6s
BFO Black Forest 12.39 309 *e*Pn **Pn** **08 06 37.5 +0.9**
BFO Black Forest 12.39 309 *e*P **Pn** **08 06 35.5 -1.1**
BFO Black Forest 12.39 309 *e*Pn **Pn** **08 06 35.5 -1.1**
BFO Black Forest 12.39 309 *e*P **Pn** **08 06 35.5 -1.1**
ORIF Oris-en-Rattie 12.82 292 *e*P **Pn** **08 06 41.0 -1.5**
comp=Z,4.3nm,0.5s
ORIF *e*R
comp=Z,53nm,21.2s
ORIF Oris-en-Rattie 12.82 292 *e*P **Pn** **08 06 41.0 -1.5**
ORIF pmax pmax
comp=Z,4.0nm,0.5s
ORIF Oris-en-Rattie 12.82 292 *e*P **Pn** **08 06 41.0 -1.5**
comp=Z,4.3nm,0.5s
ORIF Oris-en-Rattie 12.82 292 *e*P **Pn** **08 06 41.0 -1.5**
comp=Z,2.2nm,0.5s
HINF Hinteralfeld 13.04 305 *e*P **Pn** **08 06 44.0 -1.5**
comp=Z,5.1nm,0.5s
HINF Hinteralfeld 13.04 305 *e*P **Pn** **08 06 44.0 -1.5**
HINF pmax pmax
comp=Z,5.0nm,0.5s
HINF Hinteralfeld 13.04 305 *e*P **Pn** **08 06 44.0 -1.5**
comp=Z,5.2nm,0.5s
CDF Champ du Feu 13.05 308 *e*P **Pn** **08 06 43.4 -2.2**
comp=Z,10.0nm,0.9s
CDF Champ du Feu 13.05 308 *e*P **Pn** **08 06 43.4 -2.2**
CDF pmax pmax
comp=Z,10.0nm,0.9s
CDF Champ du Feu 13.05 308 *e*P **Pn** **08 06 43.4 -2.2**
comp=Z,10.0nm,0.9s
MMAI Mount Meron Ar 13.05 125 Pn **Pn** **08 06 46.9 +1.2**
MMAI Mount Meron Ar 13.05 125 Pn **Pn** **08 06 46.9 +1.2**
comp=Z,1.3nm,0.3s,baz=315,slow=18,SNR=3.4
MMAI LR LR 08 12 43.5
comp=Z,63nm,18.8s,baz=245,slow=42
MMAI Mount Meron Ar 13.05 125 Pn **Pn** **08 06 46.9 +1.2**
CABF La Chapelle 13.10 300 *e*P **Pn** **08 06 44.5 -1.7**
CABF La Chapelle 13.10 300 *e*P **Pn** **08 06 44.5 -1.7**
CABF La Chapelle 13.10 300 *e*P **Pn** **08 06 44.5 -1.7**
CABF La Chapelle 13.10 300 *e*P **Pn** **08 06 44.5 -1.7**
VIVF Saint-Julien-l 13.65 291 *e*P **Pn** **08 06 50.8 -3.0**
comp=Z,3.1nm,0.4s
VIVF Saint-Julien-l 13.65 291 *e*P **Pn** **08 06 50.8 -3.0**
VIVF pmax pmax
comp=Z,3.0nm,0.4s
VIVF Saint-Julien-l 13.65 291 *e*P **Pn** **08 06 50.8 -3.0**
comp=Z,3.1nm,0.4s
PAGF Fort de Pagny 14.04 307 *e*P **Pn** **08 06 57.3 -1.7**
comp=Z,2.6nm,0.6s
PAGF Fort de Pagny 14.04 307 *e*P **Pn** **08 06 57.3 -1.7**
comp=Z,2.6nm,0.6s
LASF Ste Croix 14.14 288 *e*P **Pn** **08 06 59.0 -1.4**
comp=Z,37nm,1.5s
LASF Ste Croix 14.14 288 *e*P **Pn** **08 06 59.0 -1.4**
comp=Z,37nm,1.5s
ASF Jabal al Asfar 14.55 124 LR LR 08 13 40.9
comp=Z,33nm,20.0s,baz=356,slow=41
SMF Signal de Mont 14.59 298 *e*P **Pn** **08 07 03.7 -2.9**
comp=Z,4.2nm,0.4s
SMF Signal de Mont 14.59 298 *e*P **Pn** **08 07 03.7 -2.9**
SMF pmax pmax
comp=Z,4.0nm,0.4s
SMF Signal de Mont 14.59 298 *e*P **Pn** **08 07 03.7 -2.9**
comp=Z,4.2nm,0.4s
LOR Lormes 14.75 300 *e*P Pn 08 07 05.3 -3.5
comp=Z,4.6nm,0.4s
LOR *e*R
comp=Z,84nm,18.5s
LOR Lormes 14.75 300 *e*P Pn 08 07 05.3 -3.5
comp=Z,4.6nm,0.4s
SSF Saint Saulge 14.92 299 *e*P Pn 08 07 07.8 -3.3
comp=Z,11nm,0.8s
SSF Saint Saulge 14.92 299 *e*P Pn 08 07 07.8 -3.3
SSF pmax pmax
comp=Z,11nm,0.8s
SSF Saint Saulge 14.92 299 *e*P Pn 08 07 07.8 -3.3
comp=Z,11nm,0.8s
AVF Avril sur Loir 14.95 298 *e*P **Pn** **08 07 10.5 -1.0**
comp=Z,15nm,0.9s
AVF Avril sur Loir 14.95 298 *e*P **Pn** **08 07 10.5 -1.0**
AVF pmax pmax
comp=Z,15nm,0.9s
AVF Avril sur Loir 14.95 298 *e*P **Pn** **08 07 10.5 -1.0**
comp=Z,15nm,0.9s
KIV Kislovodsk 14.96 73 *e*P **Pn** **08 07 12.1 +0.5**
KIV pmax pmax
comp=Z,5.0nm,0.7s
KIV MLR MLR
comp=Z,9.0nm,11.0s
VSR Storozhevoye 15.09 43 *e*P **Pn** **08 07 13.0 -0.2**
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,40nm,1.1s
BGF Bois d'Agland 15.24 297 *e*P **Pn** **08 07 13.4 -1.9**
BGF Bois d'Agland 15.24 297 *e*P **Pn** **08 07 13.4 -1.9**
BGF Bois d'Agland 15.24 297 *e*P **Pn** **08 07 13.4 -1.9**
GIVF Givet 15.26 311 *e*P **Pn** **08 07 15.5 -0.1**
GIVF Givet 15.26 311 *e*P **Pn** **08 07 15.5 -0.1**
GIVF Givet 15.26 311 *e*P **Pn** **08 07 15.5 -0.1**
MTLF Montolieu 15.29 285 *e*P **Pn** **08 07 15.7 -0.3**
comp=E,22nm,1.1s
MTLF Montolieu 15.29 285 *e*P **Pn** **08 07 15.7 -0.3**
MTLF pmax pmax
comp=Z,22nm,1.1s
MTLF Montolieu 15.29 285 *e*P **Pn** **08 07 15.7 -0.3**
comp=Z,22nm,1.1s
CAF Calviac 15.50 290 *e*P **Pn** **08 07 18.9 +0.1**
CAF Calviac 15.50 290 *e*P **Pn** **08 07 18.9 +0.1**
CAF Calviac 15.50 290 *e*P **Pn** **08 07 18.9 +0.1**
TCF Toulx Ste Croi 15.61 296 *e*P **Pn** **08 07 18.1 -2.1**
comp=Z,11nm,0.8s
TCF Toulx Ste Croi 15.61 296 *e*P **Pn** **08 07 18.1 -2.1**
TCF pmax pmax
comp=Z,11nm,0.8s
TCF Toulx Ste Croi 15.61 296 *e*P **Pn** **08 07 18.1 -2.1**
comp=Z,11nm,0.8s
RJF Les Rejaudoux 15.93 292 *e*P **Pn** **08 07 24.0 -0.3**
RJF *e*R
comp=Z,57nm,18.2s
RJF Les Rejaudoux 15.93 292 *e*P **Pn** **08 07 24.0 -0.3**
RJF Les Rejaudoux 15.93 292 *e*P **Pn** **08 07 24.0 -0.3**
VRHR Novokhopersk 16.33 47 *e*P **Pn** **08 07 30.8 +1.4**
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR pmax pmax
comp=N,20nm,1.1s
VRHR pmax pmax
comp=E,10.0nm,0.8s
VRHR Novokhopersk 16.33 47 *e*P **Pn** **08 07 30.8 +1.4**
comp=E,20nm,1.1s
MFF Saint Martin d 17.27 296 *e*P **Pn** **08 07 40.7 -0.6**
MFF Saint Martin d 17.27 296 *e*P **Pn** **08 07 40.7 -0.6**
MFF Saint Martin d 17.27 296 *e*P **Pn** **08 07 40.7 -0.6**
ETSF Etsaut 17.33 283 *e*P **Pn** **08 07 41.3 -0.9**
ETSF Etsaut 17.33 283 *e*P **Pn** **08 07 41.3 -0.9**
ETSF Etsaut 17.33 283 *e*P **Pn** **08 07 41.3 -0.9**
VSU Vasula 17.39 7⇑ *e*P **P** **08 07 43.6 -0.5**
VSU pmax pmax
comp=Z,21nm,1.0s
VSU Vasula 17.39 7 *e*P **P** **08 07 43.6 -0.5**
comp=Z,21nm,1.0s
LDF La Druitiere 17.70 302 *e*P **Pn** **08 07 44.1 -2.5**
comp=Z,13nm,0.8s
LDF La Druitiere 17.70 302 *e*P **Pn** **08 07 44.1 -2.5**
LDF pmax pmax
comp=Z,13nm,0.8s
LDF La Druitiere 17.70 302 *e*P **Pn** **08 07 44.1 -2.5**
comp=Z,13nm,0.8s
SGMF Saint Gilles 19.19 300 *e*P **P** **08 08 02.2 -1.8**
comp=Z,29nm,1.1s
SGMF Saint Gilles 19.19 300 *e*P **P** **08 08 02.2 -1.8**
SGMF pmax pmax
comp=Z,29nm,1.1s
SGMF Saint Gilles 19.19 300 *e*P **P** **08 08 02.2 -1.8**
comp=Z,29nm,1.1s
SGMF Saint Gilles 19.19 300 *e*P **P** **08 08 02.2 -1.8**
comp=Z,14nm,1.1s
QUIF Quistinic 19.52 299 *e*P **P** **08 08 06.7 -0.9**
QUIF Quistinic 19.52 299 *e*P **P** **08 08 06.7 -0.9**
QUIF Quistinic 19.52 299 *e*P **P** **08 08 06.7 -0.9**
QUIF Quistinic 19.52 299 *e*P **P** **08 08 06.7 -0.9**
HFS Hagfors 19.69 347 P **P** **08 08 09.5 +0.2**
HFS Hagfors 19.69 347 P **P** **08 08 09.5 +0.2**
comp=Z,0.2nm,0.3s,baz=146,slow=10,SNR=6.3
HFS LR LR 08 16 19.8
comp=Z,57nm,19.6s,baz=254,slow=39
HFS Hagfors 19.69 347 P **P** **08 08 09.5 +0.2**
comp=Z,57nm,19.6s
FINES FINESS Array B 20.30 5 P **P** **08 08 14.6 -1.4**
FINES FINESS Array B 20.30 5 P **P** **08 08 14.6 -1.4**
comp=Z,3.2nm,0.7s,baz=168,slow=12,SNR=7.3
FINES LR LR 08 16 52.3
comp=Z,144nm,18.5s,baz=19,slow=39
FINES FINESS Array B 20.30 5 P **P** **08 08 14.6 -1.4**
comp=Z,144nm,18.5s
ESDC Sonseca Array 20.32 274 P **P** **08 08 15.8 -0.7**
ESDC Sonseca Array 20.32 274 P **P** **08 08 15.8 -0.7**
comp=Z,1.7nm,0.5s,baz=72,slow=11,SNR=18
ESDC Sonseca Array 20.32 274 P **P** **08 08 15.8 -0.7**
PAB San Pablo 20.64 274 *e*P **P** **08 08 17.3 -2.7**
PAB pmax pmax
comp=Z,5.0nm,1.0s
PAB San Pablo 20.64 274 *e*P **P** **08 08 17.3 -2.7**
comp=Z,4.9nm,1.0s
NAO01 NORSAR Array S 20.89 344 *e*P **P** **08 08 22.8 +0.4**
comp=Z,9.5nm,1.0s
NAO01 NORSAR Array S 20.89 344 *e*P **P** **08 08 22.8 +0.4**
comp=Z,9.4nm,1.0s
NB2 NORSAR Subarra 21.00 344 P **P** **08 08 22.8 -0.8**
comp=Z,2.9nm,0.8s,baz=155,slow=11
NB2 NORSAR Subarra 21.00 344 P **P** **08 08 22.8 -0.8**
comp=Z,2.9nm,0.8s,baz=155,slow=11,SNR=9.9
NOA NORSAR Array B 21.00 344 P **P** **08 08 23.6 +0.1**
NOA NORSAR Array B 21.00 344 P **P** **08 08 23.6 +0.1**
comp=Z,2.3nm,0.8s,baz=152,slow=8.6,SNR=10.0
NOA LR LR 08 17 15.7
comp=Z,41nm,18.7s,baz=150,slow=39
NOA NORSAR Array B 21.00 344 P **P** **08 08 23.7 +0.1**
comp=Z,41nm,18.7s
EKA Eskdalemuir Ar 22.04 318 P **P** **08 08 34.0 -0.8**
EKA Eskdalemuir Ar 22.04 318 P **P** **08 08 34.0 -0.8**
comp=Z,3.1nm,0.7s,baz=111,slow=12,SNR=15
EKA Eskdalemuir Ar 22.04 318 P **P** **08 08 34.0 -0.8**
comp=Z,3.0nm,0.7s
ESK Eskdalemuir 22.06 318 *i* P **P** **08 08 36.8 +1.8**
ESK Eskdalemuir 22.06 318 *i* P **P** **08 08 36.8 +1.8**
KLMR Klimovskoe 22.14 22 *e*P **P** **08 08 35.0 -0.8**
KLMR pmax pmax
comp=Z,24nm,1.1s
KLMR Klimovskoe 22.14 22 *e*P **P** **08 08 35.0 -0.8**
comp=Z,24nm,1.1s
PBAR Barrancos 23.03 272 *e*P **P** **08 08 45.5 +0.1**
comp=Z,12nm,1.8s
PBAR Barrancos 23.03 272 *e*P **P** **08 08 45.5 +0.1**
comp=Z,12nm,1.8s
MDT Midelt 23.31 258 P **P** **08 08 49.9 +1.4**
MDT Midelt 23.31 258 P **P** **08 08 49.9 +1.4**
comp=Z,1.6nm,0.8s,baz=81,slow=15,SNR=4.9
MDT Midelt 23.31 258 P **P** **08 08 49.9 +1.4**
TAM Tamanrasset 23.41 223 *e*P **P** **08 08 49.8 +0.2**
TAM pmax pmax
comp=Z,6.0nm,1.0s
TAM Tamanrasset 23.41 223 *e*P **P** **08 08 49.8 +0.2**
comp=Z,6.4nm,1.0s
TAM Tamanrasset 23.41 223 *e*P **P** **08 08 49.8 +0.2**
comp=Z,6.4nm,1.0s
PMTG Montargil 23.67 275 *e*P **P** **08 08 51.2 -0.7**
comp=Z,18nm,1.2s
PMTG Montargil 23.67 275 *e*P **P** **08 08 51.2 -0.7**
comp=Z,18nm,1.2s
PVAQ Vaqueiros 23.78 271 *e*P **P** **08 08 53.3 +0.3**
comp=Z,14nm,1.7s
PVAQ Vaqueiros 23.78 271 *e*P **P** **08 08 53.3 +0.3**
comp=Z,14nm,1.7s
PNCL Nicolau / Gran 24.17 273 *e*P **P** **08 08 58.0 +1.4**
comp=Z,7.7nm,1.6s
PNCL Nicolau / Gran 24.17 273 *e*P **P** **08 08 58.0 +1.4**
comp=Z,7.7nm,1.6s
ARU Arti 27.65 45 *d i*P **P** **08 09 26.6 -1.4**
ARU 08 10 10.8
ARU S **S** **08 14 08.8 -1.3**
ARU pmax pmax
comp=Z,8.0nm,1.0s
ARU Arti 27.65 45 *i* P **P** **08 09 26.6 -1.4**
comp=Z,8.0nm,1.0s
ARU S **S** **08 14 08.8 -1.3**
ARCES ARCESS Array B 28.36 2 LR LR 08 21 34.5
comp=Z,94nm,19.6s,baz=270,slow=38
TOA0 Torodi Ar. Sit 33.49 219 *e*P **P** **08 10 19.1 -0.8**
TOA0 Torodi Ar. Sit 33.49 219 *e*P **P** **08 10 19.1 -0.8**
TORD Torodi Ar. Bea 33.49 219 P **P** **08 10 19.4 -0.5**
TORD Torodi Ar. Bea 33.49 219 P **P** **08 10 19.4 -0.5**
comp=Z,6.7nm,0.7s,baz=30,slow=9.2,SNR=36
TORD Torodi Ar. Bea 33.49 219 P **P** **08 10 19.4 -0.5**
BRVK Borovoye 33.82 53⇑ *e*P **P** **08 10 21.7 -0.7**
BRVK pmax pmax
comp=Z,6.0nm,1.2s
BRVK Borovoye 33.82 53 *e*P **P** **08 10 21.7 -0.7**
comp=Z,6.0nm,1.2s
BVAR Borovoye Array 33.88 53 P **P** **08 10 23.1 +0.1**
BVAR pmax pmax
comp=Z,1.0nm,0.8s
BVAR Borovoye Array 33.88 53 P **P** **08 10 23.1 +0.1**
BVAR Borovoye Array 33.88 53 P **P** **08 10 23.1 +0.1**
comp=Z,1.3nm,0.8s,baz=289,slow=4.5,SNR=8.1
BVAR Borovoye Array 33.88 53 P **P** **08 10 23.1 +0.1**
comp=Z,1.0nm,0.8s
AAK Ala-Archa 38.05 70⇑ *i*P **P** **08 10 58.4 -0.6**
AAK pmax pmax
comp=Z,6.0nm,1.2s
AAK Ala-Archa 38.05 70 LR LR 08 29 00.4
comp=Z,22nm,18.1s,baz=14,slow=40
AAK Ala-Archa 38.05 70 *i* P **P** **08 10 58.4 -0.6**
comp=Z,6.0nm,1.2s
KURBB Kurchatov Arra 39.08 57 P **P** **08 11 07.3 -0.1**
comp=Z,0.5nm,0.7s,baz=281,slow=9.7,SNR=5.0
KURK Kurchatov 39.12 57 P **P** **08 11 07.3 -0.4**
KURK pmax pmax
comp=Z,1.0nm,0.7s
KURK Kurchatov 39.12 57 P **P** **08 11 07.3 -0.4**
KURK Kurchatov 39.12 57 P **P** **08 11 07.3 -0.4**
comp=Z,1.0nm,0.7s
NVS Novosibirsk 41.36 50 *e*P **P** **08 11 25.7 -0.5**
NVS pmax pmax
comp=Z,7.0nm,1.0s
NVS pmax pmax
comp=E,3.0nm,0.6s
NVS Novosibirsk 41.36 50 *e*P **P** **08 11 25.7 -0.5**
comp=E,7.0nm,1.0s
MKAR Makanchi Array 42.30 62 P **P** **08 11 34.2 +0.2**
MKAR pmax pmax
comp=Z,2.0nm,0.7s
MKAR MLR MLR
comp=Z,21nm,18.3s
MKAR Makanchi Array 42.30 62 P **P** **08 11 34.2 +0.2**
MKAR Makanchi Array 42.30 62 P **P** **08 11 34.2 +0.2**
comp=Z,1.6nm,0.7s,baz=281,slow=6.7,SNR=21
MKAR LR LR 08 31 43.1
comp=Z,21nm,18.3s,baz=172,slow=40
MKAR Makanchi Array 42.30 62 P **P** **08 11 34.2 +0.2**
comp=Z,21nm,18.3s
DBIC Dimbokro 42.30 223 P **P** **08 11 35.9 +1.6**
DBIC Dimbokro 42.30 223 P **P** **08 11 35.9 +1.6**
comp=Z,4.8nm,1.0s,baz=359,slow=21,SNR=4.1
DBIC LR LR 08 30 04.2
comp=Z,45nm,18.6s,baz=227,slow=38
DBIC Dimbokro 42.30 223 P **P** **08 11 35.9 +1.6**
comp=Z,45nm,18.6s
ZAA0 Zalesovo Array 42.40 51 *e*P **P** **08 11 33.6 -1.1**
ZAA0 Zalesovo Array 42.40 51 *e*P **P** **08 11 33.6 -1.1**
ZALV Zalesovo Beam 42.40 51 P **P** **08 11 34.5 -0.2**
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 42.40 51 P **P** **08 11 34.5 -0.2**
ZALV Zalesovo Beam 42.40 51 P **P** **08 11 34.5 -0.2**
comp=Z,2.4nm,0.6s,baz=280,slow=8.6,SNR=10
ZALV Zalesovo Beam 42.40 51 P **P** **08 11 34.5 -0.2**
comp=Z,2.0nm,0.6s
KMBO Kilima Mbogo 44.23 159 LR LR 08 32 24.5
comp=Z,36nm,18.6s,baz=312,slow=39
HVS Khovu-Aksy 48.32 53⇑ *e*P **P** **08 12 22.3 +0.5**
HVS pmax pmax
comp=Z,22nm,1.2s
HVS Khovu-Aksy 48.32 53 *e*P **P** **08 12 22.3 +0.5**
comp=Z,22nm,1.2s
TIXI Tiksi 56.16 21⇓ *e*P **P** **08 13 19.8 +0.2**
TIXI pmax pmax
comp=Z,2.0nm,1.2s
TIXI Tiksi 56.16 21 *e*P **P** **08 13 19.8 +0.2**
comp=Z,2.0nm,1.2s
SONM Songino Array 57.22 53 P **P** **08 13 27.5 -0.2**
SONM Songino Array 57.22 53 P **P** **08 13 27.5 -0.2**
comp=Z,0.6nm,0.8s,baz=279,slow=9.1,SNR=5.9
SONM LR LR 08 40 22.1
comp=Z,23nm,19.8s,baz=174,slow=38
SONM Songino Array 57.22 53 P **P** **08 13 27.5 -0.2**
comp=Z,23nm,19.8s
CMAR Chiang Mai Arr 67.86 84 P **P** **08 14 38.4 -0.7**
CMAR Chiang Mai Arr 67.86 84 P **P** **08 14 38.4 -0.7**
comp=Z,0.8nm,0.6s,baz=301,slow=7.0,SNR=3.1
CMAR Chiang Mai Arr 67.86 84 P **P** **08 14 38.4 -0.7**
comp=Z,1.0nm,0.6s
SEY Seymchan 68.64 22⇑ *i*P **P** **08 14 43.7 +0.4**
SEY Seymchan 68.64 22 *i* P **P** **08 14 43.7 +0.4**
BOSA Boshof 69.58 178 LR LR 08 47 29.3
comp=Z,66nm,18.5s,baz=173,slow=38
YKA Yellowknife Ar 71.04 341 P **P** **08 14 57.9 -0.2**
YKA Yellowknife Ar 71.04 341 P **P** **08 14 57.8 -0.2**
comp=Z,0.6nm,0.7s,baz=34,slow=5.3,SNR=12
YKA Yellowknife Ar 71.04 341 P **P** **08 14 57.8 -0.2**

	comp=Z,1.0nm,0.7s						
COLD	Coldfoot	71.69	357	P	P	08 15 02.1	+0.2
	comp=Z,0.8nm,0.6s						
COLD	Coldfoot	71.69	357	P	P	08 15 02.1	+0.2
	comp=Z,0.8nm,0.6s						
FFC	Flin Flon	73.35	330	*i* P	P	08 15 14.4	+2.4
FFC	Flin Flon	73.35	330	*i* P	P	08 15 14.4	+2.4
DLBC	Dease Lake	78.08	346	LR	LR	08 49 41.1	
	comp=Z,32nm,20.5s,baz=340,slow=35						
PETK	Petropavlovsk-	78.29	26	LR	LR	08 56 18.0	
	comp=Z,22nm,18.8s,baz=159,slow=40						
JNU	Nakatsue	80.79	54	LR	LR	08 50 59.9	
	comp=Z,24nm,20.8s,baz=293,slow=35						
MJAR	Matsushiro Arr	82.64	47	P	P	08 16 04.1	+0.1
MJAR	Matsushiro Arr	82.64	47	P	P	08 16 04.1	+0.1
	comp=Z,0.4nm,0.3s,baz=316,slow=5.2,SNR=4.2						
MJAR	Matsushiro Arr	82.64	47	P	P	08 16 04.1	+0.1
SWMT	Swartz Lake	83.61	332	*e*P	P	08 16 09.2	+0.3
	comp=Z,3.2nm,1.0s						
SWMT	Swartz Lake	83.61	332	*e*P	P	08 16 09.2	+0.3
	comp=Z,3.2nm,1.0s						
DLMT	Dillon	84.93	330	*e*P	P	08 16 16.2	+0.5
	comp=Z,6.1nm,1.2s						
DLMT	Dillon	84.93	330	*e*P	P	08 16 16.2	+0.5
	comp=Z,6.1nm,1.2s						
PDAR	Pinedale Array	85.91	327	P	P	08 16 21.1	+0.4
PDAR	Pinedale Array	85.91	327	P	P	08 16 21.1	+0.4
	comp=Z,0.6nm,0.6s,baz=42,slow=4.6,SNR=4.8						
PDAR	Pinedale Array	85.91	327	P	P	08 16 21.1	+0.4
NVAR	Mina Array Bea	93.05	330	P	P	08 16 55.2	+0.6
NVAR	Mina Array Bea	93.05	330	P	P	08 16 55.2	+0.6
	comp=Z,0.6nm,0.7s,baz=56,slow=3.7,SNR=4.9						
NVAR	Mina Array Bea	93.05	330	P	P	08 16 55.2	+0.6
TXAR	Lajitas Array	94.01	315	P	P	08 16 59.0	+0.1
TXAR	Lajitas Array	94.01	315	P	P	08 16 59.0	+0.1
	comp=Z,0.5nm,0.9s,baz=95,slow=2.9,SNR=3.6						
TXAR	Lajitas Array	94.01	315	P	P	08 16 59.1	+0.1
	comp=Z,1.0nm,1.0s						

IDC 01 08:33:45.9±17.0**, 25°.85S**×**69°.02E, h0km, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.4**/24**, mbtmp3.6**/3**, Error ellipse: s-maj=556.6km s-min=40.1km az=51.0, Indian Ocean Triple Junction**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	58.41	103	P	P	08 43 43.9	+0.2
	0.6nm,0.7s,baz=249,slow=6.1,SNR=8.3						
WRA	Warramunga Arr	59.93	99	P	P	08 43 53.9	-0.4
	0.3nm,0.4s,baz=254,slow=6.9,SNR=5.0						
MKAR	Makanchi Array	73.29	9	P	P	08 45 19.0	+0.1
	0.3nm,0.7s,baz=177,slow=5.2,SNR=3.0						

*NEIC **01** 08:47:13.3, 19°.50N×65°.98W, h165km, MD3.5(RSPR), After RSPR.*
RSPR 01 08:47:13.3, 19°.50N×**65°.98W, h165km**±9km**, MD3.5**/5**, 10C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	Canovanas	1.23	174	*e*S	Sn	08 48 02.9	-0.4
CBYP	Canovanas	1.23	174	*e*Pn	Pn	08 47 38.3	-3.3
CBYP				*e*S	Sn	08 48 01.6	-1.7
HUMP	Col San Antoni	1.36	175⇑	*e*P	Pn	08 47 42.1	-0.5
HUMP	Col San Antoni	1.36	175	*e*S	Sn	08 48 05.5	+0.2
HUMP	Col San Antoni	1.36	175⇑	*e*P	Pn	08 47 42.1	-0.5
HUMP				*e*S	Sn	08 48 05.5	+0.2
MTP	Monte Pirata	1.46	164⇑	*e*P	Pn	08 47 43.8	+0.2
MTP	Monte Pirata	1.46	164	*e*S	Sn	08 48 06.8	-0.1
MTP	Monte Pirata	1.46	164⇑	*e*P	Pn	08 47 43.8	+0.2
MTP				*e*S	Sn	08 48 06.8	-0.1
CPD	Cerro la Pandu	1.46	178⇑	*e*P	Pn	08 47 43.6	-0.1
CPD	Cerro la Pandu	1.46	178⇑	*e*P	Pn	08 47 43.6	-0.1
STVI	Saint Thomas	1.50	139⇑	*e*P	Pn	08 47 44.1	+0.1
STVI	Saint Thomas	1.50	139	*e*S	Sn	08 48 08.2	+0.5
STVI	Saint Thomas	1.50	139⇑	*e*P	Pn	08 47 44.1	+0.1
STVI				*e*S	Sn	08 48 08.2	+0.5
CRPR	Cabo Rojo, PR	1.83	216⇑	*e*P	Pn	08 47 47.4	-0.2
CRPR	Cabo Rojo, PR	1.83	216	*e*S	Sn	08 48 14.6	+0.7
CRPR	Cabo Rojo, PR	1.83	216⇑	*e*P	Pn	08 47 47.4	-0.2
CRPR				*e*S	Sn	08 48 14.6	+0.7

*NEIC **01** 08:48:34.9, 19°.89N×66°.22W, h105km, MD3.5(RSPR), After RSPR.*
RSPR 01 08:48:34.9, 19°.89N×**66°.22W, h105km**±16km**, MD3.5**/4**, 10C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	Canovanas	1.65	168⇑	*e*P	Pn	08 49 02.7	-0.7
CBYP	Canovanas	1.65	168	*e*S	Sn	08 49 24.3	-0.6
CBYP	Canovanas	1.65	168⇑	*e*P	Pn	08 49 02.7	-0.7
CBYP				*e*S	Sn	08 49 24.3	-0.6
HUMP	Col San Antoni	1.77	169⇑	*e*P	Pn	08 49 04.9	0.0
HUMP	Col San Antoni	1.77	169⇑	*e*P	Pn	08 49 04.9	0.0
CPD	Cerro la Pandu	1.87	171	*e*S	Sn	08 49 29.5	-0.3
CPD	Cerro la Pandu	1.87	171⇑	*e*P	Pn	08 49 05.3	-0.8
CPD	Cerro la Pandu	1.87	171⇑	*e*P	Pn	08 49 05.3	-0.8
CPD				*e*S	Sn	08 49 29.5	-0.3
MTP	Monte Pirata	1.89	160	*e*S	Sn	08 49 30.5	+0.2
MTP	Monte Pirata	1.89	160⇑	*e*P	Pn	08 49 06.3	0.0
MTP	Monte Pirata	1.89	160⇑	*e*P	Pn	08 49 06.3	0.0
MTP				*e*S	Sn	08 49 30.5	+0.2
STVI	Saint Thomas	1.94	142	*e*S	Sn	08 49 31.3	-0.1
STVI	Saint Thomas	1.94	142⇑	*e*P	Pn	08 49 06.3	-0.6
STVI	Saint Thomas	1.94	142⇑	*e*P	Pn	08 49 06.3	-0.6
STVI				*e*S	Sn	08 49 31.3	-0.1

*SKO **01** 08:52:26.5, 41°.34N×22°.59E, h13km, M1.8, ML2.3*
*CSEM **01** 08:52:26.7±0.1, 41°.29N×22°.68E, h2km, ML2.2, Error ellipse: s-maj=3.0km s-min=2.5km az=28.0*
*SOF **01** 08:52:26.9, 41°.33N×22°.72E, h7km, MD2.7*
*ATH **01** 08:52:26.6, 41°.29N×22°.70E, h17km±4km, MD2.7/5*
*ISCJB **01** 08:52:26.4±0.3, 41°.28N±0°.02×22°.67E±0°.03, h7km±3km, Error ellipse: s-maj=3.6km s-min=2.9km az=135.3*
*THE **01** 08:52:27.1, 41°.29N×22°.69E, h2km±1km, ML2.7/5, Error ellipse: s-maj=1.6km s-min=0.4km az=189.0*
*BEO **01** 08:52:30.5±1.1, 41°.38N×22°.71E, h16km±4km, ML2.3/4*
ISC 01 08:52:26.6±0.8**, 41°.29N**±0°.02×**22°.66E**±0°.02**, h10km**±5km**, n50,** σ**0s.61**/77**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.07	296	P	Pg	08 52 28.8	-0.1
VAY				S	Sg	08 52 30.6	+0.1
VAY	Valandovo	0.07	296	*i* Pg	Pg	08 52 28.7	-0.1
VAY				*e*Lg	Lg	08 52 30.6	
	comp=E,4μm,0.3s						
VAY				*i* Sg	Sg	08 52 30.7	+0.1
VAY				*e*Lg	Lg	08 52 30.8	
	comp=N,4μm,0.7s						
VAY	Valandovo	0.07	296	P	Pg	08 52 28.8	-0.1
VAY	Valandovo	0.07	296	*i* Pg	Pg	08 52 29.2	+0.3
VAY				S	Sg	08 52 30.6	+0.1
VAY				*i* Sg	Sg	08 52 31.1	+0.5
VAY				*e*Lg	Lg	08 52 31.3	
	comp=N,4μm,0.7s						
KNT	Kendrikon	0.22	125	P	Pg	08 52 31.4	+0.3
KNT				S	Sg	08 52 34.4	+0.2
GRG	Griva	0.38	211	P	Pg	08 52 34.7	+0.5
GRG				S	Sg	08 52 40.1	+0.9
GRG	Griva	0.38	211	*e*PB	Pg	08 52 34.7	+0.5
GRG				*e*SB	Sb	08 52 40.6	-0.9
KKB	Krupnik	0.66	29	*i* Pg	Pg	08 52 39.2	-0.1
THE	Thessaloniki	0.69	160	P	Pg	08 52 40.0	0.0
THE	Thessaloniki	0.69	160	P	Pg	08 52 40.0	0.0
SOH	Sokhos	0.70	131	P	Pg	08 52 40.0	-0.1
SOH				S	Sg	08 52 50.0	+0.7
SOH	Sokhos	0.70	131	*e*PN	Pg	08 52 39.8	-0.3
SOH				*e*SN	Sg	08 52 48.5	-0.8
SOH	Sokhos	0.70	131	P	Pg	08 52 40.0	-0.1
SOH				S	Sg	08 52 50.0	+0.7
SRS	Serrai	0.72	103	P	Pg	08 52 40.1	-0.4
SRS				S	Sb	08 52 50.6	-0.6
SRS	Serrai	0.72	103	P	Pg	08 52 40.1	-0.4
SRS				S	Sb	08 52 50.6	-0.6
HORT	Hortiatis	0.77	154	P	Pg	08 52 41.4	+0.1
HORT	Hortiatis	0.77	154	P	Pg	08 52 41.4	+0.1
MMB	Musomiste	0.86	69	*i* Pg	Pg	08 52 42.7	-0.4
MMB	Musomiste	0.86	69	*i* Pg	Pg	08 52 42.7	-0.4
NVR	Nevrokopi	0.91	86	P	Pg	08 52 43.4	-0.6
NVR				S	Sb	08 52 56.7	+0.2
NVR	Nevrokopi	0.91	86	*e*PN	Pg	08 52 43.3	-0.7
NVR				*e*SN	Sg	08 52 55.6	-0.3
NVR	Nevrokopi	0.91	86	P	Pg	08 52 43.4	-0.6
NVR				S	Sb	08 52 56.7	+0.2
BIA	Bitola	1.04	256	*i* Pg	Pg	08 52 46.3	-0.4
BIA				*i* Sg	Sb	08 53 00.8	+0.3
BIA	Bitola	1.04	256	*i* Pg	Pg	08 52 46.2	-0.4
BIA				*i* Sg	Sb	08 53 00.8	+0.3
PLG	Polygyros	1.09	147	P	Pg	08 52 47.6	+0.1
PLG				S	Sn	08 53 02.9	-0.1
PLG	Polygyros	1.09	147	*e*PN	Pb	08 52 47.4	-0.1
PLG				*e*SN	Sg	08 53 01.7	0.0
PLG	Polygyros	1.09	147	P	Pg	08 52 47.6	+0.1
PLG				S	Sn	08 53 02.9	-0.1
FNA	Florina	1.09	243	P	Pn	08 52 48.0	0.0
FNA	Florina	1.09	243	*e*PN	Pn	08 52 48.0	0.0
FNA	Florina	1.09	243	P	Pn	08 52 48.0	0.0
SKO	Skopje	1.14	307	*i* Pg	Pb	08 52 47.5	-0.9
SKO				*i* Sg	Sg	08 53 03.8	+0.4
SKO				*e*Lg	Lg	08 53 05.6	
	comp=N,52nm,0.6s						
SKO				*e*Lg	Lg	08 53 06.5	
	comp=E,30nm,0.3s						
SKO	Skopje	1.14	307	*i* Pg	Pb	08 52 47.9	-0.5
SKO				*e*Lg	Lg	08 53 01.9	
	comp=E,30nm,0.3s						
SKO				*e*Sg	Sn	08 53 05.9	+1.6
VTS	Vitosha	1.36	17	P	Pb	08 52 52.6	+0.3
VTS				S	Sg	08 53 11.6	+1.1
VTS	Vitosha	1.36	17	*i* P	Pb	08 52 52.5	+0.3
VTS	Vitosha	1.36	17	*e*Pg	Pg	08 52 53.1	+0.3
VTS				*e*Sg	Sg	08 53 10.8	+0.3
VTS	Vitosha	1.36	17	P	Pb	08 52 52.6	+0.3
VTS	Vitosha	1.36	17	*e*Pg	Pg	08 52 53.1	+0.3
VTS				*e*Sg	Sg	08 53 10.8	+0.3
VTS				S	Sg	08 53 11.6	+1.1
KAVA	Kavala	1.43	101	P	Pb	08 52 53.0	-0.3
KAVA	Kavala	1.43	101	P	Pb	08 52 53.0	-0.3
RZN	Rozhen	1.59	75	P	Pg	08 52 56.9	-0.3
RZN	Rozhen	1.59	75	P	Pg	08 52 56.9	-0.3
BARS	Barje	1.65	338	*e*Pn	Pb	08 52 57.5	+0.4
BARS				*e*Sn	Sb	08 53 18.1	+0.1
PGB	Panagyurishte	1.69	41	P	Pb	08 52 57.6	-0.2
PGB	Panagyurishte	1.69	41	P	Pb	08 52 57.6	-0.2
ZAPS	Zavoj	1.98	359	*e*Pn	Pb	08 53 02.5	-0.3
ZAPS				*e*Sn	Sn	08 53 25.8	+0.7
KDZ	Kurdzhali	2.10	79	*i* Pg	Pb	08 53 04.9	+0.1
KDZ	Kurdzhali	2.10	79	*i* Pg	Pb	08 53 04.9	+0.1
RDO	Rodhopi	2.17	93	*e*PB	Pn	08 53 03.3	+0.5
SELS	Selova	2.24	330	*e*Sn	Sb	08 53 33.3	-1.7
GRUS	Gruza	2.97	332	*e*Pn	Pb	08 53 16.6	-2.9

IDC 01 08:57:58.9±1.3**, 2°.09N**×**127°.68E, h0km, mb4.2**/6**, mb1 4.4**/6**, mb1mx3.9**/23**, mbtmp4.2**/6**, Error ellipse: s-maj=92.2km s-min=16.9km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.16	186	P	P	09 02 35.4	+0.4
	2.1nm,0.6s,baz=12,slow=9.3,SNR=6.7						
WRA	Warramunga Arr	22.85	164	P	P	09 03 04.2	+0.2
	8.0nm,0.4s,baz=343,slow=11,SNR=151						
ASAR	Alice Springs	26.30	167	P	P	09 03 35.7	-0.8
	2.5nm,0.4s,baz=346,slow=7.6,SNR=96						
STKA	Stephens Creek	36.27	160	P	P	09 05 04.0	0.0
	3.1nm,0.6s,baz=333,slow=8.5,SNR=17						
MKAR	Makanchi Array	59.44	325	P	P	09 08 04.0	+0.4
	1.3nm,0.5s,baz=117,slow=8.5,SNR=21						
KURBB	Kurchatov Arra	63.62	327	P	P	09 08 31.3	-0.4
	0.9nm,0.5s,baz=130,slow=6.3,SNR=12						

SKO 01 09:08:40.3, 41°.29N×**22°.69E, h11km, M1.1, ML1.4, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.10	289	*i* Pg	Pg	09 08 42.8	-0.1
VAY				*i* Sg	Sg	09 08 44.6	-0.3
VAY				*e*Lg	Lg	09 08 44.7	
	comp=N,430nm,0.2s						
VAY				*e*Lg	Lg	09 08 44.9	
	comp=E,86nm,0.2s						

*CSEM **01** 09:09:41.4, 39°.10N×27°.54E, h7km, MD2.5, After DDA*
DDA 01 09:09:41.4, 39°.10N×**27°.54E, h7km, MD2.5, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	Akhisar	0.31	135	*i* P	Pg	09 09 46.8	-0.7
AKHS				*i* S	Sb	09 09 53.3	-1.3
AKHS	Akhisar	0.31	135	*i* P	Pg	09 09 46.8	-0.7
AKHS				*i* S	Sb	09 09 53.3	-1.3
BALY	Balya	0.64	6	*i* P	Pg	09 09 54.3	+0.3
BALY	Balya	0.64	6	*i* P	Pg	09 09 54.3	+0.4
DURS	Dursunbey	0.88	55	*i* P	Pg	09 09 58.5	-0.1
DURS				*i* S	Sb	09 10 12.4	+1.0
DURS	Dursunbey	0.88	55	*i* P	Pg	09 09 58.5	0.0
DURS				*i* S	Sb	09 10 12.4	+1.1
DEMI	Demirci	0.92	93	*i* P	Pg	09 09 59.1	-0.1
DEMI				*i* S	Sb	09 10 13.2	+0.8
DEMI	Demirci	0.92	93	*i* P	Pg	09 09 59.1	-0.1
DEMI				*i* S	Sb	09 10 13.2	+0.8
MANT	Manisa	1.00	127	*e*P	Pg	09 09 59.6	-1.4
MANT	Manisa	1.00	127	*e*P	Pg	09 09 59.6	-1.4
URLA	Izmir	1.04	225	*i* P	Pb	09 10 01.8	0.0
URLA	Izmir	1.04	225	*i* P	Pb	09 10 01.8	0.0
KHAL	Karahalli	1.69	115	*i* P	Pn	09 10 11.5	0.0
KHAL	Karahalli	1.69	115	*i* P	Pn	09 10 11.5	-0.1

*IPEC **01** 09:10:20.7±0.3, 51°.58N×16°.17E, h1km±2km, ML3.1/3, Error ellipse: s-maj=2.3km s-min=1.6km az=28.0*
*ISCJB **01** 09:10:20.0±0.4, 51°.47N±0°.02×16°.05E±0°.02, h0km, mb3.4/2, Error ellipse: s-maj=3.1km s-min=1.9km az=11.6*
*CSEM **01** 09:10:21.0±0.2, 51°.53N×16°.07E, h2km, ML3.9/12, Error ellipse: s-maj=3.1km s-min=1.8km az=11.0*
*IDC **01** 09:10:21.8±0.6, 51°.53N×15°.92E, h0km, mb3.4/2, mb1 3.6/9, mb1mx3.4/29, mbtmp3.4/9, ML3.4/7, Error ellipse: s-maj=11.1km s-min=6.5km az=110.0*
*PRU **01** 09:10:22.0, 51°.51N×16°.06E, h0km*
*BGR **01** 09:10:22.9±0.3, 51°.45N×16°.04E, h1km, ML3.3/19, Error ellipse: s-maj=4.4km s-min=2.2km az=11.0*
*VIE **01** 09:10:23.9±0.4, 51°.31N×15°.99E, h0km, mb2.9/6, ML3.2/8, Error ellipse: s-maj=2.4km s-min=1.6km az=12.0 75 km WNW of Wroclaw Suspected Mining induced.*
*WAR **01** 09:10:23.2, 51°.49N×16°.10E*
ISC 01 09:10:20.0±0.6**, 51°.60N**±0°.03×**16°.11E**±0°.02**, h0km, n116,** σ**1s.07**/206**, 8C-16D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.76	171	*e*Pg	Pb	09 10 35.5	-0.7
KSP				*e*Sg	Sg	09 10 45.2	+0.7
KSP	Ksiaz	0.76	171	*e*Pg	Pb	09 10 35.5	-0.7
KSP				*e*Sg	Sg	09 10 44.9	+0.4
KSP	Ksiaz	0.76	171	*e*	Sn	09 10 49.3	-0.9
KSP	Ksiaz	0.76	171	Pg	Pb	09 10 35.5	-0.7
KSP				Sg	Sg	09 10 45.2	+0.7
UPC	Upice	1.09	183	*e*PG	Pg	09 10 40.9	0.0
UPC	Upice	1.09	183	Pg	Pg	09 10 40.9	0.0
DPC	Dobruska-Polom	1.25	174	*e*Pg	Pg	09 10 44.3	+0.2
DPC				*e*Sg	Sg	09 10 59.6	-0.7
DPC	Dobruska-Polom	1.25	174	*e*PG	Pg	09 10 44.0	0.0
DPC				*e*SG	Sg	09 10 59.7	-0.6
	comp=Z,115nm,0.3s						
DPC	Dobruska-Polom	1.25	174	Pg	Pg	09 10 44.0	0.0
DPC				Sg	Sg	09 10 59.6	-0.7
PVCC	Panska Ves	1.45	223	*e*PG	Pn	09 10 47.5	0.0
PVCC				*e*SG	Sg	09 11 06.0	-0.5
	comp=Z,568nm,0.3s						
PVCC	Panska Ves	1.45	223	Pg	Pn	09 10 47.5	0.0
PVCC				Sg	Sg	09 11 06.0	-0.5
	568nm,0.3s						
BRG	Berggiesshubel	1.54	243	PN	Pn	09 10 48.3	-0.5
BRG				PG	Pg	09 10 49.8	+0.2
BRG				SG	Sg	09 11 09.7	+0.1
	139nm,0.4s						
BRG	Berggiesshubel	1.54	243	*e*Pn	Pn	09 10 48.4	-0.4
	SNR=108						
BRG				*e*Pg	Pg	09 10 49.9	+0.2
	SNR=3.8						
BRG				*e*Sg	Sg	09 11 10.1	+0.5
BRG	Berggiesshubel	1.54	243	Pn	Pn	09 10 48.4	-0.4
	SNR=108						
KRLC	Kraliky	1.58	164	*e*PG	Pn	09 10 49.3	0.0
KRLC				*e*SG	Sn	09 11 10.2	-0.3
KRLC	Kraliky	1.58	164	Pg	Pn	09 10 49.3	0.0
KRLC				Sg	Sn	09 11 10.2	-0.3
FBE	Freiberg	1.86	250	*e*Pn	Pn	09 10 53.2	+0.1
	SNR=35						
FBE				*e*Pg	Pg	09 10 55.9	+0.2
	SNR=2.8						
FBE				*e*Sg	Sg	09 11 19.2	-0.6
FBE	Freiberg	1.86	250	Pn	Pn	09 10 53.2	+0.1
	SNR=35						
PRU	Pruhonice	1.89	212	*e*Pn	Pn	09 10 53.4	-0.2
	SNR=25						
PRU				*e*Sg	Sb	09 11 19.6	0.0
PRU	Pruhonice	1.89	212	*e*PG	Pb	09 10 55.4	0.0
PRU				*e*SG	Sb	09 11 19.4	-0.2
	comp=Z,171nm,0.4s						
PRU	Pruhonice	1.89	212	Pn	Pn	09 10 53.4	-0.2
	SNR=25						
PRU	Pruhonice	1.89	212	Pg	Pb	09 10 55.4	0.0
PRU				Sg	Sb	09 11 19.6	0.0
CLL	Collm	1.97	263	*e*Pn	Pn	09 10 54.3	-0.3
	SNR=42						
CLL				*e*Pg	Pg	09 10 57.5	-0.3
	SNR=27						
CLL				*e*Sg	Sg	09 11 23.4	+0.2
CLL	Collm	1.97	263	*e*Pn	Pn	09 10 54.0	-0.6
	comp=Z,57nm,0.4s						
CLL				*i* Pg	Pg	09 10 57.3	-0.4
CLL				*i*		09 11 01.8	
CLL				*i* Sg	Sg	09 11 24.0	+0.8
	comp=Z,116nm,0.6s						
CLL	Collm	1.97	263	Pn	Pn	09 10 54.3	-0.3
	SNR=42						
MORC	Moravsky Berou	2.04	153	*e*Pn	Pn	09 10 55.5	0.0
	SNR=37						
MORC				*e*Pg	Pg	09 10 58.6	-0.4
	SNR=26						
MORC				*e*Sg	Sg	09 11 25.2	-0.1
MORC	Moravsky Berou	2.04	153⇓	*i*P	Pn	09 10 55.9	+0.3
MORC	Moravsky Berou	2.04	153	*e*Pn	Pn	09 10 55.6	0.0
	baz=335						
MORC	Moravsky Berou	2.04	153⇓	*i*P	Pn	09 10 55.9	+0.3
MORC	Moravsky Berou	2.04	153	Pg	Pg	09 10 58.6	-0.4
	SNR=26						
MORC				S	Sn	09 11 22.8	+1.1
MORC				Sg	Sg	09 11 25.2	-0.1
OKC	Ostrava-Krasne	2.18	143	*e*Pn	Pn	09 10 57.8	+0.2
	SNR=15						
OKC				*e*Pg	Pg	09 11 02.4	+0.5
	SNR=2.6						
OKC				*e*Sg	Sg	09 11 29.5	-0.6
OKC	Ostrava-Krasne	2.18	143	*e*PG	Pb	09 11 00.4	0.0
OKC				*e*SG	Sg	09 11 29.8	-0.3
	comp=Z,147nm,0.6s						
OKC	Ostrava-Krasne	2.18	143	Pn	Pn	09 10 57.8	+0.2
	SNR=15						
OKC	Ostrava-Krasne	2.18	143	Pg	Pg	09 11 02.4	+0.5
	SNR=2.6						
OKC				Sg	Sg	09 11 29.8	-0.3
	comp=Z,147nm,0.6s						
VRAC	Vranov	2.31	172⇓	*i*P	Pn	09 11 00.0	+0.7
VRAC	Vranov	2.31	172	Pn	Pn	09 11 00.3	+1.0
	comp=Z,5.5nm,0.3s,baz=334,slow=15,SNR=16						
VRAC				Lg	Lg	09 11 32.0	
	comp=Z,15nm,0.3s,baz=71,slow=22,SNR=12						
VRAC	Vranov	2.31	172	*e*Pn	Pn	09 10 59.6	+0.3
	baz=353						
VRAC	Vranov	2.31	172⇓	*i*P	Pn	09 11 00.0	+0.7
VRAC				S	Sb	09 11 30.6	-1.0
VRAC				*e*Sg	Sg	09 11 32.4	-1.8
	comp=Z,95nm,0.6s,baz=353						
TREC	Trest	2.34	190	*e*PN	Pn	09 11 00.2	+0.5
TREC				*e*PG	Pb	09 11 03.4	+0.4
TREC				*e*SG	Sb	09 11 33.0	+0.5
	comp=Z,68nm,0.3s						
TREC	Trest	2.34	190	Pn	Pn	09 11 00.2	+0.5
KRUC	Moravsky	2.54	176	*e*Pn	Pn	09 11 02.6	+0.1
	baz=357						
KRUC				*e*Sg	Sb	09 11 39.7	+1.4
	comp=Z,109nm,0.9s,baz=357						
TANN	Tannenbergstha	2.59	244	*e*Pn	Pn	09 11 03.8	+0.5
	SNR=41						
TANN				*e*Sg	Sg	09 11 42.6	-0.7
TANN	Tannenbergstha	2.59	244	Pn	Pn	09 11 03.8	+0.5
	SNR=41						
TANN				Sg	Sg	09 11 42.6	-0.7
WERD	Werda	2.67	246	*e*Pn	Pn	09 11 04.5	+0.3
	SNR=46						
WERD				*e*Pg	Pg	09 11 10.1	-1.0
	SNR=11						
WERD				*e*Sg	Sg	09 11 45.2	-0.4
WERD	Werda	2.67	246	Pn	Pn	09 11 04.5	+0.3
	SNR=46						
NKC	Novy Kostel	2.69	241	*e*Pn	Pn	09 11 05.0	+0.4
	SNR=35						
NKC				*e*Pg	Pg	09 11 12.4	+0.8
	SNR=35						
NKC				*e*Sg	Sg	09 11 46.5	+0.1
NKC	Novy Kostel	2.69	241	*e*PN	Pn	09 11 05.0	+0.4
NKC				*e*PG	Pg	09 11 10.6	-1.0
NKC				*e*SG	Sg	09 11 45.9	-0.6
	comp=Z,136nm,0.3s						
NKC	Novy Kostel	2.69	241	Pn	Pn	09 11 05.0	+0.4
	SNR=35						
NKC	Novy Kostel	2.69	241	Pg	Pg	09 11 12.4	+0.8
	SNR=35						
NKC				Sg	Sg	09 11 45.9	-0.6
	comp=Z,136nm,0.3s						
OJC	Ojcow	2.71	119	*e*Pn	Pn	09 11 04.6	-0.2
	SNR=10						
OJC				*e*Pg	Pg	09 11 12.4	+0.5
	SNR=2.5						
OJC				*e*Sg	Sg	09 11 48.8	+1.8
OJC	Ojcow	2.71	119	*e*Pn	Pn	09 11 04.2	-0.6
OJC				*e*Pg	Pg	09 11 13.3	+1.4
OJC				*e*Sg	Sg	09 11 48.4	+1.4
OJC	Ojcow	2.71	119	Pn	Pn	09 11 04.6	-0.2
	SNR=10						
KHC	Kasperske Hory	2.95	214	*e*Pn	Pn	09 11 08.3	+0.1
	SNR=28						
KHC				*e*Pg	Pb	09 11 14.8	+1.3
	SNR=18						
KHC				*e*Sg	Sb	09 11 52.5	+2.3
KHC	Kasperske Hory	2.95	214	*e*PN	Pn	09 11 08.2	0.0
KHC				*e*PG	Pb	09 11 14.5	+1.0
KHC				*e*SN	Sn	09 11 44.0	-0.4
KHC				*e*SG	Sg	09 11 53.3	-1.6
	comp=Z,63nm,0.4s						
KHC	Kasperske Hory	2.95	214	Pn	Pn	09 11 08.3	+0.1
	SNR=28						
KHC	Kasperske Hory	2.95	214	Pg	Pb	09 11 14.8	+1.3
	SNR=18						
KHC				Sn	Sn	09 11 44.0	-0.4
KHC				Sg	Sg	09 11 53.3	-1.6
	comp=Z,63nm,0.4s						
MOX	Moxa	2.99	253	*e*Pn	Pn	09 11 08.9	+0.2
	SNR=16						
MOX				*e*Pg	Pg	09 11 17.1	-0.2
	SNR=7.5						
MOX				*e*Sg	Sg	09 11 57.1	+1.1
MOX	Moxa	2.99	253	Pn	Pn	09 11 08.9	+0.2
	SNR=16						
MANZ	Manzenberg	3.01	239	*e*Pn	Pn	09 11 09.4	+0.4
	SNR=23						
MANZ				*e*Pg	Pg	09 11 18.2	+0.5
	SNR=23						
MANZ				*e*Sg	Sg	09 11 54.8	-1.8
MANZ	Manzenberg	3.01	239	Pn	Pn	09 11 09.4	+0.4
	SNR=23						
ROTZ	Rotzenmuhle	3.09	235	*e*Pn	Pn	09 11 10.6	+0.6
	SNR=54						
ROTZ				*e*Pg	Pg	09 11 17.9	-1.3
	SNR=54						
ROTZ				*e*Sg	Sg	09 11 56.9	-2.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROTZ	Rotzenmuhle	3.09	235	Pn	Pn	09 11 10.6	+0.6
	SNR=54						
GEC2	GERESS Array S	3.16	210	ePn	Pn	09 11 11.5	+0.4
	SNR=36						
GEC2				ePg	Pb	09 11 18.1	+1.0
	SNR=19						
GEC2				eSg	Sb	09 11 57.7	+1.5
GEC2	GERESS Array S	3.16	210	Pn	Pn	09 11 11.5	+0.4
	SNR=36						
GERES	GERESS Array B	3.16	210	Pn	Pn	09 11 11.2	+0.2
	comp=Z,6.1nm,0.3s,baz=30,slow=13,SNR=162						
GERES				Pg	Pb	09 11 17.6	+0.5
	comp=Z,12nm,0.3s,baz=30,slow=16,SNR=36						
GERES				Lg	Lg	09 11 56.9	
	comp=Z,16nm,0.3s,baz=24,slow=29,SNR=9.4						
SMOL	Smolenice	3.20	164	e	Pg	09 11 22.7	+1.4
SMOL	Smolenice	3.20	164	eSG	Sg	09 12 03.0	+0.2
SMOL	Smolenice	3.20	164	eSg	Sg	09 12 03.0	+0.2
WET	Wettzell	3.21	221	ePn	Pn	09 11 12.3	+0.5
	SNR=24						
WET				ePg	Pb	09 11 18.4	+0.5
	SNR=23						
WET				eSg	Sb	09 12 00.1	+2.5
WET	Wettzell	3.21	221	Pn	Pn	09 11 12.3	+0.5
	SNR=24						
WET				Sg	Sb	09 12 00.1	+2.5
NIE	Niedzica	3.45	127	eP	Pg	09 11 26.8	+0.6
NIE				eS	Sg	09 12 12.4	+1.5
ZST	Bratislava	3.46	169	eSG	Sg	09 12 10.8	-0.4
ZST	Bratislava	3.46	169	eSg	Sg	09 12 10.8	-0.4
VYHS	Vyhne	3.57	149	ePN	Pn	09 11 17.2	+0.6
VYHS				eSG	Sg	09 12 13.3	-1.2
VYHS	Vyhne	3.57	149	ePn	Pn	09 11 17.2	+0.6
VYHS				eSg	Sg	09 12 13.3	-1.2
BSD	Bornholm Skovb	3.60	349	i P	Pn	09 11 17.8	+0.8
BSD				eS	Sn	09 11 57.7	-2.4
BSD	Bornholm Skovb	3.60	349	i P	Pn	09 11 17.8	+0.8
GRA1	Grafenberg Arr	3.65	240	Pn	Pn	09 11 18.6	+0.8
	SNR=8.7						
GRA1				Sg	Sg	09 12 17.5	+0.3
GRF	Grafenberg Arr	3.65	240	ePn	Pn	09 11 18.6	+0.8
	SNR=8.7						
GRF				eSg	Sg	09 12 17.6	+0.3
CONA	Conrad Observa	3.67	183	⇓iPn	Pn	09 11 18.5	+0.3
	SNR=23						
CONA				⇓iSg	Sg	09 12 15.7	-2.3
	comp=Z,90nm,0.7s						
CONA	Conrad Observa	3.67	183	Pn	Pn	09 11 18.5	+0.3
	SNR=23						
CONA				Sg	Sg	09 12 15.7	-2.3
	comp=Z,90nm,0.7s						
STHS	Stebnicka Huta	3.93	122	ePN	Pn	09 11 23.1	+1.4
STHS				e		09 11 36.8	
STHS	Stebnicka Huta	3.93	122	ePn	Pn	09 11 23.1	+1.4
STHS				eSg	Sg	09 12 29.1	+2.7
MOA	Molln	3.94	198	⇓iPn	Pn	09 11 22.2	+0.5
	SNR=18						
MOA				⇑iSg	Sg	09 12 24.1	-2.3
	comp=Z,43nm,0.5s						
MOA	Molln	3.94	198	Pn	Pn	09 11 22.2	+0.5
	SNR=18						
MOA				Sg	Sg	09 12 24.1	-2.3
	comp=Z,43nm,0.5s						
KECS	Kecovo	4.20	136	ePN	Pn	09 11 24.7	-0.6
KECS				e		09 11 41.1	
KECS	Kecovo	4.20	136	ePn	Pn	09 11 24.7	-0.6
KECS				eSg	Sg	09 12 34.6	-0.3
CRVS	Cervenica-Dubn	4.36	126	ePN	Pn	09 11 27.5	-0.1
CRVS				e		09 11 43.2	
CRVS	Cervenica-Dubn	4.36	126	ePn	Pn	09 11 27.5	-0.1
CRVS				eSg	Sg	09 12 39.1	-1.0
ARSA	Arzberg	4.37	185	⇑iPn	Pn	09 11 28.0	+0.4
ARSA				⇓iSg	Sg	09 12 39.0	-1.2
	comp=Z,37nm,0.6s						
ARSA	Arzberg	4.37	185	Pn	Pn	09 11 28.0	+0.4
ARSA				Sg	Sg	09 12 39.0	-1.2
	comp=Z,37nm,0.6s						
PSZ	Piszkesteto	4.42	145	⇓e	Pn	09 11 30.1	+1.7
KOLS	Kolonicke sedl	4.76	122	ePN	Pn	09 11 34.0	+0.9
KOLS				e		09 11 52.2	
KOLS	Kolonicke sedl	4.76	122	ePn	Pn	09 11 34.0	+0.9
KOLS				eSg	Sg	09 12 54.3	+1.3
KBA	Koelnbreinsper	4.87	203	⇑iPn	Pn	09 11 35.7	+1.0
KBA				⇑iSg	Sg	09 12 55.4	-1.0
	comp=Z,30nm,0.6s						
KBA	Koelnbreinsper	4.87	203	Pn	Pn	09 11 35.7	+1.0
KBA				Sg	Sg	09 12 55.4	-1.0
	comp=Z,30nm,0.6s						
WATA	Walderalm	5.19	217	⇑iPn	Pn	09 11 38.9	-0.1
	SNR=7.1						
WATA				⇓iSg	Sg	09 13 05.9	-0.7
	comp=Z,17nm,0.6s						
WATA	Walderalm	5.19	217	Pn	Pn	09 11 38.9	-0.1
	SNR=7.1						
WATA				Sg	Sg	09 13 05.9	-0.7
	comp=Z,17nm,0.6s						
MOTA	Moosalm	5.36	219	⇓iPn	Pn	09 11 41.4	0.0
	SNR=7.3						
MOTA	Moosalm	5.36	219	Pn	Pn	09 11 41.4	0.0
	SNR=7.3						
TRPA	Tarpa	5.41	127	⇑e	Pg	09 12 01.4	-2.3
PKSM	Moragy	5.64	162	⇓e	Pn	09 11 46.4	+1.3
DAVOX	Davos/Dischmat	6.32	223	Pn	Pn	09 11 55.1	+0.5
	comp=Z,0.8nm,0.3s,baz=64,slow=9.3,SNR=7.3						
DAVOX				Lg	Lg	09 13 37.1	
	comp=Z,0.8nm,0.3s,baz=169,slow=22,SNR=3.4						
DRGR		6.46	135	⇑iP	Pn	09 11 57.0	+0.5
DRGR		6.46	135	⇑iP	Pn	09 11 57.0	+0.5
WLF	Walferdange	6.63	257	P	Sg	09 13 57.8	+5.0
BZS	Buzias	7.01	147	⇓iP	Pn	09 12 05.5	+1.7
BZS	Buzias	7.01	147	⇓iP	Pn	09 12 05.5	+1.7
BURAR	Bucovina Array	7.13	120	⇓iP	Pn	09 12 05.4	-0.2
BURAR	Bucovina Array	7.13	120	⇓iP	Pn	09 12 05.4	-0.2
AKASG	Malin Array Be	8.29	91	Pn	Pn	09 12 21.6	+0.1
	comp=Z,2.7nm,0.3s,baz=278,slow=12,SNR=10						
AKASG				Sn	Sn	09 13 52.5	-3.3
	comp=Z,1.0nm,0.3s,baz=266,slow=23,SNR=4.1						
HFS	Hagfors	8.67	352	Pn	Pn	09 12 26.6	+0.1
	comp=Z,0.2nm,0.3s,baz=172,slow=12,SNR=6.1						
NOA	NORSAR Array B	9.85	346	Pn	Pn	09 12 42.0	-0.8
	comp=Z,0.2nm,0.3s,baz=155,slow=12,SNR=4.9						
FINES	FINESS Array B	11.29	25	Pn	Pn	09 13 00.8	-1.6
	comp=Z,0.9nm,0.3s,baz=208,slow=12,SNR=17						
FINES				Sn	Sn	09 15 04.2	-4.8
	comp=Z,0.5nm,0.3s,baz=206,slow=21,SNR=5.2						
MKAR	Makanchi Array	42.18	69	P	P	09 18 16.7	+2.5
	comp=Z,0.2nm,0.5s,baz=317,slow=6.1,SNR=3.1						
YKA	Yellowknife Ar	59.78	336	P	P	09 20 28.1	+1.9
	comp=Z,0.5nm,0.6s,baz=29,slow=6.8,SNR=11						

*DDA **01** 09:53:05.8, 39°.47N×28°.15E, h7km, MD2.9*
*CSEM **01** 09:53:05.9±0.1, 39°.47N×28°.16E, h5km, MD2.8, Error ellipse: s-maj=3.3km s-min=2.6km az=50.0*
*ISCJB **01** 09:53:06.2±0.4, 39°.48N±0°.03×28°.16E±0°.04, h11km, Error ellipse: s-maj=4.9km s-min=3.7km az=37.3*
*ISK **01** 09:53:06.2, 39°.51N×28°.13E, h6km, MD2.8*
ISC 01 09:53:05.9±0.9**, 39°.46N**±0°.03×**28°.15E**±0°.03**, h11**km**, n44, σ0s.34**/51**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.27	311	ePG	Pg	09 53 11.4	-0.1
BALB	Balikesir	0.27	311	ePg	Pg	09 53 11.4	-0.1
DURS	Dursunbey	0.29	61	i P	Pg	09 53 11.4	-0.4
DURS	Dursunbey	0.29	61	i P	Pg	09 53 11.4	-0.4
BALY	Balya	0.49	304	i P	Pg	09 53 15.5	-0.1
BALY				i S	Sb	09 53 23.8	-0.1
BALY	Balya	0.49	304	i P	Pg	09 53 15.5	-0.1
BALY				i S	Sb	09 53 23.8	-0.1
DEMI	Demirci	0.61	133	i P	Pg	09 53 17.8	0.0
DEMI				i S	Sb	09 53 27.4	+0.1
DEMI	Demirci	0.61	133	i P	Pg	09 53 17.8	0.0
DEMI				i S	Sb	09 53 27.4	+0.1
AKHS	Akhisar	0.64	204	i P	Pg	09 53 18.1	-0.2
AKHS				i S	Sb	09 53 28.4	+0.4
AKHS	Akhisar	0.64	204	i P	Pg	09 53 18.1	-0.2
AKHS				i S	Sb	09 53 28.4	+0.4
GONE	Gonen-Balikesi	0.68	329	ePG	Pg	09 53 19.0	-0.2
GONE	Gonen-Balikesi	0.68	329	ePg	Pg	09 53 19.0	-0.2
KCTX	Karacabey (Bur	0.82	11	ePG	Pg	09 53 21.4	-0.3
KCTX	Karacabey (Bur	0.82	11	ePg	Pg	09 53 21.4	-0.3
BNT	Bandirma	0.91	349	ePG	Pb	09 53 23.6	-0.1
BNT	Bandirma	0.91	349	ePg	Pb	09 53 23.6	-0.1
TVSB	Tavsanli	1.02	90	ePG	Pn	09 53 26.1	-0.1
TVSB				eSG	Sn	09 53 41.5	+1.0
TVSB	Tavsanli	1.02	90	ePg	Pn	09 53 26.1	-0.1
MANT	Manisa	1.02	162	eP	Pg	09 53 24.9	-0.8
MANT	Manisa	1.02	162	eP	Pg	09 53 24.9	-0.8
MDNY	Mudanya-Bursa	1.07	32	ePG	Pg	09 53 26.3	-0.2
MDNY	Mudanya-Bursa	1.07	32	ePg	Pg	09 53 26.3	-0.2
KRBG	Karabiga-Canak	1.14	325	ePN	Pb	09 53 27.4	-0.2
KRBG	Karabiga-Canak	1.14	325	ePn	Pb	09 53 27.4	-0.2
MRMT	Marmara Adasi	1.22	340	ePN	Pg	09 53 29.1	-0.2
MRMT	Marmara Adasi	1.22	340	ePn	Pg	09 53 29.1	-0.2
ARMT	Armutlu	1.23	26	ePN	Pg	09 53 29.7	+0.1
ARMT	Armutlu	1.23	26	ePn	Pg	09 53 29.7	+0.1
GEMT	Gemlik	1.26	39	ePN	Pg	09 53 29.7	-0.4
GEMT	Gemlik	1.26	39	ePn	Pg	09 53 29.7	-0.4
LPK	Lapseki	1.40	311	ePN	Pb	09 53 32.3	+0.2
LPK	Lapseki	1.40	311	ePn	Pb	09 53 32.3	+0.2
RKY	Sarkoy-Tekirda	1.43	329	ePN	Pb	09 53 32.7	0.0
RKY	Sarkoy-Tekirda	1.43	329	ePn	Pb	09 53 32.7	0.0
YLV	Yalova	1.45	40	ePN	Pb	09 53 33.1	+0.1
YLV	Yalova	1.45	40	ePn	Pb	09 53 33.1	+0.1
EZN	Ezine	1.45	285	ePN	Pb	09 53 33.2	+0.2
EZN	Ezine	1.45	285	ePn	Pb	09 53 33.2	+0.2
MFT	Murefte	1.48	334	ePN	Pb	09 53 33.7	+0.2
MFT	Murefte	1.48	334	ePn	Pb	09 53 33.7	+0.2
GELI	Tayfur-Gelibol	1.59	306	ePN	Pb	09 53 35.1	-0.2
GELI	Tayfur-Gelibol	1.59	306	ePn	Pb	09 53 35.1	-0.2
ERIK	Erikli-Kesan	1.74	314	ePN	Pb	09 53 37.1	-0.8
ERIK	Erikli-Kesan	1.74	314	ePn	Pb	09 53 37.1	-0.8

IDC 01 10:30:28.6±2.2**, 1°.05N**×**127°.68E, h0**km**, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.5**/21**, mbtmp3.7**/3**, Error ellipse: s-maj=164.3km s-min=25.9km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.86	163	P	P	10 35 22.9	-0.3
	2.2nm,0.8s,baz=342,slow=11,SNR=15						
ASAR	Alice Springs	25.30	167	P	P	10 35 57.3	+0.2
	2.1nm,0.8s,baz=345,slow=9.9,SNR=16						
MKAR	Makanchi Array	60.29	326	P	P	10 40 39.1	-0.1
	0.3nm,0.6s,baz=124,slow=8.2,SNR=5.2						

IDC 01 10:31:09.2±2.1**, 0°.89N**×**127°.43E, h0**km**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.4**/21**, mbtmp3.6**/3**, Error ellipse: s-maj=164.2km s-min=25.0km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.79	162	P	P	10 36 02.4	-0.5
	1.7nm,0.6s,baz=341,slow=11,SNR=11						
ASAR	Alice Springs	25.21	166	P	P	10 36 37.2	+0.3
	1.1nm,0.7s,baz=342,slow=8.3,SNR=8.3						
MKAR	Makanchi Array	60.28	326	P	P	10 41 19.5	-0.1
	0.4nm,0.8s,baz=128,slow=8.1,SNR=3.0						

*ISK **01** 10:37:12.1, 37°.15N×37°.22E, h5km, MD2.6*
*CSEM **01** 10:37:12.6±3.5, 37°.11N×37°.21E, h2km, MD2.6, Error ellipse: s-maj=114.7km s-min=20.8km az=23.0*
*DDA **01** 10:37:13.1, 37°.17N×37°.20E, h7km, MD2.5*
ISC 01 10:37:13.4±2.0**, 37°.2N**±0°.1×**37°.21E**±0°.03**, h4**km±14km**, n12, σ0s.78**/12**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.04	174	ePG	Pg	10 37 12.4	-2.1
GAZ	Gaziantep	0.04	174	ePg	Pg	10 37 12.4	-2.1
AYKD	Aykdinkavak	0.38	302	i P	Pg	10 37 21.6	+1.0
AYKD	Aykdinkavak	0.38	302	i P	Pg	10 37 21.6	+1.0
KMRS	Kahramanmaras	0.38	320	ePG	Pb	10 37 22.0	-0.7
KMRS	Kahramanmaras	0.38	320	ePg	Pb	10 37 22.0	-0.7
URFA	Urfa	1.31	80	ePN	Pg	10 37 38.4	-0.1
URFA				eSN	Sn	10 37 57.3	+0.8
URFA	Urfa	1.31	80	ePn	Pg	10 37 38.4	-0.1
URFA				eSn	Sn	10 37 57.3	+0.8
DARE	Darende-Malaty	1.37	9	ePN	Pg	10 37 40.3	+0.6
DARE	Darende-Malaty	1.37	9	ePn	Pg	10 37 40.3	+0.6
MYA	Malataya	1.47	41	ePN	Pb	10 37 41.5	+0.1
MYA	Malataya	1.47	41	ePn	Pb	10 37 41.5	+0.1

IDC 01 10:40:07.6±4.7**, 52°.19N**×**174°.95E, h62**km±30km**, mb2.9**/4**, mb1 3.3**/6**, mb1mx3.1**/30**, mbtmp3.2**/6**, ML3.5**/2**, Error ellipse: s-maj=63.8km s-min=18.9km az=176.0, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FX1	Attu Island--F	1.29	303	P	Pn	10 40 28.0	-1.5
	133nm,0.3s,baz=162,slow=8.3,SNR=328						
FX1				S	Sn	10 40 46.0	+0.1
	60nm,0.3s,baz=320,slow=22,SNR=5.8						
PETK	Petropavlovsk-	10.53	282	P	Pn	10 42 37.4	+1.9
	0.2nm,0.3s,baz=110,slow=18,SNR=3.6						
KDAK	Kodiak Island	19.32	60	P	Pn	10 44 28.5	-0.4
	0.3nm,0.3s,baz=340,slow=23,SNR=5.5						
ILAR	Eielson Array	23.16	42	P	P	10 45 07.4	-0.9
	0.1nm,0.6s,baz=240,slow=7.2,SNR=2.8						
YKA	Yellowknife Ar	37.47	46	P	P	10 47 15.0	+0.4
	0.2nm,0.9s,baz=307,slow=4.0,SNR=2.7						
SONM	Songino Array	42.78	293	P	P	10 47 59.4	+0.5
	0.3nm,0.5s,baz=61,slow=8.1,SNR=3.7						
MKAR	Makanchi Array	56.43	305	P	P	10 49 41.7	-0.8
	0.3nm,0.4s,baz=51,slow=6.7,SNR=6.7						

*NEIC **01** 10:47:29.0, 40°.32S×173°.31E, h172km, MG4.2(WEL), After WEL.*
WEL 01 10:47:29.0±0.2**, 40°.32S**×**173°.31E, h172**km±1km**, ML4.2**/18**, 16C-24D, Error ellipse: s-maj=1.6km s-min=0.6km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.67	136	⇓PN	Pn	10 47 53.9	+0.1
DUWZ				SN	Sn	10 48 12.2	-0.6
DUWZ	D'Urville Isla	0.67	136	⇓Pn	Pn	10 47 53.9	+0.2
DUWZ				Sn	Sn	10 48 12.2	-0.6
QRZ	Quartz Range	0.78	230	⇑PN	Pn	10 47 54.3	-0.1
QRZ				SN	Sn	10 48 12.6	-1.4
QRZ	Quartz Range	0.78	230	⇑Pn	Pn	10 47 54.3	-0.1
QRZ				Sn	Sn	10 48 12.6	-1.4
NNZ	Nelson	0.90	177	⇑PN	Pn	10 47 55.0	-0.1
NNZ				SN	Sn	10 48 14.5	-0.9
NNZ	Nelson	0.90	177	⇑Pn	Pn	10 47 55.0	-0.1
NNZ				Sn	Sn	10 48 14.5	-0.9
NRZ	Ngariki Road	1.09	26	⇑PN	Pn	10 47 56.7	0.0
NRZ	Ngariki Road	1.09	26	⇑Pn	Pn	10 47 56.7	0.0
NWEZ	Newall Road	1.13	22	⇓PN	Pn	10 47 56.9	-0.1
NWEZ	Newall Road	1.13	22	⇓Pn	Pn	10 47 56.9	-0.1
TCW	Tory Channel	1.15	141	PN	Pn	10 47 57.6	+0.5
TCW				SN	Sn	10 48 18.0	-0.9
TCW				AML	AML	10 48 18.1	
TCW	Tory Channel	1.15	141	Pn	Pn	10 47 57.6	+0.5
TCW				Sn	Sn	10 48 18.0	-0.9
DFE	Dawson Falls	1.17	32	PN	Pn	10 47 57.1	-0.3
DFE	Dawson Falls	1.17	32	Pn	Pn	10 47 57.1	-0.3
TUWZ	Tuamarina	1.20	157	PN	Pn	10 47 57.8	+0.2
TUWZ				SN	Sn	10 48 18.4	-1.3
TUWZ				AML	AML	10 48 19.4	
TUWZ	Tuamarina	1.20	157	Pn	Pn	10 47 57.8	+0.2
TUWZ				Sn	Sn	10 48 18.4	-1.3
NEZ	North Egmont	1.21	30	PN	Pn	10 47 57.5	-0.3
NEZ	North Egmont	1.21	30	Pn	Pn	10 47 57.5	-0.3
PKE	Pukeiti	1.24	25	⇓PN	Pn	10 47 57.8	-0.2
PKE				SN	Sn	10 48 20.1	-0.2
PKE	Pukeiti	1.24	25	⇓Pn	Pn	10 47 57.8	-0.2
PKE				Sn	Sn	10 48 20.1	-0.2
DREZ	Durham Road	1.32	31	PN	Pn	10 47 58.5	-0.1
DREZ	Durham Road	1.32	31	Pn	Pn	10 47 58.5	-0.1
RAEZ	Rainy Point	1.33	39	PN	Pn	10 47 58.7	0.0
RAEZ	Rainy Point	1.33	39	Pn	Pn	10 47 58.7	0.0
KIW	Kapiti Island	1.33	114	PN	Pn	10 47 58.7	+0.1
KIW				AML	AML	10 48 20.9	
KIW				AML	AML	10 48 21.5	
KIW	Kapiti Island	1.33	114	Pn	Pn	10 47 58.8	+0.1
WAZ	Wanganui	1.40	67	⇓PN	Pn	10 47 59.5	+0.1
WAZ	Wanganui	1.40	67	⇓Pn	Pn	10 47 59.5	+0.1
SNZO	South Karori	1.44	133	PN	Pn	10 47 59.9	+0.2
SNZO				SN	Sn	10 48 21.8	-1.7
SNZO				AML	AML	10 48 23.5	
SNZO	South Karori	1.44	133	Pn	Pn	10 47 59.9	+0.2
SNZO				Sn	Sn	10 48 21.8	-1.7
BSWZ	Blackbirch Sta	1.45	163	⇑PN	Pn	10 48 00.1	+0.3
BSWZ				AML	AML	10 48 23.2	
BSWZ				AML	AML	10 48 23.9	
BSWZ	Blackbirch Sta	1.45	163	⇑Pn	Pn	10 48 00.1	+0.3
WEL	Wellington	1.46	132	PN	Pn	10 48 00.1	+0.2
WEL	Wellington	1.46	132	Pn	Pn	10 48 00.1	+0.2
MHEZ	Mangahewa	1.47	32	PN	Pn	10 48 00.1	0.0
MHEZ				SN	Sn	10 48 24.3	+0.4
MHEZ	Mangahewa	1.47	32	Pn	Pn	10 48 00.1	0.0
MHEZ				Sn	Sn	10 48 24.3	+0.4
THZ	Tophouse	1.47	192	PN	Pn	10 47 59.7	-0.4
THZ				SN	Sn	10 48 22.4	-1.8
THZ	Tophouse	1.47	192	Pn	Pn	10 47 59.7	-0.4
THZ				Sn	Sn	10 48 22.4	-1.8
OGWZ	Otaki Gorge	1.50	110	PN	Pn	10 48 00.4	+0.1
OGWZ	Otaki Gorge	1.50	110	Pn	Pn	10 48 00.4	+0.1
CAW	Cannon Point	1.55	121	⇓PN	Pn	10 48 00.8	0.0
CAW				AML	AML	10 48 24.5	
CAW				AML	AML	10 48 25.9	
CAW	Cannon Point	1.55	121	⇓Pn	Pn	10 48 00.8	0.0
CMWZ	Cape Campbell	1.58	155	SN	Sn	10 48 25.9	0.0
CMWZ				AML	AML	10 48 30.2	
CMWZ	Cape Campbell	1.58	155	Sn	Sn	10 48 25.9	0.0
BHW	Baring Head	1.60	133	PN	Pn	10 48 01.2	0.0
BHW				AML	AML	10 48 24.7	
BHW				AML	AML	10 48 24.7	
BHW	Baring Head	1.60	133	Pn	Pn	10 48 01.2	0.0
VRZ	Vera Road	1.64	43	PN	Pn	10 48 00.8	-0.8
VRZ				SN	Sn	10 48 25.7	-1.2
VRZ	Vera Road	1.64	43	Pn	Pn	10 48 00.8	-0.8
VRZ				Sn	Sn	10 48 25.7	-1.2
MRZ	Mangatainoka R	1.76	102	⇓PN	Pn	10 48 02.7	-0.3
MRZ				AML	AML	10 48 27.7	
MRZ				AML	AML	10 48 29.6	
MRZ	Mangatainoka R	1.76	102	⇓Pn	Pn	10 48 02.7	-0.3
HOWZ	Holdsworth Sta	1.77	110	⇓PN	Pn	10 48 02.9	-0.2
HOWZ	Holdsworth Sta	1.77	110	⇓Pn	Pn	10 48 02.9	-0.2
MSWZ	Moikau Station	1.83	127	PN	Pn	10 48 03.5	-0.1
MSWZ				SN	Sn	10 48 28.3	-2.2
MSWZ				AML	AML	10 48 29.6	
MSWZ	Moikau Station	1.83	127	Pn	Pn	10 48 03.5	-0.1
MSWZ				Sn	Sn	10 48 28.3	-2.2
PKVZ	Pokaka	1.88	57	PN	Pn	10 48 03.6	-0.7
PKVZ	Pokaka	1.88	57	Pn	Pn	10 48 03.6	-0.7
POWZ	Post Office Ro	1.88	93	PN	Pn	10 48 03.8	-0.4
POWZ	Post Office Ro	1.88	93	Pn	Pn	10 48 03.8	-0.4
MTVZ	Mangateitei	1.91	61	PN	Pn	10 48 03.9	-0.7
MTVZ	Mangateitei	1.91	61	Pn	Pn	10 48 03.9	-0.7
PLWZ	Palliser	1.93	131	PN	Pn	10 48 04.4	-0.3
PLWZ	Palliser	1.93	131	Pn	Pn	10 48 04.4	-0.3
TRVZ	Turoa	2.00	60	PN	Pn	10 48 04.8	-1.1
TRVZ	Turoa	2.00	60	Pn	Pn	10 48 04.8	-1.1
TIWZ	Tintock	2.01	104	⇓PN	Pn	10 48 05.4	-0.2
TIWZ	Tintock	2.01	104	⇓Pn	Pn	10 48 05.5	-0.2
WNVZ	Wahianoa	2.02	61	PN	Pn	10 48 05.0	-1.0
WNVZ	Wahianoa	2.02	61	Pn	Pn	10 48 05.0	-1.0
DRZ	Dome Shelter	2.02	60	PN	Pn	10 48 05.5	-0.7
DRZ	Dome Shelter	2.02	60	Pn	Pn	10 48 05.5	-0.7
FWVZ	Far West T-bar	2.03	59	PN	Pn	10 48 05.0	-1.2
FWVZ	Far West T-bar	2.03	59	Pn	Pn	10 48 05.0	-1.2
TSZ	Takapari Road	2.04	83	⇓PN	Pn	10 48 05.4	-0.7
TSZ				AML	AML	10 48 35.5	
TSZ				AML	AML	10 48 36.7	
TSZ	Takapari Road	2.04	83	⇓Pn	Pn	10 48 05.4	-0.7
WPVZ	Whakapapa	2.05	58	PN	Pn	10 48 05.2	-1.1
WPVZ	Whakapapa	2.05	58	Pn	Pn	10 48 05.2	-1.1
TWVZ	Taurewa	2.06	53	PN	Pn	10 48 05.2	-1.2
TWVZ	Taurewa	2.06	53	Pn	Pn	10 48 05.2	-1.2
MOVZ	Moawhango	2.09	65	⇓PN	Pn	10 48 05.2	-1.4
MOVZ	Moawhango	2.09	65	⇓Pn	Pn	10 48 05.2	-1.4
TUVZ	Tukino	2.09	60	PN	Pn	10 48 05.8	-0.9
TUVZ	Tukino	2.09	60	Pn	Pn	10 48 05.8	-0.9
TRWZ	Traveller	2.10	122	PN	Pn	10 48 06.4	-0.2
TRWZ				AML	AML	10 48 34.0	
TRWZ				AML	AML	10 48 34.4	
TRWZ	Traveller	2.10	122	Pn	Pn	10 48 06.4	-0.2
KHZ	Kahutara	2.10	175	PN	Pn	10 48 06.2	-0.4
KHZ				AML	AML	10 48 07.2	
KHZ				AML	AML	10 48 07.2	
KHZ	Kahutara	2.10	175	Pn	Pn	10 48 06.2	-0.4
NGZ	Ngauruhoe	2.10	58	PN	Pn	10 48 05.9	-1.0
NGZ	Ngauruhoe	2.10	58	Pn	Pn	10 48 05.9	-1.0
TMWZ	Te Maipa	2.11	113	PN	Pn	10 48 06.5	-0.2
TMWZ	Te Maipa	2.11	113	Pn	Pn	10 48 06.5	-0.2
WTVZ	West Tongariro	2.13	56	PN	Pn	10 48 06.1	-1.0
WTVZ	West Tongariro	2.13	56	Pn	Pn	10 48 06.1	-1.0
OTVZ	Oturere	2.15	58	PN	Pn	10 48 06.4	-1.0
OTVZ	Oturere	2.15	58	Pn	Pn	10 48 06.5	-1.0
HIZ	Hauiti	2.17	34	⇓PN	Pn	10 48 06.3	-1.1
HIZ	Hauiti	2.17	34	⇓Pn	Pn	10 48 06.3	-1.1
KRVZ	Karewarewa	2.17	56	PN	Pn	10 48 06.5	-1.2
KRVZ	Karewarewa	2.17	56	Pn	Pn	10 48 06.5	-1.2
DVHZ	Dannevirke	2.18	90	PN	Pn	10 48 06.8	-0.8
DVHZ	Dannevirke	2.18	90	Pn	Pn	10 48 06.8	-0.8
PNHZ	Pukenui	2.25	80	PN	Pn	10 48 07.5	-0.9
PNHZ	Pukenui	2.25	80	Pn	Pn	10 48 07.5	-0.9
BFZ	Birch Farm	2.26	100	PN	Pn	10 48 08.1	-0.4
BFZ	Birch Farm	2.26	100	Pn	Pn	10 48 08.1	-0.4
BHHZ	Black Hill Sta	2.27	69	⇓PN	Pn	10 48 07.2	-1.5
BHHZ	Black Hill Sta	2.27	69	⇓Pn	Pn	10 48 07.2	-1.5
KATZ	Kakaramea	2.28	55	PN	Pn	10 48 07.9	-1.0
KATZ	Kakaramea	2.28	55	Pn	Pn	10 48 07.9	-1.0
WPHZ	Waipukurau	2.41	85	PN	Pn	10 48 09.5	-0.7
WPHZ	Waipukurau	2.41	85	Pn	Pn	10 48 09.5	-0.7
PRHZ	Porangahau	2.54	90	PN	Pn	10 48 11.2	-0.5
PRHZ	Porangahau	2.54	90	Pn	Pn	10 48 11.2	-0.5
LTZ	Lake Taylor	2.58	197	⇑PN	Pn	10 48 11.2	-1.0
LTZ	Lake Taylor	2.58	197	⇑Pn	Pn	10 48 11.2	-1.0
BKZ	Black Stump Fm	2.71	66	PN	Pn	10 48 12.0	-1.8
BKZ				AML	AML	10 48 46.5	
BKZ				AML	AML	10 48 47.1	
BKZ	Black Stump Fm	2.71	66	Pn	Pn	10 48 12.0	-1.8
PXZ	Pawanui	2.73	85	PN	Pn	10 48 13.2	-0.8
PXZ				AML	AML	10 48 50.7	
PXZ				AML	AML	10 48 50.9	
PXZ				AML	AML	10 48 50.9	
PXZ				AML	AML	10 49 19.9	
PXZ	Pawanui	2.73	85	Pn	Pn	10 48 13.2	-0.8
MCHZ	McNeill Hill	2.75	72	PN	Pn	10 48 13.5	-0.8
MCHZ	McNeill Hill	2.75	72	Pn	Pn	10 48 13.5	-0.8
KAHZ	Kahuranaki	2.78	80	PN	Pn	10 48 13.9	-0.8
KAHZ	Kahuranaki	2.78	80	Pn	Pn	10 48 13.9	-0.8
NMHZ	Naumai	2.96	67	PN	Pn	10 48 16.0	-0.9
NMHZ	Naumai	2.96	67	Pn	Pn	10 48 16.0	-0.9
TOZ	Tahuroa Road	3.10	34	PN	Pn	10 48 16.8	-1.7
TOZ	Tahuroa Road	3.10	34	Pn	Pn	10 48 16.8	-1.7
RAHZ	Arahi	3.23	65	PN	Pn	10 48 18.5	-1.7
RAHZ	Arahi	3.23	65	Pn	Pn	10 48 18.5	-1.7
CRLZ	Canterbury Las	3.29	189	⇑PN	Pn	10 48 18.6	-2.2
CRLZ	Canterbury Las	3.29	189	⇑Pn	Pn	10 48 18.6	-2.2
WVZ	Waitaha Valley	3.36	214	⇑PN	Pn	10 48 19.9	-1.8
WVZ	Waitaha Valley	3.36	214	⇑Pn	Pn	10 48 19.9	-1.8
MQZ	McQueen's Vall	3.42	188	PN	Pn	10 48 19.8	-2.6
MQZ	McQueen's Vall	3.42	188	Pn	Pn	10 48 19.8	-2.6
MKAZ	Moumakai	3.52	25	PN	Pn	10 48 25.2	+1.4
MKAZ	Moumakai	3.52	25	Pn	Pn	10 48 25.2	+1.4
URZ	Urewera	3.59	56	PN	Pn	10 48 21.8	-2.9
URZ				AML	AML	10 49 03.5	
URZ				AML	AML	10 49 05.4	
URZ	Urewera	3.59	56	Pn	Pn	10 48 21.8	-2.9
KNZ	Kokohu	3.61	70	PN	Pn	10 48 22.8	-2.0
KNZ	Kokohu	3.61	70	Pn	Pn	10 48 22.8	-2.0
MHGZ	Mahia Peninsul	3.73	73	PN	Pn	10 48 24.9	-1.5
MHGZ	Mahia Peninsul	3.73	73	Pn	Pn	10 48 24.9	-1.5
RPZ	Rata Peaks	3.79	206	PN	Pn	10 48 24.7	-2.4
RPZ	Rata Peaks	3.79	206	Pn	Pn	10 48 24.7	-2.4
MWZ	Matawai	3.82	60	PN	Pn	10 48 24.9	-2.8
MWZ				AML	AML	10 49 11.7	
MWZ				AML	AML	10 49 15.1	
MWZ	Matawai	3.82	60	Pn	Pn	10 48 24.9	-2.8
KUZ	Kuaotunu	4.04	29	PN	Pn	10 48 31.2	+0.9
KUZ	Kuaotunu	4.04	29	Pn	Pn	10 48 31.2	+0.9
CNGZ	Carnagh Statio	4.21	66	PN	Pn	10 48 30.6	-2.0
CNGZ	Carnagh Statio	4.21	66	Pn	Pn	10 48 30.6	-2.0

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FOZ	Fox Glacier	4.22	219	PN	Pn	10 48 29.0	-3.6
FOZ	Fox Glacier	4.22	219	Pn	Pn	10 48 29.0	-3.6
PUZ	Puketiti	4.45	61	AML	AML	10 49 23.2	
PUZ				AML	AML	10 49 26.6	
LBZ	Lake Benmore	4.67	209	PN	Pn	10 48 35.5	-3.1
LBZ	Lake Benmore	4.67	209	Pn	Pn	10 48 35.5	-3.1
JCZ	Jackson Bay	5.05	221	PN	Pn	10 48 40.8	-2.7
JCZ	Jackson Bay	5.05	221	Pn	Pn	10 48 40.8	-2.7
ODZ	Otahua Downs	5.11	202	PN	Pn	10 48 41.6	-2.6
ODZ	Otahua Downs	5.11	202	Pn	Pn	10 48 41.6	-2.6
WKZ	Wanaka	5.51	214	PN	Pn	10 48 45.6	-3.8
WKZ	Wanaka	5.51	214	Pn	Pn	10 48 45.6	-3.8
EAZ	Earnscleugh	5.72	210	PN	Pn	10 48 48.4	-3.8
EAZ	Earnscleugh	5.72	210	Pn	Pn	10 48 48.4	-3.8
MSZ	Milford Sound	5.89	221	PN	Pn	10 48 51.8	-2.6
MSZ	Milford Sound	5.89	221	Pn	Pn	10 48 51.8	-2.6
TUZ	Tuapeka	6.24	204	⇑PN	Pn	10 48 56.1	-2.9
TUZ	Tuapeka	6.24	204	⇑Pn	Pn	10 48 56.1	-2.9
MLZ	Mavora Lakes	6.28	215	PN	Pn	10 48 57.2	-2.4
MLZ	Mavora Lakes	6.28	215	Pn	Pn	10 48 57.2	-2.4
WHZ	Wether Hill Ro	6.81	213	PN	Pn	10 49 02.6	-4.0
WHZ	Wether Hill Ro	6.81	213	Pn	Pn	10 49 02.6	-4.0
DCZ	Deep Cove	6.85	219	PN	Pn	10 49 03.5	-3.6
DCZ	Deep Cove	6.85	219	Pn	Pn	10 49 03.5	-3.6

*NSSC **01** 10:54:31.9±1.8, 37°.51N×38°.24E, h14km±52km, MD1.7, ML2.1*
*CSEM **01** 10:54:37.5±0.6, 36°.72N×38°.31E, h8km, ML2.1, Error ellipse: s-maj=17.8km s-min=12.6km az=59.0*
*DDA **01** 10:54:43.9, 37°.17N×38°.64E, h7km, MD2.7*
ISC 01 10:54:37.5±1.3**, 36°.76N**±0°.05×**38°.33E**±0°.05**, h17**km±10km**, n18, σ1ˢ25**/23**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.71	357	*i* P	Pb	10 54 52.2	+0.7
ATAB				*i* S	Sg	10 54 59.0	-1.9
ATAB	Bozova	0.71	357	*i* P	Pb	10 54 52.2	+0.7
ATAB				*i* S	Sg	10 54 59.0	-1.9
KUZU	Kuzuini	1.01	271	*i* P	Pn	10 55 08.4	+11
KUZU				*i* S	Sn	10 55 27.7	+17
KUZU	Kuzuini	1.01	271	*i* P	Pn	10 55 08.4	+11
KUZU				*i* S	Sn	10 55 27.7	+17
AYKD	Aykdinkavak	1.39	299	*i* P	Pg	10 55 12.0	+7.7
AYKD				*i* S	Sg	10 55 32.5	+10
SFNV	Sufian	1.47	103	*e*P	Pb	10 55 04.7	+0.2
SFNV				*e*S	Sg	10 55 25.3	+0.3
SFNV				AML	AML	10 55 30.6	
	comp=N,64nm,0.5s						
SFNV				AML	AML	10 55 32.1	
	comp=Z,30nm,0.5s						
SFNV	Sufian	1.47	103	*e*P	Pb	10 55 04.7	+0.2
	SNR=51						
SFNV				*e*S	Sg	10 55 25.3	+0.3
	comp=Z,30nm,0.5s,SNR=49						
AKCD	Akcadag	1.57	348	*i* P	Pg	10 55 08.5	+0.8
AKCD				*i* S	Sn	10 55 25.1	+0.3
AKCD	Akcadag	1.57	348	*i* P	Pg	10 55 08.5	+0.8
AKCD				*i* S	Sn	10 55 25.1	+0.3
BTCH	Batrach	1.68	245	*e*P	Pn	10 55 06.3	+0.1
BTCH				AML	AML	10 56 00.0	
	comp=Z,10nm,0.4s						
BTCH	Batrach	1.68	245	*e*P	Pn	10 55 06.3	+0.1
	SNR=51						
KBSD	Kabsdagh	1.79	82	*e*P	Pn	10 55 03.9	-3.8
KBSD				AML	AML	10 55 28.1	
	comp=Z,36nm,0.6s						
KBSD	Kabsdagh	1.79	82	*e*P	Pn	10 55 03.9	-3.8
	SNR=51						
ELZG	Elazig	1.81	16	*i* P	Pn	10 55 09.3	+1.2
ELZG				*i* S	Sn	10 55 28.2	-2.6
ELZG	Elazig	1.81	16	*i* P	Pn	10 55 09.3	+1.2
ELZG				*i* S	Sn	10 55 28.2	-2.6
MARD	Mardin	2.03	74	*i* P	Pg	10 55 21.4	+4.8
MARD				*i* S	Sn	10 55 36.2	-0.1
MZRK	Al-Mazaregh	2.09	116	*e*P	Pn	10 55 12.1	+0.2
MZRK				*e*S	Sg	10 55 43.5	-1.3
MZRK				AML	AML	10 55 54.6	
	comp=Z,13nm,0.4s						
MZRK	Al-Mazaregh	2.09	116	*e*P	Pn	10 55 12.1	+0.2
	SNR=51						
MZRK				*e*S	Sg	10 55 43.5	-1.3
	comp=Z,13nm,0.4s,SNR=49						

*CSEM **01** 11:07:23.6±0.3, 39°.87N×40°.47E, h2km, MD3.1, Error ellipse: s-maj=9.1km s-min=7.6km az=6.0*
*ISK **01** 11:07:23.1, 39°.91N×40°.49E, h4km, MD2.9*
*DDA **01** 11:07:24.2, 39°.98N×40°.51E, h5km, MD3.1*
ISC 01 11:07:23.6±1.2**, 39°.87N**±0°.03×**40°.56E**±0°.03**, h5**km±11km**, n26, σ1ˢ16**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.15	341	*i* P	Pg	11 07 25.6	-1.1
KOPT				*i* S	Sg	11 07 30.1	+1.2
KOPT	Kop Dagi	0.15	341	*i* P	Pg	11 07 25.7	-1.1
KOPT				*i* S	Sg	11 07 30.1	+1.2
BAYT	Ayd˜–ntepe-Bay	0.61	328	*e*PG	Pg	11 07 34.1	-1.3
BAYT				*e*SG	Sg	11 07 43.0	-0.3
BAYT	Ayd˜–ntepe-Bay	0.61	328	*e*Pg	Pg	11 07 34.1	-1.3
BAYT				*e*Sg	Sg	11 07 43.0	-0.3
EZM	Erzurum	0.62	87	*e*PG	Pb	11 07 36.9	-0.2
ERZM	Erzurum	0.62	87	*i* P	Pb	11 07 37.2	+0.1
ERZM				*i* S	Sn	11 07 49.2	-0.6
ERZM	Erzurum	0.62	87	*i* P	Pb	11 07 37.2	+0.1
ERZN	Erzincan	0.71	246	*e*PG	Pg	11 07 36.7	-0.5
BNGB	Bingˆ¶l	0.89	174	*e*PG	Pb	11 07 41.4	-0.1
EZC	Erzincan	0.94	263	*e*Pg	Pg	11 07 36.7	-4.9
BINT	Bingol	1.00	183	*e*Pg	Pg	11 07 41.4	-1.3
GUMT	Gumushane	1.01	306	*e*PG	Pg	11 07 42.0	-1.1
GUMT	Gumushane	1.01	306	*e*Pg	Pg	11 07 42.0	-1.1
KELT	Kelkit	1.04	286	*i* P	Pg	11 07 43.0	-0.5
KELT				*i* S	Sn	11 08 00.2	+0.1
KELT	Kelkit	1.04	286	*i* P	Pg	11 07 43.0	-0.5
PTK	Pertek	1.33	223	*e*PN	Pn	11 07 49.0	-0.1
PTK	Pertek	1.33	223	*e*Pn	Pn	11 07 49.0	-0.1
DDEM	Demirkent	1.36	41	*i* P	Pg	11 07 49.8	0.0
DDEM	Demirkent	1.36	41	*i* P	Pg	11 07 49.8	0.0
DAGI	Agillar	1.59	40	*i* P	Pn	11 07 52.6	+0.1
ILIC	ilic-Erzincan	1.59	255	*e*PN	Pn	11 07 52.3	-0.3
ILIC	ilic-Erzincan	1.59	255	*e*Pn	Pn	11 07 52.3	-0.3
BCA	Borcka	1.77	27	*e*PN	Pn	11 07 55.1	+0.2
BCA	Borcka	1.77	27	*e*Pn	Pn	11 07 55.1	+0.2
SUSE	Susehri	1.84	281	*i* P	Pb	11 07 57.6	-0.3
SUSE				*i* S	Sg	11 08 27.6	+4.8
SUSE	Susehri	1.84	281	*i* P	Pb	11 07 57.6	-0.3

*DDA **01** 11:10:09.9, 38°.30N×29°.70E, h7km, MD2.9*
*ISK **01** 11:10:09.6, 38°.29N×29°.69E, h5km, MD2.6*
*ISCJB **01** 11:10:10.4±0.8, 38°.30N±0°.04×29°.70E±0°.05, h6km±6km, Error ellipse: s-maj=6.9km s-min=6.3km az=31.4*
*CSEM **01** 11:10:10.2±0.3, 38°.28N×29°.70E, h5km, MD2.6, Error ellipse: s-maj=5.7km s-min=4.9km az=123.0*
ISC 01 11:10:09.7±1.1**, 38°.28N**±0°.03×**29°.71E**±0°.04**, h8**km±8km**, n22, σ0ˢ76**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHL	Karahalli	0.15	285	*e*PG	Pg	11 10 12.8	-0.2
KHL				*e*SG	Sg	11 10 15.2	-0.1
KHL	Karahalli	0.15	285	*e*Pg	Pg	11 10 12.8	-0.2
KHL				*e*Sg	Sg	11 10 15.2	-0.1
KHAL	Karahalli	0.19	297	*i* P	Pg	11 10 14.1	+0.4
KHAL				*i* S	Sg	11 10 17.1	+0.7
KHAL	Karahalli	0.19	297	*i* P	Pg	11 10 14.1	+0.4
KHAL				*i* S	Sg	11 10 17.1	+0.7
SHUT	Suhut-Afyon	0.71	68	*e*PG	Pb	11 10 24.8	+0.3
SHUT	Suhut-Afyon	0.71	68	*e*Pg	Pb	11 10 24.8	+0.3
DNZL	Cakiroluk	0.79	222	*i* P	Pb	11 10 26.1	+0.3
DNZL				*i* S	Sn	11 10 41.3	+2.0
DNZL	Cakiroluk	0.79	222	*i* P	Pb	11 10 26.1	+0.3
GDZ	Gediz	0.82	348	*i* P	Pb	11 10 25.9	-0.4
GDZ				*i* S	Sb	11 10 38.0	+0.4
GDZ	Gediz	0.82	348	*i* P	Pb	11 10 25.9	-0.4
ALT	Altintas	0.83	22	*e*PG	Pn	11 10 26.8	-1.0
ALT	Altintas	0.83	22	*e*Pg	Pn	11 10 26.8	-1.0
KULA	Kula-Manisa	0.85	286	*e*PG	Pn	11 10 27.0	-1.1
KULA	Kula-Manisa	0.85	286	*e*Pg	Pn	11 10 27.0	-1.1
MANT	Manisa	0.93	283	*i* P	Pn	11 10 29.2	0.0
MANT				*i* S	Sb	11 10 39.9	-0.8
MANT	Manisa	0.93	283	*i* P	Pn	11 10 29.2	0.0
MANT				*i* S	Sb	11 10 39.9	-0.8
GOLH	Golhisar	1.05	186	*i* P	Pg	11 10 29.1	-0.8
GOLH				*i* S	Sn	11 10 46.6	+0.9
GOLH	Golhisar	1.05	186	*i* P	Pg	11 10 29.1	-0.8
GOLH				*i* S	Sn	11 10 46.6	+0.9
TVSB	Tavsanli	1.18	351	*e*PN	Pn	11 10 33.2	+0.6
TVSB	Tavsanli	1.18	351	*e*Pn	Pn	11 10 33.2	+0.6
DURS	Dursunbey	1.63	324	*i* P	Pb	11 10 39.3	-0.7
DURS	Dursunbey	1.63	324	*i* P	Pb	11 10 39.3	-0.7

*NEIC **01** 11:21:26.0, 18°.35N×93°.03W, h132km, MD4.0(MEX), After MEX.*
MEX 01 11:21:26.0±0.4**, 18°.35N×93°.03W, h132**km±8km**, MD4.0, Bay of Campeche**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		1.56	183	*e*P	Pn	11 21 53.7	-1.3
TGIG				*i* S	Sn	11 22 15.2	-1.9
TGIG		1.56	183	*e*P	Pn	11 21 53.7	-1.3
TGIG				*i* S	Sn	11 22 15.2	-1.9
SCIG	Sabancuy	1.86	70	*e*P	Pn	11 21 56.8	-1.6
SCIG				*i* S	Sn	11 22 21.4	-1.7
SCIG	Sabancuy	1.86	70	*e*P	Pn	11 21 56.8	-1.6
SCIG				*i* S	Sn	11 22 21.4	-1.7
CCIG	Comitan	2.22	157	*e*P	Pn	11 22 02.0	-1.0
CCIG				*i* S	Sn	11 22 29.2	-2.3
CCIG	Comitan	2.22	157	*e*P	Pn	11 22 02.0	-1.0
CCIG				*i* S	Sn	11 22 29.2	-2.3
PCIG		2.63	184	*i* P	Pn	11 22 06.7	-1.3
PCIG				*i* S	Sn	11 22 38.6	-1.6
PCIG		2.63	184	*i* P	Pn	11 22 06.7	-1.3
PCIG				*i* S	Sn	11 22 38.6	-1.6
LVIG	Laguna Verde	3.48	294	*i* P	Pn	11 22 18.1	-0.9
LVIG				*i* S	Sn	11 22 58.0	-2.0
LVIG	Laguna Verde	3.48	294	*i* P	Pn	11 22 18.1	-0.9
LVIG				*i* S	Sn	11 22 58.0	-2.0
TEIG	Tepich	4.87	67	*i* P	Pn	11 22 36.8	-0.5
TEIG				*i* S	Sn	11 23 30.1	-2.8
TEIG	Tepich	4.87	67	*i* P	Pn	11 22 36.8	-0.5
TEIG				*i* S	Sn	11 23 30.1	-2.8

*ISCJB **01** 11:32:48.3±2.3, 38°.1N±0°.2×38°.61E±0°.06, h6km±11km, Error ellipse: s-maj=26.1km s-min=6.7km az=169.0*
*CSEM **01** 11:32:49.8±0.6, 38°.26N×38°.57E, h15km, MD2.5, Error ellipse: s-maj=16.5km s-min=3.9km az=165.0*
*DDA **01** 11:32:50.3, 38°.31N×38°.57E, h7km, MD2.4*
*ISK **01** 11:32:50.7, 38°.46N×38°.47E, h5km, MD2.5*
ISC 01 11:32:50.4±2.5**, 38°.2N**±0°.2×**38°.59E**±0°.06**, h10**km±11km**, n10, σ0ˢ57**/18**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MYA	Malataya	0.15	304	*e*PG	Pg	11 32 53.7	-0.2
MYA				*e*SG	Sg	11 32 56.5	+0.2
MYA	Malataya	0.15	304	*e*Pg	Pg	11 32 53.7	-0.2
MYA				*e*Sg	Sg	11 32 56.5	+0.2
ELZG	Elazig	0.40	51	*i* P	Pg	11 32 58.0	-0.5
ELZG				*i* S	Sg	11 33 03.8	0.0
ELZG	Elazig	0.40	51	*i* P	Pg	11 32 58.0	-0.5
ELZG				*i* S	Sg	11 33 03.8	0.0
AKCD	Akcadag	0.53	276	*i* P	Pg	11 33 00.4	-0.3
AKCD				*i* S	Sg	11 33 08.3	+0.6
AKCD	Akcadag	0.53	276	*i* P	Pg	11 33 00.4	-0.3
AKCD				*i* S	Sg	11 33 08.3	+0.6
PTK	Pertek	0.91	44	*e*PG	Pg	11 33 07.6	-0.3
PTK				*e*SG	Sb	11 33 21.2	+0.6
PTK	Pertek	0.91	44	*e*Pg	Pg	11 33 07.6	-0.3
PTK				*e*Sg	Sb	11 33 21.2	+0.6
DARE	Darende-Malaty	0.93	291	*e*PG	Pg	11 33 07.3	-1.0
DARE	Darende-Malaty	0.93	291	*e*Pg	Pg	11 33 07.3	-1.0

WEL 01 11:34:46.7±0.3**, 38°.58S×175°.73E, h175**km±2km**, ML3.7**/12**, 17C, Error ellipse: s-maj=1.6km s-min=1.6km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ALRZ	Allen Road	0.48	89	PN	Pn	11 35 10.5	-0.3
KRVZ	Karewarewa	0.52	188	PN	Pn	11 35 10.8	-0.3
WTVZ	West Tongariro	0.55	192	⇑PN	Pn	11 35 11.1	-0.2
WTVZ				SN	Sn	11 35 30.4	+0.1
OTVZ	Oturere	0.59	185	PN	Pn	11 35 11.3	-0.2
NGZ	Ngauruhoe	0.61	190	⇑PN	Pn	11 35 11.5	-0.1
WPVZ	Whakapapa	0.64	193	PN	Pn	11 35 11.4	-0.3
HIZ	Hauiti	0.69	275	⇑PN	Pn	11 35 11.8	0.0
HIZ				SN	Sn	11 35 30.6	-0.5
FWVZ	Far West T-bar	0.69	192	PN	Pn	11 35 11.8	-0.4
TUVZ	Tukino	0.69	185	⇑PN	Pn	11 35 12.0	0.0
TRVZ	Turoa	0.74	191	PN	Pn	11 35 12.3	-0.1
WNVZ	Wahianoa	0.76	188	⇑PN	Pn	11 35 12.3	-0.1
PKVZ	Pokaka	0.77	203	PN	Pn	11 35 12.2	-0.2
MOVZ	Moawhango	0.83	179	⇑PN	Pn	11 35 12.4	-0.4
MTVZ	Mangateitei	0.83	194	PN	Pn	11 35 12.6	-0.1
BKZ	Black Stump Fm	0.84	135	⇑PN	Pn	11 35 12.6	-0.2
BKZ				AML	AML	11 35 30.6	
BKZ				AML	AML	11 35 32.2	
TOZ	Tahuroa Road	0.86	348	PN	Pn	11 35 13.1	+0.2
VRZ	Vera Road	0.94	234	PN	Pn	11 35 13.4	0.0
VRZ				SN	Sn	11 35 33.5	-0.5
BHHZ	Black Hill Sta	0.95	164	⇑PN	Pn	11 35 13.2	-0.3
NMHZ	Naumai	0.99	122	PN	Pn	11 35 14.5	+0.7
NMHZ				SN	Sn	11 35 34.2	-0.6
RAHZ	Arahi	1.11	108	PN	Pn	11 35 15.1	+0.4
RAHZ				SN	Sn	11 35 35.1	-1.4
URZ	Urewera	1.13	74	⇑PN	Pn	11 35 14.3	-0.6
URZ				AML	AML	11 35 34.0	
URZ				AML	AML	11 35 35.6	
MCHZ	McNeill Hill	1.15	139	⇑PN	Pn	11 35 15.8	+0.8
MCHZ				SN	Sn	11 35 36.3	-0.7
RAEZ	Rainy Point	1.26	235	PN	Pn	11 35 16.5	+0.5
WAZ	Wanganui	1.31	206	PN	Pn	11 35 16.4	-0.1
PNHZ	Pukenui	1.38	165	⇑PN	Pn	11 35 17.0	-0.2
MWZ	Matawai	1.43	81	PN	Pn	11 35 17.3	-0.3
MWZ				AML	AML	11 35 39.4	
MWZ				AML	AML	11 35 39.4	
MWZ				AML	AML	11 35 39.7	
MWZ				AML	AML	11 35 39.7	
DFE	Dawson Falls	1.48	239	PN	Pn	11 35 18.1	0.0
TSZ	Takapari Road	1.49	173	⇑PN	Pn	11 35 18.0	-0.2
TSZ				AML	AML	11 35 18.1	
TSZ				AML	AML	11 35 42.1	
PKE	Pukeiti	1.50	245	PN	Pn	11 35 18.4	+0.3
KAHZ	Kahuranaki	1.51	144	PN	Pn	11 35 18.7	+0.4
KNZ	Kokohu	1.58	107	PN	Pn	11 35 19.1	+0.2
WPHZ	Waipukurau	1.58	160	⇑PN	Pn	11 35 19.0	0.0
PXZ	Pawanui	1.70	149	⇑PN	Pn	11 35 20.1	0.0
PXZ				AML	AML	11 35 46.9	
PXZ				AML	AML	11 35 46.9	
PXZ				AML	AML	11 35 51.2	
PXZ				AML	AML	11 35 51.2	
DVHZ	Dannevirke	1.75	169	PN	Pn	11 35 20.2	-0.6
MHGZ	Mahia Peninsul	1.79	109	PN	Pn	11 35 21.7	+0.6
POWZ	Post Office Ro	1.81	179	PN	Pn	11 35 20.8	-0.6
PRHZ	Porangahau	1.83	158	PN	Pn	11 35 21.5	0.0
CNGZ	Carnagh Statio	1.94	88	PN	Pn	11 35 23.3	+0.6
MRZ	Mangatainoka R	2.09	183	⇑PN	Pn	11 35 23.4	-0.9
MRZ				AML	AML	11 35 52.3	
MRZ				AML	AML	11 35 52.3	
BFZ	Birch Farm	2.14	169	PN	Pn	11 35 24.2	-0.7
TIWZ	Tintock	2.20	177	PN	Pn	11 35 24.9	-0.8
OGWZ	Otaki Gorge	2.28	191	PN	Pn	11 35 25.6	-0.8
HOWZ	Holdsworth Sta	2.33	184	PN	Pn	11 35 25.8	-1.2
KIW	Kapiti Island	2.37	195	PN	Pn	11 35 26.3	-1.2
CAW	Cannon Point	2.58	191	PN	Pn	11 35 28.5	-1.4
CAW				AML	AML	11 36 02.0	
CAW				AML	AML	11 36 02.6	
DUWZ	D'Urville Isla	2.63	212	PN	Pn	11 35 29.0	-1.6
WEL	Wellington	2.81	195	PN	Pn	11 35 31.1	-1.6
TRWZ	Traveller	2.82	181	PN	Pn	11 35 31.4	-1.4
TRWZ				AML	AML	11 36 07.2	
TRWZ				AML	AML	11 36 07.4	
SNZO	South Karori	2.84	196	PN	Pn	11 35 31.4	-1.7
SNZO				AML	AML	11 36 07.2	
SNZO				AML	AML	11 36 24.8	
MSWZ	Moikau Station	2.86	187	⇑PN	Pn	11 35 31.6	-1.7
MSWZ				AML	AML	11 36 07.0	
MSWZ				AML	AML	11 36 07.1	
TCW	Tory Channel	2.86	203	PN	Pn	11 35 31.9	-1.4
TCW				AML	AML	11 36 07.4	
TCW				AML	AML	11 36 08.9	
PLWZ	Palliser	3.01	187	PN	Pn	11 35 33.3	-2.0
TUWZ	Tuamarina	3.17	205	PN	Pn	11 35 35.2	-1.9
TUWZ				AML	AML	11 36 14.1	
TUWZ				AML	AML	11 36 14.4	
NNZ	Nelson	3.20	214	⇑PN	Pn	11 35 35.5	-1.9
QRZ	Quartz Range	3.34	227	PN	Pn	11 35 36.9	-2.4
BSWZ	Blackbirch Sta	3.44	204	PN	Pn	11 35 38.8	-1.7
THZ	Tophouse	3.85	213	PN	Pn	11 35 43.6	-2.1
KHZ	Kahutara	4.18	203	PN	Pn	11 35 48.2	-1.7
LTZ	Lake Taylor	4.96	211	PN	Pn	11 35 57.0	-3.0
MQZ	McQueen's Vall	5.63	203	PN	Pn	11 36 04.9	-3.7
ODZ	Otahua Downs	7.50	209	PN	Pn	11 36 30.0	-3.2

IDC 01 11:35:31.5±2.1**, 0°.95N×127°.46E, h0**km**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/21**, mbtmp3.4**/3**, Error ellipse: s-maj=161.6km s-min=24.9km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.83	162	P	P	11 40 25.9	+0.2
	1.0nm,0.7s,baz=341,slow=11,SNR=8.3						
ASAR	Alice Springs	25.25	166	P	P	11 40 59.4	-0.2
	0.7nm,0.7s,baz=354,slow=9.0,SNR=12						
MKAR	Makanchi Array	60.25	326	P	P	11 45 41.7	0.0
	0.2nm,0.6s,baz=144,slow=5.2,SNR=2.5						

IDC 01 11:36:25.1±1.9**, 1°.40N×128°.75E, h0**km**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/21**, mbtmp3.5**/4**, Error ellipse: s-maj=131.6km s-min=23.9km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.91	166	P	P	11 41 21.1	+0.9
	0.7nm,0.6s,baz=345,slow=11,SNR=5.5						
ASAR	Alice Springs	25.41	169	P	P	11 41 55.2	+0.6
	0.8nm,0.8s,baz=344,slow=11,SNR=6.8						
STKA	Stephens Creek	35.27	161	P	P	11 43 20.2	-1.5
	0.8nm,0.4s,baz=333,slow=11,SNR=4.0						
MKAR	Makanchi Array	60.61	325	P	P	11 46 37.8	0.0
	0.2nm,0.4s,baz=126,slow=7.4,SNR=3.1						

*ISK **01** 11:47:48.6, 37°.27N×28°.18E, h2km, MD2.5*
*ISCJB **01** 11:47:49.8±0.5, 37°.23N±0°.05×28°.20E±0°.04, h8km±7km, Error ellipse: s-maj=8.7km s-min=4.6km az=29.7*
*CSEM **01** 11:47:50.0±0.2, 37°.22N×28°.20E, h10km, MD2.5, Error ellipse: s-maj=6.1km s-min=4.0km az=29.0*
*DDA **01** 11:47:50.1, 37°.21N×28°.27E, h7km, MD2.8*
ISC 01 11:47:49.9±0.9**, 37°.22N**±0°.03×**28°.19E**±0°.03**, h10**km±7km**, n20, σ0ˢ47**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.11	139	*e*PG	Pg	11 47 52.5	-0.3
YER				*e*SG	Sg	11 47 55.3	+0.5
YER	Yerkesik	0.11	139	*e*Pg	Pg	11 47 52.5	-0.3
YER				*e*Sg	Sg	11 47 55.3	+0.5
MLSB	Milas	0.34	283	*e*PG	Pg	11 47 55.7	-1.0
MLSB	Milas	0.34	283	*e*Pg	Pg	11 47 55.7	-1.0
TURN	Turunc	0.48	136	*i* P	Pg	11 47 58.9	-0.4
TURN				*i* S	Sg	11 48 06.0	+0.4
TURN	Turunc	0.48	136	*i* P	Pg	11 47 58.9	-0.4
TURN				*i* S	Sg	11 48 06.0	+0.4
AYDN	Tasoluk	0.51	331	*i* P	Pg	11 47 59.9	+0.1
AYDN				*i* S	Sg	11 48 07.3	+0.8
AYDN	Tasoluk	0.51	331	*i* P	Pg	11 47 59.9	+0.1
AYDN				*i* S	Sg	11 48 07.3	+0.8
BODT	Bodrum	0.72	258	*e*PG	Pg	11 48 03.6	-0.3
BODT				*e*SG	Sb	11 48 14.5	0.0
BODT	Bodrum	0.72	258	*e*Pg	Pg	11 48 03.6	-0.3
BODT				*e*Sg	Sb	11 48 14.5	0.0
DNZL	Cakiroluk	0.83	55	*i* P	Pg	11 48 05.7	-0.3
DNZL				*i* S	Sg	11 48 16.7	0.0
DNZL	Cakiroluk	0.83	55	*i* P	Pg	11 48 05.7	-0.3
DNZL				*i* S	Sg	11 48 16.7	0.0
GCAM	G?zelcaml?	0.90	303	*i* P	Pn	11 48 09.1	+0.5
GCAM	G?zelcaml?	0.90	303	*i* P	Pn	11 48 09.1	+0.5
FETY	Fethiye	0.92	129	*e*PG	Pg	11 48 07.8	+0.1
FETY	Fethiye	0.92	129	*e*Pg	Pg	11 48 07.8	+0.1
KULA	Kula-Manisa	1.34	16	*e*PN	Pn	11 48 14.4	-0.4
KULA	Kula-Manisa	1.34	16	*e*Pn	Pn	11 48 14.4	-0.4
ELL	Elmali	1.45	108	*e*PN	Pb	11 48 17.0	-0.1
ELL	Elmali	1.45	108	*e*Pn	Pb	11 48 17.0	-0.1

IDC 01 11:58:20.3±10.0**, 56°.12S×27°.11W, h134**km±93km**, mb3.8**/5**, mb1 4.0**/5**, mb1mx3.7**/15**, mbtmp3.8**/5**, Error ellipse: s-maj=32.4km s-min=20.6km az=63.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	40.07	143	P	P	12 05 41.6	-0.1
	1.2nm,0.5s,baz=233,slow=6.8,SNR=8.4						
VNDA	Vanda	46.51	183	P	P	12 06 33.4	+0.1
	1.4nm,0.7s,baz=185,slow=6.2,SNR=11						
LPAZ	La Paz	50.45	305	P	P	12 07 04.7	-0.3
	6.2nm,0.6s,baz=153,slow=6.1,SNR=27						
TORD	Torodi Ar. Bea	73.09	29	P	P	12 09 35.7	+0.1
	0.8nm,0.4s,baz=201,slow=6.3,SNR=17						
TORD				pP	pP	12 10 03.3	-5.4
	0.8nm,0.6s,baz=197,slow=6.2,SNR=3.3						
ASAR	Alice Springs	98.91	162	P	P	12 11 44.3	-1.0
	0.4nm,0.7s,baz=187,slow=4.3,SNR=6.5						
YKA	Yellowknife Ar	136.25	318	PKP	PKPdf	12 17 24.0	-0.2
	0.3nm,0.4s,baz=130,slow=2.1,SNR=15						
ILAR	Eielson Array	150.19	312	PKPbc	PKPbc	12 17 53.5	-0.2
	2.4nm,0.7s,baz=124,slow=1.6,SNR=29						

KRSC 01 11:59:36.6±1.5**, 49°.51N×156°.24E, h5**km±5km**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.18	356	*e*P	Pg	11 59 57.4	-1.8
SKR				*i* S	Sg	12 00 13.3	-1.1
MIPR	Malaya Ipel'ka	2.79	7	P	Pn	12 00 22.4	+0.5
ASAK	Asacha	3.06	19	*e*P	Pn	12 00 26.8	+1.1
MTVR	Mutnovka	3.22	22	P	Pn	12 00 29.3	+1.3
MTVR				*i* S	Sn	12 01 07.6	+0.7
RUS	Russkaya	3.26	25	*e*P	Pn	12 00 28.8	+0.5
RUS				*i* S	Sn	12 01 06.9	-0.6
UGLR	Uglovaya	4.04	23	P	Pn	12 00 41.4	+2.2
AVH	Avacha	4.07	22	P	Pn	12 00 41.7	+2.1
AVH				*i* S	Sn	12 01 28.4	+0.7
KOK	Koryaka	4.07	21	P	Pn	12 00 42.1	+2.4
KRER	Koryakskii	4.11	21	*e*P	Pn	12 00 42.9	+2.6
SDLR	Sedlovina	4.12	23	*e*P	Pn	12 00 41.9	+1.6
SPN	Mys Shipunski	4.31	32	*e*P	Pn	12 00 43.9	+1.2
SPN				*i* S	Sn	12 01 32.8	-0.5
GNL	Ganaly	4.32	14	P	Pn	12 00 46.1	+3.0
MKZ	Mys Kozlova	6.08	32	*e*P	Pn	12 01 08.2	+1.1

*DDA **01** 12:04:14.6, 38°.73N×39°.98E, h8km, MD2.9*
*ISCJB **01** 12:04:15.3±0.7, 38°.70N±0°.02×39°.94E±0°.03, h6km±6km, Error ellipse: s-maj=4.8km s-min=3.8km az=145.9*
*CSEM **01** 12:04:15.4±0.2, 38°.71N×39°.88E, h5km, MD3.0, Error ellipse: s-maj=4.8km s-min=4.1km az=64.0*
*ISK **01** 12:04:15.3, 38°.70N×39°.90E, h6km, MD3.0*
ISC 01 12:04:15.4±1.1**, 38°.69N**±0°.02×**39°.92E**±0°.02**, h11**km±10km**, n42, σ0ˢ62**/56**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTK	Pertek	0.46	296	*e*PG	Pg	12 04 24.1	-0.3
PTK				*e*SG	Sg	12 04 31.2	+0.7
PTK	Pertek	0.46	296	*e*Pg	Pg	12 04 24.1	-0.3
PTK				*e*Sg	Sg	12 04 31.2	+0.7
SVRC	Sivrice-ELAZID	0.57	237	*e*PG	Pg	12 04 26.8	+0.1
SVRC	Sivrice-ELAZID	0.57	237	*e*Pg	Pg	12 04 26.8	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.76	255	iP	Pg	12 04 29.0	-1.1
ELZG				iS	Sn	12 04 43.4	-0.4
ELZG	Elazig	0.76	255	iP	Pg	12 04 29.0	-1.1
ELZG				iS	Sn	12 04 43.4	-0.4
DIYA	Diyarbakir	0.79	168	iP	Pb	12 04 31.4	+0.3
DIYA				iS	Sb	12 04 42.3	+0.5
DIYA	Diyarbakir	0.79	168	iP	Pb	12 04 31.4	+0.3
DIYA				iS	Sb	12 04 42.3	+0.5
DIY	Diyarbakir	0.83	163	ePG	Pb	12 04 31.9	0.0
DIY	Diyarbakir	0.83	163	ePg	Pb	12 04 31.9	0.0
ERZN	Erzincan	0.90	350	ePG	Pg	12 04 32.3	-0.5
ERZN				eSG	Sb	12 04 45.9	+0.6
BNGL	BINGOL	0.99	75	iP	Pg	12 04 33.0	-1.5
BNGL				eS	Sg	12 04 47.1	-0.4
EZC	Erzincan	1.14	338	ePN	Pb	12 04 37.4	+0.1
EZC	Erzincan	1.14	338	ePn	Pb	12 04 37.4	+0.1
MYA	Malataya	1.23	253	ePN	Pg	12 04 38.9	-0.1
MYA	Malataya	1.23	253	ePn	Pg	12 04 38.9	-0.1
KEMA	Kemaliye	1.25	298	iP	Pn	12 04 37.5	-1.4
KEMA				iS	Sb	12 04 54.6	-0.6
KEMA	Kemaliye	1.25	298	iP	Pn	12 04 37.5	-1.4
KEMA				iS	Sb	12 04 54.6	-0.6
VRTB	Varto-Mus	1.28	68	ePN	Pg	12 04 40.7	+0.6
VRTB	Varto-Mus	1.28	68	ePn	Pg	12 04 40.7	+0.6
ILIC	ilic-Erzincan	1.30	306	ePN	Pg	12 04 40.0	-0.2
ILIC	ilic-Erzincan	1.30	306	ePn	Pg	12 04 40.1	-0.2
BTMT	Batman	1.33	112	ePN	Pn	12 04 39.6	-0.4
BTMT	Batman	1.33	112	ePn	Pn	12 04 39.6	-0.4
BEST	Besiri	1.33	127	iP	Pn	12 04 39.8	-0.2
BEST				iS	Sb	12 04 57.0	-0.5
URFA	Urfa	1.52	215	ePN	Pb	12 04 43.9	+0.2
URFA	Urfa	1.52	215	ePn	Pb	12 04 43.9	+0.2
MARD	Mardin	1.54	154	iP	Pn	12 04 43.3	+0.4
MARD				iS	Sb	12 05 03.7	+0.2
KELT	Kelkit	1.54	341	iP	Pn	12 04 43.5	+0.5
KELT				iS	Sb	12 05 04.0	+0.3
KELT	Kelkit	1.54	341	iP	Pn	12 04 43.5	+0.5
KELT				iS	Sb	12 05 04.0	+0.3
AKCD	Akcadag	1.62	256	iP	Pb	12 04 45.6	+0.2
AKCD	Akcadag	1.62	256	iP	Pb	12 04 45.6	+0.2
EZM	Erzurum	1.65	42	ePN	Pn	12 04 45.5	+0.9
BAYT	Ayd˜–ntepe-Bay	1.71	6	ePN	Pb	12 04 46.3	-0.6
BAYT	Ayd˜–ntepe-Bay	1.71	6	ePn	Pb	12 04 46.3	-0.6
ATAB	Bozova	1.77	227	eP	Pn	12 04 45.8	-0.2
ATAB	Bozova	1.77	227	eP	Pn	12 04 45.8	-0.2
GUMT	Gumushane	1.80	349	ePN	Pn	12 04 47.3	+0.8
GUMT	Gumushane	1.80	349	ePn	Pn	12 04 47.3	+0.8
DARE	Darende-Malaty	1.91	267	ePN	Pn	12 04 49.1	+1.1
SUSE	Susehri	2.01	319	iP	Pb	12 04 52.7	+0.6
SUSE	Susehri	2.01	319	iP	Pb	12 04 52.7	+0.6

ISK 01 12:36:20.1, 37.°00N×38.°62E, h6km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URFA	Urfa	0.47	20	ePG	Pg	12 36 29.6	+0.3
URFA				eSG	Sg	12 36 36.6	+1.1
MYA	Malataya	1.33	353	ePN	Pn	12 36 45.4	0.0
MYA				eSN	Sn	12 37 04.7	+1.2
SVRC	Sivrice-ELAZID	1.48	21	ePN	Pb	12 36 48.4	+0.1
SVRC				eSN	Sg	12 37 08.1	0.0

*IDC **01** 12:37:31.3±6.3, 6.°64S×129.°74E, h99km±57km, mb3.7/3, mb1 3.9/6, mb1mx3.6/20, mbtmp3.8/6, MS3.0/1, Ms1 3.0/1, ms1mx2.2/31, Error ellipse: s-maj=69.6km s-min=25.7km az=59.0*
*ISCJB **01** 12:37:34.0±0.9, 6.°81S±0.°05×129.°6E±0.°1, h139km, mb3.7/3, Error ellipse: s-maj=18.4km s-min=6.3km az=8.2*
*DJA **01** 12:37:42.0±0.6, 7°S±5°×13°2E±2°3, h10km, M4.8/4, mb4.8/3, mB5.3/3, MLv4.7/4, Mw(mB)4.8/3*
ISC 01 12:37:34.7±0.8**, 6.°98S**±0.°07×**129.°7E**±0.°1**, h139km, n12, σ2.s17**/13**, mb3.8**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	4.77	32	P	Pn	12 38 45.8	+0.9
FAKI				S	Sn	12 39 37.0	-2.5
SWI	Sorong	6.27	15	P	Pn	12 39 17.4	+12
RKPI	Ransiki, Papua	7.03	40	P	Pn	12 39 15.6	+0.4
	72nm,0.8s,3µm1.0nm						
FITZ	Fitzroy Crossi	11.74	199	P	Pn	12 40 19.5	+1.5
	0.6nm,0.3s,baz=37,slow=12,SNR=20						
FITZ				S	Sn	12 42 24.2	-3.4
	0.5nm,0.3s,baz=78,slow=16,SNR=6.1						
WRA	Warramunga Arr	13.66	161	P	P	12 40 44.6	-2.2
	0.6nm,0.3s,baz=342,slow=13,SNR=32						
WRA				S	Sn	12 43 14.9	+1.1
	0.6nm,0.3s,baz=332,slow=23,SNR=5.9						
ASAR	Alice Springs	17.08	167	P	Pn	12 41 29.4	+4.2
	0.6nm,0.3s,baz=345,slow=11,SNR=120						
ASAR				S	Sn	12 44 34.9	-1.3
	0.1nm,0.3s,baz=350,slow=25,SNR=4.6						
STKA	Stephens Creek	27.15	157	P	P	12 43 08.6	+3.5
	1.1nm,0.6s,baz=342,slow=11,SNR=3.4						
KSRS	Korea Array	44.23	358	LR	LR	13 02 37.2	
	comp=Z,17nm,18.7s,baz=220,slow=34						
MKAR	Makanchi Array	68.04	327	P	P	12 48 18.9	-0.2
	1.0nm,0.4s,baz=123,slow=7.2,SNR=17						
ILAR	Eielson Array	93.46	25	P	P	12 50 33.2	-0.9
	0.3nm,0.6s,baz=252,slow=4.8,SNR=6.9						
TORD	Torodi Ar. Bea	128.50	281	PKP	PKPdf	12 56 26.5	+0.4
	0.3nm,0.6s,baz=82,slow=2.2,SNR=3.5						
LPAZ	La Paz	150.93	143	PKPbc	PKPbc	12 57 14.8	+2.0
	0.6nm,0.5s,baz=225,slow=1.4,SNR=3.2						

*ISCJB **01** 12:45:18.0±1.4, 9.°17N±0.°06×122.°0E±0.°1, h37km, mb3.3/3, Error ellipse: s-maj=17.5km s-min=7.8km az=13.2*
*IDC **01** 12:45:17.0±2.7, 9.°42N×123.°46E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/24, mbtmp3.4/3, Error ellipse: s-maj=265.9km s-min=28.1km az=63.0*
*MAN **01** 12:45:18, 9.°22N×121.°94E, h33km, mb4.7, ML3.6, MS3.6*
ISC 01 12:45:18.4±1.7**, 9.°21N**±0.°06×**121.°8E**±0.°1**, h37km, n10, σ1.s64**/11**, mb3.3**/3**, 1C-1D, Sulu Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IPIL	Ipil	1.59	152	eP	Pn	12 45 44.0	-0.1
IPIL				eS	Sn	12 46 00.7	-2.7
DCPH	Dipolog City	1.64	112	⇑eP	Pn	12 45 40.6	-4.0
DCPH				eS	Sn	12 46 07.3	+2.8
PAGZ	Pagadian	2.05	131	eP	Pn	12 45 49.6	-0.8
PAGZ				eS	Sn	12 46 00.5	-14
TBP	Tagbilaran	2.07	76	eP	Pn	12 45 50.0	-0.6
LLP	Lapu-Lapu	2.39	62	eP	Pn	12 45 54.5	-0.5
LLP				eS	Sn	12 46 21.3	-1.7
RCP	Roxas	2.51	21	⇓eP	Pn	12 45 56.7	+0.1
BUKP	Musuan	3.47	112	eP	Pn	12 46 10.0	+0.1
WRA	Warramunga Arr	31.48	157	P	P	12 51 36.9	+0.1
	0.3nm,0.9s,baz=340,slow=9.7,SNR=2.7						
ASAR	Alice Springs	34.74	160	P	P	12 52 06.7	+1.4
	0.3nm,0.7s,baz=336,slow=7.0,SNR=6.5						
MKAR	Makanchi Array	50.30	325	P	P	12 54 21.1	+10
	0.2nm,0.6s,baz=137,slow=6.9,SNR=4.1						

IDC 01 12:54:27.7±1.7**, 7.°07S**×**129.°64E, h0km, mb3.9**/2**, mb1 4.2**/5**, mb1mx3.8**/20**, mbtmp4.1**/5**, ML4.3**/3**, Error ellipse: s-maj=67.3km s-min=25.4km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.64	199	Pn	Pn	12 57 15.9	+0.6
	0.9nm,0.3s,baz=36,slow=8.0,SNR=35						
FITZ				Sn	Sn	12 59 12.9	-13
	2.9nm,0.3s,baz=75,slow=17,SNR=9.1						
WRA	Warramunga Arr	13.59	161	Pn	Pn	12 57 41.1	-0.8
	2.1nm,0.3s,baz=340,slow=12,SNR=92						
WRA				Sn	Sn	13 00 01.9	-12
	2.1nm,0.3s,baz=332,slow=22,SNR=8.0						
ASAR	Alice Springs	17.01	167	P	Pn	12 58 26.5	-0.7
	0.9nm,0.3s,baz=338,slow=9.3,SNR=80						
ASAR				S	Sn	13 01 23.6	-13
	0.6nm,0.3s,baz=346,slow=26,SNR=7.3						
STKA	Stephens Creek	27.09	157	P	P	13 00 12.5	+0.2
	1.0nm,0.4s,baz=327,slow=9.4,SNR=7.4						
MKAR	Makanchi Array	68.08	327	P	P	13 05 29.3	0.0
	0.3nm,0.5s,baz=125,slow=7.9,SNR=5.0						

*ISCJB **01** 13:00:49.1±0.6, 6.°02S±0.°09×127.°7E±0.°2, h400km, mb3.7/6, Error ellipse: s-maj=23.5km s-min=8.2km az=156.5*
*IDC **01** 13:00:51.7±2.8, 6.°14S×127.°85E, h419km±33km, mb3.3/6, mb1 3.4/9, mb1mx3.2/22, mbtmp3.3/9, Error ellipse: s-maj=29.4km s-min=11.3km az=71.0*
ISC 01 13:00:50.0±0.8**, 6.°10S**±0.°10×**127.°9E**±0.°2**, h400km, n20, σ1.s26**/22**, mb3.8**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.13	190	P	P	13 03 32.2	+1.1
	0.8nm,0.3s,baz=19,slow=12,SNR=8.3						
WRA	Warramunga Arr	15.11	156	P	P	13 04 05.3	+1.6
	1.0nm,0.3s,baz=334,slow=11,SNR=13						
WRA				S	S	13 06 40.0	-4.1
	0.3nm,0.3s,baz=332,slow=20,SNR=5.3						
ASAR	Alice Springs	18.39	162	P	P	13 04 40.0	+1.3
	0.6nm,0.3s,baz=344,slow=12,SNR=12						
ASAR				S	S	13 07 47.5	0.0
	0.1nm,0.3s,baz=338,slow=18,SNR=6.5						
CMAR	Chiang Mai Arr	37.58	311	P	P	13 07 28.1	-0.3
	3.2nm,0.7s,baz=138,slow=6.4,SNR=6.4						
MJAR	Matsushiro Arr	43.50	12	P	P	13 08 15.2	-0.8
	2.5nm,0.8s,baz=192,slow=11,SNR=8.3						
ODAN	Odare	51.11	312	eP	P	13 09 13.7	-0.6
	7.7nm,0.4s						
TAPN	Taplejung	51.15	313	eP	P	13 09 14.1	-0.6
	9.9nm,0.4s						
RAMN	Ramite	51.75	311	eP	P	13 09 18.8	-0.2
	20nm,0.6s						
GUN	Gumba	52.81	312	eP	P	13 09 26.1	-0.7
	15nm,0.5s						
PKI	Pulchoki	52.98	311	eP	P	13 09 27.1	-0.9
	10nm,0.6s						
PKIN	Phulchoki	52.99	311	eP	P	13 09 27.1	-0.9
	5.8nm,0.4s						
KKN	Kakani	53.19	311	eP	P	13 09 28.5	-0.9
	12nm,0.6s						
DMN	Daman	53.22	311	eP	P	13 09 29.1	-0.6
	10.0nm,0.3s						
KOLN	Koldanda	54.44	310	eP	P	13 09 37.9	-0.4
	12nm,0.3s						
DANN	Dangsing	54.62	311	eP	P	13 09 38.6	-1.1
	7.6nm,0.4s						
PYUN	Piuthan	55.08	310	eP	P	13 09 42.6	-0.2
	24nm,0.8s						
PETK	Petropavlovsk-	64.15	19	P	P	13 10 44.5	+1.4
	1.7nm,0.6s,baz=178,slow=4.7,SNR=8.5						
MKAR	Makanchi Array	66.36	328	P	P	13 10 57.5	+0.1
	1.3nm,0.5s,baz=121,slow=8.2,SNR=14						
KURBB	Kurchatov Arra	70.68	329	P	P	13 11 23.6	+0.1
	1.3nm,0.5s,baz=130,slow=5.2,SNR=16						
BVAR	Borovoye Array	76.21	328	P	P	13 11 55.3	-0.2
	0.5nm,0.5s,baz=106,slow=4.7,SNR=3.0						

*CSEM **01** 13:05:55.7, 43.°17N×46.°12E, h11km, mb4.1, After OBN*
*TIF **01** 13:05:55.1, 43.°34N×45.°91E, h9km±9km*
*MOS **01** 13:05:55.7±1.1, 43.°17N×46.°12E, h11km, mb4.1/1, Error ellipse: s-maj=9.5km s-min=5.3km az=31.8*
ISC 01 13:05:55.7±1.1**, 43.°17N**±0.°03×**46.°13E**±0.°02**, h4km**±9km**, n64, σ0.s77**/117**, 6C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GRO	Groznyy	0.31	299	⇓iPG	Pg	13 06 01.6	-0.2
GRO	Groznyy	0.31	299	iPg	Pg	13 06 01.6	-0.2
DLMR	Dylym	0.38	105	ePG	Pg	13 06 02.7	-0.4
DLMR				S	Sg	13 06 08.5	+0.4
DLMR	Dylym	0.38	105	ePg	Pg	13 06 02.7	-0.4
DLMR				Sg	Sg	13 06 08.5	+0.4
BTLR	Botlikh	0.51	172	⇑iPG	Pg	13 06 05.2	-0.3
BTLR				eS	Sg	13 06 13.0	+0.8
BTLR				pmax	pmax		
	comp=Z,171nm,0.3s						
BTLR	Botlikh	0.51	172	iPg	Pg	13 06 05.2	-0.3
	comp=Z,171nm,0.3s						
BTLR				eSg	Sg	13 06 13.0	+0.8
DBC	Dubki	0.54	106	iPG	Pg	13 06 05.0	-1.1
DBC				iS	Sg	13 06 12.9	-0.1
DBC	Dubki	0.54	106	iPg	Pg	13 06 05.0	-1.1
DBC				iSg	Sg	13 06 12.9	-0.1
KRNR	Karanay	0.67	121	ePG	Pg	13 06 07.2	-1.3
KRNR				iS	Sg	13 06 17.0	-0.2
KRNR				pmax	pmax		
	comp=Z,57nm,0.2s						
KRNR	Karanay	0.67	121	ePg	Pg	13 06 07.2	-1.3
	comp=Z,57nm,0.2s						
KRNR				iSg	Sg	13 06 17.0	-0.2
UNCR	Uncukul	0.67	133	⇑iPG	Pg	13 06 07.8	-0.8
UNCR				iS	Sg	13 06 17.7	+0.4
UNCR				pmax	pmax		
	comp=Z,135nm,0.2s						
UNCR	Uncukul	0.67	133	iPg	Pg	13 06 07.8	-0.8
	comp=Z,135nm,0.2s						
UNCR				iSg	Sg	13 06 17.7	+0.4
XNZR	Khunzakh	0.76	146	ePG	Pg	13 06 09.8	-0.5
XNZR				eS	Sg	13 06 20.9	+0.8
XNZR	Khunzakh	0.76	146	ePg	Pg	13 06 09.8	-0.5
XNZR				eSg	Sg	13 06 20.9	+0.8
BUJR	Buynaksk	0.80	115	ePG	Pb	13 06 12.2	0.0
BUJR				eS	Sn	13 06 25.2	-1.0
BUJR				pmax	pmax		
	comp=Z,80nm,0.2s						
BUJR	Buynaksk	0.80	115	ePg	Pb	13 06 12.2	0.0
	comp=Z,80nm,0.2s						
BUJR				eSg	Sn	13 06 25.2	-1.0
ARKR	Arakani	0.85	131	ePG	Pg	13 06 11.4	-0.7
ARKR				eS	Sb	13 06 24.5	-0.5
ARKR				pmax	pmax		
	comp=Z,38nm,0.2s						
ARKR	Arakani	0.85	131	ePg	Pg	13 06 11.4	-0.7
	comp=Z,38nm,0.2s						
ARKR				eSg	Sb	13 06 24.5	-0.5
SNJR	Sundja	0.97	264	ePG	Pb	13 06 14.7	-0.4
SNJR				eS	Sb	13 06 28.8	+0.6
SNJR	Sundja	0.97	264	ePg	Pb	13 06 14.7	-0.4
SNJR				eSg	Sb	13 06 28.8	+0.6
MAK	Makhachkala	1.03	101	ePG	Pn	13 06 18.6	+1.6
MAK				e		13 06 31.3	
MAK				pmax	pmax		
	comp=Z,199nm,0.4s						
MAK				smax	smax		
	comp=N,699nm,0.6s						
MAK				smax	smax		
	comp=E,726nm,0.5s						
MAK	Makhachkala	1.03	101	ePg	Pn	13 06 18.6	+1.6
	comp=E,199nm,0.4s						
MAK				eSg	Sn	13 06 31.3	-0.5
	comp=E,699nm,0.6s						
VLKR	Vladikavkaz	1.07	264	ePG	Pg	13 06 16.3	+0.1
VLKR				eS	Sb	13 06 31.6	+0.5
VLKR	Vladikavkaz	1.07	264	ePg	Pg	13 06 16.3	+0.1
VLKR				eSg	Sb	13 06 31.6	+0.5
TRKR	Terskaya	1.16	299	ePG	Pb	13 06 18.0	-0.2
TRKR				iS	Sn	13 06 34.5	-0.4
TRKR	Terskaya	1.16	299	ePg	Pb	13 06 18.0	-0.2
TRKR				iSg	Sn	13 06 34.5	-0.4
BTKR	Batakoyurt	1.17	280	ePG	Pg	13 06 18.2	0.0
BTKR				eS	Sn	13 06 35.2	-0.2
BTKR	Batakoyurt	1.17	280	ePg	Pg	13 06 18.2	0.0
BTKR				eSg	Sn	13 06 35.2	-0.2
MNSR	Manas	1.26	111	PG	Pb	13 06 20.2	+0.2
MNSR				iS	Sn	13 06 37.2	-0.2
MNSR	Manas	1.26	111	Pg	Pb	13 06 20.2	+0.2
MNSR				iSg	Sn	13 06 37.2	-0.2
KMKR	Kumukh	1.26	145	ePG	Pn	13 06 19.3	-1.0
KMKR				eS	Sn	13 06 37.8	-0.1
KMKR				pmax	pmax		
	comp=Z,151nm,0.4s						
KMKR	Kumukh	1.26	145	ePg	Pn	13 06 19.3	-1.0
	comp=Z,151nm,0.4s						
KMKR				eSg	Sn	13 06 37.8	-0.1
SGKR	Sergokala	1.33	122	ePG	Pg	13 06 22.0	+0.7
SGKR				iS	Sn	13 06 41.0	+1.7
SGKR	Sergokala	1.33	122	ePg	Pg	13 06 22.0	+0.7
SGKR				iSg	Sn	13 06 41.0	+1.7
ARNR	Ardon	1.35	271	ePG	Pn	13 06 21.0	-0.4
ARNR				eS	Sn	13 06 39.5	-0.3
ARNR	Ardon	1.35	271	ePg	Pn	13 06 21.0	-0.4
ARNR				eSg	Sn	13 06 39.5	-0.3
LACR	Lac	1.39	256	⇑iPG	Pn	13 06 21.1	-0.9
LACR				iS	Sn	13 06 40.5	-0.3
LACR	Lac	1.39	256	iPg	Pn	13 06 21.1	-0.9
LACR				iSg	Sn	13 06 40.5	-0.3
GUDG	Gudauri	1.40	240	P	Pn	13 06 21.5	-0.8
GUDG				S	Sb	13 06 39.4	-1.5
PRTR	Priterechnaya	1.46	294	⇓iPG	Pn	13 06 22.6	-0.3
PRTR				eS	Sg	13 06 42.8	+0.1
PRTR	Priterechnaya	1.46	294	iPg	Pn	13 06 22.6	-0.3
PRTR				eSg	Sg	13 06 42.8	+0.1
URKR	Urkarakh	1.50	132	iPG	Pn	13 06 23.5	0.0
URKR				iS	Sg	13 06 44.0	+0.1
URKR	Urkarakh	1.50	132	iPg	Pn	13 06 23.5	0.0
URKR				iSg	Sg	13 06 44.0	+0.1
KORR	Kora	1.51	267	ePG	Pn	13 06 23.0	-0.6
KORR				eS	Sb	13 06 43.7	-0.1
KORR	Kora	1.51	267	ePg	Pn	13 06 23.0	-0.6
KORR				eSg	Sb	13 06 43.7	-0.1
ZEI	Tsey	1.68	257	ePN	Pn	13 06 25.1	-1.0
ZEI				iS	Sn	13 06 47.5	-0.8
ZEI	Tsey	1.68	257	ePn	Pn	13 06 25.1	-1.0
ZEI				iSg	Sn	13 06 47.5	-0.8
LSNR	Lesken	1.69	274	ePN	Pn	13 06 25.3	-0.8
LSNR				iS	Sn	13 06 48.1	-0.1
LSNR	Lesken	1.69	274	ePn	Pn	13 06 25.3	-0.8
LSNR				iSg	Sn	13 06 48.1	-0.1
TBLG	Delisi	1.77	216	P	Pb	13 06 28.3	-0.4
TBLG				S	Sb	13 06 51.4	+0.2
TBLG	Delisi	1.77	216	PN	Pb	13 06 28.3	-0.4
TBLG				S	Sb	13 06 51.4	+0.2
TBLG	Delisi	1.77	216	Pn	Pb	13 06 28.3	-0.4
TBLG				Sg	Sb	13 06 51.4	+0.2
DGRG	David-gareji	1.81	198	P	Pg	13 06 30.3	0.0
DGRG				S	Sg	13 06 56.6	+2.8
DIGR	Digorskoe uzhe	1.89	263	ePN	Pn	13 06 28.0	-0.9
DIGR	Digorskoe uzhe	1.89	263	ePn	Pn	13 06 28.0	-0.9
GOR	Gori	1.90	232	P	Sn	13 06 56.4	+2.9
ONI	Oni	2.05	254	P	Pn	13 06 31.4	+0.4
ONI				S	Sb	13 06 59.7	+0.4
AKT	Akhty	2.07	144	ePN	Pb	13 06 33.0	-0.8
AKT				iS	Sb	13 07 01.0	+1.1
AKT	Akhty	2.07	144	ePn	Pb	13 06 33.0	-0.8
AKT				iSg	Sb	13 07 01.0	+1.1
KSMR	Kasumkent	2.16	136	ePN	Pg	13 06 36.5	-0.6
KSMR				eS	Sb	13 07 03.0	+0.5
KSMR				pmax	pmax		
	comp=Z,54nm,0.2s						
KSMR	Kasumkent	2.16	136	ePn	Pg	13 06 36.5	-0.6
	comp=Z,54nm,0.2s						
KSMR				eSn	Sb	13 07 03.0	+0.5
GOF	Gofitskoye	2.92	311	ePb	Pb	13 06 49.6	+1.3
AKTO	Aktyubinsk	10.91	44	⇑P	Pn	13 08 28.5	-4.0
	comp=Z,1.7nm,0.8s						
AKTO				⇑S	Sn	13 10 20.6	-14
	comp=Z,1.7nm,0.5s						
AB31	Akbulak array	11.34	53	P	Pn	13 08 33.9	-4.5
	baz=241,slow=12						
AB31				⇑S	Sn	13 10 33.1	-12
	comp=Z,0.7nm,0.4s,baz=245,slow=22,SNR=6.1						

*DDA **01** 13:12:42.8, 39.°43N×37.°18E, h17km, MD2.8*
*CSEM **01** 13:12:43.6±0.2, 39.°36N×37.°23E, h2km, MD3.1, Error ellipse: s-maj=5.4km s-min=4.2km az=174.0*
*ISK **01** 13:12:43.3, 39.°39N×37.°23E, h9km, MD3.1*
ISC 01 13:12:43.1±1.3**, 39.°42N**±0.°03×**37.°21E**±0.°02**, h8km**±11km**, n34, σ0.s62**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DARE	Darende-Malaty	0.87	166	ePG	Pg	13 12 59.8	-0.1
PINB	Pinarbasi	0.97	221	iP	Pg	13 13 01.3	-0.5
PINB				eS	Sg	13 13 15.0	+0.5
PINB	Pinarbasi	0.97	221	iP	Pg	13 13 01.3	-0.5
PINB				eS	Sg	13 13 15.0	+0.5
RSDY	Resadiye-TOKAT	0.98	5	ePG	Pn	13 13 03.1	-0.1
RSDY	Resadiye-TOKAT	0.98	5	ePg	Pn	13 13 03.2	-0.1
KEMA	Kemaliye	1.00	98	iP	Pg	13 13 02.4	0.0
KEMA				iS	Sn	13 13 17.5	-0.5
KEMA	Kemaliye	1.00	98	iP	Pg	13 13 02.4	0.0
KEMA				iS	Sn	13 13 17.5	-0.5
ILIC	ilic-Erzincan	1.05	88	ePG	Pb	13 13 03.6	-0.1
ILIC	ilic-Erzincan	1.05	88	ePg	Pb	13 13 03.6	-0.1
SUSE	Susehri	1.10	44	iP	Pn	13 13 05.2	+0.2
SUSE				eS	Sb	13 13 19.7	+0.7
SUSE	Susehri	1.10	44	iP	Pn	13 13 05.2	+0.2
SUSE				eS	Sb	13 13 19.7	+0.7
SARI	SarD1z-Kayseri	1.18	212	ePN	Pb	13 13 06.0	+0.1
SARI				eSN	Sn	13 13 23.5	+0.9
AKCD	Akcadag	1.25	153	iP	Pn	13 13 06.7	-0.3
AKCD	Akcadag	1.25	153	iP	Pn	13 13 06.7	-0.3
MYA	Malataya	1.44	139	ePN	Pn	13 13 09.8	+0.1
MYA	Malataya	1.44	139	ePn	Pn	13 13 09.8	+0.1
YOZ	Yozgat	1.48	279	ePN	Pn	13 13 10.6	+0.4
YOZ	Yozgat	1.48	279	ePn	Pn	13 13 10.6	+0.4
KELT	Kelkit	1.74	64	iP	Pb	13 13 15.2	-0.2
KELT	Kelkit	1.74	64	iP	Pb	13 13 15.2	-0.2
PTK	Pertek	1.77	107	ePN	Pn	13 13 14.8	+0.5
PTK	Pertek	1.77	107	ePn	Pn	13 13 14.8	+0.5
KMRS	Kahramanmaras	1.93	187	ePN	Pn	13 13 16.8	+0.6
KMRS	Kahramanmaras	1.93	187	ePn	Pn	13 13 16.8	+0.6
SVRC	Sivrice-ELAZID	1.94	122	ePN	Pn	13 13 16.9	+0.4
SVRC	Sivrice-ELAZID	1.94	122	ePn	Pn	13 13 16.9	+0.4
CORM	Corum	2.13	292	ePN	Pn	13 13 20.4	+1.2
CORM	Corum	2.13	292	ePn	Pn	13 13 20.4	+1.2
CDAG	Cicekdag	2.21	276	iP	Pb	13 13 22.4	-1.0
CDAG				iS	Sb	13 13 50.7	-0.2
CDAG	Cicekdag	2.21	276	iP	Pb	13 13 22.4	-1.0
CDAG				iS	Sb	13 13 50.7	-0.2
CTKT	Corum	2.22	304	iP	Pb	13 13 23.6	0.0
CTKT				iS	Sn	13 13 47.4	-0.7
CTKT	Corum	2.22	304	iP	Pb	13 13 23.6	0.0
CTKT				iS	Sn	13 13 47.3	-0.7
BINT	Bingol	2.60	101	ePn	Pb	13 13 28.5	-1.7
BNGB	Bingˆ¶l	2.73	98	ePN	Pn	13 13 28.5	+1.2

*IDC **01** 13:22:32.8±1.1, 2.°53N×133.°24E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.7/24, mbtmp3.8/9, MS3.5/15, Ms1 3.5/15, ms1mx3.3/28, Error ellipse: s-maj=64.9km s-min=15.4km az=78.0*
*NEIC **01** 13:22:34.3±0.5, 2.°50N×133.°20E, h10km, mb4.5/5, Error ellipse: s-maj=15.7km s-min=7.4km az=72.0*
*ISCJB **01** 13:22:36.0±0.6, 2.°49N±0.°08×133.°2E±0.°1, h33km, mb4.0/13, MS3.5/12, Error ellipse: s-maj=21.2km s-min=9.6km az=162.1*
ISC 01 13:22:37.8±1.1**, 2.°5N**±0.°1×**133.°2E**±0.°2**, h35km, n34, σ0.s88**/22**, mb4.0**/12**, MS3.5**/12**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	8.84	301	LR	LR	13 27 46.5	
	comp=Z,249nm,21.1s,baz=110,slow=35						
KAPI	Kappang	15.40	241	LR	LR	13 31 22.1	
	comp=Z,97nm,21.3s,baz=99,slow=34						
KKM	Kota Kinabalu	17.31	282	P	Pn	13 26 35.6	-1.4
	22nm,1.1s						
PMG	Port Moresby	18.27	131	LR	LR	13 34 27.5	
	comp=Z,142nm,18.4s,baz=11,slow=39						
FITZ	Fitzroy Crossi	21.82	200	P	P	13 27 27.7	+0.5
FITZ	Fitzroy Crossi	21.82	200	P	P	13 27 27.7	+0.5
	1.7nm,0.7s,baz=37,slow=9.5,SNR=3.9						
FITZ				LR	LR	13 35 38.0	
	comp=Z,34nm,18.6s,baz=173,slow=36						
WRAB	Tennant Creek	22.35	177	eP	P	13 27 31.8	-1.1
	4.7nm,0.9s						
WRA	Warramunga Arr	22.36	177	P	P	13 27 31.3	-1.7
WRA	Warramunga Arr	22.36	177	P	P	13 27 31.3	-1.7
	1.7nm,0.9s,baz=354,slow=11,SNR=15						
KSM	Kuching	22.92	268	eP	P	13 27 38.9	-0.1
	30nm,1.1s						
AS31	Alice Springs	26.05	179	eP	P	13 28 08.2	+0.2
ASAR	Alice Springs	26.05	179	P	P	13 28 07.9	-0.2
ASAR	Alice Springs	26.05	179	P	P	13 28 07.9	-0.2
	1.0nm,0.9s,baz=355,slow=7.8,SNR=10						
ASAR				LR	LR	13 39 14.6	
	comp=Z,161nm,18.8s,baz=1.9,slow=38						
HNR	Honiara	29.16	114	LR	LR	13 39 42.0	
	comp=Z,155nm,19.5s,baz=266,slow=35						
JNU	Nakatsue	30.51	356	LR	LR	13 38 23.7	
	comp=Z,43nm,20.2s,baz=30,slow=31						
JHJ	Hachijo jima 2	31.05	11	LR	LR	13 39 31.2	

	comp=Z,41nm,19.0s,baz=57,slow=33						
KSRS	Korea Array	35.09	353	LR	LR	13 44 59.1	
	comp=Z,62nm,18.5s,baz=348,slow=38						
STKA	Stephens Creek	35.13	168	eP	P	13 29 27.9	-0.2
STKA	Stephens Creek	35.13	168	P	P	13 29 28.6	+0.4
	0.5nm,0.3s,baz=328,slow=9.5,SNR=2.9						
STKA				LR	LR	13 44 45.6	
	comp=Z,100nm,18.8s,baz=19,slow=38						
CMAR	Chiang Mai Arr	37.12	298	LR	LR	13 43 53.5	
	comp=Z,126nm,19.7s,baz=288,slow=34						
SONM	Songino Array	50.72	337	P	P	13 31 33.9	-0.4
SONM	Songino Array	50.72	337	P	P	13 31 33.8	-0.4
	0.6nm,0.6s,baz=104,slow=4.7,SNR=5.6						
SONM				LR	LR	13 51 38.0	
	comp=Z,37nm,19.2s,baz=70,slow=34						
MK31	Makanchi Array	62.32	323	eP	P	13 32 57.7	+0.9
MKAR	Makanchi Array	62.32	323	P	P	13 32 57.1	+0.4
MKAR	Makanchi Array	62.32	323	P	P	13 32 57.1	+0.4
	1.1nm,0.6s,baz=120,slow=7.5,SNR=12						
MKAR				LR	LR	14 01 54.1	
	comp=Z,27nm,19.9s,baz=306,slow=38						
ZALV	Zalesovo Beam	64.69	331	P	P	13 33 11.8	-0.4
ZALV	Zalesovo Beam	64.69	331	P	P	13 33 11.8	-0.4
	0.9nm,0.6s,baz=108,slow=4.8,SNR=7.0						
KURK	Kurchatov	66.31	326	eP	P	13 33 24.0	+1.3
	16nm,1.4s						
KURBB	Kurchatov Arra	66.32	325	P	P	13 33 23.9	+1.1
	2.7nm,0.7s,baz=117,slow=6.0,SNR=24						
ABKAR	Akbulak array	77.20	320	eP	P	13 34 28.7	+0.4
	6.3nm,1.1s						
VNDA	Vanda	81.49	174	LR	LR	14 11 11.3	
	comp=Z,81nm,19.8s,baz=45,slow=36						
FINES	FINESS Array B	95.91	333	LR	LR	14 20 21.6	
	comp=Z,23nm,18.3s,baz=37,slow=36						
YKA	Yellowknife Ar	97.83	26	P	Pdif	13 36 10.3	+0.8
YKA	Yellowknife Ar	97.83	26	P	Pdif	13 36 10.4	+0.8
	0.5nm,1.0s,baz=281,slow=3.3,SNR=3.7						

*IDC **01** 13:23:23.3±1.2, 7°.06N×71°.97W, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/24, mbtmp3.6/4, ML2.1/1, Error ellipse: s-maj=38.4km s-min=24.9km az=83.0*
*FUNV **01** 13:23:26.9, 6°.98N×72°.32W, h5km, MW3.5*
*ISCJB **01** 13:23:27.1±1.5, 7°.02N±0°.04×72°.13W±0°.05, h13km±10km, mb3.6/3, Error ellipse: s-maj=8.3km s-min=5.9km az=34.1*
ISC 01 13:23:25.8±1.7**, 6°.99N**±0°.05×**72°.11W**±0°.05**, h5**km±11km**, n22,** σ1s52/33**, mb3.6**/3**, 1C-3D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	0.90	347	⇑iP	Pg	13 23 42.6	-0.5
CAPV				eS	Sg	13 23 54.9	+0.1
SOCV	Socops	1.79	44	⇓eP	Pb	13 23 59.6	+0.4
SOCV				eS	Sg	13 24 24.5	+1.0
VIGV	El Vigia	1.99	22	eP	Pb	13 24 02.1	-0.3
VIGV				eS	Sb	13 24 28.0	+0.4
ELOV	Elorza	2.61	89	eP	Pb	13 24 11.7	-1.3
ELOV				eS	Sb	13 24 44.1	-1.3
ROSC	El Rosal	3.06	226	Pn	Pn	13 24 16.3	+1.1
	4.4nm,0.3s,baz=90,slow=18,SNR=8.0						
ROSC				Sn	Sn	13 24 54.4	+2.1
	18nm,0.3s,baz=121,slow=21,SNR=7.0						
QARV	Quebrada Arrib	3.56	26	eP	Pn	13 24 23.7	+1.8
QARV				eS	Sn	13 25 05.2	+0.8
SANV	Sanarito	3.57	45	eP	Pn	13 24 24.3	+2.3
CURV	Curarigua	3.68	35	eP	Pn	13 24 25.2	+1.7
CURV				eS	Sn	13 25 08.7	+1.2
TEPV	Terepaima	4.13	44	eP	Pn	13 24 31.6	+1.9
DABV	Dabajuro	4.17	20	eP	Pn	13 24 31.4	+1.2
DABV				eS	Sn	13 25 18.2	-1.2
SIQV	Siquisique	4.29	32	eP	Pn	13 24 32.7	+0.8
BAUV	El Baul	4.47	64	eP	Pn	13 24 35.9	+1.5
BAUV				eS	Sn	13 25 27.9	+1.1
MAPV	Macapo	4.59	52	eP	Pn	13 24 37.7	+1.8
MAPV				eS	Sn	13 25 30.2	+0.5
MONV	Montecano	5.37	23	⇓eP	Pn	13 24 47.5	+0.8
MONV				eS	Sn	13 25 46.7	-2.2
TURV	Turiamo	5.45	50	eP	Pn	13 24 49.4	+1.7
BIRV	Birongo	6.73	59	eP	Pn	13 25 07.2	+1.7
CUPV	Cœpira	6.96	64	⇓eP	Pn	13 25 10.2	+1.6
LPAZ	La Paz	23.46	170	P	P	13 28 35.2	-1.8
	1.3nm,0.7s,baz=340,slow=12,SNR=5.6						
SIV	San Ignacio	25.31	154	P	P	13 28 52.4	-1.3
	1.8nm,0.8s,baz=344,slow=9.0,SNR=7.3						
YKA	Yellowknife Ar	63.46	339	P	P	13 33 54.4	-2.1
	0.2nm,0.4s,baz=123,slow=6.7,SNR=5.4						
ASAR	Alice Springs	150.02	234	PKPbc	PKPdf	13 43 15.8	+2.2
	0.3nm,1.0s,baz=115,slow=3.7,SNR=3.3						
WRA	Warramunga Arr	151.29	241	PKPbc	PKPbc	13 43 21.6	0.0
	0.5nm,0.8s,baz=111,slow=2.5,SNR=5.9						

*BJI **01** 13:52:00.1, 25°.10N×100°.00E, h13km, ML3.4/7*
*IDC **01** 13:52:02.8±1.4, 25°.10N×99°.32E, h0km, mb3.3/3, mb1 3.4/3, mb1mx3.2/27, mbtmp3.3/3, Error ellipse: s-maj=45.3km s-min=19.6km az=81.0*
ISC 01 13:51:59.5±1.7**, 25°.0N**±0°.1×**99°.9E**±0°.1**, h10**km**, n5,** σ0s95/4**, mb3.4**/3**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMI	Kunming	2.55	86	Pg	Pb	13 52 44.9	-0.6
KMI				Sg	Sb	13 53 17.7	+0.7
KMI				smax	smax		
	comp=N,180nm,0.7s						
KMI				smax	smax		
	comp=E,220nm,0.7s						
CMAR	Chiang Mai Arr	6.56	188	Pg	Pg	13 54 05.3	+0.1
	comp=E,0.8nm,0.3s,baz=4.1,slow=17,SNR=18						
CMAR				Lg	Lg	13 55 30.6	
	comp=E,0.4nm,0.3s,baz=0.9,slow=31,SNR=9.0						
SONM	Songino Array	23.37	11	P	P	13 57 14.2	+5.8
	comp=E,0.2nm,0.3s,baz=191,slow=13,SNR=3.5						
MKAR	Makanchi Array	25.92	332	P	P	13 57 32.0	+0.2
	comp=E,0.6nm,0.6s,baz=137,slow=9.3,SNR=6.0						
WRA	Warramunga Arr	55.81	140	P	P	14 01 45.5	+8.4
	comp=E,0.3nm,0.7s,baz=327,slow=7.9,SNR=3.5						

MAN 01 14:06:27, 13°.55N×120°.57E, h58km, mb4.0, ML2.8, MS2.5, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.38	97	⇑iP	Pn	14 06 39.7	+2.1
TGY	Tagaytay City	0.66	33	⇑iP	Pn	14 06 43.2	+2.5
OTRP	Odiongan	1.85	130	eP	Pn	14 06 57.9	+1.5
OTRP				eS	Sn	14 07 16.6	-2.1
BALP	Baler	2.39	24	eP	Pn	14 07 05.2	+1.5
BALP				eS	Sn	14 07 33.0	+1.1
ENPP	El Nido	2.58	206	eP	Pn	14 07 07.2	+0.8

*JMA **01** 14:11:50.7±0.2, 33°.67N×141°.22E, h78km±3km, M2.6*
*IDC **01** 14:11:54.8±3.9, 33°.63N×141°.03E, h71km±30km, mb3.1/3, mb1 3.3/4, mb1mx3.0/25, mbtmp3.0/4, MS2.4/1, Ms1 2.4/1, ms1mx1.5/9, Error ellipse: s-maj=48.7km s-min=11.8km az=84.0*
ISC 01 14:11:52.7±1.7**, 33°.65N**±0°.06×**141°.2E**±0°.1**, h57**km±14km**, n15,** σ0s81/22**, mb3.3**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO1	Boso 1	1.02	351	P	Pn	14 12 09.8	-0.5
BSO1				S	Sn	14 12 24.0	+0.5
BSO2	Boso 2	1.15	343	eS	Sn	14 12 27.9	+0.8
JHJ2	Mitsune	1.25	245	P	Pn	14 12 13.8	-0.2
JHJ2				S	Sn	14 12 31.1	+1.3
JHJ	Hachijo jima 2	1.27	246	P	Pn	14 12 13.8	-0.4
	28nm,0.3s,baz=75,slow=20,SNR=28						
JHJ				S	Sn	14 12 30.5	+0.1
	47nm,0.3s,baz=68,slow=22,SNR=9.2						
BSO3	Boso 3	1.27	335	P	Pn	14 12 13.2	-0.8
BSO3				S	Sn	14 12 30.7	+0.7
JHCJ	Hachijojimakas	1.28	244	P	Pn	14 12 14.1	-0.3
JHCJ				eS	Sn	14 12 30.5	-0.1
BSO4	Boso 4	1.50	333	P	Pn	14 12 16.7	-0.6
JIM2	Oshima 3	1.79	307	P	Pn	14 12 20.4	-0.9
JOD2	Odawara 2	2.36	314	P	Pn	14 12 28.4	-0.6
JOD2				eS	Sn	14 12 56.4	-0.4
MJAR	Matsushiro Arr	3.77	321	P	Pn	14 12 49.0	+0.6
	0.7nm,0.3s,baz=154,slow=12,SNR=8.4						
MJAR				S	Sn	14 13 32.8	+1.3
	0.4nm,0.3s,baz=164,slow=18,SNR=2.6						
MAT	Matsushiro	3.77	321	P	Pn	14 12 49.1	+0.7
MAT				S	Sn	14 13 32.5	+1.0
ASAJ	Asahikawa	10.51	6	LR	LR	14 18 50.2	
	comp=Z,24nm,21.7s,baz=215,slow=39						
MKAR	Makanchi Array	45.82	305	P	P	14 20 07.7	-1.2
	0.1nm,0.4s,baz=91,slow=9.1,SNR=3.5						
WRA	Warramunga Arr	53.69	188	P	P	14 21 09.3	+0.5
	0.3nm,0.3s,baz=5.5,slow=7.6,SNR=13						
ASAR	Alice Springs	57.41	188	P	P	14 21 36.2	+0.7
	0.2nm,0.7s,baz=7.8,slow=7.5,SNR=6.5						

*IDC **01** 14:38:31.2±1.4, 32°.08S×179°.20W, h0km, mb4.4/4, mb1 4.4/5, mb1mx4.0/19, mbtmp4.3/5, ML3.7/1, MS3.3/2, Ms1 3.3/2, ms1mx2.5/26, Error ellipse: s-maj=38.7km s-min=28.0km az=50.0*
*NEIC **01** 14:38:33.0±1.0, 32°.19S×179°.32W, h10km, mb4.5/2, Error ellipse: s-maj=19.7km s-min=17.5km az=86.0*
*ISCJB **01** 14:38:38.0±1.7, 32°.49S±0°.08×179°.8W±0°.2, h33km, mb4.3/5, MS3.3/1, Error ellipse: s-maj=28.8km s-min=11.8km az=0.2*
ISC 01 14:38:38.1±1.2**, 32°.4S**±0°.1×**179°.5W**±0°.2**, h35**km**, n22,** σ1s31/22**, mb4.3**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUZ	Omahuta	6.38	242	eP	Pn	14 40 09.1	-0.6
URZ	Urewera	6.49	204	Pn	Pn	14 40 11.8	+0.7
URZ				Sn	Sn	14 41 22.4	-1.4
URZ	Urewera	6.49	204	Pn	Pn	14 40 11.8	+0.7
	1.4nm,0.3s,baz=296,slow=2.6,SNR=12						
URZ				Sn	Sn	14 41 22.4	-1.4
	0.4nm,0.3s,baz=342,slow=20,SNR=1.7						
DZM	Mont Dzumac	16.13	306	LR	LR	14 47 14.1	
	comp=Z,125nm,18.3s,baz=102,slow=32						
STKA	Stephens Creek	32.80	260	P	P	14 45 10.0	+1.9
STKA	Stephens Creek	32.80	260	P	P	14 45 10.0	+1.9
	2.1nm,0.9s,baz=118,slow=15,SNR=3.6						
AS31	Alice Springs	41.74	270	eP	P	14 46 24.0	0.0
ASAR	Alice Springs	41.74	270	P	P	14 46 24.5	+0.5
ASAR	Alice Springs	41.74	270	P	P	14 46 24.5	+0.5
	5.7nm,0.8s,baz=108,slow=7.6,SNR=73						
WRAB	Tennant Creek	42.90	275	eP	P	14 46 33.6	+0.1
	3.7nm,0.6s						
WRA	Warramunga Arr	42.91	275	P	P	14 46 33.6	+0.1
WRA	Warramunga Arr	42.91	275	P	P	14 46 33.6	+0.1
	4.4nm,0.7s,baz=115,slow=7.6,SNR=26						
FITZ	Fitzroy Crossi	51.08	272	P	P	14 47 37.3	0.0
QSPA	South Pole Qui	57.75	180	eP	P	14 48 26.6	+1.2
	9.2nm,1.1s						
QSPA	South Pole Qui	57.75	180	P	P	14 48 26.4	+1.1
	5.9nm,0.9s,baz=30,slow=1.4,SNR=30						
PFO	Pinyon Flat Ob	88.50	48	LR	LR	15 20 39.0	
	comp=Z,13nm,21.2s,baz=314,slow=29						
KURK	Kurchatov	121.44	313	PKP	PKPdf	14 57 24.6	-2.7
KURBB	Kurchatov Arra	121.47	313	PKP	PKPdf	14 57 24.6	-2.8
	0.1nm,0.4s,baz=121,slow=2.0,SNR=3.1						
FINES	FINESS Array B	146.50	338	PKPbc	PKPdf	14 58 13.6	+0.2
FINES	FINESS Array B	146.50	338	PKPbc	PKPdf	14 58 13.6	+0.2
	2.5nm,0.7s,baz=42,slow=2.3,SNR=6.0						
TORD	Torodi Ar. Bea	160.84	184	PKPab	PKPab	14 59 16.3	-1.0
TORD	Torodi Ar. Bea	160.84	184	PKPab	PKPab	14 59 16.3	-1.0
	1.0nm,0.7s,baz=176,slow=2.8,SNR=9.1						

IDC 01 14:51:34.9±0.7**, 7°.42S**×**125°.72E, h0**km**, mb4.0**/11**, mb1 4.0**/13**, mb1mx3.9**/22**, mbtmp3.9**/13**, ML3.6**/2**, Error ellipse: s-maj=36.6km s-min=15.4km az=79.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	6.39	292	Sn	Sn	14 54 19.6	-4.6
	2.1nm,0.3s,baz=248,slow=18,SNR=2.2						
FITZ	Fitzroy Crossi	10.62	180	Pn	Pn	14 54 08.7	+0.2
	0.3nm,0.3s,baz=88,slow=19,SNR=16						
FITZ				Sn	Sn	14 55 59.6	-8.6
	2.6nm,0.3s,baz=306,slow=20,SNR=10.0						
WRA	Warramunga Arr	15.00	147	Pn	Pn	14 55 04.6	-3.8
	0.4nm,0.3s,baz=320,slow=15,SNR=23						
WRA				Sn	Sn	14 57 43.0	-12
	0.8nm,0.3s,baz=319,slow=25,SNR=8.7						
ASAR	Alice Springs	17.97	155	P	Pn	14 55 45.8	-0.6
	0.2nm,0.3s,baz=320,slow=9.4,SNR=29						
NWAO	Narrogin (SRO)	26.58	196	P	P	14 57 15.2	+0.3
	8.9nm,1.1s,baz=46,slow=6.0,SNR=2.9						
STKA	Stephens Creek	28.48	151	P	P	14 57 33.1	+1.1
	0.7nm,0.3s,baz=318,slow=4.4,SNR=5.0						
CMAR	Chiang Mai Arr	36.86	315	P	P	14 58 46.9	+1.5
	1.1nm,0.7s,baz=144,slow=7.2,SNR=7.6						
SONM	Songino Array	57.60	345	P	P	15 01 27.2	+0.4
	0.7nm,0.8s,baz=156,slow=7.4,SNR=4.2						
SONM				PcP	PcP	15 02 20.2	+0.1
	0.5nm,0.6s,baz=157,slow=4.1,SNR=4.0						
PETK	Petropavlovsk-	66.12	20	P	P	15 02 25.0	+1.1
	2.4nm,0.7s,baz=186,slow=8.0,SNR=5.1						
MKAR	Makanchi Array	66.31	329	P	P	15 02 25.1	-0.2
	0.7nm,0.8s,baz=135,slow=7.1,SNR=6.2						
ZALV	Zalesovo Beam	70.14	336	P	P	15 02 48.4	-0.7
	0.5nm,0.4s,baz=117,slow=5.2,SNR=6.0						
MAW	Mawson	73.03	201	P	P	15 03 06.3	0.0
	1.1nm,0.7s,baz=18,slow=3.2,SNR=4.0						
BVAR	Borovoye Array	76.20	329	P	P	15 03 25.3	+0.3
	0.2nm,0.3s,baz=145,slow=8.1,SNR=4.9						
ILAR	Eielson Array	95.54	25	P	P	15 04 59.9	-1.7
	0.4nm,0.8s,baz=262,slow=6.3,SNR=4.0						
BRTR	Keskin Array B	96.28	309	P	P	15 05 04.4	-1.5
	0.5nm,0.7s,baz=91,slow=6.2,SNR=2.6						
TORD	Torodi Ar. Bea	124.72	281	PKP	PKPdf	15 10 35.9	-1.8
	0.6nm,0.9s,baz=121,slow=1.2,SNR=3.8						

IDC 01 14:52:24.6±2.2**, 16°.18S**×**168°.05E, h182**km±16km**, mb3.9**/13**, mb1 4.0**/14**, mb1mx3.8**/22**, mbtmp3.8**/14**, Error ellipse: s-maj=23.7km s-min=14.3km az=55.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.05	194	P	Pn	14 53 54.0	+1.7
	3.7nm,0.3s,baz=27,slow=16,SNR=58						
DZM				S	Sn	14 55 02.3	+0.6
	baz=307,slow=20,SNR=2.2						
CTA	Charters Tower	21.07	256	P	P	14 56 55.9	+1.1
	10nm,0.7s,baz=79,slow=13,SNR=12						
URZ	Urewera	23.40	162	P	P	14 57 17.0	0.0
	4.5nm,0.5s,baz=323,slow=6.9,SNR=4.9						
RPZ	Rata Peaks	27.56	175	P	P	14 57 52.9	-1.6
	19nm,1.0s,baz=322,slow=4.6,SNR=3.4						
STKA	Stephens Creek	28.66	232	P	P	14 58 03.0	-1.4
	3.9nm,0.8s,baz=72,slow=6.4,SNR=4.9						
STKA				ScP	ScP	15 04 35.4	+0.7
	1.8nm,0.9s,baz=63,slow=4.5,SNR=4.0						
WRA	Warramunga Arr	32.23	258	P	P	14 58 34.6	-1.3
	3.6nm,0.8s,baz=89,slow=8.9,SNR=9.8						
WRA				ScP	ScP	15 04 45.9	-0.8
	0.6nm,0.7s,baz=92,slow=3.5,SNR=6.0						
ASAR	Alice Springs	32.89	251	P	P	14 58 41.5	-0.2
	22nm,0.5s,baz=76,slow=9.0,SNR=245						
ASAR				ScP	ScP	15 04 48.5	-0.4
	1.9nm,0.9s,baz=91,slow=4.2,SNR=13						
FITZ	Fitzroy Crossi	40.51	261	P	P	14 59 46.1	+0.1
	19nm,0.7s,baz=106,slow=7.2,SNR=19						
MJAR	Matsushiro Arr	59.53	332	P	P	15 02 07.8	-1.0
	1.5nm,0.9s,baz=167,slow=9.0,SNR=4.6						
VNDA	Vanda	61.44	182	P	P	15 02 21.6	+0.5
	1.3nm,0.6s,baz=19,slow=9.5,SNR=13						
CMAR	Chiang Mai Arr	76.22	294	P	P	15 03 54.4	+1.0
	0.4nm,0.5s,baz=126,slow=4.7,SNR=3.4						
MAW	Mawson	80.83	202	P	P	15 04 18.2	+0.6
	1.0nm,0.8s,baz=143,slow=19,SNR=2.8						
SONM	Songino Array	84.11	323	P	P	15 04 34.8	-0.2
	0.9nm,0.8s,baz=155,slow=4.5,SNR=7.0						
ILAR	Eielson Array	87.67	18	pP	pP	15 05 35.9	-1.4
	0.1nm,0.5s,baz=125,slow=11,SNR=1.7						
YKA	Yellowknife Ar	98.49	27	pP	pP	15 06 26.9	-0.4
	0.3nm,0.8s,baz=248,slow=4.4,SNR=3.8						
MKAR	Makanchi Array	98.77	316	P	Pdif	15 05 43.8	+0.4
	0.2nm,0.6s,baz=113,slow=3.7,SNR=3.0						
TORD	Torodi Ar. Bea	166.46	259	PKP	PKPdf	15 12 08.3	-0.6
	0.3nm,0.7s,baz=70,slow=2.2,SNR=3.3						
TORD				PKPab	PKPab	15 13 11.1	-0.8
	1.0nm,0.9s,baz=96,slow=3.5,SNR=5.8						

*ISCJB **01** 15:25:02.7±0.5, 39°.93N±0°.02×25°.87E±0°.03, h3km±4km, Error ellipse: s-maj=3.5km s-min=3.1km az=179.9*
*CSEM **01** 15:25:03.3±0.1, 39°.93N×25°.90E, h2km, MD3.0, Error ellipse: s-maj=3.2km s-min=2.3km az=93.0*
*THE **01** 15:25:03.3, 39°.92N×25°.90E, h2km±4km, ML2.5/3, Error ellipse: s-maj=4.1km s-min=0.6km az=302.0*
*ISK **01** 15:25:03.7, 39°.95N×25°.99E, h4km, MD3.0*
*ATH **01** 15:25:03.3, 39°.91N×25°.90E, h5km, MD2.9/7*
*DDA **01** 15:25:03.5, 39°.96N×25°.98E, h7km, MD3.0*
ISC 01 15:25:03.3±0.9**, 39°.93N**±0°.02×**25°.89E**±0°.02**, h8**km±9km**, n66,** σ0s64/93**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.15	127	i P	Pg	15 25 06.6	0.0
BOZC				i S	Sg	15 25 09.0	+0.2
EZN	Ezine	0.35	108	PG	Pg	15 25 09.9	-0.3
EZN				SG	Sg	15 25 14.6	-0.2
EZN	Ezine	0.35	108	i Pg	Pg	15 25 09.9	-0.3
EZN				i Sg	Sg	15 25 14.6	-0.2
LIA	Limnos Island	0.55	266	P	Pg	15 25 14.1	+0.2
LIA				S	Sg	15 25 21.6	+0.5
LIA	Limnos Island	0.55	266	ePB	Pg	15 25 14.1	+0.2
LIA				eSB	Sg	15 25 21.5	+0.5
LIA	Limnos Island	0.55	266	P	Pg	15 25 14.1	+0.2
LIA				S	Sg	15 25 21.6	+0.5
SMTH	Samothraki Isl	0.60	333	ePB	Pg	15 25 15.4	+0.4
SMTH				eSB	Sb	15 25 24.0	-0.8
GELI	Tayfur-Gelibol	0.64	44	PG	Pg	15 25 15.7	-0.1
GELI	Tayfur-Gelibol	0.64	44	i Pg	Pg	15 25 15.7	-0.1
SIGR	SIGRI	0.72	182	P	Pg	15 25 16.4	-0.8
SIGR				S	Sb	15 25 27.6	-0.6
SIGR	SIGRI	0.72	182	P	Pg	15 25 16.4	-0.8
SIGR				S	Sb	15 25 27.6	-0.6
PRK	Paraskevi	0.75	157	P	Pg	15 25 17.5	-0.2
PRK				S	Sg	15 25 27.4	0.0
PRK	Paraskevi	0.75	157	ePB	Pg	15 25 17.4	-0.2
PRK				eSB	Sg	15 25 27.1	-0.3
PRK	Paraskevi	0.75	157	P	Pg	15 25 17.5	-0.2
PRK				S	Sg	15 25 27.4	0.0
LPK	Lapseki	0.80	56	ePG	Pg	15 25 18.2	-0.4
LPK				eSG	Sg	15 25 29.3	+0.3
LPK	Lapseki	0.80	56	ePg	Pg	15 25 18.2	-0.4
LPK				eSg	Sg	15 25 29.3	+0.3
ENEZ	Enez	0.82	14	ePG	Pg	15 25 19.2	0.0
ENEZ	Enez	0.82	14	ePg	Pg	15 25 19.2	0.0
ERIK	Erikli-Kesan	0.88	33	ePG	Pg	15 25 20.3	+0.1
ERIK				eSG	Sb	15 25 32.1	-0.5
ERIK	Erikli-Kesan	0.88	33	ePg	Pg	15 25 20.3	+0.1
ERIK				eSg	Sb	15 25 32.1	-0.5
AYVA	Ayvalik	0.88	135	i P	Pb	15 25 20.7	-0.1
AYVA				i S	Sg	15 25 31.6	0.0
AYVA	Ayvalik	0.88	135	i P	Pb	15 25 20.7	-0.1
AYVA				i S	Sg	15 25 31.6	0.0
ALN	Alexandroupoli	0.97	7	P	Pg	15 25 21.8	-0.2
ALN				S	Sb	15 25 35.4	+0.1
ALN	Alexandroupoli	0.97	7	ePB	Pg	15 25 21.8	-0.2
ALN				eSB	Sb	15 25 35.2	-0.1
ALN	Alexandroupoli	0.97	7	P	Pg	15 25 21.8	-0.2
ALN				S	Sb	15 25 35.4	+0.1
KRBG	Karabiga-Canak	1.17	66	ePN	Pb	15 25 25.5	-0.3
KRBG	Karabiga-Canak	1.17	66	ePn	Pb	15 25 25.5	-0.3
RKY	Sarkoy-Tekirda	1.24	52	ePN	Pn	15 25 26.8	-0.2
RKY	Sarkoy-Tekirda	1.24	52	ePn	Pn	15 25 26.8	-0.2
SART	Tekirdag	1.24	52	i P	Pn	15 25 25.7	-1.3
SART				i S	Sb	15 25 43.0	-0.1
SART	Tekirdag	1.24	52	i P	Pn	15 25 25.7	-1.3
SART				i S	Sb	15 25 43.0	-0.1
RDO	Rodhopi	1.24	347	P	Pn	15 25 26.6	-0.3
RDO	Rodhopi	1.24	347	ePN	Pn	15 25 26.6	-0.3
RDO	Rodhopi	1.24	347	P	Pn	15 25 26.6	-0.3
BALY	Balya	1.34	98	i P	Pn	15 25 28.6	+0.2
BALY				i S	Sb	15 25 46.1	0.0
BALY	Balya	1.34	98	i P	Pn	15 25 28.6	+0.2
BALY				i S	Sb	15 25 46.1	0.0
MFT	Murefte	1.36	51	ePN	Pg	15 25 29.7	+0.2
MFT	Murefte	1.36	51	ePn	Pg	15 25 29.7	+0.2
GONE	Gonen-Balikesi	1.38	85	ePN	Pn	15 25 28.7	-0.2
GONE	Gonen-Balikesi	1.38	85	ePn	Pn	15 25 28.7	-0.2
MRMT	Marmara Adasi	1.46	62	ePN	Pn	15 25 30.2	+0.1
MRMT	Marmara Adasi	1.46	62	ePn	Pn	15 25 30.2	+0.1
CHOS	Chios island	1.55	175	P	Pn	15 25 30.9	-0.4
CHOS				S	Sb	15 25 52.1	0.0
CHOS	Chios island	1.55	175	ePB	Pb	15 25 32.2	-0.1
CHOS	Chios island	1.55	175	P	Pn	15 25 30.9	-0.4
CHOS				S	Sb	15 25 52.1	0.0
BALB	Balikesir	1.56	100	ePN	Pb	15 25 32.1	-0.3
BALB	Balikesir	1.56	100	ePn	Pb	15 25 32.1	-0.3
TKR	Tekirdag	1.64	49	ePN	Pb	15 25 33.1	-0.6
TKR	Tekirdag	1.64	49	ePn	Pb	15 25 33.2	-0.6
AOS	Alonnisos	1.73	245	ePG	Pb	15 25 35.8	+0.4
KCTX	Karacabey (Bur	1.92	79	ePN	Pn	15 25 37.4	+1.1
KCTX	Karacabey (Bur	1.92	79	ePn	Pn	15 25 37.4	+1.1
EDRB	Edirne	2.02	18	ePN	Pb	15 25 39.2	-1.0
EDRB	Edirne	2.02	18	ePn	Pb	15 25 39.2	-1.0
ARMT	Armutlu	2.36	74	ePN	Pn	15 25 43.5	+1.2
ARMT	Armutlu	2.36	74	ePn	Pn	15 25 43.5	+1.2
CTKS	Kestanelik-??a	2.38	56	ePN	Pn	15 25 44.0	+1.5
CTKS	Kestanelik-??a	2.38	56	ePn	Pn	15 25 44.0	+1.5
KULA	Kula-Manisa	2.58	123	ePN	Pn	15 25 46.7	+1.3
KULA	Kula-Manisa	2.58	123	ePn	Pn	15 25 46.7	+1.3
YLV	Yalova	2.74	76	ePN	Pn	15 25 49.0	+1.4
YLV	Yalova	2.74	76	ePn	Pn	15 25 49.0	+1.4
IZI	Iznik	2.77	81	ePN	Pn	15 25 49.3	+1.2
IZI	Iznik	2.77	81	ePn	Pn	15 25 49.3	+1.2
TVSB	Tavsanli	2.79	99	ePN	Pn	15 25 49.8	+1.4
TVSB	Tavsanli	2.79	99	ePn	Pn	15 25 49.8	+1.4

MEX 01 15:27:24.0±0.8**, 15°.39N**×**94°.92W, h20**km±39km**, MD4.1, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.21	288	eP	Pn	15 27 43.1	-2.6
HUIG				i S	Sb	15 27 56.4	-5.0
PCIG		1.67	79	eP	Pn	15 27 49.2	-2.9
PCIG				i S	Sn	15 28 08.2	-4.7
TGIG		2.21	51	eP	Pn	15 27 57.2	-2.5
TGIG				i S	Sn	15 28 23.4	-3.1
VHO	Vista Hermosa	2.42	314	i P	Pn	15 27 59.6	-3.1
VHO				i S	Sn	15 28 28.0	-3.9
CCIG	Comitan	2.82	71	i P	Pn	15 28 05.1	-3.1
CCIG				i S	Sn	15 28 38.2	-3.6
PNIG	Pinotepa	3.24	288	i P	Pn	15 28 12.2	-1.7
PNIG				i S	Sn	15 28 48.8	-3.2

*ISCJB **01** 15:59:03.0±0.4, 48°.25N±0°.07×151°.85E±0°.10, h200km, mb3.5/18, Error ellipse: s-maj=12.5km s-min=5.0km az=138.7*
*MOS **01** 15:59:03.6±0.8, 48°.25N×151°.80E, h210km, mb3.7/13, Error ellipse: s-maj=16.7km s-min=8.8km az=64.3*
*IDC **01** 15:59:04.3±1.9, 48°.27N×151°.76E, h196km±18km, mb3.4/16, mb1 3.6/19, mb1mx3.4/31, mbtmp3.4/19, Error ellipse: s-maj=14.9km s-min=9.2km az=150.0*
ISC 01 15:59:04.5±0.6**, 48°.23N**±0°.09×**151°.83E**±0°.08**, h200**km**, n33,** σ1s15/40**, mb3.7**/18**, 2C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.72	47	ePN	Pn	16 00 04.0	+1.3
SKR				eS	Sn	16 00 44.5	-3.9
SKR				pmax	pmax		
	comp=Z,30nm,0.5s						
SKR				smax	smax		
	comp=N,130nm,0.3s						
SKR				smax	smax		
	comp=E,200nm,0.3s						
YUK	Yuzh-Kuril'sk	5.90	227c	iPN	Pn	16 00 29.4	-1.1
YUK				eS	Sn	16 01 37.0	-1.4
YUK				pmax	pmax		
	comp=N,8.0nm,0.4s						
YUK				pmax	pmax		
	comp=E,21nm,0.4s						
YUK				pmax	pmax		
	comp=Z,40nm,0.4s						
YUK				smax	smax		
	comp=E,17nm,0.5s						
YUK				smax	smax		

	comp=N,44nm,0.5s						
PETK	Petropavlovsk-	6.14	35	PN	Pn	16 00 32.4	-1.1
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	6.14	35	P	Pn	16 00 32.4	-1.1
	comp=Z,0.6nm,0.3s,baz=204,slow=12,SNR=21						
PETK				S	Sn	16 01 52.5	+8.6
	comp=Z,0.3nm,0.3s,baz=198,slow=23,SNR=2.3						
YSS	Yuzh-Sakhalins	6.27	262	*e*PN	Pn	16 00 37.0	+1.8
PET	Petropavlovsk	6.46	40	*e*PN	Pn	16 00 37.0	-0.6
ASAJ	Asahikawa	7.62	241	P	Pn	16 00 53.3	+0.6
	comp=Z,1.0nm,0.3s,baz=77,slow=13,SNR=14						
ERM	Erimo	8.73	228	⇑*i*PN	Pn	16 01 05.3	-1.9
USRK	Ussuriysk Arra	14.30	261	P	P	16 02 20.0	+0.5
	comp=Z,0.2nm,0.3s,baz=66,slow=10,SNR=3.8						
FX1	Attu Island--F	14.32	63	P	P	16 02 22.3	+2.7
	comp=Z,0.5nm,0.3s,baz=328,slow=6.4,SNR=5.9						
FX1				S	S	16 04 47.8	-9.4
	comp=Z,1.5nm,0.3s,baz=77,slow=19,SNR=5.0						
SEY	Seymchan	14.74	1	⇓*e*P	Pn	16 02 22.7	-0.5
MJAR	Matsushiro Arr	15.39	226	P	Pn	16 02 31.6	+0.1
	comp=Z,0.3nm,0.3s,baz=23,slow=9.2,SNR=3.6						
YAK	Yakutsk	18.60	326	*e*P	P	16 03 06.4	-0.1
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SONM	Songino Array	30.05	287	P	P	16 04 55.2	+0.3
	comp=Z,0.4nm,0.6s,baz=90,slow=7.2,SNR=3.1						
COLA	College	35.53	40	*e*P	P	16 05 41.7	-0.2
COLA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ILAR	Eielson Array	35.95	40	P	P	16 05 45.1	-0.3
	comp=Z,0.6nm,0.5s,baz=272,slow=8.4,SNR=8.7						
INK	Inuvik	40.87	33	P	P	16 06 26.9	+0.5
	comp=Z,0.6nm,0.3s,baz=316,slow=9.3,SNR=6.6						
ZALV	Zalesovo Beam	41.05	304	P	P	16 06 26.9	-1.1
ZALV						16 08 23.9	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	41.05	304	P	P	16 06 26.9	-1.1
	comp=Z,0.8nm,0.5s,baz=63,slow=7.1,SNR=6.4						
ZALV				PcP	PcP	16 08 23.9	+0.2
	comp=Z,1.4nm,0.5s,baz=71,slow=2.1,SNR=13						
MKAR	Makanchi Array	45.50	296	*e*P	P	16 07 03.3	-0.5
MKAR	Makanchi Array	45.50	296	P	P	16 07 02.8	-0.9
	comp=Z,0.3nm,0.5s,baz=65,slow=8.1,SNR=6.2						
MKAR				PcP	PcP	16 08 38.5	-0.4
	comp=Z,0.4nm,0.4s,baz=74,slow=4.0,SNR=7.4						
KURK	Kurchatov	45.83	302	P	P	16 07 06.3	+0.1
KURK						16 08 40.3	
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	Kurchatov Arra	45.92	302	P	P	16 07 06.2	-0.7
	comp=Z,2.2nm,0.7s,baz=68,slow=8.3,SNR=22						
KURBB				PcP	PcP	16 08 40.3	+0.1
	comp=Z,0.5nm,0.6s,baz=68,slow=3.7,SNR=5.7						
BVAR	Borovoye Array	49.25	308	P	P	16 07 32.0	-0.5
	comp=Z,0.5nm,0.5s,baz=57,slow=9.2,SNR=4.5						
BVAR				PcP	PcP	16 08 52.2	0.0
	comp=Z,0.8nm,0.5s,baz=84,slow=3.6,SNR=6.1						
YKA	Yellowknife Ar	50.26	37	P	P	16 07 40.1	+0.2
	comp=Z,1.6nm,0.7s,baz=298,slow=7.2,SNR=17						
CMAR	Chiang Mai Arr	51.91	254	P	P	16 07 53.8	+1.0
	comp=Z,0.7nm,0.7s,baz=32,slow=6.9,SNR=6.0						
CMAR				PcP	PcP	16 09 03.6	+1.1
	comp=Z,0.5nm,0.5s,baz=66,slow=3.6,SNR=4.3						
FINES	FINESS Array B	62.33	334	P	P	16 09 03.7	-1.3
	comp=Z,0.6nm,0.4s,baz=42,slow=6.7,SNR=5.0						
NVAR	Mina Array Bea	62.51	62	P	P	16 09 07.8	+0.8
	comp=Z,0.9nm,0.5s,baz=299,slow=7.6,SNR=12						
PDAR	Pinedale Array	64.57	54	P	P	16 09 21.2	+0.8
	comp=Z,2.8nm,0.6s,baz=285,slow=2.1,SNR=17						
WRA	Warramunga Arr	69.65	198	P	P	16 09 51.1	-1.0
	comp=Z,1.0nm,0.8s,baz=19,slow=7.1,SNR=11						
SCHQ	Schefferville	72.27	22	P	P	16 10 07.6	0.0
	comp=Z,2.6nm,0.8s,baz=6.3,slow=9.2,SNR=3.4						
ASAR	Alice Springs	73.36	197	P	P	16 10 14.7	+0.4
	comp=Z,1.3nm,0.7s,baz=12,slow=5.7,SNR=41						
TXAR	Lajitas Array	77.51	60	P	P	16 10 38.5	+0.3
	comp=Z,1.3nm,0.6s,baz=300,slow=5.0,SNR=22						

*ISCJB **01** 16:00:02.1±0.4, 21°.40S±0°.03×68°.83W±0°.07, h99km±5km, mb3.9/8, Error ellipse: s-maj=11.4km s-min=5.3km az=173.7*
*GUC **01** 16:00:03.2±0.7, 21°.42S×69°.01W, h97km±4km, ML4.7*
*NEIC **01** 16:00:03.2, 21°.42S×69°.01W, h97km, mb4.5/1, After GUC.*
*IDC **01** 16:00:04.2±0.7, 21°.43S×68°.72W, h100km±5km, mb3.8/9, mb1 4.0/12, mb1mx3.8/20, mbtmp3.8/12, Error ellipse: s-maj=18.0km s-min=16.7km az=26.0*
ISC 01 16:00:03.4±0.5, **21°.42S**±0°.03×**68°.95W**±0°.07, **h98**km±4km, **n61**, σ**0s.93**/81, **mb4.0**/8, **8C-8D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	Plate Boundary	0.46	216	⇑*i*P	Pn	16 00 18.9	-0.1
PB09				*i* S	Sn	16 00 30.6	+0.1
PB09	Plate Boundary	0.46	216	⇑*i*P	Pn	16 00 18.9	-0.1
PB09				*i* S	Sn	16 00 30.6	+0.1
PB09				AML	AML	16 00 32.1	
	comp=N,39μm,0.3s						
PB01	Plate Boundary	0.62	307	⇑*i*P	Pn	16 00 19.8	-0.3
PB01				*e*S	Sn	16 00 32.0	-0.6
PB01	Plate Boundary	0.62	307	⇑*i*P	Pn	16 00 19.8	-0.3
PB01				*e*S	Sn	16 00 32.0	-0.6
PB01				AML	AML	16 00 33.1	
	comp=E,60μm,0.2s						
PB07	Plate Boundary	0.92	251	⇑*i*P	Pn	16 00 22.9	-0.1
PB07				*i* S	Sn	16 00 37.7	-0.1
PB07	Plate Boundary	0.92	251	⇑*i*P	Pn	16 00 22.9	-0.1
PB07				*i* S	Sn	16 00 37.7	-0.1
PB07				AML	AML	16 00 39.1	
	comp=E,23μm,0.5s						
PB04	Plate Boundary	0.97	210	⇓*i*P	Pn	16 00 28.7	+5.3
PB04				*i* S	Sn	16 00 48.3	+10
PB04	Plate Boundary	0.97	210	⇓*i*P	Pn	16 00 28.7	+5.3
PB04				*i* S	Sn	16 00 48.3	+10
MACH	Maria Elena	1.07	224	*e*P	Pn	16 00 24.7	0.0
MACH				*e*S	Sn	16 00 40.7	-0.1
MACH	Maria Elena	1.07	224	*e*P	Pn	16 00 24.7	0.0
MACH				*e*S	Sn	16 00 40.7	-0.1
LVC	Limon Verde	1.18	178	⇓*i*P	Pn	16 00 26.9	+0.8
LVC				*i* S	Sn	16 00 43.9	+0.7
LVC	Limon Verde	1.18	178	⇓*i*P	Pn	16 00 26.9	+0.8
LVC				*i* S	Sn	16 00 43.9	+0.7
HMBC	Humberstone	1.44	322	⇑*i*P	Pn	16 00 28.9	-0.1
HMBC				*i* S	Sn	16 00 48.1	-0.1
HMBC	Humberstone	1.44	322	⇑*i*P	Pn	16 00 28.9	-0.1
HMBC				*i* S	Sn	16 00 48.1	-0.1
HMBC				AML	AML	16 00 49.2	
	comp=E,28μm,0.3s						
PSGC	Pisagua	2.12	329	⇓*i*P	Pn	16 00 36.9	-0.8
PSGC				*e*S	Sn	16 01 03.3	-0.4
PSGC	Pisagua	2.12	329	⇓*i*P	Pn	16 00 36.9	-0.8
PSGC				*e*S	Sn	16 01 03.3	-0.4
PSGC				AML	AML	16 01 09.9	
	comp=N,4μm,0.4s						
CEN1	Los Morros	2.27	210	P	Pn	16 00 45.4	+5.8
CEN1	Los Morros	2.27	210	*e*P	Pn	16 00 45.4	+5.8
MNMC	Minimini	2.36	345	⇓*i*P	Pn	16 00 41.2	+0.3
MNMC				*i* S	Sn	16 01 10.9	+1.3
MNMC	Minimini	2.36	345	⇓*i*P	Pn	16 00 41.2	+0.3
MNMC				*i* S	Sn	16 01 10.9	+1.3
MNMC				AML	AML	16 01 18.9	
	comp=E,8μm,0.3s						
ANCH	Antofagasta	2.62	211	*e*P	Pn	16 00 44.3	+0.2
ANCH	Antofagasta	2.62	211	*e*P	Pn	16 00 44.3	+0.2
ANCH				AML	AML	16 01 23.3	
	comp=E,1μm,0.8s						
ARCH	Arica	3.18	336	P	Pn	16 00 49.6	-1.9
ARCH	Arica	3.18	336	*e*P	Pn	16 00 49.6	-1.9
LPAZ	La Paz	5.17	9	*e*P	Pn	16 01 21.2	+2.2
LPAZ	La Paz	5.17	9	P	Pn	16 01 21.1	+2.2
	comp=E,4.4nm,0.3s,baz=208,slow=6.3,SNR=54						
LCO	Las Campanas	7.72	191	*e*Pn	Pn	16 01 51.1	-2.2
	comp=E,21nm,0.6s						
SIV	San Ignacio	9.22	55	P	Pn	16 02 10.4	-3.1
SIV				S	Sn	16 03 44.0	-12
SIV	San Ignacio	9.22	55	P	Pn	16 02 10.4	-3.1
	comp=E,6.3nm,0.3s,baz=257,slow=14,SNR=132						
SIV				S	Sn	16 03 44.0	-12
	baz=294,slow=19,SNR=1.5						
CFAA	Coronel Fontan	10.16	177	P	Pn	16 02 26.5	+0.1
CFAA				S	Sn	16 04 12.4	-6.0
CFAA	Coronel Fontan	10.16	177	P	Pn	16 02 26.5	+0.1
	comp=E,0.1nm,0.3s,baz=4.0,slow=14,SNR=5.1						
CFAA				S	Sn	16 04 12.4	-6.0
	comp=E,0.1nm,0.3s,baz=189,slow=19,SNR=2.0						
SAML	Samuel	13.59	25	*e*P	Pn	16 03 10.6	-1.6
TRQA	Tornquist	17.64	162	*e*P	P	16 04 02.4	0.0
PLCA	Paso Flores	19.30	184	*e*P	Pn	16 04 22.3	-0.3
PLCA	Paso Flores	19.30	184	P	Pn	16 04 21.9	-0.7
	comp=E,0.1nm,0.3s,baz=10,slow=12,SNR=2.9						
BDFB	Brasilia	20.66	77	P	P	16 04 34.0	-1.6
BDFB	Brasilia	20.66	77	P	P	16 04 34.0	-1.6
	comp=E,8.7nm,0.4s,baz=239,slow=9.9,SNR=14						
RCBR	Riachuelo	35.55	69	P	P	16 06 50.8	-0.7
RCBR	Riachuelo	35.55	69	P	P	16 06 50.8	-0.7
	comp=E,5.9nm,0.8s,baz=244,slow=7.8,SNR=3.9						
TXAR	Lajitas Array	60.54	325	P	P	16 10 04.3	+0.7
TXAR	Lajitas Array	60.54	325	P	P	16 10 04.4	+0.7
	comp=E,0.2nm,0.5s,baz=159,slow=8.7,SNR=3.5						
DBIC	Dimbokro	68.75	73	*e*P	P	16 10 56.1	-1.2
	comp=E,4.5nm,0.6s						
DBIC	Dimbokro	68.75	73	P	P	16 10 56.3	-1.0
	comp=E,6.0nm,0.8s,baz=235,slow=7.8,SNR=9.2						
PDAR	Pinedale Array	74.02	330	P	P	16 11 30.2	+1.5
PDAR	Pinedale Array	74.02	330	P	P	16 11 30.2	+1.5
	comp=E,0.3nm,0.5s,baz=154,slow=8.9,SNR=2.4						
NVAR	Mina Array Bea	75.41	322	P	P	16 11 38.8	+2.0
NVAR	Mina Array Bea	75.41	322	P	P	16 11 38.8	+2.0
	comp=E,0.9nm,0.9s,baz=134,slow=6.4,SNR=5.2						
TOA0	Torodi Ar. Sit	77.37	70	*e*P	P	16 11 47.4	-0.7
TORD	Torodi Ar. Bea	77.37	70	P	P	16 11 47.1	-1.0
TORD				pP	pP	16 12 13.3	-0.1
TORD				sP	sP	16 12 23.9	-0.1
TORD	Torodi Ar. Bea	77.37	70	P	P	16 11 47.1	-1.0
	comp=E,4.0nm,0.7s,baz=256,slow=5.5,SNR=28						
TORD				pP	pP	16 12 13.3	-0.1
	comp=E,1.8nm,0.6s,baz=249,slow=5.0,SNR=3.8						
TORD				sP	sP	16 12 23.9	-0.1
	comp=E,5.3nm,0.8s,baz=254,slow=5.5,SNR=8.1						
BOSA	Boshof	83.52	118	*e*P	P	16 12 21.5	+0.4
BOSA	Boshof	83.52	118	P	P	16 12 21.3	+0.3
	comp=E,1.6nm,0.8s,baz=225,slow=1.4,SNR=3.0						
YKA	Yellowknife Ar	91.10	341	P	P	16 12 57.0	+0.5
YKA				pP	pP	16 13 22.1	-0.4
YKA	Yellowknife Ar	91.10	341	P	P	16 12 57.0	+0.5
	comp=E,0.5nm,0.6s,baz=134,slow=4.4,SNR=13						
YKA				pP	pP	16 13 22.1	-0.4
	comp=E,0.3nm,0.6s,baz=129,slow=4.6,SNR=3.2						
ASAR	Alice Springs	129.96	208	PKP	PKPdf	16 19 01.9	-0.5
ASAR				pPKP	pPKPdf	16 19 30.6	+1.2
ASAR	Alice Springs	129.96	208	PKP	PKPdf	16 19 01.9	-0.5
	comp=E,0.1nm,0.4s,baz=129,slow=1.5,SNR=6.8						
ASAR				pPKP	pPKPdf	16 19 30.6	+1.2
	comp=E,0.2nm,0.7s,baz=140,slow=2.4,SNR=1.8						
WRA	Warramunga Arr	133.00	211	PKP	PKPdf	16 19 07.6	-0.6
WRA				pPKP	pPKPdf	16 19 36.1	+0.9
WRA	Warramunga Arr	133.00	211	PKP	PKPdf	16 19 07.6	-0.6
	comp=E,0.2nm,0.5s,baz=155,slow=1.7,SNR=5.4						
WRA				pPKP	pPKPdf	16 19 36.1	+0.9
	comp=E,0.3nm,0.7s,baz=154,slow=1.7,SNR=1.8						
MK31	Makanchi Array	145.60	36	*e*P	PKPab	16 19 31.7	+0.7
MKAR	Makanchi Array	145.60	36	PKPbc	PKPab	16 19 31.1	+0.2
MKAR				pPKPbc	pPKPbc	16 19 58.3	+1.0
MKAR				sPKPbc	sPKPbc	16 20 08.8	+1.1
MKAR	Makanchi Array	145.60	36	PKPbc	PKPab	16 19 31.1	+0.2
	comp=E,1.0nm,0.7s,baz=325,slow=4.3,SNR=15						
MKAR				pPKPbc	pPKPbc	16 19 58.3	+1.0
	comp=E,1.0nm,0.9s,baz=327,slow=3.1,SNR=4.1						
MKAR				sPKPbc	sPKPbc	16 20 08.8	+1.1
	comp=E,0.8nm,0.7s,baz=330,slow=3.1,SNR=4.6						

IDC 01 16:40:35.1±0.8, **10°.44N**×**138°.79E**, **h0**km, **mb3.6**/10, **mb1 3.8**/10, **mb1mx3.7**/24, **mbtmp3.6**/10, **MS3.5**/2, **Ms1 3.5**/2, **ms1mx2.7**/31, **Error ellipse: s-maj=31.9km s-min=17.6km az=81.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.51	188	P	P	16 46 49.3	-1.0
	0.5nm,0.8s,baz=6.8,slow=9.7,SNR=3.6						
ASAR	Alice Springs	34.24	188	P	P	16 47 23.6	+0.6
	0.4nm,0.6s,baz=17,slow=13,SNR=4.9						
CMAR	Chiang Mai Arr	39.33	286	P	P	16 48 07.0	+0.6
	0.8nm,0.6s,baz=82,slow=6.6,SNR=5.5						
STKA	Stephens Creek	42.17	176	P	P	16 48 29.4	-0.2
	1.3nm,0.8s,baz=339,slow=8.6,SNR=3.0						
SONM	Songino Array	46.16	330	P	P	16 49 01.7	0.0
	0.3nm,0.6s,baz=134,slow=6.2,SNR=3.1						
AFI	Afiamalu	54.68	115	LR	LR	17 11 36.9	
	comp=Z,62nm,18.3s,baz=113,slow=34						
MKAR	Makanchi Array	59.74	318	P	P	16 50 41.9	0.0
	1.2nm,0.7s,baz=103,slow=8.7,SNR=20						
ZALV	Zalesovo Beam	60.84	327	P	P	16 50 48.4	-0.8
	0.4nm,0.6s,baz=89,slow=6.3,SNR=3.0						
ZALV				LR	LR	17 18 33.2	
	comp=Z,27nm,19.0s,baz=67,slow=37						
ILAR	Eielson Array	73.94	25	P	P	16 52 11.5	-0.6
	0.5nm,0.7s,baz=252,slow=6.2,SNR=5.3						
YKA	Yellowknife Ar	88.34	26	P	P	16 53 28.8	+0.2
	0.1nm,0.3s,baz=284,slow=5.0,SNR=3.6						
NVAR	Mina Array Bea	93.50	50	P	P	16 53 54.5	+1.0
	0.1nm,0.3s,baz=263,slow=7.2,SNR=2.3						

*TAP **01** 16:47:17.5, 23°.39N×120°.65E, h12km, ML3.8, B*
*ISCJB **01** 16:47:18.7±0.2, 23°.39N±0°.01×120°.64E±0°.02, h12km±2km, Error ellipse: s-maj=2.4km s-min=1.8km az=21.5*
*JMA **01** 16:47:18.2±0.5, 23°.19N×120°.63E, h40km, M3.5*
ISC 01 16:47:17.8±0.8, **23°.41N**±0°.01×**120°.65E**±0°.02, **h16**km±6km, **n71**, σ**1s.10**/118, **13C-21D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHN4	Tsaushan	0.08	219	⇓*i*P	Pg	16 47 20.4	-0.6
	baz=229						
WTP	Ta-pu	0.17	191	⇓*i*P	Pg	16 47 21.6	-0.5
	baz=189						
ALS	Alishan	0.17	56	⇑*i*P	Pb	16 47 22.6	-0.2
	baz=59						
ALS				S	Sb	16 47 26.2	0.0
	baz=59						
CHN5	Tsauling	0.18	9	⇓*i*P	Pb	16 47 22.6	-0.3
	baz=8.0						
CHN2	Minshiung	0.20	306	⇑*i*P	Pb	16 47 23.0	-0.1
	baz=311						
CHN2				*e*S	Sb	16 47 27.2	+0.6
	baz=311						
TWK	Hsinying	0.21	225	⇓*i*P	Pg	16 47 22.3	-0.4
	baz=226						
TWK				*e*S	Sg	16 47 25.9	-0.1
	baz=226						
CHY	Chiayi	0.22	292	⇑*i*P	Pb	16 47 23.2	-0.3
	baz=298						
CHY				S	Sb	16 47 27.5	+0.2
	baz=298						
CHN1	Nanshi	0.25	206	⇓*i*P	Pg	16 47 23.1	-0.3
	baz=208						
CHN1				*i* S	Sb	16 47 27.4	-0.9
	baz=208						
WGK	Gukeng	0.28	344	⇓*i*P	Pb	16 47 24.8	+0.3
	baz=346						
WGK				*i* S	Sb	16 47 30.6	+1.5
	baz=346						
YUS	Yu-Shan	0.29	75	⇑*i*P	Pb	16 47 24.8	-0.1
	baz=72						
YUS				*i* S	Sb	16 47 29.7	-0.1
	baz=72						
SGST	Jiashian	0.34	190	⇓*e*P	Pg	16 47 24.6	-0.2
	baz=190						
CHN8	Yiju	0.41	260	⇑*i*P	Pb	16 47 26.2	-0.4
	baz=264						
CHN8				*e*S	Sb	16 47 33.4	+0.8
	baz=264						
ELDTW	Lidau	0.41	123	⇑*i*P	Pb	16 47 26.3	-0.5
	baz=114						
ELDTW				S	Sb	16 47 32.1	-0.7
	baz=114						
CHN3	Shinhua	0.43	218	⇓P	Pb	16 47 27.2	+0.2
	baz=220						
CHN3				*e*S	Sn	16 47 35.1	-1.7
	baz=220						
WSF	Szhu	0.45	300	⇑*i*P	Pb	16 47 27.3	-0.1
	baz=302						
WSF				*i* S	Sb	16 47 34.8	+0.9
	baz=302						
WNT	Mingjian	0.46	4	⇓P	Pb	16 47 28.1	+0.5
	baz=4.0						
WNT				S	Sn	16 47 36.0	-1.8
	baz=4.0						
SCLT	Jiali	0.48	240	P	Pb	16 47 27.8	-0.1
	baz=242						
SCLT				*e*S	Sn	16 47 36.0	-2.2
	baz=242						
SMLT	Sun Moon Lake	0.52	26	⇓*i*P	Pb	16 47 29.1	+0.4
	baz=26						
SMLT				S	Sn	16 47 38.0	-1.3
	baz=26						
TYC	Yuchr	0.52	21	⇓*i*P	Pb	16 47 29.1	+0.5
	baz=21						
TYC				S	Sb	16 47 37.2	+1.1
	baz=21						
TAI1	Yung-k'ang	0.54	226	*e*P	Pb	16 47 29.1	+0.3
	baz=238						
TAI1				*e*S	Sn	16 47 38.3	-1.2
	baz=238						
WTCT	Ta-ch'eng	0.56	323	⇓*e*P	Pb	16 47 29.3	0.0
	baz=314						
WTCT				S	Sn	16 47 38.1	-2.1
	baz=314						
TWF1	Yuli	0.60	96	⇑*i*P	Pb	16 47 29.9	0.0
	baz=104						
TWF1				S	Sb	16 47 38.3	+0.1
	baz=104						
TWM1	Shoushan	0.62	199	⇓P	Pn	16 47 31.5	-0.6
	baz=188						
EHY	Hungye	0.63	81	⇑*i*P	Pb	16 47 30.4	0.0
	baz=89						
EHY				*e*S	Sb	16 47 38.8	-0.1
	baz=89						
SSD	Sandimen	0.67	181	⇓*i*P	Pb	16 47 30.8	-0.2
	baz=174						
SSD				*e*S	Sb	16 47 40.4	+0.3
	baz=174						
SGLT	Jiouru	0.70	192	*e*P	Pn	16 47 32.5	-0.6
	baz=179						
SGLT				*e*S	Sn	16 47 45.5	+1.9
	baz=179						
TWG	Pinlang	0.71	146	⇓*i*P	Pb	16 47 31.7	-0.1
	baz=145						
TWG				S	Sb	16 47 42.0	+0.6
	baz=145						
TCU	Taichung	0.73	2	⇓*i*P	Pn	16 47 32.8	-0.7
	baz=2.0						
TCU				*e*S	Sg	16 47 42.6	+0.9
	baz=2.0						
CHKT	Chengkung	0.73	115	⇑*i*P	Pn	16 47 33.0	-0.6
	baz=114						
CHKT				S	Sn	16 47 44.2	-0.2
	baz=114						
TTN	Taitung	0.80	145	*e*P	Pn	16 47 34.1	-0.4
	baz=144						
TTN				*e*S	Sn	16 47 46.2	+0.1
	baz=144						
ESL	Shilin	0.82	61	⇑P	Pn	16 47 34.0	-0.8
	baz=67						
ESL				*e*S	Sn	16 47 45.8	-0.9
	baz=67						
ECL	Taimali	0.86	161	⇓*e*P	Pg	16 47 34.2	-0.4
	baz=150						
ECL				*e*S	Sn	16 47 46.4	-1.2
	baz=150						
KAU	Kaohsiung	0.90	200	*e*P	Pn	16 47 36.1	+0.2
	baz=217						
WDGT	Dungji	0.92	261	⇑P	Pb	16 47 34.5	-0.9
	baz=262						
WDGT				*e*S	Sb	16 47 46.9	-0.6
	baz=262						
WHF	Hehuan Shan	0.92	38	P	Pn	16 47 36.2	-0.3
	baz=37						
WHF				S	Sn	16 47 49.0	-0.7
	baz=37						
TWQ1	Liyutan	0.94	7	⇓P	Pn	16 47 36.5	+0.1
	baz=7.0						
TWQ1				*e*S	Sn	16 47 50.4	+0.8
	baz=7.0						
TWT	Tachien	0.96	30	*e*P	Pb	16 47 36.1	-0.2
	baz=29						
NSY	Sanyi	1.00	6	*e*P	Pg	16 47 37.7	+0.4
	baz=6.0						
NSY				*e*S	Sn	16 47 52.9	+1.7
	baz=6.0						
PNG	Penghu	1.01	279	⇑*i*P	Pb	16 47 36.1	-1.0
	baz=280						
PNG				*e*S	Sb	16 47 49.4	-0.8
	baz=280						
SCZT	Fangliau	1.04	181	*e*P	Pg	16 47 37.4	-0.5
	baz=174						
SCZT				*e*S	Sn	16 47 53.1	+1.1
	baz=174						
HWA	Hwalien	1.04	57	P	Pg	16 47 38.7	+0.7
	baz=56						
HWA				S	Sn	16 47 53.3	+1.2
	baz=56						
EAST	Anshuo	1.04	170	⇓P	Pg	16 47 37.6	-0.4
	baz=177						
EAST				*e*S	Sn	16 47 53.2	+1.0
	baz=177						
TAW	Tawu	1.08	168	*e*P	Pn	16 47 37.9	-0.4
	baz=168						
TWD	Chiawan	1.09	52	P	Pg	16 47 38.8	-0.1
	baz=38						
TWD				S	Sg	16 47 54.9	+1.6
	baz=38						
TWP	Hsiaoliuchiu	1.09	194	*e*P	Pg	16 47 39.2	+0.2
	baz=194						
TWP				*e*S	Sg	16 47 57.5	+4.2
	baz=194						
NNS	Nan Shan	1.22	33	*e*P	Pb	16 47 40.5	-0.1
	baz=33						
NSTT	Nanjuang	1.25	15	⇓*i*P	Pg	16 47 41.4	-0.6
	baz=14						
NSTT				*e*S	Sg	16 47 59.0	+0.6
	baz=14						
HEN	Hengchun	1.41	177	⇓*e*P	Pb	16 47 43.2	-0.5
	baz=167						
HEN				*e*S	Sg	16 48 04.7	+1.5
	baz=167						
NSK	Sanguang	1.41	27	P	Pb	16 47 44.2	+0.3
	baz=17						
NSK				*e*S	Sg	16 48 02.5	-1.0
	baz=17						
ENA	Nanau	1.42	45	*e*P	Pb	16 47 44.2	+0.3
	baz=44						
ENA				*e*S	Sg	16 48 05.1	+1.4
	baz=44						
TWK1	Hengchun	1.47	174	*e*P	Pg	16 47 45.2	-1.0
	baz=170						
ENTT	Nioudou	1.48	34	P	Pb	16 47 45.4	+0.3
	baz=22						
ENTT				*e*S	Sg	16 48 07.3	+1.7
	baz=22						
TSEB	Hengchuen, Pin	1.52	171	*e*P	Pb	16 47 45.6	-0.2
	baz=189						
TWE	Neicheng	1.60	35	P	Pb	16 47 47.4	+0.4
	baz=35						
TWE				S	Sg	16 48 10.2	+0.8
	baz=35						
LAY	Lan-yu	1.60	148	*e*P	Pb	16 47 46.1	-1.0
	baz=138						
TWC	Suao	1.62	42	P	Pg	16 47 48.6	-0.4
	baz=42						
TWC				*e*S	Sg	16 48 10.7	+0.7
	baz=42						
TAP	Taipei	1.80	26	*e*P	Pg	16 47 51.5	-0.9
	baz=8.0						
TAP1	Taipei	1.80	26	*e*P	Pg	16 47 51.5	-0.9
	baz=8.0						
TWS1	Kuangyinshan	1.82	23	*e*P	Pg	16 47 51.7	-1.1
	baz=4.0						
EGS		1.84	39	*e*P	Pg	16 47 52.1	-1.2
	baz=39						
NWF	Wu-fen Shan	1.95	32	*e*P	Pg	16 47 54.1	-1.2
	baz=16						
TWB1	Santiao Chiao	2.00	37	*e*P	Pb	16 47 52.9	-1.1
	baz=18						
TWY	Chenhua	2.05	25	*e*P	Pn	16 47 51.8	+0.2
	baz=7.0						
KNM	Kinmen	2.26	297	*e*P	Pn	16 47 55.1	+0.6
	baz=295						
YOJ	Yonaguni jima	2.40	64	*e*P	Pb	16 47 58.2	-2.5
	baz=63						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YOJ	**Yonaguni jima**	**2.40**	**64**	P	**Pb**	**16 47 58.2**	**-2.5**
YOJ				*e*S	**Sb**	**16 48 27.6**	**-2.5**
HATJ	**Hateruma jima**	**2.96**	**77**	P	Pn	16 48 05.3	+1.1
HATJ				S	**Sn**	**16 48 40.9**	**+1.4**
IRIF	**Iriomote-Funau**	**2.97**	**71**	P	**Pn**	**16 48 06.1**	**+1.8**
IRIF				S	**Sb**	**16 48 42.6**	**-3.8**
JKRS	**Kuro-shima**	**3.19**	**74**	P	**Pn**	**16 48 09.0**	**+1.7**
JKRS				*e*S	**Sn**	**16 48 47.0**	**+2.0**
JIJ	**Ishigaki jima**	**3.34**	**73**	P	Pn	16 48 10.4	+1.0
JIJ				*e*S	**Sn**	**16 48 48.6**	**-0.1**
JTJ	**Tarama**	**3.90**	**71**	P	Pn	16 48 19.1	+1.9
JTJ				*e*S	**Sn**	**16 49 04.6**	**+1.9**

IDC 01 16:50:38.2±57.0**,18°.11S×178°.67W,h0km,mb3.9**/3**, mb1 4.1**/3**,mb1mx3.6**/19**,mbtmp3.9**/3**,Error ellipse: s-maj=1047.0km s-min=162.2km az=79.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.32**	**241**	P	P	16 58 01.2	+0.4
	1.5nm,0.9s,baz=95,slow=11,SNR=5.1						
WRA	**Warramunga Arr**	**44.35**	**260**	P	P	16 58 50.2	-0.3
	0.9nm,0.5s,baz=97,slow=8.1,SNR=9.0						
ASAR	**Alice Springs**	**44.50**	**254**	P	P	16 58 51.4	-0.4
	0.9nm,0.4s,baz=87,slow=8.7,SNR=68						

WEL 01 16:52:13.7±0.3**,39°.53S×174°.28E,h209km**±2km**,ML3.6**/10**, 11C-3D,Error ellipse: s-maj=2.6km s-min=1.4km az=90.0,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.55**	**42**	⇓PN	Pn	16 52 41.6	-0.5
VRZ				SN	S	16 53 03.5	-0.7
WAZ	**Wanganui**	**0.59**	**113**	⇑PN	Pn	16 52 43.1	+0.8
MTVZ	**Mangateitei**	**0.93**	**81**	PN	Pn	16 52 44.1	+0.1
MTVZ				SN	S	16 53 06.7	-0.9
TWVZ	**Taurewa**	**1.01**	**63**	PN	Pn	16 52 44.1	-0.5
TRVZ	**Turoa**	**1.01**	**77**	PN	Pn	16 52 44.7	-0.1
FWVZ	**Far West T-bar**	**1.02**	**75**	PN	Pn	16 52 44.7	-0.2
FWVZ				SN	S	16 53 07.7	-1.1
WPVZ	**Whakapapa**	**1.03**	**72**	PN	Pn	16 52 44.6	-0.2
WNVZ	**Wahianoa**	**1.04**	**79**	PN	Pn	16 52 44.9	0.0
WNVZ				SN	S	16 53 07.6	-1.3
HIZ	**Hauiti**	**1.11**	**24**	⇓PN	Pn	16 52 44.4	-0.8
MOVZ	**Moawhango**	**1.15**	**84**	PN	Pn	16 52 45.0	-0.5
DUWZ	**D'Urville Isla**	**1.30**	**192**	PN	Pn	16 52 46.9	+0.3
BHHZ	**Black Hill Sta**	**1.38**	**89**	PN	Pn	16 52 46.6	-0.7
TSZ	**Takapari Road**	**1.40**	**113**	⇑PN	Pn	16 52 47.4	0.0
TSZ				AML	AML	16 53 14.0	
TSZ				AML	AML	16 53 15.0	
KIW	**Kapiti Island**	**1.41**	**160**	PN	Pn	16 52 47.4	0.0
KIW				SN	S	16 53 12.2	-1.4
KIW				AML	AML	16 53 14.5	
POWZ	**Post Office Ro**	**1.43**	**127**	⇑PN	Pn	16 52 47.6	0.0
OGWZ	**Otaki Gorge**	**1.45**	**152**	⇑PN	Pn	16 52 48.0	+0.2
OGWZ				SN	S	16 53 13.3	-0.9
MRZ	**Mangatainoka R**	**1.50**	**139**	⇑PN	Pn	16 52 48.1	-0.1
MRZ				AML	AML	16 53 14.3	
MRZ				AML	AML	16 53 16.1	
PNHZ	**Pukenui**	**1.53**	**105**	⇑PN	Pn	16 52 48.4	-0.1
PNHZ				SN	S	16 53 14.4	-0.9
DVHZ	**Dannevirke**	**1.64**	**118**	PN	Pn	16 52 49.3	-0.1
HOWZ	**Holdsworth Sta**	**1.66**	**146**	⇑PN	Pn	16 52 49.4	-0.2
TCW	**Tory Channel**	**1.68**	**180**	PN	Pn	16 52 50.0	+0.2
TCW				AML	AML	16 53 17.4	
TCW				AML	AML	16 53 17.5	
CAW	**Cannon Point**	**1.68**	**159**	⇑PN	Pn	16 52 49.7	-0.1
CAW				AML	AML	16 53 17.8	
CAW				AML	AML	16 53 19.9	
WPHZ	**Waipukurau**	**1.75**	**108**	PN	Pn	16 52 50.4	0.0
TIWZ	**Tintock**	**1.75**	**136**	PN	Pn	16 52 50.3	-0.1
BKZ	**Black Stump Fm**	**1.75**	**79**	⇓PN	Pn	16 52 49.8	-0.7
BKZ				AML	AML	16 53 21.0	
BKZ				AML	AML	16 53 21.2	
WEL	**Wellington**	**1.79**	**168**	PN	Pn	16 52 50.6	-0.1
SNZO	**South Karori**	**1.80**	**170**	PN	Pn	16 52 50.7	-0.2
SNZO				AML	AML	16 53 20.1	
SNZO				AML	AML	16 53 20.7	
NNZ	**Nelson**	**1.82**	**202**	PN	Pn	16 52 51.1	0.0
QRZ	**Quartz Range**	**1.86**	**226**	PN	Pn	16 52 50.8	-0.7
BFZ	**Birch Farm**	**1.89**	**128**	PN	Pn	16 52 51.5	-0.3
TUWZ	**Tuamarina**	**1.91**	**188**	PN	Pn	16 52 51.9	0.0
TUWZ				AML	AML	16 53 53.1	
TUWZ				AML	AML	16 53 21.4	
TMWZ	**Te Maipa**	**2.00**	**143**	PN	Pn	16 52 52.6	-0.3
KAHZ	**Kahuranaki**	**2.02**	**98**	PN	Pn	16 52 53.3	+0.2
MSWZ	**Moikau Station**	**2.02**	**159**	⇑PN	Pn	16 52 52.6	-0.5
PAWZ	**Paruwai Farm**	**2.04**	**155**	⇑PN	Pn	16 52 52.9	-0.4
PAWZ				AML	AML	16 53 24.4	
PXZ	**Pawanui**	**2.05**	**105**	PN	Pn	16 52 53.3	-0.1
PXZ				AML	AML	16 53 29.7	
PXZ				AML	AML	16 53 53.9	
PXZ				AML	AML	16 53 53.9	
TRWZ	**Traveller**	**2.15**	**151**	PN	Pn	16 52 54.0	-0.4
PLWZ	**Palliser**	**2.17**	**160**	PN	Pn	16 52 53.9	-0.7
BSWZ	**Blackbirch Sta**	**2.20**	**188**	PN	Pn	16 52 54.9	0.0
THZ	**Tophouse**	**2.46**	**205**	⇑PN	Pn	16 52 57.3	-0.5
MWZ	**Matawai**	**2.80**	**66**	PN	Pn	16 52 59.7	-1.9
KHZ	**Kahutara**	**2.94**	**191**	PN	Pn	16 53 02.3	-0.7
LTZ	**Lake Taylor**	**3.58**	**204**	PN	Pn	16 53 09.6	-1.2
CRLZ	**Canterbury Las**	**4.23**	**197**	PN	Pn	16 53 16.9	-1.6
MQZ	**McQueen's Vall**	**4.35**	**196**	PN	Pn	16 53 18.2	-1.8
WVZ	**Waitaha Valley**	**4.43**	**216**	PN	Pn	16 53 19.6	-1.5
FOZ	**Fox Glacier**	**5.30**	**219**	PN	Pn	16 53 29.2	-2.8
LBZ	**Lake Benmore**	**5.73**	**211**	PN	Pn	16 53 35.2	-2.3
ODZ	**Otahua Downs**	**6.13**	**205**	PN	Pn	16 53 41.1	-1.6
JCZ	**Jackson Bay**	**6.13**	**220**	PN	Pn	16 53 40.0	-2.9
TUZ	**Tuapeka**	**7.27**	**207**	PN	Pn	16 53 56.2	-1.2

IDC 01 17:09:10.7±1.8**,0°.29S×129°.39E,h0km,mb3.6**/4**, mb1 3.9**/4**,mb1mx3.5**/21**,mbtmp3.7**/4**,Error ellipse: s-maj=118.9km s-min=23.4km az=67.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.13**	**166**	P	P	17 13 45.2	-1.2
	1.3nm,0.9s,baz=347,slow=12,SNR=7.4						
ASAR	**Alice Springs**	**23.65**	**170**	P	P	17 14 24.1	+0.2
	1.7nm,0.7s,baz=349,slow=9.3,SNR=23						
STKA	**Stephens Creek**	**33.48**	**161**	P	P	17 15 52.1	+0.4
	2.1nm,0.9s,baz=338,slow=7.0,SNR=7.4						
MKAR	**Makanchi Array**	**62.35**	**325**	P	P	17 19 35.0	-0.1
	0.1nm,0.5s,baz=134,slow=7.5,SNR=2.3						

*NEIC **01** 17:27:15.3,19°.48N×63°.53W,h109km,MD3.5(RSPR), After RSPR.*
RSPR 01 17:27:15.3,19°.48N×63°.53W,h109km±8km**,MD3.5**/3**, 6C-2D,Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.75**	**231**	⇑*e*P	Pn	17 27 44.4	-0.7
STVI	**Saint Thomas**	**1.75**	**231**	*e*S	Sn	17 28 07.9	+0.2
STVI	**Saint Thomas**	**1.75**	**231**	⇑*e*P	Pn	17 27 44.4	-0.7
STVI				*e*S	Sn	17 28 07.9	+0.2
MTP	**Monte Pirata**	**2.35**	**235**	⇑*e*P	Pn	17 27 52.7	-0.1
MTP	**Monte Pirata**	**2.35**	**235**	*e*S	Sn	17 28 21.4	-0.1
MTP	**Monte Pirata**	**2.35**	**235**	⇑*e*P	Pn	17 27 52.7	-0.1
MTP				*e*S	Sn	17 28 21.4	-0.1
CBYP	**Canovanas**	**2.50**	**242**	⇑*e*P	Pn	17 27 54.6	-0.2
CBYP	**Canovanas**	**2.50**	**242**	*e*S	Sn	17 28 25.1	0.0
CBYP	**Canovanas**	**2.50**	**242**	⇑*e*P	Pn	17 27 54.6	-0.2
CBYP				*e*S	Sn	17 28 25.1	0.0
HUMP	**Col San Antoni**	**2.56**	**239**	⇓*e*P	Pn	17 27 55.3	-0.2
HUMP	**Col San Antoni**	**2.56**	**239**	*e*S	Sn	17 28 26.6	+0.2
HUMP	**Col San Antoni**	**2.56**	**239**	⇓*e*P	Pn	17 27 55.3	-0.2
HUMP				*e*S	Sn	17 28 26.6	+0.2

*IDC **01** 17:35:18.0±1.1,7°.07N×71°.98W,h0km,mb3.7/4,mb1 4.0/5, mb1mx3.6/24,mbtmp3.8/5,ML2.4/1,MS2.8/1,Ms1 2.9/1, ms1mx2.4/26,Error ellipse: s-maj=29.2km s-min=19.5km az=85.0*
*ISCJB **01** 17:35:19.8±1.4,6°.79N±0°.06×72°.24W±0°.08,h9km±12km, mb3.6/4,MS2.6/1,Error ellipse: s-maj=14.7km s-min=8.8km az=28.0*
*FUNV **01** 17:35:20.0,6°.59N×72°.64W,h69km,MW4.1*
ISC 01 17:35:20.8±1.4**,6°.85N**±0°.06×**72°.28W**±0°.07**,h13km**±11km**, n21,**σ**1s.34**/32**,mb3.8**/4**,1D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**2.00**	**45**	*e*P	**Pb**	**17 35 56.0**	**-1.1**
SOCV				*e*S	**Sg**	**17 36 24.7**	**-0.5**
VIGV	**El Vigia**	**2.17**	**25**	*e*P	**Pb**	**17 35 59.2**	**-0.8**
VIGV				*e*S	**Sb**	**17 36 27.0**	**+0.1**
ROSC	**El Rosal**	**2.85**	**226**	Pn	**Pb**	**17 36 11.6**	**-0.2**
	8.8nm,0.3s,baz=80,slow=22,SNR=14						
ROSC				Pg	**Pg**	**17 36 16.1**	**+0.7**
	23nm,0.3s,baz=79,slow=19,SNR=15						
ROSC				Sn	**Sg**	**17 36 50.9**	**-1.5**
	49nm,0.3s,baz=116,slow=20,SNR=8.8						
QARV	**Quebrada Arrib**	**3.76**	**27**	*e*P	**Pn**	**17 36 20.0**	**+1.4**
QARV				*e*S	**Sn**	**17 37 03.9**	**+1.1**
SANV	**Sanarito**	**3.78**	**46**	*e*P	**Pn**	**17 36 20.7**	**+1.8**
SANV				*e*S	**Sn**	**17 37 05.2**	**+1.8**
CURV	**Curarigua**	**3.89**	**36**	*e*P	**Pn**	**17 36 21.7**	**+1.3**
CURV				*e*S	**Sn**	**17 37 08.4**	**+2.4**
TEPV	**Terepaima**	**4.34**	**44**	*e*P	**Pn**	**17 36 27.6**	**+1.0**
DABV	**Dabajuro**	**4.36**	**22**	*e*P	**Pn**	**17 36 27.6**	**+0.9**
SIQV	**Siquisique**	**4.49**	**33**	*e*P	**Pn**	**17 36 30.1**	**+1.4**
BAUV	**El Baul**	**4.68**	**63**	*e*P	**Pn**	**17 36 32.2**	**+0.9**
BAUV				*e*S	**Sn**	**17 37 25.9**	**+0.4**
MAPV	**Macapo**	**4.80**	**52**	*e*P	**Pn**	**17 36 34.6**	**+1.7**
MONV	**Montecano**	**5.56**	**24**	*e*P	**Pn**	**17 36 43.9**	**+0.6**
MONV				*e*S	**Sn**	**17 37 45.1**	**-2.0**
TURV	**Turiamo**	**5.66**	**51**	*e*P	**Pn**	**17 36 45.3**	**+0.7**
BIRV	**Birongo**	**6.95**	**58**	*e*P	**Pn**	**17 37 03.4**	**+1.1**
BIRV				*e*S	**Sn**	**17 38 19.9**	**-1.4**
CUPV	**Cœpira**	**7.17**	**63**	⇓*i*P	**Pn**	**17 37 06.6**	**+1.1**
CUPV				*e*S	**Sn**	**17 38 24.3**	**-2.5**
LPAZ	**La Paz**	**23.36**	**170**	P	**P**	**17 40 30.8**	**+0.9**
	1.6nm,0.6s,baz=348,slow=11,SNR=6.7						
LPAZ				LR	LR	17 51 16.7	
	comp=Z,22nm,20.1s,baz=148,slow=41						
SIV	**San Ignacio**	**25.26**	**154**	P	**P**	**17 40 47.6**	**+0.6**
	2.5nm,0.8s,baz=329,slow=11,SNR=8.3						
TXAR	**Lajitas Array**	**37.07**	**311**	P	**P**	**17 42 31.2**	**+0.1**
	0.1nm,0.3s,baz=110,slow=7.8,SNR=3.1						
YKA	**Yellowknife Ar**	**63.52**	**340**	P	**P**	**17 45 50.0**	**-0.6**
	0.5nm,0.5s,baz=129,slow=7.0,SNR=10						
ASAR	**Alice Springs**	**149.81**	**234**	PKPbc	**PKPbc**	**17 55 10.8**	**-0.8**
	0.3nm,0.5s,baz=117,slow=2.8,SNR=5.2						
WRA	**Warramunga Arr**	**151.08**	**241**	PKPbc	**PKPbc**	**17 55 13.2**	**-1.5**
	0.4nm,0.6s,baz=107,slow=2.5,SNR=10						

MEX 01 17:53:57.5±1.1**,16°.74N×94°.04W,h144km**±14km**,MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.88**	**87**	*i* P	Pn	17 54 19.6	-1.1
TGIG				*i* S	Sn	17 54 36.0	-2.4
PCIG		**1.29**	**142**	*i* P	Pn	17 54 23.8	-0.7
PCIG				*i* S	Sn	17 54 43.2	-1.8
TUIG	**Tuzandepetl**	**1.34**	**344**	*i* P	Pn	17 54 23.4	-1.6
TUIG				*i* S	Sn	17 54 44.0	-2.0
CCIG	**Comitan**	**1.88**	**104**	*i* P	Pn	17 54 30.2	-0.8
CCIG				*i* S	Sn	17 54 54.4	-2.4
HUIG	**Huatulco**	**2.21**	**244**	*i* P	Pn	17 54 32.2	-2.6
HUIG				*i* S	Sn	17 55 01.9	-1.5
VHO	**Vista Hermosa**	**2.60**	**278**	*e*P	Pn	17 54 39.3	-0.5
VHO				*i* S	Sn	17 55 11.0	-1.4
PNIG	**Pinotepa**	**3.94**	**266**	*e*P	Pn	17 54 55.1	-1.7
PNIG				*i* S	Sn	17 55 41.4	-1.4

*ISCJB **01** 17:54:34.1±1.0,31°.17S±0°.08×178°.6W±0°.2,h87km, mb3.6/3,Error ellipse: s-maj=30.7km s-min=5.5km az=18.0*
*IDC **01** 17:54:35.5±2.0,31°.10S×178°.39W,h97km±19km,mb3.4/3, mb1 3.5/4,mb1mx3.3/18,mbtmp3.4/4,Error ellipse: s-maj=35.5km s-min=18.6km az=113.0*
ISC 01 17:54:34.8±1.3**,31°.17S**±0°.10×**178°.4W**±0°.3**,h87km,n12,** σ**1s.25**/15**,mb3.6**/3**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.95**	**12**	P	**Pn**	**17 55 07.3**	**+1.2**
	126nm,0.3s,baz=60,slow=20,SNR=3.4						
RAO				S	**Sn**	**17 55 30.5**	**+0.4**
	339nm,0.3s,baz=70,slow=20,SNR=7.6						
MXZ	**Matakaoa Point**	**6.95**	**202**	SN	**Sn**	**17 57 32.8**	**+1.4**
MWZ	**Matawai**	**7.91**	**204**	PN	**Pn**	**17 56 26.0**	**-1.0**
URZ	**Urewera**	**8.00**	**207**	PN	**Pn**	**17 56 27.8**	**-0.3**
URZ				SN	**Sn**	**17 57 59.4**	**+2.5**
URZ	**Urewera**	**8.00**	**207**	P	**Pn**	**17 56 27.9**	**-0.3**
	0.7nm,0.3s,baz=76,slow=10,SNR=25						
URZ				S	**Sn**	**17 57 56.5**	**-0.4**
	5.6nm,0.3s,baz=162,slow=18,SNR=25						
MCHZ	**McNeill Hill**	**9.19**	**205**	SN	**Sn**	**17 58 26.5**	**+0.5**
WPHZ	**Waipukurau**	**9.83**	**204**	SN	**Sn**	**17 58 41.7**	**0.0**
STKA	**Stephens Creek**	**34.01**	**258**	P	**P**	**18 01 11.6**	**+1.2**
	2.8nm,0.9s,baz=119,slow=6.8,SNR=7.8						
ASAR	**Alice Springs**	**42.76**	**268**	P	**P**	**18 02 22.8**	**-1.0**
	0.3nm,0.5s,baz=107,slow=7.4,SNR=11						
WRA	**Warramunga Arr**	**43.82**	**273**	P	**P**	**18 02 31.1**	**-1.2**
	0.4nm,0.4s,baz=111,slow=8.1,SNR=10						
FINES	**FINESS Array B**	**145.75**	**339**	PKPbc	**PKPdf**	**18 14 00.5**	**-1.9**
	1.3nm,0.8s,baz=40,slow=9.5,SNR=3.9						
TORD	**Torodi Ar. Bea**	**162.07**	**180**	PKPab	**PKPab**	**18 15 13.3**	**+0.1**
	0.4nm,0.8s,baz=160,slow=4.6,SNR=2.5						

*GEN **01** 17:55:49.1,44°.30N×11°.69E,h3km,ML2.2*
*ISCJB **01** 17:55:51.1±0.3,44°.30N±0°.03×11°.51E±0°.03,h24km±4km, Error ellipse: s-maj=4.6km s-min=3.7km az=11.6*
*ROM **01** 17:55:51.0±0.2,44°.29N×11°.46E,h22km±3km,Md2.5/20, Ml2.1/11,Error ellipse: s-maj=2.8km s-min=2.3km az=44.0*
*CSEM **01** 17:55:51.1±0.1,44°.29N×11°.50E,h20km,ML2.8/5,Error ellipse: s-maj=3.0km s-min=2.7km az=111.0*
ISC 01 17:55:51.2±0.9**,44°.29N**±0°.02×**11°.47E**±0°.02**,h19km**±2km**, n59,**σ**0s.65**/78**,2D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTRZ	**Monterenzio**	**0.09**	**356**	Pg	**Pg**	**17 55 54.6**	**-0.4**
MTRZ				Sg	**Sg**	**17 55 58.5**	**+0.9**
	3μm,0.3s						
MTRZ	**Monterenzio**	**0.09**	**356**	Pg	**Pg**	**17 55 54.6**	**-0.4**
MTRZ				Sg	**Sg**	**17 55 58.5**	**+0.9**
	3μm,0.3s						
SEI	**Scarperia**	**0.25**	**200**	Pg	**Pb**	**17 55 56.4**	**-0.5**
SEI				Sg	**Sg**	**17 56 01.3**	**+0.3**
	637nm,0.2s						
SEI	**Scarperia**	**0.25**	**200**	Pg	**Pb**	**17 55 56.4**	**-0.5**
SEI				Sg	**Sg**	**17 56 01.3**	**+0.3**
	637nm,0.2s						
FNVD	**Fontana Vidola**	**0.28**	**245**	Pg	**Pg**	**17 55 56.9**	**-0.7**
FNVD				Sg	**Sb**	**17 56 02.0**	**+0.2**
FNVD	**Fontana Vidola**	**0.28**	**245**	Pg	**Pg**	**17 55 56.9**	**-0.7**
FNVD				Sg	**Sb**	**17 56 02.0**	**+0.2**
VMG	**Vicchio**	**0.33**	**171**	Pg	**Pg**	**17 55 57.9**	**-0.4**
VMG	**Vicchio**	**0.33**	**171**	Pg	**Pg**	**17 55 57.9**	**-0.4**
FIU	**Minerbio Fiu**	**0.35**	**2**	Pg	**Pg**	**17 55 58.7**	**0.0**
	348nm,0.4s						
FIU	**Minerbio Fiu**	**0.35**	**2**	Pg	**Pg**	**17 55 58.7**	**0.0**
	348nm,0.4s						
ZCCA	**Zocca**	**0.36**	**280**	Pg	**Pg**	**17 55 58.9**	**0.0**
	90nm,0.9s						
ZCCA	**Zocca**	**0.36**	**280**	Pg	**Pg**	**17 55 58.9**	**0.0**
	90nm,0.9s						
CMPO	**Campotto Po**	**0.38**	**39**	Pg	**Pb**	**17 55 59.9**	**+0.5**
	296nm,1.0s						
CMPO	**Campotto Po**	**0.38**	**39**	Pg	**Pb**	**17 55 59.9**	**+0.5**
	296nm,1.0s						
PZZT	**Monte Pizzetto**	**0.47**	**251**	Pg	**Pg**	**17 56 00.4**	**-0.4**
PZZT				Sg	**Sg**	**17 56 06.2**	**-1.0**
	88nm,0.5s						
PZZT	**Monte Pizzetto**	**0.47**	**251**	Pg	**Pg**	**17 56 00.4**	**-0.4**
PZZT				Sg	**Sg**	**17 56 06.2**	**-1.0**
	88nm,0.5s						
SFI	**Santa Sofia**	**0.47**	**145**	Pg	**Pg**	**17 56 00.3**	**-0.5**
SFI				Sg	**Sb**	**17 56 08.4**	**+1.0**
	179nm,0.3s						
SFI	**Santa Sofia**	**0.47**	**145**	Pg	**Pg**	**17 56 00.3**	**-0.5**
SFI				Sg	**Sb**	**17 56 08.4**	**+1.0**
	179nm,0.3s						
ASQU	**Asqua**	**0.54**	**155**	Pg	**Pg**	**17 56 01.7**	**-0.4**
ASQU				Sg	**Sb**	**17 56 10.6**	**+1.2**
	156nm,0.4s						
ASQU	**Asqua**	**0.54**	**155**	Pg	**Pg**	**17 56 01.7**	**-0.4**
ASQU				Sg	**Sb**	**17 56 10.6**	**+1.2**
	156nm,0.4s						
CRMI	**Carmignano**	**0.62**	**216**	Pg	**Pb**	**17 56 03.3**	**0.0**
	45nm,0.3s						
CRMI	**Carmignano**	**0.62**	**216**	Pg	**Pb**	**17 56 03.3**	**0.0**
	45nm,0.3s						
BDI	**Bagni Di Lucca**	**0.67**	**251**	Pg	**Pb**	**17 56 04.1**	**-0.1**
	98nm,0.6s						
BDI	**Bagni Di Lucca**	**0.67**	**251**	Pg	**Pb**	**17 56 04.1**	**-0.1**
	98nm,0.6s						
ERBM	**Eremo**	**0.77**	**280**	Pg	**Pn**	**17 56 06.8**	**-0.4**
ERBM	**Eremo**	**0.77**	**280**	Pg	**Pn**	**17 56 06.8**	**-0.4**
VLC	**Villacollemand**	**0.79**	**261**	Pg	**Pg**	**17 56 07.0**	**+0.3**
VLC	**Villacollemand**	**0.79**	**261**	Pg	**Pg**	**17 56 07.0**	**+0.3**
MAIM	**Mastiano**	**0.80**	**243**	P	**Pb**	**17 56 06.5**	**0.0**
MAIM				S	**Sn**	**17 56 18.3**	**-0.5**
CSNT	**Castellina Chi**	**0.82**	**189**	Pg	**Pg**	**17 56 07.5**	**+0.1**
	51nm,0.4s						
CSNT	**Castellina Chi**	**0.82**	**189**	Pg	**Pg**	**17 56 07.5**	**+0.1**
	51nm,0.4s						
PARC	**Parchiule**	**0.84**	**139**	Pg	**Pb**	**17 56 07.0**	**-0.2**
	41nm,0.4s						
PARC	**Parchiule**	**0.84**	**139**	Pg	**Pb**	**17 56 07.0**	**-0.2**
	41nm,0.4s						
VALM	**Valbona**	**0.88**	**274**	P	**Pb**	**17 56 08.0**	**+0.1**
VALM				S	**Sn**	**17 56 21.1**	**+0.1**
PII	**Pisa**	**0.89**	**231**	Pg	**Pb**	**17 56 07.9**	**-0.1**
	40nm,0.2s						
PII	**Pisa**	**0.89**	**231**	Pg	**Pb**	**17 56 07.9**	**-0.1**
	40nm,0.2s						
BADI	**Badiali**	**0.96**	**144**	Pg	**Pb**	**17 56 09.3**	**+0.1**
	46nm,0.6s						
BADI	**Badiali**	**0.96**	**144**	Pg	**Pb**	**17 56 09.3**	**+0.1**
	46nm,0.6s						
VINC	**Vinca**	**0.96**	**262**	P	**Pn**	**17 56 09.8**	**+0.1**
VINC				S	**Sn**	**17 56 23.5**	**+0.6**
GRAM	**Graiana**	**1.03**	**282**	P	**Pn**	**17 56 10.9**	**+0.2**
GRAM				S	**Sg**	**17 56 25.4**	**+0.6**
ROVR	**Roverˆ¤ Verone**	**1.39**	**348**	Pg	**Pn**	**17 56 14.8**	**-0.9**
ROVR	**Roverˆ¤ Verone**	**1.39**	**348**	Pg	**Pn**	**17 56 14.8**	**-0.9**
DDS	**Dosso del Somm**	**1.61**	**353**	*e*Pg	**Pn**	**17 56 17.8**	**-0.9**
DDS	**Dosso del Somm**	**1.61**	**353**	*e*Pg	**Pn**	**17 56 17.8**	**-0.9**
VARN	**Col Varnada, M**	**1.76**	**14**	⇓*e*Pg	**Pn**	**17 56 19.1**	**-1.7**
VARN	**Col Varnada, M**	**1.76**	**14**	*e*Pg	**Pn**	**17 56 19.1**	**-1.7**
CTI	**Castel Tesino**	**1.77**	**4**	Pg	**Pn**	**17 56 19.7**	**-1.1**
CTI	**Castel Tesino**	**1.77**	**4**	Pg	**Pn**	**17 56 19.7**	**-1.1**
RNI	**Roncone**	**1.79**	**341**	*e*Pg	**Pb**	**17 56 23.0**	**-0.5**
RNI	**Roncone**	**1.79**	**341**	*e*Pg	**Pb**	**17 56 23.0**	**-0.5**
PCP	**Piancastagn**	**2.11**	**278**	P	**Pn**	**17 56 26.2**	**+0.6**
PCP				S	**Sn**	**17 56 51.5**	**+0.2**
KOSI	**Kohlern**	**2.18**	**358**	*e*Pn	**Pn**	**17 56 26.3**	**-0.3**
APPI	**Appiano**	**2.20**	**356**	Pg	**Pn**	**17 56 26.6**	**-0.2**
APPI	**Appiano**	**2.20**	**356**	Pg	**Pn**	**17 56 26.6**	**-0.2**
ABSI	**Aberstueckl**	**2.44**	**358**	*e*Pn	**Pn**	**17 56 30.2**	**0.0**
NVLJ	**Novalja**	**2.45**	**82**	*e*Pn	**Pn**	**17 56 30.1**	**0.0**
NVLJ				Sn	**Sn**	**17 56 58.4**	**-1.1**
NVLJ	**Novalja**	**2.45**	**82**	*e*Pn	**Pn**	**17 56 30.1**	**0.0**
NVLJ				Sn	**Sn**	**17 56 58.3**	**-1.1**
ZOU	**Zoufplan**	**2.50**	**24**	⇓*e*Pn	**Pn**	**17 56 30.7**	**-0.3**
RISI	**Rein**	**2.69**	**9**	*e*Pn	**Pn**	**17 56 34.9**	**+1.2**

*ISK **01** 18:04:09.9,40°.17N×27°.27E,h5km,MD2.3*
*ISCJB **01** 18:04:10.0±0.5,40°.15N±0°.03×27°.25E±0°.04,h5km±5km, Error ellipse: s-maj=5.4km s-min=4.2km az=136.5*
*DDA **01** 18:04:10.3,40°.17N×27°.27E,h7km,MD2.6*
*CSEM **01** 18:04:10.4±0.1,40°.15N×27°.27E,h5km,MD2.3,Error ellipse: s-maj=3.6km s-min=2.0km az=49.0*
ISC 01 18:04:10.6±1.0**,40°.16N**±0°.03×**27°.27E**±0°.03**,h9km**±10km**, n45,**σ**0s.58**/54**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBG	**Karabiga-Canak**	**0.24**	**6**	*e*PG	**Pg**	**18 04 15.3**	**-0.2**
KRBG				*e*SG	**Sg**	**18 04 18.9**	**+0.1**
KRBG	**Karabiga-Canak**	**0.24**	**6**	*e*Pg	**Pg**	**18 04 15.3**	**-0.2**
KRBG				*e*Sg	**Sg**	**18 04 18.9**	**+0.1**
GONE	**Gonen-Balikesi**	**0.34**	**109**	*e*PG	**Pg**	**18 04 17.0**	**-0.4**
GONE				*e*SG	**Sg**	**18 04 22.9**	**+1.0**
GONE	**Gonen-Balikesi**	**0.34**	**109**	*e*Pg	**Pg**	**18 04 17.0**	**-0.4**
GONE				*e*Sg	**Sg**	**18 04 22.9**	**+1.0**
BALY	**Balya**	**0.50**	**147**	*i* P	**Pg**	**18 04 20.4**	**+0.1**
BALY				*i* S	**Sg**	**18 04 27.6**	**+0.8**
BALY	**Balya**	**0.50**	**147**	*i* P	**Pg**	**18 04 20.4**	**+0.1**
MRMT	**Marmara Adasi**	**0.51**	**29**	*e*PG	**Pg**	**18 04 20.1**	**-0.6**
MRMT				*e*SG	**Sg**	**18 04 27.0**	**-0.4**
MRMT	**Marmara Adasi**	**0.51**	**29**	*e*Pg	**Pg**	**18 04 20.1**	**-0.6**
MRMT				*e*Sg	**Sg**	**18 04 27.0**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.54**	**353**	*e*PG	**Pg**	**18 04 20.5**	**-0.6**
RKY	**Sarkoy-Tekirda**	**0.54**	**353**	*e*Pg	**Pg**	**18 04 20.5**	**-0.6**
BNT	**Bandirma**	**0.54**	**68**	*e*PG	**Pg**	**18 04 20.3**	**-0.8**
BNT	**Bandirma**	**0.54**	**68**	*e*Pg	**Pg**	**18 04 20.3**	**-0.8**
MFT	**Murefte**	**0.63**	**1**	*e*PG	**Pg**	**18 04 22.8**	**-0.1**
MFT	**Murefte**	**0.63**	**1**	*e*Pg	**Pg**	**18 04 22.8**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.65**	**292**	*e*PG	**Pg**	**18 04 22.8**	**-0.5**
GELI	**Tayfur-Gelibol**	**0.65**	**292**	*e*Pg	**Pg**	**18 04 22.8**	**-0.5**
BALB	**Balikesir**	**0.70**	**137**	*e*PG	**Pg**	**18 04 24.0**	**-0.1**
BALB	**Balikesir**	**0.70**	**137**	*e*Pg	**Pg**	**18 04 24.0**	**-0.1**
ERIK	**Erikli-Kesan**	**0.77**	**312**	*e*PG	**Pg**	**18 04 25.2**	**-0.3**
ERIK	**Erikli-Kesan**	**0.77**	**312**	*e*Pg	**Pg**	**18 04 25.2**	**-0.3**
KCTX	**Karacabey (Bur**	**0.84**	**82**	*e*PG	**Pg**	**18 04 26.5**	**-0.4**
KCTX	**Karacabey (Bur**	**0.84**	**82**	*e*Pg	**Pg**	**18 04 26.5**	**-0.4**
BOZC	**Bozcaada**	**0.98**	**252**	*i* P	**Pg**	**18 04 28.9**	**-0.6**
BOZC				*i* S	**Sg**	**18 04 41.5**	**-0.9**
DURS	**Dursunbey**	**1.08**	**120**	*i* P	**Pg**	**18 04 30.1**	**-1.3**
DURS				*i* S	**Sg**	**18 04 45.0**	**-0.5**
DURS	**Dursunbey**	**1.08**	**120**	*i* P	**Pg**	**18 04 30.1**	**-1.3**
ORLT	**Orhaneli**	**1.25**	**94**	*e*PN	**Pn**	**18 04 34.3**	**0.0**
ORLT	**Orhaneli**	**1.25**	**94**	*e*Pn	**Pn**	**18 04 34.3**	**0.0**
MDNY	**Mudanya-Bursa**	**1.26**	**80**	*e*PN	**Pn**	**18 04 34.3**	**0.0**
MDNY	**Mudanya-Bursa**	**1.26**	**80**	*e*Pn	**Pn**	**18 04 34.3**	**0.0**
ARMT	**Armutlu**	**1.29**	**71**	*e*PN	**Pn**	**18 04 35.0**	**+0.2**
ARMT	**Armutlu**	**1.29**	**71**	*e*Pn	**Pn**	**18 04 35.0**	**+0.2**
SLVT	**Silivri**	**1.29**	**33**	*e*PN	**Pb**	**18 04 35.2**	**+0.1**
SLVT	**Silivri**	**1.29**	**33**	*e*Pn	**Pb**	**18 04 35.2**	**+0.1**
CTKS	**Kestanelik-??a**	**1.43**	**41**	*e*PN	**Pb**	**18 04 37.4**	**-0.1**
CTKS	**Kestanelik-??a**	**1.43**	**41**	*e*Pn	**Pb**	**18 04 37.4**	**-0.1**
YLV	**Yalova**	**1.66**	**75**	*e*PN	**Pn**	**18 04 40.6**	**+0.7**
YLV	**Yalova**	**1.66**	**75**	*e*Pn	**Pn**	**18 04 40.7**	**+0.7**
IZI	**Iznik**	**1.70**	**83**	*e*PN	**Pn**	**18 04 40.5**	**0.0**
IZI	**Iznik**	**1.70**	**83**	*e*Pn	**Pn**	**18 04 40.5**	**0.0**
EDRB	**Edirne**	**1.73**	**347**	*e*PN	**Pn**	**18 04 41.8**	**+0.9**
EDRB	**Edirne**	**1.73**	**347**	*e*Pn	**Pn**	**18 04 41.8**	**+0.9**
KLYT	**Kilyos**	**1.74**	**50**	*e*PN	**Pn**	**18 04 41.8**	**+0.9**
KLYT	**Kilyos**	**1.74**	**50**	*e*Pn	**Pn**	**18 04 41.8**	**+0.9**
TVSB	**Tavsanli**	**1.83**	**112**	*e*PN	**Pn**	**18 04 42.7**	**+0.3**
TVSB	**Tavsanli**	**1.83**	**112**	*e*Pn	**Pn**	**18 04 42.7**	**+0.3**

*ISCJB **01** 18:04:27.1±0.7,13°.13N±0°.04×120°.36E±0°.07,h27km, mb3.6/6,MS2.9/1,Error ellipse: s-maj=10.4km s-min=6.1km az=170.6*
*MAN **01** 18:04:29,13°.16N×120°.51E,h48km,mb4.5,ML3.4,MS3.3*
*IDC **01** 18:04:30.4±4.8,13°.23N×120°.43E,h46km±53km,mb3.4/6, mb1 3.5/6,mb1mx3.2/25,mbtmp3.4/6,MS2.9/1,Ms1 2.9/1, ms1mx2.1/17,Error ellipse: s-maj=64.5km s-min=16.1km az=70.0*
ISC 01 18:04:28.5±0.8**,13°.16N**±0°.04×**120°.44E**±0°.08**,h27km,n17,** σ**1s.39**/19**,mb3.6**/6**,2C-1D,Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.60**	**56**	⇑*i*P	**Pb**	**18 04 40.0**	**-0.6**
SJMP	**San Jose**	**0.96**	**136**	*e*P	**Pb**	**18 04 47.1**	**+0.4**
SJMP				*e*S	**Sb**	**18 04 56.8**	**-2.2**
TGY	**Tagaytay City**	**1.05**	**27**	⇓*i*P	**Pn**	**18 04 47.7**	**+0.1**
TGY	**Tagaytay City**	**1.05**	**27**	P	**Pn**	**18 04 48.0**	**+0.5**
	348nm,0.3s,baz=205,slow=3.7,SNR=43						
TGY				S	**Sn**	**18 05 01.6**	**+0.2**
	376nm,0.3s,baz=12,slow=20,SNR=19						
OTRP	**Odiongan**	**1.74**	**117**	*e*P	**Pn**	**18 04 57.7**	**+0.8**
AUQP	**San Andres**	**2.18**	**86**	*e*P	**Pb**	**18 05 09.2**	**+1.8**
ENPP	**El Nido**	**2.18**	**207**	*e*P	**Pn**	**18 05 04.4**	**+1.3**
PCPH	**Palayan**	**2.47**	**15**	⇑*e*P	**Pn**	**18 05 06.5**	**-0.5**
BALP	**Baler**	**2.79**	**23**	*e*P	**Pn**	**18 05 12.9**	**+1.5**
CAUP	**Cauayan**	**3.99**	**19**	*e*P	**Pn**	**18 05 30.2**	**+2.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
APYP	**Conner**	**4.74**	**9**	*e*P	**Pn**	**18 05 40.8**	**+2.6**
WRA	**Warramunga Arr**	**35.63**	**157**	P	**P**	**18 11 23.5**	**-0.8**
	0.5nm,0.6s,baz=332,slow=11,SNR=8.6						
SONM	**Songino Array**	**36.50**	**344**	P	**P**	**18 11 30.7**	**-1.0**
	0.4nm,0.6s,baz=169,slow=12,SNR=4.1						
ASAR	**Alice Springs**	**38.90**	**160**	P	**P**	**18 11 52.2**	**+0.2**
	0.5nm,0.5s,baz=338,slow=7.3,SNR=18						
MKAR	**Makanchi Array**	**46.31**	**324**	P	**P**	**18 12 51.7**	**-0.4**
	0.3nm,0.6s,baz=110,slow=8.4,SNR=5.6						
MKAR				LR	LR	18 32 22.2	
	comp=Z,14nm,19.1s,baz=339,slow=36						
STKA	**Stephens Creek**	**49.16**	**156**	P	**P**	**18 13 15.2**	**+1.0**
	0.9nm,0.7s,baz=336,slow=12,SNR=3.3						
ZALV	**Zalesovo Beam**	**49.42**	**333**	P	**P**	**18 13 14.3**	**-1.7**
	0.3nm,0.4s,baz=112,slow=9.5,SNR=3.9						

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*ISCJB **01** 18:11:28.3±0.3, 24.20N±0.04×122.65E±0.02, h39km±24km, Error ellipse: s-maj=6.1km s-min=3.1km az=174.7*
*TAP **01** 18:11:28.8, 24.27N×122.57E, h60km±1km, ML3.0, C*
*JMA **01** 18:11:28.0±0.2, 24.48N×122.66E, h57km±1km, M2.2*
ISC 01 18:11:27.4±1.1**, 24.19N**±0.04×**122.64E**±0.02**, h29**km±12km**, n35, σ0.97**/60**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.43**	**52**	P	**Pn**	**18 11 37.9**	**+0.2**
YOJ				S	**Sn**	**18 11 45.1**	**+0.4**
TWC	**Suao**	**0.83**	**300**	*i* P	**Pb**	**18 11 43.4**	**+0.1**
	baz=292						
TWC				*i* S	**Sn**	**18 11 54.4**	**0.0**
	baz=292						
ENA	**Nanau**	**0.85**	**286**	P	**Pb**	**18 11 44.5**	**+0.8**
	baz=282						
TWD	**Chiawan**	**0.96**	**263**	*e*P	**Pn**	**18 11 44.9**	**-0.1**
	baz=249						
TWD				S	**Sn**	**18 11 57.5**	**-0.1**
	baz=249						
IRIF	**Iriomote-Funau**	**1.01**	**82**	P	**Pn**	**18 11 45.6**	**0.0**
IRIF				S	**Sb**	**18 11 59.0**	**-0.2**
TWE	**Neicheng**	**1.03**	**301**	P	**Pb**	**18 11 46.6**	**0.0**
	baz=308						
TWE				S	**Sb**	**18 11 59.2**	**-0.5**
	baz=308						
ENTT	**Nioudou**	**1.07**	**295**	P	**Pb**	**18 11 47.5**	**+0.1**
	baz=284						
ENTT				*e*S	**Sb**	**18 12 01.3**	**+0.2**
	baz=284						
HATJ	**Hateruma jima**	**1.08**	**97**	P	**Pb**	**18 11 47.9**	**+0.5**
ESL	**Shilin**	**1.16**	**251**	*e*P	**Pn**	**18 11 47.7**	**-0.1**
	baz=239						
ESL				*e*S	**Sn**	**18 12 02.6**	**-0.2**
	baz=239						
NWF	**Wu-fen Shan**	**1.17**	**318**	*e*P	**Pn**	**18 11 47.9**	**-0.1**
	baz=318						
NWF				*e*S	**Sn**	**18 12 02.1**	**-1.0**
	baz=318						
NNS	**Nan Shan**	**1.18**	**282**	*e*P	**Pb**	**18 11 50.3**	**+1.0**
	baz=270						
NNS				*e*S	**Sb**	**18 12 03.8**	**-0.4**
	baz=270						
JKRS	**Kuro-shima**	**1.25**	**88**	P	**Pn**	**18 11 49.7**	**+0.7**
JKRS				*e*S	**Sb**	**18 12 06.2**	**0.0**
WHF	**Hehuan Shan**	**1.25**	**268**	*e*P	**Pn**	**18 11 50.1**	**+0.7**
	baz=256						
NSK	**Sanguang**	**1.26**	**293**	P	**Pb**	**18 11 50.2**	**-0.4**
	baz=281						
NSK				S	**Sn**	**18 12 05.0**	**-0.3**
	baz=281						
TWT	**Tachien**	**1.34**	**273**	P	**Pb**	**18 11 52.5**	**+0.6**
	baz=269						
EHY	**Hungye**	**1.39**	**241**	P	**Pn**	**18 11 51.6**	**+0.7**
	baz=233						
EHY				*e*S	**Sn**	**18 12 08.2**	**-0.1**
	baz=233						
JIJ	**Ishigaki jima**	**1.39**	**83**	P	**Pn**	**18 11 50.6**	**-0.2**
JIJ				S	**Sn**	**18 12 07.9**	**-0.3**
TWF1	**Yuli**	**1.49**	**236**	*e*P	**Pn**	**18 11 52.8**	**+0.5**
	baz=245						
TWF1				*e*S	**Sn**	**18 12 10.9**	**+0.2**
	baz=245						
NSTT	**Nanjuang**	**1.55**	**287**	*e*P	**Pb**	**18 11 54.7**	**-0.9**
	baz=284						
NSTT				*e*S	**Sb**	**18 12 13.7**	**-1.1**
	baz=284						
CHKT	**Chengkung**	**1.59**	**227**	*e*P	**Pn**	**18 11 53.5**	**-0.3**
	baz=218						
CHKT				*e*S	**Sn**	**18 12 11.9**	**-1.4**
	baz=218						
SMLT	**Sun Moon Lake**	**1.62**	**259**	*e*P	**Pb**	**18 11 56.0**	**-0.7**
	baz=250						
SMLT				*e*S	**Sn**	**18 12 14.3**	**+0.1**
	baz=250						
TYC	**Yuchr**	**1.65**	**260**	P	**Pn**	**18 11 55.4**	**+0.9**
	baz=251						
TYC				S	**Sn**	**18 12 14.6**	**-0.2**
	baz=251						
YUS	**Yu-Shan**	**1.69**	**246**	*e*P	**Pn**	**18 11 56.6**	**+1.0**
	baz=242						
YUS				*e*S	**Sn**	**18 12 16.5**	**0.0**
	baz=242						
ELDTW	**Lidau**	**1.79**	**236**	*e*P	**Pn**	**18 11 56.7**	**+0.2**
	baz=225						
ELDTW				*e*S	**Sn**	**18 12 17.0**	**-1.4**
	baz=225						
ALS	**Alishan**	**1.81**	**248**	*e*P	**Pn**	**18 11 58.6**	**+1.6**
	baz=245						
ALS				*e*S	**Sn**	**18 12 19.5**	**+0.4**
	baz=245						
CHN5	**Tsauling**	**1.89**	**252**	P	**Pb**	**18 12 00.0**	**-1.3**
	baz=240						
CHN5				S	**Sn**	**18 12 22.9**	**+2.2**
	baz=240						
JTJ	**Tarama**	**1.93**	**76**	P	**Pn**	**18 11 58.9**	**+0.5**
JTJ				*e*S	**Sn**	**18 12 21.2**	**-0.6**
TWG	**Pinlang**	**1.98**	**227**	*e*P	**Pn**	**18 11 59.4**	**+0.3**
	baz=232						
CHN4	**Tsaushan**	**2.05**	**246**	*e*P	**Pb**	**18 12 02.7**	**-1.4**
	baz=244						
CHN4				*e*S	**Sb**	**18 12 27.9**	**-1.2**
	baz=244						
WTP	**Ta-pu**	**2.08**	**243**	*e*P	**Pn**	**18 12 02.8**	**+2.3**
	baz=240						
TWK	**Hsinying**	**2.17**	**245**	*e*P	**Pb**	**18 12 04.8**	**-1.3**
	baz=243						
TWK				*e*S	**Sn**	**18 12 29.8**	**+2.1**
	baz=243						
CHN1	**Nanshi**	**2.18**	**243**	*e*P	**Pn**	**18 12 03.9**	**+2.1**
	baz=240						
ECL	**Taimali**	**2.22**	**225**	*e*P	**Pn**	**18 12 02.1**	**-0.2**
	baz=229						
SSD	**Sandimen**	**2.34**	**232**	*e*P	**Pn**	**18 12 06.6**	**+2.6**
	baz=226						
EAST	**Anshuo**	**2.44**	**223**	*e*P	**Pn**	**18 12 07.0**	**+1.6**
	baz=220						

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*IDC **01** 18:17:30.3±2.9, 43.30N×105.28W, h0km, mb1 3.6/3, mb1mx3.3/28, mbtmp3.4/3, ML3.2/3, Error ellipse: s-maj=60.2km s-min=9.7km az=154.0*
*ISCJB **01** 18:17:32.4±0.2, 43.52N±0.01×105.34W±0.02, h0km, Error ellipse: s-maj=1.9km s-min=1.4km az=164.4*
*NEIC **01** 18:17:32.9±0.5, 43.58N×105.21W, h0km, ML3.1, Error ellipse: s-maj=6.7km s-min=6.0km az=190.0, Suspected Mining explosion.*
NEIC 85 km [50 miles] SSE of Gillette.
ISC 01 18:17:32.8±0.7**, 43.52N**±0.01×**105.36W**±0.01**, h0**km**, n163, σ0.93**/237**, 74C-130D, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J23A	**Dilts Ranch, B**	**0.18**	**229**	⇑P	**Pg**	**18 17 37.2**	**+0.9**
	baz=0.3						
J23A				⇓S	**Sg**	**18 17 39.3**	**+0.6**
	baz=0.3						
J23A	**Dilts Ranch, B**	**0.18**	**229**	⇑P	**Pg**	**18 17 37.2**	**+0.9**
	baz=0.3						
J23A				⇓S	**Sg**	**18 17 39.3**	**+0.6**
	baz=0.3						
I23A	**Meade Ranch, G**	**0.44**	**351**	⇑P	**Pg**	**18 17 42.1**	**+0.8**
	baz=0.4,SNR=22						
I23A				⇑S	**Sg**	**18 17 47.9**	**+0.9**
	baz=0.4						
I23A	**Meade Ranch, G**	**0.44**	**351**	⇑P	**Pg**	**18 17 42.1**	**+0.8**
	baz=0.4,SNR=22						
I23A				⇑S	**Sg**	**18 17 47.9**	**+0.9**
	baz=0.4						
J24A	**Dixon Ranch, L**	**0.55**	**110**	⇓P	**Pg**	**18 17 43.7**	**+0.4**
	baz=0.5,SNR=7.6						
J24A				⇓S	**Sg**	**18 17 51.0**	**+0.7**
	baz=0.5						
J24A	**Dixon Ranch, L**	**0.55**	**110**	⇓P	**Pg**	**18 17 43.7**	**+0.4**
	baz=0.5,SNR=7.6						
J24A				⇓S	**Sg**	**18 17 51.0**	**+0.7**
	baz=0.5						
I24A	**Kuemmerle Ranc**	**0.63**	**58**	P	**Pg**	**18 17 45.2**	**+0.3**
	baz=0.5,SNR=221						
I24A				⇑S	**Sg**	**18 17 53.9**	**+0.9**
	baz=0.5						
I24A	**Kuemmerle Ranc**	**0.63**	**58**	P	**Pg**	**18 17 45.2**	**+0.3**
	baz=0.5,SNR=221						
I24A				⇑S	**Sg**	**18 17 53.9**	**+0.9**
	baz=0.5						
K23A	**Bowen Ranch, D**	**0.79**	**194**	⇑P	**Pg**	**18 17 47.7**	**-0.2**
	baz=0.9,SNR=8.6						
K23A				⇓S	**Sg**	**18 17 57.6**	**-0.7**
	baz=0.9						
K23A	**Bowen Ranch, D**	**0.79**	**194**	⇑P	**Pg**	**18 17 47.7**	**-0.2**
	baz=0.9,SNR=8.6						
K23A				⇓S	**Sg**	**18 17 57.6**	**-0.7**
	baz=0.9						
I22A	**9 Mile Ranch,**	**0.89**	**295**	⇓P	**Pg**	**18 17 50.1**	**+0.2**
	baz=1.0,SNR=40						
I22A				⇑S	**Sg**	**18 18 02.8**	**+1.3**
	baz=1.0						
I22A	**9 Mile Ranch,**	**0.89**	**295**	⇓P	**Pg**	**18 17 50.1**	**+0.2**
	baz=1.0,SNR=40						
I22A				⇑S	**Sg**	**18 18 02.8**	**+1.3**
	baz=1.0						
K24A	**Anderson Ranch**	**0.90**	**153**	⇓P	**Pg**	**18 17 49.9**	**0.0**
	baz=0.9						
K24A				⇓S	**Sg**	**18 18 01.6**	**+0.1**
	baz=0.9						
K24A	**Anderson Ranch**	**0.90**	**153**	⇓P	**Pg**	**18 17 49.9**	**0.0**
	baz=0.9						
K24A				⇓S	**Sg**	**18 18 01.6**	**+0.1**
	baz=0.9						
H23A	**Clabaugh Cattl**	**1.04**	**358**	⇓P	**Pg**	**18 17 52.3**	**-0.4**
	baz=1.0,SNR=16						
H23A				⇓S	**Sb**	**18 18 07.3**	**-0.7**
	baz=1.0						
H23A	**Clabaugh Cattl**	**1.04**	**358**	⇓P	**Pg**	**18 17 52.3**	**-0.4**
	baz=1.0,SNR=16						
H23A				⇓S	**Sb**	**18 18 07.3**	**-0.7**
	baz=1.0						
RSSD	**Black Hills**	**1.13**	**58**	*e*P	**Pg**	**18 17 53.3**	**-1.2**
K22A	**Casper**	**1.22**	**225**	⇓P	**Pg**	**18 17 55.1**	**-1.1**
	baz=1.3						
K22A				⇑S	**Sg**	**18 18 12.0**	**+0.1**
	baz=1.3						
K22A	**Casper**	**1.22**	**225**	⇓P	**Pg**	**18 17 55.1**	**-1.1**
	baz=1.3						
K22A				⇑S	**Sg**	**18 18 12.0**	**+0.1**
	baz=1.3						
H22A	**Clearmont**	**1.29**	**327**	⇑Pb	**Pg**	**18 17 57.4**	**-0.1**
	baz=1.3,SNR=43						
H22A				⇑S	**Sg**	**18 18 14.3**	**+0.2**
	baz=1.3						
H22A	**Clearmont**	**1.29**	**327**	⇑Pb	**Pg**	**18 17 57.4**	**-0.1**
	baz=1.3,SNR=43						
H22A				⇑S	**Sg**	**18 18 14.3**	**+0.2**
	baz=1.3						
H24A	**Dirks Ranch, A**	**1.35**	**25**	P	**Pg**	**18 17 57.6**	**-1.2**
	baz=1.3,SNR=242						
H24A				⇑S	**Sg**	**18 18 16.7**	**+0.4**
	baz=1.3						
H24A	**Dirks Ranch, A**	**1.35**	**25**	P	**Pg**	**18 17 57.6**	**-1.2**
	baz=1.3,SNR=242						
H24A				⇑S	**Sg**	**18 18 16.7**	**+0.4**
	baz=1.3						
K25A	**Mack Ranch, Ha**	**1.42**	**129**	⇓Pg	**Pg**	**18 18 00.2**	**+0.2**
	baz=1.4,SNR=436						
K25A	**Mack Ranch, Ha**	**1.42**	**129**	⇓Pg	**Pg**	**18 18 00.2**	**+0.2**
	baz=1.4,SNR=436						
I21A	**Big Trails, Te**	**1.43**	**282**	⇓Pb	**Pn**	**18 17 59.1**	**-1.1**
	baz=1.5						
I21A				⇑S	**Sg**	**18 18 18.1**	**-0.6**
	baz=1.5						
I21A	**Big Trails, Te**	**1.43**	**282**	⇓Pb	**Pn**	**18 17 59.1**	**-1.1**
	baz=1.5						
I21A				⇑S	**Sg**	**18 18 18.1**	**-0.6**
	baz=1.5						
L23A	**Garrett**	**1.43**	**190**	⇑Pb	**Pn**	**18 17 58.9**	**-1.3**
	baz=1.5						
L23A	**Garrett**	**1.43**	**190**	⇑Pb	**Pn**	**18 17 58.9**	**-1.3**
	baz=1.5						
L24A	**Wheatland**	**1.51**	**168**	⇓Pb	**Pn**	**18 18 00.3**	**-0.9**
	baz=1.6						
L24A				⇓Sg	**Sn**	**18 18 22.4**	**+0.7**
	baz=1.6						
L24A	**Wheatland**	**1.51**	**168**	⇓Pb	**Pn**	**18 18 00.3**	**-0.9**
	baz=1.6						
L24A				⇓Sg	**Sn**	**18 18 22.4**	**+0.7**
	baz=1.6						
J21A	**Lysite**	**1.53**	**264**	⇓Pb	**Pn**	**18 18 00.7**	**-0.8**
	baz=1.6						
J21A				⇓Sb	**Sn**	**18 18 21.6**	**-0.7**
	baz=1.6						
J21A	**Lysite**	**1.53**	**264**	⇓Pb	**Pn**	**18 18 00.7**	**-0.8**
	baz=1.6						
J21A				⇓Sb	**Sn**	**18 18 21.6**	**-0.7**
	baz=1.6						
H21A	**Big Horn, Sher**	**1.64**	**313**	⇑Pb	**Pn**	**18 18 03.3**	**+0.3**
	baz=1.7,SNR=25						
H21A				⇑Sg	**Sg**	**18 18 27.4**	**+2.0**
	baz=1.7						
H21A	**Big Horn, Sher**	**1.64**	**313**	⇑Pb	**Pn**	**18 18 03.3**	**+0.3**
	baz=1.7,SNR=25						
H21A				⇑Sg	**Sg**	**18 18 27.4**	**+2.0**
	baz=1.7						
G23A	**Biddle**	**1.68**	**359**	⇓Pb	**Pn**	**18 18 03.7**	**+0.2**
	baz=1.6,SNR=104						
G23A				⇓Sg	**Sg**	**18 18 28.9**	**+2.2**
	baz=1.6						
G23A	**Biddle**	**1.68**	**359**	⇓Pb	**Pn**	**18 18 03.7**	**+0.2**
	baz=1.6,SNR=104						
G23A				⇓Sg	**Sg**	**18 18 28.9**	**+2.2**
	baz=1.6						
L22A	**Ellis Ranch, M**	**1.69**	**208**	⇓Pb	**Pn**	**18 18 03.5**	**-0.2**
	baz=1.8						
L22A				⇓Sb	**Sb**	**18 18 26.7**	**0.0**
	baz=1.8						
L22A	**Ellis Ranch, M**	**1.69**	**208**	⇓Pb	**Pn**	**18 18 03.5**	**-0.2**
	baz=1.8						
L22A				⇓Sb	**Sb**	**18 18 26.7**	**0.0**
	baz=1.8						
L25A	**Engebretsen Ra**	**1.71**	**143**	⇑Pg	**Pb**	**18 18 04.9**	**-0.3**
	baz=1.7,SNR=57						
L25A				⇑Sg	**Sg**	**18 18 29.1**	**+1.3**
	baz=1.7						
L25A	**Engebretsen Ra**	**1.71**	**143**	⇑Pg	**Pb**	**18 18 04.9**	**-0.3**
	baz=1.7,SNR=57						
L25A				⇑Sg	**Sg**	**18 18 29.1**	**+1.3**
	baz=1.7						
K26A	**Motz Farm, Whi**	**1.80**	**116**	⇓Pb	**Pn**	**18 18 05.6**	**+0.5**
	baz=1.7,SNR=31						
K26A				⇑Sg	**Sg**	**18 18 31.7**	**+1.2**
	baz=1.7						
K26A	**Motz Farm, Whi**	**1.80**	**116**	⇓Pb	**Pn**	**18 18 05.6**	**+0.5**
	baz=1.7,SNR=31						
K26A				⇑Sg	**Sg**	**18 18 31.7**	**+1.2**
	baz=1.7						
G22A	**Birney**	**1.82**	**339**	⇓Pb	**Pn**	**18 18 06.1**	**+0.6**
	baz=1.8,SNR=16						
G22A				⇓Sb	**Sg**	**18 18 31.6**	**+0.3**
	baz=1.8						
G22A	**Birney**	**1.82**	**339**	⇓Pb	**Pn**	**18 18 06.1**	**+0.6**
	baz=1.8,SNR=16						
G22A				⇓Sb	**Sg**	**18 18 31.6**	**+0.3**
	baz=1.8						
G24A	**Alzada**	**1.93**	**20**	⇓Pb	**Pb**	**18 18 08.0**	**-0.8**
	baz=1.8						
G24A				⇑Sb	**Sg**	**18 18 34.6**	**-0.1**
	baz=1.8						
G24A	**Alzada**	**1.93**	**20**	⇓Pb	**Pb**	**18 18 08.0**	**-0.8**
	baz=1.8						
G24A				⇑Sb	**Sg**	**18 18 34.6**	**-0.1**
	baz=1.8						
J20A	**Shoshoni**	**1.99**	**266**	⇓Pb	**Pb**	**18 18 09.4**	**-0.6**
	baz=2.1,SNR=14						
J20A				⇑Sb	**Sb**	**18 18 36.1**	**+0.7**
	baz=2.1						
J20A	**Shoshoni**	**1.99**	**266**	⇓Pb	**Pb**	**18 18 09.4**	**-0.6**
	baz=2.1,SNR=14						
J20A				⇑Sb	**Sb**	**18 18 36.1**	**+0.7**
	baz=2.1						
I20A	**Worland**	**2.05**	**283**	⇓Pb	**Pn**	**18 18 09.7**	**+1.0**
	baz=2.1,SNR=125						
I20A				⇑Sb	**Sb**	**18 18 37.5**	**+0.5**
	baz=2.1						
I20A	**Worland**	**2.05**	**283**	⇓Pb	**Pn**	**18 18 09.7**	**+1.0**
	baz=2.1,SNR=125						
I20A				⇑Sb	**Sb**	**18 18 37.5**	**+0.5**
	baz=2.1						
M23A	**Laramie**	**2.07**	**188**	⇓Pb	**Pn**	**18 18 10.1**	**+1.0**
	baz=2.1,SNR=29						
M23A				⇓Sb	**Sb**	**18 18 38.3**	**+0.5**
	baz=2.1						
M23A	**Laramie**	**2.07**	**188**	⇓Pb	**Pn**	**18 18 10.1**	**+1.0**
	baz=2.1,SNR=29						
M23A				⇓Sb	**Sb**	**18 18 38.3**	**+0.5**
	baz=2.1						
M24A	**Cheyenne**	**2.09**	**169**	⇓Pb	**Pb**	**18 18 10.7**	**-1.1**
	baz=2.1,SNR=99						
M24A				⇑Sg	**Sg**	**18 18 41.3**	**+1.3**
	baz=2.1						
M24A	**Cheyenne**	**2.09**	**169**	⇓Pb	**Pb**	**18 18 10.7**	**-1.1**
	baz=2.1,SNR=99						
M24A				⇑Sg	**Sg**	**18 18 41.3**	**+1.3**
	baz=2.1						
H20A	**Greybull**	**2.13**	**298**	⇓Pb	**Pn**	**18 18 11.1**	**+1.3**
	baz=2.2,SNR=17						
H20A				⇓Sb	**Sb**	**18 18 39.6**	**+0.2**
	baz=2.2						
H20A	**Greybull**	**2.13**	**298**	⇓Pb	**Pn**	**18 18 11.1**	**+1.3**
	baz=2.2,SNR=17						
H20A				⇓Sb	**Sb**	**18 18 39.6**	**+0.2**
	baz=2.2						
L21A	**Rawlins**	**2.15**	**224**	⇑Pb	**Pn**	**18 18 11.3**	**+1.2**
	baz=2.3,SNR=140						
L21A				⇑Sb	**Sb**	**18 18 39.7**	**-0.3**
	baz=2.3						
L21A	**Rawlins**	**2.15**	**224**	⇑Pb	**Pn**	**18 18 11.3**	**+1.2**
	baz=2.3,SNR=140						
L21A				⇑Sb	**Sb**	**18 18 39.7**	**-0.3**
	baz=2.3						
G21A	**Lodge Grass**	**2.15**	**323**	⇓P	**Pn**	**18 18 10.6**	**+0.6**
	baz=2.2,SNR=35						
G21A				⇓Sb	**Sb**	**18 18 40.2**	**+0.1**
	baz=2.2						
G21A	**Lodge Grass**	**2.15**	**323**	⇓P	**Pn**	**18 18 10.6**	**+0.6**
	baz=2.2,SNR=35						
G21A				⇓Sb	**Sb**	**18 18 40.2**	**+0.1**
	baz=2.2						
F23A	**Volborg**	**2.20**	**359**	⇓P	**Pn**	**18 18 10.8**	**+0.2**
	baz=2.1,SNR=40						
F23A				⇓Sb	**Sb**	**18 18 41.4**	**+0.1**
	baz=2.1						
F23A	**Volborg**	**2.20**	**359**	⇓P	**Pn**	**18 18 10.8**	**+0.2**
	baz=2.1,SNR=40						
F23A				⇓Sb	**Sb**	**18 18 41.4**	**+0.1**
	baz=2.1						
PHWY	**Pilot Hill**	**2.22**	**182**	*e*P	**Pn**	**18 18 11.5**	**+0.3**
L26A	**Underwood Farm**	**2.24**	**131**	⇓Pb	**Pb**	**18 18 12.9**	**-1.4**
	baz=2.2,SNR=15						
L26A				⇑Sb	**Sb**	**18 18 42.5**	**-0.1**
	baz=2.2						
L26A	**Underwood Farm**	**2.24**	**131**	⇓Pb	**Pb**	**18 18 12.9**	**-1.4**
	baz=2.2,SNR=15						
L26A				⇑Sb	**Sb**	**18 18 42.5**	**-0.1**
	baz=2.2						
M22A	**Cedar Creek Ra**	**2.31**	**204**	⇑Pb	**Pb**	**18 18 14.0**	**-1.4**
	baz=2.4,SNR=52						
M22A				⇑Sb	**Sb**	**18 18 45.0**	**+0.4**
	baz=2.4						
M22A	**Cedar Creek Ra**	**2.31**	**204**	⇑Pb	**Pb**	**18 18 14.0**	**-1.4**
	baz=2.4,SNR=52						
M22A				⇑Sb	**Sb**	**18 18 45.0**	**+0.4**
	baz=2.4						
F22A	**Rosebud**	**2.34**	**345**	⇓P	**Pn**	**18 18 11.2**	**-1.5**
	baz=2.3						
F22A				⇓Sb	**Sb**	**18 18 45.6**	**+0.1**
	baz=2.3						
F22A	**Rosebud**	**2.34**	**345**	⇓P	**Pn**	**18 18 11.2**	**-1.5**
	baz=2.3						
F22A				⇓Sb	**Sb**	**18 18 45.6**	**+0.1**
	baz=2.3						
K20A	**Yellowstone Ra**	**2.35**	**249**	⇓Pb	**Pb**	**18 18 14.8**	**-1.3**
	baz=2.5,SNR=64						
K20A				⇓Sb	**Sb**	**18 18 45.6**	**-0.1**
	baz=2.5						
K20A	**Yellowstone Ra**	**2.35**	**249**	⇓Pb	**Pb**	**18 18 14.8**	**-1.3**
	baz=2.5,SNR=64						
K20A				⇓Sb	**Sb**	**18 18 45.6**	**-0.1**
	baz=2.5						
F24A	**Ekalaka**	**2.41**	**15**	⇑Pb	**Pb**	**18 18 15.9**	**-1.2**
	baz=2.3						
F24A	**Ekalaka**	**2.41**	**15**	⇑Pb	**Pb**	**18 18 15.9**	**-1.2**
	baz=2.3						
M21A	**Separation Pea**	**2.42**	**218**	⇓Pb	**Pn**	**18 18 15.6**	**+1.8**
	baz=2.5,SNR=126						
M21A				⇓Sb	**Sb**	**18 18 47.2**	**-0.7**
	baz=2.5						
M21A	**Separation Pea**	**2.42**	**218**	⇓Pb	**Pn**	**18 18 15.6**	**+1.8**
	baz=2.5,SNR=126						
M21A				⇓Sb	**Sb**	**18 18 47.2**	**-0.7**
	baz=2.5						
F21A	**Absaloka Mine,**	**2.62**	**332**	⇓Sb	**Sb**	**18 18 53.6**	**+0.2**
	baz=2.6						
F21A	**Absaloka Mine,**	**2.62**	**332**	⇓Sb	**Sb**	**18 18 53.6**	**+0.2**
	baz=2.6						
K19A	**Absolon Red Bu**	**2.64**	**256**	⇑Pb	**Pb**	**18 18 19.7**	**-1.4**
	baz=2.8,SNR=39						
K19A				⇓Sb	**Sb**	**18 18 53.3**	**-0.9**
	baz=2.8						
K19A	**Absolon Red Bu**	**2.64**	**256**	⇑Pb	**Pb**	**18 18 19.7**	**-1.4**
	baz=2.8,SNR=39						
K19A				⇓Sb	**Sb**	**18 18 53.3**	**-0.9**
	baz=2.8						
G20A	**Bridger**	**2.66**	**311**	P	**Pn**	**18 18 17.0**	**0.0**
	baz=2.7,SNR=47						
G20A	**Bridger**	**2.66**	**311**	P	**Pn**	**18 18 17.0**	**0.0**
	baz=2.7,SNR=47						
N23A	**Red Feather La**	**2.66**	**190**	⇓P	**Pn**	**18 18 18.5**	**+1.3**
	baz=2.7,SNR=23						
N23A				⇓Sb	**Sb**	**18 18 54.4**	**-0.4**
	baz=2.7						
N23A	**Red Feather La**	**2.66**	**190**	⇓P	**Pn**	**18 18 18.5**	**+1.3**
	baz=2.7,SNR=23						
N23A				⇓Sb	**Sb**	**18 18 54.4**	**-0.4**
	baz=2.7						
L20A	**Wamsutter**	**2.67**	**236**	⇑Pb	**Pb**	**18 18 19.6**	**-1.9**
	baz=2.8,SNR=42						
L20A				⇓Sb	**Sb**	**18 18 55.4**	**+0.5**
	baz=2.8						
L20A	**Wamsutter**	**2.67**	**236**	⇑Pb	**Pb**	**18 18 19.6**	**-1.9**
	baz=2.8,SNR=42						
L20A				⇓Sb	**Sb**	**18 18 55.4**	**+0.5**
	baz=2.8						
I19A	**Meeteetse**	**2.68**	**282**	⇑P	**Pn**	**18 18 18.8**	**+1.4**
	baz=2.8,SNR=9.6						
I19A				⇓Sb	**Sb**	**18 18 55.0**	**-0.3**
	baz=2.8						
I19A	**Meeteetse**	**2.68**	**282**	⇑P	**Pn**	**18 18 18.8**	**+1.4**
	baz=2.8,SNR=9.6						
I19A				⇓Sb	**Sb**	**18 18 55.0**	**-0.3**
	baz=2.8						
J19A	**Crowheart**	**2.70**	**266**	⇑Sb	**Sb**	**18 18 55.7**	**-0.2**
	baz=2.8						
J19A	**Crowheart**	**2.70**	**266**	⇑Sb	**Sb**	**18 18 55.7**	**-0.2**
	baz=2.8						
N24A	**Carr**	**2.72**	**172**	⇓Pb	**Pb**	**18 18 20.9**	**-1.5**
	baz=2.8,SNR=9.1						
N24A				⇓Sb	**Sb**	**18 18 57.1**	**+0.7**
	baz=2.8						
N24A	**Carr**	**2.72**	**172**	⇓Pb	**Pb**	**18 18 20.9**	**-1.5**
	baz=2.8,SNR=9.1						
N24A				⇓Sb	**Sb**	**18 18 57.1**	**+0.7**
	baz=2.8						
N22A	**Wattenberg Ran**	**2.84**	**197**	⇓Pb	**Pb**	**18 18 23.1**	**-1.4**
	baz=2.9						
N22A				⇑Sb	**Sb**	**18 19 00.3**	**+0.4**
	baz=2.9						
N22A	**Wattenberg Ran**	**2.84**	**197**	⇓Pb	**Pb**	**18 18 23.1**	**-1.4**
	baz=2.9						
N22A				⇑Sb	**Sb**	**18 19 00.3**	**+0.4**
	baz=2.9						
H19A	**Powell**	**2.85**	**295**	⇓P	**Pn**	**18 18 20.6**	**+0.9**
	baz=2.9,SNR=7.7						
H19A	**Powell**	**2.85**	**295**	⇓P	**Pn**	**18 18 20.6**	**+0.9**
	baz=2.9,SNR=7.7						

E22A	**Miles City**	**2.94**	**352**	⇓Sb	**Sb**	**18 19 03.4**	**+0.6**
	baz=2.9						
E22A	**Miles City**	**2.94**	**352**	⇓Sb	**Sb**	**18 19 03.4**	**+0.6**
	baz=2.9						
E23A	**Ismay**	**2.98**	**1**	⇓P	**Pn**	**18 18 21.4**	**+0.1**
	baz=2.9,SNR=10						
E23A	**Ismay**	**2.98**	**1**	⇓P	**Pn**	**18 18 21.4**	**+0.1**
	baz=2.9,SNR=10						
F20A	**Billings**	**3.02**	**320**	⇓P	**Pn**	**18 18 21.9**	**-0.1**
	baz=3.0,SNR=17						
F20A	**Billings**	**3.02**	**320**	⇓P	**Pn**	**18 18 21.9**	**-0.1**
	baz=3.0,SNR=17						
PDAR	**Pinedale Array**	**3.16**	**258**	Pn	**Pn**	**18 18 25.4**	**+1.3**
PDAR				Lg	Lg	18 19 09.4	
PDAR	**Pinedale Array**	**3.16**	**258**	Pn	**Pn**	**18 18 25.4**	**+1.3**
	2.9nm,0.3s,baz=77,slow=16,SNR=20						
PDAR				Lg	Lg	18 19 09.4	
	14nm,0.3s,baz=65,slow=37,SNR=4.2						
BW06	**Boulder Array**	**3.16**	**258**	*e*P	**Pn**	**18 18 24.2**	**+0.1**
N21A	**Black Mountain**	**3.19**	**211**	⇓P	**Pn**	**18 18 25.9**	**+1.4**
	baz=3.3,SNR=6.3						
N21A	**Black Mountain**	**3.19**	**211**	⇓P	**Pn**	**18 18 25.9**	**+1.4**
	baz=3.3,SNR=6.3						
RLMT	**Red Lodge**	**3.23**	**301**	*e*P	**Pn**	**18 18 25.4**	**+0.5**
O23A	**Lake Granby, G**	**3.34**	**187**	⇓P	**Pn**	**18 18 28.2**	**+1.7**
	baz=3.4,SNR=26						
O23A	**Lake Granby, G**	**3.34**	**187**	⇓P	**Pn**	**18 18 28.2**	**+1.7**
	baz=3.4,SNR=26						
N20A	**Spence Gulch,**	**3.44**	**220**	⇓P	**Pn**	**18 18 29.1**	**+1.2**
	baz=3.6,SNR=11						
N20A	**Spence Gulch,**	**3.44**	**220**	⇓P	**Pn**	**18 18 29.1**	**+1.2**
	baz=3.6,SNR=11						
F19A	**Roth Farm, Mol**	**3.46**	**314**	⇓P	**Pn**	**18 18 28.4**	**+0.4**
	baz=3.5,SNR=11						
F19A	**Roth Farm, Mol**	**3.46**	**314**	⇓P	**Pn**	**18 18 28.4**	**+0.4**
	baz=3.5,SNR=11						
G18A	**Lazy EL Ranch,**	**3.50**	**302**	⇑P	**Pn**	**18 18 29.3**	**+0.7**
	baz=3.6,SNR=18						
G18A	**Lazy EL Ranch,**	**3.50**	**302**	⇑P	**Pn**	**18 18 29.3**	**+0.7**
	baz=3.6,SNR=18						
O25A	**Wiggins**	**3.53**	**164**	⇓P	**Pn**	**18 18 30.1**	**+1.1**
	baz=3.6,SNR=7.3						
O25A	**Wiggins**	**3.53**	**164**	⇓P	**Pn**	**18 18 30.1**	**+1.1**
	baz=3.6,SNR=7.3						
OGNE	**Ogallala**	**3.57**	**135**	*e*Pg	**Pg**	**18 18 40.7**	**-0.5**
ISCO	**Idaho Springs**	**3.73**	**183**	*e*P	**Pn**	**18 18 33.0**	**+1.2**
LKWY	**Lake**	**3.78**	**288**	*e*P	**Pn**	**18 18 33.5**	**+0.9**
LOHW	**Long Hollow**	**3.81**	**273**	*e*P	**Pn**	**18 18 35.0**	**+2.0**
MOOW	**Moose Ponds**	**3.91**	**275**	*e*P	**Pn**	**18 18 35.4**	**+1.0**
SNOW	**Snow King Moun**	**3.92**	**271**	*e*P	Pb	18 18 39.4	-3.6
IMW	**Indian Meadow**	**4.06**	**277**	*e*P	**Pn**	**18 18 37.9**	**+1.5**
TPAW	**Teton Pass**	**4.07**	**271**	*e*P	**Pn**	**18 18 38.4**	**+1.9**
P25A	**Willow Gulch B**	**4.11**	**167**	⇑P	**Pn**	**18 18 37.6**	**+0.6**
	baz=4.1,SNR=5.9						
P25A	**Willow Gulch B**	**4.11**	**167**	⇑P	**Pn**	**18 18 37.6**	**+0.6**
	baz=4.1,SNR=5.9						
P26A	**Davis Ranch, A**	**4.24**	**158**	⇑P	**Pn**	**18 18 39.4**	**+0.6**
	baz=4.3,SNR=25						
P26A	**Davis Ranch, A**	**4.24**	**158**	⇑P	**Pn**	**18 18 39.4**	**+0.6**
	baz=4.3,SNR=25						
RRI2	**Red Ridge**	**4.34**	**270**	*e*P	**Pn**	**18 18 42.6**	**+2.3**
F17A	**Fitzpatrick Pl**	**4.46**	**304**	⇑P	**Pn**	**18 18 42.7**	**+0.9**
	baz=4.5,SNR=12						
F17A	**Fitzpatrick Pl**	**4.46**	**304**	⇑P	**Pn**	**18 18 42.7**	**+0.9**
	baz=4.5,SNR=12						
SMCO	**Snowmass**	**4.51**	**196**	*e*Pn	**Pn**	**18 18 44.9**	**+2.2**
P28A	**Saint Francis**	**4.79**	**144**	⇓P	**Pn**	**18 18 46.6**	**+0.4**
	baz=4.8,SNR=8.5						
P28A	**Saint Francis**	**4.79**	**144**	⇓P	**Pn**	**18 18 46.6**	**+0.4**
	baz=4.8,SNR=8.5						
Q26A	**Hugo**	**4.80**	**163**	⇓P	**Pn**	**18 18 47.1**	**+0.6**
	baz=4.8,SNR=19						
Q26A	**Hugo**	**4.80**	**163**	⇓P	**Pn**	**18 18 47.1**	**+0.6**
	baz=4.8,SNR=19						
C19A	**Slack Wire Ran**	**4.94**	**330**	P	**Pn**	**18 18 48.3**	**0.0**
	baz=4.9,SNR=17						
C19A	**Slack Wire Ran**	**4.94**	**330**	P	**Pn**	**18 18 48.3**	**0.0**
	baz=4.9,SNR=17						
D17A	**Six Diamond Ra**	**5.22**	**316**	⇓P	**Pn**	**18 18 52.5**	**+0.3**
	baz=5.2,SNR=26						
D17A	**Six Diamond Ra**	**5.22**	**316**	⇓P	**Pn**	**18 18 52.5**	**+0.3**
	baz=5.2,SNR=26						
DAU	**Daniels Canyon**	**5.38**	**237**	*e*P	**Pn**	**18 18 55.6**	**+1.0**
	7.0nm,0.5s						
JLU	**Jordanelle**	**5.39**	**239**	*e*P	**Pn**	**18 18 54.5**	**-0.1**
	11nm,0.6s						
R26A	**Arlington**	**5.42**	**164**	⇓P	**Pn**	**18 18 55.3**	**+0.3**
	baz=5.4,SNR=31						
R26A	**Arlington**	**5.42**	**164**	⇓P	**Pn**	**18 18 55.3**	**+0.3**
	baz=5.4,SNR=31						
MCMT	**McKenzie Canyo**	**5.54**	**286**	P	Pn	18 19 00.4	+3.6
	3.0nm,0.8s						
LRM	**Limekiln Ridge**	**5.55**	**297**	*e*P	**Pn**	**18 18 57.5**	**+0.6**
	31nm,0.7s						
HVU	**Hansel Valley**	**5.74**	**255**	*e*P	**Pn**	**18 19 01.0**	**+1.7**
	5.9nm,0.7s						
SDCO	**Great Sand Dun**	**5.77**	**181**	*e*P	**Pn**	**18 19 00.4**	**+0.4**
	2.8nm,0.7s						
PV04	**Paradox Valley**	**5.78**	**209**	*e*P	**Pn**	**18 19 01.7**	**+1.7**
DUG	**Dugway**	**6.48**	**242**	*e*P	**Pn**	**18 19 09.8**	**+0.2**
	2.4nm,0.7s						
HLID	**Hailey**	**6.58**	**273**	*e*P	**Pn**	**18 19 13.6**	**+2.6**
	3.1nm,0.7s						
T27A	**Campo**	**6.76**	**162**	⇓P	**Pn**	**18 19 13.5**	**0.0**
	baz=6.8,SNR=11						
T27A	**Campo**	**6.76**	**162**	⇓P	**Pn**	**18 19 13.5**	**0.0**
	baz=6.8,SNR=11						
B14A	**Marquette Ranc**	**7.33**	**314**	⇑P	**Pn**	**18 19 21.9**	**+0.6**
	baz=7.4,SNR=5.0						
B14A	**Marquette Ranc**	**7.33**	**314**	⇑P	**Pn**	**18 19 21.9**	**+0.6**
	baz=7.4,SNR=5.0						
ULM	**Lac du Bonnet**	**9.35**	**41**	Pn	Pn	18 19 45.3	-3.4
ULM				Lg	Lg	18 22 23.5	
ULM	**Lac du Bonnet**	**9.35**	**41**	Pn	Pn	18 19 45.3	-3.4
	0.7nm,0.3s,baz=220,slow=9.1,SNR=2.7						
ULM				Lg	Lg	18 22 23.5	
	0.5nm,0.3s,baz=132,slow=17,SNR=3.3						
NVAR	**Mina Array Bea**	**11.02**	**247**	Pn	Pn	18 20 16.5	+4.6
NVAR	**Mina Array Bea**	**11.02**	**247**	Pn	Pn	18 20 16.5	+4.6
	0.0nm,0.3s,baz=48,slow=12,SNR=3.2						
YKA	**Yellowknife Ar**	**19.76**	**347**	P	**P**	**18 22 03.8**	**-0.3**
YKA	**Yellowknife Ar**	**19.76**	**347**	P	**P**	**18 22 03.8**	**-0.3**
	0.1nm,0.3s,baz=155,slow=13,SNR=4.7						

IDC 01 18:22:40.8±1.7**, 1°.57S**×**120°.73E, h0**km**, mb3.2**/3**, mb1 3.4**/4**, mb1mx3.3**/23**, mbtmp3.3**/4**, ML3.7**/1**, Error ellipse: s-maj=64.8km s-min=27.2km az=66.0, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**3.56**	**196**	Pn	Pn	18 23 37.1	-0.2
	7.0nm,0.3s,baz=4.0,slow=9.2,SNR=10.0						
WRA	**Warramunga Arr**	**22.59**	**145**	P	P	18 27 43.2	0.0
	0.8nm,0.8s,baz=322,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**25.41**	**151**	P	P	18 28 10.3	+0.1
	0.2nm,0.5s,baz=339,slow=11,SNR=5.5						
MKAR	**Makanchi Array**	**58.79**	**330**	P	P	18 32 40.9	-0.1
	0.2nm,0.7s,baz=115,slow=8.2,SNR=3.1						

IDC 01 18:33:52.7±1.7**, 2°.89N**×**128°.14E, h0**km**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.5**/23**, mbtmp3.7**/5**, Error ellipse: s-maj=93.7km s-min=23.3km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.01**	**187**	P	P	18 38 39.2	+1.1
	1.8nm,0.9s,baz=0.4,slow=8.3,SNR=3.1						
WRA	**Warramunga Arr**	**23.50**	**165**	P	P	18 39 04.3	-0.1
	1.2nm,0.4s,baz=344,slow=11,SNR=35						
ASAR	**Alice Springs**	**26.99**	**168**	P	P	18 39 36.0	-0.5
	0.3nm,0.7s,baz=348,slow=7.5,SNR=14						
STKA	**Stephens Creek**	**36.87**	**161**	P	P	18 41 02.7	-0.3
	1.6nm,0.6s,baz=330,slow=6.4,SNR=11						
MKAR	**Makanchi Array**	**59.04**	**325**	P	P	18 43 54.8	+0.2
	0.3nm,0.6s,baz=111,slow=7.7,SNR=5.9						

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*ISCJB **01** 18:33:56.7±0.7, 42°.77S±0°.08×72°.3W±0°.2, h10km, mb4.0/9, MS3.7/1, Error ellipse: s-maj=23.4km s-min=7.3km az=25.9*
*NEIC **01** 18:33:58.2±0.5, 42°.81S×72°.35W, h10km, mb4.4/2, Error ellipse: s-maj=25.5km s-min=11.7km az=100.0*
*IDC **01** 18:34:02.0±3.8, 42°.73S×72°.20W, h33km±27km, mb3.9/7, mb1 4.1/8, mb1mx3.9/18, mbtmp3.9/8, ML4.1/1, MS3.5/2, Ms1 3.4/2, ms1mx2.9/19, Error ellipse: s-maj=37.3km s-min=17.1km az=96.0*
ISC 01 18:33:58.3±0.6**, 42°.84S**±0°.09×**72°.3W**±0°.2**, h10**km**, n35, σ1ˢ.38**/40**, mb4.0**/9**, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.48**	**32**	*e*Pn	**Pn**	**18 34 40.4**	**+1.6**
PLCA				*e*Pg	**Pb**	**18 34 43.9**	**+0.9**
PLCA				*e*Sg	**Sg**	**18 35 17.4**	**-0.5**
PLCA				Lg	Lg	18 35 18.4	
PLCA	**Paso Flores**	**2.48**	**32**	Pn	**Pn**	**18 34 40.3**	**+1.5**
	11nm,0.3s,baz=223,slow=16,SNR=97						
PLCA				Pg	**Pb**	**18 34 43.8**	**+0.8**
	11nm,0.3s,baz=222,slow=17,SNR=151						
PLCA				Lg	Lg	18 35 18.4	
	48nm,0.3s,baz=123,slow=8.0,SNR=23						
PLCA				LR	LR	18 35 52.4	
	comp=Z,478nm,20.7s,baz=49,slow=47						
LVC	**Limon Verde**	**20.37**	**9**	*e*P	Pn	18 38 36.5	-0.9
	4.5nm,0.7s						
LPAZ	**La Paz**	**26.70**	**9**	P	**P**	**18 39 42.6**	**+4.2**
LPAZ	**La Paz**	**26.70**	**9**	P	**P**	**18 39 42.6**	**+4.2**
	2.0nm,0.5s,baz=218,slow=4.4,SNR=5.3						
SIV	**San Ignacio**	**28.43**	**23**	P	**P**	**18 39 51.5**	**-1.8**
SIV	**San Ignacio**	**28.43**	**23**	P	**P**	**18 39 51.5**	**-1.8**
	1.1nm,0.6s,baz=221,slow=6.5,SNR=6.3						
BDFB	**Brasilia**	**34.16**	**45**	LR	LR	18 55 58.5	
	comp=Z,164nm,21.1s,baz=147,slow=39						
SNAA	**Sanae**	**43.58**	**155**	P	**P**	**18 42 02.4**	**+0.3**
SNAA	**Sanae**	**43.58**	**155**	P	**P**	**18 42 02.4**	**+0.3**
	2.0nm,1.1s,baz=268,slow=7.2,SNR=6.1						
QSPA	**South Pole Qui**	**47.41**	**180**	P	**P**	**18 42 33.8**	**+1.2**
QSPA	**South Pole Qui**	**47.41**	**180**	P	**P**	**18 42 33.8**	**+1.2**
	8.3nm,1.0s,baz=136,slow=2.8,SNR=16						
VNDA	**Vanda**	**55.42**	**192**	P	**P**	**18 43 33.7**	**+1.5**
VNDA	**Vanda**	**55.42**	**192**	P	**P**	**18 43 33.7**	**+1.5**
	4.1nm,1.2s,baz=114,slow=5.7,SNR=6.8						
LRAL	**Lakeview Retre**	**76.71**	**347**	*e*P	**P**	**18 45 49.1**	**-0.3**
	2.7nm,0.3s						
TXAR	**Lajitas Array**	**77.41**	**332**	P	**P**	**18 45 53.3**	**-0.2**
TXAR	**Lajitas Array**	**77.41**	**332**	P	**P**	**18 45 53.3**	**-0.2**
	0.5nm,0.8s,baz=159,slow=8.0,SNR=5.8						
TORD	**Torodi Ar. Bea**	**87.45**	**70**	P	**P**	**18 46 44.8**	**-1.4**
TORD	**Torodi Ar. Bea**	**87.45**	**70**	P	**P**	**18 46 44.8**	**-1.4**
	0.5nm,0.8s,baz=238,slow=2.8,SNR=2.8						
PDAR	**Pinedale Array**	**91.57**	**334**	P	**P**	**18 47 04.6**	**-0.6**
PDAR	**Pinedale Array**	**91.57**	**334**	P	**P**	**18 47 04.6**	**-0.6**
	0.9nm,0.8s,baz=134,slow=4.3,SNR=6.5						
GERES	**GERESS Array B**	**118.34**	**48**	PKP	**PKPdf**	**18 52 44.2**	**-1.1**
GERES	**GERESS Array B**	**118.34**	**48**	PKP	**PKPdf**	**18 52 44.2**	**-1.1**
	0.3nm,0.7s,baz=215,slow=3.2,SNR=3.6						
ILAR	**Eielson Array**	**121.90**	**331**	PKP	**PKPdf**	**18 52 51.0**	**-0.5**
ILAR	**Eielson Array**	**121.90**	**331**	PKP	**PKPdf**	**18 52 51.0**	**-0.5**
	0.3nm,0.8s,baz=186,slow=3.3,SNR=4.3						
BRTR	**Keskin Array B**	**125.94**	**66**	PKP	**PKPdf**	**18 53 00.2**	**-0.1**
BRTR	**Keskin Array B**	**125.94**	**66**	PKP	**PKPdf**	**18 53 00.2**	**-0.1**
	0.4nm,0.8s,baz=213,slow=4.3,SNR=3.1						
PETK	**Petropavlovsk-**	**145.66**	**305**	PKPbc	**PKPab**	**18 53 36.3**	**-0.5**
PETK	**Petropavlovsk-**	**145.66**	**305**	PKPbc	**PKPab**	**18 53 36.3**	**-0.5**
	0.6nm,0.4s,baz=130,slow=2.9,SNR=5.4						
ZALV	**Zalesovo Beam**	**161.26**	**46**	PKP	**PKPdf**	**18 53 57.8**	**-0.4**
ZALV				PKPab	**PKPab**	**18 54 41.7**	**-0.4**
ZALV	**Zalesovo Beam**	**161.26**	**46**	PKP	**PKPdf**	**18 53 57.8**	**-0.4**
	0.3nm,0.5s,baz=270,slow=1.4,SNR=4.6						
ZALV				PKPab	**PKPab**	**18 54 41.7**	**-0.4**
	0.2nm,0.3s,baz=276,slow=5.8,SNR=3.8						
MKAR	**Makanchi Array**	**161.57**	**69**	PKP	**PKPdf**	**18 53 58.6**	**-0.3**
MKAR				PKPab	**PKPab**	**18 54 43.6**	**-0.2**
MKAR	**Makanchi Array**	**161.57**	**69**	PKP	**PKPdf**	**18 53 58.6**	**-0.3**
	0.5nm,0.7s,baz=21,slow=1.2,SNR=4.6						
MKAR				PKPab	**PKPab**	**18 54 43.6**	**-0.2**
	0.4nm,0.5s,baz=266,slow=5.8,SNR=6.0						
SONM	**Songino Array**	**174.92**	**10**	PKP	**PKPdf**	**18 54 06.4**	**-1.5**
SONM	**Songino Array**	**174.92**	**10**	PKP	**PKPdf**	**18 54 06.4**	**-1.5**
	0.2nm,0.3s,baz=318,slow=1.9,SNR=4.6						

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*IDC **01** 18:43:08.9±1.5, 16°.79S×166°.87E, h0km, mb4.0/5, mb1 4.3/6, mb1mx3.8/20, mbtmp4.1/6, ML4.3/1, Error ellipse: s-maj=49.7km s-min=26.6km az=131.0*
*ISCJB **01** 18:43:11.2±1.0, 17°.08S±0°.06×166°.9E±0°.2, h25km, mb3.9/5, Error ellipse: s-maj=24.2km s-min=8.4km az=177.3*
ISC 01 18:43:12.5±1.5**, 17°.03S**±0°.09×**167°.0E**±0°.2**, h25**km**, n8, σ1ˢ.30**/11**, mb4.0**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.04**	**186**	Pn	**Pn**	**18 44 27.8**	**+1.2**
	9.2nm,0.3s,baz=1.9,slow=23,SNR=236						
DZM				Sn	**Sn**	**18 45 22.0**	**-2.1**
	8.1nm,0.3s,baz=347,slow=21,SNR=7.1						
NOUC	**Port Laguerre**	**5.08**	**187**	*e*P	**Pn**	**18 44 28.1**	**+0.9**
NOUC				*e*S	**Sn**	**18 45 23.1**	**-1.9**
BAYA	**Yate Dam**	**5.10**	**181**	*e*P	**Pn**	**18 44 28.1**	**+0.7**
BAYA				*e*S	**Sn**	**18 45 26.7**	**+1.2**
STKA	**Stephens Creek**	**27.33**	**233**	P	**P**	**18 48 56.1**	**+0.6**
	1.8nm,0.7s,baz=56,slow=6.1,SNR=5.6						
WRA	**Warramunga Arr**	**31.06**	**260**	P	**P**	**18 49 29.2**	**+0.4**
	0.5nm,0.9s,baz=79,slow=8.6,SNR=3.9						
ASAR	**Alice Springs**	**31.65**	**252**	P	**P**	**18 49 33.6**	**-0.4**
	4.0nm,0.7s,baz=82,slow=8.6,SNR=68						
ILAR	**Eielson Array**	**88.79**	**18**	P	**P**	**18 56 03.0**	**-0.8**
	0.6nm,0.6s,baz=238,slow=4.8,SNR=8.1						
YKA	**Yellowknife Ar**	**99.71**	**27**	P	**Pdif**	**18 56 54.0**	**+0.2**
	0.1nm,0.3s,baz=261,slow=4.9,SNR=5.5						

MAN 01 18:57:41, 12°.44N×**121°.43E, h52**km**, mb3.8, ML2.6, MS2.2, 1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJMP	**San Jose**	**0.30**	**274**	*e*P	Pn	18 57 53.2	+2.8
SJMP				*e*S	Sn	18 58 01.1	+4.1
OTRP	**Odiongan**	**0.58**	**98**	*e*P	Pn	18 57 56.0	+2.6
OTRP				*e*S	Sn	18 58 06.4	+4.0
RCP	**Roxas**	**1.56**	**124**	⇓*e*P	Pn	18 58 07.8	+1.5
RCP				*e*S	Sn	18 58 27.8	+2.3

FUNV 01 19:01:59.5, 6°.82N×**73°.15W, h158**km**, MW3.7, 1C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.33**	**38**	⇑*i*P	Pn	19 02 28.0	-0.4
CAPV				*e*S	Sn	19 02 48.0	-2.5
VIGV	**El Vigia**	**2.68**	**41**	*e*P	Pn	19 02 42.4	-0.9
VIGV				*e*S	Sn	19 03 13.8	-3.5
SOCV	**Socops**	**2.70**	**57**	*e*P	Pn	19 02 42.0	-1.5
SOCV				*e*S	Sn	19 03 14.5	-3.2
ELOV	**Elorza**	**3.65**	**87**	*e*P	Pn	19 02 54.4	-1.1
CURV	**Curarigua**	**4.48**	**45**	*e*P	Pn	19 03 04.4	-1.9
CURV				*e*S	Sn	19 03 53.4	-5.1
BAUV	**El Baul**	**5.49**	**67**	*e*S	Sn	19 04 15.2	-6.9
MAPV	**Macapo**	**5.53**	**57**	*e*P	Pn	19 03 18.0	-2.2
MONV	**Montecano**	**5.99**	**31**	*e*P	Pn	19 03 24.2	-2.1

IDC 01 19:27:36.5±12.0**, 6°.87S**×**128°.81E, h220**km±136km**, mb2.7**/1**, mb1 2.8**/4**, mb1mx2.6**/20**, mbtmp2.6**/4**, Error ellipse: s-maj=107.6km s-min=46.0km az=43.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.59**	**195**	P	Pn	19 30 15.7	0.0
	0.0nm,0.3s,baz=0.0,slow=20,SNR=4.6						
FITZ				S	S	19 32 18.7	-5.1
	0.1nm,0.3s,baz=147,slow=11,SNR=3.2						
WRA	**Warramunga Arr**	**14.06**	**158**	P	Pn	19 30 46.5	-0.1
	0.1nm,0.3s,baz=340,slow=12,SNR=7.2						
WRA				S	S	19 33 13.3	-8.9
	0.1nm,0.3s,baz=344,slow=24,SNR=5.4						
ASAR	**Alice Springs**	**17.41**	**164**	P	P	19 31 24.6	0.0
	0.1nm,0.3s,baz=339,slow=9.2,SNR=8.2						
MKAR	**Makanchi Array**	**67.47**	**327**	P	P	19 38 08.7	0.0
	0.3nm,0.9s,baz=132,slow=4.3,SNR=3.7						

IDC 01 19:30:19.1±2.1**, 6°.24S**×**147°.17E, h0**km**, mb3.5**/5**, mb1 3.6**/7**, mb1mx3.5**/19**, mbtmp3.5**/7**, ML3.0**/2**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.3**/20**, Error ellipse: s-maj=58.2km s-min=16.4km az=87.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.15**	**180**	Pn	Pn	19 31 11.3	+1.3
	4.5nm,0.3s,baz=204,slow=22,SNR=20						
PMG				Sn	Sn	19 31 47.6	-0.7
	5.6nm,0.3s,baz=316,slow=18,SNR=2.9						
PMG				Lg	Lg	19 31 58.7	
	11nm,0.3s,baz=269,slow=20,SNR=6.5						
PMG				LR	LR	19 32 38.2	
	comp=Z,173nm,18.9s,baz=349,slow=44						
WRA	**Warramunga Arr**	**18.47**	**221**	P	P	19 34 35.4	-1.4
	0.1nm,0.3s,baz=43,slow=11,SNR=9.7						
ASAR	**Alice Springs**	**21.52**	**215**	P	P	19 35 10.7	+0.6
	0.7nm,0.4s,baz=46,slow=8.9,SNR=16						
FITZ	**Fitzroy Crossi**	**24.09**	**239**	P	P	19 35 35.8	-0.8
	3.1nm,1.1s,baz=55,slow=9.5,SNR=7.6						
CMAR	**Chiang Mai Arr**	**53.51**	**298**	P	P	19 39 43.4	+1.5
	0.3nm,0.7s,baz=114,slow=6.3,SNR=3.3						
MKAR	**Makanchi Array**	**77.79**	**320**	P	P	19 42 17.9	-0.4
	0.1nm,0.4s,baz=104,slow=8.0,SNR=4.1						
ZALV	**Zalesovo Beam**	**79.30**	**328**	P	P	19 42 24.5	-1.9
	0.3nm,0.3s,baz=111,slow=7.3,SNR=3.0						
TORD	**Torodi Ar. Bea**	**145.31**	**284**	PKPbc	PKPdf	19 50 00.3	+0.3
	1.7nm,0.7s,baz=78,slow=3.1,SNR=14						

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*ISCJB **01** 19:51:05.5±0.5, 36°.34N±0°.03×11°.26W±0°.04, h10km, Error ellipse: s-maj=4.9km s-min=3.8km az=20.2*
*MDD **01** 19:51:07.8±1.2, 36°.28N×11°.52W, h23km±17km, mb4.6/14, Error ellipse: s-maj=16.1km s-min=7.2km az=81.0*
*IGIL **01** 19:51:08.6, 36°.22N×11°.51W, h31km, ML2.8*
*CNRM **01** 19:51:08.6, 36°.04N×11°.61W, h30km, MD3.6*
*CSEM **01** 19:51:09.3±0.3, 36°.34N×11°.32W, h30km, ML3.7/8, Error ellipse: s-maj=6.0km s-min=4.2km az=94.0*
*LDG **01** 19:51:09.9±0.3, 36°.47N×11°.23W, h125km±4km, Ml3.3/2, Error ellipse: s-maj=6.3km s-min=4.9km az=42.0*
*PDA **01** 19:51:09.3±1.0, 36°.23N×11°.51W, h31km, ML2.7, Error ellipse: s-maj=4.3km s-min=3.5km az=82.0*
*INMG **01** 19:51:09.3±1.0, 36°.23N×11°.51W, h31km, ML2.7, Error ellipse: s-maj=4.3km s-min=3.5km az=82.0*
ISC 01 19:51:03.8±0.4**, 36°.32N**±0°.02×**11°.40W**±0°.02**, h10**km**, n151, σ1ˢ.95**/220**, 4C-2D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.22**	**68**	*i* Pn	**Pb**	**19 51 43.9**	**-0.2**
PFVI				*e*Sn	**Sn**	**19 52 09.3**	**+1.0**
PFVI				A	A	19 52 13.1	
	26nm,0.1s						
PFVI	**Vila Bisbo**	**2.22**	**68**	⇑P	**Pb**	**19 51 43.9**	**-0.2**
	58nm,0.1s,SNR=18						
PFVI				S	**Sn**	**19 52 09.1**	**+0.8**
	21nm,0.1s,SNR=6.5						
PFVI	**Vila Bisbo**	**2.22**	**68**	P	**Pb**	**19 51 43.9**	**-0.2**
	58nm,0.1s,SNR=18						
PFVI				*e*Sn	**Sn**	**19 52 09.3**	**+1.0**
	26nm,0.1s						
MORF	**Marmelete**	**2.42**	**65**	*i* Pn	**Pb**	**19 51 46.7**	**-0.8**
MORF				*e*Sn	**Sn**	**19 52 14.9**	**+1.7**
MORF				A	A	19 52 21.6	
	31nm,0.2s						
MORF	**Marmelete**	**2.42**	**65**	P	**Pb**	**19 51 46.6**	**-0.8**
MORF				S	**Sn**	**19 52 13.8**	**+0.7**
MORF	**Marmelete**	**2.42**	**65**	P	**Pb**	**19 51 46.6**	**-0.9**
MORF				S	**Sn**	**19 52 13.9**	**+0.7**
MORF				*e*Sn	**Sn**	**19 52 14.9**	**+1.7**
	31nm,0.2s						
PTEO	**Sao Teotonio**	**2.47**	**59**	*e*Pn	**Pb**	**19 51 47.5**	**-0.8**
PTEO				*e*Sn	**Sn**	**19 52 15.8**	**+1.4**
PTEO				A	A	19 52 18.9	
	21nm,0.2s						
PTEO	**Sao Teotonio**	**2.47**	**59**	P	**Pb**	**19 51 47.5**	**-0.8**
PTEO				S	**Sn**	**19 52 15.8**	**+1.4**
	10nm,0.2s						
PTEO	**Sao Teotonio**	**2.47**	**59**	P	**Pb**	**19 51 47.5**	**-0.8**
PTEO				S	**Sn**	**19 52 15.8**	**+1.4**
	10nm,0.2s						
PNCL	**Nicolau / Gran**	**2.91**	**51**	*e*Pn	Pn	19 51 53.4	+3.2
PNCL				*e*Sn	**Sn**	**19 52 27.2**	**+2.0**
PNCL				A	A	19 52 29.5	
	20nm,0.4s						
PNCL	**Nicolau / Gran**	**2.91**	**51**	*e*Pn	Pn	19 51 53.4	+3.2
PNCL				*e*Sn	**Sn**	**19 52 27.2**	**+2.0**
	20nm,0.4s						
PBDV	**Barranco-do-Ve**	**2.94**	**71**	*i* Pn	**Pb**	**19 51 54.1**	**-2.2**
PBDV				*e*Sn	**Sn**	**19 52 27.1**	**+1.2**
PBDV				A	A	19 52 37.2	
	8.4nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.94**	**71**	⇑P	**Pb**	**19 51 54.1**	**-2.2**
PBDV				S	**Sn**	**19 52 27.1**	**+1.2**
	8.4nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.94**	**71**	P	**Pb**	**19 51 54.1**	**-2.2**
PBDV				S	**Sn**	**19 52 27.1**	**+1.2**
	8.4nm,0.3s						
MESJ	**Messejana**	**2.96**	**58**	*e*P	Pn	19 51 54.0	+3.1
MESJ				*e*S	**Sn**	**19 52 27.1**	**+0.6**
MESJ				AML	AML	19 52 33.9	
	comp=N,20nm,0.1s						
MESJ	**Messejana**	**2.96**	**58**	*e*P	Pn	19 51 54.0	+3.1
MESJ				*e*S	**Sn**	**19 52 27.1**	**+0.6**
MESJ	**Messejana**	**2.96**	**58**	P	Pn	19 51 54.0	+3.1
MESJ				S	**Sn**	**19 52 27.1**	**+0.6**
MESJ	**Messejana**	**2.96**	**58**	P	Pn	19 51 54.0	+3.1
MESJ				S	**Sn**	**19 52 27.1**	**+0.6**
PMAFR	**Mafra**	**3.12**	**32**	*e*Pn	**Pn**	**19 51 56.0**	**+2.8**
PMAFR				*e*Sn	**Sn**	**19 52 31.3**	**+0.7**
PMAFR				A	A	19 52 32.3	
	comp=N,51nm,0.2s						
PMAFR	**Mafra**	**3.12**	**32**	P	**Pn**	**19 51 55.9**	**+2.8**
	comp=N,5.5nm,0.2s,SNR=7.0						
PMAFR				S	**Sn**	**19 52 31.6**	**+1.0**
	comp=N,60nm,0.2s,SNR=21						
PMAFR	**Mafra**	**3.12**	**32**	P	**Pn**	**19 51 55.9**	**+2.8**
	comp=N,5.5nm,0.2s,SNR=7.0						
PMAFR				*e*Sn	**Sn**	**19 52 31.3**	**+0.7**
	comp=N,51nm,0.2s						
PMAFR				S	**Sn**	**19 52 31.6**	**+1.0**
	comp=N,60nm,0.2s,SNR=21						
PVAQ	**Vaqueiros**	**3.15**	**69**	*e*Pn	Pn	19 51 56.9	+3.4
PVAQ				*e*Sn	**Sn**	**19 52 31.8**	**+0.7**
PVAQ				A	A	19 52 34.5	
	comp=N,20nm,0.1s						
PVAQ	**Vaqueiros**	**3.15**	**69**	P	Pn	19 51 56.9	+3.4
PVAQ				S	**Sn**	**19 52 31.8**	**+0.7**
	comp=N,20nm,0.1s						
PVAQ	**Vaqueiros**	**3.15**	**69**	P	Pn	19 51 56.9	+3.4
PVAQ				S	**Sn**	**19 52 31.8**	**+0.7**
	comp=N,20nm,0.1s						
MOE	**Montemor**	**3.28**	**47**	*e*Pn	**Pn**	**19 51 58.0**	**+2.7**
MOE				*e*Sn	**Sn**	**19 52 34.2**	**-0.1**
MOE	**Montemor**	**3.28**	**47**	P	**Pn**	**19 51 58.0**	**+2.7**
MOE				S	**Sn**	**19 52 34.2**	**-0.1**
MOE	**Montemor**	**3.28**	**47**	P	**Pn**	**19 51 58.0**	**+2.7**
MOE				S	**Sn**	**19 52 34.2**	**-0.1**
PBEJ	**Beja**	**3.30**	**58**	*e*Pn	Pn	19 51 59.2	+3.6
PBEJ				*e*Sn	**Sn**	**19 52 36.0**	**+1.1**
PBEJ				A	A	19 52 41.3	
	comp=N,8.4nm,0.1s						
PBEJ	**Beja**	**3.30**	**58**	P	Pn	19 51 59.2	+3.6
PBEJ				S	**Sn**	**19 52 36.0**	**+1.1**
	comp=N,4.2nm,0.1s						
PBEJ	**Beja**	**3.30**	**58**	P	Pn	19 51 59.2	+3.6
PBEJ				S	**Sn**	**19 52 36.0**	**+1.1**
	comp=N,4.2nm,0.1s						
EGRO	**El Granado**	**3.37**	**68**	P	Pn	19 51 59.6	+3.1
	comp=N,4.2nm,0.1s,SNR=69						
EGRO				S	**Sn**	**19 52 37.2**	**+0.7**
	comp=N,4.8nm,0.1s,SNR=4.8						
EGRO	**El Granado**	**3.37**	**68**	P	Pn	19 51 59.6	+3.1
	comp=N,4.2nm,0.1s,SNR=69						
EGRO				S	**Sn**	**19 52 37.2**	**+0.7**
	comp=N,4.8nm,0.1s,SNR=4.8						
EVOP	**Sao Brissos**	**3.42**	**49**	*e*Pn	**Pn**	**19 52 00.0**	**+2.8**
EVOP				*e*Sn	**Sn**	**19 52 38.3**	**+0.6**
	comp=N,13nm,0.3s						
EVO	**Evora**	**3.49**	**50**	*e*Pn	**Pn**	**19 52 00.0**	**+1.9**
EVO				*e*Sn	**Sn**	**19 52 38.3**	**-1.2**
	comp=N,26nm,0.3s						
ALMR	**Almeirim**	**3.61**	**37**	*e*P	Pn	19 52 03.0	+3.2
ALMR				*e*S	**Sn**	**19 52 42.8**	**+0.3**
ALMR				AML	AML	19 52 46.3	
	comp=N,36nm,0.2s						

ALMR	**Almeirim**	**3.61**	**37**	*e*P	Pn	19 52 03.0	+3.2
ALMR				*e*S	**Sn**	**19 52 42.8**	**+0.3**
ALMR	**Almeirim**	**3.61**	**37**	P	Pn	19 52 03.0	+3.2
ALMR				S	**Sn**	**19 52 42.8**	**+0.3**
ALMR	**Almeirim**	**3.61**	**37**	P	Pn	19 52 03.0	+3.2
ALMR				S	**Sn**	**19 52 42.8**	**+0.3**
PMTG	**Montargil**	**3.73**	**42**	*e*Pn	Pn	19 52 04.5	+3.1
PMTG				*e*Sn	**Sn**	**19 52 45.9**	**+0.5**
PMTG				A	A	19 52 48.5	
	comp=N,12nm,0.2s						
PMTG	**Montargil**	**3.73**	**42**	*e*Pn	Pn	19 52 04.5	+3.1
PMTG				*e*Sn	**Sn**	**19 52 45.9**	**+0.5**
	comp=N,12nm,0.2s						
PBAR	**Barrancos**	**3.94**	**61**	*e*Pn	Pn	19 52 07.5	+3.1
PBAR				*e*Sn	**Sn**	**19 52 51.3**	**+0.6**
PBAR				A	A	19 52 57.8	
	comp=N,5.9nm,0.2s						
PBAR	**Barrancos**	**3.94**	**61**	P	Pn	19 52 07.5	+3.1
PBAR				S	**Sn**	**19 52 51.3**	**+0.6**
	comp=N,5.9nm,0.2s						
PBAR	**Barrancos**	**3.94**	**61**	P	Pn	19 52 07.5	+3.1
PBAR				S	**Sn**	**19 52 51.3**	**+0.6**
	comp=N,5.9nm,0.2s						
PESTR	**Estremoz**	**3.96**	**49**	*e*Pn	Pn	19 52 07.8	+3.2
PESTR				*e*Sn	**Sn**	**19 52 51.5**	**+0.5**
PESTR				A	A	19 52 54.9	
	comp=N,7.9nm,0.3s						
PESTR	**Estremoz**	**3.96**	**49**	P	Pn	19 52 07.8	+3.2
PESTR				S	**Sn**	**19 52 51.5**	**+0.5**
	comp=N,7.9nm,0.3s						
PESTR	**Estremoz**	**3.96**	**49**	P	Pn	19 52 07.8	+3.2
PESTR				S	**Sn**	**19 52 51.5**	**+0.5**
	comp=N,7.9nm,0.3s						
EMIN	**Mina Concepcio**	**4.05**	**68**	⇑P	Pn	19 52 08.8	+2.9
	comp=N,7.5nm,0.1s,SNR=18						
EMIN				S	**Sn**	**19 52 53.3**	**-0.1**
	comp=N,4.1nm,0.1s,SNR=5.9						
EMIN	**Mina Concepcio**	**4.05**	**68**	P	Pn	19 52 08.8	+2.9
	comp=N,7.5nm,0.1s,SNR=18						
EMIN				S	**Sn**	**19 52 53.3**	**-0.1**
	comp=N,4.1nm,0.1s,SNR=5.9						
PTOM	**Tomar**	**4.05**	**35**	*e*Pn	Pn	19 52 09.2	+3.3
PTOM				*e*Sn	**Sn**	**19 52 54.1**	**+0.6**
PTOM				A	A	19 52 56.5	
	comp=N,14nm,0.3s						
PTOM	**Tomar**	**4.05**	**35**	P	Pn	19 52 09.2	+3.3
PTOM				S	**Sn**	**19 52 54.1**	**+0.6**
	comp=N,7.2nm,0.3s						
PTOM	**Tomar**	**4.05**	**35**	P	Pn	19 52 09.2	+3.3
PTOM				S	**Sn**	**19 52 54.1**	**+0.6**
	comp=N,7.2nm,0.3s						
EBAD	**Badajoz**	**4.25**	**54**	P	**Pn**	**19 52 11.4**	**+2.7**
	comp=N,8.2nm,0.1s,SNR=55						
EBAD				S	**Sn**	**19 52 58.4**	**+0.1**
	comp=N,18nm,0.2s,SNR=6.1						
EBAD	**Badajoz**	**4.25**	**54**	P	**Pn**	**19 52 11.4**	**+2.7**
	comp=N,8.2nm,0.1s,SNR=55						
EBAD				S	**Sn**	**19 52 58.4**	**+0.1**
	comp=N,18nm,0.2s,SNR=6.1						
PMRV	**Marv??o**	**4.44**	**44**	*e*Pn	**Pn**	**19 52 13.8**	**+2.5**
PMRV				*e*Sn	**Sn**	**19 53 02.8**	**-0.2**
PMRV				A	A	19 53 04.3	
	comp=N,16nm,0.3s						
PMRV	**Marv??o**	**4.44**	**44**	P	**Pn**	**19 52 13.8**	**+2.5**
PMRV				S	**Sn**	**19 53 02.8**	**-0.2**
	comp=N,16nm,0.3s						
PMRV	**Marv??o**	**4.44**	**44**	P	**Pn**	**19 52 13.8**	**+2.5**
PMRV				S	**Sn**	**19 53 02.8**	**-0.2**
	comp=N,16nm,0.3s						
ESPR	**Espera**	**4.50**	**81**	⇓P	Pn	19 52 15.4	+3.4
	comp=N,12nm,0.1s,SNR=18						
ESPR				S	**Sn**	**19 53 03.9**	**-0.5**
	comp=N,34nm,0.2s,SNR=7.9						
ESPR	**Espera**	**4.50**	**81**	P	Pn	19 52 15.4	+3.4
	comp=N,12nm,0.1s,SNR=18						
ESPR				S	**Sn**	**19 53 03.9**	**-0.5**
	comp=N,34nm,0.2s,SNR=7.9						
PCBR	**Castelo Branco**	**4.69**	**40**	*e*Pn	**Pn**	**19 52 17.6**	**+3.0**
PCBR				*e*Sn	**Sn**	**19 53 09.1**	**+0.1**
PCBR				A	A	19 53 11.0	
	comp=N,7.9nm,0.5s						
PCBR	**Castelo Branco**	**4.69**	**40**	P	**Pn**	**19 52 17.6**	**+3.0**
PCBR				S	**Sn**	**19 53 09.1**	**+0.1**
	comp=N,4.0nm,0.5s						
PCBR	**Castelo Branco**	**4.69**	**40**	P	**Pn**	**19 52 17.6**	**+3.0**
PCBR				S	**Sn**	**19 53 09.1**	**+0.1**
	comp=N,4.0nm,0.5s						
EJIF	**Jimena Fronter**	**4.79**	**87**	P	Pn	19 52 19.6	+3.5
	comp=N,2.8nm,0.2s,SNR=7.9						
EJIF				S	**Sn**	**19 53 13.1**	**+1.5**
	comp=N,1.3nm,0.2s,SNR=4.0						
EJIF	**Jimena Fronter**	**4.79**	**87**	P	Pn	19 52 19.6	+3.5
	comp=N,2.8nm,0.2s,SNR=7.9						
EJIF				S	**Sn**	**19 53 13.1**	**+1.5**
	comp=N,1.3nm,0.2s,SNR=4.0						
MTE	**Manteigas**	**5.08**	**35**	*e*Pn	**Pn**	**19 52 22.2**	**+2.1**
MTE				*e*Sn	**Sn**	**19 53 18.0**	**-0.8**
MTE				A	A	19 53 21.1	
	comp=N,5.5nm,0.6s						
MTE	**Manteigas**	**5.08**	**35**	P	**Pn**	**19 52 22.2**	**+2.1**
MTE				S	**Sn**	**19 53 18.0**	**-0.8**
	comp=N,2.8nm,0.6s						
MTE	**Manteigas**	**5.08**	**35**	P	**Pn**	**19 52 22.2**	**+2.1**
MTE				S	**Sn**	**19 53 18.0**	**-0.8**
	comp=N,2.8nm,0.6s						
PMPST	**Porto Santo, M**	**5.19**	**233**	*e*Pn	Pn	19 52 18.1	-3.4
PMPST				*e*Sn	Sn	19 53 07.4	-14
PMPST				A	A	19 53 09.7	
	comp=N,11nm,0.4s						
PMPS	**Porto Santo**	**5.20**	**233**	*e*Pn	**Pn**	**19 52 18.7**	**-3.0**
PMPS				*e*Sn	Sn	19 53 07.5	-14
PMPS				A	A	19 53 13.2	
	comp=N,9.8nm,0.8s						
PMPS	**Porto Santo**	**5.20**	**233**	P	Pn	19 52 18.1	-3.6
PMPS				S	Sn	19 53 07.4	-14
	comp=N,5.6nm,0.4s						
PMPS	**Porto Santo**	**5.20**	**233**	P	Pn	19 52 18.1	-3.6
PMPS				S	Sn	19 53 07.4	-14
	comp=N,5.6nm,0.4s						
CIA	**Chichaoua**	**5.22**	**154**	P	**Pn**	**19 52 23.0**	**+0.9**
CIA				S	Sn	19 53 15.0	-7.4
CIA	**Chichaoua**	**5.22**	**154**	*i* P	**Pn**	**19 52 23.0**	**+0.9**
CIA				S	Sn	19 53 15.0	-7.4
EPLA	**Plasencia**	**5.62**	**47**	P	**Pn**	**19 52 30.4**	**+3.0**
	comp=N,2.1nm,0.1s,SNR=12						
EPLA				S	**Sn**	**19 53 31.1**	**-0.9**
	comp=N,4.9nm,0.1s,SNR=8.6						
EPLA	**Plasencia**	**5.62**	**47**	P	**Pn**	**19 52 30.4**	**+3.0**
	comp=N,2.1nm,0.1s,SNR=12						
EPLA				S	**Sn**	**19 53 31.1**	**-0.9**
	comp=N,4.9nm,0.1s,SNR=8.6						
EADA	**Adamuz**	**5.75**	**69**	⇓P	**Pn**	**19 52 32.0**	**+2.7**
	comp=N,4.9nm,0.1s,SNR=18						
EADA				S	**Sn**	**19 53 34.9**	**-0.4**
	comp=N,2.1nm,0.1s,SNR=4.5						
EADA	**Adamuz**	**5.75**	**69**	P	**Pn**	**19 52 32.0**	**+2.7**
	comp=N,4.9nm,0.1s,SNR=18						
EADA				S	**Sn**	**19 53 34.9**	**-0.4**
	comp=N,2.1nm,0.1s,SNR=4.5						
POLO	**Lamas de Olo**	**5.78**	**28**	*e*Pn	**Pn**	**19 52 32.0**	**+2.3**
POLO				*e*Sn	**Sn**	**19 53 33.2**	**-2.9**
POLO				A	A	19 53 36.5	
	comp=N,2.6nm,0.3s						
POLO	**Lamas de Olo**	**5.78**	**28**	*e*Pn	**Pn**	**19 52 32.0**	**+2.3**
POLO				*e*Sn	**Sn**	**19 53 33.2**	**-2.9**
	comp=N,2.6nm,0.3s						
PMAR	**Madeira**	**5.79**	**233**	*e*Pn	**Pn**	**19 52 27.4**	**-2.6**
PMAR				*e*Sn	Sn	19 53 23.4	-13
PMAR				A	A	19 53 30.6	
	comp=N,16nm,0.3s						
PMAR	**Madeira**	**5.79**	**233**	P	**Pn**	**19 52 27.4**	**-2.6**
PMAR				S	Sn	19 53 23.4	-13
	comp=N,7.8nm,0.3s						
PMAR	**Madeira**	**5.79**	**233**	P	**Pn**	**19 52 27.4**	**-2.6**
PMAR				S	Sn	19 53 23.4	-13
	comp=N,7.8nm,0.3s						
KIB	**El Ksiba**	**5.79**	**129**	P	**Pn**	**19 52 31.5**	**+1.6**
KIB				S	**Sn**	**19 53 33.0**	**-3.5**
KIB	**El Ksiba**	**5.79**	**129**	P	**Pn**	**19 52 31.5**	**+1.6**
KIB				S	**Sn**	**19 53 33.0**	**-3.5**
TZC	**Tazercounte**	**5.82**	**134**	P	**Pn**	**19 52 31.0**	**+0.6**
TZC				S	**Sn**	**19 53 33.0**	**-4.2**
TZC	**Tazercounte**	**5.82**	**134**	P	**Pn**	**19 52 31.0**	**+0.6**
TZC				S	**Sn**	**19 53 33.0**	**-4.2**
MIF	**Mishlifen**	**5.85**	**118**	P	**Pn**	**19 52 33.0**	**+2.2**
MIF				S	**Sn**	**19 53 36.0**	**-2.0**
MIF	**Mishlifen**	**5.85**	**118**	P	**Pn**	**19 52 33.0**	**+2.2**
MIF				S	**Sn**	**19 53 36.0**	**-2.0**
ELUQ	**Luque**	**5.85**	**76**	S	**Sn**	**19 53 38.1**	**+0.3**
	comp=N,3.3nm,0.2s,SNR=7.9						
ELUQ	**Luque**	**5.85**	**76**	S	**Sn**	**19 53 38.1**	**+0.3**
	comp=N,3.3nm,0.2s,SNR=7.9						
ELOJ	**Sierra Loja**	**5.88**	**80**	P	Pn	19 52 34.3	+3.1
	comp=N,0.7nm,0.1s,SNR=4.0						
ELOJ				S	**Sn**	**19 53 39.4**	**+0.7**
	comp=N,1.2nm,0.2s,SNR=4.0						
ELOJ	**Sierra Loja**	**5.88**	**80**	P	Pn	19 52 34.3	+3.1
	comp=N,0.7nm,0.1s,SNR=4.0						
ELOJ				S	**Sn**	**19 53 39.4**	**+0.7**
	comp=N,1.2nm,0.2s,SNR=4.0						
PMOZ	**Porto Moniz, M**	**5.92**	**236**	*e*Pn	**Pn**	**19 52 29.1**	**-2.5**
MVO	**Moncorvo**	**5.92**	**34**	*e*Pn	**Pn**	**19 52 34.1**	**+2.4**
MVO				*e*Sn	**Sn**	**19 53 38.5**	**-1.2**
MVO				A	A	19 53 40.9	
	comp=N,7.4nm,0.5s						
MVO	**Moncorvo**	**5.92**	**34**	P	**Pn**	**19 52 34.0**	**+2.4**
	comp=N,0.9nm,0.1s,SNR=8.0						
MVO				S	**Sn**	**19 53 37.7**	**-1.9**
	comp=N,4.6nm,0.2s,SNR=8.3						
MVO	**Moncorvo**	**5.92**	**34**	*e*Pn	**Pn**	**19 52 34.1**	**+2.4**
MVO				S	**Sn**	**19 53 37.7**	**-1.9**
	comp=N,4.6nm,0.2s,SNR=8.3						
MVO				*e*Sn	**Sn**	**19 53 38.5**	**-1.2**
	comp=N,7.4nm,0.5s						
PCAB	**Cabril**	**5.99**	**25**	*e*Pn	**Pn**	**19 52 35.3**	**+2.7**
PCAB				*e*Sn	**Sn**	**19 53 39.6**	**-1.7**
PCAB				A	A	19 53 44.7	
	comp=N,5.7nm,0.1s						
PCAB	**Cabril**	**5.99**	**25**	P	**Pn**	**19 52 35.3**	**+2.7**
PCAB				S	**Sn**	**19 53 39.6**	**-1.7**
	comp=N,2.8nm,0.1s						
PCAB	**Cabril**	**5.99**	**25**	P	**Pn**	**19 52 35.3**	**+2.7**
PCAB				S	**Sn**	**19 53 39.6**	**-1.7**
	comp=N,2.8nm,0.1s						
PGAV	**Gavieira, Arco**	**6.14**	**22**	*e*Pn	**Pn**	**19 52 37.6**	**+2.9**
PGAV				*e*Sn	**Sn**	**19 53 43.4**	**-1.7**
PGAV				A	A	19 53 47.1	
	comp=N,5.9nm,0.3s						
PGAV	**Gavieira, Arco**	**6.14**	**22**	*e*Pn	**Pn**	**19 52 37.6**	**+2.9**
PGAV				*e*Sn	**Sn**	**19 53 43.4**	**-1.7**
	comp=N,5.9nm,0.3s						
ERON	**Agron**	**6.15**	**81**	P	Pn	19 52 38.3	+3.5
	comp=N,4.7nm,0.3s,SNR=7.9						
ERON				S	**Sn**	**19 53 46.7**	**+1.5**
	comp=N,0.8nm,0.2s,SNR=7.9						
ERON	**Agron**	**6.15**	**81**	P	Pn	19 52 38.3	+3.5
	comp=N,4.7nm,0.3s,SNR=7.9						
ERON				S	**Sn**	**19 53 46.7**	**+1.5**
	comp=N,0.8nm,0.2s,SNR=7.9						
CZD	**Col de Zad**	**6.18**	**120**	P	**Pn**	**19 52 37.0**	**+1.6**
CZD				S	**Sn**	**19 53 43.5**	**-2.8**
CZD	**Col de Zad**	**6.18**	**120**	P	**Pn**	**19 52 37.0**	**+1.6**
CZD				S	**Sn**	**19 53 43.5**	**-2.8**
EGUA	**Guajares**	**6.33**	**83**	P	Pn	19 52 40.8	+3.6
	comp=N,10nm,0.3s,SNR=7.9						
EGUA				S	**Sn**	**19 53 49.7**	**+0.1**
	comp=N,3.6nm,0.2s,SNR=7.9						
EGUA	**Guajares**	**6.33**	**83**	P	Pn	19 52 40.8	+3.6
	comp=N,10nm,0.3s,SNR=7.9						
EGUA				S	**Sn**	**19 53 49.7**	**+0.1**
	comp=N,3.6nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.57**	**32**	*e*Sn	**Sn**	**19 53 53.9**	**-1.6**
PBRG				A	A	19 53 56.0	
	comp=N,4.4nm,0.2s						
PBRG	**Braganca**	**6.57**	**32**	S	**Sn**	**19 53 53.9**	**-1.6**
	comp=N,2.2nm,0.2s						
PBRG	**Braganca**	**6.57**	**32**	S	**Sn**	**19 53 53.9**	**-1.6**
	comp=N,2.2nm,0.2s						
ECAL	**Calabor**	**6.68**	**31**	P	**Pn**	**19 52 43.6**	**+1.5**
	comp=N,1.1nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**19 53 56.1**	**-2.3**
	comp=N,8.7nm,0.3s,SNR=7.9						
ECAL	**Calabor**	**6.68**	**31**	P	**Pn**	**19 52 43.6**	**+1.5**
	comp=N,1.1nm,0.2s,SNR=7.9						
ECAL				S	**Sn**	**19 53 56.1**	**-2.3**
	comp=N,8.7nm,0.3s,SNR=7.9						
ESDC	**Sonseca Array**	**6.76**	**58**	P	**Pn**	**19 52 45.8**	**+2.6**
	comp=N,3.5nm,0.1s,baz=245,slow=13,SNR=19						
ESDC				S	**Sn**	**19 53 59.4**	**-0.9**
	comp=N,3.0nm,0.2s,baz=244,slow=22,SNR=10						
ESDC	**Sonseca Array**	**6.76**	**58**	P	**Pn**	**19 52 45.8**	**+2.6**
	comp=N,3.5nm,0.1s,slow=13,SNR=19						
ESDC				S	**Sn**	**19 53 59.4**	**-0.9**
	comp=N,3.0nm,0.2s,baz=244,slow=22,SNR=10						
EALB	**Alboran**	**6.78**	**91**	S	**Sn**	**19 53 57.3**	**-3.4**
	comp=N,2.4nm,0.2s,SNR=7.9						
EALB	**Alboran**	**6.78**	**91**	S	**Sn**	**19 53 57.3**	**-3.4**
	comp=N,2.4nm,0.2s,SNR=7.9						
EQES	**Quesada**	**6.83**	**75**	P	**Pn**	**19 52 46.8**	**+2.7**
	comp=N,1.0nm,0.1s,SNR=11						
EQES				S	**Sn**	**19 54 00.1**	**-1.8**
	comp=N,1.4nm,0.1s						
EQES	**Quesada**	**6.83**	**75**	P	**Pn**	**19 52 46.8**	**+2.7**
	comp=N,1.0nm,0.1s,SNR=11						
EQES				S	**Sn**	**19 54 00.1**	**-1.8**
	comp=N,1.4nm,0.1s						
EBER	**Berja**	**6.87**	**83**	P	Pn	19 52 48.0	+3.2
	comp=N,0.1nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**19 54 06.3**	**+3.1**
	comp=N,1.0nm,0.2s,SNR=4.0						
EBER	**Berja**	**6.87**	**83**	P	Pn	19 52 48.0	+3.2
	comp=N,0.1nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**19 54 06.3**	**+3.1**
	comp=N,1.0nm,0.2s,SNR=4.0						
EMAZ	**Mazaricos**	**6.88**	**15**	P	**Pn**	**19 52 46.5**	**+1.7**
	comp=N,0.5nm,0.1s,SNR=7.9						
EMAZ				S	Sn	19 53 56.5	-6.6
	comp=N,4.7nm,0.1s,SNR=7.1						
EMAZ	**Mazaricos**	**6.88**	**15**	P	**Pn**	**19 52 46.5**	**+1.7**
	comp=N,0.5nm,0.1s,SNR=7.9						
EMAZ				S	Sn	19 53 56.5	-6.6
	comp=N,4.7nm,0.1s,SNR=7.1						
GUD	**Guadarrama**	**7.14**	**51**	P	**Pn**	**19 52 50.6**	**+2.2**
	comp=N,0.5nm,0.1s,SNR=7.9						
GUD				S	**Sn**	**19 54 07.7**	**-1.9**
	comp=N,3.5nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**7.14**	**51**	P	**Pn**	**19 52 50.6**	**+2.2**
	comp=N,0.5nm,0.1s,SNR=7.9						
GUD				S	**Sn**	**19 54 07.7**	**-1.9**
	comp=N,3.5nm,0.3s,SNR=7.9						
EHUE	**Huescar**	**7.20**	**75**	P	**Pn**	**19 52 51.9**	**+2.6**
	comp=N,0.9nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**19 54 10.2**	**-0.9**
	comp=N,1.0nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**7.20**	**75**	P	**Pn**	**19 52 51.9**	**+2.6**
	comp=N,0.9nm,0.2s,SNR=7.9						
EHUE				S	**Sn**	**19 54 10.2**	**-0.9**
	comp=N,1.0nm,0.2s,SNR=7.9						
ZFT	**Errachidia**	**7.24**	**124**	P	**Pn**	**19 52 52.0**	**+2.1**
ZFT				S	**Sn**	**19 54 09.0**	**-3.2**
ZFT	**Errachidia**	**7.24**	**124**	P	**Pn**	**19 52 52.0**	**+2.1**
ZFT				S	**Sn**	**19 54 09.0**	**-3.2**
EFAM	**Famara**	**7.39**	**195**	P	Pn	19 52 54.7	+2.9
	comp=N,2.7nm,0.1s,SNR=7.9						
EFAM	**Famara**	**7.39**	**195**	P	Pn	19 52 54.7	+2.9
	comp=N,2.7nm,0.1s,SNR=7.9						
EVIA	**Vianos**	**7.45**	**69**	P	**Pn**	**19 52 55.1**	**+2.5**
	comp=N,3.5nm,0.1s,SNR=7.9						
EVIA				S	**Sn**	**19 54 14.9**	**-2.3**
	comp=N,0.9nm,0.1s,SNR=4.0						
EVIA	**Vianos**	**7.45**	**69**	P	**Pn**	**19 52 55.1**	**+2.5**
	comp=N,3.5nm,0.1s,SNR=7.9						
EVIA				S	**Sn**	**19 54 14.9**	**-2.3**
	comp=N,0.9nm,0.1s,SNR=4.0						
EPON	**Pontenova**	**7.73**	**24**	P	**Pn**	**19 52 58.4**	**+2.1**
	comp=N,0.7nm,0.2s,SNR=4.0						
EPON				S	**Sn**	**19 54 20.4**	**-3.5**
	comp=N,1.0nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**7.73**	**24**	P	**Pn**	**19 52 58.4**	**+2.1**
	comp=N,0.7nm,0.2s,SNR=4.0						
EPON				S	**Sn**	**19 54 20.4**	**-3.5**
	comp=N,1.0nm,0.1s,SNR=7.9						
CFUE	**Fuerteventura**	**7.94**	**196**	S	Sn	19 54 16.5	-13
	comp=N,4.1nm,0.1s,SNR=7.9						
CFUE	**Fuerteventura**	**7.94**	**196**	S	Sn	19 54 16.5	-13
	comp=N,4.1nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**8.17**	**71**	P	**Pn**	**19 53 04.9**	**+2.4**
	comp=N,2.2nm,0.3s,SNR=11						
ETOB				S	**Sn**	**19 54 33.2**	**-1.8**
	comp=N,0.8nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**8.17**	**71**	P	**Pn**	**19 53 04.9**	**+2.4**
	comp=N,2.2nm,0.3s,SNR=11						
ETOB				S	**Sn**	**19 54 33.2**	**-1.8**
	comp=N,0.8nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**8.45**	**32**	P	Pn	19 53 10.2	+4.0
	comp=N,0.6nm,0.2s,SNR=7.9						
EARI				S	**Sn**	**19 54 36.9**	**-4.7**
	comp=N,0.4nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**8.45**	**32**	P	Pn	19 53 10.2	+4.0
	comp=N,0.6nm,0.2s,SNR=7.9						
EARI				S	**Sn**	**19 54 36.9**	**-4.7**
	comp=N,0.4nm,0.2s,SNR=7.9						
ETOR	**Torete**	**8.59**	**56**	⇑P	**Pn**	**19 53 11.0**	**+2.7**
	comp=N,12nm,0.3s,SNR=18						
ETOR				S	**Sn**	**19 54 42.2**	**-3.1**
	comp=N,2.2nm,0.2s,SNR=7.9						
ETOR	**Torete**	**8.59**	**56**	P	**Pn**	**19 53 11.0**	**+2.7**
	comp=N,12nm,0.3s,SNR=18						
ETOR				S	**Sn**	**19 54 42.2**	**-3.1**
	comp=N,2.2nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**9.20**	**72**	P	**Pn**	**19 53 18.7**	**+2.1**
	comp=N,0.1nm,0.1s,SNR=4.0						
EBEN	**Beniarda**	**9.20**	**72**	P	**Pn**	**19 53 18.7**	**+2.1**
	comp=N,0.1nm,0.1s,SNR=4.0						
EMOS	**Mosqueruela**	**9.49**	**62**	P	Pn	19 53 24.2	+3.5
	comp=N,0.3nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**19 55 05.6**	**-1.9**
	comp=N,0.4nm,0.2s,SNR=4.0						
EMOS	**Mosqueruela**	**9.49**	**62**	P	Pn	19 53 24.2	+3.5
	comp=N,0.3nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**19 55 05.6**	**-1.9**
	comp=N,0.4nm,0.2s,SNR=4.0						
SJPF	**Ste Jean**	**10.36**	**46**	*e*Pn	**Pn**	**19 53 32.2**	**-0.3**
SJPF				*e*Sn	Sn	19 55 18.9	-10
	comp=N,0.6nm,0.3s						
SJPF	**Ste Jean**	**10.36**	**46**	P	**Pn**	**19 53 32.2**	**-0.3**
SJPF				S	Sn	19 55 18.9	-10
	comp=N,0.2nm,0.3s						
ETSF	**Etsaut**	**10.63**	**49**	*e*Pn	**Pn**	**19 53 36.4**	**+0.1**
ETSF	**Etsaut**	**10.63**	**49**	P	**Pn**	**19 53 36.4**	**+0.1**
EPF	**Esparros**	**11.26**	**50**	*e*Pn	**Pn**	**19 53 44.7**	**-0.1**
EPF	**Esparros**	**11.26**	**50**	P	**Pn**	**19 53 44.7**	**-0.1**

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*ATH **01** 19:54:01.7, 41°.29N×22°.71E, h6km, MD2.7/4*
*ISCJB **01** 19:54:01.2±0.5, 41°.31N±0°.03×22°.70E±0°.04, h3km±6km, Error ellipse: s-maj=5.2km s-min=4.2km az=34.5*
*SKO **01** 19:54:01.2, 41°.30N×22°.69E, h15km, M1.1, ML1.5*
*CSEM **01** 19:54:01.3±0.2, 41°.31N×22°.65E, h2km, ML1.6/5, Error ellipse: s-maj=5.1km s-min=4.2km az=28.0*
*THE **01** 19:54:02.0, 41°.29N×22°.71E, h2km±2km, ML1.6/5, Error ellipse: s-maj=2.0km s-min=0.6km az=298.0*
*BEO **01** 19:54:05.1±1.5, 41°.43N×22°.46E, h6km±5km, ML1.4/3*
ISC 01 19:54:01.6±0.9**, 41°.31N**±0°.03×**22°.68E**±0°.02**, h4**km±8km**,** **n26,** σ**0ˢ86**/45**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.08**	**281**	P	**Pg**	**19 54 04.0**	**+0.6**
VAY				S	**Sg**	**19 54 05.8**	**+1.2**
VAY	**Valandovo**	**0.08**	**281**	*i* Pg	**Pg**	**19 54 04.0**	**+0.6**
VAY				*i* Sg	**Sg**	**19 54 05.7**	**+1.1**
VAY				*e*Lg	Lg	19 54 05.8	
	comp=N,382nm,0.2s						
VAY				*e*Lg	Lg	19 54 06.1	
	comp=E,235nm,0.6s						
VAY	**Valandovo**	**0.08**	**281**	*i* Sg	**Sg**	**19 54 01.1**	**-3.5**
VAY	**Valandovo**	**0.08**	**281**	*i* Pg	**Pg**	**19 54 01.4**	**-2.0**
VAY				*e*Lg	Lg	19 54 01.5	
	comp=E,235nm,0.6s						
VAY	**Valandovo**	**0.08**	**281**	P	**Pg**	**19 54 04.0**	**+0.6**
VAY				S	**Sg**	**19 54 05.8**	**+1.2**
KNT	**Kendrikon**	**0.22**	**131**	P	**Pg**	**19 54 06.1**	**+0.3**
KNT				S	**Sg**	**19 54 08.8**	**+0.1**
KNT	**Kendrikon**	**0.22**	**131**	P	**Pg**	**19 54 06.1**	**+0.3**
KNT				S	**Sg**	**19 54 08.8**	**+0.1**
GRG	**Griva**	**0.41**	**211**	P	**Pg**	**19 54 09.7**	**+0.3**
GRG				S	**Sg**	**19 54 15.4**	**+0.7**
GRG	**Griva**	**0.41**	**211**	*e*PB	**Pg**	**19 54 09.7**	**+0.3**
GRG				*e*SB	**Sg**	**19 54 15.4**	**+0.7**
GRG	**Griva**	**0.41**	**211**	P	**Pg**	**19 54 09.7**	**+0.3**
GRG				S	**Sg**	**19 54 15.4**	**+0.7**
SOH	**Sokhos**	**0.70**	**133**	P	**Pg**	**19 54 14.6**	**-0.5**
SOH	**Sokhos**	**0.70**	**133**	*e*PG	**Pg**	**19 54 14.6**	**-0.5**
SOH	**Sokhos**	**0.70**	**133**	P	**Pg**	**19 54 14.6**	**-0.5**
SRS	**Serrai**	**0.71**	**105**	P	**Pg**	**19 54 15.1**	**-0.2**
SRS				S	**Sg**	**19 54 24.8**	**+0.3**
SRS	**Serrai**	**0.71**	**105**	P	**Pg**	**19 54 15.1**	**-0.2**
SRS				S	**Sg**	**19 54 24.8**	**+0.3**
NVR	**Nevrokopi**	**0.89**	**87**	P	**Pg**	**19 54 18.9**	**+0.2**
NVR				S	**Sg**	**19 54 30.5**	**+0.3**
NVR	**Nevrokopi**	**0.89**	**87**	*e*PB	**Pg**	**19 54 18.9**	**+0.2**
NVR				*e*SB	**Sg**	**19 54 30.2**	**0.0**
NVR	**Nevrokopi**	**0.89**	**87**	P	**Pg**	**19 54 18.9**	**+0.2**
NVR				S	**Sg**	**19 54 30.5**	**+0.3**
PLG	**Polygyros**	**1.10**	**148**	*e*PB	**Pg**	**19 54 21.5**	**-1.1**
PLG				*e*SB	**Sg**	**19 54 36.3**	**-0.5**
VTS	**Vitosha**	**1.34**	**17**	*e*Sg	**Sn**	**19 54 45.9**	**+0.3**
VTS	**Vitosha**	**1.34**	**17**	*e*Sg	**Sn**	**19 54 45.9**	**+0.3**
KAVA	**Kavala**	**1.42**	**102**	P	**Pn**	**19 54 28.1**	**0.0**
KAVA				S	**Sn**	**19 54 47.4**	**+0.2**
KAVA	**Kavala**	**1.42**	**102**	P	**Pn**	**19 54 28.1**	**0.0**
KAVA				S	**Sn**	**19 54 47.4**	**+0.2**
BARS	**Barje**	**1.64**	**337**	*e*Pg	**Pb**	**19 54 32.0**	**-0.4**
BARS				*e*Sg	**Sn**	**19 54 51.5**	**-1.2**
BARS	**Barje**	**1.64**	**337**	*e*Pg	**Pb**	**19 54 32.0**	**-0.4**
BARS				*e*Sg	**Sn**	**19 54 51.5**	**-1.2**
ZAPS	**Zavoj**	**1.97**	**359**	*e*Pn	**Pn**	**19 54 36.3**	**+0.6**
ZAPS				*e*Sn	**Sn**	**19 55 01.7**	**+0.9**

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*IDC **01** 19:54:34.3±1.3, 52°.14N×170°.20E, h0km, mb3.5/6, mb1 3.9/7, mb1mx3.5/29, mbtmp3.6/7, ML3.7/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/32, Error ellipse: s-maj=47.3km s-min=16.3km az=164.0*
*MOS **01** 19:54:35.2±0.9, 52°.30N×170°.13E, h21km, mb4.3/1, Error ellipse: s-maj=19.6km s-min=13.4km az=16.5*
*ISCJB **01** 19:54:37.2±0.6, 52°.43N±0°.09×170°.10E±0°.06, h33km, mb3.5/6, MS3.3/1, Error ellipse: s-maj=12.5km s-min=5.6km az=2.2*
*KRSC **01** 19:54:38.4±3.3, 52°.39N×169°.50E, h10km±10km, ML4.2*
ISC 01 19:54:39.1±0.9**, 52°.4N**±0°.1×**169°.98E**±0°.06**, h35**km**, n33,** σ**2ˢ06**/43**, mb3.4**/6**, South of Aleutian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FX1	**Attu Island--F**	**2.01**	**73**	Pn	Pn	19 55 07.4	-3.2
	65nm,0.3s,baz=270,slow=1.0,SNR=203						
FX1				Sn	**Sn**	**19 55 29.2**	**-5.3**
	32nm,0.3s,baz=338,slow=23,SNR=11						
BKI	**Bering**	**3.72**	**322**	S	**Sn**	**19 56 16.5**	**0.0**
MKZ	**Mys Kozlova**	**5.40**	**297**	P	**Pn**	**19 55 57.7**	**+0.6**
MKZ				S	**Sn**	**19 56 55.5**	**-2.5**
MKZ	**Mys Kozlova**	**5.40**	**297**	P	**Pn**	**19 55 57.7**	**+0.6**
MKZ				S	**Sn**	**19 56 55.5**	**-2.5**
KBTR	**Krutoberegovo**	**5.71**	**316**	P	**Pn**	**19 56 02.3**	**+1.1**
KBTR	**Krutoberegovo**	**5.71**	**316**	P	**Pn**	**19 56 02.3**	**+1.1**
SPN	**Mys Shipunski**	**6.10**	**281**	P	**Pn**	**19 56 07.5**	**+0.9**
SPN	**Mys Shipunski**	**6.10**	**281**	P	**Pn**	**19 56 07.5**	**+0.9**
NLC	**Nalytchevo**	**6.51**	**281**	P	**Pn**	**19 56 13.4**	**+1.1**
NLC				S	**Sn**	**19 57 22.3**	**-2.9**
NLC	**Nalytchevo**	**6.51**	**281**	P	**Pn**	**19 56 13.4**	**+1.1**
NLC				S	**Sn**	**19 57 22.3**	**-2.9**
TUMR	**Tumrok**	**6.52**	**301**	P	**Pn**	**19 56 14.3**	**+1.7**
TUMR				S	**Sn**	**19 57 23.6**	**-2.1**
KMNR	**Kamenistaya**	**6.67**	**305**	P	**Pn**	**19 56 16.5**	**+1.8**
KMNR				S	**Sn**	**19 57 27.6**	**-1.9**
SDLR	**Sedlovina**	**6.79**	**282**	*e*P	**Pn**	**19 56 17.8**	**+1.5**
UGLR	**Uglovaya**	**6.83**	**282**	*e*P	**Pn**	**19 56 18.3**	**+1.6**
SMAR	**Somma**	**6.84**	**282**	P	**Pn**	**19 56 18.6**	**+1.5**
AVH	**Avacha**	**6.88**	**282**	*e*P	**Pn**	**19 56 19.1**	**+1.6**
PET	**Petropavlovsk**	**6.92**	**280**	P	**Pn**	**19 56 19.3**	**+1.4**
PET	**Petropavlovsk**	**6.92**	**280**	P	**Pn**	**19 56 19.3**	**+1.4**
KOK	**Koryaka**	**6.94**	**282**	*e*P	**Pn**	**19 56 19.9**	**+1.6**
RUS	**Russkaya**	**7.02**	**275**	P	**Pn**	**19 56 20.5**	**+1.2**
RUS				S	**Sn**	**19 57 35.0**	**-2.8**
RUS	**Russkaya**	**7.02**	**275**	P	**Pn**	**19 56 20.5**	**+1.2**
RUS				S	**Sn**	**19 57 35.0**	**-2.8**
MTVR	**Mutnovka**	**7.22**	**276**	*e*P	**Pn**	**19 56 24.0**	**+1.8**
MTVR				S	**Sn**	**19 57 40.3**	**-2.6**
GNL	**Ganaly**	**7.39**	**285**	P	**Pn**	**19 56 27.1**	**+2.7**
ASAK	**Asacha**	**7.40**	**275**	*e*P	**Pn**	**19 56 26.5**	**+1.9**
ASAK				S	**Sn**	**19 57 44.7**	**-2.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	7.50	281	P	Pn	19 56 27.6	+1.7
PETK						19 57 46.4	
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	7.50	281	Pn	Pn	19 56 27.6	+1.7
	comp=Z,1.0nm,0.3s,baz=96,slow=17,SNR=12						
PETK				Sn	Sn	19 57 46.4	-3.2
	comp=Z,0.4nm,0.3s,baz=81,slow=18,SNR=2.7						
KDAK	Kodiak Island	21.91	61	P	P	19 59 26.9	-2.0
	comp=Z,16nm,1.1s,baz=287,slow=11,SNR=3.9						
ILAR	Eielson Array	25.12	44	P	P	19 59 59.5	-0.8
	comp=Z,0.4nm,0.4s,baz=255,slow=7.0,SNR=8.9						
MJAR	Matsushiro Arr	27.36	247	LR	LR	20 09 01.8	
	comp=Z,78nm,20.6s,baz=270,slow=32						
YKA	Yellowknife Ar	39.54	45	P	P	20 02 06.6	+0.4
	comp=Z,0.2nm,0.4s,baz=291,slow=8.0,SNR=3.5						
SONM	Songino Array	39.88	290	P	P	20 02 11.9	+2.7
	comp=Z,0.4nm,0.5s,baz=69,slow=7.9,SNR=3.2						
TXAR	Lajitas Array	65.23	74	P	P	20 05 17.6	+0.6
	comp=Z,0.2nm,0.5s,baz=292,slow=4.8,SNR=3.3						
WRA	Warramunga Arr	78.39	214	P	P	20 06 35.4	-0.4
	comp=Z,0.3nm,0.8s,baz=26,slow=5.9,SNR=3.0						

KRSC 01 20:11:09.4±1.1, 49°.71N×157°.15E, h10km±10km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.18	326	P	Pb	20 11 30.8	-1.0
PAU	Pauzhetka	1.77	353	P	Pb	20 11 41.1	-0.9
PAU				eS	Sb	20 12 04.1	-0.1
MIPR	Malaya Ipel'ka	2.58	355	P	Pn	20 11 51.5	+0.2
ASAK	Asacha	2.72	10	eP	Pn	20 11 55.1	+1.9
ASAK				S	Sn	20 12 28.6	+2.4
MTVR	Mutnovka	2.85	13	eP	Pn	20 11 56.9	+1.8
MTVR				eS	Sn	20 12 31.6	+1.9
RUS	Russkaya	2.86	17	eP	Pn	20 11 56.1	+1.1
RUS				eS	Sn	20 12 30.6	+1.1
APC	Apacha	3.22	0	P	Pn	20 12 01.4	+1.4
UGLR	Uglovaya	3.66	16	P	Pn	20 12 08.4	+2.2
AVH	Avacha	3.70	15	P	Pn	20 12 08.6	+2.0
KOK	Koryaka	3.71	14	P	Pn	20 12 08.9	+2.1
SMAR	Somma	3.71	16	P	Pn	20 12 08.8	+1.9
SDLR	Sedlovina	3.73	16	P	Pn	20 12 09.1	+1.9
SDLR				S	Sn	20 12 53.7	+2.4
KRER	Koryakskii	3.73	15	P	Pn	20 12 09.3	+2.0
SPN	Mys Shipunski	3.84	27	P	Pn	20 12 10.8	+2.3
SPN				S	Sn	20 12 56.6	+2.9
GNL	Ganaly	4.02	7	P	Pn	20 12 12.8	+1.6
MKZ	Mys Kozlova	5.61	28	P	Pn	20 12 33.6	+0.8

*PDA **01** 20:13:22.6, 47°.03N×21°.89W, h0km*
*INMG **01** 20:13:22.6, 47°.03N×21°.89W, h0km*
*IDC **01** 20:13:29.2±0.9, 46°.75N×21°.44W, h0km, mb3.8/6, mb1 3.8/8, mb1mx3.5/34, mbtmp3.7/8, ML4.3/2, MS2.9/4, Ms1 2.9/4, ms1mx2.5/41, Error ellipse: s-maj=29.7km s-min=24.7km az=95.0*
*LDG **01** 20:13:40.7±0.5, 46°.72N×20°.61W, h30km, Ml4.0/14, Error ellipse: s-maj=10.5km s-min=7.5km az=79.0*
*CSEM **01** 20:13:48.5±0.7, 46°.54N×19°.47W, h30km, ML4.0/10, Error ellipse: s-maj=15.3km s-min=9.0km az=91.0*
ISC 01 20:13:30.7±0.9, 46°.8N±0°.1×21°.3W±0°.1, h10km, n109, σ1s.40/88, mb3.8/6, MS2.9/4, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGAV	Gavieira, Arco	10.51	113	eP	Pn	20 16 00.3	-1.1
	19nm,2.1s						
PGAV				eS	Sn	20 17 46.1	-13
PGAV	Gavieira, Arco	10.51	113	eP	Pn	20 16 00.3	-1.1
	19nm,2.1s						
PGAV				eS	Sn	20 17 46.1	-13
PCAB	Cabril	10.80	114	eP	Pn	20 16 05.5	+0.2
	17nm,1.3s						
PCAB				eS	Sn	20 17 52.9	-13
PCAB	Cabril	10.80	114	eP	Pn	20 16 05.5	+0.2
	17nm,1.3s						
PCAB				eS	Sn	20 17 52.9	-13
POLO	Lamas de Olo	11.13	115	eP	Pn	20 16 09.8	-0.1
	8.4nm,1.6s						
POLO				eS	Sn	20 18 00.7	-14
POLO	Lamas de Olo	11.13	115	eP	Pn	20 16 09.8	-0.1
	8.4nm,1.6s						
POLO				eS	Sn	20 18 00.7	-14
PVIS	Viseu	11.45	117	eP	Pn	20 16 14.0	-0.2
	13nm,1.8s						
PVIS				eS	Sn	20 18 10.5	-12
PVIS	Viseu	11.45	117	eP	Pn	20 16 14.0	-0.2
	13nm,1.8s						
PVIS				eS	Sn	20 18 10.5	-12
PBRG	Braganca	11.56	111	eP	Pn	20 16 16.8	+1.0
	10nm,1.7s						
PBRG				eS	Sn	20 18 12.3	-13
PBRG	Braganca	11.56	111	eP	Pn	20 16 16.8	+1.0
	10nm,1.7s						
PBRG				eS	Sn	20 18 12.3	-13
MVO	Moncorvo	11.72	114	eP	Pn	20 16 17.7	-0.3
	10.0nm,1.8s						
MVO				eS	Sn	20 18 16.0	-13
MVO	Moncorvo	11.72	114	eP	Pn	20 16 17.7	-0.3
	10.0nm,1.8s						
MVO				eS	Sn	20 18 16.0	-13
PMAFR	Mafra	11.80	128	eS	Sn	20 18 14.7	-16
PMAFR	Mafra	11.80	128	eS	Sn	20 18 14.7	-16
PTOM	Tomar	11.83	123	eS	Sn	20 18 16.4	-15
PTOM	Tomar	11.83	123	eS	Sn	20 18 16.4	-15
MTE	Manteigas	11.85	118	eP	Pn	20 16 18.6	-1.1
MTE	Manteigas	11.85	118	eP	Pn	20 16 18.6	-1.1
ROSF	Rostrenen	12.26	76	ePn	Pn	20 16 24.1	-1.1
ROSF	Rostrenen	12.26	76	eP	Pn	20 16 31.0	+5.8
ROSF				eSn	Sn	20 18 29.1	-13
	5.1nm,0.3s						
ROSF	Rostrenen	12.26	76	ePn	Pn	20 16 24.1	-1.1
ROSF				eSn	Sn	20 18 29.1	-13
	2.5nm,0.3s						
PMTG	Montargil	12.31	124	eP	Pn	20 16 23.9	-2.1
PMTG	Montargil	12.31	124	eP	Pn	20 16 23.9	-2.1
QUIF	Quistinic	12.34	78	ePn	Pn	20 16 24.8	-1.5
QUIF	Quistinic	12.34	78	eP	Pn	20 16 32.0	+5.7
QUIF				eSn	Sn	20 18 30.2	-13
	5.1nm,0.3s						
QUIF	Quistinic	12.34	78	ePn	Pn	20 16 24.8	-1.5
QUIF	Quistinic	12.34	78	eP	Pn	20 16 32.0	+5.7
QUIF				eSn	Sn	20 18 30.2	-13
	2.5nm,0.3s						
PMRV	Marv??o	12.55	121	eP	Pn	20 16 28.7	-0.6
	13nm,1.7s						
PMRV				eS	Sn	20 18 35.2	-14
PMRV	Marv??o	12.55	121	eP	Pn	20 16 28.7	-0.6
	13nm,1.7s						
PMRV				eS	Sn	20 18 35.2	-14
MOE	Montemor	12.62	127	eS	Sn	20 18 32.8	-18
MOE	Montemor	12.62	127	eS	Sn	20 18 32.8	-18
SGMF	Saint Gilles	12.74	77	ePn	Pn	20 16 30.4	-1.3
SGMF	Saint Gilles	12.74	77	eP	Pn	20 16 37.3	+5.6
SGMF				eSn	Sn	20 18 39.9	-14
	1.8nm,0.2s						
SGMF	Saint Gilles	12.74	77	ePn	Pn	20 16 30.4	-1.3
SGMF	Saint Gilles	12.74	77	eP	Pn	20 16 37.3	+5.6
SGMF				eSn	Sn	20 18 39.9	-14
	0.9nm,0.2s						
EVOP	Sao Brissos	12.74	126	ePn	Pn	20 16 29.7	-2.2
EVOP				eSn	Sn	20 18 38.5	-15
	4.2nm,0.6s						
EVO	Evora	12.80	126	ePn	Pn	20 16 29.7	-3.0
EVO				eSn	Sn	20 18 38.5	-17
	8.3nm,0.6s						
PESTR	Estremoz	12.81	124	eP	Pn	20 16 32.7	-0.1
	12nm,1.7s						
PESTR				eS	Sn	20 18 41.8	-14
PESTR	Estremoz	12.81	124	eP	Pn	20 16 32.7	-0.1
	12nm,1.7s						
PESTR				eS	Sn	20 18 41.8	-14
PNCL	Nicolau / Gran	12.82	128	eP	Pn	20 16 32.5	-0.4
	11nm,1.5s						
PNCL				eS	Sn	20 18 40.0	-16
PNCL	Nicolau / Gran	12.82	128	eP	Pn	20 16 32.5	-0.4
	11nm,1.5s						
PNCL				eS	Sn	20 18 40.0	-16
PTEO	Sao Teotonio	13.13	130	eS	Sn	20 18 47.5	-16
PTEO	Sao Teotonio	13.13	130	eS	Sn	20 18 47.5	-16
MORF	Marmelete	13.35	131	eS	Sn	20 18 52.6	-16
MORF	Marmelete	13.35	131	eS	Sn	20 18 52.6	-16
PFVI	Vila Bisbo	13.39	132	eS	Sn	20 18 53.9	-16
PFVI	Vila Bisbo	13.39	132	eS	Sn	20 18 53.9	-16
PBAR	Barrancos	13.60	124	eP	Pn	20 16 43.5	0.0
	15nm,1.7s						
PBAR				eS	Sn	20 19 00.1	-15
PBAR	Barrancos	13.60	124	eP	Pn	20 16 43.5	0.0
	15nm,1.7s						
PBAR				eS	Sn	20 19 00.1	-15
PVAQ	Vaqueiros	13.77	128	eP	Pn	20 16 44.1	-1.9
	16nm,1.7s						
PVAQ				eS	Sn	20 19 03.5	-15
PVAQ	Vaqueiros	13.77	128	eP	Pn	20 16 44.1	-1.9
	16nm,1.7s						
PVAQ				eS	Sn	20 19 03.5	-15
PBDV	Barranco-do-Ve	13.78	129	eS	Sn	20 19 04.7	-14
PBDV	Barranco-do-Ve	13.78	129	eS	Sn	20 19 04.7	-14
GRR	Gorron	13.87	76	ePn	Pn	20 16 46.1	-1.1
GRR	Gorron	13.87	76	eP	P	20 16 52.4	-3.1
GRR				eSn	Sn	20 19 07.1	-14
	3.4nm,0.4s						
GRR	Gorron	13.87	76	ePn	Pn	20 16 46.1	-1.1
GRR				eSn	Sn	20 19 07.1	-14
	1.7nm,0.4s						
FLN	La Foliniere	14.11	75	ePn	Pn	20 16 50.5	0.0
	baz=244						
FLN	La Foliniere	14.11	75	eP	P	20 16 56.4	-1.9
	baz=247						
FLN				eSn	Sn	20 19 13.8	-13
	4.7nm,0.4s						
FLN	La Foliniere	14.11	75	ePn	Pn	20 16 50.5	0.0
FLN	La Foliniere	14.11	75	eP	P	20 16 56.4	-1.9
FLN				eSn	Sn	20 19 13.8	-13
	2.3nm,0.4s						
EKA	Eskdalemuir Ar	14.18	47	Pn	Pn	20 16 51.6	+0.2
	baz=233,slow=11,SNR=5.6						
LDF	La Druitiere	14.35	75	ePn	Pn	20 16 52.9	-0.9
LDF	La Druitiere	14.35	75	ePn	Pn	20 16 52.9	-0.9
ESDC	Sonseca Array	14.49	113	Pn	Pn	20 16 56.3	+0.4
	0.8nm,0.3s,baz=300,slow=12,SNR=5.2						
MFF	Saint Martin d	14.50	83	ePn	Pn	20 16 54.9	-1.0
MFF	Saint Martin d	14.50	83	ePn	Pn	20 16 54.9	-1.0
SJPF	Ste Jean	14.67	97	ePn	Pn	20 16 57.4	-0.9
SJPF				eSn	Sn	20 19 25.7	-15
	2.2nm,0.3s						
SJPF	Ste Jean	14.67	97	ePn	Pn	20 16 57.4	-0.9
SJPF				eSn	Sn	20 19 25.7	-15
	1.1nm,0.3s						
ETSF	Etsaut	15.21	97	ePn	Pn	20 17 04.9	-0.6
ETSF				eSn	Sn	20 19 38.4	-16
	2.3nm,0.3s						
ETSF	Etsaut	15.21	97	ePn	Pn	20 17 04.9	-0.6
ETSF				eSn	Sn	20 19 38.4	-16
	1.1nm,0.3s						
LFF	La Frestale	15.45	89	eP	P	20 17 12.8	-0.3
LFF	La Frestale	15.45	89	eP	P	20 17 12.8	-0.3
EPF	Esparros	15.77	96	ePn	Pn	20 17 13.0	+0.2
EPF	Esparros	15.77	96	eP	P	20 17 17.0	+0.2
EPF				eSn	Sn	20 19 52.1	-16
	1.2nm,0.4s						
EPF	Esparros	15.77	96	ePn	Pn	20 17 13.0	+0.2
EPF	Esparros	15.77	96	eP	P	20 17 17.0	+0.2
EPF				eSn	Sn	20 19 52.1	-16
	0.6nm,0.4s						
TCF	Toulx Ste Croi	16.16	83	ePn	Pn	20 17 17.6	-0.2
TCF				eSn	Sn	20 19 58.2	-19
	2.3nm,0.4s						
TCF	Toulx Ste Croi	16.16	83	ePn	Pn	20 17 17.6	-0.2
TCF				eSn	Sn	20 19 58.2	-19
	1.1nm,0.4s						
CAF	Calviac	16.36	88	ePn	Pn	20 17 20.6	+0.2
CAF	Calviac	16.36	88	ePn	Pn	20 17 20.6	+0.2
BGF	Bois d'Agland	16.55	82	ePn	Pn	20 17 23.1	+0.4
BGF				eSn	Sn	20 20 05.9	-20
	7.9nm,0.4s						
BGF	Bois d'Agland	16.55	82	ePn	Pn	20 17 23.1	+0.4
AVF	Avril sur Loir	16.85	81	ePn	Pn	20 17 27.1	+0.5
AVF	Avril sur Loir	16.85	81	ePn	Pn	20 17 27.1	+0.5
SSF	Saint Saulge	16.92	80	ePn	Pn	20 17 27.3	-0.1
SSF				eSn	Sn	20 20 20.0	-15
	1.6nm,0.3s						
SSF	Saint Saulge	16.92	80	ePn	Pn	20 17 27.3	-0.1
SSF				eSn	Sn	20 20 20.0	-15
	0.8nm,0.3s						
MTLF	Montolieu	16.95	93	ePn	Pn	20 17 28.7	+0.9
MTLF	Montolieu	16.95	93	ePn	Pn	20 17 28.7	+0.9
LOR	Lormes	17.13	79	ePn	Pn	20 17 30.6	+0.6
	baz=265						
LOR				eSn	Sn	20 20 24.2	-16
	3.7nm,0.5s						
LOR	Lormes	17.13	79	ePn	Pn	20 17 30.6	+0.6
SMF	Signal de Mont	17.21	81	eP	P	20 17 35.2	+2.6
SMF	Signal de Mont	17.21	81	eP	P	20 17 35.2	+2.6
LASF	Ste Croix	17.83	90	ePn	P	20 17 40.4	+0.8
LASF	Ste Croix	17.83	90	eP	P	20 17 43.1	+3.5
LASF				eSn	Sn	20 20 44.4	-13
LASF	Ste Croix	17.83	90	ePn	P	20 17 40.4	+0.8
LASF	Ste Croix	17.83	90	eP	P	20 17 43.1	+3.5
LASF				eSn	Sn	20 20 44.4	-13
CABF	La Chapelle	18.74	81	eP	Pn	20 17 54.7	+4.7
CABF	La Chapelle	18.74	81	eP	Pn	20 17 54.7	+4.7
NOA	NORSAR Array B	23.51	41	LR	LR	20 27 23.9	
	comp=Z,9.4nm,19.6s,baz=270,slow=35						
HFS	Hagfors	24.36	44	LR	LR	20 27 03.9	
	comp=Z,22nm,21.0s,baz=100,slow=33						
SCHQ	Schefferville	29.40	303	LR	LR	20 29 36.4	
	comp=Z,46nm,19.9s,baz=124,slow=33						
TORD	Torodi Ar. Bea	38.74	143	P	P	20 20 54.6	-0.5
	1.5nm,0.5s,baz=338,slow=8.2,SNR=31						
TORD				PcP	PcP	20 23 06.9	+0.2
	0.2nm,0.6s,baz=324,slow=3.3,SNR=3.3						
YKA	Yellowknife Ar	51.28	324	P	P	20 22 33.8	-0.5
	0.1nm,0.5s,baz=64,slow=6.3,SNR=3.7						
ZALV	Zalesovo Beam	61.71	40	P	P	20 23 49.1	+0.4
	0.2nm,0.3s,baz=308,slow=7.0,SNR=3.2						
ZALV				LR	LR	20 54 39.4	
	comp=Z,12nm,18.3s,baz=159,slow=40						
MKAR	Makanchi Array	65.32	47	P	P	20 24 13.9	+1.2
	0.6nm,0.7s,baz=315,slow=6.6,SNR=7.9						
SONM	Songino Array	75.25	33	P	P	20 25 14.9	+1.3
	0.4nm,0.7s,baz=316,slow=4.0,SNR=2.9						
LPAZ	La Paz	75.62	226	P	P	20 25 15.9	-0.7
	1.7nm,0.3s,baz=48,slow=7.5,SNR=5.2						
WRA	Warramunga Arr	146.60	45	PKPbc	PKPab	20 33 13.0	-0.6
	0.4nm,0.5s,baz=326,slow=3.0,SNR=12						
ASAR	Alice Springs	149.50	49	PKPbc	PKPbc	20 33 20.7	+0.5
	0.7nm,0.5s,baz=338,slow=2.2,SNR=26						

IDC 01 20:35:22.8±6.4, 36°.03N×70°.05E, h189km±56km, mb2.9/4, mb1 2.9/9, mb1mx2.7/32, mbtmp2.8/9, Error ellipse: s-maj=48.1km s-min=37.3km az=44.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	7.43	26	P	Pn	20 37 09.4	+0.6
	1.1nm,0.3s,baz=186,slow=9.2,SNR=3.5						
AAK				S	Sn	20 38 31.7	-1.1
	0.4nm,0.3s,baz=172,slow=14,SNR=3.1						
MKAR	Makanchi Array	14.12	37	P	P	20 38 36.5	-0.1
	0.1nm,0.3s,baz=218,slow=9.1,SNR=6.9						
KURBB	Kurchatov Arra	15.82	20	P	P	20 38 54.3	-0.9
	0.0nm,0.3s,baz=212,slow=10,SNR=6.8						
AKTO	Aktyubinsk	16.82	333	P	Pn	20 39 06.9	-0.4
	0.1nm,0.3s,baz=63,slow=11,SNR=3.8						
BVAR	Borovoye Array	16.99	1	P	Pn	20 39 08.8	-0.5
	0.1nm,0.3s,baz=163,slow=12,SNR=3.5						
ZALV	Zalesovo Beam	20.66	25	P	P	20 39 46.2	-1.5
	0.7nm,0.4s,baz=214,slow=10,SNR=5.6						
SONM	Songino Array	29.23	55	P	P	20 41 08.1	+1.1
	0.4nm,0.5s,baz=253,slow=9.8,SNR=5.0						
WRA	Warramunga Arr	82.40	121	P	P	20 47 23.5	-0.4
	0.2nm,0.8s,baz=314,slow=6.0,SNR=3.2						
ASAR	Alice Springs	84.62	124	P	P	20 47 35.2	0.0
	0.2nm,0.7s,baz=311,slow=4.1,SNR=2.6						

*ATH **01** 20:49:11.6, 41°.32N×22°.71E, h5km, MD3.0/4*
*ISCJB **01** 20:49:11.8±0.5, 41°.30N±0°.03×22°.71E±0°.04, h9km±4km, Error ellipse: s-maj=5.0km s-min=4.3km az=139.3*
*SKO **01** 20:49:11.8, 41°.30N×22°.68E, h11km, M1.1, ML1.5*
*THE **01** 20:49:12.1, 41°.30N×22°.69E, h7km±2km, ML1.6/3, Error ellipse: s-maj=2.1km s-min=0.4km az=314.0*
*CSEM **01** 20:49:12.4±0.2, 41°.29N×22°.70E, h0km±2km, ML1.6/3, Error ellipse: s-maj=4.7km s-min=3.1km az=29.0*
*BEO **01** 20:49:18.3±1.1, 41°.63N×22°.25E, h0km, ML1.4/3*
ISC 01 20:49:11.9±0.9, 41°.29N±0°.02×22°.68E±0°.02, h10km±5km, n24, σ0s.84/41, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	289	P	Pg	20 49 14.0	-0.3
VAY				S	Sg	20 49 15.9	-0.1
VAY	Valandovo	0.09	289	i Pg	Pg	20 49 14.1	-0.3
VAY				i Sg	Sg	20 49 15.9	-0.1
VAY				i Lg	Lg	20 49 16.0	
	comp=E,245nm,0.3s						
VAY				i Lg	Lg	20 49 16.0	
	comp=N,352nm,0.2s						
VAY	Valandovo	0.09	289	P	Pg	20 49 14.0	-0.3
VAY	Valandovo	0.09	289	i Pg	Pg	20 49 14.5	+0.2
VAY				S	Sg	20 49 15.9	-0.1
VAY				i Sg	Sg	20 49 16.4	+0.3
VAY				i Lg	Lg	20 49 16.5	
	comp=N,352nm,0.2s						
KNT	Kendrikon	0.21	128	P	Pg	20 49 16.6	+0.3
KNT				S	Sg	20 49 19.6	+0.3
KNT	Kendrikon	0.21	128	P	Pg	20 49 16.6	+0.3
KNT				S	Sg	20 49 19.6	+0.3
GRG	Griva	0.40	212	P	Pg	20 49 20.0	+0.3
GRG				S	Sg	20 49 25.9	+0.9
GRG	Griva	0.40	212	ePB	Pg	20 49 20.0	+0.3
GRG				eSB	Sg	20 49 25.9	+0.9
GRG	Griva	0.40	212	P	Pg	20 49 20.0	+0.3
GRG				S	Sg	20 49 25.9	+0.9
SOH	Sokhos	0.69	133	P	Pg	20 49 25.0	-0.3
SOH				S	Sg	20 49 35.1	+0.7
SOH	Sokhos	0.69	133	ePB	Pg	20 49 25.1	-0.3
SOH				eSB	Sg	20 49 34.4	0.0
SOH	Sokhos	0.69	133	P	Pg	20 49 25.0	-0.3
SOH				S	Sg	20 49 35.1	+0.7
SRS	Serrai	0.71	104	P	Pg	20 49 25.4	-0.2
SRS	Serrai	0.71	104	P	Pg	20 49 25.4	-0.2
NVR	Nevrokopi	0.89	86	P	Pg	20 49 28.8	-0.3
NVR	Nevrokopi	0.89	86	ePG	Pg	20 49 28.0	-1.1
NVR	Nevrokopi	0.89	86	P	Pg	20 49 28.8	-0.3
PLG	Polygyros	1.09	147	ePB	Pg	20 49 31.9	-0.9
FNA	Florina	1.11	243	ePB	Pg	20 49 33.0	-0.2
FNA				eSB	Sb	20 49 48.5	+0.7
VTS	Vitosha	1.36	17	ePg	Pg	20 49 38.8	+0.8
VTS				eSg	Sg	20 49 56.5	+0.9
VTS	Vitosha	1.36	17	ePg	Pg	20 49 38.8	+0.8
VTS				eSg	Sg	20 49 56.5	+0.9
BARS	Barje	1.65	337	ePn	Pb	20 49 42.5	0.0
BARS				eSn	Sn	20 49 59.7	-2.7
BARS	Barje	1.65	337	ePn	Pb	20 49 42.5	0.0
BARS				eSn	Sn	20 49 59.7	-2.7
ZAPS	Zavoj	1.98	359	ePn	Pb	20 49 49.0	+0.9
ZAPS				eSn	Sn	20 50 11.0	+0.5

IDC 01 20:51:14.0±0.8, 7°.43N×36°.10W, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.7/28, mbtmp3.9/9, ML4.1/1, MS3.1/3, Ms1 3.1/3, ms1mx2.8/32, Error ellipse: s-maj=36.6km s-min=17.0km az=131.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	13.17	179	Pn	Pn	20 54 22.2	-0.4
	0.9nm,0.3s,baz=350,slow=17,SNR=11						
RCBR				Sn	Sn	20 56 38.3	-12
	0.4nm,0.3s,baz=150,slow=20,SNR=4.9						
RCBR				LR	LR	20 58 20.1	
	comp=Z,42nm,20.4s,baz=347,slow=32						
BDFB	Brasilia	25.79	207	P	P	20 56 46.4	-0.6
	2.2nm,0.6s,baz=78,slow=19,SNR=3.6						
DBIC	Dimbokro	31.01	89	LR	LR	21 09 18.4	
	comp=Z,37nm,18.3s,baz=300,slow=35						
SIV	San Ignacio	33.96	227	P	P	20 58 00.5	+1.1
	1.3nm,0.6s,baz=89,slow=4.3,SNR=6.2						
TORD	Torodi Ar. Bea	37.58	78	P	P	20 58 30.0	-0.6
	1.2nm,0.8s,baz=270,slow=8.9,SNR=6.9						
TORD				LR	LR	21 11 42.7	
	comp=Z,52nm,18.2s,baz=175,slow=33						
MDT	Midelt	38.60	45	P	P	20 58 39.5	+0.3
	0.3nm,0.5s,baz=250,slow=5.1,SNR=4.9						
LPAZ	La Paz	39.51	233	P	P	20 58 47.1	-0.4
	1.9nm,0.8s,baz=52,slow=5.2,SNR=7.4						
GERES	GERESS Array B	58.71	36	P	P	21 01 13.6	-0.1
	0.4nm,0.6s,baz=224,slow=9.6,SNR=4.9						
FINES	FINESS Array B	70.42	27	P	P	21 02 30.6	+0.8
	1.1nm,0.6s,baz=249,slow=5.3,SNR=6.2						
YKA	Yellowknife Ar	78.14	332	P	P	21 03 14.0	-0.8
	0.5nm,0.7s,baz=100,slow=5.7,SNR=7.3						
KDAK	Kodiak Island	97.38	331	LR	LR	21 43 42.7	
	comp=Z,358nm,21.4s,baz=270,slow=32						

*PRU **01** 21:01:10.1, 30°.47S×175°.79W, h30km*
*ISCJB **01** 21:02:11.0±0.5, 23°.65S±0°.07×179°.92E±0°.10, h535km, mb4.1/18, Error ellipse: s-maj=12.1km s-min=8.5km az=19.4*
*IDC **01** 21:02:11.4±1.3, 23°.65S×179°.94E, h527km±14km, mb3.6/17, mb1 3.8/20, mb1mx3.8/24, mbtmp3.6/20, Error ellipse: s-maj=12.7km s-min=10.6km az=134.0*
ISC 01 21:02:11.6±0.5, 23°.72S±0°.08×179°.97E±0°.10, h535km, n55, σ1s.01/66, mb4.1/18, 5C-3D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	12.49	40	P	P	21 04 53.4	-2.1
	1.9nm,0.3s,baz=170,slow=6.1,SNR=3.1						
AFI				S	S	21 06 59.1	-11
	2.5nm,0.3s,baz=183,slow=18,SNR=5.2						
DZM	Mont Dzumac	12.58	275	P	P	21 04 55.1	-1.2
	0.2nm,0.3s,baz=119,slow=10,SNR=1.9						
URZ	Urewera	14.70	189	P	P	21 05 17.5	-0.6
	4.6nm,0.3s,baz=1.2,slow=5.1,SNR=16						
URZ				S	S	21 07 49.2	-2.6
	2.1nm,0.3s,baz=20,slow=21,SNR=9.9						
RPZ	Rata Peaks	21.26	198	P	P	21 06 20.5	+0.9
	5.5nm,0.4s,baz=73,slow=14,SNR=5.9						
CTA	Charters Tower	31.45	270	P	P	21 07 49.9	+0.3
	39nm,0.3s,baz=96,slow=10,SNR=69						
STKA	Stephens Creek	34.77	248	P	P	21 08 18.0	+0.5
	6.5nm,0.5s,baz=92,slow=10.0,SNR=35						
ASAR	Alice Springs	42.04	260	P	P	21 09 17.1	+0.5
	17nm,0.8s,baz=101,slow=7.1,SNR=134						
ASAR				ScP	ScP	21 14 01.4	+2.6
	4.4nm,0.8s,baz=110,slow=4.1,SNR=19						
WRA	Warramunga Arr	42.39	266	P	P	21 09 19.5	+0.1
	14nm,0.3s,baz=96,slow=8.5,SNR=435						
WRA				ScP	ScP	21 14 02.1	+1.9
	3.2nm,0.8s,baz=102,slow=4.2,SNR=11						
WRA				S	S	21 15 00.0	-2.4
	1.8nm,0.8s,baz=104,slow=13,SNR=6.1						
FITZ	Fitzroy Crossi	50.82	265	P	P	21 10 23.6	+0.5
	10nm,0.8s,baz=97,slow=7.2,SNR=61						
VNDA	Vanda	54.56	185	P	P	21 10 49.1	+0.2
	1.0nm,0.8s,baz=8.9,slow=6.3,SNR=3.2						
NWAO	Narrogin (SRO)	55.29	245	P	P	21 10 55.0	+0.2
	13nm,1.2s,baz=99,slow=8.2,SNR=6.5						
QSPA	South Pole Qui	66.36	180	P	P	21 12 08.3	+1.1
	1.9nm,0.6s,baz=31,slow=6.2,SNR=21						
MJAR	Matsushiro Arr	71.73	326	P	P	21 12 39.6	-0.1
	2.3nm,0.8s,baz=165,slow=6.4,SNR=11						
MAW	Mawson	77.91	200	P	P	21 13 14.9	+1.1
	1.9nm,0.6s,baz=121,slow=5.7,SNR=7.2						
KSRS	Korea Array	78.09	320	P	P	21 13 16.0	+0.8
	1.5nm,0.7s,baz=124,slow=6.7,SNR=4.2						
PETK	Petropavlovsk-	78.92	347	P	P	21 13 19.5	+0.2
	8.0nm,0.8s,baz=148,slow=8.1,SNR=13						
USRK	Ussuriysk Arra	80.59	327	P	P	21 13 29.4	+1.1
	0.9nm,0.5s,baz=157,slow=3.4,SNR=4.9						
NVAR	Mina Array Bea	84.64	44	P	P	21 13 49.9	+0.7
	1.6nm,0.6s,baz=221,slow=8.1,SNR=6.8						
TXAR	Lajitas Array	90.36	58	P	P	21 14 17.1	+1.0
	2.4nm,0.7s,baz=214,slow=6.2,SNR=18						
ILAR	Eielson Array	91.86	14	P	P	21 14 21.0	-1.1
	0.8nm,0.8s,baz=221,slow=6.2,SNR=8.7						
PDAR	Pinedale Array	92.58	44	P	P	21 14 25.9	-0.4
	1.4nm,0.7s,baz=199,slow=2.8,SNR=7.9						
MKAR	Makanchi Array	112.01	313	PKiKP	PKiKP	21 19 45.0	-1.0
	0.4nm,0.6s,baz=118,slow=1.2,SNR=6.7						
KURBB	Kurchatov Arra	115.10	316	PKP	PKPdf	21 19 50.7	-1.0
	0.9nm,0.7s,baz=94,slow=1.9,SNR=14						
BVAR	Borovoye Array	120.29	319	PKP	PKPdf	21 20 01.2	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	1.1nm,0.4s,baz=123,slow=1.2,SNR=11						
ARCES	ARCESS Array B	131.70	348	PKP	PKPdf	21 20 22.6	-0.4
	4.9nm,0.8s,baz=40,slow=2.1,SNR=6.5						
FINES	FINESS Array B	138.26	341	PKP	PKPdf	21 20 35.8	+0.3
	0.9nm,0.6s,baz=75,slow=1.7,SNR=7.4						
FINES				SKPbc	SKPbc	21 23 20.1	+0.5
	2.5nm,0.8s,baz=352,slow=2.8,SNR=4.6						
NB2	NORSAR Subarra	141.90	351	PKP	PKPpre	21 20 37.3	
	comp=Z,1.6nm,0.7s,baz=13,slow=3.2						
NOA	NORSAR Array B	141.90	351	PKhKP	PKPpre	21 20 37.4	
	comp=Z,2.4nm,0.7s,baz=16,slow=4.3,SNR=10						
AKASG	Malin Array Be	144.80	327	PKP	PKPdf	21 20 47.1	-0.3
	comp=Z,2.6nm,0.4s,baz=45,slow=4.0,SNR=22						
BSD	Bornholm Skovb	146.73	344	*i* P	PKPbc	21 20 52.9	-0.3
	comp=Z,7.9nm,1.1s						
COP	Copenhagen	146.77	347	*i* P	PKPbc	21 20 53.4	+0.1
	comp=Z,5.9nm,0.8s						
BRTR	Keskin Array B	147.45	307	PKPbc	PKPbc	21 20 55.8	0.0
	comp=Z,1.5nm,0.7s,baz=152,slow=5.5,SNR=8.6						
BRTR				PKPab	PKPab	21 21 00.3	+0.6
	comp=Z,2.4nm,0.7s,baz=95,slow=3.6,SNR=12						
KWP	Kalwaria Pacla	148.60	331	⇑*i*P	PKPbc	21 20 58.7	+0.5
CFR	Carcaliu	148.68	320	⇑*i*P	PKPbc	21 20 59.2	+0.7
BURAR	Bucovina Array	148.80	326	⇓*i*P	PKPbc	21 20 58.3	-0.6
VRI	Vrincioaia	149.09	322	⇓*i*P	PKPbc	21 20 58.0	-1.6
OJC	Ojcow	149.36	335	*e*PX	PKPbc	21 21 00.2	+0.2
MLR	Muntele Rosu	149.75	322	⇑*i*P	PKPdf	21 20 52.6	-3.3
TRPA	Tarpa	149.76	329	⇑*i*P	PKPbc	21 21 01.7	+0.7
NIE	Niedzica	149.78	333	*e*PX	PKPbc	21 21 02.3	+1.2
OKC	Ostrava-Krasne	150.30	336	*e*PKPDF	PKPbc	21 21 02.5	+0.2
OKC				*e*pPKP	PKPab	21 21 11.5	+0.6
UPC	Upice	150.49	339	*e*PKPDF	PKPbc	21 21 02.9	+0.2
DPC	Dobruska-Polom	150.52	339	*e*PKPDF	PKPbc	21 21 03.4	+0.6
DPC				*e*pPKP	PKPab	21 21 12.9	+1.0
KRLC	Kraliky	150.60	338	*e*PKPDF	PKPbc	21 21 03.4	+0.4
DRGR		150.62	327	⇑*i*P	PKPdf	21 20 58.6	+1.5
CLL	Collm	150.67	343	*i* PKPbc	PKPbc	21 21 03.0	-0.1
	comp=Z,11nm,0.9s						
CLL				*i* PKPab	PKPab	21 21 12.5	+0.1
BRG	Berggiesshubel	150.81	342	*i* PKP	PKPbc	21 21 03.5	+0.1
	comp=Z,6.4nm,0.5s						
BRG				*e*		21 21 12.7	
	comp=Z,3.8nm,0.9s						
BRG				*e*		21 34 12.7	
	comp=Z,6.2nm,1.1s						
PVCC	Panska Ves	150.93	341	*e*PKPDF	PKPbc	21 21 04.1	+0.4
PRU	Pruhonice	151.41	340	*e*PKPDF	PKPbc	21 21 05.1	+0.3
PRU				*e*pPKP	PKPab	21 21 16.0	+0.4
NKC	Novy Kostel	151.80	343	*e*PKPDF	PKPbc	21 21 06.7	+1.0
NKC				*e*pPKP	PKPab	21 21 17.8	+0.6
BZS	Buzias	151.98	327	⇓*i*P	PKPbc	21 21 06.2	0.0
KHC	Kasperske Hory	152.46	340	*e*PKPDF	PKPbc	21 21 07.2	0.0
KHC				*e*pPKP	PKPab	21 21 20.5	+0.4
GERES	GERESS Array B	152.68	340	PKPbc	PKPbc	21 21 07.8	0.0
	comp=Z,0.6nm,0.7s,baz=33,slow=3.2,SNR=8.2						
GERES				PKPab	PKPab	21 21 21.4	+0.4
	comp=Z,0.3nm,0.5s,baz=33,slow=5.1,SNR=4.5						
ESDC	Sonseca Array	163.75	11	PKPab	PKPab	21 22 09.1	-0.3
	comp=Z,0.3nm,0.4s,baz=350,slow=5.0,SNR=7.9						
TORD	Torodi Ar. Bea	169.36	189	PKPab	PKPab	21 22 34.7	+0.1
	comp=Z,0.6nm,1.1s,baz=166,slow=4.0,SNR=5.9						

NIED ***01*** *21:22:00, 46.°50N×153.°20E, h5km, Mw4.9 Best double couple: M0 2.56000×10^16 NP1:φs 217.00000°, δ85.00000°, λ122.00000°. NP2:φs 314.00000°, δ32.00000°, λ9.00000°.*

IDC ***01*** *21:22:19.4±0.6, 46.°32N×153.°09E, h0km, mb4.3/23, mb1 4.6/27, mb1mx4.5/32, mbtmp4.4/27, ML4.0/4, MS4.3/21, Ms1 4.3/21, ms1mx4.0/43, Error ellipse: s-maj=17.8km s-min=11.1km az=160.0*

JMA ***01*** *21:22:20.9±0.7, 46.°54N×153.°15E, h30km, M4.8*

BJI ***01*** *21:22:20.8, 46.°47N×153.°26E, h29km, mB5.0/39, mb4.7/47, Ms4.6/49, Ms7 4.5/47*

NEIC ***01*** *21:22:21.6±1.6, 46.°30N×152.°98E, h13km±10km, mb5.0/95, Error ellipse: s-maj=5.9km s-min=2.7km az=162.0*

KRSC ***01*** *21:22:21.2±2.4, 46.°13N×154.°88E, h10km±10km, ML5.0*

MOS ***01*** *21:22:21.8±1.1, 46.°43N×152.°97E, h22km, mb5.0/82, MS4.6/29, Error ellipse: s-maj=6.9km s-min=4.2km az=97.6*

SKHL ***01*** *21:22:22.9±2.5, 46.°01N×153.°58E, h65km±14km, mb5.5/3, mbh5.4/4, Ms4.7/6, msh5.6/3*

ISCJB ***01*** *21:22:24.0±0.2, 46.°41N±0.°04×153.°00E±0.°03, h38km, mb4.7/175, MS4.5/52, Error ellipse: s-maj=5.6km s-min=2.2km az=151.5*

GCMT ***01*** *21:22:25.8±0.3, 46.°28N×153.°24E, h19km, MW4.9, Moment Tensor Solution. s32,c43; s66,c104; Moment tensor: Scale 10^16 Nm; Mrr 2.47±.14; Mθθ -0.07±.11; Mφφ -2.40±.10; Mrθ -1.03±.25; Mθφ -1.10±.07; Mφr 1.29±.18; Best double couple: M0 3.10000×10^16 NP1:φs 225.00000°, δ42.00000°, λ129.00000°. NP2:φs 357.00000°, δ59.00000°, λ61.00000°. Principal axes: T 3.2800, Plg63.0000°, Azm217.0000°; N -0.3100, Plg25.0000°, Azm13.0000°; P -2.9800, Plg10.0000°, Azm108.0000°; Data Used: II IU IC G CN.*

SZGRF ***01*** *21:22:36.1, 47.°93N×153.°61E, h50km, mb4.9, MS4.4, Kuril Islands, Russia*

ISC 01 21:22:23.9±0.4, **46.°26N**±0.°05×**153.°13E**±0.°04, **h30**km±1km, **h30**km**:pP-P, n811,** σ**1.ˢ33**/872, **mb4.8**/187, **MS4.5**/52, **163C-128D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.83	256	⇓*i*PN	Pn	21 23 22.4	+1.7
KUR				*e*S	Sn	21 24 06.3	+1.7
KUR				pmax	pmax		
	comp=N,200nm,0.5s						
KUR				pmax	pmax		
	comp=Z,610nm,0.5s						
KUR				pmax	pmax		
	comp=E,50nm,0.3s						
KUR				smax	smax		
	comp=N,8μm,2.0s						
KUR				smax	smax		
	comp=E,4μm,2.0s						
KUR				smax	smax		
	comp=N,840nm,0.5s						
KUR				MLR	MLR		
	comp=N,8μm,14.0s						
KUR				MLR	MLR		
	comp=E,11μm,14.0s						
KUR				MLR	MLR		
	comp=Z,9μm,14.0s						
KUR	Kuril'sk	3.83	256	*i* P	Pn	21 23 22.4	+1.7
KUR				⇓*i*P	Pn	21 23 22.4	+1.7
KUR				AMB	AMB	21 23 23.0	
	comp=Z,50nm,0.3s						
KUR				AMB	AMB	21 23 23.0	
	comp=Z,200nm,0.5s						
KUR				AMB	AMB	21 23 23.0	
	comp=Z,610nm,0.5s						
KUR				*e*S	Sn	21 24 06.3	+1.7
KUR				A	A	21 24 12.8	
	comp=Z,8μm,2.0s						
KUR				A	A	21 24 12.8	
	comp=Z,3μm,2.0s						
KUR				A	A	21 24 19.4	
	comp=Z,840nm,0.5s						
KUR				AMS	AMS	21 24 48.0	
	comp=Z,8μm,14.0s						
KUR				AMS	AMS	21 24 48.0	
	comp=Z,11μm,14.0s						
KUR				AMS	AMS	21 24 48.0	
	comp=Z,9μm,14.0s						
SKR	Severo-Kuril's	4.85	23	*e*P	Pn	21 23 34.3	-0.3
SKR				*e*S	Sn	21 24 27.1	-2.6
SKR	Severo-Kuril's	4.85	23	*e*PN	Pn	21 23 32.2	-2.4
SKR				pmax	pmax		
	comp=N,300nm,0.9s						
SKR				pmax	pmax		
	comp=Z,460nm,0.9s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				MLR	MLR		
	comp=N,2μm,14.0s						
SKR				MLR	MLR		
	comp=E,4μm,14.0s						
SKR				MLR	MLR		
	comp=Z,2μm,14.0s						
SKR	Severo-Kuril's	4.85	23	*e*P	Pn	21 23 32.2	-2.4
SKR				AMB	AMB	21 23 36.5	
	comp=Z,80nm,0.5s						
SKR				AMB	AMB	21 23 36.5	
	comp=Z,300nm,0.9s						
SKR				AMB	AMB	21 23 36.5	
	comp=Z,460nm,0.9s						
SKR				*e*S	Sn	21 24 25.9	-3.8
SKR				A	A	21 24 34.0	
	comp=Z,2μm,2.0s						
SKR				A	A	21 24 34.0	
	comp=Z,5μm,8.0s						
SKR				A	A	21 24 34.0	
	comp=Z,2μm,8.0s						
SKR				A	A	21 24 34.0	
	comp=Z,2μm,2.0s						
SKR				A	A	21 24 34.0	
	comp=Z,5μm,8.0s						
SKR				A	A	21 24 34.0	
	comp=Z,2μm,8.0s						
SKR				A	A	21 24 35.5	
	comp=Z,170nm,0.7s						
SKR				A	A	21 24 35.5	
	comp=Z,1μm,0.9s						
SKR				A	A	21 24 35.5	
	comp=Z,490nm,0.9s						
SKR				AMS	AMS	21 25 50.0	
	comp=Z,2μm,14.0s						
SKR				AMS	AMS	21 25 50.0	
	comp=Z,4μm,14.0s						
SKR				AMS	AMS	21 25 50.0	
	comp=Z,2μm,14.0s						
SKR				AMS	AMS	21 25 50.0	
	comp=Z,2μm,14.0s						
SKR				AMS	AMS	21 25 50.0	
	comp=Z,4μm,14.0s						
SKR				AMS	AMS	21 25 50.0	
	comp=Z,2μm,14.0s						
YUK	Yuzh-Kuril'sk	5.61	249	*d i*PN	Pn	21 23 41.2	-3.8
YUK				pmax	pmax		
	comp=Z,138nm,0.4s						
YUK				pmax	pmax		
	comp=N,48nm,0.2s						
YUK				pmax	pmax		
	comp=E,99nm,0.4s						
YUK	Yuzh-Kuril'sk	5.61	249	*e*P	Pn	21 23 41.3	-3.8
YUK				AMB	AMB	21 23 55.9	
	comp=E,50nm,0.4s						
YUK				AMB	AMB	21 23 55.9	
	comp=E,99nm,0.4s						
YUK				AMB	AMB	21 23 55.9	
	comp=E,138nm,0.4s						
YUK				*i* S	Sn	21 24 47.9	-0.5
YUK				A	A	21 25 02.1	
	comp=E,1μm,2.2s						
YUK				A	A	21 25 02.1	
	comp=E,1μm,2.2s						
YUK				A	A	21 26 06.0	
	comp=E,1μm,14.0s						
NEM2	Nemuro 2	6.00	244	P	Pn	21 23 48.7	-1.8
NEM2				*e*S	Sn	21 24 53.9	-4.3
JRA	Rausu	6.13	251	P	Pn	21 23 52.8	+0.5
JRA				*e*S	Sn	21 25 02.7	+1.4
MIPR	Malaya Ipel'ka	6.47	20	*e*P	Pn	21 23 56.4	-0.5
JNK	Nakash	6.54	249	P	Pn	21 23 58.1	+0.1
JAK	Akkeshi	6.85	245	P	Pn	21 24 00.3	-1.8
JAK				*e*S	Sn	21 25 14.0	-5.0
ASAK	Asacha	6.87	25	*e*P	Pn	21 24 01.4	-1.1
ASAK				*e*S	Sn	21 25 14.0	-5.6
JTKR	Abashiri--Toko	6.92	254	P	Pn	21 24 03.9	+0.8
MTVR	Mutnovka	7.04	26	*e*P	Pn	21 24 02.9	-2.0
MTVR				*e*S	Sn	21 25 18.3	-5.6
GRL	Gorelyy	7.07	25	P	Pn	21 24 04.5	-0.8
RUS	Russkaya	7.10	28	*e*P	Pn	21 24 03.5	-2.1
RUS				*e*S	Sn	21 25 17.7	-7.5
RUS	Russkaya	7.10	28	PN	Pn	21 24 03.5	-2.1
APC	Apacha	7.16	20	*e*P	Pn	21 24 07.0	+0.6
APC				S	Sn	21 25 23.0	-3.6
YSS	Yuzh-Sakhalins	7.18	279	⇓*i*PN	Pn	21 24 12.0	+5.3
YSS				*e*S	Sn	21 25 31.6	+4.4
YSS				pmax	pmax		
	comp=E,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				smax	smax		
	comp=E,70nm,1.1s						
YSS				MLR	MLR		
	comp=N,500nm,16.0s						
YSS				MLR	MLR		
	comp=E,3μm,16.0s						
YSS				MLR	MLR		
	comp=Z,3μm,16.0s						
YSS	Yuzh-Sakhalins	7.18	279	⇓*e*P	Pn	21 24 12.0	+5.3
YSS				AMB	AMB	21 24 13.9	
	comp=Z,60nm,1.0s						
YSS				AMB	AMB	21 24 13.9	
	comp=Z,60nm,1.0s						
YSS				*e*S	Sn	21 25 31.6	+4.4
YSS				A	A	21 25 36.7	
	comp=Z,70nm,1.1s						
YSS				*e*LQ	LQ	21 26 08.0	
YSS				*e*LR	LR	21 26 22.0	
YSS				AMS	AMS	21 26 49.0	
	comp=Z,500nm,16.0s						
YSS				AMS	AMS	21 26 49.0	
	comp=Z,3μm,16.0s						
YSS				AMS	AMS	21 26 49.0	
	comp=Z,3μm,16.0s						
JMP	Maruseppu	7.27	255	P	Pn	21 24 09.1	+1.1
JAR	Ashorobuto	7.29	249	P	Pn	21 24 08.2	-0.1
JAR				*e*S	Sn	21 25 28.8	-1.2
JOB	Onbets	7.44	246	*e*S	Sn	21 25 29.7	-3.8
PEA0B	Petropavlovsk-	7.46	22	*e*Pn	Pn	21 24 10.5	-0.1
PEA0B				*e*Sn	Sn	21 25 33.9	-0.1
PETK	Petropavlovsk-	7.46	22	PN	Pn	21 24 10.4	-0.2
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK	Petropavlovsk-	7.46	22	Pn	Pn	21 24 10.4	-0.2
PETK	Petropavlovsk-	7.46	22	Pn	Pn	21 24 10.4	-0.2
	comp=Z,3.2nm,0.3s,baz=183,slow=15,SNR=93						
PET	Petropavlovsk	7.65	26	*e*S	Sn	21 25 34.4	-4.3
PET	Petropavlovsk	7.65	26	*e*PN	Pn	21 24 11.6	-1.6
PET				pmax	pmax		
	comp=Z,76nm,1.1s						
JKK2	Kamakawa 2	7.73	256	P	Pn	21 24 15.7	+1.4
ASAJ	Asahikawa	7.75	258	*e*Pn	Pn	21 24 14.4	-0.1
ASAJ	Asahikawa	7.75	258	P	Pn	21 24 16.5	+2.0
ASAJ	Asahikawa	7.75	258	Pn	Pn	21 24 13.8	-0.7
	comp=Z,2.1nm,0.3s,baz=97,slow=17,SNR=14						
ASAJ				LR	LR	21 27 01.8	
	comp=Z,2μm,21.3s,baz=36,slow=36						
JCH	Churui	7.88	246	P	Pn	21 24 14.3	-2.1
JCH				*e*S	Sn	21 25 39.2	-5.3
SDLR	Sedlovina	7.94	26	*e*P	Pn	21 24 17.0	-0.3
SDLR				*e*S	Sn	21 25 40.3	-5.8
UGL	Uglegorsk	7.98	295	*e*P	Pn	21 24 21.5	+3.8
UGL				AMB	AMB	21 24 22.5	
	comp=Z,82nm,0.9s						
UGL				AMB	AMB	21 24 27.0	
	comp=Z,600nm,5.0s						
UGL				AMB	AMB	21 24 27.0	
	comp=Z,500nm,4.0s						
UGL				AMS	AMS	21 27 21.0	
	comp=Z,2μm,17.0s						
UGL				AMS	AMS	21 27 21.0	
	comp=Z,2μm,17.0s						
GNL	Ganaly	8.06	21	*e*P	Pn	21 24 18.5	-0.3
SPN	Mys Shipunski	8.17	31	P	Pn	21 24 18.3	-1.9
SPN				*e*S	Sn	21 25 44.5	-6.9
SPN	Mys Shipunski	8.17	31	PN	Pn	21 24 18.3	-1.9
JAB	Ashibetsu	8.22	254	P	Pn	21 24 22.5	+1.5
TYV	Tymovskoe	8.33	307	*e*P	Pn	21 24 27.8	+5.3
TYV				AMB	AMB	21 24 30.0	
	comp=Z,13nm,0.8s						
TYV				AMB	AMB	21 24 33.0	
	comp=Z,1μm,4.0s						
TYV				AMB	AMB	21 24 33.0	
	comp=Z,1μm,4.0s						
TYV				*e*S	Sn	21 26 02.8	+7.4
TYV				A	A	21 26 07.2	
	comp=Z,5.0nm,0.6s						
TYV				A	A	21 26 07.2	
	comp=Z,33nm,0.8s						
TYV				AMS	AMS	21 27 55.0	
	comp=Z,4μm,14.0s						
TYV				AMS	AMS	21 27 55.0	
	comp=Z,5μm,16.0s						
ERM	Erimo	8.34	243	*e*PN	Pn	21 24 22.8	+0.3
ERM	Erimo	8.34	243	*e*Pn	Pn	21 24 22.8	+0.3
ERM				*e*Sn	Sn	21 25 54.2	-1.4
JEM	Erimo	8.34	243	*e*S	Sn	21 25 50.9	-4.7
JBT2	Biratori 2	8.45	249	P	Pn	21 24 23.4	-0.7
JNB	Noboribetsu	9.46	251	P	Pn	21 24 37.1	-0.8
JNB				*e*S	Sn	21 26 19.5	-3.6
JKB	Kayabe	9.74	248	P	Pn	21 24 40.0	-1.8
OKH	Okha	9.81	322	*e*PN	Pn	21 24 50.0	+7.3
OKH				pmax	pmax		
	comp=Z,1μm,7.0s						
OKH	Okha	9.81	322	*e*P	Pn	21 24 50.0	+7.3
OKH				AMB	AMB	21 24 50.4	
	comp=Z,1μm,7.0s						
OKH				*e*L	L	21 27 24.2	
OKH				AMS	AMS	21 29 43.0	
	comp=Z,3μm,12.0s						
OKH				AMS	AMS	21 29 43.0	
	comp=Z,4μm,14.0s						
OKH				AMS	AMS	21 29 43.0	
	comp=Z,4μm,14.0s						
MKZ	Mys Kozlova	9.94	30	*e*P	Pn	21 24 42.5	-2.0
MKZ				*e*S	Sn	21 26 23.2	-12
MKZ	Mys Kozlova	9.94	30	PN	Pn	21 24 42.5	-2.0
JYM2	Yakumo 2	10.06	250	P	Pn	21 24 45.4	-0.8
ESO	Esso	10.28	18	P	Pn	21 24 50.1	+0.9
ESO	Esso	10.28	18	PN	Pn	21 24 50.1	+0.9
JANG	Nango	10.31	239	P	Pn	21 24 45.4	-4.2
JANG				*e*S	Sn	21 26 32.6	-11
JTM	Tenmabayashi	10.33	242	P	Pn	21 24 46.8	-3.0
NKL	Nikolayevsk	10.60	315	*e*P	Pn	21 24 54.0	+0.5
NKL				AMB	AMB	21 24 57.3	
	comp=Z,13nm,1.0s						
NKL				AMB	AMB	21 24 57.3	
	comp=Z,22nm,1.0s						
NKL				AMB	AMB	21 25 00.0	
	comp=Z,400nm,8.0s						
NKL				AMB	AMB	21 25 00.0	
	comp=Z,500nm,8.0s						
NKL				AMB	AMB	21 25 00.0	
	comp=Z,500nm,8.0s						
NKL				*e*L	L	21 27 40.0	
NKL				AMS	AMS	21 29 54.0	
	comp=Z,4μm,14.0s						
NKL				AMS	AMS	21 29 54.0	
	comp=Z,700nm,14.0s						
NKL				AMS	AMS	21 29 54.0	
	comp=Z,4μm,14.0s						
JOSM	Okushiri--Mats	10.66	252	P	Pn	21 24 53.3	-1.1
BZGR	Bezymyannyi-Gr	10.78	23	P	Pn	21 24 53.8	-2.3
SRDR	Sredinnyy	10.87	20	P	Pn	21 24 57.2	-0.1
ZLN	Zelenaya	10.88	23	P	Pn	21 24 56.6	-0.9
KRSR	Krestovskiy	10.99	22	P	Pn	21 24 57.4	-1.6
OFUJ	Ofunato	11.07	234	P	Pn	21 24 56.1	-4.0
BDR	Baidarnaya	11.47	23	P	Pn	21 25 03.2	-2.3
SRKR	Sorokina	11.54	23	P	Pn	21 25 04.1	-2.3
SMKR	Semkarok	11.56	24	P	Pn	21 25 04.8	-1.9
BKI	Bering	12.07	38	P	Pn	21 25 09.6	-4.0
BKI				*e*S	Sn	21 27 12.0	-15
BKI	Bering	12.07	38	PN	Pn	21 25 09.6	-4.0
HABR	Khabarovsk	12.46	287	*e*PN	Pn	21 25 14.9	-4.0
HABR				MLR	MLR		
	comp=Z,2μm,16.0s						
FX1	Attu Island--F	14.56	56	*e*Pn	Pn	21 25 47.2	-0.4
FX1				Sn	Sn	21 28 16.1	-12
FX1	Attu Island--F	14.56	56	Pn	Pn	21 25 44.1	-3.5
	comp=Z,4.9nm,0.3s,baz=252,slow=19,SNR=12						
FX1				Sn	Sn	21 28 16.1	-12
	comp=Z,2.7nm,0.3s,baz=217,slow=20,SNR=5.8						
KLR	Kul'dur	14.68	289	*e*P	Pn	21 25 47.6	-1.6
KLR				pmax	pmax		
	comp=E,48nm,1.4s						
KLR				pmax	pmax		
	comp=Z,48nm,1.4s						
KLR				MLR	MLR		
	comp=N,2μm,12.0s						
KLR				MLR	MLR		
	comp=E,700nm,12.0s						
KLR				MLR	MLR		
	comp=Z,4μm,12.0s						
MJAR	Matsushiro Arr	14.80	234	Pn	Pn	21 25 47.6	-3.4
MJAR	Matsushiro Arr	14.80	234	Pn	Pn	21 25 47.6	-3.4
	comp=Z,0.4nm,0.3s,baz=29,slow=12,SNR=15						
MAJO	Matsushiro	14.80	234	*e*P	Pn	21 25 47.2	-3.8
MAJO	Matsushiro	14.80	234	*e*Pn	Pn	21 25 47.2	-3.8
MAJO				*e*S	S	21 28 49.4	-2.2
MAT	Matsushiro	14.80	234	P	Pn	21 25 47.9	-3.1
MAT				S	Sn	21 28 36.6	+2.7
USRK	Ussuriysk Arra	15.04	270	Pn	Pn	21 25 53.4	-0.6
	comp=Z,1.9nm,0.3s,baz=68,slow=12,SNR=29						
USRK				LR	LR	21 31 45.4	
	comp=Z,991nm,18.1s,baz=68,slow=38						
VLA	Vladivostok	15.43	266	⇑*e*P	Pn	21 25 57.9	-1.3
VLA				pmax	pmax		
	comp=Z,28nm,0.7s						
MDJ	Mudanjiang	16.59	273	P	Pn	21 26 13.7	-0.4
MDJ				pmax	pmax		
	comp=Z,30nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,99nm,4.9s						
MDJ				LR	LR		
	comp=N,240nm,13.7s						
MDJ				LR	LR		
	comp=E,720nm,15.0s						
MDJ				LR	LR		
	comp=Z,1μm,17.0s						
MDJ	Mudanjiang	16.59	273	*e*Pn	Pn	21 26 12.9	-1.2
	comp=Z,33nm,1.1s						
JHJ	Hachijo jima 2	16.64	223	LR	LR	21 31 17.6	
	comp=Z,126nm,20.6s,baz=61,slow=32						
SEY	Seymchan	16.71	359	⇑*e*P	Pn	21 26 13.0	-2.4
ZEA	Zeya	18.17	304	*e*P	Pn	21 26 32.0	-1.6
ZEA				AMB	AMB	21 26 37.0	
	comp=Z,500nm,5.0s						
ZEA				AMB	AMB	21 26 42.4	
	comp=Z,46nm,1.4s						
CN2	Changchun	19.68	273	*e*P	P	21 26 51.0	+0.6
CN2				*e*pP	pP	21 26 59.4	+0.9
CN2				*e*S	S	21 30 24.7	-5.9
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,600nm,16.0s						
CN2				LR	LR		
	comp=E,800nm,16.0s						
CN2				LR	LR		
	comp=Z,800nm,15.0s						
CLNS	Chul'man	20.35	312	*e*P	P	21 26 58.4	+0.8
CLNS				*e**PP	pP	21 27 09.8	+4.1
CLNS				*e*		21 27 16.0	
CLNS				*e*S	S	21 30 40.5	-3.3
CLNS				*e*SS	SnSn	21 31 16.5	+14
CLNS				pmax	pmax		
	comp=Z,15nm,1.0s						
CLNS				pmax	pmax		
	comp=E,10.0nm,1.2s						
CLNS				pmax	pmax		
	comp=N,6.0nm,1.2s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,11nm,0.9s						
CLNS				pmax	pmax		
	comp=N,11nm,1.0s						
CLNS				smax	smax		
	comp=N,57nm,13.3s						
CLNS				smax	smax		
	comp=E,216nm,14.9s						
CLNS				MLR	MLR		
	comp=Z,2μm,16.0s						
CLNS				MLR	MLR		
	comp=N,1μm,20.0s						
CLNS				MLR	MLR		
	comp=E,1μm,16.0s						
KSRS	Korea Array	20.67	254	P	P	21 27 01.7	+0.6
	comp=E,8.3nm,0.9s,baz=58,slow=11,SNR=14						
KSRS				LR	LR	21 33 59.5	
	comp=E,542nm,21.1s,baz=69,slow=34						
KSAR	Wonju Array Be	20.70	254	P	P	21 27 01.7	+0.2
YAK	Yakutsk	20.74	328	*e*P	P	21 27 00.6	-1.0
YAK				*e**PP	pP	21 27 09.4	-0.4
YAK				*e*S	S	21 30 47.8	-3.5
YAK				*e*SS	SnSn	21 31 17.0	+5.2
YAK				pmax	pmax		

comp=E,9.0nm,1.3s
YAK pmax pmax
comp=Z,12nm,0.9s
YAK smax smax
comp=N,55nm,2.0s
YAK smax smax
comp=E,128nm,2.5s
YAK MLR MLR
comp=Z,628nm,19.0s
YAK MLR MLR
comp=N,267nm,13.0s
YAK MLR MLR
comp=E,493nm,15.0s
JNU Nakatsue 21.49 240 *e*P **P 21 27 10.6 +0.6**
JNU Nakatsue 21.49 240 P **P 21 27 10.1 +0.1**
comp=E,10nm,0.8s,baz=128,slow=5.7,SNR=6.1
JNU LR LR 21 35 22.1
comp=E,354nm,20.9s,baz=39,slow=36
INCN Inchon 21.52 255 *e*P **P 21 27 09.2 -1.0**
SNY Shenyang 21.64 269 ⇑P **P 21 27 12.4 +0.9**
SNY S **S 21 31 13.1 +3.7**
SNY pmax pmax
comp=Z,260nm,10.2s
SNY LR LR
comp=N,230nm,20.4s
SNY LR LR
comp=E,740nm,17.1s
SNY LR LR
comp=Z,960nm,18.0s
BILL Bilibino 22.86 13*c i*P **P 21 27 23.1 -1.2**
BILL *e* 21 27 47.4
BILL *i*S **S 21 31 35.5 +3.9**
BILL pmax pmax
comp=Z,9.0nm,1.0s
BILL MLR MLR
comp=Z,300nm,15.0s
BJI Beijing 27.49 270 P **P 21 28 06.8 -0.5**
BJI pmax pmax
comp=Z,18nm,1.8s
BJI pmax pmax
comp=Z,230nm,8.5s
BJI LR LR
comp=N,290nm,15.4s
BJI LR LR
comp=E,910nm,17.3s
BJI LR LR
comp=Z,630nm,18.8s
BJT Baijiatuau 27.50 270 *e*P **P 21 28 07.0 -0.4**
SSE Sheshan 28.94 250 P **P 21 28 20.1 -0.2**
SSE S **S 21 33 06.6 -2.4**
SSE sS sS 21 33 28.8 +5.2
SSE pmax pmax
comp=Z,24nm,0.6s
SSE pmax pmax
comp=Z,81nm,4.7s
SSE LR LR
comp=N,260nm,17.4s
SSE LR LR
comp=E,260nm,17.4s
SSE LR LR
comp=Z,360nm,20.7s
NJ2 Nanjing 29.87 254 *e*P **P 21 28 28.3 -0.2**
NJ2 PcP **PcP 21 31 32.0 +1.0**
NJ2 S **S 21 33 23.5 -0.1**
NJ2 pmax pmax
comp=Z,30nm,1.3s
NJ2 pmax pmax
comp=Z,100nm,6.2s
NJ2 LR LR
comp=N,780nm,17.5s
NJ2 LR LR
comp=E,300nm,17.7s
NJ2 LR LR
comp=Z,6μm,16.0s
HHC Hu-ho-hao-te 30.34 275 *e*P **P 21 28 33.6 +0.8**
HHC pP **pP 21 28 42.6 +0.9**
HHC sP **sP 21 28 46.7 +1.3**
HHC PP **PnPn 21 29 32.8 +1.4**
HHC S **S 21 33 30.7 -0.5**
HHC sS **sS 21 33 45.0 -0.8**
HHC SS **SnSn 21 35 09.4 +2.4**
HHC ScS **ScS 21 39 07.2 -1.1**
HHC pmax pmax
comp=Z,51nm,1.2s
HHC pmax pmax
comp=Z,310nm,5.1s
HHC LR LR
comp=N,840nm,14.3s
HHC LR LR
comp=E,1μm,15.5s
HHC LR LR
comp=Z,2μm,17.8s
ULN Ulaanbaatar 31.07 290 *e*P **P 21 28 38.2 -1.0**
comp=Z,2.9nm,0.8s
SONM Songino Array 31.51 290 P **P 21 28 42.5 -0.5**
SONM Songino Array 31.51 290 P **P 21 28 42.5 -0.5**
comp=Z,0.9nm,0.6s,baz=55,slow=9.6,SNR=5.8
SONM LR LR 21 42 24.8
comp=Z,783nm,18.9s,baz=84,slow=38
TLY Talaya 32.42 298 *e*P **P 21 28 50.6 -0.2**
TLY *e*S **S 21 34 05.8 +2.6**
TLY pmax pmax
comp=Z,5.0nm,0.7s
TLY MLR MLR
comp=Z,1μm,17.0s
ZAK Zakamensk 32.90 296⇑ *i*P **P 21 28 54.0 -1.2**
ZAK pmax pmax
comp=Z,4.0nm,1.2s
WHN Wuhan 33.82 256 P **P 21 29 03.2 -0.1**
WHN LR LR
comp=N,700nm,15.2s
WHN LR LR
comp=E,910nm,15.0s
WHN LR LR
comp=Z,1μm,17.8s
RSO Redoubt South 34.20 46 *e*P **P 21 29 08.0 +1.6**
PPLA Purkeypile 34.52 41 *e*P **P 21 29 09.5 +0.4**
comp=Z,35nm,1.4s
SPU Mount Spurr 34.54 44 *e*P **P 21 29 10.5 +1.3**
QZH Quanzhou 34.83 244 P P 21 29 15.5 +3.5
QZH S **S 21 34 43.3 +2.4**
QZH LR LR
comp=N,670nm,15.8s
QZH LR LR
comp=E,630nm,16.3s
QZH LR LR
comp=Z,500nm,18.4s
TRF Thorofare Moun 35.40 40 *e*P **P 21 29 17.2 +0.5**
comp=Z,9.5nm,0.9s
XAN Xi'an 35.49 266 P **P 21 29 17.9 +0.2**
XAN pP **pP 21 29 27.0 +0.4**
XAN pmax pmax
comp=Z,29nm,10.3s
XAN LR LR
comp=N,210nm,16.0s
XAN LR LR
comp=E,120nm,16.7s
XAN LR LR
comp=Z,130nm,16.9s
RC01 Rabbit Creek A 35.67 44 *e*P **P 21 29 19.4 +0.6**
comp=Z,7.7nm,0.9s
COLD Coldfoot 35.73 34 *e*P **P 21 29 20.2 +0.9**
comp=Z,9.8nm,1.2s
PMR Palmer 35.94 44 *e*P **P 21 29 22.3 +1.1**
PMR pmax pmax
comp=Z,10.0nm,1.0s
PMR Palmer 35.94 44 *e*P **P 21 29 22.3 +1.1**
comp=Z,10nm,1.0s
MCK McKinley 36.01 40 *e*P **P 21 29 22.9 +1.0**
MCK pmax pmax
comp=Z,17nm,1.2s
MCK McKinley 36.01 40 *e*P **P 21 29 22.9 +1.0**
comp=Z,17nm,1.2s
SML Sawmill 36.31 43 *e*P **P 21 29 25.0 +0.5**
SML pmax pmax
comp=Z,10.0nm,0.8s
SML Sawmill 36.31 43 *e*P **P 21 29 25.0 +0.5**
comp=Z,10nm,0.8s
COLA College 36.51 38 *e*P **P 21 29 26.1 +0.1**
COLA pmax pmax
comp=Z,14nm,0.9s
COLA College 36.51 38 *e*P **P 21 29 26.1 +0.1**
comp=Z,14nm,0.9s
ILAR Eielson Array 36.92 38 P **P 21 29 29.6 0.0**
ILAR Eielson Array 36.92 38 P **P 21 29 29.6 0.0**
comp=Z,4.6nm,1.0s,baz=258,slow=6.9,SNR=37

ILAR LR LR 21 44 29.9
comp=Z,167nm,19.6s,baz=129,slow=36
ENH Enshi 37.29 260 *e*P **P 21 29 31.6 -1.5**
comp=Z,27nm,1.4s
DIV Divide 37.59 44 *e*P **P 21 29 36.4 +1.1**
comp=Z,14nm,0.8s
LZH Lanzhou 37.92 272 ⇑P **P 21 29 39.8 +1.3**
LZH pP **pP 21 29 48.2 +0.7**
LZH sP **sP 21 29 51.1 -0.1**
LZH PP **PnPn 21 31 10.0 +3.3**
LZH *e*S **S 21 35 29.0 +0.7**
LZH sS **sS 21 35 44.1 +1.0**
LZH SS **SnSn 21 38 02.0 -8.8**
LZH pmax pmax
comp=Z,65nm,1.3s
LZH pmax pmax
comp=Z,150nm,4.4s
LZH LR LR
comp=N,560nm,16.4s
LZH LR LR
comp=E,690nm,18.6s
LZH LR LR
comp=Z,970nm,19.1s
DOT Dot Lake 38.19 40 *e*P **P 21 29 40.5 +0.2**
comp=Z,14nm,0.8s
RAGM Ragged Mountai 38.20 45 *e*P **P 21 29 42.1 +1.6**
comp=Z,39nm,1.3s
HVS Khovu-Aksy 38.59 300*d i*P **P 21 29 43.3 -0.6**
HVS pmax pmax
comp=Z,83nm,1.7s
GTA Gaotai 39.06 280 ⇑P **P 21 29 49.0 +0.9**
GTA pP **pP 21 29 58.8 +1.8**
GTA sP **sP 21 30 02.9 +2.2**
GTA PP **PnPn 21 31 22.4 +2.1**
GTA PcP **PcP 21 31 59.4 +1.8**
GTA S **ScP 21 35 44.1 +0.6**
GTA sS **sS 21 36 00.3 +0.1**
GTA SS SS 21 38 27.8 -10
GTA pmax pmax
comp=Z,20nm,1.4s
GTA pmax pmax
comp=Z,140nm,6.2s
GTA LR LR
comp=N,420nm,15.2s
GTA LR LR
comp=E,320nm,15.7s
GTA LR LR
comp=Z,460nm,16.2s
EGAK Eagle 39.37 38 *e*P **P 21 29 49.9 -0.2**
comp=Z,13nm,0.9s
CD2 Chengdu 40.85 266 *e*P **P 21 30 03.0 +0.1**
CD2 pP **pP 21 30 12.4 +0.5**
CD2 sP **sP 21 30 16.2 +0.6**
CD2 PP **PnPn 21 31 40.8 -0.8**
CD2 S **S 21 36 10.8 -1.4**
CD2 sS **sS 21 36 26.3 -0.8**
CD2 SS SS 21 39 06.8 -7.1
CD2 pmax pmax
comp=Z,40nm,1.2s
CD2 pmax pmax
comp=Z,120nm,5.2s
CD2 LR LR
comp=N,420nm,15.4s
CD2 LR LR
comp=E,320nm,17.2s
CD2 LR LR
comp=Z,440nm,15.5s
GYA Guiyang 41.62 258 *e*P **P 21 30 10.2 +0.8**
GYA PP **PnPn 21 31 48.8 -1.9**
GYA ScP **ScP 21 35 55.6 +1.9**
GYA S **S 21 36 24.0 +0.1**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,5.2s
GYA LR LR
comp=N,480nm,17.8s
GYA LR LR
comp=E,410nm,18.0s
GYA LR LR
comp=Z,460nm,17.4s
ZAA0 Zalesovo Array 42.91 306 *e*P **P 21 30 17.0 -2.4**
ZALV Zalesovo Beam 42.91 306 P **P 21 30 17.7 -1.6**
ZALV 21 32 09.7
ZALV pmax pmax
comp=Z,2.0nm,0.6s
ZALV MLR MLR
comp=Z,1μm,19.0s
ZALV Zalesovo Beam 42.91 306 P **P 21 30 17.7 -1.6**
ZALV PcP **PcP 21 32 09.7 +0.1**
ZALV Zalesovo Beam 42.91 306 P **P 21 30 17.7 -1.6**
comp=Z,1.5nm,0.6s,baz=76,slow=7.6,SNR=11
ZALV PcP **PcP 21 32 09.7 +0.1**
comp=Z,2.2nm,0.9s,baz=64,slow=3.4,SNR=5.2
ZALV LR LR 21 49 19.7
comp=Z,1μm,19.0s,baz=69,slow=38
NVS Novosibirsk 43.50 308 *e*P P 21 30 16.8 -7.3
QIZ Qiongzhong 44.67 247 P **P 21 30 33.9 0.0**
QIZ S **S 21 37 07.8 -0.6**
WMQ Urumqi 45.12 292 *e*P **P 21 30 35.9 -1.4**
WMQ pP **pP 21 30 45.5 -0.9**
WMQ sP **sP 21 30 49.0 -1.0**
WMQ PP **PP 21 32 22.0 -0.8**
WMQ S **S 21 37 12.0 -2.5**
WMQ sS **sS 21 37 32.0 +2.5**
WMQ ScS **ScS 21 40 34.0 +2.2**
WMQ pmax pmax
comp=Z,13nm,0.6s
WMQ pmax pmax
comp=Z,130nm,4.6s
WMQ LR LR
comp=N,540nm,13.5s
WMQ LR LR
comp=E,510nm,14.8s
WMQ LR LR
comp=Z,770nm,16.6s
KMI Kunming 45.17 260 ⇑P **P 21 30 38.7 +0.6**
KMI pP **pP 21 30 47.3 +0.1**
KMI sP **sP 21 30 51.7 +0.9**
KMI PP **PP 21 32 25.5 +1.6**
KMI S **S 21 37 14.1 -1.9**
KMI sS **sS 21 37 30.1 -0.8**
KMI SS **ScS 21 40 28.4 -4.6**
KMI pmax pmax
comp=Z,12nm,1.2s
KMI pmax pmax
comp=Z,130nm,3.7s
KMI LR LR
comp=N,320nm,16.2s
KMI LR LR
comp=E,280nm,15.8s
KMI LR LR
comp=Z,290nm,15.8s
WRAK Wrangell Islan 45.44 49 *e*P **P 21 30 42.3 +2.7**
MK31 Makanchi Array 47.18 298 *e*P **P 21 30 52.1 -1.3**
MK31 Makanchi Array 47.18 298 *e*P **P 21 30 52.1 -1.3**
MKAR Makanchi Array 47.18 298 P **P 21 30 52.4 -1.0**
MKAR pmax pmax
comp=Z,6.0nm,0.8s
MKAR MLR MLR
comp=Z,1μm,18.1s
MKAR Makanchi Array 47.18 298 *e*P **P 21 30 52.5 -0.9**
MKAR Makanchi Array 47.18 298 P **P 21 30 52.4 -1.0**
comp=Z,6.2nm,0.8s,baz=66,slow=7.8,SNR=57
MKAR LR LR 21 51 51.1
comp=Z,1μm,18.1s,baz=77,slow=38
KURK Kurchatov 47.65 304 *e*P **P 21 30 54.8 -2.1**
KURK pmax pmax
comp=Z,16nm,1.0s
KURK Kurchatov 47.65 304 *e*P **P 21 30 54.8 -2.1**
comp=Z,16nm,1.0s
LSA Lhasa 50.31 274 P **P 21 31 20.1 +1.9**
LSA pmax pmax
comp=Z,10.0nm,1.6s
LSA Lhasa 50.31 274 *e*P **P 21 31 17.2 -1.1**
LSA pmax pmax
comp=Z,7.0nm,0.6s
LSA Lhasa 50.31 274 *e*P **P 21 31 17.2 -1.1**
comp=Z,7.5nm,0.6s
BRVK Borovoye 51.22 310 *e*P **P 21 31 23.0 -1.2**
BRVK pmax pmax
comp=Z,14nm,1.2s
BRVK Borovoye 51.22 310 *e*P **P 21 31 23.0 -1.2**
comp=Z,14nm,1.2s
YKW3 Yellowknife Ar 51.27 36 *e*P **P 21 31 23.9 -0.5**

comp=Z,0.1nm,0.9s
YKA Yellowknife Ar 51.31 36 P **P 21 31 24.7 +0.1**
YKA Yellowknife Ar 51.31 36 P **P 21 31 24.7 +0.1**
comp=Z,3.4nm,0.8s,baz=298,slow=7.4,SNR=35
ZRNK Zerenda 51.95 310 *i*P **P 21 31 27.9 -1.7**
ZRNK pmax pmax
comp=Z,6.0nm,1.0s
CHTO Chiang Mai 52.02 257 *e*P **P 21 31 31.7 +1.1**
CHTO pmax pmax
comp=Z,9.0nm,0.9s
CHTO Chiang Mai 52.02 257 *e*P **P 21 31 31.7 +1.1**
comp=Z,8.7nm,0.9s
CMAR Chiang Mai Arr 52.27 257 P **P 21 31 33.7 +1.3**
CMAR Chiang Mai Arr 52.27 257 P **P 21 31 33.7 +1.3**
comp=Z,1.6nm,0.8s,baz=34,slow=7.8,SNR=12
CMAR LR LR 21 54 36.5
comp=Z,241nm,20.4s,baz=187,slow=37
SHL Shillong 52.37 269 *i*P P 21 31 37.0 +3.6
ULHL Ulahol 53.18 295 P **P 21 31 39.2 0.0**
SNR=6.3
TKM2 Tokmak 2 53.23 296 *e*P **P 21 31 39.6 +0.1**
TKM2 pmax pmax
comp=Z,9.0nm,1.3s
TKM2 Tokmak 2 53.23 296 *e*P **P 21 31 39.6 +0.1**
comp=Z,8.6nm,1.3s
TKM2 Tokmak 2 53.23 296 P **P 21 31 39.7 +0.1**
SNR=6.4
USP Ospenovka 53.72 297 P **P 21 31 43.0 +0.1**
SNR=17
KBK Karagaybulak 53.77 296 P **P 21 31 43.6 +0.2**
SNR=7.0
KZA Kyzart 53.90 296 P **P 21 31 45.6 +0.9**
SNR=6.1
AAK Ala-Archa 54.06 297 *e*P **P 21 31 45.5 -0.1**
AAK pmax pmax
comp=Z,1.0nm,0.8s
AAK Ala-Archa 54.06 297 *e*P **P 21 31 45.5 -0.1**
comp=Z,1.4nm,0.8s
AAK Ala-Archa 54.06 297 P **P 21 31 45.7 +0.1**
SNR=5.1
NLWA Neilton Lookou 54.13 56 *e*P **P 21 31 46.7 +0.8**
comp=Z,17nm,1.1s
TAPN Taplejung 54.14 274 *e*P **P 21 31 47.5 +1.0**
SVE Sverdlovsk 54.20 317⇑ *e*P **P 21 31 45.1 -1.0**
SVE *e* 21 33 49.3
SVE *e*PPP PPP 21 34 56.4
SVE *e*SS **SKiKP 21 42 57.2 +2.5**
SVE pmax pmax
comp=Z,21nm,1.4s
SVE MLR MLR
comp=Z,722nm,16.0s
EKS2 Erkin-Say 54.49 297 *e*P **P 21 31 49.1 +0.5**
EKS2 pmax pmax
comp=Z,7.0nm,0.8s
EKS2 Erkin-Say 54.49 297 *e*P **P 21 31 49.1 +0.5**
comp=Z,6.9nm,0.8s
EKS2 Erkin-Say 54.49 297 P **P 21 31 49.0 +0.3**
SNR=9.7
ODAN Odare 54.67 273 *e*P **P 21 31 51.8 +1.5**
KSH Kashi 54.85 293 P P 21 31 56.0 +4.7
KSH *e*pP pP 21 32 06.1 +5.5
KSH *e*sP sP 21 32 10.1 +5.9
KSH *e*PcP **PcP 21 32 56.1 +2.9**
KSH *e*PP PP 21 34 01.1 +7.1
KSH *e*S **S 21 39 33.5 +3.0**
KSH *e*sS sS 21 39 52.2 +6.5
KSH *e*ScS **ScS 21 41 39.1 +0.8**
KSH pmax pmax
comp=Z,14nm,0.6s
KSH pmax pmax
comp=Z,260nm,3.6s
KSH LR LR
comp=N,900nm,10.5s
KSH LR LR
comp=E,730nm,11.1s
KSH LR LR
comp=Z,2μm,16.4s
GUN Gumba 55.06 275 *e*P **P 21 31 54.0 +0.8**
comp=Z,50nm,1.1s
RAMN Ramite 55.16 274 *e*P **P 21 31 54.4 +0.6**
comp=Z,38nm,0.8s
ARU Arti 55.38 318*c i*P **P 21 31 53.0 -1.7**
ARU 21 33 55.7
ARU pmax pmax
comp=Z,13nm,1.2s
KKN Kakani 55.55 276 *e*P **P 21 31 57.5 +0.9**
comp=Z,29nm,0.7s
PKI Pulchoki 55.59 275 *e*P **P 21 31 57.7 +0.6**
comp=Z,32nm,1.0s
PKIN Phulchoki 55.60 275 *e*P **P 21 31 57.1 +0.1**
comp=Z,12nm,0.6s
LON Longmire 55.67 56 *e*P **P 21 31 56.4 -0.6**
LON pmax pmax
comp=Z,3.0nm,0.8s
LON Longmire 55.67 56 *e*P **P 21 31 56.4 -0.6**
comp=Z,2.8nm,0.8s
DMN Daman 55.78 276 *e*P **P 21 31 59.3 +1.0**
comp=Z,51nm,1.0s
DANN Dangsing 56.24 277 *e*P **P 21 32 03.0 +1.3**
comp=Z,46nm,0.6s
KK31 Karatay Array 56.25 299*c e*P **P 21 32 00.1 -1.0**
KK31 pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 56.25 299 *e*P **P 21 32 00.8 -0.4**
KKAR Karatay Array 56.25 299 *e*P **P 21 32 00.8 -0.4**
KOLN Koldanda 56.72 277 *e*P **P 21 32 06.1 +1.2**
comp=Z,32nm,0.8s
PYUN Piuthan 56.93 277 *e*P **P 21 32 07.3 +0.9**
comp=Z,103nm,1.2s
DAG Danmarks Havn 57.13 358 *i*P **P 21 32 06.0 -0.9**
DAG pmax pmax
comp=Z,7.0nm,1.3s
DAG Danmarks Havn 57.13 358 *i*P **P 21 32 06.0 -0.9**
comp=Z,3.7nm,1.3s
HUMO Hull Mountain 57.31 61 *e*P **P 21 32 10.1 +1.4**
comp=Z,16nm,1.6s
NEW Newport 57.46 52 *e*P **P 21 32 10.6 +0.9**
comp=Z,11nm,1.1s
NEW Newport 57.46 52⇑P **P 21 32 10.3 +0.6**
baz=57
YBH Yreka Blue Hor 57.96 61 *e*P **P 21 32 14.3 +0.9**
YBH Yreka Blue Hor 57.96 61 P **P 21 32 13.7 +0.3**
comp=Z,1.7nm,0.7s,baz=306,slow=4.7,SNR=7.0
ARCES ARCESS Array B 58.32 341 P **P 21 32 15.0 -0.3**
ARCES ARCESS Array B 58.32 341 P **P 21 32 15.0 -0.3**
comp=Z,2.6nm,0.9s,baz=25,slow=7.3,SNR=5.9
ARCES LR LR 22 03 13.2
comp=Z,232nm,19.1s,baz=44,slow=42
C12B Naegeli Ranch, 58.68 52⇓P **P 21 32 19.0 +0.7**
baz=58
B13A Whitefish 58.84 51⇑P **P 21 32 20.6 +1.2**
baz=59,SNR=5.2
A14A Double T Ranch 59.05 50⇑P **P 21 32 21.7 +0.8**
baz=59
AKTO Aktyubinsk 59.06 312 *i*P **P 21 32 19.0 -1.8**
AKTO pmax pmax
comp=Z,12nm,2.2s
C13A Hot Springs 59.19 52⇑P **P 21 32 22.6 +0.7**
baz=59
A15A Johnson Ranch, 59.41 50⇑P **P 21 32 23.4 +0.1**
baz=59,SNR=6.5
B14A Marquette Ranc 59.49 51⇓P **P 21 32 24.8 +0.8**
baz=59,SNR=5.5
C14A Swan Lake 59.59 51⇑P **P 21 32 25.1 +0.5**
baz=59
D13A Huson 59.60 52⇓P **P 21 32 25.2 +0.5**
baz=59
SWMT Swartz Lake 59.61 52 *e*P **P 21 32 26.0 +1.3**
B15A Bradely Ranch, 59.90 50⇓P **P 21 32 27.3 +0.6**
baz=60,SNR=5.6
F12A Elk City 59.96 54⇓P **P 21 32 28.2 +0.9**
baz=60,SNR=7.5
SLMT Seeley Lake 60.04 52 *e*P **P 21 32 28.7 +0.8**
MSO Missoula 60.05 52 *e*P **P 21 32 28.6 +0.9**
comp=Z,12nm,1.1s
MSO Missoula 60.05 52⇓P **P 21 32 28.0 +0.2**
baz=60
D14A Greenough 60.13 52⇑P **P 21 32 29.1 +0.7**
baz=60,SNR=13
OHCM Honcut 60.13 63 *e*P **P 21 32 28.9 +0.5**
C15A Salmond Ranch, 60.20 51⇓P **P 21 32 30.2 +1.3**
baz=60,SNR=19
B16A M & M Farms, S 60.30 50⇑P **P 21 32 30.2 +0.8**
baz=60
G12A Big Creek, Yel 60.30 55⇑P **P 21 32 29.7 +0.1**
baz=60

CHMT **Chamberlain Mo** 60.37 52 *e*P P 21 32 30.7 +0.5
A17A **Triple J Farms** 60.50 49 ⇓P P 21 32 31.2 +0.4
baz=60,SNR=5.6
BEKR **Beckworth** 60.51 62 *e*P P 21 32 31.8 +0.7
comp=Z,3.2nm,1.0s
KLMR **Klimovskoe** 60.53 329 *e*P P 21 32 28.4 -2.3
KLMR pmax pmax
comp=Z,19nm,1.5s
E14A **Clinton** 60.54 52 ⇓P P 21 32 32.0 +0.7
baz=60
D15A **Lincoln** 60.69 51 ⇑P P 21 32 32.9 +0.7
baz=60
B17A **L&G Farms, Che** 60.85 49 ⇓P P 21 32 33.6 +0.5
baz=61
H12A **Diamond D Ranc** 60.91 55 ⇑P P 21 32 34.4 +0.6
baz=61
G13A **Cobalt** 60.94 54 ⇑P P 21 32 34.5 +0.5
baz=61,SNR=8.7
A18A **Metzger Ranch,** 60.96 48 ⇑P P 21 32 34.7 +0.8
baz=61
F14A **Wisdom** 60.98 53 ⇓P P 21 32 35.2 +0.9
baz=61
E15A **Deer Lodge** 61.01 52 ⇓P P 21 32 35.1 +0.7
baz=61,SNR=5.4
MFID **Camas Ranch** 61.05 56 *e*P P 21 32 36.0 +1.3
comp=Z,8.0nm,1.1s
MFID **Camas Ranch** 61.05 56 ⇓P P 21 32 35.3 +0.6
baz=61
FFC **Flin Flon** 61.10 40 *e*P P 21 32 35.6 +0.9
FFC pmax pmax
comp=Z,9.0nm,1.0s
FFC **Flin Flon** 61.10 40 *e*P P 21 32 35.6 +0.9
comp=Z,8.8nm,1.0s
SUMG **Summit** 61.18 4 *i* P P 21 32 35.8 +0.3
SUMG pmax pmax
comp=Z,21nm,1.0s
SUMG **Summit** 61.18 4 *e*P P 21 32 35.7 +0.2
comp=Z,24nm,0.9s
SUMG **Summit** 61.18 4 *i* P P 21 32 35.8 +0.3
comp=Z,21nm,1.0s
D16A **Dana Ranch, Ca** 61.23 51 ⇓P P 21 32 36.9 +1.0
baz=61,SNR=6.7
HRY **Holter Researc** 61.27 51 *e*P P 21 32 36.6 +0.5
C17A **Wharram Farm,** 61.28 50 ⇑P P 21 32 36.6 +0.4
baz=61
B18A **Beardsley Farm** 61.32 49 ⇑P P 21 32 37.2 +0.8
baz=61,SNR=5.7
F15A **Butte** 61.45 53 ⇑P P 21 32 38.3 +0.8
baz=61,SNR=12
E16A **East Helena** 61.46 51 ⇑P P 21 32 38.0 +0.6
baz=61
LRM **Limekiln Ridge** 61.48 53 *e*P P 21 32 38.5 +0.8
A19A **Klindworth Far** 61.53 48 ⇓P P 21 32 38.5 +0.8
baz=61
EGMT **Eagleton** 61.57 49 *e*P P 21 32 38.9 +0.8
comp=Z,19nm,1.3s
CMB **Columbia Colle** 61.61 64 *e*P P 21 32 38.4 0.0
CMB pmax pmax
comp=Z,3.0nm,0.7s
CMB **Columbia Colle** 61.61 64 *e*P P 21 32 38.4 0.0
comp=Z,2.9nm,0.7s
D17A **Six Diamond Ra** 61.61 50 ⇑P P 21 32 39.3 +0.8
baz=61,SNR=5.6
B19A **Brinkman Farms** 61.72 48 ⇓P P 21 32 39.8 +0.8
baz=62
I13A **Wildhorse Cree** 61.72 55 ⇑P P 21 32 40.3 +0.9
baz=62,SNR=5.1
HLID **Hailey** 61.77 56 *e*P P 21 32 40.6 +1.0
comp=Z,6.5nm,0.9s
HLID **Hailey** 61.77 56 ⇑P P 21 32 40.2 +0.6
baz=62
JOF **Joensuu** 61.77 334 *e*p P 21 32 36.5 -2.6
comp=Z,0.7nm,0.3s
JOF **Joensuu** 61.77 334 *e*P P 21 32 36.5 -2.6
JOF pmax pmax
comp=Z,1.0nm,0.3s
G15A **Dillon** 61.86 53 ⇑P P 21 32 40.6 +0.4
baz=62
E17A **Martinsdale** 61.95 51 ⇓P P 21 32 42.3 +1.5
baz=62,SNR=9.5
F16A **Kennard Place,** 61.96 52 ⇑P P 21 32 41.6 +0.8
baz=62
J13A **Cove Ranch, Pi** 62.01 56 ⇑P P 21 32 42.3 +1.1
baz=62
D18A **Linhart Farms,** 62.06 50 ⇓P P 21 32 42.2 +0.8
baz=62
I14A **Mackay** 62.09 55 ⇑P P 21 32 43.0 +1.2
baz=62,SNR=10
C19A **Slack Wire Ran** 62.12 49 ⇓P P 21 32 43.0 +1.2
baz=62,SNR=9.7
H15A **Lima** 62.12 54 ⇓P P 21 32 42.3 +0.4
baz=62
G16A **Moss Hill, Enn** 62.20 53 ⇓P P 21 32 43.3 +0.7
baz=62
B20A **Solberg Farm,** 62.21 48 ⇑P P 21 32 43.4 +1.0
baz=62
KBL **Kabul** 62.26 292 *e*P P 21 32 42.6 -0.5
KBL pmax pmax
comp=Z,20nm,1.0s
KBL **Kabul** 62.26 292 *e*P P 21 32 42.6 -0.5
comp=Z,20nm,1.0s
E18A **Harlowton** 62.39 51 ⇓P P 21 32 44.7 +1.0
baz=62
F17A **Fitzpatrick Pl** 62.41 52 ⇑P P 21 32 44.5 +0.7
baz=62
A21A **Bergtoll Ranch** 62.42 47 ⇓P P 21 32 44.8 +1.1
baz=62
D19A **Cripps Ranch,** 62.57 50 ⇑P P 21 32 45.9 +1.1
baz=62
NVAR **Mina Array Bea** 62.65 62 P P 21 32 46.8 +1.1
NVAR **Mina Array Bea** 62.65 62 P P 21 32 46.8 +1.1
comp=Z,3.8nm,0.7s,baz=286,slow=7.1,SNR=23
QLMT **Earthquake Lak** 62.66 53 *e*P P 21 32 46.8 +1.1
C20A **Veseth Ranch,** 62.68 49 ⇑P P 21 32 46.7 +1.2
baz=62,SNR=7.9
G17A **Pierce Place,** 62.73 52 ⇓P P 21 32 46.5 +0.5
baz=63
NV11 **Mina Array Sit** 62.74 62 *e*P P 21 32 46.2 0.0
H16A **Russell Place,** 62.84 53 ⇓P P 21 32 47.9 +1.1
baz=63
F18A **Big Timber** 62.92 51 ⇑P P 21 32 48.4 +1.2
baz=63,SNR=10
A22A **Carney Farms,** 62.93 47 ⇑P P 21 32 48.3 +1.2
baz=63
D20A **Manuel Ranch,** 63.01 49 ⇑P P 21 32 48.9 +1.2
baz=63
ELK **Elko** 63.05 58 *e*P P 21 32 49.6 +1.3
comp=Z,3.5nm,0.9s
E19A **Rath Farm, Rou** 63.06 50 ⇑P P 21 32 49.4 +1.3
baz=63
F19A **Roth Farm, Mol** 63.37 51 ⇓P P 21 32 51.2 +1.0
baz=63
G18A **Lazy EL Ranch,** 63.38 52 ⇑P P 21 32 50.8 +0.5
baz=63
E20A **Meyer Farm, Mu** 63.38 50 ⇑P P 21 32 51.3 +1.1
baz=63
H17A **Grant Village** 63.41 53 ⇓P P 21 32 51.6 +0.9
baz=63
SCO **Scoresbysund** 63.51 358 *i* P P 21 32 51.6 +1.1
SCO pmax pmax
comp=Z,8.0nm,0.9s
SCO **Scoresbysund** 63.51 358 *i* P P 21 32 51.6 +1.1
comp=Z,7.7nm,0.9s
IMW **Indian Meadow** 63.52 53 *e*P P 21 32 53.0 +1.6
comp=Z,11nm,1.1s
RRI2 **Red Ridge** 63.66 54 *e*P P 21 32 54.0 +1.7
comp=Z,15nm,0.8s
H18A **Shoshone NF, C** 63.73 52 ⇑P P 21 32 54.0 +1.3
baz=64
B23A **Brockton** 63.74 47 ⇓P P 21 32 53.8 +1.3
baz=64
TPAW **Teton Pass** 63.78 54 *e*P P 21 32 54.8 +1.7
comp=Z,14nm,1.0s
VES **Vestal, Richgr** 63.79 65 ⇑P P 21 32 54.1 +1.1
baz=64
F20A **Billings** 63.83 50 ⇓P P 21 32 53.5 +0.3
baz=64
HVU **Hansel Valley** 63.83 56 *e*P P 21 32 54.9 +1.6
HVU pmax pmax
comp=Z,9.0nm,1.0s
HVU **Hansel Valley** 63.83 56 *e*P P 21 32 54.9 +1.6
comp=Z,8.6nm,1.0s
KAF **Kangasniemi** 63.89 335 *e*p P 21 32 47.2 -6.0
comp=Z,0.6nm,0.3s
KAF **Kangasniemi** 63.89 335 *e*P P 21 32 47.2 -6.0
KAF pmax pmax
comp=Z,1.0nm,0.3s
LOHW **Long Hollow** 63.89 54 *e*P P 21 32 55.8 +1.9
comp=Z,20nm,1.5s
C23A **Lambert** 64.07 47 ⇑P P 21 32 55.6 +0.9
baz=64
H19A **Powell** 64.11 52 ⇑P P 21 32 56.1 +1.0
baz=64
GRAC **Grapevine Rang** 64.12 63 ⇑P P 21 32 56.5 +1.3
baz=64
DGMT **Dagmar** 64.13 46 ⇓P P 21 32 56.2 +1.2
baz=64
G20A **Bridger** 64.17 51 ⇑P P 21 32 56.5 +1.0
baz=64
ISA **Isabella** 64.29 65 ⇑P P 21 32 56.6 +0.3
baz=64
R11A **Troy Canyon, C** 64.36 61 ⇓P P 21 32 57.5 +0.6
baz=64,SNR=9.2
FINES **FINESS Array B** 64.48 335 P P 21 32 56.5 -0.6
FINES **FINESS Array B** 64.48 335 P P 21 32 56.5 -0.6
comp=Z,7.3nm,0.8s,baz=35,slow=6.6,SNR=24
FINES LR LR 22 04 04.7
comp=Z,202nm,19.1s,baz=292,slow=39
E22A **Miles City** 64.57 49 ⇓P P 21 32 58.9 +0.9
baz=64
HWUT **Hardware Ranch** 64.64 56 *e*P P 21 32 59.4 +0.7
comp=Z,6.4nm,0.6s
C24A **Savage** 64.64 47 ⇑P P 21 32 59.4 +1.0
baz=64
MPMC **Manual Prospec** 64.65 64 ⇓P P 21 32 59.4 +0.5
baz=64,SNR=8.7
FURC **Furnace Creek,** 64.78 63 ⇓P P 21 33 00.3 +0.9
baz=65
DUG **Dugway** 64.82 58 *e*P P 21 33 00.9 +1.1
DUG pmax pmax
comp=Z,12nm,1.0s
DUG **Dugway** 64.82 58 *e*P P 21 33 00.9 +1.1
comp=Z,12nm,1.0s
DUG **Dugway** 64.82 58 ⇑P P 21 33 00.8 +0.9
baz=65,SNR=8.4
F22A **Rosebud** 64.85 49 ⇓P P 21 33 00.7 +0.9
baz=65
E23A **Ismay** 64.87 48 ⇓P P 21 33 01.0 +1.1
baz=65
D24A **Glendive** 64.96 47 ⇑P P 21 33 01.5 +1.0
baz=65
J19A **Crowheart** 64.98 53 ⇑P P 21 33 01.7 +0.8
baz=65
PDAR **Pinedale Array** 65.02 54 P P 21 33 01.8 +0.5
PDAR **Pinedale Array** 65.02 54 P P 21 33 01.8 +0.5
comp=Z,4.3nm,0.8s,baz=288,slow=2.2,SNR=29
EDW2 **Edwards Air Fo** 65.09 65 ⇓P P 21 33 02.2 +0.7
baz=65
H21A **Big Horn, Sher** 65.19 51 ⇑P P 21 33 03.1 +0.9
baz=65
G22A **Birney** 65.20 50 ⇓P P 21 33 02.8 +0.7
baz=65
M17A **Scullys Gap (B** 65.24 55 ⇑P P 21 33 03.0 +0.4
baz=65
L18A **Fontenelle, Gr** 65.30 55 ⇑P P 21 33 03.8 +0.8
baz=65
K19A **Absolon Red Bu** 65.38 53 ⇑P P 21 33 04.1 +0.6
baz=65
J20A **Shoshoni** 65.46 52 ⇓P P 21 33 04.7 +0.8
baz=65
GSC **Goldstone** 65.56 64 *e*P P 21 33 05.9 +1.3
GSC **Goldstone** 65.56 64 *e*P P 21 33 05.9 +1.3
comp=Z,7.4nm,1.0s
GSC **Goldstone** 65.56 64 ⇑P P 21 33 05.4 +0.8
baz=65
H22A **Clearmont** 65.58 50 ⇓P P 21 33 05.1 +0.4
baz=65
I21A **Big Trails, Te** 65.59 52 ⇓P P 21 33 05.5 +0.8
baz=65,SNR=7.2
DAU **Daniels Canyon** 65.59 57 *e*P P 21 33 06.6 +1.6
DAU **Daniels Canyon** 65.59 57 *e*P P 21 33 06.6 +1.6
G23A **Biddle** 65.69 49 ⇓P P 21 33 05.7 +0.4
baz=66
BFSC **Mount Baldy Ra** 65.71 65 ⇓P P 21 33 06.3 +0.6
baz=66
OBN **Obninsk** 65.72 326 *e*P P 21 33 03.4 -1.7
OBN pmax pmax
comp=Z,27nm,1.9s
OBN MLR MLR
comp=Z,500nm,21.0s
K20A **Yellowstone Ra** 65.77 53 ⇑P P 21 33 06.5 +0.5
baz=66
CIS **Catalina Islan** 65.78 66 ⇓P P 21 33 07.3 +1.3
baz=66
I22A **9 Mile Ranch,** 65.97 51 ⇑P P 21 33 07.8 +0.6
baz=66
BBRC **Big Bear Solar** 66.16 65 ⇑P P 21 33 09.5 +0.7
baz=66
HEC **Hector,Ludlow** 66.16 64 ⇑P P 21 33 09.0 +0.4
baz=66,SNR=6.0
L20A **Wamsutter** 66.20 54 ⇑P P 21 33 09.1 +0.3
baz=66
CCUT **Cedar City** 66.21 60 *e*P P 21 33 10.3 +1.3
comp=Z,8.7nm,1.1s
MVU **Marysvale** 66.27 59 *e*P P 21 33 10.4 +1.1
comp=Z,4.1nm,0.9s
H24A **Dirks Ranch, A** 66.43 49 ⇓P P 21 33 10.5 +0.4
baz=66
VRHR **Novokhopersk** 66.51 320 *e*P P 21 33 08.3 -2.0
VRHR pmax pmax
comp=Z,10.0nm,0.7s
VRHR pmax pmax
comp=N,3.0nm,0.4s
VRHR pmax pmax
comp=E,9.0nm,1.1s
M20A **Sweetwater, Wa** 66.63 54 ⇑P P 21 33 12.4 +0.8
baz=66
L21A **Rawlins** 66.77 53 ⇓P P 21 33 13.0 +0.5
baz=67
K22A **Casper** 66.78 52 ⇓P P 21 33 12.6 +0.1
baz=67
SRU **San Rafael** 66.87 57 ⇓P P 21 33 13.7 +0.6
baz=67,SNR=11
O19A **Miners Draw (B** 66.89 55 ⇓P P 21 33 14.0 +0.8
baz=67
I24A **Kuemmerle Ranc** 66.99 50 ⇓P P 21 33 14.2 +0.5
baz=67
M21A **Separation Pea** 67.01 53 ⇓P P 21 33 13.7 -0.3
baz=67
N20A **Spence Gulch,** 67.02 55 ⇓P P 21 33 14.5 +0.4
baz=67
RSSD **Black Hills** 67.13 50 *e*P P 21 33 14.7 0.0
RSSD pmax pmax
comp=Z,9.0nm,1.1s
RSSD **Black Hills** 67.13 50 *e*P P 21 33 14.7 0.0
comp=Z,9.3nm,1.1s
L22A **Ellis Ranch, M** 67.24 53 ⇑P P 21 33 16.4 +1.0
baz=67
P19A **Cripple Cowboy** 67.41 56 ⇑P P 21 33 17.4 +0.8
baz=67
N21A **Black Mountain** 67.49 54 ⇑P P 21 33 17.4 +0.3
baz=67
VSR **Storozhevoye** 67.50 322 *e*P P 21 33 16.0 -0.6
VSR pmax pmax
comp=Z,9.0nm,1.0s
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,9.0nm,1.2s
O20A **White River Ci** 67.50 55 ⇑P P 21 33 18.2 +1.1
baz=67
W13A **Hualapai Mount** 67.50 62 ⇑P P 21 33 17.6 +0.4
baz=67
M22A **Cedar Creek Ra** 67.58 53 ⇓P P 21 33 18.2 +0.6
baz=67
U15A **North Rim** 67.59 60 ⇓P P 21 33 18.9 +1.1
baz=67,SNR=5.9
VORD **Divnogorie** 67.63 321 *e*P P 21 33 17.6 +0.2
VORD pmax pmax
comp=Z,8.0nm,0.9s
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,7.0nm,0.6s
PDMCI **Parker Dam,Lak** 67.87 63 ⇑P P 21 33 19.9 +0.7
baz=68
O21A **Pagoda** 67.89 55 ⇑P P 21 33 20.1 +0.5
baz=68
Y12C **Blythe** 68.00 64 ⇑P P 21 33 20.9 +0.8
baz=68
M23A **Laramie** 68.02 53 ⇑P P 21 33 20.5 +0.1
baz=68
WRA **Warramunga Arr** 68.06 199 P P 21 33 20.1 -0.4
WRA **Warramunga Arr** 68.06 199 P P 21 33 20.1 -0.4
comp=E,2.7nm,1.0s,baz=15,slow=6.9,SNR=3.7
N22A **Wattenberg Ran** 68.06 54 ⇑P P 21 33 21.0 +0.3
baz=68
S18A **Hurst Farm, Bl** 68.12 58 ⇓P P 21 33 21.4 +0.3
baz=68,SNR=10
Q20A **Ridgley Place,** 68.26 56 ⇑P P 21 33 22.7 +0.8
baz=68
GLA **Glamis** 68.27 65 ⇑P P 21 33 23.0 +1.2
baz=68
N23A **Red Feather La** 68.28 53 ⇑P P 21 33 23.1 +1.0
baz=68
PV04 **Paradox Valley** 68.29 57 *e*P P 21 33 23.0 +1.0
P21A **Newcastle** 68.36 55 ⇑P P 21 33 23.5 +1.0
baz=68
L25A **Engebretsen Ra** 68.51 51 ⇓P P 21 33 24.2 +0.9
baz=68
M24A **Cheyenne** 68.51 52 ⇓P P 21 33 24.0 +0.6
baz=68
NB2 **NORSAR Subarra** 68.69 341 P P 21 33 23.7 -0.3
comp=Z,25nm,1.4s,baz=27,slow=6.2
NB2 **NORSAR Subarra** 68.69 341 P P 21 33 23.7 -0.3
baz=27,slow=6.2
NOA **NORSAR Array B** 68.69 341 P P 21 33 23.9 -0.1
NOA **NORSAR Array B** 68.69 341 P P 21 33 23.9 -0.1
comp=Z,5.3nm,0.8s,baz=29,slow=6.4,SNR=13
NOA LR LR 22 08 05.3
comp=Z,256nm,18.4s,baz=30,slow=40
P22A **Eagle** 68.71 55 ⇓P P 21 33 25.4 +0.6
baz=68
R20A **Redvale** 68.73 57 ⇑P P 21 33 25.8 +0.9
baz=69
WUAZ **Wupatki** 68.75 61 *e*P P 21 33 26.0 +0.9
comp=Z,22nm,0.4s
WUAZ **Wupatki** 68.75 61 ⇓P P 21 33 25.9 +0.9
baz=69
Q21A **Lamborn Mesa,** 68.76 56 ⇓P P 21 33 25.8 +0.8
baz=69
O23A **Lake Granby, G** 68.76 54 ⇑P P 21 33 26.3 +1.1
baz=69
Y14A **Wickenburg** 68.81 63 ⇓P P 21 33 26.1 +0.8
baz=69
SMCO **Snowmass** 68.87 55 *e*P P 21 33 26.6 +0.6
comp=Z,8.4nm,1.0s
S20A **Disappointment** 68.98 57 ⇑P P 21 33 27.3 +0.8
baz=69
R21A **Cimarron** 69.09 56 ⇑P P 21 33 28.1 +1.0
baz=69
Q22A **Crested Butte,** 69.12 55 ⇑P P 21 33 28.3 +0.9
baz=69
IDID **Didziasalis** 69.17 331 *e*P P 21 33 25.5 -1.5
IDID AMB AMB 21 33 27.5
comp=Z,7.5nm,1.3s
ISAL **Salakas** 69.17 331 *e*P P 21 33 25.6 -1.4
ISAL AMB AMB 21 33 26.7
comp=Z,9.4nm,1.4s
ISCO **Idaho Springs** 69.21 54 ⇓P P 21 33 29.0 +1.0
baz=69
IIGN **Ignalina** 69.31 331 *e*P P 21 33 26.5 -1.4
IIGN AMB AMB 21 33 28.5
comp=Z,6.7nm,0.8s
P23A **Jefferson** 69.38 54 ⇑P P 21 33 28.5 -0.5
baz=69
MAK **Makhachkala** 69.40 311 *e*P P 21 33 32.6 +4.0
MAK *e* 21 33 57.6
MAK pmax pmax
comp=Z,20nm,0.6s
MAK MLR MLR
comp=Z,937nm,17.0s
S21A **Coal Bank Pass** 69.43 57 ⇑P P 21 33 30.0 +0.7
baz=69
X16A **Lo Mia Camp, P** 69.45 62 ⇑P P 21 33 30.4 +1.1
baz=69,SNR=5.6
R22A **Saguache, Gunn** 69.64 56 ⇑P P 21 33 31.9 +1.2
baz=70
Q23A **Hartsel** 69.70 55 ⇑P P 21 33 32.2 +1.1
baz=70
U20A **Newcomb** 69.88 58 ⇑P P 21 33 33.0 +1.1
baz=70
S22A **4UR Ranch, Cre** 69.93 56 ⇓P P 21 33 33.6 +1.2
baz=70
T21A **Navajo Lake** 70.04 57 ⇓P P 21 33 33.6 +0.6
baz=70
GOF **Gofitskoye** 70.17 315 *e*P P 21 33 30.8 -2.6
GOF pmax pmax
comp=Z,40nm,1.2s
R23A **Moffat** 70.20 55 ⇓P P 21 33 34.9 +0.9
baz=70
N27A **Anderson Farm,** 70.22 51 ⇓P P 21 33 35.1 +1.2
baz=70
V20A **Brimhall** 70.30 59 ⇑P P 21 33 35.8 +1.2
baz=70
U21A **Nageezi** 70.35 58 ⇓P P 21 33 36.1 +1.1
baz=70
T22A **Edith** 70.39 57 ⇑P P 21 33 36.2 +1.0
baz=70
OGNE **Ogallala** 70.39 51 ⇓P P 21 33 35.6 +0.7
baz=70
EYMN **Ely** 70.53 40 *e*P P 21 33 37.2 +1.7
comp=Z,14nm,1.2s
W20A **Ramah** 70.75 59 ⇑P P 21 33 38.0 +0.7
baz=71
U22A **Llaves** 70.86 57 ⇓P P 21 33 38.5 +0.5
baz=71
S24A **Houchin Ranch,** 70.93 55 ⇓P P 21 33 39.2 +0.6
baz=71
V22A **San Miguel Ran** 71.14 58 ⇓P P 21 33 40.4 +0.6
baz=71
KIV **Kislovodsk** 71.15 314 *e*P P 21 33 40.2 +0.7
KIV *e* 21 34 00.3
KIV *e*S S 21 42 54.7 +0.6
KIV pmax pmax
comp=Z,11nm,0.9s
KIV MLR MLR
comp=Z,591nm,18.0s
KBZ **Khabaz** 71.21 314 P P 21 33 40.1 +0.5
KBZ pmax pmax
comp=Z,10.0nm,0.9s
KBZ MLR MLR
comp=Z,238nm,18.3s
KBZ **Khabaz** 71.21 314 P P 21 33 40.1 +0.5
KBZ **Khabaz** 71.21 314 P P 21 33 40.1 +0.5
comp=Z,10.0nm,0.9s,baz=69,slow=6.5,SNR=24
KBZ LR LR 22 07 21.9
comp=Z,238nm,18.3s,baz=39,slow=38
ECSD **EROS Data Cent** 71.21 46 *e*P P 21 33 39.4 -0.4
comp=Z,33nm,1.9s
GUDG **Gudauri** 71.32 312 P P 21 33 41.7 +1.1
S25A **Robets Cordova** 71.36 55 ⇓P P 21 33 41.7 +0.7
baz=71
R26A **Arlington** 71.47 54 ⇑P P 21 33 42.4 +0.9
baz=71
DGRG **David-gareji** 71.58 311 P P 21 33 43.6 +1.6
X21A **Alamocita Cree** 71.64 59 ⇓P P 21 33 42.9 +0.2
baz=72
Y20A **Horse Springs,** 71.66 60 ⇑P P 21 33 43.9 +1.1
baz=72
TBLG **Delisi** 71.72 312 P P 21 33 44.3 +1.5
TBLG **Delisi** 71.72 312 *e*P P 21 33 44.3 +1.5
T25A **Trinidad** 71.74 55 ⇑P P 21 33 44.3 +1.0
baz=72
ASAR **Alice Springs** 71.75 199 P P 21 33 43.6 +0.6
ASAR **Alice Springs** 71.75 199 P P 21 33 43.6 +0.6
comp=Z,1.0nm,0.6s,baz=10,slow=6.6,SNR=4.4
ONI **Oni** 71.75 313 P P 21 33 44.9 +1.8
R27A **Eads** 71.84 53 ⇓P P 21 33 44.7 +0.9
baz=72
GOR **Gori** 71.86 312 P P 21 33 44.8 +1.1
AKASG **Malin Array Be** 71.96 326 P P 21 33 43.7 -0.3
AKASG pmax pmax
comp=Z,14nm,0.7s
AKASG MLR MLR
comp=Z,270nm,18.1s
AKASG **Malin Array Be** 71.96 326 P P 21 33 43.8 -0.3
AKASG **Malin Array Be** 71.96 326 P P 21 33 43.7 -0.3
comp=Z,14nm,0.7s,baz=34,slow=6.2,SNR=28
AKASG LR LR 22 09 19.4
comp=Z,270nm,18.1s,baz=30,slow=39
KIEV **Kiev** 71.97 326 *e*P P 21 33 43.4 -0.7
KIEV pmax pmax
comp=Z,19nm,1.0s
KIEV **Kiev** 71.97 326 *e*P P 21 33 43.4 -0.7
comp=Z,19nm,1.0s
AK01 **Malin Array Si** 71.97 326 *e*P P 21 33 43.6 -0.6
AK02 **Malin Array Si** 72.00 326 *e*P P 21 33 43.7 -0.6
Y21A **Point of Rocks** 72.01 60 ⇓P P 21 33 45.8 +0.8
baz=72
LAZ **Ladron** 72.05 59 *e*P P 21 33 45.0 -0.2
comp=Z,4.2nm,1.4s
X22A **Bernardo** 72.06 59 ⇑P P 21 33 45.6 +0.4

baz=72
Z20A Nine Sixteen R 72.07 61 ⇓P P 21 33 46.6 +1.3
baz=72
ANMO Albuquerque 72.08 58 eP P 21 33 46.2 +0.9
ANMO Albuquerque 72.08 58 P P 21 33 45.9 +0.5
comp=Z,1.7nm,0.7s,baz=338,slow=6.6,SNR=4.9
W23A Werner Place, 72.11 58 ⇓P P 21 33 46.0 +0.4
baz=72
KZR Kazreti 72.14 312 P P 21 33 47.0 +1.6
T26A Comanche Natio 72.18 55 ⇓P P 21 33 45.7 -0.2
baz=72
V24A Rampart Ranch, 72.23 57 ⇑P P 21 33 47.3 +1.0
baz=72
U25A Circle Dot Ran 72.26 56 ⇓P P 21 33 46.6 +0.3
baz=72
CHVG Ch'k'valeri 72.35 314 P P 21 33 48.3 +1.7
120A U Bar Ranch, L 72.44 61 ⇑P P 21 33 48.0 +0.5
baz=72
Y22A Socorro 72.48 59 ⇑P P 21 33 48.2 +0.5
baz=72
Z21A St. Cloud Mine 72.49 60 ⇓P P 21 33 48.8 +0.9
baz=72
W24A Lazy 6 Ranch, 72.51 57 ⇓P P 21 33 48.5 +0.6
baz=72
AKH Akhalkalaki 72.59 312 P P 21 33 50.0 +1.7
U26A Atchley Ranch, 72.64 55 ⇓P P 21 33 48.4 -0.3
baz=72
319A Douglas 72.85 63 ⇓P P 21 33 51.0 +1.1
baz=73
SOC Sochi 72.88 316 eP P 21 33 47.8 -1.9
SOC eS **S 21 43 11.0 -2.7**
SOC eSSS SSS 21 51 05.0
SOC pmax pmax
comp=Z,17nm,1.0s
SOC MLR MLR
comp=Z,429nm,16.0s
220A Playas Peak, P 72.95 62 ⇑P P 21 33 51.6 +1.1
baz=73
Z22A Elephant Butte 72.96 60 ⇑P P 21 33 51.3 +0.8
baz=73
121A Cookes Peak, D 72.97 61 ⇑P P 21 33 51.7 +1.1
baz=73
Y23A Lovelace Mesa, 73.03 59 ⇓P P 21 33 51.7 +0.7
baz=73
V26A Tequesquite Ra 73.04 56 ⇓P P 21 33 51.2 +0.2
baz=73
W25A X Bar L Ranch, 73.06 57 ⇑P P 21 33 51.9 +0.8
baz=73
U27A Thompson Grove 73.14 55 ⇓P P 21 33 52.3 +0.7
baz=73
221A Mesquite Ranch 73.33 61 ⇑P P 21 33 53.8 +1.1
baz=73
Z23A Rita Site, Whi 73.39 59 ⇓P P 21 33 54.1 +1.1
baz=73
X25A Clemmons Ranch 73.43 57 ⇓P P 21 33 54.2 +0.9
baz=73
222A Williams Famil 73.68 61 ⇑P P 21 33 55.7 +0.9
baz=74
Y25A Mesa, Roswell 73.83 58 ⇑P P 21 33 56.5 +0.8
baz=74
Z24A Sheeppen Canyo 73.86 59 ⇓P P 21 33 56.7 +0.8
baz=74
124A Stringfield Ra 74.25 59 ⇓P P 21 33 59.0 +0.7
baz=74
SIM Simferopol' 74.45 320 P P 21 33 53.8 -5.1
SIM pmax pmax
comp=Z,16nm,0.7s
SIM MLR MLR
comp=Z,450nm,18.0s
LVV L'vov 74.61 329 eP P 21 33 58.8 -1.0
224A Cornudas Mount 74.65 60 ⇓P P 21 34 01.2 +0.7
baz=74
Z26A Caprock 74.72 58 ⇑P P 21 34 01.5 +0.7
baz=75
125A Gardner Draw, 74.75 59 ⇑P P 21 34 01.8 +0.8
baz=75
Y27A Causey 74.75 57 ⇑P P 21 34 01.5 +0.5
baz=75
MSTX Muleshoe 74.92 57 ⇓P P 21 34 02.7 +0.7
baz=75
KIS Kishinev 75.09 324 eP P 21 34 02.0 -0.5
KIS eL L 22 04 36.0
KIS LRM MLR 22 10 10.0
comp=Z,500nm,16.0s
KIS Kishinev 75.09 324 eP P 21 34 02.0 -0.5
KIS e 21 34 14.0
KIS MLR MLR
comp=N,400nm,16.0s
KIS MLR MLR
comp=Z,500nm,16.0s
324A Moseley Ranch, 75.12 60 ⇓P P 21 34 03.8 +0.5
baz=75
Z27A Tatum 75.13 57 ⇓P P 21 34 03.6 +0.4
baz=75
126A Clayton Basin, 75.14 58 ⇑P P 21 34 03.9 +0.7
baz=75
X29A Tulia 75.20 56 ⇓P P 21 34 04.5 +1.0
baz=75
KWP Kalwaria Pacla 75.25 329 eP P 21 34 03.0 -0.4
KWP pmax pmax
comp=Z,45nm,1.1s
KWP Kalwaria Pacla 75.25 329 eP P 21 34 03.0 -0.4
comp=Z,45nm,1.1s
KWP Kalwaria Pacla 75.25 329 ⇓iP P 21 34 04.3 +0.9
KWP Kalwaria Pacla 75.25 329 eP P 21 34 03.7 +0.3
226B Tecolote Peak, 75.45 59 ⇑P P 21 34 05.7 +0.6
baz=75
325A Bean Ranch, Si 75.48 60 ⇑P P 21 34 05.8 +0.5
baz=75
W31A Holland Ranch, 75.66 54 ⇓P P 21 34 06.3 +0.2
baz=76
OJC Ojcow 75.75 331 eP P 21 34 06.7 +0.4
OJC pmax pmax
comp=Z,10.0nm,0.9s
OJC Ojcow 75.75 331 eP P 21 34 06.7 +0.4
comp=Z,10nm,0.9s
425A Indio Mountain 75.88 60 ⇑P P 21 34 08.6 +1.0
baz=76
STHS Stebnicka Huta 75.94 330 eP P 21 34 06.2 -1.2
STHS pmax pmax
comp=Z,5.0nm,1.0s
STHS Stebnicka Huta 75.94 330 eP P 21 34 06.2 -1.2
BUR08 Bucovina Ar. S 75.98 327 eP P 21 34 07.6 -0.3
KOLS Kolonicke sedl 75.99 329 eP P 21 34 07.8 +0.1
KOLS pmax pmax
comp=Z,9.0nm,1.2s
KOLS Kolonicke sedl 75.99 329 eP P 21 34 07.8 +0.1
BURAR Bucovina Array 76.00 327 ⇑iP P 21 34 08.3 +0.4
UZH Uzhgorod 76.23 329 eP P 21 34 05.9 -3.2
UZH e 21 34 16.1
CRVS Cervenica-Dubn 76.30 330 eP P 21 34 08.0 -1.5
CRVS pmax pmax
comp=Z,24nm,1.9s
CRVS Cervenica-Dubn 76.30 330 eP P 21 34 08.0 -1.5
TESR Tescani 76.35 325 ⇑iP P 21 34 10.0 +0.2
Z30A Sanderson Ranc 76.36 56 ⇓P P 21 34 10.7 +0.5
baz=76
426A McDonald Obser 76.54 60 ⇑P P 21 34 11.4 0.0
baz=76
TRPA Tarpa 76.57 328 ⇑iP P 21 34 11.8 +0.8
TRPA Tarpa 76.57 328 ⇑eP P 21 34 11.6 +0.6
OKC Ostrava-Krasne 76.63 332 eP P 21 34 11.3 0.0
OKC MLR MLR
comp=Z,300nm,19.7s
OKC Ostrava-Krasne 76.63 332 ⇑eP P 21 34 11.3 0.0
OKC AMS AMS 22 12 20.0
comp=Z,300nm,19.7s
UPC Upice 76.72 333 eP P 21 34 12.5 +0.7
UPC e 21 34 19.6
UPC Upice 76.72 333 ⇑eP P 21 34 12.5 +0.7
UPC epP **pP 21 34 19.6 -1.8**
328A Wristen Ranch, 76.76 58 ⇓P P 21 34 12.8 +0.4
baz=77
DPC Dobruska-Polom 76.76 333 eP P 21 34 12.4 +0.3
DPC pmax pmax
comp=Z,49nm,2.1s
DPC Dobruska-Polom 76.76 333 eP P 21 34 13.5 +1.4
DPC AMS AMS 22 12 10.0
comp=Z,300nm,14.7s
DPC Dobruska-Polom 76.76 333 eP P 21 34 12.4 +0.3
comp=Z,49nm,2.1s
427A Hayter Ranch, 76.79 59 ⇓P P 21 34 13.2 +0.6
baz=77
Y32A R-V Farms, Ver 76.80 54 ⇓P P 21 34 13.3 +0.7
baz=77
CFR Carcaliu 76.84 323 ⇑P P 21 34 13.5 +1.0
CFR Carcaliu 76.84 323 ⇑iP P 21 34 13.5 +1.0
VRI Vrincioaia 76.85 325 ⇑P P 21 34 13.7 +1.1
VRI Vrincioaia 76.85 325 ⇑iP P 21 34 13.6 +1.0
KRLC Kraliky 76.86 333 eP P 21 34 12.8 +0.1
KRLC Kraliky 76.86 333 ⇑eP P 21 34 12.8 +0.1
MORC Moravsky Berou 76.88 332 eP P 21 34 12.8 0.0
MORC pmax pmax
comp=Z,9.0nm,1.0s
MORC Moravsky Berou 76.88 332 eP P 21 34 12.8 0.0
comp=Z,8.7nm,1.0s
MORC Moravsky Berou 76.88 332 ⇓iP P 21 34 13.4 +0.6
Z31A Sharp Cattle R 76.90 55 ⇑P P 21 34 14.1 +0.9
baz=77
CLL Collm 76.91 336 eP P 21 34 12.5 -0.3
comp=Z,12nm,1.1s
CLL Collm 76.91 336 iP P 21 34 12.6 -0.3
CLL pmax pmax
comp=Z,12nm,1.1s
CLL Collm 76.91 336 iP P 21 34 12.6 -0.3
comp=Z,12nm,1.1s
CLL iP) **pP 21 34 18.3 -4.2**
CLL i 21 34 26.5
CLL eS **S 21 44 00.0 +1.6**
CLL ePS **PnS 21 44 36.0 -3.0**
CLL LmH 22 07 00.0
comp=N,100nm,21.5s
CLL LmH 22 07 00.0
comp=E,200nm,18.8s
CLL LmV 22 11 00.0
comp=Z,200nm,20.5s
229A Bryant Ranch, 76.92 57 ⇑P P 21 34 14.0 +0.6
baz=77
526A Mary Lane Ranc 76.94 60 ⇓P P 21 34 14.5 +0.9
baz=77
KECS Kecovo 77.00 330 eP P 21 34 13.2 -0.2
KECS pmax pmax
comp=Z,14nm,2.3s
KECS Kecovo 77.00 330 eP P 21 34 13.2 -0.2
PVCC Panska Ves 77.14 334 eP P 21 34 14.4 +0.2
PVCC Panska Ves 77.14 334 ⇑eP P 21 34 14.4 +0.2
329A Wagon Wheel Ra 77.17 58 ⇓P P 21 34 15.4 +0.6
baz=77
527A Woodward Ranch 77.17 60 ⇓P P 21 34 15.4 +0.5
baz=77
626A Big Bend Ranch 77.28 61 ⇓P P 21 34 15.6 +0.2
baz=77
Z32A Haskell 77.29 55 ⇑P P 21 34 15.5 +0.2
baz=77
428A Kincaid Ranch, 77.30 59 ⇓P P 21 34 16.3 +0.7
baz=77
IBBN Ibbenburen 77.41 339 eP P 21 34 15.6 0.0
comp=Z,14nm,1.2s
MLR Muntele Rosu 77.47 325 ⇑iP P 21 34 16.9 +0.6
VYHS Vyhne 77.56 331 eP P 21 34 17.1 +0.5
VYHS pmax pmax
comp=Z,5.0nm,1.1s
VYHS Vyhne 77.56 331 eP P 21 34 17.1 +0.5
VRAC Vranov 77.59 333 ⇑iP P 21 34 17.6 +0.9
PRU Pruhonice 77.63 334 eP P 21 34 17.5 +0.6
PRU e 21 34 21.7
PRU MLR MLR
comp=Z,300nm,14.2s
PRU Pruhonice 77.63 334 ⇑eP P 21 34 17.5 +0.6
PRU epP **pP 21 34 21.7 -4.8**
PRU AMS AMS 22 12 00.0
comp=Z,300nm,14.2s
DRGR 77.63 328 ⇑P P 21 34 18.0 +0.9
DRGR 77.63 328 ⇑iP P 21 34 18.0 +0.9
528A Cox Ranch, San 77.65 59 ⇑P P 21 34 17.8 +0.3
baz=78
PSZ Piszkesteto 77.69 330 eP P 21 34 17.0 -0.4
PSZ e 21 37 11.2
PSZ pmax pmax
comp=Z,22nm,1.5s
PSZ Piszkesteto 77.69 330 eP P 21 34 17.0 -0.4
comp=Z,22nm,1.5s
PSZ ePP **PP 21 37 11.2 -0.9**
PSZ Piszkesteto 77.69 330 ⇑iP P 21 34 18.7 +1.3
PSZ Piszkesteto 77.69 330 ⇓eP P 21 34 18.5 +1.1
330A Mertzon 77.70 57 ⇓P P 21 34 18.2 +0.4
baz=78
TXAR Lajitas Array 77.72 60 P P 21 34 18.2 +0.3
TXAR Lajitas Array 77.72 60 P P 21 34 18.2 +0.3
comp=Z,4.3nm,0.7s,baz=297,slow=4.2,SNR=36
627A Terlingua Ranc 77.80 60 ⇓P P 21 34 18.7 +0.3
baz=78
429A Davenport Ranc 77.85 58 ⇑P P 21 34 18.7 +0.1
baz=78
TANN Tannenbergstha 77.86 335 epP pP 21 34 32.7 +4.8
VOIR 77.87 325 ⇑P P 21 34 19.3 +0.9
VOIR 77.87 325 ⇑iP P 21 34 19.3 +0.9
MOX Moxa 77.90 336 eP P 21 34 18.5 +0.1
comp=Z,6.0nm,0.9s
MOX epP **PcP 21 34 32.8 +4.6**
MOX eL L 22 11 22.3
comp=Z,177nm,18.9s
MOX Moxa 77.90 336 eP P 21 34 18.5 +0.1
MOX e*PP **PcP 21 34 32.8 +4.6**
MOX pmax pmax
comp=Z,6.0nm,0.9s
MOX MLR MLR
comp=Z,200nm,18.9s
TREC Trest 77.95 333 eP P 21 34 18.9 +0.2
TREC e 21 34 24.8
TREC MLR MLR
comp=Z,300nm,18.3s
TREC Trest 77.95 333 ⇑eP P 21 34 18.9 +0.2
TREC epP **pP 21 34 24.8 -3.6**
TREC AMS AMS 22 13 40.0
comp=Z,300nm,18.3s
529A Stev Forest Ra 78.02 59 ⇓P P 21 34 19.7 +0.2
baz=78
NKC Novy Kostel 78.03 335 eP P 21 34 19.4 +0.2
NKC e 21 34 25.7
NKC MLR MLR
comp=Z,300nm,13.1s
NKC Novy Kostel 78.03 335 ⇑eP P 21 34 19.4 +0.2
NKC epP **pP 21 34 25.7 -3.1**
NKC AMS AMS 22 15 00.0
comp=Z,300nm,13.1s
628A Black Gap, Mar 78.08 60 ⇑P P 21 34 19.6 -0.2
baz=78
430A Baggett Ranch, 78.12 58 ⇓P P 21 34 20.2 +0.1
baz=78
UBBA Unterbreizbach 78.19 337 epP pP 21 34 34.8 +5.3
331A San Angelo 78.21 57 ⇑P P 21 34 20.9 +0.4
baz=78
232A Coleman 78.23 56 ⇑P P 21 34 21.0 +0.4
baz=78
BUG Bochum--Univer 78.33 339 epP pP 21 34 35.4 +5.1
BUD Budapest 78.36 330 ⇓eP P 21 34 22.3 +1.3
ZST Bratislava 78.39 332 eP P 21 34 21.9 +0.7
ZST pmax pmax
comp=Z,6.0nm,1.1s
ZST Bratislava 78.39 332 eP P 21 34 21.9 +0.7
STKA Stephens Creek 78.47 190 LR LR 22 08 31.4
comp=Z,165nm,18.6s,baz=206,slow=35
ROTZ Rotzenmuhle 78.52 335 eP P 21 34 22.3 +0.4
comp=Z,10.0nm,1.1s
ROTZ epP pP 21 34 36.7 +5.2
530A J-C Ranch, Com 78.52 58 ⇓P P 21 34 23.0 +0.7
baz=78
332A Millersview 78.55 57 ⇑P P 21 34 23.1 +0.7
baz=78
431A Sonora 78.56 58 ⇓P P 21 34 23.0 +0.5
baz=78
KHC Kasperske Hory 78.68 334 ⇑iP P 21 34 23.2 +0.4
KHC e 21 34 27.8
KHC e 21 34 31.7
KHC MLR MLR
comp=Z,300nm,14.3s
KHC Kasperske Hory 78.68 334 ⇑iP P 21 34 23.2 +0.4
KHC epP **PcP 21 34 27.8 -3.9**
KHC esP **sP 21 34 31.7 -4.3**
KHC AMS AMS 22 12 30.0
comp=Z,300nm,14.3s
KHC Kasperske Hory 78.68 334 eP P 21 34 23.3 +0.5
comp=Z,8.5nm,0.9s
BR131 Keskin Array S 78.75 317 eP P 21 34 23.2 -0.3
comp=Z,4.3nm,0.9s
BRTR Keskin Array B 78.75 317 P P 21 34 24.0 +0.5
BRTR Keskin Array B 78.75 317 P P 21 34 24.0 +0.5
comp=Z,3.5nm,0.9s,baz=64,slow=3.4,SNR=17
BRTR LR LR 22 15 13.7
comp=Z,235nm,18.3s,baz=264,slow=40
GZR Gura Zlata 78.78 327 ⇑P P 21 34 24.1 +0.6
GZR Gura Zlata 78.78 327 ⇑iP P 21 34 24.1 +0.6
GRF Grafenberg Arr 78.87 336 eP P 21 34 24.4 +0.6
comp=Z,16nm,1.0s
GRF epP pP 21 34 38.7 +5.3
GRF eL L 22 14 32.3
comp=Z,154nm,19.8s
GRF Grafenberg Arr 78.87 336 eP P 21 34 24.4 +0.6
GRF e*PP pP 21 34 38.7 +5.3
GRF pmax pmax
comp=Z,16nm,1.0s
GRF MLR MLR
comp=Z,200nm,19.8s
WET Wettzell 78.88 335 eP P 21 34 24.4 +0.5
comp=Z,7.0nm,1.0s
WET epP pP 21 34 38.8 +5.3
WET Wettzell 78.88 335 eP P 21 34 24.4 +0.5
WET e*PP pP 21 34 38.8 +5.3
WET pmax pmax
comp=Z,7.0nm,1.0s
432A Menard 78.89 57 ⇓P P 21 34 25.0 +0.7
baz=79
GEC2 GERESS Array S 78.90 334 eP P 21 34 24.2 +0.1
comp=Z,8.0nm,1.5s
GEC2 epP **pP 21 34 38.5 +4.8**
GEC2 GERESS Array S 78.90 334 eP P 21 34 24.2 +0.1
GEC2 e*PP **pP 21 34 38.5 +4.8**
GEC2 pmax pmax
comp=Z,8.0nm,1.5s
GEC2 GERESS Array S 78.90 334 eP P 21 34 24.5 +0.4
GERES GERESS Array B 78.90 334 P P 21 34 24.1 0.0
GERES GERESS Array B 78.90 334 P P 21 34 24.1 0.0
comp=Z,2.7nm,0.9s,baz=23,slow=4.4,SNR=20
GERES LR LR 22 13 11.5
comp=Z,327nm,18.1s,baz=246,slow=39
MIB Mutribah 78.93 302 eP P 21 34 24.7 +0.3
MIB AMb AMB 21 34 27.4
comp=Z,38nm,1.2s
531A Rocksprings 78.97 58 ⇑P P 21 34 24.4 -0.3
baz=79
SOP Sopron 79.02 332 ⇓eP P 21 34 26.1 +1.5
BZS Buzias 79.03 328 ⇑P P 21 34 25.5 +0.8
BZS Buzias 79.03 328 ⇑iP P 21 34 25.5 +0.8
CONA Conrad Observa 79.03 332 ⇑pP P 21 34 25.5 +0.7
comp=Z,12nm,1.4s
TNS Taunus Mts 79.14 338 epP pP 21 34 40.0 +5.0
532A Rocksprings 79.38 57 ⇓P P 21 34 27.6 +0.6
baz=79
NAY Al-Naaiem 79.39 301 eP P 21 34 27.0 0.0
NAY AMb AMB 21 34 30.1
comp=Z,18nm,1.2s
MEM Membach 79.41 339 P P 21 34 27.8 +1.2
comp=Z,12nm,1.2s
RDF Al-Radifah 79.44 301 eP P 21 34 27.9 +0.6
RDF AMb AMB 21 34 31.5
comp=Z,54nm,1.2s
631A Perdido Creek 79.51 58 ⇓P P 21 34 28.3 +0.7
baz=79
PKSM Moragy 79.59 330 ⇑P P 21 34 27.9 +0.1
PKSM Moragy 79.59 330 ⇑iP P 21 34 27.9 +0.1
PKSM Moragy 79.59 330 ⇓eP P 21 34 27.7 -0.1
TOD Tromm 79.61 337 eP P 21 34 28.2 +0.3
TOD Tromm 79.61 337 eP P 21 34 28.2 +0.3
BCLA Clavier 79.75 340 P P 21 34 29.7 +1.2
comp=Z,11nm,1.4s
632A Uvalde 79.90 58 ⇓P P 21 34 30.0 +0.2
baz=80
RUP Ruppelstein 79.98 338 eP P 21 34 31.0 +1.1
RUP Ruppelstein 79.98 338 eP P 21 34 31.0 +1.1
RJOB Jochberg 80.16 334 eP P 21 34 31.5 +0.6
comp=Z,8.0nm,1.0s
GIVF Givet 80.16 340 eP P 21 34 30.3 -0.5
GIVF Givet 80.16 340 eP P 21 34 30.3 -0.5
GIVF Givet 80.16 340 eP P 21 34 30.3 -0.5
DOU Dourbes 80.22 340 P P 21 34 31.0 -0.1
comp=Z,5.7nm,1.6s
FUR Furstenfeldbru 80.23 335 eP P 21 34 31.4 +0.2
comp=Z,21nm,1.3s
FUR Furstenfeldbru 80.23 335 eP P 21 34 31.4 +0.2
FUR pmax pmax
comp=Z,21nm,1.3s
STU Stuttgart 80.27 337 eP P 21 34 31.8 +0.4
comp=Z,12nm,1.1s
STU epP pP 21 34 46.3 +5.3
BAIF Baives 80.35 340 eP P 21 34 31.3 -0.5
comp=Z,45nm,1.5s
BAIF Baives 80.35 340 eP P 21 34 31.3 -0.5
BAIF pmax pmax
comp=Z,45nm,1.5s
BAIF Baives 80.35 340 eP P 21 34 31.3 -0.5
comp=Z,45nm,1.5s
732A Laxson Ranch, 80.37 58 ⇓P P 21 34 33.4 +1.1
baz=80
KBA Koelnbreinsper 80.58 333 ⇑ipP P 21 34 34.7 +1.4
comp=Z,23nm,1.3s
BFO Black Forest 80.91 337 eP P 21 34 35.0 +0.1
comp=Z,10.0nm,1.0s
BFO epP pP 21 34 49.5 +5.0
BFO Black Forest 80.91 337 eP P 21 34 35.0 +0.1
BFO pmax pmax
comp=Z,10.0nm,1.0s
BFO Black Forest 80.91 337 eP P 21 34 35.0 +0.1
WTTA Wattenberg 80.93 335 ⇑ipP P 21 34 35.6 +0.4
comp=Z,14nm,0.7s
VTS Vitosha 80.97 325 ⇑P P 21 34 36.5 +1.0
VTS Vitosha 80.97 325 ⇑iP P 21 34 36.5 +1.0
SPAK Spaichingen-Ko 80.99 337 eP P 21 34 35.3 -0.1
CDF Champ du Feu 81.11 338 eP P 21 34 35.7 -0.3
comp=Z,27nm,1.1s
CDF Champ du Feu 81.11 338 eP P 21 34 35.7 -0.3
CDF pmax pmax
comp=Z,27nm,1.1s
CDF Champ du Feu 81.11 338 eP P 21 34 35.7 -0.3
comp=Z,27nm,1.1s
ALN Alexandroupoli 81.22 322 eP P 21 34 36.8 +0.2
RDO Rodhopi 81.23 323 eP P 21 34 37.6 +0.9
ECH Echery 81.32 338 eP P 21 34 36.8 -0.3
ECH pmax pmax
comp=Z,12nm,1.1s
ECH Echery 81.32 338 eP P 21 34 36.8 -0.3
comp=Z,12nm,1.1s
ECH Echery 81.32 338 eP P 21 34 38.8 +1.7
PAGF Fort de Pagny 81.38 339 eP P 21 34 37.4 +0.1
comp=Z,19nm,1.2s
PAGF Fort de Pagny 81.38 339 eP P 21 34 37.4 +0.1
comp=Z,19nm,1.2s
FELD Feldberg im Sc 81.41 337 eP P 21 34 37.6 -0.1
MEZF Maizieres J'vi 81.59 339 eP P 21 34 38.5 0.0
comp=Z,23nm,1.0s
MEZF Maizieres J'vi 81.59 339 eP P 21 34 38.5 0.0
comp=Z,23nm,1.0s
THEF They Montfort 81.61 338 eP P 21 34 39.0 +0.4
THEF They Montfort 81.61 338 eP P 21 34 39.0 +0.4
THEF They Montfort 81.61 338 eP P 21 34 39.0 +0.4
MOF Molkenrain 81.66 338 eP P 21 34 38.7 -0.3
MOF Molkenrain 81.66 338 eP P 21 34 38.7 -0.3
MOF Molkenrain 81.66 338 eP P 21 34 38.7 -0.3
HAU Haudompre 81.73 338 eP P 21 34 38.8 -0.4
comp=Z,20nm,1.1s
HAU eR
comp=Z,273nm,18.8s
HAU Haudompre 81.73 338 eP P 21 34 38.8 -0.4
HAU pmax pmax
comp=Z,20nm,1.1s
HAU Haudompre 81.73 338 eP P 21 34 38.8 -0.4
comp=Z,20nm,1.1s
NVR Nevrokopi 81.76 324 eP P 21 34 39.5 0.0
HINF Hinteralfeld 81.77 338 eP P 21 34 38.8 -0.7
comp=Z,6.8nm,0.8s
HINF Hinteralfeld 81.77 338 eP P 21 34 38.8 -0.7
HINF pmax pmax
comp=Z,7.0nm,0.8s
HINF Hinteralfeld 81.77 338 eP P 21 34 38.8 -0.7
comp=Z,6.8nm,0.8s
PPT Papeete 81.86 126 LR LR 22 02 13.2
comp=Z,270nm,20.7s,baz=3.6,slow=29
SFTF Sexfontaines 81.87 339 eP P 21 34 39.7 -0.3
comp=Z,35nm,1.0s
SFTF Sexfontaines 81.87 339 eP P 21 34 39.7 -0.3
comp=Z,35nm,1.0s
PPT2 Papeete2 81.88 126 eLR LR 21 59 53.6
comp=Z,316nm,24.2s
FUORN Ofenpass-Fuorn 81.92 335 eP P 21 34 43.0 +2.4
comp=Z,9.8nm,1.0s
BBS Basel-Blauen 81.92 337 eP P 21 34 40.9 +0.6

BBS Basel-Blauen 81.92 337 *e*P P 21 34 40.9 +0.6
LOMF Lomont 82.21 338 *e*P P 21 34 43.3 +1.5
LOMF Lomont 82.21 338 *e*P P 21 34 43.3 +1.5
LOMF Lomont 82.21 338 *e*P P 21 34 43.3 +1.5
TUE Stuetta 82.32 336 *e*P P 21 34 44.1 +1.6
LIA Limnos Island 82.42 322 *e*P P 21 34 43.4 +0.5
FLN La Foliniere 82.60 343 *e*P P 21 34 43.8 +0.1
comp=Z,33nm,1.1s
FLN *e*R
comp=Z,213nm,19.5s
FLN La Foliniere 82.60 343 *e*P P 21 34 43.8 +0.1
FLN pmax pmax
comp=Z,33nm,1.1s
FLN La Foliniere 82.60 343 *e*P P 21 34 43.8 +0.1
comp=Z,33nm,1.1s
LDF La Druitiere 82.69 342 *e*P P 21 34 44.1 -0.1
comp=Z,28nm,1.2s
LDF La Druitiere 82.69 342 *e*P P 21 34 44.1 -0.1
LDF pmax pmax
comp=Z,28nm,1.2s
LDF La Druitiere 82.69 342 *e*P P 21 34 44.1 -0.1
comp=Z,28nm,1.2s
PLG Polygyros 82.75 324 *e*P P 21 34 44.4 -0.3
SWET Sewanee 83.03 45 *e*P P 21 34 47.2 +0.9
comp=Z,18nm,1.3s
GRR Gorron 83.03 343 *e*P P 21 34 45.6 -0.4
comp=Z,22nm,1.0s
GRR Gorron 83.03 343 *e*P P 21 34 45.6 -0.4
GRR pmax pmax
comp=Z,22nm,1.0s
GRR Gorron 83.03 343 *e*P P 21 34 45.6 -0.4
comp=Z,22nm,1.0s
LOR Lormes 83.04 339 *e*P P 21 34 45.9 -0.2
comp=Z,28nm,1.1s
LOR *e*R
comp=Z,184nm,20.0s
LOR Lormes 83.04 339 *e*P P 21 34 45.9 -0.2
comp=Z,28nm,1.1s
CABF La Chapelle 83.08 338 *e*P P 21 34 46.4 0.0
comp=Z,6.8nm,0.8s
CABF La Chapelle 83.08 338 *e*P P 21 34 46.4 0.0
CABF pmax pmax
comp=Z,7.0nm,0.8s
CABF La Chapelle 83.08 338 *e*P P 21 34 46.4 0.0
comp=Z,6.8nm,0.8s
FNA Florina 83.23 325 *e*P P 21 34 47.6 +0.3
CHOS Chios island 83.30 321 *e*P P 21 34 44.1 -3.6
SSF Saint Saulge 83.31 340 *e*P P 21 34 47.6 +0.1
comp=Z,12nm,0.9s
SSF Saint Saulge 83.31 340 *e*P P 21 34 47.6 +0.1
SSF pmax pmax
comp=Z,12nm,0.9s
SSF Saint Saulge 83.31 340 *e*P P 21 34 47.6 +0.1
comp=Z,12nm,0.9s
HYF Humbligny 83.33 340 *e*P P 21 34 47.7 +0.1
HYF Humbligny 83.33 340 *e*P P 21 34 47.7 +0.1
SGMF Saint Gilles 83.50 344 *e*P P 21 34 47.9 -0.5
comp=Z,31nm,1.2s
SGMF Saint Gilles 83.50 344 *e*P P 21 34 47.9 -0.5
SGMF pmax pmax
comp=Z,31nm,1.2s
SGMF Saint Gilles 83.50 344 *e*P P 21 34 47.9 -0.5
comp=Z,31nm,1.2s
ROSF Rostrenen 83.56 344 *e*P P 21 34 48.4 -0.3
ROSF Rostrenen 83.56 344 *e*P P 21 34 48.4 -0.3
ROSF Rostrenen 83.56 344 *e*P P 21 34 48.4 -0.3
AVF Avril sur Loir 83.61 340 *e*P P 21 34 49.2 +0.2
comp=Z,44nm,1.2s
AVF Avril sur Loir 83.61 340 *e*P P 21 34 49.2 +0.2
AVF pmax pmax
comp=Z,44nm,1.2s
AVF Avril sur Loir 83.61 340 *e*P P 21 34 49.2 +0.2
comp=Z,44nm,1.2s
SMF Signal de Mont 83.62 339 *e*P P 21 34 48.9 -0.2
comp=Z,78nm,1.4s
SMF Signal de Mont 83.62 339 *e*P P 21 34 48.9 -0.2
SMF pmax pmax
comp=Z,78nm,1.4s
SMF Signal de Mont 83.62 339 *e*P P 21 34 48.9 -0.2
comp=Z,78nm,1.4s
LPL La Plagne 83.92 337 *e*P P 21 34 51.3 +0.4
comp=Z,14nm,0.8s
LPL La Plagne 83.92 337 *e*P P 21 34 51.3 +0.4
LPL pmax pmax
comp=Z,14nm,0.8s
LPL La Plagne 83.92 337 *e*P P 21 34 51.3 +0.4
comp=Z,14nm,0.8s
LPG La Plagne 83.94 337 *e*P P 21 34 51.7 +0.6
comp=Z,36nm,1.3s
LPG La Plagne 83.94 337 *e*P P 21 34 51.7 +0.6
LPG pmax pmax
comp=Z,36nm,1.3s
LPG La Plagne 83.94 337 *e*P P 21 34 51.7 +0.6
comp=Z,36nm,1.3s
QUIF Quistinic 83.94 344 *e*P P 21 34 50.1 -0.5
comp=Z,33nm,1.3s
QUIF Quistinic 83.94 344 *e*P P 21 34 50.1 -0.5
QUIF pmax pmax
comp=Z,33nm,1.3s
QUIF Quistinic 83.94 344 *e*P P 21 34 50.1 -0.5
comp=Z,33nm,1.3s
BGF Bois d'Agland 83.94 340 *e*P P 21 34 50.3 -0.4
comp=Z,8.7nm,0.8s
BGF Bois d'Agland 83.94 340 *e*P P 21 34 50.3 -0.4
BGF pmax pmax
comp=Z,9.0nm,0.8s
BGF Bois d'Agland 83.94 340 *e*P P 21 34 50.3 -0.4
comp=Z,8.7nm,0.8s
TCF Toulx Ste Croi 84.35 340 *e*P P 21 34 52.8 0.0
comp=Z,19nm,1.1s
TCF Toulx Ste Croi 84.35 340 *e*P P 21 34 52.8 0.0
TCF pmax pmax
comp=Z,19nm,1.1s
TCF Toulx Ste Croi 84.35 340 *e*P P 21 34 52.8 0.0
comp=Z,19nm,1.1s
AGO Saint Agoulin 84.35 340 *e*P P 21 34 53.3 +0.5
AGO Saint Agoulin 84.35 340 *e*P P 21 34 53.3 +0.5
MFF Saint Martin d 84.58 342 *e*P P 21 34 54.0 0.0
comp=Z,16nm,1.1s
MFF Saint Martin d 84.58 342 *e*P P 21 34 54.0 0.0
MFF pmax pmax
comp=Z,16nm,1.0s
MFF Saint Martin d 84.58 342 *e*P P 21 34 54.0 0.0
comp=Z,16nm,1.0s
MBDF Montbardon 84.64 337 *e*P P 21 34 54.7 +0.2
MBDF Montbardon 84.64 337 *e*P P 21 34 54.7 +0.2
MBDF Montbardon 84.64 337 *e*P P 21 34 54.7 +0.2
RAYN Ar Rayn 84.67 299 *e*P P 21 34 55.3 +0.5
comp=Z,22nm,1.8s
ORIF Oris-en-Rattie 84.71 337 *e*P P 21 34 55.4 +0.7
comp=Z,30nm,1.1s
ORIF *e*R
comp=Z,160nm,19.2s
ORIF Oris-en-Rattie 84.71 337 *e*P P 21 34 55.4 +0.7
ORIF pmax pmax
comp=Z,30nm,1.1s
ORIF Oris-en-Rattie 84.71 337 *e*P P 21 34 55.4 +0.7
comp=Z,30nm,1.1s
SSB Saint Sauveur 84.72 338 *e*P P 21 34 54.7 0.0
SSB pmax pmax
comp=Z,7.0nm,1.0s
SSB Saint Sauveur 84.72 338 *e*P P 21 34 54.7 0.0
comp=Z,7.2nm,1.0s
VIVF Saint-Julien-l 85.08 338 *e*P P 21 34 57.3 +0.7
comp=Z,12nm,0.9s
VIVF Saint-Julien-l 85.08 338 *e*P P 21 34 57.3 +0.7
VIVF pmax pmax
comp=Z,12nm,0.9s
VIVF Saint-Julien-l 85.08 338 *e*P P 21 34 57.3 +0.7
comp=Z,12nm,0.9s
DID Didima 85.25 322 *e*P P 21 34 56.0 -1.5
SBF Sospel 85.25 336 *e*P P 21 34 58.3 +0.8
SBF Sospel 85.25 336 *e*P P 21 34 58.3 +0.8
SBF Sospel 85.25 336 *e*P P 21 34 58.3 +0.8
RJF Les Rejaudoux 85.44 340 *e*P P 21 34 59.0 +0.7
comp=Z,27nm,1.2s
RJF *e*R
comp=Z,199nm,23.0s
RJF Les Rejaudoux 85.44 340 *e*P P 21 34 59.0 +0.7
RJF pmax pmax
comp=Z,27nm,1.2s
RJF Les Rejaudoux 85.44 340 *e*P P 21 34 59.0 +0.7
comp=Z,27nm,1.2s
CAF Calviac 85.67 340 *e*P P 21 35 00.6 +1.1
comp=Z,22nm,1.2s
CAF Calviac 85.67 340 *e*P P 21 35 00.6 +1.1
CAF pmax pmax
comp=Z,22nm,1.2s
CAF Calviac 85.67 340 *e*P P 21 35 00.6 +1.1
comp=Z,22nm,1.2s
LFF La Frestale 85.96 341 *e*P P 21 35 01.3 +0.4
comp=Z,8.8nm,0.8s
LFF La Frestale 85.96 341 *e*P P 21 35 01.3 +0.4
LFF pmax pmax
comp=Z,9.0nm,0.8s
LFF La Frestale 85.96 341 *e*P P 21 35 01.3 +0.4
comp=Z,8.8nm,0.8s
LMR La Mourre 86.00 336 *e*P P 21 35 00.9 -0.2
comp=Z,61nm,1.4s
LMR La Mourre 86.00 336 *e*P P 21 35 00.9 -0.2
LMR pmax pmax
comp=Z,61nm,1.4s
LMR La Mourre 86.00 336 *e*P P 21 35 00.9 -0.2
comp=Z,61nm,1.4s
LASF Ste Croix 86.02 338 *e*P P 21 35 00.8 -0.4
comp=Z,16nm,1.1s
LASF Ste Croix 86.02 338 *e*P P 21 35 00.8 -0.4
comp=Z,16nm,1.1s
NPS Neapolis 86.09 319 *e*P P 21 35 01.9 +0.2
DYR Agios Nikonas 86.26 322 *e*P P 21 34 55.1 -7.5
TBI Tubuai 86.58 129 *e*LR LR 22 01 14.4
baz=324
MTLF Montolieu 87.12 339 *e*P P 21 35 07.9 +1.3
comp=Z,14nm,1.2s
MTLF Montolieu 87.12 339 *e*P P 21 35 07.9 +1.3
MTLF pmax pmax
comp=Z,14nm,1.2s
MTLF Montolieu 87.12 339 *e*P P 21 35 07.9 +1.3
comp=Z,14nm,1.2s
EPF Esparros 87.86 340 *e*P P 21 35 11.3 +1.1
EPF Esparros 87.86 340 *e*P P 21 35 11.3 +1.1
EPF Esparros 87.86 340 *e*P P 21 35 11.3 +1.1
ETSF Etsaut 88.19 341 *e*P P 21 35 11.6 -0.3
ETSF Etsaut 88.19 341 *e*P P 21 35 11.6 -0.3
ETSF Etsaut 88.19 341 *e*P P 21 35 11.6 -0.3
ESDC Sonseca Array 92.02 343 P P 21 35 29.2 -0.6
ESDC Sonseca Array 92.02 343 P P 21 35 29.2 -0.6
comp=Z,0.1nm,0.3s,baz=345,slow=4.0,SNR=4.1
ESDC LR LR 22 19 10.4
comp=Z,87nm,20.1s,baz=20,slow=37
KEST Kesra 92.10 331 LR LR 22 19 53.1
comp=Z,55nm,19.4s,baz=261,slow=38
RKT Rikitea 94.74 119 *e*LR LR 22 05 33.3
comp=Z,221nm,33.0s
CFAA Coronel Fontan 145.07 80 PKPbc PKPbc 21 41 57.0 -0.4
CFAA Coronel Fontan 145.07 80 PKPbc PKPbc 21 41 57.0 -0.4
comp=Z,0.8nm,0.7s,baz=307,slow=3.2,SNR=5.2
PLCA Paso Flores 148.15 96 *e*PKPdf PKPdf 21 42 04.3 +1.3
PLCA PKPbc PKPbc 21 42 05.4 -0.9
PLCA Paso Flores 148.15 96 PKPbc PKPbc 21 42 05.4 -0.9
comp=Z,7.4nm,0.9s,baz=250,slow=4.3,SNR=10
SNAA Sanae 152.09 196 *e*PKP PKPbc 21 42 13.7 -1.1
SNAA Sanae 152.09 196 *e*PKPdf PKPdf 21 42 07.5 -0.6

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*SZGRF **01** 21:25:14.0, 20°.55S×169°.15E, h33^{km}, Vanuatu Islands*
*IDC **01** 21:25:17.8±0.4, 17°.81S×167°.90E, h0^{km}, mb4.7/24, mb1 4.8/27, mb1mx4.8/29, mbtmp4.7/27, ML3.9/1, MS4.5/26, Ms1 4.5/26, ms1mx4.4/31, Error ellipse: s-maj=15.0km s-min=12.7km az=102.0*
*MOS **01** 21:25:22.9±1.1, 17°.72S×167°.72E, h40^{km}, mb5.3/28, Error ellipse: s-maj=9.7km s-min=8.4km az=32.3*
*NEIC **01** 21:25:23.3±0.2, 17°.73S×167°.79E, h35^{km}, mb5.0/35, Error ellipse: s-maj=6.1km s-min=5.0km az=142.0*
NEIC Felt at Port-Vila.
*DJA **01** 21:25:23.3±0.6, 18°S±6°×16°8E±°, h15^{km}, M4.9/18, mB5.4/4, mb4.9/18, Mw(mB)4.8/4*
*BGS **01** 21:25:23.2±3.9, 17°.73S×167°.79E, h33^{km}, mb5.0(NEIC)*
*ISCJB **01** 21:25:25.6±0.2, 17°.85S±0°.04×167°.79E±0°.05, h70^{km}, mb4.8/72, Error ellipse: s-maj=6.4km s-min=5.4km az=31.8*
*BJI **01** 21:25:26.0, 17°.69S×168°.03E, h74^{km}, mB5.0/28, mb4.8/37, Ms5.0/30, Ms7 4.6/29*
*GCMT **01** 21:25:26.1±0.2, 17°.72S×167°.68E, h20^{km}, MW5.2, Moment Tensor Solution. s73,c102; s86,c142; Moment tensor: Scale 10^{16}Nm; M_{rr}5.50±.17; $M_{\theta\theta}$0.32±.12; $M_{\phi\phi}$-5.82±.13; $M_{r\theta}$2.05±.25; $M_{\theta\phi}$0.62±.08; $M_{\phi r}$-4.37±.23; Best double couple: $M_0$7.50000×10^{16} NP1:ϕ_s7.00000°, δ27.00000°, λ113.00000°. NP2:ϕ_s162.00000°, δ65.00000°, λ79.00000°. Principal axes: T 7.4200, Plg68.0000°, Azm51.0000°; N 0.0900, Plg10.0000°, Azm166.0000°; P -7.5200, Plg20.0000°, Azm260.0000°; Data Used: II IU G CN IC.*
ISC 01 21:25:27.3±0.3**, 17°.90S**±0°.04×**167°.82E**±0°.05**, h71**^{km}±2km**, h71**^{km}**:pP-P, n441, σ1°51**/434**, mb4.9**/71**, 20C-6D, Vanuatu Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res ISC
BAYA Yate Dam 4.32 192 *e*P Pn 21 26 28.8 -1.6
BAYA *e*S Sn 21 27 15.3 -4.2
DZM Mont Dzumac 4.34 197 *e*P Pn 21 26 29.0 -1.9
DZM *e*S Sn 21 27 13.1 -7.2
DZM *e*LR LR 21 27 25.6
DZM Mont Dzumac 4.34 197 Pn Pn 21 26 26.8 -4.1
DZM Mont Dzumac 4.34 197 Pn Pn 21 26 26.8 -4.1
6.1nm,0.3s,baz=40,slow=18,SNR=49
DZM LR LR 21 28 04.1
comp=Z,6μm,18.1s,baz=17,slow=37
NOUC Port Laguerre 4.41 199 *e*P Pn 21 26 29.2 -2.5
NOUC *e*S Sn 21 27 17.5 -4.3
MSVF Nonsavu 9.75 91 *e*P Pn 21 27 45.2 +0.4
MSVF *e* 21 29 43.5
MSVF Nonsavu 9.75 91 *e*Pn Pn 21 27 45.2 +0.4
MSVF *e*Sn Sn 21 29 43.5 +11
MSVF Nonsavu 9.75 91 Pn Pn 21 27 46.0 +1.2
1μm,1.1s,SNR=15
HNR Honiara 11.37 317 *e*Pn Pn 21 28 02.0 -4.9
HNR *e*Sn Sn 21 30 04.2 -8.1
HNR Honiara 11.37 317 Pn Pn 21 28 01.9 -5.0
8.2nm,0.3s,baz=185,slow=7.1,SNR=6.7
HNR LR LR 21 31 59.3
comp=Z,2μm,19.6s,baz=140,slow=35
EIDS Eidsvold 17.23 242 *e*Pn P 21 29 23.6 -0.2
218nm,1.6s
OUZ Omahuta 18.00 165 *e*P Pn 21 29 33.8 +1.2
40nm,0.8s
OUZ *e*S S 21 32 54.0 -0.1
ARMA Armidale 19.29 227 *e*Pn Pn 21 29 48.8 +0.5
51nm,1.3s
TARA Tarawa 19.79 15 *e*P P 21 29 51.6 -0.3
263nm,1.4s
AFI Afiamalu 20.02 81 *e*P P 21 29 55.3 +0.7
AFI Afiamalu 20.02 81 P P 21 29 51.8 -2.7
1.8nm,0.3s,baz=214,slow=7.3,SNR=3.8
AFI LR LR 21 35 44.8
comp=Z,2μm,21.9s,baz=263,slow=32
CTA Charters Tower 20.50 260 P P 21 30 00.0 +0.3
CTA Charters Tower 20.50 260 P P 21 30 00.0 +0.3
29nm,1.1s,baz=81,slow=15,SNR=9.5
CTA LR LR 21 36 47.7
comp=Z,2μm,21.5s,baz=177,slow=34
CTAO Charters Tower 20.50 260 *e*P P 21 29 59.4 -0.3
CTAO pmax pmax
comp=Z,53nm,1.0s
CTAO Charters Tower 20.50 260 *e*P P 21 29 59.4 -0.3
comp=Z,53nm,1.0s
PMG Port Moresby 21.76 290 *e*P P 21 30 11.8 -1.4
comp=Z,71nm,1.1s
PMG Port Moresby 21.76 290 P P 21 30 20.4 +7.2
comp=Z,69nm,1.1s
PMG Port Moresby 21.76 290 P P 21 30 12.1 -1.1
comp=Z,10nm,0.7s,baz=90,slow=16,SNR=3.7
PMG LR LR 21 37 48.5
comp=Z,1μm,18.6s,baz=94,slow=34
URZ Urewera 21.85 160 *e*P P 21 30 15.7 +1.8
URZ Urewera 21.85 160 P P 21 30 12.8 -1.1
comp=Z,13nm,0.8s,baz=306,slow=6.8,SNR=4.1
URZ LR LR 21 37 52.9
comp=Z,1μm,18.4s,baz=235,slow=34
COEN Coen 24.01 276 *e*P P 21 30 35.2 -0.4
comp=Z,304nm,1.1s
SNZO South Karori 24.07 167 *e*P P 21 30 36.6 +0.8
comp=Z,561nm,1.9s
KHZ Kahutara 24.92 170 *e*P P 21 30 46.2 +2.7
comp=Z,354nm,1.9s
RPZ Rata Peaks 25.88 175 *e*P P 21 30 54.0 +1.7
comp=Z,60nm,1.1s
RPZ Rata Peaks 25.88 175 LR LR 21 39 55.0
comp=Z,539nm,20.9s,baz=346,slow=34
STKA Stephens Creek 27.46 235 *e*P P 21 31 07.5 +0.8
STKA PcP PcP 21 34 24.6 +0.8
STKA Stephens Creek 27.46 235 P P 21 31 06.9 +0.2
comp=Z,20nm,1.0s,baz=60,slow=7.4,SNR=24
STKA PcP PcP 21 34 24.6 +0.8
comp=Z,4.3nm,0.8s,baz=66,slow=3.0,SNR=3.5
STKA LR LR 21 41 57.9
comp=Z,2μm,18.6s,baz=58,slow=36
RAR Rarotonga 30.69 102 LR LR 21 40 47.1
comp=Z,812nm,18.6s,baz=315,slow=30
WRAB Tennant Creek 31.69 261 *e*P P 21 31 43.2 -1.2
WRAB pmax pmax
comp=Z,14nm,1.0s
WRAB Tennant Creek 31.69 261 *e*P P 21 31 43.2 -1.2
comp=Z,14nm,1.0s
WRA Warramunga Arr 31.70 261 P P 21 31 42.9 -1.5
WRA PcP PcP 21 34 35.7 +0.9
WRA *e* 22 03 16.6
WRA Warramunga Arr 31.70 261 P P 21 31 42.9 -1.5
comp=Z,2.9nm,0.8s,baz=81,slow=6.1,SNR=15
WRA PcP PcP 21 34 35.7 +0.9
comp=Z,1.5nm,0.8s,baz=92,slow=3.1,SNR=3.4
WRA LR LR 21 43 36.6
comp=Z,1μm,21.3s,baz=100,slow=35
WRA P3KPbc 22 03 16.6
comp=Z,1.3nm,0.8s,baz=278,slow=3.5,SNR=8.6
BBOO Buckleboo 32.16 236 *e*P P 21 31 48.4 +0.2
comp=Z,292nm,0.9s
AS31 Alice Springs 32.17 254 *e*P P 21 31 46.9 -1.6
ASAR Alice Springs 32.17 254 P P 21 31 47.2 -1.3
ASAR PcP PcP 21 34 36.7 +0.6
ASAR ScP ScP 21 38 20.8 +7.2
ASAR Alice Springs 32.17 254 P P 21 31 47.2 -1.3
comp=Z,6.5nm,0.9s,baz=80,slow=8.8,SNR=51
ASAR PcP PcP 21 34 36.7 +0.6
comp=Z,1.8nm,0.8s,baz=51,slow=3.7,SNR=3.0
ASAR ScP ScP 21 38 20.8 +7.2
comp=Z,1.4nm,0.9s,baz=93,slow=4.3,SNR=5.2
ASAR LR LR 21 44 47.4
comp=Z,2μm,18.0s,baz=81,slow=36
FORT Forrest 38.23 243 *e*P P 21 32 40.3 -0.1
comp=Z,36nm,0.8s
FITZ Fitzroy Crossi 40.05 263 *e*P P 21 32 55.3 -0.5
comp=Z,33nm,0.9s
TBI Tubuai 40.24 105 *e*S S 21 39 05.3 +5.7
comp=Z,348nm,27.5s
TBI *e*LQ LQ 21 42 20.2
comp=Z,1μm,27.0s
TBI *e*LR LR 21 44 27.6
comp=Z,790nm,26.0s,baz=271
PPT2 Papeete2 40.52 96 *e*P P 21 32 49.4 -10
PPT2 *e*S S 21 38 56.0 -7.9
comp=Z,376nm,24.8s
PPT2 *e*LQ LQ 21 42 30.0
PPT2 *e*LR LR 21 44 36.8
comp=Z,1μm,25.5s,baz=250
PPT Papeete 40.52 96 LR LR 21 45 33.2
comp=Z,665nm,19.0s,baz=358,slow=30
MBWA Marble Bar 45.30 258 *e*P P 21 33 38.7 +0.3
comp=Z,19nm,0.9s
NWAO Narrogin (SRO) 47.64 242 *e*P P 21 33 56.0 -0.5
comp=Z,52nm,2.3s
NWAO Narrogin (SRO) 47.64 242 P P 21 33 56.8 +0.2
comp=Z,10nm,0.8s,baz=93,slow=6.8,SNR=5.4
KAPI Kappang 48.66 279 *e*P P 21 34 04.0 -0.6
comp=Z,38nm,1.0s
KAPI Kappang 48.66 279 P P 21 34 04.1 -0.6
comp=Z,17nm,1.0s,baz=109,slow=4.6,SNR=4.9
RKT Rikitea 53.56 106 *e*LR LR 21 50 32.1
comp=Z,588nm,26.2s
SBUM Sibu 58.36 284 P P 21 35 21.9 +6.3
comp=Z,9.4nm,1.4s,comp=Z,326nm
VNDA Vanda 59.72 182 *e*P P 21 35 25.1 +1.1
VNDA Vanda 59.72 182 P P 21 35 24.3 +0.2
comp=Z,2.3nm,0.9s,baz=12,slow=6.5,SNR=9.1
KSM Kuching 59.77 283 *e*P P 21 35 26.2 +0.8
KSM Kuching 59.77 283 P P 21 35 29.3 +3.9
comp=Z,27nm,1.1s
SBA Scott Base 59.98 180 *e*P P 21 35 27.8 +2.0
SBA Scott Base 59.98 180 *e*P P 21 35 27.8 +2.0
MJAR Matsushiro Arr 60.95 333 P P 21 35 32.0 -1.0
MJAR Matsushiro Arr 60.95 333 P P 21 35 32.0 -1.0
comp=Z,15nm,1.0s,baz=170,slow=7.5,SNR=36
MJAR LR LR 22 01 00.1
comp=Z,105nm,18.2s,baz=125,slow=35
MAJO Matsushiro 60.95 333 *e*P P 21 35 32.6 -0.4
MAJO Matsushiro 60.95 333 *e*P P 21 35 32.6 -0.4
MAT Matsushiro 60.95 333 P P 21 35 31.8 -1.2
ASAJ Asahikawa 65.89 340 *e*P P 21 36 05.2 -0.2
comp=Z,12nm,1.1s
ASAJ *e*PP PP 21 38 31.1 -0.4
KSRS Korea Array 66.65 326 P P 21 36 10.5 +0.2
comp=Z,0.5nm,0.4s,baz=147,slow=5.3,SNR=2.9
KSRS LR LR 22 03 32.7
comp=Z,200nm,19.8s,baz=129,slow=34
KSAR Wonju Array Be 66.66 326 P P 21 36 10.5 +0.1
MIR Mirnyy 67.67 205⇓*i*P P 21 36 25.0 +8.5
MIR pmax pmax
comp=Z,42nm,1.0s
QIZ Qiongzhong 67.75 300 P P 21 36 18.4 +0.6
QIZ S S 21 45 10.9 +0.5
QIZ pmax pmax
comp=Z,15nm,1.2s
QIZ pmax pmax
comp=Z,66nm,4.1s
QIZ LR LR
comp=N,330nm,17.2s
QIZ LR LR
comp=Z,350nm,18.8s
NJ2 Nanjing 68.32 316 *e*P P 21 36 21.6 +0.6
NJ2 sP sP 21 36 44.8 -3.0
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
NJ2 pmax pmax
comp=Z,130nm,6.3s
YSS Yuzh-Sakhalins 68.39 342⇑*i*P P 21 36 23.2 +2.0
YSS *e* 21 36 32.7
YSS pmax pmax
comp=Z,60nm,1.0s
IPM Ipoh 69.49 282 *e*P P 21 36 28.4 -0.4
comp=Z,12nm,0.9s
IPM Ipoh 69.49 282 P pP 21 36 44.1 -3.6
UBPT Khong Chiam 69.73 294 P P 21 36 41.0 +11
USRK Ussuriysk Arra 69.94 333 P P 21 36 31.5 +0.8
comp=Z,10nm,1.1s,baz=130,slow=5.2,SNR=15
USRK LR LR 22 03 39.6
comp=Z,138nm,21.4s,baz=143,slow=33
KULM Kulim 70.12 283 P P 21 36 42.7 +10
PSI Prapat 70.87 280 P P 21 36 45.8 +8.4
PET Petropavlovsk 71.08 354 *i* P P 21 36 36.2 -1.3
PET pmax pmax
comp=Z,27nm,1.3s
PEA0B Petropavlovsk- 71.26 354 *e*P P 21 36 38.3 -0.3
PETK Petropavlovsk- 71.26 354 P P 21 36 38.3 -0.4
PETK Petropavlovsk- 71.26 354 P P 21 36 38.2 -0.4
PETK Petropavlovsk- 71.26 354 P P 21 36 38.2 -0.4
comp=Z,12nm,0.9s,baz=146,slow=8.4,SNR=19
PETK LR LR 22 06 17.0
comp=Z,128nm,18.1s,baz=74,slow=35
MDJ Mudanjiang 71.32 332 P P 21 36 39.6 +0.4
MDJ pmax pmax
comp=Z,20nm,1.0s
MDJ pmax pmax
comp=Z,250nm,8.6s
QSPA South Pole Qui 72.14 180 P P 21 36 45.2 +1.1
QSPA South Pole Qui 72.14 180 P P 21 36 45.2 +1.1
comp=Z,37nm,0.8s,baz=14,slow=1.5,SNR=126
HABR Khabarovsk 72.26 338 *e*P P 21 36 43.0 -1.7
HABR *e* 21 37 00.6
HABR *e**PP PcP 21 37 01.6 -0.9
HABR *e* 21 39 23.8
HABR *e*S S 21 45 59.9 -2.1
HABR *e**SS sS 21 46 32.4 -1.9
HABR *e* 21 46 42.6
HABR *e*SS SS 21 50 39.3 -2.3
HABR MLR MLR
comp=Z,93nm,14.0s
CN2 Changchun 72.62 329 *e*P P 21 36 47.7 +0.7
CN2 *e*pP pP 21 37 07.7 +1.6
CN2 *e*sP sP 21 37 16.3 +2.4
CN2 *e*S S 21 46 06.3 -0.1
CN2 pmax pmax
comp=Z,20nm,0.7s

CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s						
CN2				LR	LR		
	comp=E,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
GYA	Guiyang	73.95	305	P	P	21 36 56.4	+1.0
GYA				pP	pP	21 37 15.8	+1.3
GYA				sP	sP	21 37 22.0	-0.3
GYA				PP	PP	21 39 44.0	+2.5
GYA				S	S	21 46 21.2	-1.2
GYA				SKS	SKSac	21 46 53.8	-3.0
GYA				SS	SS	21 51 09.5	+0.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=N,680nm,18.8s						
GYA				LR	LR		
	comp=E,510nm,19.0s						
GYA				LR	LR		
	comp=Z,660nm,18.4s						
KLR	Kul'dur	74.11	336	eP	P	21 36 52.3	-3.4
KLR				pmax	pmax		
	comp=E,40nm,1.8s						
KLR				pmax	pmax		
	comp=Z,100nm,1.8s						
PBKT	Sadao Pong	74.19	294	P	P	21 37 07.7	+11
BJI	Beijing	75.06	321	P	P	21 37 03.7	+2.4
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
BJI				LR	LR		
	comp=N,180nm,14.2s						
BJI				LR	LR		
	comp=E,150nm,18.2s						
BJI				LR	LR		
	comp=Z,120nm,21.3s						
KMI	Kunming	76.42	302	P	P	21 37 11.1	+1.3
KMI				PcP	PcP	21 37 22.8	+1.5
KMI				sP	sP	21 37 37.7	+0.9
KMI				PP	PP	21 40 04.8	+2.2
KMI				S	S	21 46 49.7	-0.4
KMI				SS	SS	21 51 47.7	+1.3
KMI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,49nm,3.1s						
KMI				LR	LR		
	comp=N,110nm,18.1s						
KMI				LR	LR		
	comp=E,110nm,13.6s						
KMI				LR	LR		
	comp=Z,150nm,20.0s						
CM31	Chiang Mai Arr	76.73	295	eP	P	21 37 11.9	+0.6
	comp=Z,19nm,1.1s						
CM31				ePcP	PcP	21 37 21.9	-0.6
CMAR	Chiang Mai Arr	76.73	295	P	P	21 37 13.1	+1.7
CMAR	Chiang Mai Arr	76.73	295	P	P	21 37 13.1	+1.7
	comp=Z,3.9nm,0.9s,baz=126,slow=4.7,SNR=21						
CMMT	Chiang Mai	76.87	295	P	P	21 37 16.8	+4.7
	comp=Z,16nm,1.0s,comp=Z,485nm						
CHTO	Chiang Mai	76.87	295	P	P	21 37 18.5	+6.3
HHC	Hu-ho-hao-te	78.33	320	eP	P	21 37 22.7	+2.7
HHC				pP	pP	21 37 41.2	+2.0
HHC				sP	sP	21 37 49.3	+2.3
HHC				PP	PP	21 40 24.0	+5.8
HHC				S	S	21 47 10.8	+0.9
HHC				SKS	SKSac	21 47 25.3	-3.2
HHC				ScS	ScS	21 47 33.6	-0.8
HHC				sS	sS	21 47 44.4	+1.8
HHC				pmax	pmax		
	comp=Z,43nm,0.7s						
HHC				pmax	pmax		
	comp=Z,220nm,4.4s						
HHC				LR	LR		
	comp=N,170nm,17.8s						
HHC				LR	LR		
	comp=E,390nm,16.7s						
HHC				LR	LR		
	comp=Z,370nm,19.0s						
CD2	Chengdu	78.36	308	eP	P	21 37 20.8	+0.6
CD2				pP	pP	21 37 40.5	+1.0
CD2				sP	sP	21 37 48.4	+1.1
CD2				PP	PP	21 40 21.7	+3.2
CD2				S	S	21 47 10.3	-0.1
CD2				ScS	SKKSac	21 47 32.6	+2.6
CD2				sS	sS	21 47 42.9	-0.3
CD2				SS	SS	21 52 17.2	+2.2
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,30nm,6.8s						
CD2				LR	LR		
	comp=N,190nm,16.2s						
CD2				LR	LR		
	comp=Z,230nm,17.2s						
MAW	Mawson	79.16	202	eP	P	21 37 24.7	+0.8
	comp=Z,2.0nm,0.9s						
MAW	Mawson	79.16	202	P	P	21 37 25.7	+1.8
	comp=Z,2.2nm,0.9s,baz=90,slow=7.1,SNR=3.7						
MAW				LR	LR	22 07 52.0	
	comp=Z,290nm,19.6s,baz=278,slow=32						
HIA	Hailar	79.29	330	eP	P	21 37 24.3	-0.6
	comp=Z,31nm,1.2s						
LZH	Lanzhou	80.84	313	eP	P	21 37 34.7	+1.0
LZH				pP	pP	21 37 51.7	-1.4
LZH				sP	sP	21 37 59.7	-1.1
LZH				PP	PP	21 40 36.5	-2.6
LZH				eS	S	21 47 37.0	+0.3
LZH				SS	SS	21 52 54.7	+2.5
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,96nm,5.6s						
LZH				LR	LR		
	comp=N,170nm,15.2s						
LZH				LR	LR		
	comp=E,170nm,13.0s						
LZH				LR	LR		
	comp=Z,300nm,17.6s						
SEY	Seymchan	81.48	353⇑	iP	P	21 37 35.7	-0.6
CLNS	Chul'man	82.65	338	eP	P	21 37 43.3	+0.7
CLNS				e*PP	pP	21 37 57.6	-4.4
CLNS				ePPP	PPP	21 42 51.2	
CLNS				eS	S	21 47 48.8	-5.4
CLNS				e		21 49 11.8	
CLNS				pmax	pmax		
	comp=Z,45nm,0.9s						
CLNS				pmax	pmax		
	comp=N,18nm,1.1s						
CLNS				pmax	pmax		
	comp=E,7.0nm,1.1s						
CLNS				pmax	pmax		
	comp=E,4.0nm,1.4s						
CLNS				pmax	pmax		
	comp=N,4.0nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CLNS				smax	smax		
	comp=N,91nm,13.3s						
CLNS				smax	smax		
	comp=E,197nm,13.3s						
CIT	Chita	84.06	330	eP	P	21 37 49.5	-0.5
CIT				e		21 37 59.9	
ULN	Ulaanbaatar	85.00	324	P	P	21 37 55.3	+0.3
YAK	Yakutsk	85.20	343	eP	P	21 37 55.0	-0.4
YAK				e		21 38 01.8	
YAK				e*PP	pP	21 38 15.2	+0.3
YAK				eS	S	21 48 13.6	-5.8
YAK				eSS	SS	21 54 02.9	+7.5
YAK				pmax	pmax		
	comp=Z,80nm,0.9s						
YAK				pmax	pmax		
	comp=E,11nm,1.3s						
YAK				pmax	pmax		
	comp=N,15nm,1.2s						
YAK				pmax	pmax		
	comp=Z,77nm,4.3s						
YAK				pmax	pmax		
	comp=E,15nm,2.3s						
YAK				pmax	pmax		
	comp=N,47nm,3.8s						

YAK				smax	smax		
	comp=N,11nm,1.8s						
YAK				smax	smax		
	comp=E,36nm,3.3s						
YAK				MLR	MLR		
	comp=N,228nm,22.0s						
YAK				MLR	MLR		
	comp=Z,386nm,23.0s						
YAK				MLR	MLR		
	comp=E,111nm,18.0s						
GTA	Gaotai	85.23	314	P	P	21 37 58.1	+1.8
GTA				pP	pP	21 38 18.6	+2.8
GTA				sP	sP	21 38 26.8	+3.3
GTA				SKS	SKSac	21 48 14.1	-1.1
GTA				S	SKKSac	21 48 24.4	+2.7
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,98nm,6.7s						
GTA				LR	LR		
	comp=N,92nm,18.5s						
GTA				LR	LR		
	comp=E,190nm,19.0s						
GTA				LR	LR		
	comp=Z,150nm,20.9s						
SONM	Songino Array	85.35	324	P	P	21 37 56.8	+0.1
SONM	Songino Array	85.35	324	P	P	21 37 56.8	+0.1
	comp=Z,10nm,0.9s,baz=146,slow=5.2,SNR=40						
SONM				LR	LR	22 13 56.6	
	comp=Z,124nm,19.6s,baz=229,slow=34						
SHL	Shillong	85.53	299	ePKP	P	21 38 00.0	+1.8
BILL	Bilibino	85.70	359c	iP	P	21 37 56.8	-1.0
BILL				i		21 38 10.6	
BILL				pmax	pmax		
	comp=Z,50nm,1.6s						
KCPM	Cahto Peak	85.77	46	eP	P	21 37 58.6	-0.4
	comp=Z,11nm,0.8s						
SYO	Syowa Base	85.83	196⇑	eP	P	21 37 58.4	-0.2
KHMM	Horse Mountain	86.22	45	eP	P	21 38 00.9	-0.3
	comp=Z,13nm,0.9s						
CMB	Columbia Colle	87.28	49	eP	P	21 38 05.3	-1.1
CMB				pmax	pmax		
	comp=Z,13nm,0.9s						
CMB	Columbia Colle	87.28	49	eP	P	21 38 05.2	-1.1
	comp=Z,13nm,0.9s						
YBH	Yreka Blue Hor	87.29	45	eP	P	21 38 05.6	-0.8
	comp=Z,5.6nm,0.9s						
YBH	Yreka Blue Hor	87.29	45	P	P	21 38 06.2	-0.1
	comp=Z,5.2nm,0.8s,baz=212,slow=1.4,SNR=22						
YBH				LR	LR	22 07 57.0	
	comp=Z,336nm,20.8s,baz=336,slow=29						
TRF	Thorofare Moun	87.39	17	eP	P	21 38 03.5	-2.9
	comp=Z,4.2nm,0.8s						
MWC	Mount Wilson	87.44	53	eP	P	21 38 05.7	-1.7
MWC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MWC	Mount Wilson	87.44	53	eP	P	21 38 05.7	-1.7
	comp=Z,7.5nm,0.8s						
HUMO	Hull Mountain	87.52	44	eP	P	21 38 06.7	-0.7
	comp=Z,6.1nm,0.9s						
ISA	Isabella	87.70	51	eP	P	21 38 07.7	-0.7
ISA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ISA	Isabella	87.70	51	eP	P	21 38 07.7	-0.7
	comp=Z,6.3nm,0.8s						
LBCM	Butte Creek Ri	87.81	46	P	P	21 38 08.6	-0.3
BEKR	Beckworth	88.08	47	eP	P	21 38 09.3	-1.0
	comp=Z,3.6nm,0.8s						
PFO	Pinyon Flat Ob	88.42	54	LR	LR	22 10 01.1	
	comp=Z,333nm,19.8s,baz=50,slow=30						
ZAK	Zakamensk	88.43	325⇑	iP	P	21 38 11.4	-0.2
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
TLY	Talaya	88.90	326	eP	P	21 38 13.9	+0.3
TLY				e		21 38 20.9	
TLY				pmax	pmax		
	comp=Z,19nm,1.7s						
NVAR	Mina Array Bea	88.94	49	P	P	21 38 14.3	-0.1
NVAR	Mina Array Bea	88.94	49	P	P	21 38 14.3	-0.1
	comp=Z,4.7nm,0.7s,baz=226,slow=8.0,SNR=6.1						
NV11	Mina Array Sit	89.05	49	eP	P	21 38 13.9	-0.9
BBB	Bella Bella	89.11	34	LR	LR	22 13 04.4	
	comp=Z,173nm,18.5s,baz=178,slow=32						
ILAR	Eielson Array	89.37	18	P	P	21 38 13.3	-2.2
ILAR	Eielson Array	89.37	18	P	P	21 38 13.3	-2.2
	comp=Z,3.0nm,0.7s,baz=235,slow=5.7,SNR=27						
ILAR				LR	LR	22 16 20.1	
	comp=Z,232nm,18.6s,baz=325,slow=34						
VLL	Laurance Lake	89.62	42	P	P	21 38 17.6	+0.3
GULW	Guler Mountain	89.88	41	P	P	21 38 18.3	-0.2
BLN	Blyn Mountain	89.97	39	P	P	21 38 18.6	-0.1
MOY	Mondy	90.33	325	eP	P	21 38 20.9	+0.5
WVOR	Wild Horse Val	90.33	45	eP	P	21 38 20.2	-0.5
WVOR	Wild Horse Val	90.33	45	eP	P	21 38 20.2	-0.5
	comp=Z,6.7nm,0.9s						
SNAA	Sanae	90.42	183	eP	P	21 38 20.5	-0.1
SNAA	Sanae	90.42	183	epP	pP	21 38 40.9	+0.7
SNAA	Sanae	90.42	183	eP	P	21 38 20.7	+0.1
	comp=Z,28nm,1.1s						
SNAA	Sanae	90.42	183	P	P	21 38 21.4	+0.8
	comp=Z,5.8nm,1.0s,baz=179,slow=3.9,SNR=36						
TRW	Toppenish Ridg	90.70	41	P	P	21 38 22.0	-0.2
EBG	Ellensburg	90.95	41	P	P	21 38 23.1	-0.2
EGAK	Eagle	91.12	19	eP	P	21 38 21.2	-2.4
	comp=Z,3.2nm,0.9s						
DLBC	Dease Lake	91.49	28	eP	P	21 38 22.9	-2.7
DLBC	Dease Lake	91.49	28	LR	LR	22 17 51.5	
	comp=Z,212nm,18.6s,baz=247,slow=34						
HLID	Hailey	93.62	45	eP	P	21 38 35.6	-0.3
	comp=Z,2.2nm,0.8s						
NEW	Newport	93.63	40	LR	LR	22 12 47.1	
	comp=Z,110nm,19.3s,baz=118,slow=30						
HVS	Khovu-Aksy	94.19	323c	eP	P	21 38 37.9	-0.4
HVS				pmax	pmax		
	comp=Z,128nm,2.5s						
WMQ	Urumqi	95.31	314	eP	P	21 38 43.4	-0.2
WMQ				pP	pP	21 39 04.0	+0.8
WMQ				pmax	pmax		
	comp=Z,15nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,93nm,4.4s						
WMQ				LR	LR		
	comp=N,160nm,19.2s						
WMQ				LR	LR		
	comp=E,260nm,20.4s						
WMQ				LR	LR		
	comp=Z,220nm,23.0s						
RRI2	Red Ridge	95.67	46	eP	P	21 38 45.0	-0.5
PDAR	Pinedale Array	96.70	47	LR	LR	22 16 17.8	
	comp=Z,142nm,19.4s,baz=251,slow=32						
TXAR	Lajitas Array	97.32	62	P	P	21 38 52.9	-0.2
TXAR	Lajitas Array	97.32	62	P	P	21 38 52.9	-0.2
	comp=Z,0.5nm,0.7s,baz=232,slow=6.1,SNR=5.6						
TXAR				LR	LR	22 17 25.8	
	comp=Z,208nm,18.3s,baz=180,slow=32						
EGMT	Eagleton	98.18	42	eP	P	21 38 55.9	-0.5
	comp=Z,20nm,1.0s						
MKAR	Makanchi Array	99.84	316	P	Pdif	21 39 04.1	+0.2
MKAR	Makanchi Array	99.84	316	P	Pdif	21 39 04.1	+0.2
MKAR				PKKPbc	PKKPbc	21 55 21.9	-3.4
MKAR	Makanchi Array	99.84	316	P	Pdif	21 39 04.1	+0.2
	comp=Z,0.6nm,0.7s,baz=97,slow=6.3,SNR=9.2						
MKAR				PKKPbc	PKKPbc	21 55 21.9	-3.4
	comp=Z,0.8nm,0.8s,baz=289,slow=2.1,SNR=8.6						
YKA	Yellowknife Ar	100.11	27	P	Pdif	21 39 04.0	-0.5
YKA	Yellowknife Ar	100.11	27	P	Pdif	21 39 04.0	-0.5
	comp=Z,1.0nm,0.8s,baz=252,slow=4.7,SNR=11						
ZAA0	Zalesovo Array	100.24	323	ePdif	Pdif	21 39 03.9	-1.5
ZALV	Zalesovo Beam	100.24	323	P	Pdif	21 39 05.1	-0.3
ZALV	Zalesovo Beam	100.24	323	P	Pdif	21 39 05.1	-0.3
ZALV	Zalesovo Beam	100.24	323	P	Pdif	21 39 05.1	-0.3
	comp=Z,1.5nm,0.7s,baz=90,slow=4.4,SNR=8.4						
NVS	Novosibirsk	101.38	324	eP	Pdif	21 39 00.5	-10
ARU	Arti	115.37	325	i PKIKP	PKPdf	21 44 00.0	-0.5
ARU						21 45 03.5	
ARU						21 50 42.7	
DAG	Danmarks Havn	121.01	2	i PKIKP	PKPdf	21 44 09.4	-1.4
DAG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
DAG	Danmarks Havn	121.01	2	i P	PKPdf	21 44 09.4	-1.4
	comp=Z,2.8nm,0.7s						
BOSA	Boshof	121.27	219	PKP	PKPdf	21 44 13.6	+0.6
BOSA	Boshof	121.27	219	PKP	PKPdf	21 44 13.6	+0.6
	comp=Z,4.5nm,0.9s,baz=159,slow=2.1,SNR=4.2						
APA	Apatity	122.54	341⇑	iPKIKP	PKPdf	21 44 14.6	+0.7
APA				MLR	MLR		

	comp=Z,2µm,29.0s						
KEV	Kevo	122.91	345	ep	PKPdf	21 44 27.4	+13
	comp=Z,0.4nm,0.4s						
ARCES	ARCESS Array B	123.44	345	PKP	PKPdf	21 44 15.9	+0.2
ARCES	ARCESS Array B	123.44	345	PKP	PKPdf	21 44 15.9	+0.2
	comp=Z,11nm,0.7s,baz=83,slow=1.4,SNR=24						
KLMR	Klimovskoe	123.73	332	ePKIKP	PKPdf	21 44 15.5	-0.9
KLMR				pmax	pmax		
	comp=Z,26nm,1.1s						
RDF	Al-Radifah	124.59	293	eP	PKPdf	21 44 19.6	+0.5
RDF				AMb	AMB	21 44 32.5	
	comp=Z,42nm,1.2s						
MIB	Mutribah	124.81	294	eP	PKPdf	21 44 19.6	+0.2
MIB				AMb	AMB	21 44 30.5	
	comp=Z,39nm,1.1s						
NAY	Al-Naaiem	124.88	293	eP	PKPdf	21 44 19.7	+0.1
NAY				AMb	AMB	21 44 20.9	
	comp=Z,8.5nm,1.1s						
NAY				AML	AML	21 44 30.4	
	comp=Z,17nm,1.1s						
JOF	Joensuu	126.00	337	ep	PKPdf	21 44 21.1	+0.4
	comp=Z,0.3nm,0.4s						
JOF	Joensuu	126.00	337	ePKIKP	PKPdf	21 44 21.1	+0.4
VRHR	Novokhopersk	126.28	321	ePKIKP	PKPdf	21 44 21.9	+0.3
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VRHR				pmax	pmax		
	comp=N,6.0nm,1.0s						
VRHR				pmax	pmax		
	comp=E,10.0nm,1.5s						
SCO	Scoresbysund	127.10	4	i PKIKP	PKPdf	21 44 22.1	-0.5
SCO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SCO	Scoresbysund	127.10	4	i P	PKPdf	21 44 22.1	-0.5
	comp=Z,4.9nm,0.9s						
KBZ	Khabaz	127.27	312	PKIKP	PKPdf	21 44 24.3	+0.6
KBZ	Khabaz	127.27	312	PKP	PKPdf	21 44 24.3	+0.6
KBZ	Khabaz	127.27	312	PKP	PKPdf	21 44 24.3	+0.6
	comp=Z,1.8nm,0.8s,baz=63,slow=2.3,SNR=4.2						
KIV	Kislovodsk	127.38	312	ePKIKP	PKPdf	21 44 24.7	+0.6
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OBN	Obninsk	127.65	327⇓	iPKIKP	PKPdf	21 44 24.3	+0.3
OBN				pmax	pmax		
	comp=Z,33nm,1.8s						
VSR	Storozhevoye	127.70	322	ePKIKP	PKPdf	21 44 24.4	+0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR				pmax	pmax		
	comp=N,6.0nm,1.1s						
VSR				pmax	pmax		
	comp=E,7.0nm,0.9s						
VORD	Divnogorie	127.71	321	ePKIKP	PKPdf	21 44 24.5	+0.2
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VORD				pmax	pmax		
	comp=N,30nm,1.1s						
VORD				pmax	pmax		
	comp=E,40nm,0.8s						
KMBO	Kilima Mbogo	127.81	254	ePKPdf	PKPdf	21 44 26.6	+0.6
KAF	Kangasniemi	128.32	338	ep	PKPdf	21 44 26.4	+1.2
	comp=E,0.7nm,0.4s						
KAF	Kangasniemi	128.32	338	ePKIKP	PKPdf	21 44 26.4	+1.2
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	128.84	338	PKP	PKPdf	21 44 26.4	+0.2
FINES	FINESS Array B	128.84	338	PKP	PKPdf	21 44 26.4	+0.2
	comp=Z,6.5nm,0.8s,baz=104,slow=4.4,SNR=12						
ANN	Anapa	130.83	314	i PKIKP	PKPdf	21 44 33.2	+2.8
ANN				pmax	pmax		
	comp=Z,12nm,0.9s						
IDID	Didziasalis	132.39	331	eP	PKPdf	21 44 31.6	-1.4
IIGN	Ignalina	132.61	331	eP	PKPdf	21 44 31.8	-1.7
AKASG	Malin Array Be	133.63	324	PKIKP	PKPdf	21 44 35.6	0.0
AKASG	Malin Array Be	133.63	324	PKP	PKPdf	21 44 35.6	0.0
AKASG	Malin Array Be	133.63	324	PKP	PKPdf	21 44 35.6	0.0
	comp=Z,1.2nm,0.4s,baz=66,slow=2.0,SNR=8.0						
NB2	NORSAR Subarra	133.81	344	PKPdf	PKPdf	21 44 35.5	-0.2
	comp=Z,4.2nm,1.0s,baz=31,slow=1.9						
NOA	NORSAR Array B	133.81	344	PKP	PKPdf	21 44 36.0	+0.3
NOA	NORSAR Array B	133.81	344	PKP	PKPdf	21 44 36.0	+0.3
	comp=Z,3.9nm,0.8s,baz=37,slow=2.0,SNR=16						
BR131	Keskin Array S	134.93	309	ePKPdf	PKPdf	21 44 38.7	+0.1
BRTR	Keskin Array B	134.93	309	PKP	PKPdf	21 44 37.5	-1.1
BRTR	Keskin Array B	134.93	309	PKP	PKPdf	21 44 37.5	-1.1
	comp=Z,1.3nm,0.8s,baz=134,slow=3.6,SNR=10.0						
CFR	Carcaliu	136.84	318⇑	iP	PKPdf	21 44 43.9	+2.2
BUR08	Bucovina Ar. S	137.45	323	ePKPdf	PKPdf	21 44 42.5	-0.5
BSD	Bornholm Skovb	137.49	337	i PKIKP	PKPdf	21 44 43.8	+1.2
BSD				pmax	pmax		
	comp=Z,11nm,0.8s						
BSD	Bornholm Skovb	137.49	337	i P	PKPdf	21 44 43.8	+1.2
	comp=Z,11nm,0.8s						
MLR	Muntele Rosu	138.08	319⇓	iP	PKPdf	21 44 37.5	-6.7
KOLS	Kolonicke sedl	138.37	326	ePKIKP	PKPdf	21 44 45.5	+1.0
KOLS	Kolonicke sedl	138.37	326	ePKP	PKPdf	21 44 45.5	+1.0
STHS	Stebnicka Huta	138.62	327	ePKIKP	PKPdf	21 44 46.4	+1.5
STHS	Stebnicka Huta	138.62	327	ePKP	PKPdf	21 44 46.4	+1.5
CRVS	Cervenica-Dubn	138.82	326	ePKIKP	PKPdf	21 44 44.1	-1.2
CRVS	Cervenica-Dubn	138.82	326	ePKP	PKPdf	21 44 44.1	-1.2
OKC	Ostrava-Krasne	139.91	329	ePKIKP	PKPdf	21 44 50.4	+3.2
OKC				e		21 45 02.6	
OKC	Ostrava-Krasne	139.91	329	ePKP	PKPdf	21 44 50.4	+3.2
OKC				epPKP	pPKPdf	21 45 02.6	-5.0
MORC	Moravsky Berou	140.24	330⇑	iP	PKPdf	21 44 49.0	+1.1
RDO	Rodhopi	140.27	314	eP	PKPdf	21 44 48.4	+0.2
DPC	Dobruska-Polom	140.41	331	ePKIKP	PKPdf	21 44 51.8	+3.6
DPC				e		21 45 09.0	
DPC	Dobruska-Polom	140.41	331	ePKP	PKPdf	21 44 51.8	+3.6
DPC				ex	x	21 45 09.0	
VYHS	Vyhne	140.44	327	ePKHKP	PKPpre	21 44 42.3	
VYHS				e		21 44 47.9	
VYHS	Vyhne	140.44	327	ePKP	PKPdf	21 44 47.9	-0.4
VYHS	Vyhne	140.44	327	e	PKPpre	21 44 42.3	
UPC	Upice	140.44	332	ePKIKP	PKPdf	21 44 45.2	-3.0
UPC				e		21 44 51.6	
UPC	Upice	140.44	332	ePKP	PKPdf	21 44 45.2	-3.0
UPC				ex	x	21 44 51.6	
BZS	Buzias	140.62	322⇓	iP	PKPdf	21 44 43.8	-4.9
KARP	Karpathos	141.02	305	eP	PKPdf	21 44 54.6	+4.8
PVCC	Panska Ves	141.07	333	ePKIKP	PKPdf	21 44 51.6	+2.3
PVCC				e		21 44 59.2	
PVCC	Panska Ves	141.07	333	ePKP	PKPdf	21 44 51.6	+2.3
PVCC				epPKP	PKiKP	21 44 59.2	+7.2
BRG	Berggiesshubel	141.08	334	ePKP	PKPpre	21 44 43.5	
	comp=Z,4.6nm,1.0s						
BRG				e		21 44 49.8	
	comp=Z,6.1nm,0.9s						
BRG				e		21 48 26.4	
	comp=Z,12nm,1.6s						
BRG	Berggiesshubel	141.08	334	ePKHKP	PKPpre	21 44 43.5	
BRG				e		21 44 49.8	
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,12nm,1.6s						
CLL	Collm	141.14	335	i PKIKP	PKPdf	21 44 49.7	+0.3
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CLL	Collm	141.14	335	ePKPpre	PKPpre	21 44 46.0	
CLL				i PKPdf	PKPdf	21 44 49.7	+0.3
	comp=Z,7.0nm,0.8s						
CLL				i PKSbc	PKSbc	21 48 26.7	-0.7
	comp=Z,12nm,1.5s						
CLL				L	L	22 50 00.0	
	comp=Z,200nm,20.3s						
VTS	Vitosha	141.19	317⇑	iP	PKPdf	21 44 44.7	-5.3
NVR	Nevrokopi	141.33	315	eP	PKPdf	21 44 48.1	-2.0
PRU	Pruhonice	141.47	332	ePKHKP	PKPpre	21 44 45.1	
PRU	Pruhonice	141.47	332	ePKP	PKPpre	21 44 45.1	
PRU				ex	x	21 44 53.4	
ZST	Bratislava	141.51	328	ePKP	PKPdf	21 44 50.7	+0.5
TREC	Trest	141.54	331	ePKIKP	PKPdf	21 44 49.7	-0.5
TREC				e		21 45 02.5	
TREC	Trest	141.54	331	ePKP	PKPdf	21 44 49.7	-0.5
TREC				epPKP	pPKPdf	21 45 02.5	-8.2
PKSM	Moragy	141.97	325⇓	iP	PKPdf	21 44 42.3	-8.7
PLG	Polygyros	142.04	314	eP	PKPdf	21 44 43.0	-8.4
NKC	Novy Kostel	142.19	334	ePKIKP	PKPdf	21 44 49.8	-1.6
NKC				e		21 45 06.9	
NKC	Novy Kostel	142.19	334	ePKP	PKPdf	21 44 49.8	-1.6
NKC				ex	x	21 44 54.6	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKC				epPKP	pPKPdf	21 45 06.9	-4.9
IBBN	Ibbenburen	142.26	340	ePKPbc	PKPdf	21 44 47.3	-4.1
NPS	Neapolis	142.31	305	eP	PKPdf	21 44 49.2	-2.9
KHC	Kasperske Hory	142.53	332	ePKHKP	PKPpre	21 44 47.7	
KHC	Kasperske Hory	142.53	332	ePKP	PKPpre	21 44 47.7	
KHC				epPKP	PKiKP	21 45 02.4	+7.3
NEO	Neokhori	142.65	312	eP	PKPdf	21 44 52.1	-0.4
ROTZ	Rotzenmuhle	142.65	334	ePKPbc	PKPdf	21 44 48.5	-3.7
GERES	GERESS Array B	142.68	332	PKPpre	PKPpre	21 44 48.2	
GERES	GERESS Array B	142.68	332	PKhKP	PKPpre	21 44 48.2	
	comp=Z,3.1nm,0.8s,baz=46,slow=3.9,SNR=23						
GRF	Grafenberg Arr	143.12	335	ePKPbc	PKPbc	21 44 49.9	-0.2
GRF	Grafenberg Arr	143.12	335	ePKIKP	PKPbc	21 44 49.9	-0.2
FNA	Florina	143.26	315	eP	PKPbc	21 44 50.5	-0.3
LTK	Loutraki	143.35	310	eP	PKPdf	21 44 54.3	+0.5
DID	Didima	143.35	309	eP	PKPbc	21 44 51.1	0.0
VAM	Vamos	143.36	306	eP	PKPbc	21 44 52.1	+0.9
AGG	Agios Georgios	143.40	312	eP	PKPbc	21 44 52.2	+1.0
TNS	Taunus Mts	143.76	337	ePKPbc	PKPbc	21 44 52.3	+0.4
TNS	Taunus Mts	143.76	337	ePKIKP	PKPbc	21 44 52.3	+0.4
EVR	Evrytania	143.81	312	eP	PKPdf	21 44 54.3	-0.4
GUR	Goura	143.84	311	eP	PKPbc	21 44 53.2	+0.6
VLI	Veliai	143.87	308	eP	PKPdf	21 44 54.1	-0.6
ANKY	Antikythira Is	143.90	307	eP	PKPdf	21 44 53.9	-0.9
RJOB	Jochberg	143.91	331	ePKPbc	PKPbc	21 44 52.7	+0.2
KLV	Kalavryta, Ach	143.93	311	eP	PKPdf	21 44 54.6	-0.3
EFP	Efpalio	143.95	312	eP	PKPdf	21 44 55.1	+0.3
KBA	Koelnbreinsper	144.12	330	⇓iPKPdf	PKPab	21 44 53.1	+0.2
	comp=Z,16nm,0.9s,SNR=7.1						
WPM1	Penmaenmawr	144.13	352	eP	PKPab	21 44 52.1	-0.3
WPM1	Penmaenmawr	144.13	352	P	PKPab	21 44 52.1	-0.3
TOD	Tromm	144.14	337	PKIKP	PKPbc	21 44 53.5	+0.5
TOD	Tromm	144.14	337	PKP	PKPbc	21 44 53.5	+0.5
JAN	Janina	144.14	314	eP	PKPbc	21 44 53.9	+0.5
WLF1	Llynfaes	144.17	352	eP	PKPbc	21 44 52.9	0.0
WLF1				AMB	AMB	21 44 53.7	
	comp=Z,23nm,2.0s						
WLF1	Llynfaes	144.17	352	P	PKPbc	21 44 52.9	0.0
WLF1				AMB	AMB	21 44 53.7	
	comp=Z,23nm,2.0s						
BEBN	Eben Emael	144.22	341	PKP	PKPbc	21 44 53.8	+0.6
LJU	Ljubljana	144.26	328	i PKPdf	PKPbc	21 44 53.9	+0.4
FUR	Furstenfeldbru	144.27	333	ePKPbc	PKPbc	21 44 54.1	+0.6
FUR	Furstenfeldbru	144.27	333	ePKIKP	PKPbc	21 44 54.1	+0.6
MEM	Membach	144.28	340	PKP	PKPbc	21 44 53.9	+0.5
MYKA	Terra Mystica	144.30	329	⇑iPKPdf	PKPab	21 44 53.4	0.0
	comp=Z,16nm,1.0s						
DYR	Agios Nikonas	144.30	309	eP	PKPbc	21 44 54.1	+0.1
ABH	Alteburg	144.37	338	PKP	PKPbc	21 44 54.5	+0.7
FOEL	Foel Wylfa	144.38	351	eP	PKPab	21 44 52.9	-0.5
FOEL				AMB	AMB	21 44 54.7	
	comp=Z,23nm,2.2s						
FOEL	Foel Wylfa	144.38	351	P	PKPab	21 44 52.9	-0.5
FOEL				AMB	AMB	21 44 54.7	
	comp=Z,23nm,2.2s						
RLS	Riolos of Patr	144.42	311	eP	PKPbc	21 44 55.0	+0.8
ITM	Ithomi	144.44	310	eP	PKPbc	21 44 54.5	+0.1
AMT	Artemida-Makis	144.46	310	eP	PKPab	21 44 51.2	-3.0
CADS	Cadrg	144.53	328	i PKPdf	PKPab	21 44 54.0	-0.2
VOY	Vojsko	144.59	328	ePKPdf	PKPab	21 44 54.3	-0.2
VOY				e		21 45 03.8	
KTD	Kalmit	144.64	337	PKIKP	PKPbc	21 44 55.2	+0.5
KTD	Kalmit	144.64	337	PKP	PKPbc	21 44 55.2	+0.5
STU	Stuttgart	144.66	335	ePKPbc	PKPdf	21 44 55.4	-0.3
STU	Stuttgart	144.66	335	ePKIKP	PKPbc	21 44 55.1	+0.4
STU	Stuttgart	144.66	335	ePKPdf	PKPbc	21 44 55.1	+0.4
BCLA	Clavier	144.67	341	PKP	PKPab	21 44 54.6	+0.2
HLM1	Long Mynd	144.69	350	eP	PKPab	21 44 54.3	-0.2
HLM1				AMB	AMB	21 44 58.2	
	comp=Z,15nm,2.4s						
HLM1	Long Mynd	144.69	350	P	PKPab	21 44 54.3	-0.2
HLM1				AMB	AMB	21 44 58.2	
	comp=Z,15nm,2.4s						
RUP	Ruppelstein	144.69	338	PKIKP	PKPdf	21 44 55.5	-0.3
RUP	Ruppelstein	144.69	338	PKP	PKPdf	21 44 55.5	-0.3
ABTA	Abfaltersbach	144.76	330	⇑iPKPab	PKPab	21 44 54.3	-0.7
	comp=Z,43nm,0.8s,SNR=31						
WATA	Walderalm	144.76	332	⇑iPKPdf	PKPbc	21 44 55.4	+0.1
	comp=Z,9.3nm,0.7s,SNR=8.6						
WTTA	Wattenberg	144.78	332	⇑iPKPdf	PKPbc	21 44 55.5	+0.2
	comp=Z,47nm,1.5s,SNR=12						
KEK	Kerkira	144.83	315	eP	PKPbc	21 44 55.8	+0.3
SNF	Seneffe	144.90	342	PKP	PKPdf	21 44 56.1	0.0
MOTA	Moosalm	144.96	332	i PKPdf	PKPab	21 44 56.3	+0.4
	comp=Z,51nm,0.8s,SNR=53						
VLS	Valsamata	144.99	312	eP	PKPdf	21 44 56.7	0.0
RETA	Reutte	145.01	333	⇑iPKPdf	PKPbc	21 44 56.0	+0.1
	comp=Z,32nm,0.8s,SNR=19						
WLF	Walferdange	145.04	339	PKP	PKPdf	21 44 56.5	+0.1
WLF	Walferdange	145.04	339	ePKPbc	PKPdf	21 44 57.0	+0.6
WLF	Walferdange	145.04	339	ePKIKP	PKPbc	21 44 55.5	-0.4
WLF	Walferdange	145.04	339	ePKPdf	PKPbc	21 44 55.5	-0.4
SSW	Stow on the Wo	145.04	349	eP	PKPab	21 44 56.1	+0.3
SSW	Stow on the Wo	145.04	349	P	PKPab	21 44 56.1	+0.3
SKP1	Kophill	145.08	348	eP	PKPbc	21 44 55.0	-0.8
SKP1	Kophill	145.08	348	P	PKPbc	21 44 55.0	-0.8
DOU	Dourbes	145.17	341	PKP	PKPdf	21 44 56.6	+0.1
MCH1	Michaelchurch	145.22	350	⇑eP	PKPbc	21 44 55.6	-0.7
MCH1				AMB	AMB	21 44 56.7	
	comp=Z,60nm,1.1s						
MCH1	Michaelchurch	145.22	350	P	PKPbc	21 44 55.6	-0.7
MCH1				AMB	AMB	21 44 56.7	
	comp=Z,60nm,1.1s						
OBER	Oberstdorf	145.27	333	ePKPbc	PKPab	21 44 57.3	+0.3
BFO	Black Forest	145.35	336	ePKPbc	PKPab	21 44 57.5	+0.4
BFO	Black Forest	145.35	336	ePKIKP	PKPab	21 44 57.5	+0.4
BFO	Black Forest	145.35	336	ePKPbc	PKPbc	21 44 56.7	-0.2
SPAK	Spaichingen-Ko	145.36	335	PKP	PKPab	21 44 57.4	+0.2
FETA	Feichten	145.38	332	i PKPdf	PKPab	21 44 57.6	+0.2
	comp=Z,84nm,0.8s,SNR=39						
MENF	Mencas	145.46	344	PKP	PKPab	21 44 57.4	0.0
MENF	Mencas	145.46	344	PKP	PKPab	21 44 57.4	0.0
SWN1	Swindon	145.47	349	eP	PKPdf	21 44 56.9	-0.1
SWN1				AMB	AMB	21 44 58.4	
	comp=Z,166nm,1.0s						
SWN1	Swindon	145.47	349	P	PKPdf	21 44 56.9	-0.1
SWN1				AMB	AMB	21 44 58.4	
	comp=Z,166nm,1.0s						
DAVA	Damuels	145.54	333	⇑iPKPdf	PKPab	21 44 58.1	0.0
	comp=Z,82nm,1.0s,SNR=32						
LIBD	Limburg	145.78	336	PKP2	PKPab	21 44 58.7	0.0
LIBD	Limburg	145.78	336	PKP	PKPab	21 44 58.7	0.0
FELD	Feldberg im Sc	145.85	336	PKP	PKPdf	21 44 57.7	-0.3
ECH	Echery	145.90	337	ePKP2	PKPdf	21 44 57.6	-0.3
ECH	Echery	145.90	337	ePKPdf	PKPdf	21 44 57.6	-0.3
ECH	Echery	145.90	337	PKP	PKPbc	21 44 58.6	0.0
DAVOX	Davos/Dischmat	145.94	333	PKPbc	PKPbc	21 44 58.8	-0.3
DAVOX	Davos/Dischmat	145.94	333	PKPbc	PKPbc	21 44 58.7	-0.3
	comp=Z,31nm,0.9s,baz=60,slow=2.6,SNR=36						
MOF	Molkenrain	146.21	336	PKP2	PKPbc	21 44 59.6	-0.1
MOF	Molkenrain	146.21	336	PKP	PKPbc	21 44 59.6	-0.1
MOF	Molkenrain	146.21	336	PKP	PKPbc	21 44 59.6	-0.1
HEX	Exmoor	146.25	350	⇑eP	PKPbc	21 44 59.4	-0.1
HEX	Exmoor	146.25	350	P	PKPbc	21 44 59.4	-0.1
THEF	They Montfort	146.32	338	PKP2	PKPbc	21 44 59.6	-0.3
THEF	They Montfort	146.32	338	PKP	PKPbc	21 44 59.6	-0.3
THEF	They Montfort	146.32	338	PKP	PKPbc	21 44 59.6	-0.3
BBS	Basel-Blauen	146.38	336	PKP2	PKPbc	21 45 00.0	-0.1
BBS	Basel-Blauen	146.38	336	PKP	PKPbc	21 45 00.0	-0.1
TUE	Stuetta	146.41	333	ePKPdf	PKPdf	21 44 59.4	+0.3
HTL	Hartland	146.42	351	⇑eP	PKPbc	21 44 60.0	-0.1
HTL				AMB	AMB	21 45 00.8	
	comp=Z,51nm,1.1s						
HTL	Hartland	146.42	351	P	PKPbc	21 44 60.0	-0.1
HTL				AMB	AMB	21 45 00.8	
	comp=Z,51nm,1.1s						
LOMF	Lomont	146.74	336	PKP2	PKPdf	21 45 00.3	+0.9
LOMF	Lomont	146.74	336	PKP	PKPdf	21 45 00.3	+0.9
LOMF	Lomont	146.74	336	PKP	PKPdf	21 45 00.3	+0.9
DYA	Yadsworthy	146.88	350	eP	PKPdf	21 45 00.3	+0.8
DYA				AMB	AMB	21 45 02.3	
	comp=Z,29nm,1.1s						
DYA	Yadsworthy	146.88	350	P	PKPdf	21 45 00.3	+0.8
DYA				AMB	AMB	21 45 02.3	
	comp=Z,29nm,1.1s						
AQU	L'Aquila	147.32	324	ePKPdf	PKPdf	21 45 00.7	+0.2
AQU	L'Aquila	147.32	324	⇑iP	PKPbc	21 45 02.3	-0.7
OG01	Vacheresse	147.63	335	PKP	PKPbc	21 45 04.5	+0.7
OG01	Vacheresse	147.63	335	PKP	PKPbc	21 45 04.5	+0.7
JSA	Saint Aubin	147.76	348	eP	PKPbc	21 45 03.4	-0.4
JSA				AMB	AMB	21 45 04.5	
	comp=Z,47nm,0.9s						
JSA	Saint Aubin	147.76	348	P	PKPbc	21 45 03.4	-0.4
JSA				AMB	AMB	21 45 04.5	
	comp=Z,47nm,0.9s						
RSL	Roselend	148.18	335	PKP2	PKPbc	21 45 05.6	+0.3
RSL	Roselend	148.18	335	PKP	PKPbc	21 45 05.6	+0.3
RSL	Roselend	148.18	335	PKP	PKPbc	21 45 05.6	+0.3
OG35	Corcelles	148.31	336	PKP	PKPbc	21 45 06.0	+0.5
BNI	Bardonecchia	148.67	334	ePKIKP	PKPdf	21 45 03.1	+0.3
BNI				e		21 45 07.2	
BNI	Bardonecchia	148.67	334	ePKPdf	PKPdf	21 45 03.0	+0.3
BNI				ePKPbc	PKPbc	21 45 07.2	+0.6
GDM	Grand'Maison	148.78	335	PKP	PKPbc	21 45 07.7	+0.8
GDM	Grand'Maison	148.78	335	PKP	PKPbc	21 45 07.7	+0.8
GRN	Grenoble	148.90	335	PKP2	PKPbc	21 45 07.8	+0.7
GRN	Grenoble	148.90	335	PKP	PKPbc	21 45 07.8	+0.7
GRN	Grenoble	148.90	335	PKP	PKPbc	21 45 07.8	+0.7
SURF	Saint Ours	149.07	333	PKP	PKPbc	21 45 08.5	+0.8
SURF	Saint Ours	149.07	333	PKP	PKPbc	21 45 08.5	+0.8
SAOF	Saorge	149.14	332	PKP2	PKPbc	21 45 07.8	+0.1
SAOF	Saorge	149.14	332	PKP	PKPbc	21 45 07.8	+0.1
SAOF	Saorge	149.14	332	PKP	PKPbc	21 45 07.8	+0.1
AGO	Saint Agoulin	149.19	339	PKP	PKPbc	21 45 09.1	+1.4
AUTN	L'Aution	149.19	332	PKP2	PKPbc	21 45 08.2	+0.2
AUTN	L'Aution	149.19	332	PKP	PKPbc	21 45 08.2	+0.2
AUTN	L'Aution	149.19	332	PKP	PKPbc	21 45 08.2	+0.2
TOUF	Mont Tournerai	149.25	332	PKP2	PKPbc	21 45 08.2	0.0
TOUF	Mont Tournerai	149.25	332	PKP	PKPbc	21 45 08.2	0.0
TOUF	Mont Tournerai	149.25	332	PKP	PKPbc	21 45 08.2	0.0
SSB	Saint Sauveur	149.34	337	ePKHKP	PKPpre	21 45 01.9	
SSB				e		21 45 08.6	
SSB	Saint Sauveur	149.34	337	ePKPdf	PKPdf	21 45 01.9	-1.8
SSB				ePKPbc	PKPbc	21 45 08.6	+0.4
MVIF	Mont Vial	149.39	332	PKP2	PKPbc	21 45 08.6	+0.2
MVIF	Mont Vial	149.39	332	PKP	PKPbc	21 45 08.6	+0.2
MVIF	Mont Vial	149.39	332	PKP	PKPbc	21 45 08.6	+0.2
REVF	Revere	149.41	332	PKP2	PKPbc	21 45 08.3	-0.1
REVF	Revere	149.41	332	PKP	PKPbc	21 45 08.3	-0.1
REVF	Revere	149.41	332	PKP	PKPbc	21 45 08.3	-0.1
OG25	Le Caire	149.48	334	PKP	PKPbc	21 45 08.7	+0.1
OG25	Le Caire	149.48	334	PKP	PKPbc	21 45 08.7	+0.1
PYM	Petit Puy Mans	149.49	339	PKP	PKPbc	21 45 10.2	+1.6
CALN	Calern	149.62	332	PKP2	PKPbc	21 45 09.1	+0.1
CALN	Calern	149.62	332	PKP	PKPbc	21 45 09.1	+0.1
CALN	Calern	149.62	332	PKP	PKPbc	21 45 09.1	+0.1
OG26	St.-Nazaire-De	149.63	335	PKP	PKPbc	21 45 09.8	+0.9
LBL	Lubilhac	149.86	338	PKP	PKPbc	21 45 11.4	+1.9
FILF	Fillols	152.40	336	PKP	PKPbc	21 45 15.7	+0.2
MLS	Moulis	152.60	339	PKP	PKPbc	21 45 15.7	-0.1
LABF	Labassere	152.86	340	PKP	PKPbc	21 45 17.2	+0.8
LARF	Larrau	153.20	342	PKP	PKPbc	21 45 18.0	+0.8
PBRG	Braganca	155.73	350	PKPab	PKPab	21 45 39.4	-0.4
PGAV	Gavieira, Arco	155.78	353	A	A	22 21 44.3	
	comp=Z,79nm,18.5s						
PCAB	Cabril	156.01	352	ePKPab	PKPab	21 45 41.0	0.0
POLO	Lamas de Olo	156.31	352	ePKPab	PKPab	21 45 42.5	+0.2
PVRL	Vila Real	156.39	352	ePKPab	PKPab	21 45 42.8	+0.2
MVO	Moncorvo	156.40	350	ePKPab	PKPab	21 45 42.6	-0.1
MVO				eLR	LR	22 19 22.0	
	comp=Z,110nm,20.0s						
PVIS	Viseu	156.97	352	ePKPab	PKPab	21 45 45.3	+0.2
ESDC	Sonseca Array	157.16	343	PKPbc	PKPdf	21 45 25.7	+10
ESDC				PKPab	PKPab	21 45 45.9	-0.1
ESDC	Sonseca Array	157.16	343	PKPbc	PKPdf	21 45 25.7	+10
	comp=Z,0.2nm,0.3s,baz=16,slow=2.3,SNR=5.8						
ESDC				PKPab	PKPab	21 45 45.9	-0.1
	comp=Z,3.2nm,0.7s,baz=15,slow=4.2,SNR=17						
MTE	Manteigas	157.23	351	ePKPab	PKPab	21 45 46.6	+0.3
MTE				eLR	LR	22 18 14.1	
	comp=Z,119nm,18.0s						
PCBR	Castelo Branco	157.76	350	ePKPab	PKPab	21 45 48.6	+0.1
PTOM	Tomar	158.12	352	ePKPab	PKPab	21 45 50.0	0.0
PMRV	Marv??o	158.15	350	ePKPab	PKPab	21 45 50.6	+0.4
PMRV				eLR	LR	22 21 48.5	
	comp=Z,141nm,18.0s						
PMTG	Montargil	158.63	352	ePKPab	PKPab	21 45 52.3	0.0
PESTR	Estremoz	158.73	350	ePKPab	PKPab	21 45 52.8	0.0
PBAR	Barrancos	159.31	348	ePKPab	PKPab	21 45 55.5	+0.3
PBEJ	Beja	159.60	350	ePKPab	PKPab	21 45 57.1	+0.6
PNCL	Nicolau / Gran	159.61	352	ePKPab	PKPab	21 45 56.9	+0.3
PVAQ	Vaqueiros	160.18	349	ePKPab	PKPab	21 45 59.3	+0.2
PVAQ				A	A	22 23 56.9	
	comp=Z,78nm,24.7s						
PTEO	Sao Teotonio	160.20	352	ePKPab	PKPab	21 46 00.6	+1.5
MORF	Marmelete	160.42	352	ePKPab	PKPab	21 46 00.4	+0.2
TORD	Torodi Ar. Bea	165.82	252	PKP	PKPdf	21 45 24.4	-0.5
TORD				PKPab	PKPab	21 46 25.2	+0.5
TORD	Torodi Ar. Bea	165.82	252	PKP	PKPdf	21 45 24.4	-0.5
	comp=Z,2.9nm,0.8s,baz=14,slow=0.8,SNR=17						
TORD				PKPab	PKPab	21 46 25.2	+0.5
	comp=Z,1.2nm,1.0s,baz=96,slow=4.0,SNR=2.4						
DBIC	Dimbokro	166.74	214	PKP	PKPdf	21 45 25.3	-0.3
DBIC	Dimbokro	166.74	214	PKP	PKPdf	21 45 25.3	-0.3
	comp=Z,4.8nm,0.9s,baz=94,slow=2.2,SNR=4.7						

CASC 01 21:26:43.9±1.6, 13°.43N×91°.15W, h18km±11km, MD3.6, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	1.00	42	eP	Pb	21 27 03.1	+0.1
JAT	Jato	1.00	332	eP	Pb	21 27 02.5	-0.3
FUG	Fuego 3	1.06	16	eP	Pb	21 27 03.2	-0.8
NBG	Las Nubes	1.39	34	eP	Pn	21 27 09.1	+0.2
SBLS	San Blas	1.54	74	eP	Pn	21 27 09.9	-0.9
SNJE	San Jose	1.56	74	eP	Pn	21 27 09.7	-1.4
RBDL	Robledal	1.57	64	eP	Pn	21 27 10.8	-0.4
RBDL				eS	Sn	21 27 31.8	+0.5
BOQS	Boqueron	1.84	80	eP	Pn	21 27 14.8	-0.2
MTO2	Montecristo 2	1.99	61	eP	Pn	21 27 16.6	-0.3
MTO2				eS	Sn	21 27 42.2	+0.6
LFRS	El Faro	2.04	84	eP	Pn	21 27 17.7	+0.2
LFRS				eS	Sn	21 27 44.1	+1.5
SNVI	San Vicente	2.25	85	eP	Pn	21 27 20.6	0.0
SNVI				eS	Sb	21 27 50.5	-1.6

ISCJB 01 21:28:02.2±0.6, 6°.83N±0°.10×73°.0W±0°.1, h166km, mb3.7/2, Error ellipse: s-maj=18.5km s-min=7.1km az=42.5
IDC 01 21:28:04.5±3.0, 6°.73N×73°.26W, h178km±23km, mb3.4/2, mb1 3.6/3, mb1mx3.1/22, mbtmp3.5/3, Error ellipse: s-maj=92.8km s-min=29.6km az=101.0
FUNV 01 21:28:14.0, 7°.20N×72°.41W, h112km, MW2.9
ISC 01 21:28:02.9±1.0, 6°.8N±0°.1×73°.0W±0°.1, h166km, n17, σ0s.58/18, 3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.25	31	⇓iP	Pn	21 28 31.7	+0.1
CAPV				eS	Sn	21 28 45.9	-7.8
ROSC	El Rosal	2.35	215	P	Pn	21 28 43.6	+0.1
	22nm,0.3s,baz=273,slow=22,SNR=44						
ROSC				S	Sn	21 29 14.3	-0.6
	27nm,0.3s,baz=104,slow=16,SNR=9.9						
SOCV	Socops	2.57	54	⇓eP	Pn	21 28 45.7	0.0
SOCV				eS	Sn	21 29 07.9	-11
VIGV	El Vigia	2.58	38	eP	Pn	21 28 45.7	-0.2
VIGV				eS	Sn	21 29 08.7	-11
ELOV	Elorza	3.46	86	⇓eP	Pn	21 28 57.7	+0.9
CURV	Curarigua	4.37	43	eP	Pn	21 29 08.3	-0.2
CURV				eS	Sn	21 29 48.4	-11
TEPV	Terepaima	4.89	50	eP	Pn	21 29 15.3	0.0
SIQV	Siquisique	4.95	39	eP	Pn	21 29 15.4	-0.5
BAUV	El Baul	5.33	66	eP	Pn	21 29 19.8	-1.1
MAPV	Macapo	5.39	56	eP	Pn	21 29 21.7	-0.1
MONV	Montecano	5.92	30	eP	Pn	21 29 29.0	+0.2
TURV	Turiamo	6.24	54	eP	Pn	21 29 32.9	-0.1
CUPV	Cœpira	7.81	65	eP	Pn	21 29 53.3	-0.5
SCHQ	Schefferville	48.16	5	P	P	21 36 27.3	+1.1
	2.2nm,0.6s,baz=180,slow=9.1,SNR=4.0						
YKA	Yellowknife Ar	63.35	340	P	P	21 38 14.0	-0.1
	0.4nm,0.5s,baz=132,slow=6.7,SNR=9.3						
MKAR	Makanchi Array	122.30	20	PKP	PKPdf	21 46 38.2	-0.2
	0.7nm,1.1s,baz=308,slow=3.6,SNR=4.4						
WRA	Warramunga Arr	150.46	241	PKPbc	PKPbc	21 47 35.0	-0.8
	0.3nm,0.4s,baz=107,slow=2.7,SNR=12						

DDA 01 21:31:30.9, 38°.35N×27°.30E, h17km, MD3.1
ISCJB 01 21:31:31.9±0.5, 38°.35N±0°.02×27°.27E±0°.02, h6km±3km, Error ellipse: s-maj=3.3km s-min=2.7km az=32.0
ISK 01 21:31:31.6, 38°.36N×27°.25E, h2km, MD3.4
ATH 01 21:31:32.7, 38°.27N×27°.18E, h40km±2km, MD3.4/7
CSEM 01 21:31:32.0±0.2, 38°.33N×27°.27E, h2km, MD3.4, Error ellipse: s-maj=4.0km s-min=3.5km az=31.0
THE 01 21:31:33.4, 38°.27N×27°.29E, h31km±18km, ML2.6/2, Error ellipse: s-maj=18.6km s-min=0.6km az=10.0
ISC 01 21:31:31.4±0.8, 38°.35N±0°.02×27°.28E±0°.02, h9km±6km, n107, σ1s.10/138, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IZM	Izmir	0.04	348	PG	Pg	21 31 33.0	-0.4
IZM	Izmir	0.04	348	i Pg	Pg	21 31 33.0	-0.4
BLCB	Balcova	0.19	280	ePG	Pg	21 31 35.6	+0.3
BLCB				eSG	Sg	21 31 38.6	+0.6
BLCB	Balcova	0.19	280	ePg	Pg	21 31 35.6	+0.3
BLCB				eSg	Sg	21 31 38.6	+0.6
URLA	Izmir	0.53	271	i P	Pg	21 31 41.9	+0.1
URLA				i S	Sb	21 31 51.1	+0.3
URLA	Izmir	0.53	271	i P	Pg	21 31 41.9	+0.1
URLA				i S	Sb	21 31 51.1	+0.3
GCAM	G?zelcaml?	0.65	183	i P	Pg	21 31 43.5	-0.5
GCAM				i S	Sb	21 31 53.3	-0.8
GCAM	G?zelcaml?	0.65	183	i P	Pg	21 31 43.5	-0.5
GCAM				i S	Sb	21 31 53.3	-0.8
AKHS	Akhisar	0.67	39	i P	Pg	21 31 44.0	-0.5
AKHS				i S	Sg	21 31 54.3	+1.0
AKHS	Akhisar	0.67	39	i P	Pg	21 31 44.0	-0.5
AKHS				i S	Sg	21 31 54.3	+1.0
AYDN	Tasoluk	0.84	145	i P	Pb	21 31 47.4	-0.8
AYDN				i S	Sb	21 31 58.3	-1.3
AYDN	Tasoluk	0.84	145	i P	Pb	21 31 47.4	-0.8
AYDN				i S	Sb	21 31 58.3	-1.3
CHOS	Chios island	0.96	272	P	Pb	21 31 49.9	-0.4
CHOS				S	Sg	21 32 03.1	+0.7
CHOS	Chios island	0.96	272	eP	Pb	21 31 49.9	-0.4
CHOS				eS	Sb	21 32 02.9	-0.2
CHOS	Chios island	0.96	272	P	Pb	21 31 49.9	-0.4
CHOS				S	Sg	21 32 03.1	+0.7
MANT	Manisa	1.02	82	i P	Pb	21 31 50.8	-0.6
MANT				i S	Sb	21 32 03.2	-1.7
MANT	Manisa	1.02	82	i P	Pb	21 31 50.8	-0.6
MANT				i S	Sb	21 32 03.2	-1.7
AYVA	Ayvalik	1.06	335	i P	Pb	21 31 51.9	0.0
AYVA				i S	Sn	21 32 06.5	-0.8
AYVA	Ayvalik	1.06	335	i P	Pb	21 31 51.9	0.0
AYVA				i S	Sn	21 32 06.5	-0.8
KULA	Kula-Manisa	1.10	81	ePN	Pg	21 31 53.3	+0.7
KULA				eSN	Sg	21 32 09.4	+2.5
KULA	Kula-Manisa	1.10	81	P	Pb	21 31 52.2	-0.5
KULA				S	Sb	21 32 06.0	-1.1
KULA	Kula-Manisa	1.10	81	P	Pb	21 31 52.2	-0.5
KULA	Kula-Manisa	1.10	81	ePn	Pg	21 31 53.3	+0.7
KULA				S	Sb	21 32 06.0	-1.1
KULA				eSn	Sg	21 32 09.4	+2.5
MLSB	Milas	1.13	159	ePN	Pg	21 31 54.0	+0.9
MLSB	Milas	1.13	159	ePn	Pg	21 31 54.0	+0.9
PRK	Paraskevi	1.19	319	P	Pn	21 31 53.9	-0.3
PRK				S	Sn	21 32 10.2	-0.2
PRK	Paraskevi	1.19	319	eP	Pb	21 31 54.4	+0.3
PRK				eS	Sn	21 32 10.3	-0.2
PRK	Paraskevi	1.19	319	P	Pn	21 31 53.9	-0.3
PRK				S	Sn	21 32 10.2	-0.2
BODT	Bodrum	1.29	179	ePN	Pg	21 31 56.8	+0.6
BODT				eSN	Sg	21 32 15.6	+2.7
BODT	Bodrum	1.29	179	ePn	Pg	21 31 56.8	+0.6
BODT				eSn	Sg	21 32 15.6	+2.7
DEMI	Demirci	1.32	58	i P	Pn	21 31 55.6	-0.5
DEMI				i S	Sn	21 32 12.7	-1.2
DEMI	Demirci	1.32	58	i P	Pn	21 31 55.6	-0.5
DEMI				i S	Sn	21 32 12.7	-1.2
BALB	Balikesir	1.37	20	ePN	Pb	21 31 57.5	+0.3
BALB	Balikesir	1.37	20	ePn	Pb	21 31 57.5	+0.3
SIGR	SIGRI	1.40	308	P	Pn	21 31 56.9	-0.2
SIGR				S	Sn	21 32 15.0	-0.7
SIGR	SIGRI	1.40	308	P	Pn	21 31 56.9	-0.2
SIGR				S	Sn	21 32 15.0	-0.7
BALY	Balya	1.41	11	i P	Pn	21 31 56.8	-0.6
BALY				i S	Sb	21 32 16.3	+0.2
BALY	Balya	1.41	11	i P	Pn	21 31 56.8	-0.6
BALY				i S	Sb	21 32 16.3	+0.2
YER	Yerkesik	1.46	146	ePN	Pg	21 31 59.8	+0.4
YER	Yerkesik	1.46	146	ePn	Pg	21 31 59.8	+0.4
DNZL	Cakiroluk	1.55	115	i P	Pb	21 32 00.4	0.0
DNZL				i S	Sb	21 32 20.6	+0.4
DNZL	Cakiroluk	1.55	115	i P	Pb	21 32 00.4	0.0
DNZL				i S	Sb	21 32 20.6	+0.4
DURS	Dursunbey	1.56	37	i P	Pn	21 31 58.8	-0.6
DURS				i S	Sn	21 32 18.9	-0.8
DURS	Dursunbey	1.56	37	i P	Pn	21 31 58.8	-0.6
DURS				i S	Sn	21 32 18.9	-0.8
KHAL	Karahalli	1.74	89	i P	Pn	21 32 02.7	+0.8
KHAL				i S	Sb	21 32 25.1	-0.5
KHAL	Karahalli	1.74	89	i P	Pn	21 32 02.7	+0.8
KHAL				i S	Sb	21 32 25.1	-0.5
BOZC	Bozcaada	1.77	328	i P	Pn	21 32 02.0	-0.1
BOZC				i S	Sn	21 32 24.1	-0.7
KHL	Karahalli	1.77	90	ePN	Pb	21 32 04.6	+0.5
KHL	Karahalli	1.77	90	ePn	Pb	21 32 04.6	+0.5
APE	Apeiranthos	1.89	228	ePN	Pb	21 32 06.6	+0.5
APE	Apeiranthos	1.89	228	P	Pn	21 32 02.3	-1.6
APE	Apeiranthos	1.89	228	eP	Pn	21 32 02.7	-1.2
APE	Apeiranthos	1.89	228	P	Pn	21 32 02.3	-1.6
APE	Apeiranthos	1.89	228	ePn	Pb	21 32 06.6	+0.5
TVSB	Tavsanli	2.03	57	ePN	Pb	21 32 08.4	-0.1
TVSB	Tavsanli	2.03	57	ePn	Pb	21 32 08.4	-0.1
KRBG	Karabiga-Canak	2.04	0	ePN	Pb	21 32 08.2	-0.4
KRBG	Karabiga-Canak	2.04	0	ePn	Pb	21 32 08.2	-0.4
LPK	Lapseki	2.06	349	ePN	Pb	21 32 08.2	-0.7
LPK	Lapseki	2.06	349	ePn	Pb	21 32 08.2	-0.7
KCTX	Karacabey (Bur	2.09	23	ePN	Pn	21 32 07.8	+1.2
KCTX	Karacabey (Bur	2.09	23	ePn	Pn	21 32 07.8	+1.2
ORLT	Orhaneli	2.11	36	ePN	Pb	21 32 09.4	-0.4
ORLT	Orhaneli	2.11	36	ePn	Pb	21 32 09.5	-0.4
GELI	Tayfur-Gelibol	2.13	343	ePN	Pn	21 32 08.3	+1.1
GELI	Tayfur-Gelibol	2.13	343	ePn	Pn	21 32 08.3	+1.1
FETY	Fethiye	2.24	139	ePN	Pb	21 32 11.0	-1.1
FETY	Fethiye	2.24	139	ePn	Pb	21 32 11.0	-1.1
LIA	Limnos Island	2.24	314	eP	Pn	21 32 09.7	+1.0
LIA				eS	Sn	21 32 35.9	-0.6
MRMT	Marmara Adasi	2.26	6	ePN	Pn	21 32 10.5	+1.4
MRMT	Marmara Adasi	2.26	6	ePn	Pn	21 32 10.5	+1.4
ALT	Altintas	2.33	72	ePN	Pb	21 32 12.8	-0.8
ALT	Altintas	2.33	72	ePn	Pb	21 32 12.8	-0.8
RKY	Sarkoy-Tekirda	2.33	358	ePN	Pb	21 32 12.0	-1.7
RKY	Sarkoy-Tekirda	2.33	358	ePn	Pb	21 32 12.0	-1.7
ERIK	Erikli-Kesan	2.39	346	ePN	Pb	21 32 13.3	-1.3
ERIK	Erikli-Kesan	2.39	346	ePn	Pb	21 32 13.3	-1.3
MFT	Murefte	2.43	0	ePN	Pn	21 32 13.1	+1.7
MFT	Murefte	2.43	0	ePn	Pn	21 32 13.1	+1.7
SMTH	Samothraki Isl	2.51	328	eP	Pn	21 32 13.1	+0.7
ARMT	Armutlu	2.53	29	ePN	Pb	21 32 15.6	-1.4
ARMT	Armutlu	2.53	29	ePn	Pb	21 32 15.6	-1.4
ENEZ	Enez	2.53	340	ePN	Pb	21 32 15.3	-1.7
ENEZ	Enez	2.53	340	ePn	Pb	21 32 15.3	-1.7
GEMT	Gemlik	2.55	35	ePN	Pb	21 32 15.8	-1.6
GEMT	Gemlik	2.55	35	ePn	Pb	21 32 15.8	-1.6
SHUT	Suhut-Afyon	2.58	85	ePN	Pb	21 32 16.3	-1.6
SHUT	Suhut-Afyon	2.58	85	ePn	Pb	21 32 16.3	-1.6
IZI	Iznik	2.61	40	ePN	Pb	21 32 16.8	-1.7
IZI	Iznik	2.61	40	ePn	Pb	21 32 16.8	-1.7
ELL	Elmali	2.64	127	ePN	Pb	21 32 17.1	-1.8
ELL	Elmali	2.64	127	ePn	Pb	21 32 17.1	-1.8
ALN	Alexandroupoli	2.71	340	eP	Pn	21 32 17.2	+2.0
YLV	Yalova	2.74	36	ePN	Pb	21 32 19.1	-1.6
YLV	Yalova	2.74	36	ePn	Pb	21 32 19.1	-1.6
ADVT	Abdulvahap	2.82	42	ePN	Pn	21 32 19.4	+2.7
ADVT	Abdulvahap	2.82	42	ePn	Pn	21 32 19.4	+2.7
CTKS	Kestanelik-??a	3.03	18	ePN	Pn	21 32 22.4	+2.9
CTKS	Kestanelik-??a	3.03	18	ePn	Pn	21 32 22.5	+2.9
RDO	Rodhopi	3.09	335	eP	Pn	21 32 22.1	+1.7
KLYT	Kilyos	3.20	25	ePN	Pn	21 32 25.0	+3.1
KLYT	Kilyos	3.20	25	ePn	Pn	21 32 25.0	+3.1
GULT	Gulveren	3.26	49	ePN	Pn	21 32 26.0	+3.2
GULT	Gulveren	3.26	49	ePn	Pn	21 32 26.0	+3.2
EDRB	Edirne	3.51	354	ePN	Pn	21 32 29.3	+3.1
EDRB	Edirne	3.51	354	ePn	Pn	21 32 29.3	+3.1
MDUB	Mudurnu	3.70	54	ePN	Pn	21 32 32.4	+3.5

ISCJB **01** *21:48:16.6±0.4, 6°.79N±0°.04×72°.96W±0°.04, h175km±5km, mb3.9/15, Error ellipse: s-maj=8.0km s-min=5.5km az=141.7*
NEIC **01** *21:48:16.9±0.8, 6°.77N×73°.01W, h162km±8km, mb4.2/7, Error ellipse: s-maj=11.8km s-min=6.6km az=63.0*
IDC **01** *21:48:18.0±0.8, 6°.72N×73°.00W, h172km±8km, mb3.6/11, mb1 3.9/13, mb1mx3.7/25, mbtmp3.7/13, MS3.9/1, Ms1 3.9/1, ms1mx2.8/33, Error ellipse: s-maj=13.1km s-min=11.4km az=60.0*
FUNV **01** *21:48:26.5, 7°.16N×72°.57W, h130km, MW4.1*
ISC 01 21:48:17.4±0.6, **6°.81N**±0°.05×**72°.94W**±0°.06, **h163**km±5km, **n291**, σ**0s.91**/301, **mb3.9**/15, **115C-120D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.22	31	⇑iP	Pn	21 48 46.6	+1.1
CAPV				eS	Sn	21 49 01.8	-5.5
ROSC	El Rosal	2.38	215	ePn	Pn	21 48 58.5	+0.3
ROSC				eSn	Sn	21 49 25.1	-4.7
ROSC	El Rosal	2.38	215	P	Pn	21 48 58.6	+0.4
	241nm,0.3s,baz=53,slow=3.2,SNR=334						
ROSC				S	Sn	21 49 29.0	-0.7
	359nm,0.3s,baz=90,slow=21,SNR=16						
SOCV	Socops	2.54	55	⇑iP	Pn	21 49 00.8	+1.2
SOCV				eS	Sn	21 49 24.5	-7.9
VIGV	El Vigia	2.55	38	⇑iP	Pn	21 49 00.9	+1.1
VIGV				eS	Sn	21 49 25.7	-7.1
ELOV	Elorza	3.44	87	⇓iP	Pn	21 49 12.7	+1.8
SANV	Sanarito	4.30	51	⇑eP	Pn	21 49 22.8	+0.7
SANV				eS	Sn	21 50 04.0	-8.5
CURV	Curarigua	4.34	43	eP	Pn	21 49 23.3	+0.8
DABV	Dabajuro	4.68	29	eP	Pn	21 49 27.4	+0.6
DABV				eS	Sn	21 50 13.3	-7.8
TEPV	Terepaima	4.86	50	⇑iP	Pn	21 49 30.3	+1.1
TEPV				eS	Sn	21 50 15.3	-10
SIQV	Siquisique	4.91	39	⇑iP	Pn	21 49 30.3	+0.3
SIQV				eS	Sn	21 50 16.6	-10
BAUV	El Baul	5.30	66	⇑iP	Pn	21 49 34.8	-0.2
MAPV	Macapo	5.36	56	⇑iP	Pn	21 49 36.5	+0.7
IMOV	Isla Los Monje	5.87	20	eP	Pn	21 49 42.4	-0.2
JACV	Jacura	5.88	43	eP	Pn	21 49 42.0	-0.7
MONV	Montecano	5.89	30	⇑eP	Pn	21 49 42.3	-0.5
TURV	Turiamo	6.21	54	eP	Pn	21 49 47.4	+0.4
MERV	Las Mercedes	7.01	69	eP	Pn	21 49 57.4	-0.3
BCIP	Isla Barro Col	7.22	289	ePn	Pn	21 49 56.5	-3.9
BCIP				Sn	Sn	21 51 20.6	-0.8
BIRV	Birongo	7.54	61	⇓iP	Pn	21 50 04.4	-0.2
CUPV	Cœpira	7.78	65	eP	Pn	21 50 07.9	-0.1
OTAV	Otavalo	8.53	220	ePn	Pn	21 50 16.6	-1.7
	7.9nm,0.6s						
OTAV				eSn	Sn	21 51 51.4	-2.3
PCRV	Puerto La Cruz	8.87	67	eP	Pn	21 50 23.2	+0.9
SDDR	Presa de Saban	12.21	7	ePn	Pn	21 51 06.4	+0.3
	15nm,0.7s						
ATAH	Atahualpa	14.88	202	P	P	21 51 42.9	+1.0
ATAH	Atahualpa	14.88	202	P	P	21 51 42.9	+1.0
	1.0nm,0.3s,baz=21,slow=8.6,SNR=3.8						
SAML	Samuel	18.43	148	eP	P	21 52 20.0	-0.5
	3.9nm,0.5s						
SAML				eS	S	21 55 43.0	+0.4
TEIG	Tepich	19.98	313	P	P	21 52 37.5	+0.3
TEIG	Tepich	19.98	313	P	P	21 52 37.5	+0.3
	3.6nm,0.3s,baz=63,slow=3.3,SNR=15						
LPAZ	La Paz	23.44	168	P	P	21 53 12.1	-0.7
LPAZ				pP	pP	21 53 45.3	+1.4
LPAZ	La Paz	23.44	168	P	P	21 53 12.1	-0.7
	0.8nm,0.3s,baz=342,slow=10,SNR=7.0						
LPAZ				pP	pP	21 53 45.3	+1.4
	2.5nm,0.7s,baz=339,slow=11,SNR=4.8						
SIV	San Ignacio	25.52	153	P	P	21 53 30.8	-0.2
SIV				pP	pP	21 54 05.5	+0.7
SIV	San Ignacio	25.52	153	P	P	21 53 30.8	-0.2
	0.7nm,0.5s,baz=279,slow=10,SNR=4.5						
SIV				pP	pP	21 54 05.5	+0.7
	1.1nm,0.5s,baz=330,slow=10,SNR=3.1						
632A	Uvalde	33.89	315	⇑P	P	21 54 45.1	+0.3
	baz=34						
532A	Rocksprings	34.34	316	⇓P	P	21 54 48.4	-0.4
	baz=34,SNR=5.7						
432A	Menard	34.72	317	⇓P	P	21 54 51.6	-0.4
	baz=35						
531A	Rocksprings	34.81	315	⇓P	P	21 54 52.3	-0.4
	baz=35						
332A	Millersview	35.00	318	⇓P	P	21 54 54.5	+0.1
	baz=35						
530A	J-C Ranch, Com	35.36	315	⇑P	P	21 54 57.0	-0.4
	baz=35						
430A	Baggett Ranch,	35.66	316	⇓P	P	21 55 00.8	+0.8
	baz=36						
ABTX	Abilene, Hawle	35.72	320	⇓P	P	21 55 00.6	+0.1
	baz=36						
231A	Bronte	35.73	318	⇓P	P	21 55 00.4	-0.2
	baz=36						
TUL1	Tulsa	35.74	327	⇓P	P	21 55 00.1	-0.5
	baz=36						
SFIN	Scholer Farm	35.75	341	⇑P	P	21 55 01.8	+1.2
	baz=36						
529A	Stev Forest Ra	35.97	314	⇑P	P	21 55 02.2	-0.5
	baz=36						
Z32A	Haskell	36.06	321	⇑P	P	21 55 03.2	-0.1
	baz=36						
628A	Black Gap, Mar	36.11	312	⇓P	P	21 55 04.2	+0.4
	baz=36						
230A	Sterling City	36.23	317	⇑P	P	21 55 04.6	-0.2
	baz=36						
131A	Roby	36.24	319	⇑P	P	21 55 04.6	-0.3
	baz=36						
528A	Cox Ranch, San	36.40	313	⇑P	P	21 55 06.3	-0.1
	baz=36						
627A	Terlingua Ranc	36.46	312	⇑P	P	21 55 07.5	+0.7
	baz=36						
Z31A	Sharp Cattle R	36.49	320	⇓P	P	21 55 07.3	+0.3
	baz=37						
Y32A	R-V Farms, Ver	36.50	321	⇓P	P	21 55 06.8	-0.3
	baz=37						
130A	Snyder	36.57	318	⇑P	P	21 55 07.6	-0.1
	baz=37						
329A	Wagon Wheel Ra	36.59	316	⇑P	P	21 55 07.7	-0.2
	baz=37						
TXAR	Lajitas Array	36.60	312	P	P	21 55 08.0	-0.1
TXAR	Lajitas Array	36.60	312	P	P	21 55 08.0	-0.1
	2.6nm,0.6s,baz=128,slow=9.2,SNR=21						
428A	Kincaid Ranch,	36.64	314	⇑P	P	21 55 08.8	+0.4
	baz=37						
229A	Bryant Ranch,	36.75	317	⇓P	P	21 55 09.9	+0.6
	baz=37						
Y31A	Rekieta Farm,	36.98	321	⇓P	P	21 55 11.7	+0.5
	baz=37						
527A	Woodward Ranch	36.99	313	⇑P	P	21 55 12.0	+0.6
	baz=37						
626A	Big Bend Ranch	37.06	312	⇑P	P	21 55 12.2	+0.3
	baz=37						
328A	Wristen Ranch,	37.10	315	⇑P	P	21 55 12.1	-0.1
	baz=37						
Z30A	Sanderson Ranc	37.11	319	⇓P	P	21 55 12.3	0.0
	baz=37						
427A	Hayter Ranch,	37.22	314	⇓P	P	21 55 13.4	+0.1
	baz=37						
526A	Mary Lane Ranc	37.30	312	⇑P	P	21 55 14.4	+0.4
	baz=37						
Y30A	Stafford Cattl	37.33	320	⇓P	P	21 55 14.3	+0.1
	baz=37						
Z29A	Hungry Hill Ra	37.47	318	⇓P	P	21 55 15.2	-0.1
	baz=38						
327A	Balmorhea Ranc	37.58	315	⇑P	P	21 55 16.1	-0.2
	baz=38						
426A	McDonald Obser	37.58	313	⇓P	P	21 55 16.7	+0.2
	baz=38,SNR=5.9						
W31A	Holland Ranch,	37.60	322	⇑P	P	21 55 16.0	-0.4
	baz=38						
128A	Castleberry Fa	37.60	317	⇑P	P	21 55 16.7	+0.2
	baz=38						
X30A	Coker Ranch, T	37.68	321	⇓P	P	21 55 17.6	+0.5
	baz=38						
Y29A	Porterfield Fa	37.82	319	⇓P	P	21 55 18.6	+0.4
	baz=38						
326A	Caldwell Ranch	37.89	314	⇓P	P	21 55 19.4	+0.5
	baz=38						
X29A	Tulia	38.21	320	⇑P	P	21 55 21.3	-0.3
	baz=38						
Y28A	McKinney Farm,	38.22	319	⇓P	P	21 55 21.5	-0.2
	baz=38						
425A	Indio Mountain	38.33	313	⇓P	P	21 55 23.2	+0.6
	baz=38						
226B	Tecolote Peak,	38.45	315	⇑P	P	21 55 24.1	+0.5
	baz=38						
Z27A	Tatum	38.51	317	⇓P	P	21 55 23.6	-0.5
	baz=39,SNR=15						
MSTX	Muleshoe	38.60	319	⇓P	P	21 55 24.9	+0.1
	baz=39						
325A	Bean Ranch, Si	38.63	313	⇑P	P	21 55 25.6	+0.4
	baz=39						
Y27A	Causey	38.81	318	⇓P	P	21 55 26.7	+0.1
	baz=39						
Z26A	Caprock	39.00	317	⇑P	P	21 55 28.0	-0.2
	baz=39,SNR=9.4						
V29A	Stinnett	39.01	322	⇑P	P	21 55 28.8	+0.6
	baz=39						
324A	Moseley Ranch,	39.04	313	⇓P	P	21 55 28.7	+0.1
	baz=39,SNR=6.6						
MNTX	Cornudas Mount	39.10	314	eP	P	21 55 28.6	-0.3
	4.3nm,0.7s						
125A	Gardner Draw,	39.12	315	⇑P	P	21 55 29.4	+0.2
	baz=39,SNR=6.4						
Y26A	Elida	39.27	318	⇓P	P	21 55 30.5	0.0
	baz=39						
224A	Cornudas Mount	39.41	314	⇓P	P	21 55 32.4	+0.7
	baz=40,SNR=15						
Z25A	Roswell	39.51	316	⇑P	P	21 55 33.2	+0.8
	baz=40						
X26A	CR and CF Fran	39.64	318	⇑P	P	21 55 34.1	+0.6
	baz=40						
124A	Stringfield Ra	39.70	315	⇓P	P	21 55 35.5	+1.4
	baz=40						
Y25A	Mesa, Roswell	39.86	317	⇑P	P	21 55 36.3	+0.9
	baz=40						
W26A	Owens Ranch, T	39.94	319	⇑P	P	21 55 36.4	+0.4
	baz=40						
S29A	Ulysses	39.94	324	⇓P	P	21 55 36.1	+0.2
	baz=40						
Z24A	Sheeppen Canyo	39.98	316	⇓P	P	21 55 36.8	+0.4
	baz=40						
U27A	Thompson Grove	40.17	321	⇑P	P	21 55 38.3	+0.5
	baz=40						
X25A	Clemmons Ranch	40.19	318	⇓P	P	21 55 38.6	+0.5
	baz=40						
Y24A	Capitan	40.37	316	⇑P	P	21 55 40.1	+0.6
	baz=40						
V26A	Tequesquite Ra	40.38	320	⇑P	P	21 55 39.8	+0.2
	baz=40						
W25A	X Bar L Ranch,	40.47	319	⇓P	P	21 55 40.8	+0.5
	baz=40						
Z23A	Rita Site, Whi	40.55	315	⇓P	P	21 55 41.6	+0.6
	baz=41						
222A	Williams Famil	40.56	313	⇓P	P	21 55 41.7	+0.6
	baz=41,SNR=5.2						
U26A	Atchley Ranch,	40.73	321	⇑P	P	21 55 42.8	+0.3
	baz=41						
X24A	Lazy VL Ranch,	40.73	317	⇓P	P	21 55 43.1	+0.5
	baz=41						
Y23A	Lovelace Mesa,	40.80	316	⇓P	P	21 55 44.1	+1.0
	baz=41						
R28A	Tribune	40.83	325	⇑P	P	21 55 43.7	+0.5
	baz=41						
V25A	Rancho No Teng	40.94	319	⇑P	P	21 55 45.3	+1.0
	baz=41						
221A	Mesquite Ranch	41.01	312	⇓P	P	21 55 46.2	+1.5
	baz=41						
Z22A	Elephant Butte	41.06	314	⇓P	P	21 55 46.2	+1.0
	baz=41						
T26A	Comanche Natio	41.13	322	⇑P	P	21 55 46.2	+0.5
	baz=41						
U25A	Circle Dot Ran	41.15	320	⇑P	P	21 55 46.5	+0.5
	baz=41						
320A	Kipp Ranch, An	41.24	311	⇓P	P	21 55 47.8	+1.2
	baz=41						
121A	Cookes Peak, D	41.28	313	⇓P	P	21 55 48.2	+1.2
	baz=41						
V24A	Rampart Ranch,	41.30	319	⇑P	P	21 55 48.0	+0.8
	baz=41						
R27A	Eads	41.37	324	⇓P	P	21 55 48.1	+0.5
	baz=42						
Y22A	Socorro	41.43	315	⇑P	P	21 55 49.0	+0.8
	baz=42						
220A	Playas Peak, P	41.51	312	⇑P	P	21 55 49.7	+0.8
	baz=42,SNR=7.4						
W23A	Werner Place,	41.55	317	⇓P	P	21 55 49.8	+0.5
	baz=42						
Z21A	St. Cloud Mine	41.60	314	⇓P	P	21 55 50.4	+0.7
	baz=42						
ANMO	Albuquerque	41.64	317	LR	LR	22 13 49.0	
	comp=Z,167nm,20.8s,baz=84,slow=37						
R26A	Arlington	41.76	323	⇓P	P	21 55 51.1	+0.3
	baz=42						
X22A	Bernardo	41.77	316	⇑P	P	21 55 52.0	+1.0
	baz=42						
120A	U Bar Ranch, L	41.90	312	⇓P	P	21 55 53.0	+0.9
	baz=42,SNR=6.2						
V23A	Ortiz Mt. (NFS	41.91	318	⇑P	P	21 55 53.2	+1.0
	baz=42						
S25A	Robets Cordova	41.95	322	⇑P	P	21 55 53.2	+0.8
	baz=42						
Y21A	Point of Rocks	41.97	315	⇑P	P	21 55 53.3	+0.6
	baz=42						
Z20A	Nine Sixteen R	42.16	313	⇑P	P	21 55 55.5	+1.3
	baz=42						
R25A	Fountain Ranch	42.17	322	⇓P	P	21 55 54.9	+0.7
	baz=42						
Q26A	Hugo	42.22	324	⇑P	P	21 55 55.0	+0.5
	baz=42						
X21A	Alamocita Cree	42.28	315	⇑P	P	21 55 56.4	+1.2
	baz=42,SNR=6.0						
M29A	Burnside Ranch	42.40	329	⇑P	P	21 55 57.5	+1.6
	baz=42						
Y20A	Horse Springs,	42.41	314	⇑P	P	21 55 57.5	+1.2
	baz=42						
S24A	Houchin Ranch,	42.42	321	⇓P	P	21 55 57.3	+0.9
	baz=42						
P26A	Davis Ranch, A	42.54	325	⇓P	P	21 55 57.4	+0.3
	baz=43						
SDCO	Great Sand Dun	42.67	321	eP	P	21 55 58.5	+0.1
	4.7nm,0.9s						
R24A	Sanders Place,	42.72	322	⇓P	P	21 55 59.8	+1.1
	baz=43,SNR=5.9						
P25A	Willow Gulch B	42.98	324	⇓P	P	21 56 01.8	+1.0
	baz=43						
T22A	Edith	43.12	319	⇑P	P	21 56 02.9	+1.0
	baz=43						
R23A	Moffat	43.14	321	⇑P	P	21 56 03.0	+0.9
	baz=43						
S22A	4UR Ranch, Cre	43.51	320	⇓P	P	21 56 06.1	+1.0
	baz=44						
X18A	Snowflake	43.85	314	⇑P	P	21 56 08.8	+1.0
	baz=44						
P23A	Jefferson	43.88	323	⇑P	P	21 56 08.6	+0.4
	baz=44						
W18A	Petrified Fore	44.00	315	⇑P	P	21 56 10.1	+1.2
	baz=44						
ISCO	Idaho Springs	44.02	323	eP	P	21 56 08.6	-0.5
	2.4nm,0.7s						
ISCO	Idaho Springs	44.02	323	⇓P	P	21 56 09.9	+0.7
	baz=44						
S21A	Coal Bank Pass	44.07	319	⇑P	P	21 56 10.2	+0.6
	baz=44						
S20A	Disappointment	44.54	319	⇑P	P	21 56 14.4	+1.1
	baz=45,SNR=7.3						
P22A	Eagle	44.58	322	⇑P	P	21 56 14.2	+0.7
	baz=45						
R20A	Redvale	44.76	320	⇓P	P	21 56 15.8	+0.9
	baz=45						
214A	Organ Pipe Nat	44.77	309	⇓P	P	21 56 15.6	+0.7
	baz=45						
O22A	Kremmling	44.80	323	⇑P	P	21 56 15.8	+0.4
	baz=45						
X16A	Lo Mia Camp, P	44.86	313	⇓P	P	21 56 16.7	+0.9
	baz=45						
N23A	Red Feather La	44.91	324	⇓P	P	21 56 17.0	+0.9
	baz=45						
P21A	Newcastle	44.96	322	⇓P	P	21 56 17.3	+0.7
	baz=45						
Q20A	Ridgley Place,	45.15	320	⇓P	P	21 56 18.7	+0.7
	baz=45						
N22A	Wattenberg Ran	45.15	324	⇑P	P	21 56 19.2	+1.1
	baz=45						
M23A	Laramie	45.16	325	⇑P	P	21 56 19.0	+1.0
	baz=45						
WUAZ	Wupatki	45.35	315	eP	P	21 56 19.4	-0.3
	8.9nm,0.9s						
WUAZ	Wupatki	45.35	315	⇓P	P	21 56 20.9	+1.3
	baz=45,SNR=7.4						
O21A	Pagoda	45.39	322	⇓P	P	21 56 20.8	+0.9
	baz=46						
Z14A	Wintersburg	45.48	311	⇓P	P	21 56 21.4	+0.9
	baz=46						
S18A	Hurst Farm, Bl	45.54	318	⇑P	P	21 56 21.6	+0.5
	baz=46						
Y14A	Wickenburg	45.79	312	⇑P	P	21 56 23.7	+0.8
	baz=46,SNR=5.1						
N20A	Spence Gulch,	46.25	323	⇑P	P	21 56 27.6	+1.0
	baz=46						
U15A	North Rim	46.45	315	⇑P	P	21 56 28.9	+0.5
	baz=46,SNR=6.4						
M20A	Sweetwater, Wa	46.60	323	⇓P	P	21 56 30.2	+0.8
	baz=47						
GLA	Glamis	46.77	310	⇑P	P	21 56 31.5	+0.9
	baz=47						
I22A	9 Mile Ranch,	47.17	327	⇓P	P	21 56 34.3	+0.7
	baz=47						
J21A	Lysite	47.34	326	⇓P	P	21 56 35.8	+0.8
	baz=47						
ULM	Lac du Bonnet	47.35	340	P	P	21 56 34.4	-0.3
ULM	Lac du Bonnet	47.35	340	P	P	21 56 34.4	-0.3
	5.3nm,0.4s,baz=157,slow=7.7,SNR=6.3						
K20A	Yellowstone Ra	47.42	325	⇓P	P	21 56 35.6	0.0
	baz=48						
F24A	Ekalaka	47.46	330	⇓P	P	21 56 36.2	+0.4
	baz=48						
SWSC	Sam W. Stewart	47.47	309	⇓P	P	21 56 36.9	+0.9
	baz=48						
I21A	Big Trails, Te	47.56	326	⇓P	P	21 56 36.9	+0.3
	baz=48						
L19A	Farson	47.67	323	⇓P	P	21 56 38.4	+0.8
	baz=48						
J20A	Shoshoni	47.71	325	⇓P	P	21 56 38.3	+0.5
	baz=48						
K19A	Absolon Red Bu	47.81	324	⇑P	P	21 56 39.2	+0.5
	baz=48						
F23A	Volborg	47.85	330	⇑P	P	21 56 39.0	+0.2
	baz=48						
DAU	Daniels Canyon	47.85	320	eP	P	21 56 39.2	0.0
G22A	Birney	47.96	328	⇓P	P	21 56 40.2	+0.6
	baz=48						
L18A	Fontenelle, Gr	47.97	323	⇑P	P	21 56 40.4	+0.4
	baz=48,SNR=5.3						
BELC	Belle Mtn. Jos	48.06	310	⇑P	P	21 56 41.8	+1.2
	baz=48						
M17A	Scullys Gap (B	48.09	322	⇓P	P	21 56 41.0	+0.1
	baz=48						
SCHQ	Schefferville	48.14	5	P	P	21 56 40.5	-0.2
SCHQ	Schefferville	48.14	5	P	P	21 56 40.5	-0.2
	4.8nm,0.8s,baz=153,slow=4.8,SNR=7.0						
PDAR	Pinedale Array	48.19	324	P	P	21 56 41.5	-0.1
PDAR	Pinedale Array	48.19	324	P	P	21 56 41.5	-0.1
	1.7nm,0.5s,baz=127,slow=9.2,SNR=10.0						
J19A	Crowheart	48.20	325	⇑P	P	21 56 42.1	+0.4
	baz=48						
D24A	Glendive	48.31	332	⇑P	P	21 56 42.9	+0.6
	baz=48						
H20A	Greybull	48.39	327	⇓P	P	21 56 43.1	+0.2
	baz=48						
G21A	Lodge Grass	48.44	328	⇑P	P	21 56 43.7	+0.3
	baz=48						
I19A	Meeteetse	48.65	326	⇑P	P	21 56 46.0	+0.9
	baz=49						
DUG	Dugway	48.73	319	⇓P	P	21 56 46.6	+0.9
	baz=49						
D23A	Lindsay	48.77	331	⇑P	P	21 56 46.5	+0.7
	baz=49						
I18A	Diamond G Ranc	48.91	325	⇓P	P	21 56 47.7	+0.6
	baz=49						
G20A	Bridger	48.98	327	⇑P	P	21 56 47.5	0.0
	baz=49,SNR=5.1						
H19A	Powell	49.05	326	⇑P	P	21 56 49.1	+1.1
	baz=49						
RRX	Edison Barstow	49.17	311	⇓P	P	21 56 50.1	+1.1
	baz=49						
GSC	Goldstone	49.20	312	⇑P	P	21 56 50.2	+0.9
	baz=49						
C23A	Lambert	49.21	332	⇑P	P	21 56 49.9	+0.8
	baz=49						
D22A	Cohagen	49.23	330	⇓P	P	21 56 50.4	+1.1
	baz=49						
DGMT	Dagmar	49.24	333	⇓P	P	21 56 50.6	+1.3
	baz=49						
E21A	Keefer Ranch,	49.26	329	⇓P	P	21 56 49.9	+0.4
	baz=49						
F20A	Billings	49.32	328	⇓P	P	21 56 50.7	+0.7
	baz=49						
H18A	Shoshone NF, C	49.42	326	⇓P	P	21 56 50.8	-0.2
	baz=50						
A24A	Westby	49.49	333	⇑P	P	21 56 52.8	+1.7
	baz=50						
C22A	Vida	49.51	331	⇓P	P	21 56 52.5	+1.2
	baz=50						
D21A	La Casta Ranch	49.58	330	⇑P	P	21 56 53.0	+1.1
	baz=50						
B23A	Brockton	49.60	332	⇑P	P	21 56 53.6	+1.6
	baz=50						
SCI	San Clemente I	49.62	308	⇓P	P	21 56 52.4	0.0
	baz=50						
R11A	Troy Canyon, C	49.67	316	⇓P	P	21 56 53.5	+0.5
	baz=50,SNR=5.2						
H17A	Grant Village	49.77	325	⇓P	P	21 56 54.2	+0.5
	baz=50						
G18A	Lazy EL Ranch,	49.77	327	⇓P	P	21 56 54.2	+0.6
	baz=50						
E20A	Meyer Farm, Mu	49.77	329	⇑P	P	21 56 54.4	+0.9
	baz=50,SNR=6.0						
F19A	Roth Farm, Mol	49.78	327	⇓P	P	21 56 54.3	+0.8
	baz=50						
A23A	Redstone	49.91	333	⇓P	P	21 56 56.3	+2.0
	baz=50,SNR=6.2						
B22A	Reddig Ranch S	49.95	332	⇓P	P	21 56 56.4	+1.8
	baz=50						
I16A	Newdale	49.98	324	⇓P	P	21 56 55.8	+0.6
	baz=50						
MPMC	Manual Prospec	50.02	312	⇑P	P	21 56 56.2	+0.6
	baz=50						
E19A	Rath Farm, Rou	50.09	328	⇑P	P	21 56 56.7	+0.9
	baz=50						
D20A	Manuel Ranch,	50.17	329	⇓P	P	21 56 57.2	+0.8
	baz=50						
F18A	Big Timber	50.23	327	⇑P	P	21 56 57.8	+0.9
	baz=50,SNR=5.3						
A22A	Carney Farms,	50.40	332	⇑P	P	21 56 59.6	+1.6
	baz=50						
C20A	Veseth Ranch,	50.52	330	⇑P	P	21 56 59.7	+0.8
	baz=51						
B21A	Ellsworth Farm	50.52	331	⇓P	P	21 57 00.4	+1.4
	baz=51						
D19A	Cripps Ranch,	50.60	329	⇓P	P	21 57 00.4	+0.8
	baz=51,SNR=6.6						
F17A	Fitzpatrick Pl	50.74	327	⇑P	P	21 57 01.5	+0.8
	baz=51						
E18A	Harlowton	50.75	328	⇓P	P	21 57 01.7	+0.9
	baz=51						
A21A	Bergtoll Ranch	50.87	332	⇑P	P	21 57 03.1	+1.5
	baz=51						
G16A	Moss Hill, Enn	50.97	325	⇓P	P	21 57 03.2	+0.7
	baz=51						
C19A	Slack Wire Ran	51.06	329	⇓P	P	21 57 03.8	+0.8
	baz=51						
H15A	Lima	51.09	324	⇓P	P	21 57 04.2	+0.7
	baz=51,SNR=6.0						
I14A	Mackay	51.17	323	⇑P	P	21 57 04.9	+0.8
	baz=51						
E17A	Martinsdale	51.19	327	⇓P	P	21 57 04.5	+0.3
	baz=51						
PKM	Peak Mountain	51.31	310	⇓P	P	21 57 04.9	-0.4
	baz=51						
J13A	Cove Ranch, Pi	51.32	322	⇓P	P	21 57 05.9	+0.8
	baz=51						
D17A	Six Diamond Ra	51.53	328	⇑P	P	21 57 07.5	+0.9
	baz=52						
HLID	Hailey	51.55	322	⇓P	P	21 57 07.8	+0.9
	baz=52						
I13A	Wildhorse Cree	51.56	323	⇓P	P	21 57 08.6	+1.6
	baz=52,SNR=5.1						
EGMT	Eagleton	51.61	329	⇓P	P	21 57 08.2	+1.1
	baz=52						
NVAR	Mina Array Bea	51.62	315	P	P	21 57 08.1	+0.5
NVAR	Mina Array Bea	51.62	315	P	P	21 57 08.1	+0.5
	1.1nm,0.6s,baz=124,slow=6.9,SNR=8.0						
A19A	Klindworth Far	51.70	331	⇑P	P	21 57 09.0	+1.2
	baz=52						
F15A	Butte	51.72	325	⇑P	P	21 57 08.6	+0.5
	baz=52						
B18A	Beardsley Farm	51.86	329	⇑P	P	21 57 10.0	+1.1
	baz=52						
C17A	Wharram Farm,	51.88	328	⇓P	P	21 57 09.8	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=52						
D16A	Dana Ranch, Ca	51.92	327	⇑P	P	21 57 10.5	+1.0
	baz=52						
I12A	Atlanta	52.12	322	⇓P	P	21 57 11.6	+0.5
	baz=52						
E15A	Deer Lodge	52.15	326	⇑P	P	21 57 11.9	+0.7
	baz=52						
F14A	Wisdom	52.20	325	⇓P	P	21 57 12.2	+0.6
	baz=52						
A18A	Metzger Ranch,	52.24	330	⇓P	P	21 57 12.4	+0.7
	baz=52						
G13A	Cobalt	52.29	324	⇓P	P	21 57 12.6	+0.3
	baz=52						
MFID	Camas Ranch	52.34	321	⇓P	P	21 57 13.5	+0.8
	baz=52						
H12A	Diamond D Ranc	52.36	323	⇓P	P	21 57 13.8	+1.0
	baz=52						
D15A	Lincoln	52.45	327	⇓P	P	21 57 14.5	+1.0
	baz=52						
A17A	Triple J Farms	52.68	329	⇓P	P	21 57 15.7	+0.7
	baz=53						
G12A	Big Creek, Yel	52.95	323	⇑P	P	21 57 17.9	+0.7
	baz=53						
D14A	Greenough	53.02	326	⇑P	P	21 57 18.0	+0.4
	baz=53						
A16A	West Butte Ran	53.14	329	⇑P	P	21 57 19.3	+0.9
	baz=53						
B15A	Bradely Ranch,	53.25	328	⇓P	P	21 57 20.0	+0.8
	baz=53						
F12A	Elk City	53.26	324	⇑P	P	21 57 19.9	+0.6
	baz=53						
D13A	Huson	53.55	326	⇑P	P	21 57 22.2	+0.8
	baz=54						
C14A	Swan Lake	53.55	327	⇑P	P	21 57 22.3	+0.8
	baz=54						
A15A	Johnson Ranch,	53.74	328	⇑P	P	21 57 22.7	-0.1
	baz=54						
C13A	Hot Springs	53.95	326	⇑P	P	21 57 25.0	+0.6
	baz=54						
D12A	Red Ives Fores	54.03	325	⇓P	P	21 57 25.2	+0.3
	baz=54						
B13A	Whitefish	54.30	327	⇑P	P	21 57 27.9	+1.1
	baz=54						
C11A	Tepee Creek (N	54.98	326	⇓P	P	21 57 31.8	0.0
	baz=55						
A12A	Yaak River Ran	55.27	327	⇑P	P	21 57 34.9	+1.1
	baz=55						
NEW	Newport	55.70	326	⇓P	P	21 57 38.6	+1.7
	baz=56						
YKA	Yellowknife Ar	63.33	340	P	P	21 58 28.7	0.0
YKA	Yellowknife Ar	63.33	340	P	P	21 58 28.7	0.0
	4.2nm,0.6s,baz=132,slow=6.7,SNR=68						
DBIC	Dimbokro	67.56	86	P	P	21 58 56.6	-0.2
DBIC	Dimbokro	67.56	86	P	P	21 58 56.6	-0.2
	1.8nm,0.8s,baz=236,slow=6.0,SNR=6.6						
TORD	Torodi Ar. Bea	73.57	78	P	P	21 59 32.5	-0.7
TORD				pP	pP	22 00 15.9	+3.0
TORD	Torodi Ar. Bea	73.57	78	P	P	21 59 32.5	-0.7
	0.2nm,0.3s,baz=285,slow=6.6,SNR=12						
TORD				pP	pP	22 00 15.9	+3.0
	0.5nm,0.8s,baz=282,slow=7.1,SNR=2.9						
ILAR	Eielson Array	77.05	335	P	P	21 59 52.0	-0.2
ILAR	Eielson Array	77.05	335	P	P	21 59 52.0	-0.2
	0.5nm,0.6s,baz=103,slow=4.6,SNR=7.4						
ZALV	Zalesovo Beam	116.64	14	PKP	PKPdf	22 06 41.8	-0.3
ZALV	Zalesovo Beam	116.64	14	PKP	PKPdf	22 06 41.8	-0.3
	0.4nm,0.4s,baz=214,slow=3.8,SNR=4.0						
MKAR	Makanchi Array	122.27	20	PKP	PKPdf	22 06 52.6	-0.5
MKAR	Makanchi Array	122.27	20	PKP	PKPdf	22 06 52.6	-0.5
	0.3nm,0.4s,baz=300,slow=2.8,SNR=14						
ASAR	Alice Springs	149.25	234	PKPbc	PKPbc	22 07 46.6	-1.0
ASAR	Alice Springs	149.25	234	PKPbc	PKPbc	22 07 46.6	-1.0
	1.4nm,0.5s,baz=117,slow=3.6,SNR=21						
WRA	Warramunga Arr	150.49	241	PKPbc	PKPbc	22 07 49.9	-0.8
WRA	Warramunga Arr	150.49	241	PKPbc	PKPbc	22 07 49.9	-0.8
	1.7nm,0.4s,baz=106,slow=2.7,SNR=42						
CMAR	Chiang Mai Arr	153.65	18	PKPbc	PKPbc	22 07 58.4	+0.6
CMAR	Chiang Mai Arr	153.65	18	PKPbc	PKPbc	22 07 58.4	+0.6
	0.6nm,0.5s,baz=322,slow=3.6,SNR=4.0						

IDC 01 22:27:29.3±1.9, 17°.18S×178°.86W, h556km±25km, mb3.3/9, mb1 3.5/11, mb1mx3.2/23, mbtmp3.3/11, Error ellipse: s-maj=33.6km s-min=13.3km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.56	65	P	P	22 29 22.8	-0.2
	2.6nm,0.3s,baz=204,slow=10.0,SNR=3.7						
DZM	Mont Dzumac	14.67	248	P	P	22 30 36.5	+1.0
	0.5nm,0.3s,baz=33,slow=22,SNR=4.2						
RPZ	Rata Peaks	27.80	196	P	P	22 32 34.7	+0.5
	5.8nm,0.3s,baz=16,slow=6.8,SNR=6.1						
CTA	Charters Tower	33.15	259	P	P	22 33 20.9	+0.4
	2.2nm,0.4s,baz=82,slow=9.9,SNR=4.1						
STKA	Stephens Creek	38.61	240	P	P	22 34 04.4	-1.0
	2.0nm,0.5s,baz=104,slow=10.0,SNR=10						
WRA	Warramunga Arr	44.35	259	P	P	22 34 50.7	-0.2
	1.2nm,0.5s,baz=96,slow=7.0,SNR=33						
ASAR	Alice Springs	44.58	254	P	P	22 34 52.3	-0.4
	8.5nm,0.5s,baz=88,slow=8.6,SNR=142						
NVAR	Mina Array Bea	79.20	44	P	P	22 38 37.4	0.0
	0.5nm,0.5s,baz=215,slow=8.9,SNR=4.4						
ILAR	Eielson Array	85.28	13	P	P	22 39 07.7	+0.4
	0.4nm,0.4s,baz=226,slow=5.0,SNR=7.1						
TXAR	Lajitas Array	85.97	58	P	P	22 39 10.7	-0.8
	0.8nm,0.7s,baz=214,slow=5.5,SNR=6.9						
PDAR	Pinedale Array	87.12	44	P	P	22 39 16.5	-0.3
	0.4nm,0.5s,baz=243,slow=5.0,SNR=3.1						
GERES	GERESS Array B	146.81	345	PKPbc	PKPbc	22 46 09.3	-0.2
	0.4nm,0.5s,baz=38,slow=2.4,SNR=7.7						

ISCJB 01 22:31:40.5±0.3, 10°.71N±0°.03×62°.51W±0°.02, h90km±4km, mb3.7/10, Error ellipse: s-maj=5.3km s-min=3.1km az=145.6

TRN 01 22:31:43.5, 10°.74N×62°.29W, h97km, MD3.9

FUNV 01 22:31:44.4, 10°.53N×62°.49W, h66km, MW4.0

IDC 01 22:31:50.3±16.0, 10°.80N×62°.65W, h171km±162km, mb3.4/10, mb1 3.7/10, mb1mx3.4/26, mbtmp3.4/10, Error ellipse: s-maj=36.9km s-min=15.8km az=46.0

ISC 01 22:31:41.2±0.7, 10°.66N±0°.03×62°.49W±0°.03, h89km±6km, n48, σ1s73/73, mb3.8/10, 5C-2D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIV	Guiria	0.27	93	⇑iP	Pn	22 31 54.7	+0.4
GUIV				eS	Sn	22 32 02.8	-1.2
CRUV	Carupano	0.73	271	⇓iP	Pn	22 31 58.9	+1.0
CRUV				eS	Sn	22 32 09.5	-0.9
TRN	Trinidad (W)	1.07	91	⇑iP	Pn	22 32 02.4	+0.7
TRN				eS	Sn	22 32 16.1	-0.9
TPP	Pointe-a-Pierr	1.08	108	⇑iP	Pn	22 32 03.1	+1.4
TBH	Brigand Hill	1.41	97	eP	Pn	22 32 06.6	+0.7
TBH				eS	Sn	22 32 23.7	-0.7
GRW	Mount Saint Ca	1.70	29	eP	Pn	22 32 10.0	+0.5
GRW				eS	Sn	22 32 30.8	-0.2
GRHS	Sauteurs	1.76	28	eP	Pn	22 32 10.6	+0.3
GRHS				eS	Sn	22 32 30.8	-1.6
ORIV	Oritupano	1.82	210	eP	Pn	22 32 12.4	+1.3
ORIV				eS	Sn	22 32 31.9	-1.9
GRSS	Sisters	1.84	28	⇑eP	Pn	22 32 12.3	+1.0
GRSS				eS	Sn	22 32 33.2	-1.0
TOSP	Speyside	2.02	72	eP	Pn	22 32 13.7	0.0
TOSP				eS	Sn	22 32 35.7	-2.8
PCRV	Puerto La Cruz	2.16	257	eP	Pn	22 32 17.3	+1.7
PCRV				eS	Sn	22 32 40.8	-1.0
RIOV	Rio Grande	2.66	165	eP	Pn	22 32 23.6	+1.3
RIOV				eS	Sn	22 32 50.2	-3.6
PRGV	PARIAGUAN	2.84	228	⇑eP	Pn	22 32 25.9	+1.2
PRGV				eS	Sn	22 32 54.9	-3.1
SVB	Belmont	2.86	25	eP	Pn	22 32 25.5	+0.6
SVB				eS	Sn	22 32 56.2	-2.4
BHS	Barnard House	2.94	27	eP	Pn	22 32 26.9	+1.0
GURV	El Guri	2.94	191	⇓eP	Pn	22 32 26.6	+0.6
GURV				eS	Sn	22 32 57.2	-3.3
CUPV	Cœpira	3.30	260	eP	Pn	22 32 32.7	+1.9
CUPV				eS	Sn	22 33 07.9	-1.2
MCLT	Moule a Chique	3.39	26	eP	Pn	22 32 32.4	+0.4
MCLT				eS	Sn	22 33 08.9	-2.3
SLB	Belfond	3.45	24	eP	Pn	22 32 32.5	-0.4
SLB				eS	Sn	22 33 10.2	-2.6
BIRV	Birongo	3.72	267	eP	Pn	22 32 38.8	+2.3
BIRV				eS	Sn	22 33 18.8	-0.4
MERV	Las Mercedes	4.00	250	eP	Pn	22 32 41.2	+0.9
MERV				eS	Sn	22 33 23.2	-2.9
MVM	Montagne Vaucl	4.17	22	eP	Pn	22 32 44.4	+1.8
MVM				eS	Sn	22 33 29.6	-0.6
FDF	Fort de France	4.25	18	eP	Pn	22 32 44.9	+1.1
FDF				eS	Sn	22 33 28.2	-4.1
LUEV	Luepa	4.90	168	eP	Pn	22 32 52.4	-0.3
TURV	Turiamo	5.26	268	eP	Pn	22 32 58.6	+1.2
TURV				eS	Sn	22 33 54.6	-2.2
BAUV	El Baul	5.73	253	eP	Pn	22 33 04.2	+0.4
BAUV				eS	Sn	22 34 04.2	-4.1
MAPV	Macapo	5.93	263	eP	Pn	22 33 06.9	+0.4
JACV	Jacura	6.24	274	eP	Pn	22 33 13.0	+2.2
TEPV	Terepaima	6.63	265	eP	Pn	22 33 16.4	+0.2
TEPV				eS	Sn	22 34 26.5	-3.8
SANV	Sanarito	7.03	261	eP	Pn	22 33 22.2	+0.6
SIQV	Siquisique	7.19	271	eP	Pn	22 33 25.1	+1.4
CURV	Curarigua	7.38	266	eP	Pn	22 33 27.1	+0.7
MONV	Montecano	7.45	281	eP	Pn	22 33 28.2	+1.0
ELOV	Elorza	7.81	243	eP	Pn	22 33 32.5	+0.4
DABV	Dabajuro	8.00	273	eP	Pn	22 33 35.9	+1.1
SOCV	Socops	8.58	255	eP	Pn	22 33 42.0	-0.8
VIGV	El Vigia	8.93	259	eP	Pn	22 33 48.1	+0.6
CAPV	Capacho	10.08	255	eP	Pn	22 34 02.9	-0.6
SIV	San Ignacio	26.52	177	P	P	22 37 13.3	+2.6
	2.7nm,0.7s,baz=17,slow=9.5,SNR=14						
LPAZ	La Paz	27.35	192	P	P	22 37 21.9	+3.0
	0.6nm,0.7s,baz=355,slow=6.0,SNR=3.7						
CPUP	Villa Florida	37.11	172	P	P	22 38 44.9	+1.6
	1.7nm,0.7s,baz=281,slow=17,SNR=3.6						
TXAR	Lajitas Array	42.64	302	P	P	22 39 29.2	-0.1
	0.4nm,0.4s,baz=122,slow=9.3,SNR=6.1						
PLCA	Paso Flores	51.68	188	P	P	22 40 41.0	+1.8
	1.3nm,0.8s,baz=342,slow=8.7,SNR=3.2						
PDAR	Pinedale Array	51.87	317	P	P	22 40 40.1	-0.9
	2.0nm,0.6s,baz=120,slow=9.4,SNR=16						
TORD	Torodi Ar. Bea	62.71	81	P	P	22 41 58.5	+1.1
	0.4nm,0.5s,baz=288,slow=7.4,SNR=12						
YKA	Yellowknife Ar	63.70	336	P	P	22 42 01.3	-1.8
	0.5nm,0.6s,baz=113,slow=7.3,SNR=6.1						
YKA				pP	pP	22 42 26.1	+0.6
	0.4nm,0.6s,baz=109,slow=7.3,SNR=4.1						
ILAR	Eielson Array	78.04	334	P	P	22 43 27.8	-2.1
	0.4nm,0.6s,baz=90,slow=5.3,SNR=6.7						
FINES	FINESS Array B	80.04	29	P	P	22 43 41.2	+0.3
	1.2nm,0.6s,baz=260,slow=5.5,SNR=7.7						

WEL 01 22:50:17.6±0.1, 38°.69S×176°.35E, h84km±1km, ML3.6/14, 10C-12D, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ALRZ	Allen Road	0.13	359	⇑P*	Pn	22 50 29.3	-0.4
PRRZ	Plateau Road	0.20	11	P*	Pn	22 50 29.5	-0.4
PRRZ				S*	Sn	22 50 38.8	-0.2
HATZ	Hinemaiaia	0.28	225	⇑P*	Pn	22 50 30.0	-0.3
HATZ				S*	Sn	22 50 39.0	-0.7
WHTZ	Whakaora	0.30	275	P*	Pn	22 50 30.4	-0.1
HRRZ	Handcock Road	0.30	351	⇑P*	Pn	22 50 30.3	-0.2
RRRZ	Republican Roa	0.38	21	P*	Pn	22 50 30.6	-0.3
RRRZ				S*	Sn	22 50 40.8	+0.2
TARZ	Mount Tarawera	0.47	16	P*	Pn	22 50 31.5	-0.2
RITZ	Rihia Road	0.47	233	P*	Pn	22 50 31.3	-0.3
WATZ	Wairara	0.48	268	⇑P*	Pn	22 50 31.4	-0.1
RATZ	Rangitukua	0.48	249	⇑P*	Pn	22 50 31.5	-0.1
BKZ	Black Stump Fm	0.49	166	⇑P*	Pn	22 50 31.5	-0.2
BKZ				S*	Sn	22 50 41.6	-0.6
BKZ				AML	AML	22 50 42.8	
UTU	Utuhina	0.53	347	⇑P*	Pn	22 50 32.2	+0.2
NMHZ	Naumai	0.54	138	PN	Pn	22 50 32.7	+0.5
KATZ	Kakaramea	0.58	241	P*	Pn	22 50 32.3	-0.3
KATZ				S*	Sn	22 50 44.3	+0.5
RAHZ	Arahi	0.62	111	PN	Pn	22 50 33.1	+0.2
EDRZ	Edgecumbe	0.66	28	P*	Pn	22 50 32.9	-0.4
KRVZ	Karewarewa	0.68	234	P*	Pn	22 50 33.3	-0.2
OTVZ	Oturere	0.71	228	⇓P*	Pn	22 50 34.0	+0.1
OTVZ				S*	Sn	22 50 45.8	-0.2
WTVZ	West Tongariro	0.72	234	P*	Pn	22 50 33.8	-0.2
URZ	Urewera	0.74	54	P*	Pn	22 50 33.5	-0.4
URZ				S*	Sn	22 50 45.7	-0.5
URZ				AML	AML	22 50 46.4	
MARZ	Manawahe	0.75	20	P*	Pn	22 50 33.8	-0.4
MARZ				S*	Sn	22 50 46.3	-0.2
NGZ	Ngauruhoe	0.76	230	P*	Pn	22 50 34.3	0.0
TUVZ	Tukino	0.79	223	P*	Pn	22 50 34.7	0.0
TUVZ				S*	Sn	22 50 47.3	-0.1
MCHZ	McNeill Hill	0.80	160	PN	Pn	22 50 35.2	+0.6
TWVZ	Taurewa	0.80	242	⇓P*	Pn	22 50 34.6	-0.2
TWVZ				S*	Sn	22 50 47.3	-0.4
WPVZ	Whakapapa	0.81	230	P*	Pn	22 50 34.7	-0.2
BHHZ	Black Hill Sta	0.82	195	⇓P*	Pn	22 50 34.8	-0.1
BHHZ				S*	Sn	22 50 47.5	-0.5
FWVZ	Far West T-bar	0.83	227	⇓P*	Pn	22 50 35.1	-0.2
DRZ	Dome Shelter	0.84	226	⇑P*	Pn	22 50 35.4	-0.1
MOVZ	Moawhango	0.85	213	⇓P*	Pn	22 50 34.9	-0.4
MOVZ				S*	Sn	22 50 47.4	-1.1
WNVZ	Wahianoa	0.86	222	⇓P*	Pn	22 50 35.4	-0.1
OPRZ	Ohinepanea	0.86	11	⇓P*	Pn	22 50 34.9	-0.4
OPRZ				S*	Sn	22 50 48.7	+0.2
TRVZ	Turoa	0.87	225	P*	Pn	22 50 35.6	-0.1
MTVZ	Mangateitei	0.97	224	P*	Pn	22 50 36.7	+0.1
PKVZ	Pokaka	0.98	232	⇓P*	Pn	22 50 36.7	-0.1
MWZ	Matawai	0.99	69	⇓P*	Pn	22 50 36.6	-0.3
MWZ				AML	AML	22 50 52.6	
MWZ				AML	AML	22 50 52.7	
MWZ				AML	AML	22 50 56.0	
MWZ				AML	AML	22 50 56.5	
KNZ	Kokohu	1.09	108	PN	Pn	22 50 38.0	+0.2
CKHZ	Cape Kidnapper	1.12	150	PN	Pn	22 50 38.5	+0.2
CKHZ				SN	Sn	22 50 53.8	-0.1
TOZ	Tahuroa Road	1.17	325	⇑P*	Pn	22 50 39.1	+0.2
KAHZ	Kahuranaki	1.18	160	PN	Pn	22 50 39.0	0.0
HIZ	Hauiti	1.18	278	⇓PN	Pn	22 50 39.2	+0.2
PRGZ	Paritu Road	1.22	101	PN	Pn	22 50 39.5	-0.1
PNHZ	Pukenui	1.23	185	PN	Pn	22 50 38.9	-0.8
MHGZ	Mahia Peninsul	1.30	111	PN	Pn	22 50 40.5	0.0
VRZ	Vera Road	1.31	250	P*	Pn	22 50 40.5	-0.2
WIZ	White Island	1.34	30	P*	Pn	22 50 40.5	-0.5
WPHZ	Waipukurau	1.37	177	PN	Pn	22 50 40.6	-0.8
TSZ	Takapari Road	1.40	192	⇓PN	Pn	22 50 40.9	-0.9
TSZ				AML	AML	22 50 59.3	
TSZ				AML	AML	22 51 01.0	
CNGZ	Carnagh Statio	1.47	82	⇑PN	Pn	22 50 43.0	+0.3
WAZ	Wanganui	1.50	224	⇓PN	Pn	22 50 43.3	+0.3
PRHZ	Porangahau	1.59	172	PN	Pn	22 50 43.3	-0.9
PUZ	Puketiti	1.62	68	PN	Pn	22 50 44.3	-0.4
PUZ				AML	AML	22 51 17.5	
PUZ				AML	AML	22 51 17.7	
RAEZ	Rainy Point	1.63	248	PN	Pn	22 50 45.5	+0.8
POWZ	Post Office Ro	1.75	195	PN	Pn	22 50 45.0	-1.3
MKAZ	Moumakai	1.83	329	PN	Pn	22 50 47.7	+0.3
NEZ	North Egmont	1.84	251	PN	Pn	22 50 48.5	+0.9
PKE	Pukeiti	1.91	254	PN	Pn	22 50 48.9	+0.5
MXZ	Matakaoa Point	1.91	55	PN	Pn	22 50 48.4	-0.1
MXZ				AML	AML	22 50 54.4	
NRZ	Ngariki Road	1.99	250	PN	Pn	22 50 50.2	+0.8
BFZ	Birch Farm	1.99	182	PN	Pn	22 50 48.0	-1.4
NWEZ	Newall Road	2.02	252	PN	Pn	22 50 50.4	+0.6
MRZ	Mangatainoka R	2.05	196	PN	Pn	22 50 48.3	-1.9
MRZ				AML	AML	22 51 14.9	
MRZ				AML	AML	22 51 15.5	
TIWZ	Tintock	2.11	190	PN	Pn	22 50 49.2	-1.9
HOWZ	Holdsworth Sta	2.29	196	PN	Pn	22 50 51.0	-2.5
OGWZ	Otaki Gorge	2.31	203	PN	Pn	22 50 51.7	-1.9
KIW	Kapiti Island	2.43	207	PN	Pn	22 50 53.0	-2.3
TMWZ	Te Maipa	2.44	188	PN	Pn	22 50 52.9	-2.5
MTW	Mount Morrison	2.55	194	PN	Pn	22 50 54.0	-2.9
MTW				AML	AML	22 51 23.9	
MTW				AML	AML	22 51 24.5	
CAW	Cannon Point	2.60	202	PN	Pn	22 50 54.9	-2.7
CAW				AML	AML	22 51 28.9	
TRWZ	Traveller	2.75	190	PN	Pn	22 50 56.7	-2.9
TRWZ				AML	AML	22 51 29.4	
TRWZ				AML	AML	22 51 30.9	
PAWZ	Paruwai Farm	2.78	194	PN	Pn	22 50 56.7	-3.2
PAWZ				AML	AML	22 51 29.1	
PAWZ				AML	AML	22 51 29.3	
DUWZ	D'Urville Isla	2.82	221	PN	Pn	22 50 58.0	-2.5
MSWZ	Moikau Station	2.85	197	PN	Pn	22 50 57.8	-3.1
MSWZ				AML	AML	22 51 32.4	
MSWZ				AML	AML	22 52 03.1	
WEL	Wellington	2.86	205	PN	Pn	22 50 57.9	-3.1
SNZO	South Karori	2.90	205	PN	Pn	22 50 58.4	-3.2
SNZO				AML	AML	22 51 34.6	
SNZO				AML	AML	22 51 35.5	
TCW	Tory Channel	2.98	212	PN	Pn	22 50 59.7	-2.9
TCW				AML	AML	22 51 35.3	
TCW				AML	AML	22 51 35.9	
PLWZ	Palliser	2.99	196	PN	Pn	22 50 59.4	-3.5
TUWZ	Tuamarina	3.30	213	PN	Pn	22 51 03.7	-3.2
NNZ	Nelson	3.40	221	PN	Pn	22 51 05.0	-3.3
BSWZ	Blackbirch Sta	3.56	211	PN	Pn	22 51 07.0	-3.5
QRZ	Quartz Range	3.63	233	PN	Pn	22 51 08.7	-2.8
THZ	Tophouse	4.04	220	PN	Pn	22 51 13.9	-3.2
KHZ	Kahutara	4.29	209	PN	Pn	22 51 16.1	-4.3
LTZ	Lake Taylor	5.12	216	PN	Pn	22 51 26.8	-5.0
MQZ	McQueen's Vall	5.73	208	PN	Pn	22 51 34.0	-6.0
ODZ	Otahua Downs	7.64	212	PN	Pn	22 51 59.8	-6.2
JCZ	Jackson Bay	7.84	224	PN	Pn	22 52 03.0	-5.9

IDC 01 22:52:13.4±1.0, 4°.80N×126°.98E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/23, mbtmp3.9/6, Error ellipse: s-maj=66.1km s-min=18.9km az=74.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.63	164	P	P	22 57 45.0	+0.1
	2.5nm,0.8s,baz=342,slow=9.8,SNR=14						
ASAR	Alice Springs	29.09	167	P	P	22 58 15.9	0.0
	0.4nm,0.4s,baz=352,slow=7.2,SNR=8.2						
STKA	Stephens Creek	39.04	160	P	P	22 59 41.8	-0.3
	4.2nm,0.9s,baz=342,slow=8.4,SNR=6.0						
PETK	Petropavlovsk-	54.35	22	P	P	23 01 41.7	-0.1
	2.1nm,0.8s,baz=192,slow=5.7,SNR=4.8						
MKAR	Makanchi Array	56.83	325	P	P	23 01 59.6	-0.2
	0.4nm,0.5s,baz=118,slow=8.4,SNR=5.7						
ZALV	Zalesovo Beam	59.76	333	P	P	23 02 20.2	+0.1
	0.3nm,0.3s,baz=94,slow=5.8,SNR=2.9						

IDC 01 22:54:34.3±60.0, 24°.12S×176°.30W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.6/19, mbtmp3.6/3, Error ellipse: s-maj=1109.0km s-min=164.9km az=89.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.79	249	P	P	23 01 52.0	-0.4
	0.4nm,0.3s,baz=88,slow=7.0,SNR=3.3						
ASAR	Alice Springs	45.33	260	P	P	23 02 54.5	0.0
	0.2nm,0.4s,baz=92,slow=8.5,SNR=5.4						
WRA	Warramunga Arr	45.76	265	P	P	23 02 57.8	0.0
	0.6nm,0.4s,baz=104,slow=8.1,SNR=16						

IDC 01 22:56:25.1±28.0, 15°.96S×176°.26W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/20, mbtmp4.1/4, Error ellipse: s-maj=548.2km s-min=147.4km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.37	240	P	P	23 04 13.7	+0.5
	1.5nm,0.6s,baz=90,slow=9.3,SNR=5.3						
WRA	Warramunga Arr	47.03	257	P	P	23 04 58.2	-0.6
	0.4nm,0.3s,baz=95,slow=7.4,SNR=28						
ASAR	Alice Springs	47.31	252	P	P	23 05 00.4	-0.6
	5.4nm,0.5s,baz=86,slow=8.1,SNR=100						
FITZ	Fitzroy Crossi	55.40	259	P	P	23 06 02.0	+0.3
	0.7nm,0.5s,baz=112,slow=5.4,SNR=3.9						

IDC 01 23:47:54.6±1.7, 3°.86N×127°.39E, h0km, mb3.7/5, mb1 3.8/5, mb1mx3.6/24, mbtmp3.7/5, Error ellipse: s-maj=99.7km s-min=23.2km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.89	184	P	P	23 52 49.3	-0.1
	3.1nm,1.0s,baz=15,slow=15,SNR=2.8						
WRA	Warramunga Arr	24.62	164	P	P	23 53 16.5	-0.5
	1.7nm,0.7s,baz=345,slow=10,SNR=12						
ASAR	Alice Springs	28.09	167	P	P	23 53 48.0	-0.3
	0.2nm,0.5s,baz=354,slow=7.7,SNR=2.9						
STKA	Stephens Creek	38.02	160	P	P	23 55 15.6	+0.8
	1.1nm,0.5s,baz=0.0,slow=11,SNR=4.8						
MKAR	Makanchi Array	57.82	325	P	P	23 57 47.9	-0.1
	0.4nm,0.4s,baz=120,slow=8.5,SNR=7.6						

IDC 01 23:50:24.6±0.9, 3°.16N×127°.54E, h0km, mb4.2/9, mb1 4.3/10, mb1mx4.0/26, mbtmp4.2/10, ML3.7/1, MS3.2/4, Ms1 3.2/4, ms1mx2.6/29, Error ellipse: s-maj=49.2km s-min=14.2km az=75.0

ISCJB 01 23:50:28.7±0.5, 3°.17N±0°.06×127°.3E±0°.2, h49km, mb4.4/17, MS3.3/3, Error ellipse: s-maj=24.7km s-min=7.7km az=170.3

NEIC 01 23:50:29.1±0.6, 3°.20N×127°.45E, h35km, mb4.7/9, Error ellipse: s-maj=23.2km s-min=8.0km az=82.0

ISC 01 23:50:31.1±0.8, 3°.13N±0°.08×127°.4E±0°.2, h49km, n33, σ1s42/29, mb4.5/17, MS3.3/3, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	4.30	336	LR	LR	23 53 08.6	
	comp=Z,144nm,18.9s,baz=113,slow=38						
KAPI	Kappang	11.10	223	Pn	Pn	23 53 06.3	-0.9
KAPI	Kappang	11.10	223	Pn	Pn	23 53 06.3	-0.9
	0.5nm,0.3s,baz=236,slow=17,SNR=3.7						
TWG	Pinlang	20.50	343	eP	P	23 55 02.5	-2.7
	89nm,0.8s						
YULB	Yu-li	20.98	344	eP	P	23 55 08.0	-2.4
	16nm,0.6s						
TPUB	Ta-pu	21.09	343	eP	P	23 55 09.0	-2.5
	64nm,0.6s						
FITZ	Fitzroy Crossi	21.16	185	P	P	23 55 11.9	-0.5
	3.9nm,0.5s,baz=3.1,slow=10.0,SNR=11						
SSLB	Suanglung	21.45	344	eP	P	23 55 13.4	-2.1
	31nm,0.6s						
YHNB	Yeheng	22.18	345	eP	P	23 55 21.2	-2.2
	18nm,0.6s						
WRAB	Tennant Creek	23.92	164	eP	P	23 55 40.0	-0.8
	12nm,0.9s						
WRA	Warramunga Arr	23.93	164	P	P	23 55 40.1	-0.7
WRA	Warramunga Arr	23.93	164	P	P	23 55 40.1	-0.7
	7.7nm,0.7s,baz=341,slow=10,SNR=23						
ASAR	Alice Springs	27.39	167	P	P	23 56 11.8	-0.4
ASAR	Alice Springs	27.39	167	P	P	23 56 11.8	-0.4
	0.8nm,0.5s,baz=340,slow=7.7,SNR=12						
JNU	Nakatsue	30.02	6	LR	LR	00 07 39.2	
	comp=Z,56nm,20.9s,baz=144,slow=34						
MJAR	Matsushiro Arr	34.73	15	LR	LR	00 09 08.8	
	comp=Z,91nm,21.0s,baz=160,slow=32						
NWAO	Narrogin (SRO)	37.12	194	P	P	23 57 37.6	+0.6
	5.9nm,0.6s,baz=13,slow=8.4,SNR=9.8						
STKA	Stephens Creek	37.35	160	P	P	23 57 38.6	-0.5
	5.2nm,0.7s,baz=336,slow=7.8,SNR=19						
LZH	Lanzhou	39.34	329	eP	P	23 58 06.4	+10
LZH				pP	pP	23 58 14.9	+5.9
LZH				sP	sP	23 58 18.8	+4.1
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
ULN	Ulaanbaatar	47.88	342	eP	P	23 59 04.6	+0.1
	comp=Z,8.9nm,1.0s						
SONM	Songino Array	48.07	341	P	P	23 59 06.3	+0.5
SONM	Songino Array	48.07	341	P	P	23 59 06.3	+0.5
	comp=Z,4.8nm,1.0s,baz=159,slow=8.9,SNR=15						
MK31	Makanchi Array	58.40	325	eP	P	00 00 21.9	+0.2
MKAR	Makanchi Array	58.40	325	P	P	00 00 21.9	+0.1
MKAR	Makanchi Array	58.40	325	P	P	00 00 21.9	+0.1
	comp=Z,1.1nm,0.6s,baz=121,slow=8.2,SNR=15						
MKAR				LR	LR	00 29 39.7	
	comp=Z,20nm,18.5s,baz=358,slow=40						
ZALV	Zalesovo Beam	61.41	333	P	P	00 00 42.7	+0.5
ZALV	Zalesovo Beam	61.41	333	P	P	00 00 42.7	+0.5
	comp=Z,2.7nm,0.7s,baz=118,slow=6.6,SNR=16						
BRVK	Borovoye	68.23	327	eP	P	00 01 26.6	0.0
	comp=Z,5.6nm,0.9s						
ABKAR	Akbulak array	73.01	321	eP	P	00 01 55.8	0.0
	comp=Z,1.2nm,0.6s						
BRTR	Keskin Array B	90.88	310	P	P	00 03 32.9	+2.9
BRTR	Keskin Array B	90.88	310	P	P	00 03 32.9	+2.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,0.6nm,1.0s,baz=119,slow=4.9,SNR=3.8						
TORD	Torodi Ar. Bea	123.70	288	PKP	PKPdf	00 09 25.5	+1.0
TORD	Torodi Ar. Bea	123.70	288	PKP	PKPdf	00 09 25.5	+1.0
	comp=Z,1.1nm,0.7s,baz=50,slow=1.6,SNR=7.7						

*BEO **01** 23:55:16.6±0.7, 41°.16N×23°.57E, h4km±3km, ML3.3/1*
*SOF **01** 23:55:19.8, 41°.39N×22°.85E, h13km, MD3.3*
*SKO **01** 23:55:19.2, 41°.37N×22°.83E, h25km, M2.6, ML2.8*
*ATH **01** 23:55:20.2, 41°.33N×22°.87E, h26km±1km, MD3.5/21*
*THE **01** 23:55:20.6, 41°.35N×22°.85E, h7km, ML3.2/7, Error ellipse: s-maj=1.0km s-min=0.5km az=173.0*
*CSEM **01** 23:55:20.2±0.1, 41°.34N×22°.83E, h8km, ML3.2/7, Error ellipse: s-maj=1.6km s-min=1.4km az=105.0*
*ISCJB **01** 23:55:20.0±0.3, 41°.33N±0°.01×22°.87E±0°.02, h10km±3km, Error ellipse: s-maj=2.6km s-min=2.5km az=11.4*
ISC 01 23:55:20.7±0.9, 41°.33N±0°.02×22°.86E±0°.02, h8km±7km, n190, σ1s.02/226, 15C-18D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KNT	Kendrikon	0.17	169	P	Pg	23 55 24.9	+0.7
KNT				S	Sg	23 55 27.9	+1.3
KNT	Kendrikon	0.17	169	P	Pg	23 55 24.9	+0.7
KNT				S	Sg	23 55 27.9	+1.3
VAY	Valandovo	0.21	269	P	Pg	23 55 24.4	-0.6
VAY				S	Sg	23 55 27.7	-0.3
VAY	Valandovo	0.21	269	i Pg	Pg	23 55 24.5	-0.6
VAY				eSg	Sg	23 55 27.7	-0.3
VAY				eLg	Lg	23 55 27.9	
	comp=N,4μm,0.3s						
VAY				eLg	Lg	23 55 28.0	
	comp=E,3μm,0.3s						
VAY	Valandovo	0.21	269	P	Pg	23 55 24.4	-0.6
VAY	Valandovo	0.21	269	i Pg	Pg	23 55 24.9	-0.2
VAY				S	Sg	23 55 27.7	-0.3
VAY				eSg	Sg	23 55 28.2	+0.2
VAY				eLg	Lg	23 55 28.4	
	comp=E,3μm,0.3s						
GRG	Griva	0.50	223	P	Pg	23 55 30.3	-0.2
GRG				S	Sg	23 55 37.8	+0.7
GRG	Griva	0.50	223	ePN	Pg	23 55 30.6	+0.1
GRG				eSN	Sg	23 55 37.9	+0.8
GRG	Griva	0.50	223	P	Pg	23 55 30.3	-0.2
GRG				S	Sg	23 55 37.8	+0.7
KKB	Krupnik	0.57	17	i Pg	Pg	23 55 30.6	-1.1
KKB	Krupnik	0.57	17	i Pg	Pg	23 55 30.6	-1.1
SRS	Serrai	0.59	110	P	Pg	23 55 32.1	-0.1
SRS				S	Sg	23 55 40.6	+0.6
SRS	Serrai	0.59	110	P	Pg	23 55 32.1	-0.1
SRS				S	Sg	23 55 40.6	+0.6
SOH	Sokhos	0.63	143	P	Pg	23 55 32.8	-0.1
SOH				S	Sg	23 55 42.0	+0.9
SOH	Sokhos	0.63	143	ePN	Pg	23 55 33.3	+0.4
SOH				eSN	Sb	23 55 42.6	-0.4
SOH	Sokhos	0.63	143	P	Pg	23 55 32.8	-0.1
SOH				S	Sg	23 55 42.0	+0.9
THE	Thessaloniki	0.70	173	P	Pg	23 55 34.1	-0.1
THE	Thessaloniki	0.70	173	P	Pg	23 55 34.1	-0.1
MMB	Musomiste	0.71	68	i Pg	Pg	23 55 33.9	-0.5
MMB	Musomiste	0.71	68	i Pg	Pg	23 55 33.9	-0.5
HORT	Hortiatis	0.75	166	P	Pg	23 55 35.4	+0.2
HORT	Hortiatis	0.75	166	P	Pg	23 55 35.4	+0.2
NVR	Nevrokopi	0.76	88	P	Pg	23 55 35.0	-0.3
NVR				S	Sg	23 55 45.6	+0.4
NVR	Nevrokopi	0.76	88	ePN	Pg	23 55 35.1	-0.3
NVR				eSN	Sg	23 55 45.6	+0.4
NVR	Nevrokopi	0.76	88	P	Pg	23 55 35.0	-0.3
NVR				S	Sg	23 55 45.6	+0.4
PLG	Polygyros	1.05	155	P	Pg	23 55 40.4	-0.5
PLG	Polygyros	1.05	155	ePN	Pg	23 55 40.4	-0.5
PLG				eSN	Sg	23 55 54.0	-0.6
PLG	Polygyros	1.05	155	P	Pg	23 55 40.4	-0.5
BIA	Bitola	1.20	256	P	Pb	23 55 41.9	-1.8
BIA	Bitola	1.20	256	ePg	Pb	23 55 42.1	-1.6
BIA	Bitola	1.20	256	ePg	Pb	23 55 42.1	-1.6
SKO	Skopje	1.24	302	ePg	Pg	23 55 48.2	+3.6
SKO				eSg	Sn	23 56 14.0	+13
SKO	Skopje	1.24	302	ePg	Pn	23 55 42.8	-1.7
SKO				eSg	Sb	23 55 59.3	-1.4
SKO				eLg	Lg	23 56 00.5	
	comp=E,110nm,0.5s						
SKO				eLg	Lg	23 56 00.5	
	comp=N,138nm,0.4s						
SKO	Skopje	1.24	302	ePg	Pn	23 55 43.2	-1.2
SKO				eSg	Sb	23 55 59.7	-0.9
SKO				eLg	Lg	23 56 00.9	
	comp=N,138nm,0.4s						
FNA	Florina	1.24	245	P	Pn	23 55 43.4	-1.1
FNA				S	Sg	23 56 01.3	+0.6
FNA	Florina	1.24	245	ePN	Pn	23 55 43.4	-1.1
FNA				eSN	Sn	23 56 01.5	0.0
FNA	Florina	1.24	245	P	Pn	23 55 43.4	-1.1
FNA				S	Sg	23 56 01.3	+0.6
VTS	Vitosha	1.29	12	P	Pn	23 55 44.4	-0.9
VTS	Vitosha	1.29	12	i P	Pn	23 55 44.1	-1.2
VTS	Vitosha	1.29	12	⇑iP	Pn	23 55 44.3	-1.0
VTS	Vitosha	1.29	12	P	Pn	23 55 44.4	-0.9
VTS				eSg	Sg	23 56 02.5	+0.2
KAVA	Kavala	1.29	104	P	Pn	23 55 45.0	-0.1
KAVA				S	Sn	23 56 02.6	-0.1
KAVA	Kavala	1.29	104	P	Pn	23 55 45.0	-0.1
KAVA				S	Sn	23 56 02.6	-0.1
OUR	Ouranopolis	1.31	139	P	Pn	23 55 44.8	-0.5
OUR	Ouranopolis	1.31	139	P	Pn	23 55 44.8	-0.5
KZN	Kozani	1.31	219	P	Pn	23 55 44.8	-0.6
KZN	Kozani	1.31	219	ePN	Pn	23 55 44.8	-0.6
KZN	Kozani	1.31	219	P	Pn	23 55 44.8	-0.6
RZN	Rozhen	1.44	75	i P	Pn	23 55 47.0	-0.4
RZN	Rozhen	1.44	75	i P	Pn	23 55 47.0	-0.4
PGB	Panagyurishte	1.57	38	i P	Pn	23 55 48.2	-0.8
PGB	Panagyurishte	1.57	38	i P	Pn	23 55 48.2	-0.8
PLD	Plovdiv	1.59	60	P	Pn	23 55 49.2	0.0
PLD	Plovdiv	1.59	60	P	Pn	23 55 49.2	0.0
NEST	Nestorio	1.65	237	P	Pn	23 55 49.5	-0.6
NEST	Nestorio	1.65	237	P	Pn	23 55 49.5	-0.6
BARS	Barje	1.68	333	ePn	Pn	23 55 50.5	0.0
BARS				eSn	Sg	23 56 18.4	+3.7
BARS	Barje	1.68	333	ePn	Pn	23 55 50.5	0.0
KBN	Korca	1.72	247	P	Pn	23 55 50.5	-0.5
KBN	Korca	1.72	247	P	Pn	23 55 50.5	-0.5
PHP	Peshkopia	1.85	282	P	Pn	23 55 51.7	-1.1
PHP	Peshkopia	1.85	282	P	Pn	23 55 51.7	-1.1
THL	Klokotos Trika	1.87	200	P	Pn	23 55 52.4	-0.7
THL	Klokotos Trika	1.87	200	ePB	Pn	23 55 52.6	-0.5
THL	Klokotos Trika	1.87	200	P	Pn	23 55 52.4	-0.7
ZAPS	Zavoj	1.95	355	ePn	Pn	23 55 54.3	0.0
ZAPS				eSn	Sb	23 56 22.3	+1.2
XOR	Xorichti	1.98	172	P	Pn	23 55 54.0	-0.5
XOR	Xorichti	1.98	172	P	Pn	23 55 54.0	-0.5
RDO	Rodhopi	2.03	94	P	Pn	23 55 54.8	-0.5
RDO	Rodhopi	2.03	94	ePN	Pn	23 55 54.8	-0.5
RDO	Rodhopi	2.03	94	P	Pn	23 55 54.8	-0.5
NEO	Neokhori	2.04	172	P	Pn	23 55 54.7	-0.7
NEO	Neokhori	2.04	172	ePN	Pn	23 55 54.9	-0.5
NEO	Neokhori	2.04	172	P	Pn	23 55 54.7	-0.7
DIM	Dimitrovgrad	2.13	69	P	Pn	23 55 56.4	-0.3
DIM	Dimitrovgrad	2.13	69	P	Pn	23 55 56.4	-0.3
SMTH	Samothraki Isl	2.20	112	ePN	Pn	23 55 56.9	-0.7
SKIA	Skiathos	2.21	168	P	Pn	23 55 57.0	-0.7
SKIA	Skiathos	2.21	168	P	Pn	23 55 57.0	-0.7
TIR	Tirane	2.25	272	ePn	Pb	23 56 01.9	+0.2
TIR				eSn	Sg	23 56 37.1	+4.0
TIR	Tirane	2.25	272	ePn	Pb	23 56 01.9	+0.2
JAN	Janina	2.26	223	ePB	Pn	23 55 59.1	+0.6
LIA	Limnos Island	2.27	128	P	Pn	23 55 58.1	-0.5
LIA	Limnos Island	2.27	128	ePN	Pn	23 55 58.1	-0.5
LIA	Limnos Island	2.27	128	P	Pn	23 55 58.1	-0.5
SELS	Selova	2.29	326	ePn	Pb	23 56 01.3	-1.0
AOS	Alonnisos	2.29	160	P	Pn	23 55 58.2	-0.7
AOS	Alonnisos	2.29	160	ePN	Pn	23 55 58.0	-0.9
AOS	Alonnisos	2.29	160	P	Pn	23 55 58.2	-0.7
AGG	Agios Georgios	2.34	190	P	Pn	23 55 58.9	-0.6
AGG	Agios Georgios	2.34	190	ePN	Pn	23 55 59.0	-0.6
AGG	Agios Georgios	2.34	190	P	Pn	23 55 58.9	-0.6
MAKR	Makrakomi, Fth	2.38	194	P	Pn	23 55 59.9	-0.2
MAKR	Makrakomi, Fth	2.38	194	P	Pn	23 55 59.9	-0.2
ALN	Alexandroupoli	2.45	99	P	Pn	23 56 00.6	-0.4
ALN	Alexandroupoli	2.45	99	ePN	Pn	23 56 00.6	-0.4
ALN	Alexandroupoli	2.45	99	P	Pn	23 56 00.6	-0.4
SMIA	Simia	2.46	174	P	Pn	23 56 00.9	-0.3
SMIA	Simia	2.46	174	P	Pn	23 56 00.9	-0.3
EVR	Evrytania	2.54	199	ePB	Pn	23 56 03.7	+1.4
AXAR	Agios Charalam	2.56	183	P	Pn	23 56 02.2	-0.4
AXAR	Agios Charalam	2.56	183	P	Pn	23 56 02.2	-0.4
ENEZ	Enez	2.56	102	ePN	Pn	23 56 02.4	-0.2
ENEZ				eSN	Sb	23 56 38.5	-0.1
BOLS	Boljevac	2.59	345	ePn	Pn	23 56 04.1	+1.2
BOLS				eSn	Sb	23 56 39.2	-0.2
BOLS	Boljevac	2.59	345	ePn	Pn	23 56 04.1	+1.2
ATAL	Atalanti	2.63	177	P	Pn	23 56 03.3	-0.3
ATAL	Atalanti	2.63	177	P	Pn	23 56 03.3	-0.3
LKR	Lokris	2.67	178	ePN	Pn	23 56 03.4	-0.7
KEK	Kerkira	2.83	236	ePN	Pn	23 56 06.9	+0.6
ERIK	Erikli-Kesan	2.84	102	ePN	Pn	23 56 06.2	-0.2
GELI	Tayfur-Gelibol	2.90	107	ePN	Pn	23 56 06.9	-0.2
PDG	Podgorica	2.91	293	ePn	Pb	23 56 11.4	-1.4
EDRB	Edirne	2.96	79	ePN	Pn	23 56 07.3	-0.8
EDRB	Edirne	2.96	79	P	Pn	23 56 07.3	-0.8
EDRB	Edirne	2.96	79	P	Pn	23 56 07.3	-0.8
KALE	Kalithea	2.98	191	ePN	Pn	23 56 07.7	-0.7
EFP	Efpalio	2.99	194	ePN	Pn	23 56 09.1	+0.7
SZH	Strazhica	3.00	49	i P	Pn	23 56 08.3	-0.2
SZH	Strazhica	3.00	49	i P	Pn	23 56 08.3	-0.2
JMB	Yambol	3.01	67	P	Pn	23 56 08.4	-0.3
JMB	Yambol	3.01	67	P	Pn	23 56 08.4	-0.3
GRUS	Gruza	3.01	329	ePn	Pn	23 56 10.8	+2.1
GRUS				eSn	Sb	23 56 51.8	+0.3
GRUS	Gruza	3.01	329	ePn	Pn	23 56 10.8	+2.1
EZN	Ezine	3.04	118	ePN	Pn	23 56 08.0	-1.1
LKD2	Lefkada island	3.04	214	ePN	Pn	23 56 10.4	+1.2
LPK	Lapseki	3.11	107	ePN	Pn	23 56 10.3	+0.2
SIGR	SIGRI	3.12	132	P	Pn	23 56 10.8	+0.6
SIGR	SIGRI	3.12	132	P	Pn	23 56 10.8	+0.6
LAKA	Lakka	3.16	193	ePN	Pn	23 56 11.4	+0.6
SVIS	Svilajnac	3.18	338	ePn	Pn	23 56 13.4	+2.4
SVIS				eSn	Sb	23 56 54.2	-2.1
KLV	Kalavryta, Ach	3.32	190	ePN	Pn	23 56 13.3	+0.2
RKY	Sarkoy-Tekirda	3.33	100	ePN	Pn	23 56 13.3	+0.1
DJES	Djerdap	3.35	356	ePn	Pn	23 56 12.9	-0.5
DJES				eSn	Sn	23 56 55.5	+2.2
GUR	Goura	3.41	187	ePN	Pn	23 56 14.7	+0.4
DIVS	Divibare	3.48	324	ePn	Pn	23 56 17.8	+2.5
DIVS				eSn	Sb	23 57 04.0	-1.2
DIVS	Divibare	3.48	324	ePn	Pn	23 56 17.8	+2.5
KRBG	Karabiga-Canak	3.50	104	ePN	Pn	23 56 15.7	+0.3
HUMR	Humele	3.56	25	⇑iP	Pn	23 56 15.6	-0.7
HUMR	Humele	3.56	25	⇑iP	Pn	23 56 15.6	-0.7
BBLS	Lazići	3.60	316	ePn	Pn	23 56 19.8	+2.9
BBLS				eSn	Sb	23 57 07.4	-1.0
BBLS	Lazići	3.60	316	ePn	Pn	23 56 19.8	+2.9
MRMT	Marmara Adasi	3.66	100	ePN	Pn	23 56 18.4	+0.6
DID	Didima	3.83	175	ePN	Pn	23 56 19.5	-0.5
CHOS	Chios island	3.83	139	P	Pn	23 56 20.7	+0.6
CHOS	Chios island	3.83	139	P	Pn	23 56 20.7	+0.6
GONE	Gonen-Balikesi	3.89	108	ePN	Pn	23 56 21.1	+0.3
SLVT	Silivri	4.04	90	ePN	Pn	23 56 23.1	+0.2
TEKS	Tekeris	4.04	324	eSn	Sb	23 57 17.0	-4.2
GZR	Gura Zlata	4.07	359	⇓iP	Pn	23 56 22.5	-0.8
GZR	Gura Zlata	4.07	359	⇓iP	Pn	23 56 22.5	-0.8
CTYL	Yal??k??y-??at	4.09	86	ePN	Pn	23 56 24.1	+0.5
LOT	Lotru	4.17	9	⇓iP	Pn	23 56 24.3	-0.5
LOT	Lotru	4.17	9	⇓iP	Pn	23 56 24.3	-0.5
CTKS	Kestanelik-??a	4.26	89	ePN	Pn	23 56 26.0	+0.1
BZS	Buzias	4.38	349	ePn	Pn	23 56 27.7	+0.1
BZS				eSn	Sn	23 57 20.9	+2.1
BZS	Buzias	4.38	349	⇑iP	Pn	23 56 25.7	-1.9
BZS	Buzias	4.38	349	⇑iP	Pn	23 56 25.7	-1.9
BZS	Buzias	4.38	349	ePn	Pn	23 56 27.7	+0.1
BZS				eSn	Sn	23 57 20.9	+2.1
VOIR		4.41	21	⇓iP	Pn	23 56 27.4	-0.6
VOIR		4.41	21	⇓iP	Pn	23 56 27.4	-0.6
BGKT	Bogazkoy	4.46	90	ePN	Pn	23 56 29.5	+0.8
ARMT	Armutlu	4.61	98	ePN	Pn	23 56 31.5	+0.7
KLYT	Kilyos	4.66	89	ePN	Pn	23 56 32.2	+0.8
APE	Apeiranthos	4.73	153	ePN	Pn	23 56 30.9	-1.5
APE	Apeiranthos	4.73	153	⇑iP	Pn	23 56 32.6	+0.1
APE	Apeiranthos	4.73	153	⇑iP	Pn	23 56 32.6	+0.1
MLR	Muntele Rosu	4.73	27	⇓iP	Pn	23 56 32.0	-0.5
MLR	Muntele Rosu	4.73	27	⇓iP	Pn	23 56 32.0	-0.5
BUY	Buyukada	4.76	94	eP	Pn	23 56 33.7	+1.0
KYTH	Kithira	5.04	178	ePN	Pn	23 56 37.6	+0.9
GRER		5.04	35	⇓iP	Pn	23 56 36.1	-0.6
GRER		5.04	35	⇓iP	Pn	23 56 36.1	-0.6
PLOR	Plostina	5.29	30	⇑iP	Pn	23 56 40.5	+0.3
PLOR	Plostina	5.29	30	⇑iP	Pn	23 56 40.5	+0.3
VRI	Vrincioaia	5.34	30	⇑iP	Pn	23 56 41.5	+0.8
VRI	Vrincioaia	5.34	30	⇑iP	Pn	23 56 41.5	+0.8
BLY	Banja Luka	5.38	311	ePn	Pn	23 56 43.6	+2.3
BLY	Banja Luka	5.38	311	ePn	Pn	23 56 43.6	+2.3
CFR	Carcaliu	5.45	43	⇓iP	Pn	23 56 42.1	-0.1
CFR	Carcaliu	5.45	43	⇓iP	Pn	23 56 42.1	-0.1
DRGR		5.46	359	⇑iP	Pn	23 56 41.3	-1.2
DRGR		5.46	359	⇑iP	Pn	23 56 41.3	-1.2
PKSM	Moragy	5.76	329	⇓iP	Pn	23 56 44.4	-2.1
PKSM	Moragy	5.76	329	⇓iP	Pn	23 56 44.4	-2.1
TLCR		5.81	46	⇑iP	Pn	23 56 46.8	-0.4
TLCR		5.81	46	⇑iP	Pn	23 56 46.8	-0.4
TESR	Tescani	5.86	27	⇓iP	Pn	23 56 47.4	-0.5
TESR	Tescani	5.86	27	⇓iP	Pn	23 56 47.4	-0.5
BURAR	Bucovina Array	6.51	14	⇓iP	Pn	23 56 56.1	-0.8
BURAR	Bucovina Array	6.51	14	⇓iP	Pn	23 56 56.1	-0.8

IDC 01 23:58:43.5±1.4, 1°.27S×126°.63E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, Error ellipse: s-maj=146.8km s-min=21.9km az=69.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.03	158	P	P	00 03 18.0	-0.2
	1.1nm,0.8s,baz=338,slow=11,SNR=4.7						
WRA				pP	Pn	00 03 35.2	+15
	0.3nm,0.5s,baz=342,slow=12,SNR=4.6						
ASAR	Alice Springs	23.35	163	P	P	00 03 53.9	+0.1
	1.3nm,0.7s,baz=342,slow=11,SNR=13						
ASAR				pP		00 04 11.2	
	0.8nm,0.8s,baz=348,slow=10,SNR=5.3						
SONM	Songino Array	52.00	343	P	P	00 07 55.3	+0.5
	0.5nm,0.5s,baz=169,slow=10,SNR=3.3						
MKAR	Makanchi Array	61.63	327	P	P	00 09 02.5	-0.6
	0.4nm,0.5s,baz=121,slow=7.7,SNR=7.6						

*IDC **02** 00:14:36.3±0.5, 3°.58N×126°.57E, h0km, mb4.3/24, mb1 4.4/24, mb1mx4.4/26, mbtmp4.3/24, MS3.6/5, Ms1 3.6/5, ms1mx2.9/28, Error ellipse: s-maj=25.5km s-min=10.0km az=77.0*
*BJI **02** 00:14:38.3, 3°.15N×126°.95E, h51km, mB4.8/15, mb4.8/25, Ms4.4/8, Ms7 3.9/7*
*ISCJB **02** 00:14:41.2±0.2, 3°.73N±0°.03×126°.83E±0°.05, h48km, mb4.5/46, MS3.6/8, Error ellipse: s-maj=7.1km s-min=3.8km az=164.3*
*NEIC **02** 00:14:41.9±1.0, 3°.66N×126°.73E, h41km±9km, mb4.6/23, Error ellipse: s-maj=11.1km s-min=5.0km az=79.0*
*DJA **02** 00:14:44.6±0.6, 3°N±7°×12°7E±°, h10km, M4.7/8, mB5.2/4, mb4.8/8, MLv4.7/6, Mw(mB)4.6/4*
ISC 02 00:14:43.1±0.3, 3°.63N±0°.04×126°.86E±0°.06, h48km, n122, σ1s.98/158, mb4.5/46, MS3.6/9, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	2.01	152	P	Pn	00 15 15.3	+0.7
TNTI	Ternate	2.89	170	P	Pn	00 15 26.8	+0.1
MNI	Manado	2.96	223	P	Pn	00 15 28.4	+0.7
MATI	Mati	3.35	350	eP	Pn	00 15 35.7	+2.7
MATI				eS	Sn	00 16 20.2	+8.7
DAV	Davao City (W)	3.65	340	Pn	Pn	00 15 36.5	-0.5
DAV				Sn	Sn	00 16 25.1	+6.2
DAV	Davao City (W)	3.65	340	P	Pn	00 15 28.6	-8.5
DAV	Davao City (W)	3.65	340	Pn	Pn	00 15 36.5	-0.5
	49nm,0.3s,baz=135,slow=11,SNR=2.8						
DAV				Sn	Sn	00 16 25.0	+6.2
	46nm,0.3s,baz=180,slow=19,SNR=4.1						
KMSI	Cibinong	4.18	223	P	Pn	00 15 46.6	+2.2
LBMI	Labuha	4.29	171	P	Pn	00 15 47.5	+1.6
CTBH	Cotabato--PC H	4.41	324	⇓iP	Pn	00 15 49.6	+2.0
BUKP	Musuan	4.58	337	eP	Pn	00 15 51.6	+1.6
PAGZ	Pagadian	5.43	321	eP	Pn	00 15 57.9	-3.7
MRSI	Marisa	5.83	238	P	Pn	00 16 08.4	+1.4
LUWI	Luwuk	6.18	221	P	Pn	00 16 15.8	+3.9
SWI	Sorong	6.27	135	P	Pn	00 16 14.7	+1.6
	135nm,1.0s,2μm0.6nm						
NLAI	Namlea	6.83	178	P	Pn	00 16 22.2	+1.4
	54nm,0.7s,2μm0.2nm						
FAKI	Fak Fak	8.45	140	P	Pn	00 16 44.2	+1.2
	92nm,0.9s						
MYLDM	Lahad Datu	8.47	281	P	Pn	00 16 48.3	+5.0
	66nm,1.3s,0.3nm						
TTSI	Tana Toraja	9.67	227	P	Pn	00 17 02.2	+2.5
	46nm,1.0s,1μm						
BAKI	Biak	10.41	117	P	Pn	00 17 13.4	+3.5
	79nm,1.0s,1μm						
KAPI	Kappang	11.14	220	Pn	Pn	00 17 17.7	-2.2
KAPI	Kappang	11.14	220	Pn	Pn	00 17 17.7	-2.2
	0.2nm,0.3s,baz=61,slow=19,SNR=2.2						
BBKI	Banjar Baru	13.92	240	P	P	00 18 16.2	+11
SBUM	Sibu	14.66	266	P	P	00 18 12.0	-1.0
	16nm,1.1s						
JAY	Jayapura	15.13	114	P	P	00 18 21.0	+2.8
KSM	Kuching	16.67	263	ePn	P	00 18 36.5	+1.1
	17nm,0.8s						
KSM	Kuching	16.67	263	P	P	00 18 38.1	+2.8
TWG	Pinlang	19.88	344	P	P	00 19 04.3	-6.2
YULB	Yu-li	20.37	345	eP	P	00 19 13.9	-1.9
	10nm,0.4s						
TPUB	Ta-pu	20.46	343	eP	P	00 19 14.4	-2.5
	30nm,0.7s						
SSLB	Suanglung	20.83	345	eP	P	00 19 19.1	-1.9
	16nm,0.8s						
YHNB	Yeheng	21.57	346	eP	P	00 19 27.6	-1.3
	28nm,0.7s						
FITZ	Fitzroy Crossi	21.63	183	eP	P	00 19 29.7	+0.3
FITZ				S	S	00 23 22.6	-4.0
FITZ	Fitzroy Crossi	21.63	183	P	P	00 19 29.0	-0.4
	5.2nm,0.6s,baz=11,slow=14,SNR=16						
FITZ				S	S	00 23 22.6	-4.0
	2.5nm,0.9s,baz=8.1,slow=19,SNR=3.0						
JOW	Kunigami	23.11	3	eP	P	00 19 42.9	-2.1
	6.5nm,0.8s						
COEN	Coen	23.82	138	eP	P	00 19 49.9	-2.0
UBPT	Khong Chiam	24.03	300	P	P	00 19 52.7	-1.2
WRAB	Tennant Creek	24.55	163	eP	P	00 19 57.8	-0.8
	36nm,0.8s						
WRA	Warramunga Arr	24.55	163	P	P	00 19 57.7	-0.9
WRA				S	S	00 24 20.1	+3.7
WRA	Warramunga Arr	24.55	163	P	P	00 19 57.7	-0.9
	30nm,0.8s,baz=344,slow=10,SNR=64						
WRA				S	S	00 24 20.1	+3.7
	2.4nm,0.8s,baz=328,slow=21,SNR=5.6						
ASAR	Alice Springs	27.99	166	P	P	00 20 29.1	-0.5
ASAR				S	S	00 25 23.7	+13
ASAR	Alice Springs	27.99	166	P	P	00 20 29.1	-0.5
	1.8nm,0.5s,baz=350,slow=7.2,SNR=22						
ASAR				S	S	00 25 23.7	+13
	0.6nm,0.9s,baz=349,slow=24,SNR=3.0						
JNU	Nakatsue	29.58	7	eP	P	00 20 42.5	-1.2
	6.1nm,0.9s						
JNU	Nakatsue	29.58	7	P	P	00 20 44.0	+0.4
	11nm,0.8s,baz=172,slow=6.3,SNR=5.7						
JNU				LR	LR	00 33 53.9	
	comp=Z,67nm,18.5s,baz=146,slow=39						
GYA	Guiyang	29.82	322	P	P	00 20 46.8	+0.8
GYA				pP	pP	00 21 01.2	+2.7
GYA				sP	sP	00 21 08.8	+4.5
GYA				PP	PnPn	00 21 45.6	+2.1
GYA				PcP	PcP	00 23 47.5	-1.1
GYA				S	S	00 25 38.4	-1.3
GYA				sS	sS	00 26 01.2	+0.4
GYA				PcS	PcS	00 27 30.0	-2.2
GYA				ScS	ScS	00 31 18.9	-3.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	31.03	300	P	P	00 20 54.5	-2.1
CMAR	Chiang Mai Arr	31.03	300	P	P	00 20 54.5	-2.1
	comp=Z,1.7nm,0.7s,baz=110,slow=6.4,SNR=9.6						
ENH	Enshi	31.18	330	eP	P	00 20 56.6	-1.2
CHTO	Chiang Mai	31.18	301	eP	P	00 20 56.5	-1.5
	comp=Z,10nm,1.3s						
KMI	Kunming	31.54	315	P	P	00 21 03.5	+2.2
KMI				pP	pP	00 21 17.0	+3.1
KMI				sP	sP	00 21 23.5	+3.9
KMI				PP	PnPn	00 22 09.5	+3.5
KMI				S	S	00 26 08.7	+1.9
KMI				sS	sS	00 26 32.7	+4.7
KMI				SS	SnSn	00 28 00.1	+4.6
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,46nm,6.5s						
KMI				LR	LR		
	comp=N,110nm,16.9s						
KMI				LR	LR		
	comp=E,83nm,16.9s						
KMI				LR	LR		
	comp=Z,170nm,23.0s						
KSAR	Wonju Array Be	33.66	1	P	P	00 21 20.3	+0.9
KSRS	Korea Array	33.67	2	P	P	00 21 20.3	+0.8
	comp=Z,4.1nm,0.7s,baz=183,slow=9.7,SNR=11						
FORT	Forrest	34.24	178	eP	P	00 21 25.8	+1.4
	comp=Z,19nm,0.7s						
MJAR	Matsushiro Arr	34.38	16	P	P	00 21 25.4	-0.2
MJAR	Matsushiro Arr	34.38	16	P	P	00 21 25.4	-0.2
	comp=Z,0.8nm,0.4s,baz=183,slow=10,SNR=6.1						
MJAR				LR	LR	00 35 24.4	
	comp=Z,109nm,19.3s,baz=180,slow=36						
XAN	Xi'an	34.56	333	P	P	00 21 25.1	-2.2
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,13nm,5.7s						
CD2	Chengdu	34.80	324	eP	P	00 21 29.8	+0.4
CD2				pP	pP	00 21 43.8	+1.7
CD2				sP	sP	00 21 48.9	+1.1
CD2				PP	PP	00 22 48.5	-0.6
CD2				S	S	00 26 56.0	-0.9
CD2				sS	sS	00 27 19.9	+1.7
CD2				SS	SnSn	00 29 12.5	-1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,160nm,16.7s						
CD2				pmax	pmax		
	comp=Z,220nm,17.8s						
BJT	Baijiatuau	37.49	346	eP	P	00 21 50.8	-1.4
	comp=Z,51nm,0.8s						
STKA	Stephens Creek	37.99	159	eP	P	00 21 56.9	+0.3
	comp=Z,3.0nm,0.8s						
STKA				ePP	PP	00 23 24.6	+0.4
STKA	Stephens Creek	37.99	159	P	P	00 21 56.9	+0.3
	comp=Z,13nm,0.5s,baz=334,slow=9.3,SNR=33						
HHC	Hu-ho-hao-te	39.53	342	eP	P	00 22 10.1	+0.6
HHC				pP	pP	00 22 25.4	+3.1
HHC				sP	sP	00 22 32.6	+4.6
HHC				PP	PnPn	00 23 46.2	+1.9
HHC				PcS	PcS	00 28 05.8	-0.6
HHC				S	S	00 28 08.4	-0.3
HHC				sS	sS	00 28 34.5	+4.3
HHC				SS	SS	00 30 58.9	-6.1
HHC				ScS	ScS	00 32 10.2	-3.5
HHC				pmax	pmax		
	comp=Z,31nm,1.1s						
HHC				pmax	pmax		
	comp=Z,76nm,5.1s						
HHC				LR	LR		
	comp=N,300nm,15.7s						
HHC				LR	LR		
	comp=E,230nm,14.5s						
HHC				LR	LR		
	comp=Z,250nm,15.9s						
USRK	Ussuriysk Arra	40.65	6	P	P	00 22 18.8	+0.2
	comp=Z,2.0nm,0.6s,baz=185,slow=9.0,SNR=4.8						
MDJ	Mudanjiang	40.89	3	P	P	00 22 20.3	-0.2
MDJ				pP	pP	00 22 33.1	-0.3
MDJ				sP	sP	00 22 39.5	+0.5
MDJ				S	S	00 28 26.4	-2.3
MDJ				sS	sS	00 28 49.6	-0.6
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MDJ				pmax	pmax		
	comp=Z,31nm,3.2s						
MDJ				LR	LR		
	comp=N,48nm,27.0s						
MDJ				LR	LR		
	comp=E,49nm,29.5s						
LSA	Lhasa	42.60	311	P	P	00 22 34.6	-0.8
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LSA	Lhasa	42.60	311	eP	P	00 22 34.2	-1.1
	comp=Z,8.9nm,0.6s						
TAPN	Taplejung	44.18	306	eP	P	00 22 46.2	-1.7
	comp=Z,12nm,0.8s						
ODAN	Odare	44.23	306	eP	P	00 22 45.5	-2.8
	comp=Z,17nm,0.6s						
RAMN	Ramite	44.91	305	eP	P	00 22 51.4	-2.3
	comp=Z,7.4nm,0.6s						
HIA	Hailar	45.87	354	eP	P	00 22 58.5	-2.2
	comp=Z,23nm,1.5s						
GUN	Gumba	45.88	306	eP	P	00 23 00.4	-1.2
	comp=Z,26nm,0.9s						
PKI	Pulchoki	46.13	305	eP	P	00 23 01.2	-2.3
ULN	Ulaanbaatar	47.25	342	eP	P	00 23 10.6	-1.1
	comp=Z,4.2nm,0.7s						
SONM	Songino Array	47.43	341	P	P	00 23 13.0	0.0
SONM	Songino Array	47.43	341	P	P	00 23 13.0	0.0
	comp=Z,1.2nm,0.5s,baz=154,slow=7.7,SNR=6.2						
SONM				LR	LR	00 45 18.9	
	comp=Z,66nm,19.7s,baz=110,slow=39						
KOLN	Koldanda	47.68	305	eP	P	00 23 14.3	-1.2
	comp=Z,14nm,0.4s						
DANN	Dangsing	47.77	306	eP	P	00 23 14.8	-1.5
	comp=Z,24nm,0.6s						
WMQ	Urumqi	52.88	325	eP	P	00 23 53.4	-0.9
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PETK	Petropavlovsk-	55.47	22	P	P	00 24 14.2	+1.3
PETK	Petropavlovsk-	55.47	22	P	P	00 24 14.2	+1.3
	comp=Z,3.1nm,0.6s,baz=188,slow=5.4,SNR=14						
MK31	Makanchi Array	57.71	325	eP	P	00 24 28.0	-1.0
MKAR	Makanchi Array	57.71	325	P	P	00 24 27.8	-1.2
MKAR	Makanchi Array	57.71	325	P	P	00 24 27.8	-1.2
	comp=Z,3.8nm,0.6s,baz=126,slow=8.4,SNR=49						
MKAR				LR	LR	00 53 16.1	
	comp=Z,43nm,18.7s,baz=166,slow=40						
KSH	Kashi	58.20	315	eP	P	00 24 33.1	+0.4
KSH				epP	pP	00 24 49.1	+2.9
KSH				esP	sP	00 24 56.1	+4.4
KSH				ePcP	PcP	00 25 23.1	-0.7
KSH				ePP	PP	00 26 44.7	+2.7
KSH				eS	S	00 32 27.9	-3.4
KSH				esS	sS	00 32 55.1	+1.4
KSH				eScS	ScS	00 34 13.6	-5.1
KSH				pmax	pmax		
	comp=Z,14nm,1.1s						
KSH				pmax	pmax		
	comp=Z,120nm,3.6s						
TKM2	Tokmak 2	59.90	319	eP	P	00 24 43.4	-1.2
	comp=Z,5.1nm,0.9s						
ZAA0	Zalesovo Array	60.73	333	eP	P	00 24 48.0	-1.7
ZALV	Zalesovo Beam	60.73	333	P	P	00 24 48.2	-1.5
ZALV	Zalesovo Beam	60.73	333	P	P	00 24 48.2	-1.5
	comp=Z,0.8nm,0.4s,baz=116,slow=6.9,SNR=7.9						
ZALV				LR	LR	00 55 04.9	
	comp=Z,45nm,18.6s,baz=66,slow=40						
KURK	Kurchatov	61.89	327	eP	P	00 24 55.9	-1.7
	comp=Z,17nm,0.7s						
KKAR	Karatay Array	63.39	317	eP	P	00 25 07.2	-0.6
BRVK	Borovoye	67.54	327	eP	P	00 25 33.6	-0.8
	comp=Z,11nm,0.9s						
ABKAR	Akbulak array	72.31	321	eP	P	00 26 01.9	-1.8
	comp=Z,1.8nm,0.6s						
RAYN	Ar Rayn	80.64	293	eP	P	00 26 50.3	-1.2
	comp=Z,3.8nm,0.9s						
KBZ	Khabaz	83.14	313	P	P	00 27 02.1	-2.0
KBZ	Khabaz	83.14	313	P	P	00 27 02.1	-2.0
	comp=Z,1.4nm,0.9s,baz=74,slow=7.8,SNR=4.1						
VNDA	Vanda	83.31	173	eP	P	00 27 05.1	+0.8
	comp=Z,6.9nm,1.3s						
VNDA	Vanda	83.31	173	P	P	00 27 05.7	+1.3
	comp=Z,0.6nm,0.6s,baz=300,slow=4.6,SNR=3.0						
COLD	Coldfoot	83.93	23	eP	P	00 27 07.3	-0.5
	comp=Z,5.6nm,1.0s						
ILAR	Eielson Array	85.14	25	P	P	00 27 14.8	+0.9
ILAR	Eielson Array	85.14	25	P	P	00 27 14.8	+0.9
	comp=Z,0.7nm,0.8s,baz=241,slow=6.6,SNR=7.5						
KMBO	Kilima Mbogo	89.68	269	P	P	00 27 36.7	-0.5
KMBO	Kilima Mbogo	89.68	269	P	P	00 27 36.7	-0.5
	comp=Z,2.3nm,0.9s,baz=57,slow=7.1,SNR=7.1						
BR131	Keskin Array S	90.18	310	eP	P	00 27 37.5	-1.4
	comp=Z,0.8nm,0.6s						
BRTR	Keskin Array B	90.18	310	P	P	00 27 37.5	-1.4
BRTR	Keskin Array B	90.18	310	P	P	00 27 37.5	-1.4
	comp=Z,1.4nm,0.8s,baz=108,slow=4.0,SNR=8.0						
ARCES	ARCESS Array B	90.58	340	P	P	00 27 39.2	-0.7
ARCES	ARCESS Array B	90.58	340	P	P	00 27 39.2	-0.7
	comp=Z,2.8nm,0.6s,baz=81,slow=7.5,SNR=12						
FINES	FINESS Array B	91.98	332	P	P	00 27 46.6	+0.1
FINES	FINESS Array B	91.98	332	P	P	00 27 46.6	+0.1
	comp=Z,0.8nm,0.6s,baz=81,slow=4.5,SNR=3.6						
AKASG	Malin Array Be	92.05	321	P	P	00 27 45.6	-1.5
AKASG	Malin Array Be	92.05	321	P	P	00 27 45.6	-1.5
	comp=Z,0.9nm,0.5s,baz=71,slow=5.0,SNR=5.6						
DIB	Dawson Inlet,	93.49	36	T	T	02 11 52.7	
	SNR=7.3						
QSPA	South Pole Qui	93.54	180	P	P	00 27 55.2	+1.5
QSPA	South Pole Qui	93.54	180	P	P	00 27 55.2	+1.5
	comp=Z,1.4nm,1.1s,baz=350,slow=3.4,SNR=2.8						
BUR08	Bucovina Ar. S	95.16	318	eP	P	00 28 00.9	-0.8
NOA	NORSAR Array B	98.93	334	P	P	00 28 16.8	-1.5
NOA	NORSAR Array B	98.93	334	P	P	00 28 16.8	-1.5
	comp=Z,0.9nm,0.8s,baz=64,slow=4.7,SNR=4.0						
YKA	Yellowknife Ar	99.53	24	P	Pdif	00 28 22.2	+1.3
YKA	Yellowknife Ar	99.53	24	P	Pdif	00 28 22.2	+1.3
	comp=Z,0.0nm,0.2s,baz=299,slow=3.9,SNR=4.3						
TORD	Torodi Ar. Bea	123.07	288	PKP	PKPdf	00 33 35.3	-0.1
TORD	Torodi Ar. Bea	123.07	288	PKP	PKPdf	00 33 35.3	-0.1
	comp=Z,0.7nm,0.8s,baz=56,slow=1.2,SNR=5.1						
CFAA	Coronel Fontan	148.76	155	PKPbc	PKPbc	00 34 25.7	-0.3
CFAA	Coronel Fontan	148.76	155	PKPbc	PKPbc	00 34 25.7	-0.3
	comp=Z,0.1nm,0.3s,baz=217,slow=5.1,SNR=2.3						

ISCJB ***02*** *00:21:59.9±0.4, 35.°93S±0.°06×103.°42W±0.°10, h12km, mb4.6/49, MS4.6/17, Error ellipse: s-maj=12.0km s-min=8.3km az=150.9*

IDC ***02*** *00:21:59.2±0.5, 35.°84S×103.°69W, h0km, mb4.5/15, mb1 4.6/15, mb1mx4.5/20, mbtmp4.5/15, MS4.6/15, Ms1 4.5/15, ms1mx4.4/19, Error ellipse: s-maj=17.8km s-min=15.8km az=86.0*

NEIC ***02*** *00:22:01.6±0.4, 35.°86S×103.°39W, h10km, mb4.7/33, Error ellipse: s-maj=13.1km s-min=9.2km az=224.0*

GCMT ***02*** *00:22:04.3±0.1, 35.°91S×103.°47W, h17km, MW5.3, Moment Tensor Solution. s82,c140; s99,c189; Moment tensor: Scale 10^17Nm; Mrr0.03±.02; Mθθ-0.32±.02; Mφφ0.29±.02; Mrθ-0.17±.04; Mθφ-1.10±.02; Mφr-0.10±.04; Best double couple: Mo1.20000×10^17 NP1:φs7.00000°, δ82.00000°, λ-5.00000°. NP2:φs98.00000°, δ85.00000°, λ-172.00000°. Principal axes: T 1.1300, Plg2.0000°, Azm233.0000°; N 0.0600, Plg81.0000°, Azm133.0000°; P -1.1900, Plg9.0000°, Azm323.0000°; Data Used: II IU IC G CN. Surface waves from 103 sta.*

ISC 02 00:22:01.7±0.4**, 35.°82S**±0.°09×**103.°44W**±0.°09**, h12km, n112, σ1.s64**/123**, mb4.7**/48**, MS4.7**/17**, 2C, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	26.19	111	eP	P	00 27 38.6	+2.4
PLCA	Paso Flores	26.19	111	P	P	00 27 37.7	+1.4
	12nm,1.1s,baz=264,slow=8.5,SNR=9.6						
PLCA				LR	LR	00 35 16.9	
	comp=Z,601nm,18.9s,baz=25,slow=30						
LCO	Las Campanas	28.37	86	eP	P	00 27 56.8	+0.6
	50nm,1.7s						
CFAA	Coronel Fontan	29.49	92	P	P	00 28 06.5	+0.7
CFAA	Coronel Fontan	29.49	92	P	P	00 28 06.5	+0.7
	0.2nm,0.5s,baz=245,slow=9.1,SNR=6.0						
USHA	Ushuaia	30.65	139	P	P	00 28 16.9	+1.2
USHA	Ushuaia	30.65	139	P	P	00 28 16.9	+1.2
	14nm,1.0s,baz=262,slow=10,SNR=3.7						
USHA				LR	LR	00 37 28.3	
	comp=Z,2μm,21.1s,baz=272,slow=30						
LVC	Limon Verde	32.71	76	eP	P	00 28 34.7	+0.2
	7.1nm,1.3s						
TRQA	Tornquist	33.02	106	eP	P	00 28 35.7	-1.1
	85nm,1.9s						
NNA	Nana	33.77	52	eP	P	00 28 41.8	-1.8
ATAH	Atahualpa	36.62	45	P	P	00 29 08.9	+0.3
ATAH	Atahualpa	36.62	45	P	P	00 29 08.9	+0.3
	3.5nm,0.7s,baz=307,slow=5.1,SNR=3.6						
LPAZ	La Paz	36.93	67	eP	P	00 29 11.0	-0.4
	39nm,1.3s						
LPAZ	La Paz	36.93	67	P	P	00 29 12.5	+1.0
	22nm,1.1s,baz=230,slow=6.2,SNR=30						
LPAZ				LR	LR	00 41 28.7	
	comp=Z,512nm,18.5s,baz=248,slow=32						
CPUP	Villa Florida	40.30	90	LR	LR	00 43 00.8	
	comp=Z,514nm,18.6s,baz=232,slow=31						
SIV	San Ignacio	42.52	74	P	P	00 29 57.2	-0.1
SIV	San Ignacio	42.52	74	P	P	00 29 57.2	-0.1
	6.5nm,0.8s,baz=242,slow=9.0,SNR=23						
OTAV	Otavalo	42.76	38	eP	P	00 29 59.5	-0.1
	3.1nm,1.1s						
SAML	Samuel	45.35	64	eP	P	00 30 19.1	-0.9
	10nm,1.1s						
ROSC	El Rosal	48.81	40	eP	P	00 30 46.5	-0.9
ROSC	El Rosal	48.81	40	P	P	00 30 48.4	+1.0
	22nm,1.0s,baz=273,slow=22,SNR=9.7						
ROSC				LR	LR	00 47 53.7	
	comp=Z,756nm,19.2s,baz=202,slow=32						
BDFB	Brasilia	53.10	83	P	P	00 31 19.7	+0.2
BDFB	Brasilia	53.10	83	P	P	00 31 19.7	+0.2
	8.8nm,1.0s,baz=226,slow=8.4,SNR=6.5						
BDFB				LR	LR	00 52 33.7	
	comp=Z,339nm,18.5s,baz=331,slow=34						
SDV	Santo Domingo	54.15	41	eP	P	00 31 24.9	-2.3
	7.5nm,0.7s						
QSPA	South Pole Qui	54.39	180	eP	P	00 31 27.5	-0.8
	11nm,0.9s						
QSPA	South Pole Qui	54.39	180	P	P	00 31 27.7	-0.6
	4.7nm,0.8s,baz=128,slow=2.7,SNR=13						
VNDA	Vanda	56.35	195	P	P	00 31 41.6	-0.5
VNDA	Vanda	56.35	195	P	P	00 31 41.6	-0.5
	1.5nm,1.0s,baz=97,slow=7.8,SNR=3.6						
VNDA				LR	LR	00 51 13.9	
	comp=Z,381nm,18.7s,baz=97,slow=31						
VNA1	Neumayer--Stat	58.34	157	eP	P	00 31 56.3	+0.1
SNAA	Sanae	59.65	159	eP	P	00 32 04.1	-1.2
SNAA	Sanae	59.65	159	epP	P	00 32 06.3	+1.0
SNAA	Sanae	59.65	159	eP	P	00 32 04.0	-1.4
	5.5nm,0.9s						
SJG	San Juan	64.22	40	eP	P	00 32 33.7	-2.9
	19nm,0.8s						
TXAR	Lajitas Array	64.80	360	P	P	00 32 40.5	+0.2
TXAR	Lajitas Array	64.80	360	P	P	00 32 40.5	+0.2
	2.3nm,0.7s,baz=182,slow=9.0,SNR=18						
TXAR				LR	LR	00 55 13.6	
	comp=Z,197nm,19.4s,baz=120,slow=31						
TUC	Tucson	68.12	353	eP	P	00 33 02.9	+1.4
	6.9nm,1.1s						
LRAL	Lakeview Retre	70.20	15	eP	P	00 33 13.7	-0.6
LDFC	Landfair	71.36	350	eP	P	00 33 22.0	+0.5
	27nm,0.4s						
GSC	Goldstone	71.84	349	eP	P	00 33 25.1	+0.7
	7.7nm,1.1s						
SYO	Syowa Base	71.97	167	⇑eP	P	00 33 21.4	-3.3
SYO	Syowa Base	71.97	167	⇑epP	pP	00 33 28.0	-0.6
SDCO	Great Sand Dun	73.22	358	eP	P	00 33 32.7	0.0
	3.7nm,1.1s						
CCUT	Cedar City	73.58	352	eP	P	00 33 36.1	+1.3
	11nm,1.0s						
PV01	Paradox Valley	73.73	356	eP	P	00 33 36.0	+0.3
	486nm,1.1s						
PV04	Paradox Valley	74.01	356	eP	P	00 33 37.3	0.0
TZTN	Tazewell	74.33	17	P	P	00 33 39.8	+0.8
MVU	Marysvale	74.39	353	eP	P	00 33 40.8	+1.2
	14nm,1.8s						
SMCO	Snowmass	74.69	357	eP	P	00 33 42.3	+0.9
	10nm,1.3s						
NVAR	Mina Array Bea	75.14	348	P	P	00 33 43.7	-0.2
NVAR	Mina Array Bea	75.14	348	P	P	00 33 43.7	-0.2
	8.3nm,1.0s,baz=186,slow=8.1,SNR=10.0						
ISCO	Idaho Springs	75.27	358	eP	P	00 33 49.5	+4.9
	4.4nm,1.0s						
DUG	Dugway	76.13	353	eP	P	00 33 49.4	+0.1
	7.0nm,1.1s						
DAU	Daniels Canyon	76.20	354	eP	P	00 33 49.8	-0.2
MAW	Mawson	76.38	175	P	P	00 33 49.1	-1.3
MAW	Mawson	76.38	175	P	P	00 33 49.1	-1.3
	6.2nm,1.0s,baz=173,slow=3.9,SNR=5.7						
MAW				LR	LR	01 06 13.1	
	comp=Z,306nm,18.0s,baz=10,slow=35						
DZM	Mont Dzumac	77.52	252	LR	LR	00 59 33.5	
	comp=Z,605nm,21.4s,baz=34,slow=29						
BW06	Boulder Array	78.41	355	eP	P	00 34 01.4	-0.8
	7.1nm,1.0s						
PDAR	Pinedale Array	78.41	355	P	P	00 34 01.6	-0.6
PDAR	Pinedale Array	78.41	355	P	P	00 34 01.6	-0.6
	4.2nm,0.7s,baz=158,slow=6.7,SNR=13						
PDAR				LR	LR	01 04 22.0	
	comp=Z,92nm,18.6s,baz=8.1,slow=32						
KHMM	Horse Mountain	78.56	344	eP	P	00 34 03.8	+0.8
	30nm,1.5s						
WVOR	Wild Horse Val	79.11	349	eP	P	00 34 07.4	+1.5
	12nm,1.3s						
RRI2	Red Ridge	79.11	354	eP	P	00 34 09.0	+2.9
	15nm,1.4s						
YBH	Yreka Blue Hor	79.17	345	eP	P	00 34 05.9	-0.3
	4.5nm,1.0s						
TPAW	Teton Pass	79.23	354	eP	P	00 34 08.8	+2.0
	14nm,1.2s						
ECSD	EROS Data Cent	79.42	5	eP	P	00 34 06.8	-0.6
	5.3nm,0.9s						
MOOW	Moose Ponds	79.47	355	eP	P	00 34 10.1	+2.1
	3.4nm,0.8s						
RSSD	Black Hills	79.56	360	eP	P	00 34 08.8	+0.3
	10.0nm,1.3s						
IMW	Indian Meadow	79.63	354	eP	P	00 34 11.2	+2.3
	5.7nm,0.4s						
HLID	Hailey	79.63	352	eP	P	00 34 09.5	+0.7
HUMO	Hull Mountain	80.06	346	eP	P	00 34 11.6	+0.6
BOZ	Bozeman (W)	81.42	354	eP	P	00 34 17.7	-0.7
	2.9nm,1.0s						
CHMT	Chamberlain Mo	82.83	353	eP	P	00 34 26.2	+0.4
	6.8nm,1.4s						
SLMT	Seeley Lake	83.17	353	eP	P	00 34 29.7	+2.2
NEW	Newport	84.59	351	eP	P	00 34 37.0	+2.4
	7.6nm,1.0s						
NLWA	Neilton Lookou	84.83	346	eP	P	00 34 40.0	+4.2
	11nm,1.1s						
ULM	Lac du Bonnet	85.95	5	P	P	00 34 40.9	-0.4
ULM	Lac du Bonnet	85.95	5	P	P	00 34 40.9	-0.4
	1.9nm,0.7s,baz=273,slow=19,SNR=2.2						
STKA	Stephens Creek	89.18	230	LR	LR	01 07 32.2	
	comp=Z,502nm,18.9s,baz=204,slow=31						
SCHQ	Schefferville	95.61	20	LR	LR	01 13 25.0	
	comp=Z,295nm,21.9s,baz=185,slow=32						
YKA	Yellowknife Ar	98.38	355	P	P	00 35 38.1	-0.7
YKA	Yellowknife Ar	98.38	355	P	P	00 35 38.1	-0.7
	0.1nm,0.6s,baz=184,slow=2.7,SNR=3.8						
BOSA	Boshof	99.74	136	LR	LR	01 13 02.9	
	comp=Z,322nm,20.0s,baz=181,slow=31						
ASAR	Alice Springs	99.76	232	P	Pdif	00 35 41.7	-4.4
ASAR	Alice Springs	99.76	232	P	Pdif	00 35 41.7	-4.4
	0.7nm,0.9s,baz=129,slow=3.7,SNR=4.0						
ASAR				LR	LR	01 14 51.7	
	comp=Z,547nm,19.2s,baz=158,slow=32						
TORD	Torodi Ar. Bea	109.78	88	Pdif	Pdif	00 36 33.8	+3.1
TORD				PP	PP	00 41 07.1	+1.9
TORD	Torodi Ar. Bea	109.78	88	Pdiff	Pdif	00 36 33.8	+3.1
	1.1nm,1.2s,baz=258,slow=4.3,SNR=3.3						
TORD				PP	PP	00 41 07.1	+1.9
	2.3nm,1.1s,baz=238,slow=1.5,SNR=4.9						
ESDC	Sonseca Array	118.28	60	PKP	PKPdf	00 40 48.5	-0.3
ESDC	Sonseca Array	118.28	60	PKP	PKPdf	00 40 48.5	-0.3
	0.1nm,0.3s,baz=241,slow=2.5,SNR=2.8						
GRF	Grafenberg Arr	131.55	52	ePKP	PKPdf	00 41 20.4	+6.6
GERES	GERESS Array B	133.03	54	PKP	PKPdf	00 41 17.2	+0.4
GERES	GERESS Array B	133.03	54	PKP	PKPdf	00 41 17.2	+0.4
	0.5nm,0.8s,baz=222,slow=1.3,SNR=5.8						
CSS	Prodhromos	144.96	78	ePKPdf	PKPab	00 41 38.1	-0.1
BR131	Keskin Array S	146.09	70	ePKP	PKPab	00 41 42.9	+0.5
BRTR	Keskin Array B	146.09	70	PKPbc	PKPdf	00 41 40.5	-0.3
BRTR	Keskin Array B	146.09	70	PKPbc	PKPdf	00 41 40.5	-0.3
	4.1nm,1.0s,baz=256,slow=4.3,SNR=12						
ENH	Enshi	151.93	268	ePKPdf	PKPdf	00 41 52.9	+2.5
HHC	Hu-ho-hao-te	152.20	291	ePKPbc	PKPdf	00 41 53.0	+2.5
HHC				PKS	PKSdf	00 45 26.1	+1.0
HHC				PP	PP	00 45 45.4	+5.7
HHC				SKS	SKSdf	00 48 58.8	+1.1
HHC				SKKS	SKKSac	00 52 33.4	+3.8
HHC				SS	SS	01 05 13.4	+4.9
HHC				AMB	AMB		
	comp=Z,150nm,8.3s						
HHC				LR	LR		
	comp=N,260nm,21.4s						
HHC				LR	LR		
	comp=E,350nm,21.4s						
HHC				LR	LR		
	comp=Z,120nm,21.4s						
GYA	Guiyang	152.68	258	ePKPbc	PKPdf	00 41 52.8	+1.1
GYA				PKPab	PKPab	00 42 13.4	+3.9
GYA				PKS	PKSdf	00 45 25.3	-1.1
GYA				PP	PP	00 45 47.0	+4.5
GYA				AMB	AMB		
	comp=Z,90nm,7.6s						
KBZ	Khabaz	153.09	63	PKP	PKPdf	00 41 51.9	+0.4
KBZ				PKPbc	PKPbc	00 41 59.0	+0.1
KBZ	Khabaz	153.09	63	PKP	PKPdf	00 41 51.9	+0.4
	comp=Z,1.4nm,0.9s,baz=259,slow=5.2,SNR=2.5						
KBZ				PKPbc	PKPbc	00 41 59.0	+0.1
	comp=Z,3.3nm,0.9s,baz=13,slow=3.0,SNR=5.7						
CMAR	Chiang Mai Arr	153.72	235	PKPbc	PKPbc	00 41 58.6	-2.5
CMAR				PKPab	PKPab	00 42 12.5	-1.3
CMAR	Chiang Mai Arr	153.72	235	PKPbc	PKPbc	00 41 58.6	-2.5
	comp=Z,1.2nm,0.4s,baz=229,slow=2.0,SNR=4.7						
CMAR				PKPab	PKPab	00 42 12.5	-1.3
	comp=Z,1.3nm,0.4s,baz=156,slow=2.5,SNR=3.4						
ULN	Ulaanbaatar	154.46	308	PKPdf	PKPbc	00 41 58.4	-3.6
SONM	Songino Array	154.89	308	PKP	PKPdf	00 41 53.8	-0.4
SONM				PKPbc	PKPbc	00 42 01.8	-1.0
SONM				PKPab	PKPab	00 42 16.4	-1.8
SONM	Songino Array	154.89	308	PKP	PKPdf	00 41 53.8	-0.4
	comp=Z,0.4nm,0.5s,baz=116,slow=3.4,SNR=2.4						
SONM				PKPbc	PKPbc	00 42 01.8	-1.0
	comp=Z,1.3nm,0.8s,baz=90,slow=1.6,SNR=3.7						
SONM				PKPab	PKPab	00 42 16.4	-1.8
	comp=Z,2.6nm,0.8s,baz=101,slow=2.9,SNR=5.5						
CD2	Chengdu	156.79	266	ePKP	PKPdf	00 41 57.7	+0.6
LZH	Lanzhou	157.93	279	ePKP	PKPdf	00 41 55.0	-3.6
LZH				PKPab	PKPab	00 42 32.1	+0.3
LZH				LR	LR		
	comp=N,140nm,18.0s						
LZH				LR	LR		
	comp=E,120nm,19.0s						
LZH				LR	LR		
	comp=Z,160nm,20.4s						
ZALV	Zalesovo Beam	160.97	345	PKP	PKPdf	00 41 59.7	-1.6
ZALV				PKPab	PKPab	00 42 42.3	-1.7
ZALV	Zalesovo Beam	160.97	345	PKP	PKPdf	00 41 59.7	-1.6
	comp=Z,0.4nm,0.5s,baz=321,slow=2.0,SNR=2.5						
ZALV				PKPab	PKPab	00 42 42.3	-1.7
	comp=Z,0.9nm,0.7s,baz=38,slow=2.6,SNR=2.4						
MKAR	Makanchi Array	168.22	340	PKP	PKPdf	00 42 07.3	-0.6
MKAR				PKPab	PKPab	00 43 13.2	-2.9
MKAR				PP	PP	00 47 19.4	+15
MKAR	Makanchi Array	168.22	340	PKP	PKPdf	00 42 07.3	-0.6
	comp=Z,0.2nm,0.7s,baz=101,slow=3.1,SNR=3.2						
MKAR				PKPab	PKPab	00 43 13.2	-2.9
	comp=Z,0.2nm,0.6s,baz=18,slow=5.2,SNR=2.3						
MKAR				PP	PP	00 47 19.4	+15
	comp=Z,0.1nm,0.5s,baz=38,slow=7.3,SNR=2.2						
WMQ	Urumqi	168.29	316	ePKP	PKPdf	00 42 08.5	+0.4

MEX 02 00:44:27.1±0.5**, 17.°12N×99.°77W, h36km**±12km**, MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.48	261	eP	Pn	00 44 35.5	-1.9
CAIG				i S	Sn	00 44 42.8	-1.8
MEIG	Mezcala	0.81	10	eP	Pn	00 44 40.3	-2.0
MEIG				i S	Sn	00 44 50.8	-2.3
ARIG	Puente Sto Nin	1.28	335	eP	Pn	00 44 46.7	-1.8
ARIG				i S	Sn	00 45 02.6	-1.8
PLIG	Platanillo	1.29	11	eP	Pn	00 44 47.1	-1.7
PLIG				i S	Sn	00 45 02.2	-2.7
ZIIG	Zihuatanejo	1.69	287	i P	Pn	00 44 52.1	-1.9
ZIIG				i S	Sn	00 45 11.6	-2.9
PNIG	Pinotepa	1.73	114	eP	Pn	00 44 53.6	-1.2
PNIG				i S	Sn	00 45 13.5	-2.2
YAIG	Yautepec	1.86	21	i P	Pn	00 44 55.2	-1.5
YAIG				i S	Sn	00 45 16.7	-2.3
PPM	Popocatepetl	2.22	29	i P	Pn	00 45 01.0	-1.1
PPM				i S	Sn	00 45 25.8	-3.0
MMIG	Aquila	3.60	289	i P	Pn	00 45 19.5	-0.9
MMIG				i S	Sn	00 45 59.5	-2.1

BJI 02 01:00:58.9, 40.°01N×106.°71E, h6km, ML3.6/11**, Ms3.3**/2**, Ms7 2.9**/2**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	Baotou	2.60	76	ePn	Pn	01 01 38.0	-3.6
BTO				Pg	Pb	01 01 43.8	-2.3
BTO				Sn	Sn	01 02 08.5	-5.2
BTO				Sg	Sb	01 02 15.6	-2.8
BTO				smax	smax		
	comp=N,120nm,0.3s						
BTO				smax	smax		
	comp=E,85nm,0.2s						
HHC	Hu-ho-hao-te	3.80	76	ePn	Pn	01 01 57.9	-0.2
HHC				ePg	Pb	01 02 05.4	-1.1
HHC				Sn	Sn	01 02 44.0	+0.8
HHC				Sg	Sb	01 02 52.2	-0.7
HHC				smax	smax		
	comp=N,820nm,0.5s						
HHC				smax	smax		
	comp=E,580nm,0.4s						
HHC				LR	LR		
	comp=N,270nm,8.4s						
HHC				LR	LR		
	comp=E,210nm,8.1s						
HHC				LR	LR		
	comp=Z,51nm,7.3s						
LZH	Lanzhou	4.52	211	ePn	Pn	01 02 07.6	-0.6
LZH				Pg	Pb	01 02 18.1	-0.8
LZH				Sn	Sn	01 03 01.2	0.0
LZH				Sg	Sb	01 03 16.4	+2.5
LZH				smax	smax		
	comp=N,89nm,1.0s						
LZH				smax	smax		
	comp=E,81nm,0.9s						
LZH				LR	LR		
	comp=N,160nm,4.6s						
LZH				LR	LR		
	comp=E,160nm,5.0s						
LZH				LR	LR		
	comp=Z,170nm,5.7s						
GTA	Gaotai	5.35	266	Pn	Pn	01 02 21.9	+2.4
GTA				Pg	Pb	01 02 33.9	+0.9
GTA				smax	smax		
	comp=N,62nm,0.8s						
GTA				smax	smax		
	comp=E,47nm,0.7s						
XAN	Xi'an	6.22	163	Pg	Pb	01 02 51.6	+4.0
XAN				smax	smax		
	comp=N,20nm,0.6s						
XAN				smax	smax		
	comp=E,9.0nm,1.0s						

TIF ***02*** *01:09:34.9, 41.°08N×44.°00E, h5km±1km*

MOS ***02*** *01:09:35.6±2.4, 40.°93N×44.°10E, h10km, mb3.9/1, Error ellipse: s-maj=14.5km s-min=5.8km az=87.0*

ISK ***02*** *01:09:36.4, 41.°01N×43.°93E, h6km, MD3.2*

CSEM ***02*** *01:09:36.7±0.2, 41.°01N×43.°95E, h2km, ML2.7, Error ellipse: s-maj=5.6km s-min=4.5km az=132.0*

NSSP ***02*** *01:09:39.5, 41.°07N×43.°93E, h10km, Ms2.7*

DDA ***02*** *01:09:45.1, 40.°57N×43.°11E, h7km, MD3.3*

ISC 02 01:09:36.1±1.0**, 41.°07N**±0.°02×**43.°96E**±0.°02**, h4km**±9km**, n76, σ0.s86**/120**, 10C-6D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMRZ	Gyumri	0.27	201	eP	Pg	01 09 42.0	+0.6
GMRZ				⇑S	Sg	01 09 46.0	+1.0
STE	Stepanavan	0.32	102	⇑P	Pg	01 09 42.0	-0.3
STE				S	Sg	01 09 46.5	-0.1

STEZ	Stepenevan	0.34	101	⇑iP	Pg	01 09 42.0	-0.7
STEZ				⇑iS	Sg	01 09 46.5	-0.7
KZR	Kazreti	0.47	47	P	Pg	01 09 44.6	-0.5
KZR				S	Sg	01 09 51.0	-0.2
AKH	Akhalkalaki	0.49	315	P	Pg	01 09 45.4	-0.2
AKH				S	Sg	01 09 52.2	+0.2
AKH	Akhalkalaki	0.49	315	PG	Pg	01 09 45.4	-0.2
AKH	Akhalkalaki	0.49	315	Pg	Pg	01 09 45.4	-0.2
DIGO	Kars	0.79	214	iP	Pg	01 09 50.6	-0.6
DIGO				iS	Sg	01 10 00.7	-0.7
DIGO	Kars	0.79	214	iP	Pg	01 09 50.6	-0.6
DIGO				iS	Sg	01 10 00.7	-0.7
KARS	Kars	0.80	237	ePG	Pg	01 09 51.0	-0.4
KARS	Kars	0.80	237	PG	Pg	01 09 51.0	-0.4
KARS	Kars	0.80	237	ePg	Pg	01 09 51.0	-0.4
TBLG	Delisi	0.89	41	P	Pg	01 09 51.9	-1.2
TBLG				S	Sg	01 10 04.3	-0.3
TBLG	Delisi	0.89	41	iPG	Pg	01 09 51.9	-1.2
TBLG				iS	Sg	01 10 04.3	-0.3
TBLG	Delisi	0.89	41	iPg	Pg	01 09 51.9	-1.2
TBLG				iSg	Sg	01 10 04.3	-0.3
GOR	Gori	0.93	7	P	Pg	01 09 53.3	-0.6
GOR				S	Sg	01 10 06.6	+0.7
GOR	Gori	0.93	7	PG	Pg	01 09 53.3	-0.6
GOR				S	Sg	01 10 06.6	+0.7
GOR	Gori	0.93	7	Pg	Pg	01 09 53.3	-0.6
GOR				Sg	Sg	01 10 06.6	+0.7
GNI	Garni	1.09	147	ePG	Pg	01 09 56.6	-0.4
GNI				eSG	Sb	01 10 12.1	-0.1
GNI	Garni	1.09	147	⇑iP	Pg	01 09 56.5	-0.5
GNI				⇑iS	Sb	01 10 12.3	0.0
GNI	Garni	1.09	147	⇑P	Pg	01 09 56.5	-0.5
GNI				S	Sb	01 10 12.3	0.0
DGRG	David-gareji	1.14	70	P	Pg	01 09 57.3	-0.6
DGRG				S	Sb	01 10 13.9	+0.5
DGRG	David-gareji	1.14	70	PG	Pg	01 09 57.3	-0.6
DGRG				S	Sb	01 10 13.9	+0.5
DGRG	David-gareji	1.14	70	Pg	Pg	01 09 57.3	-0.6
DGRG				Sg	Sb	01 10 13.9	+0.5
DUS	Dusheti	1.17	28	P	Pg	01 09 58.4	-0.1
DUS				S	Sb	01 10 15.1	+0.8
DUS	Dusheti	1.17	28	PG	Pg	01 09 58.4	-0.1
DUS				S	Sb	01 10 15.3	+1.0
DUS	Dusheti	1.17	28	Pg	Pg	01 09 58.4	-0.1
DUS				Sg	Sb	01 10 15.3	+1.0
GUDG	Gudauri	1.45	15	P	Pn	01 10 02.4	-0.9
GUDG				S	Sb	01 10 22.4	-0.3
DAGI	Agillar	1.54	271	iP	Pn	01 10 04.3	-0.2
DAGI				iS	Sn	01 10 24.9	-0.1
ONI	Oni	1.57	346	P	Pn	01 10 04.6	-0.2
ONI				S	Sn	01 10 25.3	-0.3
VADZ	Vardenis	1.63	123	⇑iP	Pb	01 10 07.0	+0.2
VADZ				⇓iS	Sg	01 10 30.0	+1.6
VADZ	Vardenis	1.63	123	⇑P	Pb	01 10 07.0	+0.2
VADZ				S	Sg	01 10 30.0	+1.6
DDEM	Demirkent	1.68	265	iP	Pn	01 10 06.5	+0.2
DDEM				iS	Sb	01 10 29.1	0.0
DDEM	Demirkent	1.68	265	iP	Pn	01 10 06.5	+0.2
DDEM				iS	Sb	01 10 29.1	0.0
ZEI	Tsey	1.70	359	ePN	Pg	01 10 09.2	+0.4
ZEI	Tsey	1.70	359	ePn	Pg	01 10 09.2	+0.4
DBAD	Bademkaya	1.71	269	iP	Pn	01 10 07.2	+0.4
DBAD				iS	Sb	01 10 29.8	-0.3
DBAD	Bademkaya	1.71	269	iP	Pn	01 10 07.2	+0.4
DBAD				iS	Sb	01 10 29.8	-0.3
DBOC	Borcka	1.75	280	iP	Pn	01 10 07.9	+0.6
DBOC				iS	Sn	01 10 29.8	-0.2
DBOC	Borcka	1.75	280	iP	Pn	01 10 07.9	+0.6
DBOC				iS	Sn	01 10 29.8	-0.2
LACR	Lac	1.78	8	⇓iPN	Pn	01 10 08.2	+0.5
LACR	Lac	1.78	8	iPn	Pn	01 10 08.2	+0.5
BCA	Borcka	1.80	283	ePN	Pb	01 10 08.8	-0.8
BCA				eSN	Sn	01 10 31.6	+0.5
BCA	Borcka	1.80	283	ePn	Pb	01 10 08.8	-0.8
BCA				eSn	Sn	01 10 31.7	+0.5
DIGR	Digorskoe uzhe	1.85	351	⇓iPN	Pb	01 10 11.3	+0.6
DIGR	Digorskoe uzhe	1.85	351	iPn	Pb	01 10 11.3	+0.6
CLDR	Caldiran	1.92	181	ePN	Pn	01 10 09.7	-0.1
CLDR	Caldiran	1.92	181	ePn	Pn	01 10 09.7	-0.1
KORR	Kora	2.02	2	⇓iPN	Pb	01 10 14.1	+0.7
KORR	Kora	2.02	2	iPn	Pb	01 10 14.1	+0.7
VLKR	Vladikavkaz	2.05	15	ePN	Pg	01 10 15.4	0.0
VLKR				eS	Sb	01 10 40.9	+1.1
VLKR	Vladikavkaz	2.05	15	ePn	Pg	01 10 15.4	0.0
VLKR				eSn	Sb	01 10 40.9	+1.1
SNJR	Sundja	2.10	17	ePN	Pg	01 10 15.9	-0.5
SNJR				eS	Sb	01 10 42.1	+0.9
SNJR	Sundja	2.10	17	ePn	Pg	01 10 15.9	-0.5
SNJR				eSn	Sb	01 10 42.1	+0.9
CHVG	Ch'k'valeri	2.16	320	P	Pb	01 10 15.2	-0.6
CHVG				S	Sg	01 10 45.4	-0.2
LSNR	Lesken	2.21	357	ePN	Pb	01 10 17.0	+0.4
LSNR				eS	Sb	01 10 43.6	-0.7
LSNR	Lesken	2.21	357	ePn	Pb	01 10 17.0	+0.4
LSNR				eSn	Sb	01 10 43.6	-0.7
EZM	Erzurum	2.29	240	ePN	Pn	01 10 15.3	+0.4
PZAR	Pazar-Rize	2.31	274	ePN	Pn	01 10 16.2	+1.3
PZAR	Pazar-Rize	2.31	274	ePn	Pn	01 10 16.2	+1.3
BTKR	Batakoyurt	2.35	10	ePN	Pb	01 10 19.0	+0.1
BTKR				eS	Sb	01 10 47.8	-0.4
BTKR	Batakoyurt	2.35	10	ePn	Pb	01 10 19.0	+0.1
BTKR				eSn	Sb	01 10 47.8	-0.4
GRS	Goris	2.40	130	⇓P	Pb	01 10 18.0	-1.9
GRS				S	Sn	01 10 43.0	-3.1
STKZ		2.47	119	⇑P	Pg	01 10 25.5	+2.0
STKZ				S	Sg	01 10 58.1	+2.6
VRTB	Varto-Mus	2.70	226	ePN	Pn	01 10 21.1	+0.7
VRTB	Varto-Mus	2.70	226	ePn	Pn	01 10 21.2	+0.7
BAYT	Ayd˜–ntepe-Bay	2.98	258	ePN	Pn	01 10 25.8	+1.6
BAYT	Ayd˜–ntepe-Bay	2.98	258	ePn	Pn	01 10 25.8	+1.6
KIV	Kislovodsk	3.04	342	ePN	Pb	01 10 30.6	-0.1
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV	Kislovodsk	3.04	342	ePn	Pb	01 10 30.6	-0.1
	comp=Z,12nm,1.1s						
BEYR	Belyy Ugol+	3.06	344	⇓ePN	Pb	01 10 28.7	-2.5
BEYR	Belyy Ugol+	3.06	344	ePn	Pb	01 10 28.7	-2.5
MAK	Makhachkala	3.25	53	ePN	Pn	01 10 22.3	-5.5
MAK	Makhachkala	3.25	53	ePn	Pn	01 10 22.3	-5.5
GUMT	Gumushane	3.45	261	ePN	Pn	01 10 32.0	+1.3
GUMT	Gumushane	3.45	261	ePn	Pn	01 10 32.0	+1.3

*CSEM **02** 01:28:42.5, 41°.53N×14°.49E, h22km, MD1.6/4, After ROM*

ROM 02 01:28:42.5±0.4, 41°.53N×14°.49E, h22km±4km, Md1.6/4, Ml1.4/4, Error ellipse: s-maj=2.3km s-min=2.0km az=23.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSSO	Busso	0.08	81	Pg	Pb	01 28 46.8	+0.1
BSSO				Sg	Sb	01 28 49.9	+0.3
	105nm,0.5s						
BSSO	Busso	0.08	81	Pg	Pb	01 28 46.8	+0.1
BSSO				Sg	Sb	01 28 49.9	+0.3
	105nm,0.5s						
SGG	Gregorio Mates	0.17	210	Pg	Pb	01 28 47.6	-0.5
SGG				Sg	Sb	01 28 51.1	-0.9
	40nm,0.5s						
SGG	Gregorio Mates	0.17	210	Pg	Pb	01 28 47.6	-0.5
SGG				Sg	Sb	01 28 51.1	-0.9
	40nm,0.5s						
PTRJ	Pietraroja	0.17	170	Pg	Pb	01 28 48.0	-0.1
PTRJ				Sg	Sb	01 28 51.3	-0.7
PTRJ	Pietraroja	0.17	170	Pg	Pb	01 28 48.0	-0.1
PTRJ				Sg	Sb	01 28 51.3	-0.7
MIDA	Miranda	0.21	301	Pg	Pb	01 28 47.6	-0.8
MIDA				Sg	Sb	01 28 52.1	-0.3
	184nm,1.8s						
MIDA	Miranda	0.21	301	Pg	Pb	01 28 47.6	-0.8
MIDA				Sg	Sb	01 28 52.1	-0.3
	184nm,1.8s						
VAGA	Valle Agricola	0.23	239	Pg	Pb	01 28 48.5	0.0
VAGA				Sg	Sb	01 28 53.1	+0.5
	75nm,0.3s						
VAGA	Valle Agricola	0.23	239	Pg	Pb	01 28 48.5	0.0
VAGA				Sg	Sb	01 28 53.1	+0.5
	75nm,0.3s						

*BJI **02** 01:32:27.9, 3°.90S×100°.02E, h40km, mB4.9/29, mb4.9/39, Ms4.6/31, Ms7 4.2/28*
*IDC **02** 01:32:28.6±0.4, 3°.21S×100°.01E, h0km, mb4.6/29, mb1 4.7/30, mb1mx4.6/32, mbtmp4.6/30, ML4.5/1, MS3.9/7, Ms1 4.0/7, ms1mx3.5/40, Error ellipse: s-maj=14.4km s-min=8.7km az=57.0*
*ISCJB **02** 01:32:29.6±0.8, 3°.26S±0°.03×99°.98E±0°.03, h17km±5km, mb4.8/101, MS4.1/18, Error ellipse: s-maj=5.2km s-min=3.7km az=141.1*
*MOS **02** 01:32:30.8±1.1, 3°.14S×100°.04E, h25km, mb5.0/51, Error ellipse: s-maj=11.0km s-min=5.7km az=110.8*
*DJA **02** 01:32:32.7±0.9, 3°S±2°×10°0E±°, h15km±8km, M5.0/43, mB5.4/22, mb5.2/43, MLv5.5/23, Mw(mB)4.9/22*
*NEIC **02** 01:32:33.8±0.2, 3°.24S×100°.05E, h35km, mb4.9/24, Error ellipse: s-maj=6.2km s-min=4.5km az=71.0*

ISC 02 01:32:33.6±0.4, 3°.32S±0°.03×99°.94E±0°.04, h35km±1km, h35km:pP-P, n289, σ1.54/364, mb4.8/99, MS4.0/18, 21C-5D, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	2.30	86	P	Pn	01 33 08.8	-0.3
MBSI	MBSI	2.36	101	P	Pn	01 33 09.8	-0.1
KSI	Kapahiang	2.67	97	P	Pn	01 33 13.2	-1.0
PPI	Padang Panjang	2.88	9	P	Pn	01 33 15.9	-1.2
PPI				S	Sn	01 33 49.1	-1.4
MNAI	Manna	3.18	109	P	Pn	01 33 20.8	-0.4
BKNI	Bangkinang	3.78	17	P	Pn	01 33 28.7	-0.8
RGRI	Rengat	3.80	39	P	Pn	01 33 29.2	-0.5
RGRI				S	Sn	01 34 10.7	-2.5
MNSI	Mandailing Nat	4.10	355	P	Pn	01 33 32.5	-1.4
LWLI	Liwa	4.44	112	P	Pn	01 33 38.6	0.0
LWLI				S	Sn	01 34 28.3	-0.8
KASI	Kota Agung	5.04	116	P	Pn	01 33 46.1	-0.7
KASI				S	Sn	01 34 39.8	-4.0
BLSI	Bandar Lampung	5.66	111	P	Pn	01 33 55.8	+0.4
	439nm,0.5s,6μm2.0nm						
BTDF	Bukit Timah Da	6.02	40	P	Pn	01 33 59.0	-1.3
	86nm,1.0s,900nm0.4nm						
KGM	Kluang	6.28	33	P	Pn	01 34 02.4	-1.5
PPBI	Pangkal Pinang	6.29	80	P	Pn	01 34 03.9	-0.1
	47nm,0.7s,4μm1.6nm						
MYKOM	Kota Tinggi	6.40	38	P	Pn	01 34 03.9	-1.7
MYKOM	Kota Tinggi	6.40	38	P	Pn	01 34 04.5	-1.0
	124nm,0.7s,1μm0.4nm						
FRIM	Kepong	6.73	14	P	Pn	01 34 09.3	-0.7
SNSI	Sinabang, Aceh	6.74	328	P	Pn	01 34 10.0	-0.2
	278nm,0.9s,8μm1.1nm						
SBJI	Serang	6.76	115	P	Pn	01 34 10.2	-0.3
	265nm,0.9s,6μm1.1nm						
TSI	Tuntungan	6.91	348	P	Pn	01 34 12.1	-0.4
	158nm,0.9s,1.1nm						
KCSI	Kotacane, Aceh	7.13	342	P	Pn	01 34 12.7	-2.9
	54nm,0.6s,3μm1.2nm						
TNG	Tangerang	7.25	113	P	Pn	01 34 17.7	+0.5
	1μm,0.6s,23μm						
TNG	Tangerang	7.25	113	P	Pn	01 34 18.3	+1.1
	2μm,0.6s,6.6nm						
DBJI	Dramaga	7.50	116	P	Pn	01 34 20.6	-0.1
	484nm,0.6s,8μm2.6nm						
SKJI	Sukabumi	7.53	119	P	Pn	01 34 19.1	-2.0
	541nm,0.8s,7μm2.1nm						
IPM	Ipoh	7.82	8	ePn	Pn	01 34 25.2	+0.2
IPM	Ipoh	7.82	8	P	Pn	01 34 24.7	-0.3
IPM	Ipoh	7.82	8	P	Pn	01 34 25.0	-0.1
	69nm,1.0s,656nm0.3nm						
LEM	Lembang	8.40	115	P	Pn	01 34 34.1	+1.0
	550nm,0.7s,5μm						
KULM	Kulim	8.58	5	ePn	Pn	01 34 34.1	-1.3
KULM	Kulim	8.58	5	P	Pn	01 34 35.3	-0.1
KULM	Kulim	8.58	5	P	Pn	01 34 34.7	-0.8
	48nm,1.0s,563nm						
CISI	Cisompet, Garu	8.89	119	P	Pn	01 34 37.5	-2.3
	1μm,0.7s,13μm						
XMIS	Christmas Isla	9.09	142	ePn	Pn	01 34 35.9	-6.6
KTGM	Kuala Trenggan	9.16	20	P	Pn	01 34 42.6	-0.8
COCO	West Island	9.34	199	iP	Pn	01 34 49.3	+3.5
COCO	West Island	9.34	199	ePn	Pn	01 34 44.6	-1.2
TGJI	Tegal	9.80	111	P	Pn	01 34 54.2	+2.1
	136nm,1.1s						
BSI	Banda Aceh	9.91	332	P	Pn	01 34 49.9	-3.8
	83nm,1.1s						
BJII	Banjamegara	10.51	113	P	Pn	01 35 01.5	-0.4
	63nm,1.3s						
SMRI	Semarang	11.09	110	P	Pn	01 35 10.6	+0.7
	185nm,1.0s						
KSM	Kuching	11.40	65	ePn	Pn	01 35 16.2	+2.1
KSM	Kuching	11.40	65	P	Pn	01 35 11.8	-2.3
UGM	Wanagama	11.47	114	ePn	Pn	01 35 12.6	-2.6
UGM	Wanagama	11.47	114	P	Pn	01 35 14.2	-0.9
	153nm,2.1s						
SJI	Sawahan	12.56	111	P	Pn	01 35 29.0	-1.0
	98nm,0.8s						
PWJI	Pagerwojo	12.69	112	P	Pn	01 35 31.6	-0.1
	68nm,0.8s						
SBUM	Sibu	13.54	65	P	Pn	01 35 41.1	-2.3
SBUM	Sibu	13.54	65	P	Pn	01 35 44.5	+1.1
	46nm,1.0s,517nm						
BTM	Bintulu	14.64	64	P	Pn	01 35 56.4	-2.0
BBKI	Banjar Baru	14.87	91	P	P	01 36 08.2	+1.4
JAGI	Jajag, Banyuwa	15.03	111	P	P	01 36 12.7	+4.2
KKM	Kota Kinabalu	18.72	60	ePn	P	01 36 47.3	-2.2
KKM	Kota Kinabalu	18.72	60	P	P	01 36 48.1	-1.5
KKM	Kota Kinabalu	18.72	60	P	P	01 36 49.6	0.0
	96nm,1.1s,808nm						
UBPT	Khong Chiam	19.27	16	P	P	01 36 54.0	-1.4
	84nm,0.7s						
SDKM	Sandakan	19.39	63	P	P	01 36 56.2	-0.7
TSM	Tawau	19.45	67	P	P	01 36 56.7	-0.7
KDM	Kudat	19.69	59	P	P	01 36 59.9	-0.2
PBKT	Sadao Pong	19.79	3	P	Pn	01 37 03.1	+0.3
	12nm,0.7s						
KAPI	Kappang	19.83	96	ePn	P	01 36 59.0	-2.6
	63nm,1.3s						
KAPI	Kappang	19.83	96	P	Pn	01 37 03.5	+0.2
	37nm,1.0s						
KAPI	Kappang	19.83	96	P	P	01 37 00.2	-1.4
	1.4nm,0.3s,baz=272,slow=9.0,SNR=6.2						
KAPI				LR	LR	01 47 26.0	
	comp=Z,408nm,18.1s,baz=117,slow=45						
TTSI	Tana Toraja	19.85	90	P	Pn	01 37 14.6	+11
BKSI	Bulukumba	20.22	96	P	P	01 37 05.2	-0.6
	112nm,1.0s,997nm						
WBSI	Waikabubak, Su	20.31	109	P	Pn	01 37 08.3	-0.7
	73nm,0.9s,1μm						
MYLDM	Lahad Datu	20.37	66	P	P	01 37 07.7	+0.3
MYLDM	Lahad Datu	20.37	66	P	P	01 37 08.5	+1.0
	104nm,0.9s,1μm						
CM31	Chiang Mai Arr	21.66	357	eP	P	01 37 20.1	-1.3
	9.9nm,0.7s						
CMAR	Chiang Mai Arr	21.66	357	P	P	01 37 19.6	-1.7
CMAR				S	S	01 41 20.8	+1.3
CMAR	Chiang Mai Arr	21.66	357	P	P	01 37 19.6	-1.7
	6.7nm,0.7s,baz=188,slow=9.8,SNR=25						
CMAR				S	S	01 41 20.8	+1.3
	0.8nm,0.3s,baz=187,slow=13,SNR=2.7						
CMAR				LR	LR	01 46 44.6	
	comp=Z,260nm,19.7s,baz=195,slow=40						
CMMT	Chiang Mai	22.02	357	P	P	01 37 26.6	+1.5
	13nm,1.1s,346nm						
CHTO	Chiang Mai	22.02	357	eP	P	01 37 24.1	-1.0
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s						
CHTO	Chiang Mai	22.02	357	eP	P	01 37 24.1	-1.0
	comp=Z,12nm,1.0s						
CHTO	Chiang Mai	22.02	357	P	P	01 37 26.1	+1.0
	comp=Z,14nm,1.1s						
MRSI	Marisa	22.31	81	P	P	01 37 29.0	+0.6
	comp=Z,54nm,0.7s						
QIZ	Qiongzhong	24.25	23	P	P	01 37 47.1	-0.5
QIZ				S	S	01 42 05.6	+1.4
QIZ				pmax	pmax		
	comp=Z,27nm,0.8s						
QIZ				LR	LR		
	comp=N,340nm,15.8s						
QIZ				LR	LR		
	comp=E,150nm,14.2s						
QIZ				LR	LR		
	comp=Z,310nm,19.0s						
QIZ	Qiongzhong	24.25	23	eP	P	01 37 46.6	-1.0
	comp=Z,21nm,0.6s						
DAV	Davao City (W)	27.59	68	LR	LR	01 52 20.3	
	comp=Z,197nm,18.8s,baz=239,slow=43						
LBMI	Labuha	27.67	85	P	P	01 38 20.0	+1.4
	comp=Z,55nm,0.9s						
KMI	Kunming	28.40	5	P	P	01 38 25.6	+0.4
KMI				pP	pP	01 38 35.8	+0.6
KMI				sP	sP	01 38 40.1	+0.7
KMI				PP	PnPn	01 39 19.0	+3.8
KMI				S	S	01 43 08.9	-1.4
KMI				SS	SnSn	01 44 38.4	+8.2
KMI				pmax	pmax		
	comp=Z,19nm,1.1s						
KMI				pmax	pmax		
	comp=Z,81nm,3.5s						
KMI				LR	LR		
	comp=N,240nm,19.6s						
KMI				LR	LR		
	comp=E,580nm,19.6s						
KMI				LR	LR		
	comp=Z,260nm,18.8s						
FITZ	Fitzroy Crossi	29.14	122	eP	P	01 38 31.1	-0.6
	comp=Z,13nm,0.8s						
FITZ	Fitzroy Crossi	29.14	122	P	P	01 38 31.1	-0.6
	comp=Z,5.7nm,0.8s,baz=308,slow=8.1,SNR=7.5						
HYB	Hyderabad	29.50	315	iP	P	01 38 35.0	+0.1
GYA	Guiyang	30.31	12	P	P	01 38 44.0	+2.0
GYA				pP	pP	01 38 53.7	+1.7
GYA				sP	sP	01 38 59.3	+3.1
GYA				PP	PnPn	01 39 44.0	+3.1
GYA				S	S	01 43 41.2	+1.2
GYA				sS	sS	01 43 58.7	+2.2
GYA				ScP	ScP	01 45 21.7	-0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,510nm,17.8s						
GYA				LR	LR		
	comp=E,420nm,18.4s						
GYA				LR	LR		
	comp=Z,520nm,17.6s						
ODAN	Odare	32.36	339	eP	P	01 39 05.2	+5.0
	comp=Z,61nm,0.8s						
TAPN	Taplejung	32.70	340	eP	P	01 39 04.4	+1.2
	comp=Z,108nm,0.9s						
RAMN	Ramite	32.74	338	eP	P	01 39 08.6	+5.1
	comp=Z,32nm,0.9s						
TPUB	Ta-pu	33.27	36	eP	P	01 39 07.2	-0.8
	comp=Z,47nm,0.8s						
NWAO	Narrogin (SRO)	33.61	153	P	P	01 39 11.3	+0.4
NWAO	Narrogin (SRO)	33.61	153	P	P	01 39 11.3	+0.4
	comp=Z,9.4nm,0.7s,baz=316,slow=7.5,SNR=7.0						
NWAO				LR	LR	01 51 46.5	
	comp=Z,184nm,20.9s,baz=167,slow=34						
YULB	Yu-li	33.74	37	eP	P	01 39 10.9	-1.2
	comp=Z,6.6nm,0.6s						
PKI	Pulchoki	33.76	336	eP	P	01 39 14.5	+2.0
	comp=Z,12nm,0.6s						
SSLB	Suanglung	33.83	36	eP	P	01 39 12.1	-0.8
	comp=Z,21nm,0.8s						
GUN	Gumba	33.88	337	eP	P	01 39 14.3	+0.7
	comp=Z,57nm,0.6s						
LSA	Lhasa	33.90	346	P	P	01 39 14.8	+0.9
LSA				pmax	pmax		
	comp=Z,60nm,0.6s						
LSA	Lhasa	33.90	346	eP	P	01 39 14.0	+0.1
LSA				pmax	pmax		
	comp=Z,22nm,1.0s						
LSA	Lhasa	33.90	346	eP	P	01 39 14.0	+0.1
	comp=Z,22nm,1.0s						
DMN	Daman	33.91	336	eP	P	01 39 16.0	+2.2
KKN	Kakani	34.01	336	eP	P	01 39 14.7	+0.1
CD2	Chengdu	34.23	6	eP	P	01 39 19.0	+2.7
CD2				pP	pP	01 39 29.4	+3.1
CD2				sP	sP	01 39 33.5	+3.0
CD2				PP	PP	01 40 35.2	+0.9
CD2				S	S	01 44 43.5	+2.6
CD2				sS	sS	01 45 00.2	+2.7
CD2				SS	SnSn	01 46 54.5	+2.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,30nm,6.2s						
CD2				LR	LR		
	comp=N,120nm,12.8s						
CD2				LR	LR		
	comp=Z,150nm,14.2s						
NACB	Ninganchiao	34.51	37	eP	P	01 39 17.6	-1.1
	comp=Z,37nm,1.0s						
ENH	Enshi	34.63	15	eP	P	01 39 18.4	-1.3
	comp=Z,45nm,0.8s						
KOLN	Koldanda	34.69	334	eP	P	01 39 21.0	+0.5
	comp=Z,27nm,0.6s						
YHNB	Yeheng	34.76	36	eP	P	01 39 20.0	-1.0
	comp=Z,30nm,0.9s						
DANN	Dangsing	35.13	335	eP	P	01 39 22.5	-1.8
	comp=Z,36nm,0.5s						
PYUN	Piuthan	35.24	333	eP	P	01 39 25.5	+0.2
	comp=Z,42nm,0.8s						
WRA	Warramunga Arr	37.39	119	P	P	01 39 43.5	-0.1
WRA				S	S	01 45 29.5	-0.2
WRA	Warramunga Arr	37.39	119	P	P	01 39 43.5	-0.1
	comp=Z,4.3nm,0.6s,baz=303,slow=8.9,SNR=32						
WRA				S	S	01 45 29.5	-0.2
	comp=Z,4.2nm,0.9s,baz=292,slow=16,SNR=10						
WRAB	Tennant Creek	37.40	119	eP	P	01 39 44.4	+0.8
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WRAB	Tennant Creek	37.40	119	eP	P	01 39 44.4	+0.8
	comp=Z,9.7nm,0.6s						
FORT	Forrest	38.08	139	eP	P	01 39 49.9	+0.7
XAN	Xi'an	38.11	12	P	P	01 39 48.2	-1.2
XAN				pP	pP	01 39 56.5	-3.0
XAN				pmax	pmax		
	comp=Z,17nm,0.8s						
XAN				pmax	pmax		
	comp=Z,20nm,12.5s						
ASAR	Alice Springs	38.54	125	P	P	01 39 53.4	+0.2
ASAR				S	S	01 45 50.9	+3.9
ASAR	Alice Springs	38.54	125	P	P	01 39 53.4	+0.2
	comp=Z,6.9nm,0.8s,baz=298,slow=7.9,SNR=63						
ASAR				S	S	01 45 50.9	+3.9
	comp=Z,2.5nm,0.8s,baz=295,slow=15,SNR=13						
ASAR				LR	LR	01 57 04.4	
	comp=Z,194nm,18.5s,baz=300,slow=38						
LZH	Lanzhou	39.37	5	eP	P	01 40 00.6	+0.5
LZH				pP	pP	01 40 11.2	+1.0
LZH				sP	sP	01 40 15.1	+0.7
LZH				ePP	PnPn	01 41 36.2	+2.3
LZH				eS	S	01 46 00.5	+1.1
LZH				sS	sS	01 46 17.0	+0.9
LZH				pmax	pmax		
	comp=Z,34nm,1.2s						
LZH				pmax	pmax		
	comp=Z,140nm,4.5s						
LZH				LR	LR		
	comp=N,460nm,15.0s						
LZH				LR	LR		
	comp=E,520nm,16.5s						
LZH				LR	LR		
	comp=Z,790nm,18.1s						
NJ2	Nanjing	39.50	26	eP	P	01 40 01.6	+0.6
NJ2				pP	pP	01 40 10.5	-0.7
NJ2				sP	sP	01 40 13.8	-1.5
NJ2				PP	PP	01 41 32.6	+0.4
NJ2				S	S	01 46 02.0	+0.9
NJ2				sS	sS	01 46 20.0	+2.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,90nm,6.1s						
NJ2				LR	LR		
	comp=N,320nm,22.1s						
NJ2				LR	LR		
	comp=E,790nm,18.3s						
GTA	Gaotai	42.52	360	eP	P	01 40 26.1	+0.2
GTA				pP	pP	01 40 36.2	0.0
GTA				sP	sP	01 40 40.8	+0.5
GTA				PP	PP	01 42 07.5	+2.5
GTA				S	S	01 46 44.0	-2.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,40nm,5.2s						
GTA				LR	LR		
	comp=N,140nm,21.8s						
GTA				LR	LR		
	comp=E,350nm,20.9s						

GTA LR LR
comp=Z,170nm,22.3s
HHC Hu-ho-hao-te 45.22 12 *e*P **P** **01 40 50.4 +2.8**
HHC pP **pP** **01 41 00.3 +2.4**
HHC sP **sP** **01 41 04.2 +2.2**
HHC PP **PP** **01 42 37.4 +3.5**
HHC PcS **PcS** **01 46 22.8 +1.6**
HHC S **S** **01 47 28.0 +2.5**
HHC sS **sS** **01 47 44.8 +2.4**
HHC SS **ScS** **01 50 42.4 +0.4**
HHC pmax pmax
comp=Z,42nm,1.1s
HHC pmax pmax
comp=Z,190nm,5.0s
HHC LR LR
comp=N,280nm,16.1s
HHC LR LR
comp=E,770nm,17.3s
HHC LR LR
comp=Z,250nm,16.7s
BJI Beijing 45.65 17 P **P** **01 40 50.5 -0.3**
BJI PP **PP** **01 42 38.6 +0.4**
BJI S **S** **01 47 32.4 +1.0**
BJI pmax pmax
comp=Z,18nm,1.0s
BJI pmax pmax
comp=Z,140nm,4.5s
BJI LR LR
comp=N,150nm,31.5s
BJI LR LR
comp=E,230nm,27.5s
BJI LR LR
comp=Z,88nm,33.3s
JNU Nakatsue 46.58 36 *e*P **P** **01 40 57.7 -0.6**
comp=Z,20nm,0.9s
JNU Nakatsue 46.58 36 P **P** **01 40 57.5 -0.9**
comp=Z,41nm,0.8s,baz=167,slow=5.7,SNR=18
KSH Kashi 47.99 335 *e*P **P** **01 41 08.0 -1.4**
KSH *ep*P **pP** **01 41 17.9 -1.8**
KSH *es*P **sP** **01 41 21.7 -2.2**
KSH *e*PcP **PcP** **01 42 37.8 +0.6**
KSH *e*PP **PP** **01 42 57.9 -3.9**
KSH *e*S **S** **01 48 00.1 -5.1**
KSH *e*ScS **ScS** **01 50 56.0 -4.3**
KSH pmax pmax
comp=Z,14nm,0.8s
KSH pmax pmax
comp=Z,230nm,5.0s
KSH LR LR
comp=N,350nm,7.1s
KSH LR LR
comp=E,270nm,8.8s
KSH LR LR
comp=Z,240nm,5.9s
CTA Charters Tower 48.10 114 P **P** **01 41 11.2 +0.7**
CTA Charters Tower 48.10 114 P **P** **01 41 11.2 +0.7**
comp=Z,5.6nm,0.7s,baz=279,slow=8.9,SNR=5.1
KSAR Wonju Array Be 48.15 30 P **P** **01 41 09.7 -0.8**
KSRS Korea Array 48.18 30 P **P** **01 41 09.7 -1.0**
comp=Z,11nm,1.0s,baz=224,slow=8.0,SNR=18
KSRS LR LR 02 02 09.0
comp=Z,127nm,20.3s,baz=156,slow=37
WMQ Urumqi 48.20 348 P **P** **01 41 12.2 +1.3**
WMQ pP **pP** **01 41 22.0 +0.8**
WMQ sP **sP** **01 41 26.0 +0.7**
WMQ PP **PP** **01 43 04.0 +0.5**
WMQ *e*S **S** **01 48 08.0 +0.1**
WMQ sS **sS** **01 48 25.0 +0.1**
WMQ pmax pmax
comp=Z,28nm,0.8s
WMQ pmax pmax
comp=Z,110nm,4.0s
WMQ LR LR
comp=N,340nm,24.0s
WMQ LR LR
comp=E,370nm,28.0s
WMQ LR LR
comp=Z,410nm,24.7s
STKA Stephens Creek 48.33 131 *e*P **P** **01 41 12.7 +0.7**
comp=Z,3.1nm,0.8s
STKA Stephens Creek 48.33 131 P **P** **01 41 12.4 +0.4**
comp=Z,15nm,0.7s,baz=303,slow=8.5,SNR=32
STKA LR LR 02 02 35.9
comp=Z,245nm,19.5s,baz=113,slow=37
TKM2 Tokmak 2 51.02 337 *e*P **P** **01 41 32.7 +0.2**
TKM2 pmax pmax
comp=Z,21nm,0.8s
TKM2 Tokmak 2 51.02 337 *e*P **P** **01 41 32.7 +0.2**
comp=Z,21nm,0.8s
TKM2 Tokmak 2 51.02 337 P **P** **01 41 33.0 +0.5**
SNR=17
KBK Karagaybulak 51.05 336 P **P** **01 41 34.0 +1.3**
SNR=7.0
AML Almayashu 51.13 335 P **P** **01 41 34.0 +0.5**
SNR=15
AAK Ala-Archa 51.21 336 *d* *i*P **P** **01 41 34.4 +0.5**
AAK pmax pmax
comp=Z,18nm,1.5s
AAK Ala-Archa 51.21 336 *e*P **P** **01 41 33.4 -0.5**
comp=Z,11nm,0.9s
AAK Ala-Archa 51.21 336 P **P** **01 41 33.4 -0.5**
comp=Z,1.4nm,0.4s,baz=148,slow=8.1,SNR=5.5
SONM Songino Array 51.26 6 P **P** **01 41 34.7 +0.6**
SONM Songino Array 51.26 6 P **P** **01 41 34.7 +0.6**
comp=Z,9.8nm,0.5s,baz=188,slow=8.8,SNR=26
FRU Bishkek 51.33 336 *e*P P 01 41 31.0 -3.6
ULN Ulaanbaatar 51.35 6 *e*P **P** **01 41 35.1 +0.3**
comp=Z,18nm,1.0s
ULN Ulaanbaatar 51.35 6 P **P** **01 41 35.1 +0.3**
comp=Z,20nm,1.1s,comp=Z,220nm
EKS2 Erkin-Say 51.53 335 *e*P **P** **01 41 36.9 +0.7**
EKS2 pmax pmax
comp=Z,25nm,0.8s
EKS2 Erkin-Say 51.53 335 *e*P **P** **01 41 36.9 +0.7**
comp=Z,25nm,0.8s
EKS2 Erkin-Say 51.53 335 P **P** **01 41 36.8 +0.5**
SNR=19
USP Ospenovka 51.74 336 P **P** **01 41 37.9 +0.2**
SNR=14
CN2 Changchun 52.21 23 *e*P **P** **01 41 39.9 -1.2**
CN2 *ep*P **pP** **01 41 49.9 -1.7**
CN2 *es*P **sP** **01 41 53.8 -1.9**
CN2 *e*S **S** **01 49 05.1 +1.5**
CN2 pmax pmax
comp=Z,30nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,21.0s
CN2 LR LR
comp=E,300nm,21.0s
CN2 LR LR
comp=Z,200nm,20.0s
MK31 Makanchi Array 52.28 345 *i* P **P** **01 41 41.5 -0.1**
MK31 pmax pmax
comp=Z,10.0nm,0.5s
MK31 Makanchi Array 52.28 345 *e*P **P** **01 41 42.0 +0.4**
MKAR Makanchi Array 52.28 345 P **P** **01 41 41.8 +0.2**
MKAR pmax pmax
comp=Z,8.0nm,0.4s
MKAR Makanchi Array 52.28 345 P **P** **01 41 41.8 +0.2**
MKAR Makanchi Array 52.28 345 P **P** **01 41 41.8 +0.2**
comp=Z,8.1nm,0.4s,baz=147,slow=8.2,SNR=66
KK31 Karatay Array 53.30 333 *i* P **P** **01 41 47.7 -1.5**
KK31 pmax pmax
comp=Z,1.0nm,0.4s
KKAR Karatay Array 53.30 333 *e*P **P** **01 41 48.6 -0.6**
KKAR pmax pmax
comp=Z,2.0nm,0.5s
KKAR Karatay Array 53.30 333 *e*P **P** **01 41 48.6 -0.6**
comp=Z,1.7nm,0.5s
MAT Matsushiro 53.33 38 P **P** **01 41 48.0 -1.6**
MJAR Matsushiro Arr 53.33 38 P **P** **01 41 47.8 -1.8**
MJAR Matsushiro Arr 53.33 38 P **P** **01 41 47.8 -1.8**
comp=Z,3.9nm,0.6s,baz=216,slow=7.5,SNR=18
ZAK Zakamensk 53.57 3 *e*P **P** **01 41 50.8 -0.3**
ZAK pmax pmax
comp=Z,3.0nm,1.0s
HVS Khovu-Aksy 54.51 355⇑ *e*P **P** **01 41 58.5 +0.5**
HVS pmax pmax
comp=Z,22nm,1.2s
MDJ Mudanjiang 54.59 26 P **P** **01 41 59.6 +1.0**
MDJ pmax pmax
comp=Z,5.0nm,0.7s
MDJ pmax pmax
comp=Z,74nm,6.2s

MOY Mondy 54.78 1 *e*P **P** **01 42 02.6 +2.6**
USRK Ussuriysk Arra 55.35 28 P **P** **01 42 03.5 -0.5**
comp=Z,24nm,0.7s,baz=225,slow=6.0,SNR=70
KURK Kurchatov 56.85 344 *e*P **P** **01 42 14.4 -0.3**
KURK pmax pmax
comp=Z,14nm,0.8s
KURK Kurchatov 56.85 344 *e*P **P** **01 42 14.4 -0.3**
comp=Z,14nm,0.8s
ZAA0 Zalesovo Array 58.45 350 *e*P **P** **01 42 25.6 -0.2**
ZALV Zalesovo Beam 58.45 350 P **P** **01 42 25.7 -0.1**
ZALV S **S** **01 50 29.5 +2.9**
ZALV pmax pmax
comp=Z,15nm,0.5s
ZALV smax smax
comp=N,1.0nm,0.7s
ZALV Zalesovo Beam 58.45 350 P **P** **01 42 25.7 -0.1**
ZALV S **S** **01 50 29.5 +2.9**
ZALV Zalesovo Beam 58.45 350 P **P** **01 42 25.7 -0.1**
comp=N,15nm,0.5s,baz=181,slow=5.3,SNR=50
ZALV S **S** **01 50 29.5 +2.9**
comp=N,0.9nm,0.7s,baz=189,slow=8.8,SNR=5.3
KLR Kul'dur 59.15 24 *e*P P 01 42 26.2 -4.7
NVS Novosibirsk 59.59 349 *e*P **P** **01 42 32.8 -0.9**
NVS *e*S **S** **01 50 39.0 -2.3**
NVS pmax pmax
comp=N,7.0nm,1.0s
NVS pmax pmax
comp=E,9.0nm,1.0s
NVS pmax pmax
comp=Z,12nm,1.0s
NVS smax smax
comp=N,7.0nm,1.0s
NVS smax smax
comp=E,9.0nm,1.0s
NAY Al-Naaiem 59.95 307 *e*P **P** **01 42 36.4 -0.4**
NAY AMb AMB 01 42 37.1
comp=Z,12nm,0.9s
HABR Khabarovsk 59.96 26 *e*P **P** **01 42 33.7 -2.7**
HABR *e**PP **pP** **01 42 43.8 -3.2**
HABR 01 43 20.1
HABR *e* 01 44 46.0
HABR S **S** **01 50 43.3 -3.1**
HABR *e**SS **sS** **01 51 00.5 -3.3**
HABR *e* 01 52 21.0
HABR *e*SS **SS** **01 54 41.0 -2.5**
HABR pmax pmax
comp=N,9.0nm,0.6s
HABR pmax pmax
comp=Z,15nm,0.8s
HABR pmax pmax
comp=E,19nm,0.6s
HABR MLR MLR
comp=Z,141nm,19.0s
VOSK Vostochnaya 60.95 340 P **P** **01 42 41.0 -2.1**
VOSK pmax pmax
comp=Z,6.0nm,0.6s
BVA0 Borovoye Array 61.40 340 *i* P **P** **01 42 44.8 -1.4**
BVA0 pmax pmax
comp=Z,7.0nm,0.6s
BRVK Borovoye 61.46 340 *de*P **P** **01 42 45.5 -1.1**
BRVK pmax pmax
comp=Z,5.0nm,1.2s
BRVK Borovoye 61.46 340 *e*P **P** **01 42 45.1 -1.4**
comp=Z,5.7nm,0.5s
ZRNK Zerenda 61.81 339 P **P** **01 42 47.3 -1.7**
ZRNK pmax pmax
comp=Z,8.0nm,1.2s
YSS Yuzh-Sakhalins 62.63 32 *e*P **P** **01 42 55.0 +0.5**
YSS *e* 01 43 05.0
YSS pmax pmax
comp=Z,40nm,1.0s
KMBO Kilima Mbogo 62.67 270 P **P** **01 42 56.9 +1.1**
KMBO Kilima Mbogo 62.67 270 P **P** **01 42 56.9 +1.1**
comp=Z,2.3nm,0.9s,baz=63,slow=9.0,SNR=7.1
ABKAR Akbulak array 62.77 332 *e*P **P** **01 42 54.5 -0.9**
comp=Z,17nm,0.7s
AKTO Aktyubinsk 64.48 332 P **P** **01 43 05.0 -1.7**
AKTO pmax pmax
comp=Z,12nm,1.0s
SVE Sverdlovsk 67.88 338⇑ *e*P **P** **01 43 28.0 -0.3**
SVE pmax pmax
comp=Z,14nm,1.0s
ARU Arti 68.39 337 *d* *i*P **P** **01 43 31.0 -0.6**
ARU 01 46 01.2
ARU S **S** **01 52 32.6 +2.2**
ARU SS **SS** **01 56 49.6 -5.0**
ARU pmax pmax
comp=Z,20nm,2.5s
MAW Mawson 69.00 194 P **P** **01 43 36.9 +1.7**
MAW Mawson 69.00 194 P **P** **01 43 36.9 +1.7**
comp=Z,1.7nm,0.7s,baz=319,slow=9.3,SNR=1.9
YAK Yakutsk 69.03 15 *e*P **P** **01 43 33.3 -2.1**
YAK pmax pmax
comp=Z,24nm,1.1s
YAK pmax pmax
comp=N,10.0nm,1.6s
YAK pmax pmax
comp=E,4.0nm,1.3s
MBAR Mbarara 69.21 271 P **P** **01 43 38.0 +0.3**
MBAR Mbarara 69.21 271 P **P** **01 43 38.0 +0.3**
comp=E,4.1nm,0.8s,baz=124,slow=11,SNR=5.7
KBZ Khabaz 69.26 319 P **P** **01 43 37.5 +0.2**
KBZ pmax pmax
comp=Z,9.0nm,0.9s
KBZ Khabaz 69.26 319 P **P** **01 43 37.5 +0.2**
KBZ Khabaz 69.26 319 P **P** **01 43 37.5 +0.2**
comp=Z,9.4nm,0.8s,baz=109,slow=5.0,SNR=28
KIV Kislovodsk 69.50 320 *e*P **P** **01 43 39.0 +0.1**
KIV pmax pmax
comp=Z,11nm,1.0s
SOC Sochi 71.29 318 *e*P **P** **01 43 48.2 -1.5**
SOC *e* 01 44 00.2
SOC pmax pmax
comp=Z,13nm,0.7s
SOC pmax pmax
comp=Z,14nm,0.6s
VRHR Novokhopersk 73.38 326 *e*P **P** **01 44 01.1 -0.9**
VRHR *e**SP **sP** **01 44 13.8 -3.0**
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,20nm,0.8s
VRHR pmax pmax
comp=E,10.0nm,0.9s
PETK Petropavlovsk- 74.02 32 P **P** **01 44 04.5 -1.3**
PETK pmax pmax
comp=Z,3.0nm,0.6s
PETK Petropavlovsk- 74.02 32 P **P** **01 44 04.5 -1.3**
PETK Petropavlovsk- 74.02 32 P **P** **01 44 04.5 -1.3**
comp=Z,2.8nm,0.6s,baz=201,slow=4.3,SNR=6.3
BRTR Keskin Array B 74.17 313 P **P** **01 44 06.2 -0.9**
BRTR Keskin Array B 74.17 313 P **P** **01 44 06.2 -0.9**
comp=Z,4.5nm,0.8s,baz=131,slow=7.0,SNR=28
PET Petropavlovsk 74.49 32 *i* P **P** **01 44 07.9 -0.5**
PET pmax pmax
comp=Z,16nm,1.3s
VORD Divnogorie 74.64 325 *e*P **P** **01 44 08.2 -1.2**
VORD *e**SP **sP** **01 44 20.0 -4.2**
VORD pmax pmax
comp=N,9.0nm,1.0s
VORD pmax pmax
comp=Z,10.0nm,1.0s
VORD pmax pmax
comp=E,20nm,1.3s
VSR Storozhevoye 74.82 325 *e*P **P** **01 44 09.4 -1.0**
VSR *e**SP **sP** **01 44 21.4 -3.9**
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=E,7.0nm,0.7s
SYO Syowa Base 76.61 199⇑ *e*P **P** **01 44 21.4 +1.1**
SYO Syowa Base 76.61 199⇑ *e*PcP **PcP** **01 44 31.2 -0.5**
SEY Seymchan 76.86 22⇓ *e*P **P** **01 44 22.0 +0.2**
OBN Obninsk 77.88 328 *de*P **P** **01 44 27.3 -0.3**
OBN *e* 01 44 37.9
OBN *e* 01 47 22.3
OBN *e*SS SS 01 59 19.0 -0.4
OBN pmax pmax
comp=Z,36nm,2.5s
KLMR Klimovskoe 78.99 334 *e*P P 01 44 45.2 +12
KLMR pmax pmax
comp=Z,47nm,1.6s
CFR Carcaliu 79.64 317⇑ P **P** **01 44 37.6 0.0**

CFR Carcaliu 79.64 317⇑ *i*P **P** **01 44 37.6 0.0**
IDI Anoyia 79.77 307 *e*P **P** **01 44 39.1 +0.5**
comp=Z,4.4nm,0.8s
AKASG Malin Array Be 80.49 323 P **P** **01 44 41.0 -1.0**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 80.49 323 P **P** **01 44 41.0 -1.0**
AKASG Malin Array Be 80.49 323 P **P** **01 44 41.0 -1.0**
comp=Z,1.2nm,0.5s,baz=107,slow=3.5,SNR=7.3
VRI Vrincioaia 80.78 317⇑ P **P** **01 44 44.0 +0.3**
VRI Vrincioaia 80.78 317⇑ *i*P **P** **01 44 44.0 +0.3**
PLOR Plostina 80.83 317⇑ P **P** **01 44 44.2 +0.2**
PLOR Plostina 80.83 317⇑ *i*P **P** **01 44 44.2 +0.2**
VNDA Vanda 80.89 169 P **P** **01 44 44.3 +0.6**
VNDA Vanda 80.89 169 P **P** **01 44 44.3 +0.6**
comp=Z,2.4nm,1.0s,baz=351,slow=2.9,SNR=5.8
TESR Tescani 80.99 318⇑ *i*P **P** **01 44 45.3 +0.4**
MLR Muntele Rosu 81.22 317⇑ *i*P **P** **01 44 46.1 -0.1**
BURAR Bucovina Array 82.21 319⇑ *i*P **P** **01 44 52.6 +1.2**
BUR08 Bucovina Ar. S 82.23 319 *e*P **P** **01 44 52.6 +1.1**
VTS Vitosha 82.51 314⇑ P **P** **01 44 53.1 0.0**
VTS Vitosha 82.51 314⇑ *i*P **P** **01 44 53.1 0.0**
IDID Didziasalis 83.24 327 *e*P **P** **01 44 56.1 -0.3**
IDID AMB AMB 01 45 10.8
comp=Z,4.9nm,0.8s
JOF Joensuu 83.38 335 *ep* **P** **01 44 57.1 +0.2**
comp=Z,4.6nm,0.7s
JOF Joensuu 83.38 335 *e*P **P** **01 44 57.1 +0.2**
JOF pmax pmax
comp=Z,5.0nm,0.7s
IIGN Ignalina 83.53 327 *e*P **P** **01 44 57.6 -0.3**
IIGN AMB AMB 01 45 12.3
comp=Z,7.1nm,0.9s
ISAL Salakas 83.65 327 *e*P **P** **01 44 58.2 -0.3**
ISAL AMB AMB 01 45 12.1
comp=Z,5.5nm,1.1s
DRGR 83.70 318⇑ P **P** **01 44 59.8 +0.7**
DRGR 83.70 318⇑ *i*P **P** **01 44 59.8 +0.7**
BZS Buzias 84.22 316⇑ P **P** **01 45 01.5 -0.1**
BZS Buzias 84.22 316⇑ *i*P **P** **01 45 01.5 -0.1**
KWP Kalwaria Pacla 84.28 320⇑ *i*P **P** **01 45 02.4 +0.5**
BILL Bilibino 84.41 20 *e*P **P** **01 45 03.0 +0.9**
BILL *e**PP **pP** **01 45 14.1 +1.0**
BILL *e* 01 48 17.2
BILL *e*S **S** **01 55 21.3 -4.3**
BILL pmax pmax
comp=Z,14nm,1.0s
KOLS Kolonicke sedl 84.41 320 *e*P **P** **01 45 03.7 +1.1**
KOLS pmax pmax
comp=Z,13nm,0.9s
KOLS Kolonicke sedl 84.41 320 *e*P **P** **01 45 03.7 +1.1**
KOLS *ep*P **pP** **01 45 12.2 -1.4**
SUW Suwalki 84.92 325 *e*P **P** **01 45 04.8 -0.2**
CRVS Cervenica-Dubn 84.93 320 *e*P **P** **01 45 04.0 -1.2**
CRVS pmax pmax
comp=Z,17nm,2.1s
CRVS Cervenica-Dubn 84.93 320 *e*P **P** **01 45 04.0 -1.2**
CRVS *ep*P **pP** **01 45 17.6 +1.4**
STHS Stebnicka Huta 85.17 320 *e*P **P** **01 45 07.3 +0.9**
STHS pmax pmax
comp=Z,5.0nm,0.8s
STHS Stebnicka Huta 85.17 320 *e*P **P** **01 45 07.3 +0.9**
STHS *ep*P **pP** **01 45 21.0 +3.6**
FINES FINESS Array B 85.25 332 P **P** **01 45 06.5 +0.1**
FINES FINESS Array B 85.25 332 P **P** **01 45 06.5 +0.1**
comp=Z,2.0nm,0.5s,baz=113,slow=5.2,SNR=25
KAF Kangasniemi 85.33 333 *ep* **P** **01 45 06.9 0.0**
comp=Z,6.6nm,0.6s
KAF Kangasniemi 85.33 333 *e*P **P** **01 45 06.9 0.0**
KAF pmax pmax
comp=Z,7.0nm,0.6s
KECS Kecovo 85.49 319 *e*P **P** **01 45 08.0 0.0**
KECS pmax pmax
comp=Z,2.0nm,0.8s
KECS Kecovo 85.49 319 *e*P **P** **01 45 08.0 0.0**
KECS *ep*P **pP** **01 45 18.4 -0.6**
PKSM Moragy 86.36 317⇑ *i*P **P** **01 45 12.1 -0.3**
VYHS Vyhne 86.58 319 *e*P **P** **01 45 13.9 +0.5**
VYHS pmax pmax
comp=Z,2.0nm,0.4s
VYHS Vyhne 86.58 319 *e*P **P** **01 45 13.9 +0.5**
ARCES ARCESS Array B 87.69 340 P **P** **01 45 18.8 +0.4**
ARCES ARCESS Array B 87.69 340 P **P** **01 45 18.8 +0.4**
comp=Z,2.2nm,0.7s,baz=76,slow=6.7,SNR=4.1
GERES GERESS Array B 90.00 319 P **P** **01 45 30.3 +0.5**
GERES GERESS Array B 90.00 319 P **P** **01 45 30.3 +0.5**
comp=Z,1.8nm,0.8s,baz=87,slow=4.5,SNR=18
BRG Berggiesshubel 90.02 321 *e*P pP 01 45 43.1 +2.4
comp=Z,4.2nm,0.8s
CLL Collm 90.65 321 *e*P **P** **01 45 33.0 +0.4**
CLL *e* 01 45 43.0
CLL pmax pmax
comp=Z,5.0nm,1.2s
CLL Collm 90.65 321 *e*P **P** **01 45 33.0 +0.4**
comp=Z,5.0nm,1.2s
CLL *ep*P **pP** **01 45 43.0 -0.6**
CLL *e*PP **PP** **01 49 04.0 -4.0**
SNAA Sanae 90.88 198 *e*P pP 01 45 47.0 +2.6
GRF Grafenberg Arr 91.68 319 *e*P **P** **01 45 38.8 +1.3**
comp=Z,11nm,1.5s
GRF Grafenberg Arr 91.68 319 *e*P **P** **01 45 38.8 +1.3**
GRF pmax pmax
comp=Z,11nm,1.5s
KEST Kesra 92.40 305 P **P** **01 45 42.5 +1.3**
KEST Kesra 92.40 305 P **P** **01 45 42.5 +1.3**
comp=Z,4.0nm,0.9s,baz=146,slow=2.9,SNR=6.6
DAVOX Davos/Dischmat 92.44 317 P **P** **01 45 41.6 +0.4**
DAVOX Davos/Dischmat 92.44 317 P **P** **01 45 41.6 +0.4**
comp=Z,2.1nm,0.7s,baz=52,slow=12,SNR=3.0
TORD Torodi Ar. Bea 98.77 283 P Pdif 01 46 10.7 +0.1
TORD Torodi Ar. Bea 98.77 283 P Pdif 01 46 10.7 +0.1
comp=Z,0.5nm,1.1s,baz=92,slow=5.5,SNR=2.8
YKA Yellowknife Ar 115.64 17 PKP **PKPdf** **01 51 12.6 +0.6**
YKA Yellowknife Ar 115.64 17 PKP **PKPdf** **01 51 12.5 +0.6**
comp=Z,0.2nm,0.7s,baz=317,slow=2.5,SNR=2.8
NVAR Mina Array Bea 130.65 40 PKP **PKPdf** **01 51 41.6 -0.1**
NVAR Mina Array Bea 130.65 40 PKP **PKPdf** **01 51 41.6 -0.1**
comp=Z,0.4nm,0.7s,baz=180,slow=0.2,SNR=2.6
TXAR Lajitas Array 145.77 38 PKPbc **PKPab** **01 52 10.5 +0.2**
TXAR Lajitas Array 145.77 38 PKPbc **PKPab** **01 52 10.5 +0.2**
comp=Z,3.1nm,0.7s,baz=278,slow=0.9,SNR=47
WVT Waverly 146.57 11 *e*PKP2 **PKPbc** **01 52 11.4 -0.5**
WVT Waverly 146.57 11 *e*PKPbc **PKPbc** **01 52 11.4 -0.5**
JCT Junction City 147.16 33 *e*PKP2 **PKPbc** **01 52 14.1 +0.2**
JCT Junction City 147.16 33 *e*PKPbc **PKPbc** **01 52 14.1 +0.2**
TKL Tuckaleechee C 147.64 6 PKPbc **PKPab** **01 52 17.0 -0.1**
TKL Tuckaleechee C 147.64 6 PKPbc **PKPab** **01 52 17.0 -0.1**
comp=Z,1.8nm,0.7s,baz=2.5,slow=4.2,SNR=4.9
CPCT Cooper Cave 147.76 7 *e*PKPdf **PKPdf** **01 52 12.6 +0.1**
CPCT *e*PKPbc **PKPbc** **01 52 15.1 -0.2**
CPCT *e*PKPab **PKPab** **01 52 18.8 +1.2**
SWET Sewanee 147.80 9 *e*PKPbc **PKPbc** **01 52 14.7 -0.7**
SWET *e*PKPab **PKPab** **01 52 18.5 +0.7**
HKT Hockley 149.59 28 PKP2 **PKPbc** **01 52 20.6 +0.5**
HKT Hockley 149.59 28 PKPbc **PKPbc** **01 52 20.6 +0.5**
LPAZ La Paz 157.23 211 PKPab **PKPab** **01 52 59.4 +1.0**
LPAZ La Paz 157.23 211 PKPab **PKPab** **01 52 59.4 +1.0**
comp=Z,0.6nm,0.3s,baz=147,slow=3.9,SNR=4.2

IDC 02 01:50:05.0±31.0, 21.40S×178.72W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/19, mbtmp4.0/4, Error ellipse: s-maj=594.5km s-min=140.1km az=89.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.80**	**245**	P	P		01 57 13.7	-1.0
	1.5nm,0.5s,baz=90,slow=11,SNR=7.2							
ASAR	**Alice Springs**	**43.67**	**258**	P	P		01 58 11.7	-0.2
	1.0nm,0.5s,baz=99,slow=6.7,SNR=11							
WRA	**Warramunga Arr**	**43.82**	**263**	P	P		01 58 13.7	+0.6
	0.6nm,0.3s,baz=96,slow=7.8,SNR=28							
FITZ	**Fitzroy Crossi**	**52.25**	**263**	P	P		01 59 18.3	-0.1
	1.3nm,0.7s,baz=114,slow=18,SNR=3.1							

*SKO **02** 01:54:42.7, 41.24N×22.68E, h15km, M1.6, ML2.0*
*ATH **02** 01:54:43.6, 41.31N×22.68E, h9km, MD2.9/5*
*THE **02** 01:54:43.7, 41.29N×22.68E, h5km±1km, ML1.9/6, Error ellipse: s-maj=2.0km s-min=0.7km az=209.0*
*ISCJB **02** 01:54:43.2±0.4, 41.31N±0.02×22.68E±0.03, h4km±4km, Error ellipse: s-maj=4.1km s-min=3.3km az=136.6*

*CSEM **02** 01:54:43.6±0.1, 41°.29N×22°.68E, h5km, ML1.9/6, Error ellipse: s-maj=2.8km s-min=2.2km az=57.0*
*BEO **02** 01:54:48.0±1.5, 41°.44N×22°.53E, h15km±6km, ML1.5/3*
ISC 02 01:54:43.6±0.9, **41°.29N**±0°.02×**22°.68E**±0°.02, **h9**km±5km, **n36**, σ0.40/68, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.08	290	P	Pg	01 54 45.6	-0.3
VAY				S	Sg	01 54 47.5	-0.1
VAY	Valandovo	0.08	290	i Pg	Pg	01 54 45.6	-0.3
VAY				i Sg	Sg	01 54 47.5	-0.1
VAY				eLg	Lg	01 54 47.5	
	comp=E,983nm,0.2s						
VAY				eLg	Lg	01 54 47.6	
	comp=N,890nm,0.2s						
VAY	Valandovo	0.08	290	P	Pg	01 54 45.6	-0.3
VAY	Valandovo	0.08	290	i Pg	Pg	01 54 46.1	+0.2
VAY				S	Sg	01 54 47.5	-0.1
VAY				eLg	Lg	01 54 48.1	
	comp=N,890nm,0.2s						
KNT	Kendrikon	0.21	128	P	Pg	01 54 48.2	+0.2
KNT				S	Sg	01 54 51.2	+0.3
KNT	Kendrikon	0.21	128	P	Pg	01 54 48.2	+0.2
KNT				S	Sg	01 54 51.2	+0.3
GRG	Griva	0.39	212	P	Pg	01 54 51.5	+0.2
GRG				S	Sg	01 54 57.4	+0.9
GRG	Griva	0.39	212	ePB	Pg	01 54 51.5	+0.2
GRG				eSB	Sg	01 54 57.4	+0.9
GRG	Griva	0.39	212	P	Pg	01 54 51.5	+0.2
GRG				S	Sg	01 54 57.4	+0.9
THE	Thessaloniki	0.69	161	P	Pg	01 54 57.0	0.0
THE	Thessaloniki	0.69	161	P	Pg	01 54 57.0	0.0
SOH	Sokhos	0.70	132	P	Pg	01 54 56.6	-0.4
SOH				S	Sg	01 55 06.2	+0.1
SOH	Sokhos	0.70	132	ePG	Pg	01 54 56.7	-0.3
SOH				eSB	Sg	01 55 06.2	+0.1
SOH	Sokhos	0.70	132	P	Pg	01 54 56.6	-0.4
SOH				S	Sg	01 55 06.2	+0.1
SRS	Serrai	0.71	104	P	Pg	01 54 57.1	-0.2
SRS				S	Sg	01 55 06.7	0.0
SRS	Serrai	0.71	104	P	Pg	01 54 57.1	-0.2
SRS				S	Sg	01 55 06.7	0.0
HORT	Hortiatis	0.76	155	P	Pg	01 54 58.2	-0.1
HORT				S	Sb	01 55 09.2	-0.3
HORT	Hortiatis	0.76	155	P	Pg	01 54 58.2	-0.1
HORT				S	Sb	01 55 09.2	-0.3
NVR	Nevrokopi	0.90	86	P	Pg	01 55 00.4	-0.4
NVR				S	Sb	01 55 13.2	-0.1
NVR	Nevrokopi	0.90	86	ePB	Pg	01 55 00.5	-0.4
NVR				eSB	Sb	01 55 13.1	-0.2
NVR	Nevrokopi	0.90	86	P	Pg	01 55 00.4	-0.4
NVR				S	Sb	01 55 13.2	-0.1
BIA	Bitola	1.06	256	P	Pg	01 55 03.4	-0.5
BIA				S	Sg	01 55 17.5	-0.1
BIA	Bitola	1.06	256	P	Pg	01 55 03.4	-0.5
BIA				S	Sg	01 55 17.5	-0.1
PLG	Polygyros	1.09	147	P	Pg	01 55 04.0	-0.5
PLG				S	Sb	01 55 19.4	+0.6
PLG	Polygyros	1.09	147	ePG	Pg	01 55 04.0	-0.5
PLG				eSB	Sb	01 55 19.2	+0.4
PLG	Polygyros	1.09	147	P	Pg	01 55 04.0	-0.5
PLG				S	Sb	01 55 19.4	+0.6
FNA	Florina	1.11	243	ePB	Pg	01 55 04.5	-0.3
VTS	Vitosha	1.36	17	P	Pb	01 55 09.6	+0.4
VTS				S	Sg	01 55 27.6	+0.3
VTS	Vitosha	1.36	17	ePg	Pg	01 55 10.0	+0.3
VTS				eSg	Sg	01 55 28.2	+0.9
VTS	Vitosha	1.36	17	P	Pb	01 55 09.6	+0.4
VTS	Vitosha	1.36	17	ePg	Pg	01 55 10.0	+0.3
VTS				S	Sg	01 55 27.6	+0.3
VTS				eSg	Sg	01 55 28.2	+0.9
KAVA	Kavala	1.42	101	P	Pb	01 55 10.0	-0.2
KAVA				S	Sb	01 55 28.7	+0.4
KAVA	Kavala	1.42	101	P	Pb	01 55 10.0	-0.2
KAVA				S	Sb	01 55 28.7	+0.4
BARS	Barje	1.65	337	ePg	Pb	01 55 14.4	+0.2
BARS				eSg	Sb	01 55 35.0	-0.1
BARS	Barje	1.65	337	ePg	Pb	01 55 14.4	+0.2
BARS				eSg	Sb	01 55 35.0	-0.1
ZAPS	Zavoj	1.98	359	ePn	Pb	01 55 19.6	-0.2
ZAPS				eSn	Sn	01 55 41.3	-0.9

*TRN **02** 01:58:55.3, 18°.00N×64°.37W, h5km*
*NEIC **02** 01:58:55.8, 18°.28N×63°.94W, h25km, MD3.4(RSPR), After RSPR.*
RSPR 02 01:58:55.8, 18°.28N×63°.94W, h25km±13km, **11C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBVI	Tortola	0.66	282 ⇑	iP	Pb	01 59 07.1	-1.6
TBVI				eS	Sb	01 59 16.1	-1.3
TBVI	Tortola	0.66	282 ⇑	iP	Pb	01 59 07.8	-0.8
TBVI				eS	Sb	01 59 16.1	-1.3
TBVI	Tortola	0.66	282	i Pu	Pb	01 59 07.1	-1.6
TBVI				eS	Sb	01 59 16.1	-1.3
STVI	Saint Thomas	0.97	274 ⇑	eP	Pn	01 59 11.4	-2.4
STVI	Saint Thomas	0.97	274 ⇑	eP	Pn	01 59 11.4	-2.4
STVI	Saint Thomas	0.97	274 ⇑	eP	Pn	01 59 11.4	-2.4
MTP	Monte Pirata	1.54	263 ⇑	eP	Pn	01 59 19.8	-1.9
MTP	Monte Pirata	1.54	263 ⇑	eP	Pn	01 59 19.8	-1.9
MTP				eS	Sn	01 59 38.1	-3.0
MTP	Monte Pirata	1.54	263	ePn	Pn	01 59 20.1	-1.7
MTP				eS	Sn	01 59 38.5	-2.6
CBYP	Canovanas	1.82	270 ⇑	eP	Pn	01 59 24.3	-1.4
CBYP	Canovanas	1.82	270 ⇑	eP	Pn	01 59 24.3	-1.4
CBYP				eS	Sn	01 59 45.5	-2.6
CBYP	Canovanas	1.82	270	ePn	Pn	01 59 25.5	-0.2
CBYP				eS	Sn	01 59 46.8	-1.2
HUMP	Col San Antoni	1.82	266 ⇑	eP	Pn	01 59 23.7	-1.8
HUMP	Col San Antoni	1.82	266 ⇑	eP	Pn	01 59 23.7	-1.8
HUMP				eS	Sn	01 59 45.0	-2.9
HUMP	Col San Antoni	1.82	266 ⇑	eP	Pn	01 59 23.7	-1.8
HUMP				eS	Sn	01 59 45.0	-2.9

BUC 02 02:03:17.8±1.3, **45°.71N**×**26°.72E, h135**km±10km, **MD2.8**/1, **6C-2D, Error ellipse: s-maj=17.7km s-min=5.8km az=11.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.15	341 ⇓	iP	Pn	02 03 36.7	+0.5
PLOR	Plostina	0.15	341 ⇓	iP	Pn	02 03 36.7	+0.5
PLOR				i S	Sn	02 03 49.7	-0.5
VRI	Vrincioaia	0.15	2 ⇑	iP	Pn	02 03 36.5	+0.3
VRI	Vrincioaia	0.15	2 ⇑	iP	Pn	02 03 36.5	+0.3
VRI				i S	Sn	02 03 49.7	-0.5
MLR	Muntele Rosu	0.59	248 ⇑	iP	Pn	02 03 38.1	0.0
MLR	Muntele Rosu	0.59	248 ⇑	iP	Pn	02 03 38.1	0.0
MLR				i S	Sn	02 03 53.5	0.0
CFR	Carcaliu	1.13	118 ⇑	iP	Pn	02 03 42.8	+0.4
CFR	Carcaliu	1.13	118 ⇑	iP	Pn	02 03 42.8	+0.4
CFR				i S	Sn	02 04 00.7	-0.3

*IDC **02** 02:06:41.7±1.1, 19°.29N×121°.50E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/25, mbtmp3.5/4, Error ellipse: s-maj=70.6km s-min=23.9km az=69.0*
*MAN **02** 02:06:44, 19°.41N×121°.07E, h33km, mb4.3, ML3.1, MS2.9*
*ISCJB **02** 02:06:45.8±0.9, 19°.37N±0°.06×121°.11E±0°.10, h39km, mb3.4/4, Error ellipse: s-maj=13.8km s-min=8.5km az=164.0*
ISC 02 02:06:47.4±1.1, **19°.30N**±0°.09×**121°.10E**±0°.09, **h39**km, **n9**, σ**1.33**/13, **mb3.3**/4, **1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	1.07	205 ⇑	iP	Pn	02 07 04.5	-1.3
SGCP	Mt. Cagua	1.38	139	eP	Pn	02 07 09.5	-0.7
SGCP				eS	Sn	02 07 27.9	+0.7
APYP	Conner	1.43	174	eP	Pn	02 07 10.0	-0.9
APYP				eS	Sn	02 07 29.5	+1.0
ABRA	Dolores	1.68	193	eP	Pn	02 07 13.5	-0.8
ABRA				eS	Sn	02 07 36.6	+2.1
CVP	Callao Caves	1.73	156	eP	Pn	02 07 15.0	+0.1
CVP				eS	Sn	02 07 37.2	+1.4
WRA	Warramunga Arr	41.10	161	P	P	02 14 25.9	-1.8
	0.2nm,0.4s,baz=344,slow=9.4,SNR=10						
MKAR	Makanchi Array	41.90	320	P	P	02 14 35.5	+1.5
	0.2nm,0.4s,baz=112,slow=8.4,SNR=2.9						
ASAR	Alice Springs	44.49	163	P	P	02 14 54.5	-0.7
	0.2nm,0.4s,baz=351,slow=7.4,SNR=5.3						
YKA	Yellowknife Ar	87.49	23	P	P	02 19 30.5	-0.2
	0.6nm,0.7s,baz=310,slow=4.5,SNR=16						

*ATH **02** 02:08:10.6, 37°.15N×28°.22E, h28km±1km, MD3.5/9*
*ISK **02** 02:08:11.7, 37°.18N×28°.10E, h10km, MD3.3*
*ISCJB **02** 02:08:11.9±0.4, 37°.15N±0°.02×28°.07E±0°.02, h12km±3km, Error ellipse: s-maj=3.2km s-min=3.1km az=34.6*
*CSEM **02** 02:08:12.0±0.1, 37°.15N×28°.08E, h10km, MD3.3, Error ellipse: s-maj=3.1km s-min=2.6km az=2.0*
*THE **02** 02:08:12.9, 37°.16N×28°.08E, h10km±5km, ML2.7/3, Error ellipse: s-maj=5.2km s-min=1.5km az=96.0*
*DDA **02** 02:08:12.0, 37°.19N×28°.06E, h7km, MD3.0*
ISC 02 02:08:11.9±0.9, **37°.15N**±0°.02×**28°.06E**±0°.02, **h8**km±7km, **n86**, σ**0.66**/119, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.18	95	ePG	Pg	02 08 15.1	-0.5
YER				eSG	Sg	02 08 18.1	0.0
YER	Yerkesik	0.18	95	ePg	Pg	02 08 15.1	-0.5
YER				eSg	Sg	02 08 18.1	0.0
MLSB	Milas	0.27	302	ePG	Pb	02 08 18.6	-0.4
MLSB				eSG	Sb	02 08 23.0	-0.8
MLSB	Milas	0.27	302	ePg	Pb	02 08 18.6	-0.4
MLSB				eSg	Sb	02 08 23.0	-0.8
AYDN	Tasoluk	0.53	344	i P	Pg	02 08 22.7	+0.5
AYDN				i S	Sg	02 08 29.7	+0.6
AYDN	Tasoluk	0.53	344	i P	Pg	02 08 22.7	+0.5
AYDN				i S	Sg	02 08 29.7	+0.6
BODT	Bodrum	0.61	262	ePG	Pg	02 08 24.1	+0.5
BODT				eSG	Sb	02 08 33.6	+0.1
BODT	Bodrum	0.61	262	ePg	Pg	02 08 24.2	+0.5
BODT				eSg	Sb	02 08 33.6	+0.1
GCAM	G?zelcaml?	0.86	310	i P	Pg	02 08 28.8	+0.4
GCAM				i S	Sg	02 08 39.5	-0.1
GCAM	G?zelcaml?	0.86	310	i P	Pg	02 08 28.8	+0.4
GCAM				i S	Sg	02 08 39.5	-0.1
NIS1	Nisyros Isl.	0.90	233	P	Pg	02 08 29.4	+0.3
NIS1				S	Sn	02 08 44.0	+0.1
NIS1	Nisyros Isl.	0.90	233	ePN	Pg	02 08 29.5	+0.3
NIS1				eSN	Sn	02 08 44.3	+0.4
NIS1	Nisyros Isl.	0.90	233	P	Pg	02 08 29.4	+0.3
NIS1				S	Sn	02 08 44.0	+0.1
NISR	Nisiros	0.92	235	P	Pg	02 08 29.8	+0.2
NISR				S	Sn	02 08 44.1	-0.4
NISR	Nisiros	0.92	235	P	Pg	02 08 29.8	+0.2
NISR				S	Sn	02 08 44.1	-0.4
ARG	Arkhangelos	0.93	177	P	Pg	02 08 29.1	-0.7
ARG				S	Sn	02 08 44.6	-0.2
ARG	Arkhangelos	0.93	177	ePN	Pg	02 08 29.2	-0.6
ARG				eSN	Sb	02 08 42.7	-0.1
ARG	Arkhangelos	0.93	177	P	Pg	02 08 29.1	-0.7
ARG				S	Sn	02 08 44.6	-0.2
DNZL	Cakiroluk	0.95	55	i P	Pg	02 08 29.4	-0.8
DNZL				i S	Sb	02 08 43.4	-0.1
DNZL	Cakiroluk	0.95	55	i P	Pg	02 08 29.4	-0.8
DNZL				i S	Sb	02 08 43.4	-0.1
FETY	Fethiye	0.97	122	ePG	Pg	02 08 30.5	+0.1
FETY				eSG	Sn	02 08 45.0	-0.6
FETY	Fethiye	0.97	122	ePg	Pg	02 08 30.5	+0.1
DENT	Denizli	0.98	52	ePG	Pg	02 08 29.9	-0.8
DENT	Denizli	0.98	52	ePg	Pg	02 08 29.9	-0.8
GLHS	Glhisar (BURDU	1.15	89	ePN	Pb	02 08 33.6	-0.4
GLHS	Glhisar (BURDU	1.15	89	ePn	Pb	02 08 33.6	-0.4
GOLH	Golhisar	1.20	85	i P	Pb	02 08 34.8	-0.1
GOLH				i S	Sn	02 08 52.9	+1.4
GOLH	Golhisar	1.20	85	i P	Pb	02 08 34.8	-0.1
GOLH				i S	Sn	02 08 52.9	+1.4
MANT	Manisa	1.40	16	i P	Pn	02 08 36.9	-1.0
MANT				i S	Sn	02 08 57.0	+0.4
MANT	Manisa	1.40	16	i P	Pn	02 08 36.9	-1.0
MANT				i S	Sn	02 08 57.0	+0.4
IZM	Izmir	1.40	333	ePN	Pn	02 08 37.3	-0.4
IZM	Izmir	1.40	333	ePn	Pn	02 08 37.3	-0.4
KULA	Kula-Manisa	1.44	19	ePN	Pn	02 08 38.0	-0.3
KULA	Kula-Manisa	1.44	19	ePn	Pn	02 08 38.0	-0.3
BLCB	Balcova	1.48	327	ePN	Pn	02 08 38.6	-0.1
BLCB	Balcova	1.48	327	ePn	Pn	02 08 38.6	-0.1
AKAS	Kas	1.54	126	i P	Pb	02 08 41.0	+0.3
AKAS				i S	Sg	02 09 03.8	+2.4
AKAS	Kas	1.54	126	i P	Pb	02 08 41.0	+0.3
KHL	Karahalli	1.65	44	ePN	Pn	02 08 40.8	-0.4
KHL	Karahalli	1.65	44	ePn	Pn	02 08 40.8	-0.4
AKHS	Akhisar	1.74	354	i P	Pn	02 08 41.4	-0.9
AKHS	Akhisar	1.74	354	i P	Pn	02 08 41.4	-0.9
KARP	Karpathos	1.76	205	P	Pn	02 08 41.9	-0.7
KARP				S	Sn	02 09 03.9	-1.3
KARP	Karpathos	1.76	205	ePB	Pn	02 08 41.8	-0.8
KARP				eSN	Sn	02 09 04.6	-0.6
KARP	Karpathos	1.76	205	P	Pn	02 08 41.9	-0.7
KARP				S	Sn	02 09 03.9	-1.3
CHOS	Chios island	2.01	308	P	Pn	02 08 46.0	-0.2
CHOS				S	Sn	02 09 10.5	-1.1
CHOS	Chios island	2.01	308	ePN	Pn	02 08 46.0	-0.2
CHOS				eSN	Sn	02 09 12.9	+1.3
CHOS	Chios island	2.01	308	P	Pn	02 08 46.0	-0.2
CHOS				S	Sn	02 09 10.5	-1.1
APE	Apeiranthos	2.03	268	ePN	Pn	02 08 47.2	+0.9
APE	Apeiranthos	2.03	268	P	Pn	02 08 46.0	-0.3
APE	Apeiranthos	2.03	268	ePN	Pn	02 08 46.0	-0.3
APE	Apeiranthos	2.03	268	P	Pn	02 08 46.0	-0.3
APE	Apeiranthos	2.03	268	ePn	Pn	02 08 47.3	+0.9
BCK	Bucak	2.04	80	ePN	Pn	02 08 47.0	+0.5
BCK	Bucak	2.04	80	ePn	Pn	02 08 47.1	+0.5
ISP	Isparta	2.07	70	P	Pn	02 08 46.8	-0.2
ISP	Isparta	2.07	70	P	Pn	02 08 46.8	-0.2
SHUT	Suhut-Afyon	2.42	54	ePN	Pn	02 08 52.5	+0.7
SHUT	Suhut-Afyon	2.42	54	ePn	Pn	02 08 52.5	+0.7
BALB	Balikesir	2.49	357	ePN	Pn	02 08 52.8	+0.1
BALB	Balikesir	2.49	357	ePn	Pn	02 08 52.8	+0.1
ALT	Altintas	2.50	40	ePN	Pn	02 08 53.5	+0.6
ALT	Altintas	2.50	40	ePn	Pn	02 08 53.5	+0.6
ZKR	Zakros	2.52	217	ePN	Pn	02 08 53.5	+0.4
PRK	Paraskevi	2.52	327	ePN	Pn	02 08 53.0	-0.1
TVSB	Tavsanli	2.55	25	ePN	Pn	02 08 54.0	+0.4
TVSB	Tavsanli	2.55	25	ePn	Pn	02 08 54.0	+0.4
BALY	Balya	2.61	352	i P	Pn	02 08 53.7	-0.7
BALY				i S	Sn	02 09 25.6	-0.7
BALY	Balya	2.61	352	i P	Pn	02 08 53.7	-0.7
BALY				i S	Sn	02 09 25.6	-0.7
SIGR	SIGRI	2.69	320	P	Pn	02 08 54.1	-1.4
SIGR	SIGRI	2.69	320	P	Pn	02 08 54.1	-1.4
NPS	Neapolis	2.73	227	ePN	Pn	02 08 56.3	+0.3
LAST	Lasithi	2.88	227	ePN	Pn	02 08 58.7	+0.5
GONE	Gonen-Balikesi	2.91	354	ePN	Pn	02 08 59.1	+0.7
GONE	Gonen-Balikesi	2.91	354	ePn	Pn	02 08 59.1	+0.7
EZN	Ezine	3.00	333	ePN	Pn	02 09 00.2	+0.5
EZN	Ezine	3.00	333	ePn	Pn	02 09 00.2	+0.5
IDI	Anoyia	3.17	235	ePN	Pn	02 09 02.4	+0.3
KRBG	Karabiga-Canak	3.29	350	ePN	Pn	02 09 04.7	+1.0
KRBG	Karabiga-Canak	3.29	350	ePn	Pn	02 09 04.7	+1.0
ARMT	Armutlu	3.47	10	ePN	Pn	02 09 06.9	+0.8
ARMT	Armutlu	3.47	10	ePn	Pn	02 09 06.9	+0.8
LIA	Limnos Island	3.55	321	P	Pn	02 09 07.5	+0.2
LIA	Limnos Island	3.55	321	ePN	Pn	02 09 07.5	+0.2
LIA	Limnos Island	3.55	321	P	Pn	02 09 07.5	+0.2
NACGM	Naroch	17.78	358	ePP		02 39 44.0	

*ISCJB **02** 02:11:25.2±1.3, 6°.05S±0°.05×148°.24E±0°.07, h38km±12km, mb4.8/43, MS4.9/5, Error ellipse: s-maj=12.9km s-min=7.2km az=19.0*
*BJI **02** 02:11:26.1, 6°.13S×148°.31E, h56km, mB5.0/16, mb4.8/22, Ms5.4/8, Ms7 5.2/8*
*IDC **02** 02:11:27.5±0.5, 6°.07S×148°.27E, h47km±4km, mb4.4/17, mb1 4.5/19, mb1mx4.4/22, mbtmp4.4/19, Error ellipse: s-maj=22.9km s-min=8.0km az=101.0*
*DJA **02** 02:11:29.3±3.7, 6°S±10°×14°8E±1°1, h30km±27km, M5.2/8, mB5.4/1, mb5.0/8, MLv5.3/1, Mw(mB)4.8/1*
*NEIC **02** 02:11:29.2±1.1, 6°.06S×148°.14E, h63km±9km, mb4.8/19, Error ellipse: s-maj=10.4km s-min=6.1km az=98.0*
ISC 02 02:11:27.5±0.4, **6°.11S**±0°.04×**148°.30E**±0°.08, **h46**km±2km, **h46**km**:pP-P, n98**, σ**1.30**/150, **mb4.8**/42, **MS4.7**/5, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.46	199	ePn	Pn	02 12 20.6	+1.7
PMG				S	Sn	02 13 00.5	+1.8
PMG				eS		02 13 01.4	
PMG	Port Moresby	3.46	199	P	Pn	02 12 21.1	+2.2
PMG	Port Moresby	3.46	199	P	Pn	02 12 20.6	+1.7
	189nm,0.3s,baz=22,slow=5.3,SNR=126						
PMG				S	Sn	02 13 00.5	+1.8
	364nm,0.3s,baz=22,slow=18,SNR=11						
COEN	Coen	9.28	212	ePn	Pn	02 13 39.2	+0.4
COEN				eS	Sn	02 15 17.6	-4.4
CTA	Charters Tower	14.03	188	P	Pn	02 14 45.5	+1.7
CTA	Charters Tower	14.03	188	P	Pn	02 14 45.5	+1.7
	1.2nm,0.3s,baz=14,slow=16,SNR=8.7						
CTAO	Charters Tower	14.03	188	ePn	Pn	02 14 45.4	+1.7
WRAB	Tennant Creek	19.30	223	ePn	P	02 15 49.1	+0.3
	35nm,0.7s						
WRAB				e		02 19 16.2	
WRA	Warramunga Arr	19.31	223	P	P	02 15 48.7	-0.3
WRA				S	S	02 19 17.7	-7.5
WRA				PcP	PcP	02 20 10.3	0.0
WRA	Warramunga Arr	19.31	223	P	P	02 15 48.7	-0.3
	2.0nm,0.3s,baz=49,slow=10,SNR=93						
WRA				S	S	02 19 17.7	-7.5
	0.3nm,0.3s,baz=46,slow=22,SNR=5.6						
WRA				PcP	PcP	02 20 10.3	0.0
	0.3nm,0.3s,baz=37,slow=1.7,SNR=10						
EIDS	Eidsvold	19.33	172	ePn	Pn	02 15 50.7	+0.2
	34nm,1.1s						
AS31	Alice Springs	22.27	217	eP	P	02 16 21.4	+0.4
ASAR	Alice Springs	22.28	217	P	P	02 16 21.0	0.0
ASAR				PcP	PcP	02 20 16.3	+0.4
ASAR				S	S	02 20 21.8	-1.7
ASAR	Alice Springs	22.28	217	P	P	02 16 21.0	0.0
	42nm,0.8s,baz=55,slow=9.4,SNR=280						
ASAR				PcP	PcP	02 20 16.3	+0.4
	6.4nm,0.9s,baz=45,slow=3.0,SNR=9.2						
ASAR				S	S	02 20 21.8	-1.7
	12nm,0.7s,baz=31,slow=23,SNR=12						
ARMA	Armidale	24.38	173	eP	P	02 16 42.5	+0.8
	9.7nm,0.6s						
FITZ	Fitzroy Crossi	25.11	240	eP	P	02 16 48.9	+0.5
	57nm,0.6s						
FITZ				e		02 17 02.7	
FITZ	Fitzroy Crossi	25.11	240	P	P	02 16 48.8	+0.5
	31nm,0.5s,baz=73,slow=10.0,SNR=3.2						
STKA	Stephens Creek	26.39	193	eP	P	02 17 00.6	+0.9
	3.5nm,0.7s						
STKA	Stephens Creek	26.39	193	P	P	02 17 00.6	+0.9
	18nm,0.6s,baz=24,slow=9.8,SNR=40						
WSI	Waingapu	27.95	261	P	pP	02 17 31.1	+5.0
WBSI	Waikabubak, Su	28.84	261	P	P	02 17 22.3	+0.4
	55nm,0.8s						
BBOO	Buckleboo	28.90	202	eP	P	02 17 23.3	+1.1
	260nm,1.1s						
FORT	Forrest	31.03	215	eP	P	02 17 41.1	0.0
	20nm,0.7s						
MBWA	Marble Bar	31.44	239	eP	P	02 17 45.0	+0.1
	12nm,0.7s						
KHKI	Kahang-Kahang	32.50	264	P	P	02 17 54.2	0.0
	49nm,0.8s						
NWAO	Narrogin (SRO)	39.32	223	P	P	02 18 52.5	+0.1
NWAO	Narrogin (SRO)	39.32	223	P	P	02 18 52.5	+0.1
	5.6nm,0.7s,baz=58,slow=9.7,SNR=4.6						
JNU	Nakatsue	42.38	338	P	P	02 19 15.6	-2.0
JNU	Nakatsue	42.38	338	P	P	02 19 15.6	-2.0
	3.6nm,0.6s,baz=90,slow=6.1,SNR=4.1						
MJAR	Matsushiro Arr	43.47	348	P	P	02 19 26.1	-0.2
MJAR				pP	pP	02 19 39.8	+0.9
MJAR	Matsushiro Arr	43.47	348	P	P	02 19 26.1	-0.2
	7.3nm,0.8s,baz=178,slow=8.2,SNR=18						
MJAR				pP	pP	02 19 39.8	+0.9
	6.5nm,0.8s,baz=169,slow=8.7,SNR=3.0						
MAT	Matsushiro	43.47	348	P	P	02 19 25.3	-1.0
NJ2	Nanjing	47.20	325	eP	P	02 19 51.2	-4.7
NJ2				pmax	pmax		
	comp=Z,30nm,1.0s						
KSRS	Korea Array	47.33	338	P	P	02 19 56.8	0.0
	comp=Z,3.5nm,1.0s,baz=146,slow=8.8,SNR=7.5						
KSAR	Wonju Array Be	47.33	338	P	P	02 19 56.8	-0.1
GYA	Guiyang	51.73	311	eP	P	02 20 31.2	+0.5
GYA				pP	pP	02 20 43.2	-0.3
GYA				sP	sP	02 20 47.6	-1.3
GYA				PP	PP	02 22 31.8	+2.9
GYA				ScP	ScP	02 25 36.5	-0.4
GYA				S	S	02 27 49.0	-0.6
GYA				SS	SS	02 31 23.8	-3.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,4.9s						
GYA				LR	LR		
	comp=N,420nm,19.8s						
GYA				LR	LR		
	comp=E,330nm,20.4s						
GYA				LR	LR		
	comp=Z,380nm,18.6s						
USRK	Ussuriysk Arra	52.20	345	P	P	02 20 34.5	+0.8
	comp=Z,7.6nm,0.6s,baz=183,slow=6.7,SNR=20						
MDJ	Mudanjiang	53.23	343	P	P	02 20 42.0	+0.6
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,55nm,4.5s						
CN2	Changchun	53.80	340	eP	P	02 20 48.7	+3.1
KMI	Kunming	54.09	307	P	P	02 20 50.2	+1.9
KMI				S	S	02 28 21.8	-0.2
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				LR	LR		
	comp=N,3µm,14.0s						
KMI				LR	LR		
	comp=E,4µm,16.4s						
KMI				LR	LR		
	comp=Z,3µm,25.1s						
BJI	Beijing	54.64	330	P	P	02 20 51.1	-0.6
BJI				pmax	pmax		
	comp=Z,13nm,0.4s						
CD2	Chengdu	56.28	314	eP	P	02 21 05.5	+1.7
CD2				pP	pP	02 21 17.5	+0.8
CD2				sP	sP	02 21 22.2	+0.2
CD2				PP	PP	02 23 13.0	+3.3
CD2				S	S	02 28 51.4	+0.6
CD2				sS	sS	02 29 10.8	-1.6
CD2				SS	SS	02 32 38.7	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CD2				pmax	pmax		
	comp=Z,40nm,6.4s						
CD2				LR	LR		
	comp=N,180nm,14.2s						
CD2				LR	LR		
	comp=Z,220nm,15.2s						
HHC	Hu-ho-hao-te	57.61	328	i P	P	02 21 15.4	+2.3
HHC				pP	pP	02 21 28.1	+2.0
HHC				sP	sP	02 21 33.4	+2.0
HHC				PP	PP	02 23 25.2	+3.8
HHC				PcS	PcS	02 26 07.6	+0.4
HHC				S	S	02 29 09.0	+0.8
HHC				sS	sS	02 29 30.4	+0.6
HHC				ScS	ScS	02 30 57.3	-1.7
HHC				SS	SS	02 33 01.3	+2.2
HHC				pmax	pmax		
	comp=Z,57nm,1.2s						
HHC				pmax	pmax		
	comp=Z,180nm,5.5s						
HHC				LR	LR		
	comp=N,2µm,15.1s						
HHC				LR	LR		
	comp=E,2µm,15.3s						
HHC				LR	LR		
	comp=Z,2µm,17.5s						
LZH	Lanzhou	59.14	319	eP	P	02 21 23.5	-0.5
LZH				pP	pP	02 21 35.6	-1.4
LZH				sP	sP	02 21 40.7	-1.5
LZH				ePP	PP	02 23 36.5	+1.4
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,7.1s						

LZH LR LR
comp=N,370nm,15.2s
LZH LR LR
comp=E,330nm,14.9s
LZH LR LR
comp=Z,400nm,18.6s
PEA0B Petropavlovsk- 59.53 7 *e*P **P 02 21 27.1 +1.0**
PETK Petropavlovsk- 59.53 7 P **P 02 21 26.9 +0.8**
PETK Petropavlovsk- 59.53 7 P **P 02 21 26.9 +0.8**
comp=Z,11nm,0.7s,baz=176,slow=8.7,SNR=24
FX1 Attu Island--F 62.45 17 *e*P **P 02 21 46.5 +0.7**
FX1 Attu Island--F 62.45 17 P **P 02 21 46.9 +1.0**
comp=Z,13nm,0.6s,baz=250,slow=4.7,SNR=8.7
GTA Gaotai 63.66 320 *e*P **P 02 21 54.3 -0.1**
GTA pP **pP 02 22 05.0 -2.5**
GTA sP **sP 02 22 11.3 -1.4**
GTA pmax pmax
comp=Z,3.0nm,0.6s
ULN Ulaanbaatar 64.83 331 *e*P **P 02 22 01.4 -0.6**
comp=Z,2.8nm,0.6s
ULN Ulaanbaatar 64.83 331 P **P 02 22 02.5 +0.6**
SONM Songino Array 65.14 330 P **P 02 22 03.7 -0.1**
SONM Songino Array 65.14 330 P **P 02 22 03.7 -0.1**
comp=Z,1.9nm,0.7s,baz=134,slow=7.7,SNR=5.7
VNDA Vanda 71.73 177 *e*P **P 02 22 45.0 +0.6**
comp=Z,3.6nm,0.6s
VNDA Vanda 71.73 177 P **P 02 22 45.2 +0.8**
comp=Z,2.7nm,0.6s,baz=335,slow=7.4,SNR=24
WMQ Urumqi 73.72 319 *e*P **P 02 22 57.4 +0.5**
WMQ pP **pP 02 23 10.0 -0.3**
WMQ pmax pmax
comp=Z,9.0nm,0.6s
MK31 Makanchi Array 78.41 320 *e*P **P 02 23 21.4 -2.1**
MKAR Makanchi Array 78.41 320 P **P 02 23 21.8 -1.7**
MKAR Makanchi Array 78.41 320 P **P 02 23 21.8 -1.7**
comp=Z,0.7nm,0.4s,baz=112,slow=6.1,SNR=8.7
ZAA0 Zalesovo Array 79.80 327 *e*P **P 02 23 28.7 -2.2**
ZALV Zalesovo Beam 79.80 327 P **P 02 23 28.5 -2.4**
ZALV pP **pP 02 23 44.3 0.0**
ZALV Zalesovo Beam 79.80 327 P **P 02 23 28.5 -2.4**
comp=Z,2.3nm,0.7s,baz=105,slow=7.7,SNR=10
ZALV pP **pP 02 23 44.3 0.0**
comp=Z,1.4nm,0.6s,baz=124,slow=5.4,SNR=3.5
RC01 Rabbit Creek A 82.26 26 *e*P **P 02 23 43.9 +0.1**
comp=Z,15nm,0.6s
MAW Mawson 82.64 203 P **P 02 23 44.6 -1.1**
MAW pP **pP 02 23 59.3 0.0**
MAW Mawson 82.64 203 P **P 02 23 44.6 -1.1**
comp=Z,3.4nm,0.8s,baz=39,slow=6.5,SNR=6.7
MAW pP **pP 02 23 59.3 0.0**
comp=Z,3.1nm,0.8s,baz=74,slow=6.6,SNR=4.6
PMR Palmer 82.75 25 *e*P **P 02 23 46.6 +0.3**
comp=Z,8.6nm,0.8s
TRF Thorofare Moun 83.15 23 *e*P **P 02 23 47.5 -1.1**
comp=Z,5.1nm,0.9s
MCK McKinley 83.82 23 *e*P **P 02 23 51.5 -0.3**
comp=Z,17nm,1.0s
QSPA South Pole Qui 83.85 180 *e*P **P 02 23 52.3 +0.1**
comp=Z,28nm,0.7s
DIV Divide 84.01 26 *e*P **P 02 23 53.3 +0.3**
comp=Z,18nm,1.0s
COLD Coldfoot 85.00 20 *e*P **P 02 23 58.4 +0.6**
comp=Z,3.5nm,0.9s
ILAR Eielson Array 85.08 23 P **P 02 23 56.5 -1.7**
ILAR pP **pP 02 24 10.3 -1.5**
ILAR Eielson Array 85.08 23 P **P 02 23 56.5 -1.7**
comp=Z,4.4nm,0.7s,baz=252,slow=5.1,SNR=55
ILAR pP **pP 02 24 10.3 -1.5**
comp=Z,4.9nm,0.6s,baz=251,slow=4.8,SNR=14
DOT Dot Lake 85.75 24 *e*P **P 02 24 02.0 +0.4**
comp=Z,28nm,1.0s
ABKAR Akbulak array 93.51 319 *e*P **P 02 24 36.3 -2.2**
comp=Z,0.3nm,0.4s
YKA Yellowknife Ar 98.67 28 P Pdif 02 25 02.0 +0.4
YKA Yellowknife Ar 98.67 28 P Pdif 02 25 02.0 +0.4
comp=Z,0.1nm,0.6s,baz=269,slow=5.0,SNR=4.5
BOSA Boshof 115.23 235 PKP **PKPdf 02 30 03.4 -1.4**
BOSA Boshof 115.23 235 PKP **PKPdf 02 30 03.4 -1.4**
comp=Z,2.6nm,0.9s,baz=77,slow=2.3,SNR=4.6
PLCA Paso Flores 121.32 146 PKP **PKPdf 02 30 15.5 -0.7**
PLCA pPKP **pPKPdf 02 30 29.6 -0.7**
PLCA Paso Flores 121.32 146 PKP **PKPdf 02 30 15.5 -0.7**
comp=Z,2.3nm,0.7s,baz=176,slow=5.9,SNR=6.2
PLCA pPKP **pPKPdf 02 30 29.6 -0.7**
comp=Z,2.2nm,0.7s,baz=358,slow=2.2,SNR=3.0
GERES GERESS Array B 122.73 326 PKP **PKPdf 02 30 17.0 -1.6**
GERES GERESS Array B 122.73 326 PKP **PKPdf 02 30 17.0 -1.6**
comp=Z,0.8nm,0.7s,baz=90,slow=1.4,SNR=8.7
TSUM Tsumeb 125.33 241 *e*PKPdf **PKPdf 02 30 24.9 +0.4**
TSUM *e*PKPdf **PKiKP 02 30 25.1 +0.2**
LCO Las Campanas 128.75 135 *e*PKPdf **PKPdf 02 30 31.0 0.0**
LPAZ La Paz 137.64 122 PKP **PKPdf 02 30 48.8 +0.4**
LPAZ *e*PKPdf **PKiKP 02 30 48.9 -1.4**
LPAZ La Paz 137.64 122 PKP **PKPdf 02 30 48.8 +0.4**
comp=Z,3.3nm,0.7s,baz=346,slow=2.2,SNR=11
CPUP Villa Florida 139.28 143 PKP **PKPdf 02 30 50.2 -0.2**
CPUP pPKP **pPKPdf 02 31 04.8 +0.2**
CPUP Villa Florida 139.28 143 PKP **PKPdf 02 30 50.2 -0.2**
comp=Z,2.5nm,0.7s,baz=151,slow=3.9,SNR=5.6
CPUP pPKP **pPKPdf 02 31 04.8 +0.2**
comp=Z,3.0nm,0.8s,baz=241,slow=1.9,SNR=3.2
SAML Samuel 145.24 115 *e*PKPdf **PKPbc 02 31 00.6 -0.4**
TOA0 Torodi Ar. Sit 146.37 285 *e*PKPbc **PKPdf 02 31 03.8 +0.5**
TORD Torodi Ar. Bea 146.37 285 PKPbc **PKPdf 02 31 03.2 0.0**
TORD pPKPbc pPKPbc 02 31 18.1 -0.4
TORD Torodi Ar. Bea 146.37 285 PKPbc **PKPdf 02 31 03.2 0.0**
comp=Z,2.6nm,0.6s,baz=80,slow=3.4,SNR=40
TORD pPKPbc pPKPbc 02 31 18.1 -0.4
comp=Z,3.7nm,0.7s,baz=72,slow=3.4,SNR=12
BDFB Brasilia 153.01 143 PKP **PKPdf 02 31 13.2 -0.7**
BDFB PKPbc **PKPbc 02 31 20.6 -0.5**
BDFB pPKPbc **pPKPbc 02 31 34.3 -1.0**
BDFB Brasilia 153.01 143 PKP **PKPdf 02 31 13.2 -0.7**
comp=Z,5.2nm,1.1s,baz=270,slow=3.0,SNR=4.8
BDFB PKPbc **PKPbc 02 31 20.6 -0.5**
comp=Z,10nm,0.8s,baz=236,slow=2.2,SNR=12
BDFB pPKPbc **pPKPbc 02 31 34.3 -1.0**
comp=Z,8.4nm,0.8s,baz=195,slow=4.1,SNR=4.7
DBIC Dimbokro 153.31 273 PKPbc **PKPbc 02 31 20.6 -1.2**
DBIC pPKPbc **pPKPbc 02 31 37.1 +1.3**
DBIC Dimbokro 153.31 273 PKPbc **PKPbc 02 31 20.6 -1.2**
comp=Z,3.2nm,0.8s,baz=50,slow=3.8,SNR=5.3
DBIC pPKPbc **pPKPbc 02 31 37.1 +1.3**
comp=Z,2.6nm,0.6s,baz=208,slow=8.0,SNR=2.4

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*SZGRF **02** 02:16:57.9, 20°.31S×169°.69E, h33km, mb6.3, Vanuatu Islands*
*BGS **02** 02:16:59.0±7.5, 17°.76S×167°.95E, h10km, MS6.1*
*IDC **02** 02:17:01.0±0.3, 17°.80S×167°.93E, h0km, mb5.1/30, mb1 5.2/33, mb1mx5.2/34, mbtmp5.1/33, ML5.3/2, MS6.1/40, Ms1 6.1/40, ms1mx5.9/47, Error ellipse: s-maj=12.5km s-min=11.1km az=107.0*
*BJI **02** 02:17:01.9, 17°.52S×168°.38E, h18km, mB6.2/60, mb5.4/50, Ms6.3/79, Ms7 6.1/73*
*LDG **02** 02:17:02.8±0.1, 17°.63S×167°.68E, h10km, Mb5.9/4, Ms6.1/10, Error ellipse: s-maj=11.7km s-min=5.4km az=95.0*
*NEIC **02** 02:17:03.5±0.1, 17°.76S×167°.95E, h15km, mb5.7/91, ME5.9, MS6.2/154, MW6.3, Error ellipse: s-maj=4.4km s-min=3.4km az=144.0 Broadband fault plane solution: P waves. NP1:ϕ_s165.00000°, δ75.00000°, λ90.00000°. NP2:ϕ_s345.00000°, δ15.00000°, λ90.00000°. Principal axes: T Plg60.0000°, Azm75.0000°; N Plg0.0000°, Azm0.0000°; P Plg30.0000°, Azm255.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Four people injured, some buildings damaged, utilities disrupted and landslides occurred on Tongoa. Felt [III] at Port-Vila. Also felt at Lakatoro, Luganville and Norsup.
*ISCJB **02** 02:17:04.8±0.1, 17°.78S±0°.02×167°.90E±0°.03, h32km, mb5.5/145, MS6.2/261 Error ellipse: s-maj=4.0km s-min=3.4km az=17.4*
*MOS **02** 02:17:06.6±1.0, 17°.54S×167°.88E, h37km, mb5.5/77, MS6.1/69, Error ellipse: s-maj=9.0km s-min=6.7km az=115.0*
*TEH **02** 02:17:07.0, 17°.76S×167°.88E, h40km, ML6.5*
*GCMT **02** 02:17:11.8±0.1, 17°.73S×167°.64E, h20km, MW6.3, Moment Tensor Solution. s121,c309; s99,c207; Moment tensor: Scale 10^{18}Nm; M_{rr}2.85±.02; $M_{\theta\theta}$0.21±.02; $M_{\phi\phi}$-3.06±.02; $M_{r\theta}$0.98±.04; $M_{\theta\phi}$0.35±.01; $M_{\phi r}$-2.76±.04; Best double couple: $M_0$4.20000×10^{18} NP1:ϕ_s5.00000°, δ24.00000°, λ109.00000°. NP2:ϕ_s164.00000°, δ67.00000°, λ82.00000°. Principal axes: T 4.1000, Plg67.0000°, Azm60.0000°; N 0.1600, Plg7.0000°, Azm167.0000°; P -4.2600, Plg22.0000°, Azm260.0000°; Data Used: II IU CN IC G. Mantle waves from 110 sta. Surface waves: sta=126, comp=305, per= 50.*
*DJA **02** 02:17:13.1±1.5, 18°S±4°×16°8E±°, h85km±15km, M5.7/5, mB6.3/5, mb5.3/5, Mw(mB)6.0/5*
*NEIC **02** 02:17:23.5±0.0, 17°.69S×167°.61E, h28km, Moment Tensor Solution. s149 Moment tensor: Scale 10^{18}Nm; M_{rr}3.41; $M_{\theta\theta}$-0.09; $M_{\phi\phi}$-3.31; $M_{r\theta}$1.86; $M_{\theta\phi}$0.35; $M_{\phi r}$-1.43; Best double couple: $M_0$4.10000×10^{18} NP1:ϕ_s11.00000°, δ35.00000°, λ124.00000°. NP2:ϕ_s152.00000°, δ62.00000°, λ69.00000°. Principal axes: T 4.4000, Plg66.0000°, Azm22.0000°; N -0.6300, Plg18.0000°, Azm162.0000°; P -3.7600, Plg14.0000°, Azm257.0000°;*
ISC 02 02:17:06.7±0.3**, 17°.78S**±0°.03×**168°.03E**±0°.04**, h35**km±1km**, h35**km**:pP-P, n1641,** σ**1s.37**/1493**, mb5.6**/151**, MS6.2**/262**, 275C-230D, Vanuatu Islands**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
BAYA Yate Dam 4.48 194 *e*P **Pn 02 18 12.1 -0.1**
BAYA *e*S **Sn 02 19 00.8 -2.3**
DZM Mont Dzumac 4.52 199 *e*P Pb 02 18 21.4 -4.0
DZM *e*S **Sn 02 19 00.9 -3.3**
DZM *e*LR LR 02 19 14.0
249μm,23.8s
DZM Mont Dzumac 4.52 199 *e*Pn Pn 02 18 10.1 -2.8
DZM *e*S **Sn 02 19 02.4 -1.8**
DZM Mont Dzumac 4.52 199 Pn **Pn 02 18 10.9 -1.9**
41nm,0.3s,baz=40,slow=16,SNR=101
DZM Sn **Sn 02 19 01.9 -2.3**
172nm,0.3s,baz=132,slow=19,SNR=7.9
DZM LR LR 02 19 41.7
comp=Z,105μm,21.5s,baz=18,slow=36
NOUC Port Laguerre 4.59 200 *e*P **Pn 02 18 13.4 -0.4**
NOUC *e*S **Sn 02 19 04.8 -1.1**
MSVF Nonsavu 9.55 91 *e*P Pn 02 19 26.0 +4.1
MSVF Nonsavu 9.55 91 *e*Pn Pn 02 19 26.0 +4.1
MSVF Nonsavu 9.55 91 Pn Pn 02 19 30.0 +8.1
3μm,0.9s,SNR=20
HNR Honiara 11.42 316 *e*Pn **Pn 02 19 45.5 -1.9**
2μm,0.8s
HNR *e*S **Sn 02 21 50.9 -3.0**
HNR Honiara 11.42 316 Pn **Pn 02 19 46.3 -1.2**
65nm,0.3s,baz=223,slow=0.6,SNR=22
HNR Sn **Sn 02 21 48.8 -5.1**
22nm,0.3s,baz=286,slow=19,SNR=2.1
HNR LR LR 02 23 33.9
comp=Z,117μm,20.1s,baz=136,slow=35
FUNA Funafuti 14.24 51 *e*Pn **Pn 02 20 25.1 -0.9**
EIDS Eidsvold 17.46 241 *e*P **Pn 02 21 07.3 -0.3**
851nm,1.5s
OUZ Omahuta 18.07 165 *e*Pn **P 02 21 15.7 +0.6**
193nm,0.9s
ARMA Armidale 19.52 227 *e*Pn **P 02 21 31.9 +0.6**
480nm,1.5s
TARA Tarawa 19.62 15 *e*P **P 02 21 31.8 -0.5**
5μm,2.6s
AFI Afiamalu 19.80 82 *e*Pn **P 02 21 35.0 +0.5**
562nm,1.3s
AFI Afiamalu 19.80 82 P **Pn 02 21 35.6 -0.6**
0.2nm,0.3s,baz=270,slow=17,SNR=5.8
AFI LR LR 02 27 41.4
comp=Z,63μm,19.0s,baz=259,slow=32
CTA Charters Tower 20.72 260 P **P 02 21 43.6 -0.7**
CTA Charters Tower 20.72 260 P **P 02 21 43.6 -0.7**
156nm,0.9s,baz=82,slow=14,SNR=49
CTA LR LR 02 28 42.8
comp=Z,111μm,20.4s,baz=78,slow=34
CTAO Charters Tower 20.72 260 *e*P **P 02 21 43.6 -0.7**
CTAO pmax pmax
comp=Z,323nm,0.9s
CTAO MLR MLR
comp=Z,122μm,20.0s
CTAO Charters Tower 20.72 260 *e*P **P 02 21 43.6 -0.7**
comp=Z,323nm,0.9s
CTAO LR LR
comp=Z,122μm,20.0s
HIZ Hauiti 21.50 165 *e*PN **P 02 21 54.5 +1.9**
URZ Urewera 21.90 161 *e*P **P 02 21 57.5 +0.7**
comp=Z,529nm,1.1s
URZ Urewera 21.90 161 P **P 02 21 57.1 +0.3**
comp=Z,142nm,1.0s,baz=1.3,slow=3.6,SNR=13
URZ LR LR 02 29 40.1
comp=Z,59μm,18.3s,baz=240,slow=35
PMG Port Moresby 21.91 290 *e*P **P 02 21 55.7 -1.4**
comp=Z,533nm,1.3s
PMG Port Moresby 21.91 290 P **P 02 21 56.6 -0.5**
PMG Port Moresby 21.91 290 P **P 02 21 55.5 -1.6**
comp=Z,50nm,1.1s,baz=120,slow=10,SNR=6.6
PMG LR LR 02 29 15.2
comp=Z,100μm,18.3s,baz=94,slow=34
PKE Pukeiti 21.96 168 PN **P 02 21 59.6 +2.1**
MWZ Matawai 22.10 160 PN P 02 22 03.4 +4.3
FWVZ Far West T-bar 22.38 165 PN **P 02 22 02.7 +0.5**
BKZ Black Stump Fm 22.55 163 PN **P 02 22 04.8 +1.0**
SNZO South Karori 24.14 168 *e*P **P 02 22 20.0 +0.5**
comp=Z,118nm,1.3s
SNZO LR LR
comp=Z,52μm,19.0s
COEN Coen 24.20 275 *e*P **P 02 22 18.9 -1.4**
comp=Z,4μm,1.7s
THZ Tophouse 24.27 171 *e*PN **P 02 22 21.3 +0.6**
CAN Canberra 24.31 220 *e*P **P 02 22 20.9 -0.3**
CAN pmax pmax
comp=Z,325nm,1.0s
CAN MLR MLR
comp=Z,79μm,22.0s
CAN Canberra 24.31 220 *e*P **P 02 22 20.9 -0.3**
comp=Z,325nm,1.0s
CAN LR LR
comp=Z,79μm,22.0s
KHZ Kahutara 25.00 170 *e*P **P 02 22 26.9 -0.3**
comp=Z,334nm,1.1s
LTZ Lake Taylor 25.18 173 PN **P 02 22 30.0 +1.0**
RPZ Rata Peaks 25.98 175 *e*P **P 02 22 36.4 +0.2**
comp=Z,150nm,1.0s
RPZ Rata Peaks 25.98 175 P **P 02 22 37.1 +0.9**
comp=Z,20nm,0.8s,baz=18,slow=6.4,SNR=6.5
RPZ LR LR 02 32 01.9
comp=Z,29μm,18.7s,baz=341,slow=35
ODZ Otahua Downs 27.27 176 *e*P P 02 22 42.9 -4.9
comp=Z,24nm,1.4s
STKA Stephens Creek 27.70 235 *e*P **P 02 22 51.2 -0.5**
comp=Z,32nm,0.8s
STKA Stephens Creek 27.70 235 P **P 02 22 50.2 -1.5**
comp=Z,29nm,0.7s,baz=64,slow=9.3,SNR=33
STKA LR LR 02 33 43.5
comp=Z,91μm,18.4s,baz=60,slow=36
RAR Rarotonga 30.52 102 LR LR 02 32 47.1
comp=Z,27μm,20.9s,baz=135,slow=31
TAU Tasmania Unive 30.60 211 *e*P **P 02 23 17.4 0.0**
TAU pmax pmax
comp=Z,118nm,1.3s
TAU MLR MLR
comp=Z,31μm,19.0s
TAU Tasmania Unive 30.60 211 *e*P **P 02 23 17.4 0.0**
comp=Z,118nm,1.3s
TAU LR LR
comp=Z,31μm,19.0s
WRAB Tennant Creek 31.91 261 *e*P P 02 23 26.4 -2.9
WRAB pmax pmax
comp=Z,99nm,1.1s
WRAB MLR MLR
comp=Z,64μm,20.0s
WRAB Tennant Creek 31.91 261 *e*P P 02 23 26.4 -2.9
comp=Z,99nm,1.1s
WRAB LR LR
comp=Z,64μm,20.0s
WRAB Tennant Creek 31.91 261 P P 02 23 26.2 -3.0
comp=Z,368nm,0.9s,SNR=6.8
WRA Warramunga Arr 31.92 261 P P 02 23 26.1 -3.3
WRA PcP **PcP 02 26 16.7 -2.7**
WRA ScP **ScP 02 30 03.3 +3.0**
WRA *e* 02 55 02.4
WRA Warramunga Arr 31.92 261 P P 02 23 26.0 -3.3
comp=Z,4.3nm,0.5s,baz=90,slow=8.9,SNR=25
WRA PcP **PcP 02 26 16.7 -2.7**
comp=Z,7.8nm,0.9s,baz=84,slow=2.9,SNR=3.6
WRA ScP **ScP 02 30 03.3 +3.0**
comp=Z,5.9nm,1.1s,baz=89,slow=4.9,SNR=4.7
WRA LR LR 02 35 21.2
comp=Z,62μm,20.3s,baz=90,slow=35
WRA P3KPbc 02 55 02.4
comp=Z,4.9nm,0.8s,baz=284,slow=2.9,SNR=10
BBOO Buckleboo 32.39 236 *e*P **P 02 23 32.2 -1.1**
comp=Z,3μm,1.0s
AS31 Alice Springs 32.39 254 *e*P **P 02 23 31.3 -2.1**
ASAR Alice Springs 32.39 254 P P 02 23 30.4 -3.1
ASAR Alice Springs 32.39 254 P P 02 23 30.4 -3.1
comp=Z,18nm,0.8s,baz=82,slow=8.7,SNR=56
ASAR LR LR 02 36 32.4
comp=Z,107μm,18.1s,baz=82,slow=36
WAKE Wake Island 36.86 358 PFAKE 02 24 20.0 +8.1
WAKE LR LR
comp=Z,17μm,20.0s
RKPI Ransiki, Papua 36.96 292 P **P 02 24 13.8 +0.8**
FAKI Fak Fak 38.06 289 P **P 02 24 22.4 +0.1**
FORT Forrest 38.46 243 *e*P **P 02 24 24.2 -1.3**
comp=Z,330nm,0.8s
GUMO Guam 38.65 322 *e*P **P 02 24 27.1 -0.1**
comp=Z,292nm,1.2s
GUMO LR LR
comp=Z,28μm,21.0s
XMAS Kiritimati 39.31 63 PFAKE 02 24 40.0 +7.2
XMAS LR LR
comp=Z,42μm,19.0s
TBI Tubuai 40.08 105 *e*S S 02 30 51.1 +7.9
TBI *e*LQ LQ 02 34 24.8
comp=Z,68μm,27.5s
TBI *e*LR LR 02 36 05.1
baz=267
FITZ Fitzroy Crossi 40.26 263 *e*P **P 02 24 38.9 -1.7**
comp=Z,232nm,1.0s
FITZ Fitzroy Crossi 40.26 263 P P 02 24 37.4 -3.2
comp=Z,67nm,1.0s,baz=97,slow=7.8,SNR=21
FITZ LR LR 02 40 49.3
comp=Z,78μm,19.9s,baz=99,slow=36
PAE Paea 40.32 97 *e*P P 02 24 33.1 -8.0
comp=Z,24nm,1.3s
PPT2 Papeete2 40.33 96 *e*P P 02 24 32.8 -8.5
comp=Z,94nm,1.2s
PPT2 *e*S **S 02 30 48.8 +1.6**
comp=Z,21μm,24.8s
PPT2 *e*LQ LQ 02 33 47.6
comp=Z,46μm,27.8s
PPT2 *e*LR LR 02 36 14.2
comp=Z,72μm,25.5s,baz=249
PPT Papeete 40.33 96 LR LR 02 37 55.1
comp=Z,17μm,20.0s,baz=260,slow=31
NLAI Namlea 42.62 285 P **P 02 24 59.6 -0.5**
LBMI Labuha 43.32 289 P **P 02 25 06.6 +0.9**
MBWA Marble Bar 45.52 258 *e*P **P 02 25 22.0 -1.3**
comp=Z,130nm,1.0s
MBWA LR LR
comp=Z,46μm,20.0s
BBSI Bau Bau 46.04 280 P **P 02 25 26.8 -0.6**
BASI Baing, Sumba 46.55 273 P **P 02 25 30.3 -1.1**
LUWI Luwuk 47.46 285 P **P 02 25 38.9 +0.4**
MIDW Midway 47.86 17 PFAKE 02 25 50.0 +8.7
MIDW LR LR
comp=Z,13μm,22.0s
NWAO Narrogin (SRO) 47.87 241 *e*P **P 02 25 40.3 -1.3**
comp=Z,66nm,0.8s
NWAO Narrogin (SRO) 47.87 241 P **P 02 25 39.2 -2.3**
comp=Z,39nm,0.9s,baz=90,slow=8.7,SNR=14
NWAO LR LR 02 45 30.6
comp=Z,50μm,20.6s,baz=95,slow=36
BKSI Bulukumba 48.39 279 P **P 02 25 43.8 -2.0**
DAV Davao City (W) 48.65 297 PFAKE 02 26 00.0 +12
DAV LR LR
comp=Z,10μm,20.0s
KAPI Kappang 48.84 279 *e*P **P 02 25 47.2 -2.0**
comp=Z,337nm,1.3s
KAPI Kappang 48.84 279 P **P 02 25 47.9 -1.3**
comp=Z,1μm,1.4s,SNR=11
KAPI Kappang 48.84 279 P **P 02 25 47.4 -1.8**
KAPI Kappang 48.84 279 P **P 02 25 46.7 -2.5**
comp=Z,73nm,1.0s,baz=111,slow=6.8,SNR=14
KAPI LR LR 02 46 04.8
comp=Z,13μm,20.5s,baz=110,slow=36
SPSI Sidrap Palu 49.18 280 P **P 02 25 54.4 +2.6**
TTSI Tana Toraja 49.45 282 P P 02 25 57.1 +3.2
BUKP Musuan 49.50 297 *e*P **P 02 25 54.3 0.0**
BUTP Butuan 49.60 299 *e*P P 02 25 58.4 +3.4
KIP Kipapa 51.23 42 PFAKE 02 26 20.0 +13
KIP LR LR
comp=Z,22μm,21.0s
PLP Palo 51.32 301⇓*e*P **P 02 26 10.4 +2.4**
OCLP Ormoc 51.56 301 *e*P P 02 26 13.9 +4.1
IPIL Ipil 51.58 296 *e*P **P 02 26 10.6 +0.6**
POHA Pohakuloa 51.69 45 PFAKE 02 26 20.0 +9.1
POHA LR LR
comp=Z,19μm,19.0s
KHKI Kahang-Kahang 51.77 273 P **P 02 26 10.2 -1.2**
IGBI Denpasar 52.08 273 P **P 02 26 14.0 +0.3**
DRV Dumont d'Urvil 52.16 194 P P 02 26 04.0 -9.5
DRV Dumont d'Urvil 52.16 194 PP PP 02 27 55.0 -17
DRV S S 02 33 18.0 -17
DRV SS SS 02 36 50.0 -23
DRV L L 02 38 00.0
DRV R 02 41 00.0
SRBI Singaraja 52.22 274 P **P 02 26 16.0 +1.3**
GUIM Jordan 53.01 299 *e*P P 02 26 28.3 +7.8
RCP Roxas 53.38 300⇑*e*P **P 02 26 23.2 0.0**
RKT Rikitea 53.40 106 *e*S S 02 34 09.4 +16
RKT *e*LQ LQ 02 39 41.3
comp=Z,12μm,32.0s
RKT *e*LR LR 02 42 12.6
MYLDM Lahad Datu 53.93 290 P P 02 26 31.3 +4.0
TSM Tawau 54.11 289 P **P 02 26 30.0 +1.4**
AUQP San Andres 54.39 302 *e*P P 02 26 34.0 +3.4
OTRP Odiongan 54.40 300 *e*P **P 02 26 29.5 -1.2**
BOAC Boac 55.14 301 *e*P P 02 26 43.0 +7.0
SJMP San Jose 55.20 300 *e*P P 02 26 44.6 +8.1
SDKM Sandakan 55.30 290 P **P 02 26 38.3 +1.0**
ENPP El Nido 55.97 297 *e*P **P 02 26 42.2 +0.2**
KDM Kudat 56.18 291 P P 02 26 47.3 +3.7
BATP Bataraza 56.19 294 *e*P **P 02 26 44.0 +0.3**
TGY Tagaytay City 56.22 301 P **P 02 26 44.4 +0.5**
TGY Tagaytay City 56.22 301 P **P 02 26 44.4 +0.5**
comp=Z,108nm,0.3s,baz=197,slow=14,SNR=3.9
KKM Kota Kinabalu 56.35 290 *e*P **P 02 26 44.6 -0.3**
comp=Z,436nm,1.5s
KKM *e*S S 02 34 26.6 -6.9
KKM LR LR
comp=Z,7μm,20.0s
KKM Kota Kinabalu 56.35 290 P **P 02 26 46.6 +1.7**
BALP Baler 56.61 303 *e*P **P 02 26 45.8 -0.8**
CAUP Cauayan 57.09 305 *e*P P 02 26 54.9 +4.9
JHJ Hachijo jima 2 57.36 332 LR LR 02 51 52.7
comp=Z,9μm,18.1s,baz=145,slow=36
SGCP Mt. Cagua 57.67 306 *e*P **P 02 26 56.7 +2.7**
BCPH Baguio City Da 57.76 303⇓*e*P P 02 26 44.2 -11
SCZP Santa Cruz 57.96 302 *e*P P 02 27 05.7 +10
BTM Bintulu 58.02 286 P **P 02 26 57.6 +1.0**
APYP Conner 58.07 305 *e*P P 02 27 01.6 +4.7
BOLP Bolinao 58.29 303 *e*P P 02 27 05.3 +6.9
ABRA Dolores 58.37 305 *e*P **P 02 26 59.6 +0.7**
SBUM Sibu 58.53 284 P **P 02 27 00.5 +0.4**
JOW Kunigami 58.78 318 *e*P **P 02 27 01.5 -0.2**
comp=Z,59nm,1.0s
VNDA Vanda 59.85 182 *e*P **P 02 27 08.5 +0.2**
comp=Z,192nm,1.7s
VNDA Vanda 59.85 182 P **P 02 27 07.4 -0.9**
comp=Z,17nm,1.0s,baz=10,slow=7.1,SNR=28
VNDA LR LR 02 51 28.9
comp=Z,7μm,18.5s,baz=16,slow=35
KSM Kuching 59.94 282 *e*P **P 02 27 09.2 -0.7**
KSM LR LR
comp=Z,6μm,21.0s
KSM Kuching 59.94 282 P **P 02 27 09.7 -0.2**
SBA Scott Base 60.10 180 *e*P **P 02 27 11.3 +1.2**
SBA pmax pmax
comp=Z,260nm,1.3s
SBA MLR MLR
comp=Z,7μm,21.0s
SBA Scott Base 60.10 180 *e*P **P 02 27 11.3 +1.2**
comp=Z,260nm,1.3s
SBA LR LR
comp=Z,7μm,21.0s
XMIS Christmas Isla 60.70 268 *e*P **P 02 27 13.7 -1.5**
comp=Z,1μm,1.0s
MJAR Matsushiro Arr 60.93 333 P **P 02 27 14.4 -1.9**
MJAR Matsushiro Arr 60.93 333 P **P 02 27 14.4 -1.9**

comp=Z,44nm,1.1s,baz=172,slow=7.1,SNR=47
MJAR LR LR 02 50 58.5
comp=Z,5μm,18.0s,baz=130,slow=34
MAJO Matsushiro 60.94 333 *e*P **P 02 27 15.2 -1.1**
MAJO pmax pmax
comp=Z,69nm,0.9s
MAJO MLR MLR
comp=Z,6μm,19.0s
MAJO Matsushiro 60.94 333 *e*P **P 02 27 15.2 -1.1**
comp=Z,68nm,0.9s
MAJO LR LR
comp=Z,6μm,19.0s
MAT Matsushiro 60.94 333 P **P 02 27 15.5 -0.8**
MAT S **S** **02 35 30.3 -1.9**
CASY Casey 61.00 203 *e*P **P 02 27 16.5 +0.1**
comp=Z,70nm,1.2s
CASY LR LR
comp=Z,14μm,20.0s
YULB Yu-li 61.30 310 *e*P **P 02 27 20.2 +1.2**
comp=Z,62nm,1.3s
NACB Ninganchiao 61.56 311 *e*P **P 02 27 19.4 -1.3**
comp=Z,230nm,1.5s
TPUB Ta-pu 61.73 310 *e*P **P 02 27 19.6 -2.3**
comp=Z,127nm,1.2s
SSLB Suanglung 61.79 310 *e*P **P 02 27 21.5 -0.8**
comp=Z,55nm,1.1s
JNU Nakatsue 61.82 325 *e*P **P 02 27 21.4 -1.0**
comp=Z,64nm,1.3s
JNU Nakatsue 61.82 325 P **P 02 27 22.8 +0.4**
comp=Z,49nm,1.1s,baz=58,slow=3.1,SNR=6.9
JNU LR LR 02 50 08.4
comp=Z,10μm,20.6s,baz=329,slow=32
YHNB Yeheng 62.03 311 *e*P **P 02 27 23.3 -0.7**
comp=Z,167nm,1.1s
YHNB LR LR
comp=Z,16μm,22.0s
TATO Taipei 62.13 312 *e*P **P 02 27 24.4 -0.1**
comp=Z,264nm,1.5s
TATO LR LR
comp=Z,17μm,22.0s
ERM Erimo 63.78 340⇑ *i*P P 02 27 31.0 -4.2
ERM pmax pmax
comp=Z,29nm,1.1s
ERM Erimo 63.78 340 PFAKE 02 27 50.0 +15
ERM LR LR
comp=Z,13μm,20.0s
QZH Quanzhou 64.20 310 P P 02 27 42.0 +3.7
QZH S **S** **02 36 17.0 +3.5**
QZH pmax pmax
comp=Z,110nm,1.1s
QZH pmax pmax
comp=Z,3μm,8.4s
QZH LR LR
comp=N,9μm,14.4s
QZH LR LR
comp=E,7μm,15.8s
QZH LR LR
comp=Z,15μm,21.8s
YUK Yuzh-Kuril'sk 64.77 342*c i*P **P 02 27 41.6 0.0**
YUK *i* *PP **pP** **02 27 55.1 +2.8**
YUK *i* 02 30 04.0
YUK *i* PPP PPP 02 31 33.7
YUK *i* S **S** **02 36 20.4 +0.5**
YUK *i* *SS **sS** **02 36 40.2 +2.8**
YUK *i* SS **SS** **02 40 28.4 -3.6**
YUK pmax pmax
comp=Z,8μm,7.1s
ASAJ Asahikawa 65.84 340 *e*P **P 02 27 49.1 +0.6**
comp=Z,18nm,0.8s
ASAJ Asahikawa 65.84 340 P **P 02 27 49.2 +0.7**
comp=Z,33nm,0.8s,baz=220,slow=11,SNR=13
ASAJ LR LR 02 56 40.0
comp=Z,15μm,19.2s,baz=81,slow=36
HKC Hong Kong Obse 66.05 305 *i* P P 02 27 56.0 +5.7
MYKOM **Kota Tinggi 66.08 280** P **P** **02 27 50.9 +0.1**
SSE Sheshan 66.23 317 P **P** **02 27 50.8 -0.5**
SSE PcP **PcP** **02 28 21.0 -0.3**
SSE S **S** **02 36 38.3 +0.1**
SSE pmax pmax
comp=Z,29nm,0.8s
SSE pmax pmax
comp=Z,1μm,8.3s
SSE LR LR
comp=N,7μm,17.7s
SSE LR LR
comp=E,6μm,17.7s
SSE LR LR
comp=Z,7μm,21.0s
KGM Kluang 66.66 280 P **P** **02 27 55.1 +0.6**
KSRS Korea Array 66.66 326 P **P** **02 27 53.5 -0.4**
comp=Z,4.1nm,0.9s,baz=154,slow=7.0,SNR=8.1
KSRS PP **PP** **02 30 22.9 +1.7**
comp=Z,10nm,1.2s,baz=140,slow=9.1,SNR=4.3
KSAR Wonju Array Be 66.67 326 P **P** **02 27 53.5 -0.5**
KSAR PP **PP** **02 30 22.9 +1.5**
GZH Guangzhou 67.11 305 P **P** **02 27 56.6 -0.6**
GZH S **S** **02 36 48.3 -0.9**
GZH LR LR
comp=N,4μm,16.2s
GZH LR LR
comp=E,9μm,18.2s
GZH LR LR
comp=Z,13μm,18.2s
INCN Inchon 67.37 325 *e*P **P 02 27 57.6 -0.9**
comp=Z,207nm,1.4s
INCN LR LR
comp=Z,5μm,19.0s
QIZ Qiongzhong 67.86 300 P **P** **02 28 02.2 +0.2**
QIZ pP **pP** **02 28 12.6 -0.1**
QIZ S **S** **02 36 58.7 +0.3**
QIZ sS **sS** **02 37 12.7 -3.3**
QIZ pmax pmax
comp=Z,2μm,14.1s
QIZ LR LR
comp=N,4μm,18.2s
QIZ LR LR
comp=E,2μm,18.6s
QIZ LR LR
comp=Z,9μm,27.6s
QIZ Qiongzhong 67.86 300 *e*P **P 02 28 02.8 +0.8**
comp=Z,131nm,1.3s
QIZ LR LR
comp=Z,5μm,21.0s
MIR Mirnyy 67.86 205⇓ *i*P **P 02 28 03.0 +1.8**
MIR *e* 02 28 35.0
MIR *e* 02 30 39.0
MIR *e*S **S** **02 37 00.0 +3.0**
MIR *e*PS PnS 02 37 44.0 +21
MIR *e* 02 38 00.0
MIR *e*SS SS 02 41 30.0 +11
MIR pmax pmax
comp=Z,94nm,1.5s
MIR pmax pmax
comp=Z,3μm,6.0s
KTGM Kuala Trenggan 68.00 283 P **P** **02 28 05.7 +2.7**
YSS Yuzh-Sakhalins 68.34 342*α i*P **P 02 28 05.6 +1.3**
YSS *e* 02 28 14.0
YSS *e* 02 28 29.0
YSS *e* 02 30 42.0
YSS *e*PPP PPP 02 32 17.0
YSS *e*S **S** **02 37 05.0 +2.1**
YSS *i* PS **PnS** **02 37 21.0 -9.1**
YSS *e*PPS PPS 02 37 41.0
YSS pmax pmax
comp=Z,80nm,1.1s
YSS pmax pmax
comp=Z,4μm,5.0s
YSS smax smax
comp=N,6μm,11.0s
YSS MLR MLR
comp=N,14μm,18.0s
YSS MLR MLR
comp=E,7μm,18.0s
YSS MLR MLR
comp=Z,15μm,18.0s
NJ2 Nanjing 68.36 316 *e*P **P 02 28 07.5 +2.6**
NJ2 pP **pP** **02 28 14.6 -1.0**
NJ2 sP **sP** **02 28 18.7 -0.9**
NJ2 PP **PP** **02 30 36.3 0.0**
NJ2 S **S** **02 37 02.0 -1.9**
NJ2 sS **sS** **02 37 22.0 +0.5**
NJ2 pmax pmax
comp=Z,130nm,1.0s
NJ2 pmax pmax
comp=Z,2μm,9.0s
NJ2 LR LR
comp=N,10μm,21.2s
NJ2 LR LR
comp=E,9μm,25.3s
NJ2 LR LR
comp=Z,12μm,21.2s
COCO West Island 68.65 264 PFAKE 02 28 20.0 +13
COCO LR LR
comp=Z,23μm,19.0s
FRIM Kepong 68.67 281 P **P** **02 28 08.3 +1.1**
SKR Severo-Kuril's 68.97 352 *e*P **P 02 28 06.0 -2.2**
SKR *e* 02 28 22.2
SKR *e* 02 28 34.0
SKR *e* 02 30 38.0
SKR *e*PPP PPP 02 32 14.0
SKR *e*S **S** **02 37 06.0 -4.2**
SKR *e* 02 37 50.0
SKR pmax pmax
comp=N,130nm,1.0s
SKR pmax pmax
comp=E,130nm,1.0s
SKR pmax pmax
comp=Z,180nm,1.0s
SKR pmax pmax
comp=N,2μm,12.0s
SKR pmax pmax
comp=E,2μm,12.0s
SKR pmax pmax
comp=Z,4μm,12.0s
SKR pmax pmax
comp=Z,5μm,14.0s
SKR pmax pmax
comp=N,3μm,10.0s
SKR pmax pmax
comp=E,5μm,14.0s
SKR smax smax
comp=N,3μm,14.0s
SKR smax smax
comp=E,10μm,14.0s
SKR MLR MLR
comp=N,4μm,16.0s
SKR MLR MLR
comp=E,4μm,16.0s
SKR MLR MLR
comp=Z,6μm,16.0s
VLA Vladivostok 69.10 332⇑ *e*P **P 02 28 07.2 -2.0**
VLA pmax pmax
comp=Z,27nm,0.5s
IPM Ipoh 69.66 282 *e*P **P 02 28 13.2 -0.1**
comp=Z,175nm,1.2s
IPM Ipoh 69.66 282 P **P 02 28 13.9 +0.5**
USRK Ussuriysk Arra 69.92 333 P **P 02 28 14.4 +0.1**
comp=Z,41nm,1.1s,baz=134,slow=5.6,SNR=29
USRK LR LR 02 55 23.4
comp=Z,6μm,20.4s,baz=136,slow=33
USRK PKPPKP P'P'df 02 56 22.5 +6.9
comp=Z,1.0nm,0.6s,baz=342,slow=0.6,SNR=4.1
KULM Kulim 70.29 282 *e*P **P 02 28 17.9 +0.7**
comp=Z,130nm,1.1s
KULM LR LR
comp=Z,7μm,19.0s
KULM Kulim 70.29 282 P **P 02 28 18.6 +1.3**
FX1 Attu Island--F 70.51 3 *e*P **P 02 28 18.5 +0.9**
FX1 Attu Island--F 70.51 3 P **P 02 28 18.1 +0.5**
comp=Z,17nm,0.8s,baz=180,slow=4.8,SNR=3.6
FX1 LR LR 02 54 39.5
comp=Z,17μm,20.1s,baz=197,slow=32
WHN Wuhan 70.52 312 P **P** **02 28 16.8 -1.4**
WHN S **S** **02 37 29.7 +0.3**
WHN LR LR
comp=N,14μm,15.4s
WHN LR LR
comp=E,11μm,15.8s
WHN LR LR
comp=Z,23μm,22.8s
PET Petropavlovsk 70.97 354*c i*P **P 02 28 20.2 -0.2**
PET *i* S **S** **02 37 35.1 +1.4**
PET pmax pmax
comp=Z,3μm,6.5s
PET pmax pmax
comp=Z,55nm,1.3s
PET pmax pmax
comp=Z,3μm,11.2s
PET MLR MLR
comp=Z,6μm,19.0s
PET MLR MLR
comp=Z,5μm,18.0s
PEA0B Petropavlovsk- 71.16 353 *e*P **P 02 28 21.5 -0.1**
PETK Petropavlovsk- 71.16 353 P **P 02 28 21.3 -0.3**
PETK pmax pmax
comp=Z,58nm,1.1s
PETK Petropavlovsk- 71.16 353 P **P 02 28 21.3 -0.3**
PETK Petropavlovsk- 71.16 353 P **P 02 28 21.3 -0.3**
comp=Z,58nm,1.1s,baz=150,slow=6.1,SNR=32
PETK LR LR 02 57 12.0
comp=Z,7μm,19.2s,baz=166,slow=34
DL2 Dalian 71.17 323 P **P** **02 28 21.9 0.0**
DL2 S **S** **02 37 35.2 -1.3**
DL2 pmax pmax
comp=Z,69nm,1.6s
DL2 pmax pmax
comp=Z,2μm,6.9s
DL2 LR LR
comp=N,3μm,18.6s
DL2 LR LR
comp=E,3μm,20.4s
DL2 LR LR
comp=Z,5μm,20.4s
MDJ Mudanjiang 71.30 332 P **P** **02 28 22.9 +0.2**
MDJ pP pP 02 28 26.1 -7.3
MDJ PP **PP** **02 30 58.2 -3.2**
MDJ S **S** **02 37 38.1 +0.2**
MDJ SS **SS** **02 42 13.3 +0.3**
MDJ pmax pmax
comp=Z,43nm,1.4s
MDJ pmax pmax
comp=Z,3μm,8.3s
MDJ LR LR
comp=N,8μm,26.5s
MDJ LR LR
comp=E,8μm,26.5s
MDJ LR LR
comp=Z,8μm,20.3s
MDJ Mudanjiang 71.30 332 *e*P **P 02 28 21.4 -1.2**
comp=Z,124nm,1.4s
MDJ LR LR
comp=Z,9μm,20.0s
TIA Tai'an 72.09 319⇑ P **P** **02 28 27.2 -0.5**
TIA S **S** **02 37 47.6 +0.2**
TIA ScS **ScS** **02 38 32.9 +1.6**
TIA pmax pmax
comp=Z,3μm,10.1s
TIA LR LR
comp=N,5μm,20.2s
TIA LR LR
comp=E,9μm,36.9s
TIA LR LR
comp=Z,12μm,22.6s
SNY Shenyang 72.14 327⇑ P **P** **02 28 27.3 -0.4**
SNY pP **pP** **02 28 40.8 +2.3**
SNY PP **PP** **02 31 12.0 +3.4**
SNY S **S** **02 37 46.5 -1.1**
SNY sS **SKiKP** **02 38 03.5 +1.6**
SNY pmax pmax
comp=Z,50nm,2.5s
SNY pmax pmax
comp=Z,3μm,7.8s
SNY LR LR
comp=N,8μm,16.2s
SNY LR LR
comp=E,5μm,17.4s
SNY LR LR
comp=Z,7μm,18.8s
HABR Khabarovsk 72.22 338*c e*P **P 02 28 27.7 -0.4**
HABR *e**PP **pP** **02 28 40.0 +1.2**
HABR *e* 02 28 43.9
HABR *e**SP **sP** **02 28 45.8 +3.0**
HABR *e* 02 31 05.6
HABR PPP PPP 02 32 50.9
HABR S **S** **02 37 48.0 -0.2**
HABR *e**SS **sS** **02 38 08.8 +2.8**
HABR *e* 02 38 27.3
HABR *e*SS **SS** **02 42 23.0 -3.9**
HABR pmax pmax
comp=Z,306nm,2.4s
HABR pmax pmax
comp=E,31nm,0.9s
HABR pmax pmax
comp=N,103nm,2.4s
HABR pmax pmax
comp=Z,2μm,4.1s
HABR MLR MLR
comp=N,3μm,19.0s
HABR MLR MLR
comp=E,5μm,19.0s
HABR MLR MLR
comp=Z,4μm,19.0s
QSPA South Pole Qui 72.26 180 *e*P **P 02 28 28.8 +0.3**
comp=Z,261nm,1.0s
QSPA LR LR
comp=Z,8μm,19.0s
CN2 Changchun 72.62 329 *e*P **P 02 28 30.5 -0.1**
CN2 *e*pP **pP** **02 28 43.6 +2.2**
CN2 *e*S **S** **02 37 58.3 +5.2**
CN2 pmax pmax
comp=Z,30nm,1.6s
CN2 LR LR
comp=N,4μm,18.0s
CN2 LR LR
comp=E,6μm,18.0s
CN2 LR LR
comp=Z,4μm,19.0s
ENH Enshi 73.86 310 *e*P **P 02 28 37.7 -0.6**
comp=Z,163nm,1.3s
ENH LR LR
comp=Z,8μm,20.0s
GYA Guiyang 74.05 305⇑ *i*P **P 02 28 41.4 +1.8**
GYA PP **PP** **02 31 28.0 +2.6**
GYA S **S** **02 38 11.9 +1.7**
GYA SKS **SKSac** **02 38 42.1 -2.7**
GYA SS **SS** **02 43 01.6 +5.7**
GYA pmax pmax
comp=Z,50nm,1.0s
GYA pmax pmax
comp=Z,380nm,5.8s
GYA LR LR
comp=N,4μm,18.8s
GYA LR LR
comp=E,3μm,19.4s
GYA LR LR
comp=Z,3μm,18.6s
KLR Kul'dur 74.08 336⇓ *i*P P 02 28 35.7 -3.4
KLR *e*S **S** **02 38 08.5 -0.9**
KLR pmax pmax
comp=E,57nm,1.6s
KLR pmax pmax
comp=Z,230nm,1.6s
KLR pmax pmax
comp=Z,6μm,8.0s
KLR smax smax
comp=N,7.0nm,10.5s
KLR smax smax
comp=E,5.0nm,10.5s
BJT Baijiatuau 75.08 321 *e*P **P 02 28 45.5 +0.4**
comp=E,30nm,0.6s
BJT LR LR
comp=Z,9μm,19.0s
BJI Beijing 75.09 321 P **P 02 28 46.4 +1.3**
BJI PP **PP** **02 31 37.1 +3.3**
BJI S **S** **02 38 20.9 -0.1**
BJI SS **SS** **02 43 16.7 +5.7**
BJI pmax pmax
comp=Z,3μm,7.3s
BJI LR LR
comp=N,8μm,19.1s
BJI LR LR
comp=E,7μm,21.0s
BJI LR LR
comp=Z,8μm,33.1s
TIY Taiyuan 75.99 318 *e*P **P 02 28 50.4 -0.1**
TIY S S 02 38 38.9 +7.6
TIY pmax pmax
comp=Z,2μm,8.6s
TIY LR LR
comp=N,7μm,15.7s
TIY LR LR
comp=E,2μm,14.0s
TIY LR LR
comp=Z,9μm,23.6s
XAN Xi'an 76.28 313 P **P 02 28 51.7 -0.5**
XAN PcP **pP** **02 29 03.2 +0.2**
XAN sP **sP** **02 29 06.3 -0.7**
XAN PP **PP** **02 31 40.2 -3.9**
XAN S **S** **02 38 32.1 -2.5**
XAN SS **SS** **02 43 27.5 -2.0**
XAN pmax pmax
comp=Z,960nm,13.3s
XAN LR LR
comp=N,7μm,21.5s
XAN LR LR
comp=E,1μm,25.5s
XAN LR LR
comp=Z,2μm,22.1s
KMI Kunming 76.53 302 P **P 02 28 54.9 +0.9**
KMI PcP **PcP** **02 29 07.0 +1.5**
KMI sP **sP** **02 29 10.4 +1.6**
KMI PP **PP** **02 31 46.4 -0.1**
KMI S **S** **02 38 34.8 -3.2**
KMI SS **SS** **02 43 32.4 -1.5**
KMI pmax pmax
comp=Z,2μm,6.7s
KMI LR LR
comp=N,6μm,17.5s
KMI LR LR
comp=E,6μm,16.8s
KMI LR LR
comp=Z,7μm,16.5s
CM31 Chiang Mai Arr 76.86 294 *e*P **P 02 28 57.0 +1.3**
comp=Z,192nm,1.1s
CMAR Chiang Mai Arr 76.86 294 P **P 02 28 56.2 +0.5**
CMAR P'P' 02 56 17.0
CMAR Chiang Mai Arr 76.86 294 P **P 02 28 56.2 +0.5**
comp=Z,22nm,1.1s,baz=130,slow=4.3,SNR=32
CMAR PKPPKP P'P'df 02 56 17.0 +10
comp=Z,0.9nm,0.3s,baz=292,slow=3.8,SNR=4.1
CHTO Chiang Mai 77.00 295 *e*P **P 02 28 57.0 +0.5**
CHTO pmax pmax
comp=Z,195nm,1.2s
CHTO MLR MLR
comp=Z,4μm,19.0s
CHTO Chiang Mai 77.00 295 *e*P **P 02 28 57.0 +0.5**
comp=Z,195nm,1.2s
CHTO LR LR
comp=Z,4μm,19.0s
CMBY CAMPBELL BAY 77.16 282 *e*PKP **P 02 28 57.1 -0.4**
CMBY AMB AMB 02 29 08.0
comp=Z,114nm,3.7s
HHC Hu-ho-hao-te 78.37 320 *e*P **P 02 29 03.5 -0.3**
HHC pP **PcP** **02 29 10.0 -3.0**
HHC sP sP 02 29 12.3 -6.4
HHC PP **PP** **02 32 04.8 +3.2**
HHC S **S** **02 38 59.8 +2.6**
HHC sS sS 02 39 08.2 -6.9
HHC SKS **SKSac** **02 39 14.6 -1.4**
HHC ScS **ScS** **02 39 22.3 +0.4**
HHC SS **SS** **02 44 06.0 +5.1**
HHC pmax pmax
comp=Z,39nm,1.1s
HHC pmax pmax
comp=Z,5μm,6.8s
HHC LR LR
comp=N,12μm,18.0s
HHC LR LR
comp=E,7μm,18.0s
HHC LR LR
comp=Z,13μm,20.9s
CD2 Chengdu 78.44 308 P **P 02 29 05.0 +0.7**
CD2 pP **pP** **02 29 17.4 +2.2**
CD2 PP **PP** **02 32 05.1 +2.8**
CD2 SKS **SKSac** **02 39 11.9 -4.9**
CD2 sS **sS** **02 39 17.4 +1.3**
CD2 ScS **SKKSac** **02 39 19.6 +1.7**
CD2 SS **SS** **02 44 03.8 +1.6**
CD2 pmax pmax
comp=Z,110nm,1.4s
CD2 pmax pmax
comp=Z,4μm,10.7s
CD2 LR LR
comp=N,9μm,19.0s
CD2 LR LR
comp=E,11μm,25.0s
CD2 LR LR
comp=Z,13μm,25.0s

BTO Baotou 79.19 319 *e*P **P** **02 29 10.0 +1.7**
HIA Hailar 79.28 330 *e*P **P** **02 29 08.6 +0.1**
comp=Z,184nm,1.4s
HIA LR LR
comp=Z,11µm,20.0s
MAW Mawson 79.34 202 P **P** **02 29 09.5 +0.9**
MAW Mawson 79.34 202 P **P** **02 29 09.5 +0.9**
comp=Z,15nm,0.9s,baz=124,slow=7.1,SNR=23
MAW LR LR 03 01 29.7
comp=Z,12µm,18.2s,baz=97,slow=34
PBA Port Blair 79.85 286 *e*PKP P 02 29 11.5 -0.8
PBA AMB AMB 02 29 28.3
comp=Z,162nm,1.1s
DGPR DIGLIPUR 80.22 287 *e*PKP **P** **02 29 13.2 -1.1**
DGPR AMB AMB 02 29 26.0
comp=Z,185nm,1.9s
LZH Lanzhou 80.90 312 ⇑P **P** **02 29 18.1 +0.3**
LZH pP **pP** **02 29 29.5 +0.8**
LZH sP **sP** **02 29 32.3 -0.3**
LZH PP **PP** **02 32 25.2 +2.4**
LZH S **S** **02 39 24.0 -0.3**
LZH SKS **SKSac** **02 39 29.1 -5.0**
LZH sS **ScS** **02 39 41.2 -1.7**
LZH SS **SS** **02 44 43.5 +4.3**
LZH pmax pmax
comp=Z,310nm,1.5s
LZH pmax pmax
comp=Z,3µm,8.6s
LZH LR LR
comp=N,5µm,15.8s
LZH LR LR
comp=E,6µm,16.0s
LZH LR LR
comp=Z,9µm,19.1s
SEY Seymchan 81.38 353*c i*P **P** **02 29 19.2 -0.2**
PAF Port-aux-Franc 81.67 221 PFAKE 02 29 30.0 +8.6
PAF LR LR
comp=Z,10µm,19.0s
KDAK Kodiak Island 82.06 20 P **P** **02 29 24.4 +1.3**
KDAK Kodiak Island 82.06 20 P **P** **02 29 24.4 +1.3**
comp=Z,12nm,0.8s,baz=230,slow=7.1,SNR=4.9
KDAK LR LR 03 01 09.8
comp=Z,8µm,19.6s,baz=231,slow=32
CLNS Chul'man 82.61 338*c i*P **P** **02 29 26.9 +0.8**
CLNS *e**PP pP 02 29 44.2 +7.2
CLNS *e* 02 32 30.8
CLNS *e*PPP PPP 02 34 23.6
CLNS *e*S **S** **02 39 43.3 +2.6**
CLNS *e* 02 41 01.3
CLNS *e*SS **SS** **02 45 03.5 0.0**
CLNS pmax pmax
comp=Z,159nm,1.2s
CLNS pmax pmax
comp=E,47nm,1.2s
CLNS pmax pmax
comp=N,92nm,1.3s
CLNS pmax pmax
comp=E,6.0nm,0.9s
CLNS pmax pmax
comp=Z,23nm,1.7s
CLNS pmax pmax
comp=N,20nm,1.3s
CLNS smax smax
comp=N,3µm,13.3s
CLNS smax smax
comp=E,5µm,12.3s
CLNS MLR MLR
comp=N,4µm,14.0s
CLNS MLR MLR
comp=Z,5µm,17.0s
CLNS MLR MLR
comp=E,2µm,20.0s
CIT Chita 84.06 330 *e*P **P** **02 29 34.3 +0.6**
CIT *e* 02 29 42.6
CIT *e* 02 29 53.5
CIT pmax pmax
comp=Z,383nm,1.5s
ULN Ulaanbaatar 85.01 324 *e*P **P** **02 29 38.8 +0.1**
comp=Z,213nm,1.2s
ULN LR LR
comp=Z,7µm,21.0s
TNA Tin City 85.07 10 *e*P **P** **02 29 36.1 -2.2**
comp=Z,110nm,1.4s
YAK Yakutsk 85.14 343*c i*P **P** **02 29 38.6 -0.2**
YAK *e**PP **pP** **02 29 48.8 -1.0**
YAK *e* 02 32 53.4
YAK *e*S S 02 39 59.1 -6.7
YAK *e*SS **SS** **02 45 36.2 -4.4**
YAK *e*SSS SSS 02 49 03.8
YAK pmax pmax
comp=E,24nm,1.2s
YAK pmax pmax
comp=N,51nm,1.1s
YAK pmax pmax
comp=Z,199nm,1.3s
YAK pmax pmax
comp=N,378nm,5.8s
YAK pmax pmax
comp=Z,1µm,10.7s
YAK pmax pmax
comp=E,528nm,8.6s
YAK smax smax
comp=N,5µm,11.8s
YAK smax smax
comp=E,8µm,15.9s
YAK MLR MLR
comp=E,6µm,20.0s
YAK MLR MLR
comp=Z,12µm,20.0s
YAK MLR MLR
comp=N,10µm,19.0s
GTA Gaotai 85.29 314 *e*P **P** **02 29 41.0 +0.7**
GTA pP **pP** **02 29 50.1 -1.2**
GTA sP **sP** **02 29 53.9 -1.4**
GTA SKS **SKSac** **02 40 01.7 -1.2**
GTA S **SKKSac** **02 40 11.2 +1.7**
GTA sS **sS** **02 40 27.8 +1.0**
GTA SS **SS** **02 45 49.4 +5.3**
GTA pmax pmax
comp=Z,24nm,1.1s
GTA pmax pmax
comp=Z,2µm,7.6s
GTA LR LR
comp=N,6µm,17.1s
GTA LR LR
comp=E,6µm,20.9s
GTA LR LR
comp=Z,7µm,21.8s
SONM Songino Array 85.37 324 P **P** **02 29 40.5 -0.1**
SONM Songino Array 85.37 324 P **P** **02 29 40.5 -0.1**
comp=Z,77nm,1.2s,baz=138,slow=5.0,SNR=59
SONM LR LR 03 06 20.7
comp=Z,6µm,18.8s,baz=119,slow=35
KCPM Cahto Peak 85.54 46 *e*P **P** **02 29 42.1 +0.6**
comp=Z,20nm,0.9s
RC01 Rabbit Creek A 85.55 19 *e*P **P** **02 29 42.3 +1.4**
comp=Z,38nm,1.3s
HOPS Hopland 85.58 47 *e*P **P** **02 29 41.5 -0.1**
comp=Z,41nm,1.2s
BILL Bilibino 85.58 359*c i*P **P** **02 29 40.2 -0.7**
BILL *e* 02 29 49.2
BILL *e* 02 29 59.8
BILL *e*SS SS 02 45 48.3 +1.4
BILL pmax pmax
comp=Z,141nm,1.4s
SHL Shillong 85.65 298 *e*PKP **P** **02 29 41.4 -1.1**
SHL AMB AMB 02 29 51.8
comp=Z,110nm,1.3s
KIPM Iron Peak 85.67 46 *e*P **P** **02 29 43.0 +0.8**
comp=Z,52nm,1.1s
SAO San Andreas Ge 85.75 49 *e*P **P** **02 29 41.9 -0.6**
SAO pmax pmax
comp=Z,34nm,1.3s
SAO San Andreas Ge 85.75 49 *e*P **P** **02 29 41.9 -0.6**
comp=Z,34nm,1.3s
BSC Santa Cruz Isl 85.92 53 ⇑P **P** **02 29 43.6 +0.2**
baz=86
KHMM Horse Mountain 85.99 45 *e*P **P** **02 29 45.0 +1.2**
comp=Z,24nm,0.9s
SYO Syowa Base 86.00 196‖ *e*P **P** **02 29 42.0 -1.2**
SYO Syowa Base 86.00 196‖ *e*PcP **PcP** **02 29 46.0 +0.1**
SYO Syowa Base 86.00 196‖ *e*sP sP 02 29 51.7 -6.4
SBC Santa Barbara 86.04 52 ⇑P **P** **02 29 44.0 0.0**
baz=86
PKM Peak Mountain 86.15 52 ⇑P **P** **02 29 44.8 0.0**
baz=86,SNR=9.9
SMMC Simmler 86.19 51 ⇓P **P** **02 29 45.8 +1.1**
baz=86
SCI San Clemente I 86.33 54 ⇑P **P** **02 29 45.8 +0.3**
baz=86
BLG Laguna Peak 86.39 53 ⇓P **P** **02 29 46.6 +0.8**
baz=87
CIS Catalina Islan 86.61 53 ⇓P **P** **02 29 47.3 +0.5**
baz=87
WDC Whiskeytown Da 86.66 46 *e*P **P** **02 29 46.9 0.0**
WDC pmax pmax
comp=Z,45nm,1.4s
WDC Whiskeytown Da 86.66 46 *e*P **P** **02 29 46.9 0.0**
comp=Z,45nm,1.4s
FMP Fort Macarthur 86.82 53 ⇓P **P** **02 29 48.3 +0.5**
baz=87
OSI Osito Adit 86.86 52 ⇑P **P** **02 29 48.1 0.0**
baz=87
ARVC Arvin 86.98 52 ⇓P **P** **02 29 48.6 0.0**
baz=87
CMB Columbia Colle 87.05 49 *e*P **P** **02 29 48.9 0.0**
CMB pmax pmax
comp=Z,25nm,0.9s
CMB Columbia Colle 87.05 49 *e*P **P** **02 29 48.9 0.0**
comp=Z,25nm,0.9s
YBH Yreka Blue Hor 87.06 45 *e*P **P** **02 29 49.1 +0.2**
comp=Z,12nm,0.9s
YBH Yreka Blue Hor 87.06 45 LR LR 03 01 47.4
comp=Z,13µm,19.8s,baz=241,slow=31
VES Vestal, Richgr 87.09 51 ⇓P **P** **02 29 48.8 -0.3**
baz=87
RCTC Rector, Farmer 87.16 51 ⇑P **P** **02 29 49.5 +0.1**
baz=87
TRF Thorofare Moun 87.21 17 *e*P **P** **02 29 47.1 -2.1**
comp=Z,31nm,1.3s
HUMO Hull Mountain 87.30 44 *e*P **P** **02 29 50.3 +0.3**
comp=Z,116nm,2.3s
109C Camp Elliot, M 87.41 54 ⇓P **P** **02 29 50.3 -0.4**
baz=88
ISA Isabella 87.47 51 *e*P **P** **02 29 50.8 -0.2**
ISA pmax pmax
comp=Z,68nm,1.5s
ISA Isabella 87.47 51 *e*P **P** **02 29 50.8 -0.2**
comp=Z,68nm,1.5s
ISA Isabella 87.47 51 ⇓P **P** **02 29 50.5 -0.5**
baz=88,SNR=13
BFSC Mount Baldy Ra 87.51 53 ⇑P **P** **02 29 51.0 -0.4**
baz=88
EDW2 Edwards Air Fo 87.52 52 ⇑P **P** **02 29 50.7 -0.5**
baz=88,SNR=12
LBCM Butte Creek Ri 87.58 46 P **P** **02 29 52.2 +0.6**
MURC Murrieta 87.61 54 ⇑P **P** **02 29 51.3 -0.4**
baz=88
LTIM Timbered Crate 87.64 45 P **P** **02 29 52.6 +0.8**
BAR Barrett 87.66 55 *e*P **P** **02 29 52.5 +0.5**
comp=Z,100nm,2.2s
LSA Lhasa 87.79 302 P **P** **02 29 53.6 +0.4**
LSA LR LR
comp=N,3µm,18.0s
LSA LR LR
comp=E,3µm,21.4s
LSA LR LR
comp=Z,4µm,21.4s
LSA Lhasa 87.79 302 PFAKE 02 30 00.0 +6.8
LSA LR LR
comp=Z,5µm,21.0s
MCK McKinley 87.82 18 *e*P **P** **02 29 51.1 -0.9**
MCK pmax pmax
comp=Z,21nm,1.1s
MCK McKinley 87.82 18 *e*P **P** **02 29 51.1 -0.9**
comp=Z,20nm,1.1s
BEKR Beckworth 87.85 47 *e*P **P** **02 29 53.0 +0.1**
comp=Z,27nm,1.4s
MONP Monument Peak 87.94 55 ⇑P **P** **02 29 53.5 -0.1**
baz=88
LRMC Laurel Mountai 87.98 52 ⇑P **P** **02 29 53.5 -0.1**
baz=88
MLAC Mammoth Lakes 88.00 49 ⇑P **P** **02 29 53.9 +0.2**
baz=88
WCN Washoe City 88.03 48 *e*P **P** **02 29 54.3 +0.5**
WCN pmax pmax
comp=Z,140nm,2.2s
WCN Washoe City 88.03 48 *e*P **P** **02 29 54.3 +0.5**
comp=Z,140nm,2.2s
CWC Cottonwood Cre 88.07 51 ⇓P **P** **02 29 54.1 +0.1**
baz=88
BBRC Big Bear Solar 88.08 53 ⇓P **P** **02 29 54.2 -0.1**
baz=88
DVTC Desert V Tower 88.10 55 ⇑P **P** **02 29 54.6 +0.5**
baz=88
PFO Pinyon Flat Ob 88.19 54 *e*P **P** **02 29 54.6 0.0**
comp=Z,20nm,1.3s
PFO Pinyon Flat Ob 88.19 54 P **P** **02 29 54.1 -0.5**
comp=Z,7.3nm,0.9s,baz=245,slow=4.6,SNR=6.6
PFO LR LR 03 01 47.4
comp=Z,16µm,20.1s,baz=249,slow=30
PFO Pinyon Flat Ob 88.19 54 ⇑P **P** **02 29 54.5 -0.1**
baz=88
TIN Tinemaha 88.21 50 ⇓P **P** **02 29 54.8 +0.2**
baz=88
RRX Edison Barstow 88.26 53 ⇓P **P** **02 29 54.8 0.0**
baz=88
MPMC Manual Prospec 88.36 51 ⇓P **P** **02 29 54.5 -1.0**
baz=88,SNR=15
SWSC Sam W. Stewart 88.44 55 ⇑P **P** **02 29 55.6 0.0**
baz=89
ZAK Zakamensk 88.45 325⇑ *i*P **P** **02 29 55.1 -0.3**
ZAK *e* 02 33 18.2
ZAK pmax pmax
comp=Z,50nm,1.4s
GSC Goldstone 88.57 52 *e*P **P** **02 29 57.1 +0.8**
GSC pmax pmax
comp=Z,72nm,1.7s
GSC Goldstone 88.57 52 *e*P **P** **02 29 57.1 +0.8**
comp=Z,72nm,1.7s
GSC Goldstone 88.57 52 ⇓P **P** **02 29 56.1 -0.2**
baz=89,SNR=9.8
PMSA Palmer Station 88.67 160 LR LR 03 05 53.2
comp=Z,7µm,18.4s,baz=203,slow=33
BELC Belle Mtn. Jos 88.69 54 ⇑P **P** **02 29 57.1 +0.2**
baz=89
NVAR Mina Array Bea 88.71 49 P **P** **02 29 57.0 -0.1**
NVAR PKKPbc **PKKPbc** **02 47 39.5 +0.8**
NVAR P'P' 02 55 57.5
NVAR Mina Array Bea 88.71 49 P **P** **02 29 57.0 -0.1**
comp=Z,11nm,0.9s,baz=230,slow=7.9,SNR=44
NVAR PKKPbc **PKKPbc** **02 47 39.5 +0.8**
comp=Z,1.7nm,0.8s,baz=108,slow=2.9,SNR=6.2
NVAR PKPPKP P'P'df 02 55 57.5 +13
comp=Z,2.0nm,1.0s,baz=73,slow=5.1,SNR=4.6
NVAR LR LR 03 07 12.3
comp=Z,9µm,18.1s,baz=111,slow=34
HEC Hector,Ludlow 88.75 53 ⇓P **P** **02 29 57.2 0.0**
baz=89
NV11 Mina Array Sit 88.82 49 *e*P **P** **02 29 57.6 +0.1**
GRAC Grapevine Rang 88.82 51 ⇓P **P** **02 29 57.9 +0.5**
baz=89,SNR=8.9
IRK Irkutsk 88.87 327 *e*P **P** **02 29 55.2 -2.0**
IRK *e* 02 33 25.5
IRK *e*S **S** **02 40 42.0 -0.3**
IRK pmax pmax
comp=Z,95nm,3.1s
BBB Bella Bella 88.90 34 LR LR 03 01 47.1
comp=Z,8µm,20.4s,baz=247,slow=30
NLWA Neilton Lookou 88.93 39 *e*P **P** **02 29 57.6 0.0**
comp=Z,286nm,2.8s
NLWA LR LR
comp=Z,8µm,19.0s
BC3 Big Chuckawall 88.98 54 ⇓P **P** **02 29 58.5 +0.2**
baz=89
FURC Furnace Creek, 88.99 51 ⇑P **P** **02 29 58.1 +0.1**
baz=89,SNR=10
COLA College 88.99 17 *e*P **P** **02 29 55.4 -2.1**
COLA pmax pmax
comp=Z,17nm,0.9s
COLA MLR MLR
comp=Z,7µm,22.0s
COLA College 88.99 17 *e*P **P** **02 29 55.4 -2.1**
comp=Z,17nm,0.9s
COLA LR LR
comp=Z,7µm,22.0s
OBC Olympics--Boni 89.11 38 P **P** **02 29 59.8 +1.3**
WRAK Wrangell Islan 89.12 29 PFAKE 02 30 10.0 +12
WRAK LR LR
comp=Z,8µm,20.0s
ILAR Eielson Array 89.19 18 P **P** **02 29 56.5 -2.0**
ILAR P'P' 02 55 54.1
ILAR Eielson Array 89.19 18 P **P** **02 29 56.5 -2.0**
comp=Z,6.0nm,0.6s,baz=239,slow=5.5,SNR=31
ILAR PKPPKP P'P'df 02 55 54.1 +13
comp=Z,0.5nm,1.1s,baz=33,slow=1.7,SNR=4.4
ILAR LR LR 03 07 56.4
comp=Z,11µm,19.1s,baz=234,slow=34
SHOC Shoshone 89.20 52 ⇓P **P** **02 29 59.3 +0.1**
baz=89
DOT Dot Lake 89.23 19 *e*P **P** **02 29 56.6 -2.1**
comp=Z,33nm,1.2s
GLA Glamis 89.24 55 *e*P **P** **02 29 59.8 +0.3**
GLA pmax pmax
comp=Z,99nm,1.6s
GLA Glamis 89.24 55 *e*P **P** **02 29 59.8 +0.3**
comp=Z,99nm,1.6s
GLA Glamis 89.24 55 ⇓P **P** **02 29 60.0 +0.5**
baz=89
TUQ Turquoise Moun 89.29 52 ⇑P **P** **02 29 59.8 +0.1**
baz=90
TPH Tonopah 89.35 50 PFAKE 02 30 10.0 +10
TPH LR LR
comp=Z,12µm,19.0s
IRM Iron Mountain 89.40 54 ⇓P **P** **02 30 00.6 +0.4**
baz=90
GMO Grizzlie Mount 89.41 43 P **P** **02 30 00.8 +0.6**
VFP Flag Point 89.47 42 P **P** **02 30 01.0 +0.6**
VIPM Ingram Point 89.66 43 P **P** **02 30 01.7 +0.4**
VIPM Ingram Point 89.66 43 P **P** **02 30 01.7 +0.4**
Y12C Blythe 89.73 54 ⇑P **P** **02 30 01.9 +0.2**
baz=90,SNR=6.9
PGC Sidney 89.76 38 *e*P **P** **02 30 02.0 +0.6**
comp=Z,1.4nm,1.2s
LDFC Landfair 89.77 53 *e*P **P** **02 30 02.8 +0.8**
comp=Z,86nm,1.4s
TAPN Taplejung 89.78 299 *e*P P 02 30 10.3 +7.9
comp=Z,128nm,1.4s
ODAN Odare 89.88 298 *e*P P 02 30 09.6 +6.8
comp=Z,152nm,1.4s
LON Longmire 89.89 40 *e*P **P** **02 30 01.9 -0.3**
LON pmax pmax
comp=Z,22nm,1.3s
LON Longmire 89.89 40 *e*P **P** **02 30 01.9 -0.3**
comp=Z,22nm,1.3s
113A Mohawk Valley, 89.97 56 ⇓P **P** **02 30 03.2 +0.4**
baz=90
NEE2 Needles Airpor 90.03 53 ⇓P **P** **02 30 03.4 +0.3**
baz=90
WVOR Wild Horse Val 90.10 45 *e*P **P** **02 30 03.6 +0.2**
WVOR pmax pmax
comp=Z,51nm,1.2s
WVOR MLR MLR
comp=Z,12µm,22.0s
WVOR Wild Horse Val 90.10 45 *e*P **P** **02 30 03.6 +0.2**
comp=Z,51nm,1.2s
WVOR LR LR
comp=Z,12µm,22.0s
BOK Bokaro 90.14 295 *e*PKP **P** **02 30 01.8 -2.0**
BOK AMB AMB 02 30 13.4
comp=Z,48nm,0.0s
MAIT Maitri 90.15 188 *e*P P 02 29 53.3 -10
MAIT *e* 02 39 42.6
COLD Coldfoot 90.17 15 *e*P **P** **02 30 02.9 -0.1**
comp=Z,9.5nm,0.9s
PDMCI Parker Dam,Lak 90.23 54 ⇓P **P** **02 30 04.3 +0.3**
baz=90,SNR=9.6
BMN Battle Mountai 90.28 47 *e*P **P** **02 30 04.9 +0.6**
BMN pmax pmax
comp=Z,33nm,1.2s
BMN MLR MLR
comp=Z,12µm,22.0s
BMN Battle Mountai 90.28 47 *e*P **P** **02 30 04.9 +0.6**
comp=Z,33nm,1.2s
BMN LR LR
comp=Z,12µm,22.0s
MOY Mondy 90.34 325 *e*P **P** **02 30 03.9 -0.3**
MOY pmax pmax
comp=Z,157nm,3.1s
214A Organ Pipe Nat 90.43 57 ⇓P **P** **02 30 05.3 +0.2**
baz=91,SNR=13
CMW Cultus Mountai 90.45 39 P **P** **02 30 05.2 +0.4**
VIS Vishakhapatnam 90.45 288 *e*PKP **P** **02 30 04.6 -0.8**
VIS AMB AMB 02 30 14.6
comp=Z,55nm,1.7s
TRW Toppenish Ridg 90.48 41 P **P** **02 30 05.3 +0.3**
SNAA Sanae 90.56 183 *e*P **P** **02 30 04.9 -0.1**
SNAA Sanae 90.56 183 *e*pP pP 02 30 16.0 0.0
SNAA Sanae 90.56 183 *e*sP sP 02 30 21.0 +1.0
SNAA Sanae 90.56 183 *e*PKiKP **PKiKP** **02 34 58.6 -0.6**
SNAA Sanae 90.56 183 *e*P **P** **02 30 04.8 -0.2**
comp=Z,118nm,1.2s
SNAA Sanae 90.56 183 LR LR 03 10 23.3
comp=Z,3µm,18.4s,baz=176,slow=35
RAMN Ramite 90.57 298 *e*P P 02 30 13.9 +7.8
comp=Z,84nm,1.5s
TWW Teanaway 90.64 40 P **P** **02 30 06.8 +1.1**
R11A Troy Canyon, C 90.64 50 ⇓P **P** **02 30 06.1 0.0**
baz=91
W13A Hualapai Mount 90.72 53 ⇑P **P** **02 30 06.8 +0.3**
baz=91,SNR=11
TBM Table Mountain 90.82 40 P **P** **02 30 07.1 +0.6**
Z14A Wintersburg 90.82 55 ⇑P **P** **02 30 07.6 +0.8**
baz=91,SNR=9.3
EGAK Eagle 90.93 19 *e*P **P** **02 30 05.0 -1.5**
comp=Z,18nm,1.0s
EGAK LR LR
comp=Z,7µm,21.0s
Y14A Wickenburg 90.98 55 ⇑P **P** **02 30 07.5 0.0**
baz=91
HAWA Hanford 91.15 41 *e*P **P** **02 30 08.9 +0.9**
comp=Z,34nm,1.2s
HAWA LR LR
comp=Z,6µm,19.0s
ETW Entiat 91.17 40 P **P** **02 30 08.4 +0.2**
DLBC Dease Lake 91.29 28 *e*P **P** **02 30 08.0 -0.5**
DLBC Dease Lake 91.29 28 LR LR 03 03 22.3
comp=Z,6µm,19.8s,baz=248,slow=30
GUN Gumba 91.50 299 *e*P P 02 30 19.1 +8.6
comp=Z,152nm,1.5s
VNA1 Neumayer--Stat 91.76 181 *e*P **P** **02 30 10.9 +0.4**
VNA1 Neumayer--Stat 91.76 181 *e*pP pP 02 30 23.5 +2.0
VNA1 Neumayer--Stat 91.76 181 *e*sP sP 02 30 27.6 +2.1
PKI Pulchoki 91.78 298 *e*P P 02 30 19.4 +7.6
comp=Z,149nm,1.4s
ELK Elko 91.79 48 *e*P **P** **02 30 11.6 +0.1**
comp=Z,3µm,2.6s
ELK Elko 91.79 48 LR LR 03 03 19.0
comp=Z,10µm,21.2s,baz=318,slow=30
PKIN Phulchoki 91.79 298 *e*P P 02 30 19.9 +8.1
MDRS Chennai 91.85 283 *e*PKP **P** **02 30 10.9 -0.9**
MDRS AMB AMB 02 30 25.4
comp=Z,75nm,7.8s
BMO Blue Mountains 91.96 43 *e*P **P** **02 30 11.9 0.0**
comp=Z,23nm,1.4s
BMO LR LR
comp=Z,10µm,19.0s
KKN Kakani 91.96 298 *e*P P 02 30 20.9 +8.4
CCUT Cedar City 91.99 51 *e*P **P** **02 30 12.9 +0.6**
comp=Z,51nm,1.7s
DMN Daman 92.05 298 *e*P P 02 30 21.2 +8.3
comp=Z,200nm,1.4s
TUC Tucson 92.17 57 *e*P **P** **02 30 13.8 +0.6**
TUC pmax pmax
comp=Z,39nm,1.6s
TUC MLR MLR
comp=Z,6µm,20.0s
TUC Tucson 92.17 57 *e*P **P** **02 30 13.8 +0.6**
comp=Z,39nm,1.6s
TUC LR LR
comp=Z,6µm,20.0s
X16A Lo Mia Camp, P 92.36 55 ⇑P **P** **02 30 14.4 +0.3**
baz=92,SNR=20
MFID Camas Ranch 92.39 45 *e*P **P** **02 30 14.4 +0.4**
comp=Z,5.8nm,0.9s
MFID Camas Ranch 92.39 45 ⇑P **P** **02 30 14.3 +0.4**
baz=93
U15A North Rim 92.40 53 ⇓P **P** **02 30 14.9 +0.6**
baz=93
WUAZ Wupatki 92.78 54 *e*P **P** **02 30 16.6 +0.5**
comp=Z,23nm,1.1s
WUAZ LR LR
comp=Z,11µm,20.0s
WUAZ Wupatki 92.78 54 ⇑P **P** **02 30 16.2 +0.2**
baz=93
DGAR Diego Garcia 93.03 261 PFAKE 02 30 30.0 +13
DGAR LR LR
comp=Z,23µm,20.0s
319A Douglas 93.07 58 ⇓P **P** **02 30 17.5 +0.1**
baz=93,SNR=10

MVU **Marysvale** 93.17 51 *e*P P 02 30 16.1 -1.7
comp=Z,17nm,1.5s
MVU LR LR
comp=Z,22µm,19.0s
DUG Dugway 93.32 49 *e*P P 02 30 19.5 +1.1
DUG pmax pmax
comp=Z,16nm,1.4s
DUG MLR MLR
comp=Z,13µm,22.0s
DUG Dugway 93.32 49 *e*P P 02 30 19.5 +1.1
comp=Z,16nm,1.4s
DUG LR LR
comp=Z,13µm,22.0s
DUG Dugway 93.32 49 ⇓P P 02 30 18.7 +0.3
baz=94
G12A Big Creek, Yel 93.36 44 ⇓P P 02 30 18.1 -0.4
baz=94
KOLN Koldanda 93.36 298 *e*P P 02 30 26.3 +7.4
comp=Z,19nm,0.9s
HLID Hailey 93.40 45 *e*P P 02 30 19.3 +0.6
comp=Z,110nm,2.8s
HLID LR LR
comp=Z,16µm,20.0s
HLID Hailey 93.40 45 ⇓P P 02 30 19.2 +0.5
baz=94
NEW Newport 93.41 40 LR LR 03 07 30.0
comp=Z,4µm,20.0s,baz=245,slow=32
NEW Newport 93.41 40 ⇑P P 02 30 18.5 0.0
baz=94
NEW ⇑SKSac **SKSac** 02 40 52.9 +2.7
baz=94
DANN Dangsing 93.41 299 *e*P P 02 30 27.3 +8.1
comp=Z,128nm,1.7s
H12A Diamond D Ranc 93.46 44 ⇑P P 02 30 18.6 -0.4
baz=94
J13A Cove Ranch, Pi 93.50 46 ⇑P P 02 30 19.5 +0.4
baz=94
X18A Snowflake 93.56 55 ⇑P P 02 30 19.4 -0.3
baz=94
TRD Trivandrum 93.56 278 *ex* P 02 30 14.2 -5.7
TRD AMB AMB 02 30 30.9
comp=Z,66nm,5.5s
F12A Elk City 93.64 43 ⇑P P 02 30 19.4 -0.3
baz=94
320A Kipp Ranch, An 93.67 58 ⇓P P 02 30 20.6 +0.4
baz=94,SNR=15
I13A Wildhorse Cree 93.72 45 ⇑P P 02 30 20.0 -0.2
baz=94
C11A Tepee Creek (N 93.78 41 ⇓P P 02 30 20.4 +0.2
baz=94
220A Playas Peak, P 93.85 58 ⇓P P 02 30 21.2 +0.2
baz=94,SNR=9.4
W18A Petrified Fore 93.92 55 ⇑P P 02 30 21.2 -0.1
baz=94
120A U Bar Ranch, L 93.97 57 ⇓P P 02 30 22.0 +0.4
baz=94
D12A Red Ives Fores 94.06 42 ⇓P P 02 30 21.4 -0.1
baz=94
G13A Cobalt 94.07 44 ⇑P P 02 30 21.5 -0.2
baz=94
Q16A Castle Valley 94.08 51 ⇑P P 02 30 22.0 0.0
baz=94
I14A Mackay 94.18 45 ⇓P P 02 30 22.1 -0.2
baz=94
Z20A Nine Sixteen R 94.18 57 ⇓P P 02 30 23.0 +0.4
baz=94
HVS Khovu-Aksy 94.22 323 *c i*P P 02 30 21.8 -0.3
HVS pmax pmax
comp=Z,360nm,2.2s
C12B Naegeli Ranch, 94.22 41 ⇑P P 02 30 21.6 -0.7
baz=94
B12A Libby 94.43 40 ⇑P P 02 30 23.6 +0.5
baz=95
221A Mesquite Ranch 94.49 58 ⇓P P 02 30 24.4 +0.4
baz=95
S18A Hurst Farm, Bl 94.55 52 ⇑P P 02 30 24.3 0.0
baz=95
A12A Yaak River Ran 94.56 40 ⇓P P 02 30 23.7 0.0
baz=95
E13A Victor 94.58 43 ⇓P P 02 30 23.6 -0.4
baz=95
Y20A Horse Springs, 94.60 56 ⇓P P 02 30 24.6 +0.1
baz=95
SRU San Rafael 94.62 51 ⇑P P 02 30 24.1 -0.3
baz=95
G14A Jackson 94.63 44 ⇓P P 02 30 23.2 -1.2
baz=95
D13A Huson 94.64 42 ⇓P P 02 30 23.5 -0.7
baz=95
121A Cookes Peak, D 94.64 57 ⇓P P 02 30 24.6 -0.1
baz=95
HWUT Hardware Ranch 94.69 48 PFAKE 02 30 40.0 +15
HWUT LR LR
comp=Z,8µm,22.0s
HYB Hyderabad 94.70 287 *i* P P 02 30 27.5 +2.4
HYB *e*SKS **SKSac** 02 40 56.0 -2.4
HYB Hyderabad 94.70 287 *e*PKP P 02 30 24.2 -0.8
HYB AMB AMB 02 30 35.7
comp=Z,56nm,1.0s
X20A Quemado 94.70 55 ⇓P P 02 30 25.0 0.0
baz=95
C13A Hot Springs 94.78 41 ⇓P P 02 30 24.6 -0.2
baz=95
I15A Monteview 94.86 45 ⇓P P 02 30 24.7 -0.6
baz=95
MSO Missoula 94.88 42 PFAKE 02 30 40.0 +15
MSO LR LR
comp=Z,4µm,19.0s
W20A Ramah 94.88 55 ⇓P P 02 30 25.7 -0.1
baz=95
F14A Wisdom 94.89 43 ⇓P P 02 30 25.2 -0.3
baz=95
H15A Lima 94.96 45 ⇓P P 02 30 26.0 +0.2
baz=95
Z21A St. Cloud Mine 94.97 57 ⇓P P 02 30 26.5 +0.2
baz=95
P18A Preston Nutter 94.99 50 ⇓P P 02 30 26.5 +0.3
baz=95
E14A Clinton 95.02 43 ⇑P P 02 30 25.6 -0.5
baz=95
222A Williams Famil 95.06 58 ⇑P P 02 30 26.7 +0.2
baz=95
B13A Whitefish 95.09 41 ⇑P P 02 30 26.5 +0.3
baz=95
V20A Brimhall 95.12 54 ⇓P P 02 30 26.6 -0.2
baz=95
Y21A Point of Rocks 95.19 56 ⇑P P 02 30 27.9 +0.7
baz=95
X21A Alamocita Cree 95.23 56 ⇓P P 02 30 27.6 +0.2
baz=95
D14A Greenough 95.24 42 ⇓P P 02 30 26.8 -0.2
baz=95
G15A Dillon 95.25 44 ⇑P P 02 30 27.5 +0.3
baz=95
U20A Newcomb 95.25 54 ⇑P P 02 30 27.5 +0.1
baz=95
M17A Scullys Gap (B 95.28 48 ⇓P P 02 30 27.5 0.0
baz=96
122A Conniff Cattle 95.33 58 ⇓P P 02 30 28.2 +0.4
baz=96
A13A Flathead Natio 95.33 40 ⇑P P 02 30 27.4 +0.1
baz=96
C14A Swan Lake 95.33 42 ⇓P P 02 30 27.3 0.0
baz=96
NGP Nagpur 95.33 290 *e*PKP P 02 30 27.1 -0.8
NGP AMB AMB 02 30 35.3
comp=Z,50nm,1.2s
NGP *e*S **SKSac** 02 41 01.0 -0.7
WMQ Urumqi 95.37 314 P P 02 30 28.0 +0.4
WMQ pP **pP** 02 30 41.0 +2.4
WMQ PP **PP** 02 34 18.0 -0.6
WMQ SKS **SKSac** 02 40 59.0 -2.0
WMQ S **S** 02 41 39.0 -2.3
WMQ SS **SS** 02 48 13.0 +3.4
WMQ pmax pmax
comp=Z,72nm,1.2s
WMQ pmax pmax
comp=Z,2µm,9.6s
WMQ LR LR
comp=N,7µm,21.3s
WMQ LR LR
comp=E,6µm,21.3s
WMQ LR LR
comp=Z,7µm,21.3s
AHID Auburn Hatcher 95.40 47 PFAKE 02 30 40.0 +12
AHID LR LR
comp=Z,11µm,21.0s

RRI2 Red Ridge 95.44 46 *e*P P 02 30 28.0 -0.2
comp=Z,35nm,1.9s
F15A Butte 95.48 44 ⇓P P 02 30 28.0 -0.2
baz=96
I16A Newdale 95.50 46 ⇑P P 02 30 28.9 +0.6
baz=96
Z22A Elephant Butte 95.52 57 ⇑P P 02 30 29.2 +0.5
baz=96
INK Inuvik 95.53 19 P P 02 30 26.4 -1.2
INK Inuvik 95.53 19 P P 02 30 26.4 -1.2
comp=Z,1.8nm,0.9s,baz=245,slow=5.1,SNR=3.5
W21A San Fidel 95.54 55 ⇑P P 02 30 28.8 0.0
baz=96
E15A Deer Lodge 95.58 43 ⇓P P 02 30 28.4 -0.1
baz=96
223A Chaparral, Ant 95.58 58 ⇑P P 02 30 28.9 0.0
baz=96
WALA Waterton Lakes 95.68 40 *e*P P 02 30 27.4 -1.5
comp=Z,0.1nm,0.9s
Y22A Socorro 95.72 56 ⇑P P 02 30 29.9 +0.3
baz=96
G16A Moss Hill, Enn 95.73 44 ⇓P P 02 30 29.4 0.0
baz=96
TPAW Teton Pass 95.74 46 *e*P P 02 30 30.2 +0.6
comp=Z,3.0nm,0.9s
V21A Milan 95.76 54 ⇓P P 02 30 30.4 +0.6
baz=96
Y22D IRIS PASSCAL I 95.80 56 ⇓P P 02 30 30.2 +0.3
baz=96
S20A Disappointment 95.82 52 ⇑P P 02 30 30.1 0.0
baz=96
B14A Marquette Ranc 95.83 41 ⇓P P 02 30 29.7 0.0
baz=96
X22A Bernardo 95.86 56 ⇑P P 02 30 31.5 +1.3
baz=96
D15A Lincoln 95.86 43 ⇑P P 02 30 29.9 0.0
baz=96
L18A Fontenelle, Gr 95.87 48 ⇑P P 02 30 29.5 -0.6
baz=96
123A Bell Site, Whi 95.90 58 ⇑P P 02 30 30.6 +0.3
baz=96
P19A Cripple Cowboy 95.92 50 ⇓P P 02 30 30.5 +0.1
baz=96
R20A Redvale 95.92 52 ⇓P P 02 30 31.0 +0.6
baz=96
H16A Russell Place, 95.93 45 ⇓P P 02 30 31.3 +1.0
baz=96
U21A Nageezi 95.93 54 ⇓P P 02 30 30.5 0.0
baz=96
A14A Double T Ranch 95.95 40 ⇓P P 02 30 30.1 -0.1
baz=96
BOZ Bozeman (W) 95.98 44 PFAKE 02 30 40.0 +10
BOZ LR LR
comp=Z,8µm,21.0s
O19A Miners Draw (B 96.02 50 ⇑P P 02 30 30.8 0.0
baz=96
F16A Kennard Place, 96.03 44 ⇓P P 02 30 31.1 +0.5
baz=96
C15A Salmond Ranch, 96.06 42 ⇑P P 02 30 30.3 -0.4
baz=96
Z23A Rita Site, Whi 96.11 57 ⇓P P 02 30 31.6 +0.3
baz=96
I17A Pilgrim Ck. 96.13 46 ⇑P P 02 30 31.7 +0.4
baz=96
W22A Albuquerque 96.14 55 ⇓P P 02 30 32.0 +0.5
baz=96
324A Moseley Ranch, 96.18 59 ⇓P P 02 30 31.8 +0.1
baz=96
T21A Navajo Lake 96.20 53 ⇓P P 02 30 32.4 +0.6
baz=96
S21A Coal Bank Pass 96.20 53 ⇑P P 02 30 32.4 +0.5
baz=96
Q20A Ridgley Place, 96.21 51 ⇓P P 02 30 31.8 +0.1
baz=96
E16A East Helena 96.24 43 ⇓P P 02 30 32.4 +0.8
baz=96
B15A Bradely Ranch, 96.27 41 ⇓P P 02 30 31.3 -0.3
baz=96
H17A Grant Village 96.28 45 ⇑P P 02 30 32.6 +0.6
baz=96
P20A De Beque 96.31 51 ⇓P P 02 30 32.0 -0.1
baz=96
224A Cornudas Mount 96.33 58 ⇑P P 02 30 32.2 -0.2
baz=96
MNTX Cornudas Mount 96.34 59 *e*P P 02 30 32.4 +0.2
comp=Z,6.7nm,1.4s
MNTX LR LR
comp=Z,5µm,19.0s
V22A San Miguel Ran 96.36 54 ⇑P P 02 30 32.9 +0.4
baz=96
M19A Rock Springs 96.37 49 ⇓P P 02 30 32.4 0.0
baz=96
A15A Johnson Ranch, 96.38 41 ⇑P P 02 30 32.3 +0.2
baz=97
425A Indio Mountain 96.40 60 ⇑P P 02 30 32.8 +0.1
baz=97
L19A Farson 96.41 48 ⇓P P 02 30 32.8 +0.2
baz=97
ANMO Albuquerque 96.42 56 *e*P P 02 30 32.6 -0.2
comp=Z,5.2nm,1.2s
ANMO Albuquerque 96.42 56 LR LR 03 05 35.7
comp=Z,7µm,22.0s,baz=241,slow=30
Y23A Lovelace Mesa, 96.45 57 ⇑P P 02 30 32.8 -0.1
baz=97
LKWY Lake 96.46 45 PFAKE 02 30 40.0 +7.2
LKWY LR LR
comp=Z,26µm,20.0s
G17A Pierce Place, 96.47 45 ⇑P P 02 30 33.2 +0.5
baz=97
BW06 Boulder Array 96.47 47 PFAKE 02 30 40.0 +7.1
BW06 LR LR
comp=Z,7µm,22.0s
PDAR Pinedale Array 96.47 47 P P 02 30 31.3 -1.6
PDAR PKKPbc PKKPdf 02 47 27.8 +7.4
PDAR Pinedale Array 96.47 47 P P 02 30 31.3 -1.6
comp=Z,0.5nm,0.5s,baz=242,slow=1.9,SNR=5.8
PDAR PKKPbc PKKPdf 02 47 27.8 +7.4
comp=Z,1.0nm,0.8s,baz=58,slow=5.6,SNR=3.5
PDAR LR LR 03 07 43.8
comp=Z,5µm,20.0s,baz=282,slow=32
D16A Dana Ranch, Ca 96.49 43 ⇑P P 02 30 33.2 +0.5
baz=97
X23A Hourglass Bar 96.53 56 ⇓P P 02 30 33.3 +0.1
baz=97
U22A Llaves 96.53 54 ⇑P P 02 30 34.1 +0.8
baz=97
124A Stringfield Ra 96.57 58 ⇑P P 02 30 33.8 +0.2
baz=97
325A Bean Ranch, Si 96.58 59 ⇓P P 02 30 32.8 -0.7
baz=97
I18A Diamond G Ranc 96.58 46 ⇓P P 02 30 33.8 +0.5
baz=97
R21A Cimarron 96.59 52 ⇓P P 02 30 33.5 0.0
baz=97
O20A White River Ci 96.61 50 ⇑P P 02 30 33.7 +0.2
baz=97
C16A Fuhringer Ranc 96.61 42 ⇑P P 02 30 33.2 0.0
baz=97
T22A Edith 96.69 53 ⇑P P 02 30 34.7 +0.7
baz=97
F17A Fitzpatrick Pl 96.71 44 ⇓P P 02 30 34.6 +0.9
baz=97
Q21A Lamborn Mesa, 96.72 52 ⇑P P 02 30 34.4 +0.4
baz=97
W23A Werner Place, 96.73 55 ⇑P P 02 30 34.1 -0.1
baz=97
E17A Martinsdale 96.75 43 ⇓P P 02 30 34.7 +0.7
baz=97
626A Big Bend Ranch 96.76 61 ⇑P P 02 30 34.5 +0.2
baz=97
N20A Spence Gulch, 96.81 49 ⇑P P 02 30 34.6 +0.2
baz=97
Z24A Sheeppen Canyo 96.82 57 ⇓P P 02 30 34.5 -0.1
baz=97
B16A M & M Farms, S 96.84 41 ⇑P P 02 30 34.2 0.0
baz=97
V23A Ortiz Mt. (NFS 96.87 55 ⇑P P 02 30 34.9 +0.1
baz=97
526A Mary Lane Ranc 96.94 61 ⇑P P 02 30 34.8 -0.4
baz=97
Y24A Capitan 96.94 57 ⇓P P 02 30 35.0 -0.1
baz=97
S22A 4UR Ranch, Cre 96.95 53 ⇑P P 02 30 35.4 +0.1
baz=97
J19A Crowheart 96.98 47 ⇑P P 02 30 35.2 +0.2
baz=97
K19A Absolon Red Bu 96.99 47 ⇓P P 02 30 34.7 -0.5
baz=97

H18A Shoshone NF, C 96.99 45 ⇑P P 02 30 35.2 0.0
baz=97
P21A Newcastle 97.01 51 ⇓P P 02 30 35.9 +0.5
baz=97
U23A El Rito 97.03 54 ⇑P P 02 30 35.5 -0.1
baz=97
M20A Sweetwater, Wa 97.06 49 ⇓P P 02 30 34.8 -0.7
baz=97
A16A West Butte Ran 97.08 41 ⇑P P 02 30 35.4 +0.1
baz=97
D17A Six Diamond Ra 97.08 43 ⇑P P 02 30 35.6 +0.2
baz=97
TXAR Lajitas Array 97.09 62 P P 02 30 35.2 -0.6
TXAR PKKPbc PKKPdf 02 47 26.2 +7.7
TXAR P'P' 02 55 35.6
TXAR Lajitas Array 97.09 62 P P 02 30 35.2 -0.6
comp=Z,1.7nm,1.0s,baz=229,slow=3.5,SNR=12
TXAR PKKPbc PKKPdf 02 47 26.2 +7.7
comp=Z,0.8nm,1.0s,baz=82,slow=2.8,SNR=3.6
TXAR PKPPKP P'P'df 02 55 35.6 +5.7
comp=Z,0.3nm,0.9s,baz=320,slow=3.7,SNR=3.9
TXAR LR LR 03 09 03.0
comp=Z,9µm,18.0s,baz=95,slow=32
L20A Wamsutter 97.10 48 ⇓P P 02 30 36.0 +0.3
baz=97
X24A Lazy VL Ranch, 97.12 56 ⇑P P 02 30 36.0 0.0
baz=97
R22A Saguache, Gunn 97.15 52 ⇑P P 02 30 36.0 -0.1
baz=97
426A McDonald Obser 97.16 60 ⇑P P 02 30 36.4 +0.2
baz=97
C17A Wharram Farm, 97.19 42 ⇓P Pdif 02 30 36.2 +0.3
baz=97
O21A Pagoda 97.20 50 ⇓P P 02 30 36.5 +0.2
baz=97
125A Gardner Draw, 97.20 58 ⇑P Pdif 02 30 36.7 +0.4
baz=97
Q22A Crested Butte, 97.22 52 ⇓P P 02 30 36.7 +0.2
baz=97
I19A Meeteetse 97.25 46 ⇑P P 02 30 36.6 +0.3
baz=97
G18A Lazy EL Ranch, 97.26 45 ⇑P P 02 30 36.5 +0.2
baz=97
SMCO Snowmass 97.26 51 *e*P P 02 30 36.9 +0.1
K20A Yellowstone Ra 97.30 48 ⇑P P 02 30 36.4 -0.1
baz=98
N21A Black Mountain 97.32 50 ⇓P P 02 30 36.5 -0.2
baz=98
W24A Lazy 6 Ranch, 97.33 55 ⇑P P 02 30 36.8 -0.1
baz=98
Z25A Roswell 97.33 58 ⇑P P 02 30 36.9 +0.1
baz=98
F18A Big Timber 97.33 44 ⇓P P 02 30 36.7 +0.2
baz=98
627A Terlingua Ranc 97.35 62 ⇓P P 02 30 37.3 +0.3
baz=98
T23A Casias Ranch, 97.36 54 ⇓P P 02 30 37.3 +0.2
baz=98
527A Woodward Ranch 97.36 61 ⇑P P 02 30 37.2 +0.1
baz=98
B17A L&G Farms, Che 97.37 42 ⇓P P 02 30 36.6 0.0
baz=98
BHPL Bhopal 97.37 292 *e*PKP P 02 30 36.5 -0.6
BHPL AMB AMB 02 30 42.3
comp=Z,40nm,5.6s
326A Caldwell Ranch 97.38 60 ⇓P P 02 30 37.1 +0.1
baz=98
RLMT Red Lodge 97.40 45 PFAKE 02 30 50.0 +13
RLMT LR LR
comp=Z,23µm,20.0s
E18A Harlowton 97.41 44 ⇓P P 02 30 37.0 +0.1
baz=98
226B Tecolote Peak, 97.44 59 ⇑P P 02 30 37.3 0.0
baz=98
H19A Powell 97.45 46 ⇓P P 02 30 36.8 -0.3
baz=98
Y25A Mesa, Roswell 97.53 57 ⇑P P 02 30 37.3 -0.4
baz=98
P22A Eagle 97.54 51 ⇑P P 02 30 37.6 -0.2
baz=98
S23A Nye Farm, Mont 97.57 53 ⇑P Pdif 02 30 38.6 +0.6
baz=98
V24A Rampart Ranch, 97.58 55 ⇓P P 02 30 38.0 0.0
baz=98
A17A Triple J Farms 97.64 41 ⇑P P 02 30 38.0 +0.3
baz=98
D18A Linhart Farms, 97.67 43 ⇓P Pdif 02 30 38.6 +0.5
baz=98
J20A Shoshoni 97.68 47 ⇓P P 02 30 38.4 +0.2
baz=98
M21A Separation Pea 97.68 49 ⇓P P 02 30 38.1 -0.3
baz=98
126A Clayton Basin, 97.72 58 ⇓P P 02 30 38.5 0.0
baz=98
X25A Clemmons Ranch 97.72 56 ⇑P P 02 30 38.3 -0.3
baz=98
427A Hayter Ranch, 97.73 60 ⇑P P 02 30 38.6 -0.1
baz=98
U24A Moreno Valley 97.76 54 ⇓P P 02 30 39.1 +0.2
baz=98
628A Black Gap, Mar 97.78 62 ⇑P Pdif 02 30 39.3 +0.4
baz=98
L21A Rawlins 97.78 49 ⇓P P 02 30 38.9 +0.2
baz=98
327A Balmorhea Ranc 97.80 60 ⇑P P 02 30 39.2 +0.3
baz=98
I20A Worland 97.83 46 ⇓P P 02 30 39.1 +0.3
baz=98
F19A Roth Farm, Mol 97.83 44 ⇑P Pdif 02 30 39.4 +0.6
baz=98
R23A Moffat 97.84 53 ⇑P Pdif 02 30 39.7 +0.4
baz=98
O22A Kremmling 97.86 50 ⇓P P 02 30 39.4 +0.1
baz=98
Z26A Caprock 97.92 58 ⇑P P 02 30 39.6 +0.1
baz=98
EGMT Eagleton 97.95 42 PFAKE 02 30 50.0 +11
EGMT LR LR
comp=Z,5µm,21.0s
EGMT Eagleton 97.95 42 ⇓P Pdif 02 30 39.9 +0.7
baz=98
SDCO Great Sand Dun 97.96 53 PFAKE 02 30 50.0 +10
SDCO LR LR
comp=Z,8µm,21.0s
Q23A Hartsel 98.04 52 ⇑P Pdif 02 30 40.8 +0.6
baz=98
528A Cox Ranch, San 98.05 61 ⇓P P 02 30 40.1 0.0
baz=98
B18A Beardsley Farm 98.05 42 ⇓P Pdif 02 30 40.0 +0.3
baz=98
K21A Alcova 98.06 48 ⇓P P 02 30 40.3 +0.3
baz=98
H20A Greybull 98.07 46 ⇓P Pdif 02 30 40.3 +0.4
baz=98
W25A X Bar L Ranch, 98.07 56 ⇑P P 02 30 40.5 +0.3
baz=98
N22A Wattenberg Ran 98.11 50 ⇑P P 02 30 40.4 0.0
baz=98
E19A Rath Farm, Rou 98.12 44 ⇑P Pdif 02 30 40.5 +0.5
baz=98
V25A Rancho No Teng 98.12 55 ⇑Pdiff P 02 30 40.1 -0.4
baz=98
J21A Lysite 98.12 47 ⇓Pdiff P 02 30 40.3 +0.1
baz=98
227A Bennet, Jal 98.14 59 ⇓Pdiff P 02 30 40.1 -0.3
baz=98
G20A Bridger 98.14 45 ⇓Pdiff P 02 30 40.5 +0.3
baz=98
S24A Houchin Ranch, 98.16 53 ⇑Pdiff P 02 30 40.3 -0.3
baz=98
P23A Jefferson 98.16 51 ⇓Pdiff Pdif 02 30 41.4 +0.6
baz=98
A18A Metzger Ranch, 98.17 41 ⇓Pdiff P 02 30 40.2 +0.1
baz=98
M22A Cedar Creek Ra 98.18 49 ⇑Pdiff P 02 30 40.9 +0.3
baz=98
Y26A Elida 98.22 57 ⇑Pdiff P 02 30 40.8 -0.1
baz=98
127A Arkansas Junct 98.26 58 ⇓Pdiff P 02 30 40.7 -0.3
baz=98
D19A Cripps Ranch, 98.26 43 ⇑Pdiff Pdif 02 30 41.3 +0.6
baz=98
428A Kincaid Ranch, 98.29 60 ⇑Pdiff P 02 30 41.4 +0.3
baz=98
C19A Slack Wire Ran 98.32 43 ⇑Pdiff P 02 30 41.2 +0.3
baz=98
O23A Lake Granby, G 98.34 51 ⇑Pdiff P 02 30 41.6 +0.2
baz=98

F20A	Billings	98.35	45	⇓Pdiff	Pdif	02 30 42.1	+0.9
	baz=98						
328A	Wristen Ranch,	98.36	60	⇓Pdiff	P	02 30 41.6	+0.2
	baz=98						
I21A	Big Trails, Te	98.36	47	⇓Pdiff	P	02 30 41.4	+0.1
	baz=98						
R24A	Sanders Place,	98.40	53	⇓Pdiff	P	02 30 41.4	-0.2
	baz=99						
X26A	CR and CF Fran	98.40	57	⇑Pdiff	P	02 30 41.1	-0.6
	baz=99						
U25A	Circle Dot Ran	98.44	55	⇓Pdiff	P	02 30 41.8	0.0
	baz=99						
ISCO	Idaho Springs	98.45	51	PFAKE		02 30 50.0	+8.0
ISCO				LR	LR		
	comp=Z,17µm,21.0s						
ISCO	Idaho Springs	98.45	51	⇑Pdiff	P	02 30 41.9	-0.1
	baz=99						
L22A	Ellis Ranch, M	98.47	49	⇓Pdiff	P	02 30 42.0	+0.1
	baz=99						
GOA	Goa	98.50	284	*e*PKP	P	02 30 41.4	-0.9
N23A	Red Feather La	98.51	50	⇑Pdiff	P	02 30 42.3	+0.1
	baz=99						
529A	Stev Forest Ra	98.51	61	⇓Pdiff	P	02 30 42.0	-0.1
	baz=99						
Z27A	Tatum	98.55	58	⇑Pdiff	Pdif	02 30 42.7	+0.4
	baz=99						
E20A	Meyer Farm, Mu	98.56	44	⇑Pdiff	Pdif	02 30 42.8	+0.8
	baz=99						
Q24A	Divide	98.57	52	⇑Pdiff	Pdif	02 30 43.0	+0.5
	baz=99						
K22A	Casper	98.58	48	⇑Pdiff	P	02 30 42.6	+0.3
	baz=99						
W26A	Owens Ranch, T	98.58	56	⇓Pdiff	P	02 30 42.2	-0.2
	baz=99						
B19A	Brinkman Farms	98.60	42	⇑Pdiff	P	02 30 42.2	+0.1
	baz=99						
T25A	Trinidad	98.63	54	⇓Pdiff	Pdif	02 30 43.1	+0.3
	baz=99						
D20A	Manuel Ranch,	98.73	43	⇑Pdiff	P	02 30 43.0	+0.3
	baz=99						
228A	UT Block 9, Go	98.74	59	⇓Pdiff	P	02 30 43.0	-0.1
	baz=99						
Y27A	Causey	98.74	57	⇓Pdiff	P	02 30 43.1	-0.1
	baz=99						
DDI	Dehra Dun	98.75	299	*e*PKP	P	02 30 42.4	-0.7
DDI				AMB	AMB	02 30 49.9	
	comp=Z,72nm,5.2s						
S25A	Robets Cordova	98.75	53	⇓Pdiff	P	02 30 43.5	+0.3
	baz=99						
V26A	Tequesquite Ra	98.76	55	⇑Pdiff	P	02 30 43.1	-0.1
	baz=99						
H21A	Big Horn, Sher	98.77	46	⇓Pdiff	P	02 30 43.0	0.0
	baz=99						
G21A	Lodge Grass	98.82	45	⇑Pdiff	P	02 30 43.4	+0.2
	baz=99						
J22A	Midwest	98.82	47	⇑Pdiff	P	02 30 43.5	+0.2
	baz=99						
M23A	Laramie	98.83	49	⇑Pdiff	P	02 30 43.7	+0.2
	baz=99						
A19A	Klindworth Far	98.86	42	⇓Pdiff	Pdif	02 30 43.8	+0.6
	baz=99						
P24A	Kohler Place,	98.89	51	⇑Pdiff	Pdif	02 30 44.2	+0.4
	baz=99						
429A	Davenport Ranc	98.92	61	⇑Pdiff	P	02 30 44.1	+0.1
	baz=99						
O24A	Longmont	98.94	51	⇑Pdiff	Pdif	02 30 44.3	+0.4
	baz=99						
I22A	9 Mile Ranch,	98.95	47	⇑Pdiff	Pdif	02 30 44.2	+0.4
	baz=99						
U26A	Atchley Ranch,	98.95	55	⇑Pdiff	P	02 30 44.2	+0.1
	baz=99						
128A	Castleberry Fa	98.96	59	⇓Pdiff	Pdif	02 30 44.5	+0.4
	baz=99						
C20A	Veseth Ranch,	98.99	43	⇑Pdiff	Pdif	02 30 44.6	+0.8
	baz=99						
X27A	F and S Farms,	99.00	57	⇑Pdiff	P	02 30 44.6	+0.3
	baz=99						
R25A	Fountain Ranch	99.00	53	⇓Pdiff	Pdif	02 30 44.8	+0.6
	baz=99						
L23A	Garrett	99.02	49	⇑Pdiff	Pdif	02 30 44.8	+0.4
	baz=99						
F21A	Absaloka Mine,	99.04	45	⇑Pdiff	Pdif	02 30 44.4	+0.2
	baz=99						
329A	Wagon Wheel Ra	99.07	60	⇓Pdiff	Pdif	02 30 45.0	+0.4
	baz=99						
MSTX	Muleshoe	99.08	57	⇑Pdiff	Pdif	02 30 45.1	+0.4
	baz=99						
W27A	Bowe Ranch, En	99.13	56	⇓Pdiff	Pdif	02 30 45.4	+0.5
	baz=99						
B20A	Solberg Farm,	99.18	42	⇓Pdiff	Pdif	02 30 44.9	+0.2
	baz=99						
Z28A	Tucker Farm, M	99.21	58	⇓Pdiff	Pdif	02 30 44.9	-0.3
	baz=99						
H22A	Clearmont	99.23	46	⇑Pdiff	Pdif	02 30 45.8	+0.8
	baz=99						
Q25A	Bedland, Calha	99.23	52	⇑Pdiff	Pdif	02 30 46.2	+0.9
	baz=99						
K23A	Bowen Ranch, D	99.24	48	⇓Pdiff	Pdif	02 30 45.9	+0.7
	baz=99						
530A	J-C Ranch, Com	99.26	61	⇓Pdiff	Pdif	02 30 46.0	+0.5
	baz=99						
N24A	Carr	99.26	50	⇓Pdiff	Pdif	02 30 46.2	+0.9
	baz=99						
T26A	Comanche Natio	99.27	54	⇑Pdiff	Pdif	02 30 46.0	+0.5
	baz=99						
E21A	Keefer Ranch,	99.27	44	⇓Pdiff	Pdif	02 30 45.9	+0.8
	baz=99						
POO	Poona	99.31	286	*e*x	Pdif	02 30 51.0	+5.1
229A	Bryant Ranch,	99.34	59	⇑Pdiff	Pdif	02 30 45.7	-0.1
	baz=100						
A20A	Cobblestone Ra	99.37	42	⇑Pdiff	Pdif	02 30 45.6	+0.1
	baz=100						
G22A	Birney	99.44	46	⇑Pdiff	Pdif	02 30 46.4	+0.4
	baz=100						
P25A	Willow Gulch B	99.45	52	⇑Pdiff	Pdif	02 30 46.7	+0.4
	baz=100						
129A	Stewart Farms,	99.46	59	⇓Pdiff	Pdif	02 30 46.9	+0.5
	baz=100						
J23A	Dilts Ranch, B	99.47	48	⇑Pdiff	Pdif	02 30 46.5	+0.3
	baz=100						
D21A	La Casta Ranch	99.47	44	⇓Pdiff	Pdif	02 30 46.6	+0.6
	baz=100						
M24A	Cheyenne	99.47	50	⇓Pdiff	Pdif	02 30 47.1	+0.7
	baz=100						
S26A	Kim	99.48	54	⇑Pdiff	Pdif	02 30 46.6	+0.2
	baz=100						
Y28A	McKinney Farm,	99.48	57	⇓Pdiff	Pdif	02 30 46.5	0.0
	baz=100						
V27A	Dan Oppiter Fa	99.49	56	⇓Pdiff	Pdif	02 30 46.4	-0.1
	baz=100						
430A	Baggett Ranch,	99.51	61	⇑Pdiff	Pdif	02 30 46.6	0.0
	baz=100						
L24A	Wheatland	99.55	49	⇑Pdiff	Pdif	02 30 46.9	+0.3
	baz=100						
C21A	Desert Coulee	99.61	43	⇑Pdiff	Pdif	02 30 47.6	+1.0
	baz=100						
F22A	Rosebud	99.61	45	⇑Pdiff	Pdif	02 30 47.5	+0.9
	baz=100						
O25A	Wiggins	99.64	51	⇑Pdiff	Pdif	02 30 47.7	+0.6
	baz=100						
U27A	Thompson Grove	99.67	55	⇑Pdiff	Pdif	02 30 47.8	+0.5
	baz=100						
R26A	Arlington	99.68	53	⇑Pdiff	Pdif	02 30 47.6	+0.4
	baz=100						
I23A	Meade Ranch, G	99.68	47	⇓Pdiff	Pdif	02 30 47.6	+0.5
	baz=100						
X28A	Dimmitt	99.68	57	⇓Pdiff	Pdif	02 30 47.6	+0.3
	baz=100						
SMLA	Simla	99.69	300	*e*PKP	Pdif	02 30 46.7	-0.6
SMLA				AMB	AMB	02 30 55.1	
	comp=Z,18nm,3.2s						
631A	Perdido Creek	99.71	62	⇓Pdiff	Pdif	02 30 47.8	+0.4
	baz=100						
330A	Mertzon	99.72	60	⇑Pdiff	Pdif	02 30 47.4	-0.1
	baz=100						
Z29A	Hungry Hill Ra	99.75	58	⇓Pdiff	Pdif	02 30 47.3	-0.3
	baz=100						
Q26A	Hugo	99.78	52	⇓Pdiff	Pdif	02 30 48.4	+0.7
	baz=100						
K24A	Anderson Ranch	99.81	48	⇑Pdiff	Pdif	02 30 48.2	+0.4
	baz=100						
B21A	Ellsworth Farm	99.82	42	⇑Pdiff	Pdif	02 30 47.8	+0.3
	baz=100						
N25A	Grover	99.84	50	⇑Pdiff	Pdif	02 30 48.2	+0.2
	baz=100						
W28A	Vega	99.86	56	⇓Pdiff	Pdif	02 30 48.3	+0.2
	baz=100						
H23A	Clabaugh Cattl	99.88	46	⇓Pdiff	Pdif	02 30 47.6	-0.4
	baz=100						
230A	Sterling City	99.89	60	⇓Pdiff	Pdif	02 30 47.8	-0.5
	baz=100						
MK31	Makanchi Array	99.90	316	P	Pdif	02 30 47.0	-0.9
MK31				pmax	pmax		
	comp=Z,23nm,1.2s						
MKAR	Makanchi Array	99.90	316	P	Pdif	02 30 46.9	-0.9
MKAR						02 34 56.7	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MKAR				MLR	MLR		
	comp=Z,5µm,21.9s						
MKAR	Makanchi Array	99.90	316	P	Pdif	02 30 46.9	-0.9
MKAR				PP	PP	02 34 56.7	+3.5
MKAR				PKKPbc	PKKPbc	02 47 05.5	-3.5
MKAR	Makanchi Array	99.90	316	P	Pdif	02 30 46.9	-0.9
	comp=Z,0.6nm,0.5s,baz=111,slow=3.7,SNR=7.0						
MKAR				PP	PP	02 34 56.7	+3.5
	comp=Z,5.0nm,1.1s,baz=96,slow=7.6,SNR=5.2						
MKAR				PKKPbc	PKKPbc	02 47 05.5	-3.5
	comp=Z,2.1nm,0.9s,baz=280,slow=3.8,SNR=6.6						
MKAR				LR	LR	03 14 09.5	
	comp=Z,5µm,21.9s,baz=96,slow=34						
YKA	Yellowknife Ar	99.91	27	P	Pdif	02 30 45.9	-1.6
YKA				PP	PP	02 35 03.9	+11
YKA				PKiKP	PKiKP	02 35 13.5	-2.0
YKA				PKKPbc	PKKPbc	02 47 08.9	-0.6
YKA	Yellowknife Ar	99.91	27	P	Pdif	02 30 45.9	-1.6
	comp=Z,2.3nm,0.7s,baz=253,slow=4.6,SNR=16						
YKA				PP	PP	02 35 03.8	+11
	comp=Z,1.2nm,1.0s,baz=248,slow=7.1,SNR=4.2						
YKA				PKiKP	PKiKP	02 35 13.5	-2.0
	comp=Z,0.7nm,0.7s,baz=252,slow=1.4,SNR=8.0						
YKA				PKKPbc	PKKPbc	02 47 08.9	-0.6
	comp=Z,0.4nm,0.7s,baz=63,slow=2.6,SNR=4.4						
T27A	Campo	99.92	54	⇓Pdiff	Pdif	02 30 48.8	+0.4
	baz=100						
531A	Rocksprings	99.92	62	⇑Pdiff	Pdif	02 30 48.8	+0.4
	baz=100						
Y29A	Porterfield Fa	99.94	58	⇓Pdiff	Pdif	02 30 48.6	+0.2
	baz=100						
S27A	Las Animas	99.94	54	⇑Pdiff	Pdif	02 30 48.7	+0.3
	baz=100						
V28A	Channing	99.97	56	⇑Pdiff	Pdif	02 30 48.8	+0.2
	baz=100						
E22A	Miles City	100.00	44	⇑Pdiff	Pdif	02 30 49.0	+0.6
	baz=100						
431A	Sonora	100.00	61	⇑Pdiff	Pdif	02 30 48.0	-0.7
	baz=100						
EFI	East Falkland	100.02	153	PFAKE		02 31 00.0	+12
EFI				LR	LR		
	comp=Z,4µm,20.0s						
M25A	Palm-Egli Farm	100.03	50	⇑Pdiff	Pdif	02 30 49.0	+0.2
	baz=100						
D22A	Cohagen	100.03	44	⇓Pdiff	Pdif	02 30 49.2	+0.8
	baz=100						
A21A	Bergtoll Ranch	100.03	42	⇑Pdiff	Pdif	02 30 49.3	+0.8
	baz=100						
732A	Laxson Ranch,	100.04	63	⇑Pdiff	Pdif	02 30 49.3	+0.4
	baz=100						
G23A	Biddle	100.05	46	⇑Pdiff	Pdif	02 30 49.7	+1.0
	baz=100						
X29A	Tulia	100.06	57	⇑Pdiff	Pdif	02 30 49.6	+0.7
	baz=100						
P26A	Davis Ranch, A	100.07	52	⇓Pdiff	Pdif	02 30 49.6	+0.6
	baz=100						
J24A	Dixon Ranch, L	100.08	48	⇓Pdiff	Pdif	02 30 49.3	+0.5
	baz=100						
U28A	Mallet	100.13	55	⇑Pdiff	Pdif	02 30 50.1	+0.8
	baz=100						
R27A	Eads	100.17	53	⇑Pdiff	Pdif	02 30 50.1	+0.7
	baz=100						
F23A	Volborg	100.17	45	⇑Pdiff	Pdif	02 30 50.0	+0.8
	baz=100						
AMTX	Amarillo	100.18	57	PFAKE		02 31 00.0	+10
AMTX				LR	LR		
	comp=Z,5µm,19.0s						
130A	Snyder	100.19	59	⇑Pdiff	Pdif	02 30 49.6	+0.1
	baz=100						
Z30A	Sanderson Ranc	100.23	58	⇓Pdiff	Pdif	02 30 49.7	-0.1
	baz=100						
I24A	Kuemmerle Ranc	100.23	47	⇑Pdiff	Pdif	02 30 50.2	+0.6
	baz=100						
ZALV	Zalesovo Beam	100.27	323	P	Pdif	02 30 48.6	-0.7
ZALV						02 35 01.2	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	Zalesovo Beam	100.27	323	P	Pdif	02 30 48.6	-0.7
ZALV				PP	PP	02 35 01.2	+5.5
ZALV	Zalesovo Beam	100.27	323	P	Pdif	02 30 48.6	-0.7
	comp=Z,1.4nm,0.5s,baz=100,slow=4.4,SNR=8.7						
ZALV				PP	PP	02 35 01.2	+5.5
	comp=Z,0.7nm,0.3s,baz=123,slow=5.5,SNR=3.9						
O26A	Horse Wrangler	100.27	51	⇑Pdiff	Pdif	02 30 50.3	+0.5
	baz=100						
W29A	Amraillo	100.27	56	⇓Pdiff	Pdif	02 30 50.1	+0.2
	baz=100						
L25A	Engebretsen Ra	100.27	49	⇑Pdiff	Pdif	02 30 50.1	+0.3
	baz=100						
331A	San Angelo	100.31	60	⇑Pdiff	Pdif	02 30 50.8	+0.7
	baz=100						
C22A	Vida	100.38	43	⇑Pdiff	Pdif	02 30 51.3	+1.3
	baz=100						
632A	Uvalde	100.40	62	⇓Pdiff	Pdif	02 30 51.3	+0.8
	baz=100						
T28A	Walsh	100.40	54	⇑Pdiff	Pdif	02 30 51.3	+0.8
	baz=101						
E23A	Ismay	100.44	45	⇓Pdiff	Pdif	02 30 51.4	+1.1
	baz=101						
B22A	Reddig Ranch S	100.45	43	⇑Pdiff	Pdif	02 30 51.1	+0.8
	baz=101						
532A	Rocksprings	100.45	62	⇓Pdiff	Pdif	02 30 51.4	+0.6
	baz=101						
K25A	Mack Ranch, Ha	100.45	49	⇓Pdiff	Pdif	02 30 50.9	+0.3
	baz=101						
KSCO	Kaye Shedlock'	100.48	52	⇓Pdiff	Pdif	02 30 51.9	+1.1
	baz=101						
N26A	Koester Ranch,	100.48	50	⇓Pdiff	Pdif	02 30 51.4	+0.7
	baz=101						
H24A	Dirks Ranch, A	100.51	46	⇓Pdiff	Pdif	02 30 51.8	+1.0
	baz=101						
V29A	Stinnett	100.56	56	⇑Pdiff	Pdif	02 30 51.4	+0.2
	baz=101						
231A	Bronte	100.56	60	⇓Pdiff	Pdif	02 30 50.9	-0.3
	baz=101						
Y30A	Stafford Cattl	100.56	58	⇑Pdiff	Pdif	02 30 51.1	-0.1
	baz=101						
JCT	Junction City	100.62	61	PFAKE		02 31 00.0	+8.5
JCT				LR	LR		
	comp=Z,8µm,22.0s						
JCT	Junction City	100.62	61	⇑Pdiff	Pdif	02 30 51.7	+0.1
	baz=101						
P27A	Ficken Ranch,	100.65	52	⇓Pdiff	Pdif	02 30 51.3	-0.3
	baz=101						
A22A	Carney Farms,	100.68	42	⇓Pdiff	Pdif	02 30 51.8	+0.5
	baz=101						
D23A	Lindsay	100.68	44	⇑Pdiff	Pdif	02 30 52.0	+0.6
	baz=101						
131A	Roby	100.68	59	⇑Pdiff	Pdif	02 30 51.9	+0.2
	baz=101						
S28A	Manter	100.68	54	⇓Pdiff	Pdif	02 30 51.8	+0.1
	baz=101						
DHRM	DHARAMSHALA	100.69	300	*e*PKP	Pdif	02 30 51.3	-0.7
DHRM				AMB	AMB	02 31 06.5	
	comp=Z,13nm,4.5s						
M26A	McRoberts Ranc	100.70	50	⇓Pdiff	Pdif	02 30 52.1	+0.4
	baz=101						
X30A	Coker Ranch, T	100.72	57	⇑Pdiff	Pdif	02 30 51.8	0.0
	baz=101						
432A	Menard	100.73	61	⇓Pdiff	Pdif	02 30 52.2	+0.3
	baz=101						
G24A	Alzada	100.75	46	⇑Pdiff	Pdif	02 30 51.9	+0.2
	baz=101						
C23A	Lambert	100.85	43	⇑Pdiff	Pdif	02 30 52.7	+0.6
	baz=101						
F24A	Ekalaka	100.86	45	⇓Pdiff	Pdif	02 30 52.5	+0.3
	baz=101						
O27A	Beecher Island	100.88	51	⇓Pdiff	Pdif	02 30 52.8	+0.3
	baz=101						
L26A	Underwood Farm	100.88	49	⇑Pdiff	Pdif	02 30 52.9	+0.4
	baz=101						
U29A	Oasis Ranch, S	100.89	55	⇓Pdiff	Pdif	02 30 53.0	+0.3
	baz=101						
332A	Millersview	100.90	60	⇑Pdiff	Pdif	02 30 53.1	+0.4
	baz=101						
PAYG	Puerto Ayora	100.92	94	PFAKE		02 31 00.0	+6.8
PAYG				LR	LR		
	comp=Z,7µm,21.0s						
R28A	Tribune	100.93	53	⇓Pdiff	Pdif	02 30 53.5	+0.7
	baz=101						
K26A	Motz Farm, Whi	100.97	49	⇑Pdiff	Pdif	02 30 53.7	+0.8
	baz=101						
N27A	Anderson Farm,	100.98	51	⇓Pdiff	Pdif	02 30 53.1	+0.2
	baz=101						
Z31A	Sharp Cattle R	101.04	59	⇑Pdiff	Pdif	02 30 53.7	+0.5
	baz=101						
T29A	Hugoton	101.05	54	⇓Pdiff	Pdif	02 30 53.8	+0.5
	baz=101						
Q28A	Sharon Springs	101.09	52	⇑Pdiff	Pdif	02 30 54.0	+0.5
	baz=101						
Y31A	Rekieta Farm,	101.10	58	⇑Pdiff	Pdif	02 30 53.9	+0.4
	baz=101						
232A	Coleman	101.10	60	⇓Pdiff	Pdif	02 30 53.5	-0.1
	baz=101						
E24A	Baker	101.12	45	⇑Pdiff	Pdif	02 30 54.1	+0.7
	baz=101						
W30A	Crocket Farms	101.14	57	⇓Pdiff	Pdif	02 30 54.4	+0.7
	baz=101						
B23A	Brockton	101.14	43	⇑Pdiff	Pdif	02 30 53.5	+0.2
	baz=101						
V30A	Spur Ranch, Mi	101.19	56	⇓Pdiff	Pdif	02 30 54.4	+0.4
	baz=101						
D24A	Glendive	101.24	44	⇑Pdiff	Pdif	02 30 55.5	+1.6
	baz=101						
M27A	Reverse DX Ran	101.26	50	⇓Pdiff	Pdif	02 30 54.4	+0.2
	baz=101						
P28A	Saint Francis	101.27	52	⇑Pdiff	Pdif	02 30 54.8	+0.5
	baz=101						
ABTX	Abilene, Hawle	101.28	59	⇓Pdiff	Pdif	02 30 54.8	+0.4
	baz=101						
C24A	Savage	101.28	44	⇓Pdiff	Pdif	02 30 55.8	+1.8
	baz=101						
S29A	Ulysses	101.29	54	⇑Pdiff	Pdif	02 30 55.4	+1.0
	baz=101						
A23A	Redstone	101.33	42	⇑Pdiff	Pdif	02 30 55.1	+0.9
	baz=102						
O28A	Krutsinger Ran	101.39	51	⇓Pdiff	Pdif	02 30 55.0	+0.3
	baz=102						
OGNE	Ogallala	101.39	51	PFAKE		02 31 10.0	+15
OGNE				LR	LR		
	comp=Z,10µm,20.0s						
OGNE	Ogallala	101.39	51	⇑Pdiff	Pdif	02 30 56.1	+1.4
	baz=102						
NVS	Novosibirsk	101.39	324	*e*P	Pdif	02 30 53.1	-1.1
NVS				*e*		02 41 32.2	
NVS				*e*S	Sdif	02 42 36.0	+4.3
NVS				pmax	pmax		
	comp=Z,83nm,2.5s						
NVS				pmax	pmax		
	comp=N,7.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,13nm,1.4s						
NVS				pmax	pmax		
	comp=Z,85nm,2.6s						
NVS				pmax	pmax		
	comp=N,13nm,2.0s						
NVS				pmax	pmax		
	comp=E,33nm,2.5s						
NVS				smax	smax		
	comp=N,415nm,4.9s						
NVS				smax	smax		
	comp=E,362nm,4.0s						
U30A	WK&E Inc. Balk	101.40	55	⇑Pdiff	Pdif	02 30 54.8	0.0
	baz=102						
R29A	Marienthal	101.47	53	⇑Pdiff	Pdif	02 30 55.4	+0.3
	baz=102						
X31A	McDonald Ranch	101.48	57	⇑Pdiff	Pdif	02 30 54.8	-0.4
	baz=102						
Z32A	Haskell	101.57	59	⇑Pdiff	Pdif	02 30 56.1	+0.5
	baz=102						
T30A	Plains	101.62	55	⇓Pdiff	Pdif	02 30 56.2	+0.4
	baz=102						
W31A	Holland Ranch,	101.64	57	⇓Pdiff	Pdif	02 30 55.9	0.0
	baz=102						
K27A	Flueckinger Fa	101.65	49	⇓Pdiff	Pdif	02 30 56.3	+0.4
	baz=102						
DGMT	Dagmar	101.65	43	PFAKE		02 31 10.0	+14
DGMT				LR	LR		
	comp=Z,3µm,20.0s						
DGMT	Dagmar	101.65	43	⇓Pdiff	Pdif	02 30 56.3	+0.7
	baz=102						
N28A	Pribbeno Ranch	101.69	51	⇑Pdiff	Pdif	02 30 56.9	+0.8
	baz=102						
Y32A	R-V Farms, Ver	101.77	58	⇑Pdiff	Pdif	02 30 57.2	+0.7
	baz=102						
S30A	Montezuma	101.80	54	⇓Pdiff	Pdif	02 30 57.6	+1.0
	baz=102						
V31A	Spring Creek L	101.86	56	⇑Pdiff	Pdif	02 30 57.7	+0.9
	baz=102						
A24A	Westby	101.88	42	⇑Pdiff	Pdif	02 30 57.6	+0.9
	baz=102						
M28A	Bar X Bar Ranc	101.97	50	⇓Pdiff	Pdif	02 30 57.8	+0.4
	baz=102						
U31A	Nine Bar Ranch	101.99	56	⇓Pdiff	Pdif	02 30 58.3	+0.9
	baz=102						
R30A	Dighton	102.09	54	⇑Pdiff	Pdif	02 30 58.5	+0.6
	baz=102						
O29A	4D Ranch, Culb	102.11	52	⇓Pdiff	Pdif	02 30 58.4	+0.4
	baz=102						
T31A	Randall Ranch,	102.29	55	⇓Pdiff	Pdif	02 30 59.5	+0.8
	baz=102						
N29A	Votaw Ranch, W	102.39	51	⇓Pdiff	Pdif	02 30 59.7	+0.6
	baz=102						
WMOK	Wichita Mounta	102.47	57	PFAKE		02 31 10.0	+10
WMOK				LR	LR		
	comp=Z,5µm,19.0s						
M29A	Burnside Ranch	102.49	50	⇑Pdiff	Pdif	02 31 00.0	+0.4
	baz=103						
S31A	Mullinville	102.55	54	⇑Pdiff	Pdif	02 31 00.3	+0.4
	baz=103						
KSH	Kashi	102.64	308	*e*PKP		02 35 20.1	
KSH				LR	LR		
	comp=N,5µm,14.4s						
KSH				LR	LR		
	comp=E,7µm,17.6s						
KSH				LR	LR		
	comp=Z,7µm,20.0s						
AAA	Alma-Ata	102.73	312	*e*P	Pdif	02 31 00.0	-0.6
AAA				*e*S	SKSac	02 41 42.3	+4.5
AAA				pmax	pmax		
	comp=Z,900nm,14.9s						
AAA				smax	smax		
	comp=E,4µm,20.7s						
AAA				MLR	MLR		
	comp=Z,8µm,23.0s						
N30A	Hueftle Ranch,	102.78	51	⇑Pdiff	Pdif	02 31 01.6	+0.7
	baz=103						
WHTX	Lake Whitney	102.93	60	⇓Pdiff	Pdif	02 31 02.1	+0.5
	baz=103						
KURK	Kurchatov	103.18	319	P	Pdif	02 31 03.8	+1.5
KURK				*i*		02 35 21.1	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	Kurchatov	103.18	319	Pdif	Pdif	02 31 03.9	+1.5
KURK				PKiKP	PKiKP	02 35 21.1	-0.6
KURK				PKKPbc	PKKPbc	02 46 57.0	-2.5
KURK				LR	LR		
	comp=Z,7µm,20.0s						
RER	Riviere de l'E	103.19	243	PFAKE		02 31 10.0	+6.7
RER				LR	LR		
	comp=Z,12µm,21.0s						
KURBB	Kurchatov Arra	103.22	319	Pdiff	Pdif	02 31 03.8	+1.4
	comp=Z,0.6nm,0.6s,baz=110,slow=4.0,SNR=5.6						
KURBB				PKiKP	PKiKP	02 35 21.1	-0.7
	comp=Z,7.6nm,1.2s,baz=114,slow=1.9,SNR=6.4						
KURBB				PKKPbc	PKKPbc	02 46 57.0	-2.4
	comp=Z,2.6nm,0.8s,baz=281,slow=3.5,SNR=11						
TKM2	Tokmak 2	103.63	311	PFAKE		02 31 20.0	+15
TKM2				LR	LR		
	comp=Z,6µm,21.0s						
BHJ	Bhuj	104.28	290	*e*PKP	Pdif	02 31 06.8	-1.1
BHJ				AMB	AMB	02 32 29.1	
	comp=Z,63nm,1.3s						
FFC	Flin Flon	104.31	37	PFAKE		02 31 20.0	+13

FFC LR LR
comp=Z,11µm,21.0s
BRSD Miller 104.34 48 ⇑Pdiff **Pdif 02 31 08.1 +0.4**
baz=104
BGNE Belgrade 104.35 51 ⇑Pdiff **Pdif 02 31 08.0 +0.2**
baz=104
AAK Ala-Archa 104.37 311 PFAKE 02 31 20.0 +12
AAK LR LR
comp=Z,4µm,20.0s
MDND Maddock 104.53 44 ⇑Pdiff **Pdif 02 31 08.4 0.0**
baz=105
EKS2 Erkin-Say 104.89 310 PFAKE 02 31 20.0 +10
EKS2 LR LR
comp=Z,4µm,20.0s
KSU1 Kansas State U 105.07 53 PFAKE 02 35 40.0
KSU1 LR LR
comp=Z,11µm,20.0s
TUL1 Tulsa 105.10 57 ⇑Pdiff 02 35 25.6
baz=105
ECSD EROS Data Cent 105.88 49 *e*PKPdf Pdif 02 35 25.6
ECSD LR LR
comp=Z,12µm,20.0s
LCO Las Campanas 106.67 129 PFAKE 02 35 40.0
LCO LR LR
comp=Z,6µm,21.0s
AGMN Agassiz Nation 107.08 44 PFAKE 02 35 40.0
AGMN LR LR
comp=Z,7µm,20.0s
TRQA Tornquist 107.28 141 PFAKE 02 35 40.0
TRQA LR LR
comp=Z,3µm,19.0s
TGUH Tegucigalpa,Un 107.93 81 PFAKE 02 35 40.0
TGUH LR LR
comp=Z,5µm,19.0s
SCIA State Center 108.08 51 PFAKE 02 35 40.0
SCIA LR LR
comp=Z,12µm,20.0s
TEIG Tepich 108.43 74 PFAKE 02 35 40.0
TEIG LR LR
comp=Z,4µm,21.0s
BVAR Borovoye Array 108.56 321 P **Pdif 02 31 28.6 +2.4**
BVAR pmax pmax
comp=Z,3.0nm,0.9s
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR Borovoye Array 108.56 321 Pdif **Pdif 02 31 28.6 +2.4**
BVAR PKiKP **PKiKP 02 35 30.5 -1.2**
BVAR PKKPbc **PKKPbc 02 46 41.2 -1.8**
BVAR Borovoye Array 108.56 321 Pdiff **Pdif 02 31 28.6 +2.4**
comp=Z,0.4nm,0.7s,baz=72,slow=6.4,SNR=3.9
BVAR PKiKP **PKiKP 02 35 30.5 -1.2**
comp=Z,3.4nm,0.9s,baz=90,slow=1.4,SNR=6.9
BVAR PKKPbc **PKKPbc 02 46 41.2 -1.8**
comp=Z,0.9nm,0.6s,baz=310,slow=5.4,SNR=3.8
BRVK Borovoye 108.63 321 PFAKE 02 35 40.0
BRVK LR LR
comp=Z,6µm,19.0s
VBMS Vicksburg 108.75 61 PFAKE 02 35 40.0
VBMS LR LR
comp=Z,8µm,19.0s
SPMN St. Paul 108.79 47 ⇑Pdiff 02 35 33.4
baz=105
JTS JuntasAbangare 109.17 85 PFAKE 02 35 50.0
JTS LR LR
comp=Z,13µm,19.0s
NNA Nana 109.47 110 PFAKE 02 35 50.0
NNA LR LR
comp=Z,6µm,21.0s
MSEY Mahe Island 109.85 258 PFAKE 02 35 50.0
MSEY LR LR
comp=Z,21µm,19.0s
EYMN Ely 109.95 45 PFAKE 02 35 50.0
EYMN LR LR
comp=Z,10µm,20.0s
OXF Oxford 110.02 59 PFAKE 02 35 50.0
OXF LR LR
comp=Z,10µm,19.0s
JFWS Jewell Farm 110.38 50 PFAKE 02 35 50.0
JFWS LR LR
comp=Z,20µm,21.0s
HDIL Hopedale 110.85 53 PFAKE 02 35 50.0
HDIL LR LR
comp=Z,9µm,20.0s
ABPO Ambohimpanom 111.30 241 PFAKE 02 35 50.0
ABPO LR LR
comp=Z,13µm,21.0s
LVC Limon Verde 111.36 124 PFAKE 02 35 50.0
LVC LR LR
comp=Z,5µm,20.0s
BRAL Brewton 111.48 63 PFAKE 02 35 50.0
BRAL LR LR
comp=Z,6µm,20.0s
LRAL Lakeview Retre 111.81 61 PFAKE 02 35 50.0
LRAL LR LR
comp=Z,5µm,22.0s
OTAV Otavalo 112.43 97 PFAKE 02 35 50.0
OTAV LR LR
comp=Z,8µm,20.0s
SFIN Scholer Farm 112.50 53 ⇓Pdiff 02 35 39.7
baz=113
BCIP Isla Barro Col 113.74 88 PFAKE 02 35 50.0
BCIP LR LR
comp=Z,3µm,19.0s
SVE Sverdlovsk 114.21 325 *e*PKIKP PKPdf 02 35 39.9 -2.3
SVE pmax pmax
comp=Z,18nm,1.2s
TIGA Tifton 114.48 63 ⇓Pdiff PKPdf 02 35 43.7 +0.2
baz=115
IMYA Miami 114.57 302 *e*P PKPdf 02 35 42.8 -1.0
ABKAR Akbulak array 115.03 317 *e*PKPdf **PKPdf 02 35 43.8 -0.2**
ISRO Mashad 115.08 302 *e*P **PKPdf 02 35 41.0 -3.7**
IKOO Kooshah 115.12 298 *e*P **PKPdf 02 35 43.5 -1.6**
LPAZ La Paz 115.15 118 PKP **PKPdf 02 35 46.2 +0.1**
LPAZ La Paz 115.15 118 PKP **PKPdf 02 35 46.2 +0.1**
comp=Z,1.2nm,0.6s,baz=223,slow=3.4,SNR=6.5
ARU Arti 115.39 325 *i* PKIKP **PKPdf 02 35 44.2 -0.3**
ARU 02 36 44.8
ARU PPP PPP 02 39 09.5
ARU SP SP 02 46 20.8 -0.7
ARU PS **PS 02 46 28.2 +1.6**
IPAY Payeh 115.47 302 *e*P **PKPdf 02 35 42.6 -3.0**
ACSO Alum Creek Sta 115.64 53 PFAKE 02 36 00.0 +14
ACSO LR LR
comp=Z,7µm,19.0s
AKTO Aktyubinsk 116.22 318 PKIKP **PKPdf 02 35 45.1 -1.2**
AKTO pmax pmax
comp=Z,14nm,1.3s
AKTO Aktyubinsk 116.22 318 PKP **PKPdf 02 35 45.9 -0.4**
AKTO Aktyubinsk 116.22 318 PKP **PKPdf 02 35 45.9 -0.4**
comp=Z,4.5nm,0.6s,baz=116,slow=4.3,SNR=15
KMSC Kings Mountain 116.69 59 ⇑Pdiff **PKPdf 02 35 48.2 +0.5**
baz=117
NHSC New Hope 117.51 61 PFAKE 02 36 00.0 +11
NHSC LR LR
comp=Z,7µm,22.0s
BLA Blacksburg 117.53 57 PFAKE 02 36 00.0 +11
BLA LR LR
comp=Z,5µm,20.0s
KBS Kingsbay 117.79 355 *e*PKPdf **PKPdf 02 35 49.0 +0.4**
KBS *e*PP **PP 02 37 02.0 -0.1**
KBS *e*SS SS 02 53 14.3 +2.2
KBS AMS AMS 03 26 44.9
comp=Z,4µm,16.2s
KBS Kingsbay 117.79 355 PFAKE 02 36 00.0 +11
KBS LR LR
comp=Z,4µm,19.0s
CPUP Villa Florida 117.84 134 PKP **PKPdf 02 35 48.5 -1.7**
CPUP Villa Florida 117.84 134 PKP **PKPdf 02 35 48.5 -1.7**
comp=Z,3.0nm,0.8s,baz=220,slow=3.1,SNR=4.6
ERPA Erie 117.92 51 PFAKE 02 36 00.0 +10
ERPA LR LR
comp=Z,8µm,19.0s
MTDJ Mount Denham 117.97 78 PFAKE 02 36 00.0 +9.3
MTDJ LR LR
comp=Z,3µm,20.0s
SPITS Spitsbergen Ar 118.03 354 PKP **PKPdf 02 35 48.6 -0.5**
SPITS Spitsbergen Ar 118.03 354 PKP **PKPdf 02 35 48.6 -0.5**
comp=Z,13nm,0.7s,baz=17,slow=2.0,SNR=20
IMEH Mehriz 118.76 296 *e*P **PKPdf 02 35 49.6 -2.5**
ICHK Chekchek 118.99 297 *e*P PKPdf 02 35 43.5 -9.0
CNNC Cliffs of the 119.51 59 PFAKE 02 36 00.0 +6.9
CNNC LR LR
comp=Z,8µm,19.0s
IGLO Ghaloghah 119.63 302 *e*P PKPdf 02 35 45.1 -8.5
IKIA Kiasar 119.75 302 *e*P **PKPdf 02 35 49.8 -4.1**

ISRV Sarvestan 119.90 294 *e*P **PKPdf 02 35 54.5 0.0**
CBN Corbin 119.96 56 PFAKE 02 36 10.0 +16
CBN LR LR
comp=Z,8µm,22.0s
IALA Alasht 120.45 302 *e*P **PKPdf 02 35 53.8 -1.5**
GTBY Guantanamo Bay 120.53 77 PFAKE 02 36 10.0 +15
GTBY LR LR
comp=Z,4µm,19.0s
IZEF Zefreh 120.77 298 *e*P **PKPdf 02 35 52.5 -3.5**
IPRN Peran 120.83 302 *e*P **PKPdf 02 35 54.1 -1.7**
DAG Danmarks Havn 120.88 2 *i* PKIKP **PKPdf 02 35 53.0 -1.5**
DAG *i* 02 37 23.2
DAG *i* S **PS 02 47 14.5 -1.0**
DAG pmax pmax
comp=Z,6.0nm,1.0s
DAG MLR MLR
comp=Z,5µm,22.0s
DAG Danmarks Havn 120.88 2 *i* P **PKPdf 02 35 53.0 -1.5**
comp=Z,6.2nm,1.0s
DAG *i* 02 37 23.2
DAG
comp=Z,4µm,22.0s
BINY Binghamton 120.89 51 PFAKE 02 36 10.0 +14
BINY LR LR
comp=Z,8µm,19.0s
SUR Sutherland 121.07 212 PFAKE 02 36 10.0 +13
SUR LR LR
comp=Z,7µm,19.0s
SIV San Ignacio 121.13 122 PKP **PKPdf 02 35 56.0 -0.8**
SIV San Ignacio 121.13 122 PKP **PKPdf 02 35 56.0 -0.8**
comp=Z,3.5nm,0.8s,baz=294,slow=1.1,SNR=6.9
IVRN Varamin 121.32 301 *e*P **PKPdf 02 35 54.6 -2.1**
BOSA Boshof 121.49 219 PKP **PKPdf 02 35 57.2 -0.2**
BOSA *e*PKPdf **PKiKP 02 35 57.7 +0.1**
BOSA Boshof 121.49 219 PKP **PKPdf 02 35 57.2 -0.2**
comp=Z,5.9nm,0.9s,baz=117,slow=1.6,SNR=5.7
LONY Lake Ozonia 121.70 48 PFAKE 02 36 10.0 +13
LONY LR LR
comp=Z,14µm,20.0s
NCB Newcomb 122.03 49 *e*PKPdf **PKPdf 02 35 57.4 -0.3**
NCB LR LR
comp=Z,19µm,21.0s
APA Apatity 122.49 341 ⇑ *i* PKIKP **PKPdf 02 35 58.0 +0.2**
APA *i* 02 37 35.0
APA *e*PS **PS 02 47 25.0 -5.0**
APA *e*PPS PPS 02 48 50.0
APA *i* SS SS 02 54 09.0 -3.7
APA MLR MLR
comp=Z,7µm,22.0s
IGZV Ghazvin 122.54 302 *e*P **PKPdf 02 35 58.7 -0.5**
IRAZ Razeghan 122.80 301 *e*P **PKPdf 02 35 57.4 -2.3**
KEV Kevo 122.84 345 *e*p **PKPdf 02 35 57.3 -1.2**
comp=Z,12nm,0.7s
KEV Kevo 122.84 345 *e*PKIKP **PKPdf 02 35 57.3 -1.2**
KEV pmax pmax
comp=Z,12nm,0.7s
KEV Kevo 122.84 345 PFAKE 02 36 10.0 +12
KEV LR LR
comp=Z,8µm,20.0s
SAML Samuel 122.88 114 *e*PKPdf **PKPdf 02 35 58.8 -1.4**
SAML LR LR
comp=Z,6µm,20.0s
SUMG Summit 123.12 9 *i* PKIKP **PKPdf 02 35 59.3 -0.2**
SUMG *i* S **PS 02 47 34.9 -1.4**
SUMG pmax pmax
comp=Z,12nm,1.0s
SUMG MLR MLR
comp=Z,6µm,21.0s
SUMG Summit 123.12 9 *e*PKPdf **PKPdf 02 35 58.8 -0.7**
SUMG Summit 123.12 9 *i* P **PKPdf 02 35 59.3 -0.2**
comp=Z,12nm,1.0s
SUMG *i* 02 37 34.4
SUMG
comp=Z,6µm,21.0s
ARCES ARCESS Array B 123.37 345 PKP **PKPdf 02 35 59.0 -0.5**
ARCES ARCESS Array B 123.37 345 PKP **PKPdf 02 35 59.0 -0.5**
comp=Z,15nm,0.6s,baz=59,slow=2.1,SNR=45
ARE0 ARCESS Array S 123.37 345 *e*PKPdf **PKPdf 02 35 59.3 -0.2**
LBNH Lisbon 123.64 48 PFAKE 02 36 10.0 +9.2
LBNH LR LR
comp=Z,14µm,20.0s
KLMR Klimovskoe 123.72 333 *e*PKIKP **PKPdf 02 35 57.9 -2.5**
KLMR SP SP 02 47 29.1 -6.6
KLMR SS **SS 02 54 23.8 -4.9**
KLMR pmax pmax
comp=Z,93nm,1.4s
LBTB Lobatse 123.89 222 *e*PKPdf **PKPdf 02 36 02.3 +0.3**
SDDR Presa de Saban 123.94 79 PFAKE 02 36 10.0 +7.9
SDDR LR LR
comp=Z,9µm,19.0s
MAK Makhachkala 124.15 310 *e*P **Pdif 02 32 35.3 -0.4**
MAK *e* 02 36 00.2
MAK *e* 02 37 42.5
MAK *e*PPP PPP 02 40 25.2
MAK *e* 02 43 00.5
MAK *e* 02 43 09.5
MAK *e*SP SP 02 47 46.1 +5.3
MAK pmax pmax
comp=Z,148nm,1.2s
MAK MLR MLR
comp=Z,6µm,24.0s
KTK1 Kautokeino 124.31 345 *e*P **PKPdf 02 36 00.9 -0.4**
KTK1 *e*PP **PP 02 37 45.5 -1.2**
KTK1 *e*SS SS 02 54 35.8 +0.2
KTK1 AMS AMS 03 32 46.8
comp=Z,11µm,20.0s
SCHQ Schefferville 124.39 35 *e*PKPdf **PKPdf 02 36 01.2 -0.7**
SCHQ PKP **PKPdf 02 36 01.3 -0.6**
SCHQ Schefferville 124.39 35 PKP **PKPdf 02 36 01.3 -0.6**
comp=Z,11nm,0.9s,baz=228,slow=2.5,SNR=8.7
ISRB Sarab 124.52 304 *e*P **PKPdf 02 36 00.7 -2.2**
RDF Al-Radifah 124.73 293 *e*P **PKPdf 02 36 03.3 -0.1**
RDF AMb AMB 02 36 17.5
comp=Z,138nm,1.1s
TRO Tromso 124.79 347 *e*P **PKPdf 02 36 02.1 -0.1**
TRO *e*PP **PP 02 37 49.1 -0.8**
TRO *e*SS SS 02 54 40.8 -0.8
TRO AMS AMS 03 33 18.0
comp=Z,5µm,19.3s
SFJD Kangerlussuaq 124.86 17 PFAKE 02 36 10.0 +7.6
SFJD LR LR
comp=Z,7µm,19.0s
SFJD Kangerlussuaq 124.86 17 *i* P **PKPdf 02 36 03.2 +0.8**
comp=Z,11nm,1.0s
SFJD *i* 02 37 52.1
SFJD
comp=Z,5µm,19.0s
MIB Mutribah 124.94 294 *e*P **PKPdf 02 36 03.1 -0.6**
MIB AMb AMB 02 36 07.8
comp=Z,64nm,1.1s
IHRS Heris 124.98 305 *e*P **PKPdf 02 36 03.2 -0.6**
NAY Al-Naaiem 125.01 294 *e*P **PKPdf 02 36 03.2 -0.6**
NAY AMb AMB 02 36 07.8
comp=Z,20nm,1.0s
PQI Presque Isle 125.92 45 *e*PKPdf **PKPdf 02 36 03.9 -1.2**
DGRG David-gareji 125.92 309 P **PKPdf 02 36 06.8 +1.5**
JOF Joensuu 125.97 337 *e*p **PKPdf 02 36 03.3 -1.3**
comp=Z,17nm,0.8s
JOF Joensuu 125.97 337 *e*PKIKP **PKPdf 02 36 03.3 -1.3**
JOF pmax pmax
comp=Z,17nm,0.8s
ISHB Shabestar 126.10 305 *e*P **PKPdf 02 36 05.4 -0.6**
SPB Sao Paulo 126.24 139 PFAKE 02 36 20.0 +14
SPB LR LR
comp=Z,3µm,19.0s
VRHR Novokhopersk 126.31 321 *e*PKIKP **PKPdf 02 36 05.2 -0.4**
VRHR *i* 02 36 17.8
VRHR *e* 02 37 57.3
VRHR pmax pmax
comp=Z,520nm,5.2s
VRHR pmax pmax
comp=N,320nm,4.5s
VRHR pmax pmax
comp=E,320nm,7.9s
TBLG Delisi 126.35 309 P **PKPdf 02 36 04.8 -1.3**
TBLG Delisi 126.35 309 *e*PKIKP **PKPdf 02 36 04.8 -1.3**
GUDG Gudauri 126.43 310 P **PKPdf 02 36 06.8 +0.3**
GNI Garni 126.57 307 PKP **PKPdf 02 36 06.1 -0.7**
GNI *e*PKPdf **PKiKP 02 36 06.2 -1.0**
GNI LR LR
comp=Z,3µm,20.0s
GNI Garni 126.57 307 PKP **PKPdf 02 36 06.1 -0.7**
comp=Z,5.2nm,0.5s,baz=153,slow=21,SNR=4.6
KZR Kazreti 126.64 309 P PKPdf 02 36 15.0 +8.3

JMIC Jan Mayen 126.76 359 *e*PKPdf **PKPdf 02 36 09.3 +3.4**
JMIC *e*PP **PP 02 38 02.1 -0.8**
GOR Gori 126.77 309 P PKPdf 02 36 16.3 +9.4
MOS Moscow 126.84 327 *e*PKIKP **PKPdf 02 36 05.7 -0.8**
MOS *e* 02 36 18.2
MOS *e* 02 38 05.0
MOS *e*SS SS 02 55 10.0 +1.8
MOS pmax pmax
comp=Z,44nm,1.2s
SCO Scoresbysund 126.96 4 *i* PKIKP **PKPdf 02 36 06.9 +0.6**
SCO pmax pmax
comp=Z,10.0nm,1.0s
SCO MLR MLR
comp=Z,2µm,28.0s
SCO Scoresbysund 126.96 4 *i* P **PKPdf 02 36 06.9 +0.6**
comp=Z,9.6nm,1.0s
SCO
comp=Z,2µm,28.0s
ONI Oni 127.15 310 P **PKPdf 02 36 08.6 +1.0**
AKH Akhalkalaki 127.32 309 P **PKPdf 02 36 11.6 +3.4**
KBZ Khabaz 127.34 312 PKIKP **PKPdf 02 36 07.8 0.0**
KBZ pmax pmax
comp=Z,6.0nm,1.0s
KBZ Khabaz 127.34 312 PKP **PKPdf 02 36 07.8 0.0**
KBZ Khabaz 127.34 312 PKP **PKPdf 02 36 07.8 0.0**
comp=Z,5.8nm,1.0s,baz=34,slow=3.6,SNR=7.7
KIV Kislovodsk 127.44 312 *e*P **Pdif 02 32 49.0 -1.5**
KIV *i* 02 36 07.3
KIV *e* 02 38 04.7
KIV *e*PS **PS 02 48 10.3 -4.6**
KIV *e*SS SS 02 55 15.0 -2.0
KIV pmax pmax
comp=Z,30nm,1.1s
KIV MLR MLR
comp=Z,4µm,22.0s
BHD Baghdad 127.44 299 *i* PKP PKPdf 02 36 36.7 +28
BHD *i* PP PP 02 37 59.5 -10
BHD *i* PPP PPP 02 41 32.0
BHD *i* SKS SKSdf 02 42 59.0 -19
BHD *i* SKKS **SKSac 02 43 14.0 +1.4**
BHD *i* Sdif **SKKSac 02 45 01.0 -3.1**
OBN Obninsk 127.65 327 ⇓ *i* PKIKP **PKPdf 02 36 07.9 -0.1**
OBN *e* 02 36 16.0
OBN *e* 02 36 21.2
OBN *e*PS **PS 02 48 11.5 -4.4**
OBN *e*SS SS 02 55 14.6 -3.7
OBN pmax pmax
comp=Z,103nm,1.7s
VSR Storozhevoye 127.73 322 *e*PKIKP **PKPdf 02 36 08.3 -0.1**
VSR *i* 02 36 20.5
VSR *e* 02 38 07.9
VSR pmax pmax
comp=Z,20nm,0.8s
VSR pmax pmax
comp=N,7.0nm,1.0s
VSR pmax pmax
comp=E,9.0nm,0.4s
VSR pmax pmax
comp=Z,720nm,5.8s
VSR pmax pmax
comp=N,220nm,4.3s
VSR pmax pmax
comp=E,340nm,4.1s
VSR MLR MLR
comp=Z,6µm,19.0s
VSR MLR MLR
comp=N,1µm,23.0s
VSR MLR MLR
comp=E,2µm,17.0s
VORD Divnogorie 127.74 321 *e*PKIKP **PKPdf 02 36 11.6 +3.2**
VORD *i* 02 36 21.1
VORD *e* 02 38 07.9
VORD pmax pmax
comp=Z,70nm,1.3s
VORD pmax pmax
comp=N,20nm,0.4s
VORD pmax pmax
comp=E,40nm,1.6s
VORD pmax pmax
comp=Z,820nm,5.9s
VORD pmax pmax
comp=N,170nm,3.0s
VORD pmax pmax
comp=E,470nm,4.1s
VORD MLR MLR
comp=N,3µm,21.0s
VORD MLR MLR
comp=Z,4µm,21.0s
VORD MLR MLR
comp=E,4µm,19.0s
KMBO Kilima Mbogo 128.04 254 *e*PKPdf **PKPdf 02 36 10.1 -0.3**
KMBO LR LR
comp=Z,17µm,19.0s
KMBO Kilima Mbogo 128.04 254 PKP **PKPdf 02 36 10.1 -0.3**
comp=Z,9.4nm,1.1s,baz=21,slow=1.4,SNR=11
CHVG Ch'k'valeri 128.12 311 P **PKPdf 02 36 10.0 +0.6**
KAF Kangasniemi 128.28 338 *e*p **PKPdf 02 36 06.6 -2.5**
comp=Z,5.5nm,0.5s
KAF Kangasniemi 128.28 338 *e*PKIKP **PKPdf 02 36 06.6 -2.5**
KAF pmax pmax
comp=Z,6.0nm,0.5s
LSZ Lusaka 128.56 233 *e*PKPdf **PKPdf 02 36 11.3 +0.1**
LSZ LR LR
comp=Z,12µm,20.0s
SJG San Juan 128.62 81 PFAKE 02 36 20.0 +9.0
SJG LR LR
comp=Z,3µm,21.0s
FINES FINESS Array B 128.81 338 PKP **PKPdf 02 36 09.4 -0.7**
FINES FINESS Array B 128.81 338 PKP **PKPdf 02 36 09.4 -0.7**
comp=Z,12nm,0.8s,baz=45,slow=2.2,SNR=17
SOC Sochi 129.62 312 *e*P **Pdif 02 33 04.8 +4.7**
SOC *i* 02 36 13.2
SOC *e* 02 36 24.4
SOC *e* 02 38 26.6
SOC *e*SS SS 02 55 34.5 -9.2
SOC *e*SSS SSS 03 00 31.3
SOC pmax pmax
comp=Z,39nm,1.3s
SOC MLR MLR
comp=Z,3µm,20.0s
DESE Dese 129.71 270 *e*P **PKPdf 02 36 14.1 +0.5**
BBSR BB Station 130.55 62 PFAKE 02 36 30.0 +16
BBSR LR LR
comp=Z,4µm,20.0s
ANN Anapa 130.88 314 *i* PKIKP **PKPdf 02 36 12.4 -2.1**
ANN *e* 02 38 29.3
ANN *e*PS **PS 02 48 38.3 -6.2**
ANN *e*SS SS 02 55 55.2 -3.8
ANN pmax pmax
comp=Z,40nm,1.7s
ANN MLR MLR
comp=N,2µm,22.0s
ANN MLR MLR
comp=E,3µm,22.0s
ANN MLR MLR
comp=Z,4µm,22.0s
BDFB Brasilia 131.37 131 PKP **PKPdf 02 36 15.9 -0.6**
BDFB Brasilia 131.37 131 PKP **PKPdf 02 36 15.9 -0.6**
comp=Z,12nm,1.0s,baz=186,slow=3.2,SNR=6.0
GRGR Grenville 131.78 89 PFAKE 02 36 30.0 +13
GRGR LR LR
comp=Z,3µm,21.0s
TBLU Trondheim 132.05 347 *e*P PKPdf 02 36 10.0 -6.2
TBLU AMS AMS 03 30 59.0
comp=Z,3µm,19.6s
MICGM Minsk 132.31 330 *e*PKP **PKPdf 02 36 16.0 -1.0**
MICGM Minsk 132.31 330 *e* 02 46 12.0
MNK Minsk 132.34 330 *e*PKIKP **PKPdf 02 36 16.0 -1.0**
MNK *e* 02 38 38.0
MNK MLR MLR
comp=Z,16µm,20.0s
MNK MLR MLR
comp=N,10µm,20.0s
IDID Didziasalis 132.38 331 *e*P **PKPdf 02 36 16.4 -0.7**
IDID AMB AMB 02 36 31.5
comp=Z,16nm,1.0s
ISAL Salakas 132.51 332 *e*P **PKPdf 02 36 17.0 -0.3**
ISAL AMB AMB 02 36 31.7
comp=Z,16nm,1.2s
IIGN Ignalina 132.60 331 *e*P **PKPdf 02 36 17.1 -0.3**
IIGN AMB AMB 02 36 31.9
comp=Z,23nm,1.3s
IIGN Ignalina 132.60 331 *e*P **PKKPdf 02 46 08.2 -3.7**
BORG Borgarnes 132.65 5 PFAKE 02 36 30.0 +13
BORG LR LR

ANWB Willy Bob 132.67 82 PFAKE 02 36 30.0 +11
ANWB LR LR
comp=Z,2µm,19.0s
FDF Fort de France 132.79 86 PFAKE 02 36 30.0 +11
FDF LR LR
comp=Z,3µm,19.0s
SIM Simferopol' 133.07 316 *i* PKIKP **PKPdf 02 36 17.5 -1.2**
TSUM Tsumeb 133.16 220 *e*PKPdf **PKPdf 02 36 20.6 +0.8**
TSUM LR LR
comp=Z,10µm,19.0s
MOL Molde 133.23 348 *e*P **PKPdf 02 36 22.2 +3.7**
MOL AMS AMS 03 44 05.8
comp=Z,3µm,19.3s
AKASG Malin Array Be 133.64 325 PKIKP **PKPdf 02 36 18.9 -0.7**
AKASG pmax pmax
comp=Z,9.0nm,0.9s
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 133.64 325 PKP **PKPdf 02 36 18.9 -0.7**
AKASG SKPbc **SKPab 02 39 49.0 +0.9**
AKASG Malin Array Be 133.64 325 PKP **PKPdf 02 36 18.9 -0.7**
comp=Z,9.0nm,0.9s,baz=54,slow=2.3,SNR=17
AKASG SKPbc **SKPab 02 39 49.0 +0.9**
comp=Z,2.3nm,0.7s,baz=51,slow=2.6,SNR=7.2
AK01 Malin Array Si 133.65 325 *e*PKPdf **PKPdf 02 36 19.2 -0.4**
KIEV Kiev 133.66 325 *e*PKIKP **PKPdf 02 36 18.6 -1.0**
KIEV MLR MLR
comp=Z,7µm,19.0s
KIEV Kiev 133.66 325 *e*PKPdf **PKPdf 02 36 18.6 -1.0**
KIEV LR LR
comp=Z,7µm,19.0s
AK02 Malin Array Si 133.67 325 *e*PKPdf **PKPdf 02 36 19.2 -0.4**
NB2 NORSAR Subarra133.74 345 PKPdf **PKPdf 02 36 19.6 0.0**
comp=Z,26nm,1.2s,baz=31,slow=1.9
NB2 NORSAR Subarra133.74 345 PKPdf **PKPdf 02 36 19.6 0.0**
baz=31,slow=1.9
NOA NORSAR Array B133.74 345 PKP **PKPdf 02 36 19.6 0.0**
NOA SKPbc **SKPab 02 39 49.1 +0.9**
NOA NORSAR Array B133.74 345 PKP **PKPdf 02 36 19.6 0.0**
comp=Z,6.2nm,0.8s,baz=36,slow=1.9,SNR=15
NOA SKPbc **SKPab 02 39 49.1 +0.9**
comp=Z,7.2nm,1.1s,baz=33,slow=2.8,SNR=3.4
ASF Jabal al Asfar 133.81 298 PKP **PKPdf 02 36 20.6 0.0**
ASF Jabal al Asfar 133.81 298 PKP **PKPdf 02 36 20.6 0.0**
comp=Z,3.5nm,0.9s,baz=90,slow=3.1,SNR=6.4
HFS Hagfors 133.84 343 PKPpre 02 36 14.9
HFS PKP **PKPdf 02 36 19.0 -0.7**
HFS SKPbc **SKPab 02 39 48.5 0.0**
HFS Hagfors 133.84 343 PKhKP PKPpre 02 36 14.9
comp=Z,6.7nm,0.9s,baz=151,slow=3.3,SNR=4.1
HFS PKP **PKPdf 02 36 19.0 -0.7**
comp=Z,6.7nm,0.7s,baz=129,slow=3.9,SNR=9.3
HFS SKPbc **SKPab 02 39 48.5 0.0**
comp=Z,9.4nm,1.0s,baz=38,slow=2.6,SNR=6.8
NAO01 NORSAR Array S 133.99 345 *e*PKPdf **PKPdf 02 36 20.2 +0.3**
BBGH Gun Hill 134.00 89 PFAKE 02 36 30.0 +8.7
BBGH LR LR
comp=Z,8µm,21.0s
MBAR Mbarara 134.18 251 PKP **PKPdf 02 36 22.3 +0.4**
MBAR LR LR
comp=Z,1µm,21.0s
MBAR Mbarara 134.18 251 PKP **PKPdf 02 36 22.3 +0.4**
comp=Z,1.3nm,0.4s,baz=45,slow=2.9,SNR=4.4
HWQ Hawqa 134.34 301 *e*P **PKPdf 02 36 21.4 -0.2**
BHL Bhannes 134.63 300 *e*P **PKPdf 02 36 21.4 -0.7**
SUW Suwalki 134.81 331 *e*PKIKP **PKPdf 02 36 22.4 +0.7**
SUW Suwalki 134.81 331 *e*PKPdf **PKPdf 02 36 22.4 +0.7**
SUW Suwalki 134.81 331 *e*PKPdf **PKPdf 02 36 22.3 +0.7**
SUW *e*SS SS 02 56 52.2 +6.7
SUW LMZ LR 03 35 54.1
MMAI Mount Meron Ar 134.97 299 PKP **PKPdf 02 36 22.1 -0.6**
MMAI SKP 02 39 57.6
MMAI Mount Meron Ar 134.97 299 PKP **PKPdf 02 36 22.1 -0.6**
comp=Z,5.4nm,0.8s,baz=98,slow=4.4,SNR=6.8
MMAI SKP 02 39 57.6
comp=Z,0.6nm,0.3s,baz=98,slow=2.2,SNR=3.8
BR131 Keskin Array S 135.01 309 *e*PKPdf **PKPdf 02 36 22.5 -0.2**
BRTR Keskin Array B 135.01 309 PKP **PKPdf 02 36 22.6 -0.2**
BRTR Keskin Array B 135.01 309 PKP **PKPdf 02 36 22.6 -0.2**
comp=Z,7.0nm,1.1s,baz=76,slow=1.7,SNR=19
KONO Kongsberg 135.35 345 *e*P **PKPdf 02 36 23.9 +1.4**
KONO *e*PP **PP 02 38 57.5 -1.1**
KONO *e*SS SS 02 56 51.4 0.0
KONO AMS AMS 03 39 51.0
comp=Z,4µm,22.5s
KONO Kongsberg 135.35 345 PFAKE 02 36 30.0 +7.5
KONO LR LR
comp=Z,5µm,20.0s
ANTO Ankara 135.60 309 *e*PKIKP **PKPdf 02 36 24.3 +0.6**
ANTO MLR MLR
comp=Z,3µm,19.0s
ANTO Ankara 135.60 309 *e*PKPdf **PKPdf 02 36 24.3 +0.6**
ANTO LR LR
comp=Z,3µm,19.0s
SOFL Sornfelli, Far 135.62 357 AMS AMS 03 38 12.8
comp=Z,3µm,19.3s
KIS Kishinev 135.65 320 *e*PKP **PKPdf 02 36 26.0 +2.6**
comp=Z,1µm,14.0s
KIS Kishinev 135.65 320 *e*PP PP 02 39 00.0 -1.2
KIS Kishinev 135.65 320 *e*PKS 02 39 54.0
KIS *e*SKP 02 40 10.0
KIS Kishinev 135.65 320 *e*PS PS 02 49 26.0 +0.9
KIS *e*SS SS 02 56 46.0 -10
KIS *e*SSS SSS 02 58 44.0
KIS LRM MLR 03 43 24.0
comp=Z,6µm,20.0s
KIS Kishinev 135.65 320 *e*PKIKP **PKPdf 02 36 26.0 +2.6**
KIS *e* 02 36 39.0
KIS *e* 02 39 00.0
KIS *e*PS **PS 02 49 26.0 +0.9**
KIS pmax pmax
comp=Z,1µm,14.0s
KIS pmax pmax
comp=Z,1µm,14.0s
BER Bergen 135.66 348 *e*P **PKPdf 02 36 25.7 +2.6**
BER AMS AMS 03 42 12.9
comp=Z,4µm,18.7s
EIL Elat 135.71 294 PKP **PKPdf 02 36 23.4 -0.7**
EIL PP PP 02 39 13.3 +11
EIL Elat 135.71 294 PKP **PKPdf 02 36 23.4 -0.7**
comp=Z,6.5nm,0.8s,baz=50,slow=3.8,SNR=5.8
EIL PP PP 02 39 13.3 +11
comp=Z,14nm,1.0s,baz=106,slow=4.3,SNR=4.4
ODD1 Odda 135.82 347 *e*P **PKPdf 02 36 23.9 +0.4**
CSS Prodhromos 136.35 302 *e*PKPdf **PKPdf 02 36 23.5 -1.7**
CSS LR LR
comp=Z,5µm,19.0s
TLCR 136.45 318 ⇑PKIKP **PKPdf 02 36 26.5 +1.5**
TLCR 136.45 318 ⇑*i*P **PKPdf 02 36 26.5 +1.5**
HOMB Homborsund 136.84 344 *e*P **PKPdf 02 36 28.2 +2.9**
CFR Carcaliu 136.88 318 ⇑PKIKP **PKPdf 02 36 27.4 +1.6**
CFR Carcaliu 136.88 318 *i*P **PKPdf 02 36 27.4 +1.6**
LVV L'vov 136.93 326 *i* PKIKP **PKPdf 02 36 24.8 -1.0**
LVV *e* 02 36 37.7
LVV *e* 02 39 14.4
LVV *e* 02 43 30.5
TESR Tescani 137.19 321 ⇑*i*P **PKPdf 02 36 25.7 -0.7**
BEL Belsk 137.32 330 *e*PKPdf **PKPdf 02 36 26.6 +0.2**
BEL *e*SS SS 02 57 27.3 +12
BEL LMZ LR 03 32 04.1
BSD Bornholm Skovb 137.45 337 *i* PKIKP **PKPdf 02 36 24.2 -2.3**
BSD pmax pmax
comp=Z,16nm,0.9s
BSD MLR MLR
comp=Z,4µm,20.0s
BSD Bornholm Skovb 137.45 337 *i* P **PKPdf 02 36 24.2 -2.3**
comp=Z,16nm,0.9s
BSD
comp=Z,4µm,20.0s
BUR08 Bucovina Ar. S 137.48 323 *e*PKPdf **PKPdf 02 36 24.8 -2.2**
BURAR Bucovina Array 137.48 323 ⇓*i*P **PKPdf 02 36 27.6 +0.6**
PLOR Plostina 137.51 320 ⇑PKIKP PKPdf 02 36 33.3 +6.3
PLOR Plostina 137.51 320 ⇑*i*P PKPdf 02 36 33.3 +6.3
KWP Kalwaria Pacla 137.74 327 *e*PKIKP **PKPdf 02 36 27.7 +0.4**
KWP MLR MLR
comp=Z,7µm,20.0s
KWP Kalwaria Pacla 137.74 327 *e*PKPdf **PKPdf 02 36 27.7 +0.4**
KWP LR LR
comp=Z,7µm,20.0s
KWP Kalwaria Pacla 137.74 327 ⇓*i*P **PKPdf 02 36 27.5 +0.2**
KWP Kalwaria Pacla 137.74 327 *e*PKPdf **PKPdf 02 36 27.7 +0.4**
KWP *e*SS SS 02 57 22.4 +1.6
KWP LMZ LR 03 42 44.4

COP Copenhagen 137.86 340 *i* PKHKP PKPpre 02 36 19.5
COP MLR MLR
comp=Z,2µm,20.0s
COP Copenhagen 137.86 340 *i* P PKPdf 02 36 19.5 -7.7
COP
comp=Z,2µm,20.0s
ISP Isparta 137.88 307 PFAKE 02 36 40.0 +12
ISP LR LR
comp=Z,5µm,20.0s
GKP Gorka Klasztor 137.92 334 *e*PKPdf **PKPdf 02 36 28.6 +1.2**
GKP *e*SS SS 02 57 31.9 +10
GKP LMZ LR 03 39 44.6
MLR Muntele Rosu 138.11 320 PKP **PKPdf 02 36 26.8 -1.5**
MLR Muntele Rosu 138.11 320 ⇑*i*P **PKPdf 02 36 28.0 -0.3**
MLR Muntele Rosu 138.11 320 PKP **PKPdf 02 36 26.8 -1.5**
comp=Z,1.6nm,0.9s,baz=338,slow=2.6,SNR=10
LLD Lille Linde 138.22 339 *e*PKIKP **PKPdf 02 36 23.9 -4.0**
LLD pmax pmax
comp=Z,36nm,0.9s
MUD Monsted U'grnd 138.23 343 *e*PKHKP PKPpre 02 36 20.4
MUD MLR MLR
comp=Z,4µm,20.0s
KOLS Kolonicke sedl 138.38 326 *e*PKIKP **PKPdf 02 36 29.0 +0.5**
KOLS Kolonicke sedl 138.38 326 *e*PKP **PKPdf 02 36 29.0 +0.5**
UZH Uzhgorod 138.55 326 *e*PKIKP **PKPdf 02 36 24.5 -4.3**
UZH *i* 02 36 37.5
UZH *e* 02 39 14.7
UZH *e* 02 43 30.4
STHS Stebnicka Huta 138.63 327 *e*PKIKP **PKPdf 02 36 29.9 +1.0**
STHS Stebnicka Huta 138.63 327 *e*PKP **PKPdf 02 36 29.9 +1.0**
VOIR 138.69 320 ⇑PKIKP **PKPdf 02 36 31.5 +2.2**
VOIR 138.69 320 ⇑*i*P **PKPdf 02 36 31.5 +2.2**
TRPA Tarpa 138.70 325 ⇓*i*P **PKPdf 02 36 29.5 +0.4**
TRPA Tarpa 138.70 325 *e*PKPdf **PKPdf 02 36 29.4 +0.4**
CRVS Cervenica-Dubn 138.83 326 *e*PKHKP PKPpre 02 36 21.9
CRVS *e* 02 36 28.2
CRVS Cervenica-Dubn 138.83 326 *e* PKPpre 02 36 21.8
CRVS Cervenica-Dubn 138.83 326 *e*PKP **PKPdf 02 36 28.2 -1.1**
OJC Ojcow 138.85 329 *e*PKIKP **PKPdf 02 36 29.5 +0.2**
OJC *e*SS SS 02 57 37.4 +3.6
OJC Ojcow 138.85 329 *e*PKPdf **PKPdf 02 36 29.5 +0.2**
OJC *e* 02 40 08.6
OJC *e*SS SS 02 57 37.4 +3.6
OJC L L 03 42 47.4
comp=Z,5µm,19.5s
ARR Arges 138.98 320 ⇑*i*P **PKPdf 02 36 31.0 +1.2**
NIE Niedzica 139.10 328 *e*PKIKP **PKPdf 02 36 30.4 +0.6**
NIE Niedzica 139.10 328 *e*PKPdf **PKPdf 02 36 30.4 +0.6**
NIE *e* 02 40 08.0
NIE *e*SS SS 02 57 43.4 +6.5
DRGR 139.36 323 ⇑PKIKP PKPdf 02 36 25.8 -4.6
DRGR 139.36 323 ⇑*i*P PKPdf 02 36 25.8 -4.6
KECS Kecovo 139.60 327 *e*PKHKP PKPpre 02 36 24.6
KECS *e* 02 36 29.9
KECS Kecovo 139.60 327 *e* PKPpre 02 36 24.6
KECS Kecovo 139.60 327 *e*PKP **PKPdf 02 36 29.9 -0.8**
RAC Raciborz 139.71 330 *e*PKIKP **PKPdf 02 36 31.8 +0.9**
DEV Deva 139.75 322 ⇓PKIKP **PKPdf 02 36 31.3 +0.2**
DEV Deva 139.75 322 ⇓*i*P **PKPdf 02 36 31.3 +0.2**
OKC Ostrava-Krasne 139.90 330 *e*PKHKP PKPpre 02 36 24.7
OKC *e* 02 39 29.9
OKC MLR MLR
comp=Z,5µm,19.5s
OKC Ostrava-Krasne 139.90 330 *e*PKP PKPpre 02 36 24.7
OKC *e*pPKP **PKiKP 02 36 33.9 +0.3**
OKC *e*PP **PP 02 39 29.9 +2.6**
OKC AMS AMS 03 41 10.0
comp=Z,5µm,19.5s
MDO Dochfour 140.00 354 *e*P **PKPdf 02 36 28.2 -2.9**
MDO Dochfour 140.00 354 P **PKPdf 02 36 28.2 -2.9**
KAC Achnashellach 140.03 354 *e*P **PKPdf 02 36 27.5 -3.7**
KAC Achnashellach 140.03 354 P **PKPdf 02 36 27.5 -3.7**
KSP Ksiaz 140.06 332 *e*PKIKP **PKPdf 02 36 29.2 -2.3**
KSP *e*SS SS 02 57 48.0 +0.1
KSP MLR MLR
comp=Z,13µm,21.4s
KSP Ksiaz 140.06 332 *e*PKPdf **PKPdf 02 36 29.4 -2.1**
KSP *e*SS SS 02 57 57.8 +10
KSP LMZ LR 03 40 01.7
GZR Gura Zlata 140.09 321 ⇑PKIKP **PKPdf 02 36 32.1 +0.3**
GZR Gura Zlata 140.09 321 ⇑*i*P **PKPdf 02 36 32.0 +0.3**
MORC Moravsky Berou 140.23 330 *e*PKIKP **PKPdf 02 36 32.4 +0.5**
MORC Moravsky Berou 140.23 330 *e*PKPdf **PKPdf 02 36 32.4 +0.5**
MORC Moravsky Berou 140.23 330 ⇑*i*P **PKPdf 02 36 31.9 0.0**
PSZ Piszkesteto 140.26 326 *e*PKIKP **PKPdf 02 36 32.2 +0.2**
PSZ MLR MLR
comp=Z,6µm,20.0s
PSZ Piszkesteto 140.26 326 *e*PKPdf **PKPdf 02 36 32.2 +0.2**
PSZ LR LR
comp=Z,6µm,20.0s
PSZ Piszkesteto 140.26 326 ⇑*i*P PKPdf 02 36 26.8 -5.2
PSZ Piszkesteto 140.26 326 *e*PKPdf **PKPdf 02 36 32.8 +0.8**
KRLC Kraliky 140.38 331 *e*PKHKP PKPpre 02 36 24.5
KRLC Kraliky 140.38 331 *e*PKP PKPpre 02 36 24.5
DPC Dobruska-Polom 140.40 332 AMS AMS 03 43 00.0
comp=Z,6µm,18.5s
UPC Upice 140.43 332 *e*PKHKP PKPpre 02 36 25.8
UPC *e* 02 36 32.0
UPC Upice 140.43 332 *e*PKP PKPpre 02 36 25.8
UPC *e*x x 02 36 32.0
VYHS Vyhne 140.44 328 *e*PKHKP PKPpre 02 36 25.1
VYHS *e* 02 36 31.8
VYHS Vyhne 140.44 328 *e* PKPpre 02 36 25.1
VYHS Vyhne 140.44 328 *e*PKP **PKPdf 02 36 31.8 -0.5**
BZS Buzias 140.65 322 ⇑PKIKP **PKPdf 02 36 32.4 -0.3**
BZS Buzias 140.65 322 ⇑*i*P **PKPdf 02 36 32.4 -0.3**
VRAC Vranov 141.00 330 PKPpre PKPpre 02 36 27.2
VRAC PKP **PKPdf 02 36 33.0 -0.2**
VRAC PP **PP 02 39 38.3 +4.2**
VRAC Vranov 141.00 330 ⇑*i*P PKPpre 02 36 28.2
VRAC Vranov 141.00 330 PKhKP PKPpre 02 36 27.2
comp=Z,6.6nm,1.1s,baz=72,slow=3.9,SNR=3.5
VRAC PKP **PKPdf 02 36 33.0 -0.2**
comp=Z,7.7nm,1.0s,baz=105,slow=2.7,SNR=6.8
VRAC PP **PP 02 39 38.3 +4.2**
comp=Z,2.8nm,0.9s,baz=359,slow=22,SNR=4.0
PVCC Panska Ves 141.05 333 *e*PKIKP **PKPdf 02 36 30.1 -3.2**
PVCC *e* 02 39 36.0
PVCC *e* 02 57 58.3
PVCC MLR MLR
comp=Z,7µm,20.1s
PVCC Panska Ves 141.05 333 *e*PKP **PKPdf 02 36 30.1 -3.2**
PVCC *e*PP **PP 02 39 36.0 +1.7**
PVCC *e*SS SS 02 57 58.3 -1.0
PVCC AMS AMS 03 42 20.0
comp=Z,7µm,20.1s
BRG Berggiesshubel 141.06 334 *e*PKP PKPpre 02 36 27.6
comp=Z,3.1nm,1.0s
BRG *i* 02 36 47.7
comp=Z,90nm,1.7s
BRG PP **PP 02 39 35.0 +0.7**
BRG *e* 02 40 11.3
comp=Z,18nm,1.4s
BRG *e*SKKS 02 46 23.0
comp=Z,50nm,2.0s
BRG *e* 02 50 10.2
comp=Z,36nm,1.9s
BRG *i* 02 51 34.0
BRG SS SS 02 58 14.0 +15
BRG
comp=N,4µm,18.5s
BRG
comp=E,3µm,17.9s
BRG
comp=Z,7µm,19.2s
BRG Berggiesshubel 141.06 334 *e*PKHKP PKPpre 02 36 27.6
BRG 02 39 35.0
BRG pmax pmax
comp=Z,3.0nm,1.0s
BRG pmax pmax
comp=Z,90nm,1.7s
BRG pmax pmax
comp=Z,18nm,1.4s
BRG pmax pmax
comp=N,50nm,2.0s
BRG pmax pmax
comp=Z,36nm,1.9s
BRG MLR MLR
comp=N,4µm,18.5s
BRG MLR MLR
comp=E,3µm,17.9s
BRG MLR MLR
comp=Z,7µm,19.2s

KARP Karpathos 141.11 305 *e*P **PKPdf 02 36 31.0 -2.9**
CLL Collm 141.12 335 *e*PKIKP **PKPdf 02 36 29.0 -4.4**
CLL *i* 02 36 36.5
CLL pmax pmax
comp=Z,15nm,1.2s
CLL pmax pmax
comp=Z,26nm,1.3s
CLL MLR MLR
comp=Z,9µm,20.4s
CLL Collm 141.12 335 *e*PKPpre 02 36 29.0
CLL *i* (PKPdf) **PKPdf 02 36 31.4 -2.0**
comp=Z,15nm,1.2s
CLL *i* PKiKP **PKiKP 02 36 36.5 +0.4**
comp=Z,21nm,1.1s
CLL *i* (pPKPdf) 02 36 39.4
comp=Z,31nm,1.0s
CLL *e* 02 36 46.0
CLL *e*PP **PP 02 39 36.0 +1.4**
CLL *i* PKSbc **PKSbc 02 40 13.6 +2.3**
comp=Z,26nm,1.3s
CLL *e* 02 47 06.0
CLL *e*Sdiff 02 48 19.0
CLL *e*PSKS 02 49 51.0
CLL *e*PPPrev 02 51 36.0
CLL *e*PPS PPS 02 52 02.0
CLL *e* 02 53 42.0
CLL *e*SS SS 02 58 16.0 +16
CLL *e* 02 59 12.0
CLL *e* 02 59 54.0
CLL *e*SSS SSS 03 03 13.0
CLL *e*SSSS 03 06 54.0
CLL Lm MLR 03 41 00.0
comp=N,5µm,20.3s
CLL Lm MLR 03 41 00.0
comp=E,3µm,21.4s
CLL Lm MLR 03 41 00.0
comp=Z,9µm,20.4s
EAB Aberfoyle 141.22 353 *e*P PKPdf 02 36 28.0 -5.4
EAB Aberfoyle 141.22 353 P PKPdf 02 36 28.0 -5.4
VTS Vitosha 141.24 317 ⇓PKIKP **PKPdf 02 36 33.1 -1.0**
VTS Vitosha 141.24 317 ⇓*i*P **PKPdf 02 36 33.1 -1.0**
PKS6 Bocsa 141.24 325 ⇓*e*PKPdf **PKPdf 02 36 34.5 +0.8**
ESY Stoneypath 141.27 352 *e*P PKPdf 02 36 25.7 -7.8
ESY Stoneypath 141.27 352 P PKPdf 02 36 25.7 -7.8
EDI Edinburgh 141.34 352 AMS AMS 03 52 11.8
comp=Z,3µm,18.4s
PKSG 141.38 327 *e*PKPdf PKPdf 02 36 28.4 -5.5
NVR Nevrokopi 141.38 315 P PKPdf 02 36 27.7 -6.5
NVR Nevrokopi 141.38 315 *e*P PKPdf 02 36 28.0 -6.2
PRA Prague 141.45 333 PKP PKPdf 02 36 29.0 -5.0
PRA *ex* x 02 36 40.0
PRA AMS AMS 03 42 30.0
EAU Auchinoon 141.45 352 *e*P PKPdf 02 36 27.3 -6.5
EAU Auchinoon 141.45 352 P PKPdf 02 36 27.3 -6.5
PRU Pruhonice 141.46 332 *e*PKHKP PKPpre 02 36 28.8
PRU *e* 02 39 38.0
PRU MLR MLR
comp=Z,7µm,20.9s
PRU Pruhonice 141.46 332 *e*PKP PKPpre 02 36 28.8
PRU *e*pPKP **PKiKP 02 36 36.7 -0.1**
PRU *e*PP **PP 02 39 38.0 +1.2**
PRU *ex* x 02 51 29.7
PRU *e*SS SS 02 58 16.8 +13
PRU AMS AMS 03 42 30.0
comp=Z,7µm,20.9s
EBL Broad Law 141.47 352 *e*P PKPdf 02 36 27.2 -6.6
EBL Broad Law 141.47 352 P PKPdf 02 36 27.2 -6.6
PKS2 Kecel 141.50 325 ⇓*e*PKPdf **PKPdf 02 36 34.9 +0.7**
ZST Bratislava 141.51 329 *e*PKIKP **PKPdf 02 36 34.3 +0.1**
ZST Bratislava 141.51 329 *e*PKP **PKPdf 02 36 34.3 +0.1**
TREC Trest 141.53 331 *e*PKIKP **PKPdf 02 36 30.1 -4.1**
TREC *e* 02 36 40.7
TREC *e* 02 58 08.9
TREC MLR MLR
comp=Z,8µm,21.0s
TREC Trest 141.53 331 *e*PKP **PKPdf 02 36 30.1 -4.1**
TREC *ex* x 02 36 34.6
TREC *e*pPKP **PKiKP 02 36 40.7 +3.7**
TREC *e*SS SS 02 58 08.9 +3.8
TREC AMS AMS 03 43 20.0
comp=Z,8µm,21.0s
PGBU Glenifferbraes 141.61 353 AMS AMS 03 51 32.2
comp=Z,3µm,18.2s
PKST T``s 141.65 327 *e* PKPdf 02 36 29.1 -5.4
APE Apeiranthos 141.88 308 ⇓PKIKP **PKPdf 02 36 37.0 +1.7**
APE Apeiranthos 141.88 308 ⇓*i*P **PKPdf 02 36 37.0 +1.7**
EKA Eskdalemuir Ar 141.91 352 PKPpre 02 36 29.5
EKA Eskdalemuir Ar 141.91 352 PKhKP PKPpre 02 36 29.5
comp=Z,2.0nm,0.5s,baz=9,3,slow=2.4,SNR=20
ESK Eskdalemuir 141.94 352 AMS AMS 03 35 50.4
comp=Z,3µm,21.4s
ESK Eskdalemuir 141.94 352 PFAKE 02 36 50.0 +15
ESK LR LR
comp=Z,3µm,21.0s
PKS9 Tamasi 141.95 326 ⇓*e*PKPdf **PKPdf 02 36 35.1 +0.1**
PKSM Moragy 141.98 325 ⇑PKHKP PKPpre 02 36 29.1
PKSM Moragy 141.98 325 ⇑*i*P PKPdf 02 36 29.1 -6.0
PKSM Moragy 141.98 325 ⇑*e*PKPdf **PKPdf 02 36 34.8 -0.3**
ECK Cauldkaine Hil 142.06 352 *e*P PKPdf 02 36 29.7 -5.2
ECK Cauldkaine Hil 142.06 352 P PKPdf 02 36 29.7 -5.2
PLG Polygyros 142.10 314 *e*P **PKPdf 02 36 32.1 -3.4**
NKC Novy Kostel 142.17 334 *e*SS SS 02 58 19.6 +7.3
NKC AMS AMS 03 42 10.0
comp=Z,8µm,19.6s
MOX Moxa 142.19 335 *e*L L 03 39 11.3
comp=Z,4µm,20.6s
IBBN Ibbenburen 142.21 340 *e*PKPbc **PKPdf 02 36 31.2 -4.1**
CONA Conrad Observa 142.31 329 ⇑*i*PKPdf **PKPdf 02 36 32.8 -3.0**
comp=Z,2µm,7.2s,SNR=10
NPS Neapolis 142.40 305 *e*P **PKPdf 02 36 32.0 -4.2**
DIVS Divibare 142.46 321 P **PKPdf 02 36 31.8 -4.3**
DIVS Divibare 142.46 321 *e*P **PKPdf 02 36 31.6 -4.5**
KHC Kasperske Hory 142.51 332 *e*PKIKP **PKPdf 02 36 32.5 -3.5**
KHC *e* 02 39 46.1
KHC *e* 02 58 19.5
KHC MLR MLR
comp=Z,9µm,18.8s
KHC Kasperske Hory 142.51 332 *e*PKP **PKPdf 02 36 32.5 -3.5**
KHC *ex* x 02 36 34.5
KHC *e*PP **PP 02 39 46.1 +2.9**
KHC *e*SS SS 02 58 19.5 +3.0
KHC AMS AMS 03 44 00.0
comp=Z,9µm,18.8s
KHC Kasperske Hory 142.51 332 *e*PKPdf **PKPdf 02 36 32.8 -3.3**
KHC *e* 02 40 17.3
LAST Lasithi 142.54 305 P PKPdf 02 36 31.2 -5.3
GRG Griva 142.54 315 *e*P **PKPdf 02 36 34.7 -1.6**
GAL1 Galloway 142.57 353 *e*P PKPdf 02 36 29.7 -6.1
GAL1 AMS AMS 03 48 11.1
comp=Z,3µm,20.3s
GAL1 Galloway 142.57 353 P PKPdf 02 36 29.7 -6.1
GAL1 AMS AMS 03 48 11.1
comp=Z,3µm,20.3s
KESW Keswick, Cumbr 142.63 351 *e*P PKPdf 02 36 26.9 -9.1
KESW AMS AMS 03 47 44.0
comp=Z,2µm,18.7s
KESW Keswick, Cumbr 142.63 351 P PKPdf 02 36 26.9 -9.1
KESW AMS AMS 03 47 44.0
comp=Z,2µm,18.7s
UBBA Unterbreizbach 142.67 337 *e*PKPbc **PKPdf 02 36 33.0 -3.0**
GEC2 GERESS Array S 142.67 332 *e*PKPbc **PKPdf 02 36 32.8 -3.6**
GEC2 GERESS Array S 142.67 332 *e*PKIKP **PKPdf 02 36 32.8 -3.6**
GERES GERESS Array B 142.67 332 PKPpre PKPpre 02 36 32.5
GERES GERESS Array B 142.67 332 PKhKP PKPpre 02 36 32.5
comp=Z,18nm,1.0s,baz=35,slow=3.6,SNR=41
PTL Penteli 142.76 310 *e*P **PKPdf 02 36 38.6 +1.8**
WTSB Winterswijk 142.81 341 *e*PKP **PKPdf 02 36 34.3 -2.1**
WTSB *e*PKP PKKPdf 02 46 21.7 +30
WET Wettzell 142.81 333 *e*PKPbc **PKPdf 02 36 33.1 -3.4**
WET Wettzell 142.81 333 *e*PKIKP **PKPdf 02 36 33.1 -3.4**
BEHE Becsehely 142.82 327 *e*PKPdf **PKPdf 02 36 37.5 +0.9**
LIT Litokhoron 142.87 314 P PKPdf 02 36 30.1 -6.8
LIT Litokhoron 142.87 314 *e*P **PKPdf 02 36 33.0 -3.9**
BBLS Lazići 142.94 321 *e*P **PKPdf 02 36 36.7 -0.3**
IDI Anoyia 142.96 305 P **PKPdf 02 36 35.2 -2.1**
IDI Anoyia 142.96 305 *e*PKPdf **PKPdf 02 36 36.5 -0.7**
GRF Grafenberg Arr 143.09 335 *e*L L 03 42 57.8
comp=Z,6µm,20.4s
ATAL Atalanti 143.11 312 P PKPab 02 36 33.2 +0.4
MOA Molln 143.13 330 ⇑*i*PKPdf PKPbc 02 36 34.4 +0.4
comp=Z,913nm,4.1s,SNR=20
LKR Lokris 143.14 312 *e*P PKPbc 02 36 35.4 +1.1
FNA Florina 143.31 316 P PKPbc 02 36 35.0 +0.2

FNA	Florina	143.31	316	eP	PKPab	02 36 34.5	+0.9
BCI	Bajram Curri	143.35	319	ePN	PKPab	02 36 34.3	+0.6
DID	Didima	143.43	310	P	PKPab	02 36 33.7	-0.5
DID	Didima	143.43	310	eP	PKPdf	02 36 37.8	-0.2
THL	Klokotos Trika	143.44	313	eP	PKPbc	02 36 35.6	+0.5
VAM	Vamos	143.45	306	P	PKPbc	02 36 35.7	+0.4
VAM	Vamos	143.45	306	eP	PKPbc	02 36 35.7	+0.4
AGG	Agios Georgios	143.46	312	P	PKPab	02 36 35.0	+0.8
AGG	Agios Georgios	143.46	312	eP	PKPdf	02 36 37.2	-0.8
PHP	Peshkopia	143.47	318	ePN	PKPab	02 36 34.5	+0.3
PHP	Peshkopia	143.47	318	P	PKPab	02 36 34.7	+0.5
PERS	Pernice	143.56	328	i PKPdf	PKPab	02 36 34.8	+0.3
PERS				e		02 36 37.9	
SOKA	Soboth	143.57	328⇓	iPKPdf	PKPbc	02 36 35.7	+0.3
	comp=Z,891nm,4.4s						
MAKR	Makrakomi, Fth	143.60	313	P	PKPdf	02 36 37.5	-0.7
PUK	Puka	143.64	318	ePN	PKPdf	02 36 37.5	-0.8
KBI1	Birley Grange	143.67	349	eP	PKPab	02 36 34.4	-0.1
KBI1	Birley Grange	143.67	349	P	PKPab	02 36 34.4	-0.1
SISC	Sisak	143.68	326	i P	PKPab	02 36 35.5	+0.7
NEST	Nestorio	143.71	315	P	PKPab	02 36 36.0	+0.8
GVD	Gavdhos	143.72	305	ePKPdf	PKPbc	02 36 36.4	+0.3
TNS	Taunus Mts	143.73	338	ePKPbc	PKPbc	02 36 35.8	+0.1
TNS	Taunus Mts	143.73	338	ePKIKP	PKPbc	02 36 35.8	+0.1
KBN	Korca	143.78	316	ePN	PKPdf	02 36 37.8	-0.7
KBN	Korca	143.78	316	P	PKPab	02 36 35.4	-0.1
KALE	Kalithea	143.86	312	eP	PKPdf	02 36 38.3	-0.5
EVR	Evrytania	143.87	313	eP	PKPab	02 36 35.8	-0.1
RJOB	Jochberg	143.89	331	ePKPbc	PKPbc	02 36 36.8	+0.5
GUR	Goura	143.91	311	P	PKPbc	02 36 37.4	+0.7
GUR	Goura	143.91	311	eP	PKPab	02 36 35.8	-0.3
OBKA	Obir	143.93	328⇑	iPKPdf	PKPbc	02 36 36.9	+0.5
	comp=Z,992nm,4.3s,SNR=8.1						
STNC	Stoke	143.94	350	eP	PKPab	02 36 31.1	-4.4
STNC				AMS	AMS	03 51 26.1	
	comp=Z,4μm,18.3s						
STNC	Stoke	143.94	350	P	PKPab	02 36 31.1	-4.4
STNC				AMS	AMS	03 51 26.1	
	comp=Z,4μm,18.3s						
VLI	Veliai	143.95	309	P	PKPbc	02 36 37.7	+1.0
VLI	Veliai	143.95	309	eP	PKPdf	02 36 38.7	-0.2
WME	Myndd Eilian	143.96	352	eP	PKPab	02 36 35.6	0.0
WME	Myndd Eilian	143.96	352	P	PKPab	02 36 35.6	0.0
KLV	Kalavryta, Ach	144.00	311	eP	PKPab	02 36 36.5	+0.1
EFP	Efpalio	144.01	312	eP	PKPdf	02 36 39.2	+0.3
TIR	Tirane	144.02	317	ePN	PKPbc	02 36 37.5	+0.7
TIR	Tirane	144.02	317	ePKIKP	PKPbc	02 36 37.3	+0.5
TIR				MLR	MLR		
	comp=Z,5μm,21.0s						
TIR	Tirane	144.02	317	ePKPdf	PKPbc	02 36 37.2	+0.5
TIR				LR	LR		
	comp=Z,5μm,21.0s						
WPM1	Penmaenmawr	144.04	352	eP	PKPab	02 36 35.9	0.0
WPM1	Penmaenmawr	144.04	352	P	PKPab	02 36 35.9	0.0
LAKA	Lakka	144.04	311	eP	PKPab	02 36 36.7	+0.2
WLF1	Llynfaes	144.07	352	eP	PKPab	02 36 31.6	-4.5
WLF1				AMS	AMS	03 44 13.6	
	comp=Z,3μm,19.0s						
WLF1	Llynfaes	144.07	352	P	PKPab	02 36 31.6	-4.5
WLF1				AMS	AMS	03 44 13.6	
	comp=Z,3μm,19.0s						
VLX	Vlachokerasia	144.11	310	eP	PKPab	02 36 34.9	-2.0
KBA	Koelnbreinsper	144.12	330⇓	iPKPdf	PKPbc	02 36 37.3	+0.2
	comp=Z,1μm,4.8s,SNR=23						
HGN	Heimansgroeve	144.12	341	ePKP	PKPab	02 36 35.6	-0.7
	comp=Z,3μm,17.1s						
HGN				ePP	PP	02 39 39.7	-13
HGN				ePKP	PKKPdf	02 46 26.5	+37
	comp=Z,235nm,2.1s						
HGN				eSKSP		02 48 47.2	
HGN				eSS	SS	02 58 40.4	+6.1
HGN				eSKSP		02 58 47.2	
YRC	Rhoscolyn	144.13	352	eP	PKPab	02 36 35.8	-0.4
YRC	Rhoscolyn	144.13	352	P	PKPab	02 36 35.8	-0.4
BEBN	Eben Emael	144.17	341	PKP	PKPbc	02 36 37.3	+0.4
YLL	Llanberis	144.19	352	eP	PKPab	02 36 36.0	-0.4
YLL	Llanberis	144.19	352	P	PKPab	02 36 36.0	-0.4
JAN	Janina	144.20	314	P	PKPab	02 36 37.0	0.0
JAN	Janina	144.20	314	eP	PKPab	02 36 37.4	+0.4
MEM	Membach	144.23	340	PKP	PKPbc	02 36 37.5	+0.4
BOJS	Bojanci	144.25	327	i PKPdf	PKPbc	02 36 38.0	+0.6
BOJS				i		02 36 39.4	
BOJS				i		02 36 47.8	
LJU	Ljubljana	144.26	328	i PKPdf	PKPab	02 36 37.5	+0.4
LJU				i		02 36 40.9	
LJU				i		02 36 50.0	
MYKA	Terra Mystica	144.29	329⇓	iPKPdf	PKPab	02 36 37.5	+0.2
	comp=Z,1μm,4.7s						
FOEL	Foel Wylfa	144.30	351	eP	PKPab	02 36 33.6	-3.3
FOEL				AMS	AMS	03 39 42.6	
	comp=Z,4μm,20.6s						
FOEL	Foel Wylfa	144.30	351	P	PKPab	02 36 33.6	-3.3
FOEL				AMS	AMS	03 39 42.6	
	comp=Z,4μm,20.6s						
DCN	Croghan	144.32	355⇓	iP	PKPab	02 36 34.5	-2.5
ABH	Alteburg	144.33	338	PKP	PKPbc	02 36 38.2	+0.7
YRE	Yr Eifl	144.38	352	eP	PKPab	02 36 35.7	-1.5
YRE	Yr Eifl	144.38	352	P	PKPab	02 36 35.7	-1.5
DYR	Agios Nikonas	144.38	309	P	PKPab	02 36 38.1	+0.3
DYR	Agios Nikonas	144.38	309	eP	PKPab	02 36 37.8	0.0
RLS	Riolos of Patr	144.49	312	P	PKPbc	02 36 38.7	+0.4
RLS	Riolos of Patr	144.49	312	eP	PKPab	02 36 36.4	-1.7
ITM	Ithomi	144.52	310	P	PKPab	02 36 37.3	-1.0
ITM	Ithomi	144.52	310	eP	PKPab	02 36 38.3	0.0
STON	Ston	144.53	321	i P	PKPab	02 36 36.6	-1.4
AMT	Artemida-Makis	144.53	311	eP	PKPab	02 36 38.4	+0.1
UCC	Uccle	144.57	342	PKP	PKPab	02 36 38.2	+0.2
VOY	Vojsko	144.59	328	ePKPdf	PKPab	02 36 37.9	-0.5
VOY				e		02 36 49.5	
JAVS	Javornik	144.60	328	ePKPdf	PKPab	02 36 37.8	-0.6
JAVS				e		02 36 41.8	
JAVS				e		02 36 56.1	
HLM1	Long Mynd	144.61	350	eP	PKPab	02 36 33.8	-4.2
HLM1	Long Mynd	144.61	350	P	PKPab	02 36 33.8	-4.2
KTD	Kalmit	144.61	337	PKIKP	PKPbc	02 36 38.8	+0.4
KTD	Kalmit	144.61	337	PKP	PKPbc	02 36 38.8	+0.4
IGT	Igoumenitsa	144.61	314	P	PKPab	02 36 37.5	-1.0
BCLA	Clavier	144.62	341	PKP	PKPbc	02 36 38.7	+0.3
STU	Stuttgart	144.63	336	ePKPbc	PKPbc	02 36 38.9	+0.4
STU	Stuttgart	144.63	336	ePKIKP	PKPab	02 36 38.7	+0.4
STU	Stuttgart	144.63	336	ePKPdf	PKPab	02 36 38.7	+0.4
RUP	Ruppelstein	144.66	339	PKIKP	PKPab	02 36 38.7	+0.3
RUP	Ruppelstein	144.66	339	PKP	PKPab	02 36 38.7	+0.3
SRN	Sarande	144.67	315	ePN	PKPbc	02 36 39.5	+0.7
SRN	Sarande	144.67	315	P	PKPab	02 36 38.4	-0.3
VLO	Vlora	144.71	316	ePN	PKPdf	02 36 40.9	+0.9
LKD2	Lefkada island	144.73	313	P	PKPab	02 36 38.9	-0.1
LKD2	Lefkada island	144.73	313	eP	PKPab	02 36 39.3	+0.3
WATA	Walderalm	144.75	332⇑	iPKPdf	PKPab	02 36 38.9	-0.1
	comp=Z,219nm,1.7s,SNR=24						
ABTA	Abfaltersbach	144.75	330⇑	iPKPbc	PKPab	02 36 36.7	-2.2
	comp=Z,1μm,4.5s,SNR=92						
WTTA	Wattenberg	144.77	332⇑	iPKPdf	PKPab	02 36 39.2	0.0
	comp=Z,2μm,6.6s,SNR=37						
SNF	Seneffe	144.85	342	PKP	PKPbc	02 36 39.8	+0.7
TRI	Trieste	144.88	328	ePKIKP	PKPab	02 36 38.3	-1.0
TRI	Trieste	144.88	328	ePKPdf	PKPab	02 36 38.3	-1.0
KEK	Kerkira	144.88	315	P	PKPab	02 36 39.4	-0.1
KEK	Kerkira	144.88	315	eP	PKPab	02 36 39.2	-0.3
MOTA	Moosalm	144.95	332⇑	iPKPdf	PKPab	02 36 39.8	0.0
	comp=Z,256nm,1.2s,SNR=78						
SSW	Stow on the Wo	144.96	349	eP	PKPab	02 36 39.4	0.0
SSW	Stow on the Wo	144.96	349	P	PKPab	02 36 39.4	0.0
LANF	Langenberg	144.99	337	PKIKP	PKPab	02 36 40.0	+0.4
LANF	Langenberg	144.99	337	PKP	PKPab	02 36 40.0	+0.4
LANF	Langenberg	144.99	337	PKP	PKPab	02 36 40.0	+0.4
RETA	Reutte	144.99	333	i PKPdf	PKPab	02 36 39.9	+0.2
	comp=Z,5μm,7.6s,SNR=57						
WLF	Walferdange	145.00	339	PKP	PKPdf	02 36 40.5	+0.2
WLF	Walferdange	145.00	339	ePKPbc	PKPdf	02 36 40.5	+0.2
WLF	Walferdange	145.00	339	ePKIKP	PKPdf	02 36 40.4	+0.1
WLF				MLR	MLR		
	comp=Z,6μm,19.0s						
WLF	Walferdange	145.00	339	ePKPdf	PKPdf	02 36 40.4	+0.1
WLF				LR	LR		
	comp=Z,6μm,19.0s						
SKP1	Kophill	145.00	348	eP	PKPab	02 36 35.8	-3.7
SKP1	Kophill	145.00	348	P	PKPab	02 36 35.8	-3.7
VLS	Valsamata	145.06	312	P	PKPbc	02 36 39.9	-0.2
VLS	Valsamata	145.06	312	eP	PKPbc	02 36 40.0	-0.2
NVLJ	Novalja	145.08	326	i P	PKPbc	02 36 38.0	-1.9

ELSH	Elham, Standar	145.11	346	eP	PKPbc	02 36 35.4	-4.4
ELSH				AMS	AMS	03 54 13.5	
	comp=Z,4μm,18.0s						
ELSH	Elham, Standar	145.11	346	P	PKPbc	02 36 35.4	-4.4
ELSH				AMS	AMS	03 54 13.5	
	comp=Z,4μm,18.0s						
DOU	Dourbes	145.12	341	PKP	PKPbc	02 36 40.1	+0.1
MCH1	Michaelchurch	145.13	350	eP	PKPbc	02 36 36.4	-3.5
MCH1				AMS	AMS	03 40 47.6	
	comp=Z,3μm,21.4s						
MCH1	Michaelchurch	145.13	350	P	PKPbc	02 36 36.4	-3.5
MCH1				AMS	AMS	03 40 47.6	
	comp=Z,3μm,21.4s						
OBER	Oberstdorf	145.25	333	ePKPbc	PKPbc	02 36 40.7	+0.1
BFO	Black Forest	145.32	336	ePKPbc	PKPbc	02 36 41.0	+0.2
BFO	Black Forest	145.32	336	ePKIKP	PKPbc	02 36 40.9	+0.2
BFO				MLR	MLR		
	comp=Z,3μm,20.0s						
BFO	Black Forest	145.32	336	ePKPdf	PKPbc	02 36 40.9	+0.2
BFO				LR	LR		
	comp=Z,3μm,20.0s						
SPAK	Spaichingen-Ko	145.33	335	PKP	PKPbc	02 36 40.8	0.0
STR	Strasbourg	145.33	337	PKIKP	PKPdf	02 36 41.4	+0.5
STR	Strasbourg	145.33	337	PKP	PKPdf	02 36 41.4	+0.5
STR	Strasbourg	145.33	337	PKP	PKPdf	02 36 41.4	+0.5
FETA	Feichten	145.36	332⇑	iPKPdf	PKPbc	02 36 40.9	-0.2
	comp=Z,3μm,4.6s,SNR=195						
SWN1	Swindon	145.39	349	eP	PKPbc	02 36 38.3	-2.5
SWN1				AMS	AMS	03 46 05.3	
	comp=Z,4μm,20.3s						
SWN1	Swindon	145.39	349	P	PKPbc	02 36 38.3	-2.5
SWN1				AMS	AMS	03 46 05.3	
	comp=Z,4μm,20.3s						
MENF	Mencas	145.40	344	PKP	PKPbc	02 36 40.6	-0.2
WOL	Wolverton	145.47	348	eP	PKPdf	02 36 39.0	-2.0
WOL				AMS	AMS	03 50 36.9	
	comp=Z,4μm,19.4s						
WOL	Wolverton	145.47	348	P	PKPdf	02 36 39.0	-2.0
WOL				AMS	AMS	03 50 36.9	
	comp=Z,4μm,19.4s						
DAVA	Damuels	145.53	333⇑	iPKPab	PKPdf	02 36 41.2	-0.3
	comp=Z,3μm,4.5s,SNR=125						
CDF	Champ du Feu	145.66	337	ePKIKP	PKPdf	02 36 40.8	-0.8
CDF	Champ du Feu	145.66	337	ePKIKP	PKPdf	02 36 40.8	-0.8
CDF	Champ du Feu	145.66	337	ePKPdf	PKPdf	02 36 40.8	-0.8
LIBD	Limburg	145.75	337	PKIKP	PKPdf	02 36 42.2	+0.6
LIBD	Limburg	145.75	337	PKP	PKPdf	02 36 42.2	+0.6
FELD	Feldberg im Sc	145.82	336	PKP	PKPdf	02 36 41.0	-0.9
ECH	Echery	145.86	337	ePKPbc	PKPdf	02 36 42.4	+0.5
ECH	Echery	145.86	337	ePKP2	PKPdf	02 36 42.0	+0.1
ECH				MLR	MLR		
	comp=Z,3μm,20.0s						
ECH	Echery	145.86	337	ePKPdf	PKPdf	02 36 42.0	+0.1
ECH				LR	LR		
	comp=Z,3μm,20.0s						
ECH	Echery	145.86	337	PKP	PKPdf	02 36 41.9	+0.1
VAL	Valentia	145.89	358	eP	PKPdf	02 36 40.9	-0.8
SHEL	Horse Pasture	145.92	191	ePKIKP	PKPdf	02 36 43.4	+0.5
SHEL				MLR	MLR		
	comp=Z,4μm,19.0s						
SHEL	Horse Pasture	145.92	191	ePKPbc	PKPdf	02 36 43.4	+0.5
SHEL				LR	LR		
	comp=Z,4μm,19.0s						
DAVOX	Davos/Dischmat	145.92	333	PKPbc	PKPdf	02 36 42.4	+0.1
DAVOX	Davos/Dischmat	145.92	333	PKPbc	PKPdf	02 36 42.4	+0.1
	comp=Z,63nm,0.7s,baz=59,slow=3.8,SNR=70						
HEX	Exmoor	146.16	351	eP	PKPdf	02 36 42.4	+0.2
HEX	Exmoor	146.16	351	P	PKPdf	02 36 42.4	+0.2
MOF	Molkenrain	146.18	337	PKP2	PKPdf	02 36 42.6	+0.1
MOF	Molkenrain	146.18	337	PKP	PKPdf	02 36 42.6	+0.1
MOF	Molkenrain	146.18	337	PKP	PKPdf	02 36 42.6	+0.1
THEF	They Montfort	146.28	338	PKP2	PKPbc	02 36 43.8	+0.1
THEF	They Montfort	146.28	338	PKP	PKPbc	02 36 43.8	+0.1
THEF	They Montfort	146.28	338	PKP	PKPbc	02 36 43.8	+0.1
HINF	Hinteralfeld	146.31	337	ePKIKP	PKPdf	02 36 41.9	-0.8
HINF	Hinteralfeld	146.31	337	ePKIKP	PKPdf	02 36 41.9	-0.8
HINF	Hinteralfeld	146.31	337	ePKPdf	PKPdf	02 36 41.9	-0.8
HTL	Hartland	146.33	351	eP	PKPdf	02 36 41.9	-0.6
HTL				AMS	AMS	03 50 03.2	
	comp=Z,4μm,17.8s						
HTL	Hartland	146.33	351	P	PKPdf	02 36 41.9	-0.6
HTL				AMS	AMS	03 50 03.2	
	comp=Z,4μm,17.8s						
HAU	Haudompre	146.34	338	ePKIKP	PKPdf	02 36 42.1	-0.6
HAU				eR			
	comp=Z,4μm,21.2s						
HAU	Haudompre	146.34	338	ePKIKP	PKPdf	02 36 42.1	-0.6
HAU	Haudompre	146.34	338	ePKPdf	PKPdf	02 36 42.1	-0.6
BBS	Basel-Blauen	146.35	336	PKP2	PKPbc	02 36 43.9	-0.1
BBS	Basel-Blauen	146.35	336	PKP	PKPbc	02 36 43.9	-0.1
MEZF	Maizieres J'vi	146.37	339	ePKIKP	PKPdf	02 36 42.6	0.0
MEZF	Maizieres J'vi	146.37	339	ePKPdf	PKPdf	02 36 42.6	0.0
TUE	Stuetta	146.39	333	ePKPbc	PKPdf	02 36 43.6	+0.6
TUE				LR	LR		
	comp=Z,8μm,22.0s						
SFTF	Sexfontaines	146.63	339	ePKIKP	PKPdf	02 36 42.7	-0.4
SFTF	Sexfontaines	146.63	339	ePKPdf	PKPdf	02 36 42.7	-0.4
LOMF	Lomont	146.71	336	PKP2	PKPbc	02 36 45.0	-0.1
LOMF	Lomont	146.71	336	PKP	PKPbc	02 36 45.0	-0.1
LOMF	Lomont	146.71	336	PKP	PKPbc	02 36 45.0	-0.1
RCBR	Riachuelo	146.71	133	ePKPbc	PKPdf	02 36 45.5	+1.2
RCBR				LR	LR		
	comp=Z,4μm,21.0s						
RCBR	Riachuelo	146.71	133	PKPbc	PKPdf	02 36 45.1	+0.7
	comp=Z,38nm,0.9s,baz=271,slow=5.7,SNR=20						
DYA	Yadsworthy	146.79	351	eP	PKPdf	02 36 42.3	-1.0
DYA				AMS	AMS	03 50 58.0	
	comp=Z,3μm,17.8s						
DYA	Yadsworthy	146.79	351	P	PKPdf	02 36 42.3	-1.0
DYA				AMS	AMS	03 50 58.0	
	comp=Z,3μm,17.8s						
AQU	L'Aquila	147.34	324	ePKPbc	PKPbc	02 36 46.7	-0.2
AQU				LR	LR		
	comp=Z,9μm,19.0s						
CUC	Castrocucco	147.34	318	ePKPbc	PKPbc	02 36 46.7	-0.3
CUC				LR	LR		
	comp=Z,4μm,20.0s						
CABF	La Chapelle	147.60	336	ePKIKP	PKPdf	02 36 44.8	-0.1
	comp=Z,29nm,1.0s						
CABF	La Chapelle	147.60	336	ePKIKP	PKPdf	02 36 44.8	-0.1
CABF	La Chapelle	147.60	336	ePKPdf	PKPdf	02 36 44.8	-0.1
OG01	Vacheresse	147.61	336	PKP	PKPbc	02 36 47.8	+0.2
OG01	Vacheresse	147.61	336	PKP	PKPbc	02 36 47.8	+0.2
JRS	Jersey	147.66	348	eP	PKPbc	02 36 46.9	-0.6
JRS	Jersey	147.66	348	P	PKPbc	02 36 46.9	-0.6
VLC	Villacollemand	147.66	329	ePKPbc	PKPbc	02 36 47.2	-0.5
VLC				LR	LR		
	comp=Z,5μm,22.0s						
JSA	Saint Aubin	147.68	348	eP	PKPdf	02 36 41.2	-3.5
JSA				AMS	AMS	03 51 20.4	
	comp=Z,4μm,19.0s						
JSA	Saint Aubin	147.68	348	P	PKPdf	02 36 41.2	-3.5
JSA				AMS	AMS	03 51 20.4	
	comp=Z,4μm,19.0s						
FLN	La Foliniere	147.72	346	ePKIKP	PKPdf	02 36 44.3	-0.6
FLN				eR			
	comp=Z,5μm,20.5s						
FLN	La Foliniere	147.72	346	ePKIKP	PKPdf	02 36 44.3	-0.6
FLN	La Foliniere	147.72	346	ePKPdf	PKPdf	02 36 44.3	-0.6
LDF	La Druitiere	147.79	345	ePKIKP	PKPdf	02 36 44.4	-0.6
LDF	La Druitiere	147.79	345	ePKIKP	PKPdf	02 36 44.4	-0.6
LDF	La Druitiere	147.79	345	ePKPdf	PKPdf	02 36 44.4	-0.6
LOR	Lormes	147.84	340	ePKIKP	PKPdf	02 36 44.7	-0.5
	comp=Z,9.3nm,1.0s						
LOR				eR			
	comp=Z,5μm,21.5s						
LOR	Lormes	147.84	340	ePKPdf	PKPdf	02 36 44.7	-0.5
SSF	Saint Saulge	148.13	340	ePKIKP	PKPdf	02 36 45.2	-0.5
	comp=Z,19nm,1.3s						
SSF	Saint Saulge	148.13	340	ePKIKP	PKPdf	02 36 45.2	-0.5
SSF	Saint Saulge	148.13	340	ePKPdf	PKPdf	02 36 45.2	-0.5
GRR	Gorron	148.15	346	ePKIKP	PKPdf	02 36 45.1	-0.5
	comp=Z,26nm,1.1s						
GRR	Gorron	148.15	346	ePKIKP	PKPdf	02 36 45.1	-0.5
GRR	Gorron	148.15	346	ePKPdf	PKPdf	02 36 45.1	-0.5
RSL	Roselend	148.16	335	PKP2	PKPbc	02 36 49.2	0.0
RSL	Roselend	148.16	335	PKP	PKPbc	02 36 49.2	0.0
RSL	Roselend	148.16	335	PKP	PKPbc	02 36 49.2	0.0
CEL	Celeste	148.24	316	ePKPbc	PKPbc	02 36 49.4	-0.1
CEL				LR	LR		
	comp=Z,3μm,21.0s						
LPL	La Plagne	148.25	335	ePKIKP	PKPdf	02 36 45.9	-0.3
LPL	La Plagne	148.25	335	ePKIKP	PKPdf	02 36 45.9	-0.3

LPL	La Plagne	148.25	335	ePKPdf	PKPdf	02 36 45.9	-0.3
LPG	La Plagne	148.26	335	ePKIKP	PKPdf	02 36 46.0	-0.3
	comp=Z,6.9nm,1.0s						
LPG	La Plagne	148.26	335	ePKIKP	PKPdf	02 36 46.0	-0.3
LPG	La Plagne	148.26	335	ePKPdf	PKPdf	02 36 46.0	-0.3
OG35	Corcelles	148.27	336	PKP	PKPbc	02 36 49.6	+0.2
SMF	Signal de Mont	148.38	339	ePKIKP	PKPdf	02 36 45.4	-0.7
SMF	Signal de Mont	148.38	339	ePKIKP	PKPdf	02 36 45.4	-0.7
SMF	Signal de Mont	148.38	339	ePKPdf	PKPdf	02 36 45.4	-0.7
AVF	Avril sur Loir	148.42	340	ePKIKP	PKPdf	02 36 45.3	-0.8
AVF	Avril sur Loir	148.42	340	ePKIKP	PKPdf	02 36 45.3	-0.8
AVF	Avril sur Loir	148.42	340	ePKPdf	PKPdf	02 36 45.3	-0.8
SGMF	Saint Gilles	148.65	348	ePKIKP	PKPdf	02 36 45.8	-0.6
	comp=Z,21nm,1.0s						
SGMF	Saint Gilles	148.65	348	ePKIKP	PKPdf	02 36 45.8	-0.6
SGMF	Saint Gilles	148.65	348	ePKPdf	PKPdf	02 36 45.8	-0.6
BNI	Bardonecchia	148.65	334	ePKIKP	PKPdf	02 36 47.1	+0.4
BNI				e		02 36 50.8	
BNI				MLR	MLR		
	comp=Z,6μm,21.0s						
BNI	Bardonecchia	148.65	334	ePKPdf	PKPdf	02 36 47.1	+0.4
BNI				ePKPbc	PKPbc	02 36 50.8	+0.3
BNI				LR	LR		
	comp=Z,6μm,21.0s						
ROSF	Rostrenen	148.71	349	ePKIKP	PKPdf	02 36 45.9	-0.6
	comp=Z,29nm,1.2s						
ROSF	Rostrenen	148.71	349	ePKIKP	PKPdf	02 36 45.9	-0.6
ROSF	Rostrenen	148.71	349	ePKPdf	PKPdf	02 36 45.9	-0.6
OG22	Abries	148.72	334	PKP	PKPbc	02 36 50.5	-0.3
OG22	Abries	148.72	334	PKP	PKPbc	02 36 50.5	-0.3
GDM	Grand'Maison	148.76	335	PKP	PKPbc	02 36 51.0	+0.2
GDM	Grand'Maison	148.76	335	PKP	PKPbc	02 36 51.0	+0.2
BGF	Bois d'Agland	148.79	340	ePKIKP	PKPdf	02 36 46.3	-0.5
BGF	Bois d'Agland	148.79	340	ePKIKP	PKPdf	02 36 46.3	-0.5
BGF	Bois d'Agland	148.79	340	ePKPdf	PKPdf	02 36 46.3	-0.5
GRN	Grenoble	148.87	335	PKP2	PKPbc	02 36 51.3	+0.3
GRN	Grenoble	148.87	335	PKP	PKPbc	02 36 51.3	+0.3
GRN	Grenoble	148.87	335	PKP	PKPbc	02 36 51.3	+0.3
MBDF	Montbardon	148.88	334	ePKIKP	PKPdf	02 36 46.6	-0.5
MBDF	Montbardon	148.88	334	ePKIKP	PKPdf	02 36 46.6	-0.5
MBDF	Montbardon	148.88	334	ePKPdf	PKPdf	02 36 46.6	-0.5
BST	Brest	148.88	350	PKP	PKPbc	02 36 49.6	-1.2
BST	Brest	148.88	350	PKP	PKPbc	02 36 49.6	-1.2
SURF	Saint Ours	149.06	333	PKP	PKPbc	02 36 51.8	+0.2
SURF	Saint Ours	149.06	333	PKP	PKPbc	02 36 51.8	+0.2
ORIF	Oris-en-Rattie	149.09	335	ePKIKP	PKPdf	02 36 46.8	-0.6
ORIF				eR			
	comp=Z,7μm,22.5s						
ORIF	Oris-en-Rattie	149.09	335	ePKIKP	PKPdf	02 36 46.8	-0.6
ORIF	Oris-en-Rattie	149.09	335	ePKPdf	PKPdf	02 36 46.8	-0.6
QUIF	Quistinic	149.09	348	ePKIKP	PKPdf	02 36 46.4	-0.7
QUIF	Quistinic	149.09	348	ePKIKP	PKPdf	02 36 46.4	-0.7
QUIF	Quistinic	149.09	348	ePKPdf	PKPdf	02 36 46.4	-0.7
SAOF	Saorge	149.12	332	PKP2	PKPbc	02 36 51.0	-0.6
SAOF	Saorge	149.12	332	PKP	PKPbc	02 36 51.0	-0.6
SAOF	Saorge	149.12	332	PKP	PKPbc	02 36 51.0	-0.6
AGO	Saint Agoulin	149.14	339	PKP	PKPbc	02 36 51.2	-0.4
AGO	Saint Agoulin	149.14	339	PKP	PKPbc	02 36 51.2	-0.4
AUTN	L'Aution	149.17	332	PKP	PKPbc	02 36 52.6	+0.6
TCF	Toulx Ste Croi	149.24	341	ePKIKP	PKPdf	02 36 47.1	-0.4
	comp=Z,27nm,1.2s						
TCF	Toulx Ste Croi	149.24	341	ePKIKP	PKPdf	02 36 47.1	-0.4
TCF	Toulx Ste Croi	149.24	341	ePKPdf	PKPdf	02 36 47.1	-0.4
TOUF	Mont Tournerai	149.24	332	PKP2	PKPbc	02 36 51.4	-0.7
TOUF	Mont Tournerai	149.24	332	PKP	PKPbc	02 36 51.4	-0.7
TOUF	Mont Tournerai	149.24	332	PKP	PKPbc	02 36 51.4	-0.7
SSB	Saint Sauveur	149.31	337	ePKP2	PKPbc	02 36 52.2	+0.2
SSB				MLR	MLR		
	comp=Z,3μm,19.0s						
SSB	Saint Sauveur	149.31	337	ePKPbc	PKPbc	02 36 52.2	+0.2
SSB				LR	LR		
	comp=Z,3μm,19.0s						
MVIF	Mont Vial	149.37	332	PKIKP	PKPdf	02 36 50.2	+2.2
MVIF	Mont Vial	149.37	332	PKP	PKPdf	02 36 50.2	+2.2
MVIF	Mont Vial	149.37	332	PKP	PKPdf	02 36 50.2	+2.2
REVF	Revere	149.40	332	PKP2	PKPbc	02 36 51.5	-0.8
REVF	Revere	149.40	332	PKP	PKPbc	02 36 51.5	-0.8
REVF	Revere	149.40	332	PKP	PKPbc	02 36 51.5	-0.8
COLF	Collangettes	149.41	338	PKP	PKPbc	02 36 50.9	-1.4
COLF	Collangettes	149.41	338	PKP	PKPbc	02 36 50.9	-1.4
PYM	Petit Puy Mans	149.45	339	PKP2	PKPbc	02 36 52.5	+0.1
PYM	Petit Puy Mans	149.45	339	PKP	PKPbc	02 36 52.5	+0.1
PYM	Petit Puy Mans	149.45	339	PKP	PKPbc	02 36 52.5	+0.1
PGF	Pioggiola	149.54	329	ePKIKP	PKPdf	02 36 48.3	+0.1
PGF	Pioggiola	149.54	329	ePKPdf	PKPdf	02 36 48.3	+0.1
OCF	Saint Nazaire	149.60	335	PKP	PKPbc	02 36 52.8	0.0
OG26	St.-Nazaire-De	149.60	335	PKP	PKPbc	02 36 52.8	0.0
CALN	Calern	149.60	332	PKP2	PKPbc	02 36 51.9	-1.0
CALN	Calern	149.60	332	PKP	PKPbc	02 36 51.9	-1.0
CALN	Calern	149.60	332	PKP	PKPbc	02 36 51.9	-1.0
VIVF	Saint-Julien-l	149.62	336	ePKIKP	PKPdf	02 36 48.1	-0.1
VIVF	Saint-Julien-l	149.62	336	ePKPdf	PKPdf	02 36 48.1	-0.1
MFF	Saint Martin d	149.64	344	ePKIKP	PKPdf	02 36 47.8	-0.3
MFF	Saint Martin d	149.64	344	ePKPdf	PKPdf	02 36 47.8	-0.3
LBL	Lubilhac	149.82	338	PKP	PKPbc	02 36 53.8	+0.5
FRNF	Fournols	149.92	339	PKP	PKPbc	02 36 53.5	0.0
SMRF	Simiane la Rot	149.99	334	ePKIKP	PKPdf	02 36 48.5	-0.3
SMRF	Simiane la Rot	149.99	334	ePKPdf	PKPdf	02 36 48.5	-0.3
OSPF	L'Ospedale	150.09	327	PKP	PKPdf	02 36 51.0	+1.9
OSPF	L'Ospedale	150.09	327	PKP	PKPdf	02 36 51.0	+1.9
LMR	La Mourre	150.10	332	ePKIKP	PKPdf	02 36 48.1	-0.8
LMR	La Mourre	150.10	332	ePKIKP	PKPdf	02 36 48.1	-0.8
LMR	La Mourre	150.10	332	ePKPdf	PKPdf	02 36 48.1	-0.8
RJF	Les Rejaudoux	150.33	341	ePKIKP	PKPdf	02 36 49.1	-0.2
RJF				eR			
	comp=Z,5μm,19.5s						
RJF	Les Rejaudoux	150.33	341	ePKIKP	PKPdf	02 36 49.1	-0.2
RJF	Les Rejaudoux	150.33	341	ePKPdf	PKPdf	02 36 49.1	-0.2
WDD	Wield Dalam	150.42	313	PFAKE		02 37 00.0	-1.4
WDD				LR	LR		
	comp=Z,5μm,19.0s						
CAF	Calviac	150.49	340	ePKIKP	PKPdf	02 36 49.4	-0.2
CAF	Calviac	150.49	340	ePKIKP	PKPdf	02 36 49.4	-0.2
CAF	Calviac	150.49	340	ePKPdf	PKPdf	02 36 49.4	-0.2
LASF	Ste Croix	150.59	336	ePKIKP	PKPdf	02 36 49.5	-0.2
LASF	Ste Croix	150.59	336	ePKPdf	PKPdf	02 36 49.5	-0.2
LFF	La Frestale	150.90	341	ePKIKP	PKPdf	02 36 49.9	-0.2
LFF	La Frestale	150.90	341	ePKIKP	PKPdf	02 36 49.9	-0.2
LFF	La Frestale	150.90	341	ePKPdf	PKPdf	02 36 49.9	-0.2
VSL	Villasalto	151.51	324	PFAKE		02 37 00.0	+2.6
VSL				LR	LR		
	comp=Z,5μm,19.0s						
MTLF	Montolieu	151.83	338	ePKIKP	PKPdf	02 36 51.2	-0.4
MTLF	Montolieu	151.83	338	ePKIKP	PKPdf	02 36 51.2	-0.4
MTLF	Montolieu	151.83	338	ePKPdf	PKPdf	02 36 51.2	-0.4
LRDF	Laroque-de-Fa	152.06	337	PKP	PKPbc	02 36 58.8	+0.2
SJAF	Saint Jean de	152.31	336	PKP	PKPbc	02 36 58.7	-0.5
FILF	Fillols	152.37	336	PKP	PKPbc	02 36 59.2	-0.2
CARF	Carcanieres	152.41	337	PKP	PKPbc	02 36 58.9	-0.6
MLS	Moulis	152.56	339	PKP	PKPbc	02 36 59.2	-0.5
VALF	Valcebollere	152.71	337	PKP	PKPbc	02 36 59.3	-0.9
VALF	Valcebollere	152.71	337	PKP	PKPbc	02 36 59.9	-0.3
EPF	Esparros	152.75	340	ePKIKP	PKPdf	02 36 52.8	-0.2
EPF	Esparros	152.75	340	ePKIKP	PKPdf	02 36 52.8	-0.2
EPF	Esparros	152.75	340	ePKPdf	PKPdf	02 36 52.8	-0.2
MELF	Melles	152.75	339	PKP	PKPbc	02 37 00.3	+0.1
LABF	Labassere	152.82	340	PKP	PKPbc	02 36 59.4	-0.9
REYF	Montagne du Re	152.94	341	PKP	PKPbc	02 36 57.9	-2.7
RESF	Ens	152.94	340	PKP	PKPbc	02 36 58.9	-1.8
ORDF	Ordiarp	152.97	342	PKP	PKPbc	02 36 57.5	-3.1
ORDF	Ordiarp	152.97	342	PKP	PKPbc	02 36 57.5	-3.1
OSSF	Osses	153.03	343	PKP	PKPbc	02 37 00.1	-0.6
ETSF	Etsaut	153.15	341	ePKIKP	PKPdf	02 36 53.8	+0.1
ETSF	Etsaut	153.15	341	ePKIKP	PKPdf	02 36 53.8	+0.1
ETSF	Etsaut	153.15	341	ePKPdf	PKPdf	02 36 53.8	+0.1
LARF	Larrau	153.15	342	PKP	PKPbc	02 37 01.5	+0.5
KEST	Kesra	153.98	318	ePKPdf	PKPdf	02 36 54.0	-1.1
KEST				PKP	PKPdf	02 36 55.4	+0.3
KEST				PKPbc	PKPbc	02 37 02.3	-0.8
KEST				ePKPab	PKPab	02 37 16.1	-0.4
KEST	Kesra	153.98	318	PKP	PKPdf	02 36 55.4	+0.3
	comp=Z,2.3nm,0.9s,baz=158,slow=8.8,SNR=3.7						
KEST				PKPbc	PKPbc	02 37 02.3	-0.8
	comp=Z,6.7nm,1.1s,baz=180,slow=3.0,SNR=13						
KEST				PKPab	PKPab	02 37 16.1	-0.4
	comp=Z,15nm,1.1s,baz=326,slow=3.6,SNR=8.3						
ASCN	Ascension	154.34	175	PFAKE		02 37 10.0	+5.6
ASCN				LR	LR		
	comp=Z,2μm,20.0s						
CMAH	Djebel Manchou	154.60	321	P	PKPbc	02 37 10.0	+5.6
CMAH				P	PKPab	02 37 20.0	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CKFL	**Kef-Lekhel**	**155.16**	**322**	P	PKPab	02 37 12.0	-10
PBRG	**Braganca**	**155.64**	**350**	*e*PKPdf	**PKPdf**	**02 37 00.0**	**+2.9**
PBRG	**Braganca**	**155.64**	**350**	*e*PKPab	**PKPab**	**02 37 23.5**	**+0.3**
PBRG	**Braganca**	**155.64**	**350**	*e*PP	PP	02 41 01.1	+2.1
PGAV	**Gavieira, Arco**	**155.69**	**353**	*e*PKPdf	**PKPdf**	**02 36 57.1**	**-0.2**
PGAV	**Gavieira, Arco**	**155.69**	**353**	*e*PP	PP	02 41 01.4	+2.1
PGAV				*e*SS	SS	03 00 57.6	+15
PGAV				*e*LR	LR	03 43 47.7	
	comp=Z,6μm,20.0s						
PCAB	**Cabril**	**155.91**	**353**	*e*PKPdf	**PKPdf**	**02 36 57.7**	**+0.2**
PCAB	**Cabril**	**155.91**	**353**	*e*PP	PP	02 41 03.7	+3.2
SET	**Setif**	**156.06**	**323**	P	PKPdf	02 37 04.0	+6.1
POLO	**Lamas de Olo**	**156.21**	**352**	*e*PKPdf	**PKPdf**	**02 36 58.4**	**+0.4**
POLO	**Lamas de Olo**	**156.21**	**352**	*e*PKPab	**PKPab**	**02 37 26.2**	**+0.5**
POLO	**Lamas de Olo**	**156.21**	**352**	*e*PP	PP	02 41 04.3	+2.1
PVRL	**Vila Real**	**156.30**	**352**	*e*PKPdf	**PKPdf**	**02 37 01.0**	**+3.0**
PVRL	**Vila Real**	**156.30**	**352**	*e*PKPab	**PKPab**	**02 37 26.2**	**+0.2**
PVRL	**Vila Real**	**156.30**	**352**	*e*PP	PP	02 41 04.8	+2.1
MVO	**Moncorvo**	**156.31**	**351**	*e*PKPdf	**PKPdf**	**02 36 57.6**	**-0.5**
MVO	**Moncorvo**	**156.31**	**351**	*e*PKPab	**PKPab**	**02 37 26.2**	**+0.1**
MVO	**Moncorvo**	**156.31**	**351**	*e*PP	PP	02 41 04.7	+1.9
MVO				*e*SS	SS	03 01 05.7	+16
MVO				*e*LR	LR	03 43 28.8	
	comp=Z,4μm,20.0s						
CMLA	**Cha da Macela**	**156.81**	**28**	PFAKE		02 37 10.0	+11
CMLA				LR	LR		
	comp=Z,7μm,20.0s						
PVIS	**Viseu**	**156.88**	**352**	*e*PKPdf	**PKPdf**	**02 36 58.2**	**-0.6**
PVIS	**Viseu**	**156.88**	**352**	*e*PP	PP	02 41 09.0	+3.2
AKET	**Djebel Ketaf**	**157.02**	**325**	P	**PKPab**	**02 37 32.3**	**+2.8**
ESDC	**Sonseca Array**	**157.10**	**344**	PKP	**PKPdf**	**02 36 59.5**	**+0.3**
ESDC				PKPab	**PKPab**	**02 37 28.4**	**-1.2**
ESDC				PP	**PP**	**02 41 06.0**	**-1.3**
ESDC	**Sonseca Array**	**157.10**	**344**	PKP	**PKPdf**	**02 36 59.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=353,slow=3.0,SNR=6.3						
ESDC				PKPab	**PKPab**	**02 37 28.4**	**-1.2**
	comp=Z,6.7nm,0.7s,baz=16,slow=3.3,SNR=12						
ESDC				PP	**PP**	**02 41 06.0**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=22,slow=5.1,SNR=4.2						
ESLA	**Sonseca Array**	**157.10**	**344**	*e*PKPdf	**PKPdf**	**02 36 58.8**	**-0.3**
ESLA				*e*PKPab	**PKPab**	**02 37 30.2**	**+0.7**
MTE	**Manteigas**	**157.14**	**351**	*e*PKPdf	**PKPdf**	**02 36 59.9**	**+0.7**
MTE	**Manteigas**	**157.14**	**351**	*e*PP	PP	02 41 08.4	+1.1
MTE				*e*SS	SS	03 01 06.0	+7.4
MTE				*e*LR	LR	03 43 45.9	
	comp=Z,4μm,17.1s						
MTE	**Manteigas**	**157.14**	**351**	*e*PKPdf	**PKPdf**	**02 36 58.4**	**-0.8**
MTE				*e*PKPab	**PKPab**	**02 37 30.3**	**+0.6**
MTE				LR	LR		
	comp=Z,5μm,20.0s						
ADJB	**Djebel Djouab**	**157.17**	**326**	P	**PKPab**	**02 37 31.8**	**+1.7**
PAB	**San Pablo**	**157.32**	**345**	*e*PKIKP	**PKPdf**	**02 36 59.6**	**+0.2**
PAB				MLR	MLR		
	comp=Z,5μm,20.0s						
PAB	**San Pablo**	**157.32**	**345**	*e*PKPdf	**PKPdf**	**02 36 59.6**	**+0.2**
PAB				LR	LR		
	comp=Z,5μm,20.0s						
EMHD	**Djebel Mahouad**	**157.39**	**327**	P	PKPdf	02 37 13.0	+13
PCBR	**Castelo Branco**	**157.68**	**351**	*e*PKPdf	**PKPdf**	**02 36 59.9**	**+0.2**
PCBR	**Castelo Branco**	**157.68**	**351**	*e*PP	PP	02 41 13.7	+3.5
PTOM	**Tomar**	**158.02**	**353**	*e*PKPdf	**PKPdf**	**02 36 59.9**	**-0.3**
PTOM	**Tomar**	**158.02**	**353**	*e*PP	PP	02 41 15.5	+3.4
EBNR	**Beni Rached**	**158.03**	**330**	P	**PKPab**	**02 37 34.0**	**+0.3**
PMRV	**Marv??o**	**158.06**	**350**	*e*PKPdf	**PKPdf**	**02 36 59.9**	**-0.4**
PMRV	**Marv??o**	**158.06**	**350**	*e*PKPab	**PKPab**	**02 37 34.8**	**+1.1**
PMRV	**Marv??o**	**158.06**	**350**	*e*PP	PP	02 41 14.2	+1.8
PMRV				*e*SS	SS	03 01 13.5	+5.1
PMRV				*e*LR	LR	03 43 03.1	
	comp=Z,4μm,34.3s						
EANR	**'Ain N'Sour**	**158.51**	**330**	P	**PKPab**	**02 37 36.0**	**+0.2**
PMTG	**Montargil**	**158.54**	**352**	*e*PKPdf	**PKPdf**	**02 37 00.9**	**+0.1**
PMTG	**Montargil**	**158.54**	**352**	*e*PKPab	**PKPab**	**02 37 36.8**	**+1.1**
PMTG	**Montargil**	**158.54**	**352**	*e*PP	PP	02 41 17.2	+2.3
PESTR	**Estremoz**	**158.65**	**351**	*e*PKPdf	**PKPdf**	**02 37 01.3**	**+0.3**
PESTR	**Estremoz**	**158.65**	**351**	*e*PKPab	**PKPab**	**02 37 37.0**	**+0.8**
PESTR	**Estremoz**	**158.65**	**351**	*e*PP	PP	02 41 17.6	+2.1
PMAFR	**Mafra**	**158.77**	**354**	*e*PKPdf	**PKPdf**	**02 37 03.8**	**+2.7**
PMAFR	**Mafra**	**158.77**	**354**	*e*PP	PP	02 41 20.5	+4.3
ETRT	**Tiaret**	**158.86**	**329**	P	**PKPab**	**02 37 38.0**	**+0.6**
LIS	**Lisbon**	**159.00**	**354**	*e*P	**PKPdf**	**02 37 00.3**	**-1.1**
LIS				AMS	AMS	03 49 50.3	
	comp=Z,5μm,19.3s						
LIS	**Lisbon**	**159.00**	**354**	*e*P	**PKPdf**	**02 37 00.3**	**-1.1**
LIS				A	A	03 49 50.3	
	comp=Z,5μm,19.3s						
LIS	**Lisbon**	**159.00**	**354**	*e*PKIKP	**PKPdf**	**02 37 00.2**	**-1.1**
EVO	**Evora**	**159.04**	**351**	*e*PKIKP	**PKPdf**	**02 37 01.1**	**-0.3**
	comp=Z,44nm,1.2s						
EVO				*e*R			
	comp=Z,7μm,21.8s						
EVOP	**Sao Brissos**	**159.06**	**352**	*e*PKIKP	**PKPdf**	**02 37 01.1**	**-0.3**
EVOP	**Sao Brissos**	**159.06**	**352**	*e*PKPdf	**PKPdf**	**02 37 01.1**	**-0.3**
PBAR	**Barrancos**	**159.23**	**349**	*e*PKPdf	**PKPdf**	**02 37 01.3**	**-0.4**
PBAR	**Barrancos**	**159.23**	**349**	*e*PKPab	**PKPab**	**02 37 39.7**	**+1.0**
PBAR	**Barrancos**	**159.23**	**349**	*e*PP	PP	02 41 20.8	+2.1
PBEJ	**Beja**	**159.51**	**351**	*e*PKPdf	**PKPdf**	**02 37 01.3**	**-0.7**
PBEJ	**Beja**	**159.51**	**351**	*e*PKPab	**PKPab**	**02 37 40.5**	**+0.6**
PBEJ	**Beja**	**159.51**	**351**	*e*PP	PP	02 41 21.2	+1.0
PNCL	**Nicolau / Gran**	**159.52**	**352**	*e*PKPdf	**PKPdf**	**02 37 02.0**	**0.0**
PNCL	**Nicolau / Gran**	**159.52**	**352**	*e*PKPab	**PKPab**	**02 37 41.0**	**+1.1**
MESJ	**Messejana**	**159.75**	**351**	*e*P	**PKPdf**	**02 37 01.5**	**-0.8**
MESJ				*e*PP	**PP**	**02 41 22.4**	**+1.0**
MESJ				*e*SS	SS	03 01 31.3	+5.1
MESJ				AMS	AMS	04 05 53.9	
	comp=Z,5μm,21.0s						
MESJ	**Messejana**	**159.75**	**351**	*e*P	**PKPdf**	**02 37 01.5**	**-0.8**
MESJ	**Messejana**	**159.75**	**351**	*e*PP	PP	02 41 22.4	+0.9
MESJ				*e*SS	SS	03 01 31.3	+5.2
MESJ				A	A	04 05 53.9	
	comp=Z,5μm,21.0s						
MESJ	**Messejana**	**159.75**	**351**	*e*PKIKP	**PKPdf**	**02 37 01.4**	**-0.8**
MESJ				*e*		02 41 22.4	
PVAQ	**Vaqueiros**	**160.10**	**350**	*e*PKPdf	**PKPdf**	**02 37 02.4**	**-0.3**
PVAQ	**Vaqueiros**	**160.10**	**350**	*e*PKPab	**PKPab**	**02 37 44.2**	**+1.7**
PVAQ	**Vaqueiros**	**160.10**	**350**	*e*PP	PP	02 41 24.5	+1.1
PVAQ				*e*SS	SS	03 01 29.2	-0.7
PVAQ				*e*LR	LR	03 43 34.2	
	comp=Z,3μm,28.6s						
PTEO	**Sao Teotonio**	**160.10**	**352**	*e*PKPdf	**PKPdf**	**02 37 04.5**	**+1.8**
PTEO	**Sao Teotonio**	**160.10**	**352**	*e*PKPab	**PKPab**	**02 37 42.8**	**+0.3**
PTEO	**Sao Teotonio**	**160.10**	**352**	*e*PP	PP	02 41 27.8	+4.4
PBDV	**Barranco-do-Ve**	**160.29**	**350**	*e*PKPdf	**PKPdf**	**02 37 04.6**	**+1.6**
PBDV	**Barranco-do-Ve**	**160.29**	**350**	*e*PKPab	**PKPab**	**02 37 44.8**	**+1.4**
PBDV	**Barranco-do-Ve**	**160.29**	**350**	*e*PP	PP	02 41 28.6	+4.1
MORF	**Marmelete**	**160.33**	**352**	*e*PKPdf	**PKPdf**	**02 37 02.3**	**-0.7**
MORF	**Marmelete**	**160.33**	**352**	*e*PKPab	**PKPab**	**02 37 44.4**	**+0.8**
MORF	**Marmelete**	**160.33**	**352**	*e*PP	PP	02 41 26.6	+1.9
MORF	**Marmelete**	**160.33**	**352**	*e*PKIKP	**PKPdf**	**02 37 02.1**	**-0.9**
MORF				*e*		02 41 25.7	
PFVI	**Vila Bisbo**	**160.52**	**352**	*e*PKPdf	**PKPdf**	**02 37 03.2**	**0.0**
PFVI	**Vila Bisbo**	**160.52**	**352**	*e*PP	PP	02 41 25.3	-0.3
TAM	**Tamanrasset**	**162.85**	**290**	*e*PKIKP	**PKPdf**	**02 37 06.1**	**-0.1**
TAM				MLR	MLR		
	comp=Z,9μm,22.0s						
TAM	**Tamanrasset**	**162.85**	**290**	*e*PKPdf	**PKPdf**	**02 37 06.1**	**-0.1**
TAM				LR	LR		
	comp=Z,9μm,22.0s						
RTC	**Rabat Centre**	**163.22**	**345**	PFAKE		02 37 20.0	+14
RTC				LR	LR		
	comp=Z,8μm,19.0s						
MDT	**Midelt**	**163.62**	**338**	PKP	**PKPdf**	**02 37 06.7**	**+0.1**
MDT				PKPab	**PKPab**	**02 37 58.9**	**+0.6**
MDT	**Midelt**	**163.62**	**338**	PKP	**PKPdf**	**02 37 06.7**	**+0.1**
	comp=Z,10.0nm,1.0s,baz=359,slow=1.8,SNR=13						
MDT				PKPab	**PKPab**	**02 37 58.9**	**+0.6**
	comp=Z,7.0nm,0.9s,baz=13,slow=3.5,SNR=4.5						
PMPST	**Porto Santo, M**	**164.27**	**14**	*e*PKPdf	**PKPdf**	**02 37 07.4**	**+0.4**
PMPST	**Porto Santo, M**	**164.27**	**14**	*e*PP	PP	02 41 47.8	+2.1
PMPS	**Porto Santo**	**164.29**	**14**	*e*PKPdf	**PKPdf**	**02 37 07.4**	**+0.4**
PMPS	**Porto Santo**	**164.29**	**14**	*e*PP	PP	02 41 48.8	+3.1
PMOZ	**Porto Moniz, M**	**164.30**	**16**	*e*PKPdf	**PKPdf**	**02 37 07.9**	**+0.7**
PMOZ	**Porto Moniz, M**	**164.30**	**16**	*e*PP	PP	02 41 47.5	+1.5
PMOZ				*e*LR	LR	03 40 49.4	
	comp=Z,4μm,20.0s						
PMAR	**Madeira**	**164.47**	**16**	*e*PKPdf	**PKPdf**	**02 37 08.3**	**+0.8**
TOA0	**Torodi Ar. Sit**	**166.04**	**253**	*e*PKPdf	**PKPdf**	**02 37 08.0**	**-1.1**
TOA0				*e*PKPab	**PKPab**	**02 38 09.3**	**-0.1**
TORD	**Torodi Ar. Bea**	**166.04**	**253**	PKP	**PKPdf**	**02 37 08.1**	**-0.9**
TORD				PKPab	**PKPab**	**02 38 10.7**	**+1.2**
TORD				PP	**PP**	**02 42 01.3**	**+4.3**
TORD	**Torodi Ar. Bea**	**166.04**	**253**	PKP	**PKPdf**	**02 37 08.1**	**-0.9**
	comp=Z,8.0nm,0.9s,baz=6.9,slow=1.1,SNR=34						
TORD				PKPab	**PKPab**	**02 38 10.7**	**+1.2**
	comp=Z,12nm,1.0s,baz=106,slow=4.3,SNR=5.0						
TORD				PP	**PP**	**02 42 01.3**	**+4.3**
	comp=Z,12nm,1.2s,baz=146,slow=4.4,SNR=4.4						
LIC	**Lamto**	**166.66**	**211**	*e*PKIKP	**PKPdf**	**02 37 08.6**	**-1.0**
LIC				*e*R			
	comp=Z,14μm,19.8s						
LIC	**Lamto**	**166.66**	**211**	*e*PKPdf	**PKPdf**	**02 37 08.6**	**-1.0**
DBIC	**Dimbokro**	**166.95**	**213**	PKP	**PKPdf**	**02 37 10.4**	**+0.6**
DBIC				*e*PKPdf	PKPdf	02 37 11.2	+1.4
DBIC				PP	PP	02 42 14.7	+15
DBIC	**Dimbokro**	**166.95**	**213**	PKP	**PKPdf**	**02 37 10.4**	**+0.6**
	comp=Z,6.1nm,0.8s,baz=175,slow=2.1,SNR=6.1						
DBIC				PP	PP	02 42 14.7	+15
	comp=Z,8.9nm,1.0s,baz=165,slow=7.0,SNR=5.2						
SACV	**Santiago Islan**	**168.49**	**102**	PFAKE		02 37 20.0	+9.2
SACV				LR	LR		
	comp=Z,8μm,22.0s						

*NEIC **02** 02:20:57.0, 19°.26N×65°.68W, h57^{km}, MD3.3(RSPR), After RSPR.*

RSPR 02 02:20:57.0, 19°.26N×65°.68W, h57^{km}±11^{km}, MD3.3/3, 16C, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBYP	**Canovanas**	**1.00**	**190**	*e*Pg	Pn	02 21 13.7	-1.3
CBYP				*e*S	Sn	02 21 28.1	-0.2
HUMP	**Col San Antoni**	**1.12**	**188**	⇑*e*P	Pn	02 21 15.7	-0.9
HUMP	**Col San Antoni**	**1.12**	**188**	⇑*e*P	Pn	02 21 15.7	-0.9
HUMP	**Col San Antoni**	**1.12**	**188**	⇑*e*P	Pn	02 21 15.7	-0.9
STVI	**Saint Thomas**	**1.14**	**143**	*e*S	Sn	02 21 30.5	-0.9
STVI	**Saint Thomas**	**1.14**	**143**	*e*S	Sn	02 21 30.5	-0.9
MTP	**Monte Pirata**	**1.17**	**174**	⇑*e*P	Pn	02 21 16.6	-0.5
MTP	**Monte Pirata**	**1.17**	**174**	⇑*e*P	Pn	02 21 16.6	-0.5
MTP				*e*S	Sn	02 21 31.3	-0.8
MTP	**Monte Pirata**	**1.17**	**174**	*e*Pn	Pn	02 21 17.0	-0.1
MTP				*e*S	Sn	02 21 34.1	+2.0
SJG	**San Juan**	**1.23**	**201**	⇑*e*P	Pn	02 21 17.4	-0.6
SJG	**San Juan**	**1.23**	**201**	⇑*e*P	Pn	02 21 17.4	-0.6
SJG	**San Juan**	**1.23**	**201**	*e*Pn	Pn	02 21 17.7	-0.3
SJG				*e*S	Sn	02 21 34.3	+0.7
AOPR	**Arecibo Observ**	**1.36**	**228**	⇑*e*P	Pn	02 21 18.8	-1.0
AOPR	**Arecibo Observ**	**1.36**	**228**	⇑*e*P	Pn	02 21 18.8	-1.0
AOPR	**Arecibo Observ**	**1.36**	**228**	⇑*e*P	Pn	02 21 18.8	-1.0
CELP	**Cerrillos**	**1.45**	**216**	⇑*e*P	Pn	02 21 20.0	-1.0
CELP	**Cerrillos**	**1.45**	**216**	⇑*e*P	Pn	02 21 20.1	-0.9
CELP	**Cerrillos**	**1.45**	**216**	⇑*e*P	Pn	02 21 20.0	-1.0
CRPR	**Cabo Rojo, PR**	**1.84**	**228**	⇑*e*P	Pn	02 21 25.5	-0.8
CRPR	**Cabo Rojo, PR**	**1.84**	**228**	⇑*e*P	Pn	02 21 25.5	-0.8
CRPR	**Cabo Rojo, PR**	**1.84**	**228**	⇑*e*P	Pn	02 21 25.5	-0.8

IDC 02 02:26:38.2±1.6, 17°.66S×167°.84E, h0^{km}, mb4.1/6, mb1 4.2/7, mb1mx4.0/21, mbtmp4.1/7, ML3.6/1, MS5.3/1, Ms1 5.3/1, ms1mx3.3/31, Error ellipse: s-maj=53.9km s-min=27.5km az=134.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.58**	**196**	Pn	Pn	02 27 48.2	-0.8
	3.1nm,0.3s,baz=303,slow=17,SNR=2.9						
STKA	**Stephens Creek**	**27.62**	**234**	P	P	02 32 28.5	+0.9
	2.5nm,0.8s,baz=71,slow=13,SNR=4.7						
WRA	**Warramunga Arr**	**31.77**	**261**	P	P	02 33 03.5	-1.1
	0.9nm,0.8s,baz=81,slow=6.3,SNR=6.8						
WRA				LR	LR	02 44 31.2	
	comp=Z,6μm,21.3s,baz=70,slow=34						
ASAR	**Alice Springs**	**32.26**	**254**	P	P	02 33 08.4	-0.4
	1.5nm,0.6s,baz=80,slow=8.8,SNR=9.1						
FITZ	**Fitzroy Crossi**	**40.10**	**263**	P	P	02 34 16.8	+0.9
	2.6nm,0.6s,baz=153,slow=6.8,SNR=5.1						
NWAO	**Narrogin (SRO)**	**47.78**	**241**	P	P	02 35 17.1	-0.4
	6.1nm,0.9s,baz=72,slow=9.6,SNR=4.0						
ILAR	**Eielson Array**	**89.13**	**18**	P	P	02 39 34.8	-0.4
	0.3nm,0.7s,baz=239,slow=4.9,SNR=4.6						
ARCES	**ARCESS Array B**	**123.20**	**345**	PKP	PKPdf	02 45 36.5	+0.1
	2.7nm,0.8s,baz=57,slow=2.6,SNR=7.8						

*SZGRF **02** 02:26:48.0, 20°.38S×169°.52E, h33^{km}, Vanuatu Islands*

*IDC **02** 02:26:50.8±0.4, 17°.79S×167°.85E, h0^{km}, mb4.8/27, mb1 5.0/30, mb1mx4.9/32, mbtmp4.9/30, ML4.9/2, MS5.7/2, Ms1 5.7/2, ms1mx4.4/29, Error ellipse: s-maj=13.9km s-min=12.3km az=112.0*

*ISCJB **02** 02:26:54.0±2.4, 17°.86S±0°.04×167°.84E±0°.04, h30^{km}±16^{km}, mb5.3/103, MS5.6/17, Error ellipse: s-maj=7.1km s-min=6.1km az=35.3*

*NEIC **02** 02:26:53.4±1.5, 17°.76S×167°.86E, h15^{km}±9^{km}, mb5.5/51, Error ellipse: s-maj=5.9km s-min=4.6km az=145.0*

*BJI **02** 02:26:54.4, 17°.36S×168°.55E, h29^{km}, mB5.8/25, mb5.2/38, Ms6.0/26, Ms7 5.8/25*

*MOS **02** 02:26:54.4±1.5, 17°.75S×167°.69E, h28^{km}, mb5.7/27, MS5.8/6, Error ellipse: s-maj=9.2km s-min=8.2km az=32.2*

*TEH **02** 02:26:57.0, 17°.76S×167°.80E, h35^{km}, ML5.6*

*GCMT **02** 02:27:00.7±0.2, 17°.74S×167°.62E, h18^{km}±1^{km}, MW5.7, Moment Tensor Solution. s12,c12; s88,c163; Moment tensor: Scale 10^{17}Nm; M_{rr}2.50±.21; $M_{\theta\theta}$0.17±.11; $M_{\phi\phi}$-2.66±.13; $M_{r\theta}$1.38±.35; $M_{\theta\phi}$0.19±.06; $M_{\phi r}$-2.87±.35; Best double couple: $M_0$4.10000×10^{17} NP1:ϕ_s12.00000°, δ22.00000°, λ121.00000°. NP2:ϕ_s160.00000°, δ71.00000°, λ78.00000°. Principal axes: T 4.1400, Plg62.0000°, Azm52.0000°; N -0.0600, Plg11.0000°, Azm163.0000°; P -4.0700, Plg25.0000°, Azm259.0000°; Data Used: IU II CN IC G.*

ISC 02 02:26:56.2±0.4, 17°.90S±0°.04×167°.97E±0°.05, h35^{km}±1^{km}, h35^{km}:pP-P, n495, σ1s.47/504, mb5.4/102, MS5.7/17, 15C-2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.35**	**193**	*e*P	**Pn**	**02 28 02.4**	**+2.5**
BAYA				*e*S	**Sn**	**02 28 48.4**	**-1.0**
DZM	**Mont Dzumac**	**4.39**	**199**	*e*Pn	**Pn**	**02 28 00.3**	**-0.2**
DZM				*e*S	**Sn**	**02 28 48.9**	**-1.6**
DZM	**Mont Dzumac**	**4.39**	**199**	Pn	**Pn**	**02 27 59.3**	**-1.2**
	25nm,0.3s,baz=317,slow=18,SNR=13						
DZM				Sn	**Sn**	**02 28 48.0**	**-2.5**
	43nm,0.3s,baz=120,slow=20,SNR=9.5						
NOUC	**Port Laguerre**	**4.46**	**200**	*e*P	**Pn**	**02 28 02.9**	**+1.5**
NOUC				*e*S	**Sn**	**02 28 50.9**	**-1.3**
MSVF	**Nonsavu**	**9.60**	**91**	*e*P	Pn	02 29 19.1	+7.0
MSVF	**Nonsavu**	**9.60**	**91**	*e*Pn	Pn	02 29 19.1	+7.0
MSVF	**Nonsavu**	**9.60**	**91**	Pn	Pn	02 29 20.9	+8.9
	1μm,2.1s,SNR=10						
HNR	**Honiara**	**11.47**	**316**	Pn	Pn	02 29 32.6	-5.1
HNR	**Honiara**	**11.47**	**316**	Pn	Pn	02 29 32.6	-5.1
	20nm,0.3s,baz=143,slow=8.2,SNR=3.7						
FUNA	**Funafuti**	**14.35**	**51**	*e*Pn	**Pn**	**02 30 15.7**	**-1.3**
EIDS	**Eidsvold**	**17.36**	**242**	*e*Pn	**P**	**02 30 56.5**	**-0.5**
	790nm,1.7s						
OUZ	**Omahuta**	**17.96**	**165**	*e*Pn	**P**	**02 31 06.4**	**+3.0**
	242nm,1.6s						
ARMA	**Armidale**	**19.40**	**227**	*e*Pn	**Pn**	**02 31 21.1**	**+0.3**
	810nm,2.1s						
TARA	**Tarawa**	**19.75**	**15**	*e*P	**P**	**02 31 22.8**	**-0.4**
	2μm,2.2s						
AFI	**Afiamalu**	**19.87**	**81**	*e*P	**P**	**02 31 24.0**	**-0.7**
AFI	**Afiamalu**	**19.87**	**81**	P	**Pn**	**02 31 26.5**	**0.0**
	0.6nm,0.3s,baz=295,slow=14,SNR=3.6						
CTA	**Charters Tower**	**20.65**	**260**	P	**P**	**02 31 32.3**	**-0.8**
CTA	**Charters Tower**	**20.65**	**260**	P	**P**	**02 31 32.3**	**-0.8**
	68nm,1.1s,baz=87,slow=12,SNR=18						
CTAO	**Charters Tower**	**20.65**	**260**	*e*P	**P**	**02 31 32.4**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,304nm,1.3s						
CTAO	**Charters Tower**	**20.65**	**260**	*e*P	**P**	**02 31 32.4**	**-0.7**
	comp=Z,304nm,1.3s						
URZ	**Urewera**	**21.80**	**160**	*e*P	**P**	**02 31 47.6**	**+2.4**
	comp=Z,716nm,1.7s						
URZ	**Urewera**	**21.80**	**160**	P	**P**	**02 31 46.9**	**+1.7**
	comp=Z,52nm,1.1s,baz=21,slow=5.1,SNR=12						
PMG	**Port Moresby**	**21.90**	**290**	*e*P	**P**	**02 31 45.0**	**-1.5**
	comp=Z,459nm,1.7s						
PMG				LR	LR		
	comp=Z,20μm,19.0s						
PMG	**Port Moresby**	**21.90**	**290**	P	**P**	**02 31 46.1**	**-0.4**
	comp=Z,2μm,1.1s,comp=Z,13nm						
PMG	**Port Moresby**	**21.90**	**290**	P	**P**	**02 31 44.2**	**-2.3**
	comp=Z,59nm,1.1s,baz=114,slow=9.0,SNR=9.2						
COEN	**Coen**	**24.16**	**276**	*e*P	**P**	**02 32 08.3**	**-1.0**
	comp=Z,3μm,1.6s						
RPZ	**Rata Peaks**	**25.86**	**175**	P	**P**	**02 32 27.1**	**+2.5**
RPZ	**Rata Peaks**	**25.86**	**175**	P	**P**	**02 32 27.1**	**+2.5**
	comp=Z,7.3nm,0.8s,baz=18,slow=6.4,SNR=2.8						
STKA	**Stephens Creek**	**27.59**	**235**	*e*P	**P**	**02 32 40.5**	**+0.3**
	comp=Z,32nm,1.4s						
STKA	**Stephens Creek**	**27.59**	**235**	P	**P**	**02 32 39.7**	**-0.5**
	comp=Z,53nm,1.0s,baz=62,slow=9.6,SNR=27						
WRAB	**Tennant Creek**	**31.84**	**261**	*e*P	**P**	**02 33 15.8**	**-2.3**
WRAB	**Tennant Creek**	**31.84**	**261**	*e*P	**P**	**02 33 15.8**	**-2.3**
WRA	**Warramunga Arr**	**31.85**	**261**	P	**P**	**02 33 15.4**	**-2.8**
WRA	**Warramunga Arr**	**31.85**	**261**	P	**P**	**02 33 15.4**	**-2.8**
	comp=Z,15nm,1.0s,baz=89,slow=8.9,SNR=17						
BBOO	**Buckleboo**	**32.28**	**236**	*e*P	**P**	**02 33 21.5**	**-0.4**
	comp=Z,1μm,1.1s						
AS31	**Alice Springs**	**32.31**	**254**	*e*P	**P**	**02 33 20.2**	**-2.1**
ASAR	**Alice Springs**	**32.31**	**254**	P	**P**	**02 33 19.9**	**-2.4**
ASAR				ScP	**ScP**	**02 39 53.6**	**+2.5**
ASAR	**Alice Springs**	**32.31**	**254**	P	**P**	**02 33 19.9**	**-2.4**
	comp=Z,18nm,1.0s,baz=81,slow=8.8,SNR=27						
ASAR				ScP	**ScP**	**02 39 53.6**	**+2.5**
	comp=Z,2.1nm,1.0s,baz=107,slow=3.2,SNR=4.8						
ASAR				LR	LR	02 45 40.3	
	comp=Z,17μm,20.6s,baz=60,slow=35						
BAKI	**Biak**	**35.43**	**294**	P	P	02 34 00.8	+11
	comp=Z,135nm,1.4s						
RKPI	**Ransiki, Papua**	**36.96**	**292**	P	P	02 34 12.5	+10
	comp=Z,296nm,1.5s						
FORT	**Forrest**	**38.36**	**243**	*e*P	**P**	**02 34 13.1**	**-1.0**
	comp=Z,83nm,0.9s						
SWI	**Sorong**	**39.84**	**291**	P	P	02 34 35.7	+9.0
	comp=Z,82nm,1.4s						
FITZ	**Fitzroy Crossi**	**40.20**	**263**	P	**P**	**02 34 27.7**	**-1.9**
FITZ	**Fitzroy Crossi**	**40.20**	**263**	P	**P**	**02 34 27.7**	**-1.9**
	comp=Z,76nm,1.1s,baz=92,slow=9.1,SNR=20						
PPT	**Papeete**	**40.37**	**96**	LR	LR	02 46 58.2	
	comp=Z,9μm,18.7s,baz=262,slow=30						
NLAI	**Namlea**	**42.61**	**285**	P	**P**	**02 34 48.7**	**-0.7**
	comp=Z,265nm,1.8s,comp=Z,7μm						
LBMI	**Labuha**	**43.31**	**289**	P	P	02 35 03.9	+8.8
MBWA	**Marble Bar**	**45.45**	**258**	*e*P	**P**	**02 35 11.4**	**-0.8**
	comp=Z,128nm,1.4s						
LUWI	**Luwuk**	**47.44**	**286**	P	P	02 35 36.6	+8.7
NWAO	**Narrogin (SRO)**	**47.77**	**242**	*e*P	**P**	**02 35 29.0**	**-1.2**
	comp=Z,89nm,1.3s						
NWAO	**Narrogin (SRO)**	**47.77**	**242**	P	**P**	**02 35 28.9**	**-1.4**
	comp=Z,43nm,1.0s,baz=83,slow=8.5,SNR=11						
SKSI	**Soroako, Sulaw**	**48.20**	**283**	P	**P**	**02 35 34.5**	**+0.7**
	comp=Z,89nm,1.7s						
BKSI	**Bulukumba**	**48.36**	**279**	P	P	02 35 39.4	+4.4
	comp=Z,177nm,0.8s						
KAPI	**Kappang**	**48.81**	**279**	*e*P	**P**	**02 35 36.7**	**-1.8**
	comp=Z,308nm,1.5s						
KAPI	**Kappang**	**48.81**	**279**	P	**P**	**02 35 36.7**	**-1.8**
	comp=Z,596nm,1.3s,SNR=5.5						
KAPI	**Kappang**	**48.81**	**279**	P	**P**	**02 35 37.3**	**-1.2**
	comp=Z,199nm,1.2s						
KAPI	**Kappang**	**48.81**	**279**	P	**P**	**02 35 35.9**	**-2.6**
	comp=Z,45nm,1.1s,baz=120,slow=7.8,SNR=9.3						
SPSI	**Sidrap Palu**	**49.15**	**280**	P	**P**	**02 35 44.0**	**+3.0**
	comp=Z,102nm,0.8s						
TTSI	**Tana Toraja**	**49.42**	**282**	P	P	02 35 46.9	+3.8
	comp=Z,102nm,1.4s,comp=Z,3μm						
KHKI	**Kahang-Kahang**	**51.72**	**273**	P	**P**	**02 35 59.7**	**-0.8**
IGBI	**Denpasar**	**52.04**	**273**	P	P	02 36 08.2	+5.4
	comp=Z,240nm,1.4s,comp=Z,52μm						
SRBI	**Singaraja**	**52.18**	**274**	P	P	02 36 12.9	+9.0
KBKI	**Kotabaru**	**52.75**	**280**	P	P	02 36 13.4	+5.2
	comp=Z,87nm,1.8s						
JAGI	**Jajag, Banyuwa**	**53.08**	**273**	P	P	02 36 14.0	+3.4
	comp=Z,175nm,2.4s						
MYLDM	**Lahad Datu**	**53.93**	**291**	P	**P**	**02 36 18.8**	**+2.0**
BBKI	**Banjar Baru**	**53.94**	**279**	P	P	02 36 22.5	+5.6
	comp=Z,183nm,1.3s						
TSM	**Tawau**	**54.10**	**289**	P	**P**	**02 36 21.2**	**+3.2**
SDKM	**Sandakan**	**55.29**	**290**	P	P	02 36 41.1	+14
PWJI	**Pagerwojo**	**55.43**	**273**	P	P	02 36 36.5	+8.8
	comp=Z,94nm,1.4s						
SJI	**Sawahan**	**55.55**	**273**	P	P	02 36 34.7	+6.0
PCJI	**Pacitan**	**55.98**	**272**	P	P	02 36 35.0	+3.3
TGY	**Tagaytay City**	**56.24**	**301**	LR	LR	02 57 29.4	
	comp=Z,17nm,18.9s,baz=204,slow=33						
KKM	**Kota Kinabalu**	**56.35**	**290**	*e*P	**P**	**02 36 33.5**	**-0.8**
	comp=Z,122nm,1.4s						
KKM	**Kota Kinabalu**	**56.35**	**290**	P	**P**	**02 36 34.1**	**-0.2**
BTM	**Bintulu**	**58.00**	**286**	P	**P**	**02 36 46.1**	**+0.1**
SBUM	**Sibu**	**58.51**	**284**	P	**P**	**02 36 49.3**	**-0.2**
JOW	**Kunigami**	**58.84**	**318**	*e*P	**P**	**02 36 51.4**	**-0.1**
	comp=Z,37nm,1.5s						
VNDA	**Vanda**	**59.72**	**182**	*e*P	**P**	**02 36 58.2**	**+1.2**
	comp=Z,101nm,1.8s						
VNDA	**Vanda**	**59.72**	**182**	P	**P**	**02 36 57.6**	**+0.7**
	comp=Z,6.7nm,1.2s,baz=357,slow=7.0,SNR=10						
KSM	**Kuching**	**59.91**	**283**	*e*P	**P**	**02 36 58.3**	**-0.9**
	comp=Z,25nm,0.9s						
KSM	**Kuching**	**59.91**	**283**	P	**P**	**02 36 58.7**	**-0.5**
SBA	**Scott Base**	**59.98**	**180**	*e*P	**P**	**02 36 59.7**	**+1.0**
SBA				pmax	pmax		
	comp=Z,133nm,1.5s						
SBA	**Scott Base**	**59.98**	**180**	*e*P	**P**	**02 36 59.7**	**+1.0**
	comp=Z,133nm,1.5s						
MJAR	**Matsushiro Arr**	**61.02**	**333**	P	**P**	**02 37 04.1**	**-2.3**
MJAR	**Matsushiro Arr**	**61.02**	**333**	P	**P**	**02 37 04.1**	**-2.3**
	comp=Z,12nm,0.9s,baz=169,slow=8.3,SNR=27						
MAJO	**Matsushiro**	**61.02**	**333**	*e*P	**P**	**02 37 05.5**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,72nm,1.4s						
MAJO	**Matsushiro**	**61.02**	**333**	*e*P	**P**	**02 37 05.5**	**-0.8**
	comp=Z,72nm,1.4s						
MAT	**Matsushiro**	**61.02**	**333**	P	**P**	**02 37 05.5**	**-0.8**
YULB	**Yu-li**	**61.34**	**310**	*e*P	**P**	**02 37 08.3**	**-0.5**
	comp=Z,18nm,1.4s						
TPUB	**Ta-pu**	**61.77**	**310**	*e*P	**P**	**02 37 11.4**	**-0.3**
	comp=Z,26nm,0.9s						
JNU	**Nakatsue**	**61.89**	**325**	*e*P	**P**	**02 37 12.0**	**-0.3**
	comp=Z,26nm,1.3s						
JNU	**Nakatsue**	**61.89**	**325**	P	**P**	**02 37 12.3**	**0.0**
	comp=Z,24nm,1.1s,baz=124,slow=4.8,SNR=4.1						
YHNB	**Yeheng**	**62.07**	**312**	*e*P	**P**	**02 37 12.8**	**-1.0**
ASAJ	**Asahikawa**	**65.94**	**340**	*e*P	**P**	**02 37 39.2**	**+0.5**
	comp=Z,113nm,2.1s						
ASAJ	**Asahikawa**	**65.94**	**340**	P	**P**	**02 37 38.8**	**+0.1**
	comp=Z,13nm,0.7s,baz=165,slow=7.5,SNR=8.6						
MYKOM	**Kota Tinggi**	**66.05**	**280**	P	**P**	**02 37 40.4**	**+0.3**
KGM	**Kluang**	**66.63**	**280**	P	**P**	**02 37 43.9**	**+0.1**
KSRS	**Korea Array**	**66.73**	**326**	P	**P**	**02 37 43.9**	**0.0**
	comp=Z,1.6nm,0.9s,baz=120,slow=7.2,SNR=3.0						
KSAR	**Wonju Array Be**	**66.74**	**326**	P	**P**	**02 37 43.9**	**0.0**
QIZ	**Qiongzhong**	**67.88**	**300**	P	**P**	**02 37 52.1**	**+0.6**
QIZ				S	**S**	**02 46 44.4**	**-3.6**
KTGM	**Kuala Trenggan**	**67.98**	**284**	P	**P**	**02 37 52.9**	**+0.6**
NJ2	**Nanjing**	**68.42**	**316**	*e*P	P	02 37 59.2	+4.6
NJ2				pmax	pmax		
	comp=Z,40nm,1.0s						
YSS	**Yuzh-Sakhalins**	**68.44**	**342**	*e*P	**P**	**02 37 56.0**	**+1.6**
YSS				*e*		02 38 04.0	
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
FRIM	**Kepong**	**68.64**	**281**	P	**P**	**02 37 56.1**	**-0.3**
IPM	**Ipoh**	**69.63**	**282**	*e*P	**P**	**02 38 02.6**	**0.0**
	comp=Z,61nm,1.2s						
IPM	**Ipoh**	**69.63**	**282**	P	**P**	**02 38 02.8**	**+0.1**
IPM	**Ipoh**	**69.63**	**282**	P	P	02 38 12.3	+10
USRK	**Ussuriysk Arra**	**70.00**	**333**	P	**P**	**02 38 03.6**	**-0.6**
	comp=Z,5.7nm,0.9s,baz=142,slow=7.2,SNR=12						
KULM	**Kulim**	**70.27**	**283**	*e*P	**P**	**02 38 06.1**	**-0.4**
	comp=Z,28nm,1.3s						
KULM	**Kulim**	**70.27**	**283**	P	**P**	**02 38 06.7**	**+0.2**
PET	**Petropavlovsk**	**71.09**	**354**	⇑*i*P	**P**	**02 38 10.1**	**-0.5**
PET				*e*S	**S**	**02 47 26.8**	**+2.4**
PET				pmax	pmax		
	comp=Z,40nm,1.5s						
PET				MLR	MLR		
	comp=Z,4μm,18.0s						
PEA0B	**Petropavlovsk-**	**71.27**	**353**	*e*P	**P**	**02 38 10.0**	**-1.8**
PETK	**Petropavlovsk-**	**71.27**	**353**	P	**P**	**02 38 11.2**	**-0.6**
PETK	**Petropavlovsk-**	**71.27**	**353**	P	**P**	**02 38 11.2**	**-0.6**
PETK	**Petropavlovsk-**	**71.27**	**353**	P	**P**	**02 38 11.2**	**-0.6**
	comp=Z,31nm,1.0s,baz=160,slow=4.6,SNR=30						
MDJ	**Mudanjiang**	**71.39**	**332**	P	**P**	**02 38 13.5**	**+0.9**
MDJ				pP	**pP**	**02 38 22.8**	**-0.7**
MDJ				sP	**sP**	**02 38 26.5**	**-1.0**
MDJ				pmax	pmax		
	comp=Z,30nm,1.5s						
MDJ				pmax	pmax		

comp=Z,700nm,6.5s
MDJ Mudanjiang 71.39 332 *e*P **P** **02 38 13.1 +0.5**
QSPA South Pole Qui 72.14 180 *e*P **P** **02 38 17.8 +0.7**
comp=Z,77nm,1.2s
HABR Khabarovsk 72.31 338 *e*P **P** **02 38 15.9 -2.2**
HABR *e**PP **pP** **02 38 26.2 -2.7**
HABR *e* 02 38 33.9
HABR 02 40 56.0
HABR *e*PPP PPP 02 42 40.4
HABR *e*S **S** **02 47 36.0 -2.7**
HABR *e* 02 48 19.1
HABR *e*SS **SS** **02 52 14.5 -3.3**
HABR pmax pmax
comp=Z,218nm,2.5s
HABR pmax pmax
comp=E,84nm,2.0s
HABR pmax pmax
comp=N,83nm,2.5s
HABR MLR MLR
comp=Z,4μm,17.0s
CN2 Changchun 72.70 329 *e*P **P** **02 38 21.2 +0.7**
CN2 *e*pP **pP** **02 38 31.5 +0.1**
CN2 *e*S **S** **02 47 44.6 +1.2**
CN2 SS **SS** **02 52 22.4 -1.5**
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,5μm,18.0s
CN2 LR LR
comp=E,5μm,18.0s
CN2 LR LR
comp=Z,6μm,17.0s
ENH Enshi 73.90 310 P **P** **02 38 28.1 +0.2**
comp=Z,50nm,1.2s
GYA Guiyang 74.08 305⇑ *i*P **P** **02 38 30.0 +0.8**
GYA pP **pP** **02 38 41.2 +1.1**
GYA PP **PP** **02 41 17.8 +2.7**
GYA S **S** **02 47 58.7 -1.3**
GYA SKS **SKSac** **02 48 29.5 -4.9**
GYA SS **SS** **02 52 46.3 +0.5**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,180nm,5.4s
GYA LR LR
comp=N,820nm,18.0s
GYA LR LR
comp=E,730nm,19.2s
GYA LR LR
comp=Z,880nm,18.8s
KLR Kul'dur 74.17 336 *e*P P 02 38 24.9 -4.1
KLR pmax pmax
comp=Z,56nm,1.8s
BJI Beijing 75.15 321 P **P** **02 38 36.8 +1.9**
BJI pmax pmax
comp=Z,20nm,1.6s
XAN Xi'an 76.33 313 P P 02 38 38.0 -3.9
XAN S S 02 48 18.6 -5.9
XAN LR LR
comp=N,3μm,16.6s
XAN LR LR
comp=E,820nm,18.1s
XAN LR LR
comp=Z,2μm,18.3s
KMI Kunming 76.55 302 P **P** **02 38 46.5 +2.9**
KMI pP **PcP** **02 38 55.8 +0.7**
KMI S **S** **02 48 25.7 -2.0**
KMI pmax pmax
comp=Z,48nm,1.3s
KMI pmax pmax
comp=Z,880nm,6.4s
KMI LR LR
comp=N,3μm,18.2s
KMI LR LR
comp=E,3μm,19.8s
KMI LR LR
comp=Z,3μm,18.5s
CMAR Chiang Mai Arr 76.86 294 P **P** **02 38 46.2 +1.1**
CMAR Chiang Mai Arr 76.86 294 P **P** **02 38 46.2 +1.1**
comp=Z,20nm,1.0s,baz=131,slow=4.5,SNR=28
CHTO Chiang Mai 77.01 295 *e*P **P** **02 38 47.0 +1.0**
CHTO pmax pmax
comp=Z,106nm,1.5s
CHTO Chiang Mai 77.01 295 *e*P **P** **02 38 47.0 +1.0**
comp=Z,106nm,1.5s
CMBY CAMPBELL BAY 77.13 282 *e*PKP **P** **02 38 45.7 -1.1**
CMBY AMB AMB 02 39 32.8
comp=Z,134nm,5.1s
HHC Hu-ho-hao-te 78.43 320 *i*P **P** **02 38 55.9 +2.3**
HHC pP **pP** **02 39 06.3 +1.8**
HHC sP **sP** **02 39 10.2 +1.6**
HHC PP **PP** **02 41 55.2 +3.7**
HHC S **S** **02 48 47.9 +0.7**
HHC SKS **SKSac** **02 49 02.8 -3.1**
HHC sS **sS** **02 49 05.3 0.0**
HHC ScS **ScS** **02 49 10.5 -1.3**
HHC SS **SS** **02 53 54.0 +2.7**
HHC pmax pmax
comp=Z,62nm,1.0s
HHC pmax pmax
comp=Z,4μm,6.5s
HHC LR LR
comp=N,4μm,16.3s
HHC LR LR
comp=E,2μm,16.9s
HHC LR LR
comp=Z,4μm,16.2s
CD2 Chengdu 78.47 308 *e*P P 02 38 57.7 +3.7
CD2 pP pP 02 39 06.6 +1.7
CD2 sP sP 02 39 10.8 +1.8
CD2 PP **PP** **02 41 55.1 +3.1**
CD2 S **S** **02 48 47.6 -0.4**
CD2 sS sS 02 49 05.8 -0.3
CD2 SS **SS** **02 53 53.7 +1.5**
CD2 pmax pmax
comp=Z,20nm,1.2s
MAW Mawson 79.21 202 *e*P **P** **02 38 59.7 +2.4**
comp=Z,9.1nm,1.3s
MAW Mawson 79.21 202 P **P** **02 38 59.3 +1.9**
comp=Z,15nm,0.9s,baz=108,slow=6.2,SNR=7.0
PBA Port Blair 79.84 286 *e*PKP P 02 39 00.2 -1.5
PBA AMB AMB 02 39 20.9
comp=Z,147nm,1.1s
DGPR DIGLIPUR 80.20 287 *e*PKP **P** **02 39 01.5 -2.2**
DGPR AMB AMB 02 39 26.2
comp=Z,84nm,0.5s
LZH Lanzhou 80.95 312 *e*P **P** **02 39 10.3 +2.9**
LZH pP **pP** **02 39 21.2 +2.8**
LZH sP **sP** **02 39 25.1 +2.7**
LZH PP **PP** **02 42 17.0 +4.4**
LZH S **S** **02 49 15.1 +1.0**
LZH SKS **SKSac** **02 49 21.2 -2.7**
LZH sS **ScS** **02 49 32.2 -0.5**
LZH SS **SS** **02 54 32.5 +3.2**
LZH pmax pmax
comp=Z,63nm,1.2s
LZH pmax pmax
comp=Z,520nm,8.0s
LZH LR LR
comp=N,2μm,16.4s
LZH LR LR
comp=E,2μm,15.7s
LZH LR LR
comp=Z,4μm,19.2s
SEY Seymchan 81.50 353*c* *i*P **P** **02 39 09.3 -0.2**
CLNS Chul'man 82.70 338*c* *i*P **P** **02 39 16.8 +0.8**
CLNS *e* 02 39 25.6
CLNS *e* 02 50 39.3
CLNS pmax pmax
comp=Z,121nm,1.9s
CLNS pmax pmax
comp=N,59nm,1.5s
CLNS pmax pmax
comp=E,23nm,1.6s
CLNS pmax pmax
comp=Z,2.0nm,0.4s
CIT Chita 84.14 330 *e*P **P** **02 39 23.7 +0.1**
CIT *e* 02 39 31.7
CIT *e* 02 39 39.5
CIT pmax pmax
comp=Z,275nm,1.7s
RSO Redoubt South 84.27 18 *e*P **P** **02 39 22.7 -1.5**
ULN Ulaanbaatar 85.08 324 *e*P **P** **02 39 29.5 +1.0**

comp=Z,247nm,1.8s
YAK Yakutsk 85.25 343*c* *i*P **P** **02 39 28.7 -0.1**
YAK *e**PP **pP** **02 39 36.6 -3.2**
YAK *e* 02 42 42.6
YAK *e*S S 02 49 49.9 -6.3
YAK *e*SS **SS** **02 55 31.6 +0.1**
YAK pmax pmax
comp=Z,99nm,1.3s
YAK pmax pmax
comp=E,17nm,1.6s
YAK pmax pmax
comp=N,23nm,1.1s
YAK pmax pmax
comp=N,362nm,8.9s
YAK pmax pmax
comp=Z,518nm,7.2s
YAK pmax pmax
comp=E,842nm,9.3s
YAK smax smax
comp=N,695nm,8.8s
YAK smax smax
comp=E,884nm,10.7s
YAK MLR MLR
comp=N,5μm,16.0s
YAK MLR MLR
comp=Z,7μm,19.0s
YAK MLR MLR
comp=E,3μm,20.0s
GTA Gaotai 85.34 314 *e*P **P** **02 39 31.9 +1.9**
GTA pP **pP** **02 39 43.8 +2.7**
GTA sP **sP** **02 39 48.7 +3.6**
GTA PP **PP** **02 42 53.2 +4.7**
GTA S **SKKSac** **02 50 02.2 +3.0**
GTA pmax pmax
comp=Z,8.0nm,1.1s
GTA pmax pmax
comp=Z,900nm,7.1s
GTA LR LR
comp=N,6μm,18.1s
GTA LR LR
comp=E,6μm,20.0s
GTA LR LR
comp=Z,7μm,21.4s
SONM Songino Array 85.44 324 P **P** **02 39 30.6 +0.3**
SONM Songino Array 85.44 324 P **P** **02 39 30.6 +0.3**
comp=Z,11nm,1.0s,baz=137,slow=5.7,SNR=29
SHL Shillong 85.66 298 *e*PKP **P** **02 39 31.4 -0.6**
SHL AMB AMB 02 39 40.7
comp=Z,52nm,2.5s
BILL Bilibino 85.70 359*c* *i*P **P** **02 39 30.4 -0.6**
BILL *e**PP **pP** **02 39 43.2 +1.2**
BILL *e*SS SS 02 55 45.4 +7.3
BILL pmax pmax
comp=Z,109nm,1.5s
BILL Bilibino 85.70 359 *e*P **P** **02 39 30.7 -0.3**
comp=Z,117nm,1.3s
KIPM Iron Peak 85.79 46 *e*P **P** **02 39 32.8 +0.6**
comp=Z,31nm,1.3s
SYO Syowa Base 85.87 196⇑ *e*P P 02 39 28.7 -3.3
SYO Syowa Base 85.87 196⇑ *e*PcP **P** **02 39 32.2 +0.2**
KHMM Horse Mountain 86.11 45 *e*P **P** **02 39 34.3 +0.5**
comp=Z,15nm,1.0s
OHCM Honcut 86.96 47 *e*P **P** **02 39 38.1 +0.3**
CMB Columbia Colle 87.17 49 *e*P **P** **02 39 38.7 -0.3**
CMB pmax pmax
comp=Z,10.0nm,0.8s
CMB Columbia Colle 87.17 49 *e*P **P** **02 39 38.7 -0.3**
comp=Z,10nm,0.8s
MWC Mount Wilson 87.31 53 *e*P **P** **02 39 40.1 +0.2**
MWC pmax pmax
comp=Z,104nm,2.0s
MWC Mount Wilson 87.31 53 *e*P **P** **02 39 40.1 +0.2**
comp=Z,104nm,2.0s
TRF Thorofare Moun 87.34 17 *e*P **P** **02 39 37.9 -1.5**
comp=Z,12nm,1.1s
HUMO Hull Mountain 87.42 44 *e*P **P** **02 39 41.2 +1.2**
comp=Z,60nm,2.1s
ISA Isabella 87.58 51 *e*P **P** **02 39 41.5 +0.5**
ISA pmax pmax
comp=Z,6.0nm,0.8s
ISA Isabella 87.58 51 *e*P **P** **02 39 41.5 +0.5**
comp=Z,6.1nm,0.8s
BEKR Beckworth 87.97 47 *e*P **P** **02 39 43.0 +0.1**
comp=Z,52nm,2.1s
WCN Washoe City 88.15 48 *e*P **P** **02 39 44.2 +0.4**
WCN pmax pmax
comp=Z,17nm,1.4s
WCN Washoe City 88.15 48 *e*P **P** **02 39 44.2 +0.4**
comp=Z,17nm,1.4s
MTUM Tungsten Hills 88.20 50 *e*P **P** **02 39 44.9 +0.8**
PFO Pinyon Flat Ob 88.30 54 *e*P **P** **02 39 44.9 +0.3**
comp=Z,3.8nm,0.9s
PFO Pinyon Flat Ob 88.30 54 P **P** **02 39 43.5 -1.0**
comp=Z,2.0nm,0.8s,baz=265,slow=7.4,SNR=5.2
ZAK Zakamensk 88.52 325⇑ *i*P **P** **02 39 44.9 -0.3**
ZAK pmax pmax
comp=Z,19nm,1.6s
GSC Goldstone 88.69 52 *e*P **P** **02 39 47.1 +0.8**
GSC pmax pmax
comp=Z,129nm,2.5s
GSC Goldstone 88.69 52 *e*P **P** **02 39 47.1 +0.8**
comp=Z,129nm,2.5s
NVAR Mina Array Bea 88.83 49 P **P** **02 39 47.5 +0.4**
NVAR Mina Array Bea 88.83 49 P **P** **02 39 47.5 +0.4**
comp=Z,3.7nm,0.9s,baz=234,slow=6.1,SNR=13
IRK Irkutsk 88.94 327 *e*P **P** **02 39 46.3 -0.7**
IRK pmax pmax
comp=Z,65nm,3.2s
NLWA Neilton Lookou 89.05 39 *e*P **P** **02 39 46.1 -1.6**
comp=Z,64nm,1.9s
ILAR Eielson Array 89.32 18 P **P** **02 39 46.5 -2.0**
ILAR Eielson Array 89.32 18 P **P** **02 39 46.5 -2.0**
comp=Z,2.7nm,0.7s,baz=235,slow=5.5,SNR=17
GLA Glamis 89.35 55 *e*P **P** **02 39 50.4 +1.0**
GLA pmax pmax
comp=Z,72nm,1.8s
GLA Glamis 89.35 55 *e*P **P** **02 39 50.4 +1.0**
comp=Z,72nm,1.8s
LDFC Landfair 89.89 53 *e*P **P** **02 39 52.9 +0.9**
comp=Z,40nm,1.1s
LON Longmire 90.01 40 *e*P **P** **02 39 52.3 +0.1**
LON pmax pmax
comp=Z,28nm,1.7s
LON Longmire 90.01 40 *e*P **P** **02 39 52.2 +0.1**
comp=Z,28nm,1.7s
BOK Bokaro 90.14 295 *e*PKP **P** **02 39 54.8 +1.5**
BOK AMB AMB 02 41 42.4
comp=Z,19nm,6.3s
WVOR Wild Horse Val 90.22 45 *e*P **P** **02 39 54.0 +0.6**
WVOR pmax pmax
comp=Z,29nm,1.4s
WVOR Wild Horse Val 90.22 45 *e*P **P** **02 39 54.0 +0.6**
comp=Z,29nm,1.4s
MOY Mondy 90.41 325 *e*P **P** **02 39 55.1 +1.1**
SNAA Sanae 90.43 183 *e*P **P** **02 39 52.1 -1.8**
SNAA Sanae 90.43 183 *e*P **P** **02 39 52.1 -1.8**
comp=Z,92nm,1.4s
VIS Vishakhapatnam 90.44 288 *e*PKP **P** **02 39 53.5 -1.3**
VIS AMB AMB 02 40 17.5
comp=Z,35nm,2.9s
EGAK Eagle 91.06 19 *e*P **P** **02 39 55.7 -0.9**
comp=Z,167nm,1.2s
HAWA Hanford 91.28 41 *e*P **P** **02 39 57.7 -0.3**
comp=Z,41nm,1.5s
VNA1 Neumayer--Stat 91.64 181 *e*P **P** **02 40 00.9 +1.5**
VNA1 Neumayer--Stat 91.64 181 *e*PcP **PcP** **02 40 01.7 +1.5**
VNA1 Neumayer--Stat 91.64 181 *e*pP pP 02 40 10.0 -0.5
BMO Blue Mountains 92.08 43 *e*P **P** **02 40 01.7 -0.2**
CCUT Cedar City 92.10 51 *e*P **P** **02 40 03.0 +0.6**
comp=Z,25nm,1.5s
TUC Tucson 92.28 57 *e*P **P** **02 40 04.0 +0.9**
TUC *e* 02 40 14.4
TUC Tucson 92.28 57 *e*P **P** **02 40 04.0 +0.9**
TUC *e* 02 40 14.4
HLID Hailey 93.52 45 *e*P **P** **02 40 09.4 +0.7**
comp=Z,23nm,2.3s
TRD Trivandrum 93.53 278 *e*PKP **P** **02 40 09.2 0.0**
TRD AMB AMB 02 40 18.1
comp=Z,74nm,6.5s
HVS Khovu-Aksy 94.28 323*de*P **P** **02 40 12.4 +0.5**
HVS pmax pmax
comp=Z,272nm,2.5s
HYB Hyderabad 94.69 287 *e*PKP **P** **02 40 11.5 -3.0**
HYB AMB AMB 02 40 22.3
comp=Z,20nm,1.5s
WMQ Urumqi 95.42 314 *e*P **P** **02 40 18.7 +1.4**

WMQ pP **pP** **02 40 30.0 +1.6**
WMQ pmax pmax
comp=Z,11nm,1.2s
WMQ LR LR
comp=N,2μm,16.8s
WMQ LR LR
comp=E,2μm,17.3s
WMQ LR LR
comp=Z,2μm,18.4s
ANMO Albuquerque 96.53 56 *e*P **P** **02 40 22.4 -0.3**
comp=Z,1.4nm,1.0s
ANMO Albuquerque 96.53 56 P **P** **02 40 22.6 -0.1**
comp=Z,0.6nm,0.6s,baz=225,slow=4.3,SNR=3.0
TXAR Lajitas Array 97.19 62 P **P** **02 40 24.7 -1.0**
TXAR Lajitas Array 97.19 62 P **P** **02 40 24.7 -1.0**
comp=Z,0.7nm,0.8s,baz=231,slow=5.7,SNR=5.4
BHPL Bhopal 97.37 292 *e*PKP P 02 40 23.1 -3.5
BHPL AMB AMB 02 43 26.6
comp=Z,13nm,1.1s
GOA Goa 98.48 284 *e*PKP **P** **02 40 29.8 -1.8**
DDI Dehra Dun 98.76 299 *e*PKP Pdif 02 40 33.0 +0.3
DDI AMB AMB 02 43 41.5
comp=Z,65nm,4.9s
SMLA Simla 99.71 300 *e*PKP **Pdif** **02 40 36.2 -0.5**
SMLA AMB AMB 02 40 52.3
comp=Z,9.4nm,2.0s
MKAR Makanchi Array 99.95 316 P **Pdif** **02 40 36.9 -0.6**
MKAR Makanchi Array 99.95 316 P **Pdif** **02 40 36.9 -0.6**
MKAR Makanchi Array 99.95 316 P **Pdif** **02 40 36.9 -0.6**
comp=Z,0.8nm,1.0s,baz=92,slow=4.3,SNR=2.4
YKA Yellowknife Ar 100.04 27 P **Pdif** **02 40 36.8 -0.7**
YKA Yellowknife Ar 100.04 27 P **Pdif** **02 40 36.8 -0.7**
comp=Z,1.3nm,0.9s,baz=252,slow=4.6,SNR=10
ZALV Zalesovo Beam 100.33 323 P **Pdif** **02 40 38.6 -0.4**
ZALV Zalesovo Beam 100.33 323 P **Pdif** **02 40 38.6 -0.4**
ZALV Zalesovo Beam 100.33 323 P **Pdif** **02 40 38.6 -0.4**
comp=Z,0.7nm,0.3s,baz=101,slow=2.9,SNR=3.3
DHRM DHARAMSHALA 100.71 300 *e*PKP **Pdif** **02 40 41.2 -0.3**
DHRM AMB AMB 02 40 57.4
comp=Z,14nm,1.9s
KURK Kurchatov 103.24 319 P **Pdif** **02 40 50.7 -1.3**
KURK Kurchatov 103.24 319 Pdif **Pdif** **02 40 50.7 -1.3**
KURK PP PP 02 44 57.3 -10
KURBB Kurchatov Arra 103.28 319 Pdiff **Pdif** **02 40 50.7 -1.4**
comp=Z,0.2nm,0.6s,baz=79,slow=4.8,SNR=4.0
KURBB PP PP 02 44 57.3 -11
comp=Z,0.8nm,0.9s,baz=96,slow=6.7,SNR=3.2
BHJ Bhuj 104.28 290 *e*PKP **Pdif** **02 40 56.1 -1.2**
BVAR Borovoye Array 108.63 321 PKiKP **PKiKP** **02 45 20.4 -0.8**
BVAR Borovoye Array 108.63 321 PKiKP **PKiKP** **02 45 20.4 -0.8**
comp=Z,0.4nm,0.6s,baz=98,slow=2.0,SNR=3.5
WVT Waverly 111.62 58 *e*PKIKP **PKiKP** **02 45 29.8 +2.4**
WVT Waverly 111.62 58 *e*PKPdf **PKiKP** **02 45 29.8 +2.4**
SPITS Spitsbergen Ar 118.14 354 PKP **PKPdf** **02 45 37.4 -1.4**
SPITS Spitsbergen Ar 118.14 354 PKP **PKPdf** **02 45 37.4 -1.4**
comp=Z,3.6nm,0.7s,baz=129,slow=2.8,SNR=4.6
SUR Sutherland 120.94 212 PKP **PKPdf** **02 45 45.8 +0.1**
SUR Sutherland 120.94 212 PKP **PKPdf** **02 45 45.8 +0.1**
comp=Z,4.6nm,1.0s,baz=124,slow=11,SNR=1.8
IVRN Varamin 121.34 300 *e*P **PKPdf** **02 45 44.7 -1.5**
APA Apatity 122.59 341⇑ *i*PKIKP **PKPdf** **02 45 50.0 +2.5**
APA *e*PS **PS** **02 57 20.0 -0.3**
APA MLR MLR
comp=Z,5μm,20.0s
IRAZ Razeghan 122.81 301 *e*P **PKPdf** **02 45 48.4 -0.8**
ARCES ARCESS Array B 123.47 345 PKP **PKPdf** **02 45 48.2 -0.9**
ARCES ARCESS Array B 123.47 345 PKP **PKPdf** **02 45 48.2 -0.9**
comp=Z,3.6nm,0.7s,baz=88,slow=2.2,SNR=9.7
KLMR Klimovskoe 123.80 333 *e*PKIKP **PKPdf** **02 45 46.7 -3.3**
KLMR pmax pmax
comp=Z,53nm,1.5s
ISRB Sarab 124.55 304 *e*P **PKPdf** **02 45 51.0 -1.4**
IHRS Heris 125.00 305 *e*P **PKPdf** **02 45 52.3 -1.0**
ISHB Shabestar 126.12 305 *e*P **PKPdf** **02 45 55.1 -0.4**
VRHR Novokhopersk 126.37 321 *e*PKIKP PKPdf 02 46 03.7 +8.5
VRHR pmax pmax
comp=Z,10.0nm,1.0s
VRHR pmax pmax
comp=N,7.0nm,0.6s
VRHR pmax pmax
comp=E,7.0nm,0.6s
MOS Moscow 126.92 327 *e*PKIKP **PKPdf** **02 45 53.4 -2.7**
MOS pmax pmax
comp=Z,56nm,1.3s
KBZ Khabaz 127.38 312 PKIKP **PKPdf** **02 45 56.6 -0.7**
KBZ Khabaz 127.38 312 PKP **PKPdf** **02 45 56.6 -0.7**
KBZ Khabaz 127.38 312 PKP **PKPdf** **02 45 56.6 -0.7**
comp=Z,1.2nm,0.8s,baz=315,slow=2.9,SNR=5.3
KIV Kislovodsk 127.49 312 *e*PKIKP **PKPdf** **02 45 59.5 +1.8**
KIV pmax pmax
comp=Z,23nm,1.1s
OBN Obninsk 127.73 327⇓ *i*PKIKP **PKPdf** **02 45 57.6 0.0**
OBN *e* 02 46 08.3
OBN *e* 02 53 06.3
OBN pmax pmax
comp=Z,53nm,2.5s
VSR Storozhevoye 127.80 322 *e*PKIKP PKPdf 02 46 05.2 +7.3
VSR pmax pmax
comp=Z,10.0nm,1.2s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,0.6s
KMBO Kilima Mbogo 127.96 254 PKP **PKPdf** **02 45 59.1 -0.6**
KMBO Kilima Mbogo 127.96 254 PKP **PKPdf** **02 45 59.1 -0.6**
comp=E,10nm,1.3s,baz=50,slow=2.6,SNR=5.3
FINES FINESS Array B 128.90 338 PKP **PKPdf** **02 45 59.2 -0.5**
FINES FINESS Array B 128.90 338 PKP **PKPdf** **02 45 59.2 -0.5**
comp=E,5.0nm,0.9s,baz=72,slow=1.8,SNR=6.6
MNK Minsk 132.42 330 *e*PKIKP PKPdf 02 46 12.0 +5.4
IDID Didsiasalis 132.46 331 *e*P **PKPdf** **02 46 05.2 -1.5**
TSUM Tsumeb 133.03 220 SKPbc **SKPab** **02 49 37.2 +1.2**
TSUM Tsumeb 133.03 220 SKPbc **SKPab** **02 49 37.2 +1.2**
comp=E,0.7nm,0.3s,baz=153,slow=4.5,SNR=4.3
AKASG Malin Array Be 133.71 325 PKIKP **PKPdf** **02 46 08.4 -0.8**
AKASG Malin Array Be 133.71 325 PKP **PKPdf** **02 46 08.4 -0.8**
AKASG SKPbc **SKPab** **02 49 39.1 +1.4**
AKASG Malin Array Be 133.71 325 PKP **PKPdf** **02 46 08.4 -0.8**
comp=E,0.9nm,0.5s,baz=49,slow=1.6,SNR=6.7
AKASG SKPbc **SKPab** **02 49 39.1 +1.4**
comp=E,0.2nm,0.3s,baz=35,slow=3.4,SNR=4.9
AK02 Malin Array Si 133.74 324 *e*PKPdf **PKPdf** **02 46 08.6 -0.6**
ASF Jabal al Asfar 133.83 298 PKP **PKPdf** **02 46 10.3 +0.2**
ASF Jabal al Asfar 133.83 298 PKP **PKPdf** **02 46 10.3 +0.2**
comp=E,1.7nm,0.6s,baz=35,slow=2.7,SNR=7.1
NB2 NORSAR Subarra 133.85 345 PKPdf **PKPdf** **02 46 09.1 -0.1**
comp=Z,19nm,1.4s,baz=31,slow=1.9
NB2 NORSAR Subarra 133.85 345 PKPdf **PKPdf** **02 46 09.1 -0.1**
baz=31,slow=1.9
NOA NORSAR Array B 133.85 345 PKP **PKPdf** **02 46 09.2 +0.1**
NOA NORSAR Array B 133.85 345 PKP **PKPdf** **02 46 09.2 +0.1**
comp=Z,2.6nm,0.8s,baz=35,slow=2.0,SNR=8.7
HFS Hagfors 133.94 342 PKP **PKPdf** **02 46 08.6 -0.7**
HFS SKPbc **SKPab** **02 49 38.2 -0.2**
HFS Hagfors 133.94 342 PKP **PKPdf** **02 46 08.6 -0.7**
comp=Z,3.5nm,0.9s,baz=116,slow=3.4,SNR=4.6
HFS SKPbc **SKPab** **02 49 38.2 -0.2**
comp=Z,6.5nm,1.2s,baz=349,slow=4.4,SNR=3.8
MMAI Mount Meron Ar 134.98 299 PKP **PKPdf** **02 46 12.6 +0.4**
MMAI Mount Meron Ar 134.98 299 PKP **PKPdf** **02 46 12.6 +0.4**
comp=Z,0.8nm,0.6s,baz=72,slow=4.7,SNR=3.7
BR131 Keskin Array S 135.05 309 *e*PKPdf **PKPdf** **02 46 13.5 +1.3**
BRTR Keskin Array B 135.05 309 PKP **PKPdf** **02 46 13.9 +1.6**
BRTR Keskin Array B 135.05 309 PKP **PKPdf** **02 46 13.9 +1.6**
comp=Z,1.4nm,0.9s,baz=93,slow=1.0,SNR=4.3
ANTO Ankara 135.63 309 *e*PKIKP **PKPdf** **02 46 14.0 +0.7**
ANTO Ankara 135.63 309 *e*PKPdf **PKPdf** **02 46 13.9 +0.7**
EIL Elat 135.72 294 PKP **PKPdf** **02 46 13.7 +0.1**
EIL Elat 135.72 294 PKP **PKPdf** **02 46 13.7 +0.1**
comp=Z,2.3nm,0.9s,baz=14,slow=18,SNR=2.4
CSS Prodhromos 136.37 302 *e*PKPdf **PKPdf** **02 46 15.0 +0.3**
LVV L'vov 137.00 326 *e*PKIKP PKPdf 02 46 22.1 +6.8
MLR Muntele Rosu 138.17 320 PKP **PKPdf** **02 46 17.5 -0.3**
MLR Muntele Rosu 138.17 320 PKP **PKPdf** **02 46 17.5 -0.3**
comp=Z,0.4nm,0.8s,baz=354,slow=8.8,SNR=3.1
KOLS Kolonicke sedl 138.45 326 *e*PKIKP **PKPdf** **02 46 18.2 +0.1**
KOLS Kolonicke sedl 138.45 326 *e*PKP **PKPdf** **02 46 18.2 +0.1**
UZH Uzhgorod 138.62 326 *e*PKIKP **PKPdf** **02 46 15.1 -3.2**
UZH *e* 02 46 18.5
UZH *e* 02 46 25.7
UZH MLR MLR
comp=N,2μm,19.0s
UZH MLR MLR
comp=E,2μm,19.0s
UZH MLR MLR

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,2μm,19.0s						
STHS	Stebnicka Huta	138.70	327	ePKIKP	PKPdf	02 46 21.4	+2.9
STHS	Stebnicka Huta	138.70	327	ePKP	PKPdf	02 46 21.4	+2.9
CRVS	Cervenica-Dubn	138.90	326	ePKIKP	PKPdf	02 46 17.1	-1.8
CRVS	Cervenica-Dubn	138.90	326	ePKP	PKPdf	02 46 17.1	-1.8
KECS	Kecovo	139.67	326	ePKIKP	PKPdf	02 46 16.8	-3.5
KECS	Kecovo	139.67	326	ePKP	PKPdf	02 46 16.8	-3.5
KECS				e		03 05 11.3	
KSP	Ksiaz	140.15	332	ePKIKP	PKPdf	02 46 20.8	-0.3
KRLC	Kraliky	140.47	331	ePKIKP	PKPdf	02 46 20.8	-1.0
KRLC				e		02 46 29.6	
KRLC	Kraliky	140.47	331	ePKPdf	PKPdf	02 46 20.8	-1.0
KRLC				epPKP	pPKPdf	02 46 29.6	-3.6
UPC	Upice	140.51	332	ePKIKP	PKPdf	02 46 19.8	-2.0
UPC				e		02 46 25.3	
UPC	Upice	140.51	332	ePKPdf	PKPdf	02 46 19.8	-2.0
UPC				epPKP	PKiKP	02 46 25.3	+1.0
VYHS	Vyhne	140.52	328	ePKIKP	PKPdf	02 46 19.3	-2.6
VYHS	Vyhne	140.52	328	ePKP	PKPdf	02 46 19.3	-2.6
VRAC	Vranov	141.08	330	PKP	PKPdf	02 46 21.6	-1.3
VRAC	Vranov	141.08	330	PKP	PKPdf	02 46 21.6	-1.3
	comp=Z,2.5nm,0.9s,baz=98,slow=2.5,SNR=4.8						
LIA	Limnos Island	141.13	312	eP	PKPdf	02 46 22.8	-0.4
PVCC	Panska Ves	141.13	333	ePKIKP	PKPdf	02 46 23.8	+0.9
PVCC				e		02 46 30.4	
PVCC	Panska Ves	141.13	333	ePKPdf	PKPdf	02 46 23.8	+0.9
PVCC				epPKP	pPKPdf	02 46 30.4	-3.9
KARP	Karpathos	141.14	305	eP	PKPdf	02 46 27.1	+3.7
CLL	Collm	141.21	335	ePKIKP	PKPdf	02 46 24.0	+1.0
CLL	Collm	141.21	335	ePKPdf	PKPdf	02 46 24.0	+1.0
CLL				i PKiKP	PKiKP	02 46 25.8	+0.1
CLL				epPKiKP	pPKiKP	02 46 31.0	-6.1
CLL				e(PKSbc)		02 50 10.0	
PRA	Prague	141.53	333	PKPdf	PKPdf	02 46 21.0	-2.6
PRU	Pruhonice	141.54	332	ePKIKP	PKPdf	02 46 20.7	-2.9
PRU	Pruhonice	141.54	332	ePKPdf	PKPdf	02 46 20.7	-2.9
ZST	Bratislava	141.59	328	ePKIKP	PKPdf	02 46 23.1	-0.7
ZST	Bratislava	141.59	328	ePKP	PKPdf	02 46 23.1	-0.7
TREC	Trest	141.61	331	ePKIKP	PKPdf	02 46 24.3	+0.5
TREC	Trest	141.61	331	ePKPdf	PKPdf	02 46 24.3	+0.5
EKA	Eskdalemuir Ar	142.03	352	PKPpre	PKPpre	02 46 18.8	
EKA	Eskdalemuir Ar	142.03	352	PKhKP	PKPpre	02 46 18.8	
	comp=Z,1.4nm,0.8s,baz=20,slow=2.3,SNR=6.9						
ESK	Eskdalemuir	142.05	352	i PKIKP	PKPdf	02 46 28.9	+4.5
NKC	Novy Kostel	142.26	334	ePKIKP	PKPdf	02 46 21.2	-3.7
NKC				e		02 46 28.7	
NKC	Novy Kostel	142.26	334	ePKPdf	PKPdf	02 46 21.2	-3.7
NKC				epPKP	PKiKP	02 46 28.7	+0.8
NPS	Neapolis	142.43	305	eP	PKPdf	02 46 23.4	-2.3
KHC	Kasperske Hory	142.60	332	ePKIKP	PKPdf	02 46 22.3	-3.3
KHC				e		02 46 32.3	
KHC	Kasperske Hory	142.60	332	ePKPdf	PKPdf	02 46 22.3	-3.3
KHC				epPKP	PKiKP	02 46 32.3	+3.6
KHC	Kasperske Hory	142.60	332	ePKPdf	PKPdf	02 46 22.2	-3.4
ROTZ	Rotzenmuhle	142.71	334	ePKPbc	PKPdf	02 46 21.7	-4.0
GERES	GERESS Array B	142.75	332	PKPpre	PKPpre	02 46 22.7	
GERES				SKP		02 50 01.3	
GERES	GERESS Array B	142.75	332	PKhKP	PKPpre	02 46 22.7	
	comp=Z,1.0nm,0.6s,baz=20,slow=3.1,SNR=9.2						
GERES				SKP		02 50 01.3	
	comp=Z,1.4nm,1.1s,baz=29,slow=2.2,SNR=3.5						
UBBA	Unterbreizbach	142.76	337	ePKPbc	PKPdf	02 46 22.0	-3.6
IDI	Anoyia	142.99	305	ePKPdf	PKPdf	02 46 25.9	-0.9
GRF	Grafenberg Arr	143.18	335	ePKPbc	PKPbc	02 46 23.5	0.0
GRF				eSKPdf	SKiKP	02 50 06.0	+2.5
GRF	Grafenberg Arr	143.18	335	ePKIKP	PKPbc	02 46 23.5	0.0
LKR	Lokris	143.19	311	eP	PKPdf	02 46 26.0	-0.9
FNA	Florina	143.36	316	eP	PKPdf	02 46 30.1	+2.9
VAM	Vamos	143.48	306	eP	PKPbc	02 46 25.9	+1.1
SOKA	Soboth	143.65	328	⇑i PKPdf	PKPab	02 46 24.7	+0.4
	comp=Z,261nm,3.0s						
GVD	Gavdhos	143.75	305	ePKPdf	PKPdf	02 46 27.0	-1.0
TNS	Taunus Mts	143.82	338	ePKPbc	PKPbc	02 46 25.5	+0.1
TNS	Taunus Mts	143.82	338	ePKIKP	PKPbc	02 46 25.5	+0.1
EVR	Evrytania	143.92	312	eP	PKPdf	02 46 27.6	-0.7
GUR	Goura	143.95	311	eP	PKPdf	02 46 28.7	+0.3
RJOB	Jochberg	143.98	331	ePKPbc	PKPbc	02 46 26.5	+0.5
KLV	Kalavryta, Ach	144.04	311	eP	PKPab	02 46 26.1	+0.1
LAKA	Lakka	144.09	311	eP	PKPab	02 46 24.7	-1.4
JAN	Janina	144.25	314	eP	PKPbc	02 46 27.8	+0.7
BEBN	Eben Emael	144.27	341	PKP	PKPbc	02 46 26.8	+0.2
BOJS	Bojanci	144.33	326	i PKPdf	PKPbc	02 46 27.5	+0.4
MEM	Membach	144.33	340	PKP	PKPbc	02 46 27.3	+0.4
FUR	Furstenfeldbru	144.33	333	ePKPbc	PKPbc	02 46 27.4	+0.4
FUR	Furstenfeldbru	144.33	333	ePKIKP	PKPbc	02 46 27.4	+0.4
LJU	Ljubljana	144.34	328	i PKPdf	PKPbc	02 46 27.2	+0.1
VISS	Visnje	144.34	327	i PKPdf	PKPbc	02 46 27.3	+0.2
DCN	Croghan	144.44	355	eP	PKPab	02 46 25.3	-1.5
ITM	Ithomi	144.56	310	eP	PKPbc	02 46 28.1	0.0
VOY	Vojsko	144.67	328	ePKPdf	PKPab	02 46 27.5	-0.6
VOY				ePKPbc	PKiKP	02 46 32.7	-0.4
VOY				e		02 46 41.3	
JAVS	Javornik	144.68	328	i PKPdf	PKPab	02 46 27.8	-0.4
KTD	Kalmit	144.70	337	PKIKP	PKPbc	02 46 28.7	+0.5
KTD	Kalmit	144.70	337	PKP	PKPbc	02 46 28.7	+0.5
BCLA	Clavier	144.72	341	PKP	PKPbc	02 46 28.6	+0.5
STU	Stuttgart	144.72	336	ePKPbc	PKPbc	02 46 28.8	+0.6
STU	Stuttgart	144.72	336	ePKIKP	PKPbc	02 46 28.7	+0.5
STU	Stuttgart	144.72	336	ePKPdf	PKPbc	02 46 28.7	+0.5
WATA	Walderalm	144.83	332	i PKPdf	PKPbc	02 46 29.3	+0.5
	SNR=7.8						
ABTA	Abfaltersbach	144.83	330	⇑i PKPdf	PKPab	02 46 28.3	-0.3
	comp=Z,320nm,2.7s,SNR=9.3						
WTTA	Wattenberg	144.85	332	i PKPdf	PKPdf	02 46 29.5	-0.3
	SNR=8.4						
KEK	Kerkira	144.93	315	eP	PKPdf	02 46 33.6	+3.7
SNF	Seneffe	144.95	342	PKP	PKPdf	02 46 29.9	+0.3
MOTA	Moosalm	145.03	332	⇑i PKPdf	PKPbc	02 46 29.4	-0.1
	comp=Z,211nm,1.5s,SNR=10						
RETA	Reutte	145.07	333	⇑i PKPdf	PKPbc	02 46 29.5	0.0
	comp=Z,540nm,2.4s,SNR=12						
LANF	Langenberg	145.08	337	PKIKP	PKPdf	02 46 30.1	+0.2
LANF	Langenberg	145.08	337	PKP	PKPdf	02 46 30.1	+0.2
LANF	Langenberg	145.08	337	PKP	PKPdf	02 46 30.1	+0.2
WLF	Walferdange	145.09	339	PKP	PKPdf	02 46 30.5	+0.6
WLF	Walferdange	145.09	339	ePKPbc	PKPdf	02 46 30.5	+0.6
WLF	Walferdange	145.09	339	ePKIKP	PKPdf	02 46 30.2	+0.3
WLF	Walferdange	145.09	339	ePKPdf	PKPdf	02 46 30.2	+0.3
VLS	Valsamata	145.10	312	eP	PKPbc	02 46 27.5	-2.3
DOU	Dourbes	145.22	341	PKP	PKPab	02 46 30.0	+0.2
OBER	Oberstdorf	145.34	333	ePKPbc	PKPab	02 46 30.7	+0.2
BFO	Black Forest	145.41	336	ePKPbc	PKPab	02 46 31.0	+0.3
BFO	Black Forest	145.41	336	ePKIKP	PKPab	02 46 31.0	+0.3
BFO	Black Forest	145.41	336	ePKPdf	PKPab	02 46 30.8	+0.1
SPAK	Spaichingen-Ko	145.42	335	PKP	PKPbc	02 46 30.5	-0.1
STR	Strasbourg	145.42	337	PKIKP	PKPab	02 46 31.6	+1.0
STR	Strasbourg	145.42	337	PKP	PKPab	02 46 31.6	+1.0
STR	Strasbourg	145.42	337	PKP	PKPab	02 46 31.6	+1.0
FETA	Feichten	145.44	332	⇑i PKPdf	PKPbc	02 46 30.8	0.0
	comp=Z,630nm,3.1s,SNR=13						
MENF	Mencas	145.50	344	PKP	PKPdf	02 46 30.5	0.0
MENF	Mencas	145.50	344	PKP	PKPdf	02 46 30.5	0.0
DAVA	Damuels	145.61	333	i PKPab	PKPab	02 46 31.8	+0.2
	comp=Z,765nm,2.5s,SNR=24						
WLS	Welschbruch	145.72	337	PKIKP	PKPbc	02 46 31.4	-0.1
WLS	Welschbruch	145.72	337	PKP	PKPbc	02 46 31.4	-0.1
WLS	Welschbruch	145.72	337	PKP	PKPbc	02 46 31.4	-0.1
LIBD	Limburg	145.84	336	PKP2	PKPab	02 46 32.1	-0.1
LIBD	Limburg	145.84	336	PKP	PKPab	02 46 32.1	-0.1
FELD	Feldberg im Sc	145.91	336	PKP	PKPbc	02 46 32.0	-0.2
ECH	Echery	145.96	337	ePKIKP	PKPdf	02 46 30.5	-0.9
ECH	Echery	145.96	337	ePKPdf	PKPdf	02 46 30.5	-0.9
ECH	Echery	145.96	337	PKP	PKPbc	02 46 32.0	-0.2
DAVOX	Davos/Dischmat	146.00	333	PKPbc	PKPdf	02 46 32.1	+0.3
DAVOX	Davos/Dischmat	146.00	333	PKPbc	PKPdf	02 46 32.1	+0.3
	comp=Z,14nm,0.9s,baz=44,slow=4.0,SNR=32						
MOF	Molkenrain	146.27	337	PKP2	PKPbc	02 46 33.2	0.0
MOF	Molkenrain	146.27	337	PKP	PKPbc	02 46 33.2	0.0
MOF	Molkenrain	146.27	337	PKP	PKPbc	02 46 33.2	0.0
THEF	They Montfort	146.37	338	PKIKP	PKPdf	02 46 32.0	-0.1
THEF	They Montfort	146.37	338	PKP	PKPdf	02 46 32.0	-0.1
THEF	They Montfort	146.37	338	PKP	PKPdf	02 46 32.0	-0.1
BBS	Basel-Blauen	146.44	336	PKP2	PKPbc	02 46 33.6	-0.1
BBS	Basel-Blauen	146.44	336	PKP	PKPbc	02 46 33.6	-0.1
TUE	Stuetta	146.47	333	ePKPdf	PKPdf	02 46 32.6	-0.1
TUE				ePKPbc	PKPbc	02 46 34.1	+0.1
RCBR	Riachuelo	146.66	133	PKPbc	PKPdf	02 46 33.4	-0.3
RCBR				ePKPdf	PKPbc	02 46 34.1	-1.2
RCBR	Riachuelo	146.66	133	PKPbc	PKPdf	02 46 33.4	-0.3
	comp=Z,13nm,0.8s,baz=82,slow=1.4,SNR=10						
LOMF	Lomont	146.80	336	PKP2	PKPbc	02 46 34.8	0.0
LOMF	Lomont	146.80	336	PKP	PKPbc	02 46 34.8	0.0
LOMF	Lomont	146.80	336	PKP	PKPbc	02 46 34.8	0.0
AQU	L'Aquila	147.41	324	ePKPbc	PKPbc	02 46 36.6	0.0
OG01	Vacheresse	147.69	335	PKP	PKPbc	02 46 37.6	+0.3
OG01	Vacheresse	147.69	335	PKP	PKPbc	02 46 37.6	+0.3
RSL	Roselend	148.24	335	PKP2	PKPbc	02 46 38.9	0.0
RSL	Roselend	148.24	335	PKP	PKPbc	02 46 38.9	0.0
RSL	Roselend	148.24	335	PKP	PKPbc	02 46 38.9	0.0
OG35	Corcelles	148.36	336	PKP	PKPbc	02 46 39.4	+0.3
BNI	Bardonecchia	148.74	334	ePKIKP	PKPdf	02 46 36.8	+0.4
BNI	Bardonecchia	148.74	334	ePKPdf	PKPdf	02 46 36.8	+0.4
GDM	Grand'Maison	148.85	335	PKP	PKPbc	02 46 41.1	+0.6
GDM	Grand'Maison	148.85	335	PKP	PKPbc	02 46 41.1	+0.6
GRN	Grenoble	148.96	335	PKP2	PKPbc	02 46 41.4	+0.7
GRN	Grenoble	148.96	335	PKP	PKPbc	02 46 41.4	+0.7
GRN	Grenoble	148.96	335	PKP	PKPbc	02 46 41.4	+0.7
BST	Brest	148.99	350	PKP	PKPbc	02 46 39.8	-0.7
BST	Brest	148.99	350	PKP	PKPbc	02 46 39.8	-0.7
SURF	Saint Ours	149.14	333	PKP	PKPbc	02 46 41.9	+0.6
SURF	Saint Ours	149.14	333	PKP	PKPbc	02 46 41.9	+0.6
SAOF	Saorge	149.21	332	PKP2	PKPbc	02 46 41.3	+0.1
SAOF	Saorge	149.21	332	PKP	PKPbc	02 46 41.3	+0.1
SAOF	Saorge	149.21	332	PKP	PKPbc	02 46 41.3	+0.1
AGO	Saint Agoulin	149.24	339	PKP	PKPbc	02 46 42.7	+1.5
AUTN	L'Aution	149.26	332	PKP2	PKPbc	02 46 41.6	0.0
AUTN	L'Aution	149.26	332	PKP	PKPbc	02 46 41.6	0.0
AUTN	L'Aution	149.26	332	PKP	PKPbc	02 46 41.6	0.0
TOUF	Mont Tournerai	149.32	332	PKP2	PKPbc	02 46 41.4	-0.3
TOUF	Mont Tournerai	149.32	332	PKP	PKPbc	02 46 41.4	-0.3
TOUF	Mont Tournerai	149.32	332	PKP	PKPbc	02 46 41.4	-0.3
SSB	Saint Sauveur	149.40	337	ePKP2	PKPbc	02 46 40.7	-1.0
SSB	Saint Sauveur	149.40	337	ePKPbc	PKPbc	02 46 40.7	-1.0
MVIF	Mont Vial	149.46	332	PKP2	PKPbc	02 46 41.9	-0.1
MVIF	Mont Vial	149.46	332	PKP	PKPbc	02 46 41.9	-0.1
MVIF	Mont Vial	149.46	332	PKP	PKPbc	02 46 41.9	-0.1
REVF	Revere	149.48	332	PKP2	PKPbc	02 46 41.7	-0.3
REVF	Revere	149.48	332	PKP	PKPbc	02 46 41.7	-0.3
REVF	Revere	149.48	332	PKP	PKPbc	02 46 41.7	-0.3
PYM	Petit Puy Mans	149.54	339	PKP	PKPbc	02 46 43.4	+1.3
CALN	Calern	149.69	332	PKP2	PKPbc	02 46 42.5	-0.1
CALN	Calern	149.69	332	PKP	PKPbc	02 46 42.5	-0.1
CALN	Calern	149.69	332	PKP	PKPbc	02 46 42.5	-0.1
OG26	St.-Nazaire-De	149.69	335	PKP	PKPbc	02 46 43.2	+0.7
LBL	Lubilhac	149.91	338	PKP	PKPbc	02 46 44.9	+1.9
FRNF	Fournols	150.01	339	PKP	PKPbc	02 46 44.0	+0.8
FILF	Fillols	152.46	336	PKP	PKPbc	02 46 49.0	0.0
CARF	Carcanieres	152.50	337	PKP	PKPbc	02 46 49.4	+0.2
MLS	Moulis	152.65	339	PKP	PKPbc	02 46 49.5	+0.2
VALF	Valcebollere	152.81	337	PKP	PKPbc	02 46 50.3	+0.4
LABF	Labassere	152.91	340	PKP	PKPbc	02 46 50.9	+0.9
REYF	Montagne du Re	153.04	341	PKP	PKPbc	02 46 51.2	+0.9
RESF	Ens	153.04	340	PKP	PKPbc	02 46 51.6	+1.2
LARF	Larrau	153.25	342	PKP	PKPbc	02 46 51.2	+0.5
KEST	Kesra	154.04	317	PKPbc	PKPbc	02 46 51.7	-1.0
KEST	Kesra	154.04	317	PKPbc	PKPbc	02 46 51.7	-1.0
	comp=Z,1.8nm,0.9s,baz=322,slow=11,SNR=3.0						
PBRG	Braganca	155.75	350	ePKPab	PKPab	02 47 13.4	+0.3
PCAB	Cabril	156.03	353	ePKPab	PKPab	02 47 14.7	+0.4
POLO	Lamas de Olo	156.33	352	ePKPab	PKPab	02 47 15.4	-0.3
PVRL	Vila Real	156.41	352	ePKPab	PKPab	02 47 16.4	+0.4
MVO	Moncorvo	156.42	351	ePKPab	PKPab	02 47 16.5	+0.4
PVIS	Viseu	156.99	352	ePKPab	PKPab	02 47 18.8	+0.3
ESDC	Sonseca Array	157.21	344	PKPab	PKPab	02 47 19.4	0.0
ESDC	Sonseca Array	157.21	344	PKPab	PKPab	02 47 19.4	0.0
	comp=Z,4.0nm,0.9s,baz=16,slow=3.2,SNR=10						
MTE	Manteigas	157.25	351	ePKPab	PKPab	02 47 20.2	+0.6
PAB	San Pablo	157.43	344	ePKIKP	PKPdf	02 46 48.1	-0.9
PAB	San Pablo	157.43	344	ePKPdf	PKPdf	02 46 48.1	-0.9
PCBR	Castelo Branco	157.79	351	ePKPab	PKPab	02 47 22.2	+0.3
PMRV	Marv??o	158.18	350	ePKPab	PKPab	02 47 24.2	+0.6
PMTG	Montargil	158.65	352	ePKPab	PKPab	02 47 26.1	+0.5
PESTR	Estremoz	158.76	350	ePKPab	PKPab	02 47 24.5	-1.6
LIS	Lisbon	159.11	354	eP	PKPdf	02 46 50.5	-0.5
LIS	Lisbon	159.11	354	eP	PKPdf	02 46 50.5	-0.5
PBAR	Barrancos	159.34	349	ePKPab	PKPab	02 47 29.3	+0.7
PBEJ	Beja	159.62	351	ePKPab	PKPab	02 47 30.5	+0.6
PNCL	Nicolau / Gran	159.63	352	ePKPab	PKPab	02 47 30.6	+0.7
MESJ	Messejana	159.86	351	eP	PKPdf	02 46 50.4	-1.4
MESJ	Messejana	159.86	351	eP	PKPdf	02 46 50.4	-1.4
PTEO	Sao Teotonio	160.22	352	ePKPab	PKPab	02 47 33.1	+0.7
MORF	Marmelete	160.44	352	ePKPab	PKPab	02 47 34.3	+0.8
MDT	Midelt	163.72	337	PKP	PKPdf	02 46 55.6	-0.6
MDT				PKPab	PKPab	02 47 47.3	-0.8
MDT				PP	PP	02 51 33.0	+0.4
MDT	Midelt	163.72	337	PKP	PKPdf	02 46 55.6	-0.6
	comp=Z,4.3nm,1.2s,baz=319,slow=1.0,SNR=5.4						
MDT				PKPab	PKPab	02 47 47.3	-0.8
	comp=Z,2.7nm,0.9s,baz=40,slow=4.1,SNR=4.1						
MDT				PP	PP	02 51 33.0	+0.4
	comp=Z,1.0nm,1.0s,baz=1.7,slow=6.5,SNR=3.8						
TOA0	Torodi Ar. Sit	165.96	252	ePKPdf	PKPdf	02 46 56.9	-1.5
TORD	Torodi Ar. Bea	165.96	252	PKP	PKPdf	02 46 57.9	-0.6
TORD				PKPab	PKPab	02 47 58.9	+0.3
TORD				PP	PP	02 51 46.9	+0.9
TORD	Torodi Ar. Bea	165.96	252	PKP	PKPdf	02 46 57.9	-0.6
	comp=Z,7.4nm,1.2s,baz=131,slow=1.6,SNR=5.7						
TORD				PKPab	PKPab	02 47 58.9	+0.3
	comp=Z,6.7nm,1.0s,baz=102,slow=1.7,SNR=5.9						
TORD				PP	PP	02 51 46.9	+0.9
	comp=Z,1.7nm,1.1s,baz=126,slow=2.6,SNR=3.6						

LJU 02 02:34:24.6, 46°.27N×13°.63E, h11km, ML0.5, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROBS	Robic	0.09	250	i Pg	Pg	02 34 27.2	+0.1
ROBS				i Sg	Sg	02 34 29.0	0.0
ROBS							
	comp=Z,12nm,0.1s						
CADS	Cadrg	0.09	120	i Pg	Pg	02 34 27.4	+0.1
CADS				i Sg	Sg	02 34 29.2	0.0
GORS	Gorjuse	0.26	80	i Pg	Pg	02 34 29.9	-0.2
GORS				i Sg	Sg	02 34 34.3	+0.5

*ISK **02** 02:34:38.9, 40°.63N×29°.03E, h4km, MD2.9*
*ISCJB **02** 02:34:39.5±0.3, 40°.62N±0°.02×29°.02E±0°.03, h5km±4km, Error ellipse: s-maj=4.0km s-min=3.2km az=159.9*
*CSEM **02** 02:34:39.7±0.1, 40°.62N×29°.03E, h5km, MD2.9, Error ellipse: s-maj=2.4km s-min=2.2km az=69.0*
*DDA **02** 02:34:39.7, 40°.59N×29°.02E, h7km, MD2.9*
ISC 02 02:34:39.9±0.8**, 40°.61N**±0°.02×**29°.02E**±0°.02**, h10**km±6km**, n72,** σ**0s.66**/92**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARMT	Armutlu	0.13	248	ePG	Pg	02 34 42.4	-0.6
ARMT				eSG	Sg	02 34 45.2	0.0
ARMT	Armutlu	0.13	248	ePg	Pg	02 34 42.4	-0.6
ARMT				eSg	Sg	02 34 45.2	0.0
GEMT	Gemlik	0.22	144	ePG	Pg	02 34 44.4	-0.1
GEMT				eSG	Sg	02 34 47.3	-0.3
GEMT	Gemlik	0.22	144	ePg	Pg	02 34 44.4	-0.1
GEMT				eSg	Sg	02 34 47.3	-0.3
BUY	Buyukada	0.25	17	i P	Pg	02 34 45.4	+0.4
BUY				i S	Sg	02 34 49.2	+0.7
BUY	Buyukada	0.25	17	i P	Pg	02 34 45.4	+0.4
BUY				i S	Sg	02 34 49.2	+0.7
MDNY	Mudanya-Bursa	0.27	203	ePG	Pg	02 34 45.1	-0.2
MDNY	Mudanya-Bursa	0.27	203	ePg	Pg	02 34 45.1	-0.2
YLV	Yalova	0.27	100	ePG	Pg	02 34 45.2	-0.3
YLV				eSG	Sg	02 34 49.2	0.0
YLV	Yalova	0.27	100	ePg	Pg	02 34 45.2	-0.3
YLV				eSg	Sg	02 34 49.2	0.0
ISK	Istanbul-Kandi	0.45	4	ePG	Pg	02 34 47.7	-1.1
ISK				eSG	Sg	02 34 54.9	+0.1
ISK	Istanbul-Kandi	0.45	4	ePg	Pg	02 34 47.7	-1.1
ISK				eSg	Sg	02 34 54.9	+0.1
ULDT	Uludag	0.48	169	i P	Pg	02 34 49.1	-0.2
ULDT				i S	Sg	02 34 55.7	0.0
ULDT	Uludag	0.48	169	i P	Pg	02 34 49.1	-0.2
ULDT				i S	Sg	02 34 55.7	0.0
ADVT	Abdulvahap	0.58	108	ePG	Pg	02 34 51.0	-0.1
ADVT	Abdulvahap	0.58	108	ePg	Pg	02 34 51.0	-0.1
BGKT	Bogazkoy	0.60	342	ePG	Pg	02 34 50.7	-0.8
BGKT	Bogazkoy	0.60	342	ePg	Pg	02 34 50.7	-0.8
KCTX	Karacabey (Bur	0.61	236	ePG	Pg	02 34 51.5	-0.3
KCTX	Karacabey (Bur	0.61	236	ePg	Pg	02 34 51.5	-0.3
KLYT	Kilyos	0.64	2	ePG	Pg	02 34 51.9	-0.4
KLYT	Kilyos	0.64	2	ePg	Pg	02 34 51.9	-0.4
ELBA	Catalca	0.69	320	i P	Pg	02 34 53.8	+0.4
ELBA				i S	Sg	02 35 02.8	+0.3
ELBA	Catalca	0.69	320	i P	Pg	02 34 53.8	+0.4
ELBA				i S	Sg	02 35 02.8	+0.3
SILT	Sile	0.72	41	ePG	Pg	02 34 53.0	-0.8
SILT	Sile	0.72	41	ePg	Pg	02 34 53.0	-0.8
CTKS	Kestanelik-??a	0.73	328	ePG	Pg	02 34 53.4	-0.7
CTKS	Kestanelik-??a	0.73	328	ePg	Pg	02 34 53.4	-0.7
SLVT	Silivri	0.87	315	ePG	Pg	02 34 55.8	-0.9
SLVT	Silivri	0.87	315	ePg	Pg	02 34 55.8	-0.9
BNT	Bandirma	0.88	253	ePG	Pg	02 34 56.7	-0.1
BNT	Bandirma	0.88	253	ePg	Pg	02 34 56.7	-0.1
SPNC	Sapanca-Adapaz	0.98	85	ePG	Pg	02 34 58.5	-0.3
SPNC	Sapanca-Adapaz	0.98	85	ePg	Pg	02 34 58.5	-0.3
CTYL	Yal??k??y-??at	1.02	328	ePG	Pg	02 34 58.5	-1.1
CTYL	Yal??k??y-??at	1.02	328	ePg	Pg	02 34 58.5	-1.1
MRMT	Marmara Adasi	1.08	270	ePN	Pg	02 35 00.4	-0.3
MRMT	Marmara Adasi	1.08	270	ePn	Pg	02 35 00.4	-0.3
DURS	Dursunbey	1.09	203	i P	Pb	02 35 00.6	-0.4
DURS				i S	Sb	02 35 16.1	+0.8
DURS	Dursunbey	1.09	203	i P	Pb	02 35 00.6	-0.4
DURS				i S	Sb	02 35 16.1	+0.8
GULT	Gulveren	1.15	99	ePN	Pb	02 35 01.7	-0.3
GULT	Gulveren	1.15	99	ePn	Pb	02 35 01.7	-0.3
GONE	Gonen-Balikesi	1.17	241	ePN	Pb	02 35 01.6	-0.5
GONE	Gonen-Balikesi	1.17	241	ePn	Pb	02 35 01.6	-0.5
TVSB	Tavsanli	1.21	164	ePN	Pn	02 35 03.0	0.0
TVSB	Tavsanli	1.21	164	ePn	Pn	02 35 03.0	0.0
BALB	Balikesir	1.31	222	ePN	Pb	02 35 04.5	0.0
BALB	Balikesir	1.31	222	ePn	Pb	02 35 04.5	0.0
KRBG	Karabiga-Canak	1.33	261	ePN	Pg	02 35 05.4	-0.1
KRBG	Karabiga-Canak	1.33	261	ePn	Pg	02 35 05.4	-0.1
MFT	Murefte	1.33	278	ePN	Pg	02 35 05.6	+0.1
MFT	Murefte	1.33	278	ePn	Pg	02 35 05.6	+0.1
BALY	Balya	1.38	231	i P	Pn	02 35 04.6	-0.7
BALY				i S	Sb	02 35 22.2	-1.3
BALY	Balya	1.38	231	i P	Pn	02 35 04.6	-0.7
BALY				i S	Sb	02 35 22.2	-1.3
RKY	Sarkoy-Tekirda	1.40	274	ePN	Pb	02 35 06.2	0.0
RKY	Sarkoy-Tekirda	1.40	274	ePn	Pb	02 35 06.2	0.0
DEMI	Demirci	1.59	189	i P	Pb	02 35 09.7	+0.4
DEMI				i S	Sn	02 35 28.1	-0.6
DEMI	Demirci	1.59	189	i P	Pb	02 35 09.7	+0.4
DEMI				i S	Sn	02 35 28.1	-0.6
ALT	Altintas	1.77	151	ePN	Pn	02 35 11.5	+0.9
ALT	Altintas	1.77	151	ePn	Pn	02 35 11.5	+0.9
ERIK	Erikli-Kesan	1.91	273	ePN	Pn	02 35 13.5	+1.1
ERIK	Erikli-Kesan	1.91	273	ePn	Pn	02 35 13.5	+1.1
GELI	Tayfur-Gelibol	1.95	264	ePN	Pn	02 35 13.8	+0.8
GELI	Tayfur-Gelibol	1.95	264	ePn	Pn	02 35 13.8	+0.8
EDRB	Edirne	2.11	306	ePN	Pn	02 35 16.2	+1.0
EDRB	Edirne	2.11	306	ePn	Pn	02 35 16.2	+1.0
KULA	Kula-Manisa	2.12	188	ePN	Pn	02 35 16.2	+0.9
KULA	Kula-Manisa	2.12	188	ePn	Pn	02 35 16.2	+0.9
ENEZ	Enez	2.18	274	ePN	Pn	02 35 17.6	+1.4
ENEZ	Enez	2.18	274	ePn	Pn	02 35 17.6	+1.4
EZN	Ezine	2.21	250	ePN	Pn	02 35 18.0	+1.5
EZN	Ezine	2.21	250	ePn	Pn	02 35 18.0	+1.5

*IDC **02** 02:35:32.2±0.6, 21°.48S×68°.53W, h86km±4km, mb4.1/17, mb1 4.2/20, mb1mx4.1/26, mbtmp4.1/20, Error ellipse: s-maj=15.6km s-min=11.9km az=56.0*
*ISCJB **02** 02:35:33.9±0.4, 21°.45S±0°.03×68°.44W±0°.06, h114km±4km, mb4.4/29, Error ellipse: s-maj=8.5km s-min=4.9km az=171.8*
*NEIC **02** 02:35:35.2, 21°.57S×68°.84W, h123km, mb4.5/18, After GUC.*
*GUC **02** 02:35:35.2±0.7, 21°.57S×68°.84W, h123km±4km, ML4.9*
*BJI **02** 02:35:36.1, 21°.50S×68°.30W, h107km, mB5.7/2*
ISC 02 02:35:34.9±0.6**, 21°.52S**±0°.03×**68°.66W**±0°.06**, h113**km±4km**, n354,** σ**1s.40**/306**, mb4.5**/29**, 142C-119D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	Plate Boundary	0.61	243	⇓i P	Pn	02 35 54.5	+1.5
PB09				i S	Sn	02 36 08.6	+1.9
PB09	Plate Boundary	0.61	243	⇓i P	Pn	02 35 54.5	+1.5
PB09				i S	Sn	02 36 08.6	+1.9
PB09				AML	AML	02 36 10.8	
	comp=E,151μm,0.6s						
PB01	Plate Boundary	0.91	301	⇓i P	Pn	02 35 56.5	+1.0
PB01				i S	Sn	02 36 12.1	+0.9
PB01	Plate Boundary	0.91	301	⇓i P	Pn	02 35 56.5	+1.0
PB01				i S	Sn	02 36 12.1	+0.9
PB01				AML	AML	02 36 13.6	
	comp=E,29μm,0.3s						
LVC	Limon Verde	1.11	192	⇑i P	Pn	02 35 58.9	+1.1
LVC				i S	Sn	02 36 16.4	+1.3
LVC	Limon Verde	1.11	192	⇑i P	Pn	02 35 58.9	+1.1
LVC				i S	Sn	02 36 16.4	+1.3
SPCH	San Pedro de A	1.44	163	eP	Pn	02 36 03.5	+1.9
SPCH				i S	Sn	02 36 25.0	+3.3
SPCH	San Pedro de A	1.44	163	eP	Pn	02 36 03.5	+1.9
SPCH				i S	Sn	02 36 25.0	+3.3
HMBC	Humberstone	1.69	317	⇓i P	Pn	02 36 04.7	+0.4
HMBC				i S	Sn	02 36 27.4	+0.7
HMBC	Humberstone	1.69	317	⇓i P	Pn	02 36 04.7	+0.4
HMBC				i S	Sn	02 36 27.4	+0.7
HMBC				AML	AML	02 36 29.4	
	comp=E,18μm,0.5s						
CEN1	Los Morros	2.34	217	⇓i P	Pn	02 36 15.1	+2.5
CEN1				i S	Sn	02 36 45.8	+4.4
CEN1	Los Morros	2.34	217	⇓i P	Pn	02 36 15.1	+2.5
CEN1				i S	Sn	02 36 45.8	+4.4
PSGC	Pisagua	2.36	324	⇑i P	Pn	02 36 12.3	-0.4
PSGC				i S	Sn	02 36 41.8	+0.1
PSGC	Pisagua	2.36	324	⇑i P	Pn	02 36 12.3	-0.4
PSGC				i S	Sn	02 36 41.8	+0.1
PSGC				AML	AML	02 36 42.7	
	comp=N,3μm,0.4s						
MNMC	Minimini	2.54	339	⇑i P	Pn	02 36 15.9	+0.7
MNMC				i S	Sn	02 36 47.9	+1.8
MNMC	Minimini	2.54	339	⇑i P	Pn	02 36 15.9	+0.7
MNMC				i S	Sn	02 36 47.9	+1.8
MNMC				AML	AML	02 36 56.5	
	comp=N,4μm,0.6s						
ANCH	Antofagasta	2.69	217	⇓i P	Pn	02 36 17.0	0.0
ANCH				i S	Sn	02 36 48.0	-1.3
ANCH	Antofagasta	2.69	217	⇓i P	Pn	02 36 17.0	0.0
ANCH				i S	Sn	02 36 48.0	-1.3
LPAZ	La Paz	5.23	6	ePn	Pn	02 36 53.2	+1.7
LPAZ				eS	Sn	02 37 47.3	-3.7
LPAZ	La Paz	5.23	6	P	Pn	02 36 52.7	+1.2
	comp=N,5.5nm,0.3s,baz=189,slow=11,SNR=89						
LCO	Las Campanas	7.68	194	ePn	Pn	02 37 19.8	-4.5
LCO				eS	Sn	02 38 46.0	-3.9
SIV	San Ignacio	9.05	54	P	Pn	02 37 39.8	-2.8
SIV	San Ignacio	9.05	54	P	Pn	02 37 39.8	-2.8
	comp=N,7.4nm,0.3s,baz=250,slow=13,SNR=152						
CFAA	Coronel Fontan	10.05	178	P	Pn	02 37 52.5	-3.6
CFAA				S	Sn	02 39 37.2	-10
CFAA	Coronel Fontan	10.05	178	P	Pn	02 37 52.5	-3.6
	comp=N,0.2nm,0.3s,baz=356,slow=15,SNR=40						
CFAA				S	Sn	02 39 37.2	-10
	comp=N,0.1nm,0.3s,baz=195,slow=20,SNR=3.9						
CPUP	Villa Florida	11.41	117	P	Pn	02 38 12.6	-1.9
CPUP	Villa Florida	11.41	117	P	Pn	02 38 12.6	-1.9
	comp=N,0.6nm,0.3s,baz=274,slow=10,SNR=4.9						
SAML	Samuel	13.57	24	ePn	Pn	02 38 39.5	-3.3
TRQA	Tornquist	17.46	162	ePn	Pn	02 39 30.8	-0.6
	comp=N,111nm,1.8s						
PLCA	Paso Flores	19.22	184	eP	Pn	02 39 51.5	-0.8
	comp=N,9.3nm,0.9s						
PLCA	Paso Flores	19.22	184	P	Pn	02 39 51.1	-1.2
	comp=N,0.2nm,0.3s,baz=1.7,slow=10,SNR=9.9						
BDFB	Brasilia	20.41	77	P	P	02 40 01.5	-1.8
BDFB	Brasilia	20.41	77	P	P	02 40 01.5	-1.8
	comp=N,12nm,0.6s,baz=266,slow=13,SNR=11						
RCBR	Riachuelo	35.33	69	P	P	02 42 18.7	-1.0
RCBR	Riachuelo	35.33	69	P	P	02 42 18.7	-1.0
	comp=N,8.6nm,0.7s,baz=236,slow=8.6,SNR=9.4						
KMSC	Kings Mountain	57.62	348	⇓P	P	02 45 14.1	+0.9
	baz=58						
732A	Laxson Ranch,	58.38	328	⇑P	P	02 45 19.4	+0.8
	baz=59						
TKL	Tuckaleechee C	58.65	346	P	P	02 45 20.1	-0.2
TKL	Tuckaleechee C	58.65	346	P	P	02 45 20.1	-0.2
	comp=N,4.9nm,0.9s,baz=172,slow=8.4,SNR=6.9						

SWET Sewanee 58.76 343 eP P 02 45 21.2 +0.1
comp=N,8.7nm,0.9s
632A Uvalde 58.93 328 ⇓P P 02 45 23.1 +0.7
baz=59
631A Perdido Creek 59.25 328 ⇓P P 02 45 25.7 +1.1
baz=59
532A Rocksprings 59.50 329 ⇑P P 02 45 27.5 +1.1
baz=60
JCT Junction City 59.74 329 P P 02 45 28.6 +0.6
comp=N,8.2nm,0.9s
JCT Junction City 59.74 329 ⇓P P 02 45 29.1 +1.0
baz=60
531A Rocksprings 59.85 328 ⇑P P 02 45 29.7 +0.9
baz=60,SNR=6.1
432A Menard 60.07 329 ⇑P P 02 45 30.7 +0.4
baz=60,SNR=6.6
530A J-C Ranch, Com 60.23 327 ⇓P P 02 45 32.1 +0.7
baz=60,SNR=6.8
431A Sonora 60.30 328 ⇓P P 02 45 32.4 +0.6
baz=60
332A Millersview 60.46 329 ⇓P P 02 45 33.5 +0.6
baz=61,SNR=9.7
628A Black Gap, Mar 60.49 326 ⇑P P 02 45 34.4 +1.3
baz=61,SNR=9.8
529A Stev Forest Ra 60.66 327 ⇓P P 02 45 35.4 +1.1
baz=61,SNR=12
430A Baggett Ranch, 60.70 328 ⇓P P 02 45 35.1 +0.6
baz=61
627A Terlingua Ranc 60.73 325 ⇑P P 02 45 35.7 +0.8
baz=61
331A San Angelo 60.73 329 ⇓P P 02 45 35.1 +0.3
baz=61,SNR=5.7
TXAR Lajitas Array 60.78 325 P P 02 45 35.8 +0.6
TXAR sP sP 02 46 06.5 -8.5
TXAR Lajitas Array 60.78 325 P P 02 45 35.8 +0.6
comp=N,1.1nm,0.6s,baz=153,slow=8.6,SNR=24
TXAR sP sP 02 46 06.5 -8.5
comp=N,1.0nm,0.8s,baz=141,slow=8.1,SNR=5.2
232A Coleman 60.84 330 ⇑P P 02 45 36.0 +0.5
baz=61,SNR=7.5
429A Davenport Ranc 60.89 327 ⇓P P 02 45 36.7 +0.8
baz=61,SNR=6.5
528A Cox Ranch, San 60.98 326 ⇑P P 02 45 37.0 +0.4
baz=61,SNR=5.1
330A Mertzon 61.17 328 ⇓P P 02 45 38.2 +0.5
baz=61
231A Bronte 61.19 329 ⇓P P 02 45 38.1 +0.2
baz=61
626A Big Bend Ranch 61.20 325 ⇓P P 02 45 39.3 +1.3
baz=61,SNR=8.5
527A Woodward Ranch 61.39 326 ⇑P P 02 45 40.2 +0.8
baz=62,SNR=6.4
ABTX Abilene, Hawle 61.45 330 ⇑P P 02 45 40.3 +0.7
baz=62
526A Mary Lane Ranc 61.58 325 ⇓P P 02 45 41.8 +1.2
baz=62,SNR=5.9
329A Wagon Wheel Ra 61.63 328 ⇑P P 02 45 41.6 +0.7
baz=62,SNR=5.2
131A Roby 61.84 330 ⇓P P 02 45 43.0 +0.8
baz=62
427A Hayter Ranch, 61.84 326 ⇑P P 02 45 43.2 +0.9
baz=62
229A Bryant Ranch, 61.94 328 ⇓P P 02 45 43.7 +0.7
baz=62
Z32A Haskell 61.95 331 ⇑P P 02 45 43.6 +0.7
baz=62
328A Wristen Ranch, 61.97 327 ⇓P P 02 45 44.2 +1.1
baz=62
426A McDonald Obser 62.03 326 ⇓P P 02 45 44.7 +1.0
baz=62
130A Snyder 62.05 329 ⇓P P 02 45 44.0 +0.4
baz=62,SNR=6.2
SNAA Sanae 62.18 161 eP P 02 45 43.6 -0.4
SNAA Sanae 62.18 161 ePcP PcP 02 46 23.7 +0.7
SNAA Sanae 62.18 161 eP P 02 45 44.2 +0.2
comp=N,11nm,0.9s
SNAA Sanae 62.18 161 P P 02 45 44.3 +0.3
comp=N,3.6nm,0.8s,baz=277,slow=8.5,SNR=17
Z31A Sharp Cattle R 62.26 330 ⇑P P 02 45 45.7 +0.7
baz=62
228A UT Block 9, Go 62.45 328 ⇑P P 02 45 46.7 +0.4
baz=63
129A Stewart Farms, 62.51 329 ⇓P P 02 45 47.4 +0.7
baz=63
326A Caldwell Ranch 62.51 326 ⇓P P 02 45 47.6 +0.8
baz=63
425A Indio Mountain 62.63 325 ⇑P P 02 45 48.6 +1.0
baz=63,SNR=8.0
TUL1 Tulsa 62.63 335 ⇓P P 02 45 48.4 +1.0
baz=63
Z30A Sanderson Ranc 62.69 330 ⇑P P 02 45 48.6 +0.7
baz=63
227A Bennet, Jal 62.72 327 ⇓P P 02 45 49.4 +1.3
baz=63
128A Castleberry Fa 62.80 328 ⇑P P 02 45 49.1 +0.4
baz=63
Y31A Rekieta Farm, 62.85 331 ⇑P P 02 45 49.9 +1.0
baz=63
Z29A Hungry Hill Ra 62.95 329 ⇑P P 02 45 50.0 +0.4
baz=63
325A Bean Ranch, Si 63.08 325 ⇑P P 02 45 51.3 +0.7
baz=63,SNR=17
226B Tecolote Peak, 63.21 326 ⇑P P 02 45 52.7 +1.3
baz=63
127A Arkansas Junct 63.28 327 ⇑P P 02 45 52.5 +0.6
baz=64
X31A McDonald Ranch 63.28 331 ⇓P P 02 45 52.2 +0.5
baz=64
Z28A Tucker Farm, M 63.30 329 ⇑P P 02 45 52.3 +0.4
baz=64
324A Moseley Ranch, 63.40 325 ⇓P P 02 45 52.9 +0.1
baz=64,SNR=8.9
Y29A Porterfield Fa 63.42 330 ⇓P P 02 45 53.0 +0.2
baz=64
126A Clayton Basin, 63.59 327 ⇑P P 02 45 54.9 +1.0
baz=64
Z27A Tatum 63.72 328 ⇑P P 02 45 55.0 +0.2
baz=64
W31A Holland Ranch, 63.73 332 ⇑P P 02 45 55.7 +1.0
baz=64
Y28A McKinney Farm, 63.73 329 ⇓P P 02 45 54.8 0.0
baz=64
224A Cornudas Mount 63.92 325 ⇑P P 02 45 56.6 +0.5
baz=64,SNR=6.9
125A Gardner Draw, 63.93 326 ⇑P P 02 45 56.5 +0.4
baz=64
MSTX Muleshoe 64.04 329 ⇓P P 02 45 57.4 +0.6
baz=64,SNR=6.0
Z26A Caprock 64.07 327 ⇓P P 02 45 57.6 +0.5
baz=64
V31A Spring Creek L 64.19 332 ⇑P P 02 45 58.1 +0.5
baz=64
X28A Dimmitt 64.21 330 ⇓P P 02 45 58.8 +0.9
baz=64
124A Stringfield Ra 64.37 326 ⇑P P 02 46 00.5 +1.3
baz=65
Z25A Roswell 64.45 327 ⇑P P 02 46 00.1 +0.5
baz=65
W29A Amraillo 64.45 330 ⇓P P 02 45 59.6 +0.1
baz=65
Z24A Sheeppen Canyo 64.82 326 ⇑P P 02 46 02.6 +0.6
baz=65,SNR=5.1
Y25A Mesa, Roswell 64.95 327 ⇓P P 02 46 03.3 +0.5
baz=65
320A Kipp Ranch, An 64.99 323 ⇑P P 02 46 04.6 +1.5
baz=65
X26A CR and CF Fran 65.01 328 ⇑P P 02 46 03.9 +0.7
baz=65
W27A Bowe Ranch, En 65.06 329 ⇑P P 02 46 04.2 +0.8
baz=65
122A Conniff Cattle 65.19 325 ⇑P P 02 46 05.6 +1.2
baz=65
Z23A Rita Site, Whi 65.22 326 ⇑P P 02 46 06.1 +1.6
baz=65
T31A Randall Ranch, 65.23 333 ⇑P P 02 46 05.1 +0.6
baz=66
V28A Channing 65.23 330 ⇓P P 02 46 05.7 +1.1
baz=66
220A Playas Peak, P 65.42 323 ⇑P P 02 46 07.5 +1.6
baz=66,SNR=6.9
W26A Owens Ranch, T 65.42 329 ⇑P P 02 46 07.7 +1.9
baz=66
319A Douglas 65.45 322 ⇓P P 02 46 08.2 +2.2
baz=66
121A Cookes Peak, D 65.48 324 ⇓P P 02 46 08.4 +2.1
baz=66,SNR=6.1
Z22A Elephant Butte 65.60 325 ⇑P P 02 46 09.2 +2.2
baz=66,SNR=14

Y23A Lovelace Mesa, 65.65 326 ⇑P P 02 46 11.1 +3.7
baz=66
W25A X Bar L Ranch, 65.86 328 ⇓P P 02 46 09.6 +0.9
baz=66,SNR=6.0
120A U Bar Ranch, L 65.96 324 ⇑P P 02 46 11.4 +2.0
baz=66
V26A Tequesquite Ra 66.00 329 ⇑P P 02 46 10.3 +0.8
baz=66,SNR=6.0
Z21A St. Cloud Mine 66.02 325 ⇑P P 02 46 11.9 +2.1
baz=66,SNR=7.1
S30A Montezuma 66.02 333 ⇓P P 02 46 10.8 +1.3
baz=66
X23A Hourglass Bar 66.22 327 ⇑P P 02 46 12.8 +1.7
baz=66
S29A Ulysses 66.29 332 ⇑P P 02 46 12.3 +1.0
baz=66
T28A Walsh 66.31 331 ⇓P P 02 46 12.0 +0.5
baz=66
W24A Lazy 6 Ranch, 66.33 328 ⇓P P 02 46 13.5 +1.8
baz=66
Z20A Nine Sixteen R 66.37 324 ⇑P P 02 46 14.1 +2.1
baz=66,SNR=8.5
V25A Rancho No Teng 66.44 329 ⇓P P 02 46 13.2 +0.8
baz=67,SNR=5.0
U26A Atchley Ranch, 66.47 330 ⇓P P 02 46 13.8 +1.2
baz=67
T27A Campo 66.54 331 ⇓P P 02 46 14.0 +1.1
baz=67
Y21A Point of Rocks 66.55 325 ⇑P P 02 46 15.6 +2.4
baz=67,SNR=9.1
S28A Manter 66.61 332 ⇓P P 02 46 14.2 +0.9
baz=67,SNR=7.0
ANMO Albuquerque 66.65 327 eP P 02 46 14.9 +1.2
comp=N,3.2nm,0.9s
ANMO sP sP 02 46 45.6 -8.3
ANMO Albuquerque 66.65 327 P P 02 46 14.4 +0.7
comp=N,2.8nm,0.8s,baz=133,slow=9.9,SNR=13
ANMO sP sP 02 46 45.6 -8.3
comp=N,1.3nm,0.8s,baz=140,slow=7.3,SNR=2.8
W23A Werner Place, 66.66 327 ⇑P P 02 46 15.6 +1.7
baz=67
V24A Rampart Ranch, 66.67 328 ⇓P P 02 46 15.3 +1.4
baz=67
U25A Circle Dot Ran 66.79 329 ⇓P P 02 46 16.3 +1.7
baz=67
Y20A Horse Springs, 66.85 325 ⇓P P 02 46 17.5 +2.4
baz=67
X21A Alamocita Cree 66.95 325 ⇑P P 02 46 17.8 +2.1
baz=67,SNR=7.0
W22A Albuquerque 66.95 327 ⇑P P 02 46 18.1 +2.4
baz=67
T26A Comanche Natio 67.03 330 ⇑P P 02 46 17.4 +1.3
baz=67
V23A Ortiz Mt. (NFS 67.13 327 ⇑P P 02 46 18.7 +1.9
baz=67,SNR=5.1
R28A Tribune 67.19 332 ⇓P P 02 46 18.0 +1.0
baz=67
U24A Moreno Valley 67.21 329 ⇓P P 02 46 19.0 +1.6
baz=67
S26A Kim 67.34 331 ⇑P P 02 46 19.1 +1.1
baz=68,SNR=6.6
T25A Trinidad 67.38 330 ⇓P P 02 46 20.4 +2.1
baz=68
X20A Quenado 67.40 325 ⇑P P 02 46 20.5 +1.9
baz=68
V22A San Miguel Ran 67.63 327 ⇓P P 02 46 22.0 +2.0
baz=68,SNR=5.2
S25A Robets Cordova 67.81 330 ⇓P P 02 46 22.7 +1.6
baz=68
W20A Ramah 67.85 325 ⇓P P 02 46 23.1 +1.8
baz=68,SNR=7.7
R26A Arlington 67.88 331 ⇑P P 02 46 22.7 +1.3
baz=68
214A Organ Pipe Nat 67.93 320 ⇑P P 02 46 24.2 +2.5
baz=68
R25A Fountain Ranch 68.14 330 ⇓P P 02 46 24.4 +1.4
baz=68
S24A Houchin Ranch, 68.17 329 ⇑P P 02 46 25.1 +1.7
baz=68
X18A Snowflake 68.17 324 ⇓P P 02 46 25.4 +2.0
baz=68
V20A Brimhall 68.34 326 ⇑P P 02 46 26.2 +1.8
baz=68
SDCO Great Sand Dun 68.39 329 eP P 02 46 25.9 +1.1
comp=N,7.7nm,1.1s
U21A Nageezi 68.41 327 ⇓P P 02 46 27.0 +2.1
baz=69
Q26A Hugo 68.42 331 ⇑P P 02 46 26.5 +1.8
baz=69
T22A Edith 68.49 328 ⇑P P 02 46 27.4 +2.1
baz=69
DBIC Dimbokro 68.51 73 P P 02 46 25.1 -0.6
DBIC Dimbokro 68.51 73 P P 02 46 25.1 -0.6
comp=N,8.9nm,1.0s,baz=219,slow=6.5,SNR=8.7
R24A Sanders Place, 68.59 330 ⇑P P 02 46 27.6 +1.7
baz=69
QSPA South Pole Qui 68.67 180 eP P 02 46 26.9 +0.9
comp=N,16nm,1.2s
T21A Navajo Lake 68.79 327 ⇑P P 02 46 29.1 +1.9
baz=69
U20A Newcomb 68.81 326 ⇓P P 02 46 29.1 +1.9
baz=69
P26A Davis Ranch, A 68.87 332 ⇑P P 02 46 29.3 +1.7
baz=69
R23A Moffat 68.90 329 ⇓P P 02 46 29.8 +1.9
baz=69
X16A Lo Mia Camp, P 68.92 323 ⇓P P 02 46 30.3 +2.3
baz=69
S22A 4UR Ranch, Cre 69.03 328 ⇓P P 02 46 30.8 +2.0
baz=69
P25A Willow Gulch B 69.19 331 ⇑P P 02 46 31.6 +2.0
baz=69
Q24A Divide 69.20 330 ⇑P P 02 46 31.5 +1.7
baz=69
S21A Coal Bank Pass 69.44 328 ⇓P P 02 46 33.2 +1.9
baz=70
Y14A Wickenburg 69.46 322 ⇑P P 02 46 33.4 +2.2
baz=70
Q23A Hartsel 69.47 330 ⇓P P 02 46 33.3 +1.9
baz=70
WUAZ Wupatki 69.69 324 ⇓P P 02 46 34.9 +2.2
baz=70,SNR=7.5
P23A Jefferson 69.85 330 ⇓P P 02 46 36.7 +2.9
baz=70
S20A Disappointment 69.85 327 ⇓P P 02 46 36.2 +2.5
baz=70
R21A Cimarron 69.87 328 ⇑P P 02 46 35.7 +1.9
baz=70
ISCO Idaho Springs 70.08 330 eP P 02 46 36.5 +1.4
comp=N,3.4nm,0.8s
ISCO Idaho Springs 70.08 330 ⇓P P 02 46 36.7 +1.5
baz=70
R20A Redvale 70.14 328 ⇓P P 02 46 37.4 +1.9
baz=70,SNR=7.0
Y12C Blythe 70.21 321 ⇑P P 02 46 38.4 +2.7
baz=70
SMCO Snowmass 70.22 329 eP P 02 46 37.7 +1.5
comp=N,2.1nm,0.7s
PDMCI Parker Dam,Lak 70.38 321 ⇑P P 02 46 39.6 +2.9
baz=70
P22A Eagle 70.45 330 ⇑P P 02 46 39.0 +1.6
baz=71
O23A Lake Granby, G 70.55 331 ⇑P P 02 46 39.8 +1.8
baz=71,SNR=5.6
S18A Hurst Farm, Bl 70.58 326 ⇑P P 02 46 40.2 +2.0
baz=71,SNR=7.0
BC3 Big Chuckawall 70.70 320 ⇓P P 02 46 41.2 +2.3
baz=71
P21A Newcastle 70.72 329 ⇑P P 02 46 40.9 +1.9
baz=71
MONP Monument Peak 70.76 319 ⇓P P 02 46 42.0 +2.6
baz=71
W13A Hualapai Mount 70.80 322 ⇓P P 02 46 41.9 +2.4
baz=71
O22A Kremmling 70.80 330 ⇑P P 02 46 41.1 +1.5
baz=71,SNR=5.3
U15A North Rim 70.86 324 ⇓P P 02 46 42.3 +2.3
baz=71,SNR=6.9
M24A Cheyenne 71.08 332 ⇓P P 02 46 43.3 +2.3
baz=71
N23A Red Feather La 71.11 331 ⇓P P 02 46 43.2 +1.8
baz=71
PHWY Pilot Hill 71.22 332 eP P 02 46 40.1 -2.0
comp=N,13nm,1.0s
N22A Wattenberg Ran 71.27 331 ⇑P P 02 46 44.6 +2.3
baz=72
P19A Cripple Cowboy 71.55 328 ⇑P P 02 46 45.8 +1.8
baz=72,SNR=12

O20A White River Ci 71.58 329 ⇓P P 02 46 46.1 +1.9
baz=72
N21A Black Mountain 71.73 330 ⇑P P 02 46 47.2 +2.1
baz=72
SRU San Rafael 71.92 327 ⇑P P 02 46 47.9 +1.8
baz=72,SNR=8.9
L23A Garrett 71.98 332 ⇓P P 02 46 47.8 +1.2
baz=72
K24A Anderson Ranch 72.09 333 ⇑P P 02 46 49.1 +2.1
baz=72
Q16A Castle Valley 72.11 326 ⇓P P 02 46 49.8 +2.5
baz=72
O19A Miners Draw (B 72.13 329 ⇓P P 02 46 48.9 +1.5
baz=72,SNR=5.5
N20A Spence Gulch, 72.14 329 ⇑P P 02 46 49.2 +1.8
baz=72
P18A Preston Nutter 72.17 327 ⇑P P 02 46 49.8 +2.0
baz=72,SNR=8.6
CCUT Cedar City 72.27 324 eP P 02 46 50.8 +2.5
comp=N,11nm,1.0s
M21A Separation Pea 72.33 331 ⇑P P 02 46 50.5 +1.9
baz=72
BFSC Mount Baldy Ra 72.44 319 ⇓P P 02 46 51.7 +2.5
baz=73
L21A Rawlins 72.61 331 ⇑P P 02 46 51.8 +1.5
baz=73
M20A Sweetwater, Wa 72.61 330 ⇓P P 02 46 51.8 +1.5
baz=73
EDW2 Edwards Air Fo 73.07 319 ⇑P P 02 46 54.8 +1.8
baz=73
K21A Alcova 73.09 331 ⇓P P 02 46 54.6 +1.6
baz=73
L20A Wamsutter 73.09 330 ⇑P P 02 46 54.8 +1.7
baz=73
FURC Furnace Creek, 73.48 321 ⇓P P 02 46 57.6 +2.4
baz=74
MPMC Manual Prospec 73.57 321 ⇓P P 02 46 57.5 +1.5
baz=74
K20A Yellowstone Ra 73.60 331 ⇑P P 02 46 57.0 +1.0
baz=74,SNR=5.5
L19A Farson 73.64 330 ⇑P P 02 46 58.0 +1.7
baz=74
H24A Dirks Ranch, A 73.64 334 ⇑P P 02 46 57.0 +0.9
baz=74
J21A Lysite 73.74 332 ⇑P P 02 46 58.5 +1.7
baz=74
I22A 9 Mile Ranch, 73.76 332 ⇑P P 02 46 58.1 +1.3
baz=74
L18A Fontenelle, Gr 73.82 329 ⇑P P 02 46 58.6 +1.2
baz=74,SNR=6.8
ISA Isabella 73.89 320 ⇑P P 02 47 00.1 +2.4
baz=74
DUG Dugway 73.91 326 ⇓P P 02 46 59.9 +2.1
baz=74
K19A Absolon Red Bu 73.96 330 ⇑P P 02 46 59.5 +1.4
baz=74
I21A Big Trails, Te 74.04 332 ⇓P P 02 46 59.6 +1.1
baz=74,SNR=8.0
R11A Troy Canyon, C 74.06 323 ⇓P P 02 47 00.7 +1.9
baz=74,SNR=5.4
PKM Peak Mountain 74.20 318 ⇑P P 02 47 02.1 +2.4
baz=74
PDAR Pinedale Array 74.25 330 P P 02 47 00.5 +0.7
PDAR Pinedale Array 74.25 330 P P 02 47 00.5 +0.7
comp=N,1.0nm,0.7s,baz=134,slow=6.4,SNR=4.9
H22A Clearmont 74.27 333 ⇑P P 02 47 01.4 +1.6
baz=74
G23A Biddle 74.36 334 ⇑P P 02 47 01.6 +1.4
baz=75
VES Vestal, Richgr 74.38 319 ⇑P P 02 47 02.9 +2.4
baz=74
J19A Crowheart 74.40 331 ⇓P P 02 47 02.1 +1.5
baz=75
F24A Ekalaka 74.51 335 ⇑P P 02 47 02.5 +1.4
baz=75
I20A Worland 74.52 332 ⇓P P 02 47 02.7 +1.4
baz=75
H21A Big Horn, Sher 74.59 333 ⇑P P 02 47 03.1 +1.5
baz=75
H20A Greybull 74.89 332 ⇑P P 02 47 04.8 +1.4
baz=75
I19A Meeteetse 74.98 331 ⇑P P 02 47 05.6 +1.6
baz=75
E24A Baker 75.04 335 ⇑P P 02 47 06.0 +1.9
baz=75
I18A Diamond G Ranc 75.09 330 ⇑P P 02 47 06.4 +1.7
baz=75
TPAW Teton Pass 75.46 330 eP P 02 47 08.7 +1.9
comp=N,4.9nm,0.8s
H19A Powell 75.47 332 ⇓P P 02 47 08.2 +1.5
baz=76
RRI2 Red Ridge 75.52 329 eP P 02 47 09.1 +1.9
comp=N,7.9nm,0.9s
G20A Bridger 75.56 332 ⇓P P 02 47 08.6 +1.4
baz=76
NVAR Mina Array Bea 75.66 322 P P 02 47 09.2 +1.2
NVAR Mina Array Bea 75.66 322 P P 02 47 09.2 +1.2
comp=N,1.9nm,0.9s,baz=157,slow=7.8,SNR=6.3
IMW Indian Meadow 75.76 330 eP P 02 47 10.3 +1.7
comp=N,5.0nm,0.9s
H18A Shoshone NF, C 75.78 331 ⇑P P 02 47 10.0 +1.4
baz=76,SNR=5.2
C24A Savage 75.89 336 ⇑P P 02 47 10.9 +2.0
baz=76
D23A Lindsay 75.90 335 ⇑P P 02 47 10.8 +1.8
baz=76
I16A Newdale 76.00 330 ⇑P P 02 47 11.9 +2.0
baz=76
G18A Lazy EL Ranch, 76.23 332 ⇑P P 02 47 12.9 +1.9
baz=76
D22A Cohagen 76.26 335 ⇓P P 02 47 12.4 +1.4
baz=76
F19A Roth Farm, Mol 76.38 332 ⇓P P 02 47 13.1 +1.3
baz=77,SNR=7.2
SYO Syowa Base 76.40 159 ⇓eP P 02 47 10.2 -1.3
H16A Russell Place, 76.52 330 ⇑P P 02 47 15.1 +2.4
baz=77
E20A Meyer Farm, Mu 76.54 333 ⇑P P 02 47 14.0 +1.4
baz=77,SNR=6.1
I15A Monteview 76.57 329 ⇓P P 02 47 15.2 +2.2
baz=77
F18A Big Timber 76.75 332 ⇓P P 02 47 15.4 +1.5
baz=77,SNR=7.3
E19A Rath Farm, Rou 76.79 333 ⇑P P 02 47 15.7 +1.6
baz=77,SNR=11
VNDA Vanda 76.87 190 P P 02 47 15.3 +1.2
VNDA Vanda 76.87 190 P P 02 47 15.3 +1.2
comp=N,2.6nm,0.9s,baz=124,slow=5.1,SNR=10.0
A24A Westby 76.89 337 ⇓P P 02 47 16.6 +2.1
baz=77
J13A Cove Ranch, Pi 76.95 328 ⇓P P 02 47 17.6 +2.5
baz=77
I14A Mackay 76.98 328 ⇑P P 02 47 17.7 +2.3
baz=77
D20A Manuel Ranch, 77.01 334 ⇑P P 02 47 17.3 +2.0
baz=77
TORD Torodi Ar. Bea 77.14 70 P P 02 47 15.6 -1.1
TORD Torodi Ar. Bea 77.14 70 P P 02 47 15.6 -1.1
comp=N,5.7nm,0.7s,baz=258,slow=5.6,SNR=43
F17A Fitzpatrick Pl 77.17 331 ⇑P P 02 47 18.4 +2.1
baz=77
HLID Hailey 77.19 328 eP P 02 47 18.3 +1.8
comp=N,8.2nm,1.0s
HLID Hailey 77.19 328 ⇓P P 02 47 18.8 +2.3
baz=77,SNR=9.6
I13A Wildhorse Cree 77.30 328 ⇓P P 02 47 19.2 +2.0
baz=78
E18A Harlowton 77.35 332 ⇓P P 02 47 19.0 +1.7
baz=78
D19A Cripps Ranch, 77.38 333 ⇑P P 02 47 19.1 +1.7
baz=78
A22A Carney Farms, 77.66 336 ⇓P P 02 47 20.6 +1.7
baz=78
E17A Martinsdale 77.69 332 ⇓P P 02 47 20.6 +1.4
baz=78
MFID Camas Ranch 77.79 327 ⇑P P 02 47 21.6 +1.8
baz=78
D18A Linhart Farms, 77.80 333 ⇑P P 02 47 21.4 +1.7
baz=78
C19A Slack Wire Ran 77.90 333 ⇑P P 02 47 21.4 +1.1
baz=78
H12A Diamond D Ranc 78.12 328 ⇑P P 02 47 23.6 +2.0
baz=78
D17A Six Diamond Ra 78.14 332 ⇓P P 02 47 23.7 +2.1
baz=78
G13A Cobalt 78.22 329 ⇓P P 02 47 24.4 +2.2
baz=78,SNR=13
EGMT Eagleton 78.42 333 ⇓P P 02 47 24.5 +1.4

	baz=79						
B19A	Brinkman Farms	78.42	334	⇑P	P	02 47 24.6	+1.5
	baz=79						
D16A	Dana Ranch, Ca	78.43	332	⇑P	P	02 47 25.1	+1.8
	baz=79,SNR=5.5						
E15A	Deer Lodge	78.46	331	⇑P	P	02 47 25.3	+1.8
	baz=79						
C17A	Wharram Farm,	78.55	332	⇑P	P	02 47 25.7	+1.9
	baz=79						
A19A	Klindworth Far	78.72	334	⇑P	P	02 47 26.2	+1.5
	baz=79						
B18A	Beardsley Farm	78.72	333	⇓P	P	02 47 26.2	+1.5
	baz=79						
G12A	Big Creek, Yel	78.77	328	⇓P	P	02 47 27.0	+1.7
	baz=79						
D15A	Lincoln	78.87	331	⇑P	P	02 47 27.6	+1.9
	baz=79						
E13A	Victor	79.19	330	⇓P	P	02 47 28.9	+1.5
	baz=79						
F12A	Elk City	79.19	329	⇑P	P	02 47 29.5	+2.0
	baz=79						
D14A	Greenough	79.35	331	⇑P	P	02 47 30.6	+2.4
	baz=80						
C15A	Salmond Ranch,	79.46	332	⇑P	P	02 47 30.7	+1.8
	baz=80,SNR=6.9						
A17A	Triple J Farms	79.53	333	⇑P	P	02 47 30.8	+1.6
	baz=80						
BMO	Blue Mountains	79.56	327	eP	P	02 47 30.7	+1.3
	comp=N,13nm,1.6s						
D13A	Huson	79.80	330	⇑P	P	02 47 32.2	+1.6
	baz=80,SNR=5.0						
TSUM	Tsumeb	79.81	107	eP	P	02 47 31.3	-0.1
	comp=N,9.1nm,0.9s						
TSUM	Tsumeb	79.81	107	P	P	02 47 31.4	-0.1
	comp=N,7.4nm,0.9s,baz=242,slow=5.3,SNR=7.4						
B15A	Bradely Ranch,	79.85	332	⇑P	P	02 47 31.3	+0.4
	baz=80						
A16A	West Butte Ran	79.92	333	⇓P	P	02 47 33.0	+1.7
	baz=80						
D12A	Red Ives Fores	80.18	330	⇑P	P	02 47 34.5	+1.8
	baz=80						
YBH	Yreka Blue Hor	80.37	322	P	P	02 47 33.7	-0.1
YBH	Yreka Blue Hor	80.37	322	P	P	02 47 33.7	-0.1
	comp=N,1.5nm,0.7s,baz=125,slow=4.0,SNR=5.6						
C11A	Tepee Creek (N	81.17	330	⇓P	P	02 47 39.3	+1.3
	baz=81,SNR=5.2						
B12A	Libby	81.32	331	⇑P	P	02 47 40.7	+2.0
	baz=82						
MDT	Midelt	81.58	50	P	P	02 47 39.3	-1.2
MDT	Midelt	81.58	50	P	P	02 47 39.3	-1.2
	comp=N,1.3nm,0.8s,baz=289,slow=8.7,SNR=3.0						
BOSA	Boshof	83.23	118	P	P	02 47 48.7	-0.6
BOSA	Boshof	83.23	118	P	P	02 47 48.7	-0.6
	comp=N,2.8nm,0.7s,baz=253,slow=6.3,SNR=4.8						
MAW	Mawson	84.24	163	P	P	02 47 54.3	+0.8
MAW	Mawson	84.24	163	P	P	02 47 54.3	+0.8
	comp=N,6.1nm,0.8s,baz=211,slow=4.7,SNR=8.9						
YKA	Yellowknife Ar	91.29	341	P	P	02 48 27.6	+0.5
YKA				pP	pP	02 48 51.7	-4.8
YKA				sP	sP	02 48 59.3	-9.2
YKA	Yellowknife Ar	91.29	341	P	P	02 48 27.6	+0.5
	comp=N,4.9nm,0.6s,baz=134,slow=4.5,SNR=84						
YKA				pP	pP	02 48 51.7	-4.8
	comp=N,2.2nm,0.8s,baz=127,slow=4.4,SNR=5.5						
YKA				sP	sP	02 48 59.3	-9.2
	comp=N,1.1nm,0.8s,baz=138,slow=4.4,SNR=2.8						
KBZ	Khabaz	119.95	51	PKP	PKPdf	02 54 12.6	+0.5
KBZ	Khabaz	119.95	51	PKP	PKPdf	02 54 12.6	+0.5
	comp=N,1.4nm,0.7s,baz=198,slow=3.2,SNR=4.9						
ASAR	Alice Springs	130.00	207	PKP	PKPdf	02 54 32.2	0.0
ASAR	Alice Springs	130.00	207	PKP	PKPdf	02 54 32.2	0.0
	comp=N,2.4nm,0.7s,baz=135,slow=2.2,SNR=17						
ABKAR	Akbulak array	131.01	43	ePKPdf	PKPdf	02 54 34.7	+1.6
WRA	Warramunga Arr	133.06	210	PKP	PKPdf	02 54 38.1	+0.2
WRA	Warramunga Arr	133.06	210	PKP	PKPdf	02 54 38.1	+0.2
	comp=N,2.5nm,0.6s,baz=158,slow=1.7,SNR=25						
BVAR	Borovoye Array	135.68	35	PKP	PKPdf	02 54 41.0	-0.9
BVAR	Borovoye Array	135.68	35	PKP	PKPdf	02 54 41.0	-0.9
	comp=N,1.7nm,0.8s,baz=198,slow=38,SNR=4.9						
KURK	Kurchatov	141.22	33	PKPpre	PKPpre	02 54 48.8	
KURK				PKP	PKiKP	02 54 52.8	-2.0
KURBB	Kurchatov Arra	141.23	33	PKhKP	PKPpre	02 54 48.8	
	comp=N,0.9nm,0.8s,baz=306,slow=2.6,SNR=3.4						
KURBB				PKP	PKiKP	02 54 52.8	-2.0
	comp=N,0.8nm,0.8s,baz=302,slow=2.7,SNR=6.3						
ZALV	Zalesovo Beam	141.87	25	PKPpre	PKPpre	02 54 50.0	
ZALV	Zalesovo Beam	141.87	25	PKhKP	PKPpre	02 54 50.0	
	comp=N,1.5nm,0.6s,baz=336,slow=3.2,SNR=5.3						
KSH	Kashi	144.93	51	ePKP	PKPdf	02 54 59.1	0.0
KSH				epPKP	pPKPdf	02 55 25.2	-4.6
KSH				esPKP		02 55 36.4	
KSH				eSKS	SKSdf	03 01 56.1	-2.1
KSH				eSKKS	SKKSac	03 04 55.1	-4.8
KSH				AMB	AMB		
	comp=Z,700nm,6.8s						
KSH				LR	LR		
	comp=N,3µm,15.0s						
KSH				LR	LR		
	comp=E,3µm,14.0s						
KSH				LR	LR		
	comp=Z,2µm,16.1s						
MK31	Makanchi Array	145.51	36	ePKPdf	PKPab	02 55 01.0	+0.6
MKAR	Makanchi Array	145.51	36	PKPbc	PKPab	02 55 00.8	+0.4
MKAR				sPKPbc	sPKPbc	02 55 33.3	-8.8
MKAR	Makanchi Array	145.51	36	PKPbc	PKPab	02 55 00.8	+0.4
	comp=Z,4.7nm,0.7s,baz=321,slow=3.7,SNR=34						
MKAR				sPKPbc	sPKPbc	02 55 33.3	-8.8
	comp=Z,4.0nm,0.8s,baz=320,slow=3.2,SNR=6.6						
WMQ	Urumqi	150.34	36	ePKPbc	PKPdf	02 55 09.0	+1.2
USRK	Ussuriysk Arra	151.65	328	PKPbc	PKPbc	02 55 16.7	+0.6
	comp=Z,2.5nm,0.6s,baz=88,slow=0.2,SNR=5.1						
MJAR	Matsushiro Arr	152.27	309	PKPbc	PKPbc	02 55 17.6	-0.1
MJAR	Matsushiro Arr	152.27	309	PKPbc	PKPbc	02 55 17.6	-0.1
	comp=Z,2.3nm,0.8s,baz=114,slow=0.6,SNR=8.2						
SONM	Songino Array	153.45	7	PKP	PKPdf	02 55 14.1	+1.7
SONM				PKPbc	PKiKP	02 55 20.8	+0.6
SONM				pPKPbc	PKPab	02 55 42.0	+9.3
SONM	Songino Array	153.45	7	PKP	PKPdf	02 55 14.1	+1.7
	comp=Z,0.9nm,0.7s,baz=177,slow=3.0,SNR=3.7						
SONM				PKPbc	PKiKP	02 55 20.8	+0.6
	comp=Z,0.6nm,0.5s,baz=336,slow=3.2,SNR=2.9						
SONM				pPKPbc	PKPab	02 55 42.0	+9.3
	comp=Z,1.2nm,0.6s,baz=334,slow=4.9,SNR=3.4						
CN2	Changchun	154.88	335	ePKPbc	PKPdf	02 55 16.0	+1.6
HHC	Hu-ho-hao-te	160.73	359	ePKP	PKPdf	02 55 21.7	-0.1
HHC				PKS	PKSdf	02 58 54.0	-1.2
HHC				PP	PP	02 59 48.4	+2.3
HHC				SKKS		03 06 31.3	
HHC				SS	SS	03 19 54.0	+4.9
HHC				LR	LR		
	comp=N,390nm,20.5s						
HHC				LR	LR		
	comp=E,350nm,21.4s						
HHC				LR	LR		
	comp=Z,350nm,21.1s						
LZH	Lanzhou	164.08	23	ePKP	PKPdf	02 55 24.5	-0.9
LZH				pPKP	pPKPdf	02 55 52.1	-4.1
LZH				PKPab	PKPab	02 56 20.4	+1.3
LZH				LR	LR		
	comp=N,130nm,18.3s						
LZH				LR	LR		
	comp=E,110nm,17.9s						
LZH				LR	LR		
	comp=Z,150nm,20.0s						
NJ2	Nanjing	167.56	329	ePKP	PKPdf	02 55 29.5	+1.4
KMI	Kunming	171.32	64	PKP	PKPdf	02 55 30.6	-0.3
GYA	Guiyang	173.48	40	ePKP	PKPdf	02 55 31.2	-0.5
GYA				pPKP	pPKPdf	02 56 01.6	-0.9
GYA				sPKP		02 56 12.0	
GYA				PKS	PKSdf	02 59 01.4	-2.7

IDC 02 02:44:52.6±2.3, 17°.63S×167°.65E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.7/20, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=56.9km s-min=40.7km az=122.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.56	194	Pn	Pn	02 46 02.9	-0.1
	4.3nm,0.3s,baz=86,slow=20,SNR=25						
DZM				Sn	Sn	02 46 50.6	-6.2
	5.7nm,0.3s,baz=125,slow=21,SNR=7.6						
STKA	Stephens Creek	27.49	234	P	P	02 50 40.6	-0.2
	1.0nm,0.6s,baz=59,slow=5.9,SNR=2.8						
WRA	Warramunga Arr	31.59	260	P	P	02 51 17.0	-0.4
	0.2nm,0.5s,baz=80,slow=6.2,SNR=3.6						
ASAR	Alice Springs	32.09	253	P	P	02 51 22.1	+0.4
	0.7nm,0.6s,baz=81,slow=8.5,SNR=8.3						
ARCES	ARCESS Array B	123.14	345	PKP	PKPdf	03 03 50.5	-0.2
	2.1nm,0.8s,baz=50,slow=2.3,SNR=7.8						

IDC 02 02:46:27.0±2.2, 22°.08S×179°.36W, h572km±23km, mb3.2/11, mb1 3.5/13, mb1mx3.3/22, mbtmp3.3/13, Error ellipse: s-maj=32.2km s-min=13.9km az=150.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	10.86	43	P	P	02 48 53.3	-1.0
	2.8nm,0.3s,baz=269,slow=20,SNR=3.9						
URZ	Urewera	16.41	190	P	P	02 49 48.1	-1.1
	3.5nm,0.3s,baz=252,slow=2.5,SNR=14						
CTA	Charters Tower	32.11	267	P	P	02 52 08.8	+0.3
	2.8nm,0.5s,baz=86,slow=9.5,SNR=5.6						
STKA	Stephens Creek	35.98	246	P	P	02 52 41.1	+0.4
	0.5nm,0.3s,baz=86,slow=9.9,SNR=3.8						
ASAR	Alice Springs	42.95	259	P	P	02 53 36.4	-0.3
	2.0nm,0.6s,baz=99,slow=7.9,SNR=14						
ASAR				PcP	PcP	02 55 14.0	-0.1
	1.7nm,0.7s,baz=110,slow=4.0,SNR=9.8						
WRA	Warramunga Arr	43.15	264	P	P	02 53 37.8	-0.5
	2.3nm,0.6s,baz=96,slow=8.3,SNR=37						
PETK	Petropavlovsk-	77.48	346	P	P	02 57 23.7	-0.2
	4.0nm,0.7s,baz=142,slow=7.5,SNR=7.1						
YBH	Yreka Blue Hor	82.31	39	P	P	02 57 50.6	+1.1
	0.5nm,0.3s,baz=138,slow=1.5,SNR=5.6						
NVAR	Mina Array Bea	83.04	44	P	P	02 57 54.2	+0.8
	0.7nm,0.7s,baz=218,slow=8.7,SNR=4.1						
TXAR	Lajitas Array	88.97	58	P	P	02 58 23.4	+1.6
	0.5nm,0.7s,baz=209,slow=5.2,SNR=7.0						
CMAR	Chiang Mai Arr	89.46	290	P	P	02 58 25.6	+1.5
	2.3nm,0.7s,baz=129,slow=3.5,SNR=7.1						
ILAR	Eielson Array	90.14	13	P	P	02 58 25.1	-1.1
	0.5nm,0.7s,baz=218,slow=5.2,SNR=8.0						
YKA	Yellowknife Ar	98.47	25	P	Pdif	02 59 03.4	-0.7
	0.2nm,0.7s,baz=248,slow=4.6,SNR=3.1						
KURBB	Kurchatov Arra	114.34	317	PKP	PKPdf	03 03 60.0	-2.1
	0.4nm,0.4s,baz=94,slow=1.8,SNR=5.5						
SPITS	Spitsbergen Ar	123.36	356	PKP	PKPdf	03 04 17.6	-1.1
	4.9nm,0.9s,baz=186,slow=2.0,SNR=5.5						
ARCES	ARCESS Array B	130.23	349	PKP	PKPdf	03 04 30.9	-1.1
	1.3nm,0.4s,baz=52,slow=1.5,SNR=9.1						
FINES	FINESS Array B	136.91	342	PKP	PKPdf	03 04 45.5	+0.8
	1.2nm,0.6s,baz=89,slow=1.0,SNR=6.1						
NB2	NORSAR Subarra	140.38	352	PKP	PKPpre	03 04 44.6	
	comp=Z,5.7nm,1.4s,baz=10,slow=3.2						
NOA	NORSAR Array B	140.38	352	PKhKP	PKPpre	03 04 44.5	
	comp=Z,1.3nm,0.9s,baz=13,slow=4.6,SNR=4.0						
HFS	Hagfors	140.88	350	PKhKP	PKPpre	03 04 45.4	
	comp=Z,2.0nm,0.5s,baz=83,slow=4.5,SNR=17						
AKASG	Malin Array Be	143.75	329	PKP	PKPbc	03 04 55.0	-1.5
	comp=Z,3.7nm,0.4s,baz=40,slow=3.8,SNR=20						
ASF	Jabal al Asfar	146.34	295	PKPbc	PKPbc	03 05 04.7	-0.1
	comp=Z,1.0nm,0.3s,baz=315,slow=2.9,SNR=4.5						
EKA	Eskdalemuir Ar	146.68	4	PKPbc	PKPbc	03 05 04.1	-0.8
	comp=Z,2.3nm,0.8s,baz=352,slow=2.1,SNR=13						
BRTR	Keskin Array B	146.92	310	PKPbc	PKPbc	03 05 05.3	-0.9
	comp=Z,2.0nm,0.7s,baz=107,slow=3.3,SNR=12						
MMAI	Mount Meron Ar	147.45	297	PKPbc	PKPbc	03 05 07.6	-0.1
	comp=Z,1.9nm,0.4s,baz=72,slow=4.7,SNR=8.2						
MMAI				PKPab	PKPab	03 05 12.9	+1.1
	comp=Z,2.7nm,0.6s,baz=83,slow=7.7,SNR=4.5						
MLR	Muntele Rosu	148.82	325	PKPbc	PKPbc	03 05 09.8	-1.1
	comp=Z,0.8nm,0.9s,baz=214,slow=3.6,SNR=4.5						
GERES	GERESS Array B	151.34	342	PKPbc	PKPbc	03 05 15.9	-0.7
	comp=Z,1.0nm,0.4s,baz=26,slow=2.5,SNR=14						
GERES				PKPab	PKPab	03 05 26.7	-0.7
	comp=Z,0.4nm,0.5s,baz=46,slow=2.8,SNR=3.8						
DAVOX	Davos/Dischmat	154.25	345	PKPab	PKPab	03 05 39.3	-0.7
	comp=Z,1.5nm,0.8s,baz=31,slow=5.9,SNR=4.1						
TORD	Torodi Ar. Bea	171.06	187	PKP	PKPdf	03 05 29.6	-1.4
	comp=Z,0.4nm,0.8s,baz=176,slow=2.3,SNR=3.8						

SZGRF 02 02:50:23.4, 20°.90S×168°.40E, h33km, Loyalty Islands
IDC 02 02:50:27.4±0.7, 17°.65S×167°.76E, h0km, mb4.3/14, mb1 4.5/15, mb1mx4.4/21, mbtmp4.3/15, ML4.0/1, Error ellipse: s-maj=22.7km s-min=16.4km az=106.0
ISCJB 02 02:50:29.0±0.4, 17°.67S±0°.08×167°.66E±0°.08, h19km, mb4.5/19, Error ellipse: s-maj=11.5km s-min=10.1km az=143.1
NEIC 02 02:50:33.1±1.6, 17°.67S×167°.69E, h38km±15km, mb5.0/5, Error ellipse: s-maj=14.5km s-min=10.2km az=160.0
DJA 02 02:50:47.4±1.9, 18°S±8°×16°7E±1°0, h111km±18km, M5.3/10, mb5.3/10
ISC 02 02:50:30.8±0.4, 17°.66S±0°.08×167°.66E±0°.09, h19km, n78, σ1s19/71, mb4.6/18, 2C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.53	194	ePn	Pn	02 51 36.5	-2.0
DZM				Sn	Sn	02 52 22.5	-8.3
DZM	Mont Dzumac	4.53	194	Pn	Pn	02 51 37.4	-1.1
	7.2nm,0.3s,baz=34,slow=14,SNR=16						
DZM				Sn	Sn	02 52 22.5	-8.3
	9.9nm,0.3s,baz=126,slow=19,SNR=4.1						
MSVF	Nonsavu	9.91	92	ePn	Pn	02 52 54.3	+2.0
	70nm,1.1s						
EIDS	Eidsvold	17.21	241	ePn	P	02 54 32.6	+0.8
CTA	Charters Tower	20.39	260	P	P	02 55 07.7	+0.9
CTA	Charters Tower	20.39	260	P	P	02 55 07.7	+0.9
	14nm,0.9s,baz=97,slow=11,SNR=7.7						
CTAO	Charters Tower	20.39	260	eP	Pn	02 55 08.2	-0.8
	132nm,1.8s						
URZ	Urewera	22.13	160	P	P	02 55 25.4	+0.1
URZ	Urewera	22.13	160	P	P	02 55 25.4	+0.1
	7.6nm,0.9s,baz=23,slow=7.7,SNR=2.6						
STKA	Stephens Creek	27.48	234	eP	P	02 56 16.6	+0.7
	3.0nm,0.9s						
STKA	Stephens Creek	27.48	234	P	P	02 56 16.4	+0.4
	13nm,1.0s,baz=62,slow=7.9,SNR=11						
WRA	Warramunga Arr	31.59	261	P	P	02 56 51.0	-1.6
WRA	Warramunga Arr	31.59	261	P	P	02 56 51.0	-1.6
	5.3nm,1.0s,baz=89,slow=9.1,SNR=9.0						
AS31	Alice Springs	32.09	254	eP	P	02 56 56.3	-0.7
ASAR	Alice Springs	32.09	254	P	P	02 56 56.4	-0.6
ASAR	Alice Springs	32.09	254	P	P	02 56 56.4	-0.6
	9.5nm,1.0s,baz=80,slow=8.5,SNR=25						
KSM	Kuching	59.57	283	eP	P	03 00 34.4	+0.6
	10nm,0.8s						
VNDA	Vanda	59.95	181	eP	P	03 00 36.7	+1.3
	23nm,1.8s						
VNDA	Vanda	59.95	181	P	P	03 00 34.5	-0.9
	2.2nm,1.2s,baz=32,slow=6.6,SNR=3.0						
MJAR	Matsushiro Arr	60.67	333	P	P	03 00 40.6	-0.2
MJAR	Matsushiro Arr	60.67	333	P	P	03 00 40.6	-0.2
	0.9nm,0.3s,baz=168,slow=7.4,SNR=2.7						
UBPT	Khong Chiam	69.49	294	P	P	03 01 44.1	+5.5
	80nm,1.2s						
PETK	Petropavlovsk-	71.00	354	P	P	03 01 47.2	+0.1
PETK	Petropavlovsk-	71.00	354	P	P	03 01 47.2	+0.1
	4.3nm,0.8s,baz=126,slow=7.5,SNR=6.8						
QSPA	South Pole Qui	72.38	180	eP	P	03 01 55.4	-0.1
CMAR	Chiang Mai Arr	76.49	295	P	P	03 02 21.6	+1.6
CMAR	Chiang Mai Arr	76.49	295	P	P	03 02 21.6	+1.6
	0.9nm,0.3s,baz=120,slow=5.3,SNR=7.9						
CMMT	Chiang Mai	76.63	295	P	P	03 02 27.8	+7.0
	12nm,1.2s						
CHTO	Chiang Mai	76.63	295	P	P	03 02 27.8	+7.0
	20nm,1.1s						
MAW	Mawson	79.32	202	P	P	03 02 36.9	+2.0
MAW	Mawson	79.32	202	P	P	03 02 36.9	+2.0
	1.6nm,0.7s,baz=34,slow=6.3,SNR=3.9						
ULN	Ulaanbaatar	84.71	324	P	P	03 03 05.9	+2.2
SONM	Songino Array	85.07	324	P	P	03 03 06.5	+1.1
SONM	Songino Array	85.07	324	P	P	03 03 06.5	+1.1
	4.5nm,1.1s,baz=139,slow=5.0,SNR=12						
BILL	Bilibino	85.46	359	eP	P	03 03 06.4	-0.3
	9.4nm,1.0s						
NVAR	Mina Array Bea	88.90	49	P	P	03 03 23.3	-1.1
NVAR	Mina Array Bea	88.90	49	P	P	03 03 23.3	-1.1
	0.8nm,0.8s,baz=246,slow=6.8,SNR=4.6						
ILAR	Eielson Array	89.19	18	P	P	03 03 22.6	-2.2
ILAR	Eielson Array	89.19	18	P	P	03 03 22.6	-2.2
	0.8nm,0.7s,baz=242,slow=4.7,SNR=14						
SNAA	Sanae	90.66	183	eP	P	03 03 31.5	-0.4
	6.4nm,1.0s						
YKA	Yellowknife Ar	99.97	27	P	Pdif	03 04 12.7	-1.4
YKA	Yellowknife Ar	99.97	27	P	Pdif	03 04 12.7	-1.4
	0.4nm,1.0s,baz=268,slow=4.9,SNR=4.0						
ARCES	ARCESS Array B	123.17	345	PKP	PKPdf	03 09 24.3	-1.4
ARCES	ARCESS Array B	123.17	345	PKP	PKPdf	03 09 24.3	-1.4
	3.4nm,0.8s,baz=64,slow=2.1,SNR=7.3						
BHD	Baghdad	127.08	299	ePKP	PKPdf	03 09 37.5	+3.3
GERES	GERESS Array B	142.40	332	PKP	PKPdf	03 10 00.1	-2.3
GERES	GERESS Array B	142.40	332	PKP	PKPdf	03 10 00.1	-2.3
	0.6nm,0.9s,baz=116,slow=2.3,SNR=2.6						
TNS	Taunus Mts	143.48	337	ePKPbc	PKPbc	03 10 01.8	+0.3
STU	Stuttgart	144.38	335	ePKPbc	PKPbc	03 10 05.0	+0.9
RUP	Ruppelstein	144.42	338	PKP	PKPbc	03 10 04.5	+0.2
WLF	Walferdange	144.76	339	ePKPbc	PKPdf	03 10 06.6	+0.2
WLF	Walferdange	144.76	339	ePKPdf	PKPdf	03 10 06.0	-0.4
OBER	Oberstdorf	144.99	333	ePKPbc	PKPdf	03 10 06.9	-0.1
BFO	Black Forest	145.07	336	ePKPbc	PKPdf	03 10 07.2	+0.2
BFO	Black Forest	145.07	336	ePKPdf	PKPbc	03 10 05.8	-0.6
SPAK	Spaichingen-Ko	145.08	335	PKP	PKPbc	03 10 06.1	-0.4
FETA	Feichten	145.09	332	⇑iPKPdf	PKPab	03 10 06.9	+0.1
	20nm,1.6s						
DAVA	Damuels	145.26	333	⇑iPKPdf	PKPbc	03 10 07.3	+0.1
	22nm,1.5s						
LIBD	Limburg	145.50	336	PKP	PKPab	03 10 08.1	+0.1
ECH	Echery	145.62	337	ePKPdf	PKPdf	03 10 07.5	-0.5
DAVOX	Davos/Dischmat	145.65	333	PKPbc	PKPbc	03 10 08.7	+0.1
DAVOX	Davos/Dischmat	145.65	333	PKPbc	PKPbc	03 10 08.7	+0.1
	6.9nm,1.0s,baz=11,slow=5.4,SNR=8.7						
MOF	Molkenrain	145.93	336	PKP	PKPdf	03 10 08.7	+0.1
MOF	Molkenrain	145.93	336	PKP	PKPdf	03 10 08.7	+0.1
THEF	They Montfort	146.04	338	PKP	PKPbc	03 10 09.5	0.0
THEF	They Montfort	146.04	338	PKP	PKPbc	03 10 09.5	0.0
LOMF	Lomont	146.46	336	PKP	PKPbc	03 10 10.7	-0.1
LOMF	Lomont	146.46	336	PKP	PKPbc	03 10 10.7	-0.1
BNI	Bardonecchia	148.39	334	ePKPbc	PKPbc	03 10 16.1	-0.2
AGO	Saint Agoulin	148.91	339	PKP	PKPbc	03 10 17.2	-0.3
AGO	Saint Agoulin	148.91	339	PKP	PKPbc	03 10 17.2	-0.3
PYM	Petit Puy Mans	149.21	339	PKP	PKPbc	03 10 16.6	-1.7
PYM	Petit Puy Mans	149.21	339	PKP	PKPbc	03 10 16.6	-1.7
LBL	Lubilhac	149.58	338	PKP	PKPbc	03 10 19.5	+0.3
ESDC	Sonseca Array	156.89	343	PKPab	PKPab	03 10 55.2	+0.1
ESDC	Sonseca Array	156.89	343	PKPab	PKPab	03 10 55.2	+0.1
	0.1nm,0.3s,baz=50,slow=3.5,SNR=4.3						
TORD	Torodi Ar. Bea	165.74	254	PKP	PKPdf	03 10 33.8	-1.6
TORD	Torodi Ar. Bea	165.74	254	PKP	PKPdf	03 10 33.8	-1.6
	1.8nm,1.1s,baz=163,slow=0.9,SNR=4.7						

SZGRF 02 02:55:05.8, 20°.97S×169°.43E, h33km, Vanuatu Islands
IDC 02 02:55:09.5±0.4, 17°.85S×167°.98E, h0km, mb4.5/25, mb1 4.7/26, mb1mx4.6/28, mbtmp4.5/26, ML4.0/1, MS5.0/9, Ms1 5.0/9, ms1mx4.5/29, Error ellipse: s-maj=15.8km s-min=13.2km az=105.0
ISCJB 02 02:55:11.0±2.8, 17°.83S±0°.05×167°.87E±0°.05, h16km±19km, mb4.9/77, MS5.1/15, Error ellipse: s-maj=8.6km s-min=7.6km az=150.8
DJA 02 02:55:11.5±0.6, 18°S±8°×17°0E±1°3, h10km, M5.6/13, mb5.6/13
MOS 02 02:55:13.3±1.3, 17°.77S×167°.84E, h30km, mb5.3/29, Error ellipse: s-maj=9.8km s-min=8.7km az=175.0
NEIC 02 02:55:14.8±1.5, 17°.78S×167°.89E, h34km±10km, mb5.1/38, Error ellipse: s-maj=7.1km s-min=5.5km az=149.0
NEIC Felt at Lakatoro and Port-Vila.
BJI 02 02:55:15.9, 17°.70S×167°.80E, h35km, mB5.0/10, mb4.9/34, Ms5.6/16, Ms7 5.2/16
GCMT 02 02:55:17.9±0.3, 17°.77S×167°.57E, h28km±1km, MW5.5, Moment Tensor Solution. s27,c41; s62,c99; Moment tensor: Scale 10^{17}Nm; M_{rr}1.46±.10; $M_{\theta\theta}$0.14±.06; $M_{\phi\phi}$-1.61±.07; $M_{r\theta}$0.50±.13; $M_{\theta\phi}$0.29±.04; $M_{\phi r}$-1.43±.10; Best double couple: $M_0$2.20000×10^{17} NP1:ϕ_s360.00000°, δ24.00000°, λ105.00000°. NP2:ϕ_s163.00000°, δ67.00000°, λ84.00000°. Principal axes: T 2.0900, Plg67.0000°, Azm62.0000°; N 0.1600, Plg6.0000°, Azm166.0000°; P -2.2600, Plg22.0000°, Azm258.0000°; Data Used: IU IC G II CN.
ISC 02 02:55:14.9±0.4, 17°.86S±0°.05×167°.94E±0°.06, h35km±2km, h35km:pP-P, n396, σ1s47/404, mb5.0/75, MS5.1/15, 17C-8D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.42	198	Pn	Pn	02 56 18.7	-0.8
DZM				Sn	Sn	02 57 05.6	-4.3
DZM	Mont Dzumac	4.42	198	Pn	Pn	02 56 18.7	-0.8
	7.2nm,0.3s,baz=38,slow=19,SNR=21						
DZM				Sn	Sn	02 57 05.6	-4.3
	61nm,0.3s,baz=120,slow=20,SNR=7.7						
NOUC	Port Laguerre	4.49	200	eP	Pn	02 56 20.6	+0.1
NOUC				eS	Sn	02 57 10.2	-1.3
MSVF	Nonsavu	9.63	91	eP	Pn	02 57 31.9	+0.8
MSVF	Nonsavu	9.63	91	ePn	Pn	02 57 31.9	+0.8
MSVF	Nonsavu	9.63	91	Pn	Pn	02 57 38.0	+6.9
	1µm,1.0s,SNR=11						
RAO	Raoul Island	17.20	134	LR	LR	03 04 37.4	
	comp=Z,3µm,20.2s,baz=301,slow=33						
EIDS	Eidsvold	17.36	242	ePn	P	02 59 15.5	-0.1
	280nm,2.0s						
OUZ	Omahuta	18.01	165	ePn	P	02 59 24.4	+1.8
	539nm,2.7s						
ARMA	Armidale	19.41	227	ePn	Pn	02 59 41.7	+2.1
	108nm,1.8s						
TARA	Tarawa	19.71	15	P	P	02 59 39.7	-1.8
	178nm,1.1s						
AFI	Afiamalu	19.89	82	ePn	Pn	02 59 46.5	+1.2
	155nm,1.3s						
AFI	Afiamalu	19.89	82	LR	LR	03 05 37.5	
	comp=Z,5µm,21.1s,baz=255,slow=32						
CTA	Charters Tower	20.63	260	P	P	02 59 52.1	+0.7
CTA	Charters Tower	20.63	260	P	P	02 59 52.1	+0.7
	18nm,0.8s,baz=90,slow=8.1,SNR=6.9						
CTA				LR	LR	03 06 50.6	
	comp=Z,6µm,18.6s,baz=28,slow=34						
CTAO	Charters Tower	20.63	260	eP	P	02 59 52.2	+0.7
CTAO				pmax	pmax		
	comp=Z,42nm,0.9s						
CTAO	Charters Tower	20.63	260	eP	P	02 59 52.2	+0.7
	comp=Z,42nm,0.9s						
URZ	Urewera	21.85	160	eP	P	03 00 06.4	+2.0
	comp=Z,371nm,1.9s						
URZ	Urewera	21.85	160	P	P	03 00 05.0	+0.6
	comp=Z,23nm,0.8s,baz=36,slow=4.9,SNR=8.6						
PMG	Port Moresby	21.86	290	P	P	03 00 05.3	+0.6
PMG	Port Moresby	21.86	290	P	P	03 00 05.3	+0.6
	comp=Z,7.3nm,0.5s,baz=351,slow=13,SNR=3.2						
PMG				LR	LR	03 07 31.5	
	comp=Z,6µm,18.9s,baz=227,slow=34						
SNZO	South Karori	24.08	167	eP	P	03 00 28.0	+1.0
	comp=Z,90nm,1.2s						
STKA	Stephens Creek	27.59	235	eP	P	03 00 59.2	+0.3
	comp=Z,6.5nm,1.0s						
STKA	Stephens Creek	27.59	235	P	P	03 00 58.2	-0.7
	comp=Z,13nm,0.9s,baz=60,slow=9.1,SNR=13						
STKA				LR	LR	03 12 00.3	
	comp=Z,4µm,19.0s,baz=8.0,slow=37						
WRAB	Tennant Creek	31.82	261	eP	P	03 01 35.6	-1.0
WRAB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WRAB	Tennant Creek	31.82	261	eP	P	03 01 35.6	-1.0
	comp=Z,6.9nm,1.0s						
WRA	Warramunga Arr	31.83	261	P	P	03 01 34.7	-2.0
WRA				PcP	PcP	03 04 26.8	-0.4
WRA				e		03 33 10.2	
WRA	Warramunga Arr	31.83	261	P	P	03 01 34.7	-2.0
	comp=Z,2.2nm,0.8s,baz=83,slow=6.2,SNR=12						
WRA				PcP	PcP	03 04 26.8	-0.4
	comp=Z,1.5nm,0.7s,baz=93,slow=2.9,SNR=4.3						
WRA				LR	LR	03 13 38.5	
	comp=Z,2µm,18.0s,baz=65,slow=35						
WRA				P3KPbc		03 33 10.2	
	comp=Z,1.1nm,0.8s,baz=293,slow=3.0,SNR=4.9						
BBOO	Buckleboo	32.28	236	eP	P	03 01 40.4	-0.1
	comp=Z,418nm,1.0s						
AS31	Alice Springs	32.30	254	eP	P	03 01 38.7	-2.1
ASAR	Alice Springs	32.30	254	P	P	03 01 39.0	-1.8
ASAR				PcP	PcP	03 04 28.2	-0.2
ASAR				ScP	ScP	03 08 12.2	+2.5
ASAR	Alice Springs	32.30	254	P	P	03 01 39.0	-1.8
	comp=Z,5.8nm,0.8s,baz=79,slow=8.9,SNR=28						
ASAR				PcP	PcP	03 04 28.2	-0.2
	comp=Z,1.5nm,0.8s,baz=90,slow=2.8,SNR=3.5						
ASAR				ScP	ScP	03 08 12.2	+2.5
	comp=Z,1.3nm,0.9s,baz=95,slow=3.2,SNR=4.3						
ASAR				LR	LR	03 15 33.0	
	comp=Z,1µm,19.4s,baz=34,slow=38						

FORT Forrest 38.35 243 *e*P **P** **03 02 31.7 -1.0**
comp=Z,38nm,0.7s
PPT Papeete 40.40 96 LR LR 03 13 51.5
comp=Z,1μm,21.9s,baz=87,slow=28
MBWA Marble Bar 45.43 258 *e*P **P** **03 03 29.8 -0.8**
comp=Z,37nm,1.0s
NWAO Narrogin (SRO) 47.77 242 *e*P **P** **03 03 48.0 -0.9**
comp=Z,30nm,1.3s
VNDA Vanda 59.76 182 *e*P **P** **03 05 17.2 +1.3**
VNDA Vanda 59.76 182 P **P** **03 05 15.9 +0.1**
comp=Z,2.0nm,0.8s,baz=13,slow=8.2,SNR=10
KSM Kuching 59.88 283 *e*P **P** **03 05 16.9 -0.7**
comp=Z,26nm,0.9s
KSM Kuching 59.88 283 P P 03 05 25.9 +8.3
KSM Kuching 59.88 283 P P 03 05 26.2 +8.5
comp=Z,37nm,0.9s
SBA Scott Base 60.02 180 *e*P **P** **03 05 20.1 +2.4**
SBA pmax pmax
comp=Z,41nm,1.2s
SBA Scott Base 60.02 180 *e*P **P** **03 05 20.1 +2.4**
comp=Z,41nm,1.2s
MJAR Matsushiro Arr 60.97 333 P **P** **03 05 24.2 -0.5**
MJAR Matsushiro Arr 60.97 333 P **P** **03 05 24.2 -0.5**
comp=Z,6.0nm,0.9s,baz=163,slow=7.9,SNR=16
MAJO Matsushiro 60.97 333 *e*P **P** **03 05 24.5 -0.2**
MAJO pmax pmax
comp=Z,10.0nm,0.9s
MAJO Matsushiro 60.97 333 *e*P **P** **03 05 24.5 -0.2**
comp=Z,10.0nm,0.9s
MAT Matsushiro 60.97 333 P **P** **03 05 23.8 -0.9**
JNU Nakatsue 61.84 325 P **P** **03 05 31.2 +0.6**
JNU Nakatsue 61.84 325 P **P** **03 05 31.2 +0.6**
comp=Z,4.5nm,0.7s,baz=14,slow=4.4,SNR=3.3
ASAJ Asahikawa 65.89 340 *e*P **P** **03 05 58.0 +1.0**
ASAJ Asahikawa 65.89 340 P **P** **03 05 57.8 +0.7**
comp=Z,12nm,0.7s,baz=206,slow=11,SNR=11
KSRS Korea Array 66.68 326 P **P** **03 06 03.2 +1.0**
comp=Z,0.5nm,0.3s,baz=136,slow=7.7,SNR=2.7
KSAR Wonju Array Be 66.69 326 P **P** **03 06 03.2 +0.9**
MIR Mirnyy 67.76 205 *e*P P 03 06 17.0 +8.3
MIR pmax pmax
comp=Z,56nm,1.5s
QIZ Qiongzhong 67.83 300 P P 03 06 16.4 +6.5
QIZ S **S** **03 15 09.0 +2.9**
NJ2 Nanjing 68.37 316 *e*P **P** **03 06 15.9 +2.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
YSS Yuzh-Sakhalins 68.39 342 *e*P **P** **03 06 14.2 +1.4**
YSS *e* 03 06 20.0
IPM Ipoh 69.60 282 P P 03 06 32.0 +11
comp=Z,36nm,0.9s
USRK Ussuriysk Arra 69.95 333 P **P** **03 06 23.5 +0.9**
comp=Z,4.0nm,0.7s,baz=112,slow=5.9,SNR=8.1
PSI Prapat 70.99 279 P P 03 06 37.4 +7.7
comp=Z,45nm,0.7s
PETK Petropavlovsk- 71.23 353 P **P** **03 06 30.2 +0.1**
PETK Petropavlovsk- 71.23 353 P **P** **03 06 30.2 +0.1**
PETK Petropavlovsk- 71.23 353 P **P** **03 06 30.2 +0.1**
comp=Z,6.8nm,0.7s,baz=148,slow=7.7,SNR=15
MDJ Mudanjiang 71.33 332 P **P** **03 06 32.0 +1.0**
MDJ pmax pmax
comp=Z,12nm,1.1s
MDJ pmax pmax
comp=Z,470nm,6.8s
SNY Shenyang 72.16 327 ⇑P P 03 06 42.5 +6.5
SNY pmax pmax
comp=Z,24nm,1.5s
QSPA South Pole Qui 72.18 180 *e*P **P** **03 06 36.6 +0.6**
comp=Z,37nm,0.9s
HABR Khabarovsk 72.26 338 *e*P **P** **03 06 34.3 -2.1**
HABR *e**PP **pP** **03 06 44.3 -3.0**
HABR *e**SP **sP** **03 06 48.5 -2.8**
HABR *e* 03 06 52.7
HABR *e* 03 09 13.2
HABR S **S** **03 15 52.7 -4.1**
HABR *e* 03 16 36.6
HABR *e*SS **SS** **03 20 28.8 -6.9**
HABR *e*SSS SSS 03 23 49.2
HABR pmax pmax
comp=E,39nm,1.0s
HABR pmax pmax
comp=N,38nm,1.6s
HABR pmax pmax
comp=Z,140nm,2.8s
HABR MLR MLR
comp=Z,988nm,16.0s
CN2 Changchun 72.65 329 *e*P **P** **03 06 39.6 +0.7**
CN2 pmax pmax
comp=Z,20nm,1.3s
GYA Guiyang 74.03 305 P **P** **03 06 48.0 +0.4**
GYA pP **pP** **03 06 58.6 +0.2**
GYA sP **sP** **03 07 03.2 +0.7**
GYA S **S** **03 16 17.5 -0.6**
GYA SKS **SKSac** **03 16 47.9 -4.8**
GYA SS **SS** **03 21 04.6 +0.9**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.8s
GYA LR LR
comp=N,520nm,18.4s
GYA LR LR
comp=E,470nm,19.0s
GYA LR LR
comp=Z,580nm,18.9s
KLR Kul'dur 74.12 336 *e*P **P** **03 06 44.8 -2.6**
KLR pmax pmax
comp=Z,80nm,1.8s
PBKT Sadao Pong 74.28 294 P P 03 07 00.2 +11
comp=Z,9.1nm,0.8s
BJI Beijing 75.10 321 P **P** **03 06 54.9 +1.6**
BJI pmax pmax
comp=Z,22nm,0.8s
KMI Kunming 76.50 302 P **P** **03 07 04.7 +2.7**
KMI S **S** **03 16 46.4 +0.5**
KMI pmax pmax
comp=Z,10.0nm,0.7s
KMI LR LR
comp=N,2μm,14.7s
KMI LR LR
comp=E,2μm,16.6s
KMI LR LR
comp=Z,2μm,15.2s
CMAR Chiang Mai Arr 76.82 294 P **P** **03 07 05.3 +1.7**
CMAR Chiang Mai Arr 76.82 294 P **P** **03 07 05.3 +1.7**
comp=Z,1.2nm,0.3s,baz=125,slow=4.6,SNR=7.2
CMAR LR LR 03 38 25.5
comp=Z,898nm,18.9s,baz=290,slow=34
CMMT Chiang Mai 76.96 295 P P 03 07 13.5 +10
comp=Z,16nm,1.4s
CHTO Chiang Mai 76.96 295 P P 03 07 13.5 +9.1
comp=Z,19nm,1.1s
HHC Hu-ho-hao-te 78.38 320 *e*P **P** **03 07 13.9 +1.9**
HHC pP **pP** **03 07 24.3 +1.4**
HHC sP **sP** **03 07 28.2 +1.3**
HHC PP **PP** **03 10 13.2 +3.4**
HHC S **S** **03 17 05.9 +0.5**
HHC SKS **SKSac** **03 17 20.8 -3.4**
HHC sS **sS** **03 17 23.3 -0.1**
HHC ScS **ScS** **03 17 28.5 -1.6**
HHC SS **SS** **03 22 12.0 +2.8**
HHC pmax pmax
comp=Z,60nm,1.2s
HHC LR LR
comp=N,700nm,19.1s
HHC LR LR
comp=E,760nm,19.6s
HHC LR LR
comp=Z,600nm,17.5s
CD2 Chengdu 78.43 308 *e*P **P** **03 07 13.5 +1.1**
CD2 sP **sP** **03 07 28.8 +1.5**
CD2 S **S** **03 17 05.7 -0.4**
CD2 SS **SS** **03 22 12.0 +1.9**
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 LR LR
comp=N,2μm,15.5s
CD2 LR LR
comp=Z,2μm,17.8s
MAW Mawson 79.24 202 *e*P **P** **03 07 17.5 +1.3**
comp=Z,3.3nm,1.0s
MAW Mawson 79.24 202 P **P** **03 07 18.1 +1.9**
comp=Z,4.6nm,0.8s,baz=116,slow=2.9,SNR=8.0
LZH Lanzhou 80.90 312 *e*P **P** **03 07 27.5 +1.7**
LZH pP **pP** **03 07 38.6 +1.8**
LZH sP **sP** **03 07 41.7 +0.9**
LZH *e*PP **PP** **03 10 30.5 -0.4**
LZH *e*S **S** **03 17 32.1 -0.2**
LZH sS **sS** **03 17 50.8 +0.4**
LZH *e*SS **SS** **03 22 51.0 +3.8**
LZH pmax pmax
comp=Z,21nm,1.1s
LZH pmax pmax
comp=Z,170nm,7.8s
LZH LR LR
comp=N,450nm,15.6s
LZH LR LR
comp=E,420nm,17.0s
LZH LR LR
comp=Z,580nm,19.1s
SEY Seymchan 81.45 353 ⇓*i*P **P** **03 07 28.2 +0.3**
CLNS Chul'man 82.66 338 *e*P **P** **03 07 34.9 +0.4**
CLNS pmax pmax
comp=E,11nm,1.1s
CLNS pmax pmax
comp=Z,14nm,0.6s
CLNS pmax pmax
comp=N,12nm,0.6s
RSO Redoubt South 84.24 18 *e*P **P** **03 07 41.0 -1.7**
ULN Ulaanbaatar 85.03 324 *e*P **P** **03 07 47.1 +0.1**
comp=N,42nm,1.2s
ULN Ulaanbaatar 85.03 324 P **P** **03 07 48.3 +1.3**
comp=N,33nm,1.5s
YAK Yakutsk 85.20 343 *e*P **P** **03 07 46.0 -1.2**
YAK pmax pmax
comp=E,7.0nm,1.1s
YAK pmax pmax
comp=Z,46nm,0.8s
YAK pmax pmax
comp=N,10.0nm,1.1s
GTA Gaotai 85.29 314 *e*P **P** **03 07 50.7 +2.3**
GTA pP **pP** **03 07 56.1 -3.4**
GTA pmax pmax
comp=Z,7.0nm,1.0s
SONM Songino Array 85.39 324 P **P** **03 07 49.3 +0.6**
SONM Songino Array 85.39 324 P **P** **03 07 49.3 +0.6**
comp=Z,4.5nm,0.9s,baz=134,slow=3.8,SNR=13
BILL Bilibino 85.66 359*c* *i*P **P** **03 07 48.9 -0.5**
BILL *e**PP pP 03 08 06.0 +5.5
BILL pmax pmax
comp=Z,44nm,1.7s
SYO Syowa Base 85.90 196⇑*e*P **P** **03 07 50.5 -0.3**
KHMM Horse Mountain 86.10 45 *e*P **P** **03 07 53.3 +0.8**
comp=Z,13nm,0.8s
CMB Columbia Colle 87.16 49 *e*P **P** **03 07 58.0 +0.4**
CMB pmax pmax
comp=Z,10.0nm,0.8s
CMB Columbia Colle 87.16 49 *e*P **P** **03 07 58.0 +0.4**
comp=Z,10nm,0.8s
YBH Yreka Blue Hor 87.17 45 P **P** **03 07 58.0 +0.3**
YBH Yreka Blue Hor 87.17 45 P **P** **03 07 58.0 +0.3**
comp=Z,4.3nm,0.8s,baz=181,slow=1.8,SNR=21
MWC Mount Wilson 87.31 53 *e*P **P** **03 07 58.7 +0.1**
MWC pmax pmax
comp=Z,7.0nm,0.7s
MWC Mount Wilson 87.31 53 *e*P **P** **03 07 58.6 +0.1**
comp=Z,7.5nm,0.7s
TRF Thofare Moun 87.31 17 *e*P **P** **03 07 56.3 -1.5**
comp=Z,11nm,1.2s
HUMO Hull Mountain 87.41 44 *e*P **P** **03 07 58.8 +0.1**
comp=Z,5.2nm,0.9s
ISA Isabella 87.58 51 *e*P **P** **03 08 00.0 +0.3**
ISA pmax pmax
comp=Z,8.0nm,1.0s
ISA Isabella 87.58 51 *e*P **P** **03 08 00.0 +0.3**
comp=Z,8.1nm,1.0s
BEKR Beckworth 87.96 47 *e*P **P** **03 08 01.3 -0.2**
comp=Z,4.0nm,0.8s
WCN Washoe City 88.14 48 *e*P **P** **03 08 02.4 0.0**
WCN pmax pmax
comp=Z,8.0nm,1.2s
WCN Washoe City 88.14 48 *e*P **P** **03 08 02.4 0.0**
comp=Z,7.7nm,1.2s
PFO Pinyon Flat Ob 88.30 54 P **P** **03 08 03.3 0.0**
PFO Pinyon Flat Ob 88.30 54 P **P** **03 08 03.3 0.0**
comp=Z,1.4nm,0.6s,baz=292,slow=2.9,SNR=4.8
ZAK Zakamensk 88.47 325 *e*P **P** **03 08 03.3 -0.3**
ZAK pmax pmax
comp=Z,9.0nm,1.6s
GSC Goldstone 88.68 52 *e*P **P** **03 08 05.7 +0.7**
GSC pmax pmax
comp=Z,56nm,2.5s
GSC Goldstone 88.68 52 *e*P **P** **03 08 05.7 +0.7**
comp=Z,56nm,2.5s
NVAR Mina Array Bea 88.82 49 P **P** **03 08 05.8 +0.1**
NVAR Mina Array Bea 88.82 49 P **P** **03 08 05.8 +0.1**
comp=Z,4.1nm,0.7s,baz=227,slow=8.2,SNR=29
COLA College 89.09 17 *e*P **P** **03 08 04.5 -1.5**
COLA pmax pmax
comp=Z,4.0nm,0.6s
COLA College 89.09 17 *e*P **P** **03 08 04.5 -1.5**
comp=Z,3.6nm,0.6s
ILAR Eielson Array 89.29 18 P **P** **03 08 05.2 -1.8**
ILAR Eielson Array 89.29 18 P **P** **03 08 05.2 -1.8**
comp=Z,2.4nm,0.7s,baz=240,slow=4.9,SNR=30
MAIT Maitri 90.06 188 *e*P P 03 08 01.7 -9.0
WVOR Wild Horse Val 90.21 45 *e*P **P** **03 08 12.6 +0.6**
WVOR pmax pmax
comp=Z,9.0nm,1.1s
WVOR Wild Horse Val 90.21 45 *e*P **P** **03 08 12.6 +0.6**
comp=Z,9.3nm,1.1s
COLD Coldfoot 90.27 15 *e*P **P** **03 08 12.4 +0.9**
comp=Z,4.5nm,1.1s
SNAA Sanae 90.47 183 *e*P **P** **03 08 13.2 +0.5**
SNAA Sanae 90.47 183 *e*pP pP 03 08 22.5 -1.3
SNAA Sanae 90.47 183 *e*sP sP 03 08 33.6 +5.8
SNAA Sanae 90.47 183 *e*P **P** **03 08 13.0 +0.3**
comp=Z,15nm,0.9s
SNAA Sanae 90.47 183 P **P** **03 08 12.8 +0.1**
comp=Z,6.8nm,1.1s,baz=198,slow=5.9,SNR=32
HAWA Hanford 91.26 41 *e*P **P** **03 08 17.4 +0.8**
comp=Z,7.0nm,0.6s
VNA1 Neumayer--Stat 91.68 181 *e*P **P** **03 08 19.6 +1.4**
VNA1 Neumayer--Stat 91.68 181 *e*pP pP 03 08 29.1 -0.2
CCUT Cedar City 92.10 51 *e*P **P** **03 08 20.8 -0.2**
comp=Z,8.2nm,1.5s
TUC Tucson 92.28 57 *e*P **P** **03 08 22.1 +0.3**
TUC pmax pmax
comp=Z,4.0nm,0.8s
TUC Tucson 92.28 57 *e*P **P** **03 08 22.1 +0.3**
comp=Z,4.0nm,0.8s
WUAZ Wupatki 92.89 54 *e*P **P** **03 08 24.9 +0.2**
comp=Z,5.1nm,0.8s
HLID Hailey 93.51 45 *e*P **P** **03 08 27.9 +0.6**
comp=Z,24nm,2.4s
HVS Khovu-Aksy 94.23 323⇑*i*P **P** **03 08 30.8 +0.5**
HVS pmax pmax
comp=Z,36nm,1.2s
WMQ Urumqi 95.37 314 *e*P **P** **03 08 37.0 +1.3**
WMQ pP **pP** **03 08 48.0 +1.2**
WMQ pmax pmax
comp=Z,12nm,1.0s
WMQ LR LR
comp=N,780nm,18.4s
WMQ LR LR
comp=E,900nm,21.6s
WMQ LR LR
comp=Z,900nm,22.0s
RRI2 Red Ridge 95.55 46 *e*P **P** **03 08 37.2 +0.4**
comp=Z,2.3nm,0.8s
PV01 Paradox Valley 95.87 52 *e*P **P** **03 08 39.7 +1.3**
ANMO Albuquerque 96.53 56 P **P** **03 08 41.0 -0.3**
ANMO Albuquerque 96.53 56 P **P** **03 08 41.0 -0.3**
comp=Z,0.6nm,0.6s,baz=240,slow=5.9,SNR=4.5
TXAR Lajitas Array 97.19 62 P Pdif 03 08 44.4 0.0
TXAR Lajitas Array 97.19 62 P Pdif 03 08 44.4 0.0
comp=Z,0.6nm,0.8s,baz=210,slow=5.2,SNR=9.3
MKAR Makanchi Array 99.90 316 P **Pdif** **03 08 56.6 +0.6**
MKAR Makanchi Array 99.90 316 P **Pdif** **03 08 56.6 +0.6**
MKAR PKKPbc **PKKPbc** **03 25 14.5 -2.6**
MKAR Makanchi Array 99.90 316 P **Pdif** **03 08 56.6 +0.6**
comp=Z,0.5nm,0.6s,baz=103,slow=6.5,SNR=6.3
MKAR PKKPbc **PKKPbc** **03 25 14.5 -2.6**
comp=Z,0.7nm,0.7s,baz=316,slow=3.3,SNR=4.8
YKA Yellowknife Ar 100.02 27 P **Pdif** **03 08 56.0 0.0**
YKA PKiKP **PKiKP** **03 13 22.5 -1.3**
YKA Yellowknife Ar 100.02 27 P **Pdif** **03 08 56.0 0.0**
comp=Z,0.9nm,0.7s,baz=253,slow=4.9,SNR=15
YKA PKiKP **PKiKP** **03 13 22.5 -1.3**
comp=Z,0.3nm,0.6s,baz=246,slow=1.4,SNR=6.7
ZALV Zalesovo Beam 100.28 323 P **Pdif** **03 08 57.3 -0.1**
ZALV Zalesovo Beam 100.28 323 P **Pdif** **03 08 57.3 -0.1**
comp=Z,1.6nm,0.7s,baz=119,slow=5.1,SNR=5.1
NVS Novosibirsk 101.41 324 *e*P **Pdif** **03 09 11.4 +9.0**
NVS pmax pmax
comp=Z,33nm,2.7s
NVS pmax pmax
comp=E,5.0nm,1.9s
KURK Kurchatov 103.19 319 P **Pdif** **03 09 11.4 +0.9**
KURK Kurchatov 103.19 319 Pdif **Pdif** **03 09 11.4 +0.9**
KURK PKKPbc **PKKPbc** **03 25 07.0 -0.6**
KURBB Kurchatov Arra 103.23 319 Pdiff **Pdif** **03 09 11.4 +0.8**
comp=E,0.2nm,0.3s,baz=111,slow=5.2,SNR=2.6
KURBB PKKPbc **PKKPbc** **03 25 07.0 -0.5**
comp=E,0.2nm,0.4s,baz=284,slow=3.7,SNR=5.1
ARU Arti 115.41 325 *i* PKiKP **PKPdf** **03 13 52.4 -0.2**
FRB Frobisher Bay 120.46 25 PKP **PKPdf** **03 14 00.9 -1.2**
FRB Frobisher Bay 120.46 25 PKP **PKPdf** **03 14 00.9 -1.2**
comp=E,3.5nm,0.5s,baz=293,slow=2.2,SNR=6.3
SIV San Ignacio 121.15 122 PKP **PKPdf** **03 14 04.3 -0.7**
SIV San Ignacio 121.15 122 PKP **PKPdf** **03 14 04.3 -0.7**
comp=E,0.8nm,0.6s,baz=352,slow=3.0,SNR=5.2
BOSA Boshof 121.38 219 PKP **PKPdf** **03 14 05.6 +0.3**
BOSA Boshof 121.38 219 PKP **PKPdf** **03 14 05.6 +0.3**
comp=E,4.5nm,1.0s,baz=135,slow=2.9,SNR=3.9
APA Apatity 122.54 341⇑*i* PKiKP **PKPdf** **03 14 06.0 0.0**
APA MLR MLR
comp=Z,1μm,17.0s
KEV Kevo 122.90 345 *e*pkp **PKPdf** **03 14 06.4 -0.3**
KEV Kevo 122.90 345 *e*PKiKP **PKPdf** **03 14 06.4 -0.3**
ARCES ARCESS Array B 123.43 345 PKP **PKPdf** **03 14 07.5 -0.2**
ARCES ARCESS Array B 123.43 345 PKP **PKPdf** **03 14 07.5 -0.2**
comp=Z,8.5nm,0.7s,baz=28,slow=2.1,SNR=23
KLMR Klimovskoe 123.75 333 *e*PKiKP **PKPdf** **03 14 04.1 -4.4**
KLMR pmax pmax
comp=Z,25nm,1.3s
SCHQ Schefferville 124.50 35 PKP **PKPdf** **03 14 09.4 -0.8**
SCHQ Schefferville 124.50 35 PKP **PKPdf** **03 14 09.4 -0.8**
comp=Z,2.2nm,0.7s,baz=57,slow=6.4,SNR=5.3
JOF Joensuu 126.01 337 *e*pkp **PKPdf** **03 14 11.7 -1.1**
comp=Z,7.2nm,0.7s
JOF Joensuu 126.01 337 *e*PKiKP **PKPdf** **03 14 11.7 -1.1**
JOF pmax pmax
comp=Z,7.0nm,0.7s
VRHR Novokhopersk 126.32 321 *e*PKiKP **PKPdf** **03 14 12.8 -1.0**
VRHR pmax pmax
comp=Z,7.0nm,0.9s
VRHR pmax pmax
comp=N,3.0nm,0.5s
VRHR pmax pmax
comp=E,9.0nm,0.6s
KBZ Khabaz 127.33 312 PKiKP **PKPdf** **03 14 16.1 +0.2**
KBZ Khabaz 127.33 312 PKP **PKPdf** **03 14 16.1 +0.2**
KBZ Khabaz 127.33 312 PKP **PKPdf** **03 14 16.1 +0.2**
comp=E,0.5nm,0.4s,baz=225,slow=2.9,SNR=3.3
BHD Baghdad 127.42 298 *e*PKP **PKPdf** **03 14 13.0 -3.4**
KIV Kislovodsk 127.44 312 *e*PKiKP **PKPdf** **03 14 17.1 +0.8**
KIV pmax pmax
comp=Z,9.0nm,1.1s
OBN Obninsk 127.68 327*d* *i*PKiKP **PKPdf** **03 14 16.5 +0.3**
OBN *e* 03 21 20.3
OBN *e*PS **PS** **03 26 22.6 -1.6**
OBN *e*SS SS 03 33 23.8 -2.9
OBN pmax pmax
comp=Z,9.0nm,1.0s
VSR Storozhevoye 127.75 322 *e*PKiKP PKPdf 03 14 24.4 +7.9
VSR pmax pmax
comp=Z,7.0nm,0.9s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,1.4s
KAF Kangasniemi 128.33 338 *e*pkp **PKPdf** **03 14 15.0 -2.3**
comp=E,3.4nm,0.6s
KAF Kangasniemi 128.33 338 *e*PKiKP **PKPdf** **03 14 15.0 -2.3**
KAF pmax pmax
comp=Z,3.0nm,0.6s
SJG San Juan 128.71 81 *e*PKPdf **PKPdf** **03 14 18.0 -1.2**
FINES FINESS Array B 128.85 338 PKP **PKPdf** **03 14 17.5 -0.7**
FINES FINESS Array B 128.85 338 PKP **PKPdf** **03 14 17.5 -0.7**
comp=Z,6.4nm,0.9s,baz=48,slow=2.1,SNR=8.4
BDFB Brasilia 131.38 131 SKPbc **SKPab** **03 17 48.9 +1.3**
BDFB Brasilia 131.38 131 SKPbc **SKPab** **03 17 48.9 +1.3**
comp=Z,2.8nm,1.0s,baz=198,slow=8.5,SNR=3.6
IDID Didziasalis 132.41 331 *e*P **PKPdf** **03 14 26.4 +1.2**
IIGN Ignalina 132.63 331 *e*P **PKPdf** **03 14 26.3 +0.7**
AKASG Malin Array Be 133.66 325 PKiKP **PKPdf** **03 14 27.7 -0.1**
AKASG Malin Array Be 133.66 325 PKP **PKPdf** **03 14 27.6 -0.1**
AKASG SKPbc **SKPab** **03 17 56.6 +0.4**
AKASG Malin Array Be 133.66 325 PKP **PKPdf** **03 14 27.6 -0.1**
comp=Z,2.0nm,0.6s,baz=64,slow=1.0,SNR=6.4
AKASG SKPbc **SKPab** **03 17 56.6 +0.4**
comp=Z,0.3nm,0.4s,baz=31,slow=2.5,SNR=8.1
NB2 NORSAR Subarra 133.80 345 PKPdf **PKPdf** **03 14 28.9 +1.1**
comp=Z,2.6nm,0.7s,baz=34,slow=1.9
NOA NORSAR Array B 133.80 345 PKP **PKPdf** **03 14 28.9 +1.1**
NOA NORSAR Array B 133.80 345 PKP **PKPdf** **03 14 28.9 +1.1**
comp=Z,2.7nm,0.7s,baz=36,slow=2.1,SNR=13
HFS Hagfors 133.89 342 PKP **PKPdf** **03 14 26.4 -1.5**
HFS Hagfors 133.89 342 PKP **PKPdf** **03 14 26.4 -1.5**
comp=Z,2.5nm,0.7s,baz=4.1,slow=2.0,SNR=5.3
BRTR Keskin Array B 135.00 309 PKP **PKPdf** **03 14 30.6 -0.2**
BRTR Keskin Array B 135.00 309 PKP **PKPdf** **03 14 30.6 -0.2**
comp=Z,1.4nm,0.7s,baz=124,slow=3.4,SNR=8.0
CFR Carcaliu 136.89 318 ⇓PKiKP **PKPdf** **03 14 36.5 +2.6**
CFR Carcaliu 136.89 318 ⇓*i*P **PKPdf** **03 14 36.5 +2.6**
BUR08 Bucovina Ar. S 137.49 323 *e*PKPdf **PKPdf** **03 14 36.0 +0.9**
BURAR Bucovina Array 137.50 323 ⇓*i*P **PKPdf** **03 14 36.4 +1.3**
MLR Muntele Rosu 138.12 320 PKP **PKPdf** **03 14 37.1 +0.7**
MLR Muntele Rosu 138.12 320 PKP **PKPdf** **03 14 37.1 +0.7**
comp=Z,0.3nm,0.7s,baz=112,slow=5.4,SNR=3.3
KOLS Kolonicke sedl 138.40 326 *e*PKiKP **PKPdf** **03 14 38.1 +1.5**
KOLS Kolonicke sedl 138.40 326 *e*PKP **PKPdf** **03 14 38.1 +1.5**
UZH Uzhgorod 138.57 326 *e*PKiKP **PKPdf** **03 14 32.7 -4.2**
UZH *i* 03 14 38.9
STHS Stebnicka Huta 138.65 327 *e*PKiKP **PKPdf** **03 14 38.7 +1.6**
STHS Stebnicka Huta 138.65 327 *e*PKP **PKPdf** **03 14 38.7 +1.6**
CRVS Cervenica-Dubn 138.85 326 *e*PKiKP **PKPdf** **03 14 36.8 -0.7**
CRVS Cervenica-Dubn 138.85 326 *e*PKP **PKPdf** **03 14 36.8 -0.7**
DRGR 139.38 323⇑PKiKP **PKPdf** **03 14 33.9 -4.7**
DRGR 139.38 323⇑*i*P **PKPdf** **03 14 33.9 -4.7**
PSZ Piszkesteto 140.28 326⇑PKiKP **PKPdf** **03 14 41.1 +0.9**
PSZ Piszkesteto 140.28 326⇑*i*P **PKPdf** **03 14 41.1 +0.9**
UPC Upice 140.46 332 *e*PKiKP **PKPdf** **03 14 42.8 +2.5**
UPC Upice 140.46 332 *e*PKPdf **PKPdf** **03 14 42.8 +2.5**
VYHS Vyhne 140.47 328 *e*PKiKP **PKPdf** **03 14 40.3 -0.1**
VYHS Vyhne 140.47 328 *e*PKP **PKPdf** **03 14 40.3 -0.1**
BZS Buzias 140.66 322⇑PKiKP **PKPdf** **03 14 41.5 +0.7**
BZS Buzias 140.66 322⇑*i*P **PKPdf** **03 14 41.5 +0.7**
VRAC Vranov 141.03 330⇑*i*P **PKPdf** **03 14 46.0 +4.6**
PVCC Panska Ves 141.09 333 *e*PKiKP **PKPdf** **03 14 38.4 -3.0**
PVCC Panska Ves 141.09 333 *e*PKPdf **PKPdf** **03 14 38.4 -3.0**
KARP Karpathos 141.09 305 *e*P **PKPdf** **03 14 37.1 -4.9**
BRG Berggiesshubel 141.10 334 *e*PKP **PKPdf** **03 14 39.6 -1.9**
comp=Z,3.3nm,0.9s
BRG Berggiesshubel 141.10 334 *e*PKiKP **PKPdf** **03 14 39.6 -1.9**
BRG pmax pmax
comp=Z,3.0nm,0.9s
CLL Collm 141.16 335 *e*PKPpre PKPpre 03 14 39.0
CLL *e*PKPdf **PKiKP** **03 14 43.0 -1.3**
CLL *e* 03 14 44.0
CLL *e* 03 14 48.0
CLL *e*PKSbc **PKSbc** **03 18 19.0 -0.5**
PRU Pruhonice 141.49 332 *e*PKiKP **PKPdf** **03 14 39.9 -2.3**
PRU *e* 03 14 45.4
PRU Pruhonice 141.49 332 *e*PKPdf **PKPdf** **03 14 39.9 -2.3**
PRU *ex* x 03 14 45.4
ZST Bratislava 141.54 328 *e*PKiKP **PKPdf** **03 14 42.8 +0.5**
ZST Bratislava 141.54 328 *e*PKP **PKPdf** **03 14 42.8 +0.5**
EKA Eskdalemuir Ar 141.98 352 PKPpre PKPpre 03 14 36.9
EKA Eskdalemuir Ar 141.98 352 PKhKP PKPpre 03 14 36.9
comp=Z,1.2nm,0.6s,baz=9.1,slow=2.7,SNR=10
NPS Neapolis 142.39 305 *e*P **PKPdf** **03 14 41.1 -3.2**
KHC Kasperske Hory 142.55 332 *e*PKiKP **PKPdf** **03 14 41.5 -2.7**
KHC *e* 03 14 47.9
KHC Kasperske Hory 142.55 332 *e*PKPdf **PKPdf** **03 14 41.5 -2.7**
KHC *ex* x 03 14 47.9
KHC Kasperske Hory 142.55 332 *e*PKPdf **PKPdf** **03 14 41.6 -2.5**
ROTZ Rotzenmuhle 142.66 334 *e*PKPbc **PKPdf** **03 14 41.7 -2.6**
GEC2 GERESS Array S 142.70 332 *e*PKiKP **PKPdf** **03 14 42.0 -2.6**
GEC2 GERESS Array S 142.70 332 *e*PKPdf **PKPdf** **03 14 42.0 -2.6**
GERES GERESS Array B 142.70 332 PKPpre PKPpre 03 14 41.0
GERES SKPbc **SKiKP** **03 18 22.5 +1.2**

GERES	GERESS Array B	142.70	332	PKhKP	PKPpre	03 14 41.0	
	comp=Z,2.2nm,0.8s,baz=35,slow=3.6,SNR=14						
GERES				SKPbc	SKiKP	03 18 22.5	+1.2
	comp=Z,0.6nm,0.8s,baz=62,slow=6.2,SNR=4.2						
IDI	Anoyia	142.94	305	ePKPdf	PKPdf	03 14 45.7	+0.4
IDI				ePKPdf	PKiKP	03 14 51.1	+2.6
FNA	Florina	143.31	316	eP	PKPbc	03 14 42.6	-0.3
DID	Didima	143.42	310	eP	PKPdf	03 14 46.6	+0.5
VAM	Vamos	143.44	306	eP	PKPab	03 14 41.0	-1.3
PERS	Pernice	143.59	328	i PKPdf	PKPbc	03 14 44.0	+0.5
GVD	Gavdhos	143.71	305	ePKPdf	PKPbc	03 14 45.4	+1.2
TNS	Taunus Mts	143.77	338	ePKPbc	PKPbc	03 14 44.1	+0.2
TNS	Taunus Mts	143.77	338	ePKIKP	PKPbc	03 14 44.1	+0.2
KALE	Kalithea	143.86	312	eP	PKPab	03 14 43.1	-0.9
EVR	Evrytania	143.87	313	eP	PKPdf	03 14 46.0	-0.9
GUR	Goura	143.90	311	eP	PKPbc	03 14 44.6	-0.2
RJOB	Jochberg	143.93	331	ePKPbc	PKPbc	03 14 44.9	+0.4
KLV	Kalavryta, Ach	144.00	311	eP	PKPab	03 14 44.8	+0.3
LAKA	Lakka	144.04	311	eP	PKPab	03 14 43.2	-1.4
HGN	Heimansgroeve	144.17	340	ePKP	PKPbc	03 14 45.2	+0.2
JAN	Janina	144.20	314	eP	PKPab	03 14 44.2	-1.0
BEBN	Eben Emael	144.22	341	PKP	PKPbc	03 14 46.1	+0.9
BOJS	Bojanci	144.28	326	i PKPdf	PKPbc	03 14 46.1	+0.5
MEM	Membach	144.28	340	PKP	PKPbc	03 14 45.7	+0.4
FUR	Furstenfeldbru	144.28	333	ePKPbc	PKPbc	03 14 46.1	+0.6
FUR	Furstenfeldbru	144.28	333	ePKIKP	PKPbc	03 14 46.1	+0.6
ABH	Alteburg	144.38	338	PKP	PKPdf	03 14 46.7	-0.7
RLS	Riolos of Patr	144.48	311	eP	PKPab	03 14 45.9	-0.3
ITM	Ithomi	144.51	310	eP	PKPab	03 14 46.5	+0.1
VOY	Vojsko	144.62	328	ePKPdf	PKPbc	03 14 46.9	+0.1
VOY				e		03 14 52.5	
JAVS	Javornik	144.63	328	i PKPdf	PKPbc	03 14 47.3	+0.5
BCLA	Clavier	144.67	341	PKP	PKPdf	03 14 47.3	-0.5
STU	Stuttgart	144.67	336	ePKPbc	PKPbc	03 14 47.3	+0.6
STU	Stuttgart	144.67	336	ePKIKP	PKPbc	03 14 47.3	+0.6
STU	Stuttgart	144.67	336	ePKPdf	PKPbc	03 14 47.3	+0.6
RUP	Ruppelstein	144.70	338	PKIKP	PKPdf	03 14 47.7	-0.2
RUP	Ruppelstein	144.70	338	PKP	PKPdf	03 14 47.7	-0.2
LKD2	Lefkada island	144.73	313	eP	PKPbc	03 14 47.4	+0.1
WATA	Walderalm	144.78	332	⇓iPKPdf	PKPbc	03 14 47.5	+0.2
	comp=Z,12nm,0.8s						
ABTA	Abfaltersbach	144.78	330	⇑iPKPdf	PKPab	03 14 46.6	-0.6
	comp=Z,27nm,0.7s,SNR=6.1						
WTTA	Wattenberg	144.81	332	⇑iPKPdf	PKPab	03 14 47.3	0.0
	comp=Z,41nm,1.5s,SNR=7.8						
KEK	Kerkira	144.88	315	eP	PKPab	03 14 46.0	-1.7
SKDS	Skadanscina	144.89	328	i PKPdf	PKPbc	03 14 47.9	+0.3
SNF	Seneffe	144.90	342	PKP	PKPbc	03 14 47.5	+0.2
MOTA	Moosalm	144.98	332	⇑iPKPdf	PKPbc	03 14 47.9	0.0
	comp=Z,37nm,0.9s,SNR=16						
RETA	Reutte	145.03	333	⇑iPKPdf	PKPbc	03 14 48.0	0.0
	comp=Z,42nm,1.4s,SNR=9.6						
WLF	Walferdange	145.04	339	PKP	PKPdf	03 14 48.8	+0.3
WLF	Walferdange	145.04	339	ePKPbc	PKPdf	03 14 48.8	+0.3
WLF	Walferdange	145.04	339	ePKIKP	PKPdf	03 14 48.8	+0.3
WLF	Walferdange	145.04	339	ePKPdf	PKPdf	03 14 48.8	+0.3
VLS	Valsamata	145.05	312	eP	PKPab	03 14 48.6	+0.3
DOU	Dourbes	145.17	341	PKP	PKPdf	03 14 48.6	0.0
OBER	Oberstdorf	145.29	333	ePKPbc	PKPdf	03 14 49.2	+0.1
BFO	Black Forest	145.37	336	ePKPbc	PKPab	03 14 49.4	+0.2
BFO	Black Forest	145.37	336	ePKIKP	PKPab	03 14 49.4	+0.2
BFO	Black Forest	145.37	336	ePKPdf	PKPdf	03 14 49.2	+0.1
SPAK	Spaichingen-Ko	145.37	335	PKP	PKPab	03 14 49.6	+0.3
FETA	Feichten	145.40	332	⇑iPKPdf	PKPbc	03 14 49.1	-0.2
	comp=Z,61nm,0.9s,SNR=68						
MENF	Mencas	145.45	344	PKP	PKPab	03 14 49.8	+0.5
MENF	Mencas	145.45	344	PKP	PKPab	03 14 49.8	+0.5
DAVA	Damuels	145.56	333	⇓iPKPab	PKPbc	03 14 50.0	+0.2
	comp=Z,73nm,1.2s,SNR=29						
WLS	Welschbruch	145.67	337	PKP2	PKPab	03 14 51.0	+0.7
WLS	Welschbruch	145.67	337	PKP	PKPab	03 14 51.0	+0.7
WLS	Welschbruch	145.67	337	PKP	PKPab	03 14 51.0	+0.7
LIBD	Limburg	145.79	336	PKP2	PKPab	03 14 51.2	+0.5
LIBD	Limburg	145.79	336	PKP	PKPab	03 14 51.2	+0.5
FELD	Feldberg im Sc	145.86	336	PKP	PKPbc	03 14 50.9	+0.2
ECH	Echery	145.91	337	ePKP2	PKPbc	03 14 50.5	-0.2
ECH	Echery	145.91	337	ePKPbc	PKPbc	03 14 50.5	-0.2
ECH	Echery	145.91	337	PKP	PKPbc	03 14 50.9	+0.2
DAVOX	Davos/Dischmat	145.95	333	PKPbc	PKPab	03 14 51.6	0.0
DAVOX	Davos/Dischmat	145.95	333	PKPbc	PKPab	03 14 51.6	0.0
	comp=Z,22nm,0.9s,baz=338,slow=2.3,SNR=24						
MOF	Molkenrain	146.22	337	PKP2	PKPbc	03 14 52.1	+0.4
MOF	Molkenrain	146.22	337	PKP	PKPbc	03 14 52.1	+0.4
MOF	Molkenrain	146.22	337	PKP	PKPbc	03 14 52.1	+0.4
THEF	They Montfort	146.32	338	PKP2	PKPab	03 14 52.7	0.0
THEF	They Montfort	146.32	338	PKP	PKPab	03 14 52.7	0.0
THEF	They Montfort	146.32	338	PKP	PKPab	03 14 52.7	0.0
BBS	Basel-Blauen	146.39	336	PKP2	PKPbc	03 14 52.6	+0.4
BBS	Basel-Blauen	146.39	336	PKP	PKPbc	03 14 52.6	+0.4
TUE	Stuetta	146.43	333	ePKPbc	PKPdf	03 14 50.7	-0.5
TUE				ePKPdf	PKPbc	03 14 51.1	-1.5
RCBR	Riachuelo	146.71	133	ePKPdf	PKPbc	03 14 53.8	-0.3
RCBR				PKPbc	PKPbc	03 14 53.9	-0.3
RCBR	Riachuelo	146.71	133	PKPbc	PKPbc	03 14 53.9	-0.2
	comp=Z,11nm,0.7s,baz=191,slow=4.8,SNR=14						
LOMF	Lomont	146.75	336	PKP2	PKPbc	03 14 53.8	+0.5
LOMF	Lomont	146.75	336	PKP	PKPbc	03 14 53.8	+0.5
LOMF	Lomont	146.75	336	PKP	PKPbc	03 14 53.8	+0.5
AQU	L'Aquila	147.36	324	⇓iP	PKPab	03 14 56.5	-0.5
OG01	Vacheresse	147.65	335	PKP	PKPbc	03 14 56.1	+0.3
OG01	Vacheresse	147.65	335	PKP	PKPbc	03 14 56.1	+0.3
RSL	Roselend	148.19	335	PKP2	PKPbc	03 14 57.8	+0.4
RSL	Roselend	148.19	335	PKP	PKPbc	03 14 57.8	+0.4
RSL	Roselend	148.19	335	PKP	PKPbc	03 14 57.8	+0.4
OG35	Corcelles	148.31	336	PKP	PKPbc	03 14 57.8	+0.2
BNI	Bardonecchia	148.69	334	ePKIKP	PKPdf	03 14 53.7	-1.2
BNI				e		03 14 59.9	
BNI	Bardonecchia	148.69	334	ePKPdf	PKPdf	03 14 53.7	-1.2
BNI				ePKPbc	PKiKP	03 14 59.9	-0.2
GDM	Grand'Maison	148.80	335	PKP	PKPbc	03 15 00.0	+1.0
GDM	Grand'Maison	148.80	335	PKP	PKPbc	03 15 00.0	+1.0
GRN	Grenoble	148.91	335	PKP2	PKPbc	03 15 00.0	+0.8
GRN	Grenoble	148.91	335	PKP	PKPbc	03 15 00.0	+0.8
GRN	Grenoble	148.91	335	PKP	PKPbc	03 15 00.0	+0.8
SURF	Saint Ours	149.09	333	PKP	PKPbc	03 15 00.0	+0.2
SURF	Saint Ours	149.09	333	PKP	PKPbc	03 15 00.0	+0.2
SAOF	Saorge	149.16	332	PKP2	PKPbc	03 15 00.0	+0.2
SAOF	Saorge	149.16	332	PKP	PKPbc	03 15 00.0	+0.2
SAOF	Saorge	149.16	332	PKP	PKPbc	03 15 00.0	+0.2
AGO	Saint Agoulin	149.19	339	PKP	PKPbc	03 15 00.2	+0.4
AGO	Saint Agoulin	149.19	339	PKP	PKPbc	03 15 00.2	+0.4
AUTN	L'Aution	149.21	332	PKP2	PKPbc	03 15 00.5	+0.3
AUTN	L'Aution	149.21	332	PKP	PKPbc	03 15 00.5	+0.3
AUTN	L'Aution	149.21	332	PKP	PKPbc	03 15 00.5	+0.3
TOUF	Mont Tournerai	149.27	332	PKP2	PKPbc	03 15 00.6	+0.3
TOUF	Mont Tournerai	149.27	332	PKP	PKPbc	03 15 00.6	+0.3
TOUF	Mont Tournerai	149.27	332	PKP	PKPbc	03 15 00.6	+0.3
SSB	Saint Sauveur	149.35	337	ePKP2	PKPbc	03 15 01.1	+0.9
SSB	Saint Sauveur	149.35	337	ePKPbc	PKPbc	03 15 01.1	+0.9
MVIF	Mont Vial	149.41	332	PKP2	PKPbc	03 15 00.6	0.0
MVIF	Mont Vial	149.41	332	PKP	PKPbc	03 15 00.6	0.0
MVIF	Mont Vial	149.41	332	PKP	PKPbc	03 15 00.6	0.0
REVF	Revere	149.43	332	PKP2	PKPbc	03 15 00.3	-0.2
REVF	Revere	149.43	332	PKP	PKPbc	03 15 00.3	-0.2
REVF	Revere	149.43	332	PKP	PKPbc	03 15 00.3	-0.2
PYM	Petit Puy Mans	149.50	339	PKP2	PKPbc	03 15 01.1	+0.5
PYM	Petit Puy Mans	149.50	339	PKP	PKPbc	03 15 01.1	+0.5
PYM	Petit Puy Mans	149.50	339	PKP	PKPbc	03 15 01.1	+0.5
CALN	Calern	149.64	332	PKP2	PKPbc	03 15 01.4	+0.3
CALN	Calern	149.64	332	PKP	PKPbc	03 15 01.4	+0.3
CALN	Calern	149.64	332	PKP	PKPbc	03 15 01.4	+0.3
OG26	St.-Nazaire-De	149.64	335	PKP	PKPbc	03 15 01.6	+0.6
LBL	Lubilhac	149.86	338	PKP	PKPbc	03 15 02.5	+1.0
FRNF	Fournols	149.97	339	PKP	PKPbc	03 15 02.5	+0.8
MLS	Moulis	152.60	339	PKP	PKPbc	03 15 08.3	+0.4
LABF	Labassere	152.87	340	PKP	PKPbc	03 15 09.7	+1.2
LARF	Larrau	153.20	342	PKP	PKPbc	03 15 10.4	+1.1
KEST	Kesra	153.99	317	PKPbc	PKPbc	03 15 12.9	+1.6
KEST	Kesra	153.99	317	PKPbc	PKPbc	03 15 12.9	+1.6
	comp=Z,1.7nm,0.8s,baz=252,slow=3.2,SNR=4.4						
PBRG	Braganca	155.71	350	ePKPab	PKPab	03 15 32.0	+0.4
PGAV	Gavieira, Arco	155.76	353	ePKPab	PKPab	03 15 32.4	+0.5
PCAB	Cabril	155.98	353	ePKPab	PKPab	03 15 32.7	-0.1
POLO	Lamas de Olo	156.28	352	ePKPab	PKPab	03 15 34.8	+0.7
PVRL	Vila Real	156.37	352	ePKPab	PKPab	03 15 35.2	+0.8
MVO	Moncorvo	156.38	350	ePKPab	PKPab	03 15 35.0	+0.5
PVIS	Viseu	156.94	352	ePKPab	PKPab	03 15 37.5	+0.6
ESDC	Sonseca Array	157.16	344	PKPab	PKPab	03 15 38.4	+0.4
ESDC	Sonseca Array	157.16	344	PKPab	PKPab	03 15 38.4	+0.4
	comp=Z,2.4nm,0.7s,baz=15,slow=4.4,SNR=19						
MTE	Manteigas	157.20	351	ePKPab	PKPab	03 15 37.8	-0.3
PCBR	Castelo Branco	157.74	351	ePKPab	PKPab	03 15 40.7	+0.4
PTOM	Tomar	158.09	352	ePKPab	PKPab	03 15 42.0	+0.2
PESTR	Estremoz	158.71	350	ePKPab	PKPab	03 15 45.1	+0.5
PMAFR	Mafra	158.84	354	ePKPab	PKPab	03 15 46.3	+1.2
PBAR	Barrancos	159.29	349	ePKPab	PKPab	03 15 47.7	+0.6
PBEJ	Beja	159.58	350	ePKPab	PKPab	03 15 49.2	+0.9
PNCL	Nicolau / Gran	159.59	352	ePKPab	PKPab	03 15 49.7	+1.3
MORF	Marmelete	160.40	352	ePKPab	PKPab	03 15 52.6	+0.6
TOA0	Torodi Ar. Sit	165.95	252	ePKPdf	PKPdf	03 15 16.1	-0.9
TORD	Torodi Ar. Bea	165.95	252	PKP	PKPdf	03 15 16.3	-0.8
TORD				PKPab	PKPab	03 16 18.1	+1.0
TORD	Torodi Ar. Bea	165.95	252	PKP	PKPdf	03 15 16.3	-0.8
	comp=Z,2.0nm,0.8s,baz=130,slow=1.9,SNR=12						
TORD				PKPab	PKPab	03 16 18.1	+1.0
	comp=Z,1.2nm,0.8s,baz=103,slow=3.2,SNR=2.3						

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*CSEM **02** 02:55:39.9±0.2,79˚69N×3˚82E,h2km,ML3.6,Error ellipse: s-maj=12.4km s-min=6.2km az=32.0*
*IDC **02** 02:55:40.6±0.7,79˚60N×3˚19E,h0km,mb3.6/11, mb1 3.8/16,mb1mx3.7/34,mbtmp3.7/16,ML3.4/4,MS3.9/2, Ms1 3.9/2,ms1mx3.0/48,Error ellipse: s-maj=20.4km s-min=11.8km az=39.0*
*ISCJB **02** 02:55:41.2±0.5,79˚58N±0˚08×3˚7E±0˚3,h16km,mb3.6/11, Error ellipse: s-maj=11.9km s-min=6.7km az=26.1*
*NEIC **02** 02:55:42.0±0.6,79˚63N×3˚76E,h10km,mb4.2/1,Error ellipse: s-maj=16.0km s-min=9.2km az=219.0*
*NAO **02** 02:55:43.9±3.6,79˚62N×5˚35E,ML3.6*
*BER **02** 02:55:43.5±1.7,79˚68N×4˚68E,h10km,ML3.2, ML3.6(NAO)*
ISC 02 02:55:42.8±0.6**,79˚59N**±0˚09×**3˚93E**±0˚07**,h16km,n89,** σ**1s24**/96**,mb3.8**/11**,3C,Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	1.65	110	Pg	Pn	02 56 09.0	-1.9
KBS				Lg	Lg	02 56 28.7	
KBS	Kingsbay	1.65	110	⇑iP	Pn	02 56 09.0	-1.9
KBS				eS	Sn	02 56 28.4	-3.3
KBS				AML	AML	02 56 40.6	
	comp=Z,433nm,0.5s						
KBS	Kingsbay	1.65	110	ePn	Pn	02 56 09.0	-1.9
KBS				eS	Sn	02 56 31.6	-0.1
KBS	Kingsbay	1.65	110	⇑iP	Pn	02 56 09.0	-1.9
	SNR=50						
KBS				Lg	Lg	02 56 28.7	
KBS				eS	Sn	02 56 31.6	-0.1
SPA0	Spitsbergen Ar	2.79	114	Pn	Pn	02 56 25.7	-1.1
	baz=315,slow=9.3						
SPA0				Sn	Sn	02 56 57.1	-3.0
SPA0	Spitsbergen Ar	2.79	114	Pn	Pn	02 56 25.7	-1.1
	baz=315,slow=9.3						
SPA0				Sn	Sn	02 56 57.1	-3.0
SPA0	Spitsbergen Ar	2.79	114	Pn	Pn	02 56 25.7	-1.1
	baz=315,slow=8.9,SNR=6.8						
SPA0				Sn	Sn	02 56 57.1	-3.0
SPITS	Spitsbergen Ar	2.79	114	Pn	Pn	02 56 25.6	-1.1
SPITS				Sn	Sn	02 57 00.5	+0.4
SPITS	Spitsbergen Ar	2.79	114	Pn	Pn	02 56 25.6	-1.1
	baz=316,slow=7.0,SNR=402						
SPITS				Sn	Sn	02 57 00.5	+0.4
	baz=294,slow=19,SNR=13						
SPITS				LR	LR	02 57 41.4	
	comp=Z,1μm,20.0s,baz=180,slow=41						
SPITS	Spitsbergen Ar	2.79	114	Pn	Pn	02 56 25.6	-1.1
SPITS				Sn	Sn	02 57 00.5	+0.4
DAG	Danmarks Havn	5.40	250	⇑iP	Pn	02 56 57.5	-4.9
DAG				i S	Sn	02 57 52.6	-12
BJO	Bjornoya	6.13	138	eP	Pn	02 57 11.6	-0.8
BJO	Bjornoya	6.13	138	eP	Pn	02 57 11.6	-0.8
	SNR=49						
JMIC	Jan Mayen	9.18	206	LR	LR	03 00 35.3	
	comp=Z,1μm,18.6s,baz=351,slow=32						
KEV	Kevo	11.46	137	ePn	Pn	02 58 26.7	+1.3
	comp=Z,21nm,0.9s						
KEV	Kevo	11.46	137	ePn	Pn	02 58 26.7	+1.3
	comp=Z,21nm,0.9s						
ARA0	ARCESS Array S	11.49	139	Pn	Pn	02 58 25.2	-0.6
	baz=348,slow=12						
ARA0				Sn	Sn	03 00 25.2	-8.4
	baz=350,slow=18						
ARA0	ARCESS Array S	11.49	139	Pn	Pn	02 58 25.2	-0.6
	baz=348,slow=12						
ARA0				Sn	Sn	03 00 25.2	-8.4
	baz=350,slow=18						
ARA0	ARCESS Array S	11.49	139	Pn	Pn	02 58 25.2	-0.6
	baz=348,slow=12,SNR=2.4						
ARCES	ARCESS Array B	11.49	139	Pn	Pn	02 58 25.2	-0.6
ARCES	ARCESS Array B	11.49	139	Pn	Pn	02 58 25.2	-0.6
	comp=Z,0.5nm,0.3s,baz=351,slow=12,SNR=15						
ARCES	ARCESS Array B	11.49	139	Pn	Pn	02 58 25.2	-0.6
SUMG	Summit	12.01	257	ePn	Pn	02 58 27.7	-5.6
	comp=Z,45nm,0.6s						
SUMG				eS	Sn	03 00 31.9	-15
SUMG	Summit	12.01	257	i P	Pn	02 58 27.9	-5.4
NB2	NORSAR Subarra	18.78	169	P	Pn	03 00 01.6	+0.3
	baz=2.6,slow=12						
NB2	NORSAR Subarra	18.78	169	P	Pn	03 00 01.6	+0.3
	baz=2.6,slow=12						
NB2	NORSAR Subarra	18.78	169	P	Pn	03 00 01.6	+0.3
	baz=2.6,slow=12						
NOA	NORSAR Array B	18.78	169	P	Pn	03 00 01.4	+0.1
NOA	NORSAR Array B	18.78	169	P	Pn	03 00 01.4	+0.1
	comp=Z,0.1nm,0.3s,baz=352,slow=12,SNR=3.3						
NOA	NORSAR Array B	18.78	169	P	Pn	03 00 01.5	+0.1
SFJD	Kangerlussuaq	18.98	260	eP	P	02 59 57.4	-5.5
	comp=Z,9.6nm,0.7s						
SFJD	Kangerlussuaq	18.98	260	P	P	02 59 56.9	-6.0
	comp=Z,1.8nm,0.3s,baz=6.4,slow=9.3,SNR=6.8						
SFJD	Kangerlussuaq	18.98	260	eP	P	03 00 01.2	-1.7
	SNR=40						
FIA0	FINESS Array S	19.39	147	P	Pn	03 00 09.7	+1.1
	baz=343,slow=9.3						
FIA0	FINESS Array S	19.39	147	P	Pn	03 00 09.7	+1.1
	baz=343,slow=9.3						
FIA0	FINESS Array S	19.39	147	P	Pn	03 00 09.7	+1.1
	baz=343,slow=9.3,SNR=0.7						
FIA1	FINESS Array S	19.39	147	eP	Pn	03 00 09.5	+0.9
FIA1	FINESS Array S	19.39	147	eP	Pn	03 00 09.5	+0.9
FINES	FINESS Array B	19.39	147	P	Pn	03 00 09.1	+0.5
FINES	FINESS Array B	19.39	147	P	Pn	03 00 09.1	+0.5
	comp=Z,0.3nm,0.3s,baz=346,slow=10.0,SNR=12						
FINES	FINESS Array B	19.39	147	P	Pn	03 00 09.1	+0.5
HFS	Hagfors	19.78	165	P	P	03 00 12.6	+0.8
HFS	Hagfors	19.78	165	P	P	03 00 12.6	+0.8
	comp=Z,0.2nm,0.3s,baz=353,slow=8.7,SNR=6.2						
HFS	Hagfors	19.78	165	P	P	03 00 12.6	+0.8
EKA	Eskdalemuir Ar	24.48	190	P	P	03 01 00.9	+0.3
EKA	Eskdalemuir Ar	24.48	190	P	P	03 01 00.9	+0.3
	comp=Z,1.3nm,0.8s,baz=0.0,slow=7.9,SNR=6.8						
EKA	Eskdalemuir Ar	24.48	190	P	P	03 01 00.9	+0.3
IZAR	Zarasai	25.02	149	i P	P	03 01 07.1	+1.7
IZAR	Zarasai	25.02	149	i P	P	03 01 07.1	+1.7
FRB	Frobisher Bay	25.16	274	P	P	03 01 06.2	-0.5
FRB	Frobisher Bay	25.16	274	P	P	03 01 06.2	-0.5
	comp=Z,5.1nm,0.9s,baz=21,slow=12,SNR=4.5						
FRB	Frobisher Bay	25.16	274	P	P	03 01 06.2	-0.5
ISAL	Salakas	25.18	150	eP	P	03 01 09.2	+2.3
ISAL	Salakas	25.18	150	eP	P	03 01 09.2	+2.3
IIGN	Ignalina	25.41	150	eP	P	03 01 09.8	+0.8
IIGN	Ignalina	25.41	150	eP	P	03 01 09.8	+0.8
IDID	Didziasalis	25.50	149	eP	P	03 01 10.7	+1.0
IDID	Didziasalis	25.50	149	eP	P	03 01 10.7	+1.0
AKASG	Malin Array Be	30.30	147	P	P	03 01 52.9	+0.2
AKASG	Malin Array Be	30.30	147	P	P	03 01 52.9	+0.2
	comp=Z,0.7nm,0.5s,baz=352,slow=9.5,SNR=5.5						
AKASG	Malin Array Be	30.30	147	P	P	03 01 52.9	+0.2
YKA	Yellowknife Ar	33.84	313	P	P	03 02 24.2	+0.6
YKA				PcP	PcP	03 05 02.1	+0.2
YKA	Yellowknife Ar	33.84	313	P	P	03 02 24.2	+0.6
	comp=Z,0.2nm,0.8s,baz=15,slow=8.7,SNR=3.1						
YKA				PcP	PcP	03 05 02.1	+0.2
	comp=Z,0.3nm,0.6s,baz=9.1,slow=2.6,SNR=7.2						
YKA	Yellowknife Ar	33.84	313	P	P	03 02 24.2	+0.6
YKA	Yellowknife Ar	33.84	313	PcP	PcP	03 05 02.1	+0.2
ILAR	Eielson Array	34.87	339	P	P	03 02 32.0	-0.6
ILAR				PcP	PcP	03 05 05.3	+0.4
ILAR	Eielson Array	34.87	339	P	P	03 02 32.0	-0.6
	comp=Z,0.2nm,0.7s,baz=1.3,slow=8.2,SNR=3.3						
ILAR				PcP	PcP	03 05 05.3	+0.4
	comp=Z,0.7nm,0.7s,baz=339,slow=3.7,SNR=9.1						
ILAR	Eielson Array	34.87	339	P	P	03 02 32.0	-0.6
ILAR	Eielson Array	34.87	339	PcP	PcP	03 05 05.3	+0.4
KURK	Kurchatov	37.85	92	P	P	03 03 00.6	+2.5
KURBB	Kurchatov Arra	37.93	92	P	P	03 03 00.6	+1.9
	comp=Z,1.4nm,0.8s,baz=339,slow=7.8,SNR=4.1						
ESDC	Sonseca Array	40.16	189	P	P	03 03 18.1	+0.5
ESDC	Sonseca Array	40.16	189	P	P	03 03 18.1	+0.5
	comp=Z,0.1nm,0.3s,baz=11,slow=9.7,SNR=4.6						
ESDC	Sonseca Array	40.16	189	P	P	03 03 18.1	+0.5
BRTR	Keskin Array B	41.61	145	P	P	03 03 31.1	+1.4
BRTR	Keskin Array B	41.61	145	P	P	03 03 31.1	+1.4
	comp=Z,1.4nm,0.7s,baz=351,slow=8.1,SNR=8.6						
BRTR	Keskin Array B	41.61	145	P	P	03 03 31.1	+1.4
MKAR	Makanchi Array	42.30	90	P	P	03 03 36.8	+1.7
MKAR	Makanchi Array	42.30	90	P	P	03 03 36.8	+1.7
	comp=Z,1.4nm,0.7s,baz=347,slow=7.3,SNR=9.9						
MKAR	Makanchi Array	42.30	90	P	P	03 03 36.8	+1.7
TXAR	Lajitas Array	64.45	293	P	P	03 06 15.9	-2.1
TXAR	Lajitas Array	64.45	293	P	P	03 06 15.9	-2.1
	comp=Z,0.4nm,0.8s,baz=37,slow=4.6,SNR=3.9						
TXAR	Lajitas Array	64.45	293	P	P	03 06 15.9	-2.1
TORD	Torodi Ar. Bea	66.47	182	P	P	03 06 30.6	-0.5
TORD	Torodi Ar. Bea	66.47	182	P	P	03 06 30.6	-0.5
	comp=Z,2.1nm,1.0s,baz=357,slow=6.0,SNR=8.2						
TORD	Torodi Ar. Bea	66.47	182	P	P	03 06 30.6	-0.5
SNAA	Sanae	151.13	184	PKPbc	PKPbc	03 15 33.7	+0.9
SNAA	Sanae	151.13	184	PKPbc	PKPbc	03 15 33.7	+0.9
	comp=Z,0.7nm,0.7s,baz=160,slow=0.5,SNR=9.2						
SNAA	Sanae	151.13	184	PKPbc	PKPbc	03 15 33.7	+0.9

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*ISCJB **02** 03:01:30.3±0.7,21˚33S±0˚05×68˚2W±0˚1,h125km±10km, mb3.5/2,Error ellipse: s-maj=17.2km s-min=7.7km az=171.2*
*IDC **02** 03:01:31.1±1.4,21˚33S×68˚16W,h121km±16km,mb3.5/2, mb1 3.7/3,mb1mx3.4/16,mbtmp3.5/3,Error ellipse: s-maj=38.6km s-min=24.0km az=118.0*
*GUC **02** 03:01:31.3±0.7,21˚40S×68˚46W,h131km±6km,ML3.5*
ISC 02 03:01:31.1±1.1**,21˚31S**±0˚05×**68˚2W**±0˚1**,h121**km±12km**,** **n14,**σ**1s01**/19**,6C,Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	Plate Boundary	1.07	243	⇑iP	Pn	03 01 54.4	+0.3
PB09				i S	Sn	03 02 11.4	-0.1
PB09				AML	AML	03 02 13.4	
	comp=N,3μm,0.4s						
PB01	Plate Boundary	1.21	283	⇑iP	Pn	03 01 55.5	-0.1
PB01				i S	Sn	03 02 13.3	-0.7
PB01				AML	AML	03 02 15.7	
	comp=E,831nm,0.2s						
LVC	Limon Verde	1.44	206	⇑iP	Pn	03 01 58.2	-0.1
LVC				i S	Sn	03 02 18.3	-0.5
LVC	Limon Verde	1.44	206	P	Pn	03 01 58.2	-0.1
	baz=8.6,slow=8.3						
PB04	Plate Boundary	1.51	231	⇑iP	Pn	03 02 04.3	+5.5
PB04				i S	Sn	03 02 29.4	+10
PB04				AML	AML	03 02 33.8	
	comp=E,460nm,0.2s						
HMBC	Humberstone	1.87	303	⇑iP	Pn	03 02 03.2	0.0
HMBC				eS	Sn	03 02 27.0	-0.7
HMBC				AML	AML	03 02 29.8	
	comp=N,569nm,0.5s						
PSGC	Pisagua	2.47	313	⇑iP	Pn	03 02 10.0	-0.7
PSGC				eS	Sn	03 02 40.4	-0.7
PSGC				AML	AML	03 02 41.5	
	comp=E,175nm,0.5s						
MNMC	Minimini	2.53	329	eP	Pn	03 02 13.0	+1.3
MNMC				i S	Sn	03 02 44.4	+1.7
MNMC				AML	AML	03 02 47.1	
	comp=N,227nm,0.2s						
CEN1	Los Morros	2.76	221	eP	Pn	03 02 16.7	+2.2
CEN1				AML	AML	03 02 56.8	
	comp=N,86nm,0.5s						
ANCH	Antofagasta	3.11	220	eP	Pn	03 02 17.4	-1.4
LPAZ	La Paz	5.00	1	P	Pn	03 02 45.5	+0.7
	comp=N,0.1nm,0.3s,baz=193,slow=7.1,SNR=3.4						
SIV	San Ignacio	8.60	53	P	Pn	03 03 31.7	-1.0
	comp=N,1.3nm,0.3s,baz=252,slow=15,SNR=18						
TORD	Torodi Ar. Bea	76.69	70	P	P	03 13 09.2	-0.2
	comp=N,0.4nm,0.6s,baz=252,slow=5.8,SNR=11						
YKA	Yellowknife Ar	91.23	340	P	P	03 14 22.2	0.0
	comp=N,0.3nm,0.5s,baz=134,slow=4.6,SNR=15						

IDC 02 03:07:59.5±1.6**,18˚74S**×**64˚95E,h0**km**,mb3.9**/5**,** **mb1 4.2**/5**,mb1mx3.7**/26**,mbtmp3.9**/5**,Error ellipse: s-maj=56.7km s-min=28.3km az=77.0,Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	63.93	108	P	P	03 18 34.0	-0.8
	1.1nm,0.7s,baz=255,slow=6.3,SNR=15						
WRA	Warramunga Arr	65.03	104	P	P	03 18 43.1	+1.1
	1.9nm,0.9s,baz=256,slow=7.1,SNR=8.2						
MKAR	Makanchi Array	67.08	13	P	P	03 18 52.8	-1.8
	0.7nm,0.7s,baz=206,slow=10,SNR=4.5						
KURBB	Kurchatov Arra	70.09	9	P	P	03 19 14.8	+1.6
	0.3nm,0.3s,baz=202,slow=6.5,SNR=4.0						
VNDA	Vanda	73.33	167	P	P	03 19 32.7	+0.2
	3.6nm,1.0s,baz=274,slow=8.9,SNR=12						

IDC 02 03:09:10.9±1.5**,17˚83S**×**65˚89E,h0**km**,mb3.8**/6**,** **mb1 3.9**/6**,mb1mx3.6**/26**,mbtmp3.8**/6**,Error ellipse: s-maj=51.3km s-min=26.8km az=40.0,Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	63.36	108	P	P	03 19 41.1	-1.4
	0.5nm,0.7s,baz=261,slow=6.2,SNR=2.8						
WRA	Warramunga Arr	64.39	104	P	P	03 19 50.8	+1.5
	0.6nm,0.8s,baz=262,slow=8.4,SNR=3.3						
MKAR	Makanchi Array	66.00	12	P	P	03 19 59.3	+0.2
	0.8nm,0.8s,baz=194,slow=7.0,SNR=3.8						
KURBB	Kurchatov Arra	69.06	9	P	P	03 20 19.8	+1.5
	0.9nm,0.8s,baz=200,slow=6.5,SNR=5.3						
TORD	Torodi Ar. Bea	70.42	291	P	P	03 20 27.6	+0.1
	0.5nm,1.1s,baz=107,slow=6.6,SNR=4.1						
BVAR	Borovoye Array	70.67	3	P	P	03 20 30.5	+2.3
	0.6nm,0.6s,baz=159,slow=4.5,SNR=2.6						
ZALV	Zalesovo Beam	73.31	12	P	P	03 20 42.6	-1.5
	0.6nm,0.3s,baz=214,slow=4.9,SNR=3.4						

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*ISCJB **02** 03:15:16.0±0.3,38˚15N±0˚03×75˚05E±0˚08,h135km, mb3.6/7,Error ellipse: s-maj=9.1km s-min=3.4km az=158.5*
*IDC **02** 03:15:18.5±4.2,38˚22N×75˚14E,h134km±27km,mb3.4/7, mb1 3.4/12,mb1mx3.2/31,mbtmp3.3/12,MS3.9/1, Ms1 3.9/1,ms1mx2.5/35,Error ellipse: s-maj=38.1km s-min=22.1km az=151.0*
*NNC **02** 03:15:24.6±1.7,38˚66N×74˚74E,h166km±13km,mb3.1, mpv3.7,Error ellipse: s-maj=14.6km s-min=9.6km az=4.0*
ISC 02 03:15:17.2±0.6**,38˚13N**±0˚05×**75˚01E**±0˚10**,h135**km**,n39,** σ**1s91**/42**,mb3.7**/7**,2C-8D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.58	28	⇓iPg	Pn	03 15 43.0	-3.7
KSH				Sg	Sn	03 15 58.3	-11
KSH				smax	smax		
	comp=N,540nm,0.4s						
KSH				smax	smax		
	comp=E,1μm,0.3s						
AAK	Ala-Archa	4.51	355	P	Pn	03 16 25.2	+1.2
	comp=E,1.1nm,0.3s,baz=148,slow=4.8,SNR=8.0						
AAK				S	Sn	03 17 14.8	-1.2
	comp=E,6.3nm,0.3s,baz=22,slow=22,SNR=13						
AAK				LR	LR	03 18 29.5	
	comp=E,2μm,20.7s,baz=161,slow=43						
TKM2	Tokmak 2	4.80	5	⇑P	Pn	03 16 28.9	+0.9
	comp=E,2.9nm,0.3s						
TKM2				⇓S	Sn	03 17 20.6	-2.4
	comp=E,49nm,0.9s						
DLH	Dalhousie	5.63	172	ePKP	Pn	03 16 42.0	+2.9
DLH				eS	Sn	03 17 42.0	-0.9
KK31	Karatay Array	6.03	327	P	Pn	03 16 44.4	+0.2
	comp=E,6.5nm,0.3s,baz=133,slow=12,SNR=137						
KK31				⇓S	Sn	03 17 47.6	-4.4
	comp=E,32nm,0.5s,baz=140,slow=24,SNR=9.9						
SMLA	Simla	7.21	165	ePKP	Pn	03 17 03.8	+3.7
SMLA				eS	Sn	03 18 17.8	-2.8
SMLA				⇓E		03 18 21.1	

	comp=N,833nm,0.3s						
SMLA				E		03 18 22.7	
	comp=E,837nm,0.3s						
AYAN	Aya Nagar	9.79	169	eS	Sn	03 19 19.4	-3.4
KUDL	Kundal	10.04	172	ePKP	Pn	03 17 40.5	+2.5
KUDL				eS	Sn	03 19 25.1	-3.8
KUDL				AML	AML	03 19 31.3	
	comp=E,24nm,0.7s						
KUDL				AML	AML	03 19 32.6	
	comp=N,17nm,0.3s						
KHET	Khetri	10.05	176	ePKP	Pn	03 17 39.3	+1.0
KHET				eS	Sn	03 19 23.3	-6.0
KHET				AML	AML	03 19 31.1	
	comp=N,18nm,0.0s						
KHET				AML	AML	03 19 32.4	
	comp=E,22nm,0.5s						
MKAR	Makanchi Array	10.19	30	P	Pn	03 17 39.9	0.0
	comp=E,0.1nm,0.3s,baz=197,slow=12,SNR=4.2						
AGRA	Agra	11.15	166	eS	Sn	03 19 50.3	-5.4
AGRA				AML	AML	03 20 00.3	
	comp=E,97nm,0.4s						
AGRA				AML	AML	03 20 01.0	
	comp=N,67nm,0.5s						
PYUN	Piuthan	12.03	144	eP	Pn	03 18 04.2	-0.4
	comp=N,51nm,0.4s						
PYUN				eS	Sn	03 20 07.7	-10
DANN	Dangsing	12.19	141	eP	Pn	03 18 06.0	-0.8
	comp=N,25nm,0.4s						
DANN				eS	Sn	03 20 10.8	-11
KOLN	Koldanda	12.60	143	eP	Pn	03 18 11.8	-0.1
	comp=N,21nm,0.5s						
KURBB	Kurchatov Arra	12.74	10	P	Pn	03 18 11.8	-1.6
	baz=197,slow=12,SNR=5.6						
KKN	Kakani	13.43	137	eP	Pn	03 18 22.0	-0.7
	comp=N,34nm,0.6s						
DMN	Daman	13.48	138	eP	Pn	03 18 22.5	-0.9
	comp=N,14nm,0.4s						
PKIN	Phulchoki	13.66	137	eP	Pn	03 18 24.9	-0.9
	comp=N,9.2nm,0.3s						
GUN	Gumba	13.67	135	eP	Pn	03 18 23.9	-2.0
	comp=N,9.6nm,0.4s						
PKI	Pulchoki	13.68	137	eP	Pn	03 18 25.6	-0.4
RAMN	Ramite	14.81	135	eP	Pn	03 18 40.1	-0.2
	comp=N,23nm,0.6s						
TAPN	Taplejung	15.14	132	eP	Pn	03 18 42.9	-1.5
BVA0	Borovoye Array	15.24	349	⇓P	Pn	03 18 44.8	-0.2
	comp=N,3.5nm,0.7s,baz=158,slow=8.8,SNR=22						
BVAR	Borovoye Array	15.24	349	P	P	03 18 48.6	+1.7
	comp=N,1.0nm,0.3s,baz=157,slow=10,SNR=26						
BRVK	Borovoye	15.28	349	⇓P	Pn	03 18 44.8	-0.8
	comp=N,14nm,0.8s						
ODAN	Odare	15.33	134	eP	Pn	03 18 45.9	-0.8
	comp=N,9.4nm,0.5s						
AB31	Akbulak array	15.53	321	P	Pn	03 18 48.5	-0.3
	comp=N,0.3nm,0.3s,baz=120,slow=11,SNR=11						
AB31				⇓S	Sn	03 21 34.6	-6.5
	comp=N,1.9nm,0.7s,baz=132,slow=25,SNR=5.0						
ZALV	Zalesovo Beam	17.20	20	P	Pn	03 19 08.2	-0.8
	comp=N,0.4nm,0.3s,baz=213,slow=11,SNR=11						
AKTO	Aktyubinsk	17.25	321	⇓P	P	03 19 09.0	-0.1
	comp=N,2.8nm,1.2s						
AKTO				⇑S	S	03 22 13.8	-8.0
	comp=N,1.7nm,0.8s						
AKTO	Aktyubinsk	17.25	321	P	P	03 19 09.8	+0.7
	comp=N,0.4nm,0.3s,baz=116,slow=12,SNR=4.5						
SONM	Songino Array	24.78	57	ScP	ScP	03 27 24.0	-1.5
	comp=N,0.9nm,0.6s,baz=230,slow=3.4,SNR=3.7						
AKASG	Malin Array Be	34.48	306	P	P	03 21 53.6	+1.7
	comp=N,0.7nm,0.3s,baz=80,slow=7.8,SNR=4.1						
FINES	FINESS Array B	37.98	324	P	P	03 22 23.1	+1.6
	comp=N,1.8nm,0.5s,baz=116,slow=10.0,SNR=11						
ARCES	ARCESS Array B	40.91	336	P	P	03 22 47.6	+1.9
	comp=N,2.1nm,0.7s,baz=107,slow=7.8,SNR=10						
NB2	NORSAR Subarra	45.03	322	P	P	03 23 20.3	+1.2
	comp=Z,0.9nm,0.5s,baz=91,slow=7.9						
NOA	NORSAR Array B	45.03	322	P	P	03 23 20.4	+1.3
	comp=Z,0.9nm,0.5s,baz=92,slow=7.8,SNR=5.0						
TORD	Torodi Ar. Bea	68.92	270	P	P	03 26 09.2	+1.3
	comp=Z,0.4nm,0.5s,baz=44,slow=5.4,SNR=23						
ILAR	Eielson Array	72.30	17	P	P	03 26 28.2	+0.6
	comp=Z,0.3nm,0.8s,baz=340,slow=4.9,SNR=4.0						
YKA	Yellowknife Ar	79.42	5	P	P	03 27 09.0	+1.1
	comp=Z,0.5nm,0.6s,baz=347,slow=5.4,SNR=13						

IDC 02 03:25:50.0±4.4, 10°.90S×162°.82E, h103km±38km, mb3.5/8, mb1 3.7/9, mb1mx3.6/21, mbtmp3.5/9, Error ellipse: s-maj=38.1km s-min=23.0km az=125.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	3.19	297	P	Pn	03 26 38.7	+0.3
	20nm,0.3s,baz=204,slow=10.0,SNR=3.2						
HNR				S	Sn	03 27 25.7	+10
	33nm,0.3s,baz=233,slow=20,SNR=3.7						
STKA	Stephens Creek	28.64	220	P	P	03 31 37.1	+0.2
	1.4nm,0.7s,baz=16,slow=14,SNR=3.6						
WRA	Warramunga Arr	28.85	248	P	P	03 31 38.5	-0.5
	0.6nm,0.8s,baz=80,slow=9.2,SNR=4.5						
ASAR	Alice Springs	30.32	241	P	P	03 31 51.4	-0.7
	0.6nm,0.7s,baz=62,slow=10,SNR=6.5						
FITZ	Fitzroy Crossi	36.65	254	P	P	03 32 46.8	-0.2
	2.0nm,0.9s,baz=9.8,slow=5.7,SNR=5.9						
VNDA	Vanda	66.61	180	P	P	03 36 29.4	+0.5
	0.6nm,0.7s,baz=29,slow=2.7,SNR=2.3						
NVAR	Mina Array Bea	88.13	50	P	P	03 38 29.6	-0.1
	0.7nm,0.8s,baz=212,slow=5.3,SNR=3.8						
MKAR	Makanchi Array	91.46	317	P	P	03 38 46.6	+1.8
	0.6nm,0.7s,baz=103,slow=5.2,SNR=3.9						
YKA	Yellowknife Ar	96.17	28	P	P	03 39 04.6	-1.4
	0.2nm,0.7s,baz=263,slow=5.6,SNR=4.2						

IDC 02 03:41:12.9±8.4, 6°.54S×129°.91E, h100km±76km, mb3.5/3, mb1 3.5/6, mb1mx3.3/21, mbtmp3.4/6, ML3.5/3, Error ellipse: s-maj=103.6km s-min=26.9km az=59.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.22	200	P	Pn	03 44 03.3	-0.3
	0.2nm,0.3s,baz=26,slow=11,SNR=13						
FITZ				S	Sn	03 46 09.2	-8.8
	0.6nm,0.3s,baz=236,slow=17,SNR=7.3						
WRA	Warramunga Arr	14.00	163	P	Pn	03 44 26.0	-0.9
	0.2nm,0.3s,baz=340,slow=14,SNR=18						
WRA				S	Sn	03 46 52.3	-8.8
	0.6nm,0.3s,baz=28,slow=20,SNR=7.6						
ASAR	Alice Springs	17.45	168	P	Pn	03 45 11.4	+1.3
	0.5nm,0.3s,baz=346,slow=9.4,SNR=28						
ASAR				S	Sn	03 48 20.9	-3.7
	0.2nm,0.3s,baz=358,slow=28,SNR=4.5						
STKA	Stephens Creek	27.47	158	P	P	03 46 49.5	-0.3
	0.6nm,0.3s,baz=342,slow=13,SNR=2.8						
MKAR	Makanchi Array	67.80	327	P	P	03 52 00.8	+0.7
	0.9nm,0.5s,baz=114,slow=8.2,SNR=12						
KURBB	Kurchatov Arra	72.08	328	P	P	03 52 25.5	-0.7
	0.1nm,0.3s,baz=125,slow=4.8,SNR=3.6						
TORD	Torodi Ar. Bea	128.63	282	PKP	PKPdf	04 00 09.0	-0.4
	0.8nm,1.2s,baz=89,slow=2.5,SNR=5.2						

*SKO **02** 03:50:30.8, 41°.29N×22°.75E, h15km, M1.4, ML1.6*
*ISCJB **02** 03:50:31.2±0.7, 41°.29N±0°.03×22°.73E±0°.04, h9km±5km, Error ellipse: s-maj=5.4km s-min=5.0km az=175.2*
*ATH **02** 03:50:31.0, 41°.31N×22°.72E, h9km±6km, MD3.1/5*
*CSEM **02** 03:50:34.1±0.5, 41°.38N×22°.57E, h2km, ML1.7, Error ellipse: s-maj=36.3km s-min=10.7km az=90.0*
*BEO **02** 03:50:37.6±1.5, 41°.57N×22°.41E, h0km, ML1.7/3*
ISC 02 03:50:31.4±0.9, 41°.27N±0°.03×22°.73E±0°.04, h11km±7km, n12, σ0.54s/22, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.13	292	i Pg	Pg	03 50 34.0	-0.5
VAY				eLg	Lg	03 50 36.3	
	comp=E,278nm,0.4s						
VAY				i Sg	Sg	03 50 36.5	-0.2
VAY				eLg	Lg	03 50 36.6	
	comp=N,398nm,0.3s						
VAY	Valandovo	0.13	292	i Pg	Pg	03 50 34.5	0.0
VAY				eLg	Lg	03 50 37.0	
	comp=N,398nm,0.3s						
VAY				i Sg	Sg	03 50 37.0	+0.3
GRG	Griva	0.40	218	⇑iPB	Pg	03 50 39.6	+0.2
GRG				eSB	Sg	03 50 45.5	+0.8
SOH	Sokhos	0.66	133	ePB	Pg	03 50 44.2	+0.1
SOH				eSB	Sb	03 50 53.8	-0.3
NVR	Nevrokopi	0.86	85	ePB	Pg	03 50 47.9	-0.1
NVR				eSB	Sg	03 50 59.2	0.0
PLG	Polygyros	1.05	148	ePB	Pg	03 50 51.2	-0.5
PLG				eSB	Sb	03 51 05.8	+0.3
FNA	Florina	1.13	245	ePN	Pb	03 50 52.5	-0.6
FNA				eSB	Sg	03 51 08.3	+0.4
VTS	Vitosha	1.36	15	eSg	Sb	03 51 15.2	+0.6
VTS	Vitosha	1.36	15	eSg	Sb	03 51 15.2	+0.6
BARS	Barje	1.68	337	ePn	Pb	03 51 02.7	+0.2
BARS				eSn	Sn	03 51 21.6	-0.9
BARS	Barje	1.68	337	ePn	Pb	03 51 02.7	+0.2
BARS				eSn	Sn	03 51 21.6	-0.9
ZAPS	Zavoj	2.00	358	ePn	Pg	03 51 09.3	-0.5
ZAPS				eSn	Sn	03 51 31.2	+0.9

*GUC **02** 03:52:21.6±0.6, 32°.70S×69°.13W, h19km±2km, ML4.6*
*ISCJB **02** 03:52:21.5±0.5, 32°.77S±0°.03×68°.95W±0°.04, h39km±4km, mb4.8/63, MS5.2/2, Error ellipse: s-maj=5.2km s-min=4.1km az=19.1*
*MOS **02** 03:52:21.2±0.9, 32°.75S×68°.92W, h33km, mb4.9/25, Error ellipse: s-maj=14.1km s-min=8.1km az=97.9*
*NEIC **02** 03:52:21.6±0.2, 32°.71S×69°.01W, mb4.9/48, MD4.5(SJA), ML4.6(GUC), Error ellipse: s-maj=4.8km s-min=3.4km az=118.0*
NEIC Felt [IV] at Mendoza. Felt [II] at Maipo, Melipilla and Santiago, Chile. Also felt at Vina del Mar.
*BJI **02** 03:52:22.9, 32°.60S×68°.80W, h26km, mB5.2/5, Ms5.4/6, Ms7 5.0/6*
*IDC **02** 03:52:25.0±1.5, 32°.73S×69°.02W, h53km±12km, mb4.4/20, mb1 4.4/24, mb1mx4.4/25, mbtmp4.4/24, MS4.2/1, Ms1 4.2/1, ms1mx3.9/22, Error ellipse: s-maj=15.6km s-min=9.7km az=91.0*
ISC 02 03:52:21.7±0.4, 32°.77S±0°.03×69°.04W±0°.04, h29km±2km, h29km:pP-P, n537, σ0.96s/594, mb4.8/63, 153C-184D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	1.35	31	P	Pn	03 52 45.1	+0.5
CFAA				S	Sb	03 53 03.8	+0.5
CFAA	Coronel Fontan	1.35	31	P	Pn	03 52 45.1	+0.5
	25nm,0.3s,baz=210,slow=15,SNR=1278						
CFAA				S	Sb	03 53 03.8	+0.5
	99nm,0.3s,baz=293,slow=17,SNR=32						
CLCH	Cerro Calan	1.40	243	AML	AML	03 53 06.1	
	comp=N,33μm,0.8s						
SJCH	San Jose de Ma	1.40	231	⇓iP	Pn	03 52 44.6	-0.9
SJCH				i S	Sn	03 53 02.6	-0.4
SJCH	San Jose de Ma	1.40	231	⇓iP	Pn	03 52 44.6	-0.9
SJCH				i S	Sn	03 53 02.6	-0.4
SJCH				AML	AML	03 53 06.3	
	comp=N,8μm,0.5s						
LACH	Col Las Americ	1.42	241	i P	Pn	03 52 45.5	-0.2
LACH				i S	Sn	03 53 03.8	+0.3
LACH	Col Las Americ	1.42	241	i P	Pn	03 52 45.5	-0.2
LACH				i S	Sn	03 53 03.8	+0.3
LACH				AML	AML	03 53 05.0	
	comp=E,8μm,0.5s						
PEL	Peldehue	1.43	254	⇑iP	Pn	03 52 45.3	-0.5
PEL				i S	Sn	03 53 03.4	-0.3
PEL				AML	AML	03 53 04.3	
	comp=N,33μm,0.4s						
FSR	Penalolen	1.43	240	i P	Pn	03 52 46.2	+0.3
FSR				i S	Sn	03 53 04.5	+0.7
FSR	Penalolen	1.43	240	i P	Pn	03 52 46.2	+0.3
FSR				i S	Sn	03 53 04.5	+0.7
FSR				AML	AML	03 53 05.9	
	comp=N,7μm,0.5s						
LMEL	Las Melosas	1.45	222	⇓iP	Pn	03 52 46.9	+0.7
LMEL				i S	Sb	03 53 06.0	-0.3
LMEL	Las Melosas	1.45	222	⇓iP	Pn	03 52 46.9	+0.7
LMEL				i S	Sb	03 53 06.0	-0.3
LMEL				AML	AML	03 53 12.9	
	comp=E,9μm,0.7s						
PCH	Pirque	1.50	235	⇑iP	Pn	03 52 47.3	+0.5
PCH	Pirque	1.50	235	⇑iP	Pn	03 52 47.3	+0.5
STL	Santa Lucia	1.50	243	⇓iP	Pn	03 52 47.0	+0.2
STL				i S	Sn	03 53 06.2	+0.8
SAN	Santiago	1.52	243	⇑iP	Pn	03 52 47.3	+0.3
SAN				i S	Sn	03 53 06.8	+0.9
SAN	Santiago	1.52	243	⇑iP	Pn	03 52 47.3	+0.3
SAN				i S	Sn	03 53 06.8	+0.9
SAN	Santiago	1.52	243	⇑iP	Pn	03 52 47.3	+0.3
SAN				i S	Sn	03 53 06.8	+0.9
SAN				AML	AML	03 53 16.6	
	comp=N,13μm,0.6s						
ANTU	Antumapu	1.56	239	⇑iP	Pn	03 52 48.2	+0.6
ANTU				i S	Sn	03 53 08.0	+1.2
ANTU	Antumapu	1.56	239	⇑iP	Pn	03 52 48.2	+0.6
ANTU				i S	Sn	03 53 08.0	+1.2
ANTU				AML	AML	03 53 09.5	
	comp=N,13μm,0.7s						
ROCH	El Roble	1.67	262	⇑iP	Pn	03 52 49.3	+0.1
ROCH	El Roble	1.67	262	⇑iP	Pn	03 52 49.3	+0.1
TACH	Talagante	1.82	240	eP	Pn	03 52 52.0	+0.9
TACH				i S	Sn	03 53 15.0	+1.8
TACH	Talagante	1.82	240	eP	Pn	03 52 52.0	+0.9
TACH				i S	Sn	03 53 15.0	+1.8
IHA	Instituto Hidr	2.20	263	⇓iP	Pn	03 52 57.3	+0.9
IHA				eS	Sn	03 53 24.4	+1.8
IHA	Instituto Hidr	2.20	263	⇓iP	Pn	03 52 57.3	+0.9
IHA				eS	Sn	03 53 24.4	+1.8
CHNG	Los Chungos	2.26	292	eP	Pn	03 52 58.8	+1.6
CHNG				i S	Sn	03 53 26.4	+2.3
CHNG	Los Chungos	2.26	292	eP	Pn	03 52 58.8	+1.6
CHNG				i S	Sn	03 53 26.4	+2.3
CHNG				AML	AML	03 53 31.6	
	comp=N,13μm,0.6s						
LNV	Longovilo	2.31	239	⇓iP	Pn	03 52 59.2	+1.4
LNV				i S	Sn	03 53 28.4	+3.1
LNV	Longovilo	2.31	239	⇓iP	Pn	03 52 59.2	+1.4
LNV				i S	Sn	03 53 28.4	+3.1
TLL	Tololo Astrono	3.00	329	⇑iP	Pn	03 53 10.7	+3.1
TLL				i S	Sn	03 53 46.4	+3.7
TLL	Tololo Astrono	3.00	329	⇑iP	Pn	03 53 10.7	+3.1
TLL				i S	Sn	03 53 46.4	+3.7
TLL	Tololo Astrono	3.00	329	⇑iP	Pn	03 53 10.7	+3.1
TLL				i S	Sn	03 53 46.4	+3.7
TLL				AML	AML	03 53 57.9	
	comp=N,4μm,0.5s						
TALC	Talca	3.39	219	i P	Pn	03 53 14.7	+1.9
TALC				i S	Sn	03 53 55.3	+3.3
TALC	Talca	3.39	219	i P	Pn	03 53 14.7	+1.9
TALC				i S	Sn	03 53 55.3	+3.3
LCO	Las Campanas	4.01	339	i P	Pn	03 53 23.3	+1.8
LCO				i S	Sn	03 54 09.5	+1.9
LCO	Las Campanas	4.01	339	i P	Pn	03 53 23.3	+1.8
LCO				i S	Sn	03 54 09.5	+1.9
CCHI	Chillan	4.57	212	eP	Pn	03 53 31.0	+2.1
CCHI				i S	Sn	03 54 23.7	+2.7
CCHI	Chillan	4.57	212	eP	Pn	03 53 31.0	+2.1
CCHI				i S	Sn	03 54 23.7	+2.7
TRQA	Tornquist	7.81	134	ePn	Pn	03 54 14.5	+1.0
TRQA				eSn	Sn	03 55 39.5	-1.5
PLCA	Paso Flores	8.04	188	ePn	Pn	03 54 19.9	+3.3
PLCA				eSn	Sb	03 56 06.1	-10
PLCA	Paso Flores	8.04	188	P	Pn	03 54 20.6	+3.9
	comp=N,1.0nm,0.3s,baz=357,slow=14,SNR=12						
PLCA				LR	LR	03 57 50.9	
	comp=N,1μm,18.9s,baz=209,slow=40						
LVC	Limon Verde	10.12	1	ePn	Pn	03 54 36.2	-9.2
CPUP	Villa Florida	12.04	61	P	Pn	03 55 11.7	+0.3
CPUP	Villa Florida	12.04	61	P	Pn	03 55 11.7	+0.3
	comp=N,0.8nm,0.3s,baz=216,slow=18,SNR=6.6						
LPAZ	La Paz	16.43	3	ePn	Pn	03 56 11.3	+0.4
	comp=N,28nm,0.9s						
LPAZ	La Paz	16.43	3	P	Pn	03 56 12.1	+1.2
	comp=N,0.5nm,0.3s,baz=174,slow=8.7,SNR=82						
SIV	San Ignacio	18.20	25	P	P	03 56 33.1	+0.7
SIV	San Ignacio	18.20	25	P	P	03 56 33.1	+0.7
	comp=N,0.7nm,0.3s,baz=223,slow=13,SNR=74						
EFI	East Falkland	20.52	160	eP	P	03 56 57.9	+0.4
EFI				pmax	pmax		
	comp=Z,45nm,0.9s						
EFI	East Falkland	20.52	160	eP	P	03 56 57.9	+0.4
	comp=Z,45nm,0.9s						
NNA	Nana	21.89	339	eP	P	03 57 10.8	-1.8
	comp=Z,108nm,1.8s						
NNA	Nana	21.89	339	P	P	03 57 13.7	+1.2
	comp=Z,5.4nm,0.4s,baz=161,slow=11,SNR=5.8						
USHA	Ushuaia	22.06	179	P	P	03 57 14.5	+0.5
USHA	Ushuaia	22.06	179	P	P	03 57 14.5	+0.5
	comp=Z,26nm,0.7s,baz=343,slow=7.9,SNR=21						
SAML	Samuel	24.32	14	eP	P	03 57 36.1	-0.8
	comp=Z,20nm,0.8s						
BDFB	Brasilia	25.58	53	P	P	03 57 47.8	-0.7
BDFB	Brasilia	25.58	53	P	P	03 57 47.8	-0.7
	comp=Z,8.3nm,0.8s,baz=224,slow=9.1,SNR=14						
OTAV	Otavalo	34.01	343	eP	P	03 59 03.0	-0.7
	comp=Z,5.5nm,0.8s						
ROSC	El Rosal	37.75	351	eP	P	03 59 33.7	-2.0
ROSC	El Rosal	37.75	351	P	P	03 59 37.7	+2.0
	comp=Z,4.3nm,0.7s,baz=214,slow=4.8,SNR=4.2						
SDV	Santo Domingo	41.45	358	eP	P	04 00 03.5	-2.7
	comp=Z,8.8nm,0.9s						
BCIP	Isla Barro Col	42.95	344	eP	P	04 00 18.3	0.0
	comp=Z,12nm,0.6s						
VNA1	Neumayer--Stat	49.84	158	eP	P	04 01 13.8	+2.1
CRPR	Cabo Rojo, PR	50.52	2	eP	P	04 01 16.7	-0.7
OBIP	Obispado Ponce	50.58	3	eP	P	04 01 16.6	-1.2
	comp=Z,27nm,0.8s						
CELP	Cerrillos	50.61	3	eP	P	04 01 17.1	-1.0
CELP				e	pP	04 01 25.7	-1.2
LRS	Lares	50.81	3	eP	P	04 01 18.9	-0.7
CBYP	Canovanas	50.84	4	eP	P	04 01 17.3	-2.6
	comp=Z,32nm,1.2s						
SNAA	Sanae	51.79	158	eP	P	04 01 26.8	+0.3
SNAA	Sanae	51.79	158	eP	P	04 01 26.7	+0.2
	comp=Z,32nm,0.9s						
SNAA	Sanae	51.79	158	P	P	04 01 26.8	+0.3
	comp=Z,11nm,0.9s,baz=286,slow=6.6,SNR=94						
TEIG	Tepich	55.81	338	eP	P	04 01 56.3	0.0
	comp=Z,54nm,1.2s						
TEIG				epP	pP	04 02 04.7	-0.6
TEIG	Tepich	55.81	338	P	P	04 01 56.1	-0.3
	comp=Z,13nm,0.4s,baz=216,slow=5.0,SNR=8.2						
MAIT	Maitri	56.43	157	eP	P	04 01 50.9	-9.3
QSPA	South Pole Qui	57.47	180	eP	P	04 02 08.7	+0.8
	comp=Z,35nm,0.8s						
QSPA	South Pole Qui	57.47	180	P	P	04 02 08.8	+1.0
	comp=Z,47nm,0.9s,baz=154,slow=2.6,SNR=119						
TIGA	Tifton	65.33	346	⇑P	P	04 03 00.7	-0.4
	baz=66						
VNDA	Vanda	65.78	191	P	P	04 03 05.2	+1.6
VNDA	Vanda	65.78	191	P	P	04 03 05.2	+1.6
	comp=Z,3.5nm,0.9s,baz=139,slow=5.8,SNR=16						
SYO	Syowa Base	66.08	158	⇑eP	P	04 03 03.0	-2.5
SYO	Syowa Base	66.08	158	⇑epP	pP	04 03 11.4	-3.2
GOGA	Godfrey	67.22	347	eP	P	04 03 12.7	-0.5
GOGA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GOGA	Godfrey	67.22	347	eP	P	04 03 12.7	-0.5
	comp=Z,7.7nm,0.9s						
732A	Laxson Ranch,	67.84	331	⇓P	P	04 03 17.7	+0.5
	baz=68,SNR=19						
632A	Uvalde	68.45	331	⇓P	P	04 03 21.7	+0.6
	baz=69,SNR=12						
631A	Perdido Creek	68.69	331	⇓P	P	04 03 22.6	0.0
	baz=69,SNR=6.4						
532A	Rocksprings	69.05	332	⇓P	P	04 03 25.4	+0.6
	baz=69,SNR=21						
JCT	Junction City	69.32	332	eP	P	04 03 26.6	+0.1
JCT				e*PP	pP	04 03 34.4	-1.2
JCT				pmax	pmax		
	comp=Z,15nm,0.8s						
JCT	Junction City	69.32	332	eP	P	04 03 26.6	+0.1
	comp=Z,15nm,0.8s						
JCT				epP	pP	04 03 34.4	-1.2
JCT	Junction City	69.32	332	⇑P	P	04 03 26.8	+0.3
	baz=70,SNR=12						
531A	Rocksprings	69.34	331	⇑P	P	04 03 27.3	+0.7
	baz=70,SNR=14						
SWET	Sewanee	69.46	345	eP	P	04 03 26.8	-0.5
	comp=Z,29nm,0.8s						
SWET				epP	pP	04 03 34.6	-1.7
OXF	Oxford	69.61	342	eP	P	04 03 27.5	-0.6
OXF				e*PP	pP	04 03 36.1	-1.1
OXF				e*SP	sP	04 03 40.5	-0.1
OXF				pmax	pmax		
	comp=Z,43nm,0.9s						
OXF	Oxford	69.61	342	eP	P	04 03 27.4	-0.6
	comp=Z,43nm,0.9s						
OXF				epP	pP	04 03 36.1	-1.1
OXF				esP	sP	04 03 40.5	-0.1
530A	J-C Ranch, Com	69.65	330	⇓P	P	04 03 29.1	+0.6
	baz=70,SNR=10						
432A	Menard	69.67	332	⇑P	P	04 03 28.6	0.0
	baz=70,SNR=7.9						
PLAL	Pickwick Lake	69.72	343	eP	P	04 03 28.2	-0.6
	comp=Z,16nm,1.1s						
628A	Black Gap, Mar	69.74	329	⇓P	P	04 03 29.6	+0.5
	baz=70,SNR=11						
WHTX	Lake Whitney	69.78	334	⇓P	P	04 03 29.1	-0.1
	baz=70						
431A	Sonora	69.82	331	⇑P	P	04 03 29.7	+0.1
	baz=70,SNR=5.7						
627A	Terlingua Ranc	69.93	328	⇑P	P	04 03 30.4	0.0
	baz=70						
TXAR	Lajitas Array	69.95	328	P	P	04 03 30.7	+0.2
TXAR	Lajitas Array	69.95	328	P	P	04 03 30.7	+0.2
	comp=Z,2.1nm,0.6s,baz=152,slow=8.4,SNR=44						
529A	Stev Forest Ra	70.00	330	⇓P	P	04 03 30.8	+0.1
	baz=70						
332A	Millersview	70.10	332	⇓P	P	04 03 31.3	0.0
	baz=70,SNR=12						
430A	Baggett Ranch,	70.17	331	⇑P	P	04 03 32.0	+0.2
	baz=70,SNR=20						
528A	Cox Ranch, San	70.28	329	⇑P	P	04 03 32.5	0.0
	baz=70,SNR=14						
331A	San Angelo	70.30	332	⇓P	P	04 03 32.5	0.0
	baz=71,SNR=13						
429A	Davenport Ranc	70.30	330	⇓P	P	04 03 32.9	+0.3
	baz=71,SNR=11						
626A	Big Bend Ranch	70.35	328	⇑P	P	04 03 33.5	+0.6
	baz=71,SNR=12						
232A	Coleman	70.51	333	⇑P	P	04 03 33.7	0.0
	baz=71,SNR=13						
527A	Woodward Ranch	70.62	329	⇓P	P	04 03 34.7	+0.1
	baz=71,SNR=7.4						
330A	Mertzon	70.69	331	⇑P	P	04 03 34.8	-0.1
	baz=71,SNR=8.7						
428A	Kincaid Ranch,	70.72	330	⇓P	P	04 03 35.4	+0.2
	baz=71,SNR=5.2						
WVT	Waverly	70.76	344	eP	P	04 03 34.3	-0.8
WVT				e*PP	pP	04 03 43.4	-0.8
WVT				pmax	pmax		
	comp=Z,44nm,0.8s						
WVT	Waverly	70.76	344	eP	P	04 03 34.3	-0.8
	comp=Z,44nm,0.8s						
WVT				epP	pP	04 03 43.4	-0.8
526A	Mary Lane Ranc	70.76	328	⇑P	P	04 03 36.0	+0.5
	baz=71,SNR=12						
231A	Bronte	70.81	332	⇑P	P	04 03 35.4	-0.2
	baz=71,SNR=16						
230A	Sterling City	71.09	331	⇑P	P	04 03 37.5	+0.2
	baz=71						
329A	Wagon Wheel Ra	71.09	331	⇓P	P	04 03 37.5	+0.1
	baz=71,SNR=13						
427A	Hayter Ranch,	71.14	329	⇓P	P	04 03 37.8	+0.1
	baz=71,SNR=5.8						
ABTX	Abilene, Hawle	71.16	333	⇑P	P	04 03 37.9	+0.2
	baz=71,SNR=5.3						
UTMT	University of	71.21	343	eP	P	04 03 37.8	0.0
	comp=Z,89nm,0.8s						
426A	McDonald Obser	71.26	329	⇓P	P	04 03 39.0	+0.4
	baz=72,SNR=12						
328A	Wristen Ranch,	71.34	330	⇓P	P	04 03 38.9	+0.1
	baz=72,SNR=8.0						
229A	Bryant Ranch,	71.44	331	⇑P	P	04 03 39.4	0.0
	baz=72						
131A	Roby	71.49	332	⇓P	P	04 03 39.8	+0.1
	baz=72,SNR=5.9						
130A	Snyder	71.65	332	⇓P	P	04 03 40.5	-0.1
	baz=72						
Z32A	Haskell	71.70	333	⇑P	P	04 03 41.0	0.0
	baz=72,SNR=6.8						
PARMO	Parma	71.74	343	eP	P	04 03 41.4	+0.4
425A	Indio Mountain	71.78	328	⇑P	P	04 03 41.6	0.0
	baz=72,SNR=7.9						
326A	Caldwell Ranch	71.79	329	⇓P	P	04 03 41.7	+0.1
	baz=72,SNR=6.9						
228A	UT Block 9, Go	71.89	330	⇓P	P	04 03 42.1	-0.1
	baz=72,SNR=9.4						

Z31A **Sharp Cattle R** 71.97 333 ⇑P P 04 03 42.6 +0.1
baz=72,SNR=11
227A **Bennet, Jal** 72.09 330 ⇑P P 04 03 43.7 +0.3
baz=72,SNR=8.8
325A **Bean Ranch, Si** 72.27 328 ⇑P P 04 03 44.3 -0.3
baz=72,SNR=12
128A **Castleberry Fa** 72.29 331 ⇓P P 04 03 44.5 -0.1
baz=73,SNR=8.3
Y32A **R-V Farms, Ver** 72.31 334 ⇓P P 04 03 44.5 -0.1
baz=73
Z30A **Sanderson Ranc** 72.32 332 ⇑P P 04 03 44.3 -0.3
baz=73,SNR=7.5
DBIC **Dimbokro** 72.41 70 eP P 04 03 45.5 -0.1
comp=Z,10nm,0.7s
DBIC **Dimbokro** 72.41 70 P P 04 03 45.5 -0.1
comp=Z,13nm,0.8s,baz=211,slow=8.5,SNR=14
226B **Tecolote Peak,** 72.52 329 ⇑P P 04 03 46.5 +0.5
baz=73,SNR=7.5
Z29A **Hungry Hill Ra** 72.53 332 ⇓P P 04 03 45.4 -0.5
baz=73,SNR=17
324A **Moseley Ranch,** 72.56 328 ⇑P P 04 03 45.6 -0.7
baz=73,SNR=9.6
Y31A **Rekieta Farm,** 72.58 333 ⇑P P 04 03 46.2 0.0
baz=73
SIUC **Southern Illin** 72.60 343 eP P 04 03 45.8 -0.3
comp=Z,13nm,0.9s
127A **Arkansas Junct** 72.70 330 ⇑P P 04 03 47.2 +0.2
baz=73
MNTX **Cornudas Mount** 72.73 328 eP P 04 03 46.3 -0.9
comp=Z,5.6nm,0.7s
MNTX eP pP 04 03 53.6 -2.7
MNTX eS pwP 04 04 00.0 +3.8
TUL1 **Tulsa** 72.77 338 ⇓P P 04 03 46.9 -0.3
baz=73,SNR=5.4
Z28A **Tucker Farm, M** 72.83 331 ⇑P P 04 03 47.5 -0.2
baz=73,SNR=6.4
126A **Clayton Basin,** 72.95 330 ⇓P P 04 03 48.5 0.0
baz=73,SNR=7.5
Y29A **Porterfield Fa** 73.04 332 ⇑P P 04 03 49.0 0.0
baz=73,SNR=11
X31A **McDonald Ranch** 73.07 334 ⇓P P 04 03 49.2 +0.1
baz=73,SNR=5.9
224A **Cornudas Mount** 73.12 328 ⇓P P 04 03 49.2 -0.4
baz=73,SNR=11
Z27A **Tatum** 73.19 331 ⇑P P 04 03 49.5 -0.4
baz=74,SNR=5.9
SUR **Sutherland** 73.21 118 P P 04 03 51.8 +1.4
SUR **Sutherland** 73.21 118 P P 04 03 51.8 +1.4
comp=Z,12nm,0.7s,baz=243,slow=9.2,SNR=13
125A **Gardner Draw,** 73.23 329 ⇓P P 04 03 49.9 -0.4
baz=74,SNR=12
X30A **Coker Ranch, T** 73.25 333 ⇑P P 04 03 50.0 -0.1
baz=74
Z26A **Caprock** 73.47 330 ⇓P P 04 03 51.7 +0.1
baz=74,SNR=26
MSTX **Muleshoe** 73.58 331 ⇓P P 04 03 52.2 0.0
baz=74,SNR=12
124A **Stringfield Ra** 73.62 329 ⇓P P 04 03 53.0 +0.4
baz=74,SNR=10
MAW **Mawson** 73.63 163 P P 04 03 52.7 +0.7
MAW **Mawson** 73.63 163 P P 04 03 52.7 +0.7
comp=Z,8.9nm,0.8s,baz=234,slow=9.1,SNR=11
Y27A **Causey** 73.66 331 ⇑P P 04 03 52.6 -0.1
baz=74
ACSO **Alum Creek Sta** 73.77 349 eP P 04 03 52.4 -0.6
comp=Z,8.9nm,0.7s
Z25A **Roswell** 73.79 329 ⇓P P 04 03 53.6 +0.1
baz=74,SNR=6.0
X28A **Dimmitt** 73.83 332 ⇑P P 04 03 53.9 +0.3
baz=74
320A **Kipp Ranch, An** 73.88 326 ⇓P P 04 03 55.2 +1.1
baz=74,SNR=5.3
AMTX **Amarillo** 73.94 333 eP P 04 03 54.2 -0.1
comp=Z,20nm,1.2s
Y26A **Elida** 73.97 330 ⇑P P 04 03 55.2 +0.6
baz=74
221A **Mesquite Ranch** 74.09 326 ⇓P P 04 03 56.3 +1.0
baz=74
Z24A **Sheeppen Canyo** 74.11 329 ⇓P P 04 03 55.8 +0.3
baz=74,SNR=15
W29A **Amraillo** 74.14 333 ⇓P P 04 03 55.4 0.0
baz=74,SNR=5.2
319A **Douglas** 74.28 325 ⇑P P 04 03 57.4 +1.1
baz=74,SNR=8.8
X27A **F and S Farms,** 74.30 331 ⇓P P 04 03 56.7 +0.3
baz=75
122A **Conniff Cattle** 74.31 327 ⇑P P 04 03 57.7 +1.1
baz=75
Y25A **Mesa, Roswell** 74.33 330 ⇓P P 04 03 56.9 +0.3
baz=75
V30A **Spur Ranch, Mi** 74.34 334 ⇓P P 04 03 57.7 +1.1
baz=75
220A **Playas Peak, P** 74.35 326 ⇑P P 04 03 57.7 +0.8
baz=75,SNR=13
Z23A **Rita Site, Whi** 74.44 328 ⇑P P 04 03 58.4 +1.2
baz=75,SNR=9.5
W28A **Vega** 74.48 332 ⇑P P 04 03 57.7 +0.3
baz=75
X26A **CR and CF Fran** 74.51 331 ⇑P P 04 03 58.1 +0.5
baz=75,SNR=18
121A **Cookes Peak, D** 74.53 327 ⇑P P 04 03 59.0 +1.2
baz=75,SNR=13
U31A **Nine Bar Ranch** 74.57 335 ⇑P P 04 03 58.6 +0.7
baz=75
W27A **Bowe Ranch, En** 74.65 332 ⇓P P 04 03 58.7 +0.2
baz=75,SNR=11
Y24A **Capitan** 74.65 329 ⇓P P 04 03 58.8 +0.2
baz=75
Z22A **Elephant Butte** 74.76 328 ⇓P P 04 03 59.9 +0.7
baz=75
V28A **Channing** 74.92 333 ⇓P P 04 04 00.6 +0.7
baz=75
Y23A **Lovelace Mesa,** 74.93 329 ⇓P P 04 04 01.2 +1.0
baz=75,SNR=6.8
120A **U Bar Ranch, L** 74.93 326 ⇑P P 04 04 01.4 +1.2
baz=75,SNR=6.1
W26A **Owens Ranch, T** 74.95 331 ⇓P P 04 04 00.8 +0.6
baz=75,SNR=8.7
U30A **WK&E Inc. Balk** 75.01 334 ⇓P P 04 04 00.9 +0.5
baz=75
Z21A **St. Cloud Mine** 75.12 327 ⇓P P 04 04 02.3 +0.9
baz=75
V27A **Dan Oppiter Fa** 75.16 332 ⇑P P 04 04 01.7 +0.3
baz=75
T31A **Randall Ranch,** 75.16 335 ⇑P P 04 04 01.5 +0.3
baz=75
Y22A **Socorro** 75.33 328 ⇓P P 04 04 03.0 +0.5
baz=76
W25A **X Bar L Ranch,** 75.35 331 ⇑P P 04 04 02.8 +0.3
baz=76,SNR=12
BNM **Barren Site** 75.36 328 eP P 04 04 03.4 +0.6
comp=Z,5.4nm,1.2s
Z20A **Nine Sixteen R** 75.39 326 ⇓P P 04 04 04.0 +1.2
baz=76,SNR=5.0
U28A **Mallet** 75.47 333 ⇓P P 04 04 04.2 +1.1
baz=76
S31A **Mullinville** 75.56 335 ⇓P P 04 04 04.1 +0.5
baz=76
V26A **Tequesquite Ra** 75.57 331 ⇓P P 04 04 03.9 +0.2
baz=76,SNR=5.8
Y21A **Point of Rocks** 75.71 328 ⇓P P 04 04 06.1 +1.3
baz=76,SNR=11
W24A **Lazy 6 Ranch,** 75.74 330 ⇓P P 04 04 05.3 +0.5
baz=76,SNR=14
LAZ **Ladron** 75.80 328 eP P 04 04 06.2 +1.0
comp=Z,7.9nm,1.4s
LAZ eP pP 04 04 14.4 0.0
X22A **Bernardo** 75.83 328 ⇑P P 04 04 06.8 +1.5
baz=76
S30A **Montezuma** 75.93 335 ⇑P P 04 04 06.3 +0.6
baz=76
Y20A **Horse Springs,** 75.95 327 ⇓P P 04 04 07.3 +1.2
baz=76,SNR=6.2
V25A **Rancho No Teng** 75.95 331 ⇓P P 04 04 06.5 +0.5
baz=76,SNR=15
ANMO **Albuquerque** 75.96 329 eP P 04 04 06.6 +0.5
comp=Z,12nm,1.3s
W23A **Werner Place,** 76.01 329 ⇑P P 04 04 07.6 +1.2
baz=76,SNR=11
T28A **Walsh** 76.08 333 ⇑P P 04 04 07.0 +0.4
baz=76
U26A **Atchley Ranch,** 76.08 332 ⇓P P 04 04 07.0 +0.3
baz=76,SNR=7.8
V24A **Rampart Ranch,** 76.12 330 ⇑P P 04 04 07.3 +0.2
baz=76,SNR=6.1
X21A **Alamocita Cree** 76.13 328 ⇑P P 04 04 08.5 +1.4
baz=76,SNR=9.5
W22A **Albuquerque** 76.25 329 ⇓P P 04 04 09.0 +1.3
baz=76
U25A **Circle Dot Ran** 76.35 331 ⇓P P 04 04 08.8 +0.6
baz=77,SNR=14
S28A **Manter** 76.41 334 ⇑P P 04 04 08.8 +0.3
baz=77,SNR=9.6
R30A **Dighton** 76.44 335 ⇓P P 04 04 08.9 +0.4
baz=77
214A **Organ Pipe Nat** 76.50 323 ⇓P P 04 04 10.3 +1.3
baz=77,SNR=6.5
V23A **Ortiz Mt. (NFS** 76.52 330 ⇓P P 04 04 10.1 +0.8
baz=77
X20A **Quemado** 76.53 327 ⇓P P 04 04 10.4 +1.0
baz=77,SNR=6.4
W21A **San Fidel** 76.63 328 ⇑P P 04 04 11.2 +1.3
baz=77,SNR=5.9
T26A **Comanche Natio** 76.69 332 ⇓P P 04 04 10.7 +0.6
baz=77,SNR=5.8
R29A **Marienthal** 76.87 335 ⇓P P 04 04 11.4 +0.4
baz=77,SNR=7.0
V22A **San Miguel Ran** 76.98 329 ⇓P P 04 04 13.3 +1.4
baz=77,SNR=20
T25A **Trinidad** 76.99 332 ⇓P P 04 04 13.0 +1.1
baz=77,SNR=16
W20A **Ramah** 77.02 328 ⇓P P 04 04 13.2 +1.1
baz=77,SNR=11
U23A **El Rito** 77.02 330 ⇑P P 04 04 13.3 +1.2
baz=77,SNR=8.3
S26A **Kim** 77.03 333 ⇓P P 04 04 12.9 +0.9
baz=77,SNR=13
R28A **Tribune** 77.04 334 ⇓P P 04 04 12.6 +0.6
baz=77
TSUM **Tsumeb** 77.12 105 eP P 04 04 13.9 +0.9
TSUM **Tsumeb** 77.12 105 P P 04 04 13.9 +0.9
comp=Z,4.8nm,0.9s,baz=244,slow=5.0,SNR=5.7
X18A **Snowflake** 77.19 326 ⇑P P 04 04 14.0 +0.9
baz=77
V21A **Milan** 77.20 329 ⇓P P 04 04 14.2 +1.0
baz=78
U22A **Llaves** 77.35 330 ⇑P P 04 04 15.4 +1.5
baz=78,SNR=7.1
R27A **Eads** 77.36 333 ⇑P P 04 04 14.2 +0.4
baz=78,SNR=8.7
S25A **Robets Cordova** 77.45 332 ⇑P P 04 04 15.1 +0.7
baz=78,SNR=7.8
T23A **Casias Ranch,** 77.56 330 ⇓P P 04 04 15.9 +0.7
baz=78
V20A **Brimhall** 77.56 328 ⇑P P 04 04 15.9 +0.8
baz=78
SCIA **State Center** 77.57 342 eP P 04 04 14.5 -0.2
W18A **Petrified Fore** 77.57 327 ⇓P P 04 04 16.2 +1.1
baz=78
R26A **Arlington** 77.62 333 ⇓P P 04 04 15.8 +0.5
baz=78,SNR=6.9
113A **Mohawk Valley,** 77.63 323 ⇑P P 04 04 16.1 +0.8
baz=78
Q28A **Sharon Springs** 77.68 334 ⇓P P 04 04 16.3 +0.7
baz=78
U21A **Nageezi** 77.73 329 ⇓P P 04 04 17.1 +1.0
baz=78,SNR=19
S24A **Houchin Ranch,** 77.74 331 ⇑P P 04 04 17.3 +1.1
baz=78,SNR=14
X16A **Lo Mia Camp, P** 77.80 325 ⇓P P 04 04 17.7 +1.2
baz=78,SNR=13
R25A **Fountain Ranch** 77.81 332 ⇓P P 04 04 17.0 +0.6
baz=78
T22A **Edith** 77.91 330 ⇓P P 04 04 18.4 +1.4
baz=78,SNR=11
SDCO **Great Sand Dun** 77.95 331 eP P 04 04 17.9 +0.6
comp=Z,3.4nm,0.7s
SDCO eP pP 04 04 25.9 -0.6
U20A **Newcomb** 78.07 328 ⇓P P 04 04 18.7 +0.8
baz=78
P28A **Saint Francis** 78.11 335 ⇓P P 04 04 19.1 +1.2
baz=78
T21A **Navajo Lake** 78.16 329 ⇓P P 04 04 19.4 +1.0
baz=78
Y14A **Wickenburg** 78.18 324 ⇑P P 04 04 19.2 +0.8
baz=78,SNR=6.5
Q26A **Hugo** 78.19 333 ⇓P P 04 04 19.3 +0.9
baz=78
R24A **Sanders Place,** 78.21 332 ⇑P P 04 04 19.7 +1.1
baz=78,SNR=10
O29A **4D Ranch, Culb** 78.26 336 ⇑P P 04 04 19.8 +1.1
baz=78
BOSA **Boshof** 78.40 116 P P 04 04 20.1 0.0
BOSA **Boshof** 78.40 116 P P 04 04 20.1 0.0
comp=Z,14nm,0.8s,baz=238,slow=4.5,SNR=26
R23A **Moffat** 78.46 331 ⇓P P 04 04 21.0 +0.9
baz=79,SNR=7.0
S22A **4UR Ranch, Cre** 78.50 330 ⇑P P 04 04 21.2 +0.8
baz=79,SNR=6.6
WUAZ **Wupatki** 78.67 326 ⇓P P 04 04 22.4 +1.2
baz=79,SNR=5.5
P26A **Davis Ranch, A** 78.68 334 ⇑P P 04 04 22.3 +1.1
baz=79
Y12C **Blythe** 78.80 323 ⇑P P 04 04 23.3 +1.5
baz=79
S21A **Coal Bank Pass** 78.83 330 ⇑P P 04 04 23.2 +1.0
baz=79,SNR=6.1
Q24A **Divide** 78.86 332 ⇓P P 04 04 23.1 +0.8
baz=79,SNR=7.7
P25A **Willow Gulch B** 78.95 333 ⇑P P 04 04 23.7 +1.1
baz=79,SNR=9.1
N28A **Pribbeno Ranch** 79.02 335 ⇓P P 04 04 23.5 +0.6
baz=79
PDMCI **Parker Dam,Lak** 79.04 323 ⇑P P 04 04 23.8 +0.8
baz=79
Q23A **Hartsel** 79.08 332 ⇓P P 04 04 24.5 +0.9
baz=79
BAR **Barrett** 79.08 321 eP P 04 04 24.3 +0.9
comp=Z,5.7nm,1.1s
BAR eP PcP 04 04 32.7 +0.9
MONP **Monument Peak** 79.11 321 ⇓P P 04 04 24.5 +0.8
baz=79
BC3 **Big Chuckawall** 79.20 322 ⇓P P 04 04 24.7 +0.6
baz=79
S20A **Disappointment** 79.22 329 ⇓P P 04 04 25.3 +1.1
baz=80,SNR=5.7
O26A **Horse Wrangler** 79.26 334 ⇓P P 04 04 25.6 +1.3
baz=80
R21A **Cimarron** 79.32 330 ⇑P P 04 04 26.3 +1.5
baz=80
O25A **Wiggins** 79.45 333 ⇓P P 04 04 26.7 +1.4
baz=80
N27A **Anderson Farm,** 79.47 335 ⇓P P 04 04 26.3 +0.9
baz=80
Q22A **Crested Butte,** 79.48 331 ⇑P P 04 04 26.7 +1.0
baz=80,SNR=5.1
P23A **Jefferson** 79.48 332 ⇓P P 04 04 26.7 +0.9
baz=80
R20A **Redvale** 79.52 329 ⇓P P 04 04 26.9 +1.0
baz=80,SNR=8.5
W13A **Hualapai Mount** 79.54 324 ⇑P P 04 04 27.2 +1.1
baz=80,SNR=6.9
M28A **Bar X Bar Ranc** 79.59 336 ⇑P P 04 04 27.2 +1.2
baz=80
PFO **Pinyon Flat Ob** 79.69 321 eP P 04 04 28.4 +1.5
comp=Z,10nm,1.1s
PFO **Pinyon Flat Ob** 79.69 321 ⇑P P 04 04 28.3 +1.5
baz=80
Q21A **Lamborn Mesa,** 79.73 330 ⇑P P 04 04 28.1 +1.2
baz=80
ISCO **Idaho Springs** 79.76 332 eP P 04 04 27.8 +0.6
ISCO pmax pmax
comp=Z,17nm,1.6s
ISCO **Idaho Springs** 79.76 332 eP P 04 04 27.8 +0.6
comp=Z,17nm,1.6s
ISCO **Idaho Springs** 79.76 332 ⇓P P 04 04 28.0 +0.8
baz=80,SNR=6.6
SMCO **Snowmass** 79.77 331 eP P 04 04 28.0 +0.6
comp=Z,16nm,1.1s
SMCO e 04 04 36.7
S18A **Hurst Farm, Bl** 79.81 328 ⇓P P 04 04 28.6 +1.1
baz=80,SNR=18
U15A **North Rim** 79.84 326 ⇓P P 04 04 28.8 +1.1
baz=80,SNR=9.0
P22A **Eagle** 80.04 331 ⇓P P 04 04 29.8 +1.1
baz=80
M27A **Reverse DX Ran** 80.06 335 ⇑P P 04 04 30.0 +1.4
baz=80
MURC **Murrieta** 80.07 321 ⇑P P 04 04 30.1 +1.3
baz=80
O23A **Lake Granby, G** 80.23 332 ⇓P P 04 04 30.8 +1.0
baz=80,SNR=12
P21A **Newcastle** 80.26 331 ⇑P P 04 04 30.9 +1.0
baz=80
O22A **Kremmling** 80.44 332 ⇑P P 04 04 31.5 +0.6
baz=81,SNR=6.7
LBTB **Lobatse** 80.52 114 eP P 04 04 31.7 +0.1
comp=Z,12nm,0.6s
HEC **Hector,Ludlow** 80.57 322 ⇓P P 04 04 32.7 +1.3
baz=81
M25A **Palm-Egli Farm** 80.58 334 ⇑P P 04 04 32.7 +1.2
baz=81
P20A **De Beque** 80.63 330 ⇓P P 04 04 33.0 +1.2
baz=81
BFSC **Mount Baldy Ra** 80.81 321 ⇑P P 04 04 33.7 +0.9
baz=81,SNR=6.2
N23A **Red Feather La** 80.83 333 ⇑P P 04 04 34.2 +1.3
baz=81
M24A **Cheyenne** 80.89 334 ⇑P P 04 04 34.7 +1.6
baz=81
N22A **Wattenberg Ran** 80.95 332 ⇓P P 04 04 34.7 +1.1
baz=81,SNR=8.1
P19A **Cripple Cowboy** 80.99 330 ⇑P P 04 04 34.5 +0.8
baz=81,SNR=7.1
MWC **Mount Wilson** 81.01 321 eP P 04 04 35.2 +1.2
MWC pmax pmax
comp=Z,15nm,1.1s
MWC **Mount Wilson** 81.01 321 eP P 04 04 35.2 +1.2
comp=Z,15nm,1.1s
K27A **Flueckinger Fa** 81.04 336 ⇓P P 04 04 34.9 +1.0
baz=81
O20A **White River Ci** 81.10 331 ⇓P P 04 04 35.0 +0.7
baz=81
SRU **San Rafael** 81.22 329 ⇓P P 04 04 35.3 +0.3
baz=82,SNR=7.5
M23A **Laramie** 81.23 333 ⇓P P 04 04 35.5 +0.5
baz=82,SNR=10
CCUT **Cedar City** 81.25 326 eP P 04 04 36.9 +1.7
comp=Z,7.0nm,0.9s
N21A **Black Mountain** 81.33 331 ⇑P P 04 04 36.4 +0.9
baz=82
Q16A **Castle Valley** 81.35 328 ⇑P P 04 04 36.7 +1.0
baz=82
TORD **Torodi Ar. Bea** 81.43 68 P P 04 04 36.4 0.0
TORD **Torodi Ar. Bea** 81.43 68 P P 04 04 36.4 0.0
comp=Z,12nm,0.9s,baz=254,slow=4.8,SNR=49
EDW2 **Edwards Air Fo** 81.47 321 ⇓P P 04 04 36.6 +0.4
baz=82,SNR=5.3
MVU **Marysvale** 81.48 327 eP P 04 04 37.1 +0.6
comp=Z,5.5nm,1.0s
P18A **Preston Nutter** 81.53 329 ⇑P P 04 04 37.3 +0.6
baz=82,SNR=7.8
K25A **Mack Ranch, Ha** 81.54 335 ⇑P P 04 04 37.2 +0.7
baz=82
O19A **Miners Draw (B** 81.61 330 ⇓P P 04 04 37.4 +0.5
baz=82,SNR=7.8
N20A **Spence Gulch,** 81.70 331 ⇑P P 04 04 38.0 +0.5
baz=82
LRMC **Laurel Mountai** 81.77 322 ⇓P P 04 04 38.8 +0.9
baz=82
L23A **Garrett** 81.78 333 ⇓P P 04 04 38.6 +0.7
baz=82
K24A **Anderson Ranch** 81.98 334 ⇓P P 04 04 39.8 +1.0
baz=82,SNR=9.5
M21A **Separation Pea** 81.99 332 ⇑P P 04 04 39.6 +0.6
baz=82
FURC **Furnace Creek,** 82.11 323 ⇑P P 04 04 40.7 +1.3
baz=82
MPMC **Manual Prospec** 82.12 322 ⇓P P 04 04 40.4 +0.6
baz=82,SNR=5.6
M20A **Sweetwater, Wa** 82.22 331 ⇓P P 04 04 41.0 +0.7
baz=82
L21A **Rawlins** 82.30 332 ⇑P P 04 04 40.6 +0.1
baz=83,SNR=12
K23A **Bowen Ranch, D** 82.30 334 ⇓P P 04 04 41.0 +0.5
baz=83
ISA **Isabella** 82.33 321 eP P 04 04 41.9 +1.2
ISA pmax pmax
comp=Z,6.0nm,0.9s
ISA **Isabella** 82.33 321 eP P 04 04 41.9 +1.2
comp=Z,5.5nm,0.9s
ISA **Isabella** 82.33 321 ⇓P P 04 04 41.9 +1.2
baz=83,SNR=6.8
PKM **Peak Mountain** 82.46 320 ⇓P P 04 04 42.7 +1.1
baz=83,SNR=9.2
K22A **Casper** 82.55 333 ⇓P P 04 04 42.4 +0.6
baz=83,SNR=5.7
L20A **Wamsutter** 82.72 332 ⇓P P 04 04 43.4 +0.6
baz=83
GRAC **Grapevine Rang** 82.78 323 ⇑P P 04 04 44.3 +1.3
baz=83
VES **Vestal, Richgr** 82.78 321 ⇑P P 04 04 44.1 +1.1
baz=83
K21A **Alcova** 82.82 333 ⇓P P 04 04 43.9 +0.6
baz=83
JLU **Jordanelle** 82.85 329 eP P 04 04 44.3 +0.7
comp=Z,3.5nm,0.8s
I24A **Kuemmerle Ranc** 82.89 335 ⇓P P 04 04 44.5 +1.0
baz=83
RSSD **Black Hills** 82.91 335 eP P 04 04 43.5 -0.3
RSSD **Black Hills** 82.91 335 eP P 04 04 43.5 -0.3
R11A **Troy Canyon, C** 82.95 325 ⇓P P 04 04 44.9 +0.9
baz=83,SNR=11
DUG **Dugway** 83.12 328 eP P 04 04 45.7 +0.9
DUG **Dugway** 83.12 328 eP P 04 04 45.7 +0.9
J22A **Midwest** 83.19 334 ⇑P P 04 04 45.6 +0.5
baz=84
L19A **Farson** 83.21 331 ⇓P P 04 04 45.8 +0.5
baz=84,SNR=7.0
RCTC **Rector, Farmer** 83.22 321 ⇑P P 04 04 45.7 +0.5
baz=84
M17A **Scullys Gap (B** 83.23 330 ⇑P P 04 04 46.0 +0.5
baz=84
K20A **Yellowstone Ra** 83.27 332 ⇑P P 04 04 45.9 +0.3
baz=84
L18A **Fontenelle, Gr** 83.34 330 ⇑P P 04 04 46.3 +0.2
baz=84
I22A **9 Mile Ranch,** 83.60 334 ⇑P P 04 04 47.3 0.0
baz=84,SNR=8.3
K19A **Absolon Red Bu** 83.61 332 ⇑P P 04 04 47.6 +0.3
baz=84
H24A **Dirks Ranch, A** 83.64 335 ⇓P P 04 04 47.3 0.0
baz=84,SNR=6.5
HWUT **Hardware Ranch** 83.72 329 eP P 04 04 47.7 -0.3
comp=Z,23nm,1.5s
H23A **Clabaugh Cattl** 83.78 335 ⇑P P 04 04 48.7 +0.6
baz=84
I21A **Big Trails, Te** 83.84 333 ⇑P P 04 04 48.3 -0.1
baz=84,SNR=6.5
PDAR **Pinedale Array** 83.84 331 P P 04 04 48.2 -0.4
PDAR **Pinedale Array** 83.84 331 P P 04 04 48.2 -0.4
comp=Z,1.6nm,0.7s,baz=139,slow=7.0,SNR=12
MLAC **Mammoth Lakes** 84.01 322 ⇓P P 04 04 50.1 +0.5
baz=84
J19A **Crowheart** 84.06 332 ⇑P P 04 04 49.6 0.0
baz=84,SNR=6.1
H22A **Clearmont** 84.15 334 ⇑P P 04 04 50.1 +0.1
baz=84
AGMN **Agassiz Nation** 84.20 342 eP P 04 04 49.9 -0.1
comp=Z,6.3nm,1.0s
I20A **Worland** 84.27 333 ⇓P P 04 04 50.7 +0.1
baz=85,SNR=6.6
G23A **Biddle** 84.33 335 ⇓P P 04 04 50.9 0.0
baz=85
NVAR **Mina Array Bea** 84.35 323 P P 04 04 52.2 +0.9
NVAR **Mina Array Bea** 84.35 323 P P 04 04 52.2 +0.9
comp=Z,4.7nm,0.9s,baz=157,slow=6.0,SNR=24
HVU **Hansel Valley** 84.39 329 eP P 04 04 51.6 +0.3
HVU pmax pmax
comp=Z,9.0nm,0.9s
HVU **Hansel Valley** 84.39 329 eP P 04 04 51.6 +0.3
comp=Z,8.6nm,0.9s
H21A **Big Horn, Sher** 84.44 334 ⇑P P 04 04 52.0 +0.6
baz=85
F24A **Ekalaka** 84.56 336 ⇓P P 04 04 52.2 +0.3
baz=85
G22A **Birney** 84.67 335 ⇑P P 04 04 53.1 +0.5
baz=85
ELK **Elko** 84.67 327 eP P 04 04 53.4 +0.5
H20A **Greybull** 84.68 333 ⇓P P 04 04 53.0 +0.4
baz=85
I19A **Meeteetse** 84.68 332 ⇑P P 04 04 53.5 +0.7
baz=85
F23A **Volborg** 84.78 335 ⇑P P 04 04 52.9 -0.2
baz=85,SNR=5.3
MDND **Maddock** 84.81 340 ⇑P P 04 04 53.8 +0.7
baz=85
SNOW **Snow King Moun** 84.91 331 eP P 04 04 54.4 +0.4
RRI2 **Red Ridge** 85.05 330 eP P 04 04 54.7 0.0
CMB **Columbia Colle** 85.12 322 eP P 04 04 55.7 +0.7
CMB **Columbia Colle** 85.12 322 eP P 04 04 55.7 +0.7
E24A **Baker** 85.14 336 ⇓P P 04 04 55.2 +0.4
baz=85
F22A **Rosebud** 85.14 335 ⇓P P 04 04 55.0 +0.2

baz=85
H19A Powell 85.21 333 ⇓P P 04 04 55.4 +0.1
baz=86
IMW Indian Meadow 85.34 331 *e*P P 04 04 56.9 +0.6
comp=Z,7.6nm,1.0s
G20A Bridger 85.38 333 ⇑P P 04 04 55.8 -0.4
baz=86,SNR=6.7
H18A Shoshone NF, C 85.48 332 ⇓P P 04 04 56.8 0.0
baz=86,SNR=7.4
I16A Newdale 85.55 331 ⇓P P 04 04 57.5 +0.4
baz=86
D23A Lindsay 85.97 336 ⇑P P 04 04 59.3 +0.3
baz=86
G18A Lazy EL Ranch, 85.98 333 ⇑P P 04 04 59.6 +0.4
baz=86
ULM Lac du Bonnet 86.01 343 P P 04 04 57.8 -1.2
ULM Lac du Bonnet 86.01 343 P P 04 04 57.8 -1.2
comp=Z,4.4nm,0.7s,baz=150,slow=5.3,SNR=4.7
C24A Savage 86.02 337 ⇓P P 04 04 59.7 +0.5
baz=86,SNR=5.5
F19A Roth Farm, Mol 86.19 333 ⇑P P 04 05 00.4 +0.2
baz=86
D22A Cohagen 86.29 336 ⇓P P 04 05 00.8 +0.3
baz=87,SNR=5.3
J13A Cove Ranch, Pi 86.31 329 ⇓P P 04 05 01.4 +0.6
baz=87,SNR=6.1
GCMT Greycliff 86.41 333 *e*P P 04 05 00.4 -0.9
comp=Z,6.8nm,1.2s
I14A Mackay 86.42 330 ⇓P P 04 05 02.0 +0.6
baz=87,SNR=11
E20A Meyer Farm, Mu 86.44 334 ⇓P P 04 05 01.6 +0.3
baz=87,SNR=19
BEKR Beckworth 86.48 323 *e*P P 04 05 02.1 +0.3
comp=Z,5.1nm,1.2s
C23A Lambert 86.51 337 ⇓P P 04 05 01.8 +0.2
baz=87,SNR=6.8
F18A Big Timber 86.53 333 ⇑P P 04 05 01.8 0.0
baz=87,SNR=11
HLID Hailey 86.54 329 *e*P P 04 05 02.5 +0.5
comp=Z,15nm,1.4s
HLID Hailey 86.54 329 ⇓P P 04 05 02.5 +0.5
baz=87,SNR=12
H15A Lima 86.64 330 ⇓P P 04 05 03.0 +0.5
baz=87,SNR=8.0
E19A Rath Farm, Rou 86.64 334 ⇓P P 04 05 02.5 +0.1
baz=87,SNR=26
I13A Wildhorse Cree 86.69 329 ⇑P P 04 05 03.5 +0.7
baz=87,SNR=12
C22A Vida 86.70 336 ⇑P P 04 05 03.2 +0.7
baz=87
DGMT Dagmar 86.77 337 *e*P P 04 05 03.5 +0.7
comp=Z,22nm,1.0s
DGMT Dagmar 86.77 337 ⇑P P 04 05 03.2 +0.4
baz=87
G16A Moss Hill, Enn 86.79 331 ⇓P P 04 05 03.4 +0.2
baz=87
MCMT McKenzie Canyo 86.89 330 *e*P P 04 05 04.3 +0.5
comp=Z,4.5nm,0.9s
F17A Fitzpatrick Pl 86.89 332 ⇑P P 04 05 04.0 +0.4
baz=87
D20A Manuel Ranch, 86.94 334 ⇑P P 04 05 03.8 +0.1
baz=87,SNR=15
G15A Dillon 87.02 331 ⇓P P 04 05 04.7 +0.3
baz=87,SNR=5.9
B23A Brockton 87.02 337 ⇑P P 04 05 04.6 +0.5
baz=87
MFID Camas Ranch 87.05 328 *e*P P 04 05 05.0 +0.6
comp=Z,8.0nm,1.2s
MFID Camas Ranch 87.05 328 ⇓P P 04 05 04.5 0.0
baz=87
A24A Westby 87.10 338 ⇑P P 04 05 04.7 +0.3
baz=87
E18A Harlowton 87.16 333 ⇓P P 04 05 05.0 +0.2
baz=87,SNR=5.1
C21A Desert Coulee 87.19 335 ⇓P P 04 05 04.7 -0.2
baz=88
B22A Reddig Ranch S 87.22 336 ⇓P P 04 05 05.4 +0.3
baz=88,SNR=6.7
SCHQ Schefferville 87.27 1 P P 04 05 04.1 -0.9
SCHQ Schefferville 87.27 1 P P 04 05 04.1 -0.9
comp=Z,2.4nm,0.8s,baz=189,slow=11,SNR=3.8
D19A Cripps Ranch, 87.27 334 ⇑P P 04 05 05.2 -0.1
baz=88,SNR=7.0
C20A Veseth Ranch, 87.42 335 ⇓P P 04 05 06.0 0.0
baz=88
E17A Martinsdale 87.43 333 ⇓P P 04 05 06.6 +0.3
baz=88
H12A Diamond D Ranc 87.52 329 ⇑P P 04 05 06.9 +0.2
baz=88
LRM Limekiln Ridge 87.54 331 *e*P P 04 05 06.9 0.0
LRM *e*pP pP 04 05 15.8 -0.4
F15A Butte 87.57 331 ⇓P P 04 05 07.4 +0.4
baz=88,SNR=7.4
D18A Linhart Farms, 87.64 334 ⇓P P 04 05 07.4 +0.3
baz=88,SNR=8.8
G13A Cobalt 87.69 330 ⇓P P 04 05 08.1 +0.6
baz=88,SNR=5.3
A22A Carney Farms, 87.79 337 ⇑P P 04 05 08.1 +0.3
baz=88,SNR=8.7
C19A Slack Wire Ran 87.81 334 ⇑P P 04 05 07.9 0.0
baz=88,SNR=5.6
F14A Wisdom 87.91 331 ⇑P P 04 05 09.1 +0.5
baz=88
D17A Six Diamond Ra 87.94 333 ⇓P P 04 05 08.9 +0.3
baz=88,SNR=16
E15A Deer Lodge 88.11 331 ⇓P P 04 05 09.4 0.0
baz=88
A21A Bergtoll Ranch 88.13 336 ⇓P P 04 05 09.5 +0.1
baz=88
D16A Dana Ranch, Ca 88.17 332 ⇑P P 04 05 10.3 +0.5
baz=88,SNR=7.7
G12A Big Creek, Yel 88.18 329 ⇓P P 04 05 10.4 +0.5
baz=88
EGMT Eagleton 88.31 334 ⇓P P 04 05 10.4 +0.1
baz=89
C17A Wharram Farm, 88.36 333 ⇓P P 04 05 10.8 +0.2
baz=89
B19A Brinkman Farms 88.38 335 ⇑P P 04 05 10.7 +0.1
baz=89,SNR=5.8
D15A Lincoln 88.56 332 ⇓P P 04 05 11.8 +0.2
baz=89
B18A Beardsley Farm 88.63 334 ⇑P P 04 05 11.9 +0.1
baz=89,SNR=14
F12A Elk City 88.65 330 ⇑P P 04 05 12.4 +0.4
baz=89,SNR=5.4
A19A Klindworth Far 88.71 335 ⇓P P 04 05 12.5 +0.3
baz=89
E13A Victor 88.75 331 ⇑P P 04 05 13.1 +0.7
baz=89,SNR=5.0
C16A Fuhringer Ranc 88.88 333 ⇓P P 04 05 13.1 +0.1
baz=89,SNR=9.9
B17A L&G Farms, Che 88.92 334 ⇓P P 04 05 13.4 +0.2
baz=89
KHMM Horse Mountain 88.96 322 *e*P P 04 05 15.7 +2.0
comp=Z,12nm,1.2s
MSO Missoula 88.96 331 ⇓P P 04 05 14.1 +0.6
baz=89
D14A Greenough 88.99 331 ⇑P P 04 05 14.2 +0.6
baz=89
A18A Metzger Ranch, 89.09 334 ⇓P P 04 05 14.2 +0.2
baz=89
C15A Salmond Ranch, 89.19 332 ⇓P P 04 05 14.9 +0.4
baz=90,SNR=6.0
D13A Huson 89.39 331 ⇑P P 04 05 15.6 +0.2
baz=90
A17A Triple J Farms 89.43 334 ⇓P P 04 05 15.2 -0.3
baz=90,SNR=11
B15A Bradely Ranch, 89.61 333 ⇓P P 04 05 16.1 -0.3
baz=90
D12A Red Ives Fores 89.72 330 ⇓P P 04 05 17.8 +0.8
baz=90
A16A West Butte Ran 89.77 334 ⇑P P 04 05 17.8 +0.6
baz=90
A15A Johnson Ranch, 90.22 333 ⇑P P 04 05 18.8 -0.5
baz=90
A14A Double T Ranch 90.48 333 ⇓P P 04 05 20.4 -0.1
baz=91
WALA Waterton Lakes 90.74 332 *e*P P 04 05 21.6 -0.2
comp=Z,0.2nm,0.9s
FFC Flin Flon 91.64 342 *i* P P 04 05 25.8 +0.2
ESDC Sonseca Array 93.93 45 P P 04 05 36.6 0.0
ESDC Sonseca Array 93.93 45 P P 04 05 36.6 0.0
comp=Z,0.1nm,0.3s,baz=237,slow=4.5,SNR=4.0
PUH Pauahi 97.16 288 *e*P P 04 05 50.8 -1.1
YKA Yellowknife Ar 101.73 340 P Pdif 04 06 10.6 -0.5
YKA Yellowknife Ar 101.73 340 P Pdif 04 06 10.5 -0.5
comp=Z,0.4nm,1.0s,baz=147,slow=5.0,SNR=4.9
BRTR Keskin Array B 119.05 59 PKP PKPdf 04 11 07.7 -0.1

BRTR Keskin Array B 119.05 59 PKP **PKPdf** 04 11 07.7 -0.1
comp=Z,0.8nm,0.7s,baz=201,slow=2.4,SNR=6.2
AKASG Malin Array Be 119.52 46 PKIKP **PKPdf** 04 11 07.1 -1.0
AKASG pmax pmax
comp=Z,2.0nm,0.6s
AKASG Malin Array Be 119.52 46 PKP **PKPdf** 04 11 07.1 -1.0
AKASG Malin Array Be 119.52 46 PKP **PKPdf** 04 11 07.1 -1.0
comp=Z,1.9nm,0.6s,baz=262,slow=2.7,SNR=7.1
ASAR Alice Springs 119.76 204 PKP **PKPdf** 04 11 08.3 -1.4
ASAR Alice Springs 119.76 204 PKP **PKPdf** 04 11 08.3 -1.4
comp=Z,0.7nm,0.7s,baz=136,slow=2.1,SNR=6.5
ARCES ARCESS Array B 121.85 24 PKP **PKPdf** 04 11 11.4 -0.6
ARCES ARCESS Array B 121.85 24 PKP **PKPdf** 04 11 11.4 -0.6
comp=Z,4.9nm,1.0s,baz=228,slow=2.9,SNR=29
WRA Warramunga Arr 123.02 206 PKP **PKPdf** 04 11 15.1 -0.9
WRA Warramunga Arr 123.02 206 PKP **PKPdf** 04 11 15.1 -0.9
comp=Z,1.7nm,0.7s,baz=156,slow=1.9,SNR=28
OBN Obninsk 124.83 42 *i* PKIKP **PKPdf** 04 11 18.6 +0.5
OBN *e* 04 13 04.9
OBN *e*SS SS 04 29 56.1 -3.8
OBN pmax pmax
comp=Z,6.0nm,1.5s
OBN MLR MLR
comp=Z,200nm,16.0s
BILL Bilibino 132.80 335 *e*PKIKP **PKPdf** 04 11 33.2 +0.2
BILL *e* 04 11 42.1
BILL *e* 04 14 03.3
BILL *e* 04 18 39.1
BILL pmax pmax
comp=Z,15nm,0.9s
BVAR Borovoye Array 144.68 43 PKIKP **PKPdf** 04 11 55.0 -0.1
BVAR pmax pmax
comp=Z,3.0nm,0.7s
BVAR Borovoye Array 144.68 43 PKP **PKPdf** 04 11 55.0 -0.1
BVAR Borovoye Array 144.68 43 PKP **PKPdf** 04 11 55.0 -0.1
comp=Z,3.3nm,0.7s,baz=289,slow=3.0,SNR=10
KKAR Karatay Array 146.76 60 *e*PKP2 **PKPbc** 04 12 00.8 0.0
KKAR Karatay Array 146.76 60 *e*PKPbc **PKPbc** 04 12 00.8 0.0
HYB Hyderabad 147.07 110 *i* PKP **PKPbc** 04 12 01.5 -0.9
YAK Yakutsk 148.35 343 *e*PKP2 **PKPbc** 04 12 03.3 -1.1
YAK pmax pmax
comp=Z,24nm,1.1s
AML Almayashu 149.18 62 P **PKPdf** 04 12 01.6 -2.0
SNR=10.0
EKS2 Erkin-Say 149.19 60 *e*PKP2 **PKPbc** 04 12 08.3 +0.9
EKS2 Erkin-Say 149.19 60 *e*PKPbc **PKPbc** 04 12 08.3 +0.9
EKS2 Erkin-Say 149.19 60 P **PKPbc** 04 12 08.4 +0.9
SNR=7.6
USP Ospenovka 149.64 59 P **PKPbc** 04 12 09.4 +1.0
SNR=11
AAK Ala-Archa 149.72 60 PKP2 **PKPbc** 04 12 09.9 +1.1
AAK pmax pmax
comp=Z,22nm,0.9s
AAK Ala-Archa 149.72 60 *e*PKPbc **PKPbc** 04 12 09.8 +1.0
AAK Ala-Archa 149.72 60 P **PKPbc** 04 12 09.9 +1.1
SNR=9.7
AAK Ala-Archa 149.72 60 PKPbc **PKPbc** 04 12 09.9 +1.1
comp=Z,22nm,0.9s,baz=199,slow=2.8,SNR=15
FRU Bishkek 149.78 60 *i* PKP2 **PKPbc** 04 12 09.0 +0.2
FRU pmax pmax
comp=Z,46nm,1.6s
CHMS Chumysh 149.86 60 P **PKPbc** 04 12 09.7 +0.7
SNR=5.3
KBK Karagaybulak 150.05 60 P **PKPbc** 04 12 10.5 +0.8
SNR=7.5
KURBB Kurchatov Arra 150.25 44 PKPbc **PKPbc** 04 12 09.9 +0.4
comp=Z,15nm,0.9s,baz=299,slow=3.0,SNR=64
KURK Kurchatov 150.27 43 *c i* PKIKP **PKPbc** 04 12 10.2 +0.6
KURK pmax pmax
comp=Z,19nm,1.0s
KURK Kurchatov 150.27 43 *e*PKPbc **PKPbc** 04 12 10.1 +0.5
KZA Kyzart 150.34 61 P **PKPbc** 04 12 12.2 +1.5
SNR=5.2
TKM2 Tokmak 2 150.48 60 P **PKPbc** 04 12 10.9 +0.2
SNR=12
NVS Novosibirsk 150.55 33 *e*PKIKP **PKPbc** 04 12 10.4 +0.3
NVS pmax pmax
comp=N,5.0nm,0.9s
NVS pmax pmax
comp=E,5.0nm,0.9s
NVS pmax pmax
comp=Z,34nm,0.9s
ULHL Ulahol 151.05 61 P **PKPbc** 04 12 12.9 +0.9
SNR=12
KSH Kashi 151.09 67 PKPbc **PKPbc** 04 12 12.1 0.0
KSH *e*SKS **SKSdf** 04 19 13.1 +1.1
KSH AMB AMB
comp=Z,210nm,5.1s
KSH LR LR
comp=N,690nm,14.4s
KSH LR LR
comp=E,740nm,14.5s
KSH LR LR
comp=Z,520nm,14.4s
ZAA0 Zalesovo Array 151.83 33 *e*PKPbc **PKPbc** 04 12 13.3 +0.1
ZALV Zalesovo Beam 151.83 33 PKIKP **PKPbc** 04 12 13.3 +0.1
ZALV pmax pmax
comp=Z,25nm,0.7s
ZALV Zalesovo Beam 151.83 33 PKPbc **PKPbc** 04 12 13.2 +0.1
ZALV Zalesovo Beam 151.83 33 PKPbc **PKPbc** 04 12 13.2 +0.1
comp=Z,25nm,0.7s,baz=304,slow=3.0,SNR=68
MK31 Makanchi Array 154.07 49 *e*PKIKP **PKPbc** 04 12 18.2 -0.2
MK31 *e* 04 12 32.5
MK31 Makanchi Array 154.07 49 *e*PKPbc **PKPbc** 04 12 18.2 -0.2
MK31 *e*PKPab **PKPab** 04 12 32.5 +0.5
MKAR Makanchi Array 154.07 49 PKIKP **PKPbc** 04 12 18.2 -0.2
MKAR 04 12 31.9
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR pmax pmax
comp=Z,4.0nm,0.9s
MKAR Makanchi Array 154.07 49 PKPbc **PKPbc** 04 12 18.2 -0.2
MKAR PKPab **PKPab** 04 12 31.9 -0.2
MKAR Makanchi Array 154.07 49 PKPbc **PKPbc** 04 12 18.2 -0.2
comp=Z,2.6nm,0.7s,baz=289,slow=2.0,SNR=15
MKAR PKPab **PKPab** 04 12 31.9 -0.2
comp=Z,4.2nm,0.9s,baz=296,slow=3.4,SNR=11
MJAR Matsushiro Arr 157.30 287 PKPab **PKPab** 04 12 46.7 +0.5
MJAR Matsushiro Arr 157.30 287 PKPab **PKPab** 04 12 46.7 +0.5
comp=Z,0.9nm,0.3s,baz=126,slow=2.4,SNR=7.0
WMQ Urumqi 158.74 52 *e*PKP **PKPdf** 04 12 16.0 -0.5
CMAR Chiang Mai Arr 162.12 140 PKP **PKPdf** 04 12 18.8 -2.1
CMAR Chiang Mai Arr 162.12 140 PKP **PKPdf** 04 12 18.8 -2.1
comp=Z,0.5nm,0.3s,baz=246,slow=3.6,SNR=4.7
GTA Gaotai 168.82 51 PKP **PKPdf** 04 12 27.0 +1.0
GTA PKPab **PKPab** 04 13 37.6 +0.9
KMI Kunming 169.52 135 PKP **PKPdf** 04 12 25.8 -1.2
BJI Beijing 171.62 331 PKP **PKPdf** 04 12 27.4 0.0
HHC Hu-ho-hao-te 171.92 357 *e*PKP **PKPdf** 04 12 26.8 -0.9
HHC pPKP **pPKPdf** 04 12 36.9 -0.4
HHC sPKP 04 12 41.1
HHC PP **PP** 04 17 42.6 +2.1
HHC SKS **SKSdf** 04 19 25.0 -4.0
HHC SKKS **SKKSac** 04 24 24.4 -1.5
HHC SS **SS** 04 38 44.8 -1.8
HHC AMB AMB
comp=Z,540nm,9.2s
HHC LR LR
comp=N,430nm,20.0s
HHC LR LR
comp=E,340nm,18.1s
HHC LR LR
comp=Z,240nm,19.4s
GYA Guiyang 172.69 148 PKP **PKPdf** 04 12 28.0 -0.5
GYA PKPab **PKPab** 04 13 55.6 +1.6
GYA PKS **PKSdf** 04 15 58.7 -2.3
GYA PP **PP** 04 17 47.9 +3.1
GYA SKKS 04 24 30.5
GYA SS **SS** 04 38 55.0 0.0
GYA AMB AMB
comp=Z,110nm,8.0s
GYA LR LR
comp=N,120nm,22.4s
GYA LR LR
comp=E,110nm,23.0s
GYA LR LR
comp=Z,130nm,22.9s
LZH Lanzhou 173.25 59 *e*PKP **PKPdf** 04 12 28.0 -0.5
LZH pPKP **pPKPdf** 04 12 38.9 +0.8
LZH sPKP 04 12 42.5
LZH PKPab **PKPab** 04 13 56.2 -0.4
LZH LR LR
comp=N,140nm,18.0s
LZH LR LR
comp=E,130nm,18.2s
LZH LR LR
comp=Z,170nm,20.3s
CD2 Chengdu 173.60 105 *e*PKP **PKPdf** 04 12 28.0 -0.6

IDC ***02*** *04:05:31.7±0.9,31°.10N×69°.87E,h0km,mb3.8/16, mb1 4.0/18,mb1mx3.8/33,mbtmp3.8/18,ML3.8/2, Error ellipse: s-maj=21.0km s-min=17.7km az=23.0*
ISCJB ***02*** *04:05:32.9±0.5,31°.07N±0°.06×69°.97E±0°.06,h23km, mb3.8/16,Error ellipse: s-maj=10.4km s-min=5.0km az=34.8*
ISC 02 04:05:35.4±0.7,31°.18N±0°.07×70°.11E±0°.06,h23km,n42, σ1s84/41,mb3.8/16,1D,Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THW	**Thamme Wali**	**2.13**	**40**	P	**Pb**	**04 06 13.4**	**+0.1**
CEP	**Cherat**	**3.05**	**30**	⇓P	**Pn**	**04 06 25.5**	**+3.2**
CEP				S	**Sb**	**04 07 08.0**	**+2.1**
DLH	**Dalhousie**	**5.17**	**73**	*e*PKP	**Pn**	**04 06 52.0**	**+0.4**
DLH				*e*4		04 08 18.0	
DHRM	**DHARAMSHALA**	**5.39**	**77**	*e*PKP	**Pn**	**04 06 56.6**	**+2.0**
DHRM				*e*S	Sn	04 08 04.2	+8.2
DHRM				*e*S	Sb	04 08 06.0	-7.2
DHRM				AML	AML	04 08 43.8	
	comp=E,360nm,0.5s						
DHRM				AML	AML	04 08 44.2	
	comp=N,392nm,0.6s						
BHK	**Bhakra**	**5.41**	**86**	*e*S	Sb	04 08 07.0	-6.7
SDNR	**Sundarnagar**	**5.88**	**85**	*e*4	Pn	04 07 06.0	+4.8
SDNR				*e*4		04 08 42.0	
SMLA	**Simla**	**6.05**	**89**	*e*PKP	Pn	04 07 07.5	+4.0
SMLA				*i* S	Sn	04 08 20.6	+8.5
SMLA				AML	AML	04 08 40.6	
	comp=E,124nm,0.6s						
SMLA				AML	AML	04 08 41.1	
	comp=N,54nm,0.5s						
AJM	**Ajmer**	**6.14**	**139**	*e*4	Pb	04 07 29.0	+7.2
AJM				*i* 4		04 08 53.0	
KUDL	**Kundal**	**6.33**	**117**	*e*PKP	**Pn**	**04 07 10.1**	**+2.8**
KUDL				*e*S	Sb	04 08 29.6	-10
KUDL				AML	AML	04 09 10.7	
	comp=E,44nm,0.6s						
KUDL				AML	AML	04 09 12.1	
	comp=N,49nm,0.6s						
NDI	**New Delhi**	**6.65**	**110**	*e*PKP	**Pn**	**04 07 14.0**	**+2.2**
NDI				*e*4		04 08 21.0	
DDI	**Dehra Dun**	**6.90**	**95**	*e*PKP	**Pn**	**04 07 17.3**	**+2.1**
DDI				*e*S	Sn	04 08 41.3	+8.3
BHPL	**Bhopal**	**10.24**	**139**	*e*S	**Sn**	**04 09 57.0**	**+1.8**
PYUN	**Piuthan**	**11.62**	**102**	*e*P	**Pn**	**04 08 21.1**	**+1.0**
AAK	**Ala-Archa**	**11.96**	**16**	Pn	**Pn**	**04 08 25.8**	**+1.2**
	comp=N,1.2nm,0.3s,baz=190,slow=6.5,SNR=15						
AAK				Sn	**Sn**	**04 10 33.1**	**-4.2**
	comp=N,0.3nm,0.3s,baz=275,slow=12,SNR=2.0						
DANN	**Dangsing**	**12.19**	**100**	*e*P	**Pn**	**04 08 28.4**	**+0.4**
	comp=N,25nm,0.5s						
KOLN	**Koldanda**	**12.24**	**103**	*e*P	**Pn**	**04 08 30.5**	**+1.9**
	comp=N,19nm,0.5s						
KOLN				*e*S	**Sn**	**04 10 41.8**	**-2.6**
DMN	**Daman**	**13.55**	**101**	*e*P	**Pn**	**04 08 46.8**	**+0.2**
KKN	**Kakani**	**13.64**	**101**	*e*P	**Pn**	**04 08 47.4**	**-0.3**
	comp=N,25nm,0.6s						
PKIN	**Phulchoki**	**13.81**	**101**	*e*P	**Pn**	**04 08 50.9**	**+0.9**
	comp=N,14nm,0.3s						
PKI	**Pulchoki**	**13.82**	**101**	*e*P	**Pn**	**04 08 49.7**	**-0.6**
	comp=N,17nm,0.5s						
GUN	**Gumba**	**14.11**	**99**	*e*P	**Pn**	**04 08 53.6**	**-0.7**
	comp=N,56nm,0.5s						
RAMN	**Ramite**	**15.03**	**102**	*e*P	**Pn**	**04 09 05.8**	**-0.8**
	comp=N,20nm,0.5s						
RAMN				*e*S	**Sn**	**04 11 47.2**	**-5.3**
ODAN	**Odare**	**15.72**	**102**	*e*P	**Pn**	**04 09 15.4**	**-0.3**
	comp=N,8.0nm,0.5s						
TAPN	**Taplejung**	**15.83**	**100**	*e*P	**Pn**	**04 09 16.5**	**-0.7**
	comp=N,7.5nm,0.4s						
MKAR	**Makanchi Array**	**18.21**	**28**	P	**P**	**04 09 47.0**	**+0.2**
	comp=N,0.1nm,0.3s,baz=208,slow=12,SNR=9.1						
KURBB	**Kurchatov Arra**	**20.42**	**16**	P	**P**	**04 10 10.8**	**0.0**
	comp=N,1.6nm,0.6s,baz=208,slow=10,SNR=9.1						
AKTO	**Aktyubinsk**	**21.25**	**338**	P	**P**	**04 10 19.8**	**0.0**
	comp=N,3.1nm,0.8s,baz=147,slow=15,SNR=6.2						
BVAR	**Borovoye Array**	**21.83**	**0**	P	**P**	**04 10 26.0**	**0.0**
	comp=N,2.0nm,0.7s,baz=178,slow=10,SNR=12						
KBZ	**Khabaz**	**24.85**	**308**	P	**P**	**04 10 59.6**	**+3.6**
	comp=N,1.0nm,0.6s,baz=80,slow=8.2,SNR=3.6						
ZALV	**Zalesovo Beam**	**25.10**	**21**	P	**P**	**04 10 58.7**	**+0.5**
	comp=N,1.1nm,0.3s,baz=221,slow=11,SNR=8.2						
BRTR	**Keskin Array B**	**30.74**	**296**	P	**P**	**04 11 47.9**	**-1.1**
	comp=N,1.3nm,0.6s,baz=106,slow=9.3,SNR=8.4						
SONM	**Songino Array**	**32.21**	**48**	P	P	04 12 05.2	+3.4
	comp=N,0.4nm,0.5s,baz=280,slow=8.6,SNR=3.0						
AKASG	**Malin Array Be**	**35.94**	**315**	P	**P**	**04 12 32.7**	**-1.2**
	comp=N,0.8nm,0.5s,baz=98,slow=6.1,SNR=4.8						
MLR	**Muntele Rosu**	**37.00**	**305**	P	**P**	**04 12 42.9**	**-0.3**
	comp=N,0.7nm,0.8s,baz=154,slow=1.8,SNR=5.9						
FINES	**FINESS Array B**	**41.59**	**330**	P	**P**	**04 13 20.9**	**-0.3**
	comp=N,3.3nm,0.9s,baz=108,slow=12,SNR=3.7						
GERES	**GERESS Array B**	**45.57**	**310**	P	**P**	**04 13 52.5**	**-1.1**
	comp=N,0.5nm,0.8s,baz=78,slow=11,SNR=3.5						
ARCES	**ARCESS Array B**	**45.82**	**340**	P	**P**	**04 13 55.6**	**+0.5**
	comp=N,1.8nm,0.6s,baz=123,slow=8.8,SNR=28						
NOA	**NORSAR Array B**	**48.27**	**326**	P	**P**	**04 14 11.9**	**-2.6**
	comp=N,1.2nm,0.9s,baz=132,slow=5.4,SNR=3.4						
TORD	**Torodi Ar. Bea**	**64.94**	**271**	P	**P**	**04 16 11.8**	**-1.8**
	comp=N,0.7nm,0.8s,baz=62,slow=4.9,SNR=4.7						
WRA	**Warramunga Arr**	**79.87**	**121**	P	**P**	**04 17 43.3**	**+0.7**
	comp=N,0.5nm,0.5s,baz=323,slow=5.1,SNR=8.8						
ASAR	**Alice Springs**	**81.88**	**124**	P	**P**	**04 17 53.5**	**+0.3**
	comp=N,0.5nm,0.7s,baz=309,slow=5.4,SNR=6.2						
YKA	**Yellowknife Ar**	**86.58**	**2**	P	**P**	**04 18 16.7**	**+0.2**
	comp=N,0.5nm,0.6s,baz=349,slow=5.0,SNR=12						

SKO ***02*** *04:11:34.0,41°.25N×22°.72E,h15km,M1.7,ML1.9*
ATH ***02*** *04:11:34.2,41°.28N×22°.70E,h21km±2km,MD3.3/10*
SOF ***02*** *04:11:34.2,41°.27N×22°.71E,h9km,MD2.5*
ISCJB ***02*** *04:11:34.6±0.4,41°.25N±0°.02×22°.70E±0°.03,h5km±3km, Error ellipse: s-maj=3.7km s-min=3.0km az=156.9*
CSEM ***02*** *04:11:35.1±0.1,41°.25N×22°.71E,h2km, ML2.4/5, Error ellipse: s-maj=3.5km s-min=2.5km az=59.0*
THE ***02*** *04:11:35.0,41°.27N×22°.72E,h2km±1km,ML2.4/5,Error ellipse: s-maj=1.6km s-min=0.7km az=208.0*
BEO ***02*** *04:11:37.7±1.5,41°.28N×22°.65E,h12km,ML2.0/3*
ISC 02 04:11:35.0±1.0,41°.25N±0°.02×22°.70E±0°.02,h4km±8km, n48,σ0s77/80,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**305**	P	**Pg**	**04 11 36.8**	**-0.7**
VAY				S	**Sg**	**04 11 39.0**	**-0.1**
VAY	**Valandovo**	**0.12**	**305**	*i* Pg	**Pg**	**04 11 37.0**	**-0.5**
VAY				*i* Sg	**Sg**	**04 11 39.1**	**-0.1**
VAY				*e*Lg	Lg	04 11 39.1	
	comp=E,377nm,0.2s						
VAY				*e*Lg	Lg	04 11 39.2	
	comp=N,944nm,0.2s						
VAY	**Valandovo**	**0.12**	**305**	P	**Pg**	**04 11 36.8**	**-0.7**
VAY	**Valandovo**	**0.12**	**305**	*i* Pg	**Pg**	**04 11 37.4**	**-0.1**
VAY				S	**Sg**	**04 11 39.0**	**-0.1**
VAY				*e*Lg	Lg	04 11 39.7	
	comp=N,944nm,0.2s						
KNT	**Kendrikon**	**0.17**	**121**	P	**Pg**	**04 11 38.6**	**+0.2**
KNT				S	**Sg**	**04 11 41.2**	**+0.6**
KNT	**Kendrikon**	**0.17**	**121**	P	**Pg**	**04 11 38.6**	**+0.2**
KNT				S	**Sg**	**04 11 41.2**	**+0.6**
GRG	**Griva**	**0.37**	**218**	P	**Pg**	**04 11 42.4**	**+0.2**
GRG				S	**Sg**	**04 11 48.2**	**+1.2**
GRG	**Griva**	**0.37**	**218**	*e*PB	**Pg**	**04 11 42.5**	**+0.2**
GRG				*e*SB	**Sg**	**04 11 48.4**	**+1.4**
GRG	**Griva**	**0.37**	**218**	P	**Pg**	**04 11 42.4**	**+0.2**
GRG				S	**Sg**	**04 11 48.2**	**+1.2**
SOH	**Sokhos**	**0.65**	**131**	P	**Pg**	**04 11 47.2**	**-0.3**
SOH				S	**Sg**	**04 11 56.4**	**+0.4**
SOH	**Sokhos**	**0.65**	**131**	*e*PN	**Pg**	**04 11 47.2**	**-0.3**
SOH				*e*SN	**Sg**	**04 11 56.5**	**+0.4**
SOH	**Sokhos**	**0.65**	**131**	P	**Pg**	**04 11 47.2**	**-0.3**
SOH				S	**Sg**	**04 11 56.4**	**+0.4**
KKB	**Krupnik**	**0.68**	**25**	Pg	**Pg**	**04 11 47.5**	**-0.6**
KKB	**Krupnik**	**0.68**	**25**	Pg	**Pg**	**04 11 47.5**	**-0.6**
SRS	**Serrai**	**0.68**	**101**	P	**Pg**	**04 11 47.7**	**-0.4**
SRS				S	**Sg**	**04 11 56.6**	**-0.4**
SRS	**Serrai**	**0.68**	**101**	P	**Pg**	**04 11 47.7**	**-0.4**

SRS				S	Sg	04 11 56.6	-0.4
HORT	Hortiatis	0.72	155	P	Pg	04 11 48.7	-0.1
HORT				S	Sg	04 11 59.1	+1.0
HORT	Hortiatis	0.72	155	P	Pg	04 11 48.7	-0.1
HORT				S	Sg	04 11 59.1	+1.0
MMB	Musomiste	0.84	66	Pg	Pg	04 11 50.5	-0.7
MMB	Musomiste	0.84	66	Pg	Pg	04 11 50.5	-0.7
NVR	Nevrokopi	0.88	83	P	Pg	04 11 51.3	-0.6
NVR				S	Sg	04 12 03.9	+0.6
NVR	Nevrokopi	0.88	83	*e*PN	Pg	04 11 51.5	-0.4
NVR				*e*SN	Sg	04 12 03.1	-0.2
NVR	Nevrokopi	0.88	83	P	Pg	04 11 51.3	-0.6
NVR				S	Sg	04 12 03.9	+0.6
PLG	Polygyros	1.04	147	P	Pb	04 11 54.4	-1.2
PLG				S	Sb	04 12 09.5	-0.1
PLG	Polygyros	1.04	147	*e*PN	Pb	04 11 54.7	-0.9
PLG				*e*SN	Sb	04 12 09.3	-0.3
PLG	Polygyros	1.04	147	P	Pb	04 11 54.4	-1.2
PLG				S	Sb	04 12 09.5	-0.1
FNA	Florina	1.11	246	*e*PN	Pb	04 11 55.7	-1.1
LIT	Litokhoron	1.16	188	*e*PN	Pb	04 11 57.8	+0.2
KZN	Kozani	1.18	217	*e*PN	Pn	04 11 57.2	-1.2
OUR	Ouranopolis	1.33	133	P	Pn	04 12 00.1	-0.3
OUR				S	Sb	04 12 18.9	+0.9
OUR	Ouranopolis	1.33	133	P	Pn	04 12 00.1	-0.3
OUR				S	Sb	04 12 18.9	+0.9
KAVA	Kavala	1.39	100	P	Pn	04 12 01.2	0.0
KAVA				S	Sn	04 12 20.1	+0.1
KAVA	Kavala	1.39	100	P	Pn	04 12 01.2	0.0
KAVA				S	Sn	04 12 20.1	+0.1
VTS	Vitosha	1.39	16	P	Pn	04 12 00.9	-0.5
VTS				S	Sn	04 12 19.1	-1.2
VTS	Vitosha	1.39	16	P	Pn	04 12 00.9	-0.5
VTS				Pg	Pn	04 12 01.9	+0.5
VTS	Vitosha	1.39	16	P	Pn	04 12 00.9	-0.5
VTS	Vitosha	1.39	16	Pg	Pn	04 12 01.9	+0.5
VTS				S	Sn	04 12 19.1	-1.2
VTS				*e*Sg	Sg	04 12 21.8	+2.0
RZN	Rozhen	1.57	73	P	Pn	04 12 04.3	+0.4
RZN	Rozhen	1.57	73	P	Pn	04 12 04.3	+0.4
BARS	Barje	1.70	337	*e*Pn	Pn	04 12 06.2	+0.7
BARS				*e*Sn	Sn	04 12 28.1	+0.4
BARS	Barje	1.70	337	*e*Pn	Pn	04 12 06.2	+0.7
BARS				*e*Sn	Sn	04 12 28.1	+0.4
THL	Klokotos Trika	1.76	198	*e*PN	Pn	04 12 06.2	-0.1
ZAPS	Zavoj	2.02	359	*e*Pn	Pn	04 12 12.0	+2.0
ZAPS				*e*Sn	Sn	04 12 35.4	-0.3
KDZ	Kurdzhali	2.08	78	P	Pn	04 12 12.7	+2.0
KDZ	Kurdzhali	2.08	78	P	Pn	04 12 12.7	+2.0
MPEP	Malo Peshtene	2.24	20	P	Pb	04 12 16.7	+0.6
AOS	Alonnisos	2.26	156	*e*PN	Pn	04 12 12.7	-0.5
ALN	Alexandroupoli	2.55	97	*e*PN	Pn	04 12 16.6	-0.6

IDC 02 04:19:26.8±1.6**, 1°.07N×121°.79E, h0km, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/23**, mbtmp3.4**/3**, Error ellipse: s-maj=258.0km s-min=26.7km az=61.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.24	150	P	P	04 24 46.2	+0.5
	0.5nm,0.6s,baz=326,slow=10,SNR=6.0						
ASAR	Alice Springs	27.27	155	P	P	04 25 12.7	-0.4
	0.2nm,0.4s,baz=335,slow=11,SNR=3.7						
MKAR	Makanchi Array	57.07	329	P	P	04 29 14.8	-0.1
	0.3nm,0.4s,baz=139,slow=7.6,SNR=4.8						

IDC 02 04:50:05.7±2.2**, 3°.10S×129°.41E, h0km, mb3.6**/2**, mb1 3.9**/4**, mb1mx3.6**/22**, mbtmp3.7**/4**, ML3.5**/2**, Error ellipse: s-maj=113.5km s-min=19.8km az=71.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.36	194	Pn	Pn	04 53 46.1	+2.1
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=2.9						
FITZ				Sn	Sn	04 56 19.3	-16
	0.0nm,0.3s,baz=68,slow=19,SNR=2.8						
WRA	Warramunga Arr	17.42	164	P	P	04 54 12.2	+0.5
	0.3nm,0.3s,baz=346,slow=12,SNR=14						
WRA				S	Sn	04 57 22.6	-2.5
	0.1nm,0.3s,baz=342,slow=21,SNR=3.2						
ASAR	Alice Springs	20.91	168	P	Pn	04 54 51.9	-0.6
	2.3nm,0.4s,baz=347,slow=11,SNR=32						
MKAR	Makanchi Array	64.67	326	P	P	05 00 44.8	-0.7
	0.4nm,0.6s,baz=117,slow=7.4,SNR=5.1						

*IDC **02** 05:00:01.2±2.1, 35°.54N×0°.98W, h0km, mb3.0/1, mb1 3.5/3, mb1mx3.2/31, mbtmp3.4/3, ML3.9/2, Error ellipse: s-maj=44.1km s-min=25.4km az=62.0*
*SFS **02** 05:00:01.0, 35°.47N×0°.98W, h0km, ML3.1*
*INMG **02** 05:00:02.2±1.0, 35°.50N×1°.12W, h0km, ML2.8, Error ellipse: s-maj=5.0km s-min=4.2km az=142.0*
*PDA **02** 05:00:02.2±1.0, 35°.50N×1°.12W, h0km, ML2.8, Error ellipse: s-maj=5.0km s-min=4.2km az=142.0*
*LDG **02** 05:00:02.2±0.4, 35°.53N×0°.91W, h30km, Ml3.2/4, Error ellipse: s-maj=9.4km s-min=4.2km az=155.0*
*MDD **02** 05:00:02.6±0.3, 35°.60N×0°.99W, h0km, mbLg3.0/29, Error ellipse: s-maj=4.2km s-min=3.2km az=21.0*
*IGIL **02** 05:00:03.2, 35°.47N×1°.08W, h7km, ML2.7*
*CRAAG **02** 05:00:03.2, 35°.50N×0°.89W, Ml3.9*
*CSEM **02** 05:00:03.5±0.2, 35°.56N×1°.00W, h20km, ML3.9, Error ellipse: s-maj=5.2km s-min=3.7km az=173.0*
*CNRM **02** 05:00:06.8, 35°.43N×0°.80W, h30km, MD3.9*
ISC 02 05:00:03.2±1.2**, 35°.61N**±0°.03×**0°.93W**±0°.02**, h17km**±8km**, n219, σ2s13**/316**, 9C-10D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USTO	Oran	0.33	68	P	Pg	05 00 10.0	-0.1
USTO	Oran	0.33	68	P	Pg	05 00 10.0	-0.1
OTSS	Djebel Tessala	0.35	162	P	Pg	05 00 09.3	-1.1
OTSS	Djebel Tessala	0.35	162	P	Pg	05 00 09.3	-1.1
OTSS	Djebel Tessala	0.35	162	P	Pg	05 00 09.3	-1.1
ODJA	Bouhanifia	0.69	114	P	Pg	05 00 16.6	-0.2
ODJA	Bouhanifia	0.69	114	P	Pg	05 00 16.6	-0.2
ODJA	Bouhanifia	0.69	114	P	Pg	05 00 16.6	-0.2
OJGS	Djebel Guires	1.37	94	P	Pb	05 00 28.9	+0.5
OJGS	Djebel Guires	1.37	94	P	Pb	05 00 28.9	+0.5
OJGS	Djebel Guires	1.37	94	P	Pb	05 00 28.9	+0.5
ZAI	Zaio	1.62	247	P	Pb	05 00 32.0	-0.6
ZAI				S	Sn	05 00 51.0	-0.5
ZAI	Zaio	1.62	247	*i* P	Pb	05 00 32.0	-0.6
ZAI				*i* S	Sn	05 00 51.0	-0.5
MELI	Melilla	1.67	260	P	Pn	05 00 29.1	-2.5
	48nm,0.2s,SNR=7.9						
MELI				S	Sn	05 00 49.2	-3.4
	116nm,0.2s,SNR=7.9						
MELI	Melilla	1.67	260	P	Pn	05 00 29.1	-2.5
	48nm,0.2s,SNR=7.9						
MELI				*e*S	Sn	05 00 50.0	-2.6
EANR	'Ain N'Sour	1.68	78	P	Pn	05 00 30.7	-1.2
EANR	'Ain N'Sour	1.68	78	P	Pn	05 00 30.7	-1.2
EANR	'Ain N'Sour	1.68	78	P	Pn	05 00 30.7	-1.2
EALB	Alboran	1.74	281	⇓P	Pn	05 00 30.2	-2.5
	86nm,0.2s,SNR=18						
EALB				S	Sn	05 00 52.4	-2.1
	125nm,0.2s,SNR=7.9						
EALB	Alboran	1.74	281	P	Pn	05 00 30.2	-2.5
	86nm,0.2s,SNR=18						
EALB				S	Sn	05 00 52.4	-2.1
	125nm,0.2s,SNR=7.9						
ETRT	Tiaret	1.83	96	P	Pn	05 00 26.4	-7.6
ETRT	Tiaret	1.83	96	P	Pn	05 00 26.4	-7.6
ETRT	Tiaret	1.83	96	P	Pn	05 00 26.4	-7.6
ECHF	Ech Chlef	1.92	73	P	Pn	05 00 33.0	-2.1
ECHA	Ech Chlef	1.94	73	P	Pn	05 00 33.0	-2.3
ECHA	Ech Chlef	1.94	73	P	Pn	05 00 33.0	-2.3
CART	Cartagena	1.97	358	⇓P	Pn	05 00 34.1	-1.7
CART				S	Sn	05 00 55.5	-4.7
CART	Cartagena	1.97	358	P	Pn	05 00 34.1	-1.7
CART				*e*S	Sn	05 00 55.5	-4.7
EBER	Berja	2.04	310	⇓P	Pn	05 00 35.6	-1.3
	59nm,0.2s,SNR=18						
EBER				S	Sn	05 01 02.3	+0.2
	70nm,0.3s,SNR=6.6						
EBER	Berja	2.04	310	P	Pn	05 00 35.6	-1.3
	59nm,0.2s,SNR=18						
EBER				S	Sn	05 01 02.3	+0.2
	70nm,0.3s,SNR=6.6						
EBNR	Beni Rached	2.11	70	P	Pn	05 00 36.4	-1.3
EBNR	Beni Rached	2.11	70	P	Pn	05 00 36.4	-1.3
EMUR	La Murta	2.24	354	P	Pn	05 00 38.9	-0.7
	24nm,0.4s,SNR=24						
EMUR				S	Sn	05 01 03.3	-3.6
	146nm,0.3s,SNR=9.8						
EMUR	La Murta	2.24	354	P	Pn	05 00 38.9	-0.7
	24nm,0.4s,SNR=24						
TOU	Touzarine	2.40	255	P	Pn	05 00 42.0	+0.2
TOU				S	Sn	05 01 11.0	+0.1
TOU	Touzarine	2.40	255	*i* P	Pn	05 00 42.0	+0.2
TOU				S	Sn	05 01 11.0	+0.1
EGUA	Guajares	2.46	301	⇑P	Pn	05 00 40.5	-2.0
	91nm,0.2s,SNR=18						
EGUA				S	Sn	05 01 10.1	-2.1
	130nm,0.3s,SNR=7.9						
EGUA	Guajares	2.46	301	P	Pn	05 00 40.5	-2.0
	91nm,0.2s,SNR=18						
EGUA				S	Sn	05 01 10.1	-2.1
	130nm,0.3s,SNR=7.9						
MPAL	Palemas	2.49	262	P	Pn	05 00 45.0	+2.0
MPAL				S	Sn	05 01 14.0	+1.0
MPAL	Palemas	2.49	262	*i* P	Pn	05 00 45.0	+2.0
MPAL				*i* S	Sn	05 01 14.0	+1.0
EHUE	Huescar	2.58	329	⇓P	Pn	05 00 44.6	+0.4
	14nm,0.2s,SNR=18						
EHUE				S	Sn	05 01 15.3	+0.2
	14nm,0.2s,SNR=7.9						
EHUE	Huescar	2.58	329	P	Pn	05 00 44.6	+0.4
	14nm,0.2s,SNR=18						
EHUE				S	Sn	05 01 15.3	+0.2
	14nm,0.2s,SNR=7.9						
EQUE	Quentar	2.58	309	⇓P	Pn	05 00 44.4	+0.2
	80nm,0.2s,SNR=18						
EQUE				S	Sn	05 01 16.3	+1.1
	37nm,0.3s,SNR=4.4						
EQUE	Quentar	2.58	309	P	Pn	05 00 44.4	+0.2
	80nm,0.2s,SNR=18						
EQUE				S	Sn	05 01 16.3	+1.1
	37nm,0.3s,SNR=4.4						
ECOG	Cogollos-Vega	2.70	309	⇓P	Pn	05 00 46.2	+0.3
	45nm,0.2s,SNR=18						
ECOG				S	Sn	05 01 17.9	-0.4
	35nm,0.4s,SNR=4.6						
ECOG	Cogollos-Vega	2.70	309	P	Pn	05 00 46.2	+0.3
	45nm,0.2s,SNR=18						
ECOG				S	Sn	05 01 17.9	-0.4
	35nm,0.4s,SNR=4.6						
ERON	Agron	2.72	302	⇑P	Pn	05 00 44.8	-1.4
	108nm,0.3s,SNR=18						
ERON				S	Sn	05 01 17.7	-1.0
	35nm,0.4s,SNR=7.9						
ERON	Agron	2.72	302	P	Pn	05 00 44.8	-1.4
	108nm,0.3s,SNR=18						
ERON				S	Sn	05 01 17.7	-1.0
	35nm,0.4s,SNR=7.9						
EQES	Quesada	2.78	322	⇓P	Pn	05 00 48.2	+1.1
	164nm,0.3s,SNR=18						
EQES				S	Sn	05 01 21.5	+1.1
	107nm,0.3s,SNR=7.8						
EQES	Quesada	2.78	322	P	Pn	05 00 48.2	+1.1
	164nm,0.3s,SNR=18						
EQES				S	Sn	05 01 21.5	+1.1
	107nm,0.3s,SNR=7.8						
ELOJ	Sierra Loja	3.02	301	P	Pn	05 00 50.3	0.0
	6.8nm,0.2s,SNR=13						
ELOJ				S	Sn	05 01 26.9	+0.8
	18nm,0.4s,SNR=6.9						
ELOJ	Sierra Loja	3.02	301	P	Pn	05 00 50.3	0.0
	6.8nm,0.2s,SNR=13						
ELOJ				S	Sn	05 01 26.9	+0.8
	18nm,0.4s,SNR=6.9						
EMAL	Malaga-Limoner	3.06	293	*e*P	Pn	05 00 48.9	-1.8
EMAL				*e*S	Sn	05 01 19.6	-7.3
ETOB	Tobarra	3.07	351	⇓P	Pn	05 00 51.6	+0.6
	10nm,0.2s,SNR=18						
ETOB				S	Sn	05 01 25.8	-1.5
	110nm,0.4s,SNR=15						
ETOB	Tobarra	3.07	351	P	Pn	05 00 51.6	+0.6
	10nm,0.2s,SNR=18						
ETOB				S	Sn	05 01 25.8	-1.5
	110nm,0.4s,SNR=15						
EBEN	Beniarda	3.14	10	P	Pn	05 00 51.9	0.0
	2.6nm,0.2s,SNR=7.9						
EBEN				S	Sn	05 01 28.5	-0.5
	14nm,0.3s,SNR=9.7						
EBEN	Beniarda	3.14	10	P	Pn	05 00 51.9	0.0
	2.6nm,0.2s,SNR=7.9						
EBEN				S	Sn	05 01 28.5	-0.5
	14nm,0.3s,SNR=9.7						
EMHD	Djebel Mahouad	3.21	78	P	Pn	05 00 51.6	-1.3
EMHD	Djebel Mahouad	3.21	78	P	Pn	05 00 51.6	-1.3
EMHD	Djebel Mahouad	3.21	78	P	Pn	05 00 51.6	-1.3
EVIA	Vianos	3.27	338	⇓P	Pn	05 00 54.3	+0.5
	43nm,0.3s,SNR=18						
EVIA				S	Sn	05 01 32.8	+0.4
	52nm,0.3s,SNR=6.9						
EVIA	Vianos	3.27	338	P	Pn	05 00 54.3	+0.5
	43nm,0.3s,SNR=18						
EVIA				S	Sn	05 01 32.8	+0.4
	52nm,0.3s,SNR=6.9						
ELUQ	Luque	3.32	307	P	Pn	05 00 55.9	+1.5
	33nm,0.5s,SNR=7.9						
ELUQ				S	Sn	05 01 36.0	+2.5
	SNR=7.9						
ELUQ	Luque	3.32	307	P	Pn	05 00 55.9	+1.5
	33nm,0.5s,SNR=7.9						
ELUQ				S	Sn	05 01 36.0	+2.5
	SNR=7.9						
ABA	Alger-Bouzarea	3.42	68	P	Pg	05 01 14.2	+5.5
ABA	Alger-Bouzarea	3.42	68	P	Pg	05 01 14.2	+5.5
ABA	Alger-Bouzarea	3.42	68	P	Pg	05 01 14.2	+5.5
ADJB	Djebel Djouab	3.59	80	P	Pn	05 00 58.3	+0.2
ADJB	Djebel Djouab	3.59	80	P	Pn	05 00 58.3	+0.2
ADJB	Djebel Djouab	3.59	80	P	Pn	05 00 58.3	+0.2
TGT	Taghat	3.73	247	P	Pn	05 01 03.0	+3.0
TGT				S	Sn	05 01 44.0	+0.5
TGT	Taghat	3.73	247	*i* P	Pn	05 01 03.0	+3.0
TGT				S	Sn	05 01 44.0	+0.5
EJIF	Jimena Fronter	3.77	284	P	Pn	05 00 59.8	-0.8
	3.8nm,0.2s,SNR=7.9						
EJIF	Jimena Fronter	3.77	284	P	Pn	05 00 59.8	-0.8
	3.8nm,0.2s,SNR=7.9						
LIJA	Lijar	3.84	291	P	Pn	05 01 03.0	+1.4
LIJA	Lijar	3.84	291	P	Pn	05 01 03.0	+1.4
EIBI	Ibiza	3.86	27	⇑P	Pn	05 01 01.8	0.0
	21nm,0.2s,SNR=18						
EIBI				S	Sn	05 01 45.0	-1.8
	47nm,0.3s,SNR=4.7						
EIBI	Ibiza	3.86	27	P	Pn	05 01 01.8	0.0
	21nm,0.2s,SNR=18						
EADA	Adamuz	3.88	312	P	Pn	05 01 02.0	-0.1
	1.9nm,0.2s,SNR=21						
EADA				S	Sn	05 01 47.9	+0.6
	8.1nm,0.3s,SNR=7.9						
EADA	Adamuz	3.88	312	P	Pn	05 01 02.0	-0.1
	1.9nm,0.2s,SNR=21						
EADA				S	Sn	05 01 47.9	+0.6
	8.1nm,0.3s,SNR=7.9						
AKET	Djebel Ketaf	3.93	82	P	Pn	05 01 06.6	+3.7
AKET	Djebel Ketaf	3.93	82	P	Pn	05 01 06.6	+3.7
AKET	Djebel Ketaf	3.93	82	P	Pn	05 01 06.6	+3.7
MIF	Mishlifen	4.17	239	P	Pn	05 01 08.0	+1.7
MIF				S	Sn	05 01 52.0	-2.9
MIF	Mishlifen	4.17	239	*i* P	Pn	05 01 08.0	+1.7
MIF				*i* S	Sn	05 01 52.0	-2.9
ESPR	Espera	4.18	289	P	Pn	05 01 07.5	+1.4
	SNR=7.9						
ESPR	Espera	4.18	289	P	Pn	05 01 07.5	+1.4
	SNR=7.9						
CZD	Col de Zad	4.27	234	P	Pn	05 01 10.0	+2.4
CZD				S	Sn	05 01 55.0	-2.2
CZD	Col de Zad	4.27	234	*i* P	Pn	05 01 10.0	+2.4
CZD				*i* S	Sn	05 01 55.0	-2.2
ZFT	Errachidia	4.56	220	P	Pn	05 01 12.0	+0.3
ZFT				S	Sn	05 01 59.0	-5.4
ZFT	Errachidia	4.56	220	*i* P	Pn	05 01 12.0	+0.3
ZFT				*i* S	Sn	05 01 59.0	-5.4
ESDC	Sonseca Array	4.72	330	P	Pn	05 01 14.1	+0.5
	5.3nm,0.3s,baz=148,slow=13,SNR=40						
ESDC				S	Sn	05 02 03.7	-4.3
	5.7nm,0.2s,baz=147,slow=22,SNR=7.9						
ESDC	Sonseca Array	4.72	330	Pn	Pn	05 01 14.1	+0.5
	4.9nm,0.3s,baz=148,slow=14,SNR=122						
ESDC				Pg	Pb	05 01 28.2	+2.8
	12nm,0.3s,baz=151,slow=14,SNR=21						
ESDC				Sn	Sn	05 02 03.6	-4.3
	6.2nm,0.3s,baz=152,slow=26,SNR=4.2						
ESDC				Lg	Lg	05 02 18.8	
	7.8nm,0.3s,baz=149,slow=30,SNR=11						
ESDC	Sonseca Array	4.72	330	P	Pn	05 01 14.1	+0.5
	5.3nm,0.3s,baz=148,slow=13,SNR=40						
ESDC				S	Sn	05 02 03.7	-4.3
	5.7nm,0.2s,slow=22,SNR=7.9						
EMOS	Mosqueruela	4.76	4	⇑P	Pn	05 01 16.0	+1.7
	9.5nm,0.3s,SNR=18						
EMOS				S	Sn	05 02 08.3	-0.9
	7.3nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.76	4	P	Pn	05 01 16.0	+1.7
	9.5nm,0.3s,SNR=18						
EMOS				S	Sn	05 02 08.3	-0.9
	7.3nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	5.09	297	P	Pn	05 01 16.8	-1.9
	2.8nm,0.3s,SNR=11						
EMIN				S	Sn	05 02 12.7	-4.4
	1.6nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	5.09	297	P	Pn	05 01 16.8	-1.9
	2.8nm,0.3s,SNR=11						
EMIN				S	Sn	05 02 12.7	-4.4
	1.6nm,0.2s,SNR=7.9						
ETOR	Torete	5.28	351	P	Pn	05 01 22.8	+1.5
	19nm,0.3s,SNR=31						
ETOR				S	Sn	05 02 19.9	-1.9
	SNR=7.9						
ETOR	Torete	5.28	351	P	Pn	05 01 22.8	+1.5
	19nm,0.3s,SNR=31						
ETOR				S	Sn	05 02 19.9	-1.9
	SNR=7.9						
ERTA	Horta de San J	5.43	10	⇓P	Pn	05 01 24.7	+1.3
	2.9nm,0.2s,SNR=18						
ERTA				S	Sn	05 02 23.7	-1.7
	5.7nm,0.4s,SNR=7.9						
ERTA	Horta de San J	5.43	10	P	Pn	05 01 24.7	+1.3
	2.9nm,0.2s,SNR=18						
PBAR	Barrancos	5.53	299	*e*Pn	Pn	05 01 23.6	-1.0
PBAR				*e*Sn	Sn	05 02 24.9	-2.9
PBAR				A	A	05 02 25.4	
	4.4nm,0.5s						
PBAR	Barrancos	5.53	299	P	Pn	05 01 23.6	-1.0
PBAR				S	Sn	05 02 24.9	-2.9
	4.4nm,0.5s						
PBAR	Barrancos	5.53	299	P	Pn	05 01 23.6	-1.0
PBAR				S	Sn	05 02 24.9	-2.9
	4.4nm,0.5s						
EGRO	El Granado	5.61	292	P	Pn	05 01 25.6	-0.3
	2.0nm,0.2s,SNR=6.8						
EGRO				S	Sn	05 02 25.7	-4.2
	SNR=7.9						
EGRO	El Granado	5.61	292	P	Pn	05 01 25.6	-0.3
	2.0nm,0.2s,SNR=6.8						
EGRO				S	Sn	05 02 25.7	-4.2
	SNR=7.9						
GUD	Guadarrama	5.63	334	⇑P	Pn	05 01 27.3	+1.1
	11nm,0.3s,SNR=18						
GUD	Guadarrama	5.63	334	P	Pn	05 01 27.3	+1.1
	11nm,0.3s,SNR=18						
PVAQ	Vaqueiros	5.75	290	*e*Pn	Pn	05 01 26.3	-1.5
PVAQ				*e*Sn	Sn	05 02 29.4	-4.0
PVAQ				A	A	05 02 32.9	
	5.1nm,0.2s						
PVAQ	Vaqueiros	5.75	290	P	Pn	05 01 26.3	-1.5
PVAQ				S	Sn	05 02 29.4	-4.0
	5.1nm,0.2s						
PVAQ	Vaqueiros	5.75	290	P	Pn	05 01 26.3	-1.5
PVAQ				S	Sn	05 02 29.4	-4.0
	5.1nm,0.2s						
EBAD	Badajoz	5.78	305	P	Pn	05 01 26.8	-1.4
	3.9nm,0.2s,SNR=18						
EBAD				S	Sn	05 02 30.6	-3.6
	9.1nm,0.2s,SNR=6.0						
EBAD	Badajoz	5.78	305	P	Pn	05 01 26.8	-1.4
	3.9nm,0.2s,SNR=18						
EBAD				S	Sn	05 02 30.6	-3.6
	9.1nm,0.2s,SNR=6.0						
PBDV	Barranco-do-Ve	5.88	288	*e*Pn	Pn	05 01 28.3	-1.2
PBDV				*e*Sn	Sn	05 02 32.9	-3.6
PBDV				A	A	05 02 38.1	
	5.4nm,0.3s						
PBDV	Barranco-do-Ve	5.88	288	P	Pn	05 01 28.3	-1.2
PBDV				S	Sn	05 02 32.9	-3.6
	5.4nm,0.3s						
PBDV	Barranco-do-Ve	5.88	288	P	Pn	05 01 28.3	-1.2
PBDV				S	Sn	05 02 32.9	-3.6
	5.4nm,0.3s						
EPOB	Poblet	5.95	15	P	Pn	05 01 31.4	+0.9
	3.3nm,0.3s,SNR=8.2						
EPOB				S	Sn	05 02 35.7	-2.5
	7.2nm,0.3s,SNR=7.0						
EPOB	Poblet	5.95	15	P	Pn	05 01 31.4	+0.9
	3.3nm,0.3s,SNR=8.2						
EPLA	Plasencia	6.03	319	⇑P	Pn	05 01 32.2	+0.6
	7.2nm,0.3s,SNR=18						
EPLA	Plasencia	6.03	319	P	Pn	05 01 32.2	+0.6
	7.2nm,0.3s,SNR=18						
PBEJ	Beja	6.07	295	*e*Pn	Pn	05 01 30.9	-1.2
PBEJ				*e*Sn	Sn	05 02 36.7	-4.4
PBEJ				A	A	05 02 42.9	
	3.2nm,0.3s						
PBEJ	Beja	6.07	295	P	Pn	05 01 30.9	-1.2
PBEJ				S	Sn	05 02 36.7	-4.4
	1.6nm,0.3s						
PBEJ	Beja	6.07	295	P	Pn	05 01 30.9	-1.2
PBEJ				S	Sn	05 02 36.7	-4.4
	1.6nm,0.3s						
PESTR	Estremoz	6.23	303	*e*Pn	Pn	05 01 33.3	-1.0
PESTR				*e*Sn	Sn	05 02 42.1	-3.1
PESTR				A	A	05 02 44.0	
	5.7nm,0.5s						
PESTR	Estremoz	6.23	303	P	Pn	05 01 33.3	-1.0
PESTR				S	Sn	05 02 42.1	-3.1
	5.7nm,0.5s						
PESTR	Estremoz	6.23	303	P	Pn	05 01 33.3	-1.0
PESTR				S	Sn	05 02 42.1	-3.1
	5.7nm,0.5s						
MESJ	Messejana	6.26	293	*e*P	Pn	05 01 33.2	-1.6
MESJ				*e*S	Sn	05 02 37.9	-8.1
MESJ				AML	AML	05 02 44.2	
	comp=N,5.0nm,0.3s						
MESJ	Messejana	6.26	293	*e*P	Pn	05 01 33.2	-1.6
MESJ				*e*S	Sn	05 02 37.9	-8.1
MESJ	Messejana	6.26	293	P	Pn	05 01 33.2	-1.6
MESJ				S	Sn	05 02 37.9	-8.1
MESJ	Messejana	6.26	293	P	Pn	05 01 33.2	-1.6
EVO	Evora	6.37	299	*e*Pn	Pn	05 01 35.7	-0.6
EVO				*e*Sn	Sn	05 02 41.6	-7.0
	comp=N,12nm,0.4s						
PMRV	Marv??o	6.39	308	*e*Pn	Pn	05 01 36.1	-0.5
PMRV				A	A	05 03 10.8	
	comp=N,5.6nm,0.5s						
PMRV	Marv??o	6.39	308	P	Pn	05 01 36.1	-0.5
PMRV	Marv??o	6.39	308	P	Pn	05 01 36.1	-0.5
EVOP	Sao Brissos	6.45	299	*e*Pn	Pn	05 01 35.7	-1.6
MORF	Marmelete	6.45	287	*e*Pn	Pn	05 01 35.8	-1.6
MORF				*e*Sn	Sn	05 02 47.7	-2.9
MORF				A	A	05 02 50.9	
	comp=N,4.3nm,0.4s						
MORF	Marmelete	6.45	287	P	Pn	05 01 35.8	-1.6
MORF				S	Sn	05 02 42.2	-8.5
MORF				S	Sn	05 02 47.7	-2.9
	comp=N,4.3nm,0.4s						
MORF	Marmelete	6.45	287	P	Pn	05 01 35.8	-1.6
MORF				S	Sn	05 02 47.7	-2.9
	comp=N,4.3nm,0.4s						
PFVI	Vila Bisbo	6.55	286	*e*Pn	Pn	05 01 37.9	-0.8
PFVI				*e*Sn	Sn	05 02 48.5	-4.6
PFVI				A	A	05 02 52.9	
	comp=N,6.4nm,0.7s						
PFVI	Vila Bisbo	6.55	286	P	Pn	05 01 38.0	-0.8
	comp=N,2.6nm,0.2s,SNR=8.7						
PFVI				S	Sn	05 02 47.5	-5.6
	comp=N,3.9nm,0.2s,SNR=7.9						
PFVI	Vila Bisbo	6.55	286	*e*Pn	Pn	05 01 37.9	-0.8
PFVI				S	Sn	05 02 47.5	-5.6
	comp=N,3.9nm,0.2s,SNR=7.9						
PFVI				*e*Sn	Sn	05 02 48.5	-4.6
	comp=N,6.4nm,0.7s						
PTEO	Sao Teotonio	6.56	289	*e*Pn	Pn	05 01 37.9	-1.0
PTEO				*e*Sn	Sn	05 02 49.7	-3.6
PTEO	Sao Teotonio	6.56	289	P	Pn	05 01 37.9	-1.0
PTEO				S	Sn	05 02 49.7	-3.6
PTEO	Sao Teotonio	6.56	289	P	Pn	05 01 37.9	-1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PTEO				S	Sn	05 02 49.7	-3.6
EMIR	Miracle	6.58	16	P	Pn	05 01 40.5	+1.3
	comp=N,2.7nm,0.3s,SNR=7.2						
EMIR				S	Sn	05 02 54.4	+0.5
	comp=N,11nm,0.5s,SNR=6.7						
EMIR	Miracle	6.58	16	P	Pn	05 01 40.5	+1.3
	comp=N,2.7nm,0.3s,SNR=7.2						
EMIR				S	Sn	05 02 54.4	+0.5
	comp=N,11nm,0.5s,SNR=6.7						
PNCL	Nicolau / Gran	6.58	295	ePn	Pn	05 01 38.0	-1.2
PNCL				eSn	Sn	05 02 48.6	-5.3
PNCL				A	A	05 03 00.5	
	comp=N,2.4nm,0.6s						
PNCL	Nicolau / Gran	6.58	295	ePn	Pn	05 01 38.0	-1.2
PNCL				eSn	Sn	05 02 48.6	-5.3
	comp=N,2.4nm,0.6s						
MOE	Montemor	6.61	298	eSn	Sn	05 02 47.8	-6.6
MOE	Montemor	6.61	298	S	Sn	05 02 47.8	-6.6
CFON	Fontmartina	6.68	22	⇑P	Pn	05 01 41.1	+0.5
	comp=N,3.0nm,0.2s,SNR=18						
CFON				S	Sn	05 02 52.1	-4.3
	comp=N,3.8nm,0.2s,SNR=7.9						
CFON	Fontmartina	6.68	22	P	Pn	05 01 41.1	+0.5
	comp=N,3.0nm,0.2s,SNR=18						
PCBR	Castelo Branco	6.69	311	ePn	Pn	05 01 40.5	-0.1
PCBR				eSn	Sn	05 02 52.6	-3.9
PCBR				A	A	05 02 55.8	
	comp=N,9.7nm,0.5s						
PCBR	Castelo Branco	6.69	311	P	Pn	05 01 40.5	-0.1
PCBR				S	Sn	05 02 52.6	-3.9
	comp=N,4.8nm,0.5s						
PCBR	Castelo Branco	6.69	311	P	Pn	05 01 40.5	-0.1
PCBR				S	Sn	05 02 52.6	-3.9
	comp=N,4.8nm,0.5s						
PMTG	Montargil	6.76	303	ePn	Pn	05 01 40.3	-1.3
PMTG				eSn	Sn	05 02 54.1	-4.1
PMTG	Montargil	6.76	303	ePn	Pn	05 01 40.3	-1.3
PMTG				eSn	Sn	05 02 54.1	-4.1
CSOR	Sort	6.94	13	P	Pn	05 01 46.2	+2.0
	comp=N,1.1nm,0.2s,SNR=5.6						
CSOR				S	Sn	05 03 01.0	-1.9
	SNR=7.9						
CSOR	Sort	6.94	13	P	Pn	05 01 46.2	+2.0
	comp=N,1.1nm,0.2s,SNR=5.6						
MTE	Manteigas	7.08	314	ePn	Pn	05 01 46.3	+0.2
MTE				eSn	Sn	05 03 02.4	-3.8
MTE				A	A	05 03 48.8	
	comp=N,7.3nm,0.7s						
MTE	Manteigas	7.08	314	P	Pn	05 01 46.3	+0.2
MTE				S	Sn	05 03 02.4	-3.8
	comp=N,3.7nm,0.7s						
MTE	Manteigas	7.08	314	P	Pn	05 01 46.3	+0.2
MTE				S	Sn	05 03 02.4	-3.8
	comp=N,3.7nm,0.7s						
IUNC	Unciti	7.15	357	P	Pn	05 01 50.4	+3.4
	comp=N,2.6nm,0.2s,SNR=7.9						
IUNC	Unciti	7.15	357	P	Pn	05 01 50.4	+3.4
	comp=N,2.6nm,0.2s,SNR=7.9						
PTOM	Tomar	7.16	306	ePn	Pn	05 01 46.3	-0.8
PTOM	Tomar	7.16	306	P	Pn	05 01 46.3	-0.8
PTOM	Tomar	7.16	306	P	Pn	05 01 46.3	-0.8
IEPA	Eparoz	7.16	358	P	Pn	05 01 50.5	+3.3
	comp=N,3.8nm,0.3s,SNR=7.9						
IEPA	Eparoz	7.16	358	P	Pn	05 01 50.5	+3.3
	comp=N,3.8nm,0.3s,SNR=7.9						
IPRE	Itoiz	7.19	357	P	Pn	05 01 50.2	+2.6
	SNR=7.9						
IPRE	Itoiz	7.19	357	P	Pn	05 01 50.2	+2.6
	SNR=7.9						
CLLI	Llivia	7.22	17	P	Pn	05 01 50.7	+2.6
	SNR=7.9						
CLLI	Llivia	7.22	17	P	Pn	05 01 50.7	+2.6
	SNR=7.9						
IELO	Elcoad	7.23	358	P	Pn	05 01 50.9	+2.8
	comp=N,1.7nm,0.3s,SNR=7.9						
IELO	Elcoad	7.23	358	P	Pn	05 01 50.9	+2.8
	comp=N,1.7nm,0.3s,SNR=7.9						
ETSF	Etsaut	7.28	2	eP	Pn	05 01 49.7	+0.8
ETSF				eSn	Sn	05 03 03.6	-7.6
	comp=N,1.2nm,0.2s						
ETSF	Etsaut	7.28	2	P	Pn	05 01 49.7	+0.8
MVO	Moncorvo	7.33	321	ePn	Pn	05 01 50.0	+0.6
MVO				eSn	Sn	05 03 11.0	-1.2
MVO				A	A	05 03 53.7	
	comp=N,7.4nm,0.5s						
MVO	Moncorvo	7.33	321	⇑P	Pn	05 01 50.1	+0.7
	comp=N,9.6nm,0.3s,SNR=18						
MVO				S	Sn	05 03 09.1	-3.2
	comp=N,6.9nm,0.4s,SNR=7.9						
MVO	Moncorvo	7.33	321	ePn	Pn	05 01 50.0	+0.6
MVO				S	Sn	05 03 09.1	-3.2
	comp=N,6.9nm,0.4s,SNR=7.9						
MVO				eSn	Sn	05 03 11.0	-1.2
	comp=N,7.4nm,0.5s						
IUSE	Utxeti	7.34	356	P	Pn	05 01 53.6	+3.9
	SNR=7.9						
EPF	Esparros	7.47	7	ePn	Pn	05 01 48.3	-3.2
EPF	Esparros	7.47	7	eP	Pn	05 01 53.1	+1.6
EPF				eSn	Sn	05 03 08.3	-7.6
	comp=N,2.5nm,0.3s						
EPF	Esparros	7.47	7	eP	Pn	05 01 53.1	+1.6
PVIS	Viseu	7.49	315	ePn	Pn	05 01 51.7	+0.1
PVIS				eSn	Sn	05 03 13.6	-2.6
PVIS				A	A	05 03 53.9	
	comp=N,3.5nm,0.8s						
PVIS	Viseu	7.49	315	P	Pn	05 01 51.7	+0.1
PVIS				S	Sn	05 03 13.6	-2.6
	comp=N,1.8nm,0.8s						
PVIS	Viseu	7.49	315	P	Pn	05 01 51.7	+0.1
PVIS				S	Sn	05 03 13.6	-2.6
	comp=N,1.8nm,0.8s						
SJPF	Ste Jean	7.50	358	eP	Pn	05 01 53.8	+2.1
SJPF				eSn	Sn	05 03 08.8	-7.5
	comp=N,1.2nm,0.4s						
SJPF	Ste Jean	7.50	358	P	Pn	05 01 53.8	+2.1
ELIZ	Elizondo	7.56	357	P	Pn	05 01 55.1	+2.5
	comp=N,7.2nm,0.4s,SNR=8.6						
ELIZ	Elizondo	7.56	357	P	Pn	05 01 55.1	+2.5
	comp=N,7.2nm,0.4s,SNR=8.6						
EALK	Alkurruntz	7.61	357	P	Pn	05 01 57.1	+3.8
	comp=N,5.7nm,0.3s,SNR=12						
EALK	Alkurruntz	7.61	357	P	Pn	05 01 57.1	+3.8
	comp=N,5.7nm,0.3s,SNR=12						
PBRG	Braganca	7.67	325	ePn	Pn	05 01 54.8	+0.6
PBRG	Braganca	7.67	325	P	Pn	05 01 54.8	+0.6
PBRG	Braganca	7.67	325	P	Pn	05 01 54.8	+0.6
PVRL	Vila Real	7.77	319	ePn	Pn	05 01 55.8	+0.3
PVRL	Vila Real	7.77	319	P	Pn	05 01 55.8	+0.3
PVRL	Vila Real	7.77	319	P	Pn	05 01 55.8	+0.3
ECAL	Calabor	7.78	326	⇑P	Pn	05 01 56.3	+0.6
	comp=N,10nm,0.3s,SNR=18						
ECAL				S	Sn	05 03 19.6	-3.8
	comp=N,3.8nm,0.3s,SNR=7.9						
ECAL	Calabor	7.78	326	P	Pn	05 01 56.3	+0.6
	comp=N,10nm,0.3s,SNR=18						
ECAL				S	Sn	05 03 19.6	-3.8
	comp=N,3.8nm,0.3s,SNR=7.9						
POLO	Lamas de Olo	7.88	319	ePn	Pn	05 01 57.6	+0.6
POLO				eSn	Sn	05 03 23.6	-2.2
POLO				A	A	05 04 10.8	
	comp=N,2.3nm,0.8s						
POLO	Lamas de Olo	7.88	319	ePn	Pn	05 01 57.6	+0.6
POLO				eSn	Sn	05 03 23.6	-2.2
	comp=N,2.3nm,0.8s						
PCAB	Cabril	8.24	320	ePn	Pn	05 02 02.4	+0.5
PCAB	Cabril	8.24	320	P	Pn	05 02 02.4	+0.5
PCAB	Cabril	8.24	320	P	Pn	05 02 02.4	+0.5
EARI	Arriondas	8.36	338	P	Pn	05 02 04.6	+1.0
	comp=N,2.6nm,0.2s,SNR=23						
EARI				S	Sn	05 03 33.4	-4.3
	comp=N,3.8nm,0.7s,SNR=7.9						
EARI	Arriondas	8.36	338	P	Pn	05 02 04.6	+1.0
	comp=N,2.6nm,0.2s,SNR=23						
EARI				S	Sn	05 03 33.4	-4.3
	comp=N,3.8nm,0.7s,SNR=7.9						
KEST	Kesra	8.36	86	Pn	Pn	05 02 04.4	+0.7
	comp=N,0.4nm,0.3s,baz=259,slow=5.1,SNR=10						
PGAV	Gavieira, Arco	8.55	320	ePn	Pn	05 02 06.8	+0.6
PGAV				eSn	Sn	05 03 38.6	-3.7
PGAV	Gavieira, Arco	8.55	320	ePn	Pn	05 02 06.8	+0.6
PGAV				eSn	Sn	05 03 38.6	-3.7
CAF	Calviac	9.58	13	eP	Pn	05 02 21.9	+1.6
CAF	Calviac	9.58	13	P	Pn	05 02 21.9	+1.6
QUIF	Quistinic	12.41	353	eP	Pn	05 03 00.3	+1.4
QUIF	Quistinic	12.41	353	P	Pn	05 03 00.3	+1.4
ROSF	Rostrenen	12.84	353	eP	Pn	05 03 05.4	+0.6
ROSF	Rostrenen	12.84	353	P	Pn	05 03 05.4	+0.6
TORD	Torodi Ar. Bea	22.49	173	P	P	05 05 01.7	-0.2
	comp=N,0.5nm,0.8s,baz=356,slow=11,SNR=3.6						

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*ISCJB **02** 05:06:24.3±0.5, 17°.87S±0°.04×167°.59E±0°.07, h23km, mb4.5/19, MS4.2/2, Error ellipse: s-maj=9.8km s-min=5.9km az=9.6*
*NOU **02** 05:06:25.5±2.2, 17°.87S×167°.66E, h30km±999km, MD3.3, ML4.2*
*IDC **02** 05:06:26.8±0.6, 17°.77S×167°.68E, h30km±3km, mb4.1/15, mb1 4.3/16, mb1mx4.2/22, mbtmp4.2/16, ML3.9/1, MS4.3/2, Ms1 4.3/2, ms1mx3.6/32, Error ellipse: s-maj=17.4km s-min=12.5km az=124.0*
*NEIC **02** 05:06:27.4±0.8, 17°.80S×167°.61E, h34km±5km, mb4.9/7, Error ellipse: s-maj=9.6km s-min=7.3km az=151.0*
ISC 02 05:06:26.1±0.4, **17°.83S**±0°.06×**167°.64E**±0°.08, **h23**km, **n70**, σ**1s29**/90, **mb4.6**/19, **2C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.36	189	eP	Pn	05 07 32.4	+1.4
BAYA				eS	Sn	05 08 19.5	-1.6
DZM	Mont Dzumac	4.37	195	eP	Pn	05 07 30.2	-0.9
DZM				eS	Sn	05 08 19.6	-1.8
DZM				AMP		05 08 27.0	
	comp=Z,1μm,2.6s						
DZM	Mont Dzumac	4.37	195	ePn	Pn	05 07 30.4	-0.7
DZM				Sn	Sn	05 08 18.7	-2.7
DZM	Mont Dzumac	4.37	195	Pn	Pn	05 07 30.0	-1.1
	comp=Z,6.8nm,0.3s,baz=26,slow=17,SNR=17						
DZM				Sn	Sn	05 08 18.7	-2.7
	comp=Z,9.6nm,0.3s,baz=304,slow=23,SNR=6.7						
NOUC	Port Laguerre	4.43	196	eS	Sn	05 08 22.3	-0.6
MSVF	Nonsavu	9.92	91	ePn	Pn	05 08 49.1	+1.7
	comp=Z,93nm,1.0s						
EIDS	Eidsvold	17.12	241	ePn	Pn	05 10 24.0	0.0
ARMA	Armidale	19.22	226	eP	P	05 10 48.5	-0.4
CTA	Charters Tower	20.35	260	P	P	05 11 01.4	+0.3
CTA	Charters Tower	20.35	260	P	P	05 11 01.4	+0.3
	comp=Z,11nm,0.8s,baz=80,slow=13,SNR=8.1						
CTAO	Charters Tower	20.35	260	eP	P	05 11 01.4	+0.3
	comp=Z,20nm,0.8s						
URZ	Urewera	21.98	160	P	P	05 11 19.3	+0.9
URZ	Urewera	21.98	160	P	P	05 11 19.3	+0.9
	comp=Z,6.8nm,0.6s,baz=270,slow=6.1,SNR=4.1						
STKA	Stephens Creek	27.37	234	eP	P	05 12 10.4	+0.6
	comp=Z,3.4nm,0.9s						
STKA				pP	pP	05 12 19.5	+2.8
STKA	Stephens Creek	27.37	234	P	P	05 12 10.6	+0.8
	comp=Z,4.7nm,0.8s,baz=60,slow=7.9,SNR=10						
STKA				pP	pP	05 12 19.5	+2.8
	comp=Z,18nm,0.9s,baz=65,slow=9.0,SNR=16						
RAR	Rarotonga	30.87	102	LR	LR	05 21 30.7	
	comp=Z,460nm,18.8s,baz=315,slow=29						
WRAB	Tennant Creek	31.54	261	eP	P	05 12 46.0	-0.9
WRA	Warramunga Arr	31.55	261	P	P	05 12 45.8	-1.2
WRA				pP	pP	05 12 54.7	+0.7
WRA				pPcP		05 15 48.3	
WRA	Warramunga Arr	31.55	261	P	P	05 12 45.8	-1.2
	comp=Z,3.5nm,0.8s,baz=90,slow=8.8,SNR=14						
WRA				pP	pP	05 12 54.7	+0.7
	comp=Z,7.1nm,0.8s,baz=89,slow=8.7,SNR=13						
WRA				pPcP		05 15 48.3	
	comp=Z,1.2nm,0.7s,baz=94,slow=2.8,SNR=6.2						
AS31	Alice Springs	32.03	254	eP	P	05 12 50.3	-0.9
ASAR	Alice Springs	32.03	254	P	P	05 12 50.4	-0.8
ASAR				pP	pP	05 12 60.0	+1.8
ASAR				pPcP		05 15 47.8	
ASAR	Alice Springs	32.03	254	P	P	05 12 50.4	-0.8
	comp=Z,8.1nm,0.7s,baz=79,slow=8.9,SNR=42						
ASAR				pP	pP	05 12 60.0	+1.8
	comp=Z,15nm,0.8s,baz=80,slow=8.8,SNR=16						
ASAR				pPcP		05 15 47.8	
	comp=Z,1.3nm,0.8s,baz=103,slow=2.3,SNR=4.9						
BBOO	Buckleboo	32.06	236	eP	P	05 12 51.5	+0.1
	comp=Z,266nm,0.8s						
FITZ	Fitzroy Crossi	39.89	263	P	P	05 13 58.6	+0.1
FITZ				pP	pP	05 14 07.9	+2.3
FITZ	Fitzroy Crossi	39.89	263	P	P	05 13 58.6	+0.1
	comp=Z,9.8nm,0.8s,baz=137,slow=7.0,SNR=13						
FITZ				pP	pP	05 14 07.9	+2.3
	comp=Z,31nm,0.9s,baz=102,slow=10,SNR=18						
NWAO	Narrogin (SRO)	47.53	241	P	P	05 14 59.0	-0.9
NWAO	Narrogin (SRO)	47.53	241	P	P	05 14 59.0	-0.9
	comp=Z,7.4nm,0.9s,baz=90,slow=7.1,SNR=2.9						
DAV	Davao City (W)	48.34	297	LR	LR	05 34 29.2	
	comp=Z,318nm,18.4s,baz=348,slow=35						
KSM	Kuching	59.59	283	eP	P	05 16 28.8	+0.2
	comp=Z,9.6nm,1.0s						
VNDA	Vanda	59.79	181	P	P	05 16 28.4	-0.6
VNDA	Vanda	59.79	181	P	P	05 16 28.4	-0.6
	comp=Z,0.4nm,0.7s,baz=27,slow=5.1,SNR=2.0						
MJAR	Matsushiro Arr	60.81	333	P	P	05 16 34.1	-2.4
MJAR	Matsushiro Arr	60.81	333	P	P	05 16 34.1	-2.4
	comp=Z,0.7nm,0.4s,baz=172,slow=10,SNR=5.4						
PETK	Petropavlovsk-	71.17	354	P	P	05 17 42.5	-0.3
PETK				pP	pP	05 17 51.8	+1.6
PETK	Petropavlovsk-	71.17	354	P	P	05 17 42.5	-0.3
	comp=Z,8.0nm,0.8s,baz=150,slow=12,SNR=13						
PETK				pP	pP	05 17 51.8	+1.6
	comp=Z,8.9nm,0.9s,baz=147,slow=8.5,SNR=6.9						
QSPA	South Pole Qui	72.21	180	eP	P	05 17 49.7	+0.5
	comp=Z,16nm,0.9s						
QSPA	South Pole Qui	72.21	180	P	P	05 17 50.2	+1.0
	comp=Z,5.4nm,0.8s,baz=7.2,slow=1.5,SNR=26						
CMAR	Chiang Mai Arr	76.55	295	P	P	05 18 16.1	+1.0
CMAR				pP	PcP	05 18 25.6	-1.0
CMAR	Chiang Mai Arr	76.55	295	P	P	05 18 16.1	+1.0
	comp=Z,1.4nm,0.9s,baz=135,slow=4.4,SNR=6.7						
CMAR				pP	PcP	05 18 25.6	-1.0
	comp=Z,3.5nm,0.8s,baz=130,slow=4.8,SNR=8.6						
MAW	Mawson	79.16	202	pP	pP	05 18 39.1	+2.9
MAW	Mawson	79.16	202	pP	pP	05 18 39.1	+2.9
	comp=Z,6.3nm,0.9s,baz=95,slow=7.5,SNR=7.9						
ULN	Ulaanbaatar	84.84	324	eP	P	05 18 59.6	+0.6
	comp=Z,6.2nm,0.8s						
SONM	Songino Array	85.19	324	P	P	05 19 02.1	+1.4
SONM	Songino Array	85.19	324	P	P	05 19 02.1	+1.4
	comp=Z,2.8nm,0.9s,baz=134,slow=4.3,SNR=14						
BILL	Bilibino	85.63	359	eP	P	05 19 01.4	-0.9
	comp=Z,35nm,1.3s						
NVAR	Mina Array Bea	89.02	49	P	P	05 19 18.8	-0.8
NVAR	Mina Array Bea	89.02	49	P	P	05 19 18.8	-0.8
	comp=Z,0.3nm,0.3s,baz=227,slow=9.3,SNR=6.0						
ILAR	Eielson Array	89.35	18	P	P	05 19 17.8	-2.5
ILAR				pP	pP	05 19 28.0	+0.1
ILAR	Eielson Array	89.35	18	P	P	05 19 17.8	-2.5
	comp=Z,1.2nm,0.8s,baz=239,slow=5.0,SNR=16						
ILAR				pP	pP	05 19 28.0	+0.1
	comp=Z,1.2nm,0.7s,baz=233,slow=4.9,SNR=9.2						
MAIT	Maitri	90.05	188	eP	P	05 19 14.3	-9.3
SNAA	Sanae	90.49	183	eP	P	05 19 25.9	+0.1
	comp=Z,9.5nm,1.0s						
ZALV	Zalesovo Beam	100.09	323	P	Pdif	05 20 10.1	+0.5
ZALV	Zalesovo Beam	100.09	323	P	Pdif	05 20 10.1	+0.5
	comp=Z,0.2nm,0.3s,baz=126,slow=7.3,SNR=3.8						
YKA	Yellowknife Ar	100.12	27	P	Pdif	05 20 08.2	-1.4
YKA				pP	pP	05 20 18.6	+1.4
YKA	Yellowknife Ar	100.12	27	P	Pdif	05 20 08.1	-1.4
	comp=Z,0.2nm,0.6s,baz=258,slow=4.9,SNR=5.7						
YKA				pP	pP	05 20 18.6	+1.4
	comp=Z,0.3nm,0.6s,baz=256,slow=4.7,SNR=5.2						
ARCES	ARCESS Array B	123.33	345	PKP	PKPdf	05 25 19.4	-1.3
ARCES				pPKP	pPKPdf	05 25 29.3	+0.9
ARCES	ARCESS Array B	123.33	345	PKP	PKPdf	05 25 19.4	-1.3
	comp=Z,2.4nm,0.9s,baz=325,slow=1.5,SNR=4.1						
ARCES				pPKP	pPKPdf	05 25 29.3	+0.9
	comp=Z,3.7nm,0.8s,baz=90,slow=2.4,SNR=3.4						
NB2	NORSAR Subarra	133.69	344	PKPdf	pPKPdf	05 25 50.0	+1.6
	comp=Z,1.2nm,1.0s,baz=31,slow=1.9						
NOA	NORSAR Array B	133.69	344	PKP	PKPdf	05 25 40.5	-0.1
NOA				pPKP	pPKPdf	05 25 50.3	+1.9
NOA	NORSAR Array B	133.69	344	PKP	PKPdf	05 25 40.5	-0.1
	comp=Z,0.6nm,0.7s,baz=331,slow=19,SNR=1.2						
NOA				pPKP	pPKPdf	05 25 50.3	+1.9
	comp=Z,0.9nm,0.7s,baz=32,slow=2.0,SNR=3.9						
WLF	Walferdange	144.91	339	ePKPdf	PKPab	05 26 00.0	-0.4
BFO	Black Forest	145.22	336	ePKPbc	PKPbc	05 26 01.2	-0.4
FETA	Feichten	145.23	332	⇑iPKPdf	PKPdf	05 26 02.1	-0.1
	comp=Z,16nm,0.8s						
DAVA	Damuels	145.40	333	⇑iPKPdf	PKPbc	05 26 02.3	-0.1
	comp=Z,11nm,0.9s						
ECH	Echery	145.76	337	ePKPdf	PKPdf	05 26 02.9	0.0
BNI	Bardonecchia	148.53	334	ePKPdf	PKPdf	05 26 08.2	+0.4
ESDC	Sonseca Array	157.05	343	PKPab	PKPab	05 26 49.3	-1.2
ESDC	Sonseca Array	157.05	343	PKPab	PKPab	05 26 49.3	-1.2
	comp=Z,0.2nm,0.3s,baz=352,slow=3.7,SNR=3.6						
TORD	Torodi Ar. Bea	165.68	253	PKP	PKPdf	05 26 29.1	-0.8
TORD				pPKP	pPKPdf	05 26 38.9	+1.1
TORD				pPKPab	pPKPab	05 27 38.4	+1.8
TORD	Torodi Ar. Bea	165.68	253	PKP	PKPdf	05 26 29.1	-0.8
	comp=Z,1.2nm,1.1s,baz=216,slow=3.6,SNR=4.3						
TORD				pPKP	pPKPdf	05 26 38.9	+1.1
	comp=Z,2.6nm,1.1s,baz=353,slow=1.9,SNR=8.2						
TORD				pPKPab	pPKPab	05 27 38.4	+1.8
	comp=Z,1.4nm,1.0s,baz=115,slow=4.3,SNR=4.6						

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*ATH **02** 05:07:34.6, 40°.25N×21°.93E, h9km±1km, MD3.6/29*
*THE **02** 05:07:35.3, 40°.27N×21°.93E, h0km±3km, ML3.3/8, Error ellipse: s-maj=3.0km s-min=0.8km az=45.0*
*CSEM **02** 05:07:35.4±0.2, 40°.24N×21°.97E, h2km, ML3.3/8, Error ellipse: s-maj=4.3km s-min=3.8km az=88.0*
*SKO **02** 05:07:35.8, 40°.26N×21°.97E, h2km, M2.7, ML3.1*
*TIR **02** 05:07:37.0±3.4, 40°.38N×21°.73E, h0km±28km*
ISC 02 05:07:34.4±1.0, **40°.27N**±0°.02×**21°.94E**±0°.02, **h4**km±8km, **n108**, σ**1s07**/121, **13C-2D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.13	286	P	Pg	05 07 37.2	0.0
KZN				S	Sg	05 07 39.4	+0.4
KZN	Kozani	0.13	286	⇑iPG	Pg	05 07 37.3	0.0
KZN				eSG	Sg	05 07 39.5	+0.4
KZN	Kozani	0.13	286	P	Pg	05 07 37.2	0.0
KZN				S	Sg	05 07 39.4	+0.4
LIT	Litokhoron	0.45	112	P	Pg	05 07 43.5	+0.3
LIT	Litokhoron	0.45	112	P	Pg	05 07 43.5	+0.3
FNA	Florina	0.67	320	P	Pg	05 07 46.6	-0.7
FNA				S	Sb	05 07 58.1	-0.3
FNA	Florina	0.67	320	ePB	Pb	05 07 48.0	-0.7
FNA				eSB	Sb	05 07 57.5	-0.9
NEST	Nestorio	0.70	282	P	Pg	05 07 47.7	-0.1
NEST				S	Sb	05 07 58.8	-0.3
NEST	Nestorio	0.70	282	P	Pg	05 07 47.7	-0.1
NEST				S	Sb	05 07 58.8	-0.3
THL	Klokotos Trika	0.71	175	P	Pg	05 07 47.6	-0.4
THL				S	Sb	05 07 59.1	-0.2
THL	Klokotos Trika	0.71	175	ePB	Pb	05 07 47.9	-1.4
THL				eSB	Sb	05 07 58.0	-1.3
THL	Klokotos Trika	0.71	175	P	Pg	05 07 47.6	-0.4
THL				S	Sb	05 07 59.1	-0.2
GRG	Griva	0.77	27	P	Pb	05 07 49.7	-0.7
GRG	Griva	0.77	27	ePB	Pb	05 07 49.8	-0.7
GRG				eSB	Sb	05 08 00.8	-0.5
GRG	Griva	0.77	27	P	Pb	05 07 49.7	-0.7
THE	Thessaloniki	0.86	65	P	Pn	05 07 52.9	-0.4
THE	Thessaloniki	0.86	65	P	Pn	05 07 52.9	-0.4
BIA	Bitola	0.88	328	P	Pg	05 07 51.3	-0.1
BIA				S	Sn	05 08 05.9	-1.1
BIA	Bitola	0.88	328	i Pg	Pg	05 07 51.4	0.0
BIA				eSg	Sn	05 08 05.7	-1.3
BIA	Bitola	0.88	328	i Pg	Pg	05 07 51.4	0.0
BIA				eSg	Sn	05 08 05.7	-1.3
HORT	Hortiatis	0.94	69	P	Pb	05 07 53.3	-0.1
HORT				S	Sn	05 08 08.0	-0.5
HORT	Hortiatis	0.94	69	P	Pb	05 07 53.3	-0.1
KBN	Korca	0.95	292	ePG	Pn	05 07 53.3	-1.3
KBN				i SG	Sn	05 08 10.0	+1.5
KBN	Korca	0.95	292	P	Pb	05 07 53.1	-0.4
KBN	Korca	0.95	292	ePg	Pn	05 07 53.3	-1.3
	SNR=9.0						
KBN				i Sg	Sn	05 08 10.0	+1.5
	SNR=9.0						
JAN	Janina	1.04	234	P	Pn	05 07 56.6	+0.9
JAN	Janina	1.04	234	ePG	Pg	05 07 53.5	-0.8
JAN	Janina	1.04	234	P	Pn	05 07 56.6	+0.9
KNT	Kendrikon	1.15	39	P	Pn	05 07 57.1	-0.2
KNT				S	Sn	05 08 14.7	+1.2
KNT	Kendrikon	1.15	39	P	Pn	05 07 57.1	-0.2
KNT				S	Sn	05 08 14.7	+1.2
VAY	Valandovo	1.16	24	P	Pb	05 07 55.8	-1.1
VAY	Valandovo	1.16	24	i Pg	Pb	05 07 55.8	-1.1
VAY				i Sn	Sn	05 08 14.2	+0.7
VAY				eLg	Lg	05 08 15.9	
	comp=E,696nm,1.4s						
VAY				eLg	Lg	05 08 18.2	
	comp=N,633nm,0.9s						
VAY	Valandovo	1.16	24	P	Pb	05 07 55.8	-1.1
VAY	Valandovo	1.16	24	i Pg	Pb	05 07 56.2	-0.7
VAY				i Sn	Sn	05 08 14.7	+1.2
VAY				eLg	Lg	05 08 18.7	
	comp=N,633nm,0.9s						
PLG	Polygyros	1.16	84	P	Pn	05 07 57.0	-0.4
PLG	Polygyros	1.16	84	ePN	Pn	05 07 57.0	-0.4
PLG				eSB	Sn	05 08 12.3	-1.3
PLG	Polygyros	1.16	84	P	Pn	05 07 57.0	-0.4
SOH	Sokhos	1.21	62	P	Pg	05 07 58.2	+0.5
SOH	Sokhos	1.21	62	ePB	Pg	05 07 58.6	+0.9
SOH				eSB	Sn	05 08 14.2	-0.8
SOH	Sokhos	1.21	62	P	Pg	05 07 58.2	+0.5
MAKR	Makrakomi, Fth	1.26	173	P	Pg	05 07 58.9	+0.2
MAKR	Makrakomi, Fth	1.26	173	P	Pg	05 07 58.9	+0.2
AGG	Agios Georgios	1.28	166	P	Pg	05 07 59.2	+0.2
AGG				S	Sn	05 08 19.2	+2.5
AGG	Agios Georgios	1.28	166	ePB	Pg	05 07 59.3	+0.2
AGG	Agios Georgios	1.28	166	P	Pg	05 07 59.2	+0.2
XOR	Xorichti	1.32	133	P	Pg	05 07 59.6	-0.2
XOR	Xorichti	1.32	133	P	Pg	05 07 59.6	-0.2
EVR	Evrytania	1.35	184	P	Pg	05 08 00.7	+0.3
EVR				S	Sg	05 08 20.9	+2.9
EVR	Evrytania	1.35	184	ePB	Pg	05 08 00.7	+0.3
EVR				eSB	Sg	05 08 19.1	+1.1
EVR	Evrytania	1.35	184	P	Pg	05 08 00.7	+0.3
NEO	Neokhori	1.38	134	P	Pg	05 08 00.5	-0.4
NEO	Neokhori	1.38	134	ePB	Pg	05 08 00.7	-0.2
NEO				eSB	Sg	05 08 18.7	-0.1
NEO	Neokhori	1.38	134	P	Pg	05 08 00.5	-0.4
SRS	Serrai	1.52	55	P	Pg	05 08 03.2	-0.3
SRS	Serrai	1.52	55	P	Pg	05 08 03.2	-0.3
SRN	Sarande	1.54	256	ePN	Pg	05 08 06.7	+2.8
SRN	Sarande	1.54	256	P	Pg	05 08 04.0	+0.1
SRN	Sarande	1.54	256	P	Pg	05 08 04.0	+0.1
SRN	Sarande	1.54	256	ePn	Pg	05 08 06.7	+2.8
	SNR=4.0						
OUR	Ouranopolis	1.56	87	P	Pg	05 08 03.7	-0.7
OUR	Ouranopolis	1.56	87	P	Pg	05 08 03.7	-0.7
SKIA	Skiathos	1.61	133	P	Pb	05 08 03.9	-0.8
SKIA	Skiathos	1.61	133	P	Pb	05 08 03.9	-0.8
KEK	Kerkira	1.74	252	ePN	Pg	05 08 07.8	+0.1
KEK				eSN	Sg	05 08 31.0	+0.8
SKO	Skopje	1.74	348	ePn	Pg	05 08 07.4	-0.4
LKD2	Lefkada island	1.78	214	ePG	Pg	05 08 07.2	-1.3
LKR	Lokris	1.81	153	ePN	Pb	05 08 07.2	-0.9
NVR	Nevrokopi	1.81	53	ePN	Pb	05 08 07.7	-0.5
EFP	Efpalio	1.84	181	ePG	Pg	05 08 08.7	-1.0
AOS	Alonnisos	1.86	126	ePB	Pb	05 08 07.1	-1.8
KALE	Kalithea	1.88	175	P	Pb	05 08 08.3	-1.1
KALE	Kalithea	1.88	175	ePN	Pb	05 08 08.4	-1.0
KALE	Kalithea	1.88	175	P	Pb	05 08 08.3	-1.1
TIR	Tirane	1.91	305	ePN	Pg	05 08 13.1	+2.1
TIR	Tirane	1.91	305	ePn	Pg	05 08 13.1	+2.1
	SNR=4.0						
LAKA	Lakka	2.03	179	ePG	Pb	05 08 11.6	-0.2
KLV	Kalavryta, Ach	2.23	176	ePN	Pb	05 08 13.6	-1.7
RLS	Riolos of Patr	2.24	190	ePN	Pb	05 08 13.2	-2.2
VLS	Valsamata	2.34	207	ePN	Pb	05 08 16.0	-1.1
LTK	Loutraki	2.38	160	ePN	Pb	05 08 15.5	-2.3
VTS	Vitosha	2.51	22	⇑iP	Pb	05 08 18.6	-1.5
VTS	Vitosha	2.51	22	⇑iP	Pb	05 08 18.6	-1.5
VTS	Vitosha	2.51	22	ePn	Pb	05 08 18.9	-1.2
BARS	Barje	2.55	358	ePn	Pb	05 08 18.1	-2.6
SMTH	Samothraki Isl	2.75	85	ePN	Pn	05 08 19.7	+0.4
VLX	Vlachokerasia	2.92	173	ePB	Pb	05 08 23.7	-3.3
DID	Didima	2.94	159	ePN	Pn	05 08 21.8	-0.1
PDG	Podgorica	2.96	318	ePn	Pb	05 08 24.9	-2.7
ITM	Ithomi	3.08	180	ePB	Pb	05 08 26.1	-3.7
ALN	Alexandroupoli	3.19	77	ePN	Pn	05 08 26.2	+0.9
DYR	Agios Nikonas	3.52	175	ePN	Pn	05 08 31.8	+2.0
VLI	Veliai	3.63	167	ePN	Pn	05 08 32.7	+1.3
CHOS	Chios island	3.70	119	ePN	Pn	05 08 34.0	+1.5
BBLS	Lazići	4.06	333	ePn	Pn	05 08 40.1	+2.8

DIVS	**Divibare**	**4.09**	**340**	*e*Pn	**Pn**	**05 08 39.8**	**+2.0**
ANKY	**Antikythira Is**	**4.52**	**166**	*e*PN	Pn	05 08 46.9	+3.3
GZR	**Gura Zlata**	**5.16**	**7**	⇑*i*P	**Pn**	**05 08 53.9**	**+1.5**
GZR	**Gura Zlata**	**5.16**	**7**	⇑*i*P	**Pn**	**05 08 53.9**	**+1.5**
BZS	**Buzias**	**5.35**	**358**	⇑*i*P	**Pn**	**05 08 57.1**	**+2.1**
BZS	**Buzias**	**5.35**	**358**	⇑*i*P	**Pn**	**05 08 57.1**	**+2.1**
VOIR		**5.65**	**23**	⇓*i*P	Pn	05 09 01.9	+2.7
VOIR		**5.65**	**23**	⇓*i*P	Pn	05 09 01.9	+2.7
MLR	**Muntele Rosu**	**5.99**	**28**	⇑*i*P	Pn	05 09 09.7	+5.8
TIRR	**Tirgusor**	**6.36**	**47**	⇑*i*P	Pn	05 09 04.8	-4.1
PLOR	**Plostina**	**6.56**	**30**	⇑*i*P	Pn	05 09 15.1	+3.5
PLOR	**Plostina**	**6.56**	**30**	⇑*i*P	Pn	05 09 15.1	+3.5
VRI	**Vrincioaia**	**6.60**	**30**	⇑*i*P	Pn	05 09 15.6	+3.4
VRI	**Vrincioaia**	**6.60**	**30**	⇑*i*P	Pn	05 09 15.6	+3.4

IDC 02 05:08:38.7±0.8**, 24°.20S×69°.73E, h0km, mb4.0**/7**, mb1 4.1**/7**, mb1mx3.8**/25**, mbtmp4.0**/7**, MS4.2**/3**, Ms1 4.1**/3**, ms1mx3.4**/44**, Error ellipse: s-maj=28.4km s-min=23.5km az=14.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**21.72**	**281**	LR	LR	05 19 38.0	
	comp=Z,396nm,19.5s,baz=191,slow=30						
BOSA	**Boshof**	**39.91**	**254**	P	P	05 16 14.7	-0.2
	3.4nm,1.0s,baz=76,slow=8.3,SNR=3.0						
BOSA				LR	LR	05 30 04.6	
	comp=Z,298nm,18.4s,baz=264,slow=32						
ASAR	**Alice Springs**	**58.16**	**104**	P	P	05 18 34.8	-0.1
	1.0nm,0.7s,baz=252,slow=6.8,SNR=7.3						
WRA	**Warramunga Arr**	**59.56**	**100**	P	P	05 18 44.7	+0.1
	1.0nm,0.7s,baz=251,slow=7.0,SNR=4.6						
AAK	**Ala-Archa**	**66.64**	**4**	LR	LR	05 46 15.0	
	comp=Z,185nm,19.3s,baz=109,slow=34						
VNDA	**Vanda**	**67.02**	**166**	P	P	05 19 32.9	-0.2
	1.0nm,0.8s,baz=281,slow=7.3,SNR=4.8						
MKAR	**Makanchi Array**	**71.56**	**9**	P	P	05 20 01.4	-0.1
	1.3nm,0.7s,baz=191,slow=5.9,SNR=15						
TORD	**Torodi Ar. Bea**	**76.08**	**291**	P	P	05 20 29.1	+0.3
	0.4nm,0.6s,baz=95,slow=4.5,SNR=4.7						
ZALV	**Zalesovo Beam**	**78.91**	**9**	P	P	05 20 43.6	0.0
	1.6nm,0.7s,baz=196,slow=4.6,SNR=7.1						
YKA	**Yellowknife Ar**	**141.61**	**3**	PKP	PKPdf	05 28 12.2	+0.8
	0.2nm,0.6s,baz=331,slow=2.5,SNR=5.5						

*SOF **02** 05:10:01.9, 41°.95N×23°.26E, h10km, MD2.7*
*SKO **02** 05:10:01.8, 41°.93N×23°.17E, h18km, M2.1, ML2.5*
*CSEM **02** 05:10:02.1±0.1, 41°.95N×23°.20E, h10km, MD2.7, Error ellipse: s-maj=3.9km s-min=2.9km az=72.0*
*THE **02** 05:10:02.5, 41°.92N×23°.23E, h3km±2km, ML2.8/3, Error ellipse: s-maj=2.5km s-min=1.0km az=308.0*
*ATH **02** 05:10:02.1, 41°.96N×23°.40E, h40km±3km, MD3.5/7*
*BEO **02** 05:10:03.4±1.1, 41°.94N×23°.19E, h0km, ML2.4/5*
ISC 02 05:10:02.0±0.9**, 41°.94N**±0°.02×**23°.22E**±0°.02**, h13**km±7km**, n55, σ0°.75**/82**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.13**	**236**	*i* Pg	**Pg**	**05 10 05.5**	**+0.1**
KKB	**Krupnik**	**0.13**	**236**	*i* Pg	**Pg**	**05 10 05.5**	**+0.1**
MMB	**Musomiste**	**0.51**	**133**	*i* Pg	**Pb**	**05 10 12.9**	**+0.1**
MMB	**Musomiste**	**0.51**	**133**	*i* Pg	**Pb**	**05 10 12.9**	**+0.1**
VTS	**Vitosha**	**0.65**	**359**	P	**Pg**	**05 10 15.0**	**+0.3**
VTS				S	**Sg**	**05 10 23.9**	**+0.5**
VTS	**Vitosha**	**0.65**	**359**	*i* Pg	**Pg**	**05 10 15.1**	**+0.3**
VTS	**Vitosha**	**0.65**	**359**	*e*Pg	**Pg**	**05 10 14.7**	**-0.1**
VTS				*e*Sg	**Sg**	**05 10 23.9**	**+0.5**
VTS	**Vitosha**	**0.65**	**359**	P	**Pg**	**05 10 15.0**	**+0.3**
VTS				S	**Sg**	**05 10 23.9**	**+0.5**
NVR	**Nevrokopi**	**0.76**	**141**	P	**Pg**	**05 10 16.6**	**-0.1**
NVR				S	**Sg**	**05 10 26.5**	**-0.1**
NVR	**Nevrokopi**	**0.76**	**141**	*e*P	**Pg**	**05 10 16.6**	**-0.1**
NVR				*e*S	**Sg**	**05 10 26.7**	**+0.1**
NVR	**Nevrokopi**	**0.76**	**141**	P	**Pg**	**05 10 16.6**	**-0.1**
NVR				S	**Sg**	**05 10 26.5**	**-0.1**
VAY	**Valandovo**	**0.79**	**219**	P	**Pg**	**05 10 17.2**	**0.0**
VAY				S	**Sb**	**05 10 28.3**	**+0.3**
VAY	**Valandovo**	**0.79**	**219**	*i* Pg	**Pg**	**05 10 17.2**	**0.0**
VAY				*i* Sg	**Sb**	**05 10 28.0**	**0.0**
VAY				*i* Lg	Lg	05 10 28.1	
	comp=E,128nm,0.5s						
VAY				*i* Lg	Lg	05 10 28.3	
	comp=N,135nm,0.5s						
VAY	**Valandovo**	**0.79**	**219**	P	**Pg**	**05 10 17.2**	**0.0**
VAY	**Valandovo**	**0.79**	**219**	*i* Pg	**Pb**	**05 10 17.7**	**+0.2**
VAY				S	**Sb**	**05 10 28.3**	**+0.3**
VAY				*i* Lg	Lg	05 10 28.8	
	comp=N,135nm,0.5s						
KNT	**Kendrikon**	**0.81**	**198**	P	**Pg**	**05 10 17.7**	**0.0**
KNT				S	**Sg**	**05 10 28.2**	**-0.2**
KNT	**Kendrikon**	**0.81**	**198**	P	**Pg**	**05 10 17.7**	**0.0**
KNT				S	**Sg**	**05 10 28.2**	**-0.2**
SRS	**Serrai**	**0.86**	**161**	P	**Pb**	**05 10 18.8**	**0.0**
SRS				S	**Sb**	**05 10 30.6**	**+0.3**
SRS	**Serrai**	**0.86**	**161**	P	**Pb**	**05 10 18.8**	**0.0**
SRS				S	**Sb**	**05 10 30.6**	**+0.3**
PGB	**Panagyurishte**	**0.93**	**49**	Pg	**Pb**	**05 10 19.3**	**-0.6**
PGB	**Panagyurishte**	**0.93**	**49**	Pg	**Pb**	**05 10 19.3**	**-0.6**
PLD	**Plovdiv**	**1.11**	**81**	P	**Pg**	**05 10 24.9**	**+1.5**
PLD				S	**Sn**	**05 10 39.5**	**+1.1**
PLD	**Plovdiv**	**1.11**	**81**	P	**Pg**	**05 10 24.9**	**+1.5**
PLD				S	**Sn**	**05 10 39.5**	**+1.1**
SOH	**Sokhos**	**1.12**	**175**	P	**Pn**	**05 10 23.4**	**+0.1**
SOH				S	**Sg**	**05 10 38.4**	**+0.3**
SOH	**Sokhos**	**1.12**	**175**	*e*P	**Pn**	**05 10 23.4**	**+0.1**
SOH				*e*S	**Sg**	**05 10 38.5**	**+0.3**
SOH	**Sokhos**	**1.12**	**175**	P	**Pn**	**05 10 23.4**	**+0.1**
SOH				S	**Sg**	**05 10 38.4**	**+0.3**
RZN	**Rozhen**	**1.14**	**102**	P	**Pg**	**05 10 24.3**	**+0.3**
RZN	**Rozhen**	**1.14**	**102**	P	**Pg**	**05 10 24.3**	**+0.3**
GRG	**Griva**	**1.16**	**213**	*e*P	**Pg**	**05 10 24.4**	**+0.1**
GRG				*e*S	**Sn**	**05 10 40.3**	**+0.8**
HORT	**Hortiatis**	**1.34**	**184**	P	**Pg**	**05 10 27.7**	**-0.1**
HORT				S	**Sg**	**05 10 45.8**	**+0.6**
HORT	**Hortiatis**	**1.34**	**184**	P	**Pg**	**05 10 27.7**	**-0.1**
HORT				S	**Sg**	**05 10 45.8**	**+0.6**
KAVA	**Kavala**	**1.35**	**134**	P	**Pg**	**05 10 27.9**	**0.0**
KAVA				S	**Sg**	**05 10 45.3**	**-0.2**
KAVA	**Kavala**	**1.35**	**134**	P	**Pg**	**05 10 27.9**	**0.0**
KAVA				S	**Sg**	**05 10 45.3**	**-0.2**
BARS	**Barje**	**1.36**	**311**	*e*Pg	**Pg**	**05 10 28.1**	**-0.1**
BARS				*e*Sg	**Sg**	**05 10 45.8**	**-0.1**
BARS	**Barje**	**1.36**	**311**	*e*Pg	**Pg**	**05 10 28.1**	**-0.1**
BARS				*e*Sg	**Sg**	**05 10 45.8**	**-0.1**
ZAPS	**Zavoj**	**1.41**	**342**	*e*Pg	**Pg**	**05 10 29.5**	**+0.5**
MPEP	**Malo Peshtene**	**1.47**	**15**	P	**Pg**	**05 10 30.0**	**-0.2**
PLG	**Polygyros**	**1.57**	**174**	*e*P	**Pb**	**05 10 30.4**	**-0.5**
KDZ	**Kurdzhali**	**1.67**	**99**	P	**Pn**	**05 10 30.5**	**-0.3**
KDZ	**Kurdzhali**	**1.67**	**99**	P	**Pn**	**05 10 30.5**	**-0.3**
FNA	**Florina**	**1.81**	**231**	*e*P	**Pb**	**05 10 34.1**	**-0.8**
SELS	**Selova**	**2.01**	**310**	*e*Pg	**Pb**	**05 10 38.9**	**+0.5**
SELS				*e*Sg	**Sg**	**05 11 06.3**	**-0.4**
PVL	**Pavlikeni**	**2.02**	**50**	P	**Pb**	**05 10 37.5**	**-0.9**
PVL	**Pavlikeni**	**2.02**	**50**	P	**Pb**	**05 10 37.5**	**-0.9**
SMTH	**Samothraki Isl**	**2.27**	**129**	*e*P	**Pn**	**05 10 37.7**	**-1.5**
ALN	**Alexandroupoli**	**2.36**	**115**	*e*P	**Pn**	**05 10 38.3**	**-2.1**
SZH	**Strazhica**	**2.40**	**56**	*i* P	**Pg**	**05 10 47.6**	**-0.4**
GRUS	**Gruza**	**2.68**	**317**	*e*Pn	**Pn**	**05 10 46.8**	**+2.0**
GRUS				*e*Sn	**Sb**	**05 11 21.5**	**-1.1**
GRUS	**Gruza**	**2.68**	**317**	*e*Pn	**Pn**	**05 10 46.8**	**+2.0**
GRUS				*e*Sn	**Sb**	**05 11 21.5**	**-1.1**
KECS	**Kecovo**	**6.83**	**344**	*e*PN	Pn	05 11 37.8	-3.9
VYHS	**Vyhne**	**7.25**	**336**	*e*PN	**Pn**	**05 11 46.2**	**-1.3**
VYHS	**Vyhne**	**7.25**	**336**	*e*Pn	**Pn**	**05 11 46.2**	**-1.3**
STHS	**Stebnicka Huta**	**7.61**	**350**	*e*PN	**Pn**	**05 11 51.5**	**-0.9**
STHS	**Stebnicka Huta**	**7.61**	**350**	*e*Pn	**Pn**	**05 11 51.5**	**-0.9**
ZST	**Bratislava**	**7.61**	**327**	*e*PN	**Pn**	**05 11 49.8**	**-2.6**

*ISCJB **02** 05:10:32.3±0.5, 17°.83S±0°.06×167°.47E±0°.08, h23km, mb4.3/14, MS4.2/2, Error ellipse: s-maj=11.3km s-min=7.9km az=24.2*
*IDC **02** 05:10:34.5±0.7, 17°.71S×167°.59E, h30km±4km, mb4.1/9, mb1 4.3/10, mb1mx4.0/20, mbtmp4.1/10, ML3.6/1, MS4.2/2, Ms1 4.2/2, ms1mx3.7/28, Error ellipse: s-maj=20.2km s-min=15.6km az=128.0*
*NEIC **02** 05:10:36.0±0.9, 17°.82S×167°.48E, h37km±8km, mb4.7/5, Error ellipse: s-maj=14.2km s-min=10.7km az=151.0*
ISC 02 05:10:34.1±0.5**, 17°.83S**±0°.07×**167°.6E**±0°.1**, h23**km**, n41, σ1°.33**/50**, mb4.3**/14**, 2C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.36**	**194**	Pn	**Pn**	**05 11 38.1**	**-0.9**
DZM				Sn	**Sn**	**05 12 28.0**	**-1.1**
DZM	**Mont Dzumac**	**4.36**	**194**	Pn	**Pn**	**05 11 38.1**	**-0.9**
	3.2nm,0.3s,baz=85,slow=11,SNR=7.6						
DZM				Sn	**Sn**	**05 12 28.0**	**-1.1**
	16nm,0.3s,baz=312,slow=21,SNR=7.1						
MSVF	**Nonsavu**	**9.96**	**91**	*e*Pn	Pn	05 13 00.1	+4.2
	95nm,1.3s						
EIDS	**Eidsvold**	**17.08**	**241**	*e*Pn	**Pn**	**05 14 30.4**	**-1.1**
AFI	**Afiamalu**	**20.22**	**82**	LR	LR	05 21 03.7	
	comp=Z,650nm,19.5s,baz=12,slow=31						
URZ	**Urewera**	**21.99**	**160**	P	**P**	**05 15 27.9**	**+1.4**
URZ	**Urewera**	**21.99**	**160**	P	**P**	**05 15 27.9**	**+1.4**
	8.1nm,0.7s,baz=304,slow=12,SNR=5.4						
STKA	**Stephens Creek**	**27.34**	**234**	*e*P	**P**	**05 16 17.9**	**+0.5**
STKA	**Stephens Creek**	**27.34**	**234**	P	**P**	**05 16 17.3**	**-0.1**
	6.3nm,1.0s,baz=55,slow=12,SNR=4.5						
WRAB	**Tennant Creek**	**31.50**	**261**	P	**P**	**05 16 52.9**	**-1.6**
WRA	**Warramunga Arr**	**31.51**	**261**	P	**P**	**05 16 53.2**	**-1.4**
WRA				pP	**pP**	**05 17 02.2**	**+0.7**
WRA				pPcP		05 19 54.5	
WRA	**Warramunga Arr**	**31.51**	**261**	P	**P**	**05 16 53.2**	**-1.4**
	2.0nm,0.8s,baz=88,slow=9.1,SNR=7.1						
WRA				pP	**pP**	**05 17 02.2**	**+0.7**
	2.2nm,0.8s,baz=88,slow=8.6,SNR=6.4						
WRA				pPcP		05 19 54.5	
	1.5nm,0.9s,baz=91,slow=3.0,SNR=6.2						
ASAR	**Alice Springs**	**31.99**	**254**	P	**P**	**05 16 58.0**	**-0.8**
ASAR				pPcP		05 19 57.8	
ASAR	**Alice Springs**	**31.99**	**254**	P	**P**	**05 16 58.0**	**-0.8**
	3.5nm,0.7s,baz=80,slow=8.9,SNR=14						
ASAR				pPcP		05 19 57.8	
	1.3nm,1.1s,baz=108,slow=3.8,SNR=4.2						
FITZ	**Fitzroy Crossi**	**39.85**	**263**	P	**P**	**05 18 06.6**	**+0.4**
FITZ				pP	**pP**	**05 18 15.2**	**+2.1**
FITZ	**Fitzroy Crossi**	**39.85**	**263**	P	**P**	**05 18 06.6**	**+0.4**
	10nm,1.0s,baz=82,slow=9.2,SNR=5.9						
FITZ				pP	**pP**	**05 18 15.2**	**+2.1**
	14nm,0.9s,baz=118,slow=4.8,SNR=8.5						
KIP	**Kipapa**	**51.55**	**42**	P	**P**	**05 19 37.1**	**-1.3**
KSM	**Kuching**	**59.55**	**283**	*e*P	**P**	**05 20 36.0**	**-0.3**
	11nm,1.1s						
PETK	**Petropavlovsk-**	**71.16**	**354**	P	**P**	**05 21 50.6**	**-0.1**
PETK				pP	**pP**	**05 21 59.9**	**+1.8**
PETK	**Petropavlovsk-**	**71.16**	**354**	P	**P**	**05 21 50.6**	**-0.1**
	3.5nm,0.8s,baz=144,slow=10,SNR=5.5						
PETK				pP	**pP**	**05 21 59.9**	**+1.8**
	9.2nm,1.0s,baz=134,slow=8.5,SNR=7.9						
QSPA	**South Pole Qui**	**72.22**	**180**	*e*P	**P**	**05 21 57.2**	**0.0**
	4.0nm,0.8s						
QSPA				pP	**pP**	**05 22 07.7**	**+3.1**
QSPA	**South Pole Qui**	**72.22**	**180**	P	**P**	**05 21 57.6**	**+0.5**
	3.1nm,0.8s,baz=355,slow=1.6,SNR=17						
QSPA				pP	**pP**	**05 22 07.7**	**+3.1**
	7.1nm,1.0s,baz=24,slow=2.5,SNR=6.5						
CMAR	**Chiang Mai Arr**	**76.50**	**295**	pP	pP	05 22 33.4	+3.2
CMAR	**Chiang Mai Arr**	**76.50**	**295**	pP	pP	05 22 33.4	+3.2
	4.0nm,0.8s,baz=130,slow=4.6,SNR=7.0						
ULN	**Ulaanbaatar**	**84.81**	**324**	*e*P	**P**	**05 23 07.3**	**+0.4**
	8.0nm,1.1s						
SONM	**Songino Array**	**85.16**	**324**	P	**P**	**05 23 10.6**	**+2.0**
SONM	**Songino Array**	**85.16**	**324**	P	**P**	**05 23 10.6**	**+2.0**
	1.3nm,0.9s,baz=134,slow=6.4,SNR=5.9						
BILL	**Bilibino**	**85.63**	**360**	*e*P	**P**	**05 23 09.8**	**-0.5**
	10.0nm,1.1s						
YBH	**Yreka Blue Hor**	**87.39**	**45**	LR	LR	05 55 02.3	
	comp=Z,139nm,18.6s,baz=164,slow=31						
NVAR	**Mina Array Bea**	**89.05**	**49**	P	**P**	**05 23 26.7**	**-1.1**
NVAR				pP	**pP**	**05 23 35.9**	**+0.6**
NVAR	**Mina Array Bea**	**89.05**	**49**	P	**P**	**05 23 26.7**	**-1.1**
	0.8nm,0.9s,baz=224,slow=7.5,SNR=4.0						
NVAR				pP	**pP**	**05 23 35.9**	**+0.6**
	1.3nm,0.9s,baz=222,slow=6.4,SNR=4.8						
ILAR	**Eielson Array**	**89.36**	**18**	P	**P**	**05 23 25.9**	**-2.4**
ILAR				pP	**pP**	**05 23 35.0**	**-0.9**
ILAR	**Eielson Array**	**89.36**	**18**	P	**P**	**05 23 25.9**	**-2.4**
	0.5nm,0.7s,baz=232,slow=5.5,SNR=7.2						
ILAR				pP	**pP**	**05 23 35.0**	**-0.9**
	0.9nm,0.9s,baz=236,slow=5.9,SNR=6.3						
COLD	**Coldfoot**	**90.32**	**15**	*e*P	**P**	**05 23 33.1**	**+0.4**
	1.9nm,1.1s						
YKA	**Yellowknife Ar**	**100.14**	**27**	P	**Pdif**	**05 24 16.5**	**-1.1**
YKA	**Yellowknife Ar**	**100.14**	**27**	P	**Pdif**	**05 24 16.5**	**-1.1**
	0.2nm,0.7s,baz=254,slow=4.4,SNR=3.4						
BFO	**Black Forest**	**145.20**	**336**	*e*PKPbc	**PKPbc**	**05 30 09.3**	**-0.1**
FETA	**Feichten**	**145.21**	**332**	⇑*i*PKPdf	**PKPab**	**05 30 09.8**	**0.0**
	14nm,0.8s						
DAVA	**Damuels**	**145.38**	**333**	⇑*i*PKPdf	**PKPab**	**05 30 10.4**	**0.0**
	12nm,0.7s						
TORD	**Torodi Ar. Bea**	**165.64**	**253**	pPKP	**pPKPdf**	**05 30 46.2**	**+0.6**
TORD				pPKPab	pPKPab	05 31 44.3	-0.1
TORD	**Torodi Ar. Bea**	**165.64**	**253**	pPKP	**pPKPdf**	**05 30 46.2**	**+0.6**
	1.8nm,0.9s,baz=313,slow=0.2,SNR=7.5						
TORD				pPKPab	pPKPab	05 31 44.3	-0.1
	0.5nm,0.8s,baz=107,slow=2.9,SNR=4.2						

IDC 02 05:22:34.2±3.8**, 20°.49S×177°.75W, h533**km±42km**, mb3.5**/17**, mb1 3.7**/18**, mb1mx3.6**/23**, mbtmp3.5**/18**, Error ellipse: s-maj=18.3km s-min=16.9km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.68**	**42**	S	S	05 26 07.2	-13
	8.5nm,0.3s,baz=82,slow=21,SNR=8.9						
URZ	**Urewera**	**18.26**	**193**	P	P	05 26 13.5	-1.6
	1.5nm,0.3s,baz=317,slow=11,SNR=8.1						
CTA	**Charters Tower**	**33.73**	**264**	P	P	05 28 31.9	+0.3
	9.2nm,0.6s,baz=93,slow=11,SNR=10						
STKA	**Stephens Creek**	**38.01**	**244**	P	P	05 29 06.6	-0.3
	2.8nm,0.7s,baz=98,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**44.75**	**257**	P	P	05 30 00.2	-0.2
	17nm,0.9s,baz=86,slow=8.5,SNR=93						
ASAR				PcP	PcP	05 31 31.5	+0.2
	0.9nm,0.7s,baz=87,slow=5.8,SNR=4.8						
WRA	**Warramunga Arr**	**44.84**	**262**	P	P	05 30 00.3	-0.8
	4.7nm,0.3s,baz=97,slow=7.6,SNR=322						
FITZ	**Fitzroy Crossi**	**53.26**	**262**	P	P	05 31 03.3	-0.1
	2.1nm,0.6s,baz=80,slow=7.1,SNR=16						
QSPA	**South Pole Qui**	**69.58**	**180**	P	P	05 32 50.9	+1.4
	0.6nm,0.6s,baz=320,slow=3.0,SNR=6.0						
MJAR	**Matsushiro Arr**	**70.34**	**324**	P	P	05 32 53.9	-0.4
	7.2nm,0.6s,baz=162,slow=6.3,SNR=19						
MAT	**Matsushiro**	**70.34**	**324**	P	P	05 32 53.9	-0.5
PETK	**Petropavlovsk-**	**76.32**	**345**	P	P	05 33 27.6	-0.5
	4.5nm,0.7s,baz=152,slow=8.0,SNR=7.7						
KSRS	**Korea Array**	**77.04**	**318**	P	P	05 33 33.1	+0.8
	1.3nm,0.6s,baz=138,slow=6.9,SNR=4.1						
USRK	**Ussuriysk Arra**	**79.08**	**326**	P	P	05 33 44.2	+1.1
	7.5nm,0.9s,baz=156,slow=3.5,SNR=12						
YBH	**Yreka Blue Hor**	**80.14**	**39**	P	P	05 33 49.9	+0.9
	2.4nm,0.7s,baz=205,slow=1.9,SNR=9.7						
NVAR	**Mina Array Bea**	**80.86**	**43**	P	P	05 33 53.5	+0.6
	1.0nm,0.8s,baz=223,slow=9.2,SNR=7.7						
TXAR	**Lajitas Array**	**86.85**	**57**	P	P	05 34 23.6	+1.0
	0.2nm,0.7s,baz=217,slow=7.9,SNR=4.6						
ILAR	**Eielson Array**	**88.25**	**13**	P	P	05 34 27.1	-1.2
	1.2nm,0.6s,baz=218,slow=5.2,SNR=7.8						
PDAR	**Pinedale Array**	**88.79**	**43**	P	P	05 34 30.1	-1.4
	0.8nm,0.7s,baz=204,slow=3.3,SNR=5.6						
CMAR	**Chiang Mai Arr**	**90.33**	**289**	P	P	05 34 40.7	+1.7
	2.0nm,0.8s,baz=125,slow=3.2,SNR=12						
YKA	**Yellowknife Ar**	**96.41**	**25**	P	P	05 35 04.4	-1.2
	0.1nm,0.7s,baz=254,slow=4.4,SNR=3.5						
ZALV	**Zalesovo Beam**	**110.63**	**321**	PKiKP	PKiKP	05 40 04.4	-1.6
	0.2nm,0.3s,baz=124,slow=2.1,SNR=2.7						
MKAR	**Makanchi Array**	**111.36**	**313**	PKiKP	PKiKP	05 40 06.3	-1.4
	0.4nm,0.6s,baz=222,slow=0.6,SNR=6.1						
ARCES	**ARCESS Array B**	**128.95**	**350**	PKP	PKPdf	05 40 40.8	+0.1
	5.0nm,1.1s,baz=49,slow=2.9,SNR=2.8						
AKASG	**Malin Array Be**	**143.12**	**331**	PKP	PKPab	05 41 04.2	-0.8
	4.4nm,0.6s,baz=42,slow=4.3,SNR=22						
BRTR	**Keskin Array B**	**147.01**	**312**	PKPbc	PKPbc	05 41 16.6	-0.9
	1.7nm,0.7s,baz=139,slow=4.2,SNR=7.1						
CLL	**Collm**	**148.11**	**347**	*i* PKP	PKPbc	05 41 19.5	-0.2
	comp=Z,9.0nm,0.8s						
CLL				*i*		05 41 24.7	
BRG	**Berggiesshubel**	**148.31**	**346**	*e*PKP	PKPbc	05 41 20.3	+0.1
	comp=Z,5.8nm,0.9s						
GERES	**GERESS Array B**	**150.25**	**345**	PKPbc	PKPbc	05 41 24.4	-0.7
	comp=Z,1.1nm,0.6s,baz=48,slow=2.0,SNR=9.6						
TORD	**Torodi Ar. Bea**	**172.68**	**176**	PKP	PKPdf	05 41 41.7	-1.2
	comp=Z,0.6nm,1.0s,baz=207,slow=3.2,SNR=3.1						

*IDC **02** 05:28:29.9±0.6, 17°.67S×167°.89E, h0km, mb4.2/16, mb1 4.4/17, mb1mx4.3/22, mbtmp4.2/17, ML3.7/1, MS4.2/3, Ms1 4.2/3, ms1mx3.6/26, Error ellipse: s-maj=21.6km s-min=15.8km az=112.0*
*ISCJB **02** 05:28:32.8±0.4, 17°.83S±0°.05×167°.83E±0°.07, h32km, mb4.3/19, MS4.2/2, Error ellipse: s-maj=10.0km s-min=6.6km az=17.9*
*NEIC **02** 05:28:35.1±0.3, 17°.73S×167°.83E, h35km, mb4.9/6, Error ellipse: s-maj=9.8km s-min=7.5km az=137.0*
ISC 02 05:28:34.7±0.4**, 17°.80S**±0°.06×**167°.82E**±0°.09**, h32**km**, n85, σ1°.08**/85**, mb4.3**/18**, 2C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.42**	**191**	*e*S	**Sn**	**05 30 28.3**	**-1.8**
DZM	**Mont Dzumac**	**4.45**	**197**	*e*P	**Pn**	**05 29 40.2**	**+0.2**
DZM				*e*S	**Sn**	**05 30 28.8**	**-2.1**
DZM	**Mont Dzumac**	**4.45**	**197**	*e*Pn	**Pn**	**05 29 40.1**	**0.0**
DZM				Sn	**Sn**	**05 30 29.7**	**-1.1**
DZM	**Mont Dzumac**	**4.45**	**197**	Pn	**Pn**	**05 29 39.6**	**-0.5**
	3.7nm,0.3s,baz=147,slow=18,SNR=23						
DZM				Sn	**Sn**	**05 30 29.7**	**-1.1**
	10.0nm,0.3s,baz=140,slow=22,SNR=6.9						
MSVF	**Nonsavu**	**9.74**	**91**	*e*Pn	**Pn**	**05 30 52.4**	**-0.4**
	52nm,0.9s						
EIDS	**Eidsvold**	**17.29**	**241**	*e*Pn	**P**	**05 32 34.6**	**-0.4**
	94nm,1.8s						
ARMA	**Armidale**	**19.37**	**227**	*e*P	**Pn**	**05 32 58.6**	**-0.6**
AFI	**Afiamalu**	**20.00**	**82**	LR	LR	05 38 59.8	
	comp=Z,549nm,19.2s,baz=227,slow=32						
CTA	**Charters Tower**	**20.53**	**260**	P	Pn	05 33 11.7	-1.2
CTA	**Charters Tower**	**20.53**	**260**	P	Pn	05 33 11.7	-1.2
	10nm,0.9s,baz=79,slow=14,SNR=4.0						
URZ	**Urewera**	**21.95**	**160**	P	**P**	**05 33 26.2**	**+0.6**
URZ	**Urewera**	**21.95**	**160**	P	**P**	**05 33 26.2**	**+0.6**
	10nm,1.0s,baz=315,slow=14,SNR=2.3						
STKA	**Stephens Creek**	**27.53**	**234**	*e*P	**P**	**05 34 19.0**	**+0.4**
	2.3nm,1.0s						
STKA	**Stephens Creek**	**27.53**	**234**	P	**P**	**05 34 20.1**	**+1.5**
	4.5nm,0.7s,baz=61,slow=6.8,SNR=11						
WRAB	**Tennant Creek**	**31.72**	**261**	*e*P	**P**	**05 34 54.7**	**-1.2**
WRA	**Warramunga Arr**	**31.73**	**261**	P	**P**	**05 34 54.8**	**-1.2**
WRA	**Warramunga Arr**	**31.73**	**261**	P	**P**	**05 34 54.8**	**-1.2**
	2.7nm,1.0s,baz=90,slow=8.8,SNR=7.6						
AS31	**Alice Springs**	**32.20**	**254**	*e*P	**P**	**05 34 59.1**	**-1.1**
ASAR	**Alice Springs**	**32.20**	**254**	P	**P**	**05 34 59.7**	**-0.5**
ASAR	**Alice Springs**	**32.20**	**254**	P	**P**	**05 34 59.7**	**-0.5**
	3.3nm,0.8s,baz=81,slow=8.9,SNR=20						
ASAR				LR	LR	05 47 47.7	
	comp=Z,648nm,18.3s,baz=74,slow=36						
BBOO	**Buckleboo**	**32.22**	**236**	*e*P	**P**	**05 35 00.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**40.07**	**263**	*e*P	**P**	**05 36 07.8**	**+0.3**
	13nm,0.9s						
VNDA	**Vanda**	**59.83**	**182**	P	**P**	**05 38 37.1**	**+0.6**
VNDA	**Vanda**	**59.83**	**182**	P	**P**	**05 38 37.1**	**+0.6**
	0.6nm,0.6s,baz=21,slow=6.2,SNR=6.0						
SBA	**Scott Base**	**60.09**	**180**	*e*P	**P**	**05 38 39.0**	**+0.7**
	9.0nm,0.9s						
MJAR	**Matsushiro Arr**	**60.86**	**333**	P	**P**	**05 38 42.5**	**-1.6**
MJAR	**Matsushiro Arr**	**60.86**	**333**	P	**P**	**05 38 42.5**	**-1.6**
	4.3nm,0.9s,baz=173,slow=7.6,SNR=10.0						
PETK	**Petropavlovsk-**	**71.15**	**354**	P	**P**	**05 39 49.0**	**-0.9**
PETK	**Petropavlovsk-**	**71.15**	**354**	P	**P**	**05 39 49.0**	**-0.9**
	6.2nm,1.0s,baz=134,slow=11,SNR=6.3						
PETK				LR	LR	06 07 25.1	
	comp=Z,78nm,18.7s,baz=210,slow=33						
QSPA	**South Pole Qui**	**72.25**	**180**	*e*P	**P**	**05 39 57.6**	**+0.9**
	21nm,1.1s						
CMAR	**Chiang Mai Arr**	**76.69**	**295**	P	**P**	**05 40 25.1**	**+2.0**
CMAR	**Chiang Mai Arr**	**76.69**	**295**	P	**P**	**05 40 25.1**	**+2.0**
	2.7nm,0.8s,baz=133,slow=4.6,SNR=9.0						
MAW	**Mawson**	**79.26**	**202**	P	**P**	**05 40 38.3**	**+1.8**
MAW	**Mawson**	**79.26**	**202**	P	**P**	**05 40 38.3**	**+1.8**
	1.7nm,0.8s,baz=135,slow=5.7,SNR=2.1						
SONM	**Songino Array**	**85.27**	**324**	P	**P**	**05 41 09.6**	**+1.2**
SONM	**Songino Array**	**85.27**	**324**	P	**P**	**05 41 09.6**	**+1.2**
	2.9nm,0.8s,baz=140,slow=5.5,SNR=18						
BILL	**Bilibino**	**85.60**	**359**	*e*P	**P**	**05 41 08.9**	**-0.5**
	19nm,1.3s						
YBH	**Yreka Blue Hor**	**87.21**	**45**	P	**P**	**05 41 17.6**	**-0.5**
YBH	**Yreka Blue Hor**	**87.21**	**45**	P	**P**	**05 41 17.6**	**-0.5**
	0.9nm,0.9s,baz=292,slow=5.4,SNR=3.1						
NVAR	**Mina Array Bea**	**88.86**	**49**	P	**P**	**05 41 26.4**	**+0.2**
NVAR	**Mina Array Bea**	**88.86**	**49**	P	**P**	**05 41 26.4**	**+0.2**
	0.9nm,0.9s,baz=222,slow=6.9,SNR=6.5						
ILAR	**Eielson Array**	**89.27**	**18**	P	**P**	**05 41 25.2**	**-1.9**
ILAR	**Eielson Array**	**89.27**	**18**	P	**P**	**05 41 25.2**	**-1.9**
	0.8nm,0.6s,baz=235,slow=5.1,SNR=21						
SNAA	**Sanae**	**90.53**	**183**	*e*P	**P**	**05 41 33.4**	**+0.2**
	7.0nm,1.0s						
MKAR	**Makanchi Array**	**99.77**	**316**	P	**Pdif**	**05 42 14.5**	**-1.2**
MKAR	**Makanchi Array**	**99.77**	**316**	P	**Pdif**	**05 42 14.5**	**-1.2**
	0.2nm,0.6s,baz=92,slow=5.5,SNR=2.8						
YKA	**Yellowknife Ar**	**100.01**	**27**	P	**Pdif**	**05 42 14.9**	**-1.4**
YKA	**Yellowknife Ar**	**100.01**	**27**	P	**Pdif**	**05 42 14.9**	**-1.4**
	0.2nm,0.7s,baz=265,slow=5.3,SNR=3.8						
ZALV	**Zalesovo Beam**	**100.16**	**323**	P	**Pdif**	**05 42 18.5**	**+1.3**
ZALV	**Zalesovo Beam**	**100.16**	**323**	P	**Pdif**	**05 42 18.5**	**+1.3**
	0.2nm,0.3s,baz=97,slow=4.5,SNR=3.6						
ARCES	**ARCESS Array B**	**123.33**	**345**	PKP	**PKPdf**	**05 47 28.0**	**+0.1**
ARCES	**ARCESS Array B**	**123.33**	**345**	PKP	**PKPdf**	**05 47 28.0**	**+0.1**
	2.6nm,0.6s,baz=114,slow=2.4,SNR=16						
FINES	**FINESS Array B**	**128.75**	**338**	PKP	**PKPdf**	**05 47 38.0**	**-0.3**
FINES	**FINESS Array B**	**128.75**	**338**	PKP	**PKPdf**	**05 47 38.0**	**-0.3**
	2.3nm,0.9s,baz=36,slow=5.2,SNR=3.2						
AKASG	**Malin Array Be**	**133.54**	**325**	PKP	**PKPdf**	**05 47 49.6**	**+1.8**
AKASG	**Malin Array Be**	**133.54**	**325**	PKP	**PKPdf**	**05 47 49.6**	**+1.8**
	0.6nm,0.5s,baz=68,slow=3.3,SNR=4.1						
NB2	**NORSAR Subarra**	**133.70**	**344**	PKPdf	**PKPdf**	**05 47 48.7**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=33,slow=1.9						
NOA	**NORSAR Array B**	**133.70**	**344**	PKP	**PKPdf**	**05 47 48.8**	**+0.9**
NOA	**NORSAR Array B**	**133.70**	**344**	PKP	**PKPdf**	**05 47 48.8**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=33,slow=2.0,SNR=3.8						
VYHS	**Vyhne**	**140.35**	**328**	*e*PKP	**PKPdf**	**05 48 03.6**	**+3.1**
RUP	**Ruppelstein**	**144.60**	**338**	PKP	**PKPdf**	**05 48 07.4**	**-0.7**
MOTA	**Moosalm**	**144.87**	**332**	⇓*i*PKPdf	**PKPdf**	**05 48 08.7**	**-0.1**
	comp=Z,18nm,0.9s						
BFO	**Black Forest**	**145.26**	**336**	*e*PKPbc	**PKPdf**	**05 48 09.2**	**-0.1**
SPAK	**Spaichingen-Ko**	**145.26**	**335**	PKP	**PKPdf**	**05 48 09.6**	**+0.3**
FETA	**Feichten**	**145.28**	**332**	⇑*i*PKPdf	**PKPdf**	**05 48 09.7**	**+0.2**
	comp=Z,24nm,0.8s,SNR=17						
DAVA	**Damuels**	**145.45**	**333**	⇑*i*PKPdf	**PKPab**	**05 48 10.5**	**+0.5**
	comp=Z,28nm,0.8s,SNR=8.8						
FELD	**Feldberg im Sc**	**145.75**	**336**	PKP	**PKPab**	**05 48 10.9**	**-0.2**
ECH	**Echery**	**145.80**	**337**	*e*PKPdf	**PKPab**	**05 48 10.4**	**-0.6**
ECH	**Echery**	**145.80**	**337**	PKP	**PKPab**	**05 48 11.1**	**0.0**
MOF	**Molkenrain**	**146.11**	**336**	PKP	**PKPab**	**05 48 12.4**	**+0.1**
MOF	**Molkenrain**	**146.11**	**336**	PKP	**PKPab**	**05 48 12.4**	**+0.1**
THEF	**They Montfort**	**146.22**	**338**	PKP	**PKPab**	**05 48 12.8**	**+0.2**
THEF	**They Montfort**	**146.22**	**338**	PKP	**PKPab**	**05 48 12.8**	**+0.2**
LOMF	**Lomont**	**146.64**	**336**	PKP	**PKPab**	**05 48 13.8**	**-0.6**
LOMF	**Lomont**	**146.64**	**336**	PKP	**PKPab**	**05 48 13.8**	**-0.6**
BNI	**Bardonecchia**	**148.58**	**334**	*e*PKPbc	**PKPbc**	**05 48 19.3**	**+0.6**
AGO	**Saint Agoulin**	**149.09**	**339**	PKP	**PKPbc**	**05 48 20.5**	**+0.7**
AGO	**Saint Agoulin**	**149.09**	**339**	PKP	**PKPbc**	**05 48 20.5**	**+0.7**
PYM	**Petit Puy Mans**	**149.39**	**339**	PKP	**PKPbc**	**05 48 20.5**	**-0.2**
PYM	**Petit Puy Mans**	**149.39**	**339**	PKP	**PKPbc**	**05 48 20.5**	**-0.2**
LBL	**Lubilhac**	**149.76**	**338**	PKP	**PKPbc**	**05 48 22.6**	**+1.0**
ESDC	**Sonseca Array**	**157.06**	**344**	PKPab	**PKPab**	**05 48 57.5**	**-0.3**
ESDC	**Sonseca Array**	**157.06**	**344**	PKPab	**PKPab**	**05 48 57.5**	**-0.3**
	comp=Z,0.3nm,0.3s,baz=44,slow=3.1,SNR=4.8						
TORD	**Torodi Ar. Bea**	**165.85**	**253**	PKP	**PKPdf**	**05 48 35.2**	**-2.1**
TORD	**Torodi Ar. Bea**	**165.85**	**253**	PKP	**PKPdf**	**05 48 35.2**	**-2.1**
	comp=Z,1.7nm,1.1s,baz=228,slow=0.5,SNR=5.3						

MEX 02 05:43:42.3±0.6**, 16°.01N×98°.39W, h4**km±6km**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.45**	**34**	*i* P	Pg	05 43 50.5	-0.6
PNIG				*i* S	Sg	05 43 57.9	+0.8
CAIG	**El Cayaco**	**2.08**	**300**	*i* P	Pn	05 44 14.9	-3.0
CAIG				*e*S	Sn	05 44 40.0	-4.2
HUIG	**Huatulco**	**2.21**	**96**	*e*P	Pn	05 44 17.2	-2.5
HUIG				*i* S	Sn	05 44 42.8	-4.7
TPIG	**Tehuac#an**	**2.59**	**22**	*e*P	Pn	05 44 21.9	-3.3
TPIG				*e*S	Sn	05 44 52.6	-4.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PLIG	**Platanillo**	**2.59**	**336**	*e*P	Pn	05 44 21.6	-3.5
PLIG				*i* S	Sn	05 44 53.1	-4.2
YAIG	**Yautepec**	**2.91**	**347**	*e*P	Pn	05 44 27.3	-2.3
YAIG				*e*S	Sn	05 45 00.6	-4.6

*IDC **02** 05:43:54.2±4.2, 36°.04N×71°.20E, h58km±38km, mb3.7/9, mb1 3.8/14, mb1mx3.6/32, mbtmp3.7/14, ML3.9/5, Error ellipse: s-maj=26.9km s-min=22.4km az=14.0*
*ISCJB **02** 05:43:57.6±0.4, 36°.24N±0°.03×71°.52E±0°.07, h119km, mb3.7/8, Error ellipse: s-maj=8.2km s-min=3.2km az=156.4*
*NNC **02** 05:44:02.1±2.6, 36°.64N×70°.85E, h112km±29km, mb3.6, mpv4.4, Error ellipse: s-maj=19.4km s-min=12.5km az=12.0*
ISC 02 05:43:59.3±0.6**, 36°.23N**±0°.06×**71°.47E**±0°.08**, h119km, n50, σ1s.73**/58**, mb3.9**/8**, 7C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMU	**Jammu**	**4.50**	**140**	*e*PKP	**Pn**	**05 45 03.5**	**-2.1**
JMU				*e*S	**Sn**	**05 45 54.0**	**-3.0**
DHRM	**DHARAMSHALA**	**5.63**	**133**	*e*PKP	**Pn**	**05 45 22.1**	**+1.1**
DHRM				*e*S	**Sn**	**05 46 24.7**	**+0.1**
DHRM				AML	AML	05 46 28.3	
	comp=E,1μm,0.3s						
DHRM				AML	AML	05 46 28.5	
	comp=N,735nm,0.2s						
PONG	**Pong**	**5.65**	**138**	*e*PKP	**Pn**	**05 45 20.5**	**-0.6**
PONG				*e*x	**Sn**	**05 46 25.5**	**+0.7**
AML	**Almayashu**	**6.15**	**16**	P	**Pn**	**05 45 27.1**	**-0.9**
	SNR=80						
KZA	**Kyzart**	**6.54**	**26**	P	**Pn**	**05 45 32.8**	**-0.6**
	SNR=12						
SDNR	**Sundarnagar**	**6.57**	**134**	*e*PKP	**Pn**	**05 45 34.0**	**+0.5**
SDNR				*e*S	**Sn**	**05 46 45.0**	**-2.0**
EKS2	**Erkin-Say**	**6.67**	**15**	P	**Pn**	**05 45 34.4**	**-0.5**
	SNR=28						
AAK	**Ala-Archa**	**6.81**	**19**	P	**Pn**	**05 45 36.4**	**-0.5**
	SNR=10						
AAK	**Ala-Archa**	**6.81**	**19**	P	**Pn**	**05 45 36.7**	**-0.1**
	comp=N,7.2nm,0.3s,baz=163,slow=6.6,SNR=27						
AAK				S	**Sn**	**05 46 50.0**	**-3.0**
	comp=N,2.6nm,0.3s,baz=130,slow=23,SNR=9.4						
KK31	**Karatay Array**	**6.91**	**354**	⇓P	**Pn**	**05 45 35.5**	**-2.5**
	comp=N,10.0nm,0.3s,baz=187,slow=14,SNR=282						
KK31				⇓S	Sn	05 46 47.5	-7.6
	comp=N,6.8nm,0.3s,baz=183,slow=25,SNR=8.1						
SMLA	**Simla**	**6.96**	**135**	*i* P	**Pn**	**05 45 39.5**	**+0.8**
SMLA				*e*S	**Sn**	**05 46 55.2**	**-1.1**
SMLA				AML	AML	05 47 00.8	
	comp=N,216nm,0.3s						
SMLA				AML	AML	05 47 01.1	
	comp=E,270nm,0.1s						
CHMS	**Chumysh**	**7.22**	**20**	P	**Pn**	**05 45 42.0**	**-0.3**
	SNR=10						
TKM2	**Tokmak 2**	**7.41**	**24**	⇑P	**Pn**	**05 45 44.7**	**-0.2**
	comp=E,10nm,0.5s						
TKM2				⇓S	**Sn**	**05 47 07.4**	**-0.1**
	comp=E,10nm,1.1s						
TKM2	**Tokmak 2**	**7.41**	**24**	P	**Pn**	**05 45 44.9**	**0.0**
	SNR=30						
USP	**Ospenovka**	**7.41**	**17**	P	**Pn**	**05 45 44.5**	**-0.3**
	SNR=11						
DDI	**Dehra Dun**	**8.06**	**135**	*e*PKP	**Pn**	**05 45 53.5**	**-0.2**
DDI				*e*S	**Sn**	**05 47 21.5**	**-1.8**
AJM	**Ajmer**	**10.09**	**164**	*i* P	**Pn**	**05 46 21.0**	**-0.1**
AJM				*i* 4		05 48 08.0	
PYUN	**Piuthan**	**12.68**	**126**	*e*P	**Pn**	**05 46 53.5**	**-2.1**
	comp=E,151nm,0.4s						
DANN	**Dangsing**	**13.02**	**124**	*e*P	**Pn**	**05 46 58.5**	**-1.7**
	comp=E,44nm,0.4s						
DANN				*e*S	Sn	05 49 15.9	-7.9
KOLN	**Koldanda**	**13.30**	**126**	*e*P	**Pn**	**05 47 02.1**	**-1.5**
	comp=E,32nm,0.3s						
MK31	**Makanchi Array**	**13.30**	**34**	⇓P	**Pn**	**05 47 05.2**	**+1.8**
	comp=E,1.1nm,0.6s,baz=210,slow=9.8,SNR=6.8						
MK31				⇑S	**Sn**	**05 49 33.0**	**+3.2**
	comp=E,1.0nm,0.8s,baz=274,slow=38,SNR=11						
MKAR	**Makanchi Array**	**13.30**	**34**	P	**Pn**	**05 47 04.0**	**+0.6**
	comp=E,0.1nm,0.3s,baz=206,slow=11,SNR=6.7						
DMN	**Daman**	**14.41**	**123**	*e*P	**Pn**	**05 47 16.6**	**-1.4**
	comp=E,36nm,0.3s						
KKN	**Kakani**	**14.41**	**122**	*e*P	**Pn**	**05 47 16.4**	**-1.6**
	comp=E,24nm,0.4s						
PKIN	**Phulchoki**	**14.63**	**122**	*e*P	**Pn**	**05 47 19.5**	**-1.2**
	comp=E,34nm,0.3s						
PKI	**Pulchoki**	**14.64**	**122**	*e*P	**Pn**	**05 47 19.5**	**-1.5**
GUN	**Gumba**	**14.75**	**120**	*e*P	**Pn**	**05 47 20.4**	**-2.0**
	comp=E,30nm,0.3s						
JBP	**Jabalpur**	**14.96**	**148**	*e*x	P	05 47 23.4	-3.9
JBP				*e*x	x	05 50 00.9	
KURBB	**Kurchatov Arra**	**15.27**	**17**	P	**Pn**	**05 47 27.6**	**-0.7**
	comp=E,0.1nm,0.3s,baz=209,slow=10,SNR=4.8						
AB31	**Akbulak array**	**15.51**	**331**	⇓P	**Pn**	**05 47 27.0**	**-4.3**
	comp=E,1.0nm,0.2s,baz=0.0,slow=0.1,SNR=99						
AB31				⇑S	Sn	05 50 11.7	-11
	comp=E,2.1nm,0.5s,baz=149,slow=23,SNR=3.5						
RAMN	**Ramite**	**15.85**	**121**	*e*P	**Pn**	**05 47 34.6**	**-1.4**
	comp=E,31nm,0.4s						
TAPN	**Taplejung**	**16.38**	**118**	*e*P	**Pn**	**05 47 41.0**	**-1.7**
	comp=E,32nm,0.4s						
ODAN	**Odare**	**16.45**	**120**	*e*P	**Pn**	**05 47 42.8**	**-0.7**
	comp=E,20nm,0.4s						
VOSK	**Vostochnaya**	**16.50**	**359**	⇑P	**Pn**	**05 47 40.7**	**-2.8**
	comp=E,3.8nm,0.8s						
ZRNK	**Zerenda**	**16.81**	**355**	⇓P	**Pn**	**05 47 46.1**	**-1.3**
	comp=E,1.9nm,0.5s						
BVA0	**Borovoye Array**	**16.82**	**358**	⇑P	**Pn**	**05 47 44.9**	**-2.5**
	comp=E,2.1nm,0.8s,baz=177,slow=9.8,SNR=3.5						
BVAR	**Borovoye Array**	**16.82**	**358**	P	**Pn**	**05 47 46.6**	**-0.8**
	comp=E,0.7nm,0.3s,baz=170,slow=12,SNR=7.5						
BRVK	**Borovoye**	**16.85**	**358**	⇑P	**Pn**	**05 47 45.0**	**-2.9**
	comp=E,3.5nm,0.5s						
AKTO	**Aktyubinsk**	**17.21**	**330**	⇑P	**P**	**05 47 49.6**	**-2.4**
	comp=E,9.7nm,0.8s						
AKTO				⇓S	Sn	05 50 51.5	-12
	comp=E,4.8nm,1.0s						
AKTO	**Aktyubinsk**	**17.21**	**330**	P	**P**	**05 47 50.7**	**-1.2**
	comp=E,1.0nm,0.3s,baz=152,slow=10,SNR=17						
ZALV	**Zalesovo Beam**	**20.01**	**24**	P	**P**	**05 48 23.1**	**+0.7**
	comp=E,4.4nm,0.3s,baz=219,slow=12,SNR=18						
KBZ	**Khabaz**	**23.06**	**298**	P	**P**	**05 48 53.5**	**-0.8**
	comp=E,1.3nm,0.8s,baz=166,slow=9.9,SNR=2.4						
FINES	**FINESS Array B**	**37.92**	**326**	P	**P**	**05 51 06.2**	**+1.4**
	comp=E,1.3nm,0.4s,baz=117,slow=7.4,SNR=9.3						
ARCES	**ARCESS Array B**	**41.54**	**338**	P	**P**	**05 51 37.3**	**+2.7**
	comp=E,2.1nm,0.6s,baz=116,slow=8.2,SNR=13						
NB2	**NORSAR Subarra**	**44.83**	**323**	P	**P**	**05 52 02.8**	**+1.6**
	comp=Z,1.3nm,0.5s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.83**	**323**	P	**P**	**05 52 03.1**	**+2.0**
	comp=Z,1.2nm,0.4s,baz=96,slow=7.7,SNR=8.0						
TORD	**Torodi Ar. Bea**	**66.09**	**269**	P	**P**	**05 54 33.1**	**-0.8**
	comp=Z,0.6nm,0.4s,baz=52,slow=6.3,SNR=12						
BOSA	**Boshof**	**77.78**	**220**	P	**P**	**05 55 44.2**	**+0.7**
	comp=Z,1.2nm,0.6s,baz=32,slow=6.3,SNR=4.5						
YKA	**Yellowknife Ar**	**81.50**	**3**	P	**P**	**05 56 05.3**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=350,slow=5.2,SNR=9.9						
WRA	**Warramunga Arr**	**81.53**	**122**	P	**P**	**05 56 06.7**	**+2.9**
	comp=Z,0.3nm,0.7s,baz=325,slow=4.8,SNR=4.6						

*ISCJB **02** 05:46:24.2±1.2, 42°.85S±0°.06×72°.6W±0°.1, h10km, mb3.6/2, Error ellipse: s-maj=14.3km s-min=5.1km az=152.4*
*IDC **02** 05:46:24.5±1.5, 42°.81S×72°.56W, h0km, mb3.7/2, mb1 4.1/3, mb1mx3.8/17, mbtmp3.8/3, ML3.9/1, MS3.1/1, Ms1 3.0/1, ms1mx2.6/23, Error ellipse: s-maj=45.2km s-min=20.3km az=129.0*
*GUC **02** 05:46:24.0±0.4, 42°.84S×72°.59W, h2km±4km, ML3.5*
ISC 02 05:46:25.1±1.2**, 42°.83S**±0°.06×**72°.6W**±0°.1**, h10km, n10, σ0s.87**/14**, 1C-1D, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUNY	**Huinay**	**0.47**	**18**	*e*P	**Pg**	**05 46 33.1**	**-1.1**
HUNY				*i* S	**Sg**	**05 46 40.4**	**0.0**
HUNY				AML	AML	05 46 41.4	
	comp=N,3μm,0.3s						
FUTA	**Futaleufœ**	**0.66**	**123**	⇑*i*P	**Pg**	**05 46 36.7**	**-1.2**
FUTA				*i* S	**Sg**	**05 46 46.0**	**-0.6**
CNTO	**Contao**	**1.03**	**355**	⇓*i*P	**Pg**	**05 46 43.5**	**-1.2**
CNTO				*i* S	**Sb**	**05 46 58.3**	**0.0**
CNTO				AML	AML	05 47 01.9	
	comp=N,3μm,0.4s						
PMCH	**Puerto Montt**	**1.35**	**351**	*e*P	**Pn**	**05 46 49.3**	**-0.6**
PMCH				*i* S	**Sn**	**05 47 08.1**	**+0.1**
PMCH				AML	AML	05 47 10.0	
	comp=N,1μm,0.3s						
PLCA	**Paso Flores**	**2.60**	**37**	Pn	**Pn**	**05 47 08.5**	**+1.3**
	comp=N,5.7nm,0.3s,baz=212,slow=17,SNR=48						
PLCA				Pg	**Pb**	**05 47 11.4**	**-0.3**
	comp=N,7.3nm,0.3s,baz=220,slow=17,SNR=92						
PLCA				Lg	Lg	05 47 45.4	
	comp=N,28nm,0.3s,baz=115,slow=12,SNR=15						
PLCA				LR	LR	05 48 19.6	
	comp=N,349nm,20.7s,baz=251,slow=45						
COYC	**Coyhaique**	**2.77**	**172**	AML	AML	05 47 55.2	
	comp=E,108nm,0.5s						
TXAR	**Lajitas Array**	**77.28**	**332**	P	**P**	**05 58 20.8**	**+1.2**
	comp=E,0.4nm,0.9s,baz=158,slow=7.8,SNR=4.6						
TORD	**Torodi Ar. Bea**	**87.66**	**70**	P	**P**	**05 59 14.1**	**+0.2**
	comp=E,0.7nm,0.8s,baz=236,slow=6.6,SNR=3.8						
AKTO	**Aktyubinsk**	**145.79**	**60**	PKPbc	**PKPab**	**06 06 04.2**	**0.0**
	comp=E,1.9nm,0.8s,baz=273,slow=5.4,SNR=5.5						
MKAR	**Makanchi Array**	**161.78**	**69**	PKPab	**PKPab**	**06 07 11.9**	**+0.4**
	comp=E,0.5nm,0.8s,baz=283,slow=2.6,SNR=4.0						

IDC 02 05:46:57.4±1.6**, 17°.62S**×**167°.73E, h0km, mb3.9**/6**, mb1 4.1**/7**, mb1mx3.9**/20**, mbtmp3.9**/7**, ML3.7**/1**, MS3.8**/4**, Ms1 3.8**/4**, ms1mx3.1**/39**, Error ellipse: s-maj=49.1km s-min=23.3km az=122.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.59**	**195**	Pn	Pn	05 48 07.7	-0.6
	3.8nm,0.3s,baz=90,slow=16,SNR=26						
DZM				Sn	Sn	05 48 56.0	-6.4
	10nm,0.3s,baz=136,slow=22,SNR=9.5						
AFI	**Afiamalu**	**20.07**	**82**	LR	LR	05 57 27.2	
	comp=Z,221nm,21.7s,baz=145,slow=31						
STKA	**Stephens Creek**	**27.56**	**234**	P	P	05 52 46.6	+0.4
	0.9nm,0.4s,baz=34,slow=3.6,SNR=2.2						
STKA				LR	LR	06 03 59.1	
	comp=Z,180nm,19.7s,baz=24,slow=37						
WRA	**Warramunga Arr**	**31.67**	**260**	P	P	05 53 22.1	-0.7
	0.5nm,0.6s,baz=82,slow=6.0,SNR=4.8						
ASAR	**Alice Springs**	**32.17**	**253**	P	P	05 53 27.4	+0.3
	1.6nm,0.6s,baz=79,slow=8.8,SNR=14						
ASAR				LR	LR	06 05 32.7	
	comp=Z,224nm,21.4s,baz=247,slow=35						
FITZ	**Fitzroy Crossi**	**40.00**	**263**	LR	LR	06 08 54.4	
	comp=Z,202nm,19.7s,baz=141,slow=33						
MJAR	**Matsushiro Arr**	**60.66**	**333**	P	P	05 57 09.8	-0.6
	2.2nm,0.8s,baz=167,slow=8.1,SNR=4.5						
SONM	**Songino Array**	**85.07**	**324**	P	P	05 59 35.8	+0.6
	0.9nm,0.8s,baz=133,slow=6.3,SNR=6.2						
ILAR	**Eielson Array**	**89.13**	**18**	P	P	05 59 54.4	0.0
	0.3nm,0.7s,baz=251,slow=4.7,SNR=3.6						
ARCES	**ARCESS Array B**	**123.14**	**345**	PKP	PKPdf	06 05 55.0	-0.5
	3.1nm,0.9s,baz=84,slow=5.0,SNR=5.9						

*ISCJB **02** 05:53:56.6±0.8, 33°.4N±0°.1×138°.5E±0°.1, h342km±10km, mb2.8/3, Error ellipse: s-maj=20.1km s-min=14.4km az=144.9*
*IDC **02** 05:53:56.1±3.0, 33°.13N×137°.98E, h302km±77km, mb2.8/3, mb1 2.9/4, mb1mx2.7/28, mbtmp2.7/4, Error ellipse: s-maj=175.1km s-min=21.8km az=64.0*
*JMA **02** 05:53:56.6±0.5, 33°.24N×138°.35E, h328km±5km, M3.4*
ISC 02 05:53:57.5±1.2**, 33°.4N**±0°.1×**138°.4E**±0°.1**, h336km**±12km**, n17, σ0s.97**/28**, mb2.9**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOD2	**Odawara 2**	**1.94**	**17**	P	**Pn**	**05 54 47.6**	**+0.6**
JOD2				*e*S	**S**	**05 55 28.2**	**+1.5**
JNY	**Yasuok**	**2.00**	**347**	P	**Pn**	**05 54 47.3**	**-0.2**
JYN	**Shimob**	**2.09**	**3**	P	**Pn**	**05 54 49.2**	**+1.0**
BSO3	**Boso 3**	**2.24**	**51**	P	**Pn**	**05 54 48.9**	**0.0**
BSO3				*e*S	**S**	**05 55 29.7**	**-0.5**
BSO4	**Boso 4**	**2.26**	**45**	P	**Pn**	**05 54 49.5**	**+0.3**
BSO4				*e*S	**S**	**05 55 31.9**	**+1.1**
BSO1	**Boso 1**	**2.48**	**59**	P	**Pn**	**05 54 50.2**	**-0.3**
BSO1				*e*S	**S**	**05 55 33.0**	**-0.2**
JRY	**Ryogami san**	**2.64**	**9**	P	**Pn**	**05 54 53.7**	**+1.1**
JRY				*e*S	**S**	**05 55 36.6**	**-0.1**
MJAR	**Matsushiro Arr**	**3.13**	**357**	P	**Pn**	**05 54 57.3**	**+0.3**
	1.3nm,0.3s,baz=182,slow=11,SNR=12						
MJAR				S	**S**	**05 55 43.6**	**-1.2**
	0.4nm,0.3s,baz=1.5,slow=3.3,SNR=3.0						
MAT	**Matsushiro**	**3.14**	**357**	P	**Pn**	**05 54 57.6**	**+0.5**
MAT				S	**S**	**05 55 42.0**	**-2.8**
MAT	**Matsushiro**	**3.14**	**357**	P	**Pn**	**05 54 57.5**	**+0.5**
JAG	**Ashikaga**	**3.14**	**16**	P	**Pn**	**05 54 57.1**	**+0.1**
JAG				*e*S	**S**	**05 55 44.5**	**-0.3**
JYT	**Yasato**	**3.18**	**27**	P	**Pn**	**05 54 57.6**	**+0.2**
JYT				*e*S	**S**	**05 55 44.1**	**-1.5**
JHO	**Hitachi**	**3.66**	**29**	P	**Pn**	**05 55 02.4**	**+0.3**
JHO				*e*S	**S**	**05 55 53.2**	**-1.0**
JFK	**Kawauchi**	**4.44**	**26**	P	**Pn**	**05 55 11.4**	**+1.1**
JFK				*e*S	**S**	**05 56 09.0**	**0.0**
MKAR	**Makanchi Array**	**44.06**	**305**	P	**P**	**06 01 34.0**	**+0.8**
	0.2nm,0.3s,baz=86,slow=9.7,SNR=5.9						
KURBB	**Kurchatov Arra**	**46.38**	**310**	P	**P**	**06 01 51.4**	**+0.3**
	0.5nm,0.5s,baz=92,slow=9.2,SNR=5.6						
WRA	**Warramunga Arr**	**53.19**	**185**	P	**P**	**06 02 41.5**	**-0.7**
	0.5nm,0.9s,baz=1.7,slow=7.6,SNR=4.9						

IDC 02 06:00:47.2±3.8**, 7°.23S**×**125°.72E, h511km**±53km**, mb3.1**/3**, mb1 2.9**/7**, mb1mx2.7**/23**, mbtmp2.8**/7**, Error ellipse: s-maj=118.9km s-min=19.2km az=56.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.33**	**290**	P	P	06 02 26.0	-1.2
	0.3nm,0.3s,baz=77,slow=19,SNR=2.4						
FITZ	**Fitzroy Crossi**	**10.80**	**180**	P	P	06 03 13.6	+0.4
	0.7nm,0.3s,baz=10,slow=11,SNR=29						
WRA	**Warramunga Arr**	**15.15**	**147**	P	P	06 03 57.2	-1.7
	0.1nm,0.3s,baz=336,slow=9.7,SNR=14						
ASAR	**Alice Springs**	**18.13**	**155**	P	P	06 04 28.6	+0.4
	0.2nm,0.3s,baz=325,slow=8.0,SNR=7.4						
MKAR	**Makanchi Array**	**66.16**	**329**	P	P	06 10 44.1	+0.4
	0.4nm,0.5s,baz=124,slow=6.7,SNR=7.0						
ZALV	**Zalesovo Beam**	**69.98**	**336**	P	P	06 11 06.4	-0.4
	1.3nm,0.4s,baz=123,slow=5.4,SNR=6.4						
KURBB	**Kurchatov Arra**	**70.55**	**330**	P	P	06 11 10.7	+0.5
	0.9nm,0.5s,baz=133,slow=5.3,SNR=7.3						

BJI 02 06:01:36.0, 31°.22N×**103°.64E, h16km, ML3.6**/7**, 1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.33**	**162**	⇓*i*Pg	Pg	06 01 42.9	0.0
CD2				Sg	Sg	06 01 47.4	-0.2
CD2				smax	smax		
	comp=N,16μm,0.8s						
CD2				smax	smax		
	comp=E,8μm,0.8s						
LZH	**Lanzhou**	**4.86**	**2**	*e*Pg	Pg	06 03 14.0	+4.7
LZH				Sg	Sg	06 04 17.2	+4.8
LZH				smax	smax		
	comp=N,75nm,1.1s						
LZH				smax	smax		
	comp=E,53nm,1.1s						
LZH				LR	LR		
	comp=N,220nm,7.6s						
LZH				LR	LR		
	comp=E,230nm,7.0s						
LZH				LR	LR		
	comp=Z,240nm,8.0s						
XAN	**Xi'an**	**5.27**	**56**	Pn	Pn	06 02 55.0	+0.8
XAN				Pg	Pg	06 03 14.0	-3.0
XAN				Sn	Sn	06 03 54.2	-0.4
XAN				Sg	Sb	06 04 17.7	+6.8
XAN				smax	smax		
	comp=N,23nm,0.8s						
XAN				smax	smax		
	comp=E,15nm,0.8s						
HHC	**Hu-ho-hao-te**	**11.55**	**31**	*e*P	Pn	06 04 20.9	+0.6

IDC 02 06:13:07.2±3.2**, 2°.88S**×**140°.62E, h0km, mb3.3**/3**, mb1 3.7**/4**, mb1mx3.5**/18**, mbtmp3.5**/4**, ML3.8**/1**, Error ellipse: s-maj=98.6km s-min=15.8km az=98.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.03**	**199**	P	P	06 17 20.3	+0.3
	0.3nm,0.3s,baz=24,slow=12,SNR=25						
WRA				S	Sn	06 20 42.5	+1.1
	0.1nm,0.3s,baz=17,slow=26,SNR=4.2						
FITZ	**Fitzroy Crossi**	**21.08**	**223**	P	P	06 17 53.0	-0.2
	1.6nm,0.7s,baz=31,slow=12,SNR=3.4						
ASAR	**Alice Springs**	**21.66**	**197**	P	P	06 17 59.0	-0.5
	0.9nm,0.6s,baz=27,slow=11,SNR=14						
MKAR	**Makanchi Array**	**71.10**	**322**	P	P	06 24 27.6	+0.1
	0.1nm,0.6s,baz=114,slow=7.0,SNR=2.3						

*ISCJB **02** 06:27:01.1±0.5, 62°.81S±0°.09×158°.4W±0°.2, h10km, mb4.5/13, MS5.0/162, Error ellipse: s-maj=13.8km s-min=9.8km az=26.5*
*IDC **02** 06:27:01.2±0.7, 63°.11S×158°.37W, h0km, mb4.2/9, mb1 4.4/9, mb1mx4.4/13, mbtmp4.2/9, MS4.8/17, Ms1 4.8/17, ms1mx4.7/22, Error ellipse: s-maj=30.7km s-min=16.5km az=28.0*
*NEIC **02** 06:27:03.1±0.4, 62°.83S×158°.43W, h10km, mb4.8/9, MS5.0/141, Error ellipse: s-maj=16.0km s-min=11.7km az=209.0*
*GCMT **02** 06:27:08.1±0.1, 62°.92S×158°.32W, h12km, MW5.5, Moment Tensor Solution. s85,c140; s33,c34; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.36±.03; $M_{\theta\theta}$2.20±.03; $M_{\phi\phi}$-1.83±.03; $M_{r\theta}$-0.15±.07; $M_{\theta\phi}$0.73±.03; $M_{\phi r}$0.86±.07; Best double couple: $M_0$2.30000×10^{17} NP1:ϕ_s123.00000°, δ73.00000°, λ-17.00000°. NP2:ϕ_s218.00000°, δ74.00000°, λ-163.00000°. Principal axes: T 2.3300, Plg0.0000°, Azm350.0000°; N 0.0200, Plg66.0000°, Azm260.0000°; P -2.3400, Plg24.0000°, Azm80.0000°; Data Used: II IU IC G CN. Surface waves: sta= 98, comp=176, per= 50.*
ISC 02 06:27:03.4±0.4**, 62°.93S**±0°.09×**158°.38W**±0°.08**, h10km, n221, σ2s.05**/69**, mb4.6**/13**, MS5.0**/162**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	**Scott Base**	**18.46**	**202**	*e*P	**Pn**	**06 31 20.1**	**+1.3**
	61nm,1.5s						
VNDA	**Vanda**	**19.19**	**205**	*e*P	**Pn**	**06 31 29.7**	**+1.9**
	99nm,2.0s						
VNDA				S	S	06 35 18.9	+15
VNDA	**Vanda**	**19.19**	**205**	P	**Pn**	**06 31 29.6**	**+1.9**
	0.4nm,0.3s,baz=72,slow=15,SNR=21						
VNDA				S	S	06 35 18.9	+15
	0.0nm,0.3s,baz=323,slow=10,SNR=1.9						
VNDA				LR	LR	06 36 57.8	
	comp=Z,4μm,21.1s,baz=65,slow=31						
MCQ	**Macquarie Isla**	**23.30**	**271**	P	**P**	**06 32 07.8**	**-3.1**
RPZ	**Rata Peaks**	**26.11**	**303**	P	**P**	**06 32 38.0**	**+0.9**
RPZ	**Rata Peaks**	**26.11**	**303**	P	**P**	**06 32 38.0**	**+0.9**
	16nm,1.0s,baz=101,slow=5.2,SNR=3.5						
RPZ				LR	LR	06 40 56.7	
	comp=Z,758nm,20.7s,baz=317,slow=32						
SNZO	**South Karori**	**26.87**	**311**	P	**P**	**06 32 43.4**	**-0.5**
SNZO				LR	LR		
	comp=Z,3μm,19.0s						
QSPA	**South Pole Qui**	**27.18**	**180**	*e*P	**P**	**06 32 46.5**	**-0.3**
	comp=Z,17nm,1.0s						
QSPA				LR	LR		
	comp=Z,2μm,19.0s						
QSPA	**South Pole Qui**	**27.18**	**180**	P	**P**	**06 32 46.2**	**-0.6**
	comp=Z,4.6nm,1.0s,baz=301,slow=0.9,SNR=9.1						
QSPA				LR	LR	06 41 42.6	
	comp=Z,2μm,21.2s,baz=243,slow=33						
URZ	**Urewera**	**28.83**	**317**	LR	LR	06 41 32.1	
	comp=Z,3μm,21.8s,baz=165,slow=30						
CASY	**Casey**	**35.93**	**224**	PFAKE		06 34 20.0	+17
CASY				LR	LR		
	comp=Z,875nm,20.0s						
RAO	**Raoul Island**	**36.00**	**330**	LR	LR	06 44 54.4	
	comp=Z,1μm,19.1s,baz=246,slow=30						
TAU	**Tasmania Unive**	**36.93**	**277**	PFAKE		06 34 20.0	+7.9
TAU				LR	LR		
	comp=Z,2μm,22.0s						
PMSA	**Palmer Station**	**37.94**	**136**	*e*P	**P**	**06 34 19.9**	**-0.4**
PMSA	**Palmer Station**	**37.94**	**136**	LR	LR	06 47 33.7	
	comp=Z,2μm,20.7s,baz=231,slow=33						
TBI	**Tubuai**	**40.02**	**13**	*e*S	**S**	**06 40 49.0**	**+5.3**
	comp=Z,474nm,28.5s						
TBI				*e*LR	LR	06 45 17.5	
	comp=Z,6μm,27.5s,baz=185						
TBI				*e*T	T	07 16 52.1	
	comp=Z,127nm,0.3s						
RAR	**Rarotonga**	**41.70**	**358**	PFAKE		06 35 00.0	+7.9
RAR				LR	LR		
	comp=Z,3μm,19.0s						
CAN	**Canberra**	**42.36**	**285**	PFAKE		06 35 10.0	+13
CAN				LR	LR		
	comp=Z,1μm,20.0s						
RKT	**Rikitea**	**42.80**	**33**	*e*LQ	LQ	06 44 41.1	
	comp=Z,2μm,29.0s						
RKT				*e*LR	LR	06 46 50.2	
	comp=Z,2μm,27.8s						
RKT				*e*T	T	07 20 21.4	
	comp=Z,26nm,0.2s						
SNAA	**Sanae**	**44.62**	**169**	*e*P	**P**	**06 35 13.6**	**-1.6**
	comp=Z,9.9nm,1.2s						
SNAA	**Sanae**	**44.62**	**169**	P	P	06 35 11.9	-3.4
	comp=Z,1.0nm,1.2s,baz=216,slow=17,SNR=3.1						
TVO	**Taravao**	**45.55**	**12**	*e*T	T	07 23 44.0	
	comp=Z,34nm,0.3s						
TVO				*e*Td		07 30 52.7	
	comp=Z,6.2nm,0.3s						
PAE	**Paea**	**45.64**	**12**	*e*T	T	07 23 52.6	
	comp=Z,12nm,0.3s						
PPT2	**Papeete2**	**45.71**	**12**	*e*S	**S**	**06 42 09.2**	**+1.7**
	comp=Z,921nm,24.8s						
PPT2				*e*LQ	LQ	06 45 46.4	
	comp=Z,5μm,30.2s						
PPT2				*e*LR	LR	06 47 51.0	
	comp=Z,6μm,27.5s,baz=188						
PPT2				*e*T	T	07 23 52.6	
	comp=Z,18nm,0.3s						
PPT	**Papeete**	**45.73**	**12**	LR	LR	06 49 13.4	
	comp=Z,2μm,19.5s,baz=188,slow=29						
MAW	**Mawson**	**46.41**	**200**	P	**P**	**06 35 31.9**	**+2.6**
MAW	**Mawson**	**46.41**	**200**	P	**P**	**06 35 31.9**	**+2.6**
	comp=Z,3.9nm,0.9s,baz=210,slow=3.1,SNR=4.1						
MAW				LR	LR	06 53 20.8	
	comp=Z,939nm,19.6s,baz=152,slow=34						
DZM	**Mont Dzumac**	**47.23**	**313**	*e*LR	LR	06 49 41.8	
	comp=Z,3μm,22.3s						
PMOR	**Pomariorio Ree**	**48.44**	**14**	*e*T	T	07 27 17.6	
	comp=Z,21nm,0.3s						
STKA	**Stephens Creek**	**48.57**	**281**	*e*P	**P**	**06 35 46.6**	**+0.1**
	comp=Z,2.2nm,0.9s						
STKA	**Stephens Creek**	**48.57**	**281**	P	**P**	**06 35 47.0**	**+0.5**
	comp=Z,7.6nm,1.0s,baz=132,slow=5.9,SNR=10.0						
STKA				LR	LR	06 53 22.8	
	comp=Z,1μm,18.4s,baz=143,slow=32						
EFI	**East Falkland**	**49.85**	**127**	PFAKE		06 36 10.0	+14
EFI				LR	LR		
	comp=Z,1μm,20.0s						
AFI	**Afiamalu**	**49.87**	**343**	PFAKE		06 36 10.0	+13
AFI				LR	LR		
	comp=Z,2μm,19.0s						
PLCA	**Paso Flores**	**53.76**	**110**	*e*P	**P**	**06 36 26.4**	**+0.9**
PLCA	**Paso Flores**	**53.76**	**110**	P	**P**	**06 36 25.1**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=136,slow=4.8,SNR=3.2						
PLCA				LR	LR	06 53 51.1	
	comp=Z,871nm,20.3s,baz=210,slow=30						
CTAO	**Charters Tower**	**56.77**	**292**	PFAKE		06 37 00.0	+13
CTAO				LR	LR		
	comp=Z,1μm,19.0s						
NWAO	**Narrogin (SRO)**	**58.76**	**258**	PFAKE		06 37 10.0	+8.8
NWAO				LR	LR		
	comp=Z,1μm,21.0s						
AS31	**Alice Springs**	**59.07**	**278**	*e*P	**P**	**06 37 02.6**	**-0.9**
ASAR	**Alice Springs**	**59.07**	**278**	P	**P**	**06 37 02.5**	**-1.1**
ASAR	**Alice Springs**	**59.07**	**278**	P	**P**	**06 37 02.5**	**-1.1**
	comp=Z,5.1nm,1.0s,baz=143,slow=4.1,SNR=17						
ASAR				LR	LR	06 58 28.6	
	comp=Z,2μm,21.0s,baz=150,slow=32						
TRQA	**Tornquist**	**59.63**	**115**	*e*P	**P**	**06 37 07.0**	**-0.2**
TRQA				LR	LR		
	comp=Z,983nm,20.0s						
HNR	**Honiara**	**61.19**	**312**	LR	LR	06 58 37.2	

comp=Z,559nm,20.9s,baz=346,slow=31
PAF Port-aux-Franc 61.65 214 PFAKE 06 37 30.0 +9.2
PAF LR LR
comp=Z,3μm,19.0s
WRA Warramunga Arr 62.12 281 P **P** **06 37 22.5 -1.9**
WRA Warramunga Arr 62.12 281 P **P** **06 37 22.5 -1.9**
comp=Z,4.6nm,1.0s,baz=157,slow=5.9,SNR=10
WRA LR LR 07 01 08.9
comp=Z,1μm,18.3s,baz=145,slow=33
WRAB Tennant Creek 62.12 281 *e*P **P** **06 37 22.6 -1.7**
comp=Z,13nm,1.0s
WRAB LR LR
comp=Z,1μm,19.0s
CFAA Coronel Fontan 62.43 106 LR LR 07 00 03.7
comp=Z,45nm,18.9s,baz=221,slow=32
LCO Las Campanas 63.56 102 PFAKE 06 37 50.0 +16
LCO LR LR
comp=Z,691nm,19.0s
XMAS Kiritimati 64.81 1 PFAKE 06 37 50.0 +7.9
XMAS LR LR
comp=Z,2μm,19.0s
PMG Port Moresby 66.00 298 PFAKE 06 38 00.0 +10
PMG LR LR
comp=Z,638nm,20.0s
TARA Tarawa 67.65 329 PFAKE 06 38 10.0 +10
TARA LR LR
comp=Z,925nm,22.0s
MBWA Marble Bar 67.71 267 PFAKE 06 38 10.0 +9.3
MBWA LR LR
comp=Z,2μm,19.0s
LVC Limon Verde 69.88 100 PFAKE 06 38 30.0 +15
LVC LR LR
comp=Z,522nm,22.0s
CPUP Villa Florida 71.72 112 P **P** **06 38 24.6 -0.8**
CPUP Villa Florida 71.72 112 P **P** **06 38 24.6 -0.8**
comp=Z,0.7nm,0.5s,baz=177,slow=8.2,SNR=5.5
CPUP LR LR 07 05 49.2
comp=Z,746nm,19.8s,baz=194,slow=32
NNA Nana 75.56 88 PFAKE 06 39 00.0 +12
NNA LR LR
comp=Z,673nm,20.0s
LPAZ La Paz 75.76 98 *e*P **P** **06 38 48.0 -1.9**
comp=Z,22nm,1.3s
LPAZ La Paz 75.76 98 P **P** **06 38 48.0 -1.9**
comp=Z,6.0nm,1.2s,baz=187,slow=5.3,SNR=9.2
SPB Sao Paulo 78.24 119 PFAKE 06 39 10.0 +7.0
SPB LR LR
comp=Z,1μm,20.0s
PAYG Puerto Ayora 79.57 71 PFAKE 06 39 20.0 +10
PAYG LR LR
comp=Z,811nm,19.0s
KAPI Kappang 81.86 275 PFAKE 06 39 30.0 +7.3
KAPI LR LR
comp=Z,799nm,19.0s
SAML Samuel 84.46 99 *e*P **P** **06 39 37.2 +1.1**
comp=Z,6.4nm,1.1s
SAML LR LR
comp=Z,364nm,20.0s
SUR Sutherland 85.02 179 PFAKE 06 39 50.0 +11
SUR LR LR
comp=Z,2μm,19.0s
OTAV Otavalo 85.62 81 *e*P **P** **06 39 42.0 -0.5**
comp=Z,25nm,1.5s
OTAV LR LR
comp=Z,284nm,19.0s
COCO West Island 85.85 251 PFAKE 06 39 50.0 +6.9
COCO LR LR
comp=Z,1μm,20.0s
WAKE Wake Island 86.44 327 PFAKE 06 40 00.0 +14
WAKE LR LR
comp=Z,843nm,19.0s
BOSA Boshof 88.72 183 LR LR 07 15 06.1
comp=Z,1μm,21.7s,baz=173,slow=33
DAV Davao City (W) 89.96 286 PFAKE 06 40 10.0 +7.3
DAV LR LR
comp=Z,401nm,20.0s
ROSC El Rosal 91.58 83 LR LR 07 13 42.4
comp=Z,216nm,18.4s,baz=7.8,slow=31
JTS JuntasAbangare 91.68 71 PFAKE 06 40 20.0 +9.3
JTS LR LR
comp=Z,583nm,20.0s
KSM Kuching 91.90 269 PFAKE 06 40 20.0 +8.2
KSM LR LR
comp=Z,207nm,21.0s
BCIP Isla Barro Col 92.92 76 PFAKE 06 40 30.0 +14
BCIP LR LR
comp=Z,511nm,21.0s
TGUH Tegucigalpa,Un 94.06 67 PFAKE 06 40 30.0 +8.4
TGUH LR LR
comp=Z,496nm,19.0s
ABPO Ambohimpanom 95.87 204 PFAKE 06 40 40.0 +10
ABPO LR LR
comp=Z,773nm,19.0s
TSUM Tsumeb 98.08 176 PFAKE 06 40 50.0 +10
TSUM LR LR
comp=Z,629nm,19.0s
RCBR Riachuelo 98.90 122 PFAKE 06 40 50.0 +6.2
RCBR LR LR
comp=Z,528nm,20.0s
TEIG Tepich 99.17 63 LR LR 07 13 09.2
comp=Z,90nm,22.0s,baz=341,slow=28
KULM Kulim 99.68 263 PFAKE 06 41 00.0 +13
KULM LR LR
comp=Z,455nm,20.0s
LSZ Lusaka 101.88 186 PFAKE 06 41 10.0 +13
LSZ LR LR
comp=Z,822nm,20.0s
PFO Pinyon Flat Ob 101.88 35 PFAKE 06 41 10.0 +13
PFO LR LR
comp=Z,514nm,20.0s
MTDJ Mount Denham 101.96 74 PFAKE 06 41 10.0 +13
MTDJ LR LR
comp=Z,322nm,19.0s
KVTX Kingsville 102.06 52 PFAKE 06 41 10.0 +13
KVTX LR LR
comp=Z,301nm,22.0s
TUC Tucson 102.22 40 PFAKE 06 41 10.0 +12
TUC LR LR
comp=Z,279nm,19.0s
MNTX Cornudas Mount 103.31 44 PFAKE 06 41 10.0 +7.2
MNTX LR LR
comp=Z,231nm,19.0s
GRGR Grenville 103.77 90 PFAKE 06 41 20.0 +15
GRGR LR LR
comp=Z,309nm,19.0s
JCT Junction City 104.06 49 PFAKE 06 41 20.0 +14
JCT LR LR
comp=Z,341nm,19.0s
GTBY Guantanamo Bay 104.52 75 PFAKE 06 41 20.0 +12
GTBY LR LR
comp=Z,278nm,19.0s
WUAZ Wupatki 105.06 38 PFAKE 06 41 20.0 +9.3
WUAZ LR LR
comp=Z,324nm,20.0s
SDDR Presa de Saban 105.40 79 PFAKE 06 45 40.0
SDDR LR LR
comp=Z,207nm,19.0s
BBGH Gun Hill 105.62 92 PFAKE 06 45 40.0
BBGH LR LR
comp=Z,583nm,20.0s
TPH Tonopah 105.92 33 PFAKE 06 45 40.0
TPH LR LR
comp=Z,726nm,20.0s
ANMO Albuquerque 105.98 42 PFAKE 06 45 40.0
ANMO LR LR
comp=Z,315nm,20.0s
FDF Fort de France 106.28 90 PFAKE 06 45 40.0
FDF LR LR
comp=Z,359nm,19.0s
SJG San Juan 106.96 83 PFAKE 06 45 40.0
SJG LR LR
comp=Z,300nm,21.0s
YHNB Yeheng 107.37 290 PFAKE 06 45 40.0
YHNB LR LR
comp=Z,229nm,21.0s
AMTX Amarillo 107.44 46 PFAKE 06 45 40.0
AMTX LR LR
comp=Z,451nm,22.0s
QIZ Qiongzhong 107.56 277 PFAKE 06 45 40.0
QIZ LR LR
comp=Z,186nm,19.0s
TATO Taipei 107.59 290 PFAKE 06 45 40.0
TATO LR LR
comp=Z,240nm,21.0s
MVU Marysvale 107.62 36 PFAKE 06 45 40.0
MVU LR LR
comp=Z,398nm,20.0s
MSEY Mahe Island 107.86 216 PFAKE 06 45 40.0
MSEY LR LR
comp=Z,541nm,19.0s
BMN Battle Mountai 108.15 32 PFAKE 06 45 40.0
BMN LR LR
comp=Z,383nm,22.0s
WMOK Wichita Mounta 108.28 48 PFAKE 06 45 40.0
WMOK LR LR
comp=Z,304nm,20.0s
ANWB Willy Bob 108.56 88 PFAKE 06 45 40.0
ANWB LR LR
comp=Z,278nm,21.0s
SDCO Great Sand Dun 108.86 42 PFAKE 06 45 40.0
SDCO LR LR
comp=Z,380nm,21.0s
VBMS Vicksburg 109.00 56 PFAKE 06 45 40.0
VBMS LR LR
comp=Z,275nm,22.0s
DUG Dugway 109.05 35 PFAKE 06 45 40.0
DUG LR LR
comp=Z,423nm,22.0s
WVOR Wild Horse Val 109.72 30 PFAKE 06 45 40.0
WVOR LR LR
comp=Z,524nm,19.0s
HWUT Hardware Ranch 110.70 36 PFAKE 06 45 50.0
HWUT LR LR
comp=Z,356nm,20.0s
ISCO Idaho Springs 110.71 41 PFAKE 06 45 50.0
ISCO LR LR
comp=Z,335nm,21.0s
LRAL Lakeview Retre 111.08 59 PFAKE 06 45 50.0
LRAL LR LR
comp=Z,154nm,20.0s
MAJO Matsushiro 111.24 309 PFAKE 06 45 50.0
MAJO LR LR
comp=Z,172nm,21.0s
OXF Oxford 111.46 56 PFAKE 06 45 50.0
OXF LR LR
comp=Z,307nm,19.0s
HLID Hailey 111.79 33 PFAKE 06 45 50.0
HLID LR LR
comp=Z,632nm,20.0s
AHID Auburn Hatcher 111.90 36 PFAKE 06 45 50.0
AHID LR LR
comp=Z,348nm,20.0s
BMO Blue Mountains 112.32 30 PFAKE 06 45 50.0
BMO LR LR
comp=Z,500nm,22.0s
BW06 Boulder Array 112.32 37 PFAKE 06 45 50.0
BW06 LR LR
comp=Z,342nm,19.0s
CHTO Chiang Mai 112.34 268 PFAKE 06 45 50.0
CHTO LR LR
comp=Z,459nm,21.0s
OGNE Ogallala 112.86 43 PFAKE 06 45 50.0
OGNE LR LR
comp=Z,324nm,20.0s
KSU1 Kansas State U 112.96 48 PFAKE 06 45 50.0
KSU1 LR LR
comp=Z,408nm,20.0s
HAWA Hanford 113.28 28 PFAKE 06 45 50.0
HAWA LR LR
comp=Z,855nm,20.0s
NLWA Neilton Lookou 113.35 25 PFAKE 06 45 50.0
NLWA LR LR
comp=Z,627nm,20.0s
LKWY Lake 113.76 35 PFAKE 06 45 50.0
LKWY LR LR
comp=Z,288nm,20.0s
NHSC New Hope 113.88 64 PFAKE 06 45 50.0
NHSC LR LR
comp=Z,222nm,20.0s
BOZ Bozeman (W) 114.45 34 PFAKE 06 45 50.0 +7.5
BOZ LR LR
comp=Z,305nm,19.0s
ERM Erimo 114.50 316 PFAKE 06 45 50.0 +7.6
ERM LR LR
comp=Z,388nm,19.0s
RLMT Red Lodge 114.58 36 PFAKE 06 45 50.0 +7.2
RLMT LR LR
comp=Z,346nm,21.0s
MSO Missoula 114.97 32 PFAKE 06 45 50.0 +6.6
MSO LR LR
comp=Z,277nm,21.0s
KMBO Kilima Mbogo 115.03 197 PFAKE 06 46 00.0 +15
KMBO LR LR
comp=Z,545nm,20.0s
MSKU Masuku 115.30 171 PFAKE 06 46 00.0 +15
MSKU LR LR
comp=Z,2.0nm,22.0s
GYA Guiyang 115.44 279 *e*Pdif **Pdif** **06 41 57.8 +0.8**
GYA PKP **PKiKP** **06 45 45.0 0.0**
GYA PP **PP** **06 46 51.2 +4.4**
GYA PKS **PKSdf** **06 49 20.4 -1.5**
GYA SKKS 06 53 42.8
GYA SS **SS** **07 02 47.6 +2.2**
GYA AMB AMB
comp=Z,140nm,8.0s
GYA LR LR
comp=N,320nm,21.4s
GYA LR LR
comp=E,210nm,22.0s
GYA LR LR
comp=Z,430nm,20.9s
NEW Newport 115.58 29 PFAKE 06 46 00.0 +16
NEW LR LR
comp=Z,721nm,19.0s
KMI Kunming 116.07 274 PKP **PKPdf** **06 45 44.4 -1.9**
KMI sPKP 06 45 50.8
KMI PP **PP** **06 46 56.4 +5.0**
KMI SS SS 07 02 59.2 +5.3
KMI AMB AMB
comp=Z,97nm,7.0s
KMI LR LR
comp=Z,270nm,22.3s
MBAR Mbarara 116.26 190 PFAKE 06 46 00.0 +13
MBAR LR LR
comp=Z,824nm,21.0s
INCN Inchon 116.40 301 PFAKE 06 46 00.0 +14
INCN LR LR
comp=Z,209nm,20.0s
SCIA State Center 116.63 49 PFAKE 06 46 00.0 +13
SCIA LR LR
comp=Z,299nm,20.0s
CNNC Cliffs of the 116.67 65 PFAKE 06 46 00.0 +13
CNNC LR LR
comp=Z,457nm,21.0s
HDIL Hopedale 116.84 53 PFAKE 06 46 00.0 +13
HDIL LR LR
comp=Z,205nm,19.0s
ECSD EROS Data Cent 117.11 46 PFAKE 06 46 00.0 +13
ECSD LR LR
comp=Z,372nm,22.0s
EGMT Eagleton 117.13 34 PFAKE 06 46 00.0 +13
EGMT LR LR
comp=Z,468nm,22.0s
BLA Blacksburg 117.34 62 PFAKE 06 46 00.0 +12
BLA LR LR
comp=Z,168nm,19.0s
ENH Enshi 117.44 283 PFAKE 06 46 00.0 +11
ENH LR LR
comp=Z,272nm,22.0s
JFWS Jewell Farm 118.56 51 PFAKE 06 46 00.0 +10
JFWS LR LR
comp=Z,284nm,19.0s
ACSO Alum Creek Sta 118.93 58 PFAKE 06 46 00.0 +8.9
ACSO LR LR
comp=Z,292nm,21.0s
DGMT Dagmar 119.05 38 PFAKE 06 46 00.0 +8.9
DGMT LR LR
comp=Z,398nm,21.0s
CBN Corbin 119.43 63 PFAKE 06 46 00.0 +7.9
CBN LR LR
comp=Z,324nm,19.0s
BBSR BB Station 119.91 77 PFAKE 06 46 00.0 +6.8
BBSR LR LR
comp=Z,195nm,20.0s
AAM Ann Arbor 120.45 56 PFAKE 06 46 10.0 +16
AAM LR LR
comp=Z,308nm,21.0s
KDAK Kodiak Island 120.47 4 PFAKE 06 46 00.0 +6.6
KDAK LR LR
comp=Z,818nm,19.0s
CD2 Chengdu 120.55 279 *e*PKP **PKPdf** **06 45 54.1 -0.5**
CD2 PP **PP** **06 47 26.0 +3.7**
CD2 PKS **PKSdf** **06 49 29.5 -1.8**
CD2 SKS **SKSdf** **06 53 03.5 -2.8**
CD2 SKKS **SKKSac** **06 54 17.0 -4.3**
CD2 SS **SS** **07 03 53.2 +1.6**
CD2 AMB AMB
comp=Z,60nm,11.0s
CD2 LR LR
comp=N,410nm,23.4s
CD2 LR LR
comp=E,410nm,20.2s
CD2 LR LR
comp=Z,350nm,21.4s
WRAK Wrangell Islan 120.72 16 PFAKE 06 46 00.0 +6.1
WRAK LR LR
comp=Z,658nm,20.0s
MDJ Mudanjiang 121.44 307 PFAKE 06 46 10.0 +14
MDJ LR LR
comp=Z,264nm,22.0s
ERPA Erie 121.71 59 PFAKE 06 46 10.0 +14
ERPA LR LR
comp=Z,329nm,19.0s
EYMN Ely 122.51 47 PFAKE 06 46 10.0 +12
EYMN LR LR
comp=Z,385nm,20.0s
SACV Santiago Islan 122.66 125 PFAKE 06 46 10.0 +11
SACV LR LR
comp=Z,593nm,21.0s
BJT Baijiatuau 122.80 294 PFAKE 06 46 10.0 +11
BJT LR LR
comp=Z,164nm,20.0s
BINY Binghamton 123.37 62 PFAKE 06 46 10.0 +10
BINY LR LR
comp=Z,457nm,22.0s
FFC Flin Flon 125.27 36 PFAKE 06 46 10.0 +7.2
FFC LR LR
comp=Z,623nm,21.0s
LSA Lhasa 125.28 267 PFAKE 06 46 20.0 +16
LSA LR LR
comp=Z,264nm,22.0s
HHC Hu-ho-hao-te 125.43 291 *e*PKP **PKPdf** **06 45 59.7 -4.0**
HHC sPKP 06 46 13.5
HHC PP **PP** **06 47 54.2 -1.1**
HHC PKS PKSdf 06 49 35.0 -5.3
HHC SKKS 06 54 44.7
HHC SS **SS** **07 04 51.5 -2.1**
HHC AMB AMB
comp=Z,200nm,5.9s
HHC LR LR
comp=N,280nm,14.3s
HHC LR LR
comp=E,270nm,13.1s
HHC LR LR
comp=Z,280nm,17.8s
NCB Newcomb 125.56 62 PFAKE 06 46 10.0 +6.3
NCB LR LR
comp=Z,321nm,20.0s
LONY Lake Ozonia 125.95 61 PFAKE 06 46 20.0 +16
LONY LR LR
comp=Z,250nm,19.0s
MCK McKinley 126.55 5 *e*PKPdf **PKPdf** **06 46 05.9 +0.9**
LBNH Lisbon 126.72 64 PFAKE 06 46 20.0 +14
LBNH LR LR
comp=Z,318nm,20.0s
ILAR Eielson Array 127.68 6 PKP **PKPdf** **06 46 07.8 +0.7**
ILAR Eielson Array 127.68 6 PKP **PKPdf** **06 46 07.8 +0.7**
comp=Z,2.1nm,0.8s,baz=231,slow=1.7,SNR=13
COLA College 127.74 6 *e*PKPdf **PKPdf** **06 46 07.0 -0.1**
COLA LR LR
comp=Z,442nm,20.0s
EGAK Eagle 128.04 9 PFAKE 06 46 20.0 +12
EGAK LR LR
comp=Z,749nm,21.0s
TORD Torodi Ar. Bea 128.31 155 PKP **PKPdf** **06 46 11.9 +2.1**
TORD Torodi Ar. Bea 128.31 155 PKP **PKPdf** **06 46 11.9 +2.1**
comp=Z,0.2nm,0.5s,baz=214,slow=2.5,SNR=2.8
HIA Hailar 129.02 303 PFAKE 06 46 20.0 +10
HIA LR LR
comp=Z,189nm,19.0s
YKA Yellowknife Ar 129.36 25 PKP **PKPdf** **06 46 10.5 +0.2**
YKA Yellowknife Ar 129.36 25 PKP **PKPdf** **06 46 10.5 +0.2**
comp=Z,0.3nm,0.9s,baz=184,slow=2.5,SNR=4.6
ULN Ulaanbaatar 133.00 293 PFAKE 06 46 30.0 +12
ULN LR LR
comp=Z,227nm,21.0s
BILL Bilibino 133.12 343 PFAKE 06 46 30.0 +13
BILL LR LR
comp=Z,255nm,21.0s
TAM Tamanrasset 138.43 157 PFAKE 06 46 40.0 +11
TAM LR LR
comp=Z,283nm,22.0s
MKAR Makanchi Array 143.14 273 PKP PKPbc 06 46 34.6 +1.2
MKAR Makanchi Array 143.14 273 PKP PKPbc 06 46 34.6 +1.2
comp=Z,1.0nm,0.7s,baz=116,slow=2.8,SNR=6.8
TKM2 Tokmak 2 143.23 263 PFAKE 06 46 50.0 +13
TKM2 LR LR
comp=Z,157nm,20.0s
AAK Ala-Archa 143.50 262 PFAKE 06 46 50.0 +13
AAK LR LR
comp=Z,212nm,22.0s
EKS2 Erkin-Say 143.85 261 PFAKE 06 46 50.0 +12
EKS2 LR LR
comp=Z,177nm,20.0s
KKAR Karatay Array 145.67 258 *e*PKPdf **PKPab** **06 46 41.9 +0.2**
RTC Rabat Centre 145.99 135 PFAKE 06 46 50.0 +7.0
RTC LR LR
comp=Z,284nm,20.0s
ZAA0 Zalesovo Array 147.06 284 *e*PKPdf **PKPdf** **06 46 42.8 0.0**
ZALV Zalesovo Beam 147.06 284 PKPbc **PKPdf** **06 46 43.1 +0.3**
ZALV Zalesovo Beam 147.06 284 PKPbc **PKPdf** **06 46 43.1 +0.3**
comp=Z,1.3nm,0.7s,baz=94,slow=4.5,SNR=8.1
KURBB Kurchatov Arra 147.63 275 PKPbc **PKPbc** **06 46 45.7 -0.9**
comp=Z,4.7nm,1.0s,baz=136,slow=2.1,SNR=22
KURK Kurchatov 147.65 275 *e*PKPbc **PKPdf** **06 46 44.6 +0.7**
KURK LR LR
comp=Z,230nm,19.0s
CSS Prodhromos 151.07 200 PFAKE 06 47 00.0 -3.4
CSS LR LR
comp=Z,443nm,21.0s
MTE Manteigas 151.54 129 PFAKE 06 47 00.0 +3.2
MTE LR LR
comp=Z,405nm,22.0s
PAB San Pablo 151.87 134 PFAKE 06 47 00.0 +2.4
PAB LR LR
comp=Z,382nm,20.0s
WDD Wield Dalam 152.55 167 PFAKE 06 47 00.0 +0.9
WDD LR LR
comp=Z,793nm,20.0s
BVAR Borovoye Array 152.98 271 PKPbc **PKPbc** **06 46 59.8 +0.3**
BVAR Borovoye Array 152.98 271 PKPbc **PKPbc** **06 46 59.8 +0.3**
comp=Z,1.5nm,0.7s,baz=134,slow=4.3,SNR=6.8
BRVK Borovoye 153.05 271 PFAKE 06 47 00.0 +0.4
BRVK LR LR
comp=Z,352nm,21.0s
GNI Garni 153.33 222 PFAKE 06 47 00.0 -0.9
GNI LR LR
comp=Z,357nm,20.0s
ISP Isparta 154.28 196 PFAKE 06 47 10.0 -7.0
ISP LR LR
comp=Z,289nm,21.0s
CEL Celeste 155.05 169 PFAKE 06 47 10.0 -10
CEL LR LR
comp=Z,585nm,21.0s
VSL Villasalto 155.40 157 PFAKE 06 47 10.0 -12
VSL LR LR
comp=Z,588nm,21.0s
BRTR Keskin Array B 155.66 203 PKPab **PKPab** **06 47 21.3 -1.6**
BRTR Keskin Array B 155.66 203 PKPab **PKPab** **06 47 21.3 -1.6**
comp=Z,0.4nm,0.5s,baz=151,slow=6.6,SNR=3.9
ANTO Ankara 155.95 201 PFAKE 06 47 10.0 +13
ANTO LR LR
comp=Z,257nm,22.0s
CUC Castrocucco 156.76 169 PFAKE 06 47 10.0 +12
CUC LR LR
comp=Z,404nm,20.0s
TIR Tirane 158.35 176 PFAKE 06 47 10.0 +10
TIR LR LR
comp=Z,520nm,20.0s
AQU L'Aquila 158.83 163 PFAKE 06 47 10.0 +10
AQU LR LR
comp=Z,652nm,20.0s
SSB Saint Sauveur 159.79 143 PFAKE 06 47 10.0 +8.6
SSB LR LR
comp=Z,358nm,21.0s
VLC Villacollemand 160.10 156 PFAKE 06 47 10.0 +8.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VLC				LR	LR		
	comp=Z,298nm,19.0s						
BNI	**Bardonecchia**	**160.14**	**147**	PFAKE		06 47 10.0	+8.1
BNI				LR	LR		
	comp=Z,491nm,20.0s						
BORG	**Borgarnes**	**161.24**	**65**	PFAKE		06 47 10.0	+7.8
BORG				LR	LR		
	comp=Z,693nm,20.0s						
TUE	**Stuetta**	**162.10**	**151**	PFAKE		06 47 10.0	+5.9
TUE				LR	LR		
	comp=Z,404nm,20.0s						
ECH	**Echery**	**163.20**	**145**	PFAKE		06 47 20.0	+15
ECH				LR	LR		
	comp=Z,302nm,20.0s						
BFO	**Black Forest**	**163.61**	**147**	PFAKE		06 47 20.0	+15
BFO				LR	LR		
	comp=Z,336nm,19.0s						
KBS	**Kingsbay**	**163.66**	**7**	PFAKE		06 47 10.0	+5.6
KBS				LR	LR		
	comp=Z,559nm,21.0s						
WLF	**Walferdange**	**164.24**	**140**	PFAKE		06 47 20.0	+14
WLF				LR	LR		
	comp=Z,371nm,19.0s						
PSZ	**Piszkesteto**	**164.92**	**176**	PFAKE		06 47 20.0	+14
PSZ				LR	LR		
	comp=Z,446nm,22.0s						
ESK	**Eskdalemuir**	**165.23**	**110**	PFAKE		06 47 20.0	+14
ESK				LR	LR		
	comp=Z,331nm,20.0s						
VYHS	**Vyhne**	**165.44**	**173**	*e*PKP	PKPdf	06 47 14.1	+7.3
VYHS				*e*		06 48 10.3	
KECS	**Kecovo**	**165.50**	**177**	*e*PKP	PKPab	06 48 10.7	+5.4
KWP	**Kalwaria Pacla**	**166.65**	**183**	PFAKE		06 47 20.0	+12
KWP				LR	LR		
	comp=Z,548nm,21.0s						
KIEV	**Kiev**	**167.06**	**202**	PFAKE		06 47 20.0	+12
KIEV				LR	LR		
	comp=Z,318nm,20.0s						
CLL	**Collm**	**167.46**	**154**	*e*PP	PP	06 52 06.0	+3.4
CLL				*e*SKSdf	**SKSdf**	**06 54 12.0**	**+0.5**
CLL				*e*SKKSac	**SKKSac**	**06 58 47.0**	**-2.0**
CLL				*e*		07 01 05.0	
CLL				*e*PSKS		07 02 36.0	
CLL				*e*PPS	PPS	07 05 56.0	
CLL				*e*		07 10 42.0	
CLL				*e*SS	**SS**	**07 12 55.0**	**+6.3**
CLL				*e*PSS	PSS	07 13 53.0	
CLL				*e*SSS	SSS	07 19 29.0	
CLL				*e*		07 25 00.0	
CLL				*e*		07 29 54.0	
KONO	**Kongsberg**	**173.34**	**114**	PFAKE		06 47 20.0	+8.8
KONO				LR	LR		
	comp=Z,320nm,20.0s						

IDC ***02*** *06:36:08.9±2.0, 30°.35N×80°.44E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/29, mbtmp3.6/7, Error ellipse: s-maj=86.2km s-min=19.9km az=62.0*

NDI ***02*** *06:36:11.2±2.8, 30°.45N×80°.45E, h10km, ML4.2*

ISC 02 06:36:08.9±3.8**, 30°.38N**±0°.06×**80°.44E**±0°.07**, h0**km±24km**, n14,** σ1s.**57**/19**, mb3.7**/5**, Western Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LGTI	**Lohaghat**	**0.94**	**190**	*e*PKP	Pn	06 36 33.6	+4.2
LGTI				*e*S	**Sn**	**06 36 46.2**	**+2.7**
DDI	**Dehra Dun**	**2.06**	**269**	*e*PKP	**Pn**	**06 36 45.8**	**+0.9**
DDI				*e*S	**Sb**	**06 37 13.2**	**-0.2**
SMLA	**Simla**	**2.91**	**286**	*i* P	**Pn**	**06 36 57.7**	**+1.2**
SMLA				*e*S	**Sn**	**06 37 32.5**	**+0.3**
SMLA				AML	AML	06 37 39.1	
	comp=N,2μm,0.4s						
SMLA				AML	AML	06 37 39.4	
	comp=E,2μm,0.3s						
SDNR	**Sundarnagar**	**3.18**	**291**	*e*PKP	**Pn**	**06 37 02.0**	**+1.7**
SDNR				*e*S	**Sn**	**06 37 36.0**	**-2.9**
NDI	**New Delhi**	**3.28**	**240**	*e*x	**Pb**	**06 37 07.0**	**-1.0**
NDI				*e*S	**Sn**	**06 37 42.0**	**+0.8**
JBP	**Jabalpur**	**7.20**	**183**	*e*PKP	**Pn**	**06 37 55.4**	**0.0**
JBP				*e*4	**Sn**	**06 39 15.3**	**-2.6**
JBP				AML	AML	06 39 18.6	
	comp=N,177nm,0.1s						
JBP				AML	AML	06 39 19.0	
	comp=E,138nm,0.1s						
MKAR	**Makanchi Array**	**16.45**	**4**	Pn	**P**	**06 40 02.9**	**-1.1**
	comp=E,0.1nm,0.3s,baz=191,slow=12,SNR=16						
KURBB	**Kurchatov Arra**	**20.27**	**356**	P	**P**	**06 40 46.1**	**+0.2**
	comp=E,6.1nm,1.1s,baz=181,slow=9.4,SNR=9.8						
CMAR	**Chiang Mai Arr**	**20.58**	**121**	P	**P**	**06 40 50.4**	**+0.9**
	comp=E,0.6nm,0.3s,baz=297,slow=13,SNR=4.5						
ZALV	**Zalesovo Beam**	**23.76**	**6**	P	**P**	**06 41 23.5**	**+0.7**
	comp=E,1.5nm,0.8s,baz=177,slow=5.5,SNR=3.2						
ARCES	**ARCESS Array B**	**49.78**	**338**	P	**P**	**06 45 03.9**	**+1.0**
	comp=E,3.4nm,1.0s,baz=97,slow=7.4,SNR=3.7						
WRA	**Warramunga Arr**	**72.04**	**127**	P	**P**	**06 47 33.5**	**-1.4**
	comp=E,0.4nm,0.6s,baz=322,slow=6.1,SNR=6.2						
ASAR	**Alice Springs**	**74.29**	**130**	P	**P**	**06 47 49.1**	**+0.9**
	comp=E,0.1nm,0.4s,baz=312,slow=6.0,SNR=3.6						
YKA	**Yellowknife Ar**	**86.66**	**7**	P	**P**	**06 48 53.1**	**-1.0**
	comp=E,0.1nm,0.7s,baz=342,slow=4.6,SNR=3.4						

IDC 02 06:42:34.6±8.4**, 1°.63N**×**97°.10E, h0**km**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/26**, mbtmp3.5**/4**, Error ellipse: s-maj=398.9km s-min=26.8km az=54.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**42.35**	**122**	P	P	06 50 30.7	-0.1
	0.7nm,1.1s,baz=299,slow=9.3,SNR=2.5						
MKAR	**Makanchi Array**	**46.80**	**346**	P	P	06 51 05.8	-0.3
	0.2nm,0.4s,baz=168,slow=7.4,SNR=2.7						
KURBB	**Kurchatov Arra**	**51.29**	**345**	P	P	06 51 40.2	-0.1
	0.3nm,0.4s,baz=172,slow=7.8,SNR=4.4						
ZALV	**Zalesovo Beam**	**53.12**	**351**	P	P	06 51 54.0	+0.1
	1.6nm,0.5s,baz=174,slow=7.6,SNR=12						

IDC ***02*** *06:43:39.0±0.6, 15°.39N×86°.52W, h0km, mb4.6/23, mb1 4.8/25, mb1mx4.7/29, mbtmp4.6/25, ML5.5/1, MS4.0/10, Ms1 4.0/10, ms1mx3.8/25, Error ellipse: s-maj=23.7km s-min=10.9km az=62.0*

ISCJB ***02*** *06:43:39.5±0.2, 15°.46N±0°.02×86°.39W±0°.02, h10km, mb4.8/134, MS4.3/15, Error ellipse: s-maj=3.3km s-min=3.3km az=140.7*

MOS ***02*** *06:43:39.4±1.0, 15°.45N×86°.40W, h10km, mb5.1/44, Error ellipse: s-maj=10.7km s-min=5.1km az=103.7*

BJI ***02*** *06:43:41.2, 15°.50N×86°.40W, h10km, mB5.4/6, Ms5.1/7, Ms7 4.7/7*

NEIC ***02*** *06:43:41.0±0.2, 15°.42N×86°.41W, h10km, mb5.0/108, Error ellipse: s-maj=4.3km s-min=3.2km az=221.0*

NEIC Felt [IV] at Utila; [III] at Roatan and Valle de Angeles; [II] at La Ceiba, San Pedro Sula, Sandy Bay and Tegucigalpa. Also felt at Cerro Grande, El Progreso, Jutiapa, La Masica, Mateo, Olanchito, Piedras Amarillas, Puerto Cortes, Sambo Creek, Santa Lucia, Santa Rosa de Copan, Siguatepeque and Yuscaran. Felt [III] at Belize City, Belize. Also felt at Dangriga. Felt at San Luis, Guatemala and at Ocotal, Nicaragua.

CASC ***02*** *06:43:43.3±2.2, 15°.49N×86°.90W, h0km±17km, ML4.6, mb5.0(NEIC)*

GCMT ***02*** *06:43:45.1±0.2, 15°.69N×86°.42W, h17km, MW5.1, Moment Tensor Solution. s28,c32; s80,c122; Moment tensor: Scale 10^{16}Nm; M_{rr}-6.21±.34; $M_{\theta\theta}$2.03±.19; $M_{\phi\phi}$4.19±.25; $M_{r\theta}$2.58±.62; $M_{\theta\phi}$2.19±.13; $M_{\phi r}$0.48±.59; Best double couple: $M_0$6.40000×10^{16} NP1:ϕ_s20.00000°, δ38.00000°, λ-112.00000°. NP2:ϕ_s227.00000°, δ55.00000°, λ-74.00000°. Principal axes: T 5.8300, Plg9.0000°, Azm305.0000°; N 1.1300, Plg13.0000°, Azm37.0000°; P -6.9500, Plg74.0000°, Azm183.0000°; Data Used: II IU G IC CN.*

ISC 02 06:43:40.7±0.3**, 15°.47N**±0°.03×**86°.47W**±0°.04**, h10**km**, n728,** σ1s.**22**/730**, mb4.9**/135**, MS4.2**/16**, 189C-195D, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**1.60**	**209**	*e*P	**Pn**	**06 44 08.9**	**-0.2**
TGUH				*e*S	**Sg**	**06 44 31.8**	**-0.6**
CAHU	**Cacacuatique**	**2.38**	**225**	*e*P	**Pn**	**06 44 19.8**	**-0.3**
VSM	**San Miguel**	**2.68**	**221**	*e*P	**Pn**	**06 44 24.1**	**-0.1**
SNET	**Serv Nac Est T**	**3.21**	**237**	*e*P	**Pn**	**06 44 30.6**	**-0.6**
SNET				*e*S	**Sn**	**06 45 08.1**	**-1.5**
SNET				AML	AML	06 45 27.8	
	comp=Z,4μm,0.7s						
BOQS	**Boqueron**	**3.22**	**238**	*e*P	**Pn**	**06 44 31.2**	**-0.4**
RBDL	**Robledal**	**3.39**	**247**	*e*P	**Pn**	**06 44 33.3**	**-0.6**
SNJE	**San Jose**	**3.42**	**243**	*e*P	**Pn**	**06 44 33.9**	**-0.4**
RTR	**El Retiro**	**3.44**	**243**	*e*P	**Pn**	**06 44 33.9**	**-0.8**
LAPC	**Finca la Perla**	**4.78**	**168**	*i* P	Pb	06 44 59.4	-5.3
MESS	**Mesas**	**4.86**	**165**	*i* P	Pb	06 44 59.6	-6.5
MESS				*i* S	Sg	06 46 09.7	-7.3
LIM1	**Limonal**	**4.89**	**166**	*i* P	Pb	06 45 01.4	-5.1
TEIG	**Tepich**	**5.03**	**340**	*e*Pn	**Pn**	**06 44 55.2**	**-1.1**
TEIG				*e*Sn	**Sn**	**06 45 50.8**	**-3.8**
TEIG				Sn	**Sn**	**06 45 51.1**	**-3.5**
TEIG	**Tepich**	**5.03**	**340**	Pn	**Pn**	**06 44 55.2**	**-1.1**
	comp=Z,194nm,0.3s,baz=303,slow=11,SNR=1003						
TEIG				Sn	**Sn**	**06 45 51.1**	**-3.5**
	comp=Z,268nm,0.3s,baz=261,slow=23,SNR=13						
TEIG				LR	LR	06 46 54.1	
	comp=Z,4μm,20.1s,baz=273,slow=38						
FORC	**Fortuna**	**5.27**	**160**	*e*P	Pb	06 45 06.1	-6.9
JTS	**JuntasAbangare**	**5.36**	**164**	Pn	**Pn**	**06 45 00.9**	**+0.1**
	comp=Z,593nm,0.4s,SNR=15						
JTS	**JuntasAbangare**	**5.36**	**164**	*e*Pn	**Pn**	**06 45 00.2**	**-0.5**
VCR	**Vista de Mar**	**5.37**	**171**	*e*P	Pb	06 45 07.6	-7.2
CCIG	**Comitan**	**5.51**	**279**	P	**Pn**	**06 45 04.7**	**+1.6**
CCIG				S	**Sb**	**06 46 27.8**	**+4.4**
THIG		**5.62**	**265**	P	**Pn**	**06 45 04.8**	**+0.5**
THIG				S	Sb	06 46 33.1	+6.7
SCIG	**Sabancuy**	**5.69**	**308**	P	Pn	06 45 00.9	-4.5
SCIG				S	**Sn**	**06 46 07.9**	**-2.9**
JCR	**Jicaral**	**5.74**	**166**	*e*P	Pb	06 45 13.5	-7.6
CGA2	**Cerro Gallo 2**	**5.76**	**160**	*e*P	Pb	06 45 14.1	-7.4
SJS	**Escuela Geolog**	**5.98**	**156**	*e*P	Pb	06 45 17.8	-7.4
QCR	**Quepos**	**6.42**	**159**	*e*P	**Pn**	**06 45 17.1**	**+1.8**
BUS	**Buena Vista**	**6.45**	**155**	*e*P	Pb	06 45 24.6	-8.7
PCIG		**6.50**	**273**	P	**Pn**	**06 45 16.5**	**0.0**
TGIG		**6.52**	**282**	P	**Pn**	**06 45 18.1**	**+1.3**
TGIG				S	Sb	06 46 45.3	-7.2
ACR	**Cerro Adams**	**7.50**	**154**	*e*P	Pn	06 45 36.1	+5.8
SOR	**Soroa**	**7.99**	**24**	*e*P	**Pn**	**06 45 37.2**	**+0.3**
	baz=217						
SOR				*e*S	Sn	06 46 57.8	-10
MCJ	**Malvern**	**8.77**	**73**	*i* P	**Pn**	**06 45 46.5**	**-1.2**
MTDJ	**Mount Denham**	**8.99**	**71**	*e*Pn	**Pn**	**06 45 50.7**	**0.0**
HUIG	**Huatulco**	**9.29**	**273**	P	**Pn**	**06 45 55.5**	**+0.7**
STH	**Stony Hill**	**9.61**	**73**	*i* P	**Pn**	**06 45 58.6**	**-0.6**
HOJ	**Hope**	**9.65**	**73**	*i* P	**Pn**	**06 45 58.6**	**-1.1**
GWJ	**Greenwich**	**9.69**	**73**	*i* P	**Pn**	**06 45 59.8**	**-0.6**
LMGC	**Las Mercedes**	**10.11**	**62**	*e*P	**Pn**	**06 46 06.2**	**+0.2**
TPIG	**Tehuac#an**	**10.82**	**287**	P	**Pn**	**06 46 15.8**	**-0.2**
RCC	**Rio Carpintero**	**11.21**	**65**	*e*P	**Pn**	**06 46 20.1**	**-1.0**
SDDR	**Presa de Saban**	**14.92**	**74**	*e*Pn	**Pn**	**06 47 12.4**	**+0.5**
BRAL	**Brewton**	**15.48**	**358**	*e*Pn	**Pn**	**06 47 21.3**	**+2.1**
	comp=Z,211nm,0.6s						
ROSC	**El Rosal**	**15.93**	**130**	*e*Pn	**P**	**06 47 27.5**	**-1.6**
ROSC	**El Rosal**	**15.93**	**130**	Pn	**Pn**	**06 47 26.2**	**+0.7**
	baz=270,slow=20,SNR=4.4						
ROSC				LR	LR	06 53 35.6	
	comp=Z,374nm,20.6s,baz=201,slow=38						
TIGA	**Tifton**	**16.11**	**9**	⇑P	**Pn**	**06 47 25.2**	**-2.2**
	baz=16,SNR=18						
HKT	**Hockley**	**16.79**	**331**	*e*P	**Pn**	**06 47 37.1**	**+1.1**
HKT	**Hockley**	**16.79**	**331**	*e*Pn	**Pn**	**06 47 37.0**	**+1.1**
SDV	**Santo Domingo**	**16.80**	**111**	*e*Pn	**P**	**06 47 38.5**	**-0.2**
	comp=Z,69nm,1.0s						
VBMS	**Vicksburg**	**17.08**	**348**	*e*Pn	**Pn**	**06 47 40.3**	**+0.7**
	comp=Z,168nm,0.9s						
OTAV	**Otavalo**	**17.08**	**152**	*e*Pn	**Pn**	**06 47 39.2**	**-1.0**
	comp=Z,2.5nm,1.1s						
LRAL	**Lakeview Retre**	**17.50**	**359**	*e*Pn	**Pn**	**06 47 44.1**	**-0.7**
	comp=Z,140nm,1.2s						
GOGA	**Godfrey**	**18.07**	**8**	*e*P	**Pn**	**06 47 51.1**	**-0.9**
GOGA				pmax	pmax		
	comp=Z,78nm,0.9s						
GOGA	**Godfrey**	**18.07**	**8**	*e*Pn	**Pn**	**06 47 51.1**	**-0.9**
	comp=Z,78nm,0.9s						
732A	**Laxson Ranch,**	**18.16**	**319**	⇓P	**Pn**	**06 47 50.8**	**-2.2**
	baz=18,SNR=28						
NHSC	**New Hope**	**18.46**	**17**	*e*P	**P**	**06 47 56.7**	**0.0**
	comp=Z,285nm,1.1s						
632A	**Uvalde**	**18.59**	**321**	⇑P	**P**	**06 47 57.2**	**-1.0**
	baz=19,SNR=34						
LRS	**Lares**	**18.99**	**79**	*e*Pn	**Pn**	**06 48 07.3**	**+4.0**
631A	**Perdido Creek**	**19.01**	**319**	⇓P	**P**	**06 48 01.2**	**-1.6**
	baz=19,SNR=50						
532A	**Rocksprings**	**19.11**	**322**	⇓P	**P**	**06 48 03.8**	**-0.1**
	baz=19,SNR=95						
OXF	**Oxford**	**19.15**	**353**	*e*P	**P**	**06 48 04.9**	**+0.7**
OXF				pmax	pmax		
	comp=Z,107nm,1.0s						
OXF	**Oxford**	**19.15**	**353**	*e*P	**P**	**06 48 04.9**	**+0.7**
	comp=Z,107nm,1.0s						
CELP	**Cerrillos**	**19.22**	**79**	*e*P	**P**	**06 48 02.9**	**-2.3**
WHTX	**Lake Whitney**	**19.25**	**331**	⇑P	**P**	**06 48 06.6**	**+1.2**
	baz=19						
JCT	**Junction City**	**19.31**	**323**	*e*P	**P**	**06 48 07.2**	**+1.2**
JCT				pmax	pmax		
	comp=Z,46nm,0.8s						
JCT	**Junction City**	**19.31**	**323**	*e*P	**P**	**06 48 07.2**	**+1.2**
	comp=Z,46nm,0.8s						
JCT	**Junction City**	**19.31**	**323**	⇑P	**P**	**06 48 06.6**	**+0.5**
	baz=19,SNR=16						
PLAL	**Pickwick Lake**	**19.48**	**356**	*e*P	**P**	**06 48 08.1**	**+0.2**
	comp=Z,38nm,0.7s						
531A	**Rocksprings**	**19.52**	**321**	⇑P	**P**	**06 48 09.1**	**+0.8**
	baz=20,SNR=48						
432A	**Menard**	**19.59**	**324**	⇑P	**P**	**06 48 10.1**	**+0.9**
	baz=20,SNR=108						
SWET	**Sewanee**	**19.67**	**1**	*e*Pn	**P**	**06 48 10.9**	**+1.0**
	comp=Z,61nm,0.8s						
RFTA	**Plano**	**19.77**	**334**	*e*P	**P**	**06 48 12.2**	**+1.1**
431A	**Sonora**	**19.93**	**322**	⇓P	**P**	**06 48 14.2**	**+1.4**
	baz=20,SNR=72						
UALR	**University of**	**19.94**	**346**	*e*P	**P**	**06 48 14.2**	**+1.4**
	comp=Z,159nm,1.1s						
332A	**Millersview**	**19.95**	**325**	⇓P	**P**	**06 48 14.5**	**+1.4**
	baz=20,SNR=56						
CPCT	**Cooper Cave**	**19.98**	**5**	*e*Pn	**P**	**06 48 14.4**	**+1.1**
530A	**J-C Ranch, Com**	**20.00**	**319**	⇓P	**P**	**06 48 15.1**	**+1.5**
	baz=20,SNR=58						
KMSC	**Kings Mountain**	**20.13**	**12**	⇑P	**P**	**06 48 15.9**	**+1.0**
	baz=20,SNR=49						
TKL	**Tuckaleechee C**	**20.25**	**6**	P	**P**	**06 48 17.7**	**+1.4**
TKL				S	S	06 51 51.9	-12
TKL	**Tuckaleechee C**	**20.25**	**6**	P	**P**	**06 48 17.7**	**+1.4**
	comp=Z,13nm,0.9s,baz=183,slow=9.8,SNR=18						
TKL				S	S	06 51 51.9	-12
	comp=Z,16nm,0.8s,baz=49,slow=10,SNR=5.6						
331A	**San Angelo**	**20.28**	**323**	⇑P	**P**	**06 48 18.2**	**+1.5**
	baz=20,SNR=67						
232A	**Coleman**	**20.28**	**326**	⇑P	**P**	**06 48 18.2**	**+1.5**
	baz=20,SNR=64						
HBAR	**Harrisburg**	**20.35**	**350**	*e*P	**P**	**06 48 18.9**	**+1.6**
430A	**Baggett Ranch,**	**20.38**	**321**	⇑P	**P**	**06 48 19.1**	**+1.4**
	baz=20,SNR=41						
529A	**Stev Forest Ra**	**20.54**	**318**	⇑P	**P**	**06 48 20.5**	**+1.0**
	baz=21,SNR=75						
628A	**Black Gap, Mar**	**20.57**	**315**	⇓P	**P**	**06 48 21.3**	**+1.5**
	baz=21,SNR=95						
WVT	**Waverly**	**20.61**	**357**	*e*P	**P**	**06 48 20.1**	**-0.1**
WVT				pmax	pmax		
	comp=Z,25nm,0.6s						
WVT	**Waverly**	**20.61**	**357**	*e*P	**P**	**06 48 20.1**	**-0.1**
	comp=Z,25nm,0.6s						
GNAR	**Gosnell**	**20.66**	**352**	*e*P	**P**	**06 48 21.7**	**+1.0**
	comp=Z,2μm,1.4s						
429A	**Davenport Ranc**	**20.67**	**320**	⇓P	**P**	**06 48 22.1**	**+1.1**
	baz=21,SNR=38						
231A	**Bronte**	**20.68**	**325**	⇑P	**P**	**06 48 22.0**	**+0.9**
	baz=21,SNR=42						
330A	**Mertzon**	**20.79**	**322**	⇑P	**P**	**06 48 23.2**	**+1.0**
	baz=21,SNR=37						
ABTX	**Abilene, Hawle**	**20.85**	**327**	⇓P	**P**	**06 48 24.2**	**+1.3**
	baz=21,SNR=105						
627A	**Terlingua Ranc**	**20.89**	**315**	⇓P	**P**	**06 48 25.1**	**+1.7**
	baz=21,SNR=98						
UTMT	**University of**	**20.90**	**355**	*e*P	**P**	**06 48 24.3**	**+1.0**
	comp=Z,483nm,1.1s						
528A	**Cox Ranch, San**	**20.94**	**317**	⇑P	**P**	**06 48 24.9**	**+1.0**
	baz=21,SNR=27						
TXAR	**Lajitas Array**	**21.01**	**314**	P	**P**	**06 48 26.2**	**+1.6**
TXAR				S	**S**	**06 52 13.7**	**-5.2**
TXAR	**Lajitas Array**	**21.01**	**314**	P	**P**	**06 48 26.2**	**+1.6**
	comp=Z,38nm,0.8s,baz=135,slow=9.9,SNR=195						
TXAR				S	**S**	**06 52 13.7**	**-5.2**
	comp=Z,2.9nm,0.9s,baz=122,slow=13,SNR=6.3						
TXAR				LR	LR	06 57 49.2	
	comp=Z,302nm,18.4s,baz=25,slow=40						
230A	**Sterling City**	**21.10**	**323**	⇓P	**P**	**06 48 26.2**	**+0.6**
	baz=21,SNR=12						
CNNC	**Cliffs of the**	**21.14**	**20**	*e*P	**P**	**06 48 26.6**	**+0.7**
	comp=Z,185nm,1.1s						
TZTN	**Tazewell**	**21.15**	**7**	*e*P	**P**	**06 48 26.9**	**+0.9**
	comp=Z,124nm,1.0s						
428A	**Kincaid Ranch,**	**21.24**	**318**	⇑P	**P**	**06 48 28.3**	**+1.2**
	baz=21,SNR=23						
131A	**Roby**	**21.29**	**326**	⇓P	**P**	**06 48 28.6**	**+1.1**
	baz=21,SNR=19						
PARMO	**Parma**	**21.31**	**353**	*e*P	**P**	**06 48 28.2**	**+0.6**
Z32A	**Haskell**	**21.31**	**329**	⇓P	**P**	**06 48 29.5**	**+1.7**
	baz=21,SNR=99						
329A	**Wagon Wheel Ra**	**21.32**	**321**	⇓P	**P**	**06 48 28.4**	**+0.4**
	baz=21,SNR=14						
626A	**Big Bend Ranch**	**21.47**	**314**	⇓P	**P**	**06 48 31.1**	**+1.5**
	baz=22,SNR=181						
527A	**Woodward Ranch**	**21.48**	**316**	⇑P	**P**	**06 48 31.2**	**+1.5**
	baz=22,SNR=99						
130A	**Snyder**	**21.54**	**325**	⇓P	**P**	**06 48 30.9**	**+0.6**
	baz=22,SNR=10						
229A	**Bryant Ranch,**	**21.57**	**322**	⇓P	**P**	**06 48 30.6**	**0.0**
	baz=22,SNR=17						
Z31A	**Sharp Cattle R**	**21.66**	**328**	⇓P	**P**	**06 48 32.5**	**+1.0**
	baz=22,SNR=58						
526A	**Mary Lane Ranc**	**21.75**	**315**	⇓P	**P**	**06 48 34.1**	**+1.5**
	baz=22						
328A	**Wristen Ranch,**	**21.76**	**320**	⇓P	**P**	**06 48 33.3**	**+0.6**
	baz=22,SNR=62						
427A	**Hayter Ranch,**	**21.79**	**318**	⇓P	**P**	**06 48 33.7**	**+0.7**
	baz=22,SNR=17						
Y32A	**R-V Farms, Ver**	**21.85**	**330**	⇑P	**P**	**06 48 34.7**	**+1.1**
	baz=22,SNR=11						
TUL1	**Tulsa**	**22.00**	**339**	⇑P	**P**	**06 48 35.1**	**+0.1**
	baz=22,SNR=38						
129A	**Stewart Farms,**	**22.08**	**323**	⇓P	**P**	**06 48 35.7**	**-0.4**
	baz=22,SNR=14						
426A	**McDonald Obser**	**22.08**	**316**	⇑P	**P**	**06 48 35.5**	**-0.8**
	baz=22,SNR=53						
228A	**UT Block 9, Go**	**22.14**	**321**	⇓P	**P**	**06 48 36.3**	**-0.4**
	baz=22,SNR=11						
WMOK	**Wichita Mounta**	**22.15**	**332**	*e*P	**P**	**06 48 37.1**	**+0.3**
WMOK				pmax	pmax		
	comp=Z,29nm,0.8s						
WMOK	**Wichita Mounta**	**22.15**	**332**	*e*P	**P**	**06 48 37.1**	**+0.3**
	comp=Z,29nm,0.8s						
Z30A	**Sanderson Ranc**	**22.15**	**326**	⇑P	**P**	**06 48 36.4**	**-0.5**
	baz=22,SNR=45						
327A	**Balmorhea Ranc**	**22.19**	**318**	⇓P	**P**	**06 48 37.1**	**-0.2**
	baz=22						
Y31A	**Rekieta Farm,**	**22.23**	**328**	⇓P	**P**	**06 48 37.8**	**+0.2**
	baz=22,SNR=63						
SIUC	**Southern Illin**	**22.29**	**354**	*e*P	**P**	**06 48 39.1**	**+0.9**
	comp=Z,183nm,1.3s						
BLA	**Blacksburg**	**22.31**	**13**	*e*P	**P**	**06 48 39.5**	**+1.0**
BLA				pmax	pmax		
	comp=Z,47nm,0.8s						
BLA	**Blacksburg**	**22.31**	**13**	*e*P	**P**	**06 48 39.5**	**+1.0**
	comp=Z,47nm,0.8s						
128A	**Castleberry Fa**	**22.43**	**322**	⇑P	**P**	**06 48 40.1**	**+0.2**
	baz=23,SNR=35						
USIN	**University of**	**22.43**	**358**	*e*P	**P**	**06 48 40.3**	**+0.6**
	comp=Z,338nm,1.4s						
Z29A	**Hungry Hill Ra**	**22.45**	**325**	⇓P	**P**	**06 48 40.1**	**0.0**
	baz=23,SNR=18						
326A	**Caldwell Ranch**	**22.46**	**318**	⇑P	**P**	**06 48 40.5**	**+0.3**
	baz=23,SNR=9.3						
Y30A	**Stafford Cattl**	**22.48**	**327**	⇓P	**P**	**06 48 40.6**	**+0.1**
	baz=23,SNR=27						
227A	**Bennet, Jal**	**22.49**	**320**	⇑P	**P**	**06 48 40.2**	**-0.3**
	baz=23						
X31A	**McDonald Ranch**	**22.62**	**330**	⇑P	**P**	**06 48 42.2**	**+0.3**
	baz=23,SNR=70						
WCI	**Wyandotte Cave**	**22.67**	**0**	*e*P	**P**	**06 48 42.6**	**+0.3**
WCI				pmax	pmax		
	comp=Z,161nm,0.9s						
WCI	**Wyandotte Cave**	**22.67**	**0**	*e*P	**P**	**06 48 42.5**	**+0.3**
	comp=Z,161nm,0.9s						
425A	**Indio Mountain**	**22.80**	**315**	⇑P	**P**	**06 48 44.1**	**+0.2**
	baz=23,SNR=24						
Z28A	**Tucker Farm, M**	**22.86**	**324**	⇑P	**P**	**06 48 44.2**	**-0.2**
	baz=23,SNR=57						
Y29A	**Porterfield Fa**	**22.88**	**326**	⇑P	**P**	**06 48 44.8**	**+0.1**
	baz=23,SNR=59						
X30A	**Coker Ranch, T**	**22.92**	**328**	⇑P	**P**	**06 48 45.0**	**+0.1**
	baz=23,SNR=29						
127A	**Arkansas Junct**	**22.99**	**321**	⇑P	**P**	**06 48 45.3**	**-0.6**
	baz=23,SNR=22						
CLNB	**Carlsbad**	**23.03**	**320**	*e*P	**P**	**06 48 47.0**	**+0.8**
	comp=Z,34nm,0.7s						
W31A	**Holland Ranch,**	**23.06**	**331**	⇓P	**P**	**06 48 46.3**	**-0.1**
	baz=23,SNR=23						
226B	**Tecolote Peak,**	**23.08**	**319**	⇓P	**P**	**06 48 47.2**	**+0.5**
	baz=23,SNR=70						
325A	**Bean Ranch, Si**	**23.15**	**316**	⇓P	**P**	**06 48 46.9**	**-0.6**
	baz=23,SNR=40						
Y28A	**McKinney Farm,**	**23.24**	**325**	⇓P	**P**	**06 48 48.0**	**-0.3**
	baz=23,SNR=26						
GDL2	**Guadalupe Moun**	**23.29**	**319**	*e*P	**P**	**06 48 50.8**	**+1.8**
SLM	**Saint Louis**	**23.32**	**353**	*e*P	**P**	**06 48 50.0**	**+1.1**
SLM				pmax	pmax		
	comp=Z,221nm,1.7s						
SLM	**Saint Louis**	**23.32**	**353**	*e*P	**P**	**06 48 50.0**	**+1.1**
	comp=Z,221nm,1.7s						
X29A	**Tulia**	**23.35**	**327**	⇑P	**P**	**06 48 49.3**	**-0.1**
	baz=24						
Z27A	**Tatum**	**23.35**	**323**	⇑P	**P**	**06 48 48.9**	**-0.7**
	baz=24,SNR=44						
W30A	**Crocket Farms**	**23.36**	**330**	⇑P	**P**	**06 48 49.4**	**-0.1**
	baz=24,SNR=5.3						
126A	**Clayton Basin,**	**23.38**	**320**	⇑P	**P**	**06 48 49.1**	**-0.7**
	baz=24,SNR=11						
JSRW	**J. Sargeant Re**	**23.41**	**17**	*e*P	**P**	**06 48 50.1**	**+0.2**
V31A	**Spring Creek L**	**23.49**	**332**	⇓P	**P**	**06 48 51.0**	**+0.2**
	baz=24,SNR=26						
324A	**Moseley Ranch,**	**23.54**	**316**	⇑P	**P**	**06 48 51.3**	**-0.1**
	baz=24,SNR=69						
MSTX	**Muleshoe**	**23.57**	**324**	⇑P	**P**	**06 48 51.2**	**-0.5**
	baz=24,SNR=20						
BLO	**Bloomington**	**23.61**	**360**	*e*P	**P**	**06 48 52.0**	**+0.1**
BLO				pmax	pmax		
	comp=Z,167nm,0.7s						
BLO	**Bloomington**	**23.61**	**360**	*e*P	**P**	**06 48 52.0**	**+0.1**
	comp=Z,167nm,0.7s						
MNTX	**Cornudas Mount**	**23.63**	**316**	*e*P	**P**	**06 48 52.2**	**0.0**
	comp=Z,52nm,1.3s						
X28A	**Dimmitt**	**23.67**	**326**	⇑P	**P**	**06 48 52.3**	**-0.3**
	baz=24,SNR=22						
AMTX	**Amarillo**	**23.67**	**328**	*e*P	**P**	**06 48 53.3**	**+0.7**
	comp=Z,44nm,0.6s						
Y27A	**Causey**	**23.73**	**324**	⇑P	**P**	**06 48 52.8**	**-0.5**
	baz=24,SNR=22						
Z26A	**Caprock**	**23.78**	**321**	⇓P	**P**	**06 48 53.2**	**-0.6**
	baz=24						
125A	**Gardner Draw,**	**23.78**	**319**	⇑P	**P**	**06 48 53.7**	**-0.1**
	baz=24,SNR=46						
W29A	**Amraillo**	**23.84**	**328**	⇓P	**P**	**06 48 53.3**	**-1.0**
	baz=24,SNR=12						
ATAH	**Atahualpa**	**23.84**	**160**	P	**P**	**06 48 56.7**	**+1.9**
ATAH	**Atahualpa**	**23.84**	**160**	P	**P**	**06 48 56.7**	**+1.9**
	comp=Z,10nm,1.0s,baz=338,slow=8.2,SNR=4.5						
V30A	**Spur Ranch, Mi**	**23.88**	**330**	⇑P	**P**	**06 48 53.5**	**-1.1**
	baz=24						
224A	**Cornudas Mount**	**23.96**	**317**	⇑P	**P**	**06 48 54.9**	**-0.6**
	baz=24,SNR=24						
U31A	**Nine Bar Ranch**	**23.99**	**333**	⇓P	**P**	**06 48 54.7**	**-1.0**
	baz=24						
CBN	**Corbin**	**24.03**	**18**	*e*P	**P**	**06 48 57.2**	**+1.3**
	comp=Z,44nm,0.7s						
Y26A	**Elida**	**24.14**	**323**	⇓P	**P**	**06 48 56.7**	**-0.4**
	baz=24						
Z25A	**Roswell**	**24.23**	**320**	⇓P	**P**	**06 48 58.4**	**+0.4**
	baz=24,SNR=28						
W28A	**Vega**	**24.23**	**327**	⇓P	**P**	**06 48 58.1**	**+0.1**
	baz=24						
X27A	**F and S Farms,**	**24.25**	**325**	⇓P	**P**	**06 48 58.0**	**-0.2**
	baz=24,SNR=14						
124A	**Stringfield Ra**	**24.31**	**318**	⇑P	**P**	**06 48 59.8**	**+0.9**
	baz=24,SNR=80						
V29A	**Stinnett**	**24.37**	**329**	⇓P	**P**	**06 48 59.5**	**+0.3**
	baz=24						

U30A **WK&E Inc. Balk** 24.48 332 ⇑P P 06 49 00.0 -0.2
baz=25,SNR=18
223A **Chaparral, Ant** 24.52 316 ⇓P P 06 49 00.9 +0.2
baz=25
T31A **Randall Ranch,** 24.53 334 ⇑P P 06 49 00.2 -0.4
baz=25,SNR=6.0
W27A **Bowe Ranch, En** 24.54 326 ⇓P P 06 49 01.3 +0.5
baz=25,SNR=28
X26A **CR and CF Fran** 24.58 324 ⇑P P 06 49 01.6 +0.4
baz=25,SNR=39
V28A **Channing** 24.62 328 ⇓P P 06 49 01.9 +0.4
baz=25,SNR=14
Y25A **Mesa, Roswell** 24.66 321 ⇑P P 06 49 02.6 +0.7
baz=25,SNR=32
Z24A **Sheeppen Canyo** 24.67 319 ⇑P P 06 49 03.1 +1.1
baz=25,SNR=36
U29A **Oasis Ranch, S** 24.71 330 ⇑P P 06 49 03.0 +0.7
baz=25
123A **Bell Site, Whi** 24.80 317 ⇑P P 06 49 03.4 +0.3
baz=25
SFIN **Scholer Farm** 24.82 359 ⇑P P 06 49 02.7 -0.4
baz=25,SNR=14
ACSO **Alum Creek Sta** 24.86 6 eP P 06 49 04.4 +0.9
comp=Z,66nm,0.9s
T30A **Plains** 24.86 332 ⇑P P 06 49 03.3 -0.2
baz=25
S31A **Mullinville** 24.89 335 ⇓P P 06 49 04.1 +0.3
baz=25
V27A **Dan Oppiter Fa** 24.95 327 ⇑P P 06 49 04.2 -0.2
baz=25
W26A **Owens Ranch, T** 24.95 325 ⇓P P 06 49 05.0 +0.5
baz=25,SNR=24
222A **Williams Famil** 25.04 315 ⇑P P 06 49 05.7 +0.4
baz=25
X25A **Clemmons Ranch** 25.06 323 ⇑P P 06 49 06.6 +1.1
baz=25,SNR=32
Y24A **Capitan** 25.11 320 ⇓P P 06 49 07.5 +1.5
baz=25,SNR=113
HDIL **Hopedale** 25.12 355 eP P 06 49 06.4 +0.7
comp=Z,72nm,0.9s
U28A **Mallet** 25.12 329 ⇑P P 06 49 05.7 -0.3
baz=25
KSU1 **Kansas State U** 25.17 341 eP P 06 49 06.8 +0.6
comp=Z,52nm,0.9s
Z23A **Rita Site, Whi** 25.18 318 ⇓P P 06 49 08.1 +1.6
baz=25,SNR=14
T29A **Hugoton** 25.29 331 ⇑P P 06 49 07.8 +0.3
baz=25
SDMD **Soldier's Deli** 25.30 18 eP P 06 49 08.0 +0.5
comp=Z,44nm,0.7s
S30A **Montezuma** 25.32 333 ⇓P P 06 49 07.9 +0.2
baz=26,SNR=6.2
122A **Conniff Cattle** 25.33 316 ⇓P P 06 49 09.5 +1.5
baz=25,SNR=18
W25A **X Bar L Ranch,** 25.43 324 ⇑P P 06 49 09.6 +0.7
baz=26,SNR=37
221A **Mesquite Ranch** 25.45 314 ⇓P P 06 49 10.9 +1.9
baz=26
U27A **Thompson Grove** 25.45 328 ⇑P P 06 49 09.1 0.0
baz=26,SNR=71
V26A **Tequesquite Ra** 25.48 326 ⇓P P 06 49 09.8 +0.5
baz=26,SNR=72
Y23A **Lovelace Mesa,** 25.50 320 ⇑P P 06 49 11.1 +1.5
baz=26,SNR=32
X24A **Lazy VL Ranch,** 25.54 322 ⇓P P 06 49 10.7 +0.8
baz=26
S29A **Ulysses** 25.59 332 ⇓P P 06 49 10.9 +0.6
baz=26,SNR=7.1
320A **Kipp Ranch, An** 25.60 312 ⇑P P 06 49 12.3 +1.8
baz=26,SNR=35
Z22A **Elephant Butte** 25.64 317 ⇑P P 06 49 11.9 +1.0
baz=26,SNR=68
T28A **Walsh** 25.65 330 ⇓P P 06 49 10.9 +0.1
baz=26
121A **Cookes Peak, D** 25.75 315 ⇓P P 06 49 13.3 +1.5
baz=26,SNR=38
R30A **Dighton** 25.78 334 ⇓P P 06 49 11.9 -0.1
baz=26
T27A **Campo** 25.90 329 ⇓P P 06 49 12.5 -0.6
baz=26,SNR=8.3
220A **Playas Peak, P** 25.91 313 ⇓P P 06 49 14.2 +1.0
baz=26,SNR=25
U26A **Atchley Ranch,** 25.91 327 ⇑P P 06 49 13.7 +0.4
baz=26,SNR=45
S28A **Manter** 25.92 331 ⇑P P 06 49 13.2 0.0
baz=26,SNR=21
V25A **Rancho No Teng** 25.97 325 ⇑P P 06 49 14.9 +1.0
baz=26,SNR=62
W24A **Lazy 6 Ranch,** 25.98 323 ⇑P P 06 49 15.0 +1.1
baz=26,SNR=28
BBSR **BB Station** 25.98 46 eP P 06 49 13.8 +0.1
MVL **Millersville** 25.99 18 eP P 06 49 16.7 +3.0
comp=Z,62nm,1.4s
BNM **Barren Site** 26.00 319 eP P 06 49 16.1 +1.9
comp=Z,15nm,1.2s
X23A **Hourglass Bar** 26.01 321 ⇓P P 06 49 14.7 +0.5
baz=26
Y22A **Socorro** 26.08 319 ⇑P P 06 49 16.0 +1.2
baz=26,SNR=19
Y22D **IRIS PASSCAL I** 26.14 319 ⇓P P 06 49 16.4 +1.2
baz=26
Z21A **St. Cloud Mine** 26.14 317 ⇑P P 06 49 16.4 +0.9
baz=26,SNR=21
319A **Douglas** 26.16 311 ⇓P P 06 49 16.1 +0.6
baz=26,SNR=6.9
SSPA **Standing Stone** 26.16 15 eP P 06 49 16.5 +1.2
LENM **Lemitar** 26.23 319 eP P 06 49 18.6 +2.4
comp=Z,10nm,0.9s
V24A **Rampart Ranch,** 26.26 324 ⇓P P 06 49 17.8 +1.3
baz=26,SNR=45
R29A **Marienthal** 26.27 333 ⇓P P 06 49 16.9 +0.5
baz=26
U25A **Circle Dot Ran** 26.27 326 ⇓P P 06 49 17.6 +1.0
baz=26,SNR=42
120A **U Bar Ranch, L** 26.34 314 ⇑P P 06 49 18.9 +1.7
baz=26,SNR=20
W23A **Werner Place,** 26.38 322 ⇑P P 06 49 18.2 +0.6
baz=26,SNR=15
ANMO **Albuquerque** 26.42 321 eP P 06 49 19.1 +1.2
comp=Z,11nm,1.1s
ANMO **Albuquerque** 26.42 321 P P 06 49 20.9 +3.0
comp=Z,5.9nm,1.0s,baz=133,slow=9.1,SNR=17
ANMO LR LR 07 02 06.2
comp=Z,212nm,21.8s,baz=203,slow=42
T26A **Comanche Natio** 26.42 328 ⇓P P 06 49 18.1 +0.2
baz=27,SNR=20
X22A **Bernardo** 26.47 319 ⇑P P 06 49 18.1 -0.2
baz=27
S27A **Las Animas** 26.48 330 ⇓P P 06 49 18.3 0.0
baz=27,SNR=20
LAZ **Ladron** 26.48 319 eP P 06 49 20.2 +1.7
comp=Z,6.7nm,1.2s
R28A **Tribune** 26.50 332 ⇑P P 06 49 17.9 -0.5
baz=27,SNR=27
Y21A **Point of Rocks** 26.58 318 ⇓P P 06 49 21.5 +2.1
baz=27,SNR=36
Z20A **Nine Sixteen R** 26.64 315 ⇑P P 06 49 21.6 +1.7
baz=27,SNR=8.7
ALLY **Alegheny Colle** 26.66 11 eP P 06 49 20.8 +1.1
comp=Z,102nm,1.1s
S26A **Kim** 26.71 329 ⇓P P 06 49 21.2 +0.8
baz=27,SNR=60
U24A **Moreno Valley** 26.75 325 ⇓P P 06 49 22.9 +1.9
baz=27,SNR=18
W22A **Albuquerque** 26.75 321 ⇑P P 06 49 21.3 +0.4
baz=27
V23A **Ortiz Mt. (NFS** 26.80 323 ⇓P P 06 49 23.2 +1.9
baz=27,SNR=7.2
T25A **Trinidad** 26.82 327 ⇓P P 06 49 22.9 +1.4
baz=27,SNR=90
AAM **Ann Arbor** 26.85 5 eP P 06 49 23.2 +1.8
AAM pmax pmax
comp=Z,105nm,1.3s
AAM **Ann Arbor** 26.85 5 eP P 06 49 23.2 +1.8
comp=Z,105nm,1.3s
R27A **Eads** 26.91 331 ⇑P P 06 49 22.5 +0.3
baz=27,SNR=14
X21A **Alamocita Cree** 26.92 318 ⇓P P 06 49 23.7 +1.2
baz=27,SNR=20
Y20A **Horse Springs,** 26.98 317 ⇑P P 06 49 24.7 +1.8
baz=27,SNR=24
SCIA **State Center** 26.98 349 eP P 06 49 22.8 +0.1
comp=Z,78nm,1.4s
Q28A **Sharon Springs** 27.10 333 ⇓P P 06 49 24.1 +0.2
baz=27
ERPA **Erie** 27.14 11 eP P 06 49 24.8 +0.7
comp=Z,132nm,1.1s
U23A **El Rito** 27.21 323 ⇑P P 06 49 26.4 +1.4
baz=27,SNR=42
S25A **Robets Cordova** 27.23 328 ⇑P P 06 49 25.8 +0.7
baz=27,SNR=39
R26A **Arlington** 27.23 330 ⇓P P 06 49 25.4 +0.3
baz=27,SNR=24
W21A **San Fidel** 27.27 320 ⇑P P 06 49 27.0 +1.5
baz=27,SNR=7.4
V22A **San Miguel Ran** 27.35 322 ⇓P P 06 49 26.6 +0.3
baz=28
KSCO **Kaye Shedlock'** 27.41 332 ⇓P P 06 49 27.4 +0.7
baz=28
X20A **Quemado** 27.44 318 ⇓P P 06 49 28.8 +1.7
baz=28,SNR=21
P28A **Saint Francis** 27.49 334 ⇑P P 06 49 28.0 +0.6
baz=28
R25A **Fountain Ranch** 27.52 329 ⇓P P 06 49 28.6 +0.9
baz=28
JFWS **Jewell Farm** 27.54 354 eP P 06 49 29.6 +1.9
JFWS pmax pmax
comp=Z,49nm,0.8s
JFWS **Jewell Farm** 27.54 354 eP P 06 49 29.6 +1.9
comp=Z,49nm,0.8s
O29A **4D Ranch, Culb** 27.56 336 ⇓P P 06 49 28.5 +0.5
baz=28
S24A **Houchin Ranch,** 27.62 327 ⇑P P 06 49 30.7 +1.9
baz=28,SNR=27
T23A **Casias Ranch,** 27.63 325 ⇑P P 06 49 30.6 +1.8
baz=28,SNR=17
U22A **Llaves** 27.63 323 ⇓P P 06 49 30.2 +1.3
baz=28,SNR=10
V21A **Milan** 27.71 321 ⇓P P 06 49 31.0 +1.5
baz=28
TUC **Tucson** 27.74 311 eP P 06 49 31.1 +1.4
TUC pmax pmax
comp=Z,12nm,1.3s
TUC **Tucson** 27.74 311 eP P 06 49 31.1 +1.4
comp=Z,12nm,1.3s
BGNE **Belgrade** 27.75 341 ⇓P P 06 49 30.5 +0.9
baz=28
Q26A **Hugo** 27.75 331 ⇓P P 06 49 30.6 +0.8
baz=28,SNR=40
W20A **Ramah** 27.81 319 ⇑P P 06 49 31.9 +1.4
baz=28,SNR=6.1
P27A **Ficken Ranch,** 27.83 333 ⇑P P 06 49 30.9 +0.5
baz=28,SNR=6.6
SDCO **Great Sand Dun** 27.85 326 eP P 06 49 32.2 +1.3
comp=Z,54nm,1.5s
O28A **Krutsinger Ran** 27.96 334 ⇓P P 06 49 32.2 +0.6
baz=28
R24A **Sanders Place,** 28.01 328 ⇑P P 06 49 33.9 +1.8
baz=28,SNR=24
S23A **Nye Farm, Mont** 28.09 326 ⇓P P 06 49 34.2 +1.2
baz=28
N29A **Votaw Ranch, W** 28.09 337 ⇑P P 06 49 33.6 +0.9
baz=28
Q25A **Bedland, Calha** 28.10 330 ⇓P P 06 49 34.3 +1.3
baz=28
T22A **Edith** 28.10 324 ⇑P P 06 49 34.5 +1.5
baz=28,SNR=12
BINY **Binghamton** 28.13 17 eP P 06 49 33.5 +0.6
comp=Z,43nm,1.1s
U21A **Nageezi** 28.14 322 ⇓P P 06 49 35.0 +1.6
baz=28,SNR=9.1
P26A **Davis Ranch, A** 28.18 332 ⇓P P 06 49 34.4 +0.8
baz=28
V20A **Brimhall** 28.22 320 ⇑P P 06 49 34.5 +0.5
baz=28
O27A **Beecher Island** 28.31 334 ⇑P P 06 49 34.8 +0.1
baz=28
N28A **Pribbeno Ranch** 28.34 335 ⇓P P 06 49 35.2 +0.3
baz=28
R23A **Moffat** 28.35 327 ⇑P P 06 49 36.8 +1.4
baz=28,SNR=18
X18A **Snowflake** 28.39 316 ⇑P P 06 49 36.3 +0.7
baz=28
T21A **Navajo Lake** 28.45 323 ⇓P P 06 49 36.2 +0.1
baz=29
P25A **Willow Gulch B** 28.53 331 ⇓P P 06 49 37.7 +1.0
baz=29,SNR=23
S22A **4UR Ranch, Cre** 28.57 325 ⇑P P 06 49 39.3 +2.0
baz=29,SNR=40
Q24A **Divide** 28.58 329 ⇑P P 06 49 38.1 +0.7
baz=29
W18A **Petrified Fore** 28.60 317 ⇑P P 06 49 38.2 +0.7
baz=29
U20A **Newcomb** 28.62 321 ⇓P P 06 49 38.9 +1.3
baz=29
M29A **Burnside Ranch** 28.66 337 ⇓P P 06 49 39.1 +1.3
baz=29
O26A **Horse Wrangler** 28.72 333 ⇑P P 06 49 38.9 +0.6
baz=29
OGNE **Ogallala** 28.76 335 ⇓P P 06 49 38.9 +0.3
baz=29
N27A **Anderson Farm,** 28.85 334 ⇓P P 06 49 39.8 +0.4
baz=29
M28A **Bar X Bar Ranc** 28.88 336 ⇓P P 06 49 41.0 +1.3
baz=29
R22A **Saguache, Gunn** 28.88 326 ⇑P P 06 49 41.7 +1.6
baz=29,SNR=14
P24A **Kohler Place,** 28.89 330 ⇑P P 06 49 41.4 +1.5
baz=29
Q23A **Hartsel** 28.89 328 ⇑P P 06 49 41.3 +1.2
baz=29,SNR=5.7
O25A **Wiggins** 28.98 331 ⇑P P 06 49 42.3 +1.5
baz=29
214A **Organ Pipe Nat** 29.05 309 ⇑P P 06 49 43.0 +1.6
baz=29
S21A **Coal Bank Pass** 29.06 324 ⇑P P 06 49 43.3 +1.6
baz=29,SNR=8.3
P23A **Jefferson** 29.24 328 ⇓P P 06 49 44.6 +1.3
baz=29,SNR=9.6
TRY **Troy** 29.31 19 eP P 06 49 43.8 +0.4
comp=Z,121nm,1.3s
X16A **Lo Mia Camp, P** 29.34 315 ⇓P P 06 49 45.5 +1.5
baz=29,SNR=7.4
M27A **Reverse DX Ran** 29.39 335 ⇓P P 06 49 45.9 +1.6
baz=30
R21A **Cimarron** 29.42 325 ⇓P P 06 49 45.8 +1.1
baz=30
Q22A **Crested Butte,** 29.42 326 ⇓P P 06 49 46.4 +1.5
baz=30,SNR=11
O24A **Longmont** 29.44 330 ⇑P P 06 49 45.7 +0.9
baz=30
ISCO **Idaho Springs** 29.45 329 eP P 06 49 46.6 +1.5
ISCO pmax pmax
comp=Z,33nm,1.4s
ISCO **Idaho Springs** 29.45 329 eP P 06 49 46.6 +1.5
comp=Z,33nm,1.4s
ISCO **Idaho Springs** 29.45 329 ⇑P P 06 49 46.4 +1.3
baz=30,SNR=29
ECSD **EROS Data Cent** 29.47 345 eP P 06 49 43.7 -1.1
comp=Z,33nm,0.9s
S20A **Disappointment** 29.50 323 ⇑P P 06 49 47.3 +1.8
baz=30,SNR=6.6
N25A **Grover** 29.53 332 ⇑P P 06 49 46.7 +1.1
baz=30
M26A **McRoberts Ranc** 29.65 334 ⇑P P 06 49 47.3 +0.7
baz=30
SMCO **Snowmass** 29.68 327 eP P 06 49 49.0 +1.8
comp=Z,22nm,1.3s
R20A **Redvale** 29.76 324 ⇑P P 06 49 49.1 +1.4
baz=30,SNR=13
Q21A **Lamborn Mesa,** 29.76 325 ⇑P P 06 49 49.3 +1.5
baz=30,SNR=9.0
PV01 **Paradox Valley** 29.83 323 eP P 06 49 51.4 +3.0
comp=Z,397nm,1.0s
Z14A **Wintersburg** 29.84 311 ⇓P P 06 49 49.6 +1.3
baz=30
SADO **Sadowa** 29.86 11 P P 06 49 49.6 +1.4
SADO **Sadowa** 29.86 11 P P 06 49 49.6 +1.4
comp=Z,20nm,0.8s,baz=213,slow=8.4,SNR=14
P22A **Eagle** 29.88 327 ⇓P P 06 49 50.3 +1.5
baz=30,SNR=33
ACCN **Adirondack Com** 29.90 19 eP P 06 49 49.7 +1.1
comp=Z,30nm,1.3s
WUAZ **Wupatki** 29.91 316 eP P 06 49 51.2 +2.1
comp=Z,21nm,1.3s
WUAZ **Wupatki** 29.91 316 ⇓P P 06 49 51.2 +2.1
baz=30,SNR=9.1
O23A **Lake Granby, G** 29.92 329 ⇓P P 06 49 50.3 +1.1
baz=30,SNR=5.1
M25A **Palm-Egli Farm** 30.02 333 ⇓P P 06 49 51.1 +1.2
baz=30
L26A **Underwood Farm** 30.10 335 ⇑P P 06 49 51.6 +1.0
baz=30
SPMN **St. Paul** 30.14 351 ⇓P P 06 49 50.3 -0.4
baz=30
113A **Mohawk Valley,** 30.15 310 ⇓P P 06 49 51.0 0.0
baz=30
Y14A **Wickenburg** 30.17 312 ⇓P P 06 49 52.6 +1.3
baz=30
P21A **Newcastle** 30.19 327 ⇓P P 06 49 53.1 +1.5
baz=30,SNR=22
O22A **Kremmling** 30.19 328 ⇓P P 06 49 52.2 +0.6
baz=30
PV04 **Paradox Valley** 30.20 323 eP P 06 49 54.2 +2.6
Q20A **Ridgley Place,** 30.24 325 ⇓P P 06 49 52.6 +0.7
baz=30
NCB **Newcomb** 30.26 18 eP P 06 49 52.2 +0.3
comp=Z,16nm,1.1s
K27A **Flueckinger Fa** 30.33 337 ⇑P P 06 49 53.3 +0.8
baz=30
S18A **Hurst Farm, Bl** 30.37 321 ⇓P P 06 49 54.3 +1.0
baz=30,SNR=9.6
M24A **Cheyenne** 30.38 332 ⇓P P 06 49 53.6 +0.4
baz=30
N23A **Red Feather La** 30.46 330 ⇑P P 06 49 54.7 +0.7
baz=31
PHWY **Pilot Hill** 30.54 331 eP P 06 49 57.0 +2.3
comp=Z,12nm,1.1s
L25A **Engebretsen Ra** 30.57 334 ⇑P P 06 49 55.3 +0.6
baz=31
N22A **Wattenberg Ran** 30.63 329 ⇑P P 06 49 56.5 +1.0
baz=31
FFD **Franklin Falls** 30.64 21 eP P 06 49 56.3 +1.1
comp=Z,66nm,1.1s
P20A **De Beque** 30.68 326 ⇓P P 06 49 57.4 +1.5
baz=31
K26A **Motz Farm, Whi** 30.70 335 ⇑P P 06 49 56.9 +1.1
baz=31
O21A **Pagoda** 30.71 327 ⇓P P 06 49 57.9 +1.7
baz=31,SNR=5.5
LONY **Lake Ozonia** 30.75 17 eP P 06 49 56.6 +0.3
comp=Z,70nm,1.0s
BRSD **Miller** 30.76 342 ⇓P P 06 49 56.7 +0.4
baz=31
M23A **Laramie** 30.80 331 ⇑P P 06 49 57.9 +1.0
baz=31
L24A **Wheatland** 30.89 333 ⇓P P 06 49 58.7 +1.0
baz=31
K25A **Mack Ranch, Ha** 30.90 335 ⇑P P 06 49 58.8 +1.1
baz=31
MSNY **Massena** 31.03 16 P P 06 49 59.0 +0.4
comp=Z,400nm,1.0s
U15A **North Rim** 31.05 317 ⇓P P 06 50 00.8 +1.6
baz=31,SNR=9.6
O20A **White River Ci** 31.05 327 ⇑P P 06 50 00.7 +1.5
baz=31,SNR=16
P19A **Cripple Cowboy** 31.10 325 ⇑P P 06 50 00.8 +1.2
baz=31,SNR=5.6
N21A **Black Mountain** 31.13 328 ⇓P P 06 50 00.9 +1.0
baz=31
M22A **Cedar Creek Ra** 31.16 330 ⇑P P 06 50 01.5 +1.4
baz=31
PDMCI **Parker Dam,Lak** 31.17 312 ⇓P P 06 50 01.5 +1.5
baz=31
LBNH **Lisbon** 31.23 20 eP P 06 50 00.1 -0.3
LBNH pmax pmax
comp=Z,24nm,1.0s
LBNH **Lisbon** 31.23 20 eP P 06 50 00.1 -0.3
comp=Z,24nm,1.0s
FRNY **Flat Rock** 31.24 18 eP P 06 50 01.5 +1.0
L23A **Garrett** 31.30 332 ⇓P P 06 50 02.2 +0.9
baz=31,SNR=6.2
K24A **Anderson Ranch** 31.39 334 ⇑P P 06 50 03.2 +1.2
baz=32
W13A **Hualapai Mount** 31.40 314 ⇑P P 06 50 02.7 +0.5
baz=32
L22A **Ellis Ranch, M** 31.57 331 ⇑P P 06 50 04.4 +0.7
baz=32
N20A **Spence Gulch,** 31.57 327 ⇑P P 06 50 05.0 +1.2
baz=32,SNR=40
SRU **San Rafael** 31.62 323 ⇓P P 06 50 05.3 +1.2
baz=32,SNR=14
O19A **Miners Draw (B** 31.64 326 ⇓P P 06 50 04.7 +0.4
baz=32
M21A **Separation Pea** 31.69 329 ⇑P P 06 50 05.7 +0.9
baz=32,SNR=24
NEE2 **Needles Airpor** 31.74 312 ⇓P P 06 50 06.6 +1.6
baz=32
K23A **Bowen Ranch, D** 31.77 333 ⇑P P 06 50 05.8 +0.4
baz=32
DVTC **Desert V Tower** 31.86 308 ⇓P P 06 50 05.7 -0.5
baz=32
Q16A **Castle Valley** 31.87 322 ⇓P P 06 50 07.6 +1.2
baz=32,SNR=6.7
L21A **Rawlins** 31.96 330 ⇑P P 06 50 07.7 +0.5
baz=32,SNR=38
M20A **Sweetwater, Wa** 32.01 328 ⇑P P 06 50 08.0 +0.4
baz=32
K22A **Casper** 32.09 332 ⇓P P 06 50 09.3 +1.1
baz=32,SNR=8.3
RSSD **Black Hills** 32.23 336 eP P 06 50 11.9 +2.4
RSSD **Black Hills** 32.23 336 eP P 06 50 11.8 +2.4
MVU **Marysvale** 32.24 320 eP P 06 50 11.6 +1.9
comp=Z,26nm,1.5s
LDFC **Landfair** 32.25 313 eP P 06 50 12.7 +3.1
comp=Z,16nm,1.1s
J23A **Dilts Ranch, B** 32.26 333 ⇓P P 06 50 11.0 +1.4
baz=32
BELC **Belle Mtn. Jos** 32.38 310 ⇓P P 06 50 10.0 -0.8
baz=32
CCUT **Cedar City** 32.40 318 eP P 06 50 13.7 +2.6
comp=Z,9.6nm,1.3s
K21A **Alcova** 32.42 331 ⇓P P 06 50 11.7 +0.5
baz=33
L20A **Wamsutter** 32.47 329 ⇑P P 06 50 11.8 +0.1
baz=33
M19A **Rock Springs** 32.52 327 ⇓P P 06 50 11.4 -0.6
baz=33
ARUT **Antelope Range** 32.59 318 eP P 06 50 14.2 +1.6
ARUT pmax pmax
comp=Z,9.0nm,0.9s
ARUT **Antelope Range** 32.59 318 eP P 06 50 14.2 +1.6
comp=Z,9.4nm,0.9s
EYMN **Ely** 32.65 354 eP P 06 50 13.3 +0.4
comp=Z,32nm,1.6s
MPU **Maple Canyon** 32.86 323 eP P 06 50 15.9 +0.9
comp=Z,23nm,1.1s
DAU **Daniels Canyon** 32.90 324 eP P 06 50 16.9 +1.4
DAU **Daniels Canyon** 32.90 324 eP P 06 50 16.9 +1.4
H24A **Dirks Ranch, A** 32.95 336 ⇓P P 06 50 16.1 +0.5
baz=33
K20A **Yellowstone Ra** 32.96 330 ⇓P P 06 50 15.5 -0.3
baz=33,SNR=6.3
TUQ **Turquoise Moun** 33.00 313 ⇓P P 06 50 16.3 0.0
baz=33
L19A **Farson** 33.05 328 ⇑P P 06 50 17.0 +0.2
baz=33
I22A **9 Mile Ranch,** 33.06 333 ⇓P P 06 50 16.9 +0.3
baz=33
J21A **Lysite** 33.06 331 ⇓P P 06 50 17.0 +0.3
baz=33,SNR=16
H23A **Clabaugh Cattl** 33.14 335 ⇑P P 06 50 17.6 +0.3
baz=33
JLU **Jordanelle** 33.14 324 eP P 06 50 18.6 +1.1
comp=Z,15nm,1.3s
L18A **Fontenelle, Gr** 33.28 327 ⇑P P 06 50 19.3 +0.6
baz=33,SNR=9.1
M17A **Scullys Gap (B** 33.30 326 ⇓P P 06 50 19.7 +0.8
baz=33,SNR=19
K19A **Absolon Red Bu** 33.33 329 ⇑P P 06 50 19.4 +0.3
baz=34,SNR=7.2
I21A **Big Trails, Te** 33.35 332 ⇓P P 06 50 19.8 +0.6
baz=34,SNR=6.8
J20A **Shoshoni** 33.36 331 ⇑P P 06 50 19.9 +0.6
baz=34
G24A **Alzada** 33.39 337 ⇓P P 06 50 19.6 +0.2
baz=34
SAML **Samuel** 33.48 135 eP P 06 50 18.4 -2.0
comp=Z,19nm,1.0s
H22A **Clearmont** 33.56 334 ⇑P P 06 50 21.6 +0.7
baz=34
BW06 **Boulder Array** 33.64 329 eP P 06 50 22.4 +0.6
comp=Z,22nm,1.3s
PDAR **Pinedale Array** 33.64 329 P P 06 50 21.9 0.0
PDAR **Pinedale Array** 33.64 329 P P 06 50 21.9 0.0
comp=Z,16nm,1.2s,baz=133,slow=10,SNR=21
PDAR LR LR 07 09 06.2
comp=Z,186nm,18.4s,baz=144,slow=45
G23A **Biddle** 33.66 336 ⇑P P 06 50 23.0 +1.2
baz=34
DUG **Dugway** 33.66 322 eP P 06 50 23.7 +1.7
DUG pmax pmax
comp=Z,19nm,1.1s
DUG **Dugway** 33.66 322 eP P 06 50 23.7 +1.7

comp=Z,19nm,1.1s
DUG Dugway 33.66 322 ⇓P P 06 50 23.2 +1.2
baz=34,SNR=13
BFSC Mount Baldy Ra 33.71 309 ⇓P P 06 50 23.1 +0.7
baz=34
F24A Ekalaka 33.83 337 ⇑P P 06 50 23.9 +0.6
baz=34
SCI San Clemente I 33.87 307 ⇑P P 06 50 24.2 +0.6
baz=34
HWUT Hardware Ranch 33.88 325 eP P 06 50 24.8 +0.9
comp=Z,38nm,1.2s
H21A Big Horn, Sher 33.88 333 ⇓P P 06 50 25.3 +1.5
baz=34
G22A Birney 34.04 335 ⇑P P 06 50 25.6 +0.4
baz=34
MDND Maddock 34.06 344 ⇑P P 06 50 25.2 0.0
baz=34,SNR=7.4
F23A Volborg 34.10 336 ⇑P P 06 50 25.9 +0.3
baz=34,SNR=9.9
FURC Furnace Creek, 34.17 313 ⇑P P 06 50 26.9 +0.7
baz=34,SNR=7.7
H20A Greybull 34.20 332 ⇓P P 06 50 26.5 0.0
baz=34
EDW2 Edwards Air Fo 34.24 310 ⇑P P 06 50 26.8 -0.2
baz=34
R11A Troy Canyon, C 34.30 317 ⇑P P 06 50 29.3 +1.7
baz=34,SNR=14
I19A Meeteetse 34.31 331 ⇑P P 06 50 29.0 +1.4
baz=34,SNR=7.7
E24A Baker 34.39 338 ⇑P P 06 50 28.0 -0.1
baz=34
MPMC Manual Prospec 34.42 312 ⇓P P 06 50 28.9 +0.2
baz=34
F22A Rosebud 34.48 335 ⇑P P 06 50 28.8 -0.2
baz=35
HVU Hansel Valley 34.67 324 eP P 06 50 31.8 +1.1
HVU pmax pmax
comp=Z,29nm,1.2s
HVU Hansel Valley 34.67 324 eP P 06 50 31.8 +1.1
comp=Z,29nm,1.2s
E23A Ismay 34.71 337 ⇓P P 06 50 30.7 -0.1
baz=35,SNR=7.7
REDW Red Top Meadow 34.73 328 eP P 06 50 32.9 +1.7
comp=Z,2.1nm,1.4s
SNOW Snow King Moun 34.75 328 eP P 06 50 32.8 +1.3
comp=Z,114mm,1.4s
LOHW Long Hollow 34.78 329 eP P 06 50 33.2 +1.5
comp=Z,32nm,1.3s
H19A Powell 34.79 331 ⇓P P 06 50 31.7 +0.1
baz=35
G20A Bridger 34.86 333 ⇓P P 06 50 31.8 -0.5
baz=35,SNR=11
TPAW Teton Pass 34.87 328 eP P 06 50 33.6 +1.1
comp=Z,72nm,1.1s
D24A Glendive 34.87 339 ⇓P P 06 50 32.2 0.0
baz=35
E22A Miles City 34.90 336 ⇑P P 06 50 32.3 -0.3
baz=35,SNR=25
ISA Isabella 34.94 311 ⇑P P 06 50 34.0 +1.0
baz=35
MOOW Moose Ponds 34.95 329 eP P 06 50 34.1 +0.9
comp=Z,16nm,0.8s
RRI2 Red Ridge 34.96 328 eP P 06 50 34.6 +1.3
comp=Z,186nm,1.6s
ARVC Arvin 34.97 310 ⇓P P 06 50 34.6 +1.4
baz=35
I17A Pilgrim Ck. 34.99 329 ⇓P P 06 50 34.7 +1.2
baz=35
DCID1 Drake Creek 35.06 328 eP P 06 50 36.8 +2.7
comp=Z,33nm,1.1s
H18A Shoshone NF, C 35.11 331 ⇓P P 06 50 34.9 +0.3
baz=35,SNR=5.5
D23A Lindsay 35.24 338 ⇓P P 06 50 35.6 +0.2
baz=35,SNR=14
C24A Savage 35.26 339 ⇓P P 06 50 35.1 -0.5
baz=35,SNR=9.7
RLMT Red Lodge 35.26 332 eP P 06 50 36.5 +0.6
comp=Z,26nm,1.4s
F20A Billings 35.29 333 ⇑P P 06 50 36.2 +0.3
baz=35
SBC Santa Barbara 35.34 308 ⇓P P 06 50 36.4 +0.1
baz=35
I16A Newdale 35.42 328 ⇓P P 06 50 38.4 +1.2
baz=36
ELK Elko 35.46 321 eP P 06 50 39.3 +1.7
comp=Z,453nm,1.3s
ULM Lac du Bonnet 35.52 350 P P 06 50 36.5 -1.2
ULM Lac du Bonnet 35.52 350 P P 06 50 36.5 -1.2
comp=Z,31nm,1.0s,baz=161,slow=7.7,SNR=7.4
ULM LR LR 07 06 00.3
comp=Z,210nm,20.5s,baz=203,slow=38
G18A Lazy EL Ranch, 35.55 332 ⇓P P 06 50 37.6 -0.6
baz=36,SNR=11
D22A Cohagen 35.58 337 ⇑P P 06 50 37.7 -0.6
baz=36,SNR=7.9
F19A Roth Farm, Mol 35.68 333 ⇑P P 06 50 39.0 -0.3
baz=36,SNR=14
YMR Madison River 35.73 330 eP P 06 50 41.5 +1.7
comp=Z,21nm,0.8s
C23A Lambert 35.76 338 ⇓P P 06 50 39.4 -0.5
baz=36,SNR=8.3
MTUM Tungsten Hills 35.80 314 eP P 06 50 44.7 +4.1
D21A La Casta Ranch 35.83 336 ⇑P P 06 50 39.9 -0.6
baz=36
E20A Meyer Farm, Mu 35.84 334 ⇑P P 06 50 40.6 0.0
baz=36,SNR=12
H16A Russell Place, 35.89 329 ⇑P P 06 50 40.6 -0.7
baz=36
GCMT Greycliff 35.95 332 eP P 06 50 42.3 +0.6
comp=Z,6.0nm,0.8s
C22A Vida 35.97 338 ⇑P P 06 50 41.3 -0.4
baz=36
DGMT Dagmar 35.99 340 eP P 06 50 42.0 +0.1
comp=Z,26nm,0.8s
DGMT Dagmar 35.99 340 ⇓P P 06 50 41.9 0.0
baz=36,SNR=7.4
NV11 Mina Array Sit 36.05 315 eP P 06 50 44.3 +1.7
F18A Big Timber 36.06 332 ⇑P P 06 50 42.8 +0.2
baz=36,SNR=14
QLMT Earthquake Lak 36.07 329 eP P 06 50 46.4 +3.6
E19A Rath Farm, Rou 36.08 334 ⇑P P 06 50 43.1 +0.4
baz=36,SNR=7.4
G17A Pierce Place, 36.10 331 ⇑P P 06 50 42.8 -0.1
baz=36
MLAC Mammoth Lakes 36.12 314 ⇓P P 06 50 42.6 -0.7
baz=36
NVAR Mina Array Bea 36.15 315 P P 06 50 44.1 +0.5
NVAR PcP PcP 06 53 09.0 -0.3
NVAR Mina Array Bea 36.15 315 P P 06 50 44.1 +0.5
comp=Z,15nm,1.2s,baz=123,slow=7.8,SNR=23
NVAR PcP PcP 06 53 09.0 -0.3
comp=Z,2.2nm,1.0s,baz=129,slow=3.1,SNR=3.8
NVAR LR LR 07 08 59.3
comp=Z,467nm,18.2s,baz=44,slow=42
B23A Brockton 36.26 339 ⇑P P 06 50 44.4 +0.2
baz=36
D20A Manuel Ranch, 36.31 335 ⇓P P 06 50 44.8 +0.2
baz=36,SNR=14
A24A Westby 36.33 340 ⇓P P 06 50 44.6 -0.1
baz=36,SNR=6.5
LPAZ La Paz 36.38 149 eP P 06 50 45.5 -0.6
LPAZ La Paz 36.38 149 P P 06 50 45.5 -0.6
comp=Z,2.1nm,0.9s,baz=341,slow=9.5,SNR=7.0
B22A Reddig Ranch S 36.48 338 ⇑P P 06 50 46.2 +0.2
baz=37
I14A Mackay 36.48 327 ⇑P P 06 50 47.0 +0.8
baz=37,SNR=12
C21A Desert Coulee 36.49 336 ⇑P P 06 50 46.3 +0.2
baz=37
F17A Fitzpatrick Pl 36.49 331 ⇑P P 06 50 46.1 -0.2
baz=37,SNR=6.6
BMN Battle Mountai 36.51 319 eP P 06 50 48.6 +2.1
BMN pmax pmax
comp=Z,76nm,1.4s
BMN Battle Mountai 36.51 319 eP P 06 50 48.6 +2.1
comp=Z,76nm,1.4s
J13A Cove Ranch, Pi 36.51 325 ⇓P P 06 50 46.6 +0.1
baz=37,SNR=27
H15A Lima 36.53 328 ⇓P P 06 50 48.0 +1.3
baz=37,SNR=25
G16A Moss Hill, Enn 36.54 329 ⇓P P 06 50 48.0 +1.2
baz=37,SNR=15
A23A Redstone 36.65 340 ⇓P P 06 50 48.3 +0.9
baz=37
E18A Harlowton 36.66 333 ⇑P P 06 50 48.9 +1.2
baz=37,SNR=9.7
D19A Cripps Ranch, 36.68 334 ⇑P P 06 50 48.2 +0.4
baz=37,SNR=14
HLID Hailey 36.75 325 ⇓P P 06 50 48.9 +0.3
baz=37,SNR=21
C20A Veseth Ranch, 36.76 336 ⇑P P 06 50 48.7 +0.3
baz=37,SNR=14
BOZ Bozeman (W) 36.76 330 eP P 06 50 49.8 +1.2
BOZ pmax pmax
comp=Z,18nm,1.1s
BOZ Bozeman (W) 36.76 330 eP P 06 50 49.8 +1.2
comp=Z,18nm,1.1s
MCMT McKenzie Canyo 36.78 328 eP P 06 50 51.0 +2.1
comp=Z,17nm,1.0s
I13A Wildhorse Cree 36.82 326 ⇑P P 06 50 50.1 +0.9
baz=37,SNR=34
G15A Dillon 36.84 329 ⇓P P 06 50 50.1 +0.8
baz=37,SNR=19
F16A Kennard Place, 36.86 330 ⇓P P 06 50 49.9 +0.5
baz=37
B21A Ellsworth Farm 36.96 337 ⇓P P 06 50 50.0 0.0
baz=37
E17A Martinsdale 37.00 332 ⇓P P 06 50 50.8 +0.1
baz=37
A22A Carney Farms, 37.03 339 ⇑P P 06 50 51.3 +0.6
baz=37,SNR=25
DLMT Dillon 37.03 329 eP P 06 50 52.1 +1.3
comp=Z,23nm,1.1s
D18A Linhart Farms, 37.09 333 ⇓P P 06 50 51.7 +0.3
baz=37
C19A Slack Wire Ran 37.20 335 ⇓P P 06 50 52.7 +0.5
baz=37,SNR=12
LRM Limekiln Ridge 37.29 330 eP P 06 50 54.7 +1.5
F15A Butte 37.32 330 ⇓P P 06 50 53.6 +0.2
baz=37,SNR=19
B20A Solberg Farm, 37.35 336 ⇓P P 06 50 54.0 +0.6
baz=38,SNR=16
G14A Jackson 37.38 328 ⇓P P 06 50 54.5 +0.5
baz=38
A21A Bergtoll Ranch 37.39 338 ⇑P P 06 50 54.1 +0.3
baz=38,SNR=19
CMB Columbia Colle 37.39 313 eP P 06 50 58.2 +4.3
CMB Columbia Colle 37.39 313 eP P 06 50 58.2 +4.3
E16A East Helena 37.43 331 ⇑P P 06 50 54.7 +0.4
baz=38
MFID Camas Ranch 37.45 324 eP P 06 50 55.7 +1.3
MFID Camas Ranch 37.45 324 ⇑P P 06 50 54.6 +0.2
baz=38,SNR=15
D17A Six Diamond Ra 37.45 333 ⇓P P 06 50 54.7 +0.3
baz=38,SNR=26
WCN Washoe City 37.57 316 eP P 06 50 57.6 +2.0
WCN pmax pmax
comp=Z,9.0nm,1.3s
WCN Washoe City 37.57 316 eP P 06 50 57.6 +2.0
comp=Z,9.0nm,1.3s
HRY Holter Researc 37.64 331 eP P 06 50 51.9 -4.1
H12A Diamond D Ranc 37.64 326 ⇓P P 06 50 56.9 +0.8
baz=38,SNR=23
A20A Cobblestone Ra 37.67 337 ⇑P P 06 50 56.0 -0.2
baz=38
G13A Cobalt 37.68 327 ⇑P P 06 50 56.7 +0.3
baz=38,SNR=5.8
EGMT Eagleton 37.72 334 eP P 06 50 58.7 +2.1
comp=Z,38nm,1.6s
EGMT Eagleton 37.72 334 ⇑P P 06 50 56.4 -0.3
baz=38,SNR=9.1
B19A Brinkman Farms 37.73 335 ⇓P P 06 50 56.3 -0.3
baz=38
F14A Wisdom 37.73 329 ⇑P P 06 50 55.8 -1.1
baz=38
D16A Dana Ranch, Ca 37.74 332 ⇑P P 06 50 57.3 +0.4
baz=38,SNR=18
E15A Deer Lodge 37.81 330 ⇑P P 06 50 57.1 -0.4
baz=38,SNR=23
C17A Wharram Farm, 37.85 333 ⇓P P 06 50 57.4 -0.3
baz=38,SNR=10
B18A Beardsley Farm 38.02 335 ⇓P P 06 50 59.2 +0.1
baz=38,SNR=6.0
A19A Klindworth Far 38.03 336 ⇑P P 06 50 59.3 +0.1
baz=38,SNR=8.4
D15A Lincoln 38.20 331 ⇓P P 06 51 00.6 -0.1
baz=38,SNR=9.0
E14A Clinton 38.22 329 ⇓P P 06 51 00.9 0.0
baz=38,SNR=8.1
BEKR Beckworth 38.25 316 eP P 06 51 03.1 +1.7
comp=Z,15nm,1.7s
G12A Big Creek, Yel 38.27 327 ⇓P P 06 51 01.5 0.0
baz=38
B17A L&G Farms, Che 38.37 334 ⇓P P 06 51 02.2 +0.1
baz=38
C16A Fuhringer Ranc 38.41 332 ⇓P P 06 51 02.6 +0.2
baz=38,SNR=9.0
CHMT Chamberlain Mo 38.46 330 eP P 06 51 05.7 +2.7
A18A Metzger Ranch, 38.46 335 ⇓P P 06 51 03.3 +0.5
baz=39,SNR=18
WVOR Wild Horse Val 38.51 321 eP P 06 51 04.6 +1.2
WVOR pmax pmax
comp=Z,62nm,1.3s
WVOR Wild Horse Val 38.51 321 eP P 06 51 04.6 +1.2
comp=Z,62nm,1.3s
E13A Victor 38.58 329 ⇓P P 06 51 04.6 +0.6
baz=39,SNR=10
F12A Elk City 38.65 327 ⇓P P 06 51 04.7 +0.1
baz=39,SNR=27
D14A Greenough 38.70 330 ⇑P P 06 51 05.2 +0.2
baz=39
MSO Missoula 38.73 330 eP P 06 51 05.8 +0.7
comp=Z,15nm,1.2s
C15A Salmond Ranch, 38.78 332 ⇓P P 06 51 06.2 +0.6
baz=39,SNR=15
SLMT Seeley Lake 38.80 330 eP P 06 51 07.4 +1.5
A17A Triple J Farms 38.83 334 ⇓P P 06 51 06.3 +0.4
baz=39,SNR=8.2
B16A M & M Farms, S 38.85 333 ⇓P P 06 51 05.5 -0.7
baz=39
B15A Bradely Ranch, 39.16 332 ⇑P P 06 51 08.6 -0.1
baz=39,SNR=8.2
D13A Huson 39.17 329 ⇓P P 06 51 09.1 +0.3
baz=39,SNR=18
BMO Blue Mountains 39.17 325 eP P 06 51 08.7 -0.2
comp=Z,25nm,1.3s
A16A West Butte Ran 39.21 334 ⇑P P 06 51 09.0 -0.2
baz=39,SNR=5.4
SWMT Swartz Lake 39.24 330 eP P 06 51 14.3 +4.9
D12A Red Ives Fores 39.58 329 ⇑P P 06 51 12.0 -0.2
baz=40
A15A Johnson Ranch, 39.73 333 ⇑P P 06 51 13.0 -0.5
baz=40,SNR=13
A14A Double T Ranch 40.03 332 ⇑P P 06 51 15.5 -0.5
baz=40,SNR=20
B13A Whitefish 40.07 331 ⇑P P 06 51 16.3 -0.1
baz=40
SIV San Ignacio 40.08 140 P P 06 51 15.4 -1.3
SIV San Ignacio 40.08 140 P P 06 51 15.4 -1.3
comp=Z,25nm,0.9s,baz=322,slow=8.9,SNR=49
C12B Naegeli Ranch, 40.09 329 ⇑P P 06 51 16.4 -0.1
baz=40
WALA Waterton Lakes 40.31 332 eP P 06 51 20.3 +2.0
comp=Z,0.7nm,1.4s
KIPM Iron Peak 40.35 314 eP P 06 51 19.2 +0.4
comp=Z,14nm,0.9s
A13A Flathead Natio 40.45 332 ⇓P P 06 51 19.2 -0.2
baz=41
YBH Yreka Blue Hor 40.72 317 eP P 06 51 21.1 -0.8
comp=Z,2.6nm,1.0s
FFC Flin Flon 40.98 346 eP P 06 51 23.1 -0.6
FFC pmax pmax
comp=Z,9.0nm,1.0s
FFC Flin Flon 40.98 346 eP P 06 51 23.1 -0.6
comp=Z,9.5nm,1.0s
FFC Flin Flon 40.98 346 P P 06 51 23.0 -0.6
comp=Z,49nm,0.9s,SNR=5.5
NEW Newport 41.28 329 eP P 06 51 28.3 +2.1
NEW Newport 41.28 329 ⇑P P 06 51 26.2 -0.1
baz=41
OD2 Odessa Site #2 41.53 327 P P 06 51 31.2 +2.9
LVC Limon Verde 41.57 155 eP P 06 51 29.4 +0.3
comp=Z,31nm,1.3s
IRO Indian Ridge 41.59 321 P P 06 51 31.0 +2.0
VFP Flag Point 41.83 323 P P 06 51 32.4 +1.5
BROR Big Rock Looko 41.84 321 P P 06 51 31.5 +0.7
TRW Toppenish Ridg 41.86 324 P P 06 51 31.9 +0.9
SCHQ Schefferville 42.13 17 eP P 06 51 32.2 -0.9
comp=Z,40nm,1.1s
SCHQ Schefferville 42.13 17 P P 06 51 32.9 -0.2
comp=Z,30nm,1.0s,baz=222,slow=6.1,SNR=9.1
SCHQ LR LR 07 09 07.7
comp=Z,258nm,18.3s,baz=202,slow=36
KEBM Edson Butte 42.33 318 eP P 06 51 36.0 +1.1
comp=Z,85nm,1.2s
RNO Roman Nose 42.46 320 P P 06 51 37.1 +1.1
LON Longmire 42.84 324 eP P 06 51 40.0 +1.0
LON pmax pmax
comp=Z,13nm,0.9s
LON Longmire 42.84 324 eP P 06 51 40.0 +1.0
comp=Z,12nm,0.9s
NLWA Neilton Lookou 44.36 324 eP P 06 51 51.9 +0.6
comp=Z,23nm,1.4s
LCO Las Campanas 46.77 161 eP P 06 52 10.6 -0.2
comp=Z,23nm,0.8s
BDFB Brasilia 48.97 127 P P 06 52 28.6 +0.8
BDFB Brasilia 48.97 127 P P 06 52 28.6 +0.8
comp=Z,4.9nm,1.0s,baz=271,slow=13,SNR=4.1
CFAA Coronel Fontan 49.97 160 P P 06 52 35.1 -0.1
CFAA Coronel Fontan 49.97 160 P P 06 52 35.1 -0.1
comp=Z,0.5nm,0.6s,baz=343,slow=7.6
CPUP Villa Florida 50.29 145 P P 06 52 35.1 -2.5
CPUP Villa Florida 50.29 145 P P 06 52 35.1 -2.5
comp=Z,2.8nm,0.9s,baz=276,slow=9.2,SNR=3.8
YKA Yellowknife Ar 50.98 344 P P 06 52 42.0 -0.4
YKA PcP PcP 06 53 59.0 +0.5
YKA Yellowknife Ar 50.98 344 P P 06 52 42.0 -0.4
comp=Z,11nm,0.7s,baz=139,slow=7.8,SNR=176
YKA PcP PcP 06 53 59.0 +0.5
comp=Z,2.3nm,0.9s,baz=150,slow=4.1,SNR=3.6
YKW3 Yellowknife Ar 51.04 344 eP P 06 52 42.5 -0.4
comp=Z,0.8nm,1.2s
DLBC Dease Lake 53.63 333 eP P 06 53 03.2 +0.9
RCBR Riachuelo 54.37 109 P P 06 53 09.4 +1.1
RCBR Riachuelo 54.37 109 P P 06 53 09.4 +1.1
comp=Z,14nm,1.0s,baz=303,slow=9.0,SNR=3.8
SFJD Kangerlussuaq 56.57 16 P P 06 53 26.0 +2.8
SFJD Kangerlussuaq 56.57 16 iP P 06 53 25.6 +2.4
comp=Z,13nm,0.9s
SFJD Kangerlussuaq 56.57 16 P P 06 53 26.0 +2.8
comp=Z,15nm,0.9s,baz=201,slow=9.2,SNR=3.9
SFJD LR LR 07 18 55.2
comp=Z,148nm,18.8s,baz=330,slow=37
PLCA Paso Flores 57.84 166 eP P 06 53 31.9 -0.7
PLCA Paso Flores 57.84 166 P P 06 53 32.0 -0.6
comp=Z,11nm,1.0s,baz=352,slow=8.9,SNR=4.4
EGAK Eagle 61.42 337 eP P 06 53 56.5 -0.5
comp=Z,2.6nm,1.0s
DOT Dot Lake 62.11 335 eP P 06 54 01.6 0.0
comp=Z,6.6nm,0.9s
SUMG Summit 63.45 14 iP P 06 54 10.8 0.0
SUMG pmax pmax
comp=Z,27nm,1.0s
SUMG Summit 63.45 14 eP P 06 54 10.4 -0.5
comp=Z,40nm,1.1s
SUMG Summit 63.45 14 iP P 06 54 10.8 0.0
comp=Z,27nm,1.0s
ILAR Eielson Array 63.67 335 P P 06 54 11.7 -0.3
ILAR Eielson Array 63.67 335 P P 06 54 11.7 -0.3
comp=Z,4.0nm,0.8s,baz=114,slow=5.1,SNR=42
TRF Thorofare Moun 64.66 334 eP P 06 54 17.7 -1.1
comp=Z,9.2nm,0.9s
BORG Borgarnes 65.59 25 LR LR 07 23 21.8
comp=Z,96nm,20.1s,baz=71,slow=36
COLD Coldfoot 65.78 337 eP P 06 54 26.4 +0.7
comp=Z,5.6nm,1.0s
SCO Scoresbysund 67.11 19 eP P 06 54 41.0 +6.9
SCO pmax pmax
comp=Z,5.0nm,1.1s
SCO Scoresbysund 67.11 19 iP P 06 54 41.0 +6.9
comp=Z,4.7nm,1.1s
DAG Danmarks Havn 70.02 13 iP P 06 54 51.1 -1.1
DAG pmax pmax
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 70.02 13 iP P 06 54 51.1 -1.1
comp=Z,6.5nm,0.9s
EVOP Sao Brissos 71.51 54 eP P 06 55 03.0 +1.0
EVOP pmax pmax
comp=Z,11nm,0.9s
EVOP Sao Brissos 71.51 54 eP P 06 55 03.0 +1.0
comp=Z,11nm,0.9s
EVO Evora 71.59 54 eP P 06 55 03.0 +0.5
comp=Z,11nm,0.9s
ESK Eskdalemuir 73.61 36 eP P 06 55 14.4 +0.2
ESK pmax pmax
comp=Z,7.0nm,1.0s
ESK Eskdalemuir 73.61 36 eP P 06 55 14.4 +0.2
comp=Z,7.0nm,1.0s
ROSF Rostrenen 74.12 44 eP P 06 55 17.3 0.0
comp=Z,35nm,1.3s
ROSF Rostrenen 74.12 44 eP P 06 55 17.3 0.0
ROSF pmax pmax
comp=Z,35nm,1.3s
ROSF Rostrenen 74.12 44 eP P 06 55 17.3 0.0
comp=Z,35nm,1.3s
QUIF Quistinic 74.23 44 eP P 06 55 18.4 +0.4
comp=Z,51nm,1.2s
QUIF Quistinic 74.23 44 eP P 06 55 18.4 +0.4
QUIF pmax pmax
comp=Z,51nm,1.2s
QUIF Quistinic 74.23 44 eP P 06 55 18.4 +0.4
comp=Z,51nm,1.2s
ESDC Sonseca Array 74.60 53 P P 06 55 20.9 +0.5
ESDC Sonseca Array 74.60 53 P P 06 55 20.9 +0.5
comp=Z,4.1nm,0.8s,baz=290,slow=5.4,SNR=13
ESLA Sonseca Array 74.60 53 eP P 06 55 20.9 +0.5
comp=Z,1.6nm,0.9s
SGMF Saint Gilles 74.61 44 eP P 06 55 20.4 +0.3
comp=Z,72nm,1.6s
SGMF Saint Gilles 74.61 44 eP P 06 55 20.4 +0.3
SGMF pmax pmax
comp=Z,72nm,1.6s
SGMF Saint Gilles 74.61 44 eP P 06 55 20.4 +0.3
comp=Z,72nm,1.6s
GRR Gorron 75.72 43 eP P 06 55 26.2 -0.3
comp=Z,28nm,1.1s
GRR Gorron 75.72 43 eP P 06 55 26.2 -0.3
GRR pmax pmax
comp=Z,28nm,1.1s
GRR Gorron 75.72 43 eP P 06 55 26.2 -0.3
comp=Z,28nm,1.1s
FLN La Foliniere 75.92 43 eP P 06 55 27.8 +0.1
FLN La Foliniere 75.92 43 eP P 06 55 27.8 +0.1
FLN La Foliniere 75.92 43 eP P 06 55 27.8 +0.1
SJPF Ste Jean 76.17 49 eP P 06 55 29.5 +0.2
comp=Z,32nm,1.2s
SJPF Ste Jean 76.17 49 eP P 06 55 29.5 +0.2
SJPF pmax pmax
comp=Z,32nm,1.2s
SJPF Ste Jean 76.17 49 eP P 06 55 29.5 +0.2
comp=Z,32nm,1.2s
LDF La Druitiere 76.17 43 eP P 06 55 29.1 -0.1
comp=Z,37nm,1.3s
LDF La Druitiere 76.17 43 eP P 06 55 29.1 -0.1
LDF pmax pmax
comp=Z,37nm,1.3s
LDF La Druitiere 76.17 43 eP P 06 55 29.1 -0.1
comp=Z,37nm,1.3s
MFF Saint Martin d 76.43 45 eP P 06 55 31.2 +0.5
MFF Saint Martin d 76.43 45 eP P 06 55 31.2 +0.5
MFF Saint Martin d 76.43 45 eP P 06 55 31.2 +0.5
EPF Esparros 77.32 49 eP P 06 55 36.1 +0.3
EPF Esparros 77.32 49 eP P 06 55 36.1 +0.3
EPF Esparros 77.32 49 eP P 06 55 36.1 +0.3
NB2 NORSAR Subarra 80.28 29 P P 06 55 51.8 +0.1
comp=Z,21nm,1.7s,baz=283,slow=5.6
NOA NORSAR Array B 80.28 29 P P 06 55 52.7 +1.0
NOA NORSAR Array B 80.28 29 P P 06 55 52.7 +1.0
comp=Z,4.7nm,1.0s,baz=286,slow=5.4,SNR=4.8
BILL Bilibino 82.07 339 ⇓iP P 06 56 00.5 -0.5
BILL e 06 56 05.3
BILL eSS SS 07 11 34.7 +0.9
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL MLR MLR
comp=Z,100nm,21.0s
BILL Bilibino 82.07 339 eP P 06 56 00.8 -0.2
BILL pmax pmax
comp=Z,10.0nm,1.1s
BILL Bilibino 82.07 339 eP P 06 56 00.8 -0.2
comp=Z,9.9nm,1.1s
ARCES ARCESS Array B 83.04 19 P P 06 56 06.8 +0.7
ARCES ARCESS Array B 83.04 19 P P 06 56 06.8 +0.7
comp=Z,5.6nm,0.8s,baz=273,slow=6.1,SNR=6.1
CLL Collm 83.88 39 eP P 06 56 11.0 +0.3
CLL e 06 56 19.0
CLL Collm 83.88 39 eP P 06 56 11.0 +0.3
CLL e 06 56 19.0
CLL eS S 07 06 36.0 +1.7
CLL eSS SS 07 12 08.0 +6.7
BRG Berggiesshubel 84.57 39 eP P 06 56 16.2 +1.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,20nm,1.8s						
BRG	Berggiesshubel	84.57	39	*e*P	P	06 56 16.2	+1.9
BRG				pmax	pmax		
	comp=Z,20nm,1.8s						
TORD	Torodi Ar. Bea	84.84	78	P	P	06 56 15.8	-0.6
TORD	Torodi Ar. Bea	84.84	78	P	P	06 56 15.8	-0.6
	comp=Z,1.7nm,0.9s,baz=284,slow=4.8,SNR=8.0						
ABTA	Abfaltersbach	84.90	43	⇑*i*PcP	P	06 56 18.0	+1.9
	comp=Z,5.7nm,1.0s						
GERES	GERESS Array B	85.04	41	P	P	06 56 16.8	0.0
GERES	GERESS Array B	85.04	41	P	P	06 56 16.8	0.0
	comp=Z,1.5nm,0.8s,baz=299,slow=2.7,SNR=12						
KEST	Kesra	85.72	54	*e*P	P	06 56 20.3	-0.2
KEST	Kesra	85.72	54	P	P	06 56 20.3	-0.2
	comp=Z,2.6nm,1.0s,baz=29,slow=5.1,SNR=4.7						
CONA	Conrad Observa	86.70	41	⇑*i*P	P	06 56 25.2	+0.1
	comp=Z,7.4nm,1.0s						
FINES	FINESS Array B	86.86	26	P	P	06 56 26.2	+0.8
FINES	FINESS Array B	86.86	26	P	P	06 56 26.2	+0.8
	comp=Z,3.1nm,0.9s,baz=294,slow=1.9,SNR=5.2						
VYHS	Vyhne	88.36	40	*e*P	P	06 56 33.1	+0.1
VYHS	Vyhne	88.36	40	*e*P	P	06 56 33.1	+0.1
SEY	Seymchan	89.57	337	⇑*i*P	P	06 56 38.4	+0.1
CRVS	Cervenica-Dubn	89.81	39	*e*P	P	06 56 39.7	-0.1
CRVS	Cervenica-Dubn	89.81	39	*e*P	P	06 56 39.7	-0.1
TIXI	Tiksi	89.87	349	⇑*i*P	P	06 56 39.4	-0.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MLR	Muntele Rosu	94.03	41	P	P	06 57 00.4	+0.9
MLR	Muntele Rosu	94.03	41	P	P	06 57 00.4	+0.9
	comp=Z,0.8nm,0.8s,baz=309,slow=6.5,SNR=5.7						
OBN	Obninsk	94.88	29	*e*P	P	06 57 01.0	-2.0
OBN				*e*		06 57 09.1	
OBN				*e*		07 07 32.6	
OBN				*e*PS	PS	07 09 35.8	+1.8
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,100nm,18.0s						
ZALV	Zalesovo Beam	110.46	5	PP	PP	07 02 50.3	+2.7
ZALV	Zalesovo Beam	110.46	5	PP	PP	07 02 50.3	+2.7
	comp=Z,1.0nm,0.7s,baz=342,slow=9.1,SNR=8.4						
KURK	Kurchatov	112.81	10	PP	PP	07 03 03.6	-1.0
KURBB	Kurchatov Arra	112.89	10	PP	PP	07 03 03.6	-1.5
	comp=Z,0.5nm,0.8s,baz=343,slow=6.2,SNR=3.5						
CN2	Changchun	114.19	335	*e*PKP	PKPdf	07 02 23.0	+2.3
CN2				*e*sPKP		07 02 30.0	
CN2				LR	LR		
	comp=N,300nm,16.0s						
CN2				LR	LR		
	comp=E,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
SONM	Songino Array	115.94	350	PP	PP	07 03 23.8	-3.0
SONM	Songino Array	115.94	350	PP	PP	07 03 23.8	-3.0
	comp=Z,0.3nm,0.4s,baz=3.4,slow=4.9,SNR=2.6						
MKAR	Makanchi Array	117.21	9	PP	PP	07 03 43.2	+7.6
MKAR	Makanchi Array	117.21	9	PP	PP	07 03 43.2	+7.6
	comp=Z,0.8nm,1.0s,baz=5.0,slow=4.9,SNR=4.0						
WMQ	Urumqi	120.76	5	*e*PKP	PKPdf	07 02 37.0	+3.5
WMQ				LR	LR		
	comp=N,370nm,27.8s						
WMQ				LR	LR		
	comp=E,540nm,29.9s						
WMQ				LR	LR		
	comp=Z,410nm,32.5s						
BJI	Beijing	120.89	340	PKP	PKPdf	07 02 32.0	-1.7
BJI				PP	PP	07 04 03.6	+2.5
BJI				AMB	AMB		
	comp=Z,74nm,6.5s						
BJI				LR	LR		
	comp=E,81nm,20.6s						
BJI				LR	LR		
	comp=Z,93nm,27.1s						
GTA	Gaotai	125.09	354	*e*PKP	PKPdf	07 02 43.1	+1.1
LZH	Lanzhou	127.81	349	*e*PKP	PKPdf	07 02 47.1	-0.2
LZH				sPKP		07 02 52.6	
LZH				*e*PP	PP	07 04 51.2	+3.6
LZH				SKKS		07 11 41.0	
LZH				*e*SS	SS	07 21 59.5	+0.3
LZH				AMB	AMB		
	comp=Z,100nm,7.8s						
LZH				LR	LR		
	comp=N,160nm,18.1s						
LZH				LR	LR		
	comp=E,130nm,17.8s						
LZH				LR	LR		
	comp=Z,180nm,20.2s						
CD2	Chengdu	132.85	348	*e*PKP	PKPdf	07 02 57.2	+0.3
CD2				PP	PP	07 05 24.9	+4.7
CD2				PKS	PKSdf	07 06 32.1	-1.4
CD2				SKS	SKSdf	07 10 05.8	-2.9
CD2				SKKS	SKKSac	07 12 14.6	-3.6
CD2				SS	SS	07 23 02.2	+1.2
CD2				AMB	AMB		
	comp=Z,120nm,10.2s						
CD2				LR	LR		
	comp=N,120nm,18.2s						
CD2				LR	LR		
	comp=Z,180nm,16.2s						
STKA	Stephens Creek	133.43	241	PKP	PKPdf	07 02 57.6	-0.2
STKA	Stephens Creek	133.43	241	PKP	PKPdf	07 02 57.6	-0.2
	comp=Z,1.9nm,0.7s,baz=24,slow=4.9,SNR=4.8						
GYA	Guiyang	136.41	343	*e*Pdif	Pdif	07 00 07.8	-1.1
GYA				PKP	PKPdf	07 03 03.0	-0.8
GYA				PP	PP	07 05 46.4	+3.4
GYA				PKS	PKSdf	07 06 37.8	-2.5
GYA				SKKS		07 12 37.0	
GYA				SS	SS	07 23 44.5	+0.3
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
GYA				LR	LR		
	comp=N,120nm,21.0s						
GYA				LR	LR		
	comp=E,110nm,22.5s						
GYA				LR	LR		
	comp=Z,130nm,20.6s						
KMI	Kunming	138.67	347	PKP	PKPdf	07 03 07.8	-0.3
WRA	Warramunga Arr	140.94	257	PKPpre	PKPpre	07 03 06.1	
WRA				PKP	PKPdf	07 03 09.9	-2.1
WRA	Warramunga Arr	140.94	257	PKhKP	PKPpre	07 03 06.1	
	comp=Z,1.0nm,0.9s,baz=82,slow=3.7,SNR=4.7						
WRA				PKP	PKPdf	07 03 09.9	-2.1
	comp=Z,3.4nm,1.0s,baz=81,slow=2.1,SNR=10						
ASAR	Alice Springs	141.20	251	PKP	PKPdf	07 03 09.3	-3.1
ASAR	Alice Springs	141.20	251	PKP	PKPdf	07 03 09.3	-3.1
	comp=Z,4.7nm,1.1s,baz=105,slow=1.9,SNR=18						
FORT	Forrest	144.95	238	*e*PKPab	PKPab	07 03 17.0	-1.0
CHTO	Chiang Mai	145.52	351	*e*PKIKP	PKPdf	07 03 19.5	-0.7
CHTO	Chiang Mai	145.52	351	*e*PKPdf	PKPdf	07 03 19.5	-0.7
CM31	Chiang Mai Arr	145.87	351	*e*PKPdf	PKPdf	07 03 21.0	+0.3
CMAR	Chiang Mai Arr	145.87	351	PKPbc	PKPdf	07 03 21.0	+0.2
CMAR	Chiang Mai Arr	145.87	351	PKPbc	PKPdf	07 03 21.0	+0.2
	comp=Z,18nm,1.0s,baz=338,slow=4.0,SNR=50						
FITZ	Fitzroy Crossi	149.17	261	*e*PKPdf	PKPdf	07 03 26.1	-0.1
FITZ				*e*PKPbc	PKPbc	07 03 29.8	-0.5

WEL 02 06:44:40.0±1.2**,34°.74S×178°.23E,h33km,ML4.0**/3**,Error ellipse: s-maj=23.4km s-min=8.9km az=90.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.82	179	PN	Pn	06 45 22.9	+0.2
URZ	Urewera	3.63	194	PN	Pn	06 45 34.1	+0.2
URZ				SN	Sn	06 46 14.1	-1.5
MWZ	Matawai	3.63	189	PN	Pn	06 45 34.1	+0.1
MWZ				SN	Sn	06 46 13.5	-2.3
CNGZ	Carnagh Statio	3.74	180	PN	Pn	06 45 34.0	-1.4
CNGZ				SN	Sn	06 46 15.6	-2.7
RAHZ	Arahi	4.27	192	PN	Pn	06 45 41.6	-1.1
KNZ	Kokohu	4.30	186	PN	Pn	06 45 40.5	-2.5
BFZ	Birch Farm	6.14	194	PN	Pn	06 46 04.5	-3.9
THZ	Tophouse	8.17	209	PN	Pn	06 46 32.1	-4.2

IDC 02 06:52:10.9±1.9**,18°.48S×167°.06E,h0km,mb3.5**/3**, mb1 3.7**/4**,mb1mx3.6**/18**,mbtmp3.4**/4**,ML2.5**/1**,Error ellipse: s-maj=45.1km s-min=29.1km az=112.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.62	189	Pn	Pn	06 53 07.7	-0.6
	0.4nm,0.3s,baz=23,slow=15,SNR=15						
DZM				Sn	Sn	06 53 54.6	+2.8
	3.2nm,0.3s,baz=120,slow=23,SNR=10						
WRA	Warramunga Arr	30.91	262	P	P	06 58 30.6	+1.0
	2.2nm,1.4s,baz=80,slow=6.3,SNR=2.9						
ASAR	Alice Springs	31.32	255	P	P	06 58 32.1	-1.1
	0.5nm,0.7s,baz=80,slow=8.9,SNR=3.9						
ILAR	Eielson Array	90.14	18	P	P	07 05 12.6	0.0
	0.5nm,1.2s,baz=203,slow=8.8,SNR=3.1						

IDC 02 07:04:31.5±2.9**,16°.38N×85°.56W,h0km,mb3.5**/4**, mb1 4.0**/5**,mb1mx3.7**/23**,mbtmp3.6**/5**,ML3.7**/1**,Error ellipse: s-maj=98.8km s-min=42.8km az=40.0,North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	Tepich	4.62	326	Pn	Pn	07 05 40.4	-2.1
	3.4nm,0.3s,baz=135,slow=5.7,SNR=15						
TEIG				Sn	Sn	07 06 39.0	+2.0
	9.8nm,0.3s,baz=266,slow=23,SNR=13						
TXAR	Lajitas Array	21.05	311	P	P	07 09 16.3	-1.0
	1.3nm,0.6s,baz=143,slow=12,SNR=13						
NVAR	Mina Array Bea	36.14	314	P	P	07 11 37.5	+1.6
	0.4nm,0.7s,baz=110,slow=9.7,SNR=4.2						
YKA	Yellowknife Ar	50.37	343	P	P	07 13 30.8	+0.7
	0.8nm,0.8s,baz=138,slow=7.7,SNR=15						
ILAR	Eielson Array	63.22	335	P	P	07 15 00.7	-0.7
	0.2nm,0.6s,baz=134,slow=5.2,SNR=4.6						
CMAR	Chiang Mai Arr	145.10	353	PKPbc	PKPbc	07 24 09.8	-1.5
	0.8nm,0.3s,baz=337,slow=2.1,SNR=3.2						

*SOF **02** 07:14:25.7,41°.27N×22°.69E,h7km,MD2.9*
*SKO **02** 07:14:25.7,41°.27N×22°.69E,h15km,M2.0,ML2.5*
*ATH **02** 07:14:26.3,41°.26N×22°.70E,h15km±1km,MD3.5/12*
*CSEM **02** 07:14:26.7±0.1,41°.24N×22°.69E,h2km,ML2.9/7,Error ellipse: s-maj=3.0km s-min=2.5km az=31.0*
*THE **02** 07:14:26.6,41°.27N×22°.69E,h1km±1km,ML2.9/7,Error ellipse: s-maj=1.9km s-min=0.6km az=256.0*
*BEO **02** 07:14:29.0±1.1,41°.31N×22°.75E,h7km±4km,ML2.5/4*
ISC 02 07:14:26.4±0.9**,41°.26N**±0°.02×**22°.69E**±0°.01**,h4km**±8km**, n81,σ0s.76**/116**,8C-1D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.11	302	P	Pg	07 14 27.9	-0.6
VAY				S	Sg	07 14 30.1	+0.1
VAY	Valandovo	0.11	302	*i* Pg	Pg	07 14 28.4	-0.2
VAY				*i* Sg	Sg	07 14 30.3	+0.3
VAY				*i* Lg	Lg	07 14 30.4	
	comp=N,6μm,0.5s						
VAY				*i* Lg	Lg	07 14 31.9	
	comp=E,3μm,0.4s						
VAY	Valandovo	0.11	302	P	Pg	07 14 27.9	-0.6
VAY	Valandovo	0.11	302	*i* Pg	Pg	07 14 28.8	+0.3
VAY				S	Sg	07 14 30.1	+0.1
VAY				*i* Lg	Lg	07 14 32.4	
	comp=E,3μm,0.4s						
KNT	Kendrikon	0.19	123	P	Pg	07 14 30.4	+0.4
KNT				S	Sg	07 14 32.9	+0.4
KNT	Kendrikon	0.19	123	P	Pg	07 14 30.4	+0.4
KNT				S	Sg	07 14 32.9	+0.4
GRG	Griva	0.38	216	P	Pg	07 14 34.0	+0.4
GRG				S	Sg	07 14 39.6	+1.1
GRG	Griva	0.38	216	*e*PB	Pg	07 14 34.0	+0.4
GRG				*e*SB	Sg	07 14 39.3	+0.8
GRG	Griva	0.38	216	P	Pg	07 14 34.0	+0.4
GRG				S	Sg	07 14 39.6	+1.1
THE	Thessaloniki	0.66	162	P	Pg	07 14 39.2	+0.1
THE				S	Sg	07 14 48.1	+0.4
THE	Thessaloniki	0.66	162	P	Pg	07 14 39.2	+0.1
THE				S	Sg	07 14 48.1	+0.4
SOH	Sokhos	0.67	131	P	Pg	07 14 39.1	-0.1
SOH				S	Sg	07 14 47.9	0.0
SOH	Sokhos	0.67	131	*e*PN	Pg	07 14 39.1	-0.1
SOH				*e*SN	Sg	07 14 47.9	0.0
SOH	Sokhos	0.67	131	P	Pg	07 14 39.1	-0.1
SOH				S	Sg	07 14 47.9	0.0
KKB	Krupnik	0.67	26	Pg	Pg	07 14 39.0	-0.2
KKB	Krupnik	0.67	26	Pg	Pg	07 14 39.0	-0.2
SRS	Serrai	0.70	102	P	Pg	07 14 39.5	-0.2
SRS				S	Sb	07 14 50.5	-0.5
SRS	Serrai	0.70	102	P	Pg	07 14 39.5	-0.2
SRS				S	Sb	07 14 50.5	-0.5
HORT	Hortiatis	0.73	155	P	Pg	07 14 40.5	+0.1
HORT				S	Sg	07 14 50.7	+0.7
HORT	Hortiatis	0.73	155	P	Pg	07 14 40.5	+0.1
HORT				S	Sg	07 14 50.7	+0.7
MMB	Musomiste	0.84	67	Pg	Pg	07 14 42.5	-0.1
MMB	Musomiste	0.84	67	Pg	Pg	07 14 42.5	-0.1
NVR	Nevrokopi	0.89	84	P	Pg	07 14 43.1	-0.3
NVR				S	Sg	07 14 55.4	+0.5
NVR	Nevrokopi	0.89	84	*e*PN	Pg	07 14 43.1	-0.3
NVR				*e*SN	Sg	07 14 55.2	+0.3
NVR	Nevrokopi	0.89	84	P	Pg	07 14 43.1	-0.3
NVR				S	Sg	07 14 55.4	+0.5
PLG	Polygyros	1.06	147	P	Pg	07 14 46.5	-0.1
PLG				S	Sb	07 15 01.2	-0.3
PLG	Polygyros	1.06	147	*e*PN	Pg	07 14 46.5	-0.1
PLG				*e*SN	Sb	07 15 01.1	-0.4
PLG	Polygyros	1.06	147	P	Pg	07 14 46.5	-0.1
PLG				S	Sb	07 15 01.2	-0.3
BIA	Bitola	1.06	257	*i* Pg	Pg	07 14 45.4	-1.4
BIA				*i* Sg	Sg	07 15 00.5	0.0
BIA	Bitola	1.06	257	*i* Pg	Pg	07 14 45.3	-1.4
BIA				*i* Sg	Sg	07 15 00.4	0.0
FNA	Florina	1.10	245	P	Pb	07 14 47.0	-1.1
FNA				S	Sg	07 15 02.1	+0.3
FNA	Florina	1.10	245	*e*PN	Pb	07 14 47.3	-0.8
FNA	Florina	1.10	245	P	Pb	07 14 47.0	-1.1
FNA				S	Sg	07 15 02.1	+0.3
SKO	Skopje	1.18	307	*e*Pg	Pg	07 14 50.6	+1.7
SKO				*e*Sg	Sn	07 15 06.9	+0.8
SKO	Skopje	1.18	307	*i* Pn	Pg	07 14 49.5	+0.6
SKO				*i* Sg	Sn	07 15 05.2	-0.8
SKO				*i* Lg	Lg	07 15 06.6	
	comp=N,93nm,0.8s						
SKO				*i* Lg	Lg	07 15 10.2	
	comp=E,85nm,0.8s						
SKO	Skopje	1.18	307	*i* Pn	Pg	07 14 50.0	+1.1
SKO	Skopje	1.18	307	*e*Pg	Pg	07 14 50.6	+1.7
SKO				*e*Sg	Sn	07 15 06.9	+0.8
SKO				*i* Lg	Lg	07 15 10.6	
	comp=E,85nm,0.8s						
KZN	Kozani	1.18	216	P	Pb	07 14 48.9	-0.5
KZN				S	Sn	07 15 05.7	-0.7
KZN	Kozani	1.18	216	*e*PN	Pb	07 14 49.1	-0.3
KZN	Kozani	1.18	216	P	Pb	07 14 48.9	-0.5
KZN				S	Sn	07 15 05.7	-0.7
OUR	Ouranopolis	1.35	133	P	Pg	07 14 52.2	0.0
OUR				S	Sg	07 15 11.4	+1.7
OUR	Ouranopolis	1.35	133	P	Pg	07 14 52.2	0.0
OUR				S	Sg	07 15 11.4	+1.7
VTS	Vitosha	1.38	16	P	Pb	07 14 52.4	-0.4
VTS				S	Sg	07 15 11.2	+0.4
VTS	Vitosha	1.38	16	P	Pg	07 14 52.9	0.0
VTS	Vitosha	1.38	16	*e*Pg	Pb	07 14 52.7	-0.2
VTS	Vitosha	1.38	16	⇑*i*P	Pb	07 14 52.5	-0.4
VTS	Vitosha	1.38	16	P	Pg	07 14 52.9	0.0
VTS				S	Sg	07 15 11.2	+0.4
KAVA	Kavala	1.40	100	P	Pn	07 14 52.3	-0.4
KAVA				S	Sg	07 15 12.2	+0.8
KAVA	Kavala	1.40	100	P	Pn	07 14 52.3	-0.4
KAVA				S	Sg	07 15 12.2	+0.8
RZN	Rozhen	1.58	74	P	Pb	07 14 56.1	-0.2
RZN	Rozhen	1.58	74	P	Pb	07 14 56.1	-0.2
BARS	Barje	1.68	337	*e*Pn	Pb	07 14 58.0	+0.1
BARS				*e*Sn	Sg	07 15 20.2	-0.2
BARS	Barje	1.68	337	*e*Pn	Pb	07 14 58.0	+0.1
BARS				*e*Sn	Sg	07 15 20.2	-0.2
PGB	Panagyurishte	1.69	40	P	Pb	07 14 58.2	+0.1
PGB	Panagyurishte	1.69	40	P	Pb	07 14 58.2	+0.1
THL	Klokotos Trika	1.77	197	*e*PN	Pb	07 14 58.5	-0.9
ZAPS	Zavoj	2.01	359	*e*Pn	Pg	07 15 04.6	-0.3
ZAPS				*e*Sn	Sb	07 15 27.8	-1.1
KDZ	Kurdzhali	2.08	78	P	Pn	07 15 01.0	-1.1
KDZ	Kurdzhali	2.08	78	P	Pn	07 15 01.0	-1.1
KDZ	Kurdzhali	2.08	78	Pg	Pg	07 15 08.6	+2.3
MPEP	Malo Peshtene	2.23	20	P	Pn	07 15 04.2	+0.1
MPEP				Pg	Pg	07 15 08.6	-0.5
AGG	Agios Georgios	2.26	187	*e*PB	Pn	07 15 05.0	+0.5
SELS	Selova	2.28	330	*e*Pn	Pn	07 15 05.5	+0.7
AOS	Alonnisos	2.28	156	*e*PB	Pn	07 15 04.6	-0.2
SMTH	Samothraki Isl	2.29	109	*e*PN	Pb	07 15 06.5	-1.8
ALN	Alexandroupoli	2.56	97	P	Pn	07 15 09.7	+1.1
ALN	Alexandroupoli	2.56	97	*e*PN	Pn	07 15 09.3	+0.7
ALN	Alexandroupoli	2.56	97	P	Pn	07 15 09.7	+1.1
KEK	Kerkira	2.69	236	*e*PB	Pn	07 15 12.1	+1.6
GRUS	Gruza	3.00	332	*e*Pn	Pn	07 15 16.2	+1.5
GRUS	Gruza	3.00	332	*e*Pn	Pn	07 15 16.2	+1.5
DIVS	Divibare	3.46	326	*e*Pn	Pn	07 15 22.6	+1.5
DIVS	Divibare	3.46	326	*e*Pn	Pn	07 15 22.6	+1.5
GZR	Gura Zlata	4.13	1	⇑*i*P	Pn	07 15 32.8	+2.5
GZR	Gura Zlata	4.13	1	⇑*i*P	Pn	07 15 32.8	+2.5
BZS	Buzias	4.42	350	⇑*i*P	Pb	07 15 40.1	-4.5
VOIR		4.51	22	⇑*i*P	Pn	07 15 26.1	-9.4
ISR	Istrita	4.77	35	⇑*i*P	Pg	07 16 06.2	+8.4
MLR	Muntele Rosu	4.84	28	⇑*i*P	Pn	07 15 44.0	+3.8
MLR	Muntele Rosu	4.84	28	⇑*i*P	Pn	07 15 44.0	+3.8
DRGR		5.53	0	⇓*i*P	Pg	07 16 10.9	-1.3

*IDC **02** 07:41:37.2±0.7,30°.27S×178°.77W,h160km±7km,mb4.0/12, mb1 4.1/12,mb1mx4.0/18,mbtmp4.0/12,Error ellipse: s-maj=17.1km s-min=13.7km az=99.0*
*NEIC **02** 07:41:37.3±0.9,30°.27S×178°.66W,h164km±7km,mb4.5/11, Error ellipse: s-maj=12.4km s-min=9.7km az=137.0*
ISC 02 07:41:36.2±0.5**,30°.36S**±0°.08×**178°.72W**±0°.09**,h150km, n101,σ1s.23**/90**,mb4.4**/21**,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.30	32	*e*Pn	Pn	07 42 04.0	+0.2
RAO				S	Sn	07 42 26.9	+2.1
RAO	Raoul Island	1.30	32	P	Pn	07 42 04.3	+0.5
	831nm,0.3s,baz=90,slow=6.6,SNR=38						
RAO				S	Sn	07 42 26.9	+2.1
	2μm,0.3s,baz=80,slow=22,SNR=13						
MXZ	Matakaoa Point	7.60	198	PN	Pn	07 43 18.0	-6.2
MXZ				SN	Sn	07 44 39.8	-9.3
OUZ	Omahuta	8.09	231	*e*Pn	Pn	07 43 35.4	+4.6
PUZ	Puketiti	8.10	197	PN	Pn	07 43 23.8	-7.1
PUZ				SN	Sn	07 44 52.9	-8.2
CNGZ	Carnagh Statio	8.50	197	PN	Pn	07 43 29.9	-6.3
MWZ	Matawai	8.54	200	PN	Pn	07 43 29.2	-7.7
MWZ				SN	Sn	07 45 04.2	-7.7
URZ	Urewera	8.61	203	*e*Pn	Pn	07 43 30.4	-7.2
URZ				S	Sn	07 45 03.7	-9.5
URZ	Urewera	8.61	203	PN	Pn	07 43 30.3	-7.3
URZ	Urewera	8.61	203	P	Pn	07 43 30.5	-7.1
	0.6nm,0.3s,baz=356,slow=20,SNR=19						
URZ				S	Sn	07 45 03.7	-9.5
	5.1nm,0.3s,baz=187,slow=22,SNR=12						
FWVZ	Far West T-bar	10.05	206	PN	Pn	07 43 51.3	-5.7
TSZ	Takapari Road	10.61	203	PN	Pn	07 43 55.0	-9.3
MRZ	Mangatainoka R	11.28	203	PN	Pn	07 44 03.9	-9.1
TIWZ	Tintock	11.29	201	PN	Pn	07 44 04.8	-8.4
OGWZ	Otaki Gorge	11.56	204	PN	Pn	07 44 08.6	-8.1
MSVF	Nonsavu	12.91	346	*e*Pn	Pn	07 44 34.5	+0.1
KHZ	Kahutara	13.55	205	*e*Pn	Pn	07 44 34.7	-7.6
KHZ				*e*Sn	Sn	07 46 54.5	-18
DZM	Mont Dzumac	15.66	298	P	P	07 45 13.7	+3.9
DZM	Mont Dzumac	15.66	298	P	P	07 45 13.7	+3.9
	0.6nm,0.3s,baz=88,slow=19,SNR=5.6						
EIDS	Eidsvold	27.12	273	*e*P	P	07 47 05.8	+0.5
	9.1nm,0.9s						
CTAO	Charters Tower	33.18	280	*e*P	P	07 47 59.6	+0.8
	65nm,1.1s						
STKA	Stephens Creek	33.88	257	*e*P	P	07 48 05.8	+1.0
	5.1nm,0.8s						
STKA	Stephens Creek	33.88	257	P	P	07 48 05.9	+1.1
	17nm,0.6s,baz=96,slow=9.7,SNR=62						
COEN	Coen	38.66	286	*e*P	P	07 48 46.2	+0.7
	52nm,0.5s						
AS31	Alice Springs	42.49	267	*e*P	P	07 49 15.8	-1.1
ASAR	Alice Springs	42.49	267	P	P	07 49 16.4	-0.5
ASAR				PcP	PcP	07 51 06.0	-1.0
ASAR				ScP	ScP	07 54 41.0	-2.6
ASAR	Alice Springs	42.49	267	P	P	07 49 16.4	-0.5
	4.7nm,0.5s,baz=105,slow=7.4,SNR=65						
ASAR				PcP	PcP	07 51 06.0	-1.0
	1.9nm,0.8s,baz=122,slow=3.8,SNR=7.4						
ASAR				ScP	ScP	07 54 41.0	-2.6
	1.4nm,0.7s,baz=117,slow=4.5,SNR=12						
WRAB	Tennant Creek	43.47	273	*e*P	P	07 49 23.9	-0.8
	14nm,0.6s						
WRA	Warramunga Arr	43.48	272	P	P	07 49 24.0	-0.8
WRA				PcP	PP	07 51 09.2	+0.2
WRA				ScP	ScP	07 54 46.9	-0.7
WRA	Warramunga Arr	43.48	272	P	P	07 49 24.0	-0.8
	9.0nm,0.3s,baz=111,slow=8.1,SNR=383						
WRA				PcP	PP	07 51 09.2	+0.2
	3.2nm,0.8s,baz=111,slow=3.1,SNR=7.2						
WRA				ScP	ScP	07 54 46.9	-0.7
	0.9nm,0.7s,baz=107,slow=3.9,SNR=7.5						
FORT	Forrest	45.46	255	*e*P	P	07 49 38.9	-1.5
	11nm,0.6s						
SBA	Scott Base	48.03	184	*e*P	P	07 50 02.8	+3.1
	17nm,1.1s						
VNDA	Vanda	48.08	186	P	P	07 50 00.5	+0.5
VNDA				ScP	ScP	07 55 05.6	-0.1
VNDA	Vanda	48.08	186	P	P	07 50 00.5	+0.5
	1.6nm,0.8s,baz=11,slow=5.2,SNR=6.0						
VNDA				ScP	ScP	07 55 05.6	-0.1
	0.5nm,0.6s,baz=337,slow=5.5,SNR=3.5						
FITZ	Fitzroy Crossi	51.74	270	*e*P	P	07 50 27.7	-0.8
	4.2nm,0.7s						
QSPA	South Pole Qui	59.75	180	*e*P	P	07 51 26.2	+1.1
	6.6nm,0.8s						
QSPA	South Pole Qui	59.75	180	P	P	07 51 26.4	+1.3
	4.9nm,0.6s,baz=44,slow=1.2,SNR=35						
MAW	Mawson	72.13	201	P	P	07 52 42.5	-1.3
MAW	Mawson	72.13	201	P	P	07 52 42.5	-1.3
	1.8nm,0.6s,baz=98,slow=7.4,SNR=6.1						
MJAR	Matsushiro Arr	77.86	326	P	P	07 53 15.8	-1.3
MJAR	Matsushiro Arr	77.86	326	P	P	07 53 15.8	-1.3
	1.2nm,0.6s,baz=169,slow=5.2,SNR=5.3						
SNAA	Sanae	78.21	179	*e*P	P	07 53 18.9	+0.1
SNAA	Sanae	78.21	179	*e*P	P	07 53 18.5	-0.2
	3.8nm,0.9s						
SNAA	Sanae	78.21	179	P	P	07 53 18.6	-0.2
	0.8nm,0.6s,baz=224,slow=2.7,SNR=11						
VNA2	Neumayer--Watz	78.81	177	*e*P	P	07 53 23.5	+1.5
VNA1	Neumayer--Stat	79.05	177	*e*P	P	07 53 25.6	+2.4
PLCA	Paso Flores	82.99	133	P	P	07 53 41.6	-3.1
PLCA	Paso Flores	82.99	133	P	P	07 53 41.6	-3.1
	2.3nm,0.9s,baz=224,slow=6.6,SNR=3.1						
PETK	Petropavlovsk-	85.62	346	P	P	07 53 55.5	-1.9
PETK	Petropavlovsk-	85.62	346	P	P	07 53 55.5	-1.9
	5.1nm,0.7s,baz=140,slow=8.3,SNR=9.1						
USRK	Ussuriysk Arra	86.78	327	P	P	07 54 03.4	+0.2
	2.2nm,0.7s,baz=131,slow=2.3,SNR=6.7						
NVAR	Mina Array Bea	88.63	43	P	P	07 54 13.8	+1.3
NVAR	Mina Array Bea	88.63	43	P	P	07 54 13.8	+1.3
	0.6nm,0.7s,baz=222,slow=9.4,SNR=6.0						
TUC	Tucson	89.57	52	*e*P	P	07 54 18.3	+1.4
	1.2nm,0.9s						
ILAR	Eielson Array	98.02	13	P	P	07 54 53.1	-1.6
ILAR	Eielson Array	98.02	13	P	P	07 54 53.1	-1.6
	0.1nm,0.6s,baz=210,slow=5.2,SNR=3.0						
YKA	Yellowknife Ar	105.67	26	PKKPbc	PKKPbc	08 11 21.0	+14
YKA	Yellowknife Ar	105.67	26	PKKPbc	PKKPbc	08 11 21.0	+14
	0.3nm,0.9s,baz=53,slow=4.7,SNR=3.8						
MKAR	Makanchi Array	117.27	310	PKP	PKPdf	08 00 01.9	-1.5
MKAR	Makanchi Array	117.27	310	PKP	PKPdf	08 00 01.9	-1.5
	1.2nm,0.8s,baz=90,slow=0.6,SNR=11						
ZALV	Zalesovo Beam	117.59	318	PKP	PKPdf	08 00 03.2	-0.5
ZALV	Zalesovo Beam	117.59	318	PKP	PKPdf	08 00 03.2	-0.5
	0.7nm,0.5s,baz=150,slow=3.3,SNR=3.7						
KURK	Kurchatov	120.57	314	*e*PKPdf	PKPdf	08 00 08.5	-1.1
KBL	Kabul	123.64	293	*e*PKPdf	PKPdf	08 00 16.3	0.0
KKAR	Karatay Array	124.53	304	*e*PKPdf	PKPdf	08 00 16.9	-0.7
ARCES	ARCESS Array B	138.41	347	PKPpre	PKPpre	08 00 34.5	
ARCES	ARCESS Array B	138.41	347	PKhKP	PKPpre	08 00 34.5	
	1.1nm,0.5s,baz=48,slow=1.8,SNR=8.7						
JOF	Joensuu	142.15	338	*e*p	PKPdf	08 00 45.0	-4.8
	4.8nm,0.6s						
KAF	Kangasniemi	144.30	340	*e*p	PKPab	08 00 50.5	-1.5
KBZ	Khabaz	144.57	304	PKP	PKPab	08 00 54.3	+0.7
KBZ	Khabaz	144.57	304	PKP	PKPab	08 00 54.3	+0.7
	4.9nm,0.6s,baz=141,slow=1.6,SNR=16						
FIA1	FINESS Array S	144.89	339	*e*PKPdf	PKPbc	08 00 53.0	-1.1

FINES	FINESS Array B	144.89	339	PKP	PKPbc	08 00 53.1	-1.0
FINES	FINESS Array B	144.89	339	PKP	PKPbc	08 00 53.1	-1.0
	21nm,0.5s,baz=57,slow=3.4,SNR=68						
NB2	NORSAR Subarra	148.61	351	PKP	PKPbc	08 01 04.1	-0.8
	comp=Z,3.1nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	148.61	351	PKPbc	PKPbc	08 01 04.2	-0.7
NOA	NORSAR Array B	148.61	351	PKPbc	PKPbc	08 01 04.2	-0.7
	comp=Z,7.2nm,0.6s,baz=15,slow=4.2,SNR=23						
NAO01	NORSAR Array S	148.85	351	ePKPbc	PKPbc	08 01 05.6	+0.2
IZAR	Zarasai	149.07	332	eP	PKPbc	08 01 06.2	0.0
IZAR				AMB	AMB	08 01 07.7	
	comp=Z,11nm,0.9s						
IDID	Didziasalis	149.18	331	eP	PKPbc	08 01 06.3	-0.1
IDID				AMB	AMB	08 01 08.7	
	comp=Z,5.6nm,0.9s						
ISAL	Salakas	149.25	332	eP	PKPbc	08 01 06.5	-0.1
ISAL				AMB	AMB	08 01 08.1	
	comp=Z,8.2nm,0.7s						
IIGN	Ignalina	149.36	332	eP	PKPbc	08 01 06.2	-0.7
IIGN				AMB	AMB	08 01 08.4	
	comp=Z,9.3nm,0.8s						
NACGM	Naroch	149.44	331	eLR	LR	08 00 46.0	
AKASG	Malin Array Be	150.89	322	PKPbc	PKPbc	08 01 09.8	-0.8
AKASG	Malin Array Be	150.89	322	PKPbc	PKPbc	08 01 09.8	-0.8
	comp=Z,20nm,0.7s,baz=52,slow=2.8,SNR=40						
AK01	Malin Array Si	150.90	322	ePKPbc	PKPbc	08 01 10.5	-0.2
KIEV	Kiev	150.90	322	ePKPbc	PKPbc	08 01 09.9	-0.8
AK02	Malin Array Si	150.92	322	ePKPbc	PKPbc	08 01 10.0	-0.7
BR131	Keskin Array S	152.03	298	ePKPbc	PKPbc	08 01 13.4	-0.4
BRTR	Keskin Array B	152.03	298	PKPbc	PKPbc	08 01 13.4	-0.4
BRTR				PKPab	PKPab	08 01 23.2	-0.7
BRTR	Keskin Array B	152.03	298	PKPbc	PKPbc	08 01 13.4	-0.4
	comp=Z,3.2nm,0.6s,baz=126,slow=3.8,SNR=12						
BRTR				PKPab	PKPab	08 01 23.2	-0.7
	comp=Z,1.3nm,0.7s,baz=153,slow=8.3,SNR=3.7						
CSS	Prodhromos	152.70	288	ePKPbc	PKPbc	08 01 15.1	-0.3
KIS	Kishinev	153.03	316	LRM	MLR	08 04 15.0	
	comp=Z,600nm,22.0s						
BSD	Bornholm Skovb	153.41	342	i P	PKPbc	08 01 16.8	+0.7
	comp=Z,7.1nm,0.7s						
STHS	Stebnicka Huta	155.70	327	ePKP	PKPab	08 01 40.5	+1.5
CRVS	Cervenica-Dubn	155.95	326	ePKP	PKPab	08 01 38.8	-1.2
BRG	Berggiesshubel	157.43	339	ePKP	PKPab	08 01 46.8	+0.6
	comp=Z,4.8nm,0.8s						
VYHS	Vyhne	157.47	328	ePKP	PKPab	08 01 47.0	+0.4
ZST	Bratislava	158.46	330	ePKP	PKPab	08 01 51.4	+0.6
TORD	Torodi Ar. Bea	162.87	181	PKP	PKPdf	08 01 21.1	0.0
TORD				PKPab	PKPab	08 02 10.4	-0.4
TORD	Torodi Ar. Bea	162.87	181	PKP	PKPdf	08 01 21.1	0.0
	comp=Z,0.8nm,0.9s,baz=264,slow=0.8,SNR=4.3						
TORD				PKPab	PKPab	08 02 10.4	-0.4
	comp=Z,1.8nm,0.6s,baz=163,slow=4.4,SNR=16						

IDC 02 08:09:41.2±1.0, 10°.61N×138°.81E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/25, mbtmp3.6/6, Error ellipse: s-maj=46.5km s-min=21.9km az=90.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	30.68	188	P	P	08 15 57.7	-0.1
	0.3nm,0.8s,baz=8.7,slow=10,SNR=2.9						
ASAR	Alice Springs	34.40	188	P	P	08 16 30.3	-0.1
	0.2nm,0.6s,baz=16,slow=12,SNR=6.0						
MKAR	Makanchi Array	59.63	318	P	P	08 19 47.4	+0.1
	0.8nm,0.7s,baz=104,slow=8.9,SNR=9.4						
BVAR	Borovoye Array	68.64	323	P	P	08 20 46.2	-0.1
	1.2nm,0.5s,baz=98,slow=10,SNR=7.6						
ILAR	Eielson Array	73.78	25	P	P	08 21 16.6	-0.6
	0.2nm,0.6s,baz=256,slow=4.6,SNR=6.9						
YKA	Yellowknife Ar	88.18	26	P	P	08 22 34.8	+0.9
	0.1nm,0.5s,baz=292,slow=4.9,SNR=5.6						

IDC 02 08:10:11.9±1.4, 16°.12N×85°.43W, h0km, mb3.4/5, mb1 3.8/6, mb1mx3.6/24, mbtmp3.5/6, Error ellipse: s-maj=90.0km s-min=21.9km az=53.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	Tepich	4.90	327	Pn	Pn	08 11 27.4	+0.5
	4.6nm,0.3s,baz=337,slow=22,SNR=51						
TEIG				Sn	Sn	08 12 22.8	-1.5
	8.5nm,0.3s,baz=261,slow=23,SNR=13						
TXAR	Lajitas Array	21.31	311	P	P	08 14 59.1	-1.5
	0.8nm,0.7s,baz=131,slow=12,SNR=12						
NVAR	Mina Array Bea	36.41	314	P	P	08 17 19.3	+0.8
	0.3nm,0.8s,baz=111,slow=5.0,SNR=3.0						
SIV	San Ignacio	39.95	142	P	P	08 17 47.9	-0.4
	1.3nm,0.9s,baz=320,slow=7.9,SNR=4.9						
YKA	Yellowknife Ar	50.65	343	P	P	08 19 12.5	-0.2
	0.4nm,0.7s,baz=138,slow=7.5,SNR=11						
ILAR	Eielson Array	63.51	335	P	P	08 20 43.9	+0.2
	0.2nm,0.8s,baz=112,slow=4.0,SNR=3.1						

KRSC 02 08:42:18.7±0.8, 48°.10N×155°.91E, h5km±5km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.59	3	P	Pn	08 43 01.4	+0.2
SKR				S	Sn	08 43 31.8	-1.2
PAU	Pauzhetka	3.42	9	S	Sn	08 43 55.1	+1.6
ASAK	Asacha	4.47	16	P	Pn	08 43 29.5	+2.3
MTVR	Mutnovka	4.62	18	P	Pn	08 43 31.2	+1.8
MTVR				S	Sn	08 44 25.2	+1.7
RUS	Russkaya	4.65	20	P	Pn	08 43 31.0	+1.5
RUS				S	Sn	08 44 24.1	+0.3
UGLR	Uglovaya	5.44	19	P	Pn	08 43 43.7	+3.2
AVH	Avacha	5.47	18	P	Pn	08 43 43.3	+2.3
AVH				S	Sn	08 44 47.0	+2.6
KOK	Koryaka	5.48	17	P	Pn	08 43 43.6	+2.5
SMAR	Somma	5.49	18	P	Pn	08 43 43.9	+2.6
SDLR	Sedlovina	5.52	19	P	Pn	08 43 43.3	+1.7
SPN	Mys Shipunski	5.65	26	P	Pn	08 43 45.9	+2.7
SPN				S	Sn	08 44 49.9	+1.5
GNL	Ganaly	5.75	12	P	Pn	08 43 46.7	+1.9
MKZ	Mys Kozlova	7.42	27	P	Pn	08 44 09.1	+1.6
MKZ				S	Sn	08 45 31.3	-0.7

IDC 02 08:44:19.2±3.0, 17°.72S×167°.33E, h0km, mb4.1/5, mb1 4.3/6, mb1mx4.0/19, mbtmp4.1/6, ML3.8/1, MS3.6/6, Ms1 3.5/6, ms1mx3.0/25, Error ellipse: s-maj=70.1km s-min=33.5km az=102.0

ISC 02 08:44:23.5±2.0, 17°.84S±0°.10×167°.3E±0°.3, h23km, n13, σ1s.70/11, mb4.0/5, MS3.7/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.28	191	Pn	Pn	08 45 26.3	-1.1
	4.5nm,0.3s,baz=39,slow=13,SNR=5.1						
DZM				Sn	Sn	08 46 16.0	-0.7
	19nm,0.3s,baz=315,slow=24,SNR=11						
BAYA	Yate Dam	4.31	185	eP	Pn	08 45 30.5	+2.9
BAYA				eS	Sn	08 46 15.2	-2.0
NOUC	Port Laguerre	4.34	192	eS	Sn	08 46 17.5	-0.5
HNR	Honiara	10.99	319	LR	LR	08 50 29.9	
	comp=Z,99nm,19.3s,baz=132,slow=34						
CTA	Charters Tower	20.02	260	P	Pn	08 48 58.0	+1.3
	6.3nm,0.9s,baz=58,slow=15,SNR=3.8						
AFI	Afiamalu	20.51	82	LR	LR	08 54 47.9	
	comp=Z,119nm,19.8s,baz=158,slow=31						
STKA	Stephens Creek	27.09	234	P	P	08 50 05.8	+1.2
	2.7nm,0.7s,baz=92,slow=9.8,SNR=5.2						
STKA				LR	LR	08 59 25.9	
	comp=Z,88nm,19.4s,baz=204,slow=33						
WRA	Warramunga Arr	31.22	261	P	P	08 50 39.8	-1.6
	1.1nm,0.6s,baz=89,slow=8.6,SNR=6.1						
ASAR	Alice Springs	31.70	254	P	P	08 50 45.5	-0.2
	3.1nm,0.8s,baz=81,slow=8.9,SNR=14						
ASAR				LR	LR	09 03 22.6	
	comp=Z,160nm,18.7s,baz=85,slow=36						
NWAO	Narrogin (SRO)	47.23	241	LR	LR	09 11 33.9	
	comp=Z,117nm,19.6s,baz=17,slow=34						
CMAR	Chiang Mai Arr	76.24	295	P	P	08 56 11.6	+0.9
	0.7nm,0.3s,baz=115,slow=6.1,SNR=4.1						
SONM	Songino Array	85.00	324	P	P	08 56 55.6	-1.6
	0.8nm,0.7s,baz=130,slow=5.0,SNR=6.5						
TXAR	Lajitas Array	97.73	62	LR	LR	09 37 00.5	
	comp=Z,29nm,18.0s,baz=205,slow=32						

IDC 02 08:45:33.5±1.7, 6°.81S×129°.76E, h0km, mb3.9/4, mb1 4.2/7, mb1mx3.9/20, mbtmp4.0/7, ML4.2/3, Error ellipse: s-maj=78.6km s-min=23.8km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.93	199	Pn	Pn	08 48 24.7	-0.3
	1.6nm,0.3s,baz=28,slow=12,SNR=50						
FITZ				Sn	Sn	08 50 23.2	-16
	1.2nm,0.3s,baz=350,slow=17,SNR=6.2						
WRA	Warramunga Arr	13.79	162	Pn	Pn	08 48 50.8	+0.2
	1.6nm,0.3s,baz=335,slow=13,SNR=21						
WRA				Sn	Sn	08 51 11.1	-14
	2.4nm,0.3s,baz=334,slow=23,SNR=12						
ASAR	Alice Springs	17.23	167	P	Pn	08 49 36.0	+0.2
	0.4nm,0.3s,baz=338,slow=9.3,SNR=17						
ASAR				S	Sn	08 52 34.4	-14
	0.4nm,0.3s,baz=348,slow=24,SNR=5.9						
CMAR	Chiang Mai Arr	39.42	310	P	P	08 53 05.9	+0.3
	0.8nm,0.3s,baz=130,slow=8.4,SNR=4.1						
SONM	Songino Array	58.18	342	P	P	08 55 29.8	+0.3
	0.4nm,0.6s,baz=144,slow=5.4,SNR=2.6						
MKAR	Makanchi Array	67.93	327	P	P	08 56 33.8	-0.4
	1.3nm,0.5s,baz=115,slow=8.1,SNR=26						
ZALV	Zalesovo Beam	71.30	334	P	P	08 56 54.9	+0.1
	0.9nm,0.5s,baz=147,slow=8.2,SNR=4.0						

GUC 02 08:47:22.5±0.6, 42°.83S×72°.60W, h2km±5km, ML3.5, 1C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUNY	Huinay	0.47	17	eP	Pg	08 47 31.7	+0.2
HUNY				eS	Sg	08 47 38.2	+0.6
HUNY				AML	AML	08 47 44.3	
	comp=N,2μm,0.3s						
FUTA	Futaleufœ	0.66	123	⇑iP	Pg	08 47 35.3	+0.2
FUTA				i S	Sg	08 47 44.9	+1.2
FUTA				AML	AML	08 47 50.2	
	comp=N,910nm,0.2s						
CNTO	Contao	1.03	355	eP	Pg	08 47 42.3	+0.1
CNTO				eS	Sb	08 47 56.7	-0.3
CNTO				AML	AML	08 48 05.4	
	comp=E,3μm,0.6s						
PMCH	Puerto Montt	1.36	351	eP	Pn	08 47 48.0	-0.5
PMCH				i S	Sn	08 48 06.7	-0.2
PMCH				AML	AML	08 48 20.3	
	comp=E,1μm,0.5s						
PUYE	Entre Lagos	2.14	360	AML	AML	08 48 45.1	
	comp=E,2μm,0.6s						
COYC	Coyhaique	2.77	172	AML	AML	08 48 54.0	
	comp=N,74nm,0.6s						

ATH 02 08:51:11.7, 41°.82N×22°.87E, h21km±3km, MD3.2/5
CSEM 02 08:51:12.2±0.2, 41°.82N×22°.92E, h2km, ML2.6/5, Error ellipse: s-maj=4.8km s-min=2.6km az=72.0
SKO 02 08:51:12.1, 41°.79N×22°.87E, h15km, M2.1, ML2.6
THE 02 08:51:12.2, 41°.81N×22°.90E, h3km±2km, ML2.6/5, Error ellipse: s-maj=2.8km s-min=0.9km az=271.0
BEO 02 08:51:13.9±1.0, 41°.84N×22°.92E, h0km, ML2.3/5

ISC 02 08:51:12.3±1.1, 41°.80N±0°.02×22°.91E±0°.03, h2km±10km, n33, σ0s.73/62, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.54	208	P	Pg	08 51 23.3	+0.6
VAY				S	Sg	08 51 29.9	+0.2
VAY	Valandovo	0.54	208	i Pg	Pg	08 51 23.0	+0.3
VAY				i Sg	Sg	08 51 30.0	+0.3
VAY				i Lg	Lg	08 51 30.4	
	comp=N,170nm,0.3s						
VAY				i Lg	Lg	08 51 30.4	
	comp=E,326nm,0.4s						
VAY	Valandovo	0.54	208	P	Pg	08 51 23.3	+0.6
VAY				S	Sg	08 51 29.9	+0.2
VAY				i Sg	Sb	08 51 30.5	-2.2
VAY				i Lg	Lg	08 51 30.9	
	comp=E,326nm,0.4s						
KNT	Kendrikon	0.64	181	P	Pg	08 51 24.8	+0.3
KNT				S	Sg	08 51 33.1	+0.3
KNT	Kendrikon	0.64	181	P	Pg	08 51 24.8	+0.3
KNT				S	Sg	08 51 33.1	+0.3
VTS	Vitosha	0.82	15	P	Pg	08 51 27.6	-0.4
VTS				S	Sg	08 51 38.6	-0.1
VTS	Vitosha	0.82	15	eSg	Sg	08 51 38.8	+0.1
VTS	Vitosha	0.82	15	P	Pg	08 51 27.6	-0.4
VTS				S	Sg	08 51 38.6	-0.1
NVR	Nevrokopi	0.84	122	P	Pg	08 51 28.6	+0.2
NVR				S	Sg	08 51 40.2	+0.9
NVR	Nevrokopi	0.84	122	ePN	Pg	08 51 28.8	+0.4
NVR				eSN	Sb	08 51 40.5	-0.9
NVR	Nevrokopi	0.84	122	P	Pg	08 51 28.6	+0.2
NVR				S	Sg	08 51 40.2	+0.9
SRS	Serrai	0.85	143	P	Pg	08 51 28.7	+0.1
SRS				S	Sb	08 51 41.2	-0.4
SRS	Serrai	0.85	143	P	Pg	08 51 28.7	+0.1
SRS				S	Sb	08 51 41.2	-0.4
GRG	Griva	0.93	205	P	Pg	08 51 29.8	-0.2
GRG				S	Sg	08 51 42.1	+0.1
GRG	Griva	0.93	205	ePN	Pg	08 51 29.6	-0.4
GRG				eSN	Sg	08 51 42.5	+0.5
GRG	Griva	0.93	205	P	Pg	08 51 29.8	-0.2
GRG				S	Sg	08 51 42.1	+0.1
SOH	Sokhos	1.03	161	P	Pg	08 51 32.2	+0.2
SOH				S	Sb	08 51 46.8	-0.1
SOH	Sokhos	1.03	161	ePN	Pg	08 51 32.3	+0.2
SOH				eSN	Sb	08 51 46.8	-0.1
SOH	Sokhos	1.03	161	P	Pg	08 51 32.2	+0.2
SOH				S	Sb	08 51 46.8	-0.1
HORT	Hortiatis	1.21	173	P	Pg	08 51 35.3	-0.2
HORT				S	Sb	08 51 52.1	+0.1
HORT	Hortiatis	1.21	173	P	Pg	08 51 35.3	-0.2
HORT				S	Sb	08 51 52.1	+0.1
BARS	Barje	1.30	322	⇑iPg	Pn	08 51 36.1	-1.3
BARS				eSg	Sb	08 51 54.4	-0.2
BARS	Barje	1.30	322	⇑iPg	Pn	08 51 36.1	-1.3
BARS				eSg	Sb	08 51 54.4	-0.2
KAVA	Kavala	1.45	123	P	Pn	08 51 39.3	-0.1
KAVA				S	Sn	08 51 58.6	-0.3
KAVA	Kavala	1.45	123	P	Pn	08 51 39.3	-0.1
KAVA				S	Sn	08 51 58.6	-0.3
PLG	Polygyros	1.48	164	ePN	Pn	08 51 39.9	0.0
ZAPS	Zavoj	1.49	352	ePg	Pn	08 51 39.8	-0.2
ZAPS				eSg	Sg	08 51 59.7	-0.3
FNA	Florina	1.54	229	ePN	Pn	08 51 39.5	-1.2
SELS	Selova	1.94	318	ePg	Pb	08 51 47.7	-0.6
SELS				eSg	Sg	08 52 14.5	-0.1
GRUS	Gruza	2.64	323	ePn	Pn	08 51 57.6	+1.8
GRUS	Gruza	2.64	323	ePn	Pn	08 51 57.6	+1.8
DIVS	Divibare	3.14	318	ePn	Pn	08 52 04.4	+1.6
DIVS				eSn	Sn	08 52 42.2	+1.3
DIVS	Divibare	3.14	318	ePn	Pn	08 52 04.4	+1.6
DIVS				eSn	Sn	08 52 42.2	+1.3

ISCJB 02 08:53:01.4±0.6, 66°.46N±0°.06×157°.56W±0°.09, h10km, mb3.5/1, Error ellipse: s-maj=8.5km s-min=5.3km az=173.2
IDC 02 08:53:03.9±1.9, 66°.79N×157°.75W, h0km, mb3.7/1, mb1 3.6/5, mb1mx3.3/30, mbtmp3.5/5, ML2.4/2, Error ellipse: s-maj=30.7km s-min=19.1km az=177.0
NEIC 02 08:53:04.0, 66°.44N×157°.61W, h23km, ML3.3(AEIC), After AEIC.

ISC 02 08:53:02.9±1.1, 66°.50N±0°.08×157°.57W±0°.05, h10km, n28, σ1s.03/33, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IM3	Indian Mountai	1.63	107	P	Pn	08 53 31.1	-0.5
IM3				S	Sn	08 53 52.8	+0.2
GCSA	Galena City Sc	1.78	170	P	Pn	08 53 32.6	-1.0
GCSA				S	Sn	08 53 54.6	-1.6
COLD	Coldfoot	3.00	72	P	Pn	08 53 51.1	+0.7
MLY	Manley	3.18	114	P	Pn	08 53 52.2	-0.7
TT01	Tatalina	3.67	169	P	Pn	08 53 59.0	-0.6
NEA	Nenana	4.02	115	P	Pn	08 54 04.5	0.0
MDM	Murphy Dome	4.15	108	P	Pn	08 54 06.9	+0.6
TNA	Tin City	4.33	262	P	Pn	08 54 09.2	+0.6
TNA				S	Sn	08 54 58.0	-1.0
COLA	College	4.33	108	P	Pn	08 54 09.0	+0.3
TRF	Thorofare Moun	4.35	131	P	Pn	08 54 08.9	-0.2
WRH	Wood River Hil	4.44	113	P	Pn	08 54 10.2	0.0
CCB	Clear Creek Bu	4.46	110	P	Pn	08 54 09.9	-0.5
MCK	McKinley	4.58	123	P	Pn	08 54 12.3	+0.2
IL1	Eielson Array	4.75	106	P	Pn	08 54 14.6	+0.2
ILAR	Eielson Array	4.75	106	Pn	Pn	08 54 14.7	+0.2
	3.2nm,0.3s,baz=294,slow=14,SNR=289						
ILAR				Sn	Sn	08 55 08.8	-0.7
	1.6nm,0.3s,baz=224,slow=23,SNR=4.5						
ILAR				Lg	Lg	08 55 31.3	
	3.1nm,0.3s,baz=297,slow=31,SNR=9.0						
DHY	Denali Highway	5.54	123	P	Pn	08 54 26.1	+0.6
BGL	Barrier Glacie	5.73	154	P	Pn	08 54 28.6	+0.7
PMR	Palmer	6.16	139	ePn	Pn	08 54 34.2	+0.5
	5.5nm,0.5s						
SML	Sawmill	6.20	135	ePn	Pn	08 54 33.8	-0.5
	2.4nm,0.6s						
RSO	Redoubt South	6.43	158	ePn	Pn	08 54 37.7	0.0
	58nm,0.4s						
MENT	Mentasta	6.92	115	ePn	Pn	08 54 44.6	+0.4
EGAK	Eagle	7.00	97	ePn	Pn	08 54 44.9	-0.4
	3.1nm,0.7s						
BCA3	Beaver Creek A	7.56	110	P	Pn	08 54 53.0	0.0
DAWY	Dawson	7.99	99	P	Pn	08 54 58.8	-0.1
KDAK	Kodiak Island	9.05	163	Pn	Pn	08 55 15.2	+1.9
INK	Inuvik	9.41	68	Pn	Pn	08 55 19.9	+1.8
	0.0nm,0.3s,baz=279,slow=13,SNR=3.0						
INK				Sn	Sn	08 57 00.6	-3.2
	0.1nm,0.3s,baz=72,slow=13,SNR=1.7						
YKA	Yellowknife Ar	18.63	82	P	Pn	08 57 21.4	+0.9
	0.0nm,0.3s,baz=302,slow=12,SNR=4.1						
PETK	Petropavlovsk-	25.50	260	P	P	08 58 33.0	+2.1
	0.7nm,0.4s,baz=39,slow=9.4,SNR=4.8						

IDC 02 09:01:51.3±3.1, 17°.71S×167°.30E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/19, mbtmp3.8/5, ML3.5/1, MS3.7/1, Ms1 3.7/1, ms1mx2.7/22, Error ellipse: s-maj=68.7km s-min=35.6km az=100.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.41	190	Pn	Pn	09 02 58.6	-1.1
	2.3nm,0.3s,baz=52,slow=18,SNR=15						
DZM				Sn	Sn	09 03 48.9	-3.0
	3.5nm,0.3s,baz=290,slow=23,SNR=8.8						
STKA	Stephens Creek	27.18	234	P	P	09 07 37.6	+0.9
	2.9nm,1.0s,baz=64,slow=11,SNR=3.7						
WRA	Warramunga Arr	31.25	261	P	P	09 08 11.6	-1.4
	0.9nm,0.8s,baz=94,slow=9.4,SNR=5.0						
ASAR	Alice Springs	31.75	254	P	P	09 08 18.0	+0.6
	1.6nm,0.8s,baz=76,slow=8.9,SNR=18						
ASAR				LR	LR	09 21 02.5	
	comp=Z,119nm,18.6s,baz=80,slow=36						
SONM	Songino Array	84.90	324	P	P	09 14 28.3	+0.1
	0.4nm,0.7s,baz=133,slow=6.1,SNR=3.2						

MOS 02 09:20:23.4±1.2, 41°.34N×44°.23E, h9km, mb4.1/1, Error ellipse: s-maj=14.8km s-min=5.9km az=90.2
TIF 02 09:20:23.6, 41°.39N×44°.28E, h15km±1km
NSSP 02 09:20:24.7, 41°.38N×44°.23E, h10km, Ms2.9
CSEM 02 09:20:24.5±0.2, 41°.41N×44°.25E, h2km, ML2.9, Error ellipse: s-maj=5.2km s-min=3.6km az=94.0

ISC 02 09:20:23.9±1.0, 41°.39N±0°.02×44°.20E±0°.02, h4km±10km, n56, σ0s.75/100, 4C-8D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZR	Kazreti	0.16	93	P	Pg	09 20 27.8	+0.7
KZR				S	Sg	09 20 30.1	+0.8
BAW	Bavra	0.41	228	i P	Pg	09 20 27.0	-4.8
BAW				S	Sg	09 20 32.0	-5.1
STE	Stepanavan	0.41	162	⇓P	Pg	09 20 32.0	+0.2
STE				S	Sg	09 20 36.8	-0.4
STEZ	Stepenevan	0.42	159	⇓iP	Pg	09 20 32.0	0.0
STEZ				⇑iS	Sg	09 20 36.8	-0.6
TBLG	Delisi	0.53	50	P	Pg	09 20 33.8	-0.2
TBLG				S	Sg	09 20 41.1	+0.2
TBLG	Delisi	0.53	50	PG	Pg	09 20 33.8	-0.2
TBLG				i S	Sg	09 20 41.1	+0.2
TBLG	Delisi	0.53	50	P	Pg	09 20 33.8	-0.2
TBLG				S	Sg	09 20 41.1	+0.2
AKH	Akhalkalaki	0.53	272	P	Pb	09 20 35.5	-0.4
AKH				S	Sb	09 20 43.7	-0.3
AKH	Akhalkalaki	0.53	272	PG	Pb	09 20 35.5	-0.4
AKH				S	Sb	09 20 43.7	-0.3
AKH	Akhalkalaki	0.53	272	Pg	Pb	09 20 35.5	-0.4
AKH				Sg	Sb	09 20 43.7	-0.3
GOR	Gori	0.60	353	P	Pg	09 20 35.1	-0.3
GOR				S	Sb	09 20 45.1	-0.7
GOR	Gori	0.60	353	ePG	Pg	09 20 36.1	+0.7
DUS	Dusheti	0.79	28	P	Pg	09 20 39.8	+0.7
DUS				S	Sb	09 20 51.4	0.0
DUS	Dusheti	0.79	28	PG	Pg	09 20 39.8	+0.7
DUS				S	Sb	09 20 51.4	0.0
DUS	Dusheti	0.79	28	Sg	Sb	09 20 51.4	0.0
DGRG	David-gareji	0.88	86	P	Pg	09 20 40.6	-0.3
DGRG				S	Sb	09 20 53.8	-0.2
DGRG	David-gareji	0.88	86	ePG	Pg	09 20 40.5	-0.3
DGRG	David-gareji	0.88	86	ePg	Pg	09 20 40.5	-0.3
GUDG	Gudauri	1.09	11	P	Pg	09 20 44.4	-0.4
DIGO	Kars	1.16	213	i P	Pg	09 20 46.4	+0.2
DIGO				i S	Sb	09 21 02.6	+0.5
DIGO	Kars	1.16	213	i P	Pg	09 20 46.4	+0.3
DIGO				i S	Sb	09 21 02.6	+0.5
DIGO	Kars	1.16	213	i P	Pg	09 20 46.4	+0.3
DIGO				i S	Sb	09 21 02.6	+0.5
GNI	Garni	1.31	162	⇓iP	Pn	09 20 48.8	-0.3
GNI				⇑iS	Sg	09 21 06.5	+0.6
GNI	Garni	1.31	162	⇓P	Pn	09 20 48.8	-0.3
GNI				i Sg	Sn	09 21 06.7	-0.3
ONI	Oni	1.32	335	P	Pn	09 20 48.7	-0.5
ONI				S	Sb	09 21 06.7	0.0
ZEI	Tsey	1.40	351	⇑iPG	Pn	09 20 50.3	-0.1
ZEI				i S	Sg	09 21 09.7	+0.9
ZEI	Tsey	1.40	351	i Pg	Pn	09 20 50.3	-0.1
ZEI				i Sg	Sg	09 21 09.7	+0.9
LACR	Lac	1.44	3	⇓iPG	Pn	09 20 50.7	-0.1
LACR				eS	Sb	09 21 10.1	+0.2
LACR	Lac	1.44	3	i Pg	Pn	09 20 50.7	-0.1
LACR				eSg	Sb	09 21 10.1	+0.2
DIGR	Digorskoe uzhe	1.58	343	⇑iPN	Pb	09 20 53.9	+0.2
DIGR				i S	Sg	09 21 15.4	+0.8
DIGR	Digorskoe uzhe	1.58	343	i Pn	Pb	09 20 53.9	+0.2
DIGR				i Sg	Sg	09 21 15.4	+0.8
VADZ	Vardenis	1.69	136	eP	Pg	09 20 57.0	+0.7
VADZ				⇓S	Sg	09 21 19.0	+0.8
VADZ	Vardenis	1.69	136	P	Pg	09 20 57.0	+0.7
VADZ				S	Sg	09 21 19.0	+0.8
VLKR	Vladikavkaz	1.69	12	ePN	Pb	09 20 55.2	-0.4
VLKR				eS	Sb	09 21 17.7	+0.5
VLKR	Vladikavkaz	1.69	12	ePn	Pb	09 20 55.2	-0.4
VLKR				eSg	Sb	09 21 17.7	+0.5
KORR	Kora	1.70	357	⇓iPN	Pb	09 20 55.2	-0.5
KORR				eS	Sg	09 21 18.3	-0.1
KORR	Kora	1.70	357	i Pn	Pb	09 20 55.2	-0.5
KORR				eSg	Sg	09 21 18.3	-0.1
SNJR	Sundja	1.74	15	ePN	Pb	09 20 55.6	-0.8
SNJR				eS	Sb	09 21 18.6	+0.1
SNJR	Sundja	1.74	15	ePn	Pb	09 20 55.6	-0.8
SNJR				eSg	Sb	09 21 18.6	+0.1
DAGI	Agillar	1.75	260	i P	Pb	09 20 57.4	+0.7
DAGI				i S	Sg	09 21 20.4	+0.2
DAGI	Agillar	1.75	260	i P	Pb	09 20 57.4	+0.7
DAGI				i S	Sg	09 21 20.4	+0.2
LSNR	Lesken	1.90	351	⇓iPN	Pg	09 21 00.1	-0.3
LSNR				eS	Sg	09 21 25.4	+0.4
LSNR	Lesken	1.90	351	i Pn	Pg	09 21 00.1	-0.3
LSNR				eSg	Sg	09 21 25.4	+0.4
DBOC	Borcka	1.91	269	i P	Pb	09 20 59.7	+0.4
DBOC				i S	Sb	09 21 24.7	+1.2
DBOC	Borcka	1.91	269	i P	Pb	09 20 59.7	+0.4
DBOC				i S	Sb	09 21 24.7	+1.3
DBOC	Borcka	1.91	269	i P	Pb	09 20 59.7	+0.4
DBOC				i S	Sb	09 21 24.7	+1.3
DDEM	Demirkent	1.92	256	i P	Pb	09 20 59.7	+0.2
DDEM				i S	Sg	09 21 25.5	0.0
DDEM				i S	Sg	09 21 25.5	0.0

DDEM	Demirkent	1.92	256	i P	Pb	09 20 59.7	+0.2
DDEM	Demirkent	1.92	256	i P	Pb	09 20 59.7	+0.2
DDEM				i S	Sg	09 21 25.5	0.0
BTKR	Batakoyurt	2.00	7	ePN	Pb	09 21 00.0	-0.8
BTKR	Batakoyurt	2.00	7	ePn	Pb	09 21 00.0	-0.8
CHVG	Ch'k'valeri	2.06	311	P	Pg	09 21 04.3	+0.9
CHVG				S	Sg	09 21 30.6	+0.5
KIV	Kislovodsk	2.80	337	ePN	Pn	09 21 08.0	-1.5
KIV				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KIV	Kislovodsk	2.80	337	ePn	Pn	09 21 08.0	-1.5
	comp=Z,8.0nm,0.5s						
BEYR	Belyy Ugol+	2.81	339	i PN	Pn	09 21 09.8	+0.2
BEYR	Belyy Ugol+	2.81	339	i Pn	Pn	09 21 09.8	+0.2

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*CASC **02** 09:34:35.2±3.0, 16°.33N×87°.59W, h38^{km}±999^{km}, MD4.3, ML4.1*

*IDC **02** 09:34:41.3±3.5, 16°.72N×88°.07W, h0^{km}, mb3.3/2, mb1 3.8/5, mb1mx3.6/24, mbtmp3.4/5, ML3.8/3, MS3.3/1, Ms1 3.4/1, ms1mx2.6/13, Error ellipse: s-maj=74.8km s-min=45.5km az=106.0*

ISC 02 09:34:38.8±3.1**, 16°.43N**±0°.05×**88°.2W**±0°.1**, h15**^{km}±19^{km}**, n20, σ1^{s}92**/20**, Belize**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRL	Marmol	1.97	227	eP	Pn	09 35 09.1	-2.7
MTO2	Montecristo 2	2.30	209	eP	Pn	09 35 15.7	-0.8
MTO2				eS	Sb	09 35 46.0	-2.5
TGUH	Tegucigalpa,Un	2.52	159	eP	Pn	09 35 09.8	-9.4
TGUH				eS	Sn	09 35 37.1	-13
RBDL	Robledal	2.71	212	eP	Pn	09 35 21.2	-0.8
RBDL				eS	Sn	09 35 56.2	+1.6
NBG	Las Nubes	2.75	229	eP	Pn	09 35 20.9	-1.8
NBG				eS	Sg	09 36 09.0	+1.5
SNVI	San Vicente	2.86	192	eP	Pn	09 35 21.2	-2.9
BOQS	Boqueron	2.87	201	eP	Pn	09 35 22.4	-1.9
RTR	El Retiro	2.87	209	eP	Pn	09 35 23.8	-0.5
SNJE	San Jose	2.88	208	eP	Pn	09 35 23.4	-1.0
SNET	Serv Nac Est T	2.90	200	AML	AML	09 36 11.9	
	comp=Z,1µm,0.5s						
SBLS	San Blas	2.91	208	eP	Pn	09 35 24.1	-0.8
SBLS				eS	Sn	09 36 01.0	+1.3
FUG	Fuego 3	3.21	233	eP	Pn	09 35 27.4	-1.6
TEIG	Tepich	3.78	359	Pn	Pn	09 35 35.3	-1.3
	comp=Z,8.8nm,0.3s,baz=222,slow=2.0,SNR=57						
TEIG				Sn	Sn	09 36 20.6	-0.2
	comp=Z,27nm,0.3s,baz=356,slow=21,SNR=18						
TXAR	Lajitas Array	19.15	315	P	Pn	09 39 04.6	+1.9
	comp=Z,0.1nm,0.3s,baz=134,slow=10,SNR=12						
TXAR				S	Sn	09 42 35.1	-2.1
	comp=Z,0.1nm,0.3s,baz=128,slow=24,SNR=4.2						
TKL	Tuckaleechee C	19.56	11	P	Pn	09 39 07.5	0.0
	comp=Z,0.2nm,0.3s,baz=180,slow=9.1,SNR=3.3						
LPAZ	La Paz	38.06	148	LR	LR	09 58 00.6	
	comp=Z,38nm,18.4s,baz=107,slow=37						
YKA	Yellowknife Ar	49.61	344	P	P	09 43 32.7	+3.5
	comp=Z,0.2nm,0.6s,baz=140,slow=7.8,SNR=6.6						
ILAR	Eielson Array	62.11	336	P	P	09 45 02.8	+3.9
	comp=Z,0.4nm,0.8s,baz=129,slow=4.1,SNR=6.0						
WRA	Warramunga Arr	139.50	258	PKP	PKPdf	09 54 09.6	+2.9
	comp=Z,0.4nm,0.8s,baz=88,slow=1.8						
ASAR	Alice Springs	139.90	253	PKhKP	PKPpre	09 54 07.7	
	comp=Z,0.5nm,1.0s,baz=101,slow=1.9,SNR=3.2						

IDC 02 09:56:43.3±3.8**, 16°.07S**×**168°.02E, h176**^{km}±35^{km}**, mb3.4**/6**, mb1 3.7**/7**, mb1mx3.4**/21**, mbtmp3.4**/7**, Error ellipse: s-maj=25.6km s-min=24.2km az=95.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.15	194	eP	Pn	09 58 11.4	-0.9
DZM				eS	Sn	09 59 21.3	-1.1
DZM	Mont Dzumac	6.15	194	P	Pn	09 58 12.3	0.0
	3.6nm,0.3s,baz=35,slow=12,SNR=61						
WRA	Warramunga Arr	32.23	258	P	P	10 02 54.5	-0.8
	0.3nm,0.6s,baz=82,slow=7.5,SNR=7.4						
ASAR	Alice Springs	32.90	251	P	P	10 03 01.1	+0.1
	1.3nm,0.6s,baz=76,slow=9.0,SNR=32						
FITZ	Fitzroy Crossi	40.50	261	P	P	10 04 05.4	+0.1
	1.1nm,0.3s,baz=99,slow=10,SNR=13						
MJAR	Matsushiro Arr	59.42	332	P	P	10 06 27.4	0.0
	2.2nm,0.6s,baz=170,slow=8.9,SNR=9.3						
VNDA	Vanda	61.54	182	P	P	10 06 41.2	0.0
	0.7nm,0.6s,baz=8.4,slow=4.9,SNR=7.0						
ILAR	Eielson Array	87.58	18	P	P	10 09 10.6	-0.4
	0.6nm,1.1s,baz=242,slow=3.8,SNR=3.1						
ILAR				pP	pP	10 09 55.9	+1.1
	0.5nm,0.8s,baz=240,slow=5.7,SNR=5.7						
ARCES	ARCESS Array B	121.73	345	PKP	PKPdf	10 15 15.4	-0.2
	2.1nm,0.9s,baz=64,slow=2.1,SNR=6.7						

IDC 02 10:03:51.7±8.6**, 7°.08S**×**129°.07E, h75**^{km}±85^{km}**, mb3.7**/3**, mb1 4.0**/6**, mb1mx3.6**/20**, mbtmp3.9**/6**, ML4.2**/3**, Error ellipse: s-maj=98.8km s-min=30.5km az=54.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.46	197	P	Pn	10 06 31.1	-1.4
	2.2nm,0.3s,baz=27,slow=12,SNR=43						
FITZ				S	Sn	10 08 27.1	-12
	1.0nm,0.3s,baz=107,slow=19,SNR=3.7						
WRA	Warramunga Arr	13.77	159	P	Pn	10 07 03.2	-0.5
	0.8nm,0.3s,baz=339,slow=12,SNR=36						
WRA				S	Sn	10 09 24.4	-11
	2.1nm,0.3s,baz=332,slow=22,SNR=12						
ASAR	Alice Springs	17.14	165	P	P	10 07 48.2	+1.1
	1.4nm,0.3s,baz=338,slow=10,SNR=168						
ASAR				S	Sn	10 10 47.0	-10
	0.5nm,0.3s,baz=350,slow=27,SNR=6.7						
STKA	Stephens Creek	27.30	156	P	P	10 09 29.3	-0.1
	1.1nm,0.7s,baz=333,slow=11,SNR=4.7						
MKAR	Makanchi Array	67.79	327	P	P	10 14 41.8	+0.1
	0.5nm,0.4s,baz=124,slow=7.4,SNR=15						
MKAR				pP	pP	10 15 03.0	+1.6
	1.0nm,0.7s,baz=125,slow=8.7,SNR=6.4						
ZALV	Zalesovo Beam	71.25	334	P	P	10 15 02.7	0.0
	1.0nm,0.3s,baz=141,slow=5.5,SNR=5.0						

SKO 02 10:08:25.7, 41°.31N×**22°.66E, h12**^{km}**, M0.2, ML0.6, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.07	279	i Pg	Pg	10 08 28.2	+0.1
VAY				i Sg	Sg	10 08 30.1	+0.2
VAY				eLg	Lg	10 08 30.2	
	comp=E,46nm,0.2s						
VAY				eLg	Lg	10 08 31.6	
	comp=N,30nm,0.4s						

IDC 02 10:09:27.1±1.0**, 5°.90S**×**148°.54E, h51**^{km}±7^{km}**, mb3.9**/6**, mb1 4.1**/9**, mb1mx3.9**/18**, mbtmp4.0**/9**, MS3.2**/2**, Ms1 3.1**/2**, ms1mx2.3**/30**, Error ellipse: s-maj=32.3km s-min=11.4km az=107.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.74	201	P	Pn	10 10 22.8	+0.5
	23nm,0.3s,baz=20,slow=6.9,SNR=60						
PMG				S	Sn	10 11 05.8	+0.7
	31nm,0.3s,baz=40,slow=12,SNR=14						
CTA	Charters Tower	14.28	189	P	Pn	10 12 47.3	+0.8
	0.2nm,0.3s,baz=26,slow=17,SNR=3.5						
WRA	Warramunga Arr	19.63	223	P	P	10 13 51.6	0.0
	1.0nm,0.3s,baz=48,slow=11,SNR=20						
ASAR	Alice Springs	22.59	217	P	P	10 14 23.1	-0.4
	6.2nm,0.7s,baz=57,slow=9.4,SNR=19						
ASAR				pP	pP	10 14 38.1	+2.9
	5.3nm,0.7s,baz=44,slow=12,SNR=7.9						
ASAR				S	S	10 18 22.7	-5.1
	1.4nm,1.0s,baz=39,slow=20,SNR=5.1						
ASAR				LR	LR	10 22 12.2	
	comp=Z,62nm,21.3s,baz=158,slow=34						
FITZ	Fitzroy Crossi	25.43	240	P	P	10 14 50.4	+0.2
	14nm,0.9s,baz=72,slow=8.0,SNR=11						
FITZ				pP	pP	10 15 03.2	+0.1
	9.6nm,0.8s,baz=111,slow=4.2,SNR=7.0						
STKA	Stephens Creek	26.65	193	P	P	10 15 01.7	+0.5
	3.0nm,0.9s,baz=321,slow=8.4,SNR=4.6						
STKA				LR	LR	10 25 47.3	
	comp=Z,51nm,19.4s,baz=25,slow=37						
MJAR	Matsushiro Arr	43.32	348	pP	pP	10 17 39.2	+1.6
	1.9nm,0.9s,baz=178,slow=8.6,SNR=3.8						
PETK	Petropavlovsk-	59.30	6	P	P	10 19 24.4	+0.9
	0.7nm,0.3s,baz=157,slow=7.8,SNR=2.7						
VNDA	Vanda	71.92	177	P	P	10 20 44.1	-0.5
	0.9nm,0.9s,baz=329,slow=6.2,SNR=3.5						
VNDA				pP	pP	10 20 59.4	+0.4
	0.7nm,0.7s,baz=322,slow=6.6,SNR=2.9						
MKAR	Makanchi Array	78.40	320	P	P	10 21 22.3	-0.1
	0.1nm,0.6s,baz=123,slow=5.3,SNR=2.9						
ILAR	Eielson Array	84.79	23	P	P	10 21 55.2	-0.5
	0.6nm,0.6s,baz=249,slow=4.9,SNR=15						
TORD	Torodi Ar. Bea	146.55	285	PKPbc	PKPdf	10 29 02.9	+0.4
	0.4nm,0.4s,baz=65,slow=2.9,SNR=10						
TORD				pPKPbc	pPKPbc	10 29 17.8	-1.4
	0.2nm,0.3s,baz=81,slow=4.0,SNR=2.4						

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*ISCJB **02** 10:10:03.9±0.7, 36°.96N±0°.04×29°.16E±0°.05, h13^{km}±7^{km}, Error ellipse: s-maj=7.3km s-min=6.3km az=30.7*

*ISK **02** 10:10:03.5, 36°.94N×29°.20E, h5^{km}, MD2.4*

*CSEM **02** 10:10:03.7±0.3, 36°.99N×29°.16E, h12^{km}, MD2.4, Error ellipse: s-maj=7.2km s-min=6.6km az=49.0*

*DDA **02** 10:10:03.1, 37°.00N×29°.13E, h7^{km}, MD2.9*

ISC 02 10:10:03.1±1.3**, 37°.03N**±0°.03×**29°.13E**±0°.03**, h3**^{km}±11^{km}**, n18, σ0^{s}57**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLHS	Glhisar (BURDU	0.33	66	ePG	Pb	10 10 11.0	-0.7
GLHS				eSG	Sb	10 10 16.6	-0.7
GLHS	Glhisar (BURDU	0.33	66	ePg	Pb	10 10 11.0	-0.7
GLHS				eSg	Sb	10 10 16.6	-0.7
FETY	Fethiye	0.39	185	ePG	Pg	10 10 10.7	0.0
FETY	Fethiye	0.39	185	ePg	Pg	10 10 10.7	0.0
GOLH	Golhisar	0.41	59	i P	Pg	10 10 11.0	+0.1
GOLH				i S	Sb	10 10 18.6	-1.1
GOLH	Golhisar	0.41	59	i P	Pg	10 10 11.0	+0.1
GOLH				i S	Sb	10 10 18.6	-1.1
DNZL	Cakiroluk	0.67	355	i P	Pg	10 10 15.9	0.0
DNZL				i S	Sb	10 10 27.5	+0.3
DNZL	Cakiroluk	0.67	355	i P	Pg	10 10 15.9	0.0
DNZL				i S	Sb	10 10 27.5	+0.3
YER	Yerkesik	0.68	279	ePG	Pn	10 10 19.5	-0.2
YER	Yerkesik	0.68	279	ePg	Pn	10 10 19.5	-0.2
ELL	Elmali	0.69	114	ePG	Pg	10 10 16.1	-0.2
ELL				eSG	Sg	10 10 26.0	+0.8
ELL	Elmali	0.69	114	ePg	Pg	10 10 16.1	-0.2
ELL				eSg	Sg	10 10 26.0	+0.8
AKAS	Kas	0.88	154	i P	Pg	10 10 20.0	0.0
AKAS				i S	Sn	10 10 36.8	+1.0
AKAS	Kas	0.88	154	i P	Pg	10 10 20.0	0.0
AYDN	Tasoluk	1.18	303	i P	Pg	10 10 25.5	-0.2
AYDN				i S	Sn	10 10 43.4	+0.2
AYDN	Tasoluk	1.18	303	i P	Pg	10 10 25.5	-0.2
AYDN				i S	Sn	10 10 43.4	+0.2
KHAL	Karahalli	1.37	12	i P	Pn	10 10 29.6	+0.3
KHAL				i S	Sn	10 10 48.9	+0.9
KHAL	Karahalli	1.37	12	i P	Pn	10 10 29.6	+0.3
KHAL				i S	Sn	10 10 48.9	+0.9

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*CSEM **02** 10:11:54.8, 36°.98N×24°.44W, h5^{km}, ML3.6, After PDA*

PDA 02 10:11:54.8±0.8**, 36°.98N**×**24°.44W, h5**^{km}**, MD3.4, ML3.6, Error ellipse: s-maj=5.0km s-min=3.8km az=102.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.50	273	eP	Pg	10 12 03.5	-1.0
PSMN				eS	Sg	10 12 10.3	-0.8
PSMN				A	A	10 12 12.1	
	1µm,0.4s						
PSMN	Pico do Norte,	0.50	273	eP	Pg	10 12 03.5	-1.0
PSMN				eS	Sg	10 12 10.3	-0.8
PSMA	Santa Maria	0.55	272	eP	Pg	10 12 04.2	-1.3
PSMA				eS	Sg	10 12 11.3	-1.4
PSMA				A	A	10 12 13.6	
	1µm,0.3s						
BART	Pico Bartolome	0.99	324	eP	Pg	10 12 10.3	-3.6
BART				eS	Sg	10 12 22.5	-4.3
BART				A	A	10 12 23.4	
	544nm,0.2s						
BART	Pico Bartolome	0.99	324	eP	Pg	10 12 10.3	-3.6
BART				eS	Sg	10 12 22.5	-4.3
CMLA	Cha da Macela	1.17	312	eP	Pg	10 12 12.7	-4.6
CMLA				eS	Sg	10 12 26.7	-5.8
CMLA				A	A	10 12 31.1	
	2µm,0.4s						
CMLA	Cha da Macela	1.17	312	eP	Pg	10 12 12.7	-4.6
CMLA				eS	Sg	10 12 26.7	-5.8
PDA	Ponta Delgada	1.24	309	eS	Sg	10 12 27.8	-7.0
PDA				A	A	10 12 30.1	
	251nm,0.2s						
PDA	Ponta Delgada	1.24	309	eS	Sg	10 12 27.8	-7.0
PSET	Sete Cidades	1.33	310	eP	Pn	10 12 15.3	-4.7
PSET				eS	Sg	10 12 30.7	-6.9
PSET				A	A	10 12 33.9	
	236nm,0.1s						
PSET	Sete Cidades	1.33	310	eP	Pn	10 12 15.3	-4.7
PSET				eS	Sg	10 12 30.7	-6.9
PMAN	Manadas	3.33	301	eP	Pn	10 12 43.3	-4.3
PMAN				eS	Sn	10 13 19.2	-8.3
PMAN				A	A	10 13 20.6	
	42nm,0.2s						
PMAN	Manadas	3.33	301	eP	Pn	10 12 43.3	-4.3
PMAN				eS	Sn	10 13 19.2	-8.3
ROSA	Rosais	3.48	301	eP	Pn	10 12 45.3	-4.3
ROSA				eS	Sn	10 13 22.4	-8.8
ROSA				A	A	10 13 27.8	
	29nm,0.1s						
ROSA	Rosais	3.48	301	eP	Pn	10 12 45.3	-4.3
ROSA				eS	Sn	10 13 22.4	-8.8
PICO	Pico	3.51	297	eP	Pn	10 12 45.9	-4.2
PICO	Pico	3.51	297	eP	Pn	10 12 45.9	-4.2
PCAN	Candelaria	3.54	296	eP	Pn	10 12 45.9	-4.5
PCAN				eS	Sn	10 13 24.3	-8.3
PCAN				A	A	10 13 27.9	
	68nm,0.2s						
PCAN	Candelaria	3.54	296	eP	Pn	10 12 45.9	-4.5
PCAN				eS	Sn	10 13 24.3	-8.3
CALA	Caldeira	3.74	297	eS	Sn	10 13 29.4	-8.4
CALA	Caldeira	3.74	297	eS	Sn	10 13 29.4	-8.4

CSEM 02 10:14:43.8±0.5**, 48°.85N**×**20°.52E, h1**^{km}**, ML2.0**/3**, 2C, Error ellipse: s-maj=13.1km s-min=6.5km az=149.0, Suspected Mining explosion., Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KECS	Kecovo	0.37	184	ePG	Pg	10 14 51.0	0.0
KECS				eSG	Sg	10 14 56.6	+0.8
KECS	Kecovo	0.37	184	ePg	Pg	10 14 51.1	+0.1
KECS				eSg	Sg	10 14 56.6	+0.8
CRVS	Cervenica-Dubn	0.62	85	ePG	Pg	10 14 54.0	-1.8
CRVS				eSG	Sg	10 15 02.4	-1.5
CRVS	Cervenica-Dubn	0.62	85	ePg	Pg	10 14 54.0	-1.8
CRVS				eSg	Sg	10 15 02.4	-1.5
STHS	Stebnicka Huta	0.73	40	ePG	Pb	10 14 59.1	-0.4
STHS	Stebnicka Huta	0.73	40	ePg	Pb	10 14 59.1	-0.4
PSZ	Piszkesteto	1.03	204	⇑ePg	Pb	10 15 04.3	-0.2
PSZ				eSg	Sn	10 15 20.2	-0.3
PSZ	Piszkesteto	1.03	204	⇑ePg	Pb	10 15 04.3	-0.2
KOLS	Kolonicke sedl	1.16	85	ePG	Pb	10 15 06.5	-0.2
KOLS				eSG	Sb	10 15 22.7	+0.5
KOLS	Kolonicke sedl	1.16	85	ePg	Pb	10 15 06.5	-0.2
KOLS				eSg	Sb	10 15 22.7	+0.5
VYHS	Vyhne	1.18	253	ePG	Pg	10 15 05.9	-0.5
VYHS				eSG	Sg	10 15 20.7	-0.9
VYHS	Vyhne	1.18	253	ePg	Pg	10 15 05.9	-0.5
VYHS				eSg	Sg	10 15 20.7	-0.9

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*NIED **02** 10:20:00, 44°.90N×142°.20E, h270^{km}, Mw4.5 Best double couple: $M_0$6.57000×10^{15} NP1:ϕ_s166.00000°, δ89.00000°, λ30.00000°. NP2:ϕ_s75.00000°, δ60.00000°, λ178.00000°.*

*ISCJB **02** 10:20:13.8±0.1, 44°.83N±0°.03×142°.14E±0°.03, h261^{km}±1^{km}, mb4.2/83, Error ellipse: s-maj=4.4km s-min=3.4km az=162.7*

*MOS **02** 10:20:13.5±1.0, 44°.92N×142°.06E, h258^{km}, mb4.2/35, Error ellipse: s-maj=7.8km s-min=6.1km az=89.7*

*BJI **02** 10:20:13.2, 44°.98N×142°.18E, h261^{km}, mB4.5/9, mb4.6/25*

*NEIC **02** 10:20:14.4±0.4, 44°.92N×142°.06E, h251^{km}±5^{km}, mb4.3/48, Error ellipse: s-maj=7.3km s-min=4.0km az=166.0*

*JMA **02** 10:20:14.1±0.1, 44°.89N×142°.19E, h260^{km}±1^{km}, M4.0*

*IDC **02** 10:20:14.6±0.7, 44°.96N×142°.14E, h255^{km}±7^{km}, mb3.8/21, mb1 4.0/25, mb1mx3.9/29, mbtmp3.8/25, Error ellipse: s-maj=12.9km s-min=9.0km az=164.0*

ISC 02 10:20:14.4±0.4**, 44°.82N**±0°.04×**142°.17E**±0°.04**, h257**^{km}±4^{km}**, n521, σ0^{s}96**/564**, mb4.2**/83**, 172C-157D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	0.33	65	⇓P	Pn	10 20 47.6	0.0
JSE				eS	S	10 21 13.3	-0.4
JSS	Shosan	0.48	208	⇑P	Pn	10 20 48.6	+0.6
JSS				eS	S	10 21 15.2	+0.7
JWK2	Keihoku	0.53	339	⇑P	Pn	10 20 48.1	0.0
JWK2				eS	S	10 21 14.4	-0.3
JYG	Yagishiri	0.66	234	⇑P	Pn	10 20 49.0	+0.4
JYG				eS	S	10 21 16.0	+0.5
JRR	Rishiri	0.69	298	⇑P	Pn	10 20 48.9	+0.3
JRR				eS	S	10 21 15.6	0.0
ASAJ	Asahikawa	0.77	156	ePn	Pn	10 20 49.7	+0.6
ASAJ				S	S	10 21 17.0	+0.7
ASAJ				eSn	S	10 21 18.2	+1.8
ASAJ	Asahikawa	0.77	156	⇑P	Pn	10 20 49.7	+0.6
ASAJ				eS	S	10 21 17.2	+0.8
ASAJ	Asahikawa	0.77	156	P	Pn	10 20 49.6	+0.6
	42nm,0.3s,baz=294,slow=7.2,SNR=292						
ASAJ				S	S	10 21 17.0	+0.7
	12nm,0.3s,baz=94,slow=19,SNR=56						
JKK2	Kamakawa 2	1.03	156	⇓P	Pn	10 20 51.2	+0.8
JKK2				eS	S	10 21 19.8	+1.0
JHR	Hokuryu	1.12	197	P	Pn	10 20 51.7	+0.8
JHR				eS	S	10 21 21.4	+1.8
JMP	Maruseppu	1.18	133	⇓P	Pn	10 20 51.7	+0.5
JMP				eS	S	10 21 20.5	+0.2
JAB	Ashibetsu	1.31	178	⇑P	Pn	10 20 52.8	+0.7
JAB				eS	S	10 21 23.3	+1.5
JTKR	Abashiri--Toko	1.51	124	⇓P	Pn	10 20 54.0	+0.6
JTKR				eS	S	10 21 24.8	+0.7
JFR	Furan	1.68	169	P	Pn	10 20 55.2	+0.4
JSK	Shakotan	1.91	220	⇑P	Pn	10 20 57.3	+0.7
JSK				eS	S	10 21 30.9	+0.9
JAR	Ashorobuto	1.91	142	⇓P	Pn	10 20 57.5	+0.8
JAR				eS	S	10 21 31.2	+1.1
JEW	Eniwo	2.05	195	⇑P	Pn	10 20 59.0	+1.1
JEW				eS	S	10 21 33.0	+0.8
YSS	Yuzh-Sakhalins	2.17	11	⇑iPN	Pn	10 20 59.3	+0.4
YSS				eS	S	10 21 36.0	+1.8
YSS				smax	smax		
	comp=E,380nm,1.1s						
YSS				smax	smax		
	comp=E,900nm,3.0s						
JRA	Rausu	2.29	112	⇓P	Pn	10 21 01.0	+0.9
JRA				eS	S	10 21 36.1	-0.1
JCH	Churui	2.37	158	P	Pn	10 21 00.0	-0.9
JCH				eS	S	10 21 35.0	-2.6
JNBK	Urakawa-nobuka	2.57	170	P	Pn	10 21 02.7	-0.2
JNBK				eS	S	10 21 40.1	-1.2
JAK	Akkeshi	2.58	134	P	Pn	10 21 01.8	-1.1
JAK				eS	S	10 21 39.1	-2.2
YUK	Yuzh-Kuril'sk	2.76	105	d iPN	Pn	10 21 05.3	+0.6
YUK				eS	S	10 21 44.6	0.0
YUK				pmax	pmax		
	comp=Z,169nm,0.9s						
YUK				pmax	pmax		
	comp=N,55nm,0.4s						
YUK				pmax	pmax		
	comp=E,55nm,0.9s						
YUK				pmax	pmax		
	comp=Z,1µm,2.5s						
YUK				smax	smax		
	comp=E,62nm,0.3s						
YUK				smax	smax		
	comp=N,109nm,0.6s						
YUK				smax	smax		
	comp=N,20µm,2.2s						
YUK				smax	smax		
	comp=E,21µm,2.8s						
ERM	Erimo	2.89	165	ePN	Pn	10 21 07.1	+0.9
ERM				e		10 21 46.7	
ERM	Erimo	2.89	165	ePn	Pn	10 21 07.1	+0.9
ERM				eSn	S	10 21 46.7	-0.5
NEM2	Nemuro 2	2.96	118	P	Pn	10 21 05.4	-1.4
NEM2				eS	S	10 21 45.7	-2.6
JKB	Kayabe	3.05	196	⇑P	Pn	10 21 07.5	-0.3
JKB				eS	S	10 21 47.4	-2.7
KUR	Kuril'sk	4.06	82	ePN	Pn	10 21 20.0	+0.9
KUR				eS	S	10 22 11.7	+1.1
KUR				pmax	pmax		
	comp=Z,230nm,0.6s						
KUR				pmax	pmax		
	comp=E,70nm,0.7s						
KUR				smax	smax		
	comp=N,920nm,1.3s						
KUR				smax	smax		
	comp=E,170nm,0.9s						
HABR	Khabarovsk	6.11	309	d iPN	Pn	10 21 43.8	-0.1
HABR				eS	S	10 22 55.1	-0.5
HABR				pmax	pmax		
	comp=Z,247nm,1.1s						
HABR				pmax	pmax		
	comp=N,71nm,1.1s						
HABR				pmax	pmax		
	comp=E,165nm,1.1s						
HABR				MLR	MLR		
	comp=Z,72nm,16.0s						
USRK	Ussuriysk Arra	7.31	269	P	Pn	10 21 59.4	+0.5
	comp=Z,1.2nm,0.3s,baz=85,slow=12,SNR=84						
USRK				S	S	10 23 22.9	0.0
	baz=84,slow=24,SNR=4.2						
KLR	Kul'dur	8.37	305	⇑iPN	Pn	10 22 08.2	-4.0
KLR				pmax	pmax		
	comp=E,90nm,1.4s						
KLR				pmax	pmax		
	comp=Z,110nm,1.4s						
MAJO	Matsushiro	8.80	201	ePN	Pn	10 22 16.4	-1.4
MAJO				pmax	pmax		
	comp=Z,84nm,0.7s						
MAJO	Matsushiro	8.80	201	ePn	Pn	10 22 16.4	-1.4
	comp=Z,84nm,0.7s						
MAT	Matsushiro	8.80	201	P	Pn	10 22 16.6	-1.2
MAT				eS	S	10 23 55.7	-1.9
MJAR	Matsushiro Arr	8.80	201	P	Pn	10 22 16.7	-1.1
MJAR				S	S	10 23 54.7	-2.8
MJAR	Matsushiro Arr	8.80	201	P	Pn	10 22 16.7	-1.1
	comp=Z,3.8nm,0.3s,baz=12,slow=14,SNR=97						
MJAR				S	S	10 23 54.7	-2.8
	comp=Z,0.1nm,0.3s,baz=19,slow=23,SNR=3.3						
MDJ	Mudanjiang	8.96	273	P	Pn	10 22 20.0	+0.3
MDJ				pmax	pmax		
	comp=Z,49nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,59nm,3.2s						
MDJ	Mudanjiang	8.96	273	eP	Pn	10 22 20.1	+0.3
	comp=Z,40nm,0.9s						
SKR	Severo-Kuril's	11.06	53	ePN	Pn	10 22 44.5	-1.4
SKR				e		10 24 44.0	
SKR				pmax	pmax		
	comp=Z,130nm,0.6s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
JHJ	Hachijo jima 2	11.83	190	P	Pn	10 22 55.0	-0.7
	comp=E,7.7nm,0.3s,baz=225,slow=23,SNR=17						
JHJ				S	S	10 24 57.8	-10
	comp=E,14nm,0.3s,baz=54,slow=19,SNR=5.9						
CN2	Changchun	12.03	271	eP	Pn	10 22 57.0	-1.0
KSRS	Korea Array	13.01	240	P	P	10 23 12.6	+1.0
	comp=E,0.2nm,0.3s,baz=55,slow=11,SNR=5.4						
KSAR	Wonju Array Be	13.04	241	P	P	10 23 12.6	+0.6
PEA0B	Petropavlovsk-	13.13	45	ePn	Pn	10 23 06.7	-4.7
PETK	Petropavlovsk-	13.13	45	PN	Pn	10 23 11.8	+0.4
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK	Petropavlovsk-	13.13	45	P	Pn	10 23 11.8	+0.4
PETK	Petropavlovsk-	13.13	45	P	Pn	10 23 11.8	+0.4
	comp=Z,2.5nm,0.3s,baz=214,slow=10,SNR=80						

PET Petropavlovsk 13.57 47⇑ *iP* **Pn 10 23 16.8 0.0**
PET *eS* **S 10 25 43.1 -3.9**
PET pmax pmax
comp=Z,51nm,0.7s
PET MLR MLR
comp=Z,100nm,16.0s
JNU Nakatsue 14.60 221 P **Pn 10 23 30.9 +1.5**
JNU Nakatsue 14.60 221 P **Pn 10 23 30.9 +1.5**
comp=Z,0.9nm,0.3s,baz=52,slow=9.4,SNR=12
HIA Hailar 15.90 294 *eP* **P 10 23 42.2 -1.3**
comp=Z,84nm,0.8s
CLNS Chul'man 16.18 324 *eP* **P 10 23 46.2 -0.3**
CLNS pmax pmax
comp=Z,24nm,0.6s
CLNS pmax pmax
comp=N,9.0nm,0.6s
CLNS pmax pmax
comp=E,9.0nm,0.8s
YAK Yakutsk 18.72 341 *i* P **P 10 24 12.8 -1.0**
YAK pmax pmax
comp=Z,12nm,0.7s
SEY Seymchan 19.08 14⇑ *iP* **P 10 24 16.8 -0.9**
BJT Baijiatuan 19.75 265 *eP* **P 10 24 23.7 -1.4**
FX1 Attu Island--F 21.80 57 *eP* **P 10 24 46.8 +1.1**
FX1 Attu Island--F 21.80 57 P **P 10 24 46.5 +0.9**
comp=Z,22nm,0.6s,baz=281,slow=4.7,SNR=19
BTO Baotou 23.91 271 *eP* **P 10 25 06.1 +1.0**
SONM Songino Array 24.75 290 P **P 10 25 13.2 +0.6**
SONM Songino Array 24.75 290 P **P 10 25 13.2 +0.6**
comp=Z,24nm,0.7s,baz=83,slow=8.1,SNR=14
TLY Talaya 26.31 299 *eP* **P 10 25 26.4 -0.1**
TLY *e* 10 26 12.7
TLY pmax pmax
comp=Z,8.0nm,0.8s
BILL Bilibino 26.46 20⇓ *eP* **P 10 25 29.7 +2.2**
BILL *e* 10 26 21.9
BILL pmax pmax
comp=Z,1.0nm,0.6s
LZH Lanzhou 30.21 267 *eP* **P 10 26 03.1 +1.8**
LZH pmax pmax
comp=Z,20nm,1.3s
GTA Gaotai 31.61 275 *eP* **P 10 26 15.1 +1.6**
GTA pmax pmax
comp=Z,23nm,0.8s
ZAA0 Zalesovo Array 37.48 305 *eP* **P 10 27 02.5 -0.7**
ZALV Zalesovo Beam 37.48 305 P **P 10 27 02.0 -1.2**
ZALV 10 29 15.7
ZALV 10 32 38.6
ZALV pmax pmax
comp=Z,6.0nm,0.8s
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV Zalesovo Beam 37.48 305 P **PcP 10 27 02.0 -1.2**
ZALV PcP **PcP 10 29 15.7 +0.1**
ZALV ScP **ScP 10 32 38.6 +0.8**
ZALV Zalesovo Beam 37.48 305 P **P 10 27 02.0 -1.2**
comp=Z,6.0nm,0.8s,baz=86,slow=8.8,SNR=22
ZALV PcP **PcP 10 29 15.7 +0.1**
comp=Z,0.9nm,0.5s,baz=74,slow=5.3,SNR=4.0
ZALV ScP **ScP 10 32 38.6 +0.8**
comp=Z,2.6nm,0.6s,baz=65,slow=3.5,SNR=11
RSO Redoubt South 40.64 44 *eP* **P 10 27 30.8 +1.3**
MK31 Makanchi Array 40.90 295 *i* P **P 10 27 31.8 +0.2**
MK31 pmax pmax
comp=Z,23nm,0.7s
MKAR Makanchi Array 40.90 295 P **P 10 27 31.8 +0.2**
MKAR pmax pmax
comp=Z,19nm,0.8s
MKAR pmax pmax
comp=Z,1.0nm,0.7s
MKAR Makanchi Array 40.90 295 P **P 10 27 31.8 +0.2**
MKAR ScP **ScP 10 32 52.3 +1.0**
MKAR Makanchi Array 40.90 295 P **P 10 27 31.8 +0.2**
comp=Z,19nm,0.8s,baz=79,slow=8.8,SNR=160
MKAR ScP **ScP 10 32 52.3 +1.0**
comp=Z,0.7nm,0.7s,baz=52,slow=4.8,SNR=5.2
COLD Coldfoot 41.19 33 *eP* **P 10 27 32.5 -1.1**
TRF Thorofare Moun 41.43 39 *eP* **P 10 27 35.5 -0.3**
comp=Z,27nm,1.9s
KURK Kurchatov 41.94 302 *eP* **P 10 27 39.2 -0.7**
KURK pmax pmax
comp=Z,6.0nm,0.6s
KURK Kurchatov 41.94 302 *eP* **P 10 27 39.2 -0.7**
comp=Z,6.2nm,0.6s
MCK McKinley 42.00 38 *eP* **P 10 27 40.2 0.0**
MCK McKinley 42.00 38 *eP* **P 10 27 40.2 0.0**
PMR Palmer 42.22 42 *eP* **P 10 27 43.3 +1.4**
PMR pmax pmax
comp=Z,27nm,1.8s
PMR Palmer 42.22 42 *eP* **P 10 27 43.3 +1.4**
comp=Z,27nm,1.8s
COLA College 42.33 37 *eP* **P 10 27 42.5 -0.2**
COLA College 42.33 37 *eP* **P 10 27 42.5 -0.2**
SML Sawmill 42.56 41 *eP* **P 10 27 45.0 +0.3**
SML Sawmill 42.56 41 *eP* **P 10 27 45.0 +0.3**
ILAR Eielson Array 42.75 37 P **P 10 27 44.9 -1.3**
ILAR PcP **PcP 10 29 32.5 0.0**
ILAR Eielson Array 42.75 37 P **P 10 27 44.9 -1.3**
comp=Z,4.9nm,0.7s,baz=278,slow=8.7,SNR=61
ILAR PcP **PcP 10 29 32.5 0.0**
comp=Z,0.9nm,0.9s,baz=283,slow=4.5,SNR=4.6
DOT Dot Lake 44.16 38 *eP* **P 10 27 55.9 -1.6**
comp=Z,3.4nm,0.7s
MENT Mentasta 44.45 39 *eP* **P 10 27 59.5 -0.2**
CMAR Chiang Mai Arr 44.50 248 P **P 10 28 01.8 +1.2**
CMAR Chiang Mai Arr 44.50 248 P **P 10 28 01.8 +1.2**
comp=Z,1.5nm,0.8s,baz=39,slow=7.4,SNR=6.1
EGAK Eagle 45.17 36 *eP* **P 10 28 04.1 -1.1**
comp=Z,7.9nm,0.7s
VOSK Vostochnaya 45.80 307 P **P 10 28 09.4 -1.0**
VOSK pmax pmax
comp=Z,5.0nm,0.8s
BVA0 Borovoye Array 46.03 307 *i* P **P 10 28 11.4 -0.8**
BVA0 pmax pmax
comp=Z,4.0nm,0.7s
BRVK Borovoye 46.08 307⇑ *iP* **P 10 28 12.6 0.0**
ULHL Ulahol 46.68 291 P **P 10 28 16.2 -1.5**
SNR=5.9
TKM2 Tokmak 2 46.80 292 *eP* **P 10 28 19.7 +1.1**
TKM2 pmax pmax
comp=Z,16nm,0.9s
TKM2 Tokmak 2 46.80 292 *eP* **P 10 28 19.6 +1.1**
comp=Z,16nm,0.9s
TKM2 Tokmak 2 46.80 292 P **P 10 28 19.9 +1.3**
SNR=12
ZRNK Zerenda 46.84 307 P **P 10 28 17.9 -0.6**
ZRNK pmax pmax
comp=Z,5.0nm,0.8s
USP Ospenovka 47.37 293 P **P 10 28 23.6 +0.8**
SNR=12
KZA Kyzart 47.41 292 P **P 10 28 25.0 +1.5**
SNR=17
AAK Ala-Archa 47.66 293 *eP* **P 10 28 25.8 +0.7**
AAK pmax pmax
comp=Z,5.0nm,0.6s
AAK Ala-Archa 47.66 293 *eP* **P 10 28 25.8 +0.7**
comp=Z,4.6nm,0.6s
EKS2 Erkin-Say 48.12 293 *eP* **P 10 28 28.7 +0.2**
EKS2 pmax pmax
comp=Z,7.0nm,0.8s
EKS2 Erkin-Say 48.12 293 *eP* **P 10 28 28.7 +0.2**
comp=Z,6.5nm,0.8s
EKS2 Erkin-Say 48.12 293 P **P 10 28 29.4 +0.9**
SNR=7.5
AML Almayashu 48.41 292 P **P 10 28 32.4 +1.2**
SNR=7.3
KK31 Karatay Array 50.03 295 *i* P **P 10 28 42.8 -0.1**
KK31 pmax pmax
comp=Z,4.0nm,0.6s
KKAR Karatay Array 50.03 295 *eP* **P 10 28 42.9 0.0**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 50.03 295 *eP* **P 10 28 42.9 0.0**
comp=Z,5.1nm,0.8s
ARU Arti 51.09 315 *di* P **P 10 28 49.7 -0.8**
ARU *PP **pP 10 29 42.7 -3.0**
ARU 10 30 00.3
ARU 10 30 46.7
ARU S **S 10 35 47.9 +0.4**
ARU pmax pmax
comp=Z,5.0nm,0.9s
DLBC Dease Lake 52.28 42 *eP* **P 10 29 01.0 +1.7**
ABKAR Akbulak array 53.58 306 *eP* **P 10 29 08.9 +0.2**

comp=Z,8.9nm,0.6s
YKA Yellowknife Ar 56.87 33 P **P 10 29 31.6 -0.3**
YKA Yellowknife Ar 56.87 33 P **P 10 29 31.6 -0.3**
comp=Z,5.5nm,0.7s,baz=306,slow=6.5,SNR=117
ARCES ARCESS Array B 56.96 338 P **P 10 29 31.4 -1.2**
ARCES ARCESS Array B 56.96 338 P **P 10 29 31.4 -1.2**
comp=Z,2.9nm,0.9s,baz=60,slow=7.3,SNR=5.3
NLWA Neilton Lookou 61.18 51 *eP* **P 10 30 03.2 +1.4**
comp=Z,10nm,1.0s
MBW Mount Baker 61.43 49 P **P 10 30 04.5 +0.9**
CMW Cultus Mountai 61.52 49 P **P 10 30 05.6 +1.5**
JCW Jim Creek 61.76 49 P **P 10 30 06.8 +1.1**
FINES FINESS Array B 62.25 331 P **P 10 30 07.0 -1.6**
FINES FINESS Array B 62.25 331 P **P 10 30 07.0 -1.6**
comp=Z,1.1nm,0.4s,baz=23,slow=6.2,SNR=6.0
OBN Obninsk 62.29 321 *eP* **P 10 30 09.7 +0.8**
OBN pmax pmax
comp=Z,5.0nm,1.2s
VRHR Novokhopersk 62.41 316 *eP* **P 10 30 07.5 -2.3**
VRHR pmax pmax
comp=Z,10.0nm,0.3s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.4s
LVP Lakeview Peak 62.78 51 P **P 10 30 14.3 +1.8**
ETW Entiat 62.98 49 P **P 10 30 14.8 +1.0**
EBG Ellensburg 63.27 50 P **P 10 30 17.2 +1.5**
VSR Storozhevoye 63.55 317 *eP* **P 10 30 17.1 -0.2**
VSR pmax pmax
comp=Z,8.0nm,0.6s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,4.0nm,0.9s
VORD Divnogorie 63.65 317 *eP* **P 10 30 16.2 -1.7**
VORD pmax pmax
comp=Z,6.0nm,0.4s
VORD pmax pmax
comp=N,7.0nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.5s
TRW Toppenish Ridg 63.67 50 P **P 10 30 19.9 +1.6**
H2OWA Water 64.21 49 P **P 10 30 23.1 +1.4**
NEW Newport 64.26 47 ⇓P **P 10 30 22.8 +0.8**
baz=64
HUMO Hull Mountain 64.58 55 *eP* **P 10 30 25.1 +0.9**
comp=E,5.5nm,1.3s
WRA Warramunga Arr 64.84 188 P **P 10 30 26.5 +0.5**
WRA pP **pP 10 31 24.6 +0.5**
WRA Warramunga Arr 64.84 188 P **P 10 30 26.5 +0.5**
comp=E,0.5nm,0.9s,baz=2.8,slow=6.4,SNR=4.0
WRA pP **pP 10 31 24.6 +0.5**
comp=E,0.4nm,0.6s,baz=1.6,slow=7.0,SNR=2.3
A13A Flathead Natio 65.22 45 ⇓P **P 10 30 29.1 +0.8**
baz=65
YBH Yreka Blue Hor 65.27 55 *eP* **P 10 30 30.0 +1.3**
comp=E,4.0nm,0.7s
C12B Naegeli Ranch, 65.47 46 ⇑P **P 10 30 30.7 +0.8**
baz=65
B13A Whitefish 65.55 45 ⇑P **P 10 30 31.3 +0.9**
baz=65
A14A Double T Ranch 65.69 44 ⇑P **P 10 30 31.6 +0.3**
baz=65,SNR=8.5
C13A Hot Springs 65.95 46 ⇑P **P 10 30 33.8 +0.9**
baz=66
D12A Red Ives Fores 65.95 47 ⇓P **P 10 30 33.5 +0.5**
baz=66
A15A Johnson Ranch, 66.03 44 ⇑P **P 10 30 33.4 -0.1**
baz=66,SNR=7.7
WDC Whiskeytown Da 66.09 56 *eP* **P 10 30 34.8 +0.9**
WDC pmax pmax
comp=Z,7.0nm,1.1s
WDC Whiskeytown Da 66.09 56 *eP* **P 10 30 34.8 +0.9**
comp=Z,6.9nm,1.1s
B14A Marquette Ranc 66.16 45 ⇓P **P 10 30 34.8 +0.4**
baz=66,SNR=5.5
C14A Swan Lake 66.31 46 ⇑P **P 10 30 36.0 +0.7**
baz=66
LTIM Timbered Crate 66.33 55 P **P 10 30 37.2 +1.7**
BMO Blue Mountains 66.34 50 *eP* **P 10 30 36.3 +0.8**
comp=Z,5.5nm,1.1s
KIV Kislovodsk 66.35 309 *eP* **P 10 30 37.0 +1.5**
KIV pmax pmax
comp=Z,21nm,0.9s
KBZ Khabaz 66.37 309 P **P 10 30 36.3 +0.7**
KBZ pmax pmax
comp=Z,6.0nm,0.8s
KBZ Khabaz 66.37 309 P **P 10 30 36.2 +0.7**
KBZ Khabaz 66.37 309 P **P 10 30 36.2 +0.7**
comp=Z,6.1nm,0.8s,baz=46,slow=4.3,SNR=19
D13A Huon 66.39 47 ⇑P **P 10 30 36.2 +0.5**
baz=66,SNR=11
B15A Bradely Ranch, 66.55 45 ⇓P **P 10 30 37.3 +0.5**
baz=66,SNR=8.1
LBCM Butte Creek Ri 66.63 55 P **P 10 30 38.5 +1.1**
MSO Missoula 66.83 46 *eP* **P 10 30 39.0 +0.4**
comp=Z,6.5nm,1.3s
MSO Missoula 66.83 46 ⇓P **P 10 30 39.1 +0.6**
baz=67,SNR=6.1
F12A Elk City 66.85 48 ⇑P **P 10 30 39.6 +0.8**
baz=67,SNR=10
C15A Salmond Ranch, 66.89 45 ⇑P **P 10 30 40.0 +1.1**
baz=67,SNR=16
D14A Greenough 66.89 46 ⇑P **P 10 30 39.5 +0.5**
baz=67,SNR=14
B16A M & M Farms, S 66.91 44 ⇑P **P 10 30 39.4 +0.4**
baz=67,SNR=9.9
FFC Flin Flon 66.91 35 *eP* **P 10 30 38.9 +0.2**
FFC pmax pmax
comp=Z,4.0nm,0.8s
FFC Flin Flon 66.91 35 *eP* **P 10 30 38.9 +0.2**
comp=Z,3.9nm,0.8s
E13A Victor 66.96 47 ⇑P **P 10 30 39.9 +0.5**
baz=67
A17A Triple J Farms 67.05 43 ⇑P **P 10 30 40.3 +0.5**
baz=67,SNR=22
WVOR Wild Horse Val 67.17 52 *eP* **P 10 30 41.8 +1.0**
WVOR pmax pmax
comp=Z,8.0nm,1.0s
WVOR Wild Horse Val 67.17 52 *eP* **P 10 30 41.8 +1.0**
comp=Z,7.6nm,1.0s
G12A Big Creek, Yel 67.23 49 ⇑P **P 10 30 41.5 +0.4**
baz=67
NOA NORSAR Array B 67.25 337 P **P 10 30 39.6 -1.2**
NOA NORSAR Array B 67.25 337 P **P 10 30 39.6 -1.2**
comp=Z,0.5nm,0.4s,baz=35,slow=6.4,SNR=4.4
C16A Fuhringer Ranc 67.30 45 ⇓P **P 10 30 42.1 +0.6**
baz=67,SNR=8.9
E14A Clinton 67.34 47 ⇓P **P 10 30 42.5 +0.7**
baz=67
D15A Lincoln 67.42 46 ⇑P **P 10 30 42.9 +0.6**
baz=67
B17A L&G Farms, Che 67.44 44 ⇑P **P 10 30 42.6 +0.3**
baz=67
A18A Metzger Ranch, 67.48 43 ⇑P **P 10 30 42.8 +0.3**
baz=67,SNR=7.3
E15A Deer Lodge 67.77 46 ⇑P **P 10 30 45.0 +0.6**
baz=68,SNR=12
F14A Wisdom 67.80 47 ⇑P **P 10 30 45.5 +0.8**
baz=68
G13A Cobalt 67.83 48 ⇑P **P 10 30 45.0 +0.1**
baz=68
BEKR Beckworth 67.83 55 *eP* **P 10 30 45.4 +0.3**
comp=Z,3.9nm,1.0s
H12A Diamond D Ranc 67.86 49 ⇓P **P 10 30 45.9 +0.8**
baz=68,SNR=6.4
B18A Beardsley Farm 67.87 43 ⇓P **P 10 30 45.7 +0.7**
baz=68,SNR=13
C17A Wharram Farm, 67.90 44 ⇑P **P 10 30 45.6 +0.4**
baz=68
D16A Dana Ranch, Ca 67.92 45 ⇑P **P 10 30 46.3 +0.9**
baz=68
HRY Holter Researc 67.99 46 *eP* **P 10 30 46.7 +0.9**
comp=Z,11nm,0.6s
A19A Klindworth Far 68.00 42 ⇑P **P 10 30 46.5 +0.7**
baz=68,SNR=15
MFID Camas Ranch 68.08 50 ⇓P **P 10 30 47.5 +1.1**
baz=68,SNR=7.4
EGMT Eagleton 68.13 43 *eP* **P 10 30 47.2 +0.6**
comp=Z,11nm,0.9s
EGMT Eagleton 68.13 43 ⇑P **P 10 30 47.3 +0.6**
baz=68,SNR=9.3
E16A East Helena 68.19 46 ⇑P **P 10 30 48.1 +1.0**
baz=68
F15A Butte 68.24 47 ⇑P **P 10 30 48.3 +0.8**
baz=68,SNR=12

D17A Six Diamond Ra 68.27 45 ⇓P **P 10 30 48.4 +0.8**
baz=68
LRM Limekiln Ridge 68.27 47 *eP* **P 10 30 48.0 +0.3**
comp=Z,72nm,0.9s
A20A Cobblestone Ra 68.42 42 ⇓P **P 10 30 49.7 +1.3**
baz=68
DLMT Dillon 68.51 47 *eP* **P 10 30 50.0 +0.9**
comp=Z,27nm,1.1s
AKASG Malin Array Be 68.55 321 P **P 10 30 48.2 -0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 68.55 321 P **P 10 30 48.2 -0.8**
AKASG Malin Array Be 68.55 321 P **P 10 30 48.2 -0.8**
comp=Z,2.2nm,0.4s,baz=43,slow=6.5,SNR=10
WCN Washoe City 68.56 56 *eP* **P 10 30 50.6 +1.1**
WCN pmax pmax
comp=Z,3.0nm,1.0s
WCN Washoe City 68.56 56 *eP* **P 10 30 50.6 +1.1**
comp=Z,2.5nm,1.0s
ASAR Alice Springs 68.57 188 P **P 10 30 50.6 +1.2**
ASAR Alice Springs 68.57 188 P **P 10 30 50.6 +1.2**
comp=Z,0.6nm,0.8s,baz=10,slow=5.6,SNR=8.4
AK02 Malin Array Si 68.59 321 *eP* **P 10 30 48.4 -0.9**
E17A Martinsdale 68.65 45 ⇑P **P 10 30 51.2 +1.2**
baz=68,SNR=11
C19A Slack Wire Ran 68.68 43 ⇓P **P 10 30 51.0 +1.1**
baz=68,SNR=14
D18A Linhart Farms, 68.68 44 ⇑P **P 10 30 51.0 +1.0**
baz=68,SNR=8.7
I13A Wildhorse Cree 68.68 49 ⇓P **P 10 30 51.4 +1.1**
baz=68,SNR=18
B20A Solberg Farm, 68.69 42 ⇑P **P 10 30 50.5 +0.5**
baz=68,SNR=5.5
G15A Dillon 68.70 47 ⇓P **P 10 30 51.1 +0.8**
baz=68,SNR=33
F16A Kennard Place, 68.72 46 ⇓P **P 10 30 51.1 +0.7**
baz=68,SNR=12
MCMT McKenzie Canyo 68.74 48 *eP* **P 10 30 50.5 -0.2**
comp=Z,1.4nm,0.9s
HLID Hailey 68.75 49 *eP* **P 10 30 51.8 +1.1**
comp=Z,1.3nm,0.8s
HLID Hailey 68.75 49 ⇓P **P 10 30 51.8 +1.1**
baz=68
BOZ Bozeman (W) 68.82 46 *eP* **P 10 30 51.9 +0.9**
BOZ pmax pmax
comp=Z,5.0nm,0.7s
BOZ Bozeman (W) 68.82 46 *eP* **P 10 30 51.9 +0.9**
comp=Z,5.3nm,0.7s
A21A Bergtoll Ranch 68.82 41 ⇑P **P 10 30 51.6 +0.8**
baz=68,SNR=9.0
H15A Lima 68.99 48 ⇑P **P 10 30 53.0 +0.9**
baz=69
J13A Cove Ranch, Pi 68.99 49 ⇑P **P 10 30 53.3 +1.2**
baz=69,SNR=15
G16A Moss Hill, Enn 69.01 47 ⇑P **P 10 30 53.1 +0.9**
baz=69
I14A Mackay 69.03 49 ⇓P **P 10 30 54.4 +2.1**
baz=69
E18A Harlowton 69.06 45 ⇓P **P 10 30 53.4 +1.0**
baz=69
F17A Fitzpatrick Pl 69.14 46 ⇓P **P 10 30 53.8 +0.9**
baz=69,SNR=6.5
B21A Ellsworth Farm 69.17 42 ⇓P **P 10 30 53.7 +0.7**
baz=69,SNR=5.6
C20A Veseth Ranch, 69.20 43 ⇑P **P 10 30 54.1 +0.9**
baz=69,SNR=14
A22A Carney Farms, 69.29 41 ⇓P **P 10 30 54.1 +0.4**
baz=69,SNR=18
G17A Pierce Place, 69.50 46 ⇑P **P 10 30 56.4 +1.2**
baz=69
C21A Desert Coulee 69.56 42 ⇓P **P 10 30 56.0 +0.7**
baz=69,SNR=5.8
D20A Manuel Ranch, 69.57 43 ⇑P **P 10 30 56.5 +1.1**
baz=69,SNR=8.9
F18A Big Timber 69.61 45 ⇑P **P 10 30 56.9 +1.1**
baz=69,SNR=9.1
H16A Russell Place, 69.66 47 ⇓P **P 10 30 57.2 +1.0**
baz=69,SNR=5.7
E19A Rath Farm, Rou 69.69 44 ⇓P **P 10 30 57.2 +0.9**
baz=69,SNR=7.7
B22A Reddig Ranch S 69.74 41 ⇑P **P 10 30 57.4 +0.9**
baz=69
NVAR Mina Array Bea 69.98 56 P **P 10 30 59.2 +0.9**
NVAR Mina Array Bea 69.98 56 P **P 10 30 59.2 +0.9**
comp=Z,3.6nm,0.9s,baz=293,slow=6.1,SNR=28
E20A Meyer Farm, Mu 69.99 44 ⇑P **P 10 30 58.8 +0.9**
baz=70,SNR=5.0
F19A Roth Farm, Mol 70.04 45 ⇑P **P 10 30 59.3 +1.0**
baz=70,SNR=15
NV11 Mina Array Sit 70.07 55 *eP* **P 10 30 59.3 +0.6**
B23A Brockton 70.10 41 ⇓P **P 10 30 59.2 +0.6**
baz=70,SNR=14
G18A Lazy EL Ranch, 70.10 45 ⇑P **P 10 30 59.6 +0.8**
baz=70
I16A Newdale 70.10 48 ⇓P **P 10 31 00.4 +1.6**
baz=70,SNR=10
D21A La Casta Ranch 70.14 43 ⇓P **P 10 30 59.9 +1.0**
baz=70
A24A Westby 70.22 40 ⇓P **P 10 30 59.6 +0.3**
baz=70
DCID1 Drake Creek 70.45 48 *eP* **P 10 31 02.6 +1.6**
comp=Z,15nm,1.0s
DGMT Dagmar 70.46 40 *eP* **P 10 31 01.0 +0.2**
comp=Z,19nm,0.8s
DGMT Dagmar 70.46 40 ⇑P **P 10 31 01.3 +0.5**
baz=70,SNR=5.4
F20A Billings 70.47 44 ⇑P **P 10 31 01.8 +0.8**
baz=70
D22A Cohagen 70.48 42 ⇓P **P 10 31 01.4 +0.5**
baz=70
C23A Lambert 70.48 41 ⇑P **P 10 31 01.6 +0.7**
baz=70,SNR=6.2
H18A Shoshone NF, C 70.49 46 ⇓P **P 10 31 02.3 +1.0**
baz=70
I17A Pilgrim Ck. 70.55 47 ⇑P **P 10 31 03.1 +1.4**
baz=70
RRI2 Red Ridge 70.55 48 *eP* **P 10 31 03.2 +1.5**
comp=Z,18nm,0.8s
MOOW Moose Ponds 70.58 47 *eP* **P 10 31 03.2 +1.3**
comp=Z,7.5nm,1.1s
TPAW Teton Pass 70.65 48 *eP* **P 10 31 03.7 +1.4**
comp=Z,12nm,1.3s
SNOW Snow King Moun 70.77 47 *eP* **P 10 31 04.1 +1.1**
comp=Z,5.0nm,1.0s
H19A Powell 70.84 46 ⇓P **P 10 31 03.9 +0.6**
baz=71
G20A Bridger 70.85 45 ⇑P **P 10 31 03.6 +0.3**
baz=71
D23A Lindsay 70.92 42 ⇓P **P 10 31 04.5 +0.9**
baz=71,SNR=6.4
F21A Absaloka Mine, 70.96 44 ⇓P **P 10 31 04.9 +1.0**
baz=71
C24A Savage 71.03 41 ⇑P **P 10 31 05.0 +0.8**
baz=71
I18A Diamond G Ranc 71.09 47 ⇑P **P 10 31 05.8 +0.9**
baz=71
E22A Miles City 71.10 43 ⇑P **P 10 31 05.4 +0.7**
baz=71
I19A Meeteetse 71.28 46 ⇓P **P 10 31 07.0 +1.0**
baz=71
E23A Ismay 71.36 42 ⇓P **P 10 31 07.1 +0.9**
baz=71,SNR=12
D24A Glendive 71.38 41 ⇓P **P 10 31 07.2 +0.9**
baz=71,SNR=6.1
H20A Greybull 71.47 45 ⇓P **P 10 31 07.6 +0.6**
baz=71
R11A Troy Canyon, C 71.62 54 ⇑P **P 10 31 09.1 +1.0**
baz=71,SNR=9.6
HWUT Hardware Ranch 71.63 49 *eP* **P 10 31 09.3 +1.2**
comp=Z,9.5nm,1.0s
ISA Isabella 71.73 58 ⇑P **P 10 31 09.6 +0.9**
baz=72
I20A Worland 71.79 46 ⇑P **P 10 31 10.0 +1.1**
baz=72,SNR=6.3
E24A Baker 71.79 42 ⇓P **P 10 31 09.5 +0.7**
baz=72
J19A Crowheart 71.80 47 ⇓P **P 10 31 10.0 +0.9**
baz=72,SNR=7.1
G22A Birney 71.80 44 ⇑P **P 10 31 09.6 +0.7**
baz=72
H21A Big Horn, Sher 71.85 45 ⇓P **P 10 31 10.0 +0.7**
baz=72
F23A Volborg 71.87 43 ⇓P **P 10 31 09.8 +0.5**
baz=72,SNR=20
BW06 Boulder Array 71.88 47 *eP* **P 10 31 09.9 +0.3**
comp=Z,11nm,0.9s
PDAR Pinedale Array 71.88 47 P **P 10 31 09.8 +0.2**
PDAR Pinedale Array 71.88 47 P **P 10 31 09.8 +0.2**

comp=Z,9.9nm,0.7s,baz=307,slow=1.7,SNR=68
DUG **Dugway** **71.92** **51** *e*P **P** **10 31 11.0 +1.2**
DUG pmax pmax
comp=Z,36nm,0.6s
DUG **Dugway** **71.92** **51** *e*P **P** **10 31 10.9 +1.2**
comp=Z,36nm,0.6s
DUG **Dugway** **71.92** **51** ⇑P **P** **10 31 11.0 +1.2**
baz=72,SNR=8.4
MPMC **Manual Prospec** **72.05** **57** ⇑P **P** **10 31 11.7 +1.0**
baz=72,SNR=5.1
FURC **Furnace Creek,** **72.15** **56** ⇑P **P** **10 31 12.3 +1.3**
baz=72,SNR=8.6
M17A **Scullys Gap (B** **72.20** **49** ⇑P **P** **10 31 12.2 +0.6**
baz=72
K19A **Absolon Red Bu** **72.21** **47** ⇑P **P** **10 31 11.6 +0.1**
baz=72
H22A **Clearmont** **72.22** **44** ⇑P **P** **10 31 11.9 +0.4**
baz=72
L18A **Fontenelle, Gr** **72.22** **48** ⇓P **P** **10 31 12.5 +0.9**
baz=72,SNR=6.1
J20A **Shoshoni** **72.23** **46** ⇓P **P** **10 31 12.3 +0.7**
baz=72
F24A **Ekalaka** **72.25** **42** ⇓P **P** **10 31 12.1 +0.5**
baz=72,SNR=10
G23A **Biddle** **72.26** **43** ⇓P **P** **10 31 12.1 +0.4**
baz=72
I21A **Big Trails, Te** **72.31** **45** ⇓P **P** **10 31 12.7 +0.7**
baz=72,SNR=22
L19A **Farson** **72.46** **48** ⇑P **P** **10 31 13.5 +0.5**
baz=72
EDW2 **Edwards Air Fo** **72.55** **58** ⇑P **P** **10 31 14.4 +0.9**
baz=72
J21A **Lysite** **72.56** **46** ⇑P **P** **10 31 14.3 +0.6**
baz=72
BUR08 **Bucovina Ar. S** **72.59** **321** *e*P **P** **10 31 13.8 +0.3**
K20A **Yellowstone Ra** **72.59** **47** ⇑P **P** **10 31 14.2 +0.5**
baz=72
G24A **Alzada** **72.64** **43** ⇓P **P** **10 31 13.9 0.0**
baz=72
I22A **9 Mile Ranch,** **72.66** **45** ⇑P **P** **10 31 14.4 +0.3**
baz=72
ULM **Lac du Bonnet** **72.73** **35** P **P** **10 31 13.7 -0.5**
ULM **Lac du Bonnet** **72.73** **35** P **P** **10 31 13.7 -0.5**
comp=Z,8.5nm,0.6s,baz=309,slow=5.0,SNR=5.8
STHS **Stebnicka Huta** **72.95** **324** *e*P **P** **10 31 16.7 +1.2**
STHS pmax pmax
comp=Z,3.0nm,0.6s
STHS **Stebnicka Huta** **72.95** **324** *e*P **P** **10 31 16.7 +1.2**
GSC **Goldstone** **72.97** **57** ⇓P **P** **10 31 16.7 +0.7**
baz=73
MDND **Maddock** **72.99** **38** ⇓P **P** **10 31 16.3 +0.5**
baz=73
H24A **Dirks Ranch, A** **73.00** **43** ⇓P **P** **10 31 16.0 0.0**
baz=73,SNR=5.1
L20A **Wamsutter** **73.06** **47** ⇓P **P** **10 31 17.2 +0.7**
baz=73
K21A **Alcova** **73.17** **46** ⇑P **P** **10 31 17.5 +0.3**
baz=73
BFSC **Mount Baldy Ra** **73.18** **58** ⇑P **P** **10 31 18.3 +1.0**
baz=73
ARUT **Antelope Range** **73.23** **53** *e*P **P** **10 31 18.2 +0.6**
ARUT pmax pmax
comp=Z,3.0nm,0.9s
ARUT **Antelope Range** **73.23** **53** *e*P **P** **10 31 18.2 +0.6**
comp=Z,2.7nm,0.9s
TUQ **Turquoise Moun** **73.41** **56** ⇑P **P** **10 31 19.8 +1.2**
baz=73
MVU **Marysvale** **73.43** **52** *e*P **P** **10 31 19.9 +1.1**
comp=Z,5.9nm,1.4s
M20A **Sweetwater, Wa** **73.51** **48** ⇓P **P** **10 31 20.1 +0.9**
baz=73,SNR=6.0
K22A **Casper** **73.53** **46** ⇓P **P** **10 31 19.4 +0.2**
baz=73
HEC **Hector,Ludlow** **73.58** **57** ⇑P **P** **10 31 21.2 +1.7**
baz=73
L21A **Rawlins** **73.59** **47** ⇑P **P** **10 31 20.1 +0.4**
baz=73,SNR=7.1
I24A **Kuemmerle Ranc** **73.61** **44** ⇑P **P** **10 31 20.0 +0.4**
baz=73
RSSD **Black Hills** **73.71** **43** *e*P **P** **10 31 20.5 +0.2**
RSSD pmax pmax
comp=Z,4.0nm,0.6s
RSSD **Black Hills** **73.71** **43** *e*P **P** **10 31 20.5 +0.2**
comp=Z,3.6nm,0.6s
Q16A **Castle Valley** **73.72** **51** ⇑P **P** **10 31 21.3 +0.9**
baz=74
P18A **Preston Nutter** **73.73** **50** ⇑P **P** **10 31 21.7 +1.1**
baz=74,SNR=9.1
M21A **Separation Pea** **73.85** **47** ⇑P **P** **10 31 21.7 +0.5**
baz=74,SNR=7.9
O19A **Miners Draw (B** **73.86** **49** ⇓P **P** **10 31 21.8 +0.6**
baz=74,SNR=6.1
N20A **Spence Gulch,** **73.94** **48** ⇑P **P** **10 31 22.7 +1.0**
baz=74,SNR=14
SRU **San Rafael** **73.94** **51** ⇑P **P** **10 31 22.5 +0.8**
baz=74,SNR=7.2
BR131 **Keskin Array S** **74.17** **311** *e*P **P** **10 31 22.8 -0.2**
comp=Z,0.6nm,0.5s
BRTR **Keskin Array B** **74.17** **311** P **P** **10 31 23.1 +0.2**
BRTR **Keskin Array B** **74.17** **311** P **P** **10 31 23.1 +0.2**
comp=Z,1.2nm,0.7s,baz=60,slow=4.3,SNR=7.5
L23A **Garrett** **74.34** **46** ⇓P **P** **10 31 24.1 +0.1**
baz=74
PFO **Pinyon Flat Ob** **74.34** **58** ⇑P **P** **10 31 25.1 +1.1**
baz=74
BELC **Belle Mtn. Jos** **74.35** **58** ⇑P **P** **10 31 25.0 +0.9**
baz=74
N21A **Black Mountain** **74.38** **48** ⇑P **P** **10 31 24.8 +0.6**
baz=74,SNR=7.9
M22A **Cedar Creek Ra** **74.40** **47** ⇑P **P** **10 31 25.1 +0.7**
baz=74
P19A **Cripple Cowboy** **74.41** **49** ⇓P **P** **10 31 25.3 +0.8**
baz=74,SNR=10
O20A **White River Ci** **74.45** **49** ⇓P **P** **10 31 25.4 +0.8**
baz=74,SNR=6.4
CLL **Collm** **74.65** **330** *i* P **P** **10 31 25.5 +0.2**
CLL pmax pmax
comp=Z,7.0nm,0.7s
CLL **Collm** **74.65** **330** *i* P **P** **10 31 25.5 +0.2**
comp=Z,7.0nm,0.7s
IRM **Iron Mountain** **74.75** **57** ⇓P **P** **10 31 27.2 +1.0**
baz=74
O21A **Pagoda** **74.80** **48** ⇓P **P** **10 31 27.6 +0.9**
baz=74
M23A **Laramie** **74.80** **46** ⇓P **P** **10 31 27.4 +0.7**
baz=74
P20A **De Beque** **74.82** **49** ⇑P **P** **10 31 27.2 +0.5**
baz=75
U15A **North Rim** **74.84** **54** ⇑P **P** **10 31 28.6 +1.6**
baz=75,SNR=15
W13A **Hualapai Mount** **74.84** **56** ⇓P **P** **10 31 28.0 +1.0**
baz=75
MONP **Monument Peak** **74.86** **59** ⇓P **P** **10 31 27.9 +0.8**
baz=75
N22A **Wattenberg Ran** **74.91** **47** ⇑P **P** **10 31 28.4 +1.1**
baz=75,SNR=5.9
BC3 **Big Chuckawall** **74.91** **58** ⇓P **P** **10 31 28.1 +0.8**
baz=75
N23A **Red Feather La** **75.11** **47** ⇓P **P** **10 31 29.2 +0.7**
baz=75
K26A **Motz Farm, Whi** **75.18** **44** ⇓P **P** **10 31 29.3 +0.7**
baz=75
SWSC **Sam W. Stewart** **75.20** **58** ⇓P **P** **10 31 30.3 +1.5**
baz=75
S18A **Hurst Farm, Bl** **75.24** **51** ⇓P **P** **10 31 30.1 +0.8**
baz=75
PDMCI **Parker Dam,Lak** **75.25** **56** ⇓P **P** **10 31 30.1 +1.1**
baz=75
M24A **Cheyenne** **75.26** **46** ⇑P **P** **10 31 30.3 +1.1**
baz=75,SNR=5.3
Q20A **Ridgley Place,** **75.27** **49** ⇓P **P** **10 31 29.9 +0.7**
baz=75,SNR=6.1
P21A **Newcastle** **75.31** **49** ⇓P **P** **10 31 30.4 +0.8**
baz=75,SNR=7.9
O22A **Kremmling** **75.33** **48** ⇑P **P** **10 31 30.4 +0.6**
baz=75,SNR=7.7
Y12C **Blythe** **75.41** **57** ⇑P **P** **10 31 31.2 +1.3**
baz=75
O23A **Lake Granby, G** **75.62** **47** ⇑P **P** **10 31 32.5 +1.1**
baz=75,SNR=8.1
P22A **Eagle** **75.63** **48** ⇓P **P** **10 31 32.3 +1.0**
baz=75,SNR=7.5
K27A **Flueckinger Fa** **75.64** **43** ⇓P **P** **10 31 31.4 +0.2**
baz=75
M25A **Palm-Egli Farm** **75.68** **45** ⇑P **P** **10 31 32.7 +1.2**
baz=75
N24A **Carr** **75.70** **46** ⇑P **P** **10 31 32.5 +0.8**
baz=75

PV01 **Paradox Valley** **75.71** **50** *e*P **P** **10 31 32.0 +0.2**
Q21A **Lamborn Mesa,** **75.74** **49** ⇑P **P** **10 31 32.7 +0.7**
baz=76
R20A **Redvale** **75.77** **50** ⇑P **P** **10 31 33.2 +1.0**
baz=76,SNR=11
SMCO **Snowmass** **75.82** **49** *e*P **P** **10 31 33.2 +0.6**
comp=Z,4.9nm,0.9s
BRSD **Miller** **75.88** **40** ⇑P **P** **10 31 32.9 +0.5**
baz=76
WUAZ **Wupatki** **76.01** **54** ⇑P **P** **10 31 34.6 +1.1**
baz=76
S20A **Disappointment** **76.04** **50** ⇑P **P** **10 31 34.9 +1.1**
baz=76,SNR=8.4
Q22A **Crested Butte,** **76.08** **49** ⇓P **P** **10 31 35.0 +1.0**
baz=76,SNR=7.0
ISCO **Idaho Springs** **76.08** **47** *e*P **P** **10 31 34.9 +0.9**
ISCO pmax pmax
comp=Z,3.0nm,0.9s
ISCO **Idaho Springs** **76.08** **47** *e*P **P** **10 31 34.9 +0.9**
comp=Z,3.0nm,0.9s
ISCO **Idaho Springs** **76.08** **47** ⇓P **P** **10 31 34.7 +0.7**
baz=76
R21A **Cimarron** **76.09** **49** ⇓P **P** **10 31 35.2 +1.2**
baz=76,SNR=5.9
O24A **Longmont** **76.12** **47** ⇓P **P** **10 31 35.0 +1.0**
baz=76
Y14A **Wickenburg** **76.17** **56** ⇑P **P** **10 31 35.5 +1.1**
baz=76
P23A **Jefferson** **76.27** **48** ⇑P **P** **10 31 36.4 +1.3**
baz=76
EYMN **Ely** **76.32** **34** *e*P **P** **10 31 34.4 -0.5**
comp=Z,5.4nm,0.9s
GERES **GERESS Array B** **76.41** **328** P **P** **10 31 35.0 -0.4**
GERES **GERESS Array B** **76.41** **328** P **P** **10 31 35.0 -0.4**
comp=Z,0.5nm,0.5s,baz=27,slow=9.0,SNR=5.0
S21A **Coal Bank Pass** **76.47** **50** ⇓P **P** **10 31 37.8 +1.6**
baz=76,SNR=12
113A **Mohawk Valley,** **76.54** **57** ⇓P **P** **10 31 37.0 +0.7**
baz=76
Q23A **Hartsel** **76.62** **48** ⇑P **P** **10 31 38.4 +1.3**
baz=76
R22A **Saguache, Gunn** **76.62** **49** ⇓P **P** **10 31 38.4 +1.3**
baz=76,SNR=7.9
P24A **Kohler Place,** **76.66** **47** ⇓P **P** **10 31 38.4 +1.3**
baz=76
X16A **Lo Mia Camp, P** **76.75** **55** ⇑P **P** **10 31 39.1 +1.4**
baz=76
N27A **Anderson Farm,** **76.91** **45** ⇑P **P** **10 31 39.0 +0.6**
baz=77
S22A **4UR Ranch, Cre** **76.94** **49** ⇓P **P** **10 31 39.9 +1.1**
baz=77,SNR=7.8
Q24A **Divide** **76.94** **48** ⇓P **P** **10 31 39.8 +0.9**
baz=77
P25A **Willow Gulch B** **77.04** **47** ⇑P **P** **10 31 40.2 +0.9**
baz=77
T21A **Navajo Lake** **77.10** **50** ⇑P **P** **10 31 40.6 +1.0**
baz=77
R23A **Moffat** **77.15** **49** ⇑P **P** **10 31 41.3 +1.3**
baz=77,SNR=6.2
O27A **Beecher Island** **77.40** **45** ⇓P **P** **10 31 41.8 +0.7**
baz=77
T22A **Edith** **77.43** **50** ⇑P **P** **10 31 42.7 +1.2**
baz=77,SNR=7.9
P26A **Davis Ranch, A** **77.43** **46** ⇑P **P** **10 31 41.7 +0.3**
baz=77
U21A **Nageezi** **77.44** **51** ⇑P **P** **10 31 42.6 +1.0**
baz=77,SNR=6.2
ECSD **EROS Data Cent** **77.49** **39** *e*P **P** **10 31 41.3 -0.2**
comp=Z,22nm,1.4s
N28A **Pribbeno Ranch** **77.50** **44** ⇓P **P** **10 31 42.2 +0.6**
baz=77
R24A **Sanders Place,** **77.50** **48** ⇓P **P** **10 31 42.9 +1.1**
baz=77
X18A **Snowflake** **77.53** **54** ⇓P **P** **10 31 43.5 +1.4**
baz=77
SDCO **Great Sand Dun** **77.65** **49** *e*P **P** **10 31 43.2 +0.5**
comp=Z,2.4nm,0.9s
SCHQ **Schefferville** **77.71** **17** P **P** **10 31 42.4 -0.1**
SCHQ **Schefferville** **77.71** **17** P **P** **10 31 42.4 -0.1**
comp=Z,4.8nm,1.0s,baz=26,slow=14,SNR=4.4
O28A **Krutsinger Ran** **77.80** **45** ⇑P **P** **10 31 43.8 +0.5**
baz=78
Q26A **Hugo** **77.82** **47** ⇑P **P** **10 31 44.1 +0.6**
baz=78
P27A **Ficken Ranch,** **77.83** **46** ⇑P **P** **10 31 44.2 +0.7**
baz=78
N29A **Votaw Ranch, W** **77.85** **44** ⇓P **P** **10 31 43.5 0.0**
baz=78
S24A **Houchin Ranch,** **77.88** **49** ⇑P **P** **10 31 44.3 +0.3**
baz=78
T23A **Casias Ranch,** **77.89** **49** ⇓P **P** **10 31 44.9 +0.8**
baz=78
W20A **Ramah** **77.92** **52** ⇓P **P** **10 31 44.8 +0.6**
baz=78
U22A **Llaves** **77.92** **50** ⇑P **P** **10 31 45.0 +0.8**
baz=78
SPMN **St. Paul** **77.97** **36** ⇑P **P** **10 31 44.0 0.0**
baz=78
R25A **Fountain Ranch** **78.00** **48** ⇑P **P** **10 31 44.8 +0.3**
baz=78
KSCO **Kaye Shedlock'** **78.21** **46** ⇓P **P** **10 31 45.9 +0.2**
baz=78
P28A **Saint Francis** **78.23** **45** ⇓P **P** **10 31 45.8 +0.1**
baz=78
V22A **San Miguel Ran** **78.23** **51** ⇑P **P** **10 31 46.4 +0.5**
baz=78
O29A **4D Ranch, Culb** **78.29** **44** ⇑P **P** **10 31 46.1 +0.1**
baz=78
R26A **Arlington** **78.32** **47** ⇓P **P** **10 31 46.7 +0.5**
baz=78,SNR=14
U23A **El Rito** **78.32** **50** ⇑P **P** **10 31 47.7 +1.3**
baz=78,SNR=15
X20A **Quemado** **78.34** **53** ⇓P **P** **10 31 47.6 +1.1**
baz=78
Q28A **Sharon Springs** **78.58** **46** ⇓P **P** **10 31 48.0 +0.4**
baz=78
R27A **Eads** **78.67** **47** ⇑P **P** **10 31 48.4 +0.3**
baz=78,SNR=5.3
T25A **Trinidad** **78.68** **48** ⇑P **P** **10 31 48.9 +0.6**
baz=78
V23A **Ortiz Mt. (NFS** **78.76** **50** ⇓P **P** **10 31 50.5 +1.7**
baz=78
S26A **Kim** **78.82** **48** ⇑P **P** **10 31 49.5 +0.5**
baz=78
X21A **Alamocita Cree** **78.82** **52** ⇓P **P** **10 31 50.6 +1.4**
baz=79
Y20A **Horse Springs,** **78.88** **53** ⇓P **P** **10 31 50.9 +1.5**
baz=79,SNR=5.6
T26A **Comanche Natio** **79.09** **48** ⇓P **P** **10 31 50.4 -0.1**
baz=79,SNR=5.8
R28A **Tribune** **79.14** **46** ⇓P **P** **10 31 50.6 0.0**
baz=79
Y21A **Point of Rocks** **79.20** **53** ⇑P **P** **10 31 52.3 +1.1**
baz=79
U25A **Circle Dot Ran** **79.23** **49** ⇑P **P** **10 31 51.3 0.0**
baz=79
V24A **Rampart Ranch,** **79.27** **50** ⇑P **P** **10 31 52.9 +1.4**
baz=79,SNR=5.7
Z20A **Nine Sixteen R** **79.33** **54** ⇓P **P** **10 31 53.3 +1.5**
baz=79,SNR=7.7
R29A **Marienthal** **79.42** **46** ⇓P **P** **10 31 52.5 +0.4**
baz=79
V25A **Rancho No Teng** **79.54** **49** ⇓P **P** **10 31 53.6 +0.7**
baz=79
W24A **Lazy 6 Ranch,** **79.58** **50** ⇑P **P** **10 31 54.6 +1.5**
baz=79,SNR=7.1
U26A **Atchley Ranch,** **79.59** **48** ⇑P **P** **10 31 53.6 +0.4**
baz=79
X23A **Hourglass Bar** **79.61** **51** ⇓P **P** **10 31 54.2 +0.8**
baz=79
T27A **Campo** **79.63** **47** ⇑P **P** **10 31 53.5 +0.2**
baz=79
Y22A **Socorro** **79.65** **52** ⇑P **P** **10 31 54.3 +0.7**
baz=79
S28A **Manter** **79.66** **47** ⇓P **P** **10 31 53.4 -0.1**
baz=79
Z21A **St. Cloud Mine** **79.71** **53** ⇓P **P** **10 31 55.3 +1.4**
baz=80,SNR=5.7
120A **U Bar Ranch, L** **79.72** **54** ⇓P **P** **10 31 55.2 +1.3**
baz=80
T28A **Walsh** **79.91** **47** ⇑P **P** **10 31 55.1 +0.3**
baz=80
R30A **Dighton** **79.96** **45** ⇓P **P** **10 31 54.8 -0.1**
baz=80,SNR=5.1
V26A **Tequesquite Ra** **80.02** **49** ⇑P **P** **10 31 55.8 +0.4**
baz=80
S29A **Ulysses** **80.04** **46** ⇓P **P** **10 31 55.6 +0.2**
baz=80

X24A **Lazy VL Ranch,** **80.04** **51** ⇑P **P** **10 31 56.9 +1.2**
baz=80,SNR=5.4
U27A **Thompson Grove** **80.06** **48** ⇓P **P** **10 31 56.1 +0.5**
baz=80
W25A **X Bar L Ranch,** **80.09** **50** ⇓P **P** **10 31 56.7 +0.9**
baz=80,SNR=8.0
Y23A **Lovelace Mesa,** **80.17** **52** ⇑P **P** **10 31 57.5 +1.1**
baz=80,SNR=7.0
319A **Douglas** **80.19** **55** ⇑P **P** **10 31 57.7 +1.3**
baz=80
121A **Cookes Peak, D** **80.22** **54** ⇑P **P** **10 31 58.0 +1.4**
baz=80,SNR=6.1
220A **Playas Peak, P** **80.25** **55** ⇓P **P** **10 31 57.8 +1.1**
baz=80
S30A **Montezuma** **80.36** **46** ⇓P **P** **10 31 57.7 +0.6**
baz=80
X25A **Clemmons Ranch** **80.49** **50** ⇓P **P** **10 31 59.2 +1.2**
baz=80,SNR=6.9
Y24A **Capitan** **80.51** **51** ⇑P **P** **10 31 59.5 +1.3**
baz=80
W26A **Owens Ranch, T** **80.56** **49** ⇓P **P** **10 31 59.7 +1.4**
baz=80
Z23A **Rita Site, Whi** **80.56** **52** ⇓P **P** **10 31 59.7 +1.3**
baz=80
320A **Kipp Ranch, An** **80.66** **55** ⇑P **P** **10 32 00.3 +1.3**
baz=80
S31A **Mullinville** **80.87** **45** ⇑P **P** **10 31 59.6 -0.2**
baz=81
222A **Williams Famil** **80.92** **53** ⇑P **P** **10 32 01.5 +1.3**
baz=81
Y25A **Mesa, Roswell** **80.93** **51** ⇓P **P** **10 32 00.8 +0.5**
baz=81
X26A **CR and CF Fran** **80.94** **50** ⇓P **P** **10 32 01.3 +0.9**
baz=81
W27A **Bowe Ranch, En** **80.96** **49** ⇑P **P** **10 32 01.1 +0.6**
baz=81
Z24A **Sheeppen Canyo** **81.00** **52** ⇑P **P** **10 32 01.6 +0.8**
baz=81
U30A **WK&E Inc. Balk** **81.11** **46** ⇑P **P** **10 32 01.6 +0.5**
baz=81
T31A **Randall Ranch,** **81.17** **46** ⇓P **P** **10 32 01.9 +0.5**
baz=81
X27A **F and S Farms,** **81.25** **49** ⇓P **P** **10 32 02.8 +0.8**
baz=81
Z25A **Roswell** **81.39** **51** ⇑P **P** **10 32 03.5 +0.8**
baz=81
Y26A **Elida** **81.40** **50** ⇑P **P** **10 32 04.0 +1.2**
baz=81
124A **Stringfield Ra** **81.42** **52** ⇑P **P** **10 32 03.8 +0.8**
baz=81
U31A **Nine Bar Ranch** **81.65** **46** ⇓P **P** **10 32 04.9 +1.0**
baz=81
Y27A **Causey** **81.79** **50** ⇑P **P** **10 32 06.1 +1.3**
baz=82
Z26A **Caprock** **81.81** **51** ⇑P **P** **10 32 05.7 +0.9**
baz=82,SNR=11
224A **Cornudas Mount** **81.84** **53** ⇓P **P** **10 32 06.2 +1.0**
baz=82
125A **Gardner Draw,** **81.89** **52** ⇓P **P** **10 32 06.5 +1.2**
baz=82
X29A **Tulia** **82.16** **49** ⇑P **P** **10 32 07.4 +0.8**
baz=82
Z27A **Tatum** **82.19** **50** ⇑P **P** **10 32 07.2 +0.3**
baz=82
126A **Clayton Basin,** **82.25** **51** ⇓P **P** **10 32 08.0 +0.8**
baz=82
324A **Moseley Ranch,** **82.34** **53** ⇓P **P** **10 32 08.4 +0.7**
baz=82
W31A **Holland Ranch,** **82.51** **47** ⇓P **P** **10 32 09.2 +0.8**
baz=82
226B **Tecolote Peak,** **82.60** **52** ⇓P **P** **10 32 09.8 +0.9**
baz=82,SNR=8.0
Z29A **Hungry Hill Ra** **83.06** **49** ⇓P **P** **10 32 11.9 +0.6**
baz=83
425A **Indio Mountain** **83.11** **53** ⇑P **P** **10 32 12.8 +1.1**
baz=83
128A **Castleberry Fa** **83.12** **50** ⇑P **P** **10 32 12.0 +0.4**
baz=83
326A **Caldwell Ranch** **83.28** **52** ⇓P **P** **10 32 13.2 +0.8**
baz=83,SNR=7.3
Z30A **Sanderson Ranc** **83.35** **49** ⇑P **P** **10 32 13.6 +0.9**
baz=83
426A **McDonald Obser** **83.74** **52** ⇓P **P** **10 32 15.4 +0.5**
baz=84
Z31A **Sharp Cattle R** **83.85** **48** ⇓P **P** **10 32 15.3 +0.1**
baz=84
328A **Wristen Ranch,** **83.88** **51** ⇓P **P** **10 32 16.1 +0.6**
baz=84
427A **Hayter Ranch,** **83.95** **52** ⇓P **P** **10 32 16.6 +0.7**
baz=84,SNR=5.0
TUL1 **Tulsa** **84.05** **44** ⇑P **P** **10 32 16.8 +0.7**
baz=84
526A **Mary Lane Ranc** **84.16** **53** ⇑P **P** **10 32 18.1 +1.1**
baz=84,SNR=7.9
Z32A **Haskell** **84.21** **48** ⇑P **P** **10 32 17.5 +0.5**
baz=84
329A **Wagon Wheel Ra** **84.26** **51** ⇓P **P** **10 32 18.3 +0.9**
baz=84
527A **Woodward Ranch** **84.37** **53** ⇓P **P** **10 32 18.9 +0.8**
baz=84
230A **Sterling City** **84.43** **50** ⇑P **P** **10 32 19.1 +0.9**
baz=84
428A **Kincaid Ranch,** **84.45** **52** ⇑P **P** **10 32 19.5 +1.1**
baz=84,SNR=11
626A **Big Bend Ranch** **84.52** **53** ⇑P **P** **10 32 19.6 +0.9**
baz=84,SNR=5.8
330A **Mertzon** **84.76** **50** ⇓P **P** **10 32 20.2 +0.3**
baz=84
528A **Cox Ranch, San** **84.82** **52** ⇓P **P** **10 32 21.0 +0.7**
baz=85
231A **Bronte** **84.82** **49** ⇓P **P** **10 32 20.4 +0.3**
baz=85
TXAR **Lajitas Array** **84.95** **53** P **P** **10 32 21.5 +0.6**
TXAR **Lajitas Array** **84.95** **53** P **P** **10 32 21.5 +0.6**
comp=Z,2.4nm,0.7s,baz=289,slow=3.9,SNR=40
429A **Davenport Ranc** **84.97** **51** ⇑P **P** **10 32 21.6 +0.7**
baz=85
627A **Terlingua Ranc** **85.02** **53** ⇑P **P** **10 32 22.1 +0.9**
baz=85
529A **Stev Forest Ra** **85.17** **52** ⇓P **P** **10 32 22.8 +0.9**
baz=85
430A **Baggett Ranch,** **85.20** **51** ⇑P **P** **10 32 22.5 +0.5**
baz=85
628A **Black Gap, Mar** **85.28** **52** ⇓P **P** **10 32 23.1 +0.7**
baz=85
332A **Millersview** **85.56** **49** ⇑P **P** **10 32 24.4 +0.7**
baz=85
431A **Sonora** **85.63** **50** ⇓P **P** **10 32 24.9 +0.7**
baz=85
530A **J-C Ranch, Com** **85.64** **51** ⇓P **P** **10 32 25.1 +0.9**
baz=85
432A **Menard** **85.92** **50** ⇓P **P** **10 32 26.1 +0.6**
baz=86
531A **Rocksprings** **86.06** **50** ⇓P **P** **10 32 26.6 +0.4**
baz=86
JCT **Junction City** **86.22** **50** ⇑P **P** **10 32 27.5 +0.5**
baz=86
532A **Rocksprings** **86.44** **50** ⇓P **P** **10 32 28.7 +0.6**
baz=86
631A **Perdido Creek** **86.63** **51** ⇓P **P** **10 32 29.7 +0.7**
baz=86
SWET **Sewanee** **89.19** **38** *e*P **P** **10 32 40.9 -0.1**
comp=Z,4.1nm,1.0s
PLCA **Paso Flores** **155.73** **92** PKPab **PKPab** **10 40 03.1 -2.0**
PLCA **Paso Flores** **155.73** **92** PKPab **PKPab** **10 40 03.1 -2.0**
comp=Z,2.2nm,1.0s,baz=350,slow=5.2,SNR=3.0

CSEM ***02*** *10:22:20.3, 37.°67N×36.°35E, h5km, MD2.9, After DDA*
DDA 02 10:22:20.3, 37.°67N×36.°35E, h5km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.09**	**183**	*i* P	Pg	10 22 22.3	-0.1
ANDN				*i* S	Sg	10 22 24.4	+0.4
ANDN	**Andirin**	**0.09**	**183**	*i* P	Pg	10 22 22.3	-0.2
ANDN				*i* S	Sg	10 22 24.4	+0.5
AYKD	**Aykdinkavak**	**0.45**	**125**	*i* P	Pg	10 22 29.5	+0.5
AYKD				*i* S	Sb	10 22 36.6	-1.1
AYKD	**Aykdinkavak**	**0.45**	**125**	*i* P	Pg	10 22 29.5	+0.5
AYKD				*i* S	Sb	10 22 36.6	-1.1
KUZU	**Kuzuini**	**1.07**	**147**	*i* P	Pn	10 22 42.5	+0.5
KUZU				*i* S	Sn	10 22 58.0	+0.7
KUZU	**Kuzuini**	**1.07**	**147**	*i* P	Pn	10 22 42.5	+0.5
KUZU				*i* S	Sn	10 22 58.0	+0.7
AKCD	**Akcadag**	**1.39**	**63**	*i* P	Pg	10 22 47.6	+0.4
AKCD				*i* S	Sn	10 23 10.0	+4.6
AKCD	**Akcadag**	**1.39**	**63**	*i* P	Pg	10 22 47.6	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AKCD				*i* S	Sn	10 23 10.0	+4.6

*IDC **02** 10:26:50.5±0.9, 12.°98N×120.°35E, h0km, mb3.9/8, mb1 3.9/8, mb1mx3.7/27, mbtmp3.9/8, MS3.2/1, Ms1 3.2/1, ms1mx2.6/38, Error ellipse: s-maj=22.0km s-min=13.1km az=100.0*
*ISCJB **02** 10:26:53.3±0.6, 12.°98N±0.°05×120.°38E±0.°06, h27km, mb3.9/8, MS3.0/1, Error ellipse: s-maj=9.7km s-min=5.6km az=146.7*
*MAN **02** 10:26:55, 12.°99N×120.°62E, h48km, mb4.7, ML3.6, MS3.6*
ISC 02 10:26:54.7±0.7**, 13.°01N**±0.°04×**120.°54E**±0.°06**, h27km, n22, σ1.s32/22, mb3.9/8, 1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJMP	San Jose	0.79	134	*e*P	Pn	10 27 10.7	+0.7
SJMP				*e*S	Sn	10 27 22.6	+1.8
TGY	Tagaytay City	1.15	19⇑	*i*P	Pb	10 27 15.6	-0.3
TGY	Tagaytay City	1.15	19	Pg	Pn	10 27 15.4	+0.4
	331nm,0.3s,baz=213,slow=3.2,SNR=52						
TGY				Lg	Lg	10 27 30.7	
	781nm,0.3s,baz=24,slow=20,SNR=20						
LQP	Lukban	1.46	41	*e*P	Pn	10 27 19.8	+0.3
OTRP	Odiongan	1.58	114	*e*P	Pb	10 27 24.3	+1.0
OTRP				*e*S	Sn	10 27 40.6	0.0
GQP	Guinayangan	2.05	64⇓	*e*P	Pn	10 27 28.0	+0.6
GQP				*e*S	Sn	10 27 40.0	-12
AUQP	San Andres	2.10	81	*e*P	Pb	10 27 38.1	+6.0
ENPP	El Nido	2.10	211	*e*P	Pn	10 27 29.8	+1.6
CUYO	Cuyo Island	2.20	168	*e*P	Pn	10 27 29.4	0.0
SCZP	Santa Cruz	2.81	348	*e*P	Pn	10 27 40.1	+2.2
BALP	Baler	2.89	20	*e*P	Pn	10 27 41.4	+2.4
CAUP	Cauayan	4.10	17	*e*P	Pn	10 27 57.1	+1.5
APYP	Conner	4.87	8	*e*P	Pn	10 28 08.4	+2.2
KSRS	Korea Array	25.22	14	LR	LR	10 42 29.7	
	comp=Z,52nm,20.5s,baz=125,slow=37						
WRA	Warramunga Arr	35.45	157	P	P	10 33 48.6	-0.3
	0.5nm,0.4s,baz=333,slow=11,SNR=13						
SONM	Songino Array	36.67	344	P	P	10 33 58.2	-1.0
	0.9nm,0.6s,baz=189,slow=5.4,SNR=3.2						
ASAR	Alice Springs	38.73	160	P	P	10 34 17.0	+0.3
	0.6nm,0.6s,baz=338,slow=7.0,SNR=12						
MKAR	Makanchi Array	46.49	324	P	P	10 35 19.5	-0.2
	1.9nm,0.8s,baz=132,slow=8.9,SNR=18						
ZALV	Zalesovo Beam	49.59	333	P	P	10 35 41.1	-2.3
	0.5nm,0.4s,baz=118,slow=9.3,SNR=4.1						
KURBB	Kurchatov Arra	50.67	327	P	P	10 35 51.3	-0.3
	3.0nm,0.6s,baz=130,slow=7.6,SNR=28						
AKTO	Aktyubinsk	62.64	320	P	P	10 37 16.2	-0.6
	0.6nm,0.3s,baz=53,slow=5.1,SNR=3.4						
BRTR	Keskin Array B	79.45	308	P	P	10 38 58.8	-0.3
	0.3nm,0.4s,baz=40,slow=7.6,SNR=2.3						

*NEIC **02** 10:32:41.1±0.5, 2.°34S×100.°70E, h35km, mb4.4/6, Error ellipse: s-maj=18.1km s-min=6.9km az=55.0*
*IDC **02** 10:32:42.6±1.1, 2.°24S×100.°80E, h45km±6km, mb4.0/17, mb1 4.1/18, mb1mx3.9/29, mbtmp4.1/18, ML4.3/1, MS3.3/6, Ms1 3.3/6, ms1mx2.8/40, Error ellipse: s-maj=33.7km s-min=11.6km az=50.0*
*DJA **02** 10:32:45.8±0.4, 2°S±4°×10°1E±°, h94km±20km, M4.2/5, mb4.2/4, mB4.9/1, MLv4.2/5, Mw(mB)4.2/1*
ISC 02 10:32:42.3±0.8**, 2.°43S**±0.°08×**100.°73E**±0.°09**, h48km**±5km**, h47km:pP-P, n69, σ1.s48/77, mb4.3/19, MS3.5/5, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	1.67	115	P	Pn	10 33 12.6	+3.5
MBSI	MBSI	2.03	131	P	Sn	10 33 37.7	-0.5
MBSI				S	Sn	10 33 42.8	+4.6
KSI	Kapahiang	2.22	123	P	Pn	10 33 22.8	+6.0
BKNI	Bangkinang	2.76	6	P	Pn	10 33 24.9	+0.8
BKNI				S	Sn	10 34 00.3	+4.2
MNAI	Manna	2.93	131	P	Pn	10 33 32.1	+5.6
MNSI	Mandailing Nat	3.41	340	P	Pn	10 33 34.8	+1.8
BTDF	Bukit Timah Da	4.84	39	P	Pn	10 33 54.0	+1.3
KASI	Kota Agung	4.85	129	P	Pn	10 33 53.9	+1.1
KASI				S	Sn	10 34 51.2	+3.4
MYKOM	Kota Tinggi	5.23	37	P	Pn	10 33 59.5	+1.5
	64nm,0.9s,1μm0.3nm						
PSI	Prapat	5.50	341	P	Pn	10 34 03.9	+2.0
	23nm,1.1s,0.1nm						
KCSI	Kotacane, Aceh	6.61	333	P	Pn	10 34 19.2	+2.2
IPM	Ipoh	6.87	2	*e*Pn	Pn	10 34 20.8	+0.3
	13nm,0.6s						
IPM	Ipoh	6.87	2	P	Pn	10 34 23.4	+2.8
	17nm,0.7s,0.1nm						
KULM	Kulim	7.67	359	*e*Pn	Pn	10 34 28.0	-3.5
	32nm,1.3s						
KULM	Kulim	7.67	359	P	Pn	10 34 33.0	+1.5
MLSI	Meulaboh, Aceh	7.93	327	P	Pn	10 34 37.9	+2.8
KAPI	Kappang	19.15	98	*e*P	Pn	10 37 03.7	+0.6
	22nm,1.1s						
KAPI	Kappang	19.15	98	P	Pn	10 37 02.9	-0.3
	1.0nm,0.3s,baz=289,slow=15,SNR=4.5						
KAPI				LR	LR	10 43 50.5	
	comp=Z,48nm,20.7s,baz=173,slow=35						
CMAR	Chiang Mai Arr	20.83	355	P	P	10 37 18.5	-1.6
CMAR				sP	sP	10 37 35.9	-1.4
CMAR	Chiang Mai Arr	20.83	355	P	P	10 37 18.5	-1.6
	2.2nm,0.4s,baz=193,slow=7.4,SNR=6.6						
CMAR				sP	sP	10 37 35.9	-1.4
	1.8nm,0.4s,baz=187,slow=10,SNR=3.2						
CMAR				LR	LR	10 46 09.2	
	comp=Z,40nm,18.7s,baz=170,slow=39						
FITZ	Fitzroy Crossi	28.97	124	*e*P	P	10 38 36.3	-1.2
	2.8nm,1.0s						
FITZ	Fitzroy Crossi	28.97	124	P	P	10 38 38.3	+0.7
	1.6nm,0.9s,baz=323,slow=5.1,SNR=3.3						
ODAN	Odare	31.84	337	*e*P	P	10 39 03.9	+0.8
	30nm,0.7s						
RAMN	Ramite	32.24	336	*e*P	P	10 39 07.7	+1.1
PKI	Pulchoki	33.28	335	*e*P	P	10 39 16.2	+0.4
PKIN	Phulchoki	33.29	335	*e*P	P	10 39 16.6	+0.8
GUN	Gumba	33.38	336	*e*P	P	10 39 17.4	+0.7
KKN	Kakani	33.53	335	*e*P	P	10 39 17.8	0.0
KOLN	Koldanda	34.26	332	*e*P	P	10 39 24.9	+0.7
DANN	Dangsing	34.68	333	*e*P	P	10 39 29.5	+1.6
	20nm,0.4s						
WRA	Warramunga Arr	37.15	120	P	P	10 39 49.1	+0.2
WRA	Warramunga Arr	37.15	120	P	P	10 39 49.1	+0.2
	1.7nm,0.5s,baz=309,slow=9.7,SNR=45						
AS31	Alice Springs	38.41	126	*e*P	P	10 40 00.8	+1.2
ASAR	Alice Springs	38.41	126	P	P	10 40 00.5	+0.9
ASAR				PcP	PcP	10 42 13.2	+0.9
ASAR				S	S	10 45 48.4	-3.1
ASAR	Alice Springs	38.41	126	P	P	10 40 00.5	+0.9
	6.5nm,0.8s,baz=304,slow=8.0,SNR=65						
ASAR				PcP	PcP	10 42 13.2	+0.9
	0.8nm,0.6s,baz=289,slow=3.0,SNR=6.3						
ASAR				S	S	10 45 48.4	-3.1
	0.9nm,1.0s,baz=293,slow=15,SNR=7.3						
ASAR				LR	LR	10 55 37.5	
	comp=Z,65nm,19.4s,baz=44,slow=36						
KSRS	Korea Array	47.02	30	LR	LR	11 02 13.9	
	comp=Z,18nm,19.1s,baz=213,slow=38						
STKA	Stephens Creek	48.32	132	*e*P	P	10 41 20.9	+1.5
	0.4nm,0.5s						
STKA	Stephens Creek	48.32	132	P	P	10 41 20.8	+1.5
	2.0nm,0.7s,baz=309,slow=7.8,SNR=12						
STKA				LR	LR	11 02 52.4	
	comp=Z,64nm,18.3s,baz=24,slow=37						
SONM	Songino Array	50.30	5	P	P	10 41 33.5	-0.8
SONM	Songino Array	50.30	5	P	P	10 41 33.5	-0.8
	2.5nm,0.7s,baz=195,slow=7.7,SNR=6.6						
EKS2	Erkin-Say	51.06	335	*e*P	P	10 41 41.1	+1.0
	7.7nm,0.8s						
MK31	Makanchi Array	51.64	344	*e*P	P	10 41 43.0	-1.2
MKAR	Makanchi Array	51.64	344	P	P	10 41 43.7	-0.5
MKAR				pP	pP	10 41 55.9	-1.5
MKAR	Makanchi Array	51.64	344	P	P	10 41 43.7	-0.5
	6.5nm,0.5s,baz=149,slow=8.0,SNR=78						
MKAR				pP	pP	10 41 55.9	-1.5
	1.3nm,0.6s,baz=149,slow=8.4,SNR=4.8						
USRK	Ussuriysk Arra	54.20	27	P	P	10 42 01.8	-1.2
	2.4nm,0.7s,baz=202,slow=9.9,SNR=4.7						
KURBB	Kurchatov Arra	56.17	343	P	P	10 42 16.2	-0.9
	4.3nm,0.8s,baz=161,slow=7.1,SNR=21						
KURBB				pP	pP	10 42 28.7	-1.8
	0.8nm,0.7s,baz=168,slow=7.0,SNR=2.3						
KURK	Kurchatov	56.23	343	*e*P	P	10 42 17.3	-0.2
	8.4nm,0.9s						
KURK				pP	pP	10 42 28.7	-2.2
ZAA0	Zalesovo Array	57.73	349	*e*P	P	10 42 27.2	-0.9
ZALV	Zalesovo Beam	57.73	349	P	P	10 42 27.2	-0.8
ZALV	Zalesovo Beam	57.73	349	P	P	10 42 27.2	-0.8
	5.9nm,0.4s,baz=160,slow=4.7,SNR=46						
BVAR	Borovoye Array	60.84	340	P	P	10 42 48.7	-1.0
BVAR				pP	pP	10 43 02.4	-0.7
BVAR	Borovoye Array	60.84	340	P	P	10 42 48.7	-1.0
	0.9nm,0.5s,baz=177,slow=8.5,SNR=5.7						
BVAR				pP	pP	10 43 02.4	-0.7
	1.6nm,0.7s,baz=142,slow=9.4,SNR=4.5						
BVAR				LR	LR	11 10 54.5	
	comp=Z,36nm,20.5s,baz=339,slow=38						
ABKAR	Akbulak array	62.37	331	*e*P	P	10 42 59.5	-0.5
	7.4nm,0.6s						
AKTO	Aktyubinsk	64.08	331	P	P	10 43 10.5	-0.9
AKTO	Aktyubinsk	64.08	331	P	P	10 43 10.5	-0.9
	0.7nm,0.3s,baz=114,slow=12,SNR=3.7						
KBZ	Khabaz	69.11	319	P	P	10 43 44.1	+0.5
KBZ	Khabaz	69.11	319	P	P	10 43 44.1	+0.5
	0.9nm,0.3s,baz=131,slow=5.8,SNR=5.5						
PETK	Petropavlovsk-	72.86	32	P	P	10 44 05.8	-0.4
PETK	Petropavlovsk-	72.86	32	P	P	10 44 05.8	-0.4
	1.8nm,0.8s,baz=235,slow=5.1,SNR=3.1						
BRTR	Keskin Array B	74.15	312	P	P	10 44 14.1	-0.2
BRTR	Keskin Array B	74.15	312	P	P	10 44 14.1	-0.2
	1.1nm,0.6s,baz=126,slow=6.3,SNR=5.3						
FINES	FINESS Array B	84.83	332	P	P	10 45 12.4	+0.8
FINES	FINESS Array B	84.83	332	P	P	10 45 12.4	+0.8
	2.0nm,1.0s,baz=116,slow=4.8,SNR=3.1						
ARCES	ARCESS Array B	87.12	340	P	P	10 45 22.8	0.0
ARCES	ARCESS Array B	87.12	340	P	P	10 45 22.8	0.0
	3.5nm,0.9s,baz=102,slow=4.9,SNR=7.8						
TXAR	Lajitas Array	144.59	38	PKP	PKPbc	10 52 13.8	+0.5
TXAR	Lajitas Array	144.59	38	PKP	PKPbc	10 52 13.8	+0.5
	3.8nm,0.8s,baz=309,slow=1.3,SNR=45						
WVT	Waverly	145.54	12	*e*PKPbc	PKPdf	10 52 15.2	-0.6
JCT	Junction City	146.00	33	*e*PKPbc	PKPbc	10 52 17.5	-0.1

*NSSC **02** 10:32:47.0±3.2, 34.°55N×36.°42E, h6km±19km, ML1.8*
*CSEM **02** 10:32:50.0±0.3, 34.°65N×36.°69E, h15km, ML1.8, Error ellipse: s-maj=8.2km s-min=6.2km az=84.0*
*GRAL **02** 10:32:52.9±0.3, 34.°44N×36.°75E, h19km±92km, MD3.2*
ISC 02 10:32:47.4±1.4**, 34.°59N**±0.°02×**36.°64E**±0.°04**, h7km**±12km**, n17, σ1.s71/29, 2C-4D, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWQ	Hawqa	0.65	242	*e*P	Pn	10 33 05.0	+1.9
HWQ				*e*S	Sn	10 33 14.2	+0.5
HWQ	Hawqa	0.65	242	*e*P	Pn	10 33 05.0	+1.9
HWQ				*e*S	Sn	10 33 14.2	+0.5
ROOS	tl_alroos	0.68	127	*e*P	Pn	10 33 04.5	+1.0
ROOS				*e*S	Sb	10 33 12.3	+0.9
ROOS				AML	AML	10 33 18.8	
	comp=Z,0.8nm,0.4s						
ROOS	tl_alroos	0.68	127	*e*P	Pn	10 33 04.5	+1.0
	SNR=66						
ROOS				*e*S	Sb	10 33 12.3	+0.9
	comp=Z,0.8nm,0.4s,SNR=62						
BHL	Bhannes	1.06	230	*e*P	Pn	10 33 11.1	+2.3
BHL	Bhannes	1.06	230	*e*P	Pn	10 33 11.1	+2.3
SLNF	Slenfeh	1.06	342	*e*P	Pg	10 33 05.5	-2.3
SLNF				AML	AML	10 33 28.9	
	comp=Z,103nm,0.3s						
QASN	Qassioun	1.09	196	*e*P	Pb	10 33 06.7	-1.9
TOTH	TOTAH	1.23	188⇑	*e*P	Pn	10 33 09.4	-1.7
TOTH				AML	AML	10 33 29.9	
	comp=Z,34nm,0.5s						
RCY	Rachaya	1.27	212	*e*P	Pg	10 33 13.7	+1.9
RCY				*e*S	Sg	10 33 28.9	+0.7
BRBR	Barbar	1.30	206⇑	*e*P	Pn	10 33 09.7	-2.6
BRBR				*e*S	Sb	10 33 24.4	-4.9
BRBR				AML	AML	10 33 35.7	
	comp=E,18nm,0.4s						
BRBR				AML	AML	10 33 37.3	
	comp=N,27nm,0.4s						
BTCH	Batrach	1.46	354⇓	*e*P	Pb	10 33 15.6	+0.7
BTCH				*e*S	Sb	10 33 34.5	+0.9
BTCH				AMPG		10 33 43.5	
BTCH				AML	AML	10 33 45.4	
	comp=E,83nm,0.4s						
BTCH				AML	AML	10 33 48.2	
	comp=N,68nm,0.4s						
BTCH	Batrach	1.46	354⇓	*e*P	Pb	10 33 15.6	+0.7
	SNR=66						
BTCH				*e*S	Sb	10 33 34.5	+0.9
	comp=N,68nm,0.4s,SNR=62						
ZALF	Zalf	1.76	160⇓	*e*P	Pg	10 33 21.2	+0.1
ZALF				*e*S	Sn	10 33 41.5	+0.5
ZALF				AML	AML	10 33 46.9	
	comp=N,21nm,0.5s						
ZALF				AML	AML	10 33 48.4	
	comp=E,13nm,0.9s						
ZALF				AML	AML	10 33 50.3	
	comp=Z,17nm,0.5s						
ZALF	Zalf	1.76	160⇓	*e*P	Pg	10 33 21.2	+0.1
	SNR=51						
ZALF				*e*S	Sn	10 33 41.5	+0.5
	comp=Z,17nm,0.5s,SNR=49						
DRWC	Darouich	2.03	1	*e*P	Pn	10 33 21.9	-0.2
DRWC				*e*S	Sn	10 33 47.0	-0.9
DRWC				AML	AML	10 33 58.7	
	comp=E,29nm,0.6s						
DRWC				AML	AML	10 34 00.1	
	comp=Z,14nm,0.6s						
DRWC				AML	AML	10 34 00.7	
	comp=N,22nm,0.6s						
DRWC	Darouich	2.03	1	*e*P	Pn	10 33 21.9	-0.2
	SNR=51						
DRWC				*e*S	Sn	10 33 47.0	-0.9
	comp=N,22nm,0.6s,SNR=49						

*ISCJB **02** 10:35:35.3±0.4, 35.°00N±0.°03×73.°24E±0.°06, h24km, mb3.7/6, Error ellipse: s-maj=7.5km s-min=4.2km az=164.8*
*NDI **02** 10:35:35.7±1.5, 34.°74N×72.°79E, h10km, ML3.5*
*IDC **02** 10:35:38.8±5.5, 34.°88N×73.°11E, h54km±46km, mb3.5/7, mb1 3.5/12, mb1mx3.3/33, mbtmp3.4/12, ML3.5/5, Error ellipse: s-maj=34.7km s-min=27.4km az=36.0*
ISC 02 10:35:36.1±0.6**, 34.°88N**±0.°04×**73.°12E**±0.°06**, h24km, n25, σ2.s33/31, mb3.6/6, 3D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.22	174	P	Pb	10 35 59.2	+0.6
CEP	Cherat	1.45	224	P	Pb	10 36 03.2	+0.7
CEP				S	Sb	10 36 24.0	+3.4
THW	Thamme Wali	2.37	209	P	Pb	10 36 19.3	+1.1
SARP	Sargodha	2.97	187	P	Pn	10 36 24.6	+2.8
DLH	Dalhousie	3.33	134	*e*PKP	Pn	10 36 29.0	+2.1
DLH				*e*S	Sn	10 37 09.0	+3.2
SDNR	Sundarnagar	4.67	135	*e*PKP	Pn	10 36 48.0	+2.9
SDNR				*e*S	Sn	10 37 39.0	+0.4
SMLA	Simla	5.05	137	*i* P	Pn	10 36 52.9	+2.5
SMLA				*i* S	Sn	10 37 49.3	+1.3
SMLA				⇓E		10 37 52.9	
	comp=N,930nm,0.3s						
SMLA				⇓E		10 37 53.4	
	comp=E,1μm,0.2s						
KHET	Khetri	7.16	161	*e*x	x	10 37 10.5	
KHET				*e*S	Sn	10 38 36.4	-3.6
KHET				AML	AML	10 39 35.0	
	comp=N,65nm,0.1s						
KHET				AML	AML	10 39 37.0	
	comp=E,60nm,0.2s						
AYAN	Aya Nagar	7.23	151	*e*S	Sn	10 38 36.9	-4.8
AYAN				*e*4		10 39 18.4	
KUDL	Kundal	7.30	156	*e*PKP	Pn	10 37 21.1	-0.2
KUDL				*e*S	Sn	10 38 39.0	-4.4
KUDL				AML	AML	10 39 33.9	
	comp=E,7.6nm,0.5s						
KUDL				AML	AML	10 39 34.4	
	comp=N,5.4nm,0.5s						
AAK	Ala-Archa	7.82	8	P	Pn	10 37 31.4	+2.9
	comp=N,0.3nm,0.3s,baz=156,slow=10.0,SNR=2.2						
AAK				S	Sn	10 38 56.6	+0.2
	comp=N,0.2nm,0.3s,baz=294,slow=20,SNR=3.0						
KK31	Karatay Array	8.46	347	P	Pn	10 37 38.6	+1.4
	comp=N,0.7nm,0.2s,baz=170,slow=13,SNR=79						
KK31				⇓S	Sn	10 39 09.9	-2.0
	comp=N,2.9nm,0.5s,baz=170,slow=23,SNR=11						
AGRA	Agra	8.67	150	*e*S	Sn	10 39 12.2	-5.0
AGRA				AML	AML	10 39 35.6	
	comp=E,92nm,0.0s						
AGRA				AML	AML	10 39 39.7	
	comp=N,57nm,0.4s						
MKAR	Makanchi Array	13.77	27	P	Pn	10 38 51.6	+1.8
	comp=N,0.0nm,0.3s,baz=205,slow=11,SNR=3.0						
TAPN	Taplejung	14.57	117	*e*P	P	10 39 07.0	-0.4
	comp=N,109nm,1.0s						
KURBB	Kurchatov Arra	16.22	12	P	Pn	10 39 23.3	+0.9
	comp=N,0.1nm,0.3s,baz=201,slow=11,SNR=3.5						
BVAR	Borovoye Array	18.25	355	P	P	10 39 47.5	-0.2
	comp=N,0.6nm,0.3s,baz=178,slow=8.7,SNR=4.7						
AKTO	Aktyubinsk	19.05	329	P	P	10 39 56.1	-0.3
	comp=N,0.4nm,0.3s,baz=138,slow=9.6,SNR=5.5						
ZALV	Zalesovo Beam	20.77	20	P	P	10 40 13.6	-1.6
	comp=N,1.2nm,0.4s,baz=208,slow=10.0,SNR=5.1						
FINES	FINESS Array B	39.79	327	P	P	10 43 06.3	-0.6
	comp=N,1.1nm,0.7s,baz=103,slow=6.1,SNR=3.5						
ARCES	ARCESS Array B	43.30	338	P	P	10 43 35.1	-0.5
	comp=N,1.0nm,0.8s,baz=113,slow=8.1,SNR=6.4						
SPITS	Spitsbergen Ar	49.46	347	P	P	10 44 23.9	+0.1
	comp=N,9.5nm,1.0s,baz=150,slow=4.3,SNR=4.2						
TORD	Torodi Ar. Bea	67.43	271	P	P	10 46 28.4	-1.7
	comp=N,0.2nm,0.5s,baz=43,slow=5.9,SNR=3.2						
WRA	Warramunga Arr	79.67	123	P	P	10 47 41.0	-0.9
	comp=N,0.3nm,0.5s,baz=328,slow=5.7,SNR=5.2						
YKA	Yellowknife Ar	82.77	4	P	P	10 47 56.4	-1.3
	comp=N,0.1nm,0.3s,baz=346,slow=5.4,SNR=7.1						

JMA 02 10:36:39.3, 34.°54N×139.°39E, h15km±1km, M2.0, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIM2	Oshima 3	0.18	11	P	Pg	10 36 43.4	-0.3
JIM2				S	Sg	10 36 46.3	-0.4
JKO	Kozu shima	0.41	211	P	Pg	10 36 47.6	0.0
JIZS	Izushimoda	0.46	293	P	Pg	10 36 48.6	+0.1
JIZS				S	Sb	10 36 55.2	-0.5
KTJJ	Kamata 2	0.47	325	P	Pg	10 36 48.5	-0.2
KTJJ				S	Sg	10 36 55.3	+0.3
JMY	Miyakejima3	0.48	168	S	Sg	10 36 55.2	-0.2
JOD2	Odawara 2	0.76	341	P	Pg	10 36 53.5	-0.7
JOD2				S	Sg	10 37 04.2	-0.1
BSO3	Boso 3	0.96	74	P	Pb	10 36 56.9	-0.4
MAT	Matsushiro	2.22	335	P	Pb	10 37 17.8	-1.4
MAT				S	Sb	10 37 46.9	+0.4

*NIED **02** 10:37:00, 34.°50N×139.°40E, h5km, Mw4.0   Best double couple: $M_0$1.11000×10^15 NP1:ϕ_s191.00000°, δ82.00000°, λ40.00000°.   NP2:ϕ_s94.00000°, δ50.00000°, λ170.00000°.*
*IDC **02** 10:37:26.8±0.7, 34.°47N×139.°36E, h0km, mb3.7/12, mb1 3.9/14, mb1mx3.8/28, mbtmp3.7/14, ML3.9/2, MS3.1/5, Ms1 3.1/5, ms1mx2.8/48, Error ellipse: s-maj=22.8km s-min=12.7km az=74.0*
*ISCJB **02** 10:37:27.9±0.7, 34.°51N±0.°03×139.°40E±0.°05, h14km±4km, mb3.7/12, MS3.1/4, Error ellipse: s-maj=6.6km s-min=4.7km az=154.4*
*JMA **02** 10:37:28.5, 34.°54N×139.°40E, h14km±1km, M3.4*
JMA Felt II J1.
ISC 02 10:37:27.8±1.2**, 34.°50N**±0.°04×**139.°42E**±0.°04**, h5km**±8km**, n26, σ0.s62/31, mb3.8/12, MS3.2/4, 1C-4D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIM2	Oshima 3	0.22	2	⇓P	Pg	10 37 32.4	+0.2
JIM2				S	Sg	10 37 35.6	+0.5
JKO	Kozu shima	0.39	218	⇑P	Pb	10 37 36.8	-0.3
JMY	Miyakejima3	0.43	170	P	Pb	10 37 37.7	-0.1
JIZS	Izushimoda	0.50	296	⇓P	Pg	10 37 37.8	+0.4
JIZS				S	Sg	10 37 44.3	+0.4
KTJJ	Kamata 2	0.52	326	⇓P	Pg	10 37 37.7	-0.1
KTJJ				S	Sg	10 37 44.2	-0.4
JOD2	Odawara 2	0.81	340	⇓P	Pg	10 37 42.7	-0.7
JOD2				S	Sg	10 37 53.3	-0.7
BSO3	Boso 3	0.95	71	P	Pg	10 37 45.7	-0.2
BSO3				*e*S	Sg	10 37 58.5	+0.3
JHJ	Hachijo jima 2	1.41	168	Pn	Pn	10 37 54.0	0.0
	348nm,0.3s,baz=16,slow=3.1,SNR=75						
JHJ				Sn	Sb	10 38 12.7	0.0
	132nm,0.3s,baz=98,slow=20,SNR=10						
MJAR	Matsushiro Arr	2.27	334	Pn	Pn	10 38 06.2	+0.3
	20nm,0.3s,baz=124,slow=14,SNR=77						
MJAR				Sn	Sn	10 38 34.8	+0.5
	25nm,0.3s,baz=160,slow=26,SNR=10						
MAT	Matsushiro	2.27	334	P	Pn	10 38 06.6	+0.7
MAT				S	Sb	10 38 37.0	-0.6
JNU	Nakatsue	7.24	261	Pn	Pn	10 39 15.2	+0.9
	2.3nm,0.3s,baz=51,slow=4.8,SNR=18						
ASAJ	Asahikawa	9.92	13	LR	LR	10 43 47.7	
	comp=Z,93nm,19.2s,baz=205,slow=38						
PETK	Petropavlovsk-	22.69	29	LR	LR	10 51 48.0	
	comp=Z,17nm,19.1s,baz=76,slow=38						
SONM	Songino Array	27.98	308	LR	LR	10 55 06.9	
	comp=Z,58nm,18.8s,baz=169,slow=38						
ZALV	Zalesovo Beam	42.48	314	P	P	10 45 23.5	-0.1
	0.7nm,0.5s,baz=87,slow=6.2,SNR=3.7						
ZALV				LR	LR	11 03 43.9	
	comp=Z,28nm,19.9s,baz=96,slow=37						
MKAR	Makanchi Array	44.14	304	P	P	10 45 36.8	-0.4
	0.3nm,0.5s,baz=90,slow=11,SNR=4.4						
KURBB	Kurchatov Arra	46.33	310	P	P	10 45 53.7	-0.7
	0.6nm,0.6s,baz=87,slow=7.4,SNR=6.4						
ILAR	Eielson Array	52.50	31	P	P	10 46 41.7	+0.3
	0.4nm,0.8s,baz=266,slow=7.1,SNR=5.7						
WRA	Warramunga Arr	54.35	186	P	P	10 46 53.9	-1.6
	0.6nm,0.5s,baz=2.4,slow=7.7,SNR=13						
ASAR	Alice Springs	58.08	186	P	P	10 47 22.6	+0.5
	0.3nm,0.6s,baz=11,slow=12,SNR=8.4						
ARCES	ARCESS Array B	65.80	339	P	P	10 48 12.5	-1.0
	2.7nm,1.0s,baz=43,slow=6.7,SNR=2.9						
YKA	Yellowknife Ar	66.81	29	P	P	10 48 20.4	+0.4
	0.3nm,0.8s,baz=285,slow=6.5,SNR=4.1						
FINES	FINESS Array B	70.30	332	P	P	10 48 41.1	-0.7
	1.0nm,0.6s,baz=35,slow=4.7,SNR=3.6						
NOA	NORSAR Array B	75.89	337	P	P	10 49 14.7	-0.3
	0.8nm,0.8s,baz=42,slow=6.6,SNR=2.8						
NVAR	Mina Array Bea	77.82	52	P	P	10 49 27.3	+0.8
	0.5nm,0.7s,baz=292,slow=4.8,SNR=5.1						
TXAR	Lajitas Array	92.96	51	P	P	10 50 43.2	+0.8
	0.4nm,0.9s,baz=287,slow=6.2,SNR=4.4						
TXAR				LR	LR	11 33 15.0	
	comp=Z,16nm,18.8s,baz=0.0,slow=36						

*ISK **02** 10:47:29.4, 38.°41N×43.°43E, h2km, MD2.5*
*DDA **02** 10:47:30.0, 38.°63N×43.°51E, h16km, MD3.1*
*CSEM **02** 10:47:31.6±0.4, 38.°51N×43.°46E, h10km, MD3.1, Error ellipse: s-maj=12.3km s-min=7.7km az=102.0*
ISC 02 10:47:32.4±1.0**, 38.°51N**±0.°03×**43.°43E**±0.°05**, h9km**±5km**, n13, σ1.s04/23, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	Van	0.03	318	*i* P	Pg	10 47 33.5	-1.0
TVAN				*i* S	Sg	10 47 37.8	+1.8
TVAN	Van	0.03	318	*i* P	Pg	10 47 33.5	-1.0
TVAN				*i* S	Sg	10 47 37.7	+1.8
VANB	Van	0.09	339	*e*PG	Pg	10 47 34.1	-0.9
VANB				*e*SG	Sg	10 47 37.5	+0.6
VANB	Van	0.09	339	*e*Pg	Pg	10 47 34.1	-0.9
VANB				*e*Sg	Sg	10 47 37.5	+0.6
GEVA	Gevas	0.35	237	*i* P	Pg	10 47 38.6	-0.8
GEVA				*i* S	Sb	10 47 46.7	+0.1
GEVA	Gevas	0.35	237	*i* P	Pg	10 47 38.6	-0.8
GEVA				*i* S	Sb	10 47 46.7	+0.1
CLDR	Caldiran	0.74	31	*e*PG	Pg	10 47 46.1	-0.6
CLDR	Caldiran	0.74	31	*e*Pg	Pg	10 47 46.2	-0.6
HAKT	HAKKARI	0.97	167	*i* P	Pb	10 47 51.1	-0.5
HAKT				*i* S	Sn	10 48 06.9	+0.5
HAKT	HAKKARI	0.97	167	*i* P	Pb	10 47 51.1	-0.5
AGRB	Hanur-Agry	1.12	342	*e*PN	Pb	10 47 53.4	-0.7
AGRB				*e*SN	Sn	10 48 10.9	+0.8
AGRB	Hanur-Agry	1.12	342	*e*Pn	Pb	10 47 53.4	-0.7
AGRB				*e*Sn	Sn	10 48 10.9	+0.8
BEST	Besiri	1.81	251	*i* P	Pb	10 48 04.7	-1.0
BEST				*i* S	Sg	10 48 32.5	+1.9

*ISCJB **02** 11:10:59.3±1.0, 77°.11N±0°.04×18°.0E±0°.3, h10km, Error ellipse: s-maj=9.8km s-min=5.9km az=162.1*
*NAO **02** 11:10:59.7±1.6, 77°.01N×17°.78E, ML2.7*
*CSEM **02** 11:11:01.0±0.2, 77°.12N×17°.39E, h5km, ML2.3, Error ellipse: s-maj=9.4km s-min=2.8km az=69.0*
*BER **02** 11:11:05.6±2.5, 77°.20N×17°.65E, h17km±15km, MD2.3, ML2.3, ML2.7(NAO)*
ISC 02 11:11:02.3±0.9**, 77°.16N**±0°.04×**17°.69E**±0°.06**, h10km, n14, σ0s.97**/19**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.51**	**253**	eP	**Pg**	**11 11 12.0**	**-0.1**
HSP				eS	**Sg**	**11 11 18.1**	**-0.7**
SPA0	**Spitsbergen Ar**	**1.06**	**345**	Pg	**Pg**	**11 11 22.2**	**-0.5**
	baz=158,slow=22						
SPA0				Lg	Lg	11 11 38.8	
	baz=164,slow=37						
SPA0	**Spitsbergen Ar**	**1.06**	**345**	Pg	**Pg**	**11 11 22.2**	**-0.5**
	baz=158,slow=22						
SPA0				Lg	Lg	11 11 38.8	
	baz=164,slow=37						
SPA0	**Spitsbergen Ar**	**1.06**	**345**	Pg	**Pg**	**11 11 22.2**	**-0.5**
	baz=158,slow=21,SNR=93						
SPA0				Lg	Lg	11 11 38.8	
	baz=164,slow=29						
HOPEN	**Hopen**	**1.80**	**108**	eS	**Sn**	**11 11 56.6**	**+0.4**
HOPEN	**Hopen**	**1.80**	**108**	eS	**Sn**	**11 11 56.6**	**+0.4**
	SNR=55						
KBS	**Kingsbay**	**2.14**	**329**	Pn	**Pn**	**11 11 37.7**	**-0.3**
KBS				Pg	**Pb**	**11 11 41.9**	**+0.9**
KBS				Lg	Lg	11 12 08.1	
KBS	**Kingsbay**	**2.14**	**329**	eP	**Pn**	**11 11 37.7**	**-0.3**
KBS				ePg	**Pb**	**11 11 42.0**	**+0.9**
KBS				eSg	**Sb**	**11 12 07.9**	**+0.3**
KBS				AML	AML	11 12 10.0	
	comp=Z,72nm,0.4s						
KBS	**Kingsbay**	**2.14**	**329**	eP	**Pn**	**11 11 37.7**	**-0.3**
	SNR=55						
KBS	**Kingsbay**	**2.14**	**329**	ePg	**Pb**	**11 11 42.0**	**+0.9**
	SNR=91						
KBS				eSg	**Sb**	**11 12 07.9**	**+0.3**
	comp=Z,72nm,0.4s,SNR=91						
KBS				Lg	Lg	11 12 08.1	
BJO	**Bjornoya**	**2.70**	**171**	ePg	**Pb**	**11 11 52.0**	**+1.4**
BJO				eSg	**Sg**	**11 12 27.0**	**-1.8**
BJO				AML	AML	11 12 35.9	
	comp=Z,20nm,0.5s						
BJO	**Bjornoya**	**2.70**	**171**	ePg	**Pb**	**11 11 52.0**	**+1.4**
	SNR=91						
BJO				eSg	**Sg**	**11 12 27.0**	**-1.8**
	comp=Z,20nm,0.5s,SNR=91						
ARA0	**ARCESS Array S**	**7.98**	**160**	Sn	Sn	11 14 20.4	-7.8
	baz=356,slow=22						
ARA0	**ARCESS Array S**	**7.98**	**160**	S	Sn	11 14 20.4	-7.8
	baz=356,slow=22						

IDC 02 11:21:25.5±5.0**, 20°.33S**×**176°.35W, h0km, mb3.9**/4**, mb1 4.0**/4**, mb1mx3.7**/20**, mbtmp3.9**/4**, Error ellipse: s-maj=167.8km s-min=97.3km az=161.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.25**	**244**	P	P	11 28 56.4	+0.3
	1.3nm,0.9s,baz=74,slow=7.4,SNR=4.1						
ASAR	**Alice Springs**	**46.06**	**256**	P	P	11 29 51.5	-0.1
	1.3nm,0.8s,baz=98,slow=7.9,SNR=24						
ASAR				PcP	PcP	11 31 27.8	-0.3
	0.2nm,0.6s,baz=115,slow=3.6,SNR=4.4						
WRA	**Warramunga Arr**	**46.16**	**262**	P	P	11 29 51.9	-0.4
	0.4nm,0.3s,baz=99,slow=8.4,SNR=21						
FITZ	**Fitzroy Crossi**	**54.58**	**262**	P	P	11 30 55.9	-0.2
	1.9nm,0.9s,baz=114,slow=6.4,SNR=4.1						

IDC 02 11:25:08.8±3.7**, 16°.23N**×**85°.64W, h0km, mb3.3**/4**, mb1 3.9**/5**, mb1mx3.7**/23**, mbtmp3.5**/5**, ML4.3**/1**, Error ellipse: s-maj=97.3km s-min=55.0km az=40.0, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	**Tepich**	**4.70**	**328**	Pn	Pn	11 26 21.7	+0.8
	14nm,0.3s,baz=135,slow=1.4,SNR=58						
TEIG				Sn	Sn	11 27 16.6	+0.4
	7.5nm,0.3s,baz=69,slow=20,SNR=6.5						
TXAR	**Lajitas Array**	**21.09**	**311**	P	P	11 29 53.8	-1.2
	1.2nm,0.6s,baz=131,slow=10,SNR=16						
NVAR	**Mina Array Bea**	**36.19**	**314**	P	P	11 32 14.4	+0.9
	0.3nm,0.8s,baz=144,slow=5.0,SNR=4.1						
YKA	**Yellowknife Ar**	**50.49**	**343**	P	P	11 34 08.6	+0.3
	0.5nm,0.7s,baz=138,slow=7.6,SNR=11						
ILAR	**Eielson Array**	**63.32**	**335**	P	P	11 35 38.7	-0.7
	0.1nm,0.6s,baz=113,slow=6.9,SNR=2.9						

IDC 02 11:37:46.9±4.5**, 6°.81S**×**124°.99E, h553km**±64km**, mb2.8**/2**, mb1 3.1**/6**, mb1mx2.8**/23**, mbtmp2.9**/6**, Error ellipse: s-maj=165.3km s-min=18.8km az=56.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.51**	**289**	P	P	11 39 21.6	+0.4
	1.0nm,0.3s,baz=169,slow=5.2,SNR=5.2						
FITZ	**Fitzroy Crossi**	**11.24**	**177**	P	P	11 40 16.8	-0.7
	0.9nm,0.3s,baz=5.7,slow=11,SNR=29						
WRA	**Warramunga Arr**	**15.90**	**146**	P	P	11 41 03.9	-1.4
	0.6nm,0.3s,baz=323,slow=11,SNR=38						
WRA				S	S	11 43 43.7	-3.9
	0.1nm,0.3s,baz=328,slow=15,SNR=3.9						
ASAR	**Alice Springs**	**18.82**	**154**	P	P	11 41 32.4	+0.2
	0.6nm,0.3s,baz=329,slow=8.6,SNR=72						
ASAR				S	S	11 44 33.1	-2.1
	0.0nm,0.3s,baz=348,slow=22,SNR=4.3						
STKA	**Stephens Creek**	**29.36**	**150**	P	P	11 43 05.9	+0.3
	0.6nm,0.5s,baz=318,slow=11,SNR=4.0						
MKAR	**Makanchi Array**	**65.43**	**329**	P	P	11 47 35.2	-0.2
	0.3nm,0.6s,baz=129,slow=8.2,SNR=4.0						

IDC 02 11:44:04.6±2.3**, 6°.32S**×**130°.03E, h0km, mb3.5**/1**, mb1 3.6**/4**, mb1mx3.4**/20**, mbtmp3.4**/4**, ML3.1**/3**, Error ellipse: s-maj=94.0km s-min=29.3km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.46**	**200**	Pn	Pn	11 47 05.2	+1.9
	0.1nm,0.3s,baz=18,slow=6.4,SNR=4.4						
FITZ				Sn	Sn	11 49 08.7	-14
	0.1nm,0.3s,baz=191,slow=16,SNR=4.5						
WRA	**Warramunga Arr**	**14.17**	**163**	Pn	Pn	11 47 25.9	-0.8
	0.1nm,0.3s,baz=342,slow=13,SNR=5.3						
WRA				Sn	Sn	11 49 49.1	-16
	0.1nm,0.3s,baz=337,slow=22,SNR=5.7						
ASAR	**Alice Springs**	**17.64**	**168**	P	Pn	11 48 11.1	-0.9
	0.1nm,0.3s,baz=353,slow=12,SNR=6.5						
MKAR	**Makanchi Array**	**67.68**	**327**	P	P	11 55 03.6	0.0
	0.2nm,0.4s,baz=113,slow=7.5,SNR=4.3						

IDC 02 11:47:01.1±0.6**, 5°.68N**×**32°.79W, h0km, mb3.8**/13**, mb1 4.1**/15**, mb1mx3.9**/30**, mbtmp3.9**/15**, ML4.0**/2**, MS3.7**/15**, Ms1 3.7**/15**, ms1mx3.5**/33**, Error ellipse: s-maj=20.0km s-min=16.2km az=152.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**11.84**	**195**	Pn	Pn	11 49 49.7	-1.8
	0.3nm,0.3s,baz=7.8,slow=16,SNR=4.0						
RCBR				LR	LR	11 53 01.0	
	comp=Z,157nm,21.0s,baz=338,slow=30						
BBTS	**Babate**	**18.31**	**60**	P	Pn	11 51 16.7	0.0
	1.8nm,0.3s,baz=225,slow=1.4,SNR=2.1						
BBTS				LR	LR	11 56 54.9	
	comp=Z,194nm,18.9s,baz=212,slow=32						
BDFB	**Brasilia**	**26.00**	**215**	LR	LR	12 01 57.1	
	comp=Z,164nm,19.0s,baz=38,slow=34						
DBIC	**Dimbokro**	**27.79**	**86**	LR	LR	12 01 28.5	
	comp=Z,135nm,20.4s,baz=243,slow=31						
TORD	**Torodi Ar. Bea**	**34.78**	**75**	P	P	11 53 53.9	+0.1
	1.1nm,0.6s,baz=267,slow=7.9,SNR=13						
TORD				PcP	PcP	11 56 28.1	+0.5
	0.6nm,0.7s,baz=285,slow=2.8,SNR=5.8						
TORD				LR	LR	12 05 57.8	
	comp=Z,149nm,21.4s,baz=225,slow=33						
SIV	**San Ignacio**	**35.32**	**232**	P	P	11 53 58.9	+0.5
	1.7nm,0.7s,baz=94,slow=8.6,SNR=7.9						
CPUP	**Villa Florida**	**39.73**	**216**	LR	LR	12 10 12.2	
	comp=Z,85nm,18.4s,baz=200,slow=35						
LPAZ	**La Paz**	**41.22**	**237**	P	P	11 54 48.9	0.0
	0.7nm,0.6s,baz=100,slow=11,SNR=4.5						
LPAZ				LR	LR	12 11 11.4	
	comp=Z,107nm,18.0s,baz=80,slow=35						
TSUM	**Tsumeb**	**55.41**	**118**	P	P	11 56 37.5	-0.4
	1.6nm,0.5s,baz=281,slow=14,SNR=5.9						
PLCA	**Paso Flores**	**57.73**	**213**	LR	LR	12 21 11.1	
	comp=Z,138nm,19.4s,baz=355,slow=36						
GERES	**GERESS Array B**	**58.24**	**34**	P	P	11 56 57.3	-0.2
	0.3nm,0.3s,baz=217,slow=6.5,SNR=6.3						
GERES				LR	LR	12 19 37.6	
	comp=Z,36nm,19.0s,baz=84,slow=34						
NOA	**NORSAR Array B**	**64.26**	**22**	P	P	11 57 38.9	+0.9
	0.2nm,0.3s,baz=205,slow=9.8,SNR=2.3						
NOA				LR	LR	12 23 38.4	
	comp=Z,39nm,18.1s,baz=180,slow=34						
LBTB	**Lobatse**	**64.41**	**121**	LR	LR	12 20 09.7	
	comp=Z,90nm,18.9s,baz=290,slow=31						
BOSA	**Boshof**	**65.40**	**125**	P	P	11 57 46.1	0.0
	4.4nm,0.9s,baz=268,slow=4.1,SNR=4.6						
BOSA				LR	LR	12 19 30.1	
	comp=Z,89nm,18.2s,baz=166,slow=30						
AKASG	**Malin Array Be**	**68.11**	**37**	P	P	11 58 02.1	-0.8
	0.5nm,0.4s,baz=248,slow=6.9,SNR=3.8						
BRTR	**Keskin Array B**	**68.31**	**50**	LR	LR	12 30 19.8	
	comp=Z,22nm,18.3s,baz=283,slow=38						
FINES	**FINESS Array B**	**70.52**	**26**	P	P	11 58 17.5	-0.1
	2.0nm,0.8s,baz=282,slow=6.5,SNR=2.9						
FINES				LR	LR	12 24 10.3	
	comp=Z,29nm,20.4s,baz=167,slow=32						
TXAR	**Lajitas Array**	**70.58**	**299**	P	P	11 58 17.9	-0.8
	0.1nm,0.7s,baz=110,slow=11,SNR=3.9						
TXAR				LR	LR	12 26 16.2	
	comp=Z,36nm,20.4s,baz=180,slow=33						
PDAR	**Pinedale Array**	**76.46**	**312**	P	P	11 58 53.5	+0.1
	0.7nm,0.8s,baz=99,slow=9.2,SNR=4.0						
YKA	**Yellowknife Ar**	**81.21**	**332**	P	P	11 59 18.1	-0.6
	0.4nm,0.9s,baz=90,slow=5.0,SNR=5.6						
NVAR	**Mina Array Bea**	**83.00**	**308**	P	P	11 59 29.6	+0.7
	0.4nm,0.7s,baz=93,slow=5.7,SNR=3.5						
ASAR	**Alice Springs**	**158.00**	**146**	PKP	PKPdf	12 06 60.0	-1.0
	0.3nm,1.0s,baz=204,slow=2.0,SNR=4.1						
ASAR				PKPab	PKPab	12 07 33.8	-0.2
	0.4nm,0.9s,baz=191,slow=5.1,SNR=4.0						

IDC 02 11:50:12.8±1.7**, 11°.23S**×**122°.52E, h0km, mb3.2**/1**, mb1 3.6**/4**, mb1mx3.4**/19**, mbtmp3.4**/4**, ML3.2**/3**, Error ellipse: s-maj=137.2km s-min=26.5km az=57.0, South of Timor**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**7.46**	**157**	Pn	Pn	11 52 03.2	+0.2
	0.2nm,0.3s,baz=337,slow=13,SNR=13						
FITZ				Sn	Sn	11 53 19.2	-9.3
	1.1nm,0.3s,baz=216,slow=19,SNR=8.6						
WRA	**Warramunga Arr**	**14.29**	**129**	Pn	Pn	11 53 36.3	-0.4
	0.2nm,0.3s,baz=305,slow=14,SNR=10						
WRA				Sn	Sn	11 56 03.2	-13
	0.4nm,0.3s,baz=309,slow=27,SNR=11						
ASAR	**Alice Springs**	**16.44**	**140**	Pn	Pn	11 54 05.2	0.0
	0.1nm,0.3s,baz=314,slow=13,SNR=12						
ASAR				Sn	Sn	11 56 55.4	-13
	0.1nm,0.3s,baz=316,slow=25,SNR=4.6						
MKAR	**Makanchi Array**	**68.04**	**331**	P	P	12 01 14.2	0.0
	0.2nm,0.8s,baz=130,slow=6.6,SNR=2.6						

IDC 02 12:11:40.1±7.3**, 55°.98S**×**27°.71W, h137km**±66km**, mb3.7**/6**, mb1 3.9**/7**, mb1mx3.6**/18**, mbtmp3.8**/7**, Error ellipse: s-maj=31.8km s-min=21.5km az=77.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	**Sanae**	**18.93**	**156**	P	P	12 15 49.0	-1.0
	2.7nm,0.3s,baz=307,slow=11,SNR=466						
SNAA				S	S	12 19 05.7	-12
	0.0nm,0.3s,baz=204,slow=14,SNR=3.7						
QSPA	**South Pole Qui**	**34.27**	**180**	P	P	12 18 12.8	0.0
	1.8nm,0.5s,baz=206,slow=3.6,SNR=21						
MAW	**Mawson**	**40.38**	**144**	P	P	12 19 04.0	+0.1
	0.7nm,0.3s,baz=219,slow=6.1,SNR=8.2						
VNDA	**Vanda**	**46.63**	**183**	P	P	12 19 54.2	+0.4
	1.1nm,0.7s,baz=181,slow=5.3,SNR=8.3						
LPAZ	**La Paz**	**50.10**	**306**	P	P	12 20 21.7	-0.1
	1.2nm,0.5s,baz=162,slow=3.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**73.14**	**30**	P	P	12 22 55.6	+0.3
	0.7nm,0.4s,baz=202,slow=6.5,SNR=20						
ASAR	**Alice Springs**	**99.15**	**163**	P	Pdif	12 25 04.6	-1.2
	0.3nm,0.6s,baz=188,slow=4.1,SNR=4.7						
WRA	**Warramunga Arr**	**102.86**	**163**	P	Pdif	12 25 22.2	-0.1
	0.3nm,0.8s,baz=201,slow=4.5,SNR=3.1						
YKA	**Yellowknife Ar**	**135.92**	**318**	PKP	PKPdf	12 30 42.5	-0.5
	0.1nm,0.5s,baz=127,slow=1.9,SNR=4.3						
ILAR	**Eielson Array**	**149.85**	**312**	PKPbc	PKPbc	12 31 11.6	-0.8
	0.8nm,0.6s,baz=134,slow=2.7,SNR=17						
SONM	**Songino Array**	**151.01**	**87**	PKPbc	PKPbc	12 31 15.5	-0.4
	1.0nm,0.5s,baz=230,slow=3.7,SNR=7.5						

KRSC 02 12:13:21.7±1.0**, 48°.96N**×**155°.93E, h5km**±5km**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.73**	**4**	P	Pn	12 13 52.2	-0.2
SKR				S	Sn	12 14 14.7	-0.1
PAU	**Pauzhetka**	**2.57**	**12**	S	Sn	12 14 34.8	-0.8
ASAK	**Asacha**	**3.65**	**19**	P	Pn	12 14 19.0	+0.1
MTVR	**Mutnovka**	**3.81**	**21**	P	Pn	12 14 22.2	+1.0
MTVR				S	Sn	12 15 05.2	-1.2
RUS	**Russkaya**	**3.84**	**24**	P	Pn	12 14 21.2	-0.3
RUS				S	Sn	12 15 05.3	-1.7
UGLR	**Uglovaya**	**4.63**	**22**	P	Pn	12 14 34.1	+1.7
AVH	**Avacha**	**4.66**	**21**	P	Pn	12 14 35.1	+2.3
KOK	**Koryaka**	**4.66**	**20**	P	Pn	12 14 34.5	+1.7
SDLR	**Sedlovina**	**4.71**	**22**	P	Pn	12 14 36.0	+2.5
MKZ	**Mys Kozlova**	**6.66**	**31**	P	Pn	12 15 00.8	+0.7

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*THE **02** 12:33:25.5, 38°.94N×26°.68E, h4km±20km, ML2.3/2, Error ellipse: s-maj=20.5km s-min=0.8km az=69.0*
*DDA **02** 12:33:27.8, 38°.89N×26°.29E, h7km, MD3.0*
*ISCJB **02** 12:33:28.5±0.5, 38°.91N±0°.02×26°.29E±0°.04, h4km±4km, Error ellipse: s-maj=5.6km s-min=3.4km az=164.8*
*ISK **02** 12:33:28.5, 38°.93N×26°.26E, h5km, MD2.9*
*ATH **02** 12:33:28.8, 38°.91N×26°.36E, h10km±2km, MD3.0/3*
*CSEM **02** 12:33:28.9±0.2, 38°.92N×26°.29E, h2km, ML2.3/2, Error ellipse: s-maj=5.2km s-min=3.2km az=74.0*
ISC 02 12:33:27.4±1.2**, 38°.93N**±0°.02×**26°.47E**±0°.03**, h3km**±10km**, n55, σ1s.15**/69**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.35**	**334**	P	**Pg**	**12 33 34.5**	**+0.3**
PRK				S	**Sb**	**12 33 40.9**	**-1.4**
PRK	**Paraskevi**	**0.35**	**334**	ePB	**Pb**	**12 33 35.8**	**-0.5**
PRK				eSB	**Sg**	**12 33 40.5**	**+1.7**
PRK	**Paraskevi**	**0.35**	**334**	P	**Pg**	**12 33 34.5**	**+0.3**
PRK				S	**Sb**	**12 33 40.9**	**-1.4**
AYVA	**Ayvalik**	**0.41**	**24**	i P	**Pn**	**12 33 38.1**	**-2.1**
AYVA				i S	**Sb**	**12 33 45.2**	**+1.1**
AYVA	**Ayvalik**	**0.41**	**24**	i P	**Pn**	**12 33 38.1**	**-2.1**
AYVA				i S	**Sb**	**12 33 45.2**	**+1.1**
SIGR	**SIGRI**	**0.56**	**301**	P	**Pg**	**12 33 38.5**	**+0.4**
SIGR				S	**Sb**	**12 33 49.2**	**+1.0**
SIGR	**SIGRI**	**0.56**	**301**	P	**Pg**	**12 33 38.5**	**+0.4**
URLA	**Izmir**	**0.58**	**170**	i P	**Pb**	**12 33 39.5**	**-0.6**
URLA				i S	**Sb**	**12 33 46.8**	**-1.9**
URLA	**Izmir**	**0.58**	**170**	i P	**Pb**	**12 33 39.5**	**-0.6**
URLA				i S	**Sb**	**12 33 46.8**	**-1.9**
CHOS	**Chios island**	**0.63**	**211**	P	**Pg**	**12 33 39.4**	**-0.1**
CHOS				S	**Sb**	**12 33 50.8**	**+0.4**
CHOS	**Chios island**	**0.63**	**211**	ePG	**Pg**	**12 33 39.5**	**-0.1**
CHOS				eSB	**Sg**	**12 33 47.9**	**+0.1**
CHOS	**Chios island**	**0.63**	**211**	P	**Pg**	**12 33 39.4**	**-0.1**
CHOS				S	**Sb**	**12 33 50.8**	**+0.4**
BLCB	**Balcova**	**0.70**	**140**	ePG	**Pn**	**12 33 44.7**	**+0.5**
BLCB				eSG	**Sn**	**12 33 56.1**	**+0.6**
BLCB	**Balcova**	**0.70**	**140**	ePg	**Pn**	**12 33 44.7**	**+0.5**
BLCB				eSg	**Sn**	**12 33 56.1**	**+0.6**
IZM	**Izmir**	**0.81**	**130**	ePG	**Pn**	**12 33 47.2**	**+1.4**
IZM	**Izmir**	**0.81**	**130**	ePg	**Pn**	**12 33 47.2**	**+1.4**
EZN	**Ezine**	**0.90**	**353**	ePG	**Pn**	**12 33 46.2**	**-0.8**
EZN				eSG	**Sn**	**12 33 59.1**	**-1.4**
EZN	**Ezine**	**0.90**	**353**	ePg	**Pn**	**12 33 46.2**	**-0.8**
EZN				eSg	**Sn**	**12 33 59.1**	**-1.4**
BOZC	**Bozcaada**	**0.97**	**340**	i P	**Pn**	**12 33 47.3**	**-0.5**
BOZC				i S	**Sb**	**12 33 59.6**	**-0.4**
AKHS	**Akhisar**	**1.05**	**92**	eP	**Pn**	**12 33 48.2**	**-0.8**
AKHS				i S	**Sn**	**12 34 06.6**	**+2.5**
AKHS	**Akhisar**	**1.05**	**92**	eP	**Pn**	**12 33 48.2**	**-0.8**
AKHS				i S	**Sn**	**12 34 06.6**	**+2.5**
BALY	**Balya**	**1.20**	**47**	i P	**Pn**	**12 33 52.5**	**+1.3**
BALY				i S	**Sn**	**12 34 09.7**	**+1.7**
BALY	**Balya**	**1.20**	**47**	i P	**Pn**	**12 33 52.5**	**+1.3**
BALY				i S	**Sn**	**12 34 09.7**	**+1.7**
BALB	**Balikesir**	**1.30**	**57**	ePN	Pn	12 33 56.1	+3.7
BALB	**Balikesir**	**1.30**	**57**	ePn	Pn	12 33 56.2	+3.7
LIA	**Limnos Island**	**1.39**	**314**	ePG	**Pb**	**12 33 53.8**	**-0.2**
GONE	**Gonen-Balikesi**	**1.46**	**40**	ePN	Pg	12 33 57.4	+2.0
GONE	**Gonen-Balikesi**	**1.46**	**40**	ePn	Pg	12 33 57.4	+2.0
LPK	**Lapseki**	**1.46**	**9**	ePN	**Pg**	**12 33 56.4**	**+1.0**
LPK	**Lapseki**	**1.46**	**9**	ePn	**Pg**	**12 33 56.4**	**+1.0**
GELI	**Tayfur-Gelibol**	**1.47**	**0**	ePN	**Pg**	**12 33 56.1**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.47**	**0**	ePn	**Pg**	**12 33 56.2**	**+0.6**
KRBG	**Karabiga-Canak**	**1.59**	**23**	ePN	**Pg**	**12 33 58.7**	**+0.7**
KRBG	**Karabiga-Canak**	**1.59**	**23**	ePn	**Pg**	**12 33 58.7**	**+0.7**
SMTH	**Samothraki Isl**	**1.70**	**335**	ePB	**Pg**	**12 34 00.5**	**+0.4**
ERIK	**Erikli-Kesan**	**1.74**	**1**	ePN	**Pg**	**12 34 00.8**	**0.0**
ERIK	**Erikli-Kesan**	**1.74**	**1**	ePn	**Pg**	**12 34 00.8**	**0.0**
KULA	**Kula-Manisa**	**1.76**	**103**	ePN	Pg	12 34 03.3	+2.1
KULA	**Kula-Manisa**	**1.76**	**103**	ePn	Pg	12 34 03.3	+2.1
ENEZ	**Enez**	**1.82**	**352**	ePN	**Pg**	**12 34 01.4**	**-0.9**
ENEZ	**Enez**	**1.82**	**352**	ePn	**Pg**	**12 34 01.4**	**-0.9**
RKY	**Sarkoy-Tekirda**	**1.84**	**17**	ePN	**Pg**	**12 34 02.4**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.84**	**17**	ePn	**Pg**	**12 34 02.4**	**-0.3**
MRMT	**Marmara Adasi**	**1.88**	**27**	ePN	**Pg**	**12 34 03.0**	**-0.4**
MRMT	**Marmara Adasi**	**1.88**	**27**	ePn	**Pg**	**12 34 03.1**	**-0.4**
MFT	**Murefte**	**1.96**	**18**	ePN	**Pg**	**12 34 04.1**	**-0.8**
MFT	**Murefte**	**1.96**	**18**	ePn	**Pg**	**12 34 04.1**	**-0.8**
KCTX	**Karacabey (Bur**	**1.97**	**47**	ePN	**Pg**	**12 34 05.8**	**+0.5**
KCTX	**Karacabey (Bur**	**1.97**	**47**	ePn	**Pg**	**12 34 05.8**	**+0.5**
TVSB	**Tavsanli**	**2.38**	**76**	ePN	**Pg**	**12 34 11.3**	**-1.7**
TVSB	**Tavsanli**	**2.38**	**76**	ePn	**Pg**	**12 34 11.3**	**-1.7**
ARMT	**Armutlu**	**2.46**	**48**	ePN	**Pg**	**12 34 12.5**	**-2.1**
ARMT	**Armutlu**	**2.46**	**48**	ePn	**Pg**	**12 34 12.5**	**-2.1**
YLV	**Yalova**	**2.77**	**53**	ePN	**Pb**	**12 34 17.4**	**-0.2**
YLV	**Yalova**	**2.77**	**53**	ePn	**Pb**	**12 34 17.4**	**-0.2**

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*NIED **02** 12:34:00, 37°.00N×141°.70E, h23km, Mw4.1 Best double couple: $M_0$1.72000×10[15] NP1:ϕ_s225.00000°, δ80.00000°, λ-86.00000°. NP2:ϕ_s25.00000°, δ10.00000°, λ-110.00000°.*
*MOS **02** 12:34:37.9±1.2, 36°.88N×141°.90E, h33km, mb4.5/17, Error ellipse: s-maj=10.4km s-min=8.0km az=96.0*
*ISCJB **02** 12:34:38.3±0.9, 36°.91N±0°.03×141°.74E±0°.05, h28km±6km, mb4.3/27, MS3.5/10, Error ellipse: s-maj=6.2km s-min=4.7km az=11.8*
*JMA **02** 12:34:39.5±0.1, 36°.95N×141°.66E, h38km±3km, M4.4*
JMA Felt II J1.
*NEIC **02** 12:34:40.9±0.3, 36°.88N×141°.75E, h35km, mb4.6/10, MW4.1(NIED), Error ellipse: s-maj=8.2km s-min=6.0km az=148.0*
NEIC Recorded [2 JMA] in Fukushima and Ibaraki; [1 JMA] in Miyagi, Tochigi and Yamagata.
*IDC **02** 12:34:42.4±2.1, 36°.88N×141°.72E, h50km±19km, mb3.9/15, mb1 4.1/22, mb1mx4.0/31, mbtmp4.0/22, ML3.8/7, MS3.5/13, Ms1 3.5/13, ms1mx3.2/42, Error ellipse: s-maj=17.1km s-min=12.8km az=106.0*
ISC 02 12:34:40.6±0.9**, 36°.94N**±0°.05×**141°.66E**±0°.05**, h34km**±2km**, n101, σ1s.10**/111**, mb4.3**/27**, MS3.5**/10**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.71**	**284**	P	**Pn**	**12 34 53.2**	**-1.0**
ONAJ				S	**Sn**	**12 35 02.7**	**-1.3**
JFK	**Kawauchi**	**0.76**	**305**	P	**Pn**	**12 34 53.7**	**-1.2**
JFK				eS	**Sn**	**12 35 03.4**	**-1.9**
JHO	**Hitachi**	**0.94**	**250**	P	**Pn**	**12 34 56.2**	**-1.1**
JHO				eS	**Sn**	**12 35 08.4**	**-1.1**
JMM	**Marumori**	**1.16**	**324**	P	**Pn**	**12 34 59.3**	**-1.0**
JMM				eS	**Sn**	**12 35 13.4**	**-1.6**
JFT	**Otama**	**1.21**	**299**	P	**Pn**	**12 35 01.1**	**+0.1**
JFT				eS	**Sn**	**12 35 16.1**	**-0.1**
JIO	**Ouri**	**1.54**	**351**	P	**Pn**	**12 35 04.2**	**-1.3**
JIO				eS	**Sn**	**12 35 21.7**	**-2.6**
JOU	**Okura**	**1.63**	**331**	P	**Pn**	**12 35 06.4**	**-0.5**
JOU				eS	**Sn**	**12 35 27.0**	**+0.3**
JFY	**Yanaizu**	**1.63**	**287**	P	**Pn**	**12 35 07.3**	**+0.4**
JFY				eS	**Sn**	**12 35 27.4**	**+0.7**
JYS	**Shirataka**	**1.80**	**316**	P	**Pn**	**12 35 09.5**	**+0.3**
JYS				eS	**Sn**	**12 35 32.3**	**+1.4**
JAG	**Ashikaga**	**1.85**	**255**	P	**Pn**	**12 35 09.6**	**-0.2**
JKT	**Katashina**	**1.94**	**266**	P	**Pn**	**12 35 12.0**	**+0.8**
MJAR	**Matsushiro Arr**	**2.80**	**263**	P	**Pn**	**12 35 24.2**	**+1.3**
MJAR				S	**Sb**	**12 36 02.1**	**-1.7**
MJAR	**Matsushiro Arr**	**2.80**	**263**	P	**Pn**	**12 35 24.2**	**+1.3**
	55nm,0.3s,baz=90,slow=14,SNR=168						
MJAR				S	**Sb**	**12 36 02.1**	**-1.7**
	54nm,0.3s,baz=90,slow=26,SNR=8.6						
MJAR				LR	LR	12 36 50.9	
	comp=Z,567nm,19.5s,baz=100,slow=46						
MAJO	**Matsushiro**	**2.80**	**263**	eP	**Pn**	**12 35 24.7**	**+1.7**
MAJO				e		12 36 01.0	
MAJO	**Matsushiro**	**2.80**	**263**	ePn	**Pn**	**12 35 24.6**	**+1.7**
MAJO				eSn	**Sb**	**12 36 01.0**	**-2.9**
MAT	**Matsushiro**	**2.80**	**263**	P	**Pn**	**12 35 24.7**	**+1.7**
MAT				S	**Sb**	**12 36 02.1**	**-1.8**
JHJ	**Hachijo jima 2**	**4.11**	**203**	P	**Pn**	**12 35 40.8**	**-0.1**
	135nm,0.3s,baz=18,slow=13,SNR=80						
JHJ				S	**Sn**	**12 36 27.5**	**-0.3**
	149nm,0.3s,baz=47,slow=19,SNR=11						
ERM	**Erimo**	**5.20**	**12**	eP	**Pn**	**12 35 57.2**	**+1.3**
ERM				e		12 36 57.7	
ERM				pmax	pmax		
	comp=Z,131nm,0.8s						
ERM	**Erimo**	**5.20**	**12**	ePn	**Pn**	**12 35 57.2**	**+1.3**
	comp=Z,131nm,0.8s						
ERM				eSn	**Sn**	**12 36 57.6**	**+3.0**
ASAJ	**Asahikawa**	**7.21**	**5**	P	**Pn**	**12 36 24.1**	**+0.6**
ASAJ				S	**Sn**	**12 37 42.5**	**-1.6**
ASAJ	**Asahikawa**	**7.21**	**5**	P	**Pn**	**12 36 24.1**	**+0.6**
	comp=Z,2.4nm,0.3s,baz=198,slow=15,SNR=13						
ASAJ				S	**Sn**	**12 37 42.5**	**-1.6**
	comp=Z,1.1nm,0.3s,baz=195,slow=20,SNR=3.5						
YUK	**Yuzh-Kuril'sk**	**7.78**	**23**	i P	Pn	12 36 28.2	-3.0
YUK				i		12 37 49.6	
YUK				pmax	pmax		
	comp=E,14nm,0.6s						
YUK				pmax	pmax		
	comp=N,10.0nm,0.6s						
YUK				pmax	pmax		
	comp=Z,36nm,0.6s						
YUK				pmax	pmax		
	comp=N,271nm,3.0s						
YUK				pmax	pmax		
	comp=E,289nm,3.0s						
YUK				MLR	MLR		
	comp=Z,132nm,12.0s						
JNU	**Nakatsue**	**9.63**	**250**	ePn	**Pn**	**12 36 58.6**	**+1.9**
	comp=Z,7.3nm,0.8s						
JNU	**Nakatsue**	**9.63**	**250**	P	Pn	12 37 00.1	+3.3
	comp=Z,0.7nm,0.3s,baz=48,slow=8.1,SNR=8.5						
JNU				LR	LR	12 41 08.0	
	comp=Z,59nm,18.6s,baz=72,slow=40						
YSS	**Yuzh-Sakhalins**	**10.04**	**4**	eP	Pn	12 37 05.5	+3.2
USRK	**Ussuriysk Arra**	**10.32**	**318**	P	Pn	12 37 10.7	+4.6
	comp=Z,1.3nm,0.3s,baz=128,slow=13,SNR=42						
KSRS	**Korea Array**	**10.97**	**277**	P	Pn	12 37 19.6	+4.6
	comp=Z,0.5nm,0.3s,baz=88,slow=13,SNR=10						
KSRS				LR	LR	12 41 18.0	
	comp=Z,212nm,19.4s,baz=142,slow=36						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSAR	Wonju Array Be	11.01	277	P	Pn	12 37 19.6	+4.1
PETK	Petropavlovsk-	19.67	30	P	Pn	12 39 08.3	+0.2
PETK	Petropavlovsk-	19.67	30	P	Pn	12 39 08.2	+0.2
PETK	Petropavlovsk-	19.67	30	P	Pn	12 39 08.3	+0.2
	comp=Z,0.1nm,0.3s,baz=202,slow=7.2,SNR=2.9						
FX1	Attu Island--F	27.13	44	LR	LR	12 48 39.9	
	comp=Z,22nm,21.2s,baz=213,slow=31						
ENH	Enshi	27.52	266	eP	P	12 40 23.7	-0.3
	comp=Z,8.9nm,0.6s						
ULN	Ulaanbaatar	27.57	304	eP	P	12 40 26.0	+1.5
	comp=Z,5.5nm,0.7s						
SONM	Songino Array	28.00	304	P	P	12 40 29.0	+0.7
SONM	Songino Array	28.00	304	P	P	12 40 29.0	+0.7
	comp=Z,4.8nm,0.5s,baz=104,slow=8.2,SNR=28						
SONM				LR	LR	12 51 21.0	
	comp=Z,52nm,20.9s,baz=40,slow=36						
ZAK	Zakamensk	30.49	308	eP	P	12 40 49.6	-0.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BILL	Bilibino	34.06	16	eP	P	12 41 18.4	-2.8
BILL				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CMAR	Chiang Mai Arr	41.66	256	P	P	12 42 26.6	+0.6
CMAR	Chiang Mai Arr	41.66	256	P	P	12 42 26.6	+0.6
	comp=Z,0.7nm,0.4s,baz=43,slow=6.4,SNR=4.5						
CMAR				LR	LR	13 00 59.2	
	comp=Z,48nm,20.1s,baz=180,slow=38						
ZAA0	Zalesovo Array	42.13	312	eP	P	12 42 29.9	+0.6
ZAA0				epP	pP	12 42 39.2	-0.1
ZALV	Zalesovo Beam	42.13	312	P	P	12 42 30.0	+0.7
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZALV				MLR	MLR		
	comp=Z,58nm,18.9s						
ZALV	Zalesovo Beam	42.13	312	P	P	12 42 29.9	+0.7
ZALV	Zalesovo Beam	42.13	312	P	P	12 42 29.9	+0.7
	comp=Z,2.6nm,0.5s,baz=98,slow=6.4,SNR=15						
ZALV				LR	LR	13 00 53.7	
	comp=Z,58nm,18.9s,baz=81,slow=37						
NVS	Novosibirsk	43.05	314	eP	P	12 42 38.4	+1.7
MK31	Makanchi Array	44.34	302	eP	P	12 42 47.4	+0.1
MK31				e*PP	pP	12 42 58.3	+0.9
MK31	Makanchi Array	44.34	302	eP	P	12 42 47.4	+0.1
MK31				epP	pP	12 42 58.3	+0.9
MKAR	Makanchi Array	44.34	302	P	P	12 42 47.7	+0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,33nm,20.6s						
MKAR	Makanchi Array	44.34	302	eP	P	12 42 47.7	+0.4
MKAR	Makanchi Array	44.34	302	P	P	12 42 47.7	+0.4
	comp=Z,1.4nm,0.6s,baz=85,slow=9.1,SNR=12						
MKAR				LR	LR	13 01 20.7	
	comp=Z,33nm,20.6s,baz=179,slow=36						
TAPN	Taplejung	46.15	274	eP	P	12 43 03.5	+1.3
	comp=Z,7.9nm,0.5s						
KURK	Kurchatov	46.15	308	eP	P	12 43 01.5	0.0
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
KURK	Kurchatov	46.15	308	eP	P	12 43 01.5	0.0
	comp=Z,14nm,0.8s						
ODAN	Odare	46.62	274	eP	P	12 43 08.0	+2.2
	comp=Z,15nm,0.7s						
RAMN	Ramite	47.21	274	eP	P	12 43 11.3	+0.8
	comp=Z,20nm,0.6s						
GUN	Gumba	47.36	276	eP	P	12 43 13.2	+1.4
KKN	Kakani	47.89	276	eP	P	12 43 17.4	+1.7
	comp=Z,11nm,0.4s						
DANN	Dangsing	48.86	277	eP	P	12 43 23.7	+0.4
	comp=Z,23nm,0.6s						
KOLN	Koldanda	49.24	277	eP	P	12 43 27.2	+1.1
	comp=Z,16nm,0.9s						
ILAR	Eielson Array	49.47	32	P	P	12 43 27.1	+0.1
ILAR	Eielson Array	49.47	32	P	P	12 43 27.1	+0.1
	comp=Z,2.4nm,0.7s,baz=267,slow=6.5,SNR=45						
PYUN	Piuthan	49.58	278	eP	P	12 43 30.8	+2.1
	comp=Z,31nm,0.9s						
TKM2	Tokmak 2	49.85	299	eP	P	12 43 30.7	+0.1
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
TKM2	Tokmak 2	49.85	299	eP	P	12 43 30.7	+0.1
	comp=Z,4.7nm,0.6s						
BRVK	Borovoye	50.84	312	eP	P	12 43 38.9	+1.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRVK	Borovoye	50.84	312	eP	P	12 43 38.9	+1.3
	comp=Z,3.3nm,0.7s						
FITZ	Fitzroy Crossi	56.79	198	eP	P	12 44 22.0	+0.6
	comp=Z,2.9nm,0.5s						
WRAB	Tennant Creek	56.98	188	eP	P	12 44 22.1	-0.6
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRAB	Tennant Creek	56.98	188	eP	P	12 44 22.1	-0.6
	comp=Z,2.2nm,0.6s						
WRA	Warramunga Arr	56.99	188	P	P	12 44 22.2	-0.6
WRA	Warramunga Arr	56.99	188	P	P	12 44 22.2	-0.6
	comp=Z,3.1nm,0.5s,baz=5.6,slow=7.4,SNR=74						
ABKAR	Akbulak array	58.15	310	eP	P	12 44 30.6	-0.1
	comp=Z,3.8nm,0.5s						
ASAR	Alice Springs	60.72	188	P	P	12 44 48.4	-0.3
ASAR	Alice Springs	60.72	188	P	P	12 44 48.4	-0.3
	comp=Z,3.3nm,0.8s,baz=7.2,slow=5.5,SNR=52						
YKA	Yellowknife Ar	63.79	30	P	P	12 45 08.0	-0.8
YKA	Yellowknife Ar	63.79	30	P	P	12 45 08.0	-0.8
	comp=Z,0.4nm,0.7s,baz=306,slow=6.7,SNR=11						
ARCES	ARCESS Array B	64.16	339	LR	LR	13 18 56.4	
	comp=Z,50nm,20.6s,baz=102,slow=41						
STKA	Stephens Creek	68.46	180	P	P	12 45 38.5	-0.4
STKA	Stephens Creek	68.46	180	P	P	12 45 38.5	-0.4
	comp=Z,2.2nm,0.9s,baz=327,slow=9.2,SNR=4.1						
FINES	FINESS Array B	68.99	332	P	P	12 45 42.1	0.0
FINES	FINESS Array B	68.99	332	P	P	12 45 42.1	0.0
	comp=Z,3.1nm,0.9s,baz=71,slow=8.3,SNR=4.8						
FINES				LR	LR	13 19 26.5	
	comp=Z,36nm,20.6s,baz=47,slow=39						
LRM	Limekiln Ridge	74.08	44	eP	P	12 46 14.2	+0.8
NB2	NORSAR Subarra	74.35	337	P	P	12 46 14.4	+0.1
	comp=Z,1.0nm,0.6s,baz=41,slow=5.9						
NOA	NORSAR Array B	74.35	337	P	P	12 46 14.5	+0.1
NOA	NORSAR Array B	74.35	337	P	P	12 46 14.5	+0.1
	comp=Z,1.6nm,0.7s,baz=39,slow=5.8,SNR=7.4						
NOA				LR	LR	13 20 29.6	
	comp=Z,44nm,20.9s,baz=30,slow=37						
AKASG	Malin Array Be	74.50	322	P	P	12 46 15.4	+0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	74.50	322	P	P	12 46 15.4	+0.1
AKASG	Malin Array Be	74.50	322	P	P	12 46 15.4	+0.1
	comp=Z,0.5nm,0.4s,baz=43,slow=6.2,SNR=4.3						
NVAR	Mina Array Bea	74.89	53	P	P	12 46 18.9	+0.7
NVAR	Mina Array Bea	74.89	53	P	P	12 46 18.9	+0.7
	comp=Z,2.1nm,0.8s,baz=286,slow=6.2,SNR=18						
PDAR	Pinedale Array	77.59	46	P	P	12 46 33.2	-0.2
PDAR	Pinedale Array	77.59	46	P	P	12 46 33.3	-0.2
	comp=Z,0.4nm,0.6s,baz=266,slow=4.0,SNR=4.1						
JLU	Jordanelle	77.84	48	eP	P	12 46 34.3	-0.6
	comp=Z,3.4nm,0.4s						
CCUT	Cedar City	78.55	52	eP	P	12 46 40.3	+1.4
	comp=Z,32nm,2.7s						
MVU	Marysvale	78.67	50	eP	P	12 46 41.6	+2.0
PPT	Papeete	84.41	117	LR	LR	13 21 07.9	
	comp=Z,95nm,20.4s,baz=268,slow=33						
RPZ	Rata Peaks	84.60	159	LR	LR	13 21 06.8	
	comp=Z,136nm,19.9s,baz=34,slow=33						
TXAR	Lajitas Array	90.02	53	P	P	12 47 37.5	+0.5
TXAR	Lajitas Array	90.02	53	P	P	12 47 37.5	+0.5
	comp=Z,1.3nm,0.7s,baz=292,slow=3.6,SNR=11						
LPAZ	La Paz	146.57	60	PKPbc	PKPbc	12 54 19.3	-0.3
LPAZ	La Paz	146.57	60	PKPbc	PKPbc	12 54 19.3	-0.3
	comp=Z,1.5nm,0.7s,baz=296,slow=2.5,SNR=5.9						

JMA 02 12:39:53.9±0.4, 27°.02N×125°.90E, h180km, M3.7, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKE	Kume jima 2	1.05	131	P	Pn	12 40 22.4	+0.4
JKE				eS	Sn	12 40 43.6	-0.1
JAGN	Aguni-jima	1.27	109	P	Pn	12 40 24.1	+0.3
JAGN				eS	Sn	12 40 46.4	-0.4
JIH	Iheya	1.84	89	P	Pn	12 40 29.2	-0.1
JIH				eS	Sn	12 40 55.1	-1.6
JJT2	Tamagusuku 2	1.87	118	P	Pn	12 40 30.3	+0.7
JJT2				eS	Sn	12 40 57.1	-0.2
JOW	Kunigami	2.13	95	P	Pn	12 40 32.1	-0.3
JOW				eS	Sn	12 40 59.9	-2.3
JMJ	Miyako jima 2	2.26	194	P	Pn	12 40 34.1	+0.2
JMJ				eS	Sn	12 41 05.1	+0.1
JOGS	Gusukube	2.29	191	P	Pn	12 40 34.6	+0.3
JOGS				eS	Sn	12 41 06.2	+0.6
JTJ	Tarama	2.60	205	P	Pn	12 40 37.4	-0.4
JTJ				eS	Sn	12 41 10.4	-1.6
JTK	Tokunoshima	2.82	74	P	Pn	12 40 38.9	-1.4
JTK				eS	Sn	12 41 13.4	-3.1
JIJ	Ishigaki jima	3.08	211	P	Pn	12 40 42.5	-1.1
JIJ				eS	Sn	12 41 18.3	-4.0
JAMN	Amaminishikomi	3.15	67	P	Pn	12 40 42.6	-1.7
JAMN				eS	Sn	12 41 20.9	-2.8
JKRS	Kuro-shima	3.25	212	P	Pn	12 40 44.7	-1.0
JKRS				eS	Sn	12 41 23.5	-2.6
IRIF	Iriomote-Funau	3.31	217	P	Pn	12 40 45.4	-1.0
IRIF				eS	Sn	12 41 25.2	-2.2
HATJ	Hateruma jima	3.50	213	P	Pn	12 40 47.8	-1.0
HATJ				eS	Sn	12 41 29.2	-2.5
JAM	Amami Oshima	3.56	66	P	Pn	12 40 47.7	-1.8
JAM				eS	Sn	12 41 28.7	-4.2
YOJ	Yonaguni jima	3.64	226	P	Pn	12 40 50.5	0.0
YOJ				eS	Sn	12 41 34.6	-0.2
JZK	Kikaishima	3.83	69	P	Pn	12 40 52.3	-0.6
JZK				eS	Sn	12 41 36.0	-3.0
JMZ	Minamidaito 2	4.92	103	P	Pn	12 41 05.7	-1.1
JMZ				eS	Sn	12 41 58.5	-5.5

ISK 02 13:04:39.9, 37°.24N×28°.17E, h5km, MD2.4
ISCJB 02 13:04:41.1±0.7, 37°.19N±0°.05×28°.16E±0°.04, h0km, Error ellipse: s-maj=6.7km s-min=4.5km az=168.9
CSEM 02 13:04:41.2±0.2, 37°.19N×28°.16E, h2km, MD2.8, Error ellipse: s-maj=5.7km s-min=4.0km az=7.0
DDA 02 13:04:44.3, 37°.44N×28°.18E, h7km, MD2.8
ISC 02 13:04:41.5±1.1, 37°.22N±0°.04×28°.18E±0°.03, h0km, n14, σ0ˢ.57/22, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.12	135	ePG	Pg	13 04 43.3	-0.5
YER	Yerkesik	0.12	135	ePg	Pg	13 04 43.3	-0.5
MLSB	Milas	0.33	284	ePG	Pg	13 04 47.3	-0.5
MLSB	Milas	0.33	284	ePg	Pg	13 04 47.3	-0.5
AYDN	Tasoluk	0.50	332	iP	Pg	13 04 50.6	-0.5
AYDN				iS	Sg	13 04 58.5	+0.8
AYDN	Tasoluk	0.50	332	iP	Pg	13 04 50.6	-0.5
AYDN				iS	Sg	13 04 58.5	+0.8
BODT	Bodrum	0.71	258	ePG	Pg	13 04 54.6	-0.5
BODT				eSG	Sg	13 05 05.4	+1.1
BODT	Bodrum	0.71	258	ePg	Pg	13 04 54.6	-0.5
BODT				eSg	Sg	13 05 05.4	+1.1
DNZL	Cakiroluk	0.84	55	iP	Pg	13 04 57.6	+0.1
DNZL				iS	Sb	13 05 10.9	0.0
DNZL	Cakiroluk	0.84	55	iP	Pg	13 04 57.6	+0.1
DNZL				iS	Sb	13 05 10.9	0.0
FETY	Fethiye	0.93	128	ePG	Pg	13 04 59.1	-0.2
FETY	Fethiye	0.93	128	ePg	Pg	13 04 59.1	-0.2
KHAL	Karahalli	1.55	42	iP	Pb	13 05 10.9	-0.3
KHAL				iS	Sg	13 05 31.6	+0.2
KHAL	Karahalli	1.55	42	iP	Pb	13 05 10.9	-0.3
KHAL				iS	Sg	13 05 31.6	+0.2

IDC 02 13:24:40.2±1.9, 15°.71N×87°.35W, h0km, mb3.7/6, mb1 4.1/7, mb1mx3.8/24, mbtmp3.8/7, ML4.1/1, MS3.2/1, Ms1 3.2/1, ms1mx2.5/35, Error ellipse: s-maj=60.2km s-min=28.6km az=42.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	Tepich	4.58	349	Pn	Pn	13 25 51.0	+0.2
	9.5nm,0.3s,baz=236,slow=1.4,SNR=16						
TEIG				Sn	Sn	13 26 44.8	+0.1
	35nm,0.3s,baz=143,slow=20,SNR=23						
ROSC	El Rosal	16.73	129	LR	LR	13 35 35.6	
	comp=Z,74nm,19.9s,baz=214,slow=39						
TXAR	Lajitas Array	20.24	315	P	P	13 29 16.8	-0.4
	0.8nm,0.7s,baz=134,slow=11,SNR=8.4						
YKA	Yellowknife Ar	50.52	344	P	P	13 33 39.4	-0.5
	0.9nm,0.7s,baz=141,slow=7.6,SNR=26						
YKA				PcP	PcP	13 34 57.3	-0.6
	0.2nm,0.6s,baz=144,slow=4.1,SNR=6.0						
DLBC	Dease Lake	53.04	333	P	P	13 34 00.7	+1.7
	3.2nm,0.9s,baz=184,slow=5.1,SNR=5.4						
ILAR	Eielson Array	63.11	336	P	P	13 35 08.8	-0.5
	1.4nm,1.0s,baz=107,slow=5.9,SNR=16						
ESDC	Sonseca Array	75.12	52	P	P	13 36 24.7	+0.2
	0.3nm,0.3s,baz=285,slow=4.5,SNR=4.3						
TORD	Torodi Ar. Bea	85.61	78	P	P	13 37 21.3	0.0
	0.2nm,0.7s,baz=301,slow=5.2,SNR=2.8						
CMAR	Chiang Mai Arr	145.49	349	PKPbc	PKPbc	13 44 20.1	-1.0
	1.3nm,0.6s,baz=338,slow=3.5,SNR=7.6						

IDC 02 13:33:23.1±2.2, 1°.09N×126°.31E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/21, mbtmp3.3/3, Error ellipse: s-maj=185.7km s-min=27.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.34	160	P	P	13 38 21.6	-1.1
	0.9nm,0.7s,baz=338,slow=11,SNR=8.8						
ASAR	Alice Springs	25.70	164	P	P	13 38 56.0	+0.9
	0.3nm,0.4s,baz=342,slow=9.8,SNR=5.2						
MKAR	Makanchi Array	59.48	326	P	P	13 43 28.0	-0.1
	0.1nm,0.4s,baz=118,slow=8.3,SNR=4.0						

ISCJB 02 13:38:26.8±0.6, 59°.80N±0°.04×24°.28E±0°.08, h0km, Error ellipse: s-maj=6.2km s-min=4.4km az=39.8
IDC 02 13:38:27.7±3.4, 59°.76N×24°.45E, h0km, mb1 3.3/2, mb1mx2.9/26, mbtmp3.2/2, ML2.9/2, Error ellipse: s-maj=42.4km s-min=11.8km az=156.0
HEL 02 13:38:28.8±0.1, 59°.84N×24°.27E, h0km, ML1.8, Explosion
ISC 02 13:38:26.8±0.9, 59°.82N±0°.04×24°.20E±0°.04, h0km, n11, σ0ˢ.75/21, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEF	Metsahovi	0.41	13	eP	Pg	13 38 35.4	+0.7
MEF				eS	Sg	13 38 40.4	+0.4
PVF	Pernaja	1.10	48	eP	Pg	13 38 48.0	0.0
PVF				eS	Sg	13 39 01.1	-1.2
MTSE	Matsula	1.12	190	eP	Pb	13 38 49.1	+0.1
MTSE				eS	Sg	13 39 02.6	-0.2
RAF	Rauma	1.71	316	eP	Pb	13 38 59.0	0.0
RAF				eS	Sg	13 39 21.8	+0.1
VJF	Virojoki	1.82	65	eP	Pb	13 39 00.7	-0.3
VJF				eS	Sn	13 39 23.7	+0.6
VJF				MSG		13 39 28.3	
	comp=Z,5.9nm,0.1s						
FIA0	FINESS Array S	1.88	29	eP	Pb	13 39 01.8	0.0
FIA0				eS	Sb	13 39 25.3	-0.5
FIA0				MSG		13 39 30.8	
	comp=Z,5.3nm,0.2s						
FINES	FINESS Array B	1.88	29	Pn	Pb	13 39 01.8	0.0
	comp=Z,1.0nm,0.3s,baz=204,slow=15,SNR=34						
FINES				Sn	Sg	13 39 26.6	-0.4
	comp=Z,2.3nm,0.3s,baz=216,slow=27,SNR=18						
AAL	Aland	2.15	282	eP	Pb	13 39 06.7	+0.2
AAL				eS	Sb	13 39 33.4	-0.2
KAF	Kangasniemi	2.52	23	ePB	Pb	13 39 12.2	-0.7
KAF				eSG	Sb	13 39 44.8	+0.4
NOA	NORSAR Array B	6.55	286	Pn	Pn	13 40 04.8	+0.5
	comp=Z,0.2nm,0.3s,baz=64,slow=20,SNR=7.2						
NOA				Sn	Sn	13 41 17.1	-2.4
	comp=Z,0.1nm,0.3s,baz=283,slow=8.4,SNR=2.8						
ARCES	ARCESS Array B	9.77	3	Pn	Pn	13 40 48.9	+0.4
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=8.3						

ISCJB 02 13:51:47.0±0.3, 23°.30N±0°.02×121°.58E±0°.02, h26km±3km, Error ellipse: s-maj=3.3km s-min=2.6km az=136.2
TAP 02 13:51:47.8, 23°.33N×121°.49E, h31km, ML3.2, B
JMA 02 13:51:48.4±0.3, 23°.32N×121°.60E, h73km, M2.7
ISC 02 13:51:47.1±1.0, 23°.30N±0°.02×121°.56E±0°.02, h26km±8km, n57, σ0ˢ.84/95, 14C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWF1	Yuli	0.25	282	⇑iP	Pb	13 51 54.1	+0.6
	baz=276						
CHKT	Chengkung	0.27	222	⇓iP	Pn	13 51 55.0	-0.5
	baz=200						
CHKT				S	Sn	13 52 00.1	-0.5
	baz=200						
EHY	Hungye	0.30	313	⇑iP	Pb	13 51 54.6	+0.3
	baz=307						
EHY				S	Sb	13 51 59.4	+0.2
	baz=307						
TEGC	Jichi Village	0.41	358	eP	Pn	13 51 57.0	-0.4
	baz=14						
TEGC				eS	Sn	13 52 04.5	+0.3
	baz=14						
ELDTW	Lidau	0.51	258	⇑iP	Pb	13 51 57.2	-0.5
	baz=246						
ELDTW				eS	Sb	13 52 03.3	-1.5
	baz=246						
ESL	Shilin	0.53	347	⇑P	Pb	13 51 57.4	-0.4
	baz=343						
YUS	Yu-Shan	0.59	289	⇑iP	Pb	13 51 59.1	-0.1
	baz=287						
YUS				eS	Sb	13 52 06.7	-0.7
	baz=287						
TWG	Pinlang	0.66	223	eP	Pb	13 51 59.2	-0.8
	baz=226						
TWG				eS	Sb	13 52 07.7	-1.0
	baz=226						
TTN	Taitung	0.66	215	eP	Pb	13 51 59.0	-1.2
	baz=209						
HWA	Hwalien	0.68	4	eP	Pb	13 52 00.6	+0.3
	baz=357						
ALS	Alishan	0.72	287	⇑P	Pb	13 52 01.4	0.0
	baz=286						
TWD	Chiawan	0.78	2	eP	Pb	13 52 01.1	-1.0
	baz=354						
SMLT	Sun Moon Lake	0.84	314	⇑iP	Pb	13 52 02.8	-0.4
	baz=319						
SMLT				eS	Sb	13 52 13.6	-0.5
	baz=319						
CHN5	Tsauling	0.86	290	⇑iP	Pn	13 52 03.7	0.0
	baz=289						
CHN5				eS	Sn	13 52 15.4	-0.1
	baz=289						
WTP	Ta-pu	0.87	267	P	Pn	13 52 03.7	-0.1
	baz=264						
WTP				S	Sn	13 52 15.8	+0.1
	baz=264						
TYC	Yuchr	0.88	313	⇑eP	Pb	13 52 03.4	-0.4
	baz=320						
TYC				eS	Sb	13 52 14.8	-0.4
	baz=320						
WHF	Hehuan Shan	0.88	342	⇑iP	Pb	13 52 03.1	-1.0
	baz=345						
WHF				eS	Sb	13 52 13.7	-2.1
	baz=345						
CHN4	Tsaushan	0.89	273	P	Pn	13 52 04.2	+0.2
	baz=271						
CHN4				iS	Sn	13 52 16.4	+0.4
	baz=271						
ECL	Taimali	0.90	219	eP	Pb	13 52 02.4	-1.6
	baz=215						
CHN1	Nanshi	0.95	263	⇑P	Pb	13 52 05.3	+0.3
	baz=261						
CHN1				S	Sn	13 52 18.3	+0.6
	baz=261						
TWK	Hsinying	0.99	268	eP	Pb	13 52 05.5	-0.1
	baz=266						
TWK				eS	Sn	13 52 18.6	+0.1
	baz=266						
WNT	Mingjian	0.99	306	⇑P	Pb	13 52 05.9	+0.3
	baz=305						
WNT				S	Sn	13 52 18.8	+0.3
	baz=305						
WGK	Gukeng	0.99	293	eP	Pb	13 52 05.7	0.0
	baz=292						
WGK				eS	Sn	13 52 18.6	0.0
	baz=292						
TWT	Tachien	1.01	340	⇑eP	Pn	13 52 05.6	-0.3
	baz=340						
TWT				eS	Sb	13 52 17.2	-2.0
	baz=340						
CHN2	Minshiung	1.02	283	eP	Pb	13 52 06.7	+0.5
	baz=293						
CHN2				eS	Sn	13 52 21.1	+1.8
	baz=293						
CHY	Chiayi	1.06	281	eP	Pb	13 52 06.5	-0.3
	baz=279						
CHY				eS	Sn	13 52 20.7	+0.5
	baz=279						
EAST	Anshuo	1.12	216	eP	Pn	13 52 06.1	-1.1
	baz=214						
ENA	Nanau	1.14	8	eP	Pn	13 52 06.3	-1.1
	baz=357						
NNS	Nan Shan	1.15	351	eP	Pn	13 52 07.4	-0.3
	baz=3.0						
TWM1	Shoushan	1.15	246	eP	Pb	13 52 09.6	+1.2
	baz=244						
TWM1				eS	Sb	13 52 26.7	+3.8
	baz=244						
TCU	Taichung	1.17	316	eP	Pb	13 52 08.8	+0.1
	baz=304						
TCU				eS	Sb	13 52 23.3	-0.2
	baz=304						
LAY	Lan-yu	1.25	180	eP	Pn	13 52 08.0	-1.1
	baz=172						
SCLT	Jiali	1.26	265	eP	Pb	13 52 11.4	+1.2
	baz=263						
SCZT	Fangliau	1.27	223	eP	Pb	13 52 10.2	-0.1
	baz=212						
SCZT				eS	Sb	13 52 26.6	+0.4
	baz=212						
TWQ1	Liyutan	1.27	326	⇑iP	Pb	13 52 10.4	+0.1
	baz=325						
TWQ1				S	Sb	13 52 27.0	+0.7
	baz=325						
WSF	Szhu	1.27	286	eP	Pn	13 52 09.5	+0.3
	baz=284						
WSF				eS	Sn	13 52 25.4	-0.1
	baz=284						
WTCT	Ta-ch'eng	1.30	296	eP	Pn	13 52 09.8	+0.2
	baz=294						
WTCT				eS	Sb	13 52 26.8	-0.4
	baz=294						
NSY	Sanyi	1.33	327	eP	Pb	13 52 11.4	0.0
	baz=326						
NSY				eS	Sb	13 52 28.9	+0.8
	baz=326						
TWC	Suao	1.33	11	eP	Pn	13 52 10.5	+0.5
	baz=360						
ENTT	Nioudou	1.33	0	eP	Pn	13 52 09.5	-0.6
NSK	Sanguang	1.38	352	P	Pn	13 52 11.0	+0.1
	baz=4.0						
NSK				eS	Sn	13 52 27.3	-1.0
	baz=4.0						
TWE	Neicheng	1.42	4	eP	Pn	13 52 11.8	+0.6
	baz=4.0						
NSTT	Nanjuang	1.42	339	P	Pb	13 52 12.1	-0.9
	baz=339						
NSTT				eS	Sb	13 52 29.9	-0.8
	baz=339						
HEN	Hengchun	1.50	211	eP	Pn	13 52 13.2	+0.8
	baz=200						
HEN				eS	Sb	13 52 32.1	-0.7
	baz=200						
TWK1	Hengchun	1.52	207	eP	Pn	13 52 13.4	+0.8
	baz=210						
TWK1				eS	Sb	13 52 33.0	-0.5
	baz=210						
TSEB	Hengchuen, Pin	1.52	204	eP	Pn	13 52 13.4	+0.7
	baz=198						
TWB1	Santiao Chiao	1.75	13	eP	Pn	13 52 16.7	+1.0
	baz=358						
WDGT	Dungji	1.75	269	eP	Pn	13 52 15.5	-0.3
	baz=267						
YOJ	Yonaguni jima	1.76	49	eP	Pn	13 52 16.6	+0.6
	baz=48						
YOJ				eS	Sn	13 52 37.7	+0.1
	baz=48						
YOJ	Yonaguni jima	1.76	49	P	Pn	13 52 16.9	+0.9
YOJ				eS	Sn	13 52 38.1	+0.5
TWS1	Kuangyinshan	1.80	356	eP	Pn	13 52 17.1	+0.7
	baz=8.0						
PNG	Penghu	1.86	279	eP	Pn	13 52 17.3	0.0
	baz=276						
PNG				eS	Sn	13 52 38.9	-1.1
	baz=276						
HATJ	Hateruma jima	2.19	69	P	Pn	13 52 22.6	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HATJ				eS	Sn	13 52 48.2	0.0
IRIF	Iriomote-Funau	2.24	62	P	Pn	13 52 23.4	+0.9
IRIF				eS	Sn	13 52 50.2	+0.8
JKRS	Kuro-shima	2.43	67	P	Pn	13 52 26.5	+1.3
JKRS				eS	Sn	13 52 55.0	+0.9
JIJ	Ishigaki jima	2.59	65	P	Pn	13 52 28.0	+0.6
JIJ				eS	Sn	13 52 58.1	0.0
JTJ	Tarama	3.17	64	P	Pn	13 52 36.2	+0.9
JTJ				eS	Sn	13 53 12.1	-0.2

IDC 02 14:01:58.7±3.8, 16.27N×87.07W, h0km, mb3.4/4, mb1 3.8/5, mb1mx3.6/23, mbtmp3.4/5, ML3.4/1, Error ellipse: s-maj=97.4km s-min=58.9km az=75.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	Tepich	4.10	344	Pn	Pn	14 03 03.4	+0.7
	2.2nm,0.3s,baz=282,slow=0.8,SNR=15						
TEIG				Sn	Sn	14 03 51.0	-0.5
	8.5nm,0.3s,baz=255,slow=21,SNR=12						
TXAR	Lajitas Array	20.05	313	P	P	14 06 34.4	+0.8
	0.8nm,0.8s,baz=134,slow=11,SNR=7.0						
PDAR	Pinedale Array	32.66	329	P	P	14 08 32.1	-0.8
	0.3nm,0.4s,baz=127,slow=12,SNR=2.7						
YKA	Yellowknife Ar	50.06	344	P	P	14 10 55.3	+0.3
	0.3nm,0.4s,baz=142,slow=7.6,SNR=8.7						
ILAR	Eielson Array	62.71	335	P	P	14 12 24.9	-0.3
	0.4nm,0.8s,baz=114,slow=5.7,SNR=5.9						

*IDC **02** 14:07:19.1±2.5, 59.67N×24.49E, h0km, mb1 3.6/2, mb1mx3.1/26, mbtmp3.4/2, ML3.4/2, Error ellipse: s-maj=29.1km s-min=11.2km az=153.0*
*ISCJB **02** 14:07:19.5±0.5, 59.83N±0.03×24.21E±0.06, h0km, Error ellipse: s-maj=5.4km s-min=3.6km az=40.1*
*BER **02** 14:07:20.7±3.2, 59.74N×24.39E, h0km, ML2.2(NAO)*
*NAO **02** 14:07:20.1±2.3, 59.71N×24.44E, ML2.2*
*HEL **02** 14:07:21.2±0.1, 59.82N×24.25E, h0km, ML2.0, Explosion*
*CSEM **02** 14:07:21.3±0.2, 59.92N×24.14E, h2km, ML2.0, Error ellipse: s-maj=5.9km s-min=3.2km az=153.0, Mining explosion.*
ISC 02 14:07:19.2±0.7, 59.83N±0.03×24.22E±0.03, h0km, n33, σ1s39/60, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	Metsahovi	0.39	13	eP	Pg	14 07 28.1	+1.3
MEF				eS	Sg	14 07 33.5	+1.8
MEF	Metsahovi	0.39	13	P	Pg	14 07 28.0	+1.3
MEF				eS	Sg	14 07 32.9	+1.1
	139nm,0.6s,SNR=90						
PVF	Pernaja	1.08	48	eP	Pg	14 07 40.6	+0.7
PVF				eS	Sb	14 07 55.7	+0.2
PVF				MSG		14 08 02.3	
	comp=Z,15nm,0.2s						
PVF	Pernaja	1.08	48	P	Pg	14 07 40.6	+0.7
PVF				S	Sb	14 07 55.6	+0.2
MTSE	Matsula	1.14	191	eP	Pg	14 07 41.3	+0.3
MTSE				eS	Sg	14 07 56.1	+0.4
RAF	Rauma	1.71	315	eP	Pb	14 07 51.7	+0.4
RAF				eS	Sb	14 08 13.8	+0.4
RAF	Rauma	1.71	315	P	Pb	14 07 51.7	+0.4
RAF				S	Sb	14 08 13.7	+0.4
VJF	Virojoki	1.81	66	eP	Pb	14 07 52.9	-0.1
VJF				eS	Sb	14 08 16.8	+0.6
VJF	Virojoki	1.81	66	P	Pb	14 07 52.9	-0.1
VJF				S	Sb	14 08 16.8	+0.6
FIA0	FINESS Array S	1.85	29	Pg	Pb	14 07 54.3	+0.4
	baz=223,slow=16						
FIA0				Lg	Lg	14 08 20.8	
	baz=201,slow=28						
FIA0	FINESS Array S	1.85	29	Pg	Pb	14 07 54.3	+0.4
	baz=223,slow=16						
FIA0				Lg	Lg	14 08 20.8	
	baz=201,slow=28						
FIA0	FINESS Array S	1.85	29	eP	Pb	14 07 54.3	+0.4
FIA0				eS	Sg	14 08 18.9	+0.2
FIA0	FINESS Array S	1.85	29	P	Pb	14 07 54.3	+0.4
FIA0				S	Sg	14 08 18.8	+0.2
FIA0				Lg	Lg	14 08 20.8	
	baz=201,slow=25						
FINES	FINESS Array B	1.85	29	Pn	Pb	14 07 54.3	+0.4
	comp=Z,3.1nm,0.3s,baz=202,slow=14,SNR=49						
FINES				Sn	Sg	14 08 19.4	+0.7
	comp=Z,5.3nm,0.3s,baz=202,slow=24,SNR=16						
AAL	Aland	2.15	281	ePB	Pb	14 07 59.5	+0.6
AAL				eSB	Sb	14 08 26.7	+0.6
AAL	Aland	2.15	281	Pb	Pb	14 07 59.5	+0.6
AAL				Sb	Sb	14 08 26.7	+0.6
SLIT	Slitere, Latvi	2.43	205	eP	Pb	14 08 03.2	-0.5
	SNR=50						
SLIT				eS	Sb	14 08 35.4	+1.3
	comp=Z,136nm,0.2s,SNR=50						
KAF	Kangasniemi	2.50	23	ePB	Pb	14 08 04.8	-0.1
KAF				eSB	Sb	14 08 37.0	+0.8
KAF				MSG		14 08 39.3	
	comp=Z,7.3nm,0.2s						
SUF	Sumiainen	3.04	17	ePB	Pb	14 08 13.4	-0.7
SUF				eSB	Sb	14 08 51.9	+0.2
HFS	Hagfors	5.30	278	Pn	Pn	14 08 41.7	+2.3
	baz=97,slow=14						
HFS				Sn	Sn	14 09 39.7	-1.4
	baz=76,slow=37						
HFS	Hagfors	5.30	278	Pn	Pn	14 08 41.7	+2.3
	baz=97,slow=14						
HFS				Sn	Sn	14 09 39.7	-1.4
	baz=76,slow=37						
HFS	Hagfors	5.30	278	Pn	Pn	14 08 41.7	+2.3
	baz=97,slow=13,SNR=50						
HFS				Sn	Sn	14 09 39.7	-1.4
	baz=76,slow=33,SNR=50						
NB2	NORSAR Subarra	6.55	286	Pn	Pn	14 08 57.1	+0.5
	baz=94,slow=14						
NB2				Sn	Sn	14 10 10.6	-1.4
	baz=97,slow=22						
NB2	NORSAR Subarra	6.55	286	Pn	Pn	14 08 57.1	+0.5
	baz=94,slow=14						
NB2				Sn	Sn	14 10 10.6	-1.4
	baz=97,slow=22						
NB2	NORSAR Subarra	6.55	286	Pn	Pn	14 08 57.2	+0.5
	baz=94,slow=13,SNR=50						
NB2				Sn	Sn	14 10 10.6	-1.4
	baz=97,slow=21,SNR=50						
NOA	NORSAR Array B	6.55	286	Pn	Pn	14 08 56.9	+0.2
	comp=Z,0.3nm,0.3s,baz=80,slow=15,SNR=20						
NOA				Sn	Sn	14 10 09.2	-2.9
	comp=Z,0.4nm,0.3s,baz=110,slow=16,SNR=5.9						
APA0	Apatity Array	8.71	23	Pn	Pn	14 09 27.0	+0.9
	baz=203,slow=14						
APA0	Apatity Array	8.71	23	Pn	Pn	14 09 27.0	+0.9
	baz=203,slow=14						
APA0	Apatity Array	8.71	23	Pn	Pn	14 09 27.0	+0.9
	baz=203,slow=13,SNR=50						
ARA0	ARCESS Array S	9.76	3	Pn	Pn	14 09 41.0	+0.5
	baz=175,slow=16						
ARA0				Sn	Sn	14 11 26.0	-4.7
	baz=186,slow=28						
ARA0	ARCESS Array S	9.76	3	Pn	Pn	14 09 41.0	+0.5
	baz=175,slow=16						
ARA0				Sn	Sn	14 11 26.0	-4.7
	baz=186,slow=28						
ARA0	ARCESS Array S	9.76	3	Pn	Pn	14 09 41.0	+0.5
	baz=175,slow=14,SNR=50						
ARCES	ARCESS Array B	9.76	3	Pn	Pn	14 09 40.7	+0.2
	comp=Z,0.5nm,0.3s,baz=180,slow=14,SNR=40						
ARCES				Sn	Sn	14 11 27.3	-3.4
	comp=Z,0.1nm,0.3s,baz=190,slow=25,SNR=3.8						

*IDC **02** 14:21:47.2±3.5, 59.65N×24.54E, h0km, mb1 3.3/2, mb1mx2.9/26, mbtmp3.2/2, ML2.8/2, Error ellipse: s-maj=43.1km s-min=12.1km az=156.0*
*ISCJB **02** 14:21:48.1±0.6, 59.82N±0.03×24.27E±0.07, h0km, Error ellipse: s-maj=5.9km s-min=4.2km az=37.2*
*HEL **02** 14:21:49.6±0.1, 59.83N×24.27E, h0km, ML1.8, Explosion*
ISC 02 14:21:47.1±0.9, 59.78N±0.05×24.22E±0.04, h0km, n12, σ0s67/23, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	Metsahovi	0.45	11	eP	Pg	14 21 56.2	+0.5
MEF				eS	Sg	14 22 01.9	+0.3
MTSE	Matsula	1.09	191	eP	Pn	14 22 09.8	+0.3
MTSE				eS	Sn	14 22 25.2	0.0
PVF	Pernaja	1.12	46	eP	Pg	14 22 08.7	+0.1
PVF				eS	Sg	14 22 23.5	+0.3
RAF	Rauma	1.75	317	eP	Pb	14 22 20.2	+0.2
RAF				eS	Sb	14 22 42.6	+0.2
RAF				MSG		14 22 48.0	
	comp=Z,4.5nm,0.3s						
VJF	Virojoki	1.83	64	eP	Pb	14 22 21.1	-0.4
VJF				eS	Sb	14 22 45.1	+0.2
FIA0	FINESS Array S	1.91	28	eP	Pb	14 22 22.4	-0.3
FIA0				eS	Sn	14 22 46.2	+0.7
FIA0				MSG		14 22 51.1	
	comp=Z,6.1nm,0.1s						
FINES	FINESS Array B	1.91	28	Pn	Pb	14 22 22.3	-0.3
	comp=Z,0.9nm,0.3s,baz=204,slow=16,SNR=25						
FINES				Sn	Sg	14 22 49.1	+0.8
	comp=Z,1.2nm,0.3s,baz=231,slow=24,SNR=10						
AAL	Aland	2.16	283	eP	Pb	14 22 26.9	-0.2
AAL				eS	Sb	14 22 54.8	+0.4
KAF	Kangasniemi	2.56	23	ePB	Pb	14 22 33.3	-0.5
KAF				eSG	Sb	14 23 06.2	+0.5
KAF				MSG		14 23 10.3	
	comp=Z,3.9nm,0.1s						
SUF	Sumiainen	3.10	17	ePB	Pb	14 22 41.6	-1.3
SUF				eSB	Sb	14 23 20.8	-0.5
SUF				MSG		14 23 24.0	
	comp=Z,1.7nm,0.1s						
NOA	NORSAR Array B	6.57	287	Pn	Pn	14 23 25.5	+0.6
	comp=Z,0.1nm,0.3s,baz=41,slow=16,SNR=3.6						
NOA				Sn	Sn	14 24 38.6	-1.7
	comp=Z,0.1nm,0.3s,baz=120,slow=21,SNR=2.3						
ARCES	ARCESS Array B	9.81	3	Pn	Pn	14 24 08.6	-0.7
	comp=Z,0.1nm,0.3s,baz=188,slow=12,SNR=6.1						

DDA 02 14:28:09.9, 38.83N×27.84E, h7km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MANT	Manisa	0.65	121	i P	Pg	14 28 22.5	-0.4
MANT				i S	Sg	14 28 32.2	+0.7
DURS	Dursunbey	0.91	32	i P	Pg	14 28 27.6	-0.1
DURS				i S	Sb	14 28 41.5	+0.7
KHAL	Karahalli	1.37	109	i P	Pn	14 28 35.3	-0.3
KHAL				i S	Sb	14 28 53.5	-0.4

*IDC **02** 14:36:01.2±3.2, 59.53N×24.74E, h0km, mb1 3.1/4, mb1mx2.9/28, mbtmp3.0/4, ML2.8/4, Error ellipse: s-maj=39.8km s-min=10.2km az=151.0*
*ISCJB **02** 14:36:02.2±0.5, 59.82N±0.03×24.18E±0.07, h0km, Error ellipse: s-maj=5.7km s-min=4.1km az=41.3*
*CSEM **02** 14:36:03.2±0.2, 59.81N×24.24E, h2km, ML1.5, Error ellipse: s-maj=4.9km s-min=3.3km az=126.0, Mining explosion.*
*BER **02** 14:36:04.6±4.2, 59.84N×24.11E, h0km, ML2.3(NAO), Suspected explosion*
*HEL **02** 14:36:04.2±0.0, 59.82N×24.23E, h0km, ML1.5, Explosion*
*NAO **02** 14:36:06.4±2.0, 60.00N×23.94E, ML2.3*
ISC 02 14:36:02.8±0.8, 59.81N±0.03×24.26E±0.04, h0km, n31, σ0s67/41, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	Metsahovi	0.42	9	eP	Pg	14 36 11.3	+0.4
MEF				eS	Sg	14 36 16.7	+0.4
MEF	Metsahovi	0.42	9	P	Pg	14 36 11.2	+0.4
MEF				eS	Sg	14 36 16.6	+0.4
	394nm,0.5s,SNR=90						
PVF	Pernaja	1.09	46	eP	Pg	14 36 23.8	+0.1
PVF				eS	Sg	14 36 37.2	-0.6
PVF				MSG		14 36 38.5	
	comp=Z,6.6nm,0.1s						
PVF	Pernaja	1.09	46	P	Pg	14 36 23.8	+0.1
PVF				S	Sg	14 36 37.2	-0.6
MTSE	Matsula	1.12	192	eP	Pg	14 36 24.3	+0.1
MTSE				eS	Sg	14 36 39.2	+0.5
MTSE	Matsula	1.12	192	P	Pg	14 36 24.2	+0.1
MTSE				S	Sg	14 36 39.1	+0.5
RAF	Rauma	1.74	316	eP	Pn	14 36 34.6	+0.3
RAF	Rauma	1.74	316	P	Pn	14 36 34.5	+0.3
RAF				eS	Sn	14 36 56.7	-0.3
	comp=Z,38nm,0.2s,SNR=51						
VJF	Virojoki	1.80	65	eP	Pn	14 36 36.2	+1.1
VJF	Virojoki	1.80	65	P	Pn	14 36 36.1	+1.1
FIA0	FINESS Array S	1.87	28	Pg	Pb	14 36 37.5	-0.3
	baz=212,slow=18						
FIA0				Lg	Lg	14 37 03.0	
	baz=219,slow=37						
FIA0	FINESS Array S	1.87	28	Pg	Pb	14 36 37.5	-0.3
	baz=212,slow=18						
FIA0				Lg	Lg	14 37 03.0	
	baz=219,slow=37						
FIA0	FINESS Array S	1.87	28	eP	Pb	14 36 37.5	-0.3
FIA0	FINESS Array S	1.87	28	P	Pb	14 36 37.5	-0.3
FIA0				Lg	Lg	14 37 03.0	
	baz=219,slow=31,SNR=5.1						
FINES	FINESS Array B	1.87	28	Pn	Pb	14 36 37.6	-0.2
	comp=Z,3.8nm,0.3s,baz=209,slow=13,SNR=59						
FINES				Sn	Sg	14 37 03.3	+0.4
	comp=Z,3.9nm,0.3s,baz=218,slow=25,SNR=13						
AAL	Aland	2.18	282	eP	Pn	14 36 41.2	+1.0
AAL	Aland	2.18	282	P	Pn	14 36 41.2	+1.0
SLIT	Slitere, Latvi	2.41	206	eP	Pb	14 36 46.2	-0.8
	SNR=51						
KAF	Kangasniemi	2.52	22	ePB	Pb	14 36 47.7	-1.2
HFS	Hagfors	5.32	278	Pn	Pn	14 37 23.5	+0.2
	baz=108,slow=14						
HFS				Lg	Lg	14 38 45.8	
	baz=107,slow=28						
HFS	Hagfors	5.32	278	Pn	Pn	14 37 23.5	+0.2
	baz=108,slow=14						
HFS				Lg	Lg	14 38 45.8	
	baz=107,slow=28						
HFS	Hagfors	5.32	278	Pn	Pn	14 37 24.3	+0.9
	comp=Z,0.2nm,0.3s,baz=93,slow=13,SNR=15						
HFS				Sn	Sn	14 38 25.5	+0.2
	comp=Z,0.4nm,0.3s,baz=92,slow=25,SNR=4.2						
HFS	Hagfors	5.32	278	Pn	Pn	14 37 23.5	+0.2
	baz=108,slow=12,SNR=9.0						
HFS				Lg	Lg	14 38 45.8	
	baz=107,slow=26,SNR=4.2						
NB2	NORSAR Subarra	6.58	286	Pn	Pn	14 37 40.2	-0.5
	baz=86,slow=14						
NB2	NORSAR Subarra	6.58	286	Pn	Pn	14 37 40.2	-0.5
	baz=86,slow=14						
NB2	NORSAR Subarra	6.58	286	Pn	Pn	14 37 40.2	-0.5
	baz=86,slow=13,SNR=6.9						
NOA	NORSAR Array B	6.58	286	Pn	Pn	14 37 39.9	-0.8
	comp=Z,0.3nm,0.3s,baz=107,slow=19,SNR=11						
NOA				Sn	Sn	14 38 58.2	+1.9
	comp=Z,0.3nm,0.3s,baz=308,slow=6.8,SNR=2.5						
ARA0	ARCESS Array S	9.79	3	Pn	Pn	14 38 23.8	-0.8
	baz=174,slow=16						
ARA0	ARCESS Array S	9.79	3	Pn	Pn	14 38 23.8	-0.8
	baz=174,slow=16						
ARA0	ARCESS Array S	9.79	3	Pn	Pn	14 38 23.8	-0.8
	baz=174,slow=15,SNR=5.6						
ARCES	ARCESS Array B	9.79	3	Pn	Pn	14 38 24.7	+0.1
	comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=16						

*IDC **02** 14:36:23.0±2.9, 59.61N×24.60E, h0km, mb1 3.3/3, mb1mx2.9/27, mbtmp3.2/3, ML3.1/3, Error ellipse: s-maj=36.6km s-min=9.7km az=153.0*
*CSEM **02** 14:36:24.8±2.3, 59.98N×24.03E, h1km, ML2.3, Error ellipse: s-maj=89.0km s-min=10.1km az=149.0, Suspected Mining explosion.*
*NAO **02** 14:36:25.8±2.5, 59.93N×23.90E, ML2.3*
*BER **02** 14:36:26.1±2.4, 59.92N×23.92E, h0km, ML2.3(NAO), Suspected explosion*
ISC 02 14:36:24.5±2.9, 59.9N±0.2×24.1E±0.1, h0km, n19, σ0s93/22, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FIA0	FINESS Array S	1.84	30	Pg	Pn	14 36 58.2	+0.8
	baz=221,slow=14						
FIA0				Lg	Lg	14 37 24.6	
	baz=211,slow=28						
FIA0	FINESS Array S	1.84	30	Pg	Pn	14 36 58.2	+0.8
	baz=221,slow=14						
FIA0				Lg	Lg	14 37 24.6	
	baz=211,slow=28						
FIA0	FINESS Array S	1.84	30	Pg	Pn	14 36 58.2	+0.8
	SNR=6.6						
FIA0				Lg	Lg	14 37 24.6	
	SNR=1.0						
FINES	FINESS Array B	1.84	30	Pn	Pb	14 36 58.5	-0.5
	3.4nm,0.3s,baz=207,slow=15,SNR=20						
FINES				Sn	Sg	14 37 24.4	+0.7
	4.7nm,0.3s,baz=218,slow=24,SNR=15						
HFS	Hagfors	5.25	277	Pn	Pn	14 37 43.1	-1.1
	baz=100,slow=12						
HFS				Lg	Lg	14 39 03.7	
	baz=82,slow=22						
HFS	Hagfors	5.25	277	Pn	Pn	14 37 43.1	-1.1
	baz=100,slow=12						
HFS				Lg	Lg	14 39 03.7	
	baz=82,slow=22						
HFS	Hagfors	5.25	277	Pn	Pn	14 37 45.1	+0.9
	0.3nm,0.3s,baz=102,slow=13,SNR=11						
HFS				Sn	Sn	14 38 46.7	+1.4
	0.6nm,0.3s,baz=105,slow=29,SNR=5.2						
HFS	Hagfors	5.25	277	Pn	Pn	14 37 43.1	-1.1
	SNR=7.0						
NB2	NORSAR Subarra	6.50	286	Pn	Pn	14 38 00.8	-0.6
	baz=94,slow=14						
NB2	NORSAR Subarra	6.50	286	Pn	Pn	14 38 00.8	-0.6
	baz=94,slow=14						
NB2	NORSAR Subarra	6.50	286	Pn	Pn	14 38 00.8	-0.6
	SNR=7.1						
NOA	NORSAR Array B	6.50	286	Pn	Pn	14 38 00.5	-0.9
	0.4nm,0.3s,baz=88,slow=11,SNR=13						
NOA				Sn	Sn	14 39 16.7	+0.5
	0.4nm,0.3s,baz=127,slow=17,SNR=2.6						
APA0	Apatity Array	8.69	23	Pn	Pn	14 38 31.4	+0.1
	baz=211,slow=14						
APA0	Apatity Array	8.69	23	Pn	Pn	14 38 31.4	+0.1
	baz=211,slow=14						
APA0	Apatity Array	8.69	23	Pn	Pn	14 38 31.4	+0.1
	SNR=4.2						
ARA0	ARCESS Array S	9.72	3	Pn	Pn	14 38 44.1	-1.3
	baz=180,slow=14						
ARA0	ARCESS Array S	9.72	3	Pn	Pn	14 38 44.1	-1.3
	baz=180,slow=14						
ARA0	ARCESS Array S	9.72	3	Pn	Pn	14 38 44.2	-1.3
	SNR=6.1						
ARCES	ARCESS Array B	9.72	3	Pn	Pn	14 38 45.8	+0.4
	0.2nm,0.3s,baz=186,slow=11,SNR=8.5						

IDC 02 14:36:40.4±3.1, 59.59N×24.69E, h0km, mb1 3.3/3, mb1mx3.0/27, mbtmp3.3/3, ML3.0/3, Error ellipse: s-maj=37.9km s-min=10.6km az=153.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FINES	FINESS Array B	1.98	20	Pn	Pn	14 37 15.9	+0.8
	4.3nm,0.3s,baz=196,slow=14,SNR=9.1						
FINES				Sn	Sb	14 37 41.9	-0.5
	4.8nm,0.3s,baz=213,slow=24,SNR=6.0						
HFS	Hagfors	5.57	280	Pn	Pn	14 38 03.0	-1.3
	0.3nm,0.3s,baz=120,slow=14,SNR=7.0						
HFS				Sn	Sn	14 39 05.2	-3.7
	0.7nm,0.3s,baz=87,slow=26,SNR=4.1						
NOA	NORSAR Array B	6.85	288	Pn	Pn	14 38 18.6	-3.4
	0.4nm,0.3s,baz=88,slow=14,SNR=7.3						
NOA				Sn	Sn	14 39 34.5	-6.1
	0.6nm,0.3s,baz=109,slow=20,SNR=2.8						
ARCES	ARCESS Array B	9.99	2	Pn	Pn	14 39 03.7	-1.2
	0.2nm,0.3s,baz=185,slow=12,SNR=3.8						

*BJI **02** 14:39:30.0, 40.36N×52.46E, h44km, mB4.9/32, mb4.9/44, Ms4.7/38, Ms7 4.4/36*
*THR **02** 14:39:31.5±0.8, 40.28N×52.92E, h15km, ML5.7*
*MOS **02** 14:39:32.6±1.0, 40.36N×53.03E, h38km, mb5.1/73, Error ellipse: s-maj=4.7km s-min=3.2km az=38.6*
*ISCJB **02** 14:39:33.5±0.3, 40.30N±0.02×53.03E±0.02, h49km±3km, mb4.8/147, MS4.1/50, Error ellipse: s-maj=3.1km s-min=1.7km az=20.0*
*CSEM **02** 14:39:35.2±0.1, 40.29N×53.04E, h53km, mb4.9/76, Ms4.0, Mw5.0, Error ellipse: s-maj=2.7km s-min=2.6km az=41.0*
*NEIC **02** 14:39:35.2±0.2, 40.28N×53.02E, mb5.0/66, Error ellipse: s-maj=3.7km s-min=2.8km az=171.0*
NEIC Felt at Balkanabat and Celeken.
*IDC **02** 14:39:35.8±0.4, 40.32N×52.94E, h55km±2km, mb4.2/31, mb1 4.4/38, mb1mx4.3/41, mbtmp4.3/38, MS4.0/32, Ms1 4.0/32, ms1mx4.0/38, Error ellipse: s-maj=10.2km s-min=6.1km az=172.0*
*PDA **02** 14:39:35.2, 40.29N×52.99E, h50km, mb4.9*
*TEH **02** 14:39:36.4, 40.15N×52.95E, h23km, ML5.6*
*AZER **02** 14:39:37.1, 40.00N×52.50E, h195km*
*NSSC **02** 14:39:38.0±2.8, 39.82N×52.58E, h0km±999km*
*GCMT **02** 14:39:38.2±0.2, 40.27N×52.99E, h59km±1km, MW5.0, Moment Tensor Solution. s40,c57; s77,c125; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.50±.15; $M_{\theta\theta}$-2.72±.13; $M_{\phi\phi}$4.23±.10; $M_{r\theta}$2.26±.10; $M_{\theta\phi}$1.27±.09; $M_{\phi r}$-0.67±.09; Best double couple: $M_0$4.60000×10^{16} NP1:ϕ_s229.00000°, δ63.00000°, λ-26.00000°. NP2:ϕ_s331.00000°, δ67.00000°, λ-150.00000°. Principal axes: T 4.4700, Plg3.0000°, Azm99.0000°; N 0.2200, Plg53.0000°, Azm5.0000°; P -4.6800, Plg36.0000°, Azm191.0000°; Data Used: II IU IC G CN.*
*DJA **02** 14:39:38.5±1.5, 40°N±12°×5°3E±°, h61km±15km, M4.9/7, mB5.3/5, mb5.1/7, Mw(mB)4.7/5*
*NNC **02** 14:39:41.2±1.0, 41.03N×53.97E, h0km, mb5.2, Error ellipse: s-maj=8.7km s-min=7.7km az=136.0*
*SZGRF **02** 14:39:42.4, 39.50N×51.02E, h33km, mb4.9, MS3.8, Caspian Sea*
ISC 02 14:39:35.3±0.2, 40.27N±0.03×53.01E±0.02, h53km±1km, h52km:pP-P, n996, σ1s28/1298, mb4.8/147, MS4.1/50, 107C-59D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GALA	Gala	2.19	275	⇑Pn	Pn	14 40 12.6	+3.5
	SNR=16						
GALA	Gala	2.19	275	⇑P	Pn	14 40 12.6	+3.5
	SNR=16						
GALA				⇓S	Sn	14 40 43.2	+8.2
GALA	Gala	2.19	275	P	Pn	14 40 12.6	+3.5
	SNR=16						
GALA				S	Sn	14 40 43.2	+8.2
NDR	Nardaran	2.33	279	⇑Pn	Pn	14 40 14.1	+3.0
	SNR=16						
NDR	Nardaran	2.33	279	⇑P	Pn	14 40 14.1	+3.0
	SNR=16						
NDR	Nardaran	2.33	279	P	Pn	14 40 14.1	+3.0
	SNR=16						
GOBA	Gobu	2.51	274	Pn	Pn	14 40 16.9	+3.3
	SNR=28						
GOBA				⇓Sn	Sn	14 40 44.4	+1.5
GOBA	Gobu	2.51	274	P	Pn	14 40 16.9	+3.3
	SNR=28						
GOBA	Gobu	2.51	274	P	Pn	14 40 16.9	+3.3
	SNR=28						
ALIB	Äli-Bayra	3.08	266	⇑Pn	Pn	14 40 24.0	+2.6
	SNR=41						
ALIB				⇑Sn	Sn	14 40 59.8	+2.7
ALIB	Äli-Bayra	3.08	266	⇑P	Pn	14 40 24.0	+2.6
	SNR=41						
ALIB				⇑S	Sn	14 40 59.8	+2.7
ALIB	Äli-Bayra	3.08	266	P	Pn	14 40 24.0	+2.6
	SNR=41						
ALIB				S	Sn	14 40 59.8	+2.7
SIZA	Siyzn	3.23	286	⇑Pn	Pn	14 40 25.0	+1.5
	SNR=179						
SIZA				⇑Sn	Sn	14 41 04.3	+3.5
SIZA	Siyzn	3.23	286	⇑P	Pn	14 40 25.0	+1.5
	SNR=179						
SIZA				⇑S	Sn	14 41 04.3	+3.5
SIZA	Siyzn	3.23	286	P	Pn	14 40 25.0	+1.5
	SNR=179						
SIZA				S	Sn	14 41 04.3	+3.5
PQL	Pirkuli	3.40	280	⇑Pn	Pn	14 40 27.1	+1.1
	SNR=197						
PQL				⇓Sn	Sn	14 41 06.7	+1.5
PQL	Pirkuli	3.40	280	⇑P	Pn	14 40 27.1	+1.1
	SNR=197						

PQL ⇓S Sn 14 41 06.7 +1.5
PQL Pirkuli 3.40 280 P Pn 14 40 27.1 +1.1
SNR=197
PQL S Sn 14 41 06.7 +1.5
IMND Minoodasht 3.54 147 *e*Pn Pn 14 40 29.0 +1.2
IMND *e*Sn Sn 14 41 08.0 -0.4
IMND Minoodasht 3.54 147 *e*Pn Pn 14 40 29.0 +1.2
IMND *e*Sn Sn 14 41 08.0 -0.4
MRVT Maraveh tapeh 3.54 136 *e*Pn Pn 14 40 28.8 +0.9
MRVT AML AML 14 41 07.7
comp=E,9µm,0.4s
MRVT AML AML 14 41 09.0
comp=N,10µm,0.6s
MRVT Maraveh tapeh 3.54 136 *e*Pn Pn 14 40 28.8 +0.9
QUBA Quba, Azerbaij 3.59 289 ⇑Pn Pn 14 40 29.8 +1.3
SNR=72
QUBA ⇑Sn Sn 14 41 12.3 +2.6
QUBA Quba, Azerbaij 3.59 289 ⇑P Pn 14 40 29.8 +1.3
SNR=72
QUBA ⇓S Sn 14 41 11.8 +2.1
QUBA Quba, Azerbaij 3.59 289 P Pn 14 40 29.8 +1.3
SNR=72
QUBA S Sn 14 41 11.8 +2.1
LKRN Lenkeran, Azer 3.62 246 ⇓Pn Pn 14 40 28.5 -0.3
SNR=66
LKRN ⇑Sn Sn 14 41 07.8 -2.6
LKRN Lenkeran, Azer 3.62 246 ⇓P Pn 14 40 28.5 -0.3
SNR=66
LKRN ⇑S Sn 14 41 07.8 -2.6
LKRN Lenkeran, Azer 3.62 246 P Pn 14 40 28.5 -0.3
SNR=66
LKRN S Sn 14 41 07.8 -2.6
GLBA Clilabad 3.70 255 ⇑Pn Pn 14 40 29.9 0.0
SNR=150
GLBA ⇓Sn Sn 14 41 11.2 -1.1
GLBA Clilabad 3.70 255 ⇑P Pn 14 40 29.9 0.0
SNR=150
GLBA ⇓S Sn 14 41 11.2 -1.1
GLBA Clilabad 3.70 255 P Pn 14 40 29.9 0.0
SNR=150
GLBA S Sn 14 41 11.2 -1.1
IML Ismayilli 3.71 280 ⇑Pn Pn 14 40 30.6 +0.4
SNR=15
IML ⇑Sn Sn 14 41 13.8 +1.1
IML Ismayilli 3.71 280 ⇑P Pn 14 40 30.6 +0.4
SNR=15
IML ⇑S Sn 14 41 13.8 +1.1
IML Ismayilli 3.71 280 P Pn 14 40 30.6 +0.4
SNR=15
IML S Sn 14 41 13.8 +1.1
IGLO Ghaloghah 3.82 170 *e*Pn Pn 14 40 31.9 +0.2
IGLO *e*Sn Sn 14 41 12.8 -2.6
IGLO *e* 14 41 19.1
comp=E,55µm,0.2s
IGLO Ghaloghah 3.82 170 Pn Pn 14 40 31.8 +0.1
IGLO Sn Sn 14 41 12.8 -2.6
IPRN Peran 4.05 188 *e*Pn Pn 14 40 34.4 -0.5
IPRN *e* 14 41 22.3
comp=E,26µm,0.1s
IPRN Peran 4.05 188 Pn Pn 14 40 34.4 -0.5
IPRN Peran 4.05 188 *e*Pn Pn 14 40 34.4 -0.5
IALA Alasht 4.18 182 *e*Pn Pn 14 40 36.0 -0.8
IALA *e* 14 41 25.2
comp=E,81µm,0.1s
IALA Alasht 4.18 182 Pn Pn 14 40 36.0 -0.8
IALA Alasht 4.18 182 *e*Pn Pn 14 40 36.0 -0.8
GRMI Germi 4.21 251 *e*Pn Pn 14 40 36.5 -0.6
GRMI Germi 4.21 251 *e*Pn Pn 14 40 36.5 -0.6
IGZV Ghazvin 4.45 210 *e*Pn Pn 14 40 39.6 -0.9
IGZV *e* 14 41 31.0
comp=E,57µm,0.1s
IGZV Ghazvin 4.45 210 *e*Pn Pn 14 40 39.6 -0.9
BRDA Brd 4.46 272 ⇑Pn Pn 14 40 41.0 +0.7
SNR=31
BRDA ⇑Sn Sn 14 41 31.7 +0.8
BRDA Brd 4.46 272 ⇑P Pn 14 40 41.0 +0.7
SNR=31
BRDA Brd 4.46 272 P Pn 14 40 41.0 +0.7
SNR=31
ISHM Shahmirzad 4.46 177 *e*Pn Pn 14 40 41.2 +0.6
ISHM *e* 14 41 36.9
comp=E,87µm,0.2s
ISHM Shahmirzad 4.46 177 *e*Pn Pn 14 40 41.2 +0.6
SEKA Sheki 4.51 284 ⇑Pn Pn 14 40 41.4 +0.3
SNR=556
SEKA ⇑Sn Sn 14 41 32.9 +0.6
SEKA Sheki 4.51 284 ⇑P Pn 14 40 41.4 +0.3
SNR=556
SEKA ⇑S Sn 14 41 32.9 +0.6
SEKA Sheki 4.51 284 P Pn 14 40 41.4 +0.3
SNR=556
SEKA S Sn 14 41 32.9 +0.6
ISHV Shirvan 4.57 125 *e*Pn Pn 14 40 43.3 +1.3
ISHV *e* 14 41 50.5
comp=Z,693nm,0.3s
ISHV Shirvan 4.57 125 *e*Pn Pn 14 40 43.3 +1.3
CHTH Charan 4.60 199 *e*Pn Pn 14 40 42.0 -0.5
CHTH Charan 4.60 199 *e*Pn Pn 14 40 42.0 -0.5
IFIR Firoozkooh 4.62 183 *e*Pn Pn 14 40 43.2 +0.3
IFIR *e* 14 41 37.8
comp=E,10µm,0.1s
IFIR Firoozkooh 4.62 183 *e*Pn Pn 14 40 43.2 +0.3
THKV Tehran--Karaj 4.66 202 *e*Pn Pn 14 40 43.3 0.0
THKV AML AML 14 41 37.3
comp=N,14µm,0.6s
THKV AML AML 14 41 39.3
comp=E,8µm,0.5s
THKV Tehran--Karaj 4.66 202 *e*Pn Pn 14 40 43.3 0.0
DAMV Damavand 4.70 190 *e*Pn Pn 14 40 44.3 +0.4
DAMV AML AML 14 41 39.7
comp=E,5µm,0.4s
DAMV AML AML 14 41 43.3
comp=N,7µm,0.6s
DAMV Damavand 4.70 190 *e*Pn Pn 14 40 44.3 +0.4
IDMV Damavand 4.75 190 *e*Pn Pn 14 40 45.0 +0.4
IDMV *e* 14 41 42.7
comp=Z,55µm,0.3s
IDMV Damavand 4.75 190 *e*Pn Pn 14 40 45.0 +0.4
ISRB Sarab 4.82 241 *e*Pn Pn 14 40 44.9 -0.6
ISRB *e*Sn Sn 14 41 37.6 -2.5
ISRB *e* 14 41 38.9
comp=E,60µm,0.2s
ISRB Sarab 4.82 241 *e*Pn Pn 14 40 44.9 -0.6
ISRB *e*Sn Sn 14 41 37.6 -2.5
IANJ Anjilo 4.85 171 *e*Pn Pn 14 40 46.8 +0.9
IANJ *e* 14 41 42.5
comp=Z,37µm,0.2s
IANJ Anjilo 4.85 171 Pn Pn 14 40 46.8 +0.9
IANJ Anjilo 4.85 171 *e*Pn Pn 14 40 46.8 +0.9
ILAS Lasjerd 4.88 180 *e*Pn Pn 14 40 46.8 +0.5
ILAS *e* 14 41 50.9
comp=Z,78µm,0.2s
ILAS Lasjerd 4.88 180 *e*Pn Pn 14 40 46.8 +0.5
SHRO Shahrood 4.88 150 *e*Pn Pn 14 40 47.2 +0.9
MAK Makhachkala 4.92 305 *e*P Pn 14 40 47.4 +0.8
MAK *e* 14 41 45.2
MAK pmax pmax
comp=Z,666nm,0.5s
MAK smax smax
comp=N,3µm,0.5s
MAK smax smax
comp=E,3µm,0.5s
MAK MLR MLR
comp=Z,371nm,4.0s
MAK Makhachkala 4.92 305 ⇑ *i*P Pn 14 40 47.5 +0.8
MAK Makhachkala 4.92 305 *e*P Pn 14 40 47.4 +0.8
comp=Z,666nm,0.5s
MAK *e*S Sn 14 41 45.2 +2.9
comp=Z,371nm,4.0s
IMHD Mahdasht 4.94 203 *e*Pn Pn 14 40 47.4 +0.4
IMHD *e* 14 40 50.1
comp=Z,25µm,0.1s
IMHD Mahdasht 4.94 203 Pn Pn 14 40 47.3 +0.3
IMHD Mahdasht 4.94 203 Pn Pn 14 40 47.3 +0.3
IHRS Heris 5.02 249 *e*Pn Pn 14 40 48.3 0.0
IHRS *e*Sn Sn 14 41 42.9 -2.2
IHRS *e* 14 41 48.1
comp=Z,63µm,0.1s
IHRS Heris 5.02 249 *e*Pn Pn 14 40 48.3 0.0
IHRS *e*Sn Sn 14 41 42.9 -2.2
IR3 Iran Long-Peri 5.04 199 *e*Pn Pn 14 40 48.5 +0.2
IR3 Iran Long-Peri 5.04 199 *e*Pn Pn 14 40 48.5 +0.2
ISFR Sfrayin 5.06 128 *e*Pn Pn 14 40 50.0 +1.2
ISFR *e*Sn Sn 14 41 44.2 -1.8
ISFR *e* 14 41 55.2
comp=Z,73µm,0.3s
ISFR Sfrayin 5.06 128 *e*Pn Pn 14 40 50.0 +1.2
ISFR *e*Sn Sn 14 41 44.2 -1.8
GANJ Ganja 5.11 276 ⇑Pn Pn 14 40 48.1 -1.2
SNR=37
GANJ ⇑Sn Sn 14 41 43.4 -3.7
GANJ Ganja 5.11 276 ⇑P Pn 14 40 48.1 -1.2
SNR=37
GANJ ⇑S Sn 14 41 43.4 -3.7
GANJ Ganja 5.11 276 P Pn 14 40 48.1 -1.2
SNR=37
GANJ S Sn 14 41 43.4 -3.7
IVRN Varamin 5.36 191 *e*Pn Pn 14 40 52.8 0.0
IVRN *e* 14 42 08.2
comp=Z,23µm,0.2s
IVRN Varamin 5.36 191 *e*Pn Pn 14 40 52.8 0.0
IR5 Iran Long-Peri 5.40 202 *e*Pn Pn 14 40 53.4 0.0
IR5 Iran Long-Peri 5.40 202 *e*Pn Pn 14 40 53.4 0.0
IRAZ Razeghan 5.43 208 *e*Pn Pn 14 40 53.8 -0.1
IRAZ *e* 14 41 59.5
comp=Z,44µm,0.3s
IRAZ Razeghan 5.43 208 *e*Pn Pn 14 40 53.8 -0.1
IKRD Kardeh 5.55 127 *e*Pn Pn 14 41 05.3 +10
IKRD *e* 14 42 17.2
comp=Z,15µm,0.4s
ITBZ Tabriz 5.70 251 *e*Pn Pn 14 40 57.9 +0.4
ITBZ *e* 14 41 01.6
comp=Z,6µm,0.1s
ITBZ *e*Sn Sn 14 41 59.1 -2.6
ITBZ Tabriz 5.70 251 Pn Pn 14 40 57.8 +0.3
ITBZ Sn Sn 14 41 59.1 -2.6
ITBZ Tabriz 5.70 251 Pn Pn 14 40 57.8 +0.3
IAKL Akhelmad 5.81 127 *e*Pn Pn 14 41 00.1 +1.0
IAKL *e* 14 42 31.1
comp=Z,18µm,0.4s
NAX Nakhchivan 5.89 262 ⇑Pn Pn 14 41 00.6 +0.5
SNR=31
NAX Nakhchivan 5.89 262 ⇑P Pn 14 41 00.6 +0.5
SNR=31
NAX Nakhchivan 5.89 262 P Pn 14 41 00.6 +0.5
SNR=31
DGRG David-gareji 5.91 284 P Pn 14 41 00.4 +0.2
DGRG S Sn 14 42 06.2 -0.3
GHVR GHOM 5.94 194 *e*Pn Pn 14 41 01.7 +1.0
IAZR Azarshahr 6.05 247 *e* 14 41 05.6
comp=Z,14µm,0.3s
IAZR *e*Pn Pn 14 41 03.2 +0.7
IPAY Payeh 6.06 127 *e*Pn Pn 14 41 03.6 +1.1
IPAY *e* 14 42 29.6
comp=Z,13µm,0.3s
ISHB Shabestar 6.07 253 *e*Pn Pn 14 41 03.0 +0.4
ISHB *e* 14 42 14.9
comp=Z,4µm,0.2s
ASAO Ashtian 6.18 203 *e*Pn Pn 14 41 04.5 +0.3
GNI Garni 6.33 272 *e*P Pn 14 41 07.1 +1.0
GNI Garni 6.33 272 Pn Pn 14 41 07.4 +1.3
SNR=23
GNI Garni 6.33 272 *e*P Pn 14 41 06.4 +0.3
comp=Z,362nm,0.8s
GNI S Sn 14 42 19.8 +2.7
GNI Garni 6.33 272 P Pn 14 41 06.7 +0.6
comp=Z,31nm,0.3s,baz=350,slow=0.8,SNR=35
GNI S Sn 14 42 19.8 +2.7
comp=Z,27nm,0.3s,baz=112,slow=19,SNR=3.7
GNI Garni 6.33 272 *e*P Pn 14 41 06.4 +0.3
comp=Z,362nm,0.8s
GNI Garni 6.33 272 Pn Pn 14 41 07.4 +1.3
SNR=23
GNI S Sn 14 42 19.8 +2.7
TBLG Delisi 6.42 286 P Pn 14 41 06.4 -0.9
TBLG S Sn 14 42 15.1 -4.1
TBLG Delisi 6.42 286 *i*P Pn 14 41 06.4 -0.9
TBLG *i*S Sn 14 42 15.1 -4.1
MHI Mashad 6.44 126 *e*Pn Pn 14 41 09.5 +1.9
MHI *e* 14 42 20.0
comp=Z,9µm,0.3s
IMOG Moghan 6.49 128 *e*Pn Pn 14 41 09.1 +0.6
IMOG *e* 14 42 24.9
comp=Z,9µm,0.3s
DUS Dusheti 6.53 289 P Pn 14 41 10.3 +1.6
DUS S Sn 14 42 21.7 -0.1
KZR Kazreti 6.61 282 P Pn 14 41 09.0 -0.9
KZR S Sn 14 42 20.0 -3.9
IMYA Miami 6.82 123 *e*Pn Pn 14 41 13.6 +0.8
IMYA *e* 14 43 39.9
comp=Z,16µm,0.5s
SNGE Sanandaj 6.84 223 *e*Pn Pn 14 41 13.8 +0.6
GOR Gori 6.93 287 P Pn 14 41 14.2 -0.1
GOR S Sn 14 42 29.6 -2.2
KHMZ Khomeyn 6.96 201 *e*Pn Pn 14 41 15.9 +1.1
CLDR Caldiran 7.10 264 *e*P Pn 14 41 18.9 +2.1
KORR Kora 7.26 296 *i*P Pn 14 41 16.7 -2.0
AKH Akhalkalaki 7.30 282 P Pn 14 41 19.0 -0.5
AKH S Sn 14 42 41.0 0.0
IZEF Zefreh 7.38 184 *e*Pn Pn 14 41 20.5 -0.1
IZEF *e* 14 43 34.3
comp=Z,3µm,0.2s
TABS Tabas 7.38 152 *e*Pn Pn 14 41 21.7 +1.2
NASN Na'in 7.46 181 *e*Pn Pn 14 41 22.0 +0.2
ONI Oni 7.54 291 P Pn 14 41 24.1 +1.4
ONI S Sn 14 42 48.0 +1.2
KARS Kars 7.58 276 *e*P Pn 14 41 25.1 +1.9
AGRB Hanur-Agry 7.73 268 *e*P Pn 14 41 27.6 +2.3
CUKT Cukurca 7.94 251 *e*P Pn 14 41 31.5 +3.4
ICHK Chekchek 8.09 172 *e*Pn Pn 14 41 30.3 0.0
ICHK *e* 14 43 08.7
comp=Z,4µm,0.2s
KBZ Khabaz 8.28 298 P Pn 14 41 31.2 -1.5
KBZ S Sn 14 43 01.1 -3.7
KBZ pmax pmax
comp=Z,13nm,0.3s
KBZ smax smax
comp=Z,22nm,0.3s
KBZ MLR MLR
comp=Z,474nm,21.0s
KBZ Khabaz 8.28 298 P Pn 14 41 31.2 -1.5
KBZ S Sn 14 43 01.1 -3.7
KBZ Khabaz 8.28 298 P Pn 14 41 31.2 -1.5
comp=Z,13nm,0.3s,baz=114,slow=7.9,SNR=148
KBZ S Sn 14 43 01.1 -3.7
comp=Z,22nm,0.3s,baz=141,slow=22,SNR=5.1
KBZ LR LR 14 45 43.2
comp=Z,474nm,21.0s,baz=232,slow=45
KBZ Khabaz 8.28 298 P Pn 14 41 31.2 -1.5
KBZ S Sn 14 43 01.1 -3.7
KIV Kislovodsk 8.51 299 *e*P Pn 14 41 34.5 -1.4
KIV *e*S Sn 14 43 07.9 -2.6
KIV pmax pmax
comp=Z,155nm,0.7s
KIV MLR MLR
comp=Z,119nm,9.0s
KIV Kislovodsk 8.51 299 Pn Pn 14 41 34.8 -1.1
comp=Z,2µm,0.4s,SNR=24
CHVG Ch'k'valeri 8.56 290 P Pn 14 41 39.2 +2.7
BCA Borcka 8.71 281 *e*P Pn 14 41 41.0 +2.4
EZM Erzurum 8.94 271 *e*P Pn 14 41 43.5 +1.6
VRTB Varto-Mus 8.97 267 *e*P Pn 14 41 44.3 +2.0
BNGB Bing ¶ll 9.60 266 *e*P Pn 14 41 52.8 +1.9
BAYT Ayd¨–ntepe-Bay 9.83 275 *e*P Pn 14 41 56.0 +2.0
BHD Baghdad 9.83 227 *e*P Pn 14 41 41.0 -13
BHD *e*S Sn 14 43 21.4 -21
ERZN Erzincan 10.23 270 *e*P Pn 14 42 00.7 +1.2
AB31 Akbulak array 10.24 26 P Pn 14 41 56.1 -3.3
comp=Z,26nm,0.5s,baz=211,slow=13,SNR=617
AB31 S Sn 14 43 42.0 -11
comp=Z,43nm,0.5s,baz=183,slow=24,SNR=5.3
AB31 Akbulak array 10.24 26 P Pn 14 41 56.2 -3.3
comp=Z,26nm,0.5s,SNR=617
AB31 S Sn 14 43 42.0 -11
comp=Z,43nm,0.5s,SNR=5.3
KBSD Kabsdagh 10.28 255 *e*P Pn 14 42 01.8 +1.7
KBSD Kabsdagh 10.28 255 *e*P Pn 14 42 01.8 +1.7
SNR=46
GUMT Gumushane 10.33 275 *e*P Pn 14 42 02.4 +1.5
SOC Sochi 10.44 293 *e*P Pn 14 42 04.3 +2.1
SOC *e* 14 43 56.4
SOC pmax pmax
comp=Z,34nm,0.6s
SOC pmax pmax
comp=N,10.0nm,0.6s
SOC pmax pmax
comp=E,15nm,0.6s
SOC MLR MLR
comp=Z,335nm,12.0s
PTK Pertek 10.60 267 *e*P Pn 14 42 06.5 +1.8
AKTO Aktyubinsk 10.76 17 ⇓P Pn 14 42 03.5 -3.0
comp=Z,33nm,0.5s
AKTO ⇓S Sn 14 43 56.3 -9.0
comp=Z,312nm,0.8s
AKTO Aktyubinsk 10.76 17 P Pn 14 42 03.9 -2.6
AKTO S Sn 14 43 57.6 -7.7
AKTO pmax pmax
comp=Z,8.0nm,0.3s
AKTO smax smax
comp=Z,51nm,0.3s
AKTO MLR MLR
comp=Z,1µm,18.6s
AKTO Aktyubinsk 10.76 17 P Pn 14 42 03.9 -2.6
AKTO S Sn 14 43 57.6 -7.7
AKTO Aktyubinsk 10.76 17 P Pn 14 42 03.9 -2.6
comp=Z,7.5nm,0.3s,baz=201,slow=12,SNR=44
AKTO S Sn 14 43 57.6 -7.7
comp=Z,50nm,0.3s,baz=81,slow=21,SNR=10
AKTO LR LR 14 47 33.8
comp=Z,1µm,18.6s,baz=43,slow=45
AKTO Aktyubinsk 10.76 17 P Pn 14 42 03.5 -3.0
comp=Z,33nm,0.5s
AKTO S Sn 14 43 56.3 -9.0
comp=Z,312nm,0.8s
SFNV Sufian 10.83 253 *e*P Pn 14 42 08.2 +0.6
SFNV Sufian 10.83 253 *e*P Pn 14 42 08.9 +1.2
SFNV Sufian 10.83 253 *e*P Pn 14 42 08.2 +0.6
SNR=46
MIB Mutribah 11.42 206 *e*P Pn 14 42 15.6 -0.1
MIB AMb AMB 14 42 19.3
comp=Z,444nm,0.9s
MIB Mutribah 11.42 206 *e*P Pn 14 42 15.6 -0.1
comp=Z,444nm,0.9s
UMR Umm Al-Rimmam 11.54 204 *e*P Pn 14 42 17.3 +0.1
UMR AMb AMB 14 42 18.7
comp=Z,140nm,0.9s
UMR Umm Al-Rimmam 11.54 204 *e*P Pn 14 42 17.3 +0.1
comp=Z,140nm,0.9s
KBD Kabd 11.89 203 *e*P Pn 14 42 21.9 -0.2
KBD AMb AMB 14 42 23.7
comp=Z,170nm,0.9s
KBD Kabd 11.89 203 *e*P Pn 14 42 22.0 -0.2
comp=Z,170nm,0.9s
NAY Al-Naaiem 11.97 205 *e*P Pn 14 42 22.4 -0.8
NAY AMb AMB 14 42 24.4
comp=Z,100nm,1.0s
NAY Al-Naaiem 11.97 205 *e*P Pn 14 42 22.4 -0.8
comp=Z,100nm,1.0s
RDF Al-Radifah 12.17 203 *e*P Pn 14 42 26.1 +0.2
RDF AMb AMB 14 42 28.1
comp=Z,193nm,0.8s
RDF Al-Radifah 12.17 203 *e*P Pn 14 42 26.1 +0.2
comp=Z,193nm,0.8s
ANN Anapa 12.35 297 *e*P Pn 14 42 28.9 +0.7
ANN *e*S Sn 14 44 46.2 +2.1
ANN pmax pmax
comp=Z,76nm,1.2s
ANN MLR MLR
comp=Z,1µm,24.0s
KMRS Kahramanmaras 12.85 263 *e*P Pn 14 42 36.6 +1.4
SARI SarD1z-Kayseri 12.98 267 *e*P Pn 14 42 38.5 +1.4
BNN Bunyan 13.32 269 *e*P Pn 14 42 43.1 +1.4
KK31 Karatay Array 13.39 72 ⇑P Pn 14 42 39.8 -2.7
comp=Z,167nm,1.1s,baz=268,slow=18,SNR=380
KK31 ⇓S Sn 14 45 02.3 -7.3
comp=Z,38nm,0.6s,baz=266,slow=25,SNR=3.9
KK31 Karatay Array 13.39 72 *i*P Pn 14 42 39.8 -2.7
KK31 14 45 02.0
KK31 pmax pmax
comp=Z,42nm,0.5s
KK31 smax smax
comp=Z,61nm,0.6s
KK31 Karatay Array 13.39 72 P Pn 14 42 39.8 -2.7
comp=Z,167nm,1.1s,SNR=380
KK31 S Sn 14 45 02.3 -7.3
comp=Z,38nm,0.6s,SNR=3.9
KKAR Karatay Array 13.39 72 *e*P Pn 14 42 40.2 -2.3
KKAR pmax pmax
comp=Z,3.0nm,0.4s
KKAR Karatay Array 13.39 72 *e*P Pn 14 42 40.2 -2.3
comp=Z,3.2nm,0.4s
KKAR Karatay Array 13.39 72 *e*P Pn 14 42 40.2 -2.3
comp=Z,3.2nm,0.4s
VRHR Novokhopersk 13.42 328 *e*P Pn 14 42 42.3 -0.5
VRHR *e*S Sn 14 45 17.5 +7.3
VRHR pmax pmax
comp=Z,120nm,0.5s
VRHR pmax pmax
comp=N,90nm,0.7s
VRHR pmax pmax
comp=E,80nm,0.7s
VRHR smax smax
comp=N,670nm,1.2s
VRHR smax smax
comp=E,570nm,0.6s
VRHR smax smax
comp=Z,90nm,0.6s
DIKM Dikmen 13.49 282 *e*P Pn 14 42 45.3 +1.5
YOZ Yozgat 13.59 273 *e*P Pn 14 42 47.2 +1.9
ROOS tl_alroos 13.92 249 *e*P Pn 14 42 49.6 -0.2
ROOS tl_alroos 13.92 249 *e*P Pn 14 42 49.6 -0.2
KBL Kabul 13.96 109 *e*P Pn 14 42 50.3 -0.2
KBL pmax pmax
comp=Z,59nm,1.0s
KBL Kabul 13.96 109 *e*P Pn 14 42 50.3 -0.2
comp=Z,59nm,1.0s
KBL Kabul 13.96 109 *e*P Pn 14 42 50.3 -0.2
comp=Z,59nm,1.0s
SLNF Slenfeh 14.04 256 *e*P P 14 42 59.6 +1.7
SLNF Slenfeh 14.04 256 *e*P P 14 42 59.6 +1.7
SNR=45
CORM Corum 14.05 276 *e*P Pn 14 42 53.0 +1.5
ARNB Al Arnab 14.12 257 *e*P Pn 14 42 53.1 +0.6
ARNB Al Arnab 14.12 257 *e*P Pn 14 42 53.1 +0.6
ARNB Al Arnab 14.12 257 *e*P Pn 14 42 53.1 +0.6
SNR=45
VORD Divnogorie 14.35 323 *e*P Pn 14 42 53.0 -2.2
VORD *e*S Sn 14 45 27.3 -5.4
VORD pmax pmax
comp=Z,30nm,0.7s
VORD pmax pmax
comp=N,130nm,1.0s
VORD pmax pmax
comp=E,80nm,0.9s
VORD smax smax
comp=E,280nm,0.7s
VORD smax smax
comp=Z,120nm,1.1s
VORD smax smax
comp=N,220nm,0.9s
BZK Bozkurt 14.43 283 *e*P Pn 14 42 57.1 +0.7
NIG Nigde 14.43 267 *e*P Pn 14 42 58.5 +1.7
ZALF Zalf 14.56 245 *e*P Pn 14 42 58.1 -0.1
ZALF Zalf 14.56 245 *e*P Pn 14 42 58.1 -0.1
SNR=45
BANOM Banah 14.57 168 P Pn 14 42 58.6 +0.2
SNR=14
VSR Storozhevoye 14.57 323 *e*P Pn 14 42 56.0 -2.3
VSR *e*S Sn 14 45 30.8 -7.5
VSR pmax pmax
comp=Z,40nm,0.5s
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR smax smax
comp=N,380nm,1.2s
VSR smax smax
comp=Z,180nm,1.1s
VSR smax smax
comp=E,160nm,0.9s
SIM Simferopol' **14.67 295** *c i*P Pn 14 42 57.6 -2.0
SIM *e*S Sn 14 45 42.0 +1.3
SIM pmax pmax
comp=Z,40nm,1.0s
SIM MLR MLR
comp=Z,200nm,15.0s
BR131 Keskin Array S 14.86 274 *e*P Pn 14 43 01.8 -0.4
comp=Z,12nm,0.6s
BR131 Keskin Array S 14.86 274 *e*P Pn 14 43 01.8 -0.4
comp=Z,12nm,0.6s
BRTR Keskin Array B 14.86 274 P Pn 14 43 02.4 +0.1
BRTR Keskin Array B 14.86 274 P Pn 14 43 02.3 +0.1
comp=Z,0.7nm,0.3s,baz=92,slow=13,SNR=37

BRTR Keskin Array B 14.86 274 P Pn 14 43 02.3 +0.1
VOR Voronezh 14.92 325 P Pn 14 43 03.0 +0.3
VOR pmax pmax
comp=Z,500nm,0.4s
TOTH TOTAH 14.95 248 *e*P **P 14 43 08.4 +0.5**
TOTH TOTAH 14.95 248 *e*P **P 14 43 08.4 +0.5**
SNR=45
SALA Sala 15.09 245 *e*P **Pn 14 43 06.1 +0.8**
SALA Sala 15.09 245 *e*P **Pn 14 43 06.1 +0.8**
SNR=45
SULT Sultanhani-AKS 15.25 268 *e*P **P 14 43 09.4 -1.8**
BRBR Barbar 15.26 249 *e*P **Pn 14 43 08.7 +1.1**
BRBR Barbar 15.26 249 *e*P **P 14 43 10.0 -1.5**
BRBR Barbar 15.26 249 *e*P **Pn 14 43 08.6 +1.1**
SNR=45
ASF Jabal al Asfar 15.29 243 P Pn 14 43 08.7 +0.9
ASF Jabal al Asfar 15.29 243 P Pn 14 43 08.7 +0.9
comp=Z,0.4nm,0.3s,baz=111,slow=15,SNR=7.3
ASF LR LR 14 50 00.2
comp=Z,250nm,18.5s,baz=286,slow=41
NAZ Nazwa, Dubai 15.40 171 P Pn 14 43 08.6 -0.6
ANTO Ankara 15.48 275 *e*P **Pn 14 43 10.5 +0.3**
ANTO Ankara 15.48 275 *e*P **Pn 14 43 11.0 +0.7**
ANTO pmax pmax
comp=Z,59nm,1.0s
ANTO Ankara 15.48 275 Pn **Pn 14 43 10.9 +0.7**
SNR=15
ANTO Ankara 15.48 275 *e*P **Pn 14 43 11.0 +0.7**
comp=Z,59nm,1.0s
ANTO Ankara 15.48 275 Pn **Pn 14 43 10.9 +0.7**
SNR=15
HATD Hatta, Dubai 15.62 169 P Pn 14 43 11.0 -1.0
FAQ Al Faqa, Dubai 15.63 171 P Pn 14 43 11.3 -0.8
TCHB Talchebab 15.65 246 *e*P **P 14 43 14.0 -1.6**
TCHB Talchebab 15.65 246 *e*P **P 14 43 13.9 -1.6**
TCHB Talchebab 15.65 246 *e*P **P 14 43 14.0 -1.6**
SNR=43
AML Almayashu 15.68 76 *i* P **Pn 14 43 13.8 +0.7**
AML Almayashu 15.68 76 P **Pn 14 43 13.8 +0.7**
SNR=20
ASUD Al Ashush, Dub 15.72 172 P Pn 14 43 13.0 -0.3
EKS2 Erkin-Say 15.75 74 P Pn 14 43 12.6 -1.1
SNR=23
MMAI Mount Meron Ar 15.86 248 P Pn 14 43 16.3 +1.2
MMAI Mount Meron Ar 15.86 248 P Pn 14 43 16.3 +1.2
comp=Z,0.8nm,0.3s,baz=67,slow=13,SNR=16
MMAI LR LR 14 50 55.6
comp=Z,621nm,19.0s,baz=60,slow=43
MMAI Mount Meron Ar 15.86 248 P Pn 14 43 16.3 +1.2
LADK Ladik-KONYA 16.13 269 *e*P **P 14 43 19.9 -1.1**
LFK Lefkose 16.18 258 *e*P **P 14 43 22.5 +1.1**
KONT Konya--Tatoy 16.19 268 *e*P **P 14 43 21.2 -0.4**
AAK Ala-Archa 16.28 75 P Pn 14 43 20.1 -0.3
AAK pmax pmax
comp=Z,3.0nm,0.3s
AAK MLR MLR
comp=Z,1μm,19.3s
AAK Ala-Archa 16.28 75 *e*P **Pn 14 43 19.6 -0.9**
comp=Z,123nm,1.2s
AAK Ala-Archa 16.28 75 P Pn 14 43 19.9 -0.6
SNR=38
AAK Ala-Archa 16.28 75 P Pn 14 43 20.1 -0.3
comp=Z,3.1nm,0.3s,baz=241,slow=9.4,SNR=50
AAK LR LR 14 50 33.7
comp=Z,1μm,19.3s,baz=266,slow=40
AAK Ala-Archa 16.28 75 *e*P **Pn 14 43 19.6 -0.9**
comp=Z,123nm,1.2s
USP Ospenovka 16.31 72 P Pn 14 43 19.5 -1.2
SNR=40
FRU Bishkek 16.37 74⇑ *i* P **Pn 14 43 20.4 -1.1**
FRU pmax pmax
comp=Z,240nm,1.8s
FRU MLR MLR
comp=Z,1μm,20.0s
CEP Cherat 16.39 107 P Pn 14 43 21.8 -0.1
CSS Prodhromos 16.46 257 *e*P **P 14 43 26.8 +2.2**
CSS Prodhromos 16.46 257 P Pn 14 43 19.9 -2.6
comp=Z,48nm,1.1s
CSS Prodhromos 16.46 257 P Pn 14 43 20.0 -2.6
comp=Z,48nm,1.1s
CHMS Chumysh 16.48 73 *i* P **Pn 14 43 22.3 -0.5**
CHMS Chumysh 16.48 73 P Pn 14 43 22.3 -0.5
SNR=40
ARU Arti 16.58 11 *d i*P **Pn 14 43 20.4 -3.5**
ARU S Sn 14 46 19.5 -7.4
ARU pmax pmax
comp=Z,21nm,0.6s
ARU MLR MLR
comp=Z,1μm,19.0s
KBK Karagaybulak 16.61 75 *i* P **Pn 14 43 24.7 +0.1**
KBK Karagaybulak 16.61 75 P Pn 14 43 24.7 +0.1
SNR=58
ZRNK Zerenda 16.73 35 ⇓P **Pn 14 43 23.4 -2.4**
comp=Z,30nm,0.7s
ZRNK ⇑S Sn 14 46 18.1 -13
comp=Z,40nm,0.6s
ZRNK Zerenda 16.73 35 P Pn 14 43 23.4 -2.4
ZRNK pmax pmax
comp=Z,36nm,0.7s
ZRNK Zerenda 16.73 35 P Pn 14 43 23.5 -2.4
comp=Z,30nm,0.7s
ZRNK S Sn 14 46 18.1 -13
comp=Z,40nm,0.6s
KZA Kyzart 16.84 77 *i* P **P 14 43 28.8 -0.4**
KZA Kyzart 16.84 77 P P 14 43 28.8 -0.4
SNR=11
HOQ Hoqain 17.03 166 Pn **Pn 14 43 29.8 0.0**
SNR=19
HOQ Hoqain 17.03 166 Pn **Pn 14 43 29.8 0.0**
SNR=19
TKM2 Tokmak 2 17.10 74⇑P **Pn 14 43 29.5 -1.2**
comp=Z,153nm,1.1s
TKM2 ⇑S Sn 14 46 32.7 -7.2
comp=Z,73nm,1.1s
TKM2 Tokmak 2 17.10 74 *i* P **Pn 14 43 29.9 -0.8**
TKM2 Tokmak 2 17.10 74 P Pn 14 43 30.0 -0.8
SNR=46
TKM2 Tokmak 2 17.10 74 P Pn 14 43 29.5 -1.2
comp=Z,153nm,1.1s
TKM2 S Sn 14 46 32.7 -7.2
comp=Z,73nm,1.1s
ARQ Araqi 17.14 169 Pn **Pn 14 43 31.1 0.0**
SNR=60
ARQ Araqi 17.14 169 Pn **Pn 14 43 31.1 0.0**
SNR=60
SVE Sverdlovsk 17.30 14⇑ *e*P **Pn 14 43 30.6 -2.3**
SVE *e*S Sn 14 46 30.4 -14
SVE pmax pmax
comp=Z,105nm,1.6s
SVE MLR MLR
comp=Z,1μm,21.0s
BRVK Borovoye 17.38 37 ⇓P **Pn 14 43 31.5 -2.4**
comp=Z,110nm,0.7s
BRVK ⇑S Sn 14 46 33.6 -13
comp=Z,94nm,1.0s
BRVK Borovoye 17.38 37 P Pn 14 43 31.5 -2.4
BRVK pmax pmax
comp=Z,224nm,1.4s
BRVK Borovoye 17.38 37 *e*P **Pn 14 43 31.5 -2.4**
comp=Z,77nm,0.7s
BRVK *e*S Sn 14 46 31.1 -15
BRVK Borovoye 17.38 37 P Pn 14 43 31.5 -2.4
comp=Z,110nm,0.7s
BRVK S Sn 14 46 33.6 -13
comp=Z,94nm,1.0s
BVA0 Borovoye Array 17.41 37 ⇓P **Pn 14 43 32.0 -2.2**
comp=Z,62nm,0.7s,baz=212,slow=16,SNR=133
BVA0 S Sn 14 46 35.7 -11
comp=Z,51nm,0.8s,baz=227,slow=26,SNR=9.0
BVA0 Borovoye Array 17.41 37 *i* P **Pn 14 43 32.4 -1.8**
BVA0 *e* 14 46 36.4
BVA0 pmax pmax
comp=Z,51nm,0.6s
BVA0 smax smax
comp=Z,51nm,0.8s
BVA0 Borovoye Array 17.41 37 P Pn 14 43 32.0 -2.2
comp=Z,62nm,0.7s,SNR=133
BVAR Borovoye Array 17.41 37 P Pn 14 43 32.4 -1.9
BVAR S Sn 14 46 35.2 -12
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BVAR pmax pmax
comp=Z,14nm,0.3s
BVAR smax smax
comp=Z,5.0nm,0.3s
BVAR MLR MLR
comp=Z,1μm,19.5s
BVAR Borovoye Array 17.41 37 P **Pn 14 43 32.4 -1.9**
BVAR sP **sP 14 43 54.0 +0.6**
BVAR S Sn 14 46 35.2 -12
BVAR Borovoye Array 17.41 37 P **Pn 14 43 32.4 -1.9**
comp=Z,2.4nm,0.3s,baz=243,slow=13,SNR=58
BVAR sP **sP 14 43 54.0 +0.6**
comp=Z,14nm,0.3s,baz=225,slow=10.0,SNR=11
BVAR S Sn 14 46 35.2 -12
comp=Z,4.5nm,0.3s,baz=220,slow=26,SNR=5.3
BVAR LR LR 14 51 31.6
comp=Z,1μm,19.5s,baz=233,slow=41
BVAR Borovoye Array 17.41 37 P **Pn 14 43 32.3 -1.9**
BVAR sP **sP 14 43 54.0 +0.6**
CHCP Chirak Chowk 17.46 106 P **P 14 43 36.4 +0.7**
VOSK Vostochnaya 17.50 39⇑P **Pn 14 43 33.9 -1.4**
comp=Z,34nm,0.6s
VOSK ⇑S Sn 14 46 37.1 -12
comp=Z,28nm,0.6s
VOSK Vostochnaya 17.50 39 P **Pn 14 43 32.7 -2.6**
VOSK 14 46 35.0
VOSK pmax pmax
comp=Z,34nm,0.6s
VOSK smax smax
comp=Z,32nm,0.7s
ULHL Ulahol 17.57 76 *i* P **P 14 43 40.9 +3.9**
ULHL Ulahol 17.57 76 P **P 14 43 41.0 +3.9**
SNR=8.2
KSH Kashi 17.64 85 *e*P **Pn 14 43 34.1 -3.2**
KSH *e*pP pP 14 43 44.1 -5.3
KSH *e*sP sP 14 43 50.7 -5.4
KSH *e*S Sn 14 46 41.2 -12
KSH pmax pmax
comp=Z,220nm,2.3s
KSH LR LR
comp=N,2μm,5.0s
KSH LR LR
comp=E,1μm,5.8s
KSH LR LR
comp=Z,1μm,6.9s
SMDO Samad 17.68 165 Pn **P 14 43 38.7 +0.5**
SNR=12
SMDO Samad 17.68 165 Pn **P 14 43 38.7 +0.5**
SNR=12
BSY Bisya 17.83 167 Pn **P 14 43 40.9 +1.1**
SNR=11
BSYO Bisya 17.85 167 Pn **P 14 43 40.9 +0.9**
SNR=11
RAYN Ar Rayn 17.86 203 Pn **Pn 14 43 38.6 -1.4**
comp=Z,1μm,1.0s,SNR=67
EIL Elat 18.15 240 P **Pn 14 43 44.4 +0.9**
EIL sP **sP 14 44 03.5 +1.8**
EIL Elat 18.15 240 P **Pn 14 43 44.4 +0.9**
comp=Z,0.1nm,0.3s,baz=51,slow=8.7,SNR=6.7
EIL sP **sP 14 44 03.5 +1.8**
comp=Z,0.3nm,0.3s,baz=31,slow=7.6,SNR=3.6
EIL LR LR 14 51 53.6
comp=Z,271nm,19.4s,baz=86,slow=41
EIL Elat 18.15 240 P **Pn 14 43 44.4 +0.9**
EIL sP **sP 14 44 03.5 +1.8**
WBK Wadi Bani Khal 18.32 162 P **Pn 14 43 46.5 +0.9**
SNR=17
WBK Wadi Bani Khal 18.32 162 P **Pn 14 43 46.5 +0.9**
SNR=17
JMDO Jabal Madar 18.36 165 P **Pn 14 43 46.6 +0.5**
SNR=14
JMDO Jabal Madar 18.36 165 P **Pn 14 43 46.6 +0.5**
SNR=14
TLCR 18.41 293 ⇓P **P 14 43 45.3 -0.7**
TLCR 18.41 293 ⇓*i*P **P 14 43 45.3 -0.7**
TLCR 18.41 293 ⇓*i*P **P 14 43 45.3 -0.7**
OBN Obninsk 18.45 329 *i* P **P 14 43 46.2 -0.1**
OBN pmax pmax
comp=Z,88nm,2.1s
MOS Moscow 18.52 332 *e*P P 14 43 39.9 -7.2
MOS *e*SS **Sn 14 47 12.3 -1.4**
MOS pmax pmax
comp=Z,66nm,0.9s
MOS MLR MLR
comp=Z,900nm,21.0s
TIRR Tirgusor 18.63 291 ⇓P **P 14 43 48.7 +0.4**
TIRR Tirgusor 18.63 291 ⇓*e*P **P 14 43 46.6 -1.8**
comp=Z,41nm,0.8s
TIRR Tirgusor 18.63 291 ⇓*i*P **P 14 43 48.7 +0.4**
TIRR Tirgusor 18.63 291 ⇓*i*P **P 14 43 48.7 +0.4**
KIS Kishinev 18.71 299⇑ *i*P **P 14 43 47.0 -2.3**
comp=Z,300nm,2.0s
KIS Kishinev 18.71 299 *e*PP pP 14 44 06.0 +4.9
KIS Kishinev 18.71 299 *e*PPP PPP 14 44 13.0
KIS *e*S Sn 14 47 09.0 -10
KIS *i* SS **SnSn 14 47 28.0 -4.9**
comp=Z,500nm,1.8s
KIS LRM MLR 14 52 49.0
comp=Z,900nm,19.0s
KIS Kishinev 18.71 299⇑ *i*P **P 14 43 47.0 -2.3**
KIS *e*S Sn 14 47 09.0 -10
KIS pmax pmax
comp=Z,250nm,2.0s
KIS pmax pmax
comp=Z,400μm,2.0s
KIS MLR MLR
comp=Z,900nm,19.0s
KIS MLR MLR
comp=Z,700nm,16.0s
CFR Carcaliu 18.89 293 P **P 14 43 50.4 -0.8**
CFR Carcaliu 18.89 293 ⇓*i*P **P 14 43 50.2 -1.0**
CFR Carcaliu 18.89 293 ⇓*i*P **P 14 43 50.2 -1.0**
PRD Provadia 19.31 287 P **Pn 14 44 00.9 +3.6**
SOKR Solikamsk 19.47 6*d i*P **Pn 14 43 59.7 +0.7**
SOKR S S 14 47 21.0 -13
SOKR pmax pmax
comp=Z,40nm,1.8s
SOKR MLR MLR
comp=Z,500nm,25.0s
AKASG Malin Array Be 19.59 310 P **P 14 43 57.6 -1.2**
AKASG S S 14 47 28.5 -8.4
AKASG pmax pmax
comp=Z,20nm,0.3s
AKASG smax smax
comp=Z,1.0nm,0.3s
AKASG MLR MLR
comp=Z,573nm,18.5s
AKASG Malin Array Be 19.59 310 P **P 14 43 57.6 -1.2**
AKASG S S 14 47 28.5 -8.4
AKASG Malin Array Be 19.59 310 P **P 14 43 57.6 -1.2**
comp=Z,20nm,0.3s,baz=100,slow=8.9,SNR=114
AKASG S S 14 47 28.5 -8.4
comp=Z,0.8nm,0.3s,baz=116,slow=21,SNR=3.5
AKASG LR LR 14 53 25.3
comp=Z,573nm,18.5s,baz=100,slow=42
AKASG Malin Array Be 19.59 310 P **P 14 43 57.6 -1.2**
AKASG S S 14 47 28.5 -8.4
VRI Vrincioaia 19.95 295⇑P **P 14 44 03.9 +1.0**
VRI Vrincioaia 19.95 295⇑*i*P **P 14 44 03.8 +0.9**
VRI Vrincioaia 19.95 295⇑*i*P **P 14 44 03.8 +0.9**
PLOR Plostina 20.00 295 ⇓P Pn 14 44 04.6 -1.0
PLOR Plostina 20.00 295 ⇓*i*P Pn 14 44 04.6 -1.0
PLOR Plostina 20.00 295 ⇓*i*P Pn 14 44 04.6 -1.0
ISR Istrita 20.01 293 ⇓P Pn 14 44 05.2 -0.4
ISR Istrita 20.01 293 ⇓*i*P Pn 14 44 05.2 -0.4
ISR Istrita 20.01 293 ⇓*i*P Pn 14 44 05.2 -0.4
TESR Tescani 20.09 297⇑*i*P **P 14 44 04.7 +0.3**
SECR 20.34 292 ⇓*i*P Pn 14 44 09.0 -0.5
SZH Strazhica 20.38 287 P **P 14 44 07.9 +0.4**
MLR Muntele Rosu 20.46 294 P Pn 14 44 09.9 -1.2
MLR Muntele Rosu 20.46 294⇑*i*P **P 14 44 09.5 +1.0**
MLR Muntele Rosu 20.46 294 P Pn 14 44 09.9 -1.2
comp=Z,7.7nm,0.5s,baz=17,slow=5.4,SNR=53
MLR LR LR 14 54 09.0
comp=Z,108nm,20.9s,baz=308,slow=43
MLR Muntele Rosu 20.46 294⇑*i*P **P 14 44 09.5 +1.0**
ALN Alexandroupoli 20.46 281 P **P 14 44 09.3 +0.9**
ALN Alexandroupoli 20.46 281 *e*P **P 14 44 09.5 +1.1**
PRAR RASCA 20.52 299⇑*i*P **P 14 44 08.6 -0.4**
PRK Paraskevi 20.56 276 P **P 14 44 10.2 +0.8**
KURBB Kurchatov Arra 20.59 51⇑P **P 14 44 10.6 +1.0**
comp=Z,43nm,1.5s
KURBB ⇓S **S 14 47 51.6 -5.1**
comp=Z,61nm,0.9s
KURBB Kurchatov Arra 20.59 51 P **P 14 44 11.0 +1.3**
comp=Z,22nm,0.8s,baz=254,slow=11,SNR=98
KURBB S **S 14 47 57.9 +1.2**
comp=Z,3.3nm,0.8s,baz=284,slow=28,SNR=4.2
KURBB Kurchatov Arra 20.59 51 P **P 14 44 10.6 +1.0**
comp=Z,43nm,1.5s
KURK Kurchatov 20.67 51⇑P **P 14 44 11.6 +1.0**
comp=Z,64nm,0.9s
KURK ⇓S **S 14 47 53.3 -5.1**
comp=Z,52nm,1.2s
KURK Kurchatov 20.67 51 P **P 14 44 11.5 +1.0**
KURK 14 47 50.0
KURK pmax pmax
comp=Z,82nm,0.9s
KURK smax smax
comp=Z,100nm,1.2s
KURK Kurchatov 20.67 51 *e*P **P 14 44 11.6 +1.0**
comp=Z,57nm,0.8s
KURK S **S 14 47 57.9 -0.5**
KURK Kurchatov 20.67 51 P **P 14 44 11.6 +1.0**
comp=Z,64nm,0.9s
KDZ Kurdzhali 20.85 283 P **P 14 44 14.0 +1.4**
KARP Karpathos 20.90 265 P **P 14 44 13.5 +0.3**
KARP Karpathos 20.90 265 *e*P **P 14 44 13.9 +0.7**
CHOS Chios island 20.91 274 *e*P **P 14 44 14.0 +0.7**
SMTH Samothraki Isl 20.91 260 *e*P **P 14 44 14.0 +0.8**
MTUR Matau 21.06 293 ⇓P **P 14 44 17.0 +2.1**
MTUR Matau 21.06 293 ⇓*i*P **P 14 44 17.0 +2.1**
MTUR Matau 21.06 293 ⇓*i*P **P 14 44 17.0 +2.1**
VOIR 21.08 293 ⇓P **P 14 44 16.0 +0.9**
VOIR 21.08 293 ⇓*i*P **P 14 44 16.0 +0.9**
VOIR 21.08 293 ⇓*i*P **P 14 44 16.0 +0.9**
BURAR Bucovina Array 21.24 299 ⇓*i*P **P 14 44 16.8 0.0**
PLD Plovdiv 21.34 284 P **P 14 44 20.6 +2.7**
PLD Plovdiv 21.34 284 P **P 14 44 20.6 +2.7**
ARR Arges 21.37 293⇑*i*P **P 14 44 18.8 +0.6**
RZN Rozhen 21.37 283 P **P 14 44 18.8 +0.4**
SMLA Simla 21.58 107 *i* P **P 14 44 22.9 +2.4**
SMLA AMb AMB 14 44 28.9
comp=Z,196nm,0.5s
SMLA *i* S **S 14 48 12.2 -4.5**
SMLA *i* S **S 14 48 16.8 +0.1**
APE Apeiranthos 21.66 270 P **P 14 44 21.9 +0.6**
APE Apeiranthos 21.66 270 *e*P **P 14 44 22.1 +0.8**
APE Apeiranthos 21.66 270⇑P **P 14 44 22.4 +1.1**
APE Apeiranthos 21.66 270⇑*i*P **P 14 44 22.4 +1.1**
APE Apeiranthos 21.66 270 P **P 14 44 21.9 +0.6**
ZKR Zakros 21.78 265 P **P 14 44 24.6 +2.0**
MPEP Malo Peshtene 21.98 288 P **P 14 44 25.1 +0.4**
NVR Nevrokopi 22.05 282 P **P 14 44 25.7 +0.3**
NVR Nevrokopi 22.05 282 *e*P **P 14 44 21.3 -4.1**
MMB Musomiste 22.12 283 P **P 14 44 26.9 +0.7**
MK31 Makanchi Array 22.13 63 P **P 14 44 26.8 +0.6**
comp=Z,21nm,0.7s,baz=256,slow=12,SNR=199
MK31 S **S 14 48 24.9 -2.0**
comp=Z,32nm,1.2s,baz=146,slow=35,SNR=2.6
MK31 Makanchi Array 22.13 63 *i* P **P 14 44 26.8 +0.6**
MK31 14 48 26.2
MK31 pmax pmax
comp=Z,37nm,0.8s
MK31 Makanchi Array 22.13 63 *e*P **P 14 44 26.9 +0.6**
MK31 Makanchi Array 22.13 63 *e*P **P 14 44 26.9 +0.6**
MK31 S **S 14 48 24.9 -2.0**
comp=Z,32nm,1.2s,SNR=2.6
MKAR Makanchi Array 22.13 63 P **P 14 44 27.1 +0.8**
MKAR S **S 14 48 28.5 +1.6**
MKAR pmax pmax
comp=Z,15nm,0.6s
MKAR MLR MLR
comp=Z,408nm,18.3s
MKAR Makanchi Array 22.13 63 P **P 14 44 27.1 +0.8**
MKAR S **S 14 48 28.5 +1.6**
MKAR Makanchi Array 22.13 63 P **P 14 44 27.1 +0.8**
comp=Z,15nm,0.6s,baz=251,slow=11,SNR=113
MKAR S **S 14 48 28.5 +1.6**
comp=Z,2.5nm,0.6s,baz=271,slow=30,SNR=3.4
MKAR LR LR 14 54 03.5
comp=Z,408nm,18.3s,baz=260,slow=39
MKAR Makanchi Array 22.13 63 P **P 14 44 27.1 +0.8**
MKAR S **S 14 48 28.5 +1.6**
NPS Neapolis 22.18 266 *e*P **P 14 44 27.3 +0.3**
KLMR Klimovskoe 22.23 342*c i*P **P 14 44 26.6 -0.6**
KLMR *e*S **S 14 48 22.8 -5.6**
KLMR pmax pmax
comp=Z,838nm,12.4s
XRY Khrisi 22.26 265 *e*P **P 14 44 28.8 +1.0**
VTS Vitosha 22.41 286 P **P 14 44 29.7 +0.3**
VTS Vitosha 22.41 286 *e*P **P 14 44 30.0 +0.5**
VTS Vitosha 22.41 286⇑P **P 14 44 29.8 +0.3**
VTS Vitosha 22.41 286 P **P 14 44 29.8 +0.3**
VTS Vitosha 22.41 286⇑*i*P **P 14 44 29.8 +0.3**
VTS Vitosha 22.41 286 *e*P **P 14 44 29.2 -0.3**
LVV L'vov 22.47 305 *e*P **P 14 44 28.9 -1.0**
LVV *e* 14 44 47.1
LVV *e*S **S 14 48 28.4 -4.4**
LVV MLR MLR
comp=Z,190nm,15.0s
LVV MLR MLR
comp=N,100nm,13.0s
LVV MLR MLR
comp=E,170nm,15.0s
PLG Polygyros 22.50 280 *e*P **P 14 44 31.0 +0.7**
KKB Krupnik 22.57 284 P **P 14 44 31.3 +0.3**
RBK Rabkut 22.71 177 P **P 14 44 33.0 +0.3**
SNR=7.2
RBK Rabkut 22.71 177 P **P 14 44 33.0 +0.3**
SNR=7.2
IDI Anoyia 22.73 266 P **P 14 44 31.7 -1.0**
IDI Anoyia 22.73 266 *e*P **P 14 44 31.9 -0.9**
IDI Anoyia 22.73 266 *e*P **P 14 44 31.8 -1.0**
comp=E,88nm,0.9s
IDI Anoyia 22.73 266 *e*P **P 14 44 31.8 -1.0**
comp=E,88nm,0.9s
NACGM Naroch 22.77 319 *e*P **P 14 44 29.0 -4.0**
DRGR 22.82 297 ⇓P **P 14 44 33.6 -0.1**
DRGR 22.82 297 ⇓*i*P **P 14 44 33.6 -0.1**
DRGR 22.82 297 ⇓*i*P **P 14 44 33.6 -0.1**
ABTO Aybut 22.84 179 P **P 14 44 33.0 -1.0**
SNR=7.9
ABTO Aybut 22.84 179 P **P 14 44 33.0 -1.0**
SNR=7.9
NDI New Delhi 22.99 113 *e*PKP **P 14 44 35.0 -0.4**
IDID Didziasalis 23.00 320 *e*P **P 14 44 34.2 -1.1**
IDID AMb AMB 14 44 56.7
comp=Z,25nm,0.9s
IDID Didziasalis 23.00 320 *e*P **P 14 44 34.2 -1.1**
comp=Z,25nm,0.9s,SNR=33
NAIG Nisos Aigina 23.03 273 *e*P **P 14 44 36.3 +0.5**
TRPA Tarpa 23.10 300 ⇓*i*P **P 14 44 36.8 +0.4**
TRPA Tarpa 23.10 300 ⇓*e*P **P 14 44 36.6 +0.2**
LKR Lokris 23.18 276 *e*P **P 14 44 35.9 -1.4**
GRG Griva 23.19 282 *e*P **P 14 44 36.0 -1.4**
VAM Vamos 23.21 267 *e*P **P 14 44 36.8 -0.8**
KWP Kalwaria Pacla 23.26 304⇑P **P 14 44 39.1 +1.1**
KWP Kalwaria Pacla 23.26 304⇑*i*P **P 14 44 39.1 +1.1**
KWP Kalwaria Pacla 23.26 304 *e*P **P 14 44 38.3 +0.3**
KWP Kalwaria Pacla 23.26 304⇑*i*P **P 14 44 39.1 +1.1**
IIGN Ignalina 23.27 319 *e*P **P 14 44 36.8 -1.2**
IIGN AMb AMB 14 44 58.4
comp=Z,29nm,0.9s
IIGN Ignalina 23.27 319 *e*P **P 14 44 36.8 -1.2**
comp=Z,29nm,0.9s,SNR=28
DID Didima 23.29 273 P **P 14 44 37.6 -0.8**
DID Didima 23.29 273 *e*P **P 14 44 37.3 -1.1**
UZH Uzhgorod 23.34 301 *e*P **P 14 44 40.0 +1.3**
UZH *e* 14 44 51.4
UZH *i* 14 44 58.8
KOLS Kolonicke sedl 23.41 302 *e*P **P 14 44 39.4 0.0**
KOLS pmax pmax
comp=Z,25nm,0.6s
KOLS Kolonicke sedl 23.41 302 *e*P **P 14 44 39.4 0.0**
KOLS *e*sP **sP 14 44 57.9 -0.6**
KOLS *e*S **S 14 48 53.5 +5.0**
ISAL Salakas 23.43 320 *e*P **P 14 44 38.1 -1.4**
ISAL AMb AMB 14 44 47.5
comp=Z,29nm,0.9s
ISAL Salakas 23.43 320 *e*P **P 14 44 38.1 -1.4**
comp=Z,29nm,0.9s,SNR=28
IZAR Zarasai 23.46 320 *e*P **P 14 44 38.6 -1.2**
IZAR AMb AMB 14 44 55.0
comp=Z,36nm,0.9s
IZAR Zarasai 23.46 320 *e*P **P 14 44 38.6 -1.2**
comp=Z,36nm,0.9s,SNR=28
BZS Buzias 23.50 294 ⇓P **P 14 44 40.5 +0.2**
BZS Buzias 23.50 294 ⇓*i*P **P 14 44 40.5 +0.2**
BZS Buzias 23.50 294 *e*P **P 14 44 39.1 -1.2**
GVD Gavdhos 23.50 266 *e*P **P 14 44 40.0 -0.4**
comp=Z,242nm,0.9s
GVD Gavdhos 23.50 266 *e*P **P 14 44 40.0 -0.4**

comp=Z,242nm,0.9s
AGG Agios Georgios 23.60 277 P P 14 44 41.4 +0.1
AGG Agios Georgios 23.60 277 eP P 14 44 42.0 +0.7
THL Klokotos Trika 23.73 278 P P 14 44 42.2 -0.2
THL Klokotos Trika 23.73 278 eP P 14 44 42.4 0.0
ANKY Antikythira Is 23.74 269 eP P 14 44 40.8 -1.8
VLI Veliai 23.75 271 eP P 14 44 41.3 -1.3
KYTH Kithira 23.81 270 P P 14 44 41.4 -1.8
KYTH Kithira 23.81 270 eP P 14 44 41.6 -1.6
KALE Kalithea 23.89 276 eP P 14 44 44.0 -0.1
CRVS Cervenica-Dubn 23.93 302 eP P 14 44 43.2 -1.0
CRVS pmax pmax
comp=Z,14nm,1.0s
CRVS Cervenica-Dubn 23.93 302 eP P 14 44 43.2 -1.0
CRVS esP **sP 14 45 02.4 -1.3**
CRVS eS **S 14 48 58.3 +1.4**
KLV Kalavryta, Ach 23.97 275 eP P 14 44 44.8 0.0
EVR Evrytania 24.02 277 eP P 14 44 45.8 +0.5
LAKA Lakka 24.05 275 P P 14 44 45.7 +0.2
LAKA Lakka 24.05 275 eP P 14 44 45.1 -0.4
EFP Efpalio 24.06 276 eP P 14 44 45.9 +0.4
STHS Stebnicka Huta 24.16 303 eP P 14 44 47.2 +0.9
STHS pmax pmax
comp=Z,4.0nm,0.6s
STHS Stebnicka Huta 24.16 303 eP P 14 44 47.2 +0.9
STHS esP **sP 14 45 06.5 +0.6**
DYR Agios Nikonas 24.19 272 P P 14 44 46.2 -0.6
DYR Agios Nikonas 24.19 272 eP P 14 44 46.2 +0.6
SUW Suwalki 24.28 314 eP P 14 44 47.3 -0.1
ITM Ithomi 24.38 273 P P 14 44 47.3 -1.2
ITM Ithomi 24.38 273 eP P 14 44 47.4 -1.1
AMT Artemida-Makis 24.45 274 eP P 14 44 49.6 +0.5
RLS Riolos of Patr 24.49 275 eP P 14 44 50.2 +0.8
KECS Kecovo 24.51 300 eP P 14 44 50.2 +0.7
KECS pmax pmax
comp=Z,6.0nm,0.8s
KECS Kecovo 24.51 300 eP P 14 44 50.2 +0.7
KECS esP **sP 14 45 08.9 -0.2**
PHP Peshkopia 24.55 284 ePG P 14 44 51.1 +1.1
PHP *i* SG **pP 14 45 02.5 -0.9**
PHP Peshkopia 24.55 284 P P 14 44 51.5 +1.5
JAN Janina 24.59 279 eP P 14 44 49.8 -0.5
DIVS Divibare 24.67 290 P P 14 44 52.1 +1.0
DIVS Divibare 24.67 290 P P 14 44 52.1 +1.0
BCI Bajram Curri 24.75 286 ePG P 14 44 53.2 +1.4
NIE Niedzica 24.75 303⇑ eP P 14 44 53.5 +1.7
NIE Niedzica 24.75 303 eP P 14 44 53.5 +1.7
PVY Plav 24.80 286⇑ iP P 14 44 53.7 +1.4
PVY Plav 24.80 286⇑ iP P 14 44 53.8 +1.4
NVS Novosibirsk 24.82 44⇑ iP P 14 44 52.7 +0.5
NVS *i* 14 45 32.6
NVS pmax pmax
comp=N,81nm,2.5s
NVS pmax pmax
comp=E,58nm,2.5s
NVS pmax pmax
comp=Z,156nm,2.5s
BEY Berane 24.82 287⇑ iP P 14 44 54.1 +1.5
IVA Berane 24.82 287⇑ iP P 14 44 54.0 +1.5
PSZ Piszkesteto 24.84 299 ⇑P P 14 44 52.6 0.0
PSZ Piszkesteto 24.84 299⇑ iP P 14 44 52.6 0.0
PSZ Piszkesteto 24.84 299 eP P 14 44 53.1 +0.5
PSZ Piszkesteto 24.84 299⇑ iP P 14 44 52.6 0.0
PUK Puka 24.91 285 ePG P 14 44 54.9 +1.6
PUK *i* SG **pP 14 45 06.6 0.0**
LKD2 Lefkada island 24.93 277 P P 14 44 53.5 +0.1
LKD2 Lefkada island 24.93 277 eP P 14 44 53.0 -0.4
BEL Belsk 24.96 308 eP P 14 44 54.2 +0.6
IGT Igoumenitsa 25.00 279 P P 14 44 54.2 +0.1
VLS Valsamata 25.13 276 P P 14 44 54.4 -0.8
VLS Valsamata 25.13 276 eP P 14 44 54.2 -1.0
SRN Sarande 25.18 280 P P 14 44 55.9 +0.2
OJC Ojcow 25.22 304 eP P 14 44 56.5 +0.6
OJC Ojcow 25.22 304 eP P 14 44 56.5 +0.6
PDG Podgorica 25.34 286⇑ iP P 14 44 58.8 +1.7
TTG Podgorica 25.34 286⇑ iP P 14 44 58.7 +1.7
ZAA0 Zalesovo Array 25.36 47 eP P 14 44 57.4 +0.2
ZAA0 Zalesovo Array 25.36 47 eP P 14 44 57.3 +0.2
ZALV Zalesovo Beam 25.36 47 P P 14 44 57.4 +0.3
ZALV *PP **pP 14 45 12.8 +2.5**
ZALV 14 45 33.9
ZALV pmax pmax
comp=Z,23nm,0.8s
ZALV pmax pmax
comp=Z,10.0nm,0.5s
ZALV pmax pmax
comp=Z,29nm,0.9s
ZALV MLR MLR
comp=Z,721nm,18.5s
ZALV Zalesovo Beam 25.36 47 P P 14 44 57.4 +0.3
ZALV pP **pP 14 45 12.8 +2.5**
ZALV PP **PnPn 14 45 33.9 -0.1**
ZALV S S 14 49 42.5 +23
ZALV Zalesovo Beam 25.36 47 P P 14 44 57.4 +0.3
comp=Z,23nm,0.8s,baz=262,slow=11,SNR=85
ZALV pP **pP 14 45 12.8 +2.5**
comp=Z,10.0nm,0.5s,baz=261,slow=11,SNR=11
ZALV PP **PnPn 14 45 33.9 -0.1**
comp=Z,29nm,0.9s,baz=263,slow=12,SNR=5.6
ZALV S S 14 49 42.5 +23
comp=Z,2.0nm,0.6s,baz=254,slow=16,SNR=3.5
ZALV LR LR 14 56 23.7
comp=Z,720nm,18.5s,baz=249,slow=40
ZALV Zalesovo Beam 25.36 47 P P 14 44 57.4 +0.3
ZALV pP **pP 14 45 12.8 +2.5**
KEK Kerkira 25.37 280 P P 14 44 58.0 +0.6
KEK Kerkira 25.37 280 eP P 14 44 57.4 0.0
ULC Ulcinj 25.40 285⇑ iP P 14 44 58.3 +0.6
ULC Ulcinj 25.40 285⇑ iP P 14 44 58.3 +0.6
NKY Niksic 25.49 287⇑ iP P 14 44 59.8 +1.2
NKY Niksic 25.49 287⇑ iP P 14 44 59.8 +1.2
UPM Unac-Piva 25.51 288⇑ iP P 14 44 59.9 +1.0
UPM Unac-Piva 25.51 288⇑ iP P 14 45 00.0 +1.0
PKSM Moragy 25.59 295 ⇑P P 14 45 00.5 +1.2
PKSM Moragy 25.59 295⇑ iP P 14 45 00.5 +1.2
PKSM Moragy 25.59 295⇓ eP P 14 44 59.8 +0.5
PKSM Moragy 25.59 295 eP P 14 44 59.4 +0.1
VYHS Vyhne 25.60 300 eP P 14 45 00.6 +1.2
VYHS pmax pmax
comp=Z,16nm,1.5s
VYHS Vyhne 25.60 300 eP P 14 45 00.6 +1.2
VYHS esP **sP 14 45 19.3 +0.3**
VYHS eS S 14 49 35.7 +12
BUM Brajici-Budva 25.62 286⇑ iP P 14 45 00.4 +0.7
BUM Brajici-Budva 25.62 286⇑ iP P 14 45 00.4 +0.7
BRY Bratogost 25.81 287⇑ iP P 14 45 02.2 +0.7
BRY Bratogost 25.81 287⇑ iP P 14 45 02.2 +0.7
WMQ Urumqi 25.89 71 P P 14 45 03.7 +1.5
WMQ pP **pP 14 45 15.1 -0.3**
WMQ sP **sP 14 45 21.0 -0.7**
WMQ S **S 14 49 28.9 +0.5**
WMQ sS **sS 14 49 48.4 -2.6**
WMQ pmax pmax
comp=Z,75nm,0.7s
WMQ pmax pmax
comp=Z,140nm,3.1s
WMQ LR LR
comp=N,1µm,5.4s
WMQ LR LR
comp=E,970nm,8.4s
WMQ LR LR
comp=Z,610nm,11.9s
HCY Herceg Novi 25.89 286⇑ iP P 14 45 02.9 +0.8
HCY Herceg Novi 25.89 286⇑ iP P 14 45 03.0 +0.8
MUKL Al Mukalla 25.93 189 eP P 14 45 03.3 +0.7
JOF Joensuu 26.12 337 ep P 14 45 02.7 -1.3
comp=Z,21nm,0.5s
JOF Joensuu 26.12 337 eP P 14 45 02.7 -1.3
JOF pmax pmax
comp=Z,21nm,0.5s
OKC Ostrava-Krasne 26.21 303 eP P 14 45 05.7 +0.8
OKC *e* 14 45 19.8
OKC MLR MLR
comp=Z,200nm,15.6s
OKC Ostrava-Krasne 26.21 303 eP P 14 45 05.7 +0.8
OKC epP **pP 14 45 19.8 +1.6**
OKC eS S 14 49 44.6 +11
OKC AMS AMS 14 56 40.0
comp=Z,200nm,15.6s
OKC Ostrava-Krasne 26.21 303 P P 14 45 05.7 +0.8
MORC Moravsky Berou 26.59 303 ⇑P P 14 45 09.1 +0.7
MORC Moravsky Berou 26.59 303⇑ iP P 14 45 09.1 +0.7
MORC Moravsky Berou 26.59 303⇑ iP P 14 45 09.1 +0.7
ZST Bratislava 26.73 299 eP P 14 45 09.8 +0.2
ZST pmax pmax
comp=Z,11nm,0.7s
ZST Bratislava 26.73 299 eP P 14 45 09.8 +0.2
ZST epP **pP 14 45 22.8 -0.1**
ZST eS **S 14 49 44.9 +3.6**
FIA1 FINESS Array S 26.82 331 eP P 14 45 10.0 -0.2
FIA1 FINESS Array S 26.82 331 eP P 14 45 10.0 -0.2
FINES FINESS Array B 26.82 331 P P 14 45 10.1 -0.2
FINES PP **PnPn 14 45 53.8 -0.1**
FINES S S 14 50 14.4 +32
FINES FINESS Array B 26.82 331 P P 14 45 10.1 -0.2
comp=Z,8.8nm,0.6s,baz=131,slow=10,SNR=24
FINES PP **PnPn 14 45 53.8 -0.1**
comp=Z,28nm,0.6s,baz=123,slow=14,SNR=5.3
FINES S S 14 50 14.4 +32
comp=Z,16nm,0.7s,baz=128,slow=22,SNR=6.2
FINES LR LR 14 57 31.2
comp=Z,334nm,20.3s,baz=28,slow=40
FINES FINESS Array B 26.82 331 P P 14 45 10.1 -0.2
BEHE Becsehely 26.89 295⇑ e pP 14 45 25.7 +1.3
KRLC Kraliky 27.12 303 eP P 14 45 13.5 +0.4
KRLC *e* 14 45 26.6
KRLC Kraliky 27.12 303 eP P 14 45 13.5 +0.4
KRLC epP **pP 14 45 26.6 +0.1**
KRLC esP **sP 14 45 32.8 +0.1**
KRLC Kraliky 27.12 303 P P 14 45 13.5 +0.4
VRAC Vranov 27.15 302 LR LR 14 57 58.4
comp=Z,337nm,21.0s,baz=78,slow=41
KAF Kangasniemi 27.17 332 ep P 14 45 15.4 +2.0
comp=Z,1.5nm,0.3s
KAF Kangasniemi 27.17 332 eP P 14 45 15.4 +2.0
KAF pmax pmax
comp=Z,2.0nm,0.3s
DPC Dobruska-Polom 27.44 304 eP P 14 45 17.2 +1.1
DPC *e* 14 45 25.1
DPC *e* 14 45 30.1
DPC eS **S 14 49 53.0 +0.3**
DPC MLR MLR
comp=Z,300nm,14.1s
DPC Dobruska-Polom 27.44 304 eP P 14 45 17.2 +1.1
DPC *ex* x 14 45 25.1
DPC epP **pP 14 45 30.1 +0.7**
DPC eS **S 14 49 53.0 +0.3**
DPC AMS AMS 14 58 20.0
comp=Z,300nm,14.1s
DPC Dobruska-Polom 27.44 304 P P 14 45 17.2 +1.1
DPC S **S 14 49 53.0 +0.3**
PYUN Piuthan 27.48 107 eP P 14 45 18.2 +1.4
KSP Ksiaz 27.53 305 eP P 14 45 17.1 +0.4
KSP eS **S 14 49 54.5 +0.5**
UPC Upice 27.66 304 eP P 14 45 19.1 +1.2
UPC *e* 14 45 37.0
UPC Upice 27.66 304 eP P 14 45 19.1 +1.2
UPC epP pP 14 45 37.0 +5.7
UPC Upice 27.66 304 P P 14 45 19.1 +1.2
TREC Trest 27.87 301 AMS AMS 14 57 50.0
comp=Z,300nm,16.2s
DANN Dangsing 27.91 106 eP P 14 45 22.7 +2.0
comp=Z,383nm,1.5s
SOKA Soboth 28.09 296⇓ iP P 14 45 22.7 +0.8
comp=Z,10nm,0.7s
SOKA Soboth 28.09 296 P P 14 45 22.7 +0.8
comp=Z,10nm,0.7s
KOLN Koldanda 28.11 107 eP P 14 45 23.7 +1.3
PRU Pruhonice 28.54 303 eP P 14 45 32.8 +7.0
PRU *e* 14 45 44.8
PRU MLR MLR
comp=Z,200nm,18.0s
PRU Pruhonice 28.54 303 eP P 14 45 32.8 +7.0
PRU epP pP 14 45 38.7 -0.5
PRU esP sP 14 45 44.8 -0.6
PRU *ex* x 14 50 20.3
PRU AMS AMS 14 57 50.0
comp=Z,200nm,18.0s
PVCC Panska Ves 28.58 304 eP P 14 45 26.4 +0.3
PVCC *e* 14 45 41.2
PVCC Panska Ves 28.58 304 eP P 14 45 26.4 +0.3
PVCC epP **pP 14 45 41.2 +1.7**
PVCC Panska Ves 28.58 304 P P 14 45 26.4 +0.3
PRA Prague 28.62 303 pP pP 14 45 40.0 +0.1
BRG Berggiesshubel 29.01 305 eP P 14 45 31.1 +1.2
BRG comp=Z,11nm,0.8s
BRG epP **pP 14 45 43.7 +0.4**
BRG comp=Z,9.9nm,1.0s
BRG *i* sP **sP 14 45 49.4 -0.2**
BRG comp=Z,22nm,0.9s
BRG ePCP PcP 14 48 53.6 +16
BRG comp=Z,7.7nm,1.1s
BRG S S 14 50 04.0 -13
BRG ePCS PcS 14 52 31.2 +12
BRG comp=Z,1.9nm,0.6s
BRG comp=N,136nm,14.7s
BRG comp=E,172nm,13.0s
BRG comp=Z,274nm,18.7s
BRG Berggiesshubel 29.01 305 eP P 14 45 31.3 +1.4
comp=Z,22nm,0.9s
BRG Berggiesshubel 29.01 305 eP P 14 45 31.1 +1.2
BRG e*PP **pP 14 45 43.7 +0.4**
BRG *i* *SP **sP 14 45 49.4 -0.2**
BRG pmax pmax
comp=Z,11nm,0.8s
BRG pmax pmax
comp=Z,10.0nm,1.0s
BRG pmax pmax
comp=N,22nm,0.9s
BRG pmax pmax
comp=Z,8.0nm,1.2s
BRG pmax pmax
comp=Z,2.0nm,0.6s
BRG MLR MLR
comp=N,136nm,14.7s
BRG MLR MLR
comp=E,172nm,13.0s
BRG MLR MLR
comp=Z,274nm,18.7s
GEC2 GERESS Array S 29.02 300 eP P 14 45 30.8 +0.7
comp=Z,14nm,1.0s
GEC2 GERESS Array S 29.02 300 eP P 14 45 30.8 +0.7
GEC2 pmax pmax
comp=Z,14nm,1.0s
GERES GERESS Array B 29.02 300 P P 14 45 30.4 +0.3
GERES pP **pP 14 45 44.3 +0.8**
GERES sP **sP 14 45 51.0 +1.2**
GERES GERESS Array B 29.02 300 P P 14 45 30.4 +0.3
comp=Z,2.6nm,0.5s,baz=92,slow=8.7,SNR=21
GERES pP **pP 14 45 44.3 +0.8**
comp=Z,1.8nm,0.4s,baz=100,slow=11,SNR=6.6
GERES sP **sP 14 45 51.0 +1.2**
comp=Z,7.7nm,0.9s,baz=104,slow=8.4,SNR=8.4
GERES LR LR 14 59 16.8
comp=Z,267nm,19.1s,baz=90,slow=41
GERES GERESS Array B 29.02 300 P P 14 45 30.4 +0.3
GERES pP **pP 14 45 44.3 +0.8**
KHC Kasperske Hory 29.11 301 eP P 14 45 31.0 +0.1
KHC *e* 14 45 43.5
KHC *e* 14 45 49.5
KHC eS **S 14 50 18.9 -0.1**
KHC MLR MLR
comp=Z,300nm,23.5s
KHC Kasperske Hory 29.11 301 eP P 14 45 31.0 +0.1
KHC epP **pP 14 45 43.5 -0.9**
KHC esP **sP 14 45 49.5 -1.1**
KHC eS **S 14 50 18.9 -0.1**
KHC AMS AMS 14 58 10.0
comp=Z,300nm,23.5s
KHC Kasperske Hory 29.11 301 eP P 14 45 31.0 +0.1
comp=Z,3.3nm,0.8s
KHC epP **pP 14 45 43.4 -0.9**
KHC Kasperske Hory 29.11 301 P P 14 45 31.0 +0.1
KHC epP **pP 14 45 43.4 -0.9**
KHC S **S 14 50 18.9 -0.1**
BSD Bornholm Skovb 29.20 313⇓ iP P 14 45 30.2 -1.3
BSD pmax pmax
comp=Z,24nm,0.7s
BSD Bornholm Skovb 29.20 313⇓ iP P 14 45 30.2 -1.3
comp=Z,24nm,0.7s
BSD Bornholm Skovb 29.20 313⇓ iP P 14 45 30.2 -1.3
comp=Z,24nm,0.7s,SNR=28
KBA Koelnbreinsper 29.24 297⇑ iP P 14 45 33.2 +1.0
comp=Z,9.9nm,0.6s
KBA Koelnbreinsper 29.24 297 P P 14 45 33.2 +1.0
comp=Z,9.9nm,0.6s
DMN Daman 29.31 106 eP P 14 45 34.7 +1.6
KKN Kakani 29.34 105 eP P 14 45 34.6 +1.3
APA Apatity 29.41 345⇑ iP pP 14 45 46.0 -0.6
APA *i* 14 46 35.0
APA pmax pmax
comp=Z,64nm,1.5s
APA MLR MLR
comp=Z,1µm,15.0s
PKIN Phulchoki 29.54 105 eP P 14 45 36.6 +1.4
PKI Pulchoki 29.55 105 eP P 14 45 36.6 +1.3
CLL Collm 29.65 305 eP P 14 45 36.4 +0.9
comp=Z,14nm,0.8s
CLL Collm 29.65 305⇑ iP P 14 45 36.2 +0.7
CLL *e* 14 45 51.0
CLL pmax pmax
comp=Z,8.0nm,0.8s
CLL MLR MLR
comp=Z,200nm,20.1s
CLL Collm 29.65 305⇑ iP P 14 45 36.2 +0.7
comp=Z,8.0nm,0.8s
CLL *e*(pP) **pP 14 45 51.0 +2.0**
CLL *e* 14 46 11.0
CLL *e*PP **PnPn 14 46 28.0 -4.3**
CLL *e*(sS) 14 50 46.0
CLL LmV 14 59 00.0
comp=Z,200nm,20.1s
GUN Gumba 29.71 104 eP P 14 45 38.0 +1.2
comp=Z,79nm,1.0s
NKC Novy Kostel 29.91 303 eP P 14 45 39.1 +1.2
NKC *e* 14 45 51.9
NKC MLR MLR
comp=Z,200nm,16.0s
NKC Novy Kostel 29.91 303 eP P 14 45 39.1 +1.2
NKC epP **pP 14 45 51.9 +0.6**
NKC AMS AMS 14 59 50.0
comp=Z,200nm,16.0s
NKC Novy Kostel 29.91 303 P P 14 45 39.1 +1.2
TANN Tannenbergstha 29.91 303 eP P 14 45 39.2 +1.2
comp=Z,6.0nm,0.8s
WTTA Wattenberg 30.40 297⇑ iP P 14 45 42.7 +0.2
comp=Z,18nm,0.7s
WTTA Wattenberg 30.40 297 P P 14 45 42.7 +0.2
comp=Z,18nm,0.7s
MOX Moxa 30.46 304 eP P 14 45 44.2 +1.4
comp=Z,15nm,0.7s
MOX *e*L L 15 00 29.7
comp=Z,222nm,18.4s
MOX Moxa 30.46 304 eP P 14 45 44.2 +1.4
MOX pmax pmax
comp=Z,15nm,0.7s
MOX MLR MLR
comp=Z,200nm,18.4s
GRF Grafenberg Arr 30.67 302 eP P 14 45 45.8 +1.1
comp=Z,16nm,0.9s
GRF *e*L L 14 59 43.6
comp=Z,181nm,21.7s
GRF Grafenberg Arr 30.67 302 eP P 14 45 45.8 +1.1
GRF pmax pmax
comp=Z,16nm,0.9s
GRF MLR MLR
comp=Z,200nm,21.7s
MOTA Moosalm 30.76 297⇑ iP P 14 45 45.3 -0.4
comp=Z,4.2nm,0.5s
MOTA Moosalm 30.76 297 P P 14 45 45.3 -0.4
comp=Z,4.2nm,0.5s
RAMN Ramite 30.78 105 eP P 14 45 47.1 +1.0
comp=Z,47nm,0.8s
TAPN Taplejung 31.38 103 eP P 14 45 52.8 +1.4
comp=Z,91nm,1.2s
HFS Hagfors 31.38 322 P P 14 45 50.3 -0.5
HFS sP **sP 14 46 10.0 -0.5**
HFS PP **PnPn 14 46 54.5 -0.4**
HFS Hagfors 31.38 322 P P 14 45 50.3 -0.5
comp=Z,17nm,0.6s,baz=106,slow=9.4,SNR=44
HFS sP **sP 14 46 10.0 -0.5**
comp=Z,10nm,0.6s,baz=125,slow=9.4,SNR=5.0
HFS PP **PnPn 14 46 54.5 -0.4**
comp=Z,7.3nm,0.4s,baz=123,slow=12,SNR=4.0
HFS LR LR 14 59 47.5
comp=Z,435nm,19.7s,baz=82,slow=39
HFS Hagfors 31.38 322 P P 14 45 50.3 -0.5
HFS sP **sP 14 46 10.0 -0.5**
ODAN Odare 31.41 105 eP P 14 45 53.4 +1.7
comp=Z,68nm,1.1s
BSEG Bad Segeberg 31.59 310 eP P 14 45 54.0 +1.3
comp=Z,51nm,0.7s
BSEG Bad Segeberg 31.59 310 eP P 14 45 54.0 +1.3
BSEG pmax pmax
comp=Z,51nm,0.7s
BSEG Bad Segeberg 31.59 310 eP P 14 45 54.0 +1.3
comp=Z,51nm,0.7s
DAVA Damuels 31.59 297⇓ iP P 14 45 52.6 -0.4
comp=Z,11nm,0.8s
DAVA Damuels 31.59 297 P P 14 45 52.6 -0.4
comp=Z,11nm,0.8s
DAVOX Davos/Dischmat 31.63 296 P P 14 45 53.3 0.0
DAVOX Davos/Dischmat 31.63 296 P P 14 45 53.3 0.0
comp=Z,7.0nm,0.7s,baz=104,slow=10,SNR=9.9
DAVOX LR LR 15 00 47.2
comp=Z,154nm,21.6s,baz=82,slow=40
DAVOX Davos/Dischmat 31.63 296 P P 14 45 53.3 0.0
STU Stuttgart 32.00 300 eP P 14 45 57.0 +0.7
comp=Z,25nm,1.1s
TNS Taunus Mts 32.47 303 eP P 14 46 01.9 +1.4
comp=Z,9.0nm,1.0s
TNS Taunus Mts 32.47 303 eP P 14 46 01.9 +1.4
TNS pmax pmax
comp=Z,9.0nm,1.0s
TNS Taunus Mts 32.47 303 eP P 14 46 01.9 +1.4
comp=Z,9.0nm,1.0s
KEV Kevo 32.55 344 ep P 14 46 00.0 -0.8
comp=Z,6.6nm,0.7s
KEV Kevo 32.55 344 eP P 14 46 01.5 +0.6
KEV pmax pmax
comp=Z,191nm,1.8s
KEV Kevo 32.55 344 eP P 14 46 01.4 +0.6
comp=Z,191nm,1.8s
KEV Kevo 32.55 344 eP P 14 46 01.5 +0.6
comp=Z,191nm,1.8s
ARCES ARCESS Array B 32.71 343 P P 14 46 02.0 -0.3
ARCES pP **pP 14 46 16.9 +1.1**
ARCES ARCESS Array B 32.71 343 P P 14 46 02.0 -0.3
comp=Z,1.1nm,0.3s,baz=147,slow=10.0,SNR=20
ARCES pP **pP 14 46 16.9 +1.1**
comp=Z,3.3nm,0.6s,baz=138,slow=8.7,SNR=5.3
ARCES LR LR 15 01 22.6
comp=Z,421nm,19.1s,baz=140,slow=40
ARCES ARCESS Array B 32.71 343 P P 14 46 02.0 -0.3
comp=Z,1.0nm,0.3s
ARCES pP **pP 14 46 16.9 +1.1**
PGF Pioggiola 32.81 289 eP P 14 46 03.6 0.0
comp=Z,16nm,0.8s
PGF Pioggiola 32.81 289 eP P 14 46 03.6 0.0
PGF pmax pmax
comp=Z,16nm,0.8s
PGF Pioggiola 32.81 289 eP P 14 46 03.6 0.0
comp=Z,16nm,0.8s
PGF Pioggiola 32.81 289 eP P 14 46 03.6 0.0
comp=Z,8.0nm,0.8s
NB2 NORSAR Subarra 32.85 323 P P 14 46 02.7 -0.9
comp=Z,9.2nm,0.6s,baz=113,slow=8.6
NOA NORSAR Array B 32.85 323 P P 14 46 02.8 -0.9
NOA pP **pP 14 46 16.7 -0.5**
NOA sP **sP 14 46 22.9 -0.5**
NOA NORSAR Array B 32.85 323 P P 14 46 02.8 -0.9
comp=Z,8.8nm,0.7s,baz=112,slow=8.4,SNR=29
NOA pP **pP 14 46 16.7 -0.5**
comp=Z,5.8nm,0.5s,baz=113,slow=8.4,SNR=7.6
NOA sP **sP 14 46 22.9 -0.5**
comp=Z,6.5nm,0.5s,baz=114,slow=8.4,SNR=7.4
NOA LR LR 15 00 43.1
comp=Z,410nm,19.7s,baz=105,slow=39
NOA NORSAR Array B 32.85 323 P P 14 46 02.8 -0.9
comp=Z,9.0nm,0.7s
NOA pP **pP 14 46 16.7 -0.5**
NAO01 NORSAR Array S 32.94 323 eP P 14 46 02.8 -1.6
comp=Z,5.8nm,0.6s
NAO01 NORSAR Array S 32.94 323 eP P 14 46 02.8 -1.6
comp=Z,5.8nm,0.6s
IBBN Ibbenburen 32.97 307 eP P 14 46 06.1 +1.3
comp=Z,32nm,1.1s
BUG Bochum--Univer 33.24 305 eP P 14 46 08.5 +1.4
comp=Z,15nm,0.6s

CDF **Champ du Feu** 33.28 300 eP P 14 46 07.1 -0.6
comp=Z,11nm,0.7s
CDF **Champ du Feu** 33.28 300 eP P 14 46 07.1 -0.6
CDF pmax pmax
comp=Z,11nm,0.7s
CDF **Champ du Feu** 33.28 300 eP P 14 46 07.1 -0.6
comp=Z,11nm,0.7s
CDF **Champ du Feu** 33.28 300 eP P 14 46 07.1 -0.6
comp=Z,5.4nm,0.7s
ECH **Echery** 33.37 299 eP P 14 46 08.1 -0.3
ECH pmax pmax
comp=Z,17nm,1.1s
ECH **Echery** 33.37 299 eP P 14 46 08.1 -0.3
comp=Z,17nm,1.1s
ECH **Echery** 33.37 299 eP P 14 46 08.1 -0.3
comp=Z,17nm,1.1s
RUP **Ruppelstein** 33.37 302 eP P 14 46 09.3 +0.9
RUP **Ruppelstein** 33.37 302 eP P 14 46 09.3 +0.9
RUP **Ruppelstein** 33.37 302 eP P 14 46 09.3 +0.9
MOF **Molkenrain** 33.41 299 eP P 14 46 09.1 +0.3
MOF **Molkenrain** 33.41 299 eP P 14 46 09.1 +0.3
MOF **Molkenrain** 33.41 299 eP P 14 46 09.1 +0.3
MOF **Molkenrain** 33.41 299 eP P 14 46 09.1 +0.3
HINF **Hinteralfeld** 33.60 299 eP P 14 46 09.6 -0.8
comp=Z,7.2nm,0.7s
HINF **Hinteralfeld** 33.60 299 eP P 14 46 09.6 -0.8
HINF pmax pmax
comp=Z,7.0nm,0.7s
HINF **Hinteralfeld** 33.60 299 eP P 14 46 09.6 -0.8
comp=Z,7.2nm,0.7s
HINF **Hinteralfeld** 33.60 299 eP P 14 46 09.6 -0.8
comp=Z,3.6nm,0.7s
AUTN **L'Aution** 33.68 292 eP P 14 46 11.4 +0.1
AUTN **L'Aution** 33.68 292 eP P 14 46 11.4 +0.1
AUTN **L'Aution** 33.68 292 eP P 14 46 11.4 +0.1
AUTN **L'Aution** 33.68 292 eP P 14 46 12.4 +1.1
AUTN **L'Aution** 33.68 292 eP P 14 46 11.4 +0.1
SBF **Sospel** 33.70 291 eP P 14 46 11.6 +0.3
comp=Z,36nm,0.7s
SBF **Sospel** 33.70 291 eP P 14 46 11.6 +0.3
SBF pmax pmax
comp=Z,37nm,0.7s
SBF **Sospel** 33.70 291 eP P 14 46 11.6 +0.3
comp=Z,36nm,0.7s
SBF **Sospel** 33.70 291 eP P 14 46 11.6 +0.3
comp=Z,18nm,0.7s
TOUF **Mont Tournerai** 33.80 292 eP P 14 46 12.9 +0.5
TOUF **Mont Tournerai** 33.80 292 eP P 14 46 12.9 +0.5
TOUF **Mont Tournerai** 33.80 292 eP P 14 46 12.9 +0.5
TOUF **Mont Tournerai** 33.80 292 eP P 14 46 12.9 +0.5
LPG **La Plagne** 33.92 294 eP P 14 46 13.2 -0.3
LPG **La Plagne** 33.92 294 eP P 14 46 13.2 -0.3
LPG **La Plagne** 33.92 294 eP P 14 46 13.2 -0.3
LPG **La Plagne** 33.92 294 eP P 14 46 13.2 -0.3
HAU **Haudompre** 33.93 299 eP P 14 46 12.8 -0.4
comp=Z,56nm,1.0s
HAU epP pP 14 46 25.8 -0.9
HAU eR
comp=Z,100nm,22.8s
HAU **Haudompre** 33.93 299 eP P 14 46 12.8 -0.4
HAU e*PP pP 14 46 25.8 -0.9
HAU pmax pmax
comp=Z,56nm,1.0s
HAU **Haudompre** 33.93 299 eP P 14 46 12.8 -0.4
comp=Z,56nm,1.0s
HAU epP pP 14 46 25.8 -0.9
HAU **Haudompre** 33.93 299 eP P 14 46 12.8 -0.4
comp=Z,28nm,1.0s
HAU epP pP 14 46 25.8 -0.9
LPL **La Plagne** 33.93 294 eP P 14 46 13.3 -0.2
LPL epP pP 14 46 26.3 -0.7
LPL **La Plagne** 33.93 294 eP P 14 46 13.3 -0.2
LPL e*PP pP 14 46 26.3 -0.7
LPL **La Plagne** 33.93 294 eP P 14 46 13.3 -0.2
LPL epP pP 14 46 26.3 -0.7
LPL **La Plagne** 33.93 294 eP P 14 46 13.3 -0.2
LPL epP pP 14 46 26.3 -0.7
RSL **Roselend** 33.98 295 eP P 14 46 14.6 +0.7
RSL **Roselend** 33.98 295 eP P 14 46 14.6 +0.7
RSL **Roselend** 33.98 295 eP P 14 46 14.6 +0.7
RSL **Roselend** 33.98 295 eP P 14 46 14.6 +0.7
MBDF **Montbardon** 34.02 293 eP P 14 46 14.1 -0.1
comp=Z,50nm,0.7s
MBDF **Montbardon** 34.02 293 eP P 14 46 14.1 -0.1
MBDF pmax pmax
comp=Z,50nm,0.7s
MBDF **Montbardon** 34.02 293 eP P 14 46 14.1 -0.1
comp=Z,50nm,0.7s
MBDF **Montbardon** 34.02 293 eP P 14 46 14.1 -0.1
comp=Z,25nm,0.7s
BNI **Bardonecchia** 34.04 294 eP P 14 46 14.5 +0.2
BNI pmax pmax
comp=Z,11nm,0.7s
BNI **Bardonecchia** 34.04 294 eP P 14 46 14.5 +0.2
comp=Z,11nm,0.7s
BNI **Bardonecchia** 34.04 294 eP P 14 46 14.5 +0.2
comp=Z,11nm,0.7s
CABF **La Chapelle** 34.24 297 eP P 14 46 15.9 -0.1
comp=Z,28nm,0.7s
CABF epP pP 14 46 28.8 -0.7
CABF **La Chapelle** 34.24 297 eP P 14 46 15.9 -0.1
CABF e*PP pP 14 46 28.8 -0.7
CABF pmax pmax
comp=Z,28nm,0.7s
CABF **La Chapelle** 34.24 297 eP P 14 46 15.9 -0.1
comp=Z,28nm,0.7s
CABF epP pP 14 46 28.8 -0.7
CABF **La Chapelle** 34.24 297 eP P 14 46 15.9 -0.1
comp=Z,14nm,0.7s
CABF epP pP 14 46 28.8 -0.7
PAGF **Fort de Pagny** 34.30 300 eP P 14 46 16.7 +0.3
comp=Z,7.7nm,0.8s
PAGF **Fort de Pagny** 34.30 300 eP P 14 46 16.7 +0.3
comp=Z,7.7nm,0.8s
PAGF **Fort de Pagny** 34.30 300 eP P 14 46 16.7 +0.3
comp=Z,3.8nm,0.8s
FRF **La Foret Royal** 34.31 291 eP P 14 46 16.6 +0.1
comp=Z,81nm,1.0s
FRF epP pP 14 46 29.5 -0.6
FRF **La Foret Royal** 34.31 291 eP P 14 46 16.6 +0.1
FRF e*PP pP 14 46 29.5 -0.6
FRF pmax pmax
comp=Z,81nm,1.0s
FRF **La Foret Royal** 34.31 291 eP P 14 46 16.6 +0.1
comp=Z,81nm,1.0s
FRF epP pP 14 46 29.5 -0.6
FRF **La Foret Royal** 34.31 291 eP P 14 46 16.6 +0.1
comp=Z,40nm,1.0s
FRF epP pP 14 46 29.5 -0.6
KEST **Kesra** 34.44 277 eP P 14 46 19.1 +1.2
KEST **Kesra** 34.44 277 P P 14 46 19.1 +1.2
comp=Z,3.5nm,0.7s,baz=229,slow=1.3,SNR=13
KEST **Kesra** 34.44 277 eP P 14 46 19.1 +1.2
LMR **La Mourre** 34.45 291 eP P 14 46 17.4 -0.4
LMR epP pP 14 46 30.5 -0.8
LMR **La Mourre** 34.45 291 eP P 14 46 17.4 -0.4
LMR e*PP pP 14 46 30.5 -0.8
LMR **La Mourre** 34.45 291 eP P 14 46 17.4 -0.4
LMR epP pP 14 46 30.5 -0.8
LMR **La Mourre** 34.45 291 eP P 14 46 17.4 -0.4
LMR epP pP 14 46 30.5 -0.8
MOY **Mondy** 34.65 54 eP P 14 46 22.2 +2.7
OG35 **Corcelles** 34.67 296 eP P 14 46 19.9 +0.2
MEZF **Maizieres J'vi** 34.75 300 eP P 14 46 20.5 +0.2
MEZF **Maizieres J'vi** 34.75 300 eP P 14 46 20.5 +0.2
MEZF **Maizieres J'vi** 34.75 300 eP P 14 46 20.5 +0.2
SFTF **Sexfontaines** 34.79 299 eP P 14 46 20.4 -0.2
SFTF **Sexfontaines** 34.79 299 eP P 14 46 20.4 -0.2
SFTF **Sexfontaines** 34.79 299 eP P 14 46 20.4 -0.2
GIVF **Givet** 34.80 303 eP P 14 46 22.0 +1.3
comp=Z,24nm,0.8s
GIVF epP pP 14 46 35.0 +0.7
GIVF **Givet** 34.80 303 eP P 14 46 22.0 +1.3
GIVF e*PP pP 14 46 35.0 +0.7
GIVF pmax pmax
comp=Z,24nm,0.8s
GIVF **Givet** 34.80 303 eP P 14 46 22.0 +1.3
comp=Z,24nm,0.8s
GIVF epP pP 14 46 35.0 +0.7
GIVF **Givet** 34.80 303 eP P 14 46 22.2 +1.3
comp=Z,12nm,0.8s
GIVF epP pP 14 46 35.0 +0.7
DOU **Dourbes** 34.95 303 P P 14 46 22.2 +0.2
comp=Z,10.0nm,1.1s

SMRF **Simiane la Rot** 35.00 292 eP P 14 46 22.5 0.0
comp=Z,18nm,0.8s
SMRF **Simiane la Rot** 35.00 292 eP P 14 46 22.5 0.0
comp=Z,18nm,0.8s
SMRF **Simiane la Rot** 35.00 292 eP P 14 46 22.5 0.0
comp=Z,8.8nm,0.8s
BAIF **Baives** 35.20 303 eP P 14 46 25.5 +1.4
comp=Z,53nm,1.0s
BAIF epP pP 14 46 39.4 +1.7
BAIF **Baives** 35.20 303 eP P 14 46 25.5 +1.4
BAIF e*PP pP 14 46 39.4 +1.7
BAIF pmax pmax
comp=Z,53nm,1.0s
BAIF **Baives** 35.20 303 eP P 14 46 25.5 +1.4
comp=Z,53nm,1.0s
BAIF epP pP 14 46 39.4 +1.7
BAIF **Baives** 35.20 303 eP P 14 46 25.5 +1.4
comp=Z,26nm,1.0s
BAIF epP pP 14 46 39.4 +1.7
VIVF **Saint-Julien-l** 35.48 294 eP P 14 46 26.2 -0.4
comp=Z,28nm,1.1s
VIVF epP pP 14 46 39.4 -0.8
VIVF **Saint-Julien-l** 35.48 294 eP P 14 46 26.2 -0.4
VIVF e*PP pP 14 46 39.4 -0.8
VIVF pmax pmax
comp=Z,28nm,1.1s
VIVF **Saint-Julien-l** 35.48 294 eP P 14 46 26.2 -0.4
comp=Z,28nm,1.1s
VIVF epP pP 14 46 39.4 -0.8
VIVF **Saint-Julien-l** 35.48 294 eP P 14 46 26.2 -0.4
comp=Z,14nm,1.1s
VIVF epP pP 14 46 39.4 -0.8
SSB **Saint Sauveur** 35.49 294 eP P 14 46 26.9 +0.1
SSB pmax pmax
comp=Z,8.0nm,0.4s
SSB **Saint Sauveur** 35.49 294 eP P 14 46 26.9 +0.1
comp=Z,8.1nm,0.4s
SSB **Saint Sauveur** 35.49 294 eP P 14 46 26.9 +0.1
comp=Z,8.1nm,0.4s
GTA **Gaotai** 35.62 76 eP P 14 46 29.9 +1.8
GTA pP pP 14 46 44.3 +2.6
GTA sP sP 14 46 48.9 +1.0
GTA PP PP 14 47 52.5 +2.9
GTA S S 14 52 04.8 +4.2
GTA sS sS 14 52 25.2 +1.7
GTA SS SnSn 14 54 28.7 +3.3
GTA pmax pmax
comp=Z,7.0nm,0.9s
GTA pmax pmax
comp=Z,97nm,7.1s
GTA LR LR
comp=N,200nm,19.9s
GTA LR LR
comp=E,300nm,16.6s
GTA LR LR
comp=Z,360nm,17.1s
LOR **Lormes** 35.68 298 eP P 14 46 27.8 -0.5
comp=Z,21nm,0.8s
LOR eR
comp=Z,153nm,21.2s
LOR **Lormes** 35.68 298 eP P 14 46 27.8 -0.5
comp=Z,21nm,0.8s
LOR **Lormes** 35.68 298 eP P 14 46 27.8 -0.5
comp=Z,11nm,0.8s
SMF **Signal de Mont** 35.77 297 eP P 14 46 29.0 -0.1
comp=Z,42nm,1.1s
SMF **Signal de Mont** 35.77 297 eP P 14 46 29.0 -0.1
SMF pmax pmax
comp=Z,42nm,1.1s
SMF **Signal de Mont** 35.77 297 eP P 14 46 29.0 -0.1
comp=Z,42nm,1.1s
SMF **Signal de Mont** 35.77 297 eP P 14 46 29.0 -0.1
comp=Z,21nm,1.1s
SSF **Saint Saulge** 35.94 298 eP P 14 46 30.2 -0.3
SSF epP pP 14 46 43.2 -0.9
SSF **Saint Saulge** 35.94 298 eP P 14 46 30.2 -0.3
SSF e*PP pP 14 46 43.2 -0.9
SSF **Saint Saulge** 35.94 298 eP P 14 46 30.2 -0.3
SSF epP pP 14 46 43.2 -0.9
SSF **Saint Saulge** 35.94 298 eP P 14 46 30.2 -0.3
SSF epP pP 14 46 43.2 -0.9
AVF **Avril sur Loir** 36.08 297 eP P 14 46 31.8 +0.1
comp=Z,53nm,1.1s
AVF epP pP 14 46 44.7 -0.6
AVF esP sP 14 46 50.9 -0.6
AVF **Avril sur Loir** 36.08 297 eP P 14 46 31.8 +0.1
AVF e*PP pP 14 46 44.7 -0.6
AVF e*SP sP 14 46 50.9 -0.6
AVF pmax pmax
comp=Z,53nm,1.1s
AVF **Avril sur Loir** 36.08 297 eP P 14 46 31.8 +0.1
comp=Z,53nm,1.1s
AVF epP pP 14 46 44.7 -0.6
AVF esP sP 14 46 50.9 -0.6
AVF **Avril sur Loir** 36.08 297 eP P 14 46 31.8 +0.1
comp=Z,26nm,1.1s
AVF epP pP 14 46 44.7 -0.6
AVF esP sP 14 46 50.9 -0.6
ZAK **Zakamensk** 36.13 57 eP P 14 46 33.7 +1.5
ZAK e 14 47 56.2
ZAK pmax pmax
comp=Z,4.0nm,1.9s
LASF **Ste Croix** 36.19 293 eP P 14 46 32.9 +0.1
comp=Z,32nm,1.2s
LASF **Ste Croix** 36.19 293 eP P 14 46 32.9 +0.1
comp=Z,32nm,1.2s
LASF **Ste Croix** 36.19 293 eP P 14 46 32.9 +0.1
comp=Z,16nm,1.2s
TLY **Talaya** 36.30 54 eP P 14 46 35.8 +2.3
TLY e 14 46 49.4
TLY e 14 47 51.9
TLY eS S 14 52 16.3 +5.9
TLY eSS SnSn 14 54 36.3 -4.8
TLY pmax pmax
comp=Z,6.0nm,1.6s
TLY MLR MLR
comp=Z,437nm,18.0s
AGO **Saint Agoulin** 36.35 296 eP P 14 46 35.0 +1.0
AGO **Saint Agoulin** 36.35 296 eP P 14 46 35.0 +1.0
AGO **Saint Agoulin** 36.35 296 eP P 14 46 35.0 +1.0
LBL **Lubilhac** 36.40 295 eP P 14 46 34.9 +0.3
LBL **Lubilhac** 36.40 295 eP P 14 46 34.9 +0.3
LBL **Lubilhac** 36.40 295 eP P 14 46 34.9 +0.3
LBL **Lubilhac** 36.40 295 eP P 14 46 34.9 +0.3
PYM **Petit Puy Mans** 36.48 296 eP P 14 46 35.7 +0.5
PYM **Petit Puy Mans** 36.48 296 eP P 14 46 35.7 +0.5
PYM **Petit Puy Mans** 36.48 296 eP P 14 46 35.7 +0.5
PYM **Petit Puy Mans** 36.48 296 eP P 14 46 35.7 +0.5
IRK **Irkutsk** 36.66 53 eP pP 14 46 51.2 +0.9
IRK pmax pmax
comp=Z,49nm,1.8s
TCF **Toulx Ste Croi** 36.94 297 eP P 14 46 39.5 +0.4
comp=Z,48nm,1.0s
TCF epP pP 14 46 52.6 -0.1
TCF **Toulx Ste Croi** 36.94 297 eP P 14 46 39.5 +0.4
TCF e*PP pP 14 46 52.6 -0.1
TCF pmax pmax
comp=Z,49nm,1.0s
TCF **Toulx Ste Croi** 36.94 297 eP P 14 46 39.5 +0.4
comp=Z,48nm,1.0s
TCF epP pP 14 46 52.6 -0.1
TCF **Toulx Ste Croi** 36.94 297 eP P 14 46 39.5 +0.4
comp=Z,24nm,1.0s
TCF epP pP 14 46 52.6 -0.1
CAF **Calviac** 37.28 294 eP P 14 46 42.5 +0.5
comp=Z,19nm,0.9s
CAF epP pP 14 46 55.6 -0.1
CAF **Calviac** 37.28 294 eP P 14 46 42.5 +0.5
CAF e*PP pP 14 46 55.6 -0.1
CAF pmax pmax
comp=Z,19nm,0.9s
CAF **Calviac** 37.28 294 eP P 14 46 42.5 +0.5
comp=Z,19nm,0.9s
CAF epP pP 14 46 55.6 -0.1
CAF **Calviac** 37.28 294 eP P 14 46 42.5 +0.5
comp=Z,9.4nm,0.9s
CAF epP pP 14 46 55.6 -0.1
MTLF **Montolieu** 37.51 292 eP P 14 46 44.0 +0.1
comp=Z,33nm,1.1s
MTLF epP pP 14 46 57.1 -0.5
MTLF **Montolieu** 37.51 292 eP P 14 46 44.0 +0.1
MTLF e*PP pP 14 46 57.1 -0.5
MTLF pmax pmax
comp=Z,33nm,1.1s

MTLF **Montolieu** 37.51 292 eP P 14 46 44.0 +0.1
comp=Z,33nm,1.1s
MTLF epP pP 14 46 57.1 -0.5
MTLF **Montolieu** 37.51 292 eP P 14 46 44.0 +0.1
comp=Z,16nm,1.1s
MTLF epP pP 14 46 57.1 -0.5
RJF **Les Rejaudoux** 37.59 295 eP P 14 46 45.4 +0.8
comp=Z,46nm,1.2s
RJF epP pP 14 46 58.5 +0.2
RJF eR
comp=Z,49nm,21.8s
RJF **Les Rejaudoux** 37.59 295 eP P 14 46 45.4 +0.8
RJF e*PP pP 14 46 58.5 +0.2
RJF pmax pmax
comp=Z,46nm,1.2s
RJF **Les Rejaudoux** 37.59 295 eP P 14 46 45.4 +0.8
comp=Z,46nm,1.2s
RJF epP pP 14 46 58.5 +0.2
RJF **Les Rejaudoux** 37.59 295 eP P 14 46 45.4 +0.8
comp=Z,23nm,1.2s
RJF epP pP 14 46 58.5 +0.2
LDF **La Druitiere** 38.16 301 eP P 14 46 48.9 -0.4
comp=Z,7.4nm,0.5s
LDF **La Druitiere** 38.16 301 eP P 14 46 48.9 -0.4
LDF pmax pmax
comp=Z,7.0nm,0.4s
LDF **La Druitiere** 38.16 301 eP P 14 46 48.9 -0.4
comp=Z,7.4nm,0.4s
LDF **La Druitiere** 38.16 301 eP P 14 46 48.9 -0.4
comp=Z,3.7nm,0.5s
LFF **La Frestale** 38.20 295 eP P 14 46 50.2 +0.5
comp=Z,56nm,0.8s
LFF epP pP 14 47 03.3 -0.1
LFF **La Frestale** 38.20 295 eP P 14 46 50.2 +0.5
LFF e*PP pP 14 47 03.3 -0.1
LFF pmax pmax
comp=Z,56nm,0.8s
LFF **La Frestale** 38.20 295 eP P 14 46 50.2 +0.5
comp=Z,56nm,0.8s
LFF epP pP 14 47 03.3 -0.1
LFF **La Frestale** 38.20 295 eP P 14 46 50.2 +0.5
comp=Z,28nm,0.8s
LFF epP pP 14 47 03.3 -0.1
FLN **La Foliniere** 38.37 301 eP P 14 46 51.0 -0.1
comp=Z,22nm,0.7s
FLN eR
comp=Z,182nm,17.0s
FLN **La Foliniere** 38.37 301 eP P 14 46 51.0 -0.1
FLN pmax pmax
comp=Z,22nm,0.7s
FLN **La Foliniere** 38.37 301 eP P 14 46 51.0 -0.1
comp=Z,22nm,0.7s
FLN **La Foliniere** 38.37 301 eP P 14 46 51.0 -0.1
comp=Z,11nm,0.7s
SONM **Songino Array** 38.44 60 P P 14 46 52.9 +1.0
SONM **Songino Array** 38.44 60 P P 14 46 52.9 +1.0
comp=Z,1.6nm,0.7s,baz=274,slow=9.8,SNR=14
SONM LR LR 15 03 40.9
comp=Z,253nm,19.6s,baz=274,slow=38
SONM **Songino Array** 38.44 60 P P 14 46 52.9 +1.0
MFF **Saint Martin d** 38.49 298 eP P 14 46 51.7 -0.4
comp=Z,32nm,1.1s
MFF epP pP 14 47 04.9 -0.9
MFF **Saint Martin d** 38.49 298 eP P 14 46 51.7 -0.4
MFF e*PP pP 14 47 04.9 -0.9
MFF pmax pmax
comp=Z,32nm,1.1s
MFF **Saint Martin d** 38.49 298 eP P 14 46 51.7 -0.4
comp=Z,32nm,1.1s
MFF epP pP 14 47 04.9 -0.9
MFF **Saint Martin d** 38.49 298 eP P 14 46 51.7 -0.4
comp=Z,16nm,1.1s
MFF epP pP 14 47 04.9 -0.9
GRR **Gorron** 38.67 301 eP P 14 46 53.3 -0.3
comp=Z,18nm,0.7s
GRR **Gorron** 38.67 301 eP P 14 46 53.3 -0.3
GRR pmax pmax
comp=Z,18nm,0.7s
GRR **Gorron** 38.67 301 eP P 14 46 53.3 -0.3
comp=Z,18nm,0.7s
GRR **Gorron** 38.67 301 eP P 14 46 53.3 -0.3
comp=Z,9.1nm,0.7s
ULN **Ulaanbaatar** 38.88 60 P P 14 46 57.5 +2.0
SNR=9.8
ULN **Ulaanbaatar** 38.88 60 eP P 14 46 56.7 +1.1
comp=Z,14nm,0.9s
ULN **Ulaanbaatar** 38.88 60 P P 14 46 56.5 +1.0
comp=Z,17nm,1.1s,comp=Z,182nm
ULN **Ulaanbaatar** 38.88 60 eP P 14 46 56.7 +1.1
comp=Z,14nm,0.9s
EPF **Esparros** 38.92 292 eP P 14 46 56.3 +0.5
EPF **Esparros** 38.92 292 eP P 14 46 56.3 +0.5
EPF **Esparros** 38.92 292 eP P 14 46 56.3 +0.5
EPF **Esparros** 38.92 292 eP P 14 46 56.3 +0.5
EKA **Eskdalemuir Ar** 39.48 312 P P 14 47 00.2 -0.1
EKA pP pP 14 47 14.1 +0.1
EKA **Eskdalemuir Ar** 39.48 312 P P 14 47 00.2 -0.1
comp=Z,8.6nm,0.6s,baz=101,slow=9.0,SNR=45
EKA pP pP 14 47 14.1 +0.1
comp=Z,4.2nm,0.3s,baz=97,slow=8.6,SNR=11
EKA **Eskdalemuir Ar** 39.48 312 P P 14 47 00.2 -0.1
EKA pP pP 14 47 14.1 +0.1
ESK **Eskdalemuir** 39.51 312 eP P 14 47 00.2 -0.3
ESK pmax pmax
comp=Z,8.0nm,0.7s
ESK **Eskdalemuir** 39.51 312 eP P 14 47 00.1 -0.3
comp=Z,8.3nm,0.7s
ESK **Eskdalemuir** 39.51 312 eP P 14 47 00.2 -0.3
comp=Z,8.3nm,0.7s
ETSF **Etsaut** 39.59 292 eP P 14 47 02.1 +0.6
comp=Z,33nm,1.1s
ETSF epP pP 14 47 15.5 +0.3
ETSF **Etsaut** 39.59 292 eP P 14 47 02.1 +0.6
ETSF e*PP pP 14 47 15.5 +0.3
ETSF pmax pmax
comp=Z,33nm,1.1s
ETSF **Etsaut** 39.59 292 eP P 14 47 02.1 +0.6
comp=Z,33nm,1.1s
ETSF epP pP 14 47 15.5 +0.3
ETSF **Etsaut** 39.59 292 eP P 14 47 02.1 +0.6
comp=Z,16nm,1.1s
ETSF epP pP 14 47 15.5 +0.3
LZH **Lanzhou** 39.74 79 eP P 14 47 03.6 +0.7
LZH PP PnPn 14 48 39.5 +1.2
LZH S S 14 53 03.2 +0.1
LZH sS sS 14 53 23.0 -3.2
LZH SS SS 14 55 54.0 -6.1
LZH pmax pmax
comp=Z,52nm,1.2s
LZH pmax pmax
comp=Z,170nm,5.1s
LZH LR LR
comp=N,420nm,14.0s
LZH LR LR
comp=E,480nm,14.3s
LZH LR LR
comp=Z,610nm,17.6s
SGMF **Saint Gilles** 39.82 301 eP P 14 47 03.3 +0.2
comp=Z,34nm,0.6s
SGMF epP pP 14 47 16.5 -0.4
SGMF **Saint Gilles** 39.82 301 eP P 14 47 03.3 +0.2
SGMF e*PP pP 14 47 16.5 -0.4
SGMF pmax pmax
comp=Z,34nm,0.6s
SGMF **Saint Gilles** 39.82 301 eP P 14 47 03.3 +0.2
comp=Z,34nm,0.6s
SGMF epP pP 14 47 16.5 -0.4
SGMF **Saint Gilles** 39.82 301 eP P 14 47 03.3 +0.2
comp=Z,17nm,0.6s
SGMF epP pP 14 47 16.5 -0.4
SJPF **Ste Jean** 40.01 292 eP P 14 47 04.6 -0.2
SJPF **Ste Jean** 40.01 292 eP P 14 47 04.6 -0.2
SJPF **Ste Jean** 40.01 292 eP P 14 47 04.6 -0.2
SJPF **Ste Jean** 40.01 292 eP P 14 47 04.6 -0.2
ROSF **Rostrenen** 40.27 301 eP P 14 47 07.1 +0.2
comp=Z,29nm,0.7s
ROSF **Rostrenen** 40.27 301 eP P 14 47 07.1 +0.2
ROSF pmax pmax
comp=Z,29nm,0.7s
ROSF **Rostrenen** 40.27 301 eP P 14 47 07.1 +0.2
comp=Z,29nm,0.7s
ROSF **Rostrenen** 40.27 301 eP P 14 47 07.1 +0.2
comp=Z,14nm,0.7s
QUIF **Quistinic** 40.28 300 eP P 14 47 07.0 0.0
comp=Z,42nm,0.9s

QUIF ePP pP 14 47 20.1 -0.6
QUIF Quistinic 40.28 300 eP P 14 47 07.0 0.0
QUIF e*PP pP 14 47 20.1 -0.6
QUIF pmax pmax
comp=Z,42nm,0.9s
QUIF Quistinic 40.28 300 eP P 14 47 07.0 0.0
comp=Z,42nm,0.9s
QUIF ePP pP 14 47 20.1 -0.6
QUIF Quistinic 40.28 300 eP P 14 47 07.0 0.0
comp=Z,21nm,0.9s
QUIF ePP pP 14 47 20.1 -0.6
SPITS Spitsbergen Ar 40.83 349 P P 14 47 12.5 +1.2
SPITS pP pP 14 47 26.2 +1.2
SPITS Spitsbergen Ar 40.83 349 P P 14 47 12.5 +1.2
comp=Z,8.0nm,0.6s,baz=149,slow=9.8,SNR=10
SPITS pP pP 14 47 26.2 +1.2
comp=Z,62nm,1.1s,baz=145,slow=16,SNR=10
SPITS Spitsbergen Ar 40.83 349 P P 14 47 12.5 +1.2
SPITS pP pP 14 47 26.2 +1.2
CD2 Chengdu 41.82 86 eP P 14 47 20.3 +0.3
CD2 pP pP 14 47 34.3 +0.5
CD2 sP sP 14 47 40.4 +0.5
CD2 PP PnPn 14 49 01.3 -1.4
CD2 S S 14 53 34.1 +0.1
CD2 sS sS 14 53 56.9 -0.3
CD2 SS SS 14 56 35.9 -5.6
CD2 pmax pmax
comp=Z,20nm,0.6s
CD2 pmax pmax
comp=Z,120nm,4.8s
CD2 LR LR
comp=N,300nm,20.2s
CD2 LR LR
comp=Z,330nm,22.6s
ESDC Sonseca Array 43.01 288 P P 14 47 28.8 -0.7
ESDC pP pP 14 47 43.2 -0.1
ESDC sP sP 14 47 48.8 -0.7
ESDC Sonseca Array 43.01 288 P P 14 47 28.8 -0.7
comp=Z,3.7nm,0.7s,baz=62,slow=8.5,SNR=16
ESDC pP pP 14 47 43.2 -0.1
comp=Z,1.1nm,0.4s,baz=64,slow=8.5,SNR=3.3
ESDC sP sP 14 47 48.8 -0.7
comp=Z,5.7nm,0.6s,baz=58,slow=7.2,SNR=6.5
ESDC LR LR 15 06 49.1
comp=Z,57nm,19.3s,baz=120,slow=38
ESDC Sonseca Array 43.01 288 P P 14 47 28.8 -0.7
ESDC pP pP 14 47 43.2 -0.1
ESLA Sonseca Array 43.01 288 eP P 14 47 29.2 -0.3
comp=Z,0.6nm,0.7s
ESLA Sonseca Array 43.01 288 eP P 14 47 29.2 -0.3
comp=Z,0.6nm,0.7s
TAM Tamanrasset 43.52 261 eP P 14 47 33.6 -0.3
TAM pmax pmax
comp=Z,12nm,1.4s
TAM Tamanrasset 43.52 261 eP P 14 47 33.6 -0.3
comp=Z,12nm,1.4s
TAM Tamanrasset 43.52 261 eP P 14 47 33.6 -0.3
comp=Z,12nm,1.4s
KMBO Kilima Mbogo 43.64 203 P P 14 47 37.5 +2.5
SNR=6.0
KMBO Kilima Mbogo 43.64 203 eP P 14 47 36.7 +1.7
comp=Z,39nm,1.8s
KMBO Kilima Mbogo 43.64 203 P P 14 47 36.2 +1.3
comp=Z,4.6nm,0.9s,baz=34,slow=8.3,SNR=12
KMBO LR LR 15 09 03.3
comp=Z,135nm,18.1s,baz=90,slow=40
KMBO Kilima Mbogo 43.64 203 P P 14 47 37.5 +2.5
SNR=6.0
HHC Hu-ho-hao-te 43.76 69 eP P 14 47 34.8 -0.8
HHC pP pP 14 47 46.9 -2.6
HHC sP sP 14 47 52.3 -3.3
HHC PP PP 14 49 18.5 +0.5
HHC S S 14 54 01.0 -1.2
HHC sS sS 14 54 21.4 -4.2
HHC pmax pmax
comp=Z,41nm,0.7s
HHC pmax pmax
comp=Z,130nm,4.8s
HHC LR LR
comp=N,300nm,14.1s
HHC LR LR
comp=E,400nm,13.3s
HHC LR LR
comp=Z,370nm,16.7s
KMI Kunming 43.93 94 P P 14 47 38.1 +0.8
KMI pP pP 14 47 51.8 +0.6
KMI sP sP 14 47 57.3 0.0
KMI PP PcP 14 49 21.6 -0.9
KMI PcP PP 14 49 24.0 +3.7
KMI S S 14 54 03.6 -1.7
KMI sS sS 14 54 28.7 0.0
KMI SS SS 14 57 14.7 -8.5
KMI pmax pmax
comp=Z,21nm,0.9s
KMI pmax pmax
comp=Z,55nm,3.1s
KMI LR LR
comp=N,170nm,16.9s
KMI LR LR
comp=E,130nm,17.9s
KMI LR LR
comp=Z,220nm,22.1s
XAN Xi'an 44.37 80 P P 14 47 41.3 +0.8
XAN pP pP 14 47 55.9 +1.5
XAN sP sP 14 48 03.7 +3.1
XAN pmax pmax
comp=Z,4.0nm,0.7s
CHTO Chiang Mai 44.73 105 eP P 14 47 43.4 -0.1
CHTO pmax pmax
comp=Z,9.0nm,1.4s
CHTO Chiang Mai 44.73 105 eP P 14 47 43.4 -0.1
comp=Z,9.2nm,1.4s
CHTO Chiang Mai 44.73 105 eP P 14 47 43.3 -0.2
comp=Z,9.2nm,1.4s
CMAR Chiang Mai Arr 44.95 105 P P 14 47 45.3 +0.1
CMAR pP pP 14 48 01.8 +2.7
CMAR sP sP 14 48 05.1 -0.2
CMAR Chiang Mai Arr 44.95 105 P P 14 47 45.3 +0.1
comp=Z,3.9nm,1.0s,baz=305,slow=8.4,SNR=14
CMAR pP pP 14 48 01.8 +2.7
comp=Z,12nm,1.1s,baz=299,slow=7.2,SNR=6.9
CMAR sP sP 14 48 05.1 -0.2
comp=Z,12nm,1.1s,baz=307,slow=8.4,SNR=11
CMAR LR LR 15 07 19.5
comp=Z,81nm,20.2s,baz=201,slow=37
CMAR Chiang Mai Arr 44.95 105 P P 14 47 45.3 +0.1
MTE Manteigas 45.34 291 eP P 14 47 48.6 +0.5
comp=Z,31nm,1.1s
MTE Manteigas 45.34 291 eP P 14 47 48.6 +0.5
comp=Z,31nm,1.1s
PMRV Marv??o 45.57 289 eP P 14 47 49.0 -1.0
comp=Z,25nm,1.1s
PMRV Marv??o 45.57 289 eP P 14 47 49.0 -1.0
comp=Z,25nm,1.1s
PBAR Barrancos 45.78 288 eP P 14 47 51.6 0.0
comp=Z,17nm,2.2s
PBAR Barrancos 45.78 288 eP P 14 47 51.6 0.0
comp=Z,17nm,2.2s
PESTR Estremoz 45.92 289 eP P 14 47 52.8 +0.1
comp=Z,42nm,1.0s
PESTR Estremoz 45.92 289 eP P 14 47 52.8 +0.1
comp=Z,42nm,1.0s
MDT Midelt 46.19 280 P P 14 47 53.9 -1.1
MDT pP pP 14 48 08.4 -0.6
MDT Midelt 46.19 280 P P 14 47 53.9 -1.1
comp=Z,3.1nm,0.9s,baz=64,slow=8.6,SNR=6.3
MDT pP pP 14 48 08.4 -0.6
comp=Z,7.0nm,0.8s,baz=254,slow=3.5,SNR=11
MDT Midelt 46.19 280 P P 14 47 53.9 -1.1
MDT pP pP 14 48 08.4 -0.6
GYA Guiyang 46.23 90 P P 14 47 55.6 +0.2
GYA pP pP 14 48 10.5 +1.1
GYA sP sP 14 48 15.3 -0.2
GYA PP PP 14 49 45.0 +0.5
GYA ScP ScP 14 53 18.7 -0.3
GYA S S 14 54 37.0 -1.3
GYA sS sS 14 55 01.6 -0.2
GYA SS SS 14 57 55.4 -8.5
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,120nm,5.0s
GYA LR LR
comp=N,520nm,18.0s
GYA LR LR
comp=E,460nm,19.5s
GYA LR LR
comp=Z,530nm,18.6s
PMTG Montargil 46.31 289 eP P 14 47 54.8 -0.9
comp=Z,17nm,1.5s
PMTG Montargil 46.31 289 eP P 14 47 54.8 -0.9
comp=Z,17nm,1.5s
DAG Danmarks Havn 47.00 343↑ iP P 14 48 00.6 0.0
DAG pmax pmax
comp=Z,5.0nm,0.7s
DAG Danmarks Havn 47.00 343↑ iP P 14 48 00.6 0.0
comp=Z,7.7nm,0.7s
PBKT Sadao Pong 47.64 105 P P 14 48 05.5 -0.8
TIXI Tiksi 47.94 24↓ iP P 14 48 08.9 +1.0
TIXI pmax pmax
comp=Z,12nm,1.6s
CLNS Chul'man 48.04 45 eP P 14 48 09.8 +0.8
CLNS pmax pmax
comp=Z,12nm,0.9s
CLNS pmax pmax
comp=E,10.0nm,1.1s
CLNS pmax pmax
comp=N,11nm,1.4s
YAK Yakutsk 49.39 37 eP P 14 48 19.6 +0.4
YAK pmax pmax
comp=Z,8.0nm,0.7s
TOA0 Torodi Ar. Sit 52.31 254 eP P 14 48 40.9 -0.8
TOA0 Torodi Ar. Sit 52.31 254 eP P 14 48 40.9 -0.8
TORD Torodi Ar. Bea 52.31 254 P P 14 48 40.7 -1.1
TORD pP pP 14 48 56.7 +0.8
TORD Torodi Ar. Bea 52.31 254 P P 14 48 40.7 -1.1
comp=Z,1.0nm,0.3s,baz=42,slow=6.7,SNR=34
TORD pP pP 14 48 56.7 +0.8
comp=Z,1.6nm,0.5s,baz=45,slow=6.6,SNR=5.5
TORD Torodi Ar. Bea 52.31 254 P P 14 48 40.7 -1.1
TORD pP pP 14 48 56.7 +0.8
CN2 Changchun 52.32 61 eP P 14 48 42.1 +0.6
CN2 eS S 14 56 03.2 +0.2
CN2 pmax pmax
comp=Z,10.0nm,0.4s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,300nm,11.0s
CN2 LR LR
comp=E,400nm,11.0s
CN2 LR LR
comp=Z,400nm,16.0s
SUMG Summit 52.55 338↓ iP P 14 48 44.2 +0.9
SUMG pmax pmax
comp=Z,13nm,0.8s
SUMG Summit 52.55 338 eP P 14 48 44.0 +0.7
comp=Z,11nm,0.6s
SUMG Summit 52.55 338↓ iP P 14 48 44.2 +0.9
comp=Z,13nm,0.8s
SUMG Summit 52.55 338↓ iP P 14 48 44.2 +0.9
comp=Z,13nm,0.8s
NJ2 Nanjing 52.71 77 eP P 14 48 43.6 -0.9
NJ2 pP pP 14 48 56.7 -2.0
NJ2 sP sP 14 49 02.6 -2.2
NJ2 PP PP 14 50 42.3 -1.7
NJ2 S S 14 56 08.0 -0.5
NJ2 sS sS 14 56 30.0 -2.4
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
NJ2 pmax pmax
comp=Z,120nm,4.6s
NJ2 LR LR
comp=N,150nm,14.9s
NJ2 LR LR
comp=E,170nm,15.0s
NJ2 LR LR
comp=Z,200nm,18.2s
QIZ Qiongzhong 52.80 96 P P 14 48 43.1 -2.2
QIZ S S 14 56 08.3 -1.7
QIZ LR LR
comp=Z,120nm,23.8s
KLR Kul'dur 54.26 52 eP P 14 48 52.2 -3.5
KLR e 14 49 07.0
KLR eS S 14 56 52.0 +23
KLR pmax pmax
comp=E,42nm,1.8s
KLR pmax pmax
comp=Z,70nm,1.8s
KLR MLR MLR
comp=Z,700nm,13.0s
USRK Ussuriysk Arra 56.47 58 P P 14 49 11.7 +0.1
comp=Z,6.4nm,0.7s,baz=284,slow=7.7,SNR=20
USRK pP pP 14 49 27.0 +1.0
comp=Z,7.7nm,0.6s,baz=291,slow=6.2,SNR=12
USRK sP sP 14 49 34.8 +2.8
comp=Z,4.1nm,0.6s,baz=286,slow=6.3,SNR=3.6
USRK LR LR 15 15 46.0
comp=Z,392nm,19.3s,baz=68,slow=38
HABR Khabarovsk 56.56 52 eP P 14 49 10.7 -1.5
HABR e*PP pP 14 49 24.7 -1.8
HABR e 14 50 07.3
HABR e 14 51 16.6
HABR S S 14 56 58.4 -1.4
HABR e*SS sS 14 57 22.1 -1.8
HABR e 14 58 54.3
HABR eSS SS 15 00 47.1 -0.2
HABR pmax pmax
comp=Z,39nm,1.6s
HABR MLR MLR
comp=Z,170nm,19.0s
KSAR Wonju Array Be 56.73 67 P P 14 49 13.9 +0.4
KSAR pP pP 14 49 29.1 +1.1
KSAR Wonju Array Be 56.73 67 P P 14 49 13.9 +0.4
KSAR pP pP 14 49 29.0 +1.1
KSRS Korea Array 56.75 67 P P 14 49 13.9 +0.3
comp=Z,4.0nm,0.6s,baz=295,slow=6.7,SNR=17
KSRS pP pP 14 49 29.1 +1.0
comp=Z,5.5nm,0.6s,baz=296,slow=6.7,SNR=8.3
KSRS LR LR 15 15 13.4
comp=Z,87nm,21.3s,baz=116,slow=38
SEY Seymchan 58.97 32↓ eP P 14 49 29.5 +0.6
LSZ Lusaka 59.89 208 P P 14 49 37.4 +1.5
SNR=7.2
LSZ Lusaka 59.89 208 eP P 14 49 36.4 +0.6
comp=Z,48nm,1.4s
LSZ Lusaka 59.89 208 P P 14 49 37.4 +1.5
SNR=7.2
JNU Nakatsue 60.98 70 P P 14 49 44.4 +1.2
JNU Nakatsue 60.98 70 P P 14 49 44.4 +1.2
comp=Z,7.3nm,0.9s,baz=293,slow=7.7,SNR=3.5
JNU Nakatsue 60.98 70 P P 14 49 44.4 +1.2
BILL Bilibino 61.13 23↓ iP P 14 49 44.5 +0.9
BILL e 14 49 58.6
BILL e 14 50 24.9
BILL pmax pmax
comp=Z,18nm,2.1s
DBIC Dimbokro 61.41 253 P P 14 49 45.9 -0.3
DBIC Dimbokro 61.41 253 P P 14 49 45.9 -0.3
comp=Z,4.1nm,0.5s,baz=34,slow=9.1,SNR=7.8
DBIC Dimbokro 61.41 253 P P 14 49 45.9 -0.3
LIC Lamto 61.83 253 eP P 14 49 48.5 -0.6
comp=Z,12nm,0.4s
LIC Lamto 61.83 253 eP P 14 49 48.5 -0.6
comp=Z,12nm,0.4s
LIC Lamto 61.83 253 eP P 14 49 48.5 -0.6
comp=Z,6.0nm,0.4s
YSS Yuzh-Sakhalins 61.88 51 iP P 14 49 49.1 +0.2
YSS pmax pmax
comp=Z,12nm,1.3s
MAT Matsushiro 64.33 63 P P 14 50 04.7 -0.7
MAT S S 14 58 35.0 -4.6
MJAR Matsushiro Arr 64.33 63 P P 14 50 05.5 +0.1
MJAR pP pP 14 50 20.9 +0.9
MJAR Matsushiro Arr 64.33 63 P P 14 50 05.5 +0.1
comp=Z,1.3nm,0.7s,baz=298,slow=5.9,SNR=4.1
MJAR pP pP 14 50 20.9 +0.9
comp=Z,4.4nm,0.9s,baz=299,slow=7.8,SNR=9.5
MJAR LR LR 15 20 26.0
comp=Z,124nm,18.8s,baz=270,slow=38
MJAR Matsushiro Arr 64.33 63 P P 14 50 05.5 +0.1
MJAR pP pP 14 50 20.9 +0.9
YUK Yuzh-Kuril'sk 65.26 52 P P 14 50 01.1 -10
YUK eSS SS 15 03 09.2 +5.6
YUK MLR MLR
comp=Z,232nm,19.0s
PETK Petropavlovsk- 66.63 39 P P 14 50 18.7 -1.3
PETK *PP pP 14 50 34.3 -0.3
PETK pmax pmax
comp=Z,2.0nm,0.9s
PETK pmax pmax
comp=Z,5.0nm,1.0s
PETK Petropavlovsk- 66.63 39 P P 14 50 18.7 -1.3
PETK pP pP 14 50 34.3 -0.3
PETK Petropavlovsk- 66.63 39 P P 14 50 18.7 -1.3
comp=Z,1.7nm,0.8s,baz=259,slow=6.9,SNR=3.4
PETK pP pP 14 50 34.3 -0.3
comp=Z,5.0nm,1.0s,baz=193,slow=4.6,SNR=5.3
PETK LR LR 15 25 02.8
comp=Z,206nm,21.4s,baz=296,slow=41
PETK Petropavlovsk- 66.63 39 P P 14 50 18.7 -1.3
PETK pP pP 14 50 34.3 -0.3
GUIM Jordan 67.64 95 eP P 14 50 14.0 -13
TSUM Tsumeb 67.74 216 eP P 14 50 27.9 +0.4
comp=Z,2.5nm,0.7s
TSUM Tsumeb 67.74 216 eP P 14 50 27.9 +0.4
comp=Z,2.5nm,0.7s
LBTB Lobatse 69.79 206 eP P 14 50 41.2 +1.2
comp=Z,19nm,0.6s
LBTB Lobatse 69.79 206 eP P 14 50 41.2 +1.2
comp=Z,19nm,0.6s
COLD Coldfoot 71.38 9 eP P 14 50 49.8 +0.6
comp=Z,26nm,1.1s
COLD epP pP 14 51 04.2 +0.2
COLD Coldfoot 71.38 9 eP P 14 50 49.8 +0.6
comp=Z,26nm,1.1s
COLD epP pP 14 51 04.2 +0.2
SCHQ Schefferville 72.25 328 P P 14 50 54.5 -0.2
SCHQ Schefferville 72.25 328 P P 14 50 54.5 -0.2
comp=Z,5.5nm,0.6s,baz=67,slow=5.6,SNR=10.0
SCHQ LR LR 15 21 43.7
comp=Z,92nm,21.7s,baz=26,slow=35
SCHQ Schefferville 72.25 328 P P 14 50 54.5 -0.2
BOSA Boshof 73.22 205 P P 14 51 00.8 +0.1
BOSA pP PcP 14 51 17.5 +0.5
BOSA Boshof 73.22 205 P P 14 51 00.8 +0.1
comp=Z,5.4nm,0.4s,baz=15,slow=6.2,SNR=24
BOSA pP PcP 14 51 17.5 +0.5
comp=Z,6.2nm,1.0s,baz=10,slow=6.9,SNR=5.8
BOSA LR LR 15 24 56.8
comp=Z,103nm,20.5s,baz=224,slow=37
BOSA Boshof 73.22 205 P P 14 51 00.8 +0.1
BOSA pP PcP 14 51 17.5 +0.5
FX1 Attu Island--F 73.79 33 P P 14 51 04.2 +0.5
FX1 pP pP 14 51 18.7 +0.1
FX1 Attu Island--F 73.79 33 P P 14 51 04.2 +0.5
comp=Z,9.4nm,0.7s,baz=270,slow=4.0,SNR=5.7
FX1 pP pP 14 51 18.7 +0.1
comp=Z,14nm,0.6s,baz=196,slow=4.8,SNR=5.6
FX1 Attu Island--F 73.79 33 P P 14 51 04.2 +0.5
FX1 pP pP 14 51 18.7 +0.1
COLA College 73.92 9 eP P 14 51 05.2 +0.9
COLA e*PP PcP 14 51 20.1 +0.6
COLA pmax pmax
comp=Z,5.0nm,0.8s
COLA College 73.92 9 eP P 14 51 05.2 +0.9
comp=Z,4.8nm,0.8s
COLA epP PcP 14 51 20.1 +0.6
COLA College 73.92 9 eP P 14 51 05.2 +0.9
comp=Z,4.8nm,0.8s
COLA epP PcP 14 51 20.0 +0.6
ILAR Eielson Array 74.14 9 P P 14 51 05.7 +0.1
ILAR pP pP 14 51 21.9 +1.5
ILAR Eielson Array 74.14 9 P P 14 51 05.7 +0.1
comp=Z,1.4nm,0.7s,baz=335,slow=4.6,SNR=20
ILAR pP pP 14 51 21.9 +1.5
comp=Z,2.6nm,0.7s,baz=332,slow=4.4,SNR=13
ILAR LR LR 15 25 48.8
comp=Z,142nm,21.4s,baz=113,slow=37
ILAR Eielson Array 74.14 9 P P 14 51 05.7 +0.1
ILAR pP pP 14 51 21.9 +1.5
EGAK Eagle 74.70 6 eP P 14 51 09.4 +0.6
comp=Z,20nm,1.3s
EGAK epP pP 14 51 23.8 +0.1
EGAK Eagle 74.70 6 eP P 14 51 09.4 +0.6
comp=Z,20nm,1.3s
EGAK epP pP 14 51 23.8 +0.1
MCK McKinley 74.88 10 eP P 14 51 10.4 +0.4
MCK pmax pmax
comp=Z,23nm,1.2s
MCK McKinley 74.88 10 eP P 14 51 10.4 +0.4
comp=Z,23nm,1.2s
MCK McKinley 74.88 10 eP P 14 51 10.4 +0.4
comp=Z,23nm,1.2s
DOT Dot Lake 75.54 8 eP P 14 51 14.4 +0.7
comp=Z,41nm,1.4s
DOT epP pP 14 51 28.5 -0.2
DOT Dot Lake 75.54 8 eP P 14 51 14.4 +0.7
comp=Z,41nm,1.4s
DOT epP pP 14 51 28.5 -0.2
PAX Paxson 76.05 9 eP P 14 51 16.8 +0.1
PAX e*PP pP 14 51 31.3 -0.3
PAX pmax pmax
comp=Z,14nm,1.3s
PAX Paxson 76.05 9 eP P 14 51 16.8 +0.1
comp=Z,14nm,1.3s
PAX epP pP 14 51 31.3 -0.3
PAX Paxson 76.05 9 eP P 14 51 16.8 +0.1
comp=Z,14nm,1.3s
PAX epP pP 14 51 31.3 -0.3
MENT Mentasta 76.27 8 eP P 14 51 18.7 +0.8
MENT Mentasta 76.27 8 eP P 14 51 18.7 +0.8
SML Sawmill 76.81 10 eP P 14 51 21.1 +0.1
SML pmax pmax
comp=Z,4.0nm,1.0s
SML Sawmill 76.81 10 eP P 14 51 21.1 +0.1
comp=Z,4.3nm,1.0s
SML Sawmill 76.81 10 eP P 14 51 21.1 +0.1
comp=Z,4.3nm,1.0s
PMR Palmer 76.91 11 eP P 14 51 21.4 0.0
PMR *PP pP 14 51 35.9 -0.5
PMR pmax pmax
comp=Z,37nm,1.3s
PMR Palmer 76.91 11 eP P 14 51 21.4 0.0
comp=Z,37nm,1.3s
PMR pP pP 14 51 35.9 -0.5
PMR Palmer 76.91 11 eP P 14 51 21.4 0.0
comp=Z,37nm,1.3s
PMR pP pP 14 51 35.9 -0.5
YKW3 Yellowknife Ar 77.03 354 eP P 14 51 21.8 -0.3
YKW3 Yellowknife Ar 77.03 354 eP P 14 51 21.8 -0.3
YKA Yellowknife Ar 77.10 354 P P 14 51 21.5 -1.0
YKA pP pP 14 51 38.0 +0.5
YKA Yellowknife Ar 77.10 354 P P 14 51 21.5 -1.0
comp=Z,1.3nm,0.7s,baz=8.0,slow=6.2,SNR=30
YKA pP pP 14 51 37.9 +0.5
comp=Z,2.2nm,0.8s,baz=9.1,slow=6.1,SNR=10
YKA Yellowknife Ar 77.10 354 P P 14 51 21.5 -1.0
YKA pP pP 14 51 38.0 +0.5
KDAK Kodiak Island 79.98 14 LR LR 15 34 03.9
comp=Z,115nm,18.8s,baz=283,slow=41
DLBC Dease Lake 81.62 2 eP P 14 51 48.3 +0.9
DLBC Dease Lake 81.62 2 eP P 14 51 48.3 +0.9
FFC Flin Flon 82.98 346 iP P 14 51 54.0 -0.4
LONY Lake Ozonia 83.26 325 eP P 14 51 56.9 +0.8
comp=Z,18nm,1.0s
LONY Lake Ozonia 83.26 325 eP P 14 51 56.8 +0.8
comp=Z,18nm,1.0s
SLMT Seeley Lake 92.05 351 eP P 14 52 38.9 +0.3
comp=Z,5.4nm,1.1s
SLMT Seeley Lake 92.05 351 eP P 14 52 38.9 +0.3
comp=Z,5.4nm,1.1s
GCMT Greycliff 92.93 348 eP P 14 52 43.2 +0.5
comp=Z,3.6nm,0.7s
GCMT Greycliff 92.93 348 eP P 14 52 43.2 +0.5
comp=Z,3.6nm,0.7s
PDAR Pinedale Array 95.85 347 LR LR 15 37 45.8
comp=Z,110nm,19.2s,baz=35,slow=36
WRA Warramunga Arr 96.30 111 P P 14 52 57.4 -0.9
WRA pP pP 14 53 13.4 -0.2
WRA Warramunga Arr 96.30 111 P P 14 52 57.4 -0.9
comp=Z,1.8nm,0.9s,baz=322,slow=4.1,SNR=10.0
WRA pP pP 14 53 13.4 -0.2
comp=Z,1.1nm,0.8s,baz=320,slow=4.5,SNR=3.8
WRA Warramunga Arr 96.30 111 P P 14 52 57.4 -0.9
WRA pP pP 14 53 13.4 -0.2
ASAR Alice Springs 98.39 114 LR LR 15 49 26.8
comp=Z,74nm,19.1s,baz=118,slow=43
SNAA Sanae 118.35 197 ePKP **PKPdf** 14 58 14.8 -0.7
SNAA Sanae 118.35 197 epPKP pPKPdf 14 58 30.8 -0.6
SNAA Sanae 118.35 197 epSdiff pSdif 15 07 34.5 -1.8

*IDC **02** 14:39:58.7±0.9, 36.81N×142.07E, h0km, mb3.8/7,*

mb1 3.9/12, mb1mx3.8/29, mbtmp3.8/12, ML3.4/4, MS2.7/1, Ms1 2.7/1, ms1mx2.1/44, Error ellipse: s-maj=22.5km s-min=18.2km az=105.0
*ISCJB **02** 14:40:00.2±1.1, 36°.97N±0°.03×141°.79E±0°.06, h19km±7km, mb3.7/7, Error ellipse: s-maj=7.8km s-min=5.6km az=13.3*
*NIED **02** 14:40:00, 37°.00N×141°.70E, h32km, Mw3.6 Best double couple: M0 2.53000×10^14 NP1:φs226.00000°, δ89.00000°, λ-99.00000°. NP2:φs132.00000°, δ9.00000°, λ-4.00000°.*
*JMA **02** 14:40:02.8±0.2, 36°.96N×141°.62E, h49km±3km, M3.9*
JMA Felt I J1.
ISC 02 14:39:59.6±1.9**, 36°.96N**±0°.04×**141°.76E**±0°.06**, h6**km±11km**, n25, σ1§27**/36**, mb3.6**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.78**	**281**	P	**Pb**	**14 40 16.1**	**+0.4**
ONAJ				eS	**Sg**	**14 40 25.5**	**+0.7**
JFK	**Kawauchi**	**0.82**	**300**	P	**Pb**	**14 40 16.6**	**+0.4**
JFK				eS	**Sg**	**14 40 26.5**	**+0.6**
JHO	**Hitachi**	**1.02**	**250**	P	**Pg**	**14 40 19.1**	**-0.1**
JHO				eS	**Sg**	**14 40 31.6**	**-0.8**
JMM	**Marumori**	**1.19**	**320**	P	**Pb**	**14 40 22.3**	**-0.2**
JMM				eS	**Sg**	**14 40 36.0**	**-1.8**
JFT	**Otama**	**1.27**	**296**	P	**Pn**	**14 40 24.0**	**+0.1**
JFT				eS	**Sb**	**14 40 39.0**	**-1.5**
JIO	**Ouri**	**1.52**	**348**	P	**Pn**	**14 40 27.1**	**-0.3**
JIO				eS	**Sn**	**14 40 45.7**	**-1.9**
JOU	**Okura**	**1.65**	**328**	P	**Pn**	**14 40 29.5**	**+0.3**
JOU				eS	**Sn**	**14 40 49.7**	**-1.1**
JFY	**Yanaizu**	**1.70**	**286**	P	**Pn**	**14 40 30.2**	**+0.3**
JFY				eS	**Sn**	**14 40 50.4**	**-1.6**
JYS	**Shirataka**	**1.84**	**314**	P	**Pn**	**14 40 32.5**	**+0.7**
JYS				eS	**Sn**	**14 40 54.5**	**-1.0**
JAG	**Ashikaga**	**1.93**	**255**	P	**Pn**	**14 40 32.7**	**-0.3**
JAG				eS	**Sn**	**14 40 55.4**	**-2.3**
JKT	**Katashina**	**2.02**	**265**	P	**Pn**	**14 40 34.9**	**+0.5**
MJAR	**Matsushiro Arr**	**2.88**	**263**	Pn	**Pn**	**14 40 48.1**	**+2.0**
	5.8nm,0.3s,baz=82,slow=10.0,SNR=36						
MJAR				Sn	**Sb**	**14 41 25.5**	**-1.6**
	6.8nm,0.3s,baz=87,slow=23,SNR=9.9						
MAT	**Matsushiro**	**2.89**	**263**	P	**Pn**	**14 40 47.8**	**+1.6**
MAT				S	**Sn**	**14 41 21.6**	**+0.4**
JHJ	**Hachijo jima 2**	**4.16**	**204**	Pn	**Pn**	**14 41 04.2**	**+0.5**
	14nm,0.3s,baz=262,slow=20,SNR=29						
JHJ				Sn	**Sn**	**14 41 49.9**	**-2.9**
	34nm,0.3s,baz=41,slow=19,SNR=6.9						
ASAJ	**Asahikawa**	**7.17**	**5**	Pn	**Pn**	**14 41 45.2**	**+0.1**
	0.8nm,0.3s,baz=182,slow=25,SNR=11						
ASAJ				Sn	**Sn**	**14 43 06.5**	**-0.4**
	0.6nm,0.3s,baz=122,slow=33,SNR=5.7						
JNU	**Nakatsue**	**9.71**	**250**	Pn	Pn	14 42 24.3	+4.4
	0.1nm,0.3s,baz=54,slow=14,SNR=2.7						
USRK	**Ussuriysk Arra**	**10.36**	**317**	Pn	Pn	14 42 34.5	+5.8
	0.2nm,0.3s,baz=110,slow=13,SNR=8.2						
KSRS	**Korea Array**	**11.05**	**277**	LR	LR	14 46 41.0	
	comp=Z,38nm,18.4s,baz=170,slow=36						
SONM	**Songino Array**	**28.06**	**304**	P	**P**	**14 45 53.5**	**+1.6**
	0.5nm,0.5s,baz=98,slow=10,SNR=5.1						
ILAR	**Eielson Array**	**49.41**	**32**	P	**P**	**14 48 50.0**	**+0.2**
	0.3nm,0.7s,baz=263,slow=6.3,SNR=4.9						
WRA	**Warramunga Arr**	**57.03**	**188**	P	**P**	**14 49 45.0**	**-1.4**
	0.6nm,0.5s,baz=6.4,slow=7.3,SNR=17						
ASAR	**Alice Springs**	**60.76**	**188**	P	**P**	**14 50 11.4**	**-0.9**
	0.2nm,0.7s,baz=3.1,slow=4.8,SNR=7.1						
BRTR	**Keskin Array B**	**79.11**	**312**	P	**P**	**14 52 07.8**	**+2.6**
	2.3nm,1.1s,baz=90,slow=2.5,SNR=5.5						
TXAR	**Lajitas Array**	**89.94**	**53**	P	**P**	**14 53 00.2**	**0.0**
	0.1nm,0.5s,baz=249,slow=4.7,SNR=2.8						
ESDC	**Sonseca Array**	**97.48**	**334**	P	**P**	**14 53 34.5**	**0.0**
	0.2nm,0.3s,baz=47,slow=3.5,SNR=7.6						

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*IDC **02** 14:46:03.4±2.7, 11°.22N×125°.63E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.5/4, MS3.2/1, Ms1 3.2/1, ms1mx2.1/25, Error ellipse: s-maj=266.0km s-min=24.5km az=65.0*
*MAN **02** 14:46:06, 10°.92N×124°.85E, h4km, mb4.9, ML3.8, MS3.8*
*ISCJB **02** 14:46:07.4±0.6, 10°.93N±0°.04×124°.89E±0°.05, h28km±6km, mb3.5/4, Error ellipse: s-maj=8.7km s-min=6.0km az=21.0*
ISC 02 14:46:07.2±1.2**, 10°.92N**±0°.03×**124°.85E**±0°.04**, h18**km±6km**, n22, σ1§36**/26**, mb3.7**/4**, 2C-1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.27**	**299**	eP	**Pg**	**14 46 12.2**	**-1.1**
PLP	**Palo**	**0.27**	**27**⇓	iP	**Pb**	**14 46 12.5**	**-1.1**
MSLP	**Maasin**	**0.78**	**179**	eP	**Pb**	**14 46 21.7**	**-0.5**
MSLP				eS	**Sn**	**14 46 35.7**	**+1.1**
BESP	**Borongan**	**0.89**	**40**	eP	**Pg**	**14 46 23.5**	**-1.0**
BESP				eS	**Sb**	**14 46 36.3**	**+0.7**
LLP	**Lapu-Lapu**	**1.06**	**236**	eP	**Pn**	**14 46 27.3**	**+0.2**
LLP				eS	**Sb**	**14 46 41.8**	**+1.3**
TBP	**Tagbilaran**	**1.56**	**219**	eP	**Pn**	**14 46 34.6**	**+0.5**
TBP				eS	**Sn**	**14 46 52.7**	**-1.2**
CNP	**Catarman**	**1.59**	**353**	eP	**Pn**	**14 46 34.5**	**0.0**
CNP				eS	**Sg**	**14 47 02.4**	**+3.8**
BUTP	**Butuan**	**2.08**	**159**	eP	**Pn**	**14 46 42.2**	**+1.0**
RCP	**Roxas**	**2.16**	**287**⇑	eP	**Pn**	**14 46 43.1**	**+0.8**
RCP				iS	**Sb**	**14 47 11.7**	**-0.7**
SNPH	**Sibulan**	**2.23**	**226**	eP	Pn	14 46 31.4	-12
SNPH	**Sibulan**	**2.23**	**226**	iS	Sn	14 47 02.5	-8.1
DCPH	**Dipolog City**	**2.75**	**213**⇑	eP	**Pn**	**14 46 51.1**	**+0.7**
DCPH				eS	**Sn**	**14 47 24.2**	**+0.9**
BUKP	**Musuan**	**3.03**	**176**	eP	**Pn**	**14 46 56.7**	**+2.4**
BUKP				eS	**Sg**	**14 47 43.6**	**-1.0**
OTRP	**Odiongan**	**3.12**	**298**	eP	**Pb**	**14 47 01.7**	**-0.5**
PAGZ	**Pagadian**	**3.38**	**206**	eP	**Pn**	**14 47 00.0**	**+0.9**
IPIL	**Ipil**	**3.84**	**216**	eP	**Pn**	**14 47 07.7**	**+2.2**
DAV	**Davao City (W)**	**3.89**	**169**	LR	LR	14 48 58.1	
	comp=Z,268nm,19.1s,baz=175,slow=42						
MATI	**Mati**	**4.18**	**161**	eP	Pb	14 47 17.1	-3.3
WRA	**Warramunga Arr**	**32.06**	**163**	P	**P**	**14 52 32.3**	**-0.9**
	0.1nm,0.5s,baz=344,slow=8.9,SNR=3.5						
ASAR	**Alice Springs**	**35.49**	**166**	P	**P**	**14 53 03.3**	**+0.3**
	0.3nm,0.4s,baz=346,slow=7.4,SNR=6.5						
STKA	**Stephens Creek**	**45.47**	**160**	P	**P**	**14 54 24.4**	**-1.1**
	1.2nm,0.8s,baz=333,slow=13,SNR=2.2						
KURBB	**Kurchatov Arra**	**54.75**	**326**	P	**P**	**14 55 36.0**	**+0.3**
	1.2nm,0.9s,baz=124,slow=6.9,SNR=3.9						

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*ATH **02** 14:50:53.7, 36°.02N×27°.49E, h9km±2km, MD3.3/6*
*CSEM **02** 14:51:00.5±0.9, 36°.26N×28°.03E, h10km, MD2.9*
*DDA **02** 14:51:00.7, 36°.25N×27°.52E, h11km, MD3.0*
*ISK **02** 14:51:01.5, 36°.32N×28°.05E, h22km, MD2.9*
ISC 02 14:50:53.4±1.1**, 35°.95N**±0°.04×**27°.55E**±0°.05**, h17**km±10km**, n22, σ2§01**/27**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.51**	**218**	ePB	**Pg**	**14 51 03.7**	**+0.1**
KARP				eSB	**Sg**	**14 51 11.7**	**+1.2**
ARG	**Arkhangelos**	**0.54**	**60**	ePB	**Pb**	**14 51 04.7**	**+0.3**
ARG				eSB	**Sb**	**14 51 12.4**	**+0.5**
BODT	**Bodrum**	**1.13**	**350**	ePG	Pn	14 51 19.7	+5.2
BODT				eSG	**Sn**	**14 51 33.3**	**+3.7**
BODT	**Bodrum**	**1.13**	**350**	ePg	Pn	14 51 19.7	+5.2
BODT				eSg	**Sn**	**14 51 33.3**	**+3.7**
TURN	**Turunc**	**1.25**	**42**	iP	**Pn**	**14 51 14.0**	**-2.2**
TURN				iS	**Sb**	**14 51 27.9**	**-4.6**
TURN	**Turunc**	**1.25**	**42**	iP	**Pn**	**14 51 14.0**	**-2.2**
TURN				iS	**Sb**	**14 51 27.9**	**-4.6**
YER	**Yerkesik**	**1.32**	**26**	ePG	**Pg**	**14 51 18.3**	**-0.7**
YER	**Yerkesik**	**1.32**	**26**	ePg	**Pg**	**14 51 18.3**	**-0.7**
MLSB	**Milas**	**1.36**	**8**	ePG	**Pg**	**14 51 20.8**	**+1.2**
MLSB	**Milas**	**1.36**	**8**	ePg	**Pg**	**14 51 20.8**	**+1.2**
ZKR	**Zakros**	**1.37**	**233**	ePB	**Pg**	**14 51 19.5**	**-0.3**
ZKR				eSB	**Sg**	**14 51 38.0**	**+0.4**
FETY	**Fethiye**	**1.42**	**61**	ePG	**Pn**	**14 51 19.1**	**+0.7**
FETY	**Fethiye**	**1.42**	**61**	ePg	**Pn**	**14 51 19.1**	**+0.7**
AYDN	**Tasoluk**	**1.73**	**9**	iP	**Pg**	**14 51 25.8**	**-0.9**
AYDN				iS	**Sg**	**14 51 49.9**	**+0.7**
AYDN	**Tasoluk**	**1.73**	**9**	iP	**Pg**	**14 51 25.8**	**-0.9**
XRY	**Khrisi**	**1.85**	**235**	ePG	**Pg**	**14 51 28.0**	**-1.1**
LAST	**Lasithi**	**1.86**	**246**	ePN	**Pb**	**14 51 27.7**	**+0.7**
APE	**Apeiranthos**	**1.97**	**305**	ePN	Pg	14 51 37.2	+5.9
APE	**Apeiranthos**	**1.97**	**305**	ePN	**Pb**	**14 51 28.0**	**-0.9**
APE	**Apeiranthos**	**1.97**	**305**	ePn	Pg	14 51 37.2	+5.9
DNZL	**Cakiroluk**	**2.11**	**34**	iP	**Pg**	**14 51 34.6**	**+0.6**
DNZL				iS	**Sg**	**14 52 03.0**	**+1.5**
DNZL	**Cakiroluk**	**2.11**	**34**	iP	**Pg**	**14 51 34.6**	**+0.6**

IDC 02 14:55:08.5±1.2**, 8°.19N**×**38°.00W, h0**km**, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.6**/25**, mbtmp3.8**/4**, MS3.4**/3**, Ms1 3.4**/3**, ms1mx3.0**/31**, Error ellipse: s-maj=44.1km s-min=28.9km az=160.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**36.24**	**267**	LR	LR	15 17 21.0	
	comp=Z,96nm,20.6s,baz=203,slow=37						
LPAZ	**La Paz**	**38.49**	**231**	P	P	15 02 33.4	-0.2
	2.7nm,0.9s,baz=53,slow=7.2,SNR=6.3						
LPAZ				LR	LR	15 18 34.4	
	comp=Z,26nm,21.8s,baz=26,slow=36						
TORD	**Torodi Ar. Bea**	**39.28**	**79**	P	P	15 02 39.4	-0.1
	0.7nm,0.7s,baz=273,slow=9.6,SNR=13						
DAVOX	**Davos/Dischmat**	**56.00**	**38**	LR	LR	15 27 50.4	
	comp=Z,46nm,18.2s,baz=264,slow=35						
YKA	**Yellowknife Ar**	**76.60**	**332**	P	P	15 07 00.9	+0.1
	0.8nm,0.9s,baz=97,slow=5.9,SNR=12						
ILAR	**Eielson Array**	**90.54**	**336**	P	P	15 08 12.1	-0.2
	0.4nm,1.0s,baz=32,slow=5.3,SNR=2.6						

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*CSEM **02** 15:08:22.8±0.3, 38°.49N×43°.21E, h2km, MD3.5, Error ellipse: s-maj=8.0km s-min=6.6km az=77.0*
*DDA **02** 15:08:22.9, 38°.51N×43°.14E, h4km, MD3.3*
*ISK **02** 15:08:23.5, 38°.51N×43°.33E, h5km, MD3.5*
ISC 02 15:08:23.1±1.1**, 38°.50N**±0°.02×**43°.23E**±0°.03**, h3**km±10km**, n33, σ1§36**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	**Van**	**0.15**	**53**	ePG	**Pg**	**15 08 26.4**	**+0.3**
VANB	**Van**	**0.15**	**53**	ePg	**Pg**	**15 08 26.4**	**+0.3**
GEVA	**Gevas**	**0.23**	**216**	iP	**Pg**	**15 08 27.3**	**-0.3**
GEVA				iS	**Sg**	**15 08 31.3**	**+0.6**
GEVA	**Gevas**	**0.23**	**216**	iP	**Pg**	**15 08 27.3**	**-0.3**
GEVA				iS	**Sg**	**15 08 31.3**	**+0.6**
TATV	**Tatvan**	**0.76**	**271**	iP	**Pg**	**15 08 36.4**	**-1.2**
TATV				iS	**Sg**	**15 08 46.3**	**-1.1**
TATV	**Tatvan**	**0.76**	**271**	iP	**Pg**	**15 08 36.4**	**-1.2**
TATV				iS	**Sg**	**15 08 46.3**	**-1.1**
CLDR	**Caldiran**	**0.83**	**40**	ePG	**Pb**	**15 08 39.0**	**-1.4**
CLDR	**Caldiran**	**0.83**	**40**	ePg	**Pb**	**15 08 39.0**	**-1.4**
TUTA	**Tutak**	**0.96**	**340**	iP	**Pg**	**15 08 41.0**	**-0.4**
TUTA				iS	**Sg**	**15 08 54.2**	**+0.4**
TUTA	**Tutak**	**0.96**	**340**	iP	**Pg**	**15 08 41.0**	**-0.4**
TUTA				iS	**Sg**	**15 08 54.2**	**+0.4**
HAKT	**HAKKARI**	**1.01**	**158**	iP	**Pg**	**15 08 41.0**	**-1.5**
HAKT				iS	**Sn**	**15 08 58.2**	**-1.0**
HAKT	**HAKKARI**	**1.01**	**158**	iP	**Pg**	**15 08 41.0**	**-1.5**
HAKT				iS	**Sn**	**15 08 58.2**	**-1.0**
AGRB	**Hanur-Agry**	**1.09**	**350**	ePN	**Pb**	**15 08 43.4**	**-1.2**
AGRB				eSN	**Sn**	**15 09 00.9**	**-0.2**
AGRB	**Hanur-Agry**	**1.09**	**350**	ePn	**Pb**	**15 08 43.4**	**-1.2**
AGRB				eSn	**Sn**	**15 09 00.9**	**-0.2**
CUKT	**Cukurca**	**1.29**	**167**	ePN	**Pg**	**15 08 48.2**	**+0.5**
CUKT				eSN	**Sg**	**15 09 06.3**	**+1.9**
CUKT	**Cukurca**	**1.29**	**167**	ePn	**Pg**	**15 08 48.2**	**+0.5**
CUKT				eSn	**Sg**	**15 09 06.3**	**+1.9**
VRTB	**Varto-Mus**	**1.54**	**296**	ePN	**Pg**	**15 08 53.8**	**+1.3**
BEST	**Besiri**	**1.66**	**249**	iP	**Pn**	**15 08 53.5**	**+0.4**
BEST				iS	**Sn**	**15 09 15.9**	**+0.9**
EZM	**Erzurum**	**2.02**	**315**	ePN	**Pn**	**15 08 59.2**	**+1.0**
GNI	**Garni**	**2.02**	**35**	ePN	**Pb**	**15 08 58.7**	**-1.8**
GNI	**Garni**	**2.02**	**35**	ePn	**Pb**	**15 08 58.7**	**-1.8**
BNGB	**Bingˆ¶l**	**2.06**	**285**	ePN	**Pb**	**15 09 00.8**	**-0.2**
KARS	**Kars**	**2.13**	**357**	ePN	**Pb**	**15 09 00.8**	**-1.4**
KARS	**Kars**	**2.13**	**357**	ePn	**Pb**	**15 09 00.9**	**-1.4**
BINT	**Bingol**	**2.18**	**281**	ePn	**Pn**	**15 09 00.9**	**+0.6**
ERZN	**Erzincan**	**2.94**	**293**	ePN	**Pn**	**15 09 13.5**	**+2.7**
PTK	**Pertek**	**3.03**	**279**	ePN	**Pn**	**15 09 14.8**	**+2.8**
BAYT	**Ayd˜–ntepe-Bay**	**3.05**	**309**	ePN	**Pn**	**15 09 14.5**	**+2.2**
BAYT	**Ayd˜–ntepe-Bay**	**3.05**	**309**	ePn	**Pn**	**15 09 14.5**	**+2.2**
BCA	**Borcka**	**3.19**	**338**	ePN	**Pn**	**15 09 15.8**	**+1.7**
BCA	**Borcka**	**3.19**	**338**	ePn	**Pn**	**15 09 15.8**	**+1.7**
EZC	**Erzincan**	**3.26**	**294**	ePn	**Pn**	**15 09 13.5**	**-1.7**
URFA	**Urfa**	**3.64**	**254**	ePN	Pn	15 09 23.4	+3.1

MAN 02 15:09:17, 10°.89N×**124°.90E, h0**km**, mb4.2, ML3.0, MS2.7, 1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLP	**Palo**	**0.28**	**16**⇓	iP	Pb	15 09 24.1	-0.9
PLP				iS	Sg	15 09 28.3	+2.1
OCLP	**Ormoc**	**0.33**	**299**	eP	Pg	15 09 23.5	+0.2
OCLP				eS	Sg	15 09 28.4	+0.8
MSLP	**Maasin**	**0.75**	**183**	eP	Pb	15 09 33.0	0.0
MSLP				eS	Sn	15 09 46.0	-1.0
BESP	**Borongan**	**0.88**	**37**	eP	Pb	15 09 35.2	0.0
BESP				eS	Sb	15 09 48.0	+0.4
LLP	**Lapu-Lapu**	**1.08**	**238**	eP	Pn	15 09 39.4	-0.1
LLP				eS	Sb	15 09 53.4	+0.1
CNP	**Catarman**	**1.63**	**352**	eP	Pn	15 09 46.3	-0.6
CNP				eS	Sg	15 10 09.9	+0.6

IDC 02 15:13:32.8±2.4**, 6°.79S**×**129°.25E, h0**km**, mb3.7**/1**, mb1 3.5**/3**, mb1mx3.3**/19**, mbtmp3.3**/3**, ML3.3**/2**, Error ellipse: s-maj=202.2km s-min=31.3km az=68.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.97**	**160**	Pn	Pn	15 16 52.2	0.0
	0.2nm,0.3s,baz=334,slow=14,SNR=12						
WRA				Sn	Sn	15 19 14.7	-14
	0.6nm,0.3s,baz=335,slow=22,SNR=14						
ASAR	**Alice Springs**	**17.36**	**166**	P	Pn	15 17 36.8	+0.1
	0.1nm,0.3s,baz=342,slow=9.1,SNR=8.8						
ASAR				S	Sn	15 20 38.1	-13
	0.2nm,0.3s,baz=358,slow=27,SNR=6.0						
MKAR	**Makanchi Array**	**67.65**	**327**	P	P	15 24 31.7	0.0
	0.3nm,0.4s,baz=116,slow=6.6,SNR=7.5						

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*ISCJB **02** 15:17:22.7±0.3, 59°.86N±0°.02×22°.33E±0°.04, h0km, Error ellipse: s-maj=3.6km s-min=2.6km az=159.9*
*CSEM **02** 15:17:23.9±0.2, 59°.86N×22°.32E, h2km, ML2.0, Error ellipse: s-maj=4.5km s-min=3.1km az=152.0, Mining explosion.*
*BER **02** 15:17:24.9±4.3, 59°.89N×22°.33E, h0km, ML2.3(NAO)*
*NAO **02** 15:17:24.4±1.6, 59°.94N×22°.23E, ML2.3*
*HEL **02** 15:17:24.0±0.1, 59°.81N×22°.30E, h0km, ML2.2, ML2.3(UPP), Explosion*
*IDC **02** 15:17:24.5±1.7, 59°.81N×22°.32E, h0km, mb1 3.2/4, mb1mx3.0/29, mbtmp3.1/4, ML2.7/4, Error ellipse: s-maj=24.5km s-min=7.9km az=159.0*
*UPP **02** 15:17:25.4, 59°.82N×22°.06E, h0km, ML2.3, Suspected Mining explosion.*
ISC 02 15:17:22.6±0.7**, 59°.82N**±0°.03×**22°.32E**±0°.02**, h0**km**, n87, σ1§21**/121**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	**Metsahovi**	**1.11**	**68**	eP	**Pg**	**15 17 44.2**	**+0.2**
MEF				eS	**Sg**	**15 17 58.7**	**+0.3**
MEF	**Metsahovi**	**1.11**	**68**	P	**Pg**	**15 17 44.2**	**+0.2**
MEF				S	**Sg**	**15 17 58.7**	**+0.3**
AAL	**Aland**	**1.22**	**288**	eP	**Pg**	**15 17 45.7**	**-0.3**
AAL				eS	**Sg**	**15 18 01.6**	**-0.4**
AAL	**Aland**	**1.22**	**288**	P	**Pg**	**15 17 45.7**	**-0.3**
AAL				S	**Sg**	**15 18 01.5**	**-0.4**
RAF	**Rauma**	**1.24**	**347**	eP	**Pg**	**15 17 46.2**	**-0.1**
RAF				eS	**Sg**	**15 18 02.6**	**+0.2**
RAF	**Rauma**	**1.24**	**347**	eP	**Pg**	**15 17 46.6**	**+0.3**
	SNR=90						
RAF				eS	**Sg**	**15 18 03.0**	**+0.6**
	72nm,0.7s,SNR=90						
MTSE	**Matsula**	**1.35**	**145**	eP	**Pg**	**15 17 48.3**	**-0.2**
MTSE				eS	**Sg**	**15 18 04.9**	**-0.9**
MTSE	**Matsula**	**1.35**	**145**	P	**Pg**	**15 17 48.2**	**-0.2**
MTSE				S	**Sg**	**15 18 04.9**	**-0.9**
NRTU	**Norrtaelje**	**1.87**	**267**	eP	**Pn**	**15 17 56.7**	**+0.9**
NRTU				eS	**Sn**	**15 18 21.7**	**+1.5**
NRTU	**Norrtaelje**	**1.87**	**267**	P	**Pn**	**15 17 56.7**	**+0.9**
NRTU				S	**Sn**	**15 18 21.7**	**+1.5**
PVF	**Pernaja**	**1.91**	**66**	eP	**Pn**	**15 17 58.2**	**+1.7**
PVF				eS	**Sn**	**15 18 22.5**	**+1.3**
PVF	**Pernaja**	**1.91**	**66**	P	**Pn**	**15 17 58.1**	**+1.7**
PVF				S	**Sn**	**15 18 22.4**	**+1.3**
FORU	**Forsmark**	**2.15**	**287**	eP	**Pn**	**15 18 01.1**	**+1.4**
FORU				eS	**Sb**	**15 18 29.8**	**+0.2**
FORU	**Forsmark**	**2.15**	**287**	P	**Pn**	**15 18 01.0**	**+1.4**
FORU				S	**Sb**	**15 18 29.7**	**+0.2**
SLIT	**Slitere, Latvi**	**2.20**	**180**	eP	**Pn**	**15 18 02.6**	**+2.3**
	SNR=50						
SLIT				eS	**Sb**	**15 18 31.2**	**+0.3**
	SNR=50						
FLYU	**Flymyra**	**2.25**	**280**	eP	**Pn**	**15 18 02.1**	**+1.0**
FLYU				eS	**Sb**	**15 18 33.0**	**+0.5**
FLYU	**Flymyra**	**2.25**	**280**	P	**Pn**	**15 18 02.1**	**+1.0**
FLYU				S	**Sb**	**15 18 33.0**	**+0.5**
FIA0	**FINESS Array S**	**2.46**	**47**	Pn	**Pb**	**15 18 06.8**	**-1.0**
	baz=227,slow=14						
FIA0				Lg	Lg	15 18 38.6	
	baz=233,slow=22						
FIA0				Rg	Rg	15 18 53.8	
	baz=209,slow=37						
FIA0	**FINESS Array S**	**2.46**	**47**	Pn	**Pb**	**15 18 06.8**	**-1.0**
	baz=227,slow=14						
FIA0				Lg	Lg	15 18 38.6	
	baz=233,slow=22						
FIA0				Rg	Rg	15 18 53.8	
	baz=209,slow=37						
FIA0	**FINESS Array S**	**2.46**	**47**	ePB	**Pb**	**15 18 06.8**	**-1.0**
FIA0				eSB	**Sb**	**15 18 39.0**	**+0.4**
FIA0	**FINESS Array S**	**2.46**	**47**	Pn	**Pb**	**15 18 06.8**	**-1.0**
	baz=227,slow=13,SNR=50						
FIA0				Lg	Lg	15 18 38.7	
	baz=233,slow=22						
FIA0				Sb	**Sb**	**15 18 39.0**	**+0.4**
FINES	**FINESS Array B**	**2.46**	**47**	Pn	**Pb**	**15 18 06.8**	**-1.0**
	2.1nm,0.3s,baz=227,slow=13,SNR=48						
FINES				Sn	**Sb**	**15 18 39.3**	**+0.7**
	5.5nm,0.3s,baz=230,slow=23,SNR=24						
BACU	**Backbrunna**	**2.63**	**273**	eP	**Pn**	**15 18 07.6**	**+1.2**
BACU	**Backbrunna**	**2.63**	**273**	P	**Pn**	**15 18 07.5**	**+1.2**
OSTU	**Oestervaala**	**2.64**	**281**	eP	**Pn**	**15 18 07.5**	**+1.1**
OSTU	**Oestervaala**	**2.64**	**281**	P	**Pn**	**15 18 07.4**	**+1.1**
IGGU	**Iggoen**	**2.70**	**295**	eP	**Pn**	**15 18 08.4**	**+1.1**
IGGU	**Iggoen**	**2.70**	**295**	P	**Pn**	**15 18 08.4**	**+1.1**
VJF	**Virojoki**	**2.71**	**72**	eP	**Pn**	**15 18 09.0**	**+1.6**
VJF				eS	**Sn**	**15 18 42.7**	**+1.8**
VJF				MSG		15 18 48.9	
	comp=Z,16nm,0.2s						
VJF	**Virojoki**	**2.71**	**72**	P	**Pn**	**15 18 09.0**	**+1.6**
VJF				S	**Sn**	**15 18 42.6**	**+1.8**
KAF	**Kangasniemi**	**3.01**	**38**	ePB	**Pb**	**15 18 15.3**	**-1.8**
KAF				eSB	**Sb**	**15 18 53.8**	**-0.6**
KAF				MSG		15 18 55.0	
	comp=Z,13nm,0.1s						
KAF	**Kangasniemi**	**3.01**	**38**	Pb	**Pb**	**15 18 15.2**	**-1.8**
KAF				Sb	**Sb**	**15 18 53.7**	**-0.6**
ARNU	**Arnoeviken**	**3.07**	**310**	eP	**Pn**	**15 18 13.7**	**+1.4**
ARNU	**Arnoeviken**	**3.07**	**310**	P	**Pn**	**15 18 13.6**	**+1.4**
ESKU	**Eskilstuna**	**3.08**	**262**	eP	**Pn**	**15 18 13.9**	**+1.5**
ESKU	**Eskilstuna**	**3.08**	**262**	P	**Pn**	**15 18 13.9**	**+1.5**
VAF	**Ylistaro**	**3.24**	**3**	ePB	**Pb**	**15 18 19.5**	**-1.4**
VAF				eSB	**Sb**	**15 19 00.4**	**-0.5**
VAF				MSG		15 19 03.2	
	comp=Z,2.5nm,0.1s						
VAF	**Ylistaro**	**3.24**	**3**	Pb	**Pb**	**15 18 19.5**	**-1.4**
VAF				Sb	**Sb**	**15 19 00.3**	**-0.5**
FALU	**Falun**	**3.31**	**285**	eP	**Pn**	**15 18 16.6**	**+0.9**
FALU	**Falun**	**3.31**	**285**	P	**Pn**	**15 18 16.6**	**+0.9**
SUF	**Sumiainen**	**3.45**	**31**	eP	**Pn**	**15 18 20.1**	**+2.5**
SUF				eSB	**Sb**	**15 19 05.7**	**-1.2**
SUF				MSG		15 19 08.8	
	comp=Z,4.6nm,0.2s						
SUF	**Sumiainen**	**3.45**	**31**	P	**Pn**	**15 18 20.0**	**+2.5**
SUF				Sb	**Sb**	**15 19 05.6**	**-1.2**
HEMU	**Hemsoen**	**3.54**	**326**	eP	**Pn**	**15 18 20.9**	**+2.2**
HEMU	**Hemsoen**	**3.54**	**326**	P	**Pn**	**15 18 20.9**	**+2.2**
ROTU	**Roteberg**	**3.59**	**299**	eP	**Pn**	**15 18 20.0**	**+0.6**
ROTU	**Roteberg**	**3.59**	**299**	P	**Pn**	**15 18 20.0**	**+0.6**
HASU	**Hassela**	**3.63**	**313**	eP	**Pn**	**15 18 21.4**	**+1.3**
HASU	**Hassela**	**3.63**	**313**	P	**Pn**	**15 18 21.3**	**+1.3**
ASPU	**Aespoe**	**3.84**	**234**	eP	**Pn**	**15 18 24.3**	**+1.4**
ASPU	**Aespoe**	**3.84**	**234**	P	**Pn**	**15 18 24.3**	**+1.4**
LNKU	**Linkoeping**	**3.87**	**249**	eP	**Pn**	**15 18 24.7**	**+1.4**
LNKU	**Linkoeping**	**3.87**	**249**	P	**Pn**	**15 18 24.7**	**+1.4**
OSKU	**Oskarshamn**	**4.19**	**234**	eP	**Pn**	**15 18 28.6**	**+0.9**
OSKU	**Oskarshamn**	**4.19**	**234**	P	**Pn**	**15 18 28.6**	**+0.9**
HFS	**Hagfors**	**4.35**	**278**	Pn	**Pn**	**15 18 30.7**	**+0.8**
	baz=106,slow=12						
HFS				Sn	**Sn**	**15 19 20.4**	**-0.8**
	baz=105,slow=28						
HFS				Lg	Lg	15 19 34.0	
	baz=93,slow=37						
HFS	**Hagfors**	**4.35**	**278**	Pn	**Pn**	**15 18 30.7**	**+0.8**
	baz=106,slow=12						
HFS				Sn	**Sn**	**15 19 20.4**	**-0.8**
	baz=105,slow=28						
HFS				Lg	Lg	15 19 34.0	
	baz=93,slow=37						
HFS	**Hagfors**	**4.35**	**278**	Pn	**Pn**	**15 18 30.9**	**+1.0**
	comp=Z,0.2nm,0.3s,baz=98,slow=16,SNR=16						
HFS				Pg	**Pb**	**15 18 41.2**	**+1.4**
	comp=Z,0.6nm,0.3s,baz=94,slow=16,SNR=11						
HFS				Sn	**Sn**	**15 19 23.8**	**+2.7**
	comp=Z,0.3nm,0.3s,baz=95,slow=29,SNR=3.4						
HFS				Lg	Lg	15 19 38.3	
	comp=Z,1.1nm,0.3s,baz=95,slow=29,SNR=7.9						
HFS	**Hagfors**	**4.35**	**278**	Pn	**Pn**	**15 18 30.7**	**+0.8**
	baz=106,slow=12,SNR=50						
HFS				Sn	**Sn**	**15 19 20.4**	**-0.8**
	baz=105,slow=28,SNR=50						
HFS				Lg	Lg	15 19 34.0	
	baz=93,slow=33						
BURU	**Burvik**	**4.80**	**355**	eP	**Pn**	**15 18 37.6**	**+1.5**
BURU	**Burvik**	**4.80**	**355**	P	**Pn**	**15 18 37.5**	**+1.5**
LILU	**Lilltraesk**	**5.60**	**349**	eP	**Pn**	**15 18 48.9**	**+1.8**
LILU	**Lilltraesk**	**5.60**	**349**	P	**Pn**	**15 18 48.9**	**+1.8**
NB2	**NORSAR Subarra**	**5.64**	**287**	Pn	**Pn**	**15 18 47.8**	**+0.2**
	baz=96,slow=14						
NB2				Lg	Lg	15 20 16.4	
NB2	**NORSAR Subarra**	**5.64**	**287**	Pn	**Pn**	**15 18 47.8**	**+0.2**
	baz=96,slow=14						
NB2				Lg	Lg	15 20 16.4	
NB2	**NORSAR Subarra**	**5.64**	**287**	Pn	**Pn**	**15 18 47.8**	**+0.2**
	baz=96,slow=12,SNR=50						
NB2				Lg	Lg	15 20 16.5	
NOA	**NORSAR Array B**	**5.64**	**287**	Pn	**Pn**	**15 18 47.9**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=238,slow=20,SNR=7.9						
NOA				Sn	**Sn**	**15 19 56.4**	**+3.4**
	comp=Z,0.2nm,0.3s,baz=272,slow=3.9,SNR=2.8						
NOA				Lg	Lg	15 20 15.0	
	comp=Z,0.5nm,0.3s,baz=111,slow=13,SNR=4.2						
SJUU	**Sjulsmark**	**5.72**	**357**	eP	**Pn**	**15 18 50.0**	**+1.4**
SJUU	**Sjulsmark**	**5.72**	**357**	P	**Pn**	**15 18 50.0**	**+1.4**
KALU	**Kalix**	**6.08**	**4**	eP	**Pn**	**15 18 55.3**	**+1.7**
KALU	**Kalix**	**6.08**	**4**	P	**Pn**	**15 18 55.3**	**+1.7**
HARU	**Harads**	**6.40**	**355**	eP	**Pn**	**15 18 58.9**	**+0.9**
HARU	**Harads**	**6.40**	**355**	P	**Pn**	**15 18 58.9**	**+0.9**
ERTU	**Ertsjaerv**	**6.76**	**360**	eP	**Pn**	**15 19 03.8**	**+0.8**
ERTU	**Ertsjaerv**	**6.76**	**360**	P	**Pn**	**15 19 03.8**	**+0.8**
PAJU	**Pajala**	**7.24**	**2**	eP	**Pn**	**15 19 10.3**	**+0.7**
PAJU	**Pajala**	**7.24**	**2**	P	**Pn**	**15 19 10.3**	**+0.7**
MASU	**Masugnsbyn**	**7.67**	**359**	eP	**Pn**	**15 19 15.8**	**+0.4**
MASU	**Masugnsbyn**	**7.67**	**359**	P	**Pn**	**15 19 15.8**	**+0.4**
SALU	**Saltoluokta**	**7.78**	**349**	eP	**Pn**	**15 19 17.4**	**+0.5**
SALU	**Saltoluokta**	**7.78**	**349**	P	**Pn**	**15 19 17.4**	**+0.5**
APA0	**Apatity Array**	**9.12**	**27**	Pn	**Pn**	**15 19 34.5**	**-0.8**
APA0	**Apatity Array**	**9.12**	**27**	Pn	**Pn**	**15 19 34.5**	**-0.8**
APA0	**Apatity Array**	**9.12**	**27**	Pn	**Pn**	**15 19 34.5**	**-0.8**
	SNR=50						
ARA0	**ARCESS Array S**	**9.85**	**7**	Pn	**Pn**	**15 19 44.4**	**-0.8**
	baz=190,slow=16						
ARA0				Sn	Sn	15 21 28.9	-7.4
	baz=196,slow=28						
ARA0	**ARCESS Array S**	**9.85**	**7**	Pn	**Pn**	**15 19 44.4**	**-0.8**
	baz=190,slow=16						
ARA0				Sn	Sn	15 21 28.9	-7.4
	baz=196,slow=28						
ARA0	**ARCESS Array S**	**9.85**	**7**	Pn	**Pn**	**15 19 44.4**	**-0.8**
	baz=190,slow=14,SNR=50						
ARCES	**ARCESS Array B**	**9.85**	**7**	Pn	**Pn**	**15 19 44.5**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=191,slow=14,SNR=15						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARCES				Sn	Sn	15 21 30.4	-6.0
	comp=Z,0.2nm,0.3s,baz=190,slow=23,SNR=3.7						

IDC ***02*** *15:23:12.7±0.6, 52°.53N×160°.88E, h0km, mb4.0/25, mb1 4.2/27, mb1mx4.1/34, mbtmp4.0/27, ML4.2/2, MS3.2/4, Ms1 3.2/4, ms1mx2.8/47, Error ellipse: s-maj=19.2km s-min=9.9km az=171.0*
MOS ***02*** *15:23:13.8±1.0, 52°.42N×161°.14E, h27km, mb4.3/23, Error ellipse: s-maj=9.5km s-min=7.2km az=87.1*
ISCJB ***02*** *15:23:15.9±0.6, 52°.47N±0°.04×161°.17E±0°.05, h43km±5km, mb4.0/31, MS3.2/3, Error ellipse: s-maj=6.7km s-min=4.4km az=154.0*
KRSC ***02*** *15:23:15.6±0.6, 52°.51N×161°.11E, h41km±41km, ML4.5*
ISC 02 15:23:16.0±0.8**, 52°.48N**±0°.05×**161°.20E**±0°.04**, h37**km±1km**, n90,** σ1**s20**/97**, mb4.1**/31**, MS3.3**/3**, 2C-4D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.94**	**312**	P	**Pn**	**15 23 32.0**	**-0.7**
SPN				*i* S	**Sn**	**15 23 44.3**	**-0.7**
SPN	**Mys Shipunski**	**0.94**	**312**	PN	**Pn**	**15 23 32.0**	**-0.7**
SPN				S	**Sn**	**15 23 44.3**	**-0.7**
NLC	**Nalytchevo**	**1.32**	**302**	*e*P	**Pn**	**15 23 37.7**	**-0.1**
NLC				*i* S	**Sn**	**15 23 54.1**	**-0.1**
NLC	**Nalytchevo**	**1.32**	**302**	PN	**Pn**	**15 23 37.7**	**-0.1**
NLC				S	**Sn**	**15 23 54.1**	**-0.1**
SDLR	**Sedlovina**	**1.61**	**301**	P	**Pn**	**15 23 42.3**	**+0.3**
SDLR				*i* S	**Sn**	**15 24 01.8**	**+0.2**
UGLR	**Uglovaya**	**1.61**	**298**	P	**Pn**	**15 23 42.4**	**+0.4**
UGLR				*i* S	**Sn**	**15 24 01.6**	**0.0**
PET	**Petropavlovsk**	**1.64**	**291**	P	**Pn**	**15 23 42.5**	**+0.3**
PET				*i* S	**Sn**	**15 24 02.5**	**+0.5**
PET	**Petropavlovsk**	**1.64**	**291**	⇑*i*PN	**Pn**	**15 23 42.3**	**+0.1**
PET				*i* S	**Sn**	**15 24 02.8**	**+0.8**
PET				pmax	pmax		
	comp=Z,1μm,0.5s						
PET				pmax	pmax		
	comp=Z,1μm,0.4s						
PET				smax	smax		
	comp=N,3μm,0.7s						
RUS	**Russkaya**	**1.64**	**269**	P	**Pn**	**15 23 42.4**	**+0.1**
RUS				*i* S	**Sn**	**15 24 01.8**	**-0.3**
RUS	**Russkaya**	**1.64**	**269**	PN	**Pn**	**15 23 42.4**	**+0.1**
RUS				S	**Sn**	**15 24 01.8**	**-0.3**
SMAR	**Somma**	**1.65**	**299**	P	**Pn**	**15 23 42.9**	**+0.3**
SMAR				*i* S	**Sn**	**15 24 02.6**	**-0.1**
INSR	**Institute**	**1.68**	**292**	*e*P	**Pn**	**15 23 43.4**	**+0.6**
INSR				*i* S	**Sn**	**15 24 03.7**	**+0.6**
AVH	**Avacha**	**1.69**	**299**	P	**Pn**	**15 23 43.5**	**+0.5**
AVH				*i* S	**Sn**	**15 24 04.1**	**+0.8**
KRER	**Koryakskii**	**1.70**	**300**	*e*P	**Pn**	**15 23 44.1**	**+0.8**
KRER				*i* S	**Sn**	**15 24 05.2**	**+1.4**
KOK	**Koryaka**	**1.75**	**299**	*e*P	**Pn**	**15 23 44.7**	**+0.8**
KOK				*i* S	**Sn**	**15 24 05.9**	**+0.9**
MTVR	**Mutnovka**	**1.84**	**271**	*e*P	**Pn**	**15 23 45.9**	**+0.7**
MTVR				*i* S	**Sn**	**15 24 07.8**	**+0.5**
GRL	**Gorelyy**	**1.91**	**273**	P	**Pn**	**15 23 47.1**	**+1.0**
GRL				*i* S	**Sn**	**15 24 09.8**	**+0.9**
ASAK	**Asacha**	**2.02**	**269**	P	**Pn**	**15 23 48.3**	**+0.7**
ASAK				*i* S	**Sn**	**15 24 11.7**	**+0.1**
MKZ	**Mys Kozlova**	**2.11**	**9**	P	**Pn**	**15 23 49.1**	**+0.4**
MKZ				*i* S	**Sn**	**15 24 13.4**	**-0.2**
MKZ	**Mys Kozlova**	**2.11**	**9**	PN	**Pn**	**15 23 49.1**	**+0.4**
MKZ				S	**Sn**	**15 24 13.4**	**-0.2**
PETK	**Petropavlovsk-**	**2.21**	**288**	PN	**Pn**	**15 23 51.0**	**+0.8**
PETK						15 24 17.8	
PETK				pmax	pmax		
	comp=Z,164nm,0.3s						
PETK				smax	smax		
	comp=Z,39nm,0.3s						
PETK	**Petropavlovsk-**	**2.21**	**288**	Pn	**Pn**	**15 23 51.0**	**+0.8**
	comp=Z,164nm,0.3s,baz=101,slow=18,SNR=1369						
PETK				Sn	**Sn**	**15 24 17.8**	**+1.5**
	comp=Z,38nm,0.3s,baz=91,slow=23,SNR=6.3						
GNL	**Ganaly**	**2.31**	**303**	P	Pn	15 23 53.2	+1.6
GNL				*i* S	**Sn**	**15 24 19.9**	**+1.1**
APC	**Apacha**	**2.50**	**282**	*e*P	Pn	15 23 55.6	+1.6
APC				*i* S	**Sn**	**15 24 24.3**	**+1.1**
MIPR	**Malaya Ipel'ka**	**2.73**	**268**	P	**Pn**	**15 23 58.7**	**+1.5**
PAU	**Pauzhetka**	**2.89**	**251**	*e*P	**Pn**	**15 23 59.7**	**+0.2**
PAU	**Pauzhetka**	**2.89**	**251**	PN	**Pn**	**15 23 59.7**	**+0.2**
LGNR	**Loginova**	**3.62**	**356**	*e*P	Pn	15 24 12.3	+2.5
LGNR				*i* S	**Sn**	**15 24 53.0**	**+1.6**
SKR	**Severo-Kuril's**	**3.64**	**242**	*e*P	**Pn**	**15 24 09.2**	**-0.5**
SKR				*i* S	**Sn**	**15 24 47.1**	**-4.3**
SKR	**Severo-Kuril's**	**3.64**	**242**	*e*PN	Pn	15 24 06.5	-3.2
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=N,60nm,0.3s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
KBTR	**Krutoberegovo**	**3.86**	**14**	P	**Pn**	**15 24 14.0**	**+1.3**
KBTR				*i* S	**Sn**	**15 24 55.6**	**-1.1**
KBTR	**Krutoberegovo**	**3.86**	**14**	PN	**Pn**	**15 24 14.0**	**+1.3**
BKI	**Bering**	**3.93**	**44**	*e*P	**Pn**	**15 24 14.5**	**+0.8**
BKI				*i* S	**Sn**	**15 24 56.3**	**-2.2**
BKI	**Bering**	**3.93**	**44**	PN	**Pn**	**15 24 14.5**	**+0.8**
FX1	**Attu Island--F**	**7.29**	**82**	Pn	**Pn**	**15 25 01.6**	**+1.8**
	comp=E,13nm,0.3s,baz=241,slow=5.5,SNR=99						
FX1				Sn	**Sn**	**15 26 17.4**	**-3.8**
	comp=E,24nm,0.3s,baz=285,slow=20,SNR=12						
YSS	**Yuzh-Sakhalins**	**13.14**	**252**	*i* PN	**Pn**	**15 26 20.7**	**+0.9**
YSS				pmax	pmax		
	comp=Z,13nm,1.3s						
ASAJ	**Asahikawa**	**14.91**	**243**	Pn	**Pn**	**15 26 43.2**	**-0.6**
	comp=Z,1.4nm,0.3s,baz=84,slow=11,SNR=10						
ASAJ				LR	LR	15 32 26.3	
	comp=Z,65nm,20.6s,baz=245,slow=38						
BILL	**Bilibino**	**15.80**	**7**	⇑*e*P	**P**	**15 26 57.1**	**-1.8**
BILL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ERM	**Erimo**	**16.06**	**237**	*i* P	**P**	**15 26 58.9**	**-3.0**
KLR	**Kul'dur**	**18.81**	**272**	*e*P	**P**	**15 27 28.2**	**-4.0**
YAK	**Yakutsk**	**19.35**	**312**	*e*P	**P**	**15 27 36.0**	**-1.9**
YAK				pmax	pmax		
	comp=Z,13nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
USRK	**Ussuriysk Arra**	**20.98**	**258**	P	**P**	**15 27 55.3**	**-0.5**
	comp=E,2.5nm,0.5s,baz=52,slow=11,SNR=7.5						
USRK				LR	LR	15 37 31.9	
	comp=E,106nm,18.4s,baz=44,slow=41						
MAT	**Matsushiro**	**22.71**	**235**	P	**P**	**15 28 16.6**	**+2.2**
MJAR	**Matsushiro Arr**	**22.71**	**235**	P	**P**	**15 28 14.8**	**+0.4**
	comp=E,3.0nm,0.7s,baz=20,slow=8.8,SNR=11						
MJAR				LR	LR	15 37 36.8	
	comp=E,42nm,20.0s,baz=15,slow=38						
TIXI	**Tiksi**	**23.92**	**335**	*d i*P	**P**	**15 28 26.2**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KSRS	**Korea Array**	**27.62**	**250**	P	**P**	**15 29 00.9**	**+1.1**
	comp=Z,1.9nm,0.7s,baz=39,slow=8.9,SNR=4.8						
ILAR	**Eielson Array**	**28.78**	**44**	P	**P**	**15 29 11.5**	**+1.6**
	comp=Z,0.5nm,0.5s,baz=254,slow=7.7,SNR=5.6						
INK	**Inuvik**	**33.95**	**37**	P	**P**	**15 29 57.0**	**+1.7**
	comp=Z,0.7nm,0.5s,baz=266,slow=5.1,SNR=7.8						
TLY	**Talaya**	**34.57**	**292**	*e*P	**P**	**15 30 00.0**	**-0.9**
TLY				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONM	**Songino Array**	**34.70**	**285**	P	**P**	**15 30 02.1**	**-0.1**
	comp=Z,0.5nm,0.5s,baz=60,slow=8.1,SNR=7.1						
SONM				LR	LR	15 45 27.1	
	comp=Z,60nm,19.2s,baz=248,slow=39						
YKA	**Yellowknife Ar**	**43.16**	**42**	P	P	15 31 14.9	+2.3
	comp=Z,1.0nm,0.5s,baz=295,slow=7.9,SNR=4.1						
ZALV	**Zalesovo Beam**	**43.67**	**304**	P	**P**	**15 31 15.9**	**-0.9**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**43.67**	**304**	P	**P**	**15 31 15.9**	**-0.9**
	comp=Z,0.5nm,0.3s,baz=65,slow=6.7,SNR=4.6						
NVS	**Novosibirsk**	**44.02**	**305**	⇓*i*P	**P**	**15 31 19.4**	**-0.1**
NVS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.1s						
SPITS	**Spitsbergen Ar**	**47.85**	**351**	P	P	15 31 51.8	+2.3
	comp=E,1.9nm,0.6s,baz=46,slow=5.6,SNR=6.0						
KURK	**Kurchatov**	**48.63**	**303**	*d i*P	**P**	**15 31 55.6**	**-0.1**
KURK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURBB	**Kurchatov Arra**	**48.73**	**303**	P	**P**	**15 31 55.9**	**-0.6**
	comp=Z,1.8nm,0.3s,baz=56,slow=7.8,SNR=14						
MKAR	**Makanchi Array**	**49.03**	**297**	P	**P**	**15 31 58.2**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**49.03**	**297**	P	**P**	**15 31 58.2**	**-0.7**
	comp=Z,1.1nm,0.4s,baz=56,slow=6.2,SNR=40						
BVAR	**Borovoye Array**	**51.30**	**309**	P	**P**	**15 32 15.7**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**51.30**	**309**	P	**P**	**15 32 15.7**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=52,slow=9.8,SNR=11						
ARCES	**ARCESS Array B**	**54.08**	**342**	P	P	15 32 37.8	+1.5
	comp=Z,2.4nm,1.0s,baz=30,slow=7.3,SNR=3.7						
NVAR	**Mina Array Bea**	**55.32**	**70**	P	P	15 32 49.9	+3.9
	comp=Z,0.6nm,0.5s,baz=296,slow=7.6,SNR=6.4						
AAK	**Ala-Archa**	**55.95**	**297**	⇓*e*P	**P**	**15 32 50.4**	**0.0**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PDAR	**Pinedale Array**	**57.24**	**61**	P	P	15 33 02.9	+3.3
	comp=Z,1.1nm,0.7s,baz=310,slow=3.5,SNR=8.7						
CMAR	**Chiang Mai Arr**	**58.72**	**259**	P	P	15 33 12.0	+2.0
	comp=Z,3.9nm,0.7s,baz=24,slow=7.0,SNR=24						
AKTO	**Aktyubinsk**	**58.73**	**313**	P	**P**	**15 33 11.0**	**+1.3**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKTO	**Aktyubinsk**	**58.73**	**313**	P	**P**	**15 33 11.0**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=67,slow=7.7,SNR=4.1						
TAPN	**Taplejung**	**58.92**	**275**	*e*P	**P**	**15 33 12.7**	**+1.0**
ODAN	**Odare**	**59.47**	**275**	*e*P	P	15 33 17.0	+1.6
GUN	**Gumba**	**59.63**	**277**	*e*P	**P**	**15 33 17.2**	**+0.6**
	comp=Z,12nm,0.6s						
RAMN	**Ramite**	**59.89**	**276**	*e*P	**P**	**15 33 19.0**	**+0.7**
	comp=Z,26nm,0.5s						
KKN	**Kakani**	**60.08**	**277**	*e*P	**P**	**15 33 20.3**	**+0.7**
PKI	**Pulchoki**	**60.16**	**277**	*e*P	**P**	**15 33 21.0**	**+0.7**
	comp=Z,15nm,0.6s						
DMN	**Daman**	**60.32**	**277**	*e*P	**P**	**15 33 22.1**	**+0.8**
	comp=Z,12nm,0.5s						
DANN	**Dangsing**	**60.59**	**279**	*e*P	**P**	**15 33 24.1**	**+0.9**
	comp=Z,12nm,0.6s						
FINES	**FINESS Array B**	**60.95**	**337**	P	P	15 33 27.2	+2.5
	comp=Z,1.8nm,0.4s,baz=40,slow=7.7,SNR=11						
KOLN	**Koldanda**	**61.11**	**279**	*e*P	**P**	**15 33 27.3**	**+0.7**
	comp=Z,12nm,0.5s						
NOA	**NORSAR Array B**	**64.32**	**344**	P	P	15 33 49.9	+2.6
	comp=Z,0.9nm,0.5s,baz=22,slow=6.7,SNR=3.9						
AKASG	**Malin Array Be**	**69.48**	**330**	P	P	15 34 22.2	+2.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**69.48**	**330**	P	P	15 34 22.2	+2.0
	comp=Z,0.6nm,0.3s,baz=31,slow=6.9,SNR=4.2						
TXAR	**Lajitas Array**	**70.26**	**68**	P	P	15 34 28.7	+3.2
	comp=Z,0.6nm,0.5s,baz=305,slow=3.9,SNR=8.1						
KBZ	**Khabaz**	**70.44**	**317**	P	P	15 34 28.0	+1.8
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KBZ	**Khabaz**	**70.44**	**317**	P	P	15 34 28.0	+1.8
	comp=Z,1.8nm,0.8s,baz=43,slow=2.6,SNR=5.6						
EKA	**Eskdalemuir Ar**	**71.78**	**351**	P	P	15 34 39.5	+5.4
	comp=Z,0.2nm,0.3s,baz=12,slow=5.1,SNR=3.9						
CLL	**Collm**	**73.17**	**340**	*e*P	**P**	**15 34 41.0**	**-1.4**
GERES	**GERESS Array B**	**75.33**	**338**	P	P	15 35 00.8	+5.6
	comp=Z,0.4nm,0.5s,baz=40,slow=7.7,SNR=2.1						
BRTR	**Keskin Array B**	**77.52**	**321**	P	**P**	**15 35 08.7**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=22,slow=8.2,SNR=3.2						
ASAR	**Alice Springs**	**79.48**	**205**	P	**P**	**15 35 20.0**	**+1.5**
	comp=Z,0.2nm,0.6s,baz=14,slow=4.6,SNR=6.8						
MMAI	**Mount Meron Ar**	**82.62**	**317**	P	P	15 35 37.5	+2.2
	comp=Z,0.7nm,0.4s,baz=87,slow=7.4,SNR=2.4						

MAN 02 15:25:42, 10°.69N×124°.90E, h4km, mb4.3, ML3.1, MS2.9, Leyte

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.05**	**30**	*e*P	Pb	15 26 02.8	+0.1
BESP				*e*S	Sg	15 26 15.8	+0.1
CNP	**Catarman**	**1.82**	**353**	*e*P	Pn	15 26 14.2	+0.1
CNP				*e*S	Sb	15 26 38.8	-0.3

IDC 02 15:33:13.6±1.3**, 4°.21N**×**127°.00E, h0**km**, mb3.4**/5**, mb1 3.5**/5**, mb1mx3.4**/23**, mbtmp3.4**/5**, 1C, Error ellipse: s-maj=126.4km s-min=19.3km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**4.06**	**318**	⇑*i*P	Pb	15 34 22.4	-3.7
WRA	**Warramunga Arr**	**25.06**	**164**	P	P	15 38 39.2	-0.7
	0.6nm,0.6s,baz=344,slow=11,SNR=9.6						
ASAR	**Alice Springs**	**28.51**	**167**	P	P	15 39 11.4	+0.4
	0.1nm,0.3s,baz=345,slow=10,SNR=5.7						
STKA	**Stephens Creek**	**38.48**	**160**	P	P	15 40 37.9	+0.3
	0.8nm,0.5s,baz=343,slow=11,SNR=4.7						
SONM	**Songino Array**	**46.94**	**341**	P	P	15 41 47.0	+0.7
	0.3nm,0.5s,baz=172,slow=7.4,SNR=2.8						
MKAR	**Makanchi Array**	**57.32**	**325**	P	P	15 43 02.7	-0.8
	0.2nm,0.4s,baz=119,slow=7.2,SNR=8.2						

IDC 02 15:36:41.2±2.9**, 20°.84S**×**178°.93W, h600**km±31km**, mb3.3**/10**, mb1 3.5**/10**, mb1mx3.4**/18**, mbtmp3.3**/10**, Error ellipse: s-maj=26.7km s-min=18.1km az=125.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.85**	**244**	P	P	15 43 00.6	+0.2
	1.3nm,0.5s,baz=101,slow=10,SNR=7.5						
ASAR	**Alice Springs**	**43.59**	**257**	P	P	15 43 53.8	-0.3
	8.0nm,0.8s,baz=92,slow=7.8,SNR=128						
ASAR				PcP	PcP	15 45 27.0	-0.8
	1.0nm,0.7s,baz=114,slow=3.7,SNR=6.7						
ASAR				ScP	ScP	15 48 23.4	+0.4
	0.7nm,0.7s,baz=112,slow=5.2,SNR=8.3						
ASAR				S	S	15 49 38.0	-3.2
	1.2nm,0.8s,baz=94,slow=16,SNR=8.5						
WRA	**Warramunga Arr**	**43.69**	**263**	P	P	15 43 54.0	-0.8
	3.1nm,0.3s,baz=96,slow=7.6,SNR=143						
WRA				S	S	15 49 39.0	-3.7
	0.9nm,0.9s,baz=99,slow=13,SNR=4.7						
VNDA	**Vanda**	**57.49**	**185**	P	P	15 45 34.5	+0.7
	0.5nm,0.6s,baz=6.5,slow=5.2,SNR=4.2						
MJAR	**Matsushiro Arr**	**69.97**	**324**	P	P	15 46 53.6	-0.1
	2.1nm,0.7s,baz=165,slow=6.1,SNR=8.3						
PETK	**Petropavlovsk-**	**76.38**	**346**	P	P	15 47 30.2	+0.5
	3.1nm,0.7s,baz=154,slow=11,SNR=6.7						
USRK	**Ussuriysk Arra**	**78.76**	**326**	P	P	15 47 44.0	+1.3
	3.7nm,0.8s,baz=132,slow=4.4,SNR=5.6						
NVAR	**Mina Array Bea**	**81.87**	**44**	P	P	15 47 59.8	+0.5
	0.3nm,0.4s,baz=234,slow=9.0,SNR=5.7						
ILAR	**Eielson Array**	**88.84**	**13**	P	P	15 48 30.6	-1.3
	0.9nm,0.6s,baz=229,slow=6.0,SNR=7.7						
CMAR	**Chiang Mai Arr**	**89.41**	**290**	P	P	15 48 36.5	+0.9
	1.9nm,0.9s,baz=124,slow=3.3,SNR=8.6						
BVAR	**Borovoye Array**	**118.78**	**320**	PKP	PKPdf	15 54 20.6	-1.4
	0.4nm,0.3s,baz=90,slow=3.0,SNR=4.9						
ARCES	**ARCESS Array B**	**129.10**	**349**	PKP	PKPdf	15 54 41.0	-0.3
	1.6nm,0.9s,baz=14,slow=1.9,SNR=7.5						
AKASG	**Malin Array Be**	**142.88**	**330**	PKP	PKPdf	15 55 04.3	-2.9
	3.3nm,0.4s,baz=43,slow=4.0,SNR=25						
BRTR	**Keskin Array B**	**146.42**	**311**	PKPbc	PKPbc	15 55 15.8	-0.6
	1.5nm,0.8s,baz=140,slow=3.7,SNR=6.8						

GUC ***02*** *15:44:59.6±0.6, 34°.88S×69°.58W, h9km±3km, MD3.8, ML3.9*
NEIC ***02*** *15:44:59.6, 34°.88S×69°.58W, h9km, mb3.6/1, ML3.9(GUC), After GUC.*
NEIC Felt [IV] at San Rafael.
IDC ***02*** *15:45:03.2±6.7, 34°.70S×69°.29W, h30km±45km, mb3.5/1, mb1 3.7/4, mb1mx3.5/16, mbtmp3.5/4, ML4.0/3, Error ellipse: s-maj=63.7km s-min=28.7km az=115.0*
ISC 02 15:44:58.8±1.0**, 34°.90S**±0°.03×**69°.53W**±0°.05**, h9**km±7km**, n46,** σ1**s17**/68**, 10C-15D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**1.18**	**311**	⇑*i*P	**Pg**	**15 45 20.3**	**-1.2**
CACH				*i* S	**Sg**	**15 45 36.1**	**-0.6**
CACH	**El Canelo**	**1.18**	**311**	⇑*i*P	**Pg**	**15 45 20.3**	**-1.2**
CACH				*i* S	**Sg**	**15 45 36.1**	**-0.6**
LMEL	**Las Melosas**	**1.19**	**332**	⇑*i*P	**Pg**	**15 45 20.7**	**-0.9**
LMEL				*i* S	**Sg**	**15 45 36.9**	**-0.2**
LMEL	**Las Melosas**	**1.19**	**332**	⇑*i*P	**Pg**	**15 45 20.7**	**-0.9**
LMEL				*i* S	**Sg**	**15 45 36.9**	**-0.2**
LMEL				AML	AML	15 45 37.5	
	comp=E,5μm,0.2s						
PCH	**Pirque**	**1.51**	**327**	⇓*i*P	**Pn**	**15 45 26.5**	**+0.3**
PCH				*i* S	**Sg**	**15 45 47.5**	**+0.1**
PCH	**Pirque**	**1.51**	**327**	⇓*i*P	**Pn**	**15 45 26.5**	**+0.3**
PCH				*i* S	**Sg**	**15 45 47.5**	**+0.1**
ANTU	**Antumapu**	**1.61**	**325**	⇓*i*P	**Pb**	**15 45 28.4**	**-0.3**
ANTU				*i* S	**Sg**	**15 45 50.2**	**-0.4**
ANTU	**Antumapu**	**1.61**	**325**	⇓*i*P	**Pb**	**15 45 28.4**	**-0.3**
ANTU				*i* S	**Sg**	**15 45 50.2**	**-0.4**
ANTU				AML	AML	15 45 50.9	
	comp=E,3μm,0.3s						
FSR	**Penalolen**	**1.64**	**329**	⇓*i*P	**Pb**	**15 45 29.0**	**-0.3**
FSR				*i* S	**Sg**	**15 45 51.0**	**-0.5**
FSR	**Penalolen**	**1.64**	**329**	⇓*i*P	**Pb**	**15 45 29.0**	**-0.3**
FSR				*i* S	**Sg**	**15 45 51.0**	**-0.5**
FSR				AML	AML	15 45 52.9	
	comp=E,560nm,0.5s						
FCH	**Farellones**	**1.69**	**338**	AML	AML	15 45 15.6	
	comp=E,2μm,0.3s						
TACH	**Talagante**	**1.70**	**316**	⇑*i*P	**Pb**	**15 45 29.8**	**-0.5**
TACH				*i* S	**Sb**	**15 45 52.3**	**+0.4**
TACH	**Talagante**	**1.70**	**316**	⇑*i*P	**Pb**	**15 45 29.8**	**-0.5**
TACH				*i* S	**Sb**	**15 45 52.3**	**+0.4**
CLCH	**Cerro Calan**	**1.71**	**330**	AML	AML	15 45 55.8	
	comp=E,3μm,0.4s						
SAN	**Santiago**	**1.72**	**327**	⇑*i*P	**Pb**	**15 45 30.2**	**-0.4**
SAN				*i* S	**Sg**	**15 45 53.5**	**-0.6**
SAN	**Santiago**	**1.72**	**327**	⇑*i*P	**Pb**	**15 45 30.2**	**-0.4**
SAN				*i* S	**Sg**	**15 45 53.5**	**-0.6**
SAN				AML	AML	15 45 55.9	
	comp=E,2μm,0.5s						
RCDM	**Rinconada Maip**	**1.76**	**323**	⇓*i*P	**Pb**	**15 45 31.0**	**-0.3**
RCDM				*i* S	**Sb**	**15 45 54.4**	**+0.8**
RCDM	**Rinconada Maip**	**1.76**	**323**	⇓*i*P	**Pb**	**15 45 31.0**	**-0.3**
RCDM				*i* S	**Sb**	**15 45 54.4**	**+0.8**
RCDM				AML	AML	15 45 55.6	
	comp=E,2μm,0.2s						
TALC	**Talca**	**1.80**	**253**	⇓*i*P	**Pb**	**15 45 31.4**	**-0.5**
TALC				*i* S	**Sg**	**15 45 55.6**	**-1.0**
TALC	**Talca**	**1.80**	**253**	⇓*i*P	**Pb**	**15 45 31.4**	**-0.5**
TALC				*i* S	**Sg**	**15 45 55.6**	**-1.0**
LNV	**Longovilo**	**1.82**	**301**	⇑*i*P	**Pb**	**15 45 31.6**	**-0.7**
LNV				*i* S	**Sb**	**15 45 55.7**	**+0.5**
LNV	**Longovilo**	**1.82**	**301**	⇑*i*P	**Pb**	**15 45 31.6**	**-0.7**
LNV				*i* S	**Sb**	**15 45 55.7**	**+0.5**
PEL	**Peldehue**	**1.99**	**331**	⇓*i*P	**Pb**	**15 45 34.8**	**-0.6**
PEL				*i* S	**Sg**	**15 46 02.1**	**-0.8**
PEL				AML	AML	15 46 03.6	
	comp=N,3μm,0.3s						
ROCH	**El Roble**	**2.28**	**327**	AML	AML	15 46 13.4	
	comp=N,2μm,0.5s						
IHA	**Instituto Hidr**	**2.56**	**316**	*e*P	**Pb**	**15 45 42.8**	**-2.1**
IHA				*i* S	**Sb**	**15 46 16.6**	**0.0**
IHA	**Instituto Hidr**	**2.56**	**316**	*e*P	**Pb**	**15 45 42.8**	**-2.1**
IHA				*i* S	**Sb**	**15 46 16.6**	**0.0**
CCHI	**Chillan**	**2.68**	**230**	⇓*i*P	**Pb**	**15 45 46.5**	**-0.6**
CCHI	**Chillan**	**2.68**	**230**	⇓*i*P	**Pb**	**15 45 46.5**	**-0.6**
CCHI				AML	AML	15 46 32.4	
	comp=E,335nm,0.6s						
CHNG	**Los Chungos**	**3.43**	**331**	⇓*i*P	**Pb**	**15 45 58.1**	**-1.6**
CHNG				*i* S	**Sb**	**15 46 42.8**	**+1.3**
CHNG	**Los Chungos**	**3.43**	**331**	⇓*i*P	**Pb**	**15 45 58.1**	**-1.6**
CHNG				*i* S	**Sb**	**15 46 42.8**	**+1.3**
CHNG				AML	AML	15 46 44.2	
	comp=E,510nm,0.5s						
PLCA	**Paso Flores**	**5.88**	**188**	Pn	**Pn**	**15 46 25.5**	**-0.8**
PLCA				*e*Pg	Pg	15 46 46.5	-5.1
PLCA				*e*Sg	Sg	15 48 00.6	-7.1
PLCA	**Paso Flores**	**5.88**	**188**	Pn	Pn	15 46 31.4	+5.1
	comp=E,0.4nm,0.3s,baz=10,slow=13,SNR=10						
PLCA				Pg	Pg	15 46 46.1	-5.4
	comp=E,1.9nm,0.3s,baz=1.2,slow=13,SNR=17						
PLCA				Lg	Lg	15 48 01.1	
	comp=E,2.7nm,0.3s,baz=305,slow=18,SNR=3.7						
LCO	**Las Campanas**	**5.95**	**350**	*e*Pn	**Pn**	**15 46 28.0**	**+0.6**
LCO				*e*Sg	**Sg**	**15 48 06.4**	**-3.6**
TRQA	**Tornquist**	**6.85**	**120**	*e*Pn	**Pn**	**15 46 38.0**	**-1.5**
CPUP	**Villa Florida**	**13.53**	**54**	Pn	Pn	15 48 07.5	-3.5
CPUP				Lg	Lg	15 52 04.5	
CPUP	**Villa Florida**	**13.53**	**54**	Pn	Pn	15 48 07.5	-3.5
	comp=E,0.6nm,0.3s,baz=216,slow=14,SNR=3.3						
CPUP				Lg	Lg	15 52 04.5	
	comp=E,0.9nm,0.3s,baz=300,slow=20,SNR=2.1						
LPAZ	**La Paz**	**18.57**	**4**	*e*P	**P**	**15 49 16.9**	**0.0**
	comp=E,3.3nm,0.7s						
LPAZ	**La Paz**	**18.57**	**4**	P	**P**	**15 49 16.6**	**-0.3**
	comp=E,0.2nm,0.3s,baz=187,slow=5.3,SNR=3.8						
BOSA	**Boshof**	**77.82**	**116**	pP	pP	15 57 03.6	+3.7
BOSA	**Boshof**	**77.82**	**116**	pP	pP	15 57 03.6	+3.7
	comp=E,4.0nm,1.1s,baz=240,slow=5.4,SNR=4.0						
TORD	**Torodi Ar. Bea**	**82.59**	**68**	P	**P**	**15 57 23.0**	**+0.3**
TORD	**Torodi Ar. Bea**	**82.59**	**68**	P	**P**	**15 57 23.0**	**+0.3**
	comp=E,0.6nm,1.0s,baz=234,slow=5.6,SNR=3.7						
BVAR	**Borovoye Array**	**146.49**	**45**	PKPbc	**PKPdf**	**16 04 39.1**	**+0.6**
BVAR				pPKPbc	**PKiKP**	**16 04 46.0**	**+3.1**
BVAR	**Borovoye Array**	**146.49**	**45**	PKPbc	**PKPdf**	**16 04 39.1**	**+0.6**
	comp=E,0.3nm,0.5s,baz=227,slow=5.7,SNR=2.5						
BVAR				pPKPbc	**PKiKP**	**16 04 46.0**	**+3.1**
	comp=E,0.4nm,0.4s,baz=247,slow=2.5,SNR=3.9						
KURBB	**Kurchatov Arra**	**152.05**	**46**	PKPbc	**PKPbc**	**16 04 53.3**	**-0.8**
	comp=E,0.2nm,0.4s,baz=301,slow=3.6,SNR=2.6						
KURBB				pPKPbc	**pPKPbc**	**16 04 59.9**	**+2.8**
	comp=E,0.3nm,0.4s,baz=286,slow=2.9,SNR=4.3						
KURK	**Kurchatov**	**152.06**	**46**	PKPbc	**PKPbc**	**16 04 53.3**	**-0.8**
KURK				pPKPbc	**pPKPbc**	**16 04 59.9**	**+2.8**

IDC 02 15:59:42.4±1.9**, 2°.49S**×**138°.23E, h0**km**, mb3.4**/2**, mb1 3.8**/4**, mb1mx3.5**/17**, mbtmp3.5**/4**, ML3.4**/2**, Error ellipse: s-maj=117.1km s-min=29.4km az=111.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.76**	**192**	P	Pn	16 03 51.2	-0.1
	0.2nm,0.3s,baz=13,slow=12,SNR=16						
FITZ	**Fitzroy Crossi**	**19.83**	**218**	P	P	16 04 15.0	0.0
	0.1nm,0.3s,baz=22,slow=16,SNR=2.8						
ASAR	**Alice Springs**	**21.47**	**191**	P	P	16 04 32.8	0.0
	0.4nm,0.4s,baz=13,slow=11,SNR=16						
ILAR	**Eielson Array**	**85.83**	**25**	P	P	16 12 23.6	0.0
	0.3nm,0.6s,baz=259,slow=4.2,SNR=4.1						

SZGRF ***02*** *16:01:26.9, 20°.43S×169°.42E, h25km, Vanuatu Islands*
IDC ***02*** *16:01:31.8±0.5, 17°.82S×167°.81E, h0km, mb4.5/20, mb1 4.6/22, mb1mx4.6/25, mbtmp4.5/22, ML4.1/2, MS4.0/25, Ms1 4.0/25, ms1mx3.9/37, Error ellipse: s-maj=16.4km s-min=14.1km az=114.0*
MOS ***02*** *16:01:35.7±1.3, 17°.81S×167°.72E, h33km, mb4.9/34, MS4.0/14, Error ellipse: s-maj=11.1km s-min=9.3km az=20.1*
ISCJB ***02*** *16:01:35.1±0.2, 17°.95S±0°.04×167°.76E±0°.05, h32km, mb4.8/58, MS4.1/34, Error ellipse: s-maj=7.5km s-min=4.9km az=12.3*
NEIC ***02*** *16:01:37.1±0.2, 17°.87S×167°.81E, h35km, mb4.9/23, Error ellipse: s-maj=6.1km s-min=5.2km az=143.0*
NEIC Felt at Port-Vila.
GCMT ***02*** *16:01:40.7±0.3, 17°.82S×167°.53E, h26km, MW5.0, Moment Tensor Solution. s37,c42; s75,c104; Moment tensor: Scale 10^{16}Nm; M_{rr}3.07±.17; $M_{\theta\theta}$-0.17±.11; $M_{\phi\phi}$-2.90±.11; $M_{r\theta}$0.76±.24; $M_{\theta\phi}$0.31±.08; $M_{\phi r}$-2.29±.17; Best double couple: $M_0$3.90000×10^{16} NP1:ϕ_s0.00000°, δ26.00000°, λ102.00000°. NP2:ϕ_s166.00000°, δ64.00000°, λ84.00000°. Principal axes: T 3.9400, Plg70.0000°, Azm64.0000°; N -0.1800, Plg5.0000°, Azm169.0000°; P -3.7600, Plg19.0000°, Azm261.0000°; Data Used: II IU IC G CN.*
BJI ***02*** *16:01:41.8, 18°.00S×167°.70E, h70km, mB4.9/21, mb4.7/29, Ms4.8/19, Ms7 4.4/20*
ISC 02 16:01:36.8±0.3**, 17°.94S**±0°.05×**167°.82E**±0°.07**, h32**km**, n228,** σ1**s60**/226**, mb4.8**/57**, MS4.1**/34**, 9C-1D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.28**	**192**	*e*S	**Sn**	**16 03 26.6**	**-2.1**
DZM	**Mont Dzumac**	**4.31**	**197**	*e*Pn	**Pn**	**16 02 40.5**	**+0.3**

153nm,1.1s
DZM eSn Sn 16 03 22.7 -6.7
501nm,0.8s
DZM Mont Dzumac 4.31 197 Pn **Pn 16 02 39.5 -0.7**
DZM Sn **Sn 16 03 27.8 -1.7**
DZM Mont Dzumac 4.31 197 Pn **Pn 16 02 39.5 -0.7**
4.5nm,0.3s,baz=56,slow=12,SNR=21
DZM Sn **Sn 16 03 27.8 -1.7**
101nm,0.3s,baz=127,slow=20,SNR=14
DZM LR LR 16 04 15.3
comp=Z,1μm,18.3s,baz=199,slow=37
NOUC Port Laguerre 4.38 199 eP **Pn 16 02 40.2 -0.9**
NOUC eS **Sn 16 03 27.7 -3.3**
MSVF Nonsavu 9.75 90 eP Pn 16 04 00.8 +5.8
MSVF pmax pmax
comp=Z,123nm,1.1s
MSVF Nonsavu 9.75 90 eP Pn 16 04 00.8 +5.8
comp=Z,123nm,1.1s
HNR Honiara 11.40 317 Pn **Pn 16 04 16.6 -0.9**
HNR Honiara 11.40 317 Pn **Pn 16 04 16.6 -0.9**
comp=Z,2.6nm,0.3s,baz=157,slow=13,SNR=3.5
HNR LR LR 16 07 52.0
comp=Z,668nm,20.2s,baz=160,slow=34
EIDS Eidsvold 17.21 242 eP **P 16 05 36.5 +0.2**
comp=Z,90nm,1.8s
RAO Raoul Island 17.23 133 LR LR 16 10 58.7
comp=Z,458nm,19.3s,baz=153,slow=33
OUZ Omahuta 17.96 164 eP **P 16 05 45.9 +1.4**
comp=Z,68nm,1.3s
AFI Afiamalu 20.02 81 P **P 16 06 07.0 -0.2**
AFI Afiamalu 20.02 81 P **P 16 06 07.0 -0.2**
comp=Z,33nm,1.0s,baz=282,slow=17,SNR=2.1
AFI LR LR 16 12 01.3
comp=Z,680nm,21.9s,baz=280,slow=31
CTA Charters Tower 20.50 261 P **P 16 06 13.2 +0.8**
CTA Charters Tower 20.50 261 P **P 16 06 13.2 +0.8**
comp=Z,12nm,0.8s,baz=83,slow=12,SNR=10
CTAO Charters Tower 20.50 261 eP **P 16 06 13.0 +0.6**
CTAO pmax pmax
comp=Z,32nm,1.0s
CTAO Charters Tower 20.50 261 eP **P 16 06 13.0 +0.6**
comp=Z,32nm,1.0s
PMG Port Moresby 21.77 290 P **P 16 06 27.9 +1.8**
PMG Port Moresby 21.77 290 P **P 16 06 27.9 +1.8**
comp=Z,14nm,0.9s,baz=98,slow=15,SNR=2.2
PMG LR LR 16 13 42.3
comp=Z,676nm,19.4s,baz=92,slow=34
URZ Urewera 21.82 160 eP **P 16 06 27.6 +1.3**
comp=Z,36nm,0.8s
URZ Urewera 21.82 160 P **P 16 06 28.0 +1.7**
comp=Z,20nm,0.7s,baz=328,slow=9.0,SNR=10
RPZ Rata Peaks 25.84 175 eP **P 16 07 06.9 +1.5**
RPZ Rata Peaks 25.84 175 P **P 16 07 06.4 +1.1**
comp=Z,4.6nm,0.6s,baz=175,slow=13,SNR=1.5
STKA Stephens Creek 27.44 235 eP **P 16 07 20.6 +0.6**
STKA Stephens Creek 27.44 235 P **P 16 07 20.4 +0.5**
comp=Z,8.0nm,0.9s,baz=66,slow=7.4,SNR=17
STKA LR LR 16 17 03.6
comp=Z,495nm,19.6s,baz=42,slow=34
WRA Warramunga Arr 31.70 261 P **P 16 07 56.1 -1.7**
WRA PcP **PcP 16 10 49.0 -0.2**
WRA Warramunga Arr 31.70 261 P **P 16 07 56.1 -1.7**
comp=Z,1.9nm,1.0s,baz=89,slow=9.0,SNR=7.0
WRA PcP **PcP 16 10 49.0 -0.2**
comp=Z,1.1nm,0.8s,baz=88,slow=3.2,SNR=4.8
WRA LR LR 16 19 46.4
comp=Z,432nm,18.4s,baz=50,slow=34
BBOO Buckleboo 32.14 236 eP **P 16 08 01.3 -0.2**
comp=Z,204nm,0.8s
AS31 Alice Springs 32.16 254 eP **P 16 07 59.7 -2.1**
ASAR Alice Springs 32.16 254 P **P 16 08 00.6 -1.3**
ASAR PcP PcP 16 10 56.4 +5.9
ASAR ScP **ScP 16 14 34.2 +2.3**
ASAR Alice Springs 32.16 254 P **P 16 08 00.6 -1.3**
comp=Z,3.4nm,0.8s,baz=81,slow=8.9,SNR=30
ASAR PcP PcP 16 10 56.4 +5.9
comp=Z,2.3nm,0.9s,baz=102,slow=3.6,SNR=3.2
ASAR ScP **ScP 16 14 34.2 +2.3**
comp=Z,0.8nm,0.9s,baz=93,slow=2.0,SNR=4.1
ASAR LR LR 16 20 29.3
comp=Z,746nm,20.1s,baz=86,slow=35
FORT Forrest 38.21 243 eP **P 16 08 53.6 -0.2**
comp=Z,21nm,0.6s
FITZ Fitzroy Crossi 40.05 263 eP **P 16 09 08.9 -0.4**
FITZ Fitzroy Crossi 40.05 263 P **P 16 09 08.4 -0.9**
comp=Z,10nm,1.0s,baz=83,slow=6.7,SNR=9.7
TBI Tubuai 40.23 105 eLR LR 16 20 49.7
comp=Z,278nm,25.8s,baz=263
PPT2 Papeete2 40.51 96 eS S 16 15 27.3 +6.8
comp=Z,191nm,24.5s
PPT2 eLR LR 16 20 58.9
comp=Z,572nm,25.8s,baz=257
PPT Papeete 40.51 96 LR LR 16 21 24.1
comp=Z,307nm,21.0s,baz=278,slow=29
KAPI Kappang 48.67 279 P **P 16 10 17.4 -0.9**
KAPI Kappang 48.67 279 P **P 16 10 17.4 -0.9**
comp=Z,6.4nm,0.7s,baz=132,slow=8.7,SNR=2.3
RKT Rikitea 53.55 106 eLR LR 16 26 55.6
comp=Z,256nm,26.2s
VNDA Vanda 59.68 182 P **P 16 11 38.1 +0.4**
VNDA Vanda 59.68 182 P **P 16 11 38.1 +0.4**
comp=Z,1.2nm,0.7s,baz=5.3,slow=8.9,SNR=7.5
VNDA LR LR 16 34 42.9
comp=Z,103nm,20.6s,baz=279,slow=33
MJAR Matsushiro Arr 60.98 333 P **P 16 11 45.6 -1.5**
MJAR Matsushiro Arr 60.98 333 P **P 16 11 45.6 -1.5**
comp=Z,4.6nm,0.8s,baz=150,slow=5.6,SNR=14
MAT Matsushiro 60.98 333 P **P 16 11 45.9 -1.2**
MAT S **S 16 20 07.0 +3.5**
JNU Nakatsue 61.83 325 LR LR 16 33 37.2
comp=Z,100nm,21.9s,baz=119,slow=31
QIZ Qiongzhong 67.77 300 P **P 16 12 31.1 -0.8**
QIZ S **S 16 21 25.9 -2.1**
QIZ LR LR
comp=Z,58nm,30.2s
NJ2 Nanjing 68.34 316 eP **P 16 12 36.5 +1.3**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
YSS Yuzh-Sakhalins 68.43 342 eP **P 16 12 36.5 +1.1**
YSS e 16 12 43.2
USRK Ussuriysk Arra 69.97 333 P **P 16 12 45.7 +0.7**
comp=Z,3.2nm,0.9s,baz=144,slow=7.0,SNR=4.2
PET Petropavlovsk 71.11 354 eP **P 16 12 51.1 -0.6**
PET eS **S 16 22 10.3 +4.3**
PET pmax pmax
comp=Z,9.0nm,0.7s
PETK Petropavlovsk- 71.29 354 P **P 16 12 52.5 -0.4**
PETK pmax pmax
comp=Z,13nm,0.8s
PETK MLR MLR
comp=Z,69nm,18.7s
PETK Petropavlovsk- 71.29 354 P **P 16 12 52.5 -0.4**
PETK Petropavlovsk- 71.29 354 P **P 16 12 52.5 -0.4**
comp=Z,13nm,0.8s,baz=156,slow=7.3,SNR=28
PETK LR LR 16 41 41.3
comp=Z,69nm,18.7s,baz=329,slow=34
MDJ Mudanjiang 71.35 332 P **P 16 12 54.5 +1.1**
MDJ pP pP 16 13 13.1 +10
MDJ sP sP 16 13 21.1 +14
MDJ PP **PP 16 15 32.6 +0.4**
MDJ S **S 16 22 07.3 -1.8**
MDJ sS SKiKP 16 22 40.0 +8.6
MDJ pmax pmax
comp=Z,8.0nm,1.1s
MDJ pmax pmax
comp=Z,53nm,3.7s
MDJ LR LR
comp=N,68nm,28.0s
MDJ LR LR
comp=E,64nm,26.9s
MDJ LR LR
comp=Z,60nm,20.4s
MDJ Mudanjiang 71.35 332 eP **P 16 12 54.7 +1.3**
comp=Z,13nm,1.0s
QSPA South Pole Qui 72.11 180 eP **P 16 12 58.4 +0.4**
comp=Z,26nm,0.9s
HABR Khabarovsk 72.29 338 eP **P 16 12 57.4 -1.6**
HABR 16 13 14.4
HABR e 16 15 38.2
HABR ePPP PPP 16 17 22.4
HABR eS **S 16 22 14.1 -5.7**
HABR e*SS SKSac 16 22 50.5 -10
HABR e 16 22 55.7
HABR eSS **SS 16 26 53.7 -5.0**
HABR pmax pmax
comp=Z,41nm,2.1s
HABR pmax pmax
comp=N,25nm,2.6s
HABR pmax pmax
comp=E,56nm,2.6s
HABR MLR MLR
comp=Z,41nm,19.0s
CN2 Changchun 72.66 329 eP P 16 13 05.4 +4.1
CN2 eS **S 16 22 25.8 +1.6**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,17.0s
CN2 LR LR
comp=E,200nm,17.0s
CN2 LR LR
comp=Z,200nm,22.0s
GYA Guiyang 73.97 305 P **P 16 13 11.0 +1.4**
GYA pP pP 16 13 31.4 +12
GYA sP sP 16 13 40.0 +17
GYA PP **PP 16 15 58.8 +3.6**
GYA S **SKiKP 16 22 36.4 +0.3**
GYA SKS SKSac 16 23 06.5 -8.5
GYA SS **SS 16 27 23.1 -2.4**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.5s
GYA LR LR
comp=N,420nm,18.6s
GYA LR LR
comp=E,370nm,19.1s
GYA LR LR
comp=Z,480nm,18.7s
KLR Kul'dur 74.14 336 eP P 16 13 06.1 -3.8
KLR pmax pmax
comp=Z,64nm,1.8s
KMI Kunming 76.44 302 P **P 16 13 25.4 +1.4**
KMI pP pP 16 13 46.4 +12
KMI sP sP 16 13 54.9 +17
KMI PP **PP 16 16 19.6 +3.3**
KMI S **S 16 23 03.0 -4.8**
KMI sS **ScS 16 23 39.5 +1.6**
KMI SS **SS 16 28 02.6 -0.7**
KMI pmax pmax
comp=Z,7.0nm,0.6s
KMI LR LR
comp=N,73nm,16.9s
KMI LR LR
comp=E,90nm,13.0s
KMI LR LR
comp=Z,79nm,16.9s
CM31 Chiang Mai Arr 76.74 295 P **P 16 13 25.6 +0.1**
comp=Z,11nm,1.0s
CMAR Chiang Mai Arr 76.74 295 P **P 16 13 26.3 +0.8**
CMAR Chiang Mai Arr 76.74 295 P **P 16 13 26.3 +0.8**
comp=Z,2.8nm,0.9s,baz=129,slow=4.0,SNR=13
CHTO Chiang Mai 76.89 295 eP **P 16 13 25.9 -0.4**
CHTO pmax pmax
comp=Z,10.0nm,1.2s
CHTO Chiang Mai 76.89 295 eP **P 16 13 25.9 -0.4**
comp=Z,10nm,1.2s
HHC Hu-ho-hao-te 78.36 320 eP **P 16 13 35.5 +1.3**
HHC pP pP 16 13 55.6 +11
HHC sP sP 16 14 04.3 +16
HHC PP **PP 16 16 35.5 +3.6**
HHC S **S 16 23 24.2 -3.6**
HHC sS **ScS 16 23 59.2 +6.6**
HHC SS **SS 16 28 32.8 +1.3**
HHC pmax pmax
comp=Z,21nm,0.9s
HHC pmax pmax
comp=Z,190nm,4.8s
HHC LR LR
comp=N,140nm,15.5s
HHC LR LR
comp=E,100nm,14.3s
HHC LR LR
comp=Z,140nm,16.7s
CD2 Chengdu 78.38 308 eP **P 16 13 35.1 +0.6**
CD2 pP pP 16 13 55.9 +11
CD2 sP sP 16 14 04.7 +16
CD2 PP **PP 16 16 35.6 +3.4**
CD2 S **S 16 23 23.5 -4.7**
CD2 sS **ScS 16 23 59.5 +6.5**
CD2 SS **SS 16 28 30.8 -1.2**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,20nm,4.3s
CD2 LR LR
comp=N,120nm,12.8s
CD2 LR LR
comp=Z,150nm,13.4s
MAW Mawson 79.12 202 P **P 16 13 39.0 +1.1**
MAW Mawson 79.12 202 P **P 16 13 39.0 +1.1**
comp=Z,3.4nm,1.0s,baz=108,slow=8.2,SNR=2.7
MAW LR LR 16 45 54.2
comp=Z,92nm,20.2s,baz=253,slow=34
HIA Hailar 79.32 330 P **P 16 13 39.4 +0.2**
comp=Z,17nm,1.1s
LZH Lanzhou 80.86 313 eP **P 16 13 49.0 +1.0**
LZH pP pP 16 14 09.6 +11
LZH sP sP 16 14 17.8 +16
LZH ePP **PP 16 16 56.9 +4.0**
LZH pmax pmax
comp=Z,21nm,1.4s
LZH pmax pmax
comp=Z,72nm,7.9s
LZH LR LR
comp=N,310nm,17.2s
LZH LR LR
comp=E,310nm,16.9s
LZH LR LR
comp=Z,410nm,19.0s
SEY Seymchan 81.52 353 ceP **P 16 13 49.6 -1.0**
CLNS Chul'man 82.68 338 eP **P 16 13 57.1 +0.1**
CLNS pmax pmax
comp=Z,13nm,0.9s
CLNS pmax pmax
comp=E,3.0nm,1.4s
CLNS pmax pmax
comp=N,10.0nm,1.1s
RSO Redoubt South 84.35 18 eP P 16 14 00.8 -4.9
comp=N,34nm,0.9s
ULN Ulaanbaatar 85.03 324 eP **P 16 14 08.5 -0.8**
comp=N,11nm,0.9s
YAK Yakutsk 85.24 343 ceP **P 16 14 09.3 -0.5**
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK pmax pmax
comp=Z,46nm,1.1s
YAK pmax pmax
comp=N,7.0nm,0.9s
GTA Gaotai 85.26 314 eP **P 16 14 11.9 +1.3**
GTA pP pP 16 14 33.0 +12
GTA sP sP 16 14 40.7 +16
GTA PP **PP 16 17 32.2 +3.3**
GTA S **SKSac 16 24 35.5 +2.1**
GTA sS sS 16 25 10.7 +15
GTA pmax pmax
comp=Z,4.0nm,1.0s
GTA LR LR
comp=N,63nm,19.0s
GTA LR LR
comp=E,97nm,16.1s
GTA LR LR
comp=Z,79nm,19.0s
SONM Songino Array 85.38 324 P **P 16 14 10.7 -0.3**
SONM Songino Array 85.38 324 P **P 16 14 10.7 -0.3**
comp=Z,3.2nm,1.0s,baz=141,slow=5.4,SNR=17
SONM LR LR 16 50 38.5
comp=Z,61nm,18.0s,baz=275,slow=35
BILL Bilibino 85.74 359 i/P **P 16 14 10.5 -1.7**
BILL e 16 17 28.0
BILL pmax pmax
comp=Z,48nm,1.9s
KCPM Cahto Peak 85.80 46 eP **P 16 14 12.5 -0.8**
comp=Z,8.8nm,0.8s
SAO San Andreas Ge 86.00 49 eP **P 16 14 13.3 -0.9**
SAO pmax pmax
comp=Z,4.0nm,0.8s
SAO San Andreas Ge 86.00 49 eP **P 16 14 13.3 -0.9**
comp=Z,3.9nm,0.8s
KHMM Horse Mountain 86.24 45 eP **P 16 14 15.8 +0.2**
comp=Z,9.3nm,0.9s
CMB Columbia Colle 87.31 49 eP **P 16 14 20.3 -0.3**
CMB pmax pmax
comp=Z,9.0nm,0.9s
CMB Columbia Colle 87.31 49 eP **P 16 14 20.3 -0.3**
comp=Z,8.7nm,0.9s
YBH Yreka Blue Hor 87.31 45 eP **P 16 14 20.0 -0.6**
comp=Z,4.1nm,0.9s
YBH Yreka Blue Hor 87.31 45 LR LR 16 47 07.6
comp=Z,108nm,18.7s,baz=228,slow=31
HUMO Hull Mountain 87.55 44 eP **P 16 14 21.2 -0.4**
comp=Z,4.8nm,0.9s
ISA Isabella 87.72 51 eP **P 16 14 22.1 -0.6**
ISA pmax pmax
comp=Z,5.0nm,0.9s
ISA Isabella 87.72 51 eP **P 16 14 22.1 -0.6**
comp=Z,4.7nm,0.9s
PFO Pinyon Flat Ob 88.44 54 LR LR 16 45 56.7
comp=Z,120nm,18.7s,baz=313,slow=30
ZAK Zakamensk 88.46 325 eP **P 16 14 25.7 -0.2**
ZAK pmax pmax
comp=Z,5.0nm,1.2s
TLY Talaya 88.93 326 eP P 16 14 34.4 +6.4
TLY eS **S 16 25 08.0 -5.7**
TLY pmax pmax
comp=Z,9.0nm,1.4s
TLY MLR MLR
comp=Z,28nm,19.0s
NVAR Mina Array Bea 88.96 49 P **P 16 14 28.3 -0.5**
NVAR Mina Array Bea 88.96 49 P **P 16 14 28.3 -0.5**
comp=Z,3.2nm,0.8s,baz=232,slow=7.4,SNR=28
NV11 Mina Array Sit 89.07 49 eP **P 16 14 28.3 -0.9**
BBB Bella Bella 89.14 34 LR LR 16 47 18.1
comp=Z,64nm,18.7s,baz=200,slow=31
ILAR Eielson Array 89.40 18 P **P 16 14 27.7 -2.2**
ILAR Eielson Array 89.40 18 P **P 16 14 27.7 -2.2**
comp=Z,1.7nm,0.8s,baz=236,slow=5.7,SNR=21
ILAR LR LR 16 52 26.2
comp=Z,74nm,20.1s,baz=230,slow=34
LDFC Landfair 90.03 53 eP **P 16 14 33.6 0.0**
comp=Z,9.7nm,1.0s
WVOR Wild Horse Val 90.35 45 P **P 16 14 34.6 -0.4**
WVOR pmax pmax
comp=Z,3.0nm,0.4s
WVOR Wild Horse Val 90.35 45 P **P 16 14 34.6 -0.4**
comp=Z,2.8nm,0.4s
SNAA Sanae 90.39 183 eP **P 16 14 34.5 -0.2**
SNAA Sanae 90.39 183 eP **P 16 14 34.3 -0.3**
comp=Z,16nm,1.2s
DLBC Dease Lake 91.52 28 LR LR 16 55 18.1
comp=Z,91nm,18.2s,baz=330,slow=35
VNA1 Neumayer--Stat 91.60 181 eP **P 16 14 41.3 +1.1**
ELK Elko 92.04 48 LR LR 16 46 31.6
comp=Z,93nm,21.2s,baz=252,slow=29
WUAZ Wupatki 93.04 54 eP **P 16 14 47.7 0.0**
comp=Z,3.5nm,0.7s
TIXI Tiksi 93.20 348 ceP **P 16 14 45.8 -1.5**
TIXI pmax pmax
comp=Z,4.0nm,0.9s
HLID Hailey 93.65 45 eP **P 16 14 51.1 +0.8**
comp=Z,1.5nm,0.7s
NEW Newport 93.66 40 LR LR 16 48 01.3
comp=Z,31nm,21.4s,baz=79,slow=30
WMQ Urumqi 95.34 314 eP **P 16 14 58.9 +1.0**
WMQ pmax pmax
comp=Z,7.0nm,0.5s
WMQ pmax pmax
comp=Z,100nm,5.5s
WMQ LR LR
comp=N,83nm,25.0s
WMQ LR LR
comp=E,120nm,23.8s
WMQ LR LR
comp=Z,84nm,23.0s
ANMO Albuquerque 96.68 56 LR LR 16 49 52.9
comp=Z,52nm,20.8s,baz=201,slow=30
PDAR Pinedale Array 96.73 47 LR LR 16 53 03.1
comp=Z,43nm,18.7s,baz=12,slow=32
TXAR Lajitas Array 97.33 62 P **P 16 15 07.2 -0.2**
TXAR Lajitas Array 97.33 62 P **P 16 15 07.2 -0.2**
comp=Z,0.9nm,0.8s,baz=232,slow=5.7,SNR=5.4
TXAR LR LR 16 53 42.4
comp=Z,86nm,18.2s,baz=265,slow=32
MKAR Makanchi Array 99.87 316 P **Pdif 16 15 17.4 -0.8**
MKAR pmax pmax
comp=Z,1.0nm,1.0s
MKAR MLR MLR
comp=Z,44nm,18.4s
MKAR Makanchi Array 99.87 316 P **Pdif 16 15 17.4 -0.8**
MKAR Makanchi Array 99.87 316 P **Pdif 16 15 17.4 -0.8**
comp=Z,0.7nm,1.0s,baz=89,slow=5.8,SNR=3.2
MKAR LR LR 16 58 05.1
comp=Z,44nm,18.4s,baz=355,slow=34
YKA Yellowknife Ar 100.14 27 P **Pdif 16 15 18.6 -0.4**
YKA PKiKP **PKiKP 16 19 45.0 -1.4**
YKA Yellowknife Ar 100.14 27 P **Pdif 16 15 18.6 -0.4**
comp=Z,0.8nm,0.8s,baz=252,slow=4.7,SNR=12
YKA PKiKP **PKiKP 16 19 45.0 -1.4**
comp=Z,0.1nm,0.6s,baz=266,slow=3.7,SNR=3.6
ZALV Zalesovo Beam 100.27 323 P **Pdif 16 15 20.3 +0.5**
ZALV pmax pmax
comp=Z,1.0nm,0.7s
ZALV Zalesovo Beam 100.27 323 P **Pdif 16 15 20.3 +0.5**
ZALV Zalesovo Beam 100.27 323 P **Pdif 16 15 20.3 +0.5**
comp=Z,0.7nm,0.7s,baz=99,slow=4.8,SNR=4.6
FRB Frobisher Bay 120.58 25 PKP **PKPdf 16 20 23.6 -1.1**
FRB Frobisher Bay 120.58 25 PKP **PKPdf 16 20 23.6 -1.1**
comp=Z,3.1nm,0.9s,baz=359,slow=4.8,SNR=3.2
ARCES ARCESS Array B 123.47 345 PKP **PKPdf 16 20 29.5 -0.7**
ARCES ARCESS Array B 123.47 345 PKP **PKPdf 16 20 29.5 -0.7**
comp=Z,4.3nm,0.8s,baz=70,slow=3.0,SNR=11
KLMR Klimovskoe 123.77 332 ePKiKP **PKPdf 16 20 28.8 -2.1**
KLMR pmax pmax
comp=Z,21nm,2.0s
KBZ Khabaz 127.30 312 PKiKP **PKPdf 16 20 38.6 +0.4**
KBZ pmax pmax
comp=Z,1.0nm,0.7s
KBZ Khabaz 127.30 312 PKP **PKPdf 16 20 38.6 +0.4**
KBZ Khabaz 127.30 312 PKP **PKPdf 16 20 38.6 +0.4**
comp=Z,1.1nm,0.7s,baz=90,slow=2.0,SNR=4.5
OBN Obninsk 127.68 327 ePKiKP **PKPdf 16 20 40.2 +1.6**
OBN pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 128.88 338 PKP **PKPdf 16 20 40.6 -0.1**
FINES FINESS Array B 128.88 338 PKP **PKPdf 16 20 40.6 -0.1**
comp=Z,2.9nm,0.9s,baz=29,slow=3.2,SNR=5.0
AKASG Malin Array Be 133.66 324 PKiKP **PKPdf 16 20 49.9 -0.2**
AKASG Malin Array Be 133.66 324 PKP **PKPdf 16 20 49.9 -0.2**
AKASG Malin Array Be 133.66 324 PKP **PKPdf 16 20 49.9 -0.2**
comp=Z,0.3nm,0.3s,baz=44,slow=2.8,SNR=3.5
AK01 Malin Array Si 133.67 324 ePKPdf **PKPdf 16 20 49.8 -0.3**
NB2 NORSAR Subarra 133.84 344 PKPdf **PKPdf 16 20 49.8 -0.4**
comp=Z,1.2nm,0.7s,baz=31,slow=1.9
NOA NORSAR Array B 133.84 344 PKP **PKPdf 16 20 50.6 +0.4**
NOA NORSAR Array B 133.84 344 PKP **PKPdf 16 20 50.6 +0.4**
comp=Z,1.8nm,0.8s,baz=36,slow=2.3,SNR=4.8
BRTR Keskin Array B 134.95 309 PKP **PKPdf 16 20 54.0 +0.9**
BRTR Keskin Array B 134.95 309 PKP **PKPdf 16 20 54.0 +0.9**
comp=Z,0.4nm,0.5s,baz=188,slow=2.5,SNR=4.1
KOLS Kolonicke sedl 138.40 326 ePKiKP PKPdf 16 21 07.0 +8.0
KOLS Kolonicke sedl 138.40 326 ePKP PKPdf 16 21 07.0 +8.0
CRVS Cervenica-Dubn 138.85 326 ePKiKP PKPdf 16 21 06.2 +6.4
CRVS Cervenica-Dubn 138.85 326 ePKP PKPdf 16 21 06.2 +6.4
OKC Ostrava-Krasne 139.94 329 epPKP pPKPdf 16 21 15.0 +2.7
DPC Dobruska-Polom 140.45 331 epPKP pPKPdf 16 21 18.9 +5.6
PVCC Panska Ves 141.10 333 epPKP pPKPdf 16 21 16.0 +1.6
BRG Berggiesshubel 141.11 334 ePKP PKPdf 16 21 14.7 +11
comp=Z,4.3nm,0.8s
CLL Collm 141.18 335 ePKiKP **PKPdf 16 21 05.0 +1.1**
CLL e 16 21 11.0
CLL i 16 21 16.0
CLL pmax pmax
comp=Z,4.0nm,0.7s
CLL Collm 141.18 335 ePKPdf **PKPdf 16 21 05.0 +1.1**
comp=Z,4.0nm,0.7s
CLL e 16 21 11.0
CLL i 16 21 16.0
PRU Pruhonice 141.51 332 ePKiKP PKPdf 16 21 14.1 +10
PRU Pruhonice 141.51 332 epPKP PKPdf 16 21 14.1 +10
PRU ex x 16 21 16.8
NKC Novy Kostel 142.22 334 ePKiKP **PKPdf 16 21 09.3 +3.4**
NKC Novy Kostel 142.22 334 ePKP **PKPdf 16 21 09.3 +3.4**
KHC Kasperske Hory 142.56 332 epPKP pPKPdf 16 21 18.9 +1.8
GERES GERESS Array B 142.72 332 PKP **PKPdf 16 21 04.3 -2.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GERES	GERESS Array B	142.72	332	PKP	PKPdf	16 21 04.3	-2.6
	comp=Z,0.6nm,0.7s,baz=28,slow=3.2,SNR=6.3						
GRF	Grafenberg Arr	143.15	335	ePKPbc	PKPbc	16 21 04.0	-0.5
GRF	Grafenberg Arr	143.15	335	ePKIKP	PKPbc	16 21 04.0	-0.5
TNS	Taunus Mts	143.80	337	ePKPbc	PKPab	16 21 05.7	0.0
TNS	Taunus Mts	143.80	337	ePKIKP	PKPab	16 21 05.7	0.0
RJOB	Jochberg	143.94	331	ePKPbc	PKPbc	16 21 07.0	+0.1
RJOB				esPKPbc		16 21 17.0	
KBA	Koelnbreinsper	144.16	330	⇑iPKPdf	PKPab	16 21 07.3	0.0
	comp=Z,9.6nm,1.1s						
BEBN	Eben Emael	144.26	341	PKP	PKPbc	16 21 08.1	+0.5
FUR	Furstenfeldbru	144.30	333	esPKPbc	PKPdf	16 21 18.2	+8.6
FUR	Furstenfeldbru	144.30	333	ePKIKP	PKPdf	16 21 18.2	+8.6
MEM	Membach	144.31	340	PKP	PKPbc	16 21 08.1	+0.2
STU	Stuttgart	144.69	335	ePKPbc	PKPbc	16 21 09.3	+0.2
STU				epPKPbc	PKiKP	16 21 17.0	+3.0
STU				esPKPbc		16 21 19.3	
BCLA	Clavier	144.70	341	PKP	PKPab	16 21 08.7	-0.2
ABTA	Abfaltersbach	144.79	330	⇑iPKPab	PKPab	16 21 08.8	-0.8
	comp=Z,18nm,0.8s						
WTTA	Wattenberg	144.82	331	⇑iPKPdf	PKPab	16 21 09.5	-0.2
	comp=Z,16nm,1.7s						
MOTA	Moosalm	145.00	332	⇑iPKPdf	PKPbc	16 21 10.0	-0.4
	comp=Z,16nm,0.7s,SNR=12						
LANF	Langenberg	145.06	337	PKP	PKPdf	16 21 10.5	-0.4
WLF	Walferdange	145.07	339	PKP	PKPdf	16 21 11.0	+0.2
WLF	Walferdange	145.07	339	ePKPbc	PKPdf	16 21 11.1	+0.2
WLF				epPKPbc	pPKPbc	16 21 18.5	-2.5
WLF				esPKPbc	sPKPbc	16 21 20.8	-3.8
WLF	Walferdange	145.07	339	ePKIKP	PKPbc	16 21 09.6	-0.7
WLF	Walferdange	145.07	339	ePKP	PKPbc	16 21 09.6	-0.7
DOU	Dourbes	145.21	341	PKP	PKPdf	16 21 10.8	-0.3
OBER	Oberstdorf	145.31	333	ePKPbc	PKPab	16 21 11.2	-0.2
OBER				epPKPbc	pPKPbc	16 21 18.9	-2.9
OBER				esPKPbc	sPKPbc	16 21 21.2	-4.3
BFO	Black Forest	145.39	336	ePKPbc	PKPab	16 21 11.6	0.0
BFO				epPKPbc	pPKPbc	16 21 19.1	-2.9
BFO				esPKPbc	sPKPbc	16 21 21.4	-4.2
BFO	Black Forest	145.39	336	ePKIKP	PKPab	16 21 11.6	0.0
BFO				e		16 21 19.1	
BFO				e		16 21 21.4	
BFO	Black Forest	145.39	336	ePKP	PKPbc	16 21 11.1	-0.4
FETA	Feichten	145.41	332	i PKPdf	PKPab	16 21 11.8	-0.1
	comp=Z,27nm,0.8s,SNR=27						
MENF	Mencas	145.50	344	PKP	PKPab	16 21 11.7	-0.1
DAVA	Damuels	145.58	333	⇑iPKPab	PKPab	16 21 12.3	-0.2
	comp=Z,25nm,0.8s,SNR=8.3						
ECH	Echery	145.93	337	PKP	PKPbc	16 21 12.7	-0.4
VAL	Valentia	146.04	358	⇓iP	PKPab	16 21 14.1	+0.3
MOF	Molkenrain	146.24	336	PKP	PKPbc	16 21 13.6	-0.6
THEF	They Montfort	146.35	338	PKP	PKPab	16 21 14.7	-0.5
TUE	Stuetta	146.44	333	ePKPbc	PKPab	16 21 15.4	-0.5
LOMF	Lomont	146.77	336	PKP	PKPbc	16 21 16.0	+0.3
OG35	Corcelles	148.34	336	PKP	PKPbc	16 21 20.1	+0.1
BNI	Bardonecchia	148.71	334	ePKP2	PKPbc	16 21 20.9	-0.2
BNI	Bardonecchia	148.71	334	ePKPbc	PKPbc	16 21 20.9	-0.2
SAOF	Saorge	149.17	332	PKP	PKPbc	16 21 21.8	-0.4
AGO	Saint Agoulin	149.22	339	PKP	PKPbc	16 21 22.2	0.0
TOUF	Mont Tournerai	149.28	332	PKP	PKPbc	16 21 22.5	-0.2
PYM	Petit Puy Mans	149.53	339	PKP	PKPbc	16 21 23.5	+0.4
CALN	Calern	149.65	332	PKP	PKPbc	16 21 23.4	-0.1
VERF	Verneugheol	149.70	339	PKP	PKPbc	16 21 24.7	+1.2
LBL	Lubilhac	149.89	338	PKP	PKPbc	16 21 24.4	+0.4
LEPF	PUYLOUBIER	150.35	333	PKP	PKPdf	16 21 21.0	+1.2
MLS	Moulis	152.63	338	PKP	PKPbc	16 21 30.1	-0.2
LARF	Larrau	153.24	342	PKP	PKPbc	16 21 32.2	+0.5
KEST	Kesra	153.96	317	PKPbc	PKPbc	16 21 33.8	+0.3
KEST	Kesra	153.96	317	PKPbc	PKPbc	16 21 33.8	+0.3
	comp=Z,1.0nm,0.8s,baz=34,slow=3.6,SNR=3.1						
PBRG	Braganca	155.76	350	ePKPab	PKPab	16 21 54.2	0.0
POLO	Lamas de Olo	156.34	352	ePKPab	PKPab	16 21 56.1	-0.7
PVRL	Vila Real	156.43	352	ePKPab	PKPab	16 21 57.5	+0.4
MVO	Moncorvo	156.43	350	ePKPab	PKPab	16 21 57.4	+0.3
PVIS	Viseu	157.00	352	ePKPab	PKPab	16 21 59.6	0.0
ESDC	Sonseca Array	157.20	343	PKPab	PKPab	16 21 59.8	-0.7
ESDC	Sonseca Array	157.20	343	PKPab	PKPab	16 21 59.8	-0.7
	comp=Z,0.3nm,0.3s,baz=11,slow=4.1,SNR=6.5						
MTE	Manteigas	157.26	351	ePKPab	PKPab	16 22 01.0	+0.3
PESTR	Estremoz	158.77	350	ePKPab	PKPab	16 22 07.5	+0.3
PBAR	Barrancos	159.34	348	ePKPab	PKPab	16 22 09.9	+0.2
PBEJ	Beja	159.63	350	ePKPab	PKPab	16 22 11.6	+0.7
PCVE	Castro Verde	160.05	350	ePKPab	PKPab	16 22 13.5	+0.8
TORD	Torodi Ar. Bea	165.81	252	PKP	PKPdf	16 21 39.0	-0.4
TORD				PKPab	PKPab	16 22 38.8	-0.1
TORD	Torodi Ar. Bea	165.81	252	PKP	PKPdf	16 21 39.0	-0.4
	comp=Z,1.9nm,0.9s,baz=158,slow=1.6,SNR=9.2						
TORD				PKPab	PKPab	16 22 38.7	-0.1
	comp=Z,0.7nm,0.8s,baz=105,slow=4.4,SNR=2.1						

JMA 02 16:34:42.3±0.2, 27°.76N×140°.36E, h490km, M3.3
IDC 02 16:34:42.8±3.0, 27°.64N×140°.04E, h493km±41km, mb2.8/5, mb1 2.9/6, mb1mx2.6/24, mbtmp2.8/6, Error ellipse: s-maj=78.6km s-min=15.7km az=76.0
ISC 02 16:34:42.0±0.9, 27°.7N±0°.1×140°.2E±0°.2, h479km, n19, σ1^{s}82/21, mb3.1/5, Bonin Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.91	108	P	P	16 35 45.6	+0.9
CBIJ				S	S	16 36 35.1	-0.5
JHHJ	Haha-jima-NKT	2.11	120	P	P	16 35 47.0	+1.3
JHHJ				eS	S	16 36 38.2	+0.8
JHCJ	Hachijojimakas	5.35	357	P	P	16 36 13.4	+2.5
JHJ2	Mitsune	5.38	357	P	P	16 36 12.7	+1.4
BSO1	Boso 1	6.95	6	P	P	16 36 28.7	+2.5
JIE	Ise	7.28	337	P	P	16 36 33.5	+3.3
JOD2	Odawara 2	7.58	353	P	P	16 36 35.4	+2.1
JNY	Yasuok	7.87	346	P	P	16 36 38.3	+1.9
JTO	Tosashimizu	8.16	311	P	P	16 36 41.4	+1.9
JRY	Ryogami san	8.34	353	P	P	16 36 42.9	+1.5
JWT	Wachi	8.56	333	P	P	16 36 46.3	+2.6
JAG	Ashikaga	8.70	356	P	P	16 36 45.7	+0.6
JAG				eS	S	16 38 23.3	-3.1
MJAR	Matsushiro Arr	8.95	350	P	P	16 36 49.5	+1.6
	0.6nm,0.3s,baz=167,slow=9.8,SNR=7.5						
JMK	Ichinoseki	11.24	4	P	P	16 37 14.4	+2.1
WRA	Warramunga Arr	47.71	187	P	P	16 42 33.1	-1.3
	0.2nm,0.6s,baz=8.9,slow=8.2,SNR=9.6						
ZALV	Zalesovo Beam	47.84	319	P	P	16 42 33.7	-1.2
	0.4nm,0.3s,baz=99,slow=9.0,SNR=3.6						
MKAR	Makanchi Array	48.69	309	P	P	16 42 41.3	-0.2
	0.3nm,0.4s,baz=95,slow=9.0,SNR=9.8						
ASAR	Alice Springs	51.44	187	P	P	16 43 01.2	-0.8
	0.5nm,0.7s,baz=358,slow=5.3,SNR=6.1						
FINES	FINESS Array B	76.59	333	P	P	16 45 41.9	-0.2
	4.7nm,1.0s,baz=53,slow=5.6,SNR=9.1						

CSEM 02 16:39:25.2, 39°.43N×29°.73W, h10km, ML3.2, After PDA
PDA 02 16:39:25.2±0.4, 39°.43N×29°.73W, h10km, MD3.5, ML3.2, Error ellipse: s-maj=7.0km s-min=3.0km az=50.0, Azores Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCED	Cedros	1.13	135	eS	Sb	16 39 55.2	-6.5
PCED				A	A	16 39 58.0	
	182nm,0.3s						
PCED	Cedros	1.13	135	eS	Sb	16 39 55.2	-6.5
CALA	Caldeira	1.17	136	eP	Pb	16 39 43.0	-4.6
CALA				eS	Sb	16 39 56.3	-6.6
CALA	Caldeira	1.17	136	eP	Pb	16 39 43.0	-4.6
CALA				eS	Sb	16 39 56.3	-6.6
HOR	Horta	1.25	136	eP	Pn	16 39 44.0	-4.7
HOR				eS	Sb	16 39 57.9	-7.0
HOR	Horta	1.25	136	eP	Pn	16 39 44.0	-4.7
HOR				eS	Sb	16 39 57.9	-7.0
ROSA	Rosais	1.36	121	eP	Pn	16 39 45.5	-4.8
ROSA				eS	Sb	16 40 00.9	-7.3
ROSA				A	A	16 40 03.9	
	109nm,0.3s						
ROSA	Rosais	1.36	121	eP	Pn	16 39 45.5	-4.8
ROSA				eS	Sb	16 40 00.9	-7.3
PCAN	Candelaria	1.37	135	eP	Pn	16 39 45.6	-4.8
PCAN				eS	Sb	16 40 01.3	-7.3
PCAN				A	A	16 40 03.7	
	271nm,0.2s						
PCAN	Candelaria	1.37	135	eP	Pn	16 39 45.6	-4.8
PCAN				eS	Sb	16 40 01.3	-7.3
PICO	Pico	1.38	132	eP	Pn	16 39 45.9	-4.7
PICO				eS	Sb	16 40 01.5	-7.4
PICO	Pico	1.38	132	eP	Pn	16 39 45.9	-4.7
PICO				eS	Sb	16 40 01.5	-7.4
PMAN	Manadas	1.51	121	eS	Sn	16 40 04.3	-7.7
PMAN				A	A	16 40 07.4	
	60nm,0.4s						
PMAN	Manadas	1.51	121	eS	Sn	16 40 04.3	-7.7

IDC 02 16:39:33.6±1.1, 31°.40S×177°.49W, h0km, mb4.1/4, mb1 4.4/6, mb1mx4.0/20, mbtmp4.2/6, ML4.0/2, Error ellipse: s-maj=31.8km s-min=22.5km az=114.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.17	350	Pn	Pn	16 40 10.4	-0.7
	110nm,0.3s,baz=107,slow=21,SNR=4.7						
RAO				Sn	Sn	16 40 39.2	+0.5
	112nm,0.3s,baz=238,slow=24,SNR=2.0						
URZ	Urewera	8.15	211	Pn	Pn	16 41 31.1	-2.1
	0.9nm,0.3s,baz=27,slow=12,SNR=9.3						
URZ				Sn	Sn	16 42 59.8	-6.3
	4.2nm,0.3s,baz=154,slow=15,SNR=10						
STKA	Stephens Creek	34.69	258	P	P	16 46 26.3	+1.1
	2.3nm,0.8s,baz=94,slow=11,SNR=7.2						
ASAR	Alice Springs	43.50	268	P	P	16 47 38.9	-0.2
	2.7nm,0.8s,baz=103,slow=7.6,SNR=30						
WRA	Warramunga Arr	44.58	273	P	P	16 47 47.4	-0.3
	4.4nm,0.7s,baz=112,slow=7.9,SNR=30						
NVAR	Mina Array Bea	88.68	42	P	P	16 52 29.4	+0.4
	0.5nm,0.8s,baz=238,slow=6.9,SNR=3.3						
KBZ	Khabaz	146.03	303	PKPbc	PKPbc	16 59 14.9	-0.3
	1.3nm,0.8s,baz=90,slow=2.0,SNR=3.3						
FINES	FINESS Array B	146.23	340	PKPbc	PKPbc	16 59 14.7	-0.5
	4.5nm,0.7s,baz=48,slow=2.1,SNR=14						
AKASG	Malin Array Be	152.36	322	PKPbc	PKPbc	16 59 30.6	-0.5
	1.0nm,0.5s,baz=41,slow=2.8,SNR=5.2						
AKASG				PKPab	PKPab	16 59 40.3	-0.9
	1.2nm,0.6s,baz=51,slow=4.5,SNR=4.8						
BRTR	Keskin Array B	153.45	297	PKPab	PKPab	16 59 45.7	-0.8
	1.2nm,0.9s,baz=97,slow=2.9,SNR=4.6						
TORD	Torodi Ar. Bea	161.82	177	PKPab	PKPab	17 00 22.3	-0.3
	0.3nm,0.8s,baz=211,slow=3.1,SNR=3.0						

IDC 02 16:55:37.7±6.6, 4°.86S×153°.31E, h57km±54km, mb3.5/8, mb1 3.7/9, mb1mx3.5/20, mbtmp3.6/9, ML2.7/1, MS3.4/2, Ms1 3.3/2, ms1mx2.8/15, Error ellipse: s-maj=58.5km s-min=28.3km az=110.0, New Ireland region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.59	233	P	Pn	16 57 26.5	+0.7
	0.7nm,0.3s,baz=51,slow=13,SNR=3.6						
PMG				S	Sn	16 58 46.0	-4.6
	0.8nm,0.3s,baz=217,slow=20,SNR=3.6						
WRA	Warramunga Arr	23.79	229	P	P	17 00 45.4	0.0
	1.3nm,0.5s,baz=52,slow=9.9,SNR=16						
ASAR	Alice Springs	26.45	223	P	P	17 01 10.4	+0.9
	0.4nm,0.5s,baz=57,slow=8.6,SNR=15						
STKA	Stephens Creek	29.03	201	LR	LR	17 13 11.6	
	comp=Z,88nm,19.0s,baz=205,slow=36						
FITZ	Fitzroy Crossi	30.08	242	P	P	17 01 40.4	-1.6
	2.8nm,0.6s,baz=66,slow=8.9,SNR=13						
MJAR	Matsushiro Arr	43.55	342	LR	LR	17 18 57.8	
	comp=Z,31nm,18.4s,baz=245,slow=32						
CMAR	Chiang Mai Arr	58.37	295	P	P	17 05 27.6	-0.1
	0.9nm,0.7s,baz=120,slow=5.4,SNR=6.2						
SONM	Songino Array	66.65	328	P	P	17 06 23.1	+0.5
	0.3nm,0.5s,baz=145,slow=5.5,SNR=4.3						
MKAR	Makanchi Array	80.71	319	P	P	17 07 45.1	+0.2
	0.5nm,0.5s,baz=110,slow=6.3,SNR=5.5						
ZALV	Zalesovo Beam	81.49	326	P	P	17 07 49.0	+0.2
	0.6nm,0.4s,baz=112,slow=5.1,SNR=5.2						
ILAR	Eielson Array	82.03	22	P	P	17 07 50.6	-0.8
	0.3nm,0.8s,baz=232,slow=4.4,SNR=3.8						
TORD	Torodi Ar. Bea	150.81	288	PKPbc	PKPbc	17 15 24.9	+0.1
	2.1nm,0.6s,baz=75,slow=2.3,SNR=20						

NEIC 02 17:04:40.1, 40°.45N×125°.82W, h8km, MW3.5(BRK), After NCEDC., Off coast of northern California

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHMM	Horse Mountain	1.65	74	ePn	Pn	17 05 07.3	-2.2
KCPM	Cahto Peak	1.88	113	ePn	Pn	17 05 10.2	-2.5
KIPM	Iron Peak	1.90	109	ePn	Pn	17 05 10.9	-2.2
KIPM				eSn	Sn	17 05 32.8	-4.5
WDC	Whiskeytown Da	2.50	86	ePn	Pn	17 05 19.8	-1.4
WDC				eSn	Sn	17 05 49.4	-2.5
YBH	Yreka Blue Hor	2.68	60	ePn	Pn	17 05 23.4	-0.2
YBH				eSn	Sn	17 05 52.8	-3.6
HUMO	Hull Mountain	3.05	44	ePn	Pn	17 05 27.9	-0.7
HUMO				eSn	Sn	17 06 05.8	+0.4
BEKR	Beckworth	4.23	96	ePn	Pn	17 05 44.6	-0.4

SOF 02 17:55:22.9, 41°.28N×22°.70E, h13km, MD2.6
THE 02 17:55:23.9, 41°.30N×22°.71E, h6km, ML2.6/9, Error ellipse: s-maj=1.1km s-min=0.5km az=204.0
ISCJB 02 17:55:23.6±0.3, 41°.26N±0°.02×22°.70E±0°.02, h6km±3km, Error ellipse: s-maj=3.0km s-min=2.6km az=136.4
SKO 02 17:55:23.3, 41°.29N×22°.67E, h15km, M1.8, ML2.2
ATH 02 17:55:23.0, 41°.31N×22°.68E, h23km±2km, MD3.1/9
CSEM 02 17:55:24.0±0.1, 41°.26N×22°.69E, h5km, ML2.2, Error ellipse: s-maj=3.3km s-min=3.0km az=29.0
BEO 02 17:55:25.8±0.7, 41°.29N×22°.67E, h0km, ML2.2/7
ISC 02 17:55:23.8±0.8, 41°.29N±0°.02×22°.69E±0°.02, h8km±5km, n72, σ0^{s}76/112, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.10	291	P	Pg	17 55 25.8	-0.3
VAY				S	Sg	17 55 28.0	+0.2
VAY	Valandovo	0.10	291	i Pg	Pg	17 55 26.0	-0.1
VAY				i Sg	Sg	17 55 28.1	+0.3
VAY				i Lg	Lg	17 55 28.2	
	comp=E,3μm,0.2s						
VAY				i Lg	Lg	17 55 28.2	
	comp=N,2μm,0.2s						
VAY	Valandovo	0.10	291	P	Pg	17 55 25.8	-0.3
VAY	Valandovo	0.10	291	i Pg	Pg	17 55 26.5	+0.4
VAY				S	Sg	17 55 28.0	+0.2
VAY				i Lg	Lg	17 55 28.7	
	comp=N,2μm,0.2s						
KNT	Kendrikon	0.20	128	P	Pg	17 55 28.5	+0.6
KNT				S	Sg	17 55 31.2	+0.6
KNT	Kendrikon	0.20	128	P	Pg	17 55 28.5	+0.6
KNT				S	Sg	17 55 31.2	+0.6
GRG	Griva	0.39	214	P	Pg	17 55 31.8	+0.3
GRG				S	Sg	17 55 37.5	+0.8
GRG	Griva	0.39	214	ePB	Pg	17 55 31.9	+0.4
GRG				eSB	Sg	17 55 37.9	+1.2
GRG	Griva	0.39	214	P	Pg	17 55 31.8	+0.3
GRG				S	Sg	17 55 37.5	+0.8
KKB	Krupnik	0.65	27	i Pg	Pg	17 55 36.0	-0.3
KKB	Krupnik	0.65	27	i Pg	Pg	17 55 36.0	-0.3
SOH	Sokhos	0.68	132	P	Pg	17 55 36.9	0.0
SOH				S	Sg	17 55 46.4	+0.6
SOH	Sokhos	0.68	132	ePN	Pg	17 55 37.1	+0.2
SOH				eSN	Sg	17 55 46.5	+0.6
SOH	Sokhos	0.68	132	P	Pg	17 55 36.9	0.0
SOH				S	Sg	17 55 46.4	+0.6
THE	Thessaloniki	0.69	162	P	Pg	17 55 37.1	+0.1
THE				S	Sb	17 55 47.1	-0.4
THE	Thessaloniki	0.69	162	P	Pg	17 55 37.1	+0.1
THE				S	Sb	17 55 47.1	-0.4
SRS	Serrai	0.70	104	P	Pg	17 55 37.1	-0.2
SRS				S	Sg	17 55 46.8	+0.4
SRS	Serrai	0.70	104	P	Pg	17 55 37.1	-0.2
SRS				S	Sg	17 55 46.8	+0.4
HORT	Hortiatis	0.75	156	P	Pg	17 55 38.4	+0.1
HORT				S	Sb	17 55 49.0	-0.6
HORT	Hortiatis	0.75	156	P	Pg	17 55 38.4	+0.1
HORT				S	Sb	17 55 49.0	-0.6
MMB	Musomiste	0.84	68	i Pg	Pg	17 55 39.7	-0.2
MMB	Musomiste	0.84	68	i Pg	Pg	17 55 39.7	-0.2
NVR	Nevrokopi	0.89	85	P	Pg	17 55 40.5	-0.3
NVR				S	Sg	17 55 52.5	+0.2
NVR	Nevrokopi	0.89	85	ePN	Pg	17 55 40.6	-0.3
NVR				eSN	Sg	17 55 52.6	+0.2
NVR	Nevrokopi	0.89	85	P	Pg	17 55 40.5	-0.3
NVR				S	Sg	17 55 52.5	+0.2
BIA	Bitola	1.06	256	ePg	Pb	17 55 42.7	-1.7
BIA	Bitola	1.06	256	ePg	Pb	17 55 42.7	-1.7
PLG	Polygyros	1.08	148	P	Pb	17 55 44.2	-0.4
PLG				S	Sn	17 56 00.0	-0.2
PLG	Polygyros	1.08	148	ePN	Pb	17 55 44.6	0.0
PLG				eSN	Sg	17 55 59.4	+1.0
PLG	Polygyros	1.08	148	P	Pb	17 55 44.2	-0.4
PLG				S	Sn	17 56 00.0	-0.2
FNA	Florina	1.11	244	P	Pb	17 55 44.6	-0.7
FNA	Florina	1.11	244	ePN	Pb	17 55 45.0	-0.3
FNA				eSN	Sb	17 55 59.8	-0.1
FNA	Florina	1.11	244	P	Pb	17 55 44.6	-0.7
SKO	Skopje	1.16	307	ePg	Pg	17 55 46.9	+0.8
SKO				eSg	Sn	17 56 02.6	+0.3
SKO	Skopje	1.16	307	ePn	Pg	17 55 46.5	+0.4
SKO				eLg	Lg	17 56 02.6	
	comp=E,18nm,0.4s						
SKO				eSg	Sn	17 56 02.8	+0.5
SKO				eLg	Lg	17 56 07.2	
	comp=N,54nm,1.0s						
SKO	Skopje	1.16	307	ePg	Pg	17 55 46.9	+0.8
SKO				eSg	Sg	17 56 01.3	+0.2
SKO				eLg	Lg	17 56 01.7	
	comp=N,54nm,1.0s						
KZN	Kozani	1.20	216	P	Pn	17 55 46.4	-0.5
KZN	Kozani	1.20	216	ePN	Pn	17 55 45.8	-1.1
KZN	Kozani	1.20	216	P	Pn	17 55 46.4	-0.5
VTS	Vitosha	1.36	16	P	Pn	17 55 49.1	-0.1
VTS				S	Sn	17 56 06.9	-0.6
VTS	Vitosha	1.36	16	P	Pb	17 55 49.3	-0.3
VTS	Vitosha	1.36	16	ePg	Pb	17 55 49.4	-0.2
VTS				eSg	Sg	17 56 08.7	+1.1
VTS	Vitosha	1.36	16	P	Pb	17 55 49.3	-0.3
VTS				S	Sn	17 56 06.9	-0.6
VTS				eSg	Sg	17 56 08.7	+1.1
KAVA	Kavala	1.41	101	P	Pn	17 55 49.3	-0.3
KAVA				S	Sb	17 56 08.4	+0.1
KAVA	Kavala	1.41	101	P	Pn	17 55 49.3	-0.3
KAVA				S	Sb	17 56 08.4	+0.1
NEST	Nestorio	1.52	236	P	Pn	17 55 51.4	+0.1
NEST	Nestorio	1.52	236	P	Pn	17 55 51.4	+0.1
RZN	Rozhen	1.57	75	P	Pb	17 55 52.8	-0.4
RZN				Pg	Pg	17 55 54.0	0.0
RZN	Rozhen	1.57	75	P	Pb	17 55 52.8	-0.4
BARS	Barje	1.66	337	ePn	Pb	17 55 53.9	-0.7
BARS				eSn	Sg	17 56 18.1	+0.9
BARS	Barje	1.66	337	ePn	Pb	17 55 53.9	-0.7
BARS				eSn	Sg	17 56 18.1	+0.9
PGB	Panagyurishte	1.68	41	P	Pb	17 55 55.1	+0.2
PGB	Panagyurishte	1.68	41	P	Pb	17 55 55.1	+0.2
PLD	Plovdiv	1.72	61	ePn	Pg	17 55 57.5	+0.8
THL	Klokotos Trika	1.79	197	ePN	Pn	17 55 55.7	+0.7
ZAPS	Zavoj	1.99	359	ePn	Pg	17 56 01.1	-0.8
ZAPS				eSn	Sb	17 56 25.9	+0.8
KDZ	Kurdzhali	2.08	79	P	Pb	17 56 01.6	-0.1
KDZ	Kurdzhali	2.08	79	P	Pb	17 56 01.6	-0.1
RDO	Rodhopi	2.15	93	P	Pn	17 55 59.5	-0.4
RDO				S	Sn	17 56 27.1	+0.4
RDO	Rodhopi	2.15	93	ePN	Pn	17 55 58.8	-1.1
RDO	Rodhopi	2.15	93	P	Pn	17 55 59.5	-0.4
RDO				S	Sn	17 56 27.1	+0.4
MPEP	Malo Peshtene	2.21	20	P	Pg	17 56 05.4	-0.7
AGG	Agios Georgios	2.28	187	ePB	Pn	17 56 02.3	+0.7
AOS	Alonnisos	2.30	156	ePN	Pn	17 56 01.2	-0.7
SMTH	Samothraki Isl	2.30	110	ePN	Pn	17 56 01.5	-0.5
ALN	Alexandroupoli	2.57	98	P	Pn	17 56 05.8	+0.2
ALN	Alexandroupoli	2.57	98	ePN	Pn	17 56 05.5	-0.1
ALN	Alexandroupoli	2.57	98	P	Pn	17 56 05.8	+0.2
BOLS	Boljevac	2.60	348	ePn	Pb	17 56 10.0	-0.6
GRUS	Gruza	2.98	331	ePn	Pb	17 56 15.0	-2.1
GRUS				eSn	Sb	17 56 50.9	-2.7
DIVS	Divibare	3.44	326	ePn	Pn	17 56 20.6	+2.9
DIVS	Divibare	3.44	326	ePn	Pn	17 56 20.6	+2.9

NEIC 02 18:08:07.3±0.7, 23°.37S×67°.96W, h107km±6km, mb4.2/13, Error ellipse: s-maj=11.3km s-min=7.4km az=93.0
ISCJB 02 18:08:08.2±0.4, 23°.23S±0°.06×67°.93W±0°.07, h125km, mb4.1/17, Error ellipse: s-maj=8.6km s-min=7.8km az=164.3
IDC 02 18:08:13.1±2.6, 22°.97S×67°.85W, h147km±22km, mb3.9/9, mb1 3.9/13, mb1mx3.8/20, mbtmp3.8/13, Error ellipse: s-maj=22.8km s-min=16.2km az=37.0
ISC 02 18:08:08.9±0.4, 23°.36S±0°.05×67°.92W±0°.08, h125km, n195, σ0^{s}99/196, mb4.1/17, 61C-84D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.18	309	ePn	Pn	18 08 31.3	-2.1
LVC				eSn	Sn	18 08 48.5	-3.5
LCO	Las Campanas	6.16	203	ePn	Pn	18 09 33.5	-4.3
	28nm,0.6s						
LPAZ	La Paz	7.04	358	ePn	Pn	18 09 49.0	-0.9
	4.5nm,0.7s						
LPAZ				eSn	Sn	18 10 49.4	-20
LPAZ				S		18 10 51.6	
LPAZ	La Paz	7.04	358	P	Pn	18 09 49.9	-0.1
	1.0nm,0.3s,baz=191,slow=4.1,SNR=12						
LPAZ				S	Sn	18 10 51.6	-18
	0.3nm,0.3s,baz=195,slow=8.5,SNR=5.4						
CFAA	Coronel Fontan	8.22	182	P	Pn	18 10 03.8	-1.5
CFAA				S	Sn	18 11 32.2	-4.4
CFAA	Coronel Fontan	8.22	182	P	Pn	18 10 03.8	-1.5
	0.1nm,0.3s,baz=3.3,slow=16,SNR=9.6						
CFAA				S	Sn	18 11 32.2	-4.4
	0.2nm,0.3s,baz=270,slow=22,SNR=4.2						
SIV	San Ignacio	9.76	43	P	Pn	18 10 24.5	-1.6
SIV				S	Sn	18 12 10.6	-3.3
SIV	San Ignacio	9.76	43	P	Pn	18 10 24.5	-1.6
	5.4nm,0.3s,baz=262,slow=8.9,SNR=48						
SIV				S	Sn	18 12 10.6	-3.3
	1.1nm,0.3s,baz=316,slow=23,SNR=5.6						
CPUP	Villa Florida	10.06	109	P	Pn	18 10 34.6	+4.5
CPUP	Villa Florida	10.06	109	P	Pn	18 10 34.6	+4.5
	0.7nm,0.3s,baz=266,slow=15,SNR=5.5						
SAML	Samuel	15.03	18	ePn	Pn	18 11 34.2	-0.7
TRQA	Tornquist	15.51	162	ePn	P	18 11 43.5	+1.1
PLCA	Paso Flores	17.47	187	P	Pn	18 12 05.8	+1.1
	1.1nm,0.7s						
PLCA	Paso Flores	17.47	187	P	Pn	18 12 12.8	+8.1
	0.2nm,0.3s,baz=16,slow=4.6,SNR=3.9						
BDFB	Brasilia	20.25	71	P	P	18 12 35.1	+0.5
BDFB	Brasilia	20.25	71	P	P	18 12 35.1	+0.5
	16nm,0.9s,baz=231,slow=12,SNR=12						
KMSC	Kings Mountain	59.55	347	⇓P	P	18 17 58.8	-0.4
	baz=60						
SNAA	Sanae	60.23	161	eP	P	18 18 04.9	+1.4
	1.4nm,0.9s						
632A	Uvalde	60.85	328	⇓P	P	18 18 07.6	-0.5
	baz=61						
631A	Perdido Creek	61.15	327	⇓P	P	18 18 10.0	-0.2
	baz=61						
532A	Rocksprings	61.42	328	⇓P	P	18 18 11.8	-0.2
	baz=62						
531A	Rocksprings	61.76	328	⇓P	P	18 18 13.9	-0.4
	baz=62						
432A	Menard	61.99	329	⇓P	P	18 18 15.4	-0.4
	baz=62						
530A	J-C Ranch, Com	62.13	327	⇑P	P	18 18 16.9	+0.1
	baz=62						
431A	Sonora	62.22	328	⇑P	P	18 18 17.2	-0.2
	baz=62						
332A	Millersview	62.38	329	⇑P	P	18 18 18.1	-0.4
	baz=63						
628A	Black Gap, Mar	62.38	326	⇓P	P	18 18 18.6	+0.1
	baz=63,SNR=5.0						
529A	Stev Forest Ra	62.56	327	⇓P	P	18 18 19.6	0.0
	baz=63,SNR=7.3						
430A	Baggett Ranch,	62.61	328	⇓P	P	18 18 19.7	-0.3
	baz=63						
627A	Terlingua Ranc	62.62	325	⇓P	P	18 18 20.0	-0.2
	baz=63						
TXAR	Lajitas Array	62.67	325	P	P	18 18 20.4	-0.1
TXAR	Lajitas Array	62.67	325	P	P	18 18 20.4	-0.1
	0.7nm,0.6s,baz=141,slow=8.1,SNR=6.6						
232A	Coleman	62.76	330	⇓P	P	18 18 20.6	-0.4
	baz=63						
429A	Davenport Ranc	62.80	327	⇓P	P	18 18 21.0	-0.3
	baz=63						
528A	Cox Ranch, San	62.88	326	⇓P	P	18 18 21.6	-0.3

baz=63
330A **Mertzon** 63.09 328 ⇓P P 18 18 22.8 -0.3
baz=63
626A **Big Bend Ranch** 63.09 325 ⇑P P 18 18 23.5 +0.2
baz=63,SNR=7.1
428A **Kincaid Ranch,** 63.28 327 ⇓P P 18 18 24.2 -0.3
baz=64
527A **Woodward Ranch** 63.29 326 ⇓P P 18 18 24.1 -0.5
baz=64
526A **Mary Lane Ranc** 63.47 325 ⇑P P 18 18 26.1 +0.3
baz=64,SNR=6.3
329A **Wagon Wheel Ra** 63.54 328 ⇑P P 18 18 26.0 -0.2
baz=64
427A **Hayter Ranch,** 63.74 326 ⇓P P 18 18 27.4 -0.1
baz=64
131A **Roby** 63.76 330 ⇑P P 18 18 27.4 -0.2
baz=64
Z32A **Haskell** 63.88 331 ⇑P P 18 18 28.0 -0.3
baz=64
426A **McDonald Obser** 63.92 326 ⇑P P 18 18 28.5 -0.3
baz=64
130A **Snyder** 63.97 329 ⇓P P 18 18 28.5 -0.4
baz=64
Z31A **Sharp Cattle R** 64.19 330 ⇓P P 18 18 30.1 -0.2
baz=64
326A **Caldwell Ranch** 64.41 326 ⇓P P 18 18 32.0 +0.2
baz=65
Y32A **R-V Farms, Ver** 64.45 331 ⇓P P 18 18 31.9 -0.1
baz=65
425A **Indio Mountain** 64.52 325 ⇓P P 18 18 32.2 -0.4
baz=65,SNR=11
Z30A **Sanderson Ranc** 64.61 329 ⇓P P 18 18 32.8 -0.3
baz=65
128A **Castleberry Fa** 64.72 328 ⇑P P 18 18 33.4 -0.5
baz=65
Y31A **Rekieta Farm,** 64.78 331 ⇓P P 18 18 34.1 0.0
baz=65
325A **Bean Ranch, Si** 64.97 325 ⇑P P 18 18 35.4 -0.2
baz=65,SNR=8.2
Y30A **Stafford Cattl** 65.00 330 ⇓P P 18 18 35.0 -0.6
baz=65
226B **Tecolote Peak,** 65.11 326 ⇓P P 18 18 36.7 +0.3
baz=65
X31A **McDonald Ranch** 65.22 331 ⇓P P 18 18 36.9 -0.1
baz=66
324A **Moseley Ranch,** 65.29 325 ⇑P P 18 18 37.5 -0.2
baz=66
X30A **Coker Ranch, T** 65.46 330 ⇑P P 18 18 38.3 -0.3
baz=66
126A **Clayton Basin,** 65.50 327 ⇓P P 18 18 39.1 +0.2
baz=66
Z27A **Tatum** 65.64 328 ⇓P P 18 18 39.4 -0.4
baz=66,SNR=5.0
Y28A **McKinney Farm,** 65.65 329 ⇓P P 18 18 39.3 -0.5
baz=66
224A **Cornudas Mount** 65.81 325 ⇓P P 18 18 40.8 -0.2
baz=66
125A **Gardner Draw,** 65.83 326 ⇑P P 18 18 40.8 -0.3
baz=66
X29A **Tulia** 65.84 330 ⇑P P 18 18 40.5 -0.6
baz=66
MSTX **Muleshoe** 65.95 329 ⇑P P 18 18 41.7 -0.2
baz=66
Z26A **Caprock** 65.98 327 ⇓P P 18 18 42.1 +0.2
baz=66
Y27A **Causey** 66.07 328 ⇓P P 18 18 42.3 -0.3
baz=66
124A **Stringfield Ra** 66.27 326 ⇓P P 18 18 44.0 0.0
baz=66
Z25A **Roswell** 66.35 327 ⇓P P 18 18 44.5 +0.1
baz=67
Y26A **Elida** 66.42 328 ⇑P P 18 18 45.0 +0.1
baz=67
Z24A **Sheeppen Canyo** 66.72 326 ⇑P P 18 18 46.8 0.0
baz=67,SNR=5.0
QSPA **South Pole Qui** 66.84 180 *eP* P 18 18 48.6 +1.5
3.0nm,0.5s
Y25A **Mesa, Roswell** 66.85 327 ⇓P P 18 18 47.4 -0.2
baz=67
X26A **CR and CF Fran** 66.92 328 ⇑P P 18 18 47.7 -0.4
baz=67,SNR=5.4
220A **Playas Peak, P** 67.29 323 ⇓P P 18 18 50.8 +0.4
baz=68
319A **Douglas** 67.31 322 ⇑P P 18 18 51.2 +0.7
baz=68
W26A **Owens Ranch, T** 67.34 329 ⇓P P 18 18 51.1 +0.5
baz=68
121A **Cookes Peak, D** 67.37 324 ⇑P P 18 18 51.8 +0.8
baz=68
Z22A **Elephant Butte** 67.49 325 ⇓P P 18 18 52.7 +1.1
baz=68,SNR=11
Y23A **Lovelace Mesa,** 67.55 326 ⇓P P 18 18 52.7 +0.7
baz=68
W25A **X Bar L Ranch,** 67.78 328 ⇓P P 18 18 53.7 +0.3
baz=68
Z21A **St. Cloud Mine** 67.90 325 ⇑P P 18 18 54.7 +0.4
baz=68
V26A **Tequesquite Ra** 67.92 329 ⇑P P 18 18 54.2 -0.1
baz=68
X23A **Hourglass Bar** 68.12 327 ⇑P P 18 18 56.4 +0.7
baz=68
S29A **Ulysses** 68.22 332 ⇓P P 18 18 56.5 +0.5
baz=68
W24A **Lazy 6 Ranch,** 68.23 328 ⇑P P 18 18 56.6 +0.3
baz=68
T28A **Walsh** 68.24 331 ⇑P P 18 18 56.2 0.0
baz=68
Z20A **Nine Sixteen R** 68.25 324 ⇓P P 18 18 57.0 +0.6
baz=68
V25A **Rancho No Teng** 68.35 329 ⇑P P 18 18 57.0 -0.1
baz=69,SNR=6.1
DBIC **Dimbokro** 68.40 72 *eP* P 18 18 58.3 +0.7
8.9nm,0.7s
DBIC **Dimbokro** 68.40 72 P P 18 18 58.9 +1.3
5.5nm,0.4s,baz=206,slow=8.8,SNR=20
Y21A **Point of Rocks** 68.44 325 ⇑P P 18 18 58.6 +0.9
baz=69
T27A **Campo** 68.47 331 ⇑P P 18 18 57.5 -0.1
baz=69
S28A **Manter** 68.54 332 ⇑P P 18 18 58.1 +0.1
baz=69,SNR=5.1
ANMO **Albuquerque** 68.55 327 *eP* P 18 18 58.7 +0.4
1.6nm,0.8s
V24A **Rampart Ranch,** 68.58 328 ⇑P P 18 18 59.0 +0.5
baz=69
U25A **Circle Dot Ran** 68.70 329 ⇑P P 18 19 00.2 +1.0
baz=69
Y20A **Horse Springs,** 68.74 325 ⇓P P 18 19 00.5 +1.0
baz=69
X21A **Alamocita Cree** 68.84 325 ⇓P P 18 19 01.3 +1.2
baz=69
W22A **Albuquerque** 68.86 326 ⇑P P 18 19 01.3 +1.2
baz=69
S26A **Kim** 69.27 330 ⇓P P 18 19 03.1 +0.5
baz=70
X20A **Quemado** 69.29 325 ⇓P P 18 19 03.8 +0.9
baz=70
W21A **San Fidel** 69.29 326 ⇑P P 18 19 03.9 +1.1
baz=70
V22A **San Miguel Ran** 69.54 327 ⇓P P 18 19 05.1 +0.7
baz=70
S25A **Robets Cordova** 69.74 330 ⇓P P 18 19 06.2 +0.6
baz=70
W20A **Ramah** 69.74 325 ⇑P P 18 19 06.7 +1.1
baz=70
214A **Organ Pipe Nat** 69.77 320 ⇓P P 18 19 07.0 +1.3
baz=70
S24A **Houchin Ranch,** 70.08 329 ⇓P P 18 19 08.2 +0.4
baz=70
V20A **Brimhall** 70.24 326 ⇓P P 18 19 09.9 +1.2
baz=70
SDCO **Great Sand Dun** 70.31 329 *eP* P 18 19 09.6 +0.5
4.6nm,1.0s
U21A **Nageezi** 70.31 327 ⇑P P 18 19 09.9 +0.7
baz=71
T22A **Edith** 70.40 328 ⇓P P 18 19 10.6 +0.9
baz=71
X16A **Lo Mia Camp, P** 70.79 323 ⇑P P 18 19 13.1 +1.1
baz=71
Q24A **Divide** 71.12 330 ⇓P P 18 19 14.6 +0.5
baz=71
S21A **Coal Bank Pass** 71.34 328 ⇓P P 18 19 16.5 +1.0
baz=72
Q23A **Hartsel** 71.39 330 ⇑P P 18 19 16.6 +0.9
baz=72
S20A **Disappointment** 71.76 327 ⇓P P 18 19 18.5 +0.6
baz=72
SMCO **Snowmass** 72.14 329 *eP* P 18 19 20.7 +0.3
3.2nm,1.0s

S18A **Hurst Farm, Bl** 72.47 326 ⇓P P 18 19 23.1 +0.9
baz=73
BC3 **Big Chuckawall** 72.54 320 ⇓P P 18 19 23.7 +1.3
baz=73
P21A **Newcastle** 72.64 329 ⇑P P 18 19 24.1 +1.1
baz=73
O22A **Kremmling** 72.73 330 ⇑P P 18 19 24.2 +0.5
baz=73
U15A **North Rim** 72.74 324 ⇑P P 18 19 25.0 +1.2
baz=73
M24A **Cheyenne** 73.01 332 ⇑P P 18 19 26.1 +1.0
baz=73
N23A **Red Feather La** 73.04 331 ⇓P P 18 19 26.1 +0.7
baz=73
M23A **Laramie** 73.40 331 ⇓P P 18 19 27.8 +0.3
baz=74
O20A **White River Ci** 73.50 329 ⇑P P 18 19 28.5 +0.5
baz=74
Q16A **Castle Valley** 74.01 326 ⇑P P 18 19 31.8 +0.8
baz=74
O19A **Miners Draw (B** 74.05 328 ⇓P P 18 19 32.2 +1.0
baz=74
N20A **Spence Gulch,** 74.06 329 ⇑P P 18 19 32.0 +0.7
baz=74
P18A **Preston Nutter** 74.08 327 ⇑P P 18 19 32.3 +0.7
baz=74
CCUT **Cedar City** 74.15 324 *eP* P 18 19 33.4 +1.4
3.3nm,0.9s
M20A **Sweetwater, Wa** 74.54 330 ⇑P P 18 19 34.7 +0.6
baz=75
L21A **Rawlins** 74.54 331 ⇓P P 18 19 34.5 +0.4
baz=75
L20A **Wamsutter** 75.02 330 ⇓P P 18 19 37.4 +0.6
baz=75
K21A **Alcova** 75.02 331 ⇓P P 18 19 37.7 +0.9
baz=75
VNDA **Vanda** 75.19 190 P P 18 19 34.9 -2.2
J22A **Midwest** 75.30 332 ⇓P P 18 19 38.6 +0.2
baz=76
MPMC **Manual Prospec** 75.41 320 ⇑P P 18 19 39.6 +0.4
baz=76
L19A **Farson** 75.56 329 ⇓P P 18 19 41.2 +1.3
baz=76
H24A **Dirks Ranch, A** 75.59 334 ⇑P P 18 19 40.0 +0.1
baz=76
ISA **Isabella** 75.72 320 ⇑P P 18 19 42.3 +1.4
baz=76
L18A **Fontenelle, Gr** 75.74 329 ⇓P P 18 19 41.5 +0.6
baz=76
K19A **Absolon Red Bu** 75.89 330 ⇑P P 18 19 42.0 +0.3
baz=76
R11A **Troy Canyon, C** 75.94 323 ⇓P P 18 19 43.0 +0.8
baz=76
J20A **Shoshoni** 75.96 331 ⇓P P 18 19 42.4 +0.3
baz=76
I21A **Big Trails, Te** 75.98 332 ⇓P P 18 19 42.6 +0.4
baz=76
PKM **Peak Mountain** 76.02 318 ⇑P P 18 19 43.8 +1.1
baz=76
PDAR **Pinedale Array** 76.17 330 P P 18 19 43.6 +0.2
PDAR **Pinedale Array** 76.17 330 P P 18 19 43.6 +0.2
0.4nm,0.5s,baz=149,slow=6.4,SNR=3.4
J19A **Crowheart** 76.33 330 ⇓P P 18 19 44.6 +0.4
baz=77
I20A **Worland** 76.45 331 ⇑P P 18 19 45.4 +0.6
baz=77
H21A **Big Horn, Sher** 76.52 332 ⇑P P 18 19 45.7 +0.4
baz=77
F23A **Volborg** 76.73 334 ⇓P P 18 19 47.0 +0.7
baz=77
I19A **Meeteetse** 76.91 331 ⇑P P 18 19 48.3 +0.8
baz=77
TOA0 **Torodi Ar. Sit** 77.13 69 *eP* P 18 19 49.8 +0.8
TORD **Torodi Ar. Bea** 77.13 69 P P 18 19 50.0 +0.9
TORD **Torodi Ar. Bea** 77.13 69 P P 18 19 50.0 +0.9
11nm,0.6s,baz=254,slow=5.5,SNR=97
ULM **Lac du Bonnet** 77.36 342 P P 18 19 49.3 -0.3
ULM **Lac du Bonnet** 77.36 342 P P 18 19 49.3 -0.3
3.8nm,0.5s,baz=179,slow=3.5,SNR=3.0
G20A **Bridger** 77.50 332 ⇓P P 18 19 51.0 +0.4
baz=78
NVAR **Mina Array Bea** 77.52 322 P P 18 19 52.0 +0.9
NVAR **Mina Array Bea** 77.52 322 P P 18 19 52.0 +0.9
0.6nm,0.9s,baz=170,slow=9.0,SNR=3.7
H18A **Shoshone NF, C** 77.71 331 ⇑P P 18 19 52.2 +0.3
baz=78
D23A **Lindsay** 77.84 335 ⇓P P 18 19 53.6 +1.1
baz=78
G18A **Lazy EL Ranch,** 78.16 331 ⇑P P 18 19 55.1 +0.7
baz=78
D22A **Cohagen** 78.21 334 ⇓P P 18 19 55.1 +0.7
baz=78
F19A **Roth Farm, Mol** 78.31 332 ⇑P P 18 19 55.4 +0.3
baz=79
TSUM **Tsumeb** 78.64 106 *eP* P 18 19 59.6 +2.0
6.0nm,0.8s
F18A **Big Timber** 78.69 332 ⇓P P 18 19 57.9 +0.7
baz=79
G17A **Pierce Place,** 78.69 331 ⇓P P 18 19 58.1 +0.8
baz=79
E19A **Rath Farm, Rou** 78.72 333 ⇓P P 18 19 58.3 +1.0
baz=79
I14A **Mackay** 78.90 328 ⇓P P 18 20 00.1 +1.6
baz=79
HLID **Hailey** 79.10 328 *eP* P 18 20 00.6 +1.1
2.7nm,1.0s
B20A **Solberg Farm,** 79.98 334 ⇓P P 18 20 04.5 +0.4
baz=80
D16A **Dana Ranch, Ca** 80.36 331 ⇓P P 18 20 07.1 +0.9
baz=81
B18A **Beardsley Farm** 80.66 333 ⇓P P 18 20 08.3 +0.5
baz=81
E13A **Victor** 81.11 330 ⇑P P 18 20 11.2 +1.0
baz=81
C15A **Salmond Ranch,** 81.39 331 ⇓P P 18 20 12.6 +0.9
baz=82
A17A **Triple J Farms** 81.47 333 ⇓P P 18 20 12.5 +0.5
baz=82
D13A **Huson** 81.72 330 ⇑P P 18 20 13.2 -0.2
baz=82
BOSA **Boshof** 81.77 118 P P 18 20 16.7 +2.4
BOSA **Boshof** 81.77 118 P P 18 20 16.7 +2.4
1.1nm,0.3s,baz=273,slow=3.2,SNR=11
A16A **West Butte Ran** 81.85 333 ⇑P P 18 20 14.5 +0.4
baz=82
LBTB **Lobatse** 83.41 114 P P 18 20 22.3 -0.5
2.8nm,0.7s
YKA **Yellowknife Ar** 93.24 340 P P 18 21 08.9 +0.2
YKA **Yellowknife Ar** 93.24 340 P P 18 21 08.9 +0.2
0.7nm,0.6s,baz=136,slow=4.6,SNR=20
ASAR **Alice Springs** 128.68 206 PKP PKPdf 18 27 02.6 +0.6
ASAR **Alice Springs** 128.68 206 PKP PKPdf 18 27 02.6 +0.6
0.7nm,0.8s,baz=107,slow=1.5,SNR=6.7
WRA **Warramunga Arr** 131.80 209 PKP PKPdf 18 27 08.9 +0.9
WRA **Warramunga Arr** 131.80 209 PKP PKPdf 18 27 08.9 +0.9
0.4nm,0.6s,baz=150,slow=1.5,SNR=8.9
MK31 **Makanchi Array** 146.55 38 PKPdf PKPdf 18 27 32.9 -1.0
MKAR **Makanchi Array** 146.55 38 PKPbc PKPbc 18 27 35.8 +0.2
MKAR **Makanchi Array** 146.55 38 PKPbc PKPbc 18 27 35.8 +0.2
0.9nm,0.7s,baz=323,slow=4.0,SNR=7.6

IDC ***02*** *18:16:13.9±0.8, 17°.95S×167°.88E, h0km, mb4.2/12, mb1 4.4/13, mb1mx4.3/19, mbtmp4.2/13, ML3.4/1, MS3.8/14, Ms1 3.8/14, ms1mx3.6/27, Error ellipse: s-maj=27.2km s-min=17.3km az=130.0*
ISCJB ***02*** *18:16:17.6±0.3, 17°.99S±0°.04×167°.75E±0°.07, h32km, mb4.5/32, MS4.0/17, Error ellipse: s-maj=9.1km s-min=5.8km az=14.7*
BJI ***02*** *18:16:19.7, 18°.01S×167°.88E, h51km, mB4.8/10, mb4.5/21, Ms4.8/7, Ms7 4.3/7*
NEIC ***02*** *18:16:21.3±1.4, 17°.96S×167°.73E, h54km±13km, mb4.6/13, Error ellipse: s-maj=12.3km s-min=8.8km az=166.0*
NEIC Felt at Port-Vila.
ISC 02 18:16:19.0±0.4, 17°.98S±0°.05×167°.81E±0°.09, h32km, n105, σ1§48/112, mb4.5/32, MS4.0/17, 3C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.27**	**197**	*eP*n	Pb	18 17 28.5	-4.9
DZM				*e*Sn	**Sn**	**18 18 09.6**	**-1.1**
	240nm,0.8s						
DZM	**Mont Dzumac**	**4.27**	**197**	*eP*	**Pn**	**18 17 20.9**	**-0.9**
DZM	**Mont Dzumac**	**4.27**	**197**	*eP*n	**Pn**	**18 17 21.5**	**-0.4**
DZM				Sn	**Sn**	**18 18 08.0**	**-2.6**
DZM	**Mont Dzumac**	**4.27**	**197**	Pn	**Pn**	**18 17 21.5**	**-0.4**

2.2nm,0.3s,baz=20,slow=14,SNR=21
DZM Sn **Sn** 18 18 08.0 -2.6
17nm,0.3s,baz=151,slow=23,SNR=9.1
DZM LR LR 18 18 32.1
comp=Z,259nm,19.6s,baz=197,slow=32
NOUC **Port Laguerre** 4.34 199 *eP* **Pn** **18 17 24.9 +2.1**
NOUC *eS* **Sn** **18 18 12.0 -0.3**
MSVF **Nonsavu** 9.76 90 *eP*n Pn 18 18 41.5 +4.2
HNR **Honiara** 11.42 317 LR LR 18 22 34.7
comp=Z,442nm,20.3s,baz=316,slow=33
EIDS **Eidsvold** 17.18 242 Pn **P** **18 20 18.1 -0.1**
31nm,1.3s
AFI **Afiamalu** 20.04 81 LR LR 18 26 44.2
comp=Z,480nm,20.9s,baz=300,slow=32
CTA **Charters Tower** 20.48 261 P **P** **18 20 55.6 +1.2**
CTA **Charters Tower** 20.48 261 P **P** **18 20 55.6 +1.2**
8.8nm,0.8s,baz=78,slow=14,SNR=5.7
CTAO **Charters Tower** 20.48 261 *eP* **P** **18 20 54.8 +0.4**
22nm,1.1s
PMG **Port Moresby** 21.78 290 P **P** **18 21 07.7 -0.6**
URZ **Urewera** 21.78 160 P **P** **18 21 10.6 +2.4**
URZ **Urewera** 21.78 160 P **P** **18 21 10.6 +2.4**
9.2nm,0.5s,baz=333,slow=13,SNR=3.8
RPZ **Rata Peaks** 25.80 175 LR LR 18 30 38.5
comp=Z,165nm,18.0s,baz=41,slow=34
STKA **Stephens Creek** 27.41 235 *eP* **P** **18 22 02.9 +1.0**
3.3nm,1.0s
STKA **Stephens Creek** 27.41 235 P **P** **18 22 02.8 +1.0**
9.0nm,1.0s,baz=72,slow=6.9,SNR=8.3
STKA LR LR 18 32 50.7
comp=Z,400nm,18.1s,baz=30,slow=36
WRAB **Tennant Creek** 31.67 261 *eP* **P** **18 22 42.8 +3.0**
3.7nm,0.8s
WRA **Warramunga Arr** 31.68 261 P **P** **18 22 38.2 -1.7**
WRA **Warramunga Arr** 31.68 261 P **P** **18 22 38.2 -1.7**
2.4nm,1.1s,baz=80,slow=6.2,SNR=7.5
AS31 **Alice Springs** 32.14 254 *eP* **P** **18 22 41.5 -2.4**
ASAR **Alice Springs** 32.14 254 P **P** **18 22 43.0 -0.9**
ASAR **Alice Springs** 32.14 254 P **P** **18 22 43.0 -0.9**
3.2nm,0.8s,baz=79,slow=8.1,SNR=20
ASAR LR LR 18 35 31.4
comp=Z,454nm,18.9s,baz=83,slow=36
FITZ **Fitzroy Crossi** 40.03 263 *eP* **P** **18 23 49.6 -1.8**
13nm,1.0s
FITZ **Fitzroy Crossi** 40.03 263 LR LR 18 40 07.5
comp=Z,405nm,19.6s,baz=108,slow=36
PPT **Papeete** 40.52 96 LR LR 18 39 02.0
comp=Z,89nm,18.4s,baz=149,slow=34
MBWA **Marble Bar** 45.28 258 P P 18 24 39.4 +5.4
NWAO **Narrogin (SRO)** 47.59 242 *eP* **P** **18 24 49.1 -2.9**
51nm,1.6s
VNDA **Vanda** 59.64 181 P **P** **18 26 19.3 -0.3**
VNDA **Vanda** 59.64 181 P **P** **18 26 19.3 -0.3**
1.2nm,1.0s,baz=341,slow=6.0,SNR=3.7
SBA **Scott Base** 59.91 180 *eP* **P** **18 26 21.7 +0.3**
11nm,1.2s
MJAR **Matsushiro Arr** 61.01 333 P **P** **18 26 28.6 -0.9**
MJAR **Matsushiro Arr** 61.01 333 P **P** **18 26 28.6 -0.9**
2.7nm,0.9s,baz=172,slow=8.1,SNR=8.3
MAJO **Matsushiro** 61.01 333 P **P** **18 26 28.7 -0.8**
JNU **Nakatsue** 61.86 325 LR LR 18 48 20.1
comp=Z,72nm,21.3s,baz=80,slow=31
NJ2 **Nanjing** 68.36 316 *eP* **P** **18 27 18.6 +1.1**
NJ2 pmax pmax
comp=Z,10.0nm,0.5s
PETK **Petropavlovsk-** 71.33 354 P **P** **18 27 35.3 0.0**
PETK **Petropavlovsk-** 71.33 354 P **P** **18 27 35.3 0.0**
comp=Z,7.2nm,0.8s,baz=153,slow=10,SNR=13
PETK LR LR 18 55 24.0
comp=Z,48nm,19.7s,baz=246,slow=38
MDJ **Mudanjiang** 71.38 332 P **P** **18 27 37.0 +1.2**
MDJ pP pP 18 27 51.2 +5.4
MDJ sP sP 18 27 57.0 +7.5
MDJ PP **PP** **18 30 13.6 -1.1**
MDJ S **S** **18 36 50.4 -1.3**
MDJ SS **SS** **18 41 26.6 -0.5**
MDJ pmax pmax
comp=Z,4.0nm,0.9s
MDJ pmax pmax
comp=Z,40nm,4.5s
MDJ LR LR
comp=N,38nm,24.4s
MDJ LR LR
comp=E,41nm,25.2s
MDJ LR LR
comp=Z,41nm,17.7s
QSPA **South Pole Qui** 72.07 180 *eP* **P** **18 27 40.4 +0.5**
comp=Z,14nm,1.0s
CN2 **Changchun** 72.68 329 *eP* **P** **18 27 46.5 +2.9**
CN2 *eS* **S** **18 37 06.4 -0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,18.0s
CN2 LR LR
comp=E,200nm,18.0s
CN2 LR LR
comp=Z,200nm,18.0s
GYA **Guiyang** 73.99 305 *eP* **P** **18 27 51.0 -0.9**
GYA pmax pmax
comp=Z,10.0nm,1.0s
BJI **Beijing** 75.11 321 P **P** **18 27 59.1 +1.2**
BJI S **S** **18 37 32.8 -1.4**
BJI SS **SS** **18 42 20.3 -3.9**
BJI pmax pmax
comp=Z,7.0nm,0.4s
BJI LR LR
comp=N,79nm,16.4s
BJI LR LR
comp=E,91nm,19.8s
BJI LR LR
comp=Z,42nm,20.7s
KMI **Kunming** 76.46 302 P **P** **18 28 07.2 +0.9**
KMI pmax pmax
comp=Z,5.0nm,1.0s
CMAR **Chiang Mai Arr** 76.75 295 P **P** **18 28 08.9 +1.1**
CMAR **Chiang Mai Arr** 76.75 295 P **P** **18 28 08.9 +1.1**
comp=Z,2.4nm,0.9s,baz=125,slow=4.5,SNR=7.8
CMAR LR LR 18 59 20.4
comp=Z,30nm,20.2s,baz=360,slow=34
CHTO **Chiang Mai** 76.89 295 P **P** **18 28 09.5 +0.9**
HHC **Hu-ho-hao-te** 78.39 320 *eP* **P** **18 28 17.8 +1.2**
HHC pP pP 18 28 32.9 +6.2
HHC sP sP 18 28 41.1 +11
HHC PP **PP** **18 31 17.6 +3.3**
HHC S **S** **18 38 07.4 -2.8**
HHC sS **ScS** **18 38 35.7 +0.8**
HHC SS **SS** **18 43 13.5 -0.5**
HHC pmax pmax
comp=Z,20nm,1.0s
HHC pmax pmax
comp=Z,130nm,5.4s
HHC LR LR
comp=N,160nm,14.3s
HHC LR LR
comp=E,200nm,15.5s
HHC LR LR
comp=Z,130nm,16.7s
LZH **Lanzhou** 80.88 313 *eP* **P** **18 28 31.7 +1.4**
LZH pP pP 18 28 49.2 +8.7
LZH sP sP 18 28 55.8 +12
LZH *e*PP **PP** **18 31 39.5 +4.2**
LZH pmax pmax
comp=Z,16nm,1.4s
LZH pmax pmax
comp=Z,53nm,7.3s
LZH LR LR
comp=N,150nm,17.2s
LZH LR LR
comp=E,140nm,17.0s
LZH LR LR
comp=Z,170nm,19.3s
RSO **Redoubt South** 84.39 18 *eP* **P** **18 28 45.7 -2.3**
comp=Z,11nm,0.8s
ULN **Ulaanbaatar** 85.05 324 *eP* **P** **18 28 52.1 +0.5**
comp=Z,10nm,1.1s
GTA **Gaotai** 85.28 314 *eP* **P** **18 28 53.4 +0.5**
GTA pP **pP** **18 29 08.1 +5.0**
GTA sP sP 18 29 17.7 +11
GTA S **SKSac** **18 39 17.7 +1.9**
GTA pmax pmax
comp=Z,3.0nm,1.0s
SONM **Songino Array** 85.40 324 P **P** **18 28 53.6 +0.3**
SONM **Songino Array** 85.40 324 P **P** **18 28 53.6 +0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.3nm,0.9s,baz=134,slow=5.0,SNR=10.0						
SONM				LR	LR	19 04 15.2	
	comp=Z,63nm,18.5s,baz=256,slow=34						
KCPM	**Cahto Peak**	**85.83**	**46**	*e*P	**P**	**18 28 54.0**	**-1.7**
	comp=Z,2.4nm,0.7s						
CMB	**Columbia Colle**	**87.34**	**49**	*e*P	**P**	**18 29 01.4**	**-1.6**
ISA	**Isabella**	**87.75**	**51**	*e*P	**P**	**18 29 04.6**	**-0.5**
	comp=Z,1.5nm,0.6s						
NVAR	**Mina Array Bea**	**89.00**	**49**	P	**P**	**18 29 11.0**	**-0.1**
NVAR	**Mina Array Bea**	**89.00**	**49**	P	**P**	**18 29 11.0**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=222,slow=7.7,SNR=10						
ILAR	**Eielson Array**	**89.44**	**18**	P	**P**	**18 29 10.7**	**-1.6**
ILAR	**Eielson Array**	**89.44**	**18**	P	**P**	**18 29 10.7**	**-1.6**
	comp=Z,0.8nm,0.8s,baz=237,slow=6.1,SNR=9.8						
SNAA	**Sanae**	**90.35**	**183**	*e*P	**P**	**18 29 17.0**	**+0.3**
SNAA	**Sanae**	**90.35**	**183**	*e*P	**P**	**18 29 16.6**	**-0.1**
	comp=Z,7.4nm,1.2s						
VNA1	**Neumayer--Stat**	**91.56**	**181**	*e*P	**P**	**18 29 23.3**	**+1.1**
WMQ	**Urumqi**	**95.36**	**314**	*e*P	**P**	**18 29 41.0**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PDAR	**Pinedale Array**	**96.76**	**47**	LR	LR	19 03 55.6	
	comp=Z,33nm,20.1s,baz=81,slow=30						
TXAR	**Lajitas Array**	**97.36**	**62**	P	**P**	**18 29 49.1**	**-0.6**
TXAR	**Lajitas Array**	**97.36**	**62**	P	**P**	**18 29 49.1**	**-0.6**
	comp=Z,0.4nm,0.6s,baz=243,slow=5.5,SNR=4.2						
TXAR				LR	LR	19 08 53.2	
	comp=Z,65nm,19.5s,baz=180,slow=32						
YKA	**Yellowknife Ar**	**100.18**	**27**	P	**Pdif**	**18 30 00.7**	**-0.6**
YKA	**Yellowknife Ar**	**100.18**	**27**	P	**Pdif**	**18 30 00.7**	**-0.6**
	comp=Z,0.3nm,0.7s,baz=252,slow=4.6,SNR=4.3						
ZALV	**Zalesovo Beam**	**100.30**	**323**	P	**Pdif**	**18 30 03.8**	**+1.7**
ZALV	**Zalesovo Beam**	**100.30**	**323**	P	**Pdif**	**18 30 03.8**	**+1.7**
	comp=Z,0.4nm,0.4s,baz=120,slow=5.7,SNR=3.2						
ARCES	**ARCESS Array B**	**123.51**	**345**	PKP	**PKPdf**	**18 35 12.3**	**-0.2**
ARCES	**ARCESS Array B**	**123.51**	**345**	PKP	**PKPdf**	**18 35 12.3**	**-0.2**
	comp=Z,1.0nm,0.5s,baz=108,slow=1.9,SNR=8.9						
KOLS	**Kolonicke sedl**	**138.43**	**326**	*e*PKP	**PKPdf**	**18 35 38.0**	**-3.3**
KOLS				*e*		18 35 51.8	
CRVS	**Cervenica-Dubn**	**138.88**	**326**	*e*PKP	**PKPdf**	**18 35 38.7**	**-3.4**
CRVS				*e*		18 35 50.6	
VYHS	**Vyhne**	**140.50**	**327**	*e*PKP	**PKPdf**	**18 35 42.5**	**-2.6**
VYHS				*e*		18 35 55.4	
GERES	**GERESS Array B**	**142.74**	**332**	PKP	**PKPdf**	**18 35 48.8**	**-0.4**
GERES	**GERESS Array B**	**142.74**	**332**	PKP	**PKPdf**	**18 35 48.8**	**-0.4**
	comp=Z,0.3nm,0.6s,baz=124,slow=1.8,SNR=2.5						
MEM	**Membach**	**144.34**	**340**	PKP	PKPbc	18 35 50.6	+0.4
STU	**Stuttgart**	**144.72**	**335**	*e*PKPbc	PKPbc	18 35 51.9	+0.5
STU				*e*sPKPbc		18 36 01.7	
BCLA	**Clavier**	**144.74**	**341**	PKP	**PKPab**	**18 35 50.9**	**-0.4**
ABTA	**Abfaltersbach**	**144.82**	**330**	⇓*i*PKPdf	**PKPab**	**18 35 51.3**	**-0.5**
	comp=Z,7.0nm,0.8s						
MOTA	**Moosalm**	**145.03**	**332**	⇑*i*PKPdf	**PKPbc**	**18 35 52.6**	**0.0**
	comp=Z,11nm,0.9s						
LANF	**Langenberg**	**145.09**	**337**	PKP	**PKPdf**	**18 35 53.0**	**-0.2**
WLF	**Walferdange**	**145.11**	**339**	PKP	**PKPdf**	**18 35 53.2**	**0.0**
WLF	**Walferdange**	**145.11**	**339**	*e*PKPbc	**PKPdf**	**18 35 53.6**	**+0.4**
WLF				*e*pPKPbc	pPKPbc	18 36 01.0	-2.3
WLF				*e*sPKPbc	sPKPbc	18 36 03.2	-3.7
WLF	**Walferdange**	**145.11**	**339**	*e*PKPdf	**PKPab**	**18 35 52.6**	**-0.1**
DOU	**Dourbes**	**145.24**	**341**	PKP	**PKPdf**	**18 35 53.5**	**+0.2**
OBER	**Oberstdorf**	**145.34**	**333**	*e*PKPbc	**PKPab**	**18 35 53.7**	**0.0**
OBER				*e*pPKPbc	pPKPbc	18 36 01.2	-2.9
OBER				*e*sPKPbc	sPKPbc	18 36 03.6	-4.2
BFO	**Black Forest**	**145.42**	**336**	*e*PKPbc	**PKPab**	**18 35 53.9**	**0.0**
BFO				*e*pPKPbc	pPKPbc	18 36 01.5	-2.8
BFO				*e*sPKPbc	sPKPbc	18 36 03.8	-4.1
BFO	**Black Forest**	**145.42**	**336**	*e*PKPdf	**PKPbc**	**18 35 53.1**	**-0.6**
FETA	**Feichten**	**145.44**	**332**	⇑*i*PKPab	**PKPab**	**18 35 54.3**	**0.0**
	comp=Z,15nm,0.9s						
DAVA	**Damuels**	**145.61**	**333**	⇑*i*PKPab	**PKPbc**	**18 35 54.6**	**+0.1**
	comp=Z,14nm,0.7s						
DAVOX	**Davos/Dischmat**	**146.00**	**332**	PKPbc	**PKPab**	**18 35 56.2**	**-0.1**
DAVOX	**Davos/Dischmat**	**146.00**	**332**	PKPbc	**PKPab**	**18 35 56.2**	**-0.1**
	comp=Z,2.0nm,0.4s,baz=127,slow=3.0,SNR=5.2						
VAL	**Valentia**	**146.08**	**358**	*e*P	**PKPbc**	**18 35 55.6**	**0.0**
VAL				*e*PPS	PPS	18 53 28.7	
MOF	**Molkenrain**	**146.27**	**336**	PKP	**PKPbc**	**18 35 56.0**	**-0.5**
LOMF	**Lomont**	**146.80**	**336**	PKP	**PKPbc**	**18 35 57.9**	**-0.1**
BNI	**Bardonecchia**	**148.74**	**334**	*e*PKPbc	**PKPbc**	**18 36 03.3**	**-0.1**
PYM	**Petit Puy Mans**	**149.56**	**339**	PKP	**PKPbc**	**18 36 06.1**	**+0.7**
LBL	**Lubilhac**	**149.92**	**338**	PKP	**PKPbc**	**18 36 06.9**	**+0.6**
TORD	**Torodi Ar. Bea**	**165.78**	**252**	PKP	**PKPdf**	**18 36 20.9**	**-0.6**
TORD				PKPab	**PKPab**	**18 37 21.3**	**+0.3**
TORD	**Torodi Ar. Bea**	**165.78**	**252**	PKP	**PKPdf**	**18 36 20.9**	**-0.6**
	comp=Z,0.4nm,0.8s,baz=165,slow=1.7,SNR=4.4						
TORD				PKPab	**PKPab**	**18 37 21.3**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=102,slow=4.7,SNR=3.4						

ROM 02 18:19:14.5±0.0**, 42°.32N×13°.38E, h8km, Md1.3**/3**, Ml1.2**/1**, Error ellipse: s-maj=1.0km s-min=0.2km az=23.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**21**	Pg	Pg	18 19 16.4	+0.2
AQU				Sg	Sg	18 19 17.7	+0.3
	88nm,0.2s						
FAGN	**Fagnano**	**0.16**	**109**	Pg	Pg	18 19 18.3	+0.4
FAGN				Sg	Sg	18 19 21.2	+1.0
	58nm,0.5s						

GUC 02 18:22:36.7±0.8**, 32°.63S×71°.13W, h3**km±4km**, MD3.5, ML1.7, 3C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ROCH	**El Roble**	**0.35**	**163**	⇑*i*P	Pg	18 22 44.4	+0.6
ROCH				*i* S	Sg	18 22 49.6	+0.9
ROCH				AML	AML	18 22 54.8	
	comp=N,152nm,0.4s						
CHNG	**Los Chungos**	**0.81**	**337**	*e*P	Pb	18 22 52.9	-0.5
CHNG				*i* S	Sb	18 23 04.2	-0.5
CHNG				AML	AML	18 23 05.5	
	comp=E,72nm,0.3s						
FCH	**Farellones**	**0.99**	**135**	⇑*i*P	Pg	18 22 41.6	-15
FCH				*i* S	Sg	18 22 56.7	-13
FCH				AML	AML	18 23 03.4	
	comp=E,45nm,0.2s						
LNV	**Longovilo**	**1.34**	**190**	⇑*i*P	Pn	18 23 01.2	-1.1
CACH	**El Canelo**	**1.54**	**163**	⇓*i*P	Pn	18 23 05.7	+0.4
CACH				*i* S	Sg	18 23 26.7	0.0

*ISCJB **02** 18:32:08.8±0.9, 36°.15N±0°.04×21°.41E±0°.05, h17km±6km, Error ellipse: s-maj=7.8km s-min=4.6km az=137.4*
*CSEM **02** 18:32:09.4±0.4, 36°.15N×21°.51E, h10km, ML3.4/3, Error ellipse: s-maj=9.3km s-min=5.0km az=42.0*
*THE **02** 18:32:10.8, 36°.20N×21°.55E, h12km±1km, ML3.4/3, Error ellipse: s-maj=1.8km s-min=1.0km az=62.0*
*ATH **02** 18:32:10.9, 36°.22N×21°.59E, h31km±1km, MD3.5/36, ML3.1*

ISC 02 18:32:11.3±2.2**, 36°.16N**±0°.05×**21°.56E**±0°.06**, h26**km±18km**, n128, σ0s.89**/141**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DYR	**Agios Nikonas**	**0.87**	**46**	P	**Pn**	**18 32 26.7**	**-1.2**
DYR				S	**Sb**	**18 32 39.2**	**+0.2**
DYR	**Agios Nikonas**	**0.87**	**46**	*e*PN	**Pn**	**18 32 26.7**	**-1.2**
DYR				*e*SN	**Sb**	**18 32 39.2**	**+0.2**
DYR	**Agios Nikonas**	**0.87**	**46**	P	**Pn**	**18 32 26.7**	**-1.2**
DYR				S	**Sb**	**18 32 39.2**	**+0.2**
ITM	**Ithomi**	**1.06**	**16**	P	**Pn**	**18 32 29.9**	**-0.7**
ITM				S	**Sn**	**18 32 44.5**	**0.0**
ITM	**Ithomi**	**1.06**	**16**	*e*PN	**Pn**	**18 32 30.0**	**-0.7**
ITM	**Ithomi**	**1.06**	**16**	P	**Pn**	**18 32 29.9**	**-0.7**
ITM				S	**Sn**	**18 32 44.5**	**0.0**
KYTH	**Kithira**	**1.20**	**84**	P	**Pn**	**18 32 32.9**	**+0.4**
KYTH	**Kithira**	**1.20**	**84**	*e*PN	**Pn**	**18 32 33.1**	**+0.6**
KYTH	**Kithira**	**1.20**	**84**	P	**Pn**	**18 32 32.9**	**+0.4**
VLI	**Veliai**	**1.24**	**63**	P	**Pn**	**18 32 33.1**	**0.0**
VLI				S	**Sn**	**18 32 50.3**	**+1.3**
VLI	**Veliai**	**1.24**	**63**	*e*PN	**Pn**	**18 32 33.1**	**0.0**
VLI				*e*SN	**Sn**	**18 32 49.2**	**+0.2**
VLI	**Veliai**	**1.24**	**63**	P	**Pn**	**18 32 33.1**	**0.0**
VLI				S	**Sn**	**18 32 50.3**	**+1.3**
AMT	**Artemida-Makis**	**1.38**	**5**	*e*PN	**Pn**	**18 32 35.2**	**+0.3**
AMT				*e*SN	**Sn**	**18 32 52.5**	**+0.2**
VLX	**Vlachokerasia**	**1.38**	**28**	P	**Pn**	**18 32 35.0**	**0.0**
VLX				S	**Sn**	**18 32 53.7**	**+1.2**
VLX	**Vlachokerasia**	**1.38**	**28**	*e*PN	**Pn**	**18 32 35.4**	**+0.4**
VLX				*e*SN	**Sn**	**18 32 52.5**	**0.0**
VLX	**Vlachokerasia**	**1.38**	**28**	P	**Pn**	**18 32 35.0**	**0.0**
VLX				S	**Sn**	**18 32 53.7**	**+1.2**
ANKY	**Antikythira Is**	**1.44**	**101**	*e*PN	**Pn**	**18 32 36.5**	**+0.7**
ANKY				*e*SN	**Sb**	**18 32 55.8**	**+0.3**
DIDY	**Didyma**	**1.87**	**45**	P	**Pn**	**18 32 41.4**	**-0.4**
DIDY	**Didyma**	**1.87**	**45**	P	**Pn**	**18 32 41.4**	**-0.4**
GUR	**Goura**	**1.88**	**19**	P	**Pn**	**18 32 42.5**	**+0.6**
GUR	**Goura**	**1.88**	**19**	*e*PB	**Pn**	**18 32 42.6**	**+0.6**
GUR	**Goura**	**1.88**	**19**	P	**Pn**	**18 32 42.5**	**+0.6**
RLS	**Riolos of Patr**	**1.90**	**358**	P	**Pn**	**18 32 42.9**	**+0.9**
RLS	**Riolos of Patr**	**1.90**	**358**	*e*PB	**Pn**	**18 32 42.5**	**+0.5**
RLS	**Riolos of Patr**	**1.90**	**358**	P	**Pn**	**18 32 42.9**	**+0.9**
DID	**Didima**	**1.90**	**45**	P	**Pn**	**18 32 41.8**	**-0.4**
DID	**Didima**	**1.90**	**45**	*e*PN	**Pn**	**18 32 41.5**	**-0.7**
DID	**Didima**	**1.90**	**45**	P	**Pn**	**18 32 41.8**	**-0.4**
THAL	**Thalero**	**2.07**	**25**	P	**Pn**	**18 32 43.9**	**-0.6**
THAL	**Thalero**	**2.07**	**25**	P	**Pn**	**18 32 43.9**	**-0.6**
LAKA	**Lakka**	**2.10**	**9**	P	**Pn**	**18 32 46.2**	**+1.3**
LAKA	**Lakka**	**2.10**	**9**	*e*PB	**Pn**	**18 32 46.2**	**+1.3**
LAKA				*e*SN	**Sn**	**18 33 09.9**	**-0.4**
LAKA	**Lakka**	**2.10**	**9**	P	**Pn**	**18 32 46.2**	**+1.3**
VLS	**Valsamata**	**2.16**	**339**	P	**Pn**	**18 32 45.5**	**-0.2**
VLS	**Valsamata**	**2.16**	**339**	*e*PN	**Pn**	**18 32 46.0**	**+0.3**
VLS	**Valsamata**	**2.16**	**339**	P	**Pn**	**18 32 45.5**	**-0.2**
LTK	**Loutraki**	**2.17**	**31**	P	**Pn**	**18 32 46.0**	**+0.1**
LTK	**Loutraki**	**2.17**	**31**	*e*PN	**Pn**	**18 32 45.8**	**-0.1**
LTK	**Loutraki**	**2.17**	**31**	P	**Pn**	**18 32 46.0**	**+0.1**
NAIG	**Nisos Aigina**	**2.22**	**44**	*e*PN	**Pn**	**18 32 47.2**	**+0.7**
KALE	**Kalithea**	**2.27**	**12**	P	**Pn**	**18 32 48.4**	**+1.1**
KALE	**Kalithea**	**2.27**	**12**	*e*PB	**Pn**	**18 32 48.3**	**+1.0**
KALE	**Kalithea**	**2.27**	**12**	P	**Pn**	**18 32 48.4**	**+1.1**
VAM	**Vamos**	**2.28**	**109**	P	**Pn**	**18 32 47.5**	**+0.2**
VAM	**Vamos**	**2.28**	**109**	*e*PN	**Pn**	**18 32 47.5**	**+0.2**
VAM	**Vamos**	**2.28**	**109**	P	**Pn**	**18 32 47.5**	**+0.2**
EFP	**Efpalio**	**2.28**	**7**	P	**Pn**	**18 32 48.5**	**+1.1**
EFP	**Efpalio**	**2.28**	**7**	*e*PB	**Pn**	**18 32 48.4**	**+1.1**
EFP	**Efpalio**	**2.28**	**7**	P	**Pn**	**18 32 48.5**	**+1.1**
DSF	**Desfina**	**2.38**	**19**	P	**Pn**	**18 32 48.3**	**-0.4**
DSF	**Desfina**	**2.38**	**19**	P	**Pn**	**18 32 48.3**	**-0.4**
GVD	**Gavdhos**	**2.45**	**122**	P	**Pn**	**18 32 51.3**	**+1.6**
GVD	**Gavdhos**	**2.45**	**122**	*e*PN	**Pn**	**18 32 51.5**	**+1.8**
GVD	**Gavdhos**	**2.45**	**122**	P	**Pn**	**18 32 51.3**	**+1.6**
ATH	**Athens Observa**	**2.50**	**43**	*e*PN	**Pn**	**18 32 50.9**	**+0.5**
ATHU	**Athens Univers**	**2.53**	**44**	P	**Pn**	**18 32 51.5**	**+0.7**
ATHU	**Athens Univers**	**2.53**	**44**	P	**Pn**	**18 32 51.5**	**+0.7**
PTL	**Penteli**	**2.64**	**44**	*e*PN	**Pn**	**18 32 52.7**	**+0.4**
LKR	**Lokris**	**2.74**	**24**	P	**Pn**	**18 32 52.7**	**-0.9**
LKR	**Lokris**	**2.74**	**24**	*e*PN	**Pn**	**18 32 53.2**	**-0.4**
LKR	**Lokris**	**2.74**	**24**	P	**Pn**	**18 32 52.7**	**-0.9**
EVR	**Evrytania**	**2.76**	**4**	P	Pn	18 32 57.3	+3.3
EVR	**Evrytania**	**2.76**	**4**	*e*PB	**Pn**	**18 32 56.3**	**+2.3**
IDI	**Anoyia**	**2.85**	**107**	P	**Pn**	**18 32 55.7**	**+0.5**
IDI	**Anoyia**	**2.85**	**107**	*e*PN	**Pn**	**18 32 55.3**	**+0.1**
IDI	**Anoyia**	**2.85**	**107**	P	**Pn**	**18 32 55.7**	**+0.5**
MAKR	**Makrakomi, Fth**	**2.88**	**9**	P	**Pn**	**18 32 57.9**	**+2.2**
MAKR	**Makrakomi, Fth**	**2.88**	**9**	P	**Pn**	**18 32 57.9**	**+2.2**
SIVA	**Sivas**	**2.89**	**112**	*e*PN	**Pn**	**18 32 57.9**	**+2.2**
AGG	**Agios Georgios**	**2.92**	**12**	P	**Pn**	**18 32 56.9**	**+0.7**
AGG	**Agios Georgios**	**2.92**	**12**	*e*PN	**Pn**	**18 32 56.9**	**+0.7**
AGG	**Agios Georgios**	**2.92**	**12**	P	**Pn**	**18 32 56.9**	**+0.7**
THR3	**Thira Island,**	**3.12**	**84**	P	**Pn**	**18 32 57.5**	**-1.3**
THR3	**Thira Island,**	**3.12**	**84**	P	**Pn**	**18 32 57.5**	**-1.3**
APE	**Apeiranthos**	**3.32**	**73**	P	**Pn**	**18 33 00.3**	**-1.4**
APE	**Apeiranthos**	**3.32**	**73**	P	**Pn**	**18 33 00.3**	**-1.4**
LAST	**Lasithi**	**3.34**	**106**	P	**Pn**	**18 33 02.6**	**+0.5**
LAST	**Lasithi**	**3.34**	**106**	*e*PN	**Pn**	**18 33 02.8**	**+0.7**
LAST	**Lasithi**	**3.34**	**106**	P	**Pn**	**18 33 02.6**	**+0.5**
SKIA	**Skiathos**	**3.36**	**26**	P	**Pn**	**18 33 01.9**	**-0.3**
SKIA	**Skiathos**	**3.36**	**26**	P	**Pn**	**18 33 01.9**	**-0.3**
NEO	**Neokhori**	**3.41**	**22**	*e*PN	**Pn**	**18 33 03.8**	**+0.9**
THL	**Klokotos Trika**	**3.42**	**6**	P	**Pn**	**18 33 03.5**	**+0.5**
THL	**Klokotos Trika**	**3.42**	**6**	*e*PN	**Pn**	**18 33 02.9**	**-0.1**
THL	**Klokotos Trika**	**3.42**	**6**	P	**Pn**	**18 33 03.5**	**+0.5**
NPS	**Neapolis**	**3.42**	**104**	*e*PN	**Pn**	**18 33 03.5**	**+0.5**
XOR	**Xorichti**	**3.45**	**22**	P	**Pn**	**18 33 04.1**	**+0.6**
XOR	**Xorichti**	**3.45**	**22**	P	**Pn**	**18 33 04.1**	**+0.6**
IGT	**Igoumenitsa**	**3.50**	**344**	P	**Pn**	**18 33 04.0**	**-0.2**
IGT	**Igoumenitsa**	**3.50**	**344**	P	**Pn**	**18 33 04.0**	**-0.2**
AOS	**Alonnisos**	**3.52**	**31**	P	**Pn**	**18 33 05.1**	**+0.7**
AOS	**Alonnisos**	**3.52**	**31**	*e*PN	**Pn**	**18 33 05.5**	**+1.1**
AOS	**Alonnisos**	**3.52**	**31**	P	**Pn**	**18 33 05.1**	**+0.7**
KEK	**Kerkira**	**3.81**	**339**	P	**Pn**	**18 33 08.6**	**+0.2**
KEK	**Kerkira**	**3.81**	**339**	P	**Pn**	**18 33 08.6**	**+0.2**
ZKR	**Zakros**	**3.94**	**104**	*e*PN	**Pn**	**18 33 12.6**	**+2.5**
KZN	**Kozani**	**4.14**	**2**	*e*PN	**Pn**	**18 33 13.2**	**+0.2**
NEST	**Nestorio**	**4.27**	**355**	P	**Pn**	**18 33 16.1**	**+1.4**
NEST	**Nestorio**	**4.27**	**355**	P	**Pn**	**18 33 16.1**	**+1.4**
PLG	**Polygyros**	**4.46**	**19**	P	**Pn**	**18 33 18.3**	**+0.9**
PLG	**Polygyros**	**4.46**	**19**	*e*PN	**Pn**	**18 33 18.0**	**+0.6**
PLG	**Polygyros**	**4.46**	**19**	P	**Pn**	**18 33 18.3**	**+0.9**
HORT	**Hortiatis**	**4.59**	**15**	P	**Pn**	**18 33 19.1**	**-0.1**
HORT	**Hortiatis**	**4.59**	**15**	P	**Pn**	**18 33 19.1**	**-0.1**
FNA	**Florina**	**4.62**	**358**	P	**Pn**	**18 33 19.6**	**+0.1**
FNA	**Florina**	**4.62**	**358**	*e*PN	**Pn**	**18 33 20.1**	**+0.6**
FNA	**Florina**	**4.62**	**358**	P	**Pn**	**18 33 19.6**	**+0.1**
GRG	**Griva**	**4.83**	**8**	P	**Pn**	**18 33 22.3**	**-0.2**
GRG	**Griva**	**4.83**	**8**	*e*PN	**Pn**	**18 33 22.5**	**0.0**
GRG	**Griva**	**4.83**	**8**	P	**Pn**	**18 33 22.3**	**-0.2**
SOH	**Sokhos**	**4.86**	**16**	P	**Pn**	**18 33 23.4**	**+0.5**
SOH	**Sokhos**	**4.86**	**16**	*e*PN	**Pn**	**18 33 23.5**	**+0.5**
SOH	**Sokhos**	**4.86**	**16**	P	**Pn**	**18 33 23.4**	**+0.5**
KNT	**Kendrikon**	**5.10**	**11**	P	**Pn**	**18 33 26.3**	**+0.1**
KNT	**Kendrikon**	**5.10**	**11**	P	**Pn**	**18 33 26.3**	**+0.1**
SRS	**Serrai**	**5.20**	**17**	P	**Pn**	**18 33 27.4**	**-0.1**
SRS	**Serrai**	**5.20**	**17**	P	**Pn**	**18 33 27.4**	**-0.1**
KAVA	**Kavala**	**5.36**	**25**	P	**Pn**	**18 33 29.7**	**+0.1**
KAVA	**Kavala**	**5.36**	**25**	P	**Pn**	**18 33 29.7**	**+0.1**
NVR	**Nevrokopi**	**5.49**	**18**	P	**Pn**	**18 33 31.6**	**+0.2**
NVR	**Nevrokopi**	**5.49**	**18**	P	**Pn**	**18 33 31.6**	**+0.2**
BARS	**Barje**	**6.65**	**2**	*e*Pn	**Pn**	**18 33 46.4**	**-1.0**
STON	**Ston**	**7.33**	**337**	*i* Pn	**Pn**	**18 33 54.8**	**-2.0**
STON				Sn	Sn	18 35 11.2	-7.9
STON	**Ston**	**7.33**	**337**	*i* Pn	**Pn**	**18 33 54.7**	**-2.0**
GRUS	**Gruza**	**7.75**	**355**	*e*Pn	**Pn**	**18 34 00.6**	**-1.8**
DIVS	**Divibare**	**8.02**	**352**	*e*Pn	**Pn**	**18 34 04.1**	**-2.1**
NVLJ	**Novalja**	**9.82**	**331**	*e*Pn	**Pn**	**18 34 30.2**	**-0.7**
NVLJ				Sn	Sn	18 36 11.2	-9.0
NVLJ	**Novalja**	**9.82**	**331**	*e*Pn	**Pn**	**18 34 30.1**	**-0.7**

IDC 02 18:32:41.1±2.1**, 17°.97S×167°.93E, h0km, mb3.8**/6**, mb1 4.0**/7**, mb1mx3.8**/19**, mbtmp3.8**/7**, ML3.2**/1**, MS3.2**/2**, Ms1 3.2**/2**, ms1mx2.4**/28**, Error ellipse: s-maj=52.0km s-min=27.0km az=112.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.32**	**199**	Pn	Pn	18 33 49.0	+0.8
	1.2nm,0.3s,baz=88,slow=21,SNR=9.4						
DZM				Sn	Sn	18 34 38.4	-1.0
	5.5nm,0.3s,baz=285,slow=23,SNR=7.7						
DZM				LR	LR	18 35 19.2	
	comp=Z,165nm,20.9s,baz=26,slow=37						
CTA	**Charters Tower**	**20.60**	**261**	P	Pn	18 37 23.4	-0.8
	2.0nm,0.4s,baz=92,slow=12,SNR=4.0						
STKA	**Stephens Creek**	**27.52**	**235**	P	P	18 38 30.3	+0.8
	1.0nm,0.7s,baz=77,slow=14,SNR=4.6						
WRA	**Warramunga Arr**	**31.80**	**261**	P	P	18 39 06.5	-1.1
	0.3nm,0.8s,baz=80,slow=6.2,SNR=4.7						
ASAR	**Alice Springs**	**32.26**	**254**	P	P	18 39 10.6	-1.1
	1.3nm,0.8s,baz=81,slow=8.4,SNR=14						
ASAR				LR	LR	18 52 42.4	
	comp=Z,84nm,19.5s,baz=195,slow=37						
CMAR	**Chiang Mai Arr**	**76.85**	**295**	P	P	18 44 36.4	+0.9
	1.1nm,0.8s,baz=135,slow=4.8,SNR=6.2						
SONM	**Songino Array**	**85.46**	**324**	P	P	18 45 20.6	-0.2
	0.5nm,0.9s,baz=134,slow=4.2,SNR=2.7						
ARCES	**ARCESS Array B**	**123.53**	**345**	PKP	PKPdf	18 51 39.1	-0.7
	1.6nm,0.9s,baz=48,slow=1.3,SNR=4.0						

*IDC **02** 18:36:10.4±2.6, 24°.82N×62°.83E, h0km, mb3.8/10, mb1 3.9/10, mb1mx3.6/31, mbtmp3.8/10, MS3.2/2, Ms1 3.2/2, ms1mx2.4/35, Error ellipse: s-maj=57.7km s-min=21.9km az=158.0*
*ISCJB **02** 18:36:15.0±2.2, 25°.2N±0°.3×62°.5E±0°.1, h33km, mb3.6/9, MS3.1/2, Error ellipse: s-maj=45.6km s-min=11.3km az=165.6*

ISC 02 18:36:16.6±2.4**, 25°.0N**±0°.3×**62°.6E**±0°.1**, h35km, n13, σ1s.54**/13**, mb3.7**/9**, Off coast of Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RDF	**Al-Radifah**	**13.97**	**290**	*e*P	**Pn**	**18 39 30.8**	**-1.4**
RDF				AMb	AMB	18 39 33.5	
	comp=Z,11nm,0.8s						
NAY	**Al-Naaiem**	**14.31**	**291**	*e*P	**Pn**	**18 39 35.1**	**-1.6**
NAY				AMb	AMB	18 39 36.9	
	comp=Z,8.1nm,1.3s						
MIB	**Mutribah**	**14.37**	**293**	*e*P	**Pn**	**18 39 35.8**	**-1.7**
MIB				AMb	AMB	18 39 46.2	
	comp=Z,13nm,0.5s						
AAK	**Ala-Archa**	**20.15**	**26**	P	**P**	**18 40 48.2**	**+0.3**
	comp=Z,1.1nm,0.4s,baz=192,slow=2.6,SNR=3.9						
KBZ	**Khabaz**	**24.66**	**324**	P	**P**	**18 41 37.2**	**+3.2**
	comp=Z,3.3nm,0.9s,baz=119,slow=6.0,SNR=7.9						
MKAR	**Makanchi Array**	**26.84**	**31**	P	**P**	**18 41 52.6**	**-1.1**
	comp=Z,2.3nm,1.1s,baz=212,slow=9.7,SNR=11						
KURBB	**Kurchatov Arra**	**28.39**	**22**	P	**P**	**18 42 06.4**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=217,slow=8.9,SNR=6.6						
BVAR	**Borovoye Array**	**28.61**	**10**	P	**P**	**18 42 09.1**	**-0.3**
	comp=Z,0.2nm,0.4s,baz=180,slow=9.4,SNR=3.3						
BVAR				LR	LR	18 55 23.8	
	comp=Z,70nm,18.1s,baz=117,slow=40						
ZALV	**Zalesovo Beam**	**33.34**	**24**	P	**P**	**18 42 49.5**	**-1.5**
	comp=Z,1.5nm,0.6s,baz=224,slow=9.9,SNR=10.0						
ZALV				LR	LR	18 57 48.9	
	comp=Z,24nm,20.0s,baz=86,slow=39						
AKASG	**Malin Array Be**	**36.27**	**324**	P	**P**	**18 43 16.7**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=128,slow=7.8,SNR=4.8						
SONM	**Songino Array**	**41.26**	**45**	P	**P**	**18 43 58.3**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=251,slow=8.7,SNR=5.1						
GERES	**GERESS Array B**	**44.80**	**315**	P	**P**	**18 44 27.9**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=115,slow=4.4,SNR=4.5						
TORD	**Torodi Ar. Bea**	**58.34**	**270**	P	**P**	**18 46 09.1**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=62,slow=5.8,SNR=6.3						

IDC 02 18:41:48.7±24.0**, 24°.80S×179°.39E, h531**km±220km**, mb3.3**/5**, mb1 3.4**/5**, mb1mx3.1**/19**, mbtmp3.3**/5**, Error ellipse: s-maj=161.0km s-min=94.2km az=81.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**30.93**	**272**	P	P	18 47 23.6	+1.1
	4.1nm,0.3s,baz=90,slow=10,SNR=5.6						
STKA	**Stephens Creek**	**33.88**	**249**	P	P	18 47 46.6	-0.7
	1.1nm,0.5s,baz=104,slow=8.0,SNR=6.4						
ASAR	**Alice Springs**	**41.34**	**262**	P	P	18 48 47.9	-0.6
	1.0nm,0.3s,baz=95,slow=7.2,SNR=54						
WRA	**Warramunga Arr**	**41.80**	**267**	P	P	18 48 51.5	-0.5
	1.9nm,0.3s,baz=100,slow=7.1,SNR=78						
FITZ	**Fitzroy Crossi**	**50.21**	**267**	P	P	18 49 56.2	+0.2
	2.3nm,0.6s,baz=117,slow=9.1,SNR=14						
ARCES	**ARCESS Array B**	**132.64**	**348**	PKP	PKPdf	19 00 01.4	-0.9
	0.9nm,0.6s,baz=69,slow=4.9,SNR=3.8						
MMAI	**Mount Meron Ar**	**147.55**	**293**	PKPbc	PKPbc	19 00 33.4	-0.3
	0.5nm,0.3s,baz=84,slow=4.5,SNR=4.3						
BRTR	**Keskin Array B**	**147.66**	**306**	PKPbc	PKPbc	19 00 33.2	-0.6
	0.3nm,0.4s,baz=94,slow=1.4,SNR=3.0						

GUC 02 18:48:42.6±0.9**, 35°.79S×71°.23W, h100km, MD3.5, ML3.0, 2C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CACH	**El Canelo**	**1.74**	**17**	⇓*i*P	Pn	18 49 12.8	+0.7
CACH				*i* S	Sn	18 49 34.7	+0.2
LNV	**Longovilo**	**1.83**	**355**	*e*P	Pn	18 49 15.2	+2.1
LNV				*i* S	Sn	18 49 38.3	+2.1
LMEL	**Las Melosas**	**2.11**	**24**	⇑*i*P	Pn	18 49 17.2	+0.4
LMEL				*i* S	Sn	18 49 45.2	+2.2
LMEL				AML	AML	18 49 49.6	
	comp=N,109nm,0.2s						
RCDM	**Rinconada Maip**	**2.32**	**9**	⇑*i*P	Pn	18 49 19.9	+0.5
RCDM				*i* S	Sn	18 49 47.7	+0.2
RCDM				AML	AML	18 49 49.0	
	comp=E,126nm,0.1s						
FCH	**Farellones**	**2.57**	**18**	⇓*i*P	Pn	18 49 19.2	-3.9
FCH				*i* S	Sn	18 49 51.3	-2.9
FCH				AML	AML	18 49 58.9	
	comp=N,60nm,0.2s						

TAP 02 19:23:51.9, 22°.23N×121°.38E, h8km±1km**, ML2.3, C, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.25**	**141**	P	Pb	19 23 58.0	-0.7
	baz=140						
LAY				S	Sb	19 24 02.5	-0.8
	baz=140						
TAW	**Tawu**	**0.47**	**285**	P	Pb	19 24 01.9	-0.5
	baz=285						
TAW				S	Sb	19 24 09.3	-0.2
	baz=285						
EAST	**Anshuo**	**0.52**	**287**	P	Pb	19 24 03.1	-0.2
	baz=286						
EAST				*e*S	Sb	19 24 11.1	+0.1
	baz=286						
ECL	**Taimali**	**0.54**	**313**	P	Pb	19 24 03.1	-0.5
	baz=312						
ECL				*e*S	Sb	19 24 11.1	-0.4
	baz=312						
TWK1	**Hengchun**	**0.61**	**242**	*e*P	Pb	19 24 04.5	-0.3
	baz=240						
TWK1				*e*S	Sb	19 24 13.1	-0.4
	baz=240						
HEN	**Hengchun**	**0.64**	**249**	*e*S	Sb	19 24 14.7	+0.3
	baz=248						
TWG	**Pinlang**	**0.65**	**334**	*e*P	Pg	19 24 04.7	+0.1
	baz=334						
TWG				*e*S	Sb	19 24 14.7	-0.1
	baz=334						
SCZT	**Fangliau**	**0.72**	**281**	*e*P	Pb	19 24 06.6	-0.1
	baz=280						
SCZT				*e*S	Sb	19 24 17.1	+0.4
	baz=280						
ELDTW	**Lidau**	**1.01**	**341**	*e*P	Pn	19 24 12.3	-0.2
	baz=340						
CHN1	**Nanshi**	**1.23**	**320**	*e*P	Pg	19 24 16.5	+0.8
	baz=320						
CHN1				*e*S	Sn	19 24 32.9	+0.5
	baz=320						
WTP	**Ta-pu**	**1.23**	**325**	*e*P	Pn	19 24 15.4	-0.1
	baz=325						
WTP				*e*S	Sn	19 24 32.5	+0.1
	baz=325						
CHN4	**Tsaushan**	**1.33**	**327**	*e*P	Pb	19 24 17.2	0.0
	baz=326						
CHN4				*e*S	Sg	19 24 35.5	+0.7
	baz=326						
ALS	**Alishan**	**1.38**	**337**	*e*S	Sg	19 24 38.0	+1.0
	baz=337						

TAP 02 19:24:09.9, 23°.38N×120°.95E, h8km, ML1.4, 1C, B, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YUS	**Yu-Shan**	**0.11**	**2**	*e*P	Pg	19 24 13.5	+0.4
	baz=5.0						
YUS				S	Sg	19 24 15.5	+0.1
	baz=5.0						
ALS	**Alishan**	**0.19**	**315**	⇑*i*P	Pg	19 24 14.5	+0.3
	baz=316						
ALS				*e*S	Sg	19 24 19.1	+2.0
	baz=316						
ELDTW	**Lidau**	**0.20**	**161**	*e*P	Pg	19 24 14.9	+0.8
	baz=159						
ELDTW				*e*S	Sg	19 24 18.8	+1.8
	baz=159						
TWF1	**Yuli**	**0.32**	**94**	*e*P	Pb	19 24 17.6	-0.3
	baz=94						
TWF1				*e*S	Sb	19 24 22.9	-0.5
	baz=94						
CHN4	**Tsaushan**	**0.33**	**266**	*e*S	Sb	19 24 22.9	-0.6
	baz=265						
CHN5	**Tsauling**	**0.33**	**312**	P	Pb	19 24 17.6	-0.6
	baz=311						

GUC 02 19:25:29.8±0.6,27.65S×70.16W,h77km±5km,ML3.5, 2C-2D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	Copiapo	0.33	329	⇓iP	Pn	19 25 42.2	+0.2
CPCH				iS	Sn	19 25 51.3	+0.4
CPCH				AML	AML	19 25 53.0	
	comp=N,98μm,0.0s						
CDCH	Caldera	0.82	314	eP	Pn	19 25 46.9	+0.3
CDCH				iS	Sn	19 25 59.4	+0.4
CDCH				AML	AML	19 26 00.6	
	comp=N,742nm,0.1s						
VACH	Vallenar	1.07	210	⇑iP	Pn	19 25 36.0	-14
VACH				iS	Sn	19 25 51.0	-13
LCO	Las Campanas	1.44	199	⇑iP	Pn	19 25 55.2	+0.5
LCO				iS	Sn	19 26 14.7	+1.4
LCO				AML	AML	19 26 15.8	
	comp=N,458nm,0.3s						
TLL	Tololo Astrono	2.58	193	⇓iP	Pn	19 26 10.2	+0.5
TLL				iS	Sn	19 26 41.1	+0.8
TLL				AML	AML	19 26 47.4	
	comp=E,66nm,0.4s						

WEL 02 19:27:59.1±0.5,36.35S×177.79E,h5km,ML4.3/6,Error ellipse: s-maj=3.4km s-min=3.3km az=0.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.28	161	S*	Sg	19 28 37.2	-3.0
MXZ				AML	AML	19 28 49.4	
MXZ				AML	AML	19 29 03.5	
PUZ	Puketiti	1.76	168	PN	Pn	19 28 29.8	-0.5
PUZ				SN	Sn	19 28 52.0	-1.0
PUZ				AML	AML	19 28 54.3	
URZ	Urewera	1.98	196	P*	Pn	19 28 31.1	-2.1
URZ				S*	Sn	19 28 55.7	-2.8
URZ				AML	AML	19 28 57.0	
MKAZ	Moumakai	2.24	249	PN	Pn	19 28 36.0	-0.8
MKAZ				SN	Sn	19 29 03.6	-1.2
TOZ	Tahuroa Road	2.29	232	P*	Pn	19 28 36.5	-1.0
HIZ	Hauiti	3.18	226	PN	Pn	19 28 49.2	-0.6
TRVZ	Turoa	3.43	210	AML	AML	19 29 04.9	

*IDC **02** 19:31:33.0±0.9,31.27N×103.53E,h0km,mb3.7/9, mb1 3.8/11,mb1mx3.6/29,mbtmp3.7/11,ML2.8/2,MS3.0/1, Ms1 3.0/1,ms1mx2.3/38,Error ellipse: s-maj=29.6km s-min=16.7km az=55.0*

*ISCJB **02** 19:31:34.2±0.5,31.32N±0.04×103.44E±0.06,h16km, mb3.7/9,MS2.9/1,Error ellipse: s-maj=8.0km s-min=5.2km az=167.7*

*BJI **02** 19:31:35.0,31.27N×103.23E,h7km,mb3.9/4,ML3.7/19, Ms3.8/9,Ms7 3.4/6*

ISC 02 19:31:35.4±0.7,31.19N±0.04×103.58E±0.06,h16km,n18, σ1.93/27,mb3.7/9,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.32	152	⇑iPg	**Pn**	**19 31 45.1**	**-0.3**
CD2				Sg	**Sn**	**19 31 53.2**	**+1.5**
CD2				smax	smax		
	comp=N,14μm,1.0s						
CD2				smax	smax		
	comp=E,8μm,0.8s						
LZH	Lanzhou	4.89	2	ePn	Pn	19 32 52.1	+3.7
LZH				Pg	Pb	19 33 03.7	+2.9
LZH				Sn	Sb	19 33 51.5	-7.9
LZH				Sg	**Sg**	**19 34 09.9**	**-2.5**
LZH				smax	smax		
	comp=N,97nm,1.1s						
LZH				smax	smax		
	comp=E,120nm,1.2s						
LZH				LR	LR		
	comp=N,510nm,6.0s						
LZH				LR	LR		
	comp=E,1μm,4.5s						
LZH				LR	LR		
	comp=Z,1μm,6.3s						
XAN	Xi'an	5.33	56	Pn	**Pn**	**19 32 56.1**	**+1.8**
XAN				Pg	**Pg**	**19 33 15.6**	**-1.8**
XAN				Sn	**Sn**	**19 33 55.7**	**+0.3**
XAN				Sg	**Sg**	**19 34 24.6**	**-1.8**
XAN				smax	smax		
	comp=N,120nm,0.8s						
XAN				smax	smax		
	comp=E,39nm,0.9s						
KMI	Kunming	6.09	187	Pn	**Pn**	**19 33 06.6**	**+1.6**
KMI				Sn	**Sn**	**19 34 11.9**	**-2.5**
KMI				smax	smax		
	comp=N,35nm,1.9s						
KMI				smax	smax		
	comp=E,24nm,1.6s						
KMI				LR	LR		
	comp=N,250nm,6.4s						
KMI				LR	LR		
	comp=E,890nm,7.9s						
GTA	Gaotai	8.76	340	eP	**Pn**	**19 33 42.9**	**+1.3**
GTA				pP	pP	19 33 47.8	
GTA				sP	sP	19 33 50.5	
GTA				S	**Sn**	**19 35 18.0**	**-2.0**
GTA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GTA				LR	LR		
	comp=N,110nm,9.0s						
GTA				LR	LR		
	comp=E,130nm,6.2s						
GTA				LR	LR		
	comp=Z,140nm,8.1s						
HHC	Hu-ho-hao-te	11.60	32	eP	**Pn**	**19 34 21.5**	**+1.1**
HHC				pP		19 34 24.8	
HHC				sP		19 34 27.8	
HHC				PP	**PnPn**	**19 34 30.9**	**+2.7**
HHC				S	**Sn**	**19 36 31.7**	**+2.1**
HHC				SS	**SnSn**	**19 36 45.8**	**+4.1**
HHC				LR	LR		
	comp=N,280nm,6.7s						
HHC				LR	LR		
	comp=E,210nm,6.3s						
HHC				LR	LR		
	comp=Z,190nm,9.5s						
NJ2	Nanjing	13.04	82	eP	P	19 34 56.1	+5.7
NJ2				S	**S**	**19 37 26.0**	**-4.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				LR	LR		
	comp=N,140nm,15.7s						
NJ2				LR	LR		
	comp=E,190nm,18.2s						
NJ2				LR	LR		
	comp=Z,100nm,16.6s						
CMAR	Chiang Mai Arr	13.35	199	Pn	**Pn**	**19 34 45.8**	**+1.4**
	comp=Z,0.0nm,0.3s,baz=207,slow=30,SNR=3.0						
SONM	Songino Array	16.76	7	Pn	**Pn**	**19 35 29.8**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=191,slow=9.2,SNR=7.6						
KSRS	Korea Array	21.02	66	P	**P**	**19 36 19.6**	**+1.3**
	comp=Z,1.9nm,0.5s,baz=246,slow=10.0,SNR=8.7						
MKAR	Makanchi Array	22.62	320	P	**P**	**19 36 34.6**	**-0.9**
	comp=Z,1.9nm,0.9s,baz=136,slow=13,SNR=7.3						
AAK	Ala-Archa	25.79	304	P	**P**	**19 37 06.0**	**+0.2**
	comp=Z,1.5nm,0.5s,baz=146,slow=8.2,SNR=4.6						
AAK				LR	LR	19 47 38.3	
	comp=Z,38nm,20.3s,baz=256,slow=38						
ZALV	Zalesovo Beam	26.45	335	P	**P**	**19 37 10.5**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=124,slow=10,SNR=5.2						
KURBB	Kurchatov Arra	26.90	323	P	**P**	**19 37 14.9**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=128,slow=9.6,SNR=10.0						
FINES	FINESS Array B	57.25	326	P	**P**	**19 41 20.8**	**-1.0**
	comp=Z,1.9nm,0.8s,baz=104,slow=5.9,SNR=2.7						
WRA	Warramunga Arr	58.79	146	P	**P**	**19 41 33.6**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=337,slow=7.4,SNR=11						
ASAR	Alice Springs	61.80	148	P	**P**	**19 41 54.5**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=332,slow=6.1,SNR=4.4						
ILAR	Eielson Array	69.95	25	P	**P**	**19 42 44.2**	**-1.4**
	comp=Z,0.2nm,0.5s,baz=293,slow=5.9,SNR=4.8						

WEL 02 19:36:40.8±0.7,36.35S×177.76E,h12km,ML4.1/8,1D, Error ellipse: s-maj=4.9km s-min=4.4km az=0.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.29	160	S*	Sb	19 37 18.4	-3.2
MXZ				AML	AML	19 37 30.9	
MXZ				AML	AML	19 37 35.7	
KUZ	Kuaotunu	1.69	256	PN	Pn	19 37 08.8	-1.3
KUZ				SN	Sn	19 37 30.3	-1.3
PUZ	Puketiti	1.77	167	PN	Pn	19 37 10.5	-0.7
PUZ				SN	Sn	19 37 31.9	-1.8
PUZ				AML	AML	19 37 35.1	
URZ	Urewera	1.98	195	P*	Pn	19 37 12.2	-1.9
URZ				S*	Sn	19 37 36.3	-2.5
URZ				AML	AML	19 37 37.9	
MKAZ	Moumakai	2.22	249	⇓PN	Pn	19 37 16.9	-0.4
TOZ	Tahuroa Road	2.27	232	P*	Pn	19 37 17.4	-0.7
BKZ	Black Stump Fm	2.99	199	eP*	Pn	19 37 28.7	+0.6
FWVZ	Far West T-bar	3.39	210	eP*	Pn	19 37 34.5	+0.7
TRVZ	Turoa	3.43	210	AML	AML	19 38 11.4	

IDC 02 19:39:37.4±1.6,19.63N×108.95W,h0km,mb3.7/6, mb1 4.1/7,mb1mx3.9/23,mbtmp3.8/7,ML3.5/1,MS3.0/1, Ms1 3.0/1,ms1mx2.5/33,Error ellipse: s-maj=62.7km s-min=28.6km az=97.0,Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	10.79	25	Pn	Pn	19 42 16.3	+2.9
	0.1nm,0.3s,baz=201,slow=13,SNR=14						
ANMO	Albuquerque	15.42	8	Pn	P	19 43 21.4	0.0
	0.1nm,0.3s,baz=187,slow=11,SNR=3.3						
ANMO				Sn	S	19 46 18.8	-6.1
	0.5nm,0.3s,baz=209,slow=19,SNR=7.8						
PFO	Pinyon Flat Ob	15.45	336	LR	LR	19 48 27.5	
	comp=Z,53nm,19.1s,baz=140,slow=34						
NVAR	Mina Array Bea	20.42	339	P	P	19 44 16.9	+0.3
	2.4nm,0.8s,baz=165,slow=12,SNR=11						
ELK	Elko	21.73	347	P	P	19 44 30.8	+0.2
	1.4nm,0.9s,baz=180,slow=11,SNR=4.1						
PDAR	Pinedale Array	23.08	359	P	P	19 44 45.0	0.0
	0.7nm,0.6s,baz=161,slow=11,SNR=5.5						
YKA	Yellowknife Ar	43.01	356	P	P	19 47 37.4	-0.9
	1.0nm,0.7s,baz=174,slow=7.9,SNR=20						
ILAR	Eielson Array	51.66	340	P	P	19 48 45.8	0.0
	1.7nm,0.6s,baz=147,slow=6.4,SNR=25						
ARCES	ARCESS Array B	85.39	15	P	P	19 52 15.9	-0.5
	1.3nm,0.5s,baz=343,slow=2.5,SNR=10						
WRA	Warramunga Arr	120.79	258	PKP	PKPdf	19 58 32.4	+0.1
	0.4nm,0.5s,baz=78,slow=2.6,SNR=13						
ASAR	Alice Springs	121.85	254	PKP	PKPdf	19 58 34.3	0.0
	0.3nm,0.5s,baz=81,slow=2.1,SNR=7.8						

IDC 02 19:41:50.7±7.2,21.79S×176.35W,h0km,mb4.0/6, mb1 4.2/6,mb1mx3.9/18,mbtmp4.0/6,Error ellipse: s-maj=207.6km s-min=34.1km az=126.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.64	246	P	P	19 49 16.1	+0.1
	0.7nm,0.4s,baz=93,slow=13,SNR=8.1						
ASAR	Alice Springs	45.74	258	P	P	19 50 13.3	-0.8
	2.8nm,0.9s,baz=92,slow=7.8,SNR=8.9						
WRA	Warramunga Arr	45.96	263	P	P	19 50 15.6	-0.2
	0.6nm,0.5s,baz=92,slow=8.5,SNR=15						
MJAR	Matsushiro Arr	72.16	323	P	P	19 53 17.7	+0.4
	0.4nm,0.5s,baz=151,slow=4.8,SNR=4.5						
PETK	Petropavlovsk-	77.91	344	P	P	19 53 49.4	-0.8
	2.0nm,0.9s,baz=124,slow=9.2,SNR=3.7						
CMAR	Chiang Mai Arr	91.99	289	P	P	19 55 02.8	+0.9
	1.5nm,0.9s,baz=107,slow=2.8,SNR=5.1						

WEL 02 19:42:11.1±0.7,36.38S×177.63E,h12km,ML4.2/6,Error ellipse: s-maj=5.0km s-min=4.8km az=0.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.30	156	AML	AML	19 43 42.6	
MXZ				AML	AML	19 43 47.2	
KUZ	Kuaotunu	1.58	256	PN	Pn	19 42 38.1	-0.9
KUZ				SN	Sn	19 42 57.6	-1.7
KUZ				AML	AML	19 43 38.7	
PUZ	Puketiti	1.76	164	PN	Pn	19 42 40.9	-0.6
PUZ				SN	Sn	19 43 01.8	-2.0
PUZ				AML	AML	19 43 06.5	
URZ	Urewera	1.92	192	P*	Pn	19 42 42.4	-1.2
URZ				S*	Sn	19 43 05.3	-2.3
URZ				AML	AML	19 43 15.7	
MWZ	Matawai	1.95	182	P*	Pn	19 42 41.7	-2.4
MWZ				S*	Sn	19 43 06.2	-2.4
MWZ				AML	AML	19 43 29.4	
MKAZ	Moumakai	2.11	249	PN	Pn	19 42 45.9	-0.3
CNGZ	Carnagh Statio	2.15	168	PN	Pn	19 42 46.6	-0.1
TOZ	Tahuroa Road	2.17	231	P*	Pn	19 42 46.2	-0.8
NMHZ	Naumai	2.79	193	PN	Pn	19 42 54.5	-1.2
BKZ	Black Stump Fm	2.92	198	P*	Pn	19 42 57.2	-0.3
BKZ				AML	AML	19 43 53.1	
BKZ				AML	AML	19 43 58.8	
HIZ	Hauiti	3.07	225	PN	Pn	19 42 59.3	-0.1
BHHZ	Black Hill Sta	3.34	201	P*	Pn	19 43 01.8	-1.4

IDC 02 19:43:03.5±5.0,13.07S×73.76W,h0km,mb4.0/1, mb1 3.9/2,mb1mx3.5/21,mbtmp3.9/2,ML3.5/1,MS3.3/1, Ms1 3.3/1,ms1mx2.5/26,Error ellipse: s-maj=196.8km s-min=46.1km az=39.0,Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	6.32	121	Pn	Pn	19 44 38.5	-0.3
	0.5nm,0.3s,baz=304,slow=7.9,SNR=18						
LPAZ				Sn	Sb	19 46 06.0	-6.0
	0.0nm,0.3s,baz=193,slow=17,SNR=1.7						
TXAR	Lajitas Array	51.09	326	LR	LR	20 11 59.7	
	comp=Z,32nm,20.8s,baz=0.0,slow=34						
TORD	Torodi Ar. Bea	79.18	74	P	P	19 55 11.1	+0.1
	1.5nm,1.0s,baz=254,slow=4.7,SNR=6.2						
SONM	Songino Array	145.34	360	PKPbc	PKPbc	20 02 42.5	-0.9
	0.3nm,0.5s,baz=7.7,slow=3.3,SNR=2.9						

IDC 02 19:48:20.8±1.1,2.19S×69.08E,h0km,mb3.7/11, mb1 3.9/11,mb1mx3.7/27,mbtmp3.7/11,MS3.5/7, Ms1 3.5/7,ms1mx3.1/33,Error ellipse: s-maj=30.8km s-min=20.3km az=33.0,Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	31.83	271	LR	LR	20 05 08.0	
	comp=Z,44nm,19.5s,baz=102,slow=32						
CMAR	Chiang Mai Arr	35.84	54	P	P	19 55 24.4	+1.7
	0.4nm,0.8s,baz=231,slow=6.6,SNR=3.9						
MKAR	Makanchi Array	50.15	12	P	P	19 57 17.4	-0.7
	0.6nm,0.8s,baz=212,slow=13,SNR=3.5						
MKAR				LR	LR	20 19 58.3	
	comp=Z,22nm,20.4s,baz=174,slow=38						
KBZ	Khabaz	51.40	336	P	P	19 57 27.5	0.0
	1.7nm,0.8s,baz=149,slow=12,SNR=5.1						
BRTR	Keskin Array B	52.86	326	P	P	19 57 37.2	-1.5
	0.6nm,1.0s,baz=189,slow=8.2,SNR=3.3						
KURBB	Kurchatov Arra	53.23	8	P	P	19 57 39.9	-1.1
	1.3nm,0.9s,baz=205,slow=7.8,SNR=7.8						
ZALV	Zalesovo Beam	57.46	11	P	P	19 58 11.1	-0.4
	0.5nm,0.5s,baz=202,slow=6.2,SNR=3.7						
ZALV				LR	LR	20 24 16.2	
	comp=Z,28nm,18.2s,baz=257,slow=38						
FITZ	Fitzroy Crossi	57.62	110	LR	LR	20 18 23.8	
	comp=Z,63nm,20.6s,baz=130,slow=31						
SONM	Songino Array	59.51	28	P	P	19 58 26.8	+0.7
	1.9nm,0.8s,baz=219,slow=7.1,SNR=12						
SONM				LR	LR	20 24 17.0	
	comp=Z,70nm,21.1s,baz=338,slow=36						
MAW	Mawson	65.43	183	LR	LR	20 20 20.1	
	comp=Z,90nm,18.8s,baz=199,slow=29						
WRA	Warramunga Arr	66.03	111	P	P	19 59 09.6	-0.4
	0.6nm,0.8s,baz=291,slow=5.8,SNR=6.1						
ASAR	Alice Springs	66.11	115	P	P	19 59 09.8	-0.7
	0.4nm,0.6s,baz=283,slow=6.2,SNR=10.0						
TORD	Torodi Ar. Bea	68.55	285	P	P	19 59 27.4	+1.4
	1.3nm,1.1s,baz=88,slow=3.6,SNR=4.2						
ARCES	ARCESS Array B	77.34	346	LR	LR	20 35 00.0	
	comp=Z,22nm,20.9s,baz=64,slow=36						
ESDC	Sonseca Array	78.42	311	P	P	20 00 24.5	+0.7
	0.3nm,0.4s,baz=88,slow=4.8,SNR=6.4						

IDC 02 19:57:07.0±14.0,18.01S×167.18E,h0km,mb3.6/3, mb1 3.7/4,mb1mx3.5/19,mbtmp3.6/4,ML3.0/1,Error ellipse: s-maj=243.9km s-min=39.3km az=70.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.09	190	Pn	Pn	19 58 10.4	-0.7
	1.0nm,0.3s,baz=167,slow=22,SNR=8.2						
DZM				Sn	Sn	19 58 58.8	-1.1
	2.7nm,0.3s,baz=105,slow=19,SNR=8.4						
STKA	Stephens Creek	26.91	234	P	P	20 02 51.7	+1.8
	1.6nm,0.9s,baz=62,slow=8.7,SNR=3.2						
WRA	Warramunga Arr	31.09	261	P	P	20 03 26.0	-1.3
	0.5nm,0.9s,baz=86,slow=7.7,SNR=3.2						
ASAR	Alice Springs	31.55	254	P	P	20 03 31.8	+0.3
	0.7nm,0.7s,baz=77,slow=9.0,SNR=5.1						

IDC 02 20:02:47.6±6.2,10.25S×122.76E,h0km,mb3.8/1, mb1 3.7/4,mb1mx3.4/20,mbtmp3.5/4,ML3.1/3,Error ellipse: s-maj=110.9km s-min=69.4km az=72.0,Savu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	8.29	161	Pn	Pn	20 04 50.7	+1.6
	0.1nm,0.3s,baz=340,slow=12,SNR=8.4						
FITZ				Sn	Sn	20 06 22.4	-1.1
	0.6nm,0.3s,baz=183,slow=15,SNR=11						
WRA	Warramunga Arr	14.75	132	Pn	Pn	20 06 18.6	+0.9
	0.2nm,0.3s,baz=306,slow=15,SNR=12						
WRA				Sn	Sn	20 09 00.8	-1.2
	0.1nm,0.3s,baz=283,slow=21,SNR=5.4						
ASAR	Alice Springs	17.06	143	Pn	P	20 06 49.5	-0.2
	0.1nm,0.3s,baz=321,slow=14,SNR=11						
STKA	Stephens Creek	27.69	144	P	P	20 08 36.7	-0.9
	0.7nm,0.5s,baz=314,slow=11,SNR=5.1						

WEL 02 20:10:31.6±0.7,36.35S×177.85E,h12km,ML4.1/6,Error ellipse: s-maj=5.2km s-min=3.8km az=90.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.27	163	S*	Sb	20 11 07.1	-4.6
MXZ				AML	AML	20 11 31.7	
PUZ	Puketiti	1.75	169	PN	Pn	20 11 02.0	+0.2
PUZ				SN	Sn	20 11 23.1	-1.0
PUZ				AML	AML	20 11 27.9	
KUZ	Kuaotunu	1.76	256	PN	Pn	20 11 00.8	-1.0
KUZ				SN	Sn	20 11 22.2	-1.9
KUZ				AML	AML	20 11 23.5	
URZ	Urewera	2.00	197	P*	Pn	20 11 04.0	-1.1
URZ				S*	Sn	20 11 27.5	-2.5
URZ				AML	AML	20 11 36.6	
MWZ	Matawai	2.00	187	P*	Pn	20 11 03.3	-1.9
MWZ				S*	Sn	20 11 27.4	-2.9
MWZ				AML	AML	20 11 47.8	
MKAZ	Moumakai	2.28	250	PN	Pn	20 11 08.7	-0.3
TOZ	Tahuroa Road	2.33	233	P*	Pn	20 11 08.8	-0.9
BKZ	Black Stump Fm	3.01	200	P*	Pn	20 11 18.7	-0.5
BKZ				AML	AML	20 12 06.9	
BKZ				AML	AML	20 12 09.5	
HIZ	Hauiti	3.21	227	PN	Pn	20 11 21.5	-0.4

WEL 02 20:20:59.2±0.7,36.31S×177.73E,h5km,ML4.0/7,1D, Error ellipse: s-maj=5.1km s-min=5.0km az=0.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZ	Kuaotunu	1.68	254	⇓PN	Pn	20 21 28.2	-1.0
KUZ				SN	Sn	20 21 49.4	-1.6
KUZ				AML	AML	20 21 52.2	
PUZ	Puketiti	1.81	167	PN	Pn	20 21 29.9	-1.2
PUZ				eSN	Sn	20 21 53.9	-0.7
PUZ				AML	AML	20 21 58.2	
URZ	Urewera	2.01	194	P*	Pn	20 21 31.5	-2.3
URZ				eS*	Sn	20 21 55.1	-4.2
URZ				AML	AML	20 21 56.6	
MWZ	Matawai	2.03	184	P*	Pn	20 21 33.3	-0.8
MWZ				S*	Sn	20 21 54.8	-5.2
MKAZ	Moumakai	2.21	248	PN	Pn	20 21 36.2	-0.3
TOZ	Tahuroa Road	2.28	231	P*	Pn	20 21 36.5	-1.0
HIZ	Hauiti	3.18	225	PN	Pn	20 21 49.5	-0.4
HIZ				eSN	Sn	20 22 26.3	-1.8
FWVZ	Far West T-bar	3.41	210	P*	Pn	20 21 53.5	+0.1
TRVZ	Turoa	3.45	209	AML	AML	20 22 02.0	

MEX 02 20:23:21.0±0.7,17.28N×95.40W,h118km±8km,MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	Tuzandepetl	1.20	51	iP	Pn	20 23 44.0	-0.8
TUIG				iS	Sn	20 24 01.3	-1.6
OXBJ	Oaxaca	1.28	261	iP	Pn	20 23 45.5	-0.6
OXBJ				iS	Sn	20 24 02.5	-2.5
HUIG	Huatulco	1.65	204	iP	Pn	20 23 48.5	-1.6
HUIG				eS	Sn	20 24 10.6	-1.6
PANG	Puerto Angel	1.91	213	iP	Pn	20 23 51.7	-1.5
PANG				iS	Sn	20 24 16.9	-0.8
TPIG	Tehuac#an	2.18	302	iP	Pn	20 23 55.1	-1.7
TPIG				iS	Sn	20 24 22.1	-2.2
TGIG		2.24	103	eP	Pn	20 23 55.8	-1.7
TGIG				iS	Sn	20 24 22.7	-2.6
TGBT	Tuxtla Gutierr	2.27	102	iP	Pn	20 23 55.9	-1.8
LVIG	Laguna Verde	2.61	339	eP	Pn	20 24 00.7	-1.5
LVIG				iS	Sn	20 24 31.9	-1.9
PCIG		2.62	126	eP	Pn	20 24 01.9	-0.3
PCIG				eS	Sn	20 24 32.0	-1.9
PNIG	Pinotepa	2.75	252	iP	Pn	20 24 02.6	-1.5
PNIG				iS	Sn	20 24 36.2	-1.0
CCIG	Comitan	3.28	107	eP	Pn	20 24 10.5	-0.7
CCIG				iS	Sn	20 24 47.4	-2.6
YAIG	Yautepec	3.82	295	iP	Pn	20 24 17.9	-0.5
YAIG				iS	Sn	20 25 00.9	-1.9
THIG		3.83	128	iS	Sn	20 25 00.4	-2.2
CAIG	El Cayaco	4.66	268	iP	Pn	20 24 28.8	-0.5
CAIG				iS	Sn	20 25 21.0	-1.4
ARIG	Puente Sto Nin	4.81	283	iP	Pn	20 24 33.4	+1.9
ARIG				iS	Sn	20 25 24.6	-1.7

NNC 02 20:40:08.9±0.8,42.64N×80.48E,h0km,mb3.5,mpv3.1, 5C-5D,Error ellipse: s-maj=8.9km s-min=3.8km az=150.0,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	Almaty	2.64	284	⇑Pn	Pn	20 40 52.8	-0.1
	24nm,0.6s						
KNDC				⇑Lg	Lg	20 41 33.2	
	54nm,0.7s						
MK31	Makanchi Array	4.35	17	Pn	Pn	20 41 16.5	+0.2
	0.5nm,0.3s,baz=196,slow=12,SNR=58						
MK31				⇑Sn	Sn	20 42 08.7	+1.1
	1.3nm,0.5s,baz=193,slow=20,SNR=5.0						
MK31				⇓Lg	Lg	20 42 27.0	
	3.5nm,0.7s,baz=192,slow=28,SNR=4.8						
KK31	Karatay Array	7.34	277	⇓Pg	Pb	20 42 22.5	+5.4
	0.4nm,0.6s,baz=94,slow=16,SNR=4.5						
KK31				⇑Lg	Lg	20 44 01.0	
	1.3nm,0.7s,baz=92,slow=25,SNR=5.8						
KURBB	Kurchatov Arra	8.09	351	⇑Pg	Pb	20 42 36.4	+6.5
	1.3nm,0.9s						
KURBB				⇓Lg	Lg	20 44 25.6	
	7.1nm,0.7s						
KURK	Kurchatov	8.18	352	⇓Pg	Pb	20 42 36.9	+5.6
	1.9nm,1.4s						
KURK				⇓Lg	Lg	20 44 28.1	
	3.1nm,1.0s						

WEL 02 20:46:39.2±0.7,36.43S×177.77E,h5km,ML3.9/4,Error ellipse: s-maj=5.6km s-min=4.2km az=0.0,Off east coast of North Island

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.22	159	P*	Pg	20 46 59.1	-3.5
MXZ				AML	AML	20 48 12.6	
MXZ				AML	AML	20 48 14.0	
PUZ	Puketiti	1.69	167	PN	Pn	20 47 09.1	-0.4
PUZ				AML	AML	20 47 37.9	
PUZ				AML	AML	20 47 43.2	
URZ	Urewera	1.90	196	P*	Pn	20 47 10.2	-2.1
URZ				S*	Sn	20 47 33.8	-3.0
URZ				AML	AML	20 47 37.1	
MWZ	Matawai	1.92	186	P*	Pn	20 47 10.1	-2.5
MWZ				AML	AML	20 47 50.7	
MWZ				AML	AML	20 47 51.1	
MKAZ	Moumakai	2.20	251	PN	Pn	20 47 15.4	-0.9
TOZ	Tahuroa Road	2.23	234	P*	Pn	20 47 15.8	-1.0
HIZ	Hauiti	3.12	227	PN	Pn	20 47 28.6	-0.4
FWVZ	Far West T-bar	3.33	211	P*	Pn	20 47 30.4	-1.8

*IDC **02** 20:58:16.6±2.9, 36°.51S×178°.10E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.7/17, mbtmp3.8/4, MS3.5/6, Ms1 3.5/6, ms1mx3.2/28, Error ellipse: s-maj=55.1km s-min=26.1km az=69.0*

*ISCJB **02** 20:58:17.9±1.0, 36°.52S±0°.06×177°.73E±0°.08, h5km, mb3.7/4, MS3.6/4, Error ellipse: s-maj=10.7km s-min=5.9km az=137.7*

*NEIC **02** 20:58:17.6, 36°.27S×177°.79E, h6km, mb4.0/2, ML4.5(WEL), After WEL.*

*WEL **02** 20:58:19.2±1.0, 36°.43S×177°.72E, h5km, ML4.3/7, Error ellipse: s-maj=7.8km s-min=6.0km az=0.0*

ISC 02 20:58:19.3±1.3, 36°.51S±0°.08×177°.69E±0°.08, h5km, n41, σ1s.22/41, mb3.7/4, MS3.6/4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.16	155	eP*	Pg	20 58 38.5	-3.1
MXZ				S*	Sg	20 58 53.2	-3.5
MXZ				AML	AML	20 59 56.2	
MXZ				AML	AML	20 59 56.3	
MXZ				AML	AML	20 59 59.1	
KUZ	Kuaotunu	1.60	261	PN	Pn	20 58 47.3	-1.0
KUZ				SN	Sn	20 59 09.2	-0.1
KUZ				AML	AML	20 59 09.4	
KUZ	Kuaotunu	1.60	261	Pn	Pn	20 58 47.3	-1.0
KUZ				Sn	Sn	20 59 08.7	-0.6
PUZ	Puketiti	1.62	164	PN	Pn	20 58 49.1	+0.5
PUZ				AML	AML	20 59 14.3	
PUZ				AML	AML	20 59 16.2	
PUZ	Puketiti	1.62	164	Pn	Pn	20 58 49.1	+0.5
URZ	Urewera	1.81	195	P*	Pn	20 58 50.3	-0.8
URZ				AML	AML	20 59 24.3	
URZ				AML	AML	20 59 30.1	
URZ	Urewera	1.81	195	ePn	Pn	20 58 50.0	-1.1
URZ				Sn	Sn	20 59 15.1	+0.7
URZ				eSn	Sb	20 59 15.3	-0.5
URZ	Urewera	1.81	195	Pn	Pn	20 58 49.8	-1.3
	36nm,0.3s,baz=284,slow=0.8,SNR=16						
URZ				Sn	Sn	20 59 15.1	+0.7
	49nm,0.3s,baz=151,slow=19,SNR=10.0						
URZ				LR	LR	20 59 44.1	
	comp=Z,464nm,20.8s,baz=163,slow=46						
MWZ	Matawai	1.82	184	P*	Pn	20 58 50.7	-0.7
MWZ				AML	AML	20 59 21.0	
MWZ				AML	AML	20 59 43.5	
MWZ	Matawai	1.82	184	P*	Pn	20 58 50.2	-1.2
CNGZ	Carnagh Statio	2.01	168	PN	Pn	20 58 54.5	+0.6
CNGZ	Carnagh Statio	2.01	168	Pn	Pn	20 58 54.5	+0.6
MKAZ	Moumakai	2.11	253	PN	Pn	20 58 55.2	-0.1
MKAZ				AML	AML	20 59 44.7	
MKAZ	Moumakai	2.11	253	Pn	Pn	20 58 55.2	-0.1
TOZ	Tahuroa Road	2.13	235	P*	Pn	20 58 55.7	+0.1
TOZ	Tahuroa Road	2.13	235	P*	Pn	20 58 55.7	+0.1
NMHZ	Naumai	2.68	195	ePN	Pn	20 59 03.3	+0.2
NMHZ	Naumai	2.68	195	ePn	Pn	20 59 05.3	+2.2
BKZ	Black Stump Fm	2.82	199	P*	Pn	20 59 05.7	+0.6
BKZ				AML	AML	20 59 43.0	
BKZ	Black Stump Fm	2.82	199	P*	Pn	20 59 07.2	+2.1
HIZ	Hauiti	3.01	228	PN	Pn	20 59 08.6	+0.8
HIZ	Hauiti	3.01	228	Pn	Pn	20 59 08.6	+0.8
MCHZ	McNeill Hill	3.03	195	PN	Pn	20 59 10.2	+2.3
MCHZ	McNeill Hill	3.03	195	Pn	Pn	20 59 10.2	+2.3
FWVZ	Far West T-bar	3.22	211	P*	Pn	20 59 11.2	+0.5
FWVZ	Far West T-bar	3.22	211	P*	Pn	20 59 14.2	+3.5
KAHZ	Kahuranaki	3.34	191	Pn	Pn	20 59 12.9	+0.7
SNZO	South Karori	5.33	205	ePn	Pn	20 59 34.4	-5.1
SNZO				eSn	Sn	21 00 42.2	+1.1
RPZ	Rata Peaks	8.81	213	LR	LR	21 04 08.7	
	comp=Z,135nm,21.6s,baz=163,slow=39						
DZM	Mont Dzumac	17.39	323	LR	LR	21 07 22.6	
	comp=Z,283nm,18.9s,baz=232,slow=31						
STKA	Stephens Creek	30.10	268	P	P	21 04 31.4	+1.5
	1.1nm,1.2s						
STKA	Stephens Creek	30.10	268	P	P	21 04 32.1	+2.3
	1.3nm,0.8s,baz=85,slow=11,SNR=2.8						
AS31	Alice Springs	39.67	276	eP	P	21 05 52.3	-0.2
ASAR	Alice Springs	39.67	276	P	P	21 05 52.5	+0.1
ASAR	Alice Springs	39.67	276	P	P	21 05 52.5	+0.1
	1.5nm,0.8s,baz=121,slow=8.3,SNR=13						
ASAR				LR	LR	21 21 56.1	
	comp=Z,49nm,20.1s,baz=213,slow=36						
WRA	Warramunga Arr	41.24	282	P	P	21 06 05.6	+0.1
WRA	Warramunga Arr	41.24	282	P	P	21 06 05.6	+0.1
	1.1nm,1.1s,baz=120,slow=7.9,SNR=6.2						
VNDA	Vanda	41.68	185	LR	LR	21 18 55.7	
	comp=Z,71nm,20.1s,baz=10,slow=30						
QSPA	South Pole Qui	53.61	180	eP	P	21 07 41.0	-0.4
	4.8nm,1.2s						
QSPA	South Pole Qui	53.61	180	P	P	21 07 39.6	-1.8
	0.8nm,0.7s,baz=344,slow=10,SNR=5.8						
QSPA				LR	LR	21 26 29.1	
	comp=Z,84nm,19.4s,baz=74,slow=32						
MJAR	Matsushiro Arr	81.40	329	LR	LR	21 40 51.0	
	comp=Z,26nm,19.8s,baz=255,slow=31						

*ISCJB **02** 21:03:48.2±1.1, 36°.52S±0°.06×177°.78E±0°.09, h5km, mb3.8/5, Error ellipse: s-maj=11.8km s-min=6.6km az=147.6*

*IDC **02** 21:03:48.4±2.8, 36°.55S×177°.91E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/17, mbtmp3.9/4, Error ellipse: s-maj=55.6km s-min=24.6km az=67.0*

*NEIC **02** 21:03:48.5, 36°.19S×177°.87E, h9km, mb3.9/2, ML4.4(WEL), After WEL.*

*WEL **02** 21:03:52.1±0.9, 36°.56S×177°.70E, h5km, ML4.2/7, Error ellipse: s-maj=6.6km s-min=5.5km az=0.0*

ISC 02 21:03:50.1±1.5, 36°.54S±0°.09×177°.77E±0°.09, h5km, n28, σ1s.28/31, mb3.9/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.11	158	S*	Sg	21 04 24.7	-1.2
MXZ				AML	AML	21 05 24.1	
MXZ				AML	AML	21 05 24.1	
PUZ	Puketiti	1.58	166	PN	Pn	21 04 20.3	+1.4
PUZ				SN	Sg	21 04 43.0	+2.0
PUZ				AML	AML	21 04 46.0	
PUZ	Puketiti	1.58	166	Pn	Pn	21 04 20.4	+1.6
URZ	Urewera	1.80	197	Pn	Pn	21 04 21.3	-0.5
URZ				Sn	Sn	21 04 44.2	-0.8
URZ	Urewera	1.80	197	Pn	Pn	21 04 21.3	-0.5
	30nm,0.3s,baz=15,slow=10,SNR=15						
URZ				Sn	Sn	21 04 44.2	-0.8
	40nm,0.3s,baz=18,slow=20,SNR=14						
MWZ	Matawai	1.81	186	P*	Pn	21 04 21.5	-0.5
MWZ				S*	Sn	21 04 43.5	-1.8
MWZ				AML	AML	21 05 05.6	
MWZ	Matawai	1.81	186	P*	Pn	21 04 21.4	-0.5
MKAZ	Moumakai	2.17	254	PN	Pn	21 04 26.8	0.0
MKAZ				SN	Sn	21 04 52.9	-1.2
MKAZ	Moumakai	2.17	254	Pn	Pn	21 04 26.8	0.0
MKAZ				Sn	Sn	21 04 54.9	+0.8
TOZ	Tahuroa Road	2.17	236	P*	Pn	21 04 27.1	+0.2
TOZ	Tahuroa Road	2.17	236	P*	Pn	21 04 27.1	+0.2
NMHZ	Naumai	2.67	196	ePN	Pn	21 04 34.9	+1.0
NMHZ	Naumai	2.67	196	ePn	Pb	21 04 37.9	-0.6
HIZ	Hauiti	3.05	229	PN	Pn	21 04 40.0	+1.0
HIZ	Hauiti	3.05	229	Pn	Pn	21 04 40.0	+1.0
FWVZ	Far West T-bar	3.23	212	eP*	Pn	21 04 44.9	+3.2
FWVZ	Far West T-bar	3.23	212	eP*	Pn	21 04 45.9	+4.2
PKVZ	Pokaka	3.35	214	eP*	Pn	21 04 45.4	+2.1
PKVZ	Pokaka	3.35	214	eP*	Pn	21 04 45.4	+2.1
STKA	Stephens Creek	30.16	268	P	P	21 09 58.4	-2.7
STKA	Stephens Creek	30.16	268	P	P	21 10 02.5	+1.4
	2.0nm,0.8s,baz=70,slow=9.7,SNR=3.2						
ASAR	Alice Springs	39.74	276	P	P	21 11 23.9	+0.1
ASAR	Alice Springs	39.74	276	P	P	21 11 23.9	+0.1
	2.8nm,0.9s,baz=121,slow=7.9,SNR=19						
WRAB	Tennant Creek	41.30	282	eP	P	21 11 34.5	-2.3
	1.3nm,0.7s						
WRA	Warramunga Arr	41.31	282	P	P	21 11 35.6	-1.2
WRA	Warramunga Arr	41.31	282	P	P	21 11 35.6	-1.2
	1.0nm,1.0s,baz=121,slow=7.9,SNR=4.3						
QSPA	South Pole Qui	53.59	180	eP	P	21 13 11.7	-0.2
	1.2nm,0.8s						
QSPA	South Pole Qui	53.59	180	P	P	21 13 10.8	-1.1
	1.2nm,1.0s,baz=95,slow=3.9,SNR=3.7						

*ISK **02** 21:07:36.7, 37°.22N×28°.81E, h14km, MD2.6*

*ISCJB **02** 21:07:37.7±0.5, 37°.20N±0°.04×28°.78E±0°.03, h4km±11km, Error ellipse: s-maj=6.8km s-min=4.2km az=5.8*

*CSEM **02** 21:07:37.7±0.2, 37°.20N×28°.79E, h10km, MD3.0, Error ellipse: s-maj=6.4km s-min=4.3km az=10.0*

*DDA **02** 21:07:38.2, 37°.12N×28°.78E, h17km, MD3.0*

ISC 02 21:07:37.9±0.9, 37°.22N±0°.03×28°.79E±0°.02, h14km±9km, n23, σ1s.07/35, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TURN	Turunc	0.37	203	i P	Pn	21 07 48.2	-0.6
TURN				i S	Sn	21 07 55.8	0.0
YER	Yerkesik	0.41	259	ePG	Pg	21 07 45.6	-0.6
YER				eSG	Sg	21 07 52.0	+0.2
YER	Yerkesik	0.41	259	ePg	Pg	21 07 45.6	-0.6
YER				eSg	Sg	21 07 52.0	+0.2
DNZL	Cakiroluk	0.52	24	i P	Pg	21 07 48.8	+0.6
DNZL				i S	Sg	21 07 56.7	+1.5
DNZL	Cakiroluk	0.52	24	i P	Pg	21 07 48.8	+0.6
DNZL				i S	Sg	21 07 56.7	+1.5
DENT	Denizli	0.57	20	ePG	Pg	21 07 48.2	-1.0
DENT	Denizli	0.57	20	ePg	Pg	21 07 48.2	-1.0
GLHS	Glhisar (BURDU	0.57	96	ePG	Pg	21 07 47.9	-1.3
GLHS				eSG	Sg	21 07 56.4	-0.4
GLHS	Glhisar (BURDU	0.57	96	ePg	Pg	21 07 47.9	-1.3
GLHS				eSg	Sg	21 07 56.4	-0.4
GOLH	Golhisar	0.62	88	i P	Pg	21 07 50.2	+0.1
GOLH				i S	Sb	21 07 59.8	+0.7
GOLH	Golhisar	0.62	88	i P	Pg	21 07 50.2	+0.1
GOLH				i S	Sb	21 07 59.8	+0.7
FETY	Fethiye	0.63	158	ePG	Pb	21 07 49.4	-1.2
FETY	Fethiye	0.63	158	ePg	Pb	21 07 49.4	-1.2
MLSB	Milas	0.81	276	ePG	Pb	21 07 53.5	-0.3
MLSB	Milas	0.81	276	ePg	Pb	21 07 53.5	-0.3
AYDN	Tasoluk	0.85	302	i P	Pb	21 07 54.6	+0.2
AYDN				i S	Sb	21 08 06.1	+0.4
AYDN	Tasoluk	0.85	302	i P	Pb	21 07 54.6	+0.2
AYDN				i S	Sb	21 08 06.1	+0.4
ELL	Elmali	1.01	117	ePG	Pb	21 07 56.4	-0.9
ELL	Elmali	1.01	117	ePg	Pb	21 07 56.4	-0.9
AKAS	Kas	1.18	146	i P	Pg	21 08 02.0	+1.3
AKAS				i S	Sg	21 08 19.8	+3.7
AKAS	Kas	1.18	146	i P	Pg	21 08 02.0	+1.3
BODT	Bodrum	1.19	263	ePN	Pn	21 07 59.6	-0.5
BODT	Bodrum	1.19	263	ePn	Pn	21 07 59.6	-0.5

*ISCJB **02** 21:09:51.6±1.0, 47°.00N±0°.06×90°.0E±0°.1, h10km, mb3.5/1, Error ellipse: s-maj=11.8km s-min=6.3km az=146.2*

*NNC **02** 21:09:54.2±1.0, 47°.25N×90°.05E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=8.9km s-min=8.0km az=16.0*

*BJI **02** 21:09:54.0, 46°.72N×90°.08E, h7km, ML3.5/8*

ISC 02 21:09:53.1±1.4, 46°.96N±0°.09×90°.26E±0°.10, h10km, n12, σ2s.05/20, 16C-9D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	3.62	211	Pn	Pn	21 10 48.2	-1.1
WMQ				Sn	Sn	21 11 29.8	-2.3
WMQ				smax	smax		
	comp=N,300nm,0.5s						
WMQ				smax	smax		
	comp=E,230nm,0.9s						
MK31	Makanchi Array	5.46	271	⇓Pn	Pn	21 11 14.3	-0.2
	comp=E,0.4nm,0.2s,baz=92,slow=13,SNR=62						
MK31				⇑Pg	Pb	21 11 31.7	+3.1
	comp=E,2.8nm,0.3s,baz=132,slow=9.4,SNR=10						
MK31				⇓Sn	Sn	21 12 19.0	+1.5
	comp=E,3.9nm,0.5s						
MK31				⇑Lg	Lg	21 12 41.9	
	comp=E,22nm,0.7s,baz=85,slow=29,SNR=5.5						
KURK	Kurchatov	8.54	300	⇓Pn	Pn	21 11 56.0	-0.7
	comp=E,6.0nm,0.9s						
KURK				⇑Sn	Sn	21 13 30.5	-2.6
	comp=E,5.6nm,0.6s						
KURK				⇑Lg	Lg	21 14 17.0	
	comp=E,39nm,1.2s						
KURBB	Kurchatov Arra	8.56	300	⇑Pn	Pn	21 11 56.6	-0.4
	comp=E,3.4nm,0.6s						
KURBB				⇓Sn	Sn	21 13 31.7	-1.9
	comp=E,12nm,0.6s						
KURBB				⇓Lg	Lg	21 14 17.7	
	comp=E,36nm,0.6s						
VOSK	Vostochnaya	13.69	302	⇑Pn	Pn	21 13 06.4	-0.8
	comp=E,0.7nm,0.5s						
VOSK				⇑Sn	Sn	21 15 36.7	-2.5
	comp=E,2.3nm,0.8s						
VOSK				⇑Lg	Lg	21 17 00.4	
	comp=E,5.0nm,0.9s						
BVA0	Borovoye Array	14.12	303	⇑Pn	Pn	21 13 12.2	-0.8
	comp=E,1.6nm,0.7s,baz=101,slow=15,SNR=14						
BVA0				⇓Sn	Sn	21 15 47.0	-2.7
	comp=E,3.2nm,1.1s,baz=97,slow=22,SNR=6.3						
BVA0				⇑Lg	Lg	21 17 14.2	
	comp=E,3.0nm,1.1s,baz=113,slow=24,SNR=3.6						
BRVK	Borovoye	14.19	303	⇑Pn	Pn	21 13 13.2	-0.8
	comp=E,2.6nm,0.6s						
BRVK				⇑Sn	Sn	21 15 48.6	-2.8
	comp=E,2.5nm,0.7s						
BRVK				⇑Lg	Lg	21 17 17.3	
	comp=E,4.5nm,1.1s						
KK31	Karatay Array	14.48	262	Pn	Pn	21 13 18.4	+0.5
	comp=E,0.1nm,0.2s,baz=63,slow=13,SNR=4.9						
KK31				⇑Lg	Lg	21 17 30.8	
	comp=E,1.4nm,0.8s						
ZRNK	Zerenda	14.91	302	⇓Pn	Pn	21 13 22.6	-1.1
	comp=E,0.8nm,0.4s						
ZRNK				⇑Sn	Sn	21 16 06.0	-2.7
	comp=E,1.1nm,0.7s						
ZRNK				⇓Lg	Lg	21 17 39.9	
	comp=E,3.8nm,1.1s						
HHC	Hu-ho-hao-te	16.50	104	eP	Pn	21 13 44.9	+0.2
AB31	Akbulak array	20.31	288	⇓Pn	Pn	21 14 30.5	-0.4
	comp=E,0.8nm,0.7s,baz=82,slow=9.9,SNR=6.9						
AKTO	Aktyubinsk	21.47	291	⇑Pn	P	21 14 44.7	+3.3
	comp=E,2.7nm,1.2s						

WEL 02 21:11:33.0±0.8, 36°.41S×177°.79E, h5km, ML4.1/4, 1D, Error ellipse: s-maj=5.4km s-min=5.1km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.23	160	P*	Pg	21 11 54.1	-2.4
MXZ				eS*	Sg	21 12 08.3	-4.2
MXZ				eS*	Sb	21 12 08.3	-4.5
KUZ	Kuaotunu	1.70	258	⇓PN	Pn	21 12 02.1	-1.2
KUZ				SN	Sn	21 12 23.7	-1.8
PUZ	Puketiti	1.70	167	ePN	Pn	21 12 03.2	-0.2
PUZ				eSN	Sn	21 12 24.2	-1.5
PUZ				AML	AML	21 12 29.3	
URZ	Urewera	1.93	196	P*	Pn	21 12 05.3	-1.2
URZ				S*	Sn	21 12 27.6	-3.5
URZ				AML	AML	21 12 39.2	
MKAZ	Moumakai	2.22	251	PN	Pn	21 12 10.2	-0.3
MKAZ				SN	Sn	21 12 35.5	-2.8
TOZ	Tahuroa Road	2.26	234	P*	Pn	21 12 10.6	-0.4

WEL 02 21:18:04.9±1.0, 36°.37S×177°.74E, h5km, ML4.0/5, Error ellipse: s-maj=7.7km s-min=6.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	1.75	166	PN	Pn	21 18 35.6	-0.3
PUZ				SN	Sn	21 18 57.3	-1.3
PUZ				AML	AML	21 19 00.9	
URZ	Urewera	1.95	195	P*	Pn	21 18 36.9	-1.7
URZ				S*	Sn	21 19 00.9	-2.6
URZ				AML	AML	21 19 02.6	
MWZ	Matawai	1.97	185	P*	Pn	21 18 37.2	-1.8
MWZ				S*	Sn	21 19 00.8	-3.3
MWZ				AML	AML	21 19 07.7	
MKAZ	Moumakai	2.19	250	PN	Pn	21 18 41.6	-0.4
TOZ	Tahuroa Road	2.25	232	P*	Pn	21 18 42.0	-0.7
HIZ	Hauiti	3.14	226	PN	Pn	21 18 52.1	-2.9

IDC 02 21:26:36.4±3.4, 16°.41N×85°.29W, h0km, mb3.5/3, mb1 4.0/4, mb1mx3.6/23, mbtmp3.7/4, ML4.1/1, Error ellipse: s-maj=125.8km s-min=43.1km az=40.0, North of Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG	Tepich	4.74	324	Pn	Pn	21 27 50.5	+1.5
	8.3nm,0.3s,baz=170,slow=0.4,SNR=39						
TEIG				Sn	Sn	21 28 45.8	+1.1
	7.9nm,0.3s,baz=108,slow=20,SNR=18						
TXAR	Lajitas Array	21.22	310	P	P	21 31 23.4	-0.7
	1.6nm,0.7s,baz=134,slow=11,SNR=8.2						
PDAR	Pinedale Array	33.46	327	P	P	21 33 17.8	+0.2
	0.3nm,0.4s,baz=131,slow=7.5,SNR=2.7						
YKA	Yellowknife Ar	50.41	343	P	P	21 35 34.4	-0.9
	0.5nm,0.7s,baz=138,slow=7.8,SNR=8.5						
CMAR	Chiang Mai Arr	145.10	353	PKPbc	PKPbc	21 46 15.8	-0.3
	0.6nm,0.7s,baz=350,slow=3.7,SNR=4.0						

WEL 02 21:26:52.0±1.4, 36°.34S×178°.01E, h5km, ML3.9/5, 1C, Error ellipse: s-maj=10.5km s-min=7.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.24	169	S*	Sg	21 27 27.5	-4.5
MXZ				AML	AML	21 28 25.1	
PUZ	Puketiti	1.74	174	PN	Pn	21 27 22.2	-0.7
PUZ				SN	Sb	21 27 46.7	0.0
PUZ				AML	AML	21 27 50.1	
URZ	Urewera	2.05	200	P*	Pn	21 27 26.3	-0.8
URZ				S*	Sn	21 27 49.9	-3.1
URZ				AML	AML	21 28 01.2	
MKAZ	Moumakai	2.41	251	PN	Pn	21 27 30.9	-1.2
TOZ	Tahuroa Road	2.44	235	P*	Pn	21 27 31.2	-1.3
HIZ	Hauiti	3.32	228	⇑PN	Pn	21 27 44.3	-0.3

IDC 02 21:34:25.4±24.0, 23°.86S×179°.75W, h582km±236km, mb3.2/4, mb1 3.3/4, mb1mx2.9/19, mbtmp3.2/4, Error ellipse: s-maj=201.7km s-min=109.9km az=127.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	31.71	270	P	P	21 40 03.0	+0.1
	3.9nm,0.4s,baz=98,slow=12,SNR=7.2						
ASAR	Alice Springs	42.27	261	P	P	21 41 29.4	+0.3
	1.2nm,0.8s,baz=99,slow=8.3,SNR=7.1						
WRA	Warramunga Arr	42.64	266	P	P	21 41 31.2	-0.8
	1.2nm,0.3s,baz=102,slow=8.3,SNR=52						
FITZ	Fitzroy Crossi	51.06	265	P	P	21 42 35.7	+0.4
	2.8nm,1.0s,baz=107,slow=11,SNR=2.3						
HFS	Hagfors	142.56	349	PKP	PKPdf	21 52 49.5	-2.8
	1.8nm,0.3s,baz=42,slow=2.3,SNR=24						
AKASG	Malin Array Be	145.07	327	PKPbc	PKPbc	21 52 57.5	-0.4
	0.7nm,0.4s,baz=49,slow=3.4,SNR=5.0						
EKA	Eskdalemuir Ar	148.47	4	PKPbc	PKPbc	21 53 07.3	+0.5
	0.3nm,0.3s,baz=329,slow=2.4,SNR=4.3						

GUC 02 21:36:03.6±0.7, 22°.16S×68°.48W, h117km±4km, ML3.7, 3C, Northern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	0.60	222	eP	Pn	21 36 22.8	+0.6
LVC				eS	Sn	21 36 37.3	+1.0
PB09	Plate Boundary	0.80	297	⇑iP	Pn	21 36 24.9	+1.2
PB09				eS	Sn	21 36 40.4	+1.5
PB09				AML	AML	21 36 42.0	
	comp=N,3μm,0.5s						
PB04	Plate Boundary	0.94	264	eP	Pn	21 36 32.5	+7.8
PB04				eS	Sn	21 36 54.6	+14
PB04				AML	AML	21 36 57.5	
	comp=N,516nm,0.3s						
PB07	Plate Boundary	1.38	288	⇑iP	Pn	21 36 30.6	+0.9
PB07				i S	Sn	21 36 50.5	+1.1
PB07				AML	AML	21 36 51.4	
	comp=E,1μm,0.2s						
PB01	Plate Boundary	1.46	320	⇑iP	Pn	21 36 30.9	+0.4
PB01				eS	Sn	21 36 51.8	+0.9
PB01				AML	AML	21 36 53.7	
	comp=E,1μm,0.2s						
HMBC	Humberstone	2.29	325	eP	Pn	21 36 40.5	-0.3
HMBC				i S	Sn	21 37 08.6	-0.7
ANCH	Antofagasta	2.34	229	eP	Pn	21 36 39.9	-1.2
ANCH				i S	Sn	21 37 10.9	+0.8

*ISCJB **02** 21:37:01.1±1.0, 14°.74S±0°.05×73°.42W±0°.06, h82km±9km, mb4.6/63, Error ellipse: s-maj=10.9km s-min=5.9km az=140.5*

*NEIC **02** 21:37:03.0±0.7, 14°.76S×73°.35W, h84km±6km, mb4.7/44, Error ellipse: s-maj=8.4km s-min=4.3km az=57.0*

NEIC Felt [II] at Puquio. Also felt at Coracora.

*BJI **02** 21:37:03.4, 14°.70S×73°.30W, h88km, mB5.2/9, Ms5.5/7, Ms7 5.0/7*

*IDC **02** 21:37:05.1±0.5, 14°.79S×73°.34W, h105km±4km, mb4.2/20, mb1 4.3/25, mb1mx4.3/28, mbtmp4.2/25, MS3.7/10, Ms1 3.7/10, ms1mx3.4/34, Error ellipse: s-maj=16.4km s-min=10.0km az=65.0*

*GCMT **02** 21:37:10.1±0.4, 14°.80S×73°.60W, h101km±3km, MW4.9, Moment Tensor Solution. s25,c26; s58,c76; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.52±.09; $M_{\theta\theta}$0.03±.10; $M_{\phi\phi}$2.49±.11; $M_{r\theta}$0.37±.08; $M_{\theta\phi}$-1.36±.13; $M_{\phi r}$0.33±.11; Best double couple: $M_0$2.90000×10^{16} NP1:ϕ_s323.00000°, δ45.00000°, λ-108.00000°. NP2:ϕ_s169.00000°, δ48.00000°, λ-73.00000°. Principal axes: T 3.1000, Plg2.0000°, Azm246.0000°; N -0.4700, Plg13.0000°, Azm337.0000°; P -2.6300, Plg77.0000°, Azm149.0000°; Data Used: II IU G IC CN.*

ISC 02 21:37:05.1±0.4, 14°.78S±0°.06×73°.42W±0°.07, h106km±2km, h106km:pP-P, n397, σ1s.12/437, mb4.6/62, 122C-121D, Central Peru

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	Nana	4.33	309	ePn	Pn	21 38 05.7	-3.2
NNA				eSn	Sn	21 38 52.5	-5.9
NNA				S		21 38 54.8	
NNA	Nana	4.33	309	P	Pn	21 38 05.8	-3.2
	47nm,0.3s,baz=132,slow=8.6,SNR=36						
NNA				S	Sn	21 38 54.8	-3.7
	215nm,0.3s,baz=207,slow=7.8,SNR=13						
LPAZ	La Paz	5.32	107	ePn	Pn	21 38 24.6	+1.8
LPAZ				eSn	Sn	21 39 24.2	+1.1
LPAZ	La Paz	5.32	107	P	Pn	21 38 24.6	+1.8
	12nm,0.3s,baz=284,slow=9.9,SNR=97						
LPAZ				LR	LR	21 40 37.3	
	comp=Z,476nm,18.9s,baz=317,slow=40						
ATAH	Atahualpa	9.03	327	P	Pn	21 39 13.8	+0.9
ATAH	Atahualpa	9.03	327	P	Pn	21 39 13.8	+0.9
	0.9nm,0.3s,baz=126,slow=8.4,SNR=7.8						
SAML	Samuel	11.57	61	ePn	Pn	21 39 43.7	-3.3
	65nm,0.8s						
SIV	San Ignacio	11.97	97	P	Pn	21 39 49.6	-2.8
SIV	San Ignacio	11.97	97	P	Pn	21 39 49.6	-2.8
	11nm,0.3s,baz=304,slow=10.0,SNR=69						
SIV				LR	LR	21 45 24.9	
	comp=Z,279nm,19.9s,slow=42						
LCO	Las Campanas	14.39	170	Pn	Pn	21 40 24.6	+0.6
CFAA	Coronel Fontan	17.41	165	P	P	21 41 00.1	-1.0
CFAA	Coronel Fontan	17.41	165	P	P	21 41 00.1	-1.0

0.2nm,0.3s,baz=346,slow=10,SNR=28
CPUP Villa Florida 18.93 130 P **P** **21 41 16.5 -1.2**
CPUP PcP **PcP** **21 45 39.7 +0.2**
CPUP Villa Florida 18.93 130 P **P** **21 41 16.5 -1.2**
0.5nm,0.3s,baz=294,slow=13,SNR=7.1
CPUP PcP **PcP** **21 45 39.7 +0.2**
0.4nm,0.3s,baz=333,slow=9.0,SNR=3.3
ROSC El Rosal 19.53 357 *eP* **P** **21 41 23.3 -1.5**
ROSC El Rosal 19.53 357 P **Pn** **21 41 26.8 -0.2**
2.4nm,0.3s,baz=234,slow=14,SNR=2.5
SDV Santo Domingo 23.67 7 *eP* **P** **21 42 06.8 -0.6**
18nm,1.1s
BDFB Brasilia 24.53 95 P **P** **21 42 14.7 -0.4**
BDFB Brasilia 24.53 95 P **P** **21 42 14.7 -0.4**
3.2nm,0.5s,baz=273,slow=9.6,SNR=5.8
BDFB LR LR 21 53 27.1
comp=Z,121nm,18.4s,baz=66,slow=40
PLCA Paso Flores 25.98 175 *eP* **P** **21 42 25.9 -2.1**
12nm,0.8s
PLCA PcP **PcP** **21 45 53.9 +0.1**
PLCA *e*PcP PcP 21 45 55.2 +1.4
PLCA Paso Flores 25.98 175 P **P** **21 42 27.4 -0.6**
11nm,0.7s,baz=345,slow=9.9,SNR=29
PLCA PcP **PcP** **21 45 53.9 +0.1**
3.5nm,0.8s,baz=21,slow=1.9,SNR=4.1
USHA Ushuaia 40.16 176 P **P** **21 44 30.4 -0.2**
USHA Ushuaia 40.16 176 P **P** **21 44 30.4 -0.2**
5.2nm,0.6s,baz=32,slow=14,SNR=4.1
GOGA Godfrey 48.87 349 *eP* **P** **21 45 39.5 -0.6**
16nm,1.0s
LRAL Lakeview Retre 49.28 345 *eP* **P** **21 45 42.4 -0.8**
29nm,1.6s
KMSC Kings Mountain 50.21 352 ⇑P **P** **21 45 50.5 +0.3**
baz=50,SNR=7.1
732A Laxson Ranch, 50.30 329 ⇓P **P** **21 45 51.2 +0.2**
baz=50
632A Uvalde 50.85 330 ⇓P **P** **21 45 55.7 +0.5**
baz=51,SNR=9.6
TKL Tuckaleechee C 51.11 349 P **P** **21 45 56.6 -0.4**
TKL Tuckaleechee C 51.11 349 P **P** **21 45 56.6 -0.4**
6.7nm,0.9s,baz=156,slow=10.0,SNR=7.5
631A Perdido Creek 51.16 329 ⇓P **P** **21 45 57.4 -0.1**
baz=51,SNR=6.6
PLAL Pickwick Lake 51.41 345 *eP* **P** **21 45 58.1 -1.1**
13nm,1.0s
532A Rocksprings 51.42 330 ⇓P **P** **21 45 59.8 +0.3**
baz=52
531A Rocksprings 51.76 330 ⇑P **P** **21 46 02.4 +0.3**
baz=52
WHTX Lake Whitney 51.90 334 ⇑P **P** **21 46 03.2 +0.3**
baz=52
432A Menard 51.99 331 ⇓P **P** **21 46 03.5 -0.2**
baz=52
530A J-C Ranch, Com 52.14 329 ⇑P **P** **21 46 05.0 +0.2**
baz=52,SNR=8.1
431A Sonora 52.22 330 ⇑P **P** **21 46 05.5 +0.1**
baz=52,SNR=12
332A Millersview 52.40 331 ⇓P **P** **21 46 06.9 +0.2**
baz=53,SNR=13
628A Black Gap, Mar 52.40 327 ⇑P **P** **21 46 07.5 +0.7**
baz=53,SNR=7.2
529A Stev Forest Ra 52.56 328 ⇓P **P** **21 46 08.3 +0.3**
baz=53,SNR=6.8
430A Baggett Ranch, 52.61 330 ⇑P **P** **21 46 08.4 +0.1**
baz=53,SNR=9.4
627A Terlingua Ranc 52.63 327 ⇓P **P** **21 46 08.9 +0.3**
baz=53,SNR=8.3
331A San Angelo 52.65 331 ⇑P **P** **21 46 08.5 -0.1**
baz=53
TXAR Lajitas Array 52.69 326 P **P** **21 46 09.2 +0.2**
TXAR pP **pP** **21 46 35.2 +0.9**
TXAR Lajitas Array 52.69 326 P **P** **21 46 09.2 +0.2**
6.2nm,0.6s,baz=152,slow=8.9,SNR=59
TXAR pP **pP** **21 46 35.2 +0.9**
0.9nm,0.5s,baz=143,slow=9.1,SNR=3.1
232A Coleman 52.78 332 ⇑P **P** **21 46 09.6 +0.1**
baz=53,SNR=18
429A Davenport Ranc 52.80 329 ⇑P **P** **21 46 09.9 +0.2**
baz=53,SNR=12
528A Cox Ranch, San 52.88 328 ⇓P **P** **21 46 10.2 -0.2**
baz=53
330A Mertzon 53.09 330 ⇓P **P** **21 46 11.7 -0.1**
baz=53
626A Big Bend Ranch 53.11 326 ⇑P **P** **21 46 12.6 +0.5**
baz=53,SNR=25
231A Bronte 53.12 331 ⇓P **P** **21 46 11.8 -0.2**
baz=53
428A Kincaid Ranch, 53.28 328 ⇓P **P** **21 46 13.2 -0.1**
baz=54
527A Woodward Ranch 53.30 327 ⇓P **P** **21 46 13.5 0.0**
baz=54,SNR=8.2
ABTX Abilene, Hawle 53.39 332 ⇓P **P** **21 46 14.4 +0.4**
baz=54,SNR=6.0
230A Sterling City 53.46 331 ⇑P **P** **21 46 14.0 -0.5**
baz=54
526A Mary Lane Ranc 53.49 327 ⇑P **P** **21 46 15.0 +0.1**
baz=54,SNR=8.8
329A Wagon Wheel Ra 53.55 329 ⇓P **P** **21 46 14.9 -0.3**
baz=54
427A Hayter Ranch, 53.75 328 ⇓P **P** **21 46 16.8 0.0**
baz=54,SNR=6.1
131A Roby 53.77 332 ⇑P **P** **21 46 16.7 0.0**
baz=54
229A Bryant Ranch, 53.86 330 ⇑P **P** **21 46 17.2 -0.2**
baz=54
328A Wristen Ranch, 53.88 329 ⇓P **P** **21 46 17.6 0.0**
baz=54,SNR=7.0
Z32A Haskell 53.90 333 ⇑P **P** **21 46 17.9 +0.3**
baz=54
426A McDonald Obser 53.93 327 ⇑P **P** **21 46 18.2 0.0**
baz=54
130A Snyder 53.98 331 ⇑P **P** **21 46 18.6 +0.3**
baz=54
USIN University of 54.14 346 *eP* **P** **21 46 19.0 -0.2**
52nm,0.8s
Z31A Sharp Cattle R 54.20 332 ⇑P **P** **21 46 20.2 +0.3**
baz=54,SNR=12
SIUC Southern Illin 54.28 345 *eP* **P** **21 46 20.1 -0.2**
40nm,0.7s
228A UT Block 9, Go 54.36 329 ⇑P **P** **21 46 20.7 -0.4**
baz=55
326A Caldwell Ranch 54.42 328 ⇓P **P** **21 46 21.5 0.0**
baz=55,SNR=9.0
129A Stewart Farms, 54.43 330 ⇑P **P** **21 46 21.6 0.0**
baz=55
Y32A R-V Farms, Ver 54.48 333 ⇓P **P** **21 46 22.2 +0.3**
baz=55,SNR=5.6
425A Indio Mountain 54.53 326 ⇑P **P** **21 46 22.5 0.0**
baz=55,SNR=9.0
MVL Millersville 54.56 357 *eP* **P** **21 46 23.3 +1.1**
10.0nm,0.9s
Z30A Sanderson Ranc 54.63 331 ⇑P **P** **21 46 23.1 +0.1**
baz=55,SNR=12
TUL1 Tulsa 54.68 338 ⇓P **P** **21 46 23.6 +0.4**
baz=55
128A Castleberry Fa 54.72 330 ⇑P **P** **21 46 23.5 -0.3**
baz=55,SNR=5.1
Y31A Rekieta Farm, 54.80 333 ⇑P **P** **21 46 24.4 +0.3**
baz=55,SNR=11
WMOK Wichita Mounta 54.82 334 *eP* **P** **21 46 23.9 -0.4**
5.5nm,0.9s
WMOK *e*PcP PcP 21 47 24.4 -1.0
Z29A Hungry Hill Ra 54.87 331 ⇓P **P** **21 46 25.1 +0.3**
baz=55
OLIL Olney 54.98 346 *eP* **P** **21 46 24.9 -0.4**
21nm,0.9s
325A Bean Ranch, Si 54.98 327 ⇓P **P** **21 46 25.6 -0.2**
baz=55,SNR=10
Y30A Stafford Cattl 55.01 332 ⇓P **P** **21 46 26.2 +0.5**
baz=55
226B Tecolote Peak, 55.12 328 ⇑P **P** **21 46 27.3 +0.7**
baz=55,SNR=6.9
127A Arkansas Junct 55.19 329 ⇓P **P** **21 46 27.1 0.0**
baz=55
X31A McDonald Ranch 55.24 333 ⇑P **P** **21 46 27.2 -0.1**
baz=56,SNR=15
SSPA Standing Stone 55.28 356 *eP* **P** **21 46 28.7 +1.2**
4.5nm,0.7s
324A Moseley Ranch, 55.31 327 ⇓P **P** **21 46 27.5 -0.5**
baz=56
Y29A Porterfield Fa 55.35 331 ⇓P **P** **21 46 27.8 -0.4**
baz=56,SNR=5.4
ACSO Alum Creek Sta 55.44 351 *eP* **P** **21 46 28.4 -0.2**
19nm,0.9s
MNTX Cornudas Mount 55.46 327 *eP* **P** **21 46 28.1 -0.8**
3.8nm,0.9s
X30A Coker Ranch, T 55.48 332 ⇑P **P** **21 46 29.2 +0.2**
baz=56

126A Clayton Basin, 55.50 329 ⇓P **P** **21 46 29.3 0.0**
baz=56
Z27A Tatum 55.64 330 ⇑P **P** **21 46 30.0 -0.4**
baz=56,SNR=7.1
Y28A McKinney Farm, 55.66 331 ⇑P **P** **21 46 30.6 +0.2**
baz=56
W31A Holland Ranch, 55.70 334 ⇓P **P** **21 46 30.5 -0.2**
baz=56
224A Cornudas Mount 55.83 327 ⇑P **P** **21 46 31.4 -0.4**
baz=56,SNR=13
125A Gardner Draw, 55.84 328 ⇑P **P** **21 46 31.5 -0.3**
baz=56,SNR=6.8
X29A Tulia 55.85 332 ⇓P **P** **21 46 31.6 -0.2**
baz=56
MSTX Muleshoe 55.96 331 ⇓P **P** **21 46 32.8 +0.2**
baz=56
Z26A Caprock 55.98 329 ⇑P **P** **21 46 32.8 0.0**
baz=56
Y27A Causey 56.08 330 ⇑P **P** **21 46 33.2 -0.2**
baz=56
X28A Dimmitt 56.14 331 ⇓P **P** **21 46 33.7 -0.2**
baz=56
V31A Spring Creek L 56.16 334 ⇓P **P** **21 46 34.5 +0.6**
baz=56
124A Stringfield Ra 56.28 327 ⇓P **P** **21 46 35.2 +0.2**
baz=56,SNR=9.4
SFIN Seiler Farm 56.33 347 ⇓P **P** **21 46 33.7 -1.2**
baz=57
Z25A Roswell 56.36 328 ⇑P **P** **21 46 35.4 0.0**
baz=57
W29A Amraillo 56.39 332 ⇑P **P** **21 46 35.4 -0.3**
baz=57
Z24A Sheeppen Canyo 56.73 328 ⇓P **P** **21 46 38.7 +0.5**
baz=57
BINY Binghamton 56.74 358 *eP* **P** **21 46 38.0 +0.2**
17nm,1.0s
Y25A Mesa, Roswell 56.86 329 ⇑P **P** **21 46 39.0 0.0**
baz=57
320A Kipp Ranch, An 56.91 324 ⇑P **P** **21 46 40.0 +0.5**
baz=57
X26A CR and CF Fran 56.93 330 ⇑P **P** **21 46 39.3 -0.2**
baz=57,SNR=5.6
W27A Bowe Ranch, En 56.99 331 ⇓P **P** **21 46 40.5 +0.6**
baz=57
T31A Randall Ranch, 57.22 335 ⇑P **P** **21 46 42.3 +0.9**
baz=58
220A Playas Peak, P 57.33 324 ⇓P **P** **21 46 42.9 +0.5**
baz=58,SNR=16
W26A Owens Ranch, T 57.35 331 ⇓P **P** **21 46 43.7 +1.3**
baz=58
319A Douglas 57.37 323 ⇑P **P** **21 46 43.4 +0.7**
baz=58,SNR=7.7
121A Cookes Peak, D 57.39 326 ⇑P **P** **21 46 43.8 +0.9**
baz=58,SNR=5.8
Z22A Elphant Butte 57.50 327 ⇓P **P** **21 46 44.4 +0.8**
baz=58,SNR=6.6
Y23A Lovelace Mesa, 57.55 328 ⇑P **P** **21 46 44.6 +0.6**
baz=58
U28A Mallet 57.70 333 ⇓P **P** **21 46 45.2 +0.4**
baz=58
W25A X Bar L Ranch, 57.78 330 ⇓P **P** **21 46 45.8 +0.3**
baz=58
120A U Bar Ranch, L 57.87 325 ⇑P **P** **21 46 46.8 +0.6**
baz=58
Z21A St. Cloud Mine 57.92 326 ⇑P **P** **21 46 47.3 +0.7**
baz=58,SNR=5.1
V26A Tequesquite Ra 57.93 331 ⇓P **P** **21 46 46.4 -0.1**
baz=58,SNR=11
T29A Hugoton 57.94 334 ⇑P **P** **21 46 47.1 +0.6**
baz=58
U27A Thompson Grove 58.00 332 ⇑P **P** **21 46 47.6 +0.6**
baz=58
BNM Barren Site 58.02 328 *eP* **P** **21 46 46.6 -0.7**
8.9nm,1.4s
Y22A Socorro 58.03 327 ⇓P **P** **21 46 48.1 +0.8**
baz=58
W24A Lazy 6 Ranch, 58.24 329 ⇓P **P** **21 46 49.3 +0.6**
baz=58
T28A Walsh 58.27 333 ⇓P **P** **21 46 48.7 -0.1**
baz=58
Z20A Nine Sixteen R 58.27 325 ⇑P **P** **21 46 49.7 +0.7**
baz=58,SNR=11
V25A Rancho No Teng 58.36 330 ⇓P **P** **21 46 49.5 -0.1**
baz=59,SNR=8.1
U26A Atchley Ranch, 58.40 331 ⇑P **P** **21 46 50.1 +0.3**
baz=59
Y21A Point of Rocks 58.46 327 ⇓P **P** **21 46 51.8 +1.4**
baz=59
LAZ Ladron 58.48 327 *eP* **P** **21 46 50.5 +0.1**
6.5nm,1.2s
LAZ *e* 21 47 16.9
T27A Campo 58.48 333 ⇑P **P** **21 46 50.9 +0.5**
baz=59
MDV Middlebury 58.49 0 *eP* **P** **21 46 50.9 +0.9**
X22A Bernardo 58.50 328 ⇓P **P** **21 46 51.7 +1.2**
baz=59
ANMO Albuquerque 58.56 328 *eP* **P** **21 46 50.9 -0.1**
5.6nm,1.0s
ANMO Albuquerque 58.56 328 P **P** **21 46 51.3 +0.4**
3.6nm,0.8s,baz=160,slow=7.7,SNR=7.6
S28A Mander 58.57 334 ⇑P **P** **21 46 51.7 +0.8**
baz=59
W23A Werner Place, 58.57 329 ⇑P **P** **21 46 51.7 +0.7**
baz=59
V24A Rampart Ranch, 58.58 330 ⇑P **P** **21 46 51.5 +0.3**
baz=59
U25A Circle Dot Ran 58.71 331 ⇑P **P** **21 46 52.4 +0.4**
baz=59
X21A Alamocita Cree 58.85 327 ⇓P **P** **21 46 53.9 +0.8**
baz=59,SNR=9.6
W22A Albuquerque 58.86 328 ⇑P **P** **21 46 53.6 +0.6**
baz=59
TUC Tucson 58.92 323 *eP* **P** **21 46 53.6 +0.2**
R29A Marienthal 58.95 335 ⇓P **P** **21 46 54.1 +0.7**
baz=59
T26A Comanche Natio 58.97 332 ⇓P **P** **21 46 54.5 +0.7**
baz=59
V23A Ortiz Mt. (NFS 59.05 329 ⇑P **P** **21 46 55.6 +1.2**
baz=59
S26A Kim 59.28 332 ⇓P **P** **21 46 56.2 +0.4**
baz=60,SNR=14
X20A Quemado 59.31 327 ⇑P **P** **21 46 57.3 +1.1**
baz=60
T25A Trinidad 59.31 331 ⇑P **P** **21 46 56.7 +0.5**
baz=60,SNR=7.9
FRNY Flat Rock 59.33 360 *eP* **P** **21 46 56.6 +0.8**
12nm,1.1s
R27A Eads 59.54 333 ⇓P **P** **21 46 58.8 +1.2**
baz=60
V22A San Miguel Ran 59.54 329 ⇓P **P** **21 46 58.6 +0.8**
baz=60,SNR=8.5
S25A Robets Cordova 59.75 332 ⇑P **P** **21 46 59.5 +0.3**
baz=60,SNR=6.1
W20A Ramah 59.75 327 ⇑P **P** **21 46 59.9 +0.6**
baz=60,SNR=5.9
Q28A Sharon Springs 59.78 335 ⇑P **P** **21 47 00.1 +0.9**
baz=60
V21A Milan 59.83 328 ⇑P **P** **21 47 01.0 +1.3**
baz=60
R26A Arlington 59.83 333 ⇑P **P** **21 47 00.3 +0.7**
baz=60
214A Organ Pipe Nat 59.87 321 ⇑P **P** **21 47 00.5 +0.6**
baz=60,SNR=7.9
U22A Llaves 59.88 329 ⇑P **P** **21 47 01.5 +1.4**
baz=60
KSCO Kaye Shedlock' 60.07 334 ⇓P **P** **21 47 02.5 +1.2**
baz=60
R25A Fountain Ranch 60.08 332 ⇑P **P** **21 47 01.7 +0.4**
baz=60
X18A Snowflake 60.08 325 ⇓P **P** **21 47 02.6 +1.1**
baz=60
S24A Houchin Ranch, 60.09 331 ⇓P **P** **21 47 02.5 +0.8**
baz=60,SNR=8.0
P28A Saint Francis 60.18 335 ⇓P **P** **21 47 03.1 +1.2**
baz=60
V20A Brimhall 60.25 327 ⇓P **P** **21 47 03.3 +0.7**
baz=60
O29A 4D Ranch, Culb 60.27 336 ⇑P **P** **21 47 03.3 +0.9**
baz=60
SDCO Great Sand Dun 60.31 331 *eP* **P** **21 47 03.1 0.0**
17nm,1.0s
SDCO *e* **pP** **21 47 28.9 -0.2**
U21A Nageezi 60.32 329 ⇑P **P** **21 47 03.6 +0.4**
baz=61
Q26A Hugo 60.38 333 ⇑P **P** **21 47 04.3 +0.9**
baz=61
W18A Petrified Fore 60.41 326 ⇑P **P** **21 47 04.5 +0.8**
baz=61

O28A Krutsinger Ran 60.66 335 ⇑P **P** **21 47 05.9 +0.7**
baz=61
T21A Navajo Lake 60.70 329 ⇑P **P** **21 47 07.0 +1.3**
baz=61
U20A Newcomb 60.72 328 ⇓P **P** **21 47 06.5 +0.7**
baz=61
N29A Votaw Ranch, W 60.80 337 ⇑P **P** **21 47 07.2 +1.1**
baz=61
R23A Moffat 60.83 331 ⇑P **P** **21 47 07.8 +1.2**
baz=61
X16A Lo Mia Camp, P 60.83 324 ⇓P **P** **21 47 07.4 +0.9**
baz=61,SNR=11
P26A Davis Ranch, A 60.84 334 ⇑P **P** **21 47 07.3 +0.8**
baz=61
Z14A Wintersburg 60.94 322 ⇓P **P** **21 47 08.6 +1.5**
baz=61
S22A 4UR Ranch, Cre 60.95 330 ⇓P **P** **21 47 07.9 +0.5**
baz=61,SNR=7.7
O27A Beecher Island 61.00 335 ⇓P **P** **21 47 08.5 +1.0**
baz=61
113A Mohawk Valley, 61.01 321 ⇑P **P** **21 47 08.7 +1.1**
baz=61
N28A Pribbeno Ranch 61.04 336 ⇑P **P** **21 47 09.0 +1.2**
baz=61
Q24A Divide 61.14 332 ⇓P **P** **21 47 09.4 +0.7**
baz=61
P25A Willow Gulch B 61.15 333 ⇑P **P** **21 47 09.7 +1.0**
baz=61
S21A Coal Bank Pass 61.35 329 ⇓P **P** **21 47 10.5 +0.3**
baz=62,SNR=7.4
Y14A Wickenburg 61.38 323 ⇓P **P** **21 47 11.0 +0.9**
baz=62
Q23A Hartsel 61.40 332 ⇑P **P** **21 47 11.3 +0.8**
baz=62
N27A Anderson Farm, 61.54 335 ⇑P **P** **21 47 12.2 +1.1**
baz=62
O25A Wiggins 61.62 334 ⇑P **P** **21 47 13.1 +1.4**
baz=62
S20A Disappointment 61.76 329 ⇑P **P** **21 47 14.2 +1.3**
baz=62
R21A Cimarron 61.79 330 ⇑P **P** **21 47 13.9 +0.9**
baz=62
ECSD EROS Data Cent 61.97 341 *eP* **P** **21 47 13.6 -0.2**
21nm,1.1s
ECSD *e* **pP** **21 47 38.4 -1.5**
ISCO Idaho Springs 62.03 332 *eP* **P** **21 47 15.4 +0.8**
6.1nm,1.2s
R20A Redvale 62.05 329 ⇑P **P** **21 47 15.7 +1.0**
baz=62,SNR=8.7
PV01 Paradox Valley 62.10 329 *eP* **P** **21 47 15.8 +0.7**
434nm,0.9s
PV01 *e* **pP** **21 47 41.6 +0.3**
SMCO Snowmass 62.15 331 *eP* **P** **21 47 16.8 +1.2**
6.3nm,0.8s
SMCO *e* **pP** **21 47 42.1 +0.4**
SPMN St. Paul 62.25 345 ⇓P **P** **21 47 15.5 -0.1**
baz=62
S18A Hurst Farm, Bl 62.48 328 ⇓P **P** **21 47 18.3 +0.6**
baz=63,SNR=6.5
BC3 Big Chuckawall 62.65 321 ⇓P **P** **21 47 19.8 +1.1**
baz=63
P21A Newcastle 62.65 331 ⇓P **P** **21 47 19.9 +1.2**
baz=63
W13A Hualapai Mount 62.72 323 ⇓P **P** **21 47 20.2 +1.0**
baz=63
MONP Monument Peak 62.72 320 ⇓P **P** **21 47 19.9 +0.6**
baz=63
O22A Kremmling 62.74 332 ⇑P **P** **21 47 19.5 +0.1**
baz=63,SNR=5.4
BAR Barrett 62.74 319 *eP* **P** **21 47 20.6 +1.4**
8.7nm,0.9s
U15A North Rim 62.77 325 ⇑P **P** **21 47 20.6 +1.0**
baz=63,SNR=7.1
IRM Iron Mountain 62.81 322 ⇑P **P** **21 47 20.6 +1.0**
baz=63,SNR=5.2
P20A De Beque 63.08 330 ⇑P **P** **21 47 22.9 +1.4**
baz=63
PFO Pinyon Flat Ob 63.23 320 LR LR 22 12 09.6
comp=Z,33nm,19.3s,baz=150,slow=33
PFO Pinyon Flat Ob 63.23 320 ⇓P **P** **21 47 23.4 +0.9**
baz=64
L25A Engebretsen Ra 63.26 335 ⇓P **P** **21 47 23.8 +1.2**
baz=64
P19A Cripple Cowboy 63.47 330 ⇑P **P** **21 47 24.9 +0.7**
baz=64,SNR=8.4
N21A Black Mountain 63.66 332 ⇓P **P** **21 47 26.9 +1.5**
baz=64
Q16A Castle Valley 64.02 328 ⇓P **P** **21 47 28.9 +1.2**
baz=64
O19A Miners Draw (B 64.05 330 ⇑P **P** **21 47 28.4 +0.5**
baz=64,SNR=5.8
N20A Spence Gulch, 64.07 331 ⇑P **P** **21 47 28.7 +0.6**
baz=54,SNR=5.4
CCUT Cedar City 64.17 325 *eP* **P** **21 47 30.8 +2.0**
9.0nm,1.2s
CIS Catalina Islan 64.31 319 ⇓P **P** **21 47 30.8 +1.2**
baz=64
M20A Sweetwater, Wa 64.55 332 ⇑P **P** **21 47 32.3 +1.1**
baz=65
L21A Rawlins 64.56 333 ⇓P **P** **21 47 32.4 +1.2**
baz=65
GSC Goldstone 64.58 322 *eP* **P** **21 47 32.8 +1.5**
5.5nm,1.1s
GSC Goldstone 64.58 322 ⇑P **P** **21 47 32.6 +1.2**
baz=65
EDW2 Edwards Air Fo 65.02 320 ⇑P **P** **21 47 35.3 +1.1**
baz=65
DAU Daniels Canyon 65.19 329 *eP* **P** **21 47 36.8 +1.4**
DAU *e* **pP** **21 47 59.8 -2.0**
BSC Santa Cruz Isl 65.47 319 ⇓P **P** **21 47 37.8 +0.7**
baz=66
MPMC Manual Prospec 65.50 322 ⇓P **P** **21 47 38.3 +0.8**
baz=66
K20A Yellowstone Ra 65.55 332 ⇓P **P** **21 47 38.4 +0.9**
baz=66
M17A Scullys Gap (B 65.70 330 ⇑P **P** **21 47 39.4 +0.7**
baz=66
L18A Fontenelle, Gr 65.75 331 ⇓P **P** **21 47 39.8 +0.9**
baz=66
DUG Dugway 65.81 328 *eP* **P** **21 47 40.8 +1.5**
16nm,1.1s
DUG *e* **pP** **21 48 06.6 +1.0**
ISA Isabella 65.83 321 ⇓P **P** **21 47 40.2 +0.7**
baz=66
R11A Troy Canyon, C 65.97 325 ⇓P **P** **21 47 41.7 +1.3**
baz=66,SNR=8.5
HWUT Hardware Ranch 66.24 330 *eP* **P** **21 47 42.1 +0.1**
5.3nm,1.0s
MDND Maddock 66.58 341 ⇑P **P** **21 47 45.0 +1.1**
baz=67
HVU Hansel Valley 66.97 329 *eP* **P** **21 47 47.4 +0.7**
7.8nm,0.8s
I18A Diamond G Ranc 67.03 332 ⇑P **P** **21 47 48.1 +1.0**
baz=67
RRI2 Red Ridge 67.45 331 P **P** **21 47 50.4 +0.6**
13nm,0.8s
NVAR Mina Array Bea 67.58 323 P **P** **21 47 51.9 +1.2**
NVAR pP **pP** **21 48 16.8 -0.3**
NVAR Mina Array Bea 67.58 323 P **P** **21 47 51.9 +1.2**
0.9nm,0.8s,baz=126,slow=7.5,SNR=5.4
NVAR pP **pP** **21 48 16.8 -0.3**
1.0nm,0.7s,baz=144,slow=5.4,SNR=2.4
ULM Lac du Bonnet 67.69 345 *eP* **P** **21 47 50.5 -0.3**
ULM Lac du Bonnet 67.69 345 P **P** **21 47 50.4 -0.4**
13nm,0.5s,baz=160,slow=4.8,SNR=12
IMW Indian Meadow 67.69 332 *eP* **P** **21 47 51.8 +0.5**
5.5nm,0.8s
D23A Lindsay 67.93 337 ⇑P **P** **21 47 54.3 +1.8**
baz=68
VNA1 Neumayer--Stat 68.01 161 *eP* **P** **21 47 53.6 +1.0**
VNA1 Neumayer--Stat 68.01 161 *e*PcP PcP **21 48 20.9 +2.9**
G18A Lazy EL Ranch, 68.19 333 ⇓P **P** **21 47 55.2 +0.9**
baz=68
D22A Cohagen 68.28 337 ⇓P **P** **21 47 56.5 +1.8**
baz=68
F19A Roth Farm, Mol 68.35 334 ⇑P **P** **21 47 56.4 +1.3**
baz=69
C23A Lambert 68.45 338 ⇓P **P** **21 47 56.9 +1.2**
baz=69
H16A Russell Place, 68.46 332 ⇑P **P** **21 47 57.2 +1.2**
baz=69
I15A Monteview 68.50 331 ⇑P **P** **21 47 57.8 +1.6**
baz=69
E20A Meyer Farm, Mu 68.53 335 ⇑P **P** **21 47 57.5 +1.2**
baz=69
D21A La Casta Ranch 68.53 336 ⇑P **P** **21 47 57.6 +1.4**
baz=69
DGMT Dagmar 68.66 339 *eP* **P** **21 47 58.1 +1.1**

41nm,1.3s
C22A Vida 68.67 337 ⇓P **P** **21 47 58.3 +1.3**
baz=69
F18A Big Timber 68.72 334 ⇓P **P** **21 47 58.3 +0.9**
baz=69
E19A Rath Farm, Rou 68.77 335 ⇓P **P** **21 47 58.5 +0.8**
baz=69
I14A Mackay 68.90 330 ⇓P **P** **21 48 00.2 +1.4**
baz=69
A24A Westby 68.97 339 ⇓P **P** **21 48 00.1 +1.3**
baz=69,SNR=6.3
D20A Manuel Ranch, 69.01 335 ⇑P **P** **21 48 00.3 +1.1**
baz=69
H15A Lima 69.04 331 ⇑P **P** **21 48 00.7 +1.1**
baz=69
HLID Hailey 69.10 329 *eP* **P** **21 48 01.2 +1.2**
63nm,2.6s
F17A Fitzpatrick Pl 69.13 333 ⇓P **P** **21 48 01.2 +1.2**
baz=69
C21A Desert Coulee 69.19 336 ⇑P **P** **21 48 01.5 +1.2**
baz=70
I13A Wildhorse Cree 69.22 330 ⇓P **P** **21 48 01.8 +1.1**
baz=70,SNR=8.9
E18A Harlowton 69.32 334 ⇓P **P** **21 48 02.7 +1.5**
baz=70
SCHQ Schefferville 69.56 4 *eP* **P** **21 48 02.9 +0.5**
SCHQ Schefferville 69.56 4 P **P** **21 48 02.1 -0.2**
8.6nm,0.9s,baz=198,slow=8.2,SNR=4.7
E17A Martinsdale 69.65 333 ⇓P **P** **21 48 04.3 +1.1**
baz=70
B21A Ellsworth Farm 69.66 337 ⇓P **P** **21 48 04.5 +1.4**
baz=70
MFID Camas Ranch 69.70 328 *eP* **P** **21 48 03.5 0.0**
26nm,1.2s
MFID *e* **pP** **21 48 29.1 -1.2**
MFID Camas Ranch 69.70 328 ⇑P **P** **21 48 04.8 +1.2**
baz=70,SNR=12
A22A Carney Farms, 69.72 338 ⇓P **P** **21 48 04.8 +1.4**
baz=70
D18A Linhart Farms, 69.77 334 ⇓P **P** **21 48 05.3 +1.3**
baz=70
C19A Slack Wire Ran 69.89 335 ⇓P **P** **21 48 05.6 +1.0**
baz=70
F15A Butte 69.89 332 ⇑P **P** **21 48 06.3 +1.5**
baz=70
SNAA Sanae 69.99 161 *eP* **P** **21 48 05.2 +0.3**
SNAA Sanae 69.99 161 *e*PcP PcP 21 48 32.3 +5.8
SNAA Sanae 69.99 161 *eP* **P** **21 48 04.9 0.0**
12nm,0.6s
H12A Diamond D Ranc 70.04 330 ⇑P **P** **21 48 06.7 +1.0**
baz=70
E16A East Helena 70.06 333 ⇓P **P** **21 48 07.0 +1.3**
baz=70
A21A Bergtoll Ranch 70.09 337 ⇓P **P** **21 48 06.3 +0.6**
baz=70,SNR=5.6
D17A Six Diamond Ra 70.11 334 ⇑P **P** **21 48 06.7 +0.6**
baz=70,SNR=5.3
G13A Cobalt 70.14 331 ⇓P **P** **21 48 07.3 +1.1**
baz=70,SNR=6.1
D16A Dana Ranch, Ca 70.39 333 ⇓P **P** **21 48 08.9 +1.1**
baz=71
E15A Deer Lodge 70.41 332 ⇑P **P** **21 48 08.9 +1.1**
baz=71
B19A Brinkman Farms 70.43 336 ⇑P **P** **21 48 09.0 +1.2**
baz=71
C17A Wharram Farm, 70.52 334 ⇓P **P** **21 48 09.6 +1.1**
baz=71
G12A Big Creek, Yel 70.69 330 ⇓P **P** **21 48 11.0 +1.4**
baz=71
B18A Beardsley Farm 70.72 335 ⇓P **P** **21 48 11.0 +1.4**
baz=71
A19A Klindworth Far 70.73 336 ⇓P **P** **21 48 11.0 +1.3**
baz=71
E14A Clinton 70.78 332 ⇓P **P** **21 48 11.7 +1.6**
baz=71
D15A Lincoln 70.82 333 ⇓P **P** **21 48 11.6 +1.2**
baz=71
C16A Fuhringer Ranc 71.07 334 ⇑P **P** **21 48 12.9 +1.1**
baz=71
F12A Elk City 71.12 330 ⇑P **P** **21 48 13.6 +1.4**
baz=71
E13A Victor 71.12 331 ⇑P **P** **21 48 13.5 +1.4**
baz=71
A18A Metzger Ranch, 71.16 336 ⇓P **P** **21 48 12.6 +0.3**
baz=71,SNR=8.0
DBIC Dimbokro 71.22 78 P **P** **21 48 12.9 -0.4**
DBIC Dimbokro 71.22 78 P **P** **21 48 12.9 -0.4**
5.6nm,0.6s,baz=238,slow=9.2,SNR=13
DBIC LR LR 22 19 04.1
comp=Z,90nm,18.2s,baz=159,slow=35
D14A Greenough 71.29 332 ⇓P **P** **21 48 14.1 +0.9**
baz=72
MSO Missoula 71.30 332 *eP* **P** **21 48 14.8 +1.6**
8.9nm,1.4s
C15A Salmond Ranch, 71.42 333 ⇓P **P** **21 48 15.1 +1.1**
baz=72,SNR=13
BMO Blue Mountains 71.47 329 *eP* **P** **21 48 14.3 0.0**
3.8nm,0.9s
A17A Triple J Farms 71.53 335 ⇑P **P** **21 48 15.4 +0.9**
baz=72
B16A M & M Farms, S 71.53 334 ⇑P **P** **21 48 15.7 +1.2**
baz=72
D13A Huson 71.73 332 ⇓P **P** **21 48 16.7 +0.9**
baz=72
B15A Bradely Ranch, 71.81 334 ⇑P **P** **21 48 16.6 +0.3**
baz=72,SNR=5.1
C14A Swan Lake 71.92 333 ⇓P **P** **21 48 18.2 +1.3**
baz=72
B14A Marquette Ranc 72.16 333 ⇑P **P** **21 48 18.7 +0.3**
baz=72,SNR=6.6
C13A Hot Springs 72.22 332 ⇓P **P** **21 48 19.6 +0.9**
baz=72,SNR=5.7
KHMM Horse Mountain 72.35 322 *eP* **P** **21 48 21.8 +2.2**
8.0nm,1.1s
A15A Johnson Ranch, 72.39 334 ⇓P **P** **21 48 20.7 +1.0**
baz=73
C12B Naegeli Ranch, 72.65 332 ⇓P **P** **21 48 22.7 +1.5**
baz=73
A14A Double T Ranch 72.69 334 ⇓P **P** **21 48 22.6 +1.2**
baz=73
B13A Whitefish 72.69 333 ⇑P **P** **21 48 22.8 +1.3**
baz=73
B12A Libby 73.26 332 ⇑P **P** **21 48 26.3 +1.5**
baz=74
FFC Flin Flon 73.36 343 *eP* **P** **21 48 24.9 -0.3**
3.9nm,0.8s
A12A Yaak River Ran 73.63 332 ⇓P **P** **21 48 28.7 +1.7**
baz=74
LON Longmire 75.07 328 *eP* **P** **21 48 36.4 +1.1**
3.4nm,0.9s
QSPA South Pole Qui 75.37 180 *eP* **P** **21 48 37.6 +0.7**
QSPA South Pole Qui 75.37 180 P **P** **21 48 37.1 +0.2**
baz=159,slow=3.6
NLWA Neilton Lookou 76.55 327 *eP* **P** **21 48 45.8 +2.1**
17nm,0.8s
FRB Frobisher Bay 78.37 2 P **P** **21 48 53.1 -0.2**
FRB Frobisher Bay 78.37 2 P **P** **21 48 53.1 -0.2**
8.9nm,1.0s,baz=184,slow=6.0,SNR=7.9
TOA0 Torodi Ar. Sit 79.36 73 *eP* **P** **21 48 59.4 -0.5**
TOA0 *e* **pP** **21 49 25.6 -1.5**
TORD Torodi Ar. Bea 79.36 73 P **P** **21 48 59.8 -0.1**
TORD pP **pP** **21 49 26.4 -0.7**
TORD Torodi Ar. Bea 79.36 73 P **P** **21 48 59.8 -0.1**
5.5nm,0.7s,baz=272,slow=6.1,SNR=41
TORD pP **pP** **21 49 26.4 -0.7**
3.5nm,0.7s,baz=256,slow=4.6,SNR=4.3
TORD LR LR 22 26 00.5
comp=Z,38nm,18.1s,baz=120,slow=37
VNDA Vanda 82.67 190 *eP* **P** **21 49 17.4 +1.0**
9.4nm,1.4s
VNDA Vanda 82.67 190 P **P** **21 49 17.4 +1.0**
3.0nm,1.0s,baz=138,slow=4.2,SNR=7.8
VNDA LR LR 22 19 34.6
comp=Z,87nm,19.9s,baz=305,slow=31
YKA Yellowknife Ar 83.48 342 P **P** **21 49 20.5 -0.1**
YKA pP **pP** **21 49 48.9 +0.9**
YKA sP **sP** **21 50 00.5 +1.1**
YKA Yellowknife Ar 83.48 342 P **P** **21 49 20.5 -0.1**
4.9nm,0.8s,baz=136,slow=5.2,SNR=65
YKA pP **pP** **21 49 48.9 +0.9**
0.8nm,0.5s,baz=136,slow=5.0,SNR=2.4
YKA sP **sP** **21 50 00.4 +1.1**
2.4nm,0.9s,baz=136,slow=5.1,SNR=3.0
YKW3 Yellowknife Ar 83.54 342 *eP* **P** **21 49 20.1 -0.7**
0.2nm,1.1s
YKW3 *e* 21 49 48.7
PAB San Pablo 83.89 47 *eP* **P** **21 49 24.3 +1.0**
ESDC Sonseca Array 84.22 47 P **P** **21 49 26.2 +1.3**
3.4nm,0.7s,baz=263,slow=5.0,SNR=23
ESDC pP **pP** **21 49 52.9 +0.5**
1.6nm,0.8s,baz=253,slow=5.0,SNR=3.2
ESLA Sonseca Array 84.22 47 *eP* **P** **21 49 26.0 +1.1**
9.9nm,1.7s
ESLA *e* 21 49 53.6
SYO Syowa Base 84.25 161⇑ *eP* **P** **21 49 23.0 -1.6**
TAM Tamanrasset 85.78 65 *eP* **P** **21 49 34.2 +0.9**
7.9nm,1.3s
TAM *e* **pP** **21 50 01.1 +0.3**
TSUM Tsumeb 86.17 109 *eP* **P** **21 49 35.5 +0.2**
4.4nm,0.8s
DLBC Dease Lake 86.30 334 *eP* **P** **21 49 35.7 +0.7**
DLBC *e* **pP** **21 50 02.4 -0.1**
SUMG Summit 90.17 10 *eP* P 21 49 48.9 -4.4
BOSA Boshof 90.43 120 P **P** **21 49 54.3 -1.1**
BOSA Boshof 90.43 120 P **P** **21 49 54.3 -1.1**
0.8nm,0.7s,baz=296,slow=2.3,SNR=3.5
BOSA LR LR 22 25 51.9
comp=Z,77nm,19.1s,baz=344,slow=32
MAW Mawson 91.94 165 P **P** **21 50 01.0 -0.4**
MAW Mawson 91.94 165 P **P** **21 50 01.0 -0.4**
1.6nm,0.6s,baz=238,slow=7.0,SNR=6.1
MAW LR LR 22 30 25.5
comp=Z,63nm,18.2s,baz=190,slow=35
INK Inuvik 93.21 341 P **P** **21 50 06.8 -0.2**
INK Inuvik 93.21 341 P **P** **21 50 06.8 -0.2**
4.3nm,1.0s,baz=171,slow=6.4,SNR=5.9
JMIC Jan Mayen 96.03 17 LR LR 22 29 19.0
comp=Z,22nm,18.2s,baz=249,slow=33
ILAR Eielson Array 96.37 336 P **P** **21 50 21.6 0.0**
ILAR pP **pP** **21 50 47.9 -1.6**
ILAR Eielson Array 96.37 336 P **P** **21 50 21.6 0.0**
0.5nm,0.7s,baz=142,slow=3.8,SNR=6.6
ILAR pP **pP** **21 50 47.9 -1.6**
0.3nm,0.7s,baz=145,slow=5.1,SNR=2.8
GERES GERESS Array B 99.11 42 P **Pdif** **21 50 34.1 -0.3**
GERES GERESS Array B 99.11 42 P **Pdif** **21 50 34.1 -0.3**
0.2nm,0.5s,baz=264,slow=5.4,SNR=3.5
KECS Kecovo 103.48 43 PDIF **Pdif** **21 50 55.9 +2.2**
CRVS Cervenica-Dubn 104.17 43 PDIF **Pdif** **21 51 02.0 +5.2**
KBZ Khabaz 119.05 48 PKP **PKPdf** **21 55 42.5 +0.9**
KBZ Khabaz 119.05 48 PKP **PKPdf** **21 55 42.5 +0.9**
2.4nm,0.8s,baz=220,slow=1.4,SNR=6.5
STKA Stephens Creek 122.74 215 PKP **PKPdf** **21 55 49.3 +0.2**
STKA Stephens Creek 122.74 215 PKP **PKPdf** **21 55 49.3 +0.2**
1.8nm,0.5s,baz=138,slow=3.7,SNR=10
CTA Charters Tower 127.82 229 PKP **PKPdf** **21 55 59.5 +0.3**
CTA Charters Tower 127.82 229 PKP **PKPdf** **21 55 59.5 +0.3**
3.6nm,0.6s,baz=214,slow=7.3,SNR=3.1
ABKAR Akbulak array 128.81 38 *e*PKPdf **PKPdf** **21 56 00.8 +0.7**
ASAR Alice Springs 133.38 215 PKP **PKPdf** **21 56 09.2 -0.4**
ASAR Alice Springs 133.38 215 PKP **PKPdf** **21 56 09.2 -0.4**
2.3nm,0.6s,baz=128,slow=2.0,SNR=28
WRA Warramunga Arr 136.00 219 PKPpre PKPpre 21 56 05.8
WRA PKP **PKPdf** **21 56 14.1 -0.6**
WRA Warramunga Arr 136.00 219 PKhKP PKPpre 21 56 05.8
0.6nm,0.6s,baz=215,slow=1.5,SNR=6.5
WRA PKP **PKPdf** **21 56 14.1 -0.6**
7.7nm,1.0s,baz=133,slow=2.2,SNR=16
ZAA0 Zalesovo Array 137.35 19 *e*PKP **PKPdf** **21 56 14.1 -1.9**
ZALV Zalesovo Beam 137.35 19 PKPpre PKPpre 21 56 09.7
ZALV PKP **PKPdf** **21 56 17.0 +1.0**
ZALV pPKP pPKPdf 21 56 44.6 -0.4
ZALV Zalesovo Beam 137.35 19 PKhKP PKPpre 21 56 09.7
7.2nm,0.7s,baz=222,slow=4.0,SNR=23
ZALV PKP **PKPdf** **21 56 17.0 +1.0**
7.9nm,0.7s,baz=295,slow=2.7,SNR=38
ZALV pPKP pPKPdf 21 56 44.6 -0.4
6.2nm,0.9s,baz=302,slow=2.8,SNR=5.9
KURK Kurchatov 137.63 26 *e*PKPdf **PKPdf** **21 56 17.9 +1.2**
MKAR Makanchi Array 142.18 27 PKPpre PKPpre 21 56 20.9
MKAR Makanchi Array 142.18 27 PKhKP PKPpre 21 56 20.9
1.4nm,0.7s,baz=330,slow=3.2,SNR=12
USRK Usuriysk Arra 143.57 329 PKP PKPbc 21 56 25.3 +0.1
1.6nm,0.7s,baz=81,slow=3.0,SNR=4.0
KSH Kashi 143.58 42 *e*PKP **PKPdf** **21 56 27.1 -0.8**
KSH *ep*PKP **pPKPdf** **21 56 53.4 -3.5**
KSH *e*SKS **SKSdf** **22 03 25.1 -3.0**
KSH *e*SKKS **SKKSac** **22 06 21.1 -2.8**
KSH AMB AMB
comp=Z,130nm,5.4s
KSH LR LR
comp=N,320nm,8.3s
KSH LR LR
comp=E,320nm,6.8s
KSH LR LR
comp=Z,170nm,4.9s
MJAR Matsushiro Arr 144.44 313 PKP **PKPab** **21 56 27.6 -0.2**
MJAR Matsushiro Arr 144.44 313 PKP **PKPab** **21 56 27.6 -0.2**
comp=Z,7.9nm,0.9s,baz=147,slow=1.6,SNR=27
MAJO Matsushiro 144.45 313 *e*PKPdf **PKPab** **21 56 27.4 -0.5**
MAT Matsushiro 144.45 313 PKP **PKPab** **21 56 27.4 -0.5**
WMQ Urumqi 146.87 25 PKPbc **PKPdf** **21 56 34.2 +0.8**
WMQ pPKP **pPKPdf** **21 57 01.5 -0.9**
WMQ LR LR
comp=N,110nm,36.4s
WMQ LR LR
comp=E,140nm,32.0s
WMQ LR LR
comp=Z,90nm,29.2s
CN2 Changchun 146.89 335 *e*PKPbc **PKPdf** **21 56 32.7 -0.6**
ULN Ulaanbaatar 147.01 359 *e*PKPdf **PKPdf** **21 56 34.4 +0.8**
ULN *ep*PKPdf **pPKPdf** **21 57 04.0 +1.4**
SONM Songino Array 147.04 0 PKPbc **PKPdf** **21 56 34.8 +1.2**
SONM pPKPbc **pPKPbc** **21 57 03.1 -1.4**
SONM Songino Array 147.04 0 PKPbc **PKPdf** **21 56 34.8 +1.2**
comp=Z,11nm,0.6s,baz=334,slow=2.2,SNR=93
SONM pPKPbc **pPKPbc** **21 57 03.1 -1.4**
comp=Z,2.8nm,0.8s,baz=340,slow=1.5,SNR=3.1
KSRS Korea Array 150.52 324 PKP **PKPdf** **21 56 40.8 +1.4**
comp=Z,8.2nm,0.8s,baz=350,slow=1.4,SNR=5.7
KSRS PKPbc **PKPbc** **21 56 45.3 +0.5**
comp=Z,1.3nm,0.7s,baz=4.4,slow=2.5,SNR=4.3
KSRS pPKPbc **pPKPbc** **21 57 13.7 0.0**
comp=Z,4.2nm,1.1s,baz=37,slow=2.2,SNR=3.0
KSAR Wonju Array Be 150.55 324 PKP **PKPdf** **21 56 40.8 +1.4**
KSAR PKPbc **PKPbc** **21 56 45.3 +0.4**
KSAR pPKPbc **pPKPbc** **21 57 13.7 -0.1**
HHC Hu-ho-hao-te 153.66 351 *e*PKPbc **PKPdf** **21 56 41.3 -2.8**
HHC pPKP **PKPab** **21 57 08.0 +3.1**
HHC sPKP 21 57 18.3
HHC PKS PKSdf 22 00 12.8 -5.7
HHC PP **PP** **22 00 40.1 +1.8**
HHC SKS **SKSdf** **22 03 36.2 -5.4**
HHC SKKS **SKKSac** **22 07 16.2 -3.4**
HHC SS **SS** **22 20 03.0 -2.2**
HHC AMB AMB
comp=Z,130nm,6.1s
HHC LR LR
comp=N,190nm,15.5s
HHC LR LR
comp=E,210nm,14.3s
HHC LR LR
comp=Z,140nm,13.1s
GTA Gaotai 154.75 12 *e*PKPbc **PKPdf** **21 56 47.2 +1.5**
GTA sPKP 21 57 22.7
LZH Lanzhou 158.64 6 *e*PKP **PKPdf** **21 56 46.5 -4.4**
LZH LR LR
comp=N,130nm,18.3s
LZH LR LR
comp=E,120nm,18.1s
LZH LR LR
comp=Z,150nm,20.5s
CD2 Chengdu 163.74 9 *e*PKP **PKPdf** **21 56 56.5 +0.2**
GYA Guiyang 168.38 360 *e*PKP **PKPdf** **21 56 58.9 -1.3**
GYA pPKP pPKPdf 21 57 21.0 -8.3
GYA sPKP 21 57 30.3
GYA PKPab **PKPab** **21 58 10.5 +1.2**
GYA PKS **PKSdf** **22 00 29.7 -3.3**
GYA PP **PP** **22 02 01.2 +4.2**
GYA AMB AMB
comp=Z,90nm,8.0s
KMI Kunming 169.09 19 PKP **PKPdf** **21 57 02.3 +1.5**
CMAR Chiang Mai Arr 171.82 62 PKP **PKPdf** **21 57 02.3 +0.1**
CMAR Chiang Mai Arr 171.82 62 PKP **PKPdf** **21 57 02.3 +0.1**
comp=Z,1.5nm,1.0s,baz=329,slow=3.0,SNR=6.8

IDC 02 21:41:05.7±3.3, 25°.66S×179°.87E, h490km±37km, mb3.4/6, mb1 3.6/8, mb1mx3.3/21, mbtmp3.5/8, Error ellipse: s-maj=26.9km s-min=21.8km az=162.0, South of Fiji

Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**12.79**	**283**	P	P	21 43 54.7	+1.8
	0.7nm,0.3s,baz=115,slow=15,SNR=6.0						
AFI	**Afiamalu**	**14.08**	**35**	P	P	21 44 05.5	-1.1
	2.3nm,0.3s,baz=143,slow=20,SNR=3.1						
CTA	**Charters Tower**	**31.41**	**273**	P	P	21 46 46.5	+0.5
	4.3nm,0.3s,baz=95,slow=10,SNR=9.8						
STKA	**Stephens Creek**	**33.99**	**250**	P	P	21 47 07.3	-0.5
	1.0nm,0.4s,baz=77,slow=18,SNR=7.5						
ASAR	**Alice Springs**	**41.66**	**263**	P	P	21 48 10.5	-0.3
	2.5nm,0.4s,baz=90,slow=7.4,SNR=41						
WRA	**Warramunga Arr**	**42.20**	**268**	P	P	21 48 14.4	-0.7
	2.2nm,0.4s,baz=102,slow=7.4,SNR=70						
QSPA	**South Pole Qui**	**64.43**	**180**	P	P	21 50 53.2	+0.3
	3.1nm,0.6s,baz=119,slow=0.9,SNR=6.2						
NVAR	**Mina Array Bea**	**86.09**	**44**	P	P	21 52 54.1	-0.3
	0.7nm,0.6s,baz=230,slow=7.0,SNR=2.1						
HFS	**Hagfors**	**144.24**	**348**	PKP	PKPdf	21 59 44.8	+0.1
	0.9nm,0.7s,baz=5.7,slow=1.5,SNR=6.5						
BRTR	**Keskin Array B**	**148.51**	**305**	PKPbc	PKPbc	21 59 55.8	-1.2
	0.5nm,0.8s,baz=48,slow=4.0,SNR=2.8						
BRTR				PKPab	PKPab	22 00 03.0	+0.6
	0.5nm,0.7s,baz=130,slow=6.7,SNR=3.7						
TORD	**Torodi Ar. Bea**	**167.44**	**188**	PKPab	PKPab	22 01 23.9	-0.4
	0.3nm,0.6s,baz=180,slow=4.2,SNR=2.6						

WEL 02 21:43:00.6±1.1, 36°.50S×177°.74E, h5km, ML3.7/5, 1D, Error ellipse: s-maj=7.3km s-min=7.2km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.16**	**157**	S*	Sg	21 43 33.9	-4.0
MXZ				AML	AML	21 43 35.9	
MXZ				AML	AML	21 43 37.2	
PUZ	**Puketiti**	**1.63**	**166**	PN	Pn	21 43 29.8	-0.1
PUZ				*e*SN	Sn	21 43 51.4	+0.1
PUZ				AML	AML	21 43 55.0	
URZ	**Urewera**	**1.83**	**196**	P*	Pn	21 43 30.9	-1.8
URZ				S*	Sn	21 43 53.2	-3.1
URZ				AML	AML	21 44 01.4	
MKAZ	**Moumakai**	**2.16**	**253**	PN	Pn	21 43 35.8	-1.4
TOZ	**Tahuroa Road**	**2.17**	**235**	P*	Pn	21 43 36.2	-1.2
HIZ	**Hauiti**	**3.06**	**228**	⇓PN	Pn	21 43 49.0	-0.5

*IDC **02** 21:44:52.6±1.9, 36°.54S×177°.97E, h0km, mb4.2/4, mb1 4.4/4, mb1mx4.0/17, mbtmp4.2/4, Error ellipse: s-maj=41.7km s-min=23.9km az=67.0*
*NEIC **02** 21:44:52.3, 36°.26S×177°.80E, h3km, mb4.0/2, ML4.2(WEL), After WEL.*
*WEL **02** 21:44:53.8±0.8, 36°.34S×177°.75E, h5km, ML4.2/6, Error ellipse: s-maj=5.5km s-min=5.0km az=90.0*
ISC 02 21:44:55.6±3.1, 36°.47S±0°.08×177°.74E±0°.08, h16km±17km, n41, σ1°05/49, mb4.2/5, 1D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUZ	**Kuaotunu**	**1.65**	**260**	PN	Pn	**21 45 22.8**	**-1.0**
KUZ				SN	Sn	**21 45 44.2**	**-0.4**
KUZ				AML	AML	21 45 52.7	
KUZ	**Kuaotunu**	**1.65**	**260**	Pn	Pn	**21 45 22.8**	**-1.0**
KUZ				Sn	Sn	**21 45 44.2**	**-0.4**
URZ	**Urewera**	**1.86**	**195**	P*	Pn	**21 45 26.0**	**-0.8**
URZ				S*	Sn	**21 45 49.9**	**0.0**
URZ				AML	AML	21 45 51.3	
URZ	**Urewera**	**1.86**	**195**	P*	Pn	**21 45 26.0**	**-0.8**
URZ				Sn	Sn	**21 45 49.0**	**-1.0**
URZ	**Urewera**	**1.86**	**195**	Pn	Pn	**21 45 25.9**	**-0.8**
	23nm,0.3s,baz=20,slow=9.6,SNR=15						
URZ				Sn	Sn	**21 45 49.0**	**-1.0**
	35nm,0.3s,baz=12,slow=19,SNR=9.6						
MWZ	**Matawai**	**1.87**	**185**	P*	Pn	**21 45 25.9**	**-1.2**
MWZ				S*	Sn	**21 45 50.6**	**+0.2**
MWZ				AML	AML	21 46 03.8	
MWZ	**Matawai**	**1.87**	**185**	P*	Pn	**21 45 25.9**	**-1.2**
MWZ				S*	Sn	**21 45 50.6**	**+0.2**
CNGZ	**Carnagh Statio**	**2.05**	**170**	PN	Pn	**21 45 30.1**	**+0.7**
CNGZ				SN	Sb	**21 45 59.1**	**+1.4**
CNGZ	**Carnagh Statio**	**2.05**	**170**	Pn	Pn	**21 45 30.1**	**+0.7**
CNGZ				Sn	Sg	**21 46 01.1**	**-0.5**
MKAZ	**Moumakai**	**2.16**	**252**	PN	Pn	**21 45 30.9**	**0.0**
MKAZ				SN	Sn	**21 45 57.5**	**+0.2**
MKAZ				AML	AML	21 46 14.2	
MKAZ	**Moumakai**	**2.16**	**252**	Pn	Pn	**21 45 30.9**	**0.0**
TOZ	**Tahuroa Road**	**2.19**	**234**	⇓P*	Pn	**21 45 31.2**	**-0.1**
TOZ	**Tahuroa Road**	**2.19**	**234**	P*	Pn	**21 45 31.2**	**-0.1**
RAHZ	**Arahi**	**2.50**	**192**	PN	Pn	**21 45 37.0**	**+1.3**
RAHZ	**Arahi**	**2.50**	**192**	Pn	Pn	**21 45 37.0**	**+1.3**
BKZ	**Black Stump Fm**	**2.87**	**200**	P*	Pn	**21 45 40.2**	**-0.2**
BKZ				AML	AML	21 46 34.9	
BKZ				AML	AML	21 46 38.8	
BKZ	**Black Stump Fm**	**2.87**	**200**	P*	Pn	**21 45 40.6**	**-0.2**
HIZ	**Hauiti**	**3.07**	**227**	PN	Pn	**21 45 44.0**	**+0.5**
HIZ	**Hauiti**	**3.07**	**227**	Pn	Pn	**21 45 44.0**	**+0.5**
FWVZ	**Far West T-bar**	**3.28**	**211**	AML	AML	21 46 50.5	
FWVZ	**Far West T-bar**	**3.28**	**211**	P*	Pb	21 45 49.9	-3.6
BHHZ	**Black Hill Sta**	**3.29**	**203**	*e*P*	Pn	**21 45 47.6**	**+1.0**
BHHZ	**Black Hill Sta**	**3.29**	**203**	*e*P*	Pn	**21 45 47.6**	**+1.0**
KAHZ	**Kahuranaki**	**3.39**	**191**	PN	Pn	**21 45 47.8**	**-0.1**
KAHZ	**Kahuranaki**	**3.39**	**191**	Pn	Pn	**21 45 47.8**	**-0.1**
BFZ	**Birch Farm**	**4.37**	**195**	PN	Pn	**21 45 59.8**	**-1.5**
BFZ	**Birch Farm**	**4.37**	**195**	Pn	Pn	**21 45 59.8**	**-1.5**
STKA	**Stephens Creek**	**30.14**	**268**	P	P	**21 51 06.8**	**+2.0**
STKA	**Stephens Creek**	**30.14**	**268**	P	P	**21 51 06.8**	**+2.0**
	3.0nm,0.9s,baz=115,slow=5.3,SNR=7.5						
AS31	**Alice Springs**	**39.70**	**276**	*e*P	P	**21 52 28.0**	**+0.7**
ASAR	**Alice Springs**	**39.70**	**276**	P	P	**21 52 28.1**	**+0.7**
ASAR	**Alice Springs**	**39.70**	**276**	P	P	**21 52 28.1**	**+0.7**
	7.6nm,0.9s,baz=120,slow=7.9,SNR=34						
WRAB	**Tennant Creek**	**41.26**	**281**	*e*P	P	**21 52 39.4**	**-0.8**
	1.1nm,0.6s						
WRA	**Warramunga Arr**	**41.26**	**281**	P	P	**21 52 40.4**	**+0.1**
WRA	**Warramunga Arr**	**41.26**	**281**	P	P	**21 52 40.4**	**+0.1**
	1.3nm,0.7s,baz=122,slow=7.4,SNR=8.9						
QSPA	**South Pole Qui**	**53.66**	**180**	*e*P	P	**21 54 15.5**	**-0.7**
	2.9nm,0.7s						
QSPA	**South Pole Qui**	**53.66**	**180**	P	P	**21 54 15.6**	**-0.5**
	2.7nm,0.9s,baz=33,slow=1.4,SNR=9.3						
BRTR	**Keskin Array B**	**151.67**	**288**	PKPbc	**PKPbc**	**22 04 50.0**	**+0.7**
BRTR	**Keskin Array B**	**151.67**	**288**	PKPbc	**PKPbc**	**22 04 50.0**	**+0.7**
	1.3nm,1.1s,baz=99,slow=5.5,SNR=4.7						
TORD	**Torodi Ar. Bea**	**156.51**	**190**	PKPab	**PKPab**	**22 05 16.1**	**-2.7**
TORD	**Torodi Ar. Bea**	**156.51**	**190**	PKPab	**PKPab**	**22 05 16.1**	**-2.7**
	0.7nm,0.9s,baz=184,slow=2.6,SNR=3.4						

*IDC **02** 21:47:00.7±2.3, 82°.55N×8°.90W, h0km, mb3.5/2, mb1 3.8/5, mb1mx3.3/31, mbtmp3.8/5, ML3.6/3, Error ellipse: s-maj=64.9km s-min=32.4km az=35.0*
ISC 02 21:47:03.6±1.9, 82°.2N±0°.2×7°.40W±0°.08, h10km, n7, σ2°62/8, 1C, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPITS	**Spitsbergen Ar**	**5.64**	**122**	Pn	Pn	**21 48 28.6**	**+1.2**
	baz=330,slow=11,SNR=114						
SPITS				Sn	Sn	**21 49 30.0**	**-2.1**
	baz=322,slow=16,SNR=1.6						
DAG	**Danmarks Havn**	**5.78**	**207**⇑	*i*P	Pn	**21 48 32.2**	**+3.0**
DAG				*i* S	Sn	**21 49 35.9**	**+0.5**
SUMG	**Summit**	**11.49**	**231**	*i* P	Pn	**21 49 47.5**	**-0.3**
SUMG				*i* S	Sn	**21 51 51.9**	**-4.3**
ARCES	**ARCESS Array B**	**14.58**	**131**	Pn	Pn	**21 50 30.3**	**+0.7**
	0.1nm,0.3s,baz=343,slow=12,SNR=11						
RES	**Resolute Bay**	**16.96**	**294**	Pn	Pn	21 50 53.2	-7.2
	0.5nm,0.3s,baz=32,slow=13,SNR=4.8						
AKASG	**Malin Array Be**	**33.43**	**136**	P	P	21 53 45.6	+3.7
	1.0nm,0.4s,baz=344,slow=6.9,SNR=4.6						
MKAR	**Makanchi Array**	**43.93**	**82**	P	**P**	**21 55 09.8**	**-0.2**
	0.6nm,0.9s,baz=347,slow=7.7,SNR=3.9						

WEL 02 21:54:55.4±1.1, 36°.33S×177°.82E, h5km, ML3.8/4, Error ellipse: s-maj=7.8km s-min=6.9km az=90.0, Off east coast of North Island

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MXZ	Matakaoa Point	1.29	163	eP*	Pn	21 55 16.7	-3.4
MXZ				S*	Sg	21 55 31.6	-5.4
MXZ				AML	AML	21 55 38.4	
MXZ				AML	AML	21 56 12.5	
MXZ				AML	AML	21 56 30.5	
KUZ	Kuaotunu	1.74	255	PN	Pn	21 55 25.0	-1.3
KUZ				SN	Sn	21 55 46.8	-2.0
PUZ	Puketiti	1.78	169	PN	Pn	21 55 27.0	+0.2
PUZ				SN	Sn	21 55 49.8	0.0
PUZ				AML	AML	21 55 52.4	
URZ	Urewera	2.01	196	P*	Pn	21 55 28.7	-1.3
URZ				S*	Sn	21 55 53.0	-2.6
URZ				AML	AML	21 55 53.1	
MWZ	Matawai	2.02	187	P*	Pn	21 55 28.7	-1.5
MWZ				AML	AML	21 55 59.1	
MWZ				AML	AML	21 56 06.3	
MKAZ	Moumakai	2.27	249	PN	Pn	21 55 33.2	-0.3
TOZ	Tahuroa Road	2.33	232	P*	Pn	21 55 33.3	-1.0
HIZ	Hauiti	3.22	226	PN	Pn	21 55 46.9	+0.3

*IDC **02** 21:58:03.8±2.1, 17°.88S×167°.76E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.8/18, mbtmp3.9/5, ML3.8/1, MS3.3/7, Ms1 3.3/7, ms1mx3.2/25, Error ellipse: s-maj=58.0km s-min=32.9km az=119.0*

*ISCJB **02** 21:58:06.6±1.4, 17°.99S±0°.06×167°.6E±0°.2, h23km, mb4.0/8, MS3.4/4, Error ellipse: s-maj=29.7km s-min=8.7km az=1.5*

*NEIC **02** 21:58:09.2±0.9, 18°.00S×167°.67E, h35km, mb4.4/4, Error ellipse: s-maj=21.3km s-min=14.3km az=94.0*

ISC 02 21:58:07.9±1.2**, 17°.98S**±0°.09×**167°.7E**±0°.2**, h23**km**, n24,** σ**1s.07**/23**, mb4.2**/8**, MS3.4**/4**, 3C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.22	195	eP	Pn	21 59 06.5	-4.5
DZM				eS	Sn	21 59 59.2	-0.5
DZM	Mont Dzumac	4.22	195	Pn	Pn	21 59 11.3	+0.3
DZM				Sn	Sn	21 59 59.2	-0.5
DZM	Mont Dzumac	4.22	195	Pn	Pn	21 59 11.3	+0.3
	4.7nm,0.3s,baz=40,slow=18,SNR=23						
DZM				Sn	Sn	21 59 59.2	-0.5
	14nm,0.3s,baz=309,slow=23,SNR=11						
DZM				LR	LR	22 00 24.5	
	comp=Z,141nm,19.1s,baz=24,slow=32						
NOUC	Port Laguerre	4.29	197	eS	Sn	22 00 01.9	+0.7
HNR	Honiara	11.32	318	LR	LR	22 04 35.0	
	comp=Z,116nm,18.4s,baz=79,slow=35						
RAO	Raoul Island	17.32	133	LR	LR	22 06 26.9	
	comp=Z,45nm,20.2s,baz=74,slow=29						
AFI	Afiamalu	20.19	81	LR	LR	22 08 22.2	
	comp=Z,162nm,19.5s,baz=153,slow=31						
URZ	Urewera	21.83	160	LR	LR	22 09 11.6	
	comp=Z,183nm,20.1s,baz=254,slow=30						
STKA	Stephens Creek	27.29	235	eP	P	22 03 49.6	-1.2
	0.4nm,0.6s						
STKA	Stephens Creek	27.29	235	P	P	22 03 52.1	+1.3
	2.8nm,0.8s,baz=74,slow=7.4,SNR=5.8						
STKA				LR	LR	22 14 50.2	
	comp=Z,75nm,18.7s,baz=25,slow=37						
WRAB	Tennant Creek	31.52	261	eP	P	22 04 28.7	+0.1
	18nm,1.7s						
WRA	Warramunga Arr	31.53	261	P	P	22 04 28.6	-0.1
WRA	Warramunga Arr	31.53	261	P	P	22 04 28.6	-0.1
	0.3nm,0.5s,baz=91,slow=8.9,SNR=5.1						
ASAR	Alice Springs	31.99	254	P	P	22 04 32.5	-0.2
ASAR	Alice Springs	31.99	254	P	P	22 04 32.5	-0.2
	1.7nm,0.8s,baz=79,slow=8.9,SNR=16						
ASAR				LR	LR	22 16 06.9	
	comp=Z,120nm,19.9s,baz=98,slow=34						
FITZ	Fitzroy Crossi	39.88	263	eP	P	22 05 40.1	-0.2
	5.2nm,0.9s						
QSPA	South Pole Qui	72.06	180	eP	P	22 09 29.9	-0.2
	3.8nm,0.8s						
ULN	Ulaanbaatar	84.96	324	eP	P	22 10 40.6	-0.9
	2.0nm,1.1s						
SONM	Songino Array	85.32	324	P	P	22 10 43.8	+0.6
SONM	Songino Array	85.32	324	P	P	22 10 43.8	+0.6
	0.4nm,0.7s,baz=134,slow=6.2,SNR=3.4						
ARCES	ARCESS Array B	123.47	345	PKP	PKPdf	22 17 01.3	-1.4
ARCES	ARCESS Array B	123.47	345	PKP	PKPdf	22 17 01.3	-1.4
	1.7nm,0.8s,baz=35,slow=2.2,SNR=5.0						
ABTA	Abfaltersbach	144.75	330	⇑iPKPdf	PKPab	22 17 41.1	-0.8
	2.3nm,0.7s						
ABTA				⇑ipPKPbc	PKiKP	22 17 50.2	+3.4
	5.4nm,0.7s						
FETA	Feichten	145.37	332	⇑iPKPdf	PKPbc	22 17 43.6	-0.5
	1.7nm,0.6s						

MEX 02 22:06:37.5±0.5**, 16°.67N**×**100°.05W, h5**km**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.28	42	eP	Pg	22 06 41.6	-1.3
ACX				i S	Sg	22 06 45.2	-1.4
CAIG	El Cayaco	0.43	331	eP	Pg	22 06 45.3	-0.6
CAIG				i S	Sg	22 06 52.2	+0.6
ARIG	Puente Sto Nin	1.63	350	i P	Pn	22 07 02.9	-4.1
ARIG				i S	Sn	22 07 23.3	-5.1
PLIG	Platanillo	1.80	17	i P	Pn	22 07 06.1	-3.2
PLIG				i S	Sn	22 07 28.8	-3.8
PNIG	Pinotepa	1.86	98	i P	Pn	22 07 07.0	-3.2
PNIG				i S	Sn	22 07 30.1	-4.1
UTMO	Huajuapan	2.44	61	i P	Pn	22 07 15.6	-2.7
UTMO				i S	Sn	22 07 44.9	-3.9

*WEL **02** 22:07:45.2±0.9, 36°.38S×177°.95E, h5km, ML4.1/4, Error ellipse: s-maj=6.7km s-min=6.0km az=90.0*

*IDC **02** 22:07:46.9±3.0, 36°.56S×177°.77E, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/17, mbtmp3.9/4, MS3.4/3, Ms1 3.4/3, ms1mx3.0/28, Error ellipse: s-maj=59.9km s-min=24.1km az=67.0*

ISC 02 22:07:50.8±1.6**, 36°.5S**±0°.1×**177°.9E**±0°.1**, h35**km**, n19,** σ**1s.50**/19**, mb3.8**/4**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.08	162	P*	Pn	22 08 05.6	-3.9
MXZ				eS*	Sn	22 08 21.4	-1.8
MXZ				AML	AML	22 09 21.8	
PUZ	Puketiti	1.57	169	PN	Pn	22 08 14.6	-1.6
PUZ				eSN	Sn	22 08 36.7	+1.4
PUZ				AML	AML	22 08 46.4	
MWZ	Matawai	1.82	189	P*	Pn	22 08 18.2	-1.5
MWZ				AML	AML	22 08 55.9	
MWZ				AML	AML	22 08 56.5	
URZ	Urewera	1.84	200	P*	Pn	22 08 18.7	-1.2
URZ				eS*	Sn	22 08 40.5	-1.3
URZ				AML	AML	22 08 48.0	
URZ	Urewera	1.84	200	Pn	Pn	22 08 18.5	-1.3
	16nm,0.3s,baz=20,slow=12,SNR=20						
URZ				Sn	Sn	22 08 42.3	+0.5
	17nm,0.3s,baz=35,slow=7.1,SNR=9.2						
TOZ	Tahuroa Road	2.25	237	P*	Pn	22 08 23.6	-2.0
MKAZ	Moumakai	2.26	254	PN	Pn	22 08 23.5	-2.2
MCHZ	McNeill Hill	3.06	198	PN	Pn	22 08 36.2	-0.5
HIZ	Hauiti	3.12	230	PN	Pn	22 08 36.7	-0.9
FWVZ	Far West T-bar	3.29	214	P*	Pn	22 08 41.0	+0.9
TRVZ	Turoa	3.33	213	P*	Pn	22 08 42.3	+1.7
BFZ	Birch Farm	4.34	197	PN	Pn	22 08 52.4	-1.9
DZM	Mont Dzumac	17.51	322	LR	LR	22 17 22.3	
	comp=Z,76nm,20.2s,baz=62,slow=33						
STKA	Stephens Creek	30.26	268	P	P	22 13 59.9	+1.4
	0.7nm,0.7s,baz=104,slow=8.3,SNR=2.9						
ASAR	Alice Springs	39.83	276	P	P	22 15 21.2	+0.2
	1.8nm,0.8s,baz=119,slow=7.7,SNR=15						
WRA	Warramunga Arr	41.40	281	P	P	22 15 33.4	-0.6
	1.4nm,1.0s,baz=121,slow=7.8,SNR=5.5						
QSPA	South Pole Qui	53.59	180	P	P	22 17 09.4	+1.2
	1.2nm,0.8s,baz=83,slow=1.9,SNR=2.9						
MJAR	Matsushiro Arr	81.50	329	LR	LR	22 52 35.3	
	comp=Z,38nm,18.8s,baz=250,slow=33						
KSRS	Korea Array	86.94	322	LR	LR	22 57 23.3	
	comp=Z,16nm,19.2s,baz=255,slow=34						

WEL 02 22:28:44.1±1.1**, 36°.34S**×**177°.82E, h5**km**, ML4.2**/4**, Error ellipse: s-maj=8.2km s-min=7.0km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.29	162	P*	Pn	22 29 06.1	-2.6
MXZ				S*	Sg	22 29 20.7	-4.8
MXZ				AML	AML	22 29 28.3	
PUZ	Puketiti	1.77	169	PN	Pn	22 29 14.9	-0.5
PUZ				eSN	Sn	22 29 38.4	0.0
PUZ				AML	AML	22 29 44.0	
URZ	Urewera	2.00	196	P*	Pn	22 29 17.8	-0.7
URZ				S*	Sn	22 29 41.0	-2.9
URZ				AML	AML	22 29 50.9	
MWZ	Matawai	2.01	187	eP*	Pn	22 29 17.8	-1.0
MWZ				S*	Sn	22 29 41.3	-3.1
MWZ				AML	AML	22 29 48.6	
CNGZ	Carnagh Statio	2.17	172	PN	Pn	22 29 21.9	+1.1
MKAZ	Moumakai	2.27	249	PN	Pn	22 29 21.0	-1.2
TOZ	Tahuroa Road	2.32	232	P*	Pn	22 29 20.9	-1.9
BKZ	Black Stump Fm	3.02	200	P*	Pn	22 29 32.7	+0.1
HIZ	Hauiti	3.21	226	PN	Pn	22 29 33.7	-1.4
HIZ				eSN	Sn	22 30 15.1	+1.3

*DDA **02** 22:33:04.8, 36°.61N×28°.01E, h7km, MD3.2*

*CSEM **02** 22:33:05.5±0.5, 36°.42N×27°.99E, h15km, MD3.2, Error ellipse: s-maj=10.1km s-min=4.7km az=24.0*

*ISK **02** 22:33:06.9, 36°.45N×27°.99E, h37km, MD2.9*

*ATH **02** 22:33:08.2, 36°.62N×27°.83E, h40km±5km, MD3.1/6*

ISC 02 22:33:06.4±1.2**, 36°.58N**±0°.03×**28°.01E**±0°.03**, h14**km±10km**, n40,** σ**0s.95**/58**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.38	165	eP	Pn	22 33 19.1	+1.6
ARG				eS	Sn	22 33 27.0	+2.4
TURN	Turunc	0.56	58	i P	Pb	22 33 17.9	-0.2
TURN				i S	Sg	22 33 25.2	+0.2
TURN	Turunc	0.56	58	i P	Pb	22 33 17.9	-0.2
TURN				i S	Sg	22 33 25.2	+0.2
YER	Yerkesik	0.60	22	ePG	Pn	22 33 21.7	+1.1
YER				eSG	Sn	22 33 31.7	+1.5
YER	Yerkesik	0.60	22	ePg	Pn	22 33 21.7	+1.1
YER				eSg	Sn	22 33 31.7	+1.5
BODT	Bodrum	0.74	311	ePG	Pn	22 33 22.7	+0.2
BODT				eSG	Sn	22 33 33.7	+0.2
BODT	Bodrum	0.74	311	ePg	Pn	22 33 22.7	+0.2
BODT				eSg	Sn	22 33 33.7	+0.2
MLSB	Milas	0.74	346	ePG	Pn	22 33 22.6	+0.1
MLSB	Milas	0.74	346	ePg	Pn	22 33 22.6	+0.1
FETY	Fethiye	0.87	86	ePG	Pg	22 33 23.2	0.0
FETY				eSG	Sb	22 33 35.6	+0.8
FETY	Fethiye	0.87	86	ePg	Pg	22 33 23.2	0.0
FETY				eSg	Sb	22 33 35.7	+0.8
AYDN	Tasoluk	1.08	355	i P	Pg	22 33 27.2	-0.1
AYDN				i S	Sb	22 33 40.4	-0.7
AYDN	Tasoluk	1.08	355	i P	Pg	22 33 27.2	-0.1
KARP	Karpathos	1.24	214	eP	Pn	22 33 29.4	0.0
KARP				eS	Sn	22 33 45.9	0.0
GCAM	G?zelcaml?	1.28	331	i P	Pn	22 33 29.7	-0.2
GCAM				i S	Sb	22 33 43.9	-2.6
GCAM	G?zelcaml?	1.28	331	i P	Pn	22 33 29.7	-0.2
GLHS	Glhisar (BURDU	1.33	64	ePN	Pn	22 33 30.7	0.0
GLHS	Glhisar (BURDU	1.33	64	ePn	Pn	22 33 30.7	0.0
AKAS	Kas	1.34	105	i P	Pn	22 33 29.8	-1.0
AKAS				i S	Sn	22 33 45.9	-2.6
AKAS	Kas	1.34	105	i P	Pn	22 33 29.8	-1.0
AKAS				i S	Sn	22 33 45.9	-2.6
DNZL	Cakiroluk	1.38	37	i P	Pn	22 33 31.0	-0.5
DNZL				i S	Sg	22 33 51.1	0.0
DNZL	Cakiroluk	1.38	37	i P	Pn	22 33 31.0	-0.5
DNZL				i S	Sg	22 33 51.1	0.0
GOLH	Golhisar	1.41	62	i P	Pn	22 33 31.9	+0.1
GOLH				i S	Sg	22 33 52.1	+0.2
GOLH	Golhisar	1.41	62	i P	Pn	22 33 31.9	+0.1
GOLH				i S	Sg	22 33 52.1	+0.2
DENT	Denizli	1.43	35	ePN	Pb	22 33 32.7	-0.2
DENT	Denizli	1.43	35	ePn	Pb	22 33 32.7	-0.2
ELL	Elmali	1.54	83	ePN	Pn	22 33 33.3	-0.3
ELL	Elmali	1.54	83	ePn	Pn	22 33 33.3	-0.3
BLCB	Balcova	1.96	337	ePN	Pn	22 33 40.1	+0.9
BLCB	Balcova	1.96	337	ePn	Pn	22 33 40.2	+0.9
KULA	Kula-Manisa	2.00	15	ePN	Pn	22 33 41.1	+1.2
KULA	Kula-Manisa	2.00	15	ePn	Pn	22 33 41.1	+1.2
ZKR	Zakros	2.06	225	eP	Pn	22 33 40.9	+0.2
BCK	Bucak	2.25	66	ePN	Pn	22 33 44.0	+0.7
BCK	Bucak	2.25	66	ePn	Pn	22 33 44.0	+0.7
NPS	Neapolis	2.35	237	eP	Pn	22 33 44.7	+0.1
ISP	Isparta	2.36	58	ePN	Pn	22 33 45.9	+1.0
ISP	Isparta	2.36	58	ePn	Pn	22 33 45.9	+1.0
LAST	Lasithi	2.49	236	eP	Pn	22 33 46.8	+0.1
IDI	Anoyia	2.84	244	eP	Pn	22 33 51.9	+0.5

*ISCJB **02** 22:34:32.7±0.3, 27°.43N±0°.04×54°.03E±0°.04, h23km, mb3.9/17, MS2.7/1, Error ellipse: s-maj=6.5km s-min=4.3km az=142.3*

*TEH **02** 22:34:32.0, 27°.10N×53°.90E, h25km, ML3.7*

*THR **02** 22:34:33.7±0.5, 27°.30N×54°.05E, h46km±10km, ML3.7*

*CSEM **02** 22:34:34.5±0.5, 27°.42N×54°.07E, h19km±4km, ML3.7, Error ellipse: s-maj=6.3km s-min=3.8km az=51.0*

*IDC **02** 22:34:38.8±6.8, 27°.45N×54°.06E, h66km±59km, mb3.5/16, mb1 3.6/18, mb1mx3.5/33, mbtmp3.5/18, ML3.9/2, MS2.9/1, Ms1 2.9/1, ms1mx2.2/27, Error ellipse: s-maj=40.0km s-min=15.2km az=159.0*

*OMAN **02** 22:34:53.1±99.0, 26°.22N×55°.18E, h0km±293km, Error ellipse: s-maj=333.3km s-min=25.5km az=338.0*

ISC 02 22:34:33.5±0.5**, 27°.28N**±0°.05×**54°.09E**±0°.05**, h23**km**, n71,** σ**1s.33**/75**, mb3.9**/18**, 2C, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	1.40	316	ePg	Pb	22 34 59.1	+0.1
GHIR				eSg	Sb	22 35 17.3	+0.7
GHIR				AML	AML	22 35 22.2	
	comp=E,1μm,0.8s						
GHIR				AML	AML	22 35 29.6	
	comp=N,1μm,0.4s						
GHIR	Ghir-Karzin	1.40	316	ePg	Pb	22 34 59.1	+0.1
GHIR				eSg	Sb	22 35 17.3	+0.7
BNDS	Bandar-Abbas	1.85	86	ePn	Pn	22 35 04.5	+0.5
BNDS	Bandar-Abbas	1.85	86	ePn	Pn	22 35 04.5	+0.5
IBND	Bandar-abas	2.18	85	eSg	Sb	22 35 46.5	+7.5
IBND				ePn	Pn	22 35 09.0	+0.6
IBND				e		22 36 00.8	
	comp=Z,12μm,0.3s						
ISRV	Sarvestan	2.26	338	e		22 35 11.5	
	comp=Z,4μm,0.1s						
ISRV				ePn	Pn	22 35 09.7	-0.1
ISRV				eSg	Sb	22 35 46.5	+4.9
BANOM	Banah	2.40	124	P	Pn	22 35 13.0	+1.7
	SNR=21						
BANOM	Banah	2.40	124	P	Pn	22 35 13.0	+1.7
	SNR=21						
BANOM				S	Sb	22 35 48.5	+3.4
NAZ	Nazwa, Dubai	2.68	148	P	Pb	22 35 19.7	-1.1
	SNR=7.8						
NAZ	Nazwa, Dubai	2.68	148	P	Pb	22 35 19.7	-1.1
	SNR=7.8						
FAQ	Al Faqa, Dubai	2.86	152	P	Pb	22 35 21.6	-2.3
ASUD	Al Ashush, Dub	2.87	157	P	Pb	22 35 22.5	-1.5
	SNR=42						
ASUD	Al Ashush, Dub	2.87	157	P	Pb	22 35 22.5	-1.5
	SNR=42						
HATD	Hatta, Dubai	3.06	143	P	Pn	22 35 23.2	+2.8
KRBR	Kerman	3.57	40	ePn	Pn	22 35 28.4	+0.6
KRBR				AML	AML	22 36 28.9	
	comp=N,135nm,0.6s						
KRBR				AML	AML	22 36 33.5	
	comp=E,124nm,0.5s						
KRBR	Kerman	3.57	40	ePn	Pn	22 35 28.4	+0.6
IMEH	Mehriz	4.12	6	ePn	Pn	22 35 35.9	+0.6
IMEH				e		22 36 27.8	
	comp=Z,669nm,0.2s						
IMEH	Mehriz	4.12	6	ePn	Pn	22 35 35.9	+0.6
ISAD	Sadrabad	4.63	356	ePn	Pn	22 35 42.6	+0.3
ISAD				e		22 36 43.9	
	comp=Z,640nm,0.2s						
ISAD	Sadrabad	4.63	356	ePn	Pn	22 35 42.6	+0.3
ICHK	Chekchek	4.96	3	ePn	Pn	22 35 47.0	+0.3
ICHK				e		22 36 47.3	
	comp=Z,374nm,0.2s						
ICHK	Chekchek	4.96	3	ePn	Pn	22 35 47.0	+0.3
BSY	Bisya	5.32	147	P	Pn	22 35 54.6	+3.0
	SNR=9.6						
BSYO	Bisya	5.36	147	P	Pn	22 35 54.6	+2.5
	SNR=9.6						
IGAR	Gharneh	5.41	341	ePn	Pn	22 35 52.8	-0.1
IGAR				e		22 35 54.6	
	comp=Z,580nm,0.1s						
SMDO	Samad	5.52	139	P	Pn	22 35 57.3	+2.9
	SNR=8.9						
SMDO	Samad	5.52	139	P	Pn	22 35 57.3	+2.8
	SNR=8.9						
NASN	Na'in	5.61	349	ePn	Pn	22 35 55.9	+0.1
NASN	Na'in	5.61	349	ePn	Pn	22 35 55.9	+0.1
IZEF	Zefreh	5.80	345	ePn	Pn	22 35 57.4	-1.0
IZEF				e		22 35 59.9	
	comp=Z,326nm,0.2s						
IZEF	Zefreh	5.80	345	ePn	Pn	22 35 57.4	-1.0
RDF	Al-Radifah	6.01	287	eP	Pn	22 36 01.7	+0.7
RDF				AML	AML	22 37 09.1	
	comp=Z,11nm,0.4s						
RDF	Al-Radifah	6.01	287	eP	Pn	22 36 01.7	+0.7
ZHSF	Zahedan	6.33	67	ePn	Pn	22 36 06.5	+1.0
ZHSF	Zahedan	6.33	67	ePn	Pn	22 36 06.5	+1.0
NAY	Al-Naaiem	6.35	290	eP	Pn	22 36 06.2	+0.5
NAY				AML	AML	22 37 16.0	
	comp=Z,5.7nm,0.6s						
NAY	Al-Naaiem	6.35	290	eP	Pn	22 36 06.2	+0.5
MIB	Mutribah	6.45	295	eP	Pn	22 36 07.3	+0.3
MIB				AML	AML	22 37 19.1	
	comp=Z,12nm,0.4s						
MIB	Mutribah	6.45	295	eP	Pn	22 36 07.3	+0.3
TABS	Tabas	6.86	22	ePn	Pn	22 36 13.0	+0.1
TABS	Tabas	6.86	22	ePn	Pn	22 36 13.0	+0.1
IVRN	Varamin	7.95	346	ePn	Pn	22 36 26.6	-1.2
IVRN				e		22 36 28.2	
	comp=Z,190nm,0.2s						
IVRN	Varamin	7.95	346	ePn	Pn	22 36 26.6	-1.2
SHRT	Shahrakht	8.30	39	eP	Pn	22 36 33.3	+0.8
SHRT	Shahrakht	8.30	39	eP	Pn	22 36 33.3	+0.8
IFIR	Firoozkooh	8.41	353	ePn	Pn	22 36 33.3	-1.0
IFIR				e		22 36 38.9	
	comp=Z,59nm,0.1s						
IFIR	Firoozkooh	8.41	353	ePn	Pn	22 36 33.3	-1.0
IRAZ	Razeghan	8.85	337	ePn	Pn	22 36 38.5	-1.6
IRAZ				e		22 36 40.6	
	comp=Z,124nm,0.2s						
IRAZ	Razeghan	8.85	337	ePn	Pn	22 36 38.5	-1.6
GNI	Garni	15.00	331	P	P	22 38 08.8	-0.6
	comp=Z,0.8nm,0.3s,baz=87,slow=2.6,SNR=5.5						
ASF	Jabal al Asfar	15.71	292	P	P	22 38 18.3	+1.0
	comp=Z,0.2nm,0.3s,baz=13,slow=4.3,SNR=4.5						
MMAI	Mount Meron Ar	17.14	294	P	Pn	22 38 32.1	+0.5
	comp=Z,0.5nm,0.3s,baz=101,slow=15,SNR=3.4						
KBZ	Khabaz	18.74	334	P	Pn	22 38 51.6	+0.5
	comp=Z,0.1nm,0.3s,baz=143,slow=5.1,SNR=3.3						
BRTR	Keskin Array B	21.04	311	P	P	22 39 16.5	+0.6
	comp=Z,1.8nm,0.8s,baz=128,slow=11,SNR=9.9						
AAK	Ala-Archa	22.59	42	P	P	22 39 32.6	+0.1
	comp=Z,1.3nm,0.5s,baz=228,slow=16,SNR=2.2						
AAK				LR	LR	22 49 11.6	
	comp=Z,28nm,18.9s,baz=345,slow=39						
AKTO	Aktyubinsk	23.32	6	P	P	22 39 39.4	-0.3
	comp=Z,2.0nm,0.5s,baz=179,slow=12,SNR=16						
BVAR	Borovoye Array	28.44	21	P	P	22 40 26.0	-0.4
	comp=Z,1.1nm,0.4s,baz=210,slow=8.6,SNR=12						
MKAR	Makanchi Array	29.52	41	P	P	22 40 36.1	0.0
	comp=Z,0.8nm,0.4s,baz=232,slow=12,SNR=12						
KURBB	Kurchatov Arra	29.82	32	P	P	22 40 38.7	0.0
	comp=Z,0.7nm,0.6s,baz=234,slow=8.7,SNR=9.1						
ZALV	Zalesovo Beam	34.92	32	P	P	22 41 22.5	-0.8
	comp=Z,2.5nm,0.5s,baz=238,slow=9.0,SNR=14						
FINES	FINESS Array B	38.98	339	P	P	22 41 55.8	-1.9
	comp=Z,1.4nm,0.5s,baz=131,slow=10,SNR=5.9						
FETA	Feichten	39.17	312	⇑iP	P	22 41 59.0	-0.7
	comp=Z,3.5nm,0.9s						
DAVA	Damuels	39.80	312	⇑iP	P	22 42 04.0	-1.0
	comp=Z,6.3nm,0.4s						
NOA	NORSAR Array B	44.30	332	P	P	22 42 39.5	-1.8
	comp=Z,0.4nm,0.5s,baz=120,slow=7.8,SNR=3.1						
SONM	Songino Array	45.29	49	P	P	22 42 49.5	0.0
	comp=Z,0.3nm,0.5s,baz=258,slow=12,SNR=3.0						
ARCES	ARCESS Array B	45.44	346	P	P	22 42 50.0	-0.2
	comp=Z,0.9nm,0.5s,baz=149,slow=9.8,SNR=14						
ESDC	Sonseca Array	49.20	300	P	P	22 43 20.2	+0.1
	comp=Z,0.2nm,0.4s,baz=82,slow=5.6,SNR=4.2						
TORD	Torodi Ar. Bea	50.80	265	P	P	22 43 32.5	+0.1
	comp=Z,1.0nm,0.6s,baz=58,slow=8.3,SNR=18						
DBIC	Dimbokro	59.43	261	P	P	22 44 35.1	+0.4
	comp=Z,3.6nm,0.9s,baz=40,slow=11,SNR=3.2						
ILAR	Eielson Array	86.80	9	P	P	22 47 14.7	-1.0
	comp=Z,0.3nm,0.6s,baz=341,slow=5.2,SNR=3.1						
YKA	Yellowknife Ar	90.08	355	P	P	22 47 30.2	-1.0
	comp=Z,0.2nm,0.5s,baz=2.1,slow=4.9,SNR=3.2						

*WEL **02** 22:37:31.0±1.4, 36°.03S×178°.12E, h5km, ML4.3/5, Error ellipse: s-maj=10.1km s-min=9.6km az=90.0*

*IDC **02** 22:37:37.4±2.5, 36°.58S×177°.55E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.8/17, mbtmp3.9/3, Error ellipse: s-maj=57.0km s-min=23.6km az=65.0*

ISC 02 22:37:41.6±1.6**, 36°.5S**±0°.1×**177°.7E**±0°.1**, h35**km**, n12,** σ**1s.80**/13**, mb4.0**/3**, 2D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.19	155	eP*	Pn	22 37 56.7	-5.0
MXZ				AML	AML	22 39 09.3	
MXZ				AML	AML	22 39 11.0	
KUZ	Kuaotunu	1.58	260	⇓PN	Pn	22 38 05.4	-1.7
KUZ				AML	AML	22 38 27.9	
PUZ	Puketiti	1.66	164	PN	Pn	22 38 05.8	-2.4
PUZ				SN	Sn	22 38 31.9	+3.7
PUZ				AML	AML	22 38 32.4	
URZ	Urewera	1.83	194	P*	Pn	22 38 09.1	-1.3
URZ				AML	AML	22 38 33.6	
URZ				AML	AML	22 38 41.8	
URZ	Urewera	1.83	194	Pn	Pn	22 38 08.5	-2.0
	20nm,0.3s,baz=14,slow=13,SNR=19						
URZ				Sn	Sn	22 38 31.2	-1.1
	18nm,0.3s,baz=289,slow=14,SNR=6.5						
MKAZ	Moumakai	2.10	252	PN	Pn	22 38 13.6	-0.6
BKZ	Black Stump Fm	2.83	199	P*	Pn	22 38 23.5	-0.9
BKZ				AML	AML	22 39 26.2	
BKZ				AML	AML	22 39 31.8	
HIZ	Hauiti	3.02	227	⇓PN	Pn	22 38 26.9	+0.1
ASAR	Alice Springs	39.65	276	P	P	22 45 10.6	+0.4
	2.4nm,0.8s,baz=121,slow=7.8,SNR=16						
WRA	Warramunga Arr	41.21	282	P	P	22 45 23.0	-0.1
	1.1nm,0.7s,baz=120,slow=7.7,SNR=6.9						
QSPA	South Pole Qui	53.64	180	P	P	22 46 59.3	0.0
	1.2nm,0.7s,baz=41,slow=20,SNR=6.8						
TORD	Torodi Ar. Bea	156.48	190	PKPab	PKPab	22 58 02.9	+1.2
	0.6nm,0.9s,baz=161,slow=3.1,SNR=3.0						

*NEIC **02** 22:42:38.1, 14°.26N×58°.69W, h34km, MD4.1(TRN), After TRN.*

TRN 02 22:42:36.5, 14°.26N×**58°.91W, h3**km**, MD4.1, 7C-3D, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BBGH	Gun Hill	1.28	209	ePn	Pn	22 43 04.0	+2.6
BBGH				eSn	Sg	22 43 17.3	-0.4
MVM	Montagne Vaucl	1.94	279	⇓eP	Pb	22 43 12.9	+0.3
SLW	Petit Monier	1.98	263	eP	Pb	22 43 13.8	+0.5
SLW				eS	Sb	22 43 39.2	+0.8
SLW	Petit Monier	1.98	263	eP	Pb	22 43 13.8	+0.5
SLW				eS	Sb	22 43 39.2	+0.8
SLPA	Patience	1.99	258	eP	Pg	22 43 14.2	-0.5
SLPA	Patience	1.99	258	eP	Pg	22 43 14.2	-0.5
MCLT	Moule a Chique	2.04	255	eP	Pb	22 43 14.6	+0.3
MCLT				eS	Sg	22 43 41.3	-1.0
MCLT	Moule a Chique	2.04	255	eP	Pb	22 43 14.0	-0.4
MCLT				eS	Sg	22 43 41.3	-1.0
SLPE	Piton Saint Es	2.06	259	eP	Pb	22 43 14.2	-0.5
SLPE				eS	Sg	22 43 42.3	-0.7
SLPE	Piton Saint Es	2.06	259	eP	Pb	22 43 14.2	-0.5
SLPE				eS	Sg	22 43 42.3	-0.7
SLB	Belfond	2.11	258	⇓eP	Pb	22 43 15.8	+0.2
SLB				eS	Sb	22 43 42.5	+0.3
SLB	Belfond	2.11	258	⇓eP	Pb	22 43 15.7	+0.1
SLB				eS	Sb	22 43 42.5	+0.3

SLDE	Delcer	2.13 258	eP	Pb	22 43 15.9	0.0
SLDE			eS	Sb	22 43 42.8	+0.1
SLDE	Delcer	2.13 258	eP	Pb	22 43 15.9	0.0
SLDE			eS	Sb	22 43 42.8	+0.1
FDF	Fort de France	2.22 282	⇑eP	Pb	22 43 16.6	-0.8
FDF	Fort de France	2.22 282	eP	Pb	22 43 16.6	-0.8
FDF			⇑eS	Sb	22 43 46.3	+1.1
FDF	Fort de France	2.22 282	ePn	Pb	22 43 16.3	-1.0
FDF			eSn	Sb	22 43 45.0	-0.2
BHS	Barnard House	2.36 246	eP	Pb	22 43 19.0	-0.6
BHS			eS	Sb	22 43 48.4	-0.8
BHS	Barnard House	2.36 246	eP	Pb	22 43 19.0	-0.6
BHS			eS	Sb	22 43 48.4	-0.8
SVB	Belmont	2.48 247	⇑iP	Pb	22 43 20.3	-1.5
SVB			eS	Sb	22 43 51.8	-0.9
SVB	Belmont	2.48 247	⇑iP	Pb	22 43 20.3	-1.5
SVB			eS	Sb	22 43 51.8	-0.9
DBCT	Belle View Cho	2.56 293	eP	Pb	22 43 21.8	-1.4
DBCT			eS	Sb	22 43 53.6	-1.5
DBCT	Belle View Cho	2.56 293	eP	Pb	22 43 21.8	-1.4
DBCT			eS	Sb	22 43 53.6	-1.5
DSHT	Scott's Head	2.56 292	eS	Sb	22 43 54.4	-0.7
DPMT	Pointe Michel	2.58 293	eP	Pb	22 43 21.9	-1.5
DPMT			eS	Sb	22 43 54.6	-1.1
DPMT	Pointe Michel	2.58 293	eP	Pb	22 43 21.9	-1.5
DPMT			eS	Sb	22 43 54.6	-1.1
MDN	Morne-Daniel	2.62 294	eP	Pb	22 43 22.8	-1.3
MDN			eS	Sb	22 43 54.9	-1.8
MDN	Morne-Daniel	2.62 294	eP	Pb	22 43 22.8	-1.3
MDN			eS	Sb	22 43 54.9	-1.8
DWS	Wesley	2.66 300	eP	Pn	22 43 22.4	+2.1
DWS			eS	Sn	22 43 55.4	+2.4
DWS	Wesley	2.66 300	eP	Pn	22 43 22.4	+2.1
DWS			eS	Sn	22 43 55.4	+2.4
DVCT	Vielle Casse P	2.76 299	eP	Pn	22 43 23.5	+1.8
DVCT			eS	Sn	22 43 57.8	+2.3
MGG	Marie-Galante	2.84 306	⇑iP	Pn	22 43 24.4	+1.6
TBG	Guadaloupe-3	3.08 301	⇑iP	Pn	22 43 27.8	+1.7
DOG	Dongo Capester	3.15 304	eP	Pn	22 43 28.9	+1.8
PHG	Guadaloupe-2	3.16 304	eP	Pn	22 43 29.4	+2.1
BCG	Bois Riant Cap	3.18 305	eP	Pn	22 43 29.4	+1.9
HMG	Houelmont	3.19 303	eP	Pn	22 43 28.9	+1.3
GRSS	Sisters	3.27 234	eP	Pn	22 43 31.8	+3.0
GRSS	Sisters	3.27 234	eP	Pn	22 43 31.8	+3.0
SEG	Port Louis	3.28 311	eP	Pn	22 43 29.8	+0.9
LZG	Guadaloupe-1	3.33 304	eP	Pn	22 43 31.6	+2.0
GRHS	Sauteurs	3.34 233	eP	Pn	22 43 32.3	+2.6
GRHS			eS	Sn	22 44 11.8	+1.9
GRHS	Sauteurs	3.34 233	eP	Pn	22 43 32.3	+2.6
GRHS			eS	Sn	22 44 11.8	+1.9
TOSP	Speyside	3.34 208	⇑iP	Pn	22 43 31.4	+1.7
TOSP			eS	Sn	22 44 09.8	-0.2
GRW	Mount Saint Ca	3.40 232	eP	Pn	22 43 33.5	+2.9
GRW	Mount Saint Ca	3.40 232	eP	Pn	22 43 33.5	+2.9
GRGR	Grenville	3.41 232	ePn	Pn	22 43 32.5	+1.9
GRGR			eSn	Sn	22 44 14.6	+3.0
BPA	Boggy Peak	3.96 315	eS	Sn	22 44 26.5	+1.1
ANWB	Willy Bob	4.37 321	ePn	Pn	22 43 42.5	-1.3
ANWB			eSn	Sn	22 44 32.8	-2.5
SDDR	Presa de Saban	12.75 293	Pn	Pn	22 45 39.0	0.0

WEL 02 23:02:48.3±0.3, 36.15S×177.76E, h200km±4km, ML4.4/16, 4C-4D, Error ellipse: s-maj=5.4km s-min=4.6km az=90.0, Off east coast of North Island

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.47 163	PN	Pn	23 03 21.7	+0.1
MXZ			SN	Sn	23 03 47.4	-0.3
MXZ			AML	AML	23 03 48.2	
MXZ			AML	AML	23 03 48.4	
MXZ			AML	AML	23 03 48.4	
PUZ	Puketiti	1.96 168	PN	Pn	23 03 26.3	0.0
PUZ			SN	Sn	23 03 55.9	-0.2
PUZ			AML	AML	23 04 39.9	
URZ	Urewera	2.17 194	PN	Pn	23 03 28.9	+0.5
URZ			SN	Sn	23 03 59.6	-0.3
URZ			AML	AML	23 04 01.5	
MWZ	Matawai	2.19 185	PN	Pn	23 03 28.9	+0.2
MWZ			SN	Sn	23 03 59.8	-0.6
MWZ			AML	AML	23 04 00.8	
MWZ			AML	AML	23 04 00.8	
MWZ			AML	AML	23 04 01.9	
TARZ	Mount Tarawera	2.31 205	PN	Pn	23 03 31.9	+1.9
CNGZ	Carnagh Statio	2.35 171	PN	Pn	23 03 30.9	+0.4
PRGZ	Paritu Road	2.77 178	PN	Pn	23 03 35.1	-0.1
RAHZ	Arahi	2.81 191	PN	Pn	23 03 35.9	+0.2
RAHZ			SN	Sn	23 04 12.8	0.0
KNZ	Kokohu	2.86 181	PN	Pn	23 03 35.9	-0.3
MHGZ	Mahia Peninsul	3.00 178	PN	Pn	23 03 37.6	-0.2
NMHZ	Naumai	3.04 194	PN	Pn	23 03 38.9	+0.6
BKZ	Black Stump Fm	3.17 198	⇓PN	Pn	23 03 39.7	-0.3
BKZ			AML	AML	23 04 21.2	
BKZ			AML	AML	23 04 23.3	
KRVZ	Karewarewa	3.38 209	PN	Pn	23 03 43.6	+1.1
MCHZ	McNeill Hill	3.39 194	PN	Pn	23 03 42.5	0.0
WTVZ	West Tongariro	3.42 210	PN	Pn	23 03 43.9	+0.9
OTVZ	Oturere	3.44 208	PN	Pn	23 03 43.9	+0.7
TWVZ	Taurewa	3.45 212	PN	Pn	23 03 44.2	+0.9
NGZ	Ngauruhoe	3.47 209	PN	Pn	23 03 44.8	+1.1
WPVZ	Whakapapa	3.52 209	PN	Pn	23 03 45.2	+1.1
TUVZ	Tukino	3.53 208	PN	Pn	23 03 44.7	+0.3
CKHZ	Cape Kidnapper	3.54 189	PN	Pn	23 03 43.7	-0.6
FWVZ	Far West T-bar	3.56 209	⇑PN	Pn	23 03 45.1	+0.3
DRZ	Dome Shelter	3.57 209	PN	Pn	23 03 45.8	+0.7
BHHZ	Black Hill Sta	3.59 201	PN	Pn	23 03 44.4	-0.6
TRVZ	Turoa	3.60 209	PN	Pn	23 03 45.5	+0.2
WNVZ	Wahianoa	3.60 208	PN	Pn	23 03 45.5	+0.2
MOVZ	Moawhango	3.62 205	PN	Pn	23 03 44.8	-0.5
PKVZ	Pokaka	3.67 211	PN	Pn	23 03 46.4	+0.5
KAHZ	Kahuranaki	3.70 191	PN	Pn	23 03 45.7	-0.6
PXZ	Pawanui	3.94 190	⇑PN	Pn	23 03 48.1	-1.0
PXZ			AML	AML	23 04 36.8	
PXZ			AML	AML	23 04 36.8	
PXZ			AML	AML	23 04 37.3	
PXZ			AML	AML	23 04 37.5	
PNHZ	Pukenui	3.95 198	PN	Pn	23 03 48.1	-1.3
WPHZ	Waipukurau	4.04 195	PN	Pn	23 03 49.5	-1.0
TSZ	Takapari Road	4.15 199	PN	Pn	23 03 50.6	-1.3
TSZ			AML	AML	23 04 40.8	
TSZ			AML	AML	23 04 41.1	
PRHZ	Porangahau	4.20 192	PN	Pn	23 03 51.1	-1.4
WAZ	Wanganui	4.21 211	PN	Pn	23 03 52.7	+0.1
DVHZ	Dannevirke	4.33 196	PN	Pn	23 03 52.4	-1.6
POWZ	Post Office Ro	4.51 200	PN	Pn	23 03 55.0	-1.4
BFZ	Birch Farm	4.67 194	⇓PN	Pn	23 03 56.8	-1.6
MRZ	Mangatainoka R	4.82 200	⇑PN	Pn	23 03 58.1	-2.1
MRZ			AML	AML	23 04 53.4	
MRZ			AML	AML	23 04 54.1	
TIWZ	Tintock	4.84 197	PN	Pn	23 03 58.7	-2.0
HOWZ	Holdsworth Sta	5.05 200	⇓PN	Pn	23 04 00.8	-2.5
OGWZ	Otaki Gorge	5.08 203	PN	Pn	23 04 01.5	-2.1
TMWZ	Te Maipa	5.16 196	⇓PN	Pn	23 04 02.3	-2.3
KIW	Kapiti Island	5.21 205	PN	Pn	23 04 02.9	-2.4
KIW			AML	AML	23 05 03.0	
KIW			AML	AML	23 05 03.4	
CAW	Cannon Point	5.38 202	PN	Pn	23 04 04.7	-2.7
CAW			AML	AML	23 05 07.6	
CAW			AML	AML	23 05 08.9	
TRWZ	Traveller	5.48 197	PN	Pn	23 04 06.3	-2.5
TRWZ			AML	AML	23 05 11.1	
TRWZ			AML	AML	23 05 11.9	
PAWZ	Paruwai Farm	5.53 199	PN	Pn	23 04 06.4	-3.0
PAWZ			AML	AML	23 05 10.4	
PAWZ			AML	AML	23 05 11.3	
DUWZ	D'Urville Isla	5.53 212	PN	Pn	23 04 07.0	-2.4
MSWZ	Moikau Station	5.61 200	PN	Pn	23 04 07.4	-3.0
MSWZ			AML	AML	23 05 11.3	
MSWZ			AML	AML	23 05 11.8	
SNZO	South Karori	5.67 204	PN	Pn	23 04 08.1	-3.0
SNZO			AML	AML	23 05 13.1	
SNZO			AML	AML	23 05 14.2	
TCW	Tory Channel	5.74 207	PN	Pn	23 04 09.0	-3.0
TCW			AML	AML	23 05 16.8	
TCW			AML	AML	23 05 16.9	
PLWZ	Palliser	5.75 199	PN	Pn	23 04 09.1	-3.2
TUWZ	Tuamarina	6.05 208	PN	Pn	23 04 13.0	-3.1
TUWZ			AML	AML	23 05 21.7	
TUWZ			AML	AML	23 05 24.5	
NNZ	Nelson	6.11 213	PN	Pn	23 04 14.1	-2.7
QRZ	Quartz Range	6.21 220	PN	Pn	23 04 15.4	-2.8
BSWZ	Blackbirch Sta	6.32 207	PN	Pn	23 04 16.9	-2.7
THZ	Tophouse	6.76 213	PN	Pn	23 04 22.3	-3.1
KHZ	Kahutara	7.06 206	⇑PN	Pn	23 04 25.8	-3.4
LTZ	Lake Taylor	7.86 211	PN	Pn	23 04 35.7	-4.0
MQZ	McQueen's Vall	8.50 206	PN	Pn	23 04 43.1	-4.7
JCZ	Jackson Bay	10.49 218	PN	Pn	23 05 10.1	-3.7

CSEM 02 23:11:34.3±0.3, 37.83N×36.28E, h2km, MD2.8, Error ellipse: s-maj=8.5km s-min=6.8km az=77.0
ISK 02 23:11:35.4, 37.64N×36.27E, h20km, MD2.8
ISCJB 02 23:11:36.2±0.6, 37.69N±0.03×36.24E±0.04, h6km±6km, Error ellipse: s-maj=6.2km s-min=5.1km az=40.3
DDA 02 23:11:36.0, 37.57N×36.20E, h4km, MD3.1
ISC 02 23:11:35.8±1.0, 37.65N±0.03×36.21E±0.03, h8km±7km, n19, σ1.18/32, Turkey

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	Andirin	0.13 124	iP	Pg	23 11 38.6	-0.1
ANDN			iS	Sg	23 11 41.0	+0.2
ANDN	Andirin	0.13 124	iP	Pg	23 11 38.6	-0.1
ANDN			iS	Sg	23 11 41.0	+0.2
KOZT	Kozan	0.35 241	ePG	Pb	23 11 43.9	-0.3
KOZT			eSG	Sb	23 11 50.2	+0.3
KOZT	Kozan	0.35 241	ePg	Pb	23 11 43.9	-0.3
KOZT			eSg	Sb	23 11 50.2	+0.3
AYKD	Aykdinkavak	0.53 116	iP	Pg	23 11 46.4	+0.3
AYKD			iS	Sb	23 11 53.7	-1.5
KMRS	Kahramanmaras	0.57 105	ePG	Pg	23 11 46.0	-0.8
KMRS			eSG	Sg	23 11 54.5	+0.3
KMRS	Kahramanmaras	0.57 105	ePg	Pg	23 11 46.0	-0.8
KMRS			eSg	Sg	23 11 54.5	+0.3
SARI	SarD1z-Kayseri	0.77 12	ePG	Pg	23 11 50.9	+0.2
SARI			eSG	Sb	23 12 02.4	+0.1
SARI	SarD1z-Kayseri	0.77 12	ePg	Pg	23 11 50.9	+0.2
SARI			eSg	Sb	23 12 02.4	+0.1
KUZU	Kuzuini	1.12 141	iP	Pn	23 11 58.7	+0.9
KUZU			iS	Sn	23 12 13.4	+0.1
KUZU	Kuzuini	1.12 141	iP	Pn	23 11 58.7	+0.9
KUZU			iS	Sn	23 12 13.4	+0.1
BNN	Bunyan	1.23 347	ePN	Pn	23 11 58.4	-1.0
BNN	Bunyan	1.23 347	ePn	Pn	23 11 58.4	-1.0
NIG	Nigde	1.34 290	ePN	Pn	23 12 00.5	-0.6
NIG	Nigde	1.34 290	ePn	Pn	23 12 00.5	-0.6
DARE	Darende-Malaty	1.36 47	ePN	Pn	23 11 59.0	-2.2
DARE	Darende-Malaty	1.36 47	ePn	Pn	23 11 59.0	-2.2
AKCD	Akcadag	1.50 64	iP	Pg	23 12 05.2	+0.6
AKCD			iS	Sg	23 12 27.1	+3.1
AKCD	Akcadag	1.50 64	iP	Pg	23 12 05.2	+0.6
AKCD			iS	Sg	23 12 27.1	+3.1

WEL 02 23:11:38.6±0.6, 36.91S×177.13E, h249km±5km, ML4.2/17, 9C-5D, Error ellipse: s-maj=8.2km s-min=4.9km az=0.0, Off east coast of North Island

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	Manawahe	1.14 199	PN	Pn	23 12 14.5	+0.2
MXZ	Matakaoa Point	1.14 125	PN	Pn	23 12 14.1	-0.2
MXZ			SN	S	23 12 42.9	+0.6
MXZ			AML	AML	23 12 50.8	
MXZ			AML	AML	23 12 50.8	
MXZ			AML	AML	23 12 51.0	
URZ	Urewera	1.35 181	⇑PN	Pn	23 12 15.2	-0.4
URZ			SN	S	23 12 44.1	-0.8
URZ			AML	AML	23 12 50.4	
TARZ	Mount Tarawera	1.42 200	PN	Pn	23 12 16.9	+0.6
MWZ	Matawai	1.46 168	PN	Pn	23 12 16.7	+0.2
MWZ			SN	S	23 12 45.6	-0.8
MWZ			AML	AML	23 12 53.0	
MWZ			AML	AML	23 12 53.0	
MWZ			AML	AML	23 12 57.0	
PUZ	Puketiti	1.47 143	PN	Pn	23 12 16.5	0.0
PUZ			AML	AML	23 12 45.4	
PUZ			AML	AML	23 18 22.8	
TOZ	Tahuroa Road	1.54 237	⇑PN	Pn	23 12 17.2	+0.2
CNGZ	Carnagh Statio	1.79 152	PN	Pn	23 12 19.9	+0.8
RAHZ	Arahi	2.01 181	PN	Pn	23 12 21.4	+0.5
PRGZ	Paritu Road	2.10 164	PN	Pn	23 12 22.4	+0.6
KNZ	Kokohu	2.15 169	⇑PN	Pn	23 12 22.3	+0.1
NMHZ	Naumai	2.20 187	PN	Pn	23 12 23.3	+0.4
RATZ	Rangitukua	2.23 208	PN	Pn	23 12 23.2	+0.1
BKZ	Black Stump Fm	2.31 192	PN	Pn	23 12 23.0	-0.9
BKZ			AML	AML	23 13 02.3	
BKZ			AML	AML	23 13 02.6	
MHGZ	Mahia Peninsul	2.32 165	PN	Pn	23 12 24.4	+0.5
KATZ	Kakaramea	2.36 208	PN	Pn	23 12 25.4	+0.9
KRVZ	Karewarewa	2.48 208	PN	Pn	23 12 25.9	+0.2
WTVZ	West Tongariro	2.52 208	⇓PN	Pn	23 12 26.1	+0.1
OTVZ	Oturere	2.53 207	PN	Pn	23 12 26.3	0.0
TWVZ	Taurewa	2.54 211	PN	Pn	23 12 26.3	+0.1
MCHZ	McNeill Hill	2.56 188	PN	Pn	23 12 26.4	+0.2
NGZ	Ngauruhoe	2.57 208	PN	Pn	23 12 26.7	+0.2
WPVZ	Whakapapa	2.61 208	PN	Pn	23 12 27.0	0.0
TUVZ	Tukino	2.63 206	⇑PN	Pn	23 12 27.0	-0.2
FWVZ	Far West T-bar	2.66 208	PN	Pn	23 12 27.3	-0.3
DRZ	Dome Shelter	2.67 207	PN	Pn	23 12 27.8	-0.1
TRVZ	Turoa	2.70 207	⇓PN	Pn	23 12 27.9	-0.1
WNVZ	Wahianoa	2.70 206	PN	Pn	23 12 27.6	-0.4
BHHZ	Black Hill Sta	2.71 198	⇑PN	Pn	23 12 27.2	-0.7
MOVZ	Moawhango	2.72 203	⇑PN	Pn	23 12 27.3	-0.8
CKHZ	Cape Kidnapper	2.75 181	PN	Pn	23 12 28.4	+0.1
PKVZ	Pokaka	2.77 210	⇑PN	Pn	23 12 28.3	-0.2
MTVZ	Mangateitei	2.80 207	⇓PN	Pn	23 12 28.8	-0.1
KAHZ	Kahuranaki	2.89 184	⇓PN	Pn	23 12 29.8	0.0
VRZ	Vera Road	2.90 220	PN	Pn	23 12 30.6	+0.7
PNHZ	Pukenui	3.09 193	PN	Pn	23 12 31.1	-0.9
PXZ	Pawanui	3.13 184	PN	Pn	23 12 31.8	-0.4
PXZ			AML	AML	23 13 15.4	
PXZ			AML	AML	23 13 15.4	
PXZ			AML	AML	23 13 17.4	
PXZ			AML	AML	23 13 17.5	
WPHZ	Waipukurau	3.20 190	PN	Pn	23 12 32.6	-0.5
TSZ	Takapari Road	3.28 196	PN	Pn	23 12 33.2	-0.9
TSZ			AML	AML	23 13 19.4	
TSZ			AML	AML	23 13 21.8	
WAZ	Wanganui	3.31 210	PN	Pn	23 12 33.9	-0.4
PRHZ	Porangahau	3.38 186	PN	Pn	23 12 34.4	-0.7
DVHZ	Dannevirke	3.47 192	PN	Pn	23 12 34.9	-1.3
POWZ	Post Office Ro	3.64 197	PN	Pn	23 12 36.8	-1.3
BFZ	Birch Farm	3.83 190	PN	Pn	23 12 39.0	-1.3
MRZ	Mangatainoka R	3.94 197	⇑PN	Pn	23 12 39.8	-1.8
MRZ			AML	AML	23 13 31.0	
MRZ			AML	AML	23 13 33.3	
TIWZ	Tintock	3.98 194	PN	Pn	23 12 40.7	-1.4
HOWZ	Holdsworth Sta	4.18 197	PN	Pn	23 12 42.4	-2.0
OGWZ	Otaki Gorge	4.20 201	⇑PN	Pn	23 12 42.7	-1.8
TMWZ	Te Maipa	4.30 193	PN	Pn	23 12 44.6	-1.3
KIW	Kapiti Island	4.31 203	PN	Pn	23 12 43.8	-2.1
KIW			AML	AML	23 13 39.1	
KIW			AML	AML	23 13 40.2	
CAW	Cannon Point	4.49 200	PN	Pn	23 12 45.9	-2.2
CAW			AML	AML	23 13 44.1	
CAW			AML	AML	23 13 45.0	
TRWZ	Traveller	4.62 194	AML	AML	23 13 46.3	
DUWZ	D'Urville Isla	4.63 212	PN	Pn	23 12 47.7	-2.1
PAWZ	Paruwai Farm	4.66 196	AML	AML	23 13 47.4	
PAWZ			AML	AML	23 13 50.3	
MSWZ	Moikau Station	4.73 197	AML	AML	23 13 46.2	
MSWZ			AML	AML	23 13 49.0	
SNZO	South Karori	4.79 203	PN	Pn	23 12 49.0	-2.5
SNZO			AML	AML	23 13 49.2	
TCW	Tory Channel	4.84 206	PN	Pn	23 12 49.9	-2.4
TCW			AML	AML	23 13 50.1	
TCW			AML	AML	23 13 51.9	
PLWZ	Palliser	4.88 197	PN	Pn	23 12 50.4	-2.4
TUWZ	Tuamarina	5.15 208	PN	Pn	23 12 53.8	-2.2
TUWZ			AML	AML	23 13 57.4	
TUWZ			AML	AML	23 13 58.1	
QRZ	Quartz Range	5.31 221	PN	Pn	23 12 55.1	-3.0
BSWZ	Blackbirch Sta	5.42 207	PN	Pn	23 12 57.4	-2.0
THZ	Tophouse	5.85 213	PN	Pn	23 13 02.7	-2.2
KHZ	Kahutara	6.16 206	PN	Pn	23 13 06.5	-2.1
KHZ			AML	AML	23 14 20.3	
LTZ	Lake Taylor	6.96 211	⇓PN	Pn	23 13 15.7	-3.0
MQZ	McQueen's Vall	7.61 205	PN	Pn	23 13 23.2	-3.6

GUC 02 23:13:02.6±0.8, 31.90S×69.43W, h145km±16km, MD3.5, ML3.4, 2D, San Juan Province

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	1.53 298	eP	Pn	23 13 32.3	+0.1
CMCH			iS	Sn	23 13 55.3	+0.6
CMCH			AML	AML	23 13 57.4	
	comp=N,1μm,0.5s					
FCH	Farellones	1.60 207	eP	Pn	23 13 33.1	-0.1
FCH			eS	Sn	23 13 58.9	+2.1
FCH			AML	AML	23 14 03.0	
	comp=E,139nm,0.3s					
PEL	Peldehue	1.63 220	⇓eP	Pn	23 13 33.9	+0.6
PEL			iS	Sn	23 13 57.5	+0.6
PEL			AML	AML	23 13 58.9	
	comp=E,422nm,0.4s					
ROCH	El Roble	1.71 231	⇓iP	Pn	23 13 34.8	+0.4
ROCH			iS	Sn	23 13 59.4	+0.6
ROCH			AML	AML	23 14 00.8	
	comp=E,323nm,0.3s					
CHNG	Los Chungos	1.76 270	eP	Pn	23 13 35.0	+0.4
CHNG			iS	Sn	23 13 59.6	+0.5
PCH	Pirque	1.94 208	eP	Pn	23 13 37.5	+0.6
LMEL	Las Melosas	2.05 198	eP	Pn	23 13 38.6	+0.4
LMEL			eS	Sn	23 14 06.2	+0.6
CACH	El Canelo	2.42 204	eP	Pn	23 13 43.8	+1.1

IDC 02 23:19:20.0±3.0, 16.10N×86.25W, h0km, mb3.8/5, mb1 4.3/6, mb1mx3.8/23, mbtmp3.9/6, ML4.6/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/27, Error ellipse: s-maj=79.0km s-min=31.6km az=34.0, North of Honduras

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	Tepich	4.54 335	Pn	Pn	23 20 32.0	+2.1
	26nm,0.3s,baz=234,slow=23,SNR=59					
TEIG			Sn	Sn	23 21 27.0	+3.6
	18nm,0.3s,baz=263,slow=23,SNR=16					
TEIG			LR	LR	23 22 29.9	
	comp=Z,90nm,21.1s,baz=168,slow=42					
TKL	Tuckaleechee C	19.61 6	P	Pn	23 23 54.1	+2.9
	0.1nm,0.3s,baz=158,slow=17,SNR=2.0					
TKL			S	Sn	23 27 25.4	-6.6
	0.1nm,0.3s,baz=151,slow=18,SNR=2.0					
TXAR	Lajitas Array	20.74 312	P	Pn	23 24 03.7	-1.1
	2.8nm,0.6s,baz=127,slow=10,SNR=22					
TXAR			S	S	23 27 55.0	-0.1
	0.1nm,0.4s,baz=130,slow=20,SNR=2.8					
PDAR	Pinedale Array	33.22 328	P	P	23 25 58.4	-0.7
	0.7nm,0.6s,baz=142,slow=7.5,SNR=4.7					
NVAR	Mina Array Bea	35.86 315	P	P	23 26 23.1	+1.2
	1.0nm,0.8s,baz=116,slow=9.5,SNR=4.7					
YKA	Yellowknife Ar	50.45 343	P	P	23 28 18.9	-0.2
	1.2nm,0.7s,baz=139,slow=7.7,SNR=18					
ILAR	Eielson Array	63.20 335	P	P	23 29 48.7	-1.0
	0.4nm,0.5s,baz=108,slow=4.8,SNR=4.9					

MAN 02 23:42:10, 11.02N×124.71E, h35km, mb4.0, ML2.8, MS2.5, 1D, Leyte

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.11 288	eP	Pn	23 42 17.3	+1.1
OCLP			eS	Sn	23 42 22.2	+1.9
PLP	Palo	0.30 61	⇓eP	Pn	23 42 17.8	-0.1
PLP			eS	Sn	23 42 22.2	-1.2
MSLP	Maasin	0.89 171	eP	Pn	23 42 26.4	+0.4
BESP	Borongan	0.92 51	eP	Pn	23 42 28.6	+2.2
BESP			eS	Sn	23 42 41.4	+3.0

NNC 02 23:46:18.3±2.0, 50.13N×87.79E, h0km, mb3.8, mpv3.4, 6C-4D, Error ellipse: s-maj=15.1km s-min=9.0km az=70.0, Southwestern Siberia

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	Makanchi Array	4.96 230	⇑Pn	Pn	23 47 34.4	+0.4
	0.8nm,0.2s,baz=60,slow=11,SNR=130					
MK31			⇓Pg	Pb	23 47 48.7	+2.7
	2.6nm,0.5s,baz=48,slow=16,SNR=4.1					
MK31			⇓Sn	Sn	23 48 33.1	+1.1
	1.5nm,0.3s,baz=57,slow=27,SNR=6.6					
MK31			⇑Lg	Lg	23 48 55.3	
	7.5nm,0.5s,baz=48,slow=28,SNR=6.6					
KURK	Kurchatov	5.89 279	⇑Pn	Pn	23 47 46.4	-0.4
	3.7nm,0.9s					
KURK			⇓Sn	Sn	23 48 55.9	+0.9
	1.3nm,0.5s					
KURK			⇑Lg	Lg	23 49 25.0	
	11nm,0.7s					
KURBB	Kurchatov Arra	5.95 278	⇓Pn	Pn	23 47 47.5	-0.1
	4.1nm,0.8s					
KURBB			⇑Sn	Sn	23 48 57.9	+1.5
	14nm,0.7s					
KURBB			⇑Lg	Lg	23 49 26.9	
	20nm,0.6s					

ISCJB 02 23:54:28.5±1.1, 31.62N±0.04×131.8E±0.1, h48km±8km, mb3.2/4, Error ellipse: s-maj=15.2km s-min=7.5km az=179.8
JMA 02 23:54:28.9±0.1, 31.62N×131.73E, h44km±1km, M3.4
JMA Felt I J1.
IDC 02 23:54:29.1±5.6, 30.88N×129.83E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.4/25, mbtmp3.4/4, Error ellipse: s-maj=286.0km s-min=23.5km az=63.0
ISC 02 23:54:29.1±1.7, 31.63N±0.05×131.7E±0.1, h40km±14km, n11, σ0.59/17, mb3.3/4, 5C-1D, Kyushu

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNAR	Kushima--Naru	0.41 256	⇓P	Pn	23 54 38.5	-0.2
JNAR			eS	Sn	23 54 45.5	+0.1
JTZ	Takazaki	0.62 296	⇑P	Pn	23 54 40.9	-0.6
JTZ			S	Sn	23 54 50.3	0.0
JTSN	Tsuno	0.65 342	⇑P	Pn	23 54 41.6	-0.3
JTSN			S	Sn	23 54 51.2	+0.2
JZO	Okuchi	1.10 298	⇑P	Pn	23 54 48.1	+0.1
JZO			eS	Sn	23 55 02.4	+0.4
JSU	Suzuyama	1.10 264	⇑P	Pn	23 54 48.2	+0.1
JSU			eS	Sn	23 55 02.4	+0.3
JTN	Tanegashima 3	1.17 214	P	Pn	23 54 49.3	+0.3
JTN			eS	Sn	23 55 04.2	+0.5
JIU2	Izumi 2	1.21 320	⇑P	Pn	23 54 50.3	+0.8
JIU2			S	Sn	23 55 06.0	+1.3
SONM	Songino Array	25.17 317	P	P	23 59 50.9	+0.2
	0.2nm,0.3s,baz=120,slow=8.5,SNR=2.8					
MKAR	Makanchi Array	40.52 307	P	P	00 02 03.2	-0.9
	0.1nm,0.4s,baz=92,slow=8.9,SNR=4.2					
WRA	Warramunga Arr	51.34 177	P	P	00 03 29.8	+0.2
	0.3nm,0.5s,baz=352,slow=8.4,SNR=5.9					
ASAR	Alice Springs	55.02 178	P	P	00 03 58.4	+1.7
	0.3nm,0.6s,baz=11,slow=11,SNR=3.8					

WEL 03 00:04:51.8±1.0, 36.50S×177.70E, h5km, ML4.1/5, Error ellipse: s-maj=7.5km s-min=6.1km az=0.0, Off east coast of North Island

Code	Station Name	Δ° AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.17 155	eP*	Pg	00 05 11.7	-2.5
MXZ			S*	Sg	00 05 25.2	-4.1
MXZ			AML	AML	00 06 24.5	
KUZ	Kuaotunu	1.61 261	SN	Sn	00 05 40.5	-1.4
KUZ			AML	AML	00 05 41.8	
PUZ	Puketiti	1.63 164	PN	Pn	00 05 20.9	-0.3
PUZ			SN	Sb	00 05 43.5	+0.2
PUZ			SN	Sg	00 05 43.6	-0.7
URZ	Urewera	1.81 195	P*	Pn	00 05 22.1	-1.6
URZ			S*	Sn	00 05 44.4	-2.7
URZ			AML	AML	00 05 56.9	
MWZ	Matawai	1.83 184	eP*	Pn	00 05 21.8	-2.2
MWZ			AML	AML	00 05 45.8	
MWZ			AML	AML	00 06 06.0	
MKAZ	Moumakai	2.12 253	PN	Pn	00 05 27.1	-0.8
WTAZ	Waiatarua	2.54 259	PN	Pn	00 05 33.3	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HIZ	Hauiti	3.02	228	PN	Pn	00 05 40.2	-0.1
TUVZ	Tukino	3.20	210	eP*	Pn	00 05 45.1	+2.2

CASC 03 00:10:02.2±1.9, 15°.81N×90°.62W, h0km±19km, MD3.7, Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRL	Marmol	1.16	130	eP	Pg	00 10 23.4	-1.3
MRL				eS	Sb	00 10 41.7	+0.5
NBG	Las Nubes	1.24	168	eP	Pg	00 10 25.1	-1.4
NBG				eS	Sg	00 10 41.5	-1.3
FUG	Fuego 3	1.37	189	eP	Pg	00 10 27.5	-1.3
MTO2	Montecristo 2	1.85	139	eP	Pn	00 10 35.0	-0.5
RBDL	Robledal	1.91	152	eP	Pn	00 10 36.4	+0.1
RBDL				eS	Sn	00 11 01.8	+0.5
RTR	El Retiro	2.12	154	eP	Pn	00 10 40.0	+0.8
SNJE	San Jose	2.17	153	eP	Pn	00 10 40.5	+0.7
SBLS	San Blas	2.18	154	eP	Pn	00 10 40.9	+0.8
BOQS	Boqueron	2.44	148	eS	Sb	00 11 16.6	-1.4

WEL 03 00:22:51.1±1.3, 36°.33S×177°.85E, h5km, ML4.2/5, Error ellipse: s-maj=9.7km s-min=8.9km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.28	164	P*	Pn	00 23 12.0	-3.7
MXZ				S*	Sg	00 23 27.8	-4.6
MXZ				AML	AML	00 24 26.9	
KUZ	Kuaotunu	1.77	256	PN	Pn	00 23 21.0	-1.3
KUZ				SN	Sn	00 23 42.9	-2.3
KUZ				AML	AML	00 23 51.1	
PUZ	Puketiti	1.77	170	PN	Pn	00 23 21.8	-0.6
PUZ				SN	Sb	00 23 46.9	+0.3
PUZ				AML	AML	00 23 52.7	
URZ	Urewera	2.01	197	P*	Pn	00 23 24.5	-1.2
URZ				S*	Sn	00 23 49.3	-2.0
URZ				AML	AML	00 23 54.9	
MWZ	Matawai	2.02	187	P*	Pn	00 23 24.6	-1.3
MWZ				AML	AML	00 24 04.5	
MWZ				AML	AML	00 24 15.7	
MKAZ	Moumakai	2.29	249	PN	Pn	00 23 29.6	0.0
TOZ	Tahuroa Road	2.34	233	P*	Pn	00 23 29.7	-0.5
HIZ	Hauiti	3.23	227	PN	Pn	00 23 42.9	+0.4
BFZ	Birch Farm	4.52	196	PN	Pn	00 23 58.8	-1.5

*ISK **03** 00:30:08.0, 38°.23N×27°.24E, h5km, MD2.8*
*ISCJB **03** 00:30:10.2±0.7, 38°.35N±0°.04×27°.31E±0°.04, h2km±7km, Error ellipse: s-maj=7.1km s-min=4.7km az=28.0*
*CSEM **03** 00:30:10.6±0.2, 38°.35N×27°.30E, h2km, MD2.8, Error ellipse: s-maj=5.4km s-min=4.0km az=24.0*
*DDA **03** 00:30:10.4, 38°.37N×27°.33E, h9km, MD2.8*
ISC 03 00:30:10.3±1.0, 38°.35N±0°.03×27°.29E±0°.03, h6km±8km, n31, σ0s.83/44, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IZM	Izmir	0.05	336	ePG	Pg	00 30 11.8	-0.1
IZM	Izmir	0.05	336	ePg	Pg	00 30 11.8	-0.1
BLCB	Balcova	0.20	281	ePG	Pg	00 30 13.4	-0.9
BLCB				eSG	Sg	00 30 17.1	+0.2
BLCB	Balcova	0.20	281	ePg	Pg	00 30 13.4	-0.9
BLCB				eSg	Sg	00 30 17.1	+0.2
AKHS	Akhisar	0.67	38	i P	Pg	00 30 23.2	0.0
AKHS				i S	Sg	00 30 32.7	+0.8
AKHS	Akhisar	0.67	38	i P	Pg	00 30 23.2	0.0
AKHS				i S	Sg	00 30 32.7	+0.8
AYDN	Tasoluk	0.83	146	i P	Pb	00 30 27.1	-0.1
AYDN				i S	Sg	00 30 37.5	+0.5
AYDN	Tasoluk	0.83	146	i P	Pb	00 30 27.1	-0.1
AYDN				i S	Sg	00 30 37.5	+0.5
MANT	Manisa	1.01	82	i P	Pg	00 30 29.6	-0.1
MANT				i S	Sg	00 30 42.0	-0.7
MANT	Manisa	1.01	82	i P	Pg	00 30 29.6	-0.1
MANT				i S	Sg	00 30 42.0	-0.7
AYVA	Ayvalik	1.07	334	i P	Pb	00 30 31.1	-0.2
AYVA				i S	Sb	00 30 45.4	0.0
AYVA	Ayvalik	1.07	334	i P	Pb	00 30 31.0	-0.2
AYVA				i S	Sb	00 30 45.4	0.0
MLSB	Milas	1.12	160	ePG	Pg	00 30 28.3	-3.5
DEMI	Demirci	1.31	58	i P	Pn	00 30 35.3	0.0
DEMI				i S	Sb	00 30 51.8	-0.8
DEMI	Demirci	1.31	58	i P	Pn	00 30 35.3	0.0
DEMI				i S	Sb	00 30 51.8	-0.8
BALY	Balya	1.41	10	i P	Pn	00 30 35.3	-1.3
BALY				i S	Sb	00 30 55.1	-0.3
BALY	Balya	1.41	10	i P	Pn	00 30 35.3	-1.3
BALY				i S	Sb	00 30 55.1	-0.3
EZN	Ezine	1.66	333	ePN	Pb	00 30 40.8	-0.4
EZN	Ezine	1.66	333	ePn	Pb	00 30 40.8	-0.4
GONE	Gonen-Balikesi	1.72	10	ePN	Pb	00 30 42.3	-0.1
GONE	Gonen-Balikesi	1.72	10	ePn	Pb	00 30 42.3	-0.1
TVSB	Tavsanli	2.02	56	ePN	Pn	00 30 45.9	+0.9
TVSB	Tavsanli	2.02	56	ePn	Pn	00 30 45.9	+0.9
KRBG	Karabiga-Canak	2.04	0	ePN	Pb	00 30 46.8	-1.0
KRBG	Karabiga-Canak	2.04	0	ePn	Pb	00 30 46.8	-1.0
GELI	Tayfur-Gelibol	2.14	343	ePN	Pn	00 30 47.9	+1.3
GELI	Tayfur-Gelibol	2.14	343	ePn	Pn	00 30 47.9	+1.3
ERIK	Erikli-Kesan	2.40	346	ePN	Pn	00 30 51.5	+1.4
ERIK	Erikli-Kesan	2.40	346	ePn	Pn	00 30 51.5	+1.4
TKR	Tekirdag	2.65	4	ePN	Pn	00 30 55.4	+1.9
TKR	Tekirdag	2.65	4	ePn	Pn	00 30 55.4	+1.9

*ISCJB **03** 00:30:34.1±0.9, 51°.44N±0°.04×16°.05E±0°.04, h0km, Error ellipse: s-maj=6.0km s-min=3.3km az=13.6*
*PRU **03** 00:30:35.7, 51°.49N×16°.05E, h0km*
*WAR **03** 00:30:35.1, 51°.55N×16°.10E*
*CSEM **03** 00:30:35.2±0.5, 51°.48N×16°.04E, h2km, ML3.2/7*
*VIE **03** 00:30:37.1±0.5, 51°.32N×16°.05E, h0km, mb1.8/1, ML2.5/4, Error ellipse: s-maj=3.1km s-min=2.9km az=170.0 71 km WNW of Wroclaw Suspected Mining induced.*
ISC 03 00:30:35.5±1.3, 51°.49N±0°.06×16°.04E±0°.03, h0km, n27, σ0s.52/48, 3C-1D, Poland

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.67	166	ePg	Pg	00 30 48.5	+0.2
KSP				eSg	Sg	00 30 57.9	+1.0
UPC	Upice	0.99	181	ePG	Pg	00 30 54.6	+0.3
UPC	Upice	0.99	181	Pg	Pg	00 30 54.6	+0.3
PVCC	Panska Ves	1.34	224	ePG	Pg	00 31 00.9	-0.2
PVCC				eSG	Sn	00 31 19.6	-0.3
	comp=Z,77nm,0.2s						
PVCC	Panska Ves	1.34	224	Pg	Pg	00 31 00.9	-0.2
PVCC				Sg	Sn	00 31 19.6	-0.3
	77nm,0.2s						
BRG	Berggiesshubel	1.46	246	PG	Pn	00 31 02.8	-0.2
BRG				SG	Sn	00 31 22.9	+0.1
	27nm,0.3s						
KRLC	Kraliky	1.50	161	ePG	Pn	00 31 03.5	-0.1
KRLC				eSG	Sg	00 31 23.3	-0.1
KRLC	Kraliky	1.50	161	Pg	Pn	00 31 03.5	-0.1
KRLC				Sg	Sg	00 31 23.3	-0.1
PRU	Pruhonice	1.78	213	ePN	Pn	00 31 06.9	-0.6
PRU				ePG	Pb	00 31 08.2	-0.8
PRU				eSG	Sg	00 31 32.5	-0.1
	comp=Z,23nm,0.2s						
PRU	Pruhonice	1.78	213	Pn	Pn	00 31 06.9	-0.6
CLL	Collm	1.91	266	ePg	Pn	00 31 10.0	+0.7
CLL				e		00 31 15.0	
CLL				eSg	Sb	00 31 36.0	+0.4
	comp=Z,12nm,0.6s						
MORC	Moravsky Berou	1.97	150	eSg	Sb	00 31 36.6	-0.6
OKC	Ostrava-Krasne	2.13	140	eSG	Sb	00 31 42.5	+0.6
OKC	Ostrava-Krasne	2.13	140	Sg	Sb	00 31 42.5	+0.6
VRAC	Vranov	2.21	171	ePn	Pn	00 31 13.2	-0.3
VRAC				eSg	Sb	00 31 45.2	+0.9
TREC	Trest	2.23	189	ePN	Pn	00 31 13.8	+0.1
TREC				ePG	Pb	00 31 17.3	+0.7
TREC				eSG	Sg	00 31 47.1	+0.1
	comp=Z,9.9nm,0.2s						
TREC	Trest	2.23	189	Pn	Pn	00 31 13.8	+0.1
NKC	Novy Kostel	2.60	242	eSG	Sg	00 31 59.2	+0.2
	comp=Z,14nm,0.2s						
NKC	Novy Kostel	2.60	242	Sg	Sg	00 31 59.2	+0.2
	comp=Z,14nm,0.2s						
OJC	Ojcow	2.70	117	ePg	Pg	00 31 26.8	-0.4
OJC				eSg	Sg	00 32 02.0	-0.2
OJC	Ojcow	2.70	117	ePg	Pg	00 31 26.8	-0.4
OJC				eSg	Sg	00 32 02.0	-0.2
KHC	Kasperske Hory	2.84	215	ePN	Pn	00 31 21.3	-0.8
KHC				ePG	Pb	00 31 27.6	+0.5
KHC				eSN	Sn	00 31 57.5	+0.4
KHC				eSG	Sg	00 32 05.2	-1.5
	comp=Z,4.3nm,0.4s						
KHC	Kasperske Hory	2.84	215	Pn	Pn	00 31 21.3	-0.8
CONA	Conrad Observa	3.57	182	⇑iPn	Pn	00 31 31.5	-0.7
CONA				⇓iSg	Sg	00 32 29.5	-0.6
	comp=Z,5.8nm,0.3s						
CONA	Conrad Observa	3.57	182	Pn	Pn	00 31 31.5	-0.7
CONA				Sg	Sg	00 32 29.5	-0.6
	comp=Z,5.8nm,0.3s						
MOA	Molln	3.82	198	⇑iPn	Pn	00 31 35.9	+0.3
MOA				⇑iSg	Sg	00 32 38.3	0.0
	comp=Z,3.0nm,0.4s						
MOA	Molln	3.82	198	Pn	Pn	00 31 35.9	+0.3
MOA				Sg	Sg	00 32 38.3	0.0
	comp=Z,3.0nm,0.4s						

*CSEM **03** 00:31:33.6, 41°.83N×13°.61E, h11km, MD1.7/6, After ROM*
ROM 03 00:31:33.6±0.1, 41°.83N×13°.61E, h11km, Md1.7/6, Ml1.4/2, Error ellipse: s-maj=1.0km s-min=0.8km az=38.0, Southern Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VVLD	Villa Vallelon	0.04	14	Pg	Pg	00 31 36.3	+0.4
VVLD				Sg	Sg	00 31 37.5	0.0
	2μm,0.2s						
VVLD	Villa Vallelon	0.04	14	Pg	Pg	00 31 36.3	+0.4
VVLD				Sg	Sg	00 31 37.5	0.0
	2μm,0.2s						
POFI	Posta Fibreno	0.14	145	Pg	Pg	00 31 37.6	+0.7
POFI				Sg	Sg	00 31 39.9	+0.6
	63nm,0.4s						
POFI	Posta Fibreno	0.14	145	Pg	Pg	00 31 37.6	+0.7
POFI				Sg	Sg	00 31 39.9	+0.6
	63nm,0.4s						
SDI	San Donato	0.19	128	Pg	Pg	00 31 38.5	+0.6
SDI				Sg	Sg	00 31 41.7	+0.9
	75nm,0.2s						
SDI	San Donato	0.19	128	Pg	Pg	00 31 38.5	+0.6
SDI				Sg	Sg	00 31 41.7	+0.9
	75nm,0.2s						
GUAR	Guarcino	0.22	261	Pg	Pg	00 31 39.0	+0.6
GUAR				Sg	Sg	00 31 42.6	+0.9
GUAR	Guarcino	0.22	261	Pg	Pg	00 31 39.0	+0.6
GUAR				Sg	Sg	00 31 42.6	+0.9
PTQR	Pietraquaria	0.25	321	Pg	Pg	00 31 39.4	+0.5
PTQR				Sg	Sg	00 31 43.3	+0.9
	32nm,0.2s						
PTQR	Pietraquaria	0.25	321	Pg	Pg	00 31 39.4	+0.5
PTQR				Sg	Sg	00 31 43.3	+0.9
	32nm,0.2s						
INTR	Introdacqua	0.29	50	Pg	Pg	00 31 40.1	+0.5
INTR				Sg	Sg	00 31 44.5	+0.9
	48nm,0.3s						
INTR	Introdacqua	0.29	50	Pg	Pg	00 31 40.1	+0.5
INTR				Sg	Sg	00 31 44.5	+0.9
	48nm,0.3s						

*CSEM **03** 00:32:11.7, 41°.84N×13°.60E, h10km, MD2.3/21, After ROM*
ROM 03 00:32:11.7±0.1, 41°.84N×13°.60E, h10km, Md2.3/21, Ml2.2/14, Error ellipse: s-maj=1.1km s-min=0.7km az=11.0, Southern Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VVLD	Villa Vallelon	0.04	22	Pg	Pg	00 32 14.4	+0.6
VVLD				Sg	Sg	00 32 15.7	+0.4
	2μm,0.2s						
VVLD	Villa Vallelon	0.04	22	Pg	Pg	00 32 14.4	+0.6
VVLD				Sg	Sg	00 32 15.7	+0.4
	2μm,0.2s						
POFI	Posta Fibreno	0.14	145	Pg	Pg	00 32 15.8	+0.7
POFI				Sg	Sg	00 32 18.1	+0.7
POFI	Posta Fibreno	0.14	145	Pg	Pg	00 32 15.8	+0.7
POFI				Sg	Sg	00 32 18.1	+0.7
SDI	San Donato	0.20	129	Pg	Pg	00 32 16.7	+0.7
SDI				Sg	Sg	00 32 19.7	+0.8
SDI	San Donato	0.20	129	Pg	Pg	00 32 16.7	+0.7
SDI				Sg	Sg	00 32 19.7	+0.8
GUAR	Guarcino	0.22	260	Pg	Pg	00 32 17.2	+0.8
GUAR				Sg	Sg	00 32 20.7	+1.1
	690nm,0.4s						
GUAR	Guarcino	0.22	260	Pg	Pg	00 32 17.2	+0.8
GUAR				Sg	Sg	00 32 20.7	+1.1
	690nm,0.4s						
PTQR	Pietraquaria	0.24	321	Pg	Pg	00 32 17.5	+0.7
PTQR				Sg	Sg	00 32 21.6	+1.4
	99nm,0.2s						
PTQR	Pietraquaria	0.24	321	Pg	Pg	00 32 17.5	+0.7
PTQR				Sg	Sg	00 32 21.6	+1.4
	99nm,0.2s						
INTR	Introdacqua	0.29	52	Pg	Pg	00 32 18.2	+0.6
INTR				Sg	Sg	00 32 22.6	+1.0
	754nm,0.3s						
INTR	Introdacqua	0.29	52	Pg	Pg	00 32 18.2	+0.6
INTR				Sg	Sg	00 32 22.6	+1.0
	754nm,0.3s						
CERA	Filignano	0.39	127	Pg	Pg	00 32 19.9	+0.4
CERA				Sg	Sb	00 32 26.3	-0.7
	157nm,0.3s						
CERA	Filignano	0.39	127	Pg	Pg	00 32 19.9	+0.4
CERA				Sg	Sb	00 32 26.3	-0.7
	157nm,0.3s						
FAGN	Fagnano	0.43	358	Pg	Pg	00 32 20.4	+0.1
	277nm,0.4s						
FAGN	Fagnano	0.43	358	Pg	Pg	00 32 20.4	+0.1
	277nm,0.4s						
RNI2	Rionero Sannit	0.43	108	Pg	Pb	00 32 21.1	-0.5
	129nm,0.3s						
RNI2	Rionero Sannit	0.43	108	Pg	Pb	00 32 21.1	-0.5
	129nm,0.3s						
CERT	Cerreto	0.48	284	Pg	Pg	00 32 21.3	+0.2
CERT				Sg	Sg	00 32 28.4	+0.9
	362nm,0.3s						
CERT	Cerreto	0.48	284	Pg	Pg	00 32 21.3	+0.2
CERT				Sg	Sg	00 32 28.4	+0.9
	362nm,0.3s						
LPEL	Lama dei Pelig	0.48	64	Pg	Pg	00 32 21.2	0.0
LPEL				Sg	Sb	00 32 28.9	-0.7
	105nm,0.2s						
LPEL	Lama dei Pelig	0.48	64	Pg	Pg	00 32 21.2	0.0
LPEL				Sg	Sb	00 32 28.9	-0.7
	105nm,0.2s						
MIDA	Miranda	0.52	111	Pg	Pg	00 32 22.1	+0.1
	55nm,0.3s						
MIDA	Miranda	0.52	111	Pg	Pg	00 32 22.1	+0.1
	55nm,0.3s						
AQU	L'Aquila	0.54	344	Pg	Pb	00 32 22.9	-0.5
AQU				Sg	Sb	00 32 30.8	-0.5
	203nm,1.2s						
AQU	L'Aquila	0.54	344	Pg	Pb	00 32 22.9	-0.5
AQU				Sg	Sb	00 32 30.8	-0.5
	203nm,1.2s						
FIAM	Fiamignano	0.56	320	Pg	Pg	00 32 22.7	-0.1
FIAM	Fiamignano	0.56	320	Pg	Pg	00 32 22.7	-0.1
VCEL	Villa Celiera	0.59	17	Pg	Pg	00 32 23.5	+0.2
VCEL	Villa Celiera	0.59	17	Pg	Pg	00 32 23.5	+0.2
VAGA	Valle Agricola	0.63	131	Pg	Pb	00 32 24.6	-0.3
VAGA	Valle Agricola	0.63	131	Pg	Pb	00 32 24.6	-0.3
RDP	Rocca di Papa	0.67	264	Pg	Pg	00 32 24.8	+0.1
RDP				Sg	Sb	00 32 35.0	+0.1
	227nm,0.3s						
RDP	Rocca di Papa	0.67	264	Pg	Pg	00 32 24.8	+0.1
RDP				Sg	Sb	00 32 35.0	+0.1
	227nm,0.3s						
MTCE	Montecelio	0.67	287	Pg	Pg	00 32 24.3	-0.4
	47nm,0.7s						
MTCE	Montecelio	0.67	287	Pg	Pg	00 32 24.3	-0.4
	47nm,0.7s						
RMP	Rome, Mte Porz	0.67	268	Pg	Pg	00 32 24.6	-0.2
RMP				Sg	Sb	00 32 34.6	-0.4
	152nm,0.6s						
RMP	Rome, Mte Porz	0.67	268	Pg	Pg	00 32 24.6	-0.2
RMP				Sg	Sb	00 32 34.6	-0.4
	152nm,0.6s						
TERO	Teramo	0.79	0	Pg	Pg	00 32 26.5	-0.5
TERO	Teramo	0.79	0	Pg	Pg	00 32 26.5	-0.5
MNS	Montasola	0.88	309	Pg	Pg	00 32 28.1	-0.6
	31nm,0.5s						
MNS	Montasola	0.88	309	Pg	Pg	00 32 28.1	-0.6
	31nm,0.5s						

*IDC **03** 00:47:10.6±11.0, 36°.82N×141°.37E, h0km, mb3.4/4, mb1 3.4/5, mb1mx3.3/26, mbtmp3.4/5, ML3.1/1, Error ellipse: s-maj=213.3km s-min=42.1km az=149.0*
*JMA **03** 00:47:13.9±0.1, 36°.63N×141°.26E, h47km±2km, M3.1*
ISC 03 00:47:11.4±2.8, 36°.66N±0°.07×141°.3E±0°.1, h8km±13km, n14, σ0s.98/22, mb3.4/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.55	265	P	Pn	00 47 25.5	0.0
JHO				S	Sn	00 47 33.8	-1.1
ONAJ	Iwakimizuishiy	0.57	321	S	Sn	00 47 34.5	-1.1
JFK	Kawauchi	0.77	337	P	Pn	00 47 28.5	-0.1
JYT	Yasato	0.95	244	P	Pn	00 47 31.1	0.0
JYT				S	Sb	00 47 43.3	+0.4
JFT	Otama	1.13	320	P	Pn	00 47 34.7	+1.2
JFT				S	Sn	00 47 49.9	+0.7
JMM	Marumori	1.26	343	P	Pn	00 47 35.4	+0.1
JMM				eS	Sb	00 47 51.6	-0.2
JFY	Yanaizu	1.45	302	P	Pg	00 47 39.3	+0.1
JFY				S	Sg	00 47 58.4	+0.5
JAG	Ashikaga	1.47	261	P	Pb	00 47 38.9	0.0
JAG				eS	Sn	00 47 56.6	-0.9
MJAR	Matsushiro Arr	2.45	268	Pn	Pn	00 47 53.3	+1.6
	4.0nm,0.3s,baz=110,slow=9.6,SNR=28						
MJAR				Sn	Sb	00 48 24.9	-1.2
	4.9nm,0.3s,baz=91,slow=15,SNR=9.5						
MAT	Matsushiro	2.45	268	P	Pb	00 47 54.0	-1.7
MAT				S	Sn	00 48 23.6	+1.7
SONM	Songino Array	27.89	305	P	P	00 53 02.3	+0.6
	0.6nm,0.8s,baz=100,slow=9.7,SNR=5.4						
ZALV	Zalesovo Beam	42.07	313	P	P	00 55 04.1	+0.7
	0.3nm,0.3s,baz=75,slow=7.6,SNR=3.0						
MKAR	Makanchi Array	44.21	302	P	P	00 55 21.1	+0.2
	0.2nm,0.6s,baz=75,slow=11,SNR=2.6						
KURBB	Kurchatov Arra	46.13	308	P	P	00 55 35.2	-0.8
	0.3nm,0.3s,baz=83,slow=7.3,SNR=5.1						

*IDC **03** 00:54:28.5±1.0, 60°.58S×25°.77W, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.8/16, mbtmp3.8/5, Error ellipse: s-maj=39.7km s-min=27.0km az=61.0*
ISC 03 00:54:28.1±0.8, 60°.8S±0°.2×24°.9W±0°.2, h10km, n12, σ2s.19/10, mb3.8/5, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.00	153	ePn	Pn	00 57 17.7	-1.1
VNA1	Neumayer--Stat	12.00	153	eSn	Sn	00 59 20.4	-12
SNAA	Sanae	13.98	150	ePn	Pn	00 57 43.5	-2.5
SNAA	Sanae	13.98	150	eSn	Sn	01 00 06.3	-15
CPUP	Villa Florida	40.86	313	P	P	01 02 08.2	-1.7
	0.4nm,0.3s,baz=140,slow=11,SNR=3.5						
VNDA	Vanda	41.90	182	P	P	01 02 20.3	+2.5
	1.1nm,1.1s,baz=185,slow=4.6,SNR=5.5						
SIV	San Ignacio	51.70	314	P	P	01 03 33.2	-2.0
	0.5nm,0.4s,baz=170,slow=8.5,SNR=6.9						
LPAZ	La Paz	54.09	306	P	P	01 03 52.9	-0.6
	0.5nm,0.4s,baz=146,slow=6.0,SNR=5.0						
TORD	Torodi Ar. Bea	76.67	27	P	P	01 06 20.4	+1.5
	0.6nm,0.7s,baz=202,slow=6.6,SNR=11						
YKA	Yellowknife Ar	140.38	313	PKP	PKPdf	01 13 58.3	+2.7
	0.3nm,0.5s,baz=131,slow=1.9,SNR=3.6						
SONM	Songino Array	149.56	93	PKPbc	PKPab	01 14 20.7	-1.1
	0.3nm,0.4s,baz=194,slow=4.8,SNR=4.0						
ILAR	Eielson Array	153.96	304	PKPbc	PKPbc	01 14 27.5	+1.5
	0.4nm,0.7s,baz=44,slow=1.1,SNR=4.8						

*ISCJB **03** 01:16:39.9±0.2, 44°.61N±0°.01×9°.37E±0°.01, h3km±2km, mb3.2/1, Error ellipse: s-maj=2.2km s-min=1.5km az=159.4*
*GEN **03** 01:16:40.8, 44°.67N×9°.42E, h3km, ML3.1*
*CSEM **03** 01:16:40.9±0.1, 44°.61N×9°.40E, h2km, ML3.6/6, Error ellipse: s-maj=2.4km s-min=1.6km az=168.0*
*ROM **03** 01:16:40.5±0.2, 44°.63N×9°.41E, h2km±2km, Ml3.1/45, Error ellipse: s-maj=1.4km s-min=1.4km az=18.0*
*LDG **03** 01:16:41.1±0.1, 44°.64N×9°.40E, h3km, Md3.4/2, Ml3.3/37, Error ellipse: s-maj=1.7km s-min=1.4km az=14.0*
*BGR **03** 01:16:42.0±0.7, 44°.59N×9°.31E, h10km, ML3.3/9, Error ellipse: s-maj=12.2km s-min=7.8km az=8.0*
*VIE **03** 01:16:42.3±0.4, 44°.55N×9°.49E, h13km±4km, mb2.6/9, ML3.3/12, Error ellipse: s-maj=4.1km s-min=2.0km az=177.0 47 km ENE of Genova*
*SZGRF **03** 01:16:42.0, 44°.59N×9°.31E, h10km, mb3.3, Northern Italy*
*STR **03** 01:16:42.4±0.5, 44°.59N×9°.43E, h10km, Ml3.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*PRU **03** 01:16:43.6, 44°.78N×9°.50E, h1km*
*IDC **03** 01:16:43.1±1.4, 44°.59N×10°.08E, h0km, mb3.2/1, mb1 3.2/4, mb1mx3.1/28, mbtmp3.0/4, ML3.3/3, Error ellipse: s-maj=57.4km s-min=13.7km az=117.0*
ISC 03 01:16:41.5±1.0, 44°.60N±0°.01×9°.39E±0°.01, h4km±8km, n375, σ1s.59/481, 23C-16D, Northern Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOB	Bobbio (Coli)	0.17	14	Pg	Pg	01 16 43.6	-1.3
BOB				Sg	Sg	01 16 45.6	-1.6
	14μm,0.3s						
BOB	Bobbio (Coli)	0.17	14	Pg	Pg	01 16 43.6	-1.3
BOB				Sg	Sg	01 16 45.6	-1.6
	14μm,0.3s						
MSSA	Maissana	0.30	162	Pg	Pg	01 16 47.8	+0.5
MSSA				Sg	Sg	01 16 53.2	+2.0
	3μm,0.5s						
MSSA	Maissana	0.30	162	Pg	Pg	01 16 47.8	+0.5
CODM	Codolo	0.39	122	P	Pg	01 16 48.8	-0.2
CODM				S	Sg	01 16 54.3	+0.2
GRAM	Graiana	0.49	103	P	Pg	01 16 50.5	-0.5
GRAM				S	Sg	01 16 56.8	-0.6
PCP	Piancastagn	0.61	265	Pg	Pg	01 16 53.4	+0.2
PCP				Sg	Sg	01 17 02.8	+1.7
	435nm,0.3s						
PCP	Piancastagn	0.61	265	P	Pg	01 16 52.9	-0.3
PCP	Piancastagn	0.61	265	Pg	Pg	01 16 53.4	+0.2
PCP				Sg	Sg	01 17 02.8	+1.7
	435nm,0.3s						
VALM	Valbona	0.66	112	P	Pg	01 16 53.5	-0.7
PRMA	PARMA	0.68	76	Pg	Pg	01 16 55.0	+0.5
	3μm,0.8s						
PRMA	PARMA	0.68	76	Pg	Pg	01 16 55.0	+0.5
	3μm,0.8s						
VINC	Vinca	0.71	130	P	Pg	01 16 54.7	-0.5
ERBM	Eremo	0.75	104	Pg	Pg	01 16 55.6	-0.3
	373nm,0.6s						
ERBM	Eremo	0.75	104	Pg	Pg	01 16 55.6	-0.3
	373nm,0.6s						
QLNO	Quiliano	0.80	250	Pg	Pg	01 16 56.9	+0.1
QLNO				Sg	Sb	01 17 09.8	+0.7
	392nm,0.6s						
QLNO	Quiliano	0.80	250	Pg	Pg	01 16 56.9	+0.1
VLC	Villacollemand	0.84	121	Pg	Pg	01 16 57.0	-0.6
	259nm,0.4s						
VLC	Villacollemand	0.84	121	⇑ePg	Pg	01 16 56.8	-0.8
FINB	Finale Ligure	0.87	241	Pg	Pg	01 16 58.7	+0.5
FINB				Sg	Sb	01 17 11.8	+0.6
	1μm,0.4s						
FINB	Finale Ligure	0.87	241	Pg	Pg	01 16 58.7	+0.5
GSCL	Gusciola	0.89	106	Pg	Pg	01 16 58.7	+0.1
GSCL	Gusciola	0.89	106	Pg	Pg	01 16 58.7	+0.1
NOVE	Novellara	0.96	78	Pg	Pg	01 17 00.4	+0.4
	1μm,0.7s						
NOVE	Novellara	0.96	78	Pg	Pg	01 17 00.4	+0.4
	1μm,0.7s						
BDI	Bagni Di Lucca	1.02	121	Pg	Pg	01 17 00.1	-0.9
	1μm,0.8s						
BDI	Bagni Di Lucca	1.02	121	Pg	Pg	01 17 00.1	-0.9
	1μm,0.8s						
MAIM	Mastiano	1.05	131	Pg	Pg	01 17 00.6	-1.0
MAIM				Sg	Sg	01 17 15.0	-0.1
	339nm,0.3s						

MAIM Mastiano 1.05 131 P **Pg** 01 17 00.6 -1.0
MAIM S **Sg** 01 17 14.2 -0.9
MAIM Sg **Sg** 01 17 15.0 -0.1
339nm,0.3s
RORO Rocca Rossa 1.07 243 Pg **Pg** 01 17 01.5 -0.5
266nm,0.8s
RORO Rocca Rossa 1.07 243 Pg **Pg** 01 17 01.5 -0.5
266nm,0.8s
RORO S **Sg** 01 17 15.4 -0.4
MONC Moncucco Torin 1.14 295 Pg **Pb** 01 17 04.9 +1.1
561nm,0.4s
MONC Moncucco Torin 1.14 295 Pg **Pb** 01 17 04.9 +1.1
561nm,0.4s
PZZT Monte Pizzetto 1.15 113 Pg **Pg** 01 17 02.8 -0.8
539nm,0.4s
PZZT Monte Pizzetto 1.15 113 Pg **Pg** 01 17 02.8 -0.8
539nm,0.4s
ZCCA Zocca 1.16 102 Pg **Pb** 01 17 04.6 +0.5
462nm,0.8s
ZCCA Zocca 1.16 102 Pg **Pb** 01 17 04.6 +0.5
462nm,0.8s
SBPO S.Benedetto Po 1.18 67 Pg **Pb** 01 17 04.8 +0.5
1µm,0.5s
SBPO S.Benedetto Po 1.18 67 Pg **Pb** 01 17 04.8 +0.5
1µm,0.5s
MDI Monti di Nese 1.20 11 Pg **Pg** 01 17 03.1 -1.4
518nm,0.4s
MDI Monti di Nese 1.20 11 Pg **Pg** 01 17 03.1 -1.4
518nm,0.4s
PII Pisa 1.20 137 Pg **Pg** 01 17 03.5 -1.0
180nm,0.2s
PII Pisa 1.20 137 Pg **Pg** 01 17 03.5 -1.0
180nm,0.2s
GROG Isola di Gorgo 1.23 163 Pg **Pg** 01 17 04.1 -0.9
435nm,0.8s
GROG Isola di Gorgo 1.23 163 Pg **Pg** 01 17 04.1 -0.9
435nm,0.8s
RAVA Ravarino 1.24 82⇓ *e*Pg **Pn** 01 17 07.3 +1.7
SALO Salr 1.30 38 Pg **Pg** 01 17 05.3 -1.0
1µm,0.6s
SALO Salr 1.30 38⇑ *e*Pg **Pg** 01 17 05.5 -0.8
SALO *e*Sg **Sn** 01 17 24.5 +0.4
FNVD Fontana Vidola 1.31 109 Pg **Pg** 01 17 06.2 -0.5
352nm,0.5s
FNVD Fontana Vidola 1.31 109 Pg **Pg** 01 17 06.2 -0.5
352nm,0.5s
MUGIO Muggio 1.34 350 Pg **Pn** 01 17 05.1 -2.0
MUGIO Muggio 1.34 350 Pg **Pn** 01 17 05.1 -2.0
CRMI Carmignano 1.40 125 Pg **Pn** 01 17 06.9 -0.8
CRMI Carmignano 1.40 125 Pg **Pn** 01 17 06.9 -0.8
NEGI Seborga 1.43 239 P **Pn** 01 17 06.8 -1.4
NEGI S **Sb** 01 17 23.7 -3.5
ORO Oropa 1.43 316 Pg **Pn** 01 17 07.5 -0.8
135nm,0.3s
ORO Oropa 1.43 316 Pg **Pn** 01 17 07.5 -0.8
135nm,0.3s
SAOF Saorge 1.46 246 P **Pn** 01 17 07.6 -0.9
SAOF Saorge 1.46 246 P **Pn** 01 17 07.6 -0.9
ENR Entracque 1.46 256 P **Pn** 01 17 07.1 -1.6
ENR S **Sb** 01 17 25.0 -3.2
BALD Monte Baldo 1.48 43⇑ *e*Pg **Pn** 01 17 07.8 -1.3
BALD *e*Sg **Sb** 01 17 28.3 -0.6
BALD Monte Baldo 1.48 43⇑ *e*Pg **Pn** 01 17 07.8 -1.3
BALD *e*Sg **Sb** 01 17 28.3 -0.6
TRAV Traversella 1.48 309 Pg **Pn** 01 17 08.6 -0.3
232nm,0.4s
TRAV Traversella 1.48 309 P **Pn** 01 17 08.1 -0.8
TRAV Traversella 1.48 309 Pg **Pn** 01 17 08.6 -0.3
232nm,0.4s
TRAV S **Sn** 01 17 25.2 -3.6
SEI Scarperia 1.51 110 Pg **Pn** 01 17 09.6 +0.3
SEI Scarperia 1.51 110 Pg **Pn** 01 17 09.6 +0.3
STV Sant Anna di V 1.52 257 Pg **Pn** 01 17 09.1 -0.4
99nm,0.5s
STV Sant Anna di V 1.52 257 P **Pn** 01 17 08.7 -0.8
STV Sant Anna di V 1.52 257 Pg **Pn** 01 17 09.1 -0.4
99nm,0.5s
STV S **Sn** 01 17 27.0 -2.8
AUTN L'Aution 1.54 247 P **Pn** 01 17 09.4 -0.4
AUTN S **Sn** 01 17 30.1 -0.2
AUTN L'Aution 1.54 247 P **Pn** 01 17 09.4 -0.4
AUTN S **Sn** 01 17 30.1 -0.2
DOI San Damiano 1.54 267 Pg **Pn** 01 17 10.3 +0.6
457nm,0.6s
DOI San Damiano 1.54 267 Pg **Pn** 01 17 10.3 +0.6
457nm,0.6s
ROVR Rover¤ Verone 1.58 48 Pg **Pn** 01 17 08.9 -1.5
441nm,0.4s
ROVR Rover¤ Verone 1.58 48 Pg **Pn** 01 17 08.9 -1.5
441nm,0.4s
SBF Sospel 1.59 243 *e*Pn **Pn** 01 17 09.6 -0.8
SNR=1.0
SBF Sospel 1.59 243 *e*Pg **Pn** 01 17 11.3 +0.9
SBF *e*Sn **Sn** 01 17 28.8 -2.6
160nm,0.3s,SNR=1.0
SBF Sospel 1.59 243 *e*Pn **Pn** 01 17 09.6 -0.8
SNR=1.0
SBF Sospel 1.59 243 *e*Pg **Pn** 01 17 11.3 +0.9
SBF *e*Sn **Sn** 01 17 28.8 -2.6
80nm,0.3s,SNR=1.0
RSP Reno Superiore 1.61 291 Pg **Pn** 01 17 10.4 -0.3
88nm,0.4s
RSP Reno Superiore 1.61 291 Pg **Pn** 01 17 10.4 -0.3
88nm,0.4s
PZZ Stroppo 1.63 267 Pg **Pn** 01 17 11.2 +0.1
300nm,0.7s
RNI Roncone 1.64 32⇑ *e*Pg **Pn** 01 17 09.8 -1.4
RNI *e*Sg **Sb** 01 17 33.9 +0.5
RNI Roncone 1.64 32 *e*Pg **Pn** 01 17 09.8 -1.4
RNI *e*Sg **Sb** 01 17 33.9 +0.5
TOUF Mont Tournerai 1.65 250 P **Pn** 01 17 11.0 -0.3
TOUF Mont Tournerai 1.65 250 P **Pn** 01 17 11.0 -0.3
MABI Malga Bissina 1.66 28 Pg **Pn** 01 17 10.4 -1.1
214nm,0.8s
MABI Malga Bissina 1.66 28 Pg **Pn** 01 17 10.4 -1.1
214nm,0.8s
REVF Revere 1.69 240 P **Pn** 01 17 11.9 +0.1
REVF Revere 1.69 240 P **Pn** 01 17 11.9 +0.1
CMPO Campotto Po 1.73 90 Pg **Pb** 01 17 13.3 -0.4
392nm,1.0s
CMPO Campotto Po 1.73 90 Pg **Pb** 01 17 13.3 -0.4
392nm,1.0s
MVIF Mont Vial 1.76 247 P **Pn** 01 17 12.5 -0.3
MVIF Mont Vial 1.76 247 P **Pn** 01 17 12.5 -0.3
MMK Mattmark 1.77 326 Pg **Pn** 01 17 12.5 -0.5
MMK Mattmark 1.77 326 Pg **Pn** 01 17 12.5 -0.5
CSNT Castellina Chi 1.77 129 Pg **Pn** 01 17 12.1 -0.8
71nm,0.5s
TEOL Teolo 1.79 64⇑ *e*Pn **Pn** 01 17 12.0 -1.1
TEOL *e*Sn **Sg** 01 17 38.3 -0.6
TEOL Teolo 1.79 64⇑ *e*Pn **Pn** 01 17 12.0 -1.1
TEOL *e*Sn **Sg** 01 17 38.3 -0.6
DDS Dosso del Somm 1.80 44⇑ *e*Pn **Pn** 01 17 12.0 -1.5
DDS Dosso del Somm 1.80 44⇑ *e*Pn **Pn** 01 17 12.0 -1.5
LSD Lago del Serru 1.82 299 Pg **Pn** 01 17 13.2 -0.5
77nm,0.8s
LSD Lago del Serru 1.82 299 P **Pn** 01 17 13.0 -0.7
LSD S **Sn** 01 17 35.3 -2.0
SURF Saint Ours 1.85 267 P **Pn** 01 17 14.9 +0.8
SURF S **Sn** 01 17 39.5 +1.5
SURF Saint Ours 1.85 267 P **Pn** 01 17 14.9 +0.8
SURF S **Sn** 01 17 39.5 +1.5
TUE Stuetta 1.87 359 Pn **Pn** 01 17 14.2 -0.3
109nm,0.5s
TUE Stuetta 1.87 359 Pn **Pn** 01 17 14.2 -0.3
109nm,0.5s
MBDF Montbardon 1.87 275 *e*P **Pn** 01 17 14.5 +0.1
MBDF Montbardon 1.87 275 *e*Pg **Pb** 01 17 16.9 +0.6
SNR=1.0
MBDF *e*Sn **Sn** 01 17 35.5 -3.1
127nm,0.5s,SNR=1.0
MBDF Montbardon 1.87 275 *e*P **Pn** 01 17 14.5 +0.1
MBDF Montbardon 1.87 275 *e*Pg **Pb** 01 17 16.9 +0.6
SNR=1.0
MBDF *e*Sn **Sn** 01 17 35.5 -3.1
64nm,0.5s,SNR=1.0
SFI Santa Sofia 1.90 111 Pg **Pn** 01 17 14.0 -0.6
159nm,1.0s
ASQU Asqua 1.90 114 Pg **Pn** 01 17 14.1 -0.6
113nm,0.9s
ADRI Adria, Italy 1.92 76⇑ *e*Pn **Pn** 01 17 15.7 +0.8
ADRI *e*Sn **Sg** 01 17 45.1 +2.0
ADRI Adria, Italy 1.92 76⇑ *e*Pn **Pn** 01 17 15.7 +0.8
PANI Panarotta 1.98 42 *e*Pn **Pn** 01 17 15.4 -0.6
PANI Panarotta 1.98 42 *e*Pn **Pn** 01 17 15.4 -0.6

CALN Calern 1.99 246 P **Pn** 01 17 16.0 0.0
CALN Calern 1.99 246 P **Pn** 01 17 16.0 0.0
MRGE Morge 2.02 306 Pg **Pn** 01 17 15.7 -0.8
125nm,0.6s
PGF Pioggiola 2.07 188 *e*Pn **Pn** 01 17 15.7 -1.4
SNR=1.0
PGF *e*Sn **Sn** 01 17 39.8 -3.6
35nm,0.3s
PGF Pioggiola 2.07 188 *e*Pn **Pn** 01 17 15.7 -1.4
SNR=1.0
PGF *e*Sn **Sn** 01 17 39.8 -3.6
18nm,0.3s
LPG La Plagne 2.08 297 *e*P **Pn** 01 17 17.6 +0.3
LPG La Plagne 2.08 297 *e*Pg **Pb** 01 17 20.0 +0.1
SNR=1.0
LPG *e*Sn **Sn** 01 17 40.1 -3.6
70nm,0.4s
LPG La Plagne 2.08 297 *e*P **Pn** 01 17 17.6 +0.3
LPG La Plagne 2.08 297 *e*Pg **Pb** 01 17 20.0 +0.1
SNR=1.0
LPG *e*Sn **Sn** 01 17 40.1 -3.6
35nm,0.4s
CRE Caprese Michel 2.09 117 Pg **Pn** 01 17 17.0 -0.3
63nm,0.6s
LPL La Plagne 2.10 297 *e*P **Pn** 01 17 18.1 +0.6
LPL La Plagne 2.10 297 *e*Pg **Pb** 01 17 20.5 +0.3
SNR=1.0
LPL *e*Sn **Sn** 01 17 40.2 -3.9
42nm,0.3s
LPL La Plagne 2.10 297 *e*P **Pn** 01 17 18.1 +0.6
LPL La Plagne 2.10 297 *e*Pg **Pb** 01 17 20.5 +0.3
SNR=1.0
LPL *e*Sn **Sn** 01 17 40.2 -3.9
21nm,0.3s
CASP Castiglione de 2.10 149 Pg **Pn** 01 17 15.9 -1.5
42nm,0.6s
CTI Castel Tesino 2.15 47 Pn **Pn** 01 17 16.9 -1.3
149nm,0.5s
CTI Castel Tesino 2.15 47 Pn **Pn** 01 17 16.9 -1.3
149nm,0.5s
CTI *e*Sn **Sn** 01 17 43.5 -1.9
MOSI Grossmontoni 2.17 22 Pg **Pn** 01 17 18.8 +0.2
520nm,0.9s
MOSI Grossmontoni 2.17 22⇑ *e*Pn **Pn** 01 17 19.3 +0.7
MOSI *e*Sn **Sb** 01 17 48.6 -0.2
FRF La Foret Royal 2.23 243 *e*Pn **Pn** 01 17 18.2 -1.0
SNR=1.0
FRF La Foret Royal 2.23 243 *e*P **Pn** 01 17 19.9 +0.7
FRF La Foret Royal 2.23 243 *e*Pg **Pb** 01 17 23.5 +1.1
FRF *e*Sn **Sn** 01 17 43.8 -3.4
FRF *e*Sg **Sb** 01 17 52.3 +1.9
81nm,0.4s
FRF La Foret Royal 2.23 243 *e*Pn **Pn** 01 17 18.2 -1.0
SNR=1.0
FRF La Foret Royal 2.23 243 *e*P **Pn** 01 17 19.9 +0.7
FRF La Foret Royal 2.23 243 *e*Pg **Pb** 01 17 23.5 +1.1
FRF *e*Sn **Sn** 01 17 43.8 -3.4
FRF *e*Sg **Sb** 01 17 52.3 +1.9
41nm,0.4s
RSL Roselend 2.24 300 P **Pn** 01 17 20.8 +1.3
RSL S **Sn** 01 17 48.8 +1.2
RSL Roselend 2.24 300 P **Pn** 01 17 20.8 +1.3
RSL S **Sn** 01 17 48.8 +1.2
CAFI Castiglion Fio 2.25 123 Pn **Pn** 01 17 19.1 -0.4
53nm,0.7s
CAFI Castiglion Fio 2.25 123 Pn **Pn** 01 17 19.1 -0.4
53nm,0.7s
PARC Parchiule 2.26 114 Pn **Pn** 01 17 19.9 +0.3
69nm,0.7s
PARC Parchiule 2.26 114 Pn **Pn** 01 17 19.9 +0.3
69nm,0.7s
APPI Appiano 2.28 34 Pg **Pn** 01 17 19.3 -0.6
138nm,0.6s
APPI Appiano 2.28 34⇓ *e*Pn **Pn** 01 17 19.7 -0.2
KOSI Kohlern 2.33 36⇑ *e*Pn **Pn** 01 17 20.4 -0.3
VARN Col Varnada, M 2.37 53⇓ *e*Pn **Pn** 01 17 19.5 -1.6
VARN *e*Sn **Sn** 01 17 48.3 -2.3
VARN Col Varnada, M 2.37 53⇓ *e*Pn **Pn** 01 17 19.5 -1.6
VARN *e*Sn **Sn** 01 17 48.3 -2.3
LMR La Mourre 2.44 240 *e*Pn **Pn** 01 17 20.9 -1.1
SNR=1.0
LMR La Mourre 2.44 240 *e*P **Pn** 01 17 22.6 +0.6
LMR La Mourre 2.44 240 *e*Pg **Pb** 01 17 26.2 +0.4
LMR *e*Sn **Sn** 01 17 48.8 -3.4
SNR=1.0
LMR *e*Sg **Sb** 01 17 58.2 +2.0
37nm,0.4s,SNR=1.0
LMR La Mourre 2.44 240 *e*Pn **Pn** 01 17 20.9 -1.1
SNR=1.0
LMR La Mourre 2.44 240 *e*P **Pn** 01 17 22.6 +0.6
LMR La Mourre 2.44 240 *e*Pg **Pb** 01 17 26.2 +0.4
LMR *e*Sn **Sn** 01 17 48.8 -3.4
SNR=1.0
LMR *e*Sg **Sb** 01 17 58.2 +2.0
18nm,0.4s,SNR=1.0
PLONS Plons/SG 2.45 360 *e*Pn **Pn** 01 17 23.5 +1.2
SNR=3.1
PLONS Plons/SG 2.45 360 *e*Pn **Pn** 01 17 23.5 +1.2
PLONS Plons/SG 2.45 360 Pn **Pn** 01 17 23.5 +1.2
SNR=3.1
PIEI Pieia 2.50 114 Pg **Pn** 01 17 23.1 +0.1
34nm,0.8s
AGOR Agordo 2.52 47 *e*Pn **Pn** 01 17 23.4 +0.3
ABSI Aberstueckl 2.52 32⇑ *e*Pn **Pn** 01 17 23.0 -0.4
ORIF Oris-en-Rattie 2.52 278 *e*P **Pn** 01 17 24.7 +1.4
ORIF Oris-en-Rattie 2.52 278 *e*Pg **Pb** 01 17 27.7 +0.4
SNR=1.0
ORIF *e*Sn **Sn** 01 17 50.9 -3.6
84nm,0.6s
ORIF Oris-en-Rattie 2.52 278 *e*P **Pn** 01 17 24.7 +1.4
ORIF Oris-en-Rattie 2.52 278 *e*Pg **Pb** 01 17 27.7 +0.4
SNR=1.0
ORIF *e*Sn **Sn** 01 17 50.9 -3.6
42nm,0.6s
OG01 Vacheresse 2.57 313 P **Pn** 01 17 25.9 +1.9
OG01 S **Sn** 01 17 59.1 +3.4
OG01 Vacheresse 2.57 313 P **Pn** 01 17 25.9 +1.9
OG01 S **Sn** 01 17 59.1 +3.4
FETA Feichten 2.59 21⇓ *e*Pn **Pn** 01 17 24.6 +0.2
SNR=5.5
FETA ⇑ *i*Sn **Sn** 01 17 57.2 +0.8
FETA Feichten 2.59 21 Pn **Pn** 01 17 24.6 +0.2
SNR=5.5
FETA Sn **Sn** 01 17 57.2 +0.8
MGAB Montegabbione 2.59 130 Pg **Pn** 01 17 24.1 -0.1
37nm,0.5s
DAVA Damuels 2.71 7 *e*Pn **Pn** 01 17 26.6 +0.7
SNR=4.4
DAVA Damuels 2.71 7 *e*Pn **Pn** 01 17 26.6 +0.7
DAVA Damuels 2.71 7⇑ *e*Pn **Pn** 01 17 26.4 +0.5
SNR=12
DAVA ⇑ *i*Sn **Sn** 01 18 00.4 +1.3
DAVA Damuels 2.71 7 Pn **Pn** 01 17 26.4 +0.5
SNR=12
DAVA Sn **Sn** 01 18 00.4 +1.3
ROSI Rosskopf 2.72 31 *e*Pn **Pn** 01 17 27.3 +1.1
CIMO Cimolais 2.74 50⇓ *e*Pn **Pn** 01 17 25.7 -0.6
CIMO Cimolais 2.74 50⇓ *e*Pn **Pn** 01 17 25.7 -0.6
SMRF Simiane la Rot 2.81 258 *e*P **Pn** 01 17 28.1 +0.9
SMRF Simiane la Rot 2.81 258 *e*Pg **Pb** 01 17 33.2 +1.0
SNR=1.0
SMRF *e*Sn **Sn** 01 17 57.5 -4.0
SNR=1.0
SMRF *e*Sg **Sb** 01 18 09.6 +2.6
28nm,0.4s
SMRF Simiane la Rot 2.81 258 *e*P **Pn** 01 17 28.1 +0.9
SMRF Simiane la Rot 2.81 258 *e*Pg **Pb** 01 17 33.2 +1.0
SNR=1.0
SMRF *e*Sn **Sn** 01 17 57.5 -4.0
SNR=1.0
SMRF *e*Sg **Sb** 01 18 09.6 +2.6
14nm,0.4s
WILA Wila 2.83 353 *e*Pn **Pn** 01 17 27.4 -0.2
SNR=4.0
WILA Wila 2.83 353 *e*Pn **Pn** 01 17 27.4 -0.2
WILA Wila 2.83 353 Pn **Pn** 01 17 27.4 -0.2
SNR=4.0
LEPF PUYLOUBIER 2.87 249 P **Pn** 01 17 27.9 -0.1
LEPF PUYLOUBIER 2.87 249 P **Pn** 01 17 27.9 -0.1
OBER Oberstdorf 2.88 12 *e*Pn **Pn** 01 17 29.0 +0.9
SNR=2.1
OBER *e*Sn **Sn** 01 18 04.4 +1.2
OBER Oberstdorf 2.88 12 *e*Pn **Pn** 01 17 29.0 +0.9
OBER *e*Sn **Sn** 01 18 04.4 +1.2
OBER Oberstdorf 2.88 12 Pn **Pn** 01 17 29.0 +0.9
SNR=2.1
OBER Sn **Sn** 01 18 04.4 +1.2
OG26 St.-Nazaire-De 2.92 271 P **Pn** 01 17 30.7 +2.0
OG26 St.-Nazaire-De 2.92 271 P **Pn** 01 17 30.7 +2.0
BALST Balsthal 2.98 337 *e*Pn **Pn** 01 17 29.7 +0.2
SNR=7.6
BALST *e*Sn **Sn** 01 18 05.6 -0.2
BALST Balsthal 2.98 337 *e*Pn **Pn** 01 17 29.7 +0.2
BALST *e*Sn **Sn** 01 18 05.6 -0.2
BALST Balsthal 2.98 337 Pn **Pn** 01 17 29.7 +0.2
SNR=7.6
BALST Sn **Sn** 01 18 05.6 -0.2
MOTA Moosalm 2.99 23⇑ *i*Pn **Pn** 01 17 30.2 +0.4
SNR=6.4
MOTA ⇓ *i*Sn **Sn** 01 18 06.2 0.0
MOTA Moosalm 2.99 23 Pn **Pn** 01 17 30.2 +0.4
SNR=6.4
MOTA Sn **Sn** 01 18 06.2 0.0
RISI Rein 3.01 38⇑ *e*Pn **Pn** 01 17 29.8 -0.2
SULZ Cheisacher 3.06 344 *e*Pn **Pn** 01 17 30.4 -0.2
SNR=3.4
SULZ *e*Sn **Sn** 01 18 06.9 -0.8
SULZ Cheisacher 3.06 344 *e*Pn **Pn** 01 17 30.4 -0.2
SULZ *e*Sn **Sn** 01 18 06.9 -0.8
SULZ Cheisacher 3.06 344 Pn **Pn** 01 17 30.4 -0.2
SNR=3.4
SULZ Sn **Sn** 01 18 06.9 -0.8
ABTA Abfaltersbach 3.06 44⇑ *i*Pn **Pn** 01 17 31.0 +0.3
ABTA ⇑ *i*Sn **Sn** 01 18 08.3 +0.4
ABTA Abfaltersbach 3.06 44 Pn **Pn** 01 17 31.0 +0.3
ABTA Sn **Sn** 01 18 08.3 +0.4
CABF La Chapelle 3.07 312 *e*P **Pn** 01 17 31.6 +0.8
CABF *e*Sn **Sn** 01 18 03.5 -4.5
CABF *e*Sg **Sb** 01 18 16.9 +2.4
47nm,0.6s
CABF La Chapelle 3.07 312 *e*P **Pn** 01 17 31.6 +0.8
CABF *e*Sn **Sn** 01 18 03.5 -4.5
CABF *e*Sg **Sb** 01 18 16.9 +2.4
23nm,0.6s
WTTA Wattenberg 3.09 30 *e*Pn **Pn** 01 17 32.8 +1.6
SNR=12
WTTA *e*Sn **Sn** 01 18 11.5 +2.9
WTTA Wattenberg 3.09 30 *e*Pn **Pn** 01 17 32.8 +1.6
WTTA *e*Sn **Sn** 01 18 11.5 +2.9
WTTA Wattenberg 3.09 30⇓ *i*Pn **Pn** 01 17 31.0 -0.2
SNR=16
WTTA ⇑ *i*Sn **Sn** 01 18 09.2 +0.6
WTTA Wattenberg 3.09 30 Pn **Pn** 01 17 31.0 -0.2
SNR=16
WTTA Sn **Sn** 01 18 09.2 +0.6
FUSE Fusea 3.12 53 *e*Pn **Pn** 01 17 30.8 -0.6
FUSE Fusea 3.12 53 *e*Pn **Pn** 01 17 30.8 -0.6
WATA Walderalm 3.13 28⇓ *i*Pn **Pn** 01 17 31.4 -0.3
SNR=7.0
WATA ⇓ *i*Sn **Sn** 01 18 10.4 +0.8
WATA Walderalm 3.13 28 Pn **Pn** 01 17 31.4 -0.3
SNR=7.0
WATA Sn **Sn** 01 18 10.4 +0.8
BBS Basel-Blauen 3.15 336 P **Pn** 01 17 31.8 -0.1
ZOU Zoufplan 3.19 51 *e*Pn **Pn** 01 17 32.5 -0.1
VINO Villanova 3.20 57 *e*Pn **Pn** 01 17 31.1 -1.5
VINO Villanova 3.20 57 *e*Pn **Pn** 01 17 31.1 -1.5
SLE Schleitheim 3.23 349 *e*Pn **Pn** 01 17 31.9 -1.0
SNR=13
SLE Schleitheim 3.23 349 *e*Pn **Pn** 01 17 31.9 -1.0
SLE Schleitheim 3.23 349 Pn **Pn** 01 17 31.9 -1.0
SNR=13
SABO M.te Sabotino 3.27 64⇓ *e*Pn **Pn** 01 17 32.8 -0.8
SABO M.te Sabotino 3.27 64⇓ *e*Pn **Pn** 01 17 32.8 -0.8
LOMF Lomont 3.28 328 P **Pn** 01 17 34.3 +0.6
LOMF Lomont 3.28 328 P **Pn** 01 17 34.3 +0.6
VIVF Saint-Julien-l 3.37 276 *e*P **Pn** 01 17 36.4 +1.5
VIVF *e*Sn **Sn** 01 18 11.0 -4.4
15nm,0.4s,SNR=1.0
VIVF Saint-Julien-l 3.37 276 *e*P **Pn** 01 17 36.4 +1.5
VIVF *e*Sn **Sn** 01 18 11.0 -4.4
7.3nm,0.4s,SNR=1.0
SKDS Skadanscina 3.41 72 *i* Pn **Pn** 01 17 33.6 -1.8
SKDS Skadanscina 3.41 72 *i* Pn **Pn** 01 17 33.6 -1.8
FELD Feldberg im Sc 3.42 344 P **Pn** 01 17 34.6 -1.0
VOJS Vojsko 3.48 64 *i* Pn **Pn** 01 17 35.2 -1.2
VOJS *e*Sn **Sn** 01 18 16.3 -1.7
VOJS Vojsko 3.48 64 *i* Pn **Pn** 01 17 35.2 -1.2
VOJS *e*Sn **Sn** 01 18 16.3 -1.7
ACOM Acomizza, Ital 3.49 55⇓ *e*Pn **Pn** 01 17 37.1 +0.5
ACOM Acomizza, Ital 3.49 55⇓ *e*Pn **Pn** 01 17 37.1 +0.5
MYKA Terra Mystica 3.61 54⇓ *i*Pn **Pn** 01 17 37.5 -0.7
MYKA ⇑ *i*Sn **Sn** 01 18 20.1 -1.1
MYKA Terra Mystica 3.61 54 Pn **Pn** 01 17 37.5 -0.7
MYKA Sn **Sn** 01 18 20.1 -1.1
MOF Molkenrain 3.61 335 P **Pn** 01 17 38.1 -0.1
MOF Molkenrain 3.61 335 P **Pn** 01 17 38.1 -0.1
HINF Hinteralfeld 3.67 332 *e*P **Pn** 01 17 38.7 -0.3
HINF *e*Sn **Sn** 01 18 17.6 -5.1
38nm,0.5s,SNR=1.0
HINF Hinteralfeld 3.67 332 *e*P **Pn** 01 17 38.7 -0.3
KBA Koelnbreinsper 3.71 47 *e*Sn **Sn** 01 18 25.0 +1.1
KBA Koelnbreinsper 3.71 47 *e*Sn **Sn** 01 18 25.0 +1.1
KBA Koelnbreinsper 3.71 47 Sn **Sn** 01 18 25.0 +1.1
FUR Furstenfeldbru 3.80 19 *e*Sn **Sn** 01 18 23.9 -1.9
FUR Furstenfeldbru 3.80 19 *e*Sn **Sn** 01 18 23.9 -1.9
FUR Furstenfeldbru 3.80 19 Sn **Sn** 01 18 23.9 -1.9
BFO Black Forest 3.80 349 *e*Pn **Pn** 01 17 39.4 -1.4
SNR=8.2
BFO *e*Sn **Sn** 01 18 21.9 -4.0
BFO Black Forest 3.80 349 *e*Pn **Pn** 01 17 39.4 -1.4
BFO *e*Sn **Sn** 01 18 21.9 -4.0
BFO Black Forest 3.80 349 Pn **Pn** 01 17 39.4 -1.4
SNR=8.2
BFO Sn **Sn** 01 18 21.9 -4.0
NVLJ Novalja 3.92 89 *e*Pn **Pn** 01 17 41.7 -0.6
NVLJ Sn **Sn** 01 18 27.1 -1.6
NVLJ Novalja 3.92 89 *e*Pn **Pn** 01 17 41.7 -0.6
NVLJ Sn **Sn** 01 18 27.0 -1.6
RJOB Jochberg 3.93 36 *e*Pn **Pn** 01 17 43.4 +0.8
SNR=4.1
RJOB *e*Sn **Sn** 01 18 30.0 +0.9
RJOB Jochberg 3.93 36 *e*Pn **Pn** 01 17 43.4 +0.8
RJOB *e*Sn **Sn** 01 18 30.0 +0.9
RJOB Jochberg 3.93 36 Pn **Pn** 01 17 43.4 +0.8
SNR=4.1
RJOB Sn **Sn** 01 18 30.0 +0.9
ECH Echery 3.93 338 *e*Pn **Pn** 01 17 42.5 -0.1
SNR=9.1
ECH *e*Sn **Sn** 01 18 28.9 -0.3
ECH Echery 3.93 338 *e*Pn **Pn** 01 17 42.5 -0.1
ECH *e*Sn **Sn** 01 18 28.9 -0.3
ECH Echery 3.93 338 P **Pn** 01 17 41.8 -0.8
ECH Echery 3.93 338 P **Pn** 01 17 41.8 -0.8
ECH Echery 3.93 338 Pn **Pn** 01 17 42.5 -0.1
SNR=9.1
ECH Sn **Sn** 01 18 28.9 -0.3
LASF Ste Croix 4.00 264 *e*Pn **Pn** 01 17 43.3 -0.3
SNR=1.0
LASF Ste Croix 4.00 264 *e*P **Pn** 01 17 45.9 +2.3
LASF *e*Sn **Sn** 01 18 26.7 -4.2
9.9nm,0.5s
LASF Ste Croix 4.00 264 *e*Pn **Pn** 01 17 43.3 -0.3
SNR=1.0
LASF Ste Croix 4.00 264 *e*P **Pn** 01 17 45.9 +2.3
LASF *e*Sn **Sn** 01 18 26.7 -4.2
4.9nm,0.5s
HAU Haudompre 4.01 329 *e*P **Pn** 01 17 43.6 0.0
HAU *e*Sn Sn 01 18 25.6 -5.4
165nm,0.5s
HAU Haudompre 4.01 329 *e*P **Pn** 01 17 43.6 0.0
CDF Champ du Feu 4.08 340 *e*Pn **Pn** 01 17 43.4 -1.3
SNR=1.0
CDF *e*Sn Sn 01 18 27.5 -5.4
27nm,0.5s
CDF Champ du Feu 4.08 340 *e*Pn **Pn** 01 17 43.4 -1.3
SNR=1.0
OBKA Obir 4.09 60 *e*Pn **Pn** 01 17 45.1 +0.2
SNR=1.8
OBKA Obir 4.09 60 *e*Pn **Pn** 01 17 45.1 +0.2
OBKA Obir 4.09 60 Pn **Pn** 01 17 45.1 +0.2
SNR=1.8
COLF Collangettes 4.14 285 P **Pn** 01 17 46.7 +1.2
COLF Collangettes 4.14 285 P **Pn** 01 17 46.7 +1.2
THEF They Montfort 4.32 328 P **Pn** 01 17 48.1 +0.1
THEF They Montfort 4.32 328 P **Pn** 01 17 48.1 +0.1
SMF Signal de Mont 4.40 300 *e*P **Pn** 01 17 50.0 +1.0
SMF *e*Sn Sn 01 18 35.1 -5.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	29nm,0.5s						
SMF	Signal de Mont	4.40	300	eP	Pn	01 17 50.0	+1.0
LBL	Lubilhac	4.41	280	P	Pn	01 17 50.3	+1.1
LBL	Lubilhac	4.41	280	P	Pn	01 17 50.3	+1.1
AGO	Saint Agoulin	4.65	290	P	Pn	01 17 53.7	+1.3
AGO	Saint Agoulin	4.65	290	P	Pn	01 17 53.7	+1.3
PYM	Petit Puy Mans	4.66	287	P	Pn	01 17 54.1	+1.5
PYM	Petit Puy Mans	4.66	287	P	Pn	01 17 54.1	+1.5
MOA	Molln	4.69	44	ePn	Pn	01 17 54.3	+1.3
	SNR=3.7						
MOA				eSn	Sn	01 18 46.2	-1.6
MOA	Molln	4.69	44	ePn	Pn	01 17 54.3	+1.3
MOA				eSn	Sn	01 18 46.2	-1.6
MOA	Molln	4.69	44	Pn	Pn	01 17 54.3	+1.3
	SNR=3.7						
MOA				Sn	Sn	01 18 46.2	-1.6
LOR	Lormes	4.69	307	eP	Pn	01 17 53.6	+0.6
	baz=129						
LOR				eSn	Sn	01 18 42.0	-5.9
	25nm,0.4s						
LOR	Lormes	4.69	307	eP	Pn	01 17 53.6	+0.6
	baz=129						
PAGF	Fort de Pagny	4.69	329	eP	Pn	01 17 53.6	+0.6
	baz=147						
PAGF				eSn	Sn	01 18 42.2	-5.7
	15nm,0.8s						
PAGF	Fort de Pagny	4.69	329	eP	Pn	01 17 53.6	+0.6
	baz=147						
SFTF	Sexfontaines	4.70	322	ePn	Pn	01 17 50.1	-3.0
	baz=139						
SFTF	Sexfontaines	4.70	322	eP	Pn	01 17 53.7	+0.6
	baz=138						
SFTF				eSn	Sn	01 18 43.5	-4.5
	18nm,0.5s						
SFTF	Sexfontaines	4.70	322	ePn	Pn	01 17 50.1	-3.0
	baz=139						
SFTF	Sexfontaines	4.70	322	eP	Pn	01 17 53.7	+0.6
	baz=138						
SFTF				eSn	Sn	01 18 43.5	-4.5
	8.8nm,0.5s						
AVF	Avril sur Loir	4.76	299	eP	Pn	01 17 54.3	+0.3
AVF				eSn	Sn	01 18 43.9	-5.7
	11nm,0.5s						
AVF	Avril sur Loir	4.76	299	eP	Pn	01 17 54.3	+0.3
SSF	Saint Saulge	4.79	303	eP	Pn	01 17 54.9	+0.5
SSF				eSn	Sn	01 18 44.5	-5.8
	6.7nm,0.3s						
SSF	Saint Saulge	4.79	303	eP	Pn	01 17 54.9	+0.5
MEZF	Maizieres J'vi	4.92	324	eP	Pn	01 17 56.8	+0.7
	baz=140						
MEZF				eSn	Sn	01 18 47.6	-5.8
	16nm,0.4s						
MEZF	Maizieres J'vi	4.92	324	eP	Pn	01 17 56.8	+0.7
	baz=140						
BGF	Bois d'Agland	4.99	295	eP	Pn	01 17 58.4	+1.2
BGF				eSn	Sn	01 18 49.9	-5.4
	26nm,0.4s						
BGF	Bois d'Agland	4.99	295	eP	Pn	01 17 58.4	+1.2
GRB3	Grafenberg Arr	5.02	18	ePn	Pn	01 17 56.1	-1.5
	SNR=2.3						
GRB3	Grafenberg Arr	5.02	18	ePn	Pn	01 17 56.1	-1.5
GRB3	Grafenberg Arr	5.02	18	Pn	Pn	01 17 56.1	-1.5
	SNR=2.3						
WET	Wettzell	5.13	27	eSn	Sn	01 18 54.8	-4.0
WET	Wettzell	5.13	27	eSn	Sn	01 18 54.8	-4.0
WET	Wettzell	5.13	27	Sn	Sn	01 18 54.8	-4.0
GEC2	GERESS Array S	5.18	33	ePn	Pn	01 17 58.4	-1.4
	SNR=7.0						
GEC2				eSn	Sn	01 18 56.0	-3.9
GEC2	GERESS Array S	5.18	33	ePn	Pn	01 17 58.4	-1.4
GEC2				eSn	Sn	01 18 56.0	-3.9
GEC2	GERESS Array S	5.18	33	Pn	Pn	01 17 58.4	-1.4
	SNR=7.0						
GEC2				Sn	Sn	01 18 56.0	-3.9
GERES	GERESS Array B	5.18	33	Pn	Pn	01 17 58.0	-1.8
	0.5nm,0.3s,baz=210,slow=14,SNR=28						
GERES				Sn	Sn	01 18 56.1	-3.8
	1.6nm,0.3s,baz=235,slow=13,SNR=4.3						
EJON	La Jonquera	5.19	248	P	Pn	01 17 59.5	-0.4
	0.5nm,0.2s,SNR=7.9						
CAF	Calviac	5.23	276	eP	Pn	01 18 02.2	+1.8
CAF				eSn	Sn	01 18 55.8	-5.3
	5.7nm,0.5s						
CAF	Calviac	5.23	276	eP	Pn	01 18 02.2	+1.8
TCF	Toulx Ste Croi	5.33	291	eP	Pn	01 18 03.3	+1.5
TCF				eSn	Sn	01 18 58.0	-5.5
	7.4nm,0.3s,SNR=1.0						
TCF	Toulx Ste Croi	5.33	291	eP	Pn	01 18 03.3	+1.5
MTLF	Montolieu	5.33	259	ePn	Pn	01 18 00.6	-1.2
	SNR=1.0						
MTLF				eSn	Sn	01 18 58.2	-5.3
	3.2nm,0.4s,SNR=1.0						
MTLF	Montolieu	5.33	259	ePn	Pn	01 18 00.6	-1.2
	SNR=1.0						
KHC	Kasperske Hory	5.36	31	ePN	Pn	01 18 00.8	-1.5
KHC				ex	x	01 18 10.0	
KHC				ePG	Pg	01 18 21.5	-2.7
KHC				eSN	Sn	01 18 59.2	-5.2
KHC	Kasperske Hory	5.36	31	Pn	Pn	01 18 00.8	-1.5
HYF	Humbligny	5.41	302	ePn	Pn	01 18 00.4	-2.5
HYF				eSn	Sn	01 18 59.1	-6.5
HYF	Humbligny	5.41	302	ePn	Pn	01 18 00.4	-2.5
RJF	Les Rejaudoux	5.63	280	ePn	Pn	01 18 03.5	-2.5
RJF	Les Rejaudoux	5.63	280	eP	Pn	01 18 08.9	+2.9
RJF				eSg	Sg	01 19 38.0	-4.3
	1.1nm,0.2s,SNR=1.0						
RJF	Les Rejaudoux	5.63	280	ePn	Pn	01 18 03.5	-2.5
TNS	Taunus Mts	5.66	354	ePn	Pn	01 18 05.6	-0.8
	SNR=2.2						
TNS	Taunus Mts	5.66	354	ePn	Pn	01 18 05.6	-0.8
TNS	Taunus Mts	5.66	354	Pn	Pn	01 18 05.6	-0.8
	SNR=2.2						
CLLI	Llivia	5.79	251	P	Pn	01 18 09.4	+1.1
	0.1nm,0.1s,SNR=17						
CLLI				S	Sn	01 19 13.8	-1.4
	0.1nm,0.1s,SNR=7.9						
CFON	Fontmartina	5.82	243	P	Pn	01 18 08.0	-0.6
	0.3nm,0.1s,SNR=6.2						
LFF	La Frestale	6.17	276	ePn	Pn	01 18 10.6	-2.7
LFF	La Frestale	6.17	276	eP	Pn	01 18 16.2	+2.9
LFF				eSn	Sn	01 19 18.8	-5.4
	6.0nm,0.7s						
LFF	La Frestale	6.17	276	ePn	Pn	01 18 10.6	-2.7
STON	Ston	6.26	103	i Pn	Pn	01 18 14.8	+0.2
STON				Sn	Sn	01 19 23.5	-2.9
STON	Ston	6.26	103	i Pn	Pn	01 18 14.7	+0.2
GIVF	Givet	6.32	332	ePn	Pn	01 18 12.5	-2.8
GIVF				eSn	Sn	01 19 20.1	-7.7
	2.0nm,0.2s						
EMIR	Miracle	6.34	248	P	Pn	01 18 16.1	+0.4
	0.1nm,0.1s,SNR=7.9						
CSOR	Sort	6.41	253	P	Pn	01 18 17.7	+1.1
	0.1nm,0.1s,SNR=7.7						
CSOR				S	Sn	01 19 30.3	+0.1
	0.2nm,0.2s,SNR=7.9						
PRU	Pruhonice	6.43	31	ePN	Pn	01 18 15.9	-0.9
PRU				eSN	Sn	01 19 25.9	-4.6
PRU	Pruhonice	6.43	31	Pn	Pn	01 18 15.9	-0.9
BAIF	Baives	6.50	329	ePn	Pn	01 18 14.7	-3.1
BAIF				eSn	Sn	01 19 25.0	-7.3
	8.6nm,0.7s,SNR=1.0						
EPF	Esparros	6.73	260	ePn	Pn	01 18 18.4	-2.7
EPF				eSn	Sn	01 19 31.5	-6.7
	1.7nm,0.4s						
EPF	Esparros	6.73	260	ePn	Pn	01 18 18.4	-2.7
SMOL	Smolenice	6.78	52	ePN	Pn	01 18 20.9	-0.8
MFF	Saint Martin d	6.98	290	eP	Pn	01 18 25.7	+1.2
MFF				eSn	Sn	01 19 37.4	-6.9
	3.0nm,0.4s						
MFF	Saint Martin d	6.98	290	eP	Pn	01 18 25.7	+1.2
CLL	Collm	7.13	19	eSg	Sg	01 20 24.0	-6.4
ETSF	Etsaut	7.40	260	ePn	Pn	01 18 27.4	-2.9
VYHS	Vyhne	7.58	56	ePN	Pn	01 18 30.4	-2.3
VYHS				eSN	Sn	01 19 49.8	-9.3
VYHS	Vyhne	7.58	56	ePn	Pn	01 18 30.4	-2.3
LDF	La Druitiere	7.67	305	ePn	Pn	01 18 31.6	-2.3
LDF	La Druitiere	7.67	305	ePn	Pn	01 18 31.6	-2.3
SJPF	Ste Jean	7.82	263	ePn	Pn	01 18 33.8	-2.1
SJPF	Ste Jean	7.82	263	ePn	Pn	01 18 33.8	-2.1
IELO	Elcoad	7.90	261	P	Pn	01 18 38.8	+1.7
	0.1nm,0.1s,SNR=4.0						
FLN	La Foliniere	7.96	305	ePn	Pn	01 18 35.0	-2.9
	baz=128						
GRR	Gorron	8.02	302	ePn	Pn	01 18 37.3	-1.4
	SNR=1.0						
GRR	Gorron	8.02	302	ePn	Pn	01 18 37.3	-1.4
	SNR=1.0						
EIBI	Ibiza	8.19	230	P	Pn	01 18 42.5	+1.4
	0.5nm,0.2s,SNR=7.9						
KECS	Kecovo	8.57	59	ePN	Pn	01 18 45.9	-0.4
KECS				eSN	Sn	01 20 06.4	-17
KECS	Kecovo	8.57	59	ePn	Pn	01 18 45.9	-0.4
KEST	Kesra	8.86	180	Pn	Pn	01 18 54.4	+4.1
	0.1nm,0.3s,baz=292,slow=11,SNR=4.3						
SGMF	Saint Gilles	9.02	298	ePn	Pn	01 18 50.9	-1.5
	SNR=1.0						
SGMF	Saint Gilles	9.02	298	ePn	Pn	01 18 50.9	-1.5
	SNR=1.0						
QUIF	Quistinic	9.31	295	eP	Pn	01 18 57.4	+1.1
QUIF	Quistinic	9.31	295	eP	Pn	01 18 57.4	+1.1
CRVS	Cervenica-Dubn	9.33	58	ePN	Pn	01 18 55.7	-1.0
CRVS	Cervenica-Dubn	9.33	58	ePn	Pn	01 18 55.7	-1.0
ROSF	Rostrenen	9.50	298	eP	Pn	01 19 00.8	+1.8
ROSF	Rostrenen	9.50	298	eP	Pn	01 19 00.8	+1.8
ESDC	Sonseca Array	11.07	248	Pn	Pn	01 19 29.5	+9.0
	0.2nm,0.3s,baz=55,slow=13,SNR=3.3						
TORD	Torodi Ar. Bea	32.03	194	P	P	01 23 11.5	+2.5
	0.2nm,0.5s,baz=12,slow=9.3,SNR=6.1						

IDC 03 01:43:24.2±1.0,17°.96S×167°.68E,h0km,mb4.0/10, mb1 4.2/11,mb1mx4.1/19,mbtmp4.0/11,ML3.7/1,MS3.8/9, Ms1 3.8/9,ms1mx3.5/31,Error ellipse: s-maj=25.1km s-min=19.7km az=101.0
ISCJB 03 01:43:25.9±0.6,17°.98S±0°.05×167°.6E±0°.1,h23km, mb4.1/14,MS3.8/9,Error ellipse: s-maj=15.5km s-min=7.5km az=8.8
NEIC 03 01:43:26.3±9.8,17°.95S×167°.68E,h14km±59km,mb4.6/5, Error ellipse: s-maj=22.1km s-min=14.4km az=216.0
ISC 03 01:43:27.6±0.6,17°.97S±0°.07×167°.8E±0°.1,h23km,n41, σ1s.52/39,mb4.2/14,MS3.8/9,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.26	197	eP	Pn	01 44 30.5	-0.7
DZM				eS	Sn	01 45 19.2	-1.1
DZM	Mont Dzumac	4.26	197	Pn	Pn	01 44 30.4	-0.9
DZM				Sn	Sn	01 45 19.8	-0.6
DZM	Mont Dzumac	4.26	197	Pn	Pn	01 44 30.4	-0.9
	3.8nm,0.3s,baz=352,slow=22,SNR=18						
DZM				Sn	Sn	01 45 19.8	-0.6
	12nm,0.3s,baz=318,slow=23,SNR=8.1						
NOUC	Port Laguerre	4.33	198	eS	Sn	01 45 20.8	-1.1
AFI	Afiamalu	20.09	81	LR	LR	01 53 54.1	
	comp=Z,338nm,21.2s,baz=274,slow=31						
CTA	Charters Tower	20.43	261	P	P	01 48 04.2	+0.7
CTA	Charters Tower	20.43	261	P	P	01 48 04.2	+0.7
	3.9nm,0.7s,baz=71,slow=10,SNR=2.9						
CTAO	Charters Tower	20.43	261	eP	P	01 48 03.7	+0.3
	50nm,1.5s						
URZ	Urewera	21.82	160	P	P	01 48 19.8	+1.7
URZ	Urewera	21.82	160	P	P	01 48 19.8	+1.7
	9.8nm,1.0s,baz=339,slow=17,SNR=3.1						
STKA	Stephens Creek	27.38	235	P	P	01 49 11.0	-0.2
STKA	Stephens Creek	27.38	235	P	P	01 49 11.0	-0.2
	4.4nm,0.9s,baz=80,slow=7.3,SNR=5.9						
STKA				LR	LR	01 58 52.4	
	comp=Z,262nm,19.8s,baz=29,slow=34						
WRA	Warramunga Arr	31.63	261	P	P	01 49 47.1	-2.1
WRA	Warramunga Arr	31.63	261	P	P	01 49 47.1	-2.1
	2.4nm,1.1s,baz=80,slow=6.1,SNR=7.1						
WRA				LR	LR	02 01 37.3	
	comp=Z,300nm,21.4s,baz=90,slow=35						
AS31	Alice Springs	32.09	254	eP	P	01 49 52.3	-0.9
ASAR	Alice Springs	32.09	254	P	P	01 49 51.3	-1.9
ASAR	Alice Springs	32.09	254	P	P	01 49 51.3	-1.9
	1.3nm,0.6s,baz=82,slow=8.3,SNR=10						
FORT	Forrest	38.14	243	eP	P	01 50 44.2	-1.0
	14nm,0.9s						
FITZ	Fitzroy Crossi	39.98	263	LR	LR	02 07 24.3	
	comp=Z,263nm,18.1s,baz=95,slow=36						
NWAO	Narrogin (SRO)	47.55	242	LR	LR	02 10 34.9	
	comp=Z,174nm,20.3s,baz=358,slow=34						
KAPI	Kappang	48.61	279	LR	LR	02 09 23.6	
	comp=Z,51nm,21.8s,baz=126,slow=32						
VNDA	Vanda	59.66	181	P	P	01 53 29.7	+0.2
VNDA	Vanda	59.66	181	P	P	01 53 29.7	+0.2
	0.2nm,0.4s,baz=319,slow=4.2,SNR=2.6						
PETK	Petropavlovsk-	71.31	354	P	P	01 54 44.3	-0.8
PETK	Petropavlovsk-	71.31	354	P	P	01 54 44.3	-0.8
	2.9nm,0.9s,baz=134,slow=11,SNR=4.7						
PETK				LR	LR	02 22 23.2	
	comp=Z,45nm,19.6s,baz=324,slow=33						
QSPA	South Pole Qui	72.08	180	eP	P	01 54 50.5	+0.7
	10nm,1.2s						
CMAR	Chiang Mai Arr	76.69	295	P	P	01 55 19.1	+1.8
CMAR	Chiang Mai Arr	76.69	295	P	P	01 55 19.2	+1.8
	0.9nm,0.4s,baz=141,slow=5.8,SNR=4.0						
SONM	Songino Array	85.36	324	P	P	01 56 04.6	+1.5
SONM	Songino Array	85.36	324	P	P	01 56 04.6	+1.5
	0.6nm,0.8s,baz=126,slow=7.5,SNR=6.0						
SONM				LR	LR	02 34 40.6	
	comp=Z,31nm,18.1s,baz=108,slow=36						
BILL	Bilibino	85.77	359	eP	P	01 56 03.8	-0.6
	1.9nm,0.6s						
NVAR	Mina Array Bea	89.03	49	P	P	01 56 20.8	-0.4
NVAR	Mina Array Bea	89.03	49	P	P	01 56 20.7	-0.4
	0.3nm,0.5s,baz=240,slow=7.2,SNR=3.5						
ILAR	Eielson Array	89.45	18	P	P	01 56 19.1	-3.1
ILAR	Eielson Array	89.45	18	P	P	01 56 19.1	-3.1
	0.3nm,0.8s,baz=234,slow=5.5,SNR=3.2						
SNAA	Sanae	90.36	183	eP	P	01 56 26.8	+0.1
	2.9nm,1.2s						
TXAR	Lajitas Array	97.41	62	LR	LR	02 35 36.3	
	comp=Z,49nm,20.4s,baz=10.0,slow=32						
MORC	Moravsky Berou	140.26	330	ePKPdf	PKPdf	02 02 56.1	+1.6
BFO	Black Forest	145.38	336	ePKPbc	PKPbc	02 03 02.8	-0.7
TORD	Torodi Ar. Bea	165.74	252	PKPab	PKPab	02 04 33.7	+3.0
TORD	Torodi Ar. Bea	165.74	252	PKPab	PKPab	02 04 33.7	+3.0
	0.7nm,0.9s,baz=110,slow=6.6,SNR=3.0						

ATH 03 01:54:20.5,33°.97N×27°.36E,h5km,MD3.6/7,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	Zakros	1.48	321	ePN	Pn	01 54 46.6	-1.2
ZKR				eSB	Sg	01 55 09.1	+0.9
KARP	Karpathos	1.58	354	ePN	Pn	01 54 48.0	-1.3
NPS	Neapolis	1.93	312	ePG	Pg	01 54 57.7	+0.1
LAST	Lasithi	1.96	308	ePG	Pb	01 54 57.2	+0.5
ARG	Arkhangelos	2.33	15	ePG	Pb	01 55 03.6	+0.6
SIVA	Sivas	2.35	297	ePN	Pn	01 55 01.5	+1.7
IDI	Anoyia	2.42	304	ePG	Pg	01 55 06.3	-0.8

IDC 03 01:57:46.6±1.8,0°.84N×126°.02E,h0km,mb3.8/2,Error ellipse: s-maj=167.4km s-min=23.3km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.20	159	P	P	02 02 44.4	-0.4
	0.7nm,0.6s,baz=336,slow=11,SNR=13						
ASAR	Alice Springs	25.53	163	P	P	02 03 18.0	+0.8
	0.5nm,0.4s,baz=355,slow=16,SNR=9.8						
STKA	Stephens Creek	35.72	157	P	P	02 04 46.4	-0.7
	1.0nm,0.5s,baz=343,slow=11,SNR=3.8						
MKAR	Makanchi Array	59.54	327	P	P	02 07 51.9	-0.1
	baz=122,slow=6.7						

IDC 03 02:10:10.3±1.0,19°.73N×109°.31W,h0km,mb3.7/7, mb1 4.1/8,mb1mx3.9/22,mbtmp3.7/8,ML3.6/1,MS3.4/5, Ms1 3.3/5,ms1mx3.0/32,Error ellipse: s-maj=43.2km s-min=19.7km az=70.0,Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	10.85	27	Pn	Pn	02 12 48.4	+1.4
	0.1nm,0.3s,baz=198,slow=15,SNR=34						
TXAR				LR	LR	02 16 32.0	
	comp=Z,107nm,20.8s,baz=185,slow=35						
PFO	Pinyon Flat Ob	15.22	337	LR	LR	02 19 20.4	
	comp=Z,120nm,19.2s,baz=323,slow=36						
ANMO	Albuquerque	15.36	9	Pn	P	02 13 51.9	-1.7
	0.1nm,0.3s,baz=169,slow=10,SNR=2.6						
ANMO				LR	LR	02 19 46.2	
	comp=Z,137nm,18.1s,baz=205,slow=38						
NVAR	Mina Array Bea	20.20	339	P	Pn	02 14 48.9	0.0
	2.0nm,0.9s,baz=158,slow=11,SNR=10						
PDAR	Pinedale Array	22.96	360	P	P	02 15 16.7	0.0
	0.8nm,0.7s,baz=153,slow=10.0,SNR=5.2						
ULM	Lac du Bonnet	32.27	16	LR	LR	02 29 24.7	
	comp=Z,54nm,18.8s,baz=105,slow=36						
YKA	Yellowknife Ar	42.88	356	P	P	02 18 09.5	-0.7
	0.6nm,0.7s,baz=173,slow=8.0,SNR=13						
ILAR	Eielson Array	51.45	340	P	P	02 19 17.5	+0.4
	1.0nm,0.6s,baz=145,slow=6.6,SNR=20						
LPAZ	La Paz	54.03	129	P	P	02 19 39.1	+1.6
	0.3nm,0.6s,baz=0.0,slow=8.1,SNR=2.8						
CPUP	Villa Florida	68.12	130	P	P	02 21 11.1	-1.3
	3.4nm,0.9s,baz=276,slow=7.2,SNR=2.9						
ARCES	ARCESS Array B	85.37	14	P	P	02 22 48.0	-1.2
	2.9nm,0.9s,baz=352,slow=3.7,SNR=7.1						
GERES	GERESS Array B	94.99	34	LR	LR	03 10 47.6	
	comp=Z,26nm,18.3s,baz=335,slow=38						
WRA	Warramunga Arr	120.48	258	PKP	PKPdf	02 29 04.3	-0.3
	0.5nm,1.0s,baz=77,slow=2.7,SNR=4.2						
ASAR	Alice Springs	121.55	254	PKP	PKPdf	02 29 06.0	-0.6
	0.2nm,0.6s,baz=58,slow=2.4,SNR=2.2						

WEL 03 02:11:10.8±1.2,36°.43S×177°.88E,h5km,ML3.8/4,Error ellipse: s-maj=8.1km s-min=7.7km az=0.0
IDC 03 02:11:12.0±7.0,36°.74S×178°.58E,h68km±59km,mb3.5/3, mb1 3.7/3,mb1mx3.5/16,mbtmp3.5/3,MS3.3/2,Ms1 3.3/2, ms1mx3.0/12,Error ellipse: s-maj=75.3km s-min=53.6km az=130.0
ISC 03 02:11:11.4±1.6,36°.3S±0°.1×178°.1E±0°.1,h35km,n12, σ1s.66/14,mb3.8/3,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.23	171	eP*	Pn	02 11 31.4	-0.8
MXZ				S*	Sn	02 11 45.8	-1.8
MXZ				S*		02 11 46.8	
PUZ	Puketiti	1.73	175	PN	Pn	02 11 40.3	+1.2
PUZ				SN	Sn	02 12 05.7	+5.8
PUZ				AML	AML	02 12 07.1	
MARZ	Manawahe	1.98	214	S*	Sn	02 12 06.9	+0.9
URZ	Urewera	2.06	201	P	Pn	02 11 42.8	-0.7
	4.1nm,0.3s,baz=359,slow=11,SNR=21						
URZ				S	Sn	02 12 05.9	-2.0
	17nm,0.3s,baz=194,slow=21,SNR=11						
MKAZ	Moumakai	2.45	251	ePN	Pn	02 11 47.5	-1.3
TOZ	Tahuroa Road	2.47	235	P*	Pn	02 11 48.2	-0.9
HIZ	Hauiti	3.35	229	PN	Pn	02 12 01.0	-0.2
FWVZ	Far West T-bar	3.52	214	eP*	Pn	02 12 06.1	+2.3
RPZ	Rata Peaks	9.11	214	LR	LR	02 17 05.5	
	comp=Z,102nm,18.2s,baz=1.4,slow=39						
STKA	Stephens Creek	30.40	268	P	P	02 17 21.9	+1.6
	1.4nm,0.9s,baz=140,slow=11,SNR=3.0						
ASAR	Alice Springs	39.95	276	P	P	02 18 44.4	+1.9
	2.2nm,1.0s,baz=111,slow=7.8,SNR=11						
ASAR				PcP	PcP	02 20 45.1	-2.4
	1.2nm,0.9s,baz=116,slow=8.2,SNR=5.8						
ASAR				LR	LR	02 35 06.0	
	comp=Z,52nm,18.0s,baz=354,slow=36						
WRA	Warramunga Arr	41.50	281	P	P	02 18 54.8	-0.5
	0.5nm,0.7s,baz=125,slow=7.4,SNR=3.4						

IDC 03 02:23:12.7±51.0,16°.85S×173°.58W,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.6/20,mbtmp3.8/3,Error ellipse: s-maj=975.1km s-min=176.9km az=80.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	43.18	241	P	P	02 31 16.0	+0.5
	0.9nm,0.5s,baz=81,slow=8.0,SNR=4.3						
WRA	Warramunga Arr	49.36	258	P	P	02 32 04.0	-0.3
	0.3nm,0.4s,baz=98,slow=6.9,SNR=15						
ASAR	Alice Springs	49.51	253	P	P	02 32 05.2	-0.4
	1.2nm,0.6s,baz=84,slow=9.0,SNR=8.9						

IDC 03 02:33:48.4±63.0,19°.74S×177°.59E,h0km,mb3.8/3, mb1 4.0/3,mb1mx3.6/18,mbtmp3.8/3,Error ellipse: s-maj=1114.0km s-min=146.3km az=80.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.43	242	P	P	02 40 37.3	-0.5
	1.0nm,0.7s,baz=119,slow=13,SNR=3.7						
WRA	Warramunga Arr	40.60	262	P	P	02 41 30.4	+0.1
	0.4nm,0.3s,baz=96,slow=7.8,SNR=19						
ASAR	Alice Springs	40.67	256	P	P	02 41 30.7	-0.1
	0.8nm,0.6s,baz=85,slow=8.5,SNR=6.5						

ISCJB 03 02:38:51.0±0.9,41°.31N±0°.08×22°.8E±0°.1,h17km±14km, Error ellipse: s-maj=16.6km s-min=10.2km az=44.2
SKO 03 02:38:51.9,41°.28N×22°.75E,h15km,M0.8,ML1.1
ATH 03 02:38:51.0,41°.30N×22°.71E,h27km±2km,MD3.1/5
ISC 03 02:38:51.1±1.1,41°.31N±0°.09×22°.74E±0°.05,h18km±8km, n6,σ0s.45/11,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.13	276	i Pg	Pg	02 38 55.0	0.0
VAY				eLg	Lg	02 38 57.6	
	comp=E,88nm,0.3s						
VAY				i Sg	Sg	02 38 57.6	0.0
VAY				eLg	Lg	02 38 57.7	
	comp=N,96nm,0.3s						
GRG	Griva	0.43	216	ePB	Pb	02 39 00.4	+0.1
GRG				eSB	Sb	02 39 06.4	-0.1
SOH	Sokhos	0.67	136	ePN	Pb	02 39 04.8	+0.4
SOH				eSN	Sb	02 39 14.2	+0.8
NVR	Nevrokopi	0.85	87	ePN	Pn	02 39 08.0	-0.2
NVR				eSN	Sn	02 39 19.9	-0.4
PLG	Polygyros	1.08	150	ePN	Pg	02 39 11.4	-0.6
PLG				eSN	Sn	02 39 26.2	+0.3
FNA	Florina	1.16	243	ePN	Pn	02 39 12.4	-0.1

CSEM 03 02:53:04.9±0.1,40°.68N×32°.79E,h2km,MD2.9,Error ellipse: s-maj=2.5km s-min=2.1km az=153.0
ISK 03 02:53:04.6,40°.68N×32°.80E,h5km,MD3.2
DDA 03 02:53:04.9,40°.67N×32°.85E,h7km,MD2.9
ISC 03 02:53:05.3±1.2,40°.68N±0°.02×32°.81E±0°.02,h4km±12km, n50,σ0s.56/67,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDT	Eldivan	0.51	112	i P	Pg	02 53 14.4	-0.7
ELDT				i S	Sg	02 53 23.3	+1.6
ELDT	Eldivan	0.51	112	i P	Pg	02 53 14.4	-0.7
ELDT				i S	Sg	02 53 23.3	+1.6
SAFT	Safranbolu	0.57	351	ePG	Pg	02 53 16.0	-0.2
SAFT				eSG	Sg	02 53 23.7	+0.2
SAFT	Safranbolu	0.57	351	ePg	Pg	02 53 16.0	-0.2
SAFT				eSg	Sg	02 53 23.7	+0.2
CANT	Cankiri	0.62	97	ePG	Pg	02 53 17.0	-0.2
CANT				eSG	Sg	02 53 26.4	+1.1
ILGA	Ilgaz	0.78	61	i P	Pg	02 53 19.7	-0.6
ILGA				i S	Sg	02 53 31.1	+0.6
ILGA	Ilgaz	0.78	61	i P	Pg	02 53 19.7	-0.6
ILGA				i S	Sg	02 53 31.1	+0.6
LOD	Lodumlu	0.79	182	ePG	Pg	02 53 19.9	-0.5
LOD	Lodumlu	0.79	182	ePg	Pg	02 53 19.9	-0.5
ANTO	Ankara	0.81	181	ePG	Pg	02 53 21.0	+0.2
ANTO	Ankara	0.81	181	ePg	Pg	02 53 21.0	+0.2
BALT	Daday	0.96	27	i P	Pg	02 53 22.7	-1.0
BALT				i S	Sg	02 53 37.2	+1.1
BALT	Daday	0.96	27	i P	Pg	02 53 22.7	-1.0
BALT				i S	Sg	02 53 37.2	+1.1
TOS	Tosya	0.99	69	ePG	Pb	02 53 24.9	-0.2
TOS				eSG	Sb	02 53 38.4	-0.1
TOS	Tosya	0.99	69	ePg	Pb	02 53 24.9	-0.2
TOS				eSg	Sb	02 53 38.4	-0.1
BBAL	Bala	1.16	168	i P	Pg	02 53 27.2	-0.3
BBAL				i S	Sn	02 53 45.6	+0.7
BBAL	Bala	1.16	168	i P	Pg	02 53 27.2	-0.3
KDZE	Karadeniz Ereo	1.21	302	ePN	Pg	02 53 28.2	-0.3
KDZE	Karadeniz Ereo	1.21	302	ePn	Pg	02 53 28.2	-0.3
MDUB	Mudurnu	1.24	261	ePN	Pg	02 53 28.7	-0.4
MDUB	Mudurnu	1.24	261	ePn	Pg	02 53 28.7	-0.4
CORM	Corum	1.48	109	ePN	Pn	02 53 32.6	-0.3
CORM	Corum	1.48	109	ePn	Pn	02 53 32.6	-0.3

CTKT	Corum	1.51	92	*i* P	Pn	02 53 33.1	-0.2
CTKT				*i* S	Sb	02 53 53.5	-0.1
CTKT	Corum	1.51	92	*i* P	Pn	02 53 33.1	-0.2
CTKT				*i* S	Sb	02 53 53.5	-0.1
SVRH	Sivrihisar-ESK	1.58	219	*e*PN	Pn	02 53 33.9	-0.3
SVRH	Sivrihisar-ESK	1.58	219	*e*Pn	Pn	02 53 33.9	-0.3
CDAG	Cicekdag	1.60	131	*i* P	Pn	02 53 33.7	-0.8
CDAG				*i* S	Sb	02 53 56.4	+0.3
CDAG	Cicekdag	1.60	131	*i* P	Pn	02 53 33.7	-0.8
CDAG				*i* S	Sb	02 53 56.4	+0.3
BYBT	Boyabat	1.68	61	*e*PN	Pn	02 53 35.4	-0.1
BYBT	Boyabat	1.68	61	*e*Pn	Pn	02 53 35.4	-0.1
GULT	Gulveren	1.76	263	*e*PN	Pn	02 53 36.6	-0.1
GULT	Gulveren	1.76	263	*e*Pn	Pn	02 53 36.6	-0.1
ESKT	Eskisehir	1.90	233	*e*PN	Pn	02 53 38.4	-0.2
ESKT	Eskisehir	1.90	233	*e*Pn	Pn	02 53 38.4	-0.2
KIZT	Kizilcal	1.94	202	*e*PN	Pn	02 53 38.6	-0.5
KIZT	Kizilcal	1.94	202	*e*Pn	Pn	02 53 38.6	-0.5
DIKM	Dikmen	2.09	62	*e*PN	Pn	02 53 41.4	+0.3
DIKM	Dikmen	2.09	62	*e*Pn	Pn	02 53 41.4	+0.3
YOZ	Yozgat	2.19	118	*e*PN	Pn	02 53 42.6	+0.1
YOZ	Yozgat	2.19	118	*e*Pn	Pn	02 53 42.7	+0.1
ADVT	Abdulvahap	2.35	265	*e*PN	Pn	02 53 45.0	+0.3
ADVT	Abdulvahap	2.35	265	*e*Pn	Pn	02 53 45.0	+0.3
AVNT	Avonos	2.47	140	*i* P	Pb	02 53 49.5	-0.8
AVNT				*i* S	Sg	02 54 23.8	-0.8
TVSB	Tavsanli	2.85	246	*e*PN	Pn	02 53 52.0	+0.3
TVSB	Tavsanli	2.85	246	*e*Pn	Pn	02 53 52.0	+0.3
NIG	Nigde	2.92	151	*e*PN	Pn	02 53 52.9	+0.1
NIG	Nigde	2.92	151	*e*Pn	Pn	02 53 52.9	+0.1
BNN	Bunyan	2.97	127	*e*PN	Pn	02 53 53.8	+0.4
BNN	Bunyan	2.97	127	*e*Pn	Pn	02 53 53.8	+0.4

IDC 03 02:54:27.0±3.9**,16°.21N×85°.91W,h0km,mb3.4**/3**, mb1 3.9**/4**,mb1mx3.6**/23**,mbtmp3.6**/4**,ML4.0**/1**,Error ellipse: s-maj=113.3km s-min=56.4km az=46.0,North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	Tepich	4.59	331	Pn	Pn	02 55 38.4	+0.8
	7.3nm,0.3s,baz=92,slow=1.2,SNR=35						
TEIG				Sn	Sn	02 56 32.8	+1.1
	3.9nm,0.3s,baz=35,slow=16,SNR=2.1						
TXAR	Lajitas Array	20.91	312	P	P	02 59 10.6	-0.7
	1.1nm,0.6s,baz=130,slow=12,SNR=16						
YKA	Yellowknife Ar	50.43	343	P	P	03 03 25.4	-0.7
	0.5nm,0.8s,baz=138,slow=7.6,SNR=10						
ILAR	Eielson Array	63.23	335	P	P	03 04 57.6	+0.6
	0.2nm,0.7s,baz=111,slow=4.9,SNR=3.9						

*ISK **03** 03:01:31.9,40°.67N×32°.72E,h4km,MD3.5*
*ISCJB **03** 03:01:32.1±0.6,40°.68N±0°.02×32°.74E±0°.03,h3km±5km, Error ellipse: s-maj=3.8km s-min=3.7km az=161.0*
*CSEM **03** 03:01:32.4±0.1,40°.69N×32°.73E,h2km,MD3.6,Error ellipse: s-maj=3.1km s-min=2.7km az=153.0*
*DDA **03** 03:01:33.1,40°.65N×32°.86E,h24km,MD3.6*
ISC 03 03:01:32.7±1.1**,40°.67N**±0°.02×**32°.74E**±0°.02**,h6**km±10km**, n68,**σ**0s.81**/87**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELDT	Eldivan	0.55	109	*i* P	Pg	03 01 42.2	-1.1
ELDT				*i* S	Sg	03 01 50.5	0.0
ELDT	Eldivan	0.55	109	*i* P	Pg	03 01 42.2	-1.1
ELDT				*i* S	Sg	03 01 50.5	0.0
SAFT	Safranbolu	0.57	356	*e*PG	Pg	03 01 43.4	-0.3
SAFT				*e*SG	Sg	03 01 52.2	+1.1
SAFT	Safranbolu	0.57	356	*e*Pg	Pg	03 01 43.4	-0.3
SAFT				*e*Sg	Sg	03 01 52.2	+1.1
CANT	Cankiri	0.67	95	*e*PG	Pg	03 01 45.5	-0.1
LOD	Lodumlu	0.78	179	*e*PG	Pg	03 01 47.3	-0.3
LOD				*e*SG	Sb	03 01 58.7	-0.8
LOD	Lodumlu	0.78	179	*e*Pg	Pg	03 01 47.3	-0.3
LOD				*e*Sg	Sb	03 01 58.7	-0.8
ANTO	Ankara	0.80	177	*e*PG	Pg	03 01 47.7	-0.4
ANTO	Ankara	0.80	177	*e*Pg	Pg	03 01 47.7	-0.4
ILGA	Ilgaz	0.83	62	*i* P	Pg	03 01 47.9	-0.8
ILGA				*i* S	Sg	03 02 00.2	+0.7
ILGA	Ilgaz	0.83	62	*i* P	Pg	03 01 47.9	-0.8
ILGA				*i* S	Sg	03 02 00.2	+0.7
BALT	Daday	0.99	29	*i* P	Pg	03 01 51.0	-0.7
BALT				*i* S	Sg	03 02 04.7	+0.1
BALT	Daday	0.99	29	*i* P	Pg	03 01 51.0	-0.7
BALT				*i* S	Sg	03 02 04.7	+0.1
TOS	Tosya	1.04	69	*e*PG	Pb	03 01 53.1	0.0
TOS	Tosya	1.04	69	*e*Pg	Pb	03 01 53.1	0.0
BBAL	Bala	1.16	165	*i* P	Pg	03 01 54.9	-0.1
BBAL				*i* S	Sn	03 02 12.0	+0.1
BBAL	Bala	1.16	165	*i* P	Pg	03 01 54.9	-0.1
BBAL				*i* S	Sn	03 02 12.0	+0.1
KDZE	Karadeniz Ereo	1.18	304	*e*PN	Pg	03 01 54.9	-0.3
KDZE				*e*SN	Sb	03 02 10.8	0.0
KDZE	Karadeniz Ereo	1.18	304	*e*Pn	Pg	03 01 54.9	-0.3
KDZE				*e*Sn	Sb	03 02 10.9	0.0
MDUB	Mudurnu	1.19	261	*e*PN	Pg	03 01 54.9	-0.7
MDUB	Mudurnu	1.19	261	*e*Pn	Pg	03 01 54.9	-0.7
CORM	Corum	1.52	108	*e*PN	Pn	03 02 00.2	-0.3
CORM	Corum	1.52	108	*e*Pn	Pn	03 02 00.2	-0.3
SVRH	Sivrihisar-ESK	1.54	218	*e*PN	Pn	03 02 00.8	+0.1
SVRH	Sivrihisar-ESK	1.54	218	*e*Pn	Pn	03 02 00.8	+0.1
CTKT	Corum	1.56	91	*i* P	Pn	03 02 00.6	-0.5
CTKT				*i* S	Sn	03 02 20.8	-0.9
CTKT	Corum	1.56	91	*i* P	Pn	03 02 00.6	-0.5
CTKT				*i* S	Sn	03 02 20.7	-0.9
BZK	Bozkurt	1.60	36	*e*PN	Pn	03 02 02.0	+0.5
BZK	Bozkurt	1.60	36	*e*Pn	Pn	03 02 02.0	+0.5
CDAG	Cicekdag	1.63	129	*i* P	Pn	03 02 01.7	-0.3
CDAG				*i* S	Sn	03 02 22.7	-0.6
CDAG	Cicekdag	1.63	129	*i* P	Pn	03 02 01.7	-0.3
CDAG				*i* S	Sn	03 02 22.7	-0.6
GULT	Gulveren	1.71	263	*e*PN	Pn	03 02 02.9	-0.3
GULT	Gulveren	1.71	263	*e*Pn	Pn	03 02 02.9	-0.3
BYBT	Boyabat	1.73	62	*e*PN	Pn	03 02 03.8	+0.6
BYBT	Boyabat	1.73	62	*e*Pn	Pn	03 02 03.8	+0.6
ESKT	Eskisehir	1.85	232	*e*PN	Pn	03 02 05.2	+0.1
ESKT	Eskisehir	1.85	232	*e*Pn	Pn	03 02 05.2	+0.1
GPA	Golpazari	1.90	259	*e*PN	Pn	03 02 05.5	-0.1
GPA	Golpazari	1.90	259	*e*Pn	Pn	03 02 05.5	-0.1
KIZT	Kizilcal	1.91	201	*e*PN	Pn	03 02 06.0	+0.2
KIZT	Kizilcal	1.91	201	*e*Pn	Pn	03 02 06.0	+0.2
DIKM	Dikmen	2.14	62	*e*PN	Pn	03 02 09.7	+0.8
DIKM	Dikmen	2.14	62	*e*Pn	Pn	03 02 09.7	+0.8
YOZ	Yozgat	2.23	117	*e*PN	Pn	03 02 11.0	+0.8
YOZ	Yozgat	2.23	117	*e*Pn	Pn	03 02 11.0	+0.8
CAVI	Cavuskoy	2.26	259	*e*PN	Pn	03 02 10.8	+0.3
CAVI	Cavuskoy	2.26	259	*e*Pn	Pn	03 02 10.9	+0.3
SILT	Sile	2.40	283	*e*PN	Pn	03 02 12.6	+0.2
SILT	Sile	2.40	283	*e*Pn	Pn	03 02 12.6	+0.2
LADK	Ladik-KONYA	2.48	187	*e*PN	Pn	03 02 14.7	+1.0
LADK	Ladik-KONYA	2.48	187	*e*Pn	Pn	03 02 14.7	+1.0
AVNT	Avonos	2.49	139	*i* P	Pb	03 02 17.4	-0.6
AVNT				*i* S	Sn	03 02 44.7	0.0
SULT	Sultanhani-AKS	2.54	166	*e*PN	Pn	03 02 15.6	+1.1
SULT	Sultanhani-AKS	2.54	166	*e*Pn	Pn	03 02 15.6	+1.1
ALT	Altintas	2.59	232	*e*PN	Pn	03 02 15.9	+0.7
ALT	Altintas	2.59	232	*e*Pn	Pn	03 02 15.9	+0.7
SHUT	Suhut-Afyon	2.71	219	*e*PN	Pn	03 02 17.1	+0.2
SHUT	Suhut-Afyon	2.71	219	*e*Pn	Pn	03 02 17.1	+0.2
TVSB	Tavsanli	2.80	245	*e*PN	Pn	03 02 18.8	+0.8
TVSB	Tavsanli	2.80	245	*e*Pn	Pn	03 02 18.8	+0.8
NIG	Nigde	2.94	150	*e*PN	Pn	03 02 21.8	+1.7
NIG	Nigde	2.94	150	*e*Pn	Pn	03 02 21.8	+1.7
BNN	Bunyan	3.00	126	*e*PN	Pn	03 02 22.1	+1.2
BNN	Bunyan	3.00	126	*e*Pn	Pn	03 02 22.1	+1.2
KOZT	Kozan	3.99	142	*e*PN	Pn	03 02 36.6	+2.3
KOZT	Kozan	3.99	142	*e*Pn	Pn	03 02 36.6	+2.3
DARE	Darende-Malaty	4.22	118	*e*PN	Pn	03 02 39.9	+2.3
DARE	Darende-Malaty	4.22	118	*e*Pn	Pn	03 02 39.9	+2.3

IDC 03 03:05:57.6±0.8**,6°.43S×143°.10E,h0km,mb4.1**/10**, mb1 4.2**/12**,mb1mx4.1**/17**,mbtmp4.1**/12**,ML2.2**/1**, MS3.4**/6**,Ms1 3.4**/6**,ms1mx2.9**/27**,Error ellipse: s-maj=26.0km s-min=16.7km az=82.0,New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.99	127	Pn	Pn	03 07 15.6	+1.8
	0.7nm,0.3s,baz=304,slow=15,SNR=3.1						
PMG				Sn	Sn	03 08 12.0	-0.3
	1.9nm,0.3s,baz=204,slow=22,SNR=7.3						
CTA	Charters Tower	13.92	168	Lg	Lg	03 13 23.9	
	0.3nm,0.3s,baz=27,slow=18,SNR=2.0						
WRA	Warramunga Arr	15.90	212	Pn	Pn	03 09 40.0	-2.9
	0.2nm,0.3s,baz=31,slow=11,SNR=13						
WRA				Sn	Sn	03 12 29.5	-10
	0.1nm,0.3s,baz=28,slow=24,SNR=5.5						
WRA				Lg	Lg	03 14 21.3	
	0.3nm,0.3s,baz=149,slow=21,SNR=4.7						
ASAR	Alice Springs	19.28	206	P	Pn	03 10 24.9	-0.2
	0.6nm,0.3s,baz=32,slow=10,SNR=63						
ASAR				S	Sn	03 13 52.1	-10
	0.0nm,0.3s,baz=17,slow=28,SNR=5.2						
ASAR				Lg	Lg	03 15 59.7	
	0.1nm,0.3s,baz=270,slow=34,SNR=2.2						
ASAR				LR	LR	03 18 33.4	
	comp=Z,175nm,19.5s,baz=34,slow=39						
FITZ	Fitzroy Crossi	20.61	234	P	P	03 10 38.4	-0.1
	6.6nm,0.6s,baz=54,slow=10.0,SNR=19						
FITZ				S	S	03 14 16.8	-13
	3.5nm,0.8s,baz=161,slow=14,SNR=3.2						
FITZ				Lg	Lg	03 16 49.2	
	32nm,1.2s,baz=139,slow=18,SNR=4.9						
FITZ				LR	LR	03 19 10.3	
	comp=Z,198nm,19.9s,baz=82,slow=38						
STKA	Stephens Creek	25.36	183	P	P	03 11 27.0	+0.6
	2.7nm,0.8s,baz=1.2,slow=10.0,SNR=5.3						
STKA				LR	LR	03 22 38.8	
	comp=Z,159nm,19.5s,baz=25,slow=40						
NWAO	Narrogin (SRO)	35.68	219	LR	LR	03 26 57.1	
	comp=Z,86nm,20.4s,baz=19,slow=35						
KSRS	Korea Array	45.90	343	LR	LR	03 32 35.3	
	comp=Z,8.7nm,19.2s,baz=225,slow=35						
CMAR	Chiang Mai Arr	50.08	300	P	P	03 14 55.3	+0.6
	0.7nm,0.4s,baz=115,slow=6.4,SNR=3.5						
USRK	Ussuriysk Arra	51.38	350	P	P	03 15 03.8	-0.2
	1.0nm,0.6s,baz=184,slow=12,SNR=2.9						
PETK	Petropavlovsk-	60.59	10	P	P	03 16 11.1	+1.2
	3.7nm,0.8s,baz=182,slow=10,SNR=5.3						
PETK				LR	LR	03 45 31.0	
	comp=Z,13nm,18.1s,baz=244,slow=39						
SONM	Songino Array	62.96	333	P	P	03 16 26.5	+0.3
	0.8nm,0.6s,baz=151,slow=6.4,SNR=5.6						
MKAR	Makanchi Array	75.39	322	P	P	03 17 43.1	-0.1
	1.1nm,0.7s,baz=108,slow=6.7,SNR=8.3						
ZALV	Zalesovo Beam	77.34	329	P	P	03 17 53.2	-0.8
	1.4nm,0.6s,baz=106,slow=9.1,SNR=5.0						
QSPA	South Pole Qui	83.54	180	P	P	03 18 26.2	-1.2
	1.4nm,0.9s,baz=302,slow=6.0,SNR=7.0						
ILAR	Eielson Array	87.42	24	P	P	03 18 45.8	-0.8
	1.4nm,0.8s,baz=253,slow=5.2,SNR=23						
TORD	Torodi Ar. Bea	141.42	283	PKhKP	PKPpre	03 25 26.6	
	0.3nm,0.8s,baz=62,slow=3.0,SNR=2.4						

IDC 03 03:35:57.6±16.0**,0°.51N×127°.78E,h0km,mb3.5**/3**, mb1 3.7**/3**,mb1mx3.4**/21**,mbtmp3.5**/3**,Error ellipse: s-maj=260.1km s-min=158.6km az=161.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.32	163	P	P	03 40 46.1	-0.1
	0.8nm,0.6s,baz=342,slow=11,SNR=8.6						
ASAR	Alice Springs	24.76	166	P	P	03 41 21.4	+0.2
	0.6nm,0.7s,baz=344,slow=9.2,SNR=8.2						
STKA	Stephens Creek	34.77	159	P	P	03 42 49.7	-0.2
	0.6nm,0.6s,baz=356,slow=13,SNR=3.2						

IDC 03 03:39:22.2±1.0**,5°.07S×133°.31E,h0km,mb3.8**/5**, mb1 4.1**/9**,mb1mx3.8**/21**,mbtmp4.0**/9**,ML3.9**/4**,Error ellipse: s-maj=59.9km s-min=18.4km az=69.0,Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.82	176	Pn	Pn	03 42 51.2	-2.1
	0.6nm,0.3s,baz=1.3,slow=13,SNR=28						
WRA				Sn	Sn	03 45 28.4	-10
	0.6nm,0.3s,baz=2.3,slow=23,SNR=7.5						
FITZ	Fitzroy Crossi	14.97	209	Pn	Pn	03 42 56.5	+1.2
	0.7nm,0.3s,baz=42,slow=8.3,SNR=17						
FITZ				Sn	Sn	03 45 35.5	-6.4
	1.0nm,0.3s,baz=155,slow=10,SNR=9.0						
ASAR	Alice Springs	18.50	178	P	P	03 43 39.5	-0.7
	0.5nm,0.3s,baz=4.3,slow=8.1,SNR=19						
ASAR				S	Sn	03 46 56.8	-11
	0.2nm,0.3s,baz=357,slow=27,SNR=5.7						
CTA	Charters Tower	19.54	141	P	P	03 43 51.3	-0.3
	0.1nm,0.3s,baz=308,slow=12,SNR=2.1						
STKA	Stephens Creek	27.78	165	P	P	03 45 13.2	+0.2
	1.2nm,0.6s,baz=341,slow=10,SNR=3.2						
MKAR	Makanchi Array	68.48	325	P	P	03 50 26.6	+0.2
	0.6nm,0.7s,baz=120,slow=7.2,SNR=4.7						
KURBB	Kurchatov Arra	72.64	327	P	P	03 50 51.4	-0.2
	0.3nm,0.6s,baz=131,slow=3.9,SNR=5.1						
VNDA	Vanda	73.98	174	P	P	03 50 59.4	+0.2
	1.1nm,0.9s,baz=298,slow=7.2,SNR=6.8						
BVAR	Borovoye Array	78.23	327	P	P	03 51 23.5	-0.2
	0.7nm,0.6s,baz=122,slow=7.6,SNR=3.4						
LPAZ	La Paz	150.00	135	PKPbc	PKPbc	03 59 16.6	0.0
	1.0nm,1.0s,baz=294,slow=0.9,SNR=3.2						

*ATH **03** 03:39:49.9,41°.32N×22°.72E,h14km±5km,MD2.8/5*
*THE **03** 03:39:50.2,41°.32N×22°.74E,h10km±3km,ML2.1/4,Error ellipse: s-maj=3.5km s-min=0.7km az=279.0*
*ISCJB **03** 03:39:50.3±0.5,41°.29N±0°.02×22°.74E±0°.03,h7km±4km, Error ellipse: s-maj=4.5km s-min=3.9km az=138.1*
*SKO **03** 03:39:50.4,41°.31N×22°.74E,h11km,M1.4,ML1.6*
*CSEM **03** 03:39:50.7±0.1,41°.30N×22°.75E,h2km,ML1.6,Error ellipse: s-maj=3.5km s-min=3.0km az=36.0*
*BEO **03** 03:39:52.3±0.7,41°.36N×22°.48E,h0km,ML1.6/3*
ISC 03 03:39:50.5±0.9**,41°.31N**±0°.03×**22°.73E**±0°.02**,h9**km±7km**, n24,**σ**0s.57**/46**,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.12	278	P	Pg	03 39 53.1	-0.2
VAY				S	Sg	03 39 55.3	0.0
VAY	Valandovo	0.12	278	*i* Pg	Pg	03 39 53.2	-0.2
VAY				*i* Lg	Lg	03 39 55.4	
	comp=E,220nm,0.2s						
VAY				*i* Sg	Sg	03 39 55.4	0.0
VAY				*i* Lg	Lg	03 39 55.5	
	comp=N,488nm,0.3s						
VAY	Valandovo	0.12	278	P	Pg	03 39 53.1	-0.2
VAY	Valandovo	0.12	278	*i* Pg	Pg	03 39 53.6	+0.2
VAY				S	Sg	03 39 55.3	0.0
VAY				*i* Lg	Lg	03 39 55.9	
	comp=N,488nm,0.3s						
KNT	Kendrikon	0.19	138	P	Pg	03 39 54.9	+0.4
KNT				S	Sg	03 39 57.7	+0.5
KNT	Kendrikon	0.19	138	P	Pg	03 39 54.9	+0.4
KNT				S	Sg	03 39 57.7	+0.5
GRG	Griva	0.43	216	P	Pg	03 39 58.8	-0.1
GRG				S	Sg	03 40 05.1	+0.5
GRG	Griva	0.43	216	*e*PB	Pg	03 39 58.7	-0.1
GRG				*e*SB	Sg	03 40 05.0	+0.5
GRG	Griva	0.43	216	P	Pg	03 39 58.8	-0.1
GRG				S	Sg	03 40 05.1	+0.5
SOH	Sokhos	0.68	135	P	Pg	03 40 03.4	-0.2
SOH				S	Sg	03 40 12.8	+0.4
SOH	Sokhos	0.68	135	*e*PG	Pg	03 40 03.1	-0.5
SOH				*e*SB	Sg	03 40 12.8	+0.4
SOH	Sokhos	0.68	135	P	Pg	03 40 03.4	-0.2
SOH				S	Sg	03 40 12.8	+0.4
SRS	Serrai	0.68	106	P	Pg	03 40 02.6	-1.0
SRS				S	Sg	03 40 12.2	-0.2
SRS	Serrai	0.68	106	P	Pg	03 40 02.6	-1.0
SRS				S	Sg	03 40 12.2	-0.2
NVR	Nevrokopi	0.85	87	P	Pg	03 40 06.6	-0.4
NVR				S	Sg	03 40 18.3	+0.2
NVR	Nevrokopi	0.85	87	*e*PB	Pg	03 40 06.7	-0.3
NVR				*e*SB	Sg	03 40 18.2	+0.2
NVR	Nevrokopi	0.85	87	P	Pg	03 40 06.6	-0.4
NVR				S	Sg	03 40 18.3	+0.2
PLG	Polygyros	1.08	150	*e*PG	Pg	03 40 10.5	-0.7
PLG				*e*SB	Sg	03 40 25.3	+0.1
FNA	Florina	1.15	244	*e*PN	Pb	03 40 11.4	-1.2
VTS	Vitosha	1.33	15	*e*Pg	Pg	03 40 15.8	-0.4
VTS				*e*Sg	Sn	03 40 35.1	+1.7
VTS	Vitosha	1.33	15	*e*Pg	Pg	03 40 15.8	-0.4
VTS				*e*Sg	Sn	03 40 35.1	+1.7
BARS	Barje	1.66	336	*e*Pn	Pb	03 40 20.7	-0.5
BARS				*e*Sn	Sb	03 40 42.0	-0.2
BARS	Barje	1.66	336	*e*Pn	Pb	03 40 20.7	-0.5
BARS				*e*Sn	Sb	03 40 42.0	-0.2
ZAPS	Zavoj	1.97	358	*e*Pn	Pb	03 40 26.7	+0.1
ZAPS				*e*Sn	Sb	03 40 50.8	-0.4

*ISK **03** 03:54:56.8,37°.75N×26°.94E,h4km,MD2.8*
*ISCJB **03** 03:54:57.5±0.8,37°.74N±0°.03×26°.94E±0°.06,h2km±8km, Error ellipse: s-maj=8.5km s-min=4.5km az=160.5*
*CSEM **03** 03:54:57.8±0.2,37°.73N×26°.96E,h5km,MD2.8,Error ellipse: s-maj=5.1km s-min=2.7km az=74.0*
*DDA **03** 03:54:58.5,37°.81N×27°.04E,h7km,MD2.8*
ISC 03 03:54:57.8±1.2**,37°.74N**±0°.03×**26°.93E**±0°.04**,h7**km±12km**, n23,**σ**0s.50**/34**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.24	100	*i* P	Pg	03 55 02.1	-0.5
GCAM				*i* S	Sg	03 55 06.2	+0.4
GCAM	G?zelcaml?	0.24	100	*i* P	Pg	03 55 02.1	-0.5
GCAM				*i* S	Sg	03 55 06.2	+0.4
BLCB	Balcova	0.65	8	*e*PG	Pg	03 55 09.9	-0.4
BLCB				*e*SG	Sg	03 55 19.3	+0.6
BLCB	Balcova	0.65	8	*e*Pg	Pg	03 55 09.9	-0.4
BLCB				*e*Sg	Sg	03 55 19.3	+0.6
URLA	Izmir	0.67	337	*i* P	Pb	03 55 11.6	-0.3
URLA				*i* S	Sb	03 55 20.9	-0.6
URLA	Izmir	0.67	337	*i* P	Pb	03 55 11.6	-0.3
URLA				*i* S	Sb	03 55 20.9	-0.6
IZM	Izmir	0.70	22	*e*PG	Pg	03 55 10.8	-0.6
IZM				*e*SG	Sg	03 55 21.2	+0.7
IZM	Izmir	0.70	22	*e*Pg	Pg	03 55 10.8	-0.6
IZM				*e*Sg	Sg	03 55 21.2	+0.7
BODT	Bodrum	0.74	156	*e*PG	Pg	03 55 11.7	-0.4
BODT				*e*SG	Sb	03 55 22.9	-0.5
BODT	Bodrum	0.74	156	*e*Pg	Pg	03 55 11.7	-0.4
BODT				*e*Sg	Sb	03 55 22.9	-0.5
MLSB	Milas	0.81	123	*e*PG	Pg	03 55 13.2	-0.1
MLSB	Milas	0.81	123	*e*Pg	Pg	03 55 13.2	-0.1
YER	Yerkesik	1.23	119	*e*PN	Pg	03 55 21.0	-0.5
YER	Yerkesik	1.23	119	*e*Pn	Pg	03 55 21.0	-0.5
APE	Apeiranthos	1.30	239	*e*PN	Pg	03 55 22.7	-0.1
APE	Apeiranthos	1.30	239	*e*Pn	Pg	03 55 22.7	-0.1
KULA	Kula-Manisa	1.56	60	*e*PN	Pn	03 55 26.4	+0.3
KULA	Kula-Manisa	1.56	60	*e*Pn	Pn	03 55 26.4	+0.3
DURS	Dursunbey	2.21	33	*i* P	Pb	03 55 38.8	+0.6
DURS				*i* S	Sg	03 56 08.4	-0.5
DST	Dursunbey	2.28	35	*e*PN	Pn	03 55 36.4	+0.4
DST	Dursunbey	2.28	35	*e*Pn	Pn	03 55 36.4	+0.4
GONE	Gonen-Balikesi	2.37	14	*e*PN	Pn	03 55 37.9	+0.7
GONE	Gonen-Balikesi	2.37	14	*e*Pn	Pn	03 55 37.9	+0.7

*ATH **03** 04:08:06.1,41°.34N×22°.68E,h4km,MD3.0/5*
*CSEM **03** 04:08:06.5±0.1,41°.29N×22°.71E,h4km±1km,ML1.7,Error ellipse: s-maj=2.0km s-min=1.6km az=19.0*
*SKO **03** 04:08:06.1,41°.31N×22°.67E,h10km,M1.5,ML1.8*
*ISCJB **03** 04:08:06.1±0.5,41°.31N±0°.03×22°.72E±0°.03,h2km±6km, Error ellipse: s-maj=4.8km s-min=4.0km az=28.9*
*THE **03** 04:08:06.2,41°.31N×22°.72E,h8km±3km,ML2.1/3,Error ellipse: s-maj=3.6km s-min=0.6km az=299.0*
*BEO **03** 04:08:08.3±0.7,41°.36N×22°.51E,h0km,ML1.7/4*
ISC 03 04:08:06.3±0.9**,41°.30N**±0°.02×**22°.70E**±0°.02**,h8**km±7km**, n24,**σ**0s.41**/45**,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.10	282	P	Pg	04 08 08.5	-0.1
VAY				S	Sg	04 08 10.6	+0.2
VAY	Valandovo	0.10	282	*e*Pg	Pg	04 08 08.6	-0.1
VAY				*e*Sg	Sg	04 08 10.5	+0.2
VAY	Valandovo	0.10	282	*i* Pg	Pg	04 08 08.6	-0.1
VAY				*i* Sg	Sg	04 08 10.6	+0.2
VAY				*e*Lg	Lg	04 08 10.7	
	comp=E,569nm,0.2s						
VAY				*e*Lg	Lg	04 08 10.8	
	comp=N,542nm,0.2s						
VAY	Valandovo	0.10	282	*e*Pg	Pg	04 08 08.6	-0.1
VAY				S	Sg	04 08 10.6	+0.2
VAY				*e*Lg	Lg	04 08 11.2	
	comp=N,542nm,0.2s						
KNT	Kendrikon	0.20	133	P	Pg	04 08 10.9	+0.4
KNT				S	Sg	04 08 13.8	+0.5
KNT	Kendrikon	0.20	133	P	Pg	04 08 10.9	+0.4
KNT				S	Sg	04 08 13.8	+0.5
GRG	Griva	0.41	213	P	Pg	04 08 14.4	+0.1
GRG				S	Sg	04 08 20.5	+0.8
GRG	Griva	0.41	213	*e*PG	Pg	04 08 14.4	+0.1
GRG				*e*SG	Sg	04 08 20.6	+0.8
GRG	Griva	0.41	213	P	Pg	04 08 14.4	+0.1
GRG				S	Sg	04 08 20.5	+0.8
SOH	Sokhos	0.69	134	P	Pg	04 08 19.4	-0.1
SOH				S	Sg	04 08 28.6	+0.1
SOH	Sokhos	0.69	134	*e*PG	Pg	04 08 19.5	-0.1
SOH				*e*SG	Sb	04 08 29.8	-0.4
SOH	Sokhos	0.69	134	P	Pg	04 08 19.4	-0.1
SOH				S	Sg	04 08 28.6	+0.1
SRS	Serrai	0.70	105	P	Pg	04 08 19.4	-0.4
SRS				S	Sg	04 08 29.0	+0.1
SRS	Serrai	0.70	105	P	Pg	04 08 19.4	-0.4
SRS				S	Sg	04 08 29.0	+0.1
NVR	Nevrokopi	0.88	86	P	Pg	04 08 22.9	-0.3
NVR				S	Sg	04 08 34.7	+0.1
NVR	Nevrokopi	0.88	86	*e*PB	Pg	04 08 22.8	-0.4
NVR	Nevrokopi	0.88	86	P	Pg	04 08 22.9	-0.3
NVR				S	Sg	04 08 34.7	+0.1
PLG	Polygyros	1.08	148	*e*PG	Pg	04 08 27.0	-0.1
PLG				*e*SB	Sb	04 08 42.2	+0.6
FNA	Florina	1.13	243	*e*PB	Pg	04 08 27.5	-0.4
VTS	Vitosha	1.34	16	*e*Pg	Pg	04 08 33.0	+0.9
VTS				*e*Sg	Sg	04 08 50.1	+0.5
VTS	Vitosha	1.34	16	*e*Pg	Pg	04 08 33.0	+0.9
VTS				*e*Sg	Sg	04 08 50.1	+0.5
BARS	Barje	1.65	337	*e*Pn	Pb	04 08 36.5	-0.5
BARS				*e*Sn	Sb	04 08 57.9	-0.1
BARS	Barje	1.65	337	*e*Pn	Pb	04 08 36.5	-0.5
BARS				*e*Sn	Sb	04 08 57.9	-0.1
ZAPS	Zavoj	1.97	359	*e*Sn	Sb	04 09 07.1	-0.1

IDC 03 04:15:21.9±3.5**,2°.49S×135°.12E,h0km,mb3.5**/2**, mb1 3.6**/3**,mb1mx3.4**/18**,mbtmp3.4**/3**,ML2.7**/1**,Error ellipse: s-maj=168.7km s-min=28.3km az=79.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.36	182	P	Pn	04 19 25.8	0.0
	0.0nm,0.3s,baz=0.9,slow=12,SNR=2.8						
ASAR	Alice Springs	21.08	183	P	P	04 20 07.7	-0.4
	1.8nm,0.8s,baz=5.0,slow=12,SNR=15						
MKAR	Makanchi Array	67.46	324	P	P	04 26 19.8	+0.2
	0.5nm,0.8s,baz=115,slow=7.7,SNR=4.3						

IDC 03 04:16:19.8±2.6**,23°.99S×66°.86W,h189**km±21km**,mb3.2**/2**, mb1 3.3**/7**,mb1mx3.1**/20**,mbtmp3.1**/7**,Error ellipse: s-maj=29.0km s-min=20.4km az=60.0,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	7.75	351	P	Pn	04 18 10.8	0.0
	0.5nm,0.3s,baz=179,slow=8.0,SNR=14						
LPAZ				S	Sn	04 19 37.8	-0.8
	0.1nm,0.3s,baz=4.0,slow=12,SNR=3.9						
CPUP	Villa Florida	8.94	107	P	Pn	04 18 24.1	-1.2
	0.3nm,0.3s,baz=272,slow=17,SNR=5.3						
SIV	San Ignacio	9.63	35	P	Pn	04 18 35.1	+0.6
	0.2nm,0.3s,baz=231,slow=11,SNR=4.3						
PLCA	Paso Flores	16.98	190	P	Pn	04 20 06.7	+0.3
	0.1nm,0.3s,baz=21,slow=8.6,SNR=4.6						
BDFB	Brasilia	19.56	68	P	P	04 20 34.1	+0.6
	0.4nm,0.3s,baz=241,slow=9.8,SNR=3.6						
TORD	Torodi Ar. Bea	76.44	69	P	P	04 27 48.9	-0.1
	0.4nm,0.5s,baz=263,slow=5.6,SNR=8.8						
YKA	Yellowknife Ar	94.16	340	P	P	04 29 16.2	-0.2
	0.1nm,0.5s,baz=124,slow=4.9,SNR=7.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRA	Warramunga Arr	131.70	207	PKP	PKPdf	04 35 08.7	-2.2
	0.4nm,0.7s,baz=156,slow=1.5,SNR=4.6						
FITZ	Fitzroy Crossi	136.43	197	PKP	PKPdf	04 35 20.0	+0.2
	1.4nm,0.8s,baz=135,slow=2.9,SNR=2.7						
ZALV	Zalesovo Beam	143.32	28	PKP	PKPbc	04 35 29.3	+0.4
	0.6nm,0.5s,baz=258,slow=4.3,SNR=2.3						
MKAR	Makanchi Array	146.43	40	PKPbc	PKPbc	04 35 38.5	+0.1
	0.8nm,0.5s,baz=320,slow=3.6,SNR=5.9						

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*GUC **03** 04:26:32.1±0.4, 42°.84S×72°.56W, h2km±7km, ML3.5*
*IDC **03** 04:26:33.0±1.9, 42°.71S×72°.68W, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.7/18, mbtmp3.7/4, ML3.8/1, MS3.0/2, Ms1 3.1/2, ms1mx2.7/30, Error ellipse: s-maj=43.0km s-min=21.0km az=138.0*
ISC 03 04:26:33.9±1.6**, 42°.77S**±0°.09×**72°.6W**±0°.1**, h10km, n10, σ0.s97**/13**, mb3.3**/3**, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUNY	Huinay	0.42	24	eP	Pg	04 26 41.3	-0.9
HUNY				i S	Sg	04 26 48.2	+0.3
HUNY				AML	AML	04 26 50.1	
	comp=N,3μm,0.3s						
CNTO	Contao	0.97	357	eP	Pg	04 26 52.0	-0.5
CNTO				i S	Sb	04 27 06.7	+1.1
CNTO				AML	AML	04 27 11.2	
	comp=E,2μm,0.5s						
PUEL	Puelo Alto	1.13	13	eP	Pb	04 26 54.2	-1.4
PMCH	Puerto Montt	1.29	352	eP	Pn	04 26 57.6	-0.4
PMCH				i S	Sg	04 27 16.5	+1.0
PMCH				AML	AML	04 27 23.1	
	comp=E,1μm,0.4s						
PLCA	Paso Flores	2.57	38	Pn	Pn	04 27 16.9	+1.2
	comp=E,5.0nm,0.3s,baz=219,slow=16,SNR=80						
PLCA				Pg	Pb	04 27 19.6	-0.5
	comp=E,7.4nm,0.3s,baz=223,slow=17,SNR=126						
PLCA				Lg	Lg	04 27 53.7	
	comp=E,32nm,0.3s,baz=124,slow=8.5,SNR=18						
PLCA				LR	LR	04 28 28.5	
	comp=E,257nm,19.7s,baz=115,slow=46						
COYC	Coyhaique	2.83	172	AML	AML	04 28 02.2	
	comp=E,105nm,0.6s						
LPAZ	La Paz	26.67	10	P	P	04 32 13.7	-0.1
	comp=E,0.4nm,0.5s,baz=196,slow=12,SNR=2.9						
LPAZ				LR	LR	04 44 26.0	
	comp=E,39nm,19.4s,baz=217,slow=40						
SIV	San Ignacio	28.47	24	P	P	04 32 28.5	-0.8
	comp=E,0.2nm,0.4s,baz=208,slow=15,SNR=4.4						
TXAR	Lajitas Array	77.22	333	P	P	04 38 29.3	+1.2
	comp=E,0.2nm,0.8s,baz=156,slow=6.9,SNR=5.3						
MKAR	Makanchi Array	161.78	69	PKPab	PKPab	04 47 20.2	-0.2
	comp=E,0.3nm,0.7s,baz=255,slow=3.5,SNR=2.6						

TRN 03 04:29:04.2, 14°.09N×59°.15W, h97km, MD3.8, M3.6(FDF)**, 1C-2D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SLPA	Patience	1.74	263	eS	Sn	04 29 58.1	+2.6
SLW	Petit Monier	1.74	268	eP	Pn	04 29 35.1	+1.7
SLW				eS	Sn	04 29 56.8	+1.3
MVM	Montagne Vaucl	1.76	286⇑	eP	Pn	04 29 34.6	+1.0
MCLT	Moule a Chique	1.78	258	eP	Pn	04 29 35.1	+1.2
MCLT				eS	Sn	04 29 57.7	+1.2
SLB	Belfond	1.86	262	eP	Pn	04 29 37.3	+2.4
SLB				eS	Sn	04 29 59.1	+0.8
FDF	Fort de France	2.04	289	eP	Pn	04 29 38.4	+1.0
FDF	Fort de France	2.04	289⇓	eP	Pn	04 29 38.5	+1.2
FDF				eS	Sn	04 30 04.3	+1.7
FDF			⇓	eS		04 30 04.5	
SVB	Belmont	2.20	249	eP	Pn	04 29 40.8	+1.5
SVB				eS	Sn	04 30 06.9	+0.7
MGG	Marie-Galante	2.78	311	eP	Pn	04 29 47.7	+0.8
DEG	La Desirade	2.88	320	eP	Pn	04 29 48.5	+0.1
TBG	Guadaloupe-3	2.98	306	eP	Pn	04 29 50.8	+1.0
DOG	Dongo Capester	3.07	309	eP	Pn	04 29 52.6	+1.6
PHG	Guadaloupe-2	3.08	309	eP	Pn	04 29 52.9	+1.8
BCG	Bois Riant Cap	3.11	310	eP	Pn	04 29 53.0	+1.6
SCG	Saint Claude	3.12	309	eP	Pn	04 29 53.6	+2.0
SEG	Port Louis	3.24	316	eP	Pn	04 29 55.5	+2.4

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*IDC **03** 04:34:17.5±1.5, 17°.48S×167°.90E, h0km, mb4.0/7, mb1 4.1/8, mb1mx3.9/21, mbtmp4.0/8, ML3.4/1, MS3.4/4, Ms1 3.4/4, ms1mx2.8/35, Error ellipse: s-maj=37.1km s-min=25.0km az=92.0*
*ISCJB **03** 04:34:20.6±1.4, 17°.71S±0°.06×167°.8E±0°.2, h27km, mb3.9/7, MS3.5/3, Error ellipse: s-maj=32.0km s-min=9.1km az=1.8*
*NOU **03** 04:34:28.9±0.3, 21°.43S×171°.01E, h10km, MD3.1, ML3.1*
ISC 03 04:34:21.7±1.3**, 17°.64S**±0°.09×**167°.8E**±0°.3**, h27km, n16, σ1.s13**/15**, mb4.0**/7**, MS3.6**/3**, 2C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.60	196	eP	Pn	04 35 31.2	+1.5
DZM				AMP		04 36 26.9	
	comp=Z,354nm,0.8s						
DZM	Mont Dzumac	4.60	196	Pn	Pn	04 35 30.8	+1.1
	comp=Z,1.7nm,0.3s,baz=61,slow=19,SNR=13						
DZM				Sn	Sn	04 36 20.6	-1.8
	comp=Z,14nm,0.3s,baz=134,slow=21,SNR=9.1						
NOUC	Port Laguerre	4.67	198	eS	Sn	04 36 22.7	-1.2
NOUC				AMP		04 36 30.7	
	comp=Z,15nm,2.5s						
NORM	Noumea	4.74	195	eP	Pn	04 35 30.8	-0.7
HNR	Honiara	11.19	316	LR	LR	04 40 18.0	
	comp=Z,59nm,20.8s,baz=64,slow=32						
STKA	Stephens Creek	27.64	234	P	P	04 40 08.8	+1.5
	comp=Z,0.9nm,0.5s,baz=51,slow=9.0,SNR=5.7						
STKA				LR	LR	04 50 53.5	
	comp=Z,89nm,19.0s,baz=25,slow=36						
WRA	Warramunga Arr	31.77	260	P	P	04 40 43.5	-0.5
	comp=Z,0.4nm,0.5s,baz=86,slow=8.3,SNR=4.7						
ASAR	Alice Springs	32.26	254	P	P	04 40 48.9	+0.5
	comp=Z,1.1nm,0.5s,baz=79,slow=8.7,SNR=20						
ASAR				LR	LR	04 53 32.2	
	comp=Z,117nm,18.2s,baz=133,slow=36						
FITZ	Fitzroy Crossi	40.10	263	P	P	04 41 55.8	+0.4
	comp=Z,4.5nm,0.8s,baz=94,slow=6.3,SNR=8.5						
VNDA	Vanda	59.99	182	P	P	04 44 26.4	+1.0
	comp=Z,0.5nm,0.9s,baz=352,slow=7.1,SNR=2.4						
MJAR	Matsushiro Arr	60.72	333	P	P	04 44 29.7	-1.3
	comp=Z,1.2nm,0.4s,baz=170,slow=8.9,SNR=5.2						
FX1	Attu Island--F	70.37	3	LR	LR	05 11 06.9	
	comp=Z,29nm,18.6s,baz=140,slow=32						
SONM	Songino Array	85.15	324	P	P	04 46 55.9	+0.3
	comp=Z,2.1nm,0.8s,baz=139,slow=6.6,SNR=9.1						
FETA	Feichten	145.15	332⇑	iPKPdf	PKPdf	04 53 57.0	-0.1
	comp=Z,11nm,1.0s						
DAVA	Damuels	145.32	333⇑	iPKPdf	PKPdf	04 53 57.5	+0.1
	comp=Z,8.4nm,0.9s						
TORD	Torodi Ar. Bea	165.92	253	PKP	PKPdf	04 54 24.0	-1.1
	comp=Z,0.7nm,1.0s,baz=142,slow=2.8,SNR=3.1						

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*BJI **03** 04:36:39.6, 38°.00S×49°.20E, h5km, mB5.3/20, mb5.0/18, Ms5.1/19, Ms7 4.8/20*
*IDC **03** 04:36:41.0±0.4, 37°.90S×49°.40E, h0km, mb4.4/28, mb1 4.6/29, mb1mx4.5/32, mbtmp4.4/29, ML4.2/1, MS4.6/24, Ms1 4.6/24, ms1mx4.5/29, Error ellipse: s-maj=15.1km s-min=11.3km az=39.0*
*ISCJB **03** 04:36:41.5±0.2, 37°.98S±0°.05×49°.30E±0°.06, h10km, mb4.8/68, MS4.7/43, Error ellipse: s-maj=7.5km s-min=6.2km az=35.7*
*MOS **03** 04:36:41.6±1.2, 37°.99S×49°.28E, h10km, mb5.2/27, MS4.6/6, Error ellipse: s-maj=17.3km s-min=8.3km az=99.0*
*NEIC **03** 04:36:42.7±0.2, 37°.94S×49°.28E, h10km, mb5.1/21, Error ellipse: s-maj=8.0km s-min=5.9km az=56.0*
*DJA **03** 04:36:44.4±0.4, 38°S±5°×4°9E±°, h10km, M4.7/13, mb4.7/13*
*GCMT **03** 04:36:45.6±0.1, 37°.77S×49°.43E, h12km, MW5.2, Moment Tensor Solution. s45,c63; s95,c176; Moment tensor: Scale 10^{16}Nm; M_{rr}-8.43±.14; $M_{\theta\theta}$7.80±.11; $M_{\phi\phi}$0.62±.14; $M_{r\theta}$0.90±.38; $M_{\theta\phi}$0.33±.13; $M_{\phi r}$-1.17±.52; Best double couple: $M_0$8.30000×10^{16} NP1:ϕ_s80.00000°, δ43.00000°, λ-101.00000°. NP2:ϕ_s275.00000°, δ48.00000°, λ-80.00000°. Principal axes: T 7.8600, Plg3.0000°, Azm358.0000°; N 0.7700, Plg7.0000°, Azm88.0000°; P -8.6300, Plg82.0000°, Azm246.0000°; Data Used: II IU G IC.*
ISC 03 04:36:43.1±0.3**, 38°.02S**±0°.05×**49°.05E**±0°.06**, h10km, n214, σ1.s62**/271**, mb4.9**/68**, MS4.7**/44**, 11C-4D, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RER	Riviere de l'E	17.77	21	ePn	Pn	04 40 44.4	-6.3
KSD	Kokstad	17.84	289	eP	Pn	04 40 50.6	-1.0
KSD				AMB	AMB	04 40 52.9	
	comp=Z,124nm,2.1s						
POGA	Pongola	18.08	301	eP	Pn	04 40 52.2	-2.3
POGA				AMB	AMB	04 40 58.2	
	comp=Z,59nm,1.7s						
ABPO	Ambohimpanom	19.00	355	eP	P	04 41 04.3	-0.8
ABPO				pmax	pmax		
	comp=Z,95nm,1.3s						
ABPO	Ambohimpanom	19.00	355	eP	P	04 41 04.3	-0.8
	comp=Z,95nm,1.3s						
OPO	Ambohidratompo	19.44	355	P	P	04 41 09.3	-0.8
OPO	Ambohidratompo	19.44	355	P	P	04 41 09.3	-0.8
	comp=Z,0.7nm,0.3s,baz=164,slow=9.4,SNR=33						
OPO				LR	LR	04 46 53.4	
	comp=Z,3μm,21.9s,baz=171,slow=32						
HVD	Gariep Dam	20.78	284	eP	Pn	04 41 28.5	+1.6
HVD				AMB	AMB	04 41 36.8	
	comp=Z,113nm,1.6s						
ERPM	east rand prop	21.06	297	eP	P	04 41 28.8	+1.3
ERPM				AMB	AMB	04 41 38.9	
	comp=Z,88nm,1.5s						
PRYS	Parys	21.33	295	eP	P	04 41 31.4	+0.9
PRYS				AMB	AMB	04 41 41.8	
	comp=Z,71nm,1.8s						
SLR	Silverton	21.41	299	eP	P	04 41 33.5	+2.2
SLR				AMB	AMB	04 41 39.2	
	comp=Z,50nm,4.7s						
BOSA	Boshof	21.93	288	eP	P	04 41 39.6	+2.7
BOSA				AMB	AMB	04 41 39.9	
	comp=Z,44nm,1.7s						
BOSA	Boshof	21.93	288	eP	P	04 41 36.7	-0.2
	comp=Z,66nm,1.4s						
BOSA	Boshof	21.93	288	P	P	04 41 39.9	+2.9
	comp=Z,27nm,1.1s,baz=118,slow=8.7,SNR=9.6						
BOSA				LR	LR	04 48 45.1	
	comp=Z,1μm,19.0s,baz=124,slow=33						
SWZ	Schweizer	22.65	292	eP	P	04 41 45.3	+0.6
SWZ				AMB	AMB	04 41 57.0	
	comp=Z,68nm,1.3s						
SUR	Sutherland	23.70	275	eP	P	04 41 55.6	+0.3
SUR				AMB	AMB	04 41 59.7	
	comp=Z,68nm,3.0s						
SUR	Sutherland	23.70	275	eP	P	04 41 56.8	+1.4
	comp=Z,102nm,1.4s						
SUR	Sutherland	23.70	275	P	P	04 41 57.4	+2.0
	comp=Z,267nm,1.3s,SNR=5.0						
SUR	Sutherland	23.70	275	P	P	04 41 56.9	+1.5
	comp=Z,32nm,1.0s,baz=105,slow=8.1,SNR=10						
SUR				LR	LR	04 49 22.0	
	comp=Z,679nm,19.2s,baz=147,slow=32						
LBTB	Lobatse	23.75	296	eP	P	04 41 52.8	-3.0
LBTB				AMB	AMB	04 42 02.5	
	comp=Z,42nm,2.0s						
LBTB	Lobatse	23.75	296	eP	P	04 41 55.3	-0.5
	comp=Z,33nm,1.2s						
LBTB	Lobatse	23.75	296	P	P	04 41 55.2	-0.5
	comp=Z,8.2nm,0.8s,baz=148,slow=8.5,SNR=9.4						
LBTB				LR	LR	04 49 48.3	
	comp=Z,805nm,20.8s,baz=138,slow=33						
CVNA	Calvinia	24.87	276	eP	P	04 42 06.8	+0.8
CVNA				AMB	AMB	04 42 20.3	
	comp=Z,67nm,4.4s						
UPI	Upington	25.10	284	eP	P	04 42 05.3	-2.9
LSZ	Lusaka	29.20	315	eP	P	04 42 45.3	+0.2
LSZ	Lusaka	29.20	315	eP	P	04 42 45.4	+0.3
	comp=Z,88nm,2.2s						
LSZ	Lusaka	29.20	315	P	P	04 42 46.1	+1.0
	comp=Z,2.7nm,0.6s,baz=156,slow=6.6,SNR=5.6						
LSZ				LR	LR	04 53 08.9	
	comp=Z,2μm,19.9s,baz=111,slow=34						
MAW	Mawson	30.64	170	P	P	04 42 58.1	+1.0
MAW	Mawson	30.64	170	P	P	04 42 58.1	+1.0
	comp=Z,9.3nm,1.1s,baz=347,slow=9.7,SNR=8.7						
MAW				LR	LR	04 52 14.4	
	comp=Z,3μm,21.3s,baz=355,slow=30						
SYO	Syowa Base	31.48	187⇑	eP	P	04 43 04.0	-0.5
TSUM	Tsumeb	33.16	296	eP	P	04 43 20.5	+0.5
TSUM	Tsumeb	33.16	296	eP	P	04 43 20.2	+0.2
	comp=Z,22nm,1.2s						
TSUM	Tsumeb	33.16	296	P	P	04 43 20.9	+0.9
	comp=Z,9.3nm,1.0s,baz=119,slow=9.5,SNR=8.3						
KMBO	Kilima Mbogo	38.28	341	eP	P	04 44 02.7	-1.4
KMBO	Kilima Mbogo	38.28	341	eP	P	04 44 04.4	+0.4
	comp=Z,7.3nm,1.4s						
KMBO	Kilima Mbogo	38.28	341	P	P	04 44 03.4	-0.7
	comp=Z,1.4nm,0.6s,baz=148,slow=21,SNR=5.1						
KMBO				LR	LR	04 58 53.0	
	comp=Z,1μm,18.0s,baz=126,slow=35						
SNAA	Sanae	42.60	202	eP	P	04 44 38.9	-0.1
SNAA	Sanae	42.60	202	eP	P	04 44 39.7	+0.6
	comp=Z,9.1nm,1.1s						
SNAA				ePcP	PcP	04 46 27.4	-3.7
SNAA				PcP	PcP	04 46 31.0	-0.1
SNAA	Sanae	42.60	202	P	P	04 44 39.7	+0.6
	comp=Z,1.6nm,1.0s,baz=69,slow=7.5,SNR=14						
SNAA				PcP	PcP	04 46 31.0	-0.1
	comp=Z,1.6nm,1.0s,baz=58,slow=4.1,SNR=7.4						
CASY	Casey	44.49	150	eP	P	04 44 55.4	+1.2
	comp=Z,24nm,1.4s						
QSPA	South Pole Qui	52.18	180	eP	P	04 45 53.9	+0.2
	comp=Z,37nm,1.2s						
NWAO	Narrogin (SRO)	54.64	107	LR	LR	05 01 52.6	
	comp=Z,58nm,21.1s,baz=203,slow=28						
DRV	Dumont d'Urvil	56.13	151	PP	PP	04 48 23.0	-4.0
DRV				S	S	04 53 48.0	-23
DRV				L	L	04 59 00.0	
DRV				R		05 02 00.0	
VNDA	Vanda	57.86	166	eP	P	04 46 34.1	-0.3
	comp=Z,46nm,1.6s						
VNDA	Vanda	57.86	166	P	P	04 46 34.5	+0.1
	comp=Z,7.2nm,1.0s,baz=250,slow=6.5,SNR=17						
VNDA				LR	LR	05 08 44.6	
	comp=Z,2μm,21.3s,baz=231,slow=33						
SBA	Scott Base	58.56	167	eP	P	04 46 40.6	+1.3
SBA				pmax	pmax		
	comp=Z,54nm,1.5s						
SBA	Scott Base	58.56	167	eP	P	04 46 40.6	+1.3
	comp=Z,54nm,1.5s						
RAYN	Ar Rayn	61.30	356	eP	P	04 46 57.6	-1.2
	comp=Z,14nm,1.1s						
DBIC	Dimbokro	66.96	299	P	P	04 47 37.7	+1.6
DBIC	Dimbokro	66.96	299	P	P	04 47 37.7	+1.6
	comp=Z,11nm,1.1s,baz=90,slow=9.1,SNR=3.3						
DBIC				LR	LR	05 15 06.2	
	comp=Z,403nm,18.9s,baz=120,slow=34						
TOA0	Torodi Ar. Sit	67.50	309	eP	P	04 47 39.9	+0.3
TORD	Torodi Ar. Bea	67.50	309	P	P	04 47 40.0	+0.4
TORD				PP	PP	04 50 02.6	-6.0
TORD	Torodi Ar. Bea	67.50	309	P	P	04 47 40.0	+0.4
	comp=Z,3.0nm,1.0s,baz=127,slow=4.3,SNR=10						
TORD				PP	PP	04 50 02.6	-6.0
	comp=Z,1.9nm,1.1s,baz=132,slow=7.9,SNR=3.7						
TORD				LR	LR	05 16 21.5	
	comp=Z,408nm,18.7s,baz=140,slow=35						
BBOO	Buckleboo	68.56	115	eP	P	04 47 44.4	-1.8
	comp=Z,1μm,2.0s						
FITZ	Fitzroy Crossi	68.68	97	P	P	04 47 44.9	-2.2
FITZ	Fitzroy Crossi	68.68	97	P	P	04 47 44.9	-2.2
	comp=Z,16nm,1.0s,baz=234,slow=6.0,SNR=14						
BHD	Baghdad	71.06	356	eP	P	04 48 00.8	-0.3
BHD				eS	S	04 57 15.0	-2.3
ASAR	Alice Springs	71.96	106	P	P	04 48 05.3	-1.8
ASAR	Alice Springs	71.96	106	P	P	04 48 05.3	-1.8
	comp=Z,7.3nm,0.8s,baz=230,slow=5.9,SNR=61						
AS31	Alice Springs	71.96	106	eP	P	04 48 04.9	-2.2
STKA	Stephens Creek	72.99	117	eP	P	04 48 11.4	-1.8
	comp=Z,6.5nm,1.0s						
STKA	Stephens Creek	72.99	117	P	P	04 48 11.6	-1.6
	comp=Z,20nm,0.9s,baz=236,slow=4.9,SNR=35						
STKA				LR	LR	05 13 26.1	
	comp=Z,402nm,19.5s,baz=209,slow=30						
KOLN	Koldanda	73.01	32	eP	P	04 48 12.2	-1.1
	comp=Z,45nm,1.3s						
PYUN	Piuthan	73.05	31	eP	P	04 48 12.7	-0.8
	comp=Z,48nm,1.0s						
CMAR	Chiang Mai Arr	73.14	49	P	P	04 48 11.9	-2.1
CMAR	Chiang Mai Arr	73.14	49	P	P	04 48 11.9	-2.1
	comp=Z,1.8nm,0.3s,baz=228,slow=6.5,SNR=12						
DMN	Daman	73.51	33	eP	P	04 48 14.3	-2.0
	comp=Z,48nm,1.1s						
DANN	Dangsing	73.59	32	eP	P	04 48 13.1	-3.7
	comp=Z,58nm,1.3s						
RAMN	Ramite	73.59	35	eP	P	04 48 14.8	-2.0
	comp=Z,51nm,1.1s						
PKI	Pulchoki	73.61	33	eP	P	04 48 14.8	-2.2
KKN	Kakani	73.74	33	eP	P	04 48 14.2	-3.4
ODAN	Odare	73.87	35	eP	P	04 48 16.9	-1.5
	comp=Z,30nm,0.9s						
GUN	Gumba	74.10	33	eP	P	04 48 15.7	-4.2
	comp=Z,89nm,1.1s						
WRA	Warramunga Arr	74.40	103	P	P	04 48 19.8	-1.8
WRA	Warramunga Arr	74.40	103	P	P	04 48 19.8	-1.8
	comp=Z,20nm,1.1s,baz=232,slow=5.0,SNR=62						
WRAB	Tennant Creek	74.41	103	eP	P	04 48 19.8	-1.8
WRAB				pmax	pmax		
	comp=Z,30nm,1.3s						
WRAB	Tennant Creek	74.41	103	eP	P	04 48 19.8	-1.8
	comp=Z,30nm,1.3s						
WRAB	Tennant Creek	74.41	103	P	P	04 48 20.3	-1.3
	comp=Z,126nm,1.1s,SNR=7.4						
TAPN	Taplejung	74.44	35	eP	P	04 48 16.8	-5.0
	comp=Z,75nm,1.3s						
LSA	Lhasa	78.02	37	P	P	04 48 41.4	-0.9
LSA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LSA	Lhasa	78.02	37	eP	P	04 48 42.0	-0.3
LSA				pmax	pmax		
	comp=Z,25nm,1.0s						
LSA	Lhasa	78.02	37	eP	P	04 48 42.0	-0.3
	comp=Z,25nm,1.0s						
BR131	Keskin Array S	78.65	348	eP	P	04 48 45.5	+0.3
	comp=Z,1.2nm,0.7s						
BRTR	Keskin Array B	78.65	348	P	P	04 48 43.6	-1.5
BRTR	Keskin Array B	78.65	348	P	P	04 48 43.6	-1.5
	comp=Z,1.4nm,0.9s,baz=163,slow=9.0,SNR=8.1						
BRTR				LR	LR	05 22 27.6	
	comp=Z,299nm,20.8s,baz=113,slow=35						
QIZ	Qiongzhong	80.45	57	P	P	04 48 54.4	-0.9
QIZ				S	S	04 59 02.5	+0.7
QIZ				pmax	pmax		
	comp=Z,110nm,4.0s						
QIZ				LR	LR		
	comp=Z,300nm,35.9s						
KMI	Kunming	80.50	48	P	P	04 48 56.7	+1.0
KMI				pP	pP	04 49 00.6	+1.6
KMI				sP	sP	04 49 02.0	+1.8
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,80nm,3.3s						
KMI				LR	LR		
	comp=N,280nm,15.7s						
KMI				LR	LR		
	comp=E,140nm,18.4s						
KMI				LR	LR		
	comp=Z,280nm,15.2s						
MAK	Makhachkala	80.61	359	eP	P	04 48 57.5	+2.0
MAK				e		04 51 56.5	
MAK				eS	S	04 59 02.3	-0.1
MAK				pmax	pmax		
	comp=Z,349nm,2.1s						
MAK				MLR	MLR		
	comp=Z,554nm,19.0s						
KSH	Kashi	81.02	21	P	P	04 48 54.1	-3.9
KSH				epP	pP	04 48 58.6	-2.7
KSH				esP	sP	04 49 01.2	-1.3
KSH				ePP	PP	04 51 58.2	-5.2
KSH				eS	S	04 58 56.2	-11
KSH				eSKS	SKSac	04 59 06.2	-11
KSH				pmax	pmax		
	comp=Z,22nm,0.9s						
KSH				pmax	pmax		
	comp=Z,220nm,3.5s						
KSH				LR	LR		
	comp=N,800nm,8.7s						
KSH				LR	LR		
	comp=E,430nm,8.1s						
KSH				LR	LR		
	comp=Z,420nm,8.2s						
KBZ	Khabaz	81.56	355	P	P	04 49 00.0	-0.5
KBZ	Khabaz	81.56	355	P	P	04 49 00.0	-0.5
KBZ	Khabaz	81.56	355	P	P	04 49 00.0	-0.5
	comp=Z,0.7nm,0.5s,baz=233,slow=2.4,SNR=5.9						
KBZ				LR	LR	05 25 56.4	
	comp=Z,389nm,20.0s,baz=84,slow=36						
KIV	Kislovodsk	81.80	355	eP	P	04 49 02.4	+0.4
KIV				eS	S	04 59 13.1	-1.8
KIV				eSS	SS	05 04 32.2	-1.7
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
KEST	Kesra	82.08	328	LR	LR	05 28 24.9	
	comp=Z,210nm,18.0s,baz=121,slow=38						
KKAR	Karatay Array	83.06	16	eP	P	04 49 08.6	+0.1
KKAR	Karatay Array	83.06	16	eP	P	04 49 08.6	+0.1
ANN	Anapa	83.10	352	eP	P	04 49 08.0	-0.6
ANN				e		04 52 19.5	
ANN				eS	S	04 59 26.4	-1.6
ANN				eSS	SS	05 04 55.0	+2.0
ANN				pmax	pmax		
	comp=Z,20nm,1.0s						
ANN				MLR	MLR		
	comp=N,348nm,19.0s						
ANN				MLR	MLR		
	comp=E,168nm,19.0s						
ANN				MLR	MLR		
	comp=Z,301nm,19.0s						
RPZ	Rata Peaks	83.17	142	LR	LR	05 18 23.2	
	comp=Z,748nm,20.5s,baz=139,slow=30						
CTA	Charters Tower	83.32	110	P	P	04 49 08.9	-1.6
CTA	Charters Tower	83.32	110	P	P	04 49 08.9	-1.6
	comp=Z,3.6nm,0.7s,baz=236,slow=7.0,SNR=3.6						
AAK	Ala-Archa	83.54	19	eP	P	04 49 11.2	0.0
AAK				pmax	pmax		
	comp=Z,29nm,1.4s						
AAK	Ala-Archa	83.54	19	eP	P	04 49 11.2	0.0
	comp=Z,29nm,1.4s						
AAK	Ala-Archa	83.54	19	LR	LR	05 22 37.4	
	comp=Z,396nm,20.5s,baz=270,slow=33						
EIDS	Eidsvold	83.55	117	eP	P	04 49 10.4	-1.2
	comp=Z,29nm,1.1s						
FRU	Bishkek	83.76	19	eP	P	04 49 14.0	+1.8
FRU				pmax	pmax		
	comp=Z,40nm,1.6s						
GYA	Guiyang	83.83	50	P	P	04 49 14.0	+1.0
GYA				PP	PP	04 52 29.5	+2.8
GYA				S	S	04 59 33.8	-2.7
GYA				SS	SS	05 05 07.4	+2.7
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.0s						
GYA				LR	LR		
	comp=N,520nm,20.6s						
GYA				LR	LR		
	comp=E,470nm,21.1s						
GYA				LR	LR		
	comp=Z,580nm,20.7s						
PLCA	Paso Flores	84.13	222	P	P	04 49 15.0	+0.5
	comp=Z,9.2nm,1.0s						
PLCA	Paso Flores	84.13	222	P	P	04 49 15.0	+0.5
	comp=Z,5.9nm,1.0s,baz=149,slow=4.2,SNR=4.6						
PLCA				LR	LR	05 20 00.2	
	comp=Z,240nm,18.6s,baz=144,slow=31						
CD2	Chengdu	85.49	45	eP	P	04 49 19.9	-1.3
CD2				pP	pP	04 49 26.9	+2.4
CD2				sP	sP	04 49 29.2	+3.5
CD2				PP	PP	04 52 42.6	+2.6
CD2				S	S	04 59 52.9	+0.2
CD2				sS	sS	05 00 00.3	+2.1
CD2				SS	SS	05 05 32.2	+3.3
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				pmax	pmax		
	comp=Z,140nm,4.2s						
CD2				LR	LR		
	comp=N,270nm,17.8s						
CD2				LR	LR		
	comp=E,280nm,14.3s						
CD2				LR	LR		
	comp=Z,390nm,17.8s						

BDFB	**Brasilia**	**85.94**	**253**	LR	LR	05 20 38.8	
	comp=Z,304nm,20.9s,baz=149,slow=31						
CPUP	**Villa Florida**	**85.95**	**240**	P	**P**	**04 49 24.1**	**+0.4**
CPUP	**Villa Florida**	**85.95**	**240**	P	**P**	**04 49 24.1**	**+0.4**
	comp=Z,4.7nm,0.9s,baz=101,slow=8.1,SNR=7.4						
CPUP				LR	LR	05 19 28.9	
	comp=Z,316nm,21.6s,baz=133,slow=30						
KIS	**Kishinev**	**86.55**	**346**	*e*P	**P**	**04 49 27.0**	**+1.1**
KIS				LRM	MLR	05 21 16.0	
	comp=Z,300nm,27.0s						
KIS	**Kishinev**	**86.55**	**346**	*e*P	**P**	**04 49 27.0**	**+1.1**
KIS				MLR	MLR		
	comp=Z,200nm,20.0s						
ABKAR	**Akbulak array**	**87.43**	**7**	*e*P	**P**	**04 49 30.6**	**+0.4**
BUR08	**Bucovina Ar. S**	**87.90**	**344**	*e*P	**P**	**04 49 33.1**	**+0.5**
AKTO	**Aktyubinsk**	**88.43**	**6**	P	**P**	**04 49 33.0**	**-1.9**
AKTO	**Aktyubinsk**	**88.43**	**6**	P	**P**	**04 49 33.0**	**-1.9**
AKTO	**Aktyubinsk**	**88.43**	**6**	P	**P**	**04 49 33.0**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=299,slow=5.4,SNR=4.4						
AKTO				LR	LR	05 28 33.5	
	comp=Z,231nm,20.2s,baz=178,slow=35						
WMQ	**Urumqi**	**88.66**	**27**	*e*P	**P**	**04 49 35.2**	**-1.1**
WMQ				pP	**pP**	**04 49 43.0**	**+3.4**
WMQ				PP	**PP**	**04 53 05.0**	**-0.5**
WMQ				SKS	**SKSac**	**05 00 01.5**	**-3.8**
WMQ				S	**SKKSac**	**05 00 19.0**	**+2.6**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.6s						
WMQ				LR	LR		
	comp=N,670nm,14.0s						
WMQ				LR	LR		
	comp=E,520nm,13.6s						
WMQ				LR	LR		
	comp=Z,740nm,22.0s						
VRHR	**Novokhopersk**	**88.98**	**355**	*e*P	**P**	**04 49 39.9**	**+2.5**
VRHR				pmax	pmax		
	comp=Z,40nm,1.5s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.4s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.5s						
VORD	**Divnogorie**	**89.02**	**354**	*e*P	**P**	**04 49 36.5**	**-1.2**
VORD				pmax	pmax		
	comp=Z,4.0nm,0.6s						
VORD				pmax	pmax		
	comp=N,10.0nm,1.3s						
VORD				pmax	pmax		
	comp=E,7.0nm,0.7s						
KOGS	**Kog**	**89.08**	**338**	*i* P	**P**	**04 49 39.8**	**+1.7**
VSR	**Storozhevoye**	**89.28**	**354**	*e*P	**P**	**04 49 39.2**	**+0.3**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
VSR				pmax	pmax		
	comp=N,10.0nm,1.1s						
VSR				pmax	pmax		
	comp=E,3.0nm,0.3s						
LZH	**Lanzhou**	**89.47**	**41**	*e*P	**P**	**04 49 41.4**	**+1.0**
LZH				pP	**pP**	**04 49 46.7**	**+2.9**
LZH				sP	**sP**	**04 49 49.8**	**+4.8**
LZH				PP	**PP**	**04 53 12.0**	**-0.2**
LZH				SKS	**SKSac**	**05 00 04.3**	**-6.4**
LZH				pmax	pmax		
	comp=Z,11nm,1.0s						
LZH				pmax	pmax		
	comp=Z,60nm,4.6s						
LZH				LR	LR		
	comp=N,170nm,13.6s						
LZH				LR	LR		
	comp=E,240nm,14.9s						
LZH				LR	LR		
	comp=Z,290nm,19.2s						
UZH	**Uzhgorod**	**89.49**	**343**	*e*P	**P**	**04 49 40.7**	**+0.8**
UZH				*i*		04 49 43.3	
MKAR	**Makanchi Array**	**89.53**	**22**	P	**P**	**04 49 38.8**	**-1.4**
MKAR	**Makanchi Array**	**89.53**	**22**	P	**P**	**04 49 38.8**	**-1.4**
MKAR	**Makanchi Array**	**89.53**	**22**	P	**P**	**04 49 38.8**	**-1.4**
	comp=Z,0.4nm,0.8s,baz=197,slow=4.5,SNR=4.8						
PERS	**Pernice**	**89.59**	**337**	*i* P	**P**	**04 49 42.5**	**+1.9**
SOKA	**Soboth**	**89.66**	**337**⇑	*i*P	**P**	**04 49 41.5**	**+0.6**
	comp=Z,13nm,1.0s						
CADS	**Cadrg**	**89.66**	**336**	*i* P	**P**	**04 49 42.5**	**+1.7**
CRVS	**Cervenica-Dubn**	**89.94**	**342**	*e*P	**P**	**04 49 41.9**	**-0.2**
CRVS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
CRVS	**Cervenica-Dubn**	**89.94**	**342**	*e*P	**P**	**04 49 41.9**	**-0.2**
ARSA	**Arzberg**	**90.02**	**338**⇑	*i*PcP	**PcP**	**04 49 44.7**	**+0.9**
	comp=Z,8.5nm,1.1s						
GTA	**Gaotai**	**90.05**	**37**	*e*P	**P**	**04 49 42.0**	**-1.0**
GTA				pP	**PcP**	**04 49 45.1**	**+0.9**
GTA				sP	**sP**	**04 49 47.4**	**-0.1**
GTA				PP	**PP**	**04 53 16.6**	**-0.1**
GTA				SKS	**SKSac**	**05 00 10.3**	**-3.5**
GTA				S	**S**	**05 00 34.6**	**-1.5**
GTA				sS	**sS**	**05 00 42.7**	**+1.1**
GTA				SS	**SS**	**05 06 36.6**	**+1.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,48nm,4.7s						
GTA				LR	LR		
	comp=N,180nm,20.4s						
GTA				LR	LR		
	comp=E,220nm,20.4s						
GTA				LR	LR		
	comp=Z,290nm,28.0s						
AKASG	**Malin Array Be**	**90.05**	**348**	P	**P**	**04 49 41.5**	**-1.0**
AKASG	**Malin Array Be**	**90.05**	**348**	P	**P**	**04 49 41.5**	**-1.0**
AKASG	**Malin Array Be**	**90.05**	**348**	P	**P**	**04 49 41.5**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=190,slow=4.8,SNR=3.0						
AKASG				LR	LR	05 32 33.1	
	comp=Z,177nm,20.0s,baz=160,slow=37						
VYHS	**Vyhne**	**90.22**	**340**	*e*P	**P**	**04 49 45.6**	**+2.2**
VYHS				pmax	pmax		
	comp=Z,11nm,1.8s						
VYHS	**Vyhne**	**90.22**	**340**	*e*P	**P**	**04 49 45.6**	**+2.2**
ZST	**Bratislava**	**90.42**	**339**	*e*P	**P**	**04 49 44.6**	**+0.3**
ZST				pmax	pmax		
	comp=Z,15nm,1.5s						
ZST	**Bratislava**	**90.42**	**339**	*e*P	**P**	**04 49 44.6**	**+0.3**
STHS	**Stebnicka Huta**	**90.47**	**342**	*e*P	**P**	**04 49 45.3**	**+0.8**
STHS				pmax	pmax		
	comp=Z,3.0nm,1.3s						
STHS	**Stebnicka Huta**	**90.47**	**342**	*e*P	**P**	**04 49 45.3**	**+0.8**
ABTA	**Abfaltersbach**	**90.51**	**336**⇓	*i*P	**P**	**04 49 45.2**	**+0.3**
	comp=Z,14nm,1.1s						
CONA	**Conrad Observa**	**90.54**	**338**⇓	*i*P	**P**	**04 49 45.6**	**+0.7**
	comp=Z,12nm,1.1s						
MOA	**Molln**	**90.94**	**337**⇑	*i*P	**P**	**04 49 48.6**	**+1.8**
	comp=Z,8.1nm,1.2s						
ESDC	**Sonseca Array**	**91.33**	**322**	P	**P**	**04 49 50.0**	**+1.1**
ESDC	**Sonseca Array**	**91.33**	**322**	P	**P**	**04 49 50.0**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=147,slow=5.2,SNR=6.3						
ESDC				LR	LR	05 33 31.4	
	comp=Z,436nm,18.2s,baz=110,slow=37						
FETA	**Feichten**	**91.34**	**335**⇑	*i*SKKPdf	SKKPdf	05 10 36.2	-8.3
	comp=Z,3.5nm,0.6s						
DAVA	**Damuels**	**91.86**	**335**⇓	*i*SKKPdf	SKKPdf	05 10 36.8	-6.7
	comp=Z,4.6nm,0.5s						
GERES	**GERESS Array B**	**92.00**	**338**	P	**P**	**04 49 53.1**	**+1.3**
GERES	**GERESS Array B**	**92.00**	**338**	P	**P**	**04 49 53.1**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=145,slow=6.0,SNR=5.4						
GERES				LR	LR	05 37 23.9	
	comp=Z,188nm,18.9s,baz=336,slow=40						
KURK	**Kurchatov**	**92.11**	**18**	*ce*P	**P**	**04 49 51.0**	**-1.0**
KURK				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KURK	**Kurchatov**	**92.11**	**18**	*e*P	**P**	**04 49 51.3**	**-0.7**
	comp=Z,9.7nm,1.5s						
KHC	**Kasperske Hory**	**92.29**	**338**	AMS	AMS	05 37 10.0	
	comp=Z,200nm,19.8s						
BRVK	**Borovoye**	**92.56**	**13**	*e*P	**P**	**04 49 52.8**	**-1.3**
BRVK				pmax	pmax		
	comp=Z,24nm,1.9s						
BRVK	**Borovoye**	**92.56**	**13**	*e*P	**P**	**04 49 52.8**	**-1.3**
	comp=Z,24nm,1.9s						
DPC	**Dobruska-Polom**	**92.59**	**340**	*e*P	**P**	**04 49 56.4**	**+2.0**
DPC				*e*		04 50 03.7	
DPC				MLR	MLR		
	comp=Z,1µm,16.7s						
DPC	**Dobruska-Polom**	**92.59**	**340**	*e*P	**P**	**04 49 56.4**	**+2.0**
DPC				*e*x	x	04 50 03.7	
DPC				AMS	AMS	05 34 00.0	
	comp=Z,1µm,16.7s						
PRU	**Pruhonice**	**92.77**	**339**	AMS	AMS	05 34 00.0	
	comp=Z,200nm,25.3s						
UPC	**Upice**	**92.82**	**340**	*e*P	**P**	**04 49 56.3**	**+0.9**
UPC	**Upice**	**92.82**	**340**	*e*P	**P**	**04 49 56.3**	**+0.9**
OBN	**Obninsk**	**93.38**	**353**⇑	*e*P	**P**	**04 49 56.4**	**-1.4**
OBN				*e*		04 53 44.2	
OBN				*e*S	**SKSac**	**05 00 34.7**	**+3.2**
OBN				*i* PS	**PS**	**05 02 25.5**	**+5.9**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,200nm,20.0s						
ARU	**Arti**	**94.43**	**5**	*d i*P	**P**	**04 50 02.3**	**-0.3**
ARU						04 53 49.4	
ARU				S	**SKSac**	**05 00 34.4**	**-2.8**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ARU				MLR	MLR		
	comp=Z,433nm,19.0s						
NJ2	**Nanjing**	**95.30**	**53**	*e*P	**P**	**04 50 08.8**	**+1.6**
NJ2				pP	**pP**	**04 50 11.9**	**+1.3**
NJ2				sP	**sP**	**04 50 15.4**	**+3.6**
NJ2				SKS	**SKSac**	**05 00 44.0**	**+0.9**
NJ2				S	**ScS**	**05 01 24.0**	**+0.1**
NJ2				sS	**sS**	**05 01 33.0**	**+4.5**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,100nm,5.3s						
NJ2				LR	LR		
	comp=N,590nm,28.8s						
NJ2				LR	LR		
	comp=E,390nm,26.8s						
NJ2				LR	LR		
	comp=Z,260nm,23.8s						
SIV	**San Ignacio**	**95.36**	**245**	P	**P**	**04 50 09.6**	**+1.5**
SIV	**San Ignacio**	**95.36**	**245**	P	**P**	**04 50 09.6**	**+1.5**
	comp=Z,1.1nm,0.8s,baz=112,slow=8.4,SNR=3.1						
ZALV	**Zalesovo Beam**	**96.66**	**20**	P	**P**	**04 50 11.0**	**-1.9**
ZALV	**Zalesovo Beam**	**96.66**	**20**	P	**P**	**04 50 11.0**	**-1.9**
ZALV	**Zalesovo Beam**	**96.66**	**20**	P	**P**	**04 50 11.0**	**-1.9**
	comp=Z,1.2nm,0.8s,baz=211,slow=1.7,SNR=5.3						
NVS	**Novosibirsk**	**97.03**	**19**	*e*P	**P**	**04 50 14.6**	**+0.1**
HHC	**Hu-ho-hao-te**	**97.07**	**43**	*e*P	**P**	**04 50 15.3**	**+0.1**
HHC				pP	**pP**	**04 50 19.5**	**+0.9**
HHC				sP	**sP**	**04 50 22.7**	**+2.9**
HHC				PP	**PP**	**04 54 15.2**	**+3.5**
HHC				SKS	**SKSac**	**05 00 50.5**	**-1.8**
HHC				S	**S**	**05 01 33.9**	**-4.2**
HHC				sS	**sS**	**05 01 42.6**	**-1.1**
HHC				SS	**SS**	**05 08 14.8**	**-1.0**
HHC				pmax	pmax		
	comp=Z,170nm,4.3s						
HHC				LR	LR		
	comp=N,310nm,12.7s						
HHC				LR	LR		
	comp=E,250nm,11.3s						
HHC				LR	LR		
	comp=Z,320nm,19.0s						
BJI	**Beijing**	**99.05**	**46**	P	**Pdif**	**04 50 24.5**	**+0.5**
BJI				S	**S**	**05 01 56.0**	**+1.3**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BJI				pmax	pmax		
	comp=Z,45nm,4.2s						
BJI				LR	LR		
	comp=N,310nm,16.9s						
BJI				LR	LR		
	comp=E,190nm,22.7s						
BJI				LR	LR		
	comp=Z,180nm,23.3s						
SONM	**Songino Array**	**99.56**	**35**	LR	LR	05 32 04.7	
	comp=Z,423nm,20.8s,baz=78,slow=34						
MDJ	**Mudanjiang**	**109.67**	**48**	Pdif	**Pdif**	**04 51 11.6**	**+0.5**
MDJ				PP	**PP**	**04 55 45.3**	**-0.4**
MDJ				SS	SS	05 11 11.6	+2.5
MDJ				AMB	AMB		
	comp=Z,75nm,4.1s						
MDJ				LR	LR		
	comp=N,63nm,27.3s						
MDJ				LR	LR		
	comp=E,99nm,27.3s						
MDJ				LR	LR		
	comp=Z,130nm,30.7s						
TIXI	**Tiksi**	**122.52**	**22**⇑	*i*PKIKP	**PKPdf**	**04 55 35.8**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SEY	**Seymchan**	**128.96**	**35**⇑	*i*PKIKP	**PKPdf**	**04 55 49.1**	**-1.0**
BILL	**Bilibino**	**134.76**	**28**⇑	*e*PKIKP	**PKPdf**	**04 56 01.7**	**+0.7**
BILL				*e*		04 58 30.7	
BILL				*e*S	**SKSac**	**05 03 15.6**	**+2.3**
BILL				pmax	pmax		
	comp=Z,26nm,1.7s						
BILL				MLR	MLR		
	comp=Z,100nm,21.0s						
SWET	**Sewanee**	**144.02**	**280**	*e*PKPdf	**PKPab**	**04 56 16.8**	**+0.4**
LRAL	**Lakeview Retre**	**144.14**	**276**	*e*PKPdf	**PKPab**	**04 56 15.9**	**-0.9**
OXF	**Oxford**	**146.52**	**277**	*e*PKIKP	**PKPdf**	**04 56 22.5**	**-0.7**
OXF				*e*		04 56 24.1	
OXF	**Oxford**	**146.52**	**277**	*e*PKPdf	**PKPdf**	**04 56 22.5**	**-0.7**
OXF				*e*PKPbc	**PKPbc**	**04 56 24.1**	**-0.6**
SIUC	**Southern Illin**	**147.25**	**283**	*e*PKPbc	**PKPbc**	**04 56 26.6**	**0.0**
HDIL	**Hopedale**	**147.87**	**288**	*e*PKPbc	**PKPbc**	**04 56 28.3**	**+0.1**
COWI	**Conover**	**148.22**	**298**	*e*PKPdf	**PKPdf**	**04 56 25.2**	**-0.5**
COWI				*e*PKPbc	**PKPbc**	**04 56 28.6**	**-0.4**
COLD	**Coldfoot**	**148.78**	**14**	*e*PKPbc	**PKPbc**	**04 56 29.0**	**-0.8**
JFWS	**Jewell Farm**	**148.87**	**292**	*e*PKP2	**PKPbc**	**04 56 30.5**	**-0.3**
JFWS	**Jewell Farm**	**148.87**	**292**	*e*PKPbc	**PKPbc**	**04 56 30.5**	**-0.3**
UALR	**University of**	**148.90**	**276**	*e*PKPbc	**PKPbc**	**04 56 31.0**	**0.0**
EYMN	**Ely**	**149.77**	**302**	*e*PKPdf	**PKPdf**	**04 56 26.9**	**-1.2**
EYMN				*e*PKPbc	**PKPbc**	**04 56 32.5**	**-0.3**
ILAR	**Eielson Array**	**151.60**	**14**	PKP	**PKPdf**	**04 56 29.5**	**-0.9**
ILAR				PKPbc	**PKPbc**	**04 56 34.8**	**-1.8**
ILAR				PKPab	**PKPab**	**04 56 44.0**	**-1.3**
ILAR	**Eielson Array**	**151.60**	**14**	PKP	**PKPdf**	**04 56 29.5**	**-0.9**
	comp=Z,0.5nm,0.9s,baz=300,slow=3.0,SNR=5.5						
ILAR				PKPbc	**PKPbc**	**04 56 34.8**	**-1.8**
	comp=Z,4.5nm,0.8s,baz=320,slow=3.3,SNR=48						
ILAR				PKPab	**PKPab**	**04 56 44.0**	**-1.3**
	comp=Z,6.1nm,1.0s,baz=314,slow=3.4,SNR=11						
TRF	**Thorofare Moun**	**151.98**	**18**	*e*PKPbc	**PKPbc**	**04 56 36.0**	**-1.8**
MCK	**McKinley**	**152.07**	**17**	*e*PKIKP	**PKPdf**	**04 56 32.0**	**+0.9**
MCK				*e*		04 56 37.7	
MCK	**McKinley**	**152.07**	**17**	*e*PKPdf	**PKPdf**	**04 56 32.0**	**+0.9**
MCK				*e*PKPbc	**PKPbc**	**04 56 37.6**	**-0.1**
ULM	**Lac du Bonnet**	**152.28**	**308**	PKPbc	**PKPbc**	**04 56 37.3**	**-1.3**
ULM				PKPab	**PKPab**	**04 56 48.7**	**+0.1**
ULM	**Lac du Bonnet**	**152.28**	**308**	PKPbc	**PKPbc**	**04 56 37.3**	**-1.3**
	comp=Z,48nm,1.4s,baz=81,slow=2.5,SNR=6.7						
ULM				PKPab	**PKPab**	**04 56 48.7**	**+0.1**
	comp=Z,8.0nm,1.0s,baz=98,slow=4.0,SNR=4.2						
JCT	**Junction City**	**153.26**	**263**	*e*PKIKP	**PKPbc**	**04 56 41.4**	**-0.1**
JCT				*e*		04 56 52.8	
JCT	**Junction City**	**153.26**	**263**	*e*PKPbc	**PKPbc**	**04 56 41.4**	**-0.1**
JCT				*e*PKPab	**PKPab**	**04 56 52.8**	**-0.6**
YKW3	**Yellowknife Ar**	**153.47**	**343**	*e*PKPbc	**PKPbc**	**04 56 39.7**	**-1.2**
YKA	**Yellowknife Ar**	**153.52**	**343**	PKP	**PKPdf**	**04 56 31.2**	**-2.0**
YKA				PKPbc	**PKPbc**	**04 56 39.6**	**-1.3**
YKA				PKPab	**PKPab**	**04 56 51.0**	**-2.3**
YKA	**Yellowknife Ar**	**153.52**	**343**	PKP	**PKPdf**	**04 56 31.2**	**-2.0**
	comp=Z,0.5nm,0.8s,baz=34,slow=1.6,SNR=8.8						
YKA				PKPbc	**PKPbc**	**04 56 39.6**	**-1.3**
	comp=Z,1.6nm,0.9s,baz=30,slow=2.1,SNR=17						
YKA				PKPab	**PKPab**	**04 56 51.0**	**-2.3**
	comp=Z,2.4nm,0.9s,baz=21,slow=2.3,SNR=11						
ECSD	**EROS Data Cent**	**153.54**	**293**	*e*PKPdf	**PKPdf**	**04 56 33.4**	**-0.6**
ECSD				*e*PKPbc	**PKPbc**	**04 56 41.1**	**-0.5**
FFC	**Flin Flon**	**154.21**	**320**	*c i*PKIKP	**PKPbc**	**04 56 41.7**	**-1.0**
FFC	**Flin Flon**	**154.21**	**320**	*e*PKPbc	**PKPbc**	**04 56 41.3**	**-1.4**
TXAR	**Lajitas Array**	**155.76**	**257**	PKP	**PKPdf**	**04 56 37.9**	**+0.3**
TXAR				PKPab	**PKPab**	**04 57 03.7**	**-0.5**
TXAR	**Lajitas Array**	**155.76**	**257**	PKP	**PKPdf**	**04 56 37.8**	**+0.3**
	comp=Z,2.6nm,1.1s,baz=132,slow=1.9,SNR=16						
TXAR				PKPab	**PKPab**	**04 57 03.7**	**-0.5**
	comp=Z,3.0nm,1.1s,baz=123,slow=6.1,SNR=4.8						
SDCO	**Great Sand Dun**	**159.92**	**277**	*e*PKPdf	**PKPdf**	**04 56 43.7**	**+1.0**
SDCO				*e*PKPab	**PKPab**	**04 57 23.2**	**+1.0**
PDAR	**Pinedale Array**	**163.04**	**293**	PKP	**PKPdf**	**04 56 44.8**	**-1.0**
PDAR	**Pinedale Array**	**163.04**	**293**	PKP	**PKPdf**	**04 56 44.8**	**-1.0**
	comp=Z,0.8nm,0.9s,baz=106,slow=3.3,SNR=6.4						
NVAR	**Mina Array Bea**	**170.04**	**276**	PKP	**PKPdf**	**04 56 49.9**	**-1.3**
NVAR				PKPab	**PKPab**	**04 58 07.8**	**+1.2**
NVAR	**Mina Array Bea**	**170.04**	**276**	PKP	**PKPdf**	**04 56 49.9**	**-1.3**
	comp=Z,0.8nm,0.9s,baz=222,slow=2.0,SNR=5.6						
NVAR				PKPab	**PKPab**	**04 58 07.8**	**+1.2**
	comp=Z,2.0nm,1.1s,baz=119,slow=4.5,SNR=7.3						

IDC 03 04:36:48.2±17.0**, 22°.50S**×**174°.90W, h0**km**, mb4.0**/5**, mb1 4.1**/5**, mb1mx3.8**/21**, mbtmp4.0**/5**, Error ellipse: s-maj=328.3km s-min=151.9km az=81.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**36.21**	**266**	P	P	04 43 53.5	+0.5
	2.3nm,0.3s,baz=82,slow=9.8,SNR=3.9						
STKA	**Stephens Creek**	**39.59**	**247**	P	P	04 44 21.8	+0.4
	0.7nm,0.5s,baz=72,slow=9.6,SNR=3.1						
ASAR	**Alice Springs**	**46.91**	**258**	P	P	04 45 20.2	-0.6
	1.0nm,0.7s,baz=99,slow=7.1,SNR=7.6						
WRA	**Warramunga Arr**	**47.21**	**263**	P	P	04 45 22.2	-0.9
	0.8nm,0.3s,baz=102,slow=8.4,SNR=51						
DRV	**Dumont d'Urvil**	**52.48**	**201**	P	P	04 45 55.0	-7.5
FITZ	**Fitzroy Crossi**	**55.64**	**263**	P	P	04 46 26.7	+0.3
	2.1nm,0.9s,baz=113,slow=7.7,SNR=2.9						

IDC 03 04:45:06.8±1.1**, 25°.91S**×**70°.56E, h0**km**, mb3.6**/5**, mb1 3.8**/5**, mb1mx3.5**/26**, mbtmp3.6**/5**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx3.1**/28**, Error ellipse: s-maj=48.9km s-min=22.6km az=11.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**22.81**	**284**	P	P	04 50 13.1	+1.5
	1.2nm,0.3s,baz=118,slow=15,SNR=5.6						
ASAR	**Alice Springs**	**57.05**	**102**	P	P	04 54 55.2	+0.2
	1.0nm,0.8s,baz=250,slow=6.4,SNR=7.5						
WRA	**Warramunga Arr**	**58.55**	**98**	P	P	04 55 05.6	0.0
	1.0nm,0.8s,baz=254,slow=7.1,SNR=4.1						
SNAA	**Sanae**	**60.42**	**200**	P	P	04 55 17.6	-0.2
	0.4nm,1.0s,baz=84,slow=9.2,SNR=6.6						
TORD	**Torodi Ar. Bea**	**77.41**	**291**	P	P	04 57 03.4	-0.9
	0.4nm,0.9s,baz=126,slow=3.9,SNR=2.6						
MJAR	**Matsushiro Arr**	**88.96**	**48**	LR	LR	05 38 22.5	
	comp=Z,97nm,20.7s,baz=275,slow=36						

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*IDC **03** 04:50:56.4±1.9, 17°.55S×167°.96E, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.8/19, mbtmp4.0/6, ML3.6/1, Error ellipse: s-maj=54.8km s-min=28.3km az=111.0*

*ISCJB **03** 04:50:59.3±2.1, 17°.71S±0°.07×167°.8E±0°.4, h27km, mb3.8/5, Error ellipse: s-maj=50.1km s-min=9.3km az=4.6*

ISC 03 04:51:00.5±1.7**, 17°.67S**±0°.10×**167°.9E**±0°.3**, h27**km**, n10, σ0s.98**/13**, mb3.9**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.60**	**197**	*e*LR	LR	05 21 50.8	
	451nm,33.0s						
DZM	**Mont Dzumac**	**4.60**	**197**	*e*P	**Pn**	**04 52 09.7**	**+1.3**
DZM				*e*S	**Sn**	**04 52 59.3**	**-1.7**
DZM	**Mont Dzumac**	**4.60**	**197**	Pn	**Pn**	**04 52 09.4**	**+1.0**
	2.5nm,0.3s,baz=272,slow=22,SNR=20						
DZM				Sn	**Sn**	**04 53 00.8**	**-0.2**
	16nm,0.3s,baz=159,slow=24,SNR=9.0						
NOUC	**Port Laguerre**	**4.67**	**199**	*e*S	**Sn**	**04 53 01.1**	**-1.4**
STKA	**Stephens Creek**	**27.69**	**234**	P	**P**	**04 56 47.1**	**+0.6**
	0.6nm,0.3s,baz=54,slow=12,SNR=3.0						
WRA	**Warramunga Arr**	**31.85**	**261**	P	**P**	**04 57 23.6**	**0.0**
	0.1nm,0.3s,baz=78,slow=6.1,SNR=4.6						
WRA				PcP	**PcP**	**05 00 14.0**	**-0.1**
	0.5nm,0.9s,baz=87,slow=3.5,SNR=3.5						
ASAR	**Alice Springs**	**32.34**	**254**	P	**P**	**04 57 28.1**	**+0.3**
	0.8nm,0.5s,baz=78,slow=8.7,SNR=15						
ASAR				PcP	**PcP**	**05 00 15.6**	**+0.1**
	0.7nm,0.5s,baz=89,slow=8.2,SNR=5.3						
MJAR	**Matsushiro Arr**	**60.79**	**333**	P	**P**	**05 01 09.4**	**-0.8**
	0.9nm,0.3s,baz=173,slow=9.0,SNR=4.2						
SONM	**Songino Array**	**85.23**	**324**	P	**P**	**05 03 35.0**	**+0.3**
	1.6nm,0.7s,baz=152,slow=6.7,SNR=8.9						
TORD	**Torodi Ar. Bea**	**165.99**	**253**	PKP	**PKPdf**	**05 11 03.4**	**-0.6**
	0.6nm,1.0s,baz=303,slow=1.9,SNR=2.6						

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*ATH **03** 04:52:26.7, 41°.31N×22°.74E, h4km, MD2.8/4*

*SKO **03** 04:52:26.7, 41°.29N×22°.73E, h11km, M1.6, ML1.9*

*CSEM **03** 04:52:27.4±0.1, 41°.26N×22°.76E, h2km, ML1.9, Error ellipse: s-maj=3.7km s-min=2.9km az=31.0*

*THE **03** 04:52:27.0, 41°.30N×22°.76E, h1km±1km, ML2.4/7, Error ellipse: s-maj=1.8km s-min=0.5km az=321.0*

*BEO **03** 04:52:28.3±1.0, 41°.25N×22°.66E, h4km±2km, ML1.9/5*

ISC 03 04:52:27.2±0.9**, 41°.28N**±0°.02×**22°.74E**±0°.02**, h6**km±8km**, n30, σ0s.53**/56**, 1D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.14**	**287**	P	**Pg**	**04 52 29.7**	**-0.4**
VAY				S	**Sg**	**04 52 32.1**	**+0.2**
VAY	**Valandovo**	**0.14**	**287**⇓	*i*Pg	**Pg**	**04 52 29.6**	**-0.4**
VAY				*e*Sg	**Sg**	**04 52 32.7**	**+0.8**
VAY	**Valandovo**	**0.14**	**287**	*i* Pg	**Pg**	**04 52 29.6**	**-0.4**
VAY				*i* Sg	**Sg**	**04 52 32.2**	**+0.3**
VAY				*i* Lg	Lg	04 52 32.2	
	comp=E,583nm,0.3s						
VAY				*i* Lg	Lg	04 52 32.3	
	comp=N,580nm,0.3s						
VAY	**Valandovo**	**0.14**	**287**	P	**Pg**	**04 52 29.7**	**-0.4**
VAY	**Valandovo**	**0.14**	**287**	*i* Pg	**Pg**	**04 52 30.1**	**+0.1**
VAY				S	**Sg**	**04 52 32.1**	**+0.2**
VAY				*i* Lg	Lg	04 52 32.7	
	comp=N,580nm,0.3s						
KNT	**Kendrikon**	**0.17**	**135**	P	**Pg**	**04 52 30.7**	**+0.1**
KNT				S	**Sg**	**04 52 33.1**	**+0.2**
KNT	**Kendrikon**	**0.17**	**135**	P	**Pg**	**04 52 30.7**	**+0.1**
KNT				S	**Sg**	**04 52 33.1**	**+0.2**
GRG	**Griva**	**0.41**	**218**	P	**Pg**	**04 52 35.1**	**-0.1**
GRG				S	**Sg**	**04 52 41.2**	**+0.5**
GRG	**Griva**	**0.41**	**218**	*e*PG	**Pg**	**04 52 35.1**	**-0.1**
GRG				*e*SG	**Sg**	**04 52 41.1**	**+0.4**
GRG	**Griva**	**0.41**	**218**	P	**Pg**	**04 52 35.1**	**-0.1**
GRG				S	**Sg**	**04 52 41.2**	**+0.5**
SOH	**Sokhos**	**0.65**	**135**	P	**Pg**	**04 52 39.2**	**-0.6**
SOH				S	**Sg**	**04 52 48.6**	**+0.4**
SOH	**Sokhos**	**0.65**	**135**	*e*PG	**Pg**	**04 52 39.4**	**-0.4**
SOH				*e*SG	**Sg**	**04 52 48.7**	**+0.5**
SOH	**Sokhos**	**0.65**	**135**	P	**Pg**	**04 52 39.2**	**-0.6**
SOH				S	**Sg**	**04 52 48.6**	**+0.4**
SRS	**Serrai**	**0.66**	**104**	P	**Pg**	**04 52 39.4**	**-0.5**
SRS				S	**Sg**	**04 52 48.2**	**-0.4**
SRS	**Serrai**	**0.66**	**104**	P	**Pg**	**04 52 39.4**	**-0.5**
SRS				S	**Sg**	**04 52 48.2**	**-0.4**
HORT	**Hortiatis**	**0.73**	**158**	P	**Pg**	**04 52 41.0**	**-0.3**
HORT				S	**Sg**	**04 52 51.9**	**+1.0**
HORT	**Hortiatis**	**0.73**	**158**	P	**Pg**	**04 52 41.0**	**-0.3**
HORT				S	**Sg**	**04 52 51.9**	**+1.0**
NVR	**Nevrokopi**	**0.85**	**85**	P	**Pg**	**04 52 42.9**	**-0.6**
NVR				S	**Sg**	**04 52 54.7**	**+0.2**
NVR	**Nevrokopi**	**0.85**	**85**	*e*PG	**Pg**	**04 52 42.8**	**-0.7**
NVR				*e*SG	**Sg**	**04 52 54.5**	**0.0**
NVR	**Nevrokopi**	**0.85**	**85**	P	**Pg**	**04 52 42.9**	**-0.6**
NVR				S	**Sg**	**04 52 54.7**	**+0.2**
PLG	**Polygyros**	**1.05**	**149**	*e*PG	**Pg**	**04 52 47.0**	**-0.4**
PLG				*e*SG	**Sg**	**04 53 01.2**	**+0.2**
VTS	**Vitosha**	**1.35**	**15**	*e*Pg	**Pg**	**04 52 53.1**	**-0.1**
VTS	**Vitosha**	**1.35**	**15**	*e*Pg	**Pg**	**04 52 53.1**	**-0.1**
KAVA	**Kavala**	**1.37**	**101**	P	**Pn**	**04 52 52.7**	**-0.1**
KAVA				S	**Sn**	**04 53 11.4**	**+0.2**
KAVA	**Kavala**	**1.37**	**101**	P	**Pn**	**04 52 52.7**	**-0.1**
KAVA				S	**Sn**	**04 53 11.4**	**+0.2**
BARS	**Barje**	**1.68**	**336**	*e*Pn	**Pb**	**04 52 58.2**	**-0.3**
BARS				*e*Sn	**Sb**	**04 53 19.9**	**0.0**
BARS	**Barje**	**1.68**	**336**	*e*Pn	**Pb**	**04 52 58.2**	**-0.3**
BARS				*e*Sn	**Sb**	**04 53 19.9**	**0.0**
PLD	**Plovdiv**	**1.68**	**60**	*e*Pg	**Pg**	**04 52 59.8**	**+0.3**
PLD				*e*Sg	**Sg**	**04 53 23.7**	**+2.4**
PLD	**Plovdiv**	**1.68**	**60**	*e*Pg	**Pg**	**04 52 59.8**	**+0.3**
ZAPS	**Zavoj**	**1.99**	**358**	*e*Pn	**Pg**	**04 53 04.7**	**-0.7**
ZAPS				*e*Sn	**Sb**	**04 53 29.0**	**+0.1**

IDC 03 04:53:51.9±2.3**, 23°.11S**×**170°.83E, h0**km**, mb3.9**/4**, mb1 4.1**/5**, mb1mx3.8**/18**, mbtmp4.0**/5**, ML4.1**/1**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.0**/28**, Error ellipse: s-maj=72.0km s-min=28.2km az=160.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.18	283	Pn	Pn	04 54 58.5	+1.4
	12nm,0.3s,baz=53,slow=20,SNR=11						
DZM				Sn	Sn	04 55 46.1	-0.8
	4.6nm,0.3s,baz=152,slow=22,SNR=4.3						
DZM				LR	LR	04 56 15.5	
	comp=Z,142nm,18.7s,baz=172,slow=34						
ASAR	Alice Springs	33.84	262	P	P	05 00 36.5	+0.2
	1.4nm,0.8s,baz=95,slow=9.8,SNR=8.3						
WRA	Warramunga Arr	34.03	268	P	P	05 00 37.0	-1.0
	0.2nm,0.3s,baz=96,slow=8.5,SNR=6.9						
PETK	Petropavlovsk-	76.75	352	P	P	05 05 45.8	+1.0
	3.3nm,0.7s,baz=153,slow=7.6,SNR=5.4						
ILAR	Eielson Array	93.48	17	P	P	05 07 07.5	-1.4
	0.4nm,0.8s,baz=233,slow=5.5,SNR=4.3						
GERES	GERESS Array B	148.58	330	PKPbc	PKPbc	05 13 40.4	-0.4
	0.3nm,0.3s,baz=2.9,slow=5.9,SNR=4.1						

WEL 03 05:01:51.7±1.2, 36°.40S×177°.78E, h5km, ML3.8/5, Error ellipse: s-maj=8.8km s-min=8.3km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.24	160	eP*	Pg	05 02 11.6	-3.8
MXZ				eS*	Sg	05 02 26.8	-4.7
MXZ				AML	AML	05 02 32.8	
PUZ	Puketiti	1.72	167	PN	Pn	05 02 22.0	-0.2
PUZ				eSN	Sn	05 02 44.1	-0.5
PUZ				AML	AML	05 02 47.6	
URZ	Urewera	1.94	196	P*	Pn	05 02 23.1	-2.1
URZ				eS*	Sn	05 02 47.5	-2.4
URZ				AML	AML	05 02 58.0	
MKAZ	Moumakai	2.21	250	PN	Pn	05 02 27.9	-1.2
TOZ	Tahuroa Road	2.25	233	P*	Pb	05 02 33.3	+0.5
HIZ	Hauiti	3.14	227	PN	Pn	05 02 41.4	-0.4

IDC 03 05:07:21.4±2.3, 4°.45S×152°.20E, h0km, mb3.4/3, mb1 3.8/3, mb1mx3.4/18, mbtmp3.5/3, Error ellipse: s-maj=170.5km s-min=27.4km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.02	225	Sn	Sn	05 10 25.0	-1.1
	0.8nm,0.3s,baz=197,slow=20,SNR=2.2						
WRA	Warramunga Arr	23.24	227	P	P	05 12 30.6	+0.1
	1.1nm,1.0s,baz=53,slow=10,SNR=3.7						
ASAR	Alice Springs	26.01	221	P	P	05 12 56.3	-0.1
	0.4nm,0.7s,baz=58,slow=8.8,SNR=3.6						
ILAR	Eielson Array	82.06	22	P	P	05 19 42.9	-0.4
	0.5nm,0.8s,baz=256,slow=5.4,SNR=7.0						
TORD	Torodi Ar. Bea	149.62	288	PKPbc	PKPbc	05 27 14.2	+0.1
	0.4nm,0.6s,baz=70,slow=2.3,SNR=7.0						

GUC 03 05:09:25.7±0.7, 31°.08S×68°.53W, h149km±41km, ML3.6, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	2.12	267	eP	Pn	05 10 02.7	+0.4
CMCH				eS	Sn	05 10 30.9	+0.4
CMCH				AML	AML	05 10 31.9	
	comp=N,918nm,0.5s						
TLL	Tololo Astrono	2.16	294	eP	Pn	05 10 03.7	+0.7
TLL				eS	Sn	05 10 32.9	+1.3
TLL				AML	AML	05 10 36.9	
	comp=E,116nm,0.4s						
LCO	Las Campanas	2.79	317	eP	Pn	05 10 11.8	+1.0
LCO				eS	Sn	05 10 45.9	+0.4
LMEL	Las Melosas	3.10	207	eP	Pn	05 10 15.3	+0.8
LMEL				eS	Sn	05 10 52.9	+0.6
CACH	El Canelo	3.50	209	eP	Pn	05 10 20.6	+1.0

MDD 03 05:25:05.4±2.2, 38°.89N×17°.38W, h0km, mb4.4/3, Error ellipse: s-maj=23.8km s-min=16.3km az=146.0
PDA 03 05:25:09.0±3.2, 38°.90N×17°.64W, h10km, ML2.8, Error ellipse: s-maj=17.1km s-min=8.9km az=112.0
INMG 03 05:25:09.0±3.2, 38°.90N×17°.64W, h10km, ML2.8, Error ellipse: s-maj=17.1km s-min=8.9km az=112.0
CSEM 03 05:25:13.3±0.5, 39°.12N×16°.66W, h10km, mb4.4/3, Error ellipse: s-maj=7.9km s-min=7.4km az=50.0
ISC 03 05:25:09.5±3.8, 39°.07N±0°.07×16°.9W±0°.2, h10km, n75, σ1.61/107, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMAFR	Mafra	5.95	89	P	Pn	05 26 40.0	+2.3
	2.1nm,0.2s,SNR=7.9						
PMAFR				S	Sn	05 27 46.2	+0.3
	8.2nm,0.1s,SNR=7.9						
PMAFR	Mafra	5.95	89	P	Pn	05 26 40.0	+2.3
	2.1nm,0.2s,SNR=7.9						
PMAFR				S	Sn	05 27 46.2	+0.3
	8.2nm,0.1s,SNR=7.9						
PMPST	Porto Santo, M	6.00	175	eSn	Sn	05 27 30.1	-17
PMPS	Porto Santo	6.02	175	S	Sn	05 27 30.1	-17
PMPS	Porto Santo	6.02	175	S	Sn	05 27 30.1	-17
PMAR	Madeira	6.33	180	ePn	Pn	05 26 34.7	-8.4
PMAR				eSn	Sn	05 27 36.6	-19
PMAR				A	A	05 27 42.4	
	6.4nm,0.3s						
PMAR	Madeira	6.33	180	P	Pn	05 26 34.7	-8.4
PMAR				S	Sn	05 27 36.6	-19
	3.2nm,0.3s						
PMAR	Madeira	6.33	180	P	Pn	05 26 34.7	-8.4
PMAR				S	Sn	05 27 36.6	-19
	3.2nm,0.3s						
PTOM	Tomar	6.62	83	eSn	Sn	05 28 03.4	+1.0
PTOM				A	A	05 28 08.0	
	5.6nm,0.1s						
PTOM	Tomar	6.62	83	S	Sn	05 28 03.4	+1.0
	2.8nm,0.1s						
PTOM	Tomar	6.62	83	S	Sn	05 28 03.4	+1.0
	2.8nm,0.1s						
PTEO	Sao Teotonio	6.63	101	ePn	Pn	05 26 47.5	+0.6
PTEO				eSn	Sn	05 28 00.3	-2.2
PTEO				A	A	05 28 05.4	
	7.0nm,0.6s						
PTEO	Sao Teotonio	6.63	101	P	Pn	05 26 47.5	+0.6
PTEO				S	Sn	05 28 00.3	-2.2
	3.5nm,0.6s						
PTEO	Sao Teotonio	6.63	101	P	Pn	05 26 47.5	+0.6
PTEO				S	Sn	05 28 00.3	-2.2
	3.5nm,0.6s						
PNCL	Nicolau / Gran	6.65	96	ePn	Pn	05 26 48.8	+1.6
PNCL				eSn	Sn	05 28 01.3	-1.7
PNCL				A	A	05 28 05.8	
	2.1nm,0.2s						
PNCL	Nicolau / Gran	6.65	96	ePn	Pn	05 26 48.8	+1.6
PNCL				eSn	Sn	05 28 01.3	-1.7
	2.1nm,0.2s						
PFVI	Vila Bisbo	6.67	104	ePn	Pn	05 26 48.5	+1.0
PFVI				eSn	Sn	05 28 00.4	-3.2
PFVI	Vila Bisbo	6.67	104	P	Pn	05 26 48.1	+0.5
	0.1nm,0.1s,SNR=7.9						
PFVI				S	Sn	05 27 59.7	-3.9
	1.3nm,0.3s,SNR=7.9						
PFVI	Vila Bisbo	6.67	104	P	Pn	05 26 48.1	+0.5
	0.1nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	6.67	104	ePn	Pn	05 26 48.5	+1.0
PFVI				S	Sn	05 27 59.7	-3.9
	1.3nm,0.3s,SNR=7.9						
PFVI				eSn	Sn	05 28 00.4	-3.2
MOE	Montemor	6.72	92	eSn	Sn	05 28 04.1	-0.7
MOE				eSn	Sn	05 28 07.9	+3.1
MOE	Montemor	6.72	92	S	Sn	05 28 04.1	-0.7
MOE	Montemor	6.72	92	S	Sn	05 28 04.1	-0.7
MORF	Marmelete	6.75	103	eSn	Sn	05 28 05.8	+0.2
MORF				A	A	05 28 08.4	
	3.2nm,0.4s						
MORF	Marmelete	6.75	103	S	Sn	05 28 05.8	+0.2
	3.2nm,0.4s						
MORF	Marmelete	6.75	103	S	Sn	05 28 05.8	+0.2
	3.2nm,0.4s						
PCVE	Castro Verde	7.13	99	eSn	Sn	05 28 13.4	-1.5
PCVE	Castro Verde	7.13	99	S	Sn	05 28 13.4	-1.5
PCVE	Castro Verde	7.13	99	S	Sn	05 28 13.4	-1.5
PVIS	Viseu	7.14	74	eSn	Sn	05 28 14.6	-0.5
PVIS	Viseu	7.14	74	S	Sn	05 28 14.6	-0.5
PVIS	Viseu	7.14	74	S	Sn	05 28 14.6	-0.5
EMAZ	Mazaricos	7.15	55	P	Pn	05 26 55.0	+0.9
	0.9nm,0.1s,SNR=5.7						
EMAZ				S	Sn	05 28 13.5	-1.9
	2.2nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	7.15	55	P	Pn	05 26 55.0	+0.9
	0.9nm,0.1s,SNR=5.7						
EMAZ				S	Sn	05 28 13.5	-1.9
	2.2nm,0.1s,SNR=7.9						
PBEJ	Beja	7.18	96	eSn	Sn	05 28 14.2	-1.8
PBEJ				A	A	05 28 17.2	
	2.2nm,0.2s						
PBEJ	Beja	7.18	96	S	Sn	05 28 14.2	-1.8
	1.1nm,0.2s						
PBEJ	Beja	7.18	96	S	Sn	05 28 14.2	-1.8
	1.1nm,0.2s						
PGAV	Gavieira, Arco	7.20	64	ePn	Pn	05 26 55.6	+0.8
PGAV				eSn	Sn	05 28 15.6	-1.1
PGAV				A	A	05 28 18.5	
	3.4nm,0.1s						
PGAV	Gavieira, Arco	7.20	64	ePn	Pn	05 26 55.6	+0.8
PGAV				eSn	Sn	05 28 15.6	-1.1
	3.4nm,0.1s						
PESTR	Estremoz	7.28	89	ePn	Pn	05 26 55.9	+0.1
PESTR				eSn	Sn	05 28 20.6	+2.1
PESTR	Estremoz	7.28	89	P	Pn	05 26 55.9	+0.1
PESTR				S	Sn	05 28 20.6	+2.1
PESTR	Estremoz	7.28	89	P	Pn	05 26 55.9	+0.1
PESTR				S	Sn	05 28 20.6	+2.1
PCAB	Cabril	7.29	66	eSn	Sn	05 28 18.2	-0.5
PCAB				A	A	05 28 23.9	
	5.0nm,0.1s						
PCAB	Cabril	7.29	66	S	Sn	05 28 18.2	-0.5
	2.5nm,0.1s						
PCAB	Cabril	7.29	66	S	Sn	05 28 18.2	-0.5
	2.5nm,0.1s						
PBDV	Barranco-do-Ve	7.32	102	ePn	Pn	05 26 58.2	+1.8
PBDV				eSn	Sn	05 28 18.0	-1.6
PBDV				A	A	05 28 23.7	
	2.2nm,0.3s						
PBDV	Barranco-do-Ve	7.32	102	P	Pn	05 26 58.2	+1.8
PBDV				S	Sn	05 28 18.0	-1.6
	2.2nm,0.3s						
PBDV	Barranco-do-Ve	7.32	102	P	Pn	05 26 58.2	+1.8
PBDV				S	Sn	05 28 18.0	-1.6
	2.2nm,0.3s						
PCBR	Castelo Branco	7.35	81	eSn	Sn	05 28 20.5	+0.2
PCBR	Castelo Branco	7.35	81	S	Sn	05 28 20.5	+0.2
PCBR	Castelo Branco	7.35	81	S	Sn	05 28 20.5	+0.2
STS	Santiago	7.39	56	P	Pn	05 26 58.3	+0.9
	3.0nm,0.1s,SNR=7.9						
STS	Santiago	7.39	56	P	Pn	05 26 58.3	+0.9
	3.0nm,0.1s,SNR=7.9						
PVAQ	Vaqueiros	7.44	100	ePn	Pn	05 26 59.5	+1.5
PVAQ				eSn	Sn	05 28 20.8	-1.6
PVAQ				A	A	05 28 28.4	
	1.6nm,0.2s						
PVAQ	Vaqueiros	7.44	100	P	Pn	05 26 59.5	+1.5
PVAQ				S	Sn	05 28 20.8	-1.6
	1.6nm,0.2s						
PVAQ	Vaqueiros	7.44	100	P	Pn	05 26 59.5	+1.5
PVAQ				S	Sn	05 28 20.8	-1.6
	1.6nm,0.2s						
EGRO	El Granado	7.58	99	P	Pn	05 27 01.4	+1.4
	0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	05 28 24.7	-1.3
	0.5nm,0.2s,SNR=7.9						
EGRO	El Granado	7.58	99	P	Pn	05 27 01.4	+1.4
	0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	05 28 24.7	-1.3
	0.5nm,0.2s,SNR=7.9						
EBAD	Badajoz	7.74	89	S	Sn	05 28 29.3	-0.5
	0.9nm,0.1s,SNR=7.9						
EBAD	Badajoz	7.74	89	S	Sn	05 28 29.3	-0.5
	0.9nm,0.1s,SNR=7.9						
PBAR	Barrancos	7.79	94	ePn	Pn	05 27 04.3	+1.4
PBAR				eSn	Sn	05 28 28.7	-2.5
PBAR				A	A	05 28 36.1	
	1.6nm,0.3s						
PBAR	Barrancos	7.79	94	P	Pn	05 27 04.3	+1.4
PBAR				S	Sn	05 28 28.7	-2.5
	1.6nm,0.3s						
PBAR	Barrancos	7.79	94	P	Pn	05 27 04.3	+1.4
PBAR				S	Sn	05 28 28.7	-2.5
	1.6nm,0.3s						
MVO	Moncorvo	7.87	71	ePn	Pn	05 27 05.5	+1.5
MVO				eSn	Sn	05 28 30.9	-2.2
MVO				A	A	05 28 35.5	
	3.2nm,0.2s						
MVO	Moncorvo	7.87	71	P	Pn	05 27 05.2	+1.2
	0.3nm,0.1s,SNR=7.9						
MVO				S	Sn	05 28 31.2	-1.9
	SNR=7.9						
MVO	Moncorvo	7.87	71	P	Pn	05 27 05.2	+1.2
	0.3nm,0.1s,SNR=7.9						
MVO	Moncorvo	7.87	71	ePn	Pn	05 27 05.5	+1.5
MVO				eSn	Sn	05 28 30.9	-2.2
	3.2nm,0.2s						
MVO				S	Sn	05 28 31.2	-1.9
	SNR=7.9						
EMIN	Mina Concepcio	8.15	96	P	Pn	05 27 09.7	+1.8
	0.6nm,0.2s,SNR=7.9						
EMIN				S	Sn	05 28 38.8	-1.3
	1.2nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	8.15	96	P	Pn	05 27 09.7	+1.8
	0.6nm,0.2s,SNR=7.9						
EMIN				S	Sn	05 28 38.8	-1.3
	1.2nm,0.2s,SNR=7.9						
ECAL	Calabor	8.27	66	P	Pn	05 27 09.9	+0.3
	1.1nm,0.2s,SNR=7.9						
ECAL				S	Sn	05 28 42.2	-0.9
	2.1nm,0.2s,SNR=7.9						
ECAL	Calabor	8.27	66	P	Pn	05 27 09.9	+0.3
	1.1nm,0.2s,SNR=7.9						
ECAL				S	Sn	05 28 42.2	-0.9
	2.1nm,0.2s,SNR=7.9						
EPLA	Plasencia	8.44	80	S	Sn	05 28 47.6	+0.6
	2.4nm,0.2s,SNR=7.9						
EPLA	Plasencia	8.44	80	S	Sn	05 28 47.6	+0.6
	2.4nm,0.2s,SNR=7.9						
EPON	Pontenova	8.51	57	S	Sn	05 28 45.7	-3.0
	1.0nm,0.2s,SNR=7.9						
EPON	Pontenova	8.51	57	S	Sn	05 28 45.7	-3.0
	1.0nm,0.2s,SNR=7.9						

IDC 03 05:34:28.4±1.1, 17°.98S×167°.82E, h0km, mb4.0/9, mb1 4.2/10, mb1mx4.0/18, mbtmp3.9/10, ML3.7/1, MS3.6/3, Ms1 3.5/3, ms1mx3.2/23, Error ellipse: s-maj=40.4km s-min=18.9km az=141.0
ISCJB 03 05:34:31.6±0.8, 18°.09S±0°.07×167°.8E±0°.1, h32km, mb3.9/9, MS3.4/3, Error ellipse: s-maj=20.6km s-min=7.7km az=16.6
ISC 03 05:34:33.0±1.0, 18°.1S±0°.1×167°.8E±0°.2, h32km, n15, σ1.11/14, mb4.0/8, MS3.5/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.18	198	eP	Pn	05 35 35.5	+0.8
DZM				eS	Sn	05 36 21.9	-0.8
DZM	Mont Dzumac	4.18	198	Pn	Pn	05 35 35.3	+0.5
	4.5nm,0.3s,baz=34,slow=20,SNR=19						
DZM				Sn	Sn	05 36 22.3	-0.4
	25nm,0.3s,baz=117,slow=22,SNR=9.6						
NOUC	Port Laguerre	4.26	199	eS	Sn	05 36 23.6	-0.6
NOUC				eS	Sn	05 36 24.4	+0.1
NOUC				AMP		05 36 43.1	
	comp=Z,26nm,5.1s						
CTA	Charters Tower	20.49	261	P	Pn	05 39 09.7	-1.1
	comp=Z,2.1nm,0.3s,baz=83,slow=15,SNR=3.1						
PMG	Port Moresby	21.83	290	LR	LR	05 46 30.0	
	comp=Z,133nm,18.1s,baz=228,slow=33						
STKA	Stephens Creek	27.38	235	P	P	05 40 16.8	+1.2
	comp=Z,2.9nm,0.9s,baz=98,slow=2.8,SNR=5.1						
STKA				LR	LR	05 51 14.3	
	comp=Z,106nm,18.1s,baz=192,slow=37						
WRA	Warramunga Arr	31.69	261	P	P	05 40 52.2	-1.8
	comp=Z,0.4nm,0.7s,baz=90,slow=9.2,SNR=3.7						
ASAR	Alice Springs	32.13	254	P	P	05 40 57.2	-0.7
	comp=Z,1.4nm,0.6s,baz=80,slow=8.8,SNR=12						
ASAR				LR	LR	05 54 18.8	
	comp=Z,87nm,18.0s,baz=260,slow=37						
PETK	Petropavlovsk-	71.42	354	P	P	05 45 50.2	+0.3
	comp=Z,4.9nm,0.9s,baz=148,slow=9.5,SNR=6.2						
CMAR	Chiang Mai Arr	76.81	295	P	P	05 46 27.6	+5.5
	comp=Z,0.4nm,0.3s,baz=127,slow=4.3,SNR=4.5						
SONM	Songino Array	85.49	324	P	P	05 47 09.8	+1.9
	comp=Z,0.4nm,0.4s,baz=146,slow=2.6,SNR=5.1						
NVAR	Mina Array Bea	89.04	49	P	P	05 47 25.2	-0.1
	comp=Z,1.0nm,0.8s,baz=223,slow=8.7,SNR=6.6						
ILAR	Eielson Array	89.53	18	P	P	05 47 25.1	-1.6
	comp=Z,0.3nm,0.7s,baz=226,slow=5.9,SNR=7.4						
TXAR	Lajitas Array	97.39	62	P	Pdif	05 48 04.6	+0.7
	comp=Z,0.2nm,0.8s,baz=236,slow=6.4,SNR=3.1						
YKA	Yellowknife Ar	100.25	27	P	Pdif	05 48 15.6	-0.1
	comp=Z,0.1nm,0.5s,baz=259,slow=4.4,SNR=5.1						

IDC 03 06:11:01.5±1.7, 29°.74N×90°.69E, h0km, mb3.4/5, mb1 3.7/7, mb1mx3.5/29, mbtmp3.5/7, ML3.6/2, MS3.4/1, Ms1 3.4/1, ms1mx2.5/22, Error ellipse: s-maj=66.2km s-min=19.9km az=70.0
ISC 03 06:11:01.7±1.2, 29°.6N±0°.1×90°.6E±0°.4, h8km, n9, σ1.08/8, mb3.7/5, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHL	Shillong	4.17	163	ePN	Pb	06 12 14.5	-0.9
SHL				eSN	Sb	06 13 06.0	+0.1
CMAR	Chiang Mai Arr	13.45	144	Pn	Pn	06 14 16.7	+3.7
	0.4nm,0.3s,baz=310,slow=13,SNR=3.9						
MKAR	Makanchi Array	18.36	342	P	Pn	06 15 16.7	+0.1
	0.0nm,0.3s,baz=143,slow=12,SNR=2.9						
SONM	Songino Array	21.94	29	P	P	06 15 55.5	-0.3
	2.3nm,0.8s,baz=212,slow=13,SNR=12						
KURBB	Kurchatov Arra	22.89	340	P	P	06 16 05.9	+0.3
	0.4nm,0.7s,baz=153,slow=10,SNR=3.9						
KSRS	Korea Array	31.96	66	LR	LR	06 31 14.9	
	comp=Z,61nm,18.2s,baz=124,slow=38						
WRA	Warramunga Arr	64.83	134	P	P	06 21 42.6	+1.2
	0.6nm,0.8s,baz=325,slow=6.5,SNR=3.5						
ASAR	Alice Springs	67.36	137	P	P	06 21 59.2	+1.5
	0.4nm,0.7s,baz=326,slow=7.8,SNR=3.6						
ILAR	Eielson Array	75.94	22	P	P	06 22 47.6	-1.1
	0.4nm,1.0s,baz=297,slow=5.1,SNR=4.9						

ISCJB 03 06:13:13.7±0.6, 24°.80N±0°.04×122°.46E±0°.02, h1km±5km, Error ellipse: s-maj=7.4km s-min=3.1km az=7.3
JMA 03 06:13:14.5±0.2, 24°.76N×122°.49E, h0km
TAP 03 06:13:15.6, 24°.79N×122°.29E, h4km±1km, ML3.1, D
ISC 03 06:13:14.1±1.1, 24°.78N±0°.04×122°.46E±0°.02, h7km±11km, n26, σ0.66/40, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.48	298	⇓iP	Pg	06 13 23.6	+0.2
	baz=309						
TWB1				S	Sg	06 13 29.5	-0.2
	baz=309						
TWC	Suao	0.58	253	P	Pg	06 13 25.1	-0.2
	baz=245						
TWC				eS	Sg	06 13 32.9	+0.1
	baz=245						
YOJ	Yonaguni jima	0.60	122	P	Pg	06 13 25.8	+0.1
YOJ				eS	Sg	06 13 33.7	+0.2
ILA	Ilan	0.64	269	eP	Pg	06 13 26.0	-0.5
	baz=267						
NWF	Wu-fen Shan	0.68	295	P	Pg	06 13 27.8	+0.6
	baz=301						
NWF				S	Sg	06 13 36.0	0.0
	baz=301						
TWE	Neicheng	0.72	265	P	Pg	06 13 27.7	-0.3
	baz=262						
TWE				eS	Sg	06 13 37.5	+0.2
	baz=262						
ENA	Nanau	0.74	242	i P	Pg	06 13 28.8	+0.4
	baz=233						
ENA				eS	Sg	06 13 37.9	0.0
	baz=233						
ENTT	Nioudou	0.82	260	eP	Pg	06 13 30.4	+0.5
	baz=257						
ENTT				eS	Sb	06 13 41.4	-0.6
	baz=257						
TWY	Chenhua	0.92	303	eP	Pg	06 13 32.2	+0.4
	baz=307						
TWY				eS	Sg	06 13 43.8	0.0
	baz=307						
NSK	Sanguang	1.00	264	P	Pg	06 13 33.2	-0.2
	baz=262						
NSK				eS	Sg	06 13 46.0	-0.4
	baz=262						
NNS	Nan Shan	1.04	251	eP	Pb	06 13 34.5	0.0
	baz=247						
TWD	Chiawan	1.05	228	eP	Pg	06 13 34.3	0.0
	baz=221						
HWA	Hwalien	1.11	224	eP	Pn	06 13 38.6	+2.5
	baz=217						
IRIF	Iriomote-Funau	1.24	111	P	Pg	06 13 38.0	0.0
IRIF				eS	Sg	06 13 53.1	-1.0
WHF	Hehuan Shan	1.26	240	P	Pg	06 13 38.1	-0.1
	baz=235						
WHF				eS	Sg	06 13 53.6	-1.0
	baz=235						
TWT	Tachien	1.28	246	eP	Pn	06 13 39.3	+0.7
	baz=242						
TWT				eS	Sg	06 13 55.0	-0.3
	baz=242						
NSTT	Nanjuang	1.33	264	eP	Pn	06 13 38.0	-1.1
	baz=262						
HATJ	Hateruma jima	1.43	120	eS	Sg	06 13 59.7	-0.3
JKRS	Kuro-shima	1.52	111	P	Pb	06 13 42.5	-0.1
JKRS				eS	Sn	06 14 00.7	-0.9
JIJ	Ishigaki jima	1.59	105	P	Pn	06 13 43.3	+0.6
JIJ				eS	Sn	06 14 03.8	+0.3
SMLT	Sun Moon Lake	1.68	238	eP	Pb	06 13 45.6	+0.2
	baz=234						
TYC	Yuchr	1.70	239	eP	Pn	06 13 45.0	+0.8
	baz=235						
YUS	Yu-Shan	1.88	227	eP	Pb	06 13 48.8	-0.3
	baz=223						
ALS	Alishan	1.97	230	eP	Pb	06 13 50.6	+0.1
	baz=226						
CHN5	Tsauling	2.00	234	eP	Pb	06 13 50.0	-1.0
	baz=231						
CHN4	Tsaushan	2.22	230	eP	Pn	06 13 51.9	+0.6
	baz=227						

NEIC 03 06:29:51.7±1.2, 21°.73S×177°.76W, h342km±12km, mb4.3/19, Error ellipse: s-maj=17.7km s-min=10.8km az=145.0
IDC 03 06:29:59.5±4.0, 21°.45S×177°.99W, h418km±40km, mb3.6/17, mb1 3.8/18, mb1mx3.8/22, mbtmp3.6/18, Error ellipse: s-maj=18.1km s-min=12.6km az=79.0
ISC 03 06:29:58.4±0.4, 21°.60S±0°.09×177°.88W±0°.09, h412km, n72, σ1.34/72, mb4.2/33, 3C-2D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.43	314	ePn	P	06 31 20.4	-5.1
RAO	Raoul Island	7.62	180	S	S	06 33 08.3	-12
	20nm,0.3s,baz=59,slow=19,SNR=2.0						
AFI	Afiamalu	9.60	38	ePn	P	06 32 02.6	-9.0
AFI	Afiamalu	9.60	38	P	P	06 32 04.9	-6.8
	1.2nm,0.3s,baz=198,slow=6.4,SNR=2.1						
AFI				S	S	06 33 40.9	-21
	5.7nm,0.3s,baz=38,slow=19,SNR=5.4						
DZM	Mont Dzumac	14.57	265	P	P	06 33 06.8	+0.8
	0.4nm,0.3s,baz=90,slow=18,SNR=3.7						
RAR	Rarotonga	16.87	92	eP	P	06 33 26.5	-4.0
URZ	Urewera	17.16	193	eP	P	06 33 27.7	-5.7
	12nm,0.8s						
URZ	Urewera	17.16	193	P	P	06 33 27.6	-5.8
	1.4nm,0.3s,baz=8.4,slow=8.6,SNR=13						
URZ				S	S	06 36 27.2	-4.1
	0.3nm,0.3s,baz=258,slow=19,SNR=2.9						
RPZ	Rata Peaks	23.90	200	P	P	06 34 37.8	+0.5
	3.7nm,0.3s,baz=32,slow=7.2,SNR=2.3						
STKA	Stephens Creek	37.43	245	eP	P	06 36 33.3	-1.3
	2.6nm,0.9s						
STKA	Stephens Creek	37.43	245	P	P	06 36 35.0	+0.5
	9.6nm,0.6s,baz=90,slow=9.7,SNR=20						
AS31	Alice Springs	44.39	258	eP	P	06 37 30.4	-0.3
ASAR	Alice Springs	44.39	258	P	P	06 37 30.6	-0.1
	8.8nm,0.7s,baz=91,slow=8.2,SNR=98						
ASAR				pP	pP	06 38 53.5	+2.6
	2.7nm,1.0s,baz=80,slow=8.7,SNR=4.1						
ASAR				S	S	06 43 29.8	-4.3
	0.3nm,0.5s,baz=105,slow=18,SNR=4.7						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.57	263	P	P	06 37 31.2	-0.9
	4.8nm,0.8s,baz=96,slow=7.6,SNR=63						
WRA				PcP	PcP	06 39 08.6	+1.7
	0.6nm,0.8s,baz=88,slow=1.7,SNR=3.2						
FORT	Forrest	48.97	247	eP	P	06 38 05.4	-0.2
	38nm,0.8s						
SBA	Scott Base	56.79	184	eP	P	06 39 05.0	+4.0
	15nm,1.4s						
VNDA	Vanda	56.83	185	P	P	06 39 03.6	+2.3
	0.7nm,0.5s,baz=352,slow=8.6,SNR=16						
VNDA				PcP	PcP	06 39 52.2	+0.7
	1.3nm,0.9s,baz=326,slow=5.5,SNR=4.3						
MBWA	Marble Bar	57.73	258	eP	P	06 39 07.8	-0.8
	22nm,1.0s						
QSPA	South Pole Qui	68.47	180	eP	P	06 40 18.2	+0.7
	7.8nm,1.0s						
QSPA	South Pole Qui	68.47	180	P	P	06 40 19.3	+1.7
	7.2nm,0.9s,baz=39,slow=1.3,SNR=24						
MJAR	Matsushiro Arr	71.16	324	P	P	06 40 33.1	-0.9
	0.6nm,0.3s,baz=181,slow=7.6,SNR=4.3						
TPUB	Ta-pu	74.67	303	eP	P	06 40 53.9	-0.7
	33nm,0.7s						
PETK	Petropavlovsk-	77.36	345	P	P	06 41 08.8	-0.1
	7.2nm,1.0s,baz=144,slow=10,SNR=8.6						
KSRS	Korea Array	77.78	319	P	P	06 41 11.8	+0.3
	1.6nm,0.8s,baz=106,slow=9.2,SNR=8.1						
SAO	San Andreas Ge	78.75	43	eP	P	06 41 17.6	+0.7
	6.4nm,0.9s						
MAW	Mawson	80.57	200	P	P	06 41 27.3	+1.2
	2.5nm,0.6s,baz=103,slow=7.8,SNR=8.0						
YBH	Yreka Blue Hor	81.07	38	eP	P	06 41 29.9	+0.8
	8.1nm,1.3s						
WCN	Washoe City	81.35	42	eP	P	06 41 31.0	+0.2
	3.4nm,1.0s						
HUMO	Hull Mountain	81.49	38	eP	P	06 41 32.5	+1.3
	8.7nm,1.4s						
NVAR	Mina Array Bea	81.74	43	P	P	06 41 33.4	+0.6
	1.9nm,0.7s,baz=223,slow=8.0,SNR=17						
TUC	Tucson	83.57	52	eP	P	06 41 43.5	+1.4
	4.0nm,1.1s						
WVOR	Wild Horse Val	83.90	40	eP	P	06 41 44.2	+0.6
	4.3nm,1.0s						
CCUT	Cedar City	84.48	46	eP	P	06 41 48.1	+1.4
SNAA	Sanae	86.91	178	P	P	06 41 57.7	-0.1
	0.3nm,0.5s,baz=190,slow=6.1,SNR=11						
TXAR	Lajitas Array	87.55	57	P	P	06 42 02.8	+1.3
	1.3nm,0.7s,baz=217,slow=6.4,SNR=24						
TXAR				pP	pP	06 43 34.4	-1.4
	1.1nm,1.1s,baz=231,slow=5.6,SNR=6.7						
DLMT	Dillon	89.15	40	eP	P	06 42 09.8	+1.1
	3.8nm,1.0s						
TPAW	Teton Pass	89.17	42	eP	P	06 42 09.6	+0.6
	7.1nm,1.5s						
SNOW	Snow King Moun	89.28	42	eP	P	06 42 10.6	+1.1
	4.6nm,1.0s						
ILAR	Eielson Array	89.36	13	P	P	06 42 07.7	-1.3
	0.8nm,0.6s,baz=216,slow=5.5,SNR=15						
PDAR	Pinedale Array	89.68	43	P	P	06 42 11.3	0.0
	1.9nm,0.9s,baz=198,slow=4.2,SNR=9.6						
BOZ	Bozeman (W)	89.88	40	eP	P	06 42 12.4	+0.4
	6.0nm,1.3s						
CMAR	Chiang Mai Arr	90.59	290	P	P	06 42 16.0	+0.2
	2.2nm,0.6s,baz=126,slow=2.3,SNR=9.9						
EGAK	Eagle	90.63	15	eP	P	06 42 14.8	-0.1
	3.2nm,0.9s						
PHWY	Pilot Hill	91.65	46	eP	P	06 42 14.3	-6.3
	10nm,0.5s						
YKA	Yellowknife Ar	97.46	25	P	P	06 42 44.9	-1.1
	0.1nm,0.5s,baz=239,slow=4.7,SNR=3.5						
SWET	Sewanee	103.65	57	ePdif	Pdif	06 43 14.9	+0.6
ZALV	Zalesovo Beam	111.42	321	PKiKP	PKiKP	06 47 41.1	-3.0
	0.6nm,0.4s,baz=149,slow=3.4,SNR=3.1						
MKAR	Makanchi Array	112.03	313	PKiKP	PKiKP	06 47 44.5	-1.1
	0.4nm,0.4s,baz=180,slow=0.4,SNR=12						
ARCES	ARCESS Array B	130.02	349	PKP	PKPdf	06 48 18.6	-0.8
	1.1nm,0.4s,baz=41,slow=0.5,SNR=13						
FINES	FINESS Array B	136.85	343	PKhKP	PKPpre	06 48 26.2	
	2.3nm,0.8s,baz=116,slow=3.2,SNR=2.2						
AKASG	Malin Array Be	144.02	330	PKP	PKPbc	06 48 43.3	-1.2
	8.3nm,0.4s,baz=44,slow=4.2,SNR=26						
KIEV	Kiev	144.04	330	ePKPdf	PKPbc	06 48 43.7	-0.9
ELZG	Elazig	144.21	306	i P	PKPdf	06 48 46.4	-0.2
KEMA	Kemaliye	144.33	308	i P	PKPdf	06 48 46.7	0.0
CTKT	Corum	146.48	312	i P	PKPbc	06 48 53.3	+0.8
COBT	Iskenderun	146.87	304	i P	PKPdf	06 48 51.2	0.0
AVNT	Avonos	147.16	309	i P	PKPdf	06 48 51.8	+0.3
ELDT	Eldivan	147.47	313	i P	PKPbc	06 48 56.5	+1.2
BRTR	Keskin Array B	147.65	311	PKPbc	PKPbc	06 48 55.1	-0.6
	5.5nm,0.6s,baz=138,slow=4.3,SNR=22						
GULE	Gulek	147.75	306	i P	PKPbc	06 48 56.3	+0.3
BURAR	Bucovina Array	148.07	330	⇑iP	PKPbc	06 48 57.7	+1.2
VRI	Vrincioaia	148.54	326	⇓iP	PKPbc	06 48 59.4	+1.8
CLL	Collm	149.15	347	ePKPbc	PKPbc	06 48 59.0	+0.1
	comp=Z,9.0nm,0.9s						
CLL				ePKiKP	PKiKP	06 49 01.0	+1.1
CLL				ePKPab	PKPab	06 49 05.0	+0.2
MLR	Muntele Rosu	149.20	326	⇑iP	PKPbc	06 49 01.4	+2.0
ERMK	Ermenek	149.37	306	i P	PKPbc	06 49 00.8	+0.6
ARR	Arges	149.96	327	⇓iP	PKPbc	06 49 02.5	+1.4
GAZI	Gazipasa	149.96	306	i P	PKPbc	06 49 01.6	+0.2
KHC	Kasperske Hory	151.05	344	⇑ePKP	PKPbc	06 49 03.0	-0.5
KHC				ePKPAB	PKPab	06 49 14.0	+1.2
KHC	Kasperske Hory	151.05	344	ePKPdf	PKPbc	06 49 03.5	0.0
GEC2	GERESS Array S	151.28	344	ePKPdf	PKPbc	06 49 04.7	+0.6
GERES	GERESS Array B	151.28	344	PKPbc	PKPbc	06 49 03.8	-0.3
	comp=Z,1.7nm,0.6s,baz=29,slow=3.0,SNR=12						
GERES				PKPab	PKPab	06 49 14.3	+0.4
	comp=Z,1.1nm,0.6s,baz=347,slow=5.5,SNR=4.4						
TORD	Torodi Ar. Bea	171.59	177	PKP	PKPdf	06 49 18.5	-0.8
	comp=Z,0.6nm,1.0s,baz=172,slow=0.5,SNR=4.6						
TORD				PKPab	PKPab	06 50 43.6	+0.7
	comp=Z,1.6nm,0.9s,baz=174,slow=3.7,SNR=5.4						

NNC 03 06:40:56.0±4.9, 37°.04N×69°.00E, h0km, mb3.7, mpv3.3, 1C-4D, Error ellipse: s-maj=41.3km s-min=37.8km az=115.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.16	10	⇑Pn	Pn	06 42 30.8	+2.5
	1.3nm,0.5s,baz=196,slow=15,SNR=51						
KK31				⇓Sn	Sn	06 43 45.9	+6.4
	1.0nm,0.3s,baz=187,slow=22						
TKM2	Tokmak 2	7.75	39	⇓Pn	Pn	06 42 50.5	+0.2
	1.9nm,0.9s						
TKM2				⇓Sn	Sn	06 44 21.0	+2.0
	1.6nm,0.7s						
AB31	Akbulak array	13.87	335	Pn	Pn	06 44 14.4	+0.7
	0.5nm,0.4s,baz=162,slow=12,SNR=15						
AB31				⇓Sn	Sn	06 46 49.1	+0.7
	0.4nm,0.6s						

*TIR **03** 06:58:56.9, 37°.02N×21°.03E, h1km, ML4.3*
*IDC **03** 06:59:06.8±0.8, 37°.71N×21°.17E, h0km, mb4.1/14, mb1 4.1/16, mb1mx3.9/32, mbtmp4.0/16, ML4.1/2, MS3.1/2, Ms1 3.1/2, ms1mx2.4/41, Error ellipse: s-maj=19.1km s-min=15.1km az=142.0*
*CSEM **03** 06:59:07.3±0.3, 37°.67N×21°.10E, h2km, ML4.0/8, Mw4.2, Error ellipse: s-maj=6.8km s-min=5.2km az=61.0*
*ATH **03** 06:59:07.9, 37°.68N×21°.14E, h8km±2km, MD3.7/32, ML3.8*
*THE **03** 06:59:08.6, 37°.71N×21°.17E, h9km±2km, ML4.0/8, Error ellipse: s-maj=2.5km s-min=0.9km az=42.0*
ISC 03 06:59:08.4±1.1, 37°.70N±0°.02×21°.14E±0°.02, h7km±7km, n120, σ1.s36/159, mb4.1/16, Southern Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.44	36	P	Pg	06 59 16.0	-0.9
RLS				S	Sg	06 59 22.6	-0.1
RLS	Riolos of Patr	0.44	36	ePB	Pg	06 59 16.2	-0.7
RLS	Riolos of Patr	0.44	36	P	Pg	06 59 16.0	-0.9
RLS				S	Sg	06 59 22.6	-0.1
AMT	Artemida-Makis	0.48	110	ePB	Pg	06 59 17.4	-0.3
AMT				eSB	Sg	06 59 24.0	0.0
KFL	Anninata	0.49	326	P	Pg	06 59 18.3	+0.3
KFL				S	Sb	06 59 28.0	+1.1
KFL	Anninata	0.49	326	P	Pg	06 59 18.3	+0.3
KFL				S	Sb	06 59 28.0	+1.1
VLS	Valsamata	0.65	318	P	Pg	06 59 20.7	-0.1
VLS				S	Sb	06 59 31.7	+0.4
VLS	Valsamata	0.65	318	ePB	Pg	06 59 20.8	-0.1
VLS				eSB	Sb	06 59 30.9	-0.4
VLS	Valsamata	0.65	318	P	Pg	06 59 20.7	-0.1
VLS				S	Sb	06 59 31.7	+0.4
ITM	Ithomi	0.81	130	P	Pg	06 59 23.1	-0.9
ITM				S	Sb	06 59 36.3	+0.3
ITM	Ithomi	0.81	130	ePB	Pg	06 59 23.5	-0.5
ITM	Ithomi	0.81	130	P	Pg	06 59 23.1	-0.9
ITM				S	Sb	06 59 36.3	+0.3
LAKA	Lakka	0.85	51	P	Pg	06 59 23.3	-1.5
LAKA				S	Sg	06 59 36.3	+0.4
LAKA	Lakka	0.85	51	ePG	Pg	06 59 24.0	-0.8
LAKA				eSB	Sg	06 59 36.8	+0.9
LAKA	Lakka	0.85	51	P	Pg	06 59 23.3	-1.5
LAKA				S	Sg	06 59 36.3	+0.4
PSA1	Psathopyrgos	0.86	43	ePB	Pg	06 59 24.8	-0.1
KLV	Kalavryta, Ach	0.87	66	ePB	Pg	06 59 23.9	-1.2
KLV				eSB	Sg	06 59 36.3	-0.1
EFP	Efpalio	0.94	39	P	Pg	06 59 25.4	-1.1
EFP				S	Sb	06 59 40.4	+0.6
EFP	Efpalio	0.94	39	ePG	Pg	06 59 25.5	-1.1
EFP				eSB	Sb	06 59 40.2	+0.4
EFP	Efpalio	0.94	39	P	Pg	06 59 25.4	-1.1
EFP				S	Sb	06 59 40.4	+0.6
GUR	Goura	0.98	76	P	Pg	06 59 25.6	-1.6
GUR				S	Sg	06 59 40.5	+0.6
GUR	Goura	0.98	76	ePB	Pg	06 59 25.7	-1.5
GUR				eSB	Sb	06 59 41.3	+0.4
GUR	Goura	0.98	76	P	Pg	06 59 25.6	-1.6
GUR				S	Sg	06 59 40.5	+0.6
VLX	Vlachokerasia	1.04	108	P	Pg	06 59 27.4	-0.9
VLX				S	Sb	06 59 43.2	+0.6
VLX	Vlachokerasia	1.04	108	ePB	Pg	06 59 27.3	-1.0
VLX				eSB	Sg	06 59 42.1	+0.3
VLX	Vlachokerasia	1.04	108	P	Pg	06 59 27.4	-0.9
VLX				S	Sb	06 59 43.2	+0.6
KALE	Kalithea	1.05	48	P	Pg	06 59 27.4	-1.1
KALE				S	Sb	06 59 43.3	+0.4
KALE	Kalithea	1.05	48	ePG	Pg	06 59 27.3	-1.2
KALE	Kalithea	1.05	48	P	Pg	06 59 27.4	-1.1
KALE				S	Sb	06 59 43.3	+0.4
LKD2	Lefkada island	1.15	341	P	Pg	06 59 29.2	-1.3
LKD2				S	Sn	06 59 49.3	+2.3
LKD2	Lefkada island	1.15	341	ePN	Pg	06 59 29.3	-1.3
LKD2	Lefkada island	1.15	341	P	Pg	06 59 29.2	-1.3
LKD2				S	Sn	06 59 49.3	+2.3
DSF	Desfina	1.30	57	P	Pn	06 59 31.6	-1.5
DSF				S	Sn	06 59 52.8	+2.0
DSF	Desfina	1.30	57	P	Pn	06 59 31.6	-1.5
DSF				S	Sn	06 59 52.8	+2.0
EVR	Evrytania	1.32	23	P	Pn	06 59 32.7	-0.7
EVR				S	Sn	06 59 53.6	+2.3
EVR	Evrytania	1.32	23	ePG	Pn	06 59 32.9	-0.5
EVR	Evrytania	1.32	23	P	Pn	06 59 32.7	-0.7
EVR				S	Sn	06 59 53.6	+2.3
DYR	Agios Nikonas	1.33	134	P	Pn	06 59 32.6	-0.9
DYR				S	Sn	06 59 55.1	+3.6
DYR	Agios Nikonas	1.33	134	ePB	Pn	06 59 33.2	-0.3
DYR	Agios Nikonas	1.33	134	P	Pn	06 59 32.6	-0.9
DYR				S	Sn	06 59 55.1	+3.6
LTK	Loutraki	1.48	77	P	Pn	06 59 34.7	-0.8
LTK	Loutraki	1.48	77	ePG	Pn	06 59 35.3	-0.2
LTK	Loutraki	1.48	77	P	Pn	06 59 34.7	-0.8
MAKR	Makrakomi, Fth	1.52	30	P	Pn	06 59 36.5	+0.4
MAKR				S	Sg	07 00 00.8	+3.4
MAKR	Makrakomi, Fth	1.52	30	P	Pn	06 59 36.5	+0.4
MAKR				S	Sg	07 00 00.8	+3.4
AXAR	Agios Charalam	1.60	48	P	Pn	06 59 37.1	0.0
AXAR				S	Sg	07 00 01.8	+2.0
AXAR	Agios Charalam	1.60	48	P	Pn	06 59 37.1	0.0
AXAR				S	Sg	07 00 01.8	+2.0
AGG	Agios Georgios	1.62	35	ePB	Pg	06 59 39.3	-0.1
DID	Didima	1.68	96	P	Pn	06 59 38.7	+0.5
DID				S	Sg	07 00 03.7	+1.5
DID	Didima	1.68	96	ePB	Pb	06 59 39.5	-0.1
DID	Didima	1.68	96	P	Pn	06 59 38.7	+0.5
DID				S	Sg	07 00 03.7	+1.5
VLI	Veliai	1.74	124	P	Pb	06 59 40.6	0.0
VLI				S	Sg	07 00 05.6	+1.4
VLI	Veliai	1.74	124	ePN	Pb	06 59 40.5	0.0
VLI	Veliai	1.74	124	P	Pb	06 59 40.6	0.0
VLI				S	Sg	07 00 05.6	+1.4
LKR	Lokris	1.75	56	P	Pn	06 59 40.0	+0.9
LKR				S	Sg	07 00 06.3	+1.8
LKR	Lokris	1.75	56	ePG	Pb	06 59 40.5	-0.2
LKR	Lokris	1.75	56	P	Pn	06 59 40.0	+0.9
LKR				S	Sg	07 00 06.3	+1.8
ATAL	Atalanti	1.78	56	P	Pb	06 59 41.4	0.0
ATAL				S	Sg	07 00 05.4	-0.3
ATAL	Atalanti	1.78	56	P	Pb	06 59 41.4	0.0
ATAL				S	Sg	07 00 05.4	-0.3
NAIG	Nisos Aigina	1.86	87	ePN	Pb	06 59 42.3	-0.4
JAN	Janina	1.97	353	ePG	Pg	06 59 45.8	-0.3
THL	Klokotos Trika	1.98	20	ePG	Pb	06 59 44.8	0.0
ATH	Athens Observa	2.06	82	ePN	Pb	06 59 44.9	-1.2
KYTH	Kithira	2.08	132	ePG	Pb	06 59 46.5	+0.1
PTL	Penteli	2.18	80	ePN	Pb	06 59 46.9	-1.3
KEK	Kerkira	2.27	333	ePB	Pn	06 59 47.3	+1.0
SRN	Sarande	2.35	338	ePN	Pg	06 59 55.7	+2.2
SRN				i SN	Sg	07 00 31.0	+7.0
SRN	Sarande	2.35	338	ePn	Pg	06 59 55.7	+2.2
SRN				i Sn	Sg	07 00 31.0	+7.0
ANKY	Antikythira Is	2.52	136	ePN	Pb	06 59 52.0	-2.0
AOS	Alonnisos	2.60	55	ePN	Pn	06 59 52.5	+1.6
KBN	Korca	2.93	355	ePN	Pb	07 00 00.0	-1.0
KBN				i SN	Sg	07 00 49.5	+6.9
KBN	Korca	2.93	355	ePn	Pb	07 00 00.0	-1.0
KBN				i Sn	Sg	07 00 49.5	+6.9
FNA	Florina	3.08	3	ePN	Pn	06 59 59.8	+2.2
BIA	Bitola	3.32	2	i Pn	Pn	07 00 04.1	+3.3
VAM	Vamos	3.36	132	ePN	Pn	07 00 02.5	+1.2
GRG	Griva	3.40	16	ePN	Pn	07 00 03.5	+1.7
APE	Apeiranthos	3.55	99	ePN	Pn	07 00 04.7	+0.7
VAY	Valandovo	3.78	17	i Pn	Pn	07 00 09.2	+2.2
IDI	Anoyia	3.86	127	ePN	Pn	07 00 09.0	+0.7
CHOS	Chios island	3.94	78	ePN	Pn	07 00 10.8	+1.5
PHP	Peshkopia	4.02	352	ePN	Pb	07 00 17.0	-2.5
PHP	Peshkopia	4.02	352	ePn	Pb	07 00 17.0	-2.5
LAST	Lasithi	4.32	125	ePN	Pn	07 00 15.4	+0.8
MMB	Musomiste	4.37	26	eP	Pn	07 00 16.6	+1.4
KKB	Krupnik	4.42	19	eP	Pn	07 00 20.0	+4.1
PUK	Puka	4.44	348	ePN	Pg	07 00 32.2	-1.3
PUK	Puka	4.44	348	ePn	Pg	07 00 32.2	-1.3
RZN	Rozhen	4.84	34	eP	Pn	07 00 22.2	+0.3
VTS	Vitosha	5.14	17	eP	Pn	07 00 31.0	+5.2
KDZ	Kurdzhali	5.14	39	eP	Pn	07 00 26.7	+0.9
STON	Ston	5.80	334	i Pn	Pn	07 00 33.3	-1.4
STON				Sn	Sn	07 01 37.6	-3.9
MPEP	Malo Peshtene	5.99	18	eP	Pn	07 00 41.0	+3.6
LTBQ	Tobruq	6.08	157	i P	Pn	07 00 38.7	+0.1
	SNR=146						
LTBQ				eS	Sn	07 01 52.5	+4.1
	SNR=146						
NVLJ	Novalja	8.33	327	ePn	Pn	07 01 10.5	+1.0
NVLJ				Sn	Sn	07 02 39.8	-4.0
MLR	Muntele Rosu	8.57	23	Pn	Pn	07 01 17.9	+4.9
	0.1nm,0.3s,baz=185,slow=12,SNR=2.5						
BRTR	Keskin Array B	9.97	74	Pn	Pn	07 01 37.3	+5.0
	0.2nm,0.3s,baz=263,slow=11,SNR=3.0						
VYHS	Vyhne	10.92	352	ePN	Pn	07 01 48.9	+3.9
STHS	Stebnicka Huta	11.71	0	ePN	Pn	07 02 00.7	+4.8
DAVOX	Davos/Dischmat	12.32	321	LR	LR	07 07 22.4	
	comp=Z,93nm,19.0s,baz=89,slow=40						
GERES	GERESS Array B	12.38	336	Pn	Pn	07 02 06.8	+1.7
	0.1nm,0.3s,baz=134,slow=9.6,SNR=2.5						
KBZ	Khabaz	17.54	63	P	P	07 03 16.7	+2.3
	0.1nm,0.3s,baz=243,slow=18,SNR=2.1						
ESDC	Sonseca Array	19.68	284	P	Pn	07 03 38.9	-0.6
	0.5nm,0.3s,baz=81,slow=12,SNR=12						
MDT	Midelt	21.56	265	P	P	07 03 57.5	-1.0
	2.5nm,0.9s,baz=67,slow=7.3,SNR=3.0						
HFS	Hagfors	22.95	350	P	P	07 04 11.8	-1.2
	4.0nm,0.8s,baz=146,slow=13,SNR=8.7						
FINES	FINESS Array B	23.97	6	P	P	07 04 22.3	-0.8
	4.3nm,0.7s,baz=165,slow=12,SNR=6.0						
EKA	Eskdalemuir Ar	24.10	325	P	P	07 04 24.3	-0.2
	3.8nm,0.8s,baz=120,slow=9.9,SNR=6.5						
NB2	NORSAR Subarra	24.18	348	P	P	07 04 23.9	-1.3
	comp=Z,1.8nm,0.7s,baz=159,slow=9.3						
NB2	NORSAR Subarra	24.18	348	P	P	07 04 23.9	-1.3
	comp=Z,1.8nm,0.7s,SNR=4.6						
NOA	NORSAR Array B	24.18	348	P	P	07 04 24.0	-1.2
	comp=Z,0.7nm,0.7s,baz=145,slow=6.2,SNR=3.0						
KAF	Kangasniemi	24.65	6	ep	P	07 04 29.0	-0.3
	comp=Z,3.6nm,0.7s,baz=195,slow=9.0						
JOF	Joensuu	26.00	11	ep	P	07 04 41.1	-0.5
	comp=Z,0.7nm,0.3s						
AKTO	Aktyubinsk	29.08	52	P	P	07 05 09.4	+0.1
	comp=Z,2.8nm,0.9s,baz=268,slow=8.9,SNR=11						
TORD	Torodi Ar. Bea	29.98	220	P	P	07 05 17.0	-0.6
	comp=Z,3.2nm,0.6s,baz=31,slow=9.3,SNR=20						
ARCES	ARCESS Array B	31.98	3	P	P	07 05 34.1	-0.7
	comp=Z,2.0nm,0.8s,baz=194,slow=10.0,SNR=5.3						
ARCES				LR	LR	07 19 00.2	
	comp=Z,24nm,18.3s,baz=197,slow=37						
DBIC	Dimbokro	38.88	224	P	P	07 06 34.1	-0.5
	comp=Z,3.4nm,0.8s,baz=34,slow=16,SNR=5.4						
MKAR	Makanchi Array	45.13	58	P	P	07 07 23.5	-1.9
	comp=Z,0.9nm,0.4s,baz=272,slow=8.1,SNR=14						
ZALV	Zalesovo Beam	45.65	48	P	P	07 07 28.1	-1.2
	comp=Z,4.6nm,0.6s,baz=254,slow=9.8,SNR=18						
SCHQ	Schefferville	59.14	318	P	P	07 09 09.3	-0.2
	comp=Z,1.2nm,0.4s,baz=63,slow=2.3,SNR=6.4						
CMAR	Chiang Mai Arr	69.47	82	P	P	07 10 18.6	+0.9
	comp=Z,0.6nm,0.3s,baz=302,slow=8.4,SNR=4.4						
YKA	Yellowknife Ar	74.00	340	P	P	07 10 43.5	-0.8
	comp=Z,0.4nm,0.7s,baz=36,slow=5.2,SNR=4.6						

*ISK **03** 07:00:54.9, 37°.20N×28°.19E, h19km, MD2.0*
*ISCJB **03** 07:00:55.4±1.1, 37°.20N±0°.08×28°.21E±0°.09, h20km±11km, Error ellipse: s-maj=16.1km s-min=6.4km az=41.2*
*CSEM **03** 07:00:55.1±0.1, 37°.20N×28°.22E, h20km, MD2.0, Error ellipse: s-maj=5.8km s-min=2.4km az=38.0*
*DDA **03** 07:00:55.5, 37°.21N×28°.14E, h6km, MD2.7*
ISC 03 07:00:55.2±1.1, 37°.21N±0°.07×28°.21E±0°.05, h19km±2km, n10, σ0.s33/18, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.09	142	ePG	Pg	07 00 58.7	-0.3
YER				eSG	Sg	07 01 01.9	+0.4
YER	Yerkesik	0.09	142	ePg	Pg	07 00 58.7	-0.3
YER				eSg	Sg	07 01 01.9	+0.4
MLSB	Milas	0.36	285	ePG	Pg	07 01 02.8	-0.1
MLSB				eSG	Sb	07 01 08.3	-0.2
MLSB	Milas	0.36	285	ePg	Pg	07 01 02.8	-0.1
MLSB				eSg	Sb	07 01 08.3	-0.2
TURN	Turunc	0.46	137	i P	Pg	07 01 04.0	-0.5
TURN				i S	Sb	07 01 11.4	+0.3
TURN	Turunc	0.46	137	i P	Pg	07 01 04.0	-0.5
TURN				i S	Sb	07 01 11.4	+0.3
AYDN	Tasoluk	0.53	330	i P	Pb	07 01 06.1	+0.2
AYDN				i S	Sg	07 01 13.0	0.0
AYDN	Tasoluk	0.53	330	i P	Pb	07 01 06.1	+0.2
AYDN				i S	Sg	07 01 13.0	0.0
BODT	Bodrum	0.74	259	ePG	Pg	07 01 09.4	-0.3
BODT	Bodrum	0.74	259	ePg	Pg	07 01 09.4	-0.3

*ISCJB **03** 07:09:46.5±0.4, 34°.40N±0°.06×136°.14E±0°.06, h382km±2km, mb3.4/12, Error ellipse: s-maj=10.1km s-min=6.5km az=142.1*
*JMA **03** 07:09:47.5±0.1, 34°.42N×136°.10E, h375km±1km, M3.3*
*IDC **03** 07:09:47.3±0.9, 34°.32N×136°.17E, h376km±10km, mb3.2/12, mb1 3.4/18, mb1mx3.3/33, mbtmp3.2/18, Error ellipse: s-maj=14.9km s-min=10.6km az=104.0*
ISC 03 07:09:47.4±0.7, 34°.41N±0°.07×136°.14E±0°.06, h376km±5km, n32, σ1.s01/46, mb3.4/12, Western Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKN2	Miekihoku	0.21	147	P	Pn	07 10 34.4	+0.3
JKN2				S	S	07 11 10.9	-0.8
JIE	Ise	0.47	93	P	Pn	07 10 34.9	+0.5
JIE				S	S	07 11 12.1	-0.1
JWY	Kouya	0.49	247	P	Pn	07 10 34.9	+0.3
JWY				S	S	07 11 11.6	-0.9
JWZ	Kozaga	0.95	202	P	Pn	07 10 35.6	-0.2
JWZ				S	S	07 11 13.6	-1.1
JWT	Wachi	1.06	325	P	Pn	07 10 36.2	+0.2
JWT				S	S	07 11 14.3	-0.9
JGM	Miyama	1.37	20	P	Pn	07 10 37.9	+0.5
JGM				S	S	07 11 17.8	+0.1
TK02	Tokai 2	1.42	109	S	S	07 11 19.8	+2.1
JAI	Aioi	1.53	247	P	Pn	07 10 38.4	+0.1
JAI				S	S	07 11 18.2	-1.0
JKG	Kaga	1.86	5	P	Pn	07 10 40.4	+0.4
JKG				S	S	07 11 22.3	-0.3
JMN	Monobe	2.00	251	P	Pn	07 10 41.3	+0.2
JHS	Saijyo	2.56	284	P	Pn	07 10 45.6	+0.6
JHS				S	S	07 11 31.6	0.0
MAT	Matsushiro	2.71	38	P	Pn	07 10 46.4	+0.2
MAT				S	S	07 11 33.6	-0.2
MJAR	Matsushiro Arr	2.71	38	P	Pn	07 10 46.4	+0.1
	16nm,0.3s,baz=215,slow=8.9,SNR=152						
MJAR				S	S	07 11 33.7	-0.1
	baz=224,slow=16,SNR=2.7						
JRY	Ryogami san	2.77	54	P	Pn	07 10 46.9	+0.2
JRY				S	S	07 11 36.2	+1.5
JTO	Tosashimizu	3.19	242	P	Pn	07 10 50.4	+0.1
JHJ	Hachijo jima 2	3.30	112	P	Pn	07 10 51.7	+0.4
	12nm,0.3s,baz=236,slow=18,SNR=4.4						
JHJ				S	S	07 11 36.1	-6.9
	13nm,0.3s,baz=37,slow=20,SNR=3.2						
JNU	Nakatsue	4.57	255	P	Pn	07 11 04.0	+0.3
	4.2nm,0.3s,baz=43,slow=4.2,SNR=30						
JNU				S	S	07 12 05.3	-0.2
	baz=207,slow=18,SNR=2.2						
KSRS	Korea Array	7.32	297	P	P	07 11 35.0	+0.1
	0.5nm,0.3s,baz=117,slow=12,SNR=8.1						
USRK	Ussuriysk Arra	10.28	343	P	P	07 12 08.8	+0.1
	0.8nm,0.3s,baz=167,slow=10,SNR=10						
ASAJ	Asahikawa	10.90	25	P	P	07 12 14.9	-0.7
	1.3nm,0.3s,baz=235,slow=20,SNR=6.1						
ASAJ				S	S	07 14 12.5	-4.7
	1.2nm,0.3s,baz=14,slow=31,SNR=6.6						
PETK	Petropavlovsk-	24.16	33	P	P	07 14 31.1	+0.1
	2.5nm,0.6s,baz=212,slow=8.2,SNR=6.2						
SONM	Songino Array	25.93	310	P	P	07 14 48.5	+1.6
	0.6nm,0.5s,baz=115,slow=10,SNR=5.8						
MKAR	Makanchi Array	41.94	304	P	P	07 17 03.0	+0.2
	0.4nm,0.5s,baz=92,slow=10,SNR=3.9						
FITZ	Fitzroy Crossi	53.17	193	P	P	07 18 27.5	-0.8
	2.5nm,1.0s,baz=0.0,slow=9.1,SNR=3.7						
ILAR	Eielson Array	53.97	31	P	P	07 18 33.6	+0.1
	1.0nm,0.6s,baz=256,slow=5.8,SNR=25						
WRA	Warramunga Arr	54.08	182	P	P	07 18 33.4	-1.4
	1.7nm,0.4s,baz=0.1,slow=7.7,SNR=35						
ASAR	Alice Springs	57.80	182	P	P	07 18 59.9	-0.9
	0.6nm,0.6s,baz=14,slow=13,SNR=7.1						
ARCES	ARCESS Array B	64.90	339	P	P	07 19 47.1	-0.2
	2.3nm,0.8s,baz=62,slow=8.4,SNR=6.4						
YKA	Yellowknife Ar	68.18	28	P	P	07 20 08.0	+0.1
	0.3nm,0.4s,baz=299,slow=6.0,SNR=10.0						
NVAR	Mina Array Bea	79.98	50	P	P	07 21 17.1	+1.0
	0.5nm,0.6s,baz=307,slow=4.2,SNR=6.7						
PDAR	Pinedale Array	82.53	43	P	P	07 21 29.6	+0.2
	0.4nm,0.7s,baz=340,slow=4.8,SNR=3.4						
TXAR	Lajitas Array	95.10	49	P	P	07 22 29.5	+0.5
	0.3nm,0.5s,baz=311,slow=2.6,SNR=6.3						

*IDC **03** 07:10:06.8±1.2, 9°.04N×121°.63E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/25, mbtmp3.7/4, MS3.2/8, Ms1 3.3/8, ms1mx2.9/47, Error ellipse: s-maj=131.4km s-min=23.7km az=65.0*
*ISCJB **03** 07:10:09.2±0.6, 9°.28N±0°.05×121°.79E±0°.05, h37km, mb3.9/4, MS3.2/7, Error ellipse: s-maj=8.8km s-min=5.4km az=43.5*
*MAN **03** 07:10:09, 9°.37N×121°.83E, h27km, mb5.0, ML3.9, MS4.0*
ISC 03 07:10:11.3±0.9, 9°.31N±0°.06×121°.81E±0°.06, h37km, n28, σ1.s67/21, mb3.9/4, MS3.2/7, 2C-3D, Sulu Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	1.41	88	i S	Pn	07 10 36.6	+2.1
GUIM	Jordan	1.52	30	eP	Pn	07 10 33.3	-2.7
IPIL	Ipil	1.69	153	eP	Pn	07 10 54.2	+16
CUYO	Cuyo Island	1.72	333	eP	Pn	07 10 38.0	-0.7
CUYO				eS	Sn	07 10 57.8	-1.6
TBP	Tagbilaran	2.06	79	eP	Pn	07 10 40.5	-3.0
PAGZ	Pagadian	2.13	133	eP	Pn	07 10 41.2	-3.1
LLP	Lapu-Lapu	2.35	65	⇓eP	Pn	07 10 46.7	-0.7
LLP				eS	Sn	07 11 14.7	-0.4
RCP	Roxas	2.42	22	⇑eP	Pn	07 10 47.9	-0.5

CGP	Cagayan de Oro	2.98	106	⇓eP	Pn	07 10 55.8	-0.2
CGP				eS	Sn	07 11 31.7	+1.2
ENPP	El Nido	3.01	309	eP	Pn	07 10 56.8	+0.3
OTRP	Odiongan	3.04	4	eP	Pn	07 11 07.9	+11
PPR	Puerto Princes	3.07	279	⇑eP	Pn	07 11 04.7	+7.4
MSLP	Maasin	3.12	74	eP	Pn	07 10 58.1	+0.1
CTBH	Cotabato--PC H	3.18	130	⇓iP	Pn	07 10 57.0	-1.8
SJMP	San Jose	3.21	348	eP	Pn	07 10 58.3	-0.9
BUKP	Musuan	3.52	114	eP	Pn	07 11 05.1	+1.6
DAV	Davao City (W)	4.35	120	LR	LR	07 12 36.1	
	comp=Z,211nm,21.4s,baz=141,slow=34						
CMAR	Chiang Mai Arr	23.96	295	LR	LR	07 24 57.0	
	comp=Z,51nm,20.7s,baz=110,slow=37						
JNU	Nakatsue	25.14	18	LR	LR	07 26 28.8	
	comp=Z,31nm,18.0s,baz=63,slow=39						
JHJ	Hachijo jima 2	28.93	32	LR	LR	07 27 48.6	
	comp=Z,41nm,18.2s,baz=265,slow=36						
MJAR	Matsushiro Arr	30.93	26	LR	LR	07 26 56.3	
	comp=Z,55nm,20.6s,baz=230,slow=32						
WRA	Warramunga Arr	31.58	157	P	P	07 16 29.6	-1.1
	0.6nm,0.9s,baz=331,slow=10,SNR=3.9						
ASAR	Alice Springs	34.84	160	P	P	07 16 58.0	-1.0
	1.0nm,0.6s,baz=342,slow=7.2,SNR=9.2						
SONM	Songino Array	40.55	344	LR	LR	07 36 17.3	
	comp=Z,39nm,19.6s,baz=63,slow=38						
STKA	Stephens Creek	45.12	156	P	P	07 18 24.2	+0.1
	3.3nm,0.8s,baz=327,slow=11,SNR=3.4						
MKAR	Makanchi Array	50.22	325	P	P	07 19 05.7	+2.0
	1.0nm,0.8s,baz=128,slow=7.8,SNR=7.5						
MKAR				LR	LR	07 40 41.1	
	comp=Z,37nm,18.9s,baz=172,slow=36						
NOA	NORSAR Array B	91.64	333	LR	LR	08 10 30.0	
	comp=Z,19nm,20.8s,baz=200,slow=40						
TXAR	Lajitas Array	121.74	47	PKP	PKPdf	07 29 03.5	+1.3
	0.3nm,1.0s,baz=264,slow=1.8,SNR=3.4						

IDC 03 07:22:35.9±8.0, 31°.79S×179°.94E, h305km±54km, mb3.3/4, mb1 3.3/5, mb1mx3.1/19, mbtmp3.2/5, Error ellipse: s-maj=85.5km s-min=23.3km az=45.0

ISC 03 07:22:45.8±2.2, 32°.5S±0°.1×179°.4E±0°.3, h372km, n15, σ1s.30/17, mb3.4/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MWZ	Matawai	6.06	194	PN	Pn	07 24 18.5	+0.5
URZ	Urewera	6.08	197	ePN	Pn	07 24 16.0	-2.1
URZ				SN	S	07 25 34.4	+1.1
URZ	Urewera	6.08	197	P	Pn	07 24 16.6	-1.6
	0.4nm,0.3s,baz=154,slow=23,SNR=25						
URZ				S	S	07 25 34.7	+1.3
	2.0nm,0.3s,baz=112,slow=23,SNR=20						
FWVZ	Far West T-bar	7.46	203	PN	Pn	07 24 33.7	-0.5
TSZ	Takapari Road	8.07	199	PN	Pn	07 24 39.5	-1.6
TSZ				SN	S	07 26 16.2	+0.9
BFZ	Birch Farm	8.59	196	ePN	Pn	07 24 46.2	-0.8
BFZ				SN	S	07 26 25.7	-0.6
MRZ	Mangatainoka R	8.74	199	PN	Pn	07 24 44.6	-4.3
MRZ				SN	S	07 26 28.6	-1.1
TCW	Tory Channel	9.64	203	SN	S	07 26 48.8	-0.3
NNZ	Nelson	9.97	207	PN	Pn	07 24 59.1	-4.2
THZ	Tophouse	10.62	207	ePN	Pn	07 25 07.0	-4.1
MQZ	McQueen's Vall	12.41	203	SN	S	07 27 48.6	+1.0
STKA	Stephens Creek	31.86	261	P	P	07 28 39.6	+1.8
	0.8nm,0.3s,baz=98,slow=12,SNR=7.4						
ASAR	Alice Springs	40.80	271	P	P	07 29 52.0	-0.7
	0.6nm,0.3s,baz=108,slow=7.4,SNR=14						
WRA	Warramunga Arr	41.98	276	P	P	07 30 00.8	-1.4
	0.9nm,0.3s,baz=113,slow=8.0,SNR=34						
QSPA	South Pole Qui	57.67	180	P	P	07 31 59.1	+0.7
	1.1nm,0.7s,baz=315,slow=19,SNR=6.8						

IDC 03 07:38:05.7±4.6, 15°.73S×173°.15W, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/22, mbtmp3.8/4, ML2.1/1, Error ellipse: s-maj=215.2km s-min=26.9km az=138.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.25	36	Pn	Pn	07 38 44.2	-0.1
	27nm,0.3s,baz=72,slow=1.3,SNR=33						
AFI				Sn	Sn	07 39 05.6	-7.3
	166nm,0.3s,baz=67,slow=22,SNR=15						
STKA	Stephens Creek	44.08	240	P	P	07 46 16.6	+0.9
	0.9nm,0.7s,baz=90,slow=5.1,SNR=3.7						
WRA	Warramunga Arr	50.00	257	P	P	07 47 01.1	-1.2
	0.5nm,0.9s,baz=98,slow=8.4,SNR=7.0						
ASAR	Alice Springs	50.23	252	P	P	07 47 04.1	+0.1
	1.3nm,0.6s,baz=88,slow=7.7,SNR=22						

WEL 03 07:38:40.1±0.9, 36°.32S×177°.91E, h5km, ML3.5/6, Error ellipse: s-maj=7.0km s-min=5.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.28	166	eP*	Pn	07 39 02.7	-1.9
MXZ				S*	Sg	07 39 16.8	-4.5
PUZ	Puketiti	1.77	171	ePN	Pn	07 39 11.0	-0.5
PUZ				SN	Sn	07 39 34.7	+0.3
PUZ				AML	AML	07 39 38.1	
KUZ	Kuaotunu	1.81	256	PN	Pn	07 39 10.7	-1.3
MWZ	Matawai	2.04	188	P*	Pn	07 39 13.9	-1.2
MWZ				AML	AML	07 39 51.9	
MWZ				AML	AML	07 39 57.6	
URZ	Urewera	2.04	198	P*	Pn	07 39 13.6	-1.4
URZ				S*	Sn	07 39 38.1	-2.8
URZ				AML	AML	07 39 44.7	
MKAZ	Moumakai	2.34	249	PN	Pn	07 39 18.9	-0.3
TOZ	Tahuroa Road	2.38	233	P*	Pn	07 39 19.1	-0.7

MAN 03 07:39:32, 9°.22N×121°.92E, h55km, mb4.3, ML3.2, MS3.0, 1D, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	1.30	84	⇓iP	Pn	07 39 41.2	-13
SNPH				iS	Sn	07 39 58.9	-12
GUIM	Jordan	1.55	25	eP	Pn	07 39 58.0	+0.7
GUIM				eS	Sn	07 40 18.4	+2.1
CUYO	Cuyo Island	1.85	331	eP	Pn	07 40 02.5	+1.1
PAGZ	Pagadian	1.98	133	eP	Pn	07 40 04.7	+1.5
ENPP	El Nido	3.15	309	eP	Pn	07 40 21.2	+2.0

ISCJB 03 07:51:49.8±0.3, 21°.21S±0°.08×179°.40W±0°.07, h600km, mb4.1/40, Error ellipse: s-maj=11.7km s-min=7.1km az=144.5

IDC 03 07:51:50.3±1.3, 21°.21S×179°.25W, h600km±14km, mb3.6/18, mb1 3.8/20, mb1mx3.7/25, mbtmp3.6/20, Error ellipse: s-maj=14.4km s-min=10.5km az=133.0

NEIC 03 07:51:51.6±0.7, 21°.29S×179°.36W, h610km±9km, mb4.2/25, Error ellipse: s-maj=17.6km s-min=9.9km az=129.0

ISC 03 07:51:50.3±0.4, 21°.24S±0°.09×179°.34W±0°.08, h600km, n225, σ0s.83/226, mb4.1/40, 66C-82D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.27	324	eP	P	07 53 21.9	+4.0
AFI	Afiamalu	10.25	46	eP	P	07 54 11.0	-0.8
AFI	Afiamalu	10.25	46	P	P	07 54 10.1	-1.7
	6.4nm,0.3s,baz=27,slow=9.3,SNR=8.5						
DZM	Mont Dzumac	13.25	264	P	P	07 54 42.4	+0.6
	1.1nm,0.3s,baz=95,slow=19,SNR=7.5						
OUZ	Omahuta	15.25	203	eP	P	07 55 01.4	+0.8
	24nm,0.7s						
URZ	Urewera	17.24	189	eP	P	07 55 17.3	-1.5
	142nm,2.5s						
URZ	Urewera	17.24	189	P	P	07 55 15.3	-3.5
	4.3nm,0.3s,baz=292,slow=1.6,SNR=29						
RAR	Rarotonga	18.24	93	eP	P	07 55 30.6	+2.3
RPZ	Rata Peaks	23.80	197	P	P	07 56 17.9	+0.1
	4.3nm,0.5s,baz=32,slow=9.5,SNR=4.0						
CTA	Charters Tower	32.18	266	P	P	07 57 32.1	+1.3
	11nm,0.4s,baz=94,slow=9.8,SNR=23						
PMG	Port Moresby	34.30	285	P	P	07 57 49.4	+0.7
	15nm,0.8s,baz=72,slow=9.1,SNR=3.1						
STKA	Stephens Creek	36.34	245	eP	P	07 58 06.5	+1.2
	1.0nm,0.6s						
STKA	Stephens Creek	36.34	245	P	P	07 58 06.3	+1.0
	4.0nm,0.5s,baz=93,slow=9.7,SNR=18						
AS31	Alice Springs	43.13	258	eP	P	07 58 59.1	-0.6
ASAR	Alice Springs	43.13	258	P	P	07 59 00.2	+0.6
	9.3nm,0.8s,baz=97,slow=7.8,SNR=112						
ASAR				PcP	PcP	08 00 35.2	-0.3
	1.4nm,0.6s,baz=106,slow=3.9,SNR=7.6						
ASAR				ScP	ScP	08 03 31.3	+1.0
	1.0nm,0.7s,baz=100,slow=4.7,SNR=7.4						
ASAR				S	S	08 04 41.0	-2.9
	1.6nm,0.9s,baz=92,slow=14,SNR=11						
WRA	Warramunga Arr	43.27	263	P	P	07 59 00.7	0.0
	6.4nm,0.7s,baz=96,slow=7.5,SNR=92						
WRA				ScP	ScP	08 03 32.1	+1.2
	0.7nm,0.8s,baz=95,slow=3.7,SNR=4.2						
VNDA	Vanda	57.07	185	P	P	08 00 40.6	+0.5
	0.4nm,0.8s,baz=6.0,slow=6.5,SNR=4.4						
VNDA				PcP	PcP	08 01 26.4	0.0
	0.9nm,0.9s,baz=196,slow=0.9,SNR=4.0						
VNDA				ScP	ScP	08 04 28.3	-0.8
	0.6nm,1.0s,baz=346,slow=2.4,SNR=3.8						
QSPA	South Pole Qui	68.83	180	eP	P	08 01 56.1	+0.4
MJAR	Matsushiro Arr	70.08	325	P	P	08 02 02.8	-0.6
	1.6nm,0.6s,baz=166,slow=6.2,SNR=4.9						
ASAJ	Asahikawa	73.79	332	P	P	08 02 24.5	-0.1
	3.9nm,0.4s,baz=132,slow=15,SNR=5.7						
FX1	Attu Island--F	74.10	355	P	P	08 02 25.8	-0.3
	5.6nm,0.6s,baz=274,slow=1.8,SNR=9.8						
PETK	Petropavlovsk-	76.67	346	P	P	08 02 40.6	+0.1
	3.4nm,0.7s,baz=120,slow=8.8,SNR=5.5						
ARVC	Arvin	80.20	46	⇓P	P	08 03 00.2	+0.6
	baz=80						
VES	Vestal, Richgr	80.44	46	⇓P	P	08 03 01.7	+0.8
	baz=81						
MURC	Murrieta	80.47	48	⇓P	P	08 03 01.9	+0.7
	baz=81						
BFSC	Mount Baldy Ra	80.51	48	⇓P	P	08 03 01.9	+0.5
	baz=81						
EDW2	Edwards Air Fo	80.64	47	⇓P	P	08 03 02.9	+1.0
	baz=81						
MONP	Monument Peak	80.64	49	⇓P	P	08 03 02.9	+0.6
	baz=81						
ISA	Isabella	80.75	46	eP	P	08 03 03.8	+1.3
	4.8nm,0.9s						
ISA	Isabella	80.75	46	⇑P	P	08 03 03.3	+0.8
	baz=81						
CMB	Columbia Colle	80.85	43	eP	P	08 03 03.8	+0.8
	5.5nm,1.0s						
OHCM	Honcut	80.93	42	eP	P	08 03 04.7	+1.4
PFO	Pinyon Flat Ob	81.00	49	⇓P	P	08 03 04.7	+0.7
	baz=81						
BELC	Belle Mtn. Jos	81.53	49	⇓P	P	08 03 07.4	+0.7
	baz=82						
MPMC	Manual Prospec	81.63	46	⇓P	P	08 03 07.8	+0.6
	baz=82						
MTUM	Tungsten Hills	81.64	45	eP	P	08 03 08.3	+1.0
YBH	Yreka Blue Hor	81.65	39	eP	P	08 03 07.8	+0.8
	4.1nm,0.8s						
GSC	Goldstone	81.68	47	eP	P	08 03 08.1	+0.8
	9.3nm,1.4s						
GSC	Goldstone	81.68	47	⇓P	P	08 03 08.1	+0.8
	baz=82						
BC3	Big Chuckawall	81.73	49	⇓P	P	08 03 08.4	+0.8
	baz=82						
HEC	Hector,Ludlow	81.75	48	⇑P	P	08 03 08.4	+0.7
	baz=82						
GLA	Glamis	81.86	50	⇓P	P	08 03 09.6	+1.3
	baz=82						
WCN	Washoe City	81.99	43	eP	P	08 03 09.9	+0.9
	4.6nm,0.9s						
HUMO	Hull Mountain	82.05	38	eP	P	08 03 10.7	+1.8
	4.4nm,0.8s						
IRM	Iron Mountain	82.21	49	⇑P	P	08 03 11.0	+1.0
	baz=82						
FURC	Furnace Creek,	82.28	46	⇑P	P	08 03 10.9	+0.7
	baz=82						
TUQ	Turquoise Moun	82.35	47	⇑P	P	08 03 11.4	+0.5
	baz=83						
SHOC	Shoshone	82.36	47	⇑P	P	08 03 11.6	+0.9
	baz=83						
NVAR	Mina Array Bea	82.42	44	P	P	08 03 11.9	+0.7
	4.1nm,0.8s,baz=226,slow=8.0,SNR=26						
NV11	Mina Array Sit	82.52	44	eP	P	08 03 11.9	+0.3
LDFC	Landfair	82.73	48	eP	P	08 03 13.7	+1.1
	8.9nm,0.6s						
214A	Organ Pipe Nat	82.75	52	⇑P	P	08 03 13.9	+1.1
	baz=83						
PDMCI	Parker Dam,Lak	83.00	49	⇓P	P	08 03 14.8	+1.0
	baz=83						
Z14A	Wintersburg	83.37	51	⇑P	P	08 03 16.7	+1.0
	baz=84						
W13A	Hualapai Mount	83.59	49	⇓P	P	08 03 17.9	+0.8
	baz=84						
Y14A	Wickenburg	83.62	50	⇓P	P	08 03 17.5	+0.4
	baz=84						
R11A	Troy Canyon, C	84.15	45	⇑P	P	08 03 20.0	+0.2
	baz=84						
TUC	Tucson	84.42	52	eP	P	08 03 22.7	+1.6
	3.6nm,0.9s						
WVOR	Wild Horse Val	84.50	40	eP	P	08 03 22.0	+0.7
	3.1nm,1.0s						
X16A	Lo Mia Camp, P	84.98	50	⇓P	P	08 03 24.9	+1.0
	baz=85						
319A	Douglas	85.09	54	⇓P	P	08 03 25.7	+1.3
	baz=85						
CCUT	Cedar City	85.22	47	eP	P	08 03 25.8	+0.7
	3.1nm,1.0s						
U15A	North Rim	85.38	48	⇓P	P	08 03 26.9	+1.1
	baz=86						
WUAZ	Wupatki	85.57	49	⇑P	P	08 03 27.4	+0.7
	baz=86						
320A	Kipp Ranch, An	85.64	54	⇑P	P	08 03 28.2	+1.2
	baz=86						
220A	Playas Peak, P	85.91	54	⇓P	P	08 03 29.7	+1.4
	baz=86						
120A	U Bar Ranch, L	86.13	53	⇑P	P	08 03 30.1	+0.7
	baz=86						
BMO	Blue Mountains	86.67	39	eP	P	08 03 31.8	+0.2
	2.3nm,1.0s						
MFID	Camas Ranch	86.76	41	eP	P	08 03 32.8	+0.7
	4.8nm,1.0s						
MFID	Camas Ranch	86.76	41	⇓P	P	08 03 32.7	+0.7
	baz=87,SNR=6.0						
Y20A	Horse Springs,	86.96	52	⇑P	P	08 03 34.6	+1.3
	baz=87						
X20A	Quemado	87.17	51	⇑P	P	08 03 35.2	+1.0
	baz=87						
TRF	Thorofare Moun	87.44	13	eP	P	08 03 33.8	-1.0
Y21A	Point of Rocks	87.52	52	⇓P	P	08 03 36.9	+0.9
	baz=88						
Z22A	Elephant Butte	87.70	53	⇑P	P	08 03 37.9	+1.2
	baz=88						
HLID	Hailey	87.70	41	eP	P	08 03 37.4	+0.9
	3.3nm,0.8s						
HLID	Hailey	87.70	41	⇑P	P	08 03 37.3	+0.8
	baz=88,SNR=8.4						
V20A	Brimhall	87.78	50	⇑P	P	08 03 37.1	0.0
	baz=88						
SRU	San Rafael	87.94	47	⇑P	P	08 03 38.2	+0.5
	baz=88						
H12A	Diamond D Ranc	87.96	40	⇑P	P	08 03 38.1	+0.4
	baz=88,SNR=5.9						
MCK	McKinley	87.97	13	eP	P	08 03 37.1	0.0
	6.2nm,1.0s						
G12A	Big Creek, Yel	88.00	40	⇓P	P	08 03 38.3	+0.5
	baz=88						
324A	Moseley Ranch,	88.01	55	⇑P	P	08 03 38.6	+0.4
	baz=88						
Y22A	Socorro	88.01	52	⇓P	P	08 03 39.2	+1.0
	baz=88						
425A	Indio Mountain	88.10	56	⇓P	P	08 03 39.7	+1.1
	baz=88						
MNTX	Cornudas Mount	88.20	55	eP	P	08 03 39.1	+0.2
	3.1nm,0.9s						
626A	Big Bend Ranch	88.23	57	⇑P	P	08 03 39.9	+0.7
	baz=88,SNR=5.8						
224A	Cornudas Mount	88.26	55	⇓P	P	08 03 39.9	+0.5
	baz=88						
P18A	Preston Nutter	88.38	46	⇑P	P	08 03 40.5	+0.6
	baz=89						
F12A	Elk City	88.38	39	⇑P	P	08 03 39.9	+0.3
	baz=89,SNR=7.1						
LPM	Los Pinos Moun	88.43	52	eP	P	08 03 36.9	-3.2
526A	Mary Lane Ranc	88.48	57	⇓P	P	08 03 41.3	+0.9
	baz=89						
I14A	Mackay	88.49	41	⇓P	P	08 03 41.2	+1.0
	baz=89,SNR=8.3						
TXAR	Lajitas Array	88.51	58	P	P	08 03 41.2	+0.7
	2.8nm,0.8s,baz=216,slow=5.8,SNR=43						
124A	Stringfield Ra	88.58	54	⇓P	P	08 03 41.9	+0.9
	baz=89						
G13A	Cobalt	88.63	40	⇓P	P	08 03 41.3	+0.5
	baz=89						
U21A	Nageezi	88.65	50	⇑P	P	08 03 42.1	+0.9
	baz=89						
Y23A	Lovelace Mesa,	88.68	53	⇓P	P	08 03 42.1	+0.8
	baz=89						
627A	Terlingua Ranc	88.78	58	⇑P	P	08 03 42.5	+0.7
	baz=89,SNR=7.2						
426A	McDonald Obser	88.79	56	⇓P	P	08 03 42.5	+0.6
	baz=89,SNR=6.3						
ANMO	Albuquerque	88.84	52	eP	P	08 03 41.1	-0.9
	2.6nm,1.0s						
527A	Woodward Ranch	88.89	57	⇑P	P	08 03 42.7	+0.4
	baz=89,SNR=5.3						
Z24A	Sheeppen Canyo	88.93	54	⇑P	P	08 03 43.1	+0.6
	baz=89						
C11A	Tepee Creek (N	88.95	37	⇓P	P	08 03 42.7	+0.6
	baz=89						
326A	Caldwell Ranch	89.11	56	⇑P	P	08 03 43.9	+0.6
	baz=89						
I15A	Monteview	89.12	42	⇓P	P	08 03 43.9	+0.9
	baz=89						
S21A	Coal Bank Pass	89.13	49	⇓P	P	08 03 43.9	+0.5
	baz=89						
Y24A	Capitan	89.14	53	⇑P	P	08 03 43.9	+0.5
	baz=89,SNR=12						
125A	Gardner Draw,	89.17	54	⇑P	P	08 03 43.9	+0.4
	baz=89						
628A	Black Gap, Mar	89.19	58	⇓P	P	08 03 44.1	+0.5
	baz=89						
CMAR	Chiang Mai Arr	89.19	290	P	P	08 03 45.7	+1.9
	0.6nm,0.3s,baz=111,slow=2.9,SNR=4.7						
GDL2	Guadalupe Moun	89.19	55	eP	P	08 03 44.6	+1.0
	0.8nm,0.2s						
COLA	College	89.20	13	eP	P	08 03 42.4	-0.3
	6.5nm,0.8s						
P19A	Cripple Cowboy	89.23	47	⇓P	P	08 03 44.4	+0.6
	baz=90						
226B	Tecolote Peak,	89.29	55	⇓P	P	08 03 44.5	+0.4
	baz=90,SNR=6.0						
ILAR	Eielson Array	89.31	13	P	P	08 03 42.5	-0.8
	1.3nm,0.5s,baz=216,slow=5.0,SNR=36						
C12B	Naegeli Ranch,	89.32	37	⇑P	P	08 03 44.4	+0.7
	baz=90						
H15A	Lima	89.34	41	⇓P	P	08 03 45.1	+1.0
	baz=90						
427A	Hayter Ranch,	89.36	57	⇓P	P	08 03 45.1	+0.7
	baz=90,SNR=12						
Q20A	Ridgley Place,	89.38	48	⇓P	P	08 03 45.1	+0.7
	baz=90						
V23A	Ortiz Mt. (NFS	89.40	51	⇓P	P	08 03 45.4	+0.8
	baz=90						
O19A	Miners Draw (B	89.46	46	⇑P	P	08 03 45.0	+0.2
	baz=90,SNR=5.9						
RRI2	Red Ridge	89.52	43	eP	P	08 03 46.2	+1.1
	6.9nm,0.8s						
D13A	Huson	89.56	38	⇑P	P	08 03 45.7	+0.8
	baz=90						
P20A	De Beque	89.57	47	⇓P	P	08 03 46.0	+0.7
	baz=90						
R21A	Cimarron	89.62	48	⇓P	P	08 03 46.1	+0.4
	baz=90						
U23A	El Rito	89.66	51	⇓P	P	08 03 46.5	+0.7
	baz=90						
PLCA	Paso Flores	89.67	134	P	P	08 03 45.6	-0.1
	1.3nm,0.7s,baz=249,slow=12,SNR=3.6						
I16A	Newdale	89.68	42	⇓P	P	08 03 46.7	+1.0
	baz=90						
Y25A	Mesa, Roswell	89.69	53	⇑P	P	08 03 46.2	+0.2
	baz=90						
G15A	Dillon	89.72	41	⇓P	P	08 03 46.7	+0.8
	baz=90						
W24A	Lazy 6 Ranch,	89.73	52	⇓P	P	08 03 46.5	+0.3
	baz=90						
S22A	4UR Ranch, Cre	89.84	49	⇓P	P	08 03 47.1	+0.3
	baz=90						
428A	Kincaid Ranch,	89.87	57	⇓P	P	08 03 47.5	+0.8
	baz=90						
Z26A	Caprock	89.95	54	⇑P	P	08 03 47.8	+0.7
	baz=90						
O20A	White River Ci	89.97	46	⇑P	P	08 03 47.8	+0.6
	baz=90						
529A	Stev Forest Ra	89.98	58	⇑P	P	08 03 47.7	+0.5
	baz=90						
IMW	Indian Meadow	90.03	42	eP	P	08 03 47.6	+0.1
	4.6nm,1.2s						
V24A	Rampart Ranch,	90.06	51	⇑P	P	08 03 48.5	+0.7
	baz=90						
R22A	Saguache, Gunn	90.11	49	⇓P	P	08 03 48.5	+0.5
	baz=90						
L19A	Farson	90.17	44	⇓P	P	08 03 48.4	+0.4
	baz=90,SNR=8.2						
G16A	Moss Hill, Enn	90.17	41	⇓P	P	08 03 48.4	+0.5
	baz=90						
H16A	Russell Place,	90.24	41	⇑P	P	08 03 49.7	+1.4
	baz=90						
N20A	Spence Gulch,	90.29	46	⇑P	P	08 03 48.9	+0.3
	baz=90,SNR=7.2						
Q22A	Crested Butte,	90.30	48	⇓P	P	08 03 48.8	0.0
	baz=90						
PDAR	Pinedale Array	90.36	44	P	P	08 03 48.9	0.0
	1.7nm,0.8s,baz=220,slow=3.9,SNR=12						
SMCO	Snowmass	90.40	48	eP	P	08 03 50.0	+0.6
	42nm,3.0s						
W25A	X Bar L Ranch,	90.43	52	⇑P	P	08 03 49.4	0.0
	baz=91						
429A	Davenport Ranc	90.44	57	⇑P	P	08 03 49.5	+0.1
	baz=91,SNR=8.7						
V25A	Rancho No Teng	90.58	52	⇓P	P	08 03 50.1	0.0
	baz=91						
EGAK	Eagle	90.64	15	eP	P	08 03 49.1	-0.2
	2.5nm,0.7s						
M20A	Sweetwater, Wa	90.65	45	⇑P	P	08 03 51.0	+0.7
	baz=91						
329A	Wagon Wheel Ra	90.73	56	⇓P	P	08 03 51.2	+0.5
	baz=91						
N21A	Black Mountain	90.75	46	⇑P	P	08 03 51.3	+0.5
	baz=91,SNR=5.2						
L20A	Wamsutter	90.79	45	⇓P	P	08 03 51.3	+0.4
	baz=91,SNR=5.6						
128A	Castleberry Fa	90.81	55	⇑P	P	08 03 51.7	+0.6
	baz=91						
Y27A	Causey	90.83	54	⇑P	P	08 03 51.5	+0.4
	baz=91						
K19A	Absolon Red Bu	90.84	44	⇑P	P	08 03 51.1	0.0
	baz=91						
B14A	Marquette Ranc	90.91	38	⇓P	P	08 03 51.3	0.0
	baz=91						
J19A	Crowheart	90.92	43	⇑P	P	08 03 51.7	+0.3
	baz=91						
U25A	Circle Dot Ran	90.98	51	⇓P	P	08 03 52.2	+0.3
	baz=91						
C15A	Salmond Ranch,	90.99	38	⇓P	P	08 03 52.6	+1.0
	baz=91						
631A	Perdido Creek	90.99	59	⇓P	P	08 03 52.2	+0.3
	baz=91						
K20A	Yellowstone Ra	91.09	44	⇑P	P	08 03 51.7	-0.5
	baz=91						
O22A	Kremmling	91.14	47	⇑P	P	08 03 53.0	+0.3
	baz=91						
A14A	Double T Ranch	91.15	37	⇓P	P	08 03 52.8	+0.5
	baz=91						
MSTX	Muleshoe	91.16	54	⇑P	P	08 03 53.1	+0.4
	baz=91						
V26A	Tequesquite Ra	91.17	52	⇓P	P	08 03 53.4	+0.7
	baz=91						
X27A	F and S Farms,	91.20	53	⇓P	P	08 03 52.9	0.0
	baz=91						
F17A	Fitzpatrick Pl	91.20	41	⇑P	P	08 03 53.8	+1.2
	baz=91						
D16A	Dana Ranch, Ca	91.23	39	⇑P	P	08 03 53.4	+0.7
	baz=92						
M21A	Separation Pea	91.25	46	⇓P	P	08 03 53.0	-0.1
	baz=92,SNR=6.1						
P23A	Jefferson	91.27	48	⇓P	P	08 03 53.4	+0.1
	baz=92						
T25A	Trinidad	91.30	51	⇓P	P	08 03 53.4	0.0
	baz=92						
531A	Rocksprings	91.32	58	⇑P	P	08 03 54.1	+0.6
	baz=92						
N22A	Wattenberg Ran	91.49	47	⇓P	P	08 03 54.6	+0.3
	baz=92						
S25A	Robets Cordova	91.51	50	⇑P	P	08 03 54.2	-0.1
	baz=92						
J20A	Shoshoni	91.59	44	⇓P	P	08 03 54.8	+0.3
	baz=92						
ISCO	Idaho Springs	91.62	48	⇓P	P	08 03 55.0	+0.1
	baz=92						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
632A	Uvalde	91.66	59	⇓P	P	08 03 55.7	+0.7
	baz=92						
K21A	Alcova	91.79	45	⇓P	P	08 03 55.8	+0.2
	baz=92						
D17A	Six Diamond Ra	91.80	39	⇑P	P	08 03 56.0	+0.6
	baz=92						
532A	Rocksprings	91.81	58	⇑P	P	08 03 56.3	+0.6
	baz=92						
I20A	Worland	91.84	43	⇑P	P	08 03 55.9	+0.3
	baz=92						
331A	San Angelo	91.87	57	⇑P	P	08 03 55.9	0.0
	baz=92						
N23A	Red Feather La	91.88	47	⇓P	P	08 03 56.0	0.0
	baz=92						
Y29A	Porterfield Fa	91.94	54	⇓P	P	08 03 56.8	+0.6
	baz=92						
E18A	Harlowton	91.98	40	⇓P	P	08 03 56.7	+0.5
	baz=92						
C17A	Wharram Farm,	92.00	39	⇑P	P	08 03 56.2	+0.1
	baz=92						
J21A	Lysite	92.00	44	⇑P	P	08 03 56.7	+0.2
	baz=92						
L22A	Ellis Ranch, M	92.06	45	⇓P	P	08 03 57.1	+0.4
	baz=92						
S26A	Kim	92.18	50	⇑P	P	08 03 57.5	+0.2
	baz=92						
231A	Bronte	92.21	57	⇓P	P	08 03 57.2	-0.3
	baz=92						
F19A	Roth Farm, Mol	92.22	41	⇑P	P	08 03 57.1	-0.1
	baz=92						
I21A	Big Trails, Te	92.31	44	⇓P	P	08 03 58.2	+0.4
	baz=92						
332A	Millersview	92.44	57	⇓P	P	08 03 58.3	-0.2
	baz=93						
R26A	Arlington	92.49	50	⇓P	P	08 03 58.7	0.0
	baz=93						
L23A	Garrett	92.58	46	⇑P	P	08 03 59.4	+0.2
	baz=93						
I22A	9 Mile Ranch,	92.87	44	⇓P	P	08 04 00.4	+0.1
	baz=93						
C19A	Slack Wire Ran	93.06	40	⇑P	P	08 04 01.5	+0.5
	baz=93						
C20A	Veseth Ranch,	93.67	40	⇓P	P	08 04 04.3	+0.5
	baz=94						
INK	Inuvik	95.31	16	P	P	08 04 09.8	-0.8
	0.6nm,0.6s,baz=214,slow=3.6,SNR=3.1						
C23A	Lambert	95.41	41	⇓P	P	08 04 12.1	+0.5
	baz=96						
YKA	Yellowknife Ar	97.71	25	P	Pdif	08 04 21.0	-0.5
	0.3nm,1.0s,baz=247,slow=4.8,SNR=5.7						
MKAR	Makanchi Array	110.80	313	PKiKP	PKiKP	08 09 14.0	-2.1
	0.3nm,0.4s,baz=155,slow=0.2,SNR=5.7						
KURBB	Kurchatov Arra	113.74	317	PKiKP	PKiKP	08 09 19.9	-1.6
	0.6nm,0.4s,baz=101,slow=2.2,SNR=4.9						
BVAR	Borovoye Array	118.84	320	PKP	PKPdf	08 09 30.2	-1.1
	1.9nm,0.4s,baz=122,slow=3.0,SNR=12						
SPITS	Spitsbergen Ar	122.52	356	PKP	PKPdf	08 09 36.8	-0.9
	3.7nm,0.6s,baz=92,slow=2.5,SNR=12						
AKTO	Aktyubinsk	126.78	318	PKP	PKPdf	08 09 45.3	-1.2
	1.1nm,0.7s,baz=106,slow=5.3,SNR=4.0						
ARCES	ARCESS Array B	129.41	349	PKP	PKPdf	08 09 50.0	-1.0
	2.6nm,0.6s,baz=66,slow=1.2,SNR=13						
FINES	FINESS Array B	136.12	343	PKP	PKPdf	08 10 03.9	+0.1
	0.7nm,0.4s,baz=5.7,slow=9.6,SNR=4.4						
NOA	NORSAR Array B	139.55	352	PKhKP	PKPpre	08 10 02.2	
	1.6nm,0.9s,baz=16,slow=4.6,SNR=3.6						
HFS	Hagfors	140.06	350	PKhKP	PKPpre	08 10 03.8	
	1.1nm,0.3s,baz=90,slow=2.7,SNR=8.8						
AKASG	Malin Array Be	143.03	330	PKP	PKPab	08 10 13.6	-0.9
	9.2nm,0.5s,baz=44,slow=4.2,SNR=23						
EKA	Eskdalemuir Ar	145.84	4	PKPbc	PKPdf	08 10 22.4	+1.1
	4.3nm,0.6s,baz=359,slow=2.8,SNR=11						
ASF	Jabal al Asfar	146.00	296	PKPbc	PKPbc	08 10 24.6	0.0
	0.8nm,0.5s,baz=307,slow=5.1,SNR=4.6						
BRTR	Keskin Array B	146.39	311	PKPbc	PKPbc	08 10 24.9	-0.6
	2.9nm,0.6s,baz=127,slow=4.3,SNR=14						
MMAI	Mount Meron Ar	147.08	298	PKPbc	PKPbc	08 10 27.7	+0.3
	3.3nm,0.5s,baz=58,slow=6.2,SNR=6.8						
MLR	Muntele Rosu	148.14	325	PKPbc	PKPbc	08 10 28.9	-0.9
	0.8nm,0.7s,baz=92,slow=7.5,SNR=5.1						
BRG	Berggiesshubel	148.64	344	eP	PKPbc	08 10 30.1	-0.5
	5.6nm,0.7s						
VRAC	Vranov	149.25	339	PKPbc	PKPbc	08 10 31.9	-0.3
	1.5nm,0.3s,baz=221,slow=20,SNR=3.7						
KHC	Kasperske Hory	150.32	343	⇑ePKP	PKPbc	08 10 34.5	-0.3
GERES	GERESS Array B	150.55	342	PKPbc	PKPbc	08 10 35.0	-0.4
	3.0nm,0.6s,baz=38,slow=2.4,SNR=17						
ESDC	Sonseca Array	161.20	11	PKPab	PKPab	08 11 30.6	-0.4
	0.2nm,0.3s,baz=339,slow=4.6,SNR=5.4						
TORD	Torodi Ar. Bea	171.89	187	PKP	PKPdf	08 10 49.8	-2.1
	1.2nm,0.8s,baz=258,slow=0.9,SNR=6.1						
TORD				PKPab	PKPab	08 12 17.7	-1.0
	0.7nm,1.1s,baz=168,slow=4.4,SNR=3.2						

KRSC ***03*** *07:53:53.5±1.0, 51.°56N×159.°10E, h8km±8km, ML4.5*
MOS ***03*** *07:53:54.1±1.2, 51.°51N×159.°07E, h49km, mb4.4/13, Error ellipse: s-maj=11.8km s-min=6.0km az=79.3*
ISCJB ***03*** *07:53:55.3±0.6, 51.°48N±0.°04×159.°10E±0.°06, h59km±5km, mb3.9/23, MS3.3/7, Error ellipse: s-maj=7.6km s-min=4.4km az=44.4*
IDC ***03*** *07:53:56.1±0.7, 51.°60N×159.°04E, h44km±6km, mb3.7/20, mb1 3.9/22, mb1mx3.7/35, mbtmp3.7/22, ML3.5/2, MS3.2/10, Ms1 3.2/10, ms1mx2.9/47, Error ellipse: s-maj=17.2km s-min=13.0km az=133.0*
ISC 03 07:53:55.6±0.7**, 51.°47N**±0.°04×**159.°13E**±0.°04**, h47**km±6km**, n88,** σ1**.**°36/108**, mb3.8**/23**, MS3.4**/7**, 1C-2D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RUS	Russkaya	1.04	339	P	Pn	07 54 12.1	-1.6
RUS				*i* S	Sn	07 54 25.6	-1.5
RUS	Russkaya	1.04	339	PN	Pn	07 54 12.1	-1.6
RUS				S	Sn	07 54 25.6	-1.5
ASAK	Asacha	1.19	321	P	Pn	07 54 15.3	-0.6
ASAK				*i* S	Sn	07 54 31.0	0.0
GRL	Gorelyy	1.26	329	P	Pn	07 54 16.5	-0.5
GRL				*i* S	Sn	07 54 33.2	+0.4
PAU	Pauzhetka	1.45	271	*e*P	Pn	07 54 19.9	+0.5
PAU				*i* S	Sn	07 54 39.2	+2.0
PAU	Pauzhetka	1.45	271	PN	Pn	07 54 19.9	+0.5
PAU				S	Sn	07 54 39.2	+2.0
PET	Petropavlovsk	1.58	349	P	Pn	07 54 20.5	-0.7
PET				*i* S	Sn	07 54 40.3	-0.1
PET	Petropavlovsk	1.58	349	⇓*i*PN	Pn	07 54 19.9	-1.3
PET				*i* S	Sn	07 54 40.3	-0.1
PET				pmax	pmax		
	comp=Z,200nm,0.6s						
PET				pmax	pmax		
	comp=Z,299nm,0.4s						
PET				smax	smax		
	comp=E,1μm,0.7s						
PET				smax	smax		
	comp=N,3μm,0.5s						
PET				smax	smax		
	comp=N,2μm,0.5s						
INSR	Institute	1.63	349	*e*P	Pn	07 54 21.3	-0.5
INSR				*i* S	Sn	07 54 41.7	+0.1
MIPR	Malaya Ipel'ka	1.68	300	P	Pn	07 54 23.0	+0.5
MIPR				*i* S	Sn	07 54 44.3	+1.5
NLC	Nalytchevo	1.71	4	P	Pn	07 54 22.1	-0.8
NLC				*i* S	Sn	07 54 42.7	-0.8
NLC	Nalytchevo	1.71	4	PN	Pn	07 54 22.1	-0.8
NLC				S	Sn	07 54 42.7	-0.8
SPN	Mys Shipunski	1.72	18	P	Pn	07 54 23.5	+0.5
SPN				*i* S	Sn	07 54 45.3	+1.5
SPN	Mys Shipunski	1.72	18	PN	Pn	07 54 23.5	+0.5
SPN				S	Sn	07 54 45.3	+1.5
UGLR	Uglovaya	1.75	354	P	Pn	07 54 22.9	-0.7
SMAR	Somma	1.81	354	P	Pn	07 54 24.7	+0.2
SMAR				*i* S	Sn	07 54 47.6	+1.4
AVH	Avacha	1.81	353	P	Pn	07 54 24.0	-0.4
AVH				*i* S	Sn	07 54 46.0	-0.2
SDLR	Sedlovina	1.81	355	P	Pn	07 54 23.2	-1.3
KOK	Koryaka	1.85	351	P	Pn	07 54 24.6	-0.3
KOK				*i* S	Sn	07 54 47.2	+0.1
KRER	Koryakskii	1.85	353	P	Pn	07 54 24.6	-0.4
KRER				*i* S	Sn	07 54 47.5	+0.2
PETK	Petropavlovsk-	1.86	332	PN	Pn	07 54 25.0	0.0
PETK				S	Sn	07 54 47.0	-0.3
PETK				pmax	pmax		
	comp=Z,89nm,0.3s						
PETK				smax	smax		
	comp=Z,38nm,0.3s						
PETK	Petropavlovsk-	1.86	332	P	Pn	07 54 24.9	0.0
	comp=Z,89nm,0.3s,baz=127,slow=17,SNR=1092						
PETK				S	Sn	07 54 47.0	-0.3
	comp=Z,38nm,0.3s,baz=162,slow=20,SNR=6.5						
APC	Apacha	1.90	321	*e*P	Pn	07 54 26.0	+0.5
APC				*i* S	Sn	07 54 49.7	+1.6
SKR	Severo-Kuril's	2.06	249	*e*P	Pn	07 54 28.1	+0.4
SKR				*i* S	Sn	07 54 53.2	+1.1
SKR	Severo-Kuril's	2.06	249	*e*PN	Pn	07 54 25.9	-1.8
SKR				*i* S	Sn	07 54 50.7	-1.4
SKR				pmax	pmax		
	comp=E,150nm,0.5s						
SKR				pmax	pmax		
	comp=Z,230nm,0.5s						
SKR				pmax	pmax		
	comp=N,240nm,0.3s						
SKR				smax	smax		
	comp=N,2μm,2.0s						
SKR				smax	smax		
	comp=E,2μm,2.0s						
SKR				smax	smax		
	comp=N,3μm,0.6s						
SKR				smax	smax		
	comp=E,2μm,0.6s						
GNL	Ganaly	2.34	342	P	Pn	07 54 32.2	+0.5
GNL				*i* S	Sn	07 55 00.2	+0.9
MKZ	Mys Kozlova	3.46	26	*e*P	Pn	07 54 45.5	-1.5
MKZ				*i* S	Sn	07 55 22.9	-3.8
MKZ	Mys Kozlova	3.46	26	PN	Pn	07 54 45.5	-1.5
MKZ				S	Sn	07 55 22.9	-3.8
TUMR	Tumrok	3.87	9	*e*P	Pn	07 54 54.6	+2.0
KMNR	Kamenistaya	4.34	8	P	Pn	07 55 02.1	+3.0
ESO	Esso	4.47	357	*e*P	Pn	07 55 01.8	+1.0
ESO	Esso	4.47	357	PN	Pn	07 55 01.8	+1.0
BZMR	Bezymyannaya	4.54	10	*e*P	Pn	07 55 04.7	+2.8
KIRR	Kirishev	4.55	9	*e*P	Pn	07 55 03.8	+1.8
KPT	Kopyto	4.55	8	*e*P	Pn	07 55 03.5	+1.6
BZGR	Bezymyannyi-Gr	4.57	11	P	Pn	07 55 05.4	+3.1
BZWR	Bezymyannyi-We	4.57	10	*e*P	Pn	07 55 04.5	+2.2
ZLN	Zelenaya	4.66	12	*e*P	Pn	07 55 07.3	+3.8
LGNR	Loginova	4.71	11	P	Pn	07 55 07.0	+2.7
CIRR	Tsirk	4.75	11	*e*P	Pn	07 55 07.7	+3.0
KRSR	Krestovskiy	4.83	10	*e*P	Pn	07 55 08.0	+2.2
SRDR	Sredinnyy	4.87	4	*e*P	Pn	07 55 08.1	+1.8
KBTR	Krutoberegovo	5.22	23	P	Pn	07 55 11.5	+0.4
KBTR	Krutoberegovo	5.22	23	PN	Pn	07 55 11.5	+0.4
SMKR	Semkarok	5.30	14	P	Pn	07 55 16.0	+3.8
SRKR	Sorokina	5.33	12	P	Pn	07 55 16.4	+3.8
BKI	Bering	5.55	45	P	Pn	07 55 16.5	+1.0
BKI	Bering	5.55	45	PN	Pn	07 55 16.5	+1.0
FX1	Attu Island--F	8.74	75	P	Pn	07 55 58.4	-0.9
	comp=E,4.1nm,0.3s,baz=306,slow=3.0,SNR=24						
FX1				S	Sn	07 57 28.1	-8.3
	comp=E,2.8nm,0.3s,baz=207,slow=22,SNR=6.6						
FX1				LR	LR	07 58 46.5	
	comp=E,73nm,20.9s,baz=295,slow=33						
YSS	Yuzh-Sakhalins	11.62	254	*i* PN	Pn	07 56 37.2	-1.5
ASAJ	Asahikawa	13.31	243	P	Pn	07 57 03.5	+1.7
	comp=E,0.2nm,0.3s,baz=81,slow=15,SNR=2.9						
ASAJ				LR	LR	08 02 51.4	
	comp=E,31nm,18.4s,baz=21,slow=40						
ERM	Erimo	14.44	235	*i* P	Pn	07 57 16.6	-0.4
BILL	Bilibino	16.98	9	⇑*e*P	Pn	07 57 50.0	+0.5
BILL				*e*S	Sn	08 00 52.2	-4.8
BILL				pmax	pmax		
	comp=Z,11nm,0.9s						
BILL				MLR	MLR		
	comp=Z,100nm,16.0s						
USRK	Ussuriysk Arra	19.53	259	LR	LR	08 05 28.2	
	comp=Z,85nm,21.1s,baz=223,slow=36						
VLA	Vladivostok	20.18	256	*i* P	P	07 58 24.5	-1.6
VLA				pmax	pmax		
	comp=Z,18nm,0.7s						
MJA0	Matsu Arr-Jizo	21.07	233	*e*P	P	07 58 37.9	+2.2
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MJAR	Matsushiro Arr	21.09	233	P	P	07 58 36.6	+0.7
	comp=Z,1.4nm,0.6s,baz=23,slow=9.4,SNR=5.8						
MJAR				LR	LR	08 07 24.3	
	comp=Z,88nm,19.4s,baz=70,slow=38						
TIXI	Tiksi	24.33	337	*i* P	P	07 59 07.5	-1.0
TIXI				pmax	pmax		
	comp=Z,19nm,0.9s						
ILAR	Eielson Array	30.39	43	P	P	08 00 02.8	-0.1
	comp=Z,1.3nm,0.8s,baz=262,slow=7.8,SNR=21						
INK	Inuvik	35.52	36	P	P	08 00 47.8	+0.3
	comp=Z,0.4nm,0.5s,baz=270,slow=6.1,SNR=2.9						
YKA	Yellowknife Ar	44.77	41	P	P	08 02 04.5	+0.5
	comp=Z,0.3nm,0.8s,baz=301,slow=8.3,SNR=4.7						
YKA				pP	pP	08 02 17.4	+0.7
	comp=Z,0.4nm,0.7s,baz=295,slow=8.0,SNR=5.3						
KURK	Kurchatov	48.10	303	P	P	08 02 28.6	-1.7
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	Kurchatov Arra	48.20	303	P	P	08 02 28.6	-2.5
	comp=Z,0.6nm,0.6s,baz=62,slow=7.8,SNR=4.1						
MKAR	Makanchi Array	48.34	296	P	P	08 02 30.7	-1.6
MKAR	Makanchi Array	48.34	296	P	P	08 02 30.6	-1.6
	comp=Z,0.3nm,0.5s,baz=68,slow=7.4,SNR=7.1						
SPITS	Spitsbergen Ar	48.64	350	P	P	08 02 34.1	-0.1
	comp=Z,2.7nm,0.5s,baz=52,slow=5.6,SNR=11						
BVAR	Borovoye Array	50.94	309	P	P	08 02 50.4	-1.6
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	Borovoye Array	50.94	309	P	P	08 02 50.4	-1.6
	comp=Z,0.7nm,0.3s,baz=59,slow=7.3,SNR=5.0						
ARCES	ARCESS Array B	54.65	342	P	P	08 03 19.3	+0.3
	comp=Z,3.2nm,0.9s,baz=23,slow=7.8,SNR=2.8						
ARCES				LR	LR	08 30 40.1	
	comp=Z,31nm,18.8s,baz=187,slow=40						
CMAR	Chiang Mai Arr	57.27	258	P	P	08 03 40.5	+2.0
	comp=Z,0.9nm,0.3s,baz=21,slow=7.8,SNR=6.4						
NB2	NORSAR Subarra	64.93	343	P	P	08 04 29.5	-0.3
	comp=Z,0.2nm,0.6s,baz=28,slow=6.5						
NOA	NORSAR Array B	64.93	343	P	P	08 04 29.8	-0.1
	comp=Z,2.4nm,0.7s,baz=21,slow=6.6,SNR=4.1						
NOA				LR	LR	08 37 39.1	
	comp=Z,14nm,18.5s,baz=0.0,slow=40						
HFS	Hagfors	65.31	342	P	P	08 04 31.8	-0.4
	comp=Z,3.4nm,0.5s,baz=57,slow=5.5,SNR=18						
AKASG	Malin Array Be	69.69	329	P	P	08 04 59.2	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	69.69	329	P	P	08 04 59.2	-0.9
	comp=Z,1.1nm,0.4s,baz=25,slow=5.7,SNR=4.5						
TXAR	Lajitas Array	71.83	66	P	P	08 05 14.7	+1.2
	comp=Z,0.4nm,0.8s,baz=299,slow=5.7,SNR=5.2						
TXAR				pP	pP	08 05 26.9	0.0
	comp=Z,0.4nm,0.6s,baz=300,slow=5.5,SNR=5.0						
GNI	Garni	72.35	313	LR	LR	08 39 09.9	
	comp=Z,26nm,18.7s,baz=300,slow=38						
CLL	Collm	73.65	339	*e*P	P	08 05 24.0	+0.2
CLL	Collm	73.65	339	⇓*i*PKPbc		08 10 30.4	
	comp=Z,12nm,1.1s						
WRA	Warramunga Arr	74.36	204	P	P	08 05 29.1	+0.9
	comp=Z,0.6nm,0.8s,baz=21,slow=6.2,SNR=5.4						
WRA				pP	pP	08 05 42.1	+0.4
	comp=Z,0.7nm,0.7s,baz=19,slow=6.0,SNR=3.3						
VRAC	Vranov	74.63	336	LR	LR	08 42 54.2	
	comp=Z,30nm,20.2s,baz=48,slow=39						
MLR	Muntele Rosu	75.31	328	P	P	08 05 33.4	-0.3
	comp=Z,0.6nm,0.6s,baz=349,slow=19,SNR=3.3						
MLR				LR	LR	08 42 21.8	
	comp=Z,4.6nm,19.6s,baz=32,slow=39						
GERES	GERESS Array B	75.79	337	P	P	08 05 35.6	-0.8
	comp=Z,0.3nm,0.3s,baz=29,slow=3.0,SNR=6.0						
GERES				pP	PcP	08 05 48.4	-0.5
	comp=Z,0.3nm,0.3s,baz=220,slow=12,SNR=1.7						
GERES				LR	LR	08 43 41.8	
	comp=Z,40nm,18.2s,baz=296,slow=40						
BRTR	Keskin Array B	77.49	320	P	P	08 05 46.1	0.0
	comp=Z,0.7nm,0.5s,baz=54,slow=2.3,SNR=3.7						
ASAR	Alice Springs	78.03	204	P	P	08 05 51.0	+2.0
	comp=Z,0.1nm,0.3s,baz=19,slow=5.8,SNR=3.3						
MMAI	Mount Meron Ar	82.45	315	P	P	08 06 13.4	+0.4
	comp=Z,4.5nm,0.8s,baz=50,slow=7.8,SNR=4.1						
ASF	Jabal al Asfar	82.50	314	P	P	08 06 14.3	+1.0
	comp=Z,1.0nm,0.5s,baz=60,slow=8.1,SNR=3.5						
COCO	West Island	83.07	241	*i* P	P	08 06 11.9	-4.3

TAP 03 08:00:05.2, 24.°22N×121.°06E, h12km, ML3.5, 6C-6D, B, Taiwan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWT	Tachien	0.11	73	⇓*i*P	Pg	08 00 08.6	+0.1
	baz=73						
TWT				*e*S	Sg	08 00 10.3	-0.5
	baz=73						
WHF	Hehuan Shan	0.20	112	⇑*i*P	Pb	08 00 11.0	-0.5
	baz=111						
WHF				S	Sg	08 00 14.8	+1.2
	baz=111						
TWQ1	Liyutan	0.29	296	⇑*i*P	Pb	08 00 12.0	-0.3
	baz=297						
TWQ1				*e*S	Sb	08 00 16.5	-0.7
	baz=297						
NSY	Sanyi	0.33	306	⇑*i*P	Pb	08 00 13.2	+0.1
	baz=307						
NSY				*i* S	Sb	08 00 18.5	0.0
	baz=307						
TCU	Taichung	0.36	258	⇑*e*P	Pb	08 00 14.0	+0.5
	baz=257						
TCU				S	Sb	08 00 19.4	+0.4
	baz=257						
NNS	Nan Shan	0.36	53	⇓*i*P	Pg	08 00 12.9	+0.3
	baz=47						
NNS				*i* S	Sg	08 00 17.1	-0.6
	baz=47						
TYC	Yuchr	0.36	210	P	Pg	08 00 12.7	+0.2
	baz=200						
TYC				*e*S	Sg	08 00 16.8	-0.5
	baz=200						
SMLT	Sun Moon Lake	0.36	203	⇓*i*P	Pg	08 00 13.0	+0.3
	baz=203						
NSTT	Nanjuang	0.41	353	⇓*i*P	Pb	08 00 14.2	-0.3
	baz=355						
NSTT				*i* S	Sb	08 00 19.9	-0.8
	baz=355						
WNT	Mingjian	0.48	225	P	Pb	08 00 16.3	+0.7
	baz=223						
WNT				*e*S	Sb	08 00 25.4	+2.7
	baz=223						
TWD	Chiawan	0.51	106	*i* P	Pb	08 00 16.1	0.0
	baz=97						
TWD				*i* S	Sb	08 00 22.9	-0.5
	baz=97						
ESL	Shilin	0.53	140	⇑*i*P	Pb	08 00 16.3	-0.1
	baz=139						
ESL				S	Sg	08 00 22.7	+0.1
	baz=139						
NSK	Sanguang	0.53	31	⇓*i*P	Pg	08 00 15.8	+0.1
	baz=28						
NSK				S	Sg	08 00 22.6	-0.3
	baz=28						
HWA	Hwalien	0.56	116	*e*P	Pb	08 00 17.3	+0.5
	baz=123						
HWA				*e*S	Sb	08 00 25.9	+1.1
	baz=123						
HSN	Hsinchu	0.58	352	*e*P	Pn	08 00 18.8	-0.5
	baz=357						
HSN				*e*S	Sn	08 00 28.2	-0.6
	baz=357						
ENTT	Nioudou	0.62	48	*i* P	Pg	08 00 17.4	0.0
	baz=42						
ENTT				*i* S	Sg	08 00 24.8	-0.9
	baz=42						
ENA	Nanau	0.66	71	*e*P	Pg	08 00 18.1	+0.2
	baz=63						
ENA				*e*S	Sg	08 00 26.4	-0.3
	baz=63						
WGK	Gukeng	0.70	221	*e*P	Pn	08 00 20.2	-0.6
	baz=219						
WGK				*e*S	Sn	08 00 30.3	-1.3
	baz=219						
CHN5	Tsauling	0.71	209	P	Pb	08 00 20.4	+0.7
	baz=208						
CHN5				*i* S	Sn	08 00 31.1	-1.0
	baz=208						
YUS	Yu-Shan	0.73	188	P	Pg	08 00 19.5	-0.6
	baz=180						
YUS				*e*S	Sb	08 00 31.1	+0.1
	baz=180						
ALS	Alishan	0.74	198	⇑P	Pb	08 00 20.5	+0.1
	baz=187						
ALS				*e*S	Sb	08 00 31.8	+1.0
	baz=187						
TWE	Neicheng	0.75	48	P	Pg	08 00 19.7	+0.1
	baz=45						
TWE				*e*S	Sg	08 00 28.2	-1.2
	baz=45						
EHY	Hungye	0.75	161	*e*P	Pg	08 00 19.6	-0.2
	baz=154						
EHY				*e*S	Sb	08 00 31.0	+0.6
	baz=154						
NCU	National Centr	0.76	9	*e*P	Pn	08 00 21.6	-0.1
	baz=359						
NCU				*e*S	Sn	08 00 33.3	+0.3
	baz=359						
TWC	Suao	0.82	62	P	Pg	08 00 21.0	0.0
	baz=53						
TWC				S	Sg	08 00 31.4	-0.4
	baz=53						
CHN2	Minshiung	0.87	218	*e*P	Pb	08 00 22.5	+0.3
	baz=217						
CHN2				*e*S	Sn	08 00 36.6	+0.8
	baz=217						
TWF1	Yuli	0.89	166	P	Pg	08 00 22.2	-0.2
	baz=159						
TWF1				S	Sb	08 00 34.8	+0.3
	baz=159						
TAP1	Taipei	0.92	27	*e*P	Pg	08 00 22.7	-0.2
	baz=26						
CHY	Chiayi	0.92	219	*e*P	Pb	08 00 23.3	+0.1
	baz=220						
TWS1	Kuangyinshan	0.94	20	P	Pn	08 00 25.2	+1.0
	baz=8.0						
TWS1				S	Sn	08 00 38.2	+0.7
	baz=8.0						
WSF	Szhu	0.96	233	*e*P	Pn	08 00 24.4	-0.1
	baz=232						
WSF				*e*S	Sn	08 00 38.4	+0.4
	baz=232						
CHN4	Tsaushan	0.96	206	⇓P	Pn	08 00 24.6	0.0
	baz=205						
CHN4				*e*S	Sn	08 00 40.0	+1.8
	baz=205						
ELDTW	Lidau	1.03	182	*e*P	Pn	08 00 26.0	+0.5
	baz=188						
ELDTW				*e*S	Sn	08 00 39.8	-0.2
	baz=188						
WTP	Ta-pu	1.05	203	P	Pg	08 00 25.7	+0.1
	baz=201						
WTP				*e*S	Sn	08 00 42.3	+1.8
	baz=201						
NWF	Wu-fen Shan	1.07	38	*i* P	Pn	08 00 26.2	0.0
	baz=48						
NWF				*e*S	Sn	08 00 41.1	0.0
	baz=48						
TWK	Hsinying	1.08	209	*e*P	Pn	08 00 26.6	+0.3
	baz=210						
CHN1	Nanshi	1.14	205	P	Pg	08 00 27.4	+0.3
	baz=204						
CHN1				S	Sn	08 00 43.2	+0.7
	baz=204						
TWB1	Santiao Chiao	1.16	47	*e*P	Pb	08 00 26.9	-0.2
	baz=46						
TWY	Chenhua	1.16	25	*e*P	Pg	08 00 27.6	+0.1
	baz=8.0						
TWG	Pinlang	1.39	179	*e*P	Pg	08 00 32.2	+0.3
	baz=171						
TWG				*e*S	Sg	08 00 52.1	+2.0
	baz=171						
TWM1	Shoushan	1.51	203	*e*P	Pb	08 00 33.7	+0.5
	baz=205						
PNG	Penghu	1.52	245	*e*P	Pn	08 00 32.3	+0.1
	baz=243						
PNG				*e*S	Sb	08 00 53.2	+0.7
	baz=243						
WDGT	Dungji	1.60	234	*e*P	Pn	08 00 33.3	0.0
	baz=242						
WDGT				*e*S	Sb	08 00 55.5	+0.8
	baz=242						
YOJ	Yonaguni jima	1.80	82	*e*P	Pb	08 00 37.6	-0.5
	baz=97						
EAST	Anshuo	1.84	186	*e*P	Pb	08 00 38.2	-0.6
	baz=208						
SCZT	Fangliau	1.88	192	*e*P	Pb	08 00 39.1	-0.4
	baz=196						

DDA 03 08:13:34.6, 37.89N×29.21E, h11km, MD2.5
ISCJB 03 08:13:35.5±0.5, 37.88N±0.03×29.20E±0.05, h14km±4km, Error ellipse: s-maj=6.6km s-min=4.4km az=20.5
CSEM 03 08:13:36.0±0.3, 37.91N×29.16E, h2km, MD2.5, Error ellipse: s-maj=8.2km s-min=4.7km az=112.0
ISK 03 08:13:36.0, 37.87N×29.22E, h5km, MD2.5
ISC 03 08:13:35.2±0.9, 37.89N±0.02×29.19E±0.03, h12km±8km, n22, σ0.65/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.18**	**223**	*e*PG	**Pb**	**08 13 40.6**	**+0.1**
DENT				*e*SG	**Sg**	**08 13 42.7**	**+0.6**
DENT	**Denizli**	**0.18**	**223**	*e*Pg	**Pb**	**08 13 40.6**	**+0.1**
DENT				*e*Sg	**Sg**	**08 13 42.7**	**+0.6**
DNZL	**Cakiroluk**	**0.23**	**210**	*i* P	**Pg**	**08 13 39.9**	**-0.2**
DNZL				*i* S	**Sg**	**08 13 43.2**	**-0.3**
DNZL	**Cakiroluk**	**0.23**	**210**	*i* P	**Pg**	**08 13 39.9**	**-0.2**
DNZL				*i* S	**Sg**	**08 13 43.2**	**-0.3**
KHL	**Karahalli**	**0.51**	**31**	*e*PG	**Pb**	**08 13 46.9**	**+0.8**
KHL				*e*SG	**Sb**	**08 13 53.5**	**0.0**
KHL	**Karahalli**	**0.51**	**31**	*e*Pg	**Pb**	**08 13 46.9**	**+0.8**
KHL				*e*Sg	**Sb**	**08 13 53.5**	**0.0**
KHAL	**Karahalli**	**0.54**	**26**	*i* P	**Pg**	**08 13 45.4**	**-0.3**
KHAL				*i* S	**Sg**	**08 13 52.2**	**-0.6**
KHAL	**Karahalli**	**0.54**	**26**	*i* P	**Pg**	**08 13 45.4**	**-0.3**
KHAL				*i* S	**Sg**	**08 13 52.2**	**-0.6**
GOLH	**Golhisar**	**0.71**	**156**	*i* P	**Pg**	**08 13 48.0**	**-1.0**
GOLH				*i* S	**Sg**	**08 13 59.2**	**+0.8**
GOLH	**Golhisar**	**0.71**	**156**	*i* P	**Pg**	**08 13 48.0**	**-1.0**
GOLH				*i* S	**Sg**	**08 13 59.2**	**+0.8**
KULA	**Kula-Manisa**	**0.75**	**326**	*e*PG	**Pn**	**08 13 51.7**	**0.0**
KULA	**Kula-Manisa**	**0.75**	**326**	*e*Pg	**Pn**	**08 13 51.7**	**0.0**
MANT	**Manisa**	**0.78**	**320**	*i* P	**Pg**	**08 13 50.4**	**+0.1**
MANT				*i* S	**Sg**	**08 14 00.9**	**+0.3**
MANT	**Manisa**	**0.78**	**320**	*i* P	**Pg**	**08 13 50.4**	**+0.1**
MANT				*i* S	**Sg**	**08 14 00.9**	**+0.3**
YER	**Yerkesik**	**1.04**	**224**	*e*PG	**Pn**	**08 13 56.6**	**+0.9**
YER	**Yerkesik**	**1.04**	**224**	*e*Pg	**Pn**	**08 13 56.6**	**+0.9**
AYDN	**Tasoluk**	**1.06**	**258**	*i* P	**Pb**	**08 13 55.6**	**0.0**
AYDN				*i* S	**Sb**	**08 14 09.4**	**-0.1**
AYDN	**Tasoluk**	**1.06**	**258**	*i* P	**Pb**	**08 13 55.6**	**0.0**
AYDN				*i* S	**Sb**	**08 14 09.4**	**-0.1**
DEMI	**Demirci**	**1.21**	**342**	*e*P	**Pn**	**08 13 57.4**	**-0.6**
DEMI				*e*S	**Sb**	**08 14 12.3**	**-1.4**
DEMI	**Demirci**	**1.21**	**342**	*e*P	**Pn**	**08 13 57.4**	**-0.6**
DEMI				*e*S	**Sb**	**08 14 12.3**	**-1.4**
TVSB	**Tavsanli**	**1.57**	**8**	*e*PN	**Pg**	**08 14 06.0**	**+0.6**
TVSB	**Tavsanli**	**1.57**	**8**	*e*Pn	**Pg**	**08 14 06.0**	**+0.6**

MEX 03 08:21:55.8±0.8, 17.33N×101.51W, h20km±28km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.28**	**8**	*e*P	Pb	08 22 01.2	-1.0
ZIIG				*i* S	Sb	08 22 05.4	-1.1
CAIG	**El Cayaco**	**1.22**	**103**	*e*P	Pn	08 22 14.6	-3.1
CAIG				*i* S	Sb	08 22 28.9	-4.5
ARIG	**Puente Sto Nin**	**1.45**	**49**	*e*P	Pn	08 22 17.6	-3.5
ARIG				*i* S	Sn	08 22 34.5	-5.1
PLIG	**Platanillo**	**2.18**	**61**	*i* P	Pn	08 22 29.1	-2.0
PLIG				*i* S	Sn	08 22 54.8	-2.9
YAIG	**Yautepec**	**2.78**	**56**	*i* P	Pn	08 22 36.5	-2.8
YAIG				*i* S	Sn	08 23 09.2	-3.3

DDA 03 08:22:16.3, 39.10N×29.04E, h8km, MD2.5
ISK 03 08:22:16.8, 39.12N×29.03E, h8km, MD2.7
ISCJB 03 08:22:17.1±0.4, 39.13N±0.03×29.04E±0.03, h6km±6km, Error ellipse: s-maj=4.9km s-min=4.5km az=0.5
CSEM 03 08:22:17.3±0.1, 39.14N×29.04E, h5km, MD2.5, Error ellipse: s-maj=2.1km s-min=1.7km az=83.0
ISC 03 08:22:16.9±0.9, 39.13N±0.02×29.04E±0.02, h16km±7km, n32, σ0.49/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.26**	**252**	*i* P	**Pg**	**08 22 22.9**	**+0.1**
DEMI				*i* S	**Sg**	**08 22 26.5**	**-0.3**
DEMI	**Demirci**	**0.26**	**252**	*i* P	**Pg**	**08 22 22.9**	**+0.1**
DEMI				*i* S	**Sg**	**08 22 26.5**	**-0.3**
GDZ	**Gediz**	**0.35**	**96**	*i* P	**Pg**	**08 22 24.3**	**0.0**
GDZ				*i* S	**Sg**	**08 22 28.8**	**-0.5**
GDZ	**Gediz**	**0.35**	**96**	*i* P	**Pg**	**08 22 24.3**	**0.0**
GDZ				*i* S	**Sg**	**08 22 28.8**	**-0.5**
TVSB	**Tavsanli**	**0.46**	**46**	*e*PG	**Pg**	**08 22 26.7**	**+0.4**
TVSB				*e*SG	**Sg**	**08 22 32.7**	**+0.1**
TVSB	**Tavsanli**	**0.46**	**46**	*e*Pg	**Pg**	**08 22 26.7**	**+0.4**
TVSB				*e*Sg	**Sg**	**08 22 32.7**	**+0.1**
DURS	**Dursunbey**	**0.64**	**318**	*i* P	**Pg**	**08 22 30.0**	**+0.3**
DURS				*e*S	**Sg**	**08 22 38.1**	**-0.1**
DURS	**Dursunbey**	**0.64**	**318**	*i* P	**Pg**	**08 22 30.0**	**+0.3**
DURS				*e*S	**Sg**	**08 22 38.1**	**-0.1**
KULA	**Kula-Manisa**	**0.68**	**206**	*e*PG	**Pb**	**08 22 30.6**	**+0.2**
KULA				*e*SG	**Sg**	**08 22 39.4**	**+0.2**
KULA	**Kula-Manisa**	**0.68**	**206**	*e*Pg	**Pb**	**08 22 30.6**	**+0.2**
KULA				*e*Sg	**Sg**	**08 22 39.4**	**+0.2**
ALT	**Altintas**	**0.84**	**94**	*e*PG	**Pg**	**08 22 33.8**	**+0.5**
ALT	**Altintas**	**0.84**	**94**	*e*Pg	**Pg**	**08 22 33.8**	**+0.5**
KHL	**Karahalli**	**0.89**	**154**	*e*PG	**Pn**	**08 22 34.8**	**0.0**
KHL				*e*SG	**Sg**	**08 22 46.4**	**+0.5**
KHL	**Karahalli**	**0.89**	**154**	*e*Pg	**Pn**	**08 22 34.8**	**0.0**
KHL				*e*Sg	**Sg**	**08 22 46.4**	**+0.5**
ORLT	**Orhaneli**	**0.93**	**353**	*e*PG	**Pb**	**08 22 34.4**	**-0.2**
ORLT	**Orhaneli**	**0.93**	**353**	*e*Pg	**Pb**	**08 22 34.4**	**-0.2**
ULDT	**Uludag**	**1.02**	**4**	*i* P	**Pn**	**08 22 36.9**	**+0.2**
ULDT				*i* S	**Sb**	**08 22 49.6**	**+0.1**
ULDT	**Uludag**	**1.02**	**4**	*i* P	**Pn**	**08 22 36.9**	**+0.2**
ULDT				*i* S	**Sb**	**08 22 49.6**	**+0.1**
CAVI	**Cavuskoy**	**1.24**	**30**	*e*PN	**Pg**	**08 22 41.6**	**+0.7**
CAVI	**Cavuskoy**	**1.24**	**30**	*e*Pn	**Pg**	**08 22 41.6**	**+0.7**
MDNY	**Mudanya-Bursa**	**1.25**	**355**	*e*PN	**Pg**	**08 22 41.7**	**+0.7**
MDNY	**Mudanya-Bursa**	**1.25**	**355**	*e*Pn	**Pg**	**08 22 41.7**	**+0.7**
KCTX	**Karacabey (Bur**	**1.25**	**336**	*e*PN	**Pg**	**08 22 41.4**	**+0.2**
KCTX	**Karacabey (Bur**	**1.25**	**336**	*e*Pn	**Pg**	**08 22 41.4**	**+0.2**
IZI	**Iznik**	**1.26**	**15**	*e*PN	**Pg**	**08 22 41.5**	**+0.4**
IZI	**Iznik**	**1.26**	**15**	*e*Pn	**Pg**	**08 22 41.6**	**+0.4**
SEYT	**Eskypehyr**	**1.46**	**74**	*e*P	**Pn**	**08 22 43.5**	**+0.8**
SEYT				*e*S	**Sn**	**08 22 59.4**	**-2.1**
SEYT	**Eskypehyr**	**1.46**	**74**	*e*P	**Pn**	**08 22 43.5**	**+0.8**
YLV	**Yalova**	**1.46**	**10**	*e*PN	**Pb**	**08 22 43.8**	**0.0**
YLV	**Yalova**	**1.46**	**10**	*e*Pn	**Pb**	**08 22 43.8**	**0.0**
GULT	**Gulveren**	**1.73**	**41**	*e*PN	**Pb**	**08 22 48.3**	**-0.1**
GULT	**Gulveren**	**1.73**	**41**	*e*Pn	**Pb**	**08 22 48.3**	**-0.1**

ISCJB 03 08:33:01.3±0.3, 59.84N±0.03×22.35E±0.04, h0km, Error ellipse: s-maj=4.0km s-min=2.9km az=175.5
CSEM 03 08:33:02.1±0.1, 59.87N×22.36E, h2km, ML2.1, Error ellipse: s-maj=4.7km s-min=3.0km az=179.0, Mining explosion.
HEL 03 08:33:02.7±0.1, 59.82N×22.29E, h0km, ML2.2, ML2.5(UPP), Explosion
NAO 03 08:33:03.2±1.7, 59.94N×22.25E, ML2.3
IDC 03 08:33:03.2±1.7, 59.89N×22.33E, h0km, mb1 3.1/4, mb1mx2.9/29, mbtmp3.0/4, ML2.6/4, Error ellipse: s-maj=23.2km s-min=7.0km az=157.0
UPP 03 08:33:03.8, 59.82N×22.06E, h0km, ML2.5, Suspected Mining explosion.
BER 03 08:33:04.0±3.7, 59.91N×22.25E, h0km, ML2.3(NAO)
ISC 03 08:33:01.3±0.7, 59.83N±0.02×22.31E±0.02, h0km, n54, σ1.10/80, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPE	**Suurupi**	**1.11**	**108**	*e*P	**Pg**	**08 33 22.8**	**+0.3**
SRPE				*e*S	**Sg**	**08 33 37.5**	**+0.5**
SRPE	**Suurupi**	**1.11**	**108**	P	**Pg**	**08 33 22.8**	**+0.3**
SRPE				S	**Sg**	**08 33 37.4**	**+0.5**
MEF	**Metsahovi**	**1.11**	**69**	*e*P	**Pg**	**08 33 22.8**	**+0.1**
MEF				*e*S	**Sg**	**08 33 37.3**	**+0.2**
MEF	**Metsahovi**	**1.11**	**69**	P	**Pg**	**08 33 22.7**	**+0.1**
MEF				*e*S	**Sg**	**08 33 37.0**	**0.0**
	49nm,0.5s,SNR=90						
AAL	**Aland**	**1.22**	**288**	*e*P	**Pg**	**08 33 24.2**	**-0.3**
AAL				*e*PB	**Pb**	**08 33 25.1**	**0.0**
AAL				*e*PN	**Pn**	**08 33 26.7**	**+1.2**
AAL				*e*S	**Sg**	**08 33 40.4**	**+0.1**
AAL				*e*SN	**Sn**	**08 33 45.1**	**+2.5**
AAL	**Aland**	**1.22**	**288**	P	**Pg**	**08 33 24.2**	**-0.3**
	baz=150						
RAF	**Rauma**	**1.23**	**347**	*e*P	**Pg**	**08 33 24.6**	**-0.1**
RAF				*e*S	**Sg**	**08 33 41.0**	**+0.4**
RAF				*e*SN	**Sn**	**08 33 46.1**	**+3.2**
RAF	**Rauma**	**1.23**	**347**	*e*P	**Pg**	**08 33 24.9**	**+0.2**
	SNR=90						
RAF				*e*S	**Sb**	**08 33 41.5**	**-0.1**
	71nm,0.7s,SNR=90						
RAF				Sn	**Sn**	**08 33 46.1**	**+3.2**
MTSE	**Matsula**	**1.36**	**145**	*e*P	**Pg**	**08 33 27.0**	**-0.3**
MTSE				*e*S	**Sg**	**08 33 44.4**	**-0.5**
MTSE	**Matsula**	**1.36**	**145**	P	**Pg**	**08 33 26.9**	**-0.3**
MTSE				S	**Sg**	**08 33 44.3**	**-0.5**
NRTU	**Norrtaelje**	**1.87**	**267**	*e*P	**Pb**	**08 33 35.3**	**-0.9**
NRTU				*e*S	**Sb**	**08 34 00.2**	**+0.1**
NRTU	**Norrtaelje**	**1.87**	**267**	P	**Pb**	**08 33 35.3**	**-0.9**
	baz=84						
NRTU				S	**Sb**	**08 34 00.2**	**+0.1**
PVF	**Pernaja**	**1.91**	**66**	*e*P	**Pb**	**08 33 36.7**	**-0.2**
PVF				*e*PG	**Pg**	**08 33 37.6**	**-0.2**
PVF				*e*S	**Sb**	**08 34 00.8**	**-0.5**
PVF				MSG		08 34 04.4	
	comp=Z,26nm,0.1s						
PVF	**Pernaja**	**1.91**	**66**	P	**Pb**	**08 33 36.7**	**-0.2**
FORU	**Forsmark**	**2.14**	**287**	*e*P	**Pb**	**08 33 39.6**	**-1.3**
FORU	**Forsmark**	**2.14**	**287**	P	**Pb**	**08 33 39.6**	**-1.3**
SLIT	**Slitere, Latvi**	**2.21**	**180**	*e*P	**Pb**	**08 33 41.5**	**-0.5**
	SNR=50						
FLYU	**Flymyra**	**2.25**	**280**	*e*P	**Pn**	**08 33 40.6**	**+1.0**
FLYU	**Flymyra**	**2.25**	**280**	P	**Pn**	**08 33 40.6**	**+1.0**
FIA0	**FINESS Array S**	**2.46**	**47**	Pn	**Pb**	**08 33 45.3**	**-1.0**
	baz=227,slow=14						
FIA0				Lg	Lg	08 34 17.2	
	baz=232,slow=22						
FIA0				Rg	Rg	08 34 34.2	
	baz=218,slow=37						
FIA0	**FINESS Array S**	**2.46**	**47**	Pn	**Pb**	**08 33 45.3**	**-1.0**
	baz=227,slow=14						
FIA0				Lg	Lg	08 34 17.2	
	baz=232,slow=22						
FIA0				Rg	Rg	08 34 34.2	
	baz=218,slow=37						
FIA0	**FINESS Array S**	**2.46**	**47**	*e*P	**Pb**	**08 33 45.3**	**-1.0**
FIA0				*e*SB	**Sb**	**08 34 17.6**	**+0.5**
FIA0	**FINESS Array S**	**2.46**	**47**	P	**Pb**	**08 33 45.2**	**-1.0**
FIA0				Lg	Lg	08 34 17.2	
	baz=232,slow=22,SNR=1.3						
FINES	**FINESS Array B**	**2.46**	**47**	Pn	**Pb**	**08 33 45.3**	**-1.0**
	comp=Z,1.6nm,0.3s,baz=231,slow=13,SNR=54						
FINES				Lg	Lg	08 34 17.9	
	comp=Z,4.0nm,0.3s,baz=233,slow=21,SNR=20						
BACU	**Backbrunna**	**2.63**	**273**	*e*P	**Pn**	**08 33 46.2**	**+1.3**
BACU	**Backbrunna**	**2.63**	**273**	P	**Pn**	**08 33 46.2**	**+1.3**
OSTU	**Oestervaala**	**2.63**	**281**	*e*P	**Pn**	**08 33 46.0**	**+1.1**
OSTU	**Oestervaala**	**2.63**	**281**	P	**Pn**	**08 33 46.0**	**+1.1**
GOTU	**Gotland**	**2.91**	**224**	*e*P	**Pn**	**08 33 49.8**	**+1.1**
GOTU	**Gotland**	**2.91**	**224**	P	**Pn**	**08 33 49.8**	**+1.1**
KAF	**Kangasniemi**	**3.00**	**39**	*e*PB	**Pb**	**08 33 53.7**	**-1.9**
KAF				*e*PG	**Pg**	**08 33 57.2**	**-1.5**
KAF				*e*SB	**Sb**	**08 34 32.4**	**-0.3**
KAF				MSG		08 34 34.4	
	comp=Z,8.4nm,0.2s						
KAF	**Kangasniemi**	**3.00**	**39**	Pb	**Pb**	**08 33 53.6**	**-1.9**
ARNU	**Arnoeviken**	**3.06**	**310**	*e*P	**Pn**	**08 33 52.1**	**+1.3**
ARNU	**Arnoeviken**	**3.06**	**310**	P	**Pn**	**08 33 52.1**	**+1.3**
ESKU	**Eskilstuna**	**3.08**	**261**	*e*P	**Pn**	**08 33 52.6**	**+1.6**
ESKU	**Eskilstuna**	**3.08**	**261**	P	**Pn**	**08 33 52.6**	**+1.6**
VIKU	**Vikbolandet**	**3.18**	**248**	*e*P	**Pn**	**08 33 53.4**	**+0.9**
VIKU	**Vikbolandet**	**3.18**	**248**	P	**Pn**	**08 33 53.4**	**+0.9**
VAF	**Ylistaro**	**3.23**	**3**	*e*PB	**Pb**	**08 33 58.4**	**-1.0**
VAF				*e*SB	**Sb**	**08 34 38.5**	**-0.6**
VAF				MSG		08 34 50.9	
	comp=Z,3.1nm,0.2s						
VAF	**Ylistaro**	**3.23**	**3**	Pb	**Pb**	**08 33 58.4**	**-1.0**
VAF				Sb	**Sb**	**08 34 38.5**	**-0.6**
FALU	**Falun**	**3.31**	**284**	*e*P	**Pn**	**08 33 55.5**	**+1.2**
FALU	**Falun**	**3.31**	**284**	P	**Pn**	**08 33 55.4**	**+1.2**
HFS	**Hagfors**	**4.34**	**278**	Pn	**Pn**	**08 34 09.5**	**+1.1**
	baz=97,slow=14						
HFS				Sn	**Sn**	**08 34 58.8**	**-0.8**
	baz=86,slow=28						
HFS				Lg	Lg	08 35 13.8	
	baz=104,slow=37						
HFS	**Hagfors**	**4.34**	**278**	Pn	**Pn**	**08 34 09.5**	**+1.1**
	baz=97,slow=14						
HFS				Sn	**Sn**	**08 34 58.8**	**-0.8**
	baz=86,slow=28						
HFS				Lg	Lg	08 35 13.8	
	baz=104,slow=37						
HFS	**Hagfors**	**4.34**	**278**	Pn	**Pn**	**08 34 09.8**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=102,slow=12,SNR=12						
HFS				Lg	Lg	08 35 16.9	
	comp=Z,1.2nm,0.3s,baz=96,slow=27,SNR=7.4						
HFS	**Hagfors**	**4.34**	**278**	Pn	**Pn**	**08 34 09.5**	**+1.1**
	baz=97,slow=13,SNR=50						
HFS				Sn	**Sn**	**08 34 58.8**	**-0.8**
	baz=86,slow=25,SNR=50						
HFS				Lg	Lg	08 35 13.9	
	baz=104,slow=32						
NB2	**NORSAR Subarra**	**5.63**	**287**	Pn	**Pn**	**08 34 27.0**	**+0.8**
	baz=96,slow=14						
NB2	**NORSAR Subarra**	**5.63**	**287**	Pn	**Pn**	**08 34 27.0**	**+0.8**
	baz=96,slow=14						
NB2	**NORSAR Subarra**	**5.63**	**287**	Pn	**Pn**	**08 34 27.0**	**+0.8**
	baz=96,slow=12,SNR=50						
NOA	**NORSAR Array B**	**5.63**	**287**	Pn	**Pn**	**08 34 26.0**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=94,slow=12,SNR=6.5						
ARA0	**ARCESS Array S**	**9.84**	**7**	Pn	**Pn**	**08 35 22.6**	**-1.2**
	baz=188,slow=14						
ARA0				Sn	Sn	08 37 08.0	-6.8
	baz=191,slow=28						
ARA0	**ARCESS Array S**	**9.84**	**7**	Pn	**Pn**	**08 35 22.6**	**-1.2**
	baz=188,slow=14						
ARA0				Sn	Sn	08 37 08.0	-6.8
	baz=191,slow=28						
ARA0	**ARCESS Array S**	**9.84**	**7**	Pn	**Pn**	**08 35 22.5**	**-1.2**
	baz=188,slow=13,SNR=50						
ARCES	**ARCESS Array B**	**9.84**	**7**	Pn	**Pn**	**08 35 22.6**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=185,slow=14,SNR=15						
ARCES				Sn	Sn	08 37 08.7	-6.1
	comp=Z,0.2nm,0.3s,baz=192,slow=24,SNR=3.7						

TAP 03 08:57:21.8, 23.25N×120.97E, h8km±1km, ML1.8, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.07**	**146**	*e*P	Pg	08 57 24.7	+0.8
	baz=142						
ELDTW				S	Sg	08 57 26.0	+0.5
	baz=142						
YUS	**Yu-Shan**	**0.24**	**355**	P	Pg	08 57 27.8	+0.6
	baz=356						
YUS				*e*S	Sg	08 57 31.4	+0.4
	baz=356						
ALS	**Alishan**	**0.30**	**329**	*e*P	Pg	08 57 28.5	+0.3
	baz=330						
ALS				*e*S	Sg	08 57 32.3	-0.2
	baz=330						
TWF1	**Yuli**	**0.32**	**71**	*e*P	Pb	08 57 29.7	0.0
	baz=71						
TWF1				*e*S	Sb	08 57 34.6	-0.4
	baz=71						
WTP	**Ta-pu**	**0.33**	**269**	*e*P	Pb	08 57 30.0	0.0
	baz=268						
WTP				*e*S	Sg	08 57 34.0	+1.1
	baz=268						
CHN4	**Tsaushan**	**0.36**	**286**	P	Pb	08 57 30.1	-0.4
	baz=286						
CHN4				*e*S	Sb	08 57 35.2	-1.2
	baz=286						
EHY	**Hungye**	**0.41**	**51**	*e*P	Pb	08 57 31.9	+0.6
	baz=52						
CHN1	**Nanshi**	**0.41**	**261**	*e*P	Pb	08 57 31.7	+0.3
	baz=261						
CHN1				*e*S	Sb	08 57 37.5	-0.4
	baz=261						
CHN5	**Tsauling**	**0.44**	**322**	P	Pb	08 57 31.5	-0.4
	baz=321						
CHN5				S	Sg	08 57 37.2	+0.8
	baz=321						
TWK	**Hsinying**	**0.45**	**272**	*e*P	Pb	08 57 32.3	+0.3
	baz=271						
TWK				*e*S	Sb	08 57 38.4	-0.5
	baz=271						
SMLT	**Sun Moon Lake**	**0.63**	**354**	*e*P	Pb	08 57 34.9	-0.3
	baz=354						
WHF	**Hehuan Shan**	**0.93**	**17**	*e*P	Pb	08 57 41.0	+0.2
	baz=17						
WHF				*e*S	Sg	08 57 51.8	-1.0
	baz=17						
TWT	**Tachien**	**1.02**	**10**	*e*S	Sg	08 57 55.2	+0.2
	baz=9.0						

TAP 03 08:57:24.9, 23.35N×121.67E, h26km, ML2.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.34**	**270**	*e*P	Pn	08 57 33.4	-0.7
	baz=270						
TWF1				*e*S	Sn	08 57 39.5	-0.7
	baz=270						
EHY	**Hungye**	**0.35**	**296**	*e*P	Pb	08 57 33.2	+0.3
	baz=296						
EHY				*e*S	Sb	08 57 39.4	+1.1
	baz=296						
CHKT	**Chengkung**	**0.37**	**228**	*e*P	Pb	08 57 33.6	+0.4
	baz=226						
CHKT				S	Sn	08 57 40.0	-1.0
	baz=226						
ESL	**Shilin**	**0.51**	**335**	*e*P	Pn	08 57 37.6	+1.0
	baz=335						
ESL				*e*S	Sb	08 57 43.1	+0.6
	baz=335						
ELDTW	**Lidau**	**0.62**	**255**	*e*P	Pb	08 57 37.5	+0.2
	baz=254						
ELDTW				*e*S	Sb	08 57 44.4	-1.4
	baz=254						
YUS	**Yu-Shan**	**0.67**	**282**	*e*P	Pb	08 57 38.4	-0.3
	baz=281						
YUS				*e*S	Sb	08 57 47.3	-0.8
	baz=281						
TWG	**Pinlang**	**0.76**	**226**	*e*P	Pb	08 57 38.2	-1.4
	baz=225						
CHN5	**Tsauling**	**0.94**	**285**	*e*P	Pb	08 57 43.2	+0.5
	baz=285						
CHN5				*e*S	Sb	08 57 55.0	+0.1
	baz=285						
WTP	**Ta-pu**	**0.97**	**264**	*e*P	Pb	08 57 43.3	+0.1
	baz=263						
WTP				*e*S	Sn	08 57 56.4	+0.4
	baz=263						
CHN4	**Tsaushan**	**0.98**	**270**	*e*P	Pb	08 57 43.4	0.0
	baz=270						
CHN4				*e*S	Sn	08 57 56.9	+0.7
	baz=270						
CHN1	**Nanshi**	**1.06**	**261**	*e*S	Sb	08 57 59.0	+0.8
	baz=261						

SOF 03 09:23:48.7, 41.96N×23.25E, h5km, MD2.5
ATH 03 09:23:49.1, 41.92N×23.24E, h19km±1km, MD3.4/4
CSEM 03 09:23:49.5±0.2, 41.92N×23.22E, h2km, MD2.5, Error ellipse: s-maj=4.3km s-min=3.2km az=67.0
SKO 03 09:23:50.4, 41.91N×23.24E, h0km, M2.2, ML2.6
THE 03 09:23:50.4, 41.86N×23.24E, h3km±1km, ML2.7/7, Error ellipse: s-maj=1.7km s-min=0.5km az=283.0
BEO 03 09:23:50.6±0.3, 41.95N×23.19E, h0km, ML2.5/6
ISC 03 09:23:48.9±1.0, 41.95N±0.02×23.24E±0.02, h8km±8km, n49, σ0.87/77, 3C-2D, Greece-Bulgaria border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.14**	**236**	*i* P	**Pg**	**09 23 52.2**	**+0.3**
KKB	**Krupnik**	**0.14**	**236**	*i* P	**Pg**	**09 23 52.2**	**+0.3**
MMB	**Musomiste**	**0.51**	**134**	*i* P	**Pb**	**09 23 59.6**	**-0.5**
MMB	**Musomiste**	**0.51**	**134**	*i* P	**Pb**	**09 23 59.6**	**-0.5**
VTS	**Vitosha**	**0.65**	**358**	P	**Pb**	**09 24 01.8**	**-0.7**
VTS				S	**Sb**	**09 24 10.9**	**-0.8**
VTS	**Vitosha**	**0.65**	**358**	*i* P	**Pb**	**09 24 01.7**	**-0.7**
VTS	**Vitosha**	**0.65**	**358**	⇑*i*P	**Pb**	**09 24 01.9**	**-0.6**
VTS				S	**Sb**	**09 24 10.8**	**-0.9**
VTS	**Vitosha**	**0.65**	**358**	P	**Pb**	**09 24 01.8**	**-0.7**
VTS				*e*Sg	**Sb**	**09 24 10.5**	**-1.2**
NVR	**Nevrokopi**	**0.76**	**142**	P	**Pb**	**09 24 03.5**	**-0.8**
NVR				S	**Sg**	**09 24 13.4**	**+0.2**
NVR	**Nevrokopi**	**0.76**	**142**	*e*PN	**Pb**	**09 24 03.5**	**-0.8**
NVR				*e*SN	**Sg**	**09 24 13.5**	**+0.2**
VAY	**Valandovo**	**0.80**	**219**	P	**Pb**	**09 24 04.3**	**-0.7**
VAY				S	**Sg**	**09 24 15.0**	**+0.3**
VAY	**Valandovo**	**0.80**	**219**	*e*Pg	**Pb**	**09 24 04.2**	**-0.7**
VAY				*e*Sg	**Sg**	**09 24 14.8**	**+0.1**
VAY	**Valandovo**	**0.80**	**219**	*i* Pg	**Pb**	**09 24 04.3**	**-0.7**
VAY				*e*Lg	Lg	09 24 15.0	
	comp=E,189nm,0.5s						
VAY				*i* Sg	**Sg**	**09 24 15.1**	**+0.4**
VAY				*e*Lg	Lg	09 24 15.3	
	comp=N,171nm,0.7s						
VAY	**Valandovo**	**0.80**	**219**	*i* Pg	**Pg**	**09 24 01.8**	**-2.5**
VAY				*e*Sg	**Sg**	**09 24 14.8**	**+0.1**
VAY				*e*Lg	Lg	09 24 15.7	
	comp=N,171nm,0.7s						
KNT	**Kendrikon**	**0.82**	**198**	P	**Pg**	**09 24 04.6**	**-0.1**
KNT				S	**Sg**	**09 24 15.1**	**-0.3**
SRS	**Serrai**	**0.87**	**162**	P	**Pb**	**09 24 05.6**	**-0.6**
SRS				S	**Sb**	**09 24 17.4**	**-0.6**
PGB	**Panagyurishte**	**0.92**	**48**	*i* P	**Pb**	**09 24 06.2**	**-0.8**
PGB	**Panagyurishte**	**0.92**	**48**	*i* P	**Pb**	**09 24 06.2**	**-0.8**
PLD	**Plovdiv**	**1.10**	**81**	P	**Pn**	**09 24 11.6**	**+1.0**
PLD				S	**Sn**	**09 24 26.7**	**+0.7**
PLD	**Plovdiv**	**1.10**	**81**	*i* P	**Pn**	**09 24 11.8**	**+1.2**
PLD	**Plovdiv**	**1.10**	**81**	*e*Pg	**Pn**	**09 24 11.6**	**+1.0**
PLD				*e*Sg	**Sn**	**09 24 26.2**	**+0.2**
PLD	**Plovdiv**	**1.10**	**81**	P	**Pn**	**09 24 11.6**	**+1.0**
PLD				*e*Sg	**Sn**	**09 24 26.2**	**+0.2**
SOH	**Sokhos**	**1.13**	**176**	P	**Pb**	**09 24 10.3**	**-0.3**
SOH				S	**Sb**	**09 24 25.2**	**-0.2**
SOH	**Sokhos**	**1.13**	**176**	*e*PN	**Pb**	**09 24 10.4**	**-0.2**
SOH				*e*SN	**Sb**	**09 24 25.5**	**+0.1**
RZN	**Rozhen**	**1.13**	**103**	*i* P	**Pn**	**09 24 11.0**	**-0.2**
RZN	**Rozhen**	**1.13**	**103**	*i* P	**Pn**	**09 24 11.0**	**-0.2**
GRG	**Griva**	**1.17**	**213**	P	**Pb**	**09 24 11.1**	**-0.3**
GRG				S	**Sb**	**09 24 26.7**	**0.0**
GRG	**Griva**	**1.17**	**213**	*e*PN	**Pb**	**09 24 11.1**	**-0.3**
GRG				*e*SN	**Sb**	**09 24 26.8**	**0.0**
KAVA	**Kavala**	**1.35**	**134**	P	**Pg**	**09 24 14.5**	**-0.2**
KAVA				S	**Sn**	**09 24 33.1**	**+1.1**
KAVA	**Kavala**	**1.35**	**134**	P	**Pg**	**09 24 14.5**	**-0.2**
KAVA				S	**Sn**	**09 24 33.1**	**+1.1**
HORT	**Hortiatis**	**1.35**	**185**	P	**Pg**	**09 24 14.5**	**-0.3**
HORT				S	**Sn**	**09 24 32.4**	**+0.2**
HORT	**Hortiatis**	**1.35**	**185**	P	**Pg**	**09 24 14.5**	**-0.3**
HORT				S	**Sn**	**09 24 32.4**	**+0.2**
BARS	**Barje**	**1.37**	**310**	*e*Pg	**Pg**	**09 24 14.9**	**-0.2**
BARS				*e*Sg	**Sn**	**09 24 32.4**	**-0.1**
BARS	**Barje**	**1.37**	**310**	*e*Pg	**Pg**	**09 24 14.9**	**-0.2**
BARS				*e*Sg	**Sn**	**09 24 32.4**	**-0.1**
ZAPS	**Zavoj**	**1.40**	**342**	*e*Pg	**Pg**	**09 24 16.4**	**+0.7**
MPEP	**Malo Peshtene**	**1.46**	**15**	*i* P	**Pg**	**09 24 16.6**	**-0.2**
PLG	**Polygyros**	**1.58**	**174**	*e*PN	**Pn**	**09 24 17.2**	**0.0**
PLG				*e*SN	**Sb**	**09 24 38.2**	**-0.2**
KDZ	**Kurdzhali**	**1.66**	**100**	*i* P	**Pg**	**09 24 20.0**	**-0.6**
KDZ	**Kurdzhali**	**1.66**	**100**	*i* P	**Pg**	**09 24 20.0**	**-0.6**
FNA	**Florina**	**1.82**	**231**	*e*PN	**Pn**	**09 24 21.1**	**+0.6**
SELS	**Selova**	**2.02**	**310**	*e*Pn	**Pb**	**09 24 25.3**	**-0.5**
SELS				*e*Sn	**Sb**	**09 24 51.3**	**+0.3**
GRUS	**Gruza**	**2.68**	**317**	*e*Pn	**Pb**	**09 24 35.4**	**-1.7**
GRUS				*e*Sn	**Sb**	**09 25 08.7**	**-1.5**
GRUS	**Gruza**	**2.68**	**317**	*e*Pn	**Pb**	**09 24 35.4**	**-1.7**
GRUS				*e*Sn	**Sb**	**09 25 08.7**	**-1.5**
DIVS	**Divibare**	**3.21**	**313**	*e*Pn	**Pn**	**09 24 41.9**	**+2.3**
DIVS	**Divibare**	**3.21**	**313**	*e*Pn	**Pn**	**09 24 41.9**	**+2.3**
VOIR		**3.73**	**20**	⇓*i*P	**Pn**	**09 24 48.3**	**+1.5**
VOIR		**3.73**	**20**	⇓*i*P	**Pn**	**09 24 48.3**	**+1.5**
BZS	**Buzias**	**3.85**	**343**	⇑*i*P	**Pn**	**09 24 49.6**	**+1.2**
BZS	**Buzias**	**3.85**	**343**	⇑*i*P	**Pn**	**09 24 49.6**	**+1.2**

ISCJB 03 09:24:05.6±0.5, 37.91N±0.03×27.61E±0.07, h0km, Error ellipse: s-maj=7.8km s-min=3.4km az=160.6
CSEM 03 09:24:05.7±0.3, 37.91N×27.61E, h1km, MD2.7, Error ellipse: s-maj=11.4km s-min=4.4km az=66.0
DDA 03 09:24:05.2, 37.88N×27.56E, h7km, MD2.5

*ISK **03** 09:24:05.0, 37°.95N×27°.64E, h12km, MD2.7*
ISC 03 09:24:05.8±1.0**, 37°.92N**±0°.03×**27°.62E**±0°.05**, h0**km**, n15, σ0s.47**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYDN	**Tasoluk**	**0.33**	**142**	*i* P	**Pg**	**09 24 12.3**	**+0.1**
AYDN				*i* S	**Sg**	**09 24 16.7**	**+0.2**
AYDN	**Tasoluk**	**0.33**	**142**	*i* P	**Pg**	**09 24 12.3**	**+0.1**
AYDN				*i* S	**Sg**	**09 24 16.7**	**+0.2**
IZM	**Izmir**	**0.55**	**329**	*e*PG	**Pg**	**09 24 15.5**	**-0.9**
IZM				*e*SG	**Sg**	**09 24 24.2**	**+0.7**
IZM	**Izmir**	**0.55**	**329**	*e*Pg	**Pg**	**09 24 15.5**	**-0.9**
IZM				*e*Sg	**Sg**	**09 24 24.2**	**+0.7**
MLSB	**Milas**	**0.64**	**169**	*e*PG	**Pg**	**09 24 18.4**	**+0.4**
MLSB	**Milas**	**0.64**	**169**	*e*Pg	**Pg**	**09 24 18.5**	**+0.4**
BLCB	**Balcova**	**0.65**	**316**	*e*PG	**Pg**	**09 24 18.5**	**+0.2**
BLCB				*e*SG	**Sg**	**09 24 27.2**	**+0.5**
BLCB	**Balcova**	**0.65**	**316**	*e*Pg	**Pg**	**09 24 18.5**	**+0.2**
BLCB				*e*Sg	**Sg**	**09 24 27.2**	**+0.5**
BODT	**Bodrum**	**0.89**	**196**	*e*PG	**Pg**	**09 24 22.8**	**-0.1**
BODT				*e*SG	**Sb**	**09 24 36.3**	**-0.4**
BODT	**Bodrum**	**0.89**	**196**	*e*Pg	**Pg**	**09 24 22.8**	**-0.1**
BODT				*e*Sg	**Sb**	**09 24 36.3**	**-0.4**
YER	**Yerkesik**	**0.95**	**146**	*e*PG	**Pg**	**09 24 23.6**	**-0.4**
YER	**Yerkesik**	**0.95**	**146**	*e*Pg	**Pg**	**09 24 23.6**	**-0.4**
AKHS	**Akhisar**	**0.97**	**9**	*i* P	**Pb**	**09 24 25.3**	**-0.2**
AKHS				*i* S	**Sb**	**09 24 39.3**	**+0.5**
DAT	**Datca**	**1.19**	**182**	*e*PN	**Pg**	**09 24 28.4**	**-0.3**
DAT	**Datca**	**1.19**	**182**	*e*Pn	**Pg**	**09 24 28.4**	**-0.3**

*NIED **03** 09:28:00, 22°.30N×125°.90E, h38km, Mw3.8 Best double couple: M₀5.34000×10¹⁴ NP1:φs300.00000°, δ87.00000°, λ-56.00000°. NP2:φs34.00000°, δ34.00000°, λ-175.00000°.*
JMA 03 09:28:59.0±0.5**, 22°.32N**×**125°.93E, h0**km**, M3.8, Southeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**2.48**	**349**	*e*S	Sn	09 30 13.4	+1.8
JMJ	**Miyako jima 2**	**2.55**	**347**	*e*S	Sn	09 30 14.1	+0.7
JTJ	**Tarama**	**2.57**	**334**	P	Pn	09 29 42.6	+0.7
JTJ				S	Sn	09 30 14.5	+0.6
JKRS	**Kuro-shima**	**2.60**	**318**	P	Pn	09 29 43.7	+1.4
JKRS				S	Sn	09 30 15.9	+1.3
HATJ	**Hateruma jima**	**2.61**	**312**	*e*S	Sn	09 30 16.4	+1.5
JIJ	**Ishigaki jima**	**2.61**	**321**	P	Pn	09 29 43.5	+1.0
JIJ				S	Sn	09 30 15.3	+0.3
IRIF	**Iriomote-Funau**	**2.85**	**315**	P	Pn	09 29 47.1	+1.4
IRIF				*e*S	Sn	09 30 23.1	+2.4
YOJ	**Yonaguni jima**	**3.43**	**309**	P	Pn	09 29 55.2	+1.5
YOJ				*e*S	Sn	09 30 35.9	+0.9
JKE	**Kume jima 2**	**4.06**	**11**	P	Pn	09 30 00.2	-2.3
JKE				*e*S	Sn	09 30 46.5	-4.3

IDC 03 09:45:28.7±2.0**, 22°.44S**×**174°.97W, h0**km**, mb3.8**/6**, mb1 4.2**/6**, mb1mx3.9**/19**, mbtmp3.8**/6**, Error ellipse: s-maj=130.8km s-min=22.7km az=153.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.55**	**247**	P	P	09 53 01.2	-0.4
	0.6nm,0.6s,baz=112,slow=11,SNR=4.1						
ASAR	**Alice Springs**	**46.85**	**258**	P	P	09 54 00.8	0.0
	1.6nm,0.8s,baz=94,slow=8.1,SNR=12						
WRA	**Warramunga Arr**	**47.15**	**263**	P	P	09 54 03.2	0.0
	0.5nm,0.5s,baz=93,slow=8.2,SNR=7.3						
NVAR	**Mina Array Bea**	**80.54**	**42**	P	P	09 57 43.0	-0.1
	0.7nm,0.8s,baz=218,slow=5.7,SNR=6.7						
TXAR	**Lajitas Array**	**85.76**	**56**	P	P	09 58 10.4	+0.2
	0.9nm,1.0s,baz=212,slow=5.0,SNR=6.4						
ILAR	**Eielson Array**	**89.60**	**12**	P	P	09 58 27.6	-0.1
	0.8nm,1.0s,baz=222,slow=5.4,SNR=5.7						

WEL 03 09:46:12.3±0.8**, 35°.96S**×**178°.39E, h208**km±6km**, ML4.0**/7**, 2D, Error ellipse: s-maj=7.5km s-min=7.0km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.60**	**182**	⇓PN	Pn	09 46 47.5	0.0
MXZ				SN	S	09 47 14.9	+0.1
PUZ	**Puketiti**	**2.11**	**183**	PN	Pn	09 46 52.7	+0.2
PUZ				SN	S	09 47 23.1	-0.5
PUZ				AML	AML	09 47 26.9	
MARZ	**Manawahe**	**2.44**	**214**	PN	Pn	09 46 56.9	+0.8
MWZ	**Matawai**	**2.47**	**196**	PN	Pn	09 46 56.6	+0.3
MWZ				AML	AML	09 47 38.1	
MWZ				AML	AML	09 47 38.4	
MWZ				AML	AML	09 47 43.7	
MWZ				AML	AML	09 47 43.7	
URZ	**Urewera**	**2.51**	**204**	PN	Pn	09 46 56.5	-0.2
URZ				SN	S	09 47 31.2	+0.1
URZ				AML	AML	09 47 34.7	
CNGZ	**Carnagh Statio**	**2.52**	**183**	PN	Pn	09 46 57.8	+0.9
TARZ	**Mount Tarawera**	**2.72**	**213**	PN	Pn	09 47 00.5	+1.2
PRGZ	**Paritu Road**	**2.98**	**188**	PN	Pn	09 47 01.9	-0.2
PRRZ	**Plateau Road**	**2.99**	**212**	PN	Pn	09 47 02.7	+0.4
ALRZ	**Allen Road**	**3.07**	**212**	PN	Pn	09 47 03.3	+0.2
KNZ	**Kokohu**	**3.11**	**190**	PN	Pn	09 47 03.3	-0.2
RAHZ	**Arahi**	**3.13**	**199**	PN	Pn	09 47 04.0	+0.1
MHGZ	**Mahia Peninsul**	**3.21**	**187**	PN	Pn	09 47 05.1	+0.3
NMHZ	**Naumai**	**3.38**	**201**	PN	Pn	09 47 07.1	+0.3
BKZ	**Black Stump Fm**	**3.54**	**205**	⇓PN	Pn	09 47 08.4	-0.3
BKZ				SN	S	09 47 51.5	-1.2
BKZ				AML	AML	09 47 54.1	
MCHZ	**McNeill Hill**	**3.73**	**201**	PN	Pn	09 47 10.9	0.0
MCHZ				SN	S	09 47 56.8	+0.1
OTVZ	**Oturere**	**3.86**	**213**	PN	Pn	09 47 12.7	-0.1
TWVZ	**Taurewa**	**3.89**	**216**	PN	Pn	09 47 13.2	+0.1
NGZ	**Ngauruhoe**	**3.90**	**214**	PN	Pn	09 47 13.5	+0.2
WPVZ	**Whakapapa**	**3.95**	**214**	PN	Pn	09 47 13.8	0.0
TUVZ	**Tukino**	**3.95**	**213**	PN	Pn	09 47 13.7	-0.2
BHHZ	**Black Hill Sta**	**3.98**	**207**	PN	Pn	09 47 13.1	-1.0
FWVZ	**Far West T-bar**	**3.99**	**214**	PN	Pn	09 47 14.1	-0.4
TRVZ	**Turoa**	**4.03**	**213**	PN	Pn	09 47 14.4	-0.6
WNVZ	**Wahianoa**	**4.03**	**213**	PN	Pn	09 47 14.5	-0.4
MOVZ	**Moawhango**	**4.03**	**211**	PN	Pn	09 47 13.6	-1.1
PKVZ	**Pokaka**	**4.11**	**215**	PN	Pn	09 47 15.4	-0.3
MTVZ	**Mangateitei**	**4.13**	**213**	PN	Pn	09 47 15.7	-0.3
PXZ	**Pawanui**	**4.24**	**196**	PN	Pn	09 47 16.2	-1.0
PXZ				AML	AML	09 48 08.1	
PXZ				AML	AML	09 48 10.4	
PNHZ	**Pukenui**	**4.31**	**203**	PN	Pn	09 47 16.8	-1.4
TSZ	**Takapari Road**	**4.52**	**204**	PN	Pn	09 47 19.0	-1.8
WAZ	**Wanganui**	**4.65**	**214**	PN	Pn	09 47 22.0	-0.4
DVHZ	**Dannevirke**	**4.67**	**201**	PN	Pn	09 47 21.1	-1.7
POWZ	**Post Office Ro**	**4.88**	**204**	PN	Pn	09 47 23.9	-1.4
BFZ	**Birch Farm**	**5.00**	**199**	PN	Pn	09 47 25.1	-1.8
MRZ	**Mangatainoka R**	**5.19**	**204**	PN	Pn	09 47 27.0	-2.2
MRZ				AML	AML	09 48 27.9	
MRZ				AML	AML	09 48 29.4	
TIWZ	**Tintock**	**5.20**	**201**	PN	Pn	09 47 27.6	-1.8
HOWZ	**Holdsworth Sta**	**5.42**	**204**	PN	Pn	09 47 29.8	-2.4
OGWZ	**Otaki Gorge**	**5.47**	**207**	PN	Pn	09 47 30.3	-2.4
TMWZ	**Te Maipa**	**5.50**	**200**	PN	Pn	09 47 31.0	-2.2
KIW	**Kapiti Island**	**5.60**	**208**	PN	Pn	09 47 31.9	-2.7
MTW	**Mount Morrison**	**5.66**	**203**	PN	Pn	09 47 32.8	-2.5
CAW	**Cannon Point**	**5.76**	**206**	PN	Pn	09 47 33.7	-2.8
TRWZ	**Traveller**	**5.83**	**200**	PN	Pn	09 47 35.1	-2.3
PAWZ	**Paruwai Farm**	**5.89**	**202**	PN	Pn	09 47 35.6	-2.6
DUWZ	**D'Urville Isla**	**5.97**	**215**	PN	Pn	09 47 37.0	-2.3
MSWZ	**Moikau Station**	**5.97**	**203**	PN	Pn	09 47 36.4	-2.9
WEL	**Wellington**	**6.03**	**207**	PN	Pn	09 47 36.9	-2.9
SNZO	**South Karori**	**6.07**	**207**	PN	Pn	09 47 37.2	-3.3
BHW	**Baring Head**	**6.10**	**206**	PN	Pn	09 47 37.6	-3.1
PLWZ	**Palliser**	**6.11**	**203**	PN	Pn	09 47 38.1	-3.0
TCW	**Tory Channel**	**6.15**	**210**	PN	Pn	09 47 38.4	-3.1
TUWZ	**Tuamarina**	**6.47**	**211**	PN	Pn	09 47 42.4	-3.3
NNZ	**Nelson**	**6.55**	**215**	PN	Pn	09 47 43.4	-3.3
QRZ	**Quartz Range**	**6.69**	**222**	PN	Pn	09 47 44.9	-3.6
BSWZ	**Blackbirch Sta**	**6.74**	**210**	PN	Pn	09 47 46.1	-3.0
THZ	**Tophouse**	**7.20**	**215**	PN	Pn	09 47 51.8	-3.4
KHZ	**Kahutara**	**7.47**	**209**	PN	Pn	09 47 55.3	-3.1
LTZ	**Lake Taylor**	**8.30**	**213**	PN	Pn	09 48 05.3	-4.1
MQZ	**McQueen's Vall**	**8.90**	**208**	PN	Pn	09 48 13.0	-4.2
ODZ	**Otahua Downs**	**10.81**	**211**	*e*PN	Pn	09 48 38.2	-3.5
JCZ	**Jackson Bay**	**10.96**	**219**	PN	Pn	09 48 40.0	-3.7

*DDA **03** 09:46:33.0, 37°.99N×29°.27E, h9km, MD2.7*
*ISCJB **03** 09:46:33.4±0.5, 37°.99N±0°.03×29°.27E±0°.05, h10km±4km, Error ellipse: s-maj=6.7km s-min=3.5km az=24.7*
*CSEM **03** 09:46:33.3±0.1, 37°.99N×29°.26E, h10km, MD2.6, Error ellipse: s-maj=3.6km s-min=2.3km az=113.0*
*ISK **03** 09:46:33.3, 38°.00N×29°.27E, h5km, MD2.6*
ISC 03 09:46:33.6±0.9**, 38°.00N**±0°.02×**29°.25E**±0°.03**, h15**km±9km**, n28, σ0s.64**/44**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.30**	**216**	*e*PG	**Pg**	**09 46 40.1**	**+0.2**
DENT				*e*SG	**Sg**	**09 46 44.6**	**+0.4**
DENT	**Denizli**	**0.30**	**216**	*e*Pg	**Pg**	**09 46 40.1**	**+0.2**
DENT				*e*Sg	**Sg**	**09 46 44.6**	**+0.4**
DNZL	**Cakiroluk**	**0.35**	**208**	*i* P	**Pg**	**09 46 40.1**	**-0.7**
DNZL				*i* S	**Sg**	**09 46 45.5**	**-0.3**
DNZL	**Cakiroluk**	**0.35**	**208**	*i* P	**Pg**	**09 46 40.1**	**-0.7**
DNZL				*i* S	**Sg**	**09 46 45.5**	**-0.3**
KHL	**Karahalli**	**0.39**	**33**	*e*PG	**Pg**	**09 46 41.1**	**-0.4**
KHL				*e*SG	**Sg**	**09 46 46.9**	**0.0**
KHL	**Karahalli**	**0.39**	**33**	*e*Pg	**Pg**	**09 46 41.1**	**-0.4**
KHL				*e*Sg	**Sg**	**09 46 46.9**	**0.0**
KHAL	**Karahalli**	**0.42**	**27**	*i* P	**Pg**	**09 46 41.4**	**-0.6**
KHAL				*i* S	**Sg**	**09 46 47.5**	**-0.2**
KHAL	**Karahalli**	**0.42**	**27**	*i* P	**Pg**	**09 46 41.4**	**-0.6**
KHAL				*i* S	**Sg**	**09 46 47.5**	**-0.2**
KULA	**Kula-Manisa**	**0.69**	**318**	*e*PG	**Pg**	**09 46 47.3**	**+0.1**
KULA	**Kula-Manisa**	**0.69**	**318**	*e*Pg	**Pg**	**09 46 47.3**	**+0.1**
GOLH	**Golhisar**	**0.80**	**162**	*i* P	**Pg**	**09 46 48.1**	**-1.1**
GOLH				*i* S	**Sg**	**09 46 59.5**	**-0.2**
GOLH	**Golhisar**	**0.80**	**162**	*i* P	**Pg**	**09 46 48.1**	**-1.1**
GOLH				*i* S	**Sg**	**09 46 59.5**	**-0.2**
ISP	**Isparta**	**1.02**	**100**	*e*PG	**Pg**	**09 46 53.0**	**-0.3**
ISP	**Isparta**	**1.02**	**100**	*e*Pg	**Pg**	**09 46 53.0**	**-0.3**
GDZ	**Gediz**	**1.10**	**9**	*i* P	**Pg**	**09 46 53.8**	**-1.1**
GDZ				*i* S	**Sg**	**09 47 08.7**	**-0.7**
GDZ	**Gediz**	**1.10**	**9**	*i* P	**Pg**	**09 46 53.8**	**-1.1**
GDZ				*i* S	**Sg**	**09 47 08.7**	**-0.7**
DEMI	**Demirci**	**1.12**	**338**	*i* P	**Pg**	**09 46 55.3**	**0.0**
DEMI				*i* S	**Sg**	**09 47 08.8**	**-1.2**
DEMI	**Demirci**	**1.12**	**338**	*i* P	**Pg**	**09 46 55.3**	**0.0**
DEMI				*i* S	**Sg**	**09 47 08.8**	**-1.2**
AYDN	**Tasoluk**	**1.14**	**253**	*i* P	**Pg**	**09 46 55.0**	**-0.6**
AYDN				*i* S	**Sg**	**09 47 09.6**	**-0.9**
AYDN	**Tasoluk**	**1.14**	**253**	*i* P	**Pg**	**09 46 55.0**	**-0.6**
AYDN				*i* S	**Sg**	**09 47 09.6**	**-0.9**
YER	**Yerkesik**	**1.16**	**222**	*e*PN	**Pg**	**09 46 55.2**	**-0.7**
YER	**Yerkesik**	**1.16**	**222**	*e*Pn	**Pg**	**09 46 55.2**	**-0.7**
SHUT	**Suhut-Afyon**	**1.16**	**61**	*e*PN	**Pn**	**09 46 56.0**	**+0.5**
SHUT	**Suhut-Afyon**	**1.16**	**61**	*e*Pn	**Pn**	**09 46 56.0**	**+0.5**
ALT	**Altintas**	**1.25**	**32**	*e*PN	**Pn**	**09 46 57.2**	**+0.5**
ALT	**Altintas**	**1.25**	**32**	*e*Pn	**Pn**	**09 46 57.2**	**+0.5**
TVSB	**Tavsanli**	**1.46**	**6**	*e*PN	**Pb**	**09 47 01.2**	**+0.7**
TVSB	**Tavsanli**	**1.46**	**6**	*e*Pn	**Pb**	**09 47 01.2**	**+0.7**

*ISCJB **03** 11:00:55.8±0.5, 37°.84N±0°.03×29°.27E±0°.04, h6km±5km, Error ellipse: s-maj=5.9km s-min=3.8km az=29.8*
*ISK **03** 11:00:55.0, 37°.85N×29°.25E, h8km, MD2.8*
*DDA **03** 11:00:56.7, 37°.89N×29°.20E, h9km, MD2.8*
*CSEM **03** 11:00:56.0±0.1, 37°.85N×29°.25E, h8km, MD2.8, Error ellipse: s-maj=4.0km s-min=3.0km az=117.0*
ISC 03 11:00:56.3±0.9**, 37°.85N**±0°.02×**29°.25E**±0°.03**, h12**km±7km**, n36, σ0s.61**/51**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.20**	**240**	*e*PG	**Pg**	**11 00 59.8**	**-0.8**
DENT	**Denizli**	**0.20**	**240**	*e*Pg	**Pg**	**11 00 59.8**	**-0.8**
DNZL	**Cakiroluk**	**0.23**	**225**	*i* P	**Pg**	**11 01 01.3**	**+0.1**
DNZL				*i* S	**Sg**	**11 01 05.3**	**+0.7**
DNZL	**Cakiroluk**	**0.23**	**225**	*i* P	**Pg**	**11 01 01.3**	**+0.1**
DNZL				*i* S	**Sg**	**11 01 05.3**	**+0.7**
KHL	**Karahalli**	**0.52**	**25**	*e*PG	**Pg**	**11 01 06.4**	**0.0**
KHL				*e*SG	**Sg**	**11 01 13.1**	**-0.2**
KHL	**Karahalli**	**0.52**	**25**	*e*Pg	**Pg**	**11 01 06.4**	**0.0**
KHL				*e*Sg	**Sg**	**11 01 13.1**	**-0.2**
KHAL	**Karahalli**	**0.55**	**20**	*i* P	**Pb**	**11 01 07.7**	**-0.3**
KHAL				*i* S	**Sg**	**11 01 14.3**	**-0.1**
KHAL	**Karahalli**	**0.55**	**20**	*i* P	**Pb**	**11 01 07.7**	**-0.3**
KHAL				*i* S	**Sg**	**11 01 14.3**	**-0.1**
GOLH	**Golhisar**	**0.66**	**158**	*i* P	**Pb**	**11 01 10.5**	**+0.7**
GOLH				*i* S	**Sn**	**11 01 22.5**	**+0.5**
GOLH	**Golhisar**	**0.66**	**158**	*i* P	**Pb**	**11 01 10.5**	**+0.7**
GLHS	**Glhisar (BURDU**	**0.72**	**164**	*e*PG	**Pg**	**11 01 08.8**	**-1.5**
GLHS	**Glhisar (BURDU**	**0.72**	**164**	*e*Pg	**Pg**	**11 01 08.8**	**-1.5**
KULA	**Kula-Manisa**	**0.81**	**325**	*e*PG	**Pg**	**11 01 11.1**	**-0.8**
KULA				*e*SG	**Sg**	**11 01 22.5**	**0.0**
KULA	**Kula-Manisa**	**0.81**	**325**	*e*Pg	**Pg**	**11 01 11.1**	**-0.8**
KULA				*e*Sg	**Sg**	**11 01 22.5**	**0.0**
ISP	**Isparta**	**1.01**	**91**	*e*PG	**Pg**	**11 01 14.9**	**-0.8**
ISP	**Isparta**	**1.01**	**91**	*e*Pg	**Pg**	**11 01 14.9**	**-0.8**
YER	**Yerkesik**	**1.05**	**227**	*e*PG	**Pg**	**11 01 15.4**	**-1.1**
YER	**Yerkesik**	**1.05**	**227**	*e*Pg	**Pg**	**11 01 15.4**	**-1.1**
AYDN	**Tasoluk**	**1.10**	**260**	*i* P	**Pn**	**11 01 17.6**	**0.0**
AYDN				*i* S	**Sg**	**11 01 31.4**	**-0.4**
AYDN	**Tasoluk**	**1.10**	**260**	*i* P	**Pn**	**11 01 17.6**	**0.0**
AYDN				*i* S	**Sg**	**11 01 31.4**	**-0.4**
GDZ	**Gediz**	**1.25**	**8**	*i* P	**Pg**	**11 01 20.9**	**+0.6**
GDZ				*i* S	**Sn**	**11 01 36.7**	**+0.2**
GDZ	**Gediz**	**1.25**	**8**	*i* P	**Pg**	**11 01 20.9**	**+0.6**
GDZ				*i* S	**Sn**	**11 01 36.7**	**+0.2**
DEMI	**Demirci**	**1.26**	**341**	*i* P	**Pb**	**11 01 20.2**	**+0.2**
DEMI				*i* S	**Sb**	**11 01 36.6**	**+0.3**
DEMI	**Demirci**	**1.26**	**341**	*i* P	**Pb**	**11 01 20.2**	**+0.2**
DEMI				*i* S	**Sb**	**11 01 36.6**	**+0.3**
ALT	**Altintas**	**1.38**	**29**	*e*PN	**Pn**	**11 01 21.3**	**-0.2**
ALT	**Altintas**	**1.38**	**29**	*e*Pn	**Pn**	**11 01 21.3**	**-0.2**
TVSB	**Tavsanli**	**1.60**	**6**	*e*PN	**Pn**	**11 01 23.8**	**-0.7**
TVSB	**Tavsanli**	**1.60**	**6**	*e*Pn	**Pn**	**11 01 23.8**	**-0.7**
BODT	**Bodrum**	**1.73**	**243**	*e*PN	**Pn**	**11 01 26.6**	**+0.4**
BODT	**Bodrum**	**1.73**	**243**	*e*Pn	**Pn**	**11 01 26.6**	**+0.4**
DAT	**Datca**	**1.74**	**230**	*e*PN	**Pn**	**11 01 26.8**	**+0.3**
DAT	**Datca**	**1.74**	**230**	*e*Pn	**Pn**	**11 01 26.8**	**+0.3**
KIZT	**Kizilcal**	**2.31**	**63**	*e*PN	**Pn**	**11 01 34.0**	**-0.3**
KIZT	**Kizilcal**	**2.31**	**63**	*e*Pn	**Pn**	**11 01 34.0**	**-0.3**
KONT	**Konya--Tatoy**	**2.46**	**87**	*e*PN	**Pn**	**11 01 37.0**	**+0.7**
KONT	**Konya--Tatoy**	**2.46**	**87**	*e*Pn	**Pn**	**11 01 37.0**	**+0.7**

WEL 03 11:19:54.9±0.9**, 36°.44S**×**177°.73E, h5**km**, ML3.6**/6**, Error ellipse: s-maj=6.3km s-min=6.1km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.21**	**158**	P*	Pg	11 20 16.4	-1.8
MXZ				S*	Sg	11 20 29.9	-4.1
KUZ	**Kuaotunu**	**1.64**	**259**	PN	Pn	11 20 23.1	-1.3
KUZ				SN	Sn	11 20 44.1	-1.8
PUZ	**Puketiti**	**1.68**	**166**	PN	Pn	11 20 25.0	0.0
PUZ				SN	Sn	11 20 47.2	+0.2
PUZ				AML	AML	11 20 50.6	
URZ	**Urewera**	**1.88**	**195**	P*	Pn	11 20 26.2	-1.5
URZ				S*	Sn	11 20 48.8	-3.0
URZ				AML	AML	11 20 51.8	
MWZ	**Matawai**	**1.90**	**185**	P*	Pn	11 20 26.1	-1.8
MWZ				AML	AML	11 20 49.9	
MWZ				AML	AML	11 21 00.2	
MKAZ	**Moumakai**	**2.16**	**251**	PN	Pn	11 20 31.2	-0.3
TOZ	**Tahuroa Road**	**2.20**	**233**	P*	Pn	11 20 31.5	-0.5
HIZ	**Hauiti**	**3.08**	**227**	PN	Pn	11 20 44.3	+0.1

*DDA **03** 11:21:49.6, 37°.86N×29°.25E, h7km, MD2.5*
*ISCJB **03** 11:21:50.3±1.0, 37°.87N±0°.07×29°.3E±0°.1, h11km, Error ellipse: s-maj=15.0km s-min=4.0km az=37.1*
*CSEM **03** 11:21:50.3±0.5, 37°.86N×29°.27E, h2km, MD2.5, Error ellipse: s-maj=14.0km s-min=4.9km az=127.0*
*ISK **03** 11:21:50.1, 37°.92N×29°.27E, h5km, MD2.6*
ISC 03 11:21:50.4±1.1**, 37°.87N**±0°.06×**29°.24E**±0°.09**, h11**km**, n14, σ0s.75**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.20**	**236**	*e*PG	**Pb**	**11 21 55.9**	**-0.3**
DENT	**Denizli**	**0.20**	**236**	*e*Pg	**Pb**	**11 21 55.9**	**-0.3**
DNZL	**Cakiroluk**	**0.24**	**222**	*i* P	**Pg**	**11 21 54.6**	**-0.8**
DNZL				*i* S	**Sg**	**11 21 58.4**	**-0.4**
DNZL	**Cakiroluk**	**0.24**	**222**	*i* P	**Pg**	**11 21 54.6**	**-0.8**
DNZL				*i* S	**Sg**	**11 21 58.4**	**-0.4**
KHL	**Karahalli**	**0.51**	**26**	*e*PG	**Pg**	**11 21 59.9**	**-0.5**
KHL				*e*SG	**Sb**	**11 22 08.1**	**-0.8**
KHL	**Karahalli**	**0.51**	**26**	*e*Pg	**Pg**	**11 21 59.9**	**-0.5**
KHL				*e*Sg	**Sb**	**11 22 08.1**	**-0.8**
KHAL	**Karahalli**	**0.54**	**21**	*i* P	**Pg**	**11 22 00.4**	**-0.6**
KHAL				*i* S	**Sg**	**11 22 08.2**	**0.0**
KHAL	**Karahalli**	**0.54**	**21**	*i* P	**Pg**	**11 22 00.4**	**-0.6**
KHAL				*i* S	**Sg**	**11 22 08.2**	**0.0**
KULA	**Kula-Manisa**	**0.79**	**325**	*e*PG	**Pb**	**11 22 06.2**	**-0.1**
KULA	**Kula-Manisa**	**0.79**	**325**	*e*Pg	**Pb**	**11 22 06.2**	**-0.1**
YER	**Yerkesik**	**1.06**	**227**	*e*PN	**Pn**	**11 22 13.0**	**+1.8**
YER	**Yerkesik**	**1.06**	**227**	*e*Pn	**Pn**	**11 22 13.0**	**+1.8**
AYDN	**Tasoluk**	**1.10**	**260**	*i* P	**Pb**	**11 22 11.2**	**-0.3**
AYDN				*i* S	**Sb**	**11 22 25.6**	**-0.3**
AYDN	**Tasoluk**	**1.10**	**260**	*i* P	**Pb**	**11 22 11.2**	**-0.3**
AYDN				*i* S	**Sb**	**11 22 25.6**	**-0.3**

IDC 03 11:34:27.6±2.3**, 20°.63S**×**178°.03W, h463**km±29km**, mb3.4**/4**, mb1 3.5**/7**, mb1mx3.1**/22**, mbtmp3.4**/7**, Error ellipse: s-maj=28.3km s-min=22.7km az=126.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.96**	**43**	P	P	11 36 34.1	+0.4
	2.5nm,0.3s,baz=207,slow=9.0,SNR=4.4						
DZM	**Mont Dzumac**	**14.54**	**262**	P	P	11 37 34.2	+0.4
	0.5nm,0.3s,baz=95,slow=12,SNR=5.2						
URZ	**Urewera**	**18.07**	**192**	P	P	11 38 09.8	-0.5
	1.1nm,0.3s,baz=152,slow=6.0,SNR=3.7						
RPZ	**Rata Peaks**	**24.76**	**199**	P	P	11 39 11.0	0.0
	7.1nm,0.6s,baz=72,slow=9.6,SNR=4.6						
STKA	**Stephens Creek**	**37.71**	**244**	P	P	11 41 02.4	-0.1
	2.2nm,0.5s,baz=84,slow=9.2,SNR=11						
ASAR	**Alice Springs**	**44.47**	**257**	P	P	11 41 56.6	-0.1
	2.0nm,0.5s,baz=96,slow=8.1,SNR=31						
ASAR				PcP	PcP	11 43 30.6	+0.1
	0.8nm,0.6s,baz=105,slow=3.5,SNR=10						
WRA	**Warramunga Arr**	**44.56**	**262**	P	P	11 41 56.8	-0.6
	0.9nm,0.3s,baz=96,slow=8.1,SNR=116						
WRA				PcP	PcP	11 43 31.4	+0.5
	0.2nm,0.5s,baz=96,slow=5.0,SNR=2.8						
AKASG	**Malin Array Be**	**143.11**	**331**	PKP	PKPbc	11 53 06.3	+0.6
	1.6nm,0.4s,baz=42,slow=4.0,SNR=7.2						

*NIED **03** 11:51:00, 44°.00N×148°.10E, h32km, Mw3.3 Best double couple: M₀1.10000×10¹⁴ NP1:φs244.00000°, δ71.00000°, λ-149.00000°. NP2:φs143.00000°, δ61.00000°, λ-22.00000°.*
JMA 03 11:51:54.5±0.4**, 43°.96N**×**148°.06E, h0**km**, M3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.78**	**251**	P	Pn	11 52 27.0	+0.5
NEM2				*e*S	Sb	11 52 50.6	-0.3
JRA	**Rausu**	**2.12**	**270**	P	Pn	11 52 32.2	+1.0
JRA				*e*S	Sb	11 53 00.0	-0.7
JNK	**Nakash**	**2.45**	**262**	P	Pn	11 52 36.6	+0.9
JAK	**Akkeshi**	**2.63**	**250**	P	Pn	11 52 39.1	+0.9
JTKR	**Abashiri--Toko**	**3.00**	**272**	P	Pn	11 52 45.0	+1.8
JAR	**Ashorobuto**	**3.19**	**259**	P	Pn	11 52 47.7	+1.9
JAR				*e*S	Sn	11 53 26.5	+2.0
JCH	**Churui**	**3.68**	**250**	P	Pn	11 52 54.4	+1.7
JCH				*e*S	Sn	11 53 38.2	+1.4
JFR	**Furan**	**4.05**	**261**	P	Pn	11 53 01.1	+3.3
JNBK	**Urakawa-nobuka**	**4.23**	**248**	P	Pn	11 53 02.2	+2.0
JKB	**Kayabe**	**5.56**	**251**	P	Pn	11 53 20.5	+2.1
JKB				*e*S	Sn	11 54 24.5	+1.5
JOT	**Ohata**	**5.78**	**246**	P	Pn	11 53 22.4	+1.0

*IDC **03** 11:57:34.8±0.8, 11°.88N×143°.81E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.3/29, mbtmp4.3/16, MS3.3/10, Ms1 3.3/10, ms1mx3.1/32, Error ellipse: s-maj=25.5km s-min=17.2km az=89.0*
*ISCJB **03** 11:57:37.2±0.4, 11°.81N±0°.06×143°.61E±0°.08, h25km, mb4.3/28, MS3.3/10, Error ellipse: s-maj=12.2km s-min=7.8km az=25.5*
*NEIC **03** 11:57:40.8±0.4, 11°.82N×143°.69E, h40km, mb4.6/11, Error ellipse: s-maj=12.5km s-min=8.6km az=94.0*
ISC 03 11:57:38.9±0.7**, 11°.82N**±0°.09×**143°.7E**±0°.1**, h25**km**, n49, σ0s.89**/45**, mb4.5**/28**, MS3.2**/10**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.08**	**32**	*e*Pn	**Pn**	**11 58 12.5**	**+0.3**
GUMO				*e*Sn	**Sn**	**11 58 37.6**	**+0.2**
PMG	**Port Moresby**	**21.36**	**171**	P	**P**	**12 02 23.8**	**-0.7**
	14nm,0.9s						
JHJ	**Hachijo jima 2**	**21.51**	**351**	LR	LR	12 10 16.9	
	comp=Z,62nm,18.7s,baz=78,slow=36						
JNU	**Nakatsue**	**24.26**	**333**	P	**P**	**12 02 53.2**	**-0.9**
JNU	**Nakatsue**	**24.26**	**333**	P	**P**	**12 02 53.2**	**-0.9**
	11nm,0.7s,baz=140,slow=6.3,SNR=6.7						
JNU				LR	LR	12 11 11.9	
	comp=Z,39nm,18.6s,baz=72,slow=34						
MJAR	**Matsushiro Arr**	**25.11**	**349**	P	**P**	**12 02 59.4**	**-2.4**
MJAR	**Matsushiro Arr**	**25.11**	**349**	P	**P**	**12 02 59.4**	**-2.4**
	1.7nm,0.8s,baz=171,slow=9.1,SNR=5.6						
MJAR				LR	LR	12 12 23.3	
	comp=Z,91nm,18.1s,baz=180,slow=36						
KSRS	**Korea Array**	**29.20**	**334**	P	**P**	**12 03 37.8**	**-0.7**
	0.7nm,0.4s,baz=144,slow=9.4,SNR=4.3						
KSRS				LR	LR	12 15 17.5	
	comp=Z,38nm,18.1s,baz=140,slow=36						
KSAR	**Wonju Array Be**	**29.21**	**334**	P	**P**	**12 03 37.8**	**-0.8**
ASAJ	**Asahikawa**	**32.20**	**358**	LR	LR	12 14 51.2	
	comp=Z,42nm,21.9s,baz=351,slow=32						
WRAB	**Tennant Creek**	**32.88**	**196**	*e*P	**P**	**12 04 10.4**	**-0.6**
	3.6nm,0.6s						
WRA	**Warramunga Arr**	**32.89**	**196**	P	**P**	**12 04 10.7**	**-0.4**
WRA	**Warramunga Arr**	**32.89**	**196**	P	**P**	**12 04 10.7**	**-0.4**
	2.6nm,0.5s,baz=20,slow=9.7,SNR=60						
USRK	**Ussuriysk Arra**	**33.81**	**345**	LR	LR	12 17 23.4	
	comp=Z,42nm,18.8s,baz=333,slow=35						
ASAR	**Alice Springs**	**36.55**	**195**	P	**P**	**12 04 42.8**	**0.0**
ASAR	**Alice Springs**	**36.55**	**195**	P	**P**	**12 04 42.8**	**0.0**
	0.7nm,0.7s,baz=16,slow=10,SNR=13						
ASAR				LR	LR	12 19 57.9	
	comp=Z,84nm,21.1s,baz=196,slow=37						
PETK	**Petropavlovsk-**	**42.68**	**12**	LR	LR	12 22 38.5	
	comp=Z,30nm,20.2s,baz=85,slow=35						
CMAR	**Chiang Mai Arr**	**43.65**	**284**	P	**P**	**12 05 42.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**43.65**	**284**	P	**P**	**12 05 42.8**	**+1.0**
	2.1nm,0.7s,baz=86,slow=6.1,SNR=12						
SONM	**Songino Array**	**47.55**	**326**	P	**P**	**12 06 12.5**	**+0.1**
SONM	**Songino Array**	**47.55**	**326**	P	**P**	**12 06 12.5**	**+0.1**
	1.4nm,0.5s,baz=148,slow=7.1,SNR=7.9						
SONM				LR	LR	12 27 29.9	
	comp=Z,66nm,18.8s,baz=70,slow=38						
MKAR	**Makanchi Array**	**62.00**	**317**	P	**P**	**12 07 57.2**	**+0.2**
MKAR	**Makanchi Array**	**62.00**	**317**	P	**P**	**12 07 57.2**	**+0.2**
	1.8nm,0.7s,baz=90,slow=8.5,SNR=9.9						
ZAA0	**Zalesovo Array**	**62.42**	**325**	*e*P	**P**	**12 07 59.4**	**-0.2**
ZALV	**Zalesovo Beam**	**62.42**	**325**	P	**P**	**12 07 59.6**	**-0.1**
ZALV	**Zalesovo Beam**	**62.42**	**325**	P	**P**	**12 07 59.6**	**-0.1**
	2.1nm,0.6s,baz=99,slow=5.9,SNR=8.1						
KURK	**Kurchatov**	**65.22**	**321**	*e*P	**P**	**12 08 18.2**	**0.0**
	8.0nm,0.8s						
KURBB	**Kurchatov Arra**	**65.26**	**320**	P	**P**	**12 08 18.6**	**+0.1**
	5.9nm,0.7s,baz=106,slow=6.6,SNR=52						
KKAR	**Karatay Array**	**69.78**	**312**	*e*P	**P**	**12 08 47.7**	**+0.5**
	2.1nm,0.6s						
BVAR	**Borovoye Array**	**70.63**	**322**	P	**P**	**12 08 52.3**	**+0.2**
BVAR	**Borovoye Array**	**70.63**	**322**	P	**P**	**12 08 52.3**	**+0.2**
	7.5nm,0.5s,baz=106,slow=7.8,SNR=37						
ILAR	**Eielson Array**	**70.63**	**25**	P	**P**	**12 08 50.4**	**-1.6**
ILAR	**Eielson Array**	**70.63**	**25**	P	**P**	**12 08 50.4**	**-1.6**
	1.1nm,0.7s,baz=252,slow=5.5,SNR=16						
BRVK	**Borovoye**	**70.69**	**322**	*e*P	**P**	**12 08 52.8**	**+0.2**
	5.8nm,0.6s						
DOT	**Dot Lake**	**71.60**	**27**	*e*P	**P**	**12 08 58.2**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	3.2nm,0.8s						
ABKAR	Akbulak array	77.10	318	eP	P	12 09 30.2	0.0
	4.3nm,0.6s						
AKTO	Aktyubinsk	78.27	319	P	P	12 09 36.6	-0.1
AKTO	Aktyubinsk	78.27	319	P	P	12 09 36.6	-0.1
	2.5nm,0.6s,baz=86,slow=5.9,SNR=11						
YBH	Yreka Blue Hor	84.87	49	eP	P	12 10 13.6	+1.7
	5.6nm,1.3s						
YKW3	Yellowknife Ar	84.91	27	P	P	12 10 12.1	+0.6
	0.1nm,0.8s						
YKA	Yellowknife Ar	84.93	27	P	P	12 10 11.5	-0.1
YKA	Yellowknife Ar	84.93	27	P	P	12 10 11.5	-0.1
	1.9nm,0.6s,baz=288,slow=5.2,SNR=19						
BMO	Blue Mountains	88.02	45	eP	P	12 10 28.4	+1.1
	4.4nm,0.9s						
ARCES	ARCESS Array B	88.42	342	P	P	12 10 28.0	-0.5
ARCES	ARCESS Array B	88.42	342	P	P	12 10 28.0	-0.5
	2.2nm,0.7s,baz=72,slow=8.6,SNR=7.9						
ARCES				LR	LR	12 53 15.6	
	comp=Z,28nm,20.1s,baz=81,slow=38						
NVAR	Mina Array Bea	88.89	51	P	P	12 10 33.2	+1.5
NVAR	Mina Array Bea	88.89	51	P	P	12 10 33.2	+1.5
	2.4nm,0.7s,baz=281,slow=5.4,SNR=21						
MFID	Camas Ranch	89.42	46	eP	P	12 10 34.9	+0.9
	4.5nm,1.0s						
RRI2	Red Ridge	92.58	45	P	P	12 10 52.6	+3.7
	2.1nm,0.7s						

CSEM 03 12:31:57.4±0.3, 38°.10N×38°.18E, h20^{km}, MD2.5, Error ellipse: s-maj=11.0km s-min=6.7km az=139.0
DDA 03 12:31:59.6, 38°.23N×38°.26E, h7^{km}, MD2.5
ISCJB 03 12:32:00.9±0.7, 38°.26N±0°.06×38°.30E±0°.05, h16^{km}±10^{km}, Error ellipse: s-maj=10.3km s-min=5.8km az=152.6
ISK 03 12:32:00.5, 38°.44N×38°.29E, h5^{km}, MD2.4
ISC 03 12:32:00.2±0.9, 38°.24N±0°.06×38°.28E±0°.03, h14^{km}±7^{km}, n12, σ0^s.60/20, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MYA	Malataya	0.15	53	PG	Pg	12 32 03.6	-0.4
MYA				eSG	Sb	12 32 07.9	0.0
MYA	Malataya	0.15	53	i Pg	Pg	12 32 03.7	-0.4
MYA				eSg	Sb	12 32 07.9	0.0
AKCD	Akcadag	0.28	282	i P	Pg	12 32 05.1	-1.1
AKCD	Akcadag	0.28	282	i P	Pg	12 32 05.1	-1.1
ELZG	Elazig	0.62	65	i P	Pg	12 32 12.2	-0.1
ELZG				i S	Sg	12 32 21.0	+0.5
ELZG	Elazig	0.62	65	i P	Pg	12 32 12.2	-0.1
ELZG				i S	Sg	12 32 21.0	+0.5
DARE	Darende-Malaty	0.71	299	ePG	Pb	12 32 14.9	+0.6
DARE				eSG	Sb	12 32 24.4	+0.4
DARE	Darende-Malaty	0.71	299	ePg	Pb	12 32 14.9	+0.6
DARE				eSg	Sb	12 32 24.4	+0.4
GZT	Gaziantep	1.04	213	i P	Pn	12 32 20.6	+0.1
GZT				i S	Sb	12 32 33.8	+0.1
PTK	Pertek	1.09	53	ePG	Pb	12 32 20.2	-0.8
PTK	Pertek	1.09	53	ePg	Pb	12 32 20.2	-0.8
AYKD	Aykdinkavak	1.42	235	i P	Pb	12 32 26.7	+0.2
AYKD				i S	Sg	12 32 46.4	+0.4

DDA 03 12:40:13.8, 37°.88N×29°.21E, h7^{km}, MD2.8
ISCJB 03 12:40:14.0±0.5, 37°.89N±0°.02×29°.24E±0°.04, h4^{km}±5^{km}, Error ellipse: s-maj=5.3km s-min=3.6km az=21.1
ISK 03 12:40:14.1, 37°.88N×29°.27E, h8^{km}, MD2.7
CSEM 03 12:40:14.0±0.1, 37°.89N×29°.26E, h5^{km}, MD2.8, Error ellipse: s-maj=3.1km s-min=2.3km az=118.0
ISC 03 12:40:14.1±0.9, 37°.88N±0°.02×29°.25E±0°.03, h9^{km}±10^{km}, n38, σ0^s.40/51, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.21	233	ePG	Pg	12 40 19.2	+0.7
DENT	Denizli	0.21	233	ePg	Pg	12 40 19.2	+0.7
DNZL	Cakiroluk	0.25	220	i P	Pg	12 40 18.8	-0.4
DNZL				i S	Sg	12 40 22.1	-0.5
DNZL	Cakiroluk	0.25	220	i P	Pg	12 40 18.8	-0.4
DNZL				i S	Sg	12 40 22.1	-0.5
KHL	Karahalli	0.49	26	ePG	Pg	12 40 23.5	-0.1
KHL				eSG	Sb	12 40 32.0	-0.2
KHL	Karahalli	0.49	26	ePg	Pg	12 40 23.5	-0.1
KHL				eSg	Sb	12 40 32.0	-0.2
KHAL	Karahalli	0.52	21	i P	Pg	12 40 24.1	-0.2
KHAL				i S	Sg	12 40 31.9	+0.7
KHAL	Karahalli	0.52	21	i P	Pg	12 40 24.1	-0.2
KHAL				i S	Sg	12 40 31.9	+0.7
GOLH	Golhisar	0.69	159	i P	Pg	12 40 26.9	-0.5
GOLH				i S	Sb	12 40 38.2	+0.2
GOLH	Golhisar	0.69	159	i P	Pg	12 40 26.9	-0.5
GOLH				i S	Sb	12 40 38.2	+0.2
GLHS	Glhisar (BURDU	0.75	165	ePG	Pg	12 40 28.5	0.0
GLHS	Glhisar (BURDU	0.75	165	ePg	Pg	12 40 28.5	0.0
MANT	Manisa	0.82	318	i P	Pg	12 40 29.7	-0.1
MANT				i S	Sg	12 40 40.7	+0.2
MANT	Manisa	0.82	318	i P	Pg	12 40 29.7	-0.1
MANT				i S	Sg	12 40 40.7	+0.2
ISP	Isparta	1.01	93	ePG	Pb	12 40 33.6	-0.1
ISP	Isparta	1.01	93	ePg	Pb	12 40 33.6	-0.1
YER	Yerkesik	1.07	226	ePG	Pn	12 40 35.4	+0.1
YER	Yerkesik	1.07	226	ePg	Pn	12 40 35.4	+0.1
AYDN	Tasoluk	1.11	259	i P	Pg	12 40 35.1	-0.2
AYDN				i S	Sg	12 40 49.4	-0.3
AYDN	Tasoluk	1.11	259	i P	Pg	12 40 35.1	-0.2
AYDN				i S	Sg	12 40 49.4	-0.3
TURN	Turunc	1.13	207	i P	Pn	12 40 39.8	+3.7
TURN				i S	Sn	12 40 58.1	+6.5
BCK	Bucak	1.14	111	ePN	Pn	12 40 36.2	-0.1
BCK	Bucak	1.14	111	ePn	Pn	12 40 36.2	-0.1
GDZ	Gediz	1.22	9	i P	Pb	12 40 37.4	0.0
GDZ				i S	Sb	12 40 53.0	-0.2
GDZ	Gediz	1.22	9	i P	Pb	12 40 37.4	0.0
GDZ				i S	Sb	12 40 53.0	-0.2
SHUT	Suhut-Afyon	1.23	56	ePN	Pb	12 40 37.2	-0.3
SHUT	Suhut-Afyon	1.23	56	ePn	Pb	12 40 37.2	-0.3
ELL	Elmali	1.25	155	ePN	Pg	12 40 38.5	+0.5
ELL	Elmali	1.25	155	ePn	Pg	12 40 38.5	+0.5
MLSB	Milas	1.31	244	ePN	Pg	12 40 39.4	+0.2
MLSB	Milas	1.31	244	ePn	Pg	12 40 39.4	+0.2
ALT	Altintas	1.35	30	ePN	Pn	12 40 39.3	+0.1
ALT	Altintas	1.35	30	ePn	Pn	12 40 39.3	+0.1
AKAS	Kas	1.67	170	i P	Pg	12 40 46.9	+0.9
BODT	Bodrum	1.75	243	ePN	Pn	12 40 45.3	+0.8
BODT	Bodrum	1.75	243	ePn	Pn	12 40 45.3	+0.8
DAT	Datca	1.76	230	ePN	Pb	12 40 46.1	-0.5
DAT	Datca	1.76	230	ePn	Pb	12 40 46.1	-0.5

CASC 03 12:45:37.2±2.3, 14°.88N×89°.69W, h4^{km}±14^{km}, MD3.5, Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NBG	Las Nubes	0.70	245	eP	Pn	12 46 04.1	+10
RBDL	Robledal	0.77	180	eP	Pn	12 45 59.0	+4.0
RTR	El Retiro	0.98	178	eP	Pg	12 45 56.6	+0.3
SNJE	San Jose	1.01	176	eP	Pg	12 45 57.1	+0.2
SBLS	San Blas	1.04	177	eP	Pg	12 45 56.6	-0.9
SBLS				eS	Sb	12 46 12.1	-0.3
FUG	Fuego 3	1.20	249	eP	Pb	12 46 00.8	+0.1
BOQS	Boqueron	1.21	161	eP	Pg	12 45 59.5	-1.1
LFRS	El Faro	1.39	154	eP	Pn	12 46 01.4	-2.1
LFRS				eS	Sn	12 46 23.1	+0.6
SNVI	San Vicente	1.51	147	eP	Pn	12 46 04.7	-0.5

ISK 03 12:45:48.6, 38°.74N×38°.14E, h5^{km}, MD3.0
DDA 03 12:45:49.9, 38°.67N×38°.13E, h7^{km}, MD2.9
CSEM 03 12:45:50.3±0.3, 38°.69N×38°.20E, h10^{km}, MD3.0, Error ellipse: s-maj=8.3km s-min=7.1km az=160.0
ISC 03 12:45:50.2±1.1, 38°.68N±0°.03×38°.15E±0°.02, h10^{km}±12^{km}, n25, σ0^s.88/36, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MYA	Malataya	0.41	148	ePG	Pg	12 45 58.2	-0.2
MYA				eSG	Sb	12 46 07.1	+1.1
MYA	Malataya	0.41	148	ePg	Pg	12 45 58.2	-0.2
AKCD	Akcadag	0.42	205	eP	Pb	12 45 59.4	-0.4
AKCD				i S	Sb	12 46 06.2	-0.1
AKCD	Akcadag	0.42	205	eP	Pb	12 45 59.4	-0.4
AKCD				i S	Sb	12 46 06.2	-0.1
DARE	Darende-Malaty	0.53	258	ePG	Pg	12 45 59.6	-1.0
DARE				eSG	Sb	12 46 08.9	-0.5
DARE	Darende-Malaty	0.53	258	ePg	Pg	12 45 59.6	-1.0
ELZG	Elazig	0.68	105	i P	Pg	12 46 02.2	-1.2
ELZG				i S	Sb	12 46 13.8	0.0
ELZG	Elazig	0.68	105	i P	Pg	12 46 02.2	-1.2
ELZG				i S	Sb	12 46 13.8	0.0
ILIC	ilic-Erzincan	0.84	23	ePG	Pg	12 46 05.4	-1.0
ILIC	ilic-Erzincan	0.84	23	ePg	Pg	12 46 05.4	-1.0
PTK	Pertek	1.00	77	ePG	Pg	12 46 07.9	-1.5
PTK				eSG	Sb	12 46 23.4	+0.6
PTK	Pertek	1.00	77	ePg	Pg	12 46 07.9	-1.5
PTK				eSg	Sb	12 46 23.5	+0.6
PINB	Pinarbasi	1.37	270	eP	Pn	12 46 14.8	-0.7
PINB	Pinarbasi	1.37	270	eP	Pn	12 46 14.8	-0.7
SARI	SarD1z-Kayseri	1.38	259	ePN	Pg	12 46 16.9	+0.2
EZC	Erzincan	1.42	41	ePn	Pb	12 46 17.1	+0.2
ERZN	Erzincan	1.52	53	ePN	Pn	12 46 17.1	-0.5
SUSE	Susehri	1.53	2	i P	Pb	12 46 18.6	-0.1
SUSE				i S	Sg	12 46 41.5	+2.1
SUSE	Susehri	1.53	2	i P	Pb	12 46 18.6	-0.1
SUSE				i S	Sg	12 46 41.5	+2.1
KMRS	Kahramanmaras	1.53	220	ePN	Pg	12 46 19.5	-0.1
KMRS	Kahramanmaras	1.53	220	ePn	Pg	12 46 19.5	-0.1
AYKD	Aykdinkavak	1.65	220	i P	Pb	12 46 21.0	+0.4
AYKD				i S	Sg	12 46 43.4	+0.2
BNN	Bunyan	1.81	276	ePN	Pn	12 46 21.3	-0.2
BNN	Bunyan	1.81	276	ePn	Pn	12 46 21.3	-0.2
BNGB	Bingˆ¶l	2.00	80	ePN	Pn	12 46 24.8	+0.7

MEX 03 12:53:52.8±1.0, 17°.21N×100°.04W, h31^{km}±17^{km}, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.27	233	eP	Pb	12 53 57.8	-2.1
CAIG				i S	Sb	12 54 03.5	-1.2
ACX	Acapulco	0.38	152	i P	Pb	12 53 59.5	-2.0
ACX				i S	Sb	12 54 05.9	-1.5
MEIG	Mezcala	0.82	29	eP	Pn	12 54 05.8	-2.5
MEIG				i S	Sb	12 54 16.0	-3.6
ARIG	Puente Sto Nin	1.10	345	eP	Pn	12 54 09.7	-2.5
ARIG				i S	Sn	12 54 24.2	-2.3
PLIG	Platanillo	1.29	24	i P	Pn	12 54 12.2	-2.6
PLIG				i S	Sn	12 54 29.1	-2.0
ZIIG	Zihuatanejo	1.41	286	eP	Pn	12 54 15.1	-1.3
ZIIG				i S	Sn	12 54 31.5	-2.6
YAIG	Yautepec	1.89	29	i P	Pn	12 54 21.5	-1.7
YAIG				i S	Sn	12 54 44.3	-1.8
UTMO	Huajuapan	2.23	74	i P	Pn	12 54 26.1	-1.8
UTMO				i S	Sn	12 54 52.8	-1.8
PPM	Popocatepetl	2.29	36	i P	Pn	12 54 29.8	+0.7

CSEM 03 13:03:18.8, 12°.33N×45°.70E, h10^{km}, ML3.5, After DHMR
DHMR 03 13:03:18.8±1.3, 12°.33N×45°.70E, h10^{km}, ML3.5, 2C, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADEN	Aden	0.83	303	i P	Pg	13 03 34.6	-0.2
ADEN				i S	Sb	13 03 46.9	+0.4
ADEN				AML	AML	13 03 49.2	
	comp=N,2μm,0.3s						
ADEN	Aden	0.83	303	i P	Pg	13 03 34.7	-0.1
ADEN				i S	Sb	13 03 46.9	+0.4
LBOS		1.60	344⇑	iP	Pn	13 03 48.0	+0.5
LBOS				i S	Sb	13 04 09.9	+0.6
BDHA	Al Bayda'	1.64	356	i P	Pn	13 03 48.6	+0.5
BDHA				i S	Sg	13 04 11.9	-0.4
BDHA				AML	AML	13 04 21.3	
	comp=E,612nm,0.5s						
BDHA	Al Bayda'	1.64	356	i P	Pn	13 03 48.6	+0.5
BDHA				i S	Sg	13 04 11.9	-0.4
TRBA	At Turbah	1.79	300⇑	iP	Pn	13 03 50.3	+0.2
TRBA				i S	Sb	13 04 14.8	+0.2

ISCJB 03 13:05:48.5±1.3, 36°.15N±0°.06×29°.11E±0°.06, h9^{km}±7^{km}, Error ellipse: s-maj=11.0km s-min=7.2km az=22.0
ISK 03 13:05:48.4, 36°.21N×29°.21E, h18^{km}, MD2.7
DDA 03 13:05:49.3, 36°.34N×29°.12E, h8^{km}, MD2.9
CSEM 03 13:05:49.6±0.3, 36°.24N×29°.24E, h15^{km}, MD2.9, Error ellipse: s-maj=7.8km s-min=4.5km az=8.0
ISC 03 13:05:48.8±1.6, 36°.21N±0°.07×29°.19E±0°.04, h13^{km}±10^{km}, n22, σ0^s.61/31, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKAS	Kas	0.33	86	i P	Pb	13 05 57.0	+0.4
AKAS				i S	Sn	13 06 04.4	-1.7
AKAS	Kas	0.33	86	i P	Pb	13 05 57.0	+0.4
FETY	Fethiye	0.43	348	ePG	Pg	13 05 57.3	-0.1
FETY				eSG	Sb	13 06 04.9	+0.1
FETY	Fethiye	0.43	348	ePg	Pg	13 05 57.3	-0.1
ELL	Elmali	0.79	47	ePG	Pg	13 06 04.0	0.0
ELL	Elmali	0.79	47	ePg	Pg	13 06 04.0	0.0
TURN	Turunc	0.81	324	i P	Pn	13 06 05.9	0.0
TURN				i S	Sn	13 06 17.7	-0.1
TURN	Turunc	0.81	324	i P	Pn	13 06 05.9	0.0
TURN				i S	Sn	13 06 17.7	-0.1
GLHS	Glhisar (BURDU	0.97	14	ePG	Pg	13 06 07.7	+0.1
GLHS	Glhisar (BURDU	0.97	14	ePg	Pg	13 06 07.7	+0.1
GOLH	Golhisar	1.07	16	i P	Pb	13 06 08.9	-0.2
GOLH				i S	Sn	13 06 26.0	+1.8
GOLH	Golhisar	1.07	16	i P	Pb	13 06 08.9	-0.2
YER	Yerkesik	1.18	322	ePN	Pb	13 06 11.1	+0.1
YER				eSN	Sg	13 06 26.9	0.0
YER	Yerkesik	1.18	322	ePn	Pb	13 06 11.1	+0.1
YER				eSn	Sg	13 06 26.9	0.0
DAT	Datca	1.40	292	ePN	Pb	13 06 15.0	+0.1
DAT	Datca	1.40	292	ePn	Pb	13 06 15.0	+0.1
DNZL	Cakiroluk	1.48	355	i P	Pb	13 06 15.9	-0.4
DNZL	Cakiroluk	1.48	355	i P	Pb	13 06 15.9	-0.4
BODT	Bodrum	1.74	300	ePN	Pn	13 06 18.9	+0.3
BODT	Bodrum	1.74	300	ePn	Pn	13 06 18.9	+0.3
AYDN	Tasoluk	1.79	324	i P	Pn	13 06 20.2	+0.8
AYDN				i S	Sb	13 06 42.9	-0.9
AYDN	Tasoluk	1.79	324	i P	Pn	13 06 20.2	+0.8
AYDN				i S	Sb	13 06 42.9	-0.9

IDC 03 13:09:20.8±2.0, 8°.02S×120°.20E, h188^{km}±19^{km}, mb3.4/4, mb1 3.3/7, mb1mx3.1/25, mbtmp3.2/7, Error ellipse: s-maj=62.7km s-min=10.2km az=54.0, Flores region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	3.02	351	P	Pn	13 10 10.0	-0.1
	1.2nm,0.3s,baz=175,slow=10,SNR=4.8						
FITZ	Fitzroy Crossi	11.34	153	P	Pn	13 11 56.4	-1.1
	0.1nm,0.3s,baz=333,slow=12,SNR=6.3						
FITZ				S	Sn	13 13 53.6	-10
	0.7nm,0.3s,baz=199,slow=16,SNR=11						
WRA	Warramunga Arr	18.11	132	P	P	13 13 19.1	+0.3
	0.4nm,0.3s,baz=305,slow=13,SNR=27						
WRA				S	S	13 16 36.4	-0.2
	0.1nm,0.3s,baz=303,slow=22,SNR=4.8						
ASAR	Alice Springs	20.36	141	P	P	13 13 43.0	-0.1
	2.7nm,0.5s,baz=314,slow=8.9,SNR=37						
ASAR				S	S	13 17 21.8	+0.9
	0.6nm,0.9s,baz=323,slow=24,SNR=4.1						
STKA	Stephens Creek	30.98	143	P	P	13 15 21.5	+0.9
	2.7nm,0.3s,baz=317,slow=9.7,SNR=19						
MKAR	Makanchi Array	64.14	332	P	P	13 19 34.1	-1.0
	0.4nm,0.5s,baz=138,slow=8.9,SNR=3.0						
KURBB	Kurchatov Arra	68.63	333	P	P	13 20 04.4	+0.9
	1.1nm,0.9s,baz=99,slow=5.8,SNR=4.3						

ISCJB 03 13:15:26.1±1.4, 36°.19N±0°.07×29°.09E±0°.07, h6^{km}±8^{km}, Error ellipse: s-maj=12.7km s-min=7.4km az=29.0
DDA 03 13:15:26.5, 36°.28N×29°.06E, h7^{km}, MD2.8
ISK 03 13:15:26.9, 36°.28N×29°.13E, h9^{km}, MD2.5
CSEM 03 13:15:26.9±0.5, 36°.25N×29°.23E, h15^{km}, MD2.5, Error ellipse: s-maj=11.4km s-min=6.2km az=19.0
ISC 03 13:15:26.4±1.6, 36°.22N±0°.07×29°.11E±0°.05, h7^{km}±10^{km}, n14, σ0^s.64/24, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKAS	Kas	0.40	88	i P	Pg	13 15 33.5	-0.7
AKAS				i S	Sb	13 15 42.1	-0.1
AKAS	Kas	0.40	88	i P	Pg	13 15 33.5	-0.7
AKAS				i S	Sb	13 15 42.1	-0.1
FETY	Fethiye	0.42	357	ePG	Pg	13 15 34.2	-0.3
FETY				eSG	Sg	13 15 40.4	+0.4
FETY	Fethiye	0.42	357	ePg	Pg	13 15 34.2	-0.3
FETY				eSg	Sg	13 15 40.4	+0.4
TURN	Turunc	0.77	328	i P	Pb	13 15 42.6	+0.5
TURN				i S	Sn	13 15 54.4	-1.2
TURN	Turunc	0.77	328	i P	Pb	13 15 42.6	+0.5
TURN				i S	Sn	13 15 54.4	-1.2
ELL	Elmali	0.83	50	ePG	Pg	13 15 42.3	-0.1
ELL	Elmali	0.83	50	ePg	Pg	13 15 42.3	-0.1
GOLH	Golhisar	1.08	19	i P	Pg	13 15 45.9	-1.2
GOLH				i S	Sn	13 16 03.5	+0.2
GOLH	Golhisar	1.08	19	i P	Pg	13 15 45.9	-1.2
GOLH				i S	Sn	13 16 03.5	+0.2
YER	Yerkesik	1.13	324	ePN	Pn	13 15 49.1	+0.4
YER				eSN	Sb	13 16 03.3	0.0
YER	Yerkesik	1.13	324	ePn	Pn	13 15 49.2	+0.4
YER				eSn	Sb	13 16 03.3	0.0
DAT	Datca	1.34	293	ePN	Pb	13 15 52.3	+0.4
DAT	Datca	1.34	293	ePn	Pb	13 15 52.3	+0.4

IDC 03 13:16:11.7±1.1, 32°.25N×105°.23E, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.4/29, mbtmp3.4/7, ML3.6/1, MS2.9/2, Ms1 2.9/2, ms1mx2.3/41, Error ellipse: s-maj=62.4km s-min=19.1km az=61.0, Sichuan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.86	204	Pn	Pn	13 19 44.4	+1.3
	0.1nm,0.3s,baz=104,slow=12,SNR=2.1						
SONM	Songino Array	15.59	3	Pn	Pn	13 19 54.8	+1.9
	baz=185,slow=14,SNR=2.0						
MKAR	Makanchi Array	22.78	316	P	P	13 21 16.2	+0.5
	0.8nm,0.9s,baz=138,slow=9.3,SNR=3.6						
ZALV	Zalesovo Beam	26.13	332	P	P	13 21 47.2	-0.1
	0.4nm,0.3s,baz=143,slow=10,SNR=4.8						
KURBB	Kurchatov Arra	26.93	321	P	P	13 21 53.8	-0.7
	0.2nm,0.3s,baz=135,slow=9.1,SNR=4.2						
MJAR	Matsushiro Arr	27.47	72	LR	LR	13 33 52.0	
	comp=Z,23nm,18.6s,baz=80,slow=39						
WRA	Warramunga Arr	58.91	148	P	P	13 26 12.7	0.0
	0.8nm,0.8s,baz=340,slow=7.3,SNR=7.3						
ASAR	Alice Springs	61.99	150	P	P	13 26 33.5	-0.2
	0.5nm,0.8s,baz=340,slow=7.2,SNR=5.1						
HFS	Hagfors	63.36	326	LR	LR	13 57 30.7	
	comp=Z,7.2nm,19.6s,baz=113,slow=39						

ISCJB 03 13:20:19.9±0.7, 39°.48N±0°.04×32°.98E±0°.04, h4^{km}±5^{km}, Error ellipse: s-maj=6.8km s-min=4.6km az=141.0
DDA 03 13:20:19.4, 39°.49N×32°.97E, h2^{km}, MD2.8
ISK 03 13:20:19.7, 39°.45N×33°.01E, h6^{km}, MD2.7
CSEM 03 13:20:19.8±0.2, 39°.47N×33°.00E, h2^{km}, MD2.7, Error ellipse: s-maj=5.2km s-min=3.6km az=142.0
ISC 03 13:20:20.3±0.9, 39°.47N±0°.03×33°.03E±0°.03, h7^{km}±5^{km}, n26, σ0^s.54/40, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFSR	Af¯ar-Bala (A	0.04	119	ePG	Pg	13 20 21.3	-0.5
AFSR				eSG	Sg	13 20 23.5	+0.7
AFSR	Af¯ar-Bala (A	0.04	119	ePg	Pg	13 20 21.3	-0.5
AFSR				eSg	Sg	13 20 23.5	+0.7
BBAL	Bala	0.11	44	i P	Pg	13 20 22.1	-0.6
BBAL				i S	Sg	13 20 24.5	+0.1
BBAL	Bala	0.11	44	i P	Pg	13 20 22.1	-0.6
BBAL				i S	Sg	13 20 24.5	+0.1
ANTO	Ankara	0.44	336	ePG	Pg	13 20 29.0	+0.2
ANTO	Ankara	0.44	336	ePg	Pg	13 20 29.0	+0.2
KAMT	Kaman	0.54	100	ePG	Pg	13 20 30.6	-0.1
KAMT				eSG	Sg	13 20 38.9	+1.1
KAMT	Kaman	0.54	100	ePg	Pg	13 20 30.6	-0.1
KAMT				eSg	Sg	13 20 38.9	+1.1
CDAG	Cicekdag	1.05	81	i P	Pg	13 20 39.3	-1.1
CDAG				i S	Sn	13 20 56.6	0.0
CDAG	Cicekdag	1.05	81	i P	Pg	13 20 39.3	-1.1
CDAG				i S	Sn	13 20 56.6	0.0
KIZT	Kizilcal	1.07	237	ePG	Pg	13 20 40.1	-0.6
KIZT	Kizilcal	1.07	237	ePg	Pg	13 20 40.1	-0.6
ELDT	Eldivan	1.07	17	i P	Pg	13 20 40.5	-0.3
ELDT				i S	Sg	13 20 55.0	+0.3
ELDT	Eldivan	1.07	17	i P	Pg	13 20 40.5	-0.3
ELDT				i S	Sg	13 20 55.0	+0.3
SVRH	Sivrihisar-ESK	1.17	270	ePN	Pg	13 20 41.9	-0.7
SVRH	Sivrihisar-ESK	1.17	270	ePn	Pg	13 20 41.9	-0.7
KDHN	Kadinhani	1.18	217	i P	Pg	13 20 42.4	-0.5
KDHN				i S	Sb	13 20 58.9	+0.3
KDHN	Kadinhani	1.18	217	i P	Pg	13 20 42.4	-0.5
KDHN				i S	Sb	13 20 58.9	+0.3
SULT	Sultanhani-AKS	1.32	163	ePN	Pn	13 20 45.2	0.0
SULT	Sultanhani-AKS	1.32	163	ePn	Pn	13 20 45.3	0.0
LADK	Ladik-KONYA	1.37	202	ePN	Pn	13 20 46.1	+0.2
LADK	Ladik-KONYA	1.37	202	ePn	Pn	13 20 46.1	+0.2
CORM	Corum	1.43	60	ePN	Pn	13 20 46.9	+0.2
CORM	Corum	1.43	60	ePn	Pn	13 20 46.9	+0.2
CTKT	Corum	1.78	49	eP	Pb	13 20 53.2	-0.1
CTKT				eS	Sn	13 21 14.4	-0.3
CTKT	Corum	1.78	49	eP	Pb	13 20 53.2	-0.1
CTKT				eS	Sn	13 21 14.4	-0.3

WEL 03 13:24:04.1±1.7, 36°.52S×177°.65E, h5^{km}, ML3.5/6, Error ellipse: s-maj=14.1km s-min=12.0km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.17	153	S*	Sg	13 24 37.7	-4.0
MXZ				AML	AML	13 24 47.1	
MXZ				AML	AML	13 24 53.5	
KUZ	Kuaotunu	1.56	261	PN	Pn	13 24 31.3	-1.2
KUZ				SN	Sn	13 24 52.5	-0.7
PUZ	Puketiti	1.62	163	PN	Pn	13 24 33.2	-0.2
PUZ				AML	AML	13 24 58.4	
PUZ				AML	AML	13 24 58.9	
URZ	Urewera	1.79	194	P*	Pn	13 24 34.5	-1.1
URZ				S*	Sn	13 24 58.6	-0.2
URZ				AML	AML	13 25 17.3	
MKAZ	Moumakai	2.07	253	PN	Pn	13 24 39.1	-0.4
BKZ	Black Stump Fm	2.80	199	P*	Pn	13 24 49.0	-0.5

WEL 03 13:56:26.0±0.9, 36°.15S×179°.21E, h33^{km}, ML3.7/12, Error ellipse: s-maj=7.7km s-min=5.1km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.59	207	P*	Pn	13 56 51.3	-0.6
PUZ	Puketiti	2.07	201	PN	Pn	13 56 58.9	+0.5
PUZ				AML	AML	13 57 44.4	
PUZ				AML	AML	13 57 45.7	
CNGZ	Carnagh Statio	2.47	199	ePN	Pn	13 57 03.6	-0.3
MWZ	Matawai	2.56	211	P*	Pn	13 57 05.3	0.0
MWZ				S*	Sn	13 57 35.7	+0.3
MWZ				AML	AML	13 57 54.0	
URZ	Urewera	2.69	218	P*	Pn	13 57 06.8	-0.2
URZ				S*	Sn	13 57 38.8	+0.3
URZ				AML	AML	13 58 00.7	
OPRZ	Ohinepanea	2.72	231	P*	Pn	13 57 07.4	0.0
MARZ	Manawahe	2.74	227	P*	Pn	13 57 07.8	+0.2
KUZ	Kuaotunu	2.88	257	PN	Pn	13 57 08.8	-0.7
KNZ	Kokohu	3.12	203	PN	Pn	13 57 11.1	-1.7
MHGZ	Mahia Peninsul	3.18	199	ePN	Pn	13 57 13.0	-0.7
RAHZ	Arahi	3.24	211	PN	Pn	13 57 14.0	-0.6
TOZ	Tahuroa Road	3.37	241	P*	Pn	13 57 16.4	+0.2
TOZ				S*	Sn	13 57 56.5	+1.5
MKAZ	Moumakai	3.39	252	PN	Pn	13 57 16.9	+0.3
NMHZ	Naumai	3.51	212	PN	Pn	13 57 17.2	-1.2
BKZ	Black Stump Fm	3.71	215	P*	Pn	13 57 19.5	-1.6
BHHZ	Black Hill Sta	4.17	216	P*	Pn	13 57 25.7	-1.6
FWVZ	Far West T-bar	4.25	222	P*	Pn	13 57 27.5	-1.2
TRVZ	Turoa	4.28	222	eP*	Pn	13 57 27.2	-2.0
BFZ	Birch Farm	5.09	206	ePN	Pn	13 57 36.6	-3.3

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BFZ				SN	Sn	13 58 32.7	-5.0
MRZ	Mangatainoka R	5.33	211	ePN	Pn	13 57 39.5	-3.9
MRZ				SN	Sn	13 58 38.3	-5.3
KIW	Kapiti Island	5.79	214	PN	Pn	13 57 45.5	-4.1
TCW	Tory Channel	6.36	216	SN	Sn	13 59 02.7	-6.2
THZ	Tophouse	7.46	219	ePN	Pn	13 58 10.5	-2.0
MQZ	McQueen's Vall	9.07	212	SN	Sn	14 00 03.1	-12

JMA 03 13:58:18.3±0.5, 45.21N×148.56E, h30km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	2.74	229	P	Pn	13 58 59.3	-0.8
NEM2				eS	Sn	13 59 29.4	-2.8
JRA	Rausu	2.77	244	P	Pn	13 59 02.5	+2.0
JNK	Nakash	3.20	241	P	Pn	13 59 07.4	+0.9
JNK				eS	Sn	13 59 44.0	+0.4
JTKR	Abashiri--Toko	3.55	251	P	Pn	13 59 12.3	+1.0
JAK	Akkeshi	3.56	233	P	Pn	13 59 10.4	-1.0
JAK				eS	Sn	13 59 49.1	-3.3
JMP	Maruseppu	3.90	254	P	Pn	13 59 18.7	+2.5
JAR	Ashorobuto	3.94	243	P	Pn	13 59 18.3	+1.6
JAR				eS	Sn	14 00 02.0	+0.2
JOB	Onbets	4.11	238	eS	Sn	14 00 04.4	-1.7
JCH	Churui	4.56	237	P	Pn	13 59 24.7	-0.6
JCH				eS	Sn	14 00 13.7	-3.6
JBT2	Biratori 2	5.09	244	P	Pn	13 59 32.8	+0.3
JNBK	Urakawa-nobuka	5.13	237	P	Pn	13 59 31.3	-1.7
JNBK				eS	Sn	14 00 27.0	-4.1
JNB	Noboribetsu	6.09	246	P	Pn	13 59 46.7	+0.5
JKB	Kayabe	6.40	241	P	Pn	13 59 48.9	-1.5
JKB				eS	Sn	14 00 55.8	-6.6
JTH	Tanohata	7.22	225	eS	Sn	14 01 11.9	-11
JIO	Ouri	8.63	221	eS	Sn	14 01 45.4	-12

MOS 03 13:58:47.0±1.2, 41.23N×49.73E, h16km, mb4.2/1, Error ellipse: s-maj=99.9km s-min=21.4km az=31.6

CSEM 03 13:58:43.2±0.8, 41.22N×50.36E, h20km, mb4.2, 2C-2D, Error ellipse: s-maj=24.2km s-min=7.7km az=166.0, Caspian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSMR	Kasumkent	1.72	284	ePG	Pn	13 59 09.5	-2.6
KSMR				eS	Sn	13 59 29.0	-4.6
DRN	Derbent	1.72	299	PG	Pn	13 59 11.5	-0.5
DRN				i S	Sn	13 59 34.0	+0.6
DRN	Derbent	1.72	299	Pg	Pn	13 59 11.5	-0.5
DRN				i Sg	Sn	13 59 34.0	+0.6
AKT	Akhty	2.00	278	ePG	Pn	13 59 16.0	0.0
AKT				i S	Sb	13 59 42.0	-1.5
AKT	Akhty	2.00	278	ePg	Pn	13 59 16.0	0.0
AKT				i Sg	Sb	13 59 42.0	-1.5
URKR	Urkarakh	2.25	296	ePN	Pn	13 59 20.0	+0.5
URKR				eS	Sb	13 59 49.0	-1.9
URKR	Urkarakh	2.25	296	ePn	Pn	13 59 20.0	+0.5
URKR				eSg	Sb	13 59 49.0	-1.9
KMKR	Kumukh	2.61	292	ePN	Pn	13 59 25.0	+0.5
KMKR				eS	Sb	13 59 59.0	-2.3
KMKR				pmax	pmax		
	comp=Z,28nm,0.2s						
KMKR	Kumukh	2.61	292	ePn	Pn	13 59 25.0	+0.5
	comp=Z,28nm,0.2s						
KMKR				eSb	Sb	13 59 59.0	-2.3
AB31	Akbulak array	10.50	37	⇓Pn	Pn	14 01 12.7	+0.3
	comp=Z,0.2nm,0.3s,baz=215,slow=12,SNR=13						
AB31				⇓Sn	Sn	14 03 10.0	+0.6
	comp=Z,0.8nm,0.3s,baz=221,slow=22,SNR=5.2						
AB31	Akbulak array	10.50	37	Pn	Pn	14 01 12.7	+0.3
	comp=Z,0.2nm,0.3s,baz=215,SNR=13						
AB31				Sn	Sn	14 03 10.0	+0.6
	comp=Z,0.8nm,0.3s,baz=221,SNR=5.2						
AKTO	Aktyubinsk	10.65	27	⇑Pn	Pn	14 01 14.2	-0.3
	comp=Z,1.2nm,0.6s						
AKTO				⇑Sn	Sn	14 03 10.1	-3.0
	comp=Z,4.5nm,0.7s						
AKTO	Aktyubinsk	10.65	27	Pn	Pn	14 01 14.2	-0.4
	comp=Z,1.2nm,0.6s						

IDC 03 14:01:29.6±9.2, 9.44S×127.02E, h116km±109km, mb3.6/5, mb1 3.7/8, mb1mx3.5/20, mbtmp3.6/8, ML4.0/3, Error ellipse: s-maj=81.9km s-min=32.0km az=23.0, Timor Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	8.71	189	P	Pn	14 03 33.6	+0.8
	1.2nm,0.3s,baz=16,slow=9.6,SNR=30						
WRA	Warramunga Arr	12.61	147	P	Pn	14 04 23.8	-1.2
	1.1nm,0.3s,baz=319,slow=13,SNR=76						
WRA				S	Sn	14 06 42.8	-1.1
	2.3nm,0.3s,baz=326,slow=24,SNR=10						
ASAR	Alice Springs	15.60	156	P	P	14 05 05.0	0.0
	0.7nm,0.3s,baz=326,slow=9.6,SNR=60						
ASAR				S	Sn	14 07 54.8	-1.4
	0.9nm,0.3s,baz=321,slow=20,SNR=12						
CMAR	Chiang Mai Arr	39.19	315	P	P	14 08 46.5	-0.1
	0.8nm,0.6s,baz=140,slow=6.6,SNR=5.2						
SONM	Songino Array	59.89	344	P	P	14 11 22.6	-0.7
	0.4nm,0.6s,baz=156,slow=7.4,SNR=3.1						
PETK	Petropavlovsk-	67.57	19	P	P	14 12 14.2	+0.8
	1.5nm,0.5s,baz=191,slow=6.5,SNR=7.2						
MKAR	Makanchi Array	68.70	329	P	P	14 12 20.8	+0.1
	1.2nm,0.5s,baz=126,slow=7.6,SNR=23						
ZALV	Zalesovo Beam	72.51	335	P	P	14 12 43.3	-0.3
	1.2nm,0.5s,baz=120,slow=4.5,SNR=8.2						

SKHL 03 14:09:04.2±0.2, 51.52N×139.81E, h10km, mb3.8/4, 1C, Primorye

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKL	Nikolayevsk	1.72	18	⇑iPg	Pn	14 09 34.4	+0.3
NKL				AMB	AMB	14 09 35.0	
	70nm,0.4s						
NKL				AMB	AMB	14 09 35.0	
	40nm,0.4s						
NKL				AMB	AMB	14 09 35.0	
	100nm,0.4s						
NKL				eSg	Sn	14 09 56.5	+0.4
NKL				A	A	14 09 58.3	
	350nm,0.4s						
TYV	Tymovskoe	1.91	109	ePg	Pb	14 09 38.5	-0.6
TYV				AMB	AMB	14 09 47.0	
	33nm,0.8s						
TYV				eSg	Sb	14 10 03.4	+0.5
TYV				A	A	14 10 09.2	
	120nm,0.8s						
GRNR	Gornyy	2.26	252	ePn	Pn	14 09 41.3	-0.4
GRNR				ePg	Pb	14 09 44.2	-1.0
GRNR				AMB	AMB	14 09 45.0	
	19nm,0.5s						
GRNR				AMB	AMB	14 09 45.0	
	38nm,0.5s						
GRNR				AMB	AMB	14 09 45.0	
	22nm,0.5s						
GRNR				eSg	Sb	14 10 13.5	+0.3
GRNR				A	A	14 10 14.0	
	110nm,0.5s						
OKH	Okha	2.79	42	ePg	Pg	14 09 56.2	-1.4
OKH				eSg	Sg	14 10 33.1	-0.6
OKH				A	A	14 10 34.2	
	100nm,0.6s						
UGL	Uglegorsk	2.84	149	ePg	Pb	14 09 55.0	+0.1
UGL				AMB	AMB	14 09 58.0	
	28nm,0.6s						
UGL				eSg	Sb	14 10 31.1	+1.4
UGL				A	A	14 10 34.0	
	77nm,0.5s						
UGL				A	A	14 10 34.0	
	162nm,0.5s						
KLR	Kul'dur	5.64	249	eSg	Sg	14 11 57.9	-7.4
TEY	Ternei	6.83	199	eSg	Sg	14 12 37.1	-6.3
TEY				A	A	14 12 42.8	
	26nm,0.8s						
BMKR	Bomnak	7.33	300	eSg	Sg	14 12 54.5	-4.9
BMKR				A	A	14 13 06.9	
	6.0nm,0.6s						
KROS	Kirovskiy	8.28	296	eSg	Sg	14 13 21.9	-7.9
KROS				A	A	14 13 29.6	

7.0nm,0.7s

MEX 03 14:24:21.1±0.3, 16.23N×94.72W, h80km±11km, MD4.0, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.41	251	i P	Pn	14 24 43.9	-1.4
HUIG				i S	Sn	14 25 01.8	-1.7
PCIG		1.53	110	eP	Pn	14 24 45.4	-1.4
PCIG				i S	Sn	14 25 04.6	-1.6
TGIG		1.63	70	i P	Pn	14 24 47.0	-1.1
TGIG				i S	Sn	14 25 06.4	-2.3
CCIG	Comitan	2.48	88	i P	Pn	14 24 58.4	-1.3
CCIG				i S	Sn	14 25 27.7	-1.5
PNIG	Pinotepa	3.28	273	i P	Pn	14 25 10.0	-0.3
PNIG				i S	Sn	14 25 46.5	-1.7
UTMO	Huajuapan	3.36	299	i P	Pn	14 25 11.0	-0.5
UTMO				i S	Sn	14 25 49.4	-1.2

IDC 03 14:30:53.0±0.8, 17.97S×167.76E, h0km, mb4.5/16, mb1 4.6/18, mb1mx4.5/23, mbtmp4.5/18, ML4.3/2, MS4.1/20, Ms1 4.1/20, ms1mx3.8/36, Error ellipse: s-maj=23.3km s-min=15.3km az=125.0

NOU 03 14:30:55.3±1.4, 17.78S×167.58E, h30km, MD3.2, ML4.3, MS1.9

ISCJB 03 14:30:56.9±1.4, 18.09S±0.06×167.70E±0.07, h38km±13km, mb4.6/32, MS4.2/23, Error ellipse: s-maj=12.7km s-min=8.0km az=42.9

NEIC 03 14:30:60.0±1.1, 17.84S×167.62E, h50km±10km, mb4.7/10, Error ellipse: s-maj=10.4km s-min=7.1km az=155.0

GCMT 03 14:31:00.2±0.2, 17.85S×167.58E, h20km±1km, MW5.0, Moment Tensor Solution. s30,c36; s71,c96; Moment tensor: Scale 10^{16}Nm; M_{rr}2.79±.17; $M_{\theta\theta}$0.15±.11; $M_{\phi\phi}$-2.94±.12; $M_{r\theta}$0.84±.25; $M_{\theta\phi}$0.49±.08; $M_{\phi r}$-2.25±.20; Best double couple: $M_0$3.80000×10^{16} NP1:ϕ_s360.00000°, δ26.00000°, λ105.00000°. NP2:ϕ_s164.00000°, δ65.00000°, λ83.00000°. Principal axes: T 3.6800, Plg69.0000°, Azm59.0000°; N 0.1700, Plg6.0000°, Azm167.0000°; P -3.8500, Plg20.0000°, Azm259.0000°; Data Used: IU II IC G.

BJI 03 14:31:00.0, 17.80S×167.60E, h50km, mB4.9/14, mb4.7/21, Ms4.8/9, Ms7 4.4/9

ISC 03 14:30:59.4±0.5, 18.07S±0.05×167.73E±0.08, h46km±2km, h46km:pP-P, n105, σ1.69/125, mb4.7/31, MS4.2/24, 4C-1D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.14	191	eS	Sn	14 32 46.4	-0.9
DZM	Mont Dzumac	4.16	197	ePn	Pn	14 32 11.3	+11
	205nm,0.9s						
DZM				eSn	Sn	14 32 46.1	-1.9
	404nm,0.9s						
DZM	Mont Dzumac	4.16	197	eP	Pn	14 31 58.7	-1.8
DZM				eS	Sn	14 32 45.0	-3.0
DZM				AMP		14 32 49.7	
	comp=Z,1μm,2.2s						
DZM	Mont Dzumac	4.16	197	eP	Pn	14 32 00.8	+0.3
DZM				Sn	Sn	14 32 44.5	-3.5
DZM	Mont Dzumac	4.16	197	Pn	Pn	14 31 58.8	-1.8
	comp=Z,7.0nm,0.3s,baz=24,slow=15,SNR=57						
DZM				Sn	Sn	14 32 44.5	-3.5
	comp=Z,37nm,0.3s,baz=143,slow=20,SNR=15						
DZM				LR	LR	14 32 49.8	
	comp=Z,286nm,20.0s,baz=23,slow=27						
NOUC	Port Laguerre	4.23	198	eP	Pn	14 31 60.0	-1.4
NOUC				eS	Sn	14 32 47.9	-1.6
NOUC				AMP		14 32 59.1	
	comp=Z,52nm,16.4s						
MSVF	Nonsavu	9.83	90	eP	Pn	14 33 21.8	+3.5
	comp=Z,314nm,1.8s						
HNR	Honiara	11.44	318	eP	Pn	14 33 35.4	-4.8
HNR	Honiara	11.44	318	Pn	Pn	14 33 35.1	-5.0
	comp=Z,5.4nm,0.3s,baz=308,slow=5.0,SNR=5.4						
HNR				LR	LR	14 37 13.2	
	comp=Z,618nm,20.4s,baz=302,slow=33						
FUNA	Funafuti	14.63	51	ePn	Pn	14 34 23.1	-0.6
EIDS	Eidsvold	17.08	242	eP	P	14 34 56.0	-0.2
	comp=Z,16nm,1.2s						
OUZ	Omahuta	17.86	164	eP	P	14 35 08.2	+3.5
AFI	Afiamalu	20.12	81	LR	LR	14 41 13.0	
	comp=Z,701nm,19.4s,baz=254,slow=31						
CTA	Charters Tower	20.40	261	P	P	14 35 33.5	+0.8
CTA	Charters Tower	20.40	261	P	P	14 35 33.5	+0.8
	comp=Z,24nm,1.0s,baz=87,slow=14,SNR=8.9						
CTAO	Charters Tower	20.40	261	eP	P	14 35 33.7	+1.1
	comp=Z,32nm,1.0s						
URZ	Urewera	21.73	160	LR	LR	14 42 50.5	
	comp=Z,537nm,18.1s,baz=344,slow=33						
PMG	Port Moresby	21.74	291	LR	LR	14 43 20.6	
	comp=Z,720nm,18.5s,baz=98,slow=34						
STKA	Stephens Creek	27.30	235	eP	P	14 36 40.8	+1.0
STKA	Stephens Creek	27.30	235	P	P	14 36 40.6	+0.8
	comp=Z,12nm,1.0s,baz=66,slow=9.8,SNR=21						
STKA				LR	LR	14 47 27.3	
	comp=Z,602nm,18.8s,baz=36,slow=36						
RAR	Rarotonga	30.73	101	LR	LR	14 46 56.2	
	comp=Z,455nm,19.0s,baz=90,slow=31						
WRA	Warramunga Arr	31.60	261	P	P	14 37 16.3	-1.7
WRA	Warramunga Arr	31.60	261	P	P	14 37 16.3	-1.7
	comp=Z,2.5nm,1.0s,baz=93,slow=9.7,SNR=8.2						
WRA				LR	LR	14 49 07.0	
	comp=Z,645nm,20.7s,baz=65,slow=35						
AS31	Alice Springs	32.05	254	eP	P	14 37 20.5	-1.4
ASAR	Alice Springs	32.05	254	P	P	14 37 20.8	-1.2
ASAR	Alice Springs	32.05	254	P	P	14 37 20.8	-1.2
	comp=Z,4.5nm,0.8s,baz=81,slow=8.5,SNR=39						
ASAR				LR	LR	14 49 48.3	
	comp=Z,809nm,20.9s,baz=84,slow=35						
FORT	Forrest	38.08	243	eP	P	14 38 13.9	+0.1
	comp=Z,26nm,0.6s						
FITZ	Fitzroy Crossi	39.95	263	eP	P	14 38 29.1	-0.5
FITZ	Fitzroy Crossi	39.95	263	P	P	14 38 28.9	-0.7
	comp=Z,13nm,0.9s,baz=108,slow=8.7,SNR=15						
TBI	Tubuai	40.28	105	eLR	LR	14 50 12.3	
PPT2	Papeete2	40.58	96	eLR	LR	14 50 20.4	
	comp=Z,595nm,25.5s						
PPT	Papeete	40.58	96	LR	LR	14 51 54.9	
	comp=Z,278nm,18.1s,baz=346,slow=31						
NWAO	Narrogin (SRO)	47.49	242	P	P	14 39 29.6	-0.4
NWAO	Narrogin (SRO)	47.49	242	P	P	14 39 29.6	-0.4
	comp=Z,28nm,1.0s,baz=85,slow=9.4,SNR=4.2						
VNDA	Vanda	59.55	181	P	P	14 40 59.7	+2.0
VNDA	Vanda	59.55	181	P	P	14 40 59.7	+2.0
	comp=Z,0.5nm,0.7s,baz=18,slow=5.0,SNR=4.3						
SBA	Scott Base	59.82	180	eP	P	14 41 01.5	+2.0
MAT	Matsushiro	61.06	333	P	P	14 41 08.1	-0.5
MAT				S	S	14 49 22.2	-2.0
JNU	Nakatsue	61.89	325	LR	LR	15 03 10.8	
	comp=Z,110nm,21.7s,baz=142,slow=31						
ASAJ	Asahikawa	66.02	340	P	P	14 41 41.8	+0.7
ASAJ	Asahikawa	66.02	340	P	P	14 41 41.8	+0.7
	comp=Z,4.5nm,0.7s						
ASAJ				LR	LR	15 10 40.7	
	comp=Z,121nm,18.6s,baz=354,slow=36						
NJ2	Nanjing	68.38	317	eP	P	14 41 56.9	+0.6
NJ2				pP	pP	14 42 09.4	-0.2
NJ2				sP	sP	14 42 14.2	-0.6
NJ2				S	S	14 50 57.0	+2.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,60nm,6.2s						
NJ2				LR	LR		
	comp=N,180nm,23.3s						
NJ2				LR	LR		
	comp=E,130nm,16.8s						
NJ2				LR	LR		
	comp=Z,190nm,17.0s						
USRK	Ussuriysk Arra	70.05	333	P	P	14 42 07.4	+1.1
	comp=Z,1.9nm,0.7s,baz=137,slow=12,SNR=4.2						
FX1	Attu Island--F	70.81	3	eP	P	14 42 09.6	-1.2
FX1	Attu Island--F	70.81	3	P	P	14 42 09.6	-1.2
	comp=Z,3.7nm,0.6s,baz=172,slow=7.1,SNR=9.5						
PETK	Petropavlovsk-	71.41	354	P	P	14 42 14.3	-0.2
PETK	Petropavlovsk-	71.41	354	P	P	14 42 14.3	-0.2
	comp=Z,6.4nm,0.7s,baz=152,slow=9.5,SNR=14						
PETK				LR	LR	15 10 14.2	
	comp=Z,106nm,19.0s,baz=68,slow=33						
CN2	Changchun	72.72	329	eP	P	14 42 25.0	+2.4
GYA	Guiyang	73.98	305	P	P	14 42 31.0	+0.5
GYA				pP	PcP	14 42 45.0	-0.7
GYA				sP	sP	14 42 51.7	+2.6
GYA				PP	PP	14 45 19.2	+2.9
GYA				S	SKiKP	14 51 57.5	+2.1
GYA				SKS	SKSac	14 52 28.9	-5.6
GYA				SS	SS	14 56 43.2	-2.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,80nm,5.4s						
GYA				LR	LR		
	comp=N,380nm,18.6s						
GYA				LR	LR		
	comp=E,320nm,19.1s						
GYA				LR	LR		
	comp=Z,400nm,18.7s						
BJI	Beijing	75.14	322	P	P	14 42 36.3	-0.4
BJI				S	S	14 52 11.0	-0.9
BJI				SS	SS	14 57 01.3	-1.0
BJI				pmax	pmax		
	comp=Z,13nm,0.6s						
BJI				pmax	pmax		
	comp=Z,81nm,5.3s						
BJI				LR	LR		
	comp=N,120nm,19.6s						
BJI				LR	LR		
	comp=E,90nm,16.3s						
KMI	Kunming	76.44	302	P	P	14 42 47.3	+2.4
KMI				pP	pP	14 42 58.5	+0.2
KMI				sP	sP	14 43 04.0	+0.5
KMI				PP	PP	14 45 38.3	+1.0
KMI				S	S	14 52 27.3	-0.1
KMI				sS	sS	14 52 45.9	-4.1
KMI				SS	SS	14 57 25.2	+2.0
KMI				pmax	pmax		
	comp=Z,11nm,1.1s						
KMI				pmax	pmax		
	comp=Z,100nm,5.5s						
KMI				LR	LR		
	comp=N,77nm,15.9s						
KMI				LR	LR		
	comp=E,120nm,15.2s						
KMI				LR	LR		
	comp=Z,93nm,18.1s						
CMAR	Chiang Mai Arr	76.72	295	P	P	14 42 48.5	+2.3
CMAR	Chiang Mai Arr	76.72	295	P	P	14 42 48.6	+2.3
	comp=Z,4.9nm,1.0s,baz=127,slow=4.0,SNR=16						
CD2	Chengdu	78.39	308	eP	P	14 42 55.0	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,40nm,5.2s						
HHC	Hu-ho-hao-te	78.41	320	eP	P	14 42 56.3	+1.0
HHC				pP	pP	14 43 09.2	+0.3
HHC				sP	sP	14 43 14.6	+0.6
HHC				PP	PP	14 45 56.6	+3.2
HHC				S	S	14 52 45.8	-2.1
HHC				SKS	SKSac	14 53 01.4	-5.1
HHC				sS	SKKSac	14 53 07.9	+0.3
HHC				SS	SS	14 57 53.4	+1.3
HHC				pmax	pmax		
	comp=Z,54nm,0.7s						
HHC				pmax	pmax		
	comp=Z,190nm,5.5s						
HHC				LR	LR		
	comp=N,170nm,14.9s						
HHC				LR	LR		
	comp=E,190nm,12.5s						
HHC				LR	LR		
	comp=Z,200nm,16.7s						
MAW	Mawson	78.98	202	LR	LR	15 12 20.4	
	comp=Z,117nm,19.1s,baz=264,slow=32						
LZH	Lanzhou	80.89	313	eP	P	14 43 10.5	+1.5
LZH				pP	pP	14 43 22.5	-0.1
LZH				sP	sP	14 43 30.0	+2.3
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
ULN	Ulaanbaatar	85.08	324	P	P	14 43 30.2	-0.2
	comp=Z,4.3nm,0.8s						
GTA	Gaotai	85.29	314	eP	P	14 43 32.5	+0.9
GTA				pP	pP	14 43 46.6	+1.3
GTA				sP	sP	14 43 52.1	+1.7
GTA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SONM	Songino Array	85.43	324	P	P	14 43 32.3	+0.2
SONM	Songino Array	85.43	324	P	P	14 43 32.3	+0.2
	comp=Z,1.8nm,0.8s,baz=147,slow=5.9,SNR=15						
SONM				LR	LR	15 20 55.9	
	comp=Z,49nm,18.1s,baz=278,slow=35						
SYO	Syowa Base	85.65	197	⇑eP	P	14 43 35.0	+2.2
ISA	Isabella	87.86	51	eP	P	14 43 43.5	-0.7
	comp=Z,3.9nm,0.8s						
BEKR	Beckworth	88.25	47	eP	P	14 43 45.4	-0.7
	comp=Z,1.1nm,0.6s						
NVAR	Mina Array Bea	89.11	49	P	P	14 43 49.4	-0.8
NVAR	Mina Array Bea	89.11	49	P	P	14 43 49.4	-0.8
	comp=Z,2.6nm,0.8s,baz=231,slow=7.8,SNR=18						
ILAR	Eielson Array	89.55	18	P	P	14 43 49.0	-2.3
ILAR	Eielson Array	89.55	18	P	P	14 43 49.0	-2.3
	comp=Z,1.1nm,0.7s,baz=237,slow=5.3,SNR=6.3						
ILAR				LR	LR	15 21 58.6	
	comp=Z,73nm,19.8s,baz=302,slow=34						
MAIT	Maitri	89.83	188	eP	P	14 43 43.8	-9.0
LDFC	Landfair	90.17	53	eP	P	14 43 54.4	-0.8
	comp=Z,5.2nm,0.8s						
SNAA	Sanae	90.26	183	eP	P	14 43 55.6	+0.7
SNAA	Sanae	90.26	183	eP	P	14 43 54.6	-0.3
	comp=Z,8.7nm,1.3s						
SNAA	Sanae	90.26	183	LR	LR	15 24 33.4	
	comp=Z,47nm,18.1s,baz=205,slow=36						
WVOR	Wild Horse Val	90.50	45	eP	P	14 43 55.1	-1.4
	comp=Z,2.3nm,0.8s						
WUAZ	Wupatki	93.18	54	P	P	14 44 08.8	-0.3
	comp=Z,3.9nm,0.9s						
WMQ	Urumqi	95.37	314	eP	P	14 44 17.0	-1.9
WMQ				LR	LR		
	comp=Z,86nm,20.4s						
PDAR	Pinedale Array	96.87	47	LR	LR	15 18 46.7	
	comp=Z,64nm,19.5s,baz=265,slow=30						
TXAR	Lajitas Array	97.47	62	P	P	14 44 28.2	-0.5
TXAR	Lajitas Array	97.47	62	P	P	14 44 28.2	-0.5
	comp=Z,0.5nm,0.7s,baz=231,slow=5.7,SNR=5.3						
TXAR				LR	LR	15 23 41.3	
	comp=Z,130nm,18.0s,baz=70,slow=32						
MKAR	Makanchi Array	99.91	316	P	Pdif	14 44 39.9	+0.7
MKAR	Makanchi Array	99.91	316	P	Pdif	14 44 39.9	+0.7
	comp=Z,0.3nm,0.6s,baz=87,slow=6.9,SNR=3.3						
MKAR				LR	LR	15 27 38.3	
	comp=Z,46nm,19.8s,baz=0.9,slow=34						
ARCES	ARCESS Array B	123.58	345	PKP	PKPdf	14 49 50.1	-1.0
ARCES	ARCESS Array B	123.58	345	PKP	PKPdf	14 49 50.1	-1.0
	comp=Z,2.9nm,0.9s,baz=102,slow=3.1,SNR=4.3						
BOJS	Bojanci	144.34	326	i PKPdf	PKPdf	14 50 30.8	+0.3
BOJS				i		14 50 39.7	
CRNS	Crni Vrh	144.47	328	ePKPdf	PKPbc	14 50 29.9	+0.5
CRNS				i		14 50 39.2	
ABTA	Abfaltersbach	144.86	330	⇑iPKPdf	PKPbc	14 50 30.8	+0.1
	comp=Z,14nm,0.7s						
MOTA	Moosalm	145.07	332	⇓iPKPdf	PKPab	14 50 31.5	+0.1
	comp=Z,12nm,0.9s						
LANF	Langenberg	145.14	337	PKP	PKPdf	14 50 32.0	+0.2
WLF	Walferdange	145.16	339	PKP	PKPdf	14 50 32.5	+0.7
WLF				APKP	pPKPdf	14 50 42.1	-3.9
WLF	Walferdange	145.16	339	ePKP	PKPdf	14 50 32.1	+0.4
DOU	Dourbes	145.30	341	PKP	PKPdf	14 50 32.2	+0.2
DOU				APKP	pPKPdf	14 50 41.8	-4.4
BFO	Black Forest	145.47	336	ePKP	PKPab	14 50 32.9	+0.2
FETA	Feichten	145.48	332	⇑iPKPdf	PKPab	14 50 33.0	0.0
	comp=Z,25nm,0.8s						
MENF	Mencas	145.59	344	PKP	PKPdf	14 50 32.3	-0.1
DAVA	Damuels	145.65	333	⇑iPKPab	PKPab	14 50 33.5	-0.1
	comp=Z,19nm,0.8s						
ECH	Echery	146.02	337	ePKPbc	PKPbc	14 50 34.0	-0.1
ECH	Echery	146.02	337	PKP	PKPbc	14 50 34.1	-0.1
VAL	Valentia	146.16	358	eP	PKPbc	14 50 34.5	+0.1
MOF	Molkenrain	146.32	336	PKP	PKPbc	14 50 35.1	-0.1
TUE	Stuetta	146.51	333	ePKPbc	PKPbc	14 50 35.8	-0.2
LOMF	Lomont	146.85	336	PKP	PKPbc	14 50 37.2	+0.5
BNI	Bardonecchia	148.78	334	ePKPbc	PKPbc	14 50 41.9	-0.2
PYM	Petit Puy Mans	149.61	339	PKP	PKPdf	14 50 36.0	-3.4
TORD	Torodi Ar. Bea	165.69	252	PKP	PKPdf	14 50 59.8	-0.1
TORD				PKPab	PKPab	14 52 01.1	+1.9
TORD	Torodi Ar. Bea	165.69	252	PKP	PKPdf	14 50 59.8	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1.4nm,0.9s,baz=97,slow=0.1,SNR=5.4						
TORD				PKPab	**PKPab**	**14 52 01.1**	**+1.9**
	comp=Z,1.3nm,0.9s,baz=126,slow=3.7,SNR=3.6						

*IDC **03** 14:35:17.8±1.5, 18°.14S×167°.95E, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.8/17, mbtmp3.8/6, Error ellipse: s-maj=46.8km s-min=24.6km az=124.0*
*ISCJB **03** 14:35:21.5±0.9, 18°.13S±0°.08×167°.8E±0°.2, h32km, mb4.0/7, Error ellipse: s-maj=27.8km s-min=9.8km az=14.0*
*NEIC **03** 14:35:23.5±0.9, 18°.10S×167°.83E, h35km, mb4.5/2, Error ellipse: s-maj=30.9km s-min=17.5km az=110.0*
ISC 03 14:35:23.0±0.9**, 18°.13S**±0°.10×**167°.9E**±0°.2**, h32km, n14, σ1s.18**/16**, mb4.0**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.14**	**198**	Pn	**Pn**	**14 36 23.6**	**-0.5**
DZM				Sn	**Sn**	**14 37 11.1**	**-0.4**
DZM	**Mont Dzumac**	**4.14**	**198**	Pn	**Pn**	**14 36 23.6**	**-0.5**
	baz=156,slow=24,SNR=3.7						
DZM				Sn	**Sn**	**14 37 11.1**	**-0.4**
	5.0nm,0.3s,baz=339,slow=23,SNR=4.0						
WRA	**Warramunga Arr**	**31.70**	**261**	P	**P**	**14 41 45.2**	**+1.1**
WRA	**Warramunga Arr**	**31.70**	**261**	P	**P**	**14 41 45.2**	**+1.1**
	0.6nm,0.8s,baz=93,slow=8.1,SNR=3.2						
ASAR	**Alice Springs**	**32.14**	**254**	P	**P**	**14 41 46.7**	**-1.2**
ASAR	**Alice Springs**	**32.14**	**254**	P	**P**	**14 41 46.7**	**-1.2**
	0.6nm,0.8s,baz=81,slow=8.4,SNR=4.7						
PETK	**Petropavlovsk-**	**71.48**	**354**	P	**P**	**14 46 38.9**	**-1.3**
PETK	**Petropavlovsk-**	**71.48**	**354**	P	**P**	**14 46 38.9**	**-1.3**
	2.0nm,0.8s,baz=168,slow=7.4,SNR=3.6						
QSPA	**South Pole Qui**	**71.92**	**180**	*e*P	**P**	**14 46 44.9**	**+1.9**
	7.4nm,1.4s						
SONM	**Songino Array**	**85.55**	**324**	P	**P**	**14 47 59.5**	**+1.4**
SONM	**Songino Array**	**85.55**	**324**	P	**P**	**14 47 59.5**	**+1.4**
	0.2nm,0.4s,baz=119,slow=5.1,SNR=3.8						
BILL	**Bilibino**	**85.93**	**359**	*e*P	**P**	**14 47 58.4**	**-0.9**
	4.4nm,1.3s						
NVAR	**Mina Array Bea**	**89.06**	**49**	P	**P**	**14 48 15.3**	**-0.1**
NVAR	**Mina Array Bea**	**89.06**	**49**	P	**P**	**14 48 15.3**	**-0.1**
	0.4nm,0.5s,baz=231,slow=4.3,SNR=4.4						

*IDC **03** 14:39:51.9±6.9, 34°.29N×135°.65E, h0km, mb3.7/2, mb1 3.9/3, mb1mx3.4/27, mbtmp3.6/3, ML3.6/1, Error ellipse: s-maj=295.5km s-min=31.2km az=119.0*
*ISCJB **03** 14:40:06.1±0.7, 35°.93N±0°.06×137°.34E±0°.07, h251km±5km, mb3.3/2, Error ellipse: s-maj=11.5km s-min=8.5km az=141.5*
*JMA **03** 14:40:07.5±0.2, 35°.90N×137°.37E, h241km±2km, M3.1*
ISC 03 14:40:06.5±1.1**, 35°.95N**±0°.07×**137°.34E**±0°.07**, h247km**±8km**, n17, σ0s.84**/27**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JGF	**Kuroka**	**0.34**	**178**	P	**Pn**	**14 40 38.7**	**-0.1**
JGF				S	**S**	**14 41 03.7**	**-0.4**
JGM	**Miyama**	**0.56**	**244**	P	**Pn**	**14 40 39.7**	**+0.4**
JGM				S	**S**	**14 41 04.7**	**-0.3**
JKG	**Kaga**	**0.88**	**292**	P	**Pn**	**14 40 41.7**	**+1.2**
MAT	**Matsushiro**	**0.92**	**49**	P	**Pn**	**14 40 41.5**	**+0.7**
MJAR	**Matsushiro Arr**	**0.92**	**50**	Pn	**Pn**	**14 40 41.8**	**+1.0**
	6.7nm,0.3s,baz=232,slow=6.7,SNR=79						
MJAR				Sn	**S**	**14 41 07.7**	**-0.1**
	0.6nm,0.3s,baz=335,slow=26,SNR=12						
JYN	**Shimob**	**1.08**	**114**	P	**Pn**	**14 40 41.8**	**0.0**
JYN				S	**S**	**14 41 09.0**	**-0.4**
JRY	**Ryogami san**	**1.27**	**86**	P	**Pn**	**14 40 43.5**	**+0.6**
JRY				S	**S**	**14 41 12.2**	**+0.7**
JSZ	**Suzu**	**1.50**	**1**	P	**Pn**	**14 40 45.3**	**+0.9**
JSZ				S	**S**	**14 41 15.0**	**+0.6**
JOD2	**Odawara 2**	**1.58**	**115**	P	**Pn**	**14 40 46.2**	**+1.0**
JOD2				S	**S**	**14 41 15.6**	**0.0**
JIE	**Ise**	**1.64**	**199**	P	**Pn**	**14 40 46.5**	**+0.9**
JIE				S	**S**	**14 41 14.8**	**-1.6**
JWT	**Wachi**	**1.71**	**248**	P	**Pn**	**14 40 47.3**	**+1.1**
JWT				S	**S**	**14 41 17.5**	**+0.1**
JAG	**Ashikaga**	**1.78**	**74**	P	**Pn**	**14 40 46.6**	**-0.1**
JWY	**Kouya**	**2.24**	**220**	P	**Pn**	**14 40 52.0**	**+0.9**
JWY				S	**S**	**14 41 26.3**	**+0.1**
JWZ	**Kozaga**	**2.76**	**210**	P	**Pn**	**14 40 56.7**	**+0.5**
MDJ	**Mudanjiang**	**10.48**	**328**	P	**Pn**	**14 42 29.3**	**-1.7**
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,21nm,2.9s						
WRA	**Warramunga Arr**	**55.66**	**183**	P	**P**	**14 49 17.3**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=0.2,slow=7.6,SNR=23						
ASAR	**Alice Springs**	**59.38**	**184**	P	**P**	**14 49 44.0**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=1.0,slow=7.2,SNR=5.8						

*ISCJB **03** 14:53:16.7±0.5, 7°.92N±0°.04×121°.64E±0°.04, h28km, Error ellipse: s-maj=7.1km s-min=5.0km az=143.6*
*MAN **03** 14:53:17, 8°.04N×121°.66E, h23km, mb4.6, ML3.5, MS3.5*
ISC 03 14:53:18.0±1.3**, 7°.90N**±0°.05×**121°.66E**±0°.05**, h28km, n15, σ1s.28**/16**, 1C-4D, Mindanao**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZMPH	**Zamboanga City**	**1.03**	**157**	⇓*i*P	**Pn**	**14 53 35.4**	**-1.2**
ZMPH				*i* S	**Sn**	**14 53 48.2**	**-1.8**
SNPH	**Sibulan**	**2.12**	**47**	⇓*i*P	Pn	14 53 37.6	-14
SNPH				*i* S	Sn	14 54 05.1	-12
CTBH	**Cotabato--PC H**	**2.66**	**105**	⇓*i*P	**Pn**	**14 53 59.0**	**0.0**
TBP	**Tagbilaran**	**2.81**	**51**	*e*P	Pb	14 54 11.7	+4.1
TBP				*e*S	**Sn**	**14 54 34.7**	**+0.6**
GUIM	**Jordan**	**2.86**	**19**	*e*P	**Pn**	**14 54 02.1**	**+0.3**
GUIM				*e*S	Sn	14 54 20.9	-14
CUYO	**Cuyo Island**	**2.99**	**348**	*e*P	**Pn**	**14 54 03.1**	**-0.6**
CUYO				*e*S	Sn	14 54 19.2	-19
CGP	**Cagayan de Oro**	**3.06**	**79**	⇑*e*P	**Pn**	**14 54 05.8**	**+1.3**
CGP				*e*S	**Sn**	**14 54 41.4**	**+1.2**
LLP	**Lapu-Lapu**	**3.31**	**43**	⇓*i*P	**Pn**	**14 54 08.2**	**+0.2**
LLP				*e*S	**Sn**	**14 54 45.2**	**-1.2**
PPR	**Puerto Princes**	**3.44**	**303**	*e*P	Pn	14 54 05.0	-4.8
ENPP	**El Nido**	**3.95**	**326**	*e*P	**Pn**	**14 54 15.2**	**-1.7**
MYLDM	**Lahad Datu**	**4.14**	**229**	P	**Pn**	**14 54 21.2**	**+1.7**
KDM	**Kudat**	**4.88**	**259**	P	**Pn**	**14 54 31.7**	**+2.0**
SDKM	**Sandakan**	**4.97**	**243**	P	**Pn**	**14 54 30.2**	**-0.7**
TSM	**Tawau**	**5.20**	**227**	P	**Pn**	**14 54 34.4**	**+0.4**
KKM	**Kota Kinabalu**	**5.71**	**251**	P	**Pn**	**14 54 41.9**	**+0.8**

WEL 03 14:54:35.2±1.8**, 36°.42S**×**177°.73E, h5km, ML3.5**/8**, Error ellipse: s-maj=13.7km s-min=11.1km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.23**	**158**	P*	Pg	14 54 56.2	-2.6
MXZ				S*	Sg	14 55 10.5	-4.3
MXZ				AML	AML	14 55 18.0	
KUZ	**Kuaotunu**	**1.65**	**258**	*e*PN	Pn	14 55 03.3	-1.6
KUZ				SN	Sn	14 55 24.8	-1.6
PUZ	**Puketiti**	**1.70**	**166**	PN	Pn	14 55 05.7	+0.1
PUZ				AML	AML	14 55 31.4	
PUZ				AML	AML	14 55 43.3	
URZ	**Urewera**	**1.90**	**195**	P*	Pn	14 55 07.4	-0.9
MWZ	**Matawai**	**1.92**	**185**	P*	Pn	14 55 07.8	-0.8
MWZ				AML	AML	14 55 44.8	
MKAZ	**Moumakai**	**2.17**	**251**	*e*PN	Pn	14 55 11.8	-0.2
TOZ	**Tahuroa Road**	**2.21**	**233**	P*	Pn	14 55 13.0	+0.4
BKZ	**Black Stump Fm**	**2.91**	**199**	*e*P*	Pn	14 55 22.1	-0.2
HIZ	**Hauiti**	**3.10**	**227**	PN	Pn	14 55 25.7	+0.9

*ISK **03** 14:57:00.9, 37°.86N×27°.57E, h4km, MD2.8*
*ISCJB **03** 14:57:01.3±0.6, 37°.85N±0°.03×27°.54E±0°.04, h1km±8km, Error ellipse: s-maj=5.5km s-min=4.6km az=164.2*
*CSEM **03** 14:57:01.6±0.2, 37°.84N×27°.54E, h2km, MD3.0, Error ellipse: s-maj=5.0km s-min=4.3km az=92.0*
*DDA **03** 14:57:01.2, 37°.85N×27°.52E, h7km, MD3.0*
ISC 03 14:57:01.5±1.0**, 37°.85N**±0°.02×**27°.53E**±0°.02**, h8km**±11km**, n26, σ0s.64**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.28**	**238**	*i* P	**Pg**	**14 57 06.8**	**-0.2**
GCAM				*i* S	**Sg**	**14 57 10.6**	**-0.2**
GCAM	**G?zelcaml?**	**0.28**	**238**	*i* P	**Pg**	**14 57 06.8**	**-0.2**
GCAM				*i* S	**Sg**	**14 57 10.6**	**-0.2**
AYDN	**Tasoluk**	**0.33**	**124**	*i* P	**Pg**	**14 57 08.1**	**+0.1**
AYDN				*i* S	**Sg**	**14 57 12.4**	**0.0**
AYDN	**Tasoluk**	**0.33**	**124**	*i* P	**Pg**	**14 57 08.1**	**+0.1**
AYDN				*i* S	**Sg**	**14 57 12.4**	**0.0**
MLSB	**Milas**	**0.58**	**161**	*e*PG	**Pg**	**14 57 12.7**	**0.0**
MLSB	**Milas**	**0.58**	**161**	*e*Pg	**Pg**	**14 57 12.7**	**0.0**
IZM	**Izmir**	**0.59**	**339**	*e*PG	**Pg**	**14 57 12.8**	**-0.1**
IZM				*e*SG	**Sg**	**14 57 21.4**	**+0.8**
IZM	**Izmir**	**0.59**	**339**	*e*Pg	**Pg**	**14 57 12.8**	**-0.1**
IZM				*e*Sg	**Sg**	**14 57 21.4**	**+0.8**
BLCB	**Balcova**	**0.66**	**324**	*e*PG	**Pg**	**14 57 14.3**	**+0.1**
BLCB	**Balcova**	**0.66**	**324**	*e*Pg	**Pg**	**14 57 14.3**	**+0.1**
BODT	**Bodrum**	**0.80**	**193**	*e*PG	**Pg**	**14 57 17.2**	**+0.4**
BODT				*e*SG	**Sb**	**14 57 29.5**	**+0.8**
BODT	**Bodrum**	**0.80**	**193**	*e*Pg	**Pg**	**14 57 17.3**	**+0.4**
BODT				*e*Sg	**Sb**	**14 57 29.5**	**+0.8**
AKHS	**Akhisar**	**1.05**	**12**	*i* P	**Pb**	**14 57 22.2**	**+0.3**
AKHS				*i* S	**Sg**	**14 57 35.6**	**+0.2**
AKHS	**Akhisar**	**1.05**	**12**	*i* P	**Pb**	**14 57 22.2**	**+0.3**
AKHS				*i* S	**Sg**	**14 57 35.6**	**+0.2**
KULA	**Kula-Manisa**	**1.11**	**53**	*e*PG	**Pg**	**14 57 22.3**	**-0.5**
KULA	**Kula-Manisa**	**1.11**	**53**	*e*Pg	**Pg**	**14 57 22.3**	**-0.5**
DAT	**Datca**	**1.12**	**178**	*e*PN	**Pg**	**14 57 23.1**	**+0.2**
DAT	**Datca**	**1.12**	**178**	*e*Pn	**Pg**	**14 57 23.1**	**+0.2**
DNZL	**Cakiroluk**	**1.21**	**97**	*i* P	**Pg**	**14 57 25.6**	**+0.9**
DNZL				*i* S	**Sb**	**14 57 38.6**	**-1.9**
DNZL	**Cakiroluk**	**1.21**	**97**	*i* P	**Pg**	**14 57 25.6**	**+0.9**
DNZL				*i* S	**Sb**	**14 57 38.6**	**-1.9**
KHAL	**Karahalli**	**1.63**	**71**	*i* P	**Pg**	**14 57 33.6**	**+0.9**
KHAL				*i* S	**Sg**	**14 57 53.7**	**-0.2**
KHAL	**Karahalli**	**1.63**	**71**	*i* P	**Pg**	**14 57 33.6**	**+0.9**
KHAL				*i* S	**Sg**	**14 57 53.7**	**-0.2**
KHL	**Karahalli**	**1.64**	**73**	*e*PN	**Pn**	**14 57 30.8**	**+0.1**
KHL	**Karahalli**	**1.64**	**73**	*e*Pn	**Pn**	**14 57 30.8**	**+0.1**
APE	**Apeiranthos**	**1.77**	**245**	*e*PN	**Pb**	**14 57 33.8**	**-0.4**
APE	**Apeiranthos**	**1.77**	**245**	*e*Pn	**Pb**	**14 57 33.8**	**-0.4**

WEL 03 15:09:14.8±1.0**, 36°.39S**×**177°.81E, h5km, ML3.9**/4**, Error ellipse: s-maj=8.1km s-min=7.1km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.24**	**161**	P*	Pg	15 09 34.3	-4.3
MXZ				S*	Sg	15 09 50.6	-4.1
MXZ				AML	AML	15 10 49.9	
KUZ	**Kuaotunu**	**1.72**	**257**	PN	Pn	15 09 44.2	-1.2
KUZ				SN	Sn	15 10 05.2	-2.4
PUZ	**Puketiti**	**1.72**	**168**	PN	Pn	15 09 45.2	-0.3
PUZ				AML	AML	15 10 11.3	
PUZ				AML	AML	15 10 11.9	
URZ	**Urewera**	**1.95**	**196**	P*	Pn	15 09 47.4	-1.1
URZ				S*	Sn	15 10 11.8	-1.6
URZ				AML	AML	15 10 13.1	
MWZ	**Matawai**	**1.96**	**186**	P*	Pn	15 09 47.2	-1.6
MWZ				S*	Sn	15 10 08.8	-4.9
MWZ				AML	AML	15 10 21.5	
MKAZ	**Moumakai**	**2.24**	**250**	PN	Pn	15 09 52.4	-0.1
BKZ	**Black Stump Fm**	**2.96**	**200**	P*	Pn	15 10 02.1	-0.5
HIZ	**Hauiti**	**3.16**	**227**	PN	Pn	15 10 05.5	+0.2

IDC 03 15:33:54.3±49.0**, 19°.63S**×**178°.63W, h0km, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/18**, mbtmp3.8**/3**, Error ellipse: s-maj=887.4km s-min=148.0km az=81.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.64**	**243**	P	P	15 41 10.3	-0.9
	0.8nm,0.6s,baz=85,slow=11,SNR=5.9						
WRA	**Warramunga Arr**	**44.14**	**261**	P	P	15 42 05.3	+0.2
	0.6nm,0.3s,baz=95,slow=7.5,SNR=41						
ASAR	**Alice Springs**	**44.15**	**256**	P	P	15 42 05.2	+0.1
	1.2nm,0.6s,baz=92,slow=8.4,SNR=32						

*CSEM **03** 15:41:01.6±0.1, 41°.78N×22°.21E, h10km, ML1.8, Error ellipse: s-maj=3.1km s-min=2.5km az=68.0*
*THE **03** 15:41:01.7, 41°.79N×22°.23E, h7km, ML2.0/2, Error ellipse: s-maj=1.0km s-min=0.7km az=101.0*
*SKO **03** 15:41:01.6, 41°.73N×22°.17E, h15km, M1.5, ML2.0*
*ISCJB **03** 15:41:01.5±0.5, 41°.77N±0°.02×22°.19E±0°.04, h1km±6km, Error ellipse: s-maj=4.5km s-min=3.6km az=1.9*
*BEO **03** 15:41:01.9±1.4, 41°.68N×22°.17E, h21km±7km, ML1.8/4*
*ATH **03** 15:41:01.2, 41°.80N×22°.17E, h14km±3km, MD3.1/4*
ISC 03 15:41:01.8±1.0**, 41°.77N**±0°.02×**22°.20E**±0°.02**, h9km**±9km**, n32, σ0s.71**/58**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.53**	**148**	P	**Pg**	**15 41 11.6**	**-0.4**
VAY				S	**Sg**	**15 41 19.6**	**+0.8**
VAY	**Valandovo**	**0.53**	**148**	*e*Pg	**Pg**	**15 41 11.5**	**-0.4**
VAY				*e*Sg	**Sb**	**15 41 20.1**	**-0.7**
VAY	**Valandovo**	**0.53**	**148**	*i* Pg	**Pg**	**15 41 11.7**	**-0.2**
VAY				*i* Sg	**Sg**	**15 41 19.8**	**+1.0**
VAY				*e*Lg	Lg	15 41 20.0	
	comp=N,131nm,0.4s						
VAY				*e*Lg	Lg	15 41 20.7	
	comp=E,98nm,0.5s						
VAY	**Valandovo**	**0.53**	**148**	P	**Pg**	**15 41 11.6**	**-0.4**
VAY	**Valandovo**	**0.53**	**148**	*i* Pg	**Pg**	**15 41 12.2**	**+0.3**
VAY				S	**Sg**	**15 41 19.6**	**+0.8**
VAY				*e*Sg	**Sb**	**15 41 20.1**	**-0.7**
VAY				*e*Lg	Lg	15 41 21.2	
	comp=E,98nm,0.5s						
SKO	**Skopje**	**0.60**	**290**	*i* Pg	**Pg**	**15 41 13.3**	**-0.1**
SKO				*e*Sg	**Sg**	**15 41 21.0**	**-0.3**
SKO				*e*Lg	Lg	15 41 23.2	
	comp=E,26nm,0.3s						
SKO				*e*Lg	Lg	15 41 24.0	
	comp=N,30nm,0.3s						
SKO	**Skopje**	**0.60**	**290**	*i* Pg	**Pb**	**15 41 13.8**	**-0.7**
SKO				*e*Sg	**Sg**	**15 41 21.5**	**+0.2**
SKO				*e*Lg	Lg	15 41 24.5	
	comp=N,30nm,0.3s						
KNT	**Kendrikon**	**0.80**	**139**	P	**Pg**	**15 41 17.2**	**0.0**
KNT				S	**Sb**	**15 41 28.8**	**0.0**
KNT	**Kendrikon**	**0.80**	**139**	P	**Pg**	**15 41 17.2**	**0.0**
KNT				S	**Sb**	**15 41 28.8**	**0.0**
GRG	**Griva**	**0.82**	**169**	P	**Pg**	**15 41 17.3**	**-0.3**
GRG	**Griva**	**0.82**	**169**	*e*PG	**Pg**	**15 41 17.2**	**-0.3**
GRG				*e*SB	**Sb**	**15 41 29.7**	**+0.3**
GRG	**Griva**	**0.82**	**169**	P	**Pg**	**15 41 17.3**	**-0.3**
BIA	**Bitola**	**0.99**	**222**	*e*Pg	**Pg**	**15 41 20.5**	**-0.4**
BIA				*i* Sg	**Sb**	**15 41 34.6**	**+0.2**
BIA	**Bitola**	**0.99**	**222**	*e*Pg	**Pg**	**15 41 20.4**	**-0.4**
BIA				*i* Sg	**Sb**	**15 41 34.6**	**+0.2**
BARS	**Barje**	**1.09**	**345**	*e*Pg	**Pb**	**15 41 22.4**	**-0.4**
BARS				*e*Sg	**Sn**	**15 41 40.0**	**+1.6**
BARS	**Barje**	**1.09**	**345**	*e*Pg	**Pb**	**15 41 22.4**	**-0.4**
VTS	**Vitosha**	**1.12**	**42**	P	**Pb**	**15 41 21.6**	**-1.7**
VTS				S	**Sb**	**15 41 37.7**	**-0.4**
VTS	**Vitosha**	**1.12**	**42**	*e*Sg	**Sn**	**15 41 40.6**	**+1.3**
VTS	**Vitosha**	**1.12**	**42**	P	**Pb**	**15 41 21.6**	**-1.7**
VTS				S	**Sb**	**15 41 37.7**	**-0.4**
FNA	**Florina**	**1.16**	**212**	P	**Pg**	**15 41 23.9**	**-0.1**
FNA				S	**Sn**	**15 41 40.9**	**+0.7**
FNA	**Florina**	**1.16**	**212**	*e*PB	**Pb**	**15 41 23.5**	**-0.5**
FNA	**Florina**	**1.16**	**212**	P	**Pg**	**15 41 23.9**	**-0.1**
FNA				S	**Sn**	**15 41 40.9**	**+0.7**
SRS	**Serrai**	**1.23**	**121**	P	**Pn**	**15 41 24.9**	**-0.3**
SRS				S	**Sg**	**15 41 42.0**	**+0.6**
SRS	**Serrai**	**1.23**	**121**	P	**Pn**	**15 41 24.9**	**-0.3**
SRS				S	**Sg**	**15 41 42.0**	**+0.6**
SOH	**Sokhos**	**1.28**	**137**	P	**Pn**	**15 41 25.8**	**-0.1**
SOH				S	**Sn**	**15 41 43.2**	**-0.1**
SOH	**Sokhos**	**1.28**	**137**	*e*PB	**Pb**	**15 41 26.0**	**-0.1**
SOH				*e*SB	**Sg**	**15 41 44.2**	**+1.1**
SOH	**Sokhos**	**1.28**	**137**	P	**Pn**	**15 41 25.8**	**-0.1**
SOH				S	**Sn**	**15 41 43.2**	**-0.1**
NVR	**Nevrokopi**	**1.32**	**108**	P	**Pn**	**15 41 25.7**	**-0.7**
NVR				S	**Sb**	**15 41 43.9**	**+0.2**
NVR	**Nevrokopi**	**1.32**	**108**	*e*PB	**Pb**	**15 41 26.5**	**-0.2**
NVR				*e*SB	**Sg**	**15 41 45.5**	**+1.4**
NVR	**Nevrokopi**	**1.32**	**108**	P	**Pn**	**15 41 25.7**	**-0.7**
NVR				S	**Sb**	**15 41 43.9**	**+0.2**
ZAPS	**Zavoj**	**1.54**	**12**	*e*Pg	**Pg**	**15 41 31.2**	**-0.1**
ZAPS				*e*Sg	**Sg**	**15 41 53.5**	**+2.2**
PLG	**Polygyros**	**1.68**	**145**	*e*PN	**Pb**	**15 41 32.3**	**-0.6**

WEL 03 15:49:19.6±1.6**, 36°.34S**×**177°.71E, h5km, ML3.7**/4**, Error ellipse: s-maj=11.4km s-min=9.6km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.32**	**159**	*e*P*	Pn	15 49 36.7	-8.0
MXZ				S*	Sg	15 49 54.8	-7.2
MXZ				AML	AML	15 50 03.5	
KUZ	**Kuaotunu**	**1.65**	**255**	*e*PN	Pn	15 49 47.6	-1.6
KUZ				SN	Sn	15 50 09.5	-1.4
PUZ	**Puketiti**	**1.79**	**166**	PN	Pn	15 49 50.9	-0.3
PUZ				SN	Sn	15 50 14.1	-0.3
PUZ				AML	AML	15 50 22.7	
URZ	**Urewera**	**1.98**	**194**	P*	Pn	15 49 52.2	-1.6
URZ				S*	Sn	15 50 16.3	-2.7
URZ				AML	AML	15 50 31.5	
MWZ	**Matawai**	**2.00**	**184**	P*	Pn	15 49 52.6	-1.6
MWZ				AML	AML	15 50 18.5	
MWZ				AML	AML	15 50 32.0	
BKZ	**Black Stump Fm**	**2.99**	**198**	P*	Pn	15 50 08.7	+1.0
HIZ	**Hauiti**	**3.15**	**225**	PN	Pn	15 50 10.3	+0.5

WEL 03 15:51:58.8±1.7**, 36°.30S**×**177°.88E, h5km, ML3.5**/7**, Error ellipse: s-maj=13.9km s-min=11.3km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.31**	**165**	*e*P*	Pn	15 52 20.5	-3.2
MXZ				S*	Sg	15 52 35.9	-4.9
MXZ				AML	AML	15 53 12.9	
KUZ	**Kuaotunu**	**1.79**	**255**	PN	Pn	15 52 29.3	-1.1
PUZ	**Puketiti**	**1.79**	**170**	PN	Pn	15 52 31.2	+0.7
PUZ				SN	Sb	15 52 55.3	+0.2
PUZ				AML	AML	15 52 57.1	
MWZ	**Matawai**	**2.05**	**188**	*e*P*	Pn	15 52 32.0	-2.0
MWZ				AML	AML	15 53 08.7	
MWZ				AML	AML	15 53 10.1	
URZ	**Urewera**	**2.05**	**197**	P*	Pn	15 52 32.6	-1.3
URZ				S*	Sn	15 52 56.1	-3.8
URZ				AML	AML	15 53 07.1	
MKAZ	**Moumakai**	**2.32**	**249**	PN	Pn	15 52 37.4	-0.3
BKZ	**Black Stump Fm**	**3.06**	**201**	*e*P*	Pn	15 52 48.1	+0.1

IDC 03 16:12:36.5±1.8**, 8°.90S**×**160°.48E, h67km**±12km**, mb3.7**/7**, mb1 3.9**/8**, mb1mx3.6**/20**, mbtmp3.7**/8**, MS3.4**/6**, Ms1 3.4**/6**, ms1mx3.0**/25**, Error ellipse: s-maj=29.9km s-min=23.2km az=91.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.74**	**225**	P	Pn	16 12 51.2	-0.5
	3.2nm,0.3s,baz=61,slow=3.3,SNR=6.4						
HNR				S	Sn	16 13 04.4	+1.5
	1μm,0.3s,baz=133,slow=19,SNR=29						
DZM	**Mont Dzumac**	**14.29**	**157**	P	Pn	16 15 57.3	+1.6
	0.3nm,0.3s,baz=347,slow=14,SNR=8.2						
DZM				LR	LR	16 20 33.5	
	comp=Z,113nm,20.9s,baz=27,slow=33						
WRA	**Warramunga Arr**	**27.54**	**244**	P	P	16 18 17.2	-0.1
	1.4nm,0.4s,baz=70,slow=9.1,SNR=49						
STKA	**Stephens Creek**	**28.81**	**215**	LR	LR	16 28 26.0	
	comp=Z,74nm,18.1s,baz=24,slow=33						
ASAR	**Alice Springs**	**29.35**	**237**	P	P	16 18 32.6	-0.8
	0.8nm,0.4s,baz=62,slow=10.0,SNR=56						
ASAR				PcP	PcP	16 21 37.8	-0.6
	0.3nm,0.4s,baz=83,slow=2.7,SNR=4.8						
ASAJ	**Asahikawa**	**55.20**	**344**	LR	LR	16 43 55.3	
	comp=Z,40nm,19.9s,baz=238,slow=34						
KSRS	**Korea Array**	**55.27**	**329**	LR	LR	16 42 35.2	
	comp=Z,19nm,21.5s,baz=101,slow=32						
PETK	**Petropavlovsk-**	**61.81**	**358**	LR	LR	16 45 18.9	
	comp=Z,20nm,19.3s,baz=125,slow=32						
CMAR	**Chiang Mai Arr**	**66.50**	**295**	P	P	16 23 20.0	+0.2
	1.2nm,0.9s,baz=133,slow=5.0,SNR=6.3						
VNDA	**Vanda**	**68.59**	**180**	P	P	16 23 32.2	+0.3
	0.7nm,0.6s,baz=357,slow=5.6,SNR=9.3						
VNDA				LR	LR	16 49 25.6	
	comp=Z,53nm,18.4s,baz=298,slow=32						
SONM	**Songino Array**	**73.92**	**325**	P	P	16 24 05.5	+0.8
	1.9nm,0.7s,baz=141,slow=5.2,SNR=17						
ILAR	**Eielson Array**	**83.22**	**20**	P	P	16 24 54.5	-0.8
	0.5nm,0.6s,baz=251,slow=5.3,SNR=4.7						
MKAR	**Makanchi Array**	**88.44**	**318**	P	P	16 25 21.4	-0.1
	0.6nm,0.5s,baz=97,slow=5.4,SNR=7.4						

WEL 03 16:12:46.9±1.4**, 36°.41S**×**177°.70E, h5km, ML3.5**/7**, 1D, Error ellipse: s-maj=10.4km s-min=8.7km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.25**	**157**	S*	Sg	16 13 21.8	-5.3
MXZ				S*	Sb	16 13 22.3	-5.1
MXZ				AML	AML	16 13 37.2	
KUZ	**Kuaotunu**	**1.63**	**258**	*e*PN	Pn	16 13 15.4	-0.8
KUZ				SN	Sn	16 13 35.0	-2.6
PUZ	**Puketiti**	**1.72**	**165**	PN	Pn	16 13 17.2	-0.4
PUZ				AML	AML	16 13 42.9	
PUZ				AML	AML	16 13 43.5	
URZ	**Urewera**	**1.91**	**194**	P*	Pn	16 13 18.7	-1.4
URZ				S*	Sn	16 13 43.4	-1.0
MWZ	**Matawai**	**1.93**	**184**	P*	Pn	16 13 18.7	-1.8
TOZ	**Tahuroa Road**	**2.20**	**232**	*e*P*	Pn	16 13 21.9	-2.2
BKZ	**Black Stump Fm**	**2.91**	**199**	P*	Pn	16 13 33.9	-0.2
HIZ	**Hauiti**	**3.09**	**226**	⇓PN	Pn	16 13 37.1	+0.8

IGQ 03 16:14:05.4, 2°.24S×**79°.71W, h23km**±51km**, Mb4.0, Ms3.8, 7C-15D, Error ellipse: s-maj=1.4km s-min=1.1km az=2.0, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RIOE	**Riobamba**	**1.18**	**66**	⇑S	Sb	16 14 43.2	+0.4
RIOE	**Riobamba**	**1.18**	**66**	⇑P	Pb	16 14 28.4	+0.7
IGUA	**Igualata**	**1.30**	**55**	⇑P	Pb	16 14 30.4	+0.4
IGUA	**Igualata**	**1.30**	**55**	⇑S	Sb	16 14 47.7	+0.9
BMAS	**Trigal station**	**1.43**	**59**	⇑P	Pb	16 14 31.9	0.0
BIL2	**Estacion Bilba**	**1.44**	**57**	P	Pb	16 14 32.5	+0.5
BIL2	**Estacion Bilba**	**1.44**	**57**	S	Sb	16 14 50.2	+0.2
ARRY	**Arrayan**	**1.45**	**60**	⇓P	Pb	16 14 32.2	0.0
BBIL	**Ulba Tungurahu**	**1.45**	**57**	⇓S	Sb	16 14 51.0	+0.4
BBIL	**Ulba Tungurahu**	**1.45**	**57**	⇓P	Pb	16 14 32.6	+0.3
PAT1	**Patacocha**	**1.47**	**60**	P	Pb	16 14 33.0	+0.4
JUI6	**Juive**	**1.48**	**57**	⇓S	Sb	16 14 51.8	+0.4
JUI6	**Juive**	**1.48**	**57**	⇓P	Pb	16 14 33.0	+0.3
RETU	**Refugio**	**1.49**	**58**	S	Sb	16 14 53.0	+1.0
RETU	**Refugio**	**1.49**	**58**	P	Pb	16 14 33.0	-0.1
MACE	**Macas**	**1.51**	**91**	S	Sb	16 14 52.9	+0.9
MACE	**Macas**	**1.51**	**91**	P	Pb	16 14 33.0	-0.1
ULBA	**Ulba**	**1.52**	**59**	⇑P	Pb	16 14 34.0	+0.6
BULB	**Ulba Tungurahu**	**1.52**	**59**	⇓P	Pb	16 14 33.8	+0.3
BULB	**Ulba Tungurahu**	**1.52**	**59**	⇓S	Sb	16 14 52.9	+0.1
RUN5	**Runtun**	**1.52**	**58**	S	Sb	16 14 52.9	+0.2
RUN5	**Runtun**	**1.52**	**58**	P	Pb	16 14 33.6	+0.2
BRUN	**Tungurahua Vol**	**1.53**	**58**	⇓S	Sb	16 14 52.6	-0.3
BRUN	**Tungurahua Vol**	**1.53**	**58**	⇓P	Pb	16 14 33.5	-0.1
CHIS	**Cerro-Chispas-**	**1.56**	**319**	P	Pb	16 14 33.9	+0.3
CATE	**Catamayo**	**1.75**	**169**	⇓P	Pb	16 14 36.5	-0.5
CATE	**Catamayo**	**1.75**	**169**	⇓S	Sb	16 14 58.6	-0.1
PISA	**Pisayambo**	**1.77**	**49**	S	Sb	16 15 00.7	+0.6
PISA	**Pisayambo**	**1.77**	**49**	P	Pb	16 14 37.9	0.0
CAMI	**Rancho Maria**	**1.96**	**38**	P	Pb	16 14 40.5	-0.6
CAMI	**Rancho Maria**	**1.96**	**38**	S	Sb	16 15 05.8	+0.2
BNAS	**Cotopaxi Volca**	**1.98**	**38**	P	Pb	16 14 40.8	-0.8
BREF	**Cotopaxi Volca**	**2.01**	**39**	P	Pb	16 14 42.3	+0.2
NAS2	**Nasa**	**2.01**	**38**	P	Pb	16 14 42.0	0.0
JAMA	**Jama**	**2.02**	**346**	P	Pn	16 14 39.3	+1.1
BTAM	**Cotopaxi Volca**	**2.03**	**40**	⇓P	Pb	16 14 40.8	-1.6
BVC2	**Cotopaxi Volca**	**2.04**	**40**	⇓P	Pb	16 14 41.0	-1.5

BVC2	**Cotopaxi Volca**	**2.04**	**40**	⇓S	Sb	16 15 07.7	-0.3
TAMB	**Tambo**	**2.04**	**41**	P	Pb	16 14 40.8	-1.7
VC1	**Cotopaxi 1**	**2.05**	**40**	P	Pb	16 14 41.4	-1.4
COV1	**Cotopaxi Volc**	**2.08**	**41**	P	Pb	16 14 42.0	-1.3
PITA	**Cotopaxi Volc**	**2.10**	**37**	P	Pb	16 14 41.9	-1.5
JUA2	**San Juan 2**	**2.29**	**29**	S	Sb	16 15 13.8	-1.4
JUA2	**San Juan 2**	**2.29**	**29**	P	Pb	16 14 44.9	-1.9
TERV	**Terraza Guagua**	**2.33**	**28**	S	Sb	16 15 14.2	-2.1
TERV	**Terraza Guagua**	**2.33**	**28**	P	Pb	16 14 45.5	-1.9
GGP	**Refugio Guagua**	**2.33**	**29**	⇑P	Pb	16 14 45.4	-2.2
PINO	**Pino**	**2.34**	**28**	P	Pn	16 14 45.3	+2.0
GOLV	**Golondrinas**	**2.50**	**13**	S	Sn	16 15 13.2	-1.3
GOLV	**Golondrinas**	**2.50**	**13**	P	Pn	16 14 44.9	+0.2
OTAV	**Otavalo**	**2.76**	**27**	⇓P	Pn	16 14 50.3	+1.4

*NNC **03** 16:37:24.8±2.6, 43°.63N×78°.87E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=41.2km s-min=7.6km az=151.0*

ISC 03 16:37:20.2±2.3**, 43°.0N**±0°.2×**78°.6E**±0°.1**, h24km, n11, σ1s.89**/9**, 2C-5D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.91**	**249**	P	**Pn**	**16 37 49.5**	**-1.9**
	SNR=51						
TKM2	**Tokmak 2**	**2.24**	**270**	P	**Pn**	**16 37 54.1**	**-1.8**
	SNR=7.9						
KZA	**Kyzart**	**2.66**	**252**	P	**Pn**	**16 38 03.6**	**+1.7**
	SNR=9.0						
KBK	**Karagaybulak**	**2.73**	**265**	P	**Pn**	**16 38 02.7**	**0.0**
	SNR=11						
USP	**Ospenovka**	**3.05**	**277**	P	**Sn**	**16 38 45.4**	**+2.7**
	SNR=5.6						
AAK	**Ala-Archa**	**3.07**	**266**	P	**Pn**	**16 38 08.4**	**+1.1**
	SNR=5.5						
AML	**Almayashu**	**3.75**	**259**	P	Pb	16 38 22.0	-3.8
	SNR=6.0						
MK31	**Makanchi Array**	**4.64**	**33**	⇑Pn	**Pn**	**16 38 29.3**	**+0.6**
	0.4nm,0.3s,baz=214,slow=13,SNR=38						
MK31				⇓Sn	**Sn**	**16 39 21.2**	**-0.6**
	1.0nm,0.5s						
MK31				⇓Lg	Lg	16 39 32.0	
	3.4nm,0.8s,baz=213,slow=29,SNR=7.6						
KK31	**Karatay Array**	**5.96**	**274**	⇓Pn	Pb	16 39 00.3	-3.1
	0.3nm,0.3s						
KK31				⇑Sn	**Sb**	**16 40 12.7**	**-1.6**
	0.7nm,0.4s,baz=80,slow=29,SNR=5.0						
KUR16	**Kurchatov Arra**	**7.68**	**359**	⇓Lg	Lg	16 41 08.4	
	1.2nm,1.2s						
KURK	**Kurchatov**	**7.77**	**360**	⇓Lg	Lg	16 41 12.7	
	3.4nm,1.2s						

IDC 03 16:40:47.5±3.6**, 3°.78S**×**102°.99E, h0km, mb3.4**/5**, mb1 3.5**/5**, mb1mx3.3**/23**, mbtmp3.4**/5**, Error ellipse: s-maj=154.2km s-min=23.3km az=55.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.53**	**120**	P	P	16 47 37.7	-0.2
	0.5nm,1.1s,baz=297,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**35.80**	**126**	P	P	16 47 48.6	-0.3
	0.3nm,1.0s,baz=297,slow=7.8,SNR=4.8						
SONM	**Songino Array**	**51.48**	**3**	P	P	16 49 56.6	+1.7
	0.7nm,0.7s,baz=170,slow=8.8,SNR=5.2						
MKAR	**Makanchi Array**	**53.58**	**342**	P	P	16 50 09.3	-1.0
	0.3nm,0.4s,baz=153,slow=9.1,SNR=4.4						
ZALV	**Zalesovo Beam**	**59.49**	**348**	P	P	16 50 51.5	-0.8
	0.2nm,0.3s,baz=162,slow=6.4,SNR=4.0						

*ISCJB **03** 16:44:07.5±0.5, 2°.83S±0°.04×134°.42E±0°.05, h18km, mb4.2/9, MS3.3/2, Error ellipse: s-maj=7.8km s-min=6.1km az=8.9*

*IDC **03** 16:44:07.2±0.7, 2°.75S×134°.23E, h0km, mb4.3/11, mb1 4.4/12, mb1mx4.2/23, mbtmp4.4/12, ML3.9/1, MS3.3/4, Ms1 3.3/4, ms1mx2.8/30, Error ellipse: s-maj=31.1km s-min=14.4km az=66.0*

*DJA **03** 16:44:12.8±0.6, 3°S±10°×13°4E±°, h67km±27km, M4.4/5, MLv4.4/5*

ISC 03 16:44:09.6±0.6**, 2°.75S**±0°.07×**134°.43E**±0°.06**, h18km, n23, σ1s.32**/20**, mb4.2**/9**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.26**	**348**	P	Pn	16 44 30.9	-1.4
RKPI				S	**Sn**	**16 44 48.8**	**0.0**
SRPI	**Serui, Papua**	**2.01**	**64**	P	**Pn**	**16 44 41.6**	**-1.0**
SRPI				S	**Sn**	**16 45 07.5**	**+0.1**
FAKI	**Fak Fak**	**2.18**	**266**	P	**Pn**	**16 44 45.5**	**+0.5**
BAKI	**Biak**	**2.29**	**47**	P	**Pn**	**16 44 46.4**	**0.0**
SWI	**Sorong**	**3.68**	**301**	P	**Pn**	**16 45 05.2**	**-0.5**
LBMI	**Labuha**	**7.24**	**287**	P	Pn	16 45 59.3	+4.7
KAPI	**Kappang**	**14.81**	**261**	LR	LR	16 53 19.9	
	comp=Z,97nm,21.5s,baz=104,slow=38						
WRA	**Warramunga Arr**	**17.08**	**180**	Pn	**Pn**	**16 48 04.9**	**-2.8**
	0.2nm,0.3s,baz=4.5,slow=12,SNR=13						
WRA				Sn	Sn	16 51 02.6	-15
	0.1nm,0.3s,baz=2.2,slow=23,SNR=3.8						
FITZ	**Fitzroy Crossi**	**17.52**	**209**	Pn	**Pn**	**16 48 11.5**	**-1.6**
	0.3nm,0.3s,baz=38,slow=12,SNR=13						
FITZ				Sn	Sn	16 51 14.8	-13
	baz=18,slow=20						
FITZ				LR	LR	16 55 32.4	
	comp=Z,102nm,21.7s,baz=90,slow=39						
CTA	**Charters Tower**	**20.74**	**147**	P	Pn	16 48 51.6	-0.3
	26nm,0.9s,baz=302,slow=12,SNR=12						
ASAR	**Alice Springs**	**20.80**	**181**	P	**P**	**16 48 51.2**	**+1.1**
	51nm,0.9s,baz=5.4,slow=13,SNR=254						
ASAR				S	S	16 52 32.3	-9.3
	0.4nm,0.6s,baz=7.9,slow=24,SNR=2.8						
ASAR				LR	LR	16 57 38.1	
	comp=Z,74nm,19.5s,baz=90,slow=39						
HNR	**Honiara**	**26.21**	**106**	P	**P**	**16 49 47.3**	**+3.7**
	25nm,0.7s,baz=337,slow=4.9,SNR=4.4						
STKA	**Stephens Creek**	**29.75**	**168**	P	**P**	**16 50 14.5**	**-0.6**
	5.6nm,0.8s,baz=343,slow=8.6,SNR=16						
CMAR	**Chiang Mai Arr**	**40.80**	**303**	P	**P**	**16 51 50.4**	**+0.1**
	2.4nm,0.9s,baz=122,slow=7.6,SNR=10						
ASAJ	**Asahikawa**	**47.23**	**8**	P	**P**	**16 52 40.8**	**-0.7**
	2.1nm,0.4s,baz=190,slow=12,SNR=5.5						
SONM	**Songino Array**	**56.03**	**338**	P	**P**	**16 53 47.4**	**0.0**
	0.4nm,0.4s,baz=153,slow=8.2,SNR=3.6						
MKAR	**Makanchi Array**	**67.26**	**324**	P	**P**	**16 55 03.4**	**+0.3**
	1.8nm,0.4s,baz=115,slow=8.3,SNR=50						
ZALV	**Zalesovo Beam**	**69.87**	**331**	P	**P**	**16 55 18.6**	**-0.7**
	1.0nm,0.5s,baz=113,slow=7.3,SNR=5.6						
VNDA	**Vanda**	**76.15**	**174**	P	**P**	**16 55 55.9**	**-0.1**
	1.0nm,0.9s,baz=335,slow=6.7,SNR=4.4						
BVAR	**Borovoye Array**	**76.93**	**326**	P	**P**	**16 56 00.7**	**-0.2**
	1.6nm,0.7s,baz=120,slow=5.1,SNR=9.2						
KDAK	**Kodiak Island**	**83.32**	**31**	LR	LR	17 34 57.7	
	comp=Z,23nm,18.0s,baz=100,slow=37						
TORD	**Torodi Ar. Bea**	**132.15**	**285**	PKP	**PKPdf**	**17 03 24.4**	**+0.9**
	0.8nm,0.7s,baz=65,slow=1.9,SNR=4.4						
LPAZ	**La Paz**	**150.76**	**131**	PKPbc	**PKPbc**	**17 04 03.6**	**+0.9**
	4.1nm,0.9s,baz=255,slow=2.8,SNR=11						

WEL 03 17:10:00.8±1.2**, 36°.41S**×**177°.71E, h5km, ML4.0**/4**, Error ellipse: s-maj=9.0km s-min=7.7km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.25**	**158**	eP*	Pg	17 10 21.3	-3.5
MXZ				S*	Sg	17 10 35.5	-5.5
MXZ				AML	AML	17 11 35.2	
KUZ	**Kuaotunu**	**1.64**	**257**	PN	Pn	17 10 29.2	-1.0
KUZ				SN	Sn	17 10 50.7	-0.9
PUZ	**Puketiti**	**1.72**	**165**	PN	Pn	17 10 31.5	0.0
PUZ				SN	Sb	17 10 54.8	-0.1
PUZ				AML	AML	17 10 57.2	
URZ	**Urewera**	**1.91**	**194**	P*	Pn	17 10 32.8	-1.2
URZ				S*	Sn	17 10 56.8	-1.6
URZ				S*	Sb	17 10 57.0	-3.3
MWZ	**Matawai**	**1.93**	**184**	P*	Pn	17 10 32.7	-1.7
MWZ				S*	Sn	17 10 54.5	-4.6
MWZ				AML	AML	17 11 07.2	
MKAZ	**Moumakai**	**2.16**	**250**	PN	Pn	17 10 37.8	+0.4
MKAZ				SN	Sn	17 11 03.1	-1.5
TOZ	**Tahuroa Road**	**2.21**	**233**	P*	Pn	17 10 38.2	+0.2
BKZ	**Black Stump Fm**	**2.92**	**199**	P*	Pn	17 10 47.7	-0.3
HIZ	**Hauiti**	**3.10**	**226**	PN	Pn	17 10 51.1	+0.8

IDC 03 17:12:25.6±3.3**, 6°.22N**×**132°.51E, h0km, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/23**, mbtmp3.3**/3**, Error ellipse: s-maj=182.5km s-min=27.4km az=71.0, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.06**	**176**	P	P	17 17 59.8	-1.2
	0.7nm,0.5s,baz=358,slow=9.3,SNR=6.6						
ASAR	**Alice Springs**	**29.73**	**177**	P	P	17 18 34.9	+1.1
	0.1nm,0.6s,baz=354,slow=9.0,SNR=6.8						
MKAR	**Makanchi Array**	**58.98**	**322**	P	P	17 22 27.1	0.0
	0.2nm,0.3s,baz=115,slow=7.8,SNR=5.8						

GUC 03 17:26:19.3±0.8**, 31°.65S**×**68°.79W, h8km**±9km**, MD3.8, ML3.4, 5D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.95**	**284**	eP	Pn	17 26 53.3	+0.6
CMCH				iS	Sn	17 27 18.4	+0.9
CMCH				AML	AML	17 27 27.1	
	comp=N,911nm,0.6s						
PEL	**Peldehue**	**2.18**	**227**	⇓iP	Pn	17 26 56.6	+0.6
PEL				iS	Sb	17 27 25.1	-1.4
PEL				AML	AML	17 27 31.1	
	comp=E,449nm,0.4s						
TLL	**Tololo Astrono**	**2.28**	**310**	⇓iP	Pn	17 26 58.6	+1.0
TLL				AML	AML	17 27 38.0	
	comp=N,226nm,0.6s						
CLCH	**Cerro Calan**	**2.28**	**220**	⇓iP	Pn	17 26 58.7	+1.4
CLCH				iS	Sn	17 27 27.2	+1.6
CLCH				AML	AML	17 27 36.1	
	comp=E,327nm,0.6s						
CHNG	**Los Chungos**	**2.32**	**264**	⇓iP	Pn	17 26 58.6	+0.9
CHNG				iS	Sb	17 27 28.7	-1.4
CHNG				AML	AML	17 27 32.0	
	comp=E,319nm,0.4s						
PCH	**Pirque**	**2.44**	**216**	eP	Pn	17 27 00.3	+0.7
PCH				eS	Sn	17 27 31.6	+1.9
LMEL	**Las Melosas**	**2.49**	**208**	⇓iP	Pn	17 27 01.5	+1.1
LMEL				eS	Sb	17 27 34.2	-1.2
LMEL				AML	AML	17 27 38.2	
	comp=N,108nm,0.3s						
LCO	**Las Campanas**	**3.11**	**327**	eP	Pn	17 27 10.1	+1.1
LCO				AML	AML	17 28 01.2	
	comp=E,91nm,0.3s						

WEL 03 17:44:23.8±1.7**, 36°.32S**×**177°.86E, h5km, ML3.7**/4**, Error ellipse: s-maj=11.5km s-min=8.8km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.29**	**164**	P*	Pn	17 44 45.2	-3.3
MXZ				S*	Sg	17 45 00.6	-4.7
MXZ				AML	AML	17 45 01.0	
KUZ	**Kuaotunu**	**1.77**	**256**	SN	Sn	17 45 14.8	-3.3
PUZ	**Puketiti**	**1.78**	**170**	PN	Pn	17 44 55.4	+0.1
PUZ				SN	Sb	17 45 20.3	+0.7
PUZ				AML	AML	17 45 21.5	
URZ	**Urewera**	**2.02**	**197**	P*	Pn	17 44 57.6	-1.0
URZ				S*	Sn	17 45 21.7	-2.6
URZ				AML	AML	17 45 22.4	
MWZ	**Matawai**	**2.03**	**187**	P*	Pn	17 44 57.5	-1.2
MWZ				AML	AML	17 45 34.8	
MWZ				AML	AML	17 45 36.1	
BKZ	**Black Stump Fm**	**3.04**	**200**	P*	Pn	17 45 12.4	-0.3
HIZ	**Hauiti**	**3.24**	**227**	PN	Pn	17 45 15.7	+0.4
MCHZ	**McNeill Hill**	**3.25**	**196**	PN	Pn	17 45 16.7	+1.3
FWVZ	**Far West T-bar**	**3.45**	**211**	eP*	Pn	17 45 20.6	+2.0
TRVZ	**Turoa**	**3.49**	**211**	P*	Pn	17 45 21.4	+2.3
TSZ	**Takapari Road**	**4.02**	**201**	ePN	Pn	17 45 25.1	-1.0
MRZ	**Mangatainoka R**	**4.69**	**202**	ePN	Pn	17 45 33.7	-1.6

*IDC **03** 17:45:56.8±3.3, 9°.43S×110°.04E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/22, mbtmp3.6/6, Error ellipse: s-maj=161.3km s-min=21.0km az=49.0*

*ISCJB **03** 17:46:01.5±0.9, 9°.46S±0°.07×110°.32E±0°.07, h33km, mb3.5/6, Error ellipse: s-maj=12.4km s-min=8.1km az=44.1*

*DJA **03** 17:46:05.1±1.2, 9°S±5°×11°0E±°, h22km±11km, M3.9/12, MLv3.9/12*

ISC 03 17:46:03.7±1.2**, 9°.27S**±0°.09×**110°.41E**±0°.07**, h35km, n18, σ1s.75**/20**, mb3.5**/6**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**1.31**	**35**	P	**Pn**	**17 46 25.3**	**-0.3**
UGM	**Wanagama**	**1.36**	**5**	P	**Pn**	**17 46 26.7**	**+0.5**
UGM				S	**Sn**	**17 46 40.7**	**-2.3**
YOGI	**Yogyakarta**	**1.45**	**355**	P	**Pn**	**17 46 29.5**	**+2.0**
YOGI				S	**Sn**	**17 46 48.1**	**+2.8**
PWJI	**Pagerwojo**	**1.85**	**48**	P	**Pn**	**17 46 33.8**	**+0.8**
SJI	**Sawahan**	**2.03**	**41**	P	**Pn**	**17 46 36.0**	**+0.4**
BJII	**Banjamegara**	**2.05**	**340**	P	**Pn**	**17 46 37.7**	**+1.9**
SMRI	**Semarang**	**2.21**	**1**	P	**Pn**	**17 46 41.1**	**+3.2**
KRKI	**Karangkates**	**2.30**	**61**	P	**Pn**	**17 46 40.6**	**+1.4**
TGJI	**Tegal**	**2.71**	**332**	P	**Pn**	**17 46 45.5**	**+0.7**
CISI	**Cisompet, Garu**	**3.08**	**303**	P	**Pn**	**17 46 51.3**	**+1.3**
GMJI	**Gumukmas**	**3.16**	**72**	P	**Pn**	**17 46 53.1**	**+2.1**
JAGI	**Jajag, Banyuwa**	**3.78**	**78**	P	**Pn**	**17 47 01.7**	**+2.1**
WRA	**Warramunga Arr**	**25.43**	**117**	P	**P**	**17 51 28.7**	**+0.3**
	1.2nm,0.7s,baz=291,slow=9.3,SNR=7.2						
ASAR	**Alice Springs**	**26.63**	**125**	P	**P**	**17 51 39.2**	**0.0**
	0.4nm,0.7s,baz=299,slow=8.8,SNR=9.1						
SONM	**Songino Array**	**56.97**	**357**	P	**P**	**17 55 45.2**	**-0.6**
	0.3nm,0.6s,baz=185,slow=8.0,SNR=4.1						
MKAR	**Makanchi Array**	**61.20**	**338**	P	**P**	**17 56 13.6**	**-1.3**
	0.3nm,0.3s,baz=162,slow=7.5,SNR=4.2						
KURBB	**Kurchatov Arra**	**65.76**	**338**	P	**P**	**17 56 43.7**	**-1.3**
	0.1nm,0.5s,baz=156,slow=5.6,SNR=4.5						
ZALV	**Zalesovo Beam**	**66.60**	**344**	P	**P**	**17 56 48.5**	**-1.8**
	0.4nm,0.5s,baz=167,slow=7.3,SNR=4.2						

*MOS **03** 17:50:51.9±1.3, 42°.77N×141°.83E, h146km, mb4.0/4, Error ellipse: s-maj=21.2km s-min=15.0km az=72.9*

*ISCJB **03** 17:50:52.3±0.4, 42°.76N±0°.04×141°.89E±0°.04, h147km±3km, mb3.6/9, Error ellipse: s-maj=7.0km s-min=4.4km az=149.2*

*IDC **03** 17:50:52.8±0.9, 42°.83N×142°.18E, h151km±10km, mb3.3/8, mb1 3.3/10, mb1mx3.2/27, mbtmp3.2/10, Error ellipse: s-maj=26.1km s-min=14.7km az=79.0*

*JMA **03** 17:50:53.3±0.1, 42°.80N×141°.87E, h145km±1km, M3.3*

ISC 03 17:50:53.1±0.8**, 42°.77N**±0°.05×**141°.89E**±0°.04**, h145km**±5km**, n36, σ0s.98**/54**, mb3.7**/9**, 1C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEW	**Eniwo**	**0.33**	**283**	P	**Pn**	**17 51 13.3**	**+0.2**
JEW				eS	**Sn**	**17 51 28.3**	**0.0**
JBT2	**Biratori 2**	**0.35**	**88**	P	**Pn**	**17 51 13.6**	**+0.4**
JBT2				eS	**Sn**	**17 51 29.0**	**+0.6**
JFR	**Furan**	**0.65**	**52**	P	**Pn**	**17 51 14.6**	**-0.1**
JFR				eS	**Sn**	**17 51 30.7**	**-0.5**
JNB	**Noboribetsu**	**0.70**	**245**	P	**Pn**	**17 51 15.1**	**+0.1**
JNB				eS	**Sn**	**17 51 31.8**	**+0.2**
JAB	**Ashibetsu**	**0.78**	**18**	P	**Pn**	**17 51 15.9**	**+0.3**
JAB				eS	**Sn**	**17 51 32.8**	**+0.1**
JNBK	**Urakawa-nobuka**	**0.80**	**127**	P	**Pn**	**17 51 16.8**	**+1.1**
JNBK				eS	**Sn**	**17 51 34.6**	**+1.7**
JHR	**Hokuryu**	**0.98**	**353**	P	**Pn**	**17 51 18.0**	**+0.8**
JHR				eS	**Sn**	**17 51 36.3**	**+0.6**
JKB	**Kayabe**	**1.08**	**216**	P	**Pn**	**17 51 18.3**	**+0.2**
JKB				eS	**Sn**	**17 51 36.8**	**-0.3**
JCH	**Churui**	**1.09**	**97**	P	**Pn**	**17 51 17.8**	**-0.4**
JCH				eS	**Sn**	**17 51 35.8**	**-1.5**
JSK	**Shakotan**	**1.19**	**300**	P	**Pn**	**17 51 19.4**	**+0.3**
JSK				eS	**Sn**	**17 51 38.8**	**-0.1**
JKK2	**Kamakawa 2**	**1.27**	**29**	P	**Pn**	**17 51 20.0**	**+0.1**
JKK2				eS	**Sn**	**17 51 39.8**	**-0.6**
ASAJ	**Asahikawa**	**1.45**	**21**	P	**Pn**	**17 51 21.2**	**-0.4**
	2.7nm,0.3s,baz=221,slow=13,SNR=29						
ASAJ				S	**Sn**	**17 51 41.9**	**-1.7**
	8.4nm,0.3s,baz=313,slow=18,SNR=12						
JAR	**Ashorobuto**	**1.48**	**68**	P	**Pn**	**17 51 22.1**	**+0.1**
JAR				eS	**Sn**	**17 51 43.4**	**-0.7**
JOT	**Ohata**	**1.52**	**205**	P	**Pn**	**17 51 22.7**	**+0.2**
JOT				eS	**Sn**	**17 51 45.0**	**+0.2**
JYG	**Yagishiri**	**1.69**	**349**	P	**Pn**	**17 51 24.5**	**+0.2**
JTKR	**Abashiri--Toko**	**1.90**	**50**	P	**Pn**	**17 51 27.4**	**+0.7**
JTKR				eS	**Sn**	**17 51 53.1**	**+0.6**
JOSM	**Okushiri--Mats**	**1.91**	**250**	P	**Pn**	**17 51 27.4**	**+0.5**
JOSM				eS	**Sn**	**17 51 52.6**	**-0.1**
JAK	**Akkeshi**	**2.08**	**83**	P	**Pn**	**17 51 28.0**	**-0.7**
JAK				eS	**Sn**	**17 51 54.0**	**-2.1**
JSE	**Soyaes**	**2.25**	**13**	P	**Pn**	**17 51 31.4**	**+0.6**
YUK	**Yuzh-Kuril'sk**	**3.16**	**65**	i PN	**Pn**	**17 51 43.1**	**+0.9**
YUK				i S	**Sn**	**17 52 22.3**	**+2.1**
YUK				pmax	pmax		
	comp=N,8.0nm,0.4s						
YUK				pmax	pmax		
	comp=Z,59nm,0.4s						
YUK				pmax	pmax		
	comp=E,15nm,0.4s						
YUK				smax	smax		
	comp=E,74nm,0.6s						
YUK				smax	smax		
	comp=N,40nm,0.6s						
YSS	**Yuzh-Sakhalins**	**4.23**	**8**	ePN	Pn	17 52 01.2	+5.0
KUR	**Kuril'sk**	**4.97**	**58c**	iPN	**Pn**	**17 52 07.0**	**+1.1**
KUR				i S	**Sn**	**17 53 05.7**	**+3.1**
KUR				pmax	pmax		
	comp=Z,15nm,1.0s						
KUR				pmax	pmax		
	comp=N,5.0nm,0.5s						
KUR				pmax	pmax		
	comp=E,4.0nm,1.0s						
KUR				smax	smax		
	comp=E,11nm,0.4s						
KUR				smax	smax		
	comp=N,3.0nm,0.2s						
MJAR	**Matsushiro Arr**	**6.83**	**206**	P	**Pn**	**17 52 32.2**	**+1.2**
	comp=N,0.2nm,0.3s,baz=26,slow=14,SNR=3.7						
USRK	**Ussuriysk Arra**	**7.34**	**285**	P	**Pn**	**17 52 38.8**	**+1.3**
	comp=N,0.3nm,0.3s,baz=95,slow=13,SNR=4.2						
SONM	**Songino Array**	**25.33**	**294**	P	**P**	**17 56 08.0**	**+1.6**
	comp=N,0.6nm,0.4s,baz=80,slow=9.1,SNR=7.4						
ZALV	**Zalesovo Beam**	**38.53**	**307**	P	**P**	**17 58 01.4**	**+0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**38.53**	**307**	P	**P**	**17 58 01.4**	**+0.3**
	comp=Z,0.7nm,0.4s,baz=89,slow=9.2,SNR=4.0						
MKAR	**Makanchi Array**	**41.62**	**297**	P	**P**	**17 58 27.2**	**+0.4**
MKAR	**Makanchi Array**	**41.62**	**297**	P	**P**	**17 58 27.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=51,slow=7.6,SNR=5.8						
KURK	**Kurchatov**	**42.88**	**303**	P	**P**	**17 58 37.6**	**+0.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KURBB	**Kurchatov Arra**	**42.96**	**303**	P	**P**	**17 58 37.6**	**+0.2**
	comp=Z,1.6nm,0.4s,baz=75,slow=8.9,SNR=17						
WRA	**Warramunga Arr**	**62.78**	**188**	P	**P**	**18 01 02.7**	**-0.3**
	comp=Z,0.3nm,0.8s,baz=7.5,slow=6.8,SNR=3.5						
FINES	**FINESS Array B**	**63.95**	**331**	P	**P**	**18 01 09.9**	**-0.3**
	comp=Z,2.2nm,0.6s,baz=38,slow=9.6,SNR=6.9						
ASAR	**Alice Springs**	**66.51**	**188**	P	**P**	**18 01 26.9**	**-0.3**
	comp=Z,0.4nm,0.9s,baz=359,slow=7.6,SNR=3.4						
AKASG	**Malin Array Be**	**70.02**	**321**	P	**P**	**18 01 47.0**	**-1.8**
AKASG	**Malin Array Be**	**70.02**	**321**	P	**P**	**18 01 47.0**	**-1.8**
	comp=Z,0.4nm,0.3s,baz=44,slow=7.0,SNR=3.6						

WEL 03 17:51:34.9±2.5**, 36°.46S**×**177°.67E, h5km, ML3.5**/3**, Error ellipse: s-maj=19.3km s-min=13.7km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.21**	**155**	eP*	Pg	17 51 54.8	-3.4
MXZ				S*	Sg	17 52 09.2	-4.7
MXZ				S*	Sb	17 52 09.8	-4.5
KUZ	**Kuaotunu**	**1.60**	**259**	SN	Sn	17 52 23.6	-1.2
PUZ	**Puketiti**	**1.68**	**164**	PN	Pn	17 52 04.9	0.0
PUZ				SN	Sb	17 52 28.0	+0.2
PUZ				AML	AML	17 52 35.2	
MWZ	**Matawai**	**1.88**	**183**	eP*	Pn	17 52 05.9	-1.8

IDC 03 17:59:43.6±9.5**, 7°.54S**×**130°.78E, h101km**±106km**, mb3.3**/2**, mb1 3.6**/5**, mb1mx3.2**/19**, mbtmp3.4**/5**, ML3.8**/3**, Error ellipse: s-maj=60.6km s-min=45.9km az=28.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.63**	**205**	P	Pn	18 02 26.2	-0.2
	0.7nm,0.3s,baz=35,slow=14,SNR=30						
FITZ				S	Sn	18 04 33.4	-1.0
	0.6nm,0.3s,baz=147,slow=17,SNR=6.2						
WRA	**Warramunga Arr**	**12.80**	**165**	P	Pn	18 02 42.2	+0.2
	0.5nm,0.3s,baz=348,slow=13,SNR=28						
WRA				S	Sn	18 05 01.5	-1.3
	0.5nm,0.3s,baz=344,slow=21,SNR=8.1						
ASAR	**Alice Springs**	**16.31**	**170**	P	P	18 03 28.6	+0.7
	0.4nm,0.3s,baz=350,slow=11,SNR=36						
ASAR				S	Sn	18 06 28.7	+0.9
	0.2nm,0.3s,baz=354,slow=26,SNR=5.9						
SONM	**Songino Array**	**59.20**	**341**	P	P	18 09 34.2	-0.1
	0.2nm,0.4s,baz=142,slow=7.3,SNR=2.9						
MKAR	**Makanchi Array**	**69.10**	**327**	P	P	18 10 38.9	0.0
	0.7nm,0.5s,baz=127,slow=7.4,SNR=9.1						

*ISCJB **03** 18:13:50.7±1.1, 17°.68S±0°.07×167°.7E±0°.2, h19km, mb3.9/5, MS3.4/1, Error ellipse: s-maj=24.4km s-min=9.6km az=0.3*

*IDC **03** 18:13:50.0±1.2, 17°.59S×167°.80E, h0km, mb3.8/6, mb1 4.1/8, mb1mx4.0/22, mbtmp4.0/8, ML3.9/2, MS3.2/3, Ms1 3.2/3, ms1mx2.9/33, Error ellipse: s-maj=32.4km s-min=22.9km az=102.0*

ISC 03 18:13:53.0±1.1**, 17°.69S**±0°.09×**167°.7E**±0°.2**, h19km, n13, σ1s.00**/12**, mb4.0**/5**, 3C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.53**	**195**	Pn	**Pn**	**18 15 00.3**	**-0.4**
	1.3nm,0.3s,baz=70,slow=19,SNR=24						
DZM				Sn	**Sn**	**18 15 51.5**	**-1.4**
	7.5nm,0.3s,baz=167,slow=23,SNR=7.6						
DZM				LR	LR	18 16 18.7	
	comp=Z,91nm,18.9s,baz=32,slow=32						
HNR	**Honiara**	**11.16**	**316**	Pn	**Pn**	**18 16 31.2**	**-0.5**
	2.8nm,0.3s,baz=94,slow=13,SNR=5.1						
HNR				LR	LR	18 20 16.9	
	comp=Z,142nm,20.5s,baz=167,slow=35						
AFI	**Afiamalu**	**20.06**	**82**	LR	LR	18 24 09.4	
	comp=Z,179nm,19.7s,baz=236,slow=31						
CTA	**Charters Tower**	**20.47**	**260**	P	**P**	**18 18 30.3**	**+0.6**
	3.2nm,0.7s,baz=86,slow=14,SNR=3.3						
STKA	**Stephens Creek**	**27.53**	**234**	P	**P**	**18 19 40.1**	**+1.5**
	2.1nm,0.7s,baz=62,slow=10,SNR=12						
ASAR	**Alice Springs**	**32.16**	**254**	P	**P**	**18 20 19.6**	**-0.2**
	1.1nm,0.5s,baz=79,slow=8.3,SNR=32						
VNDA	**Vanda**	**59.93**	**181**	P	**P**	**18 23 58.5**	**+1.0**
	0.4nm,0.8s,baz=354,slow=8.9,SNR=2.8						
MJAR	**Matsushiro Arr**	**60.72**	**333**	P	**P**	**18 24 03.0**	**-0.4**
	1.2nm,0.8s,baz=170,slow=6.4,SNR=4.5						
ILAR	**Eielson Array**	**89.19**	**18**	P	**P**	**18 26 45.8**	**-1.2**
	0.3nm,0.6s,baz=250,slow=4.9,SNR=4.9						
ARCES	**ARCESS Array B**	**123.21**	**345**	PKP	**PKPdf**	**18 32 48.5**	**+0.5**
	2.2nm,0.8s,baz=60,slow=3.6,SNR=3.8						
ABTA	**Abfaltersbach**	**144.53**	**330**	⇑iPKPdf	PKPbc	18 33 27.4	+0.4
	3.7nm,0.6s						
FETA	**Feichten**	**145.15**	**332**	⇑iPKPdf	**PKPdf**	**18 33 30.3**	**+0.7**
	6.6nm,0.8s						
DAVA	**Damuels**	**145.32**	**333**	⇑iPKPbc	**PKPdf**	**18 33 30.6**	**+0.8**
	6.5nm,0.7s						

*BJI **03** 18:16:07.2, 8°.50S×122°.10E, h5km, mB5.1/37, mb5.1/53, Ms4.6/36, Ms7 4.4/29*

*IDC **03** 18:16:08.7±0.4, 8°.33S×121°.90E, h0km, mb4.9/25, mb1 5.0/27, mb1mx4.9/30, mbtmp4.9/27, ML5.0/2, MS4.0/14, Ms1 4.0/14, ms1mx3.6/45, Error ellipse: s-maj=17.6km s-min=10.0km az=73.0*

*ISCJB **03** 18:16:09.5±0.2, 8°.42S±0°.03×122°.17E±0°.03, h18km, mb5.1/83, MS4.2/22, Error ellipse: s-maj=4.8km s-min=3.7km az=156.0*

*MOS **03** 18:16:11.9±1.1, 8°.29S×122°.05E, h33km, mb5.3/35, Error ellipse: s-maj=13.2km s-min=6.8km az=109.7*
*DJA **03** 18:16:13.4±0.4, 8°S±3°×12°2E±°, h10km, M5.0/24, mB5.4/16, mb5.3/24, MLv5.3/15, Mw(mB)4.8/16*
*NEIC **03** 18:16:14.0±1.1, 8°.41S×122°.03E, h39km±10km, mb5.1/36, Error ellipse: s-maj=10.9km s-min=5.8km az=64.0*
NEIC Felt [III] at Maumere.
*GCMT **03** 18:16:14.9±0.2, 8°.39S×122°.09E, h16km, MW5.0, Moment Tensor Solution. s43,c59; s63,c113; Moment tensor: Scale 10^{16}Nm; M_{rr}3.23±.16; $M_{\theta\theta}$-3.01±.10; $M_{\phi\phi}$-0.22±.12; $M_{r\theta}$-0.57±.27; $M_{\theta\phi}$-1.29±.07; $M_{\phi r}$-1.61±.36; Best double couple: $M_0$3.80000×10^{16} NP1:ϕ_s87.00000°,δ39.00000°, λ121.00000°. NP2:ϕ_s229.00000°,δ57.00000°,λ67.00000°. Principal axes: T 3.8700, Plg69.0000°, Azm91.0000°; N -0.1600, Plg19.0000°, Azm242.0000°; P -3.7100, Plg10.0000°, Azm335.0000°; Data Used: II IU IC G.*
ISC 03 18:16:11.6±0.3, **8°.45S**±0°.03×**122°.07E**±0°.04, **h18**km±1km, **n269**, σ1s**91**/312, **mb5.2**/83, **MS4.1**/23, **6C-5D, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.25**	**139**	P	**Pg**	**18 16 18.0**	**+0.7**
WSI	**Waingapu**	**2.13**	**235**	P	**Pb**	**18 16 48.1**	**-1.6**
BASI	**Baing, Sumba**	**2.30**	**220**	P	**Pn**	**18 16 50.2**	**+1.6**
BSSI	**Bau Bau, Buton**	**2.77**	**325**	P	**Pn**	**18 16 55.9**	**+0.8**
BBSI	**Bau Bau**	**2.98**	**10**	P	**Pn**	**18 16 59.6**	**+1.6**
BMNI	**Bima**	**3.34**	**268**	P	**Pb**	**18 17 08.6**	**-1.8**
BKSI	**Bulukumba**	**3.66**	**328**	P	**Pn**	**18 17 07.0**	**-0.3**
KAPI	**Kappang**	**4.12**	**326**	Pn	**Pn**	**18 17 13.7**	**+0.1**
KAPI				Sn	**Sn**	**18 18 01.1**	**-0.2**
KAPI	**Kappang**	**4.12**	**326**	Pn	**Pn**	**18 17 14.2**	**+0.7**
	2µm,0.6s,SNR=58						
KAPI	**Kappang**	**4.12**	**326**	P	**Pn**	**18 17 14.3**	**+0.7**
KAPI	**Kappang**	**4.12**	**326**	Pn	**Pn**	**18 17 13.7**	**+0.1**
	20nm,0.3s,baz=145,slow=8.5,SNR=88						
KAPI				Sn	**Sn**	**18 18 01.1**	**-0.2**
	22nm,0.3s,baz=233,slow=3.9,SNR=3.9						
KAPI				LR	LR	18 18 47.9	
	comp=Z,4µm,20.8s,baz=275,slow=41						
TTSI	**Tana Toraja**	**5.81**	**337**	P	Pn	18 17 42.0	+5.0
	242nm,0.9s,4µm1.1nm						
SKSI	**Soroako, Sulaw**	**5.92**	**353**	P	**Pn**	**18 17 41.1**	**+2.6**
	132nm,0.8s,2µm1.0nm						
KHKI	**Kahang-Kahang**	**6.39**	**270**	P	**Pn**	**18 17 47.5**	**+2.6**
	305nm,0.9s,3µm1.0nm						
DNP	**Denpasar**	**6.79**	**268**	P	Pn	18 17 56.0	+5.6
	703nm,0.9s,2.8nm						
IGBI	**Denpasar**	**6.86**	**266**	P	**Pn**	**18 17 54.2**	**+2.9**
	183nm,0.5s,0.9nm						
LUWI	**Luwuk**	**7.39**	**5**	P	**Pn**	**18 18 00.3**	**+1.7**
	484nm,0.9s,5µm1.7nm						
BYJI	**Banyuwangi**	**7.64**	**271**	P	Pn	18 18 10.3	+8.3
JAGI	**Jajag, Banyuwa**	**7.83**	**269**	P	**Pn**	**18 18 06.0**	**+1.3**
	210nm,0.8s,2µm0.8nm						
BLJI	**Banyuglugur**	**8.42**	**274**	P	**Pn**	**18 18 15.7**	**+2.9**
	113nm,0.6s,2µm0.4nm						
GMJI	**Gumukmas**	**8.54**	**271**	P	Pn	18 18 17.9	+3.5
	131nm,1.0s,0.4nm						
BBKI	**Banjar Baru**	**8.73**	**304**	P	Pn	18 18 27.0	+10
MRSI	**Marisa**	**8.87**	**359**	P	**Pn**	**18 18 20.6**	**+1.7**
	128nm,0.7s,945nm0.4nm						
SMKI	**Samarinda**	**9.31**	**328**	P	Pn	18 18 36.2	+11
LBMI	**Labuha**	**9.46**	**35**	P	Pn	18 18 32.9	+5.9
	232nm,1.1s,2µm						
KRKI	**Karangkates**	**9.52**	**271**	P	Pn	18 18 34.7	+6.8
PWJI	**Pagerwojo**	**10.17**	**272**	P	Pn	18 18 40.3	+3.5
	87nm,0.7s						
FITZ	**Fitzroy Crossi**	**10.21**	**160**	*e*Pn	**Pn**	**18 18 37.3**	**+0.1**
	33nm,0.6s						
FITZ				Sn	**Sn**	**18 20 26.8**	**-4.5**
FITZ				*e*Sn	Sn	18 20 27.6	-3.7
FITZ	**Fitzroy Crossi**	**10.21**	**160**	Pn	**Pn**	**18 18 37.9**	**+0.7**
	5.9nm,0.3s,baz=355,slow=9.0,SNR=171						
FITZ				Sn	**Sn**	**18 20 26.8**	**-4.5**
	10.0nm,0.3s,baz=91,slow=18,SNR=7.8						
FITZ				LR	LR	18 23 03.6	
	comp=Z,562nm,20.8s,baz=329,slow=40						
MNI	**Manado**	**10.21**	**16**	P	Pn	18 18 42.4	+5.1
	118nm,0.9s,1µm						
SJI	**Sawahan**	**10.23**	**273**	P	Pn	18 18 44.7	+7.1
SMRI	**Semarang**	**11.61**	**276**	P	Pn	18 19 03.0	+6.5
SWI	**Sorong**	**11.85**	**51**	P	**Pn**	**18 19 02.6**	**+2.8**
	95nm,1.1s,941nm						
MBWA	**Marble Bar**	**12.84**	**190**	*e*Pn	**Pn**	**18 19 13.0**	**-0.3**
	28nm,0.8s						
MBWA				*e*Sn	Sn	18 21 28.0	-7.8
TSM	**Tawau**	**13.33**	**342**	P	**Pn**	**18 19 20.2**	**+0.1**
STKI	**Sintang**	**13.53**	**308**	P	P	18 19 28.0	-3.8
	56nm,1.2s						
RKPI	**Ransiki, Papua**	**13.88**	**61**	P	Pn	18 19 31.2	+3.6
	88nm,1.1s,2µm						
MYLDM	**Lahad Datu**	**14.00**	**345**	P	**Pn**	**18 19 28.1**	**-1.1**
MYLDM	**Lahad Datu**	**14.00**	**345**	P	P	18 19 40.2	+3.2
CISI	**Cisompet, Garu**	**14.15**	**273**	P	**P**	**18 19 41.0**	**+2.3**
LEM	**Lembang**	**14.42**	**275**	P	**Pn**	**18 19 37.0**	**+1.9**
	97nm,0.8s						
SBUM	**Sibu**	**14.62**	**317**	P	**P**	**18 19 46.8**	**+3.0**
SBUM	**Sibu**	**14.62**	**317**	P	**P**	**18 19 46.9**	**+3.0**
BTM	**Bintulu**	**14.64**	**322**	P	P	18 19 48.4	+4.3
SDKM	**Sandakan**	**14.81**	**341**	P	**P**	**18 19 48.1**	**+1.9**
CBJI	**Citeko**	**15.23**	**277**	P	**Pn**	**18 19 44.7**	**-1.1**
	280nm,0.9s,3µm						
DBJI	**Dramaga**	**15.31**	**276**	P	**Pn**	**18 19 46.6**	**-0.3**
KSM	**Kuching**	**15.32**	**310**	*e*Pn	**P**	**18 19 52.5**	**+0.8**
	66nm,1.0s						
KSM	**Kuching**	**15.32**	**310**	P	**P**	**18 19 53.3**	**+1.6**
KSM	**Kuching**	**15.32**	**310**	P	**P**	**18 19 53.4**	**+1.6**
KSM	**Kuching**	**15.32**	**310**	P	**P**	**18 19 53.4**	**+1.7**
KKM	**Kota Kinabalu**	**15.54**	**338**	*e*Pn	**P**	**18 19 54.8**	**+0.6**
	84nm,1.4s						
KKM	**Kota Kinabalu**	**15.54**	**338**	P	**P**	**18 19 55.5**	**+1.3**
KKM	**Kota Kinabalu**	**15.54**	**338**	P	P	18 19 59.5	+5.3
CTBH	**Cotabato--PC H**	**15.71**	**8**	⇑*e*P	**P**	**18 19 55.4**	**-0.7**
BAKI	**Biak**	**15.73**	**63**	P	**P**	**18 19 59.7**	**+3.5**
DAV	**Davao City (W)**	**15.81**	**13**	LR	LR	18 26 00.7	
	comp=Z,269nm,18.1s,baz=171,slow=38						
WRA	**Warramunga Arr**	**16.48**	**135**	Pn	**Pn**	**18 19 59.2**	**-2.8**
WRA				Sn	Sn	18 22 54.4	-10
WRA	**Warramunga Arr**	**16.48**	**135**	Pn	**Pn**	**18 19 59.2**	**-2.8**
	2.5nm,0.3s,baz=313,slow=13,SNR=70						
WRA				Sn	Sn	18 22 54.4	-10
	4.3nm,0.3s,baz=305,slow=23,SNR=10						
WRA				LR	LR	18 27 42.2	
	comp=Z,1µm,18.4s,baz=315,slow=42						
WRAB	**Tennant Creek**	**16.48**	**135**	*e*P	**Pn**	**18 19 58.3**	**-3.7**
WRAB				pmax	pmax		
	comp=Z,125nm,0.8s						
WRAB	**Tennant Creek**	**16.48**	**135**	*e*Pn	**Pn**	**18 19 58.3**	**-3.7**
	comp=Z,125nm,0.8s						
WRAB				*e*Sn	Sn	18 22 54.2	-10
WRAB	**Tennant Creek**	**16.48**	**135**	Pn	**Pn**	**18 19 59.5**	**-2.5**
	comp=Z,988nm,0.6s,SNR=5.5						
PPBI	**Pangkal Pinang**	**17.04**	**291**	P	**P**	**18 20 14.2**	**+3.3**
	comp=Z,48nm,1.1s,comp=Z,684nm						
LWLI	**Liwa**	**18.21**	**280**	P	**P**	**18 20 27.5**	**+3.6**
	comp=Z,120nm,0.7s,comp=Z,1µm						
ASAR	**Alice Springs**	**18.91**	**145**	P	**Pn**	**18 20 32.8**	**+0.7**
ASAR				S	Sn	18 23 54.1	-9.4
ASAR	**Alice Springs**	**18.91**	**145**	P	**Pn**	**18 20 32.8**	**+0.7**
	comp=Z,7.1nm,0.3s,baz=326,slow=13,SNR=317						
ASAR				S	Sn	18 23 54.1	-9.4
	comp=Z,1.5nm,0.3s,baz=317,slow=22,SNR=8.9						
ASAR				LR	LR	18 28 01.3	
	comp=Z,576nm,19.6s,baz=312,slow=37						
KSI	**Kapahiang**	**19.94**	**283**	P	Pn	18 20 53.2	+8.6
MYKOM	**Kota Tinggi**	**20.82**	**298**	P	Pn	18 20 55.4	+0.6
KGM	**Kluang**	**21.39**	**298**	P	**P**	**18 21 01.2**	**+2.8**
COEN	**Coen**	**21.41**	**107**	*e*Pn	**P**	**18 20 58.7**	**0.0**
	comp=Z,1µm,1.2s						
FORT	**Forrest**	**22.91**	**167**	*e*P	**P**	**18 21 15.1**	**+0.5**
	comp=Z,121nm,0.8s						
KTGM	**Kuala Trenggan**	**23.32**	**305**	P	**P**	**18 21 20.9**	**+2.0**
FRIM	**Kepong**	**23.46**	**299**	P	**P**	**18 21 21.7**	**+1.4**
IPM	**Ipoh**	**24.61**	**301**	*e*P	**P**	**18 21 30.9**	**-0.2**
	comp=Z,74nm,0.7s						
IPM	**Ipoh**	**24.61**	**301**	P	**P**	**18 21 31.7**	**+0.7**
NWAO	**Narrogin (SRO)**	**24.77**	**190**	*e*P	**P**	**18 21 32.6**	**+0.3**
	comp=Z,61nm,1.0s						
NWAO	**Narrogin (SRO)**	**24.77**	**190**	P	**P**	**18 21 32.8**	**+0.5**
	comp=Z,37nm,0.6s,baz=14,slow=9.8,SNR=28						
NWAO				LR	LR	18 30 53.1	
	comp=Z,499nm,19.9s,baz=8.2,slow=36						
PMG	**Port Moresby**	**24.80**	**94**	P	**P**	**18 21 31.7**	**-1.1**
	comp=Z,37nm,0.9s						
PMG	**Port Moresby**	**24.80**	**94**	P	**P**	**18 21 32.4**	**-0.4**
	comp=Z,9.8nm,0.8s,baz=291,slow=8.6,SNR=3.5						
KULM	**Kulim**	**25.35**	**302**	*e*P	**P**	**18 21 37.6**	**-0.1**
	comp=Z,112nm,1.4s						
KULM	**Kulim**	**25.35**	**302**	P	**P**	**18 21 38.7**	**+0.9**
CTA	**Charters Tower**	**26.09**	**119**	P	**P**	**18 21 45.6**	**+1.0**
CTA	**Charters Tower**	**26.09**	**119**	P	**P**	**18 21 45.6**	**+1.0**
	comp=Z,11nm,0.9s,baz=289,slow=12,SNR=9.2						
CTAO	**Charters Tower**	**26.09**	**119**	*e*P	**P**	**18 21 44.9**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,18nm,0.9s						
CTAO	**Charters Tower**	**26.09**	**119**	*e*P	**P**	**18 21 44.9**	**+0.4**
	comp=Z,18nm,0.9s						
BBOO	**Buckleboo**	**27.49**	**154**	*e*P	**P**	**18 21 57.2**	**+0.3**
	comp=Z,311nm,0.6s						
STKA	**Stephens Creek**	**29.55**	**145**	*e*P	**P**	**18 22 16.0**	**+0.8**
	comp=Z,3.0nm,0.7s						
STKA	**Stephens Creek**	**29.55**	**145**	P	**P**	**18 22 17.3**	**+2.0**
	comp=Z,14nm,0.7s,baz=315,slow=9.2,SNR=49						
STKA				LR	LR	18 34 49.7	
	comp=Z,470nm,20.1s,baz=319,slow=38						
QIZ	**Qiongzhong**	**29.85**	**336**	P	**P**	**18 22 19.8**	**+1.8**
QIZ				S	**S**	**18 27 19.2**	**+4.9**
QIZ				pmax	pmax		
	comp=Z,12nm,0.8s						
QIZ				pmax	pmax		
	comp=Z,140nm,3.7s						
YULB	**Yu-li**	**31.65**	**359**	*e*P	**P**	**18 22 36.9**	**+3.0**
	comp=Z,11nm,0.7s						
CM31	**Chiang Mai Arr**	**35.15**	**320**	*e*P	**P**	**18 23 05.8**	**+1.2**
	comp=Z,20nm,0.8s						
CMAR	**Chiang Mai Arr**	**35.15**	**320**	P	**P**	**18 23 06.0**	**+1.5**
CMAR				PcP	**PcP**	**18 25 35.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**35.15**	**320**	P	**P**	**18 23 06.0**	**+1.5**
	comp=Z,21nm,0.8s,baz=144,slow=6.9,SNR=108						
CMAR				PcP	**PcP**	**18 25 35.4**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=179,slow=2.3,SNR=4.4						
CMAR				LR	LR	18 39 24.2	
	comp=Z,323nm,18.3s,baz=334,slow=40						
ARMA	**Armidale**	**35.23**	**132**	*e*P	**P**	**18 23 07.9**	**+2.7**
	comp=Z,15nm,1.0s						
CHTO	**Chiang Mai**	**35.41**	**320**	*e*P	**P**	**18 23 07.8**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,46nm,1.2s						
CHTO	**Chiang Mai**	**35.41**	**320**	*e*P	**P**	**18 23 07.8**	**+1.1**
	comp=Z,46nm,1.2s						
GYA	**Guiyang**	**37.79**	**337**	P	**P**	**18 23 29.8**	**+2.8**
GYA				S	**S**	**18 29 20.5**	**+3.3**
GYA				ScP	**ScP**	**18 29 31.6**	**+1.0**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,820nm,17.6s						
GYA				LR	LR		
	comp=E,670nm,18.1s						
GYA				LR	LR		
	comp=Z,780nm,17.7s						
KMI	**Kunming**	**38.32**	**331**	P	**P**	**18 23 33.6**	**+1.9**
KMI				pP	**pP**	**18 23 40.4**	**+3.1**
KMI				sP	**sP**	**18 23 43.8**	**+4.2**
KMI				PP	**PnPn**	**18 25 07.3**	**+6.1**
KMI				S	**ScP**	**18 29 29.4**	**-3.3**
KMI				sS	**sS**	**18 29 37.3**	**+2.5**
KMI				pmax	pmax		
	comp=Z,35nm,1.3s						
KMI				pmax	pmax		
	comp=Z,180nm,3.1s						
KMI				LR	LR		
	comp=N,210nm,21.7s						
KMI				LR	LR		
	comp=E,230nm,25.6s						
SSE	**Sheshan**	**39.33**	**359**	P	**P**	**18 23 41.8**	**+2.1**
SSE				S	**S**	**18 29 41.9**	**+1.8**
SSE				pmax	pmax		
	comp=Z,19nm,0.9s						
SSE				pmax	pmax		
	comp=Z,88nm,4.2s						
WHN	**Wuhan**	**39.47**	**349**	⇓P	**P**	**18 23 42.6**	**+1.7**
WHN				S	**S**	**18 29 45.9**	**+3.7**
WHN				LR	LR		
	comp=Z,390nm,22.0s						
ENH	**Enshi**	**40.35**	**343**	*e*P	**P**	**18 23 48.2**	**-0.2**
	comp=Z,26nm,0.8s						
NJ2	**Nanjing**	**40.39**	**356**	*e*P	**P**	**18 23 50.6**	**+2.0**
NJ2				pP	**pP**	**18 23 55.0**	**+0.8**
NJ2				S	**S**	**18 29 56.0**	**0.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,190nm,6.8s						
NJ2				LR	LR		
	comp=N,120nm,12.3s						
NJ2				LR	LR		
	comp=E,110nm,14.9s						
JNU	**Nakatsue**	**42.18**	**11**	P	**P**	**18 24 01.2**	**-2.1**
JNU	**Nakatsue**	**42.18**	**11**	P	**P**	**18 24 01.2**	**-2.1**
	comp=E,11nm,1.0s,baz=42,slow=6.8,SNR=4.0						
CD2	**Chengdu**	**42.89**	**337**	*e*P	**P**	**18 24 09.7**	**+0.5**
CD2				pP	**pP**	**18 24 15.0**	**+0.1**
CD2				sP	**sP**	**18 24 17.8**	**+0.6**
CD2				PP	**PP**	**18 25 53.2**	**+4.2**
CD2				PcP	**PcP**	**18 26 00.2**	**+0.2**
CD2				S	**S**	**18 30 36.0**	**+2.7**
CD2				sS	**sS**	**18 30 43.5**	**+0.8**
CD2				SS	**SS**	**18 33 42.2**	**-3.0**
CD2				ScS	**ScS**	**18 34 08.2**	**-1.5**
CD2				pmax	pmax		
	comp=Z,80nm,1.2s						
CD2				pmax	pmax		
	comp=Z,210nm,6.4s						
CD2				LR	LR		
	comp=N,210nm,16.6s						
CD2				LR	LR		
	comp=Z,200nm,19.0s						
XAN	**Xi'an**	**44.06**	**344**	P	**P**	**18 24 17.9**	**-0.6**
XAN				pP	**pP**	**18 24 25.8**	**+1.5**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,33nm,12.6s						
KSAR	**Wonju Array Be**	**45.97**	**6**	P	**P**	**18 24 33.8**	**+0.2**
KSAR				PcP	**PcP**	**18 26 10.3**	**+0.1**
KSRS	**Korea Array**	**45.99**	**6**	P	**P**	**18 24 33.8**	**+0.1**
	comp=Z,4.2nm,1.0s,baz=182,slow=8.3,SNR=18						
KSRS				PcP	**PcP**	**18 26 10.3**	**0.0**
	comp=Z,2.1nm,0.6s,baz=180,slow=3.1,SNR=9.9						
KSRS				LR	LR	18 42 51.2	
	comp=Z,81nm,20.5s,baz=354,slow=35						
DL2	**Dalian**	**47.11**	**360**	P	**P**	**18 24 42.2**	**-0.3**
DL2				S	**S**	**18 31 34.4**	**+0.4**
DL2				pmax	pmax		
	comp=Z,330nm,1.1s						
MAJO	**Matsushiro**	**47.25**	**18**	*e*P	**P**	**18 24 42.5**	**-1.2**
MAJO				pmax	pmax		
	comp=Z,25nm,1.1s						
MAJO	**Matsushiro**	**47.25**	**18**	*e*P	**P**	**18 24 42.5**	**-1.2**
	comp=Z,25nm,1.1s						
MAT	**Matsushiro**	**47.25**	**18**	P	**P**	**18 24 42.4**	**-1.3**
MAT				S	**S**	**18 31 37.0**	**+0.9**
MJAR	**Matsushiro Arr**	**47.25**	**18**	P	**P**	**18 24 42.9**	**-0.8**
MJAR				PcP	**PcP**	**18 26 14.6**	**-0.3**
MJAR	**Matsushiro Arr**	**47.25**	**18**	P	**P**	**18 24 42.9**	**-0.8**
	comp=Z,18nm,0.9s,baz=195,slow=8.7,SNR=30						
MJAR				PcP	**PcP**	**18 26 14.6**	**-0.3**
	comp=Z,4.4nm,1.0s,baz=203,slow=4.6,SNR=5.7						
LZH	**Lanzhou**	**47.50**	**340**	⇑P	**P**	**18 24 45.8**	**-0.1**
LZH				pP	**pP**	**18 24 52.7**	**+1.0**
LZH				sP	**sP**	**18 24 55.5**	**+1.6**
LZH				PcP	**PcP**	**18 26 13.6**	**-2.4**
LZH				PP	**PP**	**18 26 35.1**	**-2.5**
LZH				*e*S	**S**	**18 31 41.3**	**+1.2**
LZH				sS	**sS**	**18 31 47.5**	**-2.1**
LZH				SS	SS	18 34 59.4	-8.9
LZH				pmax	pmax		
	comp=Z,34nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.6s						
LZH				LR	LR		
	comp=N,1µm,13.0s						
LZH				LR	LR		
	comp=E,1µm,14.7s						
LZH				LR	LR		
	comp=Z,1µm,16.0s						
LSA	**Lhasa**	**48.20**	**323**	P	**P**	**18 24 52.3**	**+0.5**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LSA	**Lhasa**	**48.20**	**323**	*e*P	**P**	**18 24 52.1**	**+0.3**
LSA				pmax	pmax		
	comp=Z,36nm,0.6s						
LSA	**Lhasa**	**48.20**	**323**	*e*P	**P**	**18 24 52.1**	**+0.3**
	comp=Z,36nm,0.6s						
BJT	**Baijiatuau**	**48.53**	**354**	*e*P	**P**	**18 24 53.9**	**+0.4**
	comp=Z,16nm,0.6s						
BJI	**Beijing**	**48.55**	**354**	P	**P**	**18 24 53.1**	**-0.6**
BJI				S	**S**	**18 32 00.1**	**+5.7**
BJI				pmax	pmax		
	comp=Z,45nm,1.2s						
BJI				pmax	pmax		
	comp=Z,130nm,3.5s						
BJI				LR	LR		
	comp=N,130nm,16.2s						
BJI				LR	LR		
	comp=E,110nm,12.4s						
ODAN	**Odare**	**48.61**	**317**	*e*P	**P**	**18 24 53.4**	**-1.3**
	comp=E,57nm,0.7s						
TAPN	**Taplejung**	**48.72**	**318**	*e*P	**P**	**18 24 55.1**	**-0.6**
	comp=E,76nm,0.6s						
RAMN	**Ramite**	**49.20**	**317**	*e*P	**P**	**18 24 58.6**	**-0.7**
	comp=E,116nm,0.7s						
HHC	**Hu-ho-hao-te**	**50.00**	**350**	*i* P	P	18 25 08.3	+3.4
HHC				pP	pP	18 25 12.8	+2.1
HHC				sP	sP	18 25 15.3	+2.3
HHC				PP	**PP**	**18 27 04.5**	**+4.4**
HHC				PcS	**PcS**	**18 30 23.3**	**+1.5**
HHC				S	**S**	**18 32 18.6**	**+3.6**
HHC				sS	sS	18 32 26.2	+1.7
HHC				ScS	**ScS**	**18 34 56.0**	**+0.3**
HHC				SS	**SS**	**18 35 48.8**	**+0.4**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,250nm,4.2s						
HHC				LR	LR		
	comp=N,260nm,16.2s						
HHC				LR	LR		
	comp=E,310nm,18.6s						
HHC				LR	LR		
	comp=Z,180nm,15.1s						
SNY	**Shenyang**	**50.05**	**1**	⇓P	**P**	**18 25 04.2**	**-0.9**
SNY				S	**S**	**18 32 12.5**	**-2.8**
SNY				SS	SS	18 35 40.7	-8.1
SNY				pmax	pmax		
	comp=Z,12nm,0.8s						
SNY				pmax	pmax		
	comp=Z,170nm,4.7s						
SNY				LR	LR		
	comp=E,140nm,15.6s						
GUN	**Gumba**	**50.31**	**317**	*e*P	**P**	**18 25 06.9**	**-0.9**
	comp=E,118nm,0.7s						
PKI	**Pulchoki**	**50.41**	**317**	*e*P	**P**	**18 25 07.1**	**-1.5**
	comp=E,53nm,0.8s						
PKIN	**Phulchoki**	**50.42**	**317**	*e*P	**P**	**18 25 07.9**	**-0.7**
	comp=E,21nm,0.8s						
KKN	**Kakani**	**50.64**	**317**	*e*P	**P**	**18 25 09.0**	**-1.2**
	comp=E,46nm,0.8s						
DMN	**Daman**	**50.64**	**316**	*e*P	**P**	**18 25 09.0**	**-1.2**
	comp=E,85nm,0.8s						
KOLN	**Koldanda**	**51.78**	**315**	*e*P	**P**	**18 25 17.3**	**-1.4**
	comp=E,33nm,0.7s						
GTA	**Gaotai**	**51.90**	**338**	⇑*i*P	**P**	**18 25 20.0**	**+0.7**
GTA				pP	**pP**	**18 25 24.4**	**-0.7**
GTA				sP	**sP**	**18 25 27.2**	**-0.2**
GTA				S	**S**	**18 32 42.9**	**+1.5**
GTA				sS	**sS**	**18 32 51.0**	**0.0**
GTA				SS	**SS**	**18 36 19.1**	**+0.4**
GTA				pmax	pmax		
	comp=Z,54nm,0.8s						
GTA				pmax	pmax		
	comp=Z,170nm,7.6s						
GTA				LR	LR		
	comp=N,110nm,17.6s						
GTA				LR	LR		
	comp=E,180nm,20.9s						
DANN	**Dangsing**	**52.03**	**316**	*e*P	**P**	**18 25 19.2**	**-1.5**
	comp=E,101nm,0.6s						
CN2	**Changchun**	**52.09**	**3**	*e*P	P	18 25 24.6	+4.1
CN2				*e*sP	sP	18 25 31.6	+3.1
CN2				*e*S	**S**	**18 32 48.5**	**+4.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,500nm,16.0s						
CN2				LR	LR		
	comp=E,700nm,16.0s						
CN2				LR	LR		
	comp=Z,800nm,18.0s						
PYUN	**Piuthan**	**52.41**	**315**	*e*P	**P**	**18 25 22.2**	**-1.2**
	comp=Z,110nm,1.0s						
USRK	**Ussuriysk Arra**	**53.16**	**9**	P	**P**	**18 25 28.4**	**+0.1**
	comp=Z,11nm,0.6s,baz=195,slow=6.6,SNR=33						
MDJ	**Mudanjiang**	**53.25**	**7**	P	**P**	**18 25 28.8**	**-0.2**
MDJ				pP	**pP**	**18 25 32.0**	**-2.9**
MDJ				ScP	**ScP**	**18 30 34.5**	**+0.8**
MDJ				PcS	**PcS**	**18 30 35.6**	**+0.2**
MDJ				S	**S**	**18 33 00.3**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,30nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,83nm,4.1s						
MDJ	**Mudanjiang**	**53.25**	**7**	*e*P	**P**	**18 25 28.9**	**-0.1**
	comp=Z,52nm,1.3s						
RPZ	**Rata Peaks**	**55.16**	**138**	P	**P**	**18 25 44.6**	**+1.5**
RPZ	**Rata Peaks**	**55.16**	**138**	P	**P**	**18 25 44.6**	**+1.5**
	comp=Z,22nm,0.8s,baz=207,slow=8.1,SNR=6.9						
ASAJ	**Asahikawa**	**55.52**	**18**	*e*P	**P**	**18 25 46.5**	**+0.9**
	comp=Z,15nm,0.8s						
ASAJ	**Asahikawa**	**55.52**	**18**	P	**P**	**18 25 46.2**	**+0.7**
	comp=Z,35nm,0.8s,baz=232,slow=13,SNR=21						
HIA	**Hailar**	**57.50**	**358**	*e*P	**P**	**18 25 58.6**	**-1.0**
	comp=Z,8.5nm,0.9s						
URZ	**Urewera**	**57.57**	**130**	*e*P	**P**	**18 26 01.0**	**+0.7**
URZ	**Urewera**	**57.57**	**130**	P	**P**	**18 26 01.5**	**+1.2**
	comp=Z,13nm,0.8s,baz=18,slow=4.6,SNR=5.8						
ULN	**Ulaanbaatar**	**57.62**	**348**	*e*P	**P**	**18 26 00.3**	**-0.4**
	comp=Z,39nm,0.9s						
SONM	**Songino Array**	**57.73**	**348**	P	**P**	**18 26 01.2**	**-0.2**
SONM				PP	**PP**	**18 28 10.7**	**+1.1**
SONM	**Songino Array**	**57.73**	**348**	P	**P**	**18 26 01.2**	**-0.2**
	comp=Z,27nm,0.7s,baz=165,slow=8.3,SNR=238						
SONM				PP	**PP**	**18 28 10.7**	**+1.1**
	comp=Z,0.5nm,0.2s,baz=139,slow=7.0,SNR=12						
SONM				LR	LR	18 51 16.7	
	comp=Z,92nm,21.4s,baz=170,slow=37						
KLR	**Kul'dur**	**58.06**	**7**	*e*P	P	18 25 59.0	-4.5
YSS	**Yuzh-Sakhalins**	**58.15**	**17**	*e*P	**P**	**18 26 04.0**	**-0.1**
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
KUR	**Kuril'sk**	**58.26**	**21**	*c i*P	P	18 25 59.4	-5.5
KUR				*i* S	**S**	**18 34 07.7**	**+1.6**
WMQ	**Urumqi**	**60.64**	**332**	P	**P**	**18 26 21.3**	**-0.3**
WMQ				pP	**pP**	**18 26 29.0**	**+1.5**
WMQ				PcP	**PcP**	**18 27 05.0**	**-0.7**
WMQ				S	**S**	**18 34 37.0**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,47nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.0s						
WMQ				LR	LR		
	comp=N,300nm,26.2s						
WMQ				LR	LR		
	comp=E,230nm,26.4s						
WMQ				LR	LR		
	comp=Z,290nm,24.7s						
ZAK	**Zakamensk**	**60.82**	**346**	⇓*i*P	**P**	**18 26 21.2**	**-1.5**
ZAK				pmax	pmax		
	comp=Z,17nm,1.0s						
TLY	**Talaya**	**61.95**	**347**	*e*P	**P**	**18 26 30.4**	**+0.2**
TLY				*e*		18 28 53.1	
TLY				pmax	pmax		
	comp=Z,33nm,1.1s						
TLY				MLR	MLR		
	comp=Z,47nm,17.0s						
TLY	**Talaya**	**61.95**	**347**	P	**P**	**18 26 30.7**	**+0.5**
	comp=Z,157nm,1.0s,SNR=5.6						
IRK	**Irkutsk**	**62.35**	**348**	*e*P	**P**	**18 26 31.7**	**-1.2**

IRK pmax pmax
comp=Z,37nm,1.4s
MOY Mondy 62.57 345 *e*P **P** **18 26 34.2 -0.3**
MOY pmax pmax
comp=Z,97nm,1.3s
KSH Kashi 64.01 322 P **P** **18 26 43.7 -0.6**
KSH *ep*P **pP** **18 26 48.1 -2.2**
KSH *es*P **sP** **18 26 50.9 -1.6**
KSH *e*PcP **PcP** **18 27 19.9 +0.3**
KSH *e*PP **PP** **18 29 04.8 -0.6**
KSH *e*S **S** **18 35 14.9 -5.1**
KSH *e*ScS **SKSac** **18 36 32.4 -5.2**
KSH pmax pmax
comp=Z,86nm,0.7s
KSH pmax pmax
comp=Z,370nm,7.5s
KSH LR LR
comp=N,250nm,5.6s
KSH LR LR
comp=E,230nm,5.8s
KSH LR LR
comp=Z,200nm,5.8s
AFI Afiamalu 64.96 101 P P 18 27 00.8 +10
comp=Z,17nm,0.2s,baz=261,slow=20,SNR=6.3
MK31 Makanchi Array 65.40 331 *i* P **P** **18 26 52.3 -0.8**
MK31 pmax pmax
comp=Z,35nm,0.7s
MK31 Makanchi Array 65.40 331 *e*P **P** **18 26 52.5 -0.6**
MKAR Makanchi Array 65.40 331 P **P** **18 26 52.6 -0.5**
MKAR pmax pmax
comp=Z,35nm,0.7s
MKAR MLR MLR
comp=Z,102nm,18.7s
MKAR Makanchi Array 65.40 331 P **P** **18 26 52.6 -0.5**
MKAR Makanchi Array 65.40 331 P **P** **18 26 52.6 -0.5**
comp=Z,35nm,0.7s,baz=139,slow=7.7,SNR=296
MKAR LR LR 19 00 24.0
comp=Z,102nm,18.7s,baz=146,slow=41
KBL Kabul 65.87 314 *e*P **P** **18 26 54.7 -2.0**
KBL pmax pmax
comp=Z,19nm,0.6s
KBL Kabul 65.87 314 *e*P **P** **18 26 54.7 -2.0**
comp=Z,19nm,0.6s
KZA Kyzart 66.01 324 P **P** **18 26 57.6 -0.1**
SNR=15
TKM2 Tokmak 2 66.33 324 *e*P **P** **18 26 58.1 -1.3**
TKM2 pmax pmax
comp=Z,15nm,0.7s
TKM2 Tokmak 2 66.33 324 *e*P **P** **18 26 58.1 -1.3**
comp=Z,15nm,0.7s
TKM2 Tokmak 2 66.33 324 P **P** **18 26 58.9 -0.5**
SNR=21
KBK Karagaybulak 66.54 324 P **P** **18 27 00.6 -0.2**
SNR=20
AAK Ala-Archa 66.80 324 P **P** **18 27 01.7 -0.7**
AAK pmax pmax
comp=Z,22nm,0.7s
AAK MLR MLR
comp=Z,91nm,21.6s
AAK Ala-Archa 66.80 324 P **P** **18 27 01.7 -0.7**
AAK Ala-Archa 66.80 324 P **P** **18 27 01.5 -0.8**
comp=Z,190nm,0.7s,SNR=13
AAK Ala-Archa 66.80 324 P **P** **18 27 01.7 -0.7**
comp=Z,22nm,0.7s,baz=136,slow=5.4,SNR=69
AAK LR LR 19 00 02.7
comp=Z,91nm,21.6s,baz=289,slow=40
CHMS Chumysh 66.87 324 P **P** **18 27 01.7 -0.9**
SNR=5.3
AML Almayashu 66.97 323 P **P** **18 27 03.4 -0.4**
SNR=27
USP Ospennovka 67.18 324 P **P** **18 27 03.4 -1.2**
SNR=27
EKS2 Erkin-Say 67.23 323 *e*P **P** **18 27 04.4 -0.7**
EKS2 pmax pmax
comp=Z,20nm,0.9s
EKS2 Erkin-Say 67.23 323 *e*P **P** **18 27 04.3 -0.7**
comp=Z,20nm,0.9s
EKS2 Erkin-Say 67.23 323 P **P** **18 27 04.9 -0.2**
SNR=11
PETK Petropavlovsk- 68.39 22 P **P** **18 27 12.9 +0.9**
PETK pmax pmax
comp=Z,10.0nm,0.6s
PETK Petropavlovsk- 68.39 22 P **P** **18 27 12.9 +0.9**
PETK Petropavlovsk- 68.39 22 P **P** **18 27 12.9 +0.9**
comp=Z,10nm,0.6s,baz=188,slow=6.8,SNR=15
KKAR Karatay Array 69.44 322 *e*P **P** **18 27 17.2 -1.6**
KKAR pmax pmax
comp=Z,6.0nm,0.7s
KKAR Karatay Array 69.44 322 *e*P **P** **18 27 17.2 -1.6**
comp=Z,5.8nm,0.7s
ZAA0 Zalesovo Array 69.65 338 *e*P **P** **18 27 17.9 -1.8**
ZALV Zalesovo Beam 69.65 338 P **P** **18 27 18.0 -1.8**
ZALV pmax pmax
comp=Z,19nm,0.6s
ZALV MLR MLR
comp=Z,67nm,21.0s
ZALV Zalesovo Beam 69.65 338 P **P** **18 27 18.0 -1.8**
ZALV ⇑*e* 18 55 27.4
ZALV Zalesovo Beam 69.65 338 P **P** **18 27 18.0 -1.8**
comp=Z,18nm,0.6s,baz=138,slow=5.1,SNR=111
ZALV PKP2bc 18 55 27.4
comp=Z,1.1nm,1.0s,baz=316,slow=4.0,SNR=4.3
ZALV LR LR 18 58 30.1
comp=Z,67nm,21.0s,baz=246,slow=37
KURBB Kurchatov Arra 69.86 332 P **P** **18 27 20.0 -1.2**
comp=Z,9.8nm,0.5s,baz=140,slow=6.0,SNR=162
KURBB PP **PP** **18 29 54.4 -1.5**
comp=Z,2.0nm,1.0s,baz=137,slow=7.1,SNR=4.1
KURK Kurchatov 69.88 332 *e*P **P** **18 27 20.1 -1.2**
KURK 18 29 54.4
KURK pmax pmax
comp=Z,60nm,1.3s
KURK Kurchatov 69.88 332 *e*P **P** **18 27 20.1 -1.2**
comp=Z,60nm,1.3s
KURK PP **PP** **18 29 54.4 -1.7**
KURK Kurchatov 69.88 332 P **P** **18 27 20.2 -1.1**
comp=Z,188nm,0.8s,SNR=20
YAK Yakutsk 70.51 4 *e*P **P** **18 27 23.8 -1.1**
YAK *e* 18 27 44.4
YAK *e* 18 29 56.6
YAK *e*S **S** **18 36 34.7 -2.3**
YAK *e**SS sS 18 36 54.8 +7.9
YAK *e* 18 37 28.3
YAK pmax pmax
comp=Z,15nm,0.8s
YAK pmax pmax
comp=N,7.0nm,1.2s
YAK pmax pmax
comp=E,3.0nm,1.0s
YAK pmax pmax
comp=N,12nm,1.9s
YAK pmax pmax
comp=E,27nm,2.4s
YAK pmax pmax
comp=Z,60nm,3.5s
YAK smax smax
comp=E,33nm,11.8s
MAW Mawson 70.80 200 P **P** **18 27 28.3 +1.7**
MAW Mawson 70.80 200 P **P** **18 27 28.3 +1.7**
comp=E,11nm,0.7s,baz=68,slow=6.7,SNR=30
NVS Novosibirsk 70.93 337 *i* P **P** **18 27 25.3 -2.3**
VNDA Vanda 72.07 172 *e*P **P** **18 27 34.9 +0.7**
comp=E,11nm,0.9s
VNDA Vanda 72.07 172 P **P** **18 27 35.5 +1.3**
comp=E,4.9nm,0.5s,baz=317,slow=6.3,SNR=41
SBA Scott Base 73.05 171 *e*P **P** **18 27 41.9 +1.9**
SBA pmax pmax
comp=Z,9.0nm,0.9s
SBA Scott Base 73.05 171 *e*P **P** **18 27 41.9 +1.9**
comp=Z,9.0nm,0.9s
FX1 Attu Island--F 74.90 29 *e*P **P** **18 27 52.0 +0.8**
BVA0 Borovoye Array 75.27 331 P **P** **18 27 50.3 -3.1**
BVA0 pmax pmax
comp=Z,10.0nm,1.0s
BVAR Borovoye Array 75.27 331 P **P** **18 27 51.8 -1.6**
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR Borovoye Array 75.27 331 P **P** **18 27 51.8 -1.6**
BVAR Borovoye Array 75.27 331 P **P** **18 27 51.8 -1.6**
comp=Z,3.7nm,0.7s,baz=125,slow=6.3,SNR=26
BRVK Borovoye 75.34 331 *e*P **P** **18 27 52.1 -1.7**
BRVK pmax pmax
comp=Z,13nm,1.1s
BRVK Borovoye 75.34 331 *e*P **P** **18 27 52.1 -1.7**
comp=Z,14nm,1.1s
AB31 Akbulak array 78.89 324 *i* P **P** **18 28 11.4 -2.3**
AB31 pmax pmax
comp=Z,3.0nm,0.6s
ABKAR Akbulak array 78.89 324 *e*P **P** **18 28 11.7 -2.0**
comp=Z,3.3nm,0.8s
SYO Syowa Base 79.47 201⇓*e*P **P** **18 28 16.4 -0.2**
SYO Syowa Base 79.47 201⇓*ep*P **P** **18 28 19.2 +2.6**
AKTO Aktyubinsk 80.53 324 P **P** **18 28 20.2 -2.5**
AKTO pmax pmax
comp=Z,3.0nm,0.6s
AKTO MLR MLR
comp=Z,76nm,20.3s
AKTO Aktyubinsk 80.53 324 P **P** **18 28 20.2 -2.5**
AKTO Aktyubinsk 80.53 324 P **P** **18 28 20.2 -2.5**
comp=Z,2.7nm,0.6s,baz=107,slow=7.0,SNR=15
AKTO LR LR 19 07 18.1
comp=Z,76nm,20.3s,baz=121,slow=38
RDF Al-Radifah 80.72 301 *e*P **P** **18 28 22.4 -1.8**
NAY Al-Naaiem 81.06 301 *e*P **P** **18 28 23.6 -2.4**
NAY AMb AMB 18 28 25.7
comp=Z,8.4nm,0.9s
MIB Mutribah 81.13 302 *e*P **P** **18 28 23.9 -2.4**
MIB AMb AMB 18 28 25.3
comp=Z,15nm,0.9s
RAYN Ar Rayn 81.20 295 P **P** **18 28 25.5 -1.4**
comp=Z,80nm,0.8s,SNR=9.7
QSPA South Pole Qui 81.54 180 *e*P **P** **18 28 28.9 +0.9**
comp=Z,20nm,1.0s
KMBO Kilima Mbogo 84.71 270 *e*P **P** **18 28 44.8 -0.8**
comp=Z,6.6nm,0.9s
KMBO Kilima Mbogo 84.71 270 P **P** **18 28 45.1 -0.4**
comp=Z,7.1nm,0.9s,baz=66,slow=5.9,SNR=21
KBZ Khabaz 88.04 315 P **P** **18 28 59.3 -1.6**
KBZ pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 88.04 315 P **P** **18 28 59.2 -1.6**
KBZ Khabaz 88.04 315 P **P** **18 28 59.2 -1.6**
comp=Z,2.8nm,0.8s,baz=152,slow=5.4,SNR=5.7
LSZ Lusaka 91.52 254 *e*P **P** **18 29 17.0 -1.0**
comp=Z,14nm,1.0s
BOSA Boshof 91.93 241 P **P** **18 29 19.9 +0.2**
BOSA Boshof 91.93 241 P **P** **18 29 19.9 +0.2**
comp=Z,8.5nm,0.7s,baz=108,slow=4.8,SNR=18
SNAA Sanae 92.33 195 *e*P **P** **18 29 21.8 +1.2**
SNAA Sanae 92.33 195 *e*P **P** **18 29 21.5 +0.9**
comp=Z,16nm,1.3s
BR131 Keskin Array S 94.13 309 *e*P P 18 29 25.9 -3.6
comp=Z,2.7nm,1.0s
BRTR Keskin Array B 94.13 309 P **P** **18 29 27.2 -2.4**
BRTR Keskin Array B 94.13 309 P **P** **18 29 27.2 -2.4**
comp=Z,2.4nm,1.0s,baz=108,slow=4.0,SNR=10
APA Apatity 97.23 337⇑*e*P **P** **18 29 40.4 -2.5**
APA MLR MLR
comp=Z,500nm,16.0s
ILAR Eielson Array 98.02 26 P **P** **18 29 43.5 -3.0**
ILAR PP **PP** **18 33 42.5 -3.0**
ILAR PKKPbc **PKKPbc** **18 46 20.4 -2.2**
ILAR Eielson Array 98.02 26 P **P** **18 29 43.5 -3.0**
comp=Z,1.2nm,0.8s,baz=258,slow=4.5,SNR=13
ILAR PP **PP** **18 33 42.5 -3.0**
comp=Z,0.7nm,1.1s,baz=252,slow=4.4,SNR=2.9
ILAR PKKPbc **PKKPbc** **18 46 20.4 -2.2**
comp=Z,0.2nm,0.5s,baz=36,slow=1.0,SNR=5.3
CRVS Cervenica-Dubn 103.29 318 *e*P **Pdif** **18 30 18.8 +8.4**
CRVS Cervenica-Dubn 103.29 318 PDIF **Pdif** **18 30 18.8 +8.4**
NVAR Mina Array Bea 118.32 51 PKP **PKPdf** **18 34 58.7 +0.1**
NVAR Mina Array Bea 118.32 51 PKP **PKPdf** **18 34 58.7 +0.1**
comp=Z,0.8nm,0.6s,baz=251,slow=2.8,SNR=4.1
HLID Hailey 119.82 44 *e*PKPdf **PKPdf** **18 35 01.3 0.0**
SFJD Kangerlussuaq 121.32 357 *i* P **PKPdf** **18 35 05.0 +1.8**
TORD Torodi Ar. Bea 121.35 280 PKP **PKPdf** **18 35 02.7 -2.0**
TORD Torodi Ar. Bea 121.35 280 PKP **PKPdf** **18 35 02.7 -2.0**
comp=Z,2.7nm,0.7s,baz=66,slow=1.4,SNR=16
PDAR Pinedale Array 123.43 44 PKP **PKPdf** **18 35 06.6 -1.7**
PDAR Pinedale Array 123.43 44 PKP **PKPdf** **18 35 06.6 -1.7**
comp=Z,0.7nm,0.9s,baz=222,slow=2.4,SNR=6.1
PV01 Paradox Valley 125.77 49 *e*PKPdf **PKPdf** **18 35 12.7 -0.2**
PLCA Paso Flores 129.70 168 PKPpre PKPpre 18 35 08.3
PLCA Paso Flores 129.70 168 PKhKP PKPpre 18 35 08.3
comp=Z,0.7nm,0.3s,baz=179,slow=7.6,SNR=5.8
MNTX Cornudas Mount 130.28 55 *e*PKPdf **PKPdf** **18 35 21.9 +0.5**
TXAR Lajitas Array 132.38 58 PKPpre PKPpre 18 35 13.3
TXAR PKP **PKPdf** **18 35 25.7 +0.1**
TXAR Lajitas Array 132.38 58 PKhKP PKPpre 18 35 13.3
comp=Z,0.1nm,0.3s,baz=257,slow=32,SNR=2.8
TXAR PKP **PKPdf** **18 35 25.7 +0.1**
comp=Z,0.6nm,0.7s,baz=284,slow=1.0,SNR=6.1
SCHQ Schefferville 133.20 7 PKPpre PKPpre 18 35 15.7
SCHQ PKP **PKPdf** **18 35 26.1 -0.2**
SCHQ Schefferville 133.20 7 PKhKP PKPpre 18 35 15.7
comp=Z,1.3nm,0.7s,baz=348,slow=2.1,SNR=1.9
SCHQ PKP **PKPdf** **18 35 26.1 -0.2**
comp=Z,2.3nm,0.6s,baz=5.2,slow=1.8,SNR=5.0
JCT Junction City 135.20 55 *e*PKIKP **PKPdf** **18 35 30.2 -0.6**
JCT Junction City 135.20 55 *e*PKPdf **PKPdf** **18 35 30.2 -0.6**
SSPA Standing Stone 143.35 26 *e*PKPpre PKPpre 18 35 41.1
LRAL Lakeview Retre 143.66 44 *e*PKPdf PKPbc 18 35 44.1 +0.7
SDMD Soldier's Deli 144.82 26 *e*PKPpre PKPpre 18 35 45.2
BLA Blacksburg 144.85 32 *e*PKIKP **PKPab** **18 35 45.4 -1.6**
BLA Blacksburg 144.85 32 *e*PKPpre PKPpre 18 35 45.4
CPUP Villa Florida 145.43 181 PKPbc **PKPab** **18 35 50.0 +0.7**
CPUP Villa Florida 145.43 181 PKPbc **PKPab** **18 35 50.0 +0.7**
comp=Z,8.6nm,0.7s,baz=186,slow=3.4,SNR=16
CBN Corbin 145.57 28 *e*PKPdf **PKPdf** **18 35 48.9 -0.2**
JSRW J. Sargeant Re 145.75 29 *e*PKPdf **PKPdf** **18 35 48.8 -0.7**
LVC Limon Verde 147.31 161 *e*PKPdf **PKPdf** **18 35 52.5 -0.5**
LPAZ La Paz 153.43 158 *e*PKPbc **PKPbc** **18 36 07.9 -2.7**
LPAZ La Paz 153.43 158 PKPbc **PKPbc** **18 36 12.2 +1.6**
comp=Z,2.8nm,0.8s,baz=202,slow=2.5,SNR=10.0

IDC 03 18:21:11.0±27.0, 4°.97S×100°.55W, h0km, mb3.6/3, mb1 4.0/3, mb1mx3.8/16, mbtmp3.6/3, MS3.9/3, Ms1 3.9/3, ms1mx3.4/21, Error ellipse: s-maj=1219.0km s-min=129.5km az=107.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TXAR	**Lajitas Array**	**34.24**	**355**	P	P	18 27 59.4	+0.5
	0.4nm,0.8s,baz=172,slow=14,SNR=4.6						
TXAR				LR	LR	18 40 02.0	
	comp=Z,91nm,18.2s,baz=0.0,slow=33						
PLCA	**Paso Flores**	**44.63**	**147**	LR	LR	18 44 31.2	
	comp=Z,179nm,20.0s,baz=2.6,slow=31						
PDAR	**Pinedale Array**	**48.22**	**351**	P	P	18 29 53.0	-0.8
	1.7nm,1.1s,baz=160,slow=8.2,SNR=8.2						
PPT	**Papeete**	**49.54**	**251**	LR	LR	18 43 44.1	
	comp=Z,202nm,21.5s,baz=25,slow=27						
ILAR	**Eielson Array**	**77.47**	**341**	P	P	18 33 08.2	+0.2
	1.0nm,1.0s,baz=155,slow=4.1,SNR=4.2						

*NDI **03** 18:26:29.4±2.6, 34°.66N×72°.97E, h10km, ML3.8*
*NNC **03** 18:26:33.9±11.0, 35°.16N×72°.60E, h0km, mb3.9, mpv3.6, Error ellipse: s-maj=101.8km s-min=83.6km az=143.0*
*IDC **03** 18:26:35.9±9.0, 34°.86N×73°.17E, h75km±84km, mb3.6/6, mb1 3.6/10, mb1mx3.3/31, mbtmp3.5/10, ML3.4/4, MS2.6/1, Ms1 2.6/1, ms1mx1.8/54, Error ellipse: s-maj=42.5km s-min=21.9km az=21.0*

ISC 03 18:26:27.7±0.6, 34°.67N±0°.04×73°.14E±0°.06, h10km, n42, σ1°89/46, mb4.1/6, 5C-6D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHCP	**Chirah Chowk**	**1.02**	**174**	P	**Pn**	**18 26 49.6**	**+1.5**
CEP	**Cherat**	**1.33**	**231**	⇑P	**Pg**	**18 26 54.9**	**+1.7**
CEP				S	Sg	18 27 16.0	+5.5
THW	**Thamme Wali**	**2.21**	**212**	P	**Pg**	**18 27 09.7**	**-0.3**
JMU	**Jammu**	**2.44**	**143**	*e*PKP	**Pn**	**18 27 09.0**	**+1.4**
JMU				*e*S	**Sb**	**18 27 40.5**	**-1.3**
SARP	**Sargodha**	**2.77**	**188**	P	**Pb**	**18 27 17.5**	**+0.1**
THN	**Thein Dam**	**3.10**	**135**	*e*PKP	**Pn**	**18 27 18.6**	**+1.9**
THN				*e*S	**Sn**	**18 27 56.0**	**+2.2**
DLH	**Dalhousie**	**3.17**	**131**	*ex*	x	18 27 40.0	
DLH				*ex*	**Sg**	**18 28 07.0**	**-2.7**
PONG	**Pong**	**3.59**	**138**	*e*PKP	**Pn**	**18 27 25.0**	**+1.6**
PONG				*e*4	Sg	18 28 30.0	+7.0
BHK	**Bhakra**	**4.26**	**139**	*e*PKP	Pb	18 27 38.0	-4.7
BHK				*e*4	**Sg**	**18 28 43.8**	**-0.6**
SDNR	**Sundarnagar**	**4.51**	**134**	*e*PKP	**Pn**	**18 27 39.0**	**+2.9**
SDNR				*e*4	**Sb**	**18 28 46.0**	**+4.6**
SMLA	**Simla**	**4.89**	**135**	*i* P	Pn	18 27 45.0	+3.7
SMLA				*e*S	**Sn**	**18 28 40.2**	**+2.2**
SMLA				⇓E		18 28 45.6	
	comp=E,2μm,0.2s						
SMLA				⇓E		18 28 46.1	
	comp=N,2μm,0.3s						
KHET	**Khetri**	**6.96**	**160**	*e*PKP	**Pn**	**18 28 11.3**	**+1.6**
KHET				*e*S	**Sn**	**18 29 26.4**	**-2.7**
KHET				AML	AML	18 30 18.2	
	comp=N,74nm,0.1s						
KHET				AML	AML	18 30 18.3	
	comp=E,95nm,0.1s						
AYAN	**Aya Nagar**	**7.05**	**150**	*e*S	**Sn**	**18 29 27.8**	**-3.2**
AAK	**Aia-Archa**	**8.02**	**7**	LR	LR	18 31 44.5	
	comp=E,42nm,19.5s,baz=67,slow=39						
TKM2	**Tokmak 2**	**8.45**	**12**	⇑P	**Pn**	**18 28 28.1**	**-2.3**
	comp=E,1.4nm,0.6s						
TKM2				⇑S	**Sn**	**18 30 05.7**	**-0.3**
	comp=E,4.3nm,0.7s						
AGRA	**Agra**	**8.49**	**150**	*e*PKP	**Pn**	**18 28 33.4**	**+2.7**
AGRA				*e*S	**Sn**	**18 30 02.1**	**-4.4**
AGRA				AML	AML	18 30 44.5	
	comp=E,49nm,0.3s						
AGRA				AML	AML	18 30 44.9	
	comp=N,60nm,0.4s						
KK31	**Karatay Array**	**8.66**	**347**	⇓P	Pn	18 28 36.7	+3.6
	comp=N,1.1nm,0.3s,baz=164,slow=12						
KK31				⇓S	**Sn**	**18 30 09.1**	**-1.7**
	comp=N,2.0nm,0.5s,baz=176,slow=21,SNR=4.6						
PYUN	**Piuthan**	**10.66**	**125**	*e*S	Sn	18 30 54.1	-6.2
DANN	**Dangsing**	**11.03**	**122**	*e*P	**Pn**	**18 29 06.3**	**+0.4**
	comp=N,15nm,0.2s						
DANN				*e*S	Sn	18 31 02.5	-7.0
KOLN	**Koldanda**	**11.29**	**125**	*e*P	**Pn**	**18 29 09.8**	**+0.5**
	comp=N,12nm,0.3s						
KOLN				*e*S	Sn	18 31 09.1	-6.5
DMN	**Daman**	**12.43**	**121**	*e*P	**Pn**	**18 29 24.1**	**-0.8**
	comp=N,12nm,0.2s						
KKN	**Kakani**	**12.44**	**120**	*e*P	**Pn**	**18 29 23.7**	**-1.4**
KKN				*e*S	Sn	18 31 36.3	-7.6
PKIN	**Phulchoki**	**12.65**	**121**	*e*P	**Pn**	**18 29 27.7**	**-0.3**
	comp=N,12nm,0.3s						
PKIN				*e*S	Sn	18 31 40.8	-8.3
PKI	**Pulchoki**	**12.66**	**121**	*e*P	**Pn**	**18 29 27.3**	**-0.9**
PKI				*e*S	Sn	18 31 42.1	-7.4
GUN	**Gumba**	**12.80**	**118**	*e*P	**Pn**	**18 29 28.8**	**-1.3**
	comp=N,15nm,0.4s						
RAMN	**Ramite**	**13.88**	**120**	*e*P	**Pn**	**18 29 43.3**	**-1.5**
	comp=N,28nm,0.6s						
RAMN				*e*S	Sn	18 32 10.0	-9.4
MKAR	**Makanchi Array**	**13.94**	**27**	P	**Pn**	**18 29 47.0**	**+1.7**
	comp=N,0.1nm,0.3s,baz=206,slow=13,SNR=3.4						
TAPN	**Taplejung**	**14.46**	**116**	*e*P	**Pn**	**18 29 50.6**	**-2.1**
	comp=N,12nm,0.3s						
TAPN				*e*S	Sn	18 32 22.9	-11
ODAN	**Odare**	**14.51**	**119**	*e*P	**Pn**	**18 29 51.0**	**-2.3**
	comp=N,16nm,0.5s						
KURBB	**Kurchatov Arra**	**16.42**	**12**	P	**Pn**	**18 30 17.6**	**-0.5**
	comp=N,0.0nm,0.3s,baz=204,slow=12,SNR=2.3						
AB31	**Akbulak array**	**17.53**	**330**	⇑P	**P**	**18 30 34.2**	**+1.0**
	comp=N,1.7nm,0.7s,baz=141,slow=13,SNR=17						
AB31				⇓S	Sn	18 33 36.3	-11
	comp=N,0.9nm,0.7s						
BVAR	**Borovoye Array**	**18.45**	**355**	P	**P**	**18 30 43.4**	**+0.1**
	comp=N,0.3nm,0.3s,baz=159,slow=9.3,SNR=5.3						
ZRNK	**Zerenda**	**18.51**	**352**	⇓P	**Pn**	**18 30 45.1**	**+1.0**
	comp=N,3.9nm,1.0s						
AKTO	**Aktyubinsk**	**19.23**	**330**	⇑P	**Pn**	**18 30 53.0**	**+0.1**
	comp=N,4.6nm,0.7s						
AKTO	**Aktyubinsk**	**19.23**	**330**	P	**Pn**	**18 30 54.1**	**+1.2**
	comp=N,0.2nm,0.3s,baz=130,slow=11,SNR=4.4						
ZALV	**Zalesovo Beam**	**20.95**	**20**	P	**P**	**18 31 11.5**	**+1.0**
	comp=N,2.8nm,0.4s,baz=211,slow=11,SNR=8.9						
ARCES	**ARCESS Array B**	**43.49**	**338**	P	**P**	**18 34 28.4**	**-2.4**
	comp=N,2.5nm,0.8s,baz=118,slow=7.6,SNR=4.2						
TORD	**Torodi Ar. Bea**	**67.45**	**271**	P	**P**	**18 37 24.9**	**+0.9**
	comp=N,1.1nm,0.7s,baz=46,slow=6.0,SNR=9.8						
BOSA	**Boshof**	**77.52**	**222**	P	**P**	**18 38 23.8**	**0.0**
	comp=N,2.6nm,0.9s,baz=40,slow=6.0,SNR=4.6						
NWAO	**Narrogin (SRO)**	**78.96**	**143**	P	**P**	**18 38 30.3**	**-1.2**
	comp=N,30nm,1.1s,baz=315,slow=8.6,SNR=3.2						
WRA	**Warramunga Arr**	**79.54**	**123**	P	**P**	**18 38 35.9**	**+0.8**
	comp=N,0.5nm,0.5s,baz=322,slow=4.8,SNR=20						
ASAR	**Alice Springs**	**81.78**	**126**	P	**P**	**18 38 47.9**	**+0.9**
	comp=N,0.4nm,0.5s,baz=312,slow=5.1,SNR=12						

*CSEM **03** 18:28:24.1, 42°.49N×13°.33E, h15km, MD1.8/8, After ROM*
ROM 03 18:28:24.1±0.1, 42°.49N×13°.33E, h15km±1km, Md1.8/8, Ml1.4/6, Error ellipse: s-maj=1.2km s-min=1.1km az=96.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.08**	**49**	Pg	Pg	18 28 27.6	+0.2
CAMP				Sg	Sg	18 28 29.9	+0.4
	31nm,0.3s						
CAMP	**Campotosto**	**0.08**	**49**	Pg	Pg	18 28 27.6	+0.2
CAMP				Sg	Sg	18 28 29.9	+0.4
	31nm,0.3s						
TERO	**Teramo**	**0.24**	**56**	Pg	Pg	18 28 29.9	+0.3
TERO				Sg	Sb	18 28 34.1	-0.4
	21nm,0.2s						
TERO	**Teramo**	**0.24**	**56**	Pg	Pg	18 28 29.9	+0.3
TERO				Sg	Sb	18 28 34.1	-0.4
	21nm,0.2s						
LNSS	**Leonessa**	**0.24**	**299**	Pg	Pg	18 28 29.9	+0.2
LNSS				Sg	Sg	18 28 33.9	+0.4
	87nm,0.2s						
LNSS	**Leonessa**	**0.24**	**299**	Pg	Pg	18 28 29.9	+0.2
LNSS				Sg	Sg	18 28 33.9	+0.4
	87nm,0.2s						
FIAM	**Fiamignano**	**0.27**	**216**	Pg	Pg	18 28 30.0	-0.1
FIAM				Sg	Sb	18 28 35.2	-0.1
	21nm,0.4s						
FIAM	**Fiamignano**	**0.27**	**216**	Pg	Pg	18 28 30.0	-0.1
FIAM				Sg	Sb	18 28 35.2	-0.1
	21nm,0.4s						
FAGN	**Fagnano**	**0.29**	**139**	Pg	Pg	18 28 30.7	+0.4
FAGN				Sg	Sb	18 28 35.5	-0.3
	31nm,0.3s						
FAGN	**Fagnano**	**0.29**	**139**	Pg	Pg	18 28 30.7	+0.4
FAGN				Sg	Sb	18 28 35.5	-0.3
	31nm,0.3s						
NRCA	**Norcia**	**0.38**	**335**	Pg	Pg	18 28 32.1	+0.1
NRCA				Sg	Sb	18 28 38.1	-0.4
NRCA	**Norcia**	**0.38**	**335**	Pg	Pg	18 28 32.1	+0.1
NRCA				Sg	Sb	18 28 38.1	-0.4
VCEL	**Villa Celiera**	**0.39**	**103**	Pg	Pb	18 28 32.6	-0.2
VCEL				Sg	Sg	18 28 37.3	-0.4
	25nm,0.6s						
VCEL	**Villa Celiera**	**0.39**	**103**	Pg	Pb	18 28 32.6	-0.2
VCEL				Sg	Sg	18 28 37.3	-0.4
	25nm,0.6s						

IDC 03 18:30:03.9±19.0, 14°.72S×166°.69E, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/21, mbtmp3.9/5, ML4.0/1, Error ellipse: s-maj=336.1km s-min=44.6km az=58.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.32**	**182**	Pn	Pn	18 31 52.3	+0.1
	2.4nm,0.3s,baz=24,slow=20,SNR=29						
DZM				Sn	Sn	18 33 10.2	-5.8
	0.5nm,0.3s,baz=307,slow=20,SNR=3.3						
STKA	**Stephens Creek**	**28.57**	**229**	P	P	18 36 00.6	-1.1
	0.7nm,0.5s,baz=71,slow=12,SNR=5.6						
WRA	**Warramunga Arr**	**31.28**	**256**	P	P	18 36 26.0	+0.1
	0.2nm,0.3s,baz=86,slow=9.0,SNR=12						
ASAR	**Alice Springs**	**32.15**	**249**	P	P	18 36 33.4	-0.1
	0.8nm,0.4s,baz=73,slow=9.4,SNR=36						
FITZ	**Fitzroy Crossi**	**39.46**	**259**	P	P	18 37 36.9	+0.6
	1.2nm,0.5s,baz=97,slow=12,SNR=8.3						

*CSEM **03** 18:32:24.8±0.2, 70°.63N×14°.60W, h10km, mb4.1/8, Ms3.0, Error ellipse: s-maj=7.9km s-min=4.6km az=118.0*
*IDC **03** 18:32:24.5±0.8, 70°.79N×14°.14W, h0km, mb3.6/14, mb1 3.9/19, mb1mx3.8/34, mbtmp3.8/19, ML3.8/5, MS3.2/12, Ms1 3.3/12, ms1mx3.0/50, Error ellipse: s-maj=17.3km s-min=15.9km az=74.0*
*NEIC **03** 18:32:26.0±0.3, 70°.77N×14°.20W, h10km, mb4.6/15, Error ellipse: s-maj=6.9km s-min=5.2km az=76.0*
*REY **03** 18:32:28.1, 70°.11N×12°.90W, h10km, ML3.8, ML3.5*
*SZGRF **03** 18:33:10.0, 66°.25N×11°.84W, h33km, mb3.9, Iceland region*

ISC 03 18:32:26.4±1.1**,70.67N**±0.05×**14.08W**±0.06**,h16**km±6km**,n171,**σ1.76/173**,mb4.1**/36**,MS3.3**/7**,Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**1.87**	**77**	Pn	Pn	18 32 54.4	-3.2
JMIC				Sn	Sn	18 33 12.7	-8.1
JMIC	**Jan Mayen**	**1.87**	**77**	Pn	Pn	18 32 54.4	-3.2
	5.2nm,0.3s,baz=253,slow=17,SNR=7.0						
JMIC				Sn	Sn	18 33 12.7	-8.1
	13nm,0.3s,baz=270,slow=6.7,SNR=6.4						
JMIC	**Jan Mayen**	**1.87**	**77**	Pn	Pn	18 32 54.4	-3.2
JMIC				Sn	Sn	18 33 12.7	-8.1
ILEI	**Leirhofn**	**4.37**	**193**	P	**Pn**	**18 33 29.2**	**-2.7**
ILEI				S	**Sn**	**18 34 18.2**	**-4.1**
IGRI	**Grimsey**	**4.38**	**201**	P	**Pn**	**18 33 30.9**	**-1.2**
IGRI				S	**Sn**	**18 34 20.4**	**-2.3**
IGIL	**Gilhagi**	**4.69**	**191**	P	**Pn**	**18 33 33.6**	**-2.6**
IGIL				S	**Sn**	**18 34 25.6**	**-4.6**
IFLA	**Flatey**	**4.73**	**199**	P	**Pn**	**18 33 35.7**	**-1.2**
IHED	**Heoinshofoi**	**4.76**	**196**	P	**Pn**	**18 33 35.1**	**-2.1**
IHED				S	**Sn**	**18 34 28.0**	**-3.9**
IBRE	**Brettingsstaoi**	**4.78**	**199**	P	**Pn**	**18 33 36.1**	**-1.4**
IBRE				S	**Sn**	**18 34 29.6**	**-2.8**
IDIM	**Dimmadalsˆ¡s**	**4.84**	**194**	P	**Pn**	**18 33 36.1**	**-2.3**
ISKI	**Skildingahˆ‡ls**	**4.94**	**194**	P	**Pn**	**18 33 37.8**	**-2.0**
IGRA	**Granastaoir**	**4.94**	**197**	P	**Pn**	**18 33 38.1**	**-1.7**
IGRA				S	**Sn**	**18 34 33.0**	**-3.5**
IHLA	**Hella**	**5.00**	**201**	P	**Pn**	**18 33 39.9**	**-0.7**
IHLA				S	**Sn**	**18 34 34.9**	**-3.1**
IKVO	**Krokottuvotn**	**5.08**	**193**	P	**Pn**	**18 33 39.7**	**-2.0**
IHRN	**Hraun**	**5.09**	**209**	P	**Pn**	**18 33 42.9**	**+1.1**
IHRN				S	**Sn**	**18 34 39.7**	**-0.4**
IGRS	**Grimsstaoir**	**5.11**	**190**	P	**Pn**	**18 33 39.6**	**-2.5**
IGRS				S	**Sn**	**18 34 36.1**	**-4.5**
IREN	**Reynihlio**	**5.15**	**193**	P	**Pn**	**18 33 40.5**	**-2.2**
ISVA	**Svartarkot**	**5.48**	**194**	P	**Pn**	**18 33 46.1**	**-1.1**
IADA	**Aoalbol**	**5.70**	**186**	P	**Pn**	**18 33 47.7**	**-2.5**
IASK	**Askja**	**5.72**	**191**	P	**Pn**	**18 33 48.5**	**-2.1**
IGLU	**Glumsstadir**	**5.72**	**184**	P	**Pn**	**18 33 48.1**	**-2.4**
IHVA	**Hvannstoosfjol**	**5.78**	**188**	P	**Pn**	**18 33 48.8**	**-2.5**
IMKO	**Mokollar**	**5.78**	**190**	P	**Pn**	**18 33 48.8**	**-2.5**
IBRU	**Bruarjokull**	**5.91**	**188**	P	**Pn**	**18 33 50.6**	**-2.6**
IVSH	**V-Sauoahnukur**	**5.92**	**187**	P	**Pn**	**18 33 50.7**	**-2.5**
IKRE	**Kreppuhraun**	**5.97**	**190**	P	**Pn**	**18 33 51.5**	**-2.5**
DAG	**Danmarks Havn**	**6.27**	**350**	*i* P	Pn	18 33 54.0	-4.0
DAG				*i* S	Sn	18 34 59.1	-10
BORG	**Borgarnes**	**6.55**	**208**	Pn	Pn	18 34 04.9	+3.1
BORG				Sn	**Sn**	**18 35 18.7**	**+2.8**
BORG	**Borgarnes**	**6.55**	**208**	Pn	Pn	18 34 04.9	+3.1
	3.3nm,0.3s,baz=23,slow=6.5,SNR=19						
BORG				Sn	**Sn**	**18 35 18.7**	**+2.8**
	baz=195,slow=20,SNR=1.6						
BORG				LR	LR	18 36 03.5	
	comp=Z,182nm,20.0s,baz=110,slow=33						
SUMG	**Summit**	**7.91**	**295**	*e*P	**Pn**	**18 34 19.6**	**-1.2**
	8.7nm,0.6s						
SUMG	**Summit**	**7.91**	**295**	*e*P	**Pn**	**18 34 19.6**	**-1.2**
	8.7nm,0.6s						
SPITS	**Spitsbergen Ar**	**10.94**	**33**	Pn	**Pn**	**18 35 01.4**	**-0.4**
SPITS				Sn	**Sn**	**18 36 59.3**	**-4.2**
SPITS	**Spitsbergen Ar**	**10.94**	**33**	Pn	**Pn**	**18 35 01.4**	**-0.4**
	baz=225,slow=15,SNR=24						
SPITS				Sn	**Sn**	**18 36 59.3**	**-4.2**
	baz=221,slow=23,SNR=1.7						
SPITS	**Spitsbergen Ar**	**10.94**	**33**	Pn	**Pn**	**18 35 01.4**	**-0.4**
ARCES	**ARCESS Array B**	**13.36**	**76**	LR	LR	18 39 51.6	
	comp=Z,72nm,20.1s,baz=258,slow=34						
NOA	**NORSAR Array B**	**14.01**	**121**	Pn	**Pn**	**18 35 45.2**	**+1.3**
NOA	**NORSAR Array B**	**14.01**	**121**	Pn	**Pn**	**18 35 45.2**	**+1.3**
	0.1nm,0.3s,baz=322,slow=13,SNR=2.6						
NOA				LR	LR	18 40 34.5	
	comp=Z,95nm,19.2s,baz=330,slow=35						
NOA	**NORSAR Array B**	**14.01**	**121**	Pn	**Pn**	**18 35 45.2**	**+1.3**
HFS	**Hagfors**	**15.46**	**119**	Pn	**P**	**18 36 07.0**	**-0.8**
HFS	**Hagfors**	**15.46**	**119**	Pn	**P**	**18 36 07.1**	**-0.8**
	0.6nm,0.3s,baz=348,slow=21,SNR=15						
HFS				LR	LR	18 41 10.0	
	comp=Z,137nm,21.7s,baz=94,slow=34						
HFS	**Hagfors**	**15.46**	**119**	Pn	**P**	**18 36 07.1**	**-0.8**
EKA	**Eskdalemuir Ar**	**16.12**	**157**	Pn	**Pn**	**18 36 13.3**	**+1.4**
EKA	**Eskdalemuir Ar**	**16.12**	**157**	Pn	**Pn**	**18 36 13.3**	**+1.4**
	baz=334,slow=13,SNR=8.5						
EKA	**Eskdalemuir Ar**	**16.12**	**157**	Pn	**Pn**	**18 36 13.3**	**+1.4**
KAF	**Kangasniemi**	**17.93**	**98**	*e*p	**Pn**	**18 36 35.8**	**+1.3**
	5.6nm,0.6s						
KAF	**Kangasniemi**	**17.93**	**98**	*e*P	**Pn**	**18 36 35.8**	**+1.3**
	5.6nm,0.6s						
FINES	**FINESS Array B**	**18.34**	**100**	P	**Pn**	**18 36 40.8**	**+1.3**
FINES	**FINESS Array B**	**18.34**	**100**	P	**Pn**	**18 36 40.8**	**+1.3**
	0.5nm,0.3s,baz=343,slow=11,SNR=8.3						
FINES				LR	LR	18 43 30.5	
	comp=Z,12nm,20.0s,baz=246,slow=36						
FINES	**FINESS Array B**	**18.34**	**100**	P	**Pn**	**18 36 40.8**	**+1.3**
FRB	**Frobisher Bay**	**21.47**	**279**	LR	LR	18 45 07.1	
	comp=Z,94nm,18.5s,baz=243,slow=36						
BAIF	**Baives**	**22.37**	**148**	*e*P	**P**	**18 37 24.5**	**+1.2**
	22nm,0.9s						
BAIF	**Baives**	**22.37**	**148**	*e*P	**P**	**18 37 24.5**	**+1.2**
	22nm,0.9s						
BAIF	**Baives**	**22.37**	**148**	*e*P	**P**	**18 37 24.5**	**+1.2**
	11nm,0.9s						
GIVF	**Givet**	**22.44**	**147**	*e*P	**P**	**18 37 25.1**	**+1.0**
GIVF	**Givet**	**22.44**	**147**	*e*P	**P**	**18 37 25.1**	**+1.0**
GIVF	**Givet**	**22.44**	**147**	*e*P	**P**	**18 37 25.1**	**+1.0**
IZAR	**Zarasai**	**22.88**	**110**	*e*P	**P**	**18 37 30.3**	**+1.5**
IZAR				AMB	AMB	18 37 36.6	
	comp=Z,10nm,0.8s						
IZAR	**Zarasai**	**22.88**	**110**	*e*P	**P**	**18 37 30.3**	**+1.5**
	comp=Z,10nm,0.8s,SNR=34						
ROSF	**Rostrenen**	**22.98**	**161**	*e*P	**P**	**18 37 30.5**	**+0.7**
ROSF	**Rostrenen**	**22.98**	**161**	*e*P	**P**	**18 37 30.5**	**+0.7**
ROSF	**Rostrenen**	**22.98**	**161**	*e*P	**P**	**18 37 30.5**	**+0.7**
ISAL	**Salakas**	**23.00**	**110**	*e*P	**P**	**18 37 31.4**	**+1.5**
ISAL				AMB	AMB	18 37 37.9	
	comp=Z,8.7nm,1.6s						
ISAL	**Salakas**	**23.00**	**110**	*e*P	**P**	**18 37 31.4**	**+1.5**
	comp=Z,8.7nm,1.6s,SNR=34						
CLL	**Collm**	**23.05**	**133**	*e*P	**P**	**18 37 33.0**	**+2.5**
CLL				*i* sP	**sP**	**18 37 36.9**	**-0.4**
	comp=Z,11nm,1.0s						
LDF	**La Druitiere**	**23.11**	**156**	*e*P	**P**	**18 37 32.2**	**+1.0**
	comp=Z,17nm,1.1s						
LDF	**La Druitiere**	**23.11**	**156**	*e*P	**P**	**18 37 32.2**	**+1.0**
	comp=Z,17nm,1.1s						
LDF	**La Druitiere**	**23.11**	**156**	*e*P	**P**	**18 37 32.2**	**+1.0**
	comp=Z,8.4nm,1.1s						
SGMF	**Saint Gilles**	**23.14**	**160**	*e*P	**P**	**18 37 32.1**	**+0.6**
SGMF	**Saint Gilles**	**23.14**	**160**	*e*P	**P**	**18 37 32.1**	**+0.6**
SGMF	**Saint Gilles**	**23.14**	**160**	*e*P	**P**	**18 37 32.1**	**+0.6**
IIGN	**Ignalina**	**23.21**	**110**	*e*P	**P**	**18 37 33.6**	**+1.5**
IIGN				AMB	AMB	18 37 37.4	
	comp=Z,6.5nm,1.1s						
IIGN	**Ignalina**	**23.21**	**110**	*e*P	**P**	**18 37 33.6**	**+1.5**
	comp=Z,6.5nm,1.1s,SNR=34						
GRR	**Gorron**	**23.22**	**157**	*e*P	**P**	**18 37 32.2**	**0.0**
GRR	**Gorron**	**23.22**	**157**	*e*P	**P**	**18 37 32.2**	**0.0**
GRR	**Gorron**	**23.22**	**157**	*e*P	**P**	**18 37 32.2**	**0.0**
IDID	**Didziasalis**	**23.40**	**110**	*e*P	**P**	**18 37 35.8**	**+1.8**
IDID				AMB	AMB	18 37 41.1	
	comp=Z,6.0nm,0.8s						
IDID	**Didziasalis**	**23.40**	**110**	*e*P	**P**	**18 37 35.8**	**+1.8**
	comp=Z,6.0nm,0.8s,SNR=34						
QUIF	**Quistinic**	**23.41**	**161**	*e*P	**P**	**18 37 35.2**	**+1.1**
QUIF	**Quistinic**	**23.41**	**161**	*e*P	**P**	**18 37 35.2**	**+1.1**
QUIF	**Quistinic**	**23.41**	**161**	*e*P	**P**	**18 37 35.2**	**+1.1**
MEZF	**Maizieres J'vi**	**24.02**	**148**	*e*P	**P**	**18 37 40.6**	**+0.6**
	comp=Z,52nm,1.1s						
MEZF	**Maizieres J'vi**	**24.02**	**148**	*e*P	**P**	**18 37 40.6**	**+0.6**
	comp=Z,52nm,1.1s						
GRF	**Grafenberg Arr**	**24.14**	**137**	*e*P	**P**	**18 37 43.9**	**+2.8**
	comp=Z,10.0nm,1.5s						
SFTF	**Sexfontaines**	**24.30**	**148**	*e*P	**P**	**18 37 43.1**	**+0.4**
	comp=Z,28nm,1.0s						
SFTF	**Sexfontaines**	**24.30**	**148**	*e*P	**P**	**18 37 43.1**	**+0.4**
	comp=Z,28nm,1.0s						
CDF	**Champ du Feu**	**24.52**	**144**	*e*P	**P**	**18 37 45.3**	**+0.6**
CDF	**Champ du Feu**	**24.52**	**144**	*e*P	**P**	**18 37 45.3**	**+0.6**
BFO	**Black Forest**	**24.81**	**143**	*e*P	**P**	**18 37 49.6**	**+2.3**
	comp=Z,5.8nm,1.1s						
BFO	**Black Forest**	**24.81**	**143**	*e*P	**P**	**18 37 49.6**	**+2.3**
	comp=Z,5.8nm,1.1s						
LOR	**Lormes**	**25.01**	**150**	*e*P	**P**	**18 37 50.9**	**+1.9**
	comp=Z,12nm,0.8s,baz=349						
LOR				*e*R			
	comp=Z,86nm,22.0s						
LOR	**Lormes**	**25.01**	**150**	*e*P	**P**	**18 37 50.9**	**+1.9**
	comp=Z,12nm,0.8s						
HINF	**Hinteralfeld**	**25.01**	**145**	*e*P	**P**	**18 37 50.8**	**+1.7**
HINF	**Hinteralfeld**	**25.01**	**145**	*e*P	**P**	**18 37 50.8**	**+1.7**
MFF	**Saint Martin d**	**25.06**	**157**	*e*P	**P**	**18 37 51.6**	**+2.1**
	comp=Z,4.9nm,0.7s						
MFF	**Saint Martin d**	**25.06**	**157**	*e*P	**P**	**18 37 51.6**	**+2.1**
	comp=Z,4.9nm,0.7s						
SSF	**Saint Saulge**	**25.15**	**151**	*e*P	**P**	**18 37 52.0**	**+1.7**
	comp=Z,9.5nm,0.9s						
SSF	**Saint Saulge**	**25.15**	**151**	*e*P	**P**	**18 37 52.0**	**+1.7**
	comp=Z,9.5nm,0.9s						
AVF	**Avril sur Loir**	**25.39**	**151**	*e*P	**P**	**18 37 54.4**	**+1.9**
AVF	**Avril sur Loir**	**25.39**	**151**	*e*P	**P**	**18 37 54.4**	**+1.9**
GERES	**GERESS Array B**	**25.51**	**134**	P	**P**	**18 37 56.1**	**+2.4**
GERES	**GERESS Array B**	**25.51**	**134**	P	**P**	**18 37 56.1**	**+2.4**
	comp=Z,1.0nm,0.7s,baz=342,slow=8.4,SNR=7.1						
GERES				LR	LR	18 47 25.7	
	comp=Z,67nm,20.9s,baz=271,slow=35						
GERES	**GERESS Array B**	**25.51**	**134**	P	**P**	**18 37 56.1**	**+2.4**
BGF	**Bois d'Agland**	**25.54**	**152**	*e*P	**P**	**18 37 55.5**	**+1.7**
	comp=Z,16nm,0.7s						
BGF	**Bois d'Agland**	**25.54**	**152**	*e*P	**P**	**18 37 55.5**	**+1.7**
	comp=Z,16nm,0.7s						
SMF	**Signal de Mont**	**25.61**	**151**	*e*P	**P**	**18 37 56.7**	**+2.2**
	comp=Z,25nm,1.1s						
SMF	**Signal de Mont**	**25.61**	**151**	*e*P	**P**	**18 37 56.7**	**+2.2**
	comp=Z,25nm,1.1s						
TCF	**Toulx Ste Croi**	**25.70**	**153**	*e*P	**P**	**18 37 56.3**	**+0.9**
	comp=Z,6.7nm,0.7s						
TCF	**Toulx Ste Croi**	**25.70**	**153**	*e*P	**P**	**18 37 56.3**	**+0.9**
	comp=Z,6.7nm,0.7s						
VRAC	**Vranov**	**25.79**	**130**	LR	LR	18 48 13.3	
	comp=Z,84nm,18.8s,baz=156,slow=37						
RJF	**Les Rejaudoux**	**26.56**	**155**	*e*P	**P**	**18 38 06.1**	**+3.0**
	comp=Z,7.0nm,0.7s						
RJF				*e*R			
	comp=Z,120nm,18.2s						
RJF	**Les Rejaudoux**	**26.56**	**155**	*e*P	**P**	**18 38 06.1**	**+3.0**
	comp=Z,7.0nm,0.7s						
DAVOX	**Davos/Dischmat**	**26.60**	**141**	LR	LR	18 48 15.3	
	comp=Z,82nm,19.6s,baz=209,slow=36						
CAF	**Calviac**	**27.01**	**154**	*e*P	**P**	**18 38 09.4**	**+2.2**
CAF	**Calviac**	**27.01**	**154**	*e*P	**P**	**18 38 09.4**	**+2.2**
ORIF	**Oris-en-Rattie**	**27.63**	**148**	*e*P	**P**	**18 38 15.6**	**+2.8**
	comp=Z,16nm,1.1s						
ORIF				*e*R			
	comp=Z,76nm,20.0s						
ORIF	**Oris-en-Rattie**	**27.63**	**148**	*e*P	**P**	**18 38 15.6**	**+2.8**
	comp=Z,16nm,1.1s						
MBDF	**Montbardon**	**27.97**	**147**	*e*P	**P**	**18 38 18.1**	**+2.1**
	comp=Z,15nm,0.8s						
MBDF	**Montbardon**	**27.97**	**147**	*e*P	**P**	**18 38 18.1**	**+2.1**
	comp=Z,15nm,0.8s						
LASF	**Ste Croix**	**28.11**	**152**	*e*P	**P**	**18 38 18.4**	**+1.3**
	comp=Z,14nm,1.1s						
LASF	**Ste Croix**	**28.11**	**152**	*e*P	**P**	**18 38 18.4**	**+1.3**
	comp=Z,14nm,1.1s						
AKASG	**Malin Array Be**	**28.14**	**112**	P	**P**	**18 38 17.6**	**+0.4**
AKASG	**Malin Array Be**	**28.14**	**112**	P	**P**	**18 38 17.6**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=338,slow=9.8,SNR=3.1						
AKASG	**Malin Array Be**	**28.14**	**112**	P	**P**	**18 38 17.5**	**+0.4**
MTLF	**Montolieu**	**28.59**	**155**	*e*P	**P**	**18 38 23.4**	**+2.1**
MTLF	**Montolieu**	**28.59**	**155**	*e*P	**P**	**18 38 23.4**	**+2.1**
EPF	**Esparros**	**28.64**	**158**	*e*P	**P**	**18 38 22.5**	**+0.7**
EPF	**Esparros**	**28.64**	**158**	*e*P	**P**	**18 38 22.5**	**+0.7**
DIVS	**Divibare**	**31.50**	**129**	*e*P	**P**	**18 38 46.8**	**-0.3**
ESDC	**Sonseca Array**	**31.50**	**165**	P	**P**	**18 38 49.1**	**+2.0**
ESDC	**Sonseca Array**	**31.50**	**165**	P	**P**	**18 38 49.1**	**+2.0**
	comp=Z,0.1nm,0.2s,baz=332,slow=11,SNR=3.0						
ESDC	**Sonseca Array**	**31.50**	**165**	P	**P**	**18 38 49.1**	**+2.0**
MLR	**Muntele Rosu**	**31.83**	**121**	LR	LR	18 51 35.6	
	comp=Z,28nm,21.4s,baz=174,slow=36						
YKA	**Yellowknife Ar**	**36.21**	**309**	P	**P**	**18 39 28.4**	**+0.7**
YKA	**Yellowknife Ar**	**36.21**	**309**	P	**P**	**18 39 28.4**	**+0.7**
	comp=Z,0.5nm,0.5s,baz=30,slow=10.0,SNR=2.7						
YKA	**Yellowknife Ar**	**36.21**	**309**	P	**P**	**18 39 28.4**	**+0.7**
AKTO	**Aktyubinsk**	**37.78**	**83**	P	**P**	**18 39 42.7**	**+1.6**
AKTO	**Aktyubinsk**	**37.78**	**83**	P	**P**	**18 39 42.7**	**+1.6**
	comp=Z,1.9nm,0.9s,baz=319,slow=13,SNR=5.3						
AKTO	**Aktyubinsk**	**37.78**	**83**	P	**P**	**18 39 42.7**	**+1.6**
MDT	**Midelt**	**38.26**	**167**	LR	LR	18 53 40.9	
	comp=Z,64nm,21.3s,baz=23,slow=33						
BRTR	**Keskin Array B**	**39.37**	**116**	P	**P**	**18 39 55.9**	**+1.1**
BRTR	**Keskin Array B**	**39.37**	**116**	P	**P**	**18 39 55.9**	**+1.1**
	comp=Z,0.4nm,0.6s,baz=318,slow=14,SNR=3.3						
BRTR	**Keskin Array B**	**39.37**	**116**	P	**P**	**18 39 55.9**	**+1.1**
ABKAR	**Akbulak array**	**39.43**	**83**	*e*P	**P**	**18 39 56.3**	**+1.3**
	comp=Z,1.0nm,0.8s						
ABKAR	**Akbulak array**	**39.43**	**83**	*e*P	**P**	**18 39 56.3**	**+1.3**
	comp=Z,1.0nm,0.8s						
BVAR	**Borovoye Array**	**39.57**	**71**	P	**P**	**18 39 56.3**	**+0.1**
BVAR	**Borovoye Array**	**39.57**	**71**	P	**P**	**18 39 56.3**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=328,slow=5.3,SNR=3.6						
BVAR	**Borovoye Array**	**39.57**	**71**	P	**P**	**18 39 56.3**	**+0.1**
ILAR	**Eielson Array**	**40.98**	**331**	P	**P**	**18 40 06.7**	**-1.0**
ILAR	**Eielson Array**	**40.98**	**331**	P	**P**	**18 40 06.7**	**-1.0**
	comp=Z,0.6nm,0.9s,baz=23,slow=7.2,SNR=3.2						
ILAR	**Eielson Array**	**40.98**	**331**	P	**P**	**18 40 06.7**	**-1.0**
ZALV	**Zalesovo Beam**	**43.11**	**59**	P	**P**	**18 40 24.7**	**-0.4**
ZALV	**Zalesovo Beam**	**43.11**	**59**	P	**P**	**18 40 24.7**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=339,slow=7.9,SNR=3.8						
ZALV	**Zalesovo Beam**	**43.11**	**59**	P	**P**	**18 40 24.7**	**-0.4**
KURK	**Kurchatov**	**44.12**	**66**	P	**P**	**18 40 34.2**	**+0.9**
KURK	**Kurchatov**	**44.12**	**66**	P	**P**	**18 40 34.2**	**+0.9**
KURBB	**Kurchatov Arra**	**44.18**	**66**	P	**P**	**18 40 34.2**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=330,slow=7.5,SNR=8.6						
MKAR	**Makanchi Array**	**48.72**	**65**	P	**P**	**18 41 10.5**	**+0.9**
MKAR	**Makanchi Array**	**48.72**	**65**	P	**P**	**18 41 10.5**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=334,slow=8.3,SNR=4.7						
MKAR	**Makanchi Array**	**48.72**	**65**	P	**P**	**18 41 10.5**	**+0.9**
SONM	**Songino Array**	**54.34**	**46**	P	**P**	**18 41 52.4**	**+0.7**
SONM	**Songino Array**	**54.34**	**46**	P	**P**	**18 41 52.4**	**+0.7**
	comp=Z,0.4nm,0.8s,baz=339,slow=3.8,SNR=3.5						
SONM	**Songino Array**	**54.34**	**46**	P	**P**	**18 41 52.4**	**+0.7**
TORD	**Torodi Ar. Bea**	**58.31**	**162**	P	**P**	**18 42 20.5**	**+0.4**
TORD	**Torodi Ar. Bea**	**58.31**	**162**	P	**P**	**18 42 20.5**	**+0.4**
	comp=Z,2.1nm,1.0s,baz=353,slow=5.6,SNR=7.8						
TORD	**Torodi Ar. Bea**	**58.31**	**162**	P	**P**	**18 42 20.5**	**+0.4**
TXAR	**Lajitas Array**	**62.51**	**280**	P	**P**	**18 42 49.4**	**+0.6**
TXAR	**Lajitas Array**	**62.51**	**280**	P	**P**	**18 42 49.4**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=27,slow=6.8,SNR=4.7						
TXAR				LR	LR	19 08 44.2	
	comp=Z,62nm,21.2s,baz=0.0,slow=35						
TXAR	**Lajitas Array**	**62.51**	**280**	P	**P**	**18 42 49.4**	**+0.6**
MJAR	**Matsushiro Arr**	**71.25**	**23**	P	**P**	**18 43 43.1**	**-1.1**
MJAR	**Matsushiro Arr**	**71.25**	**23**	P	**P**	**18 43 43.1**	**-1.1**
	comp=Z,1.6nm,1.0s,baz=346,slow=6.0,SNR=4.1						
MJAR	**Matsushiro Arr**	**71.25**	**23**	P	**P**	**18 43 43.1**	**-1.1**

ISCJB ***03*** *18:42:57.6±0.3,23.28N±0.04×93.01E±0.03,h56km, mb4.1/32,Error ellipse: s-maj=6.8km s-min=3.4km az=29.0*

NEIC ***03*** *18:42:59.8±0.7,23.36N×93.21E,h45km±8km,mb4.3/10, Error ellipse: s-maj=13.6km s-min=5.8km az=220.0*

IDC ***03*** *18:43:02.7±3.9,23.45N×93.50E,h69km±35km,mb3.7/16, mb1 3.9/17,mb1mx3.7/29,mbtmp3.7/17,ML4.4/1,Error ellipse: s-maj=22.7km s-min=12.4km az=56.0*

ISC 03 18:43:00.2±0.5**,23.39N**±0.06×**93.15E**±0.04**,h56**km**,n97,** σ**1.88**/101**,mb4.1**/32**,1D,Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	**Imphal**	**1.56**	**27**	*i* P	**Pn**	**18 43 25.0**	**-0.8**
IMP				*i* S	**Sn**	**18 43 46.0**	**+1.0**
SHL	**Shillong**	**2.46**	**332**	*e*PKP	**Pn**	**18 43 36.4**	**-1.7**
SHL				*e*4	Sn	18 44 13.0	+6.0
SHL				AML	AML	18 44 15.2	
	comp=N,2µm,0.3s						
ODAN	**Odare**	**6.26**	**305**	*e*Pn	**Pn**	**18 44 31.2**	**+0.9**
ODAN				*e*Sn	**Sn**	**18 45 39.7**	**-0.9**
	comp=N,1µm,0.6s						
ODAN	**Odare**	**6.26**	**305**	*e*Pn	**Pn**	**18 44 31.2**	**+0.9**
ODAN				*e*Sn	**Sn**	**18 45 39.7**	**-0.9**
TAPN	**Taplejung**	**6.31**	**310**	*e*Pn	**Pn**	**18 44 31.9**	**+1.0**
TAPN				*e*Sn	**Sn**	**18 45 40.8**	**-1.0**
	comp=N,433nm,0.4s						
TAPN	**Taplejung**	**6.31**	**310**	*e*Pn	**Pn**	**18 44 31.9**	**+1.0**
TAPN				*e*Sn	**Sn**	**18 45 40.8**	**-1.0**
LSA	**Lhasa**	**6.54**	**345**	*e*Pn	**Pn**	**18 44 35.8**	**+1.6**
	comp=N,27nm,0.5s						
BOK	**Bokaro**	**6.68**	**275**	*e*x	**Pn**	**18 44 35.9**	**+0.1**
BOK				*e*S	Sn	18 45 42.8	-7.7
BOK				AML	AML	18 45 54.6	
	comp=N,333nm,0.3s						
BOK				AML	AML	18 45 54.7	
	comp=E,183nm,0.3s						
RAMN	**Ramite**	**6.91**	**302**	*e*Pn	**Pn**	**18 44 40.0**	**+0.8**
RAMN	**Ramite**	**6.91**	**302**	*e*Pn	**Pn**	**18 44 40.0**	**+0.8**
CHTO	**Chiang Mai**	**7.07**	**129**	*e*Pn	**Pn**	**18 44 41.2**	**+0.1**
CM31	**Chiang Mai Arr**	**7.30**	**131**	*e*Pn	**Pn**	**18 44 44.0**	**-0.4**
CMAR	**Chiang Mai Arr**	**7.30**	**131**	P	**Pn**	**18 44 44.6**	**+0.3**
CMAR	**Chiang Mai Arr**	**7.30**	**131**	P	**Pn**	**18 44 44.6**	**+0.3**
	comp=E,1.6nm,0.3s,baz=311,slow=13,SNR=36						
GUN	**Gumba**	**7.96**	**306**	*e*Pn	**Pn**	**18 44 54.1**	**+0.5**
GUN				*e*Sn	**Sn**	**18 46 20.0**	**-2.4**
	comp=E,812nm,0.7s						
GUN	**Gumba**	**7.96**	**306**	*e*Pn	**Pn**	**18 44 54.1**	**+0.5**
GUN				*e*Sn	**Sn**	**18 46 20.0**	**-2.4**
PKI	**Pulchoki**	**8.14**	**302**	*e*Pn	**Pn**	**18 44 56.5**	**+0.4**
PKI				*e*Sn	**Sn**	**18 46 25.0**	**-1.9**
	comp=E,224nm,0.5s						
PKI	**Pulchoki**	**8.14**	**302**	*e*Pn	**Pn**	**18 44 56.5**	**+0.4**
PKI				*e*Sn	**Sn**	**18 46 25.0**	**-1.9**
PKIN	**Phulchoki**	**8.15**	**302**	*e*Pn	**Pn**	**18 44 56.4**	**+0.2**
PKIN				*e*Sn	**Sn**	**18 46 24.9**	**-2.2**
	comp=E,267nm,0.5s						
KKN	**Kakani**	**8.35**	**303**	*e*Pn	**Pn**	**18 44 58.8**	**0.0**
KKN				*e*Sn	**Sn**	**18 46 29.9**	**-1.9**
	comp=E,194nm,0.4s						
KKN	**Kakani**	**8.35**	**303**	*e*Pn	**Pn**	**18 44 58.8**	**0.0**
KKN				*e*Sn	**Sn**	**18 46 29.9**	**-1.9**
DMN	**Daman**	**8.39**	**302**	*e*Pn	**Pn**	**18 44 59.5**	**0.0**
DMN				*e*Sn	**Sn**	**18 46 30.9**	**-2.1**
	comp=E,349nm,0.7s						
DMN	**Daman**	**8.39**	**302**	*e*Pn	**Pn**	**18 44 59.5**	**0.0**
DMN				*e*Sn	**Sn**	**18 46 30.9**	**-2.1**
KOLN	**Koldanda**	**9.66**	**299**	*e*Pn	**Pn**	**18 45 15.7**	**-1.1**
KOLN				*e*Sn	**Sn**	**18 46 58.9**	**-5.1**
	comp=E,222nm,0.5s						
KOLN	**Koldanda**	**9.66**	**299**	*e*Pn	**Pn**	**18 45 15.7**	**-1.1**
KOLN				*e*Sn	**Sn**	**18 46 58.9**	**-5.1**
DANN	**Dangsing**	**9.79**	**302**	*e*Pn	**Pn**	**18 45 17.5**	**-1.2**
DANN				*e*Sn	**Sn**	**18 47 03.9**	**-3.4**
	comp=E,266nm,0.8s						
DANN	**Dangsing**	**9.79**	**302**	*e*Pn	**Pn**	**18 45 17.5**	**-1.2**
DANN				*e*Sn	**Sn**	**18 47 03.9**	**-3.4**
PYUN	**Piuthan**	**10.29**	**299**	*e*Pn	**Pn**	**18 45 24.1**	**-1.3**
PYUN				*e*Sn	**Sn**	**18 47 14.6**	**-4.8**
	comp=E,342nm,0.8s						
PYUN	**Piuthan**	**10.29**	**299**	*e*Pn	**Pn**	**18 45 24.1**	**-1.3**
PYUN				*e*Sn	**Sn**	**18 47 14.6**	**-4.8**
JBP	**Jabalpur**	**12.11**	**272**	⇓*i*x	Pn	18 45 53.4	+3.3
JBP				*i* x	x	18 45 55.1	
	comp=Z,40nm,0.8s						
JBP				*e*4	**Sn**	**18 48 02.2**	**-1.3**
LGTI	**Lohaghat**	**13.04**	**300**	*e*4	**P**	**18 46 11.5**	**+0.1**
LGTI				*e*4		18 46 20.2	
NGP	**Nagpur**	**13.24**	**263**	*e*PKP	Pn	18 46 00.7	-4.9
NGP				*e*x	x	18 48 22.9	
NGP				AML	AML	18 48 26.0	
	comp=N,51nm,0.5s						
NGP				AML	AML	18 48 26.9	
	comp=E,22nm,0.4s						
ABI	**ADIBADRI**	**14.15**	**301**	*e*PKP	Pn	18 46 12.9	-5.0
BHPL	**Bhopal**	**14.45**	**273**	*e*PKP	**Pn**	**18 46 19.2**	**-2.7**
BHPL				*e*x	Sn	18 48 54.5	-6.2
GKD	**Gaurikund**	**14.52**	**303**	*e*4	Pn	18 46 19.6	-3.2
GTU	**Guttu**	**14.67**	**302**	*e*PKP	Pn	18 46 20.5	-4.4
HYB	**Hyderabad**	**14.91**	**249**	*i* P	**P**	**18 46 32.0**	**-0.3**
ENH	**Enshi**	**16.10**	**61**	*e*Pn	**Pn**	**18 46 42.0**	**-1.1**
	comp=E,21nm,0.9s						
SMLA	**Simla**	**16.16**	**302**	*e*PKP	**Pn**	**18 46 40.1**	**-3.6**
SMLA				*e*x	x	18 49 29.4	
LATR	**Latur**	**16.27**	**255**	*e*x	P	18 46 52.1	+4.8
LATR				*e*x	x	18 49 33.0	
AJM	**Ajmer**	**17.07**	**284**	*i* P	**Pn**	**18 46 52.0**	**-3.1**
AJM				*i* x	x	18 49 53.0	
DHRM	**DHARAMSHALA**	**17.31**	**304**	*e*PKP	**Pn**	**18 46 55.7**	**-2.5**
DHRM				*e*x	x	18 49 60.0	
DHRM				AML	AML	18 50 04.2	
	comp=N,34nm,0.6s						
DHRM				AML	AML	18 50 05.9	
	comp=E,54nm,0.6s						
POO	**Poona**	**18.66**	**259**	*e*PKP	**P**	**18 47 12.0**	**-1.8**
KBL	**Kabul**	**23.78**	**303**	*e*P	**P**	**18 48 09.7**	**+1.7**
	comp=E,7.6nm,0.6s						
TKM2	**Tokmak 2**	**24.31**	**327**	*e*P	**P**	**18 48 16.7**	**+4.0**
	comp=E,9.2nm,0.8s						
AAK	**Ala-Archa**	**24.66**	**326**	*e*P	P	18 48 21.0	+5.1
	comp=E,8.7nm,0.9s						
AAK	**Ala-Archa**	**24.66**	**326**	P	P	18 48 20.7	+4.8
	comp=E,1.3nm,0.4s,baz=135,slow=4.3,SNR=5.0						
MKAR	**Makanchi Array**	**24.94**	**342**	P	**P**	**18 48 19.7**	**+1.5**
MKAR	**Makanchi Array**	**24.94**	**342**	P	**P**	**18 48 19.7**	**+1.5**
	comp=E,2.3nm,0.5s,baz=169,slow=9.7,SNR=52						
EKS2	**Erkin-Say**	**25.06**	**325**	*e*P	**P**	**18 48 23.2**	**+3.7**
	comp=E,12nm,0.9s						
EKS2				*e*		18 48 34.3	
SONM	**Songino Array**	**26.59**	**20**	P	**P**	**18 48 34.3**	**+1.1**
SONM	**Songino Array**	**26.59**	**20**	P	**P**	**18 48 34.3**	**+1.1**
	comp=E,1.0nm,0.6s,baz=204,slow=10.0,SNR=8.8						
ULN	**Ulaanbaatar**	**26.82**	**21**	*e*P	**P**	**18 48 35.8**	**+0.4**
	comp=E,3.8nm,0.8s						
KURBB	**Kurchatov Arra**	**29.47**	**341**	P	**P**	**18 48 59.8**	**+1.0**
	comp=E,0.6nm,0.6s,baz=157,slow=8.4,SNR=8.8						
KURK	**Kurchatov**	**29.53**	**341**	P	**P**	**18 48 58.8**	**-0.4**
	comp=E,2.4nm,0.8s						
KURK				*e*		18 49 12.6	
ZALV	**Zalesovo Beam**	**31.16**	**350**	P	**P**	**18 49 14.9**	**+1.3**
ZALV	**Zalesovo Beam**	**31.16**	**350**	P	**P**	**18 49 14.9**	**+1.3**
	comp=E,2.8nm,0.7s,baz=173,slow=7.8,SNR=12						
KSAR	**Wonju Array Be**	**32.86**	**57**	P	P	18 49 25.8	-3.0
KSRS	**Korea Array**	**32.90**	**57**	P	P	18 49 25.8	-3.3
	comp=E,1.0nm,0.7s,baz=250,slow=7.9,SNR=6.1						
BVAR	**Borovoye Array**	**34.27**	**335**	P	**P**	**18 49 40.0**	**-0.9**
BVAR	**Borovoye Array**	**34.27**	**335**	P	**P**	**18 49 40.0**	**-0.9**
	comp=E,0.3nm,0.4s,baz=136,slow=11,SNR=2.4						
BRVK	**Borovoye**	**34.34**	**335**	*e*P	**P**	**18 49 42.7**	**+1.3**
	comp=E,2.4nm,0.7s						
BRVK				*e*		18 49 56.2	
ABKAR	**Akbulak array**	**36.69**	**323**	*e*P	**P**	**18 50 03.7**	**+2.0**
	comp=E,3.2nm,0.6s						
ABKAR				*e*		18 50 16.1	
USRK	**Ussuriysk Arra**	**37.92**	**47**	P	**P**	**18 50 10.7**	**-1.4**
	comp=E,1.0nm,0.5s,baz=249,slow=11,SNR=3.2						
MJAR	**Matsushiro Arr**	**40.83**	**61**	P	**P**	**18 50 33.9**	**-2.6**
MJAR	**Matsushiro Arr**	**40.83**	**61**	P	**P**	**18 50 33.9**	**-2.6**
	comp=E,3.3nm,0.9s,baz=273,slow=9.8,SNR=10						
RDF	**Al-Radifah**	**41.11**	**288**	*e*P	**P**	**18 50 41.4**	**+2.5**
RDF				AMb	AMB	18 50 54.1	
	comp=Z,16nm,0.8s						
MIB	**Mutribah**	**41.25**	**289**	*e*P	**P**	**18 50 42.1**	**+2.1**
MIB				AMb	AMB	18 50 55.4	
	comp=Z,22nm,0.8s						
NAY	**Al-Naaiem**	**41.36**	**288**	*e*P	**P**	**18 50 42.9**	**+1.9**
NAY				AMb	AMB	18 50 55.3	
	comp=Z,10nm,0.7s						
FITZ	**Fitzroy Crossi**	**52.03**	**140**	*e*P	**P**	**18 52 03.9**	**-0.5**
AKASG	**Malin Array Be**	**55.84**	**316**	P	P	18 52 37.3	+5.5
AKASG	**Malin Array Be**	**55.84**	**316**	P	P	18 52 37.3	+5.5
	comp=Z,0.5nm,0.5s,baz=83,slow=7.6,SNR=3.3						
PETK	**Petropavlovsk-**	**56.43**	**41**	P	**P**	**18 52 37.0**	**+1.0**
PETK	**Petropavlovsk-**	**56.43**	**41**	P	**P**	**18 52 37.0**	**+1.0**
	comp=Z,2.8nm,1.0s,baz=270,slow=7.0,SNR=3.3						
MLR	**Muntele Rosu**	**57.93**	**310**	P	**P**	**18 52 49.5**	**+2.5**
MLR	**Muntele Rosu**	**57.93**	**310**	P	**P**	**18 52 49.5**	**+2.5**
	comp=Z,0.5nm,0.7s,baz=198,slow=3.2,SNR=4.2						
WRA	**Warramunga Arr**	**58.89**	**134**	P	**P**	**18 52 53.7**	**0.0**
WRA	**Warramunga Arr**	**58.89**	**134**	P	**P**	**18 52 53.7**	**0.0**
	comp=Z,6.1nm,0.6s,baz=323,slow=7.4,SNR=93						
WRAB	**Tennant Creek**	**58.89**	**134**	*e*P	**P**	**18 52 53.4**	**-0.3**
	comp=Z,7.2nm,0.6s						
AS31	**Alice Springs**	**61.27**	**137**	*e*P	**P**	**18 53 09.9**	**-0.1**
ASAR	**Alice Springs**	**61.27**	**137**	P	**P**	**18 53 10.3**	**+0.3**
ASAR	**Alice Springs**	**61.27**	**137**	P	**P**	**18 53 10.3**	**+0.3**
	comp=Z,3.4nm,0.6s,baz=319,slow=6.7,SNR=83						
NB2	**NORSAR Subarra**	**65.95**	**328**	P	P	18 53 50.0	+10
	comp=Z,1.7nm,0.7s,baz=85,slow=6.5						
GERES	**GERESS Array B**	**65.95**	**315**	P	**P**	**18 53 42.4**	**+1.7**
GERES	**GERESS Array B**	**65.95**	**315**	P	**P**	**18 53 42.4**	**+1.7**
	comp=Z,0.8nm,0.5s,baz=82,slow=6.1,SNR=9.0						
CTA	**Charters Tower**	**67.44**	**126**	P	**P**	**18 53 50.1**	**-0.2**
CTA	**Charters Tower**	**67.44**	**126**	P	**P**	**18 53 50.1**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=310,slow=9.7,SNR=4.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
STKA	**Stephens Creek**	**71.88**	**138**	P	**P**	**18 54 16.2**	**-1.3**
STKA	**Stephens Creek**	**71.88**	**138**	P	**P**	**18 54 16.2**	**-1.3**
	comp=Z,0.7nm,0.4s,baz=354,slow=18,SNR=3.5						
SSF	**Saint Saulge**	**73.03**	**314**	*e*pP	pP	18 54 44.5	+4.7
SSF	**Saint Saulge**	**73.03**	**314**	*e*P	P	18 54 20.0	-4.2
	comp=Z,5.2nm,1.1s						
RJF	**Les Rejaudoux**	**74.86**	**313**	*e*P	P	18 54 31.5	-3.5
RJF				*e*pP	pP	18 54 56.0	+5.4
LDF	**La Druitiere**	**74.91**	**317**	*e*P	P	18 54 29.8	-5.4
LDF				*e*pP	pP	18 54 54.2	+3.4
ILAR	**Eielson Array**	**80.79**	**22**	P	**P**	**18 55 08.2**	**+0.7**
ILAR	**Eielson Array**	**80.79**	**22**	P	**P**	**18 55 08.2**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=308,slow=5.2,SNR=5.0						
TORD	**Torodi Ar. Bea**	**86.19**	**283**	P	**P**	**18 55 38.8**	**+2.6**
TORD	**Torodi Ar. Bea**	**86.19**	**283**	P	**P**	**18 55 38.8**	**+2.6**
	comp=Z,0.6nm,0.9s,baz=74,slow=3.5,SNR=3.3						

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*DJA **03** 18:50:29.5±0.6, 8°S±9°×12°2E±4°6, h10km±39km, M3.9/4, MLv3.9/4*
*IDC **03** 18:50:31.9±2.0, 8°.91S×121°.13E, h46km±19km, mb3.6/4, mb1 3.8/8, mb1mx3.6/22, mbtmp3.7/8, ML3.6/4, Error ellipse: s-maj=62.4km s-min=12.6km az=65.0*
ISC 03 18:50:30.8±0.8**, 8°.53S**±0°.08×**122°.03E**±0°.09**, h31**km**, n13, σ1°.54**/14**, mb4.0**/4**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**0.23**	**117**	P	Pb	18 50 35.8	-1.7
MMRI				S	**Sn**	**18 50 40.5**	**-2.3**
WSI	**Waingapu**	**2.05**	**236**	P	**Pb**	**18 51 06.0**	**-1.3**
BSSI	**Bau Bau, Buton**	**2.82**	**327**	P	**Pn**	**18 51 13.9**	**+0.2**
BSSI				S	**Sn**	**18 51 48.2**	**+1.5**
BKSI	**Bulukumba**	**3.71**	**329**	P	**Pn**	**18 51 25.3**	**-0.6**
KAPI	**Kappang**	**4.16**	**327**	P	**Pn**	**18 51 31.6**	**-0.6**
	1.4nm,0.3s,baz=153,slow=14,SNR=5.9						
KAPI				S	**Sn**	**18 52 19.6**	**-0.2**
	2.5nm,0.3s,baz=120,slow=20,SNR=5.7						
FITZ	**Fitzroy Crossi**	**10.14**	**160**	P	**Pn**	**18 52 56.6**	**+2.3**
	0.4nm,0.3s,baz=9.4,slow=7.9,SNR=5.3						
FITZ				S	**Sn**	**18 54 45.8**	**-1.3**
	0.4nm,0.3s,baz=250,slow=19,SNR=4.2						
WRA	**Warramunga Arr**	**16.45**	**135**	P	**P**	**18 54 23.9**	**+2.0**
	0.4nm,0.3s,baz=313,slow=12,SNR=10						
WRA				S	Sn	18 57 13.3	-8.0
	0.3nm,0.3s,baz=314,slow=24,SNR=6.6						
ASAR	**Alice Springs**	**18.86**	**144**	P	**Pn**	**18 54 51.1**	**+1.7**
	0.3nm,0.3s,baz=326,slow=14,SNR=9.2						
ASAR				S	Sn	18 58 08.3	-11
	0.1nm,0.3s,baz=60,slow=10,SNR=4.1						
MJAR	**Matsushiro Arr**	**47.34**	**18**	P	P	18 59 06.8	+4.9
	1.2nm,0.4s,baz=167,slow=10,SNR=9.0						
MAT	**Matsushiro**	**47.34**	**18**	P	P	18 59 06.9	+5.0
SONM	**Songino Array**	**57.80**	**348**	P	**P**	**19 00 18.1**	**-1.2**
	0.5nm,0.6s,baz=163,slow=7.9,SNR=3.9						
MKAR	**Makanchi Array**	**65.45**	**331**	P	**P**	**19 01 10.5**	**-0.3**
	0.8nm,0.7s,baz=134,slow=8.7,SNR=8.5						
ZALV	**Zalesovo Beam**	**69.71**	**338**	P	**P**	**19 01 36.5**	**-0.9**
	0.5nm,0.3s,baz=123,slow=6.5,SNR=3.0						

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*BJI **03** 18:54:33.1, 50°.74S×120°.60E, h5km, mB6.0/48, mb5.6/45, Ms5.3/47, Ms7 5.1/46*
*ISCJB **03** 18:54:38.5±0.2, 50°.02S±0°.04×120°.74E±0°.08, h10km, mb5.4/78, MS5.2/193, Error ellipse: s-maj=7.2km s-min=5.4km az=15.3*
*IDC **03** 18:54:38.4±0.4, 49°.99S×120°.59E, h0km, mb5.1/23, mb1 5.2/24, mb1mx5.2/25, mbtmp5.1/24, ML3.7/1, MS5.0/23, Ms1 5.0/23, ms1mx4.9/24, Error ellipse: s-maj=16.7km s-min=11.1km az=115.0*
*NEIC **03** 18:54:38.4±0.1, 50°.01S×120°.59E, h3km, mb5.4/39, MS5.2/137, MW5.7, MW5.6, Error ellipse: s-maj=7.0km s-min=5.3km az=119.0, Moment Tensor Solution. s32 Moment tensor: Scale 10^{17}Nm; M_{rr}-4.75; $M_{\theta\theta}$4.19; $M_{\phi\phi}$0.56; $M_{r\theta}$1.17; $M_{\theta\phi}$0.40; $M_{\phi r}$1.79; Best double couple: $M_0$5.00000×10^{17} NP1:ϕ_s247.00000°, δ56.00000°, λ-108.00000°. NP2:ϕ_s97.00000°, δ38.00000°, λ-66.00000°. Principal axes: T 4.4500, Plg9.0000°, Azm349.0000°; N 0.9600, Plg14.0000°, Azm257.0000°; P -5.4000, Plg72.0000°, Azm110.0000°;*
*MOS **03** 18:54:38.7±1.4, 49°.97S×120°.67E, h10km, mb5.6/21, MS5.0/35 Error ellipse: s-maj=15.8km s-min=8.1km az=81.0*
*GCMT **03** 18:54:42.6±0.1, 49°.96S×120°.80E, h14km, MW5.6, Moment Tensor Solution. s94,c172; s66,c76; Moment tensor: Scale 10^{17}Nm; M_{rr}-3.06±.04; $M_{\theta\theta}$2.91±.03; $M_{\phi\phi}$0.16±.03; $M_{r\theta}$-1.58±.08; $M_{\theta\phi}$-1.16±.02; $M_{\phi r}$0.67±.07; Best double couple: $M_0$3.60000×10^{17} NP1:ϕ_s288.00000°, δ31.00000°, λ-93.00000°. NP2:ϕ_s112.00000°, δ59.00000°, λ-88.00000°. Principal axes: T 3.7700, Plg14.0000°, Azm200.0000°; N -0.2600, Plg1.0000°, Azm291.0000°; P -3.4900, Plg76.0000°, Azm26.0000°; Data Used: II IU IC G. Surface waves: sta= 98, comp=215, per= 50.*
*NEIC **03** 18:54:47.5±0.0, 50°.03S×121°.03E, h10km, Moment Tensor Solution. s144 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.02; $M_{\theta\theta}$2.82; $M_{\phi\phi}$0.19; $M_{r\theta}$1.01; $M_{\theta\phi}$-1.16; $M_{\phi r}$0.63; Best double couple: $M_0$3.40000×10^{17} NP1:ϕ_s127.00000°, δ41.00000°, λ-63.00000°. NP2:ϕ_s275.00000°, δ54.00000°, λ-110.00000°. Principal axes: T 3.3400, Plg6.0000°, Azm18.0000°; N 0.0300, Plg16.0000°, Azm286.0000°; P -3.3800, Plg72.0000°, Azm130.0000°;*
*DJA **03** 18:54:47.7±1.1, 50°S±3°×12°1E±°, h55km±11km, M5.6/51, mb5.3/51, mB6.0/36, Mw(mB)5.6/36, Mwp5.9/3*
ISC 03 18:54:40.8±0.3**, 50°.09S**±0°.04×**120°.75E**±0°.06**, h15**km±1km**, n588, σ1°.47**/522**, mb5.4**/78**, MS5.2**/194**, 20C-16D, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	**Casey**	**17.06**	**194**	*e*P	**Pn**	**18 58 38.3**	**0.0**
	166nm,1.1s						
NWAO	**Narrogin (SRO)**	**17.35**	**350**	Pn	**Pn**	**18 58 42.4**	**+0.2**
NWAO	**Narrogin (SRO)**	**17.35**	**350**	Pn	**Pn**	**18 58 42.4**	**+0.2**
	13nm,0.3s,baz=183,slow=10,SNR=66						
NWAO				LR	LR	19 03 32.3	
	comp=Z,13μm,21.1s,baz=174,slow=31						
TAU	**Tasmania Unive**	**19.58**	**79**	*e*P	**Pn**	**18 59 10.1**	**+0.7**
TAU				pmax	pmax		
	comp=Z,87nm,0.9s						
TAU	**Tasmania Unive**	**19.58**	**79**	*e*P	**Pn**	**18 59 10.1**	**+0.7**
	comp=Z,245nm,1.3s						
FORT	**Forrest**	**20.06**	**19**	*e*P	**P**	**18 59 13.2**	**-0.1**
	comp=Z,106nm,0.9s						
BBOO	**Buckleboo**	**20.66**	**39**	*e*P	**P**	**18 59 20.1**	**+0.2**
	comp=Z,3μm,1.0s						
MIR	**Mirnyy**	**21.69**	**210**⇑	*i*P	**P**	**18 59 31.5**	**+0.9**
MIR				pmax	pmax		
	comp=Z,585nm,1.7s						
MIR				MLR	MLR		
	comp=N,8μm,18.0s						
MIR				MLR	MLR		
	comp=E,9μm,18.0s						
MIR				MLR	MLR		
	comp=Z,14μm,18.0s						
STKA	**Stephens Creek**	**23.92**	**48**	P	**P**	**18 59 53.5**	**-0.5**
STKA				PcP	**PcP**	**19 03 35.2**	**-0.9**
STKA	**Stephens Creek**	**23.92**	**48**	P	**P**	**18 59 53.5**	**-0.5**
	comp=Z,22nm,0.9s,baz=186,slow=13,SNR=36						
STKA				PcP	**PcP**	**19 03 35.2**	**-0.9**
	comp=Z,6.0nm,0.8s,baz=260,slow=4.4,SNR=3.3						
STKA				LR	LR	19 07 35.8	
	comp=Z,6μm,18.9s,baz=228,slow=32						
ASAR	**Alice Springs**	**28.31**	**26**	P	**P**	**19 00 32.6**	**-1.2**
ASAR				PcP	**PcP**	**19 03 45.3**	**-1.2**
ASAR	**Alice Springs**	**28.31**	**26**	P	**P**	**19 00 32.6**	**-1.2**
	comp=Z,52nm,0.7s,baz=200,slow=8.9,SNR=253						
ASAR				PcP	**PcP**	**19 03 45.3**	**-1.2**
	comp=Z,4.2nm,0.7s,baz=182,slow=2.2,SNR=6.8						
ASAR				LR	LR	19 10 29.4	
	comp=Z,8μm,19.8s,baz=14,slow=34						
AS31	**Alice Springs**	**28.31**	**26**	*e*P	**P**	**19 00 32.4**	**-1.4**
MBWA	**Marble Bar**	**28.88**	**358**	*e*P	**P**	**19 00 37.7**	**-1.1**
	comp=Z,46nm,1.0s						
MBWA				LR	LR		
	comp=Z,6μm,19.0s						
ARMA	**Armidale**	**30.36**	**61**	*e*P	**P**	**19 00 52.8**	**+0.8**
	comp=Z,68nm,1.1s						
VNDA	**Vanda**	**31.55**	**164**	*e*P	**P**	**19 01 02.7**	**+0.9**
	comp=Z,16nm,0.9s						
VNDA	**Vanda**	**31.55**	**164**	P	**P**	**19 01 03.1**	**+1.2**
	comp=Z,8.2nm,0.9s,baz=307,slow=8.5,SNR=40						
VNDA				LR	LR	19 13 17.2	
	comp=Z,7μm,18.5s,baz=318,slow=35						
WRA	**Warramunga Arr**	**31.97**	**25**	P	**P**	**19 01 04.6**	**-1.5**
WRA				PcP	**PcP**	**19 03 54.7**	**-1.3**
WRA	**Warramunga Arr**	**31.97**	**25**	P	**P**	**19 01 04.6**	**-1.5**
	comp=Z,26nm,0.8s,baz=198,slow=8.9,SNR=87						
WRA				PcP	**PcP**	**19 03 54.7**	**-1.3**
	comp=Z,10nm,0.8s,baz=212,slow=2.4,SNR=10						
WRA				LR	LR	19 12 35.7	
	comp=Z,5μm,20.5s,baz=185,slow=34						
WRAB	**Tennant Creek**	**31.98**	**25**	P	**P**	**19 01 05.0**	**-1.2**
WRAB				pmax	pmax		
	comp=Z,27nm,0.8s						
WRAB	**Tennant Creek**	**31.98**	**25**	*e*P	**P**	**19 01 04.4**	**-1.8**
	comp=Z,54nm,1.0s						
WRAB				LR	LR		
	comp=Z,6μm,22.0s						
WRAB	**Tennant Creek**	**31.98**	**25**	P	**P**	**19 01 05.0**	**-1.2**
	comp=Z,228nm,0.8s,SNR=14						
FITZ	**Fitzroy Crossi**	**32.16**	**9**	*e*P	**P**	**19 01 07.1**	**-0.6**
	comp=Z,88nm,0.8s						
FITZ				PcP	**PcP**	**19 03 56.6**	**+0.1**
FITZ	**Fitzroy Crossi**	**32.16**	**9**	P	**P**	**19 01 07.5**	**-0.2**
	comp=Z,71nm,0.8s,baz=188,slow=9.7,SNR=76						
FITZ				PcP	**PcP**	**19 03 56.6**	**+0.1**
	comp=Z,7.7nm,0.8s,baz=251,slow=5.5,SNR=5.0						
FITZ				LR	LR	19 13 03.7	
	comp=Z,4μm,18.2s,baz=196,slow=34						
SBA	**Scott Base**	**32.61**	**164**	P	**P**	**19 01 13.5**	**+2.3**
SBA				pmax	pmax		
	comp=Z,56nm,1.6s						
SBA	**Scott Base**	**32.61**	**164**	PFAKE		19 01 20.0	+8.8
SBA				LR	LR		
	comp=Z,6μm,21.0s						
MAW	**Mawson**	**33.09**	**216**	P	**P**	**19 01 15.7**	**+0.3**
MAW	**Mawson**	**33.09**	**216**	P	**P**	**19 01 15.7**	**+0.3**
	comp=Z,9.1nm,1.1s,baz=86,slow=10,SNR=9.0						
MAW				LR	LR	19 11 54.7	
	comp=Z,2μm,21.2s,baz=85,slow=31						
RPZ	**Rata Peaks**	**34.41**	**99**	P	**P**	**19 01 28.6**	**+1.4**
RPZ				PcP	**PcP**	**19 04 03.5**	**+1.0**
RPZ	**Rata Peaks**	**34.41**	**99**	P	**P**	**19 01 28.6**	**+1.4**
	comp=Z,22nm,1.1s,baz=67,slow=5.9,SNR=3.0						
RPZ				PcP	**PcP**	**19 04 03.5**	**+1.0**
	comp=Z,7.9nm,0.7s,baz=13,slow=10,SNR=4.0						
RPZ				LR	LR	19 12 46.6	
	comp=Z,3μm,19.3s,baz=235,slow=32						
CTA	**Charters Tower**	**36.14**	**43**	P	**P**	**19 01 41.9**	**-0.4**
CTA				PcP	**PcP**	**19 04 08.1**	**+0.2**
CTA	**Charters Tower**	**36.14**	**43**	P	**P**	**19 01 41.9**	**-0.4**
	comp=Z,27nm,0.8s,baz=207,slow=11,SNR=25						
CTA				PcP	**PcP**	**19 04 08.1**	**+0.2**
	comp=Z,1.9nm,0.3s,baz=322,slow=4.5,SNR=4.0						
CTA				LR	LR	19 16 04.2	
	comp=Z,4μm,18.1s,baz=200,slow=36						
CTAO	**Charters Tower**	**36.14**	**43**	P	**P**	**19 01 41.8**	**-0.5**
CTAO				pmax	pmax		
	comp=Z,33nm,0.9s						
CTAO	**Charters Tower**	**36.14**	**43**	*e*P	**P**	**19 01 41.8**	**-0.5**
	comp=Z,60nm,1.1s						
CTAO				LR	LR		
	comp=Z,4μm,20.0s						
SNZO	**South Karori**	**37.95**	**98**	PFAKE		19 02 10.0	+13
SNZO				LR	LR		
	comp=Z,2μm,19.0s						
QSPA	**South Pole Qui**	**40.03**	**180**	P	**P**	**19 02 15.6**	**+0.8**
QSPA				LR	LR		
	comp=Z,4μm,20.0s						
QSPA	**South Pole Qui**	**40.03**	**180**	P	**P**	**19 02 15.6**	**+0.8**
	comp=Z,33nm,0.8s,baz=324,slow=2.4,SNR=100						
COEN	**Coen**	**40.42**	**35**	*e*P	**P**	**19 02 17.9**	**-0.4**
	comp=Z,473nm,0.9s						
URZ	**Urewera**	**41.19**	**96**	*e*P	**P**	**19 02 24.4**	**-0.1**
	comp=Z,80nm,1.0s						
URZ	**Urewera**	**41.19**	**96**	P	**P**	**19 02 24.3**	**-0.1**
	comp=Z,40nm,0.8s,baz=242,slow=3.9,SNR=18						
URZ				LR	LR	19 17 11.7	
	comp=Z,1μm,18.1s,baz=234,slow=33						
SYO	**Syowa Base**	**41.47**	**213**⇑	*e*X	P	19 02 23.0	-3.4
SYO	**Syowa Base**	**41.47**	**213**⇑	*e*X	**P**	**19 02 26.0**	**-0.4**
COCO	**West Island**	**42.59**	**324**	PFAKE		19 02 50.0	+14
COCO				LR	LR		
	comp=Z,2μm,19.0s						
KAPI	**Kappang**	**44.93**	**359**	*e*P	**P**	**19 02 53.8**	**-1.1**
	comp=Z,139nm,1.4s						
KAPI	**Kappang**	**44.93**	**359**	P	**P**	**19 02 54.8**	**-0.1**
	comp=Z,278nm,1.3s,SNR=12						
KAPI	**Kappang**	**44.93**	**359**	P	**P**	**19 02 55.4**	**+0.5**
	comp=Z,74nm,2.6s,comp=Z,2μm						
KAPI	**Kappang**	**44.93**	**359**	P	**P**	**19 02 54.3**	**-0.6**
	comp=Z,16nm,0.7s,baz=210,slow=9.0,SNR=11						
KAPI				LR	LR	19 19 42.8	
	comp=Z,2μm,21.2s,baz=176,slow=34						
DZM	**Mont Dzumac**	**45.33**	**69**	*e*P	**P**	**19 02 57.3**	**-0.9**
	comp=Z,274nm,24.6s						
DZM				*e*S	**S**	**19 09 35.9**	**-2.4**
	comp=Z,1μm,28.1s						
DZM				*e*LR	LR	19 15 34.5	
	comp=Z,2μm,22.6s						
DZM	**Mont Dzumac**	**45.33**	**69**	*e*P	**P**	**19 02 59.2**	**+1.0**
	comp=Z,49nm,1.0s						
DZM	**Mont Dzumac**	**45.33**	**69**	P	**P**	**19 02 59.0**	**+0.9**
	comp=Z,32nm,0.9s,baz=215,slow=13,SNR=4.7						
PMG	**Port Moresby**	**46.10**	**38**	*e*P	**P**	**19 03 04.8**	**+0.6**
	comp=Z,92nm,1.0s						
PMG	**Port Moresby**	**46.10**	**38**	P	**P**	**19 03 05.3**	**+1.1**
	comp=Z,73nm,1.0s,comp=Z,2μm						
PMG	**Port Moresby**	**46.10**	**38**	P	**P**	**19 03 05.1**	**+0.9**
	comp=Z,60nm,0.8s,baz=210,slow=7.3,SNR=15						
PMG				LR	LR	19 21 47.9	
	comp=Z,3μm,19.0s,baz=30,slow=35						
KASI	**Kota Agung**	**46.48**	**337**	P	**P**	**19 03 07.4**	**+0.3**
BBKI	**Banjar Baru**	**46.73**	**352**	P	**P**	**19 03 09.3**	**+0.1**
KBKI	**Kotabaru**	**46.79**	**354**	P	**P**	**19 03 09.7**	**+0.1**
TTSI	**Tana Toraja**	**46.88**	**359**	P	**P**	**19 03 11.5**	**+1.2**
LWLI	**Liwa**	**47.07**	**337**	P	**P**	**19 03 12.7**	**+0.8**
PBKI	**Pangkalan Bun**	**47.84**	**348**	P	**P**	**19 03 17.7**	**-0.1**
FAKI	**Fak Fak**	**48.01**	**16**	P	**P**	**19 03 20.1**	**+1.0**
TPI	**Tanjungpandan**	**48.46**	**342**	P	**P**	**19 03 23.5**	**+0.9**
	comp=Z,89nm,1.6s,comp=Z,2μm						
WAMI	**Wamena**	**48.49**	**24**	P	**P**	**19 03 21.3**	**-1.5**
	comp=Z,107nm,0.8s						
KSI	**Kapahiang**	**48.76**	**336**	P	**P**	**19 03 26.2**	**+1.2**
	comp=Z,198nm,2.1s,comp=Z,4μm						
MAIT	**Maitri**	**49.29**	**204**	*e*P	P	19 03 19.1	-9.2
MAIT	**Maitri**	**49.29**	**204**	*e*P	P	19 03 19.0	-9.2
MAIT				*e*		19 03 29.9	
MASI	**Maura Aman, Be**	**49.34**	**335**	P	**P**	**19 03 30.7**	**+1.3**
PPBI	**Pangkal Pinang**	**49.35**	**341**	P	**P**	**19 03 30.2**	**+0.8**
LBMI	**Labuha**	**49.61**	**9**	P	**P**	**19 03 32.9**	**+1.5**
RKPI	**Ransiki, Papua**	**49.74**	**18**	P	**P**	**19 03 32.3**	**-0.1**
SWI	**Sorong**	**49.86**	**14**	P	**P**	**19 03 33.6**	**+0.3**
RAO	**Raoul Island**	**50.07**	**89**	LR	LR	19 21 57.0	
	comp=Z,472nm,18.2s,baz=144,slow=33						
JAY	**Jayapura**	**50.34**	**26**	P	**P**	**19 03 36.8**	**-0.2**
MRSI	**Marisa**	**50.39**	**2**	P	**P**	**19 03 37.5**	**+0.2**
KMSI	**Cibinong**	**50.55**	**4**	P	**P**	**19 03 38.3**	**-0.2**
STKI	**Sintang**	**50.59**	**348**	P	**P**	**19 03 40.3**	**+1.5**
HNR	**Honiara**	**51.90**	**52**	P	**P**	**19 03 49.7**	**+1.0**
HNR	**Honiara**	**51.90**	**52**	P	**P**	**19 03 49.7**	**+1.0**
	comp=Z,31nm,0.8s,baz=191,slow=5.2,SNR=2.6						
HNR				LR	LR	19 24 17.6	
	comp=Z,2μm,19.3s,baz=224,slow=34						
KSM	**Kuching**	**52.14**	**347**	*e*P	**P**	**19 03 49.3**	**-1.1**
	comp=Z,33nm,0.8s						
KSM				*e*PcP	**PcP**	**19 05 01.9**	**-0.3**
KSM				S	**S**	**19 11 17.6**	**+3.5**
KSM				LR	LR		
	comp=Z,420nm,20.0s						
KSM	**Kuching**	**52.14**	**347**	P	**P**	**19 03 50.3**	**-0.1**
KSM	**Kuching**	**52.14**	**347**	P	**P**	**19 03 51.5**	**+1.1**
	comp=Z,60nm,1.2s,comp=Z,1μm						
SNAA	**Sanae**	**52.20**	**199**	*e*P	**P**	**19 03 50.8**	**+0.5**
SNAA	**Sanae**	**52.20**	**199**	*e*sP	sP	19 03 55.2	-1.8
SNAA	**Sanae**	**52.20**	**199**	*e*P	**P**	**19 03 50.8**	**+0.5**
	comp=Z,87nm,1.0s						
SNAA				*e*S	**S**	**19 11 18.3**	**+4.3**
SNAA	**Sanae**	**52.20**	**199**	P	**P**	**19 03 50.9**	**+0.6**
	comp=Z,16nm,0.8s,baz=146,slow=9.0,SNR=124						
PPI	**Padang Panjang**	**52.42**	**334**	P	**P**	**19 03 53.6**	**+1.1**
	comp=Z,58nm,2.0s,comp=Z,2μm						
SBUM	**Sibu**	**52.85**	**349**	P	**P**	**19 03 55.9**	**+0.2**
SBUM	**Sibu**	**52.85**	**349**	P	**P**	**19 03 57.1**	**+1.4**
	comp=Z,59nm,1.6s,comp=Z,1μm						
BTM	**Bintulu**	**53.49**	**350**	P	**P**	**19 04 01.4**	**+1.0**
MYKOM	**Kota Tinggi**	**53.68**	**339**	P	**P**	**19 04 02.2**	**+0.4**
MYKOM	**Kota Tinggi**	**53.68**	**339**	P	**P**	**19 04 01.9**	**+0.1**
	comp=Z,41nm,2.0s,comp=Z,1μm						
MNSI	**Mandailing Nat**	**53.84**	**333**	P	**P**	**19 04 03.9**	**+0.9**
KGM	**Kluang**	**54.03**	**338**	P	**P**	**19 04 03.6**	**-0.8**
VNA1	**Neumayer--Stat**	**54.12**	**199**	*e*P	**P**	**19 04 05.2**	**+0.8**
TSM	**Tawau**	**54.23**	**356**	P	**P**	**19 04 06.4**	**+0.7**
MYLDM	**Lahad Datu**	**55.08**	**357**	P	**P**	**19 04 13.7**	**+1.8**
MYLDM	**Lahad Datu**	**55.08**	**357**	P	**P**	**19 04 13.2**	**+1.2**
	comp=Z,66nm,1.8s,comp=Z,3μm						
SDKM	**Sandakan**	**55.59**	**356**	P	**P**	**19 04 15.0**	**-0.7**
FRIM	**Kepong**	**55.62**	**337**	P	**P**	**19 04 15.1**	**-0.8**
MSVF	**Nonsavu**	**55.72**	**76**	P	**P**	**19 04 18.5**	**+1.7**
MSVF				pmax	pmax		
	comp=Z,36nm,1.0s						
MSVF	**Nonsavu**	**55.72**	**76**	*e*P	**P**	**19 04 17.9**	**+1.1**
	comp=Z,48nm,1.1s						
PSI	**Prapat**	**55.94**	**333**	P	**P**	**19 04 17.3**	**-1.0**
	comp=Z,44nm,1.5s,comp=Z,1μm						
KKM	**Kota Kinabalu**	**56.05**	**355**	PFAKE		19 04 30.0	+11
KKM				LR	LR		
	comp=Z,2μm,21.0s						
KKM	**Kota Kinabalu**	**56.05**	**355**	P	**P**	**19 04 18.9**	**-0.2**
KDM	**Kudat**	**56.88**	**355**	P	**P**	**19 04 26.6**	**+1.8**
KCSI	**Kotacane, Aceh**	**56.96**	**332**	P	**P**	**19 04 25.0**	**-0.5**
IPM	**Ipoh**	**56.97**	**336**	*e*P	**P**	**19 04 23.9**	**-1.6**
	comp=Z,74nm,0.9s						
IPM	**Ipoh**	**56.97**	**336**	P	**P**	**19 04 24.6**	**-0.9**
IPM	**Ipoh**	**56.97**	**336**	P	**P**	**19 04 25.3**	**-0.2**
	comp=Z,72nm,1.4s,comp=Z,2μm						
DAV	**Davao City (W)**	**57.08**	**6**	PFAKE		19 04 40.0	+14
DAV				LR	LR		
	comp=Z,1μm,19.0s						
CTBH	**Cotabato--PC H**	**57.16**	**4**⇓	*i*P	**P**	**19 04 26.8**	**0.0**
KTGM	**Kuala Trenggan**	**57.27**	**339**	P	**P**	**19 04 27.8**	**+0.2**
KULM	**Kulim**	**57.84**	**336**	*e*P	**P**	**19 04 29.9**	**-1.7**
	comp=Z,101nm,1.3s						
KULM				LR	LR		
	comp=Z,2μm,22.0s						
KULM	**Kulim**	**57.84**	**336**	P	**P**	**19 04 30.9**	**-0.7**
KULM	**Kulim**	**57.84**	**336**	P	**P**	**19 04 31.2**	**-0.4**
	comp=Z,83nm,2.2s,comp=Z,2μm						
RER	**Riviere de l'E**	**58.09**	**275**	*e*P	**P**	**19 04 33.0**	**-0.6**
	comp=Z,74nm,0.8s						
DGAR	**Diego Garcia**	**58.47**	**300**	PFAKE		19 04 50.0	+14
DGAR				LR	LR		
	comp=Z,1μm,20.0s						
BSI	**Banda Aceh**	**59.59**	**330**	P	**P**	**19 04 44.3**	**+0.5**
	comp=Z,112nm,1.2s						
FUNA	**Funafuti**	**63.51**	**70**	PFAKE		19 05 20.0	+10
FUNA				LR	LR		
	comp=Z,10μm,19.0s						
ABPO	**Ambohimpanom**	**65.12**	**270**	*e*P	**P**	**19 05 21.6**	**+0.4**
ABPO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ABPO				MLR	MLR		
	comp=Z,1μm,19.0s						
ABPO	**Ambohimpanom**	**65.12**	**270**	*e*P	**P**	**19 05 21.6**	**+0.4**
	comp=Z,8.4nm,0.9s						
ABPO				LR	LR		
	comp=Z,1μm,19.0s						
PMSA	**Palmer Station**	**65.41**	**178**	PFAKE		19 05 30.0	+7.9
PMSA				LR	LR		
	comp=Z,4μm,21.0s						
UBPT	**Khong Chiam**	**66.47**	**344**	P	**P**	**19 05 29.7**	**+0.3**
	comp=Z,68nm,2.0s,comp=Z,1μm						
GUMO	**Guam**	**66.86**	**26**	PFAKE		19 05 40.0	+8.1
GUMO				LR	LR		
	comp=Z,1μm,19.0s						
PALK	**Pallekele**	**66.86**	**316**	P	**P**	**19 05 32.4**	**+0.3**
	comp=Z,295nm,0.7s,SNR=7.3						
SRDT	**SRDT**	**66.93**	**337**	P	**P**	**19 05 33.6**	**+1.2**
	comp=Z,66nm,2.4s,comp=Z,5μm						
QIZ	**Qiongzhong**	**69.49**	**349**	P	**P**	**19 05 48.8**	**+0.4**
QIZ				pP	**pP**	**19 05 50.5**	**-2.8**
QIZ				sP	**sP**	**19 05 55.0**	**-0.2**
QIZ				S	**S**	**19 14 58.5**	**+3.2**
QIZ				pmax	pmax		
	comp=Z,45nm,1.6s						
QIZ				pmax	pmax		
	comp=Z,830nm,7.7s						
QIZ				LR	LR		
	comp=N,580nm,27.4s						
QIZ				LR	LR		
	comp=Z,980nm,40.0s						
QIZ	**Qiongzhong**	**69.49**	**349**	PFAKE		19 06 00.0	+12
QIZ				LR	LR		
	comp=Z,548nm,20.0s						
MSEY	**Mahe Island**	**70.70**	**286**	PFAKE		19 06 10.0	+14
MSEY				LR	LR		
	comp=Z,1μm,20.0s						
CMAR	**Chiang Mai Arr**	**70.92**	**338**	P	**P**	**19 05 56.4**	**-0.8**
CMAR	**Chiang Mai Arr**	**70.92**	**338**	P	**P**	**19 05 56.4**	**-0.8**
	comp=Z,26nm,0.8s,baz=190,slow=5.3,SNR=23						
CMAR				LR	LR	19 38 02.7	
	comp=Z,600nm,18.3s,baz=318,slow=37						
CMMT	**Chiang Mai**	**71.26**	**338**	P	**P**	**19 05 59.5**	**+0.3**
	comp=Z,53nm,1.4s,comp=Z,1μm						
CHTO	**Chiang Mai**	**71.26**	**338**	PFAKE		19 06 10.0	+11
CHTO				LR	LR		
	comp=Z,615nm,20.0s						
CHTO	**Chiang Mai**	**71.26**	**338**	P	**P**	**19 05 59.0**	**-0.2**
	comp=Z,60nm,1.4s,comp=Z,1μm						
SUR	**Sutherland**	**71.72**	**241**	*e*P	**P**	**19 06 03.2**	**+0.9**
	comp=Z,34nm,0.8s						
SUR				LR	LR		
	comp=Z,1μm,19.0s						
SUR	**Sutherland**	**71.72**	**241**	P	**P**	**19 06 03.4**	**+1.1**
	comp=Z,291nm,0.8s,SNR=11						
BOSA	**Boshof**	**71.92**	**247**	*e*P	**P**	**19 06 02.9**	**-0.6**
	comp=Z,34nm,1.2s						
BOSA	**Boshof**	**71.92**	**247**	P	**P**	**19 06 03.3**	**-0.2**
	comp=Z,21nm,1.1s,baz=136,slow=6.8,SNR=13						
BOSA				LR	LR	19 31 21.6	
	comp=Z,1μm,18.9s,baz=143,slow=31						
SSLB	**Suanglung**	**73.55**	**0**	*e*P	**P**	**19 06 12.1**	**-0.7**
	comp=Z,67nm,0.9s						
LBTB	**Lobatse**	**74.38**	**250**	*e*P	**P**	**19 06 17.0**	**-1.0**
	comp=Z,9.2nm,0.8s						
YHNB	**Yeheng**	**74.43**	**1**	PFAKE		19 06 30.0	+12
YHNB				LR	LR		
	comp=Z,677nm,21.0s						
QZH	**Quanzhou**	**74.72**	**358**⇓	*i*P	**P**	**19 06 21.2**	**+1.6**
QZH				*e*S	**S**	**19 15 58.3**	**+3.2**
QZH				pmax	pmax		
	comp=Z,2μm,8.1s						
QZH				LR	LR		
	comp=N,3μm,15.0s						
QZH				LR	LR		
	comp=E,2μm,13.8s						
QZH				LR	LR		
	comp=Z,2μm,22.7s						
PPT2	**Papeete2**	**76.51**	**101**	*e*LR	LR	19 31 19.0	
	comp=Z,653nm,23.0s						
PPT	**Papeete**	**76.53**	**101**	LR	LR	19 33 00.6	
	comp=Z,400nm,20.3s,baz=193,slow=30						
KMI	**Kunming**	**76.57**	**343**	P	**P**	**19 06 31.3**	**+0.8**
KMI				pP	**pP**	**19 06 36.3**	**+0.8**
KMI				sP	**sP**	**19 06 38.4**	**+1.1**
KMI				S	**S**	**19 16 19.9**	**+3.9**
KMI				sS	**sS**	**19 16 27.1**	**+2.8**
KMI				SS	**SS**	**19 21 16.4**	**+4.4**
KMI				pmax	pmax		
	comp=Z,120nm,1.1s						
KMI				pmax	pmax		
	comp=Z,930nm,5.6s						
KMI				LR	LR		
	comp=N,900nm,21.6s						
KMI				LR	LR		
	comp=E,380nm,24.0s						
KMI				LR	LR		
	comp=Z,1μm,22.2s						
HYB	**Hyderabad**	**76.82**	**319**	*i* P	**P**	**19 06 30.0**	**-1.8**
HYB				*e*S	**S**	**19 16 19.0**	**+0.3**
GYA	**Guiyang**	**77.23**	**347**⇑	*i*P	**P**	**19 06 37.0**	**+3.0**
GYA				PP	**PP**	**19 09 33.2**	**+4.7**
GYA				S	**S**	**19 16 27.0**	**+4.0**
GYA				SKS	**SKSac**	**19 16 45.3**	**-0.7**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,5.8s						
GYA				LR	LR		
	comp=N,2μm,18.0s						
GYA				LR	LR		

comp=E,1µm,19.0s
GYA LR LR
comp=Z,2µm,18.9s
EFI East Falkland 78.60 181 PFAKE 19 06 50.0 +8.6
EFI LR LR
comp=Z,2µm,21.0s
LSZ Lusaka 80.06 258 *e*P **P 19 06 50.8 +0.7**
LSZ LR LR
comp=Z,790nm,19.0s
WAKE Wake Island 80.08 44 PFAKE 19 07 00.0 +10
WAKE LR LR
comp=Z,2µm,20.0s
WHN Wuhan 80.48 354 ⇓P **P 19 06 51.6 0.0**
WHN S **S 19 16 54.9 -2.3**
WHN LR LR
comp=Z,1µm,20.2s
ENH Enshi 80.63 350 *e*P P 19 06 46.9 -5.6
comp=Z,70nm,1.1s
ENH LR LR
comp=Z,680nm,21.0s
SSE Sheshan 80.83 0 P **P 19 06 53.1 -0.3**
SSE PP **PP 19 09 59.8 +1.5**
SSE S S 19 17 09.6 +8.8
SSE pmax pmax
comp=Z,56nm,0.8s
SSE pmax pmax
comp=Z,630nm,7.6s
SSE LR LR
comp=N,310nm,33.8s
SSE LR LR
comp=E,140nm,33.8s
SSE LR LR
comp=Z,430nm,35.4s
RKT Rikitea 81.23 115 *e*LR LR 19 32 28.3
comp=Z,566nm,28.5s
NJ2 Nanjing 81.80 358 *e*P **P 19 06 58.6 0.0**
NJ2 pP **pP 19 07 02.7 -0.9**
NJ2 PP **PP 19 10 09.5 +3.2**
NJ2 S S 19 17 19.5 +8.7
NJ2 pmax pmax
comp=Z,40nm,1.0s
NJ2 pmax pmax
comp=Z,880nm,7.4s
NJ2 LR LR
comp=N,870nm,20.9s
NJ2 LR LR
comp=E,1µm,28.0s
NJ2 LR LR
comp=Z,710nm,25.3s
CD2 Chengdu 82.04 345 P **P 19 06 59.9 -0.1**
CD2 pP **pP 19 07 04.9 -0.1**
CD2 sP **sP 19 07 07.3 +0.5**
CD2 PP **PP 19 10 10.8 +2.4**
CD2 S **S 19 17 12.9 -0.7**
CD2 sS **sS 19 17 21.8 -0.1**
CD2 SS **SS 19 22 38.0 +4.3**
CD2 pmax pmax
comp=Z,110nm,1.1s
CD2 pmax pmax
comp=Z,1µm,5.9s
CD2 LR LR
comp=N,1µm,22.6s
CD2 LR LR
comp=E,1µm,17.8s
CD2 LR LR
comp=Z,1µm,19.0s
JNU Nakatsue 83.33 9 *e*P **P 19 07 05.3 -1.3**
comp=Z,9.1nm,0.8s
TSUM Tsumeb 83.60 248 *e*P **P 19 07 10.4 +1.7**
comp=Z,28nm,1.4s
TSUM LR LR
comp=Z,1µm,20.0s
LSA Lhasa 83.67 334 PFAKE 19 07 20.0 +11
LSA LR LR
comp=Z,790nm,20.0s
XAN Xi'an 84.42 350 SKS SKSac 19 17 21.8 -13
XAN Xi'an 84.42 350 S S 19 17 30.0 -7.5
XAN Xi'an 84.42 350 SS SS 19 22 59.3 -10
XAN pmax pmax
comp=Z,13nm,1.5s
XAN pmax pmax
comp=Z,210nm,7.7s
XAN LR LR
comp=N,540nm,26.6s
XAN LR LR
comp=Z,240nm,31.4s
KMBO Kilima Mbogo 84.96 274 *e*P **P 19 07 16.7 +1.0**
comp=Z,38nm,1.7s
KMBO Kilima Mbogo 84.96 274 P **P 19 07 16.9 +1.2**
comp=Z,4.6nm,1.0s,baz=102,slow=4.3,SNR=12
KMBO LR LR 19 40 39.3
comp=Z,370nm,18.6s,baz=96,slow=32
LZH Lanzhou 87.10 346 ⇓P **P 19 07 25.6 0.0**
LZH pP **pP 19 07 31.9 +1.2**
LZH sP **sP 19 07 34.8 +2.3**
LZH PP **PP 19 10 52.2 +2.5**
LZH SKS **SKSac 19 17 47.1 -4.9**
LZH *e*S **SKKSac 19 17 59.1 -1.7**
LZH pmax pmax
comp=Z,45nm,1.1s
LZH pmax pmax
comp=Z,230nm,5.0s
LZH LR LR
comp=N,260nm,14.8s
LZH LR LR
comp=E,650nm,17.7s
LZH LR LR
comp=Z,2µm,20.1s
INCN Inchon 87.36 5 *e*P **P 19 07 26.7 +0.1**
comp=Z,15nm,0.6s
INCN LR LR
comp=Z,496nm,20.0s
KSAR Wonju Array Be 87.39 6 P **P 19 07 27.1 +0.4**
KSRS Korea Array 87.40 6 P **P 19 07 27.1 +0.4**
comp=Z,14nm,0.8s,baz=186,slow=3.9,SNR=11
KSRS LR LR 19 47 45.1
comp=Z,269nm,22.0s,baz=181,slow=36
MJAR Matsushiro Arr 87.63 14 P **P 19 07 27.1 -0.9**
MJAR Matsushiro Arr 87.63 14 P **P 19 07 27.1 -0.9**
comp=Z,7.1nm,0.9s,baz=193,slow=5.9,SNR=19
MJAR LR LR 19 45 35.3
comp=Z,473nm,18.7s,baz=195,slow=35
MAJO Matsushiro 87.63 14 *e*P **P 19 07 26.8 -1.1**
MAJO pmax pmax
comp=Z,27nm,1.2s
MAJO MLR MLR
comp=Z,604nm,20.0s
MAJO Matsushiro 87.63 14 *e*P **P 19 07 26.8 -1.1**
comp=Z,27nm,1.2s
MAJO LR LR
comp=Z,604nm,20.0s
MAT Matsushiro 87.63 14 P **P 19 07 26.5 -1.4**
MAT S **S 19 18 11.0 +2.2**
DL2 Dalian 88.62 1 ⇓ *i*P **P 19 07 32.1 -0.4**
DL2 S **S 19 18 18.5 +0.5**
DL2 pmax pmax
comp=Z,46nm,1.4s
DL2 pmax pmax
comp=Z,670nm,6.5s
DL2 LR LR
comp=N,230nm,21.1s
DL2 LR LR
comp=Z,230nm,19.1s
PLCA Paso Flores 89.01 171 *e*P **P 19 07 35.5 +0.6**
comp=Z,28nm,0.9s
PLCA Paso Flores 89.01 171 P **P 19 07 35.6 +0.6**
comp=Z,18nm,0.8s,baz=204,slow=5.8,SNR=16
PLCA LR LR 19 49 09.4
comp=Z,870nm,19.2s,baz=181,slow=37
BJT Baijiatuau 89.82 356 PFAKE 19 07 50.0 +12
BJT LR LR
comp=Z,629nm,22.0s
BJI Beijing 89.84 356 P **P 19 07 40.4 +2.2**
BJI S **S 19 18 34.3 +4.9**
BJI pmax pmax
comp=Z,24nm,1.1s
BJI pmax pmax
comp=Z,550nm,6.2s
BJI LR LR
comp=N,470nm,20.9s
BJI LR LR
comp=E,290nm,20.5s
BJI LR LR
comp=Z,480nm,21.3s
HHC Hu-ho-hao-te 90.92 353 *e*P **P 19 07 44.1 +0.7**
HHC pP **pP 19 07 48.5 0.0**
HHC sP **sP 19 07 51.4 +1.1**
HHC PP **PP 19 11 18.9 -1.2**
HHC SKS **SKSac 19 18 14.2 -0.1**
HHC S **S 19 18 39.2 -0.4**
HHC sS **sS 19 18 48.6 +0.6**
HHC pmax pmax
comp=Z,80nm,0.8s
HHC pmax pmax
comp=Z,890nm,6.2s
HHC LR LR
comp=N,400nm,17.8s
HHC LR LR
comp=E,660nm,19.0s
HHC LR LR
comp=Z,660nm,15.5s
GTA Gaotai 91.01 344 ⇓P **P 19 07 43.3 -0.6**
GTA pP **pP 19 07 47.3 -1.7**
GTA sP **sP 19 07 49.7 -1.1**
GTA PP **PP 19 11 21.9 +1.0**
GTA SKS **SKSac 19 18 13.3 -1.6**
GTA S **S 19 18 39.2 -1.3**
GTA pmax pmax
comp=Z,33nm,0.8s
GTA pmax pmax
comp=Z,460nm,8.1s
GTA LR LR
comp=N,580nm,18.0s
GTA LR LR
comp=E,430nm,18.1s
GTA LR LR
comp=Z,730nm,18.1s
SNY Shenyang 91.57 2 ⇓P **P 19 07 46.0 -0.2**
SNY pmax pmax
comp=Z,30nm,1.2s
SNY pmax pmax
comp=Z,550nm,7.3s
SNY LR LR
comp=N,400nm,18.2s
SNY LR LR
comp=E,330nm,18.6s
SNY LR LR
comp=Z,480nm,19.0s
TRQA Tornquist 92.19 178 PFAKE 19 08 00.0 +10
TRQA LR LR
comp=Z,1µm,20.0s
CN2 Changchun 93.60 3 ⇑P **P 19 07 56.2 +0.6**
CN2 *e*sP **sP 19 08 03.0 +0.5**
CN2 *e*S **S 19 19 02.7 -0.5**
CN2 pmax pmax
comp=Z,40nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,600nm,20.0s
CN2 LR LR
comp=E,900nm,20.0s
CN2 LR LR
comp=Z,1µm,22.0s
ERM Erimo 93.81 17 PFAKE 19 08 10.0 +13
ERM LR LR
comp=Z,506nm,22.0s
USRK Ussuriysk Arra 94.42 8 P **P 19 07 59.0 -0.3**
comp=Z,6.7nm,0.8s,baz=230,slow=4.6,SNR=13
USRK LR LR 19 51 10.3
comp=Z,413nm,20.8s,baz=338,slow=36
MDJ Mudanjiang 94.64 6 P **P 19 08 01.2 +0.9**
MDJ pP **pP 19 08 04.5 -0.9**
MDJ sP **sP 19 08 05.8 -1.4**
MDJ S **ScS 19 19 14.4 +1.1**
MDJ sS **sS 19 19 20.1 -0.6**
MDJ pmax pmax
comp=Z,15nm,1.3s
MDJ pmax pmax
comp=Z,300nm,5.7s
MDJ LR LR
comp=N,370nm,29.8s
MDJ LR LR
comp=E,160nm,25.5s
MDJ LR LR
comp=Z,310nm,25.9s
MDJ Mudanjiang 94.64 6 *e*P **P 19 08 00.6 +0.3**
comp=Z,29nm,1.3s
MDJ LR LR
comp=Z,378nm,21.0s
MIDW Midway 95.27 51 PFAKE 19 08 10.0 +6.4
MIDW LR LR
comp=Z,910nm,20.0s
KBL Kabul 95.87 319 *e*P **P 19 08 06.0 -0.5**
KBL pmax pmax
comp=Z,40nm,1.4s
KBL Kabul 95.87 319 *e*P **P 19 08 06.0 -0.5**
comp=Z,40nm,1.4s
YUK Yuzh-Kuril'sk 96.27 18 *c* *i*P **P 19 08 06.2 -1.6**
YUK *i* 19 12 00.4
YUK *i* S **SKSac 19 18 45.0 +1.9**
YUK *i* 19 19 24.4
YUK PS **PS 19 20 45.5 -2.7**
YUK *i* SS **SS 19 26 01.9 +1.9**
YUK *i* SSS SSS 19 29 40.9
KSH Kashi 97.53 327 *e*S **SKKSac 19 19 11.5 -6.5**
KSH Kashi 97.53 327 *e*sS S 19 19 21.1 -17
KSH pmax pmax
comp=Z,16nm,0.7s
KSH pmax pmax
comp=Z,250nm,4.4s
KSH LR LR
comp=N,320nm,6.7s
KSH LR LR
comp=E,390nm,10.2s
KSH LR LR
comp=Z,450nm,6.8s
KUR Kuril'sk 97.83 19 *c* *i*P **P 19 08 12.7 -2.1**
KUR *i* 19 12 13.7
WMQ Urumqi 97.88 337 *e*P **P 19 08 15.0 -0.2**
WMQ sP **sP 19 08 22.0 -0.1**
WMQ SKS **SKSac 19 18 51.0 -0.7**
WMQ S **S 19 19 37.0 -3.4**
WMQ pmax pmax
comp=Z,11nm,1.1s
WMQ pmax pmax
comp=Z,200nm,5.8s
WMQ LR LR
comp=N,910nm,17.6s
WMQ LR LR
comp=E,880nm,22.5s
WMQ LR LR
comp=Z,1µm,27.6s
ULN Ulaanbaatar 98.29 351 *e*P **P 19 08 16.0 -1.0**
comp=Z,13nm,1.3s
ULN LR LR
comp=Z,354nm,19.0s
ULN Ulaanbaatar 98.29 351 P **P 19 08 16.7 -0.3**
comp=Z,8.8nm,1.8s,comp=Z,240nm
SONM Songino Array 98.33 350 P **P 19 08 15.9 -1.3**
SONM Songino Array 98.33 350 P **P 19 08 15.9 -1.3**
comp=Z,5.2nm,0.9s,baz=167,slow=3.9,SNR=35
SONM LR LR 19 51 05.7
comp=Z,524nm,22.0s,baz=172,slow=34
HABR Khabarovsk 98.95 10 P **P 19 08 18.6 -1.1**
HABR *PP Pdif 19 08 21.7 +2.0
HABR *e*S **SKSac 19 18 56.4 -0.2**
HABR *e*PS **PS 19 21 15.2 -2.1**
HABR *e*SS **SS 19 26 35.6 -2.0**
HABR *e*SSS SSS 19 30 23.5
HABR pmax pmax
comp=N,46nm,2.2s
HABR pmax pmax
comp=Z,77nm,2.2s
HABR pmax pmax
comp=E,51nm,2.2s
HABR MLR MLR
comp=Z,128nm,21.0s
HIA Hailar 98.98 359 PFAKE 19 08 30.0 +10
HIA LR LR
comp=Z,446nm,20.0s
LCO Las Campanas 100.59 170 PFAKE 19 08 40.0 +12
LCO LR LR
comp=Z,1µm,19.0s
TKM2 Tokmak 2 100.68 328 PFAKE 19 08 40.0 +12
TKM2 LR LR
comp=Z,809nm,21.0s
AAK Ala-Archa 100.81 327 *e*P **Pdif 19 08 28.6 +0.2**
AAK pmax pmax
comp=Z,6.0nm,1.0s
AAK Ala-Archa 100.81 327 *e*Pdif **Pdif 19 08 27.6 -0.9**
comp=Z,10nm,0.8s
AAK LR LR
comp=Z,919nm,21.0s
EKS2 Erkin-Say 101.09 327 PFAKE 19 08 40.0 +10
EKS2 LR LR
comp=Z,601nm,20.0s
MK31 Makanchi Array 102.08 334 *e*P **Pdif 19 08 31.7 -2.1**
MK31 pmax pmax
comp=Z,4.0nm,0.5s
MK31 Makanchi Array 102.08 334 *e*Pdif **Pdif 19 08 31.7 -2.1**
TLY Talaya 102.43 349 *e* **PP 19 12 52.3 +3.5**
TLY *e* 19 19 18.5
TLY *e* 19 21 47.8
TLY *e* 19 22 44.9
TLY pmax pmax
comp=Z,4.0nm,0.6s
TLY MLR MLR
comp=Z,330nm,20.0s
KK31 Karatay Array 102.66 325 P **Pdif 19 08 35.1 -1.3**
KKAR Karatay Array 102.66 325 P **Pdif 19 08 36.0 -0.4**
KKAR pmax pmax
comp=Z,1.0nm,0.7s
KKAR Karatay Array 102.66 325 *e*Pdif **Pdif 19 08 35.2 -1.2**
comp=Z,0.7nm,0.7s
SPB Sao Paulo 105.90 191 PFAKE 19 13 20.0
SPB LR LR
comp=Z,2µm,19.0s
KURBB Kurchatov Arra 106.61 333 Pdiff **Pdif 19 08 52.7 -1.1**
comp=Z,1.2nm,0.5s,baz=158,slow=3.5,SNR=9.3
KURBB PKiKP **PKiKP 19 13 03.1 -1.1**
comp=Z,0.4nm,0.2s,baz=170,slow=1.8,SNR=5.4
KURBB PKKPab **PKKPdf 19 24 40.5 +4.0**
comp=Z,0.4nm,0.3s,baz=334,slow=4.0,SNR=4.6
KURK Kurchatov 106.67 334 P **Pdif 19 08 53.4 -0.6**
KURK pmax pmax
comp=Z,6.0nm,0.8s
KURK Kurchatov 106.67 334 *e*Pdif **Pdif 19 08 52.9 -1.2**
comp=Z,5.7nm,0.8s
KURK PKiKP **PKiKP 19 13 03.1 -1.2**
KURK PKKPab **PKKPdf 19 24 40.5 +4.1**
KURK LR LR
comp=Z,622nm,22.0s
BHD Baghdad 106.89 302 *e*Pdiff **Pdif 19 08 54.0 -1.4**
BHD *e*PKiKP **PKiKP 19 13 07.7 +2.5**
BHD *e*PP **PP 19 13 23.0 +0.9**
BHD *e*SKS **SKSac 19 19 35.7 +1.1**
BHD *e*Ps 19 22 40.0
LVC Limon Verde 107.11 171 PFAKE 19 13 20.0
LVC LR LR
comp=Z,879nm,22.0s
ZALV Zalesovo Beam 107.98 339 PKKPbc PKKPbc 19 24 19.1 -0.3
comp=Z,0.7nm,0.7s,baz=316,slow=4.0,SNR=3.8
BVAR Borovoye Array 111.19 330 PKiKP **PKiKP 19 13 12.6 -0.1**
BVAR Borovoye Array 111.19 330 PKiKP **PKiKP 19 13 12.6 -0.1**
BVAR PKKPbc **PKKPbc 19 24 08.6 -0.3**
BVAR Borovoye Array 111.19 330 PKiKP **PKiKP 19 13 12.6 -0.1**
comp=Z,1.0nm,0.7s,baz=144,slow=3.5,SNR=5.2
BVAR PKKPbc **PKKPbc 19 24 08.6 -0.3**
comp=Z,0.4nm,0.7s,baz=352,slow=2.9,SNR=2.9
BRVK Borovoye 111.25 330 PFAKE 19 13 20.0
BRVK LR LR
comp=Z,824nm,22.0s
GNI Garni 111.83 307 PFAKE 19 13 30.0
GNI LR LR
comp=Z,479nm,19.0s
MAK Makhachkala 112.53 310 *i* PKiKP **PKiKP 19 13 11.4 -4.1**
MAK *e* 19 14 00.5
MAK *e*PPP PPP 19 16 21.9
MAK *e*SS SS 19 29 41.1 -2.0
MAK pmax pmax
comp=Z,254nm,1.3s
MAK MLR MLR
comp=Z,357nm,16.0s
CSS Prodhromos 114.36 296 PFAKE 19 13 30.0 +11
CSS LR LR
comp=Z,443nm,21.0s
KBZ Khabaz 115.38 308 PKiKP **PKPdf 19 13 19.8 -1.2**
KBZ Khabaz 115.38 308 PKP **PKPdf 19 13 19.8 -1.2**
KBZ Khabaz 115.38 308 PKP **PKPdf 19 13 19.8 -1.2**
comp=Z,2.1nm,0.8s,baz=90,slow=2.0,SNR=3.3
KIV Kislovodsk 115.65 308 *i* PKiKP **PKPdf 19 13 20.6 -1.0**
KIV *e* 19 14 21.5
KIV *e* 19 20 11.6
KIV *e*PS **PS 19 24 02.5 -2.5**
KIV *e*SS SS 19 30 22.0 -2.6
KIV pmax pmax
comp=Z,6.0nm,0.7s
KIV MLR MLR
comp=Z,265nm,21.0s
NNA Nana 116.29 161 PFAKE 19 13 40.0 +16
NNA LR LR
comp=Z,716nm,20.0s
DBIC Dimbokro 117.43 246 PKP **PKPdf 19 13 25.8 -0.1**
DBIC Dimbokro 117.43 246 PKP **PKPdf 19 13 25.8 -0.1**
comp=Z,3.4nm,1.0s,baz=90,slow=1.0,SNR=2.4
BR131 Keskin Array S 117.51 300 *e*PKPdf **PKPdf 19 13 24.2 -1.2**
BRTR Keskin Array B 117.51 300 PKP **PKPdf 19 13 24.1 -1.4**
BRTR Keskin Array B 117.51 300 PKP **PKPdf 19 13 24.1 -1.4**
comp=Z,1.8nm,0.7s,baz=156,slow=4.3,SNR=8.6
SVE Sverdlovsk 117.55 327 *e*PKiKP **PKPdf 19 13 25.3 +0.6**
ARU Arti 117.97 326 *i* PKiKP **PKPdf 19 13 24.7 -0.9**
ARU 19 20 16.7
ARU SP SP 19 24 19.2 -4.3
ARU PS **PS 19 24 28.4 +2.8**
ARU MLR MLR
comp=Z,422nm,20.0s
ISP Isparta 117.98 296 PFAKE 19 13 40.0 +14
ISP LR LR
comp=Z,365nm,20.0s
ANTO Ankara 118.08 299 PFAKE 19 13 40.0 +14
ANTO LR LR
comp=Z,322nm,19.0s
TORD Torodi Ar. Bea 118.53 256 PKP **PKPdf 19 13 26.9 -1.0**
TORD PKKPab **PKKPab 19 23 45.2 -2.3**
TORD Torodi Ar. Bea 118.53 256 PKP **PKPdf 19 13 26.9 -1.0**
comp=Z,1.7nm,0.7s,baz=119,slow=1.5,SNR=9.2
TORD PKKPab **PKKPab 19 23 45.2 -2.3**
comp=Z,1.3nm,0.8s,baz=303,slow=4.9,SNR=6.6
ANN Anapa 118.93 306 *i* PKiKP **PKPdf 19 13 27.7 -0.1**
ANN *e* 19 14 45.9
ANN *e*PPP PPP 19 17 19.9
ANN pmax pmax
comp=Z,24nm,0.9s
RCBR Riachuelo 120.74 207 PFAKE 19 13 40.0 +7.6
RCBR LR LR
comp=Z,925nm,20.0s
SAML Samuel 121.11 175 PFAKE 19 13 40.0 +7.0
SAML LR LR
comp=Z,1µm,21.0s
VRHR Novokhopersk 121.14 314 *e*PKiKP **PKPdf 19 13 30.3 -1.5**
VRHR pmax pmax
comp=Z,6.0nm,0.5s
VRHR pmax pmax
comp=N,9.0nm,0.4s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VORD Divnogorie 122.15 312 *e*PKiKP **PKPdf 19 13 32.5 -1.2**
VORD pmax pmax
comp=Z,4.0nm,0.7s
VORD pmax pmax
comp=N,5.0nm,0.6s
VORD pmax pmax
comp=E,6.0nm,0.6s
VORD MLR MLR
comp=Z,290nm,16.0s
VORD MLR MLR
comp=N,3µm,26.0s
VORD MLR MLR
comp=E,2µm,23.0s
VSR Storozhevoye 122.37 313 *e*PKiKP **PKPdf 19 13 33.1 -1.1**
VSR pmax pmax
comp=Z,10.0nm,0.6s
VSR pmax pmax
comp=N,2.0nm,0.3s
VSR pmax pmax
comp=E,8.0nm,1.0s
VSR MLR MLR
comp=Z,630nm,23.0s
VSR MLR MLR
comp=N,200nm,14.0s
VSR MLR MLR
comp=E,290nm,19.0s
BILL Bilibino 122.62 19 ⇓ *e*PKiKP **PKPdf 19 13 34.0 -0.2**
BILL *e* 19 15 10.9

BILL eS SKSac 19 20 29.8 -3.7
BILL i SS SS 19 32 06.0 +13
BILL pmax pmax
comp=Z,71nm,0.8s
BILL Bilibino 122.62 19 eP **PKPdf 19 13 34.0 -0.2**
BILL LR LR
comp=Z,202nm,21.0s
TAM Tamanrasset 123.23 266 ePKIKP **PKPdf 19 13 37.2 +0.2**
TAM MLR MLR
comp=Z,712nm,19.0s
TAM Tamanrasset 123.23 266 ePKPdf **PKPdf 19 13 37.2 +0.2**
TAM LR LR
comp=Z,712nm,19.0s
TIRR Tirgusor 123.55 301 ⇑PKIKP **PKPdf 19 13 35.8 -0.9**
TIRR Tirgusor 123.55 301 ⇑i P **PKPdf 19 13 35.8 -0.9**
TLCR 123.79 302 ⇑PKIKP **PKPdf 19 13 37.1 0.0**
TLCR 123.79 302 ⇑i P **PKPdf 19 13 37.1 0.0**
KIS Kishinev 124.93 303 ePKP **PKPdf 19 13 37.0 -2.2**
KIS LRM MLR 20 05 03.0
comp=Z,300nm,18.0s
KIS Kishinev 124.93 303 ePKIKP **PKPdf 19 13 37.0 -2.2**
KIS MLR MLR
comp=Z,300nm,18.0s
KIS MLR MLR
comp=Z,300nm,17.0s
TESR Tescani 125.80 302 ⇓i P **PKPdf 19 13 40.3 -0.7**
MOS Moscow 125.96 316 ePKIKP **PKPdf 19 13 35.8 -5.1**
MOS e 19 15 35.5
OBN Obninsk 126.06 315 ⇑i PKIKP **PKPdf 19 13 40.4 -0.7**
OBN e 19 15 31.6
OBN i SS SS 19 32 34.1 -3.2
OBN pmax pmax
comp=Z,16nm,0.7s
ARR Arges 126.22 300 ⇑i P **PKPdf 19 13 41.4 -0.5**
WDD Wield Dalam 126.33 285 PFAKE 19 13 50.0 +7.7
WDD LR LR
comp=Z,517nm,19.0s
TIR Tirane 126.51 293 PFAKE 19 13 50.0 +7.5
TIR LR LR
comp=Z,353nm,19.0s
LOT Lotru 126.75 299 ⇓i P **PKPdf 19 13 43.6 +0.6**
AK02 Malin Array Si 126.94 307 ePKPdf **PKPdf 19 13 40.8 -2.2**
AK01 Malin Array Si 126.96 307 ePKPdf **PKPdf 19 13 41.6 -1.3**
AKASG Malin Array Be 126.96 307 PKIKP **PKPdf 19 13 41.3 -1.7**
AKASG Malin Array Be 126.96 307 PKP **PKPdf 19 13 41.3 -1.7**
AKASG Malin Array Be 126.96 307 PKP **PKPdf 19 13 41.3 -1.7**
comp=Z,5.1nm,0.7s,baz=96,slow=2.2,SNR=16
KIEV Kiev 126.96 307 ePKIKP **PKPdf 19 13 39.9 -3.1**
KIEV MLR MLR
comp=Z,378nm,19.0s
KIEV Kiev 126.96 307 ePKPdf **PKPdf 19 13 39.9 -3.1**
KIEV LR LR
comp=Z,378nm,19.0s
CEL Celeste 126.99 288 PFAKE 19 13 50.0 +6.4
CEL LR LR
comp=Z,277nm,21.0s
TIP Timpagrande 127.04 289 PFAKE 19 13 50.0 +6.4
TIP LR LR
comp=Z,364nm,19.0s
BURAR Bucovina Array 127.25 302 i P **PKPdf 19 13 44.8 +1.0**
OTAV Otavalo 127.69 155 ePKPdf **PKPdf 19 13 46.7 +0.5**
OTAV LR LR
comp=Z,556nm,22.0s
CUC Castrococco 128.11 289 PFAKE 19 14 00.0 +14
CUC LR LR
comp=Z,274nm,20.0s
DRGR 128.15 300 ⇑PKIKP **PKPdf 19 13 45.3 -0.2**
DRGR 128.15 300 ⇑i P **PKPdf 19 13 45.3 -0.2**
KLMR Klimovskoe 128.24 322 ePKIKP **PKPdf 19 13 44.1 -1.0**
KLMR e 19 15 52.5
KLMR pmax pmax
comp=Z,32nm,1.3s
KLMR MLR MLR
comp=Z,313nm,20.0s
KDAK Kodiak Island 128.75 43 PKP **PKPdf 19 13 47.5 +1.4**
KDAK LR LR
comp=Z,348nm,20.0s
KDAK Kodiak Island 128.75 43 PKP **PKPdf 19 13 47.5 +1.4**
comp=Z,6.6nm,0.8s,baz=155,slow=3.3,SNR=5.8
UZH Uzhgorod 129.44 302 ePKIKP PKPpre 19 13 37.5
KEST Kesra 129.49 281 PKP **PKPdf 19 13 49.0 +0.6**
KEST Kesra 129.49 281 PKP **PKPdf 19 13 49.0 +0.6**
comp=Z,2.4nm,1.1s,baz=225,slow=4.3,SNR=3.0
KOLS Kolonicke sedl 129.62 302 ePKIKP **PKPdf 19 13 48.0 -0.2**
KOLS Kolonicke sedl 129.62 302 ePKP **PKPdf 19 13 48.0 -0.2**
KWP Kalwaria Pacla 129.77 303 PFAKE 19 14 00.0 +12
KWP LR LR
comp=Z,392nm,19.0s
CRVS Cervenica-Dubn 130.04 302 ePKIKP **PKPdf 19 13 46.8 -2.2**
CRVS Cervenica-Dubn 130.04 302 ePKP **PKPdf 19 13 46.8 -2.2**
KECS Kecovo 130.35 301 ePKIKP **PKPdf 19 13 50.5 +1.0**
KECS Kecovo 130.35 301 ePKP **PKPdf 19 13 50.5 +1.0**
PSZ Piszkesteto 130.36 300 PFAKE 19 14 00.0 +10
PSZ LR LR
comp=Z,223nm,19.0s
STHS Stebnicka Huta 130.45 302 ePKIKP **PKPdf 19 13 49.5 -0.2**
STHS Stebnicka Huta 130.45 302 ePKP **PKPdf 19 13 49.5 -0.2**
AQU L'Aquila 130.98 290 PFAKE 19 14 00.0 +9.0
AQU LR LR
comp=Z,523nm,20.0s
VYHS Vyhne 131.27 300 ePKIKP **PKPdf 19 13 51.2 -0.1**
VYHS Vyhne 131.27 300 ePKP **PKPdf 19 13 51.2 -0.1**
OJC Ojcow 131.67 302 ePKIKP **PKPdf 19 13 51.8 -0.2**
OJC Ojcow 131.67 302 ePKPdf **PKPdf 19 13 51.8 -0.2**
VSL Villasalto 131.77 285 PFAKE 19 14 00.0 +7.4
VSL LR LR
comp=Z,504nm,19.0s
SUW Suwalki 131.88 308 ePKIKP **PKPdf 19 13 51.7 -0.5**
SUW Suwalki 131.88 308 ePKPdf **PKPdf 19 13 51.7 -0.5**
DOBS Dobrina 131.90 296 i PKPdf **PKPdf 19 13 52.7 +0.1**
DOBS ePP **PP 19 16 09.5 -4.9**
DOBS e 19 17 18.8
OKC Ostrava-Krasne 132.37 301 ePKIKP **PKPdf 19 13 53.9 +0.6**
OKC MLR MLR
comp=Z,300nm,25.0s
OKC Ostrava-Krasne 132.37 301 ePKPdf **PKPdf 19 13 53.9 +0.6**
OKC AMS AMS 20 15 00.0
comp=Z,300nm,25.0s
PERS Pernice 132.37 296 i PKPdf **PKPdf 19 13 54.2 +0.7**
PERS e 19 17 19.4
SOKA Soboth 132.44 296 ⇓i PKPdf **PKPdf 19 13 53.0 -0.7**
comp=Z,6.9nm,1.0s
MORC Moravsky Berou 132.67 301 ⇑PKIKP **PKPdf 19 13 54.4 +0.4**
MORC Moravsky Berou 132.67 301 ePKPdf **PKPdf 19 13 53.7 -0.3**
MORC Moravsky Berou 132.67 301 ⇑i P **PKPdf 19 13 54.4 +0.4**
SML Sawmill 132.69 40 ePKIKP **PKPdf 19 13 53.4 -0.2**
SML Sawmill 132.69 40 ePKPdf **PKPdf 19 13 53.4 -0.2**
TRF Thorofare Moun 132.70 38 ePKPdf **PKPdf 19 13 52.4 -1.3**
ROBS Robic 133.09 295 i PKPdf **PKPdf 19 13 54.7 -0.1**
ROBS e 19 17 22.9
MCK McKinley 133.37 38 ePKIKP **PKPdf 19 13 55.6 +0.8**
MCK McKinley 133.37 38 ePKPdf **PKPdf 19 13 55.6 +0.8**
TREC Trest 133.57 299 ePKIKP **PKPdf 19 13 56.9 +1.3**
TREC MLR MLR
comp=Z,300nm,25.1s
TREC Trest 133.57 299 ePKPdf **PKPdf 19 13 56.9 +1.3**
TREC AMS AMS 20 12 30.0
comp=Z,300nm,25.1s
DPC Dobruska-Polom 133.64 301 ePKHKP PKPpre 19 13 44.2
DPC e 19 13 57.0
DPC MLR MLR
comp=Z,2µm,14.6s
DPC Dobruska-Polom 133.64 301 ePKPpre PKPpre 19 13 44.2
DPC ePKPdf **PKiKP 19 13 57.0 0.0**
DPC AMS AMS 20 17 10.0
comp=Z,2µm,14.6s
VLC Villacollemand 133.82 291 PFAKE 19 14 10.0 +14
VLC LR LR
comp=Z,324nm,20.0s
UPC Upice 133.89 301 ePP PP 19 16 28.7 +1.7
APA Apatity 134.02 328 ⇑i PKIKP **PKPdf 19 13 57.0 +1.1**
APA pmax pmax
comp=Z,18nm,0.9s
APA MLR MLR
comp=Z,800nm,18.0s
FINES FINESS Array B 134.11 318 PKP **PKPdf 19 13 55.4 -0.8**
FINES FINESS Array B 134.11 318 PKP **PKPdf 19 13 55.4 -0.8**
comp=Z,9.5nm,0.7s,baz=134,slow=5.5,SNR=6.6
RJOB Jochberg 134.30 296 ePKPdf **PKPdf 19 13 57.9 +0.8**
COLA College 134.30 37 PFAKE 19 14 10.0 +14
COLA LR LR
comp=Z,533nm,20.0s
GEC2 GERESS Array S 134.35 298 ePP PP 19 16 25.8 -4.3
GERES GERESS Array B 134.35 298 PKPpre PKPpre 19 13 43.4
GERES GERESS Array B 134.35 298 PKhKP PKPpre 19 13 43.4
comp=Z,0.6nm,0.6s,baz=162,slow=0.4,SNR=5.6
PRU Pruhonice 134.45 300 ePP PP 19 16 34.7 +4.1
PRU AMS AMS 20 17 10.0
comp=Z,300nm,17.1s
COLD Coldfoot 134.46 33 ePKPdf **PKPdf 19 13 56.6 -0.1**
KHC Kasperske Hory 134.56 298 ePKIKP **PKPdf 19 13 56.1 -1.4**
KHC MLR MLR
comp=Z,400nm,20.9s
KHC Kasperske Hory 134.56 298 ePKPdf **PKPdf 19 13 56.1 -1.4**
KHC ex x 19 16 43.0
KHC AMS AMS 20 19 10.0
comp=Z,400nm,20.9s
SACV Santiago Islan 134.61 232 PFAKE 19 14 10.0 +11
SACV LR LR
comp=Z,479nm,19.0s
ILAR Eielson Array 134.63 37 PKPpre PKPpre 19 13 50.0
ILAR PKP **PKPdf 19 13 55.5 -1.6**
ILAR Eielson Array 134.63 37 PKhKP PKPpre 19 13 50.0
comp=Z,0.4nm,0.8s,baz=224,slow=3.6,SNR=4.5
ILAR PKP **PKPdf 19 13 55.5 -1.6**
comp=Z,0.8nm,0.6s,baz=237,slow=3.5,SNR=4.1
JTS JuntasAbangare 134.99 143 PFAKE 19 14 10.0 +11
JTS LR LR
comp=Z,586nm,22.0s
MOTA Moosalm 135.08 295 ⇑i PKPdf **PKPdf 19 13 58.2 -0.5**
comp=Z,5.9nm,0.7s
KHMM Horse Mountain 135.16 76 ePKPdf **PKPdf 19 13 59.5 +0.4**
BRG Berggiesshubel 135.22 301 ePKPdf **PKPdf 19 14 00.3 +1.7**
BRG Berggiesshubel 135.22 301 e **PKPdf 19 13 59.2 +0.6**
BRG pmax pmax
comp=Z,2.0nm,0.8s
BRG pmax pmax
comp=Z,7.0nm,0.9s
BRG pmax pmax
comp=Z,7.0nm,0.9s
BRG Berggiesshubel 135.22 301 e **PKPdf 19 13 59.2 +0.6**
comp=Z,6.6nm,0.9s
BRG Berggiesshubel 135.22 301 e **PKPdf 19 14 00.5 +1.8**
comp=Z,6.6nm,0.9s
FUR Furstenfeldbru 135.40 296 ePKPdf **PKPdf 19 14 00.4 +1.3**
FUR Furstenfeldbru 135.40 296 ePKIKP **PKPdf 19 14 00.4 +1.3**
PFO Pinyon Flat Ob 135.45 89 PKP **PKPdf 19 14 02.0 +2.2**
PFO LR LR
comp=Z,363nm,19.0s
PFO Pinyon Flat Ob 135.45 89 PKP **PKPdf 19 14 02.0 +2.2**
comp=Z,5.4nm,0.8s,baz=281,slow=0.8,SNR=9.1
TUE Stuetta 135.66 293 PFAKE 19 14 10.0 +10
TUE LR LR
comp=Z,455nm,22.0s
LMR La Mourre 135.73 288 ePKIKP **PKPdf 19 13 59.2 -0.6**
comp=Z,32nm,1.1s
LMR La Mourre 135.73 288 ePKIKP **PKPdf 19 13 59.2 -0.6**
LMR La Mourre 135.73 288 ePKPdf **PKPdf 19 13 59.2 -0.6**
NKC Novy Kostel 135.74 299 ePP PP 19 16 36.2 -2.6
BCIP Isla Barro Col 135.76 150 PFAKE 19 14 10.0 +9.2
BCIP LR LR
comp=Z,333nm,20.0s
DAVA Damuels 135.77 294 ⇓i PKPdf **PKPdf 19 13 59.9 -0.2**
comp=Z,8.4nm,0.9s
CLL Collm 135.95 301 ePKPdf **PKPdf 19 14 01.5 +1.5**
CLL ePP **PP 19 16 37.3 -2.7**
CLL Collm 135.95 301 e **PKPdf 19 14 00.0 0.0**
CLL i 19 14 01.4
CLL i 19 16 37.0
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL pmax pmax
comp=Z,38nm,2.0s
CLL MLR MLR
comp=Z,300nm,21.4s
CLL Collm 135.95 301 ePKPdf **PKPdf 19 14 00.0 0.0**
CLL i pP **PKiKP 19 14 01.1 -0.5**
comp=Z,8.0nm,1.0s
CLL i PKiKP PKiKP 19 14 01.4 -0.2
comp=Z,8.0nm,1.0s
CLL i PP **PP 19 16 37.0 -3.0**
comp=Z,38nm,2.0s
CLL i 19 16 43.9
CLL ePPS PPS 19 28 56.0
CLL eSS SS 19 34 48.0 +9.4
CLL LmV 20 18 00.0
comp=Z,300nm,21.4s
GRF Grafenberg Arr 136.18 298 ePKPdf **PKPdf 19 14 02.1 +1.6**
GRF ePP **PP 19 16 37.9 -3.6**
GRF eL L 20 20 17.7
comp=Z,434nm,20.7s
GRF Grafenberg Arr 136.18 298 ePKIKP **PKPdf 19 14 02.1 +1.6**
GRF e 19 16 37.9
GRF MLR MLR
comp=Z,400nm,20.7s
YBH Yreka Blue Hor 136.28 76 ePKPdf **PKPdf 19 14 01.1 0.0**
YBH PKP **PKPdf 19 14 01.2 +0.2**
YBH Yreka Blue Hor 136.28 76 PKP **PKPdf 19 14 01.3 +0.2**
comp=Z,1.8nm,0.6s,baz=173,slow=3.2,SNR=7.6
GSC Goldstone 136.28 87 ePKIKP **PKPdf 19 14 02.0 +0.7**
GSC Goldstone 136.28 87 ePKPdf **PKPdf 19 14 01.9 +0.7**
MBDF Montbardon 136.31 289 ePKIKP **PKPdf 19 14 01.6 +0.5**
MBDF Montbardon 136.31 289 ePKIKP **PKPdf 19 14 01.6 +0.5**
MBDF Montbardon 136.31 289 ePKPdf **PKPdf 19 14 01.6 +0.5**
MOX Moxa 136.41 299 eL L 20 20 13.7
comp=Z,328nm,20.7s
BNI Bardonecchia 136.53 290 PFAKE 19 14 10.0 +8.5
BNI LR LR
comp=Z,406nm,20.0s
HUMO Hull Mountain 136.60 74 ePKPdf **PKPdf 19 14 01.1 -0.4**
LPG La Plagne 136.72 290 ePKIKP **PKPdf 19 14 01.6 -0.4**
comp=Z,9.6nm,0.8s
LPG La Plagne 136.72 290 ePKIKP **PKPdf 19 14 01.6 -0.4**
LPG La Plagne 136.72 290 ePKPdf **PKPdf 19 14 01.6 -0.4**
LPL La Plagne 136.74 290 ePKIKP **PKPdf 19 14 01.5 -0.5**
LPL La Plagne 136.74 290 ePKIKP **PKPdf 19 14 01.5 -0.5**
LPL La Plagne 136.74 290 ePKPdf **PKPdf 19 14 01.5 -0.5**
EGAK Eagle 136.89 38 ePKPdf **PKPdf 19 14 01.1 -0.3**
EGAK LR LR
comp=Z,774nm,22.0s
KEV Kevo 137.03 329 PFAKE 19 14 10.0 +8.6
KEV LR LR
comp=Z,791nm,21.0s
BFO Black Forest 137.19 295 ePP PP 19 16 44.5 -3.4
BFO Black Forest 137.19 295 PFAKE 19 14 10.0 +7.6
BFO LR LR
comp=Z,290nm,20.0s
NVAR Mina Array Bea 137.19 82 PKP **PKPdf 19 14 02.5 -0.6**
NVAR Mina Array Bea 137.19 82 PKP **PKPdf 19 14 02.5 -0.6**
comp=Z,4.1nm,0.7s,baz=224,slow=3.8,SNR=6.8
UBBA Unterbreizbach 137.40 299 ePKPdf **PKPdf 19 14 04.5 +1.9**
TGUH Tegucigalpa,Un 137.43 138 PFAKE 19 14 20.0 +16
TGUH LR LR
comp=Z,526nm,22.0s
ARCES ARCESS Array B 137.46 329 PKP **PKPdf 19 14 00.0 -2.2**
ARCES ARCESS Array B 137.46 329 PKP **PKPdf 19 14 00.0 -2.2**
comp=Z,4.2nm,0.7s,baz=90,slow=2.7,SNR=7.2
SKAG Skagway 137.46 47 ePKPdf **PKPdf 19 14 03.2 +0.7**
CLZ Clausthal 137.65 300 ePKPdf **PKPdf 19 14 04.9 +1.7**
CLZ Clausthal 137.65 300 ePKIKP **PKPdf 19 14 04.9 +1.7**
VIVF Saint-Julien-l 137.65 288 ePKIKP **PKPdf 19 14 02.5 -0.9**
VIVF Saint-Julien-l 137.65 288 ePKIKP **PKPdf 19 14 02.5 -0.9**
VIVF Saint-Julien-l 137.65 288 ePKPdf **PKPdf 19 14 02.5 -0.9**
TPH Tonopah 137.68 84 PFAKE 19 14 20.0 +16
TPH LR LR
comp=Z,383nm,20.0s
CABF La Chapelle 137.68 291 ePKIKP **PKPdf 19 14 02.9 -0.6**
comp=Z,31nm,1.2s
CABF La Chapelle 137.68 291 ePKIKP **PKPdf 19 14 02.9 -0.6**
CABF La Chapelle 137.68 291 ePKPdf **PKPdf 19 14 02.9 -0.6**
WRAK Wrangell Islan 137.74 52 PFAKE 19 14 20.0 +17
WRAK LR LR
comp=Z,620nm,19.0s
HINF Hinteralfeld 137.81 293 ePKIKP **PKPdf 19 14 03.3 -0.3**
comp=Z,6.4nm,0.7s
HINF Hinteralfeld 137.81 293 ePKIKP **PKPdf 19 14 03.3 -0.3**
HINF Hinteralfeld 137.81 293 ePKPdf **PKPdf 19 14 03.3 -0.3**
ECH Echery 137.82 294 PFAKE 19 14 10.0 +6.4
ECH LR LR
comp=Z,388nm,20.0s
SSB Saint Sauveur 137.95 289 PFAKE 19 14 20.0 +16
SSB LR LR
comp=Z,377nm,19.0s
TUC Tucson 138.26 95 ePKIKP **PKPdf 19 14 06.6 +1.6**
TUC MLR MLR
comp=Z,317nm,19.0s
TUC Tucson 138.26 95 ePKPdf **PKPdf 19 14 06.6 +1.6**
TUC LR LR
comp=Z,317nm,19.0s
NLWA Neilton Lookou 138.49 68 PFAKE 19 14 20.0 +15
NLWA LR LR
comp=Z,476nm,19.0s
RTC Rabat Centre 138.78 267 PFAKE 19 14 20.0 +14
RTC LR LR
comp=Z,482nm,19.0s
BMN Battle Mountai 139.02 81 PFAKE 19 14 20.0 +14
BMN LR LR
comp=Z,301nm,19.0s
SFTF Sexfontaines 139.07 293 ePKIKP **PKPdf 19 14 04.4 -1.5**
comp=Z,5.2nm,0.4s
SFTF Sexfontaines 139.07 293 ePKPdf **PKPdf 19 14 04.4 -1.5**
WLF Walferdange 139.08 296 PFAKE 19 14 20.0 +14
WLF LR LR
comp=Z,371nm,19.0s
WVOR Wild Horse Val 139.21 77 PFAKE 19 14 20.0 +14
WVOR LR LR
comp=Z,303nm,21.0s
CAF Calviac 139.29 287 ePKIKP **PKPdf 19 14 05.7 -0.7**
CAF Calviac 139.29 287 ePKIKP **PKPdf 19 14 05.7 -0.7**
CAF Calviac 139.29 287 ePKPdf **PKPdf 19 14 05.7 -0.7**
SSF Saint Saulge 139.45 291 ePKIKP **PKPdf 19 14 05.6 -1.0**
comp=Z,4.2nm,0.6s
DLBC Dease Lake 139.65 50 ePKPdf **PKPdf 19 14 05.1 -1.6**
DLBC PKP **PKPdf 19 14 06.0 -0.7**
DLBC Dease Lake 139.65 50 PKP **PKPdf 19 14 06.0 -0.7**
comp=Z,3.7nm,0.9s,baz=244,slow=8.8,SNR=5.1
RJF Les Rejaudoux 139.81 287 ePKIKP **PKPdf 19 14 06.7 -0.6**
comp=Z,8.7nm,0.9s
CCUT Cedar City 139.85 87 ePKPpre PKPpre 19 14 00.3
WUAZ Wupatki 139.91 91 PFAKE 19 14 20.0 +12
WUAZ LR LR
comp=Z,299nm,20.0s
ESDC Sonseca Array 140.31 277 PKP **PKPdf 19 14 07.7 -0.8**
ESDC Sonseca Array 140.31 277 PKP **PKPdf 19 14 07.7 -0.8**
comp=Z,2.6nm,0.7s,baz=100,slow=2.1,SNR=11
SJPF Ste Jean 140.41 283 ePKIKP **PKPdf 19 14 04.4 -4.1**
SJPF Ste Jean 140.41 283 ePKIKP **PKPdf 19 14 04.4 -4.1**
SJPF Ste Jean 140.41 283 ePKPdf **PKPdf 19 14 04.4 -4.1**
PAB San Pablo 140.48 276 PFAKE 19 14 20.0 +11
PAB LR LR
comp=Z,379nm,19.0s
NB2 NORSAR Subarra 140.63 314 PKPdf PKPpre 19 14 02.0
comp=Z,6.5nm,0.9s,baz=107,slow=1.9
NB2 NORSAR Subarra 140.63 314 PKPdf PKPpre 19 14 02.0
baz=107,slow=1.9
HAWA Hanford 140.64 71 PFAKE 19 14 20.0 +11
HAWA LR LR
comp=Z,349nm,20.0s
TXAR Lajitas Array 140.77 105 PKPpre PKPpre 19 14 04.0
TXAR PKP **PKPdf 19 14 09.0 -0.7**
TXAR Lajitas Array 140.77 105 PKhKP PKPpre 19 14 04.0
comp=Z,2.0nm,0.7s,baz=193,slow=5.0,SNR=17
TXAR PKP **PKPdf 19 14 09.0 -0.7**
comp=Z,3.2nm,0.8s,baz=195,slow=5.4,SNR=13
INK Inuvik 140.81 34 PKPpre PKPpre 19 14 03.0
INK PKP **PKPdf 19 14 08.1 -0.3**
INK Inuvik 140.81 34 PKhKP PKPpre 19 14 03.0
comp=Z,5.1nm,0.8s,baz=179,slow=3.3,SNR=9.9
INK PKP **PKPdf 19 14 08.1 -0.3**
comp=Z,11nm,0.8s,baz=226,slow=1.2,SNR=22
KONO Kongsberg 140.99 311 PFAKE 19 14 20.0 +11
KONO LR LR
comp=Z,1µm,21.0s
MVU Marysvale 141.14 87 ePKPpre PKPpre 19 14 08.7
MVU LR LR
comp=Z,379nm,19.0s
BMO Blue Mountains 141.27 75 ePKIKP PKPpre 19 14 03.9
BMO MLR MLR
comp=Z,438nm,22.0s
BMO Blue Mountains 141.27 75 ePKPpre PKPpre 19 14 03.9
BMO LR LR
comp=Z,438nm,22.0s
MNTX Cornudas Mount 141.31 101 ePKPpre PKPpre 19 14 04.4
MNTX LR LR
comp=Z,296nm,20.0s
SPITS Spitsbergen Ar 141.40 341 PKP **PKPdf 19 14 06.5 -2.7**
SPITS Spitsbergen Ar 141.40 341 PKP **PKPdf 19 14 06.5 -2.7**
comp=Z,8.1nm,0.8s,baz=113,slow=8.4,SNR=5.7
MFF Saint Martin d 141.45 288 ePKIKP **PKPdf 19 14 09.0 -1.2**
comp=Z,6.0nm,0.6s
MFF Saint Martin d 141.45 288 ePKIKP **PKPdf 19 14 09.0 -1.2**
MFF Saint Martin d 141.45 288 ePKPdf **PKPdf 19 14 09.0 -1.2**
PBDV Barranco-do-Ve 141.46 271 ePKP **PKPdf 19 14 10.0 -0.6**
MFID Camas Ranch 141.48 78 ePKPpre PKPpre 19 14 05.8
DUG Dugway 141.70 84 ePKIKP PKPpre 19 14 07.3
DUG MLR MLR
comp=Z,377nm,21.0s
DUG Dugway 141.70 84 ePKPpre PKPpre 19 14 07.3
DUG LR LR
comp=Z,377nm,21.0s
LENM Lemitar 141.90 96 ePKPdf **PKPdf 19 14 12.6 +0.9**
LAZ Ladron 141.94 96 ePKPpre PKPpre 19 14 09.2
GRGR Grenville 142.10 176 PFAKE 19 14 20.0 +7.6
GRGR LR LR
comp=Z,871nm,19.0s
BNM Barren Site 142.11 97 ePKPpre PKPpre 19 14 07.2
PESTR Estremoz 142.18 273 i P PKPdf 19 14 22.2 +10
KBS Kingsbay 142.25 343 PFAKE 19 14 20.0 +9.3
KBS LR LR
comp=Z,606nm,22.0s
EVO Evora 142.26 272 ePKIKP **PKPdf 19 14 08.6 -3.4**
comp=Z,10nm,1.0s
LDF La Druitiere 142.32 291 ePKIKP **PKPdf 19 14 07.1 -4.6**
comp=Z,18nm,1.0s
EVOP Sao Brissos 142.33 272 ePKIKP **PKPdf 19 14 08.6 -3.5**
EVOP Sao Brissos 142.33 272 ePKPdf **PKPdf 19 14 08.6 -3.5**
TEIG Tepich 142.35 132 ePKPdf **PKPdf 19 14 13.2 +0.6**
TEIG LR LR
comp=Z,441nm,20.0s
HLID Hailey 142.45 78 ePKPpre PKPpre 19 14 09.3
HLID LR LR
comp=Z,288nm,20.0s
HVU Hansel Valley 142.58 82 ePKIKP PKPpre 19 14 08.8
HVU Hansel Valley 142.58 82 ePKPpre PKPpre 19 14 08.8
PMTG Montargil 142.70 273 ePKP PKPdf 19 14 07.5 -5.2
ANMO Albuquerque 142.72 96 ePKPpre PKPpre 19 14 08.0
ANMO LR LR
comp=Z,350nm,21.0s
DAU Daniels Canyon 142.82 85 ePKIKP **PKPdf 19 14 09.6 -3.7**
DAU Daniels Canyon 142.82 85 ePKPdf **PKPdf 19 14 09.6 -3.7**
NEW Newport 142.94 70 PKPpre PKPpre 19 14 08.1
NEW ePKPpre PKPpre 19 14 09.4
NEW LR LR
comp=Z,476nm,20.0s
NEW Newport 142.94 70 PKhKP PKPpre 19 14 08.1
comp=Z,4.5nm,0.8s,baz=96,slow=3.0,SNR=5.2
KVTX Kingsville 143.00 113 PFAKE 19 14 30.0 +16
KVTX LR LR
comp=Z,405nm,20.0s
MTE Manteigas 143.00 275 ePKP PKPbc 19 14 10.4 +0.2
MTE Manteigas 143.00 275 PFAKE 19 14 20.0 +6.7
MTE LR LR
comp=Z,422nm,20.0s
MVO Moncorvo 143.08 277 ePKP PKPbc 19 14 10.4 0.0
MVO i P **PKiKP 19 14 19.8 +3.1**
BBGH Gun Hill 143.16 180 PFAKE 19 14 30.0 +16
BBGH LR LR
comp=Z,2µm,20.0s
PV04 Paradox Valley 143.21 89 ePKPpre PKPpre 19 14 10.4
PBRG Braganca 143.23 278 ePKP PKPbc 19 14 10.5 -0.2
PBRG i P **PKiKP 19 14 19.8 +2.9**
HWUT Hardware Ranch 143.26 83 ePKPpre PKPpre 19 14 10.1
HWUT LR LR
comp=Z,270nm,20.0s
PV01 Paradox Valley 143.27 90 ePKPdf **PKPdf 19 14 14.3 +0.2**
PVRL Vila Real 143.58 276 ePKP PKPbc 19 14 11.7 0.0
SGMF Saint Gilles 143.65 290 ePKIKP PKPab 19 14 10.7 -0.1
comp=Z,29nm,1.2s
SGMF Saint Gilles 143.65 290 ePKIKP PKPab 19 14 10.7 -0.1
SGMF Saint Gilles 143.65 290 ePKPdf PKPab 19 14 10.7 -0.1
POLO Lamas de Olo 143.68 276 ePKP PKPbc 19 14 11.9 -0.2
QUIF Quistinic 143.88 289 ePKIKP PKPab 19 14 11.1 -0.5
QUIF Quistinic 143.88 289 ePKIKP PKPab 19 14 11.1 -0.5
QUIF Quistinic 143.88 289 ePKPdf PKPab 19 14 11.1 -0.5
JCT Junction City 143.96 107 ePKIKP PKPbc 19 14 12.9 -0.2
JCT MLR MLR
comp=Z,299nm,20.0s
JCT Junction City 143.96 107 ePKPdf PKPbc 19 14 12.9 -0.2
JCT LR LR
comp=Z,299nm,20.0s
PCAB Cabril 144.00 277 ePKP PKPbc 19 14 12.9 0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MCMT	McKenzie Canyo	144.04	77	ePKPdf	PKPbc	19 14 13.7	+0.5
ROSF	Rostrenen	144.12	289	ePKIKP	PKPab	19 14 11.4	-1.1
	comp=Z,33nm,1.1s						
ROSF	Rostrenen	144.12	289	ePKIKP	PKPab	19 14 11.4	-1.1
ROSF	Rostrenen	144.12	289	ePKPdf	PKPab	19 14 11.4	-1.1
AHID	Auburn Hatcher	144.15	81	PFAKE		19 14 30.0	+15
AHID				LR	LR		
	comp=Z,415nm,21.0s						
BSMT	Bassoo Peak	144.19	72	ePKPdf	PKPab	19 14 12.8	-0.3
MSO	Missoula	144.27	74	ePKPdf	PKPab	19 14 13.5	+0.1
MSO				LR	LR		
	comp=Z,275nm,19.0s						
PGAV	Gavieira, Arco	144.29	277	ePKP	PKPbc	19 14 13.9	0.0
PGAV				i P	PKPdf	19 14 17.1	+1.5
RRI2	Red Ridge	144.30	80	ePKPdf	PKPbc	19 14 14.3	+0.1
DLMT	Dillon	144.45	77	ePKPpre	PKPbc	19 14 15.0	+0.7
JTMT	Jette	144.45	72	ePKPdf	PKPab	19 14 13.8	-0.3
BLMT	Blacktail Moun	144.51	72	ePKPdf	PKPab	19 14 14.1	-0.2
SWMT	Swartz Lake	144.53	73	ePKPdf	PKPab	19 14 13.8	-0.4
REDW	Red Top Meadow	144.60	81	ePKPdf	PKPbc	19 14 15.2	+0.1
TPAW	Teton Pass	144.60	80	ePKPdf	PKPbc	19 14 15.3	+0.2
YBMT	Yellow Bay	144.67	72	ePKPdf	PKPab	19 14 14.8	0.0
FDF	Fort de France	144.70	177	ePKIKP	PKPab	19 14 15.5	-0.2
FDF				MLR	MLR		
	comp=Z,624nm,22.0s						
FDF	Fort de France	144.70	177	ePKPdf	PKPab	19 14 15.5	-0.2
FDF				LR	LR		
	comp=Z,624nm,22.0s						
SNOW	Snow King Moun	144.71	81	ePKPdf	PKPdf	19 14 16.2	-0.2
SLMT	Seeley Lake	144.72	73	ePKPdf	PKPab	19 14 14.4	-0.6
CHMT	Chamberlain Mo	144.73	74	ePKPdf	PKPbc	19 14 15.4	0.0
LRM	Limekiln Ridge	144.75	76	ePKPdf	PKPab	19 14 15.3	0.0
IMW	Indian Meadow	144.81	80	ePKPdf	PKPbc	19 14 16.0	+0.2
MOOW	Moose Ponds	144.86	80	ePKPdf	PKPbc	19 14 15.9	+0.1
LOHW	Long Hollow	144.88	80	ePKPdf	PKPbc	19 14 16.2	+0.3
SMCO	Snowmass	144.89	89	ePKPdf	PKPbc	19 14 16.6	+0.3
QLMT	Earthquake Lak	144.94	78	ePKPdf	PKPdf	19 14 17.1	+0.3
MTDJ	Mount Denham	144.99	149	ePKPdf	PKPab	19 14 16.7	-0.1
MTDJ				LR	LR		
	comp=Z,721nm,21.0s						
BW06	Boulder Array	145.13	82	ePKPdf	PKPbc	19 14 16.0	-0.7
BW06				LR	LR		
	comp=Z,340nm,20.0s						
PDAR	Pinedale Array	145.13	82	PKPbc	PKPbc	19 14 16.4	-0.3
PDAR	Pinedale Array	145.13	82	PKPbc	PKPbc	19 14 16.4	-0.3
	comp=Z,16nm,0.8s,baz=194,slow=3.4,SNR=78						
YFT	Old Faithful	145.13	79	ePKPdf	PKPdf	19 14 18.9	+1.8
YMR	Madison River	145.16	79	ePKPdf	PKPdf	19 14 17.4	+0.3
BOZ	Bozeman (W)	145.18	77	PFAKE		19 14 30.0	+13
BOZ				LR	LR		
	comp=Z,315nm,20.0s						
WALA	Waterton Lakes	145.21	70	ePKPdf	PKPab	19 14 16.8	0.0
LKWY	Lake	145.46	79	ePKIKP	PKPab	19 14 20.0	+1.9
LKWY				MLR	MLR		
	comp=Z,688nm,19.0s						
LKWY	Lake	145.46	79	ePKPdf	PKPab	19 14 20.0	+1.9
LKWY				LR	LR		
	comp=Z,688nm,19.0s						
HRY	Holter Researc	145.53	75	ePKPdf	PKPab	19 14 18.4	+0.4
AMTX	Amarillo	145.73	100	ePKPpre	PKPpre	19 14 15.3	
AMTX				LR	LR		
	comp=Z,405nm,19.0s						
HKT	Hockley	145.98	112	ePKP2	PKPab	19 14 19.8	-0.2
HKT	Hockley	145.98	112	ePKPbc	PKPab	19 14 19.8	-0.2
ISCO	Idaho Springs	146.11	90	ePKP2	PKPab	19 14 20.6	-0.1
ISCO				MLR	MLR		
	comp=Z,445nm,20.0s						
ISCO	Idaho Springs	146.11	90	ePKPbc	PKPab	19 14 20.6	-0.1
ISCO				LR	LR		
	comp=Z,445nm,20.0s						
RLMT	Red Lodge	146.44	79	ePKPbc	PKPbc	19 14 20.4	-0.3
RLMT				LR	LR		
	comp=Z,463nm,21.0s						
ESK	Eskdalemuir	146.44	301	ePKP2	PKPdf	19 14 18.7	0.0
ESK				MLR	MLR		
	comp=Z,471nm,21.0s						
ESK	Eskdalemuir	146.44	301	ePKPdf	PKPdf	19 14 18.7	0.0
ESK				LR	LR		
	comp=Z,471nm,21.0s						
GCMT	Greycliff	146.48	78	ePKPbc	PKPbc	19 14 20.6	-0.1
PHWY	Pilot Hill	147.02	87	ePKPbc	PKPbc	19 14 22.3	-0.3
EGMT	Eagleton	147.35	74	ePKPdf	PKPdf	19 14 20.9	+0.4
EGMT				LR	LR		
	comp=Z,434nm,22.0s						
GTBY	Guantanamo Bay	147.36	152	PFAKE		19 14 30.0	+4.4
GTBY				LR	LR		
	comp=Z,491nm,19.0s						
WMOK	Wichita Mounta	147.46	103	ePKIKP	PKPdf	19 14 21.1	0.0
WMOK				MLR	MLR		
	comp=Z,418nm,19.0s						
WMOK	Wichita Mounta	147.46	103	ePKPdf	PKPdf	19 14 21.1	0.0
WMOK				LR	LR		
	comp=Z,418nm,19.0s						
SDDR	Presa de Saban	147.50	158	ePKPbc	PKPbc	19 14 23.8	-0.4
SDDR				LR	LR		
	comp=Z,558nm,20.0s						
CELP	Cerrillos	147.52	167	ePKPdf	PKPdf	19 14 22.4	+0.8
ANWB	Willy Bob	147.59	175	PFAKE		19 14 30.0	+3.5
ANWB				LR	LR		
	comp=Z,490nm,21.0s						
SJG	San Juan	147.62	168	PFAKE		19 14 30.0	+3.4
SJG				LR	LR		
	comp=Z,696nm,22.0s						
LRS	Lares	147.69	166	ePKPdf	PKPdf	19 14 22.1	+0.1
YKW3	Yellowknife Ar	147.94	46	ePKPdf	PKPdf	19 14 19.9	-1.0
YKW3				ePKPbc	PKPbc	19 14 23.8	-0.2
YKA	Yellowknife Ar	147.94	46	PKPbc	PKPbc	19 14 24.4	+0.4
YKA	Yellowknife Ar	147.94	46	PKPbc	PKPbc	19 14 24.4	+0.4
	comp=Z,42nm,0.7s,baz=272,slow=2.5,SNR=53						
DAG	Danmarks Havn	148.98	343⇓	iPKP2	PKPbc	19 14 24.8	-1.5
DAG				pmax	pmax		
	comp=Z,21nm,0.8s						
DAG	Danmarks Havn	148.98	343⇓	iP	PKPbc	19 14 24.8	-1.5
	comp=Z,28nm,0.8s						
OGNE	Ogallala	149.03	91	ePKPdf	PKPdf	19 14 23.6	0.0
OGNE				LR	LR		
	comp=Z,505nm,19.0s						
RSSD	Black Hills	149.31	84	ePKP2	PKPbc	19 14 28.5	+0.1
RSSD	Black Hills	149.31	84	ePKPbc	PKPbc	19 14 28.5	+0.1
VBMS	Vicksburg	150.75	116	PFAKE		19 14 40.0	+0.9
VBMS				LR	LR		
	comp=Z,422nm,22.0s						
DGMT	Dagmar	150.97	76	ePKPbc	PKPbc	19 14 32.1	+0.1
DGMT				LR	LR		
	comp=Z,679nm,22.0s						
RES	Resolute Bay	151.23	19	PKPbc	PKPbc	19 14 31.8	0.0
RES	Resolute Bay	151.23	19	PKPbc	PKPbc	19 14 31.8	0.0
	baz=319,slow=1.7						
KSU1	Kansas State U	151.50	98	ePKPbc	PKPbc	19 14 34.2	+0.7
KSU1				LR	LR		
	comp=Z,581nm,20.0s						
OXF	Oxford	153.04	114	PFAKE		19 14 40.0	+2.9
OXF				LR	LR		
	comp=Z,472nm,21.0s						
SCO	Scoresbysund	153.21	333⇓	iPKIKP	PKPbc	19 14 36.1	-0.2
SCO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SCO	Scoresbysund	153.21	333⇓	iP	PKPbc	19 14 36.1	-0.2
	comp=Z,5.2nm,0.8s						
LRAL	Lakeview Retre	153.37	119	ePKPbc	PKPbc	19 14 38.0	+0.1
LRAL				LR	LR		
	comp=Z,416nm,20.0s						
FFC	Flin Flon	153.84	63	ePKIKP	PKPbc	19 14 37.9	-0.3
FFC				MLR	MLR		
	comp=Z,484nm,19.0s						
FFC	Flin Flon	153.84	63	ePKPbc	PKPbc	19 14 37.9	-0.3
FFC				LR	LR		
	comp=Z,484nm,19.0s						
ECSD	EROS Data Cent	153.90	90	ePKPdf	PKPdf	19 14 29.5	-1.3
ECSD				LR	LR		
	comp=Z,531nm,22.0s						
SLM	Saint Louis	155.25	106	ePKIKP	PKPdf	19 14 30.6	-2.2
SLM	Saint Louis	155.25	106	ePKPdf	PKPdf	19 14 30.6	-2.2
BORG	Borgarnes	155.36	321	PFAKE		19 14 40.0	+8.0
BORG				LR	LR		
	comp=Z,425nm,20.0s						
SUMG	Summit	155.62	345	ePKP2	PKPab	19 14 59.0	0.0
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SUMG	Summit	155.62	345	i P	PKPab	19 14 59.0	0.0
	comp=Z,10.0nm,0.9s						
ULM	Lac du Bonnet	156.69	75	PKP	PKPdf	19 14 32.9	-1.4
ULM				PKPab	PKPab	19 15 03.7	-0.1
ULM	Lac du Bonnet	156.69	75	PKP	PKPdf	19 14 32.9	-1.4
	comp=Z,5.6nm,0.9s,baz=307,slow=5.4,SNR=4.2						
ULM				PKPab	PKPab	19 15 03.7	-0.1
	comp=Z,6.9nm,0.8s,baz=282,slow=5.8,SNR=4.8						
HDIL	Hopedale	156.96	103	PFAKE		19 14 50.0	+15
HDIL				LR	LR		
	comp=Z,699nm,20.0s						
NHSC	New Hope	157.04	130	PFAKE		19 14 50.0	+15
NHSC				LR	LR		
	comp=Z,486nm,20.0s						
JFWS	Jewell Farm	157.61	97	PFAKE		19 14 50.0	+14
JFWS				LR	LR		
	comp=Z,607nm,20.0s						
EYMN	Ely	158.83	83	ePKPdf	PKPdf	19 14 36.5	-0.6
EYMN				LR	LR		
	comp=Z,662nm,22.0s						
COWI	Conover	159.72	90	ePKPdf	PKPdf	19 14 38.0	-0.1
COWI				LR	LR		
	comp=Z,611nm,21.0s						
CNNC	Cliffs of the	159.88	130	PFAKE		19 14 50.0	+11
CNNC				LR	LR		
	comp=Z,824nm,22.0s						
BLA	Blacksburg	160.08	122	PFAKE		19 14 50.0	+11
BLA				LR	LR		
	comp=Z,435nm,20.0s						
ACSO	Alum Creek Sta	160.66	112	PFAKE		19 14 50.0	+11
ACSO				LR	LR		
	comp=Z,481nm,19.0s						
AAM	Ann Arbor	161.46	105	PFAKE		19 14 50.0	+10
AAM				LR	LR		
	comp=Z,445nm,20.0s						
BBSR	BB Station	161.84	165	PFAKE		19 14 50.0	+9.2
BBSR				LR	LR		
	comp=Z,412nm,21.0s						
CBN	Corbin	162.44	126	PFAKE		19 14 50.0	+8.7
CBN				LR	LR		
	comp=Z,545nm,20.0s						
SFJD	Kangerlussuaq	162.49	349	PFAKE		19 14 50.0	+10
SFJD				LR	LR		
	comp=Z,644nm,20.0s						
ERPA	Erie	163.59	111	PFAKE		19 14 50.0	+7.7
ERPA				LR	LR		
	comp=Z,527nm,22.0s						
BINY	Binghamton	165.99	118	PFAKE		19 15 00.0	+16
BINY				LR	LR		
	comp=Z,907nm,21.0s						
NCB	Newcomb	168.10	115	PFAKE		19 15 00.0	+14
NCB				LR	LR		
	comp=Z,730nm,21.0s						
LONY	Lake Ozonia	168.26	112	PFAKE		19 15 00.0	+14
LONY				LR	LR		
	comp=Z,841nm,22.0s						
LBNH	Lisbon	169.58	119	PFAKE		19 15 00.0	+13
LBNH				LR	LR		
	comp=Z,635nm,21.0s						

IDC 03 18:58:55.5±69.0, 17°.27S×168°.65E, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.7/19, mbtmp3.9/4, Error ellipse: s-maj=1166.0km s-min=58.6km az=73.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.21	203	Pn	Pn	19 00 13.3	-1.5
	2.0nm,0.3s,baz=45,slow=14,SNR=26						
DZM				Sn	Sn	19 01 03.1	-13
	11nm,0.3s,baz=48,slow=15,SNR=9.5						
STKA	Stephens Creek	28.48	234	P	P	19 04 53.8	+1.3
	2.0nm,0.6s,baz=75,slow=9.4,SNR=3.9						
WRA	Warramunga Arr	32.59	260	P	P	19 05 28.5	-0.5
	0.6nm,0.7s,baz=82,slow=6.0,SNR=2.4						
ASAR	Alice Springs	33.11	253	P	P	19 05 33.0	-0.5
	1.0nm,0.8s,baz=79,slow=8.4,SNR=6.6						

ISCJB 03 19:03:08.8±0.3, 23°.22N±0°.04×93°.74E±0°.04, h58km, mb4.3/33, Error ellipse: s-maj=6.7km s-min=3.8km az=30.7

NEIC 03 19:03:09.4±0.6, 23°.17N×93°.81E, h46km±6km, mb4.5/5, Error ellipse: s-maj=13.6km s-min=4.7km az=224.0

IDC 03 19:03:10.3±3.6, 23°.22N×94°.01E, h52km±33km, mb4.0/22, mb1 4.1/23, mb1mx3.9/35, mbtmp4.0/23, ML3.9/1, Error ellipse: s-maj=26.6km s-min=10.9km az=57.0

ISC 03 19:03:10.8±0.5, 23°.22N±0°.06×93°.84E±0°.05, h58km, n106, σ1§65/125, mb4.3/33, 5C, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	1.55	3	i P	Pn	19 03 32.0	-4.2
IMP				i S	Sn	19 03 54.0	-1.4
SHL	Shillong	2.94	323	ePKP	Pn	19 03 54.6	-0.6
SHL				eS	Sn	19 04 26.6	-2.7
CHTO	Chiang Mai	6.48	132	eP	Pn	19 04 43.1	-0.5
	17nm,0.8s						
CM31	Chiang Mai Arr	6.73	134	P	Pn	19 04 47.4	+0.5
	7.1nm,0.5s						
CMAR	Chiang Mai Arr	6.73	134	P	Pn	19 04 44.6	-2.3
CMAR	Chiang Mai Arr	6.73	134	P	Pn	19 04 44.6	-2.3
	0.6nm,0.3s,baz=312,slow=13,SNR=11						
ODAN	Odare	6.88	303	ePn	Pn	19 04 48.4	-0.8
ODAN				eSn	Sn	19 06 03.9	-2.4
	189nm,0.3s						
ODAN	Odare	6.88	303	ePn	Pn	19 04 48.4	-0.8
ODAN				eSn	Sn	19 06 03.9	-2.4
LSA	Lhasa	6.88	340	eP	Pn	19 04 49.3	-0.2
	18nm,0.3s						
TAPN	Taplejung	6.90	308	ePn	Pn	19 04 48.6	-1.0
TAPN				eSn	Sn	19 06 05.1	-1.9
	339nm,0.7s						
TAPN	Taplejung	6.90	308	ePn	Pn	19 04 48.6	-1.0
TAPN				eSn	Sn	19 06 05.1	-1.9
BOK	Bokaro	7.33	276	ePKP	Pn	19 04 55.4	+0.3
BOK				eS	Sn	19 06 14.7	-2.2
RAMN	Ramite	7.54	301	ePn	Pn	19 04 57.7	-0.6
RAMN	Ramite	7.54	301	ePn	Pn	19 04 57.7	-0.6
GUN	Gumba	8.57	305	ePn	Pn	19 05 11.3	-1.2
GUN				eSn	Sn	19 06 44.4	-3.5
	369nm,0.8s						
GUN	Gumba	8.57	305	ePn	Pn	19 05 11.3	-1.2
GUN				eSn	Sn	19 06 44.4	-3.5
PKI	Pulchoki	8.77	301	ePn	Pn	19 05 13.9	-1.3
PKI				eSn	Sn	19 06 49.0	-3.7
	80nm,0.4s						
PKI	Pulchoki	8.77	301	ePn	Pn	19 05 13.9	-1.3
PKI				eSn	Sn	19 06 49.0	-3.7
PKIN	Phulchoki	8.78	301	ePn	Pn	19 05 13.8	-1.5
PKIN				eSn	Sn	19 06 48.8	-4.1
	64nm,0.4s						
KKN	Kakani	8.97	302	ePn	Pn	19 05 16.5	-1.3
KKN				eSn	Sn	19 06 55.1	-2.4
	70nm,0.4s						
KKN	Kakani	8.97	302	ePn	Pn	19 05 16.5	-1.3
KKN				eSn	Sn	19 06 55.1	-2.4
DMN	Daman	9.02	301	ePn	Pn	19 05 17.0	-1.6
DMN				eSn	Sn	19 06 55.7	-3.2
	133nm,0.8s						
DMN	Daman	9.02	301	ePn	Pn	19 05 17.0	-1.6
DMN				eSn	Sn	19 06 55.7	-3.2
KOLN	Koldanda	10.30	298	ePn	Pn	19 05 33.8	-2.2
KOLN	Koldanda	10.30	298	ePn	Pn	19 05 33.8	-2.2
DANN	Dangsing	10.42	301	ePn	Pn	19 05 35.6	-2.1
DANN	Dangsing	10.42	301	ePn	Pn	19 05 35.6	-2.1
PYUN	Piuthan	10.92	299	ePn	Pn	19 05 42.1	-2.5
PYUN	Piuthan	10.92	299	ePn	Pn	19 05 42.1	-2.5
JBP	Jabalpur	12.75	272	ePKP	Pn	19 06 08.6	-0.7
JBP				ex	Sn	19 08 28.4	-1.2
JBP				AML	AML	19 08 33.0	
	comp=E,54nm,0.4s						
JBP				AML	AML	19 08 33.6	
	comp=N,98nm,0.8s						
LGTI	Lohaghat	13.67	300	ex	P	19 06 30.3	+1.6
NGP	Nagpur	13.86	264	ex	Pn	19 06 21.8	-2.6
NGP				ex	x	19 17 12.0	
NGP				AML	AML	19 17 34.1	
	comp=E,3.1nm,0.3s						
NGP				AML	AML	19 17 34.2	
	comp=N,3.7nm,0.0s						
BHPL	Bhopal	15.09	273	ePKP	Pn	19 06 39.7	-0.9
BHPL				ex	Sn	19 09 27.0	+0.3
SMLA	Simla	16.78	302	ePKP	Pn	19 07 02.1	+0.2
SMLA				e4		19 07 36.9	
SMLA				AML	AML	19 07 41.9	
	comp=E,53nm,0.7s						
SMLA				AML	AML	19 07 42.5	
	comp=N,20nm,0.6s						
GTA	Gaotai	16.92	16	eP	Pn	19 07 02.5	-1.2
GTA				pP	P	19 07 07.7	+2.8
GTA				sP	sP	19 07 11.1	-14
GTA				pmax	pmax		
	comp=Z,3.0nm,1.4s						
XAN	Xi'an	17.05	47	P	Pn	19 07 04.2	-1.0
XAN				pP	P	19 07 08.9	+2.6
XAN				PP		19 10 21.8	
DHRM	DHARAMSHALA	17.92	304	ePKP	Pn	19 07 16.2	0.0
DHRM				e4		19 07 41.4	
DHRM				AML	AML	19 07 47.9	
	comp=E,25nm,0.5s						
DHRM				AML	AML	19 07 49.2	
	comp=N,27nm,0.6s						
THN	Thein Dam	18.45	304	e4	x	19 07 41.6	
WMQ	Urumqi	21.16	348	P	P	19 07 50.8	-0.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,200nm,6.1s						
KSH	Kashi	22.22	321	eP	P	19 08 02.0	-0.6
KSH				epP	pP	19 08 06.8	-8.7
KSH				esP	sP	19 08 09.0	-14
KSH				ePP	PcP	19 11 53.0	-4.2
TKM2	Tokmak 2	24.79	327	eP	P	19 08 29.2	+1.7
	comp=Z,11nm,0.9s						
AAK	Ala-Archa	25.16	325	P	P	19 08 31.3	+0.5
AAK	Ala-Archa	25.16	325	P	P	19 08 31.3	+0.5
	comp=Z,7.8nm,0.8s,baz=191,slow=5.2,SNR=6.6						
MKAR	Makanchi Array	25.29	341	i P	P	19 08 32.2	+0.5
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MKAR	Makanchi Array	25.29	341	P	P	19 08 32.3	+0.5
MKAR	Makanchi Array	25.29	341	P	P	19 08 32.3	+0.5
	comp=Z,7.1nm,0.8s,baz=148,slow=8.5,SNR=41						
EKS2	Erkin-Say	25.56	324	eP	P	19 08 37.9	+3.6
	comp=Z,5.7nm,0.8s						
SONM	Songino Array	26.53	19	P	P	19 08 43.8	+0.8
SONM	Songino Array	26.53	19	P	P	19 08 43.8	+0.8
	comp=Z,2.0nm,0.5s,baz=208,slow=8.5,SNR=16						
KURBB	Kurchatov Arra	29.84	340	P	P	19 09 12.9	+0.5
	comp=Z,3.2nm,0.6s,baz=157,slow=7.8,SNR=14						
KURK	Kurchatov	29.89	340	P	P	19 09 12.8	+0.1
ZALV	Zalesovo Beam	31.43	350	P	P	19 09 26.0	-0.3
ZALV	Zalesovo Beam	31.43	350	P	P	19 09 26.0	-0.3
	comp=Z,5.7nm,0.8s,baz=167,slow=7.4,SNR=14						
BVAR	Borovoye Array	34.69	335	P	P	19 09 55.2	+0.5
BVAR	Borovoye Array	34.69	335	P	P	19 09 55.2	+0.5
	comp=Z,1.3nm,0.5s,baz=142,slow=11,SNR=11						
ABKAR	Akbulak array	37.20	323	eP	P	19 10 17.4	+1.1
	comp=Z,3.1nm,0.4s						
AKTO	Aktyubinsk	38.88	323	P	P	19 10 32.4	+1.9
AKTO	Aktyubinsk	38.88	323	P	P	19 10 32.4	+1.9
	comp=Z,3.0nm,0.6s,baz=116,slow=10,SNR=14						
RDF	Al-Radifah	41.76	288	eP	P	19 10 56.4	+1.8
RDF				AMb	AMB	19 10 57.0	
	comp=Z,16nm,0.4s						
MIB	Mutribah	41.91	289	eP	P	19 10 57.0	+1.3
MIB				AMb	AMB	19 10 57.6	
	comp=Z,11nm,0.9s						
NAY	Al-Naaiem	42.02	288	eP	P	19 10 57.7	+1.1
NAY				AMb	AMB	19 10 58.4	
	comp=Z,7.6nm,1.0s						
FITZ	Fitzroy Crossi	51.50	140	P	P	19 12 10.4	-0.3
FITZ	Fitzroy Crossi	51.50	140	P	P	19 12 10.4	-0.3
	comp=Z,1.0nm,0.7s,baz=333,slow=2.3,SNR=7.2						
AKASG	Malin Array Be	56.40	316	P	P	19 12 46.0	-0.1
AKASG	Malin Array Be	56.40	316	P	P	19 12 46.0	-0.1
	comp=Z,5.5nm,0.9s,baz=83,slow=6.6,SNR=8.9						
AK01	Malin Array Si	56.41	316	eP	P	19 12 45.7	-0.5
AK02	Malin Array Si	56.41	316	eP	P	19 12 46.2	0.0
KIEV	Kiev	56.41	316	eP	P	19 12 46.1	-0.1
	comp=Z,5.4nm,0.9s						
JOF	Joensuu	57.12	331	ep	P	19 12 52.5	+1.5
	comp=Z,1.6nm,0.6s						
VRI	Vrincioaia	57.96	311⇑	iP	P	19 12 59.4	+2.1
PLOR	Plostina	58.02	311⇑	iP	P	19 13 00.1	+2.4
WRA	Warramunga Arr	58.32	134	P	P	19 12 59.3	-0.8
WRA	Warramunga Arr	58.32	134	P	P	19 12 59.3	-0.8
	comp=Z,1.0nm,0.4s,baz=323,slow=7.2,SNR=25						
WRAB	Tennant Creek	58.32	134	P	P	19 12 58.4	-1.7
	comp=Z,3.8nm,0.8s						
MLR	Muntele Rosu	58.52	310⇑	iP	P	19 13 03.6	+2.2
FINES	FINESS Array B	59.26	329	P	P	19 13 06.8	+0.8
FINES	FINESS Array B	59.26	329	P	P	19 13 06.8	+0.8
	comp=Z,3.9nm,0.8s,baz=104,slow=3.9,SNR=4.0						
AS31	Alice Springs	60.72	137	eP	P	19 13 16.3	-0.3
ASAR	Alice Springs	60.72	137	P	P	19 13 16.2	-0.3
ASAR	Alice Springs	60.72	137	P	P	19 13 16.2	-0.3
	comp=Z,1.4nm,0.4s,baz=318,slow=6.8,SNR=45						
ARCES	ARCESS Array B	60.89	338	P	P	19 13 16.1	-0.9
ARCES	ARCESS Array B	60.89	338	P	P	19 13 16.1	-0.9
	comp=Z,7.2nm,1.0s,baz=101,slow=8.7,SNR=3.4						
PKSM	Moragy	63.56	311⇑	iP	P	19 13 36.3	+1.0
VRAC	Vranov	64.57	315⇑	iP	P	19 13 36.6	-5.3
SPITS	Spitsbergen Ar	64.86	347	P	P	19 13 43.7	+0.4
SPITS	Spitsbergen Ar	64.86	347	P	P	19 13 43.7	+0.4
	comp=Z,4.6nm,0.9s,baz=100,slow=10,SNR=3.5						
BRG	Berggiesshubel	66.07	317	eP	P	19 13 52.0	+0.4
	comp=Z,2.4nm,0.8s						
NOA	NORSAR Array B	66.42	328	P	P	19 13 53.5	-0.2
NOA	NORSAR Array B	66.42	328	P	P	19 13 53.5	-0.2
	comp=Z,0.7nm,0.5s,baz=109,slow=4.2,SNR=3.1						
GERES	GERESS Array B	66.52	315	P	P	19 13 55.5	+0.9
GERES	GERESS Array B	66.52	315	P	P	19 13 55.5	+0.9
	comp=Z,3.1nm,0.7s,baz=76,slow=6.1,SNR=21						
CLL	Collm	66.60	318	eP	P	19 13 56.0	+1.1
CLL				e	pP	19 14 10.0	-0.8
STKA	Stephens Creek	71.33	138	P	P	19 14 22.4	-2.0
STKA	Stephens Creek	71.33	138	P	P	19 14 22.4	-2.0
	comp=Z,1.8nm,1.0s,baz=313,slow=0.9,SNR=2.7						
ILAR	Eielson Array	80.71	22	P	P	19 15 18.1	+0.7
ILAR	Eielson Array	80.71	22	P	P	19 15 18.1	+0.7
	comp=Z,0.5nm,0.5s,baz=280,slow=5.5,SNR=4.2						
KDAK	Kodiak Island	82.30	30	P	P	19 15 25.2	-0.7
KDAK	Kodiak Island	82.30	30	P	P	19 15 25.2	-0.7
	comp=Z,5.0nm,1.1s,baz=225,slow=1.4,SNR=2.9						
INK	Inuvik	82.40	16	P	P	19 15 25.6	-0.6
INK	Inuvik	82.40	16	P	P	19 15 25.6	-0.6
	comp=Z,3.2nm,0.9s,baz=323,slow=3.0,SNR=2.2						
BOSA	Boshof	83.77	235	P	P	19 15 35.2	+1.1
BOSA	Boshof	83.77	235	P	P	19 15 35.2	+1.1
	comp=Z,1.7nm,0.5s,baz=40,slow=3.4,SNR=5.1						
TORD	Torodi Ar. Bea	86.84	283	P	P	19 15 52.1	+2.5
TORD	Torodi Ar. Bea	86.84	283	P	P	19 15 52.1	+2.5
	comp=Z,0.8nm,0.7s,baz=67,slow=4.4,SNR=3.7						
TXAR	Lajitas Array	125.09	19	PKP	PKPdf	19 22 05.2	-0.1
TXAR	Lajitas Array	125.09	19	PKP	PKPdf	19 22 05.2	-0.1
	comp=Z,0.4nm,0.5s,baz=58,slow=0.2,SNR=6.2						

IDC 03 19:12:12.5±0.6, 56°.03N×163°.70E, h0km, mb3.9/18, mb1 4.1/21, mb1mx3.9/36, mbtmp3.9/21, ML3.6/3, Error ellipse: s-maj=17.6km s-min=10.9km az=6.0

ISCJB 03 19:12:14.2±0.8, 55°.85N±0°.03×164°.05E±0°.04, h25km±6km, mb3.9/19, Error ellipse: s-maj=4.5km s-min=3.5km az=179.9

KRSC 03 19:12:14.1±0.4, 55°.84N×163°.86E, h11km±10km, ML4.2

MOS 03 19:12:15.4±0.8, 55°.91N×163°.86E, h38km, mb4.2/10, Error ellipse: s-maj=12.0km s-min=8.4km az=67.1

ISC 03 19:12:14.0±2.1, 55°.87N±0°.04×163°.87E±0°.03, h13km±13km, n79, σ1§32/112, mb3.9/19, 1D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.68	300	P	Pb	19 12 27.5	-0.2
KBTR	Krutoberegovo	0.68	300	PN	Pb	19 12 27.5	-0.2
KBG	Krutoberegovo	0.76	301	P	Pb	19 12 28.9	-0.1
KBG				i S	Sb	19 12 39.4	+0.2
KBG	Krutoberegovo	0.76	301	PN	Pb	19 12 28.9	-0.1
KBG				S	Sb	19 12 39.4	+0.2
BKI	Bering	1.37	118	P	Pn	19 12 38.9	+0.2
BKI				i S	Sn	19 12 56.5	-0.2
BKI	Bering	1.37	118	PN	Pn	19 12 38.9	+0.2
BKI				S	Sn	19 12 56.5	-0.2
SMKR	Semkarok	1.52	299	P	Pb	19 12 41.6	-0.5
SMKR				i S	Sg	19 13 02.2	-0.7
BDR	Baidarnaya	1.64	296	P	Pb	19 12 43.8	-0.4
BDR				i S	Sb	19 13 05.2	+0.4
SRKR	Sorokina	1.70	299	P	Pb	19 12 44.6	-0.5
SRKR				i S	Sb	19 13 06.1	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	**1.73**	**276**	P	**Pb**	**19 12 45.4**	**-0.3**
ZLN				*i* S	**Sb**	**19 13 08.4**	**+1.0**
CIRR	**Tsirk**	**1.77**	**279**	P	**Pb**	**19 12 46.0**	**-0.4**
CIRR				*i* S	**Sb**	**19 13 08.8**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**1.79**	**273**	P	**Pb**	**19 12 46.0**	**-0.7**
BZGR				*i* S	**Sb**	**19 13 09.2**	**+0.2**
LGNR	**Loginova**	**1.80**	**278**	P	**Pb**	**19 12 46.5**	**-0.5**
LGNR				*i* S	**Sb**	**19 13 09.7**	**+0.2**
MKZ	**Mys Kozlova**	**1.80**	**224**	P	**Pn**	**19 12 44.7**	**0.0**
MKZ				*i* S	**Sn**	**19 13 06.5**	**-0.8**
MKZ	**Mys Kozlova**	**1.80**	**224**	PN	**Pn**	**19 12 44.7**	**0.0**
MKZ				S	**Sn**	**19 13 06.5**	**-0.8**
KLY	**Klyuchi**	**1.86**	**285**	P	**Pn**	**19 12 45.2**	**-0.3**
KLY				*i* S	**Sn**	**19 13 07.8**	**-0.9**
KLY	**Klyuchi**	**1.86**	**285**	PN	**Pn**	**19 12 45.2**	**-0.3**
KLY				S	**Sn**	**19 13 07.8**	**-0.9**
KRSR	**Krestovskiy**	**1.89**	**282**	P	**Pn**	**19 12 46.9**	**+0.9**
KRSR				*i* S	**Sb**	**19 13 11.5**	**-0.3**
BZWR	**Bezymyannyi-We**	**1.90**	**274**	P	**Pb**	**19 12 47.8**	**-0.8**
BZWR				*i* S	**Sb**	**19 13 12.8**	**+0.5**
BZMR	**Bezymyannaya**	**1.91**	**273**	P	**Pb**	**19 12 47.6**	**-1.1**
KIRR	**Kirishev**	**1.99**	**274**	P	**Pb**	**19 12 49.1**	**-1.0**
KIRR				*i* S	**Sb**	**19 13 14.3**	**-0.5**
KMNR	**Kamenistaya**	**2.05**	**268**	P	**Pb**	**19 12 50.0**	**-1.2**
KMNR				*i* S	**Sb**	**19 13 16.4**	**-0.2**
KPT	**Kopyto**	**2.06**	**274**	P	**Pb**	**19 12 50.0**	**-1.2**
KPT				*i* S	**Sb**	**19 13 15.6**	**-1.1**
TUMR	**Tumrok**	**2.20**	**256**	P	**Pb**	**19 12 52.3**	**-1.3**
TUMR				*i* S	**Sb**	**19 13 19.3**	**-1.4**
KOZR	**Kozyr**	**2.24**	**277**	PN	**Pb**	**19 12 53.7**	**-0.7**
KOZR				S	**Sb**	**19 13 22.2**	**+0.2**
KOZ	**Kozyrevsk**	**2.25**	**276**	P	**Pb**	**19 12 53.7**	**-0.9**
KOZ				*i* S	**Sb**	**19 13 22.2**	**-0.1**
SRDR	**Sredinnyy**	**2.37**	**283**	P	**Pb**	**19 12 54.7**	**-1.8**
SRDR				*i* S	**Sn**	**19 13 23.5**	**+2.0**
ESO	**Esso**	**2.91**	**273**	P	**Pn**	**19 13 00.9**	**+0.9**
ESO	**Esso**	**2.91**	**273**	PN	**Pn**	**19 13 00.9**	**+0.9**
SPN	**Mys Shipunski**	**3.57**	**221**	P	**Pn**	**19 13 08.7**	**-0.3**
SPN				*i* S	**Sn**	**19 13 49.0**	**-2.0**
SPN	**Mys Shipunski**	**3.57**	**221**	PN	**Pn**	**19 13 08.7**	**-0.3**
NLC	**Nalytchevo**	**3.78**	**226**	P	**Pn**	**19 13 12.8**	**+0.9**
NLC				*i* S	**Sn**	**19 13 54.9**	**-1.2**
NLC	**Nalytchevo**	**3.78**	**226**	PN	**Pn**	**19 13 12.8**	**+0.9**
SDLR	**Sedlovina**	**3.90**	**230**	P	**Pn**	**19 13 14.6**	**+1.0**
SDLR				*i* S	**Sn**	**19 13 59.2**	**0.0**
KRER	**Koryakskii**	**3.94**	**231**	P	**Pn**	**19 13 15.7**	**+1.5**
SMAR	**Somma**	**3.94**	**231**	P	**Pn**	**19 13 16.2**	**+1.9**
SMAR				*i* S	**Sn**	**19 14 01.9**	**+1.4**
AVH	**Avacha**	**3.97**	**231**	P	**Pn**	**19 13 16.8**	**+2.2**
UGLR	**Uglovaya**	**3.97**	**230**	P	**Pn**	**19 13 16.7**	**+2.1**
KOK	**Koryaka**	**4.00**	**232**	P	**Pn**	**19 13 18.1**	**+3.2**
GNL	**Ganaly**	**4.07**	**240**	P	**Pn**	**19 13 18.2**	**+2.2**
PET	**Petropavlovsk**	**4.17**	**229**	P	**Pn**	**19 13 18.9**	**+1.6**
PET				*i* S	**Sn**	**19 14 06.2**	**+0.4**
PET	**Petropavlovsk**	**4.17**	**229**	⇓*i*PN	**Pn**	**19 13 18.7**	**+1.4**
PET				*e*S	**Sn**	**19 14 06.0**	**+0.2**
PET				pmax	pmax		
	comp=Z,54nm,0.3s						
PET				smax	smax		
	comp=N,46nm,0.7s						
PET				smax	smax		
	comp=E,41nm,0.4s						
PETK	**Petropavlovsk-**	**4.54**	**235**	PN	**Pn**	**19 13 24.5**	**+2.1**
PETK						19 14 17.9	
PETK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
PETK	**Petropavlovsk-**	**4.54**	**235**	Pn	**Pn**	**19 13 24.5**	**+2.1**
	comp=Z,5.4nm,0.3s,baz=78,slow=17,SNR=50						
PETK				Sn	**Sn**	**19 14 17.9**	**+3.0**
	baz=99,slow=19,SNR=2.2						
RUS	**Russkaya**	**4.67**	**225**	P	**Pn**	**19 13 25.6**	**+1.5**
RUS	**Russkaya**	**4.67**	**225**	PN	**Pn**	**19 13 25.6**	**+1.5**
TILK	**Tilichiki**	**4.74**	**14**	P	**Pn**	**19 13 26.3**	**+1.2**
TILK				*i* S	**Sn**	**19 14 18.1**	**-1.7**
GRL	**Gorelyy**	**4.76**	**228**	P	**Pn**	**19 13 28.4**	**+2.9**
MTVR	**Mutnovka**	**4.76**	**227**	P	**Pn**	**19 13 27.8**	**+2.3**
APC	**Apacha**	**4.91**	**236**	P	**Pn**	**19 13 30.5**	**+3.1**
ASAK	**Asacha**	**4.95**	**228**	P	**Pn**	**19 13 30.9**	**+2.8**
PAU	**Pauzhetka**	**6.09**	**226**	P	**Pn**	**19 13 45.7**	**+2.1**
PAU	**Pauzhetka**	**6.09**	**226**	PN	**Pn**	**19 13 45.7**	**+2.1**
FX1	**Attu Island--F**	**6.20**	**115**	Pn	**Pn**	**19 13 46.5**	**+1.4**
	comp=Z,1.7nm,0.3s,baz=331,slow=7.7,SNR=8.6						
FX1				Sn	**Sn**	**19 14 52.5**	**-3.3**
	comp=Z,1.1nm,0.3s,baz=273,slow=19,SNR=3.1						
SKR	**Severo-Kuril's**	**6.97**	**225**	P	**Pn**	**19 13 56.9**	**+1.2**
ASAJ	**Asahikawa**	**17.95**	**238**	P	**P**	**19 16 23.4**	**-0.2**
	comp=Z,0.6nm,0.3s,baz=96,slow=8.0,SNR=5.5						
KDAK	**Kodiak Island**	**23.60**	**67**	P	**P**	**19 17 24.2**	**+0.1**
	comp=Z,3.6nm,0.6s,baz=303,slow=7.2,SNR=7.4						
ILAR	**Eielson Array**	**25.31**	**49**	P	**P**	**19 17 39.2**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=273,slow=10,SNR=16						
MJAR	**Matsushiro Arr**	**26.00**	**233**	P	**P**	**19 17 46.7**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=47,slow=5.3,SNR=4.1						
INK	**Inuvik**	**30.32**	**41**	P	**P**	**19 18 25.1**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=288,slow=6.0,SNR=4.2						
SONM	**Songino Array**	**35.45**	**282**	P	**P**	**19 19 09.7**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=72,slow=4.7,SNR=3.2						
SPITS	**Spitsbergen Ar**	**44.74**	**351**	P	**P**	**19 20 26.1**	**-0.2**
	comp=Z,5.9nm,0.8s,baz=45,slow=8.5,SNR=5.7						
YBH	**Yreka Blue Hor**	**48.07**	**75**	P	**P**	**19 20 53.0**	**0.0**
	comp=Z,0.3nm,0.3s,baz=36,slow=4.9,SNR=5.6						
KURK	**Kurchatov**	**48.14**	**302**	P	**P**	**19 20 52.4**	**-0.9**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURBB	**Kurchatov Arra**	**48.25**	**302**	P	**P**	**19 20 52.4**	**-1.6**
	comp=Z,0.6nm,0.2s,baz=53,slow=7.8,SNR=2.5						
MKAR	**Makanchi Array**	**48.94**	**296**	P	**P**	**19 20 57.3**	**-2.2**
MKAR	**Makanchi Array**	**48.94**	**296**	P	**P**	**19 20 57.3**	**-2.2**
	comp=Z,0.2nm,0.4s,baz=54,slow=6.4,SNR=5.7						
BVAR	**Borovoye Array**	**50.38**	**308**	P	**P**	**19 21 08.0**	**-2.4**
BVAR	**Borovoye Array**	**50.38**	**308**	P	**P**	**19 21 08.0**	**-2.4**
	comp=Z,0.2nm,0.4s,baz=48,slow=8.6,SNR=2.2						
ARCES	**ARCESS Array B**	**51.31**	**343**	P	**P**	**19 21 16.6**	**-0.5**
	comp=Z,4.3nm,0.9s,baz=26,slow=11,SNR=3.5						
NVAR	**Mina Array Bea**	**52.80**	**75**	P	**P**	**19 21 30.6**	**+1.7**
	comp=Z,0.6nm,0.5s,baz=306,slow=7.7,SNR=2.4						
PDAR	**Pinedale Array**	**54.29**	**65**	P	**P**	**19 21 40.0**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=350,slow=4.0,SNR=5.7						
NOA	**NORSAR Array B**	**61.45**	**345**	P	**P**	**19 22 29.4**	**-0.1**
	comp=Z,0.9nm,0.8s,baz=18,slow=6.8,SNR=4.6						
AKASG	**Malin Array Be**	**67.32**	**331**	P	**P**	**19 23 07.8**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**67.32**	**331**	P	**P**	**19 23 07.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=21,slow=6.8,SNR=3.3						
TXAR	**Lajitas Array**	**67.58**	**71**	P	**P**	**19 23 11.2**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=293,slow=5.2,SNR=14						
KBZ	**Khabaz**	**68.98**	**318**	P	**P**	**19 23 18.4**	**-0.2**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KBZ	**Khabaz**	**68.98**	**318**	P	**P**	**19 23 18.4**	**-0.2**
	comp=Z,1.4nm,0.8s,baz=0.0,slow=2.0,SNR=3.4						
GERES	**GERESS Array B**	**72.72**	**340**	P	**P**	**19 23 42.0**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=53,slow=3.8,SNR=4.7						

IDC 03 19:57:28.0±2.9**, 49°.70S×118°.20E, h0km, mb3.8**/4**, mb1 4.1**/5**, mb1mx3.8**/15**, mbtmp3.9**/5**, ML2.2**/1**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx3.1**/24**, Error ellipse: s-maj=94.7km s-min=26.0km az=95.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**16.78**	**357**	Pn	P	20 01 25.6	-0.9
	0.5nm,0.3s,baz=181,slow=13,SNR=4.5						
NWAO				LR	LR	20 06 01.7	
	comp=Z,174nm,18.7s,baz=281,slow=31						
STKA	**Stephens Creek**	**24.95**	**53**	P	P	20 02 53.7	+0.8
	0.6nm,0.7s,baz=220,slow=7.9,SNR=3.8						
ASAR	**Alice Springs**	**28.76**	**31**	P	P	20 03 27.0	-0.3
	0.8nm,0.7s,baz=197,slow=8.3,SNR=14						
WRA	**Warramunga Arr**	**32.37**	**29**	P	P	20 03 58.5	-0.6
	1.1nm,0.7s,baz=199,slow=8.7,SNR=8.7						
VNDA	**Vanda**	**32.38**	**164**	P	P	20 03 58.7	0.0
	1.3nm,0.9s,baz=296,slow=8.8,SNR=6.0						

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*IDC **03** 20:14:31.9±1.0, 17°.77S×167°.89E, h0km, mb4.1/11, mb1 4.3/12, mb1mx4.1/21, mbtmp4.1/12, ML4.0/1, MS3.7/7, Ms1 3.7/7, ms1mx3.5/26, Error ellipse: s-maj=29.2km s-min=17.7km az=114.0*

*ISCJB **03** 20:14:35.1±0.8, 17°.78S±0°.07×167°.8E±0°.1, h32km, mb4.1/12, MS3.7/5, Error ellipse: s-maj=19.5km s-min=9.1km az=7.5*

*NEIC **03** 20:14:37.5±0.7, 17°.78S×167°.80E, h35km, mb4.5/3, Error ellipse: s-maj=18.4km s-min=13.1km az=111.0*

ISC 03 20:14:36.9±0.8**, 17°.78S**±0°.08**×167°.8E**±0°.2**, h32km, n35, σ1s.05**/32**, mb4.2**/12**, MS3.9**/4**, 2C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.47**	**197**	Pn	**Pn**	**20 15 41.9**	**-0.7**
DZM				Sn	**Sn**	**20 16 33.5**	**0.0**
DZM	**Mont Dzumac**	**4.47**	**197**	Pn	**Pn**	**20 15 41.9**	**-0.7**
	6.8nm,0.3s,baz=72,slow=12,SNR=24						
DZM				Sn	**Sn**	**20 16 33.5**	**0.0**
	7.5nm,0.3s,baz=323,slow=20,SNR=3.5						
DZM				LR	LR	20 17 18.9	
	comp=Z,287nm,21.2s,baz=186,slow=37						
HNR	**Honiara**	**11.29**	**316**	LR	LR	20 20 59.4	
	comp=Z,292nm,20.6s,baz=132,slow=34						
AFI	**Afiamalu**	**19.99**	**82**	LR	LR	20 24 51.3	
	comp=Z,179nm,19.7s,baz=142,slow=31						
CTA	**Charters Tower**	**20.54**	**260**	P	Pn	20 19 14.1	-1.2
CTA	**Charters Tower**	**20.54**	**260**	P	Pn	20 19 14.1	-1.2
	8.2nm,0.9s,baz=70,slow=12,SNR=6.8						
STKA	**Stephens Creek**	**27.55**	**234**	*e*P	**P**	**20 20 21.9**	**+0.9**
STKA	**Stephens Creek**	**27.55**	**234**	P	**P**	**20 20 22.1**	**+1.1**
	3.3nm,0.6s,baz=62,slow=9.0,SNR=19						
STKA				LR	LR	20 31 03.2	
	comp=Z,225nm,18.1s,baz=36,slow=36						
WRAB	**Tennant Creek**	**31.73**	**261**	*e*P	**P**	**20 20 57.1**	**-1.1**
	8.6nm,1.3s						
WRA	**Warramunga Arr**	**31.73**	**261**	P	**P**	**20 20 56.7**	**-1.6**
WRA	**Warramunga Arr**	**31.73**	**261**	P	**P**	**20 20 56.7**	**-1.6**
	1.8nm,0.9s,baz=88,slow=9.7,SNR=13						
AS31	**Alice Springs**	**32.21**	**254**	*e*P	**P**	**20 21 01.5**	**-0.9**
ASAR	**Alice Springs**	**32.21**	**254**	P	**P**	**20 21 01.6**	**-0.9**
ASAR	**Alice Springs**	**32.21**	**254**	P	**P**	**20 21 01.6**	**-0.9**
	3.5nm,0.8s,baz=79,slow=8.3,SNR=35						
ASAR				LR	LR	20 33 19.8	
	comp=Z,280nm,21.4s,baz=93,slow=35						
FITZ	**Fitzroy Crossi**	**40.08**	**263**	*e*P	**P**	**20 22 10.0**	**+0.3**
	8.1nm,1.0s						
FITZ	**Fitzroy Crossi**	**40.08**	**263**	P	**P**	**20 22 09.2**	**-0.5**
	5.7nm,0.9s,baz=122,slow=7.7,SNR=7.7						
FITZ				LR	LR	20 38 28.7	
	comp=Z,198nm,21.4s,baz=102,slow=36						
PPT	**Papeete**	**40.52**	**96**	LR	LR	20 34 51.2	
	comp=Z,105nm,21.9s,baz=224,slow=30						
VNDA	**Vanda**	**59.85**	**182**	P	**P**	**20 24 38.8**	**-0.2**
VNDA	**Vanda**	**59.85**	**182**	P	**P**	**20 24 38.8**	**-0.2**
	0.3nm,0.6s,baz=357,slow=4.8,SNR=2.9						
MJAR	**Matsushiro Arr**	**60.84**	**333**	P	**P**	**20 24 45.0**	**-1.2**
MJAR	**Matsushiro Arr**	**60.84**	**333**	P	**P**	**20 24 45.0**	**-1.2**
	1.0nm,0.5s,baz=159,slow=8.8,SNR=6.4						
PETK	**Petropavlovsk-**	**71.13**	**354**	P	**P**	**20 25 52.5**	**+0.5**
PETK	**Petropavlovsk-**	**71.13**	**354**	P	**P**	**20 25 52.6**	**+0.5**
	1.0nm,0.7s,baz=164,slow=7.3,SNR=4.0						
QSPA	**South Pole Qui**	**72.27**	**180**	*e*P	**P**	**20 26 00.4**	**+1.3**
	8.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**76.68**	**295**	P	**P**	**20 26 26.9**	**+1.6**
CMAR	**Chiang Mai Arr**	**76.68**	**295**	P	**P**	**20 26 26.9**	**+1.6**
	1.5nm,0.7s,baz=130,slow=5.1,SNR=2.7						
SONM	**Songino Array**	**85.25**	**324**	P	**P**	**20 27 11.8**	**+1.3**
SONM	**Songino Array**	**85.25**	**324**	P	**P**	**20 27 11.8**	**+1.3**
	0.9nm,0.5s,baz=123,slow=5.3,SNR=12						
ILAR	**Eielson Array**	**89.25**	**18**	P	**P**	**20 27 27.9**	**-1.4**
ILAR	**Eielson Array**	**89.25**	**18**	P	**P**	**20 27 27.9**	**-1.4**
	0.4nm,0.6s,baz=227,slow=4.4,SNR=6.6						
ARCES	**ARCESS Array B**	**123.32**	**345**	PKP	**PKPdf**	**20 33 30.2**	**+0.1**
ARCES	**ARCESS Array B**	**123.32**	**345**	PKP	**PKPdf**	**20 33 30.2**	**+0.1**
	1.1nm,0.5s,baz=86,slow=3.0,SNR=10						
BFO	**Black Forest**	**145.24**	**336**	*e*PKPdf	**PKPdf**	**20 34 11.8**	**+0.3**
FETA	**Feichten**	**145.27**	**332**	⇑*i*PKPdf	**PKPdf**	**20 34 12.4**	**+0.7**
	9.4nm,0.8s						
DAVA	**Damuels**	**145.44**	**333**	⇑*i*PKPbc	**PKPbc**	**20 34 10.7**	**-1.3**
	7.1nm,0.8s						

IDC 03 20:21:57.1±3.8**, 17°.03S×179°.41W, h0km, mb4.1**/5**, mb1 4.3**/5**, mb1mx3.8**/20**, mbtmp4.1**/5**, Error ellipse: s-maj=91.8km s-min=37.7km az=33.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.23**	**240**	P	P	20 29 19.7	+0.7
	2.0nm,0.7s,baz=90,slow=8.1,SNR=13						
WRA	**Warramunga Arr**	**43.86**	**259**	P	P	20 30 05.3	-0.3
	0.9nm,0.7s,baz=95,slow=7.0,SNR=29						
ASAR	**Alice Springs**	**44.12**	**253**	P	P	20 30 07.5	-0.1
	8.3nm,0.6s,baz=90,slow=7.9,SNR=161						
ASAR				PcP	PcP	20 31 53.2	+0.3
	1.1nm,0.6s,baz=88,slow=8.0,SNR=7.9						
FITZ	**Fitzroy Crossi**	**52.23**	**260**	P	P	20 31 09.0	-1.5
	0.3nm,0.3s,baz=74,slow=5.6,SNR=4.4						
VNDA	**Vanda**	**61.24**	**185**	P	P	20 32 13.4	-0.2
	1.2nm,0.5s,baz=3.9,slow=5.7,SNR=18						

WEL 03 20:22:44.1±1.4**, 36°.37S×177°.81E, h5km, ML4.1**/4**, Error ellipse: s-maj=9.8km s-min=9.5km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.25**	**161**	P*	Pg	20 23 04.0	-4.1
MXZ				S*	Sg	20 23 19.2	-5.3
MXZ				AML	AML	20 23 21.6	
PUZ	**Puketiti**	**1.73**	**168**	PN	Pn	20 23 15.0	+0.1
PUZ				SN	Sb	20 23 39.2	+0.6
PUZ				AML	AML	20 23 46.3	
URZ	**Urewera**	**1.96**	**196**	P*	Pn	20 23 15.7	-2.3
URZ				S*	Sn	20 23 40.4	-2.7
URZ				AML	AML	20 23 41.9	
MWZ	**Matawai**	**1.97**	**186**	P*	Pn	20 23 16.3	-1.9
MWZ				AML	AML	20 23 46.1	
MWZ				AML	AML	20 23 53.4	
CNGZ	**Carnagh Statio**	**2.13**	**171**	PN	Pn	20 23 20.4	0.0
MKAZ	**Moumakai**	**2.24**	**250**	PN	Pn	20 23 21.0	-0.9
TOZ	**Tahuroa Road**	**2.29**	**233**	P*	Pn	20 23 21.4	-1.0
NMHZ	**Naumai**	**2.83**	**196**	PN	Pn	20 23 30.2	+0.1
HIZ	**Hauiti**	**3.17**	**227**	PN	Pn	20 23 34.3	-0.4

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*ISCJB **03** 20:32:29.5±0.6, 13°.4N±0°.1×50°.79E±0°.05, h12km, mb3.9/9, MS3.3/1, Error ellipse: s-maj=15.1km s-min=6.2km az=5.1*

*IDC **03** 20:32:29.3±0.9, 13°.25N×50°.93E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.7/26, mbtmp3.8/9, MS3.4/2, Ms1 3.3/2, ms1mx2.7/49, Error ellipse: s-maj=31.5km s-min=23.0km az=121.0*

*DHMR **03** 20:32:34.2±0.5, 13°.51N×50°.52E, h15km±82km, ML3.7*

ISC 03 20:32:31.3±0.8**, 13°.4N**±0°.1**×50°.81E**±0°.07**, h12km, n17, σ1s.19**/18**, mb3.9**/9**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**2.02**	**302**	*i* P	**Pn**	**20 33 04.3**	**-0.9**
MUKL				*i* S	**Sn**	**20 33 28.3**	**-2.1**
MUKL				AML	AML	20 33 30.1	
	comp=N,933nm,0.5s						
BDHA	**Al Bayda'**	**5.12**	**277**	*i* P	**Pn**	**20 33 48.9**	**+0.7**
BDHA				AML	AML	20 33 49.6	
	comp=E,118nm,0.3s						
BDHA				*i* S	**Sn**	**20 34 47.2**	**-0.2**
LBOS		**5.42**	**276**	*i* P	**Pn**	**20 33 53.0**	**+0.7**
LBOS				*i* S	**Sn**	**20 34 54.1**	**-0.8**
TRBA	**At Turbah**	**6.52**	**269**	*i* P	**Pn**	**20 34 07.7**	**+0.4**
NAY	**Al-Naaiem**	**16.11**	**349**	*e*P	**P**	**20 36 22.8**	**+1.8**
NAY				AMb	AMB	20 36 24.6	
	comp=Z,6.9nm,0.8s						
MIB	**Mutribah**	**16.63**	**349**	*e*P	**P**	**20 36 27.9**	**+1.1**
MIB				AMb	AMB	20 36 32.1	
	comp=Z,27nm,0.8s						
KMBO	**Kilima Mbogo**	**19.73**	**224**	LR	LR	20 43 53.5	
	comp=Z,99nm,18.3s,baz=96,slow=35						
KBZ	**Khabaz**	**30.97**	**349**	LR	LR	20 53 41.0	
	comp=Z,69nm,19.6s,baz=353,slow=41						
MKAR	**Makanchi Array**	**42.47**	**32**	P	**P**	**20 40 26.9**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=215,slow=8.9,SNR=11						
KURBB	**Kurchatov Arra**	**43.42**	**26**	P	**P**	**20 40 34.2**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=230,slow=8.2,SNR=4.9						
CMAR	**Chiang Mai Arr**	**46.45**	**77**	P	**P**	**20 40 59.0**	**+0.5**
	comp=Z,1.6nm,1.0s,baz=276,slow=8.1,SNR=5.4						
TORD	**Torodi Ar. Bea**	**47.74**	**276**	P	**P**	**20 41 09.9**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=86,slow=8.2,SNR=5.9						
ZALV	**Zalesovo Beam**	**48.50**	**26**	P	**P**	**20 41 13.4**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=236,slow=9.1,SNR=4.6						
SONM	**Songino Array**	**57.26**	**41**	P	**P**	**20 42 18.8**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=239,slow=7.6,SNR=5.4						
MAW	**Mawson**	**81.27**	**175**	P	**P**	**20 44 45.8**	**-1.0**
	comp=Z,4.4nm,0.6s,baz=342,slow=3.2,SNR=17						
WRA	**Warramunga Arr**	**88.57**	**111**	P	**P**	**20 45 22.3**	**-2.5**
	comp=Z,1.4nm,1.1s,baz=299,slow=4.0,SNR=4.4						
ASAR	**Alice Springs**	**89.12**	**114**	P	**P**	**20 45 27.6**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=282,slow=4.6,SNR=4.5						

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*ISCJB **03** 20:42:06.5±1.5, 38°.6N±0°.1×74°.9E±0°.1, h10km, mb4.0/2, Error ellipse: s-maj=18.6km s-min=12.6km az=6.0*

*NNC **03** 20:42:12.8±4.6, 39°.13N×74°.79E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=44.4km s-min=18.3km az=11.0*

*IDC **03** 20:42:13.5±7.0, 38°.51N×75°.37E, h70km±57km, mb3.5/2, mb1 3.4/7, mb1mx3.1/32, mbtmp3.3/7, ML3.2/5, Error ellipse: s-maj=69.9km s-min=52.5km az=151.0*

ISC 03 20:42:08.1±1.9**, 38°.5N**±0°.2**×74°.8E**±0°.1**, h10km, n13, σ1s.32**/12**, 3C-6D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**4.13**	**357**	P	Pn	20 43 15.0	+3.7
	1.4nm,0.3s,baz=150,slow=7.4,SNR=11						
KNDC	**Almaty**	**4.98**	**19**	⇓Pn	**Pn**	**20 43 23.3**	**+0.3**
	5.8nm,0.5s						
KNDC				⇓Pg	**Pb**	**20 43 36.9**	**+1.5**
	13nm,0.5s						
KNDC				⇓Lg	Lg	20 44 34.8	
	56nm,0.6s						
KK31	**Karatay Array**	**5.62**	**326**	⇑Pn	**Pn**	**20 43 33.1**	**+1.4**
	0.7nm,0.3s,baz=129,slow=13,SNR=35						
KK31				⇓Sn	**Sn**	**20 44 36.6**	**+0.3**
	2.3nm,0.5s,baz=135,slow=26						
KK31				⇓Lg	Lg	20 44 55.7	
	6.5nm,0.7s						
MKAR	**Makanchi Array**	**9.95**	**31**	P	**Pn**	**20 44 30.4**	**-0.6**
	0.1nm,0.3s,baz=208,slow=13,SNR=7.5						
MK31	**Makanchi Array**	**9.95**	**31**	Pn	**Pn**	**20 44 31.2**	**+0.1**
	2.4nm,1.1s,baz=209,slow=15,SNR=7.3						
MK31				⇓Lg	Lg	20 47 09.8	
	1.9nm,0.9s,baz=211,slow=31,SNR=4.2						
KUR16	**Kurchatov Arra**	**12.40**	**11**	⇑Lg	Lg	20 48 31.7	
	2.0nm,1.4s						
KURK	**Kurchatov**	**12.50**	**11**	⇑Lg	Lg	20 48 34.4	
	6.4nm,1.4s						
BVAR	**Borovoye Array**	**14.83**	**350**	P	**P**	**20 45 42.2**	**-1.4**
	0.1nm,0.3s,baz=156,slow=11,SNR=5.8						
AB31	**Akbulak array**	**15.13**	**320**	Pn	**Pn**	**20 45 39.6**	**-2.2**
	0.9nm,0.6s,baz=130,slow=9.0,SNR=9.0						
AKTO	**Aktyubinsk**	**16.85**	**320**	P	**P**	**20 46 06.9**	**+1.0**
	0.1nm,0.3s,baz=140,slow=14,SNR=3.1						
ZALV	**Zalesovo Beam**	**16.90**	**21**	P	**Pn**	**20 46 02.9**	**-1.6**
	0.1nm,0.3s,baz=210,slow=13,SNR=3.7						
ARCES	**ARCESS Array B**	**40.50**	**336**	P	**P**	**20 49 46.4**	**-0.2**
	11nm,1.1s,baz=104,slow=7.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	**68.75**	**270**	P	**P**	**20 53 13.2**	**+0.8**
	0.4nm,0.6s,baz=41,slow=6.2,SNR=7.5						

IDC 03 20:54:52.4±3.1**, 29°.70S×176°.93W, h0km, mb4.1**/4**, mb1 4.3**/4**, mb1mx3.8**/19**, mbtmp4.1**/4**, Error ellipse: s-maj=66.5km s-min=43.2km az=41.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.97**	**297**	Pn	Pn	20 55 13.2	-0.1
	2μm,0.3s,baz=79,slow=16,SNR=129						
RAO				Sn	Sg	20 55 23.4	-0.2
	2μm,0.3s,baz=73,slow=19,SNR=26						
CTA	**Charters Tower**	**34.61**	**277**	P	P	21 01 44.1	+0.7
	2.6nm,0.5s,baz=96,slow=10,SNR=4.5						
STKA	**Stephens Creek**	**35.54**	**256**	P	P	21 01 52.0	+0.7
	2.0nm,0.6s,baz=104,slow=11,SNR=8.2						
ASAR	**Alice Springs**	**44.08**	**266**	P	P	21 03 02.0	-0.5
	0.9nm,0.7s,baz=105,slow=7.8,SNR=6.4						
WRA	**Warramunga Arr**	**45.00**	**271**	P	P	21 03 08.5	-1.4
	1.8nm,0.4s,baz=112,slow=6.3,SNR=48						
FINES	**FINESS Array B**	**144.80**	**341**	PKP	PKPdf	21 14 30.8	+0.3
	4.3nm,0.7s,baz=43,slow=2.7,SNR=12						

GUC 03 21:04:13.2±1.1**, 31°.08S×71°.23W, h69km**±6km**, ML3.8, 2C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.22**	**116**	⇓*i*P	Pn	21 04 24.4	+0.4
CMCH				*i* S	Sn	21 04 32.5	+0.7
CMCH				AML	AML	21 04 33.2	
	comp=E,33μm,0.6s						
CHNG	**Los Chungos**	**0.84**	**196**	⇑*i*P	Pn	21 04 30.0	+0.4
CHNG				*i* S	Sn	21 04 42.0	+0.3
TLL	**Tololo Astrono**	**0.98**	**22**	⇑*i*P	Pn	21 04 32.5	+0.8
TLL				*i* S	Sn	21 04 46.3	+0.9
TLL				AML	AML	21 04 49.0	
	comp=N,4μm,0.6s						
ROCH	**El Roble**	**1.90**	**174**	⇓*e*P	Pn	21 04 44.6	+0.8
ROCH				*e*S	Sn	21 05 08.4	+1.4
ROCH				AML	AML	21 05 15.1	
	comp=N,617nm,0.3s						
LCO	**Las Campanas**	**2.11**	**13**	*e*P	Pn	21 04 47.3	+0.6
LCO				*e*S	Sn	21 05 13.2	+1.0
PEL	**Peldehue**	**2.11**	**167**	*e*P	Pn	21 04 47.1	+0.7
PEL				*e*S	Sn	21 05 12.1	+0.3
PEL				AML	AML	21 05 18.5	
	comp=E,648nm,0.1s						
FCH	**Farellones**	**2.38**	**161**	⇓*e*P	Pn	21 04 53.0	+2.6
FCH				*e*S	Sn	21 05 23.5	+4.5
FCH				AML	AML	21 05 36.7	
	comp=E,390nm,0.2s						
CLCH	**Cerro Calan**	**2.39**	**166**	*e*P	Pn	21 04 51.7	+1.5
CLCH				*e*S	Sn	21 05 19.6	+1.1
CLCH				AML	AML	21 05 45.1	
	comp=E,435nm,0.4s						
RCDM	**Rinconada Maip**	**2.43**	**172**	*e*P	Pn	21 04 51.9	+1.2
RCDM				*i* S	Sn	21 05 20.1	+0.6
RCDM				AML	AML	21 05 25.6	
	comp=E,722nm,0.2s						
VACH	**Vallenar**	**2.53**	**10**	*e*P	Pn	21 04 39.2	-13
VACH				*e*S	Sn	21 05 08.9	-13
PCH	**Pirque**	**2.61**	**167**	*e*P	Pn	21 04 54.9	+1.7
LNV	**Longovilo**	**2.88**	**183**	*e*P	Pn	21 04 56.8	+0.1
LMEL	**Las Melosas**	**2.90**	**163**	*e*P	Pn	21 04 59.5	+2.3
LMEL				*i* S	Sn	21 05 34.0	+3.0
LMEL				AML	AML	21 05 36.4	
	comp=N,511nm,0.1s						
CACH	**El Canelo**	**3.08**	**170**	*e*P	Pn	21 05 01.2	+1.6

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*ISCJB **03** 21:11:02.5±1.0, 40°.99N±0°.04×25°.97E±0°.06, h6km±6km, Error ellipse: s-maj=7.9km s-min=6.3km az=4.4*

*ATH **03** 21:11:02.2, 41°.03N×26°.06E, h16km±8km, MD3.1/3*

*ISK **03** 21:11:02.8, 41°.00N×26°.03E, h5km, MD2.8*

*CSEM **03** 21:11:02.8, 41°.00N×26°.03E, h5km, MD2.8, After ISK*

*DDA **03** 21:11:11.1, 40°.70N×26°.57E, h11km, MD2.8*

ISC 03 21:11:02.9±1.1**, 41°.01N**±0°.04**×26°.04E**±0°.04**, h16km**±6km**, n30, σ0s.32**/41**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ALN	**Alexandroupoli**	**0.12**	**177**	*e*PB	**Pg**	**21 11 06.6**	**+0.1**
ALN				*e*SB	**Sg**	**21 11 08.6**	**-0.3**
ENEZ	**Enez**	**0.29**	**163**	*e*PG	**Pg**	**21 11 09.0**	**-0.1**
ENEZ				*e*SG	**Sg**	**21 11 13.2**	**-0.1**
ENEZ	**Enez**	**0.29**	**163**	*e*Pg	**Pg**	**21 11 09.0**	**-0.1**
ENEZ				*e*Sg	**Sg**	**21 11 13.3**	**-0.1**
ERIK	**Erikli-Kesan**	**0.50**	**133**	*e*PG	**Pg**	**21 11 12.8**	**0.0**
ERIK				*e*SG	**Sb**	**21 11 19.8**	**-0.5**
ERIK	**Erikli-Kesan**	**0.50**	**133**	*e*Pg	**Pg**	**21 11 12.8**	**0.0**
ERIK				*e*Sg	**Sb**	**21 11 19.8**	**-0.5**
SMTH	**Samothraki Isl**	**0.67**	**216**	*e*PN	**Pb**	**21 11 16.3**	**+0.1**
SMTH				*e*SN	**Sb**	**21 11 25.5**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.70**	**152**	*e*PG	**Pg**	**21 11 16.5**	**-0.1**
GELI				*e*SG	**Sb**	**21 11 26.4**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.70**	**152**	*e*Pg	**Pg**	**21 11 16.5**	**-0.1**
GELI				*e*Sg	**Sb**	**21 11 26.4**	**+0.3**
LPK	**Lapseki**	**0.84**	**139**	*e*PG	**Pg**	**21 11 19.3**	**0.0**
LPK				*e*SG	**Sn**	**21 11 31.5**	**-0.7**
LPK	**Lapseki**	**0.84**	**139**	*e*Pg	**Pg**	**21 11 19.3**	**0.0**
LPK				*e*Sg	**Sn**	**21 11 31.5**	**-0.7**
MFT	**Murefte**	**0.97**	**103**	*e*PG	**Pn**	**21 11 22.2**	**+0.2**

MFT	Murefte	0.97	103	ePg	Pn	21 11 22.2	+0.2
EDRB	Edirne	0.99	32	ePG	Pb	21 11 21.9	+0.2
EDRB	Edirne	0.99	32	ePg	Pb	21 11 21.9	+0.2
KRBG	Karabiga-Canak	1.14	123	ePN	Pg	21 11 25.0	0.0
KRBG	Karabiga-Canak	1.14	123	ePn	Pg	21 11 25.0	0.0
EZN	Ezine	1.21	169	ePN	Pb	21 11 25.7	+0.3
EZN	Ezine	1.21	169	ePn	Pb	21 11 25.7	+0.3
MRMT	Marmara Adasi	1.25	109	ePN	Pg	21 11 27.1	0.0
MRMT	Marmara Adasi	1.25	109	ePn	Pg	21 11 27.1	0.0
LIA	Limnos Island	1.29	211	ePN	Pb	21 11 26.9	+0.1
LIA				eSN	Sg	21 11 45.0	+0.4
GONE	Gonen-Balikesi	1.58	127	ePN	Pb	21 11 32.1	+0.3
GONE	Gonen-Balikesi	1.58	127	ePn	Pb	21 11 32.1	+0.3
SLVT	Silivri	1.66	82	ePN	Pb	21 11 33.6	+0.6
SLVT	Silivri	1.66	82	ePn	Pb	21 11 33.6	+0.6
NVR	Nevrokopi	1.68	282	ePN	Pb	21 11 33.2	-0.2
CTKS	Kestanelik-??a	1.88	82	ePN	Pb	21 11 37.0	+0.2
CTKS	Kestanelik-??a	1.88	82	ePn	Pb	21 11 37.0	+0.2
BGKT	Bogazkoy	2.07	84	ePN	Pb	21 11 39.7	-0.4
BGKT	Bogazkoy	2.07	84	ePn	Pb	21 11 39.7	-0.4

*IDC **03** 21:15:26.0±10.0, 36°.47S×178°.10E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.7/16, mbtmp3.7/3, Error ellipse: s-maj=185.3km s-min=30.5km az=86.0*
*WEL **03** 21:15:28.4±1.4, 36°.40S×177°.80E, h5^{km}, ML4.0/5, Error ellipse: s-maj=10.2km s-min=10.1km az=90.0*
*ISCJB **03** 21:15:31.6±1.3, 36°.64S±0°.08×177°.7E±0°.1, h33^{km}, mb3.5/3, Error ellipse: s-maj=16.3km s-min=8.1km az=149.0*
ISC 03 21:15:32.2±2.0**, 36°.5S**±0°.1×**177°.8E**±0°.1**, h35^{km}, n10, σ2^{s}06**/12**, mb3.6**/3**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.18	158	P*	Pn	21 15 47.8	-4.3
MXZ				S*	Sn	21 16 03.0	-3.9
MXZ				AML	AML	21 16 40.5	
PUZ	Puketiti	1.65	166	PN	Pn	21 15 58.8	+0.2
PUZ				SN	Sn	21 16 22.5	+3.9
PUZ				AML	AML	21 16 23.7	
URZ	Urewera	1.86	196	P*	Pn	21 15 59.9	-1.6
URZ				S*	Sn	21 16 23.6	-0.2
URZ				AML	AML	21 16 26.0	
URZ	Urewera	1.86	196	Pn	Pn	21 16 00.6	-1.0
	11nm,0.3s,baz=323,slow=3.8,SNR=7.7						
URZ				Sn	Sn	21 16 24.9	+1.1
	18nm,0.3s,baz=99,slow=24,SNR=13						
MKAZ	Moumakai	2.18	252	PN	Pn	21 16 04.9	-1.0
TOZ	Tahuroa Road	2.20	234	P*	Pn	21 16 05.2	-1.0
HIZ	Hauiti	3.08	228	PN	Pn	21 16 18.4	0.0
STKA	Stephens Creek	30.16	268	P	P	21 21 41.7	+2.8
	0.7nm,0.6s,baz=112,slow=9.3,SNR=2.3						
ASAR	Alice Springs	39.72	276	P	P	21 23 02.4	+1.0
	1.3nm,0.8s,baz=121,slow=7.9,SNR=11						
WRA	Warramunga Arr	41.29	281	P	P	21 23 14.7	+0.3
	0.6nm,0.9s,baz=121,slow=7.9,SNR=5.7						

*ROM **03** 21:16:46.0±0.2, 41°.93N×15°.37E, h6^{km}±1^{km}, Ml2.6/15, Error ellipse: s-maj=2.5km s-min=1.3km az=1.0*
*CSEM **03** 21:16:47.2±0.2, 41°.90N×15°.31E, h2^{km}, Error ellipse: s-maj=4.5km s-min=2.9km az=177.0*
ISC 03 21:16:47.4±0.9**, 41°.91N**±0°.03×**15°.33E**±0°.02**, h12^{km}**±6^{km}**, n50, σ0^{s}76**/63**, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FG2	Serracapriola	0.16	230	Pg	Pg	21 16 51.3	+0.1
FG2				Sg	Sg	21 16 53.7	-0.1
FG2	Serracapriola	0.16	230	Pg	Pg	21 16 51.3	+0.1
FG2				Sg	Sg	21 16 53.7	-0.1
SGRT	San Giovanni R	0.35	116	Pg	Pg	21 16 53.6	-0.9
SGRT				Sg	Sg	21 16 58.8	-0.4
	609nm,0.3s						
SGRT	San Giovanni R	0.35	116	Pg	Pg	21 16 53.6	-0.9
SGRT				Sg	Sg	21 16 58.8	-0.4
	609nm,0.3s						
CIGN	Sant'Elia a Pi	0.41	231	Pg	Pg	21 16 55.6	+0.1
CIGN				Sg	Sb	21 17 02.3	-0.3
	143nm,0.5s						
CIGN	Sant'Elia a Pi	0.41	231	Pg	Pg	21 16 55.6	+0.1
MSAG	Monte S. Angel	0.48	114	Pg	Pg	21 16 56.0	-0.8
	537nm,0.3s						
MSAG	Monte S. Angel	0.48	114	Pg	Pg	21 16 56.0	-0.8
	537nm,0.3s						
FRES	Fresagrandinar	0.49	278	Pg	Pg	21 16 57.0	-0.1
	686nm,1.0s						
FRES	Fresagrandinar	0.49	278	Pg	Pg	21 16 57.0	-0.1
	686nm,1.0s						
MS1	Monte Sant'Ang	0.50	114	ePg	Pg	21 16 56.9	-0.4
MS1				eSg	Sb	21 17 05.1	-0.4
MOCO	Biccari - m.te	0.55	193	Pg	Pg	21 16 58.0	-0.2
MOCO				Sg	Sb	21 17 07.5	+0.5
	108nm,0.3s						
TRIV	Trivento	0.60	256	Pg	Pb	21 16 59.1	-0.7
TRIV				Sg	Sb	21 17 08.8	+0.6
	162nm,0.4s						
TRIV	Trivento	0.60	256	Pg	Pb	21 16 59.1	-0.7
BSSO	Busso	0.66	237	Pg	Pg	21 16 59.9	-0.3
	112nm,0.5s						
BSSO	Busso	0.66	237	Pg	Pg	21 16 59.9	-0.3
	112nm,0.5s						
SACR	S. Croce Del S	0.69	222	Pg	Pg	21 17 00.1	-0.7
	108nm,0.3s						
SACR	S. Croce Del S	0.69	222	Pg	Pg	21 17 00.1	-0.7
	108nm,0.3s						
IPES	Pescosannita	0.77	209	Pg	Pg	21 17 01.6	-0.7
SGTA	Sant Agata di	0.77	178	Pg	Pg	21 17 02.3	-0.1
	372nm,0.4s						
SGTA	Sant Agata di	0.77	178	Pg	Pg	21 17 02.3	-0.1
	372nm,0.4s						
PSB1	Pescosannita	0.79	210	Pg	Pg	21 17 01.8	-0.8
	93nm,0.7s						
PSB1	Pescosannita	0.79	210	Pg	Pg	21 17 01.8	-0.8
	93nm,0.7s						
CAFR	Castel Frentan	0.80	294	Pg	Pg	21 17 02.0	-0.8
	669nm,0.3s						
CAFR	Castel Frentan	0.80	294	Pg	Pg	21 17 02.0	-0.8
	669nm,0.3s						
PTRJ	Pietraroja	0.81	228	Pg	Pg	21 17 02.1	-1.0
PTRJ	Pietraroja	0.81	228	Pg	Pg	21 17 02.1	-1.0
MRB1	Monte Rocchett	0.83	199	Pg	Pg	21 17 02.5	-0.9
	329nm,0.6s						
MRB1	Monte Rocchett	0.83	199	Pg	Pg	21 17 02.5	-0.9
	329nm,0.6s						
SGG	Gregorio Mates	0.88	234	Pg	Pg	21 17 03.5	-0.9
	123nm,0.5s						
SGG	Gregorio Mates	0.88	234	Pg	Pg	21 17 03.5	-0.9
	123nm,0.5s						
CERA	Filignano	1.03	253	Pg	Pg	21 17 06.5	-0.7
CERA	Filignano	1.03	253	Pg	Pg	21 17 06.5	-0.7
MRVN	Minervino Murg	1.07	142	Pg	Pg	21 17 07.0	-1.0
	331nm,0.4s						
MRVN	Minervino Murg	1.07	142	Pg	Pg	21 17 07.0	-1.0
	331nm,0.4s						
CDT	Castel del Mon	1.09	139	ePg	Pn	21 17 08.6	+0.1
CDT				eSg	Sn	21 17 24.0	+0.5
MRLC	Muro Lucano	1.16	174	Pg	Pg	21 17 08.7	-1.0
	196nm,0.4s						
MRLC	Muro Lucano	1.16	174	Pg	Pg	21 17 08.7	-1.0
	196nm,0.4s						
MODR	Mondragone	1.33	235	Pg	Pn	21 17 11.9	+0.2
MODR	Mondragone	1.33	235	Pg	Pn	21 17 11.9	+0.2
BAI	Bari	1.42	124	ePg	Pb	21 17 13.7	0.0
BAI				eSg	Sg	21 17 33.6	+0.7
STON	Ston	2.00	61	ePn	Pb	21 17 22.9	-0.8
STON				Sn	Sb	21 17 49.2	+0.6
STON	Ston	2.00	61	ePn	Pb	21 17 22.9	-0.8
STON				Sn	Sb	21 17 49.2	+0.6
NVLJ	Novalja	2.67	353	i Pn	Pn	21 17 29.9	-0.3
NVLJ				Sn	Sn	21 18 02.7	+0.2
NVLJ	Novalja	2.67	353	i Pn	Pn	21 17 29.9	-0.3
NVLJ				Sn	Sn	21 18 02.7	+0.2
BBLS	Lazići	3.58	56	ePn	Pg	21 17 54.4	-1.6
DIVS	Divibare	4.06	56	ePn	Pb	21 18 00.5	+1.6
BARS	Barje	4.89	77	ePn	Pn	21 18 04.3	+3.6
ZAPS	Zavoj	5.56	73	ePn	Pn	21 18 11.7	+1.7
ZAPS	Zavoj	5.56	73	ePn	Pn	21 18 11.7	+1.7

IDC 03 21:37:02.1±1.9**, 19°.58N**×**109°.24W, h0^{km}, mb3.8**/5**, mb1 4.1**/6**, mb1mx3.9**/23**, mbtmp3.8**/6**, ML3.5**/1**, Error ellipse: s-maj=80.2km s-min=34.0km az=105.0, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	10.96	27	Pn	Pn	21 39 42.1	+1.7
	0.1nm,0.3s,baz=201,slow=12,SNR=22						
PDAR	Pinedale Array	23.12	359	P	P	21 42 09.5	-0.7
	0.6nm,0.6s,baz=153,slow=8.3,SNR=3.9						
YKA	Yellowknife Ar	43.04	356	P	P	21 45 01.9	-1.4
	0.2nm,0.3s,baz=175,slow=7.4,SNR=2.4						
INK	Inuvik	51.04	349	P	P	21 46 06.3	+0.6
	1.4nm,0.9s,baz=167,slow=7.2,SNR=4.7						
ILAR	Eielson Array	51.62	340	P	P	21 46 10.5	+0.4
	0.8nm,0.6s,baz=149,slow=6.1,SNR=11						
ARCES	ARCESS Array B	85.51	15	P	P	21 49 42.0	+0.3
	3.7nm,0.9s,baz=337,slow=5.9,SNR=4.3						
WRA	Warramunga Arr	120.50	258	PKP	PKPdf	21 55 55.7	-0.8
	0.2nm,0.4s,baz=75,slow=2.5,SNR=5.2						
ASAR	Alice Springs	121.56	254	PKP	PKPdf	21 55 58.6	+0.1
	0.2nm,0.5s,baz=83,slow=2.2,SNR=3.0						

*ISCJB **03** 21:37:35.4±1.0, 19°.50N±0°.03×109°.12W±0°.02, h7^{km}±5^{km}, mb5.0/128, MS5.1/184, Error ellipse: s-maj=5.9km s-min=3.4km az=25.7*
*BJI **03** 21:37:35.1, 19°.60N×109°.20W, h5^{km}, mB5.7/16, mb5.7/6, Ms5.5/18, Ms7 5.2/19*
*NEIC **03** 21:37:37.3±0.3, 19°.55N×109°.17W, h6^{km}, mb5.2/109, MS5.1/136, MW5.5, MD5.6(MEX), Error ellipse: s-maj=6.3km s-min=3.8km az=213.0, Moment Tensor Solution. s24 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.43; $M_{\theta\theta}$-1.64; $M_{\phi\phi}$2.08; $M_{r\theta}$0.00; $M_{\theta\phi}$-0.15; $M_{\phi r}$-0.77; Best double couple: $M_0$2.00000×10^{17} NP1:ϕ_s224.00000°, δ80.00000°, λ13.00000°. NP2:ϕ_s132.00000°, δ78.00000°, λ170.00000°. Principal axes: T 2.3000, Plg15.0000°, Azm87.0000°; N -0.6500, Plg74.0000°, Azm260.0000°; P -1.6500, Plg1.0000°, Azm357.0000°;*
*MOS **03** 21:37:37.1±0.9, 19°.67N×109°.18W, h10^{km}, mb5.4/41, MS5.1/15 Error ellipse: s-maj=8.6km s-min=4.3km az=94.7*
*MEX **03** 21:37:37.6±0.5, 19°.72N×109°.21W, h8^{km}±22^{km}, MD5.6*
*IDC **03** 21:37:38.2±0.6, 19°.86N×109°.22W, h0^{km}, mb4.7/22, mb1 4.8/23, mb1mx4.7/29, mbtmp4.7/23, ML3.4/1, MS5.1/29, Ms1 5.1/29, ms1mx5.0/34, Error ellipse: s-maj=22.3km s-min=11.3km az=60.0*
*GCMT **03** 21:37:43.1±0.1, 19°.91N×109°.22W, h15^{km}, MW5.6, Moment Tensor Solution. s87,c153; s52,c58; Moment tensor: Scale 10^{17}Nm; M_{rr}0.01±.03; $M_{\theta\theta}$-2.65±.02; $M_{\phi\phi}$2.63±.03; $M_{r\theta}$0.44±.08; $M_{\theta\phi}$0.13±.02; $M_{\phi r}$-0.23±.08; Best double couple: $M_0$2.70000×10^{17} NP1:ϕ_s226.00000°, δ80.00000°, λ-3.00000°. NP2:ϕ_s317.00000°, δ87.00000°, λ-170.00000°. Principal axes: T 2.6500, Plg5.0000°, Azm91.0000°; N 0.0700, Plg80.0000°, Azm334.0000°; P -2.7300, Plg9.0000°, Azm182.0000°; Data Used: II IU IC G. Surface waves: sta=105, comp=212, per= 50.*
ISC 03 21:37:38.3±0.7**, 19°.68N**±0°.04×**109°.18W**±0°.04**, h13^{km}**±3^{km}**, n491, σ1^{s}76**/378**, mb5.1**/128**, MS5.1**/184**, 5C-35D, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	Chamela	3.91	92	eP	Pn	21 38 36.4	-1.6
CJM				i S	Sn	21 39 21.3	-2.4
CJM	Chamela	3.91	92	eP	Pn	21 38 36.4	-1.6
CJM				i S	Sn	21 39 21.3	-2.4
MAIG	Mazatlaan	4.33	36	i P	Pn	21 38 41.5	-2.3
MAIG				i S	Sn	21 39 30.5	-3.7
MAIG	Mazatlaan	4.33	36	i P	Pn	21 38 41.5	-2.3
MAIG				i S	Sn	21 39 30.5	-3.7
LPIG	La Paz	4.52	347	eP	Pn	21 38 43.9	-2.5
LPIG				i S	Sn	21 39 34.9	-4.0
LPIG	La Paz	4.52	347	eP	Pn	21 38 43.9	-2.5
LPIG				i S	Sn	21 39 34.9	-4.0
ANIG	Ahuacatlan	4.58	72	i P	Pn	21 38 46.5	-0.9
ANIG				i S	Sn	21 39 39.3	-1.2
ANIG	Ahuacatlan	4.58	72	i P	Pn	21 38 46.5	-0.9
ANIG				i S	Sn	21 39 39.3	-1.2
R15V		4.93	95	eP	Pn	21 38 50.3	-1.8
R15V				i S	Sn	21 39 47.6	-1.5
EZ5V		5.26	91	i P	Pn	21 38 54.8	-2.1
EZ5V				i S	Sn	21 39 55.3	-2.3
MMIG	Aquila	5.69	103	eP	Pn	21 38 59.4	-3.1
MMIG				i S	Sn	21 40 06.2	-1.6
MMIG	Aquila	5.69	103	eP	Pn	21 38 59.4	-3.1
MMIG				i S	Sn	21 40 06.2	-1.6
SFJM	Santa Fe	5.83	81	i P	Pn	21 39 09.6	+5.0
SFJM	Santa Fe	5.83	81	i P	Pn	21 39 09.6	+5.0
ZAIG	Zacatecas	6.89	62	eP	Pn	21 39 17.6	-1.8
ZAIG				i S	Sn	21 40 35.6	-2.2
ZAIG	Zacatecas	6.89	62	eP	Pn	21 39 17.6	-1.8
ZAIG				i S	Sn	21 40 35.6	-2.2
ZIIG	Zihuatanejo	7.60	105	i P	Pn	21 39 28.6	-0.2
ZIIG				i S	Sn	21 40 53.5	-1.3
ZIIG	Zihuatanejo	7.60	105	i P	Pn	21 39 28.6	-0.2
ZIIG				i S	Sn	21 40 53.5	-1.3
SRIG	Santa Rosalia	8.10	340	i P	Pn	21 39 34.3	-1.4
SRIG				i S	Sn	21 41 05.0	-2.2
SRIG	Santa Rosalia	8.10	340	i P	Pn	21 39 34.3	-1.4
SRIG				i S	Sn	21 41 05.0	-2.2
CAIG	El Cayaco	8.86	106	eP	Pn	21 39 49.8	+3.7
CAIG				i S	Sn	21 41 30.3	+4.5
CAIG	El Cayaco	8.86	106	eP	Pn	21 39 49.8	+3.7
CAIG				i S	Sn	21 41 30.3	+4.5
ACX	Acapulco	9.29	106	i P	Pn	21 39 58.6	+6.7
ACX	Acapulco	9.29	106	i P	Pn	21 39 58.6	+6.7
DEIG	Demacu	9.56	85	eP	Pn	21 39 58.9	+3.0
DEIG	Demacu	9.56	85	eP	Pn	21 39 58.9	+3.0
PPM	Popocatepetl	9.98	92	eP	Pn	21 40 04.1	+2.2
PPM	Popocatepetl	9.98	92	eP	Pn	21 40 04.1	+2.2
PPM	Popocatepetl	9.98	92	eP	Pn	21 40 04.1	+2.2
TXAR	Lajitas Array	10.84	27	Pn	Pn	21 40 16.7	+3.4
TXAR	Lajitas Array	10.84	27	Pn	Pn	21 40 16.7	+3.4
	0.3nm,0.3s,baz=202,slow=14,SNR=81						
TXAR				LR	LR	21 43 59.3	
	comp=Z,14μm,20.7s,baz=110,slow=36						
MNTX	Cornudas Mount	12.45	15	ePn	Pn	21 40 38.5	+3.3
	153nm,1.5s						
MNTX				eSn	Sn	21 42 59.3	+5.6
TUC	Tucson	12.66	354	eP	Pn	21 40 41.3	+3.2
TUC				e		21 43 00.5	
TUC	Tucson	12.66	354	ePn	Pn	21 40 41.3	+3.2
TUC				eSn	Sn	21 43 00.5	+1.5
KVTX	Kingsville	12.97	51	ePn	Pn	21 40 43.0	+0.7
KVTX				Sn	Sn	21 43 12.0	+5.5
GDL2	Guadalupe Moun	13.20	18	ePn	Pn	21 40 48.9	+3.4
CLNB	Carlsbad	13.40	20	ePn	Pn	21 40 51.0	+2.6
JCT	Junction City	13.70	36	⇓iP	P	21 40 56.1	-4.9
JCT				e		21 43 31.4	
JCT	Junction City	13.70	36	⇓iPn	P	21 40 56.1	-4.9
JCT				eSn	Sn	21 43 31.4	+7.1
GVA	Apache Junctio	13.85	352	i P	P	21 40 57.9	-4.8
GLA	Glamis	14.24	340	⇓iP	Pn	21 41 01.7	+2.0
GLA				e		21 43 43.0	
GLA	Glamis	14.24	340	⇓iPn	Pn	21 41 01.7	+2.0
GLA				eSn	Sn	21 43 43.0	+5.4
LENM	Lemitar	14.56	7	ePn	P	21 41 06.6	-4.1
LENM				S	S	21 44 05.5	+0.5
BAR	Barrett	14.58	334	⇓ePn	Pn	21 41 05.6	+1.2
BAR				eS	S	21 44 07.8	+2.7
BNM	Barren Site	14.59	8	ePn	P	21 41 07.7	-3.5
	168nm,1.5s						
BNM				eSn	Sn	21 43 52.0	+5.6
LPM	Los Pinos Moun	14.75	8	ePn	P	21 41 10.0	-2.9
LAZ	Ladron	14.78	7	ePn	P	21 41 10.3	-2.9
PFO	Pinyon Flat Ob	15.31	336	Pn	P	21 41 15.9	-3.1
	235nm,1.1s,SNR=13						
PFO	Pinyon Flat Ob	15.31	336	⇓ePn	Pn	21 41 15.4	+1.1
	321nm,2.4s						
PFO				eS	S	21 44 21.8	+1.5
PFO	Pinyon Flat Ob	15.31	336	Pn	Pn	21 41 15.4	+1.1
	0.2nm,0.3s,baz=162,slow=14,SNR=30						
PFO				LR	LR	21 46 38.9	
	comp=Z,15μm,19.4s,baz=152,slow=36						
ANMO	Albuquerque	15.40	8	⇓iPn	P	21 41 17.9	-2.1
	807nm,2.4s						
ANMO				eSn	S	21 44 14.4	-7.7
ANMO	Albuquerque	15.40	8	Pn	P	21 41 17.9	-2.1
	0.1nm,0.3s,baz=187,slow=12,SNR=29						
HKT	Hockley	15.84	47	eP	P	21 41 23.4	-1.3
HKT				pmax	pmax		
	comp=Z,150nm,1.6s						
HKT	Hockley	15.84	47	⇓ePn	Pn	21 41 21.3	+0.3
	comp=Z,150nm,1.6s						
WUAZ	Wupatki	15.89	353	⇓iPn	P	21 41 24.2	-1.3
	comp=Z,221nm,1.3s						
WUAZ				eS	S	21 44 31.1	-1.1
LDFC	Landfair	16.21	342	⇓ePn	P	21 41 29.2	+0.2
	comp=Z,234nm,1.2s						
MWC	Mount Wilson	16.49	333	eP	P	21 41 30.8	-1.4
MWC				pmax	pmax		
	comp=Z,170nm,1.4s						
MWC	Mount Wilson	16.49	333	ePn	P	21 41 30.8	-1.4
	comp=Z,171nm,1.4s						
PASC	Pasadena Art C	16.50	333	⇓ePn	P	21 41 30.4	-1.8
	comp=Z,122nm,1.4s						
AMTX	Amarillo	16.54	22	⇓iPn	P	21 41 31.7	-0.9
	comp=Z,240nm,1.5s						
AMTX				eS	S	21 44 48.7	+3.4
GSC	Goldstone	16.95	338	eP	P	21 41 36.8	-0.4
GSC				pmax	pmax		
	comp=Z,260nm,1.6s						
GSC	Goldstone	16.95	338	ePn	P	21 41 36.8	-0.4
	comp=Z,255nm,1.6s						
RFTA	Plano	17.34	38	ePn	P	21 41 40.4	-1.1
WMOK	Wichita Mounta	17.60	29	eP	P	21 41 44.5	+0.2
WMOK	Wichita Mounta	17.60	29	ePn	P	21 41 44.5	+0.2
ISA	Isabella	17.90	335	eP	P	21 41 47.6	-0.1
ISA				pmax	pmax		
	comp=Z,71nm,1.4s						
ISA	Isabella	17.90	335	ePn	P	21 41 47.6	-0.1
	comp=Z,71nm,1.4s						
CCUT	Cedar City	18.18	349	ePn	P	21 41 53.5	+2.7
	comp=Z,356nm,1.6s						
PV01	Paradox Valley	18.39	2	eP	P	21 41 54.9	+1.6
ARUT	Antelope Range	18.42	349	eP	P	21 41 56.1	+2.6
ARUT	Antelope Range	18.42	349	ePn	P	21 41 56.1	+2.6
PV10	Paradox Valley	18.63	0	eP	Pn	21 41 57.3	+1.1
PV04	Paradox Valley	18.65	1	ePn	Pn	21 41 57.7	+1.4
MVU	Marysvale	18.94	353	⇓eP	Pn	21 42 01.7	+1.7
	comp=Z,149nm,1.4s						
MVU				eS	S	21 45 40.1	+5.8
MTUM	Tungsten Hills	19.42	337	ePn	Pn	21 42 06.8	+1.1
SMCO	Snowmass	19.52	5	eP	Pn	21 42 08.1	+1.0
	comp=Z,374nm,1.4s						
TEIG	Tepich	19.66	85	LR	LR	21 50 07.4	
	comp=Z,6μm,20.9s,baz=92,slow=38						
SAO	San Andreas Ge	20.13	330	eP	Pn	21 42 14.0	+0.1
SAO				pmax	pmax		
	comp=Z,130nm,1.5s						
SAO	San Andreas Ge	20.13	330	eP	Pn	21 42 12.8	-1.1
	comp=Z,132nm,1.5s						
ISCO	Idaho Springs	20.29	8	eP	Pn	21 42 16.4	+0.3
ISCO				pmax	pmax		
	comp=Z,170nm,1.4s						
ISCO	Idaho Springs	20.29	8	eP	Pn	21 42 16.4	+0.2
	comp=Z,168nm,1.4s						
ISCO				LR	LR		
	comp=Z,13μm,21.0s						
NVAR	Mina Array Bea	20.29	339	P	Pn	21 42 16.2	+0.2
NVAR	Mina Array Bea	20.29	339	P	Pn	21 42 16.2	+0.2
	comp=Z,62nm,1.1s,baz=161,slow=10,SNR=27						
NVAR				LR	LR	21 49 13.4	
	comp=Z,6μm,21.1s,baz=212,slow=35						
MPU	Maple Canyon	20.38	355	eP	Pn	21 42 17.1	0.0
	comp=Z,293nm,1.4s						
DUG	Dugway	20.68	352	eP	Pn	21 42 20.5	0.0
DUG				pmax	pmax		
	comp=Z,540nm,1.7s						
DUG	Dugway	20.68	352	eP	Pn	21 42 20.5	0.0
	comp=Z,545nm,1.7s						
DUG				LR	LR		
	comp=Z,9μm,19.0s						
CMB	Columbia Colle	20.72	334	eP	Pn	21 42 19.7	-1.2
CMB				pmax	pmax		
	comp=Z,76nm,1.3s						
CMB	Columbia Colle	20.72	334	eP	Pn	21 42 19.7	-1.2
	comp=Z,76nm,1.3s						
DAU	Daniels Canyon	20.74	356	eP	Pn	21 42 21.0	-0.4
DAU	Daniels Canyon	20.74	356	eP	Pn	21 42 21.0	-0.4
VBMS	Vicksburg	20.88	50	eP	P	21 42 20.4	+0.2
	comp=Z,57nm,0.8s						
VBMS				eS	S	21 46 15.0	+2.3
VBMS				LR	LR		
	comp=Z,2μm,20.0s						
JLU	Jordanelle	20.94	355	⇓eP	P	21 42 20.2	-0.9
	comp=Z,197nm,1.5s						
JLU				eS	Sn	21 46 21.9	+1.5
CTU	Camp Tracy	21.06	355	eP	P	21 42 23.6	+1.3
	comp=Z,219nm,1.2s						
CTU				eS	Sn	21 46 20.8	-2.2
UALR	University of	21.17	41	eP	P	21 42 24.4	+1.1
	comp=Z,128nm,1.4s						
UALR				S	S	21 46 20.4	+1.9
SAC	San Andreas	21.24	330	eP	P	21 42 25.6	+1.5
SAC				pmax	pmax		
	comp=Z,177nm,1.4s						
SAC	San Andreas	21.24	330	eP	P	21 42 25.6	+1.5
	comp=Z,176nm,1.4s						
WCN	Washoe City	21.58	337	⇓eP	P	21 42 29.7	+1.9
WCN				eS	S	21 46 27.2	+0.4
WCN				pmax	pmax		
	comp=Z,145nm,1.3s						
WCN	Washoe City	21.58	337	⇓eP	P	21 42 29.7	+1.9
	comp=Z,145nm,1.3s						
WCN				eS	S	21 46 27.2	+0.4
ELK	Elko	21.62	347	⇓iP	P	21 42 30.1	+1.7
	comp=Z,231nm,1.9s						
ELK				eS	S	21 46 27.8	0.0
ELK	Elko	21.62	347	LR	LR	21 50 32.8	
	comp=Z,7μm,19.6s,baz=149,slow=36						
TGUH	Tegucigalpa,Un	21.69	102	⇑eP	P	21 42 33.9	+4.9
	comp=Z,87nm,1.1s						
TGUH				LR	LR		
	comp=Z,5μm,21.0s						
PHWY	Pilot Hill	21.78	8	eP	P	21 42 31.4	+1.2
	comp=Z,240nm,1.4s						
BMN	Battle Mountai	21.80	343	⇓eP	P	21 42 31.8	+1.6
BMN				S	S	21 46 28.2	-2.9
BMN				pmax	pmax		
	comp=Z,171nm,1.6s						
BMN	Battle Mountai	21.80	343	⇓eP	P	21 42 31.8	+1.6
	comp=Z,171nm,1.6s						
BMN				S	S	21 46 28.2	-2.9
MCCM	Marconi Confer	21.91	330	eP	P	21 42 32.5	+1.3
	comp=Z,98nm,1.1s						
HWUT	Hardware Ranch	21.95	355	⇓iP	P	21 42 33.3	+1.5
	comp=Z,217nm,1.5s						
HWUT				LR	LR		
	comp=Z,9μm,19.0s						
OGNE	Ogallala	22.06	15	⇓eP	P	21 42 33.7	+0.8
	comp=Z,404nm,1.5s						
OGNE				S	S	21 46 33.3	-2.6
OGNE				LR	LR		
	comp=Z,16μm,20.0s						
KSU1	Kansas State U	22.19	27	eP	P	21 42 35.4	+1.1
	comp=Z,76nm,1.4s						
KSU1				eS	S	21 46 40.9	+2.5
KSU1				LR	LR		
	comp=Z,12μm,21.0s						
HVU	Hansel Valley	22.24	353	⇓eP	P	21 42 36.1	+1.2
HVU				pmax	pmax		
	comp=Z,184nm,1.5s						
HVU	Hansel Valley	22.24	353	⇓eP	P	21 42 36.1	+1.2
	comp=Z,184nm,1.5s						
BEKR	Beckworth	22.30	337	eP	P	21 42 38.1	+2.5
	comp=Z,28nm,1.1s						
BEKR				ePcP	PcP	21 46 31.8	+0.5
HOPS	Hopland	22.68	331	eP	P	21 42 40.1	+0.6
	comp=Z,133nm,1.3s						
OXF	Oxford	22.92	46	PFAKE		21 42 50.0	+8.0
OXF				LR	LR		
	comp=Z,3μm,20.0s						
BW06	Boulder Array	23.02	359	⇓iP	P	21 42 43.4	+0.1
	comp=Z,83nm,1.5s						
BW06				LR	LR		
	comp=Z,6μm,19.0s						
PDAR	Pinedale Array	23.02	359	P	P	21 42 43.8	+0.5
PDAR	Pinedale Array	23.02	359	P	P	21 42 43.8	+0.5
	comp=Z,13nm,1.0s,baz=168,slow=9.2,SNR=39						
PDAR				LR	LR	21 51 37.5	
	comp=Z,6μm,18.1s,baz=171,slow=37						
AHID	Auburn Hatcher	23.07	356	eP	P	21 42 44.6	+0.9

AHID LR LR
comp=Z,6µm,20.0s
GNAR Gosnell 23.39 42 eP P 21 42 47.9 +1.1
KCPM Cahto Peak 23.48 331 eP P 21 42 49.6 +1.8
comp=Z,58nm,1.4s
KIPM Iron Peak 23.53 332 eP P 21 42 51.5 +3.1
comp=Z,282nm,1.8s
REDW Red Top Meadow 23.65 357 eP P 21 42 51.2 +1.6
comp=Z,6.9nm,2.0s
RRI2 Red Ridge 23.66 356 eP P 21 42 51.0 +1.3
comp=Z,857nm,2.2s
SNOW Snow King Moun 23.75 357 eP P 21 42 50.7 +0.2
comp=Z,813nm,2.1s
WDC Whiskeytown Da 23.76 334 eP P 21 42 50.4 0.0
WDC pmax pmax
comp=Z,4.0nm,1.0s
WDC Whiskeytown Da 23.76 334 eP P 21 42 50.4 0.0
comp=Z,4.1nm,1.0s
TPAW Teton Pass 23.79 357 eP P 21 42 52.6 +1.7
comp=Z,524nm,2.1s
HALT Halls 23.79 43 eP P 21 42 51.6 +0.9
LRAL Lakeview Retre 23.85 52 eP P 21 42 52.8 +1.5
comp=Z,83nm,1.5s
LRAL LR LR
comp=Z,2µm,20.0s
LOHW Long Hollow 23.89 357 ⇓ iP P 21 42 53.1 +1.2
comp=Z,417nm,2.0s
PARMO Parma 24.00 41 eP P 21 42 54.6 +1.9
MOOW Moose Ponds 24.03 357 ⇓ eP P 21 42 53.9 +0.7
comp=Z,396nm,2.3s
MOOW ePcP **PcP 21 46 34.0 -0.8**
WVOR Wild Horse Val 24.05 343 eP P 21 42 54.3 +1.0
WVOR pmax pmax
comp=Z,147nm,1.4s
WVOR MLR MLR
comp=Z,3µm,22.0s
WVOR Wild Horse Val 24.05 343 eP P 21 42 54.3 +1.0
comp=Z,147nm,1.4s
WVOR LR LR
comp=Z,3µm,22.0s
IMW Indian Meadow 24.19 357 eP P 21 42 55.6 +0.9
comp=Z,46nm,1.2s
HLID Hailey 24.21 351 eP P 21 42 54.2 -0.6
comp=Z,173nm,1.7s
HLID LR LR
comp=Z,4µm,19.0s
MFID Camas Ranch 24.31 348 eP P 21 42 57.0 +1.3
comp=Z,138nm,1.5s
KHMM Horse Mountain 24.51 333 eP P 21 42 58.8 +1.3
comp=Z,56nm,1.2s
YFT Old Faithful 24.74 357 eP P 21 43 01.7 +2.1
comp=Z,45nm,1.2s
RSSD Black Hills 24.75 9 eP P 21 43 00.7 +1.0
RSSD pmax pmax
comp=Z,63nm,1.4s
RSSD Black Hills 24.75 9 eP P 21 43 00.7 +1.0
comp=Z,63nm,1.4s
YBH Yreka Blue Hor 24.81 335 eP P 21 43 00.5 +0.4
comp=Z,8.7nm,1.1s
YBH Yreka Blue Hor 24.81 335 P P 21 42 59.5 -0.7
comp=Z,6.3nm,1.1s,baz=158,slow=11,SNR=7.3
LKWY Lake 24.83 358 eP P 21 43 02.2 +1.6
LKWY pmax pmax
comp=Z,53nm,1.2s
LKWY MLR MLR
comp=Z,6µm,19.0s
LKWY Lake 24.83 358 eP P 21 43 02.2 +1.6
comp=Z,53nm,1.2s
LKWY LR LR
comp=Z,6µm,19.0s
YMR Madison River 24.96 357 eP P 21 43 02.8 +1.1
comp=Z,107nm,1.4s
SIUC Southern Illin 25.00 40 eP P 21 43 03.4 +1.6
comp=Z,40nm,1.0s
JTS JuntasAbangare 25.17 108 PFAKE 21 43 10.0 +6.4
JTS LR LR
comp=Z,2µm,20.0s
RLMT Red Lodge 25.37 360 PFAKE 21 43 20.0 +15
RLMT LR LR
comp=Z,4µm,20.0s
HUMO Hull Mountain 25.65 336 eP P 21 43 08.2 +0.6
comp=Z,25nm,1.6s
SWET Sewanee 25.70 48 eP P 21 43 09.7 +1.4
comp=Z,34nm,0.6s
KBO Bosley Butte 25.82 334 eP P 21 43 11.0 +1.6
comp=Z,51nm,1.2s
BOZ Bozeman (W) 25.97 356 eP P 21 43 11.8 +1.0
BOZ pmax pmax
comp=Z,57nm,1.4s
BOZ MLR MLR
comp=Z,5µm,19.0s
BOZ Bozeman (W) 25.97 356 eP P 21 43 11.8 +1.0
comp=Z,58nm,1.4s
BOZ LR LR
comp=Z,5µm,19.0s
BMO Blue Mountains 25.99 347 eP P 21 43 11.6 +0.7
comp=Z,63nm,1.6s
BMO LR LR
comp=Z,3µm,20.0s
USIN University of 26.11 41 eP P 21 43 10.8 -1.1
comp=Z,210nm,1.2s
LCCM Lewis and Clar 26.18 356 P P 21 43 14.9 +2.2
ECSD EROS Data Cent 26.19 21 eP P 21 43 12.3 -0.3
comp=Z,59nm,1.6s
ECSD LR LR
comp=Z,17µm,21.0s
LRM Limekiln Ridge 26.21 355 eP P 21 43 13.9 +0.9
comp=Z,311nm,1.3s
OLIL Olney 26.33 39 eP P 21 43 15.5 +1.6
KEBM Edson Butte 26.41 334 eP P 21 43 16.4 +1.8
comp=Z,30nm,0.9s
VIPM Ingram Point 26.53 341 P P 21 43 17.7 +1.9
VIPM Ingram Point 26.53 341 P P 21 43 17.7 +1.9
CPCT Cooper Cave 26.81 49 eP P 21 43 19.5 +1.2
HDIL Hopedale 26.88 35 PFAKE 21 43 30.0 +11
HDIL LR LR
comp=Z,3µm,19.0s
BROR Big Rock Looko 26.90 339 P P 21 43 20.1 +1.2
HRY Holter Researc 27.05 356 eP P 21 43 21.5 +1.1
comp=Z,136nm,1.4s
MSO Missoula 27.36 353 eP P 21 43 23.9 +0.8
comp=Z,63nm,1.8s
MSO LR LR
comp=Z,2µm,20.0s
CHMT Chamberlain Mo 27.37 354 eP P 21 43 24.4 +1.0
PAYG Puerto Ayora 27.43 135 PFAKE 21 43 40.0 +16
PAYG LR LR
comp=Z,1µm,22.0s
TKL Tuckaleechee C 27.45 49 P P 21 43 23.9 0.0
TKL Tuckaleechee C 27.45 49 P P 21 43 23.9 0.0
comp=Z,3.1nm,0.4s,baz=246,slow=8.2,SNR=10
HAWA Hanford 27.97 345 PFAKE 21 43 40.0 +11
HAWA LR LR
comp=Z,2µm,22.0s
TZTN Tazewell 28.04 48 eP P 21 43 30.4 +1.1
comp=Z,47nm,1.1s
JFWS Jewell Farm 28.12 30 PFAKE 21 43 40.0 +10
JFWS LR LR
comp=Z,6µm,19.0s
TRW Toppenish Ridg 28.14 343 P P 21 43 32.6 +2.5
EGMT Eagleton 28.28 359 PFAKE 21 43 40.0 +8.6
EGMT LR LR
comp=Z,385nm,20.0s
EBG Ellensburg 28.71 344 P P 21 43 37.6 +2.4
LON Longmire 28.91 342 eP P 21 43 38.1 +1.1
LON pmax pmax
comp=Z,10.0nm,1.1s
LON Longmire 28.91 342 eP P 21 43 38.0 +1.1
comp=Z,10nm,1.1s
DGMT Dagmar 29.00 7 PFAKE 21 43 50.0 +12
DGMT LR LR
comp=Z,8µm,19.0s
NHSC New Hope 29.11 57 PFAKE 21 43 50.0 +11
NHSC LR LR
comp=Z,3µm,21.0s
NEW Newport 29.23 349 eP P 21 43 40.4 +0.6
comp=Z,65nm,1.5s
NEW Newport 29.23 349 P P 21 43 40.8 +1.0
comp=Z,12nm,1.0s,baz=164,slow=11,SNR=28
NEW LR LR 21 55 31.1
comp=Z,3µm,18.7s,baz=164,slow=37
WTV Waterville 29.29 345 P P 21 43 42.3 +2.0
WALA Waterton Lakes 29.55 354 eP P 21 43 43.4 +0.6
comp=Z,0.2nm,1.0s
MTDJ Mount Denham 29.95 87 PFAKE 21 44 00.0 +13
MTDJ LR LR
comp=Z,3µm,19.0s
NLWA Neilton Lookou 30.12 340 eP P 21 43 48.6 +0.9
comp=Z,99nm,2.3s
NLWA LR LR
comp=Z,7µm,20.0s
BCIP Isla Barro Col 30.23 106 PFAKE 21 44 00.0 +11
BCIP LR LR
comp=Z,3µm,20.0s
JCW Jim Creek 30.26 343 P P 21 43 50.1 +1.3
ACSO Alum Creek Sta 30.38 42 eP P 21 43 50.5 +0.4
BLA Blacksburg 30.56 49 eP P 21 43 52.7 +1.0
BLA MLR MLR
comp=Z,2µm,21.0s
BLA Blacksburg 30.56 49 eP P 21 43 52.7 +1.0
BLA LR LR
comp=Z,2µm,21.0s
COWI Conover 31.09 28 eP P 21 43 56.6 +0.4
comp=Z,69nm,1.4s
COWI LR LR
comp=Z,7µm,20.0s
AAM Ann Arbor 31.20 38 PFAKE 21 44 10.0 +13
AAM LR LR
comp=Z,5µm,20.0s
CNNC Cliffs of the 31.63 54 PFAKE 21 44 10.0 +8.9
CNNC LR LR
comp=Z,3µm,20.0s
EYMN Ely 31.64 23 eP P 21 44 01.1 0.0
comp=Z,14nm,1.0s
EYMN LR LR
comp=Z,5µm,19.0s
GTBY Guantanamo Bay 32.03 84 PFAKE 21 44 20.0 +15
GTBY LR LR
comp=Z,2µm,20.0s
ULM Lac du Bonnet 32.29 16 P P 21 44 06.6 0.0
ULM Lac du Bonnet 32.29 16 P P 21 44 06.6 0.0
comp=Z,42nm,1.1s,baz=204,slow=11,SNR=22
ULM LR LR 21 56 40.8
comp=Z,4µm,21.0s,baz=204,slow=36
ALLY Alegheny Colle 32.96 42 eP P 21 44 13.5 +0.9
comp=Z,8.7nm,0.6s
CBN Corbin 33.17 49 eP P 21 44 15.6 +1.1
CBN LR LR
comp=Z,2µm,19.0s
ERPA Erie 33.31 41 PFAKE 21 44 30.0 +14
ERPA LR LR
comp=Z,3µm,19.0s
SSPA Standing Stone 33.91 45 eP P 21 44 21.5 +0.6
comp=Z,44nm,1.5s
SDMD Soldier's Deli 34.06 48 eP P 21 44 22.7 +0.4
SADO Sadowa 35.31 38 P P 21 44 33.1 +0.1
SADO Sadowa 35.31 38 P P 21 44 33.1 +0.1
comp=Z,7.0nm,1.0s,baz=243,slow=9.0,SNR=7.3
SADO LR LR 21 58 56.1
comp=Z,3µm,18.9s,baz=246,slow=36
FFC Flin Flon 35.41 7 eP P 21 44 33.6 -0.2
FFC pmax pmax
comp=Z,128nm,1.7s
FFC MLR MLR
comp=Z,9µm,21.0s
FFC Flin Flon 35.41 7 eP P 21 44 33.6 -0.2
comp=Z,128nm,1.7s
FFC LR LR
comp=Z,9µm,21.0s
FFC Flin Flon 35.41 7 P P 21 44 34.8 +1.0
comp=Z,194nm,1.3s,SNR=8.0
BBB Bella Bella 35.65 340 LR LR 21 58 38.4
comp=Z,3µm,20.3s,baz=162,slow=36
SDDR Presa de Saban 35.72 85 PFAKE 21 44 50.0 +13
SDDR LR LR
comp=Z,1µm,19.0s
OTAV Otavalo 35.77 119 ⇑ eP P 21 44 43.0 +5.1
comp=Z,36nm,1.2s
OTAV eS S **21 50 12.0 -3.3**
OTAV LR LR
comp=Z,3µm,20.0s
BINY Binghamton 35.91 44 eP P 21 44 39.5 +1.2
comp=Z,73nm,1.6s
BINY LR LR
comp=Z,2µm,19.0s
NCB Newcomb 37.89 42 eP P 21 44 56.0 +0.9
comp=Z,21nm,1.3s
NCB LR LR
comp=Z,2µm,22.0s
ACCN Adirondack Com 37.97 44 eP P 21 44 56.1 +0.4
comp=Z,48nm,1.8s
LONY Lake Ozonia 37.98 41 PFAKE 21 45 10.0 +14
LONY LR LR
comp=Z,3µm,19.0s
FRNY Flat Rock 38.70 41 eP P 21 45 01.6 -0.2
comp=Z,10nm,1.1s
LBNH Lisbon 39.48 43 eP P 21 45 09.2 +0.8
LBNH pmax pmax
comp=Z,16nm,1.2s
LBNH MLR MLR
comp=Z,1µm,20.0s
LBNH Lisbon 39.48 43 eP P 21 45 09.2 +0.8
comp=Z,16nm,1.2s
LBNH LR LR
comp=Z,1µm,20.0s
WRAK Wrangell Islan 40.56 340 PFAKE 21 45 30.0 +13
WRAK LR LR
comp=Z,2µm,20.0s
SJG San Juan 40.66 85 PFAKE 21 45 30.0 +11
SJG LR LR
comp=Z,1µm,20.0s
DLBC Dease Lake 41.59 344 eP P 21 45 27.6 +1.9
DLBC ePcP **PcP 21 47 22.4 -0.4**
DLBC Dease Lake 41.59 344 P P 21 45 27.6 +1.9
comp=Z,21nm,1.1s,baz=143,slow=7.8,SNR=27
DLBC LR LR 22 03 42.8
comp=Z,5µm,19.8s,baz=62,slow=38
BBSR BB Station 41.65 63 PFAKE 21 45 40.0 +14
BBSR LR LR
comp=Z,760nm,22.0s
YKA Yellowknife Ar 42.94 356 P P 21 45 36.3 -0.3
YKA Yellowknife Ar 42.94 356 P P 21 45 36.3 -0.3
comp=Z,7.1nm,0.8s,baz=172,slow=7.7,SNR=21
PQI Presque Isle 43.01 42 P P 21 45 38.9 +1.6
comp=Z,29nm,1.1s
SKAG Skagway 43.96 341 eP P 21 45 46.5 +1.6
comp=Z,19nm,1.2s
NNA Nana 44.77 132 PFAKE 21 46 00.0 +8.0
NNA LR LR
comp=Z,912nm,22.0s
NNA Nana 44.77 132 LR LR 21 58 52.5
comp=Z,660nm,21.0s,baz=326,slow=28
ANWB Willy Bob 44.84 84 PFAKE 21 46 00.0 +7.6
ANWB LR LR
comp=Z,797nm,20.0s
KIP Kipapa 45.61 281 eP P 21 45 59.0 +0.4
KIP eS S **21 52 42.4 +1.4**
KIP MLR MLR
comp=Z,3µm,22.0s
KIP Kipapa 45.61 281 eP P 21 45 59.0 +0.4
KIP eS S **21 52 42.4 +1.4**
KIP LR LR
comp=Z,3µm,22.0s
FDF Fort de France 46.03 88 PFAKE 21 46 10.0 +8.0
FDF LR LR
comp=Z,2µm,20.0s
GRGR Grenville 46.20 92 PFAKE 21 46 20.0 +17
GRGR LR LR
comp=Z,984nm,20.0s
SCHQ Schefferville 47.47 32 eP P 21 46 13.3 +0.6
comp=Z,147nm,1.9s
SCHQ Schefferville 47.47 32 P P 21 46 13.1 +0.3
comp=Z,16nm,1.1s,baz=243,slow=9.0,SNR=12
SCHQ LR LR 22 07 28.1
comp=Z,3µm,18.5s,baz=246,slow=38
BBGH Gun Hill 47.91 90 PFAKE 21 46 30.0 +13
BBGH LR LR
comp=Z,2µm,21.0s
RKT Rikitea 49.43 212 eS S 21 53 39.8 +4.7
RKT eLR LR 22 00 20.6
KDAK Kodiak Island 49.50 331 P P 21 46 30.7 +2.4
KDAK LR LR
comp=Z,1µm,22.0s
KDAK Kodiak Island 49.50 331 P P 21 46 30.7 +2.4
comp=Z,27nm,1.2s,baz=148,slow=5.5,SNR=6.4
EGAK Eagle 49.84 343 eP P 21 46 31.9 +1.2
comp=Z,29nm,1.0s
EGAK ePcP **PcP 21 47 49.8 -1.4**
EGAK LR LR
comp=Z,1µm,19.0s
PAX Paxson 49.85 339 ⇓ eP P 21 46 32.6 +1.6
PAX pmax pmax
comp=Z,45nm,1.5s
PAX Paxson 49.85 339 ⇓ eP P 21 46 32.6 +1.6
comp=Z,45nm,1.5s
DOT Dot Lake 49.87 340 eP P 21 46 31.8 +0.7
comp=Z,80nm,1.9s
SML Sawmill 50.09 337 eP P 21 46 34.6 +1.9
SML pmax pmax
comp=Z,13nm,1.2s
SML Sawmill 50.09 337 eP P 21 46 34.6 +1.9
comp=Z,13nm,1.2s
RC01 Rabbit Creek A 50.17 336 eP P 21 46 35.3 +1.9
comp=Z,28nm,1.3s
PMR Palmer 50.25 336 eP P 21 46 35.4 +1.5
PMR pmax pmax
comp=Z,70nm,1.4s
PMR Palmer 50.25 336 eP P 21 46 35.4 +1.5
comp=Z,70nm,1.4s
INK Inuvik 50.95 349 P P 21 46 40.5 +1.4
INK Inuvik 50.95 349 P P 21 46 40.5 +1.4
comp=Z,50nm,1.1s,baz=151,slow=6.8,SNR=64
INK LR LR 22 10 06.9
comp=Z,2µm,18.7s,baz=164,slow=38
ILAR Eielson Array 51.54 340 P P 21 46 44.6 +1.0
ILAR Eielson Array 51.54 340 P P 21 46 44.6 +1.0
comp=Z,14nm,0.9s,baz=150,slow=7.2,SNR=70
COLA College 51.91 340 PFAKE 21 47 00.0 +14
COLA LR LR
comp=Z,828nm,22.0s
SAML Samuel 53.49 118 eP P 21 46 56.6 -2.1
comp=Z,15nm,1.3s
SAML LR LR
comp=Z,889nm,20.0s
LPAZ La Paz 53.91 129 eP P 21 47 04.8 +2.3
comp=Z,6.0nm,0.8s
LPAZ La Paz 53.91 129 P P 21 47 06.2 +3.8
comp=Z,4.6nm,1.0s,baz=333,slow=7.2,SNR=14
LPAZ LR LR 22 06 45.1
comp=Z,1µm,21.5s,baz=139,slow=32
PPT Papeete 54.26 230 LR LR 22 04 19.5
comp=Z,1µm,18.6s,baz=20,slow=30
PPT2 Papeete2 54.27 230 eS S 21 54 51.8 +10
PPT2 eLQ LQ 22 00 44.2
PPT2 eLR LR 22 02 46.5
comp=Z,2µm,24.2s
LVC Limon Verde 57.56 135 eP P 21 47 23.0 -5.2
LVC LR LR
comp=Z,927nm,19.0s
TBI Tubuai 58.08 224 eLR LR 22 04 03.2
comp=Z,2µm,27.2s
SIV San Ignacio 59.10 123 P P 21 47 41.2 +2.3
SIV San Ignacio 59.10 123 P P 21 47 41.2 +2.3
comp=Z,8.3nm,1.0s,baz=313,slow=7.7,SNR=18
SFJD Kangerlussuaq 59.93 23 PFAKE 21 48 00.0 +16
SFJD LR LR
comp=Z,4µm,20.0s
LCO Las Campanas 61.02 141 PFAKE 21 48 00.0 +8.0
LCO LR LR
comp=Z,1µm,20.0s
MIDW Midway 62.20 292 PFAKE 21 48 10.0 +10
MIDW LR LR
comp=Z,1µm,19.0s
RAR Rarotonga 64.04 233 LR LR 22 08 37.5
comp=Z,1µm,19.2s,baz=91,slow=29
CFAA Coronel Fontan 64.36 142 P P 21 48 18.4 +4.3
CFAA Coronel Fontan 64.36 142 P P 21 48 18.4 +4.3
comp=Z,0.7nm,0.9s,baz=298,slow=3.6,SNR=7.7
SUMG Summit 65.61 18 ⇓ iP P 21 48 22.5 +0.5
SUMG pmax pmax
comp=Z,8.0nm,1.3s
SUMG Summit 65.61 18 eP P 21 48 22.4 +0.5
comp=Z,34nm,1.4s
SUMG Summit 65.61 18 ⇓ iP P 21 48 22.5 +0.5
comp=Z,7.8nm,1.3s
FX1 Attu Island--F 67.14 320 P P 21 48 31.9 +0.2
FX1 Attu Island--F 67.14 320 P P 21 48 31.9 +0.2
comp=Z,6.2nm,0.9s,baz=166,slow=16,SNR=3.7
CPUP Villa Florida 68.00 130 P P 21 48 40.6 +3.2
CPUP Villa Florida 68.00 130 P P 21 48 40.6 +3.2
comp=Z,1.6nm,0.5s,baz=304,slow=9.1,SNR=7.5
CPUP LR LR 22 17 42.6
comp=Z,736nm,19.3s,baz=302,slow=35
BDFB Brasilia 69.63 116 P P 21 48 51.0 +3.1
BDFB Brasilia 69.63 116 P P 21 48 51.0 +3.1
comp=Z,5.6nm,0.9s,baz=316,slow=8.2,SNR=4.8
BILL Bilibino 69.89 336 ⇓ eP P 21 48 49.9 +1.3
BILL e*PP PcP 21 49 18.7 +7.7
BILL i S S 21 58 05.1 +7.3
BILL eSS SS 22 02 35.3 +9.2
BILL pmax pmax
comp=Z,43nm,1.6s
BILL MLR MLR
comp=Z,200nm,16.0s
PLCA Paso Flores 70.02 150 P P 21 48 52.9 +3.1
PLCA Paso Flores 70.02 150 P P 21 48 52.9 +3.1
comp=Z,3.3nm,1.1s,baz=350,slow=6.1,SNR=3.4
PLCA LR LR 22 12 59.9
comp=Z,2µm,19.0s,baz=321,slow=30
AFI Afiamalu 70.05 247 LR LR 22 12 00.9
comp=Z,1µm,18.1s,baz=318,slow=29
SCO Scoresbysund 70.69 21 i P P 21 48 53.4 0.0
SCO pmax pmax
comp=Z,4.0nm,1.0s
SCO Scoresbysund 70.69 21 i P P 21 48 53.4 0.0
comp=Z,3.7nm,1.0s
DAG Danmarks Havn 71.11 14 ⇓ iP P 21 48 56.0 +0.1
DAG pmax pmax
comp=Z,9.0nm,1.0s
DAG Danmarks Havn 71.11 14 ⇓ iP P 21 48 56.0 +0.1
comp=Z,8.6nm,1.0s
BORG Borgarnes 71.48 27 PFAKE 21 49 10.0 +12
BORG LR LR
comp=Z,3µm,19.0s
TRQA Tornquist 72.55 143 PFAKE 21 49 20.0 +15
TRQA LR LR
comp=Z,1µm,19.0s
CMLA Cha da Macela 73.34 55 PFAKE 21 49 20.0 +10
CMLA LR LR
comp=Z,706nm,20.0s
SPB Sao Paulo 73.98 123 PFAKE 21 49 30.0 +16
SPB LR LR
comp=Z,971nm,20.0s
PET Petropavlovsk 75.80 321 eP P 21 49 25.6 +1.7
PET eS S **21 59 02.0 -3.6**
PET eSS SS **22 03 55.8 -1.2**
PET pmax pmax
comp=Z,27nm,1.6s
PET MLR MLR
comp=Z,400nm,18.0s
PETK Petropavlovsk- 76.34 322 P P 21 49 28.1 +1.1
PETK Petropavlovsk- 76.34 322 P P 21 49 28.1 +1.1
PETK Petropavlovsk- 76.34 322 P P 21 49 28.1 +1.1
comp=Z,14nm,1.2s,baz=90,slow=7.2,SNR=9.1
PETK LR LR 22 20 25.4
comp=Z,124nm,18.9s,baz=275,slow=34
RCBR Riachuelo 76.35 101 PFAKE 21 49 40.0 +12
RCBR LR LR
comp=Z,855nm,21.0s
SEY Seymchan 76.44 332 d iP P 21 49 28.8 +1.4
KBS Kingsbay 76.45 10 PFAKE 21 49 40.0 +13
KBS LR LR
comp=Z,2µm,20.0s
WAKE Wake Island 78.44 286 PFAKE 21 49 50.0 +11
WAKE LR LR
comp=Z,2µm,19.0s
MSVF Nonsavu 80.52 247 PFAKE 21 50 00.0 +9.2
MSVF LR LR
comp=Z,2µm,20.0s
TIXI Tiksi 80.82 344 d iP P 21 49 51.3 0.0
TIXI pmax pmax
comp=Z,38nm,1.7s
SACV Santiago Islan 81.01 77 PFAKE 21 50 10.0 +17
SACV LR LR
comp=Z,661nm,19.0s
ESK Eskdalemuir 82.74 34 PFAKE 21 50 10.0 +8.2
ESK LR LR
comp=Z,614nm,20.0s
EFI East Falkland 83.89 151 PFAKE 21 50 20.0 +12
EFI LR LR
comp=Z,1µm,19.0s
KUR Kuril'sk 84.97 316 c iP P 21 50 18.9 +5.5
KUR i 21 53 28.9
KUR i S S 22 00 32.0 -10
KUR MLR MLR
comp=Z,316nm,21.0s
ARCES ARCESS Array B 85.39 15 P P 21 50 16.2 +1.2
ARCES ARCESS Array B 85.39 15 P P 21 50 16.2 +1.2

comp=Z,5.8nm,0.8s,baz=336,slow=2.0,SNR=14
ARCES LR LR 22 28 31.3

comp=Z,2μm,19.8s,baz=328,slow=36
ARE0 ARCESS Array S 85.39 15 *e*P **P 21 50 15.5 +0.5**
KEV Kevo 85.57 14 PFAKE 21 50 30.0 +14
KEV LR LR

comp=Z,3μm,22.0s
MTE Manteigas 85.93 49 PFAKE 21 50 30.0 +12
MTE LR LR

comp=Z,717nm,21.0s
EVOP Sao Brissos 86.22 50 *e*P **P 21 50 19.0 -0.8**
EVOP Sao Brissos 86.22 50 *e*P **P 21 50 19.0 -0.8**
YAK Yakutsk 86.24 336 *e*P **P 21 50 20.5 +1.1**
YAK *e* 21 50 24.8
YAK *e*S S 22 00 42.1 -12
YAK *e* 22 00 59.7
YAK *e*SSS SSS 22 09 59.3
YAK pmax pmax

comp=Z,15nm,1.3s
YAK pmax pmax

comp=N,3.0nm,1.1s
YAK pmax pmax

comp=E,6.0nm,1.1s
YAK pmax pmax

comp=Z,13nm,0.9s
YAK smax smax

comp=N,146nm,8.9s
YAK smax smax

comp=E,75nm,10.6s
EVO Evora 86.30 50 *e*P **P 21 50 19.0 -1.2**

comp=E,14nm,1.0s
EVO *e*R

comp=E,559nm,19.2s
NOA NORSAR Array B 86.54 25 LR LR 22 27 19.2

comp=E,1μm,21.4s,baz=315,slow=34
KONO Kongsberg 86.67 26 PFAKE 21 50 30.0 +8.5
KONO LR LR

comp=Z,2μm,21.0s
YUK Yuzh-Kuril'sk 86.76 316 *e*P **P 21 50 19.4 -2.9**
YUK *i*S S 22 00 47.1 -13
YUK *i*SS **SS 22 06 45.4 +4.8**
GRR Gorron 87.01 39 *e*P **P 21 50 23.9 +0.5**

comp=Z,48nm,1.4s
GRR Gorron 87.01 39 *e*P **P 21 50 23.9 +0.5**
GRR pmax pmax

comp=Z,48nm,1.4s
GRR Gorron 87.01 39 *e*P **P 21 50 23.9 +0.5**

comp=Z,48nm,1.4s
FLN La Foliniere 87.07 39 *e*P **P 21 50 24.4 +0.7**

comp=Z,54nm,1.2s
FLN *e*R

comp=Z,1μm,20.5s
FLN La Foliniere 87.07 39 *e*P **P 21 50 24.4 +0.7**
FLN La Foliniere 87.07 39 *e*P **P 21 50 24.4 +0.7**
LDF La Druitiere 87.36 39 *e*P **P 21 50 25.6 +0.5**

comp=Z,32nm,1.3s
LDF La Druitiere 87.36 39 *e*P **P 21 50 25.6 +0.5**
LDF pmax pmax

comp=Z,32nm,1.3s
LDF La Druitiere 87.36 39 *e*P **P 21 50 25.6 +0.5**

comp=Z,32nm,1.3s
PAB San Pablo 88.52 48 PFAKE 21 50 40.0 +9.0
PAB LR LR

comp=Z,714nm,20.0s
ESDC Sonseca Array 88.74 48 P **P 21 50 34.2 +2.2**
ESDC Sonseca Array 88.74 48 P **P 21 50 34.2 +2.2**

comp=Z,0.1nm,0.3s,baz=285,slow=6.5,SNR=3.8
ESDC LR LR 22 30 17.5

comp=Z,485nm,19.1s,baz=315,slow=36
APA Apatity 88.74 13 *e*P P 21 50 25.0 -6.3
APA pmax pmax

comp=Z,13nm,1.0s
APA MLR MLR

comp=Z,3μm,20.0s
RTC Rabat Centre 88.90 54 PFAKE 21 50 40.0 +7.3
RTC LR LR

comp=Z,641nm,22.0s
BAIF Baives 89.15 36 *e*P **P 21 50 33.1 -0.5**

comp=Z,29nm,1.3s
BAIF Baives 89.15 36 *e*P **P 21 50 33.1 -0.5**
BAIF pmax pmax

comp=Z,29nm,1.3s
BAIF Baives 89.15 36 *e*P **P 21 50 33.1 -0.5**

comp=Z,29nm,1.3s
ERM Erimo 89.42 315 PFAKE 21 50 50.0 +15
ERM LR LR

comp=Z,560nm,20.0s
GIVF Givet 89.47 36 *e*P **P 21 50 34.9 -0.2**
GIVF Givet 89.47 36 *e*P **P 21 50 34.9 -0.2**
GIVF Givet 89.47 36 *e*P **P 21 50 34.9 -0.2**
LFF La Frestale 89.56 42 *e*P **P 21 50 35.8 +0.2**

comp=Z,23nm,1.2s
LFF La Frestale 89.56 42 *e*P **P 21 50 35.8 +0.2**
LFF pmax pmax

comp=Z,23nm,1.2s
LFF La Frestale 89.56 42 *e*P **P 21 50 35.8 +0.2**

comp=Z,23nm,1.2s
ETSF Etsaut 89.66 44 *e*P **P 21 50 36.4 +0.2**

comp=Z,22nm,1.2s
ETSF Etsaut 89.66 44 *e*P **P 21 50 36.4 +0.2**
ETSF pmax pmax

comp=Z,22nm,1.2s
ETSF Etsaut 89.66 44 *e*P **P 21 50 36.4 +0.2**

comp=Z,22nm,1.2s
TCF Toulx Ste Croi 89.83 40 *e*P **P 21 50 36.7 -0.2**

comp=Z,19nm,1.2s
TCF Toulx Ste Croi 89.83 40 *e*P **P 21 50 36.7 -0.2**
TCF pmax pmax

comp=Z,19nm,1.2s
TCF Toulx Ste Croi 89.83 40 *e*P **P 21 50 36.7 -0.2**

comp=Z,19nm,1.2s
RJF Les Rejaudoux 89.88 41 *e*P **P 21 50 37.0 -0.1**

comp=Z,20nm,1.1s
RJF *e*R

comp=Z,1μm,21.2s
RJF Les Rejaudoux 89.88 41 *e*P **P 21 50 37.0 -0.1**
RJF Les Rejaudoux 89.88 41 *e*P **P 21 50 37.0 -0.1**
BGF Bois d'Agland 90.09 40 *e*P **P 21 50 37.8 -0.3**
BGF Bois d'Agland 90.09 40 *e*P **P 21 50 37.8 -0.3**
BGF Bois d'Agland 90.09 40 *e*P **P 21 50 37.8 -0.3**
EPF Esparros 90.19 44 *e*P **P 21 50 38.5 -0.2**

comp=Z,7.9nm,1.0s
EPF Esparros 90.19 44 *e*P **P 21 50 38.5 -0.2**
EPF pmax pmax

comp=Z,8.0nm,1.0s
EPF Esparros 90.19 44 *e*P **P 21 50 38.5 -0.2**

comp=Z,7.9nm,1.0s
SSF Saint Saulge 90.24 39 *e*P **P 21 50 38.6 -0.2**

comp=Z,24nm,1.3s
SSF Saint Saulge 90.24 39 *e*P **P 21 50 38.6 -0.2**
SSF pmax pmax

comp=Z,24nm,1.3s
SSF Saint Saulge 90.24 39 *e*P **P 21 50 38.6 -0.2**

comp=Z,24nm,1.3s
AVF Avril sur Loir 90.28 39 *e*P **P 21 50 38.6 -0.3**

comp=Z,11nm,1.1s
AVF Avril sur Loir 90.28 39 *e*P **P 21 50 38.6 -0.3**
AVF pmax pmax

comp=Z,11nm,1.1s
AVF Avril sur Loir 90.28 39 *e*P **P 21 50 38.6 -0.3**

comp=Z,11nm,1.1s
LOR Lormes 90.34 39 *e*P **P 21 50 39.3 0.0**

comp=Z,36nm,1.3s
LOR *e*R

comp=Z,949nm,21.0s
LOR Lormes 90.34 39 *e*P **P 21 50 39.3 0.0**
CAF Calviac 90.40 41 *e*P **P 21 50 39.4 -0.2**
CAF Calviac 90.40 41 *e*P **P 21 50 39.4 -0.2**
CAF Calviac 90.40 41 *e*P **P 21 50 39.4 -0.2**
WLF Walferdange 90.43 36 PFAKE 21 50 50.0 +10
WLF LR LR

comp=Z,1μm,21.0s
SFTF Sexfontaines 90.56 38 *e*P **P 21 50 39.8 -0.4**
SFTF Sexfontaines 90.56 38 *e*P **P 21 50 39.8 -0.4**
SMF Signal de Mont 90.64 39 *e*P **P 21 50 40.0 -0.7**

comp=Z,6.7nm,0.9s
SMF Signal de Mont 90.64 39 *e*P **P 21 50 40.0 -0.7**
SMF pmax pmax

comp=Z,7.0nm,0.9s
SMF Signal de Mont 90.64 39 *e*P **P 21 50 40.0 -0.7**

comp=Z,6.7nm,0.9s
FINES FINESS Array B 91.60 20 LR LR 22 32 16.6

comp=Z,1μm,18.9s,baz=88,slow=36
SSB Saint Sauveur 91.75 40 PFAKE 21 51 00.0 +14
SSB LR LR

comp=Z,783nm,20.0s
ECH Echery 91.76 37 PFAKE 21 51 00.0 +14
ECH LR LR

comp=Z,2μm,20.0s
LASF Ste Croix 91.93 42 *e*P **P 21 50 47.0 +0.3**

comp=Z,37nm,1.5s
LASF Ste Croix 91.93 42 *e*P **P 21 50 47.0 +0.3**

comp=Z,37nm,1.5s
CABF La Chapelle 91.99 39 *e*P **P 21 50 47.0 0.0**

comp=Z,16nm,1.1s
CABF La Chapelle 91.99 39 *e*P **P 21 50 47.0 0.0**
CABF pmax pmax

comp=Z,16nm,1.1s
CABF La Chapelle 91.99 39 *e*P **P 21 50 47.0 0.0**

comp=Z,16nm,1.1s
VIVF Saint-Julien-l 92.05 41 *e*P **P 21 50 47.6 +0.3**

comp=Z,17nm,1.3s
VIVF Saint-Julien-l 92.05 41 *e*P **P 21 50 47.6 +0.3**
VIVF pmax pmax

comp=Z,17nm,1.3s
VIVF Saint-Julien-l 92.05 41 *e*P **P 21 50 47.6 +0.3**

comp=Z,17nm,1.3s
DZM Mont Dzumac 92.26 247 *e*LR LR 22 20 32.1

comp=Z,3μm,30.1s
BFO Black Forest 92.36 36 PFAKE 21 51 00.0 +11
BFO LR LR

comp=Z,1μm,22.0s
SNZO South Karori 92.86 227 PFAKE 21 51 00.0 +9.2
SNZO LR LR

comp=Z,1μm,19.0s
LPL La Plagne 92.95 39 *e*P **P 21 50 52.4 +0.7**

comp=Z,28nm,1.3s
LPL La Plagne 92.95 39 *e*P **P 21 50 52.4 +0.7**
LPL pmax pmax

comp=Z,28nm,1.3s
LPL La Plagne 92.95 39 *e*P **P 21 50 52.4 +0.7**

comp=Z,28nm,1.3s
LPG La Plagne 92.97 39 *e*P **P 21 50 52.3 +0.5**

comp=Z,64nm,1.6s
LPG La Plagne 92.97 39 *e*P **P 21 50 52.3 +0.5**
LPG pmax pmax

comp=Z,64nm,1.6s
LPG La Plagne 92.97 39 *e*P **P 21 50 52.3 +0.5**

comp=Z,64nm,1.6s
CLL Collm 93.12 32 *e*P **P 21 50 54.0 +2.0**
CLL MLR MLR

comp=Z,1μm,19.1s
CLL Collm 93.12 32 *e*P **P 21 50 54.0 +2.0**
CLL *e*S S 22 02 06.0 +7.6
CLL *e*SS **SS 22 08 16.0 +3.9**
CLL *e*SSSS 22 15 12.0
CLL LmV 22 31 00.0
CLL comp=Z,1μm,19.1s LmH 22 34 00.0

comp=N,800nm,18.1s
CLL LmH 22 34 00.0

comp=E,400nm,20.8s
BNI Bardonecchia 93.16 40 PFAKE 21 51 00.0 +7.5
BNI LR LR

comp=Z,1μm,20.0s
MBDF Montbardon 93.39 40 *e*P **P 21 50 55.1 +1.5**
MBDF Montbardon 93.39 40 *e*P **P 21 50 55.1 +1.5**
MBDF Montbardon 93.39 40 *e*P **P 21 50 55.1 +1.5**
NKC Novy Kostel 93.48 33 *e*SS SS 22 08 20.8 +3.4
NKC AMS AMS 22 32 20.0

comp=Z,800nm,17.0s
HNR Honiara 93.94 261 PFAKE 21 51 10.0 +14
HNR LR LR

comp=Z,2μm,22.0s
HNR Honiara 93.94 261 LR LR 22 22 06.2

comp=Z,1μm,20.6s,baz=147,slow=28
TUE Stuetta 93.96 37 PFAKE 21 51 10.0 +14
TUE LR LR

comp=Z,2μm,19.0s
PVCC Panska Ves 94.38 32 AMS AMS 22 35 40.0

comp=Z,1μm,16.4s
PRU Pruhonice 94.70 33 *e*SS SS 22 08 42.6 +7.8
PRU AMS AMS 22 32 50.0

comp=Z,900nm,18.4s
KHC Kasperske Hory 94.73 34 *e*SS SS 22 08 41.1 +5.8
KHC AMS AMS 22 32 50.0

comp=Z,700nm,18.4s
GERES GERESS Array B 94.97 34 LR LR 22 33 30.4

comp=Z,701nm,19.6s,baz=38,slow=35
MJAR Matsushiro Arr 95.35 312 P **P 21 51 02.3 -0.3**
MJAR Matsushiro Arr 95.35 312 P **P 21 51 02.3 -0.3**

comp=Z,1.5nm,0.8s,baz=53,slow=3.0,SNR=7.1
MJAR LR LR 22 27 16.3

comp=Z,812nm,20.8s,baz=60,slow=31
MAJO Matsushiro 95.35 312 PFAKE 21 51 10.0 +7.4
MAJO LR LR

comp=Z,987nm,20.0s
MAT Matsushiro 95.35 312 P **P 21 51 03.9 +1.3**
MAT S **S 22 02 19.0 +0.4**
USRK Ussuriysk Arra 95.40 321 P **P 21 51 03.4 +0.8**

comp=Z,0.7nm,0.6s,baz=95,slow=4.3,SNR=2.6
TREC Trest 95.61 33 AMS AMS 22 33 20.0

comp=Z,900nm,19.7s
KLMR Klimovskoe 95.87 15 *e*P P 21 51 09.4 +5.0
KLMR pmax pmax

comp=Z,28nm,2.3s
KLMR MLR MLR

comp=Z,2μm,24.0s
VLC Villacollemand 95.87 39 PFAKE 21 51 20.0 +15
VLC LR LR

comp=Z,748nm,20.0s
MDJ Mudanjiang 96.58 322 P **P 21 51 05.5 -2.5**
MDJ pP **pP 21 51 08.8 -3.7**
MDJ S **S 22 02 24.4 -4.4**
MDJ pmax pmax

comp=Z,70nm,4.4s
MDJ LR LR

comp=N,700nm,41.4s
MDJ LR LR

comp=E,340nm,49.0s
MDJ LR LR

comp=Z,140nm,24.5s
MDJ Mudanjiang 96.58 322 PFAKE 21 51 20.0 +12
MDJ LR LR

comp=Z,320nm,20.0s
OKC Ostrava-Krasne 96.59 31 *e*SS SS 22 09 05.6 +4.1
OKC AMS AMS 22 34 40.0

comp=Z,800nm,17.6s
VYHS Vyhne 97.82 32 *e*P Pdif 21 51 18.1 +4.5
VYHS pmax pmax

comp=Z,8.0nm,2.3s
VYHS Vyhne 97.82 32 *e*P Pdif 21 51 18.1 +4.5
VSL Villasalto 97.84 43 PFAKE 21 51 30.0 +16
VSL LR LR

comp=Z,559nm,19.0s
AQU L'Aquila 98.71 39 PFAKE 21 51 30.0 +12
AQU LR LR

comp=Z,1μm,19.0s
PSZ Piszkesteto 98.73 32 PFAKE 21 51 30.0 +12
PSZ LR LR

comp=Z,1μm,19.0s
HIA Hailar 98.78 330 PFAKE 21 51 30.0 +12
HIA LR LR

comp=Z,790nm,19.0s
CRVS Cervenica-Dubn 98.83 30 *e*P Pdif 21 51 22.3 +4.2
CRVS pmax pmax

comp=Z,40nm,2.9s
CRVS Cervenica-Dubn 98.83 30 PDIF Pdif 21 51 22.3 +4.2
KWP Kalwaria Pacla 98.90 29 PFAKE 21 51 30.0 +12
KWP LR LR

comp=Z,861nm,22.0s
CN2 Changchun 99.44 323 *e*P **Pdif 21 51 21.2 +0.3**
CN2 *es*P **sP 21 51 28.0 +1.1**
CN2 *e*S **S 22 02 48.5 -4.7**
CN2 pmax pmax

comp=Z,10.0nm,0.8s
CN2 pmax pmax

comp=Z,200nm,5.0s
CN2 LR LR

comp=N,700nm,20.0s
CN2 LR LR

comp=E,900nm,20.0s
CN2 LR LR

comp=Z,1μm,22.0s
KEST Kesra 99.88 47 LR LR 22 36 08.0

comp=Z,340nm,20.3s,baz=97,slow=35
OBN Obninsk 99.99 19 *e*P **Pdif 21 51 21.0 -2.0**
OBN *e* 21 55 35.3
OBN *e*S **SKSac 22 02 05.9 +4.4**
OBN *e*PS **PS 22 04 26.1 -0.3**
OBN *i*SS **SS 22 09 48.0 -0.6**
OBN pmax pmax

comp=Z,6.0nm,0.5s
OBN MLR MLR

comp=Z,2μm,17.0s
GUMO Guam 100.00 288 PFAKE 21 51 40.0 +16
GUMO LR LR

comp=Z,597nm,19.0s
KIEV Kiev 100.94 25 PFAKE 21 51 40.0 +13
KIEV LR LR

comp=Z,2μm,22.0s
CUC Castrocucco 101.59 40 PFAKE 21 51 40.0 +9.4
CUC LR LR

comp=Z,609nm,21.0s
INCN Inchon 102.61 318 PFAKE 21 51 50.0 +15
INCN LR LR

comp=Z,395nm,20.0s
TIP Timpagrande 102.66 40 PFAKE 21 51 50.0 +15
TIP LR LR

comp=Z,1μm,20.0s
CEL Celeste 102.70 41 PFAKE 21 51 50.0 +14
CEL LR LR

comp=Z,572nm,19.0s
TIR Tirane 103.10 37 PFAKE 21 51 50.0 +13
TIR LR LR

comp=Z,885nm,21.0s
WDD Wield Dalam 103.26 44 PFAKE 21 51 50.0 +12
WDD LR LR

comp=Z,372nm,19.0s
TLY Talaya 103.36 340 *e*P **Pdif 21 51 32.3 -5.9**
TLY pmax pmax

comp=Z,3.0nm,0.8s
TAM Tamanrasset 103.56 60 PFAKE 21 51 50.0 +10
TAM LR LR

comp=Z,440nm,20.0s
ULN Ulaanbaatar 105.32 336 PFAKE 21 56 10.0
ULN LR LR

comp=Z,608nm,19.0s
PMG Port Moresby 105.90 266 PFAKE 21 56 10.0
PMG LR LR

comp=Z,2μm,20.0s
BJI Beijing 107.09 325 Pdif **Pdif 21 51 53.9 -1.0**
BJI SS SS 22 11 27.8 +0.7
BJI LR LR

comp=N,300nm,17.5s
BJI LR LR

comp=E,330nm,19.0s
BJI LR LR

comp=Z,340nm,23.2s
BJT Baijiatuau 107.11 325 PFAKE 21 56 20.0
BJT LR LR

comp=Z,470nm,19.0s
BRVK Borovoye 107.57 0 PFAKE 21 56 20.0
BRVK LR LR

comp=Z,1μm,22.0s
SBA Scott Base 107.85 193 PFAKE 21 56 20.0
SBA LR LR

comp=Z,850nm,22.0s
HHC Hu-ho-hao-te 108.87 328 Pdif **Pdif 21 51 56.6 -6.4**
HHC PP **PP 21 56 32.5 -1.3**
HHC AMB AMB

comp=Z,120nm,5.5s
HHC LR LR

comp=N,1μm,15.5s
HHC LR LR

comp=E,680nm,16.7s
HHC LR LR

comp=Z,1μm,17.7s
KURK Kurchatov 109.58 355 PFAKE 21 56 20.0
KURK LR LR

comp=Z,1μm,19.0s
QSPA South Pole Qui 109.58 180 PFAKE 21 56 20.0
QSPA LR LR

comp=Z,1μm,21.0s
CTAO Charters Tower 109.70 255 PFAKE 21 56 20.0
CTAO LR LR

comp=Z,841nm,20.0s
SOC Sochi 110.87 24 *i* PKIKP PKiKP 21 56 04.4 -6.9
SOC pmax pmax

comp=Z,58nm,1.1s
SOC MLR MLR

comp=Z,2μm,18.0s
ANTO Ankara 110.95 31 PFAKE 21 56 20.0
ANTO LR LR

comp=Z,538nm,20.0s
NJ2 Nanjing 110.99 317 *e*PKP **PKiKP 21 56 09.0 -2.9**
NJ2 PP **PP 21 56 47.0 -2.4**
NJ2 PKS PKSdf 21 59 41.0 -7.6
NJ2 SKS **SKSdf 22 03 23.0 -1.0**
NJ2 AMB AMB

comp=Z,80nm,9.4s
NJ2 LR LR

comp=N,260nm,17.9s
NJ2 LR LR

comp=E,730nm,22.8s
NJ2 LR LR

comp=Z,500nm,22.6s
ISP Isparta 111.39 33 PFAKE 21 56 20.0
ISP LR LR

comp=Z,622nm,21.0s
KIV Kislovodsk 111.63 21 *i* PKIKP **PKiKP 21 56 14.9 +2.0**
KIV *e* 21 56 55.9
KIV *e*PS **PS 22 06 20.6 -5.6**
KIV *e*SS SS 22 12 34.3 +6.6
KIV *e*SSS SSS 22 16 44.8
KIV pmax pmax

comp=Z,2.0nm,1.0s
KIV MLR MLR

comp=Z,1μm,20.0s
YHNB Yeheng 113.93 310 PFAKE 21 56 30.0
YHNB LR LR

comp=Z,978nm,19.0s
MAK Makhachkala 114.07 19 *i* PKIKP PKiKP 21 56 10.2 -7.2
MAK *e* 21 57 09.1
MAK *e*PPP PPP 21 59 36.4
MAK *e*SS SS 22 13 03.6 +3.8
MAK pmax pmax

comp=Z,212nm,1.6s
MAK MLR MLR

comp=Z,2μm,20.0s
CSS Prodhromos 115.03 33 PFAKE 21 56 30.0 +10
CSS LR LR

comp=Z,454nm,21.0s
GNI Garni 115.70 22 PFAKE 21 56 30.0 +9.1
GNI LR LR

comp=Z,1μm,21.0s
LZH Lanzhou 116.33 330 *e*PKP **PKPdf 21 56 18.5 -3.8**
AAK Ala-Archa 117.91 357 PFAKE 21 56 40.0 +15
AAK LR LR

comp=Z,1μm,21.0s
ENH Enshi 117.94 322 PFAKE 21 56 40.0 +15
ENH LR LR

comp=Z,429nm,21.0s
DAV Davao City (W) 119.91 291 PFAKE 21 56 40.0 +11
DAV LR LR

comp=Z,658nm,20.0s
CD2 Chengdu 120.57 327 *e*PKP **PKPdf 21 56 30.4 0.0**
CD2 PP **PP 21 58 00.2 +3.8**
CD2 PKS **PKSdf 22 00 06.1 -1.1**
CD2 SKS **SKSdf 22 03 40.4 -2.1**
CD2 SKKS **SKKSac 22 04 52.0 -5.3**
CD2 SS **SS 22 14 25.2 0.0**
CD2 AMB AMB

comp=Z,60nm,6.2s
CD2 LR LR

comp=N,1μm,22.6s
CD2 LR LR

comp=E,270nm,20.2s
CD2 LR LR

comp=Z,370nm,20.2s
WRAB Tennant Creek 120.57 258 *e*PKIKP **PKPdf 21 56 31.5 +1.0**
WRAB MLR MLR

comp=Z,919nm,19.0s
WRAB Tennant Creek 120.57 258 *e*PKPdf **PKPdf 21 56 31.5 +1.0**
WRAB LR LR

comp=Z,919nm,19.0s
WRA Warramunga Arr 120.58 258 PKP **PKPdf 21 56 31.6 +1.1**
WRA Warramunga Arr 120.58 258 PKP **PKPdf 21 56 31.7 +1.1**

comp=Z,1.6nm,0.8s,baz=75,slow=2.7,SNR=13
BHD Baghdad 121.61 26 *e*PKP **PKPdf 21 56 28.0 -4.2**
BHD *e*PP **PP 21 58 00.5 -2.7**
BHD *e*SKS **SKSdf 22 03 41.5 -2.7**
BHD *e*Sdiff **Sdif 22 05 57.5 -1.1**
ASAR Alice Springs 121.65 254 PKP **PKPdf 21 56 33.4 +0.9**
ASAR Alice Springs 121.65 254 PKP **PKPdf 21 56 33.4 +0.9**

comp=Z,1.7nm,0.8s,baz=83,slow=2.0,SNR=13
GYA Guiyang 122.44 322 Pdif **Pdif 21 53 02.8 -0.9**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GYA				PKP	PKPdf	21 56 33.0	-1.2
GYA				PP	PP	21 58 13.2	+3.8
GYA				PKS	PKSdf	22 00 07.4	-3.7
GYA				SKKS		22 05 03.2	
GYA				SS	SS	22 14 50.0	+0.3
GYA				AMB	AMB		
	comp=Z,190nm,7.9s						
GYA				LR	LR		
	comp=N,320nm,20.0s						
GYA				LR	LR		
	comp=E,170nm,21.0s						
GYA				LR	LR		
	comp=Z,280nm,20.9s						
KMI	Kunming	125.71	324	PKP	PKPdf	21 56 41.9	+1.3
KMI				PP	PP	21 58 36.2	+4.7
KMI				SS	SS	22 15 30.3	-0.8
KMI				AMB	AMB		
	comp=Z,40nm,6.2s						
KMI				LR	LR		
	comp=N,170nm,17.2s						
KMI				LR	LR		
	comp=E,410nm,18.6s						
KMI				LR	LR		
	comp=Z,420nm,17.2s						
QIZ	Qiongzhong	125.73	313	PKP	PKPdf	21 56 39.5	-1.0
QIZ				PP	PP	21 58 31.1	-0.7
QIZ				SS	SS	22 15 31.1	-0.6
QIZ				LR	LR		
	comp=Z,720nm,32.0s						
QIZ	Qiongzhong	125.73	313	PFAKE		21 56 50.0	+9.5
QIZ				LR	LR		
	comp=Z,399nm,19.0s						
LSA	Lhasa	127.14	338	PFAKE		21 57 00.0	+16
LSA				LR	LR		
	comp=Z,450nm,20.0s						
KKM	Kota Kinabalu	128.54	295	PFAKE		21 57 00.0	+14
KKM				LR	LR		
	comp=Z,304nm,20.0s						
TSUM	Tsumeb	129.98	99	PFAKE		21 57 00.0	+11
TSUM				LR	LR		
	comp=Z,407nm,21.0s						
KAPI	Kappang	130.22	280	PFAKE		21 57 00.0	+11
KAPI				LR	LR		
	comp=Z,576nm,22.0s						
CHTO	Chiang Mai	132.83	322	PFAKE		21 57 10.0	+16
CHTO				LR	LR		
	comp=Z,447nm,19.0s						
MBWA	Marble Bar	134.28	259	PFAKE		21 57 10.0	+13
MBWA				LR	LR		
	comp=Z,554nm,19.0s						
KSM	Kuching	135.92	294	PFAKE		21 57 10.0	+10
KSM				LR	LR		
	comp=Z,436nm,21.0s						
MBAR	Mbarara	136.42	69	PFAKE		21 57 10.0	+8.9
MBAR				LR	LR		
	comp=Z,355nm,19.0s						
NWAO	Narrogin (SRO)	136.68	243	PFAKE		21 57 10.0	+9.2
NWAO				LR	LR		
	comp=Z,589nm,19.0s						
LSZ	Lusaka	139.18	91	PFAKE		21 57 20.0	+14
LSZ				LR	LR		
	comp=Z,443nm,22.0s						
KULM	Kulim	141.57	307	PFAKE		21 57 20.0	+10
KULM				LR	LR		
	comp=Z,553nm,21.0s						
KMBO	Kilima Mbogo	142.33	65	PFAKE		21 57 20.0	+8.1
KMBO				LR	LR		
	comp=Z,462nm,19.0s						
COCO	West Island	153.92	283	PFAKE		21 57 40.0	+1.7
COCO				LR	LR		
	comp=Z,354nm,20.0s						
ABPO	Ambohimpanom	157.73	92	PFAKE		21 57 50.0	+14
ABPO				LR	LR		
	comp=Z,707nm,19.0s						
MSEY	Mahe Island	158.88	47	PFAKE		21 57 50.0	+13
MSEY				LR	LR		
	comp=Z,422nm,19.0s						
DGAR	Diego Garcia	167.70	352	PFAKE		21 58 00.0	+15
DGAR				LR	LR		
	comp=Z,834nm,19.0s						

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*IDC **03** 21:41:30.3±1.1, 19°.57N×109°.37W, h0km, mb4.2/6, mb1 4.5/8, mb1mx4.1/23, mbtmp4.2/8, ML3.2/2, MS4.6/2, Ms1 4.6/2, ms1mx4.0/32, Error ellipse: s-maj=47.6km s-min=23.6km az=71.0*

*NEIC **03** 21:41:35.8±0.9, 19°.63N×109°.15W, h10km, mb4.7/16, Error ellipse: s-maj=17.8km s-min=10.7km az=48.0*

*ISCJB **03** 21:41:37.7±0.7, 19°.74N±0°.07×109°.18W±0°.09, h26km, mb4.4/17, MS5.1/2, Error ellipse: s-maj=13.1km s-min=8.3km az=148.6*

ISC 03 21:41:37.4±0.9**, 19°.67N**±0°.09×**109°.2W**±0°.1**, h26**km**, n80,** σ**2.s19**/70**, mb4.6**/18**, Revilla Gigedo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	10.87	27	Pn	Pn	21 44 09.2	-2.2
TXAR	Lajitas Array	10.87	27	Pn	Pn	21 44 09.2	-2.2
	0.0nm,0.3s,baz=204,slow=11,SNR=3.7						
TUC	Tucson	12.66	354	ePn	Pn	21 44 37.5	+1.5
GLA	Glamis	14.23	341	ePn	Pn	21 44 58.8	+1.4
BAR	Barrett	14.57	334	ePn	Pn	21 45 02.3	+0.4
LAZ	Ladron	14.79	7	ePn	Pn	21 45 05.5	+0.4
PFO	Pinyon Flat Ob	15.30	337	ePn	Pn	21 45 12.0	+0.2
PFO				eSn	Sn	21 47 59.6	-1.1
PFO	Pinyon Flat Ob	15.30	337	Pn	Pn	21 45 11.8	-0.1
	0.1nm,0.3s,baz=156,slow=13,SNR=4.4						
ANMO	Albuquerque	15.41	9	ePn	Pn	21 45 15.4	+2.0
ANMO				eSn	Sn	21 48 03.4	0.0
ANMO	Albuquerque	15.41	9	LR	LR	21 50 42.5	
	comp=Z,1μm,20.5s,baz=169,slow=36						
HKT	Hockley	15.88	47	Pn	Pn	21 45 20.6	+1.4
WUAZ	Wupatki	15.90	354	ePn	Pn	21 45 21.3	+1.7
MWC	Mount Wilson	16.48	333	ePn	P	21 45 31.0	+1.4
	40nm,1.4s						
GSC	Goldstone	16.95	338	ePn	Pn	21 45 33.8	+0.9
ISA	Isabella	17.89	335	ePn	P	21 45 45.8	+0.7
	43nm,1.7s						
CCUT	Cedar City	18.18	349	ePn	Pn	21 45 47.5	-0.7
PV04	Paradox Valley	18.66	1	ePn	Pn	21 45 56.2	+2.2
MVU	Marysvale	18.94	353	eP	Pn	21 45 58.8	+1.3
SMCO	Snowmass	19.54	5	eP	Pn	21 46 04.6	-0.2
SAO	San Andreas Ge	20.11	330	eP	Pn	21 46 11.3	0.0
NV11	Mina Array Sit	20.23	339	eP	Pn	21 46 13.0	+0.1
NVAR	Mina Array Bea	20.28	339	P	P	21 46 09.2	-2.2
NVAR	Mina Array Bea	20.28	339	P	P	21 46 09.2	-2.2
	2.1nm,0.8s,baz=151,slow=11,SNR=4.9						
ISCO	Idaho Springs	20.30	8	eP	Pn	21 46 14.0	+0.1
	48nm,1.9s						
MPU	Maple Canyon	20.38	355	eP	Pn	21 46 14.1	-0.5
DUG	Dugway	20.68	352	eP	P	21 46 14.0	-1.7
CMB	Columbia Colle	20.71	334	eP	P	21 46 16.8	+1.0
DAU	Daniels Canyon	20.75	356	eP	Pn	21 46 18.6	-0.5
CTU	Camp Tracy	21.06	355	eP	P	21 46 21.9	+2.2
	50nm,1.3s						
PHWY	Pilot Hill	21.80	8	eP	P	21 46 26.7	-1.1
MCCM	Marconi Confer	21.90	330	eP	P	21 46 30.3	+1.8
	39nm,1.4s						
HWUT	Hardware Ranch	21.96	355	eP	P	21 46 31.8	+2.4
HVU	Hansel Valley	22.24	353	eP	P	21 46 33.0	+0.6
HOPS	Hopland	22.67	331	eP	P	21 46 38.8	+1.9
	64nm,1.3s						
KCPM	Cahto Peak	23.46	331	eP	P	21 46 47.2	+2.1
KIPM	Iron Peak	23.52	332	eP	P	21 46 48.0	+2.4
RRI2	Red Ridge	23.67	356	eP	P	21 46 47.4	+0.2
TPAW	Teton Pass	23.79	357	eP	P	21 46 49.1	+0.7
	66nm,1.8s						
LOHW	Long Hollow	23.90	358	eP	P	21 46 48.9	-0.4
WVOR	Wild Horse Val	24.05	343	eP	P	21 46 52.5	+1.9
IMW	Indian Meadow	24.20	357	eP	P	21 46 55.1	+2.9
HLID	Hailey	24.21	351	eP	P	21 46 53.6	+1.5
MFID	Camas Ranch	24.31	348	eP	P	21 46 54.9	+1.9
YMR	Madison River	24.97	357	eP	P	21 47 00.6	+1.5
	8.7nm,0.8s						
QLMT	Earthquake Lak	25.16	356	eP	P	21 47 03.0	+2.3
	3.7nm,1.3s						
MCMT	McKenzie Canyo	25.27	354	eP	P	21 47 04.6	+2.8
KBO	Bosley Butte	25.81	334	eP	P	21 47 09.1	+2.5
	26nm,1.3s						
BOZ	Bozeman (W)	25.98	356	eP	P	21 47 10.1	+2.0
BMO	Blue Mountains	25.99	347	eP	P	21 47 10.2	+1.9
GCMT	Greycliff	26.05	359	eP	P	21 47 10.7	+1.9
KEBM	Edson Butte	26.40	334	eP	P	21 47 14.7	+2.7
	36nm,1.3s						
CPCT	Cooper Cave	26.85	49	P	P	21 47 13.9	-2.1
HRY	Holter Researc	27.05	356	eP	P	21 47 19.4	+1.6
	15nm,1.0s						
MSO	Missoula	27.36	353	eP	P	21 47 21.0	+0.5
	1.2nm,0.7s						
CHMT	Chamberlain Mo	27.37	354	eP	P	21 47 22.2	+1.4
SLMT	Seeley Lake	27.72	354	eP	P	21 47 24.7	+0.9
	40nm,1.6s						
OTAV	Otavalo	35.81	119	P	P	21 48 37.1	+1.6
	27nm,1.3s						
DLBC	Dease Lake	41.59	344	eP	P	21 49 21.8	-1.2
YKA	Yellowknife Ar	42.95	356	P	P	21 49 31.4	-2.5
YKA	Yellowknife Ar	42.95	356	P	P	21 49 31.4	-2.5
	2.1nm,0.8s,baz=171,slow=8.3,SNR=6.1						
SML	Sawmill	50.08	337	eP	P	21 50 30.7	+0.8
INK	Inuvik	50.95	349	P	P	21 50 33.5	-2.8
INK	Inuvik	50.95	349	P	P	21 50 33.5	-2.8
	10nm,1.0s,baz=141,slow=7.2,SNR=6.8						
ILAR	Eielson Array	51.53	340	P	P	21 50 39.1	-1.7
ILAR	Eielson Array	51.53	340	P	P	21 50 39.1	-1.7
	4.9nm,1.1s,baz=152,slow=5.6,SNR=13						
TRF	Thorofare Moun	51.81	338	eP	P	21 50 44.0	+0.8
SAML	Samuel	53.52	118	eP	P	21 50 58.3	+2.1
	8.5nm,1.4s						
LPAZ	La Paz	53.94	129	P	P	21 50 58.7	-1.2
LPAZ	La Paz	53.94	129	P	P	21 50 58.7	-1.2
	1.3nm,0.8s,baz=307,slow=5.1,SNR=3.9						
BDFB	Brasilia	69.67	116	LR	LR	22 20 31.0	
	comp=Z,1μm,21.5s,baz=358,slow=34						
ARCES	ARCESS Array B	85.41	15	P	P	21 54 08.5	-3.8
ARCES	ARCESS Array B	85.41	15	P	P	21 54 08.5	-3.8
	4.5nm,1.0s,baz=309,slow=3.3,SNR=5.2						
HHC	Hu-ho-hao-te	108.85	328	ePdif	Pdif	21 56 05.7	+5.6
HHC				PP	PP	22 00 38.6	+7.7
HHC	Hu-ho-hao-te	108.85	328	SKS	SKSdf	22 07 21.9	+6.4
HHC	Hu-ho-hao-te	108.85	328	S	Sdif	22 08 09.7	+1.7
HHC	Hu-ho-hao-te	108.85	328	SS	SS	22 15 50.6	+3.5
HHC				AMB	AMB		
	comp=Z,190nm,5.1s						
HHC				LR	LR		
	comp=N,490nm,25.1s						
HHC				LR	LR		
	comp=E,520nm,24.1s						
HHC				LR	LR		
	comp=Z,750nm,25.3s						
WRA	Warramunga Arr	120.53	258	PKP	PKPdf	22 00 23.4	-4.1
WRA	Warramunga Arr	120.53	258	PKP	PKPdf	22 00 23.4	-4.1
	comp=Z,0.2nm,0.6s,baz=73,slow=2.2,SNR=5.7						
ASAR	Alice Springs	121.60	254	PKP	PKPdf	22 00 25.5	-4.1
ASAR	Alice Springs	121.60	254	PKP	PKPdf	22 00 25.5	-4.1
	comp=Z,0.6nm,1.0s,baz=99,slow=1.8,SNR=3.6						

CASC 03 21:45:11.7±3.0**, 13°.65N**×**91°.55W, h36**km±999km**, MD3.8, 1D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	0.67	353⇓	eP	Pn	21 45 24.2	-0.5
FUG	Fuego 3	1.05	41	eP	Pn	21 45 30.1	-0.1
PCG	Pacaya	1.18	51	eP	Pn	21 45 32.8	+0.8
IXG	Ixpaco	1.19	64	eP	Pn	21 45 32.1	+0.1
IXG				eS	Sn	21 45 51.0	+3.9
NBG	Las Nubes	1.50	51	eP	Pn	21 45 38.1	+1.7
NBG				eS	Sn	21 45 57.6	+2.7
RTR	El Retiro	1.87	82	eP	Pn	21 45 42.1	+0.7
RTR				eS	Sn	21 46 03.9	-0.1
RBDL	Robledal	1.87	76	eP	Pn	21 45 42.3	+0.9
RBDL				eS	Sn	21 46 03.7	-0.3
SBLS	San Blas	1.89	84	eP	Pn	21 45 41.9	+0.2
SBLS				eS	Sn	21 46 04.9	+0.5
SNJE	San Jose	1.91	83	eP	Pn	21 45 42.5	+0.6
SNJE				eS	Sn	21 46 06.1	+1.2
BOQS	Boqueron	2.21	88	eP	Pn	21 45 47.6	+1.4
BOQS				eS	Sn	21 46 13.3	+0.8
MTO2	Montecristo 2	2.25	70	eP	Pn	21 45 46.2	-0.6
MRL	Marmol	2.29	52	eP	Pn	21 45 51.3	+4.1
LFRS	El Faro	2.42	90	eP	Pn	21 45 50.5	+1.5
LFRS				eS	Sn	21 46 18.2	+0.8
SNVI	San Vicente	2.64	90	eP	Pn	21 45 53.3	+1.4

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*NEIC **03** 21:47:01.0, 41°.80N×112°.21W, h8km, ML4.0(SLC), After SLC.*

NEIC Felt [V] at Fielding; [IV] at Garland and Plymouth; [III] at Collinston, Corinne, Deweyville, Mendon, Providence, Smithfield and Tremonton; [II] at Brigham City, Clarkston, Logan and Richmond. Also felt at Cornish, Honeyville, Hyde Park, Magna, Portage, Salt Lake City, South Jordan, Trenton, Wellsville and Willard. Felt [II] at Preston, Idaho. Also felt at Blackfoot, Clifton, Malad City and Weston.

*IDC **03** 21:47:01.8±0.6, 41°.78N×112°.05W, h0km, mb3.9/7, mb1 4.1/12, mb1mx3.9/33, mbtmp3.9/12, ML3.4/3, MS4.7/1, Ms1 4.7/1, ms1mx3.7/37, Error ellipse: s-maj=18.6km s-min=6.2km az=155.0*

ISC 03 21:47:01.4±0.6**, 41°.77N**±0°.02×**112°.12W**±0°.02**, h7**km±4km**, n90,** σ**1.s76**/165**, mb4.0**/8**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWUT	Hardware Ranch	0.45	112	eP	Pb	21 47 12.1	+0.3
HWUT				eS	Sb	21 47 18.6	-0.1
HVU	Hansel Valley	0.49	271	ePg	Pg	21 47 10.3	-0.6
HVU				eSg	Sg	21 47 16.8	-0.6
CTU	Camp Tracy	1.11	165	ePn	Pb	21 47 23.6	+0.5
CTU				eS	Sb	21 47 39.0	+1.1
AHID	Auburn Hatcher	1.25	37	ePn	Pn	21 47 25.2	-0.2
AHID				eSn	Sg	21 47 42.4	+0.8
JLU	Jordanelle	1.27	156	ePn	Pg	21 47 26.9	+1.0
JLU				eSn	Sn	21 47 44.2	+0.9
DAU	Daniels Canyon	1.51	154	ePn	Pn	21 47 29.6	+0.5
DAU				eSn	Sb	21 47 50.1	+0.8
DUG	Dugway	1.66	199	ePn	Pn	21 47 30.2	-0.9
DUG				eSn	Sn	21 47 49.5	-3.2
RRI2	Red Ridge	1.68	20	ePn	Pn	21 47 31.5	0.0
RRI2				eSn	Sn	21 47 52.8	-0.6
MPU	Maple Canyon	1.79	168	ePn	Pb	21 47 34.3	-0.5
MPU				ePg	Pg	21 47 36.3	+0.5
MPU				eSn	Sn	21 47 56.9	+0.8
MPU				Sg	Sg	21 48 00.2	+1.1
REDW	Red Top Meadow	1.84	30	ePn	Pn	21 47 34.2	+0.5
REDW				eSn	Sb	21 47 59.1	+0.1
TPAW	Teton Pass	1.92	26	ePn	Pn	21 47 35.1	+0.3
TPAW				eSn	Sn	21 48 00.3	+1.0
TPAW				eSg	Sg	21 48 03.6	+0.4
DCID1	Drake Creek	1.95	20	ePn	Pn	21 47 34.5	-0.6
DCID1				eSn	Sn	21 48 00.4	+0.6
SNOW	Snow King Moun	1.97	30	ePn	Pn	21 47 36.2	+0.8
SNOW				eSn	Sb	21 48 02.9	+0.4
BW06	Boulder Array	2.15	62	ePn	Pb	21 47 39.6	-1.1
BW06				eSg	Sg	21 48 11.1	+0.7
PDAR	Pinedale Array	2.15	62	Pn	Pb	21 47 39.9	-0.9
PDAR				Lg	Lg	21 48 09.2	
PDAR	Pinedale Array	2.15	62	Pn	Pb	21 47 39.9	-0.9
	89nm,0.3s,baz=229,slow=12,SNR=853						
PDAR				Lg	Lg	21 48 09.2	
	339nm,0.3s,baz=233,slow=24,SNR=36						
LOHW	Long Hollow	2.15	31	ePn	Pn	21 47 37.9	0.0
LOHW				eSn	Sn	21 48 04.6	-0.4
LOHW				eSg	Sg	21 48 10.8	+0.2
MOOW	Moose Ponds	2.22	27	ePn	Pn	21 47 39.3	+0.4
MOOW				eSn	Sn	21 48 06.2	-0.4
MOOW				eSg	Sg	21 48 11.6	-1.2
IMW	Indian Meadow	2.29	22	ePn	Pn	21 47 40.6	+0.7
IMW				eS	Sb	21 48 13.0	+1.0
HLID	Hailey	2.46	317	ePn	Pn	21 47 42.1	0.0
HLID				eSn	Sn	21 48 10.2	-2.3
HLID				eSg	Sb	21 48 15.3	-1.4
ELK	Elko	2.56	247	ePn	Pn	21 47 43.1	-0.5
ELK				ePg	Pb	21 47 49.1	+1.2
ELK				eSn	Sn	21 48 12.9	-2.2
ELK				eSg	Sb	21 48 19.9	+0.2
ELK	Elko	2.56	247	Pn	Pn	21 47 45.8	+2.2
	baz=59,slow=14						
YFT	Old Faithful	2.84	19	ePn	Pn	21 47 46.8	-0.6
YFT				ePg	Pg	21 47 54.9	-0.9
YFT				eSn	Sn	21 48 20.0	-1.9
YFT				eSg	Sg	21 48 31.6	-1.0
YMR	Madison River	3.02	16	ePn	Pn	21 47 49.1	-0.7
YMR				ePg	Pg	21 47 58.9	-0.4
YMR				eSn	Sn	21 48 25.2	-1.1
YMR				eSg	Sg	21 48 36.7	-1.6
LKWY	Lake	3.06	24	ePn	Pn	21 47 50.9	+0.4
LKWY				ePg	Pg	21 47 59.8	-0.3
LKWY				eSg	Sg	21 48 39.2	-0.6
QLMT	Earthquake Lak	3.10	9	ePn	Pn	21 47 52.4	+1.5
QLMT				eSn	Sn	21 48 28.3	0.0
QLMT				eSg	Sg	21 48 39.5	-1.4
MCMT	McKenzie Canyo	3.10	350	ePn	Pn	21 47 54.0	+3.0
MCMT				ePg	Pb	21 47 59.1	+2.1
MCMT				eSg	Sb	21 48 38.2	+3.1
MVU	Marysvale	3.27	181	ePn	Pn	21 47 53.9	+0.6
MVU				ePg	Pg	21 48 03.9	-0.2
MVU				eSg	Sg	21 48 47.4	+1.1
DLMT	Dillon	3.60	355	ePn	Pn	21 48 00.8	+3.0
DLMT				eSg	Sb	21 48 52.2	+2.7
BOZ	Bozeman (W)	3.89	5	ePn	Pn	21 48 02.3	+0.6
BOZ				ePg	Pg	21 48 14.4	-1.5
BOZ				eSg	Sb	21 49 00.4	+2.7
LRM	Limekiln Ridge	4.05	357	ePn	Pn	21 48 08.1	+4.0
LRM				eSg	Sb	21 49 06.2	+3.7
BMN	Battle Mountai	4.08	253	ePn	Pn	21 48 03.6	-0.7
BMN				ePg	Pg	21 48 18.4	-1.2
BMN				eSn	Sn	21 48 50.1	-2.3
BMN				eSg	Sg	21 49 09.7	-2.8
ARUT	Antelope Range	4.11	195	ePn	Pn	21 48 05.7	+0.9
ARUT				ePg	Pg	21 48 19.8	-0.3
PV04	Paradox Valley	4.18	143	ePn	Pn	21 48 08.8	+3.0
PV04				ePg	Pg	21 48 22.1	+0.6
PV04				eSn	Sn	21 48 55.1	+0.2
PV04				eSg	Sg	21 49 14.4	-1.2
CCUT	Cedar City	4.32	193	ePn	Pn	21 48 08.4	+0.6
CCUT				eSg	Sg	21 49 22.7	+2.4
GCMT	Greycliff	4.39	23	ePn	Pn	21 48 11.3	+2.7
PV01	Paradox Valley	4.54	142	ePn	Pn	21 48 12.4	+1.6
SMCO	Snowmass	4.70	122	ePn	Pn	21 48 15.8	+2.7
SMCO				ePg	Pg	21 48 30.4	-1.1
SMCO				eSg	Sg	21 49 30.4	-2.1
BMO	Blue Mountains	4.88	311	ePn	Pn	21 48 17.5	+2.3
BMO				ePg	Pg	21 48 32.9	-2.0
BMO				eSg	Sg	21 49 34.4	-3.6
WVOR	Wild Horse Val	4.89	280	ePn	Pn	21 48 20.9	+5.4
WVOR				eSg	Sb	21 49 30.5	+3.9
HRY	Holter Researc	4.94	2	ePn	Pn	21 48 21.6	+5.4
HRY				eSg	Sg	21 49 38.8	-1.3
PHWY	Pilot Hill	5.02	93	ePn	Pn	21 48 20.0	+2.6
PHWY				eSg	Sg	21 49 40.5	-2.2
CHMT	Chamberlain Mo	5.20	351	ePn	Pn	21 48 20.0	+0.2
CHMT				ePg	Pg	21 48 40.9	-0.2
CHMT				eSg	Sb	21 49 42.2	+6.6
MSO	Missoula	5.22	346	ePn	Pn	21 48 22.3	+2.3
MSO				ePg	Pg	21 48 40.7	-0.7
MSO				eSg	Sb	21 49 41.1	+5.2
ISCO	Idaho Springs	5.32	110	ePn	Pn	21 48 24.0	+2.5
ISCO				ePg	Pg	21 48 40.7	-2.6
ISCO				eSg	Sg	21 49 47.0	-5.2
SLMT	Seeley Lake	5.56	350	ePn	Pn	21 48 24.8	+0.1
SLMT				ePg	Pg	21 48 45.6	-2.2
SLMT				eSg	Sg	21 49 57.5	-2.3
NVAR	Mina Array Bea	5.80	237	Pn	Pn	21 48 32.2	+4.2
NVAR				Pg	Pb	21 48 46.1	+3.1
NVAR				Lg	Lg	21 50 01.7	
NVAR	Mina Array Bea	5.80	237	Pn	Pn	21 48 32.2	+4.2
	2.6nm,0.3s,baz=49,slow=11,SNR=14						
NVAR				Pg	Pb	21 48 46.1	+3.1
	6.6nm,0.3s,baz=50,slow=17,SNR=28						
NVAR				Lg	Lg	21 50 01.7	
	5.8nm,0.3s,baz=31,slow=37,SNR=3.4						
JTMT	Jette	6.17	346	ePn	Pn	21 48 32.6	-0.3
JTMT				eSg	Sb	21 50 11.1	+7.9
YBMT	Yellow Bay	6.24	348	ePn	Pn	21 48 33.5	-0.5
	14nm,0.5s						
YBMT				ePg	Pg	21 48 56.0	-4.8
YBMT				eSg	Sg	21 50 17.8	-3.8
WUAZ	Wupatki	6.27	174	ePn	Pn	21 48 35.2	+0.7
WUAZ				ePg	Pg	21 49 00.5	-1.1
WUAZ				eSn	Sn	21 49 49.2	+2.7
WUAZ				eSg	Sg	21 50 22.2	-0.7
BSMT	Bassoo Peak	6.37	344	ePn	Pn	21 48 35.1	-0.7
BSMT				ePg	Pg	21 48 59.6	-3.7
BSMT				eSg	Sb	21 50 15.6	+6.6
RSSD	Black Hills	6.38	66	ePn	Pn	21 48 36.1	+0.1
RSSD				eSg	Sg	21 50 26.3	+0.1
BEKR	Beckworth	6.53	256	ePn	Pn	21 48 36.9	-1.2
	5.8nm,0.6s						
BEKR				ePg	Pg	21 49 05.2	-1.3
BEKR				eSg	Sg	21 50 27.8	-3.4
NEW	Newport	7.39	333	Pn	Pn	21 48 49.0	-0.7
NEW				ePg	Pg	21 49 18.6	-4.4
NEW				eSg	Sb	21 50 48.1	+10
NEW				Lg	Lg	21 50 49.0	
NEW	Newport	7.39	333	Lg	Lg	21 50 49.0	
	1.4nm,0.3s,baz=232,slow=19,SNR=9.7						
WALA	Waterton Lakes	7.39	351	ePn	Pn	21 48 48.4	-1.4
	0.3nm,0.6s						
WALA				ePg	Pg	21 49 21.6	-1.3
WALA				eSg	Sb	21 50 48.4	+10
OGNE	Ogallala	7.63	93	ePn	Pn	21 48 55.0	+1.9
	62nm,0.6s						
OGNE				ePg	Pg	21 49 26.7	-0.9
OGNE				eSg	Sg	21 51 06.5	+0.1
YBH	Yreka Blue Hor	7.92	273	ePn	Pn	21 48 54.7	-2.3
	18nm,1.0s						
YBH				Pg	Pb	21 49 20.5	+1.5
YBH				ePg	Pg	21 49 28.9	-4.1
YBH				eSg	Sg	21 51 14.5	-1.1
YBH	Yreka Blue Hor	7.92	273	Pn	Pn	21 49 01.3	+4.3
	0.1nm,0.3s,baz=81,slow=9.7,SNR=3.6						
YBH				Pg	Pb	21 49 20.5	+1.5
	0.4nm,0.3s,baz=96,slow=11,SNR=8.7						
WDC	Whiskeytown Da	7.95	265	Pn	Pn	21 48 56.7	-0.7
	6.5nm,0.9s						
HUMO	Hull Mountain	8.09	280	ePn	Pn	21 49 01.7	+2.4
HUMO				eSg	Sg	21 51 15.2	-5.8
ANMO	Albuquerque	8.14	145	ePn	Pn	21 48 59.8	-0.3
ANMO				Pg	Pg	21 49 31.3	-6.0
ANMO				ePg	Pb	21 49 34.3	+11
ANMO				Lg	Lg	21 51 13.4	
ANMO	Albuquerque	8.14	145	Pg	Pg	21 49 31.3	-6.0
	1.1nm,0.3s,baz=336,slow=13,SNR=8.3						
ANMO				Lg	Lg	21 51 13.4	
	0.6nm,0.3s,baz=252,slow=20,SNR=3.4						
LAZ	Ladron	8.34	150	ePn	Pn	21 49 06.4	+3.5
	4.1nm,0.6s						
LAZ				eSn	Sn	21 50 37.8	+0.5
DGMT	Dagmar	8.73	37	ePn	Pn	21 49 10.5	+2.5
ECSD	EROS Data Cent	11.57	75	ePn	Pn	21 49 47.1	+0.2
ULM	Lac du Bonnet	14.09	48	Pn	Pn	21 50 19.1	-2.3
ULM	Lac du Bonnet	14.09	48	Pn	Pn	21 50 19.1	-2.3
	1.3nm,0.3s,baz=234,slow=12,SNR=5.7						
YKA	Yellowknife Ar	20.81	357	P	P	21 51 43.1	+0.1
YKA	Yellowknife Ar	20.81	357	P	P	21 51 43.1	+0.1
	3.0nm,0.9s,baz=173,slow=9.8,SNR=11						
ILAR	Eielson Array	30.34	331	P	P	21 53 15.7	+2.3
ILAR	Eielson Array	30.34	331	P	P	21 53 15.7	+2.3
	1.1nm,0.9s,baz=125,slow=6.0,SNR=7.2						
LPAZ	La Paz	70.62	135	P	P	21 58 18.5	+0.2
LPAZ	La Paz	70.62	135	P	P	21 58 18.5	+0.2
	0.9nm,0.7s,baz=338,slow=4.6,SNR=5.5						
SIV	San Ignacio	74.30	129	P	P	21 58 39.7	+0.2
SIV	San Ignacio	74.30	129	P	P	21 58 39.7	+0.2
	1.1nm,0.5s,baz=303,slow=6.8,SNR=5.4						
ESDC	Sonseca Array	75.99	49	P	P	21 58 49.2	+0.1
ESDC	Sonseca Array	75.99	49	P	P	21 58 49.2	+0.1
	0.4nm,0.5s,baz=306,slow=5.2,SNR=4.9						
MDJ	Mudanjiang	77.80	320	P	P	21 58 58.1	-1.1
MDJ				pmax	pmax		
	comp=Z,8.0nm,2.3s						
MDJ				pmax	pmax		
	comp=Z,34nm,3.0s						
SONM	Songino Array	84.48	335	P	P	21 59 35.2	+0.3
SONM	Songino Array	84.48	335	P	P	21 59 35.2	+0.3
	comp=Z,0.5nm,0.8s,baz=35,slow=4.3,SNR=4.6						
HHC	Hu-ho-hao-te	88.73	328	eP	P	21 59 54.9	-0.9
HHC				pP	pP	21 59 58.2	0.0
HHC				sP	sP	22 00 01.7	+2.6
HHC				PP	PP	22 03 24.5	+0.8
HHC	Hu-ho-hao-te	88.73	328	SKS	SKSac	22 10 21.3	-4.3
HHC	Hu-ho-hao-te	88.73	328	S	S	22 10 36.4	-6.7
HHC	Hu-ho-hao-te	88.73	328	sS	S	22 10 45.8	+2.7
HHC	Hu-ho-hao-te	88.73	328	SS	SS	22 16 31.2	-1.9
HHC				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,30nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,4.1s						
HHC				LR	LR		
	comp=N,160nm,17.2s						
HHC				LR	LR		
	comp=E,220nm,15.2s						
HHC				LR	LR		
	comp=Z,320nm,15.5s						
MKAR	**Makanchi Array**	**90.89**	**350**	P	**P**	**22 00 05.8**	**+0.2**
MKAR	**Makanchi Array**	**90.89**	**350**	P	**P**	**22 00 05.8**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=29,slow=3.3,SNR=3.7						
BRTR	**Keskin Array B**	**93.12**	**26**	LR	LR	22 48 14.5	
	comp=Z,346nm,18.8s,baz=143,slow=40						

*PDG **03** 21:54:52.2±0.8, 39°.16N×20°.84E, h8^{km}±1^{km}, ML3.4/9, Error ellipse: s-maj=0.9km s-min=0.9km az=90.0*

*CSEM **03** 21:54:52.0±0.1, 39°.11N×20°.82E, h2^{km}, ML3.6/16, Error ellipse: s-maj=3.6km s-min=2.1km az=55.0*

*ATH **03** 21:54:52.5, 39°.11N×20°.92E, h18^{km}±1^{km}, MD3.4/25, ML3.6*

*THE **03** 21:54:52.5, 39°.12N×20°.83E, h18^{km}±1^{km}, ML3.6/16, Error ellipse: s-maj=2.0km s-min=0.6km az=233.0*

*ISCJB **03** 21:54:52.2±0.5, 39°.13N±0°.01×20°.84E±0°.02, h11^{km}±3^{km}, mb3.8/7, Error ellipse: s-maj=2.7km s-min=1.7km az=149.3*

*TIR **03** 21:54:57.2, 39°.14N×20°.83E, h43^{km}*

*IDC **03** 21:54:58.8±2.3, 39°.17N×20°.81E, h84^{km}±24^{km}, mb3.5/7, mb1 3.4/12, mb1mx3.3/33, mbtmp3.3/12, Error ellipse: s-maj=21.7km s-min=16.2km az=153.0*

ISC 03 21:54:52.0±1.0**, 39°.12N**±0°.01×**20°.85E**±0°.02**, h10**^{km}±7^{km}**, n265, σ1ˢ36**/312**, mb3.8**/7**, 16C-20D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.36**	**204**	P	**Pb**	**21 55 00.2**	**-0.4**
LKD2				S	**Sb**	**21 55 06.0**	**-0.3**
LKD2	**Lefkada island**	**0.36**	**204**	*e*PB	**Pb**	**21 55 00.2**	**-0.4**
LKD2				*e*SB	**Sb**	**21 55 06.1**	**-0.3**
LKD2	**Lefkada island**	**0.36**	**204**	P	**Pb**	**21 55 00.2**	**-0.4**
LKD2				S	**Sb**	**21 55 06.0**	**-0.3**
JAN	**Janina**	**0.53**	**0**	P	**Pg**	**21 55 02.4**	**0.0**
JAN				S	**Sb**	**21 55 10.7**	**-0.6**
JAN	**Janina**	**0.53**	**0**	*e*PN	**Pg**	**21 55 02.5**	**0.0**
JAN				*e*SN	**Sb**	**21 55 11.2**	**-0.1**
JAN	**Janina**	**0.53**	**0**	P	**Pg**	**21 55 02.4**	**0.0**
JAN				S	**Sg**	**21 55 10.6**	**+1.1**
IGT	**Igoumenitsa**	**0.57**	**316**	P	**Pg**	**21 55 03.0**	**-0.1**
IGT				S	**Sb**	**21 55 12.2**	**-0.2**
IGT	**Igoumenitsa**	**0.57**	**316**	P	**Pg**	**21 55 03.0**	**-0.1**
IGT				S	**Sb**	**21 55 12.2**	**-0.2**
EVR	**Evrytania**	**0.78**	**105**	P	**Pg**	**21 55 06.5**	**-0.5**
EVR				S	**Sb**	**21 55 18.4**	**+0.1**
EVR	**Evrytania**	**0.78**	**105**	*e*PN	**Pg**	**21 55 06.8**	**-0.2**
EVR				*e*SN	**Sg**	**21 55 17.7**	**+0.6**
EVR	**Evrytania**	**0.78**	**105**	P	**Pg**	**21 55 06.5**	**-0.5**
EVR				S	**Sg**	**21 55 16.6**	**-0.5**
VLS	**Valsamata**	**0.96**	**192**	P	**Pg**	**21 55 09.8**	**-0.7**
VLS				S	**Sg**	**21 55 22.9**	**-0.2**
VLS	**Valsamata**	**0.96**	**192**	*e*PB	**Pb**	**21 55 10.4**	**-0.4**
VLS				*e*SN	**Sn**	**21 55 25.9**	**+0.5**
VLS	**Valsamata**	**0.96**	**192**	P	**Pg**	**21 55 09.8**	**-0.7**
VLS				S	**Sg**	**21 55 22.9**	**-0.2**
SRN	**Sarande**	**1.00**	**319**	*i* SG	**Pb**	**21 55 11.2**	**-0.2**
SRN	**Sarande**	**1.00**	**319**	P	**Pg**	**21 55 10.8**	**-0.4**
SRN				S	**Sb**	**21 55 24.8**	**+0.1**
SRN	**Sarande**	**1.00**	**319**	P	**Pg**	**21 55 10.8**	**-0.4**
SRN				S	**Sb**	**21 55 24.8**	**+0.1**
KEK	**Kerkira**	**1.00**	**306**	P	**Pg**	**21 55 10.8**	**-0.5**
KEK				S	**Sg**	**21 55 24.2**	**-0.2**
KEK	**Kerkira**	**1.00**	**306**	*e*PB	**Pb**	**21 55 11.9**	**+0.4**
KEK				*e*SN	**Sn**	**21 55 27.9**	**+1.5**
KEK	**Kerkira**	**1.00**	**306**	P	**Pg**	**21 55 10.8**	**-0.5**
KEK				S	**Sg**	**21 55 24.2**	**-0.2**
MAKR	**Makrakomi, Fth**	**1.01**	**96**	P	**Pg**	**21 55 10.9**	**-0.4**
MAKR				S	**Sb**	**21 55 25.2**	**+0.4**
MAKR	**Makrakomi, Fth**	**1.01**	**96**	P	**Pg**	**21 55 10.9**	**-0.4**
MAKR				S	**Sb**	**21 55 25.2**	**+0.4**
THL	**Klokotos Trika**	**1.01**	**64**	P	**Pg**	**21 55 10.2**	**-1.2**
THL				S	**Sb**	**21 55 25.8**	**+1.0**
THL	**Klokotos Trika**	**1.01**	**64**	*e*PB	**Pg**	**21 55 10.4**	**-1.0**
THL				*e*SN	**Sb**	**21 55 25.2**	**+0.4**
THL	**Klokotos Trika**	**1.01**	**64**	P	**Pg**	**21 55 10.2**	**-1.2**
THL				S	**Sb**	**21 55 24.9**	**+0.1**
KFL	**Anninata**	**1.01**	**183**	P	**Pg**	**21 55 11.2**	**-0.2**
KFL				S	**Sb**	**21 55 24.9**	**-0.1**
KFL	**Anninata**	**1.01**	**183**	P	**Pg**	**21 55 11.2**	**-0.2**
KFL				S	**Sb**	**21 55 24.9**	**-0.1**
AXS	**Araxos**	**1.01**	**156**	P	**Pg**	**21 55 10.8**	**-0.7**
EFP	**Efpalio**	**1.08**	**130**	P	**Pg**	**21 55 12.1**	**-0.6**
EFP	**Efpalio**	**1.08**	**130**	*e*PN	**Pb**	**21 55 12.8**	**0.0**
EFP	**Efpalio**	**1.08**	**130**	P	**Pg**	**21 55 12.2**	**-0.5**
EFP				S	**Sn**	**21 55 28.5**	**+0.3**
UPR	**University Cam**	**1.11**	**138**	P	**Pn**	**21 55 14.0**	**+0.4**
PSA1	**Psathopyrgos**	**1.14**	**134**	*e*PN	**Pn**	**21 55 14.0**	**+0.1**
PSA1				*e*SN	**Sg**	**21 55 28.0**	**-0.6**
AGG	**Agios Georgios**	**1.16**	**94**	P	**Pg**	**21 55 13.3**	**-0.9**
AGG				S	**Sg**	**21 55 28.8**	**-0.5**
AGG	**Agios Georgios**	**1.16**	**94**	*e*PN	**Pg**	**21 55 13.5**	**-0.8**
AGG	**Agios Georgios**	**1.16**	**94**	P	**Pg**	**21 55 13.4**	**-0.8**
AGG				S	**Sb**	**21 55 29.6**	**+0.4**
RLS	**Riolos of Patr**	**1.17**	**155**	P	**Pg**	**21 55 13.5**	**-0.9**
RLS	**Riolos of Patr**	**1.17**	**155**	*e*PN	**Pg**	**21 55 13.6**	**-0.9**
RLS				*e*SN	**Sn**	**21 55 30.5**	**+0.1**
RLS	**Riolos of Patr**	**1.17**	**155**	P	**Pg**	**21 55 13.5**	**-0.9**
KALE	**Kalithea**	**1.25**	**125**	P	**Pb**	**21 55 14.8**	**-0.8**
KALE	**Kalithea**	**1.25**	**125**	*e*PN	**Pg**	**21 55 16.1**	**+0.2**
KALE	**Kalithea**	**1.25**	**125**	P	**Pb**	**21 55 14.8**	**-0.8**
LAKA	**Lakka**	**1.25**	**134**	P	**Pn**	**21 55 14.7**	**-0.8**
LAKA	**Lakka**	**1.25**	**134**	*e*PN	**Pb**	**21 55 15.6**	**-0.1**
LAKA	**Lakka**	**1.25**	**134**	P	**Pn**	**21 55 15.4**	**-0.1**
NEST	**Nestorio**	**1.30**	**7**	P	**Pn**	**21 55 15.4**	**-0.9**
NEST				S	**Sb**	**21 55 32.2**	**-1.2**
NEST	**Nestorio**	**1.30**	**7**	P	**Pn**	**21 55 15.4**	**-0.9**
NEST				S	**Sb**	**21 55 32.2**	**-1.2**
KZN	**Kozani**	**1.38**	**31**	P	**Pn**	**21 55 16.8**	**-0.6**
KZN				S	**Sb**	**21 55 35.8**	**+0.1**
KZN	**Kozani**	**1.38**	**31**	*e*PN	**Pn**	**21 55 17.6**	**+0.2**
KZN	**Kozani**	**1.38**	**31**	P	**Pn**	**21 55 16.8**	**-0.6**
KZN				S	**Sb**	**21 55 35.8**	**+0.1**
AXAR	**Agios Charalam**	**1.46**	**104**	P	**Pb**	**21 55 19.1**	**-0.1**
AXAR	**Agios Charalam**	**1.46**	**104**	P	**Pb**	**21 55 19.1**	**-0.1**
KLV	**Kalavryta, Ach**	**1.48**	**136**	*e*PN	**Pb**	**21 55 19.3**	**-0.4**
DSF	**Desfina**	**1.49**	**118**	P	**Pn**	**21 55 18.7**	**-0.2**
DSF	**Desfina**	**1.49**	**118**	P	**Pn**	**21 55 19.0**	**+0.1**
DSF				S	**Sg**	**21 55 39.9**	**-0.1**
KBN	**Korca**	**1.50**	**358**	*e*PG	**Pg**	**21 55 23.6**	**+2.8**
KBN				*i* SG	**Sg**	**21 55 40.3**	**0.0**
KBN	**Korca**	**1.50**	**358**	*e*Pg	**Pg**	**21 55 23.6**	**+2.8**
KBN				*i* Sg	**Sg**	**21 55 40.3**	**0.0**
GUR	**Goura**	**1.67**	**135**	P	**Pb**	**21 55 22.2**	**-0.6**
GUR	**Goura**	**1.67**	**135**	*e*PN	**Pb**	**21 55 22.6**	**-0.2**
GUR				*e*SN	**Sb**	**21 55 43.9**	**0.0**
GUR	**Goura**	**1.67**	**135**	P	**Pb**	**21 55 22.2**	**-0.6**
FNA	**Florina**	**1.71**	**14**	P	**Pn**	**21 55 21.7**	**-0.2**
FNA				S	**Sn**	**21 55 43.1**	**-0.8**
FNA	**Florina**	**1.71**	**14**	*e*PN	**Pb**	**21 55 23.8**	**+0.3**
FNA	**Florina**	**1.71**	**14**	P	**Pn**	**21 55 21.7**	**-0.2**
AMT	**Artemida-Makis**	**1.73**	**157**	*e*PN	**Pb**	**21 55 24.1**	**+0.3**
LKR	**Lokris**	**1.74**	**105**	P	**Pb**	**21 55 23.6**	**-0.5**
LKR	**Lokris**	**1.74**	**105**	*e*PN	**Pb**	**21 55 23.8**	**-0.3**
LKR	**Lokris**	**1.74**	**105**	P	**Pb**	**21 55 23.6**	**-0.5**
ATAL	**Atalanti**	**1.75**	**104**	P	**Pb**	**21 55 24.0**	**-0.2**
ATAL	**Atalanti**	**1.75**	**104**	P	**Pb**	**21 55 24.0**	**-0.2**
THAL	**Thalero**	**1.79**	**127**	P	**Pb**	**21 55 25.1**	**+0.3**
THAL	**Thalero**	**1.79**	**127**	P	**Pb**	**21 55 25.1**	**+0.3**
XOR	**Xorichti**	**1.84**	**82**	P	**Pn**	**21 55 24.7**	**+1.1**
XOR	**Xorichti**	**1.84**	**82**	P	**Pn**	**21 55 24.7**	**+1.1**
NEO	**Neokhori**	**1.85**	**84**	P	**Pn**	**21 55 24.9**	**+1.0**
NEO	**Neokhori**	**1.85**	**84**	*e*PN	**Pn**	**21 55 24.9**	**+1.0**
NEO	**Neokhori**	**1.85**	**84**	P	**Pn**	**21 55 24.9**	**+1.0**
SMIA	**Simia**	**1.86**	**97**	P	**Pb**	**21 55 25.8**	**-0.2**
SMIA	**Simia**	**1.86**	**97**	P	**Pb**	**21 55 25.8**	**-0.2**
BIA	**Bitola**	**1.93**	**11**	*e*Pn	**Pg**	**21 55 28.6**	**-0.5**
BIA	**Bitola**	**1.93**	**11**	*e*Pn	**Pg**	**21 55 28.5**	**-0.5**
LTK	**Loutraki**	**1.99**	**123**	P	**Pb**	**21 55 27.4**	**-0.9**
LTK	**Loutraki**	**1.99**	**123**	*e*PN	**Pb**	**21 55 27.5**	**-0.9**
LTK	**Loutraki**	**1.99**	**123**	P	**Pb**	**21 55 27.4**	**-0.9**
SKIA	**Skiathos**	**2.04**	**88**	P	**Pn**	**21 55 27.2**	**+0.8**
SKIA	**Skiathos**	**2.04**	**88**	P	**Pn**	**21 55 27.2**	**+0.8**
VIL2	**Platees**	**2.10**	**115**	P	**Pn**	**21 55 28.3**	**+1.0**
ITM	**Ithomi**	**2.12**	**156**	P	**Pn**	**21 55 28.9**	**+1.4**
ITM	**Ithomi**	**2.12**	**156**	*e*PN	**Pb**	**21 55 30.0**	**-0.5**
ITM	**Ithomi**	**2.12**	**156**	P	**Pn**	**21 55 28.9**	**+1.4**
VLX	**Vlachokerasia**	**2.12**	**145**	P	**Pb**	**21 55 30.2**	**-0.4**
VLX	**Vlachokerasia**	**2.12**	**145**	P	**Pb**	**21 55 30.2**	**-0.4**
MRKA	**Markates**	**2.18**	**100**	P	**Pb**	**21 55 30.1**	**-1.4**
MRKA	**Markates**	**2.18**	**100**	P	**Pb**	**21 55 30.1**	**-1.4**
GRG	**Griva**	**2.19**	**33**	P	**Pn**	**21 55 29.4**	**+0.9**
GRG	**Griva**	**2.19**	**33**	P	**Pn**	**21 55 29.4**	**+0.9**
THE	**Thessaloniki**	**2.22**	**47**	P	**Pn**	**21 55 29.9**	**+1.0**
THE	**Thessaloniki**	**2.22**	**47**	P	**Pn**	**21 55 29.9**	**+1.0**
HORT	**Hortiatis**	**2.28**	**49**	P	**Pn**	**21 55 30.5**	**+0.8**
HORT	**Hortiatis**	**2.28**	**49**	P	**Pn**	**21 55 30.5**	**+0.8**
PYL	**PYLOS**	**2.33**	**162**	P	**Pn**	**21 55 31.9**	**+1.5**
PYL	**PYLOS**	**2.33**	**162**	*e*PB	**Pn**	**21 55 31.8**	**+1.4**
PYL	**PYLOS**	**2.33**	**162**	P	**Pn**	**21 55 31.9**	**+1.5**
TIR	**Tirane**	**2.35**	**342**	*i* PN	**Pb**	**21 55 33.3**	**-1.1**
TIR	**Tirane**	**2.35**	**342**	*i* Pn	**Pb**	**21 55 33.3**	**-1.1**
AOS	**Alonnisos**	**2.36**	**88**	P	**Pn**	**21 55 31.7**	**+0.9**
AOS	**Alonnisos**	**2.36**	**88**	*e*PN	**Pn**	**21 55 31.9**	**+1.1**
AOS	**Alonnisos**	**2.36**	**88**	P	**Pn**	**21 55 31.7**	**+0.9**
PLG	**Polygyros**	**2.36**	**57**	P	**Pn**	**21 55 30.8**	**-0.1**
PLG	**Polygyros**	**2.36**	**57**	*e*PN	**Pn**	**21 55 31.1**	**+0.2**
PLG	**Polygyros**	**2.36**	**57**	P	**Pn**	**21 55 30.8**	**-0.1**
DID	**Didima**	**2.48**	**130**	P	**Pn**	**21 55 34.0**	**+1.6**
DID	**Didima**	**2.48**	**130**	*e*PB	**Pn**	**21 55 33.8**	**+1.4**
DID	**Didima**	**2.48**	**130**	P	**Pn**	**21 55 34.0**	**+1.6**
DIDY	**Didyma**	**2.48**	**131**	P	**Pn**	**21 55 33.8**	**+1.2**
DIDY	**Didyma**	**2.48**	**131**	P	**Pn**	**21 55 33.8**	**+1.2**
ATH	**Athens Observa**	**2.53**	**116**	P	**Pn**	**21 55 34.7**	**+1.7**
ATH	**Athens Observa**	**2.53**	**116**	*e*PB	**Pn**	**21 55 34.8**	**+1.7**
ATH	**Athens Observa**	**2.53**	**116**	P	**Pn**	**21 55 34.7**	**+1.7**
VAY	**Valandovo**	**2.56**	**30**	P	**Pn**	**21 55 34.8**	**+1.2**
VAY	**Valandovo**	**2.56**	**30**	*e*Pn	**Pn**	**21 55 35.7**	**+2.1**
VAY	**Valandovo**	**2.56**	**30**	*e*Pn	**Pn**	**21 55 35.2**	**+1.6**
VAY	**Valandovo**	**2.56**	**30**	P	**Pn**	**21 55 34.8**	**+1.2**
VAY	**Valandovo**	**2.56**	**30**	*e*Pn	**Pn**	**21 55 35.7**	**+2.1**
SOH	**Sokhos**	**2.57**	**48**	P	**Pn**	**21 55 35.2**	**+1.5**
SOH	**Sokhos**	**2.57**	**48**	*e*PN	**Pn**	**21 55 35.2**	**+1.5**
SOH	**Sokhos**	**2.57**	**48**	P	**Pn**	**21 55 35.2**	**+1.5**
KNT	**Kendrikon**	**2.57**	**37**	P	**Pn**	**21 55 35.2**	**+1.4**
KNT	**Kendrikon**	**2.57**	**37**	P	**Pn**	**21 55 35.2**	**+1.4**
ATHU	**Athens Univers**	**2.58**	**116**	P	**Pn**	**21 55 35.2**	**+1.4**
ATHU	**Athens Univers**	**2.58**	**116**	P	**Pn**	**21 55 35.2**	**+1.4**
PHP	**Peshkopia**	**2.58**	**353**	*e*PN	**Pn**	**21 55 36.0**	**+2.1**
PHP	**Peshkopia**	**2.58**	**353**	*e*Pn	**Pn**	**21 55 36.0**	**+2.1**
PTL	**Penteli**	**2.60**	**113**	P	**Pn**	**21 55 35.8**	**+1.7**
PTL	**Penteli**	**2.60**	**113**	*e*PB	**Pn**	**21 55 35.8**	**+1.7**
PTL	**Penteli**	**2.60**	**113**	P	**Pn**	**21 55 35.8**	**+1.7**
OUR	**Ouranopolis**	**2.70**	**62**	P	**Pn**	**21 55 36.2**	**+0.7**
OUR	**Ouranopolis**	**2.70**	**62**	P	**Pn**	**21 55 36.2**	**+0.7**
SKO	**Skopje**	**2.88**	**9**	*e*Pn	**Pb**	**21 55 41.0**	**-2.5**
SKO	**Skopje**	**2.88**	**9**	*e*Pn	**Pn**	**21 55 40.8**	**+2.8**
SKO	**Skopje**	**2.88**	**9**	*e*Pn	**Pb**	**21 55 41.0**	**-2.5**
SRS	**Serrai**	**2.90**	**46**	P	**Pn**	**21 55 38.8**	**+0.6**
SRS	**Serrai**	**2.90**	**46**	P	**Pn**	**21 55 38.8**	**+0.6**
VLI	**Veliai**	**2.91**	**145**	P	**Pn**	**21 55 40.2**	**+1.8**
VLI	**Veliai**	**2.91**	**145**	*e*PN	**Pn**	**21 55 40.1**	**+1.7**
VLI	**Veliai**	**2.91**	**145**	P	**Pn**	**21 55 40.2**	**+1.8**
MRMA	**Marmari**	**2.96**	**110**	P	**Pn**	**21 55 40.9**	**+1.8**
MRMA	**Marmari**	**2.96**	**110**	P	**Pn**	**21 55 40.9**	**+1.8**
PUK	**Puka**	**3.01**	**346**	*e*PN	**Pn**	**21 55 41.2**	**+1.4**
PUK	**Puka**	**3.01**	**346**	*e*Pn	**Pn**	**21 55 41.2**	**+1.4**
TAR1	**Taranto**	**3.08**	**298**	*e*Pn	**Pb**	**21 55 45.3**	**-1.6**
ULC	**Ulcinj**	**3.09**	**337**	⇓*i*Pn	**Pn**	**21 55 41.2**	**+0.3**
ULC				*e*Sn	**Sn**	**21 56 20.1**	**+2.2**
ULC	**Ulcinj**	**3.09**	**337**	⇓*i*Pn	**Pn**	**21 55 41.2**	**+0.3**
ULC				*e*Sn	**Sn**	**21 56 20.1**	**+2.2**
LIA	**Limnos Island**	**3.44**	**76**	*e*PN	**Pn**	**21 55 46.3**	**+0.6**
BUM	**Brajici-Budva**	**3.50**	**336**	⇓*i*Pn	**Pn**	**21 55 47.0**	**+0.4**
BUM				*e*Sn	**Sn**	**21 56 29.9**	**+1.7**
BUM	**Brajici-Budva**	**3.50**	**336**	⇓*i*Pn	**Pn**	**21 55 47.0**	**+0.4**
BUM				*e*Sn	**Sn**	**21 56 29.9**	**+1.7**
PDG	**Podgorica**	**3.52**	**340**	*e*Pn	**Pn**	**21 55 49.0**	**+2.3**
PDG	**Podgorica**	**3.52**	**340**	*e*Pn	**Pn**	**21 55 48.0**	**+1.3**
PDG				*e*Sn	**Sn**	**21 56 30.5**	**+2.1**
TTG	**Podgorica**	**3.52**	**340**	*e*Pn	**Pn**	**21 55 48.0**	**+1.3**
TTG				*e*Sn	**Sn**	**21 56 30.5**	**+2.1**
PVY	**Plav**	**3.53**	**349**	*e*Pn	**Pn**	**21 55 48.9**	**+1.8**
PVY				*e*Sn	**Sn**	**21 56 31.1**	**+2.1**
PVY	**Plav**	**3.53**	**349**	*e*Pn	**Pn**	**21 55 48.9**	**+1.8**
PVY				*e*Sn	**Sn**	**21 56 31.1**	**+2.1**
BAI	**Bari**	**3.63**	**304**	*e*Pn	**Pn**	**21 55 49.4**	**+1.2**
BARS	**Barje**	**3.76**	**11**	*e*Pn	**Pn**	**21 55 51.6**	**+1.5**
BARS	**Barje**	**3.76**	**11**	*e*Pn	**Pn**	**21 55 51.6**	**+1.5**
HCY	**Herceg Novi**	**3.77**	**332**	⇑*i*Pn	**Pn**	**21 55 50.6**	**+0.4**
HCY				*e*Sn	**Sn**	**21 56 36.0**	**+1.3**
HCY	**Herceg Novi**	**3.77**	**332**	⇑*i*Pn	**Pn**	**21 55 50.6**	**+0.4**
HCY				*e*Sn	**Sn**	**21 56 36.0**	**+1.3**
BEY	**Berane**	**3.81**	**349**	⇓*i*Pn	**Pn**	**21 55 52.1**	**+1.2**
BEY				*e*Sn	**Sn**	**21 56 37.8**	**+1.9**
IVA	**Berane**	**3.81**	**349**	⇓*i*Pn	**Pn**	**21 55 52.1**	**+1.2**
IVA				*e*Sn	**Sn**	**21 56 37.8**	**+1.9**
SMTH	**Samothraki Isl**	**3.85**	**68**	*e*PN	**Pn**	**21 55 51.3**	**0.0**
VTS	**Vitosha**	**3.90**	**27**	P	**Pn**	**21 55 53.1**	**+1.0**
VTS	**Vitosha**	**3.90**	**27**	*e*Pn	Pn	21 55 56.1	+4.0
VTS	**Vitosha**	**3.90**	**27**	⇓*i*P	Pn	21 55 56.5	+4.4
VTS	**Vitosha**	**3.90**	**27**	P	**Pn**	**21 55 53.1**	**+1.0**
VTS	**Vitosha**	**3.90**	**27**	*e*Pn	Pn	21 55 56.1	+4.0
NKY	**Niksic**	**3.94**	**340**	⇑*i*Pn	**Pn**	**21 55 53.6**	**+0.9**
NKY				*e*Sn	**Sn**	**21 56 41.4**	**+2.3**
NKY	**Niksic**	**3.94**	**340**	⇑*i*Pn	**Pn**	**21 55 53.6**	**+0.9**
NKY				*e*Sn	**Sn**	**21 56 41.4**	**+2.3**
CDT	**Castel del Mon**	**4.02**	**301**	*e*Pn	**Pn**	**21 55 54.6**	**+1.0**
CHOS	**Chios island**	**4.14**	**99**	*e*PN	**Pn**	**21 55 57.3**	**+2.0**
BRY	**Bratogost**	**4.16**	**336**	⇑*i*Pn	**Pn**	**21 55 56.5**	**+0.8**
BRY				*e*Sn	**Sn**	**21 56 46.3**	**+1.9**
BRY	**Bratogost**	**4.16**	**336**	⇑*i*Pn	**Pn**	**21 55 56.5**	**+0.8**
BRY				*e*Sn	**Sn**	**21 56 46.3**	**+1.9**
PLD	**Plovdiv**	**4.18**	**43**	*e*Pn	Pn	21 55 59.3	+3.5
PLD	**Plovdiv**	**4.18**	**43**	*e*Pn	Pn	21 55 59.3	+3.5
PRK	**Paraskevi**	**4.22**	**87**	*e*PN	**Pn**	**21 55 58.5**	**+2.2**
APE	**Apeiranthos**	**4.22**	**118**	*e*PN	**Pn**	**21 55 58.7**	**+2.2**
APE	**Apeiranthos**	**4.22**	**118**	P	**Pn**	**21 55 58.2**	**+1.7**
APE	**Apeiranthos**	**4.22**	**118**	*e*PN	**Pn**	**21 55 58.2**	**+1.7**
APE	**Apeiranthos**	**4.22**	**118**	⇓*i*P	**Pn**	**21 55 57.4**	**+0.9**
APE	**Apeiranthos**	**4.22**	**118**	P	**Pn**	**21 55 58.2**	**+1.7**
UPM	**Unac-Piva**	**4.33**	**341**	⇓*i*Pn	**Pn**	**21 55 59.1**	**+1.0**
UPM				*e*Sn	**Sn**	**21 56 50.5**	**+1.7**
UPM	**Unac-Piva**	**4.33**	**341**	⇓*i*Pn	**Pn**	**21 55 59.1**	**+1.0**
UPM				*e*Sn	**Sn**	**21 56 50.5**	**+1.7**
PLE	**Pljevlja**	**4.35**	**346**	⇓*i*Pn	**Pn**	**21 55 59.6**	**+1.4**
PLE				*e*Sn	**Sn**	**21 56 50.4**	**+1.4**
PLE	**Pljevlja**	**4.35**	**346**	⇓*i*Pn	**Pn**	**21 55 59.6**	**+1.4**
PLE				*e*Sn	**Sn**	**21 56 50.4**	**+1.4**
ZAPS	**Zavoj**	**4.36**	**17**	*e*Pn	**Pn**	**21 56 01.0**	**+2.7**
ALN	**Alexandroupoli**	**4.37**	**64**	*e*PN	**Pn**	**21 55 58.8**	**+0.4**
ENEZ	**Enez**	**4.39**	**67**	*e*PN	**Pn**	**21 55 58.6**	**-0.1**
STON	**Ston**	**4.44**	**329**	*e*Pn	**Pn**	**21 55 58.3**	**-1.0**
STON				Sn	**Sn**	**21 56 46.2**	**-4.9**
STON	**Ston**	**4.44**	**329**	*e*Pn	**Pn**	**21 55 58.3**	**-1.0**
GELI	**Tayfur-Gelibol**	**4.52**	**72**	*e*PN	**Pn**	**21 56 01.0**	**+0.5**
MS1	**Monte Sant'Ang**	**4.55**	**306**	*e*Pn	**Pn**	**21 56 01.6**	**+0.7**
ERIK	**Erikli-Kesan**	**4.62**	**69**	*e*PN	**Pn**	**21 56 02.5**	**+0.6**
LPK	**Lapseki**	**4.73**	**73**	*e*PN	**Pn**	**21 56 04.5**	**+1.1**
GRUS	**Gruza**	**4.76**	**359**	*e*Pn	**Pn**	**21 56 04.2**	**+0.4**
GRUS	**Gruza**	**4.76**	**359**	*e*Pn	**Pn**	**21 56 04.2**	**+0.4**
BBLS	**Lazići**	**4.86**	**348**	*e*Pn	Pn	21 56 08.9	+3.6
BBLS	**Lazići**	**4.86**	**348**	*e*Pn	Pn	21 56 08.9	+3.6
RKY	**Sarkoy-Tekirda**	**5.11**	**70**	*e*PN	**Pn**	**21 56 09.6**	**+0.9**
KRBG	**Karabiga-Canak**	**5.13**	**74**	*e*PN	**Pn**	**21 56 09.8**	**+1.0**
MFT	**Murefte**	**5.22**	**69**	*e*PN	**Pn**	**21 56 11.5**	**+1.4**
EDRB	**Edirne**	**5.25**	**57**	*e*PN	**Pn**	**21 56 10.1**	**-0.5**
GONE	**Gonen-Balikesi**	**5.36**	**78**	*e*PN	**Pn**	**21 56 13.8**	**+1.7**
MRMT	**Marmara Adasi**	**5.40**	**72**	*e*PN	**Pn**	**21 56 13.8**	**+1.1**
BALB	**Balikesir**	**5.47**	**82**	*e*PN	**Pn**	**21 56 15.5**	**+1.9**
MLSB	**Milas**	**5.75**	**106**	*e*PN	**Pn**	**21 56 20.1**	**+2.7**
DAT	**Datca**	**5.83**	**112**	*e*PN	**Pn**	**21 56 21.1**	**+2.5**
SLVT	**Silivri**	**6.02**	**67**	*e*PN	**Pn**	**21 56 22.1**	**+1.0**
KULA	**Kula-Manisa**	**6.13**	**93**	*e*PN	**Pn**	**21 56 24.8**	**+2.1**
CTKS	**Kestanelik-??a**	**6.23**	**68**	*e*PN	**Pn**	**21 56 25.3**	**+1.3**
BLY	**Banja Luka**	**6.25**	**335**	*e*Pn	**Pn**	**21 56 23.8**	**-0.4**
BLY	**Banja Luka**	**6.25**	**335**	*e*Pn	**Pn**	**21 56 23.8**	**-0.4**
GZR	**Gura Zlata**	**6.43**	**12**	⇓*i*P	Pn	21 56 31.2	+4.4
BZS	**Buzias**	**6.52**	**5**	*e*Pn	**Pn**	**21 56 29.8**	**+1.9**
BZS	**Buzias**	**6.52**	**5**	*e*Pn	**Pn**	**21 56 29.8**	**+1.9**
TVSB	**Tavsanli**	**6.69**	**84**	*e*PN	**Pn**	**21 56 32.5**	**+2.1**
ARR	**Arges**	**6.84**	**23**	⇓*i*P	**Pn**	**21 56 35.0**	**+2.5**
ARR	**Arges**	**6.84**	**23**	⇓*i*P	**Pn**	**21 56 35.0**	**+2.5**
FETY	**Fethiye**	**6.97**	**108**	*e*PN	**Pn**	**21 56 37.0**	**+2.8**
NVLJ	**Novalja**	**7.03**	**323**	*e*Pn	**Pn**	**21 56 34.7**	**-0.3**
NVLJ				Sn	**Sn**	**21 57 49.9**	**-5.0**
NVLJ	**Novalja**	**7.03**	**323**	*e*Pn	**Pn**	**21 56 34.6**	**-0.3**
VOIR		**7.04**	**25**	⇑*i*P	**Pn**	**21 56 38.3**	**+3.2**
VOIR		**7.04**	**25**	⇑*i*P	**Pn**	**21 56 38.3**	**+3.2**
ALT	**Altintas**	**7.21**	**88**	*e*PN	**Pn**	**21 56 40.0**	**+2.5**
MLR	**Muntele Rosu**	**7.40**	**29**	⇑*i*P	**Pn**	**21 56 43.1**	**+3.0**
MLR	**Muntele Rosu**	**7.40**	**29**	P	Pn	21 56 45.4	+5.2
	0.2nm,0.3s,baz=224,slow=17,SNR=7.1						
MLR	**Muntele Rosu**	**7.40**	**29**	⇑*i*P	**Pn**	**21 56 43.1**	**+3.0**
ELL	**Elmali**	**7.54**	**105**	*e*PN	**Pn**	**21 56 44.4**	**+2.2**
GULT	**Gulveren**	**7.56**	**77**	*e*PN	**Pn**	**21 56 43.6**	**+1.3**
BOJS	**Bojanci**	**7.61**	**329**	*e*Pn	**Pn**	**21 56 42.5**	**-0.3**
BOJS	**Bojanci**	**7.61**	**329**	*e*Pn	**Pn**	**21 56 42.5**	**-0.3**
PLOR	**Plostina**	**7.97**	**31**	⇓*i*P	Pn	21 56 52.0	+4.1
VRI	**Vrincioaia**	**8.02**	**31**	⇑*i*P	Pn	21 56 52.2	+3.7
VRI	**Vrincioaia**	**8.02**	**31**	⇑*i*P	Pn	21 56 52.2	+3.7
SOKA	**Soboth**	**8.67**	**332**	⇓*i*Pn	**Pn**	**21 56 59.3**	**+1.7**
SOKA				⇓*i*Sn	**Sn**	**21 58 33.7**	**-1.6**
SOKA	**Soboth**	**8.67**	**332**	Pn	**Pn**	**21 56 57.5**	**0.0**
OBKA	**Obir**	**8.71**	**330**	⇑*i*Pn	**Pn**	**21 56 59.7**	**+1.6**
OBKA				⇑*i*Sn	**Sn**	**21 58 33.3**	**-3.1**
OBKA	**Obir**	**8.71**	**330**	Pn	**Pn**	**21 56 56.7**	**-1.4**
PSZ	**Piszkesteto**	**8.82**	**356**	⇓*i*P	Pn	21 57 06.9	+7.3
KECS	**Kecovo**	**9.36**	**359**	*e*PN	Pn	21 57 11.7	+4.8
VYHS	**Vyhne**	**9.48**	**352**	*e*PN	Pn	21 57 14.9	+6.3
KEST	**Kesra**	**9.75**	**253**	P	**Pn**	**21 57 15.2**	**+2.9**
	0.1nm,0.3s,baz=60,slow=16,SNR=4.0						
CRVS	**Cervenica-Dubn**	**9.79**	**2**	*e*PN	Pn	21 57 18.0	+5.2
KOLS	**Kolonicke sedl**	**9.86**	**5**	*e*PN	Pn	21 57 22.4	+8.6
BRTR	**Keskin Array B**	**9.92**	**82**	P	**Pn**	**21 57 17.6**	**+2.9**
	0.3nm,0.3s,baz=263,slow=11,SNR=9.8						
MOA	**Molln**	**9.94**	**333**	⇓*i*Pn	**Pn**	**21 57 16.2**	**+1.2**
MOA	**Molln**	**9.94**	**333**	Pn	**Pn**	**21 57 14.5**	**-0.4**
MOTA	**Moosalm**	**10.86**	**322**	⇑*i*Pn	**Pn**	**21 57 30.6**	**+3.0**
MOTA				⇑*i*Sn	**Sn**	**21 59 27.2**	**-1.9**
MOTA	**Moosalm**	**10.86**	**322**	Pn	**Pn**	**21 57 27.6**	**0.0**
GERES	**GERESS Array B**	**10.99**	**334**	P	Pn	21 57 32.7	+3.3
	0.4nm,0.3s,baz=155,slow=14,SNR=12						
ESDC	**Sonseca Array**	**19.17**	**280**	P	**P**	**21 59 15.3**	**-0.4**
	0.3nm,0.3s,baz=75,slow=11,SNR=3.9						
HFS	**Hagfors**	**21.51**	**350**	P	**P**	**21 59 40.7**	**-0.1**
	3.1nm,0.7s,baz=173,slow=13,SNR=5.5						
FINES	**FINESS Array B**	**22.58**	**7**	P	**P**	**21 59 50.6**	**-1.7**
	2.5nm,0.9s,baz=185,slow=15,SNR=2.9						
NB2	**NORSAR Subarra**	**22.75**	**348**	P	**P**	**21 59 52.2**	**-1.9**
	comp=Z,2.9nm,0.8s,baz=161,slow=11						
NOA	**NORSAR Array B**	**22.75**	**348**	P	**P**	**21 59 53.1**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=154,slow=10,SNR=2.8						
EKA	**Eskdalemuir Ar**	**22.82**	**323**	P	**P**	**21 59 53.7**	**-1.1**
	comp=Z,1.9nm,0.6s,baz=119,slow=10,SNR=7.5						
TORD	**Torodi Ar. Bea**	**30.93**	**218**	P	**P**	**22 01 08.4**	**-0.7**
	comp=Z,0.7nm,0.6s,baz=34,slow=9.6,SNR=5.5						
MKAR	**Makanchi Array**	**44.59**	**59**	P	**P**	**22 03 02.3**	**-2.0**
	comp=Z,1.1nm,0.5s,baz=282,slow=7.4,SNR=37						
ZALV	**Zalesovo Beam**	**44.88**	**49**	P	**P**	**22 03 04.7**	**-1.6**
	comp=Z,1.4nm,0.5s,baz=283,slow=7.6,SNR=12						

WEL 03 22:06:40.9±1.5**, 36°.03S**×**179°.08E, h5**^{km}**, ML3.8**/3**, Error ellipse: s-maj=14.7km s-min=7.4km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.65**	**202**	*e*P*	Pn	22 07 09.9	-0.7
MXZ				S*	Sn	22 07 26.0	-6.3
MXZ				S*	Sb	22 07 26.1	-6.9
MXZ				AML	AML	22 07 28.1	
MXZ				AML	AML	22 07 28.4	
PUZ	**Puketiti**	**2.15**	**198**	PN	Pn	22 07 16.3	-1.1
PUZ				SN	Sn	22 07 45.2	+0.7
PUZ				AML	AML	22 07 46.9	
CNGZ	**Carnagh Statio**	**2.55**	**196**	PN	Pn	22 07 21.8	-1.1
MWZ	**Matawai**	**2.62**	**208**	P*	Pn	22 07 23.1	-0.8
MWZ				AML	AML	22 08 10.7	
MWZ				AML	AML	22 08 17.6	
PRGZ	**Paritu Road**	**3.04**	**198**	*e*PN	Pn	22 07 28.2	-1.6
KNZ	**Kokohu**	**3.19**	**200**	PN	Pn	22 07 28.6	-3.1
MHGZ	**Mahia Peninsul**	**3.26**	**196**	PN	Pn	22 07 30.1	-2.6
RAHZ	**Arahi**	**3.29**	**208**	PN	Pn	22 07 32.3	-0.9
MKAZ	**Moumakai**	**3.33**	**250**	PN	Pn	22 07 32.8	-0.9
TOZ	**Tahuroa Road**	**3.33**	**238**	P*	Pn	22 07 33.4	-0.3
NMHZ	**Naumai**	**3.56**	**210**	*e*PN	Pn	22 07 35.2	-1.8
KAHZ	**Kahuranaki**	**4.15**	**204**	PN	Pn	22 07 41.6	-3.3
FWVZ	**Far West T-bar**	**4.27**	**220**	*e*P*	Pn	22 07 45.3	-1.6

IDC 03 22:19:29.4±1.6**, 31°.21N**×**110°.83E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.4**/26**, mbtmp3.6**/4**, Error ellipse: s-maj=66.7km s-min=26.0km az=61.0, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**16.64**	**223**	Pn	Pn	22 23 24.1	-0.1
	0.3nm,0.3s,baz=31,slow=9.8,SNR=10						
MKAR	**Makanchi Array**	**26.90**	**313**	P	P	22 25 11.7	-0.3
	0.4nm,0.7s,baz=112,slow=11,SNR=4.7						
ZALV	**Zalesovo Beam**	**29.42**	**328**	P	P	22 25 34.6	+0.2
	0.6nm,0.5s,baz=134,slow=8.5,SNR=4.1						
ASAR	**Alice Springs**	**58.87**	**155**	P	P	22 29 30.1	0.0
	0.2nm,0.6s,baz=354,slow=7.6,SNR=2.9						

*CSEM **03** 22:30:05.8±0.4, 39°.04N×41°.02E, h2^{km}, MD2.9, Error ellipse: s-maj=10.8km s-min=6.1km az=153.0*

*ISK **03** 22:30:06.4, 39°.08N×41°.10E, h15^{km}, MD2.9*

*DDA **03** 22:30:07.7, 39°.13N×41°.05E, h18^{km}, MD3.0*

*ISCJB **03** 22:30:08.3±0.5, 39°.12N±0°.03×40°.99E±0°.04, h17^{km}±7^{km}, Error ellipse: s-maj=6.4km s-min=4.8km az=40.2*

ISC 03 22:30:07.0±0.9**, 39°.12N**±0°.03×**41°.01E**±0°.03**, h17**^{km}±8^{km}**, n25, σ1ˢ09**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.20**	**148**	*i* P	**Pb**	**22 30 11.7**	**-0.6**
BNGL				*i* S	**Sg**	**22 30 17.1**	**+1.8**
BNGB	**Bingˆ¶l**	**0.29**	**244**	*e*PG	**Pg**	**22 30 13.6**	**+0.3**
BNGB				*e*SG	**Sb**	**22 30 19.2**	**+0.7**
VRTB	**Varto-Mus**	**0.35**	**83**	*e*PG	**Pg**	**22 30 13.2**	**-1.1**
VRTB	**Varto-Mus**	**0.35**	**83**	*e*Pg	**Pg**	**22 30 13.2**	**-1.1**
BINT	**Bingol**	**0.48**	**239**	*e*Pg	Pg	22 30 13.6	-3.0
BINT				*e*Sg	**Sg**	**22 30 19.2**	**-3.9**
EZM	**Erzurum**	**0.83**	**19**	*e*PG	**Pb**	**22 30 22.8**	**-0.3**
EZM				*e*SG	**Sn**	**22 30 36.2**	**-0.1**
ERZM	**Erzurum**	**0.83**	**19**	*i* P	**Pb**	**22 30 23.1**	**-0.1**
ERZM	**Erzurum**	**0.83**	**19**	*i* P	**Pb**	**22 30 23.1**	**-0.1**
KOPT	**Kop Dagi**	**0.98**	**336**	*i* P	**Pg**	**22 30 26.9**	**+0.8**
KOPT	**Kop Dagi**	**0.98**	**336**	*i* P	**Pg**	**22 30 26.9**	**+0.8**
ERZN	**Erzincan**	**1.10**	**295**	*e*PN	**Pg**	**22 30 28.9**	**+0.5**
HOMI	**Horasan**	**1.15**	**36**	*i* P	**Pg**	**22 30 29.3**	**0.0**
HOMI				*i* S	**Sg**	**22 30 45.3**	**+0.9**
BEST	**Besiri**	**1.24**	**171**	*i* P	**Pg**	**22 30 31.5**	**+0.5**
BEST				*i* S	**Sg**	**22 30 48.9**	**+1.7**
PTK	**Pertek**	**1.28**	**260**	*e*PN	**Pb**	**22 30 31.5**	**+0.7**
PTK	**Pertek**	**1.28**	**260**	*e*Pn	**Pb**	**22 30 31.5**	**+0.7**
TUTA	**Tutak**	**1.43**	**78**	*i* P	**Pb**	**22 30 33.6**	**+0.3**
TUTA				*i* S	**Sg**	**22 30 54.0**	**+0.9**
TUTA	**Tutak**	**1.43**	**78**	*i* P	**Pb**	**22 30 33.6**	**+0.3**
TUTA				*i* S	**Sg**	**22 30 54.0**	**+0.9**
BAYT	**Aydˇ–ntepe-Bay**	**1.44**	**332**	*e*PN	**Pb**	**22 30 33.4**	**-0.1**
BAYT	**Aydˇ–ntepe-Bay**	**1.44**	**332**	*e*Pn	**Pb**	**22 30 33.4**	**-0.1**
SVRC	**Sivrice-ELAZID**	**1.53**	**242**	*e*PN	**Pb**	**22 30 35.3**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.53**	**242**	*e*Pn	**Pb**	**22 30 35.3**	**+0.3**
AGRB	**Hanur-Agry**	**1.60**	**73**	*e*PN	**Pn**	**22 30 33.9**	**-0.8**
AGRB	**Hanur-Agry**	**1.60**	**73**	*e*Pn	**Pn**	**22 30 33.9**	**-0.8**
ILIC	**ilic-Erzincan**	**1.93**	**281**	*e*PN	**Pb**	**22 30 40.8**	**-1.0**
ILIC	**ilic-Erzincan**	**1.93**	**281**	*e*Pn	**Pb**	**22 30 40.8**	**-1.0**

WEL 03 22:42:45.2±1.7**, 36°.43S**×**177°.84E, h5**^{km}**, ML3.5**/3**, Error ellipse: s-maj=12.8km s-min=11.1km az=90.0, Off east coast of North Island**

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

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.19	162	eP*	Pg	22 43 05.1	-3.0
MXZ				S*	Sg	22 43 19.4	-4.2
MXZ				S*	Sb	22 43 19.5	-4.6
PUZ	Puketiti	1.68	169	PN	Pn	22 43 15.2	0.0
PUZ				SN	Sb	22 43 38.1	0.0
PUZ				AML	AML	22 43 40.8	
URZ	Urewera	1.92	198	P*	Pn	22 43 16.6	-2.0
URZ				S*	Sn	22 43 40.4	-2.8

IDC 03 22:52:01.0±5.4, 16°.58N×86°.20W, h0km, mb3.6/4, mb1 4.2/5, mb1mx3.7/22, mbtmp3.8/5, ML4.4/1, MS2.9/1, Ms1 2.9/1, ms1mx2.7/36, Error ellipse: s-maj=109.2km s-min=75.1km az=15.0, North of Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG	Tepich	4.13	332	Pn	Pn	22 53 06.3	+0.9
	22nm,0.3s,baz=5.4,slow=0.4,SNR=54						
TEIG				Sn	Sn	22 53 50.2	-4.3
	18nm,0.3s,baz=262,slow=16,SNR=4.1						
TEIG				LR	LR	22 54 56.8	
	comp=Z,145nm,18.9s,baz=162,slow=42						
TXAR	Lajitas Array	20.46	311	P	P	22 56 39.1	-1.3
	1.4nm,0.6s,baz=124,slow=11,SNR=18						
PDAR	Pinedale Array	32.85	327	P	P	22 58 36.8	0.0
	0.4nm,0.3s,baz=136,slow=12,SNR=5.7						
NVAR	Mina Array Bea	35.56	314	P	P	22 59 00.7	+0.3
	0.4nm,0.4s,baz=118,slow=5.4,SNR=3.0						
YKA	Yellowknife Ar	50.00	343	P	P	23 00 56.8	-0.1
	0.4nm,0.6s,baz=134,slow=7.5,SNR=5.4						
ILAR	Eielson Array	62.78	335	P	P	23 02 27.9	-0.1
	0.5nm,0.8s,baz=124,slow=6.1,SNR=6.1						

MAN 03 22:53:01, 7°.08N×126°.45E, h26km, mb4.5, ML3.4, MS3.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	Mati	0.23	235	eP	Pn	22 53 09.7	+0.9
MATI				eS	Sb	22 53 15.1	+3.8
BUKP	Musuan	1.59	300	eP	Pb	22 53 38.1	+8.4
CTBH	Cotabato--PC H	2.19	274	⇑iP	Pb	22 53 38.4	-1.5
PAGZ	Pagadian	3.13	284	eP	Pn	22 53 50.7	+1.9

WEL 03 22:55:17.1±1.8, 36°.48S×177°.79E, h5km, ML3.6/3, Error ellipse: s-maj=12.5km s-min=11.8km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.16	159	P*	Pg	22 55 38.1	-1.3
MXZ				S*	Sg	22 55 50.3	-4.2
MXZ				S*	Sb	22 55 50.3	-4.7
PUZ	Puketiti	1.64	167	PN	Pn	22 55 45.9	-0.7
PUZ				SN	Sg	22 56 09.7	-0.1
PUZ				AML	AML	22 56 11.7	
URZ	Urewera	1.86	197	P*	Pn	22 55 47.3	-2.3
URZ				S*	Sn	22 56 11.1	-2.4

IDC 03 23:01:55.7±4.2, 22°.05S×173°.58W, h0km, mb3.9/5, mb1 4.1/5, mb1mx3.9/21, mbtmp3.9/5, Error ellipse: s-maj=168.3km s-min=35.1km az=144.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	37.46	265	P	P	23 09 11.6	+0.4
	1.8nm,0.3s,baz=93,slow=13,SNR=4.0						
STKA	Stephens Creek	40.89	246	P	P	23 09 38.5	-1.3
	0.6nm,0.5s,baz=71,slow=10,SNR=3.7						
ASAR	Alice Springs	48.19	257	P	P	23 10 38.1	-0.3
	0.4nm,0.6s,baz=93,slow=7.5,SNR=3.2						
WRA	Warramunga Arr	48.48	262	P	P	23 10 41.0	+0.4
	0.8nm,0.3s,baz=97,slow=8.4,SNR=30						
ILAR	Eielson Array	88.97	11	P	P	23 14 51.7	-0.1
	0.7nm,0.7s,baz=221,slow=5.4,SNR=7.2						

IDC 03 23:05:20.7±5.8, 48°.19S×127°.77E, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.8/14, mbtmp4.0/3, MS3.8/1, Ms1 3.8/1, ms1mx3.1/27, Error ellipse: s-maj=123.7km s-min=93.8km az=122.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	19.38	38	P	P	23 09 48.2	+0.2
	0.2nm,0.3s,baz=204,slow=11,SNR=11						
ASAR	Alice Springs	24.96	13	P	P	23 10 46.0	+0.2
	3.9nm,0.8s,baz=185,slow=9.6,SNR=27						
WRA	Warramunga Arr	28.68	13	P	P	23 11 18.9	-0.3
	0.7nm,0.9s,baz=192,slow=11,SNR=3.5						
URZ	Urewera	36.73	93	LR	LR	23 23 44.9	
	comp=Z,125nm,18.4s,baz=149,slow=30						
YKA	Yellowknife Ar	143.35	44	PKP	PKPdf	23 24 55.3	-0.4
	0.5nm,0.6s,baz=268,slow=3.6,SNR=3.8						

BJI 03 23:16:10.5, 53°.27N×157°.97E, h178km, mB4.7/5, mb4.6/7
ISCJB 03 23:16:11.8±0.2, 53°.13N±0°.03×157°.69E±0°.06, h183km±2km, mb4.0/31, Error ellipse: s-maj=6.7km s-min=3.2km az=33.4
MOS 03 23:16:11.3±0.9, 53°.20N×157°.64E, h178km, mb4.1/21, Error ellipse: s-maj=12.2km s-min=7.9km az=66.7
KRSC 03 23:16:12.2±0.6, 53°.08N×158°.07E, h180km±30km, ML4.2
NEIC 03 23:16:12.6±0.6, 53°.22N×157°.58E, h174km±7km, mb4.3/11, Error ellipse: s-maj=15.7km s-min=6.4km az=166.0
IDC 03 23:16:13.0±0.3, 53°.29N×157°.59E, h174km±3km, mb3.5/20, mb1 3.8/22, mb1mx3.7/30, mbtmp3.5/22, MS3.7/1, Ms1 3.7/1, ms1mx2.7/41, Error ellipse: s-maj=14.8km s-min=8.4km az=154.0
ISC 03 23:16:12.6±0.5, 53°.06N±0°.04×157°.96E±0°.04, h182km±4km, n111, σ1s.40/155, mb4.0/31, 1D, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PEA0B	Petropavlovsk-	0.17	287	ePn	Pn	23 16 36.0	-0.6
PEA0B				eSn	Sn	23 16 54.5	-0.6
PETK	Petropavlovsk-	0.17	287	PN	Pn	23 16 36.5	-0.1
PETK				S	Sn	23 16 55.0	-0.2
PETK				pmax	pmax		
	comp=Z,66nm,0.3s						
PETK				smax	smax		
	comp=Z,22nm,0.3s						
PETK	Petropavlovsk-	0.17	287	P	Pn	23 16 36.5	-0.1
	comp=Z,66nm,0.3s,baz=72,slow=5.8,SNR=885						
PETK				S	Sn	23 16 55.0	-0.2
	comp=Z,22nm,0.3s,baz=264,slow=1.5,SNR=12						
PET	Petropavlovsk	0.42	95	P	Pn	23 16 37.1	-0.1
PET				S	Sn	23 16 55.7	-0.4
PET	Petropavlovsk	0.42	95	i PN	Pn	23 16 37.2	0.0
PET				eS	Sn	23 16 56.4	+0.3
PET				pmax	pmax		
	comp=Z,2μm,0.6s						
PET				smax	smax		
	comp=N,818nm,0.7s						
KOK	Koryaka	0.47	60	P	Pn	23 16 37.9	+0.4
APC	Apacha	0.50	255	P	Pn	23 16 37.5	0.0
APC				S	Sn	23 16 56.0	-0.7
AVH	Avacha	0.51	66	P	Pn	23 16 38.1	+0.4
GRL	Gorelyy	0.51	172	P	Pn	23 16 38.7	+0.9
KRER	Koryakskii	0.53	62	P	Pn	23 16 38.0	+0.1
UGLR	Uglovaya	0.54	74	P	Pn	23 16 38.5	+0.7
SMAR	Somma	0.55	68	P	Pn	23 16 38.3	+0.3
SDLR	Sedlovina	0.60	68	P	Pn	23 16 38.3	+0.2
GNL	Ganaly	0.64	359	P	Pn	23 16 38.1	-0.2
GNL				S	Sn	23 16 57.1	-1.2
ASAK	Asacha	0.68	183	P	Pn	23 16 39.4	+0.9
ASAK				S	Sn	23 16 59.5	+1.0
RUS	Russkaya	0.71	152	P	Pn	23 16 38.6	0.0
RUS				S	Sn	23 16 58.3	-0.2
RUS	Russkaya	0.71	152	PN	Pn	23 16 38.6	0.0
RUS				S	Sn	23 16 58.3	-0.2
NLC	Nalytchevo	0.84	82	P	Pn	23 16 39.0	-0.3
NLC				S	Sn	23 16 58.9	-1.0
NLC	Nalytchevo	0.84	82	PN	Pn	23 16 39.0	-0.3
NLC				S	Sn	23 16 58.9	-1.0
MIPR	Malaya Ipel'ka	1.07	223	P	Pn	23 16 41.5	+0.5
MIPR				S	Sn	23 17 02.4	-0.5
SPN	Mys Shipunski	1.24	87	P	Pn	23 16 41.8	-0.5
SPN				S	Sn	23 17 03.2	-2.1
SPN	Mys Shipunski	1.24	87	PN	Pn	23 16 41.8	-0.5
SPN				S	Sn	23 17 03.2	-2.1
TUMR	Tumrok	2.57	29	P	Pn	23 16 57.1	+0.9
TUMR				S	Sn	23 17 30.7	+0.4
SKR	Severo-Kuril's	2.64	206	S	Sn	23 17 32.1	+0.6
SKR	Severo-Kuril's	2.64	206	ePN	Pn	23 16 55.6	-1.4
SKR				eS	Sn	23 17 29.4	-2.1
SKR				pmax	pmax		
	comp=Z,60nm,0.4s						
SKR				smax	smax		
	comp=N,900nm,0.4s						
SKR				smax	smax		
	comp=E,460nm,0.4s						
SKR				smax	smax		
	comp=Z,140nm,0.5s						
MKZ	Mys Kozlova	2.69	55	P	Pn	23 16 57.0	-0.5
MKZ				S	Sn	23 17 29.7	-2.8
MKZ	Mys Kozlova	2.69	55	PN	Pn	23 16 57.0	-0.5
MKZ				S	Sn	23 17 29.7	-2.8
ESO	Esso	2.90	8	P	Pn	23 17 00.1	+0.1
ESO	Esso	2.90	8	PN	Pn	23 17 00.1	+0.1
KMNR	Kamenistaya	3.01	25	P	Pn	23 17 02.6	+1.2
KMNR				S	Sn	23 17 40.0	+0.4
KPT	Kopyto	3.20	23	P	Pn	23 17 04.3	+0.6
KPT				S	Sn	23 17 42.9	-0.8
KOZ	Kozyrevsk	3.20	20	P	Pn	23 17 04.3	+0.6
KOZ				S	Sn	23 17 43.1	-0.6
KIRR	Kirishev	3.21	25	P	Pn	23 17 05.2	+1.3
KIRR				S	Sn	23 17 44.5	+0.4
KOZR	Kozyr	3.22	20	PN	Pn	23 17 04.3	+0.5
KOZR				S	Sn	23 17 43.1	-0.9
BZMR	Bezymyannaya	3.24	26	P	Pn	23 17 05.6	+1.4
BZMR				S	Sn	23 17 45.4	+0.8
BZWR	Bezymyannyi-We	3.26	26	P	Pn	23 17 05.6	+1.0
BZWR				S	Sn	23 17 45.4	+0.1
BZGR	Bezymyannyi-Gr	3.30	28	P	Pn	23 17 06.4	+1.5
BZGR				S	Sn	23 17 46.4	+0.5
SRDR	Sredinnyy	3.42	17	P	Pn	23 17 07.3	+0.9
SRDR				S	Sn	23 17 48.2	-0.3
CIRR	Tsirk	3.46	27	P	Pn	23 17 08.6	+1.6
CIRR				S	Sn	23 17 50.3	+0.6
KRSR	Krestovskiy	3.51	25	P	Pn	23 17 08.3	+0.8
KRSR				S	Sn	23 17 50.1	-0.4
BDR	Baidarnaya	3.98	27	P	Pn	23 17 14.1	+0.6
BDR				S	Sn	23 17 59.7	-1.6
SMKR	Semkarok	4.07	28	P	Pn	23 17 16.0	+1.4
SMKR				S	Sn	23 18 03.7	+0.5
KBG	Krutoberegovo	4.22	39	P	Pn	23 17 16.7	+0.3
KBG				S	Sn	23 18 04.6	-1.9
KBG	Krutoberegovo	4.22	39	PN	Pn	23 17 16.7	+0.3
KBG				S	Sn	23 18 04.6	-1.9
BKI	Bering	5.18	62	P	Pn	23 17 28.3	-0.4
BKI				S	Sn	23 18 24.0	-4.6
BKI	Bering	5.18	62	PN	Pn	23 17 28.3	-0.4
BKI				S	Sn	23 18 24.0	-4.6
FX1	Attu Island--F	9.18	85	ePn	Pn	23 18 24.3	+3.1
FX1				eSn	Sn	23 19 59.3	-4.2
FX1	Attu Island--F	9.18	85	P	Pn	23 18 24.3	+3.1
	comp=Z,3.3nm,0.3s,baz=318,slow=2.6,SNR=46						
FX1				S	Sn	23 20 00.3	-3.2
	comp=Z,15nm,0.3s,baz=249,slow=21,SNR=12						
AMKA	Amchitka	13.19	89	ePn	P	23 19 15.3	-1.0
AMKA				eSn	Sn	23 21 40.0	+0.7
ASAJ	Asahikawa	13.52	235	P	P	23 19 20.1	0.0
	comp=Z,1.9nm,0.3s,baz=51,slow=7.6,SNR=7.8						
ERM	Erimo	14.87	228	eP	Pn	23 19 31.8	-2.0
ERM						23 22 04.9	
ERM	Erimo	14.87	228	ePn	Pn	23 19 31.8	-2.0
ERM				Sn	Sn	23 22 04.9	-15
KLR	Kul'dur	16.85	267	eP	P	23 19 55.2	-1.6
YAK	Yakutsk	17.50	312	eP	P	23 20 02.6	-1.1
YAK				pmax	pmax		
	comp=N,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,70nm,0.9s						
YAK				pmax	pmax		
	comp=E,24nm,1.0s						
USRK	Ussuriysk Arra	19.22	253	P	P	23 20 21.2	-1.4
	comp=E,0.3nm,0.3s,baz=59,slow=12,SNR=5.6						
MAJO	Matsushiro	21.54	228	eP	P	23 20 48.8	+1.3
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MAJO	Matsushiro	21.54	228	eP	P	23 20 48.8	+1.3
	comp=Z,9.5nm,0.6s						
MAT	Matsushiro	21.54	228	P	P	23 20 48.4	+0.9
MJAR	Matsushiro Arr	21.54	228	P	P	23 20 47.0	-0.5
	comp=Z,5.9nm,0.5s,baz=17,slow=10,SNR=15						
KSRS	Korea Array	26.02	245	P	P	23 21 29.2	+0.6
	comp=Z,2.6nm,0.6s,baz=40,slow=9.5,SNR=13						
RSO	Redoubt South	27.42	55	eP	P	23 21 42.5	+1.3
OHAK	Old Harbor	27.69	62	eP	P	23 21 43.7	+0.4
	comp=Z,102nm,1.9s						
KDAK	Kodiak Island	27.94	60	P	P	23 21 46.1	+0.6
	comp=Z,3.2nm,0.4s,baz=253,slow=6.8,SNR=9.5						
TRF	Thorofare Moun	28.34	48	eP	P	23 21 50.2	+1.1
	comp=Z,26nm,2.2s						
SML	Sawmill	29.39	51	eP	P	23 21 59.6	+1.2
SML				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SML	Sawmill	29.39	51	eP	P	23 21 59.6	+1.2
	comp=Z,2.1nm,0.8s						
ILAR	Eielson Array	29.75	45	P	P	23 22 02.6	+1.1
	comp=Z,2.0nm,0.7s,baz=265,slow=7.7,SNR=29						
SONM	Songino Array	32.65	282	P	P	23 22 27.8	+0.6
	comp=Z,1.1nm,0.6s,baz=66,slow=7.2,SNR=12						
SONM				PcP	PcP	23 25 08.1	-0.4
	comp=Z,0.8nm,0.6s,baz=111,slow=0.8,SNR=7.3						
INK	Inuvik	34.68	37	P	P	23 22 45.6	+1.3
	comp=Z,1.2nm,0.7s,baz=302,slow=8.3,SNR=7.2						
ZALV	Zalesovo Beam	41.70	302	P	P	23 23 41.5	-1.6
ZALV	Zalesovo Beam	41.70	302	P	P	23 23 41.5	-1.6
	comp=Z,0.3nm,0.4s,baz=68,slow=13,SNR=4.9						
YKA	Yellowknife Ar	44.05	42	P	P	23 24 02.2	+0.5
	comp=Z,1.0nm,0.7s,baz=298,slow=7.4,SNR=5.1						
KURK	Kurchatov	46.65	301	eP	P	23 24 21.3	-1.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
KURK	Kurchatov	46.65	301	eP	P	23 24 21.3	-1.1
	comp=Z,2.6nm,0.3s						
MK31	Makanchi Array	47.00	294	eP	P	23 24 23.8	-1.4
MK31	Makanchi Array	47.00	294	eP	P	23 24 23.8	-1.4
MKAR	Makanchi Array	47.00	294	P	P	23 24 23.8	-1.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	47.00	294	eP	P	23 24 23.9	-1.4
MKAR	Makanchi Array	47.00	294	P	P	23 24 23.8	-1.4
	comp=Z,0.7nm,0.5s,baz=55,slow=6.5,SNR=22						
BRVK	Borovoye	49.42	307	eP	P	23 24 41.8	-1.8
BRVK				e		23 26 02.6	
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BRVK	Borovoye	49.42	307	eP	P	23 24 41.8	-1.8
	comp=Z,10.0nm,0.5s						
BRVK				ePcP	PcP	23 26 02.6	-0.3
BSMT	Bassoo Peak	52.49	58	eP	P	23 25 09.5	+2.7
ARCES	ARCESS Array B	52.91	341	PcP	PcP	23 26 14.3	-1.3
	comp=Z,3.8nm,0.8s,baz=36,slow=4.9,SNR=8.1						
AAK	Ala-Archa	53.93	295	eP	P	23 25 16.6	-0.7
AAK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AAK	Ala-Archa	53.93	295	eP	P	23 25 16.6	-0.7
	comp=Z,0.8nm,0.9s						
WVOR	Wild Horse Val	54.03	65	eP	P	23 25 20.5	+2.5
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WVOR	Wild Horse Val	54.03	65	eP	P	23 25 20.5	+2.5
	comp=Z,3.0nm,0.9s						
SUMG	Summit	54.14	6	eP	P	23 25 17.9	-0.7
SUMG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SUMG	Summit	54.14	6	eP	P	23 25 17.9	-0.7
	comp=Z,6.4nm,0.8s						
SUMG	Summit	54.14	6	⇓iP	P	23 25 19.1	+0.5
	comp=Z,5.5nm,0.7s						
EKS2	Erkin-Say	54.30	295	eP	P	23 25 18.5	-1.5
EKS2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EKS2	Erkin-Say	54.30	295	eP	P	23 25 18.5	-1.5
	comp=Z,3.8nm,0.8s						
KKAR	Karatay Array	55.77	298	eP	P	23 25 29.2	-1.1
KKAR	Karatay Array	55.77	298	eP	P	23 25 29.2	-1.1
ABKAR	Akbulak array	56.83	309	eP	P	23 25 36.7	-0.9
CMAR	Chiang Mai Arr	56.92	256	P	P	23 25 39.0	+0.4
	comp=Z,1.1nm,0.3s,baz=26,slow=7.0,SNR=6.3						
NVAR	Mina Array Bea	56.96	69	P	P	23 25 41.4	+2.4
	comp=Z,1.8nm,0.7s,baz=299,slow=7.4,SNR=7.4						
NVAR				PcP	PcP	23 26 32.2	+0.1
	comp=Z,0.6nm,0.4s,baz=318,slow=2.0,SNR=3.7						
PDAR	Pinedale Array	58.66	59	P	P	23 25 53.0	+2.2
	comp=Z,2.0nm,0.5s,baz=320,slow=2.3,SNR=17						
PDAR				pP	pP	23 26 33.0	+0.6
	comp=Z,0.6nm,0.5s,baz=299,slow=3.7,SNR=2.3						
FINES	FINESS Array B	59.63	336	LR	LR	23 56 29.7	
	comp=Z,63nm,20.2s,baz=74,slow=41						
RSSD	Black Hills	60.49	55	eP	P	23 26 05.5	+2.3
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RSSD	Black Hills	60.49	55	eP	P	23 26 05.5	+2.3
	comp=Z,4.2nm,0.8s						
NB2	NORSAR Subarra	63.20	343	P	P	23 26 19.8	-1.0
	comp=Z,1.0nm,0.7s,baz=25,slow=6.5						
NOA	NORSAR Array B	63.20	343	P	P	23 26 19.6	-1.2
	comp=Z,1.5nm,0.8s,baz=24,slow=6.6,SNR=4.4						
HFS	Hagfors	63.57	341	P	P	23 26 22.4	-0.8
	comp=Z,1.8nm,0.7s,baz=33,slow=5.8,SNR=11						
AKASG	Malin Array Be	67.96	328	P	P	23 26 49.8	-1.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	67.96	328	P	P	23 26 49.8	-1.6
	comp=Z,0.6nm,0.4s,baz=24,slow=6.8,SNR=3.7						
TXAR	Lajitas Array	71.83	65	P	P	23 27 18.0	+2.6
	comp=Z,1.2nm,0.4s,baz=298,slow=5.1,SNR=36						
WRA	Warramunga Arr	75.53	203	P	P	23 27 38.5	+1.8
	comp=Z,0.9nm,0.5s,baz=20,slow=6.0,SNR=13						
WRA				pP	pP	23 28 21.4	+0.9
	comp=Z,0.7nm,0.7s,baz=15,slow=5.9,SNR=4.3						
BRTR	Keskin Array B	75.81	319	P	P	23 27 38.3	-0.2
	comp=Z,0.5nm,0.6s,baz=62,slow=4.6,SNR=3.2						
ASAR	Alice Springs	79.22	202	P	P	23 27 59.8	+2.6
	comp=Z,0.8nm,0.6s,baz=15,slow=5.6,SNR=9.6						
ASAR				pP	pP	23 28 42.6	+1.3
	comp=Z,0.6nm,0.6s,baz=12,slow=5.8,SNR=3.6						
ESDC	Sonseca Array	86.32	346	P	P	23 28 33.9	+0.1
	comp=Z,0.2nm,0.3s,baz=11,slow=4.5,SNR=7.5						

IDC 03 23:22:42.1±3.0, 36°.65S×177°.63E, h0km, mb3.8/4, mb1 3.9/4, mb1mx3.8/17, mbtmp3.8/4, Error ellipse: s-maj=61.2km s-min=23.4km az=66.0
ISCJB 03 23:22:43.0±1.4, 36°.59S±0°.08×177°.9E±0°.1, h33km, mb3.5/4, Error ellipse: s-maj=18.4km s-min=8.1km az=149.6
WEL 03 23:22:44.3±2.5, 36°.60S×177°.70E, h5km, ML3.9/4, Error ellipse: s-maj=19.8km s-min=15.4km az=0.0
ISC 03 23:22:45.5±1.6, 36°.6S±0°.1×177°.9E±0°.1, h35km, n11, σ1s.56/12, mb3.5/4, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.07	161	P*	Pn	23 23 01.3	-2.7
MXZ				S*	Sn	23 23 16.0	-1.7
MXZ				AML	AML	23 23 18.6	
MXZ				AML	AML	23 23 19.4	
MXZ				AML	AML	23 23 22.6	
PUZ	Puketiti	1.55	169	PN	Pn	23 23 12.5	+1.8
PUZ				SN	Sn	23 23 36.2	+6.6
PUZ				AML	AML	23 23 38.0	
MWZ	Matawai	1.80	189	eP*	Pn	23 23 13.0	-1.2
MWZ				AML	AML	23 23 50.9	
MWZ				AML	AML	23 23 53.1	
URZ	Urewera	1.81	199	P*	Pn	23 23 13.4	-0.8
URZ				AML	AML	23 23 37.9	
URZ				AML	AML	23 23 51.4	
URZ	Urewera	1.81	199	Pn	Pn	23 23 10.8	-3.4
	4.1nm,0.3s,baz=5.3,slow=8.1,SNR=11						
URZ				Sn	Sn	23 23 36.4	+0.5
	14nm,0.3s,baz=99,slow=23,SNR=11						
MKAZ	Moumakai	2.24	255	ePN	Pn	23 23 18.4	-1.7
HIZ	Hauiti	3.10	230	ePN	Pn	23 23 31.5	-0.3
STKA	Stephens Creek	30.24	268	P	P	23 28 53.5	+0.6
	1.0nm,0.8s,baz=120,slow=8.1,SNR=2.0						
ASAR	Alice Springs	39.82	276	P	P	23 30 15.5	-0.1
	0.2nm,0.6s,baz=120,slow=7.7,SNR=4.2						
WRA	Warramunga Arr	41.39	281	P	P	23 30 28.1	-0.4
	0.6nm,0.8s,baz=121,slow=7.7,SNR=6.3						
QSPA	South Pole Qui	53.57	180	P	P	23 32 04.4	+1.6
	2.7nm,0.7s,baz=20,slow=1.2,SNR=9.7						

IDC 03 23:26:13.8±0.9, 5°.76N×61°.53E, h0km, mb3.6/12, mb1 3.8/12, mb1mx3.6/28, mbtmp3.6/12, Error ellipse: s-maj=24.4km s-min=19.5km az=2.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	25.18	255	P	P	23 31 40.7	-0.9
	0.8nm,0.3s,baz=65,slow=16,SNR=4.4						
CMAR	Chiang Mai Arr	38.60	68	P	P	23 33 39.6	+0.6
	0.7nm,0.3s,baz=252,slow=8.8,SNR=4.4						
BRTR	Keskin Array B	42.12	327	P	P	23 34 08.0	-0.2
	0.7nm,0.7s,baz=150,slow=13,SNR=4.5						
MKAR	Makanchi Array	44.63	20	P	P	23 34 28.4	+0.3
	0.6nm,0.8s,baz=218,slow=9.2,SNR=4.5						
KURBB	Kurchatov Arra	46.93	15	P	P	23 34 46.3	+0.1
	0.4nm,0.5s,baz=214,slow=7.7,SNR=4.9						
BVAR	Borovoye Array	47.68	7	P	P	23 34 51.4	-0.6
	0.4nm,0.6s,baz=186,slow=1.4,SNR=3.5						
ZALV	Zalesovo Beam	51.64	17	P	P	23 35 21.4	-0.7
	0.6nm,0.6s,baz=220,slow=8.3,SNR=3.8						
SONM	Songino Array	56.72	35	P	P	23 35 59.1	-0.5
	0.9nm,0.9s,baz=232,slow=7.8,SNR=6.1						
TORD	Torodi Ar. Bea	59.36	282	P	P	23 36 19.4	+0.9
	0.3nm,0.9s,baz=104,slow=7.3,SNR=2.7						
ESDC	Sonseca Array	67.55	311	P	P	23 37 12.3	-0.1
	0.1nm,0.3s,baz=87,slow=3.7,SNR=4.5						
WRA	Warramunga Arr	75.95	112	P	P	23 38 03.4	+0.2
	0.6nm,0.7s,baz=286,slow=4.8,SNR=4.0						
ASAR	Alice Springs	76.32	116	P	P	23 38 05.0	-0.3
	0.4nm,0.5s,baz=293,slow=4.9,SNR=4.1						

SKO 03 23:31:06.4, 41°.30N×22°.70E, h10km, M1.2, ML1.6
THE 03 23:31:06.8, 41°.29N×22°.70E, h1km±1km, ML1.7/6, Error ellipse: s-maj=1.3km s-min=0.4km az=246.0
ATH 03 23:31:06.8, 41°.28N×22°.72E, h10km, MD2.6/4
ISCJB 03 23:31:06.5±0.4, 41°.27N±0°.02×22°.69E±0°.03, h1km±4km, Error ellipse: s-maj=3.8km s-min=3.0km az=150.0
CSEM 03 23:31:06.9±0.2, 41°.26N×22°.68E, h0km±2km, ML1.6, Error ellipse: s-maj=3.8km s-min=2.5km az=59.0
BEO 03 23:31:10.2±0.8, 41°.33N×22°.55E, h0km, ML1.6/4
ISC 03 23:31:07.1±1.0, 41°.26N±0°.02×22°.69E±0°.02, h3km±9km, n36, σ0s.67/66, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.11	302	P	Pg	23 31 08.7	-0.5
VAY				S	Sg	23 31 10.5	-0.1
VAY	Valandovo	0.11	302	i Pg	Pg	23 31 08.8	-0.5
VAY				i Sg	Sg	23 31 10.9	+0.3
VAY				eLg	Lg	23 31 11.0	
	comp=N,381nm,0.4s						
VAY				eLg	Lg	23 31 11.0	
	comp=E,368nm,0.2s						
VAY	Valandovo	0.11	302	P	Pg	23 31 08.7	-0.5
VAY				S	Sg	23 31 10.5	-0.1
VAY				eLg	Lg	23 31 11.5	
	comp=E,368nm,0.2s						
KNT	Kendrikon	0.19	123	P	Pg	23 31 11.0	+0.3
KNT				S	Sg	23 31 13.5	+0.3
KNT	Kendrikon	0.19	123	P	Pg	23 31 11.0	+0.3
GRG	Griva	0.38	215	P	Pg	23 31 14.7	+0.4
GRG				S	Sg	23 31 20.4	+1.2
GRG	Griva	0.38	215	ePB	Pg	23 31 14.6	+0.3
GRG				eSB	Sg	23 31 20.6	+1.4
GRG	Griva	0.38	215	P	Pg	23 31 14.7	+0.4
THE	Thessaloniki	0.67	162	P	Pg	23 31 19.6	-0.2
THE				S	Sg	23 31 29.6	+1.2
THE	Thessaloniki	0.67	162	P	Pg	23 31 19.6	-0.2
THE				S	Sg	23 31 29.6	+1.2
SOH	Sokhos	0.67	131	P	Pg	23 31 19.5	-0.4
SOH				S	Sg	23 31 29.1	+0.5
SOH	Sokhos	0.67	131	ePG	Pg	23 31 19.5	-0.4
SOH				eSB	Sg	23 31 28.8	+0.2
SOH	Sokhos	0.67	131	P	Pg	23 31 19.5	-0.4
SOH				S	Sg	23 31 29.1	+0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SRS	**Serrai**	**0.70**	**102**	P	**Pg**	**23 31 19.7**	**-0.7**
SRS				S	**Sg**	**23 31 30.2**	**+0.7**
SRS	**Serrai**	**0.70**	**102**	P	**Pg**	**23 31 19.7**	**-0.7**
SRS				S	**Sg**	**23 31 30.2**	**+0.7**
HORT	**Hortiatis**	**0.73**	**155**	P	**Pg**	**23 31 21.0**	**-0.2**
HORT				S	**Sb**	**23 31 32.4**	**-0.6**
HORT	**Hortiatis**	**0.73**	**155**	P	**Pg**	**23 31 21.0**	**-0.2**
HORT				S	**Sb**	**23 31 32.4**	**-0.6**
NVR	**Nevrokopi**	**0.89**	**84**	P	**Pg**	**23 31 23.4**	**-0.7**
NVR				S	**Sg**	**23 31 35.6**	**0.0**
NVR	**Nevrokopi**	**0.89**	**84**	*e*PB	**Pg**	**23 31 23.4**	**-0.7**
NVR				*e*SB	**Sg**	**23 31 35.1**	**-0.5**
NVR	**Nevrokopi**	**0.89**	**84**	P	**Pg**	**23 31 23.4**	**-0.7**
NVR				S	**Sg**	**23 31 35.6**	**0.0**
PLG	**Polygyros**	**1.06**	**147**	P	**Pg**	**23 31 27.1**	**-0.3**
PLG				S	**Sb**	**23 31 42.3**	**0.0**
PLG	**Polygyros**	**1.06**	**147**	*e*PN	**Pg**	**23 31 27.0**	**-0.3**
PLG	**Polygyros**	**1.06**	**147**	P	**Pg**	**23 31 27.1**	**-0.3**
PLG				S	**Sb**	**23 31 42.3**	**0.0**
FNA	**Florina**	**1.10**	**245**	P	**Pg**	**23 31 27.5**	**-0.7**
FNA	**Florina**	**1.10**	**245**	P	**Pg**	**23 31 27.5**	**-0.7**
OUR	**Ouranopolis**	**1.35**	**133**	P	**Pn**	**23 31 32.0**	**-0.8**
OUR				S	**Sn**	**23 31 52.1**	**+0.9**
OUR	**Ouranopolis**	**1.35**	**133**	P	**Pn**	**23 31 32.0**	**-0.8**
OUR				S	**Sn**	**23 31 52.1**	**+0.9**
VTS	**Vitosha**	**1.38**	**16**	P	**Pn**	**23 31 32.5**	**-0.9**
VTS				S	**Sb**	**23 31 52.0**	**+0.3**
VTS	**Vitosha**	**1.38**	**16**	*e*Pg	**Pg**	**23 31 35.4**	**+1.8**
VTS				*e*Sg	**Sn**	**23 31 52.4**	**+0.1**
VTS	**Vitosha**	**1.38**	**16**	P	**Pn**	**23 31 32.5**	**-0.9**
VTS	**Vitosha**	**1.38**	**16**	*e*Pg	**Pg**	**23 31 35.4**	**+1.8**
VTS				S	**Sb**	**23 31 52.0**	**+0.3**
KAVA	**Kavala**	**1.40**	**100**	P	**Pn**	**23 31 32.8**	**-0.7**
KAVA				S	**Sb**	**23 31 52.2**	**0.0**
KAVA	**Kavala**	**1.40**	**100**	P	**Pn**	**23 31 32.8**	**-0.7**
KAVA				S	**Sb**	**23 31 52.2**	**0.0**
BARS	**Barje**	**1.68**	**338**	*e*Pg	**Pb**	**23 31 38.7**	**0.0**
BARS				*e*Sg	**Sb**	**23 31 59.8**	**-0.4**
BARS	**Barje**	**1.68**	**338**	*e*Pg	**Pb**	**23 31 38.7**	**0.0**
BARS				*e*Sg	**Sb**	**23 31 59.8**	**-0.4**
ZAPS	**Zavoj**	**2.01**	**359**	*e*Pn	**Pb**	**23 31 44.5**	**+0.2**
ZAPS				*e*Sn	**Sb**	**23 32 10.0**	**+0.3**

*IDC **03** 23:35:40.0±1.8, 6.°80N×72.°86W, h150km±17km, mb3.7/12, mb1 3.9/13, mb1mx3.7/26, mbtmp3.7/13, Error ellipse: s-maj=23.8km s-min=13.8km az=67.0*
*FUNV **03** 23:35:40.7, 6.°75N×73.°20W, h166km, MW4.4*
*ISCJB **03** 23:35:41.5±0.6, 6.°89N±0.°05×72.°88W±0.°05, h179km±5km, mb3.8/11, Error ellipse: s-maj=9.4km s-min=7.5km az=148.8*
ISC 03 23:35:42.9±1.0**, 6.°91N**±0.°08×**72.°85W**±0.°07**, h174**km±8km**, n34,** σ1.°**11**/48**, mb3.9**/11**, 3C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.09**	**29**	⇑*i*P	**Pn**	**23 36 10.4**	**-0.6**
CAPV				*e*S	**Sn**	**23 36 32.1**	**-0.6**
SOCV	**Socops**	**2.40**	**55**	*e*P	**Pn**	**23 36 24.8**	**+0.6**
SOCV				*e*S	**Sn**	**23 36 56.9**	**+0.7**
VIGV	**El Vigia**	**2.42**	**37**	⇑*i*P	**Pn**	**23 36 25.0**	**+0.7**
VIGV				*e*S	**Sn**	**23 36 56.8**	**+0.2**
ROSC	**El Rosal**	**2.52**	**216**	P	Pn	23 36 22.2	-3.6
	88nm,0.3s,baz=101,slow=22,SNR=74						
ROSC				S	Sn	23 36 52.2	-7.0
	84nm,0.3s,baz=86,slow=7.1,SNR=8.9						
ELOV	**Elorza**	**3.34**	**88**	*e*P	**Pn**	**23 36 36.7**	**+1.2**
ELOV				*e*S	**Sn**	**23 37 18.1**	**+1.5**
SANV	**Sanarito**	**4.17**	**52**	*e*P	**Pn**	**23 36 46.8**	**+0.7**
SANV				*e*S	**Sn**	**23 37 35.8**	**+0.2**
CURV	**Curarigua**	**4.20**	**43**	*e*P	**Pn**	**23 36 47.2**	**+0.7**
DABV	**Dabajuro**	**4.55**	**29**	*e*P	**Pn**	**23 36 51.4**	**+0.5**
DABV				*e*S	**Sn**	**23 37 43.4**	**-0.8**
TEPV	**Terepaima**	**4.72**	**50**	*e*P	**Pn**	**23 36 54.1**	**+0.9**
TEPV				*e*S	**Sn**	**23 37 49.1**	**+0.8**
SIQV	**Siquisique**	**4.78**	**39**	*e*P	**Pn**	**23 36 54.4**	**+0.4**
SIQV				*e*S	**Sn**	**23 37 49.2**	**-0.4**
BAUV	**El Baul**	**5.17**	**67**	*e*S	**Sn**	**23 37 58.0**	**-0.8**
MAPV	**Macapo**	**5.23**	**56**	⇓*i*P	**Pn**	**23 37 00.5**	**+0.8**
PAYV	**Puerto Ayacuch**	**5.37**	**106**	*e*P	**Pn**	**23 37 01.3**	**-0.3**
MONV	**Montecano**	**5.76**	**29**	⇑*i*P	**Pn**	**23 37 06.7**	**0.0**
MONV				*e*S	**Sn**	**23 38 10.0**	**-2.7**
TURV	**Turiamo**	**6.08**	**54**	*e*P	**Pn**	**23 37 11.2**	**+0.4**
TURV				*e*S	**Sn**	**23 38 18.9**	**-1.2**
MERV	**Las Mercedes**	**6.89**	**70**	*e*P	**Pn**	**23 37 21.5**	**-0.1**
MERV				*e*S	**Sn**	**23 38 37.8**	**-1.6**
BIRV	**Birongo**	**7.41**	**61**	*e*P	**Pn**	**23 37 28.4**	**0.0**
BIRV				*e*S	**Sn**	**23 38 48.5**	**-3.3**
CUPV	**Cœpira**	**7.65**	**65**	*e*P	**Pn**	**23 37 31.8**	**+0.1**
TEIG	**Tepich**	**19.98**	**313**	P	**P**	**23 40 00.6**	**-1.3**
	12nm,0.5s,baz=142,slow=19,SNR=3.3						
LPAZ	**La Paz**	**23.52**	**169**	P	**P**	**23 40 35.8**	**-2.2**
	1.4nm,0.8s,baz=343,slow=12,SNR=6.7						
TXAR	**Lajitas Array**	**36.61**	**311**	P	**P**	**23 42 32.8**	**+0.2**
	1.2nm,0.4s,baz=127,slow=8.9,SNR=26						
TXAR				PcP	**PcP**	**23 44 54.0**	**+2.0**
	0.6nm,0.6s,baz=122,slow=4.7,SNR=7.1						
ULM	**Lac du Bonnet**	**47.30**	**340**	P	**P**	**23 43 58.9**	**+0.2**
	4.5nm,0.5s,baz=135,slow=8.3,SNR=4.1						
SCHQ	**Schefferville**	**48.03**	**5**	P	**P**	**23 44 05.1**	**+0.8**
	4.1nm,0.5s,baz=195,slow=5.5,SNR=15						
PDAR	**Pinedale Array**	**48.17**	**324**	P	**P**	**23 44 06.4**	**+0.6**
	1.2nm,0.5s,baz=120,slow=8.8,SNR=9.5						
NVAR	**Mina Array Bea**	**51.62**	**314**	P	**P**	**23 44 32.5**	**+0.6**
	0.8nm,0.5s,baz=122,slow=7.8,SNR=5.2						
YBH	**Yreka Blue Hor**	**56.06**	**316**	P	**P**	**23 45 02.4**	**-1.6**
	1.7nm,0.5s,baz=129,slow=4.0,SNR=7.7						
YKA	**Yellowknife Ar**	**63.28**	**340**	P	**P**	**23 45 52.7**	**0.0**
	3.2nm,0.5s,baz=130,slow=7.4,SNR=14						
INK	**Inuvik**	**73.04**	**340**	P	**P**	**23 46 54.3**	**+1.0**
	1.2nm,0.5s,baz=108,slow=5.9,SNR=11						
TORD	**Torodi Ar. Bea**	**73.46**	**78**	P	**P**	**23 46 56.2**	**-0.6**
	0.2nm,0.3s,baz=288,slow=6.3,SNR=10						
ILAR	**Eielson Array**	**77.00**	**335**	P	**P**	**23 47 15.6**	**-0.6**
	0.4nm,0.7s,baz=122,slow=4.2,SNR=4.4						
MKAR	**Makanchi Array**	**122.15**	**20**	PKP	**PKPdf**	**23 54 17.6**	**+0.5**
	0.3nm,0.4s,baz=317,slow=2.5,SNR=11						
SONM	**Songino Array**	**125.49**	**1**	PKP	**PKPdf**	**23 54 25.0**	**+1.4**
	0.3nm,0.4s,baz=315,slow=3.0,SNR=4.2						
ASAR	**Alice Springs**	**149.38**	**234**	PKP	**PKPdf**	**23 55 07.8**	**+0.2**
	2.9nm,0.6s,baz=132,slow=1.8,SNR=6.2						
ASAR				PKPbc	**PKPbc**	**23 55 10.8**	**-1.3**
	3.1nm,0.5s,baz=125,slow=3.1,SNR=39						
WRA	**Warramunga Arr**	**150.62**	**241**	PKP	**PKPdf**	**23 55 10.2**	**+0.7**
	3.0nm,0.5s,baz=97,slow=1.4,SNR=5.4						
WRA				PKPbc	**PKPbc**	**23 55 14.3**	**-0.8**
	3.1nm,0.4s,baz=107,slow=2.6,SNR=95						

*NOU **03** 23:36:16.4±0.3, 22.°19S×170.°84E, h10km, MD3.3, ML3.6*
*IDC **03** 23:36:17.0±0.6, 23.°21S×170.°24E, h0km, mb4.5/17, mb1 4.6/20, mb1mx4.5/25, mbtmp4.5/20, ML4.0/3, MS3.7/5, Ms1 3.7/5, ms1mx3.3/27, Error ellipse: s-maj=19.3km s-min=15.1km az=88.0*
*ISCJB **03** 23:36:19.0±0.4, 23.°25S±0.°07×170.°22E±0.°06, h25km, mb4.5/21, MS3.7/2, Error ellipse: s-maj=10.5km s-min=6.6km az=27.7*
*NEIC **03** 23:36:22.2±1.5, 23.°21S×170.°18E, h35km±13km, mb4.9/7, Error ellipse: s-maj=11.7km s-min=8.0km az=67.0*
ISC 03 23:36:21.1±0.5**, 23.°22S**±0.°08×**170.°19E**±0.°08**, h25**km**, n79,** σ1.°**48**/86**, mb4.5**/21**, 6C-3D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.23**	**288**	*e*S	**Sn**	**23 37 49.6**	**+1.6**
DZM	**Mont Dzumac**	**3.64**	**288**	*e*P	**Pn**	**23 37 15.6**	**-0.4**
DZM				AMP		23 38 09.1	
	comp=Z,1μm,1.7s						
DZM	**Mont Dzumac**	**3.64**	**288**	Pn	**Pn**	**23 37 14.7**	**-1.3**
DZM				Sn	**Sn**	**23 37 57.7**	**-0.6**
DZM	**Mont Dzumac**	**3.64**	**288**	Pn	**Pn**	**23 37 14.7**	**-1.3**
	comp=Z,9.3nm,0.3s,baz=105,slow=14,SNR=61						
DZM				Sn	**Sn**	**23 37 57.7**	**-0.6**
	comp=Z,17nm,0.3s,baz=246,slow=23,SNR=3.6						
DZM				LR	LR	23 38 32.8	
	comp=Z,392nm,19.0s,baz=124,slow=37						
NOUC	**Port Laguerre**	**3.76**	**286**	*e*P	**Pn**	**23 37 19.0**	**+1.5**
NOUC				AMP		23 38 11.9	
	comp=Z,78nm,1.3s						
URZ	**Urewera**	**16.12**	**160**	Pn	**Pn**	**23 40 06.6**	**+0.5**
URZ	**Urewera**	**16.12**	**160**	Pn	**Pn**	**23 40 06.6**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=339,slow=10,SNR=6.3						
URZ				LR	LR	23 45 06.8	
	comp=Z,293nm,19.3s,baz=99,slow=33						
HNR	**Honiara**	**16.85**	**323**	Pn	**P**	**23 40 16.8**	**-0.6**
HNR	**Honiara**	**16.85**	**323**	Pn	**P**	**23 40 16.8**	**-0.6**
	comp=Z,1.4nm,0.3s,baz=202,slow=17,SNR=4.5						
AFI	**Afiamalu**	**19.42**	**65**	LR	LR	23 46 39.7	
	comp=Z,173nm,21.4s,baz=119,slow=32						
RPZ	**Rata Peaks**	**20.46**	**178**	*e*P	**P**	**23 40 57.4**	**+0.6**
RPZ	**Rata Peaks**	**20.46**	**178**	P	**P**	**23 40 55.8**	**-1.0**
	comp=Z,15nm,0.8s,baz=22,slow=4.8,SNR=6.5						
RPZ				LR	LR	23 47 31.7	
	comp=Z,399nm,19.0s,baz=19,slow=33						
CTA	**Charters Tower**	**22.46**	**273**	P	**P**	**23 41 18.7**	**+0.1**
CTA	**Charters Tower**	**22.46**	**273**	P	**P**	**23 41 18.7**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=111,slow=14,SNR=2.4						
STKA	**Stephens Creek**	**26.72**	**245**	P	**P**	**23 41 58.2**	**-0.5**
STKA	**Stephens Creek**	**26.72**	**245**	P	**P**	**23 41 58.2**	**-0.5**
	comp=Z,4.0nm,0.7s,baz=87,slow=12,SNR=10						
AS31	**Alice Springs**	**33.24**	**262**	*e*P	**P**	**23 42 55.7**	**-0.8**
ASAR	**Alice Springs**	**33.24**	**262**	P	**P**	**23 42 56.5**	**0.0**
ASAR	**Alice Springs**	**33.24**	**262**	P	**P**	**23 42 56.5**	**0.0**
	comp=Z,2.8nm,0.5s,baz=93,slow=9.4,SNR=33						
ASAR				LR	LR	23 54 02.8	
	comp=Z,148nm,21.0s,baz=101,slow=32						
WRAB	**Tennant Creek**	**33.44**	**269**	*e*P	**P**	**23 42 57.5**	**-0.8**
	comp=Z,2.7nm,0.6s						
WRA	**Warramunga Arr**	**33.44**	**269**	P	**P**	**23 42 57.2**	**-1.1**
WRA	**Warramunga Arr**	**33.44**	**269**	P	**P**	**23 42 57.2**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=96,slow=8.7,SNR=5.5						
VNDA	**Vanda**	**54.51**	**182**	P	**P**	**23 45 46.5**	**+0.2**
VNDA	**Vanda**	**54.51**	**182**	P	**P**	**23 45 46.5**	**+0.2**
	comp=Z,1.4nm,0.6s,baz=4.6,slow=5.5,SNR=5.9						
MJAR	**Matsushiro Arr**	**66.67**	**332**	P	**P**	**23 47 08.8**	**-1.0**
MJAR	**Matsushiro Arr**	**66.67**	**332**	P	**P**	**23 47 08.8**	**-1.0**
	comp=Z,4.3nm,0.8s,baz=174,slow=6.9,SNR=5.1						
QSPA	**South Pole Qui**	**66.86**	**180**	*e*P	**P**	**23 47 10.3**	**-0.5**
	comp=Z,29nm,0.8s						
QSPA	**South Pole Qui**	**66.86**	**180**	P	**P**	**23 47 10.4**	**-0.5**
	comp=Z,30nm,0.8s,baz=26,slow=1.9,SNR=75						
KSRS	**Korea Array**	**72.28**	**326**	P	**P**	**23 47 44.9**	**+0.5**
	comp=Z,3.1nm,0.8s,baz=152,slow=7.0,SNR=10						
KSAR	**Wonju Array Be**	**72.29**	**326**	P	**P**	**23 47 44.9**	**+0.5**
MAW	**Mawson**	**75.10**	**202**	*e*P	**P**	**23 48 00.5**	**-0.1**
	comp=Z,4.2nm,1.2s						
MAW	**Mawson**	**75.10**	**202**	P	**P**	**23 48 00.8**	**+0.2**
	comp=Z,8.6nm,0.7s,baz=112,slow=7.7,SNR=19						
FX1	**Attu Island--F**	**75.82**	**2**	*e*P	**P**	**23 48 04.0**	**-0.7**
FX1	**Attu Island--F**	**75.82**	**2**	P	**P**	**23 48 04.5**	**-0.3**
	comp=Z,2.7nm,0.6s,baz=297,slow=17,SNR=4.6						
PETK	**Petropavlovsk-**	**76.78**	**352**	P	**P**	**23 48 10.6**	**+0.4**
PETK	**Petropavlovsk-**	**76.78**	**352**	P	**P**	**23 48 10.6**	**+0.4**
	comp=Z,8.2nm,0.8s,baz=148,slow=8.7,SNR=5.6						
CMAR	**Chiang Mai Arr**	**80.94**	**294**	P	**P**	**23 48 35.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**80.94**	**294**	P	**P**	**23 48 35.2**	**+1.3**
	comp=Z,1.2nm,0.4s,baz=135,slow=4.7,SNR=5.4						
SNAA	**Sanae**	**85.24**	**182**	*e*P	**P**	**23 48 53.6**	**-1.7**
	comp=Z,15nm,1.4s						
YBH	**Yreka Blue Hor**	**89.54**	**44**	P	**P**	**23 49 17.0**	**+0.6**
YBH	**Yreka Blue Hor**	**89.54**	**44**	P	**P**	**23 49 17.0**	**+0.6**
	comp=Z,0.6nm,0.3s,baz=173,slow=4.6,SNR=3.6						
ULN	**Ulaanbaatar**	**90.57**	**323**	*e*P	**P**	**23 49 20.3**	**-0.9**
	comp=Z,4.9nm,1.0s						
NVAR	**Mina Array Bea**	**90.77**	**48**	P	**P**	**23 49 21.6**	**-0.8**
NVAR	**Mina Array Bea**	**90.77**	**48**	P	**P**	**23 49 21.6**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=226,slow=10,SNR=6.3						
SONM	**Songino Array**	**90.91**	**323**	P	**P**	**23 49 23.3**	**+0.6**
SONM	**Songino Array**	**90.91**	**323**	P	**P**	**23 49 23.3**	**+0.6**
	comp=Z,3.2nm,1.0s,baz=150,slow=3.9,SNR=11						
COLA	**College**	**93.58**	**17**	*e*P	**P**	**23 49 32.7**	**-1.8**
	comp=Z,5.7nm,0.9s						
ILAR	**Eielson Array**	**93.75**	**17**	P	**P**	**23 49 33.4**	**-1.9**
ILAR	**Eielson Array**	**93.75**	**17**	P	**P**	**23 49 33.4**	**-1.9**
	comp=Z,3.0nm,0.8s,baz=234,slow=5.9,SNR=26						
EGAK	**Eagle**	**95.38**	**19**	*e*P	**P**	**23 49 41.5**	**-1.2**
	comp=Z,4.2nm,0.7s						
ARCES	**ARCESS Array B**	**129.12**	**345**	PKP	**PKPdf**	**23 55 25.8**	**-0.4**
ARCES	**ARCESS Array B**	**129.12**	**345**	PKP	**PKPdf**	**23 55 25.8**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=26,slow=3.1,SNR=4.9						
KOLS	**Kolonicke sedl**	**143.97**	**323**	*e*PKP	**PKPdf**	**23 55 56.0**	**+1.7**
STHS	**Stebnicka Huta**	**144.25**	**325**	*e*PKP	**PKPdf**	**23 55 55.0**	**+0.2**
ARR	**Arges**	**144.38**	**317**	⇑*i*P	**PKPdf**	**23 55 54.9**	**-0.3**
CRVS	**Cervenica-Dubn**	**144.43**	**324**	*e*PKP	**PKPdf**	**23 55 56.1**	**+1.0**
HUMR	**Humele**	**144.52**	**315**	⇑*i*P	**PKPab**	**23 55 52.6**	**-1.2**
DRGR		**144.86**	**320**	⇑*i*P	**PKPdf**	**23 55 56.2**	**+0.2**
LOT	**Lotru**	**144.88**	**317**	⇑*i*P	**PKPdf**	**23 55 56.7**	**+0.6**
KECS	**Kecovo**	**145.20**	**324**	*e*PKP	**PKPdf**	**23 55 57.5**	**+1.1**
KECS				*e*		23 56 06.6	
GZR	**Gura Zlata**	**145.52**	**318**	⇓*i*P	**PKPdf**	**23 55 53.0**	**-4.2**
OKC	**Ostrava-Krasne**	**145.58**	**328**	*e*PKP	**PKPab**	**23 55 59.8**	**+2.3**
OKC				*e*x	x	23 56 04.1	
OKC				*e*pPKP	**pPKPdf**	**23 56 07.0**	**+1.6**
MORC	**Moravsky Berou**	**145.91**	**328**	⇓*i*P	**PKPab**	**23 56 02.5**	**+3.7**
VYHS	**Vyhne**	**146.07**	**325**	*e*PKP	**PKPab**	**23 56 00.8**	**+1.4**
VYHS				*e*		23 56 09.8	
KRLC	**Kraliky**	**146.08**	**329**	*e*PKP	**PKPbc**	**23 55 59.1**	**+0.3**
KRLC				*e*x	x	23 56 01.8	
KRLC				*e*pPKP	**pPKPdf**	**23 56 08.6**	**+2.3**
UPC	**Upice**	**146.14**	**330**	*e*PKP	**PKPab**	**23 56 00.1**	**+0.5**
UPC				*e*x	x	23 56 03.1	
PVCC	**Panska Ves**	**146.78**	**331**	*e*PKP	**PKPab**	**23 56 04.9**	**+2.9**
PVCC				*e*pPKP	**pPKPdf**	**23 56 10.6**	**+3.2**
BRG	**Berggiesshubel**	**146.80**	**332**	*e*P	**PKPab**	**23 56 03.2**	**+1.1**
	comp=Z,8.3nm,1.1s						
CLL	**Collm**	**146.87**	**334**	*e*PKPbc	**PKPab**	**23 56 03.0**	**+0.6**
	comp=Z,9.0nm,1.1s						
ZST	**Bratislava**	**147.16**	**326**	*e*PKP	PKPab	23 56 09.6	+6.0
PRU	**Pruhonice**	**147.18**	**331**	*e*PKP	**PKPab**	**23 56 02.8**	**-0.8**
PRU				*e*x	x	23 56 05.6	
PRU				*e*pPKP	**pPKPdf**	**23 56 11.3**	**+3.2**
TREC	**Trest**	**147.23**	**329**	*e*PKP	**PKPab**	**23 56 03.8**	**-0.1**
TREC				*e*pPKP	**pPKPdf**	**23 56 12.2**	**+3.9**
PKSM	**Moragy**	**147.54**	**322**	⇑*i*P	**PKPbc**	**23 56 03.1**	**+0.1**
NKC	**Novy Kostel**	**147.91**	**333**	*e*PKP	**PKPbc**	**23 56 03.9**	**-0.1**
NKC				*e*x	x	23 56 07.5	
NKC				*e*x	x	23 56 09.7	
NKC				*e*pPKP	**pPKPdf**	**23 56 13.7**	**+4.3**
KHC	**Kasperske Hory**	**148.23**	**330**	*e*PKP	**PKPbc**	**23 56 05.6**	**+0.7**
KHC				*e*x	x	23 56 10.6	
KHC				*e*pPKP	**pPKPdf**	**23 56 14.5**	**+4.5**
GERES	**GERESS Array B**	**148.38**	**330**	PKPbc	**PKPbc**	**23 56 04.9**	**-0.4**
GERES	**GERESS Array B**	**148.38**	**330**	PKPbc	**PKPbc**	**23 56 04.9**	**-0.4**
	comp=Z,2.2nm,0.8s,baz=80,slow=1.5,SNR=10						
ABTA	**Abfaltersbach**	**150.44**	**328**	⇑*i*PKiKP	**PKPbc**	**23 56 10.1**	**-0.5**
	comp=Z,8.7nm,1.1s						
FETA	**Feichten**	**151.08**	**330**	⇓*i*PKiKP	**PKPbc**	**23 56 12.4**	**+0.2**
	comp=Z,9.4nm,1.0s						

*BEO **03** 23:37:27.0±4.5, 38.°63N×27.°05E, h0km*
*ISCJB **03** 23:37:44.9±0.3, 39.°82N±0.°02×25.°99E±0.°02, h8km±2km, Error ellipse: s-maj=3.0km s-min=2.6km az=144.6*
*ATH **03** 23:37:45.4, 39.°79N×26.°05E, h21km±1km, MD3.0/7*
*CSEM **03** 23:37:45.3±0.1, 39.°82N×26.°02E, h5km, MD3.2, Error ellipse: s-maj=2.8km s-min=2.3km az=46.0*
*DDA **03** 23:37:45.5, 39.°76N×26.°16E, h5km, MD3.2*
*THE **03** 23:37:46.4, 39.°76N×26.°00E, h14km±1km, ML2.8/6, Error ellipse: s-maj=1.6km s-min=0.6km az=232.0*
*ISK **03** 23:37:46.1, 39.°89N×26.°12E, h8km, MD3.2*
*SOF **03** 23:37:50.7, 40.°31N×25.°77E, h8km, MD2.5*
ISC 03 23:37:45.6±0.8**, 39.°80N**±0.°02×**26.°04E**±0.°02**, h13**km±5km**, n161,** σ0.°**99**/193**, 9C-5D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.04**	**16**	*i* P	**Pg**	**23 37 48.0**	**+0.1**
BOZC				*i* S	**Sg**	**23 37 49.6**	**-0.1**
EZN	**Ezine**	**0.22**	**83**	*e*PG	**Pg**	**23 37 50.0**	**-0.4**
EZN				*e*SG	**Sg**	**23 37 53.2**	**-0.5**
EZN	**Ezine**	**0.22**	**83**	*e*Pg	**Pg**	**23 37 50.0**	**-0.4**
EZN				*e*Sg	**Sg**	**23 37 53.2**	**-0.5**
PRK	**Paraskevi**	**0.58**	**162**	P	**Pg**	**23 37 56.9**	**0.0**
PRK				S	**Sg**	**23 38 05.4**	**+0.7**
PRK	**Paraskevi**	**0.58**	**162**	*e*PN	**Pg**	**23 37 56.9**	**0.0**
PRK				*e*SN	**Sg**	**23 38 05.2**	**+0.5**
PRK	**Paraskevi**	**0.58**	**162**	P	**Pg**	**23 37 56.9**	**0.0**
PRK				S	**Sg**	**23 38 05.4**	**+0.7**
SIGR	**SIGRI**	**0.60**	**194**	P	**Pg**	**23 37 57.1**	**-0.3**
SIGR				S	**Sg**	**23 38 05.7**	**+0.3**
SIGR	**SIGRI**	**0.60**	**194**	P	**Pg**	**23 37 57.1**	**-0.3**
SIGR				S	**Sg**	**23 38 05.7**	**+0.3**
LIA	**Limnos Island**	**0.67**	**279**	P	**Pg**	**23 37 58.6**	**+0.1**
LIA				S	**Sb**	**23 38 08.3**	**+0.1**
LIA	**Limnos Island**	**0.67**	**279**	*e*PN	**Pg**	**23 37 58.9**	**+0.4**
LIA				*e*SN	**Sb**	**23 38 08.2**	**+0.1**
LIA	**Limnos Island**	**0.67**	**279**	P	**Pg**	**23 37 58.6**	**+0.1**
LIA				S	**Sb**	**23 38 08.3**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.69**	**29**	*e*PG	**Pg**	**23 37 57.6**	**-1.3**
GELI	**Tayfur-Gelibol**	**0.69**	**29**	*e*Pg	**Pg**	**23 37 57.6**	**-1.3**
AYVA	**Ayvalik**	**0.70**	**134**	*i* P	**Pg**	**23 37 59.0**	**-0.2**
AYVA				*i* S	**Sg**	**23 38 08.8**	**+0.3**
AYVA	**Ayvalik**	**0.70**	**134**	*i* P	**Pg**	**23 37 59.0**	**-0.2**
AYVA				*i* S	**Sg**	**23 38 08.8**	**+0.3**
SMTH	**Samothraki Isl**	**0.78**	**330**	*e*PN	**Pb**	**23 38 00.8**	**-0.1**
SMTH				*e*SN	**Sb**	**23 38 11.9**	**+0.5**
LPK	**Lapseki**	**0.80**	**44**	*e*PG	**Pg**	**23 37 59.9**	**-1.1**
LPK	**Lapseki**	**0.80**	**44**	*e*Pg	**Pg**	**23 37 59.9**	**-1.1**
ENEZ	**Enez**	**0.94**	**5**	*e*PG	**Pg**	**23 38 02.8**	**-0.9**
ENEZ	**Enez**	**0.94**	**5**	*e*Pg	**Pg**	**23 38 02.8**	**-0.9**
ERIK	**Erikli-Kesan**	**0.94**	**23**	*e*PG	**Pg**	**23 38 02.6**	**-1.2**
ERIK	**Erikli-Kesan**	**0.94**	**23**	*e*Pg	**Pg**	**23 38 02.6**	**-1.2**
ALN	**Alexandroupoli**	**1.10**	**0**	P	**Pg**	**23 38 06.0**	**-0.7**
ALN				S	**Sn**	**23 38 22.1**	**+0.4**
ALN	**Alexandroupoli**	**1.10**	**0**	*e*PN	**Pg**	**23 38 06.2**	**-0.5**
ALN				*e*SN	**Sb**	**23 38 21.3**	**+0.7**
ALN	**Alexandroupoli**	**1.10**	**0**	P	**Pg**	**23 38 06.0**	**-0.7**
ALN				S	**Sn**	**23 38 22.1**	**+0.4**
KRBG	**Karabiga-Canak**	**1.13**	**58**	*e*PG	**Pg**	**23 38 06.7**	**-0.7**
KRBG				*e*SG	**Sg**	**23 38 21.1**	**-1.1**
KRBG	**Karabiga-Canak**	**1.13**	**58**	*e*Pg	**Pg**	**23 38 06.7**	**-0.7**
KRBG				*e*Sg	**Sg**	**23 38 21.1**	**-1.1**
BALY	**Balya**	**1.22**	**92**	*i* P	**Pn**	**23 38 09.1**	**+0.7**
BALY				*i* S	**Sn**	**23 38 25.5**	**+0.7**
BALY	**Balya**	**1.22**	**92**	*i* P	**Pn**	**23 38 09.1**	**+0.7**
BALY				*i* S	**Sn**	**23 38 25.5**	**+0.7**
RKY	**Sarkoy-Tekirda**	**1.24**	**44**	*e*PN	**Pg**	**23 38 08.2**	**-1.3**
RKY	**Sarkoy-Tekirda**	**1.24**	**44**	*e*Pn	**Pg**	**23 38 08.2**	**-1.3**
SART	**Tekirdag**	**1.25**	**44**	*i* P	**Pg**	**23 38 08.4**	**-1.2**
SART				*i* S	**Sn**	**23 38 26.5**	**+1.0**
SART	**Tekirdag**	**1.25**	**44**	*i* P	**Pg**	**23 38 08.4**	**-1.2**
SART				*i* S	**Sn**	**23 38 26.5**	**+1.0**
GONE	**Gonen-Balikesi**	**1.29**	**78**	*e*PN	**Pn**	**23 38 09.7**	**+0.4**
GONE				*e*SN	**Sn**	**23 38 27.0**	**+0.5**
GONE	**Gonen-Balikesi**	**1.29**	**78**	*e*Pn	**Pn**	**23 38 09.7**	**+0.4**
GONE				*e*Sn	**Sn**	**23 38 27.0**	**+0.5**
MFT	**Murefte**	**1.37**	**44**	*e*PN	**Pn**	**23 38 10.9**	**+0.4**
MFT	**Murefte**	**1.37**	**44**	*e*Pn	**Pn**	**23 38 10.9**	**+0.4**
CHOS	**Chios island**	**1.41**	**179**	P	**Pn**	**23 38 10.4**	**-0.7**
CHOS				S	**Sb**	**23 38 28.4**	**-1.4**
CHOS	**Chios island**	**1.41**	**179**	*e*PB	**Pn**	**23 38 10.6**	**-0.5**
CHOS				*e*SN	**Sg**	**23 38 31.6**	**+0.6**
CHOS	**Chios island**	**1.41**	**179**	P	**Pn**	**23 38 10.4**	**-0.7**
CHOS				S	**Sb**	**23 38 28.4**	**-1.4**
BALB	**Balikesir**	**1.43**	**96**	*e*PN	**Pn**	**23 38 11.5**	**+0.3**
BALB	**Balikesir**	**1.43**	**96**	*e*Pn	**Pn**	**23 38 11.5**	**+0.3**
MRMT	**Marmara Adasi**	**1.44**	**56**	*e*PN	**Pn**	**23 38 11.7**	**+0.3**
MRMT	**Marmara Adasi**	**1.44**	**56**	*e*Pn	**Pn**	**23 38 11.7**	**+0.3**
URLA	**Izmir**	**1.50**	**163**	*i* P	**Pn**	**23 38 11.7**	**-0.6**
URLA				*i* S	**Sn**	**23 38 29.4**	**-2.3**
URLA	**Izmir**	**1.50**	**163**	*i* P	**Pn**	**23 38 11.7**	**-0.6**
URLA				*i* S	**Sn**	**23 38 29.4**	**-2.3**
BNT	**Bandirma**	**1.55**	**68**	*e*PN	**Pn**	**23 38 12.5**	**-0.4**
BNT	**Bandirma**	**1.55**	**68**	*e*Pn	**Pn**	**23 38 12.5**	**-0.4**
BLCB	**Balcova**	**1.61**	**151**	*e*PN	**Pg**	**23 38 16.2**	**-0.4**
BLCB	**Balcova**	**1.61**	**151**	*e*Pn	**Pg**	**23 38 16.2**	**-0.4**
TKR	**Tekirdag**	**1.65**	**43**	*e*PN	**Pn**	**23 38 14.7**	**+0.4**
TKR	**Tekirdag**	**1.65**	**43**	*e*Pn	**Pn**	**23 38 14.7**	**+0.4**
AKHS	**Akhisar**	**1.66**	**123**	*i* P	**Pn**	**23 38 14.7**	**+0.3**
AKHS				*i* S	**Sg**	**23 38 38.7**	**-0.1**
AKHS	**Akhisar**	**1.66**	**123**	*i* P	**Pn**	**23 38 14.7**	**+0.3**
AKHS				*i* S	**Sg**	**23 38 38.7**	**-0.1**
OUR	**Ouranopolis**	**1.67**	**289**	P	**Pn**	**23 38 14.2**	**-0.3**
OUR	**Ouranopolis**	**1.67**	**289**	P	**Pn**	**23 38 14.2**	**-0.3**
KAVA	**Kavala**	**1.67**	**316**	P	**Pn**	**23 38 14.7**	**+0.2**
KAVA	**Kavala**	**1.67**	**316**	P	**Pn**	**23 38 14.7**	**+0.2**
IZM	**Izmir**	**1.69**	**145**	*e*PN	**Pg**	**23 38 17.7**	**-0.4**
IZM	**Izmir**	**1.69**	**145**	*e*Pn	**Pg**	**23 38 17.7**	**-0.4**
KCTX	**Karacabey (Bur**	**1.84**	**75**	*e*PN	**Pn**	**23 38 17.3**	**+0.4**
KCTX	**Karacabey (Bur**	**1.84**	**75**	*e*Pn	**Pn**	**23 38 17.3**	**+0.4**
KDZ	**Kurdzhali**	**1.91**	**346**	*i* P	**Pn**	**23 38 17.0**	**-0.8**
KDZ	**Kurdzhali**	**1.91**	**346**	*i* P	**Pn**	**23 38 17.0**	**-0.8**
DST	**Dursunbey**	**2.00**	**95**	*e*PN	**Pn**	**23 38 20.1**	**+0.9**
DST	**Dursunbey**	**2.00**	**95**	*e*Pn	**Pn**	**23 38 20.1**	**+0.9**
PLG	**Polygyros**	**2.07**	**287**	P	**Pn**	**23 38 19.9**	**-0.2**
PLG	**Polygyros**	**2.07**	**287**	*e*PB	**Pn**	**23 38 21.1**	**+1.0**
PLG	**Polygyros**	**2.07**	**287**	P	**Pn**	**23 38 19.9**	**-0.2**
EDRB	**Edirne**	**2.11**	**14**	*e*PN	**Pn**	**23 38 21.4**	**+0.8**
EDRB	**Edirne**	**2.11**	**14**	P	**Pn**	**23 38 20.6**	**-0.1**
EDRB	**Edirne**	**2.11**	**14**	P	**Pn**	**23 38 20.6**	**-0.1**
EDRB	**Edirne**	**2.11**	**14**	*e*Pn	**Pn**	**23 38 21.4**	**+0.8**
RZN	**Rozhen**	**2.14**	**332**	*i* P	**Pn**	**23 38 21.0**	**-0.1**
RZN	**Rozhen**	**2.14**	**332**	*i* P	**Pn**	**23 38 21.0**	**-0.1**
MRMA	**Marmari**	**2.17**	**217**	P	**Pn**	**23 38 20.6**	**-0.8**
MRMA	**Marmari**	**2.17**	**217**	P	**Pn**	**23 38 20.6**	**-0.8**
SLVT	**Silivri**	**2.19**	**49**	*e*PN	**Pn**	**23 38 22.4**	**+0.8**
SLVT	**Silivri**	**2.19**	**49**	*e*Pn	**Pn**	**23 38 22.5**	**+0.8**
ORLT	**Orhaneli**	**2.21**	**83**	*e*PN	**Pn**	**23 38 23.1**	**+1.1**
ORLT	**Orhaneli**	**2.21**	**83**	*e*Pn	**Pn**	**23 38 23.1**	**+1.1**
MDNY	**Mudanya-Bursa**	**2.26**	**75**	*e*PN	**Pn**	**23 38 23.8**	**+1.2**
MDNY	**Mudanya-Bursa**	**2.26**	**75**	*e*Pn	**Pn**	**23 38 23.8**	**+1.2**
NVR	**Nevrokopi**	**2.27**	**314**	P	**Pn**	**23 38 23.1**	**+0.3**
NVR	**Nevrokopi**	**2.27**	**314**	*e*PN	**Pn**	**23 38 23.3**	**+0.5**
NVR	**Nevrokopi**	**2.27**	**314**	P	**Pn**	**23 38 23.1**	**+0.3**
DIM	**Dimitrovgrad**	**2.28**	**351**	*e*P	**Pn**	**23 38 23.1**	**+0.2**
DIM	**Dimitrovgrad**	**2.28**	**351**	*e*P	**Pn**	**23 38 23.1**	**+0.2**
SRS	**Serrai**	**2.28**	**306**	P	**Pn**	**23 38 23.2**	**+0.2**
SRS	**Serrai**	**2.28**	**306**	P	**Pn**	**23 38 23.2**	**+0.2**
SOH	**Sokhos**	**2.29**	**297**	P	**Pn**	**23 38 22.8**	**-0.3**
SOH	**Sokhos**	**2.29**	**297**	P	**Pn**	**23 38 22.8**	**-0.3**
ARMT	**Armutlu**	**2.29**	**70**	*e*PN	**Pn**	**23 38 25.0**	**+1.9**
ARMT	**Armutlu**	**2.29**	**70**	*e*Pn	**Pn**	**23 38 25.0**	**+1.9**
GCAM	**G?zelcaml?**	**2.30**	**156**	*i* P	**Pb**	**23 38 28.2**	**+1.3**
GCAM				*i* S	**Sg**	**23 38 59.2**	**-0.2**
GCAM	**G?zelcaml?**	**2.30**	**156**	*i* P	**Pb**	**23 38 28.2**	**+1.3**
CTKS	**Kestanelik-??a**	**2.37**	**52**	*e*PN	**Pn**	**23 38 24.5**	**+0.4**
CTKS	**Kestanelik-??a**	**2.37**	**52**	*e*Pn	**Pn**	**23 38 24.5**	**+0.4**
KULA	**Kula-Manisa**	**2.41**	**121**	*e*PN	**Pn**	**23 38 26.9**	**+2.1**
KULA	**Kula-Manisa**	**2.41**	**121**	P	**Pn**	**23 38 25.5**	**+0.7**
KULA	**Kula-Manisa**	**2.41**	**121**	P	**Pn**	**23 38 25.5**	**+0.7**
KULA	**Kula-Manisa**	**2.41**	**121**	*e*Pn	**Pn**	**23 38 26.9**	**+2.1**
BGKT	**Bogazkoy**	**2.50**	**56**	*e*PN	**Pn**	**23 38 26.6**	**+0.6**
BGKT	**Bogazkoy**	**2.50**	**56**	*e*Pn	**Pn**	**23 38 26.6**	**+0.6**
MMB	**Musomiste**	**2.50**	**316**	*i* P	**Pn**	**23 38 26.2**	**+0.1**
MMB	**Musomiste**	**2.50**	**316**	*i* P	**Pn**	**23 38 26.2**	**+0.1**
PLD	**Plovdiv**	**2.51**	**337**	P	**Pn**	**23 38 26.7**	**+0.5**
PLD	**Plovdiv**	**2.51**	**337**	*e*P	**Pn**	**23 38 27.5**	**+1.4**
PLD	**Plovdiv**	**2.51**	**337**	*e*Pn	**Pn**	**23 38 27.6**	**+1.4**
PLD	**Plovdiv**	**2.51**	**337**	P	**Pn**	**23 38 26.7**	**+0.5**
PLD	**Plovdiv**	**2.51**	**337**	*e*Pn	**Pn**	**23 38 27.6**	**+1.4**
ISK	**Istanbul-Kandi**	**2.63**	**60**	*e*PN	**Pn**	**23 38 28.6**	**+0.9**
ISK	**Istanbul-Kandi**	**2.63**	**60**	*e*Pn	**Pn**	**23 38 28.6**	**+0.9**
TVSB	**Tavsanli**	**2.67**	**96**	*e*PN	**Pn**	**23 38 29.6**	**+1.3**
TVSB	**Tavsanli**	**2.67**	**96**	*e*Pn	**Pn**	**23 38 29.7**	**+1.3**
YLV	**Yalova**	**2.67**	**72**	*e*PN	**Pn**	**23 38 30.0**	**+1.7**
YLV	**Yalova**	**2.67**	**72**	*e*Pn	**Pn**	**23 38 30.0**	**+1.7**
IZI	**Iznik**	**2.69**	**77**	*e*PN	**Pn**	**23 38 29.6**	**+1.0**
IZI	**Iznik**	**2.69**	**77**	*e*Pn	**Pn**	**23 38 29.7**	**+1.0**
JMB	**Yambol**	**2.70**	**9**	P	**Pn**	**23 38 29.9**	**+1.2**
JMB	**Yambol**	**2.70**	**9**	*e*P	**Pb**	**23 38 33.1**	**-0.6**
JMB	**Yambol**	**2.70**	**9**	P	**Pn**	**23 38 29.9**	**+1.2**
KLYT	**Kilyos**	**2.71**	**57**	*e*PN	**Pn**	**23 38 30.0**	**+1.2**
KLYT	**Kilyos**	**2.71**	**57**	*e*Pn	**Pn**	**23 38 30.0**	**+1.2**
KNT	**Kendrikon**	**2.75**	**301**	P	**Pn**	**23 38 29.8**	**+0.3**
KNT	**Kendrikon**	**2.75**	**301**	P	**Pn**	**23 38 29.8**	**+0.3**
APE	**Apeiranthos**	**2.76**	**188**	P	**Pn**	**23 38 28.6**	**-0.9**
APE	**Apeiranthos**	**2.76**	**188**	P	**Pn**	**23 38 28.6**	**-0.9**
MLSB	**Milas**	**2.85**	**151**	*e*PN	**Pb**	**23 38 34.1**	**-2.2**
ADVT	**Abdulvahap**	**2.91**	**76**	*e*PN	**Pn**	**23 38 33.1**	**+1.5**
ADVT	**Abdulvahap**	**2.91**	**76**	*e*Pn	**Pn**	**23 38 33.1**	**+1.5**
BODT	**Bodrum**	**2.91**	**160**	*e*PN	**Pn**	**23 38 34.7**	**+3.1**
BODT	**Bodrum**	**2.91**	**160**	*e*Pn	**Pn**	**23 38 34.7**	**+3.1**
ALT	**Altintas**	**3.24**	**102**	*e*PN	**Pn**	**23 38 38.5**	**+2.3**
ALT	**Altintas**	**3.24**	**102**	*e*Pn	**Pn**	**23 38 38.6**	**+2.3**
SZH	**Strazhica**	**3.46**	**359**	*i* P	**Pn**	**23 38 40.0**	**+0.8**
SZH	**Strazhica**	**3.46**	**359**	*i* P	**Pn**	**23 38 40.0**	**+0.8**
GULT	**Gulveren**	**3.49**	**78**	*e*PN	**Pn**	**23 38 41.3**	**+1.6**
GULT	**Gulveren**	**3.49**	**78**	*e*Pn	**Pn**	**23 38 41.3**	**+1.6**
VTS	**Vitosha**	**3.51**	**323**	P	**Pn**	**23 38 41.2**	**+1.2**
VTS	**Vitosha**	**3.51**	**323**	*i* P	**Pn**	**23 38 41.3**	**+1.2**
VTS	**Vitosha**	**3.51**	**323**	*e*Pn	**Pn**	**23 38 41.5**	**+1.5**
VTS	**Vitosha**	**3.51**	**323**	⇓*i*P	**Pn**	**23 38 41.7**	**+1.7**

VTS	Vitosha	3.51	323	P	Pn	23 38 41.2	+1.2
VTS	Vitosha	3.51	323	*e*Pn	Pn	23 38 41.5	+1.5
ZAPS	Zavoj	4.31	325	*e*Pn	Pn	23 38 53.2	+2.3
BARS	Barje	4.38	315	*e*Pn	Pn	23 38 52.7	+0.9
BARS	Barje	4.38	315	*e*Pn	Pn	23 38 52.7	+0.9
ARR	Arges	5.66	350	⇑*i*P	Pn	23 39 15.7	+6.3
LOT	Lotru	5.89	344	⇓*i*P	Pn	23 39 13.1	+0.5
LOT	Lotru	5.89	344	⇓*i*P	Pn	23 39 13.1	+0.5
PLOR	Plostina	6.07	4	⇑*i*P	Pn	23 39 16.5	+1.5
PLOR	Plostina	6.07	4	⇑*i*P	Pn	23 39 16.5	+1.5
VRI	Vrincioaia	6.08	5	⇑*i*P	Pn	23 39 14.9	-0.3
VRI	Vrincioaia	6.08	5	⇑*i*P	Pn	23 39 14.9	-0.3
GZR	Gura Zlata	6.08	338	⇑*i*P	Pn	23 39 16.3	+1.0
GZR	Gura Zlata	6.08	338	⇑*i*P	Pn	23 39 16.3	+1.0
BZS	Buzias	6.66	332	⇓*i*P	Pn	23 39 23.1	0.0
BZS	Buzias	6.66	332	⇓*i*P	Pn	23 39 23.1	0.0
TESR	Tescani	6.72	4	⇑*i*P	Pn	23 39 24.3	+0.3
TESR	Tescani	6.72	4	⇑*i*P	Pn	23 39 24.3	+0.3

WEL 03 23:47:25.3±0.2, 40°.29S×174°.36E, h97km±3km, ML3.5/14, 20C-5D, Error ellipse: s-maj=1.0km s-min=0.4km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	D'Urville Isla	0.61	213	⇓PN	Pn	23 47 41.2	-0.5
DUWZ				SN	Sn	23 47 52.9	-1.1
KIW	Kapiti Island	0.71	144	⇑PN	Pn	23 47 42.2	-0.3
KIW				AML	AML	23 47 54.5	
KIW				AML	AML	23 47 54.8	
OGWZ	Otaki Gorge	0.81	131	⇑PN	Pn	23 47 43.4	-0.1
TCW	Tory Channel	0.93	184	PN	Pn	23 47 44.7	0.0
TCW				AML	AML	23 47 59.7	
TCW				AML	AML	23 47 59.9	
CAW	Cannon Point	0.98	147	PN	Pn	23 47 45.4	+0.1
CAW				AML	AML	23 48 00.6	
CAW				AML	AML	23 48 02.1	
MRZ	Mangatainoka R	1.00	112	⇑PN	Pn	23 47 45.3	-0.2
MRZ				AML	AML	23 48 00.1	
MRZ				AML	AML	23 48 03.3	
NRZ	Ngariki Road	1.00	341	PN	Pn	23 47 45.2	-0.3
WEL	Wellington	1.04	163	PN	Pn	23 47 46.0	+0.1
SNZO	South Karori	1.05	166	⇑PN	Pn	23 47 46.0	0.0
SNZO				AML	AML	23 48 01.5	
SNZO				AML	AML	23 48 03.7	
HOWZ	Holdsworth Sta	1.07	125	PN	Pn	23 47 46.0	-0.2
POWZ	Post Office Ro	1.08	96	PN	Pn	23 47 46.1	-0.3
NWEZ	Newall Road	1.08	339	PN	Pn	23 47 46.2	-0.2
DREZ	Durham Road	1.10	353	⇓PN	Pn	23 47 46.7	0.0
PKE	Pukeiti	1.13	345	PN	Pn	23 47 46.6	-0.4
BHW	Baring Head	1.19	161	PN	Pn	23 47 47.5	-0.1
BHW				AML	AML	23 48 03.7	
BHW				AML	AML	23 48 05.7	
TUWZ	Tuamarina	1.19	195	⇓PN	Pn	23 47 47.3	-0.3
TUWZ				AML	AML	23 48 05.0	
TUWZ				AML	AML	23 48 06.0	
NNZ	Nelson	1.19	218	⇑PN	Pn	23 47 47.4	-0.3
VRZ	Vera Road	1.20	15	⇑PN	Pn	23 47 47.8	+0.1
MHEZ	Mangahewa	1.21	359	PN	Pn	23 47 48.1	+0.3
MTW	Mount Morrison	1.23	136	PN	Pn	23 47 47.8	-0.2
MTW				AML	AML	23 48 06.2	
MTW				AML	AML	23 48 11.0	
MTVZ	Mangateitei	1.24	44	PN	Pn	23 47 48.1	-0.2
TSZ	Takapari Road	1.25	80	PN	Pn	23 47 47.9	-0.4
TSZ				AML	AML	23 48 07.1	
TSZ				AML	AML	23 48 09.5	
PKVZ	Pokaka	1.25	38	⇑PN	Pn	23 47 48.3	-0.2
TIWZ	Tintock	1.26	113	PN	Pn	23 47 48.3	-0.2
MSWZ	Moikau Station	1.31	149	⇑PN	Pn	23 47 49.0	-0.1
MSWZ				AML	AML	23 48 06.0	
MSWZ				AML	AML	23 48 08.0	
TRVZ	Turoa	1.34	43	PN	Pn	23 47 49.4	-0.4
WNVZ	Wahianoa	1.35	45	PN	Pn	23 47 49.7	0.0
PAWZ	Paruwai Farm	1.36	144	⇑PN	Pn	23 47 49.5	-0.1
PAWZ				AML	AML	23 48 06.8	
PAWZ				AML	AML	23 48 06.8	
DRZ	Dome Shelter	1.37	43	PN	Pn	23 47 49.9	-0.3
FWVZ	Far West T-bar	1.38	42	⇑PN	Pn	23 47 49.8	-0.4
DVHZ	Dannevirke	1.38	91	⇑PN	Pn	23 47 49.4	-0.5
MOVZ	Moawhango	1.38	51	PN	Pn	23 47 49.7	-0.3
WPVZ	Whakapapa	1.41	41	⇑PN	Pn	23 47 50.2	-0.3
TMWZ	Te Maipa	1.42	126	PN	Pn	23 47 50.4	0.0
TUVZ	Tukino	1.42	45	⇑PN	Pn	23 47 50.5	-0.1
PLWZ	Palliser	1.45	152	PN	Pn	23 47 50.6	-0.3
PNHZ	Pukenui	1.46	76	⇓PN	Pn	23 47 50.2	-0.7
NGZ	Ngauruhoe	1.46	41	PN	Pn	23 47 50.7	-0.4
TWVZ	Taurewa	1.47	35	⇑PN	Pn	23 47 50.8	-0.3
BSWZ	Blackbirch Sta	1.47	194	PN	Pn	23 47 51.4	+0.4
BFZ	Birch Farm	1.49	106	⇑PN	Pn	23 47 51.0	-0.2
QRZ	Quartz Range	1.50	248	⇑PN	Pn	23 47 50.1	-1.2
TRWZ	Traveller	1.50	138	PN	Pn	23 47 51.3	-0.1
TRWZ				AML	AML	23 48 11.6	
TRWZ				AML	AML	23 48 18.5	
WTVZ	West Tongariro	1.50	39	PN	Pn	23 47 51.3	-0.3
OTVZ	Oturere	1.50	42	⇑PN	Pn	23 47 51.5	-0.2
BHHZ	Black Hill Sta	1.53	59	PN	Pn	23 47 51.2	-0.7
KRVZ	Karewarewa	1.55	40	PN	Pn	23 47 51.7	-0.4
WPHZ	Waipukurau	1.61	83	PN	Pn	23 47 52.2	-0.5
KATZ	Kakaramea	1.67	39	PN	Pn	23 47 53.3	-0.4
PRHZ	Porangahau	1.74	90	⇓PN	Pn	23 47 53.9	-0.4
RATZ	Rangitukua	1.79	38	PN	Pn	23 47 55.1	0.0
HIZ	Hauiti	1.81	12	⇑PN	Pn	23 47 55.2	-0.1
THZ	Tophouse	1.84	216	⇑PN	Pn	23 47 55.4	-0.3
WATZ	Wairara	1.90	34	PN	Pn	23 47 56.5	0.0
PXZ	Pawanui	1.93	83	PN	Pn	23 47 56.1	-0.7
PXZ				AML	AML	23 48 21.9	
PXZ				AML	AML	23 48 21.9	
PXZ				AML	AML	23 48 23.3	
PXZ				AML	AML	23 48 23.4	
MCHZ	McNeill Hill	1.98	66	PN	Pn	23 47 56.8	-0.7
BKZ	Black Stump Fm	1.99	56	PN	Pn	23 47 56.6	-1.1
BKZ				AML	AML	23 48 24.9	
BKZ				AML	AML	23 48 28.9	
KAHZ	Kahuranaki	1.99	77	PN	Pn	23 47 57.0	-0.7
KHZ	Kahutara	2.22	196	⇑PN	Pn	23 48 00.4	-0.2
NMHZ	Naumai	2.23	59	PN	Pn	23 48 00.0	-0.8
TOZ	Tahuroa Road	2.70	20	PN	Pn	23 48 06.6	-0.3
KNZ	Kokohu	2.85	65	PN	Pn	23 48 06.6	-2.3
URZ	Urewera	2.94	47	PN	Pn	23 48 07.8	-2.4
LTZ	Lake Taylor	2.95	212	PN	Pn	23 48 08.8	-1.4
MHGZ	Mahia Peninsul	2.96	69	PN	Pn	23 48 08.5	-1.9
PRGZ	Paritu Road	3.04	65	PN	Pn	23 48 09.3	-2.3
MKAZ	Moumakai	3.23	11	PN	Pn	23 48 13.8	-0.3
MQZ	McQueen's Vall	3.65	200	PN	Pn	23 48 16.9	-2.6
WCZ	Waipu Caves	4.34	360	*e*PN	Pn	23 48 28.6	-0.4
FOZ	Fox Glacier	4.78	225	PN	Pn	23 48 31.4	-3.6
ODZ	Otahua Downs	5.49	209	PN	Pn	23 48 42.2	-2.3
JCZ	Jackson Bay	5.63	226	PN	Pn	23 48 43.5	-3.0

IDC 04 00:00:21.9±71.0, 21°.74S×178°.03E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/18, mbtmp4.0/3, Error ellipse: s-maj=1249.0km s-min=153.4km az=83.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	33.92	245	P	P	00 07 06.2	-0.7
	1.9nm,1.0s,baz=100,slow=6.1,SNR=3.6						
ASAR	Alice Springs	40.64	259	P	P	00 08 03.7	-0.4
	1.5nm,0.8s,baz=95,slow=7.9,SNR=12						
WRA	Warramunga Arr	40.78	264	P	P	00 08 05.7	+0.5
	1.5nm,0.5s,baz=96,slow=8.5,SNR=21						

KRSC 04 00:01:19.8±0.9, 48°.67N×155°.85E, h10km±10km, ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.02	5	P	Pn	00 01 53.9	0.0
SKR				*i* S	Sn	00 02 19.2	0.0
MIPR	Malaya Ipel'ka	3.66	9	*e*P	Pn	00 02 16.1	-0.3
ASAK	Asacha	3.94	19	*e*P	Pn	00 02 22.7	+2.3
ASAK				*i* S	Sn	00 03 07.3	+0.5
MTVR	Mutnovka	4.10	20	P	Pn	00 02 24.1	+1.5
MTVR				*i* S	Sn	00 03 10.8	+0.1
RUS	Russkaya	4.13	23	*e*P	Pn	00 02 24.1	+1.2
RUS				*i* S	Sn	00 03 10.7	-0.5
GRL	Gorelyy	4.14	19	P	Pn	00 02 24.8	+1.6
APC	Apacha	4.34	11	P	Pn	00 02 27.1	+1.3
UGLR	Uglovaya	4.92	21	P	Pn	00 02 35.7	+1.8
KOK	Koryaka	4.95	20	P	Pn	00 02 36.2	+1.9
SMAR	Somma	4.96	21	P	Pn	00 02 36.2	+1.6
KRER	Koryakskii	4.99	20	P	Pn	00 02 35.8	+0.8
SDLR	Sedlovina	5.00	21	P	Pn	00 02 36.3	+1.3
SPN	Mys Shipunski	5.16	29	P	Pn	00 02 38.8	+1.8
SPN				*i* S	Sn	00 03 36.9	+0.3
GNL	Ganaly	5.20	14	*e*P	Pn	00 02 39.2	+1.4
MKZ	Mys Kozlova	6.94	30	P	Pn	00 03 01.9	+0.5
MKZ				*i* S	Sn	00 04 15.5	-4.8

IDC 04 00:12:18.6±6.3, 31°.01S×179°.24W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/17, mbtmp3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.7/15, Error ellipse: s-maj=256.4km s-min=57.1km az=157.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.09	34	LR	LR	00 13 22.2	
	comp=Z,308nm,19.7s,baz=104,slow=30						
ASAR	Alice Springs	42.01	268	P	P	00 20 10.6	-1.3
	0.3nm,0.5s,baz=102,slow=7.8,SNR=4.6						
WRA	Warramunga Arr	43.06	273	P	P	00 20 21.2	+0.8
	0.3nm,0.3s,baz=114,slow=7.9,SNR=10.0						
FINES	FINESS Array B	145.33	339	PKPbc	PKPbc	00 31 56.5	-0.9
	5.5nm,0.9s,baz=32,slow=8.2,SNR=2.6						

IDC 04 00:30:37.8±1.9, 2°.74S×101°.86W, h0km, mb3.6/5, mb1 4.0/5, mb1mx3.9/17, mbtmp3.6/5, MS3.8/14, Ms1 3.8/14, ms1mx3.7/31, Error ellipse: s-maj=86.3km s-min=28.4km az=56.0, Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	26.43	112	LR	LR	00 44 04.6	
	comp=Z,244nm,18.3s,baz=315,slow=30						
TEIG	Tepich	26.44	30	LR	LR	00 44 20.4	
	comp=Z,56nm,21.1s,baz=60,slow=31						
TXAR	Lajitas Array	31.94	357	P	P	00 37 06.1	+0.5
	0.1nm,0.3s,baz=185,slow=9.9,SNR=2.6						
TXAR				LR	LR	00 48 33.8	
	comp=Z,269nm,20.8s,baz=0.0,slow=34						
LPAZ	La Paz	35.80	114	P	P	00 37 39.7	-0.4
	0.9nm,0.7s,baz=252,slow=4.2,SNR=4.2						
LPAZ				LR	LR	00 49 56.8	
	comp=Z,100nm,20.8s,baz=320,slow=32						
SIV	San Ignacio	42.24	111	LR	LR	00 54 20.7	
	comp=Z,197nm,18.0s,slow=34						
CFAA	Coronel Fontan	42.74	136	LR	LR	00 52 56.0	
	comp=Z,22nm,19.1s,baz=260,slow=31						
NVAR	Mina Array Bea	43.70	341	LR	LR	00 53 39.1	
	comp=Z,75nm,18.1s,baz=188,slow=32						
PDAR	Pinedale Array	45.83	352	P	P	00 39 00.8	-1.2
	0.6nm,0.9s,baz=179,slow=5.9,SNR=7.1						
PLCA	Paso Flores	47.20	147	LR	LR	00 53 39.4	
	comp=Z,209nm,20.4s,baz=346,slow=29						
CPUP	Villa Florida	48.70	123	LR	LR	00 55 11.9	
	comp=Z,95nm,18.2s,baz=47,slow=30						
PPT	Papeete	49.05	249	LR	LR	00 55 04.5	
	comp=Z,147nm,18.9s,baz=23,slow=30						
ULM	Lac du Bonnet	53.04	5	LR	LR	01 02 03.9	
	comp=Z,137nm,18.7s,baz=307,slow=36						
BDFB	Brasilia	54.52	107	LR	LR	01 01 28.4	
	comp=Z,86nm,19.6s,baz=148,slow=34						
SCHQ	Schefferville	64.25	22	LR	LR	01 08 29.3	
	comp=Z,99nm,18.1s,baz=84,slow=35						
YKA	Yellowknife Ar	65.78	354	P	P	00 41 24.8	+0.3
	1.1nm,0.9s,baz=161,slow=6.0,SNR=4.6						
PMSA	Palmer Station	67.60	163	LR	LR	01 03 33.0	
	comp=Z,157nm,20.8s,baz=184,slow=29						
ILAR	Eielson Array	74.95	342	P	P	00 42 20.7	+0.1
	1.1nm,0.9s,baz=158,slow=4.3,SNR=8.0						
BRTR	Keskin Array B	125.43	42	PKP	PKPdf	00 49 41.7	+0.1
	0.5nm,1.0s,baz=224,slow=3.8,SNR=2.5						
SONM	Songino Array	128.90	336	PKP	PKPdf	00 49 47.1	-0.8
	0.1nm,0.4s,baz=38,slow=2.6,SNR=1.8						
MKAR	Makanchi Array	135.98	356	PKP	PKPdf	00 50 01.7	+0.6
	0.8nm,1.0s,baz=248,slow=3.9,SNR=3.0						

IDC 04 00:32:06.1±3.8, 49°.97S×126°.70E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.7/14, mbtmp3.8/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/25, Error ellipse: s-maj=121.6km s-min=64.8km az=101.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	18.42	334	LR	LR	00 40 59.9	
	comp=Z,125nm,20.0s,baz=288,slow=29						
STKA	Stephens Creek	21.22	37	P	P	00 36 53.4	0.0
	3.9nm,0.8s,baz=221,slow=12,SNR=7.8						
ASAR	Alice Springs	26.85	15	P	P	00 37 48.6	+0.3
	2.4nm,0.9s,baz=186,slow=9.9,SNR=18						
WRA	Warramunga Arr	30.57	14	P	P	00 38 21.2	-0.3
	0.4nm,0.9s,baz=194,slow=8.7,SNR=2.9						
YKA	Yellowknife Ar	145.11	45	PKPbc	PKPbc	00 51 42.8	-0.9
	0.4nm,0.4s,baz=269,slow=3.0,SNR=3.8						

ISCJB 04 00:41:54.4±0.7, 42°.73S±0°.09×72°.2W±0°.2, h10km, mb4.1/9, Error ellipse: s-maj=24.9km s-min=10.8km az=15.9
IDC 04 00:41:54.4±0.8, 42°.76S×72°.52W, h0km, mb3.9/8, mb1 4.1/8, mb1mx4.0/19, mbtmp3.9/8, MS3.2/1, Ms1 3.2/1, ms1mx2.6/28, Error ellipse: s-maj=33.3km s-min=13.5km az=114.0
NEIC 04 00:41:55.6±0.5, 42°.80S×72°.54W, h10km, mb4.3/4, Error ellipse: s-maj=19.8km s-min=10.2km az=102.0
ISC 04 00:41:55.9±0.6, 42°.77S±0°.10×72°.5W±0°.2, h10km, n27, σ0s.79/29, mb4.0/9, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.50	36	*e*Pn	Pn	00 42 38.6	+1.8
PLCA				Pg	Pb	00 42 41.1	+0.2
PLCA				Lg	Lg	00 43 16.1	
PLCA				Sn	Sg	00 43 16.3	0.0
PLCA	Paso Flores	2.50	36	Pg	Pb	00 42 41.1	+0.2
	6.6nm,0.3s,baz=219,slow=17,SNR=56						
PLCA				Lg	Lg	00 43 16.1	
	32nm,0.3s,baz=109,slow=21,SNR=16						
PLCA				LR	LR	00 43 49.4	
	comp=Z,437nm,19.3s,baz=208,slow=46						
LVC	Limon Verde	20.32	10	*e*P	P	00 46 32.9	+0.5
	6.0nm,0.8s						
CPUP	Villa Florida	20.56	42	P	P	00 46 35.0	+0.3
CPUP	Villa Florida	20.56	42	P	P	00 46 35.0	+0.3
	0.7nm,0.6s,baz=234,slow=13,SNR=2.9						
LPAZ	La Paz	26.66	9	*e*P	P	00 47 35.5	-0.1
	1.7nm,0.9s						
SIV	San Ignacio	28.43	24	P	P	00 47 50.0	-0.8
SIV	San Ignacio	28.43	24	P	P	00 47 50.0	-0.8
	1.3nm,0.7s,baz=214,slow=7.6,SNR=7.0						
SNAA	Sanae	43.71	155	*e*P	P	00 50 00.6	-0.1
	13nm,1.4s						
SNAA	Sanae	43.71	155	P	P	00 50 00.2	-0.5
	1.6nm,1.1s,baz=260,slow=4.9,SNR=5.1						
QSPA	South Pole Qui	47.48	180	*e*P	P	00 50 31.0	+0.3
QSPA	South Pole Qui	47.48	180	P	P	00 50 31.0	+0.3
	8.7nm,1.1s,baz=150,slow=6.0,SNR=12						
VNDA	Vanda	55.45	192	P	P	00 51 31.8	+1.8
	2.9nm,1.1s,baz=138,slow=5.7,SNR=6.4						
TXAR	Lajitas Array	77.27	332	P	P	00 53 50.1	-0.2
TXAR	Lajitas Array	77.27	332	P	P	00 53 50.1	-0.2
	0.4nm,0.7s,baz=155,slow=9.1,SNR=3.8						
TORD	Torodi Ar. Bea	87.56	70	P	P	00 54 42.6	-1.7
TORD	Torodi Ar. Bea	87.56	70	P	P	00 54 42.6	-1.7
	0.6nm,0.9s,baz=193,slow=5.9,SNR=3.1						
ECSD	EROS Data Cent	88.80	343	*e*P	P	00 54 49.1	-0.4
	13nm,1.6s						
PDAR	Pinedale Array	91.44	334	P	P	00 55 02.4	+0.3
PDAR	Pinedale Array	91.44	334	P	P	00 55 02.4	+0.3
	0.6nm,0.8s,baz=145,slow=5.4,SNR=5.9						
ILAR	Eielson Array	121.76	331	PKP	PKPdf	01 00 49.0	+0.1
ILAR	Eielson Array	121.76	331	PKP	PKPdf	01 00 49.0	+0.1
	0.4nm,0.8s,baz=92,slow=1.3,SNR=5.0						
BRTR	Keskin Array B	126.05	66	PKP	PKPdf	01 00 57.6	-0.5
BRTR	Keskin Array B	126.05	66	PKP	PKPdf	01 00 57.6	-0.5
	0.6nm,0.9s,baz=338,slow=0.8,SNR=3.3						
AKTO	Aktyubinsk	145.70	60	PKPbc	PKPab	01 01 34.1	-0.5
AKTO	Aktyubinsk	145.70	60	PKPbc	PKPab	01 01 34.1	-0.5
	3.3nm,1.0s,baz=274,slow=3.7,SNR=7.4						
ABKAR	Akbulak array	146.79	62	*e*PKPdf	PKPdf	01 01 35.6	-0.1

IDC 04 00:58:51.0±4.5, 19°.71S×173°.10E, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.7/18, mbtmp4.0/2, MS3.6/1, Ms1 3.6/1, ms1mx2.4/31, Error ellipse: s-maj=235.6km s-min=60.4km az=156.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	12.53	141	LR	LR	01 05 21.9	
	comp=Z,319nm,20.9s,baz=137,slow=31						
WRA	Warramunga Arr	36.41	263	P	P	01 05 57.4	-0.3
	0.7nm,0.5s,baz=96,slow=7.3,SNR=21						
ASAR	Alice Springs	36.55	257	P	P	01 05 58.8	-0.1
	2.5nm,0.5s,baz=86,slow=8.5,SNR=24						
FINES	FINESS Array B	132.35	339	PKP	PKPdf	01 18 06.6	-0.1
	2.2nm,0.8s,baz=26,slow=3.5,SNR=4.6						

ISCJB 04 00:59:04.2±0.7, 51°.42N±0°.04×16°.12E±0°.03, h0km, Error ellipse: s-maj=5.2km s-min=2.8km az=9.4
VIE 04 00:59:05.8±0.5, 51°.37N×16°.02E, h0km, mb2.1/4, ML2.8/4, Error ellipse: s-maj=3.5km s-min=2.8km az=5.0 75 km WNW of Wroclaw Suspected Mining induced.
WAR 04 00:59:05.5, 51°.53N×16°.17E
CSEM 04 00:59:05.0±0.3, 51°.49N×16°.09E, h2km, ML3.4/7, Error ellipse: s-maj=6.3km s-min=3.4km az=177.0
PRU 04 00:59:06.2, 51°.46N×16°.09E, h0km
ISC 04 00:59:05.6±1.0, 51°.49N±0°.05×16°.06E±0°.02, h0km, n41, σ1s.07/67, 2C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.67	167	*e*Pg	Pg	00 59 18.5	+0.1
KSP				*e*Sg	Sg	00 59 27.2	+0.2
UPC	Upice	0.99	182	*e*PG	Pg	00 59 24.5	-0.1
UPC	Upice	0.99	182	Pg	Pg	00 59 24.5	-0.1
PVCC	Panska Ves	1.35	225	*e*PG	Pg	00 59 30.9	-0.6
PVCC				*e*SG	Sn	00 59 50.5	+0.1
	comp=Z,127nm,0.3s						
PVCC	Panska Ves	1.35	225	Pg	Pg	00 59 30.9	-0.6
PVCC				Sg	Sn	00 59 50.5	+0.1
	127nm,0.3s						
BRG	Berggiesshubel	1.47	246	PG	Pn	00 59 33.4	0.0
BRG				SG	Sn	00 59 54.4	+1.0
	65nm,0.4s						
PRU	Pruhonice	1.79	213	*e*PN	Pn	00 59 36.9	-0.9
PRU				*e*PG	Pb	00 59 38.9	-0.4
PRU				*e*SG	Sg	01 00 03.2	+0.1
	comp=Z,22nm,0.3s						
PRU	Pruhonice	1.79	213	Pn	Pn	00 59 36.9	-0.9
PRU	Pruhonice	1.79	213	Pg	Pb	00 59 38.9	-0.4
PRU				Sg	Sg	01 00 03.2	+0.1
	22nm,0.3s						
CLL	Collm	1.93	266	*i* Pn	Pn	00 59 37.8	-1.8
CLL				*e*Pg	Pb	00 59 41.0	-0.6
CLL				*i*		00 59 45.0	
CLL				*e*Sg	Sg	01 00 08.0	+0.5
	comp=Z,19nm,0.9s						
MORC	Moravsky Berou	1.96	151	*e*Pn	Pn	00 59 38.6	-1.6
OKC	Ostrava-Krasne	2.12	141	*e*PG	Pb	00 59 45.0	0.0
OKC				*e*SG	Sb	01 00 11.4	-0.4
OKC	Ostrava-Krasne	2.12	141	Pg	Pb	00 59 45.0	0.0
OKC				Sg	Sb	01 00 11.4	-0.4
VRAC	Vranov	2.21	171	*e*Pn	Pn	00 59 42.9	-0.7
TREC	Trest	2.23	190	*e*PN	Pn	00 59 44.2	+0.3
TREC				*e*PG	Pb	00 59 47.2	+0.4
TREC				*e*SG	Sg	01 00 16.7	-0.6
	comp=Z,16nm,0.3s						
TREC	Trest	2.23	190	Pn	Pn	00 59 44.2	+0.3
NKC	Novy Kostel	2.62	243	*e*PN	Pn	00 59 49.0	-0.2
NKC				*e*PG	Pg	00 59 55.0	-0.7
NKC				*e*SG	Sg	01 00 31.1	+1.5
	comp=Z,39nm,0.3s						
NKC	Novy Kostel	2.62	243	Pn	Pn	00 59 49.0	-0.2
NKC	Novy Kostel	2.62	243	Pg	Pg	00 59 55.0	-0.7
NKC				Sg	Sg	01 00 31.1	+1.5
	comp=Z,39nm,0.3s						
OJC	Ojcow	2.69	117	*e*Pg	Pg	00 59 56.2	-0.9
OJC				*e*Sg	Sg	01 00 31.2	-0.8
OJC	Ojcow	2.69	117	*e*Pg	Pg	00 59 56.2	-0.9
OJC				*e*Sg	Sg	01 00 31.2	-0.8
KHC	Kasperske Hory	2.85	215	*e*PN	Pn	00 59 51.7	-0.7
KHC				*e*PG	Pb	00 59 58.0	+0.6
KHC				*e*SN	Sn	01 00 27.3	-0.2
KHC				*e*SG	Sg	01 00 36.6	-0.6
	comp=Z,8.3nm,0.3s						
KHC	Kasperske Hory	2.85	215	Pn	Pn	00 59 51.7	-0.7
ZST	Bratislava	3.37	168	*e*SG	Sg	01 00 53.2	-0.6
ZST	Bratislava	3.37	168	*e*Sg	Sg	01 00 53.2	-0.6
VYHS	Vyhne	3.50	148	*e*PN	Pn	01 00 00.8	-0.4
VYHS				*e*		01 00 12.1	
VYHS	Vyhne	3.50	148	*e*SG	Sg	01 00 56.7	-1.2
VYHS	Vyhne	3.50	148	*e*Pn	Pn	01 00 00.8	-0.4
CONA	Conrad Observa	3.57	182	⇑*i*Pn	Pn	01 00 00.8	-1.6
CONA				⇓*i*Sg	Sg	01 00 59.4	-0.9
	comp=Z,12nm,0.4s						
CONA	Conrad Observa	3.57	182	Pn	Pn	01 00 00.8	-1.6
CONA				Sg	Sg	01 00 59.4	-0.9
	comp=Z,12nm,0.4s						
MOA	Molln	3.83	198	⇑*i*Pn	Pn	01 00 05.6	-0.2
MOA				⇓*i*Sg	Sg	01 01 08.6	0.0
	comp=Z,9.1nm,0.5s						
MOA	Molln	3.83	198	Pn	Pn	01 00 05.6	-0.2
MOA				Sg	Sg	01 01 08.6	0.0
	comp=Z,9.1nm,0.5s						
STHS	Stebnicka Huta	3.91	120	*e*PN	Pn	01 00 06.0	-0.9
STHS				*e*		01 00 21.0	
STHS	Stebnicka Huta	3.91	120	*e*Pn	Pn	01 00 06.1	-0.9
STHS				*e*Sg	Sg	01 01 13.6	+2.5
KECS	Kecovo	4.15	135	*e*	Pg	01 00 24.8	-0.3
KECS	Kecovo	4.15	135	*e*SG	Sg	01 01 18.1	-0.8
KECS	Kecovo	4.15	135	*e*Sg	Sg	01 01 18.1	-0.8
CRVS	Cervenica-Dubn	4.33	125	*e*	Pg	01 00 30.1	+1.5
CRVS	Cervenica-Dubn	4.33	125	*e*SG	Sb	01 01 19.2	+3.8
CRVS	Cervenica-Dubn	4.33	125	*e*Sg	Sb	01 01 19.2	+3.8
KOLS	Kolonicke sedl	4.74	120	*e*	Pg	01 00 35.1	-1.3

IDC 04 01:01:22.2±2.1, 51°.82N×159°.45E, h0km, mb3.3/3, mb1 3.5/4, mb1mx3.3/27, mbtmp3.4/4, ML3.5/1, Error ellipse: s-maj=48.9km s-min=12.0km az=7.0
KRSC 04 01:01:24.1±0.2, 51°.73N×159°.14E, h22km±21km, ML4.0
MOS 04 01:01:24.1±2.9, 51°.73N×159°.14E, h22km, mb4.2/1, Error ellipse: s-maj=33.3km s-min=21.4km az=94.7
ISC 04 01:01:20.5±2.0, 51°.54N±0°.06×159°.22E±0°.05, h8km±11km, n32, σ1s.62/49, mb3.3/3, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.99	334	*i* P	Pb	01 01 40.1	+0.2
RUS				*i* S	Sg	01 01 50.9	-1.5
MTVR	Mutnovka	1.14	326	*i* P	Pb	01 01 42.7	+0.2
MTVR				*i* S	Sg	01 01 56.8	-0.3
ASAK	Asacha	1.17	316	*i* P	Pb	01 01 43.3	+0.3
ASAK				*i* S	Sb	01 01 56.7	-1.7
GRL	Gorelyy	1.23	325	*e*P	Pg	01 01 44.6	+0.4
GRL				*i* S	Sb	01 01 59.9	-0.3
PET	Petropavlovsk	1.52	347	P	Pn	01 01 47.9	-0.1
PET				*i* S	Sn	01 02 05.6	-2.4
PET	Petropavlovsk	1.52	347	*e*PN	Pb	01 01 48.9	-0.1
PET				*e*S	Sg	01 02 08.5	-0.9
PET				pmax	pmax		
	comp=Z,132nm,0.3s						
PET				smax	smax		
	comp=N,825nm,0.6s						
NLC	Nalytchevo	1.63	3	*e*P	Pn	01 01 49.7	+0.2
NLC				*i* S	Sn	01 02 08.3	-2.4
SPN	Mys Shipunski	1.63	17	*e*P	Pb	01 01 50.3	-0.5
SPN				*e*S	Sn	01 02 10.1	-0.6
UGLR	Uglovaya	1.69	352	*e*P	Pn	01 01 50.8	+0.4
UGLR				*e*S	Sn	01 02 10.1	-2.1
MIPR	Malaya Ipel'ka	1.69	297	*e*P	Pn	01 01 51.0	+0.7
MIPR				*i* S	Sn	01 02 10.4	-1.8
SMAR	Somma	1.74	352	*e*P	Pb	01 01 52.7	-0.1
SMAR				*e*S	Sn	01 02 12.8	-0.9
AVH	Avacha	1.75	350	*e*P	Pb	01 01 52.1	-0.8
AVH				*i* S	Sn	01 02 12.2	-1.5
SDLR	Sedlovina	1.75	353	*e*P	Pn	01 01 51.3	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SDLR				*i* S	Sn	01 02 10.7	-3.1
KRER	Koryakskii	1.79	351	*e*P	Pn	01 01 52.7	+0.9
KRER				*i* S	Sn	01 02 13.3	-1.5
KOK	Koryaka	1.79	349	*e*P	Pn	01 01 52.7	+1.0
KOK				*i* S	Sn	01 02 13.4	-1.3
PETK	Petropavlovsk-	1.82	330	PN	Pb	01 01 53.4	-0.7
PETK						01 02 17.5	
PETK				pmax	pmax		
	comp=Z,21nm,0.3s						
PETK				smax	smax		
	comp=Z,14nm,0.3s						
PETK	Petropavlovsk-	1.82	330	Pn	Pb	01 01 53.4	-0.7
	comp=Z,20nm,0.3s,baz=126,slow=18,SNR=127						
PETK				Sn	Sb	01 02 17.5	+0.4
	comp=Z,14nm,0.3s,baz=162,slow=19,SNR=9.1						
APC	Apacha	1.88	318	*e*P	Pb	01 01 54.6	-0.4
APC				*i* S	Sn	01 02 17.4	+0.7
SKR	Severo-Kuril's	2.14	247	*e*PN	Sn	01 02 19.0	-4.1
GNL	Ganaly	2.29	341	*e*P	Pn	01 02 00.4	+1.7
GNL				*i* S	Sn	01 02 27.3	+0.2
MKZ	Mys Kozlova	3.38	26	P	Pn	01 02 13.7	+0.3
MKZ				*i* S	Sn	01 02 50.8	-2.9
TUMR	Tumrok	3.79	8	P	Pn	01 02 22.4	+3.2
KMNR	Kamenistaya	4.26	8	*e*P	Pn	01 02 28.7	+2.9
KPT	Kopyto	4.47	7	P	Pn	01 02 31.8	+3.2
SRDR	Sredinnyy	4.79	3	P	Pn	01 02 36.8	+3.8
KBTR	Krutoberegovo	5.14	23	*e*P	Pn	01 02 38.7	+1.1
FX1	Attu Island--F	8.67	76	Pn	Pn	01 03 26.2	+0.1
	comp=Z,2.0nm,0.3s,baz=14,slow=7.5,SNR=26						
FX1				Sn	Sn	01 04 56.8	-7.2
	comp=Z,0.4nm,0.3s,baz=192,slow=3.7,SNR=4.0						
ILAR	Eielson Array	30.30	43	P	P	01 07 30.8	-1.1
	comp=Z,0.3nm,0.8s,baz=254,slow=7.1,SNR=4.4						
ZALV	Zalesovo Beam	43.18	304	P	P	01 09 24.1	+2.7
ZALV	Zalesovo Beam	43.18	304	P	P	01 09 24.1	+2.7
	comp=Z,0.2nm,0.3s,baz=70,slow=13,SNR=2.2						
MKAR	Makanchi Array	48.35	296	P	P	01 10 04.1	+1.7
MKAR	Makanchi Array	48.35	296	P	P	01 10 04.1	+1.7
	comp=Z,0.2nm,0.5s,baz=69,slow=6.9,SNR=2.7						

*BJI **04** 01:03:36.3, 6°28S×147°21E, h43km, mB5.3/38, mb5.1/57, Ms5.0/57, Ms7 4.7/54*

*IDC **04** 01:03:40.4±1.9, 5°96S×146°58E, h24km±11km, mb4.8/30, mb1 4.9/33, mb1mx4.9/34, mbtmp4.8/33, ML4.5/3, MS4.8/25, Ms1 4.8/25, ms1mx4.8/28, Error ellipse: s-maj=12.5km s-min=7.7km az=107.0*

*MOS **04** 01:03:40.4±0.9, 5°95S×146°44E, h36km, mb5.4/35, MS4.6/4, Error ellipse: s-maj=9.7km s-min=5.7km az=97.1*

*ISCJB **04** 01:03:42.0±0.8, 6°03S±0°03×146°62E±0°03, h52km±7km, mb5.2/138, MS4.8/46, Error ellipse: s-maj=5.8km s-min=4.9km az=37.3*

*NEIC **04** 01:03:44.2±0.8, 6°03S×146°52E, h58km±8km, mb5.3/65, Error ellipse: s-maj=5.4km s-min=4.7km az=75.0*

NEIC Felt at Goroka and Lae.

*GCMT **04** 01:03:46.4±0.1, 6°21S×146°54E, h41km, MW5.4, Moment Tensor Solution. s86,c149; s91,c162; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s252.00000°, δ30.00000°, λ40.00000°. NP2: ϕ_s127.00000°, δ71.00000°, λ114.00000°. Principal axes: T 1.3200, Plg57.0000°, Azm68.0000°; N 0.0800, Plg23.0000°, Azm299.0000°; P -1.4000, Plg23.0000°, Azm199.0000°; Data Used: II IU CN IC G.*

*DJA **04** 01:03:47.2±0.5, 6°S±3°×14°7E±°, h71km±5km, M5.4/50, mb5.4/50, mB5.7/31, MLv5.9/3, Mw(mB)5.3/31, Mwp6.2/1*

ISC 04 01:03:43.9±0.3, **6°02S**±0°03×**146°59E**±0°04, **h53**km±2km, **h53**km**:pP-P, n345, σ1°54**/419, **mb5.2**/135, **MS4.8**/49, **7C-7D, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.41	170	*e*Pn	Pn	01 04 33.7	-0.8
PMG				Sn	Sn	01 05 12.9	-0.9
PMG	Port Moresby	3.41	170	P	Pn	01 04 32.8	-1.8
PMG	Port Moresby	3.41	170	Pn	Pn	01 04 33.8	-0.8
	80nm,0.3s,baz=344,slow=6.8,SNR=95						
PMG				Sn	Sn	01 05 12.9	-0.9
	158nm,0.3s,baz=176,slow=23,SNR=7.8						
PMG				LR	LR	01 06 07.2	
	comp=Z,24μm,18.2s,baz=353,slow=42						
JAY	Jayapura	6.82	300	P	Pn	01 05 25.0	+3.5
	235nm,1.9s,23μm2.3nm						
COEN	Coen	8.57	203	*e*Pn	Pn	01 05 44.7	-0.7
COEN				*e*S	Sn	01 07 17.6	-3.2
BAKI	Biak	11.51	294	P	Pn	01 06 31.0	+5.4
	120nm,1.1s,2μm						
RKPI	Ransiki, Papua	13.17	289	P	Pn	01 06 50.5	+2.2
	164nm,1.6s,91μm						
HNR	Honiara	13.66	105	*e*Pn	Pn	01 06 56.7	+1.6
CTA	Charters Tower	13.99	181	Pn	Pn	01 06 59.7	+0.3
CTA	Charters Tower	13.99	181	Pn	Pn	01 06 59.7	+0.3
	2.0nm,0.3s,baz=0.2,slow=15,SNR=12						
CTAO	Charters Tower	13.99	181	*e*P	Pn	01 06 59.8	+0.4
CTAO	Charters Tower	13.99	181	*e*Pn	Pn	01 06 59.8	+0.4
FAKI	Fak Fak	14.62	282	P	P	01 07 11.6	-1.4
	114nm,1.2s,1μm						
SWI	Sorong	16.13	288	P	Pn	01 07 27.5	+0.2
	372nm,1.3s,4μm						
MSAI	Masohi	17.80	278	P	P	01 07 53.9	+5.7
WRAB	Tennant Creek	18.24	220	*e*P	P	01 07 51.9	-1.2
WRAB				pmax	pmax		
	comp=Z,96nm,0.8s						
WRAB	Tennant Creek	18.24	220	*e*P	P	01 07 51.9	-1.2
	comp=Z,96nm,0.8s						
WRAB	Tennant Creek	18.24	220	P	P	01 07 52.2	-0.8
	comp=Z,312nm,0.8s,SNR=17						
WRA	Warramunga Arr	18.25	220	P	P	01 07 51.9	-1.3
WRA				S	S	01 11 18.3	-1.1
WRA				PcP	PcP	01 12 24.9	+0.9
WRA				ScP	ScP	01 15 58.9	+3.7
WRA	Warramunga Arr	18.25	220	P	P	01 07 51.9	-1.3
	comp=Z,2.9nm,0.3s,baz=40,slow=11,SNR=97						
WRA				S	S	01 11 18.3	-1.1
	baz=38,slow=18,SNR=4.8						
WRA				PcP	PcP	01 12 24.9	+0.9
	comp=Z,0.8nm,0.3s,baz=30,slow=2.0,SNR=6.8						
WRA				ScP	ScP	01 15 58.9	+3.7
	comp=Z,0.2nm,0.3s,baz=44,slow=2.6,SNR=8.0						
AAI	Ambon	18.47	276	P	Pn	01 07 59.0	+2.8
	comp=Z,331nm,0.7s,comp=Z,6μm						
GUMO	Guam	19.56	355	*e*P	P	01 08 07.2	-0.3
	comp=Z,1μm,2.0s						
EIDS	Eidsvold	19.71	168	*e*P	P	01 08 08.9	-0.2
	comp=Z,44nm,0.9s						
LBMI	Labuha	19.78	285	P	Pn	01 08 12.9	+1.0
	comp=Z,386nm,1.5s,comp=Z,6μm						
GAMI	Galela, Maluku	20.33	292	P	Pn	01 08 17.2	-1.2
	comp=Z,260nm,1.1s,comp=Z,11μm						
TNTI	Ternate	20.34	289	P	Pn	01 08 18.1	-0.4
	comp=Z,201nm,1.4s,comp=Z,4μm						
AS31	Alice Springs	21.37	214	*e*P	P	01 08 27.2	+0.1
AS31				*e*		01 12 26.3	
ASAR	Alice Springs	21.37	214	P	P	01 08 25.8	-1.3
ASAR				S	S	01 12 25.1	+3.4
ASAR				ScP	ScP	01 16 07.0	+4.7
ASAR	Alice Springs	21.37	214	P	P	01 08 25.8	-1.3
	comp=Z,43nm,0.6s,baz=49,slow=8.5,SNR=124						
ASAR				S	S	01 12 25.1	+3.4
	comp=Z,22nm,0.9s,baz=24,slow=23,SNR=8.1						
ASAR				ScP	ScP	01 16 07.0	+4.7
	comp=Z,24nm,1.2s,baz=25,slow=3.1,SNR=8.5						
ASAR				LR	LR	01 17 51.1	
	comp=Z,6μm,18.8s,baz=35,slow=40						
MNI	Manado	22.95	288	P	P	01 08 43.3	-0.7
	comp=Z,405nm,1.4s						
KMSI	Cibinong	23.50	285	P	P	01 08 50.8	+1.5
	comp=Z,638nm,1.0s,comp=Z,7μm						
FITZ	Fitzroy Crossi	23.71	238	*e*P	P	01 08 48.7	-2.5
	comp=Z,120nm,0.8s						
FITZ	Fitzroy Crossi	23.71	238	P	P	01 08 50.5	-0.7
	comp=Z,74nm,0.8s,baz=73,slow=7.4,SNR=63						
FITZ				LR	LR	01 19 05.9	
	comp=Z,5μm,18.8s,baz=54,slow=39						
BBSI	Bau Bau	23.90	270	P	P	01 08 55.1	+2.0
	comp=Z,194nm,1.4s,comp=Z,6μm						
LUWI	Luwuk	24.27	281	P	P	01 08 57.7	+1.3
	comp=Z,528nm,1.3s,comp=Z,6μm						
MMRI	Maumere	24.29	262	P	P	01 08 55.1	-1.5
	comp=Z,192nm,1.1s,comp=Z,3μm						
DAV	Davao City (W)	24.67	302	LR	LR	01 19 02.0	
	comp=Z,887nm,18.2s,baz=130,slow=37						
ARMA	Armidale	24.73	170	*e*P	P	01 09 00.3	-0.2
	comp=Z,82nm,1.6s						
DZM	Mont Dzumac	24.96	132	*e*P	P	01 08 54.0	-8.7
	comp=Z,255nm,26.6s						
DZM				*e*S	S	01 13 26.8	+3.9
DZM				*e*LQ	LQ	01 14 44.2	
DZM				*e*LR	LR	01 15 55.3	
	comp=Z,4μm,22.6s						
DZM	Mont Dzumac	24.96	132	*e*P	P	01 09 01.6	-1.1
DZM	Mont Dzumac	24.96	132	P	P	01 09 02.7	0.0
DZM	Mont Dzumac	24.96	132	P	P	01 09 02.7	0.0
	comp=Z,60nm,1.0s,baz=332,slow=6.8,SNR=13						
MRSI	Marisa	25.44	284	P	P	01 09 08.9	+1.9
	comp=Z,119nm,1.0s,comp=Z,1μm						
STKA	Stephens Creek	26.14	190	*e*P	P	01 09 11.2	-2.0
	comp=Z,9.4nm,0.8s						
STKA	Stephens Creek	26.14	190	P	P	01 09 12.9	-0.3
	comp=Z,42nm,0.8s,baz=350,slow=8.3,SNR=52						
STKA				LR	LR	01 20 43.0	
	comp=Z,4μm,18.4s,baz=12,slow=39						
WSI	Waingapu	26.29	260	P	P	01 09 16.1	+1.4
	comp=Z,827nm,0.9s						
BKSI	Bulukumba	26.34	270	P	P	01 09 14.9	-0.3
	comp=Z,56nm,1.0s,comp=Z,758nm						
KAPI	Kappang	26.73	271	*e*P	P	01 09 18.4	-0.3
	comp=Z,71nm,1.1s						
KAPI	Kappang	26.73	271	P	P	01 09 19.8	+1.1
	comp=Z,61nm,1.0s,comp=Z,856nm						
KAPI	Kappang	26.73	271	P	P	01 09 18.5	-0.3
	comp=Z,23nm,0.6s,baz=134,slow=7.2,SNR=12						
TTSI	Tana Toraja	26.84	275	P	P	01 09 22.4	+2.6
	comp=Z,94nm,1.4s,comp=Z,2μm						
BBOO	Buckleboo	28.40	199	*e*P	P	01 09 32.6	-0.8
	comp=Z,1μm,1.4s						
MBWA	Marble Bar	30.05	237	*e*P	P	01 09 47.0	-1.3
	comp=Z,31nm,1.0s						
FORT	Forrest	30.16	213	*e*P	P	01 09 48.6	-0.4
	comp=Z,42nm,0.9s						
MYLDM	Lahad Datu	30.17	291	P	P	01 09 52.6	+3.3
MYLDM	Lahad Datu	30.17	291	P	P	01 09 52.2	+2.8
	comp=Z,46nm,1.1s,comp=Z,1μm						
TSM	Tawau	30.45	289	P	P	01 09 53.3	+1.5
KKM	Kota Kinabalu	32.60	291	*e*P	P	01 10 10.5	-0.4
	comp=Z,8.0nm,0.5s						
KKM	Kota Kinabalu	32.60	291	P	P	01 10 10.5	-0.4
MSVF	Nonsavu	32.85	114	*e*P	P	01 10 15.0	+2.0
MSVF	Nonsavu	32.85	114	*e*P	P	01 10 15.0	+2.0
BTM	Bintulu	34.69	284	P	P	01 10 30.4	+1.5
SBUM	Sibu	35.34	283	P	P	01 10 36.5	+2.0
SBUM	Sibu	35.34	283	P	P	01 10 35.7	+1.2
	comp=Z,34nm,1.6s,comp=Z,544nm						
KSM	Kuching	36.98	280	*e*P	P	01 10 48.8	+0.2
	comp=Z,81nm,1.4s						
KSM	Kuching	36.98	280	P	P	01 10 50.2	+1.6
KSM	Kuching	36.98	280	P	P	01 10 51.2	+2.6
	comp=Z,51nm,1.5s,comp=Z,910nm						
JOW	Kunigami	37.17	332	*e*P	P	01 10 46.9	-3.0
	comp=Z,38nm,1.3s						
NWAO	Narrogin (SRO)	38.24	222	*e*P	P	01 10 58.1	-0.9
	comp=Z,24nm,0.9s						
CISI	Cisompet, Garu	38.52	265	P	P	01 11 03.7	+2.0
	comp=Z,120nm,0.8s						
TPUB	Ta-pu	38.63	320	*e*P	P	01 11 02.5	+0.1
	comp=Z,212nm,1.6s						
NACB	Ninganchiao	38.66	322	*e*P	P	01 11 03.0	+0.4
	comp=Z,330nm,1.5s						
TPI	Tanjungpandan	38.95	273	P	P	01 11 07.0	+1.8
	comp=Z,96nm,1.3s,comp=Z,914nm						
YHNB	Yeheng	39.16	322	*e*P	P	01 11 07.8	+0.9
	comp=Z,108nm,1.0s						
TATO	Taipei	39.32	323	*e*P	P	01 11 08.3	+0.2
	comp=Z,1μm,2.1s						
JNU	Nakatsue	41.69	340	*e*P	P	01 11 27.2	-0.4
	comp=Z,37nm,1.3s						
AFI	Afiamalu	41.70	104	LR	LR	01 25 59.5	
	comp=Z,1μm,21.5s,baz=270,slow=32						
KASI	Kota Agung	41.87	268	P	P	01 11 28.4	-1.0
	comp=Z,110nm,0.9s						
URZ	Urewera	42.38	144	*e*P	P	01 11 34.3	+1.2
URZ	Urewera	42.38	144	P	P	01 11 33.6	+0.4
	comp=Z,9.9nm,0.6s,baz=27,slow=4.6,SNR=7.2						
URZ				LR	LR	01 26 58.3	
	comp=Z,703nm,20.1s,baz=322,slow=33						
MJAR	Matsushiro Arr	43.06	350	P	P	01 11 37.9	-0.7
MJAR	Matsushiro Arr	43.06	350	P	P	01 11 37.9	-0.7
	comp=Z,14nm,1.0s,baz=180,slow=8.4,SNR=29						
MJAR				LR	LR	01 28 01.6	
	comp=Z,447nm,20.3s,baz=175,slow=34						
MAJO	Matsushiro	43.06	350	*e*P	P	01 11 38.0	-0.7
MAJO				pmax	pmax		
	comp=Z,66nm,1.5s						
MAJO	Matsushiro	43.06	350	*e*P	P	01 11 38.0	-0.7
	comp=Z,66nm,1.5s						
MAT	Matsushiro	43.06	350	P	P	01 11 37.6	-1.1
MAT				S	S	01 17 57.0	-3.9
RPZ	Rata Peaks	43.27	154	*e*P	P	01 11 41.8	+1.5
	comp=Z,45nm,0.9s						
RPZ	Rata Peaks	43.27	154	P	P	01 11 41.1	+0.8
	comp=Z,7.4nm,0.6s,baz=269,slow=11,SNR=6.4						
RPZ				LR	LR	01 28 19.8	
	comp=Z,952nm,18.3s,baz=318,slow=34						
QIZ	Qiongzhong	43.93	305	P	P	01 11 45.4	-0.6
QIZ				pP	pP	01 11 57.5	-2.4
QIZ				PP	PP	01 13 29.2	0.0
QIZ				S	S	01 18 14.5	+0.4
QIZ				sS	sS	01 18 37.7	+0.1
QIZ				SS	SS	01 21 34.2	+1.8
QIZ				LR	LR		
	comp=N,520nm,21.5s						
QIZ				LR	LR		
	comp=E,210nm,24.4s						
QIZ				LR	LR		
	comp=Z,1μm,25.6s						
KGM	Kluang	43.94	279	P	P	01 11 47.4	+1.3
SSE	Sheshan	44.18	328	*e*P	P	01 11 48.3	+0.6
SSE				pP	pP	01 12 02.0	+0.3
SSE				sP	sP	01 12 07.8	0.0
SSE				S	S	01 18 17.9	+0.6
SSE				sS	sS	01 18 40.8	0.0
SSE				pmax	pmax		
	comp=Z,39nm,0.8s						
SSE				pmax	pmax		
	comp=Z,97nm,4.1s						
SSE				LR	LR		
	comp=N,570nm,23.4s						
SSE				LR	LR		
	comp=E,320nm,23.4s						
SSE				LR	LR		
	comp=Z,770nm,24.4s						
MASI	Maura Aman, Be	44.29	272	P	P	01 11 48.3	-0.7
	comp=Z,147nm,0.6s						
FRIM	Kepong	45.83	280	P	P	01 12 02.2	+1.1
NJ2	Nanjing	46.17	327	*e*P	P	01 12 03.8	+0.3
NJ2				pP	pP	01 12 18.0	+0.4
NJ2				sP	sP	01 12 24.1	+0.4
NJ2				PP	PP	01 13 53.0	+0.3
NJ2				S	S	01 18 47.0	+0.9
NJ2				sS	sS	01 19 10.5	+0.8
NJ2				pmax	pmax		
	comp=Z,80nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,200nm,5.4s						
NJ2				LR	LR		
	comp=N,990nm,25.8s						
NJ2				LR	LR		
	comp=E,570nm,27.6s						
NJ2				LR	LR		
	comp=Z,1μm,25.5s						
PPI	Padang Panjang	46.43	275	P	P	01 12 05.9	+0.1
	comp=Z,64nm,0.9s,comp=Z,880nm						
KSRS	Korea Array	46.63	339	P	P	01 12 07.2	+0.2
	comp=Z,32nm,1.0s,baz=158,slow=9.1,SNR=99						
KSRS				LR	LR	01 29 43.1	
	comp=Z,1μm,20.4s,baz=159,slow=34						
KSAR	Wonju Array Be	46.63	339	P	P	01 12 07.2	+0.2
IPM	Ipoh	46.67	282	*e*P	P	01 12 08.3	+0.4
	comp=Z,34nm,0.9s						
IPM	Ipoh	46.67	282	P	P	01 12 10.3	+2.4
IPM	Ipoh	46.67	282	P	P	01 12 10.5	+2.7
	comp=Z,44nm,1.2s						
INCN	Inchon	47.12	338	*e*P	P	01 12 10.4	-0.4
KULM	Kulim	47.22	283	*e*P	P	01 12 11.4	-0.6
	comp=Z,45nm,1.1s						
KULM	Kulim	47.22	283	P	P	01 12 23.3	+11
MNSI	Mandailing Nat	47.41	277	P	P	01 12 14.4	+0.8
	comp=Z,50nm,0.7s,comp=Z,10μm						
WHN	Wuhan	47.70	322⇓	*i*P	P	01 12 16.7	+1.3
WHN				S	S	01 19 11.8	+3.9
WHN				pmax	pmax		
	comp=Z,410nm,6.8s						
WHN				LR	LR		
	comp=N,310nm,10.1s						
WHN				LR	LR		
	comp=E,1μm,19.2s						
WHN				LR	LR		
	comp=Z,940nm,17.9s						
PSI	Prapat	48.40	279	P	P	01 12 27.1	+5.8
	comp=Z,59nm,1.6s,comp=Z,1μm						
KCSI	Kotacane, Aceh	49.66	280	P	P	01 12 31.0	+0.1
	comp=Z,44nm,0.7s						
YUK	Yuzh-Kuril'sk	49.83	359*d*	*i*P	P	01 12 29.9	-1.6
YUK				*e**PP	pP	01 12 43.0	-2.7
YUK				*e*		01 14 25.6	
YUK				*e*PPP	PPP	01 15 26.5	
YUK				*i* S	S	01 19 34.3	-3.1
YUK				*i* *SS	sS	01 19 55.5	-5.7
DL2	Dalian	50.33	335	P	P	01 12 34.1	-1.4
DL2				S	S	01 19 43.5	-1.1
DL2				pmax	pmax		
	comp=Z,36nm,1.5s						
DL2				pmax	pmax		
	comp=Z,140nm,4.1s						
DL2				LR	LR		
	comp=N,310nm,17.4s						
DL2				LR	LR		
	comp=E,300nm,18.3s						
DL2				LR	LR		
	comp=Z,480nm,25.1s						
GYA	Guiyang	50.39	312	P	P	01 12 38.0	+1.7
GYA				pP	pP	01 12 51.2	+0.7
GYA				PP	PP	01 14 34.8	+2.4
GYA				ScP	ScP	01 17 45.0	-1.0
GYA				S	S	01 19 46.0	-0.1
GYA				sS	sS	01 20 11.2	+1.2
GYA				SS	SS	01 23 18.4	-2.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.0s						
GYA				LR	LR		
	comp=N,720nm,18.0s						
GYA				LR	LR		
	comp=E,670nm,19.0s						
GYA				LR	LR		
	comp=Z,780nm,18.9s						
ENH	Enshi	50.66	318	*e*P	P	01 12 37.6	-0.5
	comp=Z,144nm,1.6s						
KUR	Kuril'sk	51.04	1*d*	*i*P	P	01 12 40.4	-0.2
KUR				*i*		01 14 41.8	
KUR				*i* S	S	01 19 52.8	-1.3
KUR				pmax	pmax		
	comp=E,5.0nm,0.4s						
KUR				pmax	pmax		
	comp=N,27nm,1.3s						
KUR				pmax	pmax		
	comp=Z,154nm,1.3s						
KUR				pmax	pmax		
	comp=Z,226nm,1.2s						
USRK	Ussuriysk Arra	51.69	347	P	P	01 12 46.1	+0.6
	comp=Z,10nm,0.7s,baz=171,slow=7.4,SNR=24						
USRK				LR	LR	01 33 39.2	
	comp=Z,589nm,18.6s,baz=320,slow=35						
SNY	Shenyang	52.05	338	⇑P	P	01 12 47.8	-0.5
SNY				pP	pP	01 13 03.6	+1.0
SNY				S	S	01 20 10.2	+1.9
SNY				pmax	pmax		
	comp=Z,23nm,1.6s						
SNY				pmax	pmax		
	comp=Z,250nm,3.5s						
SNY				LR	LR		
	comp=N,490nm,20.2s						
SNY				LR	LR		
	comp=E,620nm,20.5s						
SNY				LR	LR		
	comp=Z,1μm,25.9s						
MDJ	Mudanjiang	52.68	345	P	P	01 12 53.4	+0.5
MDJ				pP	pP	01 13 06.7	-0.5
MDJ				sP	sP	01 13 12.9	-0.3
MDJ				PcP	PcP	01 14 02.2	0.0
MDJ				S	S	01 20 16.6	-0.1
MDJ				pmax	pmax		
	comp=Z,24nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,150nm,5.6s						
MDJ				LR	LR		
	comp=N,450nm,33.0s						
MDJ				LR	LR		
	comp=Z,650nm,29.0s						
MDJ	Mudanjiang	52.68	345	*e*P	P	01 12 52.9	0.0
	comp=Z,14nm,0.8s						
KMI	Kunming	52.69	308	P	P	01 12 54.8	+1.2
KMI				PP	PP	01 14 55.0	+1.6
KMI				S	S	01 20 22.4	+4.4
KMI				SS	SS	01 24 03.0	+5.7
KMI				pmax	pmax		
	comp=Z,32nm,1.3s						
KMI				LR	LR		
	comp=N,350nm,24.2s						
KMI				LR	LR		
	comp=E,450nm,25.4s						
KMI				LR	LR		
	comp=Z,900nm,25.0s						
YSS	Yuzh-Sakhalins	52.85	357	*e*P	P	01 12 56.0	+1.9
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
CM31	Chiang Mai Arr	52.90	298	*e*P	P	01 12 56.5	+1.4
	comp=Z,41nm,0.8s						
CMAR	Chiang Mai Arr	52.90	298	P	P	01 12 56.2	+1.2
CMAR				⇑*e*		01 43 38.5	
CMAR	Chiang Mai Arr	52.90	298	P	P	01 12 56.2	+1.2
	comp=Z,22nm,0.9s,baz=122,slow=5.9,SNR=67						
CMAR				LR	LR	01 33 35.2	
	comp=Z,456nm,20.1s,baz=308,slow=34						
CMAR				PKP2bc		01 43 38.5	
	comp=Z,1.4nm,0.4s,baz=271,slow=3.6,SNR=4.4						
CHTO	Chiang Mai	53.04	299	*e*P	P	01 12 57.0	+0.9
CHTO				pmax	pmax		
	comp=Z,44nm,1.1s						
CHTO	Chiang Mai	53.04	299	*e*P	P	01 12 57.0	+0.9
	comp=Z,44nm,1.1s						
CHTO	Chiang Mai	53.04	299	P	P	01 12 57.0	+0.9
	comp=Z,46nm,1.1s						
CN2	Changchun	53.15	341	*e*P	P	01 12 51.7	-4.7
CN2				*e*sP	sP	01 13 12.1	-4.6
CN2				*e*S	S	01 20 18.5	-4.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CN2				LR	LR		
	comp=N,500nm,20.0s						
CN2				LR	LR		
	comp=E,700nm,20.0s						
CN2				LR	LR		
	comp=Z,800nm,20.0s						
XAN	Xi'an	53.44	321	P	P	01 12 58.2	-0.6
XAN				S	S	01 20 25.6	-2.0
XAN				pmax	pmax		
	comp=Z,16nm,1.4s						
XAN				LR	LR		
	comp=N,280nm,24.3s						
XAN				LR	LR		
	comp=E,140nm,23.9s						
XAN				LR	LR		
	comp=Z,190nm,26.3s						
BJT	Baijiatuau	53.71	331	*e*P	P	01 13 00.3	-0.3
	comp=Z,162nm,1.5s						
RAR	Rarotonga	54.01	112	LR	LR	01 31 29.5	
	comp=Z,527nm,20.2s,baz=0.9,slow=31						
CD2	Chengdu	55.00	314	*e*P	P	01 13 10.5	+0.3
CD2				pP	pP	01 13 25.6	+1.0
CD2				sP	sP	01 13 31.9	+1.3
CD2				PcP	PcP	01 14 11.8	+0.4
CD2				PP	PP	01 15 16.5	+2.6
CD2				PcS	PcS	01 18 10.1	-1.4
CD2				S	S	01 20 48.0	-0.7
CD2				sS	sS	01 21 12.9	+0.1
CD2				ScS	ScS	01 22 51.7	-3.5
CD2				SS	SS	01 24 32.2	-1.1
CD2				pmax	pmax		
	comp=Z,30nm,1.2s						
CD2				pmax	pmax		
	comp=Z,140nm,7.2s						

CD2 LR LR
comp=N,500nm,19.2s
CD2 LR LR
comp=E,760nm,17.8s
CD2 LR LR
comp=Z,920nm,17.8s
HABR Khabarovsk 55.20 351 *e*P **P 01 13 09.7 -1.5**
HABR *e**PP **pP 01 13 23.4 -2.2**
HABR *e* 01 14 09.8
HABR *e* 01 15 13.5
HABR *e*S **S 01 20 50.2 -0.5**
HABR *e**SS **sS 01 21 13.6 -1.2**
HABR *e* 01 22 54.0
HABR *e*SS **SS 01 24 36.2 +0.5**
HABR pmax pmax
comp=E,185nm,3.1s
HABR pmax pmax
comp=Z,219nm,3.1s
HABR pmax pmax
comp=N,197nm,3.1s
HABR MLR MLR
comp=Z,407nm,17.0s
KLR Kul'dur 56.53 348 *e*P P 01 13 17.0 -3.7
KLR *e*S **S 01 21 06.5 -1.9**
KLR *e*SS SS 01 24 48.0 -8.6
KLR pmax pmax
comp=E,45nm,1.6s
KLR pmax pmax
comp=Z,140nm,1.6s
HHC Hu-ho-hao-te 56.64 329 *e*P **P 01 13 22.4 +0.6**
HHC pP **pP 01 13 38.4 +2.1**
HHC PP **PP 01 15 30.8 +2.4**
HHC PcS **PcS 01 18 16.7 -1.7**
HHC S **S 01 21 13.7 +3.3**
HHC sS **sS 01 21 36.5 +1.9**
HHC ScS **ScS 01 23 02.4 -4.4**
HHC SS **SS 01 24 58.9 0.0**
HHC pmax pmax
comp=Z,54nm,1.0s
HHC pmax pmax
comp=Z,320nm,5.0s
HHC LR LR
comp=N,600nm,18.1s
HHC LR LR
comp=E,460nm,16.5s
HHC LR LR
comp=Z,460nm,16.4s
BTO Baotou 57.27 327 *e*P **P 01 13 25.6 -0.8**
LZH Lanzhou 57.96 320 *e*P **P 01 13 32.1 +0.8**
LZH pP **pP 01 13 46.5 +0.7**
LZH S **S 01 21 28.0 0.0**
LZH sS **sS 01 21 49.5 -2.8**
LZH SS **SS 01 25 20.1 +0.1**
LZH pmax pmax
comp=Z,53nm,1.2s
LZH pmax pmax
comp=Z,170nm,4.0s
LZH LR LR
comp=N,230nm,13.4s
LZH LR LR
comp=E,660nm,15.6s
LZH LR LR
comp=Z,900nm,17.0s
PEA0B Petropavlovsk- 59.66 8 *e*P **P 01 13 41.3 -1.3**
PETK Petropavlovsk- 59.66 8 P **P 01 13 43.8 +1.3**
PETK Petropavlovsk- 59.66 8 P **P 01 13 43.8 +1.3**
PETK Petropavlovsk- 59.66 8 P **P 01 13 43.8 +1.3**
comp=Z,10nm,0.9s,baz=168,slow=7.6,SNR=13
IMP Imphal 59.67 303 *e*PKP **P 01 13 42.0 -1.3**
PET Petropavlovsk 59.71 8 *e*P P 01 13 49.2 +6.4
PET *e*S S 01 22 00.3 +11
PET pmax pmax
comp=Z,300nm,15.4s
HIA Hailar 59.83 340 *e*P **P 01 13 44.1 +0.2**
comp=Z,137nm,1.3s
DRV Dumont d'Urvil 60.71 183 P **P 01 13 48.0 -1.6**
DRV S S 01 21 53.0 -9.2
DRV L L 01 29 00.0
DRV R 01 35 00.0
KIP Kipapa 60.77 62⇓ *e*P **P 01 13 50.5 -0.3**
KIP pmax pmax
comp=Z,53nm,1.0s
SHL Shillong 61.69 303 *e*PKP **P 01 13 59.0 +1.8**
SHL *ex* x 01 22 21.0
GTA Gaotai 62.50 320 *e*P **P 01 14 02.7 +0.4**
GTA pP **pP 01 14 16.1 -0.8**
GTA sP **sP 01 14 22.4 -0.5**
GTA S **S 01 22 27.8 +1.8**
GTA sS **sS 01 22 48.7 -1.8**
GTA SS **SS 01 26 34.9 +3.9**
GTA pmax pmax
comp=Z,11nm,0.9s
GTA pmax pmax
comp=Z,180nm,5.2s
GTA LR LR
comp=N,290nm,16.2s
GTA LR LR
comp=E,360nm,21.9s
GTA LR LR
comp=Z,490nm,21.8s
FX1 Attu Island--F 62.86 18 *e*P **P 01 14 05.7 +1.4**
FX1 Attu Island--F 62.86 18 P **P 01 14 05.5 +1.3**
baz=164,slow=5.3
PPT Papeete 63.28 107 LR LR 01 36 57.3
comp=Z,431nm,19.4s,baz=263,slow=32
PPT2 Papeete2 63.28 107 *e*P P 01 14 13.2 +5.4
PPT2 *e*LQ LQ 01 30 06.5
comp=Z,587nm,25.5s
PPT2 *e*LR LR 01 33 55.7
comp=Z,1μm,27.2s
TIAR Tiarei 63.50 107 *e*P P 01 14 12.8 +3.6
AMKA Amchitka 63.69 22 *e*P **P 01 14 09.7 0.0**
comp=Z,14nm,0.8s
TBI Tubuai 63.74 113 *e*S S 01 22 48.2 +6.4
comp=Z,324nm,29.5s
TBI *e*LR LR 01 34 02.0
comp=Z,727nm,33.2s
LSA Lhasa 63.93 307 P **P 01 14 13.1 +0.8**
LSA pmax pmax
comp=Z,10.0nm,0.8s
LSA Lhasa 63.93 307 *e*P **P 01 14 12.9 +0.6**
LSA pmax pmax
comp=Z,22nm,0.9s
LSA Lhasa 63.93 307 *e*P **P 01 14 12.9 +0.6**
comp=Z,22nm,0.9s
ULN Ulaanbaatar 63.93 332 *e*P **P 01 14 12.0 +0.4**
comp=Z,142nm,2.0s
ULN Ulaanbaatar 63.93 332 P **P 01 14 11.7 +0.1**
comp=Z,28nm,1.8s,comp=Z,458nm
SONM Songino Array 64.22 331 P **P 01 14 13.7 +0.1**
SONM ⇑*e* 01 43 09.7
SONM Songino Array 64.22 331 P **P 01 14 13.7 +0.1**
comp=Z,15nm,1.2s,baz=146,slow=6.5,SNR=68
SONM LR LR 01 42 50.5
comp=Z,491nm,19.9s,baz=136,slow=37
SONM PKP2bc 01 43 09.7
comp=Z,2.1nm,0.9s,baz=328,slow=0.9,SNR=9.8
CIT Chita 64.32 338 *e*P **P 01 14 13.9 -0.1**
CIT *e* 01 14 20.0
CIT *e* 01 14 29.6
CIT pmax pmax
comp=Z,191nm,1.8s
PMOR Pomariorio Ree 64.84 104 *e*P **P 01 14 19.6 +1.6**
comp=Z,6.4nm,0.5s
CLNS Chul'man 65.11 347 *e*P **P 01 14 18.7 -0.3**
CLNS *e**PP pP 01 14 27.5 -6.2
CLNS *e* 01 14 46.5
CLNS *e* 01 16 41.9
CLNS *e*S **S 01 23 03.2 +5.5**
CLNS pmax pmax
comp=Z,52nm,1.2s
CLNS pmax pmax
comp=N,31nm,1.2s
CLNS pmax pmax
comp=E,11nm,1.0s
CLNS pmax pmax
comp=Z,3.0nm,1.0s
CLNS pmax pmax
comp=N,5.0nm,0.9s
CLNS pmax pmax
comp=E,3.0nm,1.0s
CLNS smax smax
comp=E,130nm,12.7s
CLNS smax smax
comp=N,65nm,9.8s

CLNS MLR MLR
comp=Z,189nm,17.0s
CLNS MLR MLR
comp=N,145nm,16.0s
CLNS MLR MLR
comp=E,260nm,17.0s
TAPN Taplejung 65.82 303 *e*P **P 01 14 24.6 +0.1**
comp=E,99nm,1.2s
ODAN Odare 65.91 303 *e*P **P 01 14 25.4 +0.4**
comp=E,94nm,1.0s
RAMN Ramite 66.61 303 *e*P **P 01 14 29.7 +0.2**
comp=E,68nm,1.0s
PALK Pallekele 67.05 280 *e*P **P 01 14 32.8 +0.5**
comp=E,22nm,1.0s
ZAK Zakamensk 67.46 332 *e*P **P**
ZAK pmax pmax **01 14 33.4 -0.9**
comp=Z,22nm,1.5s
GUN Gumba 67.54 303 *e*P **P 01 14 35.8 +0.3**
comp=Z,43nm,0.5s
PKI Pulchoki 67.81 303 *e*P **P 01 14 37.1 -0.1**
KKN Kakani 67.99 303 *e*P **P 01 14 38.3 +0.1**
comp=Z,49nm,1.0s
DMN Daman 68.08 303 *e*P **P 01 14 39.1 +0.3**
comp=Z,100nm,1.1s
TLY Talaya 68.18 333*c i*P **P 01 14 38.7 +0.1**
TLY *e*S **S 01 23 37.0 +2.1**
TLY pmax pmax
comp=Z,31nm,1.8s
TLY Talaya 68.18 333 P **P 01 14 38.7 +0.1**
comp=Z,65nm,0.9s,SNR=5.9
IRK Irkutsk 68.28 334 *e*P **P 01 14 39.0 -0.3**
IRK pmax pmax
comp=Z,37nm,0.7s
SEY Seymchan 68.90 3⇓ *i*P **P 01 14 43.5 +0.6**
YAK Yakutsk 69.10 352 *e*P **P 01 14 44.2 +0.1**
YAK *e**PP **pP 01 14 54.2 -4.7**
YAK *e* 01 15 05.2
YAK *e*S **S 01 23 45.9 +0.6**
YAK *e* 01 24 37.9
YAK pmax pmax
comp=Z,44nm,1.1s
YAK pmax pmax
comp=N,24nm,1.3s
YAK pmax pmax
comp=E,5.0nm,1.3s
YAK pmax pmax
comp=Z,20nm,0.8s
YAK pmax pmax
comp=N,8.0nm,1.0s
YAK smax smax
comp=E,104nm,2.3s
YAK smax smax
comp=N,58nm,2.3s
KOLN Koldanda 69.39 302 *e*P **P 01 14 46.9 0.0**
comp=N,34nm,0.7s
MOY Mondy 69.40 332 *e*P **P 01 14 46.5 +0.2**
MOY pmax pmax
comp=Z,50nm,1.8s
DANN Dangsing 69.45 303 *e*P **P 01 14 47.1 -0.3**
comp=Z,94nm,1.1s
PYUN Piuthan 70.01 303 *e*P **P 01 14 50.3 -0.4**
comp=Z,88nm,0.9s
HYB Hyderabad 71.08 291 *i*P **P 01 14 55.5 -1.8**
UNV Unalaska Valle 71.42 27 *e*P **P 01 14 59.0 +0.6**
comp=Z,56nm,1.1s
VNDA Vanda 71.91 177 *e*P **P 01 15 01.6 +0.6**
comp=Z,15nm,0.8s
VNDA Vanda 71.91 177 P **P 01 15 01.7 +0.6**
comp=Z,14nm,0.7s,baz=328,slow=6.5,SNR=90
VNDA LR LR 01 45 12.5
comp=Z,744nm,18.4s,baz=349,slow=35
WMQ Urumqi 72.54 319 P **P 01 15 04.9 -0.6**
WMQ pP **pP 01 15 21.0 +0.6**
WMQ PcP **PcP 01 15 24.5 +1.6**
WMQ PP **PP 01 17 49.0 +1.5**
WMQ S **S 01 24 25.0 -1.2**
WMQ SKS **SKSac 01 25 02.0 -4.2**
WMQ pmax pmax
comp=Z,14nm,1.2s
WMQ pmax pmax
comp=Z,180nm,5.3s
WMQ LR LR
comp=N,390nm,14.4s
WMQ LR LR
comp=E,450nm,24.0s
WMQ LR LR
comp=Z,500nm,25.2s
SBA Scott Base 72.57 176 *e*P **P 01 15 06.6 +1.6**
SBA pmax pmax
comp=Z,9.0nm,0.9s
SBA Scott Base 72.57 176 *e*P **P 01 15 06.6 +1.6**
comp=Z,8.5nm,0.9s
BILL Bilibino 75.19 8 *i*P **P 01 15 21.1 +0.7**
BILL pmax pmax
comp=Z,72nm,1.7s
RKT Rikitea 77.05 112 *e*S **S 01 25 14.7 -2.4**
comp=Z,326nm,25.8s
RKT *e*LQ LQ 01 35 51.7
RKT *e*LR LR 01 40 05.5
comp=Z,973nm,31.0s
MK31 Makanchi Array 77.25 321 *i*P **P 01 15 32.0 -0.6**
MK31 pmax pmax
comp=Z,4.0nm,0.5s
MKAR Makanchi Array 77.25 321 P **P 01 15 32.0 -0.6**
MKAR Makanchi Array 77.25 321 P **P 01 15 32.0 -0.6**
MKAR Makanchi Array 77.25 321 P **P 01 15 32.0 -0.6**
comp=Z,4.2nm,0.5s,baz=98,slow=8.3,SNR=54
MKAR LR LR 01 50 59.9
comp=Z,293nm,21.3s,baz=263,slow=37
TIXI Tiksi 78.39 354⇑ *i*P **P 01 15 37.8 -0.6**
TIXI pmax pmax
comp=Z,42nm,1.7s
ZAA0 Zalesovo Array 78.81 328 *e*P **P 01 15 38.8 -2.3**
ZALV Zalesovo Beam 78.81 328 P **P 01 15 39.4 -1.7**
ZALV Zalesovo Beam 78.81 328 P **P 01 15 39.4 -1.7**
ZALV Zalesovo Beam 78.81 328 P **P 01 15 39.4 -1.7**
comp=Z,8.0nm,0.5s,baz=113,slow=6.1,SNR=60
ZALV LR LR 01 51 46.9
comp=Z,474nm,19.7s,baz=71,slow=37
KSH Kashi 79.09 312 P **P 01 15 44.1 +1.0**
KSH *e*PcP **PcP 01 15 52.8 +1.4**
KSH *e*pP **pP 01 16 00.1 +2.0**
KSH *e*PP **PP 01 18 45.1 +2.1**
KSH *e*S **S 01 25 35.0 -3.7**
KSH *e*SKS **SKSac 01 25 49.1 -5.8**
KSH *e*ScS **SKKSac 01 25 57.5 +1.2**
KSH *es*S **sS 01 26 05.2 +1.1**
KSH pmax pmax
comp=Z,14nm,0.9s
KSH pmax pmax
comp=Z,170nm,5.9s
KSH LR LR
comp=N,180nm,7.5s
KSH LR LR
comp=E,240nm,5.4s
KSH LR LR
comp=Z,180nm,6.8s
OHAK Old Harbor 79.51 29 *e*P **P 01 15 45.1 +0.4**
comp=Z,61nm,1.4s
NVS Novosibirsk 80.04 328⇑ *i*P **P 01 15 45.5 -2.2**
NVS pmax pmax
comp=Z,43nm,1.9s
NVS pmax pmax
comp=N,23nm,1.6s
NVS pmax pmax
comp=E,14nm,1.6s
KDAK Kodiak Island 80.11 28 *e*P **P 01 15 48.5 +0.6**
comp=E,51nm,1.3s
KDAK Kodiak Island 80.11 28 P **P 01 15 48.6 +0.6**
comp=E,180nm,1.1s,SNR=5.1
KDAK Kodiak Island 80.11 28 P **P 01 15 49.1 +1.1**
comp=E,25nm,1.1s,baz=212,slow=1.1,SNR=10
KZA Kyzart 80.37 314 P **P 01 15 50.9 +0.6**
SNR=30
TKM2 Tokmak 2 80.37 315 *i*P **P 01 15 49.8 -0.3**
TKM2 Tokmak 2 80.37 315 P **P 01 15 49.8 -0.3**
SNR=11
KURK Kurchatov 80.98 323 *e*P **P 01 15 51.8 -1.1**
KURK 01 34 34.3
KURK pmax pmax
comp=Z,33nm,1.5s
KURK Kurchatov 80.98 323 *e*P **P 01 15 51.8 -1.1**
comp=Z,33nm,1.5s
KURK PKKPbc **PKKPbc 01 34 34.3 +1.8**
KURK Kurchatov 80.98 323 P **P 01 15 52.4 -0.4**
comp=Z,68nm,1.6s,SNR=8.3

KURBB Kurchatov Arra 81.00 323 P **P 01 15 52.0 -0.9**
comp=Z,2.5nm,0.6s,baz=125,slow=4.4,SNR=44
KURBB PKKPbc **PKKPbc 01 34 34.3 +1.9**
comp=Z,0.3nm,0.7s,baz=296,slow=3.0,SNR=5.2
AAK Ala-Archa 81.06 315 *e*P **P 01 15 53.5 -0.2**
AAK pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 81.06 315 *e*P **P 01 15 53.5 -0.2**
comp=Z,6.4nm,0.8s
AAK Ala-Archa 81.06 315 P **P 01 15 53.5 -0.2**
SNR=6.9
AAK Ala-Archa 81.06 315 P **P 01 15 53.2 -0.5**
comp=Z,2.9nm,0.5s,baz=108,slow=5.7,SNR=12
USP Ospenovka 81.24 315 P **P 01 15 54.2 -0.3**
SNR=6.9
RSO Redoubt South 81.32 26 *e*P **P 01 15 53.8 -0.9**
comp=Z,14nm,0.7s
AML Almayashu 81.49 314 P **P 01 15 56.5 +0.3**
SNR=17
EKS2 Erkin-Say 81.58 315 P **P 01 15 56.4 0.0**
SNR=9.6
MAW Mawson 82.07 203 P **P 01 15 57.8 -0.4**
MAW Mawson 82.07 203 P **P 01 15 57.8 -0.4**
comp=Z,19nm,0.9s,baz=80,slow=7.9,SNR=27
MAW LR LR 01 50 39.6
comp=Z,470nm,20.8s,baz=83,slow=34
SEW Seward 82.62 27 *e*P **P 01 16 00.3 -1.0**
comp=Z,19nm,0.8s
RC01 Rabbit Creek A 82.92 26 *e*P **P 01 16 02.5 -0.4**
comp=Z,18nm,0.6s
KBL Kabul 83.21 306 *e*P **P 01 16 03.5 -1.7**
KBL pmax pmax
comp=Z,8.0nm,0.6s
KBL Kabul 83.21 306 *e*P **P 01 16 03.5 -1.7**
comp=Z,7.6nm,0.6s
PMR Palmer 83.40 26 *e*P **P 01 16 04.1 -1.1**
PMR pmax pmax
comp=Z,65nm,1.5s
PMR Palmer 83.40 26 *e*P **P 01 16 04.1 -1.1**
comp=Z,65nm,1.5s
TRF Thorofare Moun 83.75 24 *e*P **P 01 16 04.9 -2.4**
comp=Z,8.8nm,0.8s
SML Sawmill 83.84 26 *e*P **P 01 16 06.9 -0.7**
SML pmax pmax
comp=Z,22nm,1.3s
SML Sawmill 83.84 26 *e*P **P 01 16 06.9 -0.7**
comp=Z,22nm,1.3s
QSPA South Pole Qui 83.94 180 *e*P **P 01 16 07.4 -0.8**
comp=Z,22nm,0.8s
QSPA South Pole Qui 83.94 180 LR LR 01 53 32.5
comp=Z,952nm,19.6s,baz=17,slow=36
KK31 Karatay Array 84.01 314 *i*P **P 01 16 06.6 -2.3**
KK31 pmax pmax
comp=Z,4.0nm,0.5s
KKAR Karatay Array 84.01 314 *e*P **P 01 16 08.0 -0.9**
KKAR pmax pmax
comp=Z,5.0nm,0.6s
KKAR Karatay Array 84.01 314 *e*P **P 01 16 08.0 -0.9**
comp=Z,5.3nm,0.6s
MCK McKinley 84.41 24 *e*P **P 01 16 09.5 -0.9**
MCK pmax pmax
comp=Z,109nm,1.4s
MCK McKinley 84.41 24 *e*P **P 01 16 09.5 -0.9**
comp=Z,109nm,1.4s
DIV Divide 84.69 27 *e*P **P 01 16 12.2 +0.2**
comp=Z,61nm,1.1s
COLA College 85.33 23 *e*P **P 01 16 13.8 -1.2**
COLA pmax pmax
comp=Z,46nm,1.2s
COLA College 85.33 23 *e*P **P 01 16 13.8 -1.2**
comp=Z,46nm,1.2s
ILAR Eielson Array 85.66 23 P **P 01 16 15.0 -1.7**
ILAR Eielson Array 85.66 23 P **P 01 16 15.0 -1.7**
comp=Z,12nm,0.6s,baz=253,slow=4.6,SNR=113
ILAR LR LR 01 52 01.2
comp=Z,651nm,20.2s,baz=272,slow=34
VOSK Vostochnaya 86.12 324 P **P 01 16 17.6 -1.6**
VOSK pmax pmax
comp=Z,7.0nm,1.1s
MENT Mentasta 86.26 25 *e*P **P 01 16 19.8 +0.1**
DOT Dot Lake 86.37 25 *e*P **P 01 16 19.8 -0.5**
comp=Z,69nm,1.3s
BVA0 Borovoye Array 86.55 324 *i*P **P 01 16 19.6 -1.7**
BVA0 pmax pmax
comp=Z,9.0nm,1.4s
BVAR Borovoye Array 86.55 324 P **P 01 16 19.7 -1.6**
BVAR Borovoye Array 86.55 324 P **P 01 16 19.7 -1.6**
BVAR Borovoye Array 86.55 324 P **P 01 16 19.7 -1.6**
comp=Z,2.8nm,0.4s,baz=110,slow=6.5,SNR=22
BRVK Borovoye 86.62 324*d i*P **P 01 16 20.4 -1.2**
BRVK pmax pmax
comp=Z,5.0nm,0.9s
BRVK Borovoye 86.62 324 *e*P **P 01 16 20.0 -1.6**
comp=Z,8.7nm,1.1s
PNL Peninsula 87.18 29 *e*P **P 01 16 24.7 +0.4**
comp=Z,72nm,1.2s
EGAK Eagle 87.95 24 *e*P **P 01 16 28.0 +0.2**
comp=Z,46nm,1.1s
SKAG Skagway 89.12 30 *e*P **P 01 16 34.0 +0.5**
comp=Z,96nm,1.8s
SYO Syowa Base 90.43 200⇑ *e*P **P 01 16 38.0 -1.4**
DLBC Dease Lake 91.63 32 *e*P **P 01 16 45.4 +0.1**
DLBC Dease Lake 91.63 32 P **P 01 16 45.0 -0.2**
comp=Z,1.9nm,0.5s,baz=230,slow=5.2,SNR=8.3
INK Inuvik 91.83 21 P **P 01 16 45.1 -0.7**
INK PKKPbc **PKKPbc 01 34 05.7 -1.2**
INK Inuvik 91.83 21 P **P 01 16 45.1 -0.7**
comp=Z,12nm,1.1s,baz=261,slow=5.6,SNR=27
INK PKKPbc **PKKPbc 01 34 05.7 -1.2**
comp=Z,0.5nm,0.6s,baz=289,slow=6.7,SNR=3.5
BBB Bella Bella 91.83 38 P **P 01 16 46.9 +0.8**
BBB Bella Bella 91.83 38 P **P 01 16 46.9 +0.8**
comp=Z,7.3nm,0.8s,baz=272,slow=6.1,SNR=4.0
AB31 Akbulak array 92.33 319 *i*P **P 01 16 46.4 -2.2**
ABKAR Akbulak array 92.33 319 *e*P **P 01 16 46.6 -2.0**
comp=Z,2.0nm,0.6s
KRMB Red Mountain 93.58 49 *e*P **P 01 16 54.7 0.0**
comp=Z,12nm,1.4s
KHMM Horse Mountain 93.66 49 *e*P **P 01 16 56.1 +1.0**
comp=Z,23nm,1.1s
KCPM Cahto Peak 93.67 51 *e*P **P 01 16 56.1 +0.9**
comp=Z,24nm,1.5s
AKTO Aktyubinsk 93.69 320 P **P 01 16 52.7 -2.1**
AKTO Aktyubinsk 93.69 320 P **P 01 16 52.7 -2.1**
AKTO Aktyubinsk 93.69 320 P **P 01 16 52.7 -2.1**
comp=Z,0.8nm,0.5s,baz=130,slow=3.4,SNR=5.6
KIPM Iron Peak 93.76 51 *e*P **P 01 16 55.3 -0.3**
comp=Z,33nm,1.4s
ARU Arti 93.88 326*d i*P **P 01 16 55.0 -0.5**
ARU 01 20 40.6
ARU S **SKSac 01 27 24.9 -0.9**
ARU pmax pmax
comp=Z,15nm,2.5s
HUMO Hull Mountain 94.37 48 *e*P **P 01 16 57.9 -0.3**
comp=Z,19nm,1.4s
YBH Yreka Blue Hor 94.49 49 *e*P **P 01 16 59.1 +0.3**
comp=Z,22nm,1.4s
YBH Yreka Blue Hor 94.49 49 P **P 01 16 58.9 +0.1**
comp=Z,10.0nm,1.1s,baz=171,slow=3.2,SNR=20
WDC Whiskeytown Da 94.53 50 *e*P **P 01 16 59.1 +0.2**
WDC pmax pmax
comp=Z,15nm,1.3s
WDC Whiskeytown Da 94.53 50 *e*P **P 01 16 59.1 +0.2**
comp=Z,15nm,1.3s
BEKR Beckworth 96.16 51 *e*P **P 01 17 06.3 -0.3**
comp=Z,12nm,1.6s
OPO Ambohidratompo 96.95 251 LR LR 01 59 28.5
comp=Z,409nm,18.5s,baz=158,slow=34
NVAR Mina Array Bea 97.70 52 P Pdif 01 17 14.1 +0.4
NVAR Mina Array Bea 97.70 52 P Pdif 01 17 14.1 +0.4
comp=Z,2.4nm,0.8s,baz=264,slow=4.2,SNR=4.0
NVAR LR LR 01 58 21.2
comp=Z,547nm,18.1s,baz=82,slow=34
MWC Mount Wilson 97.77 56 *e*P Pdif 01 17 15.2 +1.1
MWC pmax pmax
comp=Z,19nm,1.4s
MWC Mount Wilson 97.77 56 *e*P Pdif 01 17 15.2 +1.1
comp=Z,19nm,1.4s
NEW Newport 98.65 42 P Pdif 01 17 17.5 0.0
NEW Newport 98.65 42 P Pdif 01 17 17.5 0.0
comp=Z,3.2nm,0.7s,baz=283,slow=4.1,SNR=6.5
PFO Pinyon Flat Ob 99.09 57 LR LR 01 55 51.6
comp=Z,616nm,20.5s,baz=315,slow=32
YKA Yellowknife Ar 99.38 28 P **Pdif 01 17 20.4 0.0**
YKA PKKPbc PKKPbc 01 33 40.9 -5.4
YKA Yellowknife Ar 99.38 28 P **Pdif 01 17 20.4 0.0**
comp=Z,1.5nm,0.8s,baz=275,slow=4.6,SNR=8.0

YKA				PKKPbc	PKKPbc	01 33 40.8	-5.4
	comp=Z,0.6nm,0.3s,baz=104,slow=0.9,SNR=11						
SNAA	Sanae	99.91	189	ePdiff	Pdif	01 17 22.3	-0.4
SNAA	Sanae	99.91	189	esPdiff	sP	01 17 43.5	-0.4
SNAA	Sanae	99.91	189	ePP	PP	01 21 26.4	-1.0
SNAA	Sanae	99.91	189	LR	LR	02 03 44.9	
	comp=Z,318nm,18.0s,baz=324,slow=36						
PDAR	Pinedale Array	104.23	48	Pdif	Pdif	01 17 43.0	+0.2
PDAR				PP	PP	01 22 01.9	+0.5
PDAR	Pinedale Array	104.23	48	Pdiff	Pdif	01 17 43.0	+0.2
	comp=Z,1.4nm,0.8s,baz=259,slow=5.4,SNR=9.6						
PDAR				PP	PP	01 22 01.9	+0.5
	comp=Z,0.3nm,0.6s,baz=282,slow=4.5,SNR=3.5						
ARCES	ARCESS Array B	106.15	342	Pdif	Pdif	01 17 48.6	-1.7
ARCES	ARCESS Array B	106.15	342	Pdiff	Pdif	01 17 48.6	-1.7
	comp=Z,1.8nm,0.5s,baz=83,slow=10.0,SNR=8.1						
TXAR	Lajitas Array	110.13	61	PKiKP	PKiKP	01 22 09.6	-0.9
TXAR	Lajitas Array	110.13	61	PKiKP	PKiKP	01 22 09.6	-0.9
	comp=Z,0.5nm,0.7s,baz=215,slow=1.5,SNR=3.4						
ECSD	EROS Data Cent	113.38	45	ePKPdf	PKiKP	01 22 16.1	-0.1
WMOK	Wichita Mounta	113.61	55	ePKIKP	PKiKP	01 22 16.9	0.0
WMOK	Wichita Mounta	113.61	55	ePKPdf	PKiKP	01 22 16.9	0.0
BOSA	Boshof	113.89	235	PKiKP	PKiKP	01 22 17.4	-0.4
BOSA	Boshof	113.89	235	PKiKP	PKiKP	01 22 17.4	-0.4
	comp=Z,1.2nm,0.6s,baz=349,slow=3.2,SNR=4.0						
KOLS	Kolonicke sedl	116.62	322	ePKIKP	PKPdf	01 22 14.3	-8.0
KOLS	Kolonicke sedl	116.62	322	e	PKPdf	01 22 14.3	-8.0
STHS	Stebnicka Huta	117.04	323	ePKIKP	PKPdf	01 22 22.3	-0.8
STHS	Stebnicka Huta	117.04	323	ePKP	PKPdf	01 22 22.2	-0.8
CRVS	Cervenica-Dubn	117.12	323	ePKIKP	PKPdf	01 22 27.1	+3.9
CRVS	Cervenica-Dubn	117.12	323	ePKP	PKPdf	01 22 27.1	+3.9
OKC	Ostrava-Krasne	118.67	325	AMS	AMS	02 21 50.0	
	comp=Z,200nm,19.1s						
TREC	Trest	120.45	325	AMS	AMS	02 19 50.0	
	comp=Z,400nm,22.8s						
PRU	Pruhonice	120.63	326	AMS	AMS	02 17 00.0	
	comp=Z,400nm,18.9s						
CLL	Collm	120.77	328	eP	Pdif	01 18 55.0	-0.7
CLL				e		01 22 27.0	
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CLL				MLR	MLR		
	comp=Z,300nm,20.0s						
CLL	Collm	120.77	328	ePdif	Pdif	01 18 55.0	-0.7
CLL				ePKPdf	PKPdf	01 22 27.0	-3.1
	comp=Z,5.0nm,1.1s						
CLL				ePP	PP	01 23 58.0	-0.4
CLL				e(SP)		01 33 30.0	
CLL				ePPS	PPS	01 35 30.0	
CLL				eSS	SS	01 40 18.0	-7.0
CLL				LmV		02 21 00.0	
	comp=Z,300nm,20.0s						
KHC	Kasperske Hory	121.61	326	ePP	PP	01 24 03.1	-1.2
KHC				AMS	AMS	02 18 00.0	
	comp=Z,500nm,19.9s						
NKC	Novy Kostel	121.65	327	AMS	AMS	02 18 30.0	
	comp=Z,500nm,17.2s						
GERES	GERESS Array B	121.69	325	PKP	PKPdf	01 22 31.3	-0.8
GERES				PKKPbc	PKKPbc	01 32 36.1	+3.1
GERES	GERESS Array B	121.69	325	PKP	PKPdf	01 22 31.3	-0.8
	comp=Z,0.7nm,0.5s,baz=90,slow=2.0,SNR=9.1						
GERES				PKKPbc	PKKPbc	01 32 36.1	+3.1
	comp=Z,0.2nm,0.4s,baz=270,slow=4.0,SNR=3.7						
PLCA	Paso Flores	122.33	147	PKP	PKPdf	01 22 34.5	+0.8
PLCA	Paso Flores	122.33	147	PKP	PKPdf	01 22 34.5	+0.8
	comp=Z,4.5nm,0.6s,baz=180,slow=3.4,SNR=9.2						
LRAL	Lakeview Retre	123.54	54	ePKPdf	PKPdf	01 22 35.1	-0.9
TSUM	Tsumeb	123.88	242	ePKPdf	PKPdf	01 22 37.6	+0.4
SCHQ	Schefferville	124.42	23	PKP	PKPdf	01 22 35.1	-2.0
SCHQ	Schefferville	124.42	23	PKP	PKPdf	01 22 35.1	-2.0
	comp=Z,2.2nm,0.8s,baz=321,slow=6.5,SNR=2.8						
SADO	Sadowa	124.59	38	PKP	PKPdf	01 22 36.1	-1.6
SADO	Sadowa	124.59	38	PKP	PKPdf	01 22 36.1	-1.6
	comp=Z,3.2nm,0.7s,baz=1.2,slow=2.3,SNR=3.9						
CPCT	Cooper Cave	124.75	51	ePKPdf	PKPdf	01 22 38.0	-0.3
EKA	Eskdalemuir Ar	125.20	339	PKP	PKPdf	01 22 37.8	-0.7
EKA	Eskdalemuir Ar	125.20	339	PKP	PKPdf	01 22 37.8	-0.7
	comp=Z,0.8nm,0.6s,baz=31,slow=3.9,SNR=3.7						
TKL	Tuckaleechee C	125.25	50	PKP	PKPdf	01 22 37.9	-1.4
TKL	Tuckaleechee C	125.25	50	PKP	PKPdf	01 22 37.9	-1.4
	comp=Z,7.1nm,0.7s,baz=146,slow=4.0,SNR=14						
SSPA	Standing Stone	127.42	42	ePKPdf	PKPdf	01 22 43.4	+0.1
LPAZ	La Paz	139.12	123	PKPpre	PKPpre	01 22 59.2	
LPAZ				ePKPdf	PKPdf	01 23 07.6	+1.0
LPAZ				PKP	PKiKP	01 23 08.3	-0.6
LPAZ				SKPbc	SKiKP	01 26 40.3	-0.5
LPAZ	La Paz	139.12	123	PKhKP	PKPpre	01 22 59.2	
	comp=Z,5.4nm,0.9s,baz=218,slow=2.1,SNR=17						
LPAZ				PKP	PKiKP	01 23 08.3	-0.6
	comp=Z,7.6nm,0.7s,baz=243,slow=2.1,SNR=20						
LPAZ				SKPbc	SKiKP	01 26 40.3	-0.5
	comp=Z,6.8nm,1.0s,baz=318,slow=1.0,SNR=8.1						
ROSC	El Rosal	139.26	90	PKPpre	PKPpre	01 22 59.7	
ROSC	El Rosal	139.26	90	PKhKP	PKPpre	01 22 59.7	
	comp=Z,6.0nm,0.4s,baz=104,slow=14,SNR=4.3						
CPUP	Villa Florida	140.35	145	PKPpre	PKPpre	01 23 00.8	
CPUP				SKPbc	SKiKP	01 26 42.7	+0.4
CPUP	Villa Florida	140.35	145	PKhKP	PKPpre	01 23 00.8	
	comp=Z,0.7nm,0.5s,baz=197,slow=5.5,SNR=4.0						
CPUP				SKPbc	SKiKP	01 26 42.7	+0.4
	comp=Z,4.5nm,1.0s,baz=248,slow=8.1,SNR=3.5						
TOA0	Torodi Ar. Sit	144.70	284	ePKPdf	PKPbc	01 23 14.9	+0.1
TORD	Torodi Ar. Bea	144.70	284	PKP	PKPab	01 23 14.6	-0.1
TORD				SKPbc	SKiKP	01 26 52.6	+1.0
TORD	Torodi Ar. Bea	144.70	284	PKP	PKPab	01 23 14.6	-0.1
	comp=Z,33nm,0.7s,baz=45,slow=3.9,SNR=336						
TORD				SKPbc	SKiKP	01 26 52.6	+1.0
	comp=Z,3.0nm,0.8s,baz=25,slow=1.2,SNR=4.1						
SAML	Samuel	146.81	116	ePKPdf	PKPdf	01 23 19.8	+0.3
SPB	Sao Paulo	147.54	156	ePKPbc	PKPbc	01 23 23.3	+0.2
DBIC	Dimbokro	151.61	273	ePKPbc	PKPbc	01 23 34.1	+0.6
DBIC	Dimbokro	151.61	273	PKPbc	PKPbc	01 23 33.7	+0.2
	comp=Z,43nm,0.7s,baz=71,slow=2.5,SNR=69						
BDFB	Brasilia	154.07	146	PKP	PKPdf	01 23 30.7	-0.2
BDFB				PKPbc	PKiKP	01 23 39.2	+0.2
BDFB	Brasilia	154.07	146	PKP	PKPdf	01 23 30.7	-0.2
	comp=Z,7.9nm,0.9s,baz=352,slow=1.6,SNR=7.4						
BDFB				PKPbc	PKiKP	01 23 39.2	+0.2
	comp=Z,6.7nm,0.7s,baz=191,slow=3.9,SNR=10						

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*BJI **04** 01:16:45.8, 6°.99S×147°.51E, h41km, mB5.0/16, mb4.8/18, Ms4.9/11, Ms7 4.5/12*

*IDC **04** 01:16:52.0±2.8, 6°.04S×146°.66E, h20km±17km, mb4.2/19, mb1 4.4/22, mb1mx4.3/24, mbtmp4.2/22, ML3.6/3, MS4.1/3, Ms1 4.0/3, ms1mx3.5/27, Error ellipse: s-maj=18.0km s-min=10.3km az=100.0*

*ISCJB **04** 01:16:54.5±0.3, 6°.15S±0°.04×146°.63E±0°.06, h52km, mb4.5/35, MS4.2/6, Error ellipse: s-maj=8.8km s-min=5.5km az=179.4*

*NEIC **04** 01:16:56.5±1.0, 6°.14S×146°.62E, h59km±10km, mb4.6/11, Error ellipse: s-maj=8.9km s-min=6.8km az=135.0*

ISC 04 01:16:56.2±0.4**, 6°.11S**±0°.05×**146°.66E**±0°.07**, h52km, n82, σ1s.61**/111**, mb4.6**/33**, MS4.2**/6**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.31	171	ePn	Pn	01 17 46.2	+0.6
PMG				eS	Sn	01 18 27.8	+4.1
PMG	Port Moresby	3.31	171	Pn	Pn	01 17 45.7	+0.1
	20nm,0.3s,baz=121,slow=4.5,SNR=21						
PMG				Sn	Sn	01 18 25.3	+1.6
	27nm,0.3s,baz=331,slow=16,SNR=11						
COEN	Coen	8.52	203	ePn	Pn	01 18 57.0	0.0
COEN				eS	Sn	01 20 29.3	-2.5
HNR	Honiara	13.57	105	Pn	Pn	01 20 06.7	+0.5
CTA	Charters Tower	13.90	182	Pn	Pn	01 20 09.8	-0.8
CTA	Charters Tower	13.90	182	Pn	Pn	01 20 09.8	-0.8
	0.4nm,0.3s,baz=358,slow=14,SNR=2.7						
CTAO	Charters Tower	13.90	182	ePn	Pn	01 20 09.1	-1.5
WRAB	Tennant Creek	18.22	220	ePn	P	01 21 04.0	-1.3
	35nm,1.3s						
WRA	Warramunga Arr	18.23	220	P	P	01 21 04.1	-1.3
WRA				ScP	ScP	01 29 10.8	+3.2
WRA	Warramunga Arr	18.23	220	P	P	01 21 04.1	-1.3
	0.2nm,0.3s,baz=40,slow=11,SNR=7.1						
WRA				ScP	ScP	01 29 10.8	+3.2
	0.1nm,0.3s,baz=34,slow=2.3,SNR=9.0						
AS31	Alice Springs	21.34	214	eP	P	01 21 39.4	+0.3
ASAR	Alice Springs	21.34	214	P	P	01 21 39.3	+0.1
ASAR				S	S	01 25 36.1	+2.7
ASAR				ScP	ScP	01 29 19.0	+4.2
ASAR	Alice Springs	21.34	214	P	P	01 21 39.3	+0.1
	7.0nm,0.8s,baz=48,slow=7.7,SNR=29						
ASAR				S	S	01 25 36.1	+2.7
	1.1nm,0.8s,baz=30,slow=17,SNR=5.5						
ASAR				ScP	ScP	01 29 19.0	+4.2
	2.8nm,0.9s,baz=53,slow=2.9,SNR=11						
FITZ	Fitzroy Crossi	23.73	238	eP	P	01 22 02.3	-1.5
	26nm,0.8s						
FITZ	Fitzroy Crossi	23.73	238	P	P	01 22 02.6	-1.2
	14nm,0.7s,baz=73,slow=6.1,SNR=27						
FITZ				LR	LR	01 32 28.1	
	comp=Z,416nm,18.1s,baz=54,slow=39						
DZM	Mont Dzumac	24.84	132	P	P	01 22 13.3	-0.8
DZM	Mont Dzumac	24.84	132	P	P	01 22 13.3	-0.8
	18nm,0.9s,baz=355,slow=12,SNR=5.0						
STKA	Stephens Creek	26.07	190	eP	P	01 22 24.6	-0.4
STKA	Stephens Creek	26.07	190	P	P	01 22 24.9	-0.1
	2.8nm,0.7s,baz=132,slow=1.0,SNR=7.1						
STKA				LR	LR	01 31 54.2	
	comp=Z,504nm,19.4s,baz=155,slow=34						
KAPI	Kappang	26.80	271	P	P	01 22 32.1	+0.2
KAPI	Kappang	26.80	271	P	P	01 22 32.1	+0.2
	17nm,0.9s,baz=90,slow=7.0,SNR=6.5						
JNU	Nakatsue	41.80	340	LR	LR	01 39 02.5	
	comp=Z,152nm,19.1s,baz=238,slow=32						
NJ2	Nanjing	46.29	327	eP	P	01 25 18.1	+1.2
NJ2				pmax	pmax		
	comp=Z,20nm,1.1s						
KSRS	Korea Array	46.74	339	P	P	01 25 20.2	0.0
	comp=Z,3.8nm,0.8s,baz=152,slow=8.8,SNR=16						
KSAR	Wonju Array Be	46.74	339	P	P	01 25 20.2	0.0
GYA	Guiyang	50.51	312	P	P	01 25 51.6	+2.0
GYA				pP	pP	01 26 04.3	+0.7
GYA				sP	sP	01 26 10.2	+0.6
GYA				PP	PP	01 27 48.3	+2.4
GYA				ScP	ScP	01 30 59.8	+0.8
GYA				S	S	01 33 01.2	+1.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,5.2s						
GYA				LR	LR		
	comp=N,420nm,18.5s						
GYA				LR	LR		
	comp=E,370nm,19.4s						
GYA				LR	LR		
	comp=Z,480nm,18.8s						
USRK	Ussuriysk Arra	51.80	347	P	P	01 25 58.8	0.0
	comp=Z,2.2nm,0.6s,baz=190,slow=4.0,SNR=6.7						
KMI	Kunming	52.80	308	P	P	01 26 08.5	+1.6
KMI				pP	pP	01 26 20.5	-0.5
KMI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CMAR	Chiang Mai Arr	53.01	298	P	P	01 26 08.0	-0.3
CMAR	Chiang Mai Arr	53.01	298	P	P	01 26 08.0	-0.3
	comp=Z,2.9nm,0.5s,baz=120,slow=6.2,SNR=7.1						
CN2	Changchun	53.26	341	eP	P	01 26 12.5	+2.9
CD2	Chengdu	55.11	314	eP	P	01 26 24.5	+1.0
CD2				sP	sP	01 26 43.2	-0.4
CD2				PP	PP	01 28 30.1	+2.8
CD2				S	S	01 34 02.8	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,20nm,6.2s						
CD2				LR	LR		
	comp=E,150nm,14.3s						
CD2				LR	LR		
	comp=Z,180nm,15.5s						
HHC	Hu-ho-hao-te	56.75	329	eP	P	01 26 37.1	+2.0
HHC				pP	pP	01 26 49.8	+0.5
HHC				sP	sP	01 26 55.1	-0.2
HHC				PP	PP	01 28 45.1	+3.2
HHC				PcS	PcS	01 31 32.6	+1.2
HHC				S	S	01 34 25.2	+0.8
HHC				ScS	ScS	01 36 18.8	-1.3
HHC				pmax	pmax		
	comp=Z,33nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
HHC				LR	LR		
	comp=N,150nm,14.9s						
HHC				LR	LR		
	comp=E,320nm,16.3s						
HHC				LR	LR		
	comp=Z,210nm,15.2s						
LZH	Lanzhou	58.08	320	eP	P	01 26 45.0	+0.4
LZH				pP	pP	01 26 57.0	-1.9
LZH				sP	sP	01 27 02.9	-1.9
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
PETK	Petropavlovsk-	59.73	8	P	P	01 26 55.4	-0.1
PETK	Petropavlovsk-	59.73	8	P	P	01 26 55.4	-0.1
	comp=Z,3.3nm,0.6s,baz=166,slow=9.2,SNR=5.3						
FX1	Attu Island--F	62.92	18	eP	P	01 27 17.6	+0.5
ULN	Ulaanbaatar	64.05	331	eP	P	01 27 25.0	+0.2
	comp=Z,3.1nm,0.7s						
SONM	Songino Array	64.34	331	P	P	01 27 26.8	+0.1
SONM	Songino Array	64.34	331	P	P	01 27 26.8	+0.1
	comp=Z,2.8nm,0.9s,baz=140,slow=5.3,SNR=12						
VNDA	Vanda	71.82	177	eP	P	01 28 13.3	+0.3
	comp=Z,2.3nm,0.9s						
VNDA	Vanda	71.82	177	P	P	01 28 13.6	+0.6
	comp=Z,1.7nm,0.8s,baz=322,slow=5.5,SNR=8.3						
WMQ	Urumqi	72.66	319	eP	P	01 28 19.0	+0.3
MK31	Makanchi Array	77.37	321	eP	P	01 28 45.8	0.0
MKAR	Makanchi Array	77.37	321	P	P	01 28 44.7	-1.0
MKAR	Makanchi Array	77.37	321	P	P	01 28 44.7	-1.0
	comp=Z,0.9nm,0.7s,baz=99,slow=8.1,SNR=10.0						
ZALV	Zalesovo Beam	78.93	328	P	P	01 28 52.0	-2.1
ZALV	Zalesovo Beam	78.93	328	P	P	01 28 52.0	-2.1
	comp=Z,1.2nm,0.5s,baz=119,slow=6.2,SNR=6.5						
KSH	Kashi	79.20	312	eP	P	01 28 55.1	-1.0
KSH				ePcP	PcP	01 29 04.1	-0.2
KSH				epP	pP	01 29 08.2	-2.8
KSH				esP	sP	01 29 13.5	-3.3
KSH				eSKS	SKSac	01 39 01.2	-7.0
KSH				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,300nm,8.0s						
KSH				LR	LR		
	comp=N,120nm,4.8s						
KSH				LR	LR		
	comp=E,270nm,5.0s						
KSH				LR	LR		
	comp=Z,330nm,7.3s						
KURK	Kurchatov	81.10	323	P	P	01 29 04.6	-1.3
KURBB	Kurchatov Arra	81.12	323	P	P	01 29 04.6	-1.4
	comp=Z,0.2nm,0.4s,baz=111,slow=5.0,SNR=4.6						
MAW	Mawson	82.02	203	P	P	01 29 09.3	-1.2
MAW	Mawson	82.02	203	P	P	01 29 09.3	-1.2
	comp=Z,3.1nm,0.9s,baz=131,slow=4.1,SNR=3.7						
RC01	Rabbit Creek A	82.97	26	eP	P	01 29 15.1	-0.4
	comp=Z,22nm,1.4s						
QSPA	South Pole Qui	83.86	180	eP	P	01 29 19.7	-0.5
	comp=Z,7.1nm,1.2s						
SML	Sawmill	83.89	26	eP	P	01 29 20.0	-0.3
	comp=Z,3.5nm,1.1s						
MCK	McKinley	84.47	24	eP	P	01 29 22.2	-0.9
	comp=Z,40nm,2.0s						
COLD	Coldfoot	85.56	20	eP	P	01 29 29.0	+0.5
	comp=Z,9.2nm,1.6s						
ILAR	Eielson Array	85.72	23	P	P	01 29 27.6	-1.7
ILAR	Eielson Array	85.72	23	P	P	01 29 27.6	-1.7
	comp=Z,3.6nm,0.7s,baz=252,slow=5.0,SNR=42						
BVAR	Borovoye Array	86.66	324	P	P	01 29 33.7	-0.6
BVAR	Borovoye Array	86.66	324	P	P	01 29 33.7	-0.6
	comp=Z,0.6nm,0.5s,baz=114,slow=7.2,SNR=6.0						
INK	Inuvik	91.88	21	P	P	01 29 57.5	-0.9
INK	Inuvik	91.88	21	P	P	01 29 57.5	-0.9
	comp=Z,3.5nm,1.1s,baz=258,slow=8.4,SNR=6.0						
KHMM	Horse Mountain	93.66	49	eP	P	01 30 08.9	+1.4
	comp=Z,5.5nm,1.0s						
YBH	Yreka Blue Hor	94.49	49	eP	P	01 30 10.2	-1.1
	comp=Z,2.2nm,0.9s						
NVAR	Mina Array Bea	97.70	52	P	Pdif	01 30 27.2	+1.1
NVAR	Mina Array Bea	97.70	52	P	Pdif	01 30 27.2	+1.0
	comp=Z,0.8nm,0.6s,baz=254,slow=7.1,SNR=4.0						
YKA	Yellowknife Ar	99.42	28	P	Pdif	01 30 31.9	-1.0
YKA	Yellowknife Ar	99.42	28	P	Pdif	01 30 31.9	-1.0
	comp=Z,0.9nm,0.6s,baz=275,slow=4.7,SNR=5.8						
PDAR	Pinedale Array	104.24	48	Pdif	Pdif	01 30 55.6	+0.5
PDAR	Pinedale Array	104.24	48	Pdiff	Pdif	01 30 55.6	+0.5
	comp=Z,0.5nm,0.7s,baz=241,slow=4.9,SNR=4.3						
LPAZ	La Paz	139.00	123	PKPpre	PKPpre	01 36 12.1	
LPAZ				ePKPdf	PKiKP	01 36 19.8	-1.3
LPAZ	La Paz	139.00	123	PKhKP	PKPpre	01 36 12.1	
	comp=Z,1.7nm,0.8s,baz=188,slow=1.5,SNR=8.9						
LPAZ				PKP	PKiKP	01 36 19.8	-1.3
	comp=Z,2.8nm,0.6s,baz=188,slow=1.8,SNR=11						
TOA0	Torodi Ar. Sit	144.79	284	ePKPdf	PKPab	01 36 27.1	-0.3
TORD	Torodi Ar. Bea	144.79	284	PKP	PKPab	01 36 27.2	-0.3
TORD	Torodi Ar. Bea	144.79	284	PKP	PKPab	01 36 27.2	-0.3
	comp=Z,7.7nm,0.8s,baz=74,slow=2.9,SNR=42						
SAML	Samuel	146.70	116	ePKPdf	PKPbc	01 36 32.3	-1.1
DBIC	Dimbokro	151.69	273	PKPbc	PKPbc	01 36 45.0	-1.0
DBIC	Dimbokro	151.69	273	PKPbc	PKPbc	01 36 45.0	-1.0
	comp=Z,5.5nm,0.8s,baz=132,slow=4.6,SNR=5.8						
BDFB	Brasilia	153.95	146	PKP	PKPdf	01 36 43.1	-0.1
BDFB				PKPbc	PKiKP	01 36 51.6	+0.4
BDFB	Brasilia	153.95	146	PKP	PKPdf	01 36 43.1	-0.1
	comp=Z,2.4nm,0.8s,baz=164,slow=12,SNR=3.3						
BDFB				PKPbc	PKiKP	01 36 51.6	+0.4
	comp=Z,3.1nm,0.6s,baz=165,slow=3.5,SNR=5.4						

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*IDC **04** 01:42:42.7±0.8, 3°.28S×100°.28E, h0km, mb4.6/15, mb1 4.7/16, mb1mx4.5/26, mbtmp4.6/16, ML4.6/1, MS3.9/6, Ms1 3.9/6, ms1mx3.4/39, Error ellipse: s-maj=31.0km s-min=13.2km az=48.0*

*ISCJB **04** 01:42:46.2±0.8, 3°.26S±0°.05×100°.29E±0°.06, h34km±6km, mb4.7/36, MS4.1/16, Error ellipse: s-maj=12.6km s-min=5.4km az=143.8*

*BJI **04** 01:42:46.5, 3°.20S×100°.20E, h30km, mB5.0/15, mb4.8/35, Ms4.6/20, Ms7 4.2/20*

*NEIC **04** 01:42:46.6±3.6, 3°.23S×100°.33E, h25km±23km, mb4.5/12, Error ellipse: s-maj=17.8km s-min=5.4km az=51.0*

*DJA **04** 01:42:49.4±5.0, 3°S±6°×10°0E±°, h37km±60km, M4.9/15, mb4.9/10, mB5.5/4, MLv4.9/15, Mw(mB)4.9/4*

ISC 04 01:42:47.5±0.6**, 3°.35S**±0°.05×**100°.15E**±0°.07**, h34km**±1km**, h34km:pP-P, n104, σ1s.29**/136**, mb4.7**/36**, MS4.0**/16**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	2.10	84	P	Pn	01 43 18.4	-1.8
MASI				S	Sn	01 43 32.3	-13
MBSI	MBSI	2.15	101	P	Pn	01 43 20.4	-0.6
MBSI				S	Sn	01 43 29.4	-17
KSI	Kapahiang	2.46	97	P	Pn	01 43 23.4	-1.8
KSI				S	Sn	01 43 37.5	-17
PPI	Padang Panjang	2.88	5	P	Pn	01 43 28.8	-2.2
PPI				S	Sb	01 44 13.9	+0.8
MNAI	Manna	2.97	110	P	Pn	01 43 31.9	-0.4
MNAI				S	Sn	01 43 42.4	-24
RGRI	Rengat	3.69	36	P	Pn	01 43 40.9	-1.3
BKNI	Bangkinang	3.76	14	P	Pn	01 43 47.8	+4.7
MNSI	Mandailing Nat	4.16	352	P	Pn	01 43 48.8	+0.2
LWLI	Liwa	4.24	113	P	Pn	01 43 49.6	-0.1
KASI	Kota Agung	4.84	117	P	Pn	01 43 57.3	-0.7
BLSI	Bandar Lampung	5.46	112	P	Pn	01 44 06.7	+0.2
	170nm,0.5s,0.8nm						
BTDF	Bukit Timah Da	5.92	38	P	Pn	01 44 20.3	+7.5
PSI	Prapat	6.23	349	P	Pn	01 44 17.5	+0.3
	42nm,1.1s,0.1nm						
MYKOM	Kota Tinggi	6.30	36	P	Pn	01 44 15.7	-2.4
	82nm,1.2s,879nm0.5nm						
KCSI	Kotacane, Aceh	7.23	341	P	Pn	01 44 31.2	+0.4
	39nm,1.0s,1μm0.3nm						
DBJI	Dramaga	7.30	116	P	Pn	01 44 32.2	+0.4
	112nm,0.8s,0.5nm						
IPM	Ipoh	7.83	6	ePn	Pn	01 44 39.0	-0.1
IPM	Ipoh	7.83	6	P	Pn	01 44 38.9	-0.1
	42nm,1.2s,0.2nm						
LEM	Lembang	8.20	115	P	Pn	01 44 44.5	+0.2
	107nm,0.9s						
KULM	Kulim	8.60	3	ePn	Pn	01 44 47.5	-2.0
KULM	Kulim	8.60	3	P	Pn	01 44 47.6	-2.0
	39nm,0.9s						
CISI	Cisompet, Garu	8.70	119	P	Pn	01 44 49.0	-2.0
SJI	Sawahan	12.35	111	P	Pn	01 45 33.9	-7.2
SBUM	Sibu	13.37	65	P	P	01 46 04.3	+0.3
KKM	Kota Kinabalu	18.56	60	eP	P	01 46 59.4	-2.3
	10nm,0.6s						
KAPI	Kappang	19.62	96	eP	P	01 47 11.6	-1.6
	32nm,1.0s						
KAPI	Kappang	19.62	96	P	P	01 47 11.6	-1.6
	1.9nm,0.3s,baz=275,slow=8.8,SNR=13						
CMAR	Chiang Mai Arr	21.70	357	P	P	01 47 33.8	-1.9
CMAR	Chiang Mai Arr	21.70	357	P	P	01 47 33.8	-1.9
	7.0nm,0.9s,baz=185,slow=10,SNR=20						
CMAR				LR	LR	01 57 36.1	
	comp=Z,156nm,18.9s,baz=170,slow=41						
CHTO	Chiang Mai	22.06	357	eP	P	01 47 38.4	-1.1
	9.3nm,1.2s						
QIZ	Qiongzhong	24.20	23	P	P	01 48 01.2	+0.2
QIZ				S	S	01 52 18.4	+1.1
QIZ				LR	LR		
	comp=N,240nm,15.8s						
QIZ				LR	LR		
	comp=Z,300nm,14.2s						
KMI	Kunming	28.41	5	P	P	01 48 41.5	+2.2
KMI				pP	pP	01 48 51.4	+2.3
KMI				sP	sP	01 48 55.3	+2.1
KMI				PP	PnPn	01 49 34.0	+4.8
KMI				S	S	01 53 25.1	+0.6
KMI				sS	sS	01 53 42.7	+2.1
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
KMI				LR	LR		
	comp=N,280nm,15.3s						
KMI				LR	LR		
	comp=E,130nm,17.6s						
KMI				LR	LR		
	comp=Z,300nm,12.9s						
FITZ	Fitzroy Crossi	28.95	122	eP	P	01 48 42.8	-1.1
	comp=Z,5.6nm,0.9s						
FITZ	Fitzroy Crossi	28.95	122	P	P	01 48 43.3	-0.7
	comp=Z,3.3nm,0.7s,baz=285,slow=7.4,SNR=8.5						
SHL	Shillong	29.84	345	ePKP	P	01 48 53.5	+1.6
GYA	Guiyang	30.30	12	eP	P	01 48 57.8	+2.0
GYA				pP	pP	01 49 07.4	+1.8
GYA				sP	sP	01 49 13.5	+3.7
GYA				PP	PnPn	01 49 57.3	+2.7
GYA				S	S	01 53 54.0	+0.2
GYA				sS	sS	01 54 11.2	+1.2
GYA				ScP	ScP	01 55 35.3	-0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,80nm,4.6s						
GYA				LR	LR		
	comp=N,420nm,17.5s						
GYA				LR	LR		
	comp=E,350nm,18.4s						
GYA				LR	LR		
	comp=Z,430nm,17.8s						
ODAN	Odare	32.47	338	eP	P	01 49 15.9	+0.8
	comp=Z,17nm,0.5s						
TAPN	Taplejung	32.80	339	eP	P	01 49 19.4	+1.3
	comp=Z,35nm,0.9s						
RAMN	Ramite	32.84	337	eP	P	01 49 19.8	+1.4
	comp=Z,11nm,0.5s						
LSA	Lhasa	33.98	346	eP	P	01 49 29.0	+0.5
	comp=Z,8.2nm,0.6s						
GUN	Gumba	33.98	337	eP	P	01 49 29.4	+0.9
	comp=Z,43nm,0.7s						
DMN	Daman	34.03	336	eP	P	01 49 29.5	+0.8
CD2	Chengdu	34.24	6	eP	P	01 49 21.8	-8.5
CD2				pP	pP	01 49 41.7	+1.5
CD2				sP	sP	01 49 46.0	+1.7
CD2				S	S	01 54 55.2	+0.1
CD2				sS	sS	01 55 11.9	+0.5
CD2				PP	PcS	01 56 47.2	+54
CD2				SS	SnSn	01 57 05.8	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=N,100nm,12.2s						
CD2				LR	LR		
	comp=Z,120nm,11.2s						
DANN	Dangsing	35.24	334	eP	P	01 49 39.7	+0.4
	comp=Z,29nm,0.7s						
WRA	Warramunga Arr	37.20	119	P	P	01 49 55.1	-0.7
WRA	Warramunga Arr	37.20	119	P	P	01 49 55.1	-0.7
	comp=Z,4.7nm,0.5s,baz=303,slow=9.0,SNR=57						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRAB	Tennant Creek	37.20	119	*e*P	P	01 49 55.0	-0.8
XAN	Xi'an	38.10	12	P	P	01 50 01.4	-1.9
XAN				pmax	pmax		
	comp=Z,15nm,0.7s						
XAN				LR	LR		
	comp=N,170nm,15.1s						
XAN				LR	LR		
	comp=E,83nm,15.6s						
XAN				LR	LR		
	comp=Z,110nm,14.7s						
AS31	Alice Springs	38.35	125	*e*P	P	01 50 05.6	0.0
ASAR	Alice Springs	38.35	125	P	P	01 50 05.6	0.0
ASAR	Alice Springs	38.35	125	P	P	01 50 05.6	0.0
	comp=Z,7.0nm,0.7s,baz=302,slow=8.1,SNR=54						
ASAR				LR	LR	02 07 34.9	
	comp=Z,251nm,19.7s,baz=300,slow=39						
LZH	Lanzhou	39.38	5	*e*P	P	01 50 13.5	-0.6
LZH				pP	pP	01 50 25.0	+0.9
LZH				sP	sP	01 50 28.1	-0.1
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				LR	LR		
	comp=N,270nm,15.3s						
LZH				LR	LR		
	comp=E,210nm,13.6s						
LZH				LR	LR		
	comp=Z,350nm,19.2s						
GTA	Gaotai	42.55	360	*e*P	P	01 50 39.9	-0.2
GTA				pP	pP	01 50 50.3	+0.1
GTA				sP	sP	01 50 54.4	+0.2
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC	Hu-ho-hao-te	45.21	12	*e*P	P	01 51 02.6	+1.1
HHC				pP	pP	01 51 12.5	+1.0
HHC				sP	sP	01 51 16.4	+0.8
HHC				PP	PP	01 52 49.0	+1.4
HHC				PcS	PcS	01 56 35.4	+0.2
HHC				S	S	01 57 39.6	+0.3
HHC				sS	sS	01 57 56.0	+0.1
HHC				SS	ScS	02 00 53.6	-2.4
HHC				pmax	pmax		
	comp=Z,39nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
HHC				LR	LR		
	comp=N,420nm,14.3s						
HHC				LR	LR		
	comp=E,480nm,13.3s						
HHC				LR	LR		
	comp=Z,280nm,14.8s						
BJI	Beijing	45.62	17	P	P	01 51 05.4	+0.9
BJI				S	S	01 57 46.8	+1.9
BJI				pmax	pmax		
	comp=Z,17nm,0.7s						
BJI				pmax	pmax		
	comp=Z,52nm,3.5s						
BJI				LR	LR		
	comp=N,170nm,13.9s						
BJI				LR	LR		
	comp=E,160nm,15.5s						
BJI				LR	LR		
	comp=Z,91nm,21.3s						
JNU	Nakatsue	46.48	36	*e*P	P	01 51 10.3	-1.3
	comp=Z,10nm,1.1s						
CTAO	Charters Tower	47.90	114	*e*P	P	01 51 22.7	-0.1
	comp=Z,3.5nm,0.6s						
KSAR	Wonju Array Be	48.07	30	P	P	01 51 22.7	-1.1
KSRS	Korea Array	48.10	30	P	P	01 51 22.7	-1.3
	comp=Z,4.6nm,0.7s,baz=222,slow=8.5,SNR=32						
KSRS				LR	LR	02 13 42.3	
	comp=Z,57nm,18.6s,baz=190,slow=39						
KSH	Kashi	48.11	335	*e*P	P	01 51 23.2	-1.0
KSH				*e*pP	pP	01 51 33.0	-1.4
KSH				*e*sP	sP	01 51 37.0	-1.4
KSH				*e*PcP	PcP	01 52 52.3	+0.7
KSH				*e*PP	PP	01 53 14.2	-2.6
KSH				*e*S	S	01 58 15.8	-5.1
KSH				*e*sS	sS	01 58 33.2	-4.4
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,170nm,4.0s						
KSH				LR	LR		
	comp=N,470nm,6.3s						
KSH				LR	LR		
	comp=E,260nm,6.9s						
KSH				LR	LR		
	comp=Z,240nm,5.0s						
STKA	Stephens Creek	48.15	131	*e*P	P	01 51 25.2	+0.7
	comp=Z,1.8nm,0.8s						
STKA	Stephens Creek	48.15	131	P	P	01 51 23.8	-0.8
	comp=Z,4.9nm,0.8s,baz=295,slow=7.5,SNR=16						
WMQ	Urumqi	48.27	348	P	P	01 51 26.1	+0.7
WMQ				pP	pP	01 51 36.0	+0.5
WMQ				sP	sP	01 51 40.0	+0.5
WMQ				PcP	PcP	01 52 54.0	+2.0
WMQ				*e*S	S	01 58 22.0	-0.9
WMQ				pmax	pmax		
	comp=Z,14nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.2s						
WMQ				LR	LR		
	comp=N,170nm,20.4s						
WMQ				LR	LR		
	comp=E,210nm,22.0s						
WMQ				LR	LR		
	comp=Z,150nm,19.0s						
SONM	Songino Array	51.26	5	P	P	01 51 48.4	+0.3
SONM				PcP	PcP	01 53 03.2	+0.3
SONM	Songino Array	51.26	5	P	P	01 51 48.4	+0.3
	comp=Z,16nm,0.7s,baz=189,slow=9.4,SNR=121						
SONM				PcP	PcP	01 53 03.2	+0.3
	comp=Z,3.7nm,0.7s,baz=194,slow=3.7,SNR=4.7						
ULN	Ulaanbaatar	51.36	6	*e*P	P	01 51 48.6	-0.3
	comp=Z,18nm,1.1s						
CN2	Changchun	52.16	23	*e*P	P	01 51 53.1	-1.6
CN2				*e*S	S	01 59 13.6	-3.2
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				LR	LR		
	comp=N,200nm,16.0s						
CN2				LR	LR		
	comp=E,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
MKAR	Makanchi Array	52.36	345	P	P	01 51 56.4	+0.2
MKAR	Makanchi Array	52.36	345	P	P	01 51 56.4	+0.2
	comp=Z,20nm,0.6s,baz=148,slow=8.0,SNR=219						
KKAR	Karatay Array	53.42	333	*e*P	P	01 52 04.0	0.0
	comp=Z,1.3nm,0.6s						
MDJ	Mudanjiang	54.53	26	P	P	01 52 11.3	-0.8
MDJ				pmax	pmax		
	comp=Z,6.0nm,2.4s						
MDJ				pmax	pmax		
	comp=Z,54nm,3.6s						
USRK	Ussuriysk Arra	55.28	28	P	P	01 52 16.8	-0.7
	comp=Z,24nm,0.6s,baz=224,slow=6.0,SNR=57						
KURK	Kurchatov	56.94	344	*e*P	P	01 52 29.1	-0.1
	comp=Z,15nm,0.8s						
ZAA0	Zalesovo Array	58.51	349	*e*P	P	01 52 39.8	-0.4
ZALV	Zalesovo Beam	58.51	349	P	P	01 52 40.0	-0.3
ZALV	Zalesovo Beam	58.51	349	P	P	01 52 40.0	-0.3
	comp=Z,18nm,0.8s,baz=174,slow=5.4,SNR=67						
ABKAR	Akbulak array	62.89	332	*e*P	P	01 53 09.8	-0.4
	comp=Z,9.5nm,0.6s						
AKTO	Aktyubinsk	64.61	332	LR	LR	02 22 29.1	
	comp=Z,91nm,19.9s,baz=112,slow=37						
KBZ	Khabaz	69.42	319	P	P	01 53 53.3	+1.1
KBZ	Khabaz	69.42	319	P	P	01 53 53.3	+1.1
	comp=Z,5.2nm,0.8s,baz=124,slow=4.4,SNR=8.8						
RPZ	Rata Peaks	73.93	135	LR	LR	02 24 29.7	
	comp=Z,130nm,21.0s,baz=85,slow=34						
BRTR	Keskin Array B	74.34	313	P	P	01 54 22.1	+0.1
BRTR	Keskin Array B	74.34	313	P	P	01 54 22.1	+0.1
	comp=Z,3.4nm,0.7s,baz=136,slow=7.3,SNR=26						
URZ	Urewera	77.69	128	LR	LR	02 26 02.4	
	comp=Z,136nm,19.7s,baz=322,slow=34						
JOF	Joensuu	83.49	335	*e*p	P	01 55 10.9	-0.6
	comp=Z,3.4nm,0.6s						
KOLS	Kolonicke sedl	84.57	320	*e*P	P	01 55 19.0	+1.6
KOLS				*e*pP	pP	01 55 26.9	-1.2
STHS	Stebnicka Huta	85.33	320	*e*P	P	01 55 23.1	+1.9
FINES	FINESS Array B	85.37	332	P	P	01 55 22.2	+1.1
FINES	FINESS Array B	85.37	332	P	P	01 55 22.2	+1.1
	comp=Z,3.4nm,0.8s,baz=95,slow=4.2,SNR=6.9						
KAF	Kangasniemi	85.45	333	*e*p	P	01 55 21.4	0.0
KECS	Kecovo	85.65	319	*e*pP	pP	01 55 34.1	+0.6
VYHS	Vyhne	86.74	319	*e*pP	pP	01 55 36.7	-2.2
ARCES	ARCESS Array B	87.78	340	P	P	01 55 33.3	+0.6
ARCES	ARCESS Array B	87.78	340	P	P	01 55 33.3	+0.6
	comp=Z,2.6nm,0.7s,baz=90,slow=7.4,SNR=5.4						
GERES	GERESS Array B	90.16	319	P	P	01 55 45.3	+0.8
GERES	GERESS Array B	90.16	319	P	P	01 55 45.3	+0.8
	comp=Z,1.0nm,0.8s,baz=98,slow=4.0,SNR=7.6						
WMOK	Wichita Mounta	144.16	27	*e*PKPdf	PKPab	02 02 18.1	0.0
TXAR	Lajitas Array	145.66	39	PKPbc	PKPab	02 02 24.2	+0.3
TXAR	Lajitas Array	145.66	39	PKPbc	PKPab	02 02 24.2	+0.3
	comp=Z,14nm,0.6s,baz=293,slow=0.9,SNR=231						
WVT	Waverly	146.56	12	*e*PKPdf	PKPdf	02 02 25.3	+0.8
WVT				*e*PKPbc	PKPbc	02 02 25.8	-0.1
TZTN	Tazewell	146.79	5	*e*PKPbc	PKPbc	02 02 26.3	-0.3
JCT	Junction City	147.08	33	*e*PKPbc	PKPbc	02 02 27.8	+0.2
CPCT	Cooper Cave	147.77	7	*e*PKPdf	PKPdf	02 02 27.3	+0.8
CPCT				*e*PKPbc	PKPbc	02 02 29.1	-0.2
SWET	Sewanee	147.79	9	*e*PKPbc	PKPbc	02 02 28.6	-0.9

IDC 04 02:12:19.3±3.6, 4°.39S×139°.14E, h0km, mb3.7/1, mb1 3.8/4, mb1mx3.6/17, mbtmp3.6/4, ML3.8/2, Error ellipse: s-maj=112.5km s-min=30.0km az=92.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.15	196	Pn	Pn	02 16 05.8	-2.1
	0.6nm,0.3s,baz=18,slow=12,SNR=23						
WRA				Sn	Sn	02 18 56.8	-11
	0.2nm,0.3s,baz=4.8,slow=22,SNR=1.9						
FITZ	Fitzroy Crossi	18.98	223	P	P	02 16 42.6	0.0
	0.1nm,0.3s,baz=51,slow=14,SNR=3.4						
ASAR	Alice Springs	19.82	194	P	Pn	02 16 52.7	-0.6
	0.4nm,0.3s,baz=21,slow=9.2,SNR=20						
MKAR	Makanchi Array	71.38	323	P	P	02 23 41.3	0.0
	0.4nm,0.5s,baz=119,slow=7.1,SNR=5.9						

IDC 04 02:14:56.1±2.1, 49°.84S×118°.67E, h0km, mb3.8/3, mb1 4.1/4, mb1mx3.8/16, mbtmp3.9/4, ML2.5/1, Error ellipse: s-maj=117.3km s-min=26.4km az=101.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	16.93	356	Pn	Pn	02 18 54.4	+0.1
	0.8nm,0.3s,baz=158,slow=8.0,SNR=4.3						
ASAR	Alice Springs	28.72	30	P	P	02 20 55.9	+0.9
	0.7nm,0.9s,baz=200,slow=7.6,SNR=6.0						
WRA	Warramunga Arr	32.34	28	P	P	02 21 26.3	-0.7
	1.2nm,0.9s,baz=202,slow=8.9,SNR=4.1						
QSPA	South Pole Qui	40.29	180	P	P	02 22 34.8	+0.1
	1.2nm,0.9s,baz=307,slow=4.4,SNR=3.4						
PDAR	Pinedale Array	146.43	83	PKPbc	PKPdf	02 34 37.1	-0.2
	0.3nm,0.5s,baz=233,slow=4.4,SNR=3.4						
YKA	Yellowknife Ar	148.73	46	PKPbc	PKPbc	02 34 43.7	-0.2
	1.4nm,0.8s,baz=288,slow=2.3,SNR=7.4						

IDC 04 02:17:05.8±4.4, 49°.38S×115°.95E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/15, mbtmp3.7/3, Error ellipse: s-maj=283.3km s-min=26.1km az=108.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	29.29	35	P	P	02 23 09.9	0.0
	1.0nm,0.9s,baz=209,slow=9.5,SNR=5.5						
WRA	Warramunga Arr	32.86	33	P	P	02 23 41.3	0.0
	0.7nm,0.9s,baz=199,slow=8.2,SNR=3.0						
QSPA	South Pole Qui	40.74	180	P	P	02 24 48.1	-0.1
	1.1nm,0.9s,baz=289,slow=8.3,SNR=3.8						
YKA	Yellowknife Ar	149.68	45	PKPbc	PKPbc	02 36 55.6	-0.5
	0.8nm,0.7s,baz=270,slow=2.3,SNR=5.6						

WEL 04 02:32:10.9±0.2, 40°.42S×176°.59E, h26km±1km, ML3.5/30, 3C-5D, Error ellipse: s-maj=2.3km s-min=1.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRHZ	Porangahau	0.15	12	⇑P*	Pb	02 32 15.2	-0.9
PRHZ				S*	Sb	02 32 19.0	-0.7
BFZ	Birch Farm	0.37	225	P*	Pn	02 32 20.0	-0.6
WPHZ	Waipukurau	0.37	342	P*	Pb	02 32 18.4	-0.7
WPHZ				S*	Sb	02 32 24.2	-0.4
PXZ	Pawanui	0.44	28	⇓P*	Pb	02 32 20.5	+0.4
PXZ				AML	AML	02 32 28.5	
PXZ				AML	AML	02 32 28.5	
PXZ				AML	AML	02 32 31.7	
PXZ				AML	AML	02 32 31.7	
PNHZ	Pukenui	0.59	329	⇑P*	Pb	02 32 22.0	-0.7
PNHZ				S*	Sb	02 32 30.5	-0.2
TSZ	Takapari Road	0.60	306	⇑P*	Pb	02 32 22.2	-0.7
TSZ				S*	Sb	02 32 30.7	-0.3
TSZ				AML	AML	02 32 33.4	
POWZ	Post Office Ro	0.63	272	P*	Pb	02 32 23.5	+0.2
TIWZ	Tintock	0.65	236	⇓P*	Pn	02 32 24.5	0.0
KAHZ	Kahuranaki	0.66	19	P*	Pb	02 32 24.0	+0.1
MRZ	Mangatainoka R	0.81	252	⇓P*	Pb	02 32 26.4	+0.1
MRZ				S*	Sn	02 32 38.3	+0.4
MRZ				AML	AML	02 32 38.7	
CKHZ	Cape Kidnapper	0.85	26	PN	Pb	02 32 26.9	-0.1
TMWZ	Te Maipa	0.87	218	P*	Pb	02 32 27.3	-0.1
HOWZ	Holdsworth Sta	0.95	239	⇓P*	Pn	02 32 28.3	-0.3
HOWZ				S*	Sn	02 32 41.4	0.0
MCHZ	McNeill Hill	0.98	5	PN	Pn	02 32 28.8	-0.1
BHHZ	Black Hill Sta	1.01	336	⇓PN	Pn	02 32 29.1	-0.5
MTW	Mount Morrison	1.11	228	P*	Pn	02 32 30.1	-0.7
MTW				AML	AML	02 32 53.0	
MTW				AML	AML	02 32 55.0	
OGWZ	Otaki Gorge	1.15	249	P*	Pn	02 32 31.2	-0.2
TRWZ	Traveller	1.20	215	P*	Pn	02 32 30.4	-1.5
TRWZ				AML	AML	02 33 03.3	
TRWZ				AML	AML	02 33 03.3	
MOVZ	Moawhango	1.20	327	PN	Pn	02 32 32.3	+0.2
MOVZ				AML	AML	02 32 48.7	
MOVZ				AML	AML	02 32 49.2	
BKZ	Black Stump Fm	1.25	356	PN	Pn	02 32 32.3	-0.6
BKZ				AML	AML	02 32 55.9	
BKZ				AML	AML	02 32 55.9	
PAWZ	Paruwai Farm	1.31	222	P*	Pn	02 32 32.7	-0.8
PAWZ				AML	AML	02 33 04.6	
PAWZ				AML	AML	02 33 05.2	
WNVZ	Wahianoa	1.33	325	PN	Pn	02 32 34.7	+0.6
WNVZ				SN	Sb	02 32 53.9	+1.7
WNVZ				AML	AML	02 32 53.9	
MTVZ	Mangateitei	1.34	320	PN	Pb	02 32 35.0	-0.5
MTVZ				SN	Sb	02 32 53.5	+1.1
MTVZ				AML	AML	02 32 58.7	
CAW	Cannon Point	1.35	239	P*	Pn	02 32 33.6	-0.4
CAW				AML	AML	02 33 05.6	
CAW				AML	AML	02 33 06.6	
KIW	Kapiti Island	1.35	250	P*	Pn	02 32 34.0	-0.2
KIW				AML	AML	02 32 55.0	
KIW				AML	AML	02 32 58.6	
TUVZ	Tukino	1.36	328	PN	Pn	02 32 35.1	+0.7
TUVZ				AML	AML	02 32 57.8	
TUVZ				AML	AML	02 32 58.4	
TRVZ	Turoa	1.38	324	PN	Pn	02 32 35.3	+0.5
TRVZ				AML	AML	02 32 58.1	
TRVZ				AML	AML	02 32 59.9	
DRZ	Dome Shelter	1.39	325	PN	Pb	02 32 36.1	-0.5
DRZ				AML	AML	02 33 01.0	
DRZ				AML	AML	02 33 01.7	
WAZ	Wanganui	1.40	298	AML	AML	02 32 58.8	
WAZ				AML	AML	02 33 01.2	
FWVZ	Far West T-bar	1.41	325	PN	Pn	02 32 35.6	+0.4
FWVZ				AML	AML	02 33 01.0	
FWVZ				AML	AML	02 33 01.4	
MSWZ	Moikau Station	1.42	225	PN	Pn	02 32 33.9	-1.2
MSWZ				AML	AML	02 33 07.5	
MSWZ				AML	AML	02 33 12.3	
OTVZ	Oturere	1.44	330	PN	Pb	02 32 36.6	-0.7
OTVZ				AML	AML	02 32 57.7	
OTVZ				AML	AML	02 32 59.8	
WPVZ	Whakapapa	1.46	326	PN	Pn	02 32 36.6	+0.9
WPVZ				AML	AML	02 33 00.8	
WPVZ				AML	AML	02 33 01.0	
NGZ	Ngauruhoe	1.46	328	PN	Pb	02 32 36.8	-0.8
NGZ				AML	AML	02 33 03.3	
NGZ				AML	AML	02 33 08.3	
PKVZ	Pokaka	1.48	319	PN	Pb	02 32 37.3	-0.5
PKVZ				AML	AML	02 33 04.5	
PKVZ				AML	AML	02 33 10.4	
KRVZ	Karewarewa	1.51	331	PN	Pb	02 32 37.7	-0.7
KRVZ				AML	AML	02 33 05.9	
KRVZ				AML	AML	02 33 07.0	
WTVZ	West Tongariro	1.51	329	PN	Pb	02 32 37.6	-0.9
WTVZ				AML	AML	02 33 02.6	
WTVZ				AML	AML	02 33 07.0	
PLWZ	Palliser	1.53	221	PN	Pn	02 32 35.4	-1.2
RAHZ	Arahi	1.55	14	PN	Pn	02 32 36.3	-0.5
KATZ	Kakaramea	1.60	334	PN	Pb	02 32 39.9	0.0
KATZ				AML	AML	02 33 05.3	
KATZ				AML	AML	02 33 07.9	
TWVZ	Taurewa	1.61	326	PN	Pb	02 32 39.5	-0.7
RATZ	Rangitukua	1.67	337	PN	Pb	02 32 41.5	+0.4
RATZ				AML	AML	02 33 15.2	
RATZ				AML	AML	02 33 18.6	
SNZO	South Karori	1.69	238	PN	Pn	02 32 37.7	-0.9
SNZO				AML	AML	02 33 11.0	
SNZO				AML	AML	02 33 12.8	
TCW	Tory Channel	1.93	245	PN	Pn	02 32 41.3	-0.7
TCW				AML	AML	02 33 07.0	
TCW				AML	AML	02 33 13.7	
DUWZ	D'Urville Isla	2.07	258	AML	AML	02 33 19.4	
DUWZ				AML	AML	02 33 19.4	
URZ	Urewera	2.19	11	PN	Pn	02 32 44.4	-1.2
MWZ	Matawai	2.20	20	PN	Pn	02 32 44.4	-1.5
TUWZ	Tuamarina	2.25	242	PN	Pn	02 32 45.4	-1.0
TUWZ				AML	AML	02 33 28.7	
THZ	Tophouse	3.09	243	PN	Pn	02 32 56.5	-1.6
LTZ	Lake Taylor	4.01	233	PN	Pn	02 33 08.2	-2.5

*BJI **04** 02:44:37.6, 66°.40N×157°.30W, h35km, mB5.0/4, mb4.8/7, Ms5.0/2, Ms7 4.6/3*

*NEIC **04** 02:44:38.1, 66°.40N×157°.57W, h29km, mb4.3/7, ML4.2(AEIC), MW4.3(USGS), After AEIC.*

*IDC **04** 02:44:39.1±0.7, 66°.63N×157°.41W, h0km, mb3.9/11, mb1 4.1/15, mb1mx3.9/33, mbtmp3.9/15, ML3.8/4, MS3.4/6, Ms1 3.4/6, ms1mx3.1/39, Error ellipse: s-maj=24.5km s-min=11.6km az=41.0*

ISC 04 02:44:39.4±1.8, 66°.37N±0°.06×157°.41W±0°.04, h14km±11km, n92, σ1s.37/100, mb4.2/22, MS3.3/3, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IM3	Indian Mountai	1.54	103	P	Pn	02 45 04.6	-1.8
IM3				S	Sb	02 45 26.7	-0.2
GCSA	Galena City Sc	1.65	172	P	Pn	02 45 05.7	-2.1
GCSA				S	Sn	02 45 27.6	-1.3
COLD	Coldfoot	2.98	70	*e*Pn	Pn	02 45 25.0	-1.3
COLD				*e*S	Sn	02 46 04.2	+2.5
MLY	Manley	3.07	113	P	Pn	02 45 25.7	-1.8
TT01	Tatalina	3.53	170	P	Pn	02 45 32.1	-1.7
CAST	Castle Rocks	3.73	140	P	Pn	02 45 35.5	-1.1
CAST				S	Sn	02 46 20.3	0.0
NEA	Nenana	3.91	114	P	Pn	02 45 38.0	-1.0
MDM	Murphy Dome	4.05	106	P	Pn	02 45 40.0	-1.0
TRF	Thorofare Moun	4.22	131	*e*Pn	Pn	02 45 41.9	-1.5
COLA	College	4.24	106	*e*Pn	Pn	02 45 42.2	-1.3
COLA				*e*Pg	Pg	02 45 59.0	-1.4
COLA				*e*S	Sn	02 46 35.0	+2.4
WRH	Wood River Hil	4.33	112	P	Pn	02 45 43.7	-1.1
CCB	Clear Creek Bu	4.36	109	P	Pn	02 45 43.5	-1.6
GLM	Gilmore Dome	4.37	104	P	Pn	02 45 43.5	-1.9
TNA	Tin City	4.38	264	*e*Pn	Pn	02 45 45.5	+0.2
TNA				S	Sn	02 46 34.6	-1.5
MCK	McKinley	4.46	122	P	Pn	02 45 45.5	-1.1
IL1	Eielson Array	4.65	105	P	Pn	02 45 47.8	-1.5
ILAR	Eielson Array	4.65	105	Pn	Pn	02 45 47.5	-1.8
ILAR				Sn	Sn	02 46 43.9	+0.8
ILAR				Lg	Lg	02 47 05.0	
ILAR	Eielson Array	4.65	105	Pn	Pn	02 45 47.5	-1.8
	11nm,0.3s,baz=294,slow=14,SNR=135						
ILAR				Sn	Sn	02 46 43.9	+0.8
	9.4nm,0.3s,baz=290,slow=20,SNR=7.4						
ILAR				Lg	Lg	02 47 05.0	
	26nm,0.3s,baz=308,slow=33,SNR=11						
ILAR				LR	LR	02 48 14.5	
	comp=Z,222nm,18.0s,baz=212,slow=46						
BM3	Burnt Mountain	5.15	72	P	Pn	02 45 54.9	-1.2
SVW2	Sparrevohn	5.36	170	*e*Pn	Pn	02 45 57.5	-1.4
STLK	Strandline Lak	5.47	151	P	Pn	02 46 00.1	-0.5
BGL	Barrier Glacie	5.58	154	P	Pn	02 46 02.1	0.0
CKL	Chakachamna La	5.66	154	P	Pn	02 46 03.2	+0.1
SPU	Mount Spurr	5.72	153	P	Pn	02 46 03.6	-0.3
SUA	Susitna One	5.73	146	P	Pn	02 46 04.1	-0.1
RIDG	Independ'e Rid	5.93	111	P	Pn	02 46 06.9	+0.1
PMR	Palmer	6.02	139	*e*Pn	Pn	02 46 07.4	-0.5
SML	Sawmill	6.06	135	*e*Pn	Pn	02 46 06.6	-1.9
SCRK	Sand Creek	6.14	107	P	Pn	02 46 08.4	-1.4
DFR	Drift River	6.17	158	P	Pn	02 46 09.0	-1.2
DOT	Dot Lake	6.28	110	*e*Pn	Pn	02 46 11.2	-0.3
RSO	Redoubt South	6.29	158	*e*Pn	Pn	02 46 11.1	-0.7
RC01	Rabbit Creek A	6.30	144	*e*Pn	Pn	02 46 12.7	+1.0
GAMB	Gambell	6.57	253	Pn	Pn	02 46 15.9	+0.4
GAMB				*e*Lg	Lg	02 48 02.2	
HARP	HAARP	6.63	121	P	Pn	02 46 16.0	-0.3
MENT	Mentasta	6.80	114	*e*Pn	Pn	02 46 18.6	-0.2
EGAK	Eagle	6.92	96	*e*Pn	Pn	02 46 18.6	-1.7
	27nm,0.7s						
SEW	Seward	7.24	147	*e*Pn	Pn	02 46 26.2	+1.6
DIV	Divide	7.36	130	*e*Pn	Pn	02 46 27.4	+1.0
BCA3	Beaver Creek A	7.46	109	P	Pn	02 46 26.2	-1.5
DAWY	Dawson	7.91	99	P	Pn	02 46 32.5	-1.4
VRDI	Verde Repeater	8.03	123	P	Pn	02 46 34.0	-1.7
PTPK	Patty Peak	8.40	121	P	Pn	02 46 40.6	-0.2
KDAK	Kodiak Island	8.91	163	*e*Pn	Pn	02 46 48.1	+0.6
KDAK	Kodiak Island	8.91	163	Pn	Pn	02 46 48.3	+0.8
	1.6nm,0.3s,baz=35,slow=6.9,SNR=14						
OHAK	Old Harbor	9.38	166	*e*Pn	Pn	02 46 54.8	+0.7
	46nm,1.3s						
INK	Inuvik	9.39	67	Pn	Pn	02 46 51.9	-2.3
INK				Sn	Sn	02 48 36.9	-2.6
INK				Lg	Lg	02 49 26.9	
INK	Inuvik	9.39	67	Pn	Pn	02 46 51.9	-2.3
	0.4nm,0.3s,baz=255,slow=15,SNR=12						
INK				Sn	Sn	02 48 36.9	-2.6
	0.6nm,0.3s,baz=327,slow=30,SNR=3.5						
INK				Lg	Lg	02 49 26.9	
	0.3nm,0.3s,baz=304,slow=5.4,SNR=2.4						
INK				LR	LR	02 50 44.4	
	comp=Z,260nm,18.4s,baz=259,slow=39						
PNL	Peninsula	10.55	121	Pn	Pn	02 47 08.2	-1.9
SKAG	Skagway	12.15	114	Pn	Pn	02 47 34.0	+2.1
DLBC	Dease Lake	14.85	109	*e*Pn	Pn	02 48 07.1	-1.7
DLBC				Lg	Lg	02 52 23.6	
DLBC	Dease Lake	14.85	109	Pn	Pn	02 48 08.1	-0.7
	0.3nm,0.3s,baz=306,slow=14,SNR=2.7						
DLBC				Lg	Lg	02 52 23.6	
	0.1nm,0.3s,baz=31,slow=22,SNR=8.5						
DLBC				LR	LR	02 54 11.5	
	comp=Z,238nm,18.9s,baz=99,slow=38						
YKW3	Yellowknife Ar	18.55	82	*e*P	P	02 48 54.0	-1.3
	0.2nm,1.1s						
YKA	Yellowknife Ar	18.59	82	P	Pn	02 48 56.7	+0.8
YKA	Yellowknife Ar	18.59	82	P	Pn	02 48 56.7	+0.8
	0.2nm,0.3s,baz=303,slow=13,SNR=13						
FX1	Attu Island--F	19.83	241	LR	LR	02 56 37.0	
	comp=Z,97nm,19.0s,baz=231,slow=36						
BBB	Bella Bella	20.35	120	LR	LR	02 56 57.7	
	comp=Z,127nm,20.2s,baz=291,slow=36						
PETK	Petropavlovsk-	25.54	261	LR	LR	03 01 01.1	
	comp=Z,67nm,18.1s,baz=163,slow=38						
FFC	Flin Flon	28.58	87	P	P	02 50 33.6	-1.0
	4.9nm,1.1s						
PDAR	Pinedale Array	35.08	108	P	P	02 51 34.6	+2.6
PDAR	Pinedale Array	35.08	108	P	P	02 51 34.6	+2.6
	0.2nm,0.5s,baz=330,slow=5.3,SNR=2.5						
NVAR	Mina Array Bea	35.69	122	P	P	02 51 40.1	+2.8
NVAR	Mina Array Bea	35.69	122	P	P	02 51 40.1	+2.8
	0.8nm,0.5s,baz=326,slow=7.7,SNR=2.2						
EYMN	Ely	37.99	86	*e*P	P	02 51 56.9	+0.4
	3.2nm,0.8s						
WUAZ	Wupatki	40.75	116	*e*P	P	02 52 19.1	-0.7
	2.2nm,0.7s						
MDJ	Mudanjiang	43.55	278	P	P	02 52 38.3	-4.1

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
CN2	Changchun	45.88	280	eP	P	02 52 56.8	-4.1
TXAR	Lajitas Array	49.14	111	P	P	02 53 27.0	+0.5
TXAR	Lajitas Array	49.14	111	P	P	02 53 27.0	+0.5
	0.6nm,0.6s,baz=325,slow=5.8,SNR=11						
SONM	Songino Array	49.69	299	P	P	02 53 30.1	-0.4
SONM	Songino Array	49.69	299	P	P	02 53 30.1	-0.4
	2.0nm,1.0s,baz=30,slow=7.2,SNR=9.0						
ZALV	Zalesovo Beam	51.16	318	P	P	02 53 41.6	+0.2
ZALV	Zalesovo Beam	51.16	318	P	P	02 53 41.6	+0.2
	1.8nm,0.7s,baz=26,slow=9.8,SNR=6.3						
HHC	Hu-ho-hao-te	53.79	290	eP	P	02 54 01.8	+0.6
HHC				PP	PP	02 56 04.1	+2.2
HHC				PcS	PcS	02 59 06.1	-0.1
HHC				S	S	03 01 33.2	-1.9
HHC				SS	SKiKP	03 05 12.9	-1.1
HHC				pmax	pmax		
	comp=Z,31nm,1.0s						
HHC				pmax	pmax		
	comp=Z,86nm,5.0s						
HHC				LR	LR		
	comp=Z,500nm,10.9s						
BRVK	Borovoye	55.54	327	eP	P	02 54 13.2	-0.3
	comp=Z,3.1nm,0.7s						
BVAR	Borovoye Array	55.55	327	P	P	02 54 14.3	+0.7
BVAR	Borovoye Array	55.55	327	P	P	02 54 14.3	+0.7
	comp=Z,2.3nm,0.7s,baz=38,slow=5.7,SNR=4.5						
KURK	Kurchatov	55.72	320	eP	P	02 54 14.3	-0.6
	comp=Z,3.4nm,0.8s						
KURBB	Kurchatov Arra	55.83	320	P	P	02 54 16.0	+0.3
	comp=Z,2.2nm,0.9s,baz=27,slow=6.8,SNR=6.7						
MKAR	Makanchi Array	58.32	316	P	P	02 54 32.7	-0.8
MKAR	Makanchi Array	58.32	316	P	P	02 54 32.7	-0.8
	comp=Z,0.6nm,0.5s,baz=38,slow=7.6,SNR=6.8						
WMQ	Urumqi	59.43	310	eP	P	02 54 41.4	+0.2
WMQ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ABKAR	Akbulak array	61.22	333	eP	P	02 54 52.5	-0.8
	comp=Z,2.9nm,0.6s						
AKASG	Malin Array Be	63.15	355	P	P	02 55 06.2	0.0
AKASG	Malin Array Be	63.15	355	P	P	02 55 06.2	0.0
	comp=Z,0.7nm,0.4s,baz=4.1,slow=6.8,SNR=3.4						
AAK	Ala-Archa	64.28	320	P	P	02 55 14.9	+1.0
	comp=Z,1.3nm,0.6s						
AAK	Ala-Archa	64.28	320	P	P	02 55 15.5	+1.5
	comp=Z,1.9nm,0.8s,baz=154,slow=3.3,SNR=6.5						
CD2	Chengdu	65.51	291	eP	P	02 55 22.1	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	Guiyang	68.39	286	eP	P	02 55 47.7	+7.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI	Kunming	71.10	289	P	P	02 55 52.1	-5.2
KMI				pP	pP	02 56 04.0	+2.3
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
ESDC	Sonseca Array	72.32	21	P	P	02 56 06.0	+1.7
ESDC	Sonseca Array	72.32	21	P	P	02 56 06.0	+1.7
	comp=Z,0.3nm,0.4s,baz=355,slow=6.5,SNR=4.0						

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*SZGRF **04** 02:54:41.2, 31°.17N×83°.23E, h33^{km}, mb5.2, MS4.1, Xizang*

*NDI **04** 02:54:44.1±6.3, 33°.31N×82°.08E, h10^{km}, mb5.1, mb5.2(NEIC)*

*LDG **04** 02:54:45.9±0.1, 32°.84N×81°.69E, h10^{km}, Mb5.1/40, Ms4.1/9, Error ellipse: s-maj=5.6km s-min=4.5km az=71.0*

*NNC **04** 02:54:46.4±11.0, 32°.65N×81°.42E, h0^{km}, mb4.9, Error ellipse: s-maj=158.7km s-min=70.1km az=138.0*

*BJI **04** 02:54:46.5, 32°.93N×81°.70E, h10^{km}, mB4.8/27, mb4.6/40, Ms4.8/50, Ms7 4.5/45*

*IDC **04** 02:54:46.2±0.5, 32°.65N×81°.73E, h0^{km}, mb4.5/28, mb1 4.7/31, mb1mx4.6/36, mbtmp4.5/31, ML4.0/3, MS4.1/23, Ms1 4.1/23, ms1mx4.0/31, Error ellipse: s-maj=13.4km s-min=9.7km az=52.0*

*ISCJB **04** 02:54:47.4±0.8, 32°.81N±0°.02×81°.77E±0°.02, h10^{km}±5^{km}, mb4.9/159, MS4.3/52, Error ellipse: s-maj=3.7km s-min=2.5km az=32.3*

*MOS **04** 02:54:48.7±1.6, 32°.82N×81°.81E, h21^{km}, mb5.2/78, MS4.3/33, Error ellipse: s-maj=8.3km s-min=3.4km az=128.5*

*NEIC **04** 02:54:48.1±2.9, 32°.78N×81°.76E, h7^{km}±17^{km}, mb5.2/65, Error ellipse: s-maj=9.4km s-min=4.8km az=211.0*

*DMN **04** 02:54:49.9±0.4, 33°.00N×81°.64E, h10^{km}, Ml5.1/5, Error ellipse: s-maj=9.7km s-min=7.0km az=41.0*

*TEH **04** 02:54:49.0, 32°.94N×81°.71E, h10^{km}, ML5.0*

*DJA **04** 02:54:50.0±3.0, 33°N±8°×8°2E±°, h19^{km}±25^{km}, M4.9/8, mB5.3/4, mb5.0/8, Mw(mB)4.7/4, Mwp5.5/2*

*GCMT **04** 02:54:54.7±0.3, 32°.79N×81°.82E, h27^{km}±1^{km}, MW5.0, Moment Tensor Solution. s25,c31; s71,c110; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.66±.17; $M_{\theta\theta}$-2.63±.13; $M_{\phi\phi}$3.29±.12; $M_{r\theta}$1.18±.30; $M_{\theta\phi}$-1.33±.10; $M_{\phi r}$-0.11±.22; Best double couple: $M_0$3.50000×10^{16} NP1:ϕ_s211.00000°, δ70.00000°, λ-13.00000°. NP2:ϕ_s305.00000°, δ78.00000°, λ-160.00000°. Principal axes: T 3.6100, Plg5.0000°, Azm77.0000°; N -0.2200, Plg67.0000°, Azm335.0000°; P -3.3900, Plg23.0000°, Azm169.0000°; Data Used: IU II IC G CN.*

ISC 04 02:54:48.8±0.3**, 32°.77N**±0°.03×**81°.67E**±0°.03**, h12**^{km}±1^{km}**, h12**^{km}**:pP-P, n555,** σ1**°.82**/582**, mb5.0**/163**, MS4.3**/52**, 27C-26D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LGTI	Lohaghat	3.52	201	ePKP9	Pg	02 55 58.2	+1.8
LGTI				eS	Sg	02 56 55.6	+14
DDI	Dehra Dun	3.93	233	ePKP9	Pg	02 56 03.4	-0.8
DDI				AMB	AMB	02 56 07.0	
	comp=Z,2µm,1.0s						
DDI				eS	Sg	02 56 51.8	-3.3
SMLA	Simla	4.16	248	i P	Pn	02 55 56.2	+4.1
SMLA				AMB	AMB	02 56 09.8	
	comp=Z,678nm,1.3s						
SDNR	Sundarnagar	4.18	254	ePKP	Pn	02 55 56.0	+3.5
DHRM	DHARAMSHALA	4.57	265	ePKP	Pn	02 56 00.9	+3.0
DHRM				AMB	AMB	02 56 03.2	
	comp=Z,208nm,0.3s						
BHK	Bhakra	4.66	255	ePKP	Pn	02 56 00.6	+1.6
DANN	Dangsing	4.75	157	ePn	Pn	02 56 02.9	+2.3
PYUN	Piuthan	4.79	166	ePn	Pn	02 56 03.2	+2.3
DLH	Dalhousie	4.82	269	ePKP	Pn	02 56 02.0	+0.6
DLH				eS	Sn	02 57 04.0	+6.8
THN	Thein Dam	5.04	268	ePKP	Pn	02 56 04.0	-0.1
KOLN	Koldanda	5.25	161	ePn	Pn	02 56 09.6	+2.3
KOLN				eSn	Sn	02 57 08.9	+1.0
	comp=Z,541nm,0.8s						
NDI	New Delhi	5.59	224	e4		02 55 17.0	
KKN	Kakani	5.86	147	ePn	Pn	02 56 17.6	+1.9
DMN	Daman	5.94	149	ePn	Pn	02 56 19.0	+2.2
DMN				eSn	Sn	02 57 25.9	+1.0
	comp=Z,954nm,0.9s						
GUN	Gumba	6.05	142	ePn	Pn	02 56 20.6	+2.1
PKIN	Phulchoki	6.09	147	ePn	Pn	02 56 20.8	+1.9
PKI	Pulchoki	6.10	147	ePn	Pn	02 56 21.1	+1.9
CHCP	Chirah Chowk	7.10	279	⇑P	Pn	02 56 35.1	+2.5
RAMN	Ramite	7.20	142	ePn	Pn	02 56 35.3	+1.1
RAMN				eSn	Sn	02 57 54.7	-1.3
	comp=Z,824nm,0.8s						
TAPN	Taplejung	7.52	134	ePn	Pn	02 56 40.1	+1.6
TAPN				eSn	Sn	02 58 01.6	-2.2
	comp=Z,732nm,1.2s						
SARP	Sargodha	7.66	266	P	Pn	02 56 43.1	+2.9
ODAN	Odare	7.70	138	ePn	Pn	02 56 42.8	+1.8
ODAN				eSn	Sn	02 58 06.4	-1.9
	comp=Z,420nm,0.7s						
KSH	Kashi	8.16	327	⇑iP	Pn	02 56 47.0	-0.2
KSH				epP	pP	02 56 49.7	
KSH				esP		02 56 53.1	
KSH				eS	Sn	02 58 17.1	-2.3
KSH				esS	sS	02 58 23.3	
KSH				pmax	pmax		
	comp=Z,150nm,0.9s						
KSH				LR	LR		
	comp=N,6µm,5.8s						
KSH				LR	LR		
	comp=E,8µm,5.9s						
KSH				LR	LR		
	comp=Z,9µm,6.2s						
CEP	Cherat	8.24	280	P	Pn	02 56 49.0	+0.7
CEP				S	Sn	02 58 25.0	+3.6
THW	Thamme Wali	8.36	273	P	Pn	02 56 50.6	+0.7
LSA	Lhasa	8.67	108	P	Pn	02 56 56.4	+1.9
LSA				S	Sn	02 58 35.2	+2.8
LSA				LR	LR		
	comp=N,3µm,9.6s						
LSA				LR	LR		
	comp=E,2µm,11.7s						
LSA				LR	LR		
	comp=Z,4µm,8.9s						
LSA	Lhasa	8.67	108	eP	Pn	02 56 56.6	+2.1
LSA				eS	Sn	02 58 34.2	+1.7
LSA				pmax	pmax		
	comp=Z,54nm,0.6s						
LSA	Lhasa	8.67	108	ePn	Pn	02 56 56.6	+2.1
	comp=Z,54nm,0.6s						
LSA				eS	Sn	02 58 34.2	+1.7
BOK	Bokaro	9.68	156	ePKP	Pn	02 57 07.8	-0.1
BOK				AMB	AMB	02 57 08.3	
	comp=Z,56nm,1.7s						
JBP	Jabalpur	9.68	189	⇑ePKP	Pn	02 57 09.9	+2.1
JBP				ex	Sn	02 58 56.4	-0.2
BHPL	Bhopal	10.20	203	ePKP	Pn	02 57 17.2	+2.1
BHPL				AMB	AMB	02 57 22.1	
	comp=Z,68nm,0.0s						
ULHL	Ulahol	10.40	337	P	Pn	02 57 22.8	+4.9
	SNR=14						
KZA	Kyzart	10.60	333	P	Pn	02 57 21.0	+0.2
	SNR=36						
KBL	Kabul	10.67	283	eP	Pn	02 57 21.9	+0.2
KBL				eS	Sn	02 59 20.7	-0.6
KBL	Kabul	10.67	283	ePn	Pn	02 57 21.9	+0.2
KBL				eS	Sn	02 59 20.7	-0.6
UCH	Uchtor	11.02	331	P	Pn	02 57 27.3	+0.7
	SNR=12						
KBK	Karagaybulak	11.21	334	P	Pn	02 57 30.1	+1.0
	SNR=11						
TKM2	Tokmak 2	11.21	336	⇑P	Pn	02 57 31.6	+2.5
	comp=Z,28nm,1.1s						
TKM2	Tokmak 2	11.21	336	eP	Pn	02 57 29.6	+0.5
TKM2	Tokmak 2	11.21	336	ePn	Pn	02 57 29.6	+0.5
AML	Almayashu	11.29	328	P	Pn	02 57 30.1	-0.2
	SNR=28						
AAK	Ala-Archa	11.37	332	eP	Pn	02 57 30.2	-0.9
AAK	Ala-Archa	11.37	332	ePn	Pn	02 57 30.2	-0.9
AAK				eSn	Sn	02 59 53.3	+15
AAK	Ala-Archa	11.37	332	P	Pn	02 57 34.9	+3.8
	SNR=9.0						
AAK	Ala-Archa	11.37	332	Pn	Pn	02 57 33.1	+2.0
	comp=Z,0.9nm,0.3s,baz=139,slow=14,SNR=12						
AAK				LR	LR	03 02 04.4	
	comp=Z,709nm,18.8s,baz=131,slow=38						
SHL	Shillong	11.44	126	ePKP	Pn	02 57 30.2	-2.0
SHL				ex	Sn	02 59 32.0	-8.1
FRU	Bishkek	11.49	333	eP	Pn	02 57 32.0	-0.7
FRU				pmax	pmax		
	comp=Z,70nm,2.0s						
FRU				pmax	pmax		
	comp=E,290nm,2.0s						
FRU				MLR	MLR		
	comp=Z,2µm,8.0s						
CHMS	Chumysh	11.58	334	P	Pn	02 57 37.2	+3.3
	SNR=8.9						
EKS2	Erkin-Say	11.68	330	eP	Pn	02 57 36.6	+1.2
EKS2				pmax	pmax		
	comp=Z,33nm,0.8s						
EKS2	Erkin-Say	11.68	330	ePn	Pn	02 57 36.6	+1.2
	comp=Z,33nm,0.8s						
EKS2	Erkin-Say	11.68	330	P	Pn	02 57 36.6	+1.2
	SNR=18						
NGP	Nagpur	11.80	192	ex	Pn	02 57 36.9	-0.1
NGP				ex	Sn	02 59 40.0	-8.7
WMQ	Urumqi	12.00	21	eP	Pn	02 57 41.6	+1.9
WMQ				pP		02 57 45.0	
WMQ				sP		02 57 48.0	
WMQ				eS	Sn	02 59 55.0	+1.5
WMQ				SS	SnSn	03 00 09.0	+3.2
WMQ				pmax	pmax		
	comp=Z,16nm,1.4s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.5s						
WMQ				LR	LR		
	comp=N,1µm,10.6s						
WMQ				LR	LR		
	comp=E,2µm,20.0s						
WMQ				LR	LR		
	comp=Z,1µm,13.9s						
IMP	Imphal	13.37	123	ePKP	Pn	02 57 55.0	-3.4
KK31	Karatay Array	13.55	323	⇑P	Pn	02 57 58.6	-2.3
	comp=Z,13nm,0.7s,baz=146,slow=15,SNR=110						
KK31	Karatay Array	13.55	323	i P	Pn	02 57 58.5	-2.3
KK31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KKAR	Karatay Array	13.55	323	eP	Pn	02 57 59.3	-1.6
KKAR	Karatay Array	13.55	323	ePn	Pn	02 57 59.3	-1.6
MK31	Makanchi Array	14.02	2	⇓P	Pn	02 58 05.6	-1.6
	comp=Z,17nm,0.8s,baz=190,slow=13						
MK31	Makanchi Array	14.02	2	eP	Pn	02 58 05.8	-1.4
MK31	Makanchi Array	14.02	2	ePn	Pn	02 58 05.8	-1.4
MKAR	Makanchi Array	14.02	2	eP	Pn	02 58 06.0	-1.2
MKAR						03 00 43.1	
MKAR	Makanchi Array	14.02	2	ePn	Pn	02 58 06.0	-1.2
MKAR				Sn	Sn	03 00 43.1	+0.5
MKAR	Makanchi Array	14.02	2	Pn	Pn	02 58 05.5	-1.7
	comp=Z,0.6nm,0.3s,baz=180,slow=11,SNR=47						
MKAR				Sn	Sn	03 00 43.1	+0.5
	baz=172,slow=17,SNR=3.1						
LATR	Latur	15.01	199	ex	Pn	02 58 16.1	-4.7
LATR				ex	Sn	03 01 00.8	-6.2
VIS	Vishakhapatnam	15.05	174	ex	Pn	02 58 14.8	-6.6
VIS				AMB	AMB	02 58 20.6	
	comp=Z,38nm,1.0s						
VIS				ex	x	03 02 53.1	
VIS				ex	x	03 05 27.0	
HYB	Hyderabad	15.54	191	⇓iP	Pn	02 58 24.0	-3.9
HYB				eS	Sn	03 01 20.0	0.0
HYB	Hyderabad	15.54	191	P	Pn	02 58 24.0	-3.9
HYB	Hyderabad	15.54	191	ex	Pn	02 58 25.8	-2.1
HYB				AMB	AMB	02 58 29.3	
	comp=Z,52nm,0.8s						
HYB	Hyderabad	15.54	191	P	Pn	02 58 24.0	-3.9
HYB				S	S	03 01 40.0	+4.4
POO	Poona	15.82	208	ex	Pn	02 58 26.0	-5.5
	comp=Z,30nm,1.0s						
POO				ex	x	02 58 38.0	
GTA	Gaotai	16.08	61	eP	Pn	02 58 33.9	-1.0
GTA				pP	P	02 58 37.4	-0.8
GTA				sP	sP	02 58 40.5	-2.8
GTA				S	Sn	03 01 31.0	-2.2
GTA				sS	S	03 01 37.1	-10
GTA				SS	SnSn	03 01 49.5	+3.4
GTA				pmax	pmax		
	comp=Z,20nm,1.2s						
GTA				pmax	pmax		
	comp=Z,230nm,4.7s						
GTA				LR	LR		
	comp=N,2µm,11.1s						
GTA				LR	LR		
	comp=E,1µm,9.0s						
GTA				LR	LR		
	comp=Z,1µm,11.4s						
KAD	Karad	16.81	206	i x	P	02 58 49.0	+2.7
KAD				i x	x	03 01 40.2	
KURBB	Kurchatov Arra	17.99	354	P	P	02 58 58.9	-0.2
	comp=Z,0.1nm,0.3s,baz=178,slow=11,SNR=57						
KURBB				ScP	ScP	03 07 07.5	-1.0
	baz=210,slow=1.8,SNR=5.6						
KUR17	Kurchatov Arra	18.01	353	⇑P	P	02 58 59.1	-0.2
	comp=Z,18nm,1.2s,baz=173,slow=9.6						
KURK	Kurchatov	18.08	354	⇓P	P	02 58 59.7	-0.3
	comp=Z,30nm,1.0s						
KURK	Kurchatov	18.08	354	P	Pn	02 58 58.9	-0.7
KURK	Kurchatov	18.08	354	ePn	Pn	02 58 58.4	-1.2
	comp=Z,54nm,1.1s						
KURK				ScP	ScP	03 07 07.5	-1.1
IMYA	Miami	18.12	287	eP	Pn	02 58 58.1	-2.4
IDAH	Dahanechah	18.34	276	eP	Pn	02 59 02.2	-1.1
LZH	Lanzhou	18.58	74	eP	Pn	02 59 06.0	-0.1
LZH				pP	pP	02 59 09.0	-0.4
LZH				sP	sP	02 59 12.2	+1.2
LZH				eS	Sn	03 02 28.4	-5.4
LZH				sS	S	03 02 35.0	-2.7
LZH				SS	SnSn	03 02 54.5	+6.9
LZH				pmax	pmax		
	comp=Z,65nm,1.0s						
LZH				pmax	pmax		
	comp=Z,410nm,6.3s						
LZH				LR	LR		
	comp=N,3µm,10.6s						
LZH				LR	LR		
	comp=E,1µm,10.4s						
LZH				LR	LR		
	comp=Z,3µm,11.2s						
ISRO	Mashad	18.62	287	eP	P	02 59 06.1	-0.2
IMOG	Moghan	18.71	286	eP	P	02 59 05.9	-1.6
CD2	Chengdu	18.86	90	eP	Pn	02 59 10.2	+0.8
CD2				pP	pP	02 59 14.0	+1.7
CD2				sP	sP	02 59 17.5	+3.6
CD2				PP	PnPn	02 59 26.5	+5.0
CD2				S	Sn	03 02 34.7	-5.6
CD2				sS	S	03 02 42.6	-0.5
CD2				SS	SnSn	03 03 00.9	+6.7
CD2				ScS	ScS	03 10 50.9	-1.4
CD2				pmax	pmax		
	comp=Z,30nm,1.4s						
CD2				pmax	pmax		
	comp=Z,380nm,7.2s						
CD2				LR	LR		
	comp=N,3µm,17.8s						
CD2				LR	LR		
	comp=E,2µm,9.4s						
CD2				LR	LR		
	comp=Z,2µm,8.4s						
IPAY	Payeh	19.02	287	eP	P	02 59 09.9	-0.8
IAKL	Akhelmad	19.22	288	eP	P	02 59 12.3	-0.7
ISFR	Sfrayin	19.86	289	eP	P	02 59 20.7	+0.6
ABKT	Ailbek	19.87	292	P	P	02 59 20.3	+0.4
	comp=Z,348nm,0.9s,SNR=17						
KMI	Kunming	19.93	107	P	P	02 59 20.4	-0.4
KMI				pP	pP	02 59 25.8	+1.6
KMI				sP	sP	02 59 29.6	+3.8
KMI				PP	PnPn	02 59 39.9	+3.4
KMI				S	S	03 02 59.2	-5.8
KMI				sS	sS	03 03 08.4	-2.1
KMI				SS	SnSn	03 03 25.6	+4.8
KMI				pmax	pmax		
	comp=Z,22nm,1.3s						
KMI				LR	LR		
	comp=N,1µm,10.9s						
KMI				LR	LR		
	comp=E,410nm,13.5s						
KMI				LR	LR		
	comp=Z,730nm,12.5s						
CHTO	Chiang Mai	20.81	128	eP	P	02 59 29.3	-0.9
CHTO				pmax	pmax		
	comp=Z,56nm,0.9s						
CHTO	Chiang Mai	20.81	128	ePn	P	02 59 29.3	-0.9
	comp=Z,56nm,0.9s						
CHTO	Chiang Mai	20.81	128	P	P	02 59 28.7	-1.5
	comp=Z,97nm,1.0s,comp=Z,1µm						
CM31	Chiang Mai Arr	21.06	128	eP	P	02 59 32.7	-0.2
	comp=Z,78nm,0.8s						
CMAR	Chiang Mai Arr	21.06	128	P	P	02 59 32.5	-0.3
CMAR				ScP	ScP	03 07 15.7	-0.4
CMAR	Chiang Mai Arr	21.06	128	P	P	02 59 32.5	-0.3
	comp=Z,88nm,0.8s,baz=312,slow=10,SNR=231						
CMAR				ScP	ScP	03 07 15.7	-0.4
	comp=Z,0.7nm,0.3s,baz=306,slow=3.0,SNR=6.9						
CMAR				LR	LR	03 09 43.9	
	comp=Z,442nm,19.5s,baz=203,slow=43						
ZAA0	Zalesovo Array	21.29	5	eP	P	02 59 36.1	+1.1
ZALV	Zalesovo Beam	21.29	5	P	P	02 59 36.2	+1.1
ZALV				S	Sn	03 03 35.7	-2.9
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ZALV				MLR	MLR		
	comp=Z,156nm,21.5s						
ZALV	Zalesovo Beam	21.29	5	P	P	02 59 36.1	+1.1
ZALV				S	Sn	03 03 35.7	-2.9
ZALV	Zalesovo Beam	21.29	5	P	P	02 59 36.1	+1.1
	comp=Z,10nm,0.6s,baz=198,slow=10,SNR=19						
ZALV				S	Sn	03 03 35.7	-2.9
	comp=Z,0.4nm,0.4s,baz=192,slow=13,SNR=2.2						
ZALV				LR	LR	03 08 10.7	
	comp=Z,156nm,21.5s,baz=225,slow=38						
VOSK	Vostochnaya	21.39	342	⇑P	P	02 59 35.8	-0.3
	comp=Z,100nm,1.1s						
BVA0	Borovoye Array	21.82	341	⇑P	P	02 59 40.1	-0.7
	comp=Z,112nm,1.2s,baz=154,slow=12,SNR=213						
BVA0	Borovoye Array	21.82	341	i P	P	02 59 40.0	-0.7
BVA0				pmax	pmax		
	comp=Z,186nm,1.4s						
BVAR	Borovoye Array	21.82	341	P	P	02 59 40.9	+0.1
BVAR				pmax	pmax		
	comp=Z,33nm,0.8s						
BVAR				MLR	MLR		
	comp=Z,659nm,18.5s						
BVAR	Borovoye Array	21.82	341	P	P	02 59 40.9	+0.1
BVAR	Borovoye Array	21.82	341	P	P	02 59 40.9	+0.1
	comp=Z,33nm,0.8s,baz=152,slow=10,SNR=42						
BVAR				LR	LR	03 08 40.0	
	comp=Z,659nm,18.5s,baz=158,slow=38						
BRVK	Borovoye	21.88	341	eP	P	02 59 41.6	+0.2
BRVK				pmax	pmax		
	comp=Z,126nm,0.9s						
BRVK	Borovoye	21.88	341	eP	P	02 59 41.6	+0.2
	comp=Z,126nm,0.9s						
NVS	Novosibirsk	22.10	2	⇑iP	P	02 59 43.2	-0.5
NVS				pmax	pmax		
	comp=N,35nm,1.5s						
NVS				pmax	pmax		
	comp=Z,32nm,1.5s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.8s						
IBAF	Bafgh	22.11	274	eP	P	02 59 44.0	-0.3
ZRNK	Zerenda	22.14	339	⇓P	P	02 59 43.0	-1.2
	comp=E,55nm,0.9s						
GYA	Guiyang	22.59	100	P	P	02 59 50.1	+0.7
GYA				PP	PnPn	03 00 18.4	+5.6
GYA				PcP	PcP	03 03 45.2	+2.6
GYA				S	S	03 03 52.8	-4.1
GYA				SS	SnSn	03 04 34.0	+8.0
GYA				ScP	ScP	03 07 20.9	+0.9
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.6s						
GYA				LR	LR		
	comp=N,640nm,14.5s						
GYA				LR	LR		
	comp=E,550nm,15.4s						
GYA				LR	LR		
	comp=Z,630nm,15.8s						
XAN	Xi'an	22.76	79	P	P	02 59 49.6	-1.5
XAN				S	S	03 03 51.2	-8.6
XAN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
XAN				LR	LR		
	comp=N,940nm,17.6s						
XAN				LR	LR		
	comp=E,200nm,14.9s						
XAN				LR	LR		
	comp=Z,370nm,10.5s						
IMEH	Mehriz	22.95	274	eP	P	02 59 50.0	-3.3
ICHK	Chekchek	22.98	276	eP	P	02 59 53.4	-0.2
IANJ	Anjilo	23.11	284	ePn	P	02 59 56.0	+1.1
AB31	Akbulak array	23.11	322	⇑P	P	02 59 54.6	+0.1
	comp=Z,45nm,0.8s,baz=132,slow=12,SNR=488						
AB31	Akbulak array	23.11	322	i P	P	02 59 54.6	+0.1
AB31				pmax	pmax		
	comp=Z,54nm,0.8s						
ABKAR	Akbulak array	23.11	322	eP	P	02 59 53.9	-0.6
IGLO	Ghaloghah	23.18	287	eP	P	02 59 57.5	+2.0
IKIA	Kiasar	23.29	286	eP	P	02 59 56.6	-0.1
MOY	Mondy	23.57	31	eP	P	03 00 03.0	+3.8
ISAD	Sadrabad	23.64	276	eP	P	02 59 50.6	-10
ZAK	Zakamensk	23.75	36	eP	P	03 00 00.3	-0.7
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ENH	Enshi	23.82	89	eP	P	03 00 01.2	-0.4
	comp=Z,30nm,0.9s						
BTO	Baotou	23.97	63	eP	P	03 00 02.9	-0.2
SONM	Songino Array	23.98	44	P	P	03 00 03.7	+0.5
SONM	Songino Array	23.98	44	P	P	03 00 03.7	+0.5
	comp=Z,4.4nm,0.9s,baz=237,slow=9.5,SNR=20						
IALA	Alasht	24.00	286	eP	P	03 00 03.9	+0.2
IFIR	Firoozkooh	24.05	285	eP	P	03 00 05.6	+1.4
IPRN	Peran	24.38	286	eP	P	03 00 08.3	+1.3
ULN	Ulaanbaatar	24.39	44	eP	P	03 00 05.5	-1.5
	comp=Z,68nm,2.4s						

ULN Ulaanbaatar 24.39 44 P P 03 00 07.5 +0.5
comp=Z,9.3nm,1.5s
TLY Talaya 24.77 34 eP P 03 00 15.7 +5.4
TLY eS S 03 04 18.5 -14
TLY eSS SnSn 03 05 18.9 0.0
TLY pmax pmax
comp=Z,7.0nm,0.8s
TLY MLR MLR
comp=Z,426nm,20.0s
AKTO Aktyubinsk 24.82 322 ⇓P P 03 00 10.2 -0.5
comp=Z,25nm,1.1s
AKTO Aktyubinsk 24.82 322 P P 03 00 10.9 +0.2
AKTO pmax pmax
comp=Z,8.0nm,0.8s
AKTO MLR MLR
comp=Z,669nm,18.7s
AKTO Aktyubinsk 24.82 322 P P 03 00 10.8 +0.2
AKTO Aktyubinsk 24.82 322 P P 03 00 10.8 +0.2
comp=Z,7.9nm,0.8s,baz=117,slow=9.1,SNR=24
AKTO LR LR 03 11 15.8
comp=Z,669nm,18.6s,baz=131,slow=40
IVRN Varamin 24.92 283 eP P 03 00 11.3 -0.5
HHC Hu-ho-hao-te 25.17 63 i P P 03 00 13.7 -0.4
HHC pP pP 03 00 17.9 +0.1
HHC sP sP 03 00 20.7 +1.4
HHC PP PnPn 03 00 51.2 +3.3
HHC S S 03 04 34.4 -4.6
HHC sS sS 03 04 41.4 -3.7
HHC SS SnSn 03 05 33.3 +4.5
HHC PcS PcS 03 07 28.5 +0.3
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,87nm,5.4s
HHC LR LR
comp=N,3μm,18.0s
HHC LR LR
comp=E,1μm,17.8s
HHC LR LR
comp=Z,1μm,18.6s
IKLH Kolahrood 25.20 280 eP P 03 00 15.6 +1.0
IR3 Iran Long-Peri 25.47 285 eP P 03 00 18.8 +2.0
IMHD Mahdasht 25.75 285 eP P 03 00 20.6 +1.2
IPIR Pirpir 25.85 278 eP P 03 00 22.0 +1.4
IRAZ Razeghan 26.36 285 eP P 03 00 25.0 -0.1
WHN Wuhan 27.85 86 ⇓P P 03 00 38.1 -0.1
WHN LR LR
comp=N,4μm,12.1s
WHN LR LR
comp=E,2μm,13.2s
WHN LR LR
comp=Z,2μm,12.0s
ARU Arti 28.55 333c iP P 03 00 46.2 +2.0
ARU pmax pmax
comp=Z,7.0nm,0.5s
ARU MLR MLR
comp=Z,292nm,9.0s
BJI Beijing 28.57 65 P P 03 00 43.1 -1.5
BJI S S 03 05 31.6 -0.9
BJI pmax pmax
comp=Z,14nm,0.5s
BJI pmax pmax
comp=Z,100nm,4.3s
BJI LR LR
comp=N,1μm,11.1s
BJI LR LR
comp=E,420nm,14.7s
BJI LR LR
comp=Z,470nm,25.8s
IHRS Heris 28.61 291 eP P 03 00 46.9 +1.7
MAK Makhachkala 28.66 301 eP P 03 00 46.5 +1.2
MAK MLR MLR
comp=Z,2μm,14.0s
QIZ Qiongzhong 28.69 112 P P 03 00 46.5 +0.7
QIZ S S 03 05 36.2 +1.5
QIZ sS sS 03 05 42.1 +1.2
QIZ LR LR
comp=N,310nm,9.1s
QIZ LR LR
comp=E,180nm,11.8s
QIZ LR LR
comp=Z,660nm,10.9s
IDHR Dehrash 29.32 284 eP P 03 00 50.7 -0.8
MIB Mutribah 29.42 274 eP P 03 00 53.1 +0.9
MIB AMb AMB 03 00 57.8
comp=Z,40nm,0.8s
IAZR Azarshahr 29.45 290 eP P 03 00 54.8 +2.1
RDF Al-Radifah 29.47 272 eP P 03 00 53.7 +1.1
RDF AMb AMB 03 01 01.7
comp=Z,43nm,1.4s
NAY Al-Naaiem 29.64 272 eP P 03 00 54.8 +0.6
NAY AMb AMB 03 01 08.3
comp=Z,21nm,1.2s
ISHB Shabestar 29.73 291 eP P 03 00 57.0 +1.8
DGRG David-gareji 30.04 297 P P 03 01 01.5 +3.8
GNI Garni 30.44 295 eP P 03 01 03.9 +2.5
comp=Z,70nm,1.3s
TBLG Delisi 30.54 298 P P 03 01 03.0 +0.9
TBLG Delisi 30.54 298 eP P 03 01 02.9 +0.9
DUS Dusheti 30.60 298 P P 03 01 09.5 +6.9
NJ2 Nanjing 31.30 81 eP P 03 01 08.1 -0.7
NJ2 pP pP 03 01 11.1 -1.4
NJ2 sP sP 03 01 12.9 -1.2
NJ2 S S 03 06 17.0 +1.6
NJ2 sS sS 03 06 23.5 +1.9
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
NJ2 pmax pmax
comp=Z,80nm,4.2s
NJ2 LR LR
comp=N,810nm,24.0s
NJ2 LR LR
comp=E,620nm,23.6s
NJ2 LR LR
comp=Z,730nm,21.5s
AKH Akhalkalaki 31.45 297 P P 03 01 13.3 +3.0
SOKR Solikamsk 31.49 336d iP P 03 01 13.6 +3.5
SOKR pmax pmax
comp=Z,20nm,0.8s
SOKR MLR MLR
comp=Z,580nm,18.0s
ONI Oni 31.57 299 P P 03 01 13.6 +2.5
KBZ Khabaz 32.09 301 P P 03 01 16.9 +1.3
KBZ pmax pmax
comp=Z,11nm,0.9s
KBZ MLR MLR
comp=Z,631nm,19.3s
KBZ Khabaz 32.09 301 P P 03 01 16.9 +1.3
KBZ Khabaz 32.09 301 P P 03 01 16.9 +1.3
comp=Z,11nm,0.8s,baz=138,slow=7.3,SNR=13
KBZ LR LR 03 16 24.1
comp=Z,631nm,19.3s,baz=90,slow=40
KIV Kislovodsk 32.27 302 eP P 03 01 17.7 +0.3
KIV pmax pmax
comp=Z,15nm,1.0s
KIV MLR MLR
comp=Z,444nm,16.0s
CHVG Ch'k'valeri 32.59 299 P P 03 01 22.3 +2.3
RAYN Ar Rayn 33.06 263 P P 03 01 25.0 +0.6
comp=Z,70nm,1.1s,SNR=5.3
RAYN Ar Rayn 33.06 263 eP P 03 01 25.3 +0.9
comp=Z,19nm,1.3s
VRHR Novokhopersk 34.44 314 eP P 03 01 38.2 +2.2
VRHR pmax pmax
comp=Z,40nm,1.4s
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,40nm,0.9s
VRHR MLR MLR
comp=Z,670nm,13.0s
VRHR MLR MLR
comp=N,140nm,14.0s
VRHR MLR MLR
comp=E,440nm,12.0s
CN2 Changchun 35.71 59 eP P 03 01 47.0 -0.1
CN2 eS S 03 07 21.5 -2.0
CN2 LR LR
comp=N,600nm,15.0s
CN2 LR LR
comp=E,400nm,15.0s
CN2 LR LR
comp=Z,300nm,16.0s
VORD Divnogorie 35.82 313 eP P 03 01 50.4 +2.5
VORD pmax pmax
comp=Z,30nm,1.2s
VORD pmax pmax
comp=N,40nm,0.8s
VORD pmax pmax
comp=E,110nm,1.3s
VORD MLR MLR
comp=Z,770nm,14.0s
VORD MLR MLR
comp=N,360nm,11.0s
VORD MLR MLR
comp=E,580nm,14.0s
VSR Storozhevoye 35.96 314 eP P 03 01 51.6 +2.5
VSR pmax pmax
comp=Z,20nm,0.9s
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,40nm,1.0s
VSR MLR MLR
comp=Z,1μm,18.0s
VSR MLR MLR
comp=N,500nm,13.0s
VSR MLR MLR
comp=E,740nm,15.0s
KSAR Wonju Array Be 37.80 70 P P 03 02 03.5 -1.5
KSRS Korea Array 37.83 70 P P 03 02 03.5 -1.7
comp=E,0.7nm,0.5s,baz=284,slow=11,SNR=3.4
KSRS LR LR 03 20 56.1
comp=E,64nm,21.8s,baz=88,slow=42
MDJ Mudanjiang 38.71 58 P P 03 02 11.3 -1.3
MDJ sP sP 03 02 15.8 -2.1
MDJ PP PP 03 03 39.2 -1.9
MDJ S S 03 08 09.4 +0.1
MDJ pmax pmax
comp=Z,13nm,1.9s
MDJ pmax pmax
comp=Z,56nm,3.7s
MDJ LR LR
comp=N,420nm,22.5s
MDJ LR LR
comp=E,110nm,26.1s
MDJ LR LR
comp=Z,190nm,23.4s
BR131 Keskin Array S 38.98 294 eP P 03 02 16.2 +1.2
comp=Z,11nm,1.0s
BRTR Keskin Array B 38.98 294 P P 03 02 15.9 +0.9
BRTR Keskin Array B 38.98 294 P P 03 02 15.9 +0.9
comp=Z,3.1nm,0.8s,baz=124,slow=8.3,SNR=15
BRTR LR LR 03 19 57.3
comp=Z,164nm,21.4s,baz=230,slow=39
ANTO Ankara 39.61 295 eP P 03 02 21.5 +1.2
ANTO pmax pmax
comp=Z,20nm,1.2s
ANTO Ankara 39.61 295 eP P 03 02 21.5 +1.2
comp=Z,20nm,1.2s
USRK Ussuriysk Arra 40.44 59 LR LR 03 20 40.8
comp=Z,227nm,19.5s,baz=276,slow=38
KSM Kuching 41.15 133 eP P 03 02 33.0 -0.1
comp=Z,4.0nm,0.4s
SBUM Sibu 41.60 130 P P 03 02 33.7 -3.1
comp=Z,22nm,0.9s
KKM Kota Kinabalu 41.71 122 eP P 03 02 38.5 +0.7
comp=Z,48nm,0.9s
KKM Kota Kinabalu 41.71 122 P P 03 02 37.0 -0.8
AKASG Malin Array Be 42.08 311 P P 03 02 40.6 +0.3
AKASG pmax pmax
comp=Z,9.0nm,0.6s
AKASG MLR MLR
comp=Z,306nm,21.2s
AKASG Malin Array Be 42.08 311 P P 03 02 40.6 +0.3
AKASG Malin Array Be 42.08 311 P P 03 02 40.6 +0.3
comp=Z,8.9nm,0.6s,baz=83,slow=7.7,SNR=19
AKASG LR LR 03 21 42.7
comp=Z,306nm,21.1s,baz=65,slow=38
AK01 Malin Array Si 42.08 311 eP P 03 02 40.7 +0.3
AK02 Malin Array Si 42.09 311 eP P 03 02 42.4 +2.0
KIEV Kiev 42.09 311 eP P 03 02 40.8 +0.4
KIEV Kiev 42.09 311 eP P 03 02 40.8 +0.4
KIS Kishinev 42.19 306⇓iP P 03 02 44.0 +2.7
comp=Z,200nm,1.5s
KIS LRM MLR 03 23 42.0
comp=Z,400nm,15.0s
KIS Kishinev 42.19 306κ iP P 03 02 44.0 +2.7
KIS e 03 04 26.0
KIS pmax pmax
comp=Z,180nm,1.5s
KIS MLR MLR
comp=Z,400nm,15.0s
KIS MLR MLR
comp=Z,500nm,13.0s
YAK Yakutsk 42.20 31 eP P 03 02 42.4 +1.2
YAK e*PP pP 03 02 50.3 +5.3
YAK e 03 04 37.7
YAK eS S 03 08 59.0 -1.9
YAK eSS SS 03 12 04.3 -4.3
YAK eSSS SSS 03 12 35.7
YAK e 03 12 44.7
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=E,6.0nm,1.2s
YAK smax smax
comp=N,48nm,10.6s
YAK MLR MLR
comp=Z,222nm,15.0s
YAK MLR MLR
comp=N,110nm,13.0s
YAK MLR MLR
comp=E,124nm,12.0s
PRD Provadia 43.35 300 eP P 03 02 51.4 +0.6
JOF Joensuu 43.54 329 ep P 03 02 52.0 0.0
comp=E,17nm,0.8s
JOF Joensuu 43.54 329 eP P 03 02 52.0 0.0
JOF pmax pmax
comp=Z,17nm,0.8s
VRI Vrincioaia 43.66 304 ⇑P P 03 02 55.5 +2.2
VRI Vrincioaia 43.66 304⇑iP P 03 02 55.5 +2.2
TESR Tescani 43.69 305⇓iP P 03 02 54.7 +1.2
PLOR Plostina 43.71 304 ⇓P P 03 02 56.0 +2.3
PLOR Plostina 43.71 304⇓iP P 03 02 56.0 +2.3
MLR Muntele Rosu 44.23 304⇑iP P 03 03 00.7 +2.7
SZH Strazhica 44.41 300 eP P 03 03 00.7 +1.4
APA Apatity 44.55 336⇓eP P 03 03 03.4 +3.3
APA MLR MLR
comp=Z,700nm,11.0s
BURAR Bucovina Array 44.63 307⇑iP P 03 03 02.5 +1.3
BUR08 Bucovina Ar. S 44.64 307 eP P 03 03 02.2 +1.0
VOIR 44.86 304 ⇑P P 03 03 04.4 +1.4
VOIR 44.86 304⇑iP P 03 03 04.4 +1.4
ARR Arges 45.16 303⇑iP P 03 03 07.0 +1.7
LVV L'vov 45.38 310 eP P 03 03 09.4 +2.5
LVV MLR MLR
comp=N,300nm,13.0s
LVV MLR MLR
comp=E,300nm,13.0s
LVV MLR MLR
comp=Z,300nm,13.0s
FINES FINESS Array B 45.48 326 P P 03 03 08.1 +0.5
FINES FINESS Array B 45.48 326 P P 03 03 08.1 +0.5
comp=Z,8.3nm,0.6s,baz=99,slow=9.8,SNR=10
FINES LR LR 03 23 37.5
comp=Z,798nm,18.2s,baz=163,slow=38
KAF Kangasniemi 45.53 327 ep P 03 03 10.2 +2.3
comp=Z,5.1nm,0.7s
KAF Kangasniemi 45.53 327 eP P 03 03 10.2 +2.3
KAF pmax pmax
comp=Z,5.0nm,0.7s
BMR Baia Mare 45.79 307 ⇓P P 03 03 12.5 +2.3
BMR Baia Mare 45.79 307⇓iP P 03 03 12.5 +2.3
MPEP Malo Peshtene 45.99 301 i P P 03 03 13.8 +1.9
SUW Suwalki 46.00 316 eP P 03 03 14.8 +3.1
MAT Matsushiro 46.09 69 P P 03 03 12.1 -0.7
MJAR Matsushiro Arr 46.10 69 P P 03 03 12.1 -0.7
MJAR Matsushiro Arr 46.10 69 P P 03 03 12.1 -0.7
comp=Z,2.3nm,0.9s,baz=282,slow=9.7,SNR=5.6
MJAR LR LR 03 23 42.5
comp=Z,122nm,18.0s,baz=325,slow=38
KWP Kalwaria Pacla 46.24 310 eP P 03 03 17.7 +4.0
DRGR 46.38 306 ⇑P P 03 03 17.2 +2.2
DRGR 46.38 306⇑iP P 03 03 17.2 +2.2
TRPA Tarpa 46.41 307⇓iP P 03 03 16.7 +1.6
VTS Vitosha 46.48 300 ⇑P P 03 03 18.8 +2.9
VTS Vitosha 46.48 300 eP P 03 03 18.3 +2.4
VTS Vitosha 46.48 300⇑iP P 03 03 18.8 +2.9
KOLS Kolonicke sedl 46.55 309 eP P 03 03 19.3 +3.1
KOLS pmax pmax
comp=Z,12nm,1.5s
KOLS Kolonicke sedl 46.55 309 eP P 03 03 19.3 +3.1
KOLS ePP PP 03 05 15.0 +10
UZH Uzhgorod 46.55 308 eP P 03 03 17.0 +0.8
UZH i 03 03 23.0
CRVS Cervenica-Dubn 47.08 309 eP P 03 03 22.2 +1.8
CRVS pmax pmax
comp=Z,6.0nm,1.3s
CRVS Cervenica-Dubn 47.08 309 eP P 03 03 22.2 +1.8
CRVS ePP PP 03 05 18.3 +7.4
STHS Stebnicka Huta 47.20 309 eP P 03 03 24.2 +2.9
STHS pmax pmax
comp=Z,5.0nm,0.8s
STHS Stebnicka Huta 47.20 309 eP P 03 03 24.2 +2.9
BZS Buzias 47.25 304 ⇑P P 03 03 25.5 +3.8
BZS Buzias 47.25 304⇑iP P 03 03 25.5 +3.8
KEV Kevo 47.58 337 ep P 03 03 27.2 +3.3
comp=Z,9.3nm,0.8s
KEV Kevo 47.58 337 eP P 03 03 27.2 +3.3
KEV pmax pmax
comp=Z,9.0nm,0.8s
KECS Kecovo 47.76 308 eP P 03 03 28.8 +3.2
KECS pmax pmax
comp=Z,10.0nm,1.9s
KECS Kecovo 47.76 308 eP P 03 03 28.8 +3.2
ARCES ARCESS Array B 47.99 337 P P 03 03 27.1 -0.1
ARCES ARCESS Array B 47.99 337 P P 03 03 27.1 -0.1
comp=Z,14nm,0.8s,baz=79,slow=6.5,SNR=15
ARCES LR LR 03 25 45.5
comp=Z,121nm,18.2s,baz=235,slow=39
OJC Ojcow 48.09 310 eP P 03 03 31.1 +2.9
OJC pmax pmax
comp=Z,41nm,1.7s
OJC Ojcow 48.09 310 eP P 03 03 31.1 +2.9
comp=Z,41nm,1.7s
PSZ Piszkesteto 48.20 307 eP P 03 03 30.2 +1.1
PSZ pmax pmax
comp=Z,10.0nm,1.1s
PSZ Piszkesteto 48.20 307 eP P 03 03 30.2 +1.1
comp=Z,9.5nm,1.1s
VYHS Vyhne 48.85 308 eP P 03 03 34.7 +0.6
VYHS pmax pmax
comp=Z,14nm,1.7s
VYHS Vyhne 48.85 308 eP P 03 03 34.7 +0.6
OKC Ostrava-Krasne 49.18 310 i P P 03 03 34.4 -2.1
OKC e 03 03 39.3
OKC MLR MLR
comp=Z,300nm,13.7s
OKC Ostrava-Krasne 49.18 310 i P P 03 03 34.4 -2.1
OKC epP pP 03 03 39.3 -1.1
OKC AMS AMS 03 26 30.0
comp=Z,300nm,13.7s
PKSM Moragy 49.24 305 ⇓P P 03 03 40.5 +3.5
PKSM Moragy 49.24 305⇓iP P 03 03 40.5 +3.5
MORC Moravsky Berou 49.58 310 eP P 03 03 40.2 +0.5
MORC pmax pmax
comp=Z,49nm,1.7s
MORC Moravsky Berou 49.58 310 eP P 03 03 40.1 +0.5
comp=Z,49nm,1.7s
MORC Moravsky Berou 49.58 310⇑iP P 03 03 43.5 +3.9
ZST Bratislava 50.03 308 eP P 03 03 44.4 +1.3
ZST pmax pmax
comp=Z,30nm,2.1s
ZST Bratislava 50.03 308 eP P 03 03 44.4 +1.3
VRAC Vranov 50.24 309⇓iP P 03 03 48.8 +4.2
KSP Ksiaz 50.28 311⇑eP P 03 03 48.1 +3.2
KSP Ksiaz 50.28 311 eP P 03 03 47.7 +2.8
DPC Dobruska-Polom 50.30 311 i P P 03 03 46.1 +0.9
DPC e 03 03 48.7
DPC Dobruska-Polom 50.30 311 i P P 03 03 46.1 +0.9
DPC epP pP 03 03 48.7 -0.3
DPC AMS AMS 03 27 10.0
UPC Upice 50.49 311 i P P 03 03 47.5 +1.0
UPC Upice 50.49 311 i P P 03 03 47.5 +1.0
CONA Conrad Observa 50.89 308⇑ipP P 03 03 50.2 +0.6
comp=Z,25nm,1.0s
TREC Trest 50.96 310 i P P 03 03 53.4 +3.3
TREC MLR MLR
comp=Z,300nm,12.6s
TREC Trest 50.96 310 i P P 03 03 53.4 +3.3
TREC AMS AMS 03 27 50.0
comp=Z,300nm,12.6s
ARSA Arzberg 51.22 307⇓ipP P 03 03 52.6 +0.5
comp=Z,7.2nm,0.9s
PVCC Panska Ves 51.40 311 i P P 03 03 57.0 +3.6
PVCC MLR MLR
comp=Z,600nm,13.9s
PVCC Panska Ves 51.40 311 i P P 03 03 57.0 +3.6
PVCC AMS AMS 03 27 50.0
comp=Z,600nm,13.9s
PRU Pruhonice 51.48 311 i P P 03 03 55.0 +1.0
PRU MLR MLR
comp=Z,400nm,13.3s
PRU Pruhonice 51.48 311 i P P 03 03 55.0 +1.0
PRU AMS AMS 03 27 50.0
comp=Z,400nm,13.3s
PRA Prague 51.54 311 P P 03 03 58.0 +3.6
PERS Pernice 51.59 306 i P P 03 03 58.0 +3.1
SOKA Soboth 51.64 306⇓ipP P 03 03 55.8 +0.5
comp=Z,23nm,1.2s
BOJS Bojanci 51.69 305 i P P 03 03 55.9 +0.3
BRG Berggiesshubel 51.75 312 eP P 03 03 56.4 +0.4
comp=Z,3.0nm,0.8s
BRG i 03 03 59.2
comp=Z,16nm,1.0s
BRG e 03 05 25.8
comp=Z,8.4nm,1.4s
BRG
comp=N,325nm,13.3s
BRG
comp=E,368nm,11.8s
BRG
comp=Z,558nm,14.9s
BRG Berggiesshubel 51.75 312 eP P 03 03 59.1 +3.1
comp=Z,46nm,1.8s
BRG Berggiesshubel 51.75 312 eP P 03 03 56.4 +0.4
BRG i 03 03 59.2
BRG pmax pmax
comp=Z,3.0nm,0.8s
BRG pmax pmax
comp=Z,17nm,1.0s
BRG pmax pmax
comp=Z,8.0nm,1.4s
BRG MLR MLR
comp=N,325nm,13.3s
BRG MLR MLR
comp=E,368nm,11.8s
BRG MLR MLR
comp=Z,558nm,14.9s
GEC2 GERESS Array S 52.18 309 eP P 03 04 02.4 +3.0
comp=Z,24nm,1.6s
GEC2 GERESS Array S 52.18 309 eP P 03 04 02.4 +3.0
GEC2 pmax pmax
comp=Z,24nm,1.6s
GERES GERESS Array B 52.18 309 P P 03 03 59.7 +0.3
GERES GERESS Array B 52.18 309 P P 03 03 59.7 +0.3
comp=Z,2.8nm,1.0s,baz=79,slow=7.2,SNR=18
GERES LR LR 03 28 19.3
comp=Z,166nm,19.7s,baz=80,slow=38
KHC Kasperske Hory 52.22 310 eP P 03 04 00.2 +0.6
KHC pmax pmax
comp=Z,37nm,1.9s
KHC Kasperske Hory 52.22 310 i P P 03 04 00.1 +0.6
KHC epP pP 03 04 02.6 -0.9
KHC AMS AMS 03 28 30.0
comp=Z,300nm,14.4s
KHC Kasperske Hory 52.22 310 eP P 03 04 00.1 +0.6
comp=Z,37nm,1.9s
CLL Collm 52.29 312 eP P 03 04 02.8 +2.8
comp=Z,27nm,1.6s
CLL Collm 52.29 312⇓iP P 03 04 03.1 +3.1
CLL e 03 04 15.0
CLL pmax pmax
comp=Z,27nm,1.6s
CLL MLR MLR
comp=Z,300nm,21.6s
CLL Collm 52.29 312⇓iP P 03 04 03.1 +3.1
comp=Z,27nm,1.6s
CLL e 03 04 15.0
CLL LV 03 26 00.0
comp=Z,300nm,21.6s
JAVS Javornik 52.44 305 i P P 03 04 01.7 +0.4
NB2 NORSAR Subarra 52.58 325 P P 03 04 01.0 -1.0
comp=Z,56nm,2.0s,baz=89,slow=7.4

NB2 NORSAR Subarra 52.58 325 P P 03 04 01.0 -1.0
baz=89,slow=7.4
NOA NORSAR Array B 52.58 325 P P 03 04 01.9 -0.1
NOA NORSAR Array B 52.58 325 P P 03 04 01.9 -0.1
comp=Z,3.4nm,0.9s,baz=87,slow=7.0,SNR=4.7
NOA LR LR 03 27 38.0
comp=Z,751nm,18.4s,baz=90,slow=37
WET Wettzell 52.67 310 *eP* P 03 04 06.2 +3.3
comp=Z,49nm,1.9s
WET Wettzell 52.67 310 *eP* P 03 04 06.2 +3.3
WET pmax pmax
comp=Z,49nm,1.9s
TANN Tannenbergstha 52.75 311 *eP* **P 03 04 06.4 +2.9**
comp=Z,30nm,1.7s
NKC Novy Kostel 52.78 311 AMS AMS 03 28 40.0
comp=Z,600nm,13.4s
RJOB Jochberg 52.96 308 *eP* **P 03 04 07.6 +2.5**
comp=Z,15nm,1.3s
ROTZ Rotzenmuhle 53.01 311 *eP* P 03 04 09.0 +3.7
comp=Z,44nm,1.6s
MOX Moxa 53.25 312 *eP* **P 03 04 10.1 +3.0**
comp=Z,54nm,2.0s
MOX *eL* L 03 28 08.9
comp=Z,163nm,22.0s
MOX Moxa 53.25 312 *eP* **P 03 04 10.1 +3.0**
MOX pmax pmax
comp=Z,54nm,2.0s
MOX MLR MLR
comp=Z,200nm,22.0s
BSEG Bad Segeberg 53.58 316 *eP* **P 03 04 12.6 +3.2**
comp=Z,89nm,1.5s
BSEG Bad Segeberg 53.58 316 *eP* **P 03 04 12.6 +3.2**
BSEG pmax pmax
comp=Z,89nm,1.5s
GRF Grafenberg Arr 53.65 311 *eP* P 03 04 13.6 +3.5
comp=Z,37nm,1.4s
GRF *eL* L 03 27 52.2
comp=Z,190nm,21.5s
GRF Grafenberg Arr 53.65 311 *eP* P 03 04 13.6 +3.5
GRF pmax pmax
comp=Z,37nm,1.4s
GRF MLR MLR
comp=Z,200nm,21.5s
KMBO Kilima Mbogo 53.76 240 *eP* P 03 04 15.2 +3.6
comp=Z,9.0nm,1.1s
KMBO Kilima Mbogo 53.76 240 LR LR 03 27 22.7
comp=Z,183nm,18.4s,baz=272,slow=36
CLZ Clausthal 53.84 313 *eP* **P 03 04 14.5 +3.0**
comp=Z,24nm,1.1s
CLZ Clausthal 53.84 313 *eP* **P 03 04 14.5 +3.0**
CLZ pmax pmax
comp=Z,24nm,1.1s
FUR Furstenfeldbru 53.89 309 *eP* P 03 04 15.2 +3.4
comp=Z,92nm,1.7s
FUR Furstenfeldbru 53.89 309 *eP* P 03 04 15.2 +3.4
FUR pmax pmax
comp=Z,92nm,1.7s
NRDL Niedersach Rie 53.91 314 *eP* P 03 04 15.1 +3.3
comp=Z,37nm,1.3s
UBBA Unterbreizbach 54.23 312 *eP* P 03 04 17.4 +3.2
comp=Z,18nm,1.4s
RETA Reutte 54.36 308 *i*/P **P 03 04 14.9 -0.5**
comp=Z,18nm,2.0s
DAVA Damuels 54.99 308 *i*/pP **P 03 04 20.4 +0.4**
comp=Z,17nm,0.9s
STU Stuttgart 55.13 310 *eP* **P 03 04 23.9 +3.1**
comp=Z,30nm,1.3s
TNS Taunus Mts 55.32 312 *eP* **P 03 04 25.2 +3.0**
comp=Z,25nm,1.4s
TNS Taunus Mts 55.32 312 *eP* **P 03 04 25.2 +3.0**
TNS pmax pmax
comp=Z,25nm,1.4s
VLC Villacollemand 55.35 304 *eP* **P 03 04 25.0 +2.4**
comp=Z,28nm,1.0s
IBBN Ibbenburen 55.36 314 *eP* **P 03 04 25.1 +2.7**
comp=Z,50nm,1.4s
BFO Black Forest 55.78 309 *eP* **P 03 04 27.9 +2.3**
comp=Z,17nm,1.6s
BFO Black Forest 55.78 309 *eP* **P 03 04 27.9 +2.3**
BFO pmax pmax
comp=Z,17nm,1.6s
BUG Bochum--Univer 55.81 313 *eP* **P 03 04 28.6 +2.9**
comp=Z,83nm,1.8s
LANF Langenberg 55.98 310 *eP* **P 03 04 30.0 +3.0**
LANF Langenberg 55.98 310 *eP* **P 03 04 30.0 +3.0**
LANF Langenberg 55.98 310 *eP* **P 03 04 30.0 +3.0**
RUP Ruppelstein 56.30 311 *eP* **P 03 04 32.1 +2.8**
RUP Ruppelstein 56.30 311 *eP* **P 03 04 32.1 +2.8**
CDF Champ du Feu 56.45 310 *eP* **P 03 04 30.3 -0.1**
comp=Z,45nm,1.5s
CDF Champ du Feu 56.45 310 *eP* **P 03 04 30.3 -0.1**
CDF pmax pmax
comp=Z,45nm,1.5s
CDF Champ du Feu 56.45 310 *eP* **P 03 04 30.3 -0.1**
comp=Z,45nm,1.5s
PETK Petropavlovsk- 56.47 45 LR LR 03 29 59.8
comp=Z,179nm,18.4s,baz=283,slow=37
MOF Molkenrain 56.67 309 *eP* **P 03 04 34.7 +2.7**
MOF Molkenrain 56.67 309 *eP* **P 03 04 34.7 +2.7**
MOF Molkenrain 56.67 309 *eP* **P 03 04 34.7 +2.7**
PGF Pioggiola 56.75 302 *eP* **P 03 04 32.0 -0.7**
comp=Z,78nm,1.3s
PGF Pioggiola 56.75 302 *eP* **P 03 04 32.0 -0.7**
PGF pmax pmax
comp=Z,79nm,1.3s
PGF Pioggiola 56.75 302 *eP* **P 03 04 32.0 -0.7**
comp=Z,78nm,1.3s
HINF Hinteralfeld 56.87 309 *eP* **P 03 04 33.0 -0.3**
comp=Z,29nm,0.9s
HINF Hinteralfeld 56.87 309 *eP* **P 03 04 33.0 -0.3**
HINF pmax pmax
comp=Z,29nm,0.9s
HINF Hinteralfeld 56.87 309 *eP* **P 03 04 33.0 -0.3**
comp=Z,29nm,0.9s
WLF Walferdange 56.88 311 P P 03 04 37.0 +3.7
WLF Walferdange 56.88 311 *eP* P 03 04 36.6 +3.2
comp=Z,23nm,1.3s
LOMF Lomont 56.99 308 *eP* **P 03 04 37.0 +2.7**
LOMF Lomont 56.99 308 *eP* **P 03 04 37.0 +2.7**
LOMF Lomont 56.99 308 *eP* **P 03 04 37.0 +2.7**
HAU Haudompre 57.15 309 *eP* **P 03 04 35.1 -0.2**
comp=Z,43nm,1.1s
HAU *eR*
comp=Z,326nm,18.5s
HAU Haudompre 57.15 309 *eP* **P 03 04 35.1 -0.2**
HAU pmax pmax
comp=Z,43nm,1.1s
HAU Haudompre 57.15 309 *eP* **P 03 04 35.1 -0.2**
comp=Z,43nm,1.1s
BCLA Clavier 57.25 312 P **P 03 04 38.9 +3.0**
comp=Z,17nm,1.9s
SAOF Saorge 57.37 304 *eP* **P 03 04 39.7 +2.8**
SAOF Saorge 57.37 304 *eP* **P 03 04 39.7 +2.8**
SAOF Saorge 57.37 304 *eP* **P 03 04 39.7 +2.8**
PAGF Fort de Pagny 57.42 310 *eP* **P 03 04 37.4 +0.2**
comp=Z,20nm,1.4s
PAGF Fort de Pagny 57.42 310 *eP* **P 03 04 37.4 +0.2**
comp=Z,20nm,1.4s
AUTN L'Aution 57.46 305 *eP* **P 03 04 40.7 +2.9**
AUTN L'Aution 57.46 305 *eP* **P 03 04 40.7 +2.9**
AUTN L'Aution 57.46 305 *eP* **P 03 04 40.7 +2.9**
SBF Sospel 57.49 304 *eP* **P 03 04 37.8 0.0**
comp=Z,65nm,0.8s
SBF Sospel 57.49 304 *eP* **P 03 04 37.8 0.0**
SBF pmax pmax
comp=Z,65nm,0.8s
SBF Sospel 57.49 304 *eP* **P 03 04 37.8 0.0**
comp=Z,65nm,0.8s
LPG La Plagne 57.52 306 *eP* **P 03 04 38.4 +0.1**
comp=Z,65nm,0.9s
LPG La Plagne 57.52 306 *eP* **P 03 04 38.4 +0.1**
LPG pmax pmax
comp=Z,65nm,0.9s
LPG La Plagne 57.52 306 *eP* **P 03 04 38.4 +0.1**
comp=Z,65nm,0.9s
LPL La Plagne 57.52 306 *eP* **P 03 04 38.4 +0.2**
comp=Z,77nm,1.0s
LPL La Plagne 57.52 306 *eP* **P 03 04 38.4 +0.2**
LPL pmax pmax
comp=Z,77nm,1.0s
LPL La Plagne 57.52 306 *eP* **P 03 04 38.4 +0.2**
comp=Z,77nm,1.0s
TOUF Mont Tournerai 57.58 305 *eP* **P 03 04 39.7 +1.1**
TOUF Mont Tournerai 57.58 305 *eP* **P 03 04 39.7 +1.1**
TOUF Mont Tournerai 57.58 305 *eP* **P 03 04 39.7 +1.1**
GIVF Givet 57.62 312 *eP* **P 03 04 38.9 +0.3**
GIVF Givet 57.62 312 *eP* **P 03 04 38.9 +0.3**
CABF La Chapelle 57.67 308 *eP* **P 03 04 38.8 -0.3**
CABF La Chapelle 57.67 308 *eP* **P 03 04 38.8 -0.3**
CABF La Chapelle 57.67 308 *eP* **P 03 04 38.8 -0.3**
BNI Bardonecchia 57.69 306 *eP* **P 03 04 37.9 -1.4**
BNI pmax pmax
comp=Z,17nm,1.3s
BNI Bardonecchia 57.69 306 *eP* **P 03 04 37.9 -1.4**
comp=Z,17nm,1.3s
MBDF Montbardon 57.71 305 *eP* **P 03 04 38.7 -0.8**
comp=Z,25nm,1.0s
MBDF Montbardon 57.71 305 *eP* **P 03 04 38.7 -0.8**
MBDF pmax pmax
comp=Z,25nm,1.0s
MBDF Montbardon 57.71 305 *eP* **P 03 04 38.7 -0.8**
comp=Z,25nm,1.0s
MEZF Maizieres J'vi 57.87 310 *eP* **P 03 04 40.3 0.0**
comp=Z,55nm,1.3s
MEZF Maizieres J'vi 57.87 310 *eP* **P 03 04 40.3 0.0**
comp=Z,55nm,1.3s
SFTF Sexfontaines 57.95 310 *eP* **P 03 04 40.7 -0.2**
comp=Z,73nm,1.3s
SFTF Sexfontaines 57.95 310 *eP* **P 03 04 40.7 -0.2**
comp=Z,73nm,1.3s
BAIF Baives 58.02 312 *eP* **P 03 04 41.7 +0.4**
BAIF Baives 58.02 312 *eP* **P 03 04 41.7 +0.4**
BAIF Baives 58.02 312 *eP* **P 03 04 41.7 +0.4**
FRF La Foret Royal 58.12 304 *eP* **P 03 04 41.9 -0.3**
comp=Z,32nm,0.9s
FRF La Foret Royal 58.12 304 *eP* **P 03 04 41.9 -0.3**
FRF pmax pmax
comp=Z,32nm,0.9s
FRF La Foret Royal 58.12 304 *eP* **P 03 04 41.9 -0.3**
comp=Z,32nm,0.9s
ORIF Oris-en-Rattie 58.27 306 *eP* **P 03 04 42.7 -0.6**
comp=Z,36nm,1.3s
ORIF *eR*
comp=Z,350nm,18.2s
ORIF Oris-en-Rattie 58.27 306 *eP* **P 03 04 42.7 -0.6**
ORIF pmax pmax
comp=Z,36nm,1.3s
ORIF Oris-en-Rattie 58.27 306 *eP* **P 03 04 42.7 -0.6**
comp=Z,36nm,1.3s
LMR La Mourre 58.28 304 *eP* **P 03 04 43.0 -0.3**
comp=Z,56nm,1.3s
LMR La Mourre 58.28 304 *eP* **P 03 04 43.0 -0.3**
LMR pmax pmax
comp=Z,56nm,1.3s
LMR La Mourre 58.28 304 *eP* **P 03 04 43.0 -0.3**
comp=Z,56nm,1.3s
KEST Kesra 58.58 295 *eP* **P 03 04 45.9 +0.2**
KEST Kesra 58.58 295 P **P 03 04 45.5 -0.1**
comp=Z,6.2nm,1.1s,baz=307,slow=3.2,SNR=12
SMRF Simiane la Rot 58.74 305 *eP* **P 03 04 45.6 -1.0**
comp=Z,78nm,1.5s
SMRF Simiane la Rot 58.74 305 *eP* **P 03 04 45.6 -1.0**
comp=Z,78nm,1.5s
LEPF PUYLOUBIER 58.79 304 *eP* **P 03 04 48.6 +1.7**
LEPF PUYLOUBIER 58.79 304 *eP* **P 03 04 48.6 +1.7**
LOR Lormes 58.97 309 *eP* **P 03 04 47.3 -0.8**
comp=Z,18nm,0.9s
LOR *eR*
comp=Z,281nm,18.5s
LOR Lormes 58.97 309 *eP* **P 03 04 47.3 -0.8**
comp=Z,18nm,0.9s
SSB Saint Sauveur 59.07 307 *eP* **P 03 04 51.1 +2.2**
SSB pmax pmax
comp=Z,30nm,1.4s
SSB Saint Sauveur 59.07 307 *eP* **P 03 04 51.1 +2.2**
comp=Z,30nm,1.4s
VIVF Saint-Julien-l 59.11 306 *eP* **P 03 04 48.9 -0.2**
comp=Z,22nm,1.0s
VIVF Saint-Julien-l 59.11 306 *eP* **P 03 04 48.9 -0.2**
VIVF pmax pmax
comp=Z,22nm,1.0s
VIVF Saint-Julien-l 59.11 306 *eP* **P 03 04 48.9 -0.2**
comp=Z,22nm,1.0s
SMF Signal de Mont 59.15 308 *eP* **P 03 04 48.8 -0.5**
comp=Z,46nm,1.0s
SMF Signal de Mont 59.15 308 *eP* **P 03 04 48.8 -0.5**
SMF pmax pmax
comp=Z,46nm,1.0s
SMF Signal de Mont 59.15 308 *eP* **P 03 04 48.8 -0.5**
comp=Z,46nm,1.0s
SSF Saint Saulge 59.26 309 *eP* **P 03 04 49.5 -0.5**
comp=Z,41nm,1.0s
SSF Saint Saulge 59.26 309 *eP* **P 03 04 49.5 -0.5**
SSF pmax pmax
comp=Z,41nm,1.0s
SSF Saint Saulge 59.26 309 *eP* **P 03 04 49.5 -0.5**
comp=Z,41nm,1.0s
AVF Avril sur Loir 59.43 309 *eP* **P 03 04 50.7 -0.5**
comp=Z,22nm,0.9s
AVF Avril sur Loir 59.43 309 *eP* **P 03 04 50.7 -0.5**
AVF pmax pmax
comp=Z,22nm,0.9s
AVF Avril sur Loir 59.43 309 *eP* **P 03 04 50.7 -0.5**
comp=Z,22nm,0.9s
HYF Humbligny 59.76 309 *eP* **P 03 04 53.5 0.0**
HYF Humbligny 59.76 309 *eP* **P 03 04 53.5 0.0**
AGO Saint Agoulin 59.79 308 *eP* **P 03 04 56.2 +2.4**
AGO Saint Agoulin 59.79 308 *eP* **P 03 04 56.2 +2.4**
BGF Bois d'Agland 59.83 308 *eP* **P 03 04 53.5 -0.5**
comp=Z,18nm,0.9s
BGF Bois d'Agland 59.83 308 *eP* **P 03 04 53.5 -0.5**
BGF pmax pmax
comp=Z,18nm,0.9s
BGF Bois d'Agland 59.83 308 *eP* **P 03 04 53.5 -0.5**
comp=Z,18nm,0.9s
LASF Ste Croix 59.90 305 *eP* **P 03 04 54.6 +0.1**
comp=Z,72nm,1.4s
LASF Ste Croix 59.90 305 *eP* **P 03 04 54.6 +0.1**
comp=Z,72nm,1.4s
LBL Lubilhac 59.96 307 *eP* **P 03 04 57.5 +2.5**
LBL Lubilhac 59.96 307 *eP* **P 03 04 57.5 +2.5**
LBL Lubilhac 59.96 307 *eP* **P 03 04 57.5 +2.5**
PYM Petit Puy Mans 59.97 308 *eP* **P 03 04 57.5 +2.4**
PYM Petit Puy Mans 59.97 308 *eP* **P 03 04 57.5 +2.4**
PYM Petit Puy Mans 59.97 308 *eP* **P 03 04 57.5 +2.4**
TCF Toulx Ste Croi 60.33 308 *eP* **P 03 04 57.5 0.0**
comp=Z,50nm,1.1s
TCF Toulx Ste Croi 60.33 308 *eP* **P 03 04 57.5 0.0**
TCF pmax pmax
comp=Z,50nm,1.1s
TCF Toulx Ste Croi 60.33 308 *eP* **P 03 04 57.5 0.0**
comp=Z,50nm,1.1s
CAF Calviac 60.85 307 *eP* **P 03 05 01.1 0.0**
comp=Z,22nm,0.9s
CAF Calviac 60.85 307 *eP* **P 03 05 01.1 0.0**
CAF pmax pmax
comp=Z,22nm,0.9s
CAF Calviac 60.85 307 *eP* **P 03 05 01.1 0.0**
comp=Z,22nm,0.9s
RJF Les Rejaudoux 61.10 307 *eP* **P 03 05 03.0 +0.3**
RJF *eR*
comp=Z,194nm,21.5s
RJF Les Rejaudoux 61.10 307 *eP* **P 03 05 03.0 +0.3**
RJF Les Rejaudoux 61.10 307 *eP* **P 03 05 03.0 +0.3**
LDF La Druitiere 61.14 311 *eP* **P 03 05 02.4 -0.5**
comp=Z,55nm,1.1s
LDF La Druitiere 61.14 311 *eP* **P 03 05 02.4 -0.5**
LDF pmax pmax
comp=Z,55nm,1.1s
LDF La Druitiere 61.14 311 *eP* **P 03 05 02.4 -0.5**
comp=Z,55nm,1.1s
MTLF Montolieu 61.26 305 *eP* **P 03 05 03.7 -0.1**
comp=Z,43nm,1.4s
MTLF Montolieu 61.26 305 *eP* **P 03 05 03.7 -0.1**
MTLF pmax pmax
comp=Z,43nm,1.4s
MTLF Montolieu 61.26 305 *eP* **P 03 05 03.7 -0.1**
comp=Z,43nm,1.4s
FLN La Foliniere 61.32 312 *eP* **P 03 05 03.4 -0.7**
comp=Z,70nm,1.5s
FLN *eR*
comp=Z,240nm,21.5s
FLN La Foliniere 61.32 312 *eP* **P 03 05 03.4 -0.7**
FLN pmax pmax
comp=Z,70nm,1.5s
FLN La Foliniere 61.32 312 *eP* **P 03 05 03.4 -0.7**
comp=Z,70nm,1.5s
GRR Gorron 61.67 311 *eP* **P 03 05 05.9 -0.6**
comp=Z,89nm,1.4s
GRR Gorron 61.67 311 *eP* **P 03 05 05.9 -0.6**
GRR pmax pmax
comp=Z,89nm,1.4s
GRR Gorron 61.67 311 *eP* **P 03 05 05.9 -0.6**
comp=Z,89nm,1.4s
LFF La Frestale 61.74 307 *eP* **P 03 05 07.0 0.0**
comp=Z,21nm,0.9s
LFF La Frestale 61.74 307 *eP* **P 03 05 07.0 0.0**
LFF pmax pmax
comp=Z,21nm,0.9s
LFF La Frestale 61.74 307 *eP* **P 03 05 07.0 0.0**
comp=Z,21nm,0.9s
MFF Saint Martin d 61.78 309 *eP* **P 03 05 06.6 -0.7**
comp=Z,21nm,1.0s
MFF Saint Martin d 61.78 309 *eP* **P 03 05 06.6 -0.7**
MFF pmax pmax
comp=Z,21nm,1.0s
MFF Saint Martin d 61.78 309 *eP* **P 03 05 06.6 -0.7**
comp=Z,21nm,1.0s
EPF Esparros 62.66 305 *eP* **P 03 05 12.1 -1.2**
comp=Z,7.1nm,0.8s
EPF Esparros 62.66 305 *eP* **P 03 05 12.1 -1.2**
EPF pmax pmax
comp=Z,7.0nm,0.8s
EPF Esparros 62.66 305 *eP* **P 03 05 12.1 -1.2**
comp=Z,7.1nm,0.8s
SGMF Saint Gilles 62.79 312 *eP* **P 03 05 13.7 -0.3**
comp=Z,43nm,1.2s
SGMF Saint Gilles 62.79 312 *eP* **P 03 05 13.7 -0.3**
SGMF pmax pmax
comp=Z,43nm,1.2s
SGMF Saint Gilles 62.79 312 *eP* **P 03 05 13.7 -0.3**
comp=Z,43nm,1.2s
ROSF Rostrenen 63.21 312 *eP* **P 03 05 16.5 -0.3**
comp=Z,28nm,1.1s
ROSF Rostrenen 63.21 312 *eP* **P 03 05 16.5 -0.3**
ROSF pmax pmax
comp=Z,29nm,1.1s
ROSF Rostrenen 63.21 312 *eP* **P 03 05 16.5 -0.3**
comp=Z,28nm,1.1s
QUIF Quistinic 63.28 311 *eP* **P 03 05 16.8 -0.5**
comp=Z,24nm,1.2s
QUIF Quistinic 63.28 311 *eP* **P 03 05 16.8 -0.5**
QUIF pmax pmax
comp=Z,24nm,1.2s
QUIF Quistinic 63.28 311 *eP* **P 03 05 16.8 -0.5**
comp=Z,24nm,1.2s
ETSF Etsaut 63.32 305 *eP* **P 03 05 17.7 0.0**
comp=Z,31nm,1.1s
ETSF Etsaut 63.32 305 *eP* **P 03 05 17.7 0.0**
ETSF pmax pmax
comp=Z,31nm,1.1s
ETSF Etsaut 63.32 305 *eP* **P 03 05 17.7 0.0**
comp=Z,31nm,1.1s
SJPF Ste Jean 63.70 306 *eP* **P 03 05 19.1 -1.1**
SJPF Ste Jean 63.70 306 *eP* **P 03 05 19.1 -1.1**
SJPF Ste Jean 63.70 306 *eP* **P 03 05 19.1 -1.1**
FX1 Attu Island--F 65.47 42 P **P 03 05 32.1 +0.6**
FX1 Attu Island--F 65.47 42 P **P 03 05 32.1 +0.6**
comp=Z,5.1nm,0.7s,baz=300,slow=9.7,SNR=4.3
FITZ Fitzroy Crossi 65.77 134 P **P 03 05 32.0 -1.8**
FITZ Fitzroy Crossi 65.77 134 P **P 03 05 32.0 -1.8**
comp=Z,4.8nm,0.9s,baz=315,slow=8.3,SNR=7.3
ESDC Sonseca Array 66.92 303 P **P 03 05 41.0 -0.2**
ESDC Sonseca Array 66.92 303 P **P 03 05 41.0 -0.2**
comp=Z,3.7nm,0.8s,baz=56,slow=7.0,SNR=26
ESLA Sonseca Array 66.92 303 *eP* **P 03 05 42.9 +1.8**
comp=Z,6.7nm,1.4s
PAB San Pablo 67.25 303 *eP* **P 03 05 44.9 +1.7**
PAB pmax pmax
comp=Z,25nm,1.4s
PAB San Pablo 67.25 303 *eP* **P 03 05 44.9 +1.7**
comp=Z,25nm,1.4s
SUMG Summit 67.28 344 *i* P **P 03 05 45.6 +2.3**
SUMG *i* 03 05 57.0
SUMG pmax pmax
comp=Z,10.0nm,1.0s
SUMG Summit 67.28 344 *eP* **P 03 05 45.7 +2.3**
comp=Z,7.9nm,0.8s
SUMG Summit 67.28 344 *i* P **P 03 05 45.6 +2.3**
comp=Z,9.8nm,1.0s
SUMG *i* 03 05 57.0
PBRG Braganca 67.97 306 *eP* **P 03 05 50.6 +2.9**
comp=Z,14nm,1.6s
MVO Moncorvo 68.43 306 *eP* **P 03 05 52.5 +1.8**
comp=Z,16nm,1.0s
POLO Lamas de Olo 68.86 306 *eP* **P 03 05 56.4 +3.0**
comp=Z,5.7nm,1.6s
PCAB Cabril 68.88 307 *eP* **P 03 05 55.0 +1.6**
comp=Z,30nm,1.6s
PGAV Gavieira, Arco 68.93 307 *eP* **P 03 05 56.4 +2.6**
comp=Z,29nm,1.7s
MTE Manteigas 69.11 305 *eP* **P 03 05 57.1 +2.2**
comp=Z,36nm,1.9s
MTE Manteigas 69.11 305 *eP* **P 03 05 56.6 +1.6**
comp=Z,11nm,0.9s
PVIS Viseu 69.22 306 *eP* **P 03 05 58.3 +2.7**
comp=Z,26nm,1.7s
PCBR Castelo Branco 69.31 305 *eP* **P 03 05 56.5 +0.4**
comp=Z,14nm,1.7s
PMRV Marv??o 69.43 304 *eP* **P 03 05 59.8 +3.0**
comp=Z,24nm,1.8s
AMKA Amchitka 69.54 42 *eP* **P 03 05 56.2 -1.0**
comp=Z,9.2nm,0.8s
PBAR Barrancos 69.73 303 *eP* **P 03 06 00.8 +2.1**
comp=Z,30nm,1.6s
PTOM Tomar 70.05 305 *eP* **P 03 06 00.3 -0.4**
comp=Z,36nm,1.2s
PMTG Montargil 70.17 304 *eP* **P 03 06 01.4 0.0**
comp=Z,17nm,1.3s
EVO Evora 70.26 304 *eP* P 03 06 05.2 +3.3
comp=Z,38nm,1.5s
EVO *eR*
comp=Z,204nm,21.8s
EVOP Sao Brissos 70.34 304 *eP* **P 03 06 05.2 +2.8**
EVOP pmax pmax
comp=Z,38nm,1.5s
EVOP Sao Brissos 70.34 304 *eP* **P 03 06 05.2 +2.8**
comp=Z,38nm,1.5s
PBDV Barranco-do-Ve 70.78 302 *eP* P 03 06 08.7 +3.5
comp=Z,39nm,1.7s
WRA Warramunga Arr 72.66 128 P **P 03 06 15.8 -0.7**
WRA Warramunga Arr 72.66 128 P **P 03 06 15.8 -0.7**
comp=Z,9.4nm,0.8s,baz=323,slow=6.0,SNR=53
WRAB Tennant Creek 72.66 128 *eP* **P 03 06 15.6 -0.9**
WRAB pmax pmax
comp=Z,12nm,0.8s
WRAB Tennant Creek 72.66 128 *eP* **P 03 06 15.6 -0.9**
comp=Z,12nm,0.8s
COLD Coldfoot 72.92 19 P **P 03 06 17.1 -0.4**
comp=Z,9.5nm,1.2s
TORD Torodi Ar. Bea 74.66 276 P **P 03 06 27.3 -1.2**
TORD Torodi Ar. Bea 74.66 276 P **P 03 06 27.3 -1.2**
comp=Z,1.9nm,0.8s,baz=48,slow=4.5,SNR=16
AS31 Alice Springs 75.04 131 *eP* **P 03 06 30.0 -0.5**
ASAR Alice Springs 75.04 131 P **P 03 06 29.9 -0.6**
ASAR Alice Springs 75.04 131 P **P 03 06 29.9 -0.6**
comp=Z,7.7nm,0.9s,baz=321,slow=6.1,SNR=48
PMG Port Moresby 75.08 112 P **P 03 06 29.9 -1.0**
PMG Port Moresby 75.08 112 P **P 03 06 29.9 -1.0**
comp=Z,12nm,0.9s,baz=243,slow=6.9,SNR=3.0
COLA College 75.31 20 *eP* **P 03 06 33.9 +2.5**
COLA pmax pmax
comp=Z,10.0nm,0.9s
COLA College 75.31 20 *eP* **P 03 06 33.9 +2.5**
comp=Z,9.9nm,0.9s
ILAR Eielson Array 75.66 19 P **P 03 06 32.2 -1.2**
ILAR PP PP 03 09 22.3 -0.1
ILAR Eielson Array 75.66 19 P **P 03 06 32.2 -1.2**
comp=Z,4.1nm,0.8s,baz=309,slow=5.2,SNR=38
ILAR PP **PP 03 09 22.3 -0.1**
comp=Z,0.4nm,0.7s,baz=313,slow=6.5,SNR=4.4
ILAR LR LR 03 43 27.2
comp=Z,147nm,18.7s,baz=329,slow=39
EGAK Eagle 77.18 17 *eP* **P 03 06 43.4 +1.4**
comp=Z,10nm,1.4s
CTA Charters Tower 81.03 121 P **P 03 07 02.1 -1.7**
CTA Charters Tower 81.03 121 P **P 03 07 02.1 -1.7**
comp=Z,2.4nm,0.4s,baz=334,slow=14,SNR=3.5
BOSA Boshof 81.19 228 P **P 03 07 04.5 -0.1**
BOSA Boshof 81.19 228 P **P 03 07 04.5 -0.1**
comp=Z,4.6nm,0.7s,baz=18,slow=5.8,SNR=8.2
BOSA LR LR 03 37 37.8
comp=Z,96nm,21.2s,baz=164,slow=32
DBIC Dimbokro 83.52 274 LR LR 03 48 34.7
comp=Z,279nm,19.5s,baz=35,slow=39
YKW3 Yellowknife Ar 84.10 8 *eP* **P 03 07 19.6 +0.4**
comp=Z,0.5nm,1.5s
YKA Yellowknife Ar 84.17 8 P **P 03 07 18.4 -1.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YKA	Yellowknife Ar	84.17	8	P	P	03 07 18.4	-1.1
	comp=Z,4.3nm,0.8s,baz=342,slow=5.1,SNR=25						
STKA	Stephens Creek	85.63	132	P	P	03 07 25.6	-1.7
STKA	Stephens Creek	85.63	132	P	P	03 07 25.6	-1.7
	comp=Z,1.7nm,0.8s,baz=321,slow=5.1,SNR=3.8						
STKA				LR	LR	03 51 38.9	
	comp=Z,90nm,19.7s,baz=208,slow=40						
SCHQ	Schefferville	88.64	342	P	P	03 07 42.7	+1.0
SCHQ	Schefferville	88.64	342	P	P	03 07 42.7	+1.0
	comp=Z,4.0nm,0.8s,baz=37,slow=6.4,SNR=5.2						
SCHQ				LR	LR	03 49 45.1	
	comp=Z,80nm,19.0s,baz=91,slow=37						
ULM	Lac du Bonnet	97.32	358	LR	LR	03 57 39.0	
	comp=Z,77nm,18.3s,baz=38,slow=39						
TXAR	Lajitas Array	118.03	5	PKP	PKPdf	03 13 35.2	-0.8
TXAR	Lajitas Array	118.03	5	PKP	PKPdf	03 13 35.2	-0.8
	comp=Z,0.2nm,0.6s,baz=22,slow=0.6,SNR=4.1						
SNAA	Sanae	119.04	201	ePKP	PKPdf	03 13 38.9	+2.4
CPUP	Villa Florida	143.93	269	PKP	PKPdf	03 14 23.5	-0.9
CPUP	Villa Florida	143.93	269	PKP	PKPdf	03 14 23.5	-0.9
	comp=Z,1.9nm,0.7s,baz=27,slow=3.2,SNR=6.3						
LPAZ	La Paz	148.16	294	PKPbc	PKPbc	03 14 35.6	-0.3
LPAZ	La Paz	148.16	294	PKPbc	PKPbc	03 14 35.6	-0.3
	comp=Z,2.3nm,0.7s,baz=15,slow=6.3,SNR=9.0						
TRQA	Tornquist	150.04	250	ePKPdf	PKPbc	03 14 37.4	-1.9

IDC 04 03:31:34.2±3.5, 5°.69S×146°.00E, h91km±31km, mb3.3/3, mb1 3.5/5, mb1mx3.2/19, mbtmp3.3/5, Error ellipse: s-maj=31.0km s-min=24.0km az=116.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.87	163	P	Pn	03 32 31.3	-0.2
	8.0nm,0.3s,baz=359,slow=14,SNR=26						
PMG				S	Sn	03 33 16.2	+0.3
	4.2nm,0.3s,baz=294,slow=20,SNR=8.4						
WRA	Warramunga Arr	18.15	218	P	Pn	03 35 40.3	-0.1
	0.5nm,0.3s,baz=38,slow=11,SNR=34						
WRA				S	Sn	03 39 03.9	+0.8
	0.1nm,0.3s,baz=46,slow=22,SNR=3.7						
ASAR	Alice Springs	21.34	212	P	P	03 36 13.3	-0.8
	0.9nm,0.5s,baz=45,slow=9.4,SNR=7.5						
ASAR				S	S	03 40 06.5	+0.3
	1.4nm,0.8s,baz=30,slow=21,SNR=6.3						
FITZ	Fitzroy Crossi	23.40	236	P	P	03 36 34.2	-1.1
	1.9nm,0.8s,baz=49,slow=9.3,SNR=5.4						
STKA	Stephens Creek	26.38	188	P	P	03 37 03.9	+1.7
	0.7nm,0.6s,baz=5.7,slow=10,SNR=3.3						

MAN 04 03:35:32, 8°.44N×122°.23E, h29km, mb4.4, ML3.2, MS3.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPIL	Ipil	0.73	153	eP	Pn	03 35 46.9	+0.5
IPIL				eS	Sn	03 35 57.1	+0.6
DCPH	Dipolog City	1.11	83	⇑eP	Pn	03 35 51.4	-0.3
DCPH				eS	Sb	03 36 06.8	0.0
PAGZ	Pagadian	1.28	117	eP	Pb	03 35 54.8	-0.7
PAGZ				eS	Sb	03 36 11.7	+0.1
TBP	Tagbilaran	2.03	52	eP	Pn	03 36 05.2	+0.9
GUIM	Jordan	2.20	9	eP	Pb	03 36 12.6	+1.5
CUYO	Cuyo Island	2.68	333	eP	Pn	03 36 14.9	+1.7
ENPP	El Nido	3.90	315	eP	Pn	03 36 31.8	+1.8

GUC 04 04:02:09.3±0.4, 24°.00S×67°.68W, h216km±9km, ML3.5, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.79	320	⇑iP	Pn	04 02 48.7	+1.4
LVC				iS	S	04 03 18.7	+1.9
PB04	Plate Boundary	2.40	316	iS	S	04 03 37.9	+11
ANCH	Antofagasta	2.52	277	⇓iP	Pn	04 02 55.9	+1.5
ANCH				iS	S	04 03 31.4	+2.1
PB09	Plate Boundary	2.63	326	eS	S	04 03 35.3	+3.4
PB09				AML	AML	04 03 38.3	
	comp=N,102nm,0.2s						
PB01	Plate Boundary	3.39	330	iS	S	04 03 50.2	+2.8
PB01				AML	AML	04 03 51.7	
	comp=E,33nm,0.1s						
HMBC	Humberstone	4.23	331	eP	Pn	04 03 16.6	+1.8

ISCJB 04 04:03:09.0±0.6, 8°.7S±0°.2×123°.6E±0°.3, h74km, mb3.8/5, Error ellipse: s-maj=42.9km s-min=8.0km az=148.2
IDC 04 04:03:10.9±4.5, 8°.64S×123°.40E, h66km±44km, mb3.6/5, mb1 3.8/8, mb1mx3.6/23, mbtmp3.7/8, ML4.1/3, Error ellipse: s-maj=90.6km s-min=21.3km az=69.0
ISC 04 04:03:11.0±0.8, 8°.8S±0°.1×123°.4E±0°.3, h74km, n16, σ1s.88/18, mb3.7/5, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.52	167	P	Pn	04 05 26.7	+1.4
	1.5nm,0.3s,baz=351,slow=12,SNR=50						
FITZ				S	Sn	04 07 06.9	-3.8
	5.3nm,0.3s,baz=328,slow=7.8,SNR=3.8						
WRA	Warramunga Arr	15.34	138	P	Pn	04 06 43.5	+0.1
	0.8nm,0.3s,baz=319,slow=14,SNR=56						
WRA				S	Sn	04 09 23.6	-8.8
	1.2nm,0.3s,baz=317,slow=24,SNR=10						
ASAR	Alice Springs	17.89	147	P	Pn	04 07 17.9	+2.8
	0.4nm,0.3s,baz=328,slow=14,SNR=15						
ASAR				S	Sn	04 10 25.8	-8.6
	0.5nm,0.3s,baz=316,slow=22,SNR=8.5						
ASAR				ScP	ScP	04 15 12.1	-4.7
	baz=323,slow=1.9,SNR=5.4						
TAPN	Taplejung	49.85	317	eP	P	04 11 57.8	+0.4
	15nm,0.4s						
RAMN	Ramite	50.35	316	eP	P	04 12 01.5	+0.4
	21nm,0.6s						
GUN	Gumba	51.45	316	eP	P	04 12 09.6	+0.1
	21nm,0.7s						
PKI	Pulchoki	51.56	316	eP	P	04 12 09.9	-0.4
	8.1nm,0.4s						
KOLN	Koldanda	52.94	315	eP	P	04 12 19.9	-0.5
	5.0nm,0.3s						
DANN	Dangsing	53.18	315	eP	P	04 12 21.9	-0.3
	20nm,0.4s						
PYUN	Piuthan	53.57	315	eP	P	04 12 23.8	-1.2
	10nm,0.4s						
SONM	Songino Array	58.35	347	P	P	04 12 58.2	-0.4
	0.3nm,0.4s,baz=174,slow=8.1,SNR=3.6						
MKAR	Makanchi Array	66.33	330	P	P	04 13 52.2	+0.4
	1.0nm,0.5s,baz=132,slow=7.7,SNR=13						
AAK	Ala-Archa	67.84	323	P	P	04 14 02.2	+0.5
	3.1nm,0.6s,baz=110,slow=5.9,SNR=6.8						
KURBB	Kurchatov Arra	70.77	332	P	P	04 14 18.8	-0.6
	0.7nm,0.7s,baz=138,slow=5.8,SNR=7.6						
VNDA	Vanda	71.55	172	P	P	04 14 25.5	+1.8
	0.5nm,0.5s,baz=317,slow=7.7,SNR=9.0						
TORD	Torodi Ar. Bea	122.70	280	PKP	PKPdf	04 21 58.8	-0.6
	0.7nm,0.6s,baz=75,slow=1.9,SNR=4.3						

TIR 04 04:06:27.0, 41°.52N×19°.55E, h20km, ML3.0
PDG 04 04:06:35.8±0.3, 41°.53N×19°.63E, h14km, ML2.3/8, Error ellipse: s-maj=0.6km s-min=1.0km az=0.0
CSEM 04 04:06:35.1±0.6, 41°.46N×19°.50E, h2km, ML2.3, Error ellipse: s-maj=12.2km s-min=5.8km az=33.0
BEO 04 04:06:38.0±0.7, 41°.52N×19°.63E, h2km±4km, ML2.3/3
ISC 04 04:06:35.2±1.0, 41°.50N±0°.03×19°.57E±0°.03, h16km±8km, n41, σ1s.07/69, 4C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIR	Tirane	0.27	123	ePG	Pb	04 06 41.2	-0.4
TIR				iSG	Sg	04 06 44.9	0.0
TIR	Tirane	0.27	123	ePg	Pb	04 06 41.4	-0.2
TIR				eSg	Sb	04 06 46.7	+0.7
TIR	Tirane	0.27	123	ePg	Pb	04 06 41.2	-0.4
TIR				iSg	Sg	04 06 44.9	0.0
ULC	Ulcinj	0.53	333	⇓iPg	Pg	04 06 45.1	-0.5
ULC				eSg	Sb	04 06 53.9	+0.4
ULC	Ulcinj	0.53	333	⇓iPg	Pg	04 06 45.1	-0.5
ULC				eSg	Sb	04 06 53.9	+0.4
PUK	Puka	0.60	24	ePG	Pg	04 06 46.5	-0.5
PUK				iPG	Pn	04 06 55.9	+6.7
PUK	Puka	0.60	24	ePg	Pg	04 06 46.5	-0.5
PHP	Peshkopia	0.68	74	ePG	Pg	04 06 48.0	-0.5
PHP				iSG	Sb	04 06 59.4	+1.4
PHP	Peshkopia	0.68	74	ePg	Pg	04 06 48.0	-0.5
PHP				iSg	Sb	04 06 59.4	+1.4
BUM	Brajici-Budva	0.95	328	ePg	Pn	04 06 53.9	-0.1
BUM				eSg	Sn	04 07 08.4	+1.2
BUM	Brajici-Budva	0.95	328	ePg	Pn	04 06 53.9	-0.1
BUM				eSg	Sn	04 07 08.4	+1.2
PDG	Podgorica	0.96	346	ePg	Pn	04 06 55.3	+1.2
PDG				eSg	Sn	04 07 07.7	+0.2
PDG	Podgorica	0.96	346	⇓iPg	Pb	04 06 53.6	+0.1
PDG				eSg	Sn	04 07 07.7	+0.2
TTG	Podgorica	0.96	346	⇓iPg	Pb	04 06 53.6	+0.1
TTG				eSg	Sn	04 07 08.0	+0.5
PVY	Plav	1.14	15	⇓iPg	Pn	04 06 56.0	-0.6
PVY				eSg	Sg	04 07 13.9	+1.9
PVY	Plav	1.14	15	⇓iPg	Pn	04 06 56.0	-0.6
PVY				eSg	Sg	04 07 13.9	+1.9
HCY	Herceg Novi	1.24	320	⇑iPg	Pb	04 06 58.2	-0.1
HCY				eSg	Sg	04 07 16.8	+1.4
HCY	Herceg Novi	1.24	320	⇑iPg	Pb	04 06 58.2	-0.1
HCY				eSg	Sg	04 07 16.8	+1.4
NKY	Niksic	1.38	342	⇓iPg	Pb	04 07 00.7	-0.1
NKY				eSg	Sg	04 07 20.8	+0.9
NKY	Niksic	1.38	342	⇓iPg	Pb	04 07 00.7	-0.1
NKY				eSg	Sg	04 07 20.8	+0.9
BEY	Berane	1.40	10	ePg	Pb	04 07 00.8	-0.2
BEY				eSg	Sg	04 07 22.4	+2.1
IVA	Berane	1.40	10	ePg	Pb	04 07 00.8	-0.2
IVA				eSg	Sg	04 07 22.4	+2.1
BRY	Bratogost	1.60	332	⇑iPn	Pb	04 07 04.1	-0.4
BRY				eSn	Sg	04 07 26.9	+0.2
BRY	Bratogost	1.60	332	⇑iPn	Pb	04 07 04.1	-0.4
BRY				eSn	Sg	04 07 26.9	+0.2
SRN	Sarande	1.65	168	ePN	Pg	04 07 07.2	+0.4
SRN	Sarande	1.65	168	ePn	Pg	04 07 07.2	+0.4
UPM	Unac-Piva	1.78	344	⇓iPn	Pb	04 07 07.0	-0.5
UPM				eSn	Sg	04 07 31.8	-0.6
UPM	Unac-Piva	1.78	344	⇓iPn	Pb	04 07 07.0	-0.5
UPM				eSn	Sg	04 07 31.8	-0.6
STON	Ston	1.95	315	ePn	Pn	04 07 08.2	+0.5
STON				Sn	Sn	04 07 30.3	-1.6
STON	Ston	1.95	315	ePn	Pn	04 07 08.1	+0.5
STON				Sn	Sn	04 07 30.3	-1.6
BARS	Barje	2.13	51	ePn	Pb	04 07 13.5	+0.1
BARS				eSn	Sb	04 07 40.1	+0.5
BARS	Barje	2.13	51	ePn	Pb	04 07 13.5	+0.1
BARS				eSn	Sb	04 07 40.1	+0.5
GRUS	Gruza	2.54	19	ePn	Pb	04 07 20.1	-0.2
GRUS	Gruza	2.54	19	ePn	Pb	04 07 20.1	-0.2
DIVS	Divibare	2.62	7	ePn	Pb	04 07 20.7	-1.1
DIVS	Divibare	2.62	7	ePn	Pb	04 07 20.7	-1.1
ZAPS	Zavoj	2.88	51	ePn	Pb	04 07 24.0	-2.3
ZAPS	Zavoj	2.88	51	ePn	Pb	04 07 24.0	-2.3
TEKS	Tekeris	3.05	359	ePn	Pb	04 07 27.2	-1.9
TEKS	Tekeris	3.05	359	ePn	Pb	04 07 27.2	-1.9
NVLJ	Novalja	4.61	313	Sn	Sn	04 08 33.9	-3.5

MEX 04 04:07:20.9±0.8, 17°.21N×100°.33W, h28km±7km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.17	160	eP	Pb	04 07 25.4	-1.2
CAIG				iS	Sb	04 07 28.8	-1.7
ACX	Acapulco	0.56	127	iP	Pb	04 07 29.8	-2.5
ACX				iS	Sb	04 07 37.2	-2.9
MEIG	Mezcala	0.98	43	eP	Pn	04 07 35.8	-3.2
MEIG				iS	Sn	04 07 48.8	-3.2
ARIG	Puente Sto Nin	1.07	359	eP	Pn	04 07 37.0	-3.0
ARIG				iS	Sn	04 07 50.9	-3.1
ZIIG	Zihuatanejo	1.16	290	iP	Pn	04 07 39.3	-1.9
ZIIG				iS	Sn	04 07 52.5	-3.5
PLIG	Platanillo	1.42	34	eP	Pn	04 07 42.7	-2.2
PLIG				iS	Sn	04 08 00.1	-2.6
YAIG	Yautepec	2.04	36	iP	Pn	04 07 51.4	-2.1
YAIG				iS	Sn	04 08 15.1	-3.1
PNIG	Pinotepa	2.26	111	iP	Pn	04 07 53.8	-2.6
PNIG				iS	Sn	04 08 21.5	-1.9
PPM	Popocatepetl	2.46	41	iP	Pn	04 07 58.2	-1.5
PPM				iS	Sn	04 08 25.9	-3.4
UTMO	Huajuapan	2.49	75	iP	Pn	04 07 57.4	-2.4
UTMO				iS	Sn	04 08 26.7	-2.8
MMIG	Aquila	3.07	291	iP	Pn	04 08 03.9	-3.7

IDC 04 04:15:59.8±0.7, 17°.57S×167°.83E, h0km, mb4.0/12, mb1 4.2/13, mb1mx4.1/22, mbtmp4.0/13, ML3.8/1, MS3.8/9, Ms1 3.8/9, ms1mx3.3/27, Error ellipse: s-maj=23.6km s-min=17.8km az=108.0
NEIC 04 04:16:01.1±0.4, 17°.60S×167°.83E, h10km, mb4.6/3, Error ellipse: s-maj=12.3km s-min=9.3km az=105.0
ISCJB 04 04:16:02.2±0.6, 17°.72S±0°.06×167°.7E±0°.1, h27km, mb4.1/13, MS3.7/9, Error ellipse: s-maj=16.0km s-min=8.9km az=7.6
ISC 04 04:16:03.8±0.6, 17°.70S±0°.07×167°.8E±0°.1, h27km, n51, σ0s.98/48, mb4.1/13, MS3.7/9, 2C-2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.53	196	ePn	Pn	04 17 10.5	-0.3
DZM				eS	Sn	04 18 00.8	-1.8
DZM	Mont Dzumac	4.53	196	Pn	Pn	04 17 10.9	+0.2
	4.5nm,0.3s,baz=0.0,slow=20,SNR=28						
DZM				Sn	Sn	04 18 00.4	-2.2
	7.6nm,0.3s,baz=130,slow=20,SNR=5.6						
EIDS	Eidsvold	17.32	241	ePn	Pn	04 19 57.0	-6.7
	59nm,1.7s						
AFI	Afiamalu	20.00	82	LR	LR	04 26 28.4	
	comp=Z,277nm,19.9s,baz=224,slow=32						
CTA	Charters Tower	20.53	260	P	P	04 20 40.7	+0.4
CTA	Charters Tower	20.53	260	P	P	04 20 40.7	+0.4
	1.6nm,0.5s,baz=79,slow=16,SNR=3.0						
URZ	Urewera	22.04	160	P	P	04 20 58.2	+1.8
URZ	Urewera	22.04	160	P	P	04 20 58.2	+1.8
	2.4nm,0.3s,baz=2.5,slow=7.5,SNR=4.8						
URZ				LR	LR	04 28 29.8	
	comp=Z,176nm,18.1s,baz=349,slow=34						
STKA	Stephens Creek	27.57	234	P	P	04 21 50.3	+1.5
STKA	Stephens Creek	27.57	234	P	P	04 21 50.3	+1.5
	2.7nm,0.7s,baz=55,slow=7.5,SNR=7.4						
STKA				LR	LR	04 32 41.8	
	comp=Z,191nm,18.5s,baz=31,slow=36						
WRAB	Tennant Creek	31.72	261	eP	P	04 22 25.6	-0.1
	11nm,1.4s						
WRA	Warramunga Arr	31.73	261	P	P	04 22 25.5	-0.3
WRA	Warramunga Arr	31.73	261	P	P	04 22 25.5	-0.3
	1.4nm,1.1s,baz=86,slow=9.2,SNR=6.2						
WRA				LR	LR	04 34 16.3	
	comp=Z,84nm,19.1s,baz=90,slow=34						
ASAR	Alice Springs	32.21	254	P	P	04 22 29.6	-0.4
ASAR	Alice Springs	32.21	254	P	P	04 22 29.6	-0.4
	0.9nm,0.6s,baz=82,slow=8.6,SNR=7.7						
ASAR				LR	LR	04 34 49.0	
	comp=Z,211nm,19.6s,baz=71,slow=35						
FITZ	Fitzroy Crossi	40.06	263	LR	LR	04 39 55.2	
	comp=Z,164nm,19.0s,baz=163,slow=36						
PPT	Papeete	40.55	97	LR	LR	04 37 41.1	
	comp=Z,182nm,18.6s,baz=217,slow=32						
VNDA	Vanda	59.92	181	P	P	04 26 07.8	+0.8
VNDA	Vanda	59.92	181	P	P	04 26 07.8	+0.8
	0.4nm,0.9s,baz=19,slow=6.2,SNR=2.4						
MJAR	Matsushiro Arr	60.77	333	P	P	04 26 13.3	-0.1
MJAR	Matsushiro Arr	60.77	333	P	P	04 26 13.3	-0.1
	1.3nm,0.5s,baz=171,slow=8.6,SNR=5.5						
MJAR				LR	LR	04 51 28.6	
	comp=Z,41nm,18.7s,baz=55,slow=35						
PETK	Petropavlovsk-	71.06	354	P	P	04 27 18.2	-1.1
PETK	Petropavlovsk-	71.06	354	P	P	04 27 18.2	-1.1
	2.2nm,0.9s,baz=132,slow=4.1,SNR=2.4						
QSPA	South Pole Qui	72.34	180	eP	P	04 27 26.8	-0.4
	12nm,1.1s						
CMAR	Chiang Mai Arr	76.63	294	P	P	04 27 53.0	+0.4
CMAR	Chiang Mai Arr	76.63	294	P	P	04 27 53.0	+0.4
	0.7nm,0.3s,baz=116,slow=4.2,SNR=3.1						
SONM	Songino Array	85.18	324	P	P	04 28 38.9	+1.1
SONM	Songino Array	85.18	324	P	P	04 28 38.9	+1.1
	1.7nm,0.7s,baz=114,slow=3.6,SNR=13						
NVAR	Mina Array Bea	88.82	49	P	P	04 28 55.8	0.0
NVAR	Mina Array Bea	88.82	49	P	P	04 28 55.8	0.0
	0.3nm,0.3s,baz=260,slow=3.5,SNR=2.9						
NVAR				LR	LR	05 00 09.2	
	comp=Z,34nm,19.0s,baz=209,slow=30						
ILAR	Eielson Array	89.18	18	P	P	04 28 55.5	-1.2
ILAR	Eielson Array	89.18	18	P	P	04 28 55.5	-1.2
	0.5nm,0.7s,baz=231,slow=5.0,SNR=7.2						
ARCES	ARCESS Array B	123.24	345	PKP	PKPdf	04 34 57.1	-0.5
ARCES	ARCESS Array B	123.24	345	PKP	PKPdf	04 34 57.1	-0.5
	4.3nm,0.9s,baz=64,slow=2.1,SNR=4.0						
NOA	NORSAR Array B	133.61	345	PKP	PKPdf	04 35 17.4	-0.1
NOA	NORSAR Array B	133.61	345	PKP	PKPdf	04 35 17.4	-0.1
	0.8nm,0.7s,baz=28,slow=2.0,SNR=3.0						
BRTR	Keskin Array B	134.80	309	PKP	PKPdf	04 35 21.1	+0.5
BRTR	Keskin Array B	134.80	309	PKP	PKPdf	04 35 21.1	+0.5
	0.5nm,0.6s,baz=80,slow=1.6,SNR=4.2						
GERES	GERESS Array B	142.50	332	PKP	PKPdf	04 35 31.9	-2.5
GERES	GERESS Array B	142.50	332	PKP	PKPdf	04 35 31.9	-2.5
	0.5nm,0.7s,baz=76,slow=0.4,SNR=4.7						
ABTA	Abfaltersbach	144.58	330	⇑iPKPdf	PKPab	04 35 36.5	-0.1
	12nm,0.9s						
MOTA	Moosalm	144.78	332	⇓iPKPdf	PKPbc	04 35 38.0	+0.5
	16nm,1.1s						
WLF	Walferdange	144.85	339	ePKPdf	PKPdf	04 35 38.3	0.0
BFO	Black Forest	145.17	336	ePKPdf	PKPdf	04 35 39.1	+0.1
FETA	Feichten	145.19	332	⇓ipPKPbc	PKPdf	04 35 39.4	+0.2
	17nm,0.8s						
DAVA	Damuels	145.36	333	⇑iPKPdf	PKPab	04 35 39.7	+0.2
	18nm,0.8s						
ECH	Echery	145.71	337	ePKPdf	PKPab	04 35 40.5	-0.1
TUE	Stuetta	146.22	333	ePKPbc	PKPdf	04 35 41.3	+0.2
BNI	Bardonecchia	148.49	334	ePKPbc	PKPbc	04 35 48.8	+0.4
TORD	Torodi Ar. Bea	165.87	253	PKP	PKPdf	04 36 07.1	-0.1
TORD	Torodi Ar. Bea	165.87	253	PKP	PKPdf	04 36 07.1	-0.1
	1.2nm,0.9s,baz=134,slow=1.4,SNR=4.5						

WEL 04 04:24:08.0±0.2, 38°.79S×175°.74E, h137km±2km, ML3.5/14, 14C, Error ellipse: s-maj=1.5km s-min=1.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRVZ	Karewarewa	0.32	194	PN	Pn	04 24 27.0	-0.2
KRVZ				SN	Sn	04 24 41.2	-0.7
WTVZ	West Tongariro	0.35	200	PN	Pn	04 24 27.0	-0.3
WTVZ				SN	Sn	04 24 41.0	-1.0
TWVZ	Taurewa	0.37	220	PN	Pn	04 24 27.2	-0.2
OTVZ	Oturere	0.38	189	PN	Pn	04 24 27.3	-0.2
OTVZ				SN	Sn	04 24 41.9	-0.5
NGZ	Ngauruhoe	0.40	196	PN	Pn	04 24 27.3	-0.2
NGZ				SN	Sn	04 24 41.6	-0.8
WPVZ	Whakapapa	0.44	200	PN	Pn	04 24 27.7	0.0
TUVZ	Tukino	0.48	188	⇑PN	Pn	04 24 28.0	0.0
TUVZ				SN	Sn	04 24 42.2	-1.0
FWVZ	Far West T-bar	0.49	198	⇑PN	Pn	04 24 27.8	-0.3
DRZ	Dome Shelter	0.51	196	PN	Pn	04 24 28.2	-0.1
TRVZ	Turoa	0.53	196	PN	Pn	04 24 28.4	0.0
WNVZ	Wahianoa	0.55	192	PN	Pn	04 24 28.3	0.0
PKVZ	Pokaka	0.59	211	⇑PN	Pn	04 24 28.4	-0.1
MOVZ	Moawhango	0.62	179	PN	Pn	04 24 28.3	-0.3
MTVZ	Mangateitei	0.63	199	PN	Pn	04 24 28.7	-0.1
BKZ	Black Stump Fm	0.70	123	⇑PN	Pn	04 24 28.8	-0.3
BKZ				AML	AML	04 24 45.9	
BKZ				AML	AML	04 24 46.3	
BHHZ	Black Hill Sta	0.74	160	⇑PN	Pn	04 24 29.2	-0.3
HIZ	Hauiti	0.75	291	PN	Pn	04 24 29.5	+0.1
HIZ				SN	Sn	04 24 45.6	-0.1
VRZ	Vera Road	0.84	246	⇑PN	Pn	04 24 30.3	+0.2
MCHZ	McNeill Hill	0.99	132	⇑PN	Pn	04 24 32.3	+0.9
MCHZ				SN	Sn	04 24 49.6	+0.3
RAHZ	Arahi	1.06	97	PN	Pn	04 24 32.6	+0.5
RAHZ				SN	Sn	04 24 50.1	-0.3
PNHZ	Pukenui	1.18	163	PN	Pn	04 24 33.1	-0.2
URZ	Urewera	1.20	64	PN	Pn	04 24 32.6	-0.7
TSZ	Takapari Road	1.28	172	⇑PN	Pn	04 24 34.2	-0.2
KAHZ	Kahuranaki	1.34	139	⇑PN	Pn	04 24 35.1	+0.3
KAHZ				SN	Sn	04 24 54.7	-0.7
WPHZ	Waipukurau	1.39	157	PN	Pn	04 24 35.3	-0.1
MWZ	Matawai	1.47	73	⇑PN	Pn	04 24 35.9	-0.5
PXZ	Pawanui	1.52	145	PN	Pn	04 24 36.6	-0.1
KNZ	Kokohu	1.52	99	PN	Pn	04 24 37.3	+0.5
DVHZ	Dannevirke	1.54	168	⇑PN	Pn	04 24 36.5	-0.6
POWZ	Post Office Ro	1.60	179	⇑PN	Pn	04 24 37.1	-0.6
PRHZ	Porangahau	1.63	155	⇑PN	Pn	04 24 37.8	-0.2
PRGZ	Paritu Road	1.68	95	PN	Pn	04 24 38.5	-0.1
MHGZ	Mahia Peninsul	1.73	103	PN	Pn	04 24 39.3	+0.2
MRZ	Mangatainoka R	1.88	184	PN	Pn	04 24 39.7	-1.2
MRZ				AML	AML	04 25 05.4	
MRZ				AML	AML	04 25 05.4	
BFZ	Birch Farm	1.93	169	PN	Pn	04 24 40.7	-0.8
TIWZ	Tintock	1.99	177	PN	Pn	04 24 41.3	-1.0
OGWZ	Otaki Gorge	2.07	192	PN	Pn	04 24 42.3	-1.0
HOWZ	Holdsworth Sta	2.12	185	PN	Pn	04 24 42.4	-1.3
KIW	Kapiti Island	2.17	197	PN	Pn	04 24 43.0	-1.4
TMWZ	Te Maipa	2.32	177	PN	Pn	04 24 44.8	-1.4
CAW	Cannon Point	2.37	192	PN	Pn	04 24 45.5	-1.4
MTW	Mount Morrison	2.38	184	PN	Pn	04 24 45.2	-1.7
PAWZ	Paruwai Farm	2.60	185	PN	Pn	04 24 47.9	-1.9
TRWZ	Traveller	2.61	181	PN	Pn	04 24 48.3	-1.6
MSWZ	Moikau Station	2.65	188	⇑PN	Pn	04 24 48.5	-1.9
TCW	Tory Channel	2.67	204	PN	Pn	04 24 48.8	-1.9
PLWZ	Palliser	2.80	187	PN	Pn	04 24 50.1	-2.3
QRZ	Quartz Range	3.20	230	PN	Pn	04 24 55.6	-1.9
THZ	Tophouse	3.68	215	PN	Pn	04 25 02.5	-1.2
KHZ	Kahutara	3.99	204	PN	Pn	04 25 05.3	-2.4

MEX 04 04:33:58.5±0.6, 15°.31N×96°.46W, h4km±6km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.56	36	iP	Pg	04 34 09.3	-0.1
HUIG				iS	Sg	04 34 16.8	0.0
PNIG	Pinotepa	1.93	304	iP	Pn	04 34 28.2	-4.1
PNIG				iS	Sn	04 34 52.7	-4.3
UTMO	Huajuapan	2.82	333	eP	Pn	04 34 41.8	-2.9
UTMO				iS	Sn	04 35 15.6	-3.7
PCIG		3.15	82	iP	Pn	04 34 45.9	-3.0
PCIG				iS	Sn	04 35 23.3	-3.7
TGIG		3.52	65	iP	Pn	04 34 51.8	-2.4
TGIG				iS	Sn	04 35 32.6	-3.8
PPM	Popocatepetl	4.27	331	iP	Pn	04 35 02.4	-2.7

GUC 04 05:06:45.9±0.5, 23°.84S×67°.52W, h220km±11km, ML3.8, 2C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	1.77	313	⇑iP	Pn	05 07 25.4	+1.3
LVC				iS	S	05 07 55.8	+2.0
PB04	Plate Boundary	2.40	310	eP	Pn	05 07 37.2	+7.2
PB04				iS	S	05 08 16.4	+12
PB04				AML	AML	05 08 21.7	
	comp=N,146nm,0.3s						
CEN1	Los Morros	2.50	280	⇓iP	Pn	05 07 34.0	+2.7
CEN1				iS	S	05 08 09.8	+3.4
CEN1				AML	AML	05 08 11.5	
	comp=N,59nm,0.2s						
ANCH	Antofagasta	2.66	273	⇓iP	Pn	05 07 34.5	+1.7
ANCH				iS	S	05 08 11.0	+1.8
ANCH				AML	AML	05 08 13.5	
	comp=N,255nm,0.0s						
PB01	Plate Boundary	3.33	326	⇑iP	Pn	05 07 42.2	+1.6
PB01				iS	S	05 08 25.6	+2.3
PB01				AML	AML	05 08 26.5	
	comp=E,124nm,0.2s						

MEX 04 05:11:02.3±0.6, 15°.16N×93°.92W, h16km±999km, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.62	99	eP	Pn	05 11 26.4	-3.8
THIG				iS	Sn	05 11 45.9	-4.8
TGIG		1.78	25	eP	Pn	05 11 28.6	-3.9
TGIG				eS	Sn	05 11 50.4	-4.6
CCIG	Comitan	2.05	57	eP	Pn	05 11 33.9	-2.5
CCIG				iS	Sn	05 11 56.9	-4.9

ISCJB 04 05:12:55.4±0.8, 39°.41N±0°.06×101°.04E±0°.07, h10km,

Error ellipse: s-maj=10.4km s-min=5.6km az=34.1
*BJI **04** 05:13:00.1, 39°.42N×100°.96E, h9km, ML3.5/9, Ms3.7/3, Ms7 3.6/3*
*IDC **04** 05:13:01.4±9.6, 39°.79N×100°.89E, h0km, mb1 3.5/3, mb1mx3.2/30, mbtmp3.5/3, ML3.3/1, Error ellipse: s-maj=118.1km s-min=39.4km az=148.0*
ISC 04 05:12:58.0±1.1, **39°.42N**±0°.09×**100°.95E**±0°.06, **h10km, n7, σ1s.54**/7, **Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	**Gaotai**	**0.88**	**270**	Pg	**Pg**	**05 13 15.6**	**+0.6**
GTA				Sg	**Sg**	**05 13 27.2**	**+0.7**
GTA				smax	smax		
	comp=N,1μm,0.7s						
GTA				smax	smax		
	comp=E,480nm,0.6s						
LZH	**Lanzhou**	**4.04**	**145**	Pg	**Pg**	**05 14 15.7**	**+0.3**
LZH				Sg	**Sg**	**05 15 07.8**	**0.0**
LZH				smax	smax		
	comp=N,270nm,0.7s						
LZH				smax	smax		
	comp=E,200nm,0.5s						
LZH				LR	LR		
	comp=N,400nm,4.0s						
LZH				LR	LR		
	comp=E,430nm,5.0s						
LZH				LR	LR		
	comp=Z,550nm,5.4s						
BTO	**Baotou**	**7.06**	**77**	*e*Pg	Pg	05 15 34.9	+21
BTO				Sg	Sg	05 16 37.0	-7.7
BTO				SMZ			
	comp=Z,14nm,0.4s						
BTO				smax	smax		
	comp=N,8.0nm,0.5s						
BTO				smax	smax		
	comp=E,5.0nm,0.3s						
HHC	**Hu-ho-hao-te**	**8.26**	**77**	*e*P	Pn	05 15 05.2	+7.3
HHC				pP	pP	05 15 08.3	
HHC				sP		05 15 11.1	
HHC				S	Sn	05 16 41.0	+10
HHC				sS	sS	05 16 45.9	
HHC				LR	LR		
	comp=N,210nm,7.6s						
HHC				LR	LR		
	comp=E,320nm,7.2s						
HHC				LR	LR		
	comp=Z,300nm,7.8s						
SONM	**Songino Array**	**9.29**	**23**	Pn	**Pn**	**05 15 13.0**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=204,slow=13,SNR=9.2						
SONM				Lg	Lg	05 17 46.5	
	comp=Z,0.8nm,0.3s,baz=205,slow=27,SNR=4.2						
MKAR	**Makanchi Array**	**15.47**	**305**	Pn	**Pn**	**05 16 33.6**	**-2.6**
	comp=Z,0.1nm,0.3s,baz=110,slow=12,SNR=9.5						
MKAR				Lg	Lg	05 21 19.3	
	comp=Z,0.0nm,0.3s,baz=93,slow=30,SNR=3.4						
ZALV	**Zalesovo Beam**	**18.20**	**328**	P	**Pn**	**05 17 09.8**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=129,slow=12,SNR=7.0						

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*IDC **04** 05:37:35.2±2.1, 9°.16S×110°.39E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.8/22, mbtmp3.9/8, ML3.4/1, MS2.6/1, Ms1 2.6/1, ms1mx1.7/31, Error ellipse: s-maj=72.0km s-min=18.9km az=52.0*
*ISCJB **04** 05:37:38.8±0.7, 9°.44S±0°.05×110°.36E±0°.05, h33km, mb3.9/7, Error ellipse: s-maj=8.1km s-min=6.7km az=141.0*
*DJA **04** 05:37:40.3±0.7, 9°S±5°×11°1E±°, h10km, M4.0/8, MLv4.0/8*
ISC 04 05:37:40.9±1.0, **9°.32S**±0°.08×**110°.42E**±0°.06, **h35km, n23, σ1s.52**/25, **mb3.9**/7, **South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**1.34**	**34**	P	**Pn**	**05 38 01.7**	**-1.5**
UGM	**Wanagama**	**1.40**	**4**	P	**Pn**	**05 38 03.5**	**-0.5**
UGM				S	**Sn**	**05 38 21.8**	**+0.6**
YOGI	**Yogyakarta**	**1.50**	**355**	P	**Pn**	**05 38 04.5**	**-0.8**
YOGI				S	**Sn**	**05 38 26.5**	**+2.9**
PWJI	**Pagerwojo**	**1.88**	**47**	P	**Pn**	**05 38 10.5**	**0.0**
PWJI				S	**Sn**	**05 38 35.2**	**+2.2**
SJI	**Sawahan**	**2.06**	**40**	P	**Pn**	**05 38 12.9**	**-0.2**
SJI				S	**Sn**	**05 38 39.4**	**+1.7**
BJII	**Banjamegara**	**2.09**	**340**	P	**Pn**	**05 38 14.9**	**+1.3**
SMRI	**Semarang**	**2.25**	**1**	P	**Pn**	**05 38 17.6**	**+1.9**
KRKI	**Karangkates**	**2.31**	**60**	P	**Pn**	**05 38 17.9**	**+1.3**
TGJI	**Tegal**	**2.75**	**332**	P	**Pn**	**05 38 22.5**	**-0.1**
CISI	**Cisompet, Garu**	**3.12**	**304**	P	**Pn**	**05 38 28.2**	**+0.6**
GMJI	**Gumukmas**	**3.16**	**71**	P	**Pn**	**05 38 29.9**	**+1.7**
BLJI	**Banyuglugur**	**3.51**	**64**	P	**Pn**	**05 38 35.4**	**+2.4**
LEM	**Lembang**	**3.72**	**312**	P	**Pn**	**05 38 38.9**	**+2.9**
JAGI	**Jajag, Banyuwa**	**3.78**	**77**	P	**Pn**	**05 38 36.9**	**+0.1**
KAPI	**Kappang**	**10.20**	**66**	LR	LR	05 44 41.2	
	comp=Z,32nm,20.0s,baz=55,slow=42						
FITZ	**Fitzroy Crossi**	**17.16**	**122**	P	**Pn**	**05 41 37.8**	**-0.3**
	0.1nm,0.3s,baz=270,slow=10,SNR=5.5						
FITZ				S	Sn	05 44 35.9	-12
	0.3nm,0.3s,baz=319,slow=23,SNR=4.9						
WRA	**Warramunga Arr**	**25.40**	**117**	P	**P**	**05 43 05.5**	**+0.2**
	2.6nm,0.8s,baz=289,slow=10,SNR=14						
ASAR	**Alice Springs**	**26.59**	**125**	P	**P**	**05 43 16.7**	**+0.6**
	1.1nm,0.7s,baz=302,slow=9.2,SNR=10						
KSRS	**Korea Array**	**49.33**	**18**	P	**P**	**05 46 26.3**	**-0.4**
	0.9nm,0.7s,baz=202,slow=9.0,SNR=4.3						
MJAR	**Matsushiro Arr**	**52.57**	**28**	P	P	05 46 48.6	-2.6
	0.5nm,0.3s,baz=199,slow=8.1,SNR=4.8						
SONM	**Songino Array**	**57.01**	**357**	P	**P**	**05 47 22.0**	**-1.3**
	0.6nm,0.6s,baz=179,slow=9.0,SNR=7.3						
MKAR	**Makanchi Array**	**61.24**	**338**	P	**P**	**05 47 51.1**	**-1.3**
	0.6nm,0.4s,baz=149,slow=8.0,SNR=9.1						
ZALV	**Zalesovo Beam**	**66.65**	**344**	P	**P**	**05 48 26.1**	**-1.7**
	1.4nm,0.5s,baz=166,slow=6.6,SNR=5.6						

NNC 04 05:51:21.5±6.4, **36°.99N×70°.74E, h0km, mb3.6, mpv3.4, 3C-1D, Error ellipse: s-maj=52.3km s-min=44.8km az=160.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.11**	**358**	⇑Pn	Pn	05 52 55.0	+1.9
	0.6nm,0.3s,baz=179,slow=12,SNR=28						
KK31				Sn	Sn	05 54 05.2	+1.4
	2.5nm,0.4s,baz=183,slow=20,SNR=14						
TKM2	**Tokmak 2**	**7.00**	**31**	⇑Pn	Pn	05 53 05.6	0.0
	2.7nm,0.5s						
TKM2				⇑Sn	Sn	05 54 26.2	+0.1
	0.9nm,0.5s						
AB31	**Akbulak array**	**14.56**	**331**	⇓P	Pn	05 54 44.5	-4.2
	0.2nm,0.3s,baz=147,slow=12,SNR=8.1						

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*CSEM **04** 06:00:07.3, 11°.94N×43°.46E, h12km, ML3.7, After DHMR*
DHMR 04 06:00:07.3±1.0, **11°.94N×43°.46E, h12km**±17km, **ML3.7, 1C-2D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	**At Turbah**	**1.43**	**26**	⇑*i*P	Pn	06 00 33.7	+0.2
TRBA				*i*S	Sg	06 00 54.1	+0.1
TRBA				AML	AML	06 00 56.5	
	comp=Z,2μm,0.5s						
ADEN	**Aden**	**1.70**	**61**	*i*P	Pb	06 00 38.0	-0.5
ADEN				*i*S	Sb	06 01 00.5	+0.5
ADEN				AML	AML	06 01 09.1	
	comp=E,519nm,0.5s						
ADEN	**Aden**	**1.70**	**61**	*i*P	Pb	06 00 38.0	-0.6
ADEN				*i*S	Sb	06 01 00.5	+0.5
UDYN	**Al 'Udayn**	**2.07**	**14**	⇓*i*P	Pn	06 00 43.4	+1.3
UDYN				*i*S	Sb	06 01 11.7	+0.7
UDYN	**Al 'Udayn**	**2.07**	**14**	⇓*i*P	Pn	06 00 43.4	+1.2
UDYN				*i*S	Sb	06 01 11.7	+0.7
LBOS		**2.59**	**42**	*i*P	Pn	06 00 51.8	+2.3
LBOS				*i*S	Sb	06 01 26.9	+0.7
BDHA	**Al Bayda'**	**2.88**	**45**	*i*P	Pn	06 00 55.6	+2.2
BDHA				*i*S	Sb	06 01 34.4	-0.1
BDHA				AML	AML	06 01 47.1	
	comp=E,404nm,0.5s						
BDHA	**Al Bayda'**	**2.88**	**45**	*i*P	Pn	06 00 55.7	+2.3
BDHA				*i*S	Sb	06 01 34.4	-0.1

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*ISK **04** 06:07:30.9, 37°.93N×29°.33E, h13km, MD2.8*
*ISCJB **04** 06:07:31.9±0.5, 37°.89N±0°.02×29°.27E±0°.04, h10km±5km, Error ellipse: s-maj=5.6km s-min=3.8km az=10.5*
*CSEM **04** 06:07:31.6±0.2, 37°.88N×29°.31E, h10km, MD2.8, Error ellipse: s-maj=4.9km s-min=3.8km az=105.0*
*DDA **04** 06:07:32.6, 37°.89N×29°.20E, h7km, MD2.8*
ISC 04 06:07:31.3±1.0, **37°.89N**±0°.02×**29°.32E**±0°.03, **h10km**±9km, **n36, σ0s.73**/51, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.26**	**239**	*e*PG	**Pg**	**06 07 37.1**	**+0.5**
DENT	**Denizli**	**0.26**	**239**	*e*Pg	**Pg**	**06 07 37.2**	**+0.5**
DNZL	**Cakiroluk**	**0.29**	**227**	*i* P	**Pg**	**06 07 37.5**	**+0.2**
DNZL				*i* S	**Sg**	**06 07 41.2**	**0.0**
DNZL	**Cakiroluk**	**0.29**	**227**	*i* P	**Pg**	**06 07 37.5**	**+0.2**
DNZL				*i* S	**Sg**	**06 07 41.2**	**0.0**
KHL	**Karahalli**	**0.46**	**20**	*e*PG	**Pg**	**06 07 39.8**	**-0.6**
KHL	**Karahalli**	**0.46**	**20**	*e*Pg	**Pg**	**06 07 39.8**	**-0.6**
KHAL	**Karahalli**	**0.50**	**16**	*i* P	**Pb**	**06 07 42.8**	**+0.5**
KHAL				*i* S	**Sb**	**06 07 50.2**	**+0.4**
KHAL	**Karahalli**	**0.50**	**16**	*i* P	**Pb**	**06 07 42.8**	**+0.5**
KHAL				*i* S	**Sb**	**06 07 50.2**	**+0.4**
GOLH	**Golhisar**	**0.68**	**163**	*i* P	**Pb**	**06 07 46.1**	**+0.8**
GOLH				*i* S	**Sn**	**06 07 57.3**	**-0.6**
GOLH	**Golhisar**	**0.68**	**163**	*i* P	**Pb**	**06 07 46.1**	**+0.8**
KULA	**Kula-Manisa**	**0.81**	**321**	*e*PG	**Pg**	**06 07 46.6**	**-0.3**
KULA				*e*SG	**Sg**	**06 07 57.9**	**+0.3**
KULA	**Kula-Manisa**	**0.81**	**321**	*e*Pg	**Pg**	**06 07 46.7**	**-0.3**
KULA				*e*Sg	**Sg**	**06 07 57.9**	**+0.3**
MANT	**Manisa**	**0.85**	**315**	*i* P	**Pb**	**06 07 48.3**	**0.0**
MANT				*i* S	**Sg**	**06 07 58.5**	**-0.3**
MANT	**Manisa**	**0.85**	**315**	*i* P	**Pb**	**06 07 48.3**	**0.0**
MANT				*i* S	**Sg**	**06 07 58.5**	**-0.3**
ISP	**Isparta**	**0.96**	**94**	*e*PG	**Pg**	**06 07 49.8**	**+0.1**
ISP	**Isparta**	**0.96**	**94**	*e*Pg	**Pg**	**06 07 49.8**	**+0.1**
YER	**Yerkesik**	**1.11**	**228**	*e*PN	**Pb**	**06 07 53.0**	**+0.2**
YER	**Yerkesik**	**1.11**	**228**	*e*Pn	**Pb**	**06 07 53.0**	**+0.2**
AYDN	**Tasoluk**	**1.16**	**259**	*i* P	**Pb**	**06 07 53.5**	**-0.1**
AYDN				*i* S	**Sg**	**06 08 07.3**	**-1.5**
AYDN	**Tasoluk**	**1.16**	**259**	*i* P	**Pb**	**06 07 53.5**	**-0.1**
AYDN				*i* S	**Sg**	**06 08 07.3**	**-1.5**
SHUT	**Suhut-Afyon**	**1.18**	**55**	*e*PN	**Pb**	**06 07 53.0**	**-0.8**
SHUT	**Suhut-Afyon**	**1.18**	**55**	*e*Pn	**Pb**	**06 07 53.0**	**-0.8**
GDZ	**Gediz**	**1.21**	**6**	*e*P	**Pg**	**06 07 56.5**	**+2.0**
GDZ				*i* S	**Sn**	**06 08 11.3**	**+0.3**
GDZ	**Gediz**	**1.21**	**6**	*e*P	**Pg**	**06 07 56.5**	**+2.0**
GDZ				*i* S	**Sn**	**06 08 11.3**	**+0.3**
ELL	**Elmali**	**1.23**	**157**	*e*PN	**Pn**	**06 07 54.5**	**-0.2**
ELL	**Elmali**	**1.23**	**157**	*e*Pn	**Pn**	**06 07 54.5**	**-0.2**
DEMI	**Demirci**	**1.25**	**338**	*i* P	**Pg**	**06 07 56.0**	**+0.7**
DEMI				*i* S	**Sb**	**06 08 09.7**	**-1.5**
DEMI	**Demirci**	**1.25**	**338**	*i* P	**Pg**	**06 07 56.0**	**+0.7**
DEMI				*i* S	**Sb**	**06 08 09.7**	**-1.5**
FETY	**Fethiye**	**1.26**	**189**	*e*PN	**Pn**	**06 07 55.3**	**+0.2**
FETY	**Fethiye**	**1.26**	**189**	*e*Pn	**Pn**	**06 07 55.3**	**+0.2**
MLSB	**Milas**	**1.36**	**245**	*e*PN	**Pn**	**06 07 56.6**	**+0.2**
MLSB	**Milas**	**1.36**	**245**	*e*Pn	**Pn**	**06 07 56.6**	**+0.2**
BODT	**Bodrum**	**1.80**	**243**	*e*PN	**Pn**	**06 08 02.7**	**+0.3**
BODT	**Bodrum**	**1.80**	**243**	*e*Pn	**Pn**	**06 08 02.7**	**+0.3**
DAT	**Datca**	**1.81**	**231**	*e*PN	**Pn**	**06 08 03.2**	**+0.6**
DAT	**Datca**	**1.81**	**231**	*e*Pn	**Pn**	**06 08 03.2**	**+0.6**

MEX 04 06:11:41.8±0.7, **15°.18N×91°.96W, h177km**±8km, **MD3.6, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.40**	**227**	*i* P	Pn	06 12 04.2	-1.7
THIG				*i* S	Sn	06 12 22.5	-1.9
CCIG	**Comitan**	**1.11**	**351**	*i* P	Pn	06 12 09.3	-1.0
CCIG				*i* S	Sn	06 12 29.4	-3.1
PCIG		**1.32**	**293**	*e*P	Pn	06 12 10.7	-1.2
PCIG				*i* S	Sn	06 12 32.5	-2.5
TGIG		**1.94**	**325**	*e*P	Pn	06 12 17.1	-1.0
TGIG				*e*S	Sn	06 12 44.6	-1.8
HUIG	**Huatulco**	**4.04**	**279**	*e*P	Pn	06 12 41.5	-1.9
HUIG				*i* S	Sn	06 13 28.6	-2.9

ATH 04 06:17:51.6, 34°.18N×25°.82E, h26km±1km, **MD3.5**/9, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XRY	**Khrisi**	**0.70**	**352**	*e*PN	Pn	06 18 05.6	-0.2
ZKR	**Zakros**	**0.99**	**19**	*e*PN	Pb	06 18 10.6	+0.5
ZKR				*e*SN	Sn	06 18 24.6	+1.6
LAST	**Lasithi**	**1.02**	**344**	*e*PN	Pb	06 18 11.3	+0.6
LAST				*e*SN	Sn	06 18 25.1	+1.2
NPS	**Neapolis**	**1.09**	**351**	*e*PN	Pb	06 18 12.3	+0.4
NPS				*e*SN	Sb	06 18 27.4	+1.6
SIVA	**Sivas**	**1.18**	**315**	*e*PN	Pb	06 18 13.9	+0.6
SIVA				*e*SN	Sb	06 18 30.8	+2.6
IDI	**Anoyia**	**1.34**	**326**	*e*PN	Pb	06 18 16.5	+0.2
IDI				*e*SN	Sb	06 18 34.7	+1.6
GVD	**Gavdhos**	**1.57**	**295**	*e*PN	Pb	06 18 19.9	-0.2
VAM	**Vamos**	**1.81**	**313**	*e*PN	Pb	06 18 23.1	-1.0
KYTH	**Kithira**	**3.10**	**313**	*e*PN	Pn	06 18 41.2	+2.4
VLI	**Veliai**	**3.46**	**318**	*e*PN	Pn	06 18 46.6	+2.8

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*WAR **04** 06:24:22.8, 51°.53N×16°.08E*
*ISCJB **04** 06:24:24.2±1.5, 51°.36N±0°.07×15°.95E±0°.06, h0km, Error ellipse: s-maj=10.3km s-min=4.7km az=19.9*
*CSEM **04** 06:24:24.4±1.5, 51°.36N×16°.05E, h2km, ML2.9/4*
*PRU **04** 06:24:24.7, 51°.38N×16°.09E, h0km*
ISC 04 06:24:25.1±2.1, **51°.35N**±0°.10×**16°.06E**±0°.05, **h0km, n14, σ0s.67**/23, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.53**	**164**	*e*Pg	**Pg**	**06 24 35.9**	**+0.7**
KSP				*e*Sg	**Sb**	**06 24 44.1**	**-1.3**
UPC	**Upice**	**0.84**	**182**	*e*PG	**Pg**	**06 24 41.8**	**+0.5**
UPC	**Upice**	**0.84**	**182**	Pg	**Pg**	**06 24 41.8**	**+0.5**
DPC	**Dobruska-Polom**	**1.01**	**171**	*e*PG	**Pg**	**06 24 44.5**	**0.0**
DPC				*e*SG	**Sg**	**06 24 58.5**	**+0.9**
	comp=Z,56nm,0.6s						
DPC	**Dobruska-Polom**	**1.01**	**171**	Pg	**Pg**	**06 24 44.5**	**0.0**
DPC				Sg	**Sg**	**06 24 58.5**	**+0.9**
	56nm,0.6s						
BRG	**Berggiesshubel**	**1.42**	**251**	PG	**Pn**	**06 24 51.6**	**-0.5**
BRG				SG	**Sb**	**06 25 11.2**	**+0.2**
	22nm,0.4s						
PRU	**Pruhonice**	**1.67**	**216**	*e*SG	**Sg**	**06 25 19.5**	**+0.7**
	comp=Z,9.8nm,0.4s						
PRU	**Pruhonice**	**1.67**	**216**	Sg	**Sg**	**06 25 19.5**	**+0.7**
	9.8nm,0.4s						
MORC	**Moravsky Berou**	**1.84**	**148**	*e*Pn	**Pn**	**06 24 57.7**	**-0.2**
MORC				*e*Sg	**Sn**	**06 25 21.3**	**-0.6**
CLL	**Collm**	**1.92**	**270**	*e*Sg	**Sb**	**06 25 25.0**	**-0.5**
	comp=Z,8.0nm,0.5s						
NKC	**Novy Kostel**	**2.55**	**245**	*e*SG	**Sg**	**06 25 47.5**	**+0.5**
	comp=Z,11nm,0.3s						
NKC	**Novy Kostel**	**2.55**	**245**	Sg	**Sg**	**06 25 47.5**	**+0.5**
	comp=Z,11nm,0.3s						
KHC	**Kasperske Hory**	**2.73**	**217**	*e*PG	**Pb**	**06 25 15.4**	**+0.5**
KHC				*e*SN	**Sn**	**06 25 43.5**	**-0.5**
KHC				*e*SG	**Sg**	**06 25 52.1**	**-0.8**
	comp=Z,3.0nm,0.4s						
KHC	**Kasperske Hory**	**2.73**	**217**	Pg	**Pb**	**06 25 15.4**	**+0.5**
KHC				Sn	**Sn**	**06 25 43.5**	**-0.5**
KHC				Sg	**Sg**	**06 25 52.1**	**-0.8**
	comp=Z,3.0nm,0.4s						

MAN 04 06:35:18, 9°.00N×121°.72E, h22km, mb4.6, ML3.5, MS3.5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	**Jordan**	**1.83**	**28**	*e*P	Pn	06 35 47.8	-0.3
CUYO	**Cuyo Island**	**1.97**	**339**	*e*P	Pn	06 35 49.9	-0.2
PAGZ	**Pagadian**	**2.00**	**125**	*e*P	Pn	06 35 51.0	+0.5
PAGZ				*e*S	Sn	06 36 14.6	-0.3
RCP	**Roxas**	**2.74**	**22**	⇓*e*P	Pb	06 36 09.8	+3.4
RCP				*e*S	Sb	06 36 37.3	-2.2
ENPP	**El Nido**	**3.15**	**314**	*e*P	Pn	06 36 08.1	+1.8

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*CSEM **04** 06:36:52.8, 42°.35N×13°.35E, h9km, MD1.6/9, After ROM*
ROM 04 06:36:52.8±0.1, **42°.35N×13°.35E, h9km, Md1.6**/9, **Ml1.3**/5, **Error ellipse: s-maj=1.4km s-min=1.1km az=8.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.04**	**90**	Pg	Pg	06 36 55.1	+0.4
AQU				Sg	Sg	06 36 56.5	+0.5
	467nm,0.1s						
AQU	**L'Aquila**	**0.04**	**90**	Pg	Pg	06 36 55.1	+0.4
AQU				Sg	Sg	06 36 56.5	+0.5
	467nm,0.1s						
CAMP	**Campotosto**	**0.19**	**13**	Pg	Pg	06 36 57.2	+0.3
CAMP				Sg	Sg	06 37 00.5	+0.7
	30nm,0.4s						
CAMP	**Campotosto**	**0.19**	**13**	Pg	Pg	06 36 57.2	+0.3
CAMP				Sg	Sg	06 37 00.5	+0.7
	30nm,0.4s						
FAGN	**Fagnano**	**0.19**	**117**	Pg	Pg	06 36 57.5	+0.6
FAGN				Sg	Sg	06 37 00.9	+1.2
	148nm,0.4s						
FAGN	**Fagnano**	**0.19**	**117**	Pg	Pg	06 36 57.5	+0.6
FAGN				Sg	Sg	06 37 00.9	+1.2
	148nm,0.4s						
FIAM	**Fiamignano**	**0.20**	**244**	Pg	Pg	06 36 57.5	+0.5
FIAM				Sg	Sg	06 37 00.6	+0.7
	34nm,0.6s						
FIAM	**Fiamignano**	**0.20**	**244**	Pg	Pg	06 36 57.5	+0.5
FIAM				Sg	Sg	06 37 00.6	+0.7
	34nm,0.6s						
TERO	**Teramo**	**0.33**	**35**	Pg	Pg	06 36 59.2	-0.2
	26nm,0.6s						
TERO	**Teramo**	**0.33**	**35**	Pg	Pg	06 36 59.2	-0.2
	26nm,0.6s						
LNSS	**Leonessa**	**0.34**	**317**	Pg	Pg	06 37 00.3	+0.6
LNSS				Sg	Sb	06 37 06.1	-0.7
LNSS	**Leonessa**	**0.34**	**317**	Pg	Pg	06 37 00.3	+0.6
LNSS				Sg	Sb	06 37 06.1	-0.7
VCEL	**Villa Celiera**	**0.36**	**83**	Pg	Pb	06 37 00.9	-0.7
VCEL				Sg	Sb	06 37 06.5	-1.0
	58nm,0.5s						
VCEL	**Villa Celiera**	**0.36**	**83**	Pg	Pb	06 37 00.9	-0.7
VCEL				Sg	Sb	06 37 06.5	-1.0
	58nm,0.5s						
NRCA	**Norcia**	**0.51**	**340**	Pg	Pg	06 37 02.7	-0.2
NRCA				Sg	Sb	06 37 11.1	-0.6
NRCA	**Norcia**	**0.51**	**340**	Pg	Pg	06 37 02.7	-0.2
NRCA				Sg	Sb	06 37 11.1	-0.6

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*BJI **04** 06:44:47.5, 32°.85N×81°.60E, h10km, mB4.6/26, mb4.5/34, Ms4.3/36, Ms7 4.0/34*
*IDC **04** 06:44:47.7±0.5, 32°.74N×81°.78E, h0km, mb4.4/27, mb1 4.5/30, mb1mx4.4/36, mbtmp4.4/30, ML3.9/3, MS3.6/19, Ms1 3.7/19, ms1mx3.5/38, Error ellipse: s-maj=15.7km s-min=10.6km az=41.0*
*LDG **04** 06:44:49.0±0.1, 32°.88N×81°.97E, h10km, Mb4.8/25, Ms3.5/7, Error ellipse: s-maj=7.2km s-min=3.8km az=62.0*
*ISCJB **04** 06:44:49.5±0.1, 32°.84N±0°.02×81°.85E±0°.02, h11km, mb4.6/98, MS3.8/35, Error ellipse: s-maj=3.0km s-min=2.0km az=36.0*
*NEIC **04** 06:44:50.6±0.3, 32°.83N×81°.91E, h10km, mb4.6/15, Error ellipse: s-maj=9.1km s-min=5.9km az=37.0*
*TEH **04** 06:44:50.0, 32°.79N×81°.69E, h10km, ML4.7*
*NDI **04** 06:44:51.7±3.2, 32°.63N×81°.85E, h10km, MW4.6, mb4.6(NEIC)*
*MOS **04** 06:44:52.6±1.3, 32°.92N×82°.00E, h33km, mb5.0/61, Error ellipse: s-maj=8.3km s-min=3.9km az=120.6*
*NNC **04** 06:44:54.7±9.8, 33°.23N×81°.21E, h0km, mb4.6, Error ellipse: s-maj=134.1km s-min=47.3km az=143.0*
ISC 04 06:44:51.2±0.4, **32°.83N**±0°.02×**81°.78E**±0°.02, **h13km**±2km, **h12km:pP-P, n353, σ1s.87**/391, **mb4.8**/102, **MS3.8**/35, **38C-12D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.53**	**203**	*e*PKP3	Pn	06 45 39.0	-7.0
PTH				*e*4	Pg	06 46 06.8	+7.9
LGTI	**Lohaghat**	**3.61**	**202**	*e*4	**Pg**	**06 46 01.2**	**+0.7**
DDI	**Dehra Dun**	**4.04**	**233**	*e*PKP9	**Pg**	**06 46 07.1**	**-1.6**
DDI				*e*S	**Sb**	**06 46 53.5**	**+2.3**
SMLA	**Simla**	**4.27**	**248**	*i* P	**Pn**	**06 45 57.2**	**+1.2**
SMLA				*e*S	**Sn**	**06 46 48.8**	**+3.1**
SDNR	**Sundarnagar**	**4.29**	**253**	*e*PKP	**Pn**	**06 45 58.0**	**+1.7**
DHRM	**DHARAMSHALA**	**4.67**	**264**	*e*PKP	**Pn**	**06 46 02.5**	**+0.9**
DHRM				*e*S	**Sn**	**06 46 58.6**	**+2.8**
DANN	**Dangsing**	**4.78**	**159**	*e*Pn	**Pn**	**06 46 04.3**	**+1.1**
PYUN	**Piuthan**	**4.82**	**167**	*e*Pn	**Pn**	**06 46 04.8**	**+1.0**
DLH	**Dalhousie**	**4.91**	**268**	*e*4	**Pn**	**06 46 04.0**	**-1.0**
DLH				*e*S	**Sn**	**06 47 04.0**	**+2.2**
KOLN	**Koldanda**	**5.28**	**162**	*e*Pn	**Pn**	**06 46 10.9**	**+0.9**
KOLN				*e*Sn	**Sn**	**06 47 11.9**	**+1.0**
	84nm,0.5s						
NDI	**New Delhi**	**5.70**	**225**	*e*PKP	**Pn**	**06 46 16.8**	**+1.2**
NDI				*e*S	**Sn**	**06 47 20.5**	**-0.5**
KKN	**Kakani**	**5.86**	**148**	*e*Pn	**Pn**	**06 46 19.2**	**+1.2**
KKN				*e*Sn	**Sn**	**06 47 26.3**	**+1.1**
	208nm,1.1s						
DMN	**Daman**	**5.94**	**150**	*e*Pn	**Pn**	**06 46 20.6**	**+1.4**
DMN				*e*Sn	**Sn**	**06 47 28.4**	**+1.1**
	300nm,1.0s						
GUN	**Gumba**	**6.04**	**143**	*e*Pn	**Pn**	**06 46 22.1**	**+1.4**
GUN				*e*Sn	**Sn**	**06 47 31.9**	**+2.0**
	163nm,0.7s						
PKIN	**Phulchoki**	**6.09**	**148**	*e*Pn	**Pn**	**06 46 22.4**	**+1.1**
PKI	**Pulchoki**	**6.11**	**148**	*e*Pn	**Pn**	**06 46 22.6**	**+1.1**
CHCP	**Chirah Chowk**	**7.18**	**279**	P	**Pn**	**06 46 36.4**	**+0.3**
RAMN	**Ramite**	**7.19**	**143**	*e*Pn	**Pn**	**06 46 36.9**	**+0.5**
RAMN				*e*Sn	**Sn**	**06 47 57.9**	**-0.2**
	295nm,0.8s						
TAPN	**Taplejung**	**7.49**	**135**	*e*Pn	**Pn**	**06 46 42.0**	**+1.5**
TAPN				*e*Sn	**Sn**	**06 48 06.1**	**+0.6**
	114nm,0.7s						
ODAN	**Odare**	**7.68**	**139**	*e*Pn	**Pn**	**06 46 44.2**	**+1.1**
ODAN				*e*Sn	**Sn**	**06 48 10.3**	**+0.1**
	174nm,0.7s						
KSH	**Kashi**	**8.16**	**327**	*e*P	**Pn**	**06 46 48.6**	**-0.9**
KSH				*e*pP	pP	06 46 51.5	
KSH				*e*sP		06 46 54.6	
KSH				*e*S	**Sn**	**06 48 19.0**	**-2.7**
KSH				*e*sS	sS	06 48 24.8	
KSH				pmax	pmax		
	comp=Z,69nm,0.8s						
KSH				LR	LR		
	comp=N,2μm,5.9s						
KSH				LR	LR		
	comp=E,2μm,6.7s						
KSH				LR	LR		
	comp=Z,2μm,6.2s						
CEP	**Cherat**	**8.32**	**280**	⇑P	**Pn**	**06 46 52.0**	**+0.2**
CEP				S	**Sn**	**06 48 31.0**	**+5.3**
THW	**Thamme Wali**	**8.45**	**273**	P	**Pn**	**06 46 53.5**	**+0.1**
LSA	**Lhasa**	**8.60**	**109**	P	Pn	06 46 58.8	+2.9
LSA				LR	LR		
	comp=N,850nm,8.4s						
LSA				LR	LR		
	comp=E,640nm,10.0s						
LSA				LR	LR		
	comp=Z,1μm,9.0s						
LSA	**Lhasa**	**8.60**	**109**	*e*P	**Pn**	**06 46 56.8**	**+0.9**
LSA				*e*		06 48 34.8	
LSA				pmax	pmax		
	comp=Z,26nm,0.5s						
LSA	**Lhasa**	**8.60**	**109**	*e*Pn	**Pn**	**06 46 56.8**	**+0.9**
	comp=Z,26nm,0.5s						
LSA				*e*Sn	**Sn**	**06 48 34.8**	**+1.7**
BOK	**Bokaro**	**9.70**	**157**	*e*PKP	**Pn**	**06 47 09.8**	**-0.7**
BOK				*e*x	Sn	06 48 53.0	-6.3
JBP	**Jabalpur**	**9.75**	**190**	*e*PKP	**Pn**	**06 47 09.5**	**-1.7**
JBP				*e*4	**Sn**	**06 49 01.5**	**+0.8**
BHPL	**Bhopal**	**10.29**	**203**	*e*PKP	**Pn**	**06 47 18.2**	**-0.5**
BHPL				*e*x	Sn	06 49 07.5	-6.5
ULHL	**Ulahol**	**10.38**	**337**	*i* P	**Pn**	**06 47 22.8**	**+2.8**
ULHL	**Ulahol**	**10.38**	**337**	P	**Pn**	**06 47 22.8**	**+2.8**
	SNR=9.7						
KZA	**Kyzart**	**10.59**	**333**	*i* P	**Pn**	**06 47 23.5**	**+0.4**
KZA	**Kyzart**	**10.59**	**333**	P	**Pn**	**06 47 23.5**	**+0.4**
	SNR=21						
KBL	**Kabul**	**10.75**	**283**	*e*P	**Pn**	**06 47 22.9**	**-2.2**
KBL	**Kabul**	**10.75**	**283**	*e*Pn	**Pn**	**06 47 22.9**	**-2.2**
UCH	**Uchtor**	**11.01**	**331**	*i* P	**Pn**	**06 47 30.6**	**+1.7**
UCH	**Uchtor**	**11.01**	**331**	P	**Pn**	**06 47 30.6**	**+1.7**
	SNR=6.1						
TKM2	**Tokmak 2**	**11.20**	**336**	*e*P	**Pn**	**06 47 32.6**	**+1.4**

TKM2 pmax pmax
comp=Z,5.0nm,0.6s
TKM2 Tokmak 2 11.20 336 *e*Pn **Pn 06 47 32.6 +1.4**
comp=Z,5.3nm,0.6s
AML Almayashu 11.29 328 *i* P **Pn 06 47 32.1 -0.5**
AML Almayashu 11.29 328 P **Pn 06 47 32.1 -0.5**
SNR=22
AAK Ala-Archa 11.36 332 P **Pn 06 47 35.1 +1.7**
AAK 06 49 40.8
AAK pmax pmax
comp=Z,1.0nm,0.3s
AAK MLR MLR
comp=Z,262nm,18.9s
AAK Ala-Archa 11.36 332 *e*Pn **Pn 06 47 33.0 -0.3**
AAK Sn **Sn 06 49 40.8 +0.5**
AAK Lg Lg 06 50 51.5
AAK Ala-Archa 11.36 332 Pn **Pn 06 47 35.1 +1.7**
comp=Z,0.8nm,0.3s,baz=169,slow=13,SNR=7.5
AAK Sn **Sn 06 49 40.8 +0.5**
comp=Z,0.2nm,0.3s,baz=195,slow=20,SNR=2.2
AAK Lg Lg 06 50 51.5
comp=Z,0.2nm,0.3s,baz=24,slow=20,SNR=2.0
AAK LR LR 06 52 05.9
comp=Z,262nm,18.9s,baz=135,slow=38
SHL Shillong 11.40 127 *e*PKP **Pn 06 47 31.4 -2.6**
SHL *i* x x 06 49 36.0
FRU Bishkek 11.48 333 *e*P Pn 06 47 30.0 -4.9
FRU pmax pmax
comp=Z,40nm,2.0s
FRU pmax pmax
comp=E,120nm,2.0s
EKS2 Erkin-Say 11.68 330 P **Pn 06 47 39.0 +1.3**
SNR=9.0
NGP Nagpur 11.88 192 *e*PKP **Pn 06 47 38.7 -1.8**
NGP *ex* x 06 49 43.4
WMQ Urumqi 11.91 21 *e*P **Pn 06 47 43.0 +2.1**
WMQ pP 06 47 46.5
WMQ sP 06 47 49.5
WMQ *e*S **Sn 06 49 59.0 +5.3**
WMQ SS **SnSn 06 50 12.0 +6.1**
WMQ pmax pmax
comp=Z,11nm,1.0s
WMQ pmax pmax
comp=Z,140nm,4.8s
WMQ LR LR
comp=N,860nm,12.8s
WMQ LR LR
comp=E,1μm,19.4s
WMQ LR LR
comp=Z,870nm,13.0s
KK31 Karatay Array 13.56 322 ⇑P **Pn 06 48 00.7 -2.6**
comp=Z,4.3nm,0.5s,baz=145,slow=13,SNR=55
KK31 Karatay Array 13.56 322 *i* P **Pn 06 48 00.5 -2.8**
KK31 pmax pmax
comp=Z,4.0nm,0.4s
KKAR Karatay Array 13.56 322 *e*P **Pn 06 48 00.9 -2.4**
KKAR *e* 06 50 26.4
KKAR Karatay Array 13.56 322 *e*Pn **Pn 06 48 00.9 -2.4**
KKAR *e*Sn Sn 06 50 26.4 -7.5
MK31 Makanchi Array 13.96 1 P **Pn 06 48 06.4 -2.3**
comp=Z,11nm,0.7s,baz=185,slow=14,SNR=39
MK31 Makanchi Array 13.96 1 *e*P **Pn 06 48 06.8 -1.9**
MK31 Makanchi Array 13.96 1 *e*Pn **Pn 06 48 06.8 -1.9**
MKAR Makanchi Array 13.96 1 *e*P **Pn 06 48 07.3 -1.4**
MKAR Makanchi Array 13.96 1 *e*Pn **Pn 06 48 07.3 -1.4**
MKAR Makanchi Array 13.96 1 Pn **Pn 06 48 07.1 -1.6**
comp=Z,0.5nm,0.3s,baz=183,slow=12,SNR=20
MKAR LR LR 06 54 08.9
comp=Z,98nm,21.7s,baz=177,slow=40
HYB Hyderabad 15.62 192 *i* P **Pn 06 48 30.0 -1.2**
HYB Hyderabad 15.62 192 *e*P **Pn 06 48 28.0 -3.2**
HYB Hyderabad 15.62 192 *e*PKP **Pn 06 48 27.2 -4.0**
HYB Hyderabad 15.62 192 *e*P **Pn 06 48 28.0 -3.2**
POO Poona 15.92 209 *e*4 06 48 28.0
GTA Gaotai 15.97 61 *e*P **Pn 06 48 36.3 +0.5**
GTA pP **P 06 48 39.7 +0.4**
GTA sP **sP 06 48 42.2 -2.4**
GTA S **Sn 06 51 33.9 +1.1**
GTA sS S 06 51 39.1 -7.7
GTA SS **SnSn 06 51 53.9 +8.2**
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,120nm,3.8s
GTA LR LR
comp=N,710nm,16.6s
GTA LR LR
comp=E,270nm,13.3s
GTA LR LR
comp=Z,220nm,13.8s
KURBB Kurchatov Arra 17.95 353 P **Pn 06 48 60.0 -0.4**
comp=Z,0.1nm,0.3s,baz=188,slow=9.6,SNR=20
KUR17 Kurchatov Arra 17.96 353 ⇑P **Pn 06 49 00.1 -0.4**
comp=Z,5.1nm,1.0s,baz=176,slow=10
KURK Kurchatov 18.03 353 ⇑P **Pn 06 49 01.1 -0.3**
comp=Z,24nm,1.0s
KURK Kurchatov 18.03 353*d i* P **Pn 06 49 01.1 -0.3**
KURK pmax pmax
comp=Z,20nm,0.8s
KURK Kurchatov 18.03 353 *e*Pn **Pn 06 49 00.0 -1.4**
comp=Z,21nm,0.9s
LZH Lanzhou 18.48 74 *e*P **P 06 49 07.2 +0.1**
LZH pP **pP 06 49 10.8 +0.1**
LZH sP **sP 06 49 12.0 -0.4**
LZH *e*S **Sn 06 52 29.2 -4.4**
LZH sS **S 06 52 37.1 -0.8**
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,86nm,4.0s
LZH LR LR
comp=N,750nm,8.2s
LZH LR LR
comp=E,280nm,7.1s
LZH LR LR
comp=Z,640nm,9.2s
ISRO Mashad 18.69 287 *e*P **P 06 49 08.7 -0.7**
CD2 Chengdu 18.76 90 *e*P **Pn 06 49 11.6 +1.0**
CD2 pP **pP 06 49 14.7 +1.0**
CD2 sP **sP 06 49 18.1 +2.7**
CD2 PP **PnPn 06 49 27.3 +4.7**
CD2 S **Sn 06 52 38.4 -2.0**
CD2 sS **S 06 52 43.3 -0.2**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,30nm,6.2s
CD2 LR LR
comp=N,570nm,17.8s
CD2 LR LR
comp=E,610nm,11.9s
CD2 LR LR
comp=Z,520nm,8.2s
IKRD Kardeh 19.50 288 *e*P P 06 49 09.9 -8.5
KMI Kunming 19.86 107 P **P 06 49 22.1 -0.2**
KMI pP **pP 06 49 26.7 +0.8**
KMI sP **sP 06 49 28.2 +0.6**
KMI PP **PnPn 06 49 41.2 +3.4**
KMI S **S 06 52 59.9 -6.0**
KMI sS **Sn 06 53 09.2 +2.1**
KMI SS **SnSn 06 53 25.9 +4.5**
KMI pmax pmax
comp=Z,15nm,0.7s
KMI pmax pmax
comp=Z,140nm,3.7s
KMI LR LR
comp=N,360nm,10.3s
KMI LR LR
comp=E,120nm,13.5s
KMI LR LR
comp=Z,200nm,12.8s
ISFR Sfrayin 19.93 289 *e*P **P 06 49 23.2 0.0**
CHTO Chiang Mai 20.77 128 *e*P **P 06 49 31.3 -0.8**
CHTO pmax pmax
comp=Z,17nm,0.9s
CHTO Chiang Mai 20.77 128 *e*P **P 06 49 31.3 -0.8**
comp=Z,18nm,0.9s
CM31 Chiang Mai Arr 21.03 129 *e*P **P 06 49 34.2 -0.7**
comp=Z,39nm,0.9s
CMAR Chiang Mai Arr 21.03 129 P **P 06 49 34.2 -0.7**
CMAR Chiang Mai Arr 21.03 129 P **P 06 49 34.2 -0.7**
comp=Z,30nm,0.7s,baz=312,slow=10,SNR=121
CMAR LR LR 06 59 23.6
comp=Z,156nm,21.7s,baz=225,slow=42
ZAA0 Zalesovo Array 21.23 5 *e*P **P 06 49 36.0 -0.7**

ZALV Zalesovo Beam 21.23 5 *i* P **P 06 49 36.5 -0.2**
ZALV pmax pmax
comp=Z,18nm,0.8s
ZALV Zalesovo Beam 21.23 5 P **P 06 49 35.7 -1.0**
ZALV Zalesovo Beam 21.23 5 P **P 06 49 35.7 -1.0**
comp=Z,18nm,0.8s,baz=186,slow=8.7,SNR=19
ZALV LR LR 06 58 42.7
comp=Z,103nm,18.2s,baz=70,slow=39
VOSK Vostochnaya 21.36 342 ⇓P **P 06 49 37.0 -1.3**
comp=Z,46nm,0.9s
VOSK Vostochnaya 21.36 342 P **P 06 49 36.9 -1.3**
VOSK pmax pmax
comp=Z,63nm,1.0s
BVA0 Borovoye Array 21.79 341 P **P 06 49 43.0 +0.2**
comp=Z,41nm,1.1s,baz=155,slow=12,SNR=142
BVA0 Borovoye Array 21.79 341 *i* P **P 06 49 43.0 +0.2**
BVA0 pmax pmax
comp=Z,70nm,1.3s
BVAR Borovoye Array 21.79 341 P **P 06 49 41.9 -0.9**
BVAR pmax pmax
comp=Z,23nm,0.9s
BVAR MLR MLR
comp=Z,83nm,20.3s
BVAR Borovoye Array 21.79 341 P **P 06 49 41.9 -0.9**
BVAR Borovoye Array 21.79 341 P **P 06 49 41.9 -0.9**
comp=Z,23nm,0.9s,baz=148,slow=8.7,SNR=63
BVAR LR LR 06 58 10.8
comp=Z,83nm,20.3s,baz=81,slow=37
BRVK Borovoye 21.85 341*c i* P **P 06 49 44.5 +1.1**
BRVK pmax pmax
comp=Z,70nm,1.0s
BRVK Borovoye 21.85 341 *e*P **P 06 49 43.4 -0.1**
comp=Z,61nm,1.0s
NVS Novosibirsk 22.03 2 *e*P **P 06 49 45.0 -0.3**
ZRNK Zerenda 22.12 339 ⇓P **P 06 49 45.7 -0.7**
comp=Z,34nm,0.9s
ZRNK Zerenda 22.12 339 P **P 06 49 45.6 -0.7**
ZRNK pmax pmax
comp=Z,56nm,1.2s
IBAF Bafgh 22.20 274 *e*P **P 06 49 47.3 -0.3**
GYA Guiyang 22.51 100 *e*P **P 06 49 52.2 +1.3**
GYA PP **PnPn 06 50 18.9 +4.8**
GYA PcP **PcP 06 53 45.6 +0.9**
GYA S **S 06 54 00.1 +2.4**
GYA SS **SnSn 06 54 35.0 +8.6**
GYA ScP **ScP 06 57 22.4 +0.4**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,50nm,4.7s
GYA LR LR
comp=N,230nm,10.2s
GYA LR LR
comp=E,350nm,9.9s
GYA LR LR
comp=Z,490nm,10.8s
XAN Xi'an 22.66 79 P **P 06 49 54.9 +2.6**
XAN S **S 06 53 58.2 -2.0**
XAN pmax pmax
comp=Z,4.0nm,1.1s
XAN pmax pmax
comp=Z,14nm,4.0s
XAN LR LR
comp=N,150nm,10.4s
XAN LR LR
comp=E,110nm,10.4s
XAN LR LR
comp=Z,94nm,9.5s
AB31 Akbulak array 23.12 322 ⇓P **P 06 49 56.1 -0.9**
comp=Z,21nm,0.8s,baz=126,slow=11,SNR=174
AB31 Akbulak array 23.12 322 *i* P **P 06 49 56.0 -0.9**
AB31 pmax pmax
comp=Z,28nm,0.8s
ABKAR Akbulak array 23.12 322 *e*P **P 06 49 55.6 -1.4**
IANJ Anjilo 23.18 284 *e*P **P 06 49 58.2 +0.2**
IGLO Ghaloghah 23.25 287 *e*P **P 06 50 00.7 +2.1**
ZAK Zakamensk 23.65 36 *e*P **P 06 50 01.1 -1.2**
ZAK pmax pmax
comp=Z,3.0nm,1.2s
ENH Enshi 23.72 89 *e*P **P 06 50 02.7 -0.4**
comp=Z,16nm,0.8s
SONM Songino Array 23.88 44 P **P 06 50 04.3 -0.3**
SONM Songino Array 23.88 44 P **P 06 50 04.3 -0.3**
comp=Z,5.0nm,0.8s,baz=239,slow=10.0,SNR=14
ULN Ulaanbaatar 24.28 44 *e*P **P 06 50 08.7 +0.3**
comp=Z,7.6nm,1.0s
TLY Talaya 24.67 34 *e*P **P 06 50 10.4 -1.3**
TLY pmax pmax
comp=Z,7.0nm,1.3s
TLY MLR MLR
comp=Z,119nm,19.0s
IPAR Pars 24.69 271 *e*P **P 06 50 09.9 -2.5**
IZEF Zefreh 24.71 278 *e*P **P 06 50 13.0 +0.5**
AKTO Aktyubinsk 24.83 322 ⇓P **P 06 50 13.0 -0.1**
comp=Z,11nm,0.9s
AKTO Aktyubinsk 24.83 322 P **P 06 50 13.5 +0.4**
AKTO pmax pmax
comp=Z,11nm,1.0s
AKTO Aktyubinsk 24.83 322 P **P 06 50 11.1 -2.1**
AKTO Aktyubinsk 24.83 322 P **P 06 50 11.1 -2.1**
comp=Z,6.3nm,0.7s,baz=130,slow=12,SNR=11
AKTO LR LR 07 01 16.9
comp=Z,208nm,18.7s,baz=130,slow=40
HHC Hu-ho-hao-te 25.06 63 *i* P **P 06 50 14.7 -0.7**
HHC pP **pP 06 50 18.9 -0.4**
HHC sP **sP 06 50 21.7 +0.8**
HHC PP **PnPn 06 50 52.6 +3.8**
HHC S **S 06 54 36.2 -3.3**
HHC sS **sS 06 54 43.2 -2.7**
HHC SS **SnSn 06 55 35.3 +6.8**
HHC PcS **PcS 06 57 28.9 -1.3**
HHC pmax pmax
comp=Z,23nm,1.0s
HHC pmax pmax
comp=Z,150nm,4.8s
HHC LR LR
comp=N,1μm,14.1s
HHC LR LR
comp=E,360nm,13.3s
HHC LR LR
comp=Z,330nm,11.4s
IKLH Kolahrood 25.28 279 *e*P **P 06 50 18.9 +1.3**
WHN Wuhan 27.75 86 P **P 06 50 37.4 -2.3**
WHN LR LR
comp=N,2μm,15.2s
WHN LR LR
comp=E,690nm,11.7s
WHN LR LR
comp=Z,660nm,10.1s
BJI Beijing 28.46 65 P **P 06 50 45.5 -0.4**
BJI S **S 06 55 34.1 +1.1**
BJI pmax pmax
comp=Z,10.0nm,0.5s
BJI pmax pmax
comp=Z,52nm,4.1s
BJI LR LR
comp=N,290nm,10.4s
BJI LR LR
comp=E,150nm,14.8s
BJI LR LR
comp=Z,130nm,16.5s
ARU Arti 28.54 333*c i* P **P 06 50 48.3 +1.8**
ARU 06 51 38.9
ARU S **S 06 55 37.1 +3.1**
ARU SS **SnSn 06 56 54.6 +1.5**
ARU pmax pmax
comp=Z,20nm,1.2s
QIZ Qiongzhong 28.63 112 P **P 06 50 46.7 -0.9**
QIZ S **S 06 55 36.5 +0.5**
QIZ LR LR
comp=Z,180nm,10.0s
MAK Makhachkala 28.71 301 *e*P **P 06 50 47.6 -0.5**
MAK MLR MLR
comp=Z,426nm,14.0s
NJ2 Nanjing 31.20 81 *e*P **P 06 51 08.8 -1.4**
NJ2 pmax pmax
comp=Z,20nm,0.6s
KBZ Khabaz 32.14 301 P **P 06 51 17.6 -0.8**
KBZ pmax pmax
comp=Z,3.0nm,0.9s
KBZ MLR MLR
comp=Z,185nm,20.5s
KBZ Khabaz 32.14 301 P **P 06 51 17.6 -0.8**
KBZ Khabaz 32.14 301 P **P 06 51 17.6 -0.8**
comp=Z,3.3nm,0.9s,baz=133,slow=9.4,SNR=5.0

KBZ LR LR 07 06 15.4
comp=Z,185nm,20.5s,baz=267,slow=40
KIV Kislovodsk 32.32 302 *e*P P 06 51 24.3 +4.2
KIV *e*S **S 06 56 37.5 +3.9**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KIV MLR MLR
comp=Z,124nm,15.0s
VRHR Novokhopersk 34.46 314 *e*P **P 06 51 40.1 +1.5**
VRHR pmax pmax
comp=Z,10.0nm,1.0s
VRHR pmax pmax
comp=N,9.0nm,0.6s
VRHR pmax pmax
comp=E,7.0nm,0.5s
CN2 Changchun 35.60 59 *e*P **P 06 51 48.1 -0.4**
CN2 *e*sP **sP 06 51 55.0 +1.0**
CN2 *e*S **S 06 57 22.9 -1.2**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 LR LR
comp=N,200nm,14.0s
CN2 LR LR
comp=E,200nm,14.0s
VORD Divnogorie 35.85 313 *e*P **P 06 51 51.6 +1.1**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=N,20nm,0.5s
VORD pmax pmax
comp=E,20nm,0.5s
VSR Storozhevoye 35.99 314 *e*P **P 06 51 53.2 +1.5**
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR pmax pmax
comp=N,10.0nm,1.2s
VSR pmax pmax
comp=E,20nm,0.9s
ANN Anapa 36.15 302 *e*P **P 06 51 52.6 -0.5**
ANN pmax pmax
comp=Z,9.0nm,0.4s
KSAR Wonju Array Be 37.70 70 P **P 06 52 05.3 -1.1**
KSRS Korea Array 37.72 70 P **P 06 52 05.3 -1.3**
comp=Z,0.8nm,0.5s,baz=283,slow=7.4,SNR=3.4
KSRS LR LR 07 08 14.8
comp=Z,51nm,18.1s,baz=128,slow=37
MOS Moscow 38.13 320 *e*P **P 06 52 08.1 -1.8**
OBN Obninsk 38.52 319 ⇓*i* P **P 06 52 15.3 +2.2**
OBN pmax pmax
comp=Z,48nm,1.6s
OBN MLR MLR
comp=Z,200nm,15.0s
MDJ Mudanjiang 38.60 58 P **P 06 52 13.1 -0.9**
MDJ sP **sP 06 52 18.1 -1.4**
MDJ PP **PP 06 53 41.4 -0.9**
MDJ S **S 06 58 06.3 -3.6**
MDJ pmax pmax
comp=Z,12nm,2.8s
MDJ pmax pmax
comp=Z,55nm,3.3s
MDJ LR LR
comp=N,140nm,19.9s
MDJ LR LR
comp=Z,59nm,23.1s
BR131 Keskin Array S 39.04 294 *e*P **P 06 52 19.3 +1.4**
comp=Z,1.2nm,0.6s
BRTR Keskin Array B 39.04 294 P **P 06 52 18.0 +0.1**
BRTR Keskin Array B 39.04 294 P **P 06 52 18.0 +0.1**
comp=Z,1.8nm,0.6s,baz=109,slow=9.3,SNR=10.0
BRTR LR LR 07 10 08.9
comp=Z,44nm,20.0s,baz=328,slow=39
KLMR Klimovskoe 39.15 329 *e*P **P 06 52 16.9 -1.4**
KLMR pmax pmax
comp=Z,25nm,1.1s
KLMR MLR MLR
comp=Z,399nm,15.0s
JNU Nakatsue 40.88 76 LR LR 07 11 23.5
comp=Z,80nm,20.0s,baz=52,slow=39
YAK Yakutsk 42.10 31 *e*P **P 06 52 43.7 +1.0**
YAK pmax pmax
comp=Z,17nm,0.9s
YAK pmax pmax
comp=E,4.0nm,1.1s
YAK MLR MLR
comp=Z,61nm,14.0s
YAK MLR MLR
comp=N,42nm,16.0s
YAK MLR MLR
comp=E,41nm,14.0s
AKASG Malin Array Be 42.11 311 P **P 06 52 43.4 +0.5**
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 42.11 311 P **P 06 52 43.4 +0.5**
AKASG Malin Array Be 42.11 311 P **P 06 52 43.4 +0.5**
comp=Z,6.0nm,0.7s,baz=80,slow=8.2,SNR=28
AK01 Malin Array Si 42.11 311 *e*P **P 06 52 43.7 +0.8**
AK02 Malin Array Si 42.12 311 *e*P **P 06 52 44.5 +1.5**
KIEV Kiev 42.12 311 *e*P **P 06 52 42.5 -0.5**
KIEV pmax pmax
comp=Z,33nm,1.7s
KIEV Kiev 42.12 311 *e*P **P 06 52 42.5 -0.5**
comp=Z,33nm,1.7s
HABR Khabarovsk 42.46 52 *e*P P 06 52 55.7 +10
HABR 06 54 20.1
HABR *e*S S 06 59 00.8 -6.4
HABR *e**SS sS 06 59 17.4 +3.6
HABR *e*SS **SS 07 02 11.0 -5.3**
HABR *e* 07 02 41.1
HABR pmax pmax
comp=Z,143nm,2.6s
HABR pmax pmax
comp=E,153nm,2.6s
HABR pmax pmax
comp=N,125nm,2.6s
HABR MLR MLR
comp=Z,84nm,15.0s
VRI Vrincioaia 43.70 304 ⇓*i* P P 06 52 59.5 +3.5
TESR Tescani 43.73 305 ⇑*i* P P 06 52 59.3 +3.1
PLOR Plostina 43.76 304 ⇓*i* P P 06 53 00.0 +3.6
MLR Muntele Rosu 44.27 304 ⇑*i* P P 06 53 04.1 +3.4
BURAR Bucovina Array 44.67 307 ⇑*i* P **P 06 53 06.0 +2.2**
BUR08 Bucovina Ar. S 44.68 307 P **P 06 53 06.0 +2.1**
VOIR 44.90 303 ⇑P P 06 53 08.6 +2.9
VOIR 44.90 303 ⇑*i* P P 06 53 08.6 +2.9
FINES FINESS Array B 45.48 326 P **P 06 53 09.2 -0.8**
FINES FINESS Array B 45.48 326 P **P 06 53 09.2 -0.8**
comp=Z,4.4nm,0.8s,baz=101,slow=9.9,SNR=5.5
FINES LR LR 07 13 38.3
comp=Z,234nm,18.5s,baz=181,slow=38
MJAR Matsushiro Arr 45.99 69 P **P 06 53 12.9 -1.4**
MJAR Matsushiro Arr 45.99 69 P **P 06 53 12.9 -1.4**
comp=Z,0.8nm,0.4s,baz=269,slow=9.5,SNR=5.3
TIXI Tiksi 46.11 19 *e*P **P 06 53 14.2 -0.5**
TIXI pmax pmax
comp=Z,18nm,1.7s
DRGR 46.42 306 ⇓P P 06 53 20.8 +3.2
DRGR 46.42 306 ⇓*i* P P 06 53 20.8 +3.2
TRPA Tarpa 46.45 307 ⇑*i* P P 06 53 21.1 +3.4
GZR Gura Zlata 46.50 304 ⇓*i* P P 06 53 14.1 -4.2
KOLS Kolonicke sedl 46.58 309 *e*P **P 06 53 21.7 +2.9**
KOLS pmax pmax
comp=Z,8.0nm,1.5s
KOLS Kolonicke sedl 46.58 309 *e*P **P 06 53 21.7 +2.9**
UZH Uzhgorod 46.59 308 *e*P **P 06 53 21.0 +2.2**
CRVS Cervenica-Dubn 47.12 309 *e*P pP 06 53 29.8 +2.8
CRVS Cervenica-Dubn 47.12 309 *e*pP pP 06 53 29.8 +2.8
STHS Stebnicka Huta 47.23 309 *e*P **P 06 53 26.0 +2.1**
STHS pmax pmax
comp=Z,3.0nm,0.7s
STHS Stebnicka Huta 47.23 309 *e*P **P 06 53 26.0 +2.1**
KECS Kecovo 47.79 308 *e*P **P 06 53 31.0 +2.8**
KECS pmax pmax
comp=Z,2.0nm,0.8s
KECS Kecovo 47.79 308 *e*P **P 06 53 31.0 +2.8**
ARCES ARCESS Array B 47.98 337 P **P 06 53 28.5 -0.8**
ARCES ARCESS Array B 47.98 337 P **P 06 53 28.5 -0.8**
comp=Z,11nm,0.7s,baz=98,slow=8.7,SNR=18
ARCES LR LR 07 13 30.6
comp=Z,30nm,18.9s,baz=276,slow=36
VYHS Vyhne 48.88 308 *e*P P 06 53 40.0 +3.3
VYHS pmax pmax
comp=Z,5.0nm,1.6s
VYHS Vyhne 48.88 308 *e*P P 06 53 40.0 +3.3
VYHS *e*pP pP 06 53 42.9 +2.2
DPC Dobruska-Polom 50.34 311 *e*P **P 06 53 50.4 +2.6**

DPC pmax pmax
comp=Z,5.0nm,0.8s
DPC Dobruska-Polom 50.34 311 *e*P **P** 06 53 50.3 +2.6
DPC AMS AMS 07 17 00.0
comp=Z,1µm,18.0s
DPC Dobruska-Polom 50.34 311 *e*P **P** 06 53 50.4 +2.6
comp=Z,5.0nm,0.8s
UPC Upice 50.52 311 *e*P **P** 06 53 51.0 +1.9
UPC Upice 50.52 311 *e*P **P** 06 53 51.0 +1.9
UPC epP **pP** 06 53 53.6 +0.5
CONA Conrad Observa 50.93 308⇓*i*pP **P** 06 53 54.4 +2.1
comp=Z,7.3nm,0.8s
PRU Pruhonice 51.51 310 *e*P **P** 06 53 59.1 +2.6
PRU MLR MLR
comp=Z,200nm,15.6s
PRU Pruhonice 51.51 310 *e*P **P** 06 53 59.1 +2.6
PRU AMS AMS 07 17 50.0
comp=Z,200nm,15.6s
SOKA Soboth 51.68 306⇑*i*pP pP 06 54 00.1 -1.8
comp=Z,9.5nm,0.7s
BRG Berggiesshubel 51.78 312 *e*P **P** 06 54 00.7 +2.2
comp=Z,6.9nm,0.8s
BRG Berggiesshubel 51.78 312 *e*P **P** 06 54 00.7 +2.2
BRG pmax pmax
comp=Z,7.0nm,0.8s
GERES GERESS Array B 52.22 309 P **P** 06 54 00.3 -1.6
GERES GERESS Array B 52.22 309 P **P** 06 54 00.3 -1.6
comp=Z,0.8nm,0.6s,baz=81,slow=12,SNR=3.6
GERES LR LR 07 17 08.6
comp=Z,73nm,19.6s,baz=104,slow=37
KHC Kasperske Hory 52.26 310 *e*P **P** 06 54 04.1 +2.0
KHC Kasperske Hory 52.26 310 *e*P **P** 06 54 04.1 +2.0
KHC Kasperske Hory 52.26 310 *e*P **P** 06 54 04.7 +2.5
CLL Collm 52.32 312 *e*P **P** 06 54 05.0 +2.5
CLL MLR MLR
comp=Z,100nm,19.6s
CLL Collm 52.32 312 *e*P **P** 06 54 05.0 +2.5
CLL LmV 07 18 00.0
comp=Z,100nm,19.6s
SEY Seymchan 52.58 33 *e*P **P** 06 54 03.8 -0.4
NB2 NORSAR Subarra 52.58 325 P **P** 06 54 05.4 +1.0
comp=Z,1.9nm,0.8s,baz=88,slow=7.4
NOA NORSAR Array B 52.58 325 P **P** 06 54 04.0 -0.3
NOA NORSAR Array B 52.58 325 P **P** 06 54 04.0 -0.3
comp=Z,2.3nm,0.7s,baz=89,slow=7.3,SNR=5.3
NOA LR LR 07 17 21.4
comp=Z,123nm,18.9s,baz=85,slow=37
KMBO Kilima Mbogo 53.87 240 LR LR 07 17 03.9
comp=Z,54nm,18.8s,baz=102,slow=36
DAVA Damuels 55.02 308⇑*i*pP **P** 06 54 23.8 +1.2
comp=Z,7.6nm,0.7s
CDF Champ du Feu 56.48 310 *e*P **P** 06 54 34.5 +1.5
CDF Champ du Feu 56.48 310 *e*P **P** 06 54 34.5 +1.5
CDF Champ du Feu 56.48 310 *e*P **P** 06 54 34.5 +1.5
PGF Pioggiola 56.79 302 *e*P **P** 06 54 36.3 +1.0
comp=Z,28nm,0.9s
PGF Pioggiola 56.79 302 *e*P **P** 06 54 36.3 +1.0
PGF pmax pmax
comp=Z,28nm,0.9s
PGF Pioggiola 56.79 302 *e*P **P** 06 54 36.3 +1.0
comp=Z,28nm,0.9s
HINF Hinteralfeld 56.90 309⇑*i*P **P** 06 54 37.2 +1.3
comp=Z,15nm,0.7s
HINF Hinteralfeld 56.90 309⇑*i*P **P** 06 54 37.2 +1.3
HINF pmax pmax
comp=Z,15nm,0.7s
HINF Hinteralfeld 56.90 309⇑*i*P **P** 06 54 37.2 +1.3
comp=Z,15nm,0.7s
SENIN Lac Senin/Sage 56.96 307 *e*P **P** 06 54 38.3 +1.7
comp=Z,72nm,2.1s
HAU Haudompre 57.18 309⇑*i*P **P** 06 54 39.3 +1.4
comp=Z,15nm,0.8s
HAU *e*R
comp=Z,118nm,18.8s
HAU Haudompre 57.18 309⇑*i*P **P** 06 54 39.3 +1.4
HAU pmax pmax
comp=Z,15nm,0.8s
HAU Haudompre 57.18 309⇑*i*P **P** 06 54 39.3 +1.4
comp=Z,15nm,0.8s
PAGF Fort de Pagny 57.45 310 *e*P **P** 06 54 41.5 +1.8
PAGF Fort de Pagny 57.45 310 *e*P **P** 06 54 41.5 +1.8
SBF Sospel 57.53 304 *e*P **P** 06 54 42.0 +1.6
comp=Z,64nm,0.9s
SBF Sospel 57.53 304 *e*P **P** 06 54 42.0 +1.6
SBF pmax pmax
comp=Z,64nm,0.9s
SBF Sospel 57.53 304 *e*P **P** 06 54 42.0 +1.6
comp=Z,64nm,0.9s
LPG La Plagne 57.56 306⇑*i*P **P** 06 54 42.6 +1.7
comp=Z,34nm,0.8s
LPG La Plagne 57.56 306⇑*i*P **P** 06 54 42.6 +1.7
LPG pmax pmax
comp=Z,34nm,0.8s
LPG La Plagne 57.56 306⇑*i*P **P** 06 54 42.6 +1.7
comp=Z,34nm,0.8s
LPL La Plagne 57.56 306⇑*i*P **P** 06 54 42.6 +1.7
comp=Z,38nm,0.8s
LPL La Plagne 57.56 306⇑*i*P **P** 06 54 42.6 +1.7
LPL pmax pmax
comp=Z,38nm,0.8s
LPL La Plagne 57.56 306⇑*i*P **P** 06 54 42.6 +1.7
comp=Z,38nm,0.8s
GIVF Givet 57.65 312 *e*P **P** 06 54 43.3 +2.2
comp=Z,10nm,0.7s
GIVF Givet 57.65 312 *e*P **P** 06 54 43.3 +2.2
GIVF pmax pmax
comp=Z,10.0nm,0.6s
GIVF Givet 57.65 312 *e*P **P** 06 54 43.3 +2.2
comp=Z,10nm,0.6s
MBDF Montbardon 57.75 305 *e*P **P** 06 54 42.9 +0.8
comp=Z,22nm,1.0s
MBDF Montbardon 57.75 305 *e*P **P** 06 54 42.9 +0.8
MBDF pmax pmax
comp=Z,22nm,1.0s
MBDF Montbardon 57.75 305 *e*P **P** 06 54 42.9 +0.8
comp=Z,22nm,1.0s
MEZF Maizieres J'vi 57.90 310 *e*P **P** 06 54 44.6 +1.7
MEZF Maizieres J'vi 57.90 310 *e*P **P** 06 54 44.6 +1.7
BILL Bilibino 57.97 26 *e*P **P** 06 54 43.2 +0.1
BILL pmax pmax
comp=Z,3.0nm,0.8s
FRF La Foret Royal 58.16 304 *e*P **P** 06 54 46.1 +1.3
comp=Z,21nm,0.9s
FRF La Foret Royal 58.16 304 *e*P **P** 06 54 46.1 +1.3
FRF pmax pmax
comp=Z,21nm,0.9s
FRF La Foret Royal 58.16 304 *e*P **P** 06 54 46.1 +1.3
comp=Z,21nm,0.9s
ORIF Oris-en-Rattie 58.31 306 *e*P **P** 06 54 46.5 +0.6
ORIF *e*R
comp=Z,88nm,19.2s
ORIF Oris-en-Rattie 58.31 306 *e*P **P** 06 54 46.5 +0.6
ORIF Oris-en-Rattie 58.31 306 *e*P **P** 06 54 46.5 +0.6
LMR La Mourre 58.33 304 *e*P **P** 06 54 47.2 +1.3
LMR La Mourre 58.33 304 *e*P **P** 06 54 47.2 +1.3
LMR La Mourre 58.33 304 *e*P **P** 06 54 47.2 +1.3
KEST Kesra 58.64 295 P **P** 06 54 46.9 -1.5
KEST Kesra 58.64 295 P **P** 06 54 46.9 -1.5
comp=Z,4.1nm,1.2s,baz=258,slow=3.3,SNR=5.8
LOR Lormes 59.00 309 *e*P **P** 06 54 51.4 +0.8
LOR *e*R
comp=Z,103nm,18.2s
LOR Lormes 59.00 309 *e*P **P** 06 54 51.4 +0.8
VIVF Saint-Julien-l 59.15 306 *e*P **P** 06 54 53.1 +1.4
comp=Z,10nm,0.7s
VIVF Saint-Julien-l 59.15 306 *e*P **P** 06 54 53.1 +1.4
VIVF pmax pmax
comp=Z,11nm,0.7s
VIVF Saint-Julien-l 59.15 306 *e*P **P** 06 54 53.1 +1.4
comp=Z,10nm,0.7s
SMF Signal de Mont 59.19 308⇑*i*P **P** 06 54 53.0 +1.1
comp=Z,22nm,0.9s
SMF Signal de Mont 59.19 308⇑*i*P **P** 06 54 53.0 +1.1
SMF pmax pmax
comp=Z,22nm,0.9s
SMF Signal de Mont 59.19 308⇑*i*P **P** 06 54 53.0 +1.1
comp=Z,22nm,0.9s
SSF Saint Saulge 59.29 309⇑*i*P **P** 06 54 53.7 +1.1
comp=Z,14nm,0.8s
SSF Saint Saulge 59.29 309⇑*i*P **P** 06 54 53.7 +1.1
SSF pmax pmax
comp=Z,14nm,0.8s
SSF Saint Saulge 59.29 309⇑*i*P **P** 06 54 53.7 +1.1
comp=Z,14nm,0.8s
AVF Avril sur Loir 59.47 309 *e*P **P** 06 54 54.9 +1.1
comp=Z,16nm,0.9s
AVF Avril sur Loir 59.47 309 *e*P **P** 06 54 54.9 +1.1
AVF pmax pmax
comp=Z,16nm,0.9s
AVF Avril sur Loir 59.47 309 *e*P **P** 06 54 54.9 +1.1
comp=Z,16nm,0.9s
LASF Ste Croix 59.94 305 *e*P **P** 06 54 58.8 +1.6
comp=Z,21nm,0.9s
LASF Ste Croix 59.94 305 *e*P **P** 06 54 58.8 +1.6
comp=Z,21nm,0.9s
TCF Toulx Ste Croi 60.37 308⇑*i*P **P** 06 55 01.6 +1.5
comp=Z,22nm,0.9s
TCF Toulx Ste Croi 60.37 308⇑*i*P **P** 06 55 01.6 +1.5
TCF pmax pmax
comp=Z,22nm,0.9s
TCF Toulx Ste Croi 60.37 308⇑*i*P **P** 06 55 01.6 +1.5
comp=Z,22nm,0.9s
CAF Calviac 60.89 307 *e*P **P** 06 55 05.2 +1.5
comp=Z,12nm,0.9s
CAF Calviac 60.89 307 *e*P **P** 06 55 05.2 +1.5
CAF pmax pmax
comp=Z,12nm,0.9s
CAF Calviac 60.89 307 *e*P **P** 06 55 05.2 +1.5
comp=Z,12nm,0.9s
RJF Les Rejaudoux 61.14 307 *e*P **P** 06 55 07.2 +1.9
comp=Z,8.9nm,0.7s
RJF *e*R
comp=Z,53nm,18.0s
RJF Les Rejaudoux 61.14 307 *e*P **P** 06 55 07.2 +1.9
RJF pmax pmax
comp=Z,9.0nm,0.7s
RJF Les Rejaudoux 61.14 307 *e*P **P** 06 55 07.2 +1.9
comp=Z,8.9nm,0.7s
LDF La Druitiere 61.17 311 *e*P **P** 06 55 06.6 +1.1
comp=Z,24nm,1.0s
LDF La Druitiere 61.17 311 *e*P **P** 06 55 06.6 +1.1
LDF pmax pmax
comp=Z,24nm,1.0s
LDF La Druitiere 61.17 311 *e*P **P** 06 55 06.6 +1.1
comp=Z,24nm,1.0s
MTLF Montolieu 61.30 305 *e*P **P** 06 55 07.9 +1.5
comp=Z,10nm,0.9s
MTLF Montolieu 61.30 305 *e*P **P** 06 55 07.9 +1.5
MTLF pmax pmax
comp=Z,11nm,0.9s
MTLF Montolieu 61.30 305 *e*P **P** 06 55 07.9 +1.5
comp=Z,10nm,0.9s
FLN La Foliniere 61.35 312 *e*P **P** 06 55 07.7 +1.1
FLN *e*R
comp=Z,79nm,20.2s
FLN La Foliniere 61.35 312 *e*P **P** 06 55 07.7 +1.1
FLN La Foliniere 61.35 312 *e*P **P** 06 55 07.7 +1.1
LFF La Frestale 61.78 307 *e*P **P** 06 55 11.4 +1.8
LFF La Frestale 61.78 307 *e*P **P** 06 55 11.4 +1.8
LFF La Frestale 61.78 307 *e*P **P** 06 55 11.4 +1.8
MFF Saint Martin d 61.82 309 *e*P **P** 06 55 10.8 +0.9
comp=Z,9.1nm,0.9s
MFF Saint Martin d 61.82 309 *e*P **P** 06 55 10.8 +0.9
MFF pmax pmax
comp=Z,9.0nm,0.9s
MFF Saint Martin d 61.82 309 *e*P **P** 06 55 10.8 +0.9
comp=Z,9.1nm,0.9s
SGMF Saint Gilles 62.82 312 *e*P **P** 06 55 17.8 +1.3
SGMF Saint Gilles 62.82 312 *e*P **P** 06 55 17.8 +1.3
SGMF Saint Gilles 62.82 312 *e*P **P** 06 55 17.8 +1.3
ROSF Rostrenen 63.24 312 *e*P **P** 06 55 19.8 +0.5
comp=Z,21nm,1.0s
ROSF Rostrenen 63.24 312 *e*P **P** 06 55 19.8 +0.5
ROSF pmax pmax
comp=Z,21nm,1.0s
ROSF Rostrenen 63.24 312 *e*P **P** 06 55 19.8 +0.5
comp=Z,21nm,1.0s
ETSF Etsaut 63.36 305⇑*i*P **P** 06 55 21.9 +1.6
comp=Z,17nm,0.9s
ETSF Etsaut 63.36 305⇑*i*P **P** 06 55 21.9 +1.6
ETSF pmax pmax
comp=Z,17nm,0.9s
ETSF Etsaut 63.36 305⇑*i*P **P** 06 55 21.9 +1.6
comp=Z,17nm,0.9s
FX1 Attu Island--F 65.36 42 P **P** 06 55 32.3 -0.9
FX1 Attu Island--F 65.36 42 P **P** 06 55 32.3 -0.9
comp=Z,2.4nm,0.5s,baz=73,slow=15,SNR=3.8
FX1 LR LR 07 25 40.9
comp=Z,38nm,19.5s,baz=251,slow=38
ESDC Sonseca Array 66.97 303 P **P** 06 55 43.3 -0.5
ESDC Sonseca Array 66.97 303 P **P** 06 55 43.3 -0.5
comp=Z,2.7nm,0.7s,baz=56,slow=6.8,SNR=13
SUMG Summit 67.25 344 *e*P **P** 06 55 44.2 -1.2
SUMG pmax pmax
comp=Z,10.0nm,1.1s
SUMG Summit 67.25 344 *e*P **P** 06 55 44.2 -1.2
comp=Z,10nm,1.1s
MVO Mcorvo 68.47 306 *e*P **P** 06 55 55.1 +1.8
comp=Z,9.7nm,2.0s
POLO Lamas de Olo 68.90 306 *e*P **P** 06 55 57.6 +1.6
comp=Z,5.1nm,1.7s
PGAV Gavieira, Arco 68.97 307 *e*P **P** 06 55 57.5 +1.1
comp=Z,12nm,1.1s
MTE Manteigas 69.15 305 *e*P **P** 06 55 59.9 +2.4
comp=Z,14nm,1.8s
PVIS Viseu 69.26 306 *e*P **P** 06 56 00.3 +2.2
comp=Z,12nm,1.7s
PCBR Castelo Branco 69.35 305 *e*P **P** 06 56 00.8 +2.2
PBAR Barrancos 69.77 303 *e*P **P** 06 56 03.1 +1.8
comp=Z,18nm,1.4s
PMTG Montargil 70.21 304 *e*P P 06 56 07.2 +3.2
comp=Z,10nm,2.0s
PBDV Barranco-do-Ve 70.82 302 *e*P **P** 06 56 10.2 +2.4
comp=Z,27nm,1.4s
WRA Warramunga Arr 72.62 128 P **P** 06 56 17.4 -1.3
WRA Warramunga Arr 72.62 128 P **P** 06 56 17.4 -1.3
comp=Z,6.1nm,0.7s,baz=323,slow=6.3,SNR=34
WRAB Tennant Creek 72.62 128 *e*P **P** 06 56 17.5 -1.2
WRAB pmax pmax
comp=Z,11nm,1.1s
WRAB Tennant Creek 72.62 128 *e*P **P** 06 56 17.5 -1.2
comp=Z,11nm,1.1s
NWAO Narrogin (SRO) 73.44 149 P **P** 06 56 20.9 -2.3
NWAO Narrogin (SRO) 73.44 149 P **P** 06 56 20.9 -2.3
comp=Z,16nm,1.1s,baz=300,slow=8.1,SNR=3.0
TORD Torodi Ar. Bea 74.74 276 P **P** 06 56 29.4 -1.9
TORD Torodi Ar. Bea 74.74 276 P **P** 06 56 29.4 -1.9
comp=Z,1.1nm,0.7s,baz=50,slow=5.0,SNR=8.9
TORD LR LR 07 33 33.7
comp=Z,104nm,18.4s,baz=180,slow=39
ASAR Alice Springs 75.01 131 P **P** 06 56 31.4 -1.2
ASAR Alice Springs 75.01 131 P **P** 06 56 31.4 -1.2
comp=Z,3.4nm,0.6s,baz=316,slow=5.9,SNR=33
COLA College 75.22 20 *e*P **P** 06 56 32.7 -0.5
COLA pmax pmax
comp=Z,7.0nm,0.7s
COLA College 75.22 20 *e*P **P** 06 56 32.7 -0.5
comp=Z,7.3nm,0.7s
ILAR Eielson Array 75.57 19 P **P** 06 56 33.5 -1.8
ILAR Eielson Array 75.57 19 P **P** 06 56 33.5 -1.8
comp=Z,3.1nm,0.7s,baz=320,slow=5.3,SNR=30
EGAK Eagle 77.09 17 *e*P **P** 06 56 43.0 -0.9
comp=Z,4.6nm,1.1s
PMR Palmer 77.29 22 *e*P **P** 06 56 43.6 -1.5
PMR pmax pmax
comp=Z,2.0nm,0.6s
PMR Palmer 77.29 22 *e*P **P** 06 56 43.5 -1.5
comp=Z,2.2nm,0.6s
FRB Frobisher Bay 80.92 347 P **P** 06 57 02.7 -2.1
FRB Frobisher Bay 80.92 347 P **P** 06 57 02.7 -2.1
comp=Z,2.8nm,0.7s,baz=39,slow=2.0,SNR=4.3
CTA Charters Tower 80.98 121 P **P** 06 57 04.7 -1.2
CTA Charters Tower 80.98 121 P **P** 06 57 04.7 -1.2
comp=Z,1.4nm,0.5s,baz=294,slow=7.5,SNR=3.6
BOSA Boshof 81.30 228 P **P** 06 57 05.5 -2.0
BOSA Boshof 81.30 228 P **P** 06 57 05.5 -2.0
comp=Z,2.4nm,0.7s,baz=2.6,slow=4.1,SNR=7.1
BOSA LR LR 07 30 59.7
comp=Z,52nm,19.5s,baz=164,slow=34
SKAG Skagway 83.05 18 *e*P **P** 06 57 16.7 +0.5
comp=Z,4.9nm,0.8s
DBIC Dimbokro 83.61 274 LR LR 07 38 15.0
comp=Z,111nm,20.8s,baz=292,slow=38
YKA Yellowknife Ar 84.10 8 P **P** 06 57 19.6 -1.9
YKA Yellowknife Ar 84.10 8 P **P** 06 57 19.6 -1.9
comp=Z,2.7nm,0.7s,baz=342,slow=5.1,SNR=24
SCHQ Schefferville 88.61 342 P **P** 06 57 44.4 +0.5
SCHQ Schefferville 88.61 342 P **P** 06 57 44.4 +0.5
comp=Z,2.9nm,0.8s,baz=69,slow=7.3,SNR=4.1
TXAR Lajitas Array 117.97 5 PKP **PKPdf** 07 03 36.8 -1.4
TXAR Lajitas Array 117.97 5 PKP **PKPdf** 07 03 36.8 -1.4
comp=Z,0.2nm,0.6s,baz=31,slow=3.7,SNR=3.1
SNAA Sanae 119.13 201 *e*PKP **PKPdf** 07 03 37.3 -1.7
CPUP Villa Florida 144.02 269 PKP **PKPab** 07 04 22.3 -2.0
CPUP Villa Florida 144.02 269 PKP **PKPab** 07 04 22.3 -2.0
comp=Z,2.0nm,0.8s,baz=63,slow=6.8,SNR=6.0
LPAZ La Paz 148.22 294 PKPbc **PKPdf** 07 04 36.0 +0.9
LPAZ La Paz 148.22 294 PKPbc **PKPdf** 07 04 36.0 +0.9
comp=Z,1.5nm,0.8s,baz=20,slow=1.9,SNR=5.2
CFAA Coronel Fontan 154.64 265 PKPab **PKPab** 07 05 03.3 -3.7
CFAA Coronel Fontan 154.64 265 PKPab **PKPab** 07 05 03.3 -3.7
comp=Z,0.3nm,0.6s,baz=207,slow=2.3,SNR=12

IDC 04 06:50:05.6±1.2, 8°.17S×122°.43E, h0km, mb3.7/3, mb1 3.7/7, mb1mx3.6/22, mbtmp3.6/7, ML3.4/4, Error ellipse: s-maj=106.1km s-min=20.5km az=60.0, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**4.11**	**320**	Pn		Pn	Pn	06 51 10.9	+1.2
	1.0nm,0.3s,baz=159,slow=14,SNR=4.4								
KAPI				Sn		Sn	Sn	06 51 56.4	-2.1
	1.5nm,0.3s,baz=78,slow=23,SNR=6.0								
FITZ	**Fitzroy Crossi**	**10.36**	**163**	Pn		Pn	Pn	06 52 35.5	0.0
	0.2nm,0.3s,baz=357,slow=7.2,SNR=6.8								
FITZ				Sn		Sn	Sn	06 54 24.1	-8.3
	0.4nm,0.3s,baz=114,slow=12,SNR=4.5								
WRA	**Warramunga Arr**	**16.43**	**137**	Pn		Pn	Pn	06 53 56.4	-1.5
	0.2nm,0.3s,baz=310,slow=12,SNR=15								
WRA				Sn		Sn	Sn	06 56 54.0	-7.0
	0.1nm,0.3s,baz=311,slow=23,SNR=4.0								
ASAR	**Alice Springs**	**18.93**	**146**	P		Pn	Pn	06 54 29.5	+0.6
	0.2nm,0.3s,baz=325,slow=13,SNR=22								
ASAR				S		Sn	Sn	06 57 50.8	-11
	0.0nm,0.3s,baz=313,slow=25,SNR=3.6								
SONM	**Songino Array**	**57.54**	**347**	P		P	P	06 59 58.0	+1.0
	0.2nm,0.3s,baz=161,slow=7.3,SNR=3.8								
MKAR	**Makanchi Array**	**65.32**	**331**	P		P	P	07 00 49.3	-0.3
	0.6nm,0.7s,baz=135,slow=7.8,SNR=7.0								
ZALV	**Zalesovo Beam**	**69.53**	**337**	P		P	P	07 01 15.1	-0.9
	0.4nm,0.3s,baz=123,slow=5.3,SNR=2.6								

WEL 04 07:25:11.3±0.6, 36°.50S×177°.69E, h12km, ML4.0/4, Error ellipse: s-maj=4.2km s-min=4.0km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.18**	**155**	AML		AML	AML	07 25 46.2	
MXZ				AML		AML	AML	07 25 46.2	
MXZ				AML		AML	AML	07 26 23.1	
MXZ				AML		AML	AML	07 26 23.1	
PUZ	**Puketiti**	**1.64**	**164**	PN		Pn	Pn	07 25 39.5	-0.5
PUZ				*e*SN		Sn	Sn	07 25 59.3	-1.8
URZ	**Urewera**	**1.82**	**194**	*e*P*		Pn	Pn	07 25 40.7	-1.7
URZ				S*		Sn	Sn	07 26 02.1	-3.3
URZ				AML		AML	AML	07 26 13.2	
MWZ	**Matawai**	**1.84**	**184**	P*		Pn	Pn	07 25 40.7	-2.1
MWZ				S*		Sn	Sn	07 26 03.6	-2.4
MWZ				AML		AML	AML	07 26 17.9	
MKAZ	**Moumakai**	**2.12**	**252**	PN		Pn	Pn	07 25 45.2	-1.3
TOZ	**Tahuroa Road**	**2.14**	**234**	P*		Pn	Pn	07 25 45.7	-1.1
BKZ	**Black Stump Fm**	**2.83**	**199**	P*		Pn	Pn	07 25 55.7	-0.7
HIZ	**Hauiti**	**3.02**	**227**	PN		Pn	Pn	07 25 58.6	-0.4
FWVZ	**Far West T-bar**	**3.23**	**211**	P*		Pn	Pn	07 26 04.8	+2.6
BFZ	**Birch Farm**	**4.33**	**195**	PN		Pn	Pn	07 26 14.8	-2.1

*IDC **04** 07:36:06.9±1.9, 31°.71S×68°.45W, h0km, mb3.9/1, mb1 3.7/3, mb1mx3.5/17, mbtmp3.5/3, ML3.9/2, Error ellipse: s-maj=74.2km s-min=39.2km az=156.0*
*ISCJB **04** 07:36:11.2±2.6, 30°.86S±0°.06×68°.31W±0°.05, h27km±23km, mb3.7/1, Error ellipse: s-maj=10.0km s-min=6.6km az=155.6*
*GUC **04** 07:36:13.0±0.7, 30°.83S×68°.67W, h4km, MD4.1, ML3.7*
ISC 04 07:36:14.3±1.8, 30°.86S±0°.06×68°.41W±0°.07, h38km±3km, n12, σ1°62/17, 3D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TLL	**Tololo Astrono**	**2.17**	**288**	⇓*i*P		**Pn**		**07 36 47.4**	**-0.8**
TLL				*i* S		**Sn**		**07 37 13.5**	**-0.5**
TLL				AML		AML		07 37 22.7	
	comp=E,388nm,0.7s								
CMCH	**Combarbala**	**2.24**	**261**	*e*P		**Pn**		**07 36 47.0**	**-2.0**
CMCH				*i* S		**Sn**		**07 37 14.0**	**-1.5**
CMCH				AML		AML		07 37 18.7	
	comp=N,2µm,0.6s								
LCO	**Las Campanas**	**2.71**	**312**	*e*P		**Pn**		**07 36 56.4**	**+0.9**
LCO				*e*S		**Sn**		**07 37 30.1**	**+2.9**
LCO				AML		AML		07 37 33.0	
	comp=E,465nm,0.4s								
CHNG	**Los Chungos**	**2.83**	**248**	⇓*i*P		**Pn**		**07 36 57.1**	**+0.2**
CHNG				*i* S		**Sn**		**07 37 31.2**	**+1.4**
FCH	**Farellones**	**2.93**	**212**	AML		AML		07 37 36.8	
	comp=E,159nm,0.2s								
PEL	**Peldehue**	**2.99**	**220**	*i* P		**Pn**		**07 36 59.2**	**0.0**
PEL				*i* S		**Sn**		**07 37 37.1**	**+3.3**
PEL				AML		AML		07 37 43.4	
	comp=N,320nm,0.5s								
ROCH	**El Roble**	**3.05**	**226**	⇓*i*P		**Pn**		**07 36 59.3**	**-0.9**
ROCH				*e*S		**Sn**		**07 37 36.7**	**+1.1**
ROCH				AML		AML		07 37 43.5	
	comp=N,309nm,0.6s								
CPUP	**Villa Florida**	**10.73**	**68**	Pn		**Pn**		**07 38 45.7**	**+0.3**
	comp=N,0.3nm,0.3s,baz=254,slow=18,SNR=3.1								
CPUP				Sn		**Sn**		**07 40 42.9**	**-1.4**
	comp=N,0.3nm,0.3s,baz=239,slow=18,SNR=2.4								
CPUP				Lg		Lg		07 42 01.4	
	comp=N,0.4nm,0.3s,baz=140,slow=20,SNR=2.9								
LPAZ	**La Paz**	**14.51**	**1**	Pn		P		07 39 45.5	+1.8
	comp=N,0.1nm,0.3s,baz=185,slow=7.5,SNR=5.1								
TORD	**Torodi Ar. Bea**	**80.23**	**68**	P		**P**		**07 48 21.8**	**+0.4**
	comp=N,0.6nm,0.6s,baz=225,slow=5.4,SNR=6.0								
ZALV	**Zalesovo Beam**	**149.94**	**32**	PKPbc		**PKPbc**		**07 56 00.1**	**+0.1**
	comp=N,1.2nm,0.4s,baz=291,slow=4.9,SNR=3.9								
MKAR	**Makanchi Array**	**152.39**	**47**	PKPbc		**PKPbc**		**07 56 06.0**	**-0.1**
	comp=N,0.3nm,0.7s,baz=283,slow=1.6,SNR=4.8								

*ISCJB **04** 07:38:37.0±1.1, 49°.6N±0°.2×91°.9E±0°.1, h10km, Error ellipse: s-maj=26.0km s-min=12.6km az=7.4*
*IDC **04** 07:38:38.4±1.8, 49°.56N×91°.89E, h0km, mb1 2.7/4, mb1mx2.7/31, mbtmp2.7/4, ML2.4/4, Error ellipse: s-maj=27.4km s-min=17.6km az=6.0*
*NNC **04** 07:39:29.1±14.0, 49°.08N×89°.63E, h0km, mb3.1, mpv2.7, Error ellipse: s-maj=136.6km s-min=87.3km az=33.0*
ISC 04 07:38:39.3±1.3, 49°.67N±0°.09×91°.82E±0°.09, h10km, n7, σ1°50/7, 4C, Mongolia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**6.10**	**317**	Pn		**Pn**		**07 40 10.7**	**+1.3**
	0.2nm,0.3s,baz=135,slow=18,SNR=2.2								
ZALV				Pg		**Pg**		**07 40 34.7**	**-1.3**
	0.2nm,0.3s,baz=133,slow=15,SNR=2.4								
ZALV				Lg		Lg		07 41 55.7	
	0.4nm,0.3s,baz=126,slow=23,SNR=7.0								
MK31	**Makanchi Array**	**6.98**	**249**	⇑Pn		**Pg**		**07 40 51.6**	**-1.3**
	0.5nm,0.5s,baz=69,slow=11,SNR=3.7								
MK31				⇑Lg		Lg		07 42 23.8	
	3.8nm,0.7s,baz=67,slow=31,SNR=6.9								
MKAR	**Makanchi Array**	**6.98**	**249**	Pn		**Pn**		**07 40 22.7**	**+1.1**
	0.0nm,0.3s,baz=54,slow=10,SNR=2.3								
MKAR				Pg		**Pg**		**07 40 52.0**	**-0.9**
	0.2nm,0.3s,baz=74,slow=17,SNR=8.5								
MKAR				Lg		Lg		07 42 21.8	
	0.6nm,0.3s,baz=58,slow=32,SNR=7.4								
KURK	**Kurchatov**	**8.54**	**282**	⇑Lg		Lg		07 43 21.0	
	3.2nm,0.7s								
KURBB	**Kurchatov Arra**	**8.59**	**281**	Pn		**Pn**		**07 40 45.0**	**+1.4**
	0.0nm,0.3s,baz=94,slow=14,SNR=4.0								
KURBB				Lg		Lg		07 43 14.9	
	0.1nm,0.3s,baz=97,slow=31,SNR=5.7								
KUR17	**Kurchatov Arra**	**8.63**	**282**	⇑Lg		Lg		07 43 17.9	
	1.9nm,0.9s								
SONM	**Songino Array**	**9.80**	**95**	Pn		**Pn**		**07 41 00.1**	**-0.2**
	0.1nm,0.3s,baz=315,slow=12,SNR=2.5								
SONM				Lg		Lg		07 43 48.9	
	0.2nm,0.3s,baz=286,slow=29,SNR=5.9								

*IDC **04** 07:51:42.1±1.4, 38°.28N×20°.44E, h0km, mb3.8/6,*

mb1 3.8/9, mb1mx3.6/31, mbtmp3.7/9, ML3.4/3, Error ellipse: s-maj=23.9km s-min=22.9km az=135.0
ISCJB 04 07:51:43.4±0.6, 38°.15N±0°.02×20°.35E±0°.03, h7km±3km, mb3.7/6, Error ellipse: s-maj=4.8km s-min=2.7km az=44.9
ATH 04 07:51:44.3, 38°.21N×20°.44E, h15km±1km, MD3.4/31, ML3.7
CSEM 04 07:51:44.1±0.3, 38°.16N×20°.41E, h2km, ML4.0, Error ellipse: s-maj=6.2km s-min=3.0km az=41.0
THE 04 07:51:46.6, 38°.18N×20°.51E, h10km±31km, ML3.7/3, Error ellipse: s-maj=31.6km s-min=1.1km az=0.0
ISC 04 07:51:44.2±0.8, 38°.16N±0°.02×20°.42E±0°.03, h17km±5km, n147, σ1.s32/192, mb3.9/6, 2C-3D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.14	81	P	Pb	07 51 48.6	+0.3
VLS				S	Sg	07 51 51.0	+0.1
VLS	Valsamata	0.14	81	⇓iPB	Pb	07 51 48.6	+0.3
VLS				eSB	Sg	07 51 51.0	+0.1
VLS	Valsamata	0.14	81	P	Pg	07 51 48.2	0.0
VLS				S	Sg	07 51 51.0	+0.1
KFL	Anninata	0.29	99	P	Pg	07 51 50.8	+0.2
KFL				S	Sg	07 51 54.8	-0.2
KFL	Anninata	0.29	99	P	Pg	07 51 50.8	+0.2
KFL				S	Sg	07 51 53.9	-1.1
LKD2	Lefkada island	0.66	16	P	Pg	07 51 56.6	-0.6
LKD2				S	Sb	07 52 06.7	+0.6
LKD2	Lefkada island	0.66	16	ePN	Pg	07 51 56.6	-0.6
LKD2				eSN	Sg	07 52 04.2	-1.8
LKD2	Lefkada island	0.66	16	P	Pg	07 51 56.6	-0.6
LKD2				S	Sb	07 52 06.7	+0.6
RLS	Riolos of Patr	0.83	96	P	Pb	07 51 59.6	-0.5
RLS				S	Sg	07 52 11.5	+0.1
RLS	Riolos of Patr	0.83	96	ePB	Pb	07 51 59.7	-0.4
RLS	Riolos of Patr	0.83	96	P	Pb	07 51 59.6	-0.5
RLS				S	Sb	07 52 10.9	-0.1
UPR	University Cam	1.08	83	P	Pb	07 52 04.4	0.0
PSA1	Psathopyrgos	1.17	81	ePN	Pn	07 52 05.5	-0.1
PSA1				eSN	Sg	07 52 22.0	0.0
AMT	Artemida-Makis	1.20	121	ePN	Pb	07 52 06.9	+0.5
AMT				eSN	Sg	07 52 24.4	+1.5
AMT	Artemida-Makis	1.20	121	P	Pb	07 52 06.9	+0.5
AMT				S	Sg	07 52 23.2	+0.3
EFP	Efpalio	1.20	77	ePB	Pn	07 52 05.7	-0.4
EFP				eSN	Sg	07 52 23.7	+0.6
EFP	Efpalio	1.20	77	P	Pn	07 52 05.7	-0.4
EFP				S	Sg	07 52 22.8	-0.3
LAKA	Lakka	1.23	86	P	Pn	07 52 06.4	-0.2
LAKA				S	Sg	07 52 24.1	0.0
LAKA	Lakka	1.23	86	ePN	Pn	07 52 06.6	0.0
LAKA				eSN	Sg	07 52 24.7	+0.6
LAKA	Lakka	1.23	86	P	Pn	07 52 06.4	-0.2
LAKA				S	Sg	07 52 24.1	0.0
EVR	Evrytania	1.33	55	P	Pb	07 52 09.4	+0.7
EVR				S	Sg	07 52 28.9	+1.7
EVR	Evrytania	1.33	55	ePN	Pn	07 52 08.6	+0.6
EVR	Evrytania	1.33	55	P	Pb	07 52 09.4	+0.7
EVR				S	Sg	07 52 27.4	+0.2
KLV	Kalavryta, Ach	1.37	94	ePB	Pn	07 52 08.6	+0.1
KALE	Kalithea	1.38	80	ePB	Pn	07 52 08.5	-0.1
KALE				eSN	Sg	07 52 28.9	+0.3
KALE	Kalithea	1.38	80	P	Pn	07 52 08.4	-0.1
KALE				S	Sg	07 52 28.3	-0.3
IGT	Igoumenitsa	1.38	357	P	Pg	07 52 11.1	+0.4
IGT				S	Sg	07 52 29.9	+1.2
IGT	Igoumenitsa	1.38	357	P	Pg	07 52 11.1	+0.4
IGT				S	Sg	07 52 29.9	+1.2
GUR	Goura	1.54	98	P	Pn	07 52 11.5	+0.7
GUR				S	Sg	07 52 33.8	+0.1
GUR	Goura	1.54	98	ePB	Pn	07 52 11.6	+0.7
GUR				eSN	Sg	07 52 34.4	+0.7
GUR	Goura	1.54	98	P	Pn	07 52 11.5	+0.7
GUR				S	Sg	07 52 33.2	-0.5
JAN	Janina	1.54	13	P	Pg	07 52 14.0	+0.2
JAN				S	Sg	07 52 34.8	+1.0
JAN	Janina	1.54	13	ePN	Pb	07 52 13.0	+0.8
JAN				eSN	Sb	07 52 31.9	+0.6
JAN	Janina	1.54	13	P	Pb	07 52 12.9	+0.8
JAN				S	Sg	07 52 34.8	+1.0
ITM	Ithomi	1.54	129	P	Pb	07 52 12.5	+0.2
ITM	Ithomi	1.54	129	ePN	Pb	07 52 12.8	+0.5
ITM				eSN	Sg	07 52 34.2	+0.2
ITM	Ithomi	1.54	129	P	Pb	07 52 12.7	+0.5
ITM				S	Sg	07 52 33.8	-0.2
MAKR	Makrakomi, Fth	1.59	57	P	Pb	07 52 13.2	+0.1
MAKR	Makrakomi, Fth	1.59	57	P	Pb	07 52 13.6	+0.5
MAKR				S	Sg	07 52 36.4	+0.8
KEK	Kerkira	1.63	343	P	Pb	07 52 13.6	-0.1
KEK				S	Sg	07 52 35.8	-0.9
KEK	Kerkira	1.63	343	ePN	Pb	07 52 13.7	0.0
KEK	Kerkira	1.63	343	P	Pb	07 52 13.6	-0.1
KEK				S	Sg	07 52 35.8	-0.9
PYL	PYLOS	1.64	140	P	Pb	07 52 14.1	+0.2
PYL				S	Sg	07 52 36.9	-0.2
PYL	PYLOS	1.64	140	ePB	Pb	07 52 14.1	+0.2
PYL	PYLOS	1.64	140	P	Pb	07 52 14.1	+0.2
PYL				S	Sg	07 52 36.9	-0.2
DSF	Desfina	1.68	81	P	Pn	07 52 13.1	+0.3
DSF	Desfina	1.68	81	P	Pn	07 52 13.3	+0.5
AGG	Agios Georgios	1.73	59	P	Pb	07 52 16.1	+0.6
AGG				S	Sb	07 52 38.2	+1.3
AGG	Agios Georgios	1.73	59	ePN	Pb	07 52 16.0	+0.6
AGG	Agios Georgios	1.73	59	P	Pb	07 52 16.1	+0.6
AGG				S	Sb	07 52 38.2	+1.3
VLX	Vlachokerasia	1.74	116	ePN	Pg	07 52 17.3	-0.3
SRN	Sarande	1.75	349	P	Pb	07 52 15.4	-0.4
SRN	Sarande	1.75	349	P	Pb	07 52 15.4	-0.4
THAL	Thalero	1.77	93	P	Pb	07 52 16.7	+0.5
THAL	Thalero	1.77	93	P	Pb	07 52 16.7	+0.5
AXAR	Agios Charalam	1.86	70	P	Pb	07 52 18.3	+0.6
AXAR	Agios Charalam	1.86	70	P	Pb	07 52 18.3	+0.6
THL	Klokotos Trika	1.88	41	P	Pb	07 52 17.8	-0.2
THL	Klokotos Trika	1.88	41	ePN	Pb	07 52 17.9	-0.1
THL	Klokotos Trika	1.88	41	P	Pb	07 52 17.8	-0.2
LTK	Loutraki	2.02	93	P	Pb	07 52 19.4	-0.9
LTK	Loutraki	2.02	93	ePN	Pb	07 52 19.5	-0.9
LTK	Loutraki	2.02	93	P	Pb	07 52 19.4	-0.9
DYR	Agios Nikonas	2.06	132	ePN	Pb	07 52 22.6	+1.5
LKR	Lokris	2.09	76	P	Pn	07 52 20.1	+1.8
LKR				S	Sb	07 52 45.8	-1.3
LKR	Lokris	2.09	76	ePN	Pb	07 52 20.3	-1.2
LKR	Lokris	2.09	76	P	Pn	07 52 20.1	+1.8
LKR				S	Sb	07 52 45.8	-1.3
ATAL	Atalanti	2.11	75	P	Pb	07 52 20.8	-1.2
ATAL	Atalanti	2.11	75	P	Pb	07 52 20.8	-1.2
SMIA	Simia	2.31	71	P	Pn	07 52 23.5	+2.2
SMIA	Simia	2.31	71	P	Pn	07 52 23.5	+2.2
NEST	Nestorio	2.31	12	P	Pb	07 52 24.4	-1.0
NEST				S	Sn	07 52 51.0	+1.5
NEST	Nestorio	2.31	12	P	Pb	07 52 24.4	-1.0
NEST				S	Sn	07 52 51.0	+1.5
DIDY	Didyma	2.31	106	P	Pb	07 52 24.1	-1.4
DIDY	Didyma	2.31	106	P	Pb	07 52 24.1	-1.4
DID	Didima	2.32	105	P	Pb	07 52 24.2	-1.4
DID	Didima	2.32	105	ePB	Pn	07 52 23.7	+2.1
DID	Didima	2.32	105	P	Pb	07 52 24.2	-1.4
KZN	Kozani	2.39	26	P	Pn	07 52 24.8	+2.2
KZN	Kozani	2.39	26	ePN	Pb	07 52 25.4	-1.4
KZN	Kozani	2.39	26	P	Pn	07 52 24.8	+2.2
NAIG	Nisos Aigina	2.46	98	ePB	Pn	07 52 25.9	+2.5
VLI	Veliai	2.46	125	ePN	Pb	07 52 28.3	+0.3
NEO	Neokhori	2.48	61	P	Pn	07 52 25.6	+1.9
NEO	Neokhori	2.48	61	ePB	Pn	07 52 25.7	+2.0
NEO	Neokhori	2.48	61	P	Pn	07 52 25.6	+1.9
XOR	Xorichti	2.48	60	P	Pn	07 52 25.7	+1.9
XOR	Xorichti	2.48	60	P	Pn	07 52 25.7	+1.9
MRKA	Markates	2.55	77	P	Pn	07 52 26.3	+1.6
MRKA	Markates	2.55	77	P	Pn	07 52 26.3	+1.6
ATH	Athens Observa	2.61	93	P	Pn	07 52 28.0	+2.5
ATH	Athens Observa	2.61	93	ePN	Pn	07 52 28.0	+2.5
ATH	Athens Observa	2.61	93	P	Pn	07 52 28.0	+2.5
PTL	Penteli	2.72	91	ePN	Pn	07 52 28.7	+1.6
FNA	Florina	2.73	15	P	Pn	07 52 29.4	+2.3
FNA	Florina	2.73	15	ePN	Pn	07 52 29.5	+2.3
FNA	Florina	2.73	15	P	Pn	07 52 29.4	+2.3
KYTH	Kithira	2.81	131	ePB	Pb	07 52 32.6	-1.2
AOS	Alonnisos	2.89	68	P	Pn	07 52 31.1	+1.7
AOS	Alonnisos	2.89	68	P	Pn	07 52 31.1	+1.7
BIA	Bitola	2.94	13	ePn	Pn	07 52 32.6	+2.5
BIA	Bitola	2.94	13	ePn	Pn	07 52 32.6	+2.5
TIP	Timpagrande	3.04	291	P	Pn	07 52 34.5	+3.0
TIP				S	Sb	07 53 14.8	+0.1
TIP	Timpagrande	3.04	291	P	Pn	07 52 34.5	+3.0
TIP				S	Sb	07 53 14.8	+0.1
TIR	Tirane	3.22	353	ePn	Pn	07 52 36.3	+2.5
SOH	Sokhos	3.50	40	ePN	Pn	07 52 40.0	+2.2
PHP	Peshkopia	3.52	0	P	Pn	07 52 40.4	+2.3
PHP	Peshkopia	3.52	0	P	Pn	07 52 40.4	+2.3
VAY	Valandovo	3.57	27	ePn	Pn	07 52 41.0	+2.3
VAY	Valandovo	3.57	27	ePn	Pn	07 52 41.5	+2.8
SKO	Skopje	3.89	11	ePn	Pn	07 52 45.5	+2.4
SKO	Skopje	3.89	11	ePn	Pn	07 52 46.0	+2.9
APE	Apeiranthos	4.20	103	ePN	Pn	07 52 52.2	+4.8
MMB	Musomiste	4.27	36	i P	Pn	07 52 49.9	+1.5
MMB	Musomiste	4.27	36	i P	Pn	07 52 49.9	+1.5
PDG	Podgorica	4.36	349	ePn	Pn	07 52 50.7	+1.1
CHOS	Chios island	4.44	85	P	Pn	07 52 52.7	+1.9
CHOS	Chios island	4.44	85	ePN	Pn	07 52 52.7	+1.9
CHOS	Chios island	4.44	85	P	Pn	07 52 52.7	+1.9
IDI	Anoyia	4.59	127	ePN	Pn	07 52 55.8	+3.0
VTS	Vitosha	4.92	25	eP	Pn	07 52 58.0	+0.7
VTS	Vitosha	4.92	25	eP	Pn	07 52 58.0	+0.7
VTS	Vitosha	4.92	25	ePn	Pn	07 52 59.9	+2.6
ALN	Alexandroupoli	5.14	56	ePN	Pn	07 53 01.8	+1.5
STON	Ston	5.15	337	ePn	Pn	07 53 00.5	+0.1
STON				Sn	Sn	07 53 54.7	-4.5
STON	Ston	5.15	337	ePn	Pn	07 53 00.4	+0.1
GRUS	Gruza	5.73	2	ePn	Pn	07 53 10.1	+1.7
BBLS	Lazići	5.76	353	ePn	Pn	07 53 12.9	+4.1
DIVS	Divibare	5.95	357	ePn	Pn	07 53 12.9	+1.5
TEKS	Tekeris	6.42	354	ePn	Pn	07 53 17.6	-0.3
MLR	Muntele Rosu	8.41	28	Pn	Pn	07 53 46.8	+1.5
	0.1nm,0.3s,baz=207,slow=7.1,SNR=3.9						
GBRS	Gornja Briga	8.47	332	⇑ePn	Pn	07 53 47.4	+1.4
SOKA	Soboth	9.40	337	⇑iPn	Pn	07 53 58.6	-0.2
SOKA				⇓iSn	Sn	07 55 41.6	-2.4
SOKA	Soboth	9.40	337	Pn	Pn	07 53 58.6	-0.2
KECS	Kecovo	10.32	0	ePN	Pn	07 54 09.8	-1.6
KECS				e		07 54 18.3	
BRTR	Keskin Array B	10.42	77	Pn	Pn	07 54 13.5	+0.7
	0.1nm,0.3s,baz=261,slow=14,SNR=2.4						
MOA	Molln	10.68	337	⇓iPn	Pn	07 54 16.9	+0.6
MOA	Molln	10.68	337	Pn	Pn	07 54 16.2	-0.1
STHS	Stebnicka Huta	11.27	3	ePN	Pn	07 54 24.9	+0.5
STHS				e		07 54 32.8	
STHS	Stebnicka Huta	11.27	3	ePn	Pn	07 54 24.9	+0.5
GERES	GERESS Array B	11.74	338	Pn	Pn	07 54 29.7	-1.1
	0.3nm,0.3s,baz=149,slow=14,SNR=3.2						
HFS	Hagfors	22.41	351	P	P	07 56 41.7	+0.1
	3.6nm,0.7s,baz=147,slow=14,SNR=5.5						
EKA	Eskdalemuir Ar	23.40	325	P	P	07 56 52.4	+0.6
	0.3nm,0.3s,baz=125,slow=11,SNR=4.0						
FINES	FINESS Array B	23.58	7	P	P	07 56 52.0	-1.5
	3.3nm,0.9s,baz=205,slow=13,SNR=2.6						
TORD	Torodi Ar. Bea	29.96	219	P	P	07 57 53.6	+2.0
	0.6nm,0.9s,baz=32,slow=10.0,SNR=3.9						
MKAR	Makanchi Array	45.38	58	P	P	08 00 00.6	-0.9
	0.6nm,0.4s,baz=278,slow=7.6,SNR=12						
ZALV	Zalesovo Beam	45.77	48	P	P	08 00 03.8	-0.6
	2.1nm,0.5s,baz=273,slow=9.4,SNR=9.0						

IDC 04 08:05:58.2±2.1, 37°.96N×69°.15E, h0km, mb3.4/1, mb1 3.4/5, mb1mx3.2/31, mbtmp3.4/5, ML3.2/4, Error ellipse: s-maj=44.8km s-min=17.3km az=147.0
NNC 04 08:06:04.7±7.8, 38°.67N×68°.21E, h0km, mb3.7, mpv3.3, Error ellipse: s-maj=75.5km s-min=42.9km az=4.0
ISC 04 08:05:53.6±5.2, 37°.6N±0°.4×68°.7E±0°.2, h10km, n9, σ1.s32/8, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.66	13	⇓Pn	Pn	08 07 19.4	+1.6
	0.5nm,0.4s,baz=208,slow=14,SNR=16						
KK31				⇑Pg	Pb	08 07 32.0	-0.4
	3.4nm,0.6s,baz=198,slow=15,SNR=8.7						
KK31				⇑Lg	Lg	08 08 35.8	
	5.3nm,0.4s,baz=206,slow=29,SNR=11						
AAK	Ala-Archa	6.69	40	Pn	Pn	08 07 31.9	-0.2
	0.2nm,0.3s,baz=236,slow=3.6,SNR=1.9						
AAK				Lg	Lg	08 09 14.4	
	0.5nm,0.3s,baz=165,slow=20,SNR=2.1						
TKM2	Tokmak 2	7.47	43	⇑Pn	Pn	08 07 44.6	+1.8
	2.2nm,0.4s						
TKM2				⇑Lg	Lg	08 09 46.6	
	7.1nm,1.1s						
AB31	Akbulak array	13.27	334	⇑P	Pn	08 09 00.9	-1.0
	0.5nm,0.5s,baz=153,slow=12,SNR=4.1						
MKAR	Makanchi Array	13.60	43	Pn	Pn	08 09 06.3	-0.3
	0.1nm,0.3s,baz=243,slow=9.5,SNR=4.5						
MKAR				Lg	Lg	08 12 52.2	
	0.0nm,0.3s,baz=246,slow=25,SNR=2.7						
AKTO	Aktyubinsk	14.94	333	⇓P	Pn	08 09 21.5	-3.2
	0.8nm,0.6s						
AKTO	Aktyubinsk	14.94	333	Pn	Pn	08 09 25.6	+0.8
	0.2nm,0.3s,baz=131,slow=13,SNR=4.0						
ZALV	Zalesovo Beam	19.75	29	P	P	08 10 22.5	-1.0
	0.3nm,0.3s,baz=228,slow=15,SNR=2.9						
TORD	Torodi Ar. Bea	63.94	267	P	P	08 16 35.5	+8.3
	0.3nm,0.8s,baz=53,slow=7.9,SNR=2.4						

SKO 04 08:20:06.8, 41°.29N×22°.76E, h15km, M1.5, ML1.8
ISCJB 04 08:20:06.9±0.4, 41°.25N±0°.02×22°.76E±0°.03, h2km±4km, Error ellipse: s-maj=4.0km s-min=3.2km az=38.6
ATH 04 08:20:07.5, 41°.25N×22°.78E, h15km±5km, MD2.9/5
THE 04 08:20:07.4, 41°.27N×22°.77E, h2km±2km, ML2.2/4, Error ellipse: s-maj=2.3km s-min=0.9km az=216.0
CSEM 04 08:20:07.6±0.1, 41°.26N×22°.76E, h2km, ML1.8, Error ellipse: s-maj=3.5km s-min=2.4km az=42.0
BEO 04 08:20:08.3±1.3, 41°.23N×22°.71E, h0km, ML1.8/4
ISC 04 08:20:07.4±1.1, 41°.28N±0°.02×22°.77E±0°.02, h1km±10km, n34, σ0.s54/64, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.15	286	P	Pg	08 20 09.7	-0.7
VAY				S	Sg	08 20 12.1	-0.3
VAY	Valandovo	0.15	286	i Pg	Pg	08 20 09.9	-0.5
VAY				i Sg	Sg	08 20 12.4	+0.1
VAY				i Lg	Lg	08 20 13.0	
	comp=E,302nm,0.2s						
VAY				i Lg	Lg	08 20 13.9	
	comp=N,621nm,0.8s						
VAY	Valandovo	0.15	286	P	Pg	08 20 09.7	-0.7
VAY	Valandovo	0.15	286	i Pg	Pg	08 20 10.4	0.0
VAY				S	Sg	08 20 12.1	-0.3
VAY				i Lg	Lg	08 20 14.3	
	comp=N,621nm,0.8s						
KNT	Kendrikon	0.15	140	P	Pg	08 20 10.8	+0.4
KNT				S	Sg	08 20 13.1	+0.7
KNT	Kendrikon	0.15	140	P	Pg	08 20 10.8	+0.4
KNT				S	Sg	08 20 13.1	+0.7
GRG	Griva	0.42	221	P	Pg	08 20 15.5	-0.1
GRG				S	Sg	08 20 21.8	+0.8
GRG	Griva	0.42	221	ePB	Pg	08 20 15.4	-0.1
GRG				eSB	Sg	08 20 21.9	+0.9
GRG	Griva	0.42	221	P	Pg	08 20 15.5	-0.1
GRG				S	Sg	08 20 21.8	+0.8
SOH	Sokhos	0.64	136	P	Pg	08 20 19.5	-0.1
SOH				S	Sg	08 20 27.6	-0.3
SOH	Sokhos	0.64	136	ePN	Pg	08 20 19.7	+0.1
SOH				eSN	Sg	08 20 27.7	-0.2
SOH	Sokhos	0.64	136	P	Pg	08 20 19.5	-0.1
SOH				S	Sg	08 20 27.6	-0.3
SRS	Serrai	0.65	104	P	Pg	08 20 19.6	-0.2
SRS				S	Sg	08 20 28.2	+0.1
SRS	Serrai	0.65	104	P	Pg	08 20 19.6	-0.2
SRS				S	Sg	08 20 28.2	+0.1
HORT	Hortiatis	0.73	159	P	Pg	08 20 21.0	-0.3
HORT				S	Sg	08 20 30.0	-0.8
HORT	Hortiatis	0.73	159	P	Pg	08 20 21.0	-0.3
HORT				S	Sg	08 20 30.0	-0.8
NVR	Nevrokopi	0.83	85	P	Pg	08 20 23.0	-0.3
NVR				S	Sg	08 20 34.2	+0.1
NVR	Nevrokopi	0.83	85	ePN	Pg	08 20 23.1	-0.3
NVR				eSN	Sg	08 20 34.7	+0.6
NVR	Nevrokopi	0.83	85	P	Pg	08 20 23.0	-0.3
NVR				S	Sg	08 20 34.2	+0.1
PLG	Polygyros	1.04	150	ePN	Pg	08 20 26.1	-1.3
PLG				eSN	Sg	08 20 40.2	-0.7
FNA	Florina	1.16	245	ePN	Pg	08 20 29.5	-0.2
SKO	Skopje	1.21	305	ePn	Pn	08 20 31.7	+0.2
SKO				eSg	Sg	08 20 45.0	-1.3
SKO				eLg	Lg	08 20 50.8	
	comp=N,17nm,0.4s						
SKO				eLg	Lg	08 20 56.4	
	comp=E,16nm,0.4s						
SKO	Skopje	1.21	305	ePn	Pn	08 20 32.2	+0.7
SKO				eSg	Sg	08 20 45.5	-0.8
SKO				eLg	Lg	08 20 56.9	
	comp=E,16nm,0.4s						
OUR	Ouranopolis	1.32	135	P	Pg	08 20 32.3	-0.4
OUR				S	Sn	08 20 51.1	-0.1
OUR	Ouranopolis	1.32	135	P	Pg	08 20 32.3	-0.4
OUR				S	Sn	08 20 51.1	-0.1
KAVA	Kavala	1.35	102	P	Pg	08 20 32.9	-0.4
KAVA				S	Sn	08 20 51.7	-0.2
KAVA	Kavala	1.35	102	P	Pg	08 20 32.9	-0.4
KAVA				S	Sn	08 20 51.7	-0.2
VTS	Vitosha	1.35	14	P	Pn	08 20 32.9	-0.7
VTS	Vitosha	1.35	14	ePg	Pb	08 20 33.9	+0.3
VTS				eSg	Sn	08 20 52.3	0.0
VTS	Vitosha	1.35	14	P	Pn	08 20 32.9	-0.7
VTS	Vitosha	1.35	14	ePg	Pb	08 20 33.9	+0.3
VTS				eSg	Sn	08 20 52.3	0.0
BARS	Barje	1.69	336	ePn	Pn	08 20 38.7	+0.6
BARS				eSn	Sg	08 21 03.0	+1.2
BARS	Barje	1.69	336	ePn	Pn	08 20 38.7	+0.6
BARS				eSn	Sg	08 21 03.0	+1.2
ZAPS	Zavoj	2.00	357	ePn	Pb	08 20 44.5	0.0
ZAPS				eSn	Sb	08 21 10.1	+0.2

WEL 04 08:21:13.9±0.3, 36°.33S×177°.99E, h5km, ML3.7/5, 1D, Error ellipse: s-maj=2.4km s-min=2.2km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.26	168	P*	Pg	08 21 35.6	-2.5
MXZ				S*	Sg	08 21 50.8	-3.6
MXZ				AML	AML	08 21 50.9	
MXZ				AML	AML	08 21 51.4	
MXZ				AML	AML	08 21 52.9	
MYRZ	Mayor Island	1.69	235	P*	Pn	08 21 42.3	-1.9
PUZ	Puketiti	1.75	173	AML	AML	08 22 11.6	
PUZ				AML	AML	08 22 11.7	
KUZ	Kuaotunu	1.87	256	PN	Pn	08 21 44.5	-2.1
KUZ				AML	AML	08 22 06.0	
KUZ				AML	AML	08 22 06.9	
MARZ	Manawahe	1.96	212	P*	Pn	08 21 46.0	-1.8
TGRZ	Tauranga	1.97	224	P*	Pn	08 21 46.2	-1.7
MWZ	Matawai	2.04	190	P*	Pn	08 21 47.6	-1.3
MWZ				eS*	Sn	08 22 11.5	-3.2
MWZ				AML	AML	08 22 14.3	
URZ	Urewera	2.05	200	P*	Pn	08 21 47.5	-1.5
URZ				S*	Sn	08 22 11.9	-3.1
URZ				AML	AML	08 22 20.9	
MKAZ	Moumakai	2.40	250	PN	Pn	08 21 52.7	-1.1
TOZ	Tahuroa Road	2.43	234	P*	Pn	08 21 53.0	-1.3
TOZ				eS*	Sn	08 22 21.9	-2.4
PRRZ	Plateau Road	2.51	210	P*	Pn	08 21 55.1	-0.3
RAHZ	Arahi	2.68	195	PN	Pn	08 21 57.1	-0.7
MHGZ	Mahia Peninsul	2.82	181	PN	Pn	08 21 59.7	+0.1
BKZ	Black Stump Fm	3.07	202	P*	Pn	08 22 02.7	-0.4
MCHZ	McNeill Hill	3.27	198	PN	Pn	08 22 06.7	+0.9
HIZ	Hauiti	3.31	228	⇓PN	Pn	08 22 06.0	-0.4
WPVZ	Whakapapa	3.46	213	P*	Pn	08 22 10.3	+1.6
TUVZ	Tukino	3.47	212	P*	Pn	08 22 10.8	+2.0
FWVZ	Far West T-bar	3.50	213	P*	Pn	08 22 10.5	+1.2
TRVZ	Turoa	3.54	212	P*	Pn	08 22 11.7	+1.8
WNVZ	Wahianoa	3.54	212	P*	Pn	08 22 11.6	+1.8
KAHZ	Kahuranaki	3.57	194	PN	Pn	08 22 09.9	-0.2
MTVZ	Mangateitei	3.64	212	P*	Pn	08 22 12.7	+1.6
PXZ	Pawanui	3.80	193	PN	Pn	08 22 11.4	-1.7
PNHZ	Pukenui	3.85	201	PN	Pn	08 22 13.5	-0.3
WPHZ	Waipukurau	3.92	198	PN	Pn	08 22 13.9	-0.9
TSZ	Takapari Road	4.05	203	PN	Pn	08 22 16.0	-0.6
BFZ	Birch Farm	4.55	197	PN	Pn	08 22 21.7	-1.8
MRZ	Mangatainoka R	4.72	203	PN	Pn	08 22 23.9	-1.8
TIWZ	Tintock	4.74	200	PN	Pn	08 22 24.1	-1.9
KIW	Kapiti Island	5.13	207	PN	Pn	08 22 29.4	-2.0
QRZ	Quartz Range	6.20	222	PN	Pn	08 22 46.2	+0.1
THZ	Tophouse	6.71	215	PN	Pn	08 22 52.2	-1.0

CSEM 04 08:33:56.5, 12°.05N×43°.41E, h11km, ML3.5, After DHMR
DHMR 04 08:33:56.5±1.7, 12°.05N×43°.41E, h12km±11km, ML3.5, 2D, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TRBA	At Turbah	1.35	30	⇓iP	Pn	08 34 21.7	+0.1
TRBA				i S	Sg	08 34 41.2	+0.5
TRBA				AML	AML	08 34 44.2	
	comp=E,1µm,0.6s						
ADEN	Aden	1.69	65	i P	Pb	08 34 27.2	-0.4
ADEN				i S	Sg	08 34 50.3	-0.7
ADEN				AML	AML	08 34 57.4	
	comp=E,378nm,0.3s						
ADEN	Aden	1.69	65	i P	Pb	08 34 27.2	-0.4
ADEN				i S	Sg	08 34 50.3	-0.7
	comp=E,189nm,0.3s						
UDYN	Al ‘Udayn	1.98	16	i P	Pn	08 34 30.9	+0.9
UDYN				i S	Sb	08 34 58.0	+0.5
UDYN	Al ‘Udayn	1.98	16	i P	Pn	08 34 31.0	+0.9
UDYN				i S	Sb	08 34 58.0	+0.5
LBOS		2.54	45	⇓iP	Pn	08 34 39.8	+1.8
LBOS				i S	Sb	08 35 14.0	0.0
DHBB	Dhamar BB	2.68	21	i P	Pb	08 34 43.4	-1.4
DHBB				i S	Sb	08 35 19.3	+1.4
DHBB	Dhamar BB	2.68	21	i P	Pb	08 34 43.4	-1.4
DHBB				i S	Sb	08 35 19.3	+1.3
BDHA	Al Bayda’	2.84	47	i P	Pn	08 34 44.0	+1.9
BDHA				i S	Sb	08 35 22.3	-0.2
BDHA				AML	AML	08 35 39.9	
	comp=E,303nm,0.5s						
BDHA	Al Bayda’	2.84	47	i P	Pn	08 34 44.0	+2.0
BDHA				i S	Sb	08 35 22.3	-0.2
	comp=E,152nm,0.5s						

FUNV 04 08:38:59.7, 6°.64N×72°.93W, h140km, MW3.5, 1D, Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.36	26	⇓iP	Pn	08 39 26.9	-0.5
SOCV	Socops	2.63	51	eP	Pn	08 39 41.1	-0.8
SOCV				eS	Sn	08 40 11.7	-2.9
VIGV	El Vigia	2.68	35	eP	Pn	08 39 41.4	-1.3
VIGV				eS	Sn	08 40 12.2	-3.7
ELOV	Elorza	3.44	84	eS	Sn	08 40 29.0	-4.1
QARV	Quebrada Arrib	4.27	34	eP	Pn	08 40 02.3	-1.0
QARV				eS	Sn	08 40 48.2	-4.6
CURV	Curarigua	4.46	41	eP	Pn	08 40 03.7	-2.2
DABV	Dabajuro	4.82	28	eP	Pn	08 40 08.4	-2.2
MAPV	Macapo	5.44	54	eP	Pn	08 40 17.3	-1.7

JMA 04 08:39:02.0, 35°.15N×135°.93E, h15km, M2.7, Western Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JWT	Wachi	0.45	287	P	Pg	08 39 10.9	-0.2
JWT				S	Sg	08 39 16.7	-0.5
JHE	Heguri	0.54	202	P	Pg	08 39 12.5	-0.1
JHE				S	Sg	08 39 19.6	-0.2
MAT	Matsushiro	2.31	52	P	Pn	08 39 40.3	+0.7
MAT				S	Sn	08 40 08.1	+0.3

IDC 04 08:48:55.5±2.6, 30°.20S×177°.03W, h0km, mb4.1/3, mb1 4.2/5, mb1mx3.9/20, mbtmp4.1/5, ML3.8/2, Error ellipse: s-maj=47.9km s-min=21.4km az=85.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.23	320	Pn	Pb	08 49 19.4	-0.1
	217nm,0.3s,baz=117,slow=18,SNR=17						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO				Sn	Sn	08 49 37.7	+0.6
	489nm,0.3s,baz=53,slow=20,SNR=12						
URZ	Urewera	9.39	210	Pn	Pn	08 51 10.0	-1.9
	0.4nm,0.3s,baz=292,slow=18,SNR=4.0						
URZ				Sn	Sn	08 52 56.7	-1.5
	0.6nm,0.3s,baz=260,slow=23,SNR=4.3						
RPZ	Rata Peaks	16.49	212	Pn	Pn	08 52 46.9	-1.2
	0.8nm,0.3s,baz=46,slow=13,SNR=4.2						
STKA	Stephens Creek	35.34	256	P	P	08 55 54.2	+1.5
	1.3nm,0.4s,baz=96,slow=10,SNR=17						
ASAR	Alice Springs	43.96	266	P	P	08 57 04.8	+0.2
	0.7nm,0.4s,baz=105,slow=7.0,SNR=15						
WRA	Warramunga Arr	44.93	271	P	P	08 57 11.6	-0.9
	1.5nm,0.4s,baz=111,slow=8.0,SNR=51						
FINES	FINESS Array B	145.24	341	PKPbc	PKPbc	09 08 33.1	-1.0
	3.8nm,0.8s,baz=72,slow=6.2,SNR=6.2						

IDC 04 08:52:45.1±5.0**, 18°24N×145°57E, h383**km±55km**, mb3.1**/8**, mb1 3.3**/9**, mb1mx3.1**/25**, mbtmp3.0**/9**, Error ellipse: s-maj=30.8km s-min=12.2km az=93.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr	19.35	342	P	P	08 56 44.5	0.0
	0.4nm,0.3s,baz=163,slow=9.5,SNR=4.0						
KSRS	Korea Array	24.62	325	P	P	08 57 32.8	+0.3
	1.1nm,0.7s,baz=146,slow=8.6,SNR=4.8						
WRA	Warramunga Arr	39.51	197	P	P	08 59 40.9	+0.1
	1.7nm,0.5s,baz=18,slow=8.8,SNR=25						
ASAR	Alice Springs	43.18	196	P	P	09 00 09.5	-0.6
	0.6nm,0.4s,baz=12,slow=7.1,SNR=27						
SONM	Songino Array	43.42	322	P	P	09 00 12.0	+0.1
	0.4nm,0.5s,baz=131,slow=7.9,SNR=3.5						
MKAR	Makanchi Array	58.69	314	P	P	09 02 03.6	-0.4
	0.4nm,0.4s,baz=87,slow=9.0,SNR=6.7						
ILAR	Eielson Array	64.11	26	P	P	09 02 38.8	-0.7
	0.4nm,0.4s,baz=249,slow=5.8,SNR=9.9						
YKA	Yellowknife Ar	78.45	28	P	P	09 04 04.1	-0.3
	0.3nm,0.4s,baz=290,slow=4.9,SNR=3.8						
NVAR	Mina Array Bea	83.52	52	P	P	09 04 32.6	+0.9
	1.3nm,0.6s,baz=268,slow=6.7,SNR=9.7						
LPAZ	La Paz	147.78	92	PKPbc	PKPbc	09 11 47.1	-0.1
	0.6nm,0.5s,baz=0.0,slow=3.0,SNR=3.6						

IDC 04 08:56:07.4±7.6**, 19°92N×147°00E, h0**km**, mb3.6**/5**, mb1 3.6**/5**, mb1mx3.4**/27**, mbtmp3.6**/5**, Error ellipse: s-maj=285.5km s-min=32.7km az=80.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	41.51	198	P	P	09 03 56.7	0.0
	0.3nm,0.9s,baz=19,slow=8.4,SNR=2.7						
SONM	Songino Array	42.99	320	P	P	09 04 10.3	+1.7
	0.3nm,0.3s,baz=126,slow=7.3,SNR=3.0						
MKAR	Makanchi Array	58.52	313	P	P	09 06 04.8	-0.9
	0.5nm,0.8s,baz=95,slow=7.3,SNR=3.8						
KURBB	Kurchatov Arra	61.25	317	P	P	09 06 23.6	-0.8
	0.3nm,0.3s,baz=98,slow=7.4,SNR=6.0						
BVAR	Borovoye Array	66.33	320	P	P	09 06 57.4	-0.4
	0.3nm,0.4s,baz=94,slow=11,SNR=4.1						

IDC 04 09:16:48.9±7.7**, 4°52S×145°21E, h0**km**, mb3.6**/3**, mb1 3.8**/5**, mb1mx3.5**/19**, mbtmp3.7**/5**, ML3.1**/2**, Error ellipse: s-maj=113.0km s-min=39.4km az=31.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.22	158	Pn	Pn	09 18 09.4	+1.1
	1.9nm,0.3s,baz=11,slow=10,SNR=4.8						
PMG				Sn	Sn	09 19 07.6	-1.7
	baz=12,slow=20,SNR=1.9						
WRA	Warramunga Arr	18.63	214	P	P	09 21 07.8	-0.5
	0.1nm,0.3s,baz=40,slow=12,SNR=13						
ASAR	Alice Springs	21.94	209	P	P	09 21 44.7	+0.4
	1.2nm,0.8s,baz=32,slow=12,SNR=7.2						
FITZ	Fitzroy Crossi	23.42	233	P	P	09 21 59.5	-0.3
	2.2nm,1.0s,baz=41,slow=11,SNR=3.3						
STKA	Stephens Creek	27.42	187	P	P	09 22 36.4	-0.1
	1.4nm,0.9s,baz=28,slow=15,SNR=3.0						

CSEM 04 09:22:18.9±0.5, 38°85N×44°75E, h2km, ML2.8, Error ellipse: s-maj=16.1km s-min=9.1km az=136.0
NSSP 04 09:22:19.4, 39°03N×44°67E, h10km, Ms2.8
ISC 04 09:22:19.6±1.7**, 38°91N**±0°05×**44°76E**±0°04**, h10**km±14km**, n11, σ1§61**/17**, 3C-4D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	Van	1.12	251	iP	Pb	09 22 39.4	-1.9
TVAN	Van	1.12	251	iP	Pb	09 22 39.4	-1.9
GNI	Garni	1.24	359	⇓iP	Pn	09 22 44.6	+1.4
GNI				⇓iS	Sn	09 23 01.1	+1.0
GNI	Garni	1.24	359	⇓P	Pn	09 22 44.6	+1.4
GNI				S	Sn	09 23 01.1	+1.0
GRS	Goris	1.36	64	⇑iP	Pn	09 22 44.0	-0.8
GRS				⇓iS	Sg	09 23 04.0	+0.6
GRS	Goris	1.36	64	⇑P	Pn	09 22 44.0	-0.8
GRS				S	Sg	09 23 04.0	+0.6
VADZ	Vardenis	1.48	31	eP	Pg	09 22 51.0	+3.1
VADZ				⇑S	Sg	09 23 10.0	+2.9
HAKT	HAKKARI	1.58	212	iP	Pn	09 22 48.2	+0.3
HAKT				iS	Sn	09 23 10.2	+1.6
HAKT	HAKKARI	1.58	212	iP	Pn	09 22 48.2	+0.3
HAKT				iS	Sn	09 23 10.2	+1.6
TUTA	Tutak	1.59	289	iP	Pb	09 22 47.4	-1.8
TUTA				iS	Sg	09 23 11.8	+1.1
TUTA	Tutak	1.59	289	iP	Pb	09 22 47.4	-1.8
TUTA				iS	Sg	09 23 11.8	+1.1

IDC 04 09:35:36.0±1.8**, 15°06S×175°72W, h0**km**, mb3.8**/4**, mb1 4.0**/5**, mb1mx3.7**/20**, mbtmp3.9**/5**, ML2.5**/1**, Error ellipse: s-maj=60.4km s-min=28.8km az=172.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.98	74	Pn	Pn	09 36 38.0	-0.5
	17nm,0.3s,baz=194,slow=0.6,SNR=28						
AFI				Sn	Sn	09 37 14.9	-11
	14nm,0.3s,baz=47,slow=21,SNR=3.0						
STKA	Stephens Creek	42.28	239	P	P	09 43 30.1	-1.3
	0.4nm,0.4s,baz=70,slow=12,SNR=4.3						
WRA	Warramunga Arr	47.74	257	P	P	09 44 16.2	+1.0
	0.4nm,0.4s,baz=94,slow=7.2,SNR=6.7						
ASAR	Alice Springs	48.09	252	P	P	09 44 17.4	-0.5
	1.7nm,0.7s,baz=84,slow=8.0,SNR=15						
VNDA	Vanda	63.49	185	P	P	09 46 07.8	+0.3
	0.7nm,0.6s,baz=22,slow=5.4,SNR=8.3						

NSSC 04 09:38:42.1±2.3, 33°47N×33°30E, h38km±999km, ML2.8
CSEM 04 09:38:46.5±0.2, 33°36N×33°72E, h30km, ML2.8, Error ellipse: s-maj=4.3km s-min=3.2km az=108.0
ISC 04 09:38:43.3±1.6**, 33°33N**±0°03×**33°72E**±0°04**, h6**km±12km**, n52, σ1§31**/68**, 6D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNTI	Hanita	1.25	101	Pn	Pg	09 39 07.5	+0.3
HNTI				Sn	Sg	09 39 23.3	-0.1
OFRI	‘Ofer	1.28	123	Pn	Pg	09 39 07.6	-0.3
MMA0	Mount Meron ar	1.45	102	Pn	Pn	09 39 10.5	+0.3
MMA0				Sn	Sg	09 39 28.6	-1.3
SLTI	Sal’it	1.56	134	Pn	Pn	09 39 11.9	+0.3
SLTI				Sn	Sn	09 39 30.8	-1.4
KSDI	Kefar Szold	1.63	94	Pn	Pn	09 39 13.4	+0.8
KSDI				Sn	Sn	09 39 32.8	-1.2
CSS	Prodhromos	1.66	349	Pn	Pn	09 39 13.0	0.0
CSS				Sn	Sn	09 39 31.7	-2.9
MMLI	Mount Malkishu	1.69	121	Pn	Pn	09 39 13.6	+0.1
MMLI				Sn	Sn	09 39 34.4	-1.0
RCY	Rachaya	1.78	84	eP	Pn	09 39 15.4	+0.6
KSHT	Keshet	1.79	101	Pn	Pn	09 39 16.3	+1.4
BRBR	Barbar	1.87	87	⇓eP	Pn	09 39 16.5	+0.4
BRBR				AML	AML	09 39 40.3	
	comp=N,366nm,0.3s						
BRBR				AML	AML	09 39 40.6	
	comp=Z,480nm,0.3s						
BRBR				AML	AML	09 39 41.5	
	comp=E,144nm,0.5s						
BRBR	Barbar	1.87	87	⇓eP	Pn	09 39 16.5	+0.4
	SNR=57						
TCHB	Talchebab	2.00	109	eP	Pn	09 39 17.7	-0.1
TCHB				AML	AML	09 39 43.6	
	comp=N,361nm,0.3s						
TCHB				AML	AML	09 39 44.5	
	comp=E,274nm,0.3s						
TCHB				AML	AML	09 39 45.9	
	comp=Z,128nm,0.3s						
TCHB	Talchebab	2.00	109	eP	Pn	09 39 17.7	-0.1
	SNR=57						
HWQ	Hawqa	2.08	62	eP	Pn	09 39 18.7	-0.2
HWQ	Hawqa	2.08	62	eP	Pn	09 39 18.7	-0.2
QASN	Qassioun	2.15	84	AML	AML	09 39 51.4	
	comp=Z,371nm,0.4s						
TOTH	TOTAH	2.27	89	AML	AML	09 39 52.0	
	comp=Z,223nm,0.6s						
TOTH				AML	AML	09 39 52.4	
	comp=N,104nm,0.5s						
YTIR	Yattir	2.29	149	Pn	Pn	09 39 23.2	+1.4
RSH		2.37	180	P	Pn	09 39 23.5	+0.8
RTMI	Retamim	2.42	160	Pn	Pn	09 39 24.5	+1.1
RTMI				Sn	Sn	09 39 52.9	-0.5
MZDA	Masada	2.45	145	Pn	Pn	09 39 25.3	+1.4
MZDA				Sn	Sn	09 39 53.7	-0.4
KZIT	Kziot	2.49	166	Pn	Pn	09 39 25.6	+1.2
KZIT				Sn	Sn	09 39 54.3	-0.8
HAWK	Haweek	2.53	61	⇓eP	Pn	09 39 25.7	+0.6
HAWK				AML	AML	09 39 57.5	
	comp=E,36nm,0.5s						
HAWK				AML	AML	09 39 58.6	
	comp=Z,42nm,0.4s						
HAWK				AML	AML	09 40 03.2	
	comp=N,36nm,0.5s						
HAWK	Haweek	2.53	61	⇓eP	Pn	09 39 25.7	+0.6
	SNR=57						
SALA	Sala	2.61	103	⇓eP	Pn	09 39 28.4	+2.2
SALA				eS	Sn	09 39 60.0	+1.6
SALA				AML	AML	09 40 02.5	
	comp=E,12nm,0.4s						
SALA				AML	AML	09 40 03.4	
	comp=Z,90nm,0.4s						
SALA	Sala	2.61	103	⇓eP	Pn	09 39 28.4	+2.2
	SNR=57						
SALA				eS	Sn	09 40 00.0	+1.6
	comp=Z,90nm,0.4s,SNR=58						
AMAG	Maghara	2.72	189	P	Pn	09 39 28.2	+0.6
BIDA	Albida	2.73	51	eP	Pn	09 39 26.2	-1.7
BIDA				AML	AML	09 40 01.7	
	comp=N,44nm,0.5s						
BIDA				AML	AML	09 40 04.8	
	comp=Z,100nm,0.2s						
BIDA	Albida	2.73	51	eP	Pn	09 39 26.2	-1.7
	SNR=57						
RMNI	Mount Ramon	2.87	162	Pn	Pn	09 39 31.0	+1.3
ZFRI	Zfri	3.04	155	Pn	Pn	09 39 32.7	+0.8
ZFRI				Sn	Sn	09 40 08.6	0.0
SLNF	Slenfeh	3.06	42	eP	Pn	09 39 29.3	-3.2
SLNF				AML	AML	09 40 07.5	
	comp=N,188nm,0.2s						
SLNF				AML	AML	09 40 07.9	
	comp=Z,126nm,0.2s						
SLNF				AML	AML	09 40 08.0	
	comp=E,48nm,0.2s						
SLNF	Slenfeh	3.06	42	eP	Pn	09 39 29.3	-3.2
	SNR=57						
ZALF	Zalf	3.06	97	eP	Pn	09 39 35.0	+2.6
ZALF				AML	AML	09 40 23.4	
	comp=E,16nm,0.3s						
ZALF				AML	AML	09 40 23.5	
	comp=Z,29nm,0.6s						
ZALF				AML	AML	09 40 24.6	
	comp=N,36nm,0.5s						
ZALF	Zalf	3.06	97	eP	Pn	09 39 35.0	+2.6
	SNR=57						
ROOS	tl_alroos	3.09	73	eP	Pn	09 39 32.9	+0.1
ROOS				eS	Sn	09 40 10.4	+0.3
ROOS	tl_alroos	3.09	73	eP	Pn	09 39 32.9	+0.1
	SNR=57						
ROOS				eS	Sn	09 40 10.4	+0.3
	SNR=58						
GAZI	Gazipasa	3.12	339	iP	Pn	09 39 36.2	+3.1
GAZI				iS	Sn	09 40 10.3	-0.3
GAZI	Gazipasa	3.12	339	iP	Pn	09 39 36.2	+3.1
GAZI				iS	Sn	09 40 10.3	-0.3
ARNB	Al Arnab	3.13	36	eP	Pn	09 39 32.3	-1.1
ARNB				eS	Sn	09 40 06.1	-5.1
ARNB	Al Arnab	3.13	36	eP	Pn	09 39 32.3	-1.1
	SNR=57						
ARNB				eS	Sn	09 40 06.1	-5.1
	SNR=58						
PRNI	Paran	3.17	159	Pn	Pn	09 39 34.8	+1.0
ERMK	Ermenek	3.37	349	iP	Pn	09 39 38.2	+1.5
ERMK				iS	Sn	09 40 16.9	-0.2
ERMK	Ermenek	3.37	349	iP	Pn	09 39 38.2	+1.5
ERMK				iS	Sn	09 40 16.9	-0.2
HNKL	Nakhl	3.40	176	P	Pn	09 39 37.7	+0.7
HNKL				S	Sn	09 40 15.4	-2.3
HRFI	Mount Harif	3.47	161	Pn	Pn	09 39 39.1	+1.1
SUZ		3.56	192	P	Pn	09 39 39.8	+0.6
HHAG	Hagoal	3.64	203	P	Pn	09 39 41.2	+0.9
MBRI	Mt Berech	3.67	164	Pn	Pn	09 39 41.9	+1.1
KOT	Kottamia	3.76	206	P	Pn	09 39 42.8	+0.9
KOT				S	Sn	09 40 23.8	-2.7
GLL	Jalalah	4.12	205	P	Pn	09 39 47.7	+0.8
HNAT	Natroun	4.54	216	P	Pn	09 39 53.2	+0.5

IDC 04 09:39:11.1±18.0**, 6°70S×125°71E, h379**km±237km**, mb2.5**/1**, mb1 3.1**/4**, mb1mx2.8**/22**, mbtmp2.9**/4**, Error ellipse: s-maj=196.8km s-min=53.2km az=38.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.33	180	P	P	09 41 44.0	-0.2
	1.0nm,0.3s,baz=19,slow=12,SNR=22						
WRA	Warramunga Arr	15.60	148	P	P	09 42 31.4	+0.3
	0.7nm,0.3s,baz=323,slow=11,SNR=28						
ASAR	Alice Springs	18.62	156	P	P	09 43 03.1	-0.2
	0.5nm,0.3s,baz=337,slow=12,SNR=20						
MKAR	Makanchi Array	65.70	329	P	P	09 49 16.3	0.0
	0.1nm,0.5s,baz=127,slow=3.7,SNR=3.1						

IDC 04 09:39:34.5±1.8**, 16°64S×169°38E, h0**km**, mb3.9**/7**, mb1 4.1**/8**, mb1mx3.9**/21**, mbtmp3.9**/8**, ML3.9**/1**, MS3.7**/7**, Ms1 3.7**/7**, ms1mx3.4**/29**, Error ellipse: s-maj=52.8km s-min=29.1km az=142.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.08	207	Pn	Pn	09 41 07.1	+1.3
	2.7nm,0.3s,baz=245,slow=20,SNR=17						
DZM				Sn	Sn	09 42 07.7	-8.5
	1.3nm,0.3s,baz=336,slow=21,SNR=2.1						
DZM				LR	LR	09 43 12.3	
	comp=Z,514nm,19.9s,baz=223,slow=36						
HNR	Honiara	11.65	307	LR	LR	09 46 11.5	
	comp=Z,287nm,20.5s,baz=296,slow=34						
CTA	Charters Tower	22.21	258	P	P	09 44 34.1	+1.3
	1.9nm,0.5s,baz=101,slow=13,SNR=2.8						
PMG	Port Moresby	22.80	286	LR	LR	09 52 18.3	
	comp=Z,243nm,18.2s,baz=79,slow=34						
RPZ	Rata Peaks	27.03	177	LR	LR	09 53 26.7	
	comp=Z,129nm,19.4s,baz=316,slow=31						
STKA	Stephens Creek	29.41	234	P	P	09 45 39.5	-0.3
	1.3nm,0.8s,baz=72,slow=6.4,SNR=2.6						
WRA	Warramunga Arr	33.40	259	P	P	09 46 14.2	-1.0
	0.7nm,0.8s,baz=79,slow=6.2,SNR=3.9						
ASAR	Alice Springs	33.97	252	P	P	09 46 19.1	-1.0
	2.6nm,0.7s,baz=78,slow=8.8,SNR=14						
PPT	Papeete	39.19	98	LR	LR	10 00 03.4	
	comp=Z,121nm,22.0s,baz=21,slow=31						
FITZ	Fitzroy Crossi	41.70	261	P	P	09 47 25.7	+0.2
	5.4nm,1.1s,baz=102,slow=9.6,SNR=3.1						
VNDA	Vanda	61.02	182	LR	LR	10 12 54.7	
	comp=Z,81nm,21.8s,baz=73,slow=33						
CMAR	Chiang Mai Arr	77.58	294	LR	LR	10 26 14.8	
	comp=Z,25nm,19.0s,baz=275,slow=36						
SONM	Songino Array	85.23	323	P	P	09 52 14.3	+1.1
	0.6nm,0.9s,baz=132,slow=6.0,SNR=2.9						
TXAR	Lajitas Array	95.40	61	P	P	09 53 00.9	-0.6
	0.3nm,0.8s,baz=247,slow=1.9,SNR=3.6						

KRSC 04 09:41:22.5±1.2**, 48°99N×156°35E, h10**km±10km**, ML4.1, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	1.70	355	eP	Pn	09 41 50.8	-1.4
SKR				eS	Sn	09 42 11.5	-2.5
PAU	Pauzhetka	2.50	7	P	Pn	09 42 04.1	+0.9
PAU				eS	Sn	09 42 34.1	+0.4
MIPR	Malaya Ipel’ka	3.30	4	eP	Pn	09 42 15.6	+1.4
MIPR				S	Sn	09 42 54.6	+1.1
ASAK	Asacha	3.54	16	eP	Pn	09 42 20.0	+2.4
ASAK				S	Sn	09 43 01.9	+2.4
MTVR	Mutnovka	3.69	18	eP	Pn	09 42 21.6	+1.9
MTVR				eS	Sn	09 43 04.9	+1.6
RUS	Russkaya	3.71	21	eP	Pn	09 42 21.0	+1.2
RUS				eS	Sn	09 43 04.1	+0.5
APC	Apacha	3.97	7	P	Pn	09 42 27.2	+3.8
PET	Petropavlovsk	4.29	19	S	Sn	09 43 18.9	+1.0
KOK	Koryaka	4.54	18	P	Pn	09 42 34.1	+2.7
SMAR	Somma	4.55	19	P	Pn	09 42 34.1	+2.5
KRER	Koryakskii	4.58	18	P	Pn	09 42 34.9	+2.9
SDLR	Sedlovina	4.58	19	P	Pn	09 42 34.2	+2.2
SPN	Mys Shipunski	4.72	28	P	Pn	09 42 35.5	+1.8
SPN				S	Sn	09 43 29.5	+1.0
GNL	Ganaly	4.82	11	P	Pn	09 42 38.0	+2.8

GUC 04 09:46:49.1±0.7**, 33°89S×70°19W, h6**km±1km**, MD3.8, ML2.9, 7C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMEL	Las Melosas	0.04	338	⇑iP	Pg	09 46 51.1	+0.4
LMEL				iS	Sg	09 46 52.7	+0.9
LMEL				AML	AML	09 46 53.0	
	comp=E,17μm,0.2s						
SJCH	San Jose de Ma	0.28	330	⇑iP	Pg	09 46 54.6	-0.2
SJCH				iS	Sg	09 46 59.4	+0.8
SJCH				AML	AML	09 47 00.1	
	comp=E,3μm,0.5s						
PCH	Pirque	0.38	314	⇑iP	Pg	09 46 57.4	+0.8
PCH				iS	Sg	09 47 03.0	+1.3
CHCH	Chadas Angostu	0.39	263	⇑iP	Pg	09 46 57.5	+0.6
CHCH				iS	Sb	09 47 03.5	-1.3
CACH	El Canelo	0.41	236	⇓iP	Pg	09 46 57.5	+0.2
CACH				iS	Sg	09 47 04.0	+1.0
ANTU	Antumapu	0.49	310	iP	Pg	09 46 59.4	+0.8
ANTU				iS	Sb	09 47 07.2	-0.4
ANTU				AML	AML	09 47 07.4	
	comp=E,2μm,0.3s						
FSR	Penalolen	0.50	325	iS	Sb	09 47 07.2	-0.7
FSR				AML	AML	09 47 08.5	
	comp=E,234nm,0.5s						
FCH	Farellones	0.56	351	AML	AML	09 47 37.5	
	comp=E,1μm,0.6s						
CLCH	Cerro Calan	0.57	329	⇑iP	Pg	09 47 00.7	+0.5
CLCH				iS	Sb	09 47 09.6	-0.4
CLCH				AML	AML	09 47 11.9	
	comp=E,1μm,0.5s						
CLCH				AML	AML	09 47 12.4	
	comp=E,2μm,0.5s						
SAN	Santiago	0.59	317	⇑iP	Pg	09 47 00.9	+0.5
SAN				iS	Sb	09 47 09.8	-0.6
SAN				AML	AML	09 47 10.3	
	comp=E,740nm,0.3s						
STL	Santa Lucia	0.59	320	eP	Pg	09 47 00.9	+0.4
STL				iS	Sb	09 47 09.9	-0.6
STL				AML	AML	09 47 10.0	
	comp=E,243nm,0.3s						
TACH	Talagante	0.67	290	⇑iP	Pg	09 47 02.5	+0.5
TACH				iS	Sb	09 47 12.5	-0.3
PEL	Peldehue	0.85	330	⇓iP	Pg	09 47 05.4	-0.1
PEL				iS	Sb	09 47 17.8	-0.2
PEL				AML	AML	09 47 22.8	
	comp=E,542nm,0.8s						
LNV	Longovilo	1.02	266	⇓iP	Pg	09 47 08.2	-0.5
LNV				iS	Sb	09 47 22.7	-0.2
ROCH	El Roble	1.14	323	eP	Pg	09 47 10.6	-0.8
ROCH				iS	Sg	09 47 26.6	+0.2
ROCH				AML	AML	09 47 28.0	
	comp=E,613nm,0.6s						
IHA	Instituto Hidr	1.49	305	eP	Pn	09 47 16.4	+0.1
IHA				iS	Sg	09 47 36.7	-0.3
TALC	Talca	1.93	218	eP	Pn	09 47 22.7	+0.3
TALC				iS	Sb	09 47 49.2	+0.4
TALC				AML	AML	09 47 53.6	
	comp=N,2μm,0.4s						
CHNG	Los Chungos	2.28	331	AML	AML	09 48 00.6	
	comp=E,107nm,0.4s						

IDC 04 09:57:13.2±61.0**, 19°47S×176°66W, h0**km**, mb3.6**/3**, mb1 3.8**/3**, mb1mx3.5**/19**, mbtmp3.6**/3**, Error ellipse: s-maj=1136.0km s-min=174.9km az=82.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.37	243	P	P	10 04 45.0	+0.3
	0.8nm,0.6s,baz=79,slow=13,SNR=4.5						
ASAR	Alice Springs	45.98	256	P	P	10 05 38.2	-0.4
	1.0nm,0.8s,baz=101,slow=7.4,SNR=15						
WRA	Warramunga Arr	45.99	261	P	P	10 05 38.5	-0.2
	0.5nm,0.7s,baz=97,slow=7.5,SNR=5.4						

IDC 04 10:06:02.4±1.0**, 6°85N×36°83W, h0**km**, mb4.0**/6**, mb1 4.2**/6**, mb1mx3.8**/26**, mbtmp4.0**/6**, MS3.4**/16**, Ms1 3.4**/16**, ms1mx3.2**/38**, Error ellipse: s-maj=35.0km s-min=22.2km az=143.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	Riachuelo	12.62	176	Pn	Pn	10 09 13.0	+10
	0.5nm,0.3s,baz=346,slow=14,SNR=4.8						
RCBR				Sn	Sn	10 11 30.6	+5.7
	0.5nm,0.3s,baz=290,slow=2.3,SNR=1.6						
BBTS	Babate	21.38	67	LR	LR	10 16 46.1	
	comp=Z,142nm,20.1s,baz=189,slow=30						
BDFB	Brasilia	24.94	206	P	P	10 11 28.9	+1.2
	4.7nm,0.9s,baz=39,slow=6.5,SNR=4.8						
BDFB				LR	LR	10 20 00.8	
	comp=Z,81nm,18.1s,baz=231,slow=34						
SIV	San Ignacio	33.03	226	P	P	10 12 39.2	-0.6
	2.8nm,0.9s,baz=72,slow=13,SNR=10						
SIV				LR	LR	10 26 09.6	
	comp=Z,84nm,18.4s,slow=36						
ROSC	El Rosal	37.35	269	LR	LR	10 29 25.6	
	comp=Z,42nm,18.9s,baz=211,slow=38						
TORD	Torodi Ar. Bea	38.41	78	P	P	10 13 25.9	-0.2
	1.3nm,0.5s,baz=272,slow=9.2,SNR=24						
LPAZ	La Paz	38.58	233	P	P	10 13 27.3	-0.9
	3.1nm,0.6s,baz=41,slow=5.0,SNR=12						
LPAZ				LR	LR	10 28 50.7	
	comp=Z,35nm,21.7s,baz=78,slow=36						
MDT	Midelt	39.53	45	LR	LR	10 27 15.5	
	comp=Z,56nm,19.1s,baz=147,slow=32						
ESDC	Sonseca Array	44.03	37	LR	LR	10 27 43.3	
	comp=Z,44nm,20.4s,baz=210,slow=30						
KEST	Kesra	51.07	49	LR	LR	10 34 35.4	
	comp=Z,25nm,19.6s,baz=270,slow=34						
TKL	Tuckaleechee C	51.63	311	LR	LR	10 32 03.7	
	comp=Z,32nm,18.6s,baz=250,slow=30						
DAVOX	Davos/Dischmat	56.36	37	LR	LR	10 36 01.5	
	comp=Z,48nm,18.7s,baz=262,slow=32						
PLCA	Paso Flores	56.59	210	LR	LR	10 40 56.4	
	comp=Z,88nm,18.0s,baz=174,slow=37						
NOA	NORSAR Array B	64.75	24	LR	LR	10 38 27.2	
	comp=Z,20nm,19.4s,baz=230,slow=30						
TXAR	Lajitas Array	66.50	299	P	P	10 16 55.3	+0.8
	0.3nm,0.6s,baz=102,slow=6.6,SNR=5.0						
BOSA	Boshof	69.37	124	LR	LR	10 39 25.8	
	comp=Z,36nm,20.2s,baz=163,slow=29						
FINES	FINESS Array B	71.27	27	LR	LR	10 47 01.0	
	comp=Z,32nm,19.6s,baz=264,slow=34						
PDAR	Pinedale Array	72.71	313	LR	LR	10 45 09.8	
	comp=Z,27nm,20.9s,baz=259,slow=32						
ARCES	ARCESS Array B	74.16	19	LR	LR	10 47 32.5	
	comp=Z,16nm,18.3s,baz=91,slow=34						
YKA	Yellowknife Ar	78.32	332	P	P	10 18 03.9	-0.4
	0.4nm,0.8s,baz=89,slow=5.1,SNR=4.3						
ILAR	Eielson Array	92.23	336	P	P	10 19 09.1	-4.9
	0.2nm,0.7s,baz=106,slow=6.7,SNR=2.9						

*ISCJB **04** 10:06:18.4±0.3, 37°.23N±0°.03×71°.99E±0°.05, h142km, mb3.8/16, Error ellipse: s-maj=6.2km s-min=3.7km az=168.5*
*IDC **04** 10:06:19.8±1.1, 37°.17N×71°.89E, h138km±8km, mb3.6/15, mb1 3.7/19, mb1mx3.6/32, mbtmp3.6/19, Error ellipse: s-maj=17.8km s-min=14.1km az=168.0*
*NNC **04** 10:06:20.5±5.2, 37°.48N×71°.53E, h120km±61km, mb3.5, mpv4.0, Error ellipse: s-maj=42.6km s-min=26.0km az=5.0*
ISC 04 10:06:19.2±0.5**, 37°.20N**±0°.05×**72°.11E**±0°.06**, h142km, n58, σ1ˢ41**/62**, mb3.8**/16**, 6C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.38	183	P	Pn	10 07 12.8	+1.5
CEP				S	Sn	10 07 52.0	+0.5
THW	Thamme Wali	4.41	184	P	Pn	10 07 25.0	+0.3
AML	Almayashu	5.07	13	P	Pn	10 07 33.9	+0.1
	SNR=68						
UCH	Uchtor	5.35	19	P	Sn	10 08 36.8	-1.8
	SNR=15						
KZA	Kyzart	5.44	25	P	Pn	10 07 39.2	+0.5
	SNR=34						
EKS2	Erkin-Say	5.60	13	P	Pn	10 07 41.0	+0.5
	SNR=9.5						
THN	Thein Dam	5.60	147	ePKP	Pn	10 07 41.1	+0.5
THN				eS	Sn	10 08 41.3	-2.7
DLH	Dalhousie	5.62	145	ex	x	10 07 50.0	
DLH				eS	Sn	10 08 41.0	-3.9
AAK	Ala-Archa	5.72	18	P	Pn	10 07 43.3	+1.0
	SNR=25						
AAK	Ala-Archa	5.72	18	P	Pn	10 07 43.2	+1.0
	7.9nm,0.3s,baz=166,slow=6.2,SNR=34						
AAK				S	Sn	10 08 45.8	-1.3
	6.6nm,0.3s,baz=92,slow=3.8,SNR=5.3						
ULHL	Ulahol	5.96	31	P	Pn	10 07 46.4	+1.0
	SNR=22						
KK31	Karatay Array	6.02	349	⇑P	Pn	10 07 44.0	-2.1
	4.5nm,0.2s,baz=177,slow=13,SNR=115						
KK31				⇑S	Sn	10 08 46.3	-7.7
	11nm,0.3s,baz=174,slow=23,SNR=6.0						
CHMS	Chumysh	6.13	18	P	Pn	10 07 48.4	+0.8
	SNR=10						
TKM2	Tokmak 2	6.30	24	⇑P	Pn	10 07 50.0	-0.1
	8.5nm,0.5s						
TKM2				⇓S	Sn	10 09 01.5	+0.4
	6.9nm,0.6s						
TKM2	Tokmak 2	6.30	24	P	Pn	10 07 51.2	+1.2
	SNR=22						
SDNR	Sundarnagar	6.96	143	ePKP	Pn	10 08 01.0	+2.2
SDNR				eS	Sn	10 09 15.0	-1.7
SMLA	Simla	7.36	144	iP	Pn	10 08 05.8	+1.7
SMLA				iS	Sn	10 09 23.0	-3.3
SMLA				⇓E		10 09 28.6	
	comp=N,3μm,0.4s						
SMLA				⇓E		10 09 29.6	
	comp=E,3μm,0.3s						
NDI	New Delhi	9.51	152	eS	Sn	10 10 11.0	-7.3
KHET	Khetri	9.62	160	eS	Sn	10 10 13.4	-7.5
KHET				AML	AML	10 10 16.1	
	comp=E,175nm,0.1s						
KHET				AML	AML	10 10 16.1	
	comp=N,155nm,0.2s						
AGRA	Agra	11.10	152	ex	P	10 09 09.0	+6.4
AGRA				eS	Sn	10 10 49.6	-6.8
AGRA				AML	AML	10 11 01.2	
	comp=N,54nm,0.3s						
AGRA				AML	AML	10 11 01.3	
	comp=E,67nm,0.4s						
MK31	Makanchi Array	12.20	35	⇓P	Pn	10 09 07.7	-0.6
	comp=E,1.6nm,0.7s,baz=212,slow=10,SNR=14						
MKAR	Makanchi Array	12.20	35	P	Pn	10 09 09.6	+1.3
	comp=E,0.1nm,0.3s,baz=216,slow=14,SNR=5.7						
DANN	Dangsing	13.18	129	eP	Pn	10 09 21.5	+0.2
	comp=E,17nm,0.3s						
KOLN	Koldanda	13.50	131	eP	Pn	10 09 26.1	+0.8
	comp=E,21nm,0.4s						
KURBB	Kurchatov Arra	14.18	17	P	P	10 09 38.0	+1.3
	comp=E,0.2nm,0.3s,baz=206,slow=10,SNR=7.6						
DMN	Daman	14.54	127	eP	Pn	10 09 38.5	-0.1
	comp=E,17nm,0.3s						
PKIN	Phulchoki	14.75	127	eP	P	10 09 42.6	-0.9
	comp=E,15nm,0.4s						
PKI	Pulchoki	14.76	127	eP	P	10 09 41.8	-1.9
	comp=E,14nm,0.4s						
GUN	Gumba	14.84	125	eP	P	10 09 42.8	-1.8
	comp=E,58nm,0.9s						
AB31	Akbulak array	14.94	328	⇓P	Pn	10 09 38.3	-4.7
	comp=E,0.9nm,0.3s,baz=139,slow=13,SNR=8.2						
VOSK	Vostochnaya	15.54	357	⇑P	Pn	10 09 51.1	+0.6
	comp=E,2.0nm,0.8s						
BVA0	Borovoye Array	15.87	356	⇓P	Pn	10 09 53.9	-0.6
	comp=E,1.3nm,0.6s,baz=0.0,slow=0.1,SNR=5.9						
BVAR	Borovoye Array	15.87	356	P	Pn	10 09 52.8	-1.8
	comp=E,0.5nm,0.3s,baz=193,slow=12,SNR=5.7						
ZRNK	Zerenda	15.90	353	⇑P	Pn	10 09 53.3	-1.6
	comp=E,2.1nm,0.6s						
RAMN	Ramite	15.96	126	eP	P	10 09 56.7	-0.2
	comp=E,25nm,0.6s						
TAPN	Taplejung	16.43	122	eP	P	10 10 03.1	+1.0
	comp=E,7.9nm,0.3s						
ODAN	Odare	16.54	124	eP	P	10 10 04.8	+1.6
	comp=E,9.7nm,0.4s						
AKTO	Aktyubinsk	16.65	327	⇑P	P	10 10 01.6	-2.4
	comp=E,6.6nm,0.6s						
AKTO	Aktyubinsk	16.65	327	P	P	10 10 02.2	-1.8
	comp=E,1.4nm,0.3s,baz=135,slow=12,SNR=27						
AKTO				S	S	10 12 51.1	-18
	comp=E,0.2nm,0.3s,baz=31,slow=21,SNR=2.3						
ZALV	Zalesovo Beam	18.91	24	P	Pn	10 10 31.0	0.0
	comp=E,1.2nm,0.3s,baz=213,slow=9.5,SNR=7.6						
KBZ	Khabaz	23.09	296	P	P	10 11 11.9	-0.4
	comp=E,1.1nm,0.6s,baz=102,slow=9.3,SNR=2.3						
SONM	Songino Array	27.20	56	P	P	10 11 52.6	+2.9
	comp=E,0.2nm,0.5s,baz=238,slow=8.3,SNR=2.7						
BRTR	Keskin Array B	30.08	287	P	P	10 12 15.2	0.0
	comp=E,1.1nm,0.7s,baz=121,slow=7.4,SNR=6.5						
AKASG	Malin Array Be	33.21	308	P	P	10 12 42.6	+0.3
	comp=E,0.8nm,0.3s,baz=79,slow=7.3,SNR=3.1						
AKASG				pP	pP	10 13 10.4	-2.4
	comp=E,0.5nm,0.5s,baz=96,slow=9.2,SNR=1.5						
MLR	Muntele Rosu	35.23	298	P	P	10 13 00.8	+0.9
	comp=E,0.4nm,0.5s,baz=218,slow=14,SNR=4.4						
JOF	Joensuu	35.72	329	ep	P	10 13 04.5	+0.8
	comp=E,5.6nm,0.5s						
FINES	FINESS Array B	37.41	325	P	P	10 13 18.4	+0.3
	comp=E,2.6nm,0.3s,baz=98,slow=8.5,SNR=6.8						
ARCES	ARCESS Array B	40.84	337	P	P	10 13 47.2	+0.7
	comp=E,1.8nm,0.4s,baz=116,slow=8.4,SNR=15						
HFS	Hagfors	43.07	321	P	P	10 14 04.8	+0.1
	comp=E,8.8nm,0.4s,baz=98,slow=11,SNR=58						
HFS				pP	pP	10 14 36.4	0.0
	comp=E,1.4nm,0.6s,baz=130,slow=16,SNR=1.1						
NB2	NORSAR Subarra	44.36	323	P	P	10 14 15.0	-0.1
	comp=Z,2.2nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.36	323	P	P	10 14 14.7	-0.3
	comp=Z,2.2nm,0.5s,baz=94,slow=7.7,SNR=8.5						
KMBO	Kilima Mbogo	49.96	228	P	P	10 14 59.7	+0.5
	comp=Z,1.0nm,0.5s,baz=45,slow=19,SNR=3.3						
EKA	Eskdalemuir Ar	52.41	316	P	P	10 15 16.8	+0.1
	comp=Z,0.4nm,0.3s,baz=79,slow=7.5,SNR=1.5						
ESDC	Sonseca Array	57.92	298	P	P	10 15 56.5	0.0
	comp=Z,1.6nm,0.5s,baz=59,slow=7.1,SNR=6.5						
TORD	Torodi Ar. Bea	66.62	269	P	P	10 16 53.3	-1.5
	comp=Z,0.6nm,0.6s,baz=46,slow=6.3,SNR=7.9						
ILAR	Eielson Array	73.86	16	pP	pP	10 18 12.6	-0.2
	comp=Z,0.4nm,0.9s,baz=332,slow=4.2,SNR=4.8						
YKA	Yellowknife Ar	80.50	3	P	P	10 18 16.5	+1.5
	comp=Z,0.6nm,0.4s,baz=351,slow=5.4,SNR=8.5						
YKA				pP	pP	10 18 51.6	+1.3
	comp=Z,0.5nm,0.7s,baz=347,slow=5.1,SNR=2.6						
WRA	Warramunga Arr	81.61	123	P	P	10 18 22.7	+1.2
	comp=Z,0.4nm,0.8s,baz=327,slow=5.0,SNR=2.6						

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*IDC **04** 10:09:17.2±10.0, 48°.71N×154°.18E, h165km±158km, mb2.9/2, mb1 3.1/4, mb1mx2.7/27, mbtmp2.8/4, ML3.2/2, Error ellipse: s-maj=308.6km s-min=51.0km az=141.0*
*KRSC **04** 10:09:19.2±0.6, 49°.45N×153°.96E, h281km±30km, ML4.0*
*MOS **04** 10:09:19.0±1.0, 49°.88N×152°.84E, h245km, mb4.2/1, Error ellipse: s-maj=99.9km s-min=16.1km az=57.1*
ISC 04 10:09:22.6±1.5**, 49°.6N**±0°.2×**154°.0E**±0°.3**, h250km, n19, σ1ˢ91**/26**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.71	51	eP	Pn	10 10 03.1	+0.7
SKR				iS	S	10 10 36.0	+2.2
MIPR	Malaya Ipel'ka	3.16	32	iP	Pn	10 10 17.8	+1.0
ASAK	Asacha	3.68	40	eP	Pn	10 10 25.5	+2.8
APC	Apacha	3.84	29	eP	Pn	10 10 25.7	+1.3
MTVR	Mutnovka	3.88	41	P	Pn	10 10 26.5	+1.5
MTVR				iS	S	10 11 15.6	+1.1
RUS	Russkaya	3.98	43	eP	Pn	10 10 28.2	+2.1
RUS				eS	S	10 11 17.7	+1.2
RUS	Russkaya	3.98	43	PN	Pn	10 10 28.2	+2.1
RUS				S	S	10 11 17.7	+1.2
PETK	Petropavlovsk-	4.17	32	PN	Pn	10 10 29.9	+1.5
PETK	Petropavlovsk-	4.17	32	P	Pn	10 10 29.9	+1.5
	0.2nm,0.3s,baz=215,slow=12,SNR=6.6						
SDLR	Sedlovina	4.75	38	eP	Pn	10 10 38.0	+2.7
NLC	Nalytchevo	4.86	41	P	Pn	10 10 37.6	+1.1
NLC				iS	S	10 11 33.6	-1.9
NLC	Nalytchevo	4.86	41	PN	Pn	10 10 37.6	+1.1
NLC				S	S	10 11 33.6	-1.9
SPN	Mys Shipunski	5.11	45	eP	Pn	10 10 41.0	+1.4
SPN				eS	S	10 11 38.8	-2.3
SPN	Mys Shipunski	5.11	45	PN	Pn	10 10 41.0	+1.4
MKZ	Mys Kozlova	6.84	41	eP	Pn	10 11 01.7	+0.6
MKZ				eS	S	10 12 15.7	-4.4
MKZ	Mys Kozlova	6.84	41	PN	Pn	10 11 01.7	+0.6
MJAR	Matsushiro Arr	17.41	227	P	P	10 13 03.0	-5.7
	0.3nm,0.3s,baz=21,slow=10.0,SNR=5.0						
WRA	Warramunga Arr	71.43	200	P	P	10 20 14.1	-1.6
	0.2nm,0.8s,baz=21,slow=6.9,SNR=2.8						
ASAR	Alice Springs	75.13	199	P	P	10 20 36.6	-0.6
	0.2nm,0.5s,baz=15,slow=5.1,SNR=5.1						

IDC 04 10:18:41.6±1.3**, 13°.09S**×**166°.45E, h0km, mb4.1**/10**, mb1 4.2**/11**, mb1mx4.0**/21**, mbtmp4.1**/11**, ML4.9**/1**, MS3.6**/6**, Ms1 3.6**/6**, ms1mx3.2**/26**, Error ellipse: s-maj=34.8km s-min=24.7km az=89.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	7.34	299	Pn	Pn	10 20 29.7	-0.4
	17nm,0.3s,baz=165,slow=8.6,SNR=4.8						
HNR				Sn	Sn	10 21 52.5	-1.7
	8.7nm,0.3s,baz=227,slow=21,SNR=1.7						
DZM	Mont Dzumac	8.93	180	Pn	Pn	10 20 54.9	+2.8
	0.2nm,0.3s,baz=0.0,slow=20,SNR=4.4						
DZM				Sn	Sn	10 22 32.3	-1.2
	0.1nm,0.3s,baz=137,slow=22,SNR=0.8						
DZM				LR	LR	10 23 23.9	
	comp=Z,78nm,21.2s,baz=214,slow=32						
STKA	Stephens Creek	29.49	227	LR	LR	10 36 18.0	
	comp=Z,90nm,21.1s,baz=205,slow=36						
RPZ	Rata Peaks	30.77	173	LR	LR	10 35 47.2	
	comp=Z,112nm,21.2s,baz=326,slow=33						
WRA	Warramunga Arr	31.49	253	P	P	10 25 05.2	-0.2
	0.5nm,0.7s,baz=84,slow=8.6,SNR=4.4						
ASAR	Alice Springs	32.55	246	P	P	10 25 14.8	+0.1
	0.8nm,0.7s,baz=69,slow=9.8,SNR=16						
ASAR				LR	LR	10 38 14.1	
	comp=Z,112nm,19.8s,baz=50,slow=36						
MJAR	Matsushiro Arr	56.09	333	P	P	10 28 22.4	-0.4
	2.0nm,0.8s,baz=167,slow=9.0,SNR=3.2						
KSRS	Korea Array	61.95	326	P	P	10 29 02.2	-1.2
	1.5nm,0.9s,baz=131,slow=6.4,SNR=5.8						
USRK	Ussuriysk Arra	65.07	333	P	P	10 29 24.6	+0.7
	3.3nm,0.8s,baz=154,slow=6.4,SNR=5.2						
CMAR	Chiang Mai Arr	73.56	294	P	P	10 30 18.5	+1.4
	0.6nm,0.5s,baz=131,slow=4.9,SNR=2.7						
QSPA	South Pole Qui	76.92	180	P	P	10 30 35.3	-0.4
	2.5nm,1.0s,baz=29,slow=2.5,SNR=5.1						
QSPA				LR	LR	10 58 18.2	
	comp=Z,169nm,19.6s,baz=245,slow=31						
SONM	Songino Array	80.71	324	P	P	10 30 57.1	+0.3
	0.8nm,0.5s,baz=132,slow=4.8,SNR=6.2						
ILAR	Eielson Array	85.23	18	LR	LR	11 03 42.8	
	comp=Z,36nm,19.1s,baz=346,slow=32						
MKAR	Makanchi Array	95.47	317	P	P	10 32 08.6	+0.1
	1.1nm,0.6s,baz=93,slow=7.5,SNR=8.5						
ZALV	Zalesovo Beam	95.61	324	P	P	10 32 07.8	-1.0
	1.1nm,0.6s,baz=101,slow=6.2,SNR=4.3						

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*SKO **04** 10:22:08.7, 41°.30N×22°.69E, h11km, M2.5, ML2.9*
*ATH **04** 10:22:08.8, 41°.29N×22°.70E, h21km±1km, MD3.1/7*
*SOF **04** 10:22:08.7, 41°.32N×22°.69E, h7km, MD2.7*
*ISCJB **04** 10:22:08.9±0.4, 41°.28N±0°.02×22°.70E±0°.02, h2km±3km, Error ellipse: s-maj=2.9km s-min=2.7km az=158.4*
*THE **04** 10:22:09.2, 41°.30N×22°.69E, h2km±1km, ML2.7/8, Error ellipse: s-maj=1.8km s-min=0.6km az=192.0*
*CSEM **04** 10:22:09.3±0.1, 41°.28N×22°.70E, h2km, ML2.4, Error ellipse: s-maj=2.8km s-min=2.6km az=24.0*
*BEO **04** 10:22:11.9±0.9, 41°.33N×22°.60E, h0km, ML2.4/4*
ISC 04 10:22:09.3±0.8**, 41°.29N**±0°.02×**22°.68E**±0°.01**, h6km**±6km**, n67, σ0ˢ68**/110**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	292	P	Pg	10 22 11.0	-0.3
VAY				S	Sg	10 22 12.9	+0.2
VAY	Valandovo	0.09	292	ePg	Pg	10 22 11.0	-0.3
VAY				eSg	Sg	10 22 13.2	+0.5
VAY	Valandovo	0.09	292	ePg	Pg	10 22 11.0	-0.3
VAY				iSg	Sg	10 22 12.9	+0.2
VAY				eLg	Lg	10 22 13.0	
	comp=E,9μm,0.3s						
VAY				eLg	Lg	10 22 13.1	
	comp=N,7μm,0.2s						
VAY	Valandovo	0.09	292	P	Pg	10 22 11.0	-0.3
VAY	Valandovo	0.09	292	ePg	Pg	10 22 11.5	+0.2
VAY				S	Sg	10 22 12.9	+0.2
VAY				eSg	Sg	10 22 13.2	+0.5
VAY				eLg	Lg	10 22 13.5	
	comp=N,7μm,0.2s						
KNT	Kendrikon	0.21	128	P	Pg	10 22 13.6	+0.2
KNT				S	Sg	10 22 16.6	+0.5
KNT	Kendrikon	0.21	128	P	Pg	10 22 13.6	+0.2
KNT				S	Sg	10 22 16.6	+0.5
GRG	Griva	0.39	213	P	Pg	10 22 17.0	+0.1
GRG				S	Sg	10 22 22.8	+0.7
GRG	Griva	0.39	213	ePB	Pg	10 22 17.0	+0.1
GRG				eSB	Sg	10 22 22.9	+0.8
GRG	Griva	0.39	213	P	Pg	10 22 17.0	+0.1
GRG				S	Sg	10 22 22.8	+0.7
KKB	Krupnik	0.65	27	iPg	Pg	10 22 21.6	-0.3
KKB	Krupnik	0.65	27	iPg	Pg	10 22 21.6	-0.3
SOH	Sokhos	0.69	132	P	Pg	10 22 22.0	-0.5
SOH				S	Sg	10 22 32.2	+0.7
SOH	Sokhos	0.69	132	ePN	Pg	10 22 22.1	-0.5
SOH				eSN	Sg	10 22 31.3	-0.2
SOH	Sokhos	0.69	132	P	Pg	10 22 22.0	-0.5
SOH				S	Sg	10 22 32.2	+0.7
THE	Thessaloniki	0.69	162	P	Pg	10 22 22.2	-0.3
THE				S	Sg	10 22 31.2	-0.3
THE	Thessaloniki	0.69	162	P	Pg	10 22 22.2	-0.3
THE				S	Sg	10 22 31.2	-0.3
SRS	Serrai	0.71	104	P	Pg	10 22 22.4	-0.5
SRS				S	Sg	10 22 32.1	0.0
SRS	Serrai	0.71	104	P	Pg	10 22 22.4	-0.5
SRS				S	Sg	10 22 32.1	0.0
HORT	Hortiatis	0.76	155	P	Pg	10 22 23.6	-0.3
HORT				S	Sg	10 22 34.6	+0.9
HORT	Hortiatis	0.76	155	P	Pg	10 22 23.6	-0.3
HORT				S	Sg	10 22 34.6	+0.9
MMB	Musomiste	0.84	69	iPg	Pg	10 22 25.1	-0.4
MMB	Musomiste	0.84	69	iPg	Pg	10 22 25.1	-0.4
NVR	Nevrokopi	0.89	86	P	Pg	10 22 25.8	-0.6
NVR				S	Sg	10 22 38.1	+0.1
NVR	Nevrokopi	0.89	86	ePN	Pg	10 22 25.9	-0.5
NVR				eSN	Sg	10 22 37.7	-0.3
NVR	Nevrokopi	0.89	86	P	Pg	10 22 25.8	-0.6
NVR				S	Sg	10 22 38.1	+0.1
BIA	Bitola	1.06	256	P	Pg	10 22 28.6	-1.0
BIA				S	Sg	10 22 43.4	0.0
BIA	Bitola	1.06	256	P	Pg	10 22 28.6	-1.0
BIA				S	Sg	10 22 43.4	0.0
PLG	Polygyros	1.08	147	P	Pg	10 22 29.5	-0.5
PLG				S	Sb	10 22 45.0	+0.2
PLG	Polygyros	1.08	147	ePN	Pg	10 22 29.3	-0.7
PLG				eSN	Sg	10 22 43.6	-0.5
PLG	Polygyros	1.08	147	P	Pg	10 22 29.5	-0.5
PLG				S	Sb	10 22 45.0	+0.2
FNA	Florina	1.11	243	P	Pg	10 22 29.7	-0.9
FNA				S	Sb	10 22 45.6	0.0
FNA	Florina	1.11	243	ePN	Pg	10 22 30.0	-0.6
FNA	Florina	1.11	243	P	Pg	10 22 29.7	-0.9
FNA				S	Sb	10 22 45.6	0.0
KZN	Kozani	1.20	216	P	Pb	10 22 32.5	+0.1
KZN				S	Sn	10 22 49.6	+0.3
KZN	Kozani	1.20	216	ePN	Pb	10 22 32.6	+0.1
KZN	Kozani	1.20	216	P	Pb	10 22 32.5	+0.1
KZN				S	Sn	10 22 49.6	+0.3
VTS	Vitosha	1.36	17	P	Pn	10 22 35.0	0.0
VTS				S	Sb	10 22 52.8	-0.2
VTS	Vitosha	1.36	17	iP	Pn	10 22 34.9	0.0
VTS	Vitosha	1.36	17	ePg	Pg	10 22 36.0	+0.6
VTS				eSg	Sn	10 22 54.2	+0.7
VTS	Vitosha	1.36	17	P	Pn	10 22 35.0	0.0
VTS	Vitosha	1.36	17	ePg	Pg	10 22 36.0	+0.6
VTS				S	Sb	10 22 52.8	-0.2
VTS				eSg	Sn	10 22 54.2	+0.7
OUR	Ouranopolis	1.37	134	P	Pb	10 22 35.1	-0.2
OUR				S	Sg	10 22 54.8	+1.4
OUR	Ouranopolis	1.37	134	P	Pb	10 22 35.1	-0.2
OUR				S	Sg	10 22 54.8	+1.4
KAVA	Kavala	1.41	101	P	Pn	10 22 35.2	-0.4
KAVA				S	Sn	10 22 54.3	-0.2
KAVA	Kavala	1.41	101	P	Pn	10 22 35.2	-0.4
KAVA				S	Sn	10 22 54.3	-0.2
RZN	Rozhen	1.58	75	iP	Pb	10 22 39.4	+0.4
RZN	Rozhen	1.58	75	iP	Pb	10 22 39.4	+0.4
BARS	Barje	1.66	337	ePn	Pb	10 22 39.9	-0.4
BARS				eSn	Sg	10 23 03.0	+0.4
BARS	Barje	1.66	337	ePn	Pb	10 22 39.9	-0.4
BARS				eSn	Sg	10 23 03.0	+0.4
PGB	Panagyurishte	1.68	41	iPg	Pb	10 22 40.6	-0.1
PGB	Panagyurishte	1.68	41	iPg	Pb	10 22 40.6	-0.1
PHP	Peshkopia	1.73	284	P	Pn	10 22 39.9	-0.1
PHP				S	Sb	10 23 03.6	+0.1
PHP	Peshkopia	1.73	284	P	Pn	10 22 39.9	-0.1
PHP				S	Sb	10 23 03.6	+0.1
THL	Klokotos Trika	1.79	197	ePN	Pn	10 22 40.7	-0.1
ZAPS	Zavoj	1.98	359	eSn	Sb	10 23 10.5	-0.4
KDZ	Kurdzhali	2.09	79	iPg	Pb	10 22 47.0	-0.6
KDZ	Kurdzhali	2.09	79	iPg	Pb	10 22 47.0	-0.6
MPEP	Malo Peshtene	2.21	20	iPg	Pg	10 22 51.2	-0.5
SELS	Selova	2.25	330	ePn	Pb	10 22 50.2	-0.2
AGG	Agios Georgios	2.28	187	ePN	Pn	10 22 47.5	0.0
ALN	Alexandroupoli	2.57	98	ePN	Pn	10 22 50.6	-0.9
BOLS	Boljevac	2.60	348	ePn	Pb	10 22 55.4	-0.8
BOLS				eSn	Sn	10 23 25.5	+1.8
GRUS	Gruza	2.98	331	ePn	Pb	10 23 00.2	-2.5
GRUS	Gruza	2.98	331	ePn	Pb	10 23 00.2	-2.5
DIVS	Divibare	3.44	326	ePn	Pn	10 23 05.5	+2.0
DIVS	Divibare	3.44	326	ePn	Pn	10 23 05.5	+2.0

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*NIED **04** 10:23:00, 43°.70N×147°.30E, h50km, Mw4.1 Best double couple: $M_0$1.45000×10^15 NP1:ϕ_s182.00000°, δ70.00000°, λ59.00000°. NP2:ϕ_s62.00000°, δ37.00000°, λ144.00000°.*
*MOS **04** 10:23:16.5±1.1, 43°.76N×147°.40E, h53km, mb4.3/13, Error ellipse: s-maj=11.9km s-min=8.3km az=78.2*
*JMA **04** 10:23:17.7±0.2, 43°.65N×147°.27E, h29km, M4.3*
JMA Felt I J1.
*ISCJB **04** 10:23:17.1±0.7, 43°.77N±0°.05×147°.36E±0°.06, h55km±6km, mb4.0/25, MS3.1/2, Error ellipse: s-maj=9.5km s-min=4.9km az=138.9*
*IDC **04** 10:23:17.9±0.5, 43°.83N×147°.31E, h45km±4km, mb3.7/19, mb1 3.9/24, mb1mx3.9/31, mbtmp3.7/24, MS3.0/5, Ms1 3.0/5, ms1mx2.8/32, Error ellipse: s-maj=16.1km s-min=11.1km az=150.0*
*SKHL **04** 10:23:18.9±0.1, 43°.85N×147°.50E, h67km±13km, mb4.8/3*
ISC 04 10:23:17.8±0.5**, 43°.79N**±0°.05×**147°.37E**±0°.05**, h46km**±4km**, h45km:pP-P, n68, σ1ˢ15**/92**, mb4.0**/25**, 4C-8D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.11	283d	iPN	Pn	10 23 36.8	-0.1
YUK				iS	Sn	10 23 50.4	-0.7
YUK				pmax	pmax		
	comp=E,493nm,0.2s						
YUK				pmax	pmax		
	comp=N,446nm,0.1s						
YUK				pmax	pmax		
	comp=Z,1μm,0.1s						
YUK				smax	smax		
	comp=N,4μm,0.3s						
YUK				smax	smax		
	comp=E,6μm,0.3s						
YUK	Yuzh-Kuril'sk	1.11	283⇓	iP	Pn	10 23 36.9	0.0
YUK				AMB	AMB	10 23 38.2	
	comp=E,450nm,0.2s						
YUK				AMB	AMB	10 23 38.2	
	comp=E,490nm,0.2s						
YUK				AMB	AMB	10 23 38.2	
	comp=E,1μm,0.2s						
YUK				iS	Sn	10 23 50.5	-0.7
YUK				A	A	10 23 52.0	
	comp=E,4μm,0.3s						
YUK				A	A	10 23 52.0	
	comp=E,6μm,0.3s						
NEM2	Nemuro 2	1.25	251	P	Pn	10 23 38.2	-0.6
NEM2				eS	Sn	10 23 52.8	-1.6
KUR	Kuril'sk	1.49	14c	iPN	Pn	10 23 43.0	+0.9
KUR				iS	Sn	10 24 00.9	+0.6
KUR				pmax	pmax		
	comp=E,88nm,0.2s						
KUR				pmax	pmax		
	comp=Z,284nm,0.3s						
KUR				pmax	pmax		
	comp=N,35nm,0.3s						
KUR				smax	smax		
	comp=N,823nm,0.4s						
KUR				smax	smax		
	comp=E,618nm,0.2s						
KUR	Kuril'sk	1.49	14⇑	iP	Pn	10 23 43.0	+0.9
KUR				AMB	AMB	10 23 44.5	
	comp=E,460nm,0.5s						
KUR				iS	Sn	10 24 01.0	+0.6
KUR				A	A	10 24 03.0	
	comp=E,1μm,0.3s						
KUR				A	A	10 24 03.0	
	comp=E,2μm,0.4s						
JRA	Rausu	1.63	276	P	Pn	10 23 44.4	+0.5
JRA				eS	Sn	10 24 03.8	+0.1
JNK	Nakash	1.93	265	P	Pn	10 23 48.2	+0.1
JNK				eS	Sn	10 24 10.7	-0.4
JAK	Akkeshi	2.10	249	P	Pn	10 23 50.1	-0.3
JAK				eS	Sn	10 24 13.9	-1.4
JTKR	Abashiri--Toko	2.51	275	P	Pn	10 23 57.2	+1.2
JTKR				eS	Sn	10 24 27.7	+2.4
JAR	Ashorobuto	2.66	261	P	Pn	10 23 58.9	+0.8
JAR				eS	Sn	10 24 29.3	+0.2
JOB	Onbets	2.72	252	P	Pn	10 23 59.4	+0.5
JOB				eS	Sn	10 24 30.5	-0.1
JMP	Maruseppu	2.90	276	P	Pn	10 24 02.3	+0.8
JCH	Churui	3.15	250	P	Pn	10 24 04.8	0.0
JCH				eS	Sn	10 24 40.2	-1.0
JKK2	Kamakawa 2	3.34	273	P	Pn	10 24 09.7	+2.2
ASAJ	Asahikawa	3.46	277	P	Pn	10 24 11.2	+2.1
JFR	Furan	3.53	261	P	Pn	10 24 12.0	+2.0
JFR				eS	Sn	10 24 51.3	+0.8
JEM	Erimo	3.56	242	P	Pn	10 24 12.3	+1.8
JEM				eS	Sn	10 24 53.0	+1.7
ERM	Erimo	3.56	242d	iPN	Pn	10 24 12.4	+1.9
JSE	Soyaes	3.62	291	P	Pn	10 24 12.7	+1.4
JNBK	Urakawa-nobuka	3.70	248	P	Pn	10 24 12.4	0.0
YSS	Yuzh-Sakhalins	4.54	316⇑	iPN	Pn	10 24 26.8	+3.0
YSS				eS	Sn	10 25 15.0	-0.3
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				smax	smax		
	comp=N,50nm,0.7s						
YSS				smax	smax		
	comp=E,70nm,0.8s						
YSS	Yuzh-Sakhalins	4.54	316⇑	iP	Pn	10 24 26.8	+3.0
YSS				AMB	AMB	10 24 27.2	
	comp=E,20nm,0.8s						
YSS				eS	Sn	10 25 15.0	-0.3
YSS				A	A	10 25 17.0	
	comp=E,50nm,0.7s						
YSS				A	A	10 25 17.0	
	comp=E,70nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SKR	**Severo-Kuril's**	**9.11**	**38**	*e*PN	**Pn**	**10 25 23.6**	**-2.9**
SKR	**Severo-Kuril's**	**9.11**	**38**	*e*P	**Pn**	**10 25 23.6**	**-2.9**
HABR	**Khabarovsk**	**9.75**	**303**	*e*PN	**Pn**	**10 25 32.6**	**-2.6**
HABR				pmax	pmax		
	comp=E,116nm,2.8s						
HABR				pmax	pmax		
	comp=N,115nm,2.0s						
HABR				pmax	pmax		
	comp=Z,96nm,2.0s						
HABR				MLR	MLR		
	comp=Z,81nm,17.0s						
MJAR	**Matsushiro Arr**	**10.07**	**227**	P	**Pn**	**10 25 39.0**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=27,slow=15,SNR=7.5						
MJAR				LR	LR	10 30 38.0	
	comp=Z,37nm,18.2s,baz=50,slow=44						
USRK	**Ussuriysk Arra**	**11.08**	**277**	P	**Pn**	**10 25 51.4**	**-2.1**
	comp=Z,0.2nm,0.3s,baz=93,slow=14,SNR=2.7						
USRK				LR	LR	10 30 21.6	
	comp=Z,90nm,18.0s,baz=124,slow=38						
PETK	**Petropavlovsk-**	**11.57**	**33**	*e*PN	**Pn**	**10 26 00.2**	**+0.1**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**11.57**	**33**	P	**Pn**	**10 25 59.7**	**-0.4**
	comp=Z,1.4nm,0.3s,baz=201,slow=14,SNR=25						
KSRS	**Korea Array**	**16.04**	**253**	P	**Pn**	**10 26 59.1**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=72,slow=11,SNR=4.4						
KSRS				LR	LR	10 33 48.2	
	comp=Z,27nm,18.9s,baz=353,slow=39						
FX1	**Attu Island--F**	**19.32**	**53**	P	**P**	**10 27 39.2**	**+0.2**
	comp=Z,1.4nm,0.3s,baz=286,slow=14,SNR=6.4						
SEY	**Seymchan**	**19.40**	**7**	⇓*i*P	**P**	**10 27 38.3**	**-1.4**
BILL	**Bilibino**	**26.28**	**16**	⇓*e*P	**P**	**10 28 48.1**	**-0.4**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**28.60**	**293**	P	**P**	**10 29 10.4**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=82,slow=9.0,SNR=6.3						
SONM				LR	LR	10 41 12.5	
	comp=Z,43nm,18.9s,baz=69,slow=38						
TIXI	**Tiksi**	**29.36**	**348**	*de*P	**P**	**10 29 15.9**	**0.0**
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KDAK	**Kodiak Island**	**39.11**	**47**	P	**P**	**10 30 39.9**	**-0.4**
	comp=Z,4.7nm,0.6s,baz=324,slow=14,SNR=3.8						
ZALV	**Zalesovo Beam**	**41.10**	**307**	PcP	**PcP**	**10 32 54.3**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=52,slow=2.4,SNR=5.2						
ILAR	**Eielson Array**	**41.37**	**36**	P	**P**	**10 30 58.8**	**-0.1**
	comp=Z,4.7nm,0.9s,baz=254,slow=6.5,SNR=52						
MKAR	**Makanchi Array**	**44.71**	**298**	P	**P**	**10 31 25.9**	**-0.2**
MKAR				*PP	**pP**	**10 31 38.2**	**-0.5**
MKAR						10 33 07.8	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**44.71**	**298**	P	**P**	**10 31 25.9**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=85,slow=11,SNR=5.1						
MKAR				pP	**pP**	**10 31 38.2**	**-0.5**
	comp=Z,0.6nm,0.6s,baz=76,slow=8.9,SNR=5.3						
MKAR				PcP	**PcP**	**10 33 07.8**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=62,slow=4.1,SNR=4.5						
KURK	**Kurchatov**	**45.64**	**304**	P	**P**	**10 31 34.6**	**+1.2**
KURK						10 33 10.8	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**45.72**	**304**	P	**P**	**10 31 34.6**	**+0.5**
	comp=Z,0.3nm,0.3s,baz=71,slow=9.3,SNR=3.5						
KURBB				PcP	**PcP**	**10 33 10.8**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=82,slow=3.2,SNR=6.4						
CMAR	**Chiang Mai Arr**	**47.68**	**254**	P	**P**	**10 31 50.4**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=43,slow=7.6,SNR=5.8						
CMAR				LR	LR	10 51 41.6	
	comp=Z,21nm,18.6s,baz=195,slow=36						
AAK	**Ala-Archa**	**51.48**	**296**	⇓*e*P	**P**	**10 32 19.2**	**+0.5**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.6s						
YKA	**Yellowknife Ar**	**55.69**	**34**	P	**P**	**10 32 49.0**	**+0.1**
	comp=Z,2.4nm,0.7s,baz=299,slow=6.8,SNR=18						
WRA	**Warramunga Arr**	**64.53**	**194**	P	**P**	**10 33 50.2**	**+0.3**
	comp=Z,0.5nm,0.7s,baz=11,slow=6.7,SNR=3.2						
WRA				pP	**pP**	**10 34 02.7**	**-0.3**
	comp=Z,0.9nm,0.9s,baz=8.9,slow=6.8,SNR=3.3						
FFC	**Flin Flon**	**65.58**	**37**	*i* P	**P**	**10 33 57.4**	**+1.0**
NVAR	**Mina Array Bea**	**67.43**	**58**	P	**P**	**10 34 09.6**	**+0.8**
	comp=Z,1.6nm,0.8s,baz=288,slow=6.9,SNR=12						
NVAR				sP	**sP**	**10 34 26.0**	**-1.1**
	comp=Z,1.5nm,0.9s,baz=281,slow=8.1,SNR=4.1						
ASAR	**Alice Springs**	**68.25**	**193**	P	**P**	**10 34 14.5**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=75,slow=9.1,SNR=13						
SFJD	**Kangerlussuaq**	**68.70**	**7**	P	**P**	**10 34 17.0**	**+1.0**
	comp=Z,7.3nm,0.7s,baz=297,slow=6.8,SNR=3.9						
NOA	**NORSAR Array B**	**69.62**	**339**	P	**P**	**10 34 21.2**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=41,slow=5.4,SNR=5.4						
PDAR	**Pinedale Array**	**69.77**	**50**	P	**P**	**10 34 23.6**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=270,slow=1.5,SNR=7.2						
PDAR				sP	**sP**	**10 34 42.3**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=316,slow=4.1,SNR=3.3						
KBZ	**Khabaz**	**69.89**	**312**	P	**P**	**10 34 24.4**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBZ	**Khabaz**	**69.89**	**312**	P	**P**	**10 34 24.4**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=14,slow=7.6,SNR=4.6						
AKASG	**Malin Array Be**	**71.64**	**324**	*e*P	**P**	**10 34 33.4**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**71.64**	**324**	P	**P**	**10 34 33.3**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=39,slow=5.9,SNR=7.4						
ANN	**Anapa**	**72.03**	**315**	*e*P	P	10 34 39.9	+3.2
ANN				pmax	pmax		
	comp=Z,54nm,1.1s						
CLL	**Collm**	**77.35**	**333**	⇓*i*P	**P**	**10 35 06.9**	**-0.5**
CLL				pmax	pmax		
	comp=Z,7.0nm,0.5s						
SCHQ	**Schefferville**	**77.53**	**19**	P	**P**	**10 35 08.0**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=323,slow=10,SNR=3.1						
BRTR	**Keskin Array B**	**77.63**	**314**	P	**P**	**10 35 10.0**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=36,slow=12,SNR=2.5						
KHC	**Kasperske Hory**	**79.00**	**331**	*e*P	**P**	**10 35 16.6**	**0.0**
KHC	**Kasperske Hory**	**79.00**	**331**	*e*P	**P**	**10 35 16.6**	**0.0**
GERES	**GERESS Array B**	**79.20**	**331**	P	**P**	**10 35 17.0**	**-0.8**
	comp=Z,1.4nm,0.4s,baz=38,slow=6.6,SNR=12						
TXAR	**Lajitas Array**	**82.50**	**56**	P	**P**	**10 35 36.4**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=308,slow=6.2,SNR=9.4						
TXAR				pP	**pP**	**10 35 50.7**	**+1.5**
	comp=Z,0.4nm,0.6s,baz=306,slow=4.3,SNR=3.8						
TXAR				sP	**sP**	**10 35 55.6**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=298,slow=3.7,SNR=7.2						
TORD	**Torodi Ar. Bea**	**115.26**	**323**	PKP	**PKPdf**	**10 41 53.2**	**-1.3**
	comp=Z,0.2nm,0.5s,baz=81,slow=1.0,SNR=2.6						
BDFB	**Brasilia**	**149.04**	**30**	PKPbc	**PKPbc**	**10 43 00.4**	**-0.8**
	comp=Z,1.9nm,0.4s,baz=347,slow=14,SNR=3.1						
CFAA	**Coronel Fontan**	**149.55**	**79**	PKPbc	**PKPbc**	**10 43 01.9**	**-0.1**
	comp=Z,0.1nm,0.5s,baz=298,slow=1.8,SNR=3.8						
PLCA	**Paso Flores**	**151.93**	**97**	PKPbc	**PKPbc**	**10 43 08.0**	**+0.6**
	comp=Z,1.1nm,0.6s,baz=248,slow=5.4,SNR=4.0						

*IDC **04** 10:23:31.9±0.8, 42°.80S×72°.47W, h0km, mb4.0/9, mb1 4.2/10, mb1mx4.1/20, mbtmp4.0/10, ML3.7/2, MS3.4/7, Ms1 3.4/7, ms1mx3.2/23, Error ellipse: s-maj=29.7km s-min=14.3km az=116.0*
*ISCJB **04** 10:23:32.1±0.7, 42°.67S±0°.09×72°.3W±0°.2, h10km, mb4.1/11, MS3.6/4, Error ellipse: s-maj=21.4km s-min=11.2km az=19.1*
*NEIC **04** 10:23:33.6±0.5, 42°.76S×72°.39W, h10km, mb4.4/4, Error ellipse: s-maj=19.6km s-min=10.5km az=103.0*
ISC 04 10:23:33.6±0.6**, 42°.75S**±0°.09×**72°.3W**±0°.1**, h10**km**, n38, σ1s.05**/40**, mb4.2**/11**, MS3.5**/4**, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.39**	**33**	Pn	**Pn**	**10 24 14.8**	**+1.9**
PLCA				Sn	**Sg**	**10 24 50.9**	**+0.4**
PLCA				Lg	Lg	10 24 54.7	
PLCA	**Paso Flores**	**2.39**	**33**	Pn	**Pn**	**10 24 14.8**	**+1.9**
	8.8nm,0.3s,baz=217,slow=17,SNR=67						
PLCA				Pg	**Pg**	**10 24 18.8**	**-0.7**
	12nm,0.3s,baz=221,slow=17,SNR=129						
PLCA				Sn	**Sg**	**10 24 50.9**	**+0.4**
	125nm,0.3s,baz=105,slow=6.5,SNR=35						
PLCA				Lg	Lg	10 24 54.7	
	125nm,0.3s,baz=95,slow=4.4,SNR=26						
PLCA				LR	LR	10 25 27.9	
	comp=Z,472nm,21.4s,baz=253,slow=46						
CFAA	**Coronel Fontan**	**11.58**	**17**	Pn	**Pn**	**10 26 18.6**	**-0.4**
CFAA	**Coronel Fontan**	**11.58**	**17**	Pn	**Pn**	**10 26 18.6**	**-0.4**
	0.1nm,0.3s,baz=196,slow=7.4,SNR=3.1						
CFAA				LR	LR	10 31 12.1	
	comp=Z,19nm,19.5s,baz=197,slow=39						
USHA	**Ushuaia**	**12.36**	**170**	LR	LR	10 31 23.3	
	comp=Z,185nm,20.9s,baz=70,slow=38						
LVC	**Limon Verde**	**20.27**	**9**	*e*P	**P**	**10 28 09.6**	**0.0**
	6.1nm,0.8s						
CPUP	**Villa Florida**	**20.44**	**42**	P	Pn	10 28 12.8	-0.4
CPUP	**Villa Florida**	**20.44**	**42**	P	Pn	10 28 12.8	-0.4
	1.2nm,0.5s,baz=211,slow=7.2,SNR=5.2						
CPUP				LR	LR	10 36 59.4	
	comp=Z,123nm,20.1s,baz=68,slow=39						
LPAZ	**La Paz**	**26.61**	**9**	*e*P	**P**	**10 29 15.2**	**+2.3**
	5.7nm,1.3s						
LPAZ	**La Paz**	**26.61**	**9**	P	**P**	**10 29 16.6**	**+3.7**
	1.6nm,0.3s,baz=127,slow=2.3,SNR=4.0						
SIV	**San Ignacio**	**28.34**	**23**	P	**P**	**10 29 26.9**	**-0.8**
SIV	**San Ignacio**	**28.34**	**23**	P	**P**	**10 29 26.9**	**-0.8**
	1.3nm,0.8s,baz=217,slow=10,SNR=6.8						
SIV				LR	LR	10 42 12.4	
	comp=Z,40nm,18.2s,slow=39						
BDFB	**Brasilia**	**34.08**	**45**	P	**P**	**10 30 18.3**	**-0.1**
BDFB	**Brasilia**	**34.08**	**45**	P	**P**	**10 30 18.3**	**-0.1**
	0.9nm,0.4s,baz=142,slow=18,SNR=3.2						
BDFB				LR	LR	10 45 33.4	
	comp=Z,180nm,19.7s,baz=159,slow=39						
SNAA	**Sanae**	**43.66**	**155**	P	**P**	**10 31 38.1**	**0.0**
SNAA	**Sanae**	**43.66**	**155**	P	**P**	**10 31 38.1**	**0.0**
	3.6nm,1.4s,baz=262,slow=6.6,SNR=3.2						
QSPA	**South Pole Qui**	**47.50**	**180**	P	**P**	**10 32 09.6**	**+0.9**
QSPA	**South Pole Qui**	**47.50**	**180**	P	**P**	**10 32 09.5**	**+0.9**
	5.0nm,1.1s,baz=149,slow=4.8,SNR=5.9						
LRAL	**Lakeview Retre**	**76.61**	**347**	*e*P	**P**	**10 35 23.3**	**-0.8**
	6.0nm,0.9s						
TXAR	**Lajitas Array**	**77.32**	**332**	P	**P**	**10 35 29.2**	**+0.9**
TXAR	**Lajitas Array**	**77.32**	**332**	P	**P**	**10 35 29.2**	**+0.9**
	0.6nm,0.8s,baz=141,slow=8.1,SNR=7.6						
TKL	**Tuckaleechee C**	**78.73**	**350**	P	**P**	**10 35 35.8**	**-0.2**
TKL	**Tuckaleechee C**	**78.73**	**350**	P	**P**	**10 35 35.8**	**-0.2**
	1.8nm,0.7s,baz=255,slow=4.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**87.41**	**70**	P	**P**	**10 36 21.2**	**-0.1**
TORD	**Torodi Ar. Bea**	**87.41**	**70**	P	**P**	**10 36 21.2**	**-0.1**
	0.5nm,0.8s,baz=204,slow=6.3,SNR=2.8						
TORD				LR	LR	11 10 53.0	
	comp=Z,79nm,18.0s,baz=230,slow=32						
ECSD	**EROS Data Cent**	**88.82**	**343**	*e*P	**P**	**10 36 26.2**	**-1.1**
	4.3nm,0.9s						
PDAR	**Pinedale Array**	**91.49**	**333**	P	**P**	**10 36 39.6**	**-0.5**
PDAR	**Pinedale Array**	**91.49**	**333**	P	**P**	**10 36 39.6**	**-0.5**
	1.0nm,0.8s,baz=121,slow=5.7,SNR=5.7						
ILAR	**Eielson Array**	**121.82**	**331**	PKP	**PKPdf**	**10 42 26.6**	**-0.2**
ILAR	**Eielson Array**	**121.82**	**331**	PKP	**PKPdf**	**10 42 26.6**	**-0.2**
	0.5nm,0.8s,baz=154,slow=1.0,SNR=8.6						
BRTR	**Keskin Array B**	**125.89**	**66**	PKP	**PKPdf**	**10 42 34.5**	**-1.0**
BRTR	**Keskin Array B**	**125.89**	**66**	PKP	**PKPdf**	**10 42 34.5**	**-1.0**
	0.4nm,0.6s,baz=129,slow=4.6,SNR=2.6						
ZALV	**Zalesovo Beam**	**161.19**	**46**	PKP	**PKPdf**	**10 43 34.1**	**+0.6**
ZALV				PKPab	**PKPab**	**10 44 16.5**	**-0.6**
ZALV	**Zalesovo Beam**	**161.19**	**46**	PKP	**PKPdf**	**10 43 34.1**	**+0.6**
	0.3nm,0.3s,baz=222,slow=1.9,SNR=2.6						
ZALV				PKPab	**PKPab**	**10 44 16.5**	**-0.6**
	0.4nm,0.3s,baz=198,slow=41,SNR=2.6						
MKAR	**Makanchi Array**	**161.52**	**69**	PKPab	**PKPab**	**10 44 18.1**	**-0.8**
MKAR	**Makanchi Array**	**161.52**	**69**	PKPab	**PKPab**	**10 44 18.1**	**-0.8**
	0.5nm,0.8s,baz=266,slow=4.7,SNR=5.5						
SONM	**Songino Array**	**174.83**	**10**	PKPab	**PKPab**	**10 45 18.5**	**+0.9**
SONM	**Songino Array**	**174.83**	**10**	PKPab	**PKPab**	**10 45 18.5**	**+0.9**
	0.5nm,0.6s,baz=324,slow=3.7,SNR=3.6						

WEL 04 10:32:46.0±1.5**, 36°.45S**×**177°.71E, h5**km**, ML3.5**/3**, Error ellipse: s-maj=11.9km s-min=10.5km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.21**	**157**	*e*P*	Pg	10 33 06.0	-3.1
MXZ				S*	Sg	10 33 20.7	-4.1
KUZ	**Kuaotunu**	**1.63**	**259**	PN	Pn	10 33 14.7	-0.6
KUZ				SN	Sn	10 33 35.0	-1.6
PUZ	**Puketiti**	**1.68**	**165**	PN	Pn	10 33 16.6	+0.6
PUZ				SN	Sg	10 33 39.7	-0.3
PUZ				AML	AML	10 33 41.7	
URZ	**Urewera**	**1.87**	**195**	P*	Pn	10 33 17.7	-0.9
URZ				S*	Sn	10 33 39.7	-2.9
MWZ	**Matawai**	**1.89**	**184**	P*	Pn	10 33 17.4	-1.5
MWZ				S*	Sn	10 33 40.9	-2.3

WEL 04 10:36:53.2±1.2**, 36°.34S**×**177°.85E, h5**km**, ML3.7**/4**, Error ellipse: s-maj=8.3km s-min=7.8km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.27**	**164**	*e*P*	Pg	10 37 14.7	-2.9
MXZ				S*	Sg	10 37 29.2	-4.9
MXZ				AML	AML	10 38 34.0	
PUZ	**Puketiti**	**1.76**	**170**	PN	Pn	10 37 24.3	-0.1
PUZ				SN	Sn	10 37 46.6	-0.6
PUZ				AML	AML	10 37 52.2	
KUZ	**Kuaotunu**	**1.77**	**256**	PN	Pn	10 37 23.6	-0.8
KUZ				SN	Sn	10 37 44.5	-2.8
URZ	**Urewera**	**2.00**	**197**	P*	Pn	10 37 26.7	-1.0
URZ				S*	Sn	10 37 50.8	-2.3
URZ				AML	AML	10 38 18.6	
MWZ	**Matawai**	**2.00**	**187**	P*	Pn	10 37 26.9	-1.0
MWZ				AML	AML	10 38 02.9	
MWZ				AML	AML	10 38 04.2	

KRSC 04 10:43:59.5±0.7**, 48°.74N**×**156°.64E, h5**km±5km**, ML3.9, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.97**	**350**	P	Pn	10 44 33.1	-0.5
SKR				S	Sn	10 44 57.1	-1.6
PAU	**Pauzhetka**	**2.73**	**2**	S	Sn	10 45 18.7	+1.3
MIPR	**Malaya Ipel'ka**	**3.54**	**1**	P	Pn	10 44 55.9	+0.8
MIPR				S	Sn	10 45 38.3	+0.9
ASAK	**Asacha**	**3.73**	**12**	P	Pn	10 44 59.6	+1.7
ASAK				S	Sn	10 45 44.6	+2.3
MTVR	**Mutnovka**	**3.87**	**14**	P	Pn	10 45 01.7	+1.8
MTVR				S	Sn	10 45 47.6	+1.7
RUS	**Russkaya**	**3.88**	**17**	P	Pn	10 45 01.5	+1.7
RUS				S	Sn	10 45 47.7	+1.9
PET	**Petropavlovsk**	**4.47**	**16**	S	Sn	10 46 02.5	+2.2
UGLR	**Uglovaya**	**4.68**	**16**	P	Pn	10 45 14.4	+3.5
AVH	**Avacha**	**4.72**	**15**	S	Sn	10 46 09.7	+3.1
KOK	**Koryaka**	**4.73**	**15**	P	Pn	10 45 14.7	+3.1
KOK				S	Sn	10 46 09.4	+2.6
NLC	**Nalytchevo**	**4.75**	**20**	S	Sn	10 46 07.9	+0.7
SDLR	**Sedlovina**	**4.76**	**16**	S	Sn	10 46 08.4	+0.8
SPN	**Mys Shipunski**	**4.86**	**25**	P	Pn	10 45 16.2	+3.0
SPN				S	Sn	10 46 12.0	+2.2
GNL	**Ganaly**	**5.03**	**9**	S	Sn	10 46 18.4	+4.1
MKZ	**Mys Kozlova**	**6.63**	**27**	P	Pn	10 45 39.1	+1.7
MKZ				S	Sn	10 46 53.8	+0.5

*IDC **04** 11:06:45.5±1.1, 36°.32S×178°.04E, h0km, mb4.1/5, mb1 4.3/6, mb1mx4.1/18, mbtmp4.1/6, MS3.5/7, Ms1 3.6/7, ms1mx3.2/29, Error ellipse: s-maj=30.0km s-min=25.3km az=58.0*
*NEIC **04** 11:06:47.0, 36°.23S×177°.92E, h12km, ML4.3(WEL), After WEL.*
*WEL **04** 11:06:48.4±0.8, 36°.42S×177°.83E, h5km, ML4.2/11, Error ellipse: s-maj=5.7km s-min=5.3km az=90.0*
ISC 04 11:06:47.3±3.5**, 36°.41S**±0°.06×**177°.90E**±0°.07**, h10**km±21km**, n61, σ1s.31**/61**, mb4.2**/5**, MS3.6**/5**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.20**	**164**	P*	**Pn**	**11 07 08.4**	**-1.7**
MXZ				S*	**Sb**	**11 07 23.3**	**-2.2**
MXZ				S*	**Sb**	**11 07 23.4**	**-2.2**
MXZ				AML	AML	11 07 26.2	
MXZ				AML	AML	11 08 22.5	
PUZ	**Puketiti**	**1.69**	**170**	PN	**Pn**	**11 07 17.9**	**+1.1**
PUZ				AML	AML	11 07 45.9	
KUZ	**Kuaotunu**	**1.79**	**258**	PN	**Pn**	**11 07 17.7**	**-0.5**
KUZ				AML	AML	11 07 42.2	
KUZ				AML	AML	11 08 23.3	
KUZ	**Kuaotunu**	**1.79**	**258**	Pn	**Pn**	**11 07 16.9**	**-1.2**
MARZ	**Manawahe**	**1.85**	**212**	P*	**Pn**	**11 07 20.7**	**+1.6**
MWZ	**Matawai**	**1.95**	**189**	P*	**Pn**	**11 07 20.2**	**-0.3**
MWZ				S*	**Sn**	**11 07 44.0**	**-0.9**
MWZ				AML	AML	11 07 57.9	
MWZ	**Matawai**	**1.95**	**189**	P*	**Pn**	**11 07 20.1**	**-0.3**
MWZ				S*	**Sn**	**11 07 45.8**	**+0.9**
URZ	**Urewera**	**1.95**	**199**	P*	**Pn**	**11 07 20.2**	**-0.2**
URZ				S*	**Sn**	**11 07 44.3**	**-0.7**
URZ				AML	AML	11 07 55.0	
URZ	**Urewera**	**1.95**	**199**	Pn	**Pn**	**11 07 20.0**	**-0.4**
URZ				P*	**Pn**	**11 07 20.2**	**-0.2**
URZ				Sn	**Sn**	**11 07 44.1**	**-0.9**
URZ	**Urewera**	**1.95**	**199**	Pn	**Pn**	**11 07 20.0**	**-0.4**
	36nm,0.3s,baz=4.5,slow=5.2,SNR=115						
URZ				Sn	**Sn**	**11 07 44.1**	**-0.9**
	52nm,0.3s,baz=240,slow=22,SNR=6.1						
URZ				LR	LR	11 08 20.6	
	comp=Z,932nm,18.1s,baz=268,slow=46						
CNGZ	**Carnagh Statio**	**2.09**	**173**	PN	**Pb**	**11 07 24.5**	**-0.7**
CNGZ	**Carnagh Statio**	**2.09**	**173**	Pn	**Pb**	**11 07 24.7**	**-0.6**
MKAZ	**Moumakai**	**2.31**	**251**	PN	**Pn**	**11 07 25.2**	**-0.1**
MKAZ				AML	AML	11 08 04.1	
MKAZ				AML	AML	11 08 13.5	
MKAZ	**Moumakai**	**2.31**	**251**	Pn	**Pn**	**11 07 25.2**	**-0.1**
TOZ	**Tahuroa Road**	**2.33**	**235**	P*	**Pn**	**11 07 25.6**	**0.0**
TOZ	**Tahuroa Road**	**2.33**	**235**	P*	**Pn**	**11 07 25.5**	**-0.1**
TOZ				S*	**Sn**	**11 07 52.2**	**-2.1**
RVAZ	**Riverhead Bore**	**2.70**	**261**	PN	**Pn**	**11 07 31.7**	**+1.0**
RVAZ				SN	**Sn**	**11 08 01.9**	**-1.5**
MHGZ	**Mahia Peninsul**	**2.74**	**180**	PN	**Pn**	**11 07 33.2**	**+1.9**
BKZ	**Black Stump Fm**	**2.97**	**202**	P*	**Pn**	**11 07 35.1**	**+0.6**
BKZ				AML	AML	11 08 26.5	
BKZ				AML	AML	11 08 39.5	
BKZ	**Black Stump Fm**	**2.97**	**202**	P*	**Pn**	**11 07 35.4**	**+0.8**
HIZ	**Hauiti**	**3.21**	**228**	PN	**Pn**	**11 07 38.5**	**+0.8**
HIZ	**Hauiti**	**3.21**	**228**	Pn	**Pn**	**11 07 38.5**	**+0.8**
FWVZ	**Far West T-bar**	**3.40**	**212**	AML	AML	11 08 44.8	
FWVZ	**Far West T-bar**	**3.40**	**212**	P*	**Pn**	**11 07 43.5**	**+3.0**
BHHZ	**Black Hill Sta**	**3.40**	**205**	P*	**Pn**	**11 07 41.3**	**+0.8**
BHHZ	**Black Hill Sta**	**3.40**	**205**	P*	**Pn**	**11 07 41.5**	**+1.0**
TRVZ	**Turoa**	**3.44**	**212**	AML	AML	11 08 17.9	
TRVZ				AML	AML	11 08 48.1	
TRVZ	**Turoa**	**3.44**	**212**	P*	Pn	11 07 44.5	+3.4
WNVZ	**Wahianoa**	**3.44**	**211**	AML	AML	11 08 45.5	
WNVZ				AML	AML	11 09 04.4	
WNVZ	**Wahianoa**	**3.44**	**211**	P*	Pn	11 07 44.4	+3.3
KAHZ	**Kahuranaki**	**3.48**	**193**	PN	**Pn**	**11 07 42.5**	**+1.0**
KAHZ	**Kahuranaki**	**3.48**	**193**	Pn	**Pn**	**11 07 42.8**	**+1.3**
OUZ	**Omahuta**	**3.69**	**287**	*e*Pn	**Pn**	**11 07 43.6**	**-0.8**
PXZ	**Pawanui**	**3.71**	**192**	PN	**Pn**	**11 07 46.0**	**+1.5**
PXZ	**Pawanui**	**3.71**	**192**	Pn	**Pn**	**11 07 44.7**	**+0.1**
MRZ	**Mangatainoka R**	**4.62**	**202**	PN	**Pn**	**11 07 56.8**	**-0.3**
MRZ				AML	AML	11 09 20.7	
MRZ	**Mangatainoka R**	**4.62**	**202**	Pn	**Pn**	**11 07 56.8**	**-0.3**
THZ	**Tophouse**	**6.61**	**214**	Pn	**Pn**	**11 08 26.3**	**+1.8**
DZM	**Mont Dzumac**	**17.42**	**322**	LR	LR	11 16 34.0	
	comp=Z,245nm,19.0s,baz=35,slow=34						
STKA	**Stephens Creek**	**30.27**	**268**	P	**P**	**11 12 60.0**	**+1.5**
STKA	**Stephens Creek**	**30.27**	**268**	P	**P**	**11 12 60.0**	**+1.5**
	1.6nm,0.4s,baz=92,slow=7.0,SNR=4.4						
HNR	**Honiara**	**31.42**	**324**	LR	LR	11 24 00.1	
	comp=Z,36nm,18.9s,baz=1.7,slow=33						
ASAR	**Alice Springs**	**39.83**	**276**	P	**P**	**11 14 22.4**	**+1.5**
ASAR	**Alice Springs**	**39.83**	**276**	P	**P**	**11 14 22.4**	**+1.5**
	5.0nm,0.8s,baz=120,slow=7.8,SNR=41						
ASAR				LR	LR	11 28 35.1	
	comp=Z,85nm,19.6s,baz=109,slow=33						
WRA	**Warramunga Arr**	**41.38**	**281**	P	**P**	**11 14 34.7**	**+0.9**
WRA	**Warramunga Arr**	**41.38**	**281**	P	**P**	**11 14 34.7**	**+0.9**
	1.5nm,0.5s,baz=121,slow=7.5,SNR=22						
VNDA	**Vanda**	**41.80**	**185**	LR	LR	11 27 45.6	
	comp=Z,96nm,21.1s,baz=192,slow=30						
FITZ	**Fitzroy Crossi**	**49.30**	**277**	LR	LR	11 37 33.6	
	comp=Z,77nm,18.1s,baz=91,slow=37						
QSPA	**South Pole Qui**	**53.71**	**180**	P	**P**	**11 16 11.4**	**+2.2**
QSPA	**South Pole Qui**	**53.71**	**180**	P	**P**	**11 16 11.4**	**+2.2**
	2.3nm,0.7s,baz=40,slow=2.3,SNR=17						
PETK	**Petropavlovsk-**	**90.86**	**348**	LR	LR	11 52 46.3	
	comp=Z,19nm,19.7s,baz=162,slow=30						
NVAR	**Mina Array Bea**	**94.94**	**45**	P	**P**	**11 20 10.8**	**+1.0**
NVAR	**Mina Array Bea**	**94.94**	**45**	P	**P**	**11 20 10.8**	**+1.0**
	0.1nm,0.4s,baz=270,slow=3.2,SNR=3.0						
MKAR	**Makanchi Array**	**118.92**	**309**	PKP	**PKPdf**	**11 25 33.9**	**-1.8**
MKAR	**Makanchi Array**	**118.92**	**309**	PKP	**PKPdf**	**11 25 33.9**	**-1.8**
	0.3nm,0.8s,baz=92,slow=4.6,SNR=2.7						
KBZ	**Khabaz**	**145.15**	**296**	PKPbc	**PKPbc**	**11 26 23.6**	**-0.6**
KBZ	**Khabaz**	**145.15**	**296**	PKPbc	**PKPbc**	**11 26 23.6**	**-0.6**
	1.5nm,0.7s,baz=61,slow=5.2,SNR=3.3						
BRTR	**Keskin Array B**	**151.78**	**288**	PKPbc	**PKPbc**	**11 26 39.8**	**-2.4**
BRTR	**Keskin Array B**	**151.78**	**288**	PKPbc	**PKPbc**	**11 26 39.8**	**-2.4**
	0.3nm,0.4s,baz=222,slow=1.9,SNR=3.0						
TORD	**Torodi Ar. Bea**	**156.59**	**189**	PKPab	**PKPab**	**11 27 10.7**	**-1.1**
TORD	**Torodi Ar. Bea**	**156.59**	**189**	PKPab	**PKPab**	**11 27 10.7**	**-1.1**
	0.8nm,0.9s,baz=166,slow=3.3,SNR=2.7						

*CSEM **04** 11:08:30.5, 40°.28N×28°.32E, h27km, MD2.6, After DDA*
DDA 04 11:08:30.4, 40°.28N×**28°.32E, h27**km**, MD2.6, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULDT	**Uludag**	**0.64**	**102**	*i* P	Pb	11 08 43.0	-0.3
ULDT				*i* S	Sb	11 08 52.3	+0.3
ULDT	**Uludag**	**0.64**	**102**	*i* P	Pb	11 08 43.0	-0.3
ULDT				*i* S	Sb	11 08 52.3	+0.2
DURS	**Dursunbey**	**0.69**	**170**	*i* P	Pn	11 08 44.9	+0.3
DURS				*i* S	Sb	11 08 53.9	+0.6
DURS	**Dursunbey**	**0.69**	**170**	*i* P	Pn	11 08 44.9	+0.3
DURS				*i* S	Sn	11 08 53.9	-0.6

*ISK **04** 11:08:56.0, 37°.43N×28°.25E, h9km, MD2.6*
*CSEM **04** 11:08:56.0, 37°.43N×28°.25E, h9km, MD2.6, After ISK*
*ISCJB **04** 11:08:59.2±0.5, 37°.20N±0°.04×28°.19E±0°.04, h11km±7km, Error ellipse: s-maj=7.7km s-min=4.6km az=19.3*
ISC 04 11:08:58.2±1.1**, 37°.26N**±0°.03×**28°.18E**±0°.03**, h18**km±4km**, n26, σ1s.02**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.15**	**148**	*e*PG	**Pg**	**11 09 02.3**	**-0.2**
YER	**Yerkesik**	**0.15**	**148**	*e*Pg	**Pg**	**11 09 02.3**	**-0.2**
AYDN	**Tasoluk**	**0.47**	**329**	*i* P	**Pn**	**11 09 09.8**	**-0.2**
AYDN				*i* S	**Sn**	**11 09 16.7**	**-1.2**
AYDN	**Tasoluk**	**0.47**	**329**	*i* P	**Pn**	**11 09 09.8**	**-0.2**
AYDN				*i* S	**Sn**	**11 09 16.7**	**-1.2**
TURN	**Turunc**	**0.51**	**139**	*i* P	**Pg**	**11 09 07.9**	**-0.6**
TURN				*i* S	**Sg**	**11 09 15.7**	**+0.2**
TURN	**Turunc**	**0.51**	**139**	*i* P	**Pg**	**11 09 07.9**	**-0.6**
TURN				*i* S	**Sg**	**11 09 15.7**	**+0.2**
DAT	**Datca**	**0.72**	**222**	*e*PG	**Pn**	**11 09 13.2**	**-0.3**
DAT	**Datca**	**0.72**	**222**	*e*Pg	**Pn**	**11 09 13.3**	**-0.3**
BODT	**Bodrum**	**0.73**	**254**	*e*PG	**Pb**	**11 09 12.5**	**+0.2**
BODT				*e*SG	**Sn**	**11 09 24.5**	**+0.3**
BODT	**Bodrum**	**0.73**	**254**	*e*Pg	**Pb**	**11 09 12.5**	**+0.2**
BODT				*e*Sg	**Sn**	**11 09 24.5**	**+0.3**
DNZL	**Cakiroluk**	**0.81**	**58**	*i* P	**Pn**	**11 09 15.7**	**+0.8**
DNZL				*i* S	**Sb**	**11 09 25.0**	**+0.5**
DNZL	**Cakiroluk**	**0.81**	**58**	*i* P	**Pn**	**11 09 15.7**	**+0.8**
DNZL				*i* S	**Sb**	**11 09 25.0**	**+0.5**
GCAM	**G?zelcaml?**	**0.87**	**300**	*i* P	**Pn**	**11 09 16.4**	**+0.9**
GCAM				*i* S	**Sn**	**11 09 28.2**	**+0.4**
GCAM	**G?zelcaml?**	**0.87**	**300**	*i* P	**Pn**	**11 09 16.4**	**+0.9**
GCAM				*i* S	**Sn**	**11 09 28.2**	**+0.4**
FETY	**Fethiye**	**0.95**	**131**	*e*PG	**Pb**	**11 09 16.1**	**-0.1**
FETY	**Fethiye**	**0.95**	**131**	*e*Pg	**Pb**	**11 09 16.1**	**-0.1**
GOLH	**Golhisar**	**1.10**	**91**	*i* P	**Pg**	**11 09 20.0**	**+0.4**
GOLH				*i* S	Sn	11 09 40.5	+6.9
GOLH	**Golhisar**	**1.10**	**91**	*i* P	**Pg**	**11 09 20.0**	**+0.4**
GOLH				*i* S	Sn	11 09 40.5	+6.9
KULA	**Kula-Manisa**	**1.30**	**17**	*e*PN	Pn	11 09 18.2	-3.4
KULA	**Kula-Manisa**	**1.30**	**17**	*e*Pn	Pn	11 09 18.2	-3.4
IZM	**Izmir**	**1.35**	**327**	*e*PN	**Pn**	**11 09 19.9**	**-2.2**
IZM	**Izmir**	**1.35**	**327**	*e*Pn	**Pn**	**11 09 19.9**	**-2.2**
KHL	**Karahalli**	**1.50**	**45**	*e*PN	**Pn**	**11 09 22.0**	**-2.2**
KHL	**Karahalli**	**1.50**	**45**	*e*Pn	**Pn**	**11 09 22.0**	**-2.2**
KHAL	**Karahalli**	**1.52**	**43**	*i* P	**Pg**	**11 09 27.4**	**0.0**
KHAL				*i* S	**Sg**	**11 09 48.7**	**+1.5**
KHAL	**Karahalli**	**1.52**	**43**	*i* P	**Pg**	**11 09 27.4**	**0.0**
KHAL				*i* S	**Sg**	**11 09 48.7**	**+1.5**

IDC 04 11:38:28.6±1.5, 17°.53S×128°.26E, h0km, mb3.2/1, mb1 2.9/4, mb1mx2.9/17, mbtmp2.8/4, ML2.2/3, Error ellipse: s-maj=28.1km s-min=14.6km az=5.0, Western Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	2.56	257	Pn	Pn	11 39 10.3	-1.1
	0.1nm,0.3s,baz=106,slow=9.2,SNR=13						
FITZ				Sn	Sn	11 39 45.0	+1.7
	0.7nm,0.3s,baz=3.4,slow=8.7,SNR=2.3						
FITZ				Lg	Lg	11 39 51.8	
	2.7nm,0.3s,baz=349,slow=12,SNR=15						
WRA	Warramunga Arr	6.24	114	Pn	Pn	11 40 00.7	-1.4
	0.1nm,0.3s,baz=292,slow=13,SNR=14						
WRA				Sn	Sn	11 41 11.1	-3.1
	0.2nm,0.3s,baz=143,slow=26,SNR=33						
WRA				Lg	Lg	11 41 49.0	
	0.3nm,0.3s,baz=286,slow=28,SNR=4.7						
ASAR	Alice Springs	8.08	140	Pn	Pn	11 40 28.9	+1.6
	0.1nm,0.3s,baz=320,slow=12,SNR=7.2						
ASAR				Sn	Sn	11 42 00.8	+1.3
	0.1nm,0.3s,baz=312,slow=21,SNR=1.7						
MKAR	Makanchi Array	76.22	329	P	P	11 50 18.6	-0.3
	0.1nm,0.3s,baz=126,slow=6.4,SNR=2.5						

IDC 04 11:55:13.2±2.3, 6°.48S×129°.69E, h0km, mb3.8/1, mb1 3.7/3, mb1mx3.4/19, mbtmp3.6/3, ML3.4/2, Error ellipse: s-maj=149.7km s-min=32.1km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.12	162	Pn	Pn	11 58 34.8	0.0
	0.2nm,0.3s,baz=344,slow=13,SNR=12						
WRA				Sn	Sn	12 00 57.9	-14
	0.4nm,0.3s,baz=338,slow=23,SNR=7.7						
ASAR	Alice Springs	17.56	167	Pn	Pn	11 59 19.6	0.0
	0.1nm,0.3s,baz=342,slow=9.7,SNR=20						
ASAR				Sn	Sn	12 02 23.6	-12
	0.1nm,0.3s,baz=74,slow=13,SNR=5.0						
MKAR	Makanchi Array	67.62	327	P	P	12 06 12.0	0.0
	0.5nm,0.4s,baz=127,slow=7.4,SNR=7.8						

IDC 04 12:22:32.6±4.0, 0°.93S×130°.40E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.4/22, mbtmp3.5/4, ML3.4/1, Error ellipse: s-maj=329.9km s-min=23.4km az=71.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.29	169	P	P	12 26 58.4	-0.8
	0.1nm,0.3s,baz=352,slow=13,SNR=11						
WRA				S	Sn	12 30 24.3	-13
	0.1nm,0.3s,baz=356,slow=23,SNR=4.8						
ASAR	Alice Springs	22.86	172	P	P	12 27 38.4	+0.6
	0.5nm,0.5s,baz=353,slow=9.7,SNR=7.2						
MKAR	Makanchi Array	63.45	325	P	P	12 33 04.8	+0.4
	0.5nm,0.5s,baz=111,slow=8.0,SNR=1.9						
KURBB	Kurchatov Arra	67.61	327	P	P	12 33 30.9	-0.3
	0.2nm,0.2s,baz=125,slow=5.7,SNR=8.5						

IDC 04 12:37:42.2±4.5, 21°.26N×93°.08E, h0km, mb3.6/3, mb1 3.5/4, mb1mx3.3/27, mbtmp3.5/4, ML3.6/1, MS4.1/1, Ms1 3.9/1, ms1mx2.6/40, Error ellipse: s-maj=102.6km s-min=35.5km az=46.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	6.18	116	Pn	Pn	12 39 15.5	+0.8
	0.4nm,0.3s,baz=290,slow=14,SNR=3.5						
MKAR	Makanchi Array	26.94	344	P	P	12 43 25.9	+0.7
	0.2nm,0.5s,baz=154,slow=9.6,SNR=4.7						
SONM	Songino Array	28.60	19	P	P	12 43 39.4	-0.9
	0.1nm,0.3s,baz=188,slow=8.7,SNR=3.0						
ZALV	Zalesovo Beam	33.24	351	P	P	12 44 20.9	0.0
	0.5nm,0.4s,baz=166,slow=7.1,SNR=3.8						
KBZ	Khabaz	47.06	310	LR	LR	13 07 49.9	
	comp=Z,183nm,19.0s,baz=30,slow=38						

IDC 04 12:49:44.6±7.5, 5°.91S×148°.55E, h0km, mb4.1/3, mb1 4.1/5, mb1mx3.6/19, mbtmp4.0/5, ML3.4/2, Error ellipse: s-maj=112.2km s-min=58.4km az=48.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.73	202	Pn	Pn	12 50 43.9	+0.4
	9.7nm,0.3s,baz=302,slow=6.0,SNR=20						
PMG				Sn	Sn	12 51 21.1	-7.1
	10nm,0.3s,baz=297,slow=14,SNR=5.9						
WRA	Warramunga Arr	19.63	223	P	P	12 54 13.8	-1.1
	0.2nm,0.3s,baz=48,slow=11,SNR=14						
ASAR	Alice Springs	22.59	217	P	P	12 54 45.9	-1.0
	1.2nm,0.5s,baz=53,slow=9.5,SNR=28						
FITZ	Fitzroy Crossi	25.43	240	P	P	12 55 14.9	+0.6
	5.4nm,0.4s,baz=55,slow=9.8,SNR=62						
STKA	Stephens Creek	26.64	193	P	P	12 55 25.7	+0.6
	3.2nm,1.1s,baz=36,slow=10,SNR=4.1						

IDC 04 12:58:12.2±28.0, 19°.14S×175°.35W, h0km, mb3.8/4, mb1 4.0/4, mb1mx3.6/20, mbtmp3.8/4, Error ellipse: s-maj=542.1km s-min=143.9km az=88.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.62	243	P	P	13 05 53.5	-0.6
	2.3nm,1.1s,baz=79,slow=10,SNR=2.7						
ASAR	Alice Springs	47.27	255	P	P	13 06 48.1	+0.4
	0.6nm,0.4s,baz=88,slow=8.2,SNR=18						
WRA	Warramunga Arr	47.27	260	P	P	13 06 47.6	-0.1
	0.3nm,0.3s,baz=97,slow=7.5,SNR=16						
FITZ	Fitzroy Crossi	55.69	261	P	P	13 07 50.4	-0.4
	1.2nm,0.8s,baz=108,slow=3.2,SNR=3.8						

*MOS **04** 13:02:12.9±1.2, 37°.02N×35°.78E, h10km, mb4.2/19, Error ellipse: s-maj=10.8km s-min=7.2km az=79.0*
*IDC **04** 13:02:12.4±0.7, 36°.98N×35°.75E, h0km, mb4.0/15, mb1 4.1/19, mb1mx4.0/30, mbtmp3.9/19, ML3.7/3, MS3.2/12, Ms1 3.3/12, ms1mx3.1/31, Error ellipse: s-maj=16.3km s-min=14.3km az=94.0*
*DDA **04** 13:02:13.6, 36°.96N×35°.87E, h29km, ML4.1*
*CSEM **04** 13:02:14.9±0.1, 37°.00N×35°.91E, h10km, mb4.1/19, Mw3.8, Error ellipse: s-maj=3.0km s-min=2.3km az=93.0*
*ISK **04** 13:02:14.0, 36°.98N×35°.92E, h17km, ML3.9*
*ISCJB **04** 13:02:14.9±0.3, 36°.98N±0°.01×35°.89E±0°.02, h22km±2km, mb3.9/22, MS3.2/9, Error ellipse: s-maj=2.5km s-min=1.8km az=4.8*
*NSSC **04** 13:02:16.3±1.7, 36°.89N×36°.13E, h7km±9km, ML3.8*
*NIC **04** 13:02:19.0±0.2, 37°.30N×34°.62E, h10km, mb4.4, ML4.1, MW3.8*
ISC 04 13:02:14.8±0.8, 36°.98N±0°.02×35°.91E±0°.02, h12km±5km, n289, σ1s.22/329, mb3.9/22, MS3.1/9, 5C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.13	284	PG	Pg	13 02 18.5	+0.4
CEYT	Ceyhan	0.13	284	i Pg	Pg	13 02 18.5	+0.4
YURE	YUREGIR	0.27	236	i P	Pg	13 02 20.8	+0.4
YURE				i S	Sb	13 02 26.3	+0.2
YURE	YUREGIR	0.27	236	i P	Pg	13 02 20.8	+0.4
YURE				i S	Sb	13 02 26.3	+0.2
KOZT	Kozan	0.51	352	PG	Pg	13 02 24.9	+0.2
KOZT				eSG	Sg	13 02 31.6	+0.1
KOZT	Kozan	0.51	352	i Pg	Pg	13 02 24.9	+0.2
KOZT				eSg	Sg	13 02 31.6	+0.1
COBT	Iskenderun	0.54	149	i P	Pg	13 02 24.9	-0.4
COBT				eS	Sg	13 02 32.5	+0.1
COBT	Iskenderun	0.54	149	i P	Pg	13 02 24.9	-0.4
COBT				eS	Sg	13 02 32.5	+0.1
KRTS	Karatas	0.59	227	PG	Pg	13 02 26.4	+0.1
KRTS	Karatas	0.59	227	i Pg	Pg	13 02 26.4	+0.1
ANDN	Andirin	0.69	30	i P	Pg	13 02 26.9	-1.4
ANDN				i S	Sb	13 02 38.7	+0.2
ANDN	Andirin	0.69	30	i P	Pg	13 02 26.9	-1.4
ANDN				i S	Sb	13 02 38.7	+0.2
DRWC	Darouich	0.70	120	i P	Pg	13 02 26.7	-1.7
DRWC				AML	AML	13 02 39.9	
	comp=N,6μm,0.6s						
DRWC				AML	AML	13 02 40.2	
	comp=Z,5μm,0.7s						
DRWC				AML	AML	13 02 41.8	
	comp=E,9μm,0.6s						
DRWC	Darouich	0.70	120	i P	Pg	13 02 26.7	-1.7
	SNR=94						
AYKD	Aykdinkavak	0.84	58	i P	Pg	13 02 29.8	-1.2
AYKD				i S	Sb	13 02 43.5	+1.0
AYKD	Aykdinkavak	0.84	58	i P	Pg	13 02 29.8	-1.2
AYKD				i S	Sb	13 02 43.5	+1.0
HTY	Hatay	0.88	168	PG	Pb	13 02 31.3	-0.6
HTY	Hatay	0.88	168	i Pg	Pb	13 02 31.3	-0.6
KMRS	Kahramanmaras	0.95	56	PG	Pb	13 02 32.5	-0.7
KMRS	Kahramanmaras	0.95	56	i Pg	Pb	13 02 32.5	-0.7
YAYL	Yayladag	0.95	170	i P	Pb	13 02 31.5	-1.8
YAYL				i S	Sb	13 02 44.6	-1.3
YAYL	Yayladag	0.95	170	i P	Pb	13 02 31.5	-1.8
YAYL				i S	Sb	13 02 44.6	-1.3
GULE	Gulek	0.96	289	i P	Pb	13 02 31.3	-2.1
GULE				i S	Sb	13 02 45.2	-0.9
GULE	Gulek	0.96	289	i P	Pb	13 02 31.3	-2.1
GULE				i S	Sb	13 02 45.2	-0.9
KUZU	Kuzuini	0.96	102	i P	Pg	13 02 33.8	+0.6
KUZU				i S	Sn	13 02 47.4	-0.2
KUZU	Kuzuini	0.96	102	i P	Pg	13 02 33.8	+0.6
KUZU				i S	Sn	13 02 47.4	-0.2
BTCH	Batrach	1.04	155	i P	Pb	13 02 34.6	-0.1
BTCH				eS	Sb	13 02 45.0	-3.3
BTCH				AML	AML	13 02 54.6	
	comp=N,7μm,0.5s						
BTCH				AML	AML	13 02 54.7	
	comp=Z,5μm,0.7s						
BTCH				AML	AML	13 02 57.6	
	comp=E,7μm,0.4s						
BTCH	Batrach	1.04	155	i P	Pb	13 02 34.6	-0.1
	SNR=72						
BTCH				eS	Sb	13 02 45.0	-3.3
	comp=E,7μm,0.4s,SNR=92						
GAZ	Gaziantep	1.06	79	ePG	Pb	13 02 34.3	-0.8
GAZ	Gaziantep	1.06	79	ePg	Pb	13 02 34.3	-0.8
ARNB	Al Arnab	1.12	177	i P	Pb	13 02 34.8	-1.3
ARNB				eS	Sb	13 02 50.2	-0.4
ARNB				AML	AML	13 02 54.6	
	comp=N,4μm,0.4s						
ARNB				AML	AML	13 02 55.1	
	comp=E,4μm,0.4s						
ARNB				AML	AML	13 02 57.7	
	comp=Z,2μm,0.7s						
ARNB	Al Arnab	1.12	177	i P	Pb	13 02 34.8	-1.3
	SNR=61						
ARNB				eS	Sb	13 02 50.2	-0.4
	comp=Z,2μm,0.7s,SNR=62						
GZT	Gaziantep	1.37	74	i P	Pn	13 02 39.6	-0.3
SARI	SarD1z-Kayseri	1.48	16	ePN	Pn	13 02 40.7	-0.7
SARI	SarD1z-Kayseri	1.48	16	ePn	Pn	13 02 40.7	-0.7
WRDH	Warideh	1.52	164	i P	Pn	13 02 41.5	-0.3
WRDH				AML	AML	13 03 07.4	
	comp=N,2μm,0.4s						
WRDH				AML	AML	13 03 13.6	
	comp=E,3μm,0.5s						
WRDH	Warideh	1.52	164	i P	Pn	13 02 41.5	-0.3
	SNR=61						
NIG	Nigde	1.53	318	ePN	Pn	13 02 41.1	-1.1
NIG	Nigde	1.53	318	ePn	Pn	13 02 41.1	-1.1
BSTP	Nigde	1.73	305	i P	Pn	13 02 45.6	+0.8
PINB	Pinarbasi	1.74	13	i P	Pn	13 02 44.1	-1.0
PINB				eS	Sg	13 03 11.1	+0.3
PINB	Pinarbasi	1.74	13	i P	Pn	13 02 44.1	-1.0
PINB				eS	Sg	13 03 11.1	+0.3
SLMH	Al Salmeh	1.79	115	eP	Pn	13 02 45.8	+0.2
SLMH				eS	Sn	13 03 05.9	-2.4
SLMH				AML	AML	13 03 19.6	
	comp=N,2μm,0.7s						
SLMH				AML	AML	13 03 21.4	
	comp=E,2μm,0.5s						
SLMH	Al Salmeh	1.79	115	eP	Pn	13 02 45.8	+0.2
	SNR=47						
SLMH				eS	Sn	13 03 05.9	-2.4
	comp=E,2μm,0.5s,SNR=62						
BNN	Bunyan	1.87	358	ePN	Pn	13 02 46.2	-0.6
BNN	Bunyan	1.87	358	ePn	Pn	13 02 46.2	-0.6
ATAB	Bozova	1.97	75	i P	Pn	13 02 47.5	-0.4
ATAB				i S	Sb	13 03 16.4	+1.4
ATAB	Bozova	1.97	75	i P	Pn	13 02 47.5	-0.4
ATAB				i S	Sb	13 03 16.4	+1.4
AVNT	Avonos	1.98	335	i P	Pn	13 02 46.6	-1.6
AVNT				i S	Sn	13 03 12.5	-0.7
AVNT	Avonos	1.98	335	i P	Pn	13 02 46.7	-1.6
AVNT				i S	Sn	13 03 12.5	-0.7
BIDA	Albida	1.99	170	i P	Pn	13 02 48.0	-0.3
BIDA				eS	Sn	13 03 11.6	-1.6
BIDA				AML	AML	13 03 23.8	
	comp=E,3μm,0.5s						
BIDA				AML	AML	13 03 25.5	
	comp=Z,5μm,0.4s						
BIDA				AML	AML	13 03 28.2	
	comp=N,1μm,0.5s						
BIDA	Albida	1.99	170	i P	Pn	13 02 48.0	-0.3
	SNR=47						
BIDA				eS	Sn	13 03 11.6	-1.6
	comp=N,1μm,0.5s,SNR=49						
EREN	Erenkoy	2.02	225	ePN	Pn	13 02 47.9	-0.7
EREN	Erenkoy	2.02	225	ePn	Pn	13 02 47.9	-0.7
DARE	Darende-Malaty	2.02	38	ePN	Pn	13 02 48.4	-0.4
DARE	Darende-Malaty	2.02	38	ePn	Pn	13 02 48.4	-0.4
AKCD	Akcadag	2.07	50	i P	Pn	13 02 50.0	+0.6
AKCD				i S	Sb	13 03 17.2	-0.9
AKCD	Akcadag	2.07	50	i P	Pn	13 02 50.0	+0.6
AKCD				i S	Sb	13 03 17.2	-0.9
SULT	Sultanhani-AKS	2.26	303	ePN	Pn	13 02 51.6	-0.4
SULT	Sultanhani-AKS	2.26	303	ePn	Pn	13 02 51.6	-0.4
URFA	Urfa	2.37	78	ePN	Pn	13 02 52.9	-0.6
URFA	Urfa	2.37	78	ePn	Pn	13 02 52.9	-0.6
MYA	Malataya	2.41	55	ePN	Pn	13 02 53.9	-0.2
MYA	Malataya	2.41	55	ePn	Pn	13 02 53.9	-0.2
ERMK	Ermenek	2.43	263	i P	Pn	13 02 55.2	+0.7
ERMK	Ermenek	2.43	263	i P	Pn	13 02 55.2	+0.7
HAWK	Haweek	2.48	171	i P	Pn	13 02 55.6	+0.5
HAWK				AML	AML	13 03 43.5	
	comp=Z,506nm,0.6s						
HAWK	Haweek	2.48	171	i P	Pn	13 02 55.6	+0.5
	SNR=47						
PHNC	Paralimni	2.49	218	⇑P	Pb	13 02 57.4	-2.0
	comp=Z,29nm,0.8s						
PHNC				S	Sn	13 03 27.4	+2.0
PHNC	Paralimni	2.49	218	⇑P	Pb	13 02 57.4	-2.0
	comp=Z,29nm,0.8s						
PHNC				S	Sn	13 03 27.4	+2.0
LFK	Lefkose	2.56	229	ePN	Pn	13 02 55.8	-0.4
LFK	Lefkose	2.56	229	ePn	Pn	13 02 55.8	-0.4
HWQ	Hawqa	2.69	179	eP	Pn	13 02 58.9	+0.9
MAMC	Mammari	2.83	231	P	Pn	13 02 58.8	-1.0
MAMC	Mammari	2.83	231	P	Pn	13 02 58.8	-1.0
MNKR	ALMNKUR	2.90	110	eP	Pn	13 03 00.7	-0.1
MNKR				AML	AML	13 04 02.2	
	comp=E,2μm,0.6s						
MNKR				AML	AML	13 04 03.4	
	comp=N,2μm,0.5s						
MNKR	ALMNKUR	2.90	110	eP	Pn	13 03 00.7	-0.1
	SNR=47						
CSS	Prodhromos	2.90	227	P	Pn	13 03 00.2	-0.6
	comp=N,9.3nm,0.6s						
CSS				S	Sn	13 03 32.5	-3.1
CSS	Prodhromos	2.90	227	ePN	Pn	13 03 01.5	+0.7
CSS	Prodhromos	2.90	227	P	Pn	13 03 00.2	-0.6
	comp=N,9.3nm,0.6s						
CSS	Prodhromos	2.90	227	ePn	Pn	13 03 01.5	+0.7
CSS				S	Sn	13 03 32.5	-3.1
CSS				Sn	Sb	13 03 35.6	-6.3
CDAG	Cicekdag	2.91	336	i P	Pn	13 03 00.3	-0.6
CDAG	Cicekdag	2.91	336	i P	Pn	13 03 00.3	-0.6
KAMT	Kaman	2.95	325	ePN	Pn	13 03 01.7	+0.2
KAMT	Kaman	2.95	325	ePn	Pn	13 03 01.7	+0.2
KONT	Konya--Tatoy	2.98	290	ePN	Pn	13 03 02.0	0.0
KONT	Konya--Tatoy	2.98	290	ePn	Pn	13 03 02.0	0.0
GAZI	Gazipasa	2.99	257	i P	Pn	13 03 03.0	+1.1
GAZI				i S	Sn	13 03 36.9	-0.8
GAZI	Gazipasa	2.99	257	i P	Pn	13 03 03.0	+1.1
GAZI				i S	Sn	13 03 36.9	-0.8
ROOS	tl_alroos	3.02	158	eP	Pn	13 03 03.5	+1.1
ROOS	tl_alroos	3.02	158	eP	Pn	13 03 03.5	+1.1
	SNR=47						
SVRC	Sivrice-ELAZID	3.04	62	ePN	Pn	13 03 02.8	0.0
SVRC	Sivrice-ELAZID	3.04	62	ePn	Pn	13 03 02.8	0.0
LADK	Ladik-KONYA	3.07	294	ePN	Pn	13 03 03.0	-0.2
LADK	Ladik-KONYA	3.07	294	ePn	Pn	13 03 03.0	-0.2
LEF	Lefka	3.07	234	ePN	Pn	13 03 03.3	+0.2
LEF	Lefka	3.07	234	ePn	Pn	13 03 03.3	+0.2
BHL	Bhannes	3.08	184	eP	Pn	13 03 03.5	+0.2
ALFC	Alevga	3.24	237	P	Pn	13 03 02.5	-3.0
ALFC				S	Sn	13 03 35.8	-8.2
ALFC	Alevga	3.24	237	P	Pn	13 03 02.5	-3.0
ALFC				S	Sn	13 03 35.8	-8.2
BRTR	Keskin Array B	3.27	328	Pn	Pn	13 03 05.2	-0.7
	comp=N,5.0nm,0.3s,baz=162,slow=14,SNR=37						
BRTR				Pg	Pb	13 03 12.3	-0.5
	comp=N,4.4nm,0.3s,baz=156,slow=16,SNR=19						
BRTR				Lg	Lg	13 03 59.1	
	comp=N,3.5nm,0.3s,baz=162,slow=30,SNR=5.5						
BRTR	Keskin Array B	3.27	328	P	Pn	13 03 05.3	-0.7
	comp=N,4.0nm,0.3s						
AFSR	Af¯ar-Bala (A	3.33	319	ePN	Pn	13 03 07.6	+0.9
AFSR	Af¯ar-Bala (A	3.33	319	ePn	Pn	13 03 07.6	+0.9
CORM	Corum	3.35	343	ePN	Pn	13 03 07.6	+0.5
CORM	Corum	3.35	343	ePn	Pn	13 03 07.6	+0.5
PTK	Pertek	3.35	54	ePN	Pn	13 03 07.6	+0.5
PTK	Pertek	3.35	54	ePn	Pn	13 03 07.6	+0.5
QASN	Qassioun	3.45	175	eP	Pn	13 03 10.2	+1.8
QASN	Qassioun	3.45	175	eP	Pn	13 03 10.2	+1.8
	SNR=47						
RCY	Rachaya	3.48	181	eP	Pn	13 03 09.6	+0.8
AKMC	Akamas	3.50	237	P	Pn	13 03 06.9	-2.1
AKMC	Akamas	3.50	237	P	Pn	13 03 06.9	-2.1
PPCY	Paphos	3.57	235	P	Pn	13 03 08.9	-1.0
PPCY	Paphos	3.57	235	P	Pn	13 03 08.9	-1.0
RSDY	Resadiye-TOKAT	3.59	18	ePN	Pn	13 03 11.0	+0.8
RSDY	Resadiye-TOKAT	3.59	18	ePn	Pn	13 03 11.0	+0.8
TOTH	TOTAH	3.63	173	eP	Pn	13 03 12.7	+1.8
TOTH	TOTAH	3.63	173	eP	Pn	13 03 12.7	+1.8
	SNR=47						
KBSD	Kabsdagh	3.71	88	eP	Pn	13 03 11.7	-0.3
KBSD	Kabsdagh	3.71	88	eP	Pn	13 03 11.6	-0.3
	SNR=47						
KIZT	Kizilcal	3.71	302	ePN	Pn	13 03 11.8	-0.2
KIZT	Kizilcal	3.71	302	ePn	Pn	13 03 11.8	-0.2
KSDI	Kefar Szold	3.78	183	Pn	Pn	13 03 13.8	+0.9
KSDI				Sn	Sn	13 03 58.4	+1.1
ANTO	Ankara	3.78	321	ePN	Pn	13 03 14.0	+1.0
ANTO	Ankara	3.78	321	ePn	Pn	13 03 14.0	+1.0
LOD	Lodumlu	3.81	321	ePN	Pn	13 03 14.5	+1.1
LOD	Lodumlu	3.81	321	ePn	Pn	13 03 14.5	+1.1
EZC	Erzincan	3.87	43	ePn	Pn	13 03 16.6	+2.4
HNTI	Hanita	3.93	189	Pn	Pn	13 03 15.7	+0.7
HNTI				Sn	Sn	13 04 01.1	+0.1
ERZN	Erzincan	3.97	48	ePN	Pn	13 03 16.6	+1.0
MMA0	Mount Meron ar	3.98	186	Pn	Pn	13 03 16.0	+0.4
MMA0				Sn	Sn	13 04 02.2	0.0
MMAI	Mount Meron Ar	3.98	186	Pn	Pn	13 03 15.8	+0.2
	comp=N,28nm,0.3s,baz=8.0,slow=13,SNR=48						
MMAI				Sn	Sn	13 04 02.0	-0.1
	comp=N,68nm,0.3s,baz=15,slow=20,SNR=14						
KSHT	Keshet	3.99	181	Pn	Pn	13 03 17.5	+1.7
MZRK	Al-Mazaregh	3.99	105	eP	Pn	13 03 14.2	-1.6
MZRK	Al-Mazaregh	3.99	105	eP	Pn	13 03 14.2	-1.6
	SNR=47						
CANT	Cankiri	4.04	334	ePN	Pn	13 03 17.1	+0.7
BINT	Bingol	4.09	61	ePn	Pn	13 03 20.6	+3.4
KVT	Kavak	4.10	1	ePN	Pn	13 03 17.4	+0.2
KVT	Kavak	4.10	1	ePn	Pn	13 03 17.4	+0.2
ANTB	Antalya	4.21	271	ePN	Pn	13 03 19.6	+0.8
ANTB	Antalya	4.21	271	ePn	Pn	13 03 19.6	+0.8
ZALF	Zalf	4.21	163	eP	Pn	13 03 21.2	+2.4
ZALF	Zalf	4.21	163	eP	Pn	13 03 21.2	+2.4
	SNR=47						
SVRH	Sivrihisar-ESK	4.24	307	ePN	Pn	13 03 20.1	+0.8
SVRH	Sivrihisar-ESK	4.24	307	ePn	Pn	13 03 20.1	+0.8
BNGB	Bingˆ¶l	4.27	60	ePN	Pn	13 03 20.6	+0.9
BLGI	Bet Lehem HaGe	4.28	188	Pn	Pn	13 03 21.0	+1.3
TCHB	Talchebab	4.30	179	eP	Pn	13 03 21.7	+1.7
TCHB	Talchebab	4.30	179	eP	Pn	13 03 21.7	+1.7
	SNR=47						
TOS	Tosya	4.31	341	ePN	Pn	13 03 20.6	+0.4
TOS	Tosya	4.31	341	ePn	Pn	13 03 20.6	+0.4
SALA	Sala	4.31	171	eP	Pn	13 03 21.1	+0.8
SALA				AML	AML	13 04 38.6	
	comp=E,19nm,0.5s						
SALA				AML	AML	13 04 39.5	
	comp=N,148nm,0.6s						
SALA	Sala	4.31	171	eP	Pn	13 03 21.1	+0.8
	SNR=47						
ISP	Isparta	4.37	283	ePN	Pn	13 03 22.2	+1.1
ISP	Isparta	4.37	283	i P	Pn	13 03 22.8	+1.7
ISP	Isparta	4.37	283	ePn	Pn	13 03 22.2	+1.1
ISP	Isparta	4.37	283	i P	Pn	13 03 22.8	+1.7
OFRI	‘Ofer	4.41	190	Pn	Pn	13 03 22.0	+0.4
SHUT	Suhut-Afyon	4.53	292	ePN	Pn	13 03 24.1	+0.9
SHUT	Suhut-Afyon	4.53	292	ePn	Pn	13 03 24.1	+0.9
MMLI	Mount Malkishu	4.55	185	Pn	Pn	13 03 24.7	+1.3
MMLI				Sn	Sn	13 04 16.5	+0.3
BTMT	Batman	4.59	73	ePN	Pn	13 03 22.6	-1.5
BTMT	Batman	4.59	73	ePn	Pn	13 03 22.6	-1.5
DIKM	Dikmen	4.69	354	ePN	Pn	13 03 27.0	+1.6
DIKM	Dikmen	4.69	354	ePn	Pn	13 03 27.0	+1.6
HMDT	Nahal Hemdat	4.72	184	Pn	Pn	13 03 27.0	+1.2
HMDT				Sn	Sn	13 04 22.1	+1.6
BAYT	Ayd˜–ntepe-Bay	4.75	43	ePN	Pn	13 03 27.5	+1.2
BAYT	Ayd˜–ntepe-Bay	4.75	43	ePn	Pn	13 03 27.5	+1.2
SLTI	Sal'it	4.78	189	Pn	Pn	13 03 27.6	+1.0
SLTI				Sn	Sn	13 04 22.3	+0.4
ELL	Elmali	4.82	269	ePN	Pn	13 03 28.6	+1.4
ELL	Elmali	4.82	269	ePn	Pn	13 03 28.6	+1.4
ASF	Jabal al Asfar	4.86	170	Pn	Pn	13 03 29.2	+1.4
	comp=N,1.2nm,0.3s,baz=227,slow=16,SNR=15						
ASF				Lg	Lg	13 04 48.3	
	comp=N,6.8nm,0.3s,baz=269,slow=20,SNR=3.1						
SAFT	Safranbolu	4.94	330	ePN	Pn	13 03 29.9	+1.1
SAFT	Safranbolu	4.94	330	ePn	Pn	13 03 29.9	+1.1
ALT	Altintas	5.03	296	ePN	Pn	13 03 30.7	+0.6
ALT	Altintas	5.03	296	ePn	Pn	13 03 30.7	+0.6
MDUB	Mudurnu	5.07	315	ePN	Pn	13 03 31.5	+0.8
MDUB	Mudurnu	5.07	315	ePn	Pn	13 03 31.5	+0.8
GLHS	Glhisar (BURDU	5.13	274	ePN	Pn	13 03 32.9	+1.4
GLHS	Glhisar (BURDU	5.13	274	ePn	Pn	13 03 32.9	+1.4
EZM	Erzurum	5.18	54	ePN	Pn	13 03 34.2	+1.8
BZK	Bozkurt	5.19	344	ePN	Pn	13 03 33.1	+0.9
BZK	Bozkurt	5.19	344	ePn	Pn	13 03 33.1	+0.9
DSI	Dead Sea	5.41	185	Pn	Pn	13 03 36.8	+1.5
DSI				Sn	Sn	13 04 38.0	+0.5
GULT	Gulveren	5.45	311	ePN	Pn	13 03 36.6	+0.7
GULT	Gulveren	5.45	311	ePn	Pn	13 03 36.6	+0.7
TVSB	Tavsanli	5.64	298	ePN	Pn	13 03 40.6	+2.0
TVSB	Tavsanli	5.64	298	ePn	Pn	13 03 40.6	+2.0
MZDA	Masada	5.67	185	Pn	Pn	13 03 40.0	+1.2
MZDA				Sn	Sn	13 04 44.7	+0.9
RTMI	Retamim	6.00	190	Pn	Pn	13 03 44.6	+1.3
RTMI				Sn	Sn	13 04 53.4	+1.5
KZIT	Kziot	6.19	192	Pn	Pn	13 03 46.8	+0.9
KZIT				Sn	Sn	13 04 57.8	+1.2
PRNI	Paran	6.65	187	Pn	Pn	13 03 53.8	+1.5
PRNI				Sn	Sn	13 05 09.6	+1.5
KRMI	Paran Flat	6.91	189	Pn	Pn	13 03 57.6	+1.6
KRMI				Sn	Sn	13 05 16.0	+1.4
HRFI	Mount Harif	6.96	186	Pn	Pn	13 03 58.5	+1.9
HRFI				Sn	Sn	13 05 17.9	+2.2
SOC	Sochi	7.21	23	eP	Pn	13 04 06.0	+6.1
SOC				e		13 05 33.1	
SOC				MLR	MLR		
	comp=Z,175nm,9.0s						
SOC	Sochi	7.21	23	eP	Pn	13 04 06.0	+6.1
SOC				eS	Sn	13 05 33.1	+11
	comp=Z,175nm,9.0s						
KARP	Karpathos	7.21	261	eP	Pn	13 03 58.0	-2.0
MBRI	Mt Berech	7.21	187	Pn	Pn	13 04 02.4	+2.3
MBRI				Sn	Sn	13 05 23.9	+1.9
EIL	Elat	7.33	187	Pn	Pn	13 04 03.5	+1.8
	comp=Z,0.4nm,0.3s,baz=344,slow=15,SNR=2.8						
EIL				Sn	Sn	13 05 25.7	+0.8
	comp=Z,1.3nm,0.3s,baz=180,slow=20,SNR=2.4						
EIL				LR	LR	13 07 16.0	
	comp=Z,245nm,18.5s,baz=276,slow=42						
EIL	Elat	7.33	187	Pn	Pn	13 04 03.4	+1.8
EIL				Sn	Sn	13 05 26.4	+1.6
GNI	Garni	7.61	63	LR	LR	13 07 29.4	
	comp=Z,150nm,21.6s,baz=262,slow=41						

GNI	Garni	7.61	63	eP	Pn	13 04 07.0	+1.4
	comp=Z,4.0nm,0.7s						
ANN	Anapa	7.90	8	eP	Pn	13 04 08.7	-0.7
ANN				pmax	pmax		
	comp=Z,32nm,1.4s						
ANN	Anapa	7.90	8	eP	Pn	13 04 08.7	-0.7
	comp=Z,32nm,1.4s						
CHOS	Chios island	7.94	283	eP	Pn	13 04 11.4	+1.3
ZKR	Zakros	8.07	260	eP	Pn	13 04 11.5	-0.3
APE	Apeiranthos	8.30	274	eP	Pn	13 04 15.6	+0.6
APE	Apeiranthos	8.30	274	eP	Pn	13 04 15.6	+0.6
NPS	Neapolis	8.51	261	eP	Pn	13 04 16.3	-1.5
KBZ	Khabaz	8.59	36	P	Pn	13 04 24.5	+5.6
KBZ	Khabaz	8.59	36	Pn	Pn	13 04 24.5	+5.6
	comp=Z,0.1nm,0.3s,baz=127,slow=5.2,SNR=4.0						
KBZ	Khabaz	8.59	36	P	Pn	13 04 24.5	+5.6
LAST	Lasithi	8.64	261	eP	Pn	13 04 18.5	-1.2
KIV	Kislovodsk	8.67	34	eP	Pn	13 04 21.9	+1.8
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,33nm,7.0s						
KIV	Kislovodsk	8.67	34	eP	Pn	13 04 21.9	+1.8
	comp=Z,33nm,7.0s						
VAM	Vamos	9.60	264	eP	Pn	13 04 31.7	-1.0
MAK	Makhachkala	10.71	53	eP	Pn	13 04 46.0	-1.9
MAK				MLR	MLR		
	comp=Z,214nm,10.0s						
MAK	Makhachkala	10.71	53	eP	Pn	13 04 46.0	-1.9
	comp=Z,214nm,10.0s						
MLR	Muntele Rosu	11.33	322	Pn	Pn	13 05 01.8	+5.3
	comp=Z,0.0nm,0.3s,baz=141,slow=13,SNR=2.6						
MLR				LR	LR	13 10 07.6	
	comp=Z,51nm,20.8s,baz=152,slow=42						
MLR	Muntele Rosu	11.33	322	P	Pn	13 05 01.8	+5.3
	comp=Z,51nm,20.8s						
AKASG	Malin Array Be	14.53	343c	eP	P	13 05 45.7	-1.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	14.53	343	Pn	Pn	13 05 43.0	+3.0
	comp=Z,1.0nm,0.3s,baz=156,slow=11,SNR=6.6						
AKASG	Malin Array Be	14.53	343	eP	P	13 05 45.7	-1.0
	comp=Z,1.0nm,0.5s						
UZH	Uzhgorod	15.32	324	eP	Pn	13 05 49.0	-1.7
UZH	Uzhgorod	15.32	324	eP	Pn	13 05 49.0	-1.7
OBN	Obninsk	18.14	1	⇓iP	P	13 06 26.9	+0.3
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN	Obninsk	18.14	1	iP	P	13 06 26.9	+0.3
	comp=Z,6.0nm,0.8s						
OKC	Ostrava-Krasne	18.15	321	AMS	AMS	13 14 50.0	
	comp=Z,100nm,14.6s						
VRAC	Vranov	18.66	317	LR	LR	13 15 05.8	
	comp=Z,105nm,18.1s,baz=318,slow=42						
DPC	Dobruska-Polom	19.40	320	AMS	AMS	13 15 40.0	
	comp=Z,1μm,15.9s						
GERES	GERESS Array B	20.05	313	P	P	13 06 46.5	-1.2
	comp=Z,0.3nm,0.3s,baz=97,slow=9.8,SNR=3.4						
GERES				LR	LR	13 15 13.8	
	comp=Z,94nm,18.8s,baz=108,slow=39						
GERES	GERESS Array B	20.05	313	P	P	13 06 46.5	-1.2
	comp=Z,94nm,18.8s						
PRU	Pruhonice	20.15	317	AMS	AMS	13 15 20.0	
	comp=Z,100nm,13.5s						
KHC	Kasperske Hory	20.25	314	eP	Pn	13 07 00.7	+8.8
KHC	Kasperske Hory	20.25	314	eP	Pn	13 07 00.7	+8.8
KHC	Kasperske Hory	20.25	314	eP	Pn	13 07 00.7	+8.8
AKTK	Aktyubinsk	20.79	43	P	P	13 06 56.3	+0.7
	comp=Z,3.0nm,0.6s						
AKTO	Aktyubinsk	20.79	43	P	P	13 06 56.3	+0.7
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTO	Aktyubinsk	20.79	43	P	P	13 06 56.2	+0.7
	comp=Z,2.7nm,0.6s,baz=247,slow=11,SNR=9.3						
KEST	Kesra	21.41	275	P	P	13 07 03.2	+0.7
	comp=Z,1.5nm,0.7s,baz=349,slow=4.0,SNR=6.7						
DAVOX	Davos/Dischmat	21.63	305	LR	LR	13 16 43.2	
	comp=Z,65nm,18.0s,baz=262,slow=40						
KLMR	Klimovskoe	24.01	4	eP	P	13 07 27.8	-1.3
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s						
KLMR	Klimovskoe	24.01	4	eP	P	13 07 27.8	-1.3
	comp=Z,20nm,1.3s						
ARU	Arti	24.69	31c	iP	P	13 07 36.1	+0.7
ARU						13 08 06.0	
ARU				S	S	13 11 59.2	+2.5
ARU				SS	SnSn	13 12 44.0	+1.3
ARU				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARU	Arti	24.69	31	iP	P	13 07 36.1	+0.7
	comp=Z,8.0nm,0.8s						
ARU				S	S	13 11 59.2	+2.5
FINES	FINESS Array B	25.26	349	P	P	13 07 39.4	-1.1
	comp=Z,4.0nm,0.6s,baz=142,slow=12,SNR=9.6						
FINES	FINESS Array B	25.26	349	P	P	13 07 39.4	-1.1
	comp=Z,4.0nm,0.6s						
HFS	Hagfors	27.18	336	P	P	13 07 56.5	-1.4
	comp=Z,4.8nm,0.9s,baz=102,slow=14,SNR=3.4						
HFS				LR	LR	13 20 47.0	
	comp=Z,54nm,20.9s,baz=299,slow=41						
HFS	Hagfors	27.18	336	P	P	13 07 56.5	-1.4
	comp=Z,54nm,20.9s						
NOA	NORSAR Array B	28.68	335	LR	LR	13 21 31.2	
	comp=Z,34nm,18.4s,baz=10.0,slow=40						
BRVK	Borovoye	28.78	45	eP	P	13 08 11.9	-0.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BRVK	Borovoye	28.78	45	eP	P	13 08 11.9	-0.3
	comp=Z,2.0nm,1.2s						
BVAR	Borovoye Array	28.83	45	P	P	13 08 13.8	+1.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR				MLR	MLR		
	comp=Z,40nm,19.6s						
BVAR	Borovoye Array	28.83	45	P	P	13 08 13.8	+1.1
	comp=Z,0.7nm,0.5s,baz=224,slow=6.2,SNR=6.0						
BVAR				LR	LR	13 21 24.6	
	comp=Z,40nm,19.6s,baz=250,slow=40						
BVAR	Borovoye Array	28.83	45	P	P	13 08 13.8	+1.1
	comp=Z,40nm,19.6s						
AAK	Ala-Archa	29.99	67	eP	P	13 08 25.5	+2.2
AAK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
AAK	Ala-Archa	29.99	67	eP	P	13 08 25.5	+2.2
	comp=Z,10.0nm,2.5s						
ARCES	ARCESS Array B	33.10	353	P	P	13 08 49.6	-0.6
	comp=Z,2.3nm,0.8s,baz=161,slow=7.7,SNR=6.7						
ARCES				LR	LR	13 23 32.4	
	comp=Z,20nm,21.1s,baz=42,slow=39						
ARCES	ARCESS Array B	33.10	353	P	P	13 08 49.6	-0.6
	comp=Z,20nm,21.1s						
KURBB	Kurchatov Arra	33.17	52	P	P	13 08 51.2	+0.3
	comp=Z,0.9nm,0.6s,baz=268,slow=8.8,SNR=8.5						
KURK	Kurchatov	33.24	52	eP	P	13 08 53.9	+2.4
KURK				pmax	pmax		
	comp=Z,3.0nm,1.7s						
KURK	Kurchatov	33.24	52	eP	P	13 08 53.9	+2.4
	comp=Z,3.0nm,1.7s						
MKAR	Makanchi Array	35.44	59c	eP	P	13 09 12.1	+1.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	35.44	59	P	P	13 09 11.2	+0.5
	comp=Z,0.7nm,0.6s,baz=268,slow=7.6,SNR=7.4						
MKAR	Makanchi Array	35.44	59	eP	P	13 09 12.1	+1.4
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	37.42	47	iP	P	13 09 28.0	+0.5
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	37.42	47	P	P	13 09 27.9	+0.4
	comp=Z,1.3nm,0.6s,baz=266,slow=9.5,SNR=6.7						
ZALV	Zalesovo Beam	37.42	47	iP	P	13 09 28.0	+0.5
	comp=Z,1.0nm,0.6s						
TORD	Torodi Ar. Bea	38.70	241	P	P	13 09 36.0	-2.7
	comp=Z,1.8nm,0.9s,baz=28,slow=11,SNR=10						
PSMN	Pico do Norte,	47.94	289	eS	S	13 17 51.2	+0.8
PSMN				A	A	13 17 52.8	
	comp=Z,9.6nm,0.2s						
PSMN	Pico do Norte,	47.94	289	eS	S	13 17 51.2	+0.8
PSMA	Santa Maria	47.99	289	eS	S	13 17 51.3	+0.2
PSMA				A	A	13 17 53.6	
	comp=Z,11nm,0.1s						
CMLA	Cha da Macela	48.03	291	eS	S	13 17 39.7	-12
CMLA				A	A	13 17 43.5	
	comp=Z,60nm,0.2s						
TLY	Talaya	48.88	50	eP	P	13 11 02.9	+2.7
TLY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TLY	Talaya	48.88	50	eP	P	13 11 02.9	+2.7
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	51.48	54	P	P	13 11 20.3	+0.2
	comp=Z,0.2nm,0.3s,baz=306,slow=8.6,SNR=2.8						
SONM				LR	LR	13 35 55.3	
	comp=Z,94nm,18.1s,baz=294,slow=39						
SONM	Songino Array	51.48	54	P	P	13 11 20.3	+0.2
	comp=Z,94nm,18.1s						
ULN	Ulaanbaatar	51.90	54	eP	P	13 11 25.5	+2.3
	comp=Z,1.0nm,0.8s						
CMAR	Chiang Mai Arr	57.78	90	P	P	13 12 05.1	-1.0
	comp=Z,1.1nm,0.6s,baz=296,slow=6.9,SNR=5.6						
CMAR				LR	LR	13 38 02.3	
	comp=Z,30nm,18.1s,baz=130,slow=37						
CMAR	Chiang Mai Arr	57.78	90	P	P	13 12 05.1	-1.0
	comp=Z,30nm,18.1s						
BOSA	Boshof	66.01	190	P	P	13 13 01.3	+0.1
	comp=Z,1.6nm,0.8s,baz=0.0,slow=6.1,SNR=2.3						
BOSA	Boshof	66.01	190	P	P	13 13 01.3	+0.1
	comp=Z,2.0nm,0.8s						
KSRS	Korea Array	70.11	58	P	P	13 13 26.6	-0.2
	comp=Z,0.8nm,0.7s,baz=293,slow=4.6,SNR=5.0						
KSRS	Korea Array	70.11	58	P	P	13 13 26.7	-0.2
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	78.06	346	P	P	13 14 12.5	-0.5
	comp=Z,2.1nm,0.8s,baz=28,slow=5.7,SNR=28						
YKA	Yellowknife Ar	78.06	346	P	P	13 14 12.5	-0.5
	comp=Z,2.0nm,0.8s						
ILAR	Eielson Array	78.56	1	P	P	13 14 15.1	-0.6
	comp=Z,0.6nm,0.8s,baz=256,slow=2.2,SNR=8.8						
ILAR	Eielson Array	78.56	1	P	P	13 14 15.1	-0.6
	comp=Z,1.0nm,0.8s						

*IDC **04** 13:16:49.9±0.6, 15.°33S×173.°35W, h0km, mb4.2/14, mb1 4.4/14, mb1mx4.3/23, mbtmp4.2/14, MS4.0/9, Ms1 4.0/9, ms1mx3.6/22, Error ellipse: s-maj=29.2km s-min=15.6km az=131.0*

*NEIC **04** 13:16:50.2±0.5, 15.°44S×173.°11W, h10km, mb4.5/6, Error ellipse: s-maj=16.2km s-min=12.5km az=143.0*

ISC 04 13:16:53.9±0.5, **15.°3S**±0.°1×**173.°2W**±0.°1, **h29km, n172,** **σ0.s92**/158, **mb4.2**/19, **MS4.0**/8, **58C-56D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.97	45	ePn	Pn	13 17 19.0	-6.5
AFI				Pn	Pn	13 17 19.5	-6.0
AFI				eSn	Sn	13 17 44.9	-4.4
AFI	Afiamalu	1.97	45	Pn	Pn	13 17 19.5	-6.0
	94nm,0.3s,baz=146,slow=0.3,SNR=137						
AFI				Sn	Sn	13 17 39.3	-10
	352nm,0.3s,baz=229,slow=19,SNR=24						
RAR	Rarotonga	14.05	117	Pn	Pn	13 20 04.7	-6.4
RAR	Rarotonga	14.05	117	Pn	Pn	13 20 04.7	-6.4
	2.0nm,0.3s,baz=214,slow=0.0,SNR=3.2						
RAR				LR	LR	13 24 12.5	
	comp=Z,619nm,19.2s,baz=45,slow=31						
DZM	Mont Dzumac	20.39	248	P	P	13 21 28.6	-0.2
DZM	Mont Dzumac	20.39	248	P	P	13 21 28.6	-0.2
	5.3nm,0.8s,baz=88,slow=18,SNR=3.4						
PPT	Papeete	22.78	99	LR	LR	13 27 59.1	
	comp=Z,368nm,19.4s,baz=152,slow=29						
PPT2	Papeete2	22.78	99	eLR	LR	13 27 08.9	
	714nm,25.5s						
TBI	Tubuai	23.77	113	eLR	LR	13 27 42.6	
URZ	Urewera	24.40	199	P	P	13 22 10.0	+0.2
URZ	Urewera	24.40	199	P	P	13 22 10.0	+0.2
	6.7nm,0.8s,baz=309,slow=4.1,SNR=4.6						
HNR	Honiara	26.84	279	LR	LR	13 31 48.4	
	comp=Z,342nm,18.1s,baz=119,slow=34						
RPZ	Rata Peaks	31.33	202	LR	LR	13 33 55.0	
	comp=Z,398nm,21.7s,baz=300,slow=33						
RKT	Rikitea	36.85	108	eLR	LR	13 33 39.4	
	524nm,26.0s						
STKA	Stephens Creek	44.23	240	P	P	13 24 59.3	-1.6
STKA	Stephens Creek	44.23	240	P	P	13 24 59.3	-1.6
	1.8nm,0.5s,baz=71,slow=9.3,SNR=5.0						
WRAB	Tennant Creek	50.03	257	eP	P	13 25 45.1	-1.1
	1.4nm,0.6s						
WRA	Warramunga Arr	50.04	257	P	P	13 25 44.1	-2.2
WRA	Warramunga Arr	50.04	257	P	P	13 25 44.1	-2.2
	2.1nm,0.5s,baz=92,slow=6.7,SNR=44						
AS31	Alice Springs	50.30	252	eP	P	13 25 46.2	-2.1
ASAR	Alice Springs	50.31	252	P	P	13 25 46.6	-1.8
ASAR	Alice Springs	50.31	252	P	P	13 25 46.6	-1.8
	9.9nm,0.8s,baz=90,slow=7.8,SNR=68						
VNDA	Vanda	63.48	186	P	P	13 27 21.9	+1.0
VNDA	Vanda	63.48	186	P	P	13 27 21.9	+1.0
	2.1nm,1.1s,baz=14,slow=6.0,SNR=5.5						
DAV	Davao City (W)	64.58	286	LR	LR	13 49 08.3	
	comp=Z,46nm,21.5s,baz=54,slow=30						
MAJO	Matsushiro	68.99	320	eP	P	13 27 55.6	-1.1
	11nm,0.4s						
PETK	Petropavlovsk-	72.60	342	P	P	13 28 20.2	+1.8
PETK	Petropavlovsk-	72.60	342	P	P	13 28 20.2	+1.8
	2.6nm,1.0s,baz=136,slow=9.3,SNR=3.3						
NVAR	Mina Array Bea	74.14	42	P	P	13 28 29.6	+1.6
NVAR	Mina Array Bea	74.14	42	P	P	13 28 29.6	+1.6
	0.5nm,0.5s,baz=226,slow=10,SNR=5.2						
QSPA	South Pole Qui	74.73	180	eP	P	13 28 29.0	-2.0
	8.1nm,1.0s						
X16A	Lo Mia Camp, P	76.73	48	⇓P	P	13 28 44.2	+1.2
	baz=77						
U15A	North Rim	77.11	46	⇑P	P	13 28 46.3	+1.1
	baz=77						
RSO	Redoubt South	77.29	10	eP	P	13 28 46.7	+1.1
USRK	Ussuriysk Arra	77.42	323	LR	LR	13 57 04.3	
	comp=Z,121nm,20.6s,baz=134,slow=31						
220A	Playas Peak, P	77.71	52	⇓P	P	13 28 49.2	+0.7
	baz=78						
Z20A	Nine Sixteen R	78.21	51	⇓P	P	13 28 52.3	+1.1
	baz=78						
MFID	Camas Ranch	78.51	39	⇓P	P	13 28 53.4	+0.8
	baz=79						
DUG	Dugway	78.68	43	⇓P	P	13 28 54.6	+0.9
	baz=79						
Y20A	Horse Springs,	78.73	50	⇑P	P	13 28 55.7	+1.5
	baz=79						
HLID	Hailey	79.45	39	⇓P	P	13 28 58.8	+0.9
	baz=80						
Z22A	Elephant Butte	79.49	51	⇓P	P	13 28 59.0	+0.8
	baz=80						
U20A	Newcomb	79.75	48	⇑P	P	13 29 00.8	+1.1
	baz=80						
626A	Big Bend Ranch	80.13	56	⇑P	P	13 29 02.9	+1.1
	baz=80						
F12A	Elk City	80.15	37	⇑P	P	13 29 01.5	-0.1
	baz=80						
325A	Bean Ranch, Si	80.21	54	⇑P	P	13 29 02.9	+0.6
	baz=80						
U21A	Nageezi	80.39	48	⇑P	P	13 29 03.3	+0.1
	baz=81,SNR=6.3						
124A	Stringfield Ra	80.40	52	⇓P	P	13 29 04.7	+1.3
	baz=80						
TXAR	Lajitas Array	80.42	56	P	P	13 29 04.1	+0.8
TXAR	Lajitas Array	80.42	56	P	P	13 29 04.1	+0.8
	1.4nm,1.0s,baz=221,slow=5.0,SNR=8.0						
S20A	Disappointment	80.54	47	⇓P	P	13 29 04.8	+0.8
	baz=81						
426A	McDonald Obser	80.66	55	⇓P	P	13 29 05.8	+1.1
	baz=81						
627A	Terlingua Ranc	80.69	56	⇑P	P	13 29 06.4	+1.7
	baz=81						
C11A	Tepee Creek (N	80.77	35	⇑P	P	13 29 05.6	+0.9
	baz=81						
527A	Woodward Ranch	80.78	55	⇓P	P	13 29 05.4	0.0
	baz=81						
S21A	Coal Bank Pass	80.86	47	⇓P	P	13 29 06.7	+0.9
	baz=81						
Y24A	Capitan	80.93	51	⇓P	P	13 29 07.1	+1.0
	baz=81						
MCMT	McKenzie Canyo	81.08	39	eP	P	13 29 04.9	-1.8
	1.1nm,0.8s						
H15A	Lima	81.09	39	⇑P	P	13 29 07.5	+0.8
	baz=81						
628A	Black Gap, Mar	81.10	56	⇓P	P	13 29 08.4	+1.5
	baz=81						
226B	Tecolote Peak,	81.13	53	⇑P	P	13 29 08.1	+1.1
	baz=81						
E13A	Victor	81.15	37	⇓P	P	13 29 07.1	+0.3
	baz=81						
427A	Hayter Ranch,	81.23	55	⇑P	P	13 29 08.5	+0.9
	baz=81						
D13A	Huson	81.35	36	⇑P	P	13 29 07.9	+0.1
	baz=82						
528A	Cox Ranch, San	81.44	56	⇑P	P	13 29 10.0	+1.2
	baz=82						
G15A	Dillon	81.47	39	⇓P	P	13 29 08.8	+0.1
	baz=82						
Y25A	Mesa, Roswell	81.49	51	⇓P	P	13 29 10.0	+1.0
	baz=82						
W24A	Lazy 6 Ranch,	81.50	50	⇓P	P	13 29 10.1	+1.0
	baz=82						
MSO	Missoula	81.51	37	⇑P	P	13 29 09.2	+0.5
	baz=82						
S22A	4UR Ranch, Cre	81.58	47	⇑P	P	13 29 10.3	+0.7
	baz=82						
C13A	Hot Springs	81.61	36	⇓P	P	13 29 09.4	+0.2
	baz=82						
Z26A	Caprock	81.76	52	⇑P	P	13 29 10.8	+0.4
	baz=82						
F15A	Butte	81.82	38	⇑P	P	13 29 10.3	-0.3
	baz=82						
529A	Stev Forest Ra	81.88	56	⇑P	P	13 29 11.6	+0.6
	baz=82						
D14A	Greenough	81.89	37	⇑P	P	13 29 10.7	-0.1
	baz=82						
CHMT	Chamberlain Mo	81.95	37	eP	P	13 29 09.5	-1.7
	2.4nm,1.0s						
H16A	Russell Place,	81.99	39	⇓P	P	13 29 12.0	+0.5
	baz=82,SNR=7.3						
E15A	Deer Lodge	82.04	37	⇓P	P	13 29 12.3	+0.7
	baz=82						
PDAR	Pinedale Array	82.08	42	P	P	13 29 12.2	+0.2
PDAR	Pinedale Array	82.08	42	P	P	13 29 12.2	+0.2
	1.4nm,1.0s,baz=242,slow=3.2,SNR=7.2						
COLA	College	82.24	11	eP	P	13 29 10.8	-1.2
	6.7nm,0.8s						
F16A	Kennard Place,	82.31	38	⇓P	P	13 29 13.5	+0.5
	baz=82						
ILAR	Eielson Array	82.33	11	P	P	13 29 11.8	-0.7
ILAR	Eielson Array	82.33	11	P	P	13 29 11.8	-0.7
	1.2nm,1.1s,baz=203,slow=6.5,SNR=6.0						
ILAR				LR	LR	14 03 54.9	
	comp=Z,52nm,18.0s,baz=238,slow=34						
429A	Davenport Ranc	82.34	55	⇓P	P	13 29 13.8	+0.4
	baz=82						
V25A	Rancho No Teng	82.35	50	⇑P	P	13 29 14.5	+0.9
	baz=82						
Z27A	Tatum	82.36	53	⇑P	P	13 29 14.6	+1.0
	baz=82						
D15A	Lincoln	82.44	37	⇓P	P	13 29 14.3	+0.6
	baz=83						
N21A	Black Mountain	82.47	44	⇑P	P	13 29 13.4	-0.7
	baz=83						
R23A	Moffat	82.49	47	⇑P	P	13 29 14.7	+0.3
	baz=83						
L20A	Wamsutter	82.51	43	⇓P	P	13 29 15.2	+0.9
	baz=83						
J19A	Crowheart	82.65	42	⇑P	P	13 29 15.0	+0.1
	baz=83						
E16A	East Helena	82.67	38	⇑P	P	13 29 15.4	+0.5
	baz=83,SNR=5.9						
S24A	Houchin Ranch,	82.69	48	⇑P	P	13 29 15.2	-0.2
	baz=83						
B14A	Marquette Ranc	82.72	36	⇑P	P	13 29 15.3	+0.2
	baz=83						
U25A	Circle Dot Ran	82.74	49	⇑P	P	13 29 16.4	+0.9
	baz=83						
C15A	Salmond Ranch,	82.78	36	⇑P	P	13 29 15.4	-0.1
	baz=83						
Q23A	Hartsel	82.80	47	⇓P	P	13 29 17.0	+1.1
	baz=83						
K20A	Yellowstone Ra	82.82	42	⇑P	P	13 29 16.0	+0.2
	baz=83						
O22A	Kremmling	82.86	45	⇑P	P	13 29 16.0	-0.3
	baz=83						
F17A	Fitzpatrick Pl	82.95	39	⇓P	P	13 29 17.3	+0.9
	baz=83						
A14A	Double T Ranch	82.96	35	⇑P	P	13 29 16.5	+0.2
	baz=83						
MSTX	Muleshoe	82.97	52	⇑P	P	13 29 16.7	0.0
	baz=83						
M21A	Separation Pea	82.97	44	⇓P	P	13 29 16.1	-0.6
	baz=83						
D16A	Dana Ranch, Ca	83.00	37	⇓P	P	13 29 17.1	+0.5
	baz=83						
R24A	Sanders Place,	83.02	47	⇑P	P	13 29 18.0	+1.0
	baz=83						
T25A	Trinidad	83.05	49	⇓P	P	13 29 15.6	-1.6
	baz=83						
I19A	Meeteetse	83.06	41	⇑P	P	13 29 17.7	+0.7
	baz=83						
B15A	Bradely Ranch,	83.09	36	⇑P	P	13 29 17.2	+0.2
	baz=83						
W27A	Bowe Ranch, En	83.19	51	⇑P	P	13 29 17.8	0.0
	baz=83						
N22A	Wattenberg Ran	83.21	45	⇓P	P	13 29 18.5	+0.5
	baz=83						
U26A	Atchley Ranch,	83.22	50	⇓P	P	13 29 18.3	+0.2
	baz=83						
531A	Rocksprings	83.24	56	⇓P	P	13 29 18.4	+0.3
	baz=83						
S25A	Robets Cordova	83.25	48	⇑P	P	13 29 18.4	+0.3
	baz=83						
C16A	Fuhringer Ranc	83.29	37	⇓P	P	13 29 18.5	+0.5
	baz=84						
Q24A	Divide	83.30	47	⇓P	P	13 29 19.3	+0.7
	baz=84						
J20A	Shoshoni	83.31	42	⇓P	P	13 29 19.2	+0.9
	baz=84,SNR=6.3						
O23A	Lake Granby, G	83.31	45	⇑P	P	13 29 19.3	+0.8
	baz=84						
G18A	Lazy EL Ranch,	83.33	40	⇓P	P	13 29 19.4	+1.1
	baz=84						
A15A	Johnson Ranch,	83.35	35	⇑P	P	13 29 18.4	+0.1
	baz=84						
H19A	Powell	83.37	40	⇑P	P	13 29 18.9	+0.4
	baz=84						
M22A	Cedar Creek Ra	83.39	44	⇑P	P	13 29 19.5	+0.6
	baz=84						
F18A	Big Timber	83.53	39	⇓P	P	13 29 19.8	+0.5
	baz=84						
I20A	Worland	83.56	41	⇓P	P	13 29 19.8	+0.2
	baz=84,SNR=5.3						
D17A	Six Diamond Ra	83.57	38	⇓P	P	13 29 19.9	+0.4
	baz=84,SNR=8.2						
N23A	Red Feather La	83.60	45	⇓P	P	13 29 20.1	+0.1
	baz=84						
J21A	Lysite	83.72	42	⇑P	P	13 29 20.8	+0.3
	baz=84,SNR=7.9						
E18A	Harlowton	83.73	38	⇑P	P	13 29 21.5	+1.2
	baz=84						
532A	Rocksprings	83.74	57	⇓P	P	13 29 20.3	-0.4
	baz=84						
C17A	Wharram Farm,	83.77	37	⇓P	P	13 29 20.5	0.0
	baz=84,SNR=9.8						
L22A	Ellis Ranch, M	83.78	44	⇓P	P	13 29 21.5	+0.6
	baz=84						
H20A	Greybull	83.90	41	⇓P	P	13 29 21.5	+0.2
	baz=84						
S26A	Kim	83.93	49	⇑P	P	13 29 22.1	+0.5
	baz=84						
Z30A	Sanderson Ranc	83.96	53	⇑P	P	13 29 21.1	-0.7
	baz=84						
A16A	West Butte Ran	83.97	36	⇑P	P	13 29 22.0	+0.5
	baz=84						
F19A	Roth Farm, Mol	83.97	39	⇓P	P	13 29 22.3	+0.8
	baz=84						
K22A	Casper	84.00	43	⇑P	P	13 29 22.2	+0.3
	baz=84						
I21A	Big Trails, Te	84.03	42	⇑P	P	13 29 22.0	0.0
	baz=84,SNR=6.1						
D18A	Linhart Farms,	84.11	38	⇓P	P	13 29 23.3	+1.0
	baz=84						
G20A	Bridger	84.11	40	⇓P	P	13 29 23.3	+0.9
	baz=84						
P25A	Willow Gulch B	84.22	47	⇓P	P	13 29 24.3	+1.2
	baz=84						
R26A	Arlington	84.23	48	⇑P	P	13 29 23.6	+0.5
	baz=84						
L23A	Garrett	84.31	44	⇓P	P	13 29 23.3	-0.2
	baz=84						
E19A	Rath Farm, Rou	84.36	39	⇓P	P	13 29 24.2	+0.7
	baz=85						
F20A	Billings	84.43	40	⇓P	P	13 29 24.5	+0.6
	baz=85						
A17A	Triple J Farms	84.47	36	⇑P	P	13 29 24.8	+0.8
	baz=85,SNR=7.7						
I22A	9 Mile Ranch,	84.59	42	⇑P	P	13 29 25.6	+0.8
	baz=85						
232A	Coleman	84.59	55	⇓P	P	13 29 25.7	+0.7
	baz=85						
D19A	Cripps Ranch,	84.65	38	⇑P	P	13 29 25.9	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=85						
E20A	Meyer Farm, Mu	84.78	39	⇑P	P	13 29 26.3	+0.7
	baz=85						
C19A	Slack Wire Ran	84.82	38	⇑P	P	13 29 26.3	+0.5
	baz=85,SNR=8.4						
Y31A	Rekieta Farm,	84.89	53	⇓P	P	13 29 26.7	+0.3
	baz=85						
A18A	Metzger Ranch,	84.95	36	⇓P	P	13 29 27.1	+0.7
	baz=85						
Z32A	Haskell	85.25	54	⇑P	P	13 29 28.9	+0.7
	baz=85						
C20A	Veseth Ranch,	85.43	38	⇑P	P	13 29 29.8	+1.0
	baz=86						
B20A	Solberg Farm,	85.77	37	⇓P	P	13 29 30.7	+0.2
	baz=86						
MAW	Mawson	87.93	199	P	P	13 29 41.0	+0.4
MAW	Mawson	87.93	199	P	P	13 29 41.0	+0.4
	2.7nm,0.8s,baz=127,slow=5.1,SNR=3.6						
YKA	Yellowknife Ar	89.95	23	P	P	13 29 50.2	+0.2
YKA	Yellowknife Ar	89.95	23	P	P	13 29 50.2	+0.2
	0.4nm,0.5s,baz=231,slow=4.4,SNR=7.9						
CMAR	Chiang Mai Arr	92.75	288	P	P	13 30 05.0	+0.8
CMAR	Chiang Mai Arr	92.75	288	P	P	13 30 05.0	+0.8
	0.8nm,0.8s,baz=106,slow=2.0,SNR=3.7						
CMAR				LR	LR	14 07 03.3	
	comp=Z,60nm,18.7s,baz=283,slow=32						
SONM	Songino Array	94.90	318	LR	LR	14 06 38.8	
	comp=Z,73nm,20.6s,baz=82,slow=32						
KMBO	Kilima Mbogo	145.73	244	PKPbc	PKPdf	13 36 31.0	-0.1
KMBO	Kilima Mbogo	145.73	244	PKPbc	PKPdf	13 36 31.0	-0.1
	0.8nm,0.4s,baz=129,slow=3.9,SNR=3.1						
MLR	Muntele Rosu	145.86	336	PKPbc	PKPbc	13 36 31.4	+0.7
MLR	Muntele Rosu	145.86	336	PKPbc	PKPbc	13 36 31.4	+0.7
	0.3nm,0.3s,baz=117,slow=2.6,SNR=6.7						
GERES	GERESS Array B	146.08	352	PKPbc	PKPbc	13 36 31.6	+0.3
GERES	GERESS Array B	146.08	352	PKPbc	PKPbc	13 36 31.6	+0.3
	0.4nm,0.2s,baz=46,slow=4.2,SNR=3.3						
BR131	Keskin Array S	146.20	321	ePKPab	PKPbc	13 36 32.7	+0.7
BRTR	Keskin Array B	146.20	321	PKPbc	PKPab	13 36 33.1	+0.4
BRTR	Keskin Array B	146.20	321	PKPbc	PKPab	13 36 33.1	+0.4
	9.1nm,1.0s,baz=98,slow=2.5,SNR=31						

IDC 04 13:19:05.8±1.3, 15°.28S×173°.43W, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/20, mbtmp3.9/4, Error ellipse: s-maj=44.8km s-min=30.4km az=130.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.10	50	Sn	Sn	13 19 54.1	-15
	156nm,0.3s,baz=49,slow=20,SNR=4.3						
STKA	Stephens Creek	44.07	240	P	P	13 27 15.7	-0.1
	0.7nm,0.5s,baz=78,slow=9.3,SNR=2.4						
WRA	Warramunga Arr	49.84	257	P	P	13 28 00.8	-0.4
	1.0nm,0.5s,baz=93,slow=8.1,SNR=11						
ASAR	Alice Springs	50.12	252	P	P	13 28 02.9	-0.3
	1.5nm,0.5s,baz=89,slow=7.8,SNR=6.7						
QSPA	South Pole Qui	74.76	180	P	P	13 30 47.7	+0.1
	baz=354,slow=7.8						
ILAR	Eielson Array	82.33	11	P	P	13 31 28.4	-0.7
	0.3nm,0.8s,baz=218,slow=6.8,SNR=3.9						
BRTR	Keskin Array B	146.04	321	PKPbc	PKPab	13 38 48.8	0.0
	2.0nm,1.0s,baz=33,slow=3.4,SNR=4.8						

IDC 04 13:20:53.1±1.5, 15°.41S×172°.96W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/22, mbtmp3.8/3, Error ellipse: s-maj=58.6km s-min=25.1km az=128.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.88	38	Pn	Pn	13 21 26.6	0.0
	baz=252,slow=20,SNR=1.3						
AFI				Sn	Sn	13 21 45.4	-5.8
	71nm,0.3s,baz=210,slow=20,SNR=9.4						
URZ	Urewera	24.39	199	P	P	13 26 12.9	-0.2
	3.8nm,0.6s,baz=346,slow=16,SNR=3.2						
WRA	Warramunga Arr	50.26	257	P	P	13 29 51.6	0.0
	0.3nm,0.5s,baz=90,slow=7.0,SNR=4.8						
ASAR	Alice Springs	50.51	252	P	P	13 29 53.4	-0.2
	0.6nm,0.6s,baz=89,slow=7.9,SNR=4.1						
BRTR	Keskin Array B	146.43	321	PKPbc	PKPdf	13 40 35.8	+0.4
	0.4nm,0.6s,baz=44,slow=4.4,SNR=3.2						

IDC 04 13:21:54.7±10.0, 15°.44S×173°.06W, h0km, mb3.6/2, mb1 3.9/2, mb1mx3.5/21, mbtmp3.6/2, Error ellipse: s-maj=528.3km s-min=27.2km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	1.96	39	Pn	Pn	13 22 27.9	-1.5
	6.8nm,0.3s,baz=227,slow=18,SNR=1.2						
AFI				Sn	Sn	13 22 46.3	-8.6
	57nm,0.3s,baz=170,slow=18,SNR=5.2						
WRA	Warramunga Arr	50.16	257	P	P	13 30 51.7	-0.8
	0.5nm,0.7s,baz=88,slow=7.8,SNR=6.2						
ASAR	Alice Springs	50.41	252	P	P	13 30 53.6	-0.7
	1.2nm,0.8s,baz=89,slow=7.9,SNR=6.1						
BRTR	Keskin Array B	146.40	321	PKPbc	PKPab	13 41 39.4	+0.4
	0.7nm,0.8s,baz=30,slow=3.5,SNR=3.6						

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*NIED **04** 13:26:00, 44°.80N×148°.60E, h53km, Mw3.8 Best double couple: Mo6.42000×10^14 NP1:φs346.00000°, δ73.00000°, λ62.00000°. NP2:φs227.00000°, δ33.00000°, λ147.00000°.*
*JMA **04** 13:26:13.8±0.5, 44°.84N×148°.61E, h30km, M4.7*
*IDC **04** 13:26:14.8±0.8, 44°.79N×148°.40E, h58km±6km, mb3.6/19, mb1 3.8/20, mb1mx3.8/28, mbtmp3.6/20, MS2.6/4, Ms1 2.6/4, ms1mx2.3/46, Error ellipse: s-maj=17.2km s-min=15.1km az=136.0*
*ISCJB **04** 13:26:14.7±0.7, 44°.55N±0°.05×148°.57E±0°.07, h82km±6km, mb3.8/21, Error ellipse: s-maj=9.8km s-min=5.3km az=45.0*
*MOS **04** 13:26:14.4±0.9, 44°.79N×148°.52E, h73km, mb4.3/12, Error ellipse: s-maj=13.3km s-min=10.0km az=84.9*
*SKHL **04** 13:26:15.3±0.4, 44°.69N×148°.69E, h63km±4km, mb5.3/3*
ISC 04 13:26:14.3±0.6, 44°.57N±0°.05×148°.68E±0°.06, h61km±5km, n82, σ1s.68/103, mb3.8/21, 2C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.88	319	d iPN	Pn	13 26 29.8	-1.1
KUR				iS	Sn	13 26 40.4	-2.7
KUR				pmax	pmax		
	comp=E,371nm,0.4s						
KUR				pmax	pmax		
	comp=Z,1µm,0.4s						
KUR				pmax	pmax		
	comp=N,329nm,0.4s						
KUR				smax	smax		
	comp=E,3µm,0.2s						
KUR				smax	smax		
	comp=N,6µm,0.4s						
KUR	Kuril'sk	0.88	319	⇓iP	Pn	13 26 29.8	-1.1
KUR				AMB	AMB	13 26 30.3	
	comp=N,3µm,0.4s						
KUR				iS	Sn	13 26 40.4	-2.7
KUR				A	A	13 26 41.0	
	comp=N,3µm,0.4s						
KUR				A	A	13 26 41.0	
	comp=N,10µm,0.4s						
YUK	Yuzh-Kuril'sk	2.10	256	d iPN	Pn	13 26 47.5	+0.5
YUK				iS	Sn	13 27 12.0	0.0
YUK				pmax	pmax		
	comp=N,125nm,0.2s						
YUK				pmax	pmax		
	comp=Z,749nm,0.2s						
YUK				pmax	pmax		
	comp=E,208nm,0.1s						
YUK				smax	smax		
	comp=N,785nm,0.5s						
YUK				smax	smax		
	comp=E,1µm,0.5s						
YUK	Yuzh-Kuril'sk	2.10	256	⇓iP	Pn	13 26 47.5	+0.5
YUK				AMB	AMB	13 26 49.4	
	comp=E,125nm,0.2s						
YUK				AMB	AMB	13 26 49.4	
	comp=E,210nm,0.2s						
YUK				AMB	AMB	13 26 49.4	
	comp=E,749nm,0.2s						
YUK				iS	Sn	13 27 12.0	0.0
YUK				A	A	13 27 17.3	
	comp=E,785nm,0.5s						
YUK				A	A	13 27 17.3	
	comp=E,1µm,0.5s						
NEM2	Nemuro 2	2.44	242	P	Pn	13 26 51.6	-0.1
NEM2				eS	Sn	13 27 18.9	-1.5
JRA	Rausu	2.64	257	P	Pn	13 26 55.6	+1.2
JRA				eS	Sn	13 27 27.4	+2.2
JNK	Nakash	3.02	252	P	Pn	13 27 00.7	+1.0
JNK				eS	Sn	13 27 35.5	+0.8
JAK	Akkeshi	3.29	243	P	Pn	13 27 03.5	+0.2
JAK				eS	Sn	13 27 39.9	-1.2
JTKR	Abashiri--Toko	3.48	262	P	Pn	13 27 06.8	+0.8
JAR	Ashorobuto	3.77	252	P	Pn	13 27 11.7	+1.8
JAR				eS	Sn	13 27 55.5	+2.5
JMP	Maruseppu	3.86	264	P	Pn	13 27 12.4	+1.2
JOB	Onbets	3.89	246	P	Pn	13 27 12.6	+1.1
JOB				eS	Sn	13 27 55.1	-0.8
JKK2	Kamakawa 2	4.32	263	P	Pn	13 27 19.3	+1.8
JCH	Churui	4.33	245	P	Pn	13 27 18.4	+0.8
JCH				eS	Sn	13 28 06.8	+0.1
JSE	Soyaes	4.36	277	P	Pn	13 27 18.6	+0.6
ASAJ	Asahikawa	4.39	266	P	Pn	13 27 20.1	+1.7
JFR	Furan	4.62	254	P	Pn	13 27 24.0	+2.4
JFR				eS	Sn	13 28 17.9	+4.0
JEM	Erimo	4.77	240	P	Pn	13 27 25.3	+1.7
ERM	Erimo	4.77	240	d iPN	Pn	13 27 26.3	+2.7
JAB	Ashibetsu	4.78	259	P	Pn	13 27 27.6	+3.9
YSS	Yuzh-Sakhalins	4.79	302	⇑iPN	Pn	13 27 25.0	+1.2
YSS				eS	Sn	13 28 17.0	-0.9
YSS				pmax	pmax		
	comp=Z,80nm,0.6s						
YSS				smax	smax		
	comp=N,30nm,0.9s						
YSS	Yuzh-Sakhalins	4.79	302	⇑iP	Pn	13 27 25.0	+1.2
YSS				AMB	AMB	13 27 26.0	
	comp=N,80nm,0.6s						
YSS				eS	Sn	13 28 17.0	-0.9
YSS				A	A	13 28 19.0	
	comp=N,30nm,0.9s						
JWK2	Keihoku	4.88	281	P	Pn	13 27 28.8	+3.8
JNBK	Urakawa-nobuka	4.89	244	P	Pn	13 27 26.1	+0.9
JNBK				eS	Sn	13 28 21.2	+0.8
JSS	Shosan	4.89	270	P	Pn	13 27 28.5	+3.3
JBT2	Biratori 2	4.92	251	P	Pn	13 27 27.3	+1.6
JEW	Eniwo	5.52	254	P	Pn	13 27 37.4	+3.5
JNB	Noboribetsu	5.94	252	P	Pn	13 27 41.5	+1.9
JNB				eS	Sn	13 28 48.0	+1.7
JSK	Shakotan	6.05	261	P	Pn	13 27 45.0	+3.9
JKB	Kayabe	6.20	247	P	Pn	13 27 44.0	+0.9
JKB				eS	Sn	13 28 50.5	-2.1
JYM2	Yakumo 2	6.54	251	P	Pn	13 27 49.1	+1.3
JYM2				eS	Sn	13 29 03.1	+2.2
JANG	Nango	6.76	234	P	Pn	13 27 50.0	-0.8
JANG				eS	Sn	13 29 01.0	-5.3
JTM	Tenmabayashi	6.76	239	P	Pn	13 27 50.9	0.0
JTM				eS	Sn	13 29 02.4	-4.1
JSR	Shiriuchi	6.77	246	P	Pn	13 27 51.7	+0.7
JSR				eS	Sn	13 29 04.2	-2.5
JTH	Tanohata	6.85	230	P	Pn	13 27 51.3	-0.8
JTH				eS	Sn	13 29 03.1	-5.6
JOSM	Okushiri--Mats	7.16	253	P	Pn	13 27 57.7	+1.4
OFUJ	Ofunato	7.58	226	P	Pn	13 28 02.1	0.0
SKR	Severo-Kuril's	7.91	37	ePN	Pn	13 28 06.5	0.0
SKR				e		13 29 43.5	
SKR	Severo-Kuril's	7.91	37	eP	Pn	13 28 06.5	0.0
JRG	Rokugo	7.91	232	P	Pn	13 28 07.4	+0.8
JRG				eS	Sn	13 29 33.3	-1.4
JOG2	Oga 2	8.07	238	P	Pn	13 28 09.4	+0.7
JIO	Ouri	8.22	225	P	Pn	13 28 10.2	-0.6
JIO				eS	Sn	13 29 36.5	-5.6
JYA	Atsumi	8.99	231	P	Pn	13 28 22.5	+1.2
JYA				eS	Sn	13 30 01.9	+0.9
JFK	Kawauchi	9.30	222	eS	Sn	13 30 02.5	-6.3
PETK	Petropavlovsk-	10.40	32	ePN	Pn	13 28 45.0	+4.4
PETK	Petropavlovsk-	10.40	32	P	Pn	13 28 42.7	+2.1
	comp=N,0.2nm,0.3s,baz=194,slow=14,SNR=5.1						
PETK				LR	LR	13 32 23.1	
	comp=N,26nm,19.1s,baz=106,slow=36						
PET	Petropavlovsk	10.71	34	ePN	Pn	13 28 48.8	+4.1
MJAR	Matsushiro Arr	11.29	228	LR	LR	13 33 24.4	
	comp=N,42nm,19.6s,baz=190,slow=38						
USRK	Ussuriysk Arra	11.95	274	P	Pn	13 29 02.3	+0.6
	comp=N,0.3nm,0.3s,baz=96,slow=14,SNR=6.4						
USRK				LR	LR	13 33 58.1	
	comp=N,36nm,18.2s,baz=246,slow=40						
KLR	Kul'dur	12.48	298	ePN	Pn	13 29 07.0	-1.9
KSRS	Korea Array	17.18	253	P	Pn	13 30 10.3	+0.2
	comp=N,0.2nm,0.3s,baz=62,slow=12,SNR=6.5						
KSRS				LR	LR	13 36 19.0	
	comp=N,16nm,18.5s,baz=85,slow=35						
SEY	Seymchan	18.52	5	eP	P	13 30 23.7	-1.8
SONM	Songino Array	29.19	292	P	P	13 32 09.1	-0.8
	comp=N,0.4nm,0.6s,baz=70,slow=9.3,SNR=3.1						
SONM				sP	sP	13 32 32.7	+0.6
	comp=N,0.4nm,0.7s,baz=82,slow=7.7,SNR=2.6						
ILAR	Eielson Array	40.17	37	P	P	13 33 43.5	-0.6
	comp=N,0.6nm,0.8s,baz=276,slow=8.5,SNR=6.6						
ZALV	Zalesovo Beam	41.39	307	PcP	PcP	13 35 50.9	-0.3
	comp=N,0.9nm,0.5s,baz=85,slow=1.3,SNR=4.9						
INK	Inuvik	45.14	31	P	P	13 34 24.4	+0.2
	comp=N,0.5nm,0.5s,baz=245,slow=10.0,SNR=3.4						
MKAR	Makanchi Array	45.19	297	P	P	13 34 23.9	-1.1
MKAR						13 36 04.0	
MKAR	Makanchi Array	45.19	297	P	P	13 34 23.9	-1.1
	comp=N,0.3nm,0.6s,baz=79,slow=7.2,SNR=3.7						
MKAR				PcP	PcP	13 36 04.0	-0.3
	comp=N,0.4nm,0.6s,baz=64,slow=2.8,SNR=4.2						
KURK	Kurchatov	45.99	304	eP	P	13 34 26.1	-5.1
KURK				pmax	pmax		
	comp=Z,2.0nm,1.7s						
YKA	Yellowknife Ar	54.51	34	P	P	13 35 36.2	+0.9
	comp=Z,0.6nm,0.6s,baz=299,slow=6.8,SNR=7.4						
YKA				pP	pP	13 35 50.9	-0.4
	comp=Z,0.5nm,0.5s,baz=302,slow=7.0,SNR=6.5						
ARCES	ARCESS Array B	58.86	340	P	P	13 36 04.8	-1.3
	comp=Z,3.6nm,1.0s,baz=64,slow=8.4,SNR=3.0						
FINES	FINESS Array B	64.64	333	P	P	13 36 43.6	-1.4
	comp=Z,2.8nm,0.6s,baz=27,slow=8.8,SNR=5.6						
WRA	Warramunga Arr	65.52	195	P	P	13 36 52.5	+1.3
	comp=Z,0.6nm,0.7s,baz=9.1,slow=6.4,SNR=3.9						
NVAR	Mina Array Bea	66.21	59	P	P	13 36 57.8	+1.9
	comp=Z,0.8nm,0.8s,baz=288,slow=7.6,SNR=7.0						
NVAR				pP	pP	13 37 13.1	+0.7
	comp=Z,1.2nm,0.7s,baz=288,slow=6.3,SNR=8.4						
PDAR	Pinedale Array	68.54	51	P	P	13 37 11.9	+1.4
	comp=Z,0.9nm,0.6s,baz=301,slow=0.9,SNR=6.2						
PDAR				pP	pP	13 37 26.9	-0.1
	comp=Z,0.3nm,0.3s,baz=212,slow=38,SNR=2.4						
NB2	NORSAR Subarra	69.23	339	P	P	13 37 12.6	-1.7
	comp=Z,0.4nm,0.3s,baz=32,slow=6.5						
NOA	NORSAR Array B	69.23	339	P	P	13 37 13.1	-1.2
	comp=Z,2.8nm,1.0s,baz=29,slow=6.3,SNR=16						
ASAR	Alice Springs	69.23	194	P	P	13 37 16.4	+1.8
	comp=Z,0.3nm,0.5s,baz=12,slow=6.6,SNR=7.8						
HFS	Hagfors	69.36	338	P	P	13 37 13.4	-1.6
	comp=Z,1.3nm,0.3s,baz=50,slow=4.5,SNR=18						
AKASG	Malin Array Be	71.57	324	P	P	13 37 27.7	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	71.57	324	P	P	13 37 27.7	-0.9
	comp=Z,0.5nm,0.4s,baz=39,slow=6.5,SNR=2.6						
SCHQ	Schefferville	76.48	20	P	P	13 37 57.5	+0.3
	comp=Z,1.3nm,0.6s,baz=6.5,slow=18,SNR=3.8						
CLL	Collm	77.09	333	⇓iP	P	13 38 00.0	-0.7
CLL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
CLL	Collm	77.09	333	⇓iP	P	13 38 00.0	-0.7
	comp=Z,6.0nm,0.5s						
EKA	Eskdalemuir Ar	77.65	344	P	P	13 38 03.1	-0.7
	comp=Z,1.1nm,0.3s,baz=21,slow=5.6,SNR=8.1						
KHC	Kasperske Hory	78.77	332	eP	P	13 38 10.0	-0.1
KHC	Kasperske Hory	78.77	332	eP	P	13 38 10.0	-0.1
GERES	GERESS Array B	78.97	332	P	P	13 38 10.3	-1.0
	comp=Z,1.2nm,0.4s,baz=46,slow=5.6,SNR=7.3						
TXAR	Lajitas Array	81.28	57	P	P	13 38 25.3	+1.2
	comp=Z,0.7nm,0.6s,baz=291,slow=4.8,SNR=8.6						
TXAR				pP	pP	13 38 41.7	+0.6
	comp=Z,1.1nm,0.7s,baz=305,slow=3.8,SNR=7.4						
MMAI	Mount Meron Ar	81.84	309	P	P	13 38 26.8	-0.2
	comp=Z,1.0nm,0.4s,baz=46,slow=10,SNR=2.8						
QSPA	South Pole Qui	134.30	180	PKP	PKPdf	13 45 25.6	+1.6
	comp=Z,0.9nm,0.8s,baz=306,slow=3.4,SNR=8.1						
SNAA	Sanae	149.56	197	PKPbc	PKPbc	13 45 56.1	+0.7
	comp=Z,0.2nm,0.7s,baz=198,slow=3.2,SNR=5.8						

IDC 04 13:26:14.2±3.8, 15°.41S×173°.21W, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/21, mbtmp3.8/5, Error ellipse: s-maj=190.2km s-min=25.3km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.04	43	Pn	Pn	13 26 45.7	-4.1
	30nm,0.3s,baz=342,slow=4.7,SNR=11						
AFI				Sn	Sn	13 27 04.1	-12
	176nm,0.3s,baz=56,slow=22,SNR=16						
STKA	Stephens Creek	44.19	240	P	P	13 34 25.1	0.0
	2.4nm,0.9s,baz=73,slow=11,SNR=3.4						
WRA	Warramunga Arr	50.02	257	P	P	13 35 10.4	-0.5
	0.8nm,0.5s,baz=91,slow=7.3,SNR=31						
ASAR	Alice Springs	50.28	252	P	P	13 35 12.5	-0.3
	1.8nm,0.6s,baz=90,slow=7.7,SNR=48						
ILAR	Eielson Array	82.42	11	P	P	13 38 37.5	-0.4
	0.3nm,0.8s,baz=199,slow=7.6,SNR=3.7						
YKA	Yellowknife Ar	90.03	23	P	P	13 39 14.8	-0.5
	0.1nm,0.5s,baz=240,slow=4.9,SNR=3.1						
BRTR	Keskin Array B	146.28	321	PKPbc	PKPab	13 45 58.1	+0.2
	1.7nm,0.9s,baz=116,slow=3.4,SNR=7.1						

JMA 04 13:27:33.4, 35°.15N×135°.93E, h15km, M2.9, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWT	Wachi	0.45	287	P	Pg	13 27 42.4	-0.1
JWT				S	Sg	13 27 48.1	-0.5
JHE	Heguri	0.54	202	P	Pg	13 27 43.9	-0.1
JHE				S	Sg	13 27 51.0	-0.2
TSUJ	Tsu 2	0.59	137	P	Pg	13 27 44.6	-0.5
TSUJ				S	Sg	13 27 52.7	-0.3
JKY	Yasaka	0.83	306	P	Pb	13 27 49.2	-0.3
JKY				S	Sg	13 28 00.1	-0.3
JGM	Miyama	0.84	49	P	Pb	13 27 49.4	-0.5
JGM				S	Sb	13 28 00.7	-0.4
JKS	Kasai	0.91	260	S	Sb	13 28 02.3	-0.4
JKN2	Miekihoku	0.95	163	P	Pb	13 27 50.8	-0.8
JWY	Kouya	0.97	197	P	Pb	13 27 51.5	-0.5
JWY				S	Sb	13 28 04.1	-0.6
MAT	Matsushiro	2.31	52	P	Pn	13 28 11.8	+0.8
MAT				S	Sb	13 28 45.2	+1.9

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*IDC **04** 13:27:52.3±1.3, 36°.36S×178°.11E, h0km, mb4.3/6, mb1 4.5/7, mb1mx4.1/19, mbtmp4.3/7, MS3.8/6, Ms1 3.8/6, ms1mx3.5/20, Error ellipse: s-maj=32.9km s-min=24.1km az=50.0*
*WEL **04** 13:27:54.4±0.5, 36°.43S×177°.90E, h5km, ML4.3/16, Error ellipse: s-maj=2.8km s-min=2.4km az=0.0*
*NEIC **04** 13:27:56.7, 36°.47S×177°.70E, h26km, mb4.4/1, ML4.5(WEL), After WEL.*
*ISCJB **04** 13:27:57.1±0.7, 36°.62S±0°.04×177°.70E±0°.05, h33km, mb4.2/6, MS3.8/5, Error ellipse: s-maj=6.9km s-min=4.8km az=146.0*
ISC 04 13:27:58.0±0.8, 36°.46S±0°.06×177°.74E±0°.06, h35km, n90, σ1s.61/93, mb4.2/6, MS3.9/5, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	White Island	1.15	202	P*	Pn	13 28 16.0	-1.6
WIZ				S*	Sn	13 28 31.4	-0.8
WIZ	White Island	1.15	202	P*	Pn	13 28 16.0	-1.6
MXZ	Matakaoa Point	1.19	158	eP*	Pn	13 28 14.3	-3.8
MXZ				S*	Sn	13 28 29.6	-3.4
MXZ				S*		13 28 30.0	
MXZ				AML	AML	13 28 32.5	
MXZ				AML	AML	13 29 30.5	
MXZ	Matakaoa Point	1.19	158	eP*	Pn	13 28 14.9	-3.2
MYRZ	Mayor Island	1.46	235	P*	Pn	13 28 21.1	-0.6
MYRZ				eS*	Sn	13 28 38.5	-1.2
KUZ	Kuaotunu	1.65	259	PN	Pn	13 28 23.2	-1.2
KUZ				SN	Sn	13 28 42.1	-2.3
KUZ				AML	AML	13 28 45.2	
KUZ				AML	AML	13 28 47.5	
KUZ				AML	AML	13 28 52.6	
KUZ	Kuaotunu	1.65	259	Pn	Pn	13 28 23.2	-1.2
KUZ				Sn	Sn	13 28 39.2	-5.2
KUZ				Sn	Sn	13 28 44.4	-0.1
PUZ	Puketiti	1.66	166	PN	Pn	13 28 24.2	-0.5
PUZ	Puketiti	1.66	166	Pn	Pn	13 28 24.3	-0.3
TGRZ	Tauranga	1.73	223	P*	Pn	13 28 25.2	-0.4
TGRZ				AML	AML	13 29 02.5	
TGRZ				AML	AML	13 29 15.1	
TGRZ	Tauranga	1.73	223	P*	Pn	13 28 25.1	-0.4
MARZ	Manawahe	1.74	209	P*	Pn	13 28 25.0	-0.8
MARZ	Manawahe	1.74	209	P*	Pn	13 28 25.0	-0.8
URZ	Urewera	1.86	195	P*	Pn	13 28 26.5	-0.9
URZ				S*	Sn	13 28 49.5	-0.2
URZ				AML	AML	13 28 59.5	
URZ	Urewera	1.86	195	P*	Pn	13 28 26.4	-0.9
URZ				Sn	Sn	13 28 50.5	+0.8
URZ	Urewera	1.86	195	Pn	Pn	13 28 26.7	-0.7
	42nm,0.3s,baz=8.7,slow=6.2,SNR=90						
URZ				Sn	Sn	13 28 50.5	+0.8
	75nm,0.3s,baz=122,slow=21,SNR=15						
MWZ	Matawai	1.88	185	P*	Pn	13 28 26.6	-1.1
MWZ				S*	Sn	13 28 50.4	+0.3
MWZ				AML	AML	13 29 04.3	
MWZ	Matawai	1.88	185	P*	Pn	13 28 26.4	-1.2
MWZ				S*	Sn	13 28 51.1	+0.9
CNGZ	Carnagh Statio	2.05	170	PN	Pn	13 28 31.2	+1.2
CNGZ	Carnagh Statio	2.05	170	Pn	Pn	13 28 30.9	+0.9
MKAZ	Moumakai	2.17	252	PN	Pn	13 28 31.3	-0.2
MKAZ				AML	AML	13 29 23.7	
MKAZ				AML	AML	13 29 28.9	
MKAZ	Moumakai	2.17	252	Pn	Pn	13 28 31.4	-0.2
TOZ	Tahuroa Road	2.19	234	P*	Pn	13 28 31.7	-0.1
TOZ	Tahuroa Road	2.19	234	P*	Pn	13 28 31.8	-0.1
RVAZ	Riverhead Bore	2.56	262	PN	Pn	13 28 38.0	+1.0
WTAZ	Waiatarua	2.59	259	PN	Pn	13 28 37.9	+0.6
WTAZ	Waiatarua	2.59	259	Pn	Pn	13 28 38.0	+0.6
NMHZ	Naumai	2.73	195	PN	Pn	13 28 41.1	+1.7
NMHZ	Naumai	2.73	195	Pn	Pn	13 28 41.1	+1.7
BKZ	Black Stump Fm	2.88	200	P*	Pn	13 28 41.5	+0.1
BKZ				AML	AML	13 29 32.6	
BKZ				AML	AML	13 29 44.1	
BKZ	Black Stump Fm	2.88	200	P*	Pn	13 28 41.3	-0.1
HIZ	Hauiti	3.08	227	PN	Pn	13 28 44.8	+0.7
HIZ				AML	AML	13 29 23.4	
HIZ				AML	AML	13 30 00.3	
HIZ	Hauiti	3.08	227	Pn	Pn	13 28 44.8	+0.7
FWVZ	Far West T-bar	3.28	211	P*	Pn	13 28 49.9	+2.8
FWVZ				AML	AML	13 29 32.1	
FWVZ				AML	AML	13 29 50.3	
FWVZ	Far West T-bar	3.28	211	P*	Pn	13 28 49.7	+2.6
BHHZ	Black Hill Sta	3.30	203	P*	Pn	13 28 47.8	+0.5
BHHZ	Black Hill Sta	3.30	203	P*	Pn	13 28 47.7	+0.5
TRVZ	Turoa	3.32	211	AML	AML	13 29 42.5	
TRVZ				AML	AML	13 29 49.7	
TRVZ	Turoa	3.32	211	P*	Pn	13 28 50.3	+2.6
WNVZ	Wahianoa	3.33	210	P*	Pn	13 28 50.5	+2.9
WNVZ				AML	AML	13 29 48.4	
WNVZ				AML	AML	13 29 50.3	
WNVZ	Wahianoa	3.33	210	P*	Pn	13 28 50.4	+2.7
MOVZ	Moawhango	3.33	208	P*	Pn	13 28 49.1	+1.5
MOVZ				AML	AML	13 29 39.1	
MOVZ				AML	AML	13 29 42.3	
MOVZ	Moawhango	3.33	208	P*	Pn	13 28 49.1	+1.5
KAHZ	Kahuranaki	3.40	191	PN	Pn	13 28 49.1	+0.6
KAHZ	Kahuranaki	3.40	191	Pn	Pn	13 28 49.1	+0.6
MTVZ	Mangateitei	3.43	211	P*	Pn	13 28 51.9	+3.0
MTVZ				AML	AML	13 29 08.6	
MTVZ				AML	AML	13 29 27.6	
MTVZ	Mangateitei	3.43	211	P*	Pn	13 28 51.9	+3.0
OUZ	Omahuta	3.59	289	PN	Pn	13 28 51.5	+0.4
OUZ				AML	AML	13 30 26.9	
OUZ	Omahuta	3.59	289	ePn	Pn	13 28 50.8	-0.3
PXZ	Pawanui	3.63	191	PN	Pn	13 28 50.8	-0.9
PXZ				AML	AML	13 30 08.6	
PXZ				AML	AML	13 30 25.8	
PXZ	Pawanui	3.63	191	Pn	Pn	13 28 51.2	-0.5
BFZ	Birch Farm	4.37	195	PN	Pn	13 29 01.1	-0.8
BFZ	Birch Farm	4.37	195	Pn	Pn	13 29 00.7	-1.2
MRZ	Mangatainoka R	4.52	201	PN	Pn	13 29 03.2	-0.8
MRZ				AML	AML	13 30 19.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MRZ				AML	AML	13 30 22.8	
MRZ	Mangatainoka R	4.52	201	Pn	Pn	13 29 03.2	-0.8
KIW	Kapiti Island	4.92	206	PN	Pn	13 29 08.8	-0.5
KIW	Kapiti Island	4.92	206	Pn	Pn	13 29 08.9	-0.5
MTW	Mount Morrison	5.01	200	PN	Pn	13 29 09.1	-1.5
MTW	Mount Morrison	5.01	200	Pn	Pn	13 29 09.1	-1.5
NNZ	Nelson	5.84	214	PN	Pn	13 29 24.3	+2.3
NNZ	Nelson	5.84	214	Pn	Pn	13 29 24.3	+2.3
QRZ	Quartz Range	5.97	222	PN	Pn	13 29 26.1	+2.2
QRZ	Quartz Range	5.97	222	Pn	Pn	13 29 26.0	+2.2
LTZ	Lake Taylor	7.59	212	PN	Pn	13 29 46.6	+0.4
LTZ	Lake Taylor	7.59	212	Pn	Pn	13 29 46.6	+0.4
RPZ	Rata Peaks	8.87	213	Pn	Pn	13 30 02.7	-0.9
RPZ				Sn	Sn	13 31 39.3	-3.0
RPZ	Rata Peaks	8.87	213	Pn	Pn	13 30 02.7	-0.9
	0.4nm,0.3s,baz=8.7,slow=13,SNR=2.3						
RPZ				Sn	Sn	13 31 39.3	-3.0
	0.4nm,0.3s,baz=159,slow=18,SNR=3.8						
DZM	Mont Dzumac	17.38	323	LR	LR	13 37 40.0	
	comp=Z,454nm,19.1s,baz=186,slow=34						
STKA	Stephens Creek	30.14	268	eP	P	13 34 02.2	-2.4
STKA	Stephens Creek	30.14	268	P	P	13 34 07.4	+2.8
	5.7nm,0.9s,baz=91,slow=7.6,SNR=8.6						
HNR	Honiara	31.39	325	LR	LR	13 45 36.2	
	comp=Z,111nm,18.4s,baz=155,slow=34						
CTA	Charters Tower	31.99	292	P	P	13 34 23.1	+2.2
CTA	Charters Tower	31.99	292	P	P	13 34 23.1	+2.2
	1.4nm,0.8s,baz=126,slow=14,SNR=3.7						
PMG	Port Moresby	38.66	307	LR	LR	13 47 19.1	
	comp=Z,189nm,20.9s,baz=53,slow=30						
ASAR	Alice Springs	39.71	276	P	P	13 35 29.0	+1.9
ASAR	Alice Springs	39.71	276	P	P	13 35 29.0	+1.9
	11nm,0.9s,baz=120,slow=7.3,SNR=46						
WRA	Warramunga Arr	41.27	281	P	P	13 35 41.4	+1.4
WRA	Warramunga Arr	41.27	281	P	P	13 35 41.4	+1.4
	2.5nm,0.7s,baz=121,slow=7.4,SNR=18						
QSPA	South Pole Qui	53.66	180	eP	P	13 37 16.0	+0.2
	3.0nm,0.7s						
QSPA	South Pole Qui	53.66	180	P	P	13 37 17.7	+1.9
	4.1nm,0.9s,baz=38,slow=2.4,SNR=13						
SNAA	Sanae	72.17	180	eP	P	13 39 17.9	-0.8
KSRS	Korea Array	86.81	322	LR	LR	14 12 16.0	
	comp=Z,40nm,20.2s,baz=132,slow=31						
PETK	Petropavlovsk-	90.89	348	LR	LR	14 17 07.6	
	comp=Z,38nm,18.9s,baz=60,slow=32						
NVAR	Mina Array Bea	95.06	45	P	P	13 41 16.5	-0.8
NVAR	Mina Array Bea	95.06	45	P	P	13 41 16.5	-0.8
	0.5nm,0.8s,baz=220,slow=8.2,SNR=4.6						
LPAZ	La Paz	98.72	118	LR	LR	14 14 48.8	
	comp=Z,42nm,20.3s,baz=229,slow=29						
BRTR	Keskin Array B	151.68	288	PKPbc	PKPbc	13 47 46.7	-2.0
BRTR	Keskin Array B	151.68	288	PKPbc	PKPbc	13 47 46.7	-2.0
	0.9nm,0.9s,baz=132,slow=1.8,SNR=3.8						
TORD	Torodi Ar. Bea	156.51	190	PKPab	PKPab	13 48 17.4	-0.9
TORD	Torodi Ar. Bea	156.51	190	PKPab	PKPab	13 48 17.4	-0.9
	2.3nm,1.2s,baz=173,slow=3.1,SNR=4.4						

*ISCJB **04** 13:32:01.9±0.8, 51°.52N±0°.04×16°.18E±0°.04, h0km, Error ellipse: s-maj=6.5km s-min=3.1km az=9.7*
*CSEM **04** 13:32:03.4±0.5, 51°.54N×16°.15E, h1km, ML3.8/5, Error ellipse: s-maj=9.0km s-min=3.8km az=176.0*
*PRU **04** 13:32:05.6, 51°.45N×16°.15E, h0km*
*WAR **04** 13:32:05.3, 51°.50N×16°.13E*
ISC 04 13:32:04.3±1.1**, 51°.52N**±0°.06×**16°.14E**±0°.02**, h0**km**, n24, σ0.s65**/46**, 1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.68	172	ePg	Pg	13 32 17.7	+0.4
KSP				eSg	Sg	13 32 26.8	+0.7
KSP	Ksiaz	0.68	172	⇓iPg	Pg	13 32 17.7	+0.4
KSP				eSg	Sg	13 32 26.8	+0.7
UPC	Upice	1.01	185	ePG	Pg	13 32 23.7	0.0
UPC	Upice	1.01	185	Pg	Pg	13 32 23.7	0.0
DPC	Dobruska-Polom	1.17	174	ePG	Pg	13 32 26.5	-0.3
DPC				eSG	Sg	13 32 41.6	-0.3
	comp=Z,405nm,0.4s						
DPC	Dobruska-Polom	1.17	174	Pg	Pg	13 32 26.5	-0.3
DPC				Sg	Sg	13 32 41.6	-0.3
	405nm,0.4s						
PVCC	Panska Ves	1.40	226	ePG	Pn	13 32 31.1	0.0
PVCC				eSG	Sb	13 32 49.9	+0.2
	comp=Z,183nm,0.2s						
PVCC	Panska Ves	1.40	226	Pg	Pn	13 32 31.1	0.0
PVCC				Sg	Sb	13 32 49.9	+0.2
	183nm,0.2s						
BRG	Berggiesshubel	1.52	246	PG	Pn	13 32 32.9	+0.1
BRG				SG	Sg	13 32 53.3	+0.1
	117nm,0.3s						
PRU	Pruhonice	1.84	214	ePG	Pg	13 32 39.7	+0.2
PRU				eSG	Sb	13 33 02.7	+0.5
	comp=Z,44nm,0.3s						
PRU	Pruhonice	1.84	214	Pg	Pg	13 32 39.7	+0.2
PRU				Sg	Sb	13 33 02.7	+0.5
	44nm,0.3s						
MORC	Moravsky Berou	1.96	152	ePn	Pn	13 32 37.8	-1.0
MORC				eSg	Sn	13 33 03.2	-0.9
CLL	Collm	1.98	265	ePn	Pn	13 32 38.0	-1.0
CLL				ePg	Pb	13 32 41.0	-0.1
CLL				e		13 32 45.0	
CLL				eSg	Sg	13 33 08.0	+0.3
	comp=Z,22nm,0.4s						
OKC	Ostrava-Krasne	2.11	142	eSG	Sb	13 33 10.6	+0.4
OKC	Ostrava-Krasne	2.11	142	Sg	Sb	13 33 10.6	+0.4
VRAC	Vranov	2.23	172	ePn	Pn	13 32 41.9	-0.6
VRAC				eSg	Sb	13 33 13.3	-0.3
OJC	Ojcow	2.66	118	ePg	Pb	13 32 54.0	+1.3
OJC				eSg	Sg	13 33 29.5	-0.1
OJC	Ojcow	2.66	118	ePg	Pb	13 32 54.0	+1.3
OJC				eSg	Sg	13 33 29.5	-0.1
NKC	Novy Kostel	2.67	243	ePG	Pg	13 32 55.4	0.0
NKC				eSG	Sg	13 33 31.0	+1.0
	comp=Z,50nm,0.3s						
NKC	Novy Kostel	2.67	243	Pg	Pg	13 32 55.4	0.0
NKC				Sg	Sg	13 33 31.0	+1.0
	comp=Z,50nm,0.3s						
KHC	Kasperske Hory	2.90	215	ePN	Pn	13 32 50.8	-0.9
KHC				ePG	Pb	13 32 57.6	+0.8
KHC				eSN	Sn	13 33 26.5	-0.7
KHC				eSG	Sg	13 33 35.6	-1.7
	comp=Z,14nm,0.4s						
KHC	Kasperske Hory	2.90	215	Pn	Pn	13 32 50.8	-0.9
STHS	Stebnicka Huta	3.88	121	ePG	Pg	13 33 18.1	-0.5
STHS				eSG	Sg	13 34 09.3	+0.4
STHS	Stebnicka Huta	3.88	121	ePg	Pg	13 33 18.1	-0.5
STHS				eSg	Sg	13 34 09.3	+0.4

*ROM **04** 13:35:59.8±0.2, 46°.33N×8°.55E, h17km, Md2.4/6, Ml1.9/3, Error ellipse: s-maj=3.5km s-min=2.1km az=146.0*
*GEN **04** 13:35:59.5, 46°.34N×8°.60E, h7km, ML1.6*
*ZUR **04** 13:36:00.7, 46°.30N×8°.58E, h4km±2km, ML1.8/7, Suspected Mining explosion.*
CSEM 04 13:36:00.1±0.2**, 46°.27N×8°.55E, h1**km**, MD2.4**/6**, 9C, Error ellipse: s-maj=4.3km s-min=3.1km az=148.0, Suspected Mining explosion., Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FUSIO	Fusio	0.20	22	⇑iPg	Pg	13 36 04.3	+0.1
	183nm,0.1s						
FUSIO				eSg	Sg	13 36 06.7	-0.3
	183nm,0.1s						
FUSIO	Fusio	0.20	22	Pg	Pg	13 36 04.3	+0.1
FUSIO				Sg	Sg	13 36 06.7	-0.3
FUSIO	Fusio	0.20	22	⇑iPg	Pg	13 36 04.3	+0.1
	183nm,0.1s						
FUSIO				eSg	Sg	13 36 06.7	-0.3
	183nm,0.1s						
MMK	Mattmark	0.46	242	ePg	Pg	13 36 09.9	+0.6
	103nm,0.2s						
MMK	Mattmark	0.46	242	Pg	Pg	13 36 09.9	+0.6
MMK				Sg	Sg	13 36 16.8	+1.2
MMK	Mattmark	0.46	242	ePg	Pg	13 36 09.9	+0.6
	103nm,0.2s						
MMK				Sg	Sg	13 36 16.8	+1.2
MUGIO	Muggio	0.48	135	⇑iPg	Pb	13 36 10.6	-0.9
	201nm,0.3s						
MUGIO	Muggio	0.48	135	Pg	Pg	13 36 10.5	+1.0
MUGIO				Sg	Sg	13 36 17.3	+1.4
MUGIO	Muggio	0.48	135	Pg	Pg	13 36 10.5	+1.0
MUGIO				Sg	Sg	13 36 17.3	+1.4
HASLI	Hasliberg/Brie	0.56	331	⇑iPg	Pg	13 36 11.4	+0.3
	89nm,0.3s						
HASLI	Hasliberg/Brie	0.56	331	⇑iPg	Pg	13 36 11.4	+0.3
	89nm,0.3s						
TUE	Stuetta	0.59	69	Pg	Pg	13 36 11.7	0.0
TUE				Sg	Sg	13 36 18.7	-0.8
	36nm,0.2s						
TUE	Stuetta	0.59	69	Pg	Pg	13 36 11.7	0.0
TUE				Sg	Sg	13 36 18.7	-0.8
	36nm,0.2s						
BNALP	Bannalp	0.61	352	⇑iPg	Pg	13 36 12.1	+0.1
	49nm,0.2s						
BNALP	Bannalp	0.61	352	⇑iPg	Pg	13 36 12.1	+0.1
	49nm,0.2s						
LKBD2	Leukerbad 2	0.64	280	⇑iPg	Pg	13 36 13.3	+0.6
LKBD2	Leukerbad 2	0.64	280	⇑iPg	Pg	13 36 13.3	+0.6
VDL	Val di Lei	0.66	71	ePg	Pg	13 36 12.9	-0.1
	80nm,0.3s						
SENIN	Lac Senin/Sane	0.87	277	ePg	Pg	13 36 17.4	+0.2
	27nm,0.3s						
SENIN	Lac Senin/Sane	0.87	277	ePg	Pg	13 36 17.4	+0.2
	27nm,0.3s						
TRAV	Traversella	0.94	217	Pg	Pg	13 36 18.0	-0.3
	18nm,0.2s						
TRAV	Traversella	0.94	217	P	Pg	13 36 18.0	-0.3
TRAV				S	Sg	13 36 30.9	+0.3
MDI	Monti di Nese	0.94	121	Pg	Pb	13 36 19.0	-0.4
	37nm,0.3s						
MDI	Monti di Nese	0.94	121	Pg	Pb	13 36 19.0	-0.4
	37nm,0.3s						
DAVOX	Davos/Dischmat	1.05	60	Pg	Pg	13 36 19.6	-0.9
DAVOX	Davos/Dischmat	1.05	60	Pg	Pg	13 36 19.6	-0.9
LSD	Lago del Serru	1.28	231	P	Pg	13 36 24.3	-0.7
LSD				S	Sg	13 36 41.2	-0.6
RSP	Reno Superiore	1.44	219	P	Pn	13 36 25.6	-1.9
RSP				S	Sg	13 36 43.3	-3.3

*IDC **04** 13:38:09.9±4.2, 17°.65S×166°.99E, h0km, mb3.8/4, mb1 4.0/5, mb1mx3.7/19, mbtmp3.8/5, ML3.8/1, Error ellipse: s-maj=83.9km s-min=38.3km az=83.0*
*NOU **04** 13:38:14.5±1.7, 17°.85S×167°.76E, h30km, MD3.2, ML2.9, MS3.2*
ISC 04 13:38:13.6±3.0**, 17°.9S**±0°.1×**167°.0E**±0°.4**, h20**km**, n12, σ1.s28**/17**, mb3.8**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.20	187	eP	Pn	13 39 17.2	+0.6
DZM				eS	Sn	13 40 04.2	-0.9
DZM				AMP		13 40 07.1	
	comp=Z,785nm,12.1s						
DZM	Mont Dzumac	4.20	187	Pn	Pn	13 39 17.3	+0.6
	comp=Z,5.4nm,0.3s,baz=96,slow=18,SNR=302						
DZM				Sn	Sn	13 40 04.1	-1.1
	comp=Z,21nm,0.3s,baz=287,slow=19,SNR=11						
BAYA	Yate Dam	4.25	182	eS	Sn	13 40 05.3	-0.9
NOUC	Port Laguerre	4.25	189	eP	Pn	13 39 20.2	+3.0
NOUC				eS	Sn	13 40 06.6	+0.4
NOUC				AMP		13 40 11.5	
	comp=Z,53nm,1.7s						
NORM	Noumea	4.35	187	eP	Pn	13 39 19.2	+0.7
NORM				eS	Sn	13 40 07.2	-1.4
PLUM	Mont Dore	4.38	185	eP	Pn	13 39 19.7	+0.7
PLUM				eS	Sn	13 40 07.8	-1.6
MVNO	Noumea	4.39	187	eS	Sn	13 40 09.8	0.0
HNR	Honiara	10.86	320	Pn	Pn	13 40 48.3	+0.4
	comp=Z,9.1nm,0.3s,baz=170,slow=12,SNR=5.0						
STKA	Stephens Creek	26.86	234	P	P	13 43 54.5	+1.4
	comp=Z,1.2nm,0.5s,baz=80,slow=11,SNR=6.6						
WRA	Warramunga Arr	30.96	261	P	P	13 44 28.6	-1.1
	comp=Z,0.2nm,0.4s,baz=89,slow=9.3,SNR=6.2						
ASAR	Alice Springs	31.44	254	P	P	13 44 33.2	-0.7
	comp=Z,0.5nm,0.5s,baz=78,slow=8.4,SNR=9.3						
CMAR	Chiang Mai Arr	76.03	295	P	P	13 49 59.2	-0.8
	comp=Z,0.9nm,0.7s,baz=123,slow=3.3,SNR=3.9						

KRSC 04 13:39:51.3±2.8**, 48°.37N**×**155°.94E, h5**km±5km**, ML3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.32	3	S	Sn	13 40 58.2	-0.7
MIPR	Malaya Ipel'ka	3.95	7	P	Pn	13 40 53.5	+1.0
ASAK	Asacha	4.21	17	P	Pn	13 40 58.5	+2.3
MTVR	Mutnovka	4.36	18	P	Pn	13 41 00.3	+1.9
MTVR				S	Sn	13 41 50.6	+0.9
RUS	Russkaya	4.39	21	P	Pn	13 40 59.7	+1.2
RUS				S	Sn	13 41 49.5	-0.5
UGLR	Uglovaya	5.18	20	P	Pn	13 41 10.6	+1.1
SDLR	Sedlovina	5.26	20	P	Pn	13 41 11.5	+0.9
SPN	Mys Shipunski	5.40	27	P	Pn	13 41 14.5	+2.1
SPN				S	Sn	13 42 15.3	+0.5
MKZ	Mys Kozlova	7.17	28	P	Pn	13 41 38.5	+1.8

IDC 04 13:47:35.8±4.5**, 5°.02N**×**75°.95W, h166**km±44km**, mb3.5**/2**, mb1 3.6**/2**, mb1mx3.0**/22**, mbtmp3.5**/2**, Error ellipse: s-maj=93.7km s-min=23.9km az=66.0, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	El Rosal	1.62	96	P	Pn	13 48 06.8	-1.5
	5.8nm,0.3s,baz=83,slow=21,SNR=5.1						
ROSC				S	Sn	13 48 34.0	+0.6
	11nm,0.3s,baz=82,slow=23,SNR=5.9						
SIV	San Ignacio	25.55	145	P	P	13 52 48.9	-0.6
	1.4nm,0.4s,baz=326,slow=12,SNR=9.4						
YKA	Yellowknife Ar	64.01	341	P	P	13 57 50.9	-0.3
	0.5nm,0.5s,baz=135,slow=6.2,SNR=8.8						
WRA	Warramunga Arr	147.01	241	PKPbc	PKPbc	14 07 00.4	+0.5
	0.3nm,0.6s,baz=108,slow=3.3,SNR=3.7						

*IDC **04** 13:50:55.7±0.9, 32°.80N×76°.15E, h0km, mb3.9/12, mb1 4.1/15, mb1mx3.9/32, mbtmp3.9/15, ML4.0/3, MS2.8/3, Ms1 2.8/3, ms1mx2.4/45, Error ellipse: s-maj=23.0km s-min=17.5km az=44.0*
*ISCJB **04** 13:50:56.1±1.0, 32°.98N±0°.02×76°.14E±0°.06, h8km±7km, mb3.9/16, MS2.5/2, Error ellipse: s-maj=9.1km s-min=3.3km az=166.1*
*NDI **04** 13:50:56.7±2.3, 32°.96N×76°.07E, h10km, ML3.8, mb3.8(NEIC)*
*NEIC **04** 13:50:57.7±0.7, 32°.93N×76°.18E, h10km, mb3.8/3, Error ellipse: s-maj=12.5km s-min=10.1km az=48.0*
NEIC Felt at Chamba.
*MOS **04** 13:50:59.7±1.3, 32°.96N×76°.01E, h33km, mb4.2/18, Error ellipse: s-maj=14.8km s-min=6.3km az=92.2*
*NNC **04** 13:51:04.1±2.6, 33°.54N×75°.76E, h0km, mb4.0, Error ellipse: s-maj=38.1km s-min=27.3km az=101.0*
*BJI **04** 13:51:06.0, 33°.32N×77°.14E, h12km, mB4.3/1, mb4.2/6, ML3.5/4, Ms3.6/1*
ISC 04 13:50:58.5±1.2**, 32°.83N**±0°.03×**76°.05E**±0°.04**, h17**km±8km**, n92, σ1.s56**/105**, mb3.9**/16**, 7C-7D, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DLH	Dalhousie	0.30	193	ePKP	Pg	13 51 04.0	-1.1
DLH				eS	Sb	13 51 12.0	+1.8
THN	Thein Dam	0.49	215	i 4	Pb	13 51 02.9	-5.7
THN				eS	Sn	13 51 18.0	-0.7
DHRM	DHARAMSHALA	0.62	160	ePKP	Pg	13 51 11.0	+0.1
DHRM				eS	Sb	13 51 20.3	+0.8
DHRM				AML	AML	13 51 25.7	
	comp=E,5μm,0.2s						
DHRM				AML	AML	13 51 25.8	
	comp=N,3μm,0.2s						
JMU	Jammu	0.97	263	ex	Pn	13 51 15.0	-2.4
JMU				ex	Sb	13 51 28.5	-1.0
BHK	Bhakra	1.45	167	ePKP	Pb	13 51 25.4	+0.4
BHK				eS	Sg	13 51 46.2	+1.0
SDNR	Sundarnagar	1.54	149	ePKP	Pb	13 51 26.6	0.0
SDNR				eS	Sb	13 51 47.0	+1.1
SMLA	Simla	1.95	150	i P	Pn	13 51 31.8	+1.1
SMLA				eS	Sb	13 51 57.8	+0.3
CHCP	Chirah Chowk	2.47	290	⇑P	Pb	13 51 42.2	-0.3
DDI	Dehra Dun	3.03	145	ePKP	Pn	13 51 47.5	+1.8
DDI				ex	x	13 51 48.5	
DDI				eS	Sn	13 52 22.4	+0.6
DDI				eS	Sb	13 52 23.2	-5.7
CEP	Cherat	3.60	287	P	Pn	13 51 55.8	+2.1
THW	Thamme Wali	3.62	271	P	Pn	13 51 56.4	+2.5
RTK	Rohtak	3.80	175	ePKP9	Pb	13 52 04.6	-0.5
RTK				eS	Sb	13 52 51.3	+0.4
RTK				AML	AML	13 52 55.6	
	comp=Z,382nm,0.3s						
NDI	New Delhi	4.26	166	ePKP	Pn	13 52 02.8	+0.2
NDI				eS	Sn	13 52 50.3	-1.6
NDI				AML	AML	13 53 07.7	
	comp=N,112nm,0.6s						
NDI				AML	AML	13 53 07.9	
	comp=E,166nm,0.5s						
AYAN	Aya Nagar	4.43	168	ePKP	Pn	13 52 06.3	+1.3
AYAN				AML	AML	13 53 19.4	
	comp=Z,106nm,0.5s						
KHET	Khetri	4.75	183	ePKP	Pn	13 52 09.8	+0.5
KHET				eS	Sn	13 53 02.5	-1.5
KHET				AML	AML	13 53 28.2	
KHET				AML	AML	13 53 28.7	
	comp=E,248nm,0.4s						
PTH	Pithoragarh	4.84	131	e4	Sn	13 52 57.0	-10
PTH				e4	Sb	13 53 22.3	+1.2
LGTI	Lohaghat	4.93	132	e4	Pg	13 52 31.1	-1.9
LGTI				e4	Sn	13 53 13.6	+5.1
AGRA	Agra	5.82	163	ePKP9	Pn	13 52 24.9	+0.9
AGRA				eS	Sn	13 53 29.1	-1.2
AGRA				AML	AML	13 54 13.0	
	comp=E,209nm,0.5s						
AGRA				AML	AML	13 54 14.8	
	comp=N,122nm,0.9s						
KBL	Kabul	6.08	288	eP	Pn	13 52 28.9	+1.1
KBL	Kabul	6.08	288	ePn	Pn	13 52 28.9	+1.1
AJM	Ajmer	6.45	191	ePKP	Pn	13 52 32.9	+0.1
AJM				eS	Sn	13 53 43.1	-2.9
AJM				AML	AML	13 54 25.6	
	comp=E,250nm,0.6s						
AJM				AML	AML	13 54 25.8	
	comp=N,131nm,0.7s						
KSH	Kashi	6.67	360	Pn	Pn	13 52 36.1	+0.3
KSH				Sn	Sn	13 53 47.9	-3.6
KSH				smax	smax		
	comp=N,38nm,0.6s						
KSH				smax	smax		
	comp=E,31nm,0.4s						
BHPL	Bhopal	9.63	172	ePKP	Pn	13 53 15.2	-1.2
BHPL				ex	x	13 54 55.1	
BHPL				AML	AML	13 56 14.8	
	comp=E,66nm,0.9s						
BHPL				AML	AML	13 56 16.4	
	comp=N,39nm,0.6s						
AAK	Ala-Archa	9.86	353	P	Pn	13 53 22.0	+2.4
AAK						13 55 09.4	
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK				smax	smax		
	comp=Z,1.0nm,0.3s						
AAK				MLR	MLR		
	comp=Z,91nm,18.2s						
AAK	Ala-Archa	9.86	353	ePn	Pn	13 53 19.1	-0.5
	comp=Z,7.2nm,0.8s						
AAK	Ala-Archa	9.86	353	Pn	Pn	13 53 22.0	+2.4
	comp=Z,0.8nm,0.3s,baz=153,slow=8.0,SNR=18						
AAK				Sn	Sn	13 55 09.4	-0.6
	comp=Z,0.5nm,0.3s,baz=335,slow=19,SNR=3.0						
AAK				LR	LR	13 57 26.3	
	comp=Z,91nm,18.1s,baz=174,slow=39						
EKS2	Erkin-Say	9.97	350	eP	Pn	13 53 20.0	-1.1
EKS2				pmax	pmax		
	comp=Z,3.0nm,0.5s						
EKS2	Erkin-Say	9.97	350	ePn	Pn	13 53 20.0	-1.1
	comp=Z,3.1nm,0.5s						
FRU	Bishkek	10.05	354	eP	Pn	13 53 34.0	+12
TKM2	Tokmak 2	10.08	358	⇓Pn	Pn	13 53 23.4	+0.8
	comp=Z,6.2nm,0.9s						
TKM2				⇑Sn	Sn	13 55 07.8	-7.6
	comp=Z,3.0nm,1.0s						
TKM2	Tokmak 2	10.08	358	eP	Pn	13 53 21.2	-1.4
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.6s						
TKM2	Tokmak 2	10.08	358	ePn	Pn	13 53 21.2	-1.4
	comp=Z,4.3nm,0.6s						
JBP	Jabalpur	10.24	159	⇓ePKP	Pn	13 53 26.0	+1.4
JBP				ex	x	13 55 13.2	
KK31	Karatay Array	11.14	339	Pn	Pn	13 53 36.7	-0.3
	comp=Z,2.2nm,0.4s,baz=149,slow=12,SNR=23						
KK31				⇑Sn	Sn	13 55 31.8	-9.3
	comp=Z,7.3nm,0.5s,baz=157,slow=23,SNR=9.2						
KKAR	Karatay Array	11.14	339	eP	Pn	13 53 35.7	-1.3
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KKAR	Karatay Array	11.14	339	ePn	Pn	13 53 35.7	-1.3
	comp=Z,4.2nm,0.4s						
LATR	Latur	14.36	178	e4	Sn	13 56 57.4	-2.6
LATR				e4	x	13 58 19.8	
POO	Poona	14.38	188	e4	Sn	13 57 09.0	+8.5
MK31	Makanchi Array	14.74	17	⇑P	Pn	13 54 26.6	+0.4
	comp=Z,0.7nm,0.3s,baz=193,slow=13,SNR=54						
MK31	Makanchi Array	14.74	17	eP	Pn	13 54 26.2	+0.1
MK31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	Makanchi Array	14.74	17	P	Pn	13 54 24.3	-1.8
MKAR						13 57 00.0	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MKAR	Makanchi Array	14.74	17	Pn	Pn	13 54 24.3	-1.8
MKAR				Sn	Sn	13 56 60.0	-9.0
MKAR	Makanchi Array	14.74	17	Pn	Pn	13 54 24.3	-1.8
	comp=Z,1.5nm,0.3s,baz=198,slow=15,SNR=41						
MKAR				Sn	Sn	13 56 60.0	-9.0
	comp=Z,0.1nm,0.3s,baz=204,slow=28,SNR=3.4						
KURBB	Kurchatov Arra	17.87	5	Pn	Pn	13 55 03.5	-2.6
	comp=Z,0.1nm,0.3s,baz=192,slow=11,SNR=12						
KURK	Kurchatov	17.97	5	⇑P	Pn	13 55 04.3	-3.0
	comp=Z,4.7nm,0.7s						
KURK	Kurchatov	17.97	5	eP	Pn	13 55 05.7	-1.7
KURK				pmax	pmax		
	comp=Z,10.0nm,1.7s						
KURK	Kurchatov	17.97	5	ePn	Pn	13 55 04.0	-3.4
	comp=Z,4.6nm,0.7s						
VOSK	Vostochnaya	20.21	351	⇓P	P	13 55 31.5	-0.9
	comp=Z,3.0nm,0.5s						
VOSK	Vostochnaya	20.21	351	P	P	13 55 31.5	-0.9
VOSK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
GTA	Gaotai	20.26	64	eP	Pn	13 55 34.4	-0.8
GTA				pP	pP	13 55 39.6	+1.6
GTA				sP	sP	13 55 43.3	+3.0
GTA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AB31	Akbulak array	20.34	328	⇑P	P	13 55 33.9	+0.1
	comp=Z,1.6nm,0.6s,baz=134,slow=12,SNR=27						
AB31	Akbulak array	20.34	328	eP	P	13 55 34.2	+0.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ABKAR	Akbulak array	20.34	328	eP	P	13 55 33.0	-0.8
	comp=Z,1.7nm,0.5s						
BVA0	Borovoye Array	20.59	350	⇓P	P	13 55 36.1	-0.4
	comp=Z,7.5nm,0.6s,baz=161,slow=12,SNR=47						
BVAR	Borovoye Array	20.59	350	P	P	13 55 36.9	+0.4
BVAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BVAR				MLR	MLR		
	comp=Z,36nm,20.9s						
BVAR	Borovoye Array	20.59	350	P	P	13 55 36.9	+0.4
BVAR	Borovoye Array	20.59	350	P	P	13 55 36.9	+0.4
	comp=Z,7.7nm,0.6s,baz=159,slow=11,SNR=52						
BVAR				LR	LR	14 04 20.7	
	comp=Z,36nm,20.9s,baz=163,slow=39						
BRVK	Borovoye	20.64	350	eP	P	13 55 37.3	+0.3
BRVK				pmax	pmax		
	comp=Z,27nm,1.2s						
BRVK	Borovoye	20.64	350	eP	P	13 55 36.4	-0.6
	comp=Z,16nm,0.8s						
ZRNK	Zerenda	20.74	348	⇓P	P	13 55 38.0	-0.1
	comp=Z,10nm,0.9s						
ZRNK	Zerenda	20.74	348	P	P	13 55 38.0	-0.1
ZRNK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZALV	Zalesovo Beam	22.01	14	i P	P	13 55 53.5	+1.7
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ZALV	Zalesovo Beam	22.01	14	P	P	13 55 50.0	-1.8
ZALV	Zalesovo Beam	22.01	14	P	P	13 55 50.0	-1.8
	comp=Z,8.5nm,0.7s,baz=211,slow=8.9,SNR=17						
ZALV				LR	LR	14 03 54.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,14nm,19.8s,baz=84,slow=35						
AKTO	**Aktyubinsk**	**22.06**	**328**	⇑P	**P**	**13 55 52.5**	**+0.2**
	comp=Z,4.1nm,0.7s						
AKTO	**Aktyubinsk**	**22.06**	**328**	P	**P**	**13 55 53.3**	**+1.0**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKTO	**Aktyubinsk**	**22.06**	**328**	P	**P**	**13 55 53.3**	**+1.0**
AKTO	**Aktyubinsk**	**22.06**	**328**	P	**P**	**13 55 53.3**	**+1.0**
	comp=Z,3.2nm,0.5s,baz=124,slow=9.1,SNR=13						
NVS	**Novosibirsk**	**22.58**	**11**	*e*P	**P**	**13 55 56.6**	**-1.2**
NVS				pmax	pmax		
	comp=N,6.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**25.04**	**119**	P	**P**	**13 56 22.1**	**+0.2**
CMAR	**Chiang Mai Arr**	**25.04**	**119**	P	**P**	**13 56 22.1**	**+0.2**
	comp=Z,1.1nm,0.8s,baz=304,slow=11,SNR=5.4						
ARU	**Arti**	**26.52**	**338**	*d i*P	**P**	**13 56 36.0**	**+1.1**
ARU						13 57 14.5	
ARU				S	S	14 00 59.2	-9.0
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONM	**Songino Array**	**27.34**	**48**	P	**P**	**13 56 43.5**	**+0.8**
SONM	**Songino Array**	**27.34**	**48**	P	**P**	**13 56 43.5**	**+0.8**
	comp=Z,1.5nm,0.6s,baz=243,slow=9.5,SNR=14						
BRTR	**Keskin Array B**	**34.62**	**294**	P	**P**	**13 57 49.5**	**+2.5**
BRTR	**Keskin Array B**	**34.62**	**294**	P	**P**	**13 57 49.5**	**+2.5**
	comp=Z,1.2nm,0.8s,baz=88,slow=7.4,SNR=2.2						
YAK	**Yakutsk**	**44.66**	**33**	*i* P	**P**	**13 59 10.2**	**+0.2**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARCES	**ARCESS Array B**	**46.11**	**338**	P	**P**	**13 59 22.4**	**+1.1**
ARCES	**ARCESS Array B**	**46.11**	**338**	P	**P**	**13 59 22.4**	**+1.1**
	comp=Z,3.1nm,0.8s,baz=108,slow=10,SNR=3.6						
TIXI	**Tiksi**	**47.70**	**20**	*d i*P	**P**	**13 59 35.3**	**+1.6**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MJAR	**Matsushiro Arr**	**50.47**	**67**	P	**P**	**13 59 54.8**	**-0.7**
MJAR	**Matsushiro Arr**	**50.47**	**67**	P	**P**	**13 59 54.8**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=277,slow=10,SNR=4.2						
SEY	**Seymchan**	**55.19**	**33**	*e*P	**P**	**14 00 30.8**	**+0.9**
BILL	**Bilibino**	**60.08**	**26**	*e*P	**P**	**14 01 05.3**	**+1.0**
BILL				pmax	pmax		
	comp=Z,2.0nm,1.6s						
TORD	**Torodi Ar. Bea**	**69.93**	**273**	P	**P**	**14 02 08.1**	**-1.1**
TORD	**Torodi Ar. Bea**	**69.93**	**273**	P	**P**	**14 02 08.1**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=48,slow=5.5,SNR=5.1						
WRA	**Warramunga Arr**	**76.51**	**125**	P	**P**	**14 02 47.0**	**-0.8**
WRA	**Warramunga Arr**	**76.51**	**125**	P	**P**	**14 02 47.0**	**-0.8**
	comp=Z,0.4nm,1.0s,baz=321,slow=5.9,SNR=3.7						
ILAR	**Eielson Array**	**77.09**	**17**	P	**P**	**14 02 49.8**	**-0.7**
ILAR	**Eielson Array**	**77.09**	**17**	P	**P**	**14 02 49.8**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=306,slow=4.9,SNR=12						
YKA	**Yellowknife Ar**	**84.62**	**5**	P	**P**	**14 03 30.5**	**-0.2**
YKA	**Yellowknife Ar**	**84.62**	**5**	P	**P**	**14 03 30.5**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=344,slow=5.2,SNR=5.0						

IDC 04 13:51:29.5±2.2**, 15°.50S**×**173°.09W, h0**km**, mb3.8**/7**, mb1 4.2**/7**, mb1mx3.9**/21**, mbtmp3.8**/7**, MS3.2**/2**, Ms1 3.3**/2**, ms1mx3.0**/31**, Error ellipse: s-maj=128.4km s-min=21.0km az=145.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AFI	**Afiamalu**	**2.03**	**39**	Pn	Pn	13 52 00.9	-4.3
	63nm,0.3s,baz=343,slow=6.3,SNR=25						
AFI				Sn	Sn	13 52 19.5	-12
	334nm,0.3s,baz=221,slow=19,SNR=33						
DZM	**Mont Dzumac**	**20.44**	**248**	LR	LR	14 01 49.2	
	comp=Z,40nm,21.7s,baz=39,slow=30						
STKA	**Stephens Creek**	**44.24**	**240**	P	P	13 59 40.9	-0.1
	1.3nm,0.7s,baz=95,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**50.11**	**257**	P	P	14 00 26.4	-0.6
	1.7nm,0.6s,baz=90,slow=6.7,SNR=42						
ASAR	**Alice Springs**	**50.36**	**252**	P	P	14 00 28.5	-0.3
	2.2nm,0.5s,baz=87,slow=8.3,SNR=36						
NVAR	**Mina Array Bea**	**74.20**	**42**	P	P	14 03 08.7	0.0
	0.4nm,0.8s,baz=238,slow=8.1,SNR=4.2						
PDAR	**Pinedale Array**	**82.14**	**42**	P	P	14 03 52.3	-0.3
	0.3nm,0.4s,baz=176,slow=4.5,SNR=4.5						
ILAR	**Eielson Array**	**82.49**	**11**	P	P	14 03 52.7	-0.9
	0.6nm,0.9s,baz=231,slow=5.7,SNR=4.6						
YKA	**Yellowknife Ar**	**90.07**	**23**	P	P	14 04 31.0	+0.1
	0.5nm,0.8s,baz=236,slow=4.4,SNR=6.0						
CMAR	**Chiang Mai Arr**	**92.93**	**288**	LR	LR	14 40 19.7	
	comp=Z,19nm,19.8s,baz=170,slow=32						
BRTR	**Keskin Array B**	**146.43**	**321**	PKPbc	PKPab	14 11 14.1	+0.2
	4.2nm,1.0s,baz=129,slow=1.8,SNR=16						

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*IDC **04** 14:19:26.8±2.3, 6°.69N×73°.13W, h171km±18km, mb3.3/4, mb1 3.6/6, mb1mx3.3/24, mbtmp3.4/6, Error ellipse: s-maj=42.7km s-min=20.0km az=88.0*

*ISCJB **04** 14:19:28.6±0.9, 7°.28N±0°.09×72°.81W±0°.08, h176km±7km, mb3.6/4, Error ellipse: s-maj=16.2km s-min=11.5km az=144.0*

*FUNV **04** 14:19:31.2, 7°.02N×72°.73W, h152km, MW4.1*

ISC 04 14:19:28.3±1.2**, 7°.1N**±0°.1×**72°.74W**±0°.08**, h169**km±8km**, n21, σ1s̥80**/28**, mb3.5**/4**, 1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CAPV	**Capacho**	**0.85**	**30**	⇓*i*P	**Pn**	**14 19 54.7**	**+0.6**
CAPV				*e*S	**Sn**	**14 20 12.8**	**-1.2**
VIGV	**El Vigia**	**2.19**	**38**	*e*P	**Pn**	**14 20 08.6**	**+1.9**
VIGV				*e*S	**Sn**	**14 20 36.8**	**+0.2**
SOCV	**Socops**	**2.20**	**58**	*e*P	**Pn**	**14 20 08.9**	**+2.0**
SOCV				*e*S	**Sn**	**14 20 36.2**	**-0.6**
ROSC	**El Rosal**	**2.75**	**215**	P	Pn	14 20 06.4	-7.4
	124nm,0.3s,baz=83,slow=22,SNR=57						
ROSC				S	Sn	14 20 36.0	-13
	120nm,0.3s,baz=103,slow=17,SNR=14						
ELOV	**Elorza**	**3.24**	**92**	*e*P	**Pn**	**14 20 20.9**	**+1.5**
QARV	**Quebrada Arrib**	**3.77**	**35**	*e*S	**Sn**	**14 21 11.3**	**0.0**
SANV	**Sanarito**	**3.96**	**53**	*e*P	**Pn**	**14 20 30.5**	**+1.9**
SANV				*e*S	**Sn**	**14 21 14.1**	**-1.7**
CURV	**Curarigua**	**3.98**	**44**	*e*P	**Pn**	**14 20 30.7**	**+1.8**
CURV				*e*S	**Sn**	**14 21 14.4**	**-1.7**
DABV	**Dabajuro**	**4.31**	**29**	*e*P	**Pn**	**14 20 34.6**	**+1.5**
DABV				*e*S	**Sn**	**14 21 22.7**	**-1.1**
SIQV	**Siquisique**	**4.55**	**39**	*e*P	**Pn**	**14 20 37.9**	**+1.7**
SIQV				*e*S	**Sn**	**14 21 26.9**	**-2.5**
BAUV	**El Baul**	**4.99**	**68**	*e*P	**Pn**	**14 20 43.0**	**+1.0**
BAUV				*e*S	**Sn**	**14 21 35.9**	**-3.8**
MAPV	**Macapo**	**5.02**	**57**	*e*P	**Pn**	**14 20 44.6**	**+2.3**
MONV	**Montecano**	**5.53**	**29**	*e*P	**Pn**	**14 20 51.0**	**+2.0**
CUPV	**Cœpira**	**7.47**	**67**	*e*P	**Pn**	**14 21 15.1**	**+0.4**
CUPV				*e*S	Sn	14 22 32.5	-6.1
TEIG	**Tepich**	**19.91**	**312**	P	**P**	**14 23 46.0**	**-1.0**
	0.6nm,0.3s,baz=72,slow=11,SNR=5.2						
TXAR	**Lajitas Array**	**36.55**	**311**	P	**P**	**14 26 16.4**	**-1.6**
	0.5nm,0.5s,baz=129,slow=9.3,SNR=8.3						
SCHQ	**Schefferville**	**47.81**	**5**	P	**P**	**14 27 50.4**	**+1.8**
	2.9nm,0.6s,baz=194,slow=5.4,SNR=9.6						
PDAR	**Pinedale Array**	**48.06**	**324**	P	**P**	**14 27 49.5**	**-1.5**
	0.5nm,0.6s,baz=122,slow=8.0,SNR=3.3						
YKA	**Yellowknife Ar**	**63.12**	**340**	P	**P**	**14 29 37.3**	**-0.3**
	0.5nm,0.7s,baz=132,slow=7.1,SNR=6.6						
ASAR	**Alice Springs**	**149.59**	**234**	PKPbc	**PKPdf**	**14 38 55.2**	**+1.3**
	0.5nm,0.6s,baz=116,slow=3.8,SNR=15						
WRA	**Warramunga Arr**	**150.81**	**241**	PKPbc	**PKPdf**	**14 38 58.2**	**+2.3**
	0.5nm,0.4s,baz=106,slow=2.7,SNR=28						

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*BJI **04** 14:19:57.0, 40°.83N×49°.94E, h22km, mB4.9/20, mb4.7/26, Ms4.7/15, Ms7 4.1/16*

*IDC **04** 14:19:59.0±0.5, 40°.61N×50°.55E, h0km, mb4.5/28, mb1 4.6/34, mb1mx4.6/38, mbtmp4.5/34, ML4.5/5, MS3.4/19, Ms1 3.4/19, ms1mx3.2/35, Error ellipse: s-maj=12.9km s-min=7.6km az=169.0*

*ISCJB **04** 14:20:01.2±0.1, 40°.73N±0°.02×50°.64E±0°.02, h26km, mb4.6/122, MS3.6/25, Error ellipse: s-maj=3.1km s-min=2.1km az=171.1*

*THR **04** 14:20:01.2±0.4, 40°.76N×50°.59E, h30km±17km, ML4.5*

*MOS **04** 14:20:02.5±1.2, 40°.75N×50°.63E, h33km, mb4.9/51, Error ellipse: s-maj=5.2km s-min=3.6km az=43.2*

*PDA **04** 14:20:03.5, 40°.76N×50°.55E, h32km, mb4.7*

*NEIC **04** 14:20:03.7±1.4, 40°.71N×50°.59E, h33km±10km, mb4.9/53, Error ellipse: s-maj=7.0km s-min=3.1km az=173.0*

NEIC Felt at Makhachkala, Russia.

*AZER **04** 14:20:03.8, 40°.61N×50°.77E, h51km*

*CSEM **04** 14:20:05.2±0.2, 40°.70N×50°.65E, h51km±2km, ML4.5, Ms3.1, Error ellipse: s-maj=5.3km s-min=4.0km az=173.0*

*NNC **04** 14:20:10.1±5.0, 41°.02N×51°.77E, h0km, mb4.5, Error ellipse: s-maj=73.7km s-min=27.2km az=88.0*

ISC 04 14:20:03.4±0.3**, 40°.74N**±0°.03×**50°.65E**±0°.02**, h31**km±2km**, h30**km**: pP-P, n630, σ1s̥35**/670**, mb4.7**/122**, MS3.5**/25**, 69C-68D, Caspian Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GALA	**Gala**	**0.50**	**229**	⇑Pb	Pn	14 20 18.1	+3.7
	SNR=118						
GALA				⇓Sb	Sn	14 20 30.6	+8.6
GALA	**Gala**	**0.50**	**229**	⇑P	Pn	14 20 18.1	+3.7
	SNR=118						
GALA				⇓S	Sn	14 20 30.6	+8.6
GALA	**Gala**	**0.50**	**229**	⇑Pb	Pn	14 20 18.1	+3.7
	SNR=118						
GALA				⇓Sb	Sn	14 20 30.6	+8.6
GALA	**Gala**	**0.50**	**229**	P	Pn	14 20 18.1	+3.7
	SNR=118						
GALA				S	Sn	14 20 30.6	+8.5
NDR	**Nardaran**	**0.53**	**253**	⇑Pb	Pn	14 20 18.6	+3.7
	SNR=532						
NDR				⇑Sb	Sn	14 20 30.6	+7.8
NDR	**Nardaran**	**0.53**	**253**	⇑P	Pn	14 20 18.6	+3.7
	SNR=532						
NDR				⇑S	Sn	14 20 30.6	+7.8
NDR	**Nardaran**	**0.53**	**253**	⇑Pb	Pn	14 20 18.6	+3.7
	SNR=532						
NDR				⇑Sb	Sn	14 20 30.6	+7.8
NDR	**Nardaran**	**0.53**	**253**	P	Pn	14 20 18.6	+3.7
	SNR=532						
NDR				S	Sn	14 20 30.6	+7.8
GOBA	**Gobu**	**0.78**	**245**	⇑Pb	Pb	14 20 22.6	+4.2
	SNR=110						
GOBA				⇑Sb	Sb	14 20 37.6	+8.9
GOBA	**Gobu**	**0.78**	**245**	⇑P	Pb	14 20 22.6	+4.2
	SNR=110						
GOBA				⇑S	Sb	14 20 37.6	+8.9
GOBA	**Gobu**	**0.78**	**245**	⇑Pb	Pb	14 20 22.6	+4.2
	SNR=110						
GOBA				⇑Sb	Sb	14 20 37.6	+8.9
GOBA	**Gobu**	**0.78**	**245**	P	Pb	14 20 22.6	+4.2
	SNR=110						
GOBA				S	Sb	14 20 37.6	+8.9
SIZA	**Siyzn**	**1.37**	**285**	⇑Pn	Pb	14 20 30.6	+2.1
	SNR=46						
SIZA				⇓Sn	**Sb**	**14 20 49.8**	**+4.1**
SIZA	**Siyzn**	**1.37**	**285**	⇑P	Pb	14 20 30.6	+2.1
	SNR=46						
SIZA				⇓S	**Sb**	**14 20 49.8**	**+4.1**
SIZA	**Siyzn**	**1.37**	**285**	⇑Pn	Pb	14 20 30.6	+2.1
	SNR=46						
SIZA				⇓Sn	**Sb**	**14 20 49.8**	**+4.1**
SIZA	**Siyzn**	**1.37**	**285**	P	Pb	14 20 30.6	+2.1
	SNR=46						
SIZA				S	**Sb**	**14 20 49.8**	**+4.1**
ALIB	**Äli-Bayra**	**1.48**	**239**	⇑Pn	**Pb**	**14 20 31.7**	**+1.5**
	SNR=60						
ALIB				⇑Sn	Sb	14 20 54.1	+5.4
ALIB	**Äli-Bayra**	**1.48**	**239**	⇑P	**Pb**	**14 20 31.7**	**+1.5**
	SNR=60						
ALIB	**Äli-Bayra**	**1.48**	**239**	⇑Pn	**Pb**	**14 20 31.7**	**+1.5**
	SNR=60						
ALIB	**Äli-Bayra**	**1.48**	**239**	P	**Pb**	**14 20 31.7**	**+1.5**
	SNR=60						
PQL	**Pirkuli**	**1.57**	**273**	⇓Pn	**Pb**	**14 20 32.2**	**+0.4**
	SNR=159						
PQL				⇓Sn	**Sb**	**14 20 52.1**	**+0.8**
PQL	**Pirkuli**	**1.57**	**273**	⇓P	**Pb**	**14 20 32.2**	**+0.4**
	SNR=159						
PQL				⇓S	**Sb**	**14 20 52.1**	**+0.8**
PQL	**Pirkuli**	**1.57**	**273**	⇓Pn	**Pb**	**14 20 32.2**	**+0.4**
	SNR=159						
PQL				⇓Sn	**Sb**	**14 20 52.1**	**+0.8**
PQL	**Pirkuli**	**1.57**	**273**	P	**Pb**	**14 20 32.2**	**+0.4**
	SNR=159						
PQL				S	**Sb**	**14 20 52.1**	**+0.8**
QUBA	**Quba, Azerbaij**	**1.75**	**291**	⇓Pn	**Pb**	**14 20 35.1**	**+0.3**
	SNR=20						
QUBA				⇓Sn	**Sb**	**14 20 57.8**	**+1.4**
QUBA	**Quba, Azerbaij**	**1.75**	**291**	⇓P	**Pb**	**14 20 35.1**	**+0.3**
	SNR=20						
QUBA				⇓S	**Sb**	**14 20 57.8**	**+1.4**
QUBA	**Quba, Azerbaij**	**1.75**	**291**	⇓Pn	**Pb**	**14 20 35.1**	**+0.3**
	SNR=20						
QUBA				⇓Sn	**Sb**	**14 20 57.8**	**+1.4**
QUBA	**Quba, Azerbaij**	**1.75**	**291**	P	**Pb**	**14 20 35.1**	**+0.3**
	SNR=20						
QUBA				S	**Sb**	**14 20 57.8**	**+1.4**
IML	**Ismayilli**	**1.88**	**272**	⇓Pn	**Pb**	**14 20 36.0**	**-1.1**
	SNR=19						
IML				⇓Sn	**Sb**	**14 20 59.0**	**-1.1**
IML	**Ismayilli**	**1.88**	**272**	⇓P	**Pb**	**14 20 36.0**	**-1.1**
	SNR=19						
IML				⇓S	**Sb**	**14 20 59.0**	**-1.1**
IML	**Ismayilli**	**1.88**	**272**	⇓Pn	**Pb**	**14 20 36.0**	**-1.1**
	SNR=19						
IML				⇓Sn	**Sb**	**14 20 59.0**	**-1.1**
IML	**Ismayilli**	**1.88**	**272**	P	**Pb**	**14 20 36.0**	**-1.1**
	SNR=19						
IML				S	**Sb**	**14 20 59.0**	**-1.1**
GLBA	**Clilabad**	**2.29**	**230**	⇓Pn	**Pn**	**14 20 39.5**	**+0.4**
	SNR=27						
GLBA				⇓Sn	**Sn**	**14 21 06.4**	**+0.2**
GLBA	**Clilabad**	**2.29**	**230**	⇓P	**Pn**	**14 20 39.5**	**+0.4**
	SNR=27						
GLBA				⇓S	**Sn**	**14 21 06.2**	**0.0**
GLBA	**Clilabad**	**2.29**	**230**	⇓Pn	**Pn**	**14 20 39.5**	**+0.4**
	SNR=27						
GLBA				⇓Sn	**Sn**	**14 21 06.2**	**0.0**
GLBA	**Clilabad**	**2.29**	**230**	P	**Pn**	**14 20 39.5**	**+0.4**
	SNR=27						
GLBA				S	**Sn**	**14 21 06.2**	**0.0**
LKRN	**Lenkeran, Azer**	**2.49**	**216**	⇑Pn	**Pn**	**14 20 41.6**	**-0.2**
	SNR=48						
LKRN				⇓Sn	**Sn**	**14 21 09.5**	**-1.6**
LKRN	**Lenkeran, Azer**	**2.49**	**216**	⇑P	**Pn**	**14 20 41.6**	**-0.2**
	SNR=48						
LKRN				⇑S	**Sn**	**14 21 09.3**	**-1.8**
LKRN	**Lenkeran, Azer**	**2.49**	**216**	⇑Pn	**Pn**	**14 20 41.6**	**-0.2**
	SNR=48						
LKRN				⇑Sn	**Sn**	**14 21 09.3**	**-1.8**
LKRN	**Lenkeran, Azer**	**2.49**	**216**	P	**Pn**	**14 20 41.6**	**-0.2**
	SNR=48						
LKRN				S	**Sn**	**14 21 09.3**	**-1.8**
SEKA	**Sheki**	**2.66**	**281**	⇑Pn	Pb	14 20 46.8	-3.6
	SNR=79						
SEKA				⇓Sn	**Sb**	**14 21 18.7**	**-3.9**
SEKA	**Sheki**	**2.66**	**281**	⇑P	Pb	14 20 46.8	-3.6
	SNR=79						
SEKA				⇓S	**Sb**	**14 21 18.7**	**-3.9**
SEKA	**Sheki**	**2.66**	**281**	⇑Pn	Pb	14 20 46.8	-3.6
	SNR=79						
SEKA				⇓Sn	**Sb**	**14 21 18.7**	**-3.9**
SEKA	**Sheki**	**2.66**	**281**	P	Pb	14 20 46.8	-3.6
	SNR=79						
SEKA				S	**Sb**	**14 21 18.7**	**-3.9**
BRDA	**Brd**	**2.69**	**261**	⇑Pn	**Pn**	**14 20 44.8**	**+0.2**
	SNR=6.8						
BRDA				⇓Sn	**Sb**	**14 21 19.9**	**-3.6**
BRDA	**Brd**	**2.69**	**261**	⇑P	**Pn**	**14 20 44.8**	**+0.2**
	SNR=6.8						
BRDA				⇑S	**Sb**	**14 21 19.7**	**-3.7**
BRDA	**Brd**	**2.69**	**261**	⇑Pn	**Pn**	**14 20 44.8**	**+0.2**
	SNR=6.8						
BRDA				⇑Sn	**Sb**	**14 21 19.7**	**-3.7**
BRDA	**Brd**	**2.69**	**261**	P	**Pn**	**14 20 44.8**	**+0.2**
	SNR=6.8						
BRDA				S	**Sb**	**14 21 19.7**	**-3.7**
GRMI	**Germi**	**2.87**	**229**	*e*Pn	**Pn**	**14 20 46.9**	**-0.3**
GRMI				AML	AML	14 21 19.3	
	comp=E,1μm,0.5s						
GRMI	**Germi**	**2.87**	**229**	*e*Pn	**Pn**	**14 20 46.9**	**-0.3**
MAK	**Makhachkala**	**3.24**	**314**	*e*PN	Pn	14 20 54.9	+2.9
MAK				*e*		14 21 35.6	
MAK				pmax	pmax		
	comp=Z,343nm,0.2s						
MAK				smax	smax		
	comp=N,4μm,0.3s						
MAK				smax	smax		
	comp=E,4μm,0.4s						
MAK				MLR	MLR		
	comp=Z,350nm,14.0s						
MAK	**Makhachkala**	**3.24**	**314**	*e*Pn	Pn	14 20 54.9	+2.9
	comp=Z,343nm,0.2s						
GANJ	**Ganja**	**3.29**	**270**	⇓Pn	**Pn**	**14 20 53.5**	**+0.5**
	SNR=16						
GANJ				⇓Sn	**Sn**	**14 21 29.7**	**-1.4**
GANJ	**Ganja**	**3.29**	**270**	⇓P	**Pn**	**14 20 53.5**	**+0.5**
	SNR=16						
GANJ				⇓S	**Sn**	**14 21 29.7**	**-1.4**
GANJ	**Ganja**	**3.29**	**270**	⇓Pn	**Pn**	**14 20 53.5**	**+0.5**
	SNR=16						
GANJ				⇓Sn	**Sn**	**14 21 29.7**	**-1.4**
GANJ	**Ganja**	**3.29**	**270**	P	**Pn**	**14 20 53.5**	**+0.5**
	SNR=16						
GANJ				S	**Sn**	**14 21 29.7**	**-1.4**
DGRG	**David-gareji**	**4.05**	**282**	P	Pn	14 21 05.7	+2.3
DGRG				S	Sn	14 21 19.5	-30
NAX	**Nakhchivan**	**4.26**	**250**	⇑Sn	**Sn**	**14 21 56.8**	**+1.8**
GNI	**Garni**	**4.55**	**264**	*e*Pn	**Pn**	**14 21 07.8**	**-2.5**
GNI	**Garni**	**4.55**	**264**	Pn	Pn	14 21 12.8	+2.5
	comp=Z,5.6nm,0.3s,baz=322,slow=7.6,SNR=9.8						
GNI				Sn	**Sn**	**14 22 04.3**	**+2.1**
	comp=Z,13nm,0.3s,baz=128,slow=1.4,SNR=4.7						
GNI	**Garni**	**4.55**	**264**	Pn	Pn	14 21 12.8	+2.5
	comp=Z,6.0nm,0.3s						
GNI				Sn	**Sn**	**14 22 04.3**	**+2.1**
	comp=Z,13nm,0.3s						
TBLG	**Delisi**	**4.57**	**284**	P	**Pn**	**14 21 12.1**	**+1.6**
TBLG				S	**Sn**	**14 22 02.1**	**-0.4**
TBLG	**Delisi**	**4.57**	**284**	*i* PN	**Pn**	**14 21 12.1**	**+1.6**
TBLG				S	**Sn**	**14 22 02.1**	**-0.4**
TBLG	**Delisi**	**4.57**	**284**	P	**Pn**	**14 21 12.1**	**+1.6**
TBLG				S	**Sn**	**14 22 02.1**	**-0.4**
DUS	**Dusheti**	**4.67**	**289**	P	Pn	14 21 16.1	+4.2
DUS				S	**Sn**	**14 22 08.5**	**+3.3**
KZR	**Kazreti**	**4.76**	**280**	P	**Pn**	**14 21 14.1**	**+1.0**
KZR				S	**Sn**	**14 22 04.6**	**-2.6**
THKV	**Tehran--Karaj**	**4.82**	**178**	*e*Pn	**Pn**	**14 21 14.5**	**+0.5**
THKV	**Tehran--Karaj**	**4.82**	**178**	*e*Pn	**Pn**	**14 21 14.5**	**+0.5**
CHTH	**Charan**	**4.84**	**175**	*e*Pn	**Pn**	**14 21 14.5**	**+0.2**
CHTH				AML	AML	14 22 08.7	
	comp=E,224nm,0.2s						
CHTH	**Charan**	**4.84**	**175**	*e*Pn	**Pn**	**14 21 14.5**	**+0.2**
MRVT	**Maraveh tapeh**	**5.22**	**124**	*e*Pn	**Pn**	**14 21 20.3**	**+0.8**
MRVT				AML	AML	14 22 19.5	
	comp=E,394nm,0.3s						
MRVT				AML	AML	14 22 20.3	
	comp=N,324nm,0.3s						
MRVT	**Maraveh tapeh**	**5.22**	**124**	*e*Pn	**Pn**	**14 21 20.3**	**+0.8**
AKH	**Akhalkalaki**	**5.45**	**279**	P	Pn	14 21 26.0	+3.3
AKH				S	**Sn**	**14 22 26.5**	**+2.0**
ONI	**Oni**	**5.70**	**291**	P	Pn	14 21 28.6	+2.6
ONI				S	Sb	14 23 11.5	+21
ASAO	**Ashtian**	**6.20**	**185**	*e*Pn	**Pn**	**14 21 33.6**	**+0.5**
ASAO	**Ashtian**	**6.20**	**185**	*e*Pn	**Pn**	**14 21 33.6**	**+0.5**
GHVR	**GHOM**	**6.27**	**175**	*e*Pn	**Pn**	**14 21 34.6**	**+0.7**
GHVR				Sn	**Sn**	**14 22 42.3**	**-2.1**
GHVR	**GHOM**	**6.27**	**175**	*e*Pn	**Pn**	**14 21 34.6**	**+0.7**
SHRO	**Shahrood**	**6.34**	**137**	*e*Pn	**Pn**	**14 21 35.5**	**+0.7**
KBZ	**Khabaz**	**6.49**	**300**	P	**Pn**	**14 21 37.3**	**+0.6**
KBZ						14 22 45.8	
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
KBZ				smax	smax		
	comp=Z,6.0nm,0.3s						
KBZ	**Khabaz**	**6.49**	**300**	Pn	**Pn**	**14 21 37.3**	**+0.6**
KBZ				Sn	**Sn**	**14 22 45.8**	**-3.8**
KBZ	**Khabaz**	**6.49**	**300**	Pn	**Pn**	**14 21 37.3**	**+0.6**
	comp=Z,1.8nm,0.3s,baz=97,slow=10,SNR=18						
KBZ				Sn	**Sn**	**14 22 45.8**	**-3.8**
	comp=Z,5.5nm,0.3s,baz=158,slow=19,SNR=3.1						
KBZ	**Khabaz**	**6.49**	**300**	P	**Pn**	**14 21 37.3**	**+0.6**
	comp=Z,2.0nm,0.3s						
BEYR	**Belyy Ugol+**	**6.66**	**302**	*d i*P	**Pn**	**14 21 39.8**	**+0.6**
BEYR	**Belyy Ugol+**	**6.66**	**302**	*i* P	**Pn**	**14 21 39.8**	**+0.6**
KIV	**Kislovodsk**	**6.72**	**301**	*e*P	**Pn**	**14 21 41.1**	**+1.1**
KIV				*e*S	**Sn**	**14 22 53.6**	**-2.0**
KIV				pmax	pmax		
	comp=Z,20nm,0.6s						
KIV				MLR	MLR		
	comp=Z,51nm,8.0s						
KIV	**Kislovodsk**	**6.72**	**301**	*e*P	**Pn**	**14 21 41.1**	**+1.1**
	comp=Z,20nm,0.6s						
NASN	**Na'in**	**8.11**	**167**	*e*Pn	**Pn**	**14 22 00.3**	**+0.9**
NASN	**Na'in**	**8.11**	**167**	*e*Pn	**Pn**	**14 22 00.3**	**+0.9**
ANN	**Anapa**	**10.53**	**297**	*e*P	Pn	14 22 37.3	+5.1
AB31	**Akbulak array**	**10.75**	**35**	⇑Pn	**Pn**	**14 22 35.3**	**+0.1**
	comp=Z,5.8nm,0.4s,baz=210,slow=13						
AB31				⇓Sn	**Sn**	**14 24 31.7**	**-2.7**
	comp=Z,32nm,0.5s,baz=208,slow=23						
AB31	**Akbulak array**	**10.75**	**35**	P	**Pn**	**14 22 35.2**	**+0.1**
AB31				S	**Sn**	**14 24 31.5**	**-2.9**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.2s						
AB31				smax	smax		
	comp=Z,32nm,0.3s						
AB31	**Akbulak array**	**10.75**	**35**	Pn	**Pn**	**14 22 35.3**	**+0.1**
	comp=Z,5.8nm,0.4s,baz=210						
ABKAR	**Akbulak array**	**10.75**	**35**	*e*Pn	**Pn**	**14 22 35.4**	**+0.2**
ABKAR	**Akbulak array**	**10.75**	**35**	*e*Pn	**Pn**	**14 22 35.4**	**+0.2**
AKTK	**Aktyubinsk**	**10.98**	**25**	P	**Pn**	**14 22 39.5**	**+1.2**
	comp=Z,13nm,0.3s						
AKTO	**Aktyubinsk**	**10.98**	**25**	⇑Pn	**Pn**	**14 22 39.5**	**+1.3**
	comp=Z,13nm,0.3s						
AKTO				⇓Sn	**Sn**	**14 24 37.5**	**-2.4**
	comp=Z,82nm,0.6s						
AKTO	**Aktyubinsk**	**10.98**	**25**	P	**Pn**	**14 22 39.5**	**+1.3**
AKTO				S	**Sn**	**14 24 35.4**	**-4.5**
AKTO				pmax	pmax		
	comp=Z,13nm,0.3s						
AKTO				smax	smax		
	comp=Z,137nm,0.6s						
AKTO	**Aktyubinsk**	**10.98**	**25**	Pn	**Pn**	**14 22 39.6**	**+1.4**
AKTO				Sn	**Sn**	**14 24 36.2**	**-3.7**
AKTO	**Aktyubinsk**	**10.98**	**25**	Pn	**Pn**	**14 22 39.6**	**+1.4**
	comp=Z,12nm,0.3s,baz=205,slow=11,SNR=61						
AKTO				Sn	**Sn**	**14 24 36.2**	**-3.7**
	comp=Z,21nm,0.3s,baz=332,slow=19,SNR=19						
AKTO				LR	LR	14 28 12.3	
	comp=Z,211nm,20.9s,baz=35,slow=44						
AKTO	**Aktyubinsk**	**10.98**	**25**	Pn	**Pn**	**14 22 39.7**	**+1.4**
KBD	**Kabd**	**11.79**	**193**	*e*P	**Pn**	**14 22 48.8**	**-0.6**
KBD				AMb	AMB	14 22 49.7	
	comp=Z,20nm,0.7s						
KBD	**Kabd**	**11.79**	**193**	*e*P	**Pn**	**14 22 48.8**	**-0.6**
	comp=Z,20nm,0.7s						
NAY	**Al-Naaiem**	**11.80**	**195**	*e*P	**Pn**	**14 22 48.7**	**-0.9**
NAY				AMb	AMB	14 22 50.4	
	comp=Z,7.9nm,0.7s						
NAY	**Al-Naaiem**	**11.80**	**195**	*e*P	**Pn**	**14 22 48.7**	**-0.9**
	comp=Z,7.9nm,0.7s						
RDF	**Al-Radifah**	**12.05**	**193**	*e*P	**Pn**	**14 22 52.8**	**-0.3**
RDF				AMb	AMB	14 22 54.8	
	comp=Z,35nm,0.9s						
RDF	**Al-Radifah**	**12.05**	**193**	*e*P	**Pn**	**14 22 52.8**	**-0.3**
	comp=Z,35nm,0.9s						
VRHR	**Novokhopersk**	**12.11**	**332**	*e*P	**Pn**	**14 22 54.8**	**+1.1**
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VRHR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,20nm,0.8s						
VRHR	**Novokhopersk**	**12.11**	**332**	*e*P	**Pn**	**14 22 54.8**	**+1.1**
	comp=E,10.0nm,0.6s						
BR131	**Keskin Array S**	**13.04**	**271**	*e*Pn	**Pn**	**14 23 05.6**	**-1.1**
	comp=E,2.9nm,0.5s						
BR131	**Keskin Array S**	**13.04**	**271**	*e*Pn	**Pn**	**14 23 05.6**	**-1.1**
	comp=E,2.9nm,0.5s						
BRTR	**Keskin Array B**	**13.04**	**271**	Pn	**Pn**	**14 23 07.1**	**+0.4**
BRTR	**Keskin Array B**	**13.04**	**271**	Pn	**Pn**	**14 23 07.1**	**+0.4**
	comp=E,0.1nm,0.3s,baz=97,slow=12,SNR=4.9						
BRTR	**Keskin Array B**	**13.04**	**271**	P	**Pn**	**14 23 07.1**	**+0.4**
VSR	**Storozhevoye**	**13.16**	**327**	*e*P	**Pn**	**14 23 07.7**	**-0.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VSR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.7s						
VSR	**Storozhevoye**	**13.16**	**327**	*e*P	**Pn**	**14 23 07.7**	**-0.3**
	comp=E,10.0nm,0.4s						
ASF	**Jabal al Asfar**	**13.97**	**237**	LR	LR	14 29 27.0	
	comp=E,53nm,21.4s,baz=87,slow=41						

MMAI Mount Meron Ar 14.42 243 Pn P 14 23 28.5 -3.5
MMAI Mount Meron Ar 14.42 243 Pn P 14 23 28.5 -3.5
comp=E,1.0nm,0.3s,baz=62,slow=10.0,SNR=2.7
MMAI LR LR 14 29 52.7
comp=E,70nm,18.5s,baz=65,slow=42
MMAI Mount Meron Ar 14.42 243 Pn P 14 23 28.5 -3.5
KK31 Karatay Array 14.97 74 ⇑P Pn 14 23 33.1 +0.4
comp=E,4.8nm,0.5s,baz=257,slow=17,SNR=35
KK31 Karatay Array 14.97 74 P Pn 14 23 33.1 +0.4
KK31 eS Sn 14 26 11.8 -5.7
KK31 pmax pmax
comp=Z,2.0nm,0.2s
KK31 smax smax
comp=Z,9.0nm,0.4s
KKAR Karatay Array 14.97 74 eP Pn 14 23 32.6 -0.1
KKAR pmax pmax
comp=Z,7.0nm,0.4s
KKAR Karatay Array 14.97 74 ePn Pn 14 23 32.6 -0.1
comp=Z,6.8nm,0.4s
KKAR Karatay Array 14.97 74 ePn Pn 14 23 32.6 -0.1
comp=Z,6.8nm,0.4s
ISP Isparta 15.86 266 eP P 14 23 46.3 -1.6
ISP Isparta 15.86 266 eP P 14 23 46.3 -1.6
ARU Arti 16.53 16d iP Pn 14 23 50.8 -2.0
ARU S Sn 14 26 49.1 -6.1
ARU pmax pmax
comp=Z,16nm,0.6s
TLCR 16.58 293 ⇓P P 14 23 55.4 -0.3
TLCR 16.58 293 ⇓iP P 14 23 55.4 -0.3
TLCR 16.58 293 P P 14 23 55.4 -0.3
EIL Elat 16.90 234 LR LR 14 31 21.5
comp=Z,85nm,19.5s,baz=335,slow=41
KIS Kishinev 16.92 299⇑eP P 14 24 14.0 +15
comp=Z,200nm,1.0s
KIS eS Sn 14 27 07.0 +2.3
KIS Kishinev 16.92 299⇑eP P 14 24 14.0 +15
KIS eS Sn 14 27 07.0 +2.3
KIS pmax pmax
comp=Z,190nm,1.0s
OBN Obninsk 17.15 332ceP P 14 24 01.1 -0.9
OBN eS Sn 14 27 07.8 -2.4
OBN pmax pmax
comp=Z,22nm,1.3s
OBN MLR MLR
comp=Z,200nm,21.0s
OBN pmax pmax
comp=Z,42nm,1.4s
OBN MLR MLR
comp=Z,1μm,17.0s
OBN Obninsk 17.15 332 eP P 14 24 01.1 -0.9
comp=Z,22nm,1.3s
MOS Moscow 17.29 335 eP Pn 14 23 56.9 -5.4
MOS eSS Sn 14 27 15.6 +2.0
MOS pmax pmax
comp=Z,34nm,0.7s
EKS2 Erkin-Say 17.37 76 eP P 14 24 04.6 -0.1
EKS2 pmax pmax
comp=Z,45nm,2.9s
EKS2 Erkin-Say 17.37 76 ePn P 14 24 04.6 -0.1
comp=Z,45nm,2.9s
EKS2 Erkin-Say 17.37 76 eP P 14 24 04.6 -0.1
comp=Z,45nm,2.9s
ZRNK Zerenda 17.45 39 ⇓P Pn 14 24 03.3 -1.1
comp=Z,6.6nm,0.5s
ZRNK Zerenda 17.45 39 P Pn 14 24 03.2 -1.1
ZRNK S Sn 14 27 07.2 -10
ZRNK pmax pmax
comp=Z,12nm,0.9s
ZRNK smax smax
comp=Z,31nm,0.7s
AAK Ala-Archa 17.90 76d iP P 14 24 13.2 +2.7
AAK pmax pmax
comp=Z,18nm,1.7s
AAK Ala-Archa 17.90 76 ePn P 14 24 11.0 +0.5
comp=Z,1.9nm,0.8s
AAK Ala-Archa 17.90 76 P P 14 24 12.7 +2.2
comp=Z,0.7nm,0.3s,baz=249,slow=1.9,SNR=6.4
AAK LR LR 14 32 09.9
comp=Z,111nm,20.1s,baz=282,slow=41
AAK Ala-Archa 17.90 76 ePn P 14 24 11.0 +0.5
comp=Z,1.9nm,0.8s
AAK Ala-Archa 17.90 76 iP P 14 24 13.2 +2.7
comp=Z,18nm,1.7s
AK02 Malin Array Si 17.91 311 ePn Pn 14 24 08.4 -1.6
AK02 Malin Array Si 17.91 311 ePn Pn 14 24 08.4 -1.6
AKASG Malin Array Be 17.92 311 P Pn 14 24 08.8 -1.3
AKASG pmax pmax
comp=Z,52nm,0.3s
AKASG Malin Array Be 17.92 311 P Pn 14 24 08.8 -1.3
AKASG Malin Array Be 17.92 311 P Pn 14 24 08.8 -1.3
comp=Z,52nm,0.3s,baz=118,slow=12,SNR=150
AKASG Malin Array Be 17.92 311 P Pn 14 24 08.8 -1.3
comp=Z,52nm,0.3s
AK01 Malin Array Si 17.92 311 ePn Pn 14 24 08.8 -1.3
AK01 Malin Array Si 17.92 311 ePn Pn 14 24 08.8 -1.3
KIEV Kiev 17.92 311 eP Pn 14 24 08.7 -1.4
KIEV pmax pmax
comp=Z,108nm,0.7s
KIEV Kiev 17.92 311 ePn Pn 14 24 08.7 -1.4
comp=Z,108nm,0.7s
KIEV Kiev 17.92 311 eP Pn 14 24 08.7 -1.4
comp=Z,108nm,0.7s
FRU Bishkek 17.98 75 eP P 14 24 25.0 +14
FRU S Sn 14 27 28.0 -2.6
FRU pmax pmax
comp=Z,40nm,2.0s
VRI Vrincioaia 18.13 294 ⇓P P 14 24 14.4 +1.5
VRI Vrincioaia 18.13 294 ⇓iP P 14 24 14.4 +1.5
VRI Vrincioaia 18.13 294 P P 14 24 14.4 +1.5
BRVK Borovoye 18.14 41 P P 14 24 13.6 +0.7
BRVK S Sn 14 27 26.4 -7.8
BRVK pmax pmax
comp=Z,31nm,1.0s
BRVK smax smax
comp=Z,81nm,1.2s
BRVK Borovoye 18.14 41 ePn P 14 24 13.2 +0.3
comp=Z,23nm,1.1s
BRVK Borovoye 18.14 41 ePn P 14 24 13.2 +0.3
comp=Z,23nm,1.1s
BRVK Borovoye 18.14 41 P P 14 24 13.6 +0.7
comp=Z,31nm,1.0s
ISR Istrita 18.17 292 ⇑P P 14 24 14.9 +1.5
ISR Istrita 18.17 292 ⇑iP P 14 24 14.9 +1.5
ISR Istrita 18.17 292 P P 14 24 14.9 +1.5
BVA0 Borovoye Array 18.17 41 ⇑P Pn 14 24 15.5 +2.2
comp=Z,17nm,0.8s,baz=234,slow=8.6,SNR=52
BVA0 Borovoye Array 18.17 41 iP Pn 14 24 15.4 +2.2
BVA0 S Sn 14 27 26.7 -8.3
BVA0 pmax pmax
comp=Z,22nm,0.7s
BVA0 smax smax
comp=Z,29nm,0.5s
BVA0 Borovoye Array 18.17 41 iP Pn 14 24 15.4 +2.2
comp=Z,22nm,0.7s
BVAR Borovoye Array 18.17 41 P Pn 14 24 14.3 +1.0
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BVAR MLR MLR
comp=Z,127nm,20.3s
BVAR Borovoye Array 18.17 41 P Pn 14 24 14.2 +1.0
BVAR Borovoye Array 18.17 41 P Pn 14 24 14.2 +1.0
comp=Z,1.9nm,0.3s,baz=228,slow=19,SNR=36
BVAR LR LR 14 32 36.7
comp=Z,126nm,20.3s,baz=62,slow=41
BVAR Borovoye Array 18.17 41 P Pn 14 24 14.3 +1.0
comp=Z,127nm,20.3s
TESR Tescani 18.28 296 ⇓iP Pn 14 24 15.4 +0.8
TESR Tescani 18.28 296 ⇓iP Pn 14 24 15.4 +0.8
VOSK Vostochnaya 18.30 42 ⇓P Pn 14 24 15.2 +0.4
comp=Z,14nm,0.8s
VOSK Vostochnaya 18.30 42 P Pn 14 24 14.8 0.0
VOSK S Sn 14 27 27.0 -11
VOSK pmax pmax
comp=Z,9.0nm,0.7s
VOSK smax smax
comp=Z,23nm,0.7s
VOSK Vostochnaya 18.30 42 P Pn 14 24 14.8 0.0
comp=Z,9.0nm,0.7s
MLR Muntele Rosu 18.63 293 P Pn 14 24 19.5 +0.6
MLR Muntele Rosu 18.63 293 ⇑iP Pn 14 24 19.3 +0.4
MLR Muntele Rosu 18.63 293 P Pn 14 24 19.5 +0.6
comp=Z,0.3nm,0.3s,baz=195,slow=0.8,SNR=14
MLR Muntele Rosu 18.63 293 P Pn 14 24 19.5 +0.6
TKM2 Tokmak 2 18.70 75 eP Pn 14 24 20.2 +0.3
TKM2 pmax pmax
comp=Z,14nm,0.8s
TKM2 Tokmak 2 18.70 75 eP Pn 14 24 20.2 +0.3
comp=Z,14nm,0.8s
KDZ Kurdzhali 19.00 281 iP Pn 14 24 23.9 +0.5
KDZ Kurdzhali 19.00 281 iP Pn 14 24 23.9 +0.5
KARP Karpathos 19.17 262 eP Pn 14 24 24.8 -0.7
SOKR Solikamsk 19.24 10d iP Pn 14 24 25.8 -0.2
SOKR S Sn 14 27 49.7 -11
SOKR pmax pmax
comp=Z,10.0nm,0.9s
SOKR MLR MLR
comp=Z,220nm,33.0s
SOKR Solikamsk 19.24 10 iP Pn 14 24 25.8 -0.2
comp=Z,10.0nm,0.9s
VOIR 19.25 293 ⇑P Pn 14 24 26.0 -0.4
VOIR 19.25 293 ⇑iP Pn 14 24 26.0 -0.4
VOIR 19.25 293 P Pn 14 24 26.0 -0.4
KSH Kashi 19.39 85 eP P 14 24 26.2 -0.6
KSH epP pP 14 24 32.4 -2.6
KSH esP sP 14 24 36.2 -2.7
KSH ePP PnPn 14 24 42.1 +0.7
KSH eS S 14 27 54.2 -10
KSH pmax pmax
comp=Z,10.0nm,0.5s
KSH pmax pmax
comp=Z,130nm,4.0s
KSH LR LR
comp=N,1μm,9.6s
KSH LR LR
comp=E,530nm,9.4s
KSH LR LR
comp=Z,120nm,4.0s
BURAR Bucovina Array 19.44 299⇑iP Pn 14 24 27.3 -1.4
BURAR Bucovina Array 19.44 299⇑iP Pn 14 24 27.3 -1.4
BUR08 Bucovina Ar. S 19.46 299 eP P 14 24 26.2 -1.4
BUR08 Bucovina Ar. S 19.46 299 eP P 14 24 26.2 -1.4
RZN Rozhen 19.52 281 iP Pn 14 24 29.1 -0.6
RZN Rozhen 19.52 281 iP Pn 14 24 29.1 -0.6
APE Apeiranthos 19.87 268 ⇑P Pn 14 24 33.4 -0.4
APE Apeiranthos 19.87 268 ⇑iP Pn 14 24 33.3 -0.5
APE Apeiranthos 19.87 268 P Pn 14 24 33.4 -0.4
ZKR Zakros 20.05 262 eP Pn 14 24 34.4 -1.5
MPEP Malo Peshtene 20.13 286 iP P 14 24 25.9 -8.9
MMB Musomiste 20.27 281 iP Pn 14 24 36.9 -1.5
MMB Musomiste 20.27 281 iP Pn 14 24 36.9 -1.5
NPS Neapolis 20.45 263 eP P 14 24 37.0 -1.3
MICGM Minsk 20.50 320 eP P 14 24 35.0 -3.6
MNK Minsk 20.52 320 eP P 14 24 35.0 -3.9
MNK e 14 28 18.0
VTS Vitosha 20.56 284 ⇑P Pn 14 24 40.3 -1.7
VTS Vitosha 20.56 284 iP Pn 14 24 40.2 -1.8
VTS Vitosha 20.56 284 ⇑iP Pn 14 24 40.3 -1.7
VTS Vitosha 20.56 284 P Pn 14 24 40.3 -1.7
AOS Alonnisos 20.56 274 P Pn 14 24 40.0 -1.8
AOS Alonnisos 20.56 274 P Pn 14 24 40.0 -1.8
LAST Lasithi 20.59 262 eP P 14 24 39.5 -0.4
KKB Krupnik 20.71 282 iP P 14 24 41.2 0.0
KKB Krupnik 20.71 282 iP P 14 24 41.2 0.0
LVV L'vov 20.73 305 eP P 14 24 41.2 0.0
LVV e 14 28 27.2
LVV L'vov 20.73 305 eP P 14 24 41.2 0.0
IDI Anoyia 20.98 263 P P 14 24 42.6 -1.5
IDI Anoyia 20.98 263 eP P 14 24 43.0 -1.1
IDI Anoyia 20.98 263 P P 14 24 42.6 -1.5
DRGR 21.00 296 ⇑P 14 24 44.6
DRGR 21.00 296 ⇑iP P 14 24 44.5 +0.2
DRGR 21.00 296 P 14 24 44.6
SIVA Sivas 21.15 263 eP P 14 24 45.5 -0.3
VAY Valandovo 21.16 281 iP P 14 24 46.3 +0.3
VAY Valandovo 21.16 281 iP P 14 24 46.7 +0.7
KLMR Klimovskoe 21.28 345d iP P 14 24 46.0 -1.0
KLMR eS S 14 28 36.2 -5.4
KLMR pmax pmax
comp=Z,95nm,1.6s
KLMR MLR MLR
comp=Z,113nm,11.0s
KLMR Klimovskoe 21.28 345 iP P 14 24 46.0 -1.0
comp=Z,95nm,1.6s
TRPA Tarpa 21.31 300 ⇓iP P 14 24 48.9 +1.4
TRPA Tarpa 21.31 300 ⇓iP P 14 24 48.9 +1.4
VAM Vamos 21.46 264 eP P 14 24 49.2 0.0
DID Didima 21.48 270 P P 14 24 49.1 -0.4
DID Didima 21.48 270 eP P 14 24 49.3 -0.2
DID Didima 21.48 270 P P 14 24 49.1 -0.4
IDID Didziasalis 21.49 321 eP P 14 24 48.8 -0.6
IDID AMB AMB 14 24 49.9
comp=Z,11nm,1.2s
IDID Didziasalis 21.49 321 eP P 14 24 48.8 -0.6
comp=Z,11nm,1.2s,SNR=33
DIDY Didyma 21.51 270 P P 14 24 48.5 -1.3
DIDY Didyma 21.51 270 P P 14 24 48.5 -1.3
KWP Kalwaria Pacla 21.51 304 ⇑P P 14 24 50.9 +1.3
KWP Kalwaria Pacla 21.51 304 ⇑iP P 14 24 50.9 +1.3
KWP Kalwaria Pacla 21.51 304 P P 14 24 50.9 +1.3
UZH Uzhgorod 21.56 301 ⇓iP P 14 24 52.8 +2.6
UZH i 14 25 06.0
UZH e 14 25 19.0
UZH eS S 14 28 43.9 -3.5
UZH eSS SnSn 14 29 13.0 +1.2
UZH Uzhgorod 21.56 301 iP P 14 24 52.8 +2.6
BARS Barje 21.57 285 eP P 14 24 50.9 +0.6
KOLS Kolonicke sedl 21.63 302 eP P 14 24 53.5 +2.5
KOLS pmax pmax
comp=Z,15nm,0.9s
KOLS Kolonicke sedl 21.63 302 eP P 14 24 53.5 +2.5
KOLS Kolonicke sedl 21.63 302 eP P 14 24 53.5 +2.5
comp=Z,15nm,0.9s
BZS Buzias 21.67 293 ⇑P P 14 24 50.5 -0.8
BZS Buzias 21.67 293 ⇑iP P 14 24 50.5 -0.8
BZS Buzias 21.67 293 P P 14 24 50.5 -0.8
KUR17 Kurchatov Arra 21.69 54 ⇓P P 14 24 53.4 +1.9
comp=Z,2.6nm,0.6s
KUR17 Kurchatov Arra 21.69 54 P P 14 24 53.4 +1.9
comp=Z,2.6nm,0.6s
KURBB Kurchatov Arra 21.72 54 P P 14 24 53.9 +2.0
comp=Z,9.3nm,0.6s,baz=260,slow=10,SNR=48
IIGN Ignalina 21.76 320 eP P 14 24 51.7 -0.5
IIGN AMB AMB 14 24 52.9
comp=Z,13nm,1.1s
IIGN Ignalina 21.76 320 eP P 14 24 51.7 -0.5
comp=Z,13nm,1.1s,SNR=33
AGG Agios Georgios 21.77 275 P P 14 24 52.8 +0.3
AGG Agios Georgios 21.77 275 P P 14 24 52.8 +0.3
KURK Kurchatov 21.80 53 ⇓P P 14 24 54.6 +1.8
comp=Z,13nm,0.6s
KURK Kurchatov 21.80 53d iP P 14 24 54.5 +1.8
KURK pmax pmax
comp=Z,22nm,1.0s
KURK Kurchatov 21.80 53 eP P 14 24 54.0 +1.3
KURK Kurchatov 21.80 53 eP P 14 24 54.0 +1.3
KZN Kozani 21.92 278 P P 14 25 02.9 +8.7
ISAL Salakas 21.92 321 eP P 14 24 53.2 -0.8
ISAL AMB AMB 14 24 54.7
comp=Z,19nm,1.0s
ISAL Salakas 21.92 321 eP P 14 24 53.2 -0.8
comp=Z,19nm,1.0s,SNR=29
VLI Veliai 21.95 268 P P 14 24 52.7 -1.8
VLI Veliai 21.95 268 eP P 14 24 53.0 -1.5
VLI Veliai 21.95 268 P P 14 24 52.7 -1.8
IZAR Zarasai 21.96 321 eP P 14 24 53.7 -0.7
IZAR AMB AMB 14 24 58.0
comp=Z,20nm,1.1s
IZAR Zarasai 21.96 321 eP P 14 24 53.7 -0.7
comp=Z,20nm,1.1s,SNR=28
ANKY Antikythira Is 21.97 266 eP P 14 24 52.6 -2.0
KYTH Kithira 22.02 267 eP P 14 24 47.9 -7.4
GUR Goura 22.04 272 eP P 14 24 50.2 -5.3
KALE Kalithea 22.07 273 P P 14 24 56.1 +0.3
KALE Kalithea 22.07 273 eP P 14 24 55.9 +0.1
KALE Kalithea 22.07 273 P P 14 24 56.1 +0.3
FNA Florina 22.14 280 P P 14 24 58.2 +1.7
FNA Florina 22.14 280 P P 14 24 58.2 +1.7
CRVS Cervenica-Dubn 22.15 301 eP P 14 24 54.6 -2.0
CRVS pmax pmax
comp=Z,15nm,1.1s
CRVS Cervenica-Dubn 22.15 301 eP P 14 24 54.6 -2.0
CRVS Cervenica-Dubn 22.15 301 eP P 14 24 54.6 -2.0
comp=Z,15nm,1.1s
KLV Kalavryta, Ach 22.15 272 eP P 14 24 56.5 -0.2
VLX Vlachokerasia 22.17 270 eP P 14 24 54.9 -2.1
LAKA Lakka 22.23 273 P P 14 24 57.5 0.0
LAKA Lakka 22.23 273 eP P 14 24 56.8 -0.7
LAKA Lakka 22.23 273 P P 14 24 57.5 0.0
EFP Efpalio 22.24 273 eP P 14 24 57.7 +0.2
GRUS Gruza 22.30 288 eP P 14 24 57.3 -0.9
STHS Stebnicka Huta 22.39 303 eP P 14 25 01.4 +2.3
STHS pmax pmax
comp=Z,5.0nm,0.9s
STHS Stebnicka Huta 22.39 303 eP P 14 25 01.4 +2.3
STHS Stebnicka Huta 22.39 303 eP P 14 25 01.4 +2.3
comp=Z,5.0nm,0.9s
DYR Agios Nikonas 22.40 269 eP P 14 24 58.2 -1.1
NEST Nestorio 22.45 279 P P 14 25 00.7 +0.8
NEST Nestorio 22.45 279 P P 14 25 00.7 +0.8
ITM Ithomi 22.57 270 eP P 14 24 59.7 -1.5
SUW Suwalki 22.68 315 eP P 14 25 01.7 -0.4
SUW pmax pmax
comp=Z,108nm,0.7s
SUW Suwalki 22.68 315 eP P 14 25 01.7 -0.4
comp=Z,108nm,0.7s
SUW Suwalki 22.68 315 eP P 14 25 01.7 -0.4
SUW e 14 25 03.7
SUW e 14 25 05.8
SUW Suwalki 22.68 315 eP P 14 25 01.7 -0.4
comp=Z,108nm,0.7s
KECS Kecovo 22.72 300 eP P 14 25 03.2 +0.6
KECS pmax pmax
comp=Z,8.0nm,0.8s
KECS Kecovo 22.72 300 eP P 14 25 03.2 +0.6
KECS Kecovo 22.72 300 eP P 14 25 03.2 +0.6
comp=Z,8.0nm,0.8s
PYL PYLOS 22.80 270 P P 14 25 00.6 -3.0
PYL PYLOS 22.80 270 eP P 14 25 01.0 -2.6
DIVS Divibare 22.82 289 eP P 14 25 03.6 -0.2
NIE Niedzica 22.99 302 eP P 14 25 07.1 +1.7
NIE Niedzica 22.99 302 eP P 14 25 07.1 +1.7
NIE Niedzica 22.99 302 eP P 14 25 07.1 +1.7
PSZ Piszkesteto 23.04 298 eP P 14 25 04.2 -1.8
PSZ pmax pmax
comp=Z,18nm,1.0s
PSZ Piszkesteto 23.04 298 eP P 14 25 04.2 -1.8
comp=Z,18nm,1.0s
PSZ Piszkesteto 23.04 298 ⇓iP P 14 25 08.1 +2.1
PSZ Piszkesteto 23.04 298 eP P 14 25 04.2 -1.8
comp=Z,18nm,1.0s
LKD2 Lefkada island 23.09 275 P P 14 25 05.6 -0.9
LKD2 Lefkada island 23.09 275 P P 14 25 05.6 -0.9
IGT Igoumenitsa 23.16 277 P P 14 25 06.7 -0.5
IGT Igoumenitsa 23.16 277 P P 14 25 06.7 -0.5
KFL Anninata 23.17 273 P P 14 25 06.0 -1.3
KFL Anninata 23.17 273 P P 14 25 06.0 -1.3
VLS Valsamata 23.30 274 P P 14 25 07.1 -1.5
VLS Valsamata 23.30 274 P P 14 25 07.1 -1.5
SRN Sarande 23.34 278 P P 14 25 08.4 -0.5
SRN Sarande 23.34 278 P P 14 25 08.4 -0.5
OJC Ojcow 23.47 304 eP P 14 25 10.6 +0.4
OJC pmax pmax
comp=Z,12nm,0.7s
OJC Ojcow 23.47 304 eP P 14 25 10.6 +0.4
comp=Z,12nm,0.7s
OJC Ojcow 23.47 304 eP P 14 25 10.2 0.0
MK31 Makanchi Array 23.53 65 ⇓P P 14 25 12.4 +1.5
comp=Z,10nm,0.6s,baz=262,slow=7.8,SNR=188
MK31 Makanchi Array 23.53 65 iP P 14 25 12.3 +1.5
MK31 pmax pmax
comp=Z,8.0nm,0.4s
MKAR Makanchi Array 23.53 65 P P 14 25 12.5 +1.6
MKAR pmax pmax
comp=Z,14nm,0.6s
MKAR MLR MLR
comp=Z,78nm,19.4s
MKAR Makanchi Array 23.53 65 P P 14 25 12.4 +1.6
MKAR Makanchi Array 23.53 65 P P 14 25 12.4 +1.6
comp=Z,14nm,0.6s,baz=267,slow=7.4,SNR=204
MKAR LR LR 14 35 49.0
comp=Z,78nm,19.4s,baz=270,slow=40
PKSM Moragy 23.77 294 ⇑P P 14 25 12.6 -0.4
PKSM Moragy 23.77 294 ⇑iP P 14 25 12.6 -0.4
PKSM Moragy 23.77 294 ⇑iP P 14 25 12.6 -0.4
VYHS Vyhne 23.81 300 eP P 14 25 14.3 +0.8
VYHS pmax pmax
comp=Z,5.0nm,0.8s
VYHS Vyhne 23.81 300 eP P 14 25 14.3 +0.8
VYHS Vyhne 23.81 300 eP P 14 25 14.3 +0.8
comp=Z,4.9nm,0.8s
OKC Ostrava-Krasne 24.45 303 eP P 14 25 21.2 +1.9
OKC Ostrava-Krasne 24.45 303 eP P 14 25 21.2 +1.9
OKC Ostrava-Krasne 24.45 303 P P 14 25 21.2 +1.9
TMCR Tamitsa 24.60 347 eP P 14 25 31.6 +11
TMCR pmax pmax
comp=Z,24nm,0.3s
MORC Moravsky Berou 24.83 302 eP P 14 25 22.1 -0.7
MORC pmax pmax
comp=Z,41nm,1.4s
MORC Moravsky Berou 24.83 302 eP P 14 25 22.1 -0.7
comp=Z,42nm,1.4s
MORC Moravsky Berou 24.83 302 ⇑iP P 14 25 23.8 +1.0
MORC Moravsky Berou 24.83 302 eP P 14 25 23.4 +0.6
ZST Bratislava 24.93 299 eP P 14 25 23.6 -0.1
ZST pmax pmax
comp=Z,23nm,0.8s
ZST Bratislava 24.93 299 eP P 14 25 23.6 -0.1
ZST Bratislava 24.93 299 eP P 14 25 23.6 -0.1
comp=Z,23nm,0.8s
JOF Joensuu 25.02 339 ep P 14 25 25.2 +0.9
comp=Z,44nm,0.3s
JOF Joensuu 25.02 339 eP P 14 25 25.2 +0.9
JOF pmax pmax
comp=Z,44nm,0.3s
JOF Joensuu 25.02 339 eP P 14 25 25.2 +0.9
comp=Z,44nm,0.3s
VRAC Vranov 25.38 301 P P 14 25 29.0 +1.3
VRAC Vranov 25.38 301 P P 14 25 29.0 +1.3
comp=Z,7.6nm,0.8s,baz=100,slow=10.0,SNR=6.7
VRAC LR LR 14 35 32.0
comp=Z,35nm,20.8s,baz=63,slow=37
VRAC Vranov 25.38 301 eP P 14 25 29.8 +2.1
FINES FINESS Array B 25.56 332 P P 14 25 29.6 +0.4
FINES FINESS Array B 25.56 332 P P 14 25 29.6 +0.4
comp=Z,66nm,0.6s,baz=134,slow=11,SNR=91
FINES LR LR 14 37 11.8
comp=Z,107nm,18.7s,baz=157,slow=40
DPC Dobruska-Polom 25.69 304 eP P 14 25 31.2 +0.6
DPC e 14 25 44.5
DPC Dobruska-Polom 25.69 304 eP P 14 25 31.2 +0.6
DPC epP pP 14 25 44.5 +5.1
DPC Dobruska-Polom 25.69 304 P P 14 25 31.2 +0.6
CONA Conrad Observa 25.74 298⇑iP P 14 25 31.7 +0.6
comp=Z,14nm,1.3s
CONA Conrad Observa 25.74 298 P P 14 25 31.7 +0.6
comp=Z,14nm,1.3s
NVS Novosibirsk 25.76 46 eP P 14 25 31.5 +0.4
NVS pmax pmax
comp=N,3.0nm,0.8s
NVS pmax pmax
comp=Z,7.0nm,0.8s
NVS pmax pmax
comp=E,4.0nm,0.6s
UPC Upice 25.91 304 eP P 14 25 33.5 +0.9
UPC e 14 25 47.5
UPC Upice 25.91 304 eP P 14 25 33.5 +0.9
UPC epP pP 14 25 47.5 +6.1
UPC Upice 25.91 304 P P 14 25 33.5 +0.9
TIP Timpagrande 25.94 278 eP P 14 25 32.2 -0.8
KAF Kangasniemi 25.94 334 ep P 14 25 34.5 +1.8
comp=E,23nm,0.5s
KAF Kangasniemi 25.94 334 eP P 14 25 34.5 +1.8
KAF pmax pmax
comp=Z,23nm,0.5s
KAF Kangasniemi 25.94 334 eP P 14 25 34.5 +1.8
comp=Z,23nm,0.5s
SOKA Soboth 26.27 295 ⇓iP P 14 25 36.7 +0.8
comp=Z,7.5nm,0.5s
SOKA Soboth 26.27 295 P P 14 25 36.7 +0.8
comp=Z,7.5nm,0.5s
ZAA0 Zalesovo Array 26.36 48 eP P 14 25 37.0 +0.4
ZALV Zalesovo Beam 26.36 48 P P 14 25 37.6 +1.0
ZALV pmax pmax
comp=Z,4.0nm,0.3s
ZALV MLR MLR
comp=Z,122nm,19.3s
ZALV Zalesovo Beam 26.36 48 P P 14 25 37.6 +1.0
ZALV Zalesovo Beam 26.36 48 P P 14 25 37.6 +1.0
comp=Z,4.3nm,0.3s,baz=262,slow=10,SNR=19
ZALV LR LR 14 37 59.9

comp=Z,122nm,19.3s,baz=68,slow=41
PRU Pruhonice 26.78 302 *e*P P **14 25 41.4 +1.0**
PRU *e* 14 25 59.1
PRU MLR MLR
comp=Z,100nm,14.2s
PRU Pruhonice 26.78 302 *e*P P **14 25 41.4 +1.0**
PRU *ex* x 14 25 59.1
PRU AMS AMS 14 37 40.0
comp=Z,100nm,14.2s
PRU Pruhonice 26.78 302 P P **14 25 41.4 +1.0**
CEL Celeste 26.83 276 *e*P P **14 25 42.2 +1.1**
comp=Z,15nm,0.9s
GERES GERESS Array B 27.23 300 P P **14 25 44.7 +0.1**
GERES GERESS Array B 27.23 300 P P **14 25 44.7 +0.1**
comp=Z,2.2nm,0.5s,baz=98,slow=8.8,SNR=11
BRG Berggiesshubel 27.27 304 *e*P P **14 25 45.8 +1.0**
comp=Z,5.0nm,0.9s
BRG *e* 14 26 03.8
comp=Z,4.3nm,0.7s
BRG Berggiesshubel 27.27 304 *e*P P **14 25 45.8 +1.0**
BRG *e* 14 26 03.8
BRG pmax pmax
comp=Z,5.0nm,0.9s
BRG pmax pmax
comp=Z,4.0nm,0.7s
KHC Kasperske Hory 27.33 300 *e*P P **14 25 44.2 -1.2**
KHC *e* 14 25 51.3
KHC MLR MLR
comp=Z,100nm,25.7s
KHC Kasperske Hory 27.33 300 *e*P P **14 25 44.2 -1.2**
KHC *ep*P **pP** **14 25 51.3 -2.9**
KHC *es*P sP 14 26 05.3 +7.3
KHC AMS AMS 14 37 40.0
comp=Z,100nm,25.7s
KHC Kasperske Hory 27.33 300 P P **14 25 44.2 -1.2**
KBA Koelnbreinsper 27.43 296⇑ *i*P P **14 25 47.4 +0.9**
comp=Z,15nm,0.7s
KBA Koelnbreinsper 27.43 296 P P **14 25 47.4 +0.9**
comp=Z,15nm,0.7s
WMQ Urumqi 27.43 71 *e*P P **14 25 48.5 +2.1**
WMQ pP **pP** **14 25 56.0 +0.7**
WMQ sP **sP** **14 25 59.0 0.0**
WMQ *es* S **14 30 26.0 +1.1**
WMQ pmax pmax
comp=Z,6.0nm,0.6s
WMQ pmax pmax
comp=Z,83nm,4.7s
WMQ LR LR
comp=N,370nm,21.6s
WMQ LR LR
comp=E,470nm,22.4s
WMQ LR LR
comp=Z,480nm,25.6s
CLL Collm 27.91 305 *i* P P **14 25 48.6 -1.9**
CLL pmax pmax
comp=Z,5.0nm,0.6s
CLL Collm 27.91 305 *i* P P **14 25 48.6 -1.9**
comp=Z,5.0nm,0.6s
CLL *i* 14 25 51.3
APA Apatity 28.50 346⇓ *e*P P **14 25 57.4 +1.8**
APA *i* 14 26 13.0
APA *es* S **14 30 42.0 +1.0**
APA MLR MLR
comp=Z,600nm,14.0s
WTTA Wattenberg 28.59 296⇑ *i*P P **14 25 57.1 +0.3**
comp=Z,13nm,0.9s
WTTA Wattenberg 28.59 296 P P **14 25 57.1 +0.3**
comp=Z,13nm,0.9s
DAVOX Davos/Dischmat 29.81 295 P P **14 26 07.1 -0.6**
DAVOX Davos/Dischmat 29.81 295 P P **14 26 07.1 -0.6**
comp=Z,3.1nm,0.4s,baz=78,slow=9.5,SNR=3.0
DAVOX LR LR 14 40 48.0
comp=Z,80nm,20.1s,baz=85,slow=42
HFS Hagfors 29.92 323 P P **14 26 08.7 +0.4**
HFS Hagfors 29.92 323 P P **14 26 08.7 +0.4**
comp=Z,21nm,0.3s,baz=107,slow=9.1,SNR=222
HFS LR LR 14 39 24.8
comp=Z,79nm,21.7s,baz=124,slow=39
PGF Pioggiola 30.96 287 *e*P P **14 26 16.5 -1.3**
PGF Pioggiola 30.96 287 *e*P P **14 26 16.5 -1.3**
PGF Pioggiola 30.96 287 *e*P P **14 26 16.5 -1.3**
NC602 NORSAR Array S 31.14 323 *e*P P **14 26 19.2 +0.2**
NB2 NORSAR Subarra 31.41 324 P P **14 26 21.0 -0.4**
comp=Z,12nm,0.7s,baz=115,slow=8.6
NOA NORSAR Array B 31.41 324 P P **14 26 21.1 -0.3**
NOA NORSAR Array B 31.41 324 P P **14 26 21.1 -0.3**
comp=Z,6.6nm,0.4s,baz=116,slow=8.4,SNR=44
NOA LR LR 14 40 33.4
comp=Z,57nm,20.5s,baz=125,slow=39
KEV Kevo 31.60 345 *e*p P **14 26 24.1 +1.1**
KEV Kevo 31.60 345 *e*P P **14 26 24.1 +1.1**
KEV Kevo 31.60 345 *e*P P **14 26 24.1 +1.1**
KONO Kongsberg 31.68 321 *e*P P **14 26 25.1 +1.4**
ARCES ARCESS Array B 31.74 343 P P **14 26 25.3 +1.1**
ARCES ARCESS Array B 31.74 343 P P **14 26 25.3 +1.1**
comp=Z,3.1nm,0.3s,baz=144,slow=10.0,SNR=67
ARCES LR LR 14 40 29.6
comp=Z,68nm,21.7s,baz=243,slow=39
ARE0 ARCESS Array S 31.74 343 *e*P P **14 26 25.4 +1.2**
SBF Sospel 31.85 290 *e*P P **14 26 25.7 +0.1**
comp=Z,45nm,0.9s
SBF Sospel 31.85 290 *e*P P **14 26 25.7 +0.1**
SBF pmax pmax
comp=Z,45nm,0.9s
SBF Sospel 31.85 290 *e*P P **14 26 25.7 +0.1**
comp=Z,45nm,0.9s
HAU Haudompre 32.13 298 *e*P P **14 26 27.5 -0.4**
comp=Z,32nm,0.8s
HAU *e*R
comp=Z,69nm,18.5s
HAU Haudompre 32.13 298 *e*P P **14 26 27.5 -0.4**
HAU pmax pmax
comp=Z,32nm,0.8s
HAU Haudompre 32.13 298 *e*P P **14 26 27.5 -0.4**
comp=Z,32nm,0.8s
MBDF Montbardon 32.19 292 *e*P P **14 26 28.5 -0.1**
comp=Z,15nm,0.5s
MBDF Montbardon 32.19 292 *e*P P **14 26 28.5 -0.1**
MBDF pmax pmax
comp=Z,15nm,0.5s
MBDF Montbardon 32.19 292 *e*P P **14 26 28.5 -0.1**
comp=Z,15nm,0.5s
CABF La Chapelle 32.42 296 *e*P P **14 26 30.2 -0.4**
comp=Z,24nm,0.9s
CABF La Chapelle 32.42 296 *e*P P **14 26 30.2 -0.4**
CABF pmax pmax
comp=Z,24nm,0.9s
CABF La Chapelle 32.42 296 *e*P P **14 26 30.2 -0.4**
comp=Z,24nm,0.9s
FRF La Foret Royal 32.47 290 *e*P P **14 26 31.5 +0.6**
comp=Z,50nm,0.7s
FRF La Foret Royal 32.47 290 *e*P P **14 26 31.5 +0.6**
FRF pmax pmax
comp=Z,51nm,0.7s
FRF La Foret Royal 32.47 290 *e*P P **14 26 31.5 +0.6**
comp=Z,50nm,0.7s
SNART Snartemo 32.51 318 *e*P P **14 26 30.3 -0.8**
PAGF Fort de Pagny 32.51 299 *e*P P **14 26 31.4 +0.2**
comp=Z,4.0nm,0.6s
PAGF Fort de Pagny 32.51 299 *e*P P **14 26 31.4 +0.2**
comp=Z,4.0nm,0.6s
KEST Kesra 32.61 275 *e*P P **14 26 31.2 -1.2**
KEST PcP **PcP** **14 29 19.0 +1.0**
KEST Kesra 32.61 275 P P **14 26 33.0 +0.6**
comp=Z,3.3nm,0.7s,baz=28,slow=2.5,SNR=14
KEST PcP **PcP** **14 29 19.0 +1.0**
comp=Z,0.5nm,0.5s,baz=100,slow=1.4,SNR=4.3
TBLU Trondheim 32.69 327 *e*P P **14 26 33.3 +0.7**
FLOS Flostrand 32.99 333 *e*P P **14 26 36.1 +1.0**
SFTF Sexfontaines 32.99 299 *e*P P **14 26 35.1 -0.3**
comp=Z,22nm,0.7s
SFTF Sexfontaines 32.99 299 *e*P P **14 26 35.1 -0.3**
comp=Z,22nm,0.7s
GIVF Givet 33.04 302 *e*P P **14 26 36.3 +0.5**
GIVF Givet 33.04 302 *e*P P **14 26 36.3 +0.5**
GIVF Givet 33.04 302 *e*P P **14 26 36.3 +0.5**
SMRF Simiane la Rot 33.16 291 *e*P P **14 26 36.5 -0.5**
SMRF Simiane la Rot 33.16 291 *e*P P **14 26 36.5 -0.5**
ODD1 Odda 33.20 320 *e*P P **14 26 37.1 0.0**
STEI Steigen 33.29 336 *e*P P **14 26 38.5 +0.7**
TRO Tromso 33.36 340 *e*P P **14 26 39.2 +0.9**
BAIF Baives 33.44 302 *e*P P **14 26 40.8 +1.5**
comp=Z,9.9nm,0.5s
BAIF Baives 33.44 302 *e*P P **14 26 40.8 +1.5**
BAIF pmax pmax
comp=Z,10.0nm,0.5s
BAIF Baives 33.44 302 *e*P P **14 26 40.8 +1.5**
comp=Z,9.9nm,0.5s
VIVF Saint-Julien-l 33.64 293 *e*P P **14 26 40.6 -0.6**
comp=Z,5.1nm,0.4s
VIVF Saint-Julien-l 33.64 293 *e*P P **14 26 40.6 -0.6**
VIVF pmax pmax
comp=Z,5.0nm,0.4s
VIVF Saint-Julien-l 33.64 293 *e*P P **14 26 40.6 -0.6**
comp=Z,5.1nm,0.4s
SSB Saint Sauveur 33.66 293 *e*P P **14 26 39.9 -1.5**
SSB pmax pmax
comp=Z,10.0nm,0.4s
SSB Saint Sauveur 33.66 293 *e*P P **14 26 39.9 -1.5**
comp=Z,9.9nm,0.4s
LOR Lormes 33.87 297 *e*P P **14 26 42.5 -0.6**
comp=Z,8.2nm,0.4s
LOR *e*R
comp=Z,90nm,20.2s
LOR Lormes 33.87 297 *e*P P **14 26 42.5 -0.6**
comp=Z,8.2nm,0.4s
SMF Signal de Mont 33.96 296 *e*P P **14 26 43.6 -0.3**
comp=Z,15nm,0.7s
SMF Signal de Mont 33.96 296 *e*P P **14 26 43.6 -0.3**
SMF pmax pmax
comp=Z,15nm,0.7s
SMF Signal de Mont 33.96 296 *e*P P **14 26 43.6 -0.3**
comp=Z,15nm,0.7s
SSF Saint Saulge 34.13 297 *e*P P **14 26 44.9 -0.5**
SSF Saint Saulge 34.13 297 *e*P P **14 26 44.9 -0.5**
SSF Saint Saulge 34.13 297 *e*P P **14 26 44.9 -0.5**
AVF Avril sur Loir 34.27 296 *e*P P **14 26 46.4 -0.2**
comp=Z,19nm,0.6s
AVF Avril sur Loir 34.27 296 *e*P P **14 26 46.4 -0.2**
AVF pmax pmax
comp=Z,19nm,0.6s
AVF Avril sur Loir 34.27 296 *e*P P **14 26 46.4 -0.2**
comp=Z,19nm,0.6s
LASF Ste Croix 34.35 291 *e*P P **14 26 47.2 -0.2**
comp=Z,8.4nm,0.7s
LASF Ste Croix 34.35 291 *e*P P **14 26 47.2 -0.2**
comp=Z,8.4nm,0.7s
SUE Sulen 34.39 322 *e*P P **14 26 48.4 +1.0**
TCF Toulx Ste Croi 35.12 296 *e*P P **14 26 54.3 +0.3**
comp=Z,6.7nm,0.5s
TCF Toulx Ste Croi 35.12 296 *e*P P **14 26 54.3 +0.3**
TCF pmax pmax
comp=Z,7.0nm,0.5s
TCF Toulx Ste Croi 35.12 296 *e*P P **14 26 54.3 +0.3**
comp=Z,6.7nm,0.5s
CAF Calviac 35.45 293 *e*P P **14 26 57.1 +0.2**
comp=Z,8.9nm,0.8s
CAF Calviac 35.45 293 *e*P P **14 26 57.1 +0.2**
CAF pmax pmax
comp=Z,9.0nm,0.8s
CAF Calviac 35.45 293 *e*P P **14 26 57.1 +0.2**
comp=Z,8.9nm,0.8s
MTLF Montolieu 35.67 291 *e*P P **14 26 58.4 -0.3**
comp=Z,5.0nm,0.5s
MTLF Montolieu 35.67 291 *e*P P **14 26 58.4 -0.3**
MTLF pmax pmax
comp=Z,5.0nm,0.5s
MTLF Montolieu 35.67 291 *e*P P **14 26 58.4 -0.3**
comp=Z,5.0nm,0.5s
LDF La Druitiere 36.38 300 *e*P P **14 27 04.4 -0.3**
comp=Z,14nm,0.5s
LDF La Druitiere 36.38 300 *e*P P **14 27 04.4 -0.3**
LDF pmax pmax
comp=Z,14nm,0.5s
LDF La Druitiere 36.38 300 *e*P P **14 27 04.4 -0.3**
comp=Z,14nm,0.5s
LFF La Frestale 36.38 294 *e*P P **14 27 05.1 +0.4**
LFF La Frestale 36.38 294 *e*P P **14 27 05.1 +0.4**
LFF La Frestale 36.38 294 *e*P P **14 27 05.1 +0.4**
FLN La Foliniere 36.59 300 *e*P P **14 27 06.4 -0.1**
comp=Z,17nm,0.4s
FLN *e*R
comp=Z,66nm,21.8s
FLN La Foliniere 36.59 300 *e*P P **14 27 06.4 -0.1**
FLN pmax pmax
comp=Z,17nm,0.4s
FLN La Foliniere 36.59 300 *e*P P **14 27 06.4 -0.1**
comp=Z,17nm,0.4s
MFF Saint Martin d 36.68 297 *e*P P **14 27 06.8 -0.5**
comp=Z,11nm,0.6s
MFF Saint Martin d 36.68 297 *e*P P **14 27 06.8 -0.5**
MFF pmax pmax
comp=Z,11nm,0.6s
MFF Saint Martin d 36.68 297 *e*P P **14 27 06.8 -0.5**
comp=Z,11nm,0.6s
GRR Gorron 36.89 300 *e*P P **14 27 08.8 -0.2**
comp=Z,24nm,0.5s
GRR Gorron 36.89 300 *e*P P **14 27 08.8 -0.2**
GRR pmax pmax
comp=Z,24nm,0.5s
GRR Gorron 36.89 300 *e*P P **14 27 08.8 -0.2**
comp=Z,24nm,0.5s
EPF Esparros 37.08 291 *e*P P **14 27 10.1 -0.7**
EPF Esparros 37.08 291 *e*P P **14 27 10.1 -0.7**
EPF Esparros 37.08 291 *e*P P **14 27 10.1 -0.7**
GTA Gaotai 37.25 76 *e*P P **14 27 15.2 +2.8**
GTA pP **pP** **14 27 22.4 +1.1**
GTA sP **sP** **14 27 25.7 +0.7**
GTA PcP **PcP** **14 29 33.4 +1.9**
GTA pmax pmax
comp=Z,4.0nm,0.6s
ZAK Zakamensk 37.38 57 *e*P P **14 27 15.3 +2.0**
ZAK pmax pmax
comp=Z,2.0nm,0.8s
TLY Talaya 37.49 55 *e*P P 14 27 17.1 +3.0
TLY pmax pmax
comp=Z,2.0nm,0.6s
TLY MLR MLR
comp=Z,82nm,19.0s
ETSF Etsaut 37.75 291 *e*P P **14 27 16.1 -0.4**
ETSF Etsaut 37.75 291 *e*P P **14 27 16.1 -0.4**
ETSF Etsaut 37.75 291 *e*P P **14 27 16.1 -0.4**
ESK Eskdalemuir 37.85 311 *e*P P **14 27 16.4 -0.7**
ESK pmax pmax
comp=Z,28nm,0.5s
ESK Eskdalemuir 37.85 311 *e*P P **14 27 16.4 -0.7**
comp=Z,28nm,0.5s
SGMF Saint Gilles 38.03 300 *e*P P **14 27 19.0 +0.3**
comp=Z,42nm,0.6s
SGMF Saint Gilles 38.03 300 *e*P P **14 27 19.0 +0.3**
SGMF pmax pmax
comp=Z,42nm,0.6s
SGMF Saint Gilles 38.03 300 *e*P P **14 27 19.0 +0.3**
comp=Z,42nm,0.6s
SJPF Ste Jean 38.17 291 *e*P P **14 27 19.6 -0.3**
SJPF Ste Jean 38.17 291 *e*P P **14 27 19.6 -0.3**
SJPF Ste Jean 38.17 291 *e*P P **14 27 19.6 -0.3**
QUIF Quistinic 38.49 299 *e*P P **14 27 22.7 +0.2**
comp=Z,19nm,0.4s
QUIF Quistinic 38.49 299 *e*P P **14 27 22.7 +0.2**
QUIF pmax pmax
comp=Z,19nm,0.4s
QUIF Quistinic 38.49 299 *e*P P **14 27 22.7 +0.2**
comp=Z,19nm,0.4s
ROSF Rostrenen 38.49 300 *e*P P **14 27 22.9 +0.4**
comp=Z,55nm,0.8s
ROSF Rostrenen 38.49 300 *e*P P **14 27 22.9 +0.4**
ROSF pmax pmax
comp=Z,55nm,0.8s
ROSF Rostrenen 38.49 300 *e*P P **14 27 22.9 +0.4**
comp=Z,55nm,0.8s
SONM Songino Array 39.77 61 P P **14 27 34.5 +1.0**
SONM PcP **PcP** **14 29 39.2 -0.1**
SONM Songino Array 39.77 61 P P **14 27 34.5 +1.0**
comp=Z,0.6nm,0.5s,baz=283,slow=9.8,SNR=8.3
SONM PcP **PcP** **14 29 39.2 -0.1**
comp=Z,0.1nm,0.3s,baz=305,slow=5.1,SNR=3.8
SONM LR LR 14 45 46.3
comp=Z,70nm,20.7s,baz=60,slow=39
SONM Songino Array 39.77 61 P P **14 27 34.5 +1.0**
comp=Z,1.0nm,0.5s
SPA0 Spitsbergen Ar 40.04 350 *e*P P **14 27 37.0 +1.8**
SPA0 Spitsbergen Ar 40.04 350 *e*P P **14 27 37.0 +1.8**
SNR=29
SPITS Spitsbergen Ar 40.04 350 P P **14 27 37.0 +1.8**
SPITS Spitsbergen Ar 40.04 350 P P **14 27 37.0 +1.8**
comp=Z,11nm,0.4s,baz=135,slow=11,SNR=135
SPITS Spitsbergen Ar 40.04 350 P P **14 27 37.0 +1.8**
comp=Z,11nm,0.4s
ULN Ulaanbaatar 40.20 60 *e*P P **14 27 36.5 -0.6**
comp=Z,5.1nm,0.7s
ULN Ulaanbaatar 40.20 60 *e*P P **14 27 36.5 -0.6**
comp=Z,5.1nm,0.7s
ESDC Sonseca Array 41.15 287 P P **14 27 44.1 -0.7**
ESDC Sonseca Array 41.15 287 P P **14 27 44.1 -0.7**
comp=Z,5.3nm,0.7s,baz=67,slow=8.3,SNR=22
ESDC Sonseca Array 41.15 287 P P **14 27 44.2 -0.7**
ESLA Sonseca Array 41.15 287 *e*P P **14 27 44.3 -0.6**
comp=Z,1.5nm,0.9s
ESLA Sonseca Array 41.15 287 *e*P P **14 27 44.3 -0.6**
comp=Z,1.5nm,0.9s
TAM Tamanrasset 41.83 259 *e*P P **14 27 50.6 -0.1**
TAM pmax pmax
comp=Z,2.0nm,0.6s
TAM Tamanrasset 41.83 259 *e*P P **14 27 50.6 -0.1**
comp=Z,2.2nm,0.6s
TAM Tamanrasset 41.83 259 *e*P P **14 27 50.6 -0.1**
comp=Z,2.2nm,0.6s
MVO Moncorvo 42.86 290 *e*P P **14 27 58.3 -0.5**
comp=Z,5.8nm,1.1s
MVO Moncorvo 42.86 290 *e*P P **14 27 58.3 -0.5**
comp=Z,5.8nm,1.1s
PGAV Gavieira, Arco 43.48 292 *e*P P **14 28 04.5 +0.6**
comp=Z,21nm,0.8s
PGAV Gavieira, Arco 43.48 292 *e*P P **14 28 04.5 +0.6**
comp=Z,21nm,0.8s
CD2 Chengdu 43.58 86 *e*P P **14 28 05.2 +0.5**
CD2 pP **pP** **14 28 13.0 -0.8**
CD2 PP **PP** **14 29 48.6 +2.3**
CD2 S **S** **14 34 32.5 +0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.5s
CD2 pmax pmax
comp=Z,30nm,5.2s
CD2 LR LR
comp=E,150nm,8.4s
CD2 LR LR
comp=Z,70nm,12.7s
PVIS Viseu 43.63 290 *e*P P **14 28 05.4 +0.4**
comp=Z,10nm,0.6s
PVIS Viseu 43.63 290 *e*P P **14 28 05.4 +0.4**
comp=Z,10nm,0.6s
PMRV Marv??o 43.72 288 *e*P P **14 28 05.9 +0.2**
comp=Z,7.6nm,0.7s
PMRV Marv??o 43.72 288 *e*P P **14 28 05.9 +0.2**
comp=Z,7.6nm,0.7s
PBAR Barrancos 43.93 286 *e*P P **14 28 06.3 -1.1**
comp=Z,4.4nm,0.7s
PBAR Barrancos 43.93 286 *e*P P **14 28 06.3 -1.1**
comp=Z,4.4nm,0.7s
PESTR Estremoz 44.07 287 *e*P P **14 28 08.3 -0.2**
comp=Z,22nm,1.0s
PESTR Estremoz 44.07 287 *e*P P **14 28 08.3 -0.2**
comp=Z,22nm,1.0s
PMTG Montargil 44.46 288 *e*P P **14 28 10.5 -1.1**
comp=Z,16nm,1.7s
PMTG Montargil 44.46 288 *e*P P **14 28 10.5 -1.1**
comp=Z,16nm,1.7s
EVO Evora 44.50 287 *e*P P **14 28 12.0 0.0**
comp=Z,4.6nm,0.5s
EVO *e*R
comp=Z,71nm,21.5s
EVOP Sao Brissos 44.59 287 *e*P P **14 28 12.0 -0.6**
EVOP pmax pmax
comp=Z,5.0nm,0.5s
EVOP Sao Brissos 44.59 287 *e*P P **14 28 12.0 -0.6**
comp=Z,4.6nm,0.5s
EVOP Sao Brissos 44.59 287 *e*P P **14 28 12.0 -0.6**
comp=Z,2.3nm,0.5s
PBEJ Beja 44.59 286 *e*P P **14 28 11.5 -1.2**
comp=Z,4.5nm,0.8s
PBEJ Beja 44.59 286 *e*P P **14 28 11.5 -1.2**
comp=Z,4.5nm,0.8s
PVAQ Vaqueiros 44.72 286 *e*P P **14 28 12.5 -1.2**
comp=Z,16nm,1.6s
PVAQ Vaqueiros 44.72 286 *e*P P **14 28 12.5 -1.2**
comp=Z,16nm,1.6s
HHC Hu-ho-hao-te 45.27 69 *e*P P **14 28 18.8 +0.6**
HHC pP **pP** **14 28 26.3 -1.0**
HHC sP **sP** **14 28 29.6 -1.3**
HHC PP **PP** **14 30 04.8 +0.7**
HHC PcS **PcS** **14 33 51.7 +0.1**
HHC S **S** **14 34 56.6 +0.1**
HHC ScS **ScS** **14 38 11.5 -1.2**
HHC pmax pmax
comp=Z,30nm,1.0s
HHC pmax pmax
comp=Z,210nm,5.1s
HHC LR LR
comp=N,170nm,13.3s
HHC LR LR
comp=E,140nm,14.3s
HHC LR LR
comp=Z,120nm,11.8s
KMI Kunming 45.75 93 P P **14 28 23.7 +1.4**
KMI pP **pP** **14 28 32.2 +0.7**
KMI sP **sP** **14 28 34.9 -0.2**
KMI PP **PP** **14 30 10.9 +1.2**
KMI S **S** **14 35 05.3 +1.2**
KMI pmax pmax
comp=Z,17nm,0.9s
KMI pmax pmax
comp=Z,81nm,3.8s
KMI LR LR
comp=N,84nm,10.3s
KMI LR LR
comp=E,110nm,11.5s
KMI LR LR
comp=Z,110nm,8.7s
BORG Borgarnes 46.52 326 P P 14 28 30.0 +2.4
BORG Borgarnes 46.52 326 P P 14 28 30.0 +2.4
comp=Z,8.4nm,0.9s,baz=72,slow=6.4,SNR=5.1
BORG Borgarnes 46.52 326 P P 14 28 30.0 +2.4
comp=Z,8.0nm,0.9s
CMAR Chiang Mai Arr 46.80 104 P P **14 28 30.9 +0.5**
CMAR Chiang Mai Arr 46.80 104 P P **14 28 30.9 +0.5**
comp=Z,1.4nm,0.7s,baz=302,slow=8.4,SNR=8.4
CMAR Chiang Mai Arr 46.80 104 P P **14 28 30.9 +0.5**
comp=Z,1.0nm,0.7s
GYA Guiyang 48.02 89 *e*P P **14 28 40.7 +0.8**
GYA pP **pP** **14 28 48.6 -0.5**
GYA PP **PP** **14 30 32.1 +0.1**
GYA ScP **ScP** **14 34 01.9 +2.2**
GYA S **S** **14 35 37.0 +0.8**
GYA SS **SS** **14 39 00.8 -4.3**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA LR LR
comp=N,460nm,18.5s
GYA LR LR
comp=E,350nm,19.4s
GYA LR LR
comp=Z,410nm,18.8s
TIXI Tiksi 48.26 25*c i*P P **14 28 42.2 +1.2**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
TIXI Tiksi 48.26 25 *i* P P **14 28 42.2 +1.2**
comp=Z,5.0nm,1.0s
TORD Torodi Ar. Bea 50.73 252 P P **14 28 59.6 -1.0**
TORD Torodi Ar. Bea 50.73 252 P P **14 28 59.6 -1.0**
comp=Z,3.1nm,0.5s,baz=36,slow=7.5,SNR=47
TORD Torodi Ar. Bea 50.73 252 P P **14 28 59.6 -1.0**
SUMG Summit 51.43 337 *e*P P **14 29 05.7 +0.1**
SUMG pmax pmax
comp=Z,7.0nm,0.8s
SUMG Summit 51.43 337 *e*P P **14 29 05.7 +0.1**
comp=Z,7.2nm,0.8s
SUMG Summit 51.43 337 *e*P P **14 29 05.7 +0.1**
comp=Z,7.2nm,0.8s
CN2 Changchun 53.65 60 *e*P P **14 29 24.0 +2.1**
NJ2 Nanjing 54.34 76 *e*P P **14 29 28.0 +0.9**
NJ2 pmax pmax
comp=Z,20nm,0.6s
KLR Kul'dur 55.39 52 *e*P P **14 29 32.2 -2.3**
MDJ Mudanjiang 56.00 58 P P **14 29 39.1 +0.2**
MDJ pmax pmax
comp=Z,77nm,4.0s
MDJ LR LR
comp=Z,31nm,26.8s
SFJD Kangerlussuaq 57.36 333 P P **14 29 48.5 +0.3**
SFJD Kangerlussuaq 57.36 333 P P **14 29 48.5 +0.3**
comp=Z,17nm,1.1s,baz=61,slow=12,SNR=6.0
USRK Ussuriysk Arra 57.73 57 P P **14 29 51.3 +0.1**
comp=Z,0.8nm,0.4s,baz=330,slow=6.7,SNR=3.4
USRK LR LR 14 57 17.1
comp=Z,94nm,19.8s,baz=177,slow=39
KSAR Wonju Array Be 58.18 66 P P **14 29 54.8 +0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KSRS	**Korea Array**	**58.20**	**66**	P	**P**	**14 29 54.8**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=295,slow=7.1,SNR=6.6						
KSRS				LR	LR	14 57 05.2	
	comp=Z,22nm,18.4s,baz=220,slow=38						
OPO	**Ambohidratompo**	**59.09**	**184**	P	**P**	**14 30 01.1**	**+0.1**
OPO	**Ambohidratompo**	**59.09**	**184**	P	**P**	**14 30 01.1**	**+0.1**
	comp=Z,3.9nm,1.1s,baz=45,slow=7.9,SNR=3.1						
SEY	**Seymchan**	**59.51**	**31**	*e*P	**P**	**14 30 04.4**	**+1.2**
DBIC	**Dimbokro**	**59.84**	**251**	P	**P**	**14 30 05.5**	**-0.7**
DBIC	**Dimbokro**	**59.84**	**251**	P	**P**	**14 30 05.5**	**-0.7**
	comp=Z,13nm,0.5s,baz=28,slow=8.6,SNR=19						
LIC	**Lamto**	**60.27**	**251**	⇓*i*P	**P**	**14 30 08.6**	**-0.5**
	comp=Z,81nm,0.5s,baz=54						
LIC	**Lamto**	**60.27**	**251**	⇓*i*P	**P**	**14 30 08.6**	**-0.5**
	comp=Z,81nm,0.5s						
BILL	**Bilibino**	**61.40**	**23**	⇑*i*P	**P**	**14 30 17.7**	**+1.6**
BILL				pmax	pmax		
	comp=Z,14nm,1.6s						
BILL	**Bilibino**	**61.40**	**23**	*e*P	**P**	**14 30 15.9**	**-0.2**
	comp=Z,15nm,1.3s						
BBTS	**Babate**	**63.34**	**267**	P	**P**	**14 30 29.9**	**+0.1**
BBTS	**Babate**	**63.34**	**267**	P	**P**	**14 30 29.9**	**+0.1**
	comp=Z,16nm,0.7s,baz=74,slow=6.3,SNR=4.2						
MJAR	**Matsushiro Arr**	**65.70**	**62**	P	**P**	**14 30 45.8**	**+0.7**
MJAR	**Matsushiro Arr**	**65.70**	**62**	P	**P**	**14 30 45.8**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=297,slow=6.9,SNR=3.8						
YUK	**Yuzh-Kuril'sk**	**66.39**	**52**	P	**P**	**14 30 48.6**	**-0.7**
YUK				*e*S	**S**	**14 39 33.5**	**-3.6**
YUK				MLR	MLR		
	comp=N,32nm,18.0s						
YUK				MLR	MLR		
	comp=E,79nm,18.0s						
YUK				MLR	MLR		
	comp=Z,47nm,18.0s						
PETK	**Petropavlovsk-**	**67.39**	**39**	LR	LR	15 03 42.9	
	comp=Z,38nm,19.8s,baz=59,slow=39						
TNA	**Tin City**	**69.88**	**16**	*e*P	**P**	**14 31 09.6**	**-1.2**
SCHQ	**Schefferville**	**70.89**	**327**	*e*P	**P**	**14 31 16.4**	**-0.8**
	comp=Z,14nm,1.1s						
SCHQ	**Schefferville**	**70.89**	**327**	P	**P**	**14 31 17.4**	**+0.2**
	comp=Z,7.2nm,0.6s,baz=54,slow=8.4,SNR=20						
COLD	**Coldfoot**	**71.19**	**8**	*e*P	**P**	**14 31 19.2**	**+0.4**
	comp=Z,14nm,1.0s						
BOSA	**Boshof**	**72.91**	**203**	P	**P**	**14 31 29.9**	**+0.3**
BOSA	**Boshof**	**72.91**	**203**	P	**P**	**14 31 29.9**	**+0.3**
	comp=Z,1.9nm,0.4s,baz=85,slow=21,SNR=7.0						
COLA	**College**	**73.73**	**8**	*e*P	**P**	**14 31 32.9**	**-1.0**
COLA				pmax	pmax		
	comp=Z,13nm,0.8s						
COLA	**College**	**73.73**	**8**	*e*P	**P**	**14 31 32.9**	**-1.0**
	comp=Z,13nm,0.8s						
ILAR	**Eielson Array**	**73.93**	**8**	P	**P**	**14 31 36.0**	**+0.9**
ILAR	**Eielson Array**	**73.93**	**8**	P	**P**	**14 31 36.0**	**+0.9**
	comp=Z,2.6nm,0.6s,baz=332,slow=4.7,SNR=37						
ILAR				LR	LR	15 07 22.7	
	comp=Z,30nm,18.6s,baz=78,slow=38						
FX1	**Attu Island--F**	**74.36**	**32**	*e*P	**P**	**14 31 38.0**	**+0.1**
EGAK	**Eagle**	**74.41**	**5**	*e*P	**P**	**14 31 37.8**	**-0.1**
	comp=Z,6.2nm,0.9s						
MCK	**McKinley**	**74.71**	**9**	*e*P	**P**	**14 31 39.5**	**-0.3**
MCK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MCK	**McKinley**	**74.71**	**9**	*e*P	**P**	**14 31 39.5**	**-0.3**
	comp=Z,4.7nm,0.6s						
TRF	**Thorofare Moun**	**74.82**	**10**	*e*P	**P**	**14 31 39.8**	**-0.7**
	comp=Z,6.2nm,0.6s						
DOT	**Dot Lake**	**75.30**	**7**	*e*P	**P**	**14 31 42.7**	**-0.4**
	comp=Z,7.2nm,0.7s						
PAX	**Paxson**	**75.83**	**8**	*e*P	**P**	**14 31 45.9**	**-0.4**
PAX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PAX	**Paxson**	**75.83**	**8**	*e*P	**P**	**14 31 45.9**	**-0.4**
	comp=Z,3.9nm,0.8s						
MENT	**Mentasta**	**76.03**	**7**	*e*P	**P**	**14 31 47.6**	**+0.2**
YKA	**Yellowknife Ar**	**76.43**	**353**	P	**P**	**14 31 49.9**	**+0.3**
YKA	**Yellowknife Ar**	**76.43**	**353**	P	**P**	**14 31 49.8**	**+0.3**
	comp=Z,2.9nm,0.5s,baz=8.2,slow=5.6,SNR=38						
SML	**Sawmill**	**76.65**	**9**	*e*P	**P**	**14 31 49.6**	**-1.3**
SML				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SML	**Sawmill**	**76.65**	**9**	*e*P	**P**	**14 31 49.6**	**-1.3**
	comp=Z,4.7nm,0.7s						
PMR	**Palmer**	**76.76**	**10**	*e*P	**P**	**14 31 48.5**	**-2.9**
PMR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
PMR	**Palmer**	**76.76**	**10**	*e*P	**P**	**14 31 48.5**	**-2.9**
	comp=Z,9.0nm,0.4s						
RC01	**Rabbit Creek A**	**77.17**	**10**	*e*P	**P**	**14 31 53.5**	**-0.2**
	comp=Z,15nm,0.4s						
SLMT	**Seeley Lake**	**91.27**	**349**	*e*P	**P**	**14 33 06.0**	**+0.1**
	comp=Z,2.2nm,0.6s						
BW06	**Boulder Array**	**94.97**	**346**	*e*P	**P**	**14 33 20.8**	**-2.4**
	comp=Z,7.1nm,0.6s						
WRA	**Warramunga Arr**	**98.15**	**109**	P	**P**	**14 33 36.5**	**-1.0**
WRA	**Warramunga Arr**	**98.15**	**109**	P	**P**	**14 33 36.5**	**-1.0**
	comp=Z,1.2nm,0.5s,baz=320,slow=3.9,SNR=11						

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*MAN **04** 14:26:46, 8°.07N×126°.27E, h196km, mb4.5, ML3.3, MS3.2*
*ISCJB **04** 14:26:50.4±1.2, 5°.37N±0°.09×125°.07E±0°.07, h78km±14km, mb3.6/7, Error ellipse: s-maj=14.7km s-min=11.7km az=24.7*
*IDC **04** 14:26:53.0±2.0, 5°.39N×125°.30E, h83km±18km, mb3.4/7, mb1 3.6/7, mb1mx3.3/25, mbtmp3.4/7, Error ellipse: s-maj=46.8km s-min=13.7km az=84.0*
ISC 04 14:26:51.2±1.8**, 5°.3N**±0°.1×**125°.10E**±0°.08**, h65**km±20km**, n13, σ1s.53**/18**, mb3.5**/7**, 1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DMPH	**Davao City--Mi**	**1.79**	**13**	*e*P	**Pn**	**14 27 18.8**	**-1.1**
DMPH				*e*S	**Sn**	**14 27 41.6**	**0.0**
DAV	**Davao City (W)**	**1.79**	**15**	P	**Pn**	**14 27 19.0**	**-1.0**
	37nm,0.3s,baz=258,slow=20,SNR=4.0						
DAV				S	**Sn**	**14 27 42.8**	**+1.0**
	82nm,0.3s,baz=42,slow=16,SNR=7.2						
CTBH	**Cotabato--PC H**	**2.06**	**336**	⇓*i*P	**Pn**	**14 27 22.1**	**-1.5**
BUKP	**Musuan**	**2.53**	**359**	*e*P	**Pn**	**14 27 28.7**	**-1.4**
BUKP				*e*S	**Sn**	**14 28 04.3**	**+4.4**
PAGZ	**Pagadian**	**3.03**	**326**	*e*P	**Pn**	**14 27 36.8**	**0.0**
PAGZ				*e*S	**Sn**	**14 28 12.6**	**+0.7**
IPIL	**Ipil**	**3.50**	**314**	*e*P	**Pn**	**14 27 43.3**	**+0.1**
IPIL				*e*S	**Sn**	**14 28 22.2**	**-1.3**
FITZ	**Fitzroy Crossi**	**23.29**	**179**	P	**P**	**14 31 54.3**	**+0.8**
	1.0nm,0.6s,baz=346,slow=8.2,SNR=14						
WRA	**Warramunga Arr**	**26.71**	**160**	P	**P**	**14 32 24.2**	**-0.4**
	0.9nm,0.7s,baz=339,slow=10,SNR=11						
ASAR	**Alice Springs**	**30.07**	**164**	P	**P**	**14 32 54.4**	**-0.2**
	0.4nm,0.4s,baz=346,slow=8.3,SNR=9.9						
ASAR				PcP	**PcP**	**14 35 55.0**	**-0.2**
	0.2nm,0.4s,baz=348,slow=2.9,SNR=5.2						
STKA	**Stephens Creek**	**40.20**	**158**	P	**P**	**14 34 22.3**	**+0.8**
	2.3nm,0.6s,baz=337,slow=7.8,SNR=7.3						
PETK	**Petropavlovsk-**	**54.59**	**23**	P	**P**	**14 36 11.6**	**-1.3**
	0.9nm,0.7s,baz=189,slow=6.6,SNR=3.1						
MKAR	**Makanchi Array**	**55.33**	**325**	P	**P**	**14 36 18.8**	**+0.5**
	0.3nm,0.5s,baz=120,slow=7.9,SNR=8.1						
ILAR	**Eielson Array**	**84.37**	**25**	P	P	14 39 14.5	-1.7
	0.2nm,0.7s,baz=250,slow=5.7,SNR=5.6						

IDC 04 14:27:43.6±6.8**, 7°.05S**×**148°.11E, h88**km±56km**, mb3.3**/2**, mb1 3.4**/4**, mb1mx3.1**/19**, mbtmp3.2**/4**, ML2.2**/1**, Error ellipse: s-maj=99.6km s-min=61.0km az=135.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**2.52**	**202**	P	Pn	14 28 22.7	+0.1
	3.9nm,0.3s,baz=267,slow=23,SNR=14						
PMG				S	Sn	14 29 00.4	+7.7
	1.4nm,0.3s,baz=41,slow=20,SNR=3.5						
WRA	**Warramunga Arr**	**18.51**	**225**	P	Pn	14 31 53.8	-0.5
	0.1nm,0.3s,baz=51,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**21.43**	**218**	P	P	14 32 25.1	+0.4
	0.5nm,0.4s,baz=54,slow=9.1,SNR=18						
FITZ	**Fitzroy Crossi**	**24.49**	**241**	P	P	14 32 53.9	-0.9
	1.3nm,0.3s,baz=68,slow=10						
TORD	**Torodi Ar. Bea**	**146.41**	**283**	PKPbc	PKPbc	14 47 15.0	-0.6
	0.2nm,0.4s,baz=58,slow=4.1,SNR=4.2						

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*ISCJB **04** 14:33:11.3±0.3, 41°.15S±0°.03×174°.54E±0°.04, h66km±4km, mb3.4/2, Error ellipse: s-maj=5.3km s-min=3.3km az=38.9*
*IDC **04** 14:33:11.2±2.6, 41°.00S×174°.53E, h42km±32km, mb3.2/2, mb1 3.5/4, mb1mx3.4/16, mbtmp3.3/4, ML3.0/2, Error ellipse: s-maj=71.1km s-min=17.0km az=134.0*
*NEIC **04** 14:33:13.8, 41°.08S×174°.59E, h44km, ML4.3(WEL), After WEL.*
NEIC Felt from Wellington to Marlborough.
*WEL **04** 14:33:13.4±0.1, 41°.06S×174°.54E, h44km, ML4.0/18, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*
WEL Felt from Wellington to Marlborough, maximum reported intensity MM 5.
ISC 04 14:33:12.0±0.9**, 41°.10S**±0°.03×**174°.55E**±0°.03**, h56**km±5km**, n173, σ1s.10**/179**, 14C-12D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TCW	**Tory Channel**	**0.23**	**242**	⇑P*	**Pn**	**14 33 20.9**	**-0.3**
TCW				S*	**Sn**	**14 33 26.1**	**-1.7**
TCW				AML	AML	14 33 27.8	
TCW	**Tory Channel**	**0.23**	**242**	P*	**Pn**	**14 33 20.9**	**-0.3**
SNZO	**South Karori**	**0.24**	**150**	⇓P*	**Pn**	**14 33 21.6**	**+0.4**
SNZO				S*	**Sn**	**14 33 27.9**	**0.0**
SNZO				AML	AML	14 33 30.4	
SNZO				AML	AML	14 33 30.4	
SNZO				AML	AML	14 33 30.4	
SNZO	**South Karori**	**0.24**	**150**	*e*Pn	**Pn**	**14 33 21.3**	**+0.1**
SNZO				*e*Sn	**Sn**	**14 33 27.3**	**-0.6**
WEL	**Wellington**	**0.25**	**138**	⇑P*	**Pn**	**14 33 21.7**	**+0.4**
WEL	**Wellington**	**0.25**	**138**	P*	**Pn**	**14 33 21.6**	**+0.4**
KIW	**Kapiti Island**	**0.36**	**49**	⇑P*	**Pn**	**14 33 21.8**	**-0.5**
KIW				AML	AML	14 33 28.2	
KIW				AML	AML	14 33 28.3	
KIW	**Kapiti Island**	**0.36**	**49**	P*	**Pn**	**14 33 21.8**	**-0.5**
BHW	**Baring Head**	**0.39**	**142**	⇑P*	**Pn**	**14 33 23.4**	**+0.9**
BHW				AML	AML	14 33 32.0	
BHW				AML	AML	14 33 32.9	
BHW	**Baring Head**	**0.39**	**142**	P*	**Pn**	**14 33 23.4**	**+0.9**
CAW	**Cannon Point**	**0.39**	**91**	⇑P*	**Pn**	**14 33 23.0**	**+0.4**
CAW				S*	**Sn**	**14 33 30.3**	**+0.2**
CAW				AML	AML	14 33 32.4	
CAW	**Cannon Point**	**0.39**	**91**	P*	**Pn**	**14 33 23.0**	**+0.4**
OGWZ	**Otaki Gorge**	**0.55**	**59**	⇓P*	**Pn**	**14 33 24.6**	**+0.4**
OGWZ				S*	**Sn**	**14 33 32.8**	**-0.3**
OGWZ	**Otaki Gorge**	**0.55**	**59**	P*	**Pn**	**14 33 24.6**	**+0.4**
DUWZ	**D'Urville Isla**	**0.56**	**302**	⇑P*	**Pn**	**14 33 24.0**	**-0.4**
DUWZ				S*	**Sn**	**14 33 32.1**	**-1.2**
DUWZ	**D'Urville Isla**	**0.56**	**302**	P*	**Pn**	**14 33 24.0**	**-0.4**
TUWZ	**Tuamarina**	**0.56**	**234**	⇓P*	**Pn**	**14 33 24.9**	**+0.6**
TUWZ				AML	AML	14 33 34.5	
TUWZ				AML	AML	14 33 35.8	
TUWZ	**Tuamarina**	**0.56**	**234**	P*	**Pn**	**14 33 24.9**	**+0.6**
MSWZ	**Moikau Station**	**0.61**	**121**	⇑P*	**Pn**	**14 33 26.2**	**+1.2**
MSWZ				AML	AML	14 33 37.0	
MSWZ				AML	AML	14 33 37.9	
MSWZ	**Moikau Station**	**0.61**	**121**	P*	**Pn**	**14 33 26.2**	**+1.2**
CMWZ	**Cape Campbell**	**0.69**	**201**	PN	**Pn**	**14 33 28.2**	**+2.2**
CMWZ				AML	AML	14 33 42.4	
CMWZ				AML	AML	14 33 46.9	
CMWZ	**Cape Campbell**	**0.69**	**201**	Pn	**Pn**	**14 33 28.2**	**+2.2**
PLWZ	**Palliser**	**0.71**	**132**	⇑PN	**Pn**	**14 33 27.3**	**+1.1**
PLWZ	**Palliser**	**0.71**	**132**	Pn	**Pn**	**14 33 27.3**	**+1.1**
PAWZ	**Paruwai Farm**	**0.72**	**113**	⇑PN	**Pn**	**14 33 27.3**	**+1.1**
PAWZ				S*	**Sn**	**14 33 38.3**	**+1.7**
PAWZ				AML	AML	14 33 40.2	
PAWZ	**Paruwai Farm**	**0.72**	**113**	P*	**Pn**	**14 33 27.3**	**+1.1**
MTW	**Mount Morrison**	**0.72**	**95**	⇑PN	**Pn**	**14 33 27.1**	**+0.8**
MTW				AML	AML	14 33 40.1	
MTW				AML	AML	14 33 41.8	
MTW	**Mount Morrison**	**0.72**	**95**	Pn	**Pn**	**14 33 27.1**	**+0.8**
HOWZ	**Holdsworth Sta**	**0.76**	**75**	⇑PN	**Pn**	**14 33 27.5**	**+0.7**
HOWZ	**Holdsworth Sta**	**0.76**	**75**	Pn	**Pn**	**14 33 27.5**	**+0.7**
BSWZ	**Blackbirch Sta**	**0.79**	**219**	⇓PN	**Pn**	**14 33 28.8**	**+1.6**
BSWZ				AML	AML	14 33 44.5	
BSWZ				AML	AML	14 33 44.8	
BSWZ	**Blackbirch Sta**	**0.79**	**219**	Pn	**Pn**	**14 33 28.8**	**+1.6**
NNZ	**Nelson**	**0.89**	**262**	⇑PN	**Pn**	**14 33 29.0**	**+0.5**
NNZ	**Nelson**	**0.89**	**262**	Pn	**Pn**	**14 33 29.0**	**+0.5**
MRZ	**Mangatainoka R**	**0.90**	**61**	⇓PN	**Pn**	**14 33 29.1**	**+0.6**
MRZ				AML	AML	14 33 42.4	
MRZ				AML	AML	14 33 45.5	
MRZ	**Mangatainoka R**	**0.90**	**61**	Pn	**Pn**	**14 33 29.1**	**+0.6**
TRWZ	**Traveller**	**0.91**	**109**	PN	**Pn**	**14 33 29.6**	**+0.9**
TRWZ				AML	AML	14 33 47.4	
TRWZ				AML	AML	14 33 49.1	
TRWZ	**Traveller**	**0.91**	**109**	Pn	**Pn**	**14 33 29.6**	**+0.9**
TMWZ	**Te Maipa**	**1.01**	**91**	PN	**Pn**	**14 33 30.7**	**+0.6**
TMWZ	**Te Maipa**	**1.01**	**91**	Pn	**Pn**	**14 33 30.7**	**+0.6**
TIWZ	**Tintock**	**1.06**	**73**	PN	**Pn**	**14 33 31.2**	**+0.5**
TIWZ	**Tintock**	**1.06**	**73**	Pn	**Pn**	**14 33 31.2**	**+0.5**
POWZ	**Post Office Ro**	**1.17**	**53**	PN	**Pn**	**14 33 32.3**	**+0.2**
POWZ	**Post Office Ro**	**1.17**	**53**	Pn	**Pn**	**14 33 32.4**	**+0.2**
BFZ	**Birch Farm**	**1.35**	**72**	PN	**Pn**	**14 33 34.7**	**+0.1**
BFZ	**Birch Farm**	**1.35**	**72**	Pn	**Pn**	**14 33 34.7**	**+0.1**
WAZ	**Wanganui**	**1.39**	**14**	⇓PN	**Pn**	**14 33 36.2**	**+1.1**
WAZ	**Wanganui**	**1.39**	**14**	Pn	**Pn**	**14 33 36.2**	**+1.1**
THZ	**Tophouse**	**1.40**	**241**	PN	**Pn**	**14 33 36.5**	**+1.2**
THZ	**Tophouse**	**1.40**	**241**	Pn	**Pn**	**14 33 36.5**	**+1.2**
DVHZ	**Dannevirke**	**1.47**	**57**	PN	**Pn**	**14 33 35.9**	**-0.2**
DVHZ	**Dannevirke**	**1.47**	**57**	Pn	**Pn**	**14 33 36.0**	**-0.2**
TSZ	**Takapari Road**	**1.50**	**46**	⇓PN	**Pn**	**14 33 36.7**	**+0.1**
TSZ				AML	AML	14 33 58.6	
TSZ				AML	AML	14 34 01.1	
TSZ	**Takapari Road**	**1.50**	**46**	Pn	**Pn**	**14 33 36.7**	**+0.1**
KHZ	**Kahutara**	**1.52**	**210**	⇓PN	**Pn**	**14 33 38.3**	**+1.5**
KHZ				AML	AML	14 34 10.3	
KHZ				AML	AML	14 34 18.5	
KHZ	**Kahutara**	**1.52**	**210**	*e*Pn	**Pn**	**14 33 38.3**	**+1.5**
QRZ	**Quartz Range**	**1.55**	**280**	PN	**Pn**	**14 33 38.4**	**+1.1**
PNHZ	**Pukenui**	**1.73**	**47**	⇓PN	**Pn**	**14 33 39.5**	**-0.2**
PNHZ	**Pukenui**	**1.73**	**47**	Pn	**Pn**	**14 33 39.5**	**-0.2**
WPHZ	**Waipukurau**	**1.77**	**55**	PN	**Pn**	**14 33 40.0**	**-0.3**
WPHZ	**Waipukurau**	**1.77**	**55**	Pn	**Pn**	**14 33 40.3**	**0.0**
PRHZ	**Porangahau**	**1.79**	**63**	PN	**Pn**	**14 33 40.0**	**-0.5**
PRHZ	**Porangahau**	**1.79**	**63**	Pn	**Pn**	**14 33 40.0**	**-0.5**
DFE	**Dawson Falls**	**1.81**	**349**	PN	**Pn**	**14 33 42.4**	**+1.6**
DFE	**Dawson Falls**	**1.81**	**349**	Pn	**Pn**	**14 33 42.4**	**+1.6**
RAEZ	**Rainy Point**	**1.82**	**356**	PN	**Pn**	**14 33 42.5**	**+1.6**
RAEZ	**Rainy Point**	**1.82**	**356**	Pn	**Pn**	**14 33 42.5**	**+1.6**
NRZ	**Ngariki Road**	**1.82**	**345**	PN	**Pn**	**14 33 42.4**	**+1.3**
NRZ	**Ngariki Road**	**1.82**	**345**	Pn	**Pn**	**14 33 42.3**	**+1.3**
MTVZ	**Mangateitei**	**1.85**	**23**	PN	**Pn**	**14 33 42.3**	**+0.9**
MTVZ	**Mangateitei**	**1.85**	**23**	Pn	**Pn**	**14 33 42.3**	**+0.9**
NEZ	**North Egmont**	**1.86**	**349**	PN	**Pn**	**14 33 43.4**	**+1.9**
NEZ	**North Egmont**	**1.86**	**349**	Pn	**Pn**	**14 33 43.4**	**+1.9**
NWEZ	**Newall Road**	**1.90**	**344**	PN	**Pn**	**14 33 43.4**	**+1.4**
NWEZ	**Newall Road**	**1.90**	**344**	Pn	**Pn**	**14 33 43.4**	**+1.4**
PKVZ	**Pokaka**	**1.91**	**19**	PN	**Pn**	**14 33 43.4**	**+1.2**
PKVZ	**Pokaka**	**1.91**	**19**	Pn	**Pn**	**14 33 43.4**	**+1.2**
MOVZ	**Moawhango**	**1.93**	**29**	Pn	**Pn**	**14 33 42.6**	**+0.1**
DREZ	**Durham Road**	**1.93**	**352**	PN	**Pn**	**14 33 43.9**	**+1.5**
DREZ	**Durham Road**	**1.93**	**352**	Pn	**Pn**	**14 33 43.9**	**+1.5**
WNVZ	**Wahianoa**	**1.94**	**25**	PN	**Pn**	**14 33 43.8**	**+1.0**
WNVZ	**Wahianoa**	**1.94**	**25**	Pn	**Pn**	**14 33 43.8**	**+1.0**
PKE	**Pukeiti**	**1.95**	**347**	PN	**Pn**	**14 33 44.0**	**+1.2**
PKE	**Pukeiti**	**1.95**	**347**	Pn	**Pn**	**14 33 44.0**	**+1.2**
TRVZ	**Turoa**	**1.96**	**23**	PN	**Pn**	**14 33 44.2**	**+1.2**
TRVZ	**Turoa**	**1.96**	**23**	Pn	**Pn**	**14 33 44.1**	**+1.2**
VRZ	**Vera Road**	**1.98**	**5**	⇓PN	**Pn**	**14 33 44.4**	**+1.3**
VRZ	**Vera Road**	**1.98**	**5**	Pn	**Pn**	**14 33 44.4**	**+1.3**
DRZ	**Dome Shelter**	**1.98**	**23**	PN	**Pn**	**14 33 44.6**	**+1.2**
DRZ	**Dome Shelter**	**1.98**	**23**	Pn	**Pn**	**14 33 44.6**	**+1.2**
BHHZ	**Black Hill Sta**	**1.98**	**36**	PN	**Pn**	**14 33 43.5**	**+0.3**
BHHZ	**Black Hill Sta**	**1.98**	**36**	Pn	**Pn**	**14 33 43.5**	**+0.3**
FWVZ	**Far West T-bar**	**2.00**	**23**	PN	**Pn**	**14 33 44.5**	**+1.0**
FWVZ	**Far West T-bar**	**2.00**	**23**	Pn	**Pn**	**14 33 44.5**	**+1.0**
TUVZ	**Tukino**	**2.02**	**25**	PN	**Pn**	**14 33 44.5**	**+0.8**
TUVZ	**Tukino**	**2.02**	**25**	Pn	**Pn**	**14 33 44.6**	**+0.8**
MHEZ	**Mangahewa**	**2.03**	**355**	PN	**Pn**	**14 33 45.6**	**+1.8**
MHEZ	**Mangahewa**	**2.03**	**355**	Pn	**Pn**	**14 33 45.8**	**+2.0**
WPVZ	**Whakapapa**	**2.04**	**22**	PN	**Pn**	**14 33 45.1**	**+1.0**
WPVZ	**Whakapapa**	**2.04**	**22**	Pn	**Pn**	**14 33 45.1**	**+1.0**
PXZ	**Pawanui**	**2.06**	**60**	PN	**Pn**	**14 33 43.6**	**-0.6**
PXZ				AML	AML	14 34 25.8	
PXZ				AML	AML	14 34 25.8	
PXZ				AML	AML	14 34 28.7	
PXZ				AML	AML	14 34 32.9	
PXZ	**Pawanui**	**2.06**	**60**	Pn	**Pn**	**14 33 43.6**	**-0.6**
NGZ	**Ngauruhoe**	**2.09**	**23**	PN	**Pn**	**14 33 45.6**	**+0.9**
NGZ	**Ngauruhoe**	**2.09**	**23**	Pn	**Pn**	**14 33 45.6**	**+0.9**
OTVZ	**Oturere**	**2.12**	**24**	⇑PN	**Pn**	**14 33 46.1**	**+1.0**
OTVZ	**Oturere**	**2.12**	**24**	Pn	**Pn**	**14 33 46.1**	**+1.0**
WTVZ	**West Tongariro**	**2.14**	**22**	⇑PN	**Pn**	**14 33 46.3**	**+1.0**
WTVZ	**West Tongariro**	**2.14**	**22**	Pn	**Pn**	**14 33 46.3**	**+1.0**
TWVZ	**Taurewa**	**2.14**	**19**	PN	**Pn**	**14 33 46.1**	**+0.8**
TWVZ	**Taurewa**	**2.14**	**19**	Pn	**Pn**	**14 33 46.1**	**+0.8**
KRVZ	**Karewarewa**	**2.17**	**23**	PN	**Pn**	**14 33 46.8**	**+0.9**
KRVZ	**Karewarewa**	**2.17**	**23**	Pn	**Pn**	**14 33 46.7**	**+0.9**
KAHZ	**Kahuranaki**	**2.20**	**54**	PN	**Pn**	**14 33 45.6**	**-0.6**
KAHZ	**Kahuranaki**	**2.20**	**54**	Pn	**Pn**	**14 33 45.6**	**-0.6**
KATZ	**Kakaramea**	**2.30**	**23**	Pn	**Pn**	**14 33 49.5**	**+1.9**
RITZ	**Rihia Road**	**2.35**	**26**	PN	Pn	14 33 51.6	+3.4
RITZ	**Rihia Road**	**2.35**	**26**	Pn	Pn	14 33 51.5	+3.4
LTZ	**Lake Taylor**	**2.39**	**225**	PN	**Pn**	**14 33 49.7**	**+0.9**
LTZ	**Lake Taylor**	**2.39**	**225**	Pn	**Pn**	**14 33 49.7**	**+0.9**
RATZ	**Rangitukua**	**2.42**	**23**	PN	**Pn**	**14 33 50.0**	**+0.9**
RATZ	**Rangitukua**	**2.42**	**23**	Pn	**Pn**	**14 33 51.2**	**+2.0**
BKZ	**Black Stump Fm**	**2.44**	**38**	PN	**Pn**	**14 33 48.8**	**-0.7**
BKZ				AML	AML	14 34 34.9	
BKZ				AML	AML	14 34 47.0	
BKZ	**Black Stump Fm**	**2.44**	**38**	Pn	**Pn**	**14 33 48.8**	**-0.7**
WATZ	**Wairara**	**2.56**	**21**	PN	**Pn**	**14 33 53.3**	**+2.3**
WATZ	**Wairara**	**2.56**	**21**	Pn	**Pn**	**14 33 53.8**	**+2.8**
HIZ	**Hauiti**	**2.59**	**5**	PN	**Pn**	**14 33 52.6**	**+1.1**
HIZ	**Hauiti**	**2.59**	**5**	Pn	**Pn**	**14 33 52.9**	**+1.4**
NMHZ	**Naumai**	**2.65**	**42**	PN	**Pn**	**14 33 51.8**	**-0.5**
NMHZ	**Naumai**	**2.65**	**42**	Pn	**Pn**	**14 33 51.8**	**-0.5**
CRLZ	**Canterbury Las**	**2.86**	**209**	⇓PN	**Pn**	**14 33 54.6**	**-0.4**
CRLZ	**Canterbury Las**	**2.86**	**209**	Pn	**Pn**	**14 33 54.6**	**-0.4**
ALRZ	**Allen Road**	**2.89**	**29**	PN	**Pn**	**14 33 54.7**	**-0.9**
ALRZ	**Allen Road**	**2.89**	**29**	Pn	**Pn**	**14 33 54.7**	**-0.9**
MQZ	**McQueen's Vall**	**2.96**	**208**	⇓PN	**Pn**	**14 33 55.8**	**-0.6**
MQZ	**McQueen's Vall**	**2.96**	**208**	Pn	**Pn**	**14 33 55.8**	**-0.6**
MHGZ	**Mahia Peninsul**	**3.23**	**54**	PN	**Pn**	**14 34 00.1**	**-0.1**
MHGZ	**Mahia Peninsul**	**3.23**	**54**	Pn	**Pn**	**14 34 00.1**	**-0.1**
TOZ	**Tahuroa Road**	**3.45**	**13**	PN	**Pn**	**14 34 03.5**	**+0.4**
WVZ	**Waitaha Valley**	**3.46**	**234**	PN	**Pn**	**14 34 03.7**	**+0.4**
WVZ	**Waitaha Valley**	**3.46**	**234**	Pn	**Pn**	**14 34 03.7**	**+0.4**
URZ	**Urewera**	**3.46**	**36**	AML	AML	14 35 11.2	
URZ				AML	AML	14 35 19.4	
URZ	**Urewera**	**3.46**	**36**	*e*Pn	**Pn**	**14 34 04.2**	**+0.9**
URZ	**Urewera**	**3.46**	**36**	P	**Pn**	**14 34 01.3**	**-2.0**
	0.9nm,0.3s,baz=182,slow=14,SNR=13						
URZ				S	**Sn**	**14 34 40.8**	**-2.2**
	4.0nm,0.3s,baz=311,slow=20,SNR=3.4						
MWZ	**Matawai**	**3.59**	**41**	PN	**Pn**	**14 34 03.2**	**-2.0**
MWZ	**Matawai**	**3.59**	**41**	Pn	**Pn**	**14 34 03.3**	**-2.0**
RPZ	**Rata Peaks**	**3.68**	**224**	PN	**Pn**	**14 34 06.4**	**+0.1**
RPZ	**Rata Peaks**	**3.68**	**224**	*e*Pn	**Pn**	**14 34 08.1**	**+1.7**
RPZ	**Rata Peaks**	**3.68**	**224**	P	**Pn**	**14 34 06.4**	**+0.1**
	2.0nm,0.3s,baz=24,slow=2.3,SNR=8.3						
RPZ				S	**Sn**	**14 34 45.7**	**-2.7**
	5.1nm,0.3s,baz=121,slow=22,SNR=8.4						
MKAZ	**Moumakai**	**4.01**	**7**	PN	**Pn**	**14 34 11.7**	**+0.9**
MKAZ	**Moumakai**	**4.01**	**7**	Pn	**Pn**	**14 34 11.8**	**+0.9**
WTAZ	**Waiatarua**	**4.16**	**0**	PN	**Pn**	**14 34 14.6**	**+1.6**
WTAZ	**Waiatarua**	**4.16**	**0**	Pn	**Pn**	**14 34 14.6**	**+1.6**
RVAZ	**Riverhead Bore**	**4.33**	**0**	PN	**Pn**	**14 34 16.1**	**+0.9**
FOZ	**Fox Glacier**	**4.36**	**234**	PN	**Pn**	**14 34 14.0**	**-1.7**
FOZ	**Fox Glacier**	**4.36**	**234**	Pn	**Pn**	**14 34 14.0**	**-1.7**
KUZ	**Kuaotunu**	**4.44**	**12**	PN	**Pn**	**14 34 17.4**	**+0.5**
KUZ	**Kuaotunu**	**4.44**	**12**	Pn	**Pn**	**14 34 17.3**	**+0.5**
LBZ	**Lake Benmore**	**4.59**	**223**	PN	**Pn**	**14 34 18.3**	**-0.5**
LBZ	**Lake Benmore**	**4.59**	**223**	Pn	**Pn**	**14 34 18.3**	**-0.5**
ODZ	**Otahua Downs**	**4.87**	**215**	PN	**Pn**	**14 34 21.7**	**-0.9**
ODZ	**Otahua Downs**	**4.87**	**215**	Pn	**Pn**	**14 34 21.7**	**-0.9**
WCZ	**Waipu Caves**	**5.16**	**358**	PN	**Pn**	**14 34 27.5**	**+1.0**
WCZ	**Waipu Caves**	**5.16**	**358**	Pn	**Pn**	**14 34 27.6**	**+1.0**
JCZ	**Jackson Bay**	**5.21**	**233**	PN	**Pn**	**14 34 26.4**	**-0.9**
JCZ	**Jackson Bay**	**5.21**	**233**	Pn	**Pn**	**14 34 26.4**	**-0.9**
WKZ	**Wanaka**	**5.51**	**226**	PN	**Pn**	**14 34 31.4**	**+0.1**
WKZ	**Wanaka**	**5.51**	**226**	Pn	**Pn**	**14 34 29.3**	**-2.1**
TUZ	**Tuapeka**	**6.03**	**215**	PN	**Pn**	**14 34 37.7**	**-0.7**
MSZ	**Milford Sound**	**6.03**	**232**	PN	Pn	14 34 43.8	+5.3
CTZ	**Chatham Island**	**7.05**	**115**	Pn	**Pn**	**14 34 53.1**	**+0.7**
ASAR	**Alice Springs**	**38.08**	**284**	P	**P**	**14 40 25.4**	**+0.1**
	0.3nm,0.4s,baz=127,slow=7.4,SNR=12						
ASAR				pP	**pP**	**14 40 41.6**	**+2.0**
	0.2nm,0.5s,baz=121,slow=6.5,SNR=1.7						
WRA	**Warramunga Arr**	**40.09**	**289**	P	**P**	**14 40 42.3**	**+0.2**
	0.3nm,0.5s,baz=128,slow=8.3,SNR=7.0						
ARCES	**ARCESS Array B**	**147.24**	**340**	PKPbc	**PKPbc**	**14 52 47.7**	**-0.1**
	3.6nm,1.1s,baz=22,slow=3.1,SNR=3.9						

IDC 04 14:34:11.7±3.2**, 36°.33S**×**178°.22E, h0**km**, mb4.1**/4**, mb1 4.2**/5**, mb1mx3.9**/18**, mbtmp4.0**/5**, MS3.6**/8**, Ms1 3.6**/8**, ms1mx3.3**/22**, Error ellipse: s-maj=68.0km s-min=33.4km az=62.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**2.12**	**204**	Pn	Pn	14 34 47.6	-0.8
	26nm,0.3s,baz=31,slow=8.7,SNR=15						
URZ				Sn	Sn	14 35 10.5	-5.0
	53nm,0.3s,baz=244,slow=23,SNR=15						
URZ				LR	LR	14 35 38.7	
	comp=Z,745nm,21.7s,baz=145,slow=41						
RPZ	**Rata Peaks**	**9.20**	**214**	LR	LR	14 40 15.5	
	comp=Z,189nm,20.2s,baz=28,slow=40						
DZM	**Mont Dzumac**	**17.51**	**321**	LR	LR	14 43 50.0	
	comp=Z,292nm,19.1s,baz=236,slow=33						
STKA	**Stephens Creek**	**30.53**	**268**	P	P	14 40 27.2	+0.4
	1.9nm,0.8s,baz=102,slow=9.3,SNR=2.8						
HNR	**Honiara**	**31.50**	**324**	LR	LR	14 50 41.1	
	comp=Z,48nm,18.8s,baz=9.2,slow=31						
ASAR	**Alice Springs**	**40.08**	**276**	P	P	14 41 48.9	-0.1
	4.2nm,1.0s,baz=122,slow=8.0,SNR=20						
ASAR				LR	LR	14 57 46.7	
	comp=Z,86nm,18.5s,baz=276,slow=35						
WRA	**Warramunga Arr**	**41.62**	**281**	P	P	14 42 01.3	-0.5
	1.0nm,0.6s,baz=120,slow=7.7,SNR=15						
VNDA	**Vanda**	**41.90**	**185**	LR	LR	14 55 50.0	
	comp=Z,88nm,19.6s,baz=344,slow=31						
FITZ	**Fitzroy Crossi**	**49.54**	**277**	P	P	14 43 04.7	+0.2
	2.6nm,0.7s,baz=135,slow=10.0,SNR=8.4						
PETK	**Petropavlovsk-**	**90.84**	**348**	LR	LR	15 23 55.6	
	comp=Z,28nm,19.0s,baz=301,slow=33						
CPUP	**Villa Florida**	**98.61**	**132**	LR	LR	15 28 45.8	
	comp=Z,47nm,18.2s,baz=131,slow=33						
TORD	**Torodi Ar. Bea**	**156.71**	**189**	PKPab	PKPab	14 54 38.3	-0.2
	0.7nm,0.9s,baz=183,slow=4.7,SNR=3.2						

IDC 04 14:38:00.5±2.1**, 0°.88N**×**127°.35E, h0**km**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/21**, mbtmp3.3**/3**, Error ellipse: s-maj=172.9km s-min=25.3km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.80**	**162**	P	P	14 42 54.7	+0.4
	0.9nm,0.7s,baz=341,slow=11,SNR=7.0						
ASAR	**Alice Springs**	**25.21**	**166**	P	P	14 43 27.9	-0.3
	0.5nm,0.5s,baz=345,slow=8.3,SNR=7.9						
MKAR	**Makanchi Array**	**60.24**	**326**	P	P	14 48 10.6	0.0
	0.1nm,0.3s,baz=114,slow=7.0,SNR=2.8						

IDC 04 15:04:38.6±1.9**, 26°.02S**×**179°.62E, h485**km±24km**, mb3.5**/5**, mb1 3.8**/8**, mb1mx3.4**/20**, mbtmp3.6**/8**, Error ellipse: s-maj=33.8km s-min=17.7km az=170.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.89**	**146**	P	P	15 05 55.7	+0.7
	175nm,0.3s,baz=59,slow=18,SNR=12						
RAO				S	S	15 06 55.3	-2.0
	64nm,0.3s,baz=162,slow=20,SNR=2.0						
URZ	**Urewera**	**12.39**	**189**	P	P	15 07 20.2	-0.9
	2.9nm,0.3s,baz=359,slow=3.3,SNR=25						
URZ				S	S	15 09 32.3	-2.9
	0.4nm,0.3s,baz=121,slow=18,SNR=4.0						
DZM	**Mont Dzumac**	**12.66**	**285**	*e*P	P	15 07 25.1	+0.6
DZM	**Mont Dzumac**	**12.66**	**285**	P	P	15 07 26.2	+1.7
	1.5nm,0.3s,baz=97,slow=14,SNR=18						
AFI	**Afiamalu**	**14.50**	**35**	P	P	15 07 37.0	-7.0
	3.7nm,0.3s,baz=163,slow=11,SNR=4.1						
AFI				S	S	15 10 04.4	-13
	0.7nm,0.3s,baz=41,slow=19,SNR=2.1						
RPZ	**Rata Peaks**	**18.98**	**199**	P	P	15 08 28.5	0.0
	1.1nm,0.3s,baz=24,slow=15,SNR=6.5						
STKA	**Stephens Creek**	**33.66**	**251**	P	P	15 10 38.2	+0.1
	3.2nm,0.5s,baz=94,slow=11,SNR=32						
ASAR	**Alice Springs**	**41.39**	**263**	P	P	15 11 41.2	-0.6
	7.2nm,0.4s,baz=98,slow=6.7,SNR=10						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR				S	S	15 17 21.6	+0.4
	1.0nm,0.8s,baz=99,slow=17,SNR=7.0						
WRA	Warramunga Arr	41.96	269	P	P	15 11 45.3	-1.1
	5.2nm,0.4s,baz=104,slow=8.0,SNR=108						
NVAR	Mina Array Bea	86.51	44	P	P	15 16 28.1	-1.5
	0.9nm,0.7s,baz=224,slow=8.6,SNR=8.0						
TXAR	Lajitas Array	91.84	58	P	P	15 16 54.0	-0.6
	0.5nm,0.7s,baz=212,slow=4.4,SNR=5.7						
BRTR	Keskin Array B	148.53	304	PKPbc	PKPbc	15 23 32.4	+1.9
	0.3nm,0.4s,baz=78,slow=4.5,SNR=2.9						

*ISCJB **04** 15:32:25.7±0.4, 51°.51N±0°.02×16°.07E±0°.02, h0km, mb3.2/2, Error ellipse: s-maj=3.4km s-min=2.1km az=15.6*
*CSEM **04** 15:32:27.7±0.2, 51°.49N×16°.08E, h2km, ML3.7/11, Error ellipse: s-maj=3.4km s-min=2.2km az=14.0*
*IDC **04** 15:32:27.7±0.8, 51°.52N×16°.07E, h0km, mb3.4/2, mb1 3.5/7, mb1mx3.3/27, mbtmp3.3/7, ML3.0/5, Error ellipse: s-maj=10.3km s-min=7.9km az=111.0*
*WAR **04** 15:32:28.3, 51°.53N×16°.07E*
*BGR **04** 15:32:29.3±0.3, 51°.42N×16°.07E, h1km, ML3.1/19, Error ellipse: s-maj=4.4km s-min=2.2km az=11.0*
*VIE **04** 15:32:30.6±0.4, 51°.25N×16°.07E, h0km, mb2.8/5, ML3.1/5, Error ellipse: s-maj=2.7km s-min=2.2km az=171.0 67 km WNW of Wroclaw Suspected Mining induced.*
*PRU **04** 15:32:30.3, 51°.43N×15°.99E, h0km*
ISC 04 15:32:27.7±0.6, **51°.53N**±0°.02×**16°.06E**±0°.02, **h0km, n89, σ1s.12**/161, **4C-2D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	168	ePg	Pg	15 32 41.5	+0.2
KSP	Ksiaz	0.71	168	ePg	Pg	15 32 41.3	0.0
KSP				eSg	Sg	15 32 51.2	+0.8
KSP	Ksiaz	0.71	168	e	Pn	15 32 48.9	+3.9
KSP				e		15 32 54.0	
KSP	Ksiaz	0.71	168	Pg	Pg	15 32 41.5	+0.2
KSP				eSg	Sg	15 32 50.7	+0.3
UPC	Upice	1.03	182	ePG	Pg	15 32 47.1	-0.3
UPC				eSG	Sg	15 32 59.8	-0.9
	comp=Z,49nm,0.2s						
UPC	Upice	1.03	182	Pg	Pg	15 32 47.1	-0.3
UPC				Sg	Sg	15 32 59.8	-0.9
	49nm,0.2s						
DPC	Dobruska-Polom	1.20	172	ePG	Pg	15 32 50.1	-0.5
DPC				eSG	Sg	15 33 05.2	-0.9
	comp=Z,997nm,0.7s						
DPC	Dobruska-Polom	1.20	172	Pg	Pg	15 32 50.1	-0.5
DPC				Sg	Sg	15 33 05.2	-0.9
	997nm,0.7s						
PVCC	Panska Ves	1.38	224	ePG	Pg	15 32 53.8	-0.3
PVCC				eSG	Sb	15 33 12.7	+0.2
	comp=Z,174nm,0.2s						
PVCC	Panska Ves	1.38	224	Pg	Pg	15 32 53.8	-0.3
PVCC				Sg	Sb	15 33 12.7	+0.2
	174nm,0.2s						
BRG	Berggiesshubel	1.49	244	PG	Pn	15 32 56.3	+0.6
BRG				SG	Sn	15 33 16.2	+0.4
	141nm,0.5s						
BRG	Berggiesshubel	1.49	244	ePn	Pn	15 32 54.9	-0.8
	SNR=37						
BRG				ePg	Pg	15 32 56.6	+0.4
	SNR=2.0						
BRG				eSg	Sn	15 33 16.7	+0.9
BRG	Berggiesshubel	1.49	244	Pn	Pn	15 32 54.9	-0.8
	SNR=37						
FBE	Freiberg	1.81	251	ePg	Pb	15 33 02.3	+0.6
FBE				eSg	Sg	15 33 26.5	+0.7
FBE	Freiberg	1.81	251	Pg	Pb	15 33 02.3	+0.6
FBE				Sg	Sg	15 33 26.5	+0.7
PRU	Pruhonice	1.82	213	ePn	Pn	15 32 59.6	-0.7
	SNR=15						
PRU				eSg	Sb	15 33 25.7	+0.4
PRU	Pruhonice	1.82	213	ePG	Pb	15 33 01.6	-0.3
PRU				eSG	Sb	15 33 25.5	+0.2
	comp=Z,51nm,0.4s						
PRU	Pruhonice	1.82	213	Pn	Pn	15 32 59.6	-0.7
	SNR=15						
PRU	Pruhonice	1.82	213	Pg	Pb	15 33 01.6	-0.3
PRU				Sg	Sb	15 33 25.5	+0.2
	51nm,0.4s						
GKP	Gorka Klasztor	1.88	22	ePn	Pb	15 33 03.4	+0.5
	SNR=1.4						
GKP	Gorka Klasztor	1.88	22	Pn	Pb	15 33 03.4	+0.5
	SNR=1.4						
CLL	Collm	1.93	264	ePn	Pn	15 33 00.9	-0.8
	SNR=17						
CLL				ePg	Pb	15 33 04.1	+0.3
	SNR=6.2						
CLL				eSg	Sg	15 33 30.5	+0.9
CLL	Collm	1.93	264	i Pn	Pn	15 33 00.7	-1.1
CLL				ePg	Pb	15 33 04.0	+0.3
CLL				i		15 33 07.7	
CLL				i Sg	Sg	15 33 30.1	+0.5
	comp=Z,85nm,0.6s						
CLL	Collm	1.93	264	Pn	Pn	15 33 00.9	-0.8
	SNR=17						
RAC	Raciborz	1.99	136	ePg	Pb	15 33 05.2	+0.5
RAC				eSg	Sg	15 33 31.5	0.0
MORC	Moravsky Berou	2.00	151	ePn	Pn	15 33 01.6	-1.2
	SNR=19						
MORC				eSg	Sb	15 33 29.5	-0.8
MORC	Moravsky Berou	2.00	151	Pn	Pn	15 33 01.6	-1.2
	SNR=19						
MORC				Sg	Sb	15 33 29.5	-0.8
OKC	Ostrava-Krasne	2.16	141	ePg	Pb	15 33 07.3	-0.3
OKC				eSg	Sb	15 33 35.3	+0.5
OKC	Ostrava-Krasne	2.16	141	ePG	Pb	15 33 07.3	-0.3
OKC				eSG	Sb	15 33 35.4	+0.5
	comp=Z,185nm,0.8s						
OKC	Ostrava-Krasne	2.16	141	Pg	Pb	15 33 07.3	-0.3
OKC				Sg	Sb	15 33 35.4	+0.5
	comp=Z,185nm,0.8s						
VRAC	Vranov	2.25	171	Pn	Pn	15 33 06.3	0.0
	comp=Z,1.5nm,0.3s,baz=353,slow=16,SNR=12						
VRAC				Pg	Pb	15 33 10.0	+0.7
	comp=Z,2.9nm,0.3s,baz=351,slow=16,SNR=12						
VRAC				Lg	Lg	15 33 38.4	
	comp=Z,4.0nm,0.3s,baz=353,slow=8.8,SNR=11						
VRAC	Vranov	2.25	171	ePn	Pn	15 33 06.2	0.0
VRAC				eSg	Sb	15 33 37.7	0.0
TREC	Trest	2.27	190	ePN	Pn	15 33 07.4	+0.9
TREC				ePG	Pb	15 33 09.5	-0.1
TREC				eSG	Sb	15 33 39.6	+1.4
	comp=Z,23nm,0.4s						
TREC	Trest	2.27	190	Pn	Pn	15 33 07.4	+0.9
TREC	Trest	2.27	190	Pg	Pb	15 33 09.5	-0.1
TREC				Sg	Sb	15 33 39.6	+1.4
	comp=Z,23nm,0.4s						
TANN	Tannenbergstha	2.54	245	ePn	Pn	15 33 10.2	-0.1
	SNR=4.2						
TANN				eSg	Sg	15 33 48.9	-0.3
TANN	Tannenbergstha	2.54	245	Pn	Pn	15 33 10.1	-0.1
	SNR=4.2						
TANN				Sg	Sg	15 33 48.9	-0.3
WERD	Werda	2.61	247	ePn	Pn	15 33 11.0	-0.2
	SNR=17						
WERD				eSg	Sg	15 33 50.4	-1.1
WERD	Werda	2.61	247	Pn	Pn	15 33 11.0	-0.2
	SNR=17						
WERD				Sg	Sg	15 33 50.4	-1.1
NKC	Novy Kostel	2.63	242	ePN	Pn	15 33 11.8	+0.3
NKC				ePG	Pb	15 33 17.0	+1.2
NKC				eSG	Sg	15 33 53.2	+0.9
	comp=Z,98nm,0.4s						
NKC	Novy Kostel	2.63	242	Pn	Pn	15 33 11.8	+0.3
OJC	Ojcow	2.71	118	ePg	Pb	15 33 17.8	+0.8
OJC				eSg	Sg	15 33 53.9	-0.8
OJC	Ojcow	2.71	118	ePg	Pg	15 33 18.8	-0.8
OJC				eSg	Sg	15 33 54.1	-0.6
OJC	Ojcow	2.71	118	Pg	Pb	15 33 17.8	+0.8
OJC				Sg	Sg	15 33 53.9	-0.8
KHC	Kasperske Hory	2.88	214	ePn	Pn	15 33 14.7	-0.2
	SNR=7.4						
KHC				ePg	Pb	15 33 21.0	+0.9
	SNR=5.4						
KHC	Kasperske Hory	2.88	214	ePN	Pn	15 33 14.6	-0.3
KHC				ePG	Pb	15 33 20.8	+0.8
KHC				eSN	Sn	15 33 51.1	+0.8
KHC				eSG	Sg	15 33 59.7	-0.6
	comp=Z,28nm,0.5s						
KHC	Kasperske Hory	2.88	214	Pn	Pn	15 33 14.6	-0.3
KHC	Kasperske Hory	2.88	214	Pg	Pb	15 33 21.0	+0.9
	SNR=5.4						
KHC				Sn	Sn	15 33 51.1	+0.8
KHC				Sg	Sg	15 33 59.7	-0.6
	comp=Z,28nm,0.5s						
MOX	Moxa	2.94	254	ePn	Pn	15 33 15.2	-0.5
	SNR=7.4						
MOX				ePg	Pg	15 33 23.7	-0.4
	SNR=3.0						
MOX				eSg	Sg	15 34 01.8	-0.3
MOX	Moxa	2.94	254	Pn	Pn	15 33 15.2	-0.5
	SNR=7.4						
MANZ	Manzenberg	2.95	240	ePn	Pn	15 33 15.1	-0.7
	SNR=3.9						
MANZ				ePg	Pg	15 33 24.5	+0.3
	SNR=3.9						
MANZ	Manzenberg	2.95	240	Pn	Pn	15 33 15.1	-0.7
	SNR=3.9						
ROTZ	Rotzenmuhle	3.02	236	ePn	Pn	15 33 17.1	+0.3
	SNR=5.4						
ROTZ				eSg	Sg	15 34 03.5	-1.3
ROTZ	Rotzenmuhle	3.02	236	Pn	Pn	15 33 17.1	+0.3
	SNR=5.4						
ROTZ				Sg	Sg	15 34 03.5	-1.3
GEC2	GERESS Array S	3.09	210	ePn	Pn	15 33 18.7	+0.9
	SNR=12						
GEC2				ePg	Pg	15 33 25.7	-1.2
	SNR=5.7						
GEC2				eSg	Sg	15 34 05.2	-1.8
GEC2	GERESS Array S	3.09	210	Pn	Pn	15 33 18.7	+0.9
	SNR=12						
GERES	GERESS Array B	3.09	210	Pn	Pn	15 33 17.4	-0.4
	comp=Z,1.5nm,0.3s,baz=32,slow=13,SNR=35						
GERES				Pg	Pb	15 33 23.7	+0.1
	comp=Z,3.1nm,0.3s,baz=25,slow=16,SNR=31						
GERES				Lg	Lg	15 34 05.2	
	comp=Z,4.9nm,0.3s,baz=28,slow=26,SNR=9.8						
WET	Wettzell	3.14	222	ePn	Pn	15 33 18.6	+0.1
	SNR=4.3						
WET				eSg	Sg	15 34 07.6	-1.1
WET	Wettzell	3.14	222	Pn	Pn	15 33 18.6	+0.1
	SNR=4.3						
WET				Sg	Sg	15 34 07.6	-1.1
ZST	Bratislava	3.41	168	eSN	Sn	15 34 01.4	-1.8
ZST	Bratislava	3.41	168	eSn	Sn	15 34 01.4	-1.8
NIE	Niedzica	3.44	126	eP	Pg	15 33 32.7	-1.0
NIE				eS	Sg	15 34 18.8	+0.5
VYHS	Vyhne	3.53	148	ePN	Pn	15 33 26.8	+3.0
VYHS				eSN	Sn	15 34 07.8	+1.6
VYHS	Vyhne	3.53	148	ePn	Pn	15 33 26.8	+3.0
VYHS				eSn	Sn	15 34 07.8	+1.6
CLZ	Clausthal	3.55	277	ePn	Pn	15 33 24.5	+0.4
	SNR=4.3						
CLZ				ePg	Pg	15 33 35.2	-0.6
	SNR=4.3						
CLZ				eSg	Sg	15 34 23.3	+1.5
CLZ	Clausthal	3.55	277	Pn	Pn	15 33 24.5	+0.4
	SNR=4.3						
GRA1	Grafenberg Arr	3.59	241	Pn	Pn	15 33 25.3	+0.6
	SNR=2.3						
GRA1				Sg	Sg	15 34 23.1	+0.1
GRF	Grafenberg Arr	3.59	241	ePn	Pn	15 33 25.3	+0.6
	SNR=2.3						
GRF				eSg	Sg	15 34 23.1	+0.1
CONA	Conrad Observa	3.61	182	⇓iPn	Pn	15 33 25.1	+0.1
CONA				⇑iSg	Sg	15 34 20.7	-3.0
	comp=Z,50nm,0.6s						
CONA	Conrad Observa	3.61	182	Pn	Pn	15 33 25.1	+0.1
CONA				Sg	Sg	15 34 20.7	-3.0
	comp=Z,50nm,0.6s						
BSD	Bornholm Skovb	3.65	350	i P	Pn	15 33 24.2	-1.2
BSD				eS	Sn	15 34 05.7	-3.4
MOA	Molln	3.87	198	⇑iPn	Pn	15 33 27.6	-0.8
MOA				⇑iSg	Sg	15 34 29.7	-2.2
	comp=Z,36nm,0.7s						
MOA	Molln	3.87	198	Pn	Pn	15 33 27.6	-0.8
MOA				Sg	Sg	15 34 29.7	-2.2
	comp=Z,36nm,0.7s						
STHS	Stebnicka Huta	3.93	121	ePG	Pg	15 33 42.7	-0.3
STHS				eSN	Sb	15 34 22.4	-3.6
STHS	Stebnicka Huta	3.93	121	ePg	Pg	15 33 42.7	-0.3
KECS	Kecovo	4.18	135	ePG	Pg	15 33 47.1	-0.7
KECS				eSN	Sn	15 34 25.3	+3.1
KECS	Kecovo	4.18	135	ePg	Pg	15 33 47.1	-0.7
KECS				eSn	Sn	15 34 25.3	+3.1
CRVS	Cervenica-Dubn	4.36	125	ePG	Pg	15 33 50.5	-0.6
CRVS				eSN	Sn	15 34 31.3	+4.7
CRVS	Cervenica-Dubn	4.36	125	ePg	Pg	15 33 50.5	-0.6
KOLS	Kolonicke sedl	4.76	121	ePG	Pg	15 33 58.3	-0.6
KOLS				eSN	Sn	15 34 39.3	+2.7
KOLS	Kolonicke sedl	4.76	121	ePg	Pg	15 33 58.3	-0.6
KOLS				eSn	Sn	15 34 39.3	+2.7
KBA	Koelnbreinsper	4.80	203	⇑iPn	Pn	15 33 40.8	-0.6
KBA				⇓iSg	Sg	15 35 00.8	-1.1
	comp=Z,25nm,0.7s						
KBA	Koelnbreinsper	4.80	203	Pn	Pn	15 33 40.8	-0.6
KBA				Sg	Sg	15 35 00.8	-1.1
	comp=Z,25nm,0.7s						
DAVOX	Davos/Dischmat	6.25	223	Lg	Lg	15 35 44.9	
	comp=Z,0.3nm,0.3s,baz=276,slow=23,SNR=3.1						
AKASG	Malin Array Be	8.33	91	Pn	Pn	15 34 25.6	-4.0
	comp=Z,0.9nm,0.3s,baz=281,slow=12,SNR=6.8						
AKASG				Sn	Sn	15 35 56.2	-8.0
	comp=Z,1.1nm,0.3s,baz=272,slow=22,SNR=4.0						
AKASG				Lg	Lg	15 36 51.9	
	comp=Z,0.1nm,0.3s,baz=274,slow=29,SNR=2.5						
HFS	Hagfors	8.72	352	Pn	Pn	15 34 33.3	-1.6
	comp=Z,0.1nm,0.3s,baz=163,slow=21,SNR=2.5						
HFS				Sn	Sn	15 36 12.1	-1.8
	comp=Z,0.1nm,0.3s,baz=133,slow=16,SNR=2.6						
EKA	Eskdalemuir Ar	12.07	296	Pn	Pn	15 35 19.0	-1.7
	baz=98,slow=14,SNR=2.6						
TORD	Torodi Ar. Bea	40.01	202	P	P	15 40 03.6	-0.6
	comp=Z,0.4nm,0.8s,baz=5.7,slow=8.9,SNR=3.1						
YKA	Yellowknife Ar	59.82	336	P	P	15 42 33.6	-0.6
	comp=Z,0.2nm,0.5s,baz=36,slow=6.4,SNR=5.4						

IDC 04 15:41:25.6±1.5, **3°.20N**×**128°.58E, h0km, mb3.4**/5, **mb1 3.6**/5, **mb1mx3.4**/23, **mbtmp3.4**/5, **Error ellipse: s-maj=92.2km s-min=21.8km az=71.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.36	188	P	P	15 46 15.4	+0.7
	1.3nm,0.9s,baz=355,slow=12,SNR=2.1						
WRA	Warramunga Arr	23.68	166	P	P	15 46 37.9	-1.3
	0.4nm,0.5s,baz=346,slow=10.0,SNR=8.5						
ASAR	Alice Springs	27.20	169	P	P	15 47 09.6	-1.7
	0.3nm,0.7s,baz=350,slow=7.5,SNR=7.8						
ASAR				PcP	PcP	15 50 33.0	+1.1
	0.3nm,0.6s,baz=349,slow=2.1,SNR=5.2						
STKA	Stephens Creek	37.01	161	P	P	15 48 37.9	+0.8
	1.1nm,0.6s,baz=354,slow=10,SNR=3.7						
MKAR	Makanchi Array	59.05	325	P	P	15 51 27.6	0.0
	0.1nm,0.4s,baz=121,slow=6.9,SNR=2.2						

WEL 04 15:54:24.8±0.6, **36°.55S**×**177°.53E, h12km, ML3.7**/4, **Error ellipse: s-maj=5.6km s-min=3.9km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.19	149	eP*	Pn	15 54 45.1	-2.1
MXZ				AML	AML	15 54 58.8	
MXZ				AML	AML	15 55 11.8	
KUZ	Kuaotunu	1.47	262	PN	Pn	15 54 50.2	-0.9
KUZ				SN	Sn	15 55 10.3	0.0
PUZ	Puketiti	1.63	159	PN	Pn	15 54 52.5	-0.9
PUZ				AML	AML	15 55 17.2	
PUZ				AML	AML	15 55 18.9	
URZ	Urewera	1.74	191	P*	Pn	15 54 53.3	-1.5
URZ				AML	AML	15 55 23.7	
URZ				AML	AML	15 55 25.8	
MWZ	Matawai	1.78	180	P*	Pn	15 54 53.5	-2.0
MWZ				AML	AML	15 55 30.5	
MWZ				AML	AML	15 55 30.6	
CNGZ	Carnagh Statio	2.00	165	PN	Pn	15 54 57.9	-0.6

CASC 04 16:01:03.9±3.1, **15°.64N**×**88°.17W, h0km**±26km, **MD3.8, Honduras**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRL	Marmol	1.58	249	eP	Pn	16 01 27.4	-6.0
MRL				eS	Sg	16 01 56.9	+1.9
LBRS	Las Brisas	2.07	204	eP	Pn	16 01 41.1	+1.1
LFU	La Fuente	2.09	206	eP	Pn	16 01 40.6	+0.4
LFU				eS	Sn	16 02 07.9	+0.8
RBDL	Robledal	2.11	224	eP	Pn	16 01 39.3	-1.4
RBDL				eS	Sn	16 02 07.7	-0.1
SNVI	San Vicente	2.11	198	eP	Pn	16 01 40.4	-0.4
SNVI				eS	Sn	16 02 08.3	+0.4
BOQS	Boqueron	2.17	210	eP	Pn	16 01 42.1	+0.4
BOQS				eS	Sn	16 02 10.2	+0.7
BLLM	Bellamira	2.18	182	eP	Pn	16 01 41.6	0.0
VSM	San Miguel	2.20	183	eP	Pn	16 01 42.0	0.0
VSM				eS	Sb	16 02 12.2	-0.7
SNJE	San Jose	2.24	219	eP	Pn	16 01 40.3	-2.3
SNJE				eS	Sn	16 02 10.8	-0.3
NBG	Las Nubes	2.35	244	eP	Pn	16 01 38.3	-5.9
NBG				eS	Sb	16 02 16.9	-0.5
CNCH	Conchagua	2.37	172	eP	Pn	16 01 44.5	+0.3
CNCH				eS	Sb	16 02 16.7	-0.8
IXG	Ixpaco	2.65	237	eP	Pn	16 01 43.4	-4.7
IXG				eS	Sb	16 02 23.9	-1.7

WEL 04 16:02:34.7±0.8, **36°.29S**×**177°.53E, h5km, ML3.6**/4, **Error ellipse: s-maj=6.0km s-min=5.7km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.41	154	P*	Pn	16 02 58.6	-2.4
PUZ	Puketiti	1.87	162	PN	Pn	16 03 06.8	-0.6
PUZ				SN	Sn	16 03 31.0	-0.4
PUZ				AML	AML	16 03 36.3	
URZ	Urewera	1.99	190	P*	Pn	16 03 07.9	-1.2
URZ				S*	Sn	16 03 30.9	-3.5
MWZ	Matawai	2.04	180	P*	Pn	16 03 08.0	-1.8

*ATH **04** 16:21:00.7, 41°.35N×22°.68E, h23km±2km, MD3.0/5*
*SKO **04** 16:21:01.2, 41°.30N×22°.67E, h9km, M1.4, ML2.0*
*ISCJB **04** 16:21:01.6±0.4, 41°.27N±0°.02×22°.67E±0°.04, h7km±3km, Error ellipse: s-maj=4.8km s-min=3.4km az=150.1*
*THE **04** 16:21:01.9, 41°.28N×22°.67E, h2km±1km, ML2.2/5, Error ellipse: s-maj=1.5km s-min=0.5km az=224.0*
*CSEM **04** 16:21:01.7±0.2, 41°.27N×22°.65E, h2km, ML1.7, Error ellipse: s-maj=5.4km s-min=3.4km az=66.0*
*BEO **04** 16:21:03.5±1.1, 41°.31N×22°.53E, h0km, ML1.7/4*
ISC 04 16:21:01.7±0.9, **41°.30N**±0°.02×**22°.66E**±0°.02, **h4km**±7km, **n35, σ0s.52**/58, **2C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.07	289	P	Pg	16 21 03.3	0.0
VAY				S	Sg	16 21 05.0	+0.6
VAY	Valandovo	0.07	289	⇑iPg	Pg	16 21 03.3	0.0
VAY				i Sg	Sg	16 21 04.9	+0.6
VAY				eLg	Lg	16 21 05.0	
	comp=E,785nm,0.3s						
VAY				eLg	Lg	16 21 05.0	
	comp=N,1μm,0.3s						
VAY	Valandovo	0.07	289	eLg	Lg	16 21 01.4	
	comp=N,1μm,0.3s						
VAY	Valandovo	0.07	289	⇑iPg	Pg	16 21 01.7	-1.6
VAY	Valandovo	0.07	289	P	Pg	16 21 03.3	0.0
VAY				eSg	Sg	16 21 04.9	+0.6
KNT	Kendrikon	0.22	127	P	Pg	16 21 06.1	+0.1
KNT				S	Sg	16 21 09.3	+0.4
KNT	Kendrikon	0.22	127	P	Pg	16 21 06.1	+0.1
KNT				S	Sg	16 21 09.3	+0.4
GRG	Griva	0.39	210	P	Pg	16 21 09.3	0.0
GRG				S	Sg	16 21 14.8	+0.4
GRG	Griva	0.39	210	P	Pg	16 21 09.3	0.0
GRG				S	Sg	16 21 14.8	+0.4
THE	Thessaloniki	0.70	161	P	Pg	16 21 14.8	-0.3
THE	Thessaloniki	0.70	161	P	Pg	16 21 14.8	-0.3
SOH	Sokhos	0.71	132	P	Pg	16 21 14.7	-0.5
SOH				S	Sg	16 21 24.8	+0.4
SOH	Sokhos	0.71	132	ePN	Pg	16 21 14.7	-0.5
SOH				eSN	Sb	16 21 25.9	-0.8
SOH	Sokhos	0.71	132	P	Pg	16 21 14.7	-0.5
SOH				S	Sg	16 21 24.8	+0.4
SRS	Serrai	0.72	104	P	Pb	16 21 16.8	-0.1
SRS	Serrai	0.72	104	P	Pb	16 21 16.8	-0.1
HORT	Hortiatis	0.77	154	P	Pg	16 21 16.1	-0.4
HORT				S	Sg	16 21 27.2	+0.7
HORT	Hortiatis	0.77	154	P	Pg	16 21 16.1	-0.4
HORT				S	Sg	16 21 27.2	+0.7
NVR	Nevrokopi	0.91	86	P	Pg	16 21 18.9	-0.1
NVR	Nevrokopi	0.91	86	ePN	Pg	16 21 18.5	-0.5
NVR				eSN	Sg	16 21 30.5	-0.3
NVR	Nevrokopi	0.91	86	P	Pg	16 21 18.9	-0.1
PLG	Polygyros	1.10	147	P	Pg	16 21 21.9	-0.8
PLG				S	Sg	16 21 37.2	+0.3
PLG	Polygyros	1.10	147	ePN	Pg	16 21 22.3	-0.4
PLG				eSN	Sg	16 21 37.4	+0.5
PLG	Polygyros	1.10	147	P	Pg	16 21 21.9	-0.8
PLG				S	Sg	16 21 37.2	+0.3
FNA	Florina	1.10	243	ePN	Pg	16 21 21.9	-0.9
FNA				eSN	Sb	16 21 38.4	+0.4
VTS	Vitosha	1.36	17	P	Pn	16 21 27.0	-0.5
VTS	Vitosha	1.36	17	ePg	Pg	16 21 28.1	+0.4
VTS				eSg	Sn	16 21 47.2	+1.1
VTS	Vitosha	1.36	17	P	Pn	16 21 27.0	-0.5
VTS	Vitosha	1.36	17	ePg	Pg	16 21 28.1	+0.4
VTS				eSg	Sn	16 21 47.2	+1.1
KAVA	Kavala	1.43	102	P	Pn	16 21 28.3	-0.1
KAVA				S	Sg	16 21 47.6	0.0
KAVA	Kavala	1.43	102	P	Pn	16 21 28.3	-0.1
KAVA				S	Sg	16 21 47.6	0.0
BARS	Barje	1.64	338	ePn	Pb	16 21 32.4	-0.2
BARS				eSn	Sg	16 21 54.3	-0.2
BARS	Barje	1.64	338	ePn	Pb	16 21 32.4	-0.2
BARS				eSn	Sg	16 21 54.3	-0.2
ZAPS	Zavoj	1.98	359	ePn	Pg	16 21 39.1	-0.4
ZAPS				eSn	Sb	16 22 03.0	-0.2
NEO	Neokhori	2.03	168	ePN	Pn	16 21 36.6	-0.1

*ISCJB **04** 16:21:32.4±0.3, 24°.09S±0°.05×66°.68W±0°.07, h195km, mb4.0/14, Error ellipse: s-maj=9.4km s-min=6.0km az=152.0*
*IDC **04** 16:21:32.9±1.5, 24°.05S×66°.65W, h189km±14km, mb4.0/14, mb1 4.1/20, mb1mx4.0/23, mbtmp3.9/20, MS3.3/1, Ms1 3.2/1, ms1mx2.4/29, Error ellipse: s-maj=14.0km s-min=9.9km az=73.0*
*BJI **04** 16:21:33.6, 24°.10S×66°.60W, h180km, mB5.1/3*
ISC 04 16:21:33.3±0.4, **24°.17S**±0°.06×**66°.70W**±0°.09, **h195km, n533, σ0s.88**/545, **mb4.0**/14, **245C-256D, Salta Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	7.53	190	P	Pn	16 23 19.9	-0.4
	0.3nm,0.3s,baz=15,slow=15,SNR=22						
CFAA				S	Sn	16 24 40.8	-4.7
	0.9nm,0.3s,baz=233,slow=19,SNR=11						
LPAZ	La Paz	7.96	350	P	Pn	16 23 25.9	-0.8
	2.9nm,0.3s,baz=166,slow=7.4,SNR=54						
LPAZ				S	Sn	16 24 52.1	-4.6
	2.7nm,0.3s,baz=260,slow=22,SNR=7.1						
CPUP	Villa Florida	8.75	106	P	Pn	16 23 36.9	+0.6
	1.6nm,0.3s,baz=264,slow=12,SNR=21						
SIV	San Ignacio	9.71	34	P	Pn	16 23 47.4	-1.6
	2.5nm,0.3s,baz=224,slow=12,SNR=57						
SIV				S	Sn	16 25 24.0	-14
	baz=212,slow=9.5,SNR=2.6						
NNA	Nana	15.47	320	P	Pn	16 25 01.7	0.0
	1.2nm,0.3s,baz=231,slow=13,SNR=4.3						
PLCA	Paso Flores	16.83	190	P	P	16 25 17.1	+0.5
	0.2nm,0.3s,baz=12,slow=12,SNR=7.3						
BDFB	Brasilia	19.50	68	P	P	16 25 46.1	+0.2
	2.8nm,0.3s,baz=244,slow=11,SNR=31						
BDFB				LR	LR	16 33 46.3	
	comp=Z,86nm,18.9s,baz=318,slow=38						
RCBR	Riachuelo	34.76	63	P	P	16 28 04.8	-0.6
	7.4nm,0.9s,baz=210,slow=10,SNR=4.1						
SNAA	Sanae	59.10	161	P	P	16 31 13.9	+1.0
	1.4nm,0.8s,baz=288,slow=5.6,SNR=23						
732A	Laxson Ranch,	61.58	327	⇓P	P	16 31 29.6	-0.4

	baz=62							
732A	Laxson Ranch, baz=62	61.58	327	⇓P	P	16 31 29.6	-0.4	
632A	Uvalde baz=62	62.12	327	⇑P	P	16 31 33.6	-0.2	
632A	Uvalde baz=62	62.12	327	⇑P	P	16 31 33.6	-0.2	
631A	Perdido Creek baz=63	62.44	327	⇓P	P	16 31 35.2	-0.6	
631A	Perdido Creek baz=63	62.44	327	⇓P	P	16 31 35.2	-0.6	
532A	Rocksprings baz=63,SNR=5.7	62.70	328	⇑P	P	16 31 37.2	-0.3	
532A	Rocksprings baz=63,SNR=5.7	62.70	328	⇑P	P	16 31 37.2	-0.3	
JCT	Junction City baz=63	62.94	328	⇑P	P	16 31 38.7	-0.5	
JCT	Junction City baz=63	62.94	328	⇑P	P	16 31 38.7	-0.5	
531A	Rocksprings baz=63,SNR=7.2	63.04	327	⇑P	P	16 31 39.7	-0.1	
531A	Rocksprings baz=63,SNR=7.2	63.04	327	⇑P	P	16 31 39.7	-0.1	
432A	Menard baz=64,SNR=5.5	63.26	328	⇑P	P	16 31 40.6	-0.6	
432A	Menard baz=64,SNR=5.5	63.26	328	⇑P	P	16 31 40.6	-0.6	
530A	J-C Ranch, Com baz=64,SNR=7.4	63.42	327	⇑P	P	16 31 42.1	-0.2	
530A	J-C Ranch, Com baz=64,SNR=7.4	63.42	327	⇑P	P	16 31 42.1	-0.2	
431A	Sonora baz=64	63.49	328	⇑P	P	16 31 42.3	-0.5	
431A	Sonora baz=64	63.49	328	⇑P	P	16 31 42.3	-0.5	
332A	Millersview baz=64,SNR=11	63.65	329	⇓P	P	16 31 43.3	-0.5	
332A	Millersview baz=64,SNR=11	63.65	329	⇓P	P	16 31 43.3	-0.5	
628A	Black Gap, Mar baz=64,SNR=10	63.69	325	⇓P	P	16 31 44.6	+0.5	
628A	Black Gap, Mar baz=64,SNR=10	63.69	325	⇓P	P	16 31 44.6	+0.5	
529A	Stev Forest Ra baz=64,SNR=15	63.85	326	⇑P	P	16 31 45.3	+0.2	
529A	Stev Forest Ra baz=64,SNR=15	63.85	326	⇑P	P	16 31 45.3	+0.2	
430A	Baggett Ranch, baz=64,SNR=5.6	63.89	327	⇓P	P	16 31 44.9	-0.5	
430A	Baggett Ranch, baz=64,SNR=5.6	63.89	327	⇓P	P	16 31 44.9	-0.5	
331A	San Angelo baz=64	63.92	328	⇓P	P	16 31 44.9	-0.7	
331A	San Angelo baz=64	63.92	328	⇓P	P	16 31 44.9	-0.7	
627A	Terlingua Ranc baz=64,SNR=8.3	63.92	325	⇑P	P	16 31 45.6	-0.1	
627A	Terlingua Ranc baz=64,SNR=8.3	63.92	325	⇑P	P	16 31 45.6	-0.1	
TXAR	Lajitas Array 1.5nm,0.7s,baz=153,slow=8.3,SNR=20	63.98	324	P	P	16 31 45.9	-0.2	
232A	Coleman baz=64,SNR=5.4	64.03	329	⇑P	P	16 31 45.7	-0.6	
232A	Coleman baz=64,SNR=5.4	64.03	329	⇑P	P	16 31 45.7	-0.6	
429A	Davenport Ranc baz=64,SNR=8.5	64.09	326	⇓P	P	16 31 46.5	-0.2	
429A	Davenport Ranc baz=64,SNR=8.5	64.09	326	⇓P	P	16 31 46.5	-0.2	
528A	Cox Ranch, San baz=64,SNR=7.6	64.17	325	⇓P	P	16 31 47.1	-0.2	
528A	Cox Ranch, San baz=64,SNR=7.6	64.17	325	⇓P	P	16 31 47.1	-0.2	
330A	Mertzon baz=65	64.36	328	⇑P	P	16 31 47.7	-0.7	
330A	Mertzon baz=65	64.36	328	⇑P	P	16 31 47.7	-0.7	
231A	Bronte baz=65	64.38	329	⇑P	P	16 31 47.8	-0.8	
231A	Bronte baz=65	64.38	329	⇑P	P	16 31 47.8	-0.8	
626A	Big Bend Ranch baz=65,SNR=20	64.40	324	⇓P	P	16 31 49.3	+0.5	
626A	Big Bend Ranch baz=65,SNR=20	64.40	324	⇓P	P	16 31 49.3	+0.5	
428A	Kincaid Ranch, baz=65	64.57	326	⇑P	P	16 31 49.9	0.0	
428A	Kincaid Ranch, baz=65	64.57	326	⇑P	P	16 31 49.9	0.0	
527A	Woodward Ranch baz=65,SNR=8.5	64.59	325	⇓P	P	16 31 50.0	-0.1	
527A	Woodward Ranch baz=65,SNR=8.5	64.59	325	⇓P	P	16 31 50.0	-0.1	
ABTX	Abilene, Hawle baz=65	64.64	329	⇑P	P	16 31 49.5	-0.7	
ABTX	Abilene, Hawle baz=65	64.64	329	⇑P	P	16 31 49.5	-0.7	
230A	Sterling City baz=65	64.73	328	⇑P	P	16 31 49.9	-0.9	
230A	Sterling City baz=65	64.73	328	⇑P	P	16 31 49.9	-0.9	
526A	Mary Lane Ranc baz=65,SNR=16	64.78	324	⇑P	P	16 31 51.6	+0.3	
526A	Mary Lane Ranc baz=65,SNR=16	64.78	324	⇑P	P	16 31 51.6	+0.3	
329A	Wagon Wheel Ra baz=65	64.83	327	⇓P	P	16 31 51.0	-0.5	
329A	Wagon Wheel Ra baz=65	64.83	327	⇓P	P	16 31 51.0	-0.5	
131A	Roby baz=65	65.03	329	⇑P	P	16 31 52.2	-0.5	
131A	Roby baz=65	65.03	329	⇑P	P	16 31 52.2	-0.5	
427A	Hayter Ranch, baz=65	65.04	325	⇓P	P	16 31 52.7	-0.2	
427A	Hayter Ranch, baz=65	65.04	325	⇓P	P	16 31 52.7	-0.2	
Z32A	Haskell baz=65	65.13	330	⇑P	P	16 31 52.2	-1.1	
Z32A	Haskell baz=65	65.13	330	⇑P	P	16 31 52.2	-1.1	
229A	Bryant Ranch, baz=65	65.13	327	⇑P	P	16 31 52.9	-0.6	
229A	Bryant Ranch, baz=65	65.13	327	⇑P	P	16 31 52.9	-0.6	
328A	Wristen Ranch, baz=66,SNR=7.2	65.16	326	⇓P	P	16 31 53.4	-0.2	
328A	Wristen Ranch, baz=66,SNR=7.2	65.16	326	⇓P	P	16 31 53.4	-0.2	
426A	McDonald Obser baz=66,SNR=14	65.22	325	⇑P	P	16 31 54.3	+0.1	
426A	McDonald Obser baz=66,SNR=14	65.22	325	⇑P	P	16 31 54.3	+0.1	
130A	Snyder baz=66,SNR=7.1	65.24	328	⇓P	P	16 31 53.6	-0.5	
130A	Snyder baz=66,SNR=7.1	65.24	328	⇓P	P	16 31 53.6	-0.5	
Z31A	Sharp Cattle R baz=66	65.45	330	⇓P	P	16 31 54.9	-0.5	
Z31A	Sharp Cattle R baz=66	65.45	330	⇓P	P	16 31 54.9	-0.5	
228A	UT Block 9, Go baz=66	65.64	327	⇓P	P	16 31 56.0	-0.7	
228A	UT Block 9, Go baz=66	65.64	327	⇓P	P	16 31 56.0	-0.7	
Y32A	R-V Farms, Ver baz=66	65.70	330	⇓P	P	16 31 57.1	+0.1	
Y32A	R-V Farms, Ver baz=66	65.70	330	⇓P	P	16 31 57.1	+0.1	
129A	Stewart Farms, baz=66	65.70	328	⇑P	P	16 31 56.3	-0.7	
129A	Stewart Farms, baz=66	65.70	328	⇑P	P	16 31 56.3	-0.7	
326A	Caldwell Ranch baz=66,SNR=8.2	65.71	325	⇓P	P	16 31 57.2	0.0	
326A	Caldwell Ranch baz=66,SNR=8.2	65.71	325	⇓P	P	16 31 57.2	0.0	
425A	Indio Mountain baz=66,SNR=15	65.82	324	⇑P	P	16 31 57.8	-0.2	
425A	Indio Mountain baz=66,SNR=15	65.82	324	⇑P	P	16 31 57.8	-0.2	
Z30A	Sanderson Ranc baz=66,SNR=5.1	65.88	329	⇑P	P	16 31 57.4	-0.8	
Z30A	Sanderson Ranc baz=66,SNR=5.1	65.88	329	⇑P	P	16 31 57.4	-0.8	
128A	Castleberry Fa baz=66	66.00	327	⇓P	P	16 31 58.7	-0.3	
128A	Castleberry Fa baz=66	66.00	327	⇓P	P	16 31 58.7	-0.3	
Y31A	Rekieta Farm, baz=66	66.04	330	⇑P	P	16 31 58.4	-0.8	
Y31A	Rekieta Farm, baz=66	66.04	330	⇑P	P	16 31 58.4	-0.8	
Z29A	Hungry Hill Ra baz=66	66.14	328	⇓P	P	16 31 59.2	-0.7	
Z29A	Hungry Hill Ra baz=66	66.14	328	⇓P	P	16 31 59.2	-0.7	
Y30A	Stafford Cattl baz=67	66.26	329	⇓P	P	16 32 00.1	-0.6	
Y30A	Stafford Cattl baz=67	66.26	329	⇓P	P	16 32 00.1	-0.6	
325A	Bean Ranch, Si baz=67,SNR=22	66.27	325	⇑P	P	16 32 00.7	-0.2	
325A	Bean Ranch, Si baz=67,SNR=22	66.27	325	⇑P	P	16 32 00.7	-0.2	
226B	Tecolote Peak, baz=67	66.41	326	⇓P	P	16 32 01.9	+0.3	
226B	Tecolote Peak, baz=67	66.41	326	⇓P	P	16 32 01.9	+0.3	
X31A	McDonald Ranch baz=67	66.47	330	⇓P	P	16 32 01.3	-0.6	
X31A	McDonald Ranch baz=67	66.47	330	⇓P	P	16 32 01.3	-0.6	
127A	Arkansas Junct baz=67	66.47	327	⇑P	P	16 32 01.5	-0.6	
127A	Arkansas Junct baz=67	66.47	327	⇑P	P	16 32 01.5	-0.6	
324A	Moseley Ranch, baz=67,SNR=8.8	66.60	324	⇑P	P	16 32 02.0	-0.9	
324A	Moseley Ranch, baz=67,SNR=8.8	66.60	324	⇑P	P	16 32 02.0	-0.9	
X30A	Coker Ranch, T baz=67	66.72	330	⇑P	P	16 32 02.7	-0.8	
X30A	Coker Ranch, T baz=67	66.72	330	⇑P	P	16 32 02.7	-0.8	
126A	Clayton Basin, baz=67	66.78	326	⇓P	P	16 32 03.9	-0.1	
126A	Clayton Basin, baz=67	66.78	326	⇓P	P	16 32 03.9	-0.1	
Z27A	Tatum baz=67,SNR=6.5	66.92	327	⇑P	P	16 32 04.2	-0.6	
Z27A	Tatum baz=67,SNR=6.5	66.92	327	⇑P	P	16 32 04.2	-0.6	
X29A	Tulia baz=67	67.11	329	⇓P	P	16 32 05.1	-0.8	
X29A	Tulia baz=67	67.11	329	⇓P	P	16 32 05.1	-0.8	
224A	Cornudas Mount baz=67,SNR=16	67.11	325	⇑P	P	16 32 05.6	-0.6	
224A	Cornudas Mount baz=67,SNR=16	67.11	325	⇑P	P	16 32 05.6	-0.6	
125A	Gardner Draw, baz=67	67.12	326	⇓P	P	16 32 05.3	-0.8	
125A	Gardner Draw, baz=67	67.12	326	⇓P	P	16 32 05.3	-0.8	
MSTX	Muleshoe baz=68,SNR=5.5	67.23	328	⇑P	P	16 32 06.3	-0.5	
MSTX	Muleshoe baz=68,SNR=5.5	67.23	328	⇑P	P	16 32 06.3	-0.5	
Z26A	Caprock baz=68,SNR=6.2	67.26	327	⇑P	P	16 32 06.6	-0.4	
Z26A	Caprock baz=68,SNR=6.2	67.26	327	⇑P	P	16 32 06.6	-0.4	
Y27A	Causey baz=68,SNR=5.6	67.35	328	⇑P	P	16 32 06.7	-0.9	
Y27A	Causey baz=68,SNR=5.6	67.35	328	⇑P	P	16 32 06.7	-0.9	
124A	Stringfield Ra baz=68,SNR=7.4	67.57	325	⇑P	P	16 32 08.9	-0.2	
124A	Stringfield Ra baz=68,SNR=7.4	67.57	325	⇑P	P	16 32 08.9	-0.2	
DBIC	Dinokro 3.5nm,0.7s,baz=223,slow=5.6,SNR=2.8	67.60	71	P	P	16 32 07.8	-1.6	
W29A	Amraillo baz=68	67.64	329	⇑P	P	16 32 08.5	-0.8	
W29A	Amraillo baz=68	67.64	329	⇑P	P	16 32 08.5	-0.8	
Z25A	Roswell baz=68	67.64	326	⇑P	P	16 32 09.0	-0.4	
Z25A	Roswell baz=68	67.64	326	⇑P	P	16 32 09.0	-0.4	
222A	Williams Famil baz=68	67.98	324	⇑P	P	16 32 12.2	+0.6	
222A	Williams Famil baz=68	67.98	324	⇑P	P	16 32 12.2	+0.6	
W28A	Vega baz=68	68.01	329	⇓P	P	16 32 11.3	-0.3	
W28A	Vega baz=68	68.01	329	⇓P	P	16 32 11.3	-0.3	
Z24A	Sheppen Canyo baz=68,SNR=8.2	68.01	326	⇑P	P	16 32 11.8	0.0	
Z24A	Sheppen Canyo baz=68,SNR=8.2	68.01	326	⇑P	P	16 32 11.8	0.0	
Y25A	Mesa, Roswell baz=68,SNR=5.2	68.14	327	⇓P	P	16 32 11.9	-0.6	
Y25A	Mesa, Roswell baz=68,SNR=5.2	68.14	327	⇓P	P	16 32 11.9	-0.6	
320A	Kipp Ranch, An baz=68	68.18	322	⇓P	P	16 32 14.0	+1.1	
320A	Kipp Ranch, An baz=68	68.18	322	⇓P	P	16 32 14.0	+1.1	
X26A	CR and CF Fran baz=68	68.20	328	⇓P	P	16 32 12.6	-0.3	
X26A	CR and CF Fran baz=68	68.20	328	⇓P	P	16 32 12.6	-0.3	
W27A	Bowe Ranch, En baz=69	68.25	328	⇓P	P	16 32 12.7	-0.5	
W27A	Bowe Ranch, En baz=69	68.25	328	⇓P	P	16 32 12.7	-0.5	
Z23A	Rita Site, Whi baz=69	68.41	325	⇑P	P	16 32 14.9	+0.6	
Z23A	Rita Site, Whi baz=69	68.41	325	⇑P	P	16 32 14.9	+0.6	
X25A	Clemmons Ranch baz=69	68.61	327	⇑P	P	16 32 15.0	-0.4	
X25A	Clemmons Ranch baz=69	68.61	327	⇑P	P	16 32 15.0	-0.4	
220A	Playas Peak, P baz=69	68.61	322	⇑P	P	16 32 16.4	+0.9	
220A	Playas Peak, P baz=69	68.61	322	⇑P	P	16 32 16.4	+0.9	
W26A	Owens Ranch, T baz=69	68.61	328	⇓P	P	16 32 15.3	-0.1	
W26A	Owens Ranch, T baz=69	68.61	328	⇓P	P	16 32 15.3	-0.1	
319A	Douglas baz=69	68.64	322	⇑P	P	16 32 16.5	+0.9	
319A	Douglas baz=69	68.64	322	⇑P	P	16 32 16.5	+0.9	
121A	Cookes Peak, D baz=69	68.68	323	⇑P	P	16 32 16.9	+1.0	
121A	Cookes Peak, D baz=69	68.68	323	⇑P	P	16 32 16.9	+1.0	
Z22A	Elephant Butte baz=69,SNR=20	68.79	324	⇓P	P	16 32 17.6	+1.0	
Z22A	Elephant Butte baz=69,SNR=20	68.79	324	⇓P	P	16 32 17.6	+1.0	
Y23A	Lovelace Mesa, baz=69	68.84	326	⇓P	P	16 32 17.1	+0.2	
Y23A	Lovelace Mesa, baz=69	68.84	326	⇓P	P	16 32 17.1	+0.2	
U28A	Mallet baz=69	68.94	330	⇑P	P	16 32 17.0	-0.3	
U28A	Mallet baz=69	68.94	330	⇑P	P	16 32 17.0	-0.3	
W25A	X Bar L Ranch, baz=69	69.06	328	⇓P	P	16 32 18.0	-0.2	
W25A	X Bar L Ranch, baz=69	69.06	328	⇓P	P	16 32 18.0	-0.2	
120A	U Bar Ranch, L baz=69	69.15	323	⇑P	P	16 32 20.0	+1.2	
120A	U Bar Ranch, L baz=69	69.15	323	⇑P	P	16 32 20.0	+1.2	
V26A	Tequesquite Ra baz=70	69.19	328	⇓P	P	16 32 18.6	-0.4	
V26A	Tequesquite Ra baz=70	69.19	328	⇓P	P	16 32 18.6	-0.4	
Z21A	St. Cloud Mine baz=70	69.21	324	⇑P	P	16 32 20.1	+0.9	
Z21A	St. Cloud Mine baz=70	69.21	324	⇑P	P	16 32 20.1	+0.9	
S29A	Ulysses baz=70	69.47	331	⇑P	P	16 32 21.5	+0.9	
S29A	Ulysses baz=70	69.47	331	⇑P	P	16 32 21.5	+0.9	
T28A	Walsh baz=70	69.49	330	⇑P	P	16 32 20.4	-0.3	
T28A	Walsh baz=70	69.49	330	⇑P	P	16 32 20.4	-0.3	
W24A	Lazy 6 Ranch, baz=70	69.52	327	⇓P	P	16 32 20.6	-0.5	
W24A	Lazy 6 Ranch, baz=70	69.52	327	⇓P	P	16 32 20.6	-0.5	
Z20A	Nine Sixteen R baz=70	69.56	323	⇑P	P	16 32 22.0	+0.7	
Z20A	Nine Sixteen R baz=70	69.56	323	⇑P	P	16 32 22.0	+0.7	
V25A	Rancho No Teng baz=70	69.63	328	⇑P	P	16 32 21.8	+0.1	
V25A	Rancho No Teng baz=70	69.63	328	⇑P	P	16 32 21.8	+0.1	
U26A	Atchley Ranch, baz=70	69.66	329	⇓P	P	16 32 21.7	-0.2	
U26A	Atchley Ranch, baz=70	69.66	329	⇓P	P	16 32 21.7	-0.2	
T27A	Campo baz=70,SNR=5.4	69.72	330	⇓P	P	16 32 22.1	-0.1	
T27A	Campo baz=70,SNR=5.4	69.72	330	⇓P	P	16 32 22.1	-0.1	
Y21A	Point of Rocks baz=70,SNR=5.2	69.75	325	⇓P	P	16 32 23.6	+1.0	
Y21A	Point of Rocks baz=70,SNR=5.2	69.75	325	⇓P	P	16 32 23.6	+1.0	
S28A	Manter baz=70	69.78	331	⇑P	P	16 32 22.6	+0.1	
S28A	Manter baz=70	69.78	331	⇑P	P	16 32 22.6	+0.1	
W23A	Werner Place, baz=70	69.85	326	⇓P	P	16 32 23.5	+0.4	
W23A	Werner Place, baz=70	69.85	326	⇓P	P	16 32 23.5	+0.4	
V24A	Rampart Ranch, baz=70	69.86	327	⇓P	P	16 32 23.3	+0.1	
V24A	Rampart Ranch, baz=70	69.86	327	⇓P	P	16 32 23.3	+0.1	
U25A	Circle Dot Ran baz=70,SNR=5.5	69.98	328	⇓P	P	16 32 23.9	+0.1	
U25A	Circle Dot Ran baz=70,SNR=5.5	69.98	328	⇓P	P	16 32 23.9	+0.1	
Y20A	Horse Springs, baz=70	70.05	324	⇓P	P	16 32 25.4	+1.0	
Y20A	Horse Springs, baz=70	70.05	324	⇓P	P	16 32 25.4	+1.0	
X21A	Alamocita Cree baz=70,SNR=8.1	70.14	325	⇓P	P	16 32 26.1	+1.1	
X21A	Alamocita Cree baz=70,SNR=8.1	70.14	325	⇓P	P	16 32 26.1	+1.1	
T26A	Comanche Natio baz=70	70.22	329	⇑P	P	16 32 25.5	+0.2	
T26A	Comanche Natio baz=70	70.22	329	⇑P	P	16 32 25.5	+0.2	
S26A	Kim baz=71,SNR=5.8	70.52	330	⇓P	P	16 32 27.4	+0.3	
S26A	Kim baz=71,SNR=5.8	70.52	330	⇓P	P	16 32 27.4	+0.3	
T25A	Trinidad baz=71	70.57	329	⇓P	P	16 32 28.1	+0.7	
T25A	Trinidad baz=71	70.57	329	⇓P	P	16 32 28.1	+0.7	
V22A	San Miguel Ran baz=71	70.83	326	⇑P	P	16 32 29.8	+0.7	
V22A	San Miguel Ran baz=71	70.83	326	⇑P	P	16 32 29.8	+0.7	
S25A	Robets Cordova baz=71,SNR=7.8	71.00	329	⇑P	P	16 32 30.5	+0.5	
S25A	Robets Cordova baz=71,SNR=7.8	71.00	329	⇑P	P	16 32 30.5	+0.5	
W20A	Ramah baz=71	71.04	325	⇑P	P	16 32 31.3	+0.9	
W20A	Ramah baz=71	71.04	325	⇑P	P	16 32 31.3	+0.9	
R26A	Arlington baz=71	71.07	330	⇑P	P	16 32 30.1	-0.2	
R26A	Arlington baz=71	71.07	330	⇑P	P	16 32 30.1	-0.2	
214A	Organ Pipe Nat baz=71	71.11	320	⇑P	P	16 32 31.2	+0.6	
214A	Organ Pipe Nat baz=71	71.11	320	⇑P	P	16 32 31.2	+0.6	
U22A	Llaves baz=72	71.16	327	⇑P	P	16 32 31.5	+0.4	
U22A	Llaves baz=72	71.16	327	⇑P	P	16 32 31.5	+0.4	
R25A	Fountain Ranch baz=72	71.33	329	⇓P	P	16 32 31.6	-0.3	
R25A	Fountain Ranch baz=72	71.33	329	⇓P	P	16 32 31.6	-0.3	
S24A	Houchin Ranch, baz=72	71.36	329	⇓P	P	16 32 33.1	+0.9	
S24A	Houchin Ranch, baz=72	71.36	329	⇓P	P	16 32 33.1	+0.9	
BGNE	Belgrade baz=72,SNR=5.2	71.47	336	⇓P	P	16 32 32.3	-0.3	
BGNE	Belgrade baz=72,SNR=5.2	71.47	336	⇓P	P	16 32 32.3	-0.3	
V20A	Brimhall baz=72	71.54	325	⇓P	P	16 32 34.4	+1.1	
V20A	Brimhall baz=72	71.54	325	⇓P	P	16 32 34.4	+1.1	
Q26A	Hugo baz=72	71.61	330	⇑P	P	16 32 34.4	+0.9	
Q26A	Hugo baz=72	71.61	330	⇑P	P	16 32 34.4	+0.9	
U21A	Nageezi baz=72	71.61	326	⇑P	P	16 32 34.2	+0.4	
U21A	Nageezi baz=72	71.61	326	⇑P	P	16 32 34.2	+0.4	
T22A	Edith baz=72	71.68	327	⇑P	P	16 32 35.1	+1.0	
T22A	Edith baz=72	71.68	327	⇑P	P	16 32 35.1	+1.0	
W18A	Petrified Fore baz=72	71.69	324	⇑P	P	16 32 35.4	+1.2	
W18A	Petrified Fore baz=72	71.69	324	⇑P	P	16 32 35.4	+1.2	
O28A	Krutsinger Ran baz=72	71.83	332	⇑P	P	16 32 34.8	0.0	
O28A	Krutsinger Ran baz=72	71.83	332	⇑P	P	16 32 34.8	0.0	
U20A	Newcomb baz=72	72.01	326	⇑P	P	16 32 36.8	+0.7	
U20A	Newcomb baz=72	72.01	326	⇑P	P	16 32 36.8	+0.7	
R23A	Moffat baz=72	72.09	328	⇓P	P	16 32 37.3	+0.7	
R23A	Moffat baz=72	72.09	328	⇓P	P	16 32 37.3	+0.7	
X16A	Lo Mia Camp, P baz=72	72.11	322	⇓P	P	16 32 37.5	+0.8	
X16A	Lo Mia Camp, P baz=72	72.11	322	⇓P	P	16 32 37.5	+0.8	
S22A	4UR Ranch, Cre baz=72	72.22	328	⇑P	P	16 32 38.1	+0.7	
S22A	4UR Ranch, Cre baz=72	72.22	328	⇑P	P	16 32 38.1	+0.7	
P25A	Willow Gulch B baz=73	72.38	330	⇑P	P	16 32 38.9	+0.7	
P25A	Willow Gulch B baz=73	72.38	330	⇑P	P	16 32 38.9	+0.7	
Q24A	Divide baz=73	72.38	329	⇑P	P	16 32 38.9	+0.5	
Q24A	Divide baz=73	72.38	329	⇑P	P	16 32 38.9	+0.5	
M29A	Burnside Ranch baz=73	72.49	334	⇑P	P	16 32 40.1	+1.4	
M29A	Burnside Ranch baz=73	72.49	334	⇑P	P	16 32 40.1	+1.4	
R22A	Saguache, Gunn baz=73	72.56	328	⇓P	P	16 32 40.4	+1.0	
R22A	Saguache, Gunn baz=73	72.56	328	⇓P	P	16 32 40.4	+1.0	
S21A	Coal Bank Pass baz=73	72.63	327	⇓P	P	16 32 40.4	+0.5	
S21A	Coal Bank Pass baz=73	72.63	327	⇓P	P	16 32 40.4	+0.5	
WUAZ	Wupatki baz=73	72.88	323	⇑P	P	16 32 42.8	+1.6	
WUAZ	Wupatki baz=73	72.88	323	⇑P	P	16 32 42.8	+1.6	
N26A	Koester Ranch, baz=73	73.04	332	⇑P	P	16 32 43.4	+1.4	
N26A	Koester Ranch, baz=73	73.04	332	⇑P	P	16 32 43.4	+1.4	
S20A	Disappointment baz=73	73.05	327	⇑P	P	16 32 43.5	+1.2	

S20A **Disappointment** 73.05 327 ⇑P P 16 32 43.5 +1.2
baz=73
R21A **Cimarron** 73.06 327 ⇓P P 16 32 43.5 +1.2
baz=73
R21A **Cimarron** 73.06 327 ⇓P P 16 32 43.5 +1.2
baz=73
ISCO **Idaho Springs** 73.27 330 ⇑P P 16 32 44.1 +0.5
baz=74
ISCO **Idaho Springs** 73.27 330 ⇑P P 16 32 44.1 +0.5
baz=74
SYO **Syowa Base** 73.29 159⇑eP P 16 32 42.8 -0.1
R20A **Redvale** 73.33 327 ⇑P P 16 32 44.7 +0.8
baz=74
R20A **Redvale** 73.33 327 ⇑P P 16 32 44.7 +0.8
baz=74
Y12C **Blythe** 73.39 320 ⇑P P 16 32 45.7 +1.7
baz=74
Y12C **Blythe** 73.39 320 ⇑P P 16 32 45.7 +1.7
baz=74
K29A **Lazy Trails An** 73.46 335 ⇑P P 16 32 44.9 +0.6
baz=74
K29A **Lazy Trails An** 73.46 335 ⇑P P 16 32 44.9 +0.6
baz=74
P22A **Eagle** 73.64 329 ⇓P P 16 32 46.7 +1.0
baz=74
P22A **Eagle** 73.64 329 ⇓P P 16 32 46.7 +1.0
baz=74
S18A **Hurst Farm, Bl** 73.77 325 ⇓P P 16 32 47.5 +1.0
baz=74,SNR=5.7
S18A **Hurst Farm, Bl** 73.77 325 ⇓P P 16 32 47.5 +1.0
baz=74,SNR=5.7
BC3 **Big Chuckawall** 73.88 319 ⇓P P 16 32 47.9 +0.9
baz=74,SNR=5.4
BC3 **Big Chuckawall** 73.88 319 ⇓P P 16 32 47.9 +0.9
baz=74,SNR=5.4
W13A **Hualapai Mount** 73.98 321 ⇓P P 16 32 48.7 +1.0
baz=74
W13A **Hualapai Mount** 73.98 321 ⇓P P 16 32 48.7 +1.0
baz=74
O22A **Kremmling** 73.99 329 ⇓P P 16 32 48.0 +0.3
baz=74
O22A **Kremmling** 73.99 329 ⇓P P 16 32 48.0 +0.3
baz=74
IRM **Iron Mountain** 74.05 320 ⇑P P 16 32 49.0 +1.1
baz=74
IRM **Iron Mountain** 74.05 320 ⇑P P 16 32 49.0 +1.1
baz=74
U15A **North Rim** 74.05 323 ⇓P P 16 32 49.6 +1.4
baz=74,SNR=5.5
U15A **North Rim** 74.05 323 ⇓P P 16 32 49.6 +1.4
baz=74,SNR=5.5
K27A **Flueckinger Fa** 74.17 334 ⇑P P 16 32 49.9 +1.4
baz=74
K27A **Flueckinger Fa** 74.17 334 ⇑P P 16 32 49.9 +1.4
baz=74
M24A **Cheyenne** 74.25 331 ⇓P P 16 32 50.4 +1.3
baz=75
M24A **Cheyenne** 74.25 331 ⇓P P 16 32 50.4 +1.3
baz=75
J28A **Allard Ranch,** 74.38 335 ⇑P P 16 32 50.4 +0.8
baz=75
J28A **Allard Ranch,** 74.38 335 ⇑P P 16 32 50.4 +0.8
baz=75
BELC **Belle Mtn. Jos** 74.44 319 ⇑P P 16 32 51.5 +1.2
baz=75
BELC **Belle Mtn. Jos** 74.44 319 ⇑P P 16 32 51.5 +1.2
baz=75
N22A **Wattenberg Ran** 74.45 330 ⇓P P 16 32 51.6 +1.2
baz=75
N22A **Wattenberg Ran** 74.45 330 ⇓P P 16 32 51.6 +1.2
baz=75
VNDA **Vanda** 74.58 190 P P 16 32 52.3 +2.0
1.9nm,0.8s,baz=126,slow=2.3,SNR=11
P19A **Cripple Cowboy** 74.74 327 ⇓P P 16 32 53.3 +1.3
baz=75
P19A **Cripple Cowboy** 74.74 327 ⇓P P 16 32 53.3 +1.3
baz=75
O20A **White River Ci** 74.77 328 ⇑P P 16 32 53.4 +1.3
baz=75
O20A **White River Ci** 74.77 328 ⇑P P 16 32 53.4 +1.3
baz=75
GMRC **Granite Mounta** 74.79 320 ⇑P P 16 32 53.4 +1.1
baz=75,SNR=8.1
GMRC **Granite Mounta** 74.79 320 ⇑P P 16 32 53.4 +1.1
baz=75,SNR=8.1
HEC **Hector,Ludlow** 75.22 320 ⇓P P 16 32 56.0 +1.3
baz=76
HEC **Hector,Ludlow** 75.22 320 ⇓P P 16 32 56.0 +1.3
baz=76
O19A **Miners Draw (B** 75.33 328 ⇑P P 16 32 56.1 +0.9
baz=76
O19A **Miners Draw (B** 75.33 328 ⇑P P 16 32 56.1 +0.9
baz=76
N20A **Spence Gulch,** 75.33 329 ⇑P P 16 32 56.4 +1.1
baz=76
N20A **Spence Gulch,** 75.33 329 ⇑P P 16 32 56.4 +1.1
baz=76
TUQ **Turquoise Moun** 75.40 320 ⇓P P 16 32 56.5 +0.7
baz=76
TUQ **Turquoise Moun** 75.40 320 ⇓P P 16 32 56.5 +0.7
baz=76
M21A **Separation Pea** 75.51 330 ⇓P P 16 32 57.5 +1.1
baz=76
M21A **Separation Pea** 75.51 330 ⇓P P 16 32 57.5 +1.1
baz=76
BFSC **Mount Baldy Ra** 75.61 318 ⇓P P 16 32 58.2 +1.3
baz=76
BFSC **Mount Baldy Ra** 75.61 318 ⇓P P 16 32 58.2 +1.3
baz=76
K23A **Bowen Ranch, D** 75.64 331 ⇓P P 16 32 58.3 +1.3
baz=76
K23A **Bowen Ranch, D** 75.64 331 ⇓P P 16 32 58.3 +1.3
baz=76
J24A **Dixon Ranch, L** 75.70 332 ⇓P P 16 32 58.7 +1.4
baz=76
J24A **Dixon Ranch, L** 75.70 332 ⇓P P 16 32 58.7 +1.4
baz=76
L21A **Rawlins** 75.80 330 ⇓P P 16 32 58.5 +0.6
baz=76,SNR=5.4
L21A **Rawlins** 75.80 330 ⇓P P 16 32 58.5 +0.6
baz=76,SNR=5.4
M20A **Sweetwater, Wa** 75.80 329 ⇓P P 16 32 58.7 +0.7
baz=76
M20A **Sweetwater, Wa** 75.80 329 ⇓P P 16 32 58.7 +0.7
baz=76
GSC **Goldstone** 75.82 320 ⇓P P 16 32 59.3 +1.2
baz=76
GSC **Goldstone** 75.82 320 ⇓P P 16 32 59.3 +1.2
baz=76
K21A **Alcova** 76.27 330 ⇑P P 16 33 01.7 +1.2
baz=77
K21A **Alcova** 76.27 330 ⇑P P 16 33 01.7 +1.2
baz=77
L20A **Wamsutter** 76.28 329 ⇓P P 16 33 01.0 +0.4
baz=77
L20A **Wamsutter** 76.28 329 ⇓P P 16 33 01.0 +0.4
baz=77
TORD **Torodi Ar. Bea** 76.38 69 P P 16 33 01.0 -0.5
2.0nm,0.5s,baz=259,slow=5.7,SNR=30
BSC **Santa Cruz Isl** 76.66 317 ⇓P P 16 33 03.9 +1.2
baz=77
BSC **Santa Cruz Isl** 76.66 317 ⇓P P 16 33 03.9 +1.2
baz=77
MPMC **Manual Prospec** 76.75 320 ⇑P P 16 33 04.6 +1.1
baz=77
MPMC **Manual Prospec** 76.75 320 ⇑P P 16 33 04.6 +1.1
baz=77
H24A **Dirks Ranch, A** 76.81 333 ⇓P P 16 33 03.4 0.0
baz=77,SNR=6.0
H24A **Dirks Ranch, A** 76.81 333 ⇓P P 16 33 03.4 0.0
baz=77,SNR=6.0
J21A **Lysite** 76.92 331 ⇑P P 16 33 05.2 +1.0
baz=77
J21A **Lysite** 76.92 331 ⇑P P 16 33 05.2 +1.0
baz=77
I22A **9 Mile Ranch,** 76.93 332 ⇓P P 16 33 04.6 +0.4
baz=77
I22A **9 Mile Ranch,** 76.93 332 ⇓P P 16 33 04.6 +0.4
baz=77
M17A **Scullys Gap (B** 76.98 328 ⇑P P 16 33 05.2 +0.6
baz=77
M17A **Scullys Gap (B** 76.98 328 ⇑P P 16 33 05.2 +0.6
baz=77
L18A **Fontenelle, Gr** 77.02 328 ⇓P P 16 33 05.6 +0.8
baz=77
L18A **Fontenelle, Gr** 77.02 328 ⇓P P 16 33 05.6 +0.8
baz=77
ISA **Isabella** 77.06 319 ⇓P P 16 33 06.1 +1.1
baz=77,SNR=5.6
ISA **Isabella** 77.06 319 ⇓P P 16 33 06.1 +1.1
baz=77,SNR=5.6
DUG **Dugway** 77.10 326 ⇓P P 16 33 06.5 +1.2
baz=77
DUG **Dugway** 77.10 326 ⇓P P 16 33 06.5 +1.2
baz=77
K19A **Absolon Red Bu** 77.15 330 ⇓P P 16 33 05.9 +0.4
baz=78
K19A **Absolon Red Bu** 77.15 330 ⇓P P 16 33 05.9 +0.4
baz=78
J20A **Shoshoni** 77.21 330 ⇑P P 16 33 06.0 +0.2
baz=78
J20A **Shoshoni** 77.21 330 ⇑P P 16 33 06.0 +0.2
baz=78
I21A **Big Trails, Te** 77.22 331 ⇑P P 16 33 05.9 0.0
baz=78,SNR=8.1
I21A **Big Trails, Te** 77.22 331 ⇑P P 16 33 05.9 0.0
baz=78,SNR=8.1
G24A **Alzada** 77.23 334 ⇓P P 16 33 06.5 +0.7
baz=78
G24A **Alzada** 77.23 334 ⇓P P 16 33 06.5 +0.7
baz=78
R11A **Troy Canyon, C** 77.25 323 ⇑P P 16 33 07.3 +1.1
baz=78,SNR=6.6
R11A **Troy Canyon, C** 77.25 323 ⇑P P 16 33 07.3 +1.1
baz=78,SNR=6.6
PKM **Peak Mountain** 77.37 318 ⇓P P 16 33 07.9 +1.1
baz=78,SNR=7.8
PKM **Peak Mountain** 77.37 318 ⇓P P 16 33 07.9 +1.1
baz=78,SNR=7.8
PDAR **Pinedale Array** 77.44 329 P P 16 33 06.8 -0.3
1.0nm,0.4s,baz=128,slow=8.3,SNR=5.2
J19A **Crowheart** 77.59 330 ⇑P P 16 33 08.6 +0.7
baz=78
J19A **Crowheart** 77.59 330 ⇑P P 16 33 08.6 +0.7
baz=78
I20A **Worland** 77.70 331 ⇓P P 16 33 09.1 +0.6
baz=78
I20A **Worland** 77.70 331 ⇓P P 16 33 09.1 +0.6
baz=78
H21A **Big Horn, Sher** 77.76 332 ⇑P P 16 33 08.9 +0.1
baz=78
H21A **Big Horn, Sher** 77.76 332 ⇑P P 16 33 08.9 +0.1
baz=78
F23A **Volborg** 77.95 333 ⇓P P 16 33 09.9 +0.2
baz=78
F23A **Volborg** 77.95 333 ⇓P P 16 33 09.9 +0.2
baz=78
H20A **Greybull** 78.07 331 ⇑P P 16 33 10.5 +0.1
baz=78
H20A **Greybull** 78.07 331 ⇑P P 16 33 10.5 +0.1
baz=78
I19A **Meeteetse** 78.16 330 ⇓P P 16 33 11.9 +0.9
baz=78
I19A **Meeteetse** 78.16 330 ⇓P P 16 33 11.9 +0.9
baz=78
E24A **Baker** 78.20 335 ⇓P P 16 33 11.9 +0.9
baz=78
E24A **Baker** 78.20 335 ⇓P P 16 33 11.9 +0.9
baz=78
I18A **Diamond G Ranc** 78.28 330 ⇑P P 16 33 13.0 +1.2
baz=79
I18A **Diamond G Ranc** 78.28 330 ⇑P P 16 33 13.0 +1.2
baz=79
G21A **Lodge Grass** 78.31 332 ⇓P P 16 33 12.3 +0.6
baz=79
G21A **Lodge Grass** 78.31 332 ⇓P P 16 33 12.3 +0.6
baz=79
F22A **Rosebud** 78.35 333 ⇓P P 16 33 12.2 +0.3
baz=79
F22A **Rosebud** 78.35 333 ⇓P P 16 33 12.2 +0.3
baz=79
ULM **Lac du Bonnet** 78.48 341 P P 16 33 11.4 -1.0
7.3nm,0.6s,baz=158,slow=6.6,SNR=6.8
E23A **Ismay** 78.54 334 ⇓P P 16 33 13.1 +0.2
baz=79
E23A **Ismay** 78.54 334 ⇓P P 16 33 13.1 +0.2
baz=79
H19A **Powell** 78.65 331 ⇓P P 16 33 14.2 +0.6
baz=79
H19A **Powell** 78.65 331 ⇓P P 16 33 14.2 +0.6
baz=79
SCHQ **Schefferville** 78.68 360 P P 16 33 12.8 -0.6
4.2nm,0.7s,baz=229,slow=3.1,SNR=11
G20A **Bridger** 78.74 331 ⇑P P 16 33 14.0 -0.1
baz=79,SNR=7.6
G20A **Bridger** 78.74 331 ⇑P P 16 33 14.0 -0.1
baz=79,SNR=7.6
NVAR **Mina Array Bea** 78.84 321 P P 16 33 15.6 +0.7
1.0nm,0.6s,baz=153,slow=6.1,SNR=8.8
H18A **Shoshone NF, C** 78.96 330 ⇓P P 16 33 15.8 +0.4
baz=79
H18A **Shoshone NF, C** 78.96 330 ⇓P P 16 33 15.8 +0.4
baz=79
C24A **Savage** 79.04 335 ⇑P P 16 33 16.5 +0.9
baz=79
C24A **Savage** 79.04 335 ⇑P P 16 33 16.5 +0.9
baz=79
D23A **Lindsay** 79.05 334 ⇓P P 16 33 16.6 +0.9
baz=79
D23A **Lindsay** 79.05 334 ⇓P P 16 33 16.6 +0.9
baz=79
G18A **Lazy EL Ranch,** 79.41 331 ⇓P P 16 33 18.8 +1.0
baz=80
G18A **Lazy EL Ranch,** 79.41 331 ⇓P P 16 33 18.8 +1.0
baz=80
D22A **Cohagen** 79.42 334 ⇓P P 16 33 18.0 +0.4
baz=80,SNR=5.0
D22A **Cohagen** 79.42 334 ⇓P P 16 33 18.0 +0.4
baz=80,SNR=5.0
F19A **Roth Farm, Mol** 79.55 331 ⇑P P 16 33 18.7 +0.2
baz=80,SNR=5.9
F19A **Roth Farm, Mol** 79.55 331 ⇑P P 16 33 18.7 +0.2
baz=80,SNR=5.9
C23A **Lambert** 79.56 335 ⇑P P 16 33 19.0 +0.7
baz=80
C23A **Lambert** 79.56 335 ⇑P P 16 33 19.0 +0.7
baz=80
D21A **La Casta Ranch** 79.69 333 ⇓P P 16 33 20.1 +1.0
baz=80
D21A **La Casta Ranch** 79.69 333 ⇓P P 16 33 20.1 +1.0
baz=80
E20A **Meyer Farm, Mu** 79.71 332 ⇑P P 16 33 19.6 +0.3
baz=80,SNR=7.2
E20A **Meyer Farm, Mu** 79.71 332 ⇑P P 16 33 19.6 +0.3
baz=80,SNR=7.2
DGMT **Dagmar** 79.73 336 ⇑P P 16 33 20.4 +1.1
baz=80
DGMT **Dagmar** 79.73 336 ⇑P P 16 33 20.4 +1.1
baz=80
I15A **Monteview** 79.76 328 ⇓P P 16 33 20.7 +1.0
baz=80
I15A **Monteview** 79.76 328 ⇓P P 16 33 20.7 +1.0
baz=80
C22A **Vida** 79.79 334 ⇓P P 16 33 20.1 +0.5
baz=80
C22A **Vida** 79.79 334 ⇓P P 16 33 20.1 +0.5
baz=80
F18A **Big Timber** 79.93 331 ⇑P P 16 33 21.0 +0.5
baz=80,SNR=8.3
F18A **Big Timber** 79.93 331 ⇑P P 16 33 21.0 +0.5
baz=80,SNR=8.3
E19A **Rath Farm, Rou** 79.96 332 ⇑P P 16 33 20.9 +0.3
baz=80,SNR=6.6
E19A **Rath Farm, Rou** 79.96 332 ⇑P P 16 33 20.9 +0.3
baz=80,SNR=6.6
B23A **Brockton** 80.02 335 ⇓P P 16 33 22.0 +1.1
baz=80
B23A **Brockton** 80.02 335 ⇓P P 16 33 22.0 +1.1
baz=80
I14A **Mackay** 80.17 328 ⇑P P 16 33 22.9 +0.9
baz=80
I14A **Mackay** 80.17 328 ⇑P P 16 33 22.9 +0.9
baz=80
D20A **Manuel Ranch,** 80.18 333 ⇓P P 16 33 21.8 0.0
baz=80,SNR=5.3
D20A **Manuel Ranch,** 80.18 333 ⇓P P 16 33 21.8 0.0
baz=80,SNR=5.3
C21A **Desert Coulee** 80.34 334 ⇓P P 16 33 22.7 +0.1
baz=81,SNR=5.3
C21A **Desert Coulee** 80.34 334 ⇓P P 16 33 22.7 +0.1
baz=81,SNR=5.3
F17A **Fitzpatrick Pl** 80.35 331 ⇓P P 16 33 23.8 +0.9
baz=81,SNR=5.4
F17A **Fitzpatrick Pl** 80.35 331 ⇓P P 16 33 23.8 +0.9
baz=81,SNR=5.4
HLID **Hailey** 80.38 327 ⇓P P 16 33 24.2 +1.2
baz=81,SNR=12
HLID **Hailey** 80.38 327 ⇓P P 16 33 24.2 +1.2
baz=81,SNR=12
BOSA **Boshof** 80.41 117 P P 16 33 24.1 +0.4
1.9nm,0.7s,baz=250,slow=6.3,SNR=3.3
E18A **Harlowton** 80.53 331 ⇓P P 16 33 24.2 +0.4
baz=81
E18A **Harlowton** 80.53 331 ⇓P P 16 33 24.2 +0.4
baz=81
C20A **Veseth Ranch,** 80.62 333 ⇓P P 16 33 24.0 -0.1
baz=81
C20A **Veseth Ranch,** 80.62 333 ⇓P P 16 33 24.0 -0.1
baz=81
A22A **Carney Farms,** 80.81 335 ⇑P P 16 33 25.5 +0.5
baz=81
A22A **Carney Farms,** 80.81 335 ⇑P P 16 33 25.5 +0.5
baz=81
E17A **Martinsdale** 80.87 331 ⇓P P 16 33 26.1 +0.5
baz=81
E17A **Martinsdale** 80.87 331 ⇓P P 16 33 26.1 +0.5
baz=81
I12A **Atlanta** 80.91 327 ⇑P P 16 33 26.6 +0.8
baz=81
I12A **Atlanta** 80.91 327 ⇑P P 16 33 26.6 +0.8
baz=81
D18A **Linhart Farms,** 80.97 332 ⇓P P 16 33 26.6 +0.6
baz=81
D18A **Linhart Farms,** 80.97 332 ⇓P P 16 33 26.6 +0.6
baz=81
MFID **Camas Ranch** 80.99 326 ⇓P P 16 33 26.7 +0.5
baz=81
MFID **Camas Ranch** 80.99 326 ⇓P P 16 33 26.7 +0.5
baz=81
C19A **Slack Wire Ran** 81.07 333 ⇓P P 16 33 26.9 +0.4
baz=81
C19A **Slack Wire Ran** 81.07 333 ⇓P P 16 33 26.9 +0.4
baz=81
F15A **Butte** 81.14 330 ⇓P P 16 33 27.9 +0.9
baz=81,SNR=7.6
F15A **Butte** 81.14 330 ⇓P P 16 33 27.9 +0.9
baz=81,SNR=7.6
MAW **Mawson** 81.19 163 P P 16 33 27.2 +0.4
7.0nm,0.7s,baz=218,slow=8.9,SNR=15
B20A **Solberg Farm,** 81.20 334 ⇑P P 16 33 27.5 +0.4
baz=82
B20A **Solberg Farm,** 81.20 334 ⇑P P 16 33 27.5 +0.4
baz=82
A21A **Bergtoll Ranch** 81.20 335 ⇓P P 16 33 27.2 +0.1
baz=82
A21A **Bergtoll Ranch** 81.20 335 ⇓P P 16 33 27.2 +0.1
baz=82
H12A **Diamond D Ranc** 81.32 327 ⇑P P 16 33 29.2 +1.2
baz=82
H12A **Diamond D Ranc** 81.32 327 ⇑P P 16 33 29.2 +1.2
baz=82
D17A **Six Diamond Ra** 81.32 331 ⇑P P 16 33 28.1 +0.2
baz=82,SNR=8.7
D17A **Six Diamond Ra** 81.32 331 ⇑P P 16 33 28.1 +0.2
baz=82,SNR=8.7
G13A **Cobalt** 81.41 328 ⇓P P 16 33 29.6 +1.1
baz=82,SNR=16
G13A **Cobalt** 81.41 328 ⇓P P 16 33 29.6 +1.1
baz=82,SNR=16
F14A **Wisdom** 81.53 329 ⇓P P 16 33 30.4 +1.3
baz=82
F14A **Wisdom** 81.53 329 ⇓P P 16 33 30.4 +1.3
baz=82
B19A **Brinkman Farms** 81.59 333 ⇑P P 16 33 29.5 +0.3
baz=82,SNR=5.2
B19A **Brinkman Farms** 81.59 333 ⇑P P 16 33 29.5 +0.3
baz=82,SNR=5.2
EGMT **Eagleton** 81.59 332 ⇓P P 16 33 29.1 -0.2
baz=82
EGMT **Eagleton** 81.59 332 ⇓P P 16 33 29.1 -0.2
baz=82
D16A **Dana Ranch, Ca** 81.61 331 ⇑P P 16 33 30.1 +0.7
baz=82,SNR=9.5
D16A **Dana Ranch, Ca** 81.61 331 ⇑P P 16 33 30.1 +0.7
baz=82,SNR=9.5
E15A **Deer Lodge** 81.65 330 ⇑P P 16 33 30.4 +0.8
baz=82
E15A **Deer Lodge** 81.65 330 ⇑P P 16 33 30.4 +0.8
baz=82
C17A **Wharram Farm,** 81.72 332 ⇑P P 16 33 30.3 +0.4
baz=82
C17A **Wharram Farm,** 81.72 332 ⇑P P 16 33 30.3 +0.4
baz=82
A19A **Klindworth Far** 81.88 334 ⇓P P 16 33 31.4 +0.7
baz=82
A19A **Klindworth Far** 81.88 334 ⇓P P 16 33 31.4 +0.7
baz=82
B18A **Beardsley Farm** 81.89 333 ⇑P P 16 33 31.5 +0.7
baz=82
B18A **Beardsley Farm** 81.89 333 ⇑P P 16 33 31.5 +0.7
baz=82
F13A **Darby** 81.97 329 ⇑P P 16 33 32.0 +0.7
baz=82,SNR=10
F13A **Darby** 81.97 329 ⇑P P 16 33 32.0 +0.7
baz=82,SNR=10
G12A **Big Creek, Yel** 81.97 328 ⇓P P 16 33 31.5 +0.2
baz=82
G12A **Big Creek, Yel** 81.97 328 ⇓P P 16 33 31.5 +0.2
baz=82
D15A **Lincoln** 82.05 330 ⇓P P 16 33 32.6 +0.9
baz=82
D15A **Lincoln** 82.05 330 ⇓P P 16 33 32.6 +0.9
baz=82
C16A **Fuhringer Ranc** 82.28 331 ⇓P P 16 33 33.2 +0.4
baz=83
C16A **Fuhringer Ranc** 82.28 331 ⇓P P 16 33 33.2 +0.4
baz=83
A18A **Metzger Ranch,** 82.33 333 ⇑P P 16 33 33.0 0.0
baz=83
A18A **Metzger Ranch,** 82.33 333 ⇑P P 16 33 33.0 0.0
baz=83
E13A **Victor** 82.38 329 ⇓P P 16 33 34.2 +0.8
baz=83,SNR=9.0
E13A **Victor** 82.38 329 ⇓P P 16 33 34.2 +0.8
baz=83,SNR=9.0
F12A **Elk City** 82.39 328 ⇑P P 16 33 34.1 +0.6
baz=83
F12A **Elk City** 82.39 328 ⇑P P 16 33 34.1 +0.6
baz=83
D14A **Greenough** 82.53 330 ⇓P P 16 33 34.6 +0.4
baz=83
D14A **Greenough** 82.53 330 ⇓P P 16 33 34.6 +0.4
baz=83
C15A **Salmond Ranch,** 82.64 331 ⇓P P 16 33 35.3 +0.5
baz=83,SNR=9.5
C15A **Salmond Ranch,** 82.64 331 ⇓P P 16 33 35.3 +0.5
baz=83,SNR=9.5
A17A **Triple J Farms** 82.70 333 ⇓P P 16 33 34.9 -0.1
baz=83,SNR=5.2
A17A **Triple J Farms** 82.70 333 ⇓P P 16 33 34.9 -0.1
baz=83,SNR=5.2
D13A **Huson** 82.98 329 ⇑P P 16 33 36.9 +0.4
baz=83
D13A **Huson** 82.98 329 ⇑P P 16 33 36.9 +0.4
baz=83
B15A **Bradely Ranch,** 83.03 331 ⇑P P 16 33 36.4 -0.3
baz=83
B15A **Bradely Ranch,** 83.03 331 ⇑P P 16 33 36.4 -0.3
baz=83
A16A **West Butte Ran** 83.09 332 ⇑P P 16 33 37.0 0.0
baz=83,SNR=8.5
A16A **West Butte Ran** 83.09 332 ⇑P P 16 33 37.0 0.0
baz=83,SNR=8.5
C14A **Swan Lake** 83.15 330 ⇑P P 16 33 37.9 +0.6
baz=83
C14A **Swan Lake** 83.15 330 ⇑P P 16 33 37.9 +0.6
baz=83
D12A **Red Ives Fores** 83.37 329 ⇓P P 16 33 39.1 +0.6
baz=84
D12A **Red Ives Fores** 83.37 329 ⇓P P 16 33 39.1 +0.6
baz=84
B14A **Marquette Ranc** 83.38 331 ⇑P P 16 33 38.4 -0.1
baz=84
B14A **Marquette Ranc** 83.38 331 ⇑P P 16 33 38.4 -0.1
baz=84
C13A **Hot Springs** 83.46 330 ⇑P P 16 33 39.7 +0.8
baz=84
C13A **Hot Springs** 83.46 330 ⇑P P 16 33 39.7 +0.8
baz=84
B13A **Whitefish** 83.92 330 ⇓P P 16 33 41.7 +0.5
baz=84
B13A **Whitefish** 83.92 330 ⇓P P 16 33 41.7 +0.5
baz=84
A13A **Flathead Natio** 84.31 331 ⇓P P 16 33 44.1 +0.9
baz=85

A13A	**Flathead Natio**	**84.31**	**331**	⇓P	**P**	**16 33 44.1**	**+0.9**
	baz=85						
C11A	**Tepee Creek (N**	**84.36**	**329**	⇓P	**P**	**16 33 43.4**	**0.0**
	baz=85						
C11A	**Tepee Creek (N**	**84.36**	**329**	⇓P	**P**	**16 33 43.4**	**0.0**
	baz=85						
B12A	**Libby**	**84.50**	**330**	⇓P	**P**	**16 33 44.8**	**+0.7**
	baz=85						
B12A	**Libby**	**84.50**	**330**	⇓P	**P**	**16 33 44.8**	**+0.7**
	baz=85						
ESDC	**Sonseca Array**	**86.33**	**43**	P	**P**	**16 33 53.6**	**+0.2**
	0.4nm,0.4s,baz=238,slow=4.9,SNR=5.4						
YKA	**Yellowknife Ar**	**94.38**	**340**	P	**P**	**16 34 30.0**	**-0.3**
	0.4nm,0.3s,baz=124,slow=4.5,SNR=8.4						
ASAR	**Alice Springs**	**128.41**	**204**	PKP	**PKPdf**	**16 40 17.4**	**-0.1**
	2.8nm,0.8s,baz=134,slow=1.9,SNR=42						
WRA	**Warramunga Arr**	**131.60**	**207**	PKP	**PKPdf**	**16 40 23.7**	**+0.1**
	1.4nm,0.5s,baz=156,slow=1.7,SNR=46						
PETK	**Petropavlovsk-**	**135.91**	**323**	PKP	**PKPdf**	**16 40 30.9**	**+0.4**
	1.0nm,0.5s,baz=106,slow=3.0,SNR=7.0						
ZALV	**Zalesovo Beam**	**143.42**	**28**	PKP	PKPbc	16 40 42.2	+0.3
	6.2nm,0.6s,baz=299,slow=3.9,SNR=39						
KSH	**Kashi**	**145.07**	**55**	*e*PKP	**PKPbc**	**16 40 47.8**	**+0.2**
KSH				*e*SKS	**SKSdf**	**16 47 39.4**	**+0.9**
KSH				AMB	AMB		
	comp=Z,210nm,4.5s						
KSH				LR	LR		
	comp=N,120nm,4.4s						
KSH				LR	LR		
	comp=E,200nm,5.0s						
KSH				LR	LR		
	comp=Z,230nm,4.8s						
MKAR	**Makanchi Array**	**146.48**	**40**	PKPbc	**PKPdf**	**16 40 50.4**	**+0.7**
	comp=Z,11nm,0.7s,baz=318,slow=2.0,SNR=73						
WMQ	**Urumqi**	**151.30**	**41**	*e*PKPbc	**PKPdf**	**16 40 59.1**	**+1.5**
MJAR	**Matsushiro Arr**	**155.30**	**306**	PKPab	**PKPab**	**16 41 29.8**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=91,slow=2.3,SNR=7.2						
SONM	**Songino Array**	**155.76**	**11**	PKP	**PKPdf**	**16 41 04.6**	**+0.7**
	comp=Z,0.6nm,0.6s,baz=334,slow=1.0,SNR=4.5						
SONM				PKPab	**PKPab**	**16 41 31.6**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=319,slow=4.7,SNR=6.7						
HHC	**Hu-ho-hao-te**	**163.31**	**5**	*i* PKP	**PKPdf**	**16 41 13.7**	**+1.0**
HHC				pPKP	pPKPdf	16 41 56.4	-7.3
HHC				PKS	**PKSdf**	**16 44 45.7**	**-0.1**
HHC				PP	**PP**	**16 45 53.2**	**+4.2**
HHC				SKS	**SKSdf**	**16 48 00.6**	**+1.7**
HHC				SKKS	**SKKSac**	**16 52 23.0**	**+4.3**
HHC				SS	**SS**	**17 06 02.2**	**+4.4**
HHC				AMB	AMB		
	comp=Z,94nm,5.1s						
HHC				LR	LR		
	comp=N,270nm,21.6s						
HHC				LR	LR		
	comp=E,370nm,21.0s						
HHC				LR	LR		
	comp=Z,270nm,20.0s						
GYA	**Guiyang**	**173.58**	**68**	*e*PKP	**PKPdf**	**16 41 18.6**	**-1.3**
GYA				pPKP	**pPKPdf**	**16 42 06.4**	**-4.6**
GYA				sPKP		16 42 25.0	
GYA				PKPab	**PKPab**	**16 42 50.0**	**-0.5**
GYA				PKS	**PKSdf**	**16 44 49.5**	**-2.9**
GYA				PP	**PP**	**16 46 42.6**	**-0.3**
GYA				AMB	AMB		
	comp=Z,70nm,8.0s						

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*ISK **04** 16:37:49.8, 37°.49N×35°.68E, h16km, MD3.0*
*DDA **04** 16:37:50.0, 37°.57N×35°.72E, h7km, MD2.8*
*ISCJB **04** 16:37:50.3±0.5, 37°.51N±0°.03×35°.70E±0°.03, h10km±4km, Error ellipse: s-maj=5.6km s-min=3.9km az=10.5*
*CSEM **04** 16:37:50.5±0.1, 37°.51N×35°.69E, h12km, MD3.0, Error ellipse: s-maj=3.1km s-min=2.6km az=11.0*
ISC 04 16:37:50.4±0.8**, 37°.50N**±0°.03×**35°.70E**±0°.02**, h15**km±5km**, n32,** σ0s**41**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.11**	**101**	PG	**Pg**	**16 37 53.9**	**0.0**
KOZT				*e*SG	**Sg**	**16 37 56.0**	**-0.1**
KOZT	**Kozan**	**0.11**	**101**	*i* Pg	**Pg**	**16 37 53.9**	**0.0**
KOZT				*e*Sg	**Sg**	**16 37 56.0**	**-0.1**
CEYT	**Ceyhan**	**0.49**	**175**	*e*PG	**Pg**	**16 37 60.0**	**-0.2**
CEYT				*e*SG	**Sg**	**16 38 06.9**	**0.0**
CEYT	**Ceyhan**	**0.49**	**175**	*e*Pg	**Pg**	**16 38 00.0**	**-0.2**
CEYT				*e*Sg	**Sg**	**16 38 06.9**	**0.0**
ANDN	**Andirin**	**0.52**	**81**	*i* P	**Pg**	**16 38 00.3**	**-0.5**
ANDN				*i* S	**Sb**	**16 38 08.5**	**-0.2**
ANDN	**Andirin**	**0.52**	**81**	*i* P	**Pg**	**16 38 00.3**	**-0.5**
ANDN				*i* S	**Sb**	**16 38 08.5**	**-0.2**
YURE	**YUREGIR**	**0.68**	**184**	*i* P	**Pb**	**16 38 04.5**	**+0.6**
YURE	**YUREGIR**	**0.68**	**184**	*i* P	**Pb**	**16 38 04.5**	**+0.6**
GULE	**Gulek**	**0.76**	**254**	*i* P	**Pg**	**16 38 05.5**	**+0.1**
GULE				*i* S	**Sn**	**16 38 17.2**	**-0.9**
GULE	**Gulek**	**0.76**	**254**	*i* P	**Pg**	**16 38 05.5**	**+0.1**
GULE				*i* S	**Sn**	**16 38 17.2**	**-0.9**
AYKD	**Aykdinkavak**	**0.89**	**95**	*i* P	**Pb**	**16 38 07.1**	**-0.4**
AYKD				*i* S	**Sb**	**16 38 19.0**	**-0.2**
KMRS	**Kahramanmaras**	**0.96**	**89**	*e*PG	**Pg**	**16 38 09.2**	**+0.2**
KMRS	**Kahramanmaras**	**0.96**	**89**	*e*Pg	**Pg**	**16 38 09.2**	**+0.2**
KRTS	**Karatas**	**0.96**	**196**	*e*PG	**Pb**	**16 38 08.4**	**-0.3**
KRTS	**Karatas**	**0.96**	**196**	*e*Pg	**Pb**	**16 38 08.5**	**-0.3**
NIG	**Nigde**	**1.05**	**306**	*e*PG	**Pb**	**16 38 10.3**	**-0.2**
NIG				*e*SG	**Sn**	**16 38 25.4**	**0.0**
NIG	**Nigde**	**1.05**	**306**	*e*Pg	**Pb**	**16 38 10.3**	**-0.2**
NIG				*e*Sg	**Sn**	**16 38 25.4**	**0.0**
SARI	**SarD1z-Kayseri**	**1.07**	**32**	*e*PN	**Pn**	**16 38 11.1**	**+0.1**
GAZ	**Gaziantep**	**1.25**	**105**	*e*PN	**Pb**	**16 38 13.7**	**0.0**
GAZ	**Gaziantep**	**1.25**	**105**	*e*Pn	**Pb**	**16 38 13.7**	**0.0**
AVNT	**Avonos**	**1.44**	**333**	*i* P	**Pb**	**16 38 17.1**	**+0.1**
AVNT				*i* S	**Sb**	**16 38 35.3**	**+0.2**
AVNT	**Avonos**	**1.44**	**333**	*i* P	**Pb**	**16 38 17.1**	**+0.1**
AVNT				*i* S	**Sb**	**16 38 35.3**	**+0.2**
GZT	**Gaziantep**	**1.49**	**95**	*i* P	**Pb**	**16 38 17.8**	**-0.1**
GZT				*i* S	**Sb**	**16 38 36.7**	**-0.1**
DARE	**Darende-Malaty**	**1.77**	**52**	*e*PN	**Pn**	**16 38 20.6**	**+0.1**
SULT	**Sultanhani-AKS**	**1.86**	**293**	*e*PN	**Pn**	**16 38 21.9**	**+0.1**
SULT	**Sultanhani-AKS**	**1.86**	**293**	*e*Pn	**Pn**	**16 38 21.9**	**+0.1**
YOZ	**Yozgat**	**2.15**	**352**	*e*PN	**Pn**	**16 38 26.1**	**+0.3**
YOZ	**Yozgat**	**2.15**	**352**	*e*Pn	**Pn**	**16 38 26.2**	**+0.3**
MYA	**Malataya**	**2.31**	**68**	*e*PN	**Pn**	**16 38 28.5**	**+0.5**
MYA	**Malataya**	**2.31**	**68**	*e*Pn	**Pn**	**16 38 28.5**	**+0.5**
PTK	**Pertek**	**3.23**	**63**	*e*PN	**Pn**	**16 38 41.8**	**+1.1**
PTK	**Pertek**	**3.23**	**63**	*e*Pn	**Pn**	**16 38 41.8**	**+1.1**

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*ISCJB **04** 16:41:17.6±0.9, 36°.55S±0°.06×177°.66E±0°.07, h5km, mb4.1/4, MS3.4/2, Error ellipse: s-maj=10.4km s-min=5.3km az=138.0*
*WEL **04** 16:41:17.7±1.1, 36°.46S×177°.71E, h5km, ML4.2/6, Error ellipse: s-maj=8.1km s-min=7.5km az=0.0*
*IDC **04** 16:41:17.1±2.3, 36°.52S×177°.81E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.9/18, mbtmp4.1/4, MS3.5/3, Ms1 3.5/3, ms1mx3.0/26, Error ellipse: s-maj=51.4km s-min=22.8km az=65.0*
ISC 04 16:41:17.9±1.2**, 36°.55S**±0°.08×**177°.69E**±0°.08**, h5**km**, n24,** σ1s**23**/27**, mb4.1**/4**, 1D, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.13**	**154**	P*	**Pg**	**16 41 37.9**	**-1.6**
MXZ				S*	**Sg**	**16 41 52.7**	**-1.4**
MXZ				S*	**Sb**	**16 41 53.0**	**-1.8**
MXZ				AML	AML	16 41 54.8	
MXZ				AML	AML	16 41 54.8	
PUZ	**Puketiti**	**1.59**	**164**	*e*PN	**Pn**	**16 41 47.5**	**+0.9**
PUZ				SN	**Sg**	**16 42 11.4**	**+2.5**
PUZ				AML	AML	16 42 13.2	
KUZ	**Kuaotunu**	**1.59**	**262**	PN	**Pn**	**16 41 46.1**	**-0.6**
KUZ				SN	**Sn**	**16 42 06.9**	**-0.7**
KUZ				AML	AML	16 42 23.8	
URZ	**Urewera**	**1.77**	**195**	P*	**Pn**	**16 41 49.3**	**+0.2**
URZ				S*	**Sn**	**16 42 11.6**	**-0.4**
URZ				AML	AML	16 42 21.9	
URZ	**Urewera**	**1.77**	**195**	Pn	**Pn**	**16 41 49.5**	**+0.4**
	12nm,0.3s,baz=21,slow=7.9,SNR=50						
URZ				Sn	**Sn**	**16 42 12.9**	**+0.9**
	14nm,0.3s,baz=99,slow=12,SNR=13						
MWZ	**Matawai**	**1.79**	**184**	⇓P*	**Pn**	**16 41 49.4**	**0.0**
MWZ				AML	AML	16 42 22.1	
MWZ				AML	AML	16 42 26.9	
CNGZ	**Carnagh Statio**	**1.98**	**168**	PN	**Pb**	**16 41 54.0**	**-0.3**
MKAZ	**Moumakai**	**2.10**	**254**	PN	**Pn**	**16 41 54.0**	**+0.4**
MKAZ				AML	AML	16 42 33.1	
TOZ	**Tahuroa Road**	**2.11**	**235**	P*	**Pn**	**16 41 54.6**	**+0.8**
RAHZ	**Arahi**	**2.41**	**191**	PN	**Pb**	**16 42 01.2**	**-0.5**
KNZ	**Kokohu**	**2.47**	**180**	PN	**Pn**	**16 42 00.2**	**+1.5**
RVAZ	**Riverhead Bore**	**2.51**	**264**	PN	**Pn**	**16 42 00.7**	**+1.4**
WCZ	**Waipu Caves**	**2.77**	**282**	PN	**Pn**	**16 42 02.9**	**0.0**
HIZ	**Hauiti**	**2.98**	**228**	PN	**Pn**	**16 42 07.5**	**+1.6**
TRVZ	**Turoa**	**3.23**	**211**	P*	**Pb**	**16 42 14.1**	**-1.6**
KAHZ	**Kahuranaki**	**3.30**	**191**	PN	**Pn**	**16 42 12.4**	**+2.1**
DZM	**Mont Dzumac**	**17.42**	**323**	LR	LR	16 51 11.7	
	comp=Z,151nm,18.4s,baz=200,slow=34						
HNR	**Honiara**	**31.43**	**325**	LR	LR	16 58 20.4	
	comp=Z,69nm,18.1s,baz=137,slow=32						
ASAR	**Alice Springs**	**39.67**	**276**	P	**P**	**16 48 51.9**	**+0.8**
	3.7nm,0.8s,baz=120,slow=7.8,SNR=36						
WRA	**Warramunga Arr**	**41.24**	**282**	P	**P**	**16 49 04.1**	**+0.1**
	1.2nm,0.7s,baz=121,slow=7.5,SNR=13						
VNDA	**Vanda**	**41.65**	**185**	LR	LR	17 02 52.1	
	comp=Z,46nm,19.1s,baz=220,slow=31						
FITZ	**Fitzroy Crossi**	**49.15**	**277**	P	**P**	**16 50 07.9**	**+1.1**
	3.4nm,0.9s,baz=158,slow=11,SNR=5.5						
QSPA	**South Pole Qui**	**53.57**	**180**	P	**P**	**16 50 40.5**	**+0.9**
	2.3nm,0.9s,baz=72,slow=2.3,SNR=11						
TORD	**Torodi Ar. Bea**	**156.42**	**190**	PKPab	**PKPab**	**17 01 41.6**	**-1.0**
	0.7nm,0.7s,baz=161,slow=2.6,SNR=3.7						

MAN 04 16:46:40, 9°.17N×121°.95E, h34km, mb4.6, ML3.5, MS3.4, 2C, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**1.50**	**113**	*e*P	Pn	16 47 04.0	-0.5
IPIL	**Ipil**	**1.50**	**156**	*e*P	Pn	16 47 04.9	+0.4
IPIL				*e*S	Sn	16 47 22.6	-0.3
CUYO	**Cuyo Island**	**1.91**	**331**	*e*P	Pn	16 47 11.0	+0.8
CUYO				*e*S	Sn	16 47 33.5	+0.4
PAGZ	**Pagadian**	**1.93**	**133**	*e*P	Pn	16 47 11.8	+1.3
PAGZ				*e*S	Sn	16 47 34.9	+1.4
RCP	**Roxas**	**2.50**	**18**	⇑*e*P	Pb	16 47 30.4	+6.1
CTBH	**Cotabato--PC H**	**2.98**	**130**	⇑*i*P	Pb	16 47 30.2	-2.3
ENPP	**El Nido**	**3.21**	**309**	*e*P	Pn	16 47 29.5	+1.5
ENPP				*e*S	Sn	16 48 05.6	+0.5

WEL 04 17:02:28.7±0.3**, 38°.89S**×**175°.24E, h216**km±2km**, ML3.6**/18**, 9C-4D, Error ellipse: s-maj=3.7km s-min=2.7km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WPVZ	**Whakapapa**	**0.39**	**143**	PN	Pn	17 02 57.3	-0.2
PKVZ	**Pokaka**	**0.41**	**169**	⇑PN	Pn	17 02 57.1	-0.3
PKVZ				SN	S	17 03 19.7	-0.4
FWVZ	**Far West T-bar**	**0.44**	**147**	PN	Pn	17 02 57.5	-0.3
TRVZ	**Turoa**	**0.47**	**150**	PN	Pn	17 02 57.6	-0.2
TUVZ	**Tukino**	**0.49**	**140**	PN	Pn	17 02 57.7	-0.1
MTVZ	**Mangateitei**	**0.52**	**160**	PN	Pn	17 02 57.7	-0.2
MTVZ				SN	S	17 03 20.0	-0.7
MOVZ	**Moawhango**	**0.65**	**143**	PN	Pn	17 02 57.9	-0.5
MOVZ				SN	S	17 03 19.9	-1.7
BHHZ	**Black Hill Sta**	**0.87**	**133**	PN	Pn	17 02 59.1	-0.3
BHHZ				SN	S	17 03 22.0	-1.5
WAZ	**Wanganui**	**0.89**	**193**	PN	Pn	17 02 59.4	0.0
WAZ				SN	S	17 03 23.5	-0.1
BKZ	**Black Stump Fm**	**1.01**	**106**	PN	Pn	17 02 59.8	-0.5
MCHZ	**McNeill Hill**	**1.26**	**116**	PN	Pn	17 03 02.6	+0.7
PNHZ	**Pukenui**	**1.26**	**144**	PN	Pn	17 03 02.1	+0.2
TSZ	**Takapari Road**	**1.29**	**155**	⇑PN	Pn	17 03 02.3	+0.1
RAHZ	**Arahi**	**1.44**	**92**	PN	Pn	17 03 03.1	-0.2
WPHZ	**Waipukurau**	**1.49**	**142**	PN	Pn	17 03 03.7	-0.1
POWZ	**Post Office Ro**	**1.55**	**165**	PN	Pn	17 03 04.2	-0.1
KAHZ	**Kahuranaki**	**1.55**	**126**	⇓PN	Pn	17 03 04.8	+0.4
DVHZ	**Dannevirke**	**1.58**	**153**	⇑PN	Pn	17 03 04.3	-0.1
URZ	**Urewera**	**1.59**	**67**	PN	Pn	17 03 02.7	-2.0
PXZ	**Pawanui**	**1.69**	**133**	PN	Pn	17 03 05.4	0.0
PRHZ	**Porangahau**	**1.75**	**142**	⇓PN	Pn	17 03 06.1	+0.2
MRZ	**Mangatainoka R**	**1.79**	**172**	PN	Pn	17 03 05.8	-0.5
MWZ	**Matawai**	**1.87**	**73**	⇓PN	Pn	17 03 05.6	-1.6
KNZ	**Kokohu**	**1.90**	**95**	PN	Pn	17 03 06.9	-0.5
OGWZ	**Otaki Gorge**	**1.93**	**182**	⇑PN	Pn	17 03 07.3	-0.3
BFZ	**Birch Farm**	**1.95**	**157**	PN	Pn	17 03 07.5	-0.3
TIWZ	**Tintock**	**1.95**	**166**	PN	Pn	17 03 07.4	-0.5
KIW	**Kapiti Island**	**1.98**	**187**	PN	Pn	17 03 07.4	-0.8
HOWZ	**Holdsworth Sta**	**2.02**	**174**	⇑PN	Pn	17 03 07.8	-0.8
MHGZ	**Mahia Peninsul**	**2.09**	**98**	PN	Pn	17 03 09.1	-0.2
DUWZ	**D'Urville Isla**	**2.16**	**208**	PN	Pn	17 03 08.8	-1.2
CAW	**Cannon Point**	**2.22**	**183**	⇑PN	Pn	17 03 09.7	-0.8
TMWZ	**Te Maipa**	**2.27**	**168**	PN	Pn	17 03 10.3	-0.8
MTW	**Mount Morrison**	**2.27**	**175**	PN	Pn	17 03 10.1	-1.0
CNGZ	**Carnagh Statio**	**2.35**	**81**	PN	Pn	17 03 11.4	-0.6
TCW	**Tory Channel**	**2.44**	**197**	PN	Pn	17 03 11.8	-1.1
SNZO	**South Karori**	**2.45**	**190**	PN	Pn	17 03 11.7	-1.3
PAWZ	**Paruwai Farm**	**2.49**	**177**	⇑PN	Pn	17 03 12.4	-1.1
PUZ	**Puketiti**	**2.50**	**72**	PN	Pn	17 03 11.6	-2.1
MSWZ	**Moikau Station**	**2.52**	**180**	⇓PN	Pn	17 03 12.7	-1.1
PLWZ	**Palliser**	**2.68**	**180**	⇑PN	Pn	17 03 14.1	-1.4
TUWZ	**Tuamarina**	**2.73**	**201**	PN	Pn	17 03 14.6	-1.3
NNZ	**Nelson**	**2.73**	**211**	⇑PN	Pn	17 03 14.0	-2.0
MXZ	**Matakaoa Point**	**2.75**	**62**	PN	Pn	17 03 14.4	-1.9
QRZ	**Quartz Range**	**2.85**	**226**	PN	Pn	17 03 14.4	-2.9
BSWZ	**Blackbirch Sta**	**3.01**	**200**	PN	Pn	17 03 17.9	-1.3
THZ	**Tophouse**	**3.38**	**211**	PN	Pn	17 03 21.0	-2.6
KHZ	**Kahutara**	**3.75**	**200**	PN	Pn	17 03 26.1	-1.9
LTZ	**Lake Taylor**	**4.49**	**209**	PN	Pn	17 03 34.4	-2.8
MQZ	**McQueen's Vall**	**5.19**	**201**	PN	Pn	17 03 42.2	-3.6
WVZ	**Waitaha Valley**	**5.39**	**218**	PN	Pn	17 03 44.8	-3.5

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*SZGRF **04** 17:10:00.4, 20°.62S×169°.32E, h33km, Vanuatu Islands*
*NEIC **04** 17:10:03.7±3.0, 17°.74S×167°.76E, h6km±18km, mb5.2/39, MW5.5, Error ellipse: s-maj=7.1km s-min=6.4km az=177.0, Moment Tensor Solution. s27 Moment tensor: Scale 10^17Nm; Mrr1.09; Mθθ-0.27; Mφφ-0.81; Mrθ0.41; Mθφ0.05; Mφr-2.18; Best double couple: Mo2.40000×10^17 NP1: φs356.00000°, δ12.00000°, λ96.00000°. NP2: φs170.00000°, δ78.00000°, λ89.00000°. Principal axes: T 2.5500, Plg56.0000°, Azm78.0000°; N -0.2700, Plg1.0000°, Azm170.0000°; P -2.2800, Plg33.0000°, Azm260.0000°;*
NEIC Felt [III] at Port-Vila.
*IDC **04** 17:10:03.0±0.5, 17°.71S×167°.81E, h0km, mb4.8/22, mb1 4.9/23, mb1mx4.9/24, mbtmp4.8/23, ML4.5/1, MS4.9/13, Ms1 4.9/13, ms1mx4.6/31 Error ellipse: s-maj=17.3km s-min=13.0km az=104.0*
*BJI **04** 17:10:04.5, 17°.35S×167°.89E, h13km, mB5.4/38, mb5.0/45, Ms5.3/40, Ms7 5.0/42*
*ISCJB **04** 17:10:04.1±1.7, 17°.77S±0°.03×167°.74E±0°.05, h15km±10km, mb5.1/80, MS5.2/44, Error ellipse: s-maj=8.1km s-min=4.9km az=10.2*
*NOU **04** 17:10:06.3±1.2, 17°.70S×168°.21E, h30km, MD4.1, ML3.5*
*MOS **04** 17:10:07.9±1.5, 17°.57S×167°.56E, h33km, mb5.5/35, MS5.6/17, Error ellipse: s-maj=9.8km s-min=8.4km az=114.8*
*DJA **04** 17:10:11.3±1.6, 18°S±5°×16°8E±°, h41km±14km, M5.0/24, mB5.5/12, mb5.1/24, Mw(mB)5.0/12, Mwp5.3/1*
*GCMT **04** 17:10:11.0±0.2, 17°.61S×167°.60E, h19km, MW5.6, Moment Tensor Solution. s76,c134; s34,c34; Moment tensor: Scale 10^17Nm; Mrr1.96±.04; Mθθ0.00±.03; Mφφ-1.96±.03; Mrθ1.11±.08; Mθφ0.36±.03; Mφr-1.45±.08; Best double couple: Mo2.70000×10^17 NP1:φs5.00000°, δ27.00000°, λ120.00000°. NP2:φs152.00000°, δ67.00000°, λ76.00000°. Principal axes: T 2.7700, Plg65.0000°, Azm37.0000°; N -0.1400, Plg13.0000°, Azm158.0000°; P -2.6300, Plg20.0000°, Azm253.0000°; Data Used: II IU IC G CN. Surface waves: sta= 92, comp=154, per= 50.*
ISC 04 17:10:06.1±0.3**, 17°.76S**±0°.04×**167°.78E**±0°.05**, h20**km±2km**, h20**km**:pP-P, n468,** σ1s**61**/523**, mb5.2**/78**, MS5.1**/46**, 19C-27D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.46**	**191**	*e*S	**Sn**	**17 12 02.2**	**-1.6**
DZM	**Mont Dzumac**	**4.47**	**196**	*e*Pn	**Pn**	**17 11 13.7**	**+0.9**
DZM				*e*Sn	**Sn**	**17 12 03.7**	**-0.6**
	1μm,1.0s						
DZM				*e*LR	LR	17 12 23.5	
	16μm,23.4s						
DZM	**Mont Dzumac**	**4.47**	**196**	*e*P	**Pn**	**17 11 12.7**	**-0.1**
DZM				*e*S	**Sn**	**17 12 02.5**	**-1.8**
DZM				AMP		17 12 07.2	
	comp=Z,3μm,5.1s						
DZM	**Mont Dzumac**	**4.47**	**196**	Pn	**Pn**	**17 11 12.1**	**-0.7**
DZM				Sn	**Sn**	**17 12 04.5**	**+0.2**
DZM	**Mont Dzumac**	**4.47**	**196**	Pn	**Pn**	**17 11 12.1**	**-0.7**
	comp=Z,24nm,0.3s,baz=71,slow=17,SNR=96						
DZM				Sn	**Sn**	**17 12 04.5**	**+0.2**
	comp=Z,58nm,0.3s,baz=104,slow=23,SNR=9.3						
DZM				LR	LR	17 12 52.4	
	comp=Z,16μm,18.9s,baz=21,slow=38						
NOUC	**Port Laguerre**	**4.54**	**198**	*e*P	**Pn**	**17 11 15.2**	**+1.6**
NOUC				*e*S	**Sn**	**17 12 05.5**	**-0.4**
NOUC				AMP		17 12 26.1	
	comp=Z,152nm,3.4s						
NORM	**Noumea**	**4.61**	**195**	*e*P	**Pn**	**17 11 15.1**	**+0.5**
NORM				AMP		17 12 24.9	
	comp=Z,402nm,6.6s						
PLUM	**Mont Dore**	**4.62**	**193**	*e*P	**Pn**	**17 11 15.4**	**+0.6**
PLUM				AMP		17 12 08.5	
	comp=Z,409nm,7.5s						
MSVF	**Nonsavu**	**9.79**	**91**	*e*P	**Pn**	**17 12 26.4**	**+0.6**
MSVF				pmax	pmax		
	comp=Z,261nm,1.1s						
MSVF	**Nonsavu**	**9.79**	**91**	*e*Pn	**Pn**	**17 12 26.4**	**+0.6**
	comp=Z,261nm,1.1s						
HNR	**Honiara**	**11.24**	**316**	LR	LR	17 16 40.6	
	comp=Z,7μm,19.8s,baz=282,slow=35						
EIDS	**Eidsvold**	**17.27**	**241**	*e*Pn	**Pn**	**17 14 04.8**	**-1.3**
	comp=Z,266nm,1.7s						
OUZ	**Omahuta**	**18.15**	**165**	*e*Pn	**P**	**17 14 17.1**	**+0.1**
	comp=Z,45nm,0.9s						
ARMA	**Armidale**	**19.37**	**226**	*e*P	**P**	**17 14 29.1**	**-1.6**
	comp=Z,114nm,1.3s						
TARA	**Tarawa**	**19.65**	**15**	*e*P	**P**	**17 14 32.4**	**-1.3**
	comp=Z,504nm,1.5s						
AFI	**Afiamalu**	**20.03**	**82**	P	Pn	17 14 42.6	+2.8
AFI	**Afiamalu**	**20.03**	**82**	P	Pn	17 14 42.6	+2.8
	comp=Z,0.2nm,0.3s,baz=111,slow=22,SNR=3.6						
AFI				LR	LR	17 20 32.2	
	comp=Z,5μm,21.7s,baz=266,slow=32						
CTA	**Charters Tower**	**20.49**	**260**	P	**P**	**17 14 43.4**	**+0.5**
CTA	**Charters Tower**	**20.49**	**260**	P	**P**	**17 14 43.4**	**+0.5**
	comp=Z,28nm,0.7s,baz=85,slow=13,SNR=29						
CTA				LR	LR	17 21 41.1	
	comp=Z,5μm,20.3s,baz=78,slow=34						
CTAO	**Charters Tower**	**20.49**	**260**	*e*P	**P**	**17 14 40.9**	**-2.0**
CTAO				pmax	pmax		
	comp=Z,43nm,0.8s						
CTAO	**Charters Tower**	**20.49**	**260**	*e*P	**P**	**17 14 40.9**	**-2.0**
	comp=Z,43nm,0.8s						
PMG	**Port Moresby**	**21.68**	**290**	*e*P	**P**	**17 14 55.2**	**-0.5**
	comp=Z,74nm,1.3s						
PMG	**Port Moresby**	**21.68**	**290**	P	P	17 15 03.5	+7.8
	comp=Z,47nm,1.4s,comp=Z,1μm						
PMG	**Port Moresby**	**21.68**	**290**	P	**P**	**17 14 56.3**	**+0.6**
	comp=Z,28nm,1.1s,baz=132,slow=17,SNR=3.7						
PMG				LR	LR	17 22 12.9	
	comp=Z,5μm,18.3s,baz=261,slow=34						
URZ	**Urewera**	**22.00**	**160**	*e*P	**P**	**17 14 58.9**	**0.0**
	comp=Z,369nm,1.4s						
URZ	**Urewera**	**22.00**	**160**	P	**P**	**17 15 01.4**	**+2.5**
	comp=Z,27nm,0.6s,baz=7.5,slow=3.6,SNR=21						
COEN	**Coen**	**23.96**	**276**	*e*P	**P**	**17 15 18.0**	**-1.3**
	comp=Z,433nm,1.3s						
KHZ	**Kahutara**	**25.07**	**170**	*e*P	**P**	**17 15 27.8**	**-1.3**
	comp=Z,158nm,1.5s						
RPZ	**Rata Peaks**	**26.03**	**175**	P	**P**	**17 15 38.2**	**+0.5**
RPZ	**Rata Peaks**	**26.03**	**175**	P	**P**	**17 15 38.2**	**+0.5**
	comp=Z,10nm,0.7s,baz=342,slow=9.6,SNR=2.7						
RPZ				LR	LR	17 24 34.1	
	comp=Z,2μm,20.4s,baz=343,slow=33						
STKA	**Stephens Creek**	**27.52**	**234**	*e*P	**P**	**17 15 50.5**	**-0.9**
	comp=Z,13nm,1.1s						
STKA	**Stephens Creek**	**27.52**	**234**	P	**P**	**17 15 51.8**	**+0.4**
	comp=Z,28nm,1.0s,baz=45,slow=11,SNR=56						
STKA				LR	LR	17 26 43.1	
	comp=Z,5μm,18.1s,baz=62,slow=36						
RAR	**Rarotonga**	**30.75**	**102**	LR	LR	17 26 09.0	
	comp=Z,1μm,19.5s,baz=41,slow=31						
WRAB	**Tennant Creek**	**31.68**	**261**	*e*P	P	17 16 24.6	-3.8
WRAB				pmax	pmax		
	comp=Z,22nm,1.0s						
WRAB	**Tennant Creek**	**31.68**	**261**	*e*P	P	17 16 24.6	-3.8
	comp=Z,22nm,1.0s						
WRA	**Warramunga Arr**	**31.69**	**261**	P	**P**	**17 16 27.1**	**-1.5**
WRA				PcP	**PcP**	**17 19 20.9**	**+0.6**
WRA				S	**S**	**17 21 32.9**	**-4.4**
WRA				ScP	**ScP**	**17 23 04.5**	**+2.0**
WRA	**Warramunga Arr**	**31.69**	**261**	P	**P**	**17 16 27.1**	**-1.5**
	comp=Z,10nm,0.8s,baz=90,slow=8.7,SNR=28						
WRA				PcP	**PcP**	**17 19 20.9**	**+0.6**
	comp=Z,4.2nm,0.9s,baz=92,slow=2.9,SNR=5.3						
WRA				S	**S**	**17 21 32.8**	**-4.4**
	comp=Z,1.1nm,1.0s,baz=90,slow=15,SNR=2.6						
WRA				ScP	**ScP**	**17 23 04.5**	**+2.0**
	comp=Z,1.4nm,1.1s,baz=105,slow=2.9,SNR=5.9						
WRA				LR	LR	17 28 09.3	
	comp=Z,3μm,20.5s,baz=100,slow=34						
AS31	**Alice Springs**	**32.17**	**254**	*e*P	**P**	**17 16 31.8**	**-1.0**
ASAR	**Alice Springs**	**32.18**	**254**	P	**P**	**17 16 31.8**	**-1.0**
ASAR				ScP	**ScP**	**17 23 06.0**	**+1.8**
ASAR	**Alice Springs**	**32.18**	**254**	P	**P**	**17 16 31.8**	**-1.0**
	comp=Z,33nm,0.8s,baz=82,slow=7.9,SNR=120						
ASAR				ScP	**ScP**	**17 23 06.0**	**+1.8**
	comp=Z,2.0nm,1.1s,baz=107,slow=3.2,SNR=2.5						
BBOO	**Buckleboo**	**32.21**	**236**	*e*P	**P**	**17 16 33.3**	**+0.4**
	comp=Z,634nm,0.9s						
RKPI	**Ransiki, Papua**	**36.74**	**292**	P	P	17 17 25.3	+13
SWI	**Sorong**	**39.62**	**291**	P	**P**	**17 17 39.6**	**+3.0**
	comp=Z,36nm,0.9s,comp=Z,808nm						
FITZ	**Fitzroy Crossi**	**40.03**	**263**	*e*P	**P**	**17 17 39.7**	**-0.3**
TBI	**Tubuai**	**40.31**	**105**	*e*S	S	17 23 59.9	+11
	comp=Z,1μm,28.0s						
TBI				*e*LQ	LQ	17 27 22.1	
	comp=Z,6μm,27.2s						
TBI				*e*LR	LR	17 29 19.8	
PPT2	**Papeete2**	**40.57**	**96**	*e*S	S	17 23 46.3	-6.9
	comp=Z,1μm,25.5s						
PPT2				*e*LQ	LQ	17 27 28.2	
	comp=Z,5μm,28.0s						
PPT2				*e*LR	LR	17 29 30.2	
	comp=Z,4μm,25.2s						
PPT	**Papeete**	**40.57**	**96**	LR	LR	17 30 34.9	
	comp=Z,1μm,20.7s,baz=261,slow=30						
LBMI	**Labuha**	**43.09**	**289**	P	P	17 18 10.2	+5.1
	comp=Z,41nm,1.4s,comp=Z,765nm						
MBWA	**Marble Bar**	**45.30**	**258**	*e*P	**P**	**17 18 24.4**	**+1.6**
	comp=Z,36nm,1.0s						
KAPI	**Kappang**	**48.61**	**279**	*e*P	**P**	**17 18 49.1**	**+0.4**
	comp=Z,43nm,0.9s						
KAPI	**Kappang**	**48.61**	**279**	P	**P**	**17 18 50.6**	**+1.9**
	comp=Z,54nm,1.0s,comp=Z,596nm						
DRV	**Dumont d'Urvil**	**52.13**	**194**	P	P	17 19 05.0	-10
DRV	**Dumont d'Urvil**	**52.13**	**194**	PP	PP	17 21 04.0	-8.8
DRV				S	S	17 26 19.0	-18
DRV				SS	**SS**	**17 30 13.0**	**-1.6**
DRV				L	L	17 31 00.0	
DRV				R		17 34 00.0	
RKT	**Rikitea**	**53.63**	**106**	*e*S	S	17 27 13.2	+14
	comp=Z,888nm,26.8s						
RKT				*e*LR	LR	17 35 29.3	
MYLDM	**Lahad Datu**	**53.70**	**291**	P	P	17 19 40.0	+13
KKM	**Kota Kinabalu**	**56.12**	**290**	P	**P**	**17 19 45.1**	**+0.5**
	comp=Z,67nm,1.4s						
KKM	**Kota Kinabalu**	**56.12**	**290**	P	P	17 19 55.8	+11
SBUM	**Sibu**	**58.29**	**284**	P	P	17 20 18.8	+19
KSM	**Kuching**	**59.70**	**283**	*e*P	**P**	**17 20 10.9**	**+1.3**
	comp=Z,48nm,1.0s						
KSM	**Kuching**	**59.70**	**283**	P	P	17 20 14.2	+4.5
	comp=Z,51nm,1.1s						
VNDA	**Vanda**	**59.87**	**181**	*e*P	**P**	**17 20 12.0**	**+2.2**
	comp=Z,13nm,1.1s						
VNDA	**Vanda**	**59.87**	**181**	P	**P**	**17 20 11.7**	**+1.9**
	comp=Z,3.5nm,0.8s,baz=27,slow=5.0,SNR=13						
SBA	**Scott Base**	**60.13**	**180**	*e*P	**P**	**17 20 14.0**	**+2.4**
SBA				pmax	pmax		
	comp=Z,52nm,1.2s						
SBA	**Scott Base**	**60.13**	**180**	*e*P	**P**	**17 20 14.0**	**+2.4**
	comp=Z,52nm,1.2s						
MJAR	**Matsushiro Arr**	**60.80**	**333**	P	**P**	**17 20 16.6**	**-0.1**
MJAR	**Matsushiro Arr**	**60.80**	**333**	P	**P**	**17 20 16.6**	**-0.1**
	comp=Z,19nm,1.0s,baz=170,slow=7.6,SNR=52						

MAJO **Matsushiro** 60.80 333 *e*P P 17 20 17.2 +0.4
MAJO pmax pmax
comp=Z,54nm,1.2s
MAJO Matsushiro 60.80 333 *e*P P 17 20 17.1 +0.4
comp=Z,54nm,1.2s
JNU Nakatsue 61.66 325 P P 17 20 23.2 +0.6
JNU Nakatsue 61.66 325 P P 17 20 23.2 +0.6
comp=Z,8.6nm,0.9s,baz=118,slow=7.0,SNR=4.3
JNU LR LR 17 43 05.4
comp=Z,466nm,18.9s,baz=317,slow=32
QZH Quanzhou 64.00 310 P P 17 20 40.3 +1.9
QZH S S 17 29 15.3 +1.5
QZH LR LR
comp=Z,1μm,19.4s
YUK Yuzh-Kuril'sk 64.68 343*d i*P P 17 20 40.6 -1.8
YUK *i* S S 17 29 19.6 -1.8
YUK pmax pmax
comp=E,140nm,1.4s
YUK pmax pmax
comp=Z,162nm,1.4s
YUK pmax pmax
comp=N,40nm,0.7s
YUK pmax pmax
comp=Z,613nm,4.5s
YUK MLR MLR
comp=N,281nm,20.0s
YUK MLR MLR
comp=E,187nm,20.0s
YUK MLR MLR
comp=Z,940nm,20.0s
KUR Kuril'sk 65.25 345*c i*P P 17 20 39.9 -6.2
KUR *i* S S 17 29 24.6 -3.8
KUR pmax pmax
comp=Z,90nm,1.1s
KUR pmax pmax
comp=E,7.0nm,0.5s
KUR pmax pmax
comp=N,46nm,1.1s
KUR pmax pmax
comp=Z,475nm,3.2s
KUR MLR MLR
comp=N,1μm,20.0s
KUR MLR MLR
comp=E,529nm,20.0s
KUR MLR MLR
comp=Z,1μm,20.0s
ASAJ Asahikawa 65.74 340 P P 17 20 49.9 +0.7
ASAJ Asahikawa 65.74 340 P P 17 20 49.9 +0.7
comp=Z,27nm,0.9s,baz=198,slow=11,SNR=13
ASAJ LR LR 17 47 53.4
comp=Z,994nm,18.3s,baz=184,slow=34
KSRS Korea Array 66.51 326 P P 17 20 55.2 +0.9
comp=Z,1.9nm,0.7s,baz=148,slow=7.2,SNR=13
KSAR Wonju Array Be 66.52 326 P P 17 20 55.2 +0.8
QIZ Qiongzhong 67.64 300 P P 17 21 01.0 -1.0
QIZ S S 17 29 59.8 +1.3
QIZ sS sS 17 30 05.1 -4.3
QIZ LR LR
comp=N,450nm,12.5s
QIZ LR LR
comp=Z,590nm,21.4s
QIZ Qiongzhong 67.64 300 P P 17 21 04.1 +2.1
MIR Mirnyy 67.79 205⇑ *i*P P 17 21 07.5 +5.4
MIR pmax pmax
comp=Z,63nm,1.0s
YSS Yuzh-Sakhalins 68.24 342⇑ *e*P P 17 21 07.0 +1.9
YSS *e* 17 21 27.0
YSS *e*S S 17 30 06.0 +1.5
YSS *e*SS SS 17 34 28.0 -0.2
YSS pmax pmax
comp=Z,70nm,1.1s
YSS MLR MLR
comp=N,1μm,17.0s
YSS MLR MLR
comp=Z,1μm,17.0s
SKR Severo-Kuril's 68.91 352 *e*P P 17 21 08.0 -1.2
SKR *e* 17 23 51.0
SKR *e*PPP PPP 17 25 25.0
SKR *e*S S 17 30 15.0 +2.8
SKR *e* 17 30 46.0
SKR *e*SS SS 17 34 39.0 +0.7
SKR pmax pmax
comp=Z,900nm,16.0s
SKR smax smax
comp=N,800nm,12.0s
SKR smax smax
comp=E,2μm,12.0s
SKR MLR MLR
comp=Z,900nm,18.0s
IPM Ipoh 69.42 282 *e*P P 17 21 17.1 +3.8
comp=Z,16nm,0.8s
IPM Ipoh 69.42 282 P P 17 21 17.7 +4.4
comp=Z,24nm,1.7s
USRK Ussuriysk Arra 69.79 333 P P 17 21 15.0 +0.3
comp=Z,7.2nm,0.9s,baz=143,slow=4.8,SNR=23
WHN Wuhan 70.33 313⇓ *i*P P 17 21 19.7 +1.3
WHN S S 17 30 30.1 +0.3
WHN LR LR
comp=Z,2μm,24.1s
PET Petropavlovsk 70.92 354 *i* P P 17 21 21.5 0.0
PET *i* S S 17 30 35.1 -0.7
PET pmax pmax
comp=Z,36nm,1.3s
PET pmax pmax
comp=Z,300nm,12.1s
PEA0B Petropavlovsk- 71.11 354 *e*P P 17 21 21.3 -1.3
PETK Petropavlovsk- 71.11 354 P P 17 21 22.8 +0.1
PETK Petropavlovsk- 71.11 354 P P 17 21 22.8 +0.1
PETK Petropavlovsk- 71.11 354 P P 17 21 22.8 +0.1
comp=Z,18nm,0.9s,baz=142,slow=7.5,SNR=25
PETK LR LR 17 49 16.9
comp=Z,505nm,18.4s,baz=153,slow=33
MDJ Mudanjiang 71.17 332 P P 17 21 24.1 +0.9
MDJ sP sP 17 21 28.4 -4.0
MDJ PcP PcP 17 21 44.3 +1.1
MDJ S S 17 30 42.6 +3.5
MDJ SS SS 17 35 15.1 +1.6
MDJ pmax pmax
comp=Z,26nm,1.5s
MDJ pmax pmax
comp=Z,280nm,7.0s
MDJ LR LR
comp=N,510nm,28.0s
MDJ LR LR
comp=E,490nm,29.3s
MDJ LR LR
comp=Z,290nm,25.5s
MDJ Mudanjiang 71.17 332 *e*P P 17 21 23.9 +0.7
comp=Z,21nm,1.0s
HABR Khabarovsk 72.11 338*ce*P P 17 21 29.2 +0.4
HABR *e**PP **pP** 17 21 38.1 +2.6
HABR *SP **sP** 17 21 42.1 +4.2
HABR *e* 17 21 46.1
HABR 17 24 07.2
HABR *e*S S 17 30 49.2 -0.5
HABR *e* 17 31 30.7
HABR SS SS 17 35 25.7 -1.9
HABR pmax pmax
comp=Z,158nm,2.7s
HABR pmax pmax
comp=E,57nm,2.0s
HABR pmax pmax
comp=N,43nm,2.0s
HABR MLR MLR
comp=Z,238nm,17.0s
QSPA South Pole Qui 72.29 180 *e*P P 17 21 30.0 +0.1
comp=Z,95nm,1.0s
CN2 Changchun 72.48 329 *e*P P 17 21 31.7 +0.6
CN2 *e*sP sP 17 21 39.0 -1.3
CN2 *e*S S 17 30 54.8 +0.6
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,200nm,6.0s
CN2 LR LR
comp=N,500nm,18.0s
CN2 LR LR
comp=E,500nm,18.0s
CN2 LR LR
comp=Z,500nm,17.0s
ENH Enshi 73.66 310 *e*P P 17 21 39.0 +0.4
comp=Z,27nm,1.1s
GYA Guiyang 73.84 305 *e*P P 17 21 40.1 +0.4
GYA PP PP 17 24 26.9 +2.1
GYA S S 17 31 09.4 -1.2
GYA SKS SKSac 17 31 42.0 -4.1
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.0s
GYA LR LR
comp=N,560nm,19.0s
GYA LR LR
comp=E,520nm,20.1s
GYA LR LR
comp=Z,610nm,19.0s
KLR Kul'dur 73.96 336 *e*P P 17 21 36.0 -3.8
KLR *e*S S 17 31 11.5 +0.7
KLR pmax pmax
comp=E,50nm,1.8s
KLR pmax pmax
comp=Z,180nm,1.8s
KLR MLR MLR
comp=E,600nm,12.0s
KLR MLR MLR
comp=Z,2μm,12.0s
BJI Beijing 74.92 321 P P 17 21 45.9 +0.4
BJI S S 17 31 22.7 +0.8
BJI SS SS 17 36 14.2 +3.3
BJI pmax pmax
comp=Z,17nm,0.7s
BJI pmax pmax
comp=Z,320nm,4.0s
BJI LR LR
comp=N,440nm,25.7s
BJI LR LR
comp=E,440nm,17.5s
BJI LR LR
comp=Z,300nm,33.2s
XAN Xi'an 76.09 313 P P 17 21 53.5 +1.0
XAN S S 17 31 35.7 +0.4
XAN SS SS 17 36 24.1 -5.0
XAN pmax pmax
comp=Z,4.0nm,0.8s
XAN pmax pmax
comp=Z,56nm,10.2s
XAN LR LR
comp=N,1μm,20.2s
XAN LR LR
comp=E,590nm,21.7s
XAN LR LR
comp=Z,550nm,17.2s
KMI Kunming 76.32 302 P P 17 21 55.6 +1.4
KMI pP **pP** 17 22 02.0 +1.1
KMI sP **sP** 17 22 03.7 +0.3
KMI PP **PP** 17 24 41.4 -4.6
KMI S **S** 17 31 41.8 +3.4
KMI sS **sS** 17 31 51.4 +1.8
KMI SS **SS** 17 36 32.7 -0.4
KMI pmax pmax
comp=Z,18nm,1.6s
KMI pmax pmax
comp=Z,180nm,5.4s
KMI LR LR
comp=N,410nm,17.2s
KMI LR LR
comp=E,400nm,17.2s
KMI LR LR
comp=Z,410nm,21.2s
CM31 Chiang Mai Arr 76.63 295 *e*P P 17 21 57.3 +1.5
comp=Z,25nm,0.9s
CMAR Chiang Mai Arr 76.63 295 P P 17 21 56.8 +0.9
CMAR Chiang Mai Arr 76.63 295 P P 17 21 56.8 +0.9
comp=Z,8.2nm,0.8s,baz=133,slow=4.5,SNR=39
CHTO Chiang Mai 76.78 295 *e*P P 17 21 56.3 -0.4
CHTO pmax pmax
comp=Z,19nm,0.9s
CHTO Chiang Mai 76.78 295 *e*P P 17 21 56.2 -0.4
comp=Z,19nm,0.9s
CHTO Chiang Mai 76.78 295 P P 17 21 59.1 +2.5
comp=Z,22nm,1.4s
HHC Hu-ho-hao-te 78.20 320 *e*P P 17 22 05.2 +0.9
HHC pP **pP** 17 22 09.9 -1.1
HHC sP **sP** 17 22 12.2 -1.3
HHC PP **PP** 17 25 04.4 +3.0
HHC S **S** 17 31 58.7 +0.6
HHC sS **sS** 17 32 06.6 -2.6
HHC SKS **SKSac** 17 32 14.1 -3.6
HHC ScS **ScS** 17 32 21.7 -1.7
HHC SS **SS** 17 37 04.0 +3.2
HHC pmax pmax
comp=Z,29nm,1.1s
HHC pmax pmax
comp=Z,260nm,5.2s
HHC LR LR
comp=N,480nm,20.9s
HHC LR LR
comp=E,1μm,17.8s
HHC LR LR
comp=Z,1μm,20.2s
CD2 Chengdu 78.24 308 *e*P P 17 22 04.8 +0.2
CD2 pP **pP** 17 22 09.8 -1.6
CD2 sP **sP** 17 22 11.9 -1.9
CD2 PP **PP** 17 25 04.0 +2.2
CD2 S **S** 17 31 58.5 -0.3
CD2 sS **sS** 17 32 06.2 -3.7
CD2 ScS **SKKSac** 17 32 20.9 +1.6
CD2 SS **SS** 17 37 04.0 +2.4
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,320nm,9.4s
CD2 LR LR
comp=N,730nm,19.0s
CD2 LR LR
comp=Z,670nm,23.8s
HIA Hailar 79.14 330 *e*P P 17 22 09.7 +0.5
comp=Z,35nm,1.2s
MAW Mawson 79.28 202 P P 17 22 11.2 +1.5
MAW Mawson 79.28 202 P P 17 22 11.2 +1.5
comp=Z,18nm,1.0s,baz=92,slow=9.7,SNR=5.7
LZH Lanzhou 80.71 312 *e*P P 17 22 20.6 +2.5
LZH pP **pP** 17 22 25.2 +0.3
LZH sP **sP** 17 22 27.5 +0.1
LZH S **S** 17 32 25.0 0.0
LZH sS **SKSac** 17 32 34.5 -1.2
LZH SS **SS** 17 37 42.3 +3.5
LZH pmax pmax
comp=Z,36nm,1.0s
LZH pmax pmax
comp=Z,160nm,4.0s
LZH LR LR
comp=N,310nm,16.6s
LZH LR LR
comp=E,530nm,18.4s
LZH LR LR
comp=Z,1μm,19.1s
SEY Seymchan 81.33 353*ce*P P 17 22 20.4 -0.2
CLNS Chul'man 82.50 338 *e*P P 17 22 27.2 +0.3
CLNS *e**PP **pP** 17 22 37.5 +3.8
CLNS *e* 17 25 33.6
CLNS *e*PPP PPP 17 27 24.5
CLNS *e*S S 17 32 39.2 -3.2
CLNS *e* 17 33 26.5
CLNS *e*SS SS 17 37 58.3 -6.0
CLNS pmax pmax
comp=Z,49nm,1.1s
CLNS pmax pmax
comp=E,7.0nm,1.0s
CLNS pmax pmax
comp=N,30nm,1.3s
CLNS pmax pmax
comp=E,1.0nm,0.8s
CLNS pmax pmax
comp=N,3.0nm,0.8s
CLNS pmax pmax
comp=Z,2.0nm,0.8s
CLNS smax smax
comp=N,206nm,13.4s
CLNS smax smax
comp=E,311nm,13.0s
CLNS MLR MLR
comp=Z,212nm,15.0s
CLNS MLR MLR
comp=N,113nm,11.0s
CLNS MLR MLR
comp=E,201nm,13.0s
CIT Chita 83.92 330 *e*P P 17 22 33.2 -1.2
CIT *e* 17 22 41.3
CIT *e* 17 22 45.2
CIT pmax pmax
comp=Z,169nm,1.6s
ULN Ulaanbaatar 84.86 324 *e*P P 17 22 38.6 -0.8
comp=Z,141nm,1.6s
ULN Ulaanbaatar 84.86 324 P P 17 22 40.3 +0.9
comp=Z,56nm,1.6s,comp=Z,1μm
YAK Yakutsk 85.05 343*d i*P P 17 22 39.6 -0.2
YAK *e**PP **pP** 17 22 49.3 +2.7
YAK *e* 17 25 52.1
YAK *e*S S 17 33 00.3 -7.4
YAK pmax pmax
comp=Z,69nm,0.9s
YAK pmax pmax
comp=N,22nm,1.1s
YAK pmax pmax
comp=E,14nm,1.1s
YAK pmax pmax
comp=Z,74nm,4.2s
YAK pmax pmax
comp=E,69nm,4.0s
YAK pmax pmax
comp=N,45nm,3.0s
YAK smax smax
comp=E,342nm,13.1s
YAK smax smax
comp=N,222nm,14.3s
YAK MLR MLR
comp=Z,1μm,19.0s
YAK MLR MLR
comp=N,642nm,17.0s
YAK MLR MLR
comp=E,344nm,16.0s
GTA Gaotai 85.11 314 *e*P P 17 22 43.1 +2.3
GTA pP **pP** 17 22 49.5 +1.9
GTA sP **sP** 17 22 52.8 +2.7
GTA SKS **SKSac** 17 33 04.8 +0.2
GTA S **SKKSac** 17 33 14.3 +3.4
GTA sS **sS** 17 33 25.2 +4.4
GTA pmax pmax
comp=Z,16nm,1.2s
GTA pmax pmax
comp=Z,220nm,9.0s
GTA LR LR
comp=N,470nm,19.0s
GTA LR LR
comp=E,740nm,20.9s
GTA LR LR
comp=Z,630nm,21.9s
SONM Songino Array 85.21 324 P P 17 22 41.9 +0.7
SONM Songino Array 85.21 324 P P 17 22 41.9 +0.7
comp=Z,20nm,1.1s,baz=148,slow=5.9,SNR=43
BILL Bilibino 85.56 359⇑ *i*P P 17 22 42.1 -0.1
BILL *i* S S 17 33 06.8 -5.7
BILL *e*SS SS 17 38 50.9 +1.9
BILL pmax pmax
comp=Z,347nm,1.2s
BILL Bilibino 85.56 359 *e*P P 17 22 41.8 -0.4
comp=Z,69nm,1.3s
SYO Syowa Base 85.96 196⇑ *e*P P 17 22 48.0 +3.6
WDC Whiskeytown Da 86.81 46 *e*P P 17 22 49.8 +0.7
WDC pmax pmax
comp=Z,11nm,1.3s
WDC Whiskeytown Da 86.81 46 *e*P P 17 22 49.8 +0.7
comp=Z,11nm,1.3s
YBH Yreka Blue Hor 87.21 45 P P 17 22 50.7 -0.4
YBH Yreka Blue Hor 87.21 45 P P 17 22 50.7 -0.4
comp=Z,1.3nm,0.6s,baz=185,slow=7.9,SNR=4.6
CMB Columbia Colle 87.21 49 *e*P P 17 22 49.8 -1.3
CMB pmax pmax
comp=Z,3.0nm,0.4s
CMB Columbia Colle 87.21 49 *e*P P 17 22 49.8 -1.3
comp=Z,3.5nm,0.4s
LSA Lhasa 87.57 302 *e*P P 17 22 51.7 -1.9
LSA pmax pmax
comp=Z,3.0nm,0.4s
LSA Lhasa 87.57 302 *e*P P 17 22 51.7 -1.9
comp=Z,3.3nm,0.4s
ISA Isabella 87.64 51 *e*P P 17 22 53.7 +0.4
ISA pmax pmax
comp=Z,9.0nm,1.1s
ISA Isabella 87.64 51 *e*P P 17 22 53.7 +0.4
comp=Z,9.2nm,1.1s
BEKR Beckworth 88.00 47 *e*P P 17 22 54.8 -0.3
comp=Z,7.9nm,1.5s
ZAK Zakamensk 88.29 325⇑ *i*P P 17 22 57.3 +1.2
ZAK pmax pmax
comp=Z,18nm,1.6s
PFO Pinyon Flat Ob 88.36 54 P P 17 22 59.7 +2.8
PFO Pinyon Flat Ob 88.36 54 P P 17 22 59.7 +2.8
comp=Z,2.0nm,0.8s,baz=198,slow=3.2,SNR=3.4
GSC Goldstone 88.74 52 *e*P P 17 22 59.1 +0.5
GSC pmax pmax
comp=Z,23nm,1.6s
GSC Goldstone 88.74 52 *e*P P 17 22 59.1 +0.5
comp=Z,23nm,1.6s
TLY Talaya 88.76 326 *e*P P 17 22 58.8 +0.7
TLY *e*S S 17 33 35.3 -8.8
TLY *e* 17 34 46.7
TLY pmax pmax
comp=Z,24nm,1.2s
TLY MLR MLR
comp=Z,275nm,19.0s
TLY Talaya 88.76 326 P P 17 23 00.9 +2.8
comp=Z,73nm,1.0s,SNR=5.5
NVAR Mina Array Bea 88.87 49 P P 17 22 59.0 -0.3
NVAR Mina Array Bea 88.87 49 P P 17 22 59.0 -0.3
comp=Z,2.5nm,0.9s,baz=226,slow=7.3,SNR=16
ILAR Eielson Array 89.24 18 P P 17 22 58.2 -1.9
ILAR Eielson Array 89.24 18 P P 17 22 58.2 -1.9
comp=Z,2.3nm,0.7s,baz=236,slow=5.0,SNR=21
COLD Coldfoot 90.20 15 *e*P P 17 23 05.1 +0.6
comp=Z,6.5nm,1.1s
WVOR Wild Horse Val 90.25 45 *e*P P 17 23 04.5 -1.0
WVOR pmax pmax
comp=Z,12nm,1.2s
WVOR Wild Horse Val 90.25 45 *e*P P 17 23 04.5 -1.0
comp=Z,12nm,1.2s
SNAA Sanae 90.57 183 *e*P P 17 23 07.2 +0.7
SNAA Sanae 90.57 183 *e*P P 17 23 05.8 -0.7
comp=Z,38nm,1.2s
EGAK Eagle 90.99 19 *e*P P 17 23 07.7 -0.5
comp=Z,3.9nm,1.0s
VNA1 Neumayer--Stat 91.78 181 *e*P P 17 23 14.5 +2.5
BMO Blue Mountains 92.10 43 *e*P P 17 23 14.3 +0.3
comp=Z,8.4nm,1.5s
TUC Tucson 92.35 57 *e*P P 17 23 15.1 -0.4
TUC pmax pmax
comp=Z,14nm,1.5s
TUC Tucson 92.35 57 *e*P P 17 23 15.1 -0.4
comp=Z,14nm,1.5s
TIXI Tiksi 93.02 349*ce*P P 17 23 17.0 -0.4
TIXI pmax pmax
comp=Z,12nm,1.0s
WMQ Urumqi 95.18 314 *e*P P 17 23 27.0 -1.2
WMQ pP **pP** 17 23 32.0 -3.0
WMQ sP **sP** 17 23 35.0 -2.5
WMQ PP **PP** 17 27 19.0 +0.6
WMQ SKS **SKSac** 17 34 01.0 -2.0
WMQ S **S** 17 34 38.0 -4.5
WMQ SS **SS** 17 41 10.0 +0.5
WMQ pmax pmax
comp=Z,11nm,1.0s
WMQ pmax pmax
comp=Z,170nm,4.8s
WMQ LR LR
comp=N,850nm,23.4s
WMQ LR LR
comp=E,960nm,21.0s
WMQ LR LR
comp=Z,830nm,21.0s
KRAR Krasnoyarsk 96.40 327*de*P P 17 23 34.1 +0.8
KRAR pmax pmax
comp=Z,26nm,1.7s
PDAR Pinedale Array 96.63 47 P P 17 23 39.9 +4.9
comp=Z,0.3nm,0.4s,baz=286,slow=4.4,SNR=3.0
TXAR Lajitas Array 97.28 62 P Pdif 17 23 38.4 +0.2
TXAR Lajitas Array 97.28 62 P Pdif 17 23 38.4 +0.2
comp=Z,0.1nm,0.4s,baz=284,slow=7.3,SNR=3.5
MKAR Makanchi Array 99.71 316 P **Pdif** 17 23 49.3 +0.8
MKAR 17 27 52.9
MKAR Makanchi Array 99.71 316 P **Pdif** 17 23 49.3 +0.8
MKAR PP **PP** 17 27 52.9 -0.3
MKAR Makanchi Array 99.71 316 P **Pdif** 17 23 49.3 +0.8
comp=Z,1.1nm,0.6s,baz=97,slow=5.8,SNR=11
MKAR PP **PP** 17 27 52.9 -0.3
comp=Z,0.7nm,1.0s,baz=116,slow=6.6,SNR=3.7

YKA Yellowknife Ar 99.99 27 P Pdif 17 23 48.1 -1.1
YKA PKiKP PKiKP 17 28 16.8 -0.3
YKA PKKP PKKPdf 17 40 13.5 -2.2
YKA Yellowknife Ar 99.99 27 P Pdif 17 23 48.1 -1.1
comp=Z,1.3nm,1.0s,baz=248,slow=4.7,SNR=11
YKA PKiKP PKiKP 17 28 16.8 -0.3
comp=Z,0.4nm,0.7s,baz=274,slow=1.0,SNR=5.4
YKA PKKP PKKPdf 17 40 13.5 -2.2
comp=Z,0.3nm,0.6s,baz=62,slow=2.9,SNR=3.5
ZAA0 Zalesovo Array 100.10 323 ePdif Pdif 17 23 47.9 -2.1
ZALV Zalesovo Beam 100.10 323 i P Pdif 17 23 51.9 +1.9
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 100.10 323 P Pdif 17 23 49.9 -0.1
ZALV PKKPbc PKKPbc 17 40 07.2 -3.0
ZALV Zalesovo Beam 100.10 323 P Pdif 17 23 49.9 -0.1
comp=Z,0.7nm,0.3s,baz=111,slow=3.3,SNR=10
ZALV PKKPbc PKKPbc 17 40 07.2 -3.0
comp=Z,0.8nm,0.6s,baz=252,slow=0.5,SNR=3.8
NVS Novosibirsk 101.23 324 eP Pdif 17 23 54.9 -0.1
NVS pmax pmax
comp=N,9.0nm,1.9s
NVS pmax pmax
comp=Z,14nm,1.9s
NVS pmax pmax
comp=N,9.0nm,2.2s
NVS pmax pmax
comp=Z,20nm,2.2s
KURK Kurchatov 103.01 319 P Pdif 17 24 04.1 +1.1
KURK Kurchatov 103.01 319 Pdif Pdif 17 24 04.1 +1.1
KURK PP PP 17 28 10.9 -6.9
KURK PKKPbc PKKPbc 17 40 00.9 -0.6
KURBB Kurchatov Arra 103.04 319 Pdiff Pdif 17 24 04.1 +1.0
comp=Z,0.2nm,0.5s,baz=117,slow=3.2,SNR=4.2
KURBB PP PP 17 28 10.9 -7.2
comp=Z,0.7nm,1.0s,baz=106,slow=7.6,SNR=4.4
KURBB PKKPbc PKKPbc 17 40 00.9 -0.5
comp=Z,0.7nm,0.6s,baz=286,slow=3.6,SNR=5.0
BVAR Borovoye Array 108.40 321 PKiKP PKiKP 17 28 31.8 -1.1
BVAR PP PP 17 28 57.4 -0.2
BVAR Borovoye Array 108.40 321 PKiKP PKiKP 17 28 31.8 -1.1
comp=Z,0.5nm,0.7s,baz=81,slow=14,SNR=4.6
BVAR PP PP 17 28 57.4 -0.2
comp=Z,0.9nm,0.9s,baz=86,slow=7.5,SNR=3.0
ARU Arti 115.23 325 i PKIKP PKPdf 17 28 46.0 +0.3
ARU 17 29 47.7
ARU 17 35 31.9
ARU SP SP 17 39 19.8 -3.1
AKTO Aktyubinsk 116.05 318 PKIKP PKPdf 17 28 47.8 +0.3
AKTO Aktyubinsk 116.05 318 PKP PKPdf 17 28 47.8 +0.3
AKTO PKKPbc PKKPbc 17 39 14.7 -4.6
AKTO Aktyubinsk 116.05 318 PKP PKPdf 17 28 47.8 +0.3
comp=Z,1.0nm,0.5s,baz=73,slow=2.7,SNR=5.2
AKTO PKKPbc PKKPbc 17 39 14.7 -4.6
comp=Z,1.1nm,0.6s,baz=217,slow=5.3,SNR=3.6
SPITS Spitsbergen Ar 117.98 354 PKP PKPdf 17 28 50.4 -0.1
SPITS Spitsbergen Ar 117.98 354 PKP PKPdf 17 28 50.4 -0.1
comp=Z,6.7nm,0.7s,baz=96,slow=7.6,SNR=10
FRB Frobisher Bay 120.43 25 PKP PKPdf 17 28 55.0 -0.4
FRB Frobisher Bay 120.43 25 PKP PKPdf 17 28 55.0 -0.4
comp=Z,2.7nm,0.5s,baz=290,slow=1.0,SNR=3.4
DAG Danmarks Havn 120.87 2 i PKIKP PKPdf 17 28 53.9 -2.1
DAG MLR MLR
comp=Z,1µm,24.0s
DAG Danmarks Havn 120.87 2 i P PKPdf 17 28 53.9 -2.1
DAG
comp=Z,960nm,24.0s
SUMG Summit 123.13 9 i PKIKP PKPdf 17 29 02.3 +1.3
SUMG e 17 30 38.6
SUMG MLR MLR
comp=Z,3µm,20.0s
SUMG Summit 123.13 9 ePKPdf PKPdf 17 29 02.0 +1.0
SUMG Summit 123.13 9 i P PKPdf 17 29 02.3 +1.3
SUMG e 17 30 38.6
SUMG
comp=Z,3µm,20.0s
ARCES ARCESS Array B 123.29 345 PKP PKPdf 17 29 00.4 -0.4
ARCES ARCESS Array B 123.29 345 PKP PKPdf 17 29 00.4 -0.4
comp=Z,7.6nm,0.5s,baz=97,slow=2.4,SNR=38
ARE0 ARCESS Array S 123.29 345 ePKPdf PKPdf 17 29 01.3 +0.4
KLMR Klimovskoe 123.58 333 ePKIKP PKPdf 17 29 01.6 0.0
KLMR pmax pmax
comp=Z,32nm,1.2s
SCHQ Schefferville 124.51 35 PKP PKPdf 17 29 03.1 -0.6
SCHQ Schefferville 124.51 35 PKP PKPdf 17 29 03.1 -0.6
comp=Z,3.2nm,0.9s,baz=270,slow=8.1,SNR=3.5
JOF Joensuu 125.85 337 ep PKPdf 17 29 06.7 +0.8
comp=Z,9.5nm,0.8s
JOF Joensuu 125.85 337 ePKIKP PKPdf 17 29 06.7 +0.8
JOF pmax pmax
comp=Z,10.0nm,0.8s
VRHR Novokhopersk 126.14 321 ePKIKP PKPdf 17 29 07.6 +0.8
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR pmax pmax
comp=N,10.0nm,1.2s
VRHR pmax pmax
comp=E,9.0nm,0.6s
VRHR MLR MLR
comp=Z,2µm,22.0s
VRHR MLR MLR
comp=N,780nm,19.0s
VRHR MLR MLR
comp=E,710nm,16.0s
GNI Garni 126.36 307 PKP PKPdf 17 29 06.3 -1.6
GNI Garni 126.36 307 PKP PKPdf 17 29 06.3 -1.6
comp=E,2.3nm,0.3s,baz=192,slow=18,SNR=2.4
SCO Scoresbysund 126.95 4 i PKIKP PKPdf 17 29 07.4 -0.4
SCO e 17 31 03.7
SCO MLR MLR
comp=Z,2µm,20.0s
SCO Scoresbysund 126.95 4 i P PKPdf 17 29 07.4 -0.4
SCO e 17 31 03.7
SCO
comp=Z,2µm,20.0s
KBZ Khabaz 127.15 312 PKIKP PKPdf 17 29 09.1 +0.1
KBZ Khabaz 127.15 312 PKP PKPdf 17 29 09.1 +0.1
KBZ Khabaz 127.15 312 PKP PKPdf 17 29 09.1 +0.1
comp=Z,3.6nm,1.0s,baz=90,slow=15,SNR=2.5
KIV Kislovodsk 127.25 312 i PKIKP PKPdf 17 29 08.5 -0.8
KIV e 17 36 10.6
KIV pmax pmax
comp=Z,12nm,1.1s
OBN Obninsk 127.50 327 i PKIKP PKPdf 17 29 09.9 +0.6
OBN pmax pmax
comp=Z,29nm,1.3s
VSR Storozhevoye 127.57 322 ePKIKP PKPdf 17 29 10.7 +1.2
VSR pmax pmax
comp=Z,10.0nm,1.3s
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,3.0nm,0.4s
VSR MLR MLR
comp=Z,2µm,20.0s
VSR MLR MLR
comp=N,860nm,21.0s
VSR MLR MLR
comp=E,710nm,18.0s
VORD Divnogorie 127.58 321 ePKIKP PKPdf 17 29 09.3 -0.3
VORD pmax pmax
comp=N,30nm,0.3s
VORD pmax pmax
comp=E,10.0nm,0.3s
VORD pmax pmax
comp=Z,10.0nm,0.3s
VORD MLR MLR
comp=Z,2µm,20.0s
VORD MLR MLR
comp=N,1µm,19.0s
VORD MLR MLR
comp=E,1µm,19.0s
KMBO Kilima Mbogo 127.82 254 PKP PKPdf 17 29 13.3 +1.8
KMBO ePKPdf PKiKP 17 29 14.4 +2.3
KMBO PKKP PKKPdf 17 39 21.4 -0.5
KMBO Kilima Mbogo 127.82 254 PKP PKPdf 17 29 13.3 +1.8
comp=E,5.7nm,1.0s,baz=217,slow=5.1,SNR=3.6
KMBO PKKP PKKPdf 17 39 21.4 -0.5
comp=E,1.1nm,0.5s,baz=41,slow=20,SNR=3.3
LSZ Lusaka 128.38 233 ePKPdf PKPdf 17 29 12.8 +0.4
FINES FINESS Array B 128.69 338 PKP PKPdf 17 29 12.2 +0.9
FINES FINESS Array B 128.69 338 PKP PKPdf 17 29 12.3 +0.9
comp=E,10nm,1.0s,baz=64,slow=4.4,SNR=4.0
ANN Anapa 130.70 314 i PKIKP PKPdf 17 29 16.0 +0.3
ANN pmax pmax
comp=Z,62nm,1.5s
BDFB Brasilia 131.57 131 PKP PKPdf 17 29 18.4 +0.1
BDFB Brasilia 131.57 131 PKP PKPdf 17 29 18.4 +0.1
comp=Z,2.0nm,0.5s,baz=174,slow=4.2,SNR=3.1
AKASG Malin Array Be 133.49 325 PKIKP PKPdf 17 29 21.1 +0.3
AKASG Malin Array Be 133.49 325 PKP PKPdf 17 29 21.1 +0.3
AKASG SKPbc SKPab 17 32 51.2 +0.9
AKASG Malin Array Be 133.49 325 PKP PKPdf 17 29 21.1 +0.3
comp=Z,2.7nm,0.8s,baz=62,slow=1.9,SNR=11
AKASG SKPbc SKPab 17 32 51.2 +0.9
comp=Z,0.2nm,0.2s,baz=44,slow=3.6,SNR=6.9
NB2 NORSAR Subarra 133.66 344 PKPdf PKPdf 17 29 21.8 +0.9
comp=Z,15nm,1.4s,baz=31,slow=1.9
NB2 NORSAR Subarra 133.66 344 PKPdf PKPdf 17 29 21.8 +0.9
baz=31,slow=1.9
NOA NORSAR Array B 133.66 344 PKP PKPdf 17 29 20.6 -0.3
NOA NORSAR Array B 133.66 344 PKP PKPdf 17 29 20.6 -0.3
comp=Z,5.6nm,0.9s,baz=36,slow=2.0,SNR=9.4
HFS Hagfors 133.74 342 PKP PKPdf 17 29 22.1 +1.1
HFS Hagfors 133.74 342 PKP PKPdf 17 29 22.0 +1.1
comp=Z,5.8nm,0.9s,baz=90,slow=3.0,SNR=7.4
BRTR Keskin Array B 134.81 309 PKP PKPdf 17 29 24.7 +0.8
BRTR PP PP 17 31 57.6 -0.3
BRTR Keskin Array B 134.81 309 PKP PKPdf 17 29 24.7 +0.8
comp=Z,3.1nm,1.1s,baz=116,slow=2.9,SNR=8.9
BRTR PP PP 17 31 57.6 -0.3
comp=Z,0.8nm,0.9s,baz=124,slow=4.4,SNR=3.9
KIS Kishinev 135.48 320 ePKP PKPdf 17 29 27.0 +2.4
KIS Kishinev 135.48 320 ePP PP 17 32 34.0 +33
KIS Kishinev 135.48 320 ePS PS 17 42 35.0 +10
KIS eL L 18 08 20.0
KIS LRM MLR 18 27 28.0
comp=Z,2µm,18.0s
KIS Kishinev 135.48 320 ePKIKP PKPdf 17 29 27.0 +2.4
KIS MLR MLR
comp=Z,2µm,18.0s
KIS MLR MLR
comp=Z,2µm,18.0s
LVV L'vov 136.78 326 ePKIKP PKPdf 17 29 24.8 -2.2
LVV e 17 32 05.8
LVV MLR MLR
comp=N,800nm,18.0s
LVV MLR MLR
comp=E,2µm,18.0s
LVV MLR MLR
comp=Z,2µm,18.0s
VRI Vrincioaia 137.28 320 ⇓PKIKP PKPdf 17 29 30.6 +2.5
VRI Vrincioaia 137.28 320⇓i P PKPdf 17 29 30.6 +2.5
BURAR Bucovina Array 137.32 323⇑i P PKPdf 17 29 24.2 -4.0
BSD Bornholm Skovb 137.33 337 i PKIKP PKPdf 17 29 31.6 +3.8
BSD i 17 32 11.1
BSD MLR MLR
comp=Z,2µm,19.0s
BSD Bornholm Skovb 137.33 337 i P PKPdf 17 29 31.6 +3.8
BSD i 17 32 11.1
BSD i 17 43 24.3
BSD
comp=Z,2µm,19.0s
KWP Kalwaria Pacla 137.59 326 ⇓PKIKP PKPdf 17 29 30.5 +2.0
KWP Kalwaria Pacla 137.59 326⇓i P PKPdf 17 29 30.5 +2.0
COP Copenhagen 137.76 339 i PKIKP PKPdf 17 29 29.7 +1.1
COP MLR MLR
comp=Z,820nm,18.0s
COP Copenhagen 137.76 339 i P PKPdf 17 29 29.7 +1.1
COP i 17 43 33.1
COP
comp=Z,810nm,18.0s
MLR Muntele Rosu 137.94 320 PKPpre PKPpre 17 29 25.2
MLR Muntele Rosu 137.94 320⇓i P PKPdf 17 29 27.4 -2.1
MLR Muntele Rosu 137.94 320 PKhKP PKPpre 17 29 25.2
comp=Z,0.2nm,0.4s,baz=131,slow=18,SNR=2.4
KOLS Kolonicke sedl 138.23 326 ePKIKP PKPdf 17 29 31.7 +2.0
KOLS Kolonicke sedl 138.23 326 ePKP PKPdf 17 29 31.7 +2.0
UZH Uzhgorod 138.39 326 ePKHKP PKPpre 17 29 20.2
UZH e 17 29 29.4
UZH e 17 29 41.0
UZH MLR MLR
comp=N,2µm,19.0s
UZH MLR MLR
comp=E,900nm,19.0s
UZH MLR MLR
comp=Z,670nm,19.0s
STHS Stebnicka Huta 138.48 327 ePKIKP PKPdf 17 29 32.5 +2.3
STHS Stebnicka Huta 138.48 327 ePKP PKPdf 17 29 32.5 +2.3
TRPA Tarpa 138.55 325⇓ePKPdf PKPdf 17 29 26.2 -4.1
CRVS Cervenica-Dubn 138.68 326 ePKIKP PKPdf 17 29 30.3 -0.3
CRVS Cervenica-Dubn 138.68 326 ePKP PKPdf 17 29 30.2 -0.3
OJC Ojcow 138.71 329 ePKIKP PKPdf 17 29 31.9 +1.4
OJC Ojcow 138.71 329 ePKP PKPdf 17 29 31.9 +1.4
ARR Arges 138.81 320⇓i P PKPdf 17 29 34.1 +3.1
NIE Niedzica 138.96 328 ePKIKP PKPdf 17 29 33.2 +2.1
NIE Niedzica 138.96 328 ePKP PKPdf 17 29 33.2 +2.1
KECS Kecovo 139.44 326 ePKIKP PKPdf 17 29 34.7 +2.8
KECS Kecovo 139.44 326 ePKP PKPdf 17 29 34.7 +2.8
OKC Ostrava-Krasne 139.76 330 ePKIKP PKPdf 17 29 34.0 +1.5
OKC Ostrava-Krasne 139.76 330 ePKPdf PKPdf 17 29 34.0 +1.5
KSP Ksiaz 139.93 332 ePKIKP PKPdf 17 29 34.5 +1.7
KSP e 17 32 28.0
MORC Moravsky Berou 140.09 330 ⇓PKIKP PKPdf 17 29 31.8 -1.3
MORC Moravsky Berou 140.09 330 ePKPdf PKPdf 17 29 31.3 -1.9
MORC Moravsky Berou 140.09 330⇓i P PKPdf 17 29 31.8 -1.3
PSZ Piszkesteto 140.10 326 ePKIKP PKPdf 17 29 33.7 +0.4
PSZ Piszkesteto 140.10 326 ePKPdf PKPdf 17 29 33.7 +0.4
PSZ Piszkesteto 140.10 326⇓ePKPdf PKPpre 17 29 30.0
DPC Dobruska-Polom 140.27 331 ePKHKP PKPpre 17 29 27.7
DPC e 17 29 32.4
DPC Dobruska-Polom 140.27 331 ePKPpre PKPpre 17 29 27.7
DPC ePKPdf PKPdf 17 29 32.4 -1.0
VYHS Vyhne 140.29 328 ePKIKP PKPdf 17 29 34.8 +1.3
VYHS Vyhne 140.29 328 ePKP PKPdf 17 29 34.8 +1.3
UPC Upice 140.30 332 ePKIKP PKPdf 17 29 32.0 -1.4
UPC Upice 140.30 332 ePKPdf PKPdf 17 29 32.0 -1.4
BZS Buzias 140.48 322 ⇓PKIKP PKPdf 17 29 35.4 +1.5
BZS Buzias 140.48 322⇓i P PKPdf 17 29 35.4 +1.5
VRAC Vranov 140.86 330 PKP PKPdf 17 29 33.2 -1.4
VRAC Vranov 140.86 330⇑i P PKPdf 17 29 33.9 -0.6
VRAC Vranov 140.86 330 PKP PKPdf 17 29 33.2 -1.4
comp=Z,3.1nm,0.8s,baz=55,slow=1.9,SNR=5.9
PVCC Panska Ves 140.92 333 ePKIKP PKPdf 17 29 35.7 +1.2
PVCC MLR MLR
comp=Z,4µm,20.6s
PVCC Panska Ves 140.92 333 ePKPdf PKPdf 17 29 35.7 +1.2
BRG Berggiesshubel 140.93 334 ePKP PKPpre 17 29 29.6
comp=Z,7.3nm,1.5s
BRG e 17 29 35.2
comp=Z,28nm,1.8s
BRG e 17 33 13.2
comp=Z,17nm,1.6s
BRG SS SS 17 51 51.0 +50
BRG
comp=N,2µm,18.3s
BRG
comp=E,2µm,16.3s
BRG
comp=Z,3µm,17.8s
BRG Berggiesshubel 140.93 334 ePKPdf PKPdf 17 29 35.5 +0.9
BRG Berggiesshubel 140.93 334 ePKHKP PKPpre 17 29 29.6
BRG e 17 29 35.2
BRG pmax pmax
comp=Z,7.0nm,1.5s
BRG pmax pmax
comp=Z,28nm,1.8s
BRG pmax pmax
comp=Z,17nm,1.6s
BRG MLR MLR
comp=N,2µm,18.3s
BRG MLR MLR
comp=E,2µm,16.3s
BRG MLR MLR
comp=Z,3µm,17.8s
CLL Collm 140.99 335⇓i PKIKP PKPdf 17 29 32.9 -1.7
CLL i 17 29 38.6
CLL pmax pmax
comp=Z,16nm,1.6s
CLL Collm 140.99 335⇓i PKPdf PKPdf 17 29 32.9 -1.7
CLL i pPKPdf PKiKP 17 29 35.4 -1.9
comp=Z,16nm,1.5s
CLL i PKiKP PKiKP 17 29 38.6 +1.3
comp=Z,11nm,1.0s
CLL i 17 29 48.3
CLL ePP PP 17 32 36.0 +0.8
CLL i PKSbc PKSbc 17 33 13.0 +0.6
comp=Z,16nm,1.6s
VTS Vitosha 141.06 317 ⇓PKIKP PKPdf 17 29 36.1 +0.8
VTS Vitosha 141.06 317⇓i P PKPdf 17 29 36.1 +0.8
PRU Pruhonice 141.33 332 ePKIKP PKPpre 17 29 31.5
PRU e 17 29 35.8
PRU Pruhonice 141.33 332 ePKPpre PKPpre 17 29 31.5
PRU ex x 17 29 35.8
ZST Bratislava 141.37 328 ePKIKP PKPdf 17 29 36.3 +0.9
ZST Bratislava 141.37 328 ePKP PKPdf 17 29 36.3 +0.9
PKSM Moragy 141.83 325 ⇓PKIKP PKPdf 17 29 38.0 +1.7
PKSM Moragy 141.83 325⇓i P PKPdf 17 29 38.0 +1.7
PKSM Moragy 141.83 325⇑ePKPdf PKPpre 17 29 32.9
EKA Eskdalemuir Ar 141.86 352 PKPpre PKPpre 17 29 32.3
EKA Eskdalemuir Ar 141.86 352 PKhKP PKPpre 17 29 32.3
comp=Z,2.5nm,0.8s,baz=15,slow=2.9,SNR=4.0
ESK Eskdalemuir 141.88 352 i PKIKP PKPdf 17 29 40.7 +4.6
SOP Sopron 141.98 328⇓ePKPdf PKPdf 17 29 36.6 +0.1
NKC Novy Kostel 142.04 334 ePKIKP PKPdf 17 29 35.6 -1.0
NKC e 17 29 40.6
NKC Novy Kostel 142.04 334 ePKPdf PKPdf 17 29 35.6 -1.0
NKC epPKP PKiKP 17 29 40.6 +1.0
MOX Moxa 142.06 335 ePKPbc PKPdf 17 29 32.8 -3.8
MOX Moxa 142.06 335 ePKIKP PKPdf 17 29 32.8 -3.8
CONA Conrad Observa 142.16 329⇑i PKPdf PKPdf 17 29 35.0 -2.0
comp=Z,180nm,4.1s
KHC Kasperske Hory 142.38 332 ePKHKP PKPpre 17 29 32.9
KHC e 17 29 38.8
KHC Kasperske Hory 142.38 332 ePKPpre PKPpre 17 29 32.9
KHC ex x 17 29 38.8
KHC Kasperske Hory 142.38 332 ePKPpre PKPpre 17 29 33.4
ROTZ Rotzenmuhle 142.50 334 ePKPbc PKPdf 17 29 34.8 -2.6
GEC2 GERESS Array S 142.54 332 ePKPbc PKPdf 17 29 36.1 -1.5
GEC2 GERESS Array S 142.54 332 ePKIKP PKPdf 17 29 36.1 -1.5
GERES GERESS Array B 142.54 332 PKPpre PKPpre 17 29 33.7
GERES GERESS Array B 142.54 332 PKhKP PKPpre 17 29 33.7
comp=Z,2.8nm,0.8s,baz=291,slow=5.6,SNR=26
UBBA Unterbreizbach 142.55 337 ePKPbc PKPdf 17 29 35.1 -2.2
GRF Grafenberg Arr 142.97 335 ePKPbc PKPdf 17 29 36.3 -2.0
GRF Grafenberg Arr 142.97 335 ePKIKP PKPdf 17 29 36.3 -2.0
PERS Pernice 143.41 328 i PKPdf PKPbc 17 29 37.3 +0.9
SOKA Soboth 143.43 328⇑i PKPdf PKPbc 17 29 37.8 +1.3
comp=Z,94nm,2.1s
TNS Taunus Mts 143.61 338 ePKPbc PKPdf 17 29 38.5 -0.9
TNS Taunus Mts 143.61 338 ePKIKP PKPdf 17 29 38.5 -0.9
RJOB Jochberg 143.76 331 ePKPbc PKPdf 17 29 39.5 -0.3
KBA Koelnbreinsper 143.98 330⇑i PKPdf PKPbc 17 29 39.0 +0.8
comp=Z,96nm,1.7s,SNR=12
TOD Tromm 143.99 337 PKIKP PKPab 17 29 37.6 +0.2
TOD Tromm 143.99 337 PKP PKPab 17 29 37.6 +0.2
BEBN Eben Emael 144.07 341 PKP PKPdf 17 29 39.5 -0.6
BOJS Bojanci 144.10 326 i PKPdf PKPdf 17 29 39.8 -0.6
FUR Furstenfeldbru 144.12 333 ePKPbc PKPdf 17 29 40.5 +0.2
FUR Furstenfeldbru 144.12 333 ePKIKP PKPdf 17 29 40.5 +0.2
VISS Visnje 144.12 327 i PKPdf PKPdf 17 29 39.7 -0.7
MEM Membach 144.13 340 PKP PKPbc 17 29 39.2 +1.0
MYKA Terra Mystica 144.15 329⇓i PKPdf PKPdf 17 29 39.7 -0.8
comp=Z,86nm,1.7s
ABH Alteburg 144.22 338 PKP PKPbc 17 29 38.6 0.0
STON Ston 144.36 321 P PKPab 17 29 38.0 -0.9
VOY Vojsko 144.45 328 ePKPdf PKPbc 17 29 39.7 +0.1
VOY e 17 29 48.3
JAVS Javornik 144.46 328 i PKPdf PKPbc 17 29 40.1 +0.5
KTD Kalmit 144.49 337 PKIKP PKPdf 17 29 41.5 +0.5
KTD Kalmit 144.49 337 PKP PKPdf 17 29 41.5 +0.5
STU Stuttgart 144.51 335 ePKPbc PKPdf 17 29 41.6 +0.6
STU Stuttgart 144.51 335 ePKIKP PKPab 17 29 38.8 -0.5
STU Stuttgart 144.51 335 ePKPpre PKPab 17 29 38.8 -0.5
BCLA Clavier 144.52 341 PKP PKPbc 17 29 39.4 -0.1
RUP Ruppelstein 144.54 338 PKIKP PKPbc 17 29 39.7 0.0
RUP Ruppelstein 144.54 338 PKP PKPbc 17 29 39.7 0.0
ABTA Abfaltersbach 144.61 330⇑i PKPdf PKPbc 17 29 40.7 +0.6
comp=Z,101nm,1.4s,SNR=29
WATA Walderalm 144.61 332⇓i PKPdf PKPbc 17 29 40.5 +0.4
comp=Z,54nm,1.5s
WTTA Wattenberg 144.64 332⇓i pPKPdf PKPdf 17 29 42.0 +0.5
SNR=18
SNF Seneffe 144.75 342 PKP PKPdf 17 29 41.7 +0.4
MOTA Moosalm 144.82 332⇑i PKPdf PKPab 17 29 40.2 -0.5
comp=Z,78nm,1.1s,SNR=28
RETA Reutte 144.86 333⇑i PKPdf PKPab 17 29 40.7 -0.1
comp=Z,243nm,1.8s,SNR=22
LANF Langenberg 144.87 337 PKIKP PKPdf 17 29 41.3 -0.3
LANF Langenberg 144.87 337 PKP PKPdf 17 29 41.3 -0.3
LANF Langenberg 144.87 337 PKP PKPdf 17 29 41.3 -0.3
WLF Walferdange 144.89 339 PKP PKPbc 17 29 40.9 +0.1
WLF Walferdange 144.89 339 ePKPdf PKPbc 17 29 40.8 +0.1
WLF ePKPbc PKPdf 17 29 43.4 +1.8
WLF Walferdange 144.89 339 ePKIKP PKPbc 17 29 40.9 +0.2
WLF Walferdange 144.89 339 ePKPdf PKPbc 17 29 40.9 +0.1
DOU Dourbes 145.02 341 PKP PKPbc 17 29 40.8 -0.3
BFO Black Forest 145.21 336 ePKPdf PKPbc 17 29 41.4 -0.4
BFO ePKPbc PKPdf 17 29 43.9 +1.7
BFO Black Forest 145.21 336 ePKIKP PKPbc 17 29 41.4 -0.4
BFO Black Forest 145.21 336 ePKPdf PKPbc 17 29 40.8 -1.1
SPAK Spaichingen-Ko 145.21 335 PKP PKPab 17 29 42.1 +0.1
FETA Feichten 145.23 332⇑i PKPdf PKPbc 17 29 41.7 -0.4
comp=Z,195nm,1.3s,SNR=36
DAVA Damuels 145.40 333⇓i PKPab PKPbc 17 29 41.7 -0.9
comp=Z,341nm,1.5s,SNR=44
LIBD Limburg 145.63 336 PKIKP PKPab 17 29 43.6 +0.2
LIBD Limburg 145.63 336 PKP PKPab 17 29 43.6 +0.2
FELD Feldberg im Sc 145.70 336 PKP PKPbc 17 29 43.6 0.0
ECH Echery 145.75 337 ePKP2 PKPdf 17 29 42.7 -0.5
ECH Echery 145.75 337 ePKPdf PKPdf 17 29 42.7 -0.5
ECH Echery 145.75 337 PKP PKPbc 17 29 43.6 0.0
DAVOX Davos/Dischmat 145.79 333 PKPbc PKPbc 17 29 44.0 0.0
DAVOX Davos/Dischmat 145.79 333 PKPbc PKPbc 17 29 44.0 0.0
comp=Z,71nm,1.0s,baz=59,slow=2.6,SNR=54
VAL Valentia 145.85 358 eP PKPab 17 29 44.4 +0.3
MOF Molkenrain 146.06 336 PKP2 PKPbc 17 29 44.9 +0.3
MOF Molkenrain 146.06 336 PKP PKPbc 17 29 44.9 +0.3
MOF Molkenrain 146.06 336 PKP PKPbc 17 29 44.9 +0.3
THEF They Montfort 146.17 338 PKIKP PKPdf 17 29 43.6 -0.3
THEF They Montfort 146.17 338 PKP PKPdf 17 29 43.6 -0.3
THEF They Montfort 146.17 338 PKP PKPdf 17 29 43.6 -0.3
BBS Basel-Blauen 146.23 336 PKP2 PKPbc 17 29 44.9 -0.2
BBS Basel-Blauen 146.23 336 PKP PKPbc 17 29 44.9 -0.2
TUE Stuetta 146.26 333 ePKPdf PKPdf 17 29 44.6 +0.3
LOMF Lomont 146.59 336 PKP2 PKPbc 17 29 46.4 +0.2
LOMF Lomont 146.59 336 PKP PKPbc 17 29 46.4 +0.2
LOMF Lomont 146.59 336 PKP PKPbc 17 29 46.4 +0.2
RCBR Riachuelo 146.90 133 PKPbc PKPbc 17 29 47.5 -0.5
RCBR Riachuelo 146.90 133 PKPbc PKPbc 17 29 47.5 -0.5
comp=Z,12nm,0.8s,baz=174,slow=4.0,SNR=7.1
TIP Timpagrande 147.00 316 ePKPdf PKPbc 17 29 47.2 -0.4
CUC Castrocucco 147.16 318 ePKPdf PKPdf 17 29 43.3 -2.5
AQU L'Aquila 147.18 324 ePKPbc PKPab 17 29 50.4 +0.7
OG01 Vacheresse 147.49 335 PKP PKPbc 17 29 47.9 -0.9
OG01 Vacheresse 147.49 335 PKP PKPbc 17 29 47.9 -0.9
RSL Roselend 148.03 335 PKP2 PKPbc 17 29 49.3 -1.1
RSL Roselend 148.03 335 PKP PKPbc 17 29 49.3 -1.1
RSL Roselend 148.03 335 PKP PKPbc 17 29 49.3 -1.1
CEL Celeste 148.06 315 ePKPbc PKPbc 17 29 50.5 0.0
OG35 Corcelles 148.16 336 PKP PKPbc 17 29 49.0 -1.6
BNI Bardonecchia 148.53 334 ePKP2 PKPbc 17 29 51.8 +0.1
BNI Bardonecchia 148.53 334 ePKPbc PKPbc 17 29 51.8 +0.1
GDM Grand'Maison 148.63 335 PKP PKPbc 17 29 52.3 +0.3
GDM Grand'Maison 148.63 335 PKP PKPbc 17 29 52.3 +0.3
GRN Grenoble 148.75 335 PKP2 PKPbc 17 29 52.6 +0.4
GRN Grenoble 148.75 335 PKP PKPbc 17 29 52.6 +0.4
GRN Grenoble 148.75 335 PKP PKPbc 17 29 52.6 +0.4
BST Brest 148.81 349 PKP PKPbc 17 29 52.5 +0.4
BST Brest 148.81 349 PKP PKPbc 17 29 52.5 +0.4
SURF Saint Ours 148.93 333 PKP PKPbc 17 29 53.2 +0.4
SURF Saint Ours 148.93 333 PKP PKPbc 17 29 53.2 +0.4
SAOF Saorge 148.99 332 PKP2 PKPbc 17 29 52.5 -0.2
SAOF Saorge 148.99 332 PKP PKPbc 17 29 52.5 -0.2
SAOF Saorge 148.99 332 PKP PKPbc 17 29 52.5 -0.2
AGO Saint Agoulin 149.04 339 PKP PKPbc 17 29 52.7 -0.1
AGO Saint Agoulin 149.04 339 PKP PKPbc 17 29 52.7 -0.1
TOUF Mont Tournerai 149.11 332 PKP2 PKPbc 17 29 53.3 +0.1
TOUF Mont Tournerai 149.11 332 PKP PKPbc 17 29 53.3 +0.1
TOUF Mont Tournerai 149.11 332 PKP PKPbc 17 29 53.3 +0.1
SSB Saint Sauveur 149.19 337 ePKP2 PKPbc 17 29 52.8 -0.4
SSB Saint Sauveur 149.19 337 ePKPbc PKPbc 17 29 52.8 -0.4
MVIF Mont Vial 149.24 332 PKP2 PKPbc 17 29 54.2 +0.7
MVIF Mont Vial 149.24 332 PKP PKPbc 17 29 54.2 +0.7
MVIF Mont Vial 149.24 332 PKP PKPbc 17 29 54.2 +0.7
REVF Revere 149.27 332 PKP2 PKPbc 17 29 54.0 +0.5
REVF Revere 149.27 332 PKP PKPbc 17 29 54.0 +0.5
REVF Revere 149.27 332 PKP PKPbc 17 29 54.0 +0.5
PYM Petit Puy Mans 149.34 339 PKP2 PKPbc 17 29 54.3 +0.7
PYM Petit Puy Mans 149.34 339 PKP PKPbc 17 29 54.3 +0.7

PYM	**Petit Puy Mans**	**149.34**	**339**	PKP	**PKPbc**	**17 29 54.3**	**+0.7**
CALN	**Calern**	**149.47**	**332**	PKP2	**PKPbc**	**17 29 53.8**	**-0.3**
CALN	**Calern**	**149.47**	**332**	PKP	**PKPbc**	**17 29 53.8**	**-0.3**
CALN	**Calern**	**149.47**	**332**	PKP	**PKPbc**	**17 29 53.8**	**-0.3**
OCF	**Saint Nazaire**	**149.48**	**335**	PKP	**PKPbc**	**17 29 54.2**	**+0.2**
OG26	**St.-Nazaire-De**	**149.48**	**335**	PKP	**PKPbc**	**17 29 54.2**	**+0.2**
LBL	**Lubilhac**	**149.71**	**338**	PKP	**PKPbc**	**17 29 55.3**	**+0.8**
LRDF	**Laroque-de-Fa**	**151.94**	**337**	PKP	**PKPbc**	**17 30 00.3**	**+0.5**
FILF	**Fillols**	**152.25**	**336**	PKP	**PKPbc**	**17 30 01.4**	**+0.8**
MLS	**Moulis**	**152.45**	**339**	PKP	**PKPbc**	**17 30 00.9**	**0.0**
VALF	**Valcebollere**	**152.60**	**337**	PKP	**PKPbc**	**17 30 01.9**	**+0.4**
LABF	**Labassere**	**152.71**	**340**	PKP	**PKPbc**	**17 30 01.9**	**+0.3**
RESF	**Ens**	**152.84**	**339**	PKP	**PKPbc**	**17 30 02.9**	**+0.9**
VIEF	**Viey**	**152.88**	**340**	PKP	**PKPbc**	**17 30 03.7**	**+1.7**
PBRG	**Braganca**	**155.57**	**350**	ePKPab	**PKPab**	**17 30 26.3**	**+1.9**
PGAV	**Gavieira, Arco**	**155.63**	**353**	ePKPab	**PKPab**	**17 30 26.0**	**+1.3**
POLO	**Lamas de Olo**	**156.16**	**352**	ePKPab	**PKPab**	**17 30 28.4**	**+1.5**
PVRL	**Vila Real**	**156.24**	**352**	ePKPab	**PKPab**	**17 30 28.2**	**+1.0**
MVO	**Moncorvo**	**156.25**	**350**	ePKPab	**PKPab**	**17 30 28.7**	**+1.4**
PVIS	**Viseu**	**156.82**	**352**	ePKPab	**PKPab**	**17 30 30.4**	**+0.7**
ESDC	**Sonseca Array**	**157.01**	**344**	PKP	**PKPdf**	**17 30 01.1**	**+0.5**
ESDC				PKPab	**PKPab**	**17 30 30.7**	**0.0**
ESDC				PP	**PP**	**17 34 03.4**	**-4.8**
ESDC	**Sonseca Array**	**157.01**	**344**	PKP	**PKPdf**	**17 30 01.0**	**+0.5**
	comp=Z,0.1nm,0.2s,baz=357,slow=2.6,SNR=3.8						
ESDC				PKPab	**PKPab**	**17 30 30.7**	**0.0**
	comp=Z,3.3nm,0.7s,baz=17,slow=3.7,SNR=12						
ESDC				PP	**PP**	**17 34 03.4**	**-4.8**
	comp=Z,0.2nm,0.2s,baz=17,slow=9.4,SNR=2.1						
MTE	**Manteigas**	**157.07**	**351**	ePKPab	**PKPab**	**17 30 32.5**	**+1.6**
PCBR	**Castelo Branco**	**157.61**	**350**	ePKPab	**PKPab**	**17 30 34.1**	**+1.0**
PMRV	**Marv??o**	**158.00**	**350**	ePKPab	**PKPab**	**17 30 36.3**	**+1.5**
PMTG	**Montargil**	**158.48**	**351**	ePKPab	**PKPab**	**17 30 38.2**	**+1.3**
PESTR	**Estremoz**	**158.58**	**350**	ePKPab	**PKPab**	**17 30 38.5**	**+1.2**
LIS	**Lisbon**	**158.94**	**353**	eP	**PKPdf**	**17 30 00.5**	**-2.3**
LIS	**Lisbon**	**158.94**	**353**	eP	**PKPdf**	**17 30 00.5**	**-2.3**
PBAR	**Barrancos**	**159.16**	**348**	ePKPab	**PKPab**	**17 30 41.4**	**+1.6**
PBEJ	**Beja**	**159.45**	**350**	ePKPab	**PKPab**	**17 30 43.3**	**+2.2**
MESJ	**Messejana**	**159.68**	**351**	eP	**PKPdf**	**17 30 01.0**	**-2.7**
MESJ				ePP	**PP**	**17 34 22.1**	**-0.4**
MESJ	**Messejana**	**159.68**	**351**	eP	**PKPdf**	**17 30 01.0**	**-2.7**
PTEO	**Sao Teotonio**	**160.05**	**352**	ePKPab	**PKPab**	**17 30 46.9**	**+3.2**
MORF	**Marmelete**	**160.27**	**352**	ePKPab	**PKPab**	**17 30 46.6**	**+1.8**
MDT	**Midelt**	**163.51**	**337**	PKPab	**PKPab**	**17 30 59.7**	**+0.5**
MDT	**Midelt**	**163.51**	**337**	PKPab	**PKPab**	**17 30 59.7**	**+0.5**
	comp=Z,6.0nm,1.1s,baz=36,slow=3.5,SNR=6.7						
TOA0	**Torodi Ar. Sit**	**165.83**	**253**	ePKPdf	**PKPdf**	**17 30 11.2**	**+0.9**
TORD	**Torodi Ar. Bea**	**165.83**	**253**	PKP	**PKPdf**	**17 30 09.6**	**-0.8**
TORD				PKPab	**PKPab**	**17 31 11.3**	**+1.4**
TORD	**Torodi Ar. Bea**	**165.83**	**253**	PKP	**PKPdf**	**17 30 09.6**	**-0.8**
	comp=Z,4.4nm,0.9s,baz=344,slow=1.2,SNR=14						
TORD				PKPab	**PKPab**	**17 31 11.3**	**+1.4**
	comp=Z,5.5nm,1.1s,baz=91,slow=3.3,SNR=4.5						

*NEIC **04** 17:10:29.3±3.3, 33°.92N×68°.93E, h10km, mb3.0/2, Error ellipse: s-maj=35.6km s-min=23.9km az=1.0*
NEIC Felt [II] at Kabul.
*IDC **04** 17:10:35.0±3.1, 34°.55N×68°.74E, h0km, mb3.4/2, mb1 3.6/7, mb1mx3.4/32, mbtmp3.6/7, ML3.5/5, Error ellipse: s-maj=79.4km s-min=21.8km az=135.0*
*NNC **04** 17:10:38.0±9.7, 34°.82N×68°.34E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=103.1km s-min=67.4km az=152.0*
ISC 04 17:10:31.7±2.1, **34°.1N**±0°.1×**69°.1E**±0°.1, **h10**km, **n20**, σ**1s.60**/23, **6C-1D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	**Kabul**	**0.43**	**352**	ePg	**Pg**	**17 10 41.4**	**+1.2**
KBL				eSg	**Sg**	**17 10 45.8**	**-0.1**
KK31	**Karatay Array**	**9.04**	**7**	⇑Pn	**Pn**	**17 12 43.2**	**+1.0**
	0.4nm,0.2s,baz=200,slow=14,SNR=16						
KK31				⇑Sn	Sn	17 14 19.6	-4.6
	0.7nm,0.5s,baz=201,slow=24,SNR=3.8						
KKAR	**Karatay Array**	**9.04**	**7**	ePn	**Pn**	**17 12 43.1**	**+0.9**
EKS2	**Erkin-Say**	**9.28**	**22**	Pn	**Pn**	**17 12 46.3**	**+0.6**
	2.6nm,0.8s						
AAK	**Ala-Archa**	**9.49**	**25**	ePn	**Pn**	**17 12 49.5**	**+0.9**
AAK				eSn	**Sn**	**17 14 33.1**	**-2.4**
AAK	**Ala-Archa**	**9.49**	**25**	Pn	**Pn**	**17 12 49.3**	**+0.7**
	0.9nm,0.3s,baz=201,slow=8.5,SNR=6.0						
AAK				Sn	**Sn**	**17 14 32.9**	**-2.5**
	0.3nm,0.3s,baz=45,slow=17,SNR=4.0						
TKM2	**Tokmak 2**	**10.15**	**28**	⇑Pn	**Pn**	**17 12 59.3**	**+1.7**
	2.3nm,0.8s						
TKM2				⇑Sn	**Sn**	**17 14 53.5**	**+1.9**
	2.9nm,0.8s						
TKM2	**Tokmak 2**	**10.15**	**28**	ePn	**Pn**	**17 12 58.8**	**+1.1**
MK31	**Makanchi Array**	**16.12**	**34**	P	**P**	**17 14 20.4**	**-1.3**
	0.4nm,0.6s,baz=201,slow=8.0,SNR=5.7						
MKAR	**Makanchi Array**	**16.12**	**34**	Pn	**P**	**17 14 20.6**	**-1.1**
	0.1nm,0.3s,baz=221,slow=15,SNR=6.2						
AB31	**Akbulak array**	**16.59**	**339**	⇓P	**Pn**	**17 14 23.9**	**-0.3**
	1.1nm,0.7s,baz=153,slow=13,SNR=12						
ABKAR	**Akbulak array**	**16.59**	**339**	ePn	**Pn**	**17 14 23.4**	**-0.8**
	0.7nm,0.6s						
KURBB	**Kurchatov Arra**	**17.88**	**20**	P	**Pn**	**17 14 40.1**	**-0.2**
	0.1nm,0.3s,baz=210,slow=11,SNR=5.0						
KURK	**Kurchatov**	**17.99**	**20**	P	**P**	**17 14 42.1**	**-0.1**
	0.9nm,0.7s						
AKTO	**Aktyubinsk**	**18.22**	**337**	⇑P	**P**	**17 14 43.8**	**-1.0**
	0.6nm,0.5s						
AKTO	**Aktyubinsk**	**18.22**	**337**	P	**P**	**17 14 43.5**	**-1.3**
	0.2nm,0.3s,baz=165,slow=16,SNR=4.1						
ZRNK	**Zerenda**	**18.83**	**360**	⇑P	**P**	**17 14 48.9**	**-2.6**
	0.7nm,0.5s						
BVAR	**Borovoye Array**	**18.93**	**2**	P	**Pn**	**17 14 53.0**	**-0.2**
	0.2nm,0.3s,baz=195,slow=10,SNR=3.2						
ZALV	**Zalesovo Beam**	**22.72**	**24**	P	**P**	**17 15 37.2**	**+3.7**
	0.8nm,0.4s,baz=229,slow=9.3,SNR=4.9						
TORD	**Torodi Ar. Bea**	**64.12**	**269**	P	P	17 21 09.2	+2.7
	0.1nm,0.4s,baz=56,slow=5.3,SNR=3.8						

IDC 04 17:10:50.8±4.6, **20°.64N**×**145°.53E**, **h0**km, **mb3.9**/7, **mb1 3.9**/7, **mb1mx3.7**/28, **mbtmp3.9**/7, **Error ellipse: s-maj=214.6km s-min=83.3km az=39.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**22.68**	**321**	P	P	17 15 55.3	+1.4
	2.2nm,0.7s,baz=141,slow=9.2,SNR=11						
SONM	**Songino Array**	**41.54**	**320**	P	P	17 18 38.6	-1.6
	0.4nm,0.6s,baz=133,slow=8.1,SNR=2.6						
ZALV	**Zalesovo Beam**	**56.39**	**322**	P	P	17 20 32.1	-1.7
	0.8nm,0.5s,baz=109,slow=8.1,SNR=4.0						
MKAR	**Makanchi Array**	**57.02**	**313**	P	P	17 20 39.2	+0.7
	0.5nm,0.5s,baz=90,slow=7.8,SNR=5.8						
KURBB	**Kurchatov Arra**	**59.78**	**317**	P	P	17 20 57.5	-0.2
	0.7nm,0.5s,baz=96,slow=7.8,SNR=9.9						
BVAR	**Borovoye Array**	**64.89**	**320**	P	P	17 21 32.5	+0.6
	1.1nm,0.5s,baz=96,slow=8.0,SNR=9.7						
FINES	**FINESS Array B**	**85.06**	**335**	P	P	17 23 28.6	+0.4
	1.0nm,0.3s,baz=73,slow=4.7,SNR=8.4						

JMA 04 17:11:47.8, 34°.91N×**135°.58E, h13**km, **M2.6, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHE	**Heguri**	**0.27**	**161**	P	Pg	17 11 53.2	-0.3
JHE				S	Sg	17 11 57.2	-0.1
JWT	**Wachi**	**0.40**	**339**	P	Pg	17 11 55.9	+0.1
JWT				S	Sg	17 12 01.1	-0.1
JKS	**Kasai**	**0.61**	**277**	P	Pg	17 11 59.4	-0.3
JKS				S	Sg	17 12 07.5	-0.3
JWY	**Kouya**	**0.69**	**179**	P	Pg	17 12 00.6	-0.8
JWY				S	Sg	17 12 09.7	-0.8
TSUJ	**Tsu 2**	**0.72**	**106**	P	Pg	17 12 01.2	-0.6
TSUJ				S	Sg	17 12 10.5	-0.7
JAJ2	**Tsuna**	**0.75**	**230**	P	Pg	17 12 01.9	-0.5
JAJ2				S	Sg	17 12 11.9	-0.4
JKY	**Yasaka**	**0.82**	**332**	P	Pg	17 12 03.3	-0.4
JKY				S	Sg	17 12 14.0	-0.4
JKN2	**Miekihoku**	**0.88**	**139**	P	Pg	17 12 04.1	-0.7
JKN2				S	Sg	17 12 15.4	-1.0
JKSM	**Kasumi**	**1.01**	**312**	P	Pb	17 12 06.6	-0.6
JKSM				S	Sb	17 12 19.8	-0.5
MAT	**Matsushiro**	**2.69**	**52**	P	Pg	17 12 39.1	-0.3
MAT				S	Sb	17 13 11.5	+2.8

*BJI **04** 17:25:22.7, 45°.32S×34°.43E, h15km, mB5.9/30, mb5.5/17, Ms6.0/35, Ms7 5.7/35*
*IDC **04** 17:25:22.8±0.3, 45°.89S×35°.13E, h0km, mb4.9/34, mb1 5.0/34, mb1mx5.0/34, mbtmp4.9/34, MS5.5/33, Ms1 5.5/33, ms1mx5.4/35, Error ellipse: s-maj=14.9km s-min=10.8km az=83.0*
*MOS **04** 17:25:23.4±0.9, 45°.80S×35°.24E, h10km, mb5.6/36, MS5.7/20, Error ellipse: s-maj=19.4km s-min=7.2km az=92.7*
*ISCJB **04** 17:25:23.5±0.2, 45°.83S±0°.04×35°.16E±0°.07, h10km, mb5.2/118, MS5.6/74, Error ellipse: s-maj=7.0km s-min=5.6km az=168.9*
*NEIC **04** 17:25:25.5±0.2, 45°.83S×35°.14E, h16km, mb5.5/44, MS5.7/12, MW6.0, MW6.0, Error ellipse: s-maj=8.0km s-min=6.1km az=97.0, Moment Tensor Solution. s25 Moment tensor: Scale 10^{18}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.20000×10^{18} NP1:ϕ_s21.00000°, δ82.00000°, λ170.00000°. NP2:ϕ_s113.00000°, δ80.00000°, λ8.00000°. Principal axes: T 1.3000, Plg12.0000°, Azm336.0000°; N -0.1100, Plg77.0000°, Azm163.0000°; P -1.2000, Plg1.0000°, Azm67.0000°;*
*DJA **04** 17:25:29.4±0.9, 46°S±4°×3°5E±°, h41km±9km, M5.4/20, mB5.9/14, mb5.3/20, Mw(mB)5.4/14, Mwp6.2/1*
*GCMT **04** 17:25:32.3±0.1, 45°.56S×35°.03E, h20km, MW6.0, Moment Tensor Solution. s110,c217; s94,c146; Moment tensor: Scale 10^{18}Nm; M_{rr}-0.35±.01; $M_{\theta\theta}$1.05±.01; $M_{\phi\phi}$-0.70±.01; $M_{r\theta}$-0.10±.02; $M_{\theta\phi}$1.13±.01; $M_{\phi r}$0.02±.02; Best double couple: $M_0$1.40000×10^{18} NP1:ϕ_s199.00000°, δ85.00000°, λ-179.00000°. NP2:ϕ_s109.00000°, δ89.00000°, λ-5.00000°. Principal axes: T 1.6100, Plg3.0000°, Azm154.0000°; N -0.3500, Plg85.0000°, Azm277.0000°; P -1.2600, Plg4.0000°, Azm64.0000°; Data Used: II IU CN IC G. Surface waves: sta=112, comp=239, per= 50.*
*NEIC **04** 17:25:35.9±0.0, 45°.69S×35°.02E, h10km, Moment Tensor Solution. s139 Moment tensor: Scale 10^{18}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.30000×10^{18} NP1:ϕ_s22.00000°, δ87.00000°, λ-148.00000°. NP2:ϕ_s290.00000°, δ59.00000°, λ-3.00000°. Principal axes: T 1.5500, Plg18.0000°, Azm151.0000°; N -0.4200, Plg59.0000°, Azm27.0000°; P -1.1300, Plg23.0000°, Azm249.0000°;*
ISC 04 17:25:24.7±0.5, **45°.85S**±0°.05×**35°.00E**±0°.05, **h12**km±2km, **h11**km**:pP-P, n981**, σ**1s.43**/986, **mb5.4**/125, **MS5.7**/75, **224C-179D, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRM	**Grahamstown**	**14.12**	**330**	⇑iP	Pn	17 28 38.0	-6.5
GRM				AMB	AMB	17 28 44.7	
	comp=Z,1μm,0.6s						
SOE	**Somerset East**	**15.00**	**328**	eP	Pn	17 28 51.7	-5.0
SOE				AMB	AMB	17 28 53.5	
	comp=Z,455nm,0.9s						
KSD	**Kokstad**	**15.89**	**342**	eP	Pn	17 29 02.9	-5.5
KSD				AMB	AMB	17 29 10.3	
	comp=Z,641nm,1.7s						
ELIM	**Elim**	**16.16**	**309**	eP	**Pn**	**17 29 08.0**	**-3.6**
ELIM				AMB	AMB	17 29 08.5	
	comp=Z,203nm,3.7s						
HVD	**Gariep Dam**	**16.93**	**331**	⇑iP	**Pn**	**17 29 17.3**	**-4.3**
HVD				AMB	AMB	17 29 23.0	
	comp=Z,671nm,2.1s						
SUR	**Sutherland**	**17.34**	**316**	eP	**Pn**	**17 29 23.1**	**-3.8**
SUR				AMB	AMB	17 29 29.8	
	comp=Z,103nm,2.1s						
SUR	**Sutherland**	**17.34**	**316**	P	**Pn**	**17 29 23.9**	**-2.9**
SUR				S	Sn	17 32 24.6	-15
SUR	**Sutherland**	**17.34**	**316**	P	**Pn**	**17 29 23.9**	**-2.9**
	comp=Z,16nm,0.3s,baz=137,slow=14,SNR=70						
SUR				S	Sn	17 32 24.6	-15
	comp=Z,12nm,0.3s,baz=118,slow=23,SNR=3.6						
SUR				LR	LR	17 34 31.7	
	comp=Z,30μm,20.8s,baz=143,slow=32						
CVNA	**Calvinia**	**18.59**	**315**	⇑iP	**P**	**17 29 40.7**	**-1.2**
CVNA				AMB	AMB	17 29 49.2	
	comp=Z,280nm,1.2s						
POGA	**Pongola**	**18.64**	**351**	eP	**P**	**17 29 41.1**	**-1.2**
POGA				AMB	AMB	17 29 46.9	
	comp=Z,320nm,0.6s						
BOSA	**Boshof**	**18.84**	**333**	⇑iP	**P**	**17 29 40.6**	**-4.1**
BOSA				AMB	AMB	17 29 46.4	
	comp=Z,129nm,1.2s						
BOSA	**Boshof**	**18.84**	**333**	eP	**P**	**17 29 40.5**	**-4.1**
	comp=Z,313nm,1.1s						
BOSA				S	Sn	17 32 56.1	-20
BOSA	**Boshof**	**18.84**	**333**	P	**P**	**17 29 40.7**	**-4.1**
	comp=Z,8.0nm,0.3s,baz=160,slow=13,SNR=28						
BOSA				S	Sn	17 32 56.1	-20
	comp=Z,5.8nm,0.3s,baz=80,slow=14,SNR=2.8						
BOSA				LR	LR	17 35 36.7	
	comp=Z,23μm,20.8s,baz=146,slow=32						
PRYS	**Parys**	**19.84**	**340**	AMB	AMB	17 29 59.4	
	comp=Z,291nm,1.6s						
SWZ	**Schweizer**	**20.16**	**334**	⇑iP	**P**	**17 29 58.6**	**-0.4**
SWZ				AMB	AMB	17 30 05.9	
	comp=Z,846nm,3.4s						
ERPM	**east rand prop**	**20.20**	**342**	⇓iP	**P**	**17 29 59.9**	**+0.3**
ERPM				AMB	AMB	17 30 10.3	
	comp=Z,345nm,2.6s						
KLOF	**Kloof**	**20.34**	**341**	eP	**P**	**17 30 00.8**	**-0.3**
KLOF				AMB	AMB	17 30 07.2	
	comp=Z,177nm,2.9s						
UPI	**Upington**	**20.56**	**323**	⇑iP	**P**	**17 30 02.4**	**-1.0**
UPI				AMB	AMB	17 30 13.5	
	comp=Z,320nm,3.0s						
SLR	**Silverton**	**20.78**	**343**	⇑iP	**P**	**17 30 04.9**	**-1.0**
SLR				AMB	AMB	17 30 12.4	
	comp=Z,478nm,3.5s						
KOMG	**Komaggas**	**21.10**	**313**	eP	**P**	**17 30 09.1**	**0.0**
KOMG				AMB	AMB	17 30 19.8	
	comp=Z,194nm,2.5s						
LBTB	**Lobatse**	**22.12**	**337**	⇑iP	**P**	**17 30 19.1**	**-1.1**
LBTB				AMB	AMB	17 30 27.2	
	comp=Z,336nm,1.3s						
LBTB				AML	AML	17 30 36.1	
	comp=Z,130nm,0.4s						
LBTB	**Lobatse**	**22.12**	**337**	eP	**P**	**17 30 17.7**	**-2.5**
	comp=Z,32nm,1.1s						
LBTB				S	S	17 34 12.8	-11
LBTB	**Lobatse**	**22.12**	**337**	P	**P**	**17 30 19.1**	**-1.1**
	comp=Z,55nm,0.6s,baz=174,slow=10,SNR=40						
LBTB				S	S	17 34 12.8	-11
	comp=Z,147nm,0.9s,baz=86,slow=13,SNR=5.4						
LBTB				LR	LR	17 37 34.9	
	comp=Z,29μm,20.0s,baz=151,slow=33						
SYO	**Syowa Base**	**23.34**	**176**	⇓iP	**P**	**17 30 31.0**	**-1.5**
MAW	**Mawson**	**26.19**	**156**	P	**P**	**17 30 59.5**	**+0.7**
MAW	**Mawson**	**26.19**	**156**	P	**P**	**17 30 59.5**	**+0.7**
	comp=Z,92nm,1.0s,baz=307,slow=11,SNR=54						
ABPO	**Ambohimpanom**	**28.61**	**25**	eP	**P**	**17 31 20.7**	**-0.4**
ABPO				pmax	pmax		
	comp=Z,136nm,1.4s						
ABPO	**Ambohimpanom**	**28.61**	**25**	eP	**P**	**17 31 20.7**	**-0.4**
	comp=Z,136nm,1.4s						
OPO	**Ambohidratompo**	**29.02**	**24**	P	**P**	**17 31 25.5**	**+0.7**
OPO	**Ambohidratompo**	**29.02**	**24**	P	**P**	**17 31 25.5**	**+0.7**
	comp=Z,12nm,0.9s,baz=201,slow=7.0,SNR=18						
OPO				LR	LR	17 41 19.2	
	comp=Z,17μm,21.3s,baz=208,slow=33						
RER	**Riviere de l'E**	**29.92**	**42**	P	P	17 31 28.8	-3.8
	comp=Z,76nm,1.0s						
TSUM	**Tsumeb**	**30.22**	**326**	⇑iP	**P**	**17 31 34.8**	**-0.6**
TSUM				AMB	AMB	17 31 35.9	
	comp=Z,3μm,1.2s						
TSUM	**Tsumeb**	**30.22**	**326**	eP	**P**	**17 31 34.4**	**-1.0**
	comp=Z,55nm,0.7s						
TSUM	**Tsumeb**	**30.22**	**326**	LR	LR	17 42 42.8	
	comp=Z,21μm,18.3s,baz=116,slow=34						
LSZ	**Lusaka**	**31.01**	**347**	eP	**P**	**17 31 40.3**	**-2.0**
LSZ	**Lusaka**	**31.01**	**347**	eP	**P**	**17 31 40.1**	**-2.3**
	comp=Z,112nm,0.8s						
LSZ	**Lusaka**	**31.01**	**347**	LR	LR	17 42 29.7	
	comp=Z,14μm,19.1s,baz=110,slow=33						
SNAA	**Sanae**	**31.45**	**202**	eP	**P**	**17 31 46.0**	**+0.2**
SNAA	**Sanae**	**31.45**	**202**	⇑iP	**P**	**17 31 45.9**	**+0.2**
SNAA	**Sanae**	**31.45**	**202**	P	**P**	**17 31 45.9**	**+0.2**
SNAA	**Sanae**	**31.45**	**202**	P	**P**	**17 31 45.9**	**+0.2**
	comp=Z,4.8nm,1.0s,baz=82,slow=6.8,SNR=24						
SNAA				LR	LR	17 42 04.6	
	comp=Z,1μm,18.5s,baz=237,slow=32						
MRIV	**Mauritius Mete**	**31.48**	**43**	eP	**P**	**17 31 46.5**	**+0.1**
VNA1	**Neumayer--Stat**	**32.45**	**205**	eP	**P**	**17 31 56.1**	**+1.8**
MIR	**Mirnyy**	**36.53**	**145**	⇓iP	**P**	**17 32 31.0**	**+1.3**
MIR				pmax	pmax		
	comp=Z,94nm,1.5s						
QSPA	**South Pole Qui**	**44.37**	**180**	eP	**P**	**17 33 33.8**	**-1.0**
	comp=Z,28nm,0.8s						
QSPA				PcP	**PcP**	**17 35 18.2**	**-0.2**
QSPA	**South Pole Qui**	**44.37**	**180**	P	**P**	**17 33 33.9**	**-0.8**
	comp=Z,13nm,1.0s,baz=251,slow=4.5,SNR=30						
QSPA				PcP	**PcP**	**17 35 18.2**	**-0.2**
	comp=Z,40nm,1.0s,baz=231,slow=7.7,SNR=4.6						
QSPA				LR	LR	17 50 30.9	
	comp=Z,3μm,20.7s,baz=248,slow=34						
KMBO	**Kilima Mbogo**	**44.58**	**3**	eP	**P**	**17 33 38.4**	**+1.4**
KMBO	**Kilima Mbogo**	**44.58**	**3**	eP	**P**	**17 33 38.3**	**+1.3**
	comp=Z,46nm,1.3s						
KMBO	**Kilima Mbogo**	**44.58**	**3**	P	**P**	**17 33 37.3**	**+0.2**
	comp=Z,15nm,1.1s,baz=173,slow=7.7,SNR=23						
KMBO				LR	LR	17 50 22.3	
	comp=Z,14μm,19.1s,baz=160,slow=34						
MBAR	**Mbarara**	**45.21**	**354**	eP	**P**	**17 33 42.8**	**+0.8**
MBAR	**Mbarara**	**45.21**	**354**	LR	LR	17 52 02.7	
	comp=Z,14μm,18.1s,baz=174,slow=35						
VNDA	**Vanda**	**52.64**	**167**	eP	**P**	**17 34 37.7**	**-0.3**
	comp=Z,32nm,1.1s						
VNDA	**Vanda**	**52.64**	**167**	P	**P**	**17 34 37.9**	**-0.2**
	comp=Z,16nm,0.9s,baz=244,slow=8.3,SNR=47						
VNDA				LR	LR	17 55 04.9	
	comp=Z,3μm,21.1s,baz=220,slow=34						
SBA	**Scott Base**	**53.11**	**169**	eP	**P**	**17 34 42.6**	**+1.1**
SBA				pmax	pmax		
	comp=Z,59nm,1.0s						
SBA				MLR	MLR		
	comp=Z,2μm,20.0s						
SBA	**Scott Base**	**53.11**	**169**	eP	**P**	**17 34 42.6**	**+1.1**
	comp=Z,59nm,1.0s						
SBA				LR	LR		
	comp=Z,2μm,20.0s						
PMSA	**Palmer Station**	**53.20**	**212**	LR	LR	17 51 59.2	
	comp=Z,2μm,20.6s,baz=117,slow=30						
DRV	**Dumont d'Urvil**	**54.28**	**152**	S	S	17 42 10.0	-17
DRV				SS	**SS**	**17 46 09.0**	**+0.7**
DRV				R		17 49 00.0	
FURI	**Furi**	**54.59**	**4**	P	**P**	**17 34 54.3**	**+0.9**
FURI				S	S	17 42 39.9	+6.8
DESE	**Dese**	**56.85**	**5**	eP	**P**	**17 35 11.7**	**+2.1**
DESE				eS	S	17 43 15.0	+12
NWAO	**Narrogin (SRO)**	**62.20**	**110**	LR	LR	17 56 42.6	
	comp=Z,2μm,18.1s,baz=235,slow=30						
LIC	**Lamto**	**62.93**	**314**	eP	**P**	**17 35 51.0**	**-0.1**
	comp=Z,54nm,0.7s,baz=146						
LIC	**Lamto**	**62.93**	**314**	eP	**P**	**17 35 51.0**	**-0.1**
	comp=Z,54nm,0.7s						
DBIC	**Dimbokro**	**63.23**	**315**	eP	**P**	**17 35 52.3**	**-0.8**
DBIC	**Dimbokro**	**63.23**	**315**	eP	**P**	**17 35 52.3**	**-0.8**
	comp=Z,53nm,0.8s						
DBIC	**Dimbokro**	**63.23**	**315**	P	**P**	**17 35 52.2**	**-0.8**
	comp=Z,43nm,0.9s,baz=127,slow=8.0,SNR=18						
DBIC				LR	LR	17 58 49.8	
	comp=Z,4μm,20.6s,baz=137,slow=32						
ABTO	**Aybut**	**65.05**	**19**	P	**P**	**17 36 05.2**	**+0.2**
	SNR=6.6						
TORD	**Torodi Ar. Bea**	**65.96**	**324**	P	**P**	**17 36 10.9**	**+0.1**
TORD	**Torodi Ar. Bea**	**65.96**	**324**	P	**P**	**17 36 10.9**	**+0.1**
	comp=Z,47nm,0.8s,baz=162,slow=6.7,SNR=114						
TORD				LR	LR	18 03 27.7	
	comp=Z,3μm,19.7s,baz=140,slow=35						
PALK	**Pallekele**	**66.77**	**51**	eP	**P**	**17 36 16.6**	**+0.4**
	comp=Z,55nm,1.0s						
PALK	**Pallekele**	**66.77**	**51**	P	P	17 36 19.5	+3.3
	comp=Z,54nm,2.3s,comp=Z,1μm						
TRQA	**Tornquist**	**68.17**	**238**	eP	**P**	**17 36 24.2**	**-0.6**
	comp=Z,182nm,1.8s						
JMDO	**Jabal Madar**	**71.06**	**23**	P	**P**	**17 36 42.8**	**+0.2**
	SNR=6.5						
JMDO	**Jabal Madar**	**71.06**	**23**	P	**P**	**17 36 42.8**	**+0.2**
	SNR=6.5						
BSYO	**Bisya**	**71.18**	**22**	P	**P**	**17 36 43.9**	**+0.6**
	SNR=7.3						
BSYO	**Bisya**	**71.18**	**22**	P	**P**	**17 36 43.9**	**+0.6**
	SNR=7.3						
BSYO	**Bisya**	**71.18**	**22**	P	**P**	**17 36 43.9**	**+0.6**
	SNR=7.3						
BSY	**Bisya**	**71.18**	**22**	P	**P**	**17 36 43.9**	**+0.5**
	SNR=7.3						
PLCA	**Paso Flores**	**71.19**	**231**	eP	**P**	**17 36 44.9**	**+1.4**
	comp=Z,41nm,1.5s						
PLCA	**Paso Flores**	**71.19**	**231**	P	P	17 36 50.1	+6.6
	comp=Z,8.4nm,1.0s,baz=136,slow=5.4,SNR=5.8						
PLCA				LR	LR	18 01 39.2	
	comp=Z,824nm,20.2s,baz=21,slow=31						
WBK	**Wadi Bani Khal**	**71.53**	**23**	P	**P**	**17 36 46.3**	**+0.9**
	SNR=12						
WBK	**Wadi Bani Khal**	**71.53**	**23**	P	**P**	**17 36 46.7**	**+1.2**
	SNR=7.7						
WBK	**Wadi Bani Khal**	**71.53**	**23**	P	**P**	**17 36 46.7**	**+1.2**
	SNR=7.7						
WBK	**Wadi Bani Khal**	**71.53**	**23**	P	**P**	**17 36 46.7**	**+1.2**
	SNR=7.7						
WBK	**Wadi Bani Khal**	**71.53**	**23**	P	**P**	**17 36 46.7**	**+1.2**
	SNR=7.7						
ARQ	**Araqi**	**71.58**	**21**	P	**P**	**17 36 46.1**	**+0.3**
	SNR=6.0						
ARQ	**Araqi**	**71.58**	**21**	P	**P**	**17 36 46.4**	**+0.6**
	SNR=6.6						
ARQ	**Araqi**	**71.58**	**21**	P	**P**	**17 36 46.3**	**+0.6**
	SNR=6.6						
ARQ	**Araqi**	**71.58**	**21**	P	**P**	**17 36 46.3**	**+0.6**
	SNR=6.6						
ARQ	**Araqi**	**71.58**	**21**	P	**P**	**17 36 46.3**	**+0.6**
	SNR=6.6						
SMDO	**Samad**	**71.71**	**22**	P	**P**	**17 36 46.4**	**-0.2**
	SNR=15						
SMDO	**Samad**	**71.71**	**22**	P	**P**	**17 36 46.6**	**0.0**
	SNR=10						
SMDO	**Samad**	**71.71**	**22**	P	**P**	**17 36 46.6**	**0.0**
	SNR=10						
SMDO	**Samad**	**71.71**	**22**	P	**P**	**17 36 46.6**	**0.0**
	SNR=10						
SMDO	**Samad**	**71.71**	**22**	P	**P**	**17 36 46.6**	**0.0**
	SNR=10						
HOQ	**Hoqain**	**72.01**	**21**	P	**P**	**17 36 48.7**	**+0.4**
	SNR=14						
HOQ	**Hoqain**	**72.01**	**21**	P	**P**	**17 36 47.9**	**-0.5**
	SNR=18						
HOQ	**Hoqain**	**72.01**	**21**	P	**P**	**17 36 47.9**	**-0.5**
	SNR=18						
HOQ	**Hoqain**	**72.01**	**21**	P	**P**	**17 36 48.7**	**+0.4**
	SNR=14						
HOQ	**Hoqain**	**72.01**	**21**	P	**P**	**17 36 48.7**	**+0.4**
	SNR=14						
HOQ	**Hoqain**	**72.01**	**21**	P	**P**	**17 36 48.7**	**+0.4**
	SNR=14						
KAD	**Karad**	**72.17**	**39**	ePKP	**P**	**17 36 47.0**	**-2.5**
ASHO	**Ashiyiah**	**72.76**	**20**	P	**P**	**17 36 53.5**	**+0.7**
	SNR=13						
ASHO	**Ashiyiah**	**72.76**	**20**	P	**P**	**17 36 53.5**	**+0.7**
	SNR=13						
ASHO	**Ashiyiah**	**72.76**	**20**	P	**P**	**17 36 53.5**	**+0.7**
	SNR=13						
ASHO	**Ashiyiah**	**72.76**	**20**	P	**P**	**17 36 53.5**	**+0.7**
	SNR=13						
HATD	**Hatta, Dubai**	**72.91**	**20**	P	**P**	**17 36 54.5**	**+0.8**
	SNR=15						
HATD	**Hatta, Dubai**	**72.91**	**20**	P	**P**	**17 36 53.9**	**+0.2**
	SNR=20						
HATD	**Hatta, Dubai**	**72.91**	**20**	P	**P**	**17 36 53.9**	**+0.2**
	SNR=20						
HATD	**Hatta, Dubai**	**72.91**	**20**	P	**P**	**17 36 54.5**	**+0.8**
	SNR=15						
HATD	**Hatta, Dubai**	**72.91**	**20**	P	**P**	**17 36 54.5**	**+0.8**
	SNR=15						
HATD	**Hatta, Dubai**	**72.91**	**20**	P	**P**	**17 36 54.5**	**+0.8**
	SNR=15						
HATD	**Hatta, Dubai**	**72.91**	**20**	P	**P**	**17 36 54.5**	**+0.8**
	SNR=15						
HATD	**Hatta, Dubai**	**72.91**	**20**	P	**P**	**17 36 54.5**	**+0.8**
	SNR=15						
HATD	**Hatta, Dubai**	**72.91**	**20**	P	**P**	**17 36 54.5**	**+0.8**
	SNR=15						
NAZ	**Nazwa, Dubai**	**72.96**	**20**	P	**P**	**17 36 54.7**	**+0.8**
	SNR=8.1						
NAZ	**Nazwa, Dubai**	**72.96**	**20**	P	**P**	**17 36 54.2**	**+0.3**
	SNR=9.8						
NAZ	**Nazwa, Dubai**	**72.96**	**20**	P	**P**	**17 36 54.2**	**+0.3**
	SNR=9.8						

UOSS **Wadi Hilu** 73.05 20 P P 17 36 53.3 -1.1
comp=Z,194nm,1.7s,SNR=11
POO **Poona** 73.11 38 *e*PKP P 17 36 54.0 -1.0
CPUP **Villa Florida** 73.14 250 P P 17 36 55.4 +0.2
CPUP **Villa Florida** 73.14 250 P P 17 36 55.4 +0.2
comp=Z,15nm,0.8s,baz=113,slow=5.1,SNR=17
CPUP LR LR 18 04 30.7
comp=Z,967nm,18.3s,baz=122,slow=32
TAM **Tamanrasset** 73.38 332 *e*P P 17 36 58.1 +1.5
TAM pmax pmax
comp=Z,63nm,1.6s
TAM **Tamanrasset** 73.38 332 *e*P P 17 36 58.1 +1.5
comp=Z,63nm,1.6s
BDFB **Brasilia** 74.13 264 P P 17 37 02.7 +1.4
BDFB **Brasilia** 74.13 264 P P 17 37 02.7 +1.4
comp=Z,16nm,1.0s,baz=111,slow=4.2,SNR=9.1
BDFB LR LR 18 03 05.7
comp=Z,2µm,19.2s,baz=312,slow=30
HYB **Hyderabad** 74.28 43 *i* P P 17 37 02.0 +0.1
HYB *e*pP **pP** 17 37 05.0 -0.7
HYB *e*PcP **PcP** 17 37 16.0 -0.7
HYB *e*S **S** 17 46 35.0 -0.7
EIL **Elat** 75.16 360 P P 17 37 07.2 +0.5
EIL **Elat** 75.16 360 P P 17 37 07.2 +0.5
comp=Z,17nm,0.9s,baz=173,slow=2.4,SNR=11
KBD **Kabd** 75.55 11 *e*P P 17 37 08.6 -0.3
KBD AMb AMB 17 37 24.1
comp=Z,69nm,1.4s
NAY **Al-Naaiem** 75.56 11 *e*P P 17 37 08.7 -0.3
NAY AMb AMB 17 37 11.6
comp=Z,73nm,1.4s
UMR **Umm Al-Rimmam** 75.93 11 *e*P P 17 37 11.4 +0.3
BBTS **Babate** 76.06 309 P P 17 37 13.8 +1.6
BBTS **Babate** 76.06 309 P P 17 37 13.8 +1.6
comp=Z,14nm,0.3s,baz=125,slow=7.1,SNR=3.4
MIB **Mutribah** 76.12 11 *e*P P 17 37 11.9 -0.3
MIB AMb AMB 17 37 14.6
comp=Z,109nm,1.6s
CFAA **Coronel Fontan** 76.33 239 P P 17 37 13.5 -0.2
CFAA **Coronel Fontan** 76.33 239 P P 17 37 13.5 -0.2
comp=Z,0.3nm,0.5s,baz=130,slow=4.3,SNR=6.3
AKL **Akola** 76.42 40 *e*PKP P 17 37 13.1 -1.0
AKL AMB AMB 17 37 14.9
comp=Z,47nm,1.6s
IPM **Ipoh** 76.84 69 *e*P P 17 37 16.8 0.0
comp=Z,16nm,0.8s
IPM **Ipoh** 76.84 69 P P 17 37 19.7 +1.2
comp=Z,33nm,0.9s
KULM **Kulim** 77.20 68 *e*P P 17 37 18.4 -0.3
comp=Z,185nm,1.8s
KULM **Kulim** 77.20 68 P P 17 37 19.9 +1.2
comp=Z,42nm,1.7s,comp=Z,1µm
ASF **Jabal al Asfar** 77.67 2 P P 17 37 22.1 +1.1
ASF **Jabal al Asfar** 77.67 2 P P 17 37 22.1 +1.1
comp=Z,11nm,0.9s,baz=52,slow=1.8,SNR=23
FITZ **Fitzroy Crossi** 77.67 103 LR LR 18 04 20.8
comp=Z,2µm,21.9s,baz=241,slow=30
NGP **Nagpur** 77.73 42 *e*PKP P 17 37 19.6 -1.9
NGP AMB AMB 17 37 21.5
comp=Z,44nm,2.0s
NGP *ex* x 17 47 20.1
STKA **Stephens Creek** 78.11 124 *e*P P 17 37 23.4 -0.2
comp=Z,8.8nm,1.2s
STKA **Stephens Creek** 78.11 124 P P 17 37 23.0 -0.7
comp=Z,12nm,1.0s,baz=227,slow=4.3,SNR=15
STKA LR LR 18 08 17.1
comp=Z,1µm,18.4s,baz=221,slow=33
MMAI **Mount Meron Ar** 78.50 0 P P 17 37 26.4 +0.9
MMAI **Mount Meron Ar** 78.50 0 P P 17 37 26.4 +0.9
comp=Z,4.9nm,0.8s,baz=151,slow=3.3,SNR=12
BHD **Baghdad** 79.21 8 *e*P P 17 37 23.5 -5.8
BHD *e*S S 17 47 17.7 -11
ASAR **Alice Springs** 79.26 113 P P 17 37 29.5 -0.7
ASAR **Alice Springs** 79.26 113 P P 17 37 29.5 -0.7
comp=Z,12nm,0.8s,baz=225,slow=4.9,SNR=165
ASAR LR LR 18 07 05.6
comp=Z,2µm,18.4s,baz=232,slow=32
AS31 **Alice Springs** 79.27 113 *e*P P 17 37 29.2 -1.0
LCO **Las Campanas** 79.67 239 *e*P P 17 37 34.3 +1.7
comp=Z,53nm,1.0s
JBP **Jabalpur** 79.91 41 ⇑*i*P P 17 37 33.2 -0.2
JBP *ex* x 17 47 24.4
CSS **Prodhromos** 80.45 359 *e*P P 17 37 34.5 -1.6
comp=Z,34nm,1.0s
NPS **Neapolis** 81.18 352 *e*P P 17 37 41.5 +1.5
KARP **Karpathos** 81.33 354 *e*P P 17 37 42.5 +1.7
VAM **Vamos** 81.47 351 *e*P P 17 37 42.5 +1.1
ARG **Arkhangelos** 81.92 354 *e*P P 17 37 45.0 +1.2
WRA **Warramunga Arr** 82.20 110 P P 17 37 45.6 -0.3
WRA **Warramunga Arr** 82.20 110 P P 17 37 45.6 -0.3
comp=Z,11nm,0.8s,baz=218,slow=3.9,SNR=62
WRA LR LR 18 09 35.4
comp=Z,3µm,18.2s,baz=235,slow=32
WRAB **Tennant Creek** 82.21 110 *e*P P 17 37 45.3 -0.7
WRAB pmax pmax
comp=Z,19nm,0.9s
WRAB MLR MLR
comp=Z,3µm,22.0s
WRAB **Tennant Creek** 82.21 110 *e*P P 17 37 45.3 -0.7
comp=Z,19nm,0.9s
WRAB LR LR
comp=Z,3µm,22.0s
CEYT **Ceyhan** 82.48 1 *e*P P 17 37 46.8 +0.1
KAPI **Kappang** 82.77 90 LR LR 18 07 50.6
comp=Z,2µm,19.5s,baz=53,slow=31
SIV **San Ignacio** 82.84 255 P P 17 37 50.3 +1.0
SIV **San Ignacio** 82.84 255 P P 17 37 50.3 +1.0
comp=Z,15nm,0.9s,baz=138,slow=5.7,SNR=18
KOZT **Kozan** 82.95 1 *e*P P 17 37 50.6 +1.4
APE **Apeiranthos** 82.98 352 P P 17 37 49.4 0.0
APE **Apeiranthos** 82.98 352 *e*P P 17 37 49.0 -0.4
KMRS **Kahramanmaras** 82.99 2 *e*P P 17 37 47.0 -2.4
DYR **Agios Nikonas** 83.02 350 *e*P P 17 37 50.5 +0.9
CUKT **Cukurca** 83.08 7 *e*P P 17 37 51.5 +1.5
LVC **Limon Verde** 83.22 245 *e*P P 17 37 52.5 +1.0
PYL **PYLOS** 83.23 349 *e*P P 17 37 51.5 +0.9
ISP **Isparta** 83.39 356 *e*P P 17 37 51.9 +0.3
ISP **Isparta** 83.39 356 P P 17 37 51.3 -0.3
ITM **Ithomi** 83.48 350 *e*P P 17 37 47.5 -4.5
NDI **New Delhi** 83.49 36 *e*PKP3 P 17 37 47.2 -5.0
NDI AMB AMB 17 37 49.7
comp=Z,46nm,1.7s
VLX **Vlachokerasia** 83.62 350 *e*P P 17 37 54.5 +1.8
DID **Didima** 83.65 351 *e*P P 17 37 52.5 -0.3
SULT **Sultanhani-AKS** 83.68 359 *e*P P 17 37 54.8 +1.8
LADK **Ladik-KONYA** 83.70 358 *e*P P 17 37 53.9 +0.7
AMT **Artemida-Makis** 83.86 349 *e*P P 17 37 50.5 -3.4
SARI **SarD1z-Kayseri** 83.89 1 *e*P P 17 37 55.3 +1.1
ATH **Athens Observa** 84.06 351 *e*P P 17 37 55.5 +0.7
DARE **Darende-Malaty** 84.07 2 *e*P P 17 37 57.0 +2.0
PTL **Penteli** 84.12 351 P P 17 37 55.9 +0.7
PTL **Penteli** 84.12 351 *e*P P 17 37 55.5 +0.3
IZM **Izmir** 84.15 354 *e*P P 17 37 57.1 +1.8
BLCB **Balcova** 84.16 354 *e*P P 17 37 56.7 +1.4
KULA **Kula-Manisa** 84.17 355 *e*P P 17 37 57.6 +2.1
CHOS **Chios island** 84.24 353 P P 17 37 53.3 -2.6
KLV **Kalavryta, Ach** 84.31 350 *e*P P 17 37 54.5 -1.7
VANB **Van** 84.40 7 *e*P P 17 37 59.2 +2.4
RLS **Riolos of Patr** 84.41 349 *e*P P 17 37 49.5 -7.1
KEST **Kesra** 84.44 339 *e*P P 17 37 59.5 +2.6
KEST **Kesra** 84.44 339 P P 17 37 59.3 +2.4
comp=Z,7.0nm,0.9s,baz=159,slow=2.5,SNR=22
KEST LR LR 18 19 18.7
comp=Z,3µm,18.3s,baz=106,slow=38
PTK **Pertek** 84.45 3 *e*P P 17 37 58.5 +1.5
LAKA **Lakka** 84.52 350 P P 17 37 58.3 +1.1
AXS **Araxos** 84.56 349 P P 17 37 58.0 +0.6
BNGB **Bing¶ll** 84.61 4 *e*P P 17 37 59.0 +1.2
ALT **Altintas** 84.64 356 *e*P P 17 37 59.0 +1.1
KALE **Kalithea** 84.65 350 *e*P P 17 37 59.0 +1.1
EFP **Efpalio** 84.72 350 P P 17 37 58.9 +0.7
EFP **Efpalio** 84.72 350 *e*P P 17 37 59.5 +1.3
LKR **Lokris** 84.81 351 P P 17 37 58.4 -0.2
LKR **Lokris** 84.81 351 *e*P P 17 37 59.0 +0.4
SVRH **Sivrihisar-ESK** 84.97 357 *e*P P 17 38 01.3 +1.7
CLDR **Calderan** 84.99 7 *e*P P 17 38 01.3 +1.5
SMIA **Simia** 85.01 351 P P 17 38 00.4 +0.7
TVSB **Tavsanli** 85.06 356 *e*P P 17 38 01.3 +1.3
PRK **Paraskevi** 85.07 353 P P 17 38 01.1 +1.2
PRK **Paraskevi** 85.07 353 *e*P P 17 38 01.5 +1.6
SIGR **SIGRI** 85.08 353 P P 17 37 59.0 -0.9
BRTR **Keskin Array B** 85.20 359 P P 17 37 59.9 -0.9
BRTR **Keskin Array B** 85.20 359 P P 17 37 59.9 -0.9
comp=Z,12nm,0.8s,baz=174,slow=8.0,SNR=58
BRTR LR LR 18 14 44.3
comp=Z,2µm,19.8s,baz=348,slow=35
EVR **Evrytania** 85.21 350 P P 17 38 01.8 +1.0
EVR **Evrytania** 85.21 350 *e*P P 17 38 03.0 +2.2
AOS **Alonnisos** 85.22 351 P P 17 37 59.8 -0.9
LKD2 **Lefkada island** 85.24 349 P P 17 38 00.7 -0.1
AGG **Agios Georgios** 85.25 350 P P 17 38 00.1 -0.8
AGG **Agios Georgios** 85.25 350 *e*P P 17 38 01.5 +0.6
MAKR **Makrakomi, Fth** 85.27 350 P P 17 38 02.0 +1.0
AGRB **Hanur-Agry** 85.34 6 *e*P P 17 38 02.8 +1.2
BALB **Balikesir** 85.35 354 *e*P P 17 38 02.3 +1.0
ANTO **Ankara** 85.36 358 *e*P P 17 38 02.0 +0.6
ANTO **Ankara** 85.36 358 *e*P P 17 38 02.1 +0.6
ANTO pmax pmax
comp=Z,72nm,1.6s
ANTO **Ankara** 85.36 358 *e*P P 17 38 02.1 +0.6
comp=Z,72nm,1.6s
NEO **Neokhori** 85.43 351 P P 17 38 01.7 -0.1
NEO **Neokhori** 85.43 351 *e*P P 17 38 02.0 +0.2
ABSA **Djebel Ababsia** 85.43 338 P P 17 38 04.2 +2.2
CEL **Celeste** 85.47 345 *e*P P 17 38 03.5 +1.5
comp=Z,80nm,1.1s
XOR **Xorichti** 85.49 351 P P 17 38 01.4 -0.7
PYUN **Piuthan** 85.52 41 *e*P P 17 38 01.5 -1.2
KOLN **Koldanda** 85.52 42 *e*P P 17 38 02.2 -0.5
comp=Z,166nm,1.3s
CASM **Ain Smara** 85.68 337 P P 17 38 04.9 +1.8
CKHR **Kef el Ahmar** 85.72 336 P P 17 38 05.5 +2.0
KBL **Kabul** 85.73 28 *e*P P 17 38 03.9 +0.3
KBL pmax pmax
comp=Z,38nm,1.3s
KBL **Kabul** 85.73 28 *e*P P 17 38 03.9 +0.3
comp=Z,38nm,1.3s
CKFL **Kef-Lekhel** 85.75 337 P P 17 38 05.5 +1.9
GONE **Gonen-Balikesi** 85.76 354 *e*P P 17 38 05.0 +1.6
CMAH **Djebel Manchou** 85.78 338 P P 17 38 05.4 +1.8
CAVI **Cavuskoy** 85.79 356 *e*P P 17 38 04.6 +1.1
LIA **Limnos Island** 85.82 352 *e*P P 17 38 01.5 -2.1
THL **Klokotos Trika** 85.83 350 P P 17 38 02.8 -0.9
THL **Klokotos Trika** 85.83 350 *e*P P 17 38 05.0 +1.3
RSDY **Resadiye-TOKAT** 85.89 2 *e*P P 17 38 05.5 +1.5
SET **Setif** 85.93 336 P P 17 38 06.0 +1.6
BAYT **Ayd¨–ntepe-Bay** 85.98 4 *e*P P 17 38 06.0 +1.3
GULT **Gulveren** 85.99 357 *e*P P 17 38 06.5 +1.9
MDUB **Mudurnu** 86.00 357 *e*P P 17 38 06.0 +1.3
IGT **Igoumenitsa** 86.01 349 P P 17 38 04.1 -0.5
ADVT **Abdulvahap** 86.03 356 *e*P P 17 38 05.5 +0.9
GNI **Garni** 86.06 7 *e*P P 17 38 05.4 +0.3
GNI **Garni** 86.06 7 *e*P P 17 38 06.4 +1.3
comp=Z,43nm,1.5s
GNI LR LR
comp=Z,6µm,21.0s
GNI **Garni** 86.06 7 P P 17 38 06.2 +1.2
comp=Z,3.1nm,0.3s,baz=166,slow=15,SNR=6.4
CANT **Cankiri** 86.08 359 *e*P P 17 38 05.5 +0.5
DANN **Dangsing** 86.08 42 *e*P P 17 38 05.0 -0.6
comp=Z,131nm,0.9s
DMN **Daman** 86.09 43 *e*P P 17 38 05.0 -0.7
comp=Z,71nm,0.9s
MDT **Midelt** 86.12 327 P P 17 38 07.0 +1.5
MDT PP **PP** 17 41 28.0 +1.6
MDT **Midelt** 86.12 327 P P 17 38 07.0 +1.5
comp=Z,6.9nm,1.0s,baz=156,slow=8.0,SNR=9.2
MDT PP **PP** 17 41 28.0 +1.6
comp=Z,3.4nm,1.0s,baz=161,slow=3.1,SNR=3.7
KRBG **Karabiga-Canak** 86.14 354 *e*P P 17 38 06.8 +1.6
CM31 **Chiang Mai Arr** 86.19 59 *e*P P 17 38 05.9 -0.1
comp=Z,25nm,1.3s
CMAR **Chiang Mai Arr** 86.19 59 P P 17 38 05.5 -0.5
CMAR PP **PP** 17 41 25.3 -1.7
CMAR **Chiang Mai Arr** 86.19 59 P P 17 38 05.5 -0.5
comp=Z,2.9nm,0.8s,baz=223,slow=5.5,SNR=17
CMAR PP **PP** 17 41 25.3 -1.7
comp=Z,2.7nm,1.1s,baz=224,slow=6.3,SNR=3.3
CMAR LR LR 18 10 09.8
comp=Z,1µm,19.8s,baz=227,slow=31
GELI **Tayfur-Gelibol** 86.20 353 *e*P P 17 38 06.5 +1.0
PKIN **Phulchoki** 86.20 43 *e*P P 17 38 05.1 -1.1
comp=Z,18nm,1.2s
PKI **Pulchoki** 86.20 43 *e*P P 17 38 05.3 -1.0
ARMT **Armutlu** 86.21 355 *e*P P 17 38 06.0 +0.4
TIP **Timpagrande** 86.22 346 P P 17 38 05.8 +0.1
TIP **Timpagrande** 86.22 346 *e*P P 17 38 07.6 +1.8
comp=Z,23nm,0.9s
RAMN **Re** 86.26 45 *e*P P 17 38 05.6 -0.9
comp=Z,189nm,1.4s
MRMT **Marmara Adasi** 86.32 354 *e*P P 17 38 07.8 +1.5
KKN **Kakani** 86.33 43 *e*P P 17 38 06.0 -0.8
SMTH **Samothraki Isl** 86.35 353 *e*P P 17 38 06.5 +0.2
OUR **Ouranopolis** 86.36 352 P P 17 38 05.8 -0.5
PLG **Polygyros** 86.46 351 P P 17 38 05.1 -1.8
CHTO **Chiang Mai** 86.47 58 *e*P P 17 38 06.3 -1.1
CHTO pmax pmax
comp=Z,11nm,0.8s
CHTO **Chiang Mai** 86.47 58 *e*P P 17 38 06.3 -1.1
comp=Z,11nm,0.8s
CHTO **Chiang Mai** 86.47 58 P P 17 38 07.1 -0.3
ERIK **Erikli-Kesan** 86.47 354 *e*P P 17 38 07.4 +0.6
KVT **Kavak** 86.55 1 *e*P P 17 38 07.9 +0.6
ODAN **Odare** 86.58 45 *e*P P 17 38 07.0 -1.0
comp=Z,94nm,1.2s
KZN **Kozani** 86.59 350 P P 17 38 07.2 -0.3
ISK **Istanbul-Kandi** 86.69 356 *e*P P 17 38 08.3 +0.4
GUN **Gumba** 86.71 43 *e*P P 17 38 07.5 -1.3
comp=Z,99nm,0.9s
ALN **Alexandroupoli** 86.73 353 P P 17 38 07.8 -0.3
ALN **Alexandroupoli** 86.73 353 *e*P P 17 38 08.5 +0.4
SILT **Sile** 86.75 356 *e*P P 17 38 09.3 +1.1
BGKT **Bogazkoy** 86.82 355 *e*P P 17 38 09.9 +1.4
CTKS **Kestanelik-??a** 86.89 355 *e*P P 17 38 10.1 +1.2
SOH **Sokhos** 86.91 351 *e*P P 17 38 09.5 +0.4
FNA **Florina** 87.11 350 P P 17 38 10.3 +0.3
FNA **Florina** 87.11 350 *e*P P 17 38 10.5 +0.5
TAPN **Taplejung** 87.14 45 *e*P P 17 38 09.0 -1.9
GRG **Griva** 87.15 350 *e*P P 17 38 10.5 +0.3
SRS **Serrai** 87.18 351 P P 17 38 08.6 -1.7
AKH **Akhalkalaki** 87.20 6 P P 17 38 11.6 +1.0
KNT **Kendrikon** 87.30 351 P P 17 38 10.2 -0.7
LPAZ **La Paz** 87.32 249 *e*P P 17 38 13.6 +1.1
comp=Z,15nm,0.9s
LPAZ **La Paz** 87.32 249 P P 17 38 13.5 +1.0
comp=Z,6.8nm,0.8s,baz=160,slow=6.9,SNR=11
LPAZ LR LR 18 14 30.8
comp=Z,2µm,18.6s,baz=294,slow=34
NVR **Nevrokopi** 87.38 352 P P 17 38 10.5 -0.8
DGRG **David-gareji** 87.41 8 P P 17 38 12.0 +0.6
BZK **Bozkurt** 87.43 359 *e*P P 17 38 12.1 +0.6
KDZ **Kurdzhali** 87.53 353 *i* P P 17 38 09.7 -2.3
EDRB **Edirne** 87.62 354 *e*P P 17 38 13.0 +0.6
TBLG **Delisi** 87.63 7 P P 17 38 12.5 0.0
TBLG **Delisi** 87.63 7 P P 17 38 12.5 0.0
MMB **Musomiste** 87.63 352 *i* P P 17 38 11.0 -1.5
RZN **Rozhen** 87.64 352 *i* P P 17 38 12.4 -0.3
GOR **Gori** 87.83 7 P P 17 38 15.4 +1.9
KKB **Krupnik** 87.98 351 *e*P P 17 38 13.0 -1.1
DUS **Dusheti** 87.98 7 P P 17 38 22.2 +7.9
PLD **Plovdiv** 88.05 352 P P 17 38 14.7 +0.3
PHP **Peshkopia** 88.11 349 P P 17 38 14.7 -0.1
JMB **Yambol** 88.25 354 *i* P P 17 38 15.5 +0.1
ONI **Oni** 88.38 6 P P 17 38 15.3 -0.7
CHVG **Ch'k'valeri** 88.41 5 P P 17 38 18.6 +2.4
PGB **Panagyurishte** 88.54 352 *i* P P 17 38 15.5 -1.3
VTS **Vitosha** 88.68 351 ||P P 17 38 17.8 +0.2
VTS **Vitosha** 88.68 351 *i* P P 17 38 16.0 -1.6
VTS **Vitosha** 88.68 351 ||*i*P P 17 38 17.8 +0.2
PRD **Provadia** 88.92 354 *i* P P 17 38 19.4 +0.9
SZH **Strazhica** 89.09 353 *i* P P 17 38 18.6 -0.8
MAK **Makhachkala** 89.12 9 *e*P P 17 38 18.8 -0.6
MAK *e* 17 41 56.5
MAK *e*PPP PPP 17 43 48.1
MAK *e*S **SKSac** 17 48 47.6 -1.0
MAK *e* 17 49 10.9
MAK *e*SP **SPn** 17 50 11.4 -0.2
MAK *e*PS **PS** 17 50 17.1 +3.3
MAK pmax pmax
comp=Z,222nm,1.6s
MAK MLR MLR
comp=Z,5µm,19.0s
SOC **Sochi** 89.14 3*d* *i*P P 17 38 19.3 -0.3
SOC *e* 17 41 50.4
SOC *e*S **SKSac** 17 48 49.4 +0.7
SOC *e*SS **SS** 17 54 59.1 -3.7
SOC *e*SSS SSS 17 58 32.5
SOC pmax pmax
comp=Z,37nm,1.1s
SOC MLR MLR
comp=Z,3µm,21.0s
SAML **Samuel** 89.30 258 *e*P P 17 38 21.5 +0.3
comp=Z,28nm,1.4s
MPEP **Malo Peshtene** 89.38 352 *i* P P 17 38 20.7 0.0
KBZ **Khabaz** 89.47 6 P P 17 38 21.6 +0.6
KBZ **Khabaz** 89.47 6 P P 17 38 21.6 +0.6
KBZ **Khabaz** 89.47 6 P P 17 38 21.6 +0.6
comp=Z,6.9nm,0.9s,baz=167,slow=4.8,SNR=15
KBZ LR LR 18 17 11.3
comp=Z,3µm,20.1s,baz=338,slow=35
CTA **Charters Tower** 89.65 119 LR LR 18 12 57.4
comp=Z,2µm,21.1s,baz=214,slow=32
KIV **Kislovodsk** 89.68 6 *e*P P 17 38 21.6 -0.6
KIV *e* 17 41 54.6
KIV *e* 17 48 52.0
KIV *e*SS SS 17 55 12.5 +1.7
KIV pmax pmax
comp=Z,28nm,1.1s
KIV pmax pmax
comp=Z,133nm,4.3s
KIV MLR MLR
comp=Z,3µm,19.0s
KIV **Kislovodsk** 89.68 6 P P 17 38 22.8 +0.6
comp=Z,130nm,1.6s,SNR=5.2
TIRR **Tirgusor** 90.11 355 *e*P P 17 38 24.2 +0.1
TIRR pmax pmax
comp=Z,21nm,0.9s
TIRR **Tirgusor** 90.11 355 *e*P P 17 38 24.2 +0.1
comp=Z,20nm,0.9s
ANN **Anapa** 90.29 2 *e*P P 17 38 24.3 -0.6
ANN *e* 17 42 01.1
ANN *e* 17 48 55.3
ANN *e*SS SS 17 55 21.4 +2.1
ANN pmax pmax
comp=Z,62nm,1.5s
ANN MLR MLR
comp=N,2µm,20.0s
ANN MLR MLR
comp=Z,2µm,20.0s
SIM **Simferopol'** 90.42 359 *e*P P 17 38 26.2 +0.7
SIM *e* 17 42 01.0
SIM *e*S **S** 17 49 23.8 +4.1
SIM *e*PS PnS 17 51 01.0 +33
SIM pmax pmax
comp=Z,16nm,0.7s
SIM pmax pmax
comp=Z,100nm,8.1s
LSA **Lhasa** 90.79 46 *e*P P 17 38 27.1 -1.1
LSA pmax pmax
comp=Z,16nm,0.8s
LSA MLR MLR
comp=Z,4µm,22.0s
LSA **Lhasa** 90.79 46 *e*P P 17 38 27.1 -1.1
comp=Z,16nm,0.8s
LSA LR LR
comp=Z,4µm,22.0s
GOF **Gofitskoye** 90.80 6 *e*P P 17 38 33.4 +6.1
GOF pmax pmax
comp=Z,20nm,0.8s
PMPST **Porto Santo, M** 91.25 319 *e*P P 17 38 32.3 +2.6
PMPST *i* SKS SKSac 17 49 10.3 +8.8
ARR **Arges** 91.29 353 ⇑*i*P P 17 38 29.6 0.0
PBDV **Barranco-do-Ve** 91.29 327 *e*P P 17 38 31.6 +1.8
comp=Z,49nm,1.3s
MLR **Muntele Rosu** 91.31 354 P P 17 38 29.7 -0.1
MLR **Muntele Rosu** 91.31 354 ⇑*i*P P 17 38 29.8 0.0
MLR **Muntele Rosu** 91.31 354 P P 17 38 29.7 -0.1
comp=Z,1.5nm,0.7s,baz=198,slow=3.6,SNR=14
VOIR 91.32 353 ⇓P P 17 38 29.8 0.0
VOIR 91.32 353 ⇓*i*P P 17 38 29.8 0.0
PVAQ **Vaqueiros** 91.35 327 *e*P P 17 38 32.0 +2.0
comp=Z,56nm,1.6s
PVAQ *e*LR LR 18 08 51.9
comp=Z,3µm,24.5s
PVAQ *e*LQ LQ 18 08 53.2
PMOZ **Porto Moniz, M** 91.44 318 *e*SKS SKSac 17 49 13.1 +10
PMOZ *e*LR LR 18 08 30.2
comp=Z,2µm,20.4s
PMOZ *e*LQ LQ 18 08 51.0
LOT **Lotru** 91.45 352 ⇑*i*P P 17 38 31.3 +0.9
PLOR **Plostina** 91.61 354 ⇑P P 17 38 31.4 +0.3
PLOR **Plostina** 91.61 354 ⇑*i*P P 17 38 31.4 +0.3
VRI **Vrincioaia** 91.62 354 ⇓P P 17 38 31.3 +0.2
VRI **Vrincioaia** 91.62 354 ⇓*i*P P 17 38 31.3 +0.2
MORF **Marmelete** 91.62 327 *e*P P 17 38 33.6 +2.2
comp=Z,55nm,1.3s
MORF *i* SKS S 17 49 33.0 +1.8
MORF *i* SS SS 17 55 38.4 -0.6
MORF **Marmelete** 91.62 327 *e*P P 17 38 32.2 +0.8
PBAR **Barrancos** 91.78 328 *e*P P 17 38 34.0 +2.0
comp=Z,25nm,1.5s
PBAR *i* SKS S 17 49 29.7 -2.7
PBAR *i* SS SS 17 55 17.3 -24
PBAR *e*LR LR 18 09 02.7
comp=Z,3µm,24.5s
BZS **Buzias** 91.84 351 ⇓P P 17 38 32.6 +0.5
BZS **Buzias** 91.84 351 ⇓*i*P P 17 38 32.6 +0.5
PTEO **Sao Teotonio** 91.86 327 *e*P P 17 38 35.1 +2.7
comp=Z,38nm,1.8s
MESJ **Messejana** 91.93 327 *e*P P 17 38 33.7 +1.0
MESJ AMb AMB 17 38 38.3
comp=Z,36nm,1.5s
MESJ *e*SS SS 17 55 44.9 +1.7
MESJ **Messejana** 91.93 327 *e*P P 17 38 33.7 +1.0
comp=Z,36nm,1.5s
MESJ *e*SS SS 17 55 44.9 +1.7
MESJ **Messejana** 91.93 327 *e*P P 17 38 33.6 +1.0
ESDC **Sonseca Array** 92.02 331 P P 17 38 34.3 +1.1
ESDC **Sonseca Array** 92.02 331 P P 17 38 34.3 +1.1
comp=Z,7.1nm,0.8s,baz=157,slow=4.1,SNR=38
ESDC LR LR 18 20 07.7
comp=Z,4µm,19.1s,baz=150,slow=36
PAB **San Pablo** 92.04 331 *e*P P 17 38 33.5 +0.2
PAB pmax pmax
comp=Z,22nm,1.5s
PAB **San Pablo** 92.04 331 *e*P P 17 38 33.5 +0.2
comp=Z,22nm,1.5s
LMR **La Mourre** 92.34 340 *e*P P 17 38 35.3 +0.9
comp=Z,13nm,1.3s
LMR **La Mourre** 92.34 340 *e*P P 17 38 35.3 +0.9
LMR pmax pmax
comp=Z,132nm,1.3s
LMR **La Mourre** 92.34 340 *e*P P 17 38 35.3 +0.9
comp=Z,132nm,1.3s
EVO **Evora** 92.45 328 *e*P P 17 38 35.3 +0.2
comp=Z,74nm,1.4s
EVOP **Sao Brissos** 92.49 328 *e*P P 17 38 35.3 0.0
EVOP pmax pmax
comp=Z,74nm,1.4s
EVOP **Sao Brissos** 92.49 328 *e*P P 17 38 35.3 0.0
comp=Z,74nm,1.4s
FRF **La Foret Royal** 92.52 340 *e*P P 17 38 36.3 +1.0
comp=Z,61nm,1.2s
FRF **La Foret Royal** 92.52 340 *e*P P 17 38 36.3 +1.0
FRF pmax pmax
comp=Z,61nm,1.2s
FRF **La Foret Royal** 92.52 340 *e*P P 17 38 36.3 +1.0
comp=Z,61nm,1.2s
KSH **Kashi** 92.58 31 P P 17 38 32.8 -3.0
KSH *e*pP **PcP** 17 38 36.2 -0.3
KSH *e*sP **sP** 17 38 39.9 -1.2
KSH *e*PP **PP** 17 42 12.9 -5.0
KSH *e*SKS **SKSac** 17 49 02.9 -6.1
KSH *e*S **SKKSac** 17 49 28.8 +2.0
KSH pmax pmax
comp=Z,8.0nm,0.9s
KSH pmax pmax
comp=Z,350nm,6.3s
KSH LR LR
comp=N,6µm,16.4s
KSH LR LR
comp=E,1µm,12.8s
KSH LR LR
comp=Z,6µm,17.8s
PESTR **Estremoz** 92.59 328 *i* SKS SKSac 17 49 21.5 +13
PESTR *i* SS **SS** 17 55 55.3 +2.5
KIS **Kishinev** 92.62 356 *e*P P 17 38 34.5 -1.1
comp=Z,100nm,1.6s
KIS **Kishinev** 92.62 356 *e*PP PP 17 42 20.0 +2.1
KIS *e*SKS **SKSac** 17 49 15.0 +6.5
KIS *e*S **ScS** 17 49 42.0 +0.5

KIS eSS **SS** 17 56 00.0 +7.1
KIS LRM MLR 18 22 57.0
comp=Z,2µm,19.0s
KIS Kishinev 92.62 356 eP **P** **17 38 34.5 -1.1**
KIS e 17 42 20.0
KIS e 17 49 15.0
KIS eS **ScS** **17 49 42.0 +0.5**
KIS eSS **SS** **17 56 00.0 +7.1**
KIS pmax pmax
comp=Z,110nm,1.6s
KIS MLR MLR
comp=Z,2µm,19.0s
KIS MLR MLR
comp=N,2µm,19.0s
KIS MLR MLR
comp=E,1µm,19.0s
KIS MLR MLR
comp=Z,2µm,19.0s
PKSM Moragy 92.80 349 ⇑P **P** **17 38 36.0 -0.5**
PKSM Moragy 92.80 349⇑*i*P **P** **17 38 36.0 -0.5**
DRGR 92.89 352 ⇑P P 17 38 33.5 -3.5
DRGR 92.89 352⇑*i*P P 17 38 33.5 -3.5
VISS Visnje 92.98 346 *i* P **P** **17 38 38.0 +0.7**
PMTG Montargil 93.00 328 eP **P** **17 38 39.9 +2.3**
comp=Z,29nm,1.4s
PMRV Marv??o 93.01 328 eP **P** **17 38 39.5 +1.8**
comp=Z,29nm,1.2s
PMRV *i* SKS SKSac 17 49 26.4 +15
PMRV *i* SS SS 17 55 42.6 -16
PMRV eLR LR 18 10 16.6
comp=Z,3µm,12.3s
PMRV eLQ LQ 18 10 47.5
LEGS Legarje 93.05 346 eP **P** **17 38 38.8 +1.2**
LIS Lisbon 93.05 327 eP **P** **17 38 38.5 +0.7**
LIS AMb AMB 17 39 01.8
comp=Z,90nm,1.0s
LIS eSS SS 17 56 01.0 +1.8
LIS Lisbon 93.05 327 eP **P** **17 38 38.5 +0.7**
comp=Z,90nm,1.0s
LIS eSS SS 17 56 01.0 +1.8
LIS Lisbon 93.05 327 eP **P** **17 38 38.5 +0.7**
JAVS Javornik 93.20 346 *i* P **P** **17 38 39.1 +0.5**
PMAFR Mafra 93.31 327 *i* SKS SKSac 17 49 33.0 +20
PMAFR *i* SS **SS** **17 56 09.3 +6.3**
VOY Vojsko 93.37 345 eP **P** **17 38 39.9 +0.6**
VOY e 17 38 40.4
QIZ Qiongzhong 93.37 66 P **P** **17 38 40.6 +0.7**
QIZ PP **PP** **17 42 23.5 -0.7**
QIZ SKS **SKSac** **17 49 13.0 -1.1**
QIZ S **S** **17 49 48.7 +1.2**
QIZ sS **sS** **17 49 54.5 +0.6**
QIZ SS **SS** **17 56 08.1 +3.7**
QIZ pmax pmax
comp=Z,17nm,1.7s
QIZ pmax pmax
comp=Z,160nm,6.1s
QIZ LR LR
comp=N,2µm,19.2s
QIZ LR LR
comp=Z,3µm,26.1s
PCBR Castelo Branco 93.41 329 eP **P** **17 38 41.0 +1.5**
comp=Z,17nm,1.9s
BURAR Bucovina Array 93.47 353⇓*i*P **P** **17 38 39.3 -0.4**
BUR08 Bucovina Ar. S 93.50 353 eP **P** **17 38 39.6 -0.3**
KMI Kunming 93.55 57 P **P** **17 38 41.2 +0.4**
KMI pP **pP** **17 38 46.2 +1.5**
KMI sP **sP** **17 38 47.9 +1.9**
KMI PP **PP** **17 42 30.5 +4.7**
KMI SKS **SKSac** **17 49 16.9 +1.6**
KMI S **S** **17 49 47.6 -1.7**
KMI SS **SS** **17 56 12.1 +4.8**
KMI pmax pmax
comp=Z,10.0nm,1.5s
KMI LR LR
comp=N,3µm,16.8s
KMI LR LR
comp=E,1µm,17.4s
KMI LR LR
comp=Z,2µm,18.4s
LASF Ste Croix 93.70 338 eP **P** **17 38 41.3 +0.5**
comp=Z,74nm,1.3s
LASF Ste Croix 93.70 338 eP **P** **17 38 41.3 +0.5**
comp=Z,74nm,1.3s
EPF Esparros 93.71 335 eP **P** **17 38 41.0 +0.1**
comp=Z,19nm,1.2s
EPF Esparros 93.71 335 eP **P** **17 38 41.0 +0.1**
EPF pmax pmax
comp=Z,19nm,1.2s
EPF Esparros 93.71 335 eP **P** **17 38 41.0 +0.1**
comp=Z,19nm,1.2s
OBKA Obir 93.72 346⇓*i*P **P** **17 38 41.4 +0.5**
comp=Z,21nm,1.1s,SNR=7.4
PERS Pernice 93.75 346 *i* P **P** **17 38 42.0 +1.1**
SOKA Soboth 93.80 346⇑*i*P **P** **17 38 42.4 +1.2**
comp=Z,19nm,1.2s
MTE Manteigas 93.92 329 eLR LR 18 10 18.7
comp=Z,3µm,32.7s
MTE eLQ LQ 18 11 16.6
KKAR Karatay Array 94.03 25 eP **P** **17 38 41.6 -0.7**
KKAR pmax pmax
comp=Z,26nm,1.4s
KKAR Karatay Array 94.03 25 eP **P** **17 38 41.6 -0.7**
comp=Z,26nm,1.4s
ARSA Arzberg 94.28 347⇑*i*P **P** **17 38 44.0 +0.7**
comp=Z,22nm,1.2s,SNR=10
ABTA Abfaltersbach 94.31 345⇑*i*P **P** **17 38 44.7 +1.2**
comp=Z,24nm,1.3s,SNR=7.9
LPG La Plagne 94.32 340 eP **P** **17 38 44.1 +0.2**
LPG La Plagne 94.32 340 eP **P** **17 38 44.1 +0.2**
LPG La Plagne 94.32 340 eP **P** **17 38 44.1 +0.2**
PVIS Viseu 94.33 329 eP **P** **17 38 45.2 +1.4**
comp=Z,16nm,1.3s
LPL La Plagne 94.34 340 eP **P** **17 38 44.3 +0.4**
LPL La Plagne 94.34 340 eP **P** **17 38 44.3 +0.4**
LPL La Plagne 94.34 340 eP **P** **17 38 44.3 +0.4**
MVO Moncorvo 94.41 330 eP **P** **17 38 45.9 +1.7**
comp=Z,14nm,1.5s
MVO *i* SKS SKSac 17 49 37.7 +19
MVO *i* SS **SS** **17 56 20.3 +1.4**
MVO eLR LR 18 10 33.9
comp=Z,4µm,12.3s
MVO eLQ LQ 18 12 44.0
UZH Uzhgorod 94.75 352 eP **P** **17 38 45.4 0.0**
UZH *i* 17 38 54.6
KECS Kecovo 94.80 350 eP **P** **17 38 46.2 +0.5**
KECS pmax pmax
comp=Z,2.0nm,0.9s
KECS Kecovo 94.80 350 eP **P** **17 38 46.2 +0.5**
AAK Ala-Archa 94.85 28 eP **P** **17 38 46.2 -0.1**
AAK 17 42 34.8
AAK pmax pmax
comp=Z,10.0nm,1.5s
AAK MLR MLR
comp=Z,3µm,19.0s
AAK Ala-Archa 94.85 28 eP **P** **17 38 46.2 -0.1**
comp=Z,9.9nm,1.5s
AAK PP **PP** **17 42 34.8 -0.9**
AAK LR LR
comp=Z,3µm,19.0s
AAK Ala-Archa 94.85 28 P **P** **17 38 46.0 -0.2**
comp=Z,1.0nm,0.4s,baz=162,slow=5.3,SNR=7.1
AAK PP **PP** **17 42 34.8 -0.9**
comp=Z,0.6nm,0.3s,baz=191,slow=12,SNR=4.6
DAVOX Davos/Dischmat 94.85 343 P **P** **17 38 46.8 +0.6**
DAVOX PP **PP** **17 42 37.8 +2.1**
DAVOX Davos/Dischmat 94.85 343 P **P** **17 38 46.8 +0.6**
comp=Z,3.2nm,0.8s,baz=212,slow=13,SNR=4.0
DAVOX PP **PP** **17 42 37.8 +2.1**
comp=Z,2.4nm,0.7s,baz=129,slow=13,SNR=3.7
POLO Lamas de Olo 94.87 329 eP **P** **17 38 48.0 +1.7**
comp=Z,11nm,1.3s
POLO *i* SKS 17 57 23.9
PBRG Braganca 94.88 330 *i* SKS SKSac 17 48 55.9 -25
PBRG *i* SS **SS** **17 56 26.7 +1.2**
FETA Feichten 94.91 344⇑*i*P **P** **17 38 46.5 +0.1**
comp=Z,16nm,1.1s,SNR=6.5
ZST Bratislava 94.96 348 eP **P** **17 38 46.3 -0.1**
ZST pmax pmax
comp=Z,11nm,1.1s
ZST Bratislava 94.96 348 eP **P** **17 38 46.3 -0.1**
WTTA Wattenberg 94.97 344⇓*i*P **P** **17 38 47.4 +0.6**
comp=Z,18nm,1.2s
VYHS Vyhne 95.02 349 eP **P** **17 38 46.9 +0.2**
VYHS pmax pmax
comp=Z,4.0nm,1.2s

VYHS Vyhne 95.02 349 eP **P** **17 38 46.9 +0.2**
KOLS Kolonicke sedl 95.05 352 eP **P** **17 38 47.2 +0.4**
KOLS pmax pmax
comp=Z,9.0nm,1.5s
KOLS Kolonicke sedl 95.05 352 eP **P** **17 38 47.2 +0.4**
FRU Bishkek 95.07 28 eP **P** **17 38 46.0 -1.1**
FRU *e* 17 42 33.5
FRU MLR MLR
comp=Z,2µm,19.0s
CRVS Cervenica-Dubn 95.10 351 eP **P** **17 38 45.5 -1.6**
CRVS pmax pmax
comp=Z,14nm,1.5s
CRVS Cervenica-Dubn 95.10 351 eP **P** **17 38 45.5 -1.6**
RETA Reutte 95.35 344⇑*i*P **P** **17 38 48.9 +0.6**
comp=Z,19nm,1.3s
PGAV Gavieira, Arco 95.56 329 eP P 17 38 44.0 -5.4
comp=Z,21nm,1.3s
PGAV *i* SKS S 17 49 42.6 -23
PGAV *i* SS **SS** **17 56 29.9 -5.4**
PGAV eLQ LQ 18 06 30.4
PGAV eLR LR 18 10 49.1
comp=Z,3µm,20.4s
STHS Stebnicka Huta 95.64 351 eP **P** **17 38 50.0 +0.5**
STHS pmax pmax
comp=Z,3.0nm,1.3s
STHS Stebnicka Huta 95.64 351 eP **P** **17 38 50.0 +0.5**
SMF Signal de Mont 96.10 339 eP **P** **17 38 51.6 -0.1**
SMF Signal de Mont 96.10 339 eP **P** **17 38 51.6 -0.1**
SMF Signal de Mont 96.10 339 eP **P** **17 38 51.6 -0.1**
VRAC Vranov 96.12 348 P **P** **17 38 51.9 +0.2**
VRAC PP **PP** **17 42 44.6 -0.7**
VRAC Vranov 96.12 348 P **P** **17 38 51.9 +0.2**
comp=Z,1.1nm,0.4s,baz=219,slow=9.1,SNR=3.3
VRAC PP **PP** **17 42 44.6 -0.7**
comp=Z,1.0nm,0.3s,baz=51,slow=13,SNR=4.6
GERES GERESS Array B 96.12 346 P **P** **17 38 52.6 +0.7**
GERES PP **PP** **17 42 44.2 -1.2**
GERES GERESS Array B 96.12 346 P **P** **17 38 52.6 +0.7**
comp=Z,0.6nm,0.8s,baz=160,slow=4.3,SNR=4.4
GERES PP **PP** **17 42 44.2 -1.2**
comp=Z,1.0nm,0.8s,baz=165,slow=6.6,SNR=4.6
GERES LR LR 18 24 44.7
comp=Z,4µm,21.2s,baz=163,slow=37
TCF Toulx Ste Croi 96.19 338 eP **P** **17 38 52.3 +0.2**
comp=Z,59nm,1.7s
TCF Toulx Ste Croi 96.19 338 eP **P** **17 38 52.3 +0.2**
TCF pmax pmax
comp=Z,59nm,1.7s
TCF Toulx Ste Croi 96.19 338 eP **P** **17 38 52.3 +0.2**
comp=Z,59nm,1.7s
TREC Trest 96.27 347 AMS AMS 18 22 40.0
comp=Z,2µm,18.3s
AKASG Malin Array Be 96.30 356*c*eP **P** **17 38 52.7 +0.3**
AKASG Malin Array Be 96.30 356 P **P** **17 38 51.7 -0.7**
AKASG Malin Array Be 96.30 356 P **P** **17 38 51.7 -0.7**
comp=Z,0.3nm,0.4s,baz=180,slow=4.5,SNR=5.8
AKASG LR LR 18 28 37.7
comp=Z,2µm,18.6s,baz=210,slow=39
AVF Avril sur Loir 96.36 339 eP **P** **17 38 52.8 0.0**
comp=Z,38nm,1.2s
AVF Avril sur Loir 96.36 339 eP **P** **17 38 52.8 0.0**
AVF pmax pmax
comp=Z,38nm,1.2s
AVF Avril sur Loir 96.36 339 eP **P** **17 38 52.8 0.0**
comp=Z,38nm,1.2s
KHC Kasperske Hory 96.42 346 eP **P** **17 38 53.9 +0.8**
KHC *e* 17 42 53.5
KHC eSP SP 17 51 36.3 +3.3
KHC eSS **SS** **17 56 45.2 -1.9**
KHC MLR MLR
comp=Z,3µm,19.6s
KHC Kasperske Hory 96.42 346 eP **P** **17 38 53.9 +0.8**
KHC *ex* x 17 39 04.2
KHC *ex* x 17 42 38.2
KHC ePP PP 17 42 53.5 +5.9
KHC eSKS SKSac 17 49 37.8 +8.8
KHC eSP **SP** **17 51 36.3 +3.4**
KHC *ex* x 17 55 50.5
KHC eSS **SS** **17 56 45.2 -1.9**
KHC AMS AMS 18 22 30.0
comp=Z,3µm,19.6s
OKC Ostrava-Krasne 96.42 349 *ex* PP 17 42 57.7 +10
OKC eSKS SKSac 17 49 38.0 +9.1
OKC eSP **SP** **17 51 35.3 +2.4**
OKC eSS **SS** **17 56 49.1 +2.1**
OKC AMS AMS 18 23 30.0
comp=Z,2µm,18.2s
WET Wettzell 96.55 346 ePP PP 17 42 47.4 -1.2
SSF Saint Saulge 96.57 339 eP **P** **17 38 53.6 -0.2**
SSF Saint Saulge 96.57 339 eP **P** **17 38 53.6 -0.2**
SSF Saint Saulge 96.57 339 eP **P** **17 38 53.6 -0.2**
LOR Lormes 96.68 339 eP **P** **17 38 54.2 -0.1**
comp=Z,41nm,1.4s
LOR Lormes 96.68 339 eP **P** **17 38 54.2 -0.1**
comp=Z,41nm,1.4s
GYA Guiyang 96.88 59 P **P** **17 38 58.8 +2.9**
GYA PP **PP** **17 42 55.8 +4.2**
GYA SKS **SKSac** **17 49 34.7 +2.0**
GYA S **S** **17 50 17.3 -0.7**
GYA SS **SS** **17 56 56.3 +1.9**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,280nm,6.2s
GYA LR LR
comp=N,2µm,19.6s
GYA LR LR
comp=E,2µm,20.2s
GYA LR LR
comp=Z,2µm,19.4s
PRU Pruhonice 97.09 347 eP Pdif 17 38 57.1 +0.9
PRU *e* 17 42 54.9
PRU eSP SP 17 51 43.9 +3.7
PRU eSS **SS** **17 56 53.8 -2.7**
PRU MLR MLR
comp=Z,4µm,20.5s
PRU Pruhonice 97.09 347 eP Pdif 17 38 57.1 +0.9
PRU *ex* x 17 39 14.0
PRU ePP **PP** **17 42 54.9 +2.2**
PRU *ex* x 17 49 43.7
PRU eSP SP 17 51 43.9 +3.7
PRU eSS **SS** **17 56 53.8 -2.7**
PRU AMS AMS 18 23 40.0
comp=Z,4µm,20.5s
DPC Dobruska-Polom 97.18 348 eP Pdif 17 38 57.9 +1.3
DPC eSP SP 17 51 44.7 +3.5
DPC eSS **SS** **17 56 54.5 -3.3**
DPC Dobruska-Polom 97.18 348 eP Pdif 17 38 57.9 +1.3
DPC *ex* x 17 39 11.2
DPC *ex* x 17 42 42.9
DPC *ex* x 17 49 43.6
DPC eSP SP 17 51 44.7 +3.5
DPC eSS **SS** **17 56 54.5 -3.3**
DPC AMS AMS 18 21 10.0
PRA Prague 97.19 347 AMS AMS 18 24 00.0
ROTZ Rotzenmuhle 97.27 345 ePP PP 17 42 50.9 -3.2
GRF Grafenberg Arr 97.38 345 eP Pdif 17 38 58.6 +1.1
comp=Z,12nm,1.1s
GRF ePP **PP** **17 42 51.4 -3.6**
GRF Grafenberg Arr 97.38 345 eP Pdif 17 38 58.6 +1.1
GRF *e* 17 42 51.4
GRF pmax pmax
comp=Z,12nm,1.1s
PVCC Panska Ves 97.61 347 *ex* x 17 49 46.6
PVCC ePS **PS** **17 51 53.4 +6.0**
PVCC AMS AMS 18 25 30.0
comp=Z,4µm,20.6s
NKC Novy Kostel 97.68 346 ePP PP 17 42 54.1 -3.2
NKC ePS **PS** **17 51 53.2 +5.0**
NKC *ex* x 17 56 47.5
NKC AMS AMS 18 24 40.0
comp=Z,3µm,19.5s
AKTO Aktyubinsk 97.95 15 P **P** **17 38 58.8 -1.1**
AKTO Aktyubinsk 97.95 15 P **P** **17 38 58.8 -1.1**
AKTO Aktyubinsk 97.95 15 P **P** **17 38 58.8 -1.1**
comp=Z,0.8nm,0.6s,baz=178,slow=3.2,SNR=3.6
PMG Port Moresby 98.28 113 LR LR 18 22 23.5
comp=Z,2µm,18.4s,baz=41,slow=35
WLF Walferdange 98.38 342 P Pdif 17 39 04.4 +2.5
WLF Walferdange 98.38 342 ePP PP 17 43 02.1 -0.5
CD2 Chengdu 98.50 54 P Pdif 17 39 03.6 +0.6
CD2 pP pP 17 39 08.4 +1.5
CD2 sP sP 17 39 11.2 +3.0

CD2 PP **PP** **17 43 07.0 +3.1**
CD2 SKS **SKSac** **17 49 40.5 -0.2**
CD2 S **S** **17 50 29.3 -2.2**
CD2 sS sS 17 50 36.6 -1.3
CD2 SS **SS** **17 57 18.7 +1.6**
CD2 pmax pmax
comp=Z,310nm,10.7s
CD2 LR LR
comp=N,2µm,20.2s
CD2 LR LR
comp=E,1µm,19.0s
CD2 LR LR
comp=Z,3µm,20.2s
CLL Collm 98.62 346 eP **P** **17 39 00.0 -2.9**
CLL MLR MLR
comp=Z,3µm,20.0s
CLL Collm 98.62 346 ePdif Pdif 17 39 03.0 +0.1
CLL ePP PP 17 42 59.0 -5.4
CLL ePPP PPP 17 45 06.0
CLL ePPPP 17 46 54.0
CLL eSKSac SKSac 17 49 50.0 +10
CLL eSdif **Sdif** **17 50 41.0 +10**
CLL ePS **PS** **17 52 01.0 +2.7**
CLL eSS **SS** **17 57 15.0 -3.0**
CLL eSSS SSS 18 01 24.0
CLL *e*(SSSS) 18 04 54.0
CLL *e* 18 05 48.0
CLL Lm MLR 18 26 00.0
comp=Z,3µm,20.0s
DZM Mont Dzumac 99.32 135 eLR LR 18 11 44.8
comp=Z,6µm,33.2s
MICGM Minsk 100.16 356 eLR LR 17 53 10.0
OBN Obninsk 100.60 1 eP **Pdif** **17 39 11.4 -0.2**
WMQ Urumqi 100.77 36 eP **Pdif** **17 39 13.2 +0.4**
WMQ pP pP 17 39 18.0 +1.3
WMQ PP **PP** **17 43 25.0 +4.0**
WMQ SKS **SKSac** **17 49 51.0 -0.3**
WMQ S **Sdif** **17 50 47.0 -2.9**
WMQ SS **SS** **17 57 48.0 -0.4**
WMQ pmax pmax
comp=Z,9.0nm,0.6s
WMQ pmax pmax
comp=Z,260nm,6.5s
WMQ LR LR
comp=N,3µm,18.9s
WMQ LR LR
comp=E,2µm,18.0s
WMQ LR LR
comp=Z,2µm,22.6s
MKAR Makanchi Array 101.18 31 P **Pdif** **17 39 12.2 -2.3**
MKAR 17 43 21.0
MKAR Makanchi Array 101.18 31 P **Pdif** **17 39 12.2 -2.3**
MKAR PP **PP** **17 43 21.0 -3.0**
MKAR Makanchi Array 101.18 31 P **Pdif** **17 39 12.2 -2.3**
comp=Z,0.3nm,0.6s,baz=217,slow=3.6,SNR=3.4
MKAR PP **PP** **17 43 21.0 -3.0**
comp=Z,1.7nm,1.0s,baz=207,slow=9.0,SNR=5.7
LZH Lanzhou 102.42 51 sS sS 17 51 18.0 +7.0
LZH pmax pmax
comp=Z,15nm,1.0s
LZH pmax pmax
comp=Z,120nm,7.8s
LZH LR LR
comp=N,2µm,19.6s
LZH LR LR
comp=E,2µm,18.8s
LZH LR LR
comp=Z,2µm,20.0s
GTA Gaotai 102.81 46 eP **Pdif** **17 39 21.9 -0.2**
GTA pP 17 39 26.2
GTA sP 17 39 29.0
GTA PP **PP** **17 43 33.1 -3.5**
GTA SKS **SKSac** **17 49 59.3 -2.1**
GTA pmax pmax
comp=Z,5.0nm,1.2s
GTA pmax pmax
comp=Z,120nm,4.7s
GTA LR LR
comp=N,520nm,29.9s
GTA LR LR
comp=E,730nm,26.6s
GTA LR LR
comp=Z,820nm,29.5s
BVAR Borovoye Array 103.05 21 P **Pdif** **17 39 20.9 -1.7**
BVAR Borovoye Array 103.05 21 Pdif **Pdif** **17 39 20.9 -1.7**
BVAR Borovoye Array 103.05 21 Pdiff **Pdif** **17 39 20.9 -1.7**
comp=Z,0.6nm,0.5s,baz=228,slow=3.7,SNR=5.5
BRVK Borovoye 103.05 21 PFAKE 17 39 30.0 +7.4
BRVK LR LR
comp=Z,2µm,20.0s
KURBB Kurchatov Arra 103.21 27 Pdiff **Pdif** **17 39 22.6 -0.7**
comp=Z,1.0nm,0.7s,baz=219,slow=4.7,SNR=17
KURBB PP **PP** **17 43 34.1 -5.0**
comp=Z,0.6nm,0.9s,baz=212,slow=7.9,SNR=3.3
KURK Kurchatov 103.32 27 P **Pdif** **17 39 22.6 -1.2**
KURK MLR MLR
comp=Z,2µm,20.0s
KURK Kurchatov 103.32 27 Pdif **Pdif** **17 39 22.6 -1.2**
KURK PP PP 17 43 34.1 -5.8
KURK LR LR
comp=Z,2µm,20.0s
ARU Arti 103.81 13*d* *i*P **Pdif** **17 39 22.9 -3.0**
ARU PPP PPP 17 45 52.6
ARU S SKSac 17 50 12.5 +7.6
ARU SP **SP** **17 52 45.6 -6.3**
ARU PS **PS** **17 52 55.3 +1.7**
ARU pmax pmax
comp=Z,5.0nm,1.7s
ARU MLR MLR
comp=Z,3µm,19.0s
EKA Eskdalemuir Ar 105.83 338 PP PP 17 43 55.0 -3.6
EKA Eskdalemuir Ar 105.83 338 PP PP 17 43 55.0 -3.6
comp=Z,2.3nm,0.8s,baz=153,slow=6.4,SNR=4.2
NC602 NORSAR Array S 107.93 348 ePP PP 17 44 12.0 -1.9
NC602 eSS SS 17 59 28.6 +2.7
NOA NORSAR Array B 108.27 348 PP PP 17 44 17.1 +0.7
NOA NORSAR Array B 108.27 348 PP PP 17 44 17.1 +0.7
comp=Z,2.2nm,0.9s,baz=173,slow=7.0,SNR=3.7
NVS Novosibirsk 108.30 27 eP **Pdif** **17 39 50.3 +4.4**
NVS pmax pmax
comp=Z,4.0nm,1.0s
NVS pmax pmax
comp=N,2.0nm,1.2s
SSE Sheshan 109.12 65 ePdif **Pdif** **17 39 53.7 +3.5**
SSE SS SS 17 59 44.4 +1.4
SSE LR LR
comp=N,540nm,19.5s
SSE LR LR
comp=E,1µm,19.5s
SSE LR LR
comp=Z,1µm,20.5s
HHC Hu-ho-hao-te 110.04 52 ePKP **PKiKP** **17 43 58.5 +2.7**
HHC PKS **PKSdf** **17 47 34.0 +1.6**
HHC AMB AMB
comp=Z,370nm,5.4s
HHC LR LR
comp=N,3µm,20.0s
HHC LR LR
comp=E,3µm,19.4s
HHC LR LR
comp=Z,3µm,23.0s
RKT Rikitea 110.76 190 eLR LR 18 17 05.0
comp=Z,1µm,30.5s
TBI Tubuai 111.02 176 eLQ LQ 18 13 29.9
comp=Z,2µm,38.0s
TBI eLR LR 18 19 04.0
BJI Beijing 112.08 55 Pdif **Pdif** **17 40 04.4 +1.3**
BJI LR LR
comp=N,1µm,20.7s
BJI LR LR
comp=E,1µm,18.9s
BJI LR LR
comp=Z,2µm,21.8s
SONM Songino Array 112.22 44 PKiKP **PKiKP** **17 43 59.1 -0.6**
SONM PP **PP** **17 44 42.2 -3.2**
SONM Songino Array 112.22 44 PKiKP **PKiKP** **17 43 59.2 -0.6**
comp=Z,0.6nm,0.7s,baz=196,slow=2.1,SNR=4.6
SONM PP **PP** **17 44 42.2 -3.2**
comp=Z,0.8nm,0.9s,baz=193,slow=4.4,SNR=4.4
APA Apatity 113.09 359⇓*e*PKiKP PKiKP 17 43 55.4 -5.2
APA *e* 17 44 51.0
APA *e* 17 50 51.0
APA ePPS PPS 17 54 30.0
APA *i* 17 55 30.0
APA MLR MLR

comp=Z,2μm,22.0s
ARE0 **ARCESS Array S 115.28 356** *e*PP PP 17 45 11.6 +5.2
ARE0 *e* 18 01 01.2
TRO Tromso 115.77 354 *e*PP PP 17 45 13.9 +4.0
TRO *e*SS SS 18 01 12.6 +2.6
TRO AMS AMS 18 38 55.5
comp=Z,1μm,18.2s
PPT2 Papeete2 116.73 175 *e*LR LR 18 21 27.8
comp=Z,3μm,32.5s
KSAR Wonju Array Be 117.45 64 PKP **PKPdf 17 44 08.5 -1.4**
KSRS Korea Array 117.48 64 PKP **PKPdf 17 44 08.5 -1.4**
comp=Z,2.1nm,0.8s,baz=245,slow=2.6,SNR=8.7
CN2 Changchun 119.81 57 *e*PKP **PKPdf 17 44 12.2 -2.1**
CN2 PP **PP 17 45 40.0 +1.4**
CN2 SS SS 18 01 59.6 -4.0
CN2 AMB AMB
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,400nm,21.0s
CN2 LR LR
comp=E,500nm,21.0s
CN2 LR LR
comp=Z,600nm,20.0s
MDJ Mudanjiang 122.72 58 PKP **PKPdf 17 44 20.4 +0.6**
MDJ PP **PP 17 45 58.9 +0.5**
MDJ SS SS 18 02 41.7 +1.0
MDJ AMB AMB
comp=Z,370nm,7.5s
MDJ LR LR
comp=N,610nm,42.1s
MDJ LR LR
comp=E,1μm,40.0s
MDJ LR LR
comp=Z,1μm,40.0s
MAT Matsushiro 123.54 70 PKP **PKPdf 17 44 20.8 -0.9**
MJAR Matsushiro Arr 123.54 70 PKP **PKPdf 17 44 20.6 -1.2**
MJAR Matsushiro Arr 123.54 70 PKP **PKPdf 17 44 20.6 -1.2**
comp=Z,2.0nm,0.9s,baz=236,slow=4.2,SNR=7.3
USRK Ussuriysk Arra 123.92 59 PKP **PKPdf 17 44 21.3 -0.8**
comp=Z,4.1nm,0.8s,baz=278,slow=2.5,SNR=7.3
SPA0 Spitsbergen Ar 124.28 355 *e*PP PP 17 46 08.7 +0.5
SPA0 *e*SS SS 18 03 10.1 +11
KBS Kingsbay 125.26 355 *e*PP PP 17 46 16.6 +1.9
KBS *e*SS SS 18 03 20.7 +9.2
KBS AMS AMS 18 41 37.2
comp=Z,1μm,19.2s
KLR Kul'dur 126.43 54 *e*PKIKP **PKPdf 17 44 23.0 -3.8**
CLNS Chul'man 126.64 43 *e*PKIKP **PKPdf 17 44 27.2 +0.2**
CLNS pmax pmax
comp=Z,11nm,1.0s
CLNS pmax pmax
comp=E,3.0nm,1.0s
CLNS pmax pmax
comp=N,2.0nm,1.1s
DAG Danmarks Havn 126.91 347 *i* PKIKP **PKPdf 17 44 27.3 +0.4**
DAG pmax pmax
comp=Z,3.0nm,0.9s
DAG Danmarks Havn 126.91 347 *i* P **PKPdf 17 44 27.3 +0.4**
comp=Z,3.8nm,0.9s
HABR Khabarovsk 127.95 56 *e*P **Pdif 17 41 13.2 -0.2**
HABR *i* 17 44 29.8
HABR 17 46 33.0
HABR *e*PS **PS 17 56 40.2 +1.1**
HABR *e*SS SS 18 03 48.5 +2.2
HABR *e*SSS SSS 18 08 33.1
HABR pmax pmax
comp=N,6.0nm,0.9s
HABR pmax pmax
comp=E,5.0nm,0.9s
HABR pmax pmax
comp=Z,8.0nm,1.3s
SUMG Summit 128.46 338 *e*PKIKP **PKPdf 17 44 32.7 +2.2**
SUMG pmax pmax
comp=Z,6.0nm,1.0s
SUMG Summit 128.46 338 *i* P **PKPdf 17 44 32.7 +2.2**
comp=Z,5.9nm,1.0s
ASAJ Asahikawa 130.41 64 PKP **PKPdf 17 44 34.5 -0.1**
ASAJ Asahikawa 130.41 64 PKP **PKPdf 17 44 34.5 -0.1**
comp=Z,4.7nm,0.8s,baz=261,slow=24,SNR=4.2
YAK Yakutsk 131.11 39 *e*PKIKP **PKPdf 17 44 34.1 -1.2**
YAK pmax pmax
comp=Z,7.0nm,1.0s
YAK MLR MLR
comp=Z,1μm,18.0s
YAK MLR MLR
comp=E,755nm,17.0s
YAK MLR MLR
comp=N,508nm,18.0s
SCHQ Schefferville 131.78 311 PKP **PKPdf 17 44 34.9 -1.9**
SCHQ Schefferville 131.78 311 PKP **PKPdf 17 44 34.9 -1.9**
comp=N,3.2nm,0.9s,baz=148,slow=3.4,SNR=3.5
TIXI Tiksi 133.89 26 *i* PKIKP **PKPdf 17 44 39.6 -0.6**
TIXI pmax pmax
comp=Z,11nm,2.5s
WVT Waverly 136.60 278 *e*PKIKP **PKPdf 17 44 45.6 -0.8**
WVT Waverly 136.60 278 *e*PKPdf **PKPdf 17 44 45.6 -0.8**
WHTX Lake Whitney 141.08 266 ⇑PKPdf **PKPdf 17 44 50.6 -4.2**
baz=141
632A Uvalde 141.23 261 ⇓PKPdf **PKPdf 17 44 51.4 -3.8**
baz=141
SEY Seymchan 141.53 41 *i* PKIKP **PKPdf 17 44 54.6 0.0**
532A Rocksprings 141.69 262 ⇓PKPdf **PKPdf 17 44 53.5 -2.6**
baz=142
631A Perdido Creek 141.72 260 ⇓PKPdf **PKPdf 17 44 51.8 -4.2**
baz=142
JCT Junction City 141.83 262 *e*PKIKP **PKPdf 17 44 53.9 -2.3**
JCT Junction City 141.83 262 *e*P **PKPdf 17 44 53.9 -2.3**
JCT Junction City 141.83 262 ⇓PKPdf **PKPdf 17 44 52.7 -3.5**
baz=142
TUL1 Tulsa 142.03 273 ⇑PKPdf **PKPdf 17 44 52.8 -3.5**
baz=142
432A Menard 142.06 263 ⇓PKPdf **PKPdf 17 44 52.3 -4.4**
baz=142
531A Rocksprings 142.16 261 ⇑PKPdf **PKPdf 17 44 53.8 -3.0**
baz=142
332A Millersview 142.32 264 ⇑PKPdf **PKPdf 17 44 52.5 -4.6**
baz=142
431A Sonora 142.51 262 ⇑PKPdf **PKPdf 17 44 53.5 -4.0**
baz=143
232A Coleman 142.54 264 ⇓PKPdf **PKPdf 17 44 52.9 -4.6**
baz=143
530A J-C Ranch, Com 142.69 261 ⇑PKPdf **PKPdf 17 44 53.4 -4.4**
baz=143
331A San Angelo 142.75 263 ⇑PKPdf **PKPdf 17 44 53.8 -4.1**
baz=143
ABTX Abilene, Hawle 142.96 265 ⇑PKPdf **PKPdf 17 44 54.4 -3.7**
baz=143
PETK Petropavlovsk- 142.96 57 PKIKP PKPpre 17 44 53.7
PETK Petropavlovsk- 142.96 57 PKPpre PKPpre 17 44 53.7
PETK Petropavlovsk- 142.96 57 PKhKP PKPpre 17 44 53.7
comp=Z,2.6nm,0.5s,baz=241,slow=4.8,SNR=2.2
430A Baggett Ranch, 143.00 262 ⇓PKPdf PKPab 17 44 53.5 -0.1
baz=143
231A Bronte 143.04 264 ⇑PKPdf PKPab 17 44 54.3 +0.6
baz=143
Z32A Haskell 143.22 266 ⇓PKPdf PKPab 17 44 54.8 +0.4
baz=143
529A Stev Forest Ra 143.28 260 ⇑PKPdf PKPbc 17 44 55.5 -0.4
baz=143
330A Mertzon 143.33 262 ⇓PKPdf PKPbc 17 44 55.5 -0.6
baz=144
628A Black Gap, Mar 143.35 258 ⇑PKPdf PKPbc 17 44 56.5 +0.3
baz=144
429A Davenport Ranc 143.36 261 ⇓PKPdf PKPbc 17 44 55.8 -0.3
baz=144
PET Petropavlovsk 143.50 58 *e*PKIKP **PKPdf 17 44 58.9 +0.5**
PET *i* 17 45 02.2
PET *i* 17 45 06.4
PET MLR MLR
comp=Z,2μm,21.0s
131A Roby 143.51 265 ⇑PKPdf PKPbc 17 44 56.5 0.0
baz=144
WMOK Wichita Mounta 143.51 269 *e*PKHKP PKPab 17 44 55.2 -0.2
WMOK Wichita Mounta 143.51 269 *e*PKPdf PKPab 17 44 55.2 -0.2
230A Sterling City 143.56 263 ⇓PKPdf PKPbc 17 44 56.3 -0.4
baz=144
Y32A R-V Farms, Ver 143.58 267 ⇓PKPdf PKPbc 17 44 56.6 0.0
baz=144
627A Terlingua Ranc 143.67 258 ⇓PKPdf PKPab 17 44 56.8 +0.4
baz=144
Z31A Sharp Cattle R 143.69 266 ⇓PKPdf PKPbc 17 44 57.1 +0.1
baz=144
528A Cox Ranch, San 143.70 259 ⇓PKPdf PKPbc 17 44 57.5 +0.3
baz=144
TXAR Lajitas Array 143.79 257 PKP PKPbc 17 44 57.7 +0.2
TXAR Lajitas Array 143.79 257 PKP PKPbc 17 44 57.7 +0.2
comp=Z,8.7nm,0.8s,baz=143,slow=5.5,SNR=54
130A Snyder 143.86 264 ⇑PKPdf PKPbc 17 44 57.8 +0.3
baz=144
329A Wagon Wheel Ra 143.93 262 ⇓PKPdf PKPbc 17 44 57.6 -0.2
baz=144
428A Kincaid Ranch, 143.97 260 ⇑PKPdf PKPab 17 44 57.3 -0.1
baz=144
SPMN St. Paul 143.98 288 ⇓PKPdf PKPbc 17 44 58.1 +0.7
baz=144
229A Bryant Ranch, 144.09 263 ⇓PKPdf **PKPab 17 44 58.1 +0.3**
baz=144
Y31A Rekieta Farm, 144.13 267 ⇓PKPdf PKPbc 17 44 58.4 +0.1
baz=144
626A Big Bend Ranch 144.25 257 ⇓PKPdf PKPbc 17 44 59.0 +0.2
baz=144
527A Woodward Ranch 144.25 259 ⇑PKPdf **PKPab 17 44 58.6 0.0**
baz=144
X31A McDonald Ranch 144.29 268 ⇓PKPdf PKPbc 17 44 58.7 -0.1
baz=144
Z30A Sanderson Ranc 144.36 265 ⇑PKPdf PKPbc 17 44 59.1 0.0
baz=144
328A Wristen Ranch, 144.44 261 ⇑PKPdf **PKPab 17 44 58.8 -0.3**
baz=145
129A Stewart Farms, 144.51 264 ⇑PKPdf **PKPab 17 44 59.3 0.0**
baz=145
Y30A Stafford Cattl 144.53 266 ⇓PKPdf **PKPab 17 44 59.0 -0.4**
baz=145
526A Mary Lane Ranc 144.53 258 ⇑PKPdf PKPbc 17 44 59.8 0.0
baz=145
427A Hayter Ranch, 144.53 260 ⇓PKPdf **PKPab 17 44 59.5 0.0**
baz=145
W31A Holland Ranch, 144.56 269 ⇑PKPdf PKPbc 17 44 59.8 +0.2
baz=145
228A UT Block 9, Go 144.72 262 ⇓PKPdf **PKPab 17 44 59.7 -0.4**
baz=145
Z29A Hungry Hill Ra 144.75 265 ⇑PKPdf **PKPab 17 44 59.9 -0.4**
baz=145
V31A Spring Creek L 144.79 270 ⇓PKPdf **PKPdf 17 45 00.9 -0.4**
baz=145
X30A Coker Ranch, T 144.82 267 ⇑PKPdf PKPbc 17 45 00.5 0.0
baz=145
426A McDonald Obser 144.86 259 ⇑PKPdf PKPbc 17 45 01.1 +0.2
baz=145
327A Balmorhea Ranc 144.91 260 ⇑PKPdf **PKPab 17 45 00.2 -0.6**
baz=145
128A Castleberry Fa 144.93 263 ⇑PKPdf PKPbc 17 45 01.0 +0.1
baz=145
W30A Crocket Farms 145.00 268 ⇓PKPdf **PKPbc 17 45 00.7 -0.4**
baz=145
Y29A Porterfield Fa 145.06 265 ⇓PKPdf **PKPbc 17 45 00.9 -0.5**
baz=145
U31A Nine Bar Ranch 145.10 271 ⇑PKPdf **PKPbc 17 45 01.0 -0.3**
baz=145
227A Bennet, Jal 145.14 261 ⇓PKPdf **PKPbc 17 45 01.3 -0.4**
baz=145
326A Caldwell Ranch 145.21 260 ⇑PKPdf **PKPbc 17 45 01.2 -0.7**
baz=145
Z28A Tucker Farm, M 145.24 264 ⇑PKPdf **PKPbc 17 45 01.3 -0.6**
baz=145
T31A Randall Ranch, 145.33 272 ⇓PKPdf **PKPbc 17 45 01.9 -0.1**
baz=146
V30A Spur Ranch, Mi 145.38 269 ⇓PKPdf **PKPbc 17 45 02.0 -0.2**
baz=146
X29A Tulia 145.39 266 ⇓PKPdf **PKPbc 17 45 01.5 -0.9**
baz=146
S31A Mullinville 145.45 273 ⇑PKPdf **PKPdf 17 45 01.7 -0.7**
baz=146
Y28A McKinney Farm, 145.49 265 ⇑PKPdf **PKPdf 17 45 02.3 -0.3**
baz=146
127A Arkansas Junct 145.57 262 ⇑PKPdf **PKPdf 17 45 02.3 -0.6**
baz=146
425A Indio Mountain 145.58 258 ⇑PKPdf **PKPbc 17 45 03.1 0.0**
baz=146
AMTX Amarillo 145.61 267 *e*PKPdf **PKPdf 17 45 02.7 -0.1**
CLNB Carlsbad 145.69 261 *e*PKPdf **PKPab 17 45 04.2 +0.4**
W29A Amraillo 145.71 267 ⇑PKPdf **PKPdf 17 45 03.0 0.0**
baz=146
U30A WK&E Inc. Balk 145.74 270 ⇑PKPdf **PKPdf 17 45 03.1 +0.2**
baz=146
X28A Dimmitt 145.78 266 ⇑PKPdf **PKPdf 17 45 03.4 +0.2**
baz=146
226B Tecolote Peak, 145.78 261 ⇑PKPdf **PKPbc 17 45 03.6 -0.1**
baz=146
Z27A Tatum 145.83 263 ⇑PKPdf **PKPdf 17 45 03.4 +0.2**
baz=146
MSTX Muleshoe 145.88 265 ⇓PKPdf **PKPdf 17 45 03.7 +0.3**
baz=146
T30A Plains 145.91 271 ⇑PKPdf **PKPdf 17 45 03.2 0.0**
baz=146
325A Bean Ranch, Si 145.92 259 ⇑PKPdf **PKPdf 17 45 03.1 -0.4**
baz=146
GDL2 Guadalupe Moun 145.99 261 *e*PKPdf **PKPbc 17 45 04.6 +0.2**
ECSD EROS Data Cent 146.01 284 *e*PKPdf **PKPdf 17 45 02.8 -0.3**
126A Clayton Basin, 146.01 262 ⇓PKPdf **PKPdf 17 45 03.4 -0.1**
baz=146
V29A Stinnett 146.01 269 ⇑PKPdf **PKPdf 17 45 03.6 +0.2**
baz=146
Y27A Causey 146.11 264 ⇑PKPdf **PKPdf 17 45 04.0 +0.3**
baz=146
U29A Oasis Ranch, S 146.13 270 ⇑PKPdf **PKPdf 17 45 04.1 +0.5**
baz=146
S30A Montezuma 146.14 272 ⇓PKPdf **PKPdf 17 45 03.7 +0.1**
baz=146
W28A Vega 146.18 267 ⇓PKPdf **PKPdf 17 45 03.7 0.0**
baz=146
BGNE Belgrade 146.18 280 ⇓PKPdf **PKPdf 17 45 03.8 +0.3**
baz=146
R30A Dighton 146.31 273 ⇓PKPdf **PKPdf 17 45 04.0 +0.1**
baz=146
324A Moseley Ranch, 146.32 259 ⇓PKPdf **PKPdf 17 45 04.1 -0.1**
baz=146
Z26A Caprock 146.34 263 ⇑PKPdf **PKPdf 17 45 04.3 +0.2**
baz=146
MNTX Cornudas Mount 146.40 259 *e*PKPdf **PKPdf 17 45 04.1 0.0**
V28A Channing 146.44 268 ⇑PKPdf **PKPdf 17 45 04.3 +0.1**
baz=147
125A Gardner Draw, 146.46 261 ⇓PKPdf **PKPdf 17 45 04.6 +0.3**
baz=147
X27A F and S Farms, 146.47 266 ⇓PKPdf **PKPdf 17 45 04.8 +0.5**
baz=147
T29A Hugoton 146.49 271 ⇓PKPdf **PKPdf 17 45 04.7 +0.5**
baz=147
Y26A Elida 146.59 264 ⇑PKPdf **PKPdf 17 45 04.4 -0.1**
baz=147
S29A Ulysses 146.59 272 ⇑PKPdf **PKPdf 17 45 04.9 +0.5**
baz=147
W27A Bowe Ranch, En 146.67 266 ⇑PKPdf **PKPdf 17 45 04.8 +0.2**
baz=147
224A Cornudas Mount 146.72 260 ⇓PKPdf **PKPdf 17 45 05.2 +0.3**
baz=147
BILL Bilibino 146.72 31 ⇓PKP2 **PKPbc 17 45 05.0 -0.3**
BILL *e* 17 48 30.5
BILL pmax pmax
comp=Z,304nm,1.0s
U28A Mallet 146.76 269 ⇓PKPdf **PKPdf 17 45 04.9 +0.1**
baz=147
Z25A Roswell 146.85 262 ⇓PKPdf **PKPdf 17 45 05.4 +0.4**
baz=147
V27A Dan Oppiter Fa 146.87 267 ⇑PKPdf **PKPdf 17 45 05.6 +0.6**
baz=147
X26A CR and CF Fran 146.92 265 ⇓PKPdf **PKPdf 17 45 05.5 +0.4**
baz=147
R29A Marienthal 146.98 273 ⇑PKPdf **PKPdf 17 45 05.7 +0.7**
baz=147
124A Stringfield Ra 147.03 261 ⇑PKPdf **PKPdf 17 45 06.1 +0.7**
baz=147
T28A Walsh 147.05 270 ⇓PKPdf **PKPdf 17 45 05.3 +0.1**
baz=147
S28A Hannter 147.12 271 ⇑PKPdf **PKPdf 17 45 05.3 0.0**
baz=147
W26A Owens Ranch, T 147.18 266 ⇑PKPdf **PKPdf 17 45 05.5 0.0**
baz=147
Y25A Mesa, Roswell 147.19 263 ⇓PKPdf **PKPdf 17 45 06.0 +0.4**
baz=147
U27A Thompson Grove 147.20 268 ⇑PKPdf **PKPdf 17 45 06.1 +0.6**
baz=147
N30A Hueftle Ranch, 147.28 277 ⇑PKPdf **PKPdf 17 45 06.3 +0.9**
baz=148
Z24A Sheeppen Canyo 147.33 262 ⇓PKPdf **PKPdf 17 45 06.8 +0.8**
baz=148
ULM Lac du Bonnet 147.35 296 PKPbc **PKPbc 17 45 07.0 -0.5**
ULM Lac du Bonnet 147.35 296 PKPbc **PKPbc 17 45 07.0 -0.5**
comp=Z,28nm,0.8s,baz=63,slow=3.2,SNR=20
R28A Tribune 147.41 272 ⇓PKPdf **PKPdf 17 45 06.4 +0.6**
baz=148
T27A Campo 147.44 270 ⇓PKPdf **PKPdf 17 45 06.1 +0.2**
baz=148
O29A 4D Ranch, Culb 147.49 276 ⇑PKPdf **PKPdf 17 45 06.6 +0.9**
baz=148
X25A Clemmons Ranch 147.50 264 ⇑PKPdf **PKPdf 17 45 06.6 +0.5**
baz=148
123A Bell Site, Whi 147.55 260 ⇑PKPdf **PKPdf 17 45 06.8 +0.6**
baz=148
V26A Tequesquite Ra 147.56 267 ⇑PKPdf **PKPdf 17 45 07.0 +0.9**
baz=148
N29A Votaw Ranch, W 147.66 277 ⇓PKPdf **PKPdf 17 45 07.2 +1.2**
baz=148
Y24A Capitan 147.71 262 ⇑PKPdf **PKPdf 17 45 07.5 +1.0**
baz=148
W25A X Bar L Ranch, 147.73 265 ⇓PKPdf **PKPdf 17 45 07.0 +0.6**
baz=148
Q28A Sharon Springs 147.75 274 ⇑PKPdf **PKPdf 17 45 06.8 +0.5**
baz=148
222A Williams Famil 147.82 258 ⇓PKPdf **PKPdf 17 45 06.6 -0.1**
baz=148
U26A Atchley Ranch, 147.83 268 ⇑PKPdf **PKPdf 17 45 06.7 +0.1**
baz=148
BRSD Miller 147.84 284 ⇑PKPdf **PKPbc 17 45 07.8 -1.3**
baz=148
S27A Las Animas 147.87 270 ⇓PKPdf **PKPdf 17 45 06.7 +0.1**
baz=148
Z23A Rita Site, Whi 147.89 261 ⇑PKPdf **PKPdf 17 45 07.8 +1.1**
baz=148
P28A Saint Francis 147.92 274 ⇓PKPdf **PKPdf 17 45 07.2 +0.6**
baz=148
M29A Burnside Ranch 147.95 278 ⇓PKPdf **PKPdf 17 45 06.8 +0.3**
baz=148
X24A Lazy VL Ranch, 148.06 263 ⇓PKPdf **PKPdf 17 45 07.9 +0.9**
baz=148
R27A Eads 148.07 272 ⇓PKPdf **PKPdf 17 45 08.3 +1.4**
baz=148
122A Conniff Cattle 148.10 259 ⇑PKPdf **PKPdf 17 45 07.3 +0.2**
baz=148
T26A Comanche Natio 148.11 269 ⇑PKPdf **PKPdf 17 45 07.5 +0.4**
baz=148
Y23A Lovelace Mesa, 148.14 262 ⇑PKPdf **PKPdf 17 45 07.8 +0.6**
baz=148
V25A Rancho No Teng 148.16 266 ⇓PKPdf **PKPdf 17 45 07.6 +0.4**
baz=148
O28A Krutsinger Ran 148.17 275 ⇓PKPdf **PKPdf 17 45 06.9 0.0**
baz=148
221A Mesquite Ranch 148.22 257 ⇑PKPdf **PKPdf 17 45 07.3 0.0**
baz=148
S26A Kim 148.24 270 ⇑PKPdf **PKPdf 17 45 07.5 +0.4**
baz=148
N28A Pribbeno Ranch 148.24 276 ⇑PKPdf **PKPdf 17 45 06.7 -0.3**
baz=148
KSCO Kaye Shedlock' 148.28 273 ⇓PKPdf **PKPdf 17 45 07.6 +0.4**
baz=148
U25A Circle Dot Ran 148.30 267 ⇓PKPdf **PKPdf 17 45 07.2 -0.2**
baz=148
320A Kipp Ranch, An 148.33 256 ⇑PKPdf **PKPdf 17 45 07.9 +0.4**
baz=148
W24A Lazy 6 Ranch, 148.38 265 ⇑PKPdf **PKPdf 17 45 08.2 +0.6**
baz=149
Z22A Elephant Butte 148.39 260 ⇑PKPdf **PKPdf 17 45 07.9 +0.3**
baz=149
M28A Bar X Bar Ranc 148.40 278 ⇓PKPdf **PKPdf 17 45 07.6 +0.3**
baz=149
P27A Ficken Ranch, 148.49 274 ⇓PKPdf **PKPdf 17 45 08.1 +0.6**
baz=149
R26A Arlington 148.54 271 ⇑PKPdf **PKPdf 17 45 08.7 +1.1**
baz=149
121A Cookes Peak, D 148.54 258 ⇑PKPdf **PKPdf 17 45 07.9 0.0**
baz=149
V24A Rampart Ranch, 148.56 265 ⇑PKPdf **PKPdf 17 45 08.6 +0.7**
baz=149
X23A Hourglass Bar 148.59 263 ⇓PKPdf **PKPdf 17 45 08.1 +0.1**
baz=149
BNM Barren Site 148.66 262 *e*PKPdf **PKPdf 17 45 09.2 +1.1**
T25A Trinidad 148.66 268 ⇑PKPdf **PKPdf 17 45 07.9 -0.1**
baz=149
220A Playas Peak, P 148.67 256 ⇑PKPdf **PKPdf 17 45 08.6 +0.5**
baz=149
OGNE Ogallala 148.69 277 *e*PKPdf **PKPdf 17 45 08.9 +1.2**
OGNE Ogallala 148.69 277 ⇓PKPdf **PKPdf 17 45 08.3 +0.5**
baz=149
O27A Beecher Island 148.69 275 ⇑PKPdf **PKPdf 17 45 08.1 +0.3**
baz=149
LPM Los Pinos Moun 148.75 262 *e*PKPbc **PKPbc 17 45 12.3 +0.3**
Y22A Socorro 148.77 261 ⇑PKPdf **PKPdf 17 45 08.8 +0.6**
baz=149
319A Douglas 148.86 255 ⇑PKPdf **PKPdf 17 45 09.1 +0.7**
baz=149
Q26A Hugo 148.87 272 ⇑PKPdf **PKPdf 17 45 08.8 +0.7**
baz=149
W23A Werner Place, 148.87 264 ⇑PKPdf **PKPdf 17 45 08.8 +0.4**
baz=149
LENM Lemitar 148.91 261 *e*PKPdf **PKPdf 17 45 09.6 +1.1**
U24A Moreno Valley 148.91 267 ⇑PKPdf **PKPdf 17 45 09.0 +0.5**
baz=149
S25A Robets Cordova 148.93 269 ⇓PKPdf **PKPdf 17 45 08.5 +0.1**
baz=149
ANMO Albuquerque 148.97 263 *e*PKPdf **PKPdf 17 45 09.6 +1.0**
N27A Anderson Farm, 148.98 276 ⇑PKPdf **PKPdf 17 45 08.6 +0.4**
baz=149
P26A Davis Ranch, A 149.03 273 ⇓PKPdf **PKPdf 17 45 07.8 -0.6**
baz=149
R25A Fountain Ranch 149.05 270 ⇑PKPdf **PKPdf 17 45 08.4 -0.1**
baz=149
120A U Bar Ranch, L 149.12 257 ⇓PKPdf **PKPdf 17 45 08.7 -0.2**
baz=149
LAZ Ladron 149.15 262 *e*PKPbc **PKPbc 17 45 13.7 +0.6**
M27A Reverse DX Ran 149.16 277 ⇑PKPdf **PKPdf 17 45 09.0 +0.5**
baz=149
V23A Ortiz Mt. (NFS 149.20 265 ⇓PKPdf **PKPdf 17 45 09.2 +0.3**
baz=149
MDND Maddock 149.23 290 ⇑PKPdf **PKPdf 17 45 09.7 +1.4**
baz=149
O26A Horse Wrangler 149.29 275 ⇑PKPdf **PKPdf 17 45 09.7 +0.9**
baz=150
Y21A Point of Rocks 149.30 261 ⇓PKPdf **PKPdf 17 45 09.7 +0.5**
baz=150
L27A T5 Ranch, Ells 149.32 278 ⇑PKPdf **PKPdf 17 45 09.6 +0.8**
baz=150
W22A Albuquerque 149.32 263 ⇓PKPdf **PKPdf 17 45 09.5 +0.4**
baz=150
Q25A Bedland, Calha 149.37 272 ⇑PKPdf **PKPdf 17 45 09.5 +0.4**
baz=150
Z20A Nine Sixteen R 149.43 258 ⇑PKPdf **PKPdf 17 45 09.8 +0.5**
baz=150
S24A Houchin Ranch, 149.46 269 ⇑PKPdf **PKPdf 17 45 09.5 +0.1**
baz=150
N26A Koester Ranch, 149.47 276 ⇓PKPdf **PKPdf 17 45 09.7 +0.6**
baz=150
K27A Flueckinger Fa 149.49 280 ⇑PKPdf **PKPdf 17 45 09.3 +0.3**
baz=150
U23A El Rito 149.50 266 ⇑PKPdf **PKPdf 17 45 09.6 +0.2**
baz=150
P25A Willow Gulch B 149.58 273 ⇑PKPdf **PKPdf 17 45 10.0 +0.6**
baz=150
X21A Alamocita Cree 149.62 261 ⇓PKPdf **PKPdf 17 45 10.4 +0.8**
baz=150
M26A McRoberts Ranc 149.66 277 ⇑PKPdf **PKPdf 17 45 10.4 +1.0**
baz=150
R24A Sanders Place, 149.66 270 ⇓PKPdf **PKPdf 17 45 10.5 +1.0**
baz=150
Y20A Horse Springs, 149.73 260 ⇑PKPdf **PKPdf 17 45 09.9 0.0**
baz=150
T23A Casias Ranch, 149.75 267 ⇓PKPdf **PKPdf 17 45 10.4 +0.5**
baz=150
V22A San Miguel Ran 149.79 264 ⇑PKPdf **PKPdf 17 45 10.4 +0.5**
baz=150
O25A Wiggins 149.80 274 ⇑PKPdf **PKPdf 17 45 09.9 +0.3**
baz=150
L26A Underwood Farm 149.83 278 ⇑PKPdf **PKPdf 17 45 10.1 +0.5**
baz=150
W21A San Fidel 149.89 262 ⇑PKPdf **PKPdf 17 45 09.4 -0.6**
baz=150
U22A Llaves 149.99 265 ⇑PKPdf **PKPdf 17 45 10.7 +0.6**
baz=150
Q24A Divide 150.02 271 ⇑PKPdf **PKPdf 17 45 10.2 0.0**
baz=150
S23A Nye Farm, Mont 150.04 268 ⇓PKPdf **PKPdf 17 45 10.7 +0.4**
baz=150
N25A Grover 150.06 275 ⇑PKPdf **PKPdf 17 45 10.9 +0.8**
baz=150
P24A Kohler Place, 150.10 272 ⇑PKPdf **PKPdf 17 45 10.5 +0.3**
baz=150
K26A Motz Farm, Whi 150.14 279 ⇓PKPdf **PKPdf 17 45 10.6 +0.6**
baz=150
R23A Moffat 150.15 269 ⇑PKPdf **PKPdf 17 45 10.9 +0.4**
baz=150
X20A Quemado 150.17 261 ⇓PKPdf **PKPdf 17 45 10.7 +0.2**
baz=150
V21A Milan 150.24 264 ⇓PKPdf **PKPdf 17 45 11.1 +0.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=150						
M25A	**Palm-Egli Farm**	**150.28**	**276**	⇑PKPdf	**PKPdf**	**17 45 10.9**	**+0.6**
	baz=150						
T22A	**Edith**	**150.34**	**266**	⇓PKPdf	**PKPdf**	**17 45 10.9**	**+0.1**
	baz=150						
TUC	**Tucson**	**150.44**	**255**	*e*PKIKP	**PKPdf**	**17 45 11.3**	**+0.5**
TUC	**Tucson**	**150.44**	**255**	*e*PKPdf	**PKPdf**	**17 45 11.3**	**+0.5**
O24A	**Longmont**	**150.47**	**273**	⇑PKPdf	**PKPdf**	**17 45 10.8**	**+0.1**
	baz=151						
Q23A	**Hartsel**	**150.48**	**271**	⇑PKPdf	**PKPdf**	**17 45 10.9**	**0.0**
	baz=151						
W20A	**Ramah**	**150.48**	**262**	⇓PKPdf	**PKPdf**	**17 45 10.9**	**-0.1**
	baz=151						
L25A	**Engebretsen Ra**	**150.49**	**278**	⇑PKPdf	**PKPdf**	**17 45 11.0**	**+0.3**
	baz=151						
U21A	**Nageezi**	**150.58**	**265**	⇑PKPdf	**PKPdf**	**17 45 10.5**	**-0.6**
	baz=151						
K25A	**Mack Ranch, Ha**	**150.59**	**279**	⇑PKPdf	**PKPdf**	**17 45 11.0**	**+0.2**
	baz=151						
N24A	**Carr**	**150.62**	**275**	⇓PKPdf	**PKPdf**	**17 45 11.5**	**+0.5**
	baz=151						
S22A	**4UR Ranch, Cre**	**150.64**	**268**	⇓PKPdf	**PKPdf**	**17 45 11.2**	**0.0**
	baz=151						
P23A	**Jefferson**	**150.69**	**271**	⇑PKPdf	**PKPdf**	**17 45 10.7**	**-0.6**
	baz=151						
ISCO	**Idaho Springs**	**150.71**	**272**	⇓PKPdf	**PKPdf**	**17 45 11.2**	**-0.1**
	baz=151						
R22A	**Saguache, Gunn**	**150.82**	**269**	⇓PKPdf	**PKPdf**	**17 45 11.2**	**-0.3**
	baz=151						
M24A	**Cheyenne**	**150.83**	**276**	⇑PKPdf	**PKPdf**	**17 45 11.3**	**+0.1**
	baz=151						
O23A	**Lake Granby, G**	**151.09**	**273**	⇑PKPdf	**PKPdf**	**17 45 11.0**	**-0.8**
	baz=151						
U20A	**Newcomb**	**151.15**	**264**	⇓PKPdf	**PKPdf**	**17 45 12.1**	**+0.2**
	baz=151						
X18A	**Snowflake**	**151.16**	**259**	⇑PKPdf	**PKPdf**	**17 45 11.4**	**-0.6**
	baz=151						
RSSD	**Black Hills**	**151.20**	**281**	*e*PKIKP	**PKPdf**	**17 45 11.4**	**-0.4**
RSSD	**Black Hills**	**151.20**	**281**	*e*PKPdf	**PKPdf**	**17 45 11.4**	**-0.4**
PHWY	**Pilot Hill**	**151.21**	**275**	*e*PKPdf	**PKPdf**	**17 45 12.4**	**+0.4**
Q22A	**Crested Butte,**	**151.21**	**270**	⇑PKPdf	**PKPdf**	**17 45 12.2**	**+0.1**
	baz=151						
S21A	**Coal Bank Pass**	**151.27**	**267**	⇑PKPdf	**PKPdf**	**17 45 12.4**	**+0.2**
	baz=151						
K24A	**Anderson Ranch**	**151.28**	**278**	⇑PKPdf	**PKPdf**	**17 45 12.3**	**+0.5**
	baz=152						
W18A	**Petrified Fore**	**151.33**	**261**	⇓PKPdf	**PKPdf**	**17 45 12.4**	**+0.1**
	baz=152						
N23A	**Red Feather La**	**151.39**	**274**	⇑PKPdf	**PKPdf**	**17 45 12.1**	**-0.2**
	baz=152						
SMCO	**Snowmass**	**151.39**	**270**	*e*PKPdf	**PKPdf**	**17 45 13.8**	**+1.3**
P22A	**Eagle**	**151.42**	**271**	⇑PKPdf	**PKPdf**	**17 45 12.1**	**-0.2**
	baz=152						
R21A	**Cimarron**	**151.43**	**268**	⇑PKPdf	**PKPdf**	**17 45 11.8**	**-0.5**
	baz=152						
M23A	**Laramie**	**151.45**	**275**	⇑PKPdf	**PKPdf**	**17 45 12.3**	**0.0**
	baz=152						
O22A	**Kremmling**	**151.51**	**272**	⇑PKPdf	**PKPdf**	**17 45 12.5**	**0.0**
	baz=152						
FFC	**Flin Flon**	**151.52**	**304***c*	*i*PKIKP	**PKPbc**	**17 45 18.5**	**+0.7**
FFC	**Flin Flon**	**151.52**	**304**	*e*PKPbc	**PKPbc**	**17 45 17.8**	**0.0**
I24A	**Kuemmerle Ranc**	**151.52**	**281**	⇑PKPdf	**PKPdf**	**17 45 12.3**	**+0.1**
	baz=152						
214A	**Organ Pipe Nat**	**151.59**	**252**	⇑PKPdf	**PKPdf**	**17 45 12.4**	**-0.1**
	baz=152						
Q21A	**Lamborn Mesa,**	**151.66**	**269**	⇑PKPdf	**PKPdf**	**17 45 12.7**	**+0.1**
	baz=152						
L23A	**Garrett**	**151.68**	**277**	⇑PKPdf	**PKPdf**	**17 45 12.5**	**-0.1**
	baz=152						
N22A	**Wattenberg Ran**	**151.71**	**274**	⇑PKPdf	**PKPdf**	**17 45 12.8**	**+0.1**
	baz=152						
H24A	**Dirks Ranch, A**	**151.74**	**283**	⇑PKPdf	**PKPdf**	**17 45 12.0**	**-0.4**
	baz=152						
S20A	**Disappointment**	**151.75**	**267**	⇓PKPdf	**PKPdf**	**17 45 12.0**	**-0.9**
	baz=152						
G24A	**Alzada**	**151.81**	**284**	⇑PKPdf	**PKPdf**	**17 45 11.7**	**-0.8**
	baz=152						
K23A	**Bowen Ranch, D**	**151.85**	**278**	⇓PKPdf	**PKPdf**	**17 45 11.9**	**-0.8**
	baz=152						
P21A	**Newcastle**	**151.88**	**271**	⇓PKPdf	**PKPdf**	**17 45 12.2**	**-0.8**
	baz=152						
R20A	**Redvale**	**151.93**	**267**	⇑PKPdf	**PKPdf**	**17 45 12.0**	**-1.1**
	baz=152						
F24A	**Ekalaka**	**151.96**	**285**	⇓PKPdf	**PKPdf**	**17 45 12.5**	**-0.2**
	baz=152						
J23A	**Dilts Ranch, B**	**152.01**	**279**	⇓PKPdf	**PKPdf**	**17 45 12.6**	**-0.4**
	baz=152						
M22A	**Cedar Creek Ra**	**152.04**	**275**	⇑PKPdf	**PKPdf**	**17 45 13.0**	**-0.2**
	baz=152						
E24A	**Baker**	**152.05**	**286**	⇓PKPdf	**PKPdf**	**17 45 12.8**	**0.0**
	baz=152						
X16A	**Lo Mia Camp, P**	**152.12**	**258**	⇓PKPdf	**PKPdf**	**17 45 13.0**	**-0.5**
	baz=152						
I23A	**Meade Ranch, G**	**152.13**	**281**	⇑PKPdf	**PKPdf**	**17 45 13.4**	**+0.4**
	baz=152						
L22A	**Ellis Ranch, M**	**152.16**	**276**	⇓PKPdf	**PKPdf**	**17 45 12.9**	**-0.4**
	baz=152						
O21A	**Pagoda**	**152.18**	**272**	⇑PKPdf	**PKPdf**	**17 45 12.9**	**-0.5**
	baz=152						
D24A	**Glendive**	**152.18**	**287**	⇓PKPdf	**PKPdf**	**17 45 12.8**	**-0.1**
	baz=152						
FX1	**Attu Island--F**	**152.18**	**60**	*e*PKPbc	**PKPbc**	**17 45 18.7**	**-0.6**
Q20A	**Ridgley Place,**	**152.22**	**269**	⇑PKPdf	**PKPdf**	**17 45 12.7**	**-0.7**
	baz=152						
A24A	**Westby**	**152.31**	**291**	⇓PKPdf	**PKPdf**	**17 45 12.6**	**-0.5**
	baz=152						
C24A	**Savage**	**152.34**	**288**	⇑PKPdf	**PKPdf**	**17 45 13.2**	**+0.1**
	baz=152						
DGMT	**Dagmar**	**152.36**	**290**	⇓PKPdf	**PKPdf**	**17 45 12.8**	**-0.3**
	baz=152						
PV04	**Paradox Valley**	**152.39**	**267**	*e*PKPbc	**PKPbc**	**17 45 21.2**	**+0.7**
N21A	**Black Mountain**	**152.43**	**273**	⇑PKPdf	**PKPdf**	**17 45 14.9**	**+1.1**
	baz=153						
K22A	**Casper**	**152.44**	**277**	⇑PKPdf	**PKPdf**	**17 45 13.8**	**+0.1**
	baz=153						
G23A	**Biddle**	**152.44**	**283**	⇓PKPdf	**PKPdf**	**17 45 14.6**	**+1.2**
	baz=153						
P20A	**De Beque**	**152.52**	**270**	⇑PKPdf	**PKPdf**	**17 45 13.6**	**-0.3**
	baz=153						
Z14A	**Wintersburg**	**152.53**	**254**	⇓PKPdf	**PKPdf**	**17 45 13.6**	**-0.3**
	baz=153						
F23A	**Volborg**	**152.58**	**284**	⇓PKPdf	**PKPdf**	**17 45 15.1**	**+1.5**
	baz=153						
M21A	**Separation Pea**	**152.65**	**275**	⇓PKPdf	**PKPdf**	**17 45 14.6**	**+0.6**
	baz=153						
WUAZ	**Wupatki**	**152.68**	**260**	*e*PKPdf	**PKPdf**	**17 45 15.6**	**+1.4**
WUAZ				LR	LR		
	comp=Z,1μm,20.0s						
WUAZ	**Wupatki**	**152.68**	**260**	⇑PKPdf	**PKPdf**	**17 45 14.2**	**0.0**
	baz=153						
O20A	**White River Ci**	**152.69**	**271**	⇑PKPdf	**PKPdf**	**17 45 13.8**	**-0.3**
	baz=153						
E23A	**Ismay**	**152.70**	**286**	⇑PKPdf	**PKPdf**	**17 45 14.3**	**+0.6**
	baz=153						
113A	**Mohawk Valley,**	**152.72**	**252**	⇓PKPdf	**PKPdf**	**17 45 14.0**	**-0.1**
	baz=153						
L21A	**Rawlins**	**152.78**	**275**	⇑PKPdf	**PKPdf**	**17 45 14.8**	**+0.6**
	baz=153						
D23A	**Lindsay**	**152.78**	**287**	⇓PKPdf	**PKPdf**	**17 45 14.1**	**+0.3**
	baz=153						
I22A	**9 Mile Ranch,**	**152.81**	**280**	⇓PKPdf	**PKPdf**	**17 45 14.0**	**-0.1**
	baz=153						
S18A	**Hurst Farm, Bl**	**152.82**	**265**	⇑PKPdf	**PKPdf**	**17 45 14.2**	**-0.3**
	baz=153						
B23A	**Brockton**	**152.88**	**290**	⇑PKPdf	**PKPdf**	**17 45 14.4**	**+0.5**
	baz=153						
A23A	**Redstone**	**152.89**	**291**	⇓PKPdf	**PKPdf**	**17 45 14.1**	**+0.2**
	baz=153						
C23A	**Lambert**	**152.89**	**289**	⇑PKPdf	**PKPdf**	**17 45 14.3**	**+0.3**
	baz=153						
Y14A	**Wickenburg**	**152.91**	**255**	⇑PKPdf	**PKPdf**	**17 45 14.3**	**-0.2**
	baz=153						
H22A	**Clearmont**	**152.92**	**281**	⇓PKPdf	**PKPdf**	**17 45 14.8**	**+0.5**
	baz=153						
N20A	**Spence Gulch,**	**152.98**	**273**	⇓PKPdf	**PKPdf**	**17 45 15.0**	**+0.4**
	baz=153						
P19A	**Cripple Cowboy**	**152.99**	**270**	⇓PKPdf	**PKPdf**	**17 45 15.4**	**+0.8**
	baz=153						
G22A	**Birney**	**153.06**	**283**	⇑PKPdf	**PKPdf**	**17 45 14.5**	**+0.2**
	baz=153						
E22A	**Miles City**	**153.12**	**285**	⇑PKPdf	**PKPdf**	**17 45 14.0**	**-0.3**
	baz=153						
F22A	**Rosebud**	**153.17**	**284**	⇑PKPdf	**PKPdf**	**17 45 14.0**	**-0.5**
	baz=153						
M20A	**Sweetwater, Wa**	**153.18**	**274**	⇑PKPdf	**PKPdf**	**17 45 14.1**	**-0.7**
	baz=153						
J21A	**Lysite**	**153.30**	**278**	⇓PKPdf	**PKPdf**	**17 45 14.4**	**-0.5**
	baz=154						
I21A	**Big Trails, Te**	**153.34**	**279**	⇓PKPdf	**PKPdf**	**17 45 14.4**	**-0.5**
	baz=154						
C22A	**Vida**	**153.35**	**288**	⇑PKPdf	**PKPdf**	**17 45 14.5**	**-0.1**
	baz=154						
O19A	**Miners Draw (B**	**153.37**	**271**	⇓PKPdf	**PKPdf**	**17 45 14.7**	**-0.4**
	baz=154						
H21A	**Big Horn, Sher**	**153.41**	**281**	⇑PKPdf	**PKPdf**	**17 45 14.5**	**-0.5**
	baz=154						
D22A	**Cohagen**	**153.43**	**287**	⇑PKPdf	**PKPdf**	**17 45 14.2**	**-0.6**
	baz=154						
L20A	**Wamsutter**	**153.47**	**275**	⇑PKPdf	**PKPdf**	**17 45 14.8**	**-0.4**
	baz=154						
B22A	**Reddig Ranch S**	**153.52**	**290**	⇑PKPdf	**PKPdf**	**17 45 14.3**	**-0.5**
	baz=154						
A22A	**Carney Farms,**	**153.57**	**291**	⇓PKPdf	**PKPdf**	**17 45 15.4**	**+0.5**
	baz=154						
GLA	**Glamis**	**153.60**	**252**	⇓PKPdf	**PKPdf**	**17 45 15.1**	**-0.4**
	baz=154						
G21A	**Lodge Grass**	**153.68**	**282**	⇑PKPdf	**PKPdf**	**17 45 15.8**	**+0.6**
	baz=154						
K20A	**Yellowstone Ra**	**153.70**	**276**	⇑PKPdf	**PKPdf**	**17 45 15.7**	**+0.3**
	baz=154						
J20A	**Shoshoni**	**153.75**	**278**	⇓PKPdf	**PKPdf**	**17 45 15.4**	**-0.1**
	baz=154						
U15A	**North Rim**	**153.79**	**261**	⇓PKPdf	**PKPdf**	**17 45 15.5**	**-0.4**
	baz=154						
SRU	**San Rafael**	**153.84**	**267**	⇓PKPdf	**PKPdf**	**17 45 16.2**	**+0.4**
	baz=154						
M19A	**Rock Springs**	**153.86**	**273**	⇑PKPdf	**PKPdf**	**17 45 16.2**	**+0.4**
	baz=154						
PDMCI	**Parker Dam,Lak**	**153.88**	**255**	⇑PKPdf	**PKPdf**	**17 45 15.8**	**+0.1**
	baz=154						
E21A	**Keefer Ranch,**	**153.90**	**285**	⇓PKPdf	**PKPdf**	**17 45 16.1**	**+0.7**
	baz=154						
D21A	**La Casta Ranch**	**153.96**	**287**	⇓PKPdf	**PKPdf**	**17 45 15.9**	**+0.4**
	baz=154						
I20A	**Worland**	**153.96**	**279**	⇑PKPdf	**PKPdf**	**17 45 15.8**	**+0.1**
	baz=154						
H20A	**Greybull**	**154.03**	**280**	⇓PKPdf	**PKPdf**	**17 45 15.2**	**-0.6**
	baz=154						
K19A	**Absolon Red Bu**	**154.10**	**276**	⇓PKPdf	**PKPdf**	**17 45 16.1**	**+0.1**
	baz=154						
C21A	**Desert Coulee**	**154.16**	**288**	⇓PKPdf	**PKPdf**	**17 45 15.8**	**0.0**
	baz=154						
W13A	**Hualapai Mount**	**154.16**	**256**	⇑PKPdf	**PKPdf**	**17 45 16.1**	**-0.4**
	baz=154						
SWSC	**Sam W. Stewart**	**154.17**	**250**	⇓PKPdf	**PKPdf**	**17 45 16.1**	**-0.1**
	baz=154						
B21A	**Ellsworth Farm**	**154.21**	**290**	⇓PKPdf	**PKPdf**	**17 45 15.3**	**-0.5**
	baz=154						
Q16A	**Castle Valley**	**154.21**	**267**	⇑PKPdf	**PKPdf**	**17 45 15.4**	**-0.9**
	baz=154						
L19A	**Farson**	**154.22**	**275**	⇑PKPdf	**PKPdf**	**17 45 15.6**	**-0.7**
	baz=154						
A21A	**Bergtoll Ranch**	**154.23**	**291**	⇑PKPdf	**PKPdf**	**17 45 14.9**	**-0.9**
	baz=154						
G20A	**Bridger**	**154.37**	**282**	⇑PKPdf	**PKPdf**	**17 45 15.8**	**-0.5**
	baz=154						
BC3	**Big Chuckawall**	**154.38**	**252**	⇓PKPdf	**PKPdf**	**17 45 15.4**	**-1.3**
	baz=154						
J19A	**Crowheart**	**154.39**	**277**	⇓PKPdf	**PKPdf**	**17 45 16.3**	**-0.2**
	baz=155						
F20A	**Billings**	**154.46**	**283**	⇓PKPdf	**PKPdf**	**17 45 15.9**	**-0.4**
	baz=155						
NEE2	**Needles Airpor**	**154.47**	**255**	⇓PKPdf	**PKPdf**	**17 45 16.1**	**-0.5**
	baz=155						
IRM	**Iron Mountain**	**154.48**	**253**	⇓PKPdf	**PKPdf**	**17 45 16.1**	**-0.6**
	baz=155						
BW06	**Boulder Array**	**154.58**	**276**	*e*PKPdf	**PKPdf**	**17 45 16.1**	**-0.6**
BW06				*e*PKPbc	**PKPbc**	**17 45 24.5**	**-0.7**
PDAR	**Pinedale Array**	**154.58**	**276**	PKP	**PKPdf**	**17 45 14.8**	**-2.0**
PDAR				PKPbc	**PKPbc**	**17 45 24.6**	**-0.7**
PDAR	**Pinedale Array**	**154.58**	**276**	PKP	**PKPdf**	**17 45 14.8**	**-2.0**
	comp=Z,1.5nm,0.8s,baz=121,slow=2.6,SNR=9.2						
PDAR				PKPbc	**PKPbc**	**17 45 24.6**	**-0.7**
	comp=Z,5.6nm,1.0s,baz=113,slow=3.4,SNR=22						
I19A	**Meeteetse**	**154.58**	**279**	⇓PKPdf	**PKPdf**	**17 45 16.4**	**-0.3**
	baz=155						
E20A	**Meyer Farm, Mu**	**154.61**	**285**	⇑PKPdf	**PKPdf**	**17 45 16.4**	**-0.1**
	baz=155						
L18A	**Fontenelle, Gr**	**154.63**	**274**	⇓PKPdf	**PKPdf**	**17 45 16.3**	**-0.5**
	baz=155						
D20A	**Manuel Ranch,**	**154.73**	**286**	⇓PKPdf	**PKPdf**	**17 45 15.9**	**-0.7**
	baz=155						
MVU	**Marysvale**	**154.75**	**265**	*e*PKPdf	**PKPdf**	**17 45 17.4**	**+0.2**
C20A	**Veseth Ranch,**	**154.75**	**288**	⇓PKPdf	**PKPdf**	**17 45 16.3**	**-0.3**
	baz=155						
H19A	**Powell**	**154.75**	**280**	⇑PKPdf	**PKPdf**	**17 45 16.3**	**-0.5**
	baz=155						
B20A	**Solberg Farm,**	**154.87**	**289**	⇑PKPdf	**PKPdf**	**17 45 16.4**	**-0.4**
	baz=155						
M17A	**Scullys Gap (B**	**154.90**	**272**	⇑PKPdf	**PKPdf**	**17 45 16.4**	**-0.9**
	baz=155						
BELC	**Belle Mtn. Jos**	**154.95**	**252**	⇑PKPdf	**PKPdf**	**17 45 16.0**	**-1.4**
	baz=155						
109C	**Camp Elliot, M**	**155.00**	**249**	⇓PKPdf	**PKPdf**	**17 45 16.5**	**-0.9**
	baz=155						
F19A	**Roth Farm, Mol**	**155.02**	**283**	⇑PKPdf	**PKPdf**	**17 45 15.9**	**-1.3**
	baz=155						
E19A	**Rath Farm, Rou**	**155.04**	**285**	⇑PKPdf	**PKPdf**	**17 45 16.6**	**-0.5**
	baz=155						
I18A	**Diamond G Ranc**	**155.05**	**278**	⇓PKPdf	**PKPdf**	**17 45 16.5**	**-1.0**
	baz=155						
RLMT	**Red Lodge**	**155.06**	**281**	*e*PKPdf	**PKPdf**	**17 45 16.8**	**-0.6**
CCUT	**Cedar City**	**155.09**	**262**	*e*PKPdf	**PKPdf**	**17 45 18.6**	**+1.0**
GMRC	**Granite Mounta**	**155.18**	**254**	⇑PKPdf	**PKPdf**	**17 45 17.2**	**-0.6**
	baz=155						
H18A	**Shoshone NF, C**	**155.22**	**280**	⇑PKPdf	**PKPdf**	**17 45 16.7**	**-0.9**
	baz=155						
D19A	**Cripps Ranch,**	**155.24**	**286**	⇑PKPdf	**PKPdf**	**17 45 17.1**	**-0.2**
	baz=155						
G18A	**Lazy EL Ranch,**	**155.31**	**282**	⇓PKPdf	**PKPdf**	**17 45 17.1**	**-0.5**
	baz=156						
A19A	**Klindworth Far**	**155.41**	**290**	⇑PKPdf	**PKPdf**	**17 45 17.5**	**0.0**
	baz=156						
C19A	**Slack Wire Ran**	**155.45**	**287**	⇓PKPdf	**PKPdf**	**17 45 17.1**	**-0.4**
	baz=156						
B19A	**Brinkman Farms**	**155.48**	**289**	⇓PKPdf	**PKPdf**	**17 45 16.6**	**-1.0**
	baz=156						
MURC	**Murrieta**	**155.50**	**250**	⇑PKPdf	**PKPdf**	**17 45 17.2**	**-0.9**
	baz=156						
F18A	**Big Timber**	**155.55**	**283**	⇓PKPdf	**PKPdf**	**17 45 17.6**	**-0.3**
	baz=156						
HWUT	**Hardware Ranch**	**155.58**	**272**	*e*PKPdf	**PKPdf**	**17 45 17.9**	**-0.2**
HWUT				LR	LR		
	comp=Z,1μm,22.0s						
AHID	**Auburn Hatcher**	**155.65**	**275**	*e*PKPdf	**PKPdf**	**17 45 20.4**	**+2.2**
AHID				LR	LR		
	comp=Z,1μm,21.0s						
HEC	**Hector,Ludlow**	**155.66**	**253**	⇑PKPdf	**PKPdf**	**17 45 18.0**	**-0.3**
	baz=156						
TUQ	**Turquoise Moun**	**155.73**	**255**	⇓PKPdf	**PKPdf**	**17 45 17.6**	**-0.8**
	baz=156						
TPAW	**Teton Pass**	**155.78**	**277**	*e*PKPdf	**PKPdf**	**17 45 18.4**	**0.0**
D18A	**Linhart Farms,**	**155.87**	**286**	⇑PKPdf	**PKPdf**	**17 45 17.8**	**-0.4**
	baz=156						
DUG	**Dugway**	**155.91**	**268**	*e*PKIKP	**PKPdf**	**17 45 19.4**	**+0.8**
DUG				MLR	MLR		
	comp=Z,875nm,20.0s						
DUG	**Dugway**	**155.91**	**268**	*e*PKPdf	**PKPdf**	**17 45 19.4**	**+0.8**
DUG				LR	LR		
	comp=Z,875nm,20.0s						
DUG	**Dugway**	**155.91**	**268**	⇑PKPdf	**PKPdf**	**17 45 17.6**	**-0.9**
	baz=156						
EGMT	**Eagleton**	**155.96**	**288**	*e*PKPdf	**PKPdf**	**17 45 17.6**	**-0.7**
EGMT	**Eagleton**	**155.96**	**288**	⇑PKPdf	**PKPdf**	**17 45 18.3**	**0.0**
	baz=156						
YKA	**Yellowknife Ar**	**155.97**	**325**	PKP	**PKPdf**	**17 45 15.0**	**-2.7**
YKA				PP	**PP**	**17 49 22.6**	**-0.1**
YKA	**Yellowknife Ar**	**155.97**	**325**	PKP	**PKPdf**	**17 45 15.0**	**-2.7**
	comp=Z,1.8nm,0.8s,baz=64,slow=1.5,SNR=15						
YKA				PP	**PP**	**17 49 22.6**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=70,slow=5.6,SNR=5.2						
SCI	**San Clemente I**	**155.99**	**247**	⇑PKPdf	**PKPdf**	**17 45 18.1**	**-0.6**
	baz=156						
B18A	**Beardsley Farm**	**156.03**	**289**	⇑PKPdf	**PKPdf**	**17 45 18.1**	**-0.3**
	baz=156						
GSC	**Goldstone**	**156.25**	**254**	*e*PKIKP	**PKPdf**	**17 45 18.7**	**-0.4**
GSC	**Goldstone**	**156.25**	**254**	*e*PKPdf	**PKPdf**	**17 45 18.7**	**-0.4**
D17A	**Six Diamond Ra**	**156.45**	**286**	⇑PKPdf	**PKPdf**	**17 45 18.5**	**-0.6**
	baz=157						
B17A	**L&G Farms, Che**	**156.69**	**288**	⇓PKPdf	**PKPdf**	**17 45 18.8**	**-0.4**
	baz=157						
A17A	**Triple J Farms**	**156.69**	**290**	⇑PKPdf	**PKPdf**	**17 45 18.9**	**-0.3**
	baz=157						
INK	**Inuvik**	**156.72**	**349**	PKPab	**PKPab**	**17 45 47.1**	**-0.9**
INK	**Inuvik**	**156.72**	**349**	PKPab	**PKPab**	**17 45 47.1**	**-0.9**
	comp=Z,4.6nm,0.7s,baz=18,slow=5.5,SNR=5.8						
EDW2	**Edwards Air Fo**	**156.80**	**251**	⇓PKPdf	**PKPdf**	**17 45 19.2**	**-0.6**
	baz=157						
D16A	**Dana Ranch, Ca**	**157.01**	**285**	⇓PKPdf	**PKPdf**	**17 45 19.8**	**0.0**
	baz=157						
R11A	**Troy Canyon, C**	**157.02**	**261**	⇓PKPdf	**PKPdf**	**17 45 19.3**	**-0.8**
	baz=157						
MPMC	**Manual Prospec**	**157.14**	**254**	⇓PKPdf	**PKPdf**	**17 45 19.6**	**-0.8**
	baz=157						
C16A	**Fuhringer Ranc**	**157.26**	**287**	⇓PKPdf	**PKPdf**	**17 45 19.4**	**-0.6**
	baz=157						
B16A	**M & M Farms, S**	**157.31**	**289**	⇓PKPdf	**PKPdf**	**17 45 20.1**	**+0.1**
	baz=158						
F15A	**Butte**	**157.44**	**282**	⇑PKPdf	**PKPdf**	**17 45 20.6**	**+0.2**
	baz=158						
ARVC	**Arvin**	**157.50**	**251**	⇓PKPdf	**PKPdf**	**17 45 20.6**	**0.0**
	baz=158						
ISA	**Isabella**	**157.57**	**252**	*e*PKIKP	**PKPdf**	**17 45 21.6**	**+0.8**
ISA	**Isabella**	**157.57**	**252**	*e*PKPdf	**PKPdf**	**17 45 21.6**	**+0.8**
ISA	**Isabella**	**157.57**	**252**	⇓PKPdf	**PKPdf**	**17 45 21.1**	**+0.4**
	baz=158						
I14A	**Mackay**	**157.64**	**276**	⇓PKPdf	**PKPdf**	**17 45 20.4**	**-0.3**
	baz=158						
E15A	**Deer Lodge**	**157.65**	**283**	⇑PKPdf	**PKPdf**	**17 45 20.8**	**+0.3**
	baz=158						
ELK	**Elko**	**157.82**	**267**	*e*PKPdf	**PKPdf**	**17 45 20.7**	**-0.4**
B15A	**Bradely Ranch,**	**157.86**	**288**	⇓PKPdf	**PKPdf**	**17 45 21.1**	**+0.4**
	baz=158						
G14A	**Jackson**	**157.97**	**280**	⇓PKPdf	**PKPdf**	**17 45 21.9**	**+0.8**
	baz=158						
PKM	**Peak Mountain**	**158.01**	**249**	⇑PKPdf	**PKPdf**	**17 45 21.2**	**-0.2**
	baz=158						
F14A	**Wisdom**	**158.03**	**281**	⇑PKPdf	**PKPdf**	**17 45 21.2**	**0.0**
	baz=158						
HLID	**Hailey**	**158.21**	**275**	*e*PKPdf	**PKPdf**	**17 45 22.9**	**+1.5**
HLID				LR	LR		
	comp=Z,2μm,21.0s						
E14A	**Clinton**	**158.23**	**283**	⇑PKPdf	**PKPdf**	**17 45 21.1**	**-0.2**
	baz=158						
B14A	**Marquette Ranc**	**158.34**	**288**	⇓PKPdf	**PKPdf**	**17 45 20.6**	**-0.8**
	baz=158						
G13A	**Cobalt**	**158.47**	**279**	⇑PKPdf	**PKPdf**	**17 45 21.1**	**-0.5**
	baz=159						
A14A	**Double T Ranch**	**158.49**	**290**	⇓PKPdf	**PKPdf**	**17 45 21.1**	**-0.3**
	baz=159						
F13A	**Darby**	**158.69**	**281**	⇑PKPdf	**PKPdf**	**17 45 21.3**	**-0.6**
	baz=159						
E13A	**Victor**	**158.71**	**283**	⇓PKPdf	**PKPdf**	**17 45 21.8**	**0.0**
	baz=159						
H12A	**Diamond D Ranc**	**158.78**	**277**	⇑PKPdf	**PKPdf**	**17 45 21.9**	**-0.1**
	baz=159						
NVAR	**Mina Array Bea**	**158.93**	**259**	PKP	**PKPdf**	**17 45 22.6**	**0.0**
NVAR				PKPab	**PKPab**	**17 45 58.4**	**-0.4**
NVAR	**Mina Array Bea**	**158.93**	**259**	PKP	**PKPdf**	**17 45 22.6**	**0.0**
	comp=Z,0.2nm,0.3s,baz=230,slow=2.2,SNR=4.7						
NVAR				PKPab	**PKPab**	**17 45 58.4**	**-0.4**
	comp=Z,7.1nm,1.1s,baz=106,slow=4.6,SNR=4.7						
D13A	**Huson**	**158.99**	**284**	⇓PKPdf	**PKPdf**	**17 45 21.9**	**-0.2**
	baz=159						
C13A	**Hot Springs**	**159.14**	**286**	⇓PKPdf	**PKPdf**	**17 45 22.1**	**-0.2**
	baz=159						
MFID	**Camas Ranch**	**159.15**	**274**	⇓PKPdf	**PKPdf**	**17 45 21.8**	**-0.7**
	baz=159						
F12A	**Elk City**	**159.31**	**280**	⇓PKPdf	**PKPdf**	**17 45 22.4**	**-0.2**
	baz=160						
C12B	**Naegeli Ranch,**	**159.75**	**286**	⇑PKPdf	**PKPdf**	**17 45 22.5**	**-0.4**
	baz=160						
A12A	**Yaak River Ran**	**159.95**	**289**	⇓PKPdf	**PKPdf**	**17 45 22.6**	**-0.5**
	baz=160						
WVOR	**Wild Horse Val**	**160.81**	**269**	*e*PKIKP	**PKPdf**	**17 45 23.7**	**-0.7**
WVOR	**Wild Horse Val**	**160.81**	**269**	*e*PKPdf	**PKPdf**	**17 45 23.7**	**-0.7**
NEW	**Newport**	**160.90**	**287**	⇑PKPdf	**PKPdf**	**17 45 24.3**	**+0.2**
	baz=161						
ILAR	**Eielson Array**	**161.00**	**2**	PKP	**PKPdf**	**17 45 23.1**	**-0.6**
ILAR				PKPab	**PKPab**	**17 46 03.1**	**-3.6**
ILAR				PP	**PP**	**17 49 46.6**	**-3.2**
ILAR	**Eielson Array**	**161.00**	**2**	PKP	**PKPdf**	**17 45 23.1**	**-0.6**
	comp=Z,0.6nm,1.0s,baz=344,slow=3.8,SNR=5.2						
ILAR				PKPab	**PKPab**	**17 46 03.1**	**-3.6**
	comp=Z,1.8nm,0.8s,baz=345,slow=3.0,SNR=9.5						
ILAR				PP	**PP**	**17 49 46.6**	**-3.2**
	comp=Z,2.3nm,1.1s,baz=320,slow=3.1,SNR=4.2						
YBH	**Yreka Blue Hor**	**163.40**	**264**	PKPab	**PKPab**	**17 46 17.6**	**-0.6**
YBH	**Yreka Blue Hor**	**163.40**	**264**	PKPab	**PKPab**	**17 46 17.6**	**-0.6**
	comp=Z,1.9nm,0.6s,baz=148,slow=4.3,SNR=4.4						
DLBC	**Dease Lake**	**164.45**	**330**	PKPab	**PKPab**	**17 46 24.0**	**+1.9**
DLBC	**Dease Lake**	**164.45**	**330**	PKPab	**PKPab**	**17 46 24.0**	**+1.9**
	comp=Z,8.4nm,1.0s,baz=360,slow=8.3,SNR=7.9						

ISCJB ***04*** *17:34:49.7±0.7, 27°.31N±0°.06×140°.4E±0°.1, h395km, mb2.8/4, Error ellipse: s-maj=18.4km s-min=6.7km az=166.7*

IDC ***04*** *17:34:50.1±1.8, 27°.28N×140°.23E, h380km±22km, mb2.7/4, mb1 2.9/6, mb1mx2.7/26, mbtmp2.7/6, Error ellipse: s-maj=42.1km s-min=16.7km az=97.0*

JMA ***04*** *17:34:52.1±0.1, 27°.53N×140°.95E, h395km, M3.5*

ISC 04 17:34:51.6±1.4**, 27°.5N**±0°.1×**140°.6E**±0°.2**, h395**km**, n17, σ1s.40**/20**, mb2.8**/4**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**1.43**	**104**	P	**Pn**	**17 35 43.4**	**-0.5**
CBIJ				*e*S	**S**	**17 36 23.5**	**-2.6**
JHHJ	**Haha-jima-NKT**	**1.60**	**120**	P	**Pn**	**17 35 44.7**	**-0.1**
JHHJ				S	**S**	**17 36 26.4**	**-1.3**
JHCJ	**Hachijojimakas**	**5.65**	**353**	P	**Pn**	**17 36 21.0**	**+0.8**
JHJ2	**Mitsune**	**5.69**	**353**	P	**Pn**	**17 36 21.8**	**+1.2**
JHJ	**Hachijo jima 2**	**5.70**	**353**	P	**Pn**	**17 36 22.0**	**+1.3**
	5.9nm,0.3s,baz=236,slow=21,SNR=16						
JHJ				S	**S**	**17 37 31.7**	**-1.6**
	2.2nm,0.3s,baz=49,slow=19,SNR=2.1						
BSO1	**Boso 1**	**7.19**	**2**	P	**P**	**17 36 38.3**	**+1.1**
BSO3	**Boso 3**	**7.33**	**359**	P	**P**	**17 36 39.4**	**+0.3**
BSO3				*e*S	**S**	**17 38 04.2**	**-1.8**
JOD2	**Odawara 2**	**7.90**	**351**	P	**P**	**17 36 47.5**	**+1.7**
JRY	**Ryogami san**	**8.67**	**351**	P	**P**	**17 36 54.7**	**+0.2**
JAG	**Ashikaga**	**9.01**	**354**	P	**Pn**	**17 36 57.8**	**-0.2**
JAG				*e*S	S	17 38 34.8	-7.0
JHO	**Hitachi**	**9.14**	**360**	P	**P**	**17 37 00.2**	**+0.6**
JHO				*e*S	**S**	**17 38 42.7**	**-1.8**
JNG	**Nsakai**	**9.19**	**347**	P	**P**	**17 37 01.1**	**+0.8**
MJAR	**Matsushiro Arr**	**9.30**	**348**	P	**Pn**	**17 37 00.7**	**-0.7**
	0.2nm,0.3s,baz=139,slow=9.4,SNR=3.2						
WRA	**Warramunga Arr**	**47.50**	**188**	P	P	17 42 46.8	-2.2
	0.5nm,0.4s,baz=7.4,slow=8.4,SNR=14						
ASAR	**Alice Springs**	**51.23**	**188**	P	P	17 43 14.8	-2.0
	0.2nm,0.4s,baz=356,slow=4.3,SNR=7.3						
KURBB	**Kurchatov Arra**	**51.81**	**314**	P	**P**	**17 43 19.5**	**-1.2**
	0.2nm,0.6s,baz=93,slow=8.0,SNR=3.7						
ILAR	**Eielson Array**	**58.07**	**29**	P	**P**	**17 44 06.7**	**+2.0**
	0.4nm,0.9s,baz=238,slow=5.2,SNR=2.8						

IDC ***04*** *17:37:05.2±1.4, 17°.61S×178°.90W, h505km±16km, mb3.5/18, mb1 3.7/20, mb1mx3.6/25, mbtmp3.5/20, Error ellipse: s-maj=15.2km s-min=10.6km az=121.0*

ISCJB ***04*** *17:37:06.9±0.5, 17°.68S±0°.09×179°.0W±0°.1, h539km, mb3.8/17, Error ellipse: s-maj=15.6km s-min=10.9km az=27.6*

ISC 04 17:37:08.2±0.6**, 17°.6S**±0°.1×**179°.1W**±0°.1**, h539**km**, n33, σ0s.98**/31**, mb3.8**/17**, 4C, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.93**	**63**	P	P	17 38 59.9	-5.2
	8.0nm,0.3s,baz=298,slow=10,SNR=8.0						
AFI				S	S	17 40 31.8	-9.0
	3.6nm,0.3s,baz=29,slow=19,SNR=3.3						
DZM	**Mont Dzumac**	**14.34**	**250**	P	**P**	**17 40 11.4**	**+0.2**
	1.3nm,0.3s,baz=59,slow=19,SNR=9.3						
URZ	**Urewera**	**20.82**	**189**	P	**P**	**17 41 09.9**	**-2.2**
	4.1nm,0.3s,baz=348,slow=6.5,SNR=7.8						
RPZ	**Rata Peaks**	**27.31**	**196**	P	**P**	**17 42 09.1**	**-0.6**
	8.7nm,0.7s,baz=342,slow=4.8,SNR=5.0						
STKA	**Stephens Creek**	**38.22**	**241**	P	**P**	**17 43 43.5**	**+1.3**
	7.6nm,0.4s,baz=89,slow=10,SNR=74						
WRA	**Warramunga Arr**	**44.08**	**259**	P	**P**	**17 44 28.2**	**-0.7**
	1.6nm,0.7s,baz=96,slow=7.0,SNR=14						
ASAR	**Alice Springs**	**44.27**	**254**	P	**P**	**17 44 30.6**	**+0.3**
	15nm,0.5s,baz=89,slow=7.9,SNR=436						
ASAR				ScP	**ScP**	**17 49 05.6**	**+1.7**
	0.5nm,0.8s,baz=96,slow=4.5,SNR=4.3						
ASAR				S	**S**	**17 50 23.3**	**-2.0**
	1.3nm,0.9s,baz=87,slow=18,SNR=7.8						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	60.66	185	P	**P**	**17 46 28.1**	**+1.4**
	0.5nm,0.5s,baz=21,slow=7.9,SNR=4.4						
MJAR	Matsushiro Arr	67.33	324	P	**P**	**17 47 09.0**	**-0.7**
	4.3nm,0.6s,baz=157,slow=6.3,SNR=18						
MAT	Matsushiro	67.33	324	P	**P**	**17 47 09.2**	**-0.5**
ASAJ	Asahikawa	70.75	332	P	**P**	**17 47 31.3**	**+1.3**
	2.8nm,0.5s,baz=190,slow=11,SNR=4.5						
QSPA	South Pole Qui	72.41	180	P	**P**	**17 47 39.4**	**-0.3**
	2.2nm,0.8s,baz=30,slow=2.0,SNR=14						
PETK	Petropavlovsk-	73.27	346	P	**P**	**17 47 44.3**	**-0.2**
	3.0nm,0.6s,baz=131,slow=10,SNR=3.9						
KSRS	Korea Array	74.09	319	P	**P**	**17 47 50.3**	**+0.8**
	0.6nm,0.6s,baz=116,slow=5.6,SNR=4.0						
USRK	Ussuriysk Arra	76.04	326	P	**P**	**17 48 01.0**	**+0.7**
	1.1nm,0.5s,baz=113,slow=4.4,SNR=4.5						
NVAR	Mina Array Bea	79.66	44	P	**P**	**17 48 20.4**	**+0.1**
	1.5nm,0.7s,baz=224,slow=9.6,SNR=4.2						
ILAR	Eielson Array	85.77	13	P	**P**	**17 48 48.5**	**-1.5**
	0.9nm,0.4s,baz=224,slow=5.6,SNR=7.6						
TXAR	Lajitas Array	86.37	58	P	**P**	**17 48 55.0**	**+1.1**
	1.7nm,0.9s,baz=224,slow=8.1,SNR=3.5						
PDAR	Pinedale Array	87.58	44	P	**P**	**17 48 59.3**	**-0.2**
	1.0nm,0.5s,baz=203,slow=6.7,SNR=3.5						
SONM	Songino Array	92.95	319	P	**P**	**17 49 24.8**	**+0.8**
	0.3nm,0.6s,baz=131,slow=5.9,SNR=2.3						
YKA	Yellowknife Ar	94.35	25	P	**P**	**17 49 28.8**	**-1.0**
	0.6nm,0.7s,baz=247,slow=5.1,SNR=4.0						
ZALV	Zalesovo Beam	107.64	322	PKiKP	**PKiKP**	**17 54 33.5**	**-0.3**
	0.3nm,0.5s,baz=79,slow=3.1,SNR=2.4						
MKAR	Makanchi Array	108.51	314	PKiKP	**PKiKP**	**17 54 34.7**	**-1.0**
	0.3nm,0.5s,baz=213,slow=0.9,SNR=5.9						
BRTR	Keskin Array B	144.16	315	PKP	PKPbc	17 55 42.6	-0.1
	1.1nm,0.4s,baz=114,slow=3.7,SNR=12						
TESR	Tescani	144.22	329⇑	iP	PKPbc	17 55 42.5	0.0
ASF	Jabal al Asfar	144.51	301	PKP	**PKPab**	**17 55 44.4**	**-0.1**
	0.7nm,0.3s,baz=180,slow=7.1,SNR=3.3						
VRI	Vrincioaia	144.63	328⇑	iP	**PKPab**	**17 55 44.6**	**+0.2**
PLOR	Plostina	144.68	328⇑	iP	**PKPab**	**17 55 44.7**	**0.0**
TRPA	Tarpa	144.84	335⇑	iP	PKPbc	17 55 44.4	0.0
MLR	Muntele Rosu	145.28	329	PKPbc	**PKPbc**	**17 55 46.2**	**+0.2**
	0.4nm,0.5s,baz=39,slow=2.7,SNR=4.4						
MMAI	Mount Meron Ar	145.48	303	PKPbc	**PKPbc**	**17 55 47.4**	**+0.5**
	2.3nm,0.5s,baz=67,slow=6.4,SNR=7.8						
GERES	GERESS Array B	147.19	344	PKPbc	**PKPbc**	**17 55 50.8**	**-0.3**
	2.1nm,0.6s,baz=7.8,slow=2.9,SNR=17						
DAVOX	Davos/Dischmat	150.02	348	PKPbc	**PKPbc**	**17 55 57.9**	**-0.4**
	4.6nm,0.4s,baz=302,slow=2.8,SNR=7.8						

KRSC 04 17:39:23.7±1.4**, 54°.09N**×**158°.52E, h301**km±50km**, ML3.6, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GNL	Ganaly	0.52	221	eP	Pn	17 40 02.5	-0.2
KOK	Koryaka	0.80	175	P	Pn	17 40 04.9	+1.3
SDLR	Sedlovina	0.84	165	P	Pn	17 40 05.0	+1.3
SMAR	Somma	0.84	168	P	Pn	17 40 05.0	+1.1
UGLR	Uglovaya	0.90	168	eP	Pn	17 40 05.2	+1.2
NLC	Nalytchevo	1.04	152	P	Pn	17 40 05.6	+1.2
NLC				eS	S	17 40 35.9	-0.9
SPN	Mys Shipunski	1.34	137	eP	Pn	17 40 06.5	+0.5
SPN				eS	S	17 40 37.7	-1.9
APC	Apacha	1.42	215	eP	Pn	17 40 06.3	-0.2
TUMR	Tumrok	1.52	38	P	Pn	17 40 08.4	+1.2
MTVR	Mutnovka	1.62	187	S	S	17 40 43.7	+0.4
RUS	Russkaya	1.66	180	eP	Pn	17 40 08.5	+0.4
RUS				eS	S	17 40 41.5	-1.9
ASAK	Asacha	1.75	193	eP	Pn	17 40 09.8	+1.0
MKZ	Mys Kozlova	1.94	75	eP	Pn	17 40 11.3	+1.4
MKZ				S	S	17 40 45.7	-1.1
MIPR	Malaya Ipel'ka	2.10	211	eP	Pn	17 40 11.2	-0.2
SRDR	Sredinnyy	2.33	17	P	Pn	17 40 13.2	-0.1

IDC 04 17:51:20.1±0.8, 9°.35S×117°.01E, h46km±8km, mb3.9/8, mb1 4.0/10, mb1mx3.7/23, mbtmp3.9/10, ML4.1/2, Error ellipse: s-maj=19.3km s-min=14.2km az=82.0
DJA 04 17:51:21.7±0.3, 10°S±6°×11°7E±°, h50km±15km, M5.0/15, mb5.1/10, mB5.5/6, MLv4.9/15, Mw(mB)5.0/6
ISCJB 04 17:51:22.1±0.4, 9°.31S±0°.06×117°.19E±0°.03, h87km, mb4.0/8, Error ellipse: s-maj=8.1km s-min=4.2km az=9.7
ISC 04 17:51:24.0±0.7**, 9°.34S**±0°.07×**117°.18E**±0°.05**, h87**km**, n32, σ1°.55**/33**, mb4.0**/8**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BMNI	Bima	1.69	62	P	Pn	17 51 47.2	-4.9
KHKI	Kahang-Kahang	1.83	302	P	**Pn**	**17 51 52.4**	**-1.6**
KHKI				S	**Sn**	**17 52 15.9**	**-0.8**
DNP	Denpasar	2.06	289	P	**Pn**	**17 51 54.6**	**-2.3**
DNP				S	**Sn**	**17 52 21.3**	**-0.7**
IGBI	Denpasar	2.08	284	P	Pn	17 51 53.8	-3.4
BYJI	Banyuwangi	3.01	292	P	**Pn**	**17 52 09.0**	**-0.7**
WSI	Waingapu	3.09	96	P	**Pn**	**17 52 09.0**	**-1.7**
JAGI	Jajag, Banyuwa	3.12	286	P	**Pn**	**17 52 08.3**	**-2.8**
BASI	Baing, Sumba	3.46	105	P	Pn	17 52 25.4	+10
GMJI	Gumukmas	3.84	286	P	**Pn**	**17 52 20.2**	**-0.7**
GMJI				S	**Sn**	**17 53 05.7**	**+0.7**
BLJI	Banyuglugur	3.89	294	P	**Pn**	**17 52 21.0**	**-0.5**
KMMI	Kalianget	3.91	305	P	**Pn**	**17 52 22.0**	**+0.1**
KRKI	Karangkates	4.82	284	P	**Pn**	**17 52 34.1**	**-0.1**
BKSI	Bulukumba	4.95	36	P	**Pn**	**17 52 35.8**	**-0.2**
	76nm,0.5s,2µm0.4nm						
KAPI	Kappang	5.00	31	P	**Pn**	**17 52 35.7**	**-1.0**
	5.8nm,0.3s,baz=193,slow=7.7,SNR=28						
KAPI				S	**Sn**	**17 53 32.1**	**-1.1**
	7.8nm,0.3s,baz=80,slow=22,SNR=9.9						
MMRI	Maumere	5.04	82	P	**Pn**	**17 52 38.0**	**+0.7**
	461nm,1.6s,5µm1.5nm						
PWJI	Pagerwojo	5.48	283	P	**Pn**	**17 52 42.7**	**-0.5**
	344nm,0.9s,6µm1.3nm						
SJI	Sawahan	5.59	286	P	**Pn**	**17 52 43.6**	**-1.2**
	146nm,0.4s,6µm1.1nm						
SJI				S	**Sn**	**17 53 47.1**	**-0.6**
	146nm,0.4s,6µm1.1nm						
PCJI	Pacitan	6.04	280	P	**Pn**	**17 52 48.8**	**-2.1**
	216nm,0.6s,5µm0.8nm						
UGM	Wanagama	6.74	282	P	**Pn**	**17 53 00.0**	**-0.4**
	274nm,0.7s,1.6nm						
CISI	Cisompet, Garu	9.43	280	P	Pn	17 53 33.8	-3.4
	92nm,0.8s,2µm						
FITZ	Fitzroy Crossi	11.97	138	P	Pn	17 54 05.5	-6.1
	1.2nm,0.3s,baz=329,slow=8.8,SNR=33						
FITZ				S	Sn	17 56 08.0	-15
	0.8nm,0.3s,baz=233,slow=15,SNR=5.1						
WRA	Warramunga Arr	19.64	124	P	**P**	**17 55 45.3**	**-0.7**
	0.7nm,0.3s,baz=301,slow=12,SNR=41						
WRA				S	S	17 59 09.5	-14
	0.5nm,0.3s,baz=300,slow=24,SNR=7.5						
ASAR	Alice Springs	21.41	134	P	**P**	**17 56 04.7**	**-0.4**
	8.4nm,0.9s,baz=308,slow=9.8,SNR=43						
ASAR				S	**S**	**17 59 52.8**	**-5.1**
	1.8nm,0.7s,baz=314,slow=25,SNR=4.6						
NWAO	Narrogin (SRO)	23.47	180	S	**S**	**18 00 35.0**	**+2.1**
	11nm,0.6s,baz=300,slow=20,SNR=5.6						
STKA	Stephens Creek	31.86	138	P	**P**	**17 57 41.9**	**+0.9**
	1.6nm,0.4s,baz=319,slow=12,SNR=17						
SONM	Songino Array	57.73	351	P	**P**	**18 01 06.6**	**+0.8**
	0.5nm,0.5s,baz=158,slow=6.7,SNR=5.0						
SONM				pP	pP	18 01 19.3	-8.3
	0.9nm,0.9s,baz=175,slow=7.9,SNR=3.7						
MKAR	Makanchi Array	63.96	334	P	**P**	**18 01 48.1**	**0.0**
	0.8nm,0.5s,baz=156,slow=6.8,SNR=7.6						
MKAR				pP	pP	18 02 01.8	-8.4
	1.0nm,0.7s,baz=141,slow=7.8,SNR=5.3						
ZALV	Zalesovo Beam	68.74	340	P	**P**	**18 02 18.0**	**-0.4**
	0.8nm,0.4s,baz=141,slow=4.2,SNR=5.2						
ZALV				pP	pP	18 02 31.0	-10
	0.6nm,0.3s,baz=108,slow=4.8,SNR=3.3						
VNDA	Vanda	71.93	171	P	**P**	**18 02 39.8**	**+2.2**
	4.5nm,1.2s,baz=310,slow=7.3,SNR=6.9						
KMBO	Kilima Mbogo	79.88	271	P	**P**	**18 03 23.1**	**-1.2**
	1.0nm,0.5s,baz=41,slow=21,SNR=4.3						
QSPA	South Pole Qui	80.65	180	P	**P**	**18 03 28.7**	**+1.4**
	1.2nm,0.6s,baz=308,slow=1.7,SNR=6.7						
YKA	Yellowknife Ar	115.23	24	PKP	**PKPdf**	**18 09 55.6**	**+0.6**
	0.3nm,0.4s,baz=308,slow=1.9,SNR=5.1						

MEX 04 17:59:08.0±0.5**, 18°.18N**×**101°.56W, h11**km±5km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.57	171	eP	Pg	17 59 17.7	-1.5
ZIIG				eS	Sg	17 59 26.0	-0.8
ARIG	Puente Sto Nin	1.16	85	eP	Pb	17 59 26.4	-3.8
ARIG				iS	Sb	17 59 40.5	-4.7
CAIG	El Cayaco	1.67	132	iP	Pn	17 59 34.1	-3.2
CAIG				iS	Sn	17 59 53.1	-5.6
MMIG	Aquila	1.70	274	iP	Pn	17 59 34.2	-3.4
MMIG				iS	Sn	17 59 54.5	-4.9
PLIG	Platanillo	1.97	83	iP	Pn	17 59 38.4	-3.2
PLIG				iS	Sn	18 00 00.7	-5.6
ACX	Acapulco	2.08	128	iP	Pn	17 59 39.9	-3.1
ACX				iS	Sn	18 00 03.9	-5.1
YAIG	Yautepec	2.46	74	iP	Pn	17 59 45.4	-3.0
YAIG				iS	Sn	18 00 14.8	-3.9
PPM	Popocatepetl	2.92	72	iP	Pn	17 59 52.4	-2.7
PPM				iS	Sn	18 00 27.3	-3.5

IDC 04 18:11:44.0±2.4**, 3°.04S**×**129°.68E, h0**km**, mb3.4**/2**, mb1 3.8**/4**, mb1mx3.5**/22**, mbtmp3.6**/4**, ML3.6**/2**, Error ellipse: s-maj=135.4km s-min=25.6km az=73.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.48	195	Pn	Pn	18 15 22.8	-1.0
	0.1nm,0.3s,baz=17,slow=11,SNR=5.3						
WRA	Warramunga Arr	17.41	165	P	P	18 15 49.8	0.0
	0.3nm,0.3s,baz=349,slow=11,SNR=26						
ASAR	Alice Springs	20.91	169	P	P	18 16 27.9	-0.4
	2.2nm,0.8s,baz=345,slow=12,SNR=22						
MKAR	Makanchi Array	64.77	326	P	P	18 22 24.5	0.0
	0.1nm,0.4s,baz=112,slow=6.2,SNR=3.4						

IDC 04 18:16:23.5±2.5**, 9°.45S**×**116°.89E, h0**km**, mb3.4**/3**, mb1 3.5**/5**, mb1mx3.3**/22**, mbtmp3.4**/5**, ML3.3**/2**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.6**/20**, Error ellipse: s-maj=196.2km s-min=22.6km az=51.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	5.24	33	LR	LR	18 20 15.4	
	comp=Z,215nm,19.4s,baz=202,slow=44						
FITZ	Fitzroy Crossi	12.08	136	Pn	Pn	18 19 16.9	-0.2
	0.2nm,0.3s,baz=323,slow=3.5,SNR=7.9						
FITZ				Sn	Sn	18 21 20.4	-12
	0.2nm,0.3s,baz=174,slow=20,SNR=7.7						
WRA	Warramunga Arr	19.82	124	P	P	18 20 56.1	+0.3
	0.1nm,0.3s,baz=299,slow=12,SNR=7.8						
WRA				S	S	18 24 22.1	-18
	0.1nm,0.3s,baz=297,slow=26,SNR=4.2						
ASAR	Alice Springs	21.54	133	P	P	18 21 15.7	+1.1
	0.8nm,0.6s,baz=314,slow=9.3,SNR=14						
STKA	Stephens Creek	31.97	138	P	P	18 22 50.2	-1.3
	1.9nm,1.0s,baz=328,slow=11,SNR=3.7						
MKAR	Makanchi Array	63.93	334	P	P	18 26 58.4	0.0
	0.2nm,0.5s,baz=136,slow=7.0,SNR=3.3						

ISCJB 04 18:57:58.5±0.5, 38°.51N±0°.03×39°.17E±0°.03, h8km±5km, Error ellipse: s-maj=5.5km s-min=4.5km az=3.1
ISK 04 18:57:58.0, 38°.49N×39°.17E, h6km, MD2.9
DDA 04 18:57:58.0, 38°.48N×39°.16E, h17km, MD2.8
CSEM 04 18:57:58.3±0.3, 38°.51N×39°.17E, h5km, MD2.8, Error ellipse: s-maj=8.8km s-min=7.1km az=19.0
ISC 04 18:57:58.3±0.9**, 38°.50N**±0°.03×**39°.17E**±0°.02**, h13**km±6km**, n26, σ0°.70**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.15	271	iP	**Pg**	**18 58 02.2**	**0.0**
ELZG				iS	**Sg**	**18 58 05.2**	**+0.3**
ELZG	Elazig	0.15	271	iP	**Pg**	**18 58 02.2**	**0.0**
ELZG				iS	**Sg**	**18 58 05.2**	**+0.3**
SVRC	Sivrice-ELAZID	0.16	138	ePG	**Pg**	**18 58 01.7**	**-0.6**
SVRC	Sivrice-ELAZID	0.16	138	ePg	**Pg**	**18 58 01.7**	**-0.6**
PTK	Pertek	0.43	23	ePG	**Pg**	**18 58 06.9**	**-0.1**
PTK				eSG	**Sg**	**18 58 13.8**	**+0.9**
PTK	Pertek	0.43	23	ePg	**Pg**	**18 58 06.9**	**-0.1**
PTK				eSg	**Sg**	**18 58 13.8**	**+0.9**
MYA	Malataya	0.61	254	ePG	**Pg**	**18 58 10.1**	**-0.2**
MYA				eSG	**Sg**	**18 58 19.1**	**+0.7**
MYA	Malataya	0.61	254	ePg	**Pg**	**18 58 10.1**	**-0.2**
MYA				eSg	**Sg**	**18 58 19.1**	**+0.7**
KEMA	Kemaliye	0.94	326	iP	**Pg**	**18 58 15.8**	**-0.7**
KEMA				iS	**Sb**	**18 58 29.9**	**+1.0**
KEMA	Kemaliye	0.94	326	iP	**Pg**	**18 58 15.8**	**-0.7**
KEMA				iS	**Sb**	**18 58 29.9**	**+1.0**
DIYA	Diyarbakir	0.94	127	iP	**Pg**	**18 58 16.6**	**+0.1**
DIYA				iS	**Sb**	**18 58 30.0**	**+1.1**
DIYA	Diyarbakir	0.94	127	iP	**Pg**	**18 58 16.6**	**+0.1**
DIYA				iS	**Sb**	**18 58 30.0**	**+1.1**
AKCD	Akcadag	1.00	259	iP	**Pb**	**18 58 16.8**	**-0.8**
AKCD				iS	**Sb**	**18 58 31.4**	**+0.7**
AKCD	Akcadag	1.00	259	iP	**Pb**	**18 58 16.8**	**-0.8**
AKCD				iS	**Sb**	**18 58 31.4**	**+0.7**
ILIC	ilic-Erzincan	1.07	334	ePG	**Pb**	**18 58 17.9**	**-0.7**
ILIC	ilic-Erzincan	1.07	334	ePg	**Pb**	**18 58 18.0**	**-0.7**
BINT	Bingol	1.10	69	ePn	Pg	18 58 23.0	+3.5
ERZN	Erzincan	1.17	21	ePN	**Pn**	**18 58 20.6**	**+0.1**
EZC	Erzincan	1.26	6	ePn	**Pn**	**18 58 20.6**	**-1.2**
BNGB	Bingˆ¶l	1.28	67	ePN	**Pg**	**18 58 23.0**	**+0.1**
DARE	Darende-Malaty	1.33	274	ePN	**Pb**	**18 58 23.6**	**+0.5**
DARE	Darende-Malaty	1.33	274	ePn	**Pb**	**18 58 23.6**	**+0.5**
MARD	Mardin	1.73	132	iP	**Pb**	**18 58 29.6**	**-0.4**
MARD				iS	**Sb**	**18 58 52.3**	**+0.6**
BEST	Besiri	1.76	109	iP	Pn	18 58 25.4	-3.2
BTMT	Batman	1.85	99	ePN	**Pn**	**18 58 28.9**	**-0.8**
BTMT	Batman	1.85	99	ePn	**Pn**	**18 58 28.9**	**-0.8**

IDC 04 19:00:18.4±1.7**, 3°.05N**×**125°.47E, h0**km**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.3**/23**, mbtmp3.5**/4**, MS3.7**/3**, Ms1 3.7**/3**, ms1mx3.4**/25**, Error ellipse: s-maj=183.5km s-min=21.6km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.99	2	LR	LR	19 03 16.0	
	comp=Z,130nm,18.1s,baz=205,slow=44						
WRA	Warramunga Arr	24.46	159	P	P	19 05 38.9	-0.4
	0.3nm,0.5s,baz=339,slow=10,SNR=6.6						
ASAR	Alice Springs	27.80	163	P	P	19 06 10.0	+0.5
	0.1nm,0.3s,baz=336,slow=11,SNR=2.6						
MKAR	Makanchi Array	57.40	326	P	P	19 10 07.9	-1.0
	0.5nm,0.4s,baz=123,slow=7.2,SNR=4.7						
MKAR				LR	LR	19 35 01.2	
	comp=Z,136nm,20.5s,baz=18,slow=36						
AAK	Ala-Archa	60.02	319	LR	LR	19 37 17.4	
	comp=Z,168nm,21.9s,baz=0.7,slow=37						
KURBB	Kurchatov Arra	61.63	328	P	P	19 10 38.4	+0.4
	0.4nm,0.5s,baz=129,slow=6.1,SNR=12						

IDC 04 19:17:25.5±1.3, 37°.65N×24°.67W, h0km, mb3.8/14, mb1 3.9/15, mb1mx3.8/33, mbtmp3.8/15, ML4.3/1, MS3.7/6, Ms1 3.7/6, ms1mx3.4/45, Error ellipse: s-maj=33.6km s-min=20.7km az=10.0
NEIC 04 19:17:26.4±0.8, 37°.40N×24°.86W, h10km, mb4.5/9, Error ellipse: s-maj=18.2km s-min=8.3km az=188.0
CSEM 04 19:17:26.6±0.2, 37°.24N×24°.87W, h20km, mb4.5/7, Error ellipse: s-maj=10.4km s-min=4.3km az=19.0
PDA 04 19:17:27.9±1.0, 37°.36N×24°.63W, h5km, MD4.0, ML4.1, Error ellipse: s-maj=7.6km s-min=2.4km az=85.0
INMG 04 19:17:28.5±1.9, 37°.84N×24°.45W, h10km, ML3.4, Error ellipse: s-maj=58.4km s-min=7.2km az=20.0
ISC 04 19:17:27.2±0.5**, 37°.36N**±0°.04×**24°.83W**±0°.06**, h20**km±4km**, n131, σ1°.14**/135**, mb4.1**/22**, MS3.8**/4**, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.40	208	iP	**Pb**	**19 17 36.4**	**+0.9**
PSMN				eS	**Sn**	**19 17 43.2**	**-1.6**
PSMN				A	A	19 17 44.8	
	759nm,0.3s						
PSMA	Santa Maria	0.44	213	iP	**Pb**	**19 17 36.9**	**+0.8**
PSMA				eS	**Sn**	**19 17 43.8**	**-1.8**
PSMA				A	A	19 17 47.4	
	1µm,0.2s						
BART	Pico Bartolome	0.50	327	eP	**Pb**	**19 17 37.8**	**+0.6**
BART				eS	**Sb**	**19 17 45.6**	**+1.5**
BART				A	A	19 17 48.2	
	7µm,0.2s						
BART	Pico Bartolome	0.50	327	eP	**Pb**	**19 17 37.8**	**+0.6**
BART				eS	**Sb**	**19 17 45.6**	**+1.5**
CMLA	Cha da Macela	0.68	306	iP	**Pb**	**19 17 40.5**	**+0.1**
CMLA				eS	**Sn**	**19 17 50.8**	**-0.9**
CMLA				A	A	19 17 51.9	
	4µm,0.3s						
CMLA	Cha da Macela	0.68	306	eP	**Pb**	**19 17 40.6**	**+0.1**
CMLA				eS	**Sb**	**19 17 48.2**	**-1.3**
CMLA	Cha da Macela	0.68	306	eP	**Pb**	**19 17 40.6**	**+0.1**
CMLA				eS	**Sn**	**19 17 50.8**	**-0.9**
GRON	Grota Negra	0.69	306	eP	**Pb**	**19 17 39.2**	**-1.4**
GRON				eS	**Sb**	**19 17 48.3**	**-1.5**
GRON				A	A	19 17 52.2	
	2µm,0.2s						
PDA	Ponta Delgada	0.77	300	eP	**Pb**	**19 17 41.9**	**+0.1**
PDA				eS	**Sn**	**19 17 52.9**	**-0.8**
PDA				A	A	19 17 55.3	
	4µm,0.2s						
PDA	Ponta Delgada	0.77	300	eP	**Pb**	**19 17 41.9**	**+0.1**
PDA				eS	**Sn**	**19 17 52.9**	**-0.8**
PSET	Sete Cidades	0.85	303	eP	**Pb**	**19 17 43.0**	**-0.2**
PSET				eS	**Sn**	**19 17 55.0**	**-0.8**
PSET				A	A	19 18 02.2	
	3µm,0.2s						
PSET	Sete Cidades	0.85	303	eP	**Pb**	**19 17 43.0**	**-0.2**
PSET				eS	**Sn**	**19 17 55.0**	**-0.8**
PID	Ribeirinha	2.82	294	eP	**Pn**	**19 18 11.6**	**+0.6**
PID	Ribeirinha	2.82	294	eP	**Pn**	**19 18 11.6**	**+0.6**
PGRA	Graciosa	2.99	305	eP	**Pn**	**19 18 13.2**	**-0.2**
PGRA				eS	**Sn**	**19 18 47.6**	**-1.0**
PGRA				A	A	19 18 55.5	
	183nm,0.3s						
PGRA	Graciosa	2.99	305	eP	**Pn**	**19 18 13.2**	**-0.2**
PGRA				eS	**Sn**	**19 18 47.6**	**-1.0**
ROSA	Rosais	3.02	298	eP	**Pn**	**19 18 13.8**	**0.0**
ROSA				eS	**Sn**	**19 18 48.0**	**-1.3**
ROSA				A	A	19 18 52.4	
	97nm,0.2s						
ROSA	Rosais	3.02	298	eP	**Pn**	**19 18 13.8**	**0.0**
ROSA				eS	**Sn**	**19 18 48.0**	**-1.3**
PICO	Pico	3.06	293	eP	**Pn**	**19 18 14.9**	**+0.4**
PICO	Pico	3.06	293	eP	**Pn**	**19 18 14.9**	**+0.4**
PCAN	Candelaria	3.09	292	eP	**Pn**	**19 18 14.9**	**+0.1**
PCAN				eS	**Sn**	**19 18 49.7**	**-1.5**
PCAN				A	A	19 18 55.5	
	248nm,0.2s						
PCAN	Candelaria	3.09	292	eP	**Pn**	**19 18 14.9**	**+0.1**
PCAN				eS	**Sn**	**19 18 49.7**	**-1.5**
HOR	Horta	3.22	292	eP	**Pn**	**19 18 16.9**	**+0.3**
HOR				eS	**Sn**	**19 18 53.8**	**-0.5**
HOR	Horta	3.22	292	eP	**Pn**	**19 18 16.9**	**+0.3**
HOR				eS	**Sn**	**19 18 53.8**	**-0.5**
CALA	Caldeira	3.29	293	eP	**Pn**	**19 18 18.4**	**+0.8**
CALA	Caldeira	3.29	293	eP	**Pn**	**19 18 18.4**	**+0.8**
PCED	Cedros	3.31	294	eP	**Pn**	**19 18 18.1**	**+0.3**
PCED				eS	**Sn**	**19 18 55.7**	**-0.8**
PCED				A	A	19 19 00.0	
	109nm,0.2s						
PCED	Cedros	3.31	294	eP	**Pn**	**19 18 18.1**	**+0.3**
PCED				eS	**Sn**	**19 18 55.7**	**-0.8**
PMOZ	Porto Moniz, M	7.72	124	ePn	**Pn**	**19 19 16.2**	**-2.3**
PMOZ				eSn	Sn	19 20 36.0	-9.4
PMOZ				A	A	19 20 53.8	
	30nm,0.7s						
PMOZ				iT	T	19 26 47.1	
PMOZ	Porto Moniz, M	7.72	124	ePn	**Pn**	**19 19 16.2**	**-2.3**
PMOZ				eSn	Sn	19 20 36.0	-9.4
	30nm,0.7s						
PMAR	Madeira	7.97	123	ePn	Pn	19 19 18.7	-3.3
PMAR				eSn	Sn	19 20 39.3	-12
PMAR				A	A	19 20 49.8	
	30nm,0.4s						
PMAR	Madeira	7.97	123	ePn	Pn	19 19 18.7	-3.3
PMAR				eSn	Sn	19 20 39.3	-12
	30nm,0.4s						
PMPST	Porto Santo, M	8.16	119	ePn	Pn	19 19 20.4	-4.0
PMPST				eSn	Sn	19 20 44.3	-12
PMPST				A	A	19 20 53.1	
	16nm,0.6s						
PMPST				iT	T	19 27 18.9	
PMPST	Porto Santo, M	8.16	119	ePn	Pn	19 19 20.4	-4.0
PMPST				eSn	Sn	19 20 44.3	-12
	16nm,0.6s						
EVO	Evora	13.33	80	eSn	Sn	19 22 45.0	-18
	3.8nm,0.3s						
ESDC	Sonseca Array	16.49	76	Pn	**Pn**	**19 21 13.8**	**-3.5**
ESDC	Sonseca Array	16.49	76	Pn	**Pn**	**19 21 13.8**	**-3.5**
	0.2nm,0.3s,baz=274,slow=11,SNR=3.7						
ESDC				LR	LR	19 25 27.8	
	comp=Z,131nm,19.5s,baz=95,slow=30						
MDT	Midelt	17.15	99	LR	LR	19 27 20.1	
	comp=Z,170nm,20.6s,baz=356,slow=35						
ETSF	Etsaut	19.34	66	eP	**Pn**	**19 21 52.9**	**+0.6**
ETSF	Etsaut	19.34	66	eP	**Pn**	**19 21 52.9**	**+0.6**
ETSF	Etsaut	19.34	66	eP	**Pn**	**19 21 52.9**	**+0.6**
MFF	Saint Martin d	20.47	55	eP	Pn	19 22 05.2	-0.5
	22nm,1.1s						
MFF	Saint Martin d	20.47	55	eP	Pn	19 22 05.2	-0.5
	22nm,1.1s						
MFF	Saint Martin d	20.47	55	eP	Pn	19 22 05.2	-0.5
	22nm,1.1s						
LFF	La Frestale	20.63	60	eP	**P**	**19 22 06.4**	**+1.2**
LFF	La Frestale	20.63	60	eP	**P**	**19 22 06.4**	**+1.2**
LFF	La Frestale	20.63	60	eP	**P**	**19 22 06.4**	**+1.2**
GRR	Gorron	20.65	50	eP	Pn	19 22 07.2	-0.5
	30nm,1.0s						
GRR	Gorron	20.65	50	eP	Pn	19 22 07.2	-0.5
	30nm,1.0s						
GRR	Gorron	20.65	50	eP	Pn	19 22 07.2	-0.5
	30nm,1.0s						
FLN	La Foliniere	21.03	49	eP	**P**	**19 22 10.9**	**+1.4**
FLN	La Foliniere	21.03	49	eP	**P**	**19 22 10.9**	**+1.4**
FLN	La Foliniere	21.03	49	eP	**P**	**19 22 10.9**	**+1.4**
LDF	La Druitiere	21.18	50	eP	**P**	**19 22 12.3**	**+1.2**
LDF	La Druitiere	21.18	50	eP	**P**	**19 22 12.3**	**+1.2**
LDF	La Druitiere	21.18	50	eP	**P**	**19 22 12.3**	**+1.2**
CAF	Calviac	21.55	61	eP	**P**	**19 22 16.0**	**+0.9**
	22nm,1.1s						
CAF	Calviac	21.55	61	eP	**P**	**19 22 16.0**	**+0.9**
	22nm,1.1s						
CAF	Calviac	21.55	61	eP	**P**	**19 22 16.0**	**+0.9**
	22nm,1.1s						
TCF	Toulx Ste Croi	21.95	57	eP	**P**	**19 22 21.4**	**+2.0**
	6.4nm,0.8s						
TCF	Toulx Ste Croi	21.95	57	eP	**P**	**19 22 21.4**	**+2.0**
	6.4nm,0.8s						
TCF	Toulx Ste Croi	21.95	57	eP	**P**	**19 22 21.4**	**+2.0**
	6.4nm,0.8s						
SSF	Saint Saulge	23.01	56	eP	**P**	**19 22 32.0**	**+1.4**
SSF	Saint Saulge	23.01	56	eP	**P**	**19 22 32.0**	**+1.4**
SSF	Saint Saulge	23.01	56	eP	**P**	**19 22 32.0**	**+1.4**
SMF	Signal de Mont	23.13	57	eP	**P**	**19 22 31.7**	**-0.2**
SMF	Signal de Mont	23.13	57	eP	**P**	**19 22 31.7**	**-0.2**
SMF	Signal de Mont	23.13	57	eP	**P**	**19 22 31.7**	**-0.2**
ESK	Eskdalemuir	23.19	32	P	**P**	**19 22 32.2**	**-0.1**
ESK	Eskdalemuir	23.19	32	P	**P**	**19 22 32.2**	**-0.1**
EKA	Eskdalemuir Ar	23.22	32	P	P	19 22 27.8	-4.9
EKA	Eskdalemuir Ar	23.22	32	P	P	19 22 27.8	-4.9
	0.5nm,0.5s,baz=225,slow=7.9,SNR=2.3						
VIVF	Saint-Julien-l	23.36	62	eP	**P**	**19 22 35.8**	**+1.5**
	6.5nm,0.7s						
VIVF	Saint-Julien-l	23.36	62	eP	**P**	**19 22 35.8**	**+1.5**
	6.5nm,0.7s						
VIVF	Saint-Julien-l	23.36	62	eP	**P**	**19 22 35.8**	**+1.5**
	6.5nm,0.7s						
BAIF	Baives	24.36	49	eP	**P**	**19 22 45.0**	**+1.4**
	46nm,1.5s						
BAIF	Baives	24.36	49	eP	**P**	**19 22 45.0**	**+1.4**
	46nm,1.5s						
BAIF	Baives	24.36	49	eP	**P**	**19 22 45.0**	**+1.4**
	46nm,1.5s						
CDF	Champ du Feu	25.80	54	eP	**P**	**19 22 58.2**	**+1.4**
CDF	Champ du Feu	25.80	54	eP	**P**	**19 22 58.2**	**+1.4**
CDF	Champ du Feu	25.80	54	eP	**P**	**19 22 58.2**	**+1.4**
BORG	Borgarnes	27.50	3	eP	**P**	**19 23 12.1**	**+0.3**
	16nm,1.1s						
BORG	Borgarnes	27.50	3	eP	**P**	**19 23 12.1**	**+0.3**
	16nm,1.1s						
GERES	GERESS Array B	30.07	55	P	**P**	**19 23 33.3**	**-1.7**
GERES	GERESS Array B	30.07	55	P	**P**	**19 23 33.3**	**-1.7**
	0.5nm,0.7s,baz=260,slow=7.7,SNR=4.9						
NOA	NORSAR Array B	32.71	32	LR	LR	19 36 19.6	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,120nm,18.6s,baz=340,slow=35						
TORD	Torodi Ar. Bea	33.79	129	P	P	19 24 09.6	+1.7
TORD	Torodi Ar. Bea	33.79	129	P	P	19 24 09.6	+1.7
	0.6nm,0.6s,baz=327,slow=7.1,SNR=6.8						
TORD	Torodi Ar. Bea	33.79	129	P	P	19 24 09.6	+1.7
JMIC	Jan Mayen	34.76	9	LR	LR	19 34 17.6	
	comp=Z,190nm,19.9s,baz=265,slow=29						
FINES	FINESS Array B	39.52	36	LR	LR	19 39 19.0	
	comp=Z,128nm,21.8s,baz=110,slow=34						
AKASG	Malin Array Be	40.20	53	P	P	19 25 01.2	-0.7
AKASG	Malin Array Be	40.20	53	P	P	19 25 01.2	-0.7
	0.5nm,0.4s,baz=274,slow=7.9,SNR=4.2						
AKASG	Malin Array Be	40.20	53	P	P	19 25 01.2	-0.7
ARCES	ARCESS Array B	41.88	24	P	P	19 25 15.3	-0.2
ARCES	ARCESS Array B	41.88	24	P	P	19 25 15.3	-0.2
	4.6nm,1.1s,baz=236,slow=8.6,SNR=5.0						
ARCES	ARCESS Array B	41.88	24	P	P	19 25 15.4	-0.2
BRTR	Keskin Array B	45.09	68	P	P	19 25 42.3	+0.3
BRTR	Keskin Array B	45.09	68	P	P	19 25 42.3	+0.3
	0.5nm,0.7s,baz=236,slow=5.8,SNR=3.6						
BRTR	Keskin Array B	45.09	68	P	P	19 25 42.3	+0.3
TEIG	Tepich	57.17	271	LR	LR	19 48 36.9	
	comp=Z,91nm,18.0s,baz=153,slow=33						
YKA	Yellowknife Ar	57.55	327	P	P	19 27 13.8	-1.0
YKA	Yellowknife Ar	57.55	327	P	P	19 27 13.8	-1.0
	0.4nm,0.6s,baz=72,slow=7.2,SNR=3.7						
YKA	Yellowknife Ar	57.55	327	P	P	19 27 13.8	-1.0
AKTO	Aktyubinsk	58.13	48	P	P	19 27 18.6	-0.5
AKTO	Aktyubinsk	58.13	48	P	P	19 27 18.6	-0.5
	1.9nm,0.8s,baz=318,slow=5.9,SNR=8.2						
AKTO	Aktyubinsk	58.13	48	P	P	19 27 18.6	-0.5
BVAR	Borovoye Array	64.04	42	P	P	19 27 58.1	-1.0
BVAR	Borovoye Array	64.04	42	P	P	19 27 58.1	-1.0
	0.4nm,0.6s,baz=294,slow=7.4,SNR=3.9						
BVAR	Borovoye Array	64.04	42	P	P	19 27 58.1	-1.0
TXAR	Lajitas Array	64.58	288	P	P	19 28 05.9	+2.7
TXAR	Lajitas Array	64.58	288	P	P	19 28 05.9	+2.7
	0.6nm,0.8s,baz=90,slow=7.5,SNR=5.3						
ILAR	Eielson Array	68.61	337	P	P	19 28 27.9	-0.4
ILAR	Eielson Array	68.61	337	P	P	19 28 27.9	-0.4
	0.3nm,0.8s,baz=28,slow=8.1,SNR=3.5						
ILAR	Eielson Array	68.61	337	P	P	19 28 27.9	-0.4
KURK	Kurchatov	69.60	41	eP	P	19 28 35.6	+1.0
	1.4nm,0.7s						
KURK	Kurchatov	69.60	41	eP	P	19 28 35.6	+1.0
	1.4nm,0.7s						
KURBB	Kurchatov Arra	69.60	41	P	P	19 28 34.3	-0.3
	1.0nm,0.6s,baz=308,slow=6.8,SNR=11						
ZALV	Zalesovo Beam	70.79	36	P	P	19 28 42.2	+0.3
ZALV	Zalesovo Beam	70.79	36	P	P	19 28 42.2	+0.3
	1.5nm,0.7s,baz=300,slow=6.1,SNR=8.6						
ZALV	Zalesovo Beam	70.79	36	P	P	19 28 42.2	+0.3
MK31	Makanchi Array	73.86	43	eP	P	19 29 00.7	+0.3
MK31	Makanchi Array	73.86	43	eP	P	19 29 00.7	+0.3
MKAR	Makanchi Array	73.86	43	P	P	19 29 00.9	+0.5
MKAR	Makanchi Array	73.86	43	P	P	19 29 00.9	+0.5
	1.2nm,0.7s,baz=315,slow=5.5,SNR=13						
MKAR	Makanchi Array	73.86	43	P	P	19 29 00.9	+0.5
SONM	Songino Array	84.68	31	P	P	19 30 00.2	+0.6
SONM	Songino Array	84.68	31	P	P	19 30 00.2	+0.6
	1.4nm,1.0s,baz=315,slow=3.1,SNR=6.3						
SONM	Songino Array	84.68	31	P	P	19 30 00.2	+0.6
ULN	Ulaanbaatar	84.92	30	eP	P	19 30 00.8	0.0
	4.1nm,1.2s						
ULN	Ulaanbaatar	84.92	30	eP	P	19 30 00.8	0.0
	4.1nm,1.2s						

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*IDC **04** 19:19:29.0±10.0, 36°.52S×178°.28E, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/16, mbtmp3.8/3, Error ellipse: s-maj=182.3km s-min=31.1km az=90.0*
*WEL **04** 19:19:32.4±0.9, 36°.38S×177°.73E, h5km, ML3.9/4, Error ellipse: s-maj=6.8km s-min=6.8km az=90.0*
*ISCJB **04** 19:19:34.7±1.2, 36°.62S±0°.06×177°.8E±0°.1, h33km, mb3.6/3, Error ellipse: s-maj=14.2km s-min=6.7km az=151.3*
ISC 04 19:19:36.0±1.7, **36°.5S**±0°.1×**177°.8E**±0°.1, **h35**km, **n12**, σ1^{s}62/16, **mb3.8**/3, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.14	161	P*	Pn	19 19 52.7	-2.7
MXZ				S*	Sn	19 20 07.6	-2.2
MXZ				AML	AML	19 20 10.1	
PUZ	Puketiti	1.61	168	PN	Pn	19 20 03.2	+1.2
PUZ				AML	AML	19 20 28.6	
PUZ				AML	AML	19 20 30.2	
KUZ	Kuaotunu	1.72	261	PN	Pn	19 20 00.8	-2.7
MWZ	Matawai	1.86	188	P*	Pn	19 20 04.5	-0.9
MWZ				S*	Sn	19 20 27.6	-0.1
MWZ				AML	AML	19 20 41.8	
URZ	Urewera	1.86	198	P*	Pn	19 20 04.1	-1.3
URZ				S*	Sn	19 20 27.7	0.0
URZ				AML	AML	19 20 37.3	
URZ	Urewera	1.86	198	Pn	Pn	19 20 04.0	-1.3
	3.6nm,0.3s,baz=11,slow=5.0,SNR=20						
URZ				Sn	Sn	19 20 28.4	+0.8
	11nm,0.3s,baz=148,slow=22,SNR=13						
MKAZ	Moumakai	2.23	253	PN	Pn	19 20 08.8	-1.6
TOZ	Tahuroa Road	2.24	236	P*	Pn	19 20 09.3	-1.3
HIZ	Hauiti	3.12	229	PN	Pn	19 20 22.3	-0.4
STKA	Stephens Creek	30.22	268	P	P	19 25 44.8	+1.5
	1.4nm,0.8s,baz=112,slow=5.4,SNR=2.7						
ASAR	Alice Springs	39.79	276	P	P	19 27 06.4	+0.6
	1.4nm,0.8s,baz=121,slow=7.9,SNR=14						
WRA	Warramunga Arr	41.35	281	P	P	19 27 19.7	+1.0
	0.8nm,0.7s,baz=121,slow=7.6,SNR=7.0						

IDC 04 19:21:35.3±1.1, **45°.51S**×**35°.29E**, **h0**km, **mb3.6**/4, **mb1 3.8**/5, **mb1mx3.6**/21, **mbtmp3.7**/5, **ML4.3**/1, **Error ellipse: s-maj=59.1km s-min=23.4km az=65.0, Prince Edward Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	18.65	331	P	P	19 25 53.3	-1.4
	0.7nm,0.3s,baz=170,slow=10,SNR=13						
QSPA	South Pole Qui	44.70	180	P	P	19 29 48.8	-1.1
	1.5nm,0.8s,baz=204,slow=2.3,SNR=6.3						
VNDA	Vanda	52.92	167	P	P	19 30 53.2	+0.7
	1.5nm,0.7s,baz=227,slow=7.5,SNR=10						
TORD	Torodi Ar. Bea	65.81	324	P	P	19 32 23.1	+0.7
	0.4nm,0.6s,baz=162,slow=6.7,SNR=5.1						
ASAR	Alice Springs	79.20	113	P	P	19 33 42.2	-0.2
	0.2nm,0.8s,baz=233,slow=4.5,SNR=3.3						

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*IDC **04** 19:45:06.9±2.9, 36°.53S×177°.90E, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.9/17, mbtmp4.1/4, MS4.0/1, Ms1 4.0/1, ms1mx3.3/22, Error ellipse: s-maj=57.8km s-min=24.4km az=68.0*
*ISCJB **04** 19:45:07.5±1.1, 36°.57S±0°.07×177°.68E±0°.08, h5km, mb4.0/4, Error ellipse: s-maj=12.6km s-min=6.1km az=41.7*
*WEL **04** 19:45:08.7±1.2, 36°.45S×177°.69E, h5km, ML4.2/7, Error ellipse: s-maj=9.5km s-min=7.8km az=0.0*
ISC 04 19:45:08.8±1.6, **36°.6S**±0°.1×**177°.67E**±0°.10, **h5**km, **n17**, σ1^{s}14/18, **mb4.1**/4, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.14	154	eP*	Pg	19 45 27.8	-2.8
MXZ				S*	Sg	19 45 43.3	-2.0
MXZ				AML	AML	19 45 45.4	
MXZ				AML	AML	19 46 41.5	
MXZ				AML	AML	19 46 41.5	
KUZ	Kuaotunu	1.58	262	PN	Pn	19 45 36.5	-0.9
KUZ				SN	Sn	19 45 57.4	-0.8
KUZ				AML	AML	19 46 01.2	
PUZ	Puketiti	1.59	163	PN	Pn	19 45 38.2	+0.6
PUZ				AML	AML	19 46 03.4	
PUZ				AML	AML	19 46 10.0	
URZ	Urewera	1.77	194	P*	Pn	19 45 39.5	-0.5
URZ				AML	AML	19 46 10.2	
URZ				AML	AML	19 46 12.4	
URZ	Urewera	1.77	194	Pn	Pn	19 45 39.5	-0.5
	19nm,0.3s,baz=1.0,slow=4.7,SNR=45						
URZ				Sn	Sn	19 46 02.9	+0.1
	39nm,0.3s,baz=250,slow=22,SNR=18						
MWZ	Matawai	1.79	184	P*	Pn	19 45 39.6	-0.7
MWZ				AML	AML	19 46 17.1	
MWZ				AML	AML	19 46 17.2	
CNGZ	Carnagh Statio	1.98	168	ePN	Pn	19 45 44.2	+1.3
MKAZ	Moumakai	2.08	254	PN	Pn	19 45 44.3	0.0
MKAZ				AML	AML	19 46 26.6	
MKAZ				AML	AML	19 46 32.5	
TOZ	Tahuroa Road	2.10	235	P*	Pn	19 45 44.9	+0.4
BKZ	Black Stump Fm	2.78	199	P*	Pn	19 45 54.7	+0.7
BKZ				AML	AML	19 46 31.7	
BKZ				AML	AML	19 46 34.6	
HIZ	Hauiti	2.98	228	PN	Pn	19 45 57.8	+1.1
MOVZ	Moawhango	3.23	207	P*	Pn	19 46 03.0	+2.7
DZM	Mont Dzumac	17.41	323	LR	LR	19 54 43.3	
	comp=Z,424nm,19.0s,baz=301,slow=33						
STKA	Stephens Creek	30.08	268	P	P	19 51 20.2	+1.1
	2.3nm,0.9s,baz=103,slow=13,SNR=3.4						
ASAR	Alice Springs	39.66	276	P	P	19 52 42.0	+0.2
	4.3nm,0.8s,baz=120,slow=7.7,SNR=42						
WRA	Warramunga Arr	41.23	282	P	P	19 52 54.6	-0.2
	1.8nm,0.7s,baz=121,slow=7.5,SNR=19						
QSPA	South Pole Qui	53.58	180	P	P	19 54 29.9	-0.6
	1.7nm,0.6s,baz=77,slow=2.1,SNR=7.0						

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*ISCJB **04** 19:50:51.7±0.6, 50°.15N±0°.05×19°.09E±0°.03, h0km, Error ellipse: s-maj=6.8km s-min=2.5km az=8.9*
*CSEM **04** 19:50:53.1±0.6, 50°.10N×19°.13E, h2km, ML2.6/6, Error ellipse: s-maj=13.8km s-min=4.9km az=16.0*
*PRU **04** 19:50:53.9, 50°.12N×19°.13E, h0km*
*WAR **04** 19:50:54.4, 50°.10N×19°.22E*
ISC 04 19:50:53.2±0.8, **50°.07N**±0°.04×**19°.14E**±0°.02, **h0**km, **n28**, σ**0^{s}67**/44, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.45	70	ePg	Pg	19 51 01.7	-0.2
OJC				eSg	Sg	19 51 07.5	-0.3
OKC	Ostrava-Krasne	0.68	251	ePG	Pg	19 51 07.0	+0.8
OKC				eSG	Sb	19 51 17.0	-0.8
	comp=Z,9.5nm,0.3s						
OKC	Ostrava-Krasne	0.68	251	Pg	Pg	19 51 07.0	+0.8
OKC				Sg	Sb	19 51 17.0	-0.8
	9.5nm,0.3s						
NIE	Niedzica	1.00	130	ePg	Pb	19 51 13.4	0.0
NIE				eSg	Sb	19 51 28.3	+1.1
MORC	Moravsky Berou	1.07	255	ePg	Pb	19 51 14.8	+0.2
MORC				eSg	Sb	19 51 29.4	+0.2
STHS	Stebnicka Huta	1.51	115	ePN	Pg	19 51 22.5	+0.3
STHS				eSN	Sg	19 51 41.9	+0.1
STHS	Stebnicka Huta	1.51	115	ePn	Pg	19 51 22.5	+0.3
STHS				eSn	Sg	19 51 41.9	+0.1
KRLC	Kraliky	1.52	271	ePG	Pn	19 51 21.2	-0.5
KRLC				eSG	Sn	19 51 42.2	+0.1
KRLC	Kraliky	1.52	271	Pg	Pn	19 51 21.2	-0.5
KRLC				Sg	Sn	19 51 42.2	+0.1
VYHS	Vyhne	1.58	187	ePN	Pn	19 51 22.8	+0.2
VYHS				eSN	Sg	19 51 44.3	+0.2
VYHS	Vyhne	1.58	187	ePg	Pn	19 51 22.8	+0.2
VYHS				eSn	Sg	19 51 44.3	+0.2
KECS	Kecovo	1.81	150	ePN	Pn	19 51 25.2	-0.5
KECS				eSN	Sn	19 51 47.4	-2.0
KECS	Kecovo	1.81	150	ePn	Pn	19 51 25.2	-0.5
KECS				eSn	Sn	19 51 47.4	-2.0
VRAC	Vranov	1.82	246	ePn	Pg	19 51 28.1	+0.1
VRAC				eSg	Sg	19 51 51.4	-0.1
DPC	Dobruska-Polom	1.83	280	ePG	Pn	19 51 26.6	+0.6
DPC				eSG	Sb	19 51 51.2	+0.2
	comp=Z,42nm,0.3s						
DPC	Dobruska-Polom	1.83	280	Pg	Pn	19 51 26.6	+0.6
DPC				Sg	Sb	19 51 51.2	+0.2
	42nm,0.3s						
CRVS	Cervenica-Dubn	1.91	127	eSN	Sn	19 51 51.8	0.0
CRVS	Cervenica-Dubn	1.91	127	eSn	Sn	19 51 51.9	+0.1
UPC	Upice	2.05	284	eSG	Sb	19 51 58.1	+0.7
	comp=Z,1.3nm,0.3s						
UPC	Upice	2.05	284	Sg	Sb	19 51 58.1	+0.7
	1.3nm,0.3s						
KOLS	Kolonicke sedl	2.34	118	eSN	Sn	19 52 02.9	+0.6
KOLS	Kolonicke sedl	2.34	118	eSn	Sn	19 52 02.9	+0.6
PRU	Pruhonice	2.96	270	eSG	Sg	19 52 27.7	-0.7
	comp=Z,2.5nm,0.5s						
PRU	Pruhonice	2.96	270	Sg	Sg	19 52 27.7	-0.7
	2.5nm,0.5s						
PVCC	Panska Ves	2.96	281	eSG	Sg	19 52 27.5	-0.9
	comp=Z,6.0nm,0.3s						
PVCC	Panska Ves	2.96	281	Sg	Sg	19 52 27.5	-0.9
	6.0nm,0.3s						
KHC	Kasperske Hory	3.73	258	eSG	Sg	19 52 52.9	-0.2
	comp=Z,2.0nm,0.5s						
KHC	Kasperske Hory	3.73	258	Sg	Sg	19 52 52.9	-0.2
	2.0nm,0.5s						

IDC 04 20:20:45.5±0.9, **38°.29S**×**47°.56E**, **h0**km, **mb3.9**/6, **mb1 4.0**/6, **mb1mx3.7**/23, **mbtmp3.9**/6, **MS3.8**/2, **Ms1 3.7**/2, **ms1mx3.1**/26, **Error ellipse: s-maj=41.0km s-min=22.9km az=23.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	20.92	291	P	P	20 25 28.3	-1.5
	5.6nm,1.2s,baz=103,slow=15,SNR=3.1						
MAW	Mawson	30.59	169	LR	LR	20 37 33.2	
	comp=Z,124nm,19.4s,baz=192,slow=33						
SNAA	Sanae	41.92	201	P	P	20 28 37.7	+0.3
	1.0nm,1.0s,baz=61,slow=3.6,SNR=5.2						
QSPA	South Pole Qui	51.90	180	LR	LR	20 50 04.3	
	comp=Z,111nm,20.2s,baz=336,slow=34						
TORD	Torodi Ar. Bea	66.78	310	P	P	20 31 39.7	+0.8
	1.5nm,1.2s,baz=177,slow=5.9,SNR=3.7						
ASAR	Alice Springs	73.00	107	P	P	20 32 17.3	-0.1
	0.9nm,0.8s,baz=230,slow=5.2,SNR=6.0						
STKA	Stephens Creek	73.91	118	P	P	20 32 22.0	-0.5
	1.8nm,0.8s,baz=257,slow=0.4,SNR=7.4						
WRA	Warramunga Arr	75.47	104	P	P	20 32 32.0	+0.2
	1.7nm,0.9s,baz=230,slow=4.8,SNR=7.9						
INK	Inuvik	149.93	1	PKPbc	PKPbc	20 40 36.5	0.0
	0.6nm,0.7s,baz=9.9,slow=5.6,SNR=3.1						
TXAR	Lajitas Array	154.56	258	PKPbc	PKPbc	20 40 48.5	0.0
	0.8nm,0.8s,baz=131,slow=5.1,SNR=6.7						

WEL 04 20:21:55.0±0.5, **36°.04S**×**178°.40E**, **h193**km±4km, **ML3.5**/3, **Error ellipse: s-maj=10.1km s-min=5.7km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.53	183	PN	Pn	20 22 28.4	+0.1
MXZ				SN	Sn	20 22 54.3	+0.1
PUZ	Puketiti	2.04	183	PN	Pn	20 22 33.9	+0.6
PUZ				SN	Sn	20 23 02.3	-1.1
URZ	Urewera	2.45	204	PN	Pn	20 22 38.1	+0.3
CNGZ	Carnagh Statio	2.45	184	PN	Pn	20 22 38.8	+0.9
KNZ	Kokohu	3.04	191	PN	Pn	20 22 44.9	+0.3

IDC 04 20:38:45.0±28.0, **22°.25S**×**174°.07W**, **h0**km, **mb4.1**/4, **mb1 4.3**/4, **mb1mx3.8**/21, **mbtmp4.1**/4, **Error ellipse: s-maj=517.9km s-min=151.2km az=77.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	36.99	266	P	P	20 45 57.3	+0.8
	4.5nm,0.3s,baz=96,slow=11,SNR=7.2						
STKA	Stephens Creek	40.39	247	P	P	20 46 23.8	-1.2
	1.5nm,1.0s,baz=101,slow=8.5,SNR=4.9						
ASAR	Alice Springs	47.71	258	P	P	20 47 23.6	-0.3
	0.5nm,0.4s,baz=93,slow=7.3,SNR=12						
WRA	Warramunga Arr	48.00	263	P	P	20 47 26.2	+0.1
	1.3nm,0.3s,baz=97,slow=8.4,SNR=61						

GUC 04 20:44:41.1±0.9, **36°.05S**×**71°.74W**, **h15**km±15km, **MD3.6, ML2.8, 3D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COCH	Cobquecura	0.85	264⇓	iP	Pb	20 44 56.6	-1.0
COCH				iS	Sb	20 45 07.7	-1.1
COCH				AML	AML	20 45 10.0	
	comp=N,261nm,0.3s						
LNV	Longovilo	2.11	7	eP	Pn	20 45 16.4	+0.6
CACH	El Canelo	2.14	26	eP	Pn	20 45 16.5	0.0
CACH				eS	Sb	20 45 44.8	-1.5
LMEL	Las Melosas	2.53	30⇓	iP	Pn	20 45 23.0	+1.1
LMEL				iS	Sb	20 45 55.9	-1.8
LMEL				AML	AML	20 46 02.7	
	comp=N,67nm,0.2s						
FCH	Farellones	2.97	24⇓	iP	Pn	20 45 29.9	+1.8
FCH				eS	Sn	20 46 06.1	+2.3
FCH				AML	AML	20 46 15.1	
	comp=N,66nm,0.2s						

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*IDC **04** 20:47:52.5±3.5, 37°.32N×25°.16W, h0km, mb3.8/3, mb1 3.7/4, mb1mx3.4/30, mbtmp3.6/4, ML4.4/1, MS3.2/2, Ms1 3.2/2, ms1mx2.7/31, Error ellipse: s-maj=93.7km s-min=41.8km az=67.0*
*ISCJB **04** 20:47:55.2±0.6, 37°.36N±0°.05×24°.87W±0°.06, h34km±10km, mb3.8/3, MS3.2/2, Error ellipse: s-maj=10.0km s-min=4.6km az=137.1*
*CSEM **04** 20:47:55.3±0.1, 37°.38N×24°.80W, h30km, ML3.7, Error ellipse: s-maj=5.1km s-min=2.5km az=41.0*
*PDA **04** 20:47:55.9±1.4, 37°.37N×24°.66W, h5km, MD3.6, ML3.7, Error ellipse: s-maj=7.8km s-min=3.1km az=81.0*
*INMG **04** 20:47:58.7±1.4, 37°.39N×24°.80W, h10km, ML3.2, Error ellipse: s-maj=8.2km s-min=4.9km az=54.0*
ISC 04 20:47:55.8±1.0, **37°.38N**±0°.04×**24°.88W**±0°.06, **h22**km±8km, **n42**, σ**0^{s}99**/68, **mb4.0**/3, **Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.41	202	eP	Pb	20 48 04.4	0.0
PSMN				eS	Sb	20 48 11.0	+0.8
PSMN				A	A	20 48 19.8	
	1μm,0.3s						
PSMN	Pico do Norte,	0.41	202	eP	Pb	20 48 04.4	0.0
PSMN				eS	Sb	20 48 11.0	+0.8
PSMA	Santa Maria	0.44	208	eP	Pb	20 48 04.9	0.0
PSMA				eS	Sb	20 48 11.6	+0.6
PSMA				A	A	20 48 12.9	
	619nm,0.1s						
BART	Pico Bartolome	0.46	330	eP	Pb	20 48 05.3	0.0
BART				eS	Sb	20 48 12.5	+0.8
BART				A	A	20 48 14.9	
	2μm,0.2s						
BART	Pico Bartolome	0.46	330	eP	Pb	20 48 05.3	0.0
BART				eS	Sb	20 48 12.5	+0.8
CMLA	Cha da Macela	0.64	307	eP	Pb	20 48 08.7	+0.4
CMLA				eS	Sn	20 48 18.4	-0.6
CMLA				A	A	20 48 23.3	
	4μm,0.4s						
CMLA	Cha da Macela	0.64	307	eP	Pb	20 48 08.7	+0.4
CMLA				eS	Sn	20 48 18.4	-0.6
GRON	Grota Negra	0.65	307	eP	Pb	20 48 07.0	-1.5
GRON				eS	Sb	20 48 16.3	-0.8
GRON				A	A	20 48 17.1	
	471nm,0.2s						
PDA	Ponta Delgada	0.72	300	eP	Pb	20 48 09.8	+0.1
PDA				eS	Sn	20 48 20.8	-0.2
PDA				A	A	20 48 22.3	
	2μm,0.3s						
PDA	Ponta Delgada	0.72	300	eP	Pb	20 48 09.8	+0.1
PDA				eS	Sn	20 48 20.8	-0.2
PSET	Sete Cidades	0.80	304	eP	Pb	20 48 11.2	+0.1
PSET				eS	Sb	20 48 22.5	+1.0
PSET				A	A	20 48 25.0	
	736nm,0.2s						
PSET	Sete Cidades	0.80	304	eP	Pb	20 48 11.2	+0.1
PSET				eS	Sb	20 48 22.5	+1.0
PID	Ribeirinha	2.77	293	eP	Pn	20 48 38.6	-0.3
PID	Ribeirinha	2.77	293	eP	Pn	20 48 38.6	-0.3
PMAN	Manadas	2.83	297	eP	Pn	20 48 40.0	+0.4
PMAN				eS	Sn	20 49 11.6	-1.4
PMAN				A	A	20 49 13.0	
	76nm,0.3s						
PMAN	Manadas	2.83	297	eP	Pn	20 48 40.0	+0.4
PMAN				eS	Sn	20 49 11.6	-1.4
PGRA	Graciosa	2.95	305	eP	Pn	20 48 40.8	-0.5
PGRA				eS	Sn	20 49 14.8	-1.1
PGRA				A	A	20 49 18.3	
	64nm,0.4s						
PGRA	Graciosa	2.95	305	eP	Pn	20 48 40.8	-0.5
PGRA				eS	Sn	20 49 14.8	-1.1
ROSA	Rosais	2.97	298	eP	Pn	20 48 42.2	+0.6
ROSA				eS	Sn	20 49 15.8	-0.8
ROSA				A	A	20 49 18.7	
	43nm,0.2s						
ROSA	Rosais	2.97	298	eP	Pn	20 48 42.2	+0.6
ROSA				eS	Sn	20 49 15.8	-0.8
PICO	Pico	3.02	293	eP	Pn	20 48 42.6	+0.3
PICO				eS	Sn	20 49 16.8	-1.0
PICO	Pico	3.02	293	eP	Pn	20 48 42.6	+0.3
PICO				eS	Sn	20 49 16.8	-1.0
PCAN	Candelaria	3.05	292	eP	Pn	20 48 42.6	-0.1
PCAN				eS	Sn	20 49 17.9	-0.6
PCAN				A	A	20 49 21.5	
	85nm,0.3s						
PCAN	Candelaria	3.05	292	eP	Pn	20 48 42.6	-0.1
PCAN				eS	Sn	20 49 17.9	-0.6
HOR	Horta	3.18	292	eP	Pn	20 48 44.2	-0.2
HOR				eS	Sn	20 49 20.7	-0.9
HOR	Horta	3.18	292	eP	Pn	20 48 44.2	-0.2
HOR				eS	Sn	20 49 20.7	-0.9
CALA	Caldeira	3.25	293	eP	Pn	20 48 46.1	+0.6
CALA				eS	Sn	20 49 22.2	-1.4
CALA	Caldeira	3.25	293	eP	Pn	20 48 46.1	+0.6
CALA				eS	Sn	20 49 22.2	-1.4
PCED	Cedros	3.27	294	eP	Pn	20 48 45.6	-0.1
PCED				eS	Sn	20 49 23.0	-0.8
PCED				A	A	20 49 28.0	
	83nm,0.4s						
PCED	Cedros	3.27	294	eP	Pn	20 48 45.6	-0.1
PCED				eS	Sn	20 49 23.0	-0.8
PMOZ	Porto Moniz, M	7.76	124	ePn	Pn	20 49 46.0	-1.6
PMOZ				eSn	Sn	20 51 04.8	-10
PMOZ	Porto Moniz, M	7.76	124	ePn	Pn	20 49 46.0	-1.6
PMAR	Madeira	8.01	123	ePn	Pn	20 49 49.1	-2.0
PMAR				eSn	Sn	20 51 10.2	-11
PMAR				A	A	20 51 12.9	
	16nm,0.2s						
PMAR	Madeira	8.01	123	ePn	Pn	20 49 49.1	-2.0
PMPST	Porto Santo, M	8.20	119	ePn	Pn	20 49 50.6	-2.9
PMPST				eSn	Sn	20 51 10.7	-15
PMPST	Porto Santo, M	8.20	119	ePn	Pn	20 49 50.6	-2.9
ESDC	Sonseca Array	16.52	76	Pn	P	20 51 48.8	+0.2
	0.3nm,0.3s,baz=274,slow=12,SNR=7.1						
NOA	NORSAR Array B	32.71	32	LR	LR	21 05 14.3	
	comp=Z,24nm,19.2s,baz=255,slow=32						
TORD	Torodi Ar. Bea	33.84	129	P	P	20 54 37.7	+1.1
	1.1nm,1.2s,baz=311,slow=10.0,SNR=4.2						
ZALV	Zalesovo Beam	70.80	36	P	P	20 59 11.5	+1.3
	1.1nm,0.6s,baz=309,slow=6.7,SNR=7.9						
MKAR	Makanchi Array	73.88	43	LR	LR	21 31 47.4	
	comp=Z,26nm,20.9s,baz=358,slow=36						
SONM	Songino Array	84.68	31	P	P	21 00 29.3	+1.4
	0.8nm,0.8s,baz=323,slow=4.6,SNR=5.4						

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*ISK **04** 20:59:40.0, 37°.82N×27°.56E, h5km, MD3.0*
*ISCJB **04** 20:59:41.3±0.6, 37°.81N±0°.03×27°.54E±0°.05, h8km±6km, Error ellipse: s-maj=6.8km s-min=4.7km az=169.7*
*DDA **04** 20:59:41.3, 37°.83N×27°.53E, h7km, MD3.1*
*CSEM **04** 20:59:41.4±0.2, 37°.81N×27°.57E, h10km, MD3.1, Error ellipse: s-maj=6.8km s-min=4.2km az=79.0*
ISC 04 20:59:41.6±1.0, **37°.81N**±0°.02×**27°.54E**±0°.03, **h12**km±8km, **n28**, σ**0^{s}75**/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.27	247	iP	Pg	20 59 46.9	-0.2
GCAM	G?zelcaml?	0.27	247	iP	Pg	20 59 46.9	-0.2
AYDN	Tasoluk	0.30	118	iP	Pg	20 59 48.2	+0.3
AYDN				iS	Sg	20 59 52.5	+0.5
AYDN	Tasoluk	0.30	118	iP	Pg	20 59 48.2	+0.3
AYDN				iS	Sg	20 59 52.5	+0.5
MLSB	Milas	0.54	160	ePG	Pg	20 59 51.7	-0.6
MLSB	Milas	0.54	160	ePg	Pg	20 59 51.7	-0.6
IZM	Izmir	0.63	340	ePG	Pg	20 59 53.4	-0.5
IZM	Izmir	0.63	340	ePg	Pg	20 59 53.4	-0.5
BLCB	Balcova	0.70	326	ePG	Pg	20 59 54.5	-0.7
BLCB	Balcova	0.70	326	ePg	Pg	20 59 54.5	-0.7
BODT	Bodrum	0.77	194	ePG	Pg	20 59 56.3	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BODT				eSG	Sb	21 00 07.9	+0.6
BODT	Bodrum	0.77	194	ePg	Pg	20 59 56.3	-0.2
BODT				eSg	Sb	21 00 07.9	+0.6
YER	Yerkesik	0.89	138	ePG	Pg	20 59 58.4	-0.4
YER				eSG	Sb	21 00 11.7	+0.7
YER	Yerkesik	0.89	138	ePg	Pg	20 59 58.4	-0.4
YER				eSg	Sb	21 00 11.7	+0.7
DAT	Datca	1.07	178	ePN	Pg	21 00 02.0	-0.4
DAT				eSN	Sn	21 00 17.9	+0.4
DAT	Datca	1.07	178	ePn	Pg	21 00 02.0	-0.4
DAT				eSn	Sn	21 00 18.0	+0.4
AKHS	Akhisar	1.09	11	i P	Pg	21 00 01.9	-0.8
AKHS				i S	Sg	21 00 16.9	0.0
AKHS	Akhisar	1.09	11	i P	Pg	21 00 01.9	-0.8
AKHS				i S	Sg	21 00 16.9	0.0
KULA	Kula-Manisa	1.13	51	ePN	Pb	21 00 02.2	-1.0
KULA	Kula-Manisa	1.13	51	ePn	Pb	21 00 02.2	-1.0
TURN	Turunc	1.26	137	eP	Pn	21 00 03.6	-1.5
TURN	Turunc	1.26	137	eP	Pn	21 00 03.6	-1.5
APE	Apeiranthos	1.76	246	ePN	Pb	21 00 13.6	-0.3
APE	Apeiranthos	1.76	246	ePn	Pb	21 00 13.6	-0.3
TVSB	Tavsanli	2.23	42	ePN	Pn	21 00 19.6	+1.1
TVSB	Tavsanli	2.23	42	ePn	Pn	21 00 19.6	+1.1
GONE	Gonen-Balikesi	2.24	3	ePN	Pn	21 00 19.8	+1.2
GONE	Gonen-Balikesi	2.24	3	ePn	Pn	21 00 19.8	+1.2

FUNV 04 21:05:16.2, 5°.23N×72°.47W, h90km, MW3.7, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	Capacho	2.63	3	eP	Pn	21 05 55.7	-1.4
CAPV				eS	Sn	21 06 25.9	-2.5
SOCV	Socops	3.44	28	eP	Pn	21 06 07.4	-0.3
SOCV				eS	Sn	21 06 44.0	-3.5
VIGV	El Vigia	3.75	17	eP	Pn	21 06 10.8	-1.2
VIGV				eS	Sn	21 06 51.8	-3.4
SANV	Sanarito	5.15	34	eP	Pn	21 06 29.5	-1.5
SANV				eS	Sn	21 07 23.4	-5.9
QARV	Quebrada Arrib	5.31	21	eP	Pn	21 06 31.6	-1.6
QARV				eS	Sn	21 07 27.4	-5.7
CURV	Curarigua	5.37	27	eP	Pn	21 06 32.7	-1.3
CURV				eS	Sn	21 07 29.0	-5.5

GUC 04 21:06:58.1±0.9, 32°.64S×71°.08W, h3km±2km, MD3.6, ML2.4, 2C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROCH	El Roble	0.34	170	⇑iP	Pg	21 07 05.5	+0.5
ROCH				i S	Sg	21 07 10.7	+1.1
ROCH				AML	AML	21 07 17.3	
	comp=N,457nm,0.4s						
PEL	Peldehue	0.60	147	⇓iP	Pg	21 07 10.5	+0.7
PEL				i S	Sb	21 07 19.4	-1.0
PEL				AML	AML	21 07 21.9	
	comp=N,699nm,0.4s						
CHNG	Los Chungos	0.83	334	⇓iP	Pb	21 07 14.6	-0.5
CHNG				i S	Sb	21 07 26.1	-0.7
CHNG				AML	AML	21 07 28.6	
	comp=E,283nm,0.4s						
RCDM	Rinconada Maip	0.88	165	eP	Pg	21 07 15.2	+0.1
RCDM				AML	AML	21 07 36.6	
	comp=E,157nm,0.2s						
CLCH	Cerro Calan	0.88	149	eP	Pb	21 07 16.0	-0.2
CLCH				i S	Sb	21 07 28.5	0.0
CLCH				AML	AML	21 07 30.5	
	comp=N,184nm,0.4s						
SAN	Santiago	0.89	157	eP	Pg	21 07 15.1	-0.1
SAN				eS	Sb	21 07 28.6	+0.1
SAN				AML	AML	21 07 30.3	
	comp=N,294nm,0.4s						
FCH	Farellones	0.95	136	⇑iP	Pg	21 07 14.6	-2.3
FCH				i S	Sg	21 07 28.0	-1.6
FCH				AML	AML	21 07 37.1	
	comp=N,88nm,0.5s						
ANTU	Antumapu	1.00	158	i S	Sb	21 07 31.3	-0.5
ANTU				AML	AML	21 07 32.9	
	comp=E,485nm,0.4s						
TACH	Talagante	1.02	173	eP	Pg	21 07 17.6	-0.2
TACH				i S	Sb	21 07 32.0	-0.3
PCH	Pirque	1.09	154	⇓iP	Pg	21 07 18.9	-0.3
PCH				i S	Sb	21 07 34.2	-0.3
CHCH	Chadas Angostu	1.34	165	eP	Pn	21 07 22.8	-1.0
CHCH				eS	Sg	21 07 41.2	-0.2
LNV	Longovilo	1.34	192	eP	Pn	21 07 23.1	-0.7
LMEL	Las Melosas	1.41	149	i P	Pn	21 07 24.3	-0.6
LMEL				i S	Sb	21 07 43.8	-0.1
LMEL				AML	AML	21 07 45.0	
	comp=N,363nm,0.3s						
CACH	El Canelo	1.53	165	eP	Pn	21 07 26.5	0.0
CACH				i S	Sg	21 07 49.1	+1.5

IDC 04 21:14:54.5±1.4, 5°.89S×130°.45E, h0km, mb4.1/3, mb1 4.1/6, mb1mx3.8/19, mbtmp4.0/6, ML4.1/3, Error ellipse: s-maj=89.2km s-min=20.8km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.01	201	Pn	Pn	21 18 00.2	-0.6
	0.7nm,0.3s,baz=30,slow=13,SNR=26						
FITZ				Sn	Sn	21 20 12.7	-14
	0.8nm,0.3s,baz=256,slow=24,SNR=10						
WRA	Warramunga Arr	14.47	165	Pn	Pn	21 18 18.7	-2.1
	0.9nm,0.3s,baz=350,slow=13,SNR=31						
WRA				Sn	Sn	21 20 47.8	-14
	1.3nm,0.3s,baz=332,slow=24,SNR=6.5						
ASAR	Alice Springs	17.98	170	P	Pn	21 19 06.0	-0.1
	0.7nm,0.3s,baz=343,slow=9.2,SNR=38						
ASAR				S	Sn	21 22 16.0	-11
	0.3nm,0.3s,baz=354,slow=27,SNR=5.2						
STKA	Stephens Creek	27.88	159	P	P	21 20 46.9	+0.8
	2.5nm,1.0s,baz=331,slow=10,SNR=4.2						
MKAR	Makanchi Array	67.55	326	P	P	21 25 53.1	+0.3
	1.1nm,0.5s,baz=115,slow=8.3,SNR=27						
ZALV	Zalesovo Beam	70.80	333	P	P	21 26 12.3	-0.5
	0.7nm,0.5s,baz=133,slow=8.1,SNR=2.6						

WEL 04 21:24:01.5±1.1, 36°.40S×177°.93E, h5km, ML3.6/4, Error ellipse: s-maj=7.5km s-min=7.5km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.20	165	P*	Pg	21 24 22.2	-2.4
MXZ				S*	Sg	21 24 37.0	-3.2
MXZ				AML	AML	21 24 39.3	
PUZ	Puketiti	1.69	171	PN	Pn	21 24 32.4	+0.7
PUZ				AML	AML	21 24 57.5	
PUZ				AML	AML	21 24 58.4	
MWZ	Matawai	1.96	189	P*	Pn	21 24 34.2	-1.3
MWZ				AML	AML	21 25 05.4	
MWZ				AML	AML	21 25 22.2	
URZ	Urewera	1.97	199	P*	Pn	21 24 33.9	-1.7
URZ				S*	Sn	21 24 57.9	-2.6
URZ				AML	AML	21 24 59.0	
TOZ	Tahuroa Road	2.35	235	P*	Pn	21 24 39.2	-1.5

*IDC **04** 21:53:00.8±8.5, 11°.29N×45°.65E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/25, mbtmp3.6/4, Error ellipse: s-maj=191.8km s-min=41.6km az=31.0*
*CSEM **04** 21:53:08.2, 12°.32N×45°.49E, h25km, ML3.3, After DHMR*
*DHMR **04** 21:53:08.2±1.7, 12°.32N×45°.49E, h26km±9km, ML3.3*
ISC 04 21:53:06.8±1.8, 12°.2N±0°.1×45°.42E±0°.08, h10km, n10, σ0ˢ.54/14, mb3.6/4, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	Aden	0.68	321	i P	Pb	21 53 20.9	+0.1
ADEN				i S	Sb	21 53 30.8	+0.6
ADEN				AML	AML	21 53 34.6	
	comp=N,771nm,0.2s						
ADEN	Aden	0.68	321	i P	Pb	21 53 20.9	+0.1
ADEN				i S	Sb	21 53 30.8	+0.6
	comp=N,385nm,0.2s						
TRBA	At Turbah	1.61	308	i P	Pn	21 53 35.2	-0.2
TRBA				i S	Sg	21 53 58.7	+0.1
LBOS		1.63	354	i P	Pn	21 53 35.2	-0.6
LBOS				i S	Sn	21 53 55.8	-1.2
BDHA	Al Bayda'	1.73	5	i P	Pn	21 53 37.6	+0.4
BDHA				i S	Sn	21 53 59.1	-0.3
BDHA				AML	AML	21 54 15.6	
	comp=E,521nm,0.6s						
BDHA	Al Bayda'	1.73	5	i P	Pn	21 53 37.6	+0.4
BDHA				i S	Sn	21 53 59.1	-0.3
	comp=E,261nm,0.6s						
BRTR	Keskin Array B	29.29	341	P	P	21 59 13.6	+4.1
	comp=E,1.2nm,1.1s,baz=163,slow=10,SNR=3.6						
MKAR	Makanchi Array	46.34	35	P	P	22 01 33.4	+0.3
	comp=E,0.4nm,0.8s,baz=224,slow=8.1,SNR=4.5						
CMAR	Chiang Mai Arr	51.84	76	P	P	22 02 11.1	-4.6
	comp=E,0.8nm,0.6s,baz=272,slow=11,SNR=4.8						
SONM	Songino Array	61.62	42	P	P	22 03 24.7	-0.2
	comp=E,0.2nm,0.4s,baz=264,slow=5.8,SNR=3.7						

*CSEM **04** 21:58:06.4, 12°.31N×45°.62E, h24km, ML3.7, After DHMR*
DHMR 04 21:58:06.4±0.9, 12°.31N×45°.62E, h24km±15km, ML3.7, 2D, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADEN	Aden	0.78	307	i P	Pb	21 58 21.0	-0.3
ADEN				i S	Sn	21 58 32.7	-0.1
ADEN				AML	AML	21 58 38.2	
	comp=N,4μm,0.3s						
ADEN	Aden	0.78	307	i P	Pb	21 58 21.0	-0.3
ADEN				i S	Sn	21 58 32.7	-0.1
	comp=N,2μm,0.3s						
LBOS		1.60	347	i P	Pn	21 58 34.4	+0.9
LBOS				i S	Sb	21 58 56.3	+0.6
BDHA	Al Bayda'	1.66	358	i P	Pn	21 58 34.8	+0.4
BDHA				AML	AML	21 58 54.8	
	comp=N,619nm,0.5s						
BDHA				i S	Sb	21 58 57.6	+0.2
BDHA	Al Bayda'	1.66	358	i P	Pn	21 58 34.8	+0.4
	comp=N,309nm,0.5s						
BDHA				i S	Sb	21 58 57.6	+0.2
TRBA	At Turbah	1.73	302	⇓iP	Pn	21 58 36.4	+1.1
TRBA				i S	Sb	21 58 59.3	-0.2
UDYN	Al 'Udayn	2.31	316	⇓iP	Pn	21 58 45.1	+2.0
UDYN				i S	Sb	21 59 15.2	-0.6
DHBB	Dhamar BB	2.55	332	i P	Pb	21 58 49.9	-2.0
DHBB				i S	Sb	21 59 23.4	+0.3

*BJI **04** 22:13:04.4, 53°.14N×170°.77W, h8km, mB4.9/7, mb4.7/16, Ms4.6/4, Ms7 4.0/4*
*ISCJB **04** 22:13:04.6±0.3, 52°.25N±0°.06×170°.53W±0°.04, h25km, mb4.4/69, MS3.5/8, Error ellipse: s-maj=8.6km s-min=2.4km az=165.5*
*SZGRF **04** 22:13:05.9, 51°.66N×169°.41W, h33km, mb4.6, Fox Islands, Aleutian Islands, United States*
*MOS **04** 22:13:05.1±1.0, 52°.32N×170°.56W, h29km, mb4.7/42, Error ellipse: s-maj=11.3km s-min=6.0km az=88.5*
*NEIC **04** 22:13:06.8, 52°.20N×170°.55W, h26km, mb4.6/33, ML4.2(AEIC), After AEIC.*
*IDC **04** 22:13:08.4±2.5, 52°.30N×170°.51W, h48km±23km, mb4.0/27, mb1 4.2/31, mb1mx4.1/38, mbtmp4.0/31, ML3.8/4, MS3.3/7, Ms1 3.3/7, ms1mx3.0/35, Error ellipse: s-maj=21.0km s-min=10.2km az=172.0*
ISC 04 22:13:05.9±0.6, 52°.19N±0°.09×170°.56W±0°.04, h26km±2km, h26km:pP-P, n383, σ1ˢ.02/415, mb4.5/69, MS3.4/8, 78C-59D, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKSP	Okmok Steeple	1.74	52	P	Pn	22 13 35.4	+1.0
OKSO	Okmok South	1.87	50	P	Pn	22 13 36.9	+0.8
OKSO				S	Sb	22 14 01.0	-1.3
OKCE	Okmok Cone E	1.91	49	P	Pn	22 13 38.0	+1.3
OKCE				S	Sb	22 14 02.7	-0.8
KOSE	Korovin Southe	2.15	275	P	Pb	22 13 43.0	-1.1
KOSE				S	Sb	22 14 08.5	-1.8
ATKA	Atka Island	2.23	272	ePn	Pn	22 13 43.1	+1.9
ATKA				eSn	Sn	22 14 09.3	+1.5
KOKL	Mount Kliuchef	2.24	275	P	Pb	22 13 44.0	-1.7
KOKL				S	Sn	22 14 10.3	+2.2
MREP	Makushin Rep't	2.82	53	P	Pn	22 13 51.5	+2.2
MCIR	Makushin Cirqu	2.83	50	P	Pn	22 13 51.3	+1.8
MSW	Makushin Switc	2.86	51	P	Pn	22 13 51.4	+1.6
MSW				S	Sn	22 14 25.6	+2.2
MTBL	Makushin Table	2.94	51	P	Pn	22 13 53.0	+2.1
UNV	Unalaska Valle	2.96	54	ePn	Pn	22 13 52.2	+1.1
UNV				eSn	Sn	22 14 25.9	+0.2
AKRB	Akutan Reef Bi	3.33	53	P	Pn	22 13 58.2	+2.0
GSTR	Great Sitkin T	3.39	270	ePn	Pn	22 13 59.1	+2.1
GSTR				eSn	Sn	22 14 34.5	-1.9
AKLV	Akutan Long Va	3.40	53	P	Pn	22 13 59.8	+2.5
AKGG	Akutan Green G	3.41	52	P	Pn	22 13 59.7	+2.4
GSTD	Great Sitkin T	3.44	270	P	Pn	22 14 00.1	+2.2
GSTD				S	Sn	22 14 40.0	+2.2
GSCK	Great Sitkin C	3.46	269	P	Pn	22 14 00.3	+2.3
AKUT	Akutan	3.48	54	P	Pn	22 14 00.3	+2.0
AKUT				eSn	Sn	22 14 42.1	+3.6
ETKA	Kagalaska Isla	3.62	267	P	Pn	22 14 02.1	+1.9
KIKV	Kanaga Island	4.09	268	P	Pn	22 14 09.5	+2.8
WESE	West Dahl East	4.25	55	P	Pn	22 14 10.8	+1.9
TAPA	Tanaga Point A	4.50	268	P	Pn	22 14 14.5	+2.2
TASE	Tanaga Southea	4.63	268	P	Pn	22 14 16.4	+2.2
FALS	False Pass	5.03	55	ePn	Pn	22 14 23.8	+4.3
FALS				eSn	Sn	22 15 19.0	+2.3
GANE	Gareloi Northe	5.09	269	P	Pn	22 14 22.2	+1.9
CEAP	Semis' Anvil P	6.08	272	P	Pn	22 14 36.5	+2.6
CESW	Semis' Southwe	6.10	271	P	Pn	22 14 37.6	+3.4
AMKA	Amchitka	6.34	267	ePn	Pn	22 14 39.6	+2.0
AMKA				eSn	Sn	22 15 48.9	-0.1
SDPT	Sand Point	6.76	58	ePn	Pn	22 14 44.5	+1.2
SDPT				eSn	Sn	22 15 58.8	-0.5
CHGN	Chignik	8.22	55	ePn	Pn	22 15 04.9	+1.7
CHGN				eSn	Sn	22 16 34.7	-0.4
FX1	Attu Island--F	9.94	280	ePn	Pn	22 15 29.9	+2.9
FX1	Attu Island--F	9.94	280	P	Pn	22 15 29.6	+2.7
	1.5nm,0.3s,baz=337,slow=6.3,SNR=14						
KDAK	Kodiak Island	11.73	54	P	Pn	22 15 49.8	-1.6
KDAK	Kodiak Island	11.73	54	P	Pn	22 15 49.8	-1.6
	1.0nm,0.3s,baz=242,slow=6.7,SNR=9.2						
RSO	Redoubt South	12.86	43	ePn	Pn	22 16 09.2	+2.4
TNA	Tin City	13.47	5	ePn	Pn	22 16 17.2	+2.1
SML	Sawmill	15.39	43	eP	Pn	22 16 39.7	-1.4
SML				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SML	Sawmill	15.39	43	ePn	Pn	22 16 39.7	-1.4
	comp=Z,2.5nm,1.0s						
COLA	College	17.24	34	eP	Pn	22 17 02.3	-2.1
COLA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	Eielson Array	17.51	35	P	Pn	22 17 06.8	-1.1
ILAR	Eielson Array	17.51	35	P	Pn	22 17 06.8	-1.1
	comp=Z,0.2nm,0.3s,baz=221,slow=9.2,SNR=8.2						
ILAR				LR	LR	22 24 16.9	
	comp=Z,68nm,20.7s,baz=266,slow=38						
MENT	Mentasta	17.82	42	ePn	Pn	22 17 10.4	-1.3
DOT	Dot Lake	17.99	40	eP	Pn	22 17 12.6	-1.3
	comp=Z,15nm,1.8s						
PNL	Peninsula	18.85	54	eP	Pn	22 17 23.9	-0.4
	comp=Z,15nm,0.7s						
PETK	Petropavlovsk-	19.20	285	P	Pn	22 17 28.6	0.0
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	19.20	285	P	Pn	22 17 28.6	0.0
PETK	Petropavlovsk-	19.20	285	P	Pn	22 17 28.6	0.0
	comp=Z,1.0nm,0.3s,baz=99,slow=14,SNR=18						
BILL	Bilibino	19.42	334	eP	P	22 17 30.1	+0.3
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
EGAK	Eagle	19.63	39	eP	P	22 17 31.5	-0.6
	comp=Z,5.2nm,0.6s						
SKAG	Skagway	20.88	56	eP	Pn	22 17 47.2	-1.1
	comp=Z,47nm,0.9s						
SEY	Seymchan	22.25	313	eP	P	22 18 01.3	+0.9
DLBC	Dease Lake	23.60	59	eP	P	22 18 16.0	+1.6
DLBC	Dease Lake	23.60	59	P	P	22 18 14.9	+0.4
	comp=Z,13nm,0.9s,baz=268,slow=9.9,SNR=20						
INK	Inuvik	23.90	34	P	P	22 18 15.8	-1.2
INK				PcP	PcP	22 21 58.4	-0.4
INK	Inuvik	23.90	34	P	P	22 18 15.8	-1.2
	comp=Z,4.0nm,0.4s,baz=240,slow=8.4,SNR=22						
INK				PcP	PcP	22 21 58.4	-0.4
	comp=Z,0.5nm,0.4s,baz=315,slow=5.7,SNR=4.5						
INK				LR	LR	22 28 55.5	
	comp=Z,145nm,18.3s,baz=256,slow=40						
YKA	Yellowknife Ar	30.91	49	P	P	22 19 19.3	-0.6
YKA				PcP	PcP	22 22 15.7	-0.1
YKA	Yellowknife Ar	30.91	49	P	P	22 19 19.3	-0.6
	comp=Z,1.2nm,0.5s,baz=269,slow=7.7,SNR=16						
YKA				PcP	PcP	22 22 15.6	-0.1
	comp=Z,0.5nm,0.7s,baz=278,slow=2.3,SNR=4.7						
YAK	Yakutsk	32.73	311	eP	P	22 19 33.6	-2.3
YAK				pmax	pmax		
	comp=Z,16nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YBH	Yreka Blue Hor	33.72	89	LR	LR	22 29 48.7	
	comp=E,40nm,21.3s,baz=25,slow=30						
NEW	Newport	33.76	75	eP	P	22 19 46.0	+0.8
	comp=E,4.3nm,0.8s						
NEW	Newport	33.76	75	P	P	22 19 44.8	-0.4
	comp=E,3.3nm,0.5s,baz=282,slow=5.4,SNR=6.6						
NEW				LR	LR	22 30 19.0	
	comp=E,37nm,21.3s,baz=285,slow=31						
NEW	Newport	33.76	75	⇑P	P	22 19 45.5	+0.3
	baz=34						
C12B	Naegeli Ranch,	35.00	75	⇓P	P	22 19 56.0	+0.1
	baz=35						
B13A	Whitefish	35.29	73	⇓P	P	22 19 58.6	+0.3
	baz=35						
WALA	Waterton Lakes	35.30	72	eP	P	22 19 58.9	+0.4
BSMT	Bassoo Peak	35.34	74	eP	P	22 19 59.8	+0.7
C13A	Hot Springs	35.55	74	⇑P	P	22 20 00.8	+0.2
	baz=35						
A14A	Double T Ranch	35.62	72	⇑P	P	22 20 02.0	+0.7
	baz=36,SNR=11						
WVOR	Wild Horse Val	35.82	85	eP	P	22 20 04.3	+1.2
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WVOR	Wild Horse Val	35.82	85	eP	P	22 20 04.3	+1.2
	comp=Z,3.2nm,0.9s						
B14A	Marquette Ranc	35.99	73	⇑P	P	22 20 04.8	+0.2
	baz=36						
C14A	Swan Lake	36.00	74	⇓P	P	22 20 04.8	+0.3
	baz=36						
A15A	Johnson Ranch,	36.02	72	⇑P	P	22 20 04.3	-0.4
	baz=36						
F12A	Elk City	36.10	78	⇑P	P	22 20 06.0	+0.6
	baz=36						
MSO	Missoula	36.34	75	⇓P	P	22 20 07.2	-0.2
	baz=36						
E13A	Victor	36.39	76	⇑P	P	22 20 07.4	-0.5
	baz=36						
B15A	Bradely Ranch,	36.44	72	⇓P	P	22 20 08.2	0.0
	baz=36,SNR=6.0						
D14A	Greenough	36.48	75	⇑P	P	22 20 08.4	-0.2
	baz=36						
F13A	Darby	36.64	77	⇓P	P	22 20 10.3	+0.3
	baz=36						
C15A	Salmond Ranch,	36.67	73	⇑P	P	22 20 11.1	+0.8
	baz=36						
CHMT	Chamberlain Mo	36.71	75	eP	P	22 20 10.3	-0.5
B16A	M & M Farms, S	36.89	72	⇓P	P	22 20 11.7	-0.3
	baz=37						
C16A	Fuhringer Ranc	37.16	73	⇑P	P	22 20 14.2	-0.2
	baz=37						
F14A	Wisdom	37.20	76	⇓P	P	22 20 15.1	+0.2
	baz=37						
A17A	Triple J Farms	37.22	70	⇑P	P	22 20 14.8	-0.1
	baz=37						
E15A	Deer Lodge	37.32	75	⇓P	P	22 20 15.9	0.0
	baz=37						
D16A	Dana Ranch, Ca	37.66	74	⇓P	P	22 20 18.9	+0.2
	baz=38						
A18A	Metzger Ranch,	37.73	70	⇑P	P	22 20 18.8	-0.4
	baz=38						
C17A	Wharram Farm,	37.82	72	⇓P	P	22 20 19.9	-0.1
	baz=38						
E16A	East Helena	37.84	74	⇑P	P	22 20 20.4	+0.1
	baz=38						
B18A	Beardsley Farm	38.02	71	⇑P	P	22 20 22.0	+0.3
	baz=38						
MCMT	McKenzie Canyo	38.03	78	eP	P	22 20 22.0	0.0
D17A	Six Diamond Ra	38.11	73	⇓P	P	22 20 23.4	+0.9
	baz=38						
I14A	Mackay	38.16	79	⇓P	P	22 20 23.2	+0.3
	baz=38						
EGMT	Eagleton	38.22	71	eP	P	22 20 24.0	+0.6
	comp=Z,13nm,0.8s						
EGMT	Eagleton	38.22	71	⇓P	P	22 20 23.5	+0.2
	baz=38						
BOZ	Bozeman (W)	38.33	76	eP	P	22 20 24.4	0.0
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BOZ	Bozeman (W)	38.33	76	eP	P	22 20 24.4	0.0
	comp=Z,1.5nm,0.6s						
A19A	Klindworth Far	38.36	70	⇑P	P	22 20 24.1	-0.4
	baz=38						
E17A	Martinsdale	38.36	74	⇑P	P	22 20 25.1	+0.4
	baz=38						
G16A	Moss Hill, Enn	38.44	76	⇑P	P	22 20 25.7	+0.3
	baz=38						
B19A	Brinkman Farms	38.48	70	⇓P	P	22 20 25.0	-0.5
	baz=38						
F17A	Fitzpatrick Pl	38.77	75	⇑P	P	22 20 28.3	+0.2
	baz=39						
C19A	Slack Wire Ran	38.77	71	⇑P	P	22 20 28.6	+0.6
	baz=39						
E18A	Harlowton	38.86	73	⇑P	P	22 20 28.6	-0.2
	baz=39						
MJAR	Matsushiro Arr	38.95	267	P	P	22 20 30.7	+1.2
MJAR	Matsushiro Arr	38.95	267	P	P	22 20 30.7	+1.2
	comp=Z,0.4nm,0.4s,baz=39,slow=10.0,SNR=4.4						
D19A	Cripps Ranch,	39.16	72	⇑P	P	22 20 32.1	+0.8
	baz=39						
F18A	Big Timber	39.33	74	⇓P	P	22 20 33.3	+0.6
	baz=39						
A21A	Bergtoll Ranch	39.38	68	⇑P	P	22 20 32.5	-0.5
	baz=39						
C20A	Veseth Ranch,	39.39	71	⇓P	P	22 20 33.5	+0.3
	baz=39						
MDJ	Mudanjiang	39.42	283	P	P	22 20 34.2	+0.9
MDJ				sP	sP	22 20 43.0	-1.5
MDJ				S	S	22 26 34.8	+1.6
MDJ				pmax	pmax		
	comp=Z,46nm,3.5s						
FFC	Flin Flon	39.44	58	i P	P	22 20 34.7	+1.4
E19A	Rath Farm, Rou	39.58	73	⇓P	P	22 20 35.6	+0.9
	baz=39						
B21A	Ellsworth Farm	39.60	69	⇓P	P	22 20 34.7	-0.1
	baz=39						
D20A	Manuel Ranch,	39.64	72	⇓P	P	22 20 35.6	+0.4
	baz=40						
G18A	Lazy EL Ranch,	39.73	75	⇑P	P	22 20 36.3	+0.2
	baz=40						
RRI2	Red Ridge	39.77	79	eP	P	22 20 37.0	+0.5
	comp=Z,3.1nm,0.8s						
F19A	Roth Farm, Mol	39.81	74	⇑P	P	22 20 37.0	+0.3
	baz=40						
E20A	Meyer Farm, Mu	39.95	72	⇑P	P	22 20 37.3	-0.4
	baz=40						
A22A	Carney Farms,	39.95	68	⇑P	P	22 20 37.5	-0.3
	baz=40						
RLMT	Red Lodge	40.01	75	eP	P	22 20 39.0	+0.5
	comp=Z,3.8nm,0.8s						
R11A	Troy Canyon, C	40.12	88	⇑P	P	22 20 39.7	+0.3
	baz=40						
B22A	Reddig Ranch S	40.25	69	⇓P	P	22 20 40.1	-0.2
	baz=40						
D21A	La Casta Ranch	40.32	71	⇑P	P	22 20 40.9	+0.1
	baz=40						
H19A	Powell	40.43	75	⇑P	P	22 20 43.2	+1.3
	baz=40						
G20A	Bridger	40.59	74	⇑P	P	22 20 43.3	+0.1
	baz=40						
C22A	Vida	40.60	70	⇓P	P	22 20 43.2	0.0
	baz=40						
D22A	Cohagen	40.74	71	⇑P	P	22 20 44.5	+0.1
	baz=41						
B23A	Brockton	40.75	68	⇓P	P	22 20 44.5	+0.2
	baz=41						
C23A	Lambert	40.98	69	⇓P	P	22 20 46.2	0.0
	baz=41						
A24A	Westby	41.07	67	⇓P	P	22 20 47.1	+0.1
	baz=41						
BW06	Boulder Array	41.16	78	eP	P	22 20 47.6	-0.4
	comp=Z,2.2nm,0.6s						
PDAR	Pinedale Array	41.16	78	P	P	22 20 47.9	-0.1
PDAR	Pinedale Array	41.16	78	P	P	22 20 47.9	-0.1
	comp=Z,2.4nm,0.5s,baz=308,slow=4.9,SNR=17						

PASC Pasadena Art C 41.22 95 eP P 22 20 53.4 +5.0
M17A Scullys Gap (B 41.24 80 ⇓P P 22 20 48.5 -0.2
baz=41
E22A Miles City 41.26 71 ⇓P P 22 20 48.7 +0.1
baz=41
MWC Mount Wilson 41.27 95 eP P 22 20 51.7 +2.7
MWC Mount Wilson 41.27 95 eP P 22 20 51.7 +2.7
D23A Lindsay 41.30 70 ⇑P P 22 20 49.0 +0.1
baz=41
GSC Goldstone 41.32 92 ⇑P P 22 20 49.9 +0.6
baz=41
F22A Rosebud 41.44 72 ⇑P P 22 20 50.0 0.0
baz=41
K19A Absolon Red Bu 41.55 78 ⇓P P 22 20 50.6 -0.7
baz=41
J20A Shoshoni 41.71 76 ⇑P P 22 20 53.4 +1.0
baz=42
D24A Glendive 41.84 70 ⇓P P 22 20 54.3 +1.0
baz=42,SNR=6.8
I21A Big Trails, Te 41.92 75 ⇓P P 22 20 53.7 -0.4
baz=42
K20A Yellowstone Ra 41.95 78 ⇓P P 22 20 53.8 -0.7
baz=42
F23A Volborg 41.97 72 ⇓P P 22 20 54.5 +0.1
baz=42,SNR=5.9
J21A Lysite 42.09 76 ⇑P P 22 20 55.1 -0.5
baz=42
MVU Marysvale 42.09 85 eP P 22 20 58.5 +2.7
comp=Z,12nm,1.0s
E24A Baker 42.15 70 ⇓P P 22 20 56.4 +0.5
baz=42
I22A 9 Mile Ranch, 42.35 75 ⇓P P 22 20 57.4 -0.3
baz=42
F24A Ekalaka 42.46 71 ⇓P P 22 20 58.0 -0.5
baz=42
SRU San Rafael 42.75 83 ⇑P P 22 21 01.8 +0.7
baz=43
L21A Rawlins 42.94 78 ⇓P P 22 21 03.0 +0.4
baz=43
H24A Dirks Ranch, A 43.01 73 ⇑P P 22 21 03.2 +0.3
baz=43
P19A Cripple Cowboy 43.37 82 ⇑P P 22 21 06.2 +0.1
baz=43
O20A White River Ci 43.51 80 ⇓P P 22 21 06.9 -0.3
baz=43
S18A Hurst Farm, Bl 43.97 84 ⇑P P 22 21 10.9 -0.1
baz=44
PV10 Paradox Valley 44.12 83 eP P 22 21 11.8 -0.3
KSRS Korea Array 44.69 276 P P 22 21 17.1 +0.8
comp=Z,1.5nm,0.7s,baz=54,slow=7.7,SNR=7.4
KSAR Wonju Array Be 44.73 276 P P 22 21 17.1 +0.5
ULM Lac du Bonnet 44.88 61 P P 22 21 16.6 -1.2
ULM Lac du Bonnet 44.88 61 P P 22 21 16.6 -1.2
comp=Z,1.5nm,0.5s,baz=269,slow=6.9,SNR=3.1
U21A Nageezi 46.21 84 ⇑P P 22 21 28.9 +0.2
baz=46
S24A Houchin Ranch, 46.92 81 ⇓P P 22 21 34.0 -0.3
baz=47
X21A Alamocita Cree 47.44 86 ⇓P P 22 21 39.0 +0.6
baz=47
T25A Trinidad 47.73 81 ⇓P P 22 21 40.3 -0.2
baz=48
Y21A Point of Rocks 47.80 87 ⇑P P 22 21 42.1 +0.9
baz=48
Z20A Nine Sixteen R 47.84 88 ⇓P P 22 21 42.1 +0.7
baz=48
R27A Eads 47.97 79 ⇑P P 22 21 42.1 -0.1
baz=48
O29A 4D Ranch, Culb 48.00 75 ⇑P P 22 21 42.6 +0.1
baz=48
T26A Comanche Natio 48.20 80 ⇓P P 22 21 44.4 +0.2
baz=48
U25A Circle Dot Ran 48.21 82 ⇑P P 22 21 44.5 +0.2
baz=48
ECSD EROS Data Cent 48.22 69 eP P 22 21 42.8 -1.3
comp=Z,4.6nm,0.6s
W24A Lazy 6 Ranch, 48.38 84 ⇓P P 22 21 45.4 -0.2
baz=48
V25A Rancho No Teng 48.45 82 ⇓P P 22 21 46.5 +0.3
baz=48
U26A Atchley Ranch, 48.62 81 ⇓P P 22 21 47.2 -0.3
baz=48
220A Playas Peak, P 48.70 89 ⇑P P 22 21 48.6 +0.5
baz=49
121A Cookes Peak, D 48.73 88 ⇓P P 22 21 48.9 +0.7
baz=49
Z22A Elephant Butte 48.74 87 ⇑P P 22 21 49.3 +1.0
baz=49
Y23A Lovelace Mesa, 48.84 85 ⇓P P 22 21 49.5 +0.4
baz=49
S28A Manter 48.96 79 ⇑P P 22 21 49.7 -0.2
baz=49
W25A X Bar L Ranch, 48.96 83 ⇑P P 22 21 50.2 +0.2
baz=49
V26A Tequesquite Ra 48.99 82 ⇓P P 22 21 50.3 +0.1
baz=49
320A Kipp Ranch, An 49.09 90 ⇓P P 22 21 51.1 0.0
baz=49
FRB Frobisher Bay 49.54 35 P P 22 21 52.9 -0.9
FRB Frobisher Bay 49.54 35 P P 22 21 52.9 -0.9
comp=Z,6.1nm,0.7s,baz=317,slow=6.6,SNR=12
Z24A Sheeppen Canyo 49.67 85 ⇑P P 22 21 55.6 +0.1
baz=50
TLY Talaya 49.85 306 eP P 22 21 57.2 +0.8
TLY pmax pmax
comp=Z,8.0nm,0.8s
ULN Ulaanbaatar 50.39 300 eP P 22 22 00.3 -0.4
comp=Z,6.4nm,1.0s
224A Cornudas Mount 50.43 87 ⇑P P 22 22 00.7 -0.5
baz=50
SONM Songino Array 50.76 300 P P 22 22 03.5 +0.1
SONM PcP PcP 22 23 20.3 +0.2
SONM Songino Array 50.76 300 P P 22 22 03.5 +0.1
comp=Z,3.3nm,0.8s,baz=50,slow=7.3,SNR=19
SONM PcP PcP 22 23 20.3 +0.2
comp=Z,1.3nm,0.8s,baz=50,slow=2.3,SNR=3.6
MSTX Muleshoe 50.83 83 ⇓P P 22 22 04.0 -0.2
baz=51
SUMG Summit 51.16 17 eP P 22 22 06.7 +0.2
SUMG pmax pmax
comp=Z,15nm,1.1s
SUMG Summit 51.16 17 eP P 22 22 06.7 +0.2
comp=Z,15nm,1.1s
325A Bean Ranch, Si 51.26 87 ⇑P P 22 22 07.3 -0.2
baz=51
226B Tecolote Peak, 51.26 86 ⇑P P 22 22 07.3 -0.2
baz=51
425A Indio Mountain 51.66 88 ⇓P P 22 22 10.3 -0.1
baz=52
HHC Hu-ho-hao-te 52.30 290 eP P 22 22 17.2 +2.2
HHC pP pP 22 22 24.8 +1.6
HHC sP sP 22 22 28.0 +1.7
HHC PP PP 22 24 16.3 +2.9
HHC PcS PcS 22 27 25.9 +1.5
HHC S S 22 29 37.3 -1.2
HHC sS sS 22 29 50.9 -1.0
HHC ScS ScS 22 32 02.4 -0.6
HHC SS SS 22 33 13.7 -2.1
HHC pmax pmax
comp=Z,36nm,1.1s
HHC pmax pmax
comp=Z,160nm,4.8s
HHC LR LR
comp=N,270nm,21.4s
HHC LR LR
comp=E,260nm,21.4s
HHC LR LR
comp=Z,120nm,21.4s
426A McDonald Obser 52.33 87 ⇑P P 22 22 15.1 -0.4
baz=52
527A Woodward Ranch 52.95 87 ⇑P P 22 22 19.8 -0.2
baz=53
626A Big Bend Ranch 53.04 88 ⇓P P 22 22 20.7 0.0
baz=53
428A Kincaid Ranch, 53.11 86 ⇓P P 22 22 21.2 +0.1
baz=53
Z32A Haskell 53.29 81 ⇓P P 22 22 21.8 -0.5
baz=53
TXAR Lajitas Array 53.49 88 P P 22 22 23.6 -0.3
TXAR Lajitas Array 53.49 88 P P 22 22 23.6 -0.3
comp=Z,0.8nm,0.6s,baz=293,slow=5.2,SNR=14
627A Terlingua Ranc 53.57 88 ⇓P P 22 22 24.2 -0.4
baz=53
ABTX Abilene, Hawle 53.66 82 ⇓P P 22 22 24.8 -0.2
baz=54
429A Davenport Ranc 53.67 85 ⇓P P 22 22 25.1 -0.1
baz=54

628A Black Gap, Mar 53.86 87 ⇑P P 22 22 25.2 -1.4
baz=54
430A Baggett Ranch, 53.96 85 ⇓P P 22 22 25.9 -1.4
baz=54
530A J-C Ranch, Com 54.34 85 ⇓P P 22 22 29.0 -1.1
baz=54
SCHQ Schefferville 56.06 43 eP P 22 22 41.8 -0.3
comp=Z,12nm,0.8s
SCHQ Schefferville 56.06 43 P P 22 22 41.8 -0.3
comp=Z,11nm,0.8s,baz=322,slow=8.1,SNR=16
ZALV Zalesovo Beam 57.05 317 P P 22 22 48.8 -0.3
ZALV 22 23 43.9
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV pmax pmax
comp=Z,1.0nm,0.7s
ZALV MLR MLR
comp=Z,25nm,20.5s
ZALV Zalesovo Beam 57.05 317 P P 22 22 48.8 -0.3
ZALV PcP PcP 22 23 43.9 +0.1
ZALV Zalesovo Beam 57.05 317 P P 22 22 48.8 -0.3
comp=Z,0.6nm,0.6s,baz=32,slow=5.9,SNR=4.3
ZALV PcP PcP 22 23 43.9 +0.1
comp=Z,0.9nm,0.7s,baz=80,slow=1.6,SNR=4.6
ZALV LR LR 22 46 59.1
comp=Z,25nm,20.5s,baz=69,slow=36
SADO Sadowa 57.16 58 P P 22 22 49.2 -0.9
SADO Sadowa 57.16 58 P P 22 22 49.2 -0.9
comp=Z,4.8nm,0.9s,baz=309,slow=7.8,SNR=4.4
KEV Kevo 57.69 353 eP P 22 22 55.4 +2.0
KEV Kevo 57.69 353 eP P 22 22 55.4 +2.0
ARCES ARCESS Array B 58.01 353 P P 22 22 54.5 -1.3
ARCES ARCESS Array B 58.01 353 P P 22 22 54.5 -1.3
comp=Z,2.5nm,0.7s,baz=16,slow=8.3,SNR=6.6
ARCES LR LR 22 47 55.8
comp=Z,43nm,21.1s,baz=239,slow=36
PLAL Pickwick Lake 58.94 72 eP P 22 23 01.4 -1.3
comp=Z,4.7nm,0.7s
GTA Gaotai 59.90 296 eP P 22 23 09.1 -0.3
GTA pmax pmax
comp=Z,8.0nm,0.8s
LZH Lanzhou 59.97 291 eP P 22 23 10.2 +0.2
LZH pP pP 22 23 15.0 -3.2
LZH pmax pmax
comp=Z,19nm,1.5s
BLA Blacksburg 61.75 65 eP P 22 23 21.7 -0.2
BLA pmax pmax
comp=Z,10.0nm,0.8s
BLA Blacksburg 61.75 65 eP P 22 23 21.7 -0.2
comp=Z,10nm,0.8s
KURK Kurchatov 62.01 318 eP P 22 23 22.9 -0.5
KURK pmax pmax
comp=Z,3.0nm,0.6s
KURK Kurchatov 62.01 318 eP P 22 23 22.5 -0.9
comp=Z,3.3nm,0.6s
KMSC Kings Mountain 62.72 67 ⇑P P 22 23 27.3 -1.1
baz=62
MKAR Makanchi Array 63.39 313 iP P 22 23 31.7 -1.0
MKAR Makanchi Array 63.39 313 eP P 22 23 31.9 -0.8
MKAR Makanchi Array 63.39 313 P P 22 23 31.8 -1.0
comp=Z,0.4nm,0.3s,baz=44,slow=6.0,SNR=11
BVAR Borovoye Array 63.41 324 P P 22 23 31.7 -1.0
BVAR pmax pmax
comp=Z,2.0nm,0.4s
BVAR Borovoye Array 63.41 324 P P 22 23 31.7 -1.0
BVAR Borovoye Array 63.41 324 P P 22 23 31.7 -1.0
comp=Z,2.2nm,0.4s,baz=45,slow=6.5,SNR=18
BRVK Borovoye 63.43 324 eP P 22 23 32.9 +0.1
BRVK pmax pmax
comp=Z,7.0nm,1.7s
JOF Joensuu 63.94 349 ep P 22 23 35.2 -0.8
comp=Z,1.6nm,0.4s
JOF Joensuu 63.94 349 eP P 22 23 35.2 -0.8
JOF pmax pmax
comp=Z,2.0nm,0.4s
ARU Arti 64.44 332 eP P 22 23 38.7 -0.7
ARU pmax pmax
comp=Z,9.0nm,1.7s
GYA Guiyang 65.25 282 eP P 22 23 47.0 +1.7
GYA pmax pmax
comp=Z,10.0nm,0.8s
KAF Kangasniemi 65.25 351 ep P 22 23 43.3 -1.3
comp=Z,2.9nm,0.7s
KAF Kangasniemi 65.25 351 eP P 22 23 43.3 -1.3
KAF pmax pmax
comp=Z,3.0nm,0.7s
FINES FINESS Array B 65.94 351 P P 22 23 47.7 -1.3
FINES FINESS Array B 65.94 351 P P 22 23 47.7 -1.3
comp=Z,2.5nm,0.6s,baz=8.8,slow=8.3,SNR=12
NB2 NORSAR Subarra 67.11 359 P P 22 23 55.7 -0.9
comp=Z,3.8nm,0.8s,baz=1.4,slow=6.2
NOA NORSAR Array B 67.11 359 P P 22 23 56.0 -0.5
NOA NORSAR Array B 67.11 359 P P 22 23 56.0 -0.5
comp=Z,3.1nm,0.7s,baz=0.9,slow=6.3,SNR=11
NOA LR LR 22 49 56.7
comp=Z,13nm,21.5s,baz=10.0,slow=33
KMI Kunming 68.60 284 P P 22 24 06.9 +0.2
KMI pP pP 22 24 16.2 +1.1
KMI sP sP 22 24 19.6 +1.4
KMI PP PP 22 26 41.9 +3.9
KMI S S 22 33 08.3 +0.6
KMI sS sS 22 33 20.4 -1.1
KMI pmax pmax
comp=Z,6.0nm,1.0s
KMI pmax pmax
comp=Z,58nm,3.7s
KMI LR LR
comp=N,170nm,19.2s
KMI LR LR
comp=E,77nm,21.6s
KMI LR LR
comp=Z,82nm,15.0s
AKTO Aktyubinsk 69.79 329 P P 22 24 12.6 -0.9
AKTO pmax pmax
comp=Z,1.0nm,0.4s
AKTO Aktyubinsk 69.79 329 P P 22 24 12.6 -0.9
AKTO Aktyubinsk 69.79 329 P P 22 24 12.6 -0.9
comp=Z,1.3nm,0.4s,baz=34,slow=6.4,SNR=11
AAK Ala-Archa 70.11 315 eP P 22 24 15.9 +0.2
AAK pmax pmax
comp=Z,10.0nm,1.2s
ABKAR Akbulak array 70.19 327 eP P 22 24 15.4 -0.6
OBN Obninsk 70.71 344 eP P 22 24 18.7 -0.3
OBN pmax pmax
comp=Z,5.0nm,1.2s
KKAR Karatay Array 71.42 317 eP P 22 24 22.9 -0.7
KKAR Karatay Array 71.42 317 eP P 22 24 22.9 -0.7
LSA Lhasa 71.86 295 eP P 22 24 28.0 +1.0
LSA pmax pmax
comp=Z,9.0nm,0.9s
LSA Lhasa 71.86 295 eP P 22 24 28.0 +1.0
comp=Z,9.1nm,0.9s
CMAR Chiang Mai Arr 75.94 282 P P 22 24 50.0 -0.3
CMAR Chiang Mai Arr 75.94 282 P P 22 24 50.0 -0.3
comp=Z,6.8nm,0.8s,baz=25,slow=6.8,SNR=27
AKASG Malin Array Be 76.12 347 P P 22 24 49.4 -1.5
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 76.12 347 P P 22 24 49.4 -1.5
AKASG Malin Array Be 76.12 347 P P 22 24 49.4 -1.5
comp=Z,0.5nm,0.3s,baz=11,slow=5.0,SNR=9.2
CLL Collm 76.83 358 eP P 22 24 55.0 +0.1
CLL Collm 76.83 358 eP P 22 24 55.0 +0.1
BRG Berggiesshubel 77.24 357 eP P 22 24 56.8 -0.4
comp=Z,4.2nm,0.8s
BRG Berggiesshubel 77.24 357 eP P 22 24 56.8 -0.4
BRG pmax pmax
comp=Z,4.0nm,0.8s
PVCC Panska Ves 77.56 357 eP P 22 24 59.3 +0.3
PVCC Panska Ves 77.56 357 eP P 22 24 59.3 +0.3
DPC Dobruska-Polom 77.66 355 eP P 22 24 59.6 -0.1
DPC e 22 25 03.7
DPC Dobruska-Polom 77.66 355 eP P 22 24 59.6 -0.1
DPC ex x 22 25 03.7
KRLC Kraliky 77.92 355 eP P 22 25 01.0 -0.1
KRLC Kraliky 77.92 355 eP P 22 25 01.0 -0.1
NKC Novy Kostel 77.92 358 eP P 22 25 00.6 -0.5
NKC Novy Kostel 77.92 358 eP P 22 25 00.6 -0.5
KWP Kalwaria Pacla 77.92 351 eP P 22 25 00.5 -0.6
KWP pmax pmax
comp=Z,8.0nm,1.1s
KWP Kalwaria Pacla 77.92 351 eP P 22 25 00.5 -0.6
comp=Z,8.1nm,1.1s
GIVF Givet 78.00 3 eP P 22 25 01.2 -0.3
GIVF Givet 78.00 3 eP P 22 25 01.2 -0.3

GIVF Givet 78.00 3 eP P 22 25 01.2 -0.3
BAIF Baives 78.03 3 eP P 22 25 01.6 0.0
BAIF Baives 78.03 3 eP P 22 25 01.6 0.0
BAIF Baives 78.03 3 eP P 22 25 01.6 0.0
OKC Ostrava-Krasne 78.08 354 eP P 22 25 01.4 -0.5
OKC Ostrava-Krasne 78.08 354 eP P 22 25 01.4 -0.5
PRU Pruhonice 78.10 357 eP P 22 25 01.5 -0.5
PRU Pruhonice 78.10 357 eP P 22 25 01.5 -0.5
GRF Grafenberg Arr 78.48 359 eP P 22 25 05.0 +0.8
comp=Z,8.0nm,1.1s
GRF Grafenberg Arr 78.48 359 eP P 22 25 05.0 +0.8
GRF pmax pmax
comp=Z,8.0nm,1.1s
TREC Trest 78.76 356 eP P 22 25 03.5 -2.2
TREC Trest 78.76 356 eP P 22 25 03.5 -2.2
KHC Kasperske Hory 78.99 357 eP P 22 25 07.1 +0.1
KHC e 22 25 15.8
KHC Kasperske Hory 78.99 357 eP P 22 25 07.1 +0.1
KHC ex x 22 25 10.5
KHC epP pP 22 25 15.8 +0.3
KHC Kasperske Hory 78.99 357 eP P 22 25 06.8 -0.2
comp=Z,4.4nm,1.0s
KBL Kabul 79.18 314 eP P 22 25 07.3 -1.2
KBL pmax pmax
comp=Z,3.0nm,0.9s
KBL Kabul 79.18 314 eP P 22 25 07.3 -1.2
comp=Z,2.7nm,0.9s
LDF La Druitiere 79.26 6⇑iP P 22 25 07.7 -0.7
comp=Z,3.2nm,0.4s
LDF La Druitiere 79.26 6⇑iP P 22 25 07.7 -0.7
LDF pmax pmax
comp=Z,3.0nm,0.4s
LDF La Druitiere 79.26 6⇑iP P 22 25 07.7 -0.7
comp=Z,3.2nm,0.4s
GERES GERESS Array B 79.27 357 P P 22 25 08.7 0.0
GERES GERESS Array B 79.27 357 P P 22 25 08.7 0.0
comp=Z,1.3nm,0.7s,baz=358,slow=4.4,SNR=16
SGMF Saint Gilles 79.41 8 eP P 22 25 08.8 -0.4
SGMF Saint Gilles 79.41 8 eP P 22 25 08.8 -0.4
SGMF Saint Gilles 79.41 8 eP P 22 25 08.8 -0.4
PAGF Fort de Pagny 79.58 3 eP P 22 25 10.5 +0.3
PAGF Fort de Pagny 79.58 3 eP P 22 25 10.5 +0.3
BUR08 Bucovina Ar. S 79.63 349 eP P 22 25 09.8 -0.8
CDF Champ du Feu 79.75 1⇑iP P 22 25 11.0 -0.3
CDF Champ du Feu 79.75 1⇑iP P 22 25 11.0 -0.3
CDF Champ du Feu 79.75 1⇑iP P 22 25 11.0 -0.3
SFTF Sexfontaines 79.91 3 eP P 22 25 12.0 0.0
SFTF Sexfontaines 79.91 3 eP P 22 25 12.0 0.0
HAU Haudompre 80.14 2 eP P 22 25 13.1 -0.2
comp=Z,5.3nm,0.7s
HAU Haudompre 80.14 2 eP P 22 25 13.1 -0.2
HAU pmax pmax
comp=Z,5.0nm,0.7s
HAU Haudompre 80.14 2 eP P 22 25 13.1 -0.2
comp=Z,5.3nm,0.7s
HINF Hinteralfeld 80.34 2 eP P 22 25 14.0 -0.4
comp=Z,3.4nm,0.6s
HINF Hinteralfeld 80.34 2 eP P 22 25 14.0 -0.4
HINF pmax pmax
comp=Z,3.0nm,0.6s
HINF Hinteralfeld 80.34 2 eP P 22 25 14.0 -0.4
comp=Z,3.4nm,0.6s
LOR Lormes 80.80 4 eP P 22 25 16.7 -0.1
LOR Lormes 80.80 4 eP P 22 25 16.7 -0.1
SSF Saint Saulge 80.99 4⇑iP P 22 25 17.7 -0.1
comp=Z,4.8nm,0.6s
SSF Saint Saulge 80.99 4⇑iP P 22 25 17.7 -0.1
SSF pmax pmax
comp=Z,5.0nm,0.6s
SSF Saint Saulge 80.99 4⇑iP P 22 25 17.7 -0.1
comp=Z,4.8nm,0.6s
MFF Saint Martin d 81.24 7⇑iP P 22 25 19.1 0.0
MFF Saint Martin d 81.24 7⇑iP P 22 25 19.1 0.0
MFF Saint Martin d 81.24 7⇑iP P 22 25 19.1 0.0
AVF Avril sur Loir 81.26 4 eP P 22 25 18.9 -0.3
AVF Avril sur Loir 81.26 4 eP P 22 25 18.9 -0.3
AVF Avril sur Loir 81.26 4 eP P 22 25 18.9 -0.3
SMF Signal de Mont 81.42 4 eP P 22 25 19.9 -0.2
SMF Signal de Mont 81.42 4 eP P 22 25 19.9 -0.2
SMF Signal de Mont 81.42 4 eP P 22 25 19.9 -0.2
BGF Bois d'Agland 81.46 5 eP P 22 25 21.5 +1.1
BGF Bois d'Agland 81.46 5 eP P 22 25 21.5 +1.1
BGF Bois d'Agland 81.46 5 eP P 22 25 21.5 +1.1
CABF La Chapelle 81.53 2 eP P 22 25 21.1 +0.3
CABF La Chapelle 81.53 2 eP P 22 25 21.1 +0.3
CABF La Chapelle 81.53 2 eP P 22 25 21.1 +0.3
TCF Toulx Ste Croi 81.70 5⇑iP P 22 25 21.3 -0.3
comp=Z,2.6nm,0.5s
TCF Toulx Ste Croi 81.70 5⇑iP P 22 25 21.3 -0.3
TCF pmax pmax
comp=Z,3.0nm,0.4s
TCF Toulx Ste Croi 81.70 5⇑iP P 22 25 21.3 -0.3
comp=Z,2.6nm,0.4s
LFF La Frestale 82.95 6 eP P 22 25 28.3 +0.1
comp=Z,7.6nm,0.7s
LFF La Frestale 82.95 6 eP P 22 25 28.3 +0.1
LFF pmax pmax
comp=Z,8.0nm,0.7s
LFF La Frestale 82.95 6 eP P 22 25 28.3 +0.1
comp=Z,7.6nm,0.7s
CAF Calviac 83.05 5 eP P 22 25 28.8 +0.1
CAF Calviac 83.05 5 eP P 22 25 28.8 +0.1
CAF Calviac 83.05 5 eP P 22 25 28.8 +0.1
ORIF Oris-en-Rattie 83.22 3 eP P 22 25 29.6 -0.1
ORIF Oris-en-Rattie 83.22 3 eP P 22 25 29.6 -0.1
ORIF Oris-en-Rattie 83.22 3 eP P 22 25 29.6 -0.1
VIVF Saint-Julien-l 83.24 3 eP P 22 25 29.9 +0.2
comp=Z,6.1nm,0.8s
VIVF Saint-Julien-l 83.24 3 eP P 22 25 29.9 +0.2
VIVF pmax pmax
comp=Z,6.0nm,0.8s
VIVF Saint-Julien-l 83.24 3 eP P 22 25 29.9 +0.2
comp=Z,6.1nm,0.8s
LASF Ste Croix 83.99 4 eP P 22 25 34.1 +0.6
LASF Ste Croix 83.99 4 eP P 22 25 34.1 +0.6
SJPF Ste Jean 84.62 8⇑iP P 22 25 37.4 +0.6
comp=Z,9.9nm,0.8s
SJPF Ste Jean 84.62 8⇑iP P 22 25 37.4 +0.6
SJPF pmax pmax
comp=Z,10.0nm,0.8s
SJPF Ste Jean 84.62 8⇑iP P 22 25 37.4 +0.6
comp=Z,9.9nm,0.8s
MTLF Montolieu 84.64 5 eP P 22 25 37.1 +0.3
comp=Z,3.1nm,0.6s
MTLF Montolieu 84.64 5 eP P 22 25 37.1 +0.3
MTLF pmax pmax
comp=Z,3.0nm,0.6s
MTLF Montolieu 84.64 5 eP P 22 25 37.1 +0.3
comp=Z,3.1nm,0.6s
ETSF Etsaut 84.89 7⇑iP P 22 25 38.6 +0.4
comp=Z,12nm,0.9s
ETSF Etsaut 84.89 7⇑iP P 22 25 38.6 +0.4
ETSF pmax pmax
comp=Z,12nm,0.9s
ETSF Etsaut 84.89 7⇑iP P 22 25 38.6 +0.4
comp=Z,12nm,0.9s
BRTR Keskin Array B 86.06 342 P P 22 25 44.2 +0.1
BRTR Keskin Array B 86.06 342 P P 22 25 44.2 +0.1
comp=Z,0.9nm,1.0s,baz=40,slow=2.1,SNR=4.8
WRA Warramunga Arr 86.32 231 P P 22 25 43.6 -1.7
WRA Warramunga Arr 86.32 231 P P 22 25 43.6 -1.7
comp=Z,0.2nm,0.4s,baz=32,slow=5.6,SNR=5.7
ESDC Sonseca Array 87.77 10 P P 22 25 51.1 -1.3
ESDC Sonseca Array 87.77 10 P P 22 25 51.1 -1.3
comp=Z,2.6nm,0.8s,baz=348,slow=4.8,SNR=13
HYB Hyderabad 88.57 297 iP P 22 25 55.0 -1.5
ASAR Alice Springs 89.72 229 P P 22 26 01.1 -0.5
ASAR Alice Springs 89.72 229 P P 22 26 01.1 -0.5
comp=Z,0.8nm,0.8s,baz=51,slow=5.2,SNR=5.4
TORD Torodi Ar. Bea 114.58 8 PKP PKPdf 22 31 41.8 -1.9
TORD Torodi Ar. Bea 114.58 8 PKP PKPdf 22 31 41.8 -1.9
comp=Z,0.3nm,0.5s,baz=339,slow=3.0,SNR=5.5
LBTB Lobatse 150.21 329 ePKPbc PKPbc 22 32 54.3 -0.1
BOSA Boshof 153.66 327 PKPbc PKPbc 22 33 02.5 +0.4
BOSA Boshof 153.66 327 PKPbc PKPbc 22 33 02.5 +0.4
comp=Z,0.9nm,0.4s,baz=70,slow=2.0,SNR=8.8

IDC 04 22:22:06.4±1.1,5.91S×107.49W,h0km,mb4.0/10,
mb1 4.3/10,mb1mx4.1/19,mbtmp4.0/10,MS3.8/9,
Ms1 3.8/9,ms1mx3.7/13,Error ellipse: s-maj=44.1km
s-min=24.4km az=72.0,Central East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	El Rosal	34.80	73	LR	LR	22 40 53.1	
	comp=Z,82nm,19.0s,baz=191,slow=32						
TXAR	Lajitas Array	35.23	6	P	P	22 29 02.8	0.0
	0.4nm,0.8s,baz=181,slow=11,SNR=4.3						
TXAR				LR	LR	22 41 09.9	
	comp=Z,71nm,20.4s,baz=350,slow=32						
LPAZ	La Paz	39.91	108	P	P	22 29 44.8	+1.5
	0.9nm,0.7s,baz=286,slow=6.5,SNR=3.9						
PPT	Papeete	42.70	251	LR	LR	22 44 18.2	
	comp=Z,276nm,18.6s,baz=87,slow=31						
NVAR	Mina Array Bea	45.24	348	P	P	22 30 27.0	+1.1
	0.4nm,0.3s,baz=169,slow=8.9,SNR=4.1						
PLCA	Paso Flores	47.88	142	LR	LR	22 45 27.9	
	comp=Z,308nm,21.0s,baz=100,slow=29						
PDAR	Pinedale Array	48.48	358	P	P	22 30 50.0	-1.1
	0.3nm,0.4s,baz=144,slow=2.8,SNR=4.1						
CPUP	Villa Florida	51.91	119	LR	LR	22 49 51.2	
	comp=Z,100nm,19.4s,baz=97,slow=32						
SADO	Sadowa	56.51	24	P	P	22 31 48.4	-2.0
	4.8nm,0.8s,baz=242,slow=7.3,SNR=6.1						
ULM	Lac du Bonnet	56.83	9	LR	LR	22 54 25.7	
	comp=Z,90nm,18.4s,baz=157,slow=34						
BDFB	Brasilia	59.06	105	LR	LR	22 54 50.1	
	comp=Z,84nm,19.5s,baz=125,slow=33						
DLBC	Dease Lake	66.65	347	P	P	22 32 56.9	-1.9
	2.7nm,0.8s,baz=220,slow=4.9,SNR=3.2						
YKA	Yellowknife Ar	68.42	356	P	P	22 33 10.1	+0.4
	4.5nm,1.1s,baz=163,slow=5.9,SNR=12						
INK	Inuvik	76.27	350	P	P	22 33 57.0	+0.5
	1.5nm,0.8s,baz=140,slow=9.0,SNR=3.8						
ILAR	Eielson Array	76.28	344	P	P	22 33 57.6	+0.9
	2.2nm,1.1s,baz=160,slow=3.7,SNR=11						
ILAR				LR	LR	23 01 40.6	
	comp=Z,60nm,18.6s,baz=142,slow=31						
QSPA	South Pole Qui	84.16	180	P	P	22 34 37.4	-2.0
	4.3nm,0.9s,baz=130,slow=4.0,SNR=4.1						
PETK	Petropavlovsk-	97.57	323	LR	LR	23 12 48.4	
	comp=Z,29nm,19.0s,baz=308,slow=31						
MKAR	Makanchi Array	138.40	350	PKP	PKPdf	22 41 33.8	-0.3
	0.6nm,0.9s,baz=258,slow=1.1,SNR=4.8						
CMAR	Chiang Mai Arr	151.36	298	PKPbc	PKPbc	22 42 04.3	+1.2
	0.5nm,0.3s,baz=0.8,slow=0.8,SNR=5.0						

*ISCJB **04** 22:36:11.9±0.8, 40°.10N±0°.03×19°.72E±0°.06, h5km±4km, Error ellipse: s-maj=8.2km s-min=4.3km az=7.3*
*TIR **04** 22:36:11.5±1.6, 40°.06N×19°.76E, h20km±14km, ML3.2*
*CSEM **04** 22:36:11.1±0.3, 40°.14N×19°.71E, h2km, ML3.2, Error ellipse: s-maj=6.4km s-min=3.0km az=84.0*
*ATH **04** 22:36:12.6, 40°.07N×19°.72E, h20km±2km, MD3.4/13*
*THE **04** 22:36:12.2, 40°.12N×19°.80E, h1km±2km, ML2.5/3, Error ellipse: s-maj=2.8km s-min=0.9km az=279.0*
ISC 04 22:36:11.7±1.3, **40°.07N**±0°.02×**19°.79E**±0°.04, **h8**km±11km, **n39**, σ0§99/54, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	Sarande	0.25	139	ePG	Pb	22 36 17.3	+0.8
SRN				i SG	Sb	22 36 22.1	+2.3
SRN	Sarande	0.25	139	P	Pb	22 36 17.3	+0.8
SRN				S	Sb	22 36 22.1	+2.3
SRN	Sarande	0.25	139	ePg	Pb	22 36 17.3	+0.8
	SNR=11						
SRN				i Sg	Sb	22 36 22.1	+2.3
	SNR=11						
KEK	Kerkira	0.35	179	P	Pb	22 36 19.6	-0.6
KEK				S	Sb	22 36 26.4	+0.4
KEK	Kerkira	0.35	179	ePB	Pb	22 36 19.7	-0.5
KEK				eSB	Sb	22 36 26.1	+0.1
KEK	Kerkira	0.35	179	P	Pb	22 36 19.6	-0.6
KEK				S	Sb	22 36 26.4	+0.4
VLO	Vlora	0.46	331	ePG	Pb	22 36 22.2	+0.1
VLO				i PG	Pn	22 36 28.1	+3.5
IGT	Igoumenitsa	0.68	142	P	Pb	22 36 25.6	-0.1
IGT				S	Sn	22 36 37.2	-1.2
IGT	Igoumenitsa	0.68	142	P	Pb	22 36 25.6	-0.1
IGT				S	Sn	22 36 37.2	-1.2
JAN	Janina	0.91	116	P	Pb	22 36 30.0	+0.2
JAN				S	Sb	22 36 43.1	+1.0
JAN	Janina	0.91	116	ePB	Pn	22 36 30.4	-0.5
JAN				eSN	Sn	22 36 44.5	+0.3
JAN	Janina	0.91	116	P	Pb	22 36 30.0	+0.2
JAN				S	Sb	22 36 43.1	+1.0
KBN	Korca	0.94	53	ePG	Pb	22 36 30.1	-0.2
KBN				i SG	Sn	22 36 45.1	0.0
KBN	Korca	0.94	53	ePg	Pb	22 36 30.1	-0.2
	SNR=9.0						
NEST	Nestorio	1.02	70	P	Pb	22 36 31.3	-0.4
NEST	Nestorio	1.02	70	P	Pb	22 36 31.3	-0.4
FNA	Florina	1.41	59	P	Pg	22 36 38.3	-0.3
FNA				S	Sn	22 36 57.3	+0.8
FNA	Florina	1.41	59	ePB	Pg	22 36 38.5	-0.1
FNA	Florina	1.41	59	P	Pg	22 36 38.3	-0.3
FNA				S	Sn	22 36 57.3	+0.8
LKD2	Lefkada island	1.44	152	ePN	Pg	22 36 40.4	+1.1
LKD2				eSN	Sg	22 36 59.8	+1.8
BIA	Bitola	1.51	50	ePn	Pb	22 36 39.9	0.0
KZN	Kozani	1.54	80	ePN	Pg	22 36 41.4	+0.3
PHP	Peshkopia	1.69	17	eGP		22 36 43.3	
THL	Klokotos Trika	1.78	106	ePN	Pg	22 36 45.8	0.0
THL				eSN	Sg	22 37 08.4	-0.6
EVR	Evrytania	1.94	126	ePN	Pg	22 36 48.1	-0.7
PUK	Puka	1.98	2	ePG	Pg	22 36 48.5	-1.0
PUK	Puka	1.98	2	ePg	Pg	22 36 48.5	-1.0
	SNR=9.0						
VLS	Valsamata	1.99	162	P	Pb	22 36 47.0	-1.1
VLS	Valsamata	1.99	162	ePN	Pb	22 36 47.7	-0.4
VLS	Valsamata	1.99	162	P	Pb	22 36 47.0	-1.1
GRG	Griva	2.18	65	ePN	Pb	22 36 51.6	+0.2
AGG	Agios Georgios	2.22	117	P	Pn	22 36 50.1	+1.2
AGG	Agios Georgios	2.22	117	ePN	Pb	22 36 52.4	+0.3
AGG	Agios Georgios	2.22	117	P	Pn	22 36 50.1	+1.2
BCI	Bajram Curri	2.31	5	ePG	Pb	22 36 53.3	-0.3
BCI	Bajram Curri	2.31	5	ePg	Pb	22 36 53.3	-0.3
	SNR=9.0						
RLS	Riolos of Patr	2.39	146	ePB	Pb	22 36 54.0	-1.0
PLG	Polygyros	2.81	83	ePN	Pb	22 37 00.2	-2.0
SOH	Sokhos	2.82	73	ePN	Pb	22 37 00.1	-2.2

WEL 04 22:49:01.6±0.4, **38°.66S**×**178°.53E**, **h33**km, **ML3.6**/8, **4C-1D**, **Error ellipse: s-maj=4.5km s-min=1.4km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNGZ	Carnagh Statio	0.31	304	⇑P*	Pb	22 49 08.9	-0.5
PRGZ	Paritu Road	0.57	242	⇑PN	Pb	22 49 12.6	-0.8
PRGZ				SN	Sn	22 49 22.1	+0.2
PUZ	Puketiti	0.62	339	⇑PN	Pb	22 49 14.3	+0.2
PUZ				AML	AML	22 49 24.8	
PUZ				AML	AML	22 49 25.0	
MHGZ	Mahia Peninsul	0.70	224	⇑PN	Pn	22 49 14.7	-0.5
KNZ	Kokohu	0.76	241	PN	Pn	22 49 15.1	-0.9
MWZ	Matawai	0.85	292	PN	Pn	22 49 16.7	-0.6
MWZ				SN	Sn	22 49 27.9	-0.7
MWZ				AML	AML	22 49 28.8	
MWZ				AML	AML	22 49 28.8	
MWZ				AML	AML	22 49 29.2	
MXZ	Matakaoa Point	1.10	351	PN	Pb	22 49 22.1	-0.1
MXZ				AML	AML	22 49 39.6	
MXZ				AML	AML	22 49 42.2	
MXZ				AML	AML	22 49 42.3	
RAHZ	Arahi	1.16	256	PN	Pn	22 49 21.0	-0.6
URZ	Urewera	1.18	289	⇓PN	Pn	22 49 21.8	0.0
URZ				AML	AML	22 49 38.9	
URZ				AML	AML	22 49 39.5	
MCHZ	McNeill Hill	1.63	241	PN	Pn	22 49 28.7	+0.7
TARZ	Mount Tarawera	1.65	284	PN	Pn	22 49 28.9	+0.6
BKZ	Black Stump Fm	1.67	252	PN	Pn	22 49 28.0	-0.6
BKZ				AML	AML	22 49 48.4	
BKZ				AML	AML	22 49 48.5	
KAHZ	Kahuranaki	1.72	228	PN	Pn	22 49 28.2	-1.0
OPRZ	Ohinepanea	1.75	297	PN	Pn	22 49 29.1	-0.6
PXZ	Pawanui	1.89	223	PN	Pn	22 49 29.7	-1.8
PXZ				AML	AML	22 49 58.3	
BHHZ	Black Hill Sta	2.10	246	PN	Pn	22 49 33.8	-0.7
PRHZ	Porangahau	2.18	222	PN	Pn	22 49 33.5	-2.1
PNHZ	Pukenui	2.21	234	PN	Pn	22 49 34.5	-1.4
MOVZ	Moawhango	2.29	250	PN	Pn	22 49 37.3	+0.1
TUVZ	Tukino	2.33	254	PN	Pn	22 49 37.7	-0.1
NGZ	Ngauruhoe	2.34	256	PN	Pn	22 49 37.6	-0.4
WPVZ	Whakapapa	2.39	256	PN	Pn	22 49 37.6	-1.1
FWVZ	Far West T-bar	2.40	255	PN	Pn	22 49 38.5	-0.4
FWVZ				AML	AML	22 50 06.0	
TRVZ	Turoa	2.41	254	PN	Pn	22 49 38.6	-0.5
TSZ	Takapari Road	2.44	234	PN	Pn	22 49 37.0	-2.2
DVHZ	Dannevirke	2.46	227	PN	Pn	22 49 37.5	-1.9
PKVZ	Pokaka	2.56	255	PN	Pn	22 49 40.9	0.0
HIZ	Hauiti	2.88	272	PN	Pn	22 49 46.3	+1.0
MRZ	Mangatainoka R	3.04	228	PN	Pn	22 49 44.9	-2.4
MRZ				SN	Sn	22 50 18.7	-3.8
MRZ				AML	AML	22 50 21.4	
TMWZ	Te Maipa	3.18	219	PN	Pn	22 49 47.7	-1.7
MTW	Mount Morrison	3.42	222	PN	Pn	22 49 49.0	-3.6
KIW	Kapiti Island	3.56	231	PN	Pn	22 49 51.6	-2.9
PLWZ	Palliser	3.85	220	PN	Pn	22 49 55.4	-3.1
TCW	Tory Channel	4.15	231	PN	Pn	22 50 02.2	-0.4
QRZ	Quartz Range	5.11	243	PN	Pn	22 50 12.3	-3.5

MEX 04 22:55:32.5±0.7, **17°.86N**×**101°.52W**, **h10**km±9km, **MD3.6**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.26	169	eP	Pg	22 55 37.0	-0.7
ZIIG				i S	Sg	22 55 41.6	+0.3
ARIG	Puente Sto Nin	1.19	69	i P	Pb	22 55 50.9	-4.3
ARIG				i S	Sb	22 56 06.6	-4.0
MMIG	Aquila	1.79	284	i P	Pn	22 56 00.1	-3.4
MMIG				i S	Sn	22 56 22.1	-4.2
ACX	Acapulco	1.87	122	i P	Pn	22 56 00.5	-4.1
ACX				i S	Sn	22 56 21.6	-6.7
PLIG	Platanillo	1.99	74	i P	Pn	22 56 03.0	-3.3
PLIG				i S	Sn	22 56 26.9	-4.4
YAIG	Yautepec	2.53	66	i P	Pn	22 56 10.9	-3.0
YAIG				i S	Sn	22 56 41.1	-3.8

IDC 04 23:15:58.4±0.9, **0°.64S**×**133°.34E**, **h0**km, **mb4.1**/7, **mb1 4.2**/10, **mb1mx3.9**/25, **mbtmp4.1**/10, **ML3.9**/3, **MS3.3**/3, **Ms1 3.3**/3, **ms1mx2.4**/35, **Error ellipse: s-maj=39.1km s-min=13.0km az=78.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	14.25	252	Pn	Pn	23 19 23.1	+1.4
	0.5nm,0.3s,baz=112,slow=7.9,SNR=5.1						
FITZ	Fitzroy Crossi	18.93	203	P	P	23 20 20.5	-0.5
	0.4nm,0.3s,baz=35,slow=12,SNR=8.9						
FITZ				S	Sn	23 23 38.4	-16
	0.2nm,0.3s,baz=137,slow=12,SNR=5.2						
WRA	Warramunga Arr	19.21	177	P	P	23 20 24.0	-0.1
	0.3nm,0.3s,baz=355,slow=11,SNR=22						
WRA				S	Sn	23 23 47.0	-14
	0.2nm,0.3s,baz=356,slow=23,SNR=5.2						
ASAR	Alice Springs	22.90	179	P	P	23 21 03.7	-0.3
	1.9nm,0.3s,baz=356,slow=12,SNR=34						
ASAR				S	S	23 25 15.6	+0.5
	0.6nm,0.7s,baz=346,slow=26,SNR=4.5						
CTA	Charters Tower	23.09	148	P	P	23 21 07.5	+1.5
	2.1nm,0.2s,baz=321,slow=8.0,SNR=3.8						
STKA	Stephens Creek	32.03	167	P	P	23 22 27.3	+0.4
	1.7nm,0.5s,baz=334,slow=7.8,SNR=15						
STKA				LR	LR	23 37 18.1	
	comp=Z,67nm,20.6s,baz=23,slow=40						
KSRS	Korea Array	38.23	353	LR	LR	23 36 32.2	
	comp=Z,15nm,19.6s,baz=140,slow=32						
MKAR	Makanchi Array	64.92	324	P	P	23 26 40.5	+0.6
	3.4nm,0.7s,baz=113,slow=8.0,SNR=52						
ZALV	Zalesovo Beam	67.51	331	P	P	23 26 55.8	-0.4
	0.9nm,0.6s,baz=117,slow=5.6,SNR=6.6						
BVAR	Borovoye Array	74.59	326	P	P	23 27 39.1	-0.1
	1.2nm,0.6s,baz=126,slow=5.6,SNR=5.0						
KDAK	Kodiak Island	82.09	31	LR	LR	00 04 03.3	
	comp=Z,33nm,19.6s,baz=285,slow=35						
ILAR	Eielson Array	86.21	25	P	P	23 28 40.6	-0.9
	0.4nm,0.6s,baz=266,slow=5.5,SNR=4.4						

*IDC **04** 23:29:20.6±4.6, 36°.76N×71°.28E, h33km±34km, mb3.9/15, mb1 4.1/21, mb1mx3.9/33, mbtmp4.0/21, ML4.4/6, MS3.1/2, Ms1 3.1/2, ms1mx2.2/42, Error ellipse: s-maj=19.3km s-min=13.5km az=4.0*
*ISCJB **04** 23:29:26.8±0.2, 36°.99N±0°.02×71°.42E±0°.04, h106km, mb4.1/30, Error ellipse: s-maj=4.1km s-min=2.7km az=163.9*
*NEIC **04** 23:29:27.5±1.1, 37°.08N×71°.23E, h91km±10km, mb4.3/6, Error ellipse: s-maj=12.2km s-min=9.0km az=142.0*
*MOS **04** 23:29:27.0±0.9, 37°.06N×71°.27E, h99km, mb4.2/17, Error ellipse: s-maj=11.9km s-min=5.1km az=77.7*
*BJI **04** 23:29:29.7, 37°.09N×71°.37E, h104km, mB4.4/4, mb4.7/13*
*NNC **04** 23:29:31.5±5.6, 37°.42N×71°.13E, h144km±59km, mb3.9, mpv4.8, Error ellipse: s-maj=48.5km s-min=28.4km az=8.0*
ISC 04 23:29:28.2±0.4, **37°.03N**±0°.04×**71°.35E**±0°.05, **h106**km, **n155**, σ**1§89**/162, **mb4.1**/30, **10C-9D**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	3.12	218	ePN	Pn	23 30 15.3	-0.5
KBL				e		23 30 52.2	
KBL	Kabul	3.12	218	ePn	Pn	23 30 15.3	-0.5
KBL				eSn	Sn	23 30 52.2	-0.3
CEP	Cherat	3.24	172	⇑P	Pn	23 30 18.2	+0.8
CEP				S	Sn	23 30 57.0	+1.7
CHCP	Chirah Chowk	3.71	155	P	Pn	23 30 25.6	+1.9
THW	Thamme Wali	4.24	176	P	Pn	23 30 30.6	-0.2
KSH	Kashi	4.40	54	P	Pn	23 30 31.3	-1.7
KSH				S	Sn	23 31 18.8	-4.5
KSH				smax	smax		
	comp=N,590nm,0.6s						
KSH				smax	smax		
	comp=E,340nm,0.4s						
JMU	Jammu	5.20	145	e4	Sn	23 31 35.5	-7.0
SARP	Sargodha	5.22	168	P	Pn	23 30 43.1	-0.8
AML	Almayashu	5.40	19	i PN	Pn	23 30 46.9	+0.2
AML	Almayashu	5.40	19	P	Pn	23 30 46.9	+0.2
	SNR=369						
UCH	Uchtor	5.73	24	i PN	Pn	23 30 52.8	+1.5
UCH	Uchtor	5.73	24	P	Pn	23 30 52.8	+1.5
	SNR=8.5						
KZA	Kyzart	5.87	30	i PN	Pn	23 30 53.6	+0.5
KZA	Kyzart	5.87	30	P	Pn	23 30 53.5	+0.5
	SNR=72						
DLH	Dalhousie	5.88	138	ePKP	Pn	23 30 51.0	-2.0
DLH				eS	Sn	23 31 56.0	-3.1
EKS2	Erkin-Say	5.92	18	ePN	Pn	23 30 53.7	+0.2
EKS2				pmax	pmax		
	comp=Z,58nm,0.4s						
EKS2	Erkin-Say	5.92	18	ePn	Pn	23 30 53.7	+0.2
	comp=Z,58nm,0.4s						
EKS2				eSn	Sn	23 31 55.1	-4.9
EKS2	Erkin-Say	5.92	18	P	Pn	23 30 53.8	+0.2
	SNR=80						
AAK	Ala-Archa	6.09	22	PN	Pn	23 30 55.5	-0.4
AAK				pmax	pmax		
	comp=Z,20nm,0.3s						
AAK	Ala-Archa	6.09	22	ePn	Pn	23 30 56.4	+0.6
	comp=Z,37nm,0.3s						
AAK				eSn	Sn	23 32 04.8	+0.5
AAK				Lg	Lg	23 32 42.3	
AAK	Ala-Archa	6.09	22	P	Pn	23 30 56.5	+0.6
	SNR=55						
AAK	Ala-Archa	6.09	22	Pn	Pn	23 30 55.5	-0.4
	comp=Z,20nm,0.3s,baz=198,slow=8.4,SNR=83						
AAK				Sn	Sn	23 32 05.2	+1.0
	comp=Z,11nm,0.3s,baz=136,slow=22,SNR=8.9						
AAK				Lg	Lg	23 32 42.3	
	comp=Z,3.2nm,0.3s,baz=48,slow=13,SNR=4.4						
KK31	Karatay Array	6.10	354	⇓P	Pn	23 30 54.3	-1.5
	comp=Z,31nm,0.3s,baz=176,slow=12,SNR=2260						
KK31				⇑S	Sn	23 32 00.5	-3.6
	comp=Z,21nm,0.4s,baz=183,slow=24,SNR=4.1						
KK31	Karatay Array	6.10	354	cePN	Pn	23 30 54.2	-1.5
KK31				pmax	pmax		
	comp=Z,81nm,0.2s						
KKAR	Karatay Array	6.10	354	ePN	Pn	23 30 54.2	-1.6
KKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KKAR	Karatay Array	6.10	354	ePn	Pn	23 30 54.2	-1.6
	comp=Z,4.0nm,0.6s						
KKAR				eSn	Sn	23 31 59.6	-4.6
KBK	Karagaybulak	6.26	25	P	Pn	23 30 59.1	+0.9
	SNR=33						
DHRM	DHARAMSHALA	6.28	138	ePKP	Pn	23 30 59.4	+0.9
DHRM				eS	Sn	23 32 07.9	-1.0
FRU	Bishkek	6.31	22	ePN	Pn	23 30 59.5	+0.8
FRU				pmax	pmax		
	comp=Z,50nm,1.6s						
ULHL	Ulahol	6.43	34	i PN	Pn	23 31 01.5	+1.0
ULHL	Ulahol	6.43	34	P	Pn	23 31 01.5	+1.0
	SNR=17						
CHMS	Chumysh	6.50	23	P	Pn	23 31 01.9	+0.6
	SNR=94						
USP	Ospenovka	6.68	20	i PN	Pn	23 31 03.7	0.0
USP	Ospenovka	6.68	20	P	Pn	23 31 03.7	0.0
	SNR=52						
TKM2	Tokmak 2	6.72	28	⇓P	Pn	23 31 05.3	+0.8
	comp=Z,50nm,0.6s						
TKM2				⇑S	Sn	23 32 15.8	-3.8
	comp=Z,10nm,0.5s						
TKM2	Tokmak 2	6.72	28	i PN	Pn	23 31 05.1	+0.6
TKM2	Tokmak 2	6.72	28	ePn	Pn	23 31 05.0	+0.6
	comp=Z,58nm,0.4s						
TKM2	Tokmak 2	6.72	28	P	Pn	23 31 05.1	+0.6
	SNR=95						
BHK	Bhakra	7.00	142	e4	Pn	23 31 12.8	+4.7
BHK				eS	Sn	23 32 24.0	-2.2
KNDC	Almaty	7.53	33	⇓P	Pn	23 31 15.6	+0.4
SMLA	Simla	7.61	139	i P	Pn	23 31 15.9	-0.5
SMLA				eS	Sn	23 32 38.6	-2.5
SMLA				eS		23 32 40.4	
SMLA				AML	AML	23 32 41.4	
	comp=N,655nm,0.0s						
SMLA				AML	AML	23 32 42.0	
	comp=E,600nm,0.5s						
DDI	Dehra Dun	8.72	138	ePKP	Pn	23 31 28.5	-3.0
DDI				ex	Sn	23 33 03.5	-4.6
NDI	New Delhi	9.68	148	ePKP	Pn	23 31 42.6	-1.8
NDI				ex	Sn	23 33 23.6	-7.7
NDI				AML	AML	23 33 54.0	
	comp=E,47nm,0.1s						
NDI				AML	AML	23 33 55.0	
	comp=N,44nm,0.4s						
LGTI	Lohaghat	10.61	133	e4	Sn	23 33 48.2	-5.7
AJM	Ajmer	10.89	164	ePKP	Pn	23 31 58.0	-3.0
AJM				i x	Sn	23 33 53.0	-7.8
MK31	Makanchi Array	12.70	36	⇑P	Pn	23 32 25.0	+0.2
	comp=N,3.9nm,0.8s,baz=220,slow=15,SNR=25						
MK31	Makanchi Array	12.70	36	ceP	Pn	23 32 24.5	-0.3
MK31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MK31	Makanchi Array	12.70	36	ePn	Pn	23 32 24.4	-0.4
MKAR	Makanchi Array	12.70	36	P	Pn	23 32 24.9	+0.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	12.70	36	Pn	Pn	23 32 24.9	+0.1
MKAR	Makanchi Array	12.70	36	Pn	Pn	23 32 24.9	+0.1
	comp=Z,0.5nm,0.3s,baz=223,slow=14,SNR=20						
PYUN	Piuthan	13.25	129	eP	Pn	23 32 30.1	-2.2
	comp=Z,56nm,0.3s						
PYUN				eS	Sn	23 34 48.6	-10
DANN	Dangsing	13.56	126	eP	Pn	23 32 34.4	-2.1
	comp=Z,42nm,0.5s						
KOLN	Koldanda	13.86	128	eP	Pn	23 32 38.6	-1.7
	comp=Z,32nm,0.3s						
KUR17	Kurchatov Arra	14.52	18	⇑P	Pn	23 32 45.3	-3.1
	comp=Z,1.6nm,0.7s						
KURBB	Kurchatov Arra	14.53	19	Pn	Pn	23 32 44.9	-3.5
	comp=Z,0.1nm,0.3s,baz=214,slow=12,SNR=14						
KURBB				Lg	Lg	23 37 09.8	
	comp=Z,0.0nm,0.3s,baz=198,slow=25,SNR=5.4						
KURK	Kurchatov	14.64	19	⇑P	Pn	23 32 46.4	-3.4
	comp=Z,4.5nm,0.8s						
KURK	Kurchatov	14.64	19	eP	Pn	23 32 47.4	-2.4
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	Kurchatov	14.64	19	ePn	Pn	23 32 47.4	-2.4
	comp=Z,3.9nm,0.7s						
KURK				Lg	Lg	23 37 09.8	
BHPL	Bhopal	14.71	157	ePKP	Pn	23 32 48.2	-2.8
BHPL				ex	x	23 35 22.2	
AB31	Akbulak array	14.76	329	P	Pn	23 32 46.7	-4.8
	comp=Z,4.7nm,0.3s,baz=137,slow=13,SNR=350						
AB31	Akbulak array	14.76	329	i P	Pn	23 32 46.6	-4.8
AB31				pmax	pmax		
	comp=Z,11nm,0.3s						
ABKAR	Akbulak array	14.76	329	ePn	Pn	23 32 46.4	-5.0
	comp=Z,13nm,0.4s						
ABKAR				eSn	Sn	23 35 14.3	-20
KKN	Kakani	14.93	124	eP	Pn	23 32 51.7	-2.3
	comp=Z,35nm,0.5s						
DMN	Daman	14.94	125	eP	Pn	23 32 52.2	-1.9
	comp=Z,28nm,0.4s						
PKIN	Phulchoki	15.15	124	eP	Pn	23 32 54.7	-2.1
	comp=Z,34nm,0.3s						
PKI	Pulchoki	15.16	124	eP	Pn	23 32 55.2	-1.8
	comp=Z,21nm,0.3s						
PKI				eS	Sn	23 35 33.6	-11
GUN	Gumba	15.25	122	eP	Pn	23 32 56.5	-1.7
	comp=Z,60nm,0.5s						
VOSK	Vostochnaya	15.69	359	⇑P	Pn	23 32 60.0	-3.1
	comp=Z,12nm,0.8s						
JBP	Jabalpur	15.70	149	⇓ix	x	23 33 20.3	
JBP				ex	x	23 35 43.8	
ZRNK	Zerenda	16.00	355	⇑P	Pn	23 33 04.2	-2.7
	comp=Z,9.7nm,0.5s						
ZRNK	Zerenda	16.00	355	i P	Pn	23 33 03.9	-3.1
ZRNK				pmax	pmax		
	comp=Z,15nm,0.4s						
BVA0	Borovoye Array	16.00	358	⇓P	Pn	23 33 04.5	-2.5
	comp=Z,5.4nm,0.7s,baz=231,slow=33,SNR=43						
BVAR	Borovoye Array	16.00	358	P	Pn	23 33 03.6	-3.4
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR	Borovoye Array	16.00	358	Pn	Pn	23 33 03.6	-3.4
BVAR	Borovoye Array	16.00	358	Pn	Pn	23 33 03.6	-3.4
	comp=Z,1.6nm,0.3s,baz=167,slow=14,SNR=42						
BRVK	Borovoye	16.04	358	d iP	Pn	23 33 05.4	-2.0
BRVK				pmax	pmax		
	comp=Z,22nm,1.2s						
BRVK	Borovoye	16.04	358	ePn	Pn	23 33 05.0	-2.5
	comp=Z,12nm,0.7s						
RAMN	Ramite	16.36	124	eP	Pn	23 33 10.7	-1.2
	comp=Z,75nm,0.4s						
AKTO	Aktyubinsk	16.46	329	⇓P	Pn	23 33 10.0	-2.7
	comp=Z,17nm,0.5s						
AKTO	Aktyubinsk	16.46	329	P	Pn	23 33 09.2	-3.5
AKTO						23 36 04.6	
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKTO	Aktyubinsk	16.46	329	Pn	Pn	23 33 09.2	-3.5
AKTO				Sn	Sn	23 36 04.6	-11
AKTO	Aktyubinsk	16.46	329	Pn	Pn	23 33 09.2	-3.5
	comp=Z,2.2nm,0.3s,baz=130,slow=13,SNR=26						
AKTO				Sn	Sn	23 36 04.6	-11
	comp=Z,0.3nm,0.3s,baz=42,slow=18,SNR=3.6						
TAPN	Taplejung	16.86	120	eP	Pn	23 33 16.9	-1.2
	comp=Z,28nm,0.4s						
TAPN				eS	Sn	23 36 14.0	-12
ODAN	Odare	16.95	122	eP	Pn	23 33 18.0	-1.1
	comp=Z,56nm,0.6s						
AKL	Akola	17.01	162	ePKP	Pn	23 33 18.2	-1.3
AKL				ex	x	23 36 11.9	
NGP	Nagpur	17.19	155	ex	x	23 36 15.7	
LSA	Lhasa	18.07	108	P	Pn	23 33 34.7	+1.9
LSA				pmax	pmax		
	comp=Z,80nm,0.6s						
LSA	Lhasa	18.07	108	eP	P	23 33 28.9	-3.0
LSA				pmax	pmax		
	comp=Z,16nm,0.6s						
LSA	Lhasa	18.07	108	ePn	P	23 33 28.9	-3.0
	comp=Z,16nm,0.6s						
ZAA0	Zalesovo Array	19.31	25	eP	P	23 33 45.2	+0.5
ZALV	Zalesovo Beam	19.31	25	P	P	23 33 45.5	+0.8
ZALV				S	S	23 37 16.5	-1.0
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZALV	Zalesovo Beam	19.31	25	P	P	23 33 45.5	+0.8
ZALV				S	S	23 37 16.5	-1.0
ZALV	Zalesovo Beam	19.31	25	P	P	23 33 45.5	+0.8
	comp=Z,2.9nm,0.3s,baz=208,slow=9.9,SNR=60						
ZALV				S	S	23 37 16.5	-1.0
	comp=Z,0.1nm,0.3s,baz=213,slow=15,SNR=2.7						
NVS	Novosibirsk	19.58	21	eP	P	23 33 48.4	+0.8
NVS				eS	S	23 37 21.2	-1.6

NVS				pmax	pmax		
	comp=N,3.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.6s						
NVS				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NVS				smax	smax		
	comp=N,4.0nm,1.2s						
NVS				smax	smax		
	comp=E,5.0nm,1.2s						
SHL	Shillong	20.89	117	*e*PKP	Pn	23 34 04.4	-1.4
GNI	Garni	21.00	287	P	P	23 34 02.2	-1.1
GNI	Garni	21.00	287	P	P	23 34 02.2	-1.1
	comp=E,2.5nm,0.5s,baz=135,slow=20,SNR=2.8						
ARU	Arti	21.22	340	*d i*P	P	23 34 05.5	+0.2
ARU						23 34 35.2	
ARU				S	S	23 37 50.1	-4.9
ARU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MIB	Mutribah	21.27	257	*e*P	P	23 34 06.1	+0.1
MIB				AMb	AMB	23 34 14.8	
	comp=Z,21nm,0.8s						
RDF	Al-Radifah	21.50	255	*e*P	P	23 34 10.2	+1.7
RDF				AMb	AMB	23 34 14.1	
	comp=Z,10nm,0.9s						
NAY	Al-Naaiem	21.59	256	*e*P	P	23 34 08.6	-0.8
NAY				AMb	AMB	23 34 15.0	
	comp=Z,8.5nm,1.1s						
BHD	Baghdad	22.34	268	*e*P	P	23 34 27.0	+10
BHD				*e*S	Sn	23 38 26.5	-10
GTA	Gaotai	22.45	75	*e*P	P	23 34 22.6	+4.0
GTA				pmax	pmax		
	comp=Z,11nm,0.9s						
KBZ	Khabaz	22.61	296	P	P	23 34 19.1	-0.8
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KBZ	Khabaz	22.61	296	P	P	23 34 19.1	-0.8
KBZ	Khabaz	22.61	296	P	P	23 34 19.1	-0.8
	comp=Z,1.1nm,0.5s,baz=150,slow=9.5,SNR=7.0						
KIV	Kislovodsk	22.79	297	*e*P	P	23 34 24.0	+2.1
KIV				*e*S	S	23 38 21.7	-1.2
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,17nm,14.0s						
LZH	Lanzhou	26.05	82	*e*P	P	23 34 57.0	+5.2
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
ANN	Anapa	26.63	298	*e*P	P	23 34 58.3	+1.6
ANN				*e**PP	pP	23 35 23.9	+4.0
ANN				*e*S	S	23 39 22.3	-1.4
ANN				pmax	pmax		
	comp=Z,23nm,0.9s						
SONM	Songino Array	27.80	56	P	P	23 35 09.4	+2.1
SONM	Songino Array	27.80	56	P	P	23 35 09.4	+2.1
	comp=Z,1.5nm,0.5s,baz=264,slow=9.0,SNR=11						
ULN	Ulaanbaatar	28.25	56	*e*P	P	23 35 13.4	+2.1
	comp=Z,2.6nm,0.6s						
BRTR	Keskin Array B	29.54	287	P	P	23 35 23.7	+0.8
BRTR	Keskin Array B	29.54	287	P	P	23 35 23.7	+0.8
	comp=Z,0.9nm,0.8s,baz=105,slow=9.1,SNR=6.5						
MMAI	Mount Meron Ar	29.60	273	LR	LR	23 50 11.1	
	comp=Z,19nm,20.9s,baz=120,slow=42						
OBN	Obninsk	29.72	319	*e*P	P	23 35 25.6	+1.6
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
JOF	Joensuu	35.55	330	*e*p	P	23 36 16.4	+1.7
	comp=Z,2.6nm,0.5s						
JOF	Joensuu	35.55	330	*e*P	P	23 36 16.4	+1.7
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	FINESS Array B	37.20	326	P	P	23 36 30.0	+1.2
FINES	FINESS Array B	37.20	326	P	P	23 36 30.0	+1.2
	comp=Z,7.1nm,1.1s,baz=128,slow=8.3,SNR=8.5						
ARCES	ARCESS Array B	40.76	337	P	P	23 36 59.9	+1.5
ARCES	ARCESS Array B	40.76	337	P	P	23 36 59.9	+1.5
	comp=Z,2.5nm,0.9s,baz=115,slow=8.5,SNR=15						
ARCES				LR	LR	23 55 00.1	
	comp=Z,45nm,21.0s,baz=209,slow=38						
CLL	Collm	43.08	309	*e*P	P	23 37 24.0	+6.6
CLL				*i*		23 37 55.9	
NB2	NORSAR Subarra	44.12	323	P	P	23 37 27.4	+1.7
	comp=Z,4.8nm,0.6s,baz=97,slow=8.6						
NOA	NORSAR Array B	44.12	323	P	P	23 37 27.1	+1.3
NOA	NORSAR Array B	44.12	323	P	P	23 37 27.1	+1.3
	comp=Z,1.9nm,0.7s,baz=97,slow=8.0,SNR=6.5						
TIXI	Tiksi	45.17	22	*d i*P	P	23 37 35.7	+1.9
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SMF	Signal de Mont	49.79	304	*e*P	P	23 38 11.2	+1.2
SMF	Signal de Mont	49.79	304	*e*P	P	23 38 11.2	+1.2
SMF	Signal de Mont	49.79	304	*e*P	P	23 38 11.2	+1.2
AVF	Avril sur Loir	50.08	304	*e*P	P	23 38 12.8	+0.7
	comp=Z,3.6nm,0.6s						
AVF	Avril sur Loir	50.08	304	*e*P	P	23 38 12.8	+0.7
AVF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AVF	Avril sur Loir	50.08	304	*e*P	P	23 38 12.8	+0.7
	comp=Z,3.6nm,0.6s						
ETSF	Etsaut	53.89	300	*e*P	P	23 38 41.7	+1.2
	comp=Z,2.8nm,0.5s						
ETSF	Etsaut	53.89	300	*e*P	P	23 38 41.7	+1.2
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ETSF	Etsaut	53.89	300	*e*P	P	23 38 41.7	+1.2
	comp=Z,2.8nm,0.5s						
ESDC	Sonseca Array	57.46	298	P	P	23 39 07.3	+1.3
ESDC	Sonseca Array	57.46	298	P	P	23 39 07.3	+1.3
	comp=Z,0.5nm,0.4s,baz=59,slow=7.4,SNR=8.9						
TORD	Torodi Ar. Bea	66.01	269	P	P	23 40 02.2	-1.5
TORD	Torodi Ar. Bea	66.01	269	P	P	23 40 02.2	-1.5
	comp=Z,1.7nm,0.5s,baz=50,slow=6.1,SNR=33						
ILAR	Eielson Array	74.19	16	P	P	23 40 54.4	+1.5
ILAR	Eielson Array	74.19	16	P	P	23 40 54.4	+1.5
	comp=Z,1.4nm,0.8s,baz=323,slow=4.9,SNR=15						
SML	Sawmill	76.39	18	*e*P	P	23 41 07.2	+1.6
SML				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SML	Sawmill	76.39	18	*e*P	P	23 41 07.2	+1.6
	comp=Z,1.6nm,0.6s						
BOSA	Boshof	78.33	220	P	P	23 41 16.6	-0.3
BOSA	Boshof	78.33	220	P	P	23 41 16.6	-0.3
	comp=Z,5.3nm,1.1s,baz=100,slow=11,SNR=7.1						
YKA	Yellowknife Ar	80.70	3	P	P	23 41 31.1	+1.9
YKA	Yellowknife Ar	80.70	3	P	P	23 41 31.0	+1.9
	comp=Z,1.8nm,0.7s,baz=347,slow=5.2,SNR=20						
WRA	Warramunga Arr	82.04	122	P	P	23 41 36.5	-0.3
WRA	Warramunga Arr	82.04	122	P	P	23 41 36.5	-0.3
	comp=Z,1.5nm,0.7s,baz=325,slow=5.0,SNR=19						
ASAR	Alice Springs	84.33	125	P	P	23 41 49.0	+0.5
ASAR	Alice Springs	84.33	125	P	P	23 41 49.0	+0.5
	comp=Z,1.2nm,0.6s,baz=312,slow=5.0,SNR=17						
STKA	Stephens Creek	94.88	127	P	P	23 42 39.4	+1.2
STKA	Stephens Creek	94.88	127	P	P	23 42 39.4	+1.2
	comp=Z,1.5nm,0.9s,baz=321,slow=14,SNR=2.8						

GUC 04 23:29:59.8±0.7, 20°.27S×68°.54W, h130km, ML3.6, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	Plate Boundary	1.17	229	⇑*i*P	Pn	23 30 24.8	+0.3
PB01				*i* S	Sn	23 30 44.3	+1.0
PB01				AML	AML	23 30 45.0	
	comp=N,1μm,0.3s						
MNMC	Minimini	1.51	319	⇑*i*P	Pn	23 30 28.9	+0.5
MNMC				*i* S	Sn	23 30 51.6	+1.4
MNMC				AML	AML	23 30 52.5	
	comp=N,1μm,0.2s						
PSGC	Pisagua	1.64	294	⇑*i*P	Pn	23 30 28.9	-0.7
PSGC				*i* S	Sn	23 30 51.6	-0.7
PSGC				AML	AML	23 30 52.8	
	comp=N,275nm,0.3s						
PB09	Plate Boundary	1.65	203	⇑*i*P	Pn	23 30 30.4	+0.5
PB09				*e*S	Sn	23 30 54.5	+1.7
PB09				AML	AML	23 30 56.9	
	comp=E,680nm,0.3s						
PB04	Plate Boundary	2.17	204	AML	AML	23 31 14.0	
	comp=E,196nm,0.2s						
LVC	Limon Verde	2.35	188	⇓*i*P	Pn	23 30 38.9	+0.3
LVC				*i* S	Sn	23 31 09.0	+0.8

WEL 04 23:43:58.4±1.0, 36°.45S×177°.73E, h5km, ML3.8/4, Error ellipse: s-maj=7.2km s-min=6.9km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.20	158	P*	Pg	23 44 19.7	-1.8
MXZ				S*	Sg	23 44 33.9	-3.2
MXZ				AML	AML	23 44 47.7	
PUZ	Puketiti	1.67	166	PN	Pn	23 44 28.0	-0.4
PUZ				AML	AML	23 44 52.4	
PUZ				AML	AML	23 44 56.0	
URZ	Urewera	1.87	195	P*	Pn	23 44 29.2	-1.9
URZ				S*	Sn	23 44 52.6	-2.5
URZ				AML	AML	23 44 53.4	
MWZ	Matawai	1.89	185	P*	Pn	23 44 29.2	-2.2
MWZ				AML	AML	23 45 03.2	
MWZ				AML	AML	23 45 06.2	

IDC 04 23:51:00.6±45.0, 15°.79S×172°.81W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.7/21, mbtmp4.0/3, MS3.1/2, Ms1 3.1/2, ms1mx2.6/29, Error ellipse: s-maj=875.7km s-min=187.4km az=79.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.12	28	LR	LR	23 52 16.7	
	comp=Z,335nm,19.4s,baz=205,slow=36						
RAO	Raoul Island	14.21	198	LR	LR	23 57 56.5	
	comp=Z,97nm,18.0s,baz=127,slow=29						
STKA	Stephens Creek	44.34	240	P	P	23 59 13.2	+0.4
	1.8nm,0.8s,baz=100,slow=6.1,SNR=3.9						
WRA	Warramunga Arr	50.31	257	P	P	23 59 59.1	-0.4
	0.2nm,0.3s,baz=96,slow=7.2,SNR=11						
ASAR	Alice Springs	50.53	252	P	P	00 00 01.0	-0.2
	3.5nm,0.5s,baz=88,slow=8.1,SNR=64						

*IDC **04** 23:59:41.1±0.5, 0°.21S×125°.03E, h0km, mb4.8/27, mb1 4.8/29, mb1mx4.7/33, mbtmp4.7/29, ML4.5/2, MS3.8/12, Ms1 3.8/12, ms1mx3.4/32, Error ellipse: s-maj=18.6km s-min=11.9km az=83.0*

*BJI **04** 23:59:42.7, 1°.17S×125°.34E, h81km, mB5.0/21, mb5.1/36, Ms4.5/18, Ms7 4.0/17*

*MOS **04** 23:59:44.4±1.0, 0°.31S×125°.08E, h40km, mb5.3/29, Error ellipse: s-maj=16.6km s-min=6.3km az=116.9*

*DJA **04** 23:59:47.0±0.2, 0°S±2°×12°5E±°, h10km, M4.8/18, mb4.9/13, mB5.2/8, MLv4.9/18, Mw(mB)4.6/8*

*ISCJB **04** 23:59:47.9±0.4, 0°.32S±0°.03×125°.11E±0°.03, h68km±3km, mb4.9/80, Error ellipse: s-maj=4.4km s-min=4.1km az=39.4*

*NEIC **04** 23:59:49.7±0.9, 0°.33S×125°.11E, h72km±8km, mb5.0/27, Error ellipse: s-maj=8.0km s-min=5.1km az=76.0*

*AUST **04** 23:59:49.7±0.6, 0°.27S×125°.33E, h59km, Error ellipse: s-maj=1.6km s-min=0.8km az=19.0*

ISC 04 23:59:50.6±0.3, 0°.36S±0°.03×125°.16E±0°.04, h79km±2km, h79km:pP-P, n238, σ1s.40/287, mb5.0/80, 8C-11D, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	Cibinong	1.50	308	P	Pn	00 00 10.8	-5.0
KMSI				S	Sn	00 00 31.2	-3.7
MNI	Manado	1.81	350	P	Pn	00 00 17.0	-3.0
MNI				S	Sn	00 00 42.4	0.0
LBMI	Labuha	2.36	97	P	Pn	00 00 27.1	-0.2
LBMI				S	Sn	00 00 54.6	-0.8
TNTI	Ternate	2.48	63	P	Pn	00 00 27.0	-1.9
TNTI				S	Sn	00 00 57.5	-0.7
LUWI	Luwuk	2.48	254	P	Pn	00 00 28.4	-0.5
LUWI	Luwuk	2.48	254	P	Pn	00 00 29.5	+0.6
	baz=2.7,SNR=52						
LUWI				S	Sn	00 01 05.3	+7.0
	baz=2.7,SNR=4.8						
MRSI	Marisa	3.32	284	P	Pn	00 00 35.5	-4.8
MRSI				S	Sn	00 01 23.0	+4.3
GAMI	Galela, Maluku	3.42	50	P	Pn	00 00 39.8	-1.8
MSAI	Masohi	4.80	128	P	Pn	00 00 59.4	-1.1
BBSI	Bau Bau	5.71	207	P	Pn	00 01 12.1	-0.9
	0.3nm1μm90nm,0.8s						
TTSI	Tana Toraja	5.97	243	P	Pn	00 01 14.7	-1.7
	1.1nm3μm347nm,0.7s						
SWI	Sorong	6.12	95	P	Pn	00 01 17.3	-1.2
	0.2nm49nm,0.8s						
SPSI	Sidrap Palu	6.47	236	P	Pn	00 01 21.9	-1.3
	0.6nm2μm165nm,0.7s						
BKSI	Bulukumba	7.04	225	P	Pn	00 01 30.9	-0.2
	0.2nm668nm45nm,0.7s						
KAPI	Kappang	7.11	229	*e*Pn	Pn	00 01 30.4	-1.7
KAPI				Sn	Sn	00 02 48.4	-2.9
KAPI	Kappang	7.11	229	Pn	Pn	00 01 30.7	-1.3
	381nm,0.4s,SNR=5.8						
KAPI	Kappang	7.11	229	P	Pn	00 01 31.2	-0.8
	0.2nm773nm42nm,0.9s						
KAPI	Kappang	7.11	229	Pn	Pn	00 01 28.4	-3.6
	9.7nm,0.3s,baz=17,slow=12,SNR=23						
KAPI				Sn	Sn	00 02 48.4	-2.9
	5.2nm,0.3s,baz=131,slow=19,SNR=3.6						
DAV	Davao City (W)	7.39	3	Pn	Pn	00 01 34.8	-1.0
BSSI	Bau Bau, Buton	7.40	219	P	Pn	00 01 36.2	+0.2
	0.3nm67nm,0.8s						
FAKI	Fak Fak	7.53	110	P	Pn	00 01 36.6	-1.2
	0.1nm28nm,0.6s						
FAKI	Fak Fak	7.53	110	P	Pn	00 01 35.2	-2.6
	baz=7.4,SNR=22						
SGKI	Sangatta, Kali	7.55	269	P	Pn	00 01 37.9	-0.2
	0.6nm3μm112nm,0.5s						
CTBH	Cotabato--PC H	7.58	353	⇑*i*P	Pn	00 01 38.8	+0.4
SMKI	Samarinda	7.95	269	P	Pn	00 01 49.5	+6.0
MYLDM	Lahad Datu	8.63	310	P	Pn	00 01 52.0	-0.7
	1μm115nm,0.8s						
KBKI	Kotabaru	9.45	252	P	Pn	00 02 04.7	+0.8
	2μm65nm,1.0s						
BBKI	Banjar Baru	10.76	253	P	Pn	00 02 32.8	+11
KKM	Kota Kinabalu	10.96	306	*e*Pn	Pn	00 02 25.0	+0.4
SBUM	Sibu	13.23	282	P	Pn	00 02 53.8	-1.5
	23nm,1.1s						
STKI	Sintang	13.69	272	P	P	00 03 07.9	+0.5
KDU	Kakadu	14.24	150	P	Pn	00 03 06.9	-1.6
	baz=14,SNR=9.4						
KSM	Kuching	14.96	277	*e*P	P	00 03 20.8	-0.7
KSM	Kuching	14.96	277	P	P	00 03 22.0	+0.5
	baz=15,SNR=5.6						
KNRA	Kununurra	15.63	167	P	Pn	00 03 25.7	-0.7
	baz=16,SNR=8.7						
UGM	Wanagama	16.40	242	*e*Pn	Pn	00 03 35.8	-0.4
	446nm,1.7s						
FITZ	Fitzroy Crossi	17.64	178	P	P	00 03 50.8	-0.3
FITZ	Fitzroy Crossi	17.64	178	P	P	00 03 50.8	-0.3
	0.9nm,0.3s,baz=11,slow=8.0,SNR=35						
FITZ				LR	LR	00 11 10.5	
	comp=Z,229nm,21.1s,baz=3.4,slow=39						
FITZ	Fitzroy Crossi	17.64	178	P	Pn	00 04 00.0	+8.7
	baz=18,SNR=12						
CISI	Cisompet, Garu	18.71	247	P	Pn	00 04 04.8	+0.5
	baz=19,SNR=3.4						
MBWA	Marble Bar	21.35	194	*e*P	P	00 04 31.4	0.0
	28nm,1.0s						
WRAB	Tennant Creek	21.44	156	*e*P	P	00 04 31.7	-0.8
WRAB				pmax	pmax		
	comp=Z,24nm,0.9s						
WRAB	Tennant Creek	21.44	156	*e*P	P	00 04 31.7	-0.8
	comp=Z,24nm,0.9s						
WRA	Warramunga Arr	21.44	156	P	P	00 04 31.5	-1.0
WRA	Warramunga Arr	21.44	156	P	P	00 04 31.5	-1.0
	comp=Z,5.8nm,0.6s,baz=335,slow=11,SNR=55						
XMIS	Christmas Isla	21.85	242	*e*P	P	00 04 36.6	-0.3
	comp=Z,359nm,1.0s						
COEN	Coen	22.38	128	*e*P	P	00 04 43.3	+0.8
	comp=Z,205nm,0.9s						
COEN	Coen	22.38	128	P	P	00 04 45.2	+2.6
	baz=22,SNR=16						
TPUB	Ta-pu	23.92	350	*e*P	P	00 04 56.4	-1.0
	comp=Z,53nm,0.5s						
BKNI	Bangkinang	24.13	272	P	pP	00 05 18.6	+1.2
	baz=24,SNR=3.6						
SSLB	Suanglung	24.34	351	*e*P	P	00 05 00.9	-0.2
	comp=Z,397nm,2.7s						
QIZ	Qiongzhong	24.44	323	P	P	00 05 01.7	-0.4
QIZ				S	S	00 09 18.0	+1.4
QIZ				pmax	pmax		
	comp=Z,12nm,1.1s						
QIZ				LR	LR		
	comp=N,140nm,15.5s						
QIZ				LR	LR		
	comp=Z,150nm,18.0s						
QIS	Mount Isa	24.55	146	P	P	00 05 05.0	+1.9
	baz=25,SNR=29						
IPM	Ipoh	24.58	282	*e*P	P	00 05 02.5	-1.0
	comp=Z,18nm,0.9s						
AS31	Alice Springs	24.68	160	*e*P	P	00 05 05.1	+0.8
ASAR	Alice Springs	24.68	160	P	P	00 05 05.3	+1.0
ASAR				PcP	PcP	00 08 42.1	+2.2
ASAR	Alice Springs	24.68	160	P	P	00 05 05.3	+1.0
	comp=Z,4.4nm,0.6s,baz=339,slow=8.2,SNR=45						
ASAR				PcP	PcP	00 08 42.1	+2.2
	comp=Z,1.2nm,0.5s,baz=348,slow=2.3,SNR=9.3						
ASAR				LR	LR	00 13 51.6	
	comp=Z,119nm,21.9s,baz=249,slow=34						
MTSU	Mount Surprise	25.82	134	P	P	00 05 16.7	+2.0
	baz=26,SNR=6.1						
MEEK	Meekatharra	26.88	193	P	P	00 05 24.2	0.0
	baz=27,SNR=5.6						
JOW	Kunigami	27.20	6	*e*P	P	00 05 27.7	+0.8
	comp=Z,62nm,1.4s						
CTAO	Charters Tower	28.48	135	*e*P	P	00 05 38.5	0.0
CTAO				pmax	pmax		
	comp=Z,106nm,2.7s						
CTAO	Charters Tower	28.48	135	*e*P	P	00 05 38.5	0.0
	comp=Z,106nm,2.7s						
FORT	Forrest	30.38	175	*e*P	P	00 05 54.8	-0.4
	comp=Z,690nm,2.9s						
CMAR	Chiang Mai Arr	31.83	307	P	P	00 06 06.8	-1.3
CMAR				PcP	PcP	00 09 00.3	+2.7
CMAR	Chiang Mai Arr	31.83	307	P	P	00 06 06.8	-1.3
	comp=Z,4.8nm,0.9s,baz=142,slow=7.2,SNR=15						
CMAR				PcP	PcP	00 09 00.3	+2.7
	comp=Z,1.0nm,0.3s,baz=189,slow=1.4,SNR=6.3						
CMAR				LR	LR	00 18 21.3	
	comp=Z,224nm,20.2s,baz=138,slow=35						
CHTO	Chiang Mai	32.02	308	*e*P	P	00 06 09.0	-0.9
CHTO				pmax	pmax		
	comp=Z,21nm,1.3s						
CHTO	Chiang Mai	32.02	308	*e*P	P	00 06 09.0	-0.9
	comp=Z,21nm,1.3s						
GYA	Guiyang	32.07	328	*e*P	P	00 06 10.8	+0.5
GYA				pP	pP	00 06 30.4	+1.6
GYA				sP	sP	00 06 40.7	+2.7
GYA				PP	PP	00 07 21.8	-2.4
GYA				PcP	PcP	00 08 58.9	+0.7
GYA				S	S	00 11 16.7	-0.2
GYA				sS	sS	00 11 50.4	+1.6
GYA				ScP	ScP	00 12 33.9	-1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,560nm,17.6s						
GYA				LR	LR		
	comp=E,420nm,18.2s						
GYA				LR	LR		
	comp=Z,510nm,17.4s						
NJ2	Nanjing	32.78	350	*e*P	P	00 06 16.9	+0.7
NJ2				pP	pP	00 06 33.0	-1.8
NJ2				sP	sP	00 06 44.2	+0.2
NJ2				PP	PnPn	00 07 28.6	+1.1
NJ2				S	S	00 11 28.0	+0.5
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,170nm,5.8s						
NJ2				LR	LR		
	comp=N,280nm,29.6s						
NJ2				LR	LR		
	comp=E,260nm,26.9s						
NJ2				LR	LR		
	comp=Z,270nm,26.4s						
JNU	Nakatsue	33.73	9	*e*P	P	00 06 24.5	0.0
	comp=Z,5.5nm,0.9s						
JNU	Nakatsue	33.73	9	P	P	00 06 23.4	-1.2
	comp=Z,11nm,0.8s,baz=147,slow=1.9,SNR=5.7						
ENH	Enshi	33.92	335	*e*P	P	00 06 25.3	-1.0
STKA	Stephens Creek	34.99	155	*e*P	P	00 06 33.6	-1.9
	comp=Z,2.1nm,0.9s						
STKA	Stephens Creek	34.99	155	P	P	00 06 37.4	+1.9
	comp=Z,6.6nm,0.5s,baz=323,slow=8.1,SNR=23						
STKA				LR	LR	00 20 36.4	
	comp=Z,104nm,21.7s,baz=228,slow=36						
STKA	Stephens Creek	34.99	155	P	P	00 06 36.8	+1.3
	baz=35,SNR=4.7						
CMSA	Cobar Meteorol	36.60	150	P	P	00 06 51.8	+2.5
	baz=37,SNR=13						
CD2	Chengdu	37.15	329	P	P	00 06 54.4	+0.4
CD2				pP	pP	00 07 12.7	-0.1
CD2				sP	sP	00 07 21.5	-0.4
CD2				PP	PnPn	00 08 24.2	+2.8
CD2				PcP	PcP	00 09 13.2	+0.4
CD2				S	S	00 12 36.6	+1.7
CD2				ScS	ScS	00 16 59.2	-1.7
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,160nm,5.2s						
CD2				LR	LR		
	comp=N,240nm,20.2s						
CD2				LR	LR		
	comp=E,160nm,15.5s						
CD2				LR	LR		
	comp=Z,210nm,19.0s						
KSAR	Wonju Array Be	37.69	4	P	P	00 06 58.5	+0.1
KSAR				PcP	PcP	00 09 16.3	+2.1
KSRS	Korea Array	37.71	4	P	P	00 06 58.5	0.0
	comp=Z,10nm,0.8s,baz=177,slow=10,SNR=29						
KSRS				PcP	PcP	00 09 16.3	+2.1
	comp=Z,1.7nm,0.7s,baz=181,slow=2.7,SNR=4.8						
KSRS				LR	LR	00 21 33.2	
	comp=Z,93nm,21.5s,baz=171,slow=35						
MAJO	Matsushiro	38.66	17	*e*P	P	00 07 05.4	-1.2
MAJO				pmax	pmax		
	comp=Z,18nm,0.7s						
MAJO	Matsushiro	38.66	17	*e*P	P	00 07 05.4	-1.2
	comp=Z,18nm,0.7s						
MAT	Matsushiro	38.66	17	P	P	00 07 05.7	-0.9
MAT				*e*S	S	00 12 47.0	-11
MJAR	Matsushiro Arr	38.66	17	P	P	00 07 05.5	-1.1
MJAR	Matsushiro Arr	38.66	17	P	P	00 07 05.5	-1.1
	comp=Z,9.7nm,0.6s,baz=193,slow=8.8,SNR=33						
ARPS	Mount Arapiles	39.39	159	P	P	00 07 14.7	+2.1
	baz=40,SNR=7.3						
YNG	Young	40.17	150	P	P	00 07 22.3	+3.1
	baz=40,SNR=11						
LZH	Lanzhou	41.32	334	*e*P	P	00 07 30.5	+1.7
LZH				pP	pP	00 07 48.9	+1.0
LZH				sP	sP	00 07 55.1	-1.9
LZH				*e*S	S	00 13 38.0	+0.4
LZH				pmax	pmax		
	comp=Z,44nm,1.1s						
LZH				pmax	pmax		
	comp=Z,88nm,4.0s						
LZH				LR	LR		
	comp=N,330nm,12.7s						
LZH				LR	LR		
	comp=E,370nm,16.7s						
LZH				LR	LR		
	comp=Z,520nm,18.2s						
TOO	Toolangi	41.52	155	P	P	00 07 33.5	+3.3
	baz=42,SNR=4.2						
HHC	Hu-ho-hao-te	42.83	345	*i* P	P	00 07 42.5	+1.5
HHC				pP	pP	00 08 00.9	+0.7
HHC				sP	sP	00 08 09.9	+0.7
HHC				PP	PP	00 09 25.8	+3.9
HHC				PcS	PcS	00 13 23.3	+0.1
HHC				S	S	00 14 01.9	+2.3
HHC				ScS	ScS	00 17 33.2	-1.1
HHC				pmax	pmax		
	comp=Z,57nm,1.0s						
HHC				pmax	pmax		
	comp=Z,96nm,5.0s						
HHC				LR	LR		
	comp=N,140nm,21.4s						
HHC				LR	LR		
	comp=E,130nm,21.4s						
HHC				LR	LR		
	comp=Z,190nm,21.4s						
CN2	Changchun	43.96	0	*e*P	P	00 07 53.2	+3.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LSA	Lhasa	44.09	316	*e*P	P	00 07 51.2	-0.5
LSA				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,9.0nm,0.5s						
LSA	**Lhasa**	**44.09**	**316**	*e*P	**P**	**00 07 51.2**	**-0.5**
	comp=Z,8.7nm,0.5s						
LHI	**Lord Howe Isla**	**44.60**	**137**	S	S	00 14 33.5	+8.0
	baz=45,SNR=3.0						
USRK	**Ussuriysk Arra**	**44.78**	**7**	P	**P**	**00 07 55.5**	**-0.8**
	comp=Z,7.5nm,0.5s,baz=182,slow=6.6,SNR=16						
MDJ	**Mudanjiang**	**44.95**	**4**	P	**P**	**00 07 58.4**	**+0.7**
MDJ				sP	**sP**	**00 08 27.2**	**+1.1**
MDJ				PcP	**PcP**	**00 09 37.1**	**-0.7**
MDJ				S	**S**	**00 14 31.1**	**+1.0**
MDJ				sS	**sS**	**00 15 05.5**	**+2.4**
MDJ				pmax	pmax		
	comp=Z,25nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,30nm,5.1s						
MDJ				LR	LR		
	comp=N,53nm,29.1s						
MDJ				LR	LR		
	comp=E,30nm,34.6s						
MDJ				LR	LR		
	comp=Z,69nm,27.3s						
MDJ	**Mudanjiang**	**44.95**	**4**	*e*P	**P**	**00 07 58.4**	**+0.7**
	comp=Z,12nm,0.6s						
ODAN	**Odare**	**45.30**	**310**	*e*P	**P**	**00 08 00.6**	**-0.5**
	comp=Z,16nm,0.6s						
TAPN	**Taplejung**	**45.30**	**310**	*e*P	**P**	**00 07 59.6**	**-1.6**
	comp=Z,19nm,0.5s						
GTA	**Gaotai**	**45.87**	**332**	*e*P	**P**	**00 08 05.7**	**+0.4**
GTA				pP	**pP**	**00 08 23.8**	**-0.9**
GTA				sP	**sP**	**00 08 31.8**	**-1.9**
GTA				PcP	**PcP**	**00 09 43.1**	**+1.8**
GTA				ScP	**ScP**	**00 13 25.7**	**-1.8**
GTA				pmax	pmax		
	comp=Z,35nm,0.7s						
RAMN	**Ramite**	**45.95**	**309**	*e*P	**P**	**00 08 05.1**	**-1.2**
	comp=Z,59nm,0.7s						
ASAJ	**Asahikawa**	**46.93**	**17**	*e*P	**P**	**00 08 13.8**	**+0.6**
ASAJ	**Asahikawa**	**46.93**	**17**	P	**P**	**00 08 13.7**	**+0.4**
	comp=Z,11nm,0.4s,baz=259,slow=9.3,SNR=8.6						
GUN	**Gumba**	**46.99**	**310**	*e*P	**P**	**00 08 12.7**	**-1.8**
	comp=Z,40nm,0.5s						
PKI	**Pulchoki**	**47.18**	**309**	*e*P	**P**	**00 08 13.8**	**-2.2**
	comp=Z,10.0nm,0.4s						
PKIN	**Phulchoki**	**47.19**	**309**	*e*P	**P**	**00 08 14.6**	**-1.4**
KKN	**Kakani**	**47.39**	**309**	*e*P	**P**	**00 08 15.6**	**-1.8**
DMN	**Daman**	**47.43**	**309**	*e*P	**P**	**00 08 16.1**	**-1.7**
KOLN	**Koldanda**	**48.68**	**308**	*e*P	**P**	**00 08 26.5**	**-0.9**
	comp=Z,43nm,0.6s						
DANN	**Dangsing**	**48.83**	**309**	*e*P	**P**	**00 08 26.8**	**-1.9**
	comp=Z,53nm,0.6s						
HABR	**Khabarovsk**	**49.38**	**9**	*e*P	**P**	**00 08 30.0**	**-2.1**
HABR				*e**PP	**pP**	**00 08 47.7**	**-4.0**
HABR				*e*		00 09 53.7	
HABR				*e*		00 10 23.8	
HABR				S	**S**	**00 15 30.3**	**-2.7**
HABR				*e*		00 18 15.6	
HABR				*e*SS	**SS**	**00 19 01.2**	**-4.6**
HABR				*e*SSS	SSS	00 20 21.7	
HABR				pmax	pmax		
	comp=E,76nm,2.6s						
HABR				pmax	pmax		
	comp=N,46nm,2.7s						
HABR				pmax	pmax		
	comp=Z,67nm,2.7s						
KLR	**Kul'dur**	**49.72**	**6**	*e*P	P	00 08 30.8	-3.8
ULN	**Ulaanbaatar**	**50.55**	**344**	*e*P	**P**	**00 08 41.2**	**0.0**
	comp=Z,11nm,0.6s						
SONM	**Songino Array**	**50.70**	**344**	P	**P**	**00 08 41.3**	**-1.0**
SONM	**Songino Array**	**50.70**	**344**	P	**P**	**00 08 41.3**	**-1.0**
	comp=Z,7.1nm,0.5s,baz=161,slow=8.5,SNR=39						
SONM				LR	LR	00 31 18.5	
	comp=Z,64nm,18.9s,baz=88,slow=38						
TLY	**Talaya**	**54.94**	**344**	*e*P	**P**	**00 09 12.8**	**-0.5**
TLY				pmax	pmax		
	comp=Z,11nm,0.8s						
WMQ	**Urumqi**	**55.23**	**328**	*e*P	**P**	**00 09 16.9**	**+1.3**
WMQ				pP	**pP**	**00 09 36.0**	**+0.4**
WMQ				sP	**sP**	**00 09 45.0**	**+0.6**
WMQ				PcP	**PcP**	**00 10 17.0**	**+1.3**
WMQ				PP	**PP**	**00 11 23.0**	**+3.1**
WMQ				*e*S	**S**	**00 16 53.0**	**-0.3**
WMQ				SS	**SS**	**00 20 38.0**	**-0.7**
WMQ				pmax	pmax		
	comp=Z,15nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,94nm,3.6s						
WMQ				LR	LR		
	comp=N,260nm,10.3s						
WMQ				LR	LR		
	comp=E,220nm,10.2s						
WMQ				LR	LR		
	comp=Z,320nm,22.3s						
PETK	**Petropavlovsk-**	**59.78**	**22**	P	**P**	**00 09 48.4**	**+1.0**
PETK	**Petropavlovsk-**	**59.78**	**22**	P	**P**	**00 09 48.4**	**+1.0**
PETK	**Petropavlovsk-**	**59.78**	**22**	P	**P**	**00 09 48.4**	**+1.0**
	comp=Z,13nm,0.8s,baz=192,slow=6.8,SNR=27						
KSH	**Kashi**	**59.89**	**317**	*e*P	**P**	**00 09 50.1**	**+1.6**
KSH				*e*pP	**pP**	**00 10 09.1**	**+0.4**
KSH				*e*sP	**sP**	**00 10 18.1**	**+0.6**
KSH				*e*PcP	**PcP**	**00 10 35.0**	**+0.8**
KSH				*e*PP	**PP**	**00 12 05.1**	**+3.6**
KSH				*e*S	**S**	**00 17 52.7**	**-1.9**
KSH				*e*ScS	**ScS**	**00 19 29.5**	**-2.5**
KSH				pmax	pmax		
	comp=Z,23nm,0.6s						
KSH				pmax	pmax		
	comp=Z,230nm,4.2s						
KSH				LR	LR		
	comp=N,190nm,5.2s						
KSH				LR	LR		
	comp=E,230nm,5.5s						
KSH				LR	LR		
	comp=Z,130nm,5.6s						
MK31	**Makanchi Array**	**60.06**	**327**	*e*P	**P**	**00 09 47.7**	**-1.7**
MK31				pmax	pmax		
	comp=Z,12nm,0.5s						
MKAR	**Makanchi Array**	**60.06**	**327**	P	**P**	**00 09 48.0**	**-1.4**
MKAR						00 10 35.4	
MKAR	**Makanchi Array**	**60.06**	**327**	P	**P**	**00 09 48.0**	**-1.4**
MKAR				PcP	**PcP**	**00 10 35.4**	**+0.8**
MKAR	**Makanchi Array**	**60.06**	**327**	P	**P**	**00 09 48.0**	**-1.4**
	comp=Z,15nm,0.5s,baz=122,slow=8.5,SNR=177						
MKAR				PcP	**PcP**	**00 10 35.4**	**+0.8**
	comp=Z,3.4nm,0.6s,baz=120,slow=5.7,SNR=6.0						
MKAR				LR	LR	00 37 20.8	
	comp=Z,91nm,20.3s,baz=290,slow=38						
ULHL	**Ulahol**	**61.06**	**320**	P	**P**	**00 09 58.9**	**+2.3**
	SNR=13						
KZA	**Kyzart**	**61.62**	**320**	*i* P	**P**	**00 09 59.9**	**-0.7**
KZA	**Kyzart**	**61.62**	**320**	P	**P**	**00 09 59.9**	**-0.7**
	SNR=22						
TKM2	**Tokmak 2**	**61.82**	**321**	*e*P	**P**	**00 10 00.5**	**-1.2**
TKM2				pmax	pmax		
	comp=Z,19nm,0.6s						
TKM2	**Tokmak 2**	**61.82**	**321**	*e*P	**P**	**00 10 00.5**	**-1.2**
	comp=Z,19nm,0.6s						
TKM2	**Tokmak 2**	**61.82**	**321**	P	**P**	**00 10 00.7**	**-1.0**
	SNR=22						
KBK	**Karagaybulak**	**62.10**	**320**	P	**P**	**00 10 05.2**	**+1.8**
	SNR=15						
YAK	**Yakutsk**	**62.32**	**2**	*e*P	**P**	**00 10 04.3**	**0.0**
YAK				pmax	pmax		
	comp=Z,33nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.1s						
AAK	**Ala-Archa**	**62.38**	**320**	*e*P	**P**	**00 10 05.5**	**+0.1**
AAK				pmax	pmax		
	comp=Z,11nm,0.8s						
AAK	**Ala-Archa**	**62.38**	**320**	*e*P	**P**	**00 10 05.5**	**+0.1**
	comp=Z,11nm,0.8s						
AAK	**Ala-Archa**	**62.38**	**320**	P	**P**	**00 10 06.6**	**+1.3**
	SNR=8.9						
AAK	**Ala-Archa**	**62.38**	**320**	P	**P**	**00 10 05.6**	**+0.3**
	comp=Z,10.0nm,0.8s,baz=127,slow=5.1,SNR=23						
AAK				LR	LR	00 38 18.8	
	comp=Z,79nm,22.0s,baz=97,slow=37						
AML	**Almayashu**	**62.66**	**319**	P	**P**	**00 10 09.5**	**+2.0**
	SNR=23						
KBL	**Kabul**	**62.82**	**310**	*e*P	**P**	**00 10 06.3**	**-2.2**
KBL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KBL	**Kabul**	**62.82**	**310**	*e*P	**P**	**00 10 06.3**	**-2.2**
	comp=Z,6.9nm,0.7s						
EKS2	**Erkin-Say**	**62.85**	**320**	P	**P**	**00 10 10.3**	**+1.8**
	SNR=13						
ZAA0	**Zalesovo Array**	**63.54**	**335**	*e*P	**P**	**00 10 11.5**	**-1.1**
ZALV	**Zalesovo Beam**	**63.54**	**335**	P	**P**	**00 10 11.1**	**-1.5**
ZALV	**Zalesovo Beam**	**63.54**	**335**	P	**P**	**00 10 11.1**	**-1.5**
ZALV	**Zalesovo Beam**	**63.54**	**335**	P	**P**	**00 10 11.1**	**-1.5**
	comp=Z,11nm,1.0s,baz=124,slow=6.0,SNR=31						
ZALV				LR	LR	00 38 19.7	
	comp=Z,43nm,19.2s,baz=69,slow=37						
KURK	**Kurchatov**	**64.37**	**329**	⇓*i*P	**P**	**00 10 17.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,33nm,0.8s						
KURK	**Kurchatov**	**64.37**	**329**	*e*P	**P**	**00 10 16.8**	**-1.2**
	comp=Z,30nm,0.6s						
NVS	**Novosibirsk**	**64.83**	**335**	*e*P	**P**	**00 10 18.7**	**-2.2**
NVS				pmax	pmax		
	comp=Z,14nm,0.7s						
NVS				pmax	pmax		
	comp=N,3.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.5s						
KK31	**Karatay Array**	**65.19**	**319**	*i* P	**P**	**00 10 23.6**	**0.0**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KKAR	**Karatay Array**	**65.19**	**319**	*e*P	**P**	**00 10 22.6**	**-1.0**
KKAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KKAR	**Karatay Array**	**65.19**	**319**	*e*P	**P**	**00 10 22.6**	**-1.0**
	comp=Z,7.1nm,0.8s						
SEY	**Seymchan**	**66.34**	**13**	⇓*i*P	**P**	**00 10 32.3**	**+1.7**
VOSK	**Vostochnaya**	**69.44**	**328**	P	**P**	**00 10 49.4**	**-0.9**
VOSK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BVA0	**Borovoye Array**	**69.91**	**328**	P	**P**	**00 10 52.7**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BRVK	**Borovoye**	**69.98**	**328**	⇓*i*P	**P**	**00 10 53.1**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,18nm,1.2s						
BRVK	**Borovoye**	**69.98**	**328**	*e*P	**P**	**00 10 52.3**	**-1.2**
	comp=Z,7.5nm,0.6s						
BRVK	**Borovoye**	**69.98**	**328**	P	**P**	**00 10 53.3**	**-0.2**
	comp=Z,96nm,1.0s,SNR=8.7						
ZRNK	**Zerenda**	**70.60**	**328**	P	**P**	**00 10 55.7**	**-1.7**
ZRNK				pmax	pmax		
	comp=Z,19nm,0.5s						
TIXI	**Tiksi**	**71.93**	**1**	*d i*P	**P**	**00 11 04.9**	**0.0**
TIXI				pmax	pmax		
	comp=Z,11nm,0.8s						
AB31	**Akbulak array**	**74.33**	**322**	*i* P	**P**	**00 11 19.2**	**-0.4**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.3s						
ABKAR	**Akbulak array**	**74.33**	**322**	*e*P	**P**	**00 11 18.3**	**-1.3**
	comp=Z,10nm,0.6s						
AKTO	**Aktyubinsk**	**75.89**	**323**	P	**P**	**00 11 27.4**	**-1.2**
AKTO				pmax	pmax		
	comp=Z,25nm,0.7s						
AKTO	**Aktyubinsk**	**75.89**	**323**	P	**P**	**00 11 27.8**	**-0.8**
AKTO	**Aktyubinsk**	**75.89**	**323**	P	**P**	**00 11 27.8**	**-0.8**
	comp=Z,18nm,0.4s,baz=110,slow=8.1,SNR=110						
ARU	**Arti**	**77.55**	**329**	*c i*P	**P**	**00 11 37.3**	**-0.5**
ARU				*PP	**pP**	**00 11 55.7**	**-3.1**
ARU						00 14 29.1	
ARU				S	**S**	**00 21 21.3**	**-1.4**
ARU				pmax	pmax		
	comp=Z,22nm,1.2s						
ARU	**Arti**	**77.55**	**329**	P	**P**	**00 11 36.2**	**-1.6**
	comp=Z,99nm,0.8s,SNR=6.6						
UNV	**Unalaska Valle**	**77.66**	**34**	*e*P	**P**	**00 11 38.2**	**-0.2**
MAW	**Mawson**	**79.40**	**200**	LR	LR	00 41 58.2	
	comp=Z,87nm,19.7s,baz=302,slow=32						
VNDA	**Vanda**	**79.61**	**172**	LR	LR	00 44 21.7	
	comp=Z,64nm,19.5s,baz=159,slow=34						
MIB	**Mutribah**	**79.61**	**300**	*e*P	**P**	**00 11 48.5**	**-1.2**
MIB				AMb	AMB	00 11 50.9	
	comp=Z,17nm,0.6s						
NAY	**Al-Naaiem**	**79.63**	**300**	*e*P	**P**	**00 11 47.5**	**-2.3**
NAY				AMb	AMB	00 11 55.1	
	comp=Z,5.3nm,0.7s						
KBZ	**Khabaz**	**84.64**	**314**	P	**P**	**00 12 15.7**	**+0.1**
KBZ	**Khabaz**	**84.64**	**314**	P	**P**	**00 12 15.7**	**+0.1**
KBZ	**Khabaz**	**84.64**	**314**	P	**P**	**00 12 15.7**	**+0.1**
	comp=Z,6.5nm,0.9s,baz=148,slow=3.1,SNR=8.5						
GOF	**Gofitskoye**	**84.68**	**315**	*e*P	**P**	**00 12 16.6**	**+0.8**
KIV	**Kislovodsk**	**84.81**	**314**	*e*P	**P**	**00 12 16.1**	**-0.6**
KIV				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KDAK	**Kodiak Island**	**86.16**	**32**	P	**P**	**00 12 22.5**	**-0.4**
KDAK	**Kodiak Island**	**86.16**	**32**	P	**P**	**00 12 22.5**	**-0.4**
	comp=Z,7.4nm,0.6s,baz=6.1,slow=5.0,SNR=5.0						
VRHR	**Novokhopersk**	**86.20**	**321**	*e*P	**P**	**00 12 22.9**	**-0.4**
VRHR				pmax	pmax		
	comp=Z,30nm,0.7s						
VRHR				pmax	pmax		
	comp=N,10.0nm,1.5s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.8s						
VORD	**Divnogorie**	**87.66**	**321**	*e*P	**P**	**00 12 29.6**	**-0.7**
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,10.0nm,1.3s						
VSR	**Storozhevoye**	**87.75**	**321**	*e*P	**P**	**00 12 30.3**	**-0.5**
VSR				pmax	pmax		
	comp=Z,40nm,1.3s						
VSR				pmax	pmax		
	comp=N,4.0nm,0.7s						
VSR				pmax	pmax		
	comp=E,20nm,1.2s						
KMBO	**Kilima Mbogo**	**87.90**	**269**	P	**P**	**00 12 33.7**	**+1.1**
KMBO				*e*PcP	**PcP**	**00 12 34.4**	**0.0**
KMBO	**Kilima Mbogo**	**87.90**	**269**	P	**P**	**00 12 33.7**	**+1.1**
	comp=E,5.8nm,0.9s,baz=51,slow=8.1,SNR=17						
KMBO				LR	LR	00 46 26.7	
	comp=E,80nm,19.7s,baz=92,slow=32						
RC01	**Rabbit Creek A**	**87.93**	**29**	*e*P	**P**	**00 12 30.0**	**-1.5**
KLMR	**Klimovskoe**	**88.17**	**331**	*e*P	**P**	**00 12 31.2**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,36nm,1.3s						
COLD	**Coldfoot**	**88.24**	**23**	*e*PcP	**PcP**	**00 12 34.6**	**+0.2**
	comp=Z,8.2nm,0.6s						
SML	**Sawmill**	**88.65**	**28**	⇑*e*P	**P**	**00 12 35.9**	**+1.0**
SML				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SML	**Sawmill**	**88.65**	**28**	*e*PcP	**P**	**00 12 35.9**	**+1.0**
	comp=Z,2.2nm,0.9s						
ASF	**Jabal al Asfar**	**88.71**	**302**	P	**P**	**00 12 36.7**	**+0.8**
ASF	**Jabal al Asfar**	**88.71**	**302**	P	**P**	**00 12 36.7**	**+0.8**
	comp=Z,2.2nm,0.5s,baz=45,slow=1.8,SNR=6.3						
ILAR	**Eielson Array**	**89.44**	**25**	P	**P**	**00 12 38.0**	**-0.4**
ILAR	**Eielson Array**	**89.44**	**25**	P	**P**	**00 12 38.0**	**-0.4**
	comp=Z,1.7nm,0.6s,baz=244,slow=5.0,SNR=29						
MMAI	**Mount Meron Ar**	**89.98**	**303**	P	**P**	**00 12 43.1**	**+1.3**
MMAI	**Mount Meron Ar**	**89.98**	**303**	P	**P**	**00 12 43.1**	**+1.3**
	comp=Z,3.0nm,0.7s,baz=80,slow=6.9,SNR=7.3						
BRTR	**Keskin Array B**	**91.39**	**310**	P	**P**	**00 12 47.8**	**-0.5**
BRTR	**Keskin Array B**	**91.39**	**310**	P	**P**	**00 12 47.8**	**-0.5**
	comp=Z,1.8nm,0.9s,baz=129,slow=4.4,SNR=12						
JOF	**Joensuu**	**92.07**	**333**	*e*p	**P**	**00 12 49.7**	**-1.0**
	comp=Z,6.1nm,0.5s						
JOF	**Joensuu**	**92.07**	**333**	*e*P	**P**	**00 12 49.7**	**-1.0**
JOF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ARCES	**ARCESS Array B**	**93.71**	**340**	P	**P**	**00 12 57.4**	**-0.8**
ARCES	**ARCESS Array B**	**93.71**	**340**	P	**P**	**00 12 57.4**	**-0.8**
	comp=Z,3.4nm,0.7s,baz=82,slow=4.8,SNR=10						
AKASG	**Malin Array Be**	**94.04**	**321**	P	**P**	**00 12 59.2**	**-0.9**
AKASG	**Malin Array Be**	**94.04**	**321**	P	**P**	**00 12 59.1**	**-0.9**
AKASG	**Malin Array Be**	**94.04**	**321**	P	**P**	**00 12 59.1**	**-0.9**
	comp=Z,4.1nm,0.6s,baz=71,slow=4.6,SNR=18						
SPITS	**Spitsbergen Ar**	**94.15**	**349**	P	**P**	**00 12 59.6**	**-0.5**
SPITS	**Spitsbergen Ar**	**94.15**	**349**	P	**P**	**00 12 59.6**	**-0.5**
	comp=Z,1.4nm,0.3s,baz=106,slow=8.8,SNR=30						
KAF	**Kangasniemi**	**94.46**	**332**	*e*p	**P**	**00 13 00.4**	**-1.3**
	comp=Z,2.9nm,0.5s						
KAF	**Kangasniemi**	**94.46**	**332**	*e*P	**P**	**00 13 00.4**	**-1.3**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
FINES	**FINESS Array B**	**94.66**	**332**	P	**P**	**00 13 02.4**	**-0.3**
FINES	**FINESS Array B**	**94.66**	**332**	P	**P**	**00 13 02.4**	**-0.3**
	comp=Z,3.0nm,0.8s,baz=87,slow=14,SNR=4.1						
TIRR	**Tirgusor**	**95.07**	**314**	⇑P	**P**	**00 13 04.4**	**-0.5**
TIRR	**Tirgusor**	**95.07**	**314**	⇑*i*P	**P**	**00 13 04.4**	**-0.5**
TESR	**Tescani**	**96.12**	**317**	⇓*i*P	**P**	**00 13 09.8**	**+0.1**
VRI	**Vrincioaia**	**96.13**	**316**	⇓P	**P**	**00 13 10.1**	**+0.3**
VRI	**Vrincioaia**	**96.13**	**316**	⇓*i*P	**P**	**00 13 10.1**	**+0.3**
MLR	**Muntele Rosu**	**96.72**	**316**	P	**P**	**00 13 12.3**	**-0.3**
MLR	**Muntele Rosu**	**96.72**	**316**	⇑*i*P	**P**	**00 13 12.7**	**+0.1**
MLR	**Muntele Rosu**	**96.72**	**316**	P	**P**	**00 13 12.3**	**-0.3**
	comp=Z,1.1nm,0.7s,baz=162,slow=6.2						
BURAR	**Bucovina Array**	**96.97**	**318**	⇑*i*P	**P**	**00 13 14.4**	**+0.8**
BUR08	**Bucovina Ar. S**	**96.98**	**318**	*e*P	**P**	**00 13 14.0**	**+0.3**
LOT	**Lotru**	**98.24**	**316**	⇑*i*P	Pdif	00 13 20.0	+0.5
KWP	**Kalwaria Pacla**	**98.33**	**320**	⇓P	Pdif	00 13 20.6	+1.0
KWP	**Kalwaria Pacla**	**98.33**	**320**	⇓*i*P	Pdif	00 13 20.6	+1.0
UZH	**Uzhgorod**	**98.76**	**319**	*e*P	Pdif	00 13 21.9	+0.4
UZH				*i*		00 13 36.7	
DRGR		**98.77**	**317**	⇓P	**P**	**00 13 21.2**	**-0.5**
DRGR		**98.77**	**317**	⇓*i*P	**P**	**00 13 21.2**	**-0.5**
HFS	**Hagfors**	**100.86**	**332**	P	**Pdif**	**00 13 29.5**	**-1.1**
HFS	**Hagfors**	**100.86**	**332**	P	**Pdif**	**00 13 29.5**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=143,slow=3.7,SNR=8.8						
YKA	**Yellowknife Ar**	**103.84**	**24**	Pdif	**Pdif**	**00 13 44.3**	**+0.5**
YKA	**Yellowknife Ar**	**103.84**	**24**	Pdiff	**Pdif**	**00 13 44.3**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=301,slow=4.8,SNR=3.1						
GERES	**GERESS Array B**	**104.25**	**321**	Pdif	**Pdif**	**00 13 46.3**	**+0.2**
GERES	**GERESS Array B**	**104.25**	**321**	Pdiff	**Pdif**	**00 13 46.3**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=35,slow=4.9,SNR=4.4						
TORD	**Torodi Ar. Bea**	**122.58**	**285**	PKP	**PKPdf**	**00 18 39.1**	**+1.0**
TORD	**Torodi Ar. Bea**	**122.58**	**285**	PKP	**PKPdf**	**00 18 39.1**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=49,slow=1.6,SNR=16						
SCHQ	**Schefferville**	**124.82**	**8**	PKP	**PKPdf**	**00 18 43.4**	**+2.0**
SCHQ	**Schefferville**	**124.82**	**8**	PKP	**PKPdf**	**00 18 43.4**	**+2.0**
	comp=Z,2.6nm,0.7s,baz=356,slow=3.1,SNR=6.1						
TXAR	**Lajitas Array**	**125.30**	**54**	PKP	**PKPdf**	**00 18 45.5**	**+2.4**
TXAR	**Lajitas Array**	**125.30**	**54**	PKP	**PKPdf**	**00 18 45.5**	**+2.4**
	comp=Z,0.2nm,0.4s,baz=197,slow=2.8,SNR=3.3						
CPUP	**Villa Florida**	**153.36**	**175**	PKPbc	**PKPbc**	**00 19 43.0**	**+2.5**
CPUP	**Villa Florida**	**153.36**	**175**	PKPbc	**PKPbc**	**00 19 43.0**	**+2.5**
	comp=Z,0.5nm,0.4s,baz=280,slow=3.4,SNR=3.2						

WEL 05 00:06:10.0±0.3, 36°.36S×177°.77E, h12km, ML3.7/4, Error ellipse: s-maj=2.5km s-min=2.2km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.27**	**161**	*e*P*	Pn	00 06 31.4	-2.2
MXZ				S*	Sb	00 06 46.5	-3.7
MXZ				AML	AML	00 06 47.0	
KUZ	**Kuaotunu**	**1.70**	**256**	PN	Pn	00 06 38.3	-1.1
PUZ	**Puketiti**	**1.75**	**167**	PN	Pn	00 06 39.3	-0.8
PUZ				SN	Sn	00 07 01.3	-1.1
PUZ				AML	AML	00 07 06.1	
URZ	**Urewera**	**1.97**	**195**	P*	Pn	00 06 41.4	-1.7
URZ				S*	Sn	00 07 04.6	-3.1
URZ				AML	AML	00 07 07.0	
MWZ	**Matawai**	**1.98**	**186**	P*	Pn	00 06 42.2	-1.2
MWZ				S*	Sn	00 07 04.9	-3.3
MWZ				AML	AML	00 07 19.2	
MKAZ	**Moumakai**	**2.22**	**250**	PN	Pn	00 06 46.1	-0.5
TOZ	**Tahuroa Road**	**2.27**	**232**	P*	Pn	00 06 46.6	-0.7

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*ISCJB **05** 00:08:46.0±0.5, 37°.89N±0°.03×27°.55E±0°.04, h2km±7km, Error ellipse: s-maj=5.5km s-min=3.9km az=140.3*
*DDA **05** 00:08:46.0, 37°.85N×27°.53E, h7km, MD2.9*
*ISK **05** 00:08:45.8, 37°.91N×27°.64E, h8km, MD2.9*
*CSEM **05** 00:08:46.2±0.2, 37°.89N×27°.58E, h5km, MD2.9, Error ellipse: s-maj=5.3km s-min=4.1km az=58.0*
ISC 05 00:08:46.1±1.0**, 37°.87N**±0°.02**×27°.54E**±0°.02**, h9**km±9km**, n33, σ0s.76**/50**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.30**	**235**	*i* P	**Pg**	**00 08 51.9**	**-0.1**
GCAM				*i* S	**Sg**	**00 08 55.4**	**-0.6**
GCAM	**G?zelcaml?**	**0.30**	**235**	*i* P	**Pg**	**00 08 51.9**	**-0.1**
GCAM				*i* S	**Sg**	**00 08 55.4**	**-0.6**
AYDN	**Tasoluk**	**0.34**	**128**	*i* P	**Pg**	**00 08 53.3**	**+0.4**
AYDN				*i* S	**Sg**	**00 08 57.7**	**+0.3**
AYDN	**Tasoluk**	**0.34**	**128**	*i* P	**Pg**	**00 08 53.3**	**+0.4**
AYDN				*i* S	**Sg**	**00 08 57.7**	**+0.3**
IZM	**Izmir**	**0.57**	**338**	*e*PG	**Pg**	**00 08 57.2**	**+0.1**
IZM	**Izmir**	**0.57**	**338**	*e*Pg	**Pg**	**00 08 57.2**	**+0.1**
MLSB	**Milas**	**0.61**	**162**	*e*PG	**Pg**	**00 08 58.2**	**+0.4**
MLSB				*e*SG	**Sb**	**00 09 08.2**	**+0.7**
MLSB	**Milas**	**0.61**	**162**	*e*Pg	**Pg**	**00 08 58.2**	**+0.4**
MLSB				*e*Sg	**Sb**	**00 09 08.2**	**+0.7**
BLCB	**Balcova**	**0.65**	**323**	*e*PG	**Pb**	**00 08 59.3**	**-0.2**
BLCB	**Balcova**	**0.65**	**323**	*e*Pg	**Pb**	**00 08 59.3**	**-0.2**
BODT	**Bodrum**	**0.83**	**193**	*e*PG	**Pb**	**00 09 02.8**	**+0.2**
BODT				*e*SG	**Sn**	**00 09 15.7**	**-0.5**
BODT	**Bodrum**	**0.83**	**193**	*e*Pg	**Pb**	**00 09 02.8**	**+0.2**
BODT				*e*Sg	**Sn**	**00 09 15.7**	**-0.5**
URLA	**Izmir**	**0.89**	**304**	*i* P	**Pb**	**00 09 04.0**	**+0.3**
URLA				*i* S	**Sb**	**00 09 16.3**	**+0.6**
URLA	**Izmir**	**0.89**	**304**	*i* P	**Pb**	**00 09 04.0**	**+0.3**
URLA				*i* S	**Sb**	**00 09 16.3**	**+0.6**
YER	**Yerkesik**	**0.94**	**141**	*e*PG	**Pg**	**00 09 04.2**	**-0.1**
YER				*e*SG	**Sb**	**00 09 17.2**	**0.0**
YER	**Yerkesik**	**0.94**	**141**	*e*Pg	**Pg**	**00 09 04.2**	**-0.1**
YER				*e*Sg	**Sb**	**00 09 17.2**	**0.0**
KULA	**Kula-Manisa**	**1.09**	**54**	*e*PG	**Pg**	**00 09 05.7**	**-1.4**
KULA	**Kula-Manisa**	**1.09**	**54**	*e*Pg	**Pg**	**00 09 05.7**	**-1.4**
DAT	**Datca**	**1.14**	**178**	*e*PN	**Pn**	**00 09 08.7**	**+0.4**
DAT	**Datca**	**1.14**	**178**	*e*Pn	**Pn**	**00 09 08.7**	**+0.4**
DNZL	**Cakiroluk**	**1.21**	**98**	*i* P	**Pg**	**00 09 10.5**	**+1.2**
DNZL				*i* S	**Sn**	**00 09 26.6**	**+0.8**
DNZL	**Cakiroluk**	**1.21**	**98**	*i* P	**Pg**	**00 09 10.5**	**+1.2**
DNZL				*i* S	**Sn**	**00 09 26.6**	**+0.8**
TURN	**Turunc**	**1.31**	**139**	*i* P	**Pn**	**00 09 08.6**	**-1.9**
TURN				*i* S	**Sb**	**00 09 26.2**	**-1.5**
TURN	**Turunc**	**1.31**	**139**	*i* P	**Pn**	**00 09 08.6**	**-1.9**
TURN				*i* S	**Sb**	**00 09 26.2**	**-1.5**
KHAL	**Karahalli**	**1.62**	**71**	*i* P	**Pg**	**00 09 18.3**	**+1.1**
KHAL				*i* S	**Sg**	**00 09 38.5**	**+0.3**
APE	**Apeiranthos**	**1.79**	**244**	*e*PN	**Pb**	**00 09 19.5**	**+0.5**
APE	**Apeiranthos**	**1.79**	**244**	*e*Pn	**Pb**	**00 09 19.5**	**+0.5**
DST	**Dursunbey**	**1.93**	**26**	*e*PN	**Pn**	**00 09 18.9**	**-0.1**
DST	**Dursunbey**	**1.93**	**26**	*e*Pn	**Pn**	**00 09 18.9**	**-0.1**
GONE	**Gonen-Balikesi**	**2.17**	**3**	*e*PN	**Pn**	**00 09 22.7**	**+0.3**
GONE	**Gonen-Balikesi**	**2.17**	**3**	*e*Pn	**Pn**	**00 09 22.7**	**+0.3**
TVSB	**Tavsanli**	**2.18**	**43**	*e*PN	**Pn**	**00 09 21.9**	**-0.7**
TVSB	**Tavsanli**	**2.18**	**43**	*e*Pn	**Pn**	**00 09 21.9**	**-0.7**

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*ISCJB **05** 00:20:10.8±0.8, 39°.13N±0°.04×41°.79E±0°.05, h5km±8km, Error ellipse: s-maj=7.0km s-min=5.8km az=43.9*
*CSEM **05** 00:20:10.4±0.4, 39°.03N×41°.66E, h8km, MD3.0, Error ellipse: s-maj=11.8km s-min=8.0km az=28.0*
*ISK **05** 00:20:11.9, 39°.18N×41°.68E, h24km, MD3.0*
*DDA **05** 00:20:12.6, 39°.06N×41°.84E, h7km, MD3.0*
ISC 05 00:20:10.6±1.1**, 39°.12N**±0°.03**×41°.76E**±0°.03**, h5**km±10km**, n26, σ1s.35**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.51**	**251**	*i* P	**Pb**	**00 20 22.4**	**+0.3**
BNGL				*i* S	**Sb**	**00 20 31.7**	**+1.9**
TATV	**Tatvan**	**0.72**	**147**	*i* P	**Pg**	**00 20 23.9**	**-0.7**
TATV				*i* S	**Sg**	**00 20 33.2**	**-0.8**
TATV	**Tatvan**	**0.72**	**147**	*i* P	**Pg**	**00 20 23.9**	**-0.7**
TATV				*i* S	**Sg**	**00 20 33.2**	**-0.8**
ERZM	**Erzurum**	**0.84**	**339**	*i* P	**Pn**	**00 20 30.2**	**+0.8**
ERZM	**Erzurum**	**0.84**	**339**	*i* P	**Pn**	**00 20 30.2**	**+0.8**
EZM	**Erzurum**	**0.84**	**339**	*e*PG	**Pg**	**00 20 27.6**	**+0.7**
BNGB	**Bingˆ¶l**	**0.85**	**262**	*e*PG	**Pg**	**00 20 28.1**	**+1.0**
BNGB				*e*SG	**Sg**	**00 20 40.3**	**+2.2**
HOMI	**Horasan**	**0.93**	**7**	*i* P	**Pn**	**00 20 31.6**	**+1.0**
BTMT	**Batman**	**0.95**	**193**	*e*PN	**Pn**	**00 20 32.2**	**+1.6**
BTMT	**Batman**	**0.95**	**193**	*e*Pn	**Pn**	**00 20 32.2**	**+1.6**
BINT	**Bingol**	**1.02**	**257**	*e*Pg	Pg	00 20 28.1	-2.2
BINT				*e*Sg	**Sg**	**00 20 40.3**	**-3.2**
AGRB	**Hanur-Agry**	**1.06**	**64**	*e*PN	**Pn**	**00 20 32.2**	**0.0**
AGRB	**Hanur-Agry**	**1.06**	**64**	*e*Pn	**Pn**	**00 20 32.2**	**0.0**
BEST	**Besiri**	**1.28**	**198**	*i* P	**Pg**	**00 20 36.3**	**+1.1**
BEST				*i* S	**Sn**	**00 20 54.3**	**+1.4**
KOPT	**Kop Dagi**	**1.33**	**313**	*i* P	Pg	00 20 40.9	+4.7
KOPT	**Kop Dagi**	**1.33**	**313**	*i* P	Pg	00 20 40.9	+4.7
VANB	**Van**	**1.37**	**112**	*e*PN	**Pg**	**00 20 37.7**	**+0.7**
VANB	**Van**	**1.37**	**112**	*e*Pn	**Pg**	**00 20 37.7**	**+0.7**
ERZN	**Erzincan**	**1.65**	**287**	*e*PN	**Pn**	**00 20 38.9**	**-1.4**

BAYT	**Ayd˜–ntepe-Bay**	**1.79**	**316**	*e*PN	**Pn**	**00 20 40.8**	**-1.5**
BAYT	**Ayd˜–ntepe-Bay**	**1.79**	**316**	*e*Pn	**Pn**	**00 20 40.8**	**-1.5**
PTK	**Pertek**	**1.86**	**264**	*e*PN	**Pn**	**00 20 42.3**	**-1.0**
PTK	**Pertek**	**1.86**	**264**	*e*Pn	**Pn**	**00 20 42.3**	**-1.0**
EZC	**Erzincan**	**1.97**	**289**	*e*Pn	Pn	00 20 38.9	-5.9
ILIC	**ilic-Erzincan**	**2.50**	**279**	*e*PN	**Pn**	**00 20 51.1**	**-1.0**
ILIC	**ilic-Erzincan**	**2.50**	**279**	*e*Pn	**Pn**	**00 20 51.1**	**-1.0**

*ISCJB **05** 00:39:00.2±0.3, 16°.48S±0°.09×173°.7W±0°.1, h66km, mb4.4/29, Error ellipse: s-maj=17.7km s-min=6.6km az=42.1*

*IDC **05** 00:39:00.0±3.1, 16°.46S×173°.83W, h54km±28km, mb4.2/11, mb1 4.4/12, mb1mx4.2/24, mbtmp4.2/12, ML3.4/1, MS3.4/3, Ms1 3.4/3, ms1mx2.7/34, Error ellipse: s-maj=28.3km s-min=13.9km az=133.0*

*NEIC **05** 00:39:04.2±1.3, 16°.39S×173°.73W, h90km±12km, mb4.4/17, Error ellipse: s-maj=20.8km s-min=8.0km az=139.0*

ISC 05 00:39:01.7±0.5**, 16°.52S**±0°.08×**173°.64W**±0°.09**, h66**km**, n181, σ0s.93**/191**, mb4.5**/29**, 55C-68D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.15**	**35**	*e*Pn	**Pn**	**00 39 48.9**	**-0.1**
AFI				*e*Sn	**Sn**	**00 40 26.0**	**+0.5**
AFI	**Afiamalu**	**3.15**	**35**	P	**Pn**	**00 39 49.2**	**+0.2**
	236nm,0.3s,baz=342,slow=3.2,SNR=48						
AFI				S	**Sn**	**00 40 22.4**	**-3.1**
	350nm,0.3s,baz=32,slow=21,SNR=7.6						
MSVF	**Nonsavu**	**8.04**	**260**	*e*Pn	Pn	00 41 00.5	+4.6
DZM	**Mont Dzumac**	**19.59**	**250**	*e*P	**Pn**	**00 43 26.9**	**+0.3**
DZM	**Mont Dzumac**	**19.59**	**250**	P	**Pn**	**00 43 26.6**	**+0.1**
DZM				S	Sn	00 47 15.6	+9.5
DZM	**Mont Dzumac**	**19.59**	**250**	P	**Pn**	**00 43 26.6**	**+0.1**
	1.2nm,0.3s,baz=75,slow=15,SNR=21						
DZM				S	Sn	00 47 15.6	+9.5
	0.2nm,0.3s,baz=137,slow=19,SNR=3.8						
DZM				LR	LR	00 48 06.0	
	comp=Z,46nm,19.4s,baz=241,slow=28						
OUZ	**Omahuta**	**21.85**	**209**	*e*P	**P**	**00 43 50.2**	**+1.5**
	15nm,1.0s						
URZ	**Urewera**	**23.14**	**199**	*e*P	**P**	**00 43 59.7**	**-2.6**
	64nm,0.6s						
URZ				S	**S**	**00 48 08.7**	**+0.1**
URZ	**Urewera**	**23.14**	**199**	P	**P**	**00 43 59.8**	**-2.5**
	66nm,0.5s,baz=35,slow=2.9,SNR=51						
URZ				S	**S**	**00 48 08.7**	**+0.1**
	3.6nm,0.5s,baz=119,slow=15,SNR=2.8						
KHZ	**Kahutara**	**28.06**	**200**	*e*P	**P**	**00 44 48.6**	**+1.8**
	30nm,0.9s						
RPZ	**Rata Peaks**	**30.07**	**202**	*e*P	**P**	**00 45 04.5**	**-0.1**
	14nm,0.5s						
RPZ	**Rata Peaks**	**30.07**	**202**	P	**P**	**00 45 04.5**	**-0.1**
	11nm,0.7s,baz=17,slow=11,SNR=4.1						
RPZ				LR	LR	00 55 02.0	
	comp=Z,156nm,21.0s,baz=291,slow=32						
STKA	**Stephens Creek**	**43.29**	**241**	*e*P	**P**	**00 46 55.8**	**-1.3**
	3.1nm,1.0s						
STKA	**Stephens Creek**	**43.29**	**241**	P	**P**	**00 46 55.5**	**-1.6**
	8.1nm,0.8s,baz=99,slow=9.8,SNR=14						
WRAB	**Tennant Creek**	**49.37**	**258**	*e*P	**P**	**00 47 42.8**	**-2.1**
	5.9nm,1.1s						
WRA	**Warramunga Arr**	**49.38**	**258**	P	**P**	**00 47 42.8**	**-2.3**
WRA	**Warramunga Arr**	**49.38**	**258**	P	**P**	**00 47 42.8**	**-2.3**
	1.4nm,0.6s,baz=96,slow=7.5,SNR=30						
AS31	**Alice Springs**	**49.56**	**253**	*e*P	**P**	**00 47 44.3**	**-2.1**
ASAR	**Alice Springs**	**49.56**	**253**	P	**P**	**00 47 44.5**	**-1.9**
ASAR	**Alice Springs**	**49.56**	**253**	P	**P**	**00 47 44.5**	**-1.9**
	18nm,0.6s,baz=89,slow=8.3,SNR=229						
ASAR				LR	LR	01 06 50.3	
	comp=Z,47nm,18.4s,baz=5.8,slow=34						
VNDA	**Vanda**	**62.25**	**186**	P	**P**	**00 49 17.9**	**+1.7**
VNDA	**Vanda**	**62.25**	**186**	P	**P**	**00 49 17.9**	**+1.7**
	1.2nm,0.7s,baz=354,slow=6.4,SNR=6.7						
CIS	**Catalina Islan**	**72.38**	**46**	⇑P	**P**	**00 50 21.5**	**+0.6**
	baz=72						
ISA	**Isabella**	**73.61**	**44**	⇑P	**P**	**00 50 28.6**	**+0.4**
	baz=74						
BELC	**Belle Mtn. Jos**	**74.38**	**47**	⇑P	**P**	**00 50 32.9**	**+0.1**
	baz=74						
MPMC	**Manual Prospec**	**74.49**	**44**	⇓P	**P**	**00 50 33.7**	**+0.3**
	baz=75						
GSC	**Goldstone**	**74.53**	**45**	*e*P	**P**	**00 50 32.3**	**-1.3**
	7.8nm,1.2s						
GSC	**Goldstone**	**74.53**	**45**	⇓P	**P**	**00 50 33.7**	**+0.1**
	baz=75						
GMRC	**Granite Mounta**	**75.03**	**46**	⇑P	**P**	**00 50 36.6**	**0.0**
	baz=75						
TUQ	**Turquoise Moun**	**75.20**	**46**	⇓P	**P**	**00 50 37.7**	**+0.2**
	baz=75						
SHOC	**Shoshone**	**75.22**	**45**	⇓P	**P**	**00 50 37.8**	**+0.3**
	baz=75						
NVAR	**Mina Array Bea**	**75.31**	**42**	P	**P**	**00 50 38.2**	**0.0**
NVAR	**Mina Array Bea**	**75.31**	**42**	P	**P**	**00 50 38.2**	**0.0**
	2.0nm,0.8s,baz=224,slow=7.6,SNR=5.9						
Y14A	**Wickenburg**	**76.46**	**48**	⇓P	**P**	**00 50 45.1**	**+0.5**
	baz=77						
R11A	**Troy Canyon, C**	**77.02**	**43**	⇑P	**P**	**00 50 48.5**	**+0.7**
	baz=77						
TUC	**Tucson**	**77.27**	**51**	*e*P	**P**	**00 50 49.4**	**+0.2**
	2.4nm,0.7s						
X16A	**Lo Mia Camp, P**	**77.82**	**48**	⇓P	**P**	**00 50 53.2**	**+0.8**
	baz=78						
319A	**Douglas**	**77.95**	**52**	⇓P	**P**	**00 50 53.6**	**+0.5**
	baz=78						
CCUT	**Cedar City**	**78.08**	**45**	*e*P	**P**	**00 50 55.0**	**+1.2**
U15A	**North Rim**	**78.23**	**46**	⇑P	**P**	**00 50 55.2**	**+0.4**
	baz=78						
WUAZ	**Wupatki**	**78.42**	**47**	⇓P	**P**	**00 50 56.3**	**+0.6**
	baz=79						
320A	**Kipp Ranch, An**	**78.50**	**52**	⇑P	**P**	**00 50 56.8**	**+0.5**
	baz=79						
220A	**Playas Peak, P**	**78.77**	**52**	⇓P	**P**	**00 50 58.3**	**+0.7**
	baz=79						
Z20A	**Nine Sixteen R**	**79.28**	**51**	⇓P	**P**	**00 51 01.3**	**+0.8**
	baz=79						
MVU	**Marysvale**	**79.35**	**45**	*e*P	**P**	**00 51 01.4**	**+0.6**
	1.5nm,0.4s						
121A	**Cookes Peak, D**	**79.61**	**52**	⇑P	**P**	**00 51 02.6**	**+0.3**
	baz=80						
Y20A	**Horse Springs,**	**79.81**	**50**	⇓P	**P**	**00 51 03.7**	**+0.4**
	baz=80						
X20A	**Quemado**	**80.01**	**50**	⇓P	**P**	**00 51 05.2**	**+0.8**
	baz=80						
Z21A	**St. Cloud Mine**	**80.05**	**51**	⇓P	**P**	**00 51 05.1**	**+0.4**
	baz=80						
W20A	**Ramah**	**80.28**	**49**	⇑P	**P**	**00 51 06.5**	**+0.5**
	baz=80,SNR=7.5						
Y21A	**Point of Rocks**	**80.37**	**50**	⇑P	**P**	**00 51 06.8**	**+0.3**
	baz=80						
Z22A	**Elephant Butte**	**80.56**	**51**	⇓P	**P**	**00 51 07.9**	**+0.5**
	baz=81						
SRU	**San Rafael**	**80.79**	**45**	⇑P	**P**	**00 51 09.1**	**+0.6**
	baz=81						
Y22A	**Socorro**	**80.86**	**51**	⇓P	**P**	**00 51 09.4**	**+0.4**
	baz=81						
324A	**Moseley Ranch,**	**80.88**	**53**	⇑P	**P**	**00 51 09.2**	**+0.1**
	baz=81						
H12A	**Diamond D Ranc**	**80.91**	**38**	⇑P	**P**	**00 51 09.4**	**+0.4**
	baz=81						
G12A	**Big Creek, Yel**	**80.96**	**38**	⇑P	**P**	**00 51 09.3**	**0.0**
	baz=81,SNR=5.2						
425A	**Indio Mountain**	**80.99**	**54**	⇓P	**P**	**00 51 09.6**	**-0.1**
	baz=81						
MNTX	**Cornudas Mount**	**81.07**	**53**	*e*P	**P**	**00 51 10.4**	**+0.5**
224A	**Cornudas Mount**	**81.13**	**53**	⇓P	**P**	**00 51 10.7**	**+0.3**
	baz=81						
V21A	**Milan**	**81.22**	**49**	⇑P	**P**	**00 51 10.8**	**-0.1**
	baz=81,SNR=6.4						
325A	**Bean Ranch, Si**	**81.25**	**54**	⇑P	**P**	**00 51 11.0**	**-0.1**
	baz=81						
F12A	**Elk City**	**81.35**	**37**	⇑P	**P**	**00 51 11.1**	**-0.1**
	baz=82,SNR=5.6						
TXAR	**Lajitas Array**	**81.42**	**56**	P	**P**	**00 51 12.8**	**+0.8**
TXAR	**Lajitas Array**	**81.42**	**56**	P	**P**	**00 51 12.8**	**+0.8**
	1.7nm,0.9s,baz=220,slow=11,SNR=2.5						
U21A	**Nageezi**	**81.50**	**48**	⇑P	**P**	**00 51 12.3**	**-0.1**
	baz=82,SNR=8.8						
S20A	**Disappointment**	**81.66**	**47**	⇑P	**P**	**00 51 13.4**	**+0.2**
	baz=82						
426A	**McDonald Obser**	**81.69**	**55**	⇑P	**P**	**00 51 13.6**	**+0.2**
	baz=82						
ANMO	**Albuquerque**	**81.69**	**50**	P	**P**	**00 51 12.6**	**-0.8**
ANMO	**Albuquerque**	**81.69**	**50**	P	**P**	**00 51 12.6**	**-0.8**
	1.2nm,0.6s,baz=242,slow=9.5,SNR=3.4						
CN2	**Changchun**	**81.79**	**320**	*e*P	**P**	**00 51 13.6**	**+0.2**
CN2				*e*S	**S**	**01 01 19.1**	**-2.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
V22A	**San Miguel Ran**	**81.80**	**49**	⇓P	**P**	**00 51 14.2**	**+0.2**
	baz=82						
T21A	**Navajo Lake**	**81.84**	**48**	⇑P	**P**	**00 51 14.9**	**+0.7**
	baz=82						
S21A	**Coal Bank Pass**	**81.97**	**47**	⇓P	**P**	**00 51 14.9**	**0.0**
	baz=82,SNR=6.6						
C11A	**Tepee Creek (N**	**81.98**	**35**	⇑P	**P**	**00 51 15.3**	**+0.9**
	baz=82						
W23A	**Werner Place,**	**82.01**	**50**	⇓P	**P**	**00 51 15.4**	**+0.3**
	baz=82						
125A	**Gardner Draw,**	**82.04**	**53**	⇑P	**P**	**00 51 15.1**	**0.0**
	baz=82						
U22A	**Llaves**	**82.05**	**48**	⇑P	**P**	**00 51 15.6**	**+0.4**
	baz=82						
226B	**Tecolote Peak,**	**82.17**	**53**	⇓P	**P**	**00 51 16.1**	**+0.2**
	baz=82						
Q20A	**Ridgley Place,**	**82.23**	**46**	⇓P	**P**	**00 51 16.4**	**+0.3**
	baz=82						
V23A	**Ortiz Mt. (NFS**	**82.25**	**49**	⇓P	**P**	**00 51 17.0**	**+0.7**
	baz=82						
H15A	**Lima**	**82.27**	**39**	⇓P	**P**	**00 51 16.9**	**+0.7**
	baz=82						
T22A	**Edith**	**82.30**	**48**	⇓P	**P**	**00 51 17.1**	**+0.5**
	baz=82						
O19A	**Miners Draw (B**	**82.32**	**44**	⇓P	**P**	**00 51 17.0**	**+0.5**
	baz=82						
E13A	**Victor**	**82.35**	**37**	⇑P	**P**	**00 51 16.6**	**+0.1**
	baz=82						
RRI2	**Red Ridge**	**82.42**	**41**	*e*P	**P**	**00 51 17.4**	**+0.3**
	comp=Z,5.6nm,0.9s						
P20A	**De Beque**	**82.43**	**45**	⇑P	**P**	**00 51 17.8**	**+0.7**
	baz=83						
R21A	**Cimarron**	**82.47**	**46**	⇓P	**P**	**00 51 18.1**	**+0.7**
	baz=83						
U23A	**El Rito**	**82.50**	**49**	⇓P	**P**	**00 51 18.1**	**+0.5**
	baz=83						
D13A	**Huson**	**82.56**	**36**	⇓P	**P**	**00 51 17.5**	**+0.1**
	baz=83						
W24A	**Lazy 6 Ranch,**	**82.58**	**50**	⇑P	**P**	**00 51 18.4**	**+0.3**
	baz=83						
I16A	**Newdale**	**82.59**	**40**	⇓P	**P**	**00 51 18.5**	**+0.7**
	baz=83						
G15A	**Dillon**	**82.66**	**39**	⇓P	**P**	**00 51 18.7**	**+0.6**
	baz=83						
Q21A	**Lamborn Mesa,**	**82.67**	**46**	⇑P	**P**	**00 51 19.1**	**+0.6**
	baz=83						
S22A	**4UR Ranch, Cre**	**82.69**	**47**	⇑P	**P**	**00 51 18.9**	**+0.2**
	baz=83,SNR=7.6						
MSO	**Missoula**	**82.71**	**37**	⇓P	**P**	**00 51 18.4**	**+0.1**
	baz=83						
TPAW	**Teton Pass**	**82.73**	**41**	*e*P	**P**	**00 51 19.3**	**+0.7**
	comp=Z,3.5nm,0.8s						
E14A	**Clinton**	**82.74**	**37**	⇑P	**P**	**00 51 18.8**	**+0.3**
	baz=83						
O20A	**White River Ci**	**82.83**	**45**	⇑P	**P**	**00 51 19.5**	**+0.3**
	baz=83						
M19A	**Rock Springs**	**82.88**	**43**	⇑P	**P**	**00 51 19.7**	**+0.2**
	baz=83						
IMW	**Indian Meadow**	**82.94**	**40**	*e*P	**P**	**00 51 20.5**	**+0.7**
	comp=Z,6.0nm,0.9s						
R22A	**Saguache, Gunn**	**82.96**	**47**	⇓P	**P**	**00 51 20.5**	**+0.4**
	baz=83						
F15A	**Butte**	**83.02**	**38**	⇑P	**P**	**00 51 20.6**	**+0.6**
	baz=83						
L19A	**Farson**	**83.04**	**42**	⇓P	**P**	**00 51 20.7**	**+0.4**
	baz=83						
D14A	**Greenough**	**83.09**	**37**	⇓P	**P**	**00 51 20.4**	**+0.1**
	baz=83						
G16A	**Moss Hill, Enn**	**83.10**	**39**	⇑P	**P**	**00 51 20.7**	**+0.2**
	baz=83						
Q22A	**Crested Butte,**	**83.14**	**46**	⇑P	**P**	**00 51 21.4**	**+0.4**
	baz=83						
N20A	**Spence Gulch,**	**83.15**	**44**	⇑P	**P**	**00 51 21.1**	**+0.2**
	baz=83						
H16A	**Russell Place,**	**83.17**	**40**	⇑P	**P**	**00 51 21.6**	**+0.7**
	baz=83,SNR=7.5						
E15A	**Deer Lodge**	**83.24**	**38**	⇓P	**P**	**00 51 21.9**	**+0.8**
	baz=83						
BW06	**Boulder Array**	**83.24**	**42**	*e*P	**P**	**00 51 20.8**	**-0.6**
	comp=Z,3.5nm,0.9s						
PDAR	**Pinedale Array**	**83.24**	**42**	P	**P**	**00 51 21.2**	**-0.1**
PDAR	**Pinedale Array**	**83.24**	**42**	P	**P**	**00 51 21.2**	**-0.1**
	comp=Z,4.7nm,0.8s,baz=204,slow=3.3,SNR=19						
SMCO	**Snowmass**	**83.25**	**46**	*e*P	**P**	**00 51 21.5**	**-0.2**
	comp=Z,3.3nm,0.9s						
Z27A	**Tatum**	**83.41**	**53**	⇓P	**P**	**00 51 22.5**	**+0.2**
	baz=84						
BOZ	**Bozeman (W)**	**83.43**	**39**	*e*P	**P**	**00 51 21.5**	**-0.6**
	comp=Z,1.2nm,0.7s						
X26A	**CR and CF Fran**	**83.48**	**51**	⇑P	**P**	**00 51 22.5**	**-0.1**
	baz=84						
F16A	**Kennard Place,**	**83.50**	**38**	⇓P	**P**	**00 51 23.1**	**+0.6**
	baz=84						
M20A	**Sweetwater, Wa**	**83.51**	**43**	⇓P	**P**	**00 51 22.9**	**+0.2**
	baz=84						
ILAR	**Eielson Array**	**83.58**	**11**	P	**P**	**00 51 21.7**	**-0.5**
ILAR	**Eielson Array**	**83.58**	**11**	P	**P**	**00 51 21.7**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=224,slow=6.0,SNR=7.6						
P22A	**Eagle**	**83.59**	**46**	⇓P	**P**	**00 51 23.2**	**+0.1**
	baz=84						
R23A	**Moffat**	**83.60**	**47**	⇑P	**P**	**00 51 23.2**	**-0.2**
	baz=84						
N21A	**Black Mountain**	**83.61**	**44**	⇓P	**P**	**00 51 23.5**	**+0.2**
	baz=84						
D15A	**Lincoln**	**83.64**	**37**	⇑P	**P**	**00 51 23.4**	**+0.3**
	baz=84						
L20A	**Wamsutter**	**83.66**	**43**	⇓P	**P**	**00 51 23.3**	**-0.2**
	baz=84,SNR=6.0						
128A	**Castleberry Fa**	**83.69**	**53**	⇑P	**P**	**00 51 23.7**	**+0.1**
	baz=84						
Y27A	**Causey**	**83.69**	**52**	⇓P	**P**	**00 51 23.6**	**0.0**
	baz=84						
K19A	**Absolon Red Bu**	**83.73**	**42**	⇑P	**P**	**00 51 23.9**	**+0.1**
	baz=84						
J19A	**Crowheart**	**83.81**	**42**	⇓P	**P**	**00 51 23.8**	**-0.3**
	baz=84,SNR=5.1						
Q23A	**Hartsel**	**83.91**	**47**	⇓P	**P**	**00 51 25.3**	**+0.3**
	baz=84						
K20A	**Yellowstone Ra**	**83.97**	**42**	⇓P	**P**	**00 51 24.8**	**-0.2**
	baz=84						
C15A	**Salmond Ranch,**	**83.98**	**36**	⇓P	**P**	**00 51 24.9**	**0.0**
	baz=84						
O22A	**Kremmling**	**83.99**	**45**	⇓P	**P**	**00 51 25.2**	**-0.1**
	baz=84						
M21A	**Separation Pea**	**84.11**	**44**	⇓P	**P**	**00 51 25.8**	**0.0**
	baz=84						
F17A	**Fitzpatrick Pl**	**84.14**	**39**	⇓P	**P**	**00 51 26.2**	**+0.4**
	baz=84						
A14A	**Double T Ranch**	**84.18**	**35**	⇑P	**P**	**00 51 26.2**	**+0.3**
	baz=84						
D16A	**Dana Ranch, Ca**	**84.20**	**37**	⇓P	**P**	**00 51 26.4**	**+0.4**
	baz=84						
I19A	**Meeteetse**	**84.23**	**41**	⇑P	**P**	**00 51 26.4**	**+0.2**
	baz=84						
531A	**Rocksprings**	**84.24**	**56**	⇓P	**P**	**00 51 26.6**	**+0.1**
	baz=84						
E17A	**Martinsdale**	**84.31**	**38**	⇓P	**P**	**00 51 26.5**	**-0.1**
	baz=84						
N22A	**Wattenberg Ran**	**84.35**	**45**	⇑P	**P**	**00 51 27.0**	**-0.1**
	baz=84						
S25A	**Robets Cordova**	**84.35**	**48**	⇑P	**P**	**00 51 27.2**	**+0.1**
	baz=84						
C16A	**Fuhringer Ranc**	**84.49**	**37**	⇓P	**P**	**00 51 27.2**	**-0.2**
	baz=85						
G18A	**Lazy EL Ranch,**	**84.51**	**40**	⇑P	**P**	**00 51 27.9**	**+0.2**
	baz=85						
H19A	**Powell**	**84.54**	**40**	⇓P	**P**	**00 51 28.0**	**+0.2**
	baz=85						
A15A	**Johnson Ranch,**	**84.56**	**35**	⇑P	**P**	**00 51 28.1**	**+0.4**
	baz=85						
K21A	**Alcova**	**84.67**	**43**	⇓P	**P**	**00 51 28.5**	**-0.1**
	baz=85						
F18A	**Big Timber**	**84.71**	**39**	⇓P	**P**	**00 51 28.4**	**-0.2**
	baz=85						
I20A	**Worland**	**84.73**	**41**	⇑P	**P**	**00 51 29.2**	**+0.5**
	baz=85						
N23A	**Red Feather La**	**84.73**	**45**	⇑P	**P**	**00 51 29.8**	**+0.8**
	baz=85						
D17A	**Six Diamond Ra**	**84.76**	**38**	⇓P	**P**	**00 51 29.3**	**+0.5**
	baz=85						
J21A	**Lysite**	**84.88**	**42**	⇑P	**P**	**00 51 30.2**	**+0.6**
	baz=85						
C17A	**Wharram Farm,**	**84.97**	**37**	⇓P	**P**	**00 51 30.0**	**+0.2**
	baz=85						
W28A	**Vega**	**84.97**	**51**	⇓P	**P**	**00 51 30.5**	**+0.4**
	baz=85						
231A	**Bronte**	**85.10**	**55**	⇓P	**P**	**00 51 30.7**	**-0.1**
	baz=85						
F19A	**Roth Farm, Mol**	**85.15**	**39**	⇓P	**P**	**00 51 30.7**	**-0.1**
	baz=85						
A16A	**West Butte Ran**	**85.18**	**36**	⇑P	**P**	**00 51 31.1**	**+0.3**
	baz=85						
I21A	**Big Trails, Te**	**85.20**	**42**	⇓P	**P**	**00 51 30.9**	**-0.2**
	baz=85						
AMTX	**Amarillo**	**85.21**	**52**	*e*P	**P**	**00 51 30.3**	**-1.0**
	comp=Z,18nm,0.7s						
B17A	**L&G Farms, Che**	**85.29**	**37**	⇓P	**P**	**00 51 31.1**	**-0.3**
	baz=85						
L23A	**Garrett**	**85.45**	**44**	⇑P	**P**	**00 51 32.1**	**-0.4**
	baz=86						
A17A	**Triple J Farms**	**85.68**	**36**	⇑P	**P**	**00 51 33.5**	**+0.2**
	baz=86						
EGMT	**Eagleton**	**85.75**	**37**	*e*P	**P**	**00 51 33.4**	**-0.3**
	comp=Z,14nm,0.7s						
EGMT	**Eagleton**	**85.75**	**37**	⇓P	**P**	**00 51 33.6**	**-0.1**
	baz=86						
D19A	**Cripps Ranch,**	**85.84**	**38**	⇓P	**P**	**00 51 34.6**	**+0.5**
	baz=86						
ABTX	**Abilene, Hawle**	**85.89**	**54**	⇑P	**P**	**00 51 34.5**	**-0.2**
	baz=86						
BJI	**Beijing**	**86.07**	**314**	P	**P**	**00 51 35.7**	**+0.4**
BJI				S	**S**	**01 02 04.4**	**0.0**
BJI				SS	**SS**	**01 07 46.0**	**+1.5**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,66nm,3.6s						
BJI				LR	LR		
	comp=N,98nm,24.3s						
BJI				LR	LR		
	comp=E,88nm,24.3s						
Z32A	**Haskell**	**86.28**	**54**	⇓P	**P**	**00 51 36.5**	**0.0**
	baz=86						
W31A	**Holland Ranch,**	**86.64**	**52**	⇓P	**P**	**00 51 38.8**	**+0.5**
	baz=87						
GYA	**Guiyang**	**88.36**	**298**	*e*P	**P**	**00 51 46.5**	**-0.4**
GYA				pP	**pP**	**00 52 09.4**	**+4.1**
GYA				sP	sP	00 52 19.6	+7.2
GYA				PP	**PP**	**00 55 17.3**	**+1.8**
GYA				SKS	**SKSac**	**01 02 05.7**	**-4.8**
GYA				S	**SKKSac**	**01 02 23.0**	**+1.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LZH	**Lanzhou**	**93.70**	**306**	*e*P	**P**	**00 52 13.0**	**+1.5**
LZH				pP	pP	00 52 40.5	+11
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
KMBO	**Kilima Mbogo**	**144.84**	**243**	PKP	**PKPab**	**00 58 31.0**	**-0.6**
KMBO	**Kilima Mbogo**	**144.84**	**243**	PKP	**PKPab**	**00 58 31.0**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=70,slow=9.6,SNR=7.9						
BRTR	**Keskin Array B**	**146.87**	**320**	PKPbc	**PKPbc**	**00 58 36.5**	**-0.6**
BRTR	**Keskin Array B**	**146.87**	**320**	PKPbc	**PKPbc**	**00 58 36.5**	**-0.6**
	comp=Z,2.4nm,1.1s,baz=229,slow=1.3,SNR=7.9						
KHC	**Kasperske Hory**	**146.94**	**351**	*e*PKP	**PKPab**	**00 58 41.5**	**+3.3**
GERES	**GERESS Array B**	**147.20**	**351**	PKPbc	**PKPbc**	**00 58 37.3**	**-0.3**
GERES	**GERESS Array B**	**147.20**	**351**	PKPbc	**PKPbc**	**00 58 37.3**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=36,slow=5.6,SNR=3.1						
TORD	**Torodi Ar. Bea**	**174.38**	**126**	PKPab	**PKPab**	**01 00 36.8**	**-0.7**
TORD	**Torodi Ar. Bea**	**174.38**	**126**	PKPab	**PKPab**	**01 00 36.8**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=282,slow=3.0,SNR=3.4						

*IDC **05** 00:41:09.6±0.5, 15°.50N×86°.32W, h0km, mb4.4/23, mb1 4.6/25, mb1mx4.5/29, mbtmp4.5/25, ML3.0/1, MS3.7/20, Ms1 3.7/20, ms1mx3.6/34, Error ellipse: s-maj=22.1km s-min=11.3km az=60.0*

*ISCJB **05** 00:41:13.3±0.2, 15°.49N±0°.02×86°.34W±0°.03, h33km, mb4.6/111, MS3.8/21, Error ellipse: s-maj=3.7km s-min=3.4km az=160.9*

*NEIC **05** 00:41:15.0±0.2, 15°.46N×86°.37W, h35km, mb4.7/91, Error ellipse: s-maj=4.4km s-min=2.7km az=48.0*

NEIC Felt at Danli, El Porvenir, Germania, La Ceiba, Puerto Cortes, Rio Esteban, Sambo Creek and Tegucigalpa.

*CASC **05** 00:41:17.3±2.5, 15°.29N×86°.77W, h0km±17km, ML4.3, mb4.7(NEIC)*

ISC 05 00:41:11.2±1.8**, 15°.54N**±0°.03×**86°.44W**±0°.05**, h10**km±11km**, n524, σ1s.16**/534**, mb4.7**/111**, MS3.7**/21**, 137C-140D, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**1.68**	**209**	*e*P	**Pn**	**00 41 40.6**	**-0.1**
TGUH				*e*S	**Sn**	**00 42 01.2**	**-1.1**
TGUH	**Tegucigalpa,Un**	**1.68**	**209**	*e*Pn	**Pn**	**00 41 40.5**	**-0.1**
TGUH				*e*Sn	**Sn**	**00 42 03.0**	**+0.7**
CNGN	**Cerro Negro**	**3.03**	**185**	*e*P	**Pb**	**00 42 05.1**	**-0.2**
CNGN				*e*S	**Sb**	**00 42 39.3**	**-3.1**
SNET	**Serv Nac Est T**	**3.27**	**236**	*e*P	**Pn**	**00 42 04.1**	**+1.4**
SNET				*e*S	**Sn**	**00 42 41.6**	**-0.2**
SNET				AML	AML	00 43 00.7	
	comp=Z,2μm,0.7s						
MGAN	**Managua**	**3.38**	**177**	*e*P	Pn	00 42 07.8	+3.8
MGAN				*e*S	**Sn**	**00 42 47.5**	**+3.2**
TEIG	**Tepich**	**4.98**	**340**	*e*Pn	**Pn**	**00 42 26.1**	**-0.1**
TEIG				*e*Sn	**Sn**	**00 43 20.9**	**-3.0**
TEIG	**Tepich**	**4.98**	**340**	Pn	**Pn**	**00 42 25.9**	**-0.2**
	comp=Z,83nm,0.3s,baz=334,slow=2.7,SNR=228						
TEIG				Sn	**Sn**	**00 43 20.8**	**-3.0**
	comp=Z,51nm,0.3s,baz=61,slow=19,SNR=12						
TEIG				LR	LR	00 44 26.4	
	comp=Z,1μm,21.9s,baz=56,slow=39						
JTS	**JuntasAbangare**	**5.41**	**164**	*e*Pn	**Pn**	**00 42 32.0**	**-0.1**
JTS				*e*Sn	**Sb**	**00 43 51.2**	**+0.2**
MTDJ	**Mount Denham**	**8.93**	**71**	*e*Pn	**Pn**	**00 43 20.9**	**+0.4**
BCIP	**Isla Barro Col**	**9.04**	**134**	*e*Pn	**Pn**	**00 43 21.4**	**-0.5**
STH	**Stony Hill**	**9.56**	**73**	⇑*i*P	**Pn**	**00 43 29.5**	**+0.4**
HOJ	**Hope**	**9.60**	**74**	*i* P	**Pn**	**00 43 29.1**	**-0.5**
GWJ	**Greenwich**	**9.63**	**73**	*i* P	**Pn**	**00 43 30.4**	**+0.2**
GTBY	**Guantanamo Bay**	**11.64**	**66**	*e*Pn	**Pn**	**00 43 59.3**	**+1.8**
ROSC	**El Rosal**	**15.95**	**130**	*e*Pn	**Pn**	**00 44 57.4**	**+1.2**
ROSC	**El Rosal**	**15.95**	**130**	Pn	**Pn**	**00 44 55.0**	**-1.3**
	comp=Z,1.1nm,0.3s,baz=278,slow=14,SNR=2.5						
ROSC				LR	LR	00 51 04.0	
	comp=Z,214nm,20.0s,baz=17,slow=38						
KVTX	**Kingsville**	**16.00**	**320**	*e*Pn	**Pn**	**00 44 56.9**	**+0.4**
	comp=Z,35nm,0.5s						
TIGA	**Tifton**	**16.04**	**9**	⇑P	**Pn**	**00 44 54.2**	**-2.9**
	baz=16						
HKT	**Hockley**	**16.75**	**331**	*e*Pn	**P**	**00 45 08.8**	**+0.5**
	comp=Z,71nm,1.0s						
SDV	**Santo Domingo**	**16.80**	**111**	*e*Pn	**P**	**00 45 08.5**	**-0.7**
OTAV	**Otavalo**	**17.13**	**152**	*e*Pn	**Pn**	**00 45 10.7**	**-0.7**
	comp=Z,9.6nm,1.9s						
LRAL	**Lakeview Retre**	**17.43**	**358**	*e*Pn	**P**	**00 45 15.8**	**0.0**
	comp=Z,10nm,0.5s						
GOGA	**Godfrey**	**18.00**	**8**	*e*Pn	**Pn**	**00 45 21.7**	**+0.1**
	comp=Z,22nm,1.0s						
732A	**Laxson Ranch,**	**18.13**	**319**	⇓P	**Pn**	**00 45 22.0**	**-1.3**
	baz=18,SNR=12						
NHSC	**New Hope**	**18.39**	**17**	*e*P	**Pn**	**00 45 26.7**	**+0.2**
	comp=Z,55nm,1.0s						
632A	**Uvalde**	**18.56**	**321**	⇓P	**P**	**00 45 27.8**	**-0.6**
	baz=19,SNR=34						
631A	**Perdido Creek**	**18.98**	**319**	⇑P	**P**	**00 45 32.7**	**-0.4**
	baz=19,SNR=11						
532A	**Rocksprings**	**19.08**	**322**	⇓P	**P**	**00 45 34.1**	**0.0**
	baz=19,SNR=34						
OXF	**Oxford**	**19.08**	**352**	*e*P	**P**	**00 45 31.8**	**-2.2**
OBIP	**Obispado Ponce**	**19.15**	**80**	*e*Pn	**Pn**	**00 45 36.6**	**+0.8**
	comp=Z,96nm,1.6s						
CELP	**Cerrillos**	**19.18**	**80**	*e*P	**P**	**00 45 35.7**	**+0.4**
WHTX	**Lake Whitney**	**19.21**	**330**	⇓P	**Pn**	**00 45 37.7**	**+1.2**
	baz=19,SNR=46						
JCT	**Junction City**	**19.27**	**323**	*e*P	**Pn**	**00 45 37.8**	**+0.6**
	comp=Z,18nm,0.6s						
JCT	**Junction City**	**19.27**	**323**	⇑P	**Pn**	**00 45 37.8**	**+0.6**
	baz=19,SNR=9.1						
PLAL	**Pickwick Lake**	**19.42**	**356**	*e*Pn	**Pn**	**00 45 41.4**	**+2.5**
	comp=Z,13nm,0.7s						
531A	**Rocksprings**	**19.49**	**321**	⇓P	**Pn**	**00 45 40.0**	**+0.1**
	baz=20,SNR=22						
432A	**Menard**	**19.56**	**324**	⇑P	**Pn**	**00 45 40.9**	**+0.2**
	baz=20,SNR=26						
SWET	**Sewanee**	**19.60**	**1**	*e*P	**P**	**00 45 40.4**	**+0.6**
	comp=Z,19nm,0.8s						
RFTA	**Plano**	**19.73**	**334**	*e*Pn	**Pn**	**00 45 44.5**	**+1.9**
CBYP	**Canovanas**	**19.88**	**79**	*e*Pn	**Pn**	**00 45 44.7**	**+0.2**
	comp=Z,226nm,2.6s						
UALR	**University of**	**19.88**	**346**	*e*Pn	**Pn**	**00 45 45.5**	**+1.1**

comp=Z,25nm,0.7s
431A **Sonora** 19.90 322 ⇓P Pn 00 45 44.7 0.0
baz=20,SNR=26
CPCT **Cooper Cave** 19.91 5 *e*Pn Pn 00 45 46.2 +1.5
332A **Millersview** 19.91 325 ⇑P Pn 00 45 44.9 0.0
baz=20,SNR=37
530A **J-C Ranch, Com** 19.97 319 ⇓P Pn 00 45 45.4 -0.1
baz=20,SNR=38
KMSC **Kings Mountain** 20.05 12 ⇑P Pn 00 45 46.4 -0.1
baz=20
TKL **Tuckaleechee C** 20.18 6 P Pn 00 45 47.7 -0.2
TKL S S 00 49 20.7 -12
TKL **Tuckaleechee C** 20.18 6 P Pn 00 45 47.7 -0.2
comp=Z,16nm,1.1s,baz=185,slow=19,SNR=9.1
TKL S S 00 49 20.7 -12
comp=Z,7.3nm,0.7s,baz=99,slow=19,SNR=4.3
TKL LR LR 00 53 26.4
comp=Z,91nm,20.0s,baz=268,slow=36
331A **San Angelo** 20.25 323 ⇓P Pn 00 45 48.8 -0.1
baz=20,SNR=27
232A **Coleman** 20.25 326 ⇓P Pn 00 45 48.8 0.0
baz=20,SNR=47
HBAR **Harrisburg** 20.29 350 *e*Pn Pn 00 45 49.9 +0.7
430A **Baggett Ranch,** 20.35 321 ⇑P Pn 00 45 50.0 -0.1
baz=20,SNR=19
529A **Stev Forest Ra** 20.52 318 ⇑P P 00 45 51.2 +1.4
baz=21,SNR=21
WVT **Waverly** 20.55 357 *e*P P 00 45 51.1 +1.0
comp=Z,9.4nm,0.6s
628A **Black Gap, Mar** 20.55 315 ⇓P Pn 00 45 51.8 -0.6
baz=21,SNR=39
429A **Davenport Ranc** 20.64 319 ⇓P P 00 45 52.6 +1.4
baz=21,SNR=26
231A **Bronte** 20.65 325 ⇑P P 00 45 52.5 +1.3
baz=21,SNR=19
STVI **Saint Thomas** 20.74 79 *e*P P 00 45 53.2 +1.0
comp=Z,59nm,1.4s
330A **Mertzon** 20.75 322 ⇑P P 00 45 53.5 +1.1
baz=21,SNR=17
ABTX **Abilene, Hawle** 20.82 327 ⇓P P 00 45 54.5 +1.5
baz=21,SNR=36
UTMT **University of** 20.83 354 *e*P Pn 00 45 55.3 -0.3
comp=Z,74nm,0.8s
627A **Terlingua Ranc** 20.87 314 ⇓P P 00 45 55.3 +1.5
baz=21,SNR=63
528A **Cox Ranch, San** 20.91 317 ⇑P P 00 45 55.6 +1.4
baz=21,SNR=22
TXAR **Lajitas Array** 20.99 314 P Pn 00 45 57.3 -0.3
TXAR S S 00 49 46.5 -2.5
TXAR **Lajitas Array** 20.99 314 P Pn 00 45 57.3 -0.3
comp=Z,10nm,0.6s,baz=132,slow=9.9,SNR=150
TXAR S S 00 49 46.5 -2.5
comp=Z,1.6nm,0.8s,baz=112,slow=19,SNR=3.9
TXAR LR LR 00 55 34.3
comp=Z,148nm,18.4s,baz=180,slow=41
230A **Sterling City** 21.07 323 ⇑P P 00 45 57.0 +1.2
baz=21,SNR=15
TZTN **Tazewell** 21.08 6 *e*P P 00 45 58.0 +2.2
comp=Z,27nm,1.0s
428A **Kincaid Ranch,** 21.21 318 ⇓P P 00 45 59.3 +1.9
baz=21,SNR=9.0
PARMO **Parma** 21.25 353 *e*P P 00 45 58.6 +1.0
131A **Roby** 21.25 326 ⇓P P 00 45 58.8 +1.1
baz=21,SNR=6.8
Z32A **Haskell** 21.27 329 ⇓P P 00 45 59.2 +1.3
baz=21,SNR=22
329A **Wagon Wheel Ra** 21.29 321 ⇑P P 00 45 59.6 +1.3
baz=21,SNR=7.5
626A **Big Bend Ranch** 21.45 314 ⇓P P 00 46 01.7 +1.8
baz=22,SNR=62
527A **Woodward Ranch** 21.45 316 ⇑P P 00 46 01.4 +1.4
baz=22,SNR=21
130A **Snyder** 21.51 325 ⇑P P 00 46 01.7 +1.2
baz=22,SNR=12
229A **Bryant Ranch,** 21.53 322 ⇑P P 00 46 01.7 +0.9
baz=22,SNR=6.4
Z31A **Sharp Cattle R** 21.62 327 ⇓P P 00 46 02.9 +1.2
baz=22,SNR=31
526A **Mary Lane Ranc** 21.72 315 ⇓P P 00 46 04.4 +1.5
baz=22,SNR=40
328A **Wristen Ranch,** 21.73 319 ⇓P P 00 46 03.8 +0.8
baz=22,SNR=28
427A **Hayter Ranch,** 21.76 317 ⇓P P 00 46 04.3 +1.0
baz=22,SNR=7.0
Y32A **R-V Farms, Ver** 21.81 330 ⇓P P 00 46 05.1 +1.4
baz=22
TUL1 **Tulsa** 21.95 339 ⇑P P 00 46 06.0 +0.9
baz=22,SNR=7.7
129A **Stewart Farms,** 22.04 323 ⇓P P 00 46 06.9 +0.6
baz=22
426A **McDonald Obser** 22.06 316 ⇑P P 00 46 07.8 +1.2
baz=22,SNR=26
228A **UT Block 9, Go** 22.11 321 ⇑P P 00 46 07.0 +0.1
baz=22
WMOK **Wichita Mounta** 22.11 332 *e*P P 00 46 07.5 +0.6
comp=Z,18nm,0.8s
Z30A **Sanderson Ranc** 22.12 326 ⇓P P 00 46 07.3 +0.3
baz=22,SNR=22
327A **Balmorhea Ranc** 22.16 318 ⇑P P 00 46 08.4 +0.9
baz=22
Y31A **Rekieta Farm,** 22.19 328 ⇑P P 00 46 09.0 +1.2
baz=22,SNR=14
SIUC **Southern Illin** 22.23 354 *e*P P 00 46 09.1 +1.0
comp=Z,32nm,1.0s
BLA **Blacksburg** 22.24 13 *e*P P 00 46 09.9 +1.6
comp=Z,13nm,0.8s
USIN **University of** 22.37 357 *e*P P 00 46 11.0 +1.4
comp=Z,35nm,1.0s
128A **Castleberry Fa** 22.40 322 ⇑P P 00 46 10.4 +0.3
baz=22,SNR=20
Z29A **Hungry Hill Ra** 22.42 325 ⇓P P 00 46 11.9 +1.6
baz=23,SNR=5.2
326A **Caldwell Ranch** 22.44 317 ⇑P P 00 46 11.5 +0.9
baz=23,SNR=22
Y30A **Stafford Cattl** 22.45 327 ⇓P P 00 46 11.9 +1.3
baz=23,SNR=12
227A **Bennet, Jal** 22.46 320 ⇑P P 00 46 11.3 +0.5
baz=23,SNR=5.1
X31A **McDonald Ranch** 22.58 330 ⇑P P 00 46 12.7 +0.7
baz=23,SNR=12
WCI **Wyandotte Cave** 22.61 0 *e*P P 00 46 12.8 +0.6
comp=Z,42nm,0.8s
425A **Indio Mountain** 22.78 315 ⇑P P 00 46 14.4 +0.2
baz=23,SNR=17
Z28A **Tucker Farm, M** 22.82 324 ⇓P P 00 46 14.9 +0.3
baz=23,SNR=11
Y29A **Porterfield Fa** 22.85 326 ⇑P P 00 46 15.2 +0.4
baz=23,SNR=6.3
X30A **Coker Ranch, T** 22.88 328 ⇓P P 00 46 16.0 +0.8
baz=23,SNR=16
127A **Arkansas Junct** 22.96 321 ⇑P P 00 46 15.6 -0.5
baz=23
W31A **Holland Ranch,** 23.01 331 ⇓P P 00 46 16.6 0.0
baz=23
226B **Tecolote Peak,** 23.06 319 ⇑P P 00 46 17.8 +0.8
baz=23,SNR=20
325A **Bean Ranch, Si** 23.13 316 ⇑P P 00 46 18.2 +0.3
baz=23,SNR=13
OLIL **Olney** 23.16 357 *e*P P 00 46 20.1 +2.2
comp=Z,248nm,2.0s
Y28A **McKinney Farm,** 23.20 325 ⇓P P 00 46 18.6 0.0
baz=23
SLM **Saint Louis** 23.25 352 *e*P P 00 46 20.1 +1.2
comp=Z,40nm,1.1s
X29A **Tulia** 23.31 327 ⇑P P 00 46 19.5 -0.1
baz=24
W30A **Crocket Farms** 23.31 330 ⇓P P 00 46 19.8 +0.2
baz=24
Z27A **Tatum** 23.32 322 ⇓P P 00 46 19.6 -0.2
baz=24,SNR=12
JSRW **J. Sargeant Re** 23.34 17 *e*P P 00 46 20.7 +1.0
126A **Clayton Basin,** 23.34 320 ⇑P P 00 46 19.8 -0.2
baz=24
V31A **Spring Creek L** 23.45 332 ⇓P P 00 46 21.1 +0.1
baz=24
324A **Moseley Ranch,** 23.52 316 ⇓P P 00 46 21.6 -0.2
baz=24,SNR=25
MSTX **Muleshoe** 23.54 324 ⇓P P 00 46 22.0 0.0
baz=24,SNR=14
BLO **Bloomington** 23.55 360 *e*P P 00 46 23.1 +1.3
comp=Z,56nm,0.7s
MNTX **Cornudas Mount** 23.61 316 *e*P P 00 46 22.6 +0.1
comp=Z,12nm,1.0s
X28A **Dimmitt** 23.63 326 ⇑P P 00 46 22.7 -0.1
baz=24
Y27A **Causey** 23.70 323 ⇓P P 00 46 23.0 -0.5
baz=24,SNR=18
Z26A **Caprock** 23.75 321 ⇑P P 00 46 23.7 -0.3
baz=24
125A **Gardner Draw,** 23.75 319 ⇑P P 00 46 25.0 +0.9
baz=24,SNR=15
W29A **Amraillo** 23.80 328 ⇑P P 00 46 23.9 -0.6
baz=24
V30A **Spur Ranch, Mi** 23.84 330 ⇓P P 00 46 24.7 0.0
baz=24
224A **Cornudas Mount** 23.93 317 ⇑P P 00 46 26.5 +0.6
baz=24,SNR=16
U31A **Nine Bar Ranch** 23.95 333 ⇓P P 00 46 25.4 -0.4
baz=24
Y26A **Elida** 24.11 323 ⇑P P 00 46 26.8 -0.7
baz=24
W28A **Vega** 24.20 327 ⇓P P 00 46 28.6 +0.4
baz=24
Z25A **Roswell** 24.20 320 ⇓P P 00 46 29.0 +0.7
baz=24,SNR=15
X27A **F and S Farms,** 24.22 325 ⇑P P 00 46 29.2 +0.7
baz=24
124A **Stringfield Ra** 24.29 318 ⇑P P 00 46 30.6 +1.4
baz=24,SNR=28
V29A **Stinnett** 24.33 329 ⇑P P 00 46 30.0 +0.6
baz=24
U30A **WK&E Inc. Balk** 24.44 331 ⇓P P 00 46 31.4 +1.0
baz=25,SNR=5.1
T31A **Randall Ranch,** 24.48 334 ⇓P P 00 46 31.2 +0.5
baz=25
223A **Chaparral, Ant** 24.50 316 ⇑P P 00 46 31.0 -0.1
baz=25
W27A **Bowe Ranch, En** 24.51 326 ⇑P P 00 46 31.7 +0.6
baz=25,SNR=9.0
X26A **CR and CF Fran** 24.55 324 ⇓P P 00 46 32.2 +0.7
baz=25,SNR=18
V28A **Channing** 24.59 328 ⇑P P 00 46 32.3 +0.6
baz=25
Y25A **Mesa, Roswell** 24.63 321 ⇑P P 00 46 32.7 +0.5
baz=25
Z24A **Sheeppen Canyo** 24.64 319 ⇑P P 00 46 33.9 +1.5
baz=25,SNR=12
U29A **Oasis Ranch, S** 24.67 330 ⇑P P 00 46 33.5 +1.0
baz=25
SFIN **Scholer Farm** 24.76 359 ⇑P P 00 46 33.6 +0.5
baz=25,SNR=9.5
123A **Bell Site, Whi** 24.77 317 ⇓P P 00 46 34.4 +0.9
baz=25
ACSO **Alum Creek Sta** 24.79 6 *e*P P 00 46 34.4 +1.0
comp=Z,22nm,0.9s
T30A **Plains** 24.82 332 ⇓P P 00 46 33.8 +0.1
baz=25
V27A **Dan Oppiter Fa** 24.91 327 ⇑P P 00 46 34.9 +0.2
baz=25
W26A **Owens Ranch, T** 24.91 325 ⇓P P 00 46 35.6 +0.9
baz=25,SNR=9.9
X25A **Clemmons Ranch** 25.03 322 ⇑P P 00 46 36.8 +0.9
baz=25
HDIL **Hopedale** 25.05 355 *e*P P 00 46 36.2 +0.5
comp=Z,18nm,0.6s
U28A **Mallet** 25.08 329 ⇓P P 00 46 36.3 +0.1
baz=25
Y24A **Capitan** 25.08 320 ⇓P P 00 46 37.5 +1.1
baz=25,SNR=33
KSU1 **Kansas State U** 25.12 341 *e*P P 00 46 37.2 +0.9
comp=Z,18nm,0.8s
Z23A **Rita Site, Whi** 25.15 318 ⇑P P 00 46 38.3 +1.4
baz=25,SNR=6.5
SDMD **Soldier's Deli** 25.23 18 *e*P P 00 46 38.9 +1.5
comp=Z,20nm,0.6s
T29A **Hugoton** 25.25 331 ⇓P P 00 46 38.3 +0.6
baz=25
S30A **Montezuma** 25.28 333 ⇓P P 00 46 38.9 +1.0
baz=25
122A **Conniff Cattle** 25.30 316 ⇑P P 00 46 39.5 +1.2
baz=25
W25A **X Bar L Ranch,** 25.40 324 ⇑P P 00 46 40.5 +1.4
baz=26,SNR=13
U27A **Thompson Grove** 25.41 328 ⇑P P 00 46 39.8 +0.6
baz=26,SNR=18
R31A **Burdett** 25.44 335 ⇓P P 00 46 39.5 +0.2
baz=26
V26A **Tequesquite Ra** 25.45 326 ⇑P P 00 46 40.2 +0.7
baz=26,SNR=31
Y23A **Lovelace Mesa,** 25.47 320 ⇓P P 00 46 41.6 +1.7
baz=26,SNR=14
X24A **Lazy VL Ranch,** 25.51 321 ⇑P P 00 46 41.4 +1.1
baz=26
S29A **Ulysses** 25.55 332 ⇓P P 00 46 41.1 +0.7
baz=26
320A **Kipp Ranch, An** 25.58 312 ⇓P P 00 46 42.6 +1.8
baz=26,SNR=12
T28A **Walsh** 25.61 330 ⇑P P 00 46 41.5 +0.5
baz=26
Z22A **Elephant Butte** 25.62 317 ⇑P P 00 46 42.8 +1.6
baz=26,SNR=21
121A **Cookes Peak, D** 25.73 315 ⇓P P 00 46 43.8 +1.5
baz=26,SNR=21
R30A **Dighton** 25.74 334 ⇓P P 00 46 43.0 +0.9
baz=26
T27A **Campo** 25.86 329 ⇓P P 00 46 44.1 +0.8
baz=26
U26A **Atkley Ranch,** 25.87 327 ⇑P P 00 46 44.3 +0.8
baz=26,SNR=24
S28A **Manter** 25.88 331 ⇑P P 00 46 43.9 +0.4
baz=26,SNR=8.6
220A **Playas Peak, P** 25.89 313 ⇑P P 00 46 45.4 +1.8
baz=26,SNR=16
MVL **Millersville** 25.92 18 *e*P P 00 46 45.6 +2.0
comp=Z,102nm,2.5s
V25A **Rancho No Teng** 25.93 325 ⇑P P 00 46 45.6 +1.6
baz=26,SNR=16
W24A **Lazy 6 Ranch,** 25.94 323 ⇓P P 00 46 45.6 +1.4
baz=26,SNR=12
BNM **Barren Site** 25.97 319 *e*P P 00 46 46.5 +2.0
comp=Z,5.8nm,1.1s
Y22A **Socorro** 26.05 318 ⇑P P 00 46 46.6 +1.5
baz=26,SNR=7.7
SSPA **Standing Stone** 26.09 15 *e*P P 00 46 46.5 +1.3
comp=Z,9.5nm,1.0s
Z21A **St. Cloud Mine** 26.12 316 ⇑P P 00 46 47.2 +1.4
baz=26
319A **Douglas** 26.14 311 ⇓P P 00 46 47.4 +1.5
baz=26
LENM **Lemitar** 26.20 319 *e*P P 00 46 46.5 0.0
R29A **Marienthal** 26.22 333 ⇓P P 00 46 48.0 +1.5
baz=26
V24A **Rampart Ranch,** 26.23 324 ⇑P P 00 46 48.3 +1.5
baz=26,SNR=20
U25A **Circle Dot Ran** 26.23 326 ⇑P P 00 46 48.3 +1.6
baz=26,SNR=13
120A **U Bar Ranch, L** 26.32 314 ⇓P P 00 46 49.4 +1.8
baz=26,SNR=12
W23A **Werner Place,** 26.35 321 ⇓P P 00 46 49.5 +1.6
baz=26
T26A **Comanche Natio** 26.39 328 ⇑P P 00 46 48.9 +0.7
baz=26,SNR=6.0
ANMO **Albuquerque** 26.39 321 *e*P P 00 46 50.5 +2.2
comp=Z,5.0nm,1.1s
ANMO **Albuquerque** 26.39 321 P P 00 46 48.1 -0.1
comp=Z,2.2nm,0.7s,baz=152,slow=18,SNR=7.3
ANMO LR LR 00 59 54.7
comp=Z,99nm,18.2s,baz=310,slow=42
S27A **Las Animas** 26.43 330 ⇓P P 00 46 49.1 +0.6
baz=27,SNR=9.9
R28A **Tribune** 26.45 332 ⇓P P 00 46 49.2 +0.5
baz=27,SNR=17
LAZ **Ladron** 26.46 319 *e*P P 00 46 48.8 -0.1
Q29A **Oakley** 26.54 334 ⇑P P 00 46 50.3 +0.9
baz=27
Y21A **Point of Rocks** 26.55 318 ⇓P P 00 46 51.2 +1.5
baz=27,SNR=12
ALLY **Alegheny Colle** 26.58 11 *e*P P 00 46 51.0 +1.3
Z20A **Nine Sixteen R** 26.62 315 ⇓P P 00 46 51.8 +1.5
baz=27
S26A **Kim** 26.67 329 ⇑P P 00 46 51.7 +1.1
baz=27,SNR=7.0
U24A **Moreno Valley** 26.72 325 ⇑P P 00 46 52.8 +1.6
baz=27
LUPA **Lehigh Univers** 26.76 19 *e*P P 00 46 52.6 +1.3
comp=Z,5.7nm,0.9s
AAM **Ann Arbor** 26.78 5 *e*P P 00 46 52.4 +1.0
comp=Z,57nm,1.6s
T25A **Trinidad** 26.78 327 ⇓P P 00 46 53.2 +1.4
baz=27,SNR=19
P30A **Selden** 26.80 336 ⇑P P 00 46 52.1 +0.4
baz=27
R27A **Eads** 26.86 331 ⇑P P 00 46 52.7 +0.4
baz=27,SNR=6.3
X21A **Alamocita Cree** 26.90 318 ⇓P P 00 46 54.7 +1.9
baz=27,SNR=6.2
Y20A **Horse Springs,** 26.95 317 ⇑P P 00 46 54.9 +1.6
baz=27,SNR=6.4
Q28A **Sharon Springs** 27.05 333 ⇓P P 00 46 55.2 +1.2
baz=27
ERPA **Erie** 27.07 11 *e*P P 00 46 55.1 +1.1
comp=Z,20nm,1.0s
BRNJ **Basking Ridge** 27.10 20 *e*P P 00 46 54.9 +0.6
comp=Z,11µm,1.2s
P29A **Atwood** 27.12 335 ⇓P P 00 46 55.9 +1.2
baz=27
U23A **El Rito** 27.18 323 ⇓P P 00 46 56.8 +1.5
baz=27,SNR=13
R26A **Arlington** 27.19 330 ⇑P P 00 46 56.3 +1.0
baz=27,SNR=6.9
S25A **Robets Cordova** 27.19 328 ⇑P P 00 46 56.9 +1.5
baz=27,SNR=8.4
V22A **San Miguel Ran** 27.31 322 ⇑P P 00 46 57.4 +0.8
baz=28
KSCO **Kaye Shedlock'** 27.37 332 ⇑P P 00 46 57.9 +1.0
baz=28
X20A **Quemado** 27.42 318 ⇓P P 00 46 58.1 +0.6
baz=28
JFWS **Jewell Farm** 27.48 354 *e*P P 00 46 57.6 -0.1
comp=Z,12nm,0.6s
R25A **Fountain Ranch** 27.48 328 ⇓P P 00 46 59.1 +1.2
baz=28
S24A **Houchin Ranch,** 27.58 327 ⇑P P 00 47 00.9 +1.8
baz=28,SNR=7.8
T23A **Casias Ranch,** 27.59 325 ⇓P P 00 47 00.4 +1.3
baz=28
U22A **Llaves** 27.60 323 ⇓P P 00 47 00.1 +1.0
baz=28
V21A **Milan** 27.68 321 ⇑P P 00 47 01.7 +1.8
baz=28
Q26A **Hugo** 27.71 330 ⇑P P 00 47 01.3 +1.3
baz=28,SNR=7.8
TUC **Tucson** 27.72 311 *e*P P 00 47 01.6 +1.5
comp=Z,9.3nm,1.4s
W20A **Ramah** 27.78 319 ⇑P P 00 47 02.3 +1.5
baz=28
R24A **Sanders Place,** 27.97 327 ⇑P P 00 47 03.7 +1.3
baz=28,SNR=8.3
S23A **Nye Farm, Mont** 28.05 326 ⇑P P 00 47 04.5 +1.2
baz=28
T22A **Edith** 28.07 323 ⇓P P 00 47 04.7 +1.3
baz=28
U21A **Nageezi** 28.11 322 ⇓P P 00 47 05.5 +1.8
baz=28
R23A **Moffat** 28.31 327 ⇓P P 00 47 07.5 +2.0
baz=28,SNR=7.1
T21A **Navajo Lake** 28.41 323 ⇑P P 00 47 08.0 +1.6
baz=29
P25A **Willow Gulch B** 28.49 330 ⇓P P 00 47 08.1 +1.2
baz=29
S22A **4UR Ranch, Cre** 28.54 325 ⇓P P 00 47 09.1 +1.5
baz=29,SNR=12
Q24A **Divide** 28.54 328 ⇑P P 00 47 09.0 +1.3
baz=29
W18A **Petrified Fore** 28.57 317 ⇑P P 00 47 09.5 +1.7
baz=29
OGNE **Ogallala** 28.71 335 ⇓P P 00 47 09.5 +0.7
baz=29
R22A **Saguache, Gunn** 28.84 325 ⇑P P 00 47 10.5 +0.2
baz=29
S21A **Coal Bank Pass** 29.02 323 ⇓P P 00 47 13.2 +1.3
baz=29
P23A **Jefferson** 29.20 328 ⇓P P 00 47 14.6 +1.1
baz=29
BRYW **Bryant College** 29.26 23 *e*P P 00 47 14.8 +1.2
Q22A **Crested Butte,** 29.38 326 ⇑P P 00 47 16.7 +1.6
baz=30,SNR=6.0
ISCO **Idaho Springs** 29.41 329 *e*P P 00 47 17.1 +1.8
comp=Z,41nm,2.3s
ISCO **Idaho Springs** 29.41 329 ⇑P P 00 47 16.7 +1.4
baz=30,SNR=5.5
ECSD **EROS Data Cent** 29.41 345 *e*P P 00 47 14.3 -0.7
comp=Z,13nm,0.9s
S20A **Disappointment** 29.47 323 ⇑P P 00 47 17.5 +1.7
baz=30
SMCO **Snowmass** 29.65 327 *e*P P 00 47 18.7 +1.2
comp=Z,35nm,2.3s
R20A **Redvale** 29.72 324 ⇓P P 00 47 19.8 +1.7
baz=30
Q21A **Lamborn Mesa,** 29.72 325 ⇓P P 00 47 19.4 +1.4
baz=30
SADO **Sadowa** 29.79 10 P P 00 47 17.5 -0.7
SADO **Sadowa** 29.79 10 P P 00 47 17.5 -0.7
comp=Z,4.1nm,0.5s,baz=200,slow=7.9,SNR=8.8
SADO LR LR 00 59 11.6
comp=Z,82nm,18.4s,baz=357,slow=36
P22A **Eagle** 29.84 327 ⇑P P 00 47 20.7 +1.7
baz=30,SNR=11
O23A **Lake Granby, G** 29.88 329 ⇑P P 00 47 20.7 +1.3
baz=30
WUAZ **Wupatki** 29.89 316 ⇑P P 00 47 20.5 +1.0
baz=30
P21A **Newcastle** 30.15 326 ⇑P P 00 47 22.7 +0.9
baz=30
O22A **Kremmling** 30.15 328 ⇓P P 00 47 22.9 +1.0
baz=30
Q20A **Ridgley Place,** 30.21 325 ⇓P P 00 47 22.7 +0.4
baz=30
S18A **Hurst Farm, Bl** 30.34 321 ⇓P P 00 47 24.8 +1.3
baz=30
N23A **Red Feather La** 30.41 330 ⇑P P 00 47 25.2 +1.0
baz=31
PHWY **Pilot Hill** 30.50 331 *e*P P 00 47 25.8 +0.9
comp=Z,3.2nm,0.8s
N22A **Wattenberg Ran** 30.59 329 ⇓P P 00 47 27.0 +1.3
baz=31
P20A **De Beque** 30.64 325 ⇑P P 00 47 27.6 +1.6
baz=31
O21A **Pagoda** 30.67 327 ⇓P P 00 47 28.0 +1.6
baz=31
LONY **Lake Ozonia** 30.68 17 *e*P P 00 47 27.2 +1.1
comp=Z,24nm,0.9s
O20A **White River Ci** 31.02 326 ⇓P P 00 47 31.4 +2.0
baz=31
U15A **North Rim** 31.02 317 ⇓P P 00 47 31.0 +1.4
baz=31
P19A **Cripple Cowboy** 31.06 325 ⇑P P 00 47 31.7 +1.9
baz=31
N21A **Black Mountain** 31.09 328 ⇑P P 00 47 31.0 +0.9
baz=31
LBNH **Lisbon** 31.15 20 *e*P P 00 47 31.9 +1.5
comp=Z,4.6nm,0.6s
FRNY **Flat Rock** 31.16 18 *e*P P 00 47 31.9 +1.5
comp=Z,17nm,1.3s
L23A **Garrett** 31.25 332 ⇑P P 00 47 32.3 +0.9
baz=31,SNR=7.5
L22A **Ellis Ranch, M** 31.53 331 ⇓P P 00 47 35.1 +1.2
baz=32
N20A **Spence Gulch,** 31.53 327 ⇓P P 00 47 35.1 +1.1
baz=32,SNR=17
SRU **San Rafael** 31.59 323 ⇓P P 00 47 35.1 +0.7
baz=32
O19A **Miners Draw (B** 31.61 326 ⇑P P 00 47 35.5 +0.9
baz=32
M21A **Separation Pea** 31.65 329 ⇑P P 00 47 36.2 +1.2
baz=32
L21A **Rawlins** 31.92 330 ⇓P P 00 47 38.4 +1.1
baz=32,SNR=6.1
M20A **Sweetwater, Wa** 31.97 328 ⇓P P 00 47 38.3 +0.4
baz=32
MVU **Marysvale** 32.21 320 *e*P P 00 47 42.2 +2.2
comp=Z,16nm,1.4s
CCUT **Cedar City** 32.37 318 *e*P P 00 47 44.4 +3.0
comp=Z,7.6nm,1.3s
K21A **Alcova** 32.38 331 ⇓P P 00 47 42.4 +1.1
baz=32
L20A **Wamsutter** 32.43 329 ⇑P P 00 47 42.9 +1.0
baz=33
GMRC **Granite Mounta** 32.48 312 ⇓P P 00 47 43.0 +0.8
baz=33
PFO **Pinyon Flat Ob** 32.52 309 LR LR 01 03 21.9
comp=Z,242nm,18.6s,baz=138,slow=41
ARUT **Antelope Range** 32.56 318 *e*P P 00 47 44.9 +2.0
comp=Z,4.4nm,0.8s
MPU **Maple Canyon** 32.83 323 *e*P P 00 47 48.1 +2.8
comp=Z,12nm,1.0s
DAU **Daniels Canyon** 32.87 324 *e*P P 00 47 47.1 +1.3
K20A **Yellowstone Ra** 32.92 330 ⇓P P 00 47 46.6 +0.6
baz=33
I22A **9 Mile Ranch,** 33.01 333 ⇑P P 00 47 47.7 +0.9
baz=33
J21A **Lysite** 33.02 331 ⇓P P 00 47 48.1 +1.2
baz=33,SNR=7.5
L19A **Farson** 33.02 328 ⇓P P 00 47 47.9 +0.9

baz=33
JLU **Jordanelle** 33.11 324 *e*P P 00 47 49.2 +1.4
comp=Z,6.4nm,1.1s
L18A **Fontenelle, Gr** 33.24 327 ⇓P P 00 47 49.8 +0.9
baz=33,SNR=7.1
M17A **Scullys Gap (B** 33.26 326 ⇓P P 00 47 50.1 +1.0
baz=33
K19A **Absolon Red Bu** 33.29 329 ⇓P P 00 47 49.6 +0.3
baz=33
I21A **Big Trails, Te** 33.31 332 ⇑P P 00 47 49.8 +0.4
baz=34
J20A **Shoshoni** 33.32 331 ⇑P P 00 47 50.4 +0.9
baz=34
SAML **Samuel** 33.51 135 *e*P P 00 47 49.1 -2.1
comp=Z,9.4nm,0.8s
H22A **Clearmont** 33.52 334 ⇓P P 00 47 51.5 +0.3
baz=34
BW06 **Boulder Array** 33.60 328 *e*P P 00 47 52.5 +0.4
comp=Z,2.3nm,0.8s
PDAR **Pinedale Array** 33.60 329 P P 00 47 52.7 +0.6
PDAR PcP PcP 00 50 32.5 +0.1
PDAR **Pinedale Array** 33.60 329 P P 00 47 52.7 +0.6
comp=Z,2.4nm,0.6s,baz=136,slow=11,SNR=24
PDAR PcP PcP 00 50 32.5 +0.1
comp=Z,1.1nm,0.8s,baz=130,slow=3.6,SNR=3.3
PDAR LR LR 01 06 07.0
comp=Z,125nm,18.7s,baz=157,slow=44
DUG **Dugway** 33.63 322 *e*P P 00 47 54.0 +1.7
comp=Z,9.3nm,1.0s
DUG **Dugway** 33.63 322 ⇓P P 00 47 54.0 +1.7
baz=34,SNR=7.3
J19A **Crowheart** 33.72 330 ⇓P P 00 47 54.3 +1.3
baz=34
I20A **Worland** 33.80 331 ⇑P P 00 47 54.8 +1.2
baz=34,SNR=8.8
HWUT **Hardware Ranch** 33.84 325 *e*P P 00 47 55.9 +1.7
comp=Z,20nm,1.3s
F23A **Volborg** 34.05 336 ⇓P P 00 47 56.8 +1.0
baz=34
H20A **Greybull** 34.15 332 ⇓P P 00 47 57.5 +0.8
baz=34
R11A **Troy Canyon, C** 34.27 317 ⇑P P 00 47 59.1 +1.2
baz=34,SNR=6.2
HVU **Hansel Valley** 34.63 324 *e*P P 00 48 02.5 +1.6
comp=Z,14nm,1.1s
E23A **Ismay** 34.66 337 ⇓P P 00 48 00.9 -0.1
baz=35
SNOW **Snow King Moun** 34.71 328 *e*P P 00 48 03.1 +1.3
comp=Z,16nm,0.8s
LOHW **Long Hollow** 34.74 329 *e*P P 00 48 03.1 +1.1
comp=Z,79nm,2.3s
G20A **Bridger** 34.82 333 ⇓P P 00 48 02.9 +0.4
baz=35,SNR=5.3
D24A **Glendive** 34.82 338 ⇑P P 00 48 03.0 +0.6
baz=35
TPAW **Teton Pass** 34.83 328 *e*P P 00 48 04.3 +1.6
comp=Z,18nm,1.1s
E22A **Miles City** 34.85 336 ⇓P P 00 48 03.4 +0.7
baz=35
MOOW **Moose Ponds** 34.91 329 *e*P P 00 48 04.5 +1.1
comp=Z,7.3nm,0.8s
RRI2 **Red Ridge** 34.92 328 *e*P P 00 48 05.2 +1.7
comp=Z,23nm,1.0s
I17A **Pilgrim Ck.** 34.95 329 ⇑P P 00 48 04.5 +0.7
baz=35
H18A **Shoshone NF, C** 35.07 331 ⇓P P 00 48 05.6 +0.9
baz=35,SNR=5.4
IMW **Indian Meadow** 35.12 329 *e*P P 00 48 06.7 +1.4
comp=Z,7.4nm,0.6s
D23A **Lindsay** 35.19 338 ⇑P P 00 48 06.2 +0.7
baz=35
RLMT **Red Lodge** 35.22 332 *e*P P 00 48 06.8 +0.7
comp=Z,3.8nm,0.8s
F20A **Billings** 35.24 333 ⇑P P 00 48 06.2 +0.1
baz=35
E21A **Keefer Ranch,** 35.39 335 ⇓P P 00 48 08.4 +1.1
baz=36
ELK **Elko** 35.43 321 *e*P P 00 48 10.2 +2.2
comp=Z,158nm,1.0s
ULM **Lac du Bonnet** 35.46 350 *e*P P 00 48 06.9 -0.9
comp=Z,10.0nm,0.9s
ULM PcP PcP 00 50 37.6 +0.4
ULM **Lac du Bonnet** 35.46 350 P P 00 48 06.5 -1.3
comp=Z,8.2nm,0.8s,baz=164,slow=9.8,SNR=7.8
ULM PcP PcP 00 50 37.6 +0.4
comp=Z,1.8nm,0.3s,baz=83,slow=19,SNR=3.5
ULM LR LR 01 05 37.5
comp=Z,56nm,18.1s,baz=76,slow=41
G18A **Lazy EL Ranch,** 35.50 331 ⇑P P 00 48 09.1 +0.7
baz=36,SNR=10
D22A **Cohagen** 35.53 337 ⇓P P 00 48 08.8 +0.3
baz=36
F19A **Roth Farm, Mol** 35.63 333 ⇓P P 00 48 09.8 +0.3
baz=36
C23A **Lambert** 35.71 338 ⇑P P 00 48 10.4 +0.3
baz=36
E20A **Meyer Farm, Mu** 35.79 334 ⇓P P 00 48 11.9 +1.1
baz=36,SNR=8.4
H16A **Russell Place,** 35.85 329 ⇑P P 00 48 12.9 +1.4
baz=36
GCMT **Greycliff** 35.91 332 *e*P P 00 48 12.5 +0.6
comp=Z,3.5nm,0.8s
F18A **Big Timber** 36.02 332 ⇑P P 00 48 13.7 +0.9
baz=36,SNR=9.8
E19A **Rath Farm, Rou** 36.04 333 ⇓P P 00 48 14.0 +1.1
baz=36,SNR=5.0
NVAR **Mina Array Bea** 36.12 315 P P 00 48 16.4 +2.5
NVAR **Mina Array Bea** 36.12 315 P P 00 48 16.4 +2.5
comp=Z,6.8nm,1.0s,baz=124,slow=8.4,SNR=21
NVAR LR LR 01 06 32.3
comp=Z,314nm,18.1s,baz=27,slow=42
B23A **Brockton** 36.21 339 ⇑P P 00 48 15.2 +0.9
baz=36
D20A **Manuel Ranch,** 36.26 335 ⇑P P 00 48 15.6 +0.8
baz=36
LPAZ **La Paz** 36.42 149 *e*P P 00 48 16.2 -0.8
LPAZ **La Paz** 36.42 149 P P 00 48 16.2 -0.8
comp=Z,1.2nm,0.6s,baz=355,slow=11,SNR=4.5
LPAZ LR LR 01 05 02.2
comp=Z,152nm,20.8s,baz=7.5,slow=39
I14A **Mackay** 36.44 326 ⇓P P 00 48 17.8 +1.3
baz=37,SNR=5.9
F17A **Fitzpatrick Pl** 36.45 331 ⇓P P 00 48 17.6 +1.1
baz=37
BMN **Battle Mountai** 36.48 319 *e*P P 00 48 19.6 +2.8
comp=Z,34nm,1.3s
H15A **Lima** 36.49 328 ⇑P P 00 48 18.7 +1.8
baz=37,SNR=5.9
G16A **Moss Hill, Enn** 36.50 329 ⇓P P 00 48 18.3 +1.2
baz=37,SNR=7.3
E18A **Harlowton** 36.61 333 ⇓P P 00 48 18.4 +0.5
baz=37
D19A **Cripps Ranch,** 36.63 334 ⇑P P 00 48 18.9 +0.9
baz=37
BOZ **Bozeman (W)** 36.72 330 *e*P P 00 48 20.1 +1.3
comp=Z,4.9nm,0.9s
MCMT **McKenzie Canyo** 36.74 328 *e*P P 00 48 20.2 +1.1
comp=Z,6.0nm,0.8s
G15A **Dillon** 36.80 329 ⇓P P 00 48 21.2 +1.7
baz=37,SNR=12
F16A **Kennard Place,** 36.82 330 ⇓P P 00 48 20.9 +1.3
baz=37
E17A **Martinsdale** 36.96 332 ⇑P P 00 48 21.7 +0.8
baz=37,SNR=5.4
A22A **Carney Farms,** 36.98 339 ⇓P P 00 48 22.1 +1.3
baz=37
DLMT **Dillon** 36.99 329 *e*P P 00 48 23.2 +2.1
comp=Z,9.4nm,0.9s
C19A **Slack Wire Ran** 37.15 335 ⇑P P 00 48 23.6 +1.2
baz=37
LRM **Limekiln Ridge** 37.24 330 *e*P P 00 48 24.8 +1.4
F15A **Butte** 37.28 330 ⇑P P 00 48 25.0 +1.3
baz=37,SNR=20
D17A **Six Diamond Ra** 37.40 333 ⇑P P 00 48 25.4 +0.8
baz=38,SNR=7.7
MFID **Camas Ranch** 37.41 324 *e*P P 00 48 25.7 +1.0
comp=Z,9.6nm,0.9s
MFID **Camas Ranch** 37.41 324 ⇓P P 00 48 26.0 +1.3
baz=38,SNR=7.0
H12A **Diamond D Ranc** 37.60 326 ⇓P P 00 48 27.5 +1.1
baz=38,SNR=7.2
D16A **Dana Ranch, Ca** 37.70 332 ⇓P P 00 48 28.2 +1.1
baz=38,SNR=9.6
E15A **Deer Lodge** 37.77 330 ⇓P P 00 48 28.7 +1.0
baz=38
C17A **Wharram Farm,** 37.80 333 ⇑P P 00 48 28.7 +0.8
baz=38
B18A **Beardsley Farm** 37.97 335 ⇓P P 00 48 29.9 +0.6
baz=38
A19A **Klindworth Far** 37.98 336 ⇓P P 00 48 30.2 +0.8
baz=38
D15A **Lincoln** 38.16 331 ⇑P P 00 48 32.0 +1.0
baz=38
F13A **Darby** 38.16 328 ⇑P P 00 48 31.6 +0.6
baz=38,SNR=11
E14A **Clinton** 38.18 329 ⇑P P 00 48 32.0 +0.8
baz=38
BEKR **Beckworth** 38.23 316 *e*P P 00 48 33.5 +1.8
comp=Z,3.3nm,1.4s
G12A **Big Creek, Yel** 38.24 326 ⇑P P 00 48 33.0 +1.3
baz=38,SNR=11
C16A **Fuhringer Ranc** 38.36 332 ⇓P P 00 48 33.4 +0.7
baz=38
A18A **Metzger Ranch,** 38.41 335 ⇑P P 00 48 33.9 +0.9
baz=39
CHMT **Chamberlain Mo** 38.41 330 *e*P P 00 48 34.4 +1.1
WVOR **Wild Horse Val** 38.48 321 *e*P P 00 48 35.1 +1.3
comp=Z,22nm,1.2s
E13A **Victor** 38.54 329 ⇑P P 00 48 34.9 +0.8
baz=39,SNR=5.6
F12A **Elk City** 38.62 327 ⇓P P 00 48 35.8 +0.9
baz=39,SNR=13
D14A **Greenough** 38.66 330 ⇓P P 00 48 36.0 +0.9
baz=39
MSO **Missoula** 38.69 330 *e*P P 00 48 36.1 +0.7
comp=Z,3.4nm,0.9s
MSO **Missoula** 38.69 330 ⇑P P 00 48 36.3 +0.9
baz=39
C15A **Salmond Ranch,** 38.73 332 ⇑P P 00 48 36.6 +0.8
baz=39,SNR=8.5
OHCM **Honcut** 38.73 315 *e*P P 00 48 38.3 +2.5
B15A **Bradely Ranch,** 39.11 332 ⇓P P 00 48 39.8 +0.8
baz=39
D13A **Huson** 39.13 329 ⇓P P 00 48 39.7 +0.7
baz=39
BMO **Blue Mountains** 39.14 325 *e*P P 00 48 39.7 +0.4
comp=Z,6.6nm,1.0s
D12A **Red Ives Fores** 39.54 329 ⇓P P 00 48 43.0 +0.5
baz=40
A15A **Johnson Ranch,** 39.68 333 ⇑P P 00 48 44.7 +1.1
baz=40
A14A **Double T Ranch** 39.98 332 ⇑P P 00 48 46.8 +0.5
baz=40,SNR=6.2
B13A **Whitefish** 40.03 331 ⇑P P 00 48 47.1 +0.6
baz=40
SIV **San Ignacio** 40.11 140 P P 00 48 46.5 -1.0
SIV PcP PcP 00 50 51.5 -0.6
SIV **San Ignacio** 40.11 140 P P 00 48 46.5 -1.0
comp=Z,19nm,0.9s,baz=319,slow=9.1,SNR=53
SIV PcP PcP 00 50 51.5 -0.6
comp=Z,2.4nm,0.6s,baz=303,slow=4.8,SNR=5.5
C11A **Tepee Creek (N** 40.52 329 ⇑P P 00 48 51.4 +0.8
baz=41
LVC **Limon Verde** 41.62 155 *e*P P 00 49 01.0 +0.9
SCHQ **Schefferville** 42.06 17 *e*P P 00 49 03.1 0.0
SCHQ PcP PcP 00 50 56.9 -1.0
SCHQ **Schefferville** 42.06 17 P P 00 49 03.0 -0.1
comp=Z,8.0nm,0.9s,baz=210,slow=8.0,SNR=14
SCHQ PcP PcP 00 50 56.9 -1.0
comp=Z,4.4nm,0.7s,baz=210,slow=5.1,SNR=6.1
SCHQ LR LR 01 06 31.3
comp=Z,68nm,19.0s,baz=324,slow=36
LON **Longmire** 42.80 324 *e*P P 00 49 10.3 +1.0
comp=Z,5.7nm,0.8s
LCO **Las Campanas** 46.83 161 *e*P P 00 49 41.3 -0.5
BDFB **Brasilia** 48.99 127 LR LR 01 10 53.5
comp=Z,254nm,20.7s,baz=148,slow=36
CPUP **Villa Florida** 50.33 145 P P 00 50 06.2 -2.3
CPUP **Villa Florida** 50.33 145 P P 00 50 06.2 -2.3
comp=Z,0.4nm,0.4s,baz=331,slow=5.6,SNR=4.2
YKA **Yellowknife Ar** 50.93 344 P P 00 50 12.4 -0.1
YKA PcP PcP 00 51 28.4 -0.4
YKA **Yellowknife Ar** 50.93 344 P P 00 50 12.4 -0.1
comp=Z,9.0nm,0.7s,baz=139,slow=7.9,SNR=137
YKA PcP PcP 00 51 28.4 -0.4
comp=Z,1.9nm,0.8s,baz=144,slow=3.8,SNR=8.4
DLBC **Dease Lake** 53.59 333 *e*P P 00 50 34.0 +1.5
SFJD **Kangerlussuaq** 56.50 16 P P 00 50 51.8 -1.4
SFJD **Kangerlussuaq** 56.50 16 P P 00 50 51.8 -1.4
comp=Z,6.6nm,0.9s,baz=225,slow=9.9,SNR=4.0
PLCA **Paso Flores** 57.89 166 *e*P P 00 51 03.0 -0.6
comp=Z,49nm,1.8s
PLCA **Paso Flores** 57.89 166 P P 00 51 03.3 -0.2
comp=Z,6.6nm,0.8s,baz=340,slow=6.5,SNR=13
DOT **Dot Lake** 62.06 335 *e*P P 00 51 32.2 +0.3
comp=Z,6.3nm,0.8s
SUMG **Summit** 63.37 14 *e*P P 00 51 40.9 -0.1
comp=Z,9.0nm,0.8s
SUMG **Summit** 63.37 14 ⇓*i*P P 00 51 41.0 +0.1
comp=Z,9.9nm,0.9s
ILAR **Eielson Array** 63.62 335 P P 00 51 42.4 +0.1
ILAR **Eielson Array** 63.62 335 P P 00 51 42.4 +0.1
comp=Z,3.5nm,0.8s,baz=118,slow=5.2,SNR=43
ILAR LR LR 01 19 28.0
comp=Z,82nm,21.1s,baz=104,slow=36
TRF **Thorofare Moun** 64.61 333 *e*P P 00 51 48.4 -0.6
comp=Z,8.5nm,0.8s
BORG **Borgarnes** 65.51 25 LR LR 01 21 53.8
comp=Z,40nm,18.2s,baz=211,slow=37
COLD **Coldfoot** 65.73 337 *e*P P 00 51 57.1 +1.2
comp=Z,10nm,1.5s
SCO **Scoresbysund** 67.03 19 *i*P P 00 52 04.0 -0.2
comp=Z,1.8nm,0.9s
DAG **Danmarks Havn** 69.94 13 *i*P P 00 52 21.8 -0.5
comp=Z,4.2nm,0.9s
MORF **Marmelete** 71.14 55 *e*P P 00 52 31.6 +1.1
comp=Z,24nm,2.4s
PVIS **Viseu** 71.43 52 *e*P P 00 52 32.3 +0.2
comp=Z,19nm,1.5s
EVOP **Sao Brissos** 71.44 54 *e*P P 00 52 32.4 +0.2
comp=Z,11nm,0.8s
PVRL **Vila Real** 71.52 51 *e*P P 00 52 31.2 -1.5
EVO **Evora** 71.53 54 *e*P P 00 52 32.4 -0.3
comp=Z,11nm,0.8s
EVO *e*R
comp=Z,64nm,21.8s
PBEJ **Beja** 71.69 55 *e*P P 00 52 34.9 +1.2
comp=Z,16nm,2.2s
PBDV **Barranco-do-Ve** 71.72 55 *e*P P 00 52 32.1 -1.8
comp=Z,34nm,2.1s
MTE **Manteigas** 71.72 52 *e*P P 00 52 34.0 +0.1
comp=Z,25nm,2.2s
PCBR **Celo Branco** 71.82 53 *e*P P 00 52 34.5 +0.1
PESTR **Estremoz** 71.83 54 *e*P P 00 52 34.5 0.0
comp=Z,17nm,1.8s
PVAQ **Vaqueiros** 71.87 55 *e*P P 00 52 36.5 +1.7
comp=Z,23nm,1.7s
PMRV **Marv??o** 71.93 53 *e*P P 00 52 34.9 -0.2
comp=Z,14nm,2.0s
MVO **Moncorvo** 72.04 51 *e*P P 00 52 35.5 -0.4
comp=Z,9.7nm,1.6s
PBAR **Barrancos** 72.33 54 *e*P P 00 52 38.2 +0.7
comp=Z,3.3nm,1.7s
QUIF **Quistinic** 74.16 44 *e*P P 00 52 47.9 -0.2
comp=Z,16nm,0.8s
QUIF **Quistinic** 74.16 44 *e*P P 00 52 47.9 -0.2
comp=Z,16nm,0.8s
ESDC **Sonseca Array** 74.53 53 P P 00 52 51.2 +0.7
ESDC **Sonseca Array** 74.53 53 P P 00 52 51.2 +0.7
comp=Z,2.9nm,0.7s,baz=288,slow=5.5,SNR=25
ESLA **Sonseca Array** 74.53 53 *e*P P 00 52 51.1 +0.5
comp=Z,0.9nm,0.8s
GRR **Gorron** 75.64 43 *e*P P 00 52 56.3 -0.4
comp=Z,24nm,1.1s
GRR **Gorron** 75.64 43 *e*P P 00 52 56.3 -0.4
comp=Z,24nm,1.1s
FLN **La Foliniere** 75.84 43 *e*P P 00 52 57.4 -0.5
comp=Z,23nm,1.0s
FLN *e*R
comp=Z,47nm,19.0s
FLN **La Foliniere** 75.84 43 *e*P P 00 52 57.4 -0.5
comp=Z,23nm,1.0s
LDF **La Druitiere** 76.10 43 *e*P P 00 52 59.6 +0.3
LDF **La Druitiere** 76.10 43 *e*P P 00 52 59.6 +0.3
SJPF **Ste Jean** 76.10 49 *e*P P 00 53 00.0 +0.5
comp=Z,40nm,1.4s
SJPF **Ste Jean** 76.10 49 *e*P P 00 53 00.0 +0.5
comp=Z,40nm,1.4s
MFF **Saint Martin d** 76.36 45 *e*P P 00 53 00.5 -0.4
comp=Z,6.6nm,0.9s
MFF **Saint Martin d** 76.36 45 *e*P P 00 53 00.5 -0.4
comp=Z,6.6nm,0.9s
ETSF **Etsaut** 76.62 49 *e*P P 00 53 02.9 +0.4
comp=Z,7.2nm,0.9s
ETSF **Etsaut** 76.62 49 *e*P P 00 53 02.9 +0.4
comp=Z,7.2nm,0.9s
LFF **La Frestale** 77.23 47 *e*P P 00 53 05.6 -0.2
LFF **La Frestale** 77.23 47 *e*P P 00 53 05.6 -0.2
EPF **Esparros** 77.25 49 *e*P P 00 53 06.1 +0.1
comp=Z,8.1nm,1.0s
EPF **Esparros** 77.25 49 *e*P P 00 53 06.1 +0.1
comp=Z,8.1nm,1.0s
BGF **Bois d'Agland** 78.41 45 *e*P P 00 53 11.5 -0.8
comp=Z,12nm,0.9s
BGF **Bois d'Agland** 78.41 45 *e*P P 00 53 11.5 -0.8
comp=Z,12nm,0.9s
MTLF **Montolieu** 78.55 48 *e*P P 00 53 12.8 -0.4
MTLF **Montolieu** 78.55 48 *e*P P 00 53 12.8 -0.4
AVF **Avril sur Loir** 78.71 44 *e*P P 00 53 12.6 -1.4
AVF **Avril sur Loir** 78.71 44 *e*P P 00 53 12.6 -1.4
SSF **Saint Saulge** 78.76 44 *e*P P 00 53 14.7 +0.4
SSF **Saint Saulge** 78.76 44 *e*P P 00 53 14.7 +0.4
SMF **Signal de Mont** 79.06 45 *e*P P 00 53 16.2 +0.2
SMF **Signal de Mont** 79.06 45 *e*P P 00 53 16.2 +0.2
SFTF **Sexfontaines** 79.56 43 *e*P P 00 53 17.7 -0.9
comp=Z,11nm,0.7s
SFTF **Sexfontaines** 79.56 43 *e*P P 00 53 17.7 -0.9
comp=Z,11nm,0.7s
LASF **Ste Croix** 79.58 47 *e*P P 00 53 18.8 0.0
comp=Z,13nm,1.0s
LASF **Ste Croix** 79.58 47 *e*P P 00 53 18.8 0.0
comp=Z,13nm,1.0s
PAGF **Fort de Pagny** 79.93 42 *e*P P 00 53 20.0 -0.6
PAGF **Fort de Pagny** 79.93 42 *e*P P 00 53 20.0 -0.6
VIVF **Saint-Julien-l** 79.99 46 *e*P P 00 53 21.1 0.0
comp=Z,26nm,1.2s
VIVF **Saint-Julien-l** 79.99 46 *e*P P 00 53 21.1 0.0
comp=Z,26nm,1.2s
DBIC **Dimbokro** 80.16 86 P P 00 53 22.2 -0.3
DBIC **Dimbokro** 80.16 86 P P 00 53 22.2 -0.3
comp=Z,3.9nm,0.8s,baz=299,slow=19,SNR=2.4
NB2 **NORSAR Subarra** 80.21 29 P P 00 53 20.0 -1.9
comp=Z,8.7nm,1.0s,baz=283,slow=5.6
NB2 **NORSAR Subarra** 80.21 29 P P 00 53 22.0 +0.1
comp=Z,9.0nm,1.1s,baz=283,slow=5.6
NOA **NORSAR Array B** 80.21 29 P P 00 53 22.1 +0.2
NOA **NORSAR Array B** 80.21 29 P P 00 53 22.1 +0.2
comp=Z,3.2nm,0.9s,baz=285,slow=5.3,SNR=7.2
NOA LR LR 01 25 09.2
comp=Z,20nm,19.9s,baz=0.0,slow=33
CABF **La Chapelle** 80.59 44 *e*P P 00 53 24.5 +0.2
CABF **La Chapelle** 80.59 44 *e*P P 00 53 24.5 +0.2
CDF **Champ du Feu** 80.97 42 *e*P P 00 53 25.4 -0.9
CDF **Champ du Feu** 80.97 42 *e*P P 00 53 25.4 -0.9
LPL **La Plagne** 81.27 45 *e*P P 00 53 27.9 -0.3
LPL **La Plagne** 81.27 45 *e*P P 00 53 27.9 -0.3
LPG **La Plagne** 81.29 45 *e*P P 00 53 28.2 -0.1
LPG **La Plagne** 81.29 45 *e*P P 00 53 28.2 -0.1
ARCES **ARCESS Array B** 82.96 19 P P 00 53 36.6 +0.3
ARCES **ARCESS Array B** 82.96 19 P P 00 53 36.6 +0.3
comp=Z,3.4nm,0.7s,baz=302,slow=5.2,SNR=8.5
ARCES LR LR 01 36 05.1
comp=Z,26nm,19.1s,baz=194,slow=40
CLL **Collm** 83.80 39 *i*P P 00 53 40.8 -0.1
TORD **Torodi Ar. Bea** 84.79 78 P P 00 53 45.6 -1.1
TORD **Torodi Ar. Bea** 84.79 78 P P 00 53 45.6 -1.1
comp=Z,1.4nm,0.8s,baz=291,slow=4.2,SNR=17
TORD LR LR 01 28 14.1
comp=Z,59nm,19.8s,baz=155,slow=33
GERES **GERESS Array B** 84.97 41 P P 00 53 46.6 -0.4
GERES **GERESS Array B** 84.97 41 P P 00 53 46.6 -0.4
comp=Z,1.4nm,1.0s,baz=276,slow=2.4,SNR=11
GERES LR LR 01 28 32.3
comp=Z,32nm,19.0s,baz=290,slow=34
KEST **Kesra** 85.66 54 *e*P P 00 53 51.1 +0.3
KEST **Kesra** 85.66 54 P P 00 53 51.3 +0.5
comp=Z,1.6nm,0.9s,baz=256,slow=4.8,SNR=5.5
CONA **Conrad Observa** 86.62 41 ⇓*i*PcP P 00 53 55.3 0.0
comp=Z,11nm,1.7s
FINES **FINESS Array B** 86.78 26 P P 00 53 55.8 +0.2
FINES **FINESS Array B** 86.78 26 P P 00 53 55.8 +0.2
comp=Z,5.6nm,0.9s,baz=335,slow=6.3,SNR=5.3
FINES LR LR 01 32 48.6
comp=Z,28nm,19.5s,baz=209,slow=36
CN2 **Changchun** 114.14 335 *e*PKP PKPdf 00 59 48.0 -3.2
SONM **Songino Array** 115.88 350 PKP **PKPdf** 00 59 54.2 -0.4
SONM **Songino Array** 115.88 350 PKP **PKPdf** 00 59 54.2 -0.4
comp=Z,0.5nm,0.5s,baz=70,slow=1.7,SNR=3.3
MKAR **Makanchi Array** 117.14 9 PKP **PKPdf** 00 59 55.5 -1.4
MKAR **Makanchi Array** 117.14 9 PKP **PKPdf** 00 59 55.5 -1.4
comp=Z,0.2nm,0.5s,baz=23,slow=1.9,SNR=3.1
KSRS **Korea Array-I** 118.17 329 PKP **PKPdf** 00 59 59.0 -0.1
comp=Z,0.6nm,0.3s,baz=41,slow=2.1,SNR=3.9
KSAR **Wonju Array Be** 118.20 329 PKP **PKPdf** 00 59 59.0 -0.2
BJI **Beijing** 120.83 340 PKP **PKPdf** 01 00 04.9 +0.7
BJI SS SS 01 18 03.9 +2.1
BJI LR LR
comp=N,84nm,34.9s
BJI LR LR
comp=E,85nm,34.7s
HHC **Hu-ho-hao-te** 121.47 344 *e*PKP **PKPdf** 01 00 08.3 +2.7
HHC PP PP 01 01 43.1 +7.4
HHC PKS **PKSdf** 01 03 43.7 +1.4
HHC SKS **SKSdf** 01 07 19.1 +1.0
HHC SKKS **SKKSac** 01 08 35.1 -1.9
HHC SS **SS** 01 18 14.9 +4.9
HHC AMB AMB
comp=Z,60nm,5.2s
HHC LR LR
comp=N,740nm,20.2s
HHC LR LR
comp=E,750nm,21.5s
HHC LR LR
comp=Z,110nm,21.4s
LZH **Lanzhou** 127.75 349 *e*PKP **PKPdf** 01 00 19.5 +1.7
LZH LR LR
comp=N,130nm,18.2s
LZH LR LR
comp=E,100nm,15.9s
LZH LR LR
comp=Z,160nm,20.0s
CD2 **Chengdu** 132.79 348 *e*PKP **PKPdf** 01 00 27.2 -0.2
STKA **Stephens Creek** 133.49 241 PKP **PKPdf** 01 00 26.4 -2.2
STKA **Stephens Creek** 133.49 241 PKP **PKPdf** 01 00 26.4 -2.2
comp=Z,3.1nm,0.8s,baz=135,slow=1.4,SNR=5.4
GYA **Guiyang** 136.36 343 *e*Pdif **Pdif** 00 57 37.0 -2.2
GYA PKP **PKPdf** 01 00 33.4 -0.9
GYA PP **PP** 01 03 17.9 +4.6
GYA AMB AMB
comp=Z,90nm,7.6s
WRA **Warramunga Arr** 140.98 257 PKPpre PKPpre 01 00 36.0
WRA PKP **PKPdf** 01 00 42.7 0.0
WRA **Warramunga Arr** 140.98 257 PKhKP PKPpre 01 00 36.0
comp=Z,1.6nm,0.9s,baz=87,slow=2.8,SNR=7.0
WRA PKP **PKPdf** 01 00 42.7 0.0
comp=Z,3.7nm,0.8s,baz=84,slow=2.2,SNR=18
ASAR **Alice Springs** 141.25 251 PKPpre PKPpre 01 00 36.2
ASAR PKP **PKPdf** 01 00 43.8 +0.6
ASAR **Alice Springs** 141.25 251 PKhKP PKPpre 01 00 36.2
comp=Z,1.8nm,0.9s,baz=98,slow=3.9,SNR=7.5
ASAR PKP **PKPdf** 01 00 43.8 +0.6
comp=Z,3.9nm,0.8s,baz=94,slow=1.6,SNR=24
CHTO **Chiang Mai** 145.46 351 *e*PKPdf **PKPbc** 01 00 49.5 -1.0
CM31 **Chiang Mai Arr** 145.81 351 *e*PKPdf **PKPbc** 01 00 51.5 -0.1
CMAR **Chiang Mai Arr** 145.81 351 PKPbc **PKPbc** 01 00 51.6 0.0
CMAR **Chiang Mai Arr** 145.81 351 PKPbc **PKPbc** 01 00 51.6 0.0
comp=Z,16nm,0.8s,baz=334,slow=3.5,SNR=56

IDC 05 00:52:11.7±0.9, 15°54N×86°39W, h0km, mb3.7/9, mb1 4.1/10, mb1mx3.9/25, mbtmp3.8/10, ML4.6/1, MS3.7/2, Ms1 3.7/2, ms1mx2.9/35, Error ellipse: s-maj=40.8km s-min=17.7km az=58.0, Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**4.99**	**339**	Pn	Pn	00 53 27.6	-0.3
	22nm,0.3s,baz=130,slow=6.1,SNR=36						
TEIG				Sn	Sn	00 54 22.3	-4.1
	30nm,0.3s,baz=254,slow=21,SNR=8.6						
TEIG				LR	LR	00 55 26.3	
	comp=Z,311nm,18.2s,baz=172,slow=39						
TKL	**Tuckaleechee C**	**20.17**	**6**	P	P	00 56 47.2	-0.6
	1.8nm,0.8s,baz=186,slow=9.2,SNR=2.0						
TXAR	**Lajitas Array**	**21.02**	**314**	P	P	00 56 58.1	+1.0
	5.9nm,0.9s,baz=134,slow=11,SNR=36						
TXAR				S	S	01 00 47.2	-5.1
	0.3nm,0.6s,baz=122,slow=21,SNR=3.6						
PDAR	**Pinedale Array**	**33.62**	**328**	P	P	00 58 54.6	+0.4
	0.6nm,0.8s,baz=139,slow=9.2,SNR=4.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVAR	Mina Array Bea	36.15	315	P	P	00 59 15.0	-1.1
	0.7nm,0.6s,baz=134,slow=7.7,SNR=3.5						
SIV	San Ignacio	40.08	140	P	P	00 59 48.4	-0.8
	2.5nm,1.0s,baz=317,slow=6.7,SNR=7.7						
YKA	Yellowknife Ar	50.94	344	P	P	01 01 14.1	-0.5
	1.9nm,0.8s,baz=139,slow=7.9,SNR=26						
PLCA	Paso Flores	57.89	166	P	P	01 02 05.8	+0.3
	2.9nm,1.1s,baz=25,slow=11,SNR=3.2						
ILAR	Eielson Array	63.64	335	P	P	01 02 44.0	-0.4
	0.4nm,0.6s,baz=128,slow=5.1,SNR=6.0						
ESDC	Sonseca Array	74.49	53	P	P	01 03 52.9	+0.5
	0.1nm,0.4s,baz=288,slow=6.9,SNR=3.7						
RAO	Raoul Island	98.74	242	LR	LR	01 39 09.3	
	comp=Z,103nm,21.4s,baz=93,slow=28						
ASAR	Alice Springs	141.29	251	PKP	PKPdf	01 11 45.0	-0.3
	0.4nm,0.6s,baz=88,slow=1.8,SNR=4.7						
CMAR	Chiang Mai Arr	145.81	351	PKPbc	PKPdf	01 11 53.5	+0.2
	2.2nm,0.7s,baz=346,slow=3.8,SNR=8.7						

IDC 05 00:53:30.9±1.6, 15°.91N×85°.90W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.5/23, mbtmp3.6/4, Error ellipse: s-maj=120.5km s-min=27.4km az=54.0, Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG	Tepich	4.85	333	Sn	Sn	00 55 40.0	-1.9
	13nm,0.3s,baz=60,slow=20,SNR=3.5						
TXAR	Lajitas Array	21.11	312	P	P	00 58 17.8	+0.4
	1.9nm,0.8s,baz=135,slow=10,SNR=5.9						
SIV	San Ignacio	40.07	141	P	P	01 01 08.1	-0.2
	0.6nm,0.6s,baz=312,slow=10.0,SNR=3.7						
YKA	Yellowknife Ar	50.72	343	P	P	01 02 32.0	-0.1
	0.8nm,0.8s,baz=140,slow=8.4,SNR=4.4						
ILAR	Eielson Array	63.50	335	P	P	01 04 01.9	-0.7
	0.3nm,0.6s,baz=126,slow=4.6,SNR=3.3						
CMAR	Chiang Mai Arr	145.51	352	PKPbc	PKPbc	01 13 11.5	-0.4
	0.8nm,0.3s,baz=339,slow=4.3,SNR=3.9						

IDC 05 00:55:07.9±4.8, 15°.72N×86°.40W, h0km, mb3.2/3, mb1 3.8/4, mb1mx3.5/23, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=114.5km s-min=67.9km az=67.0, Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG	Tepich	4.82	339	Pn	Pn	00 56 23.4	+1.6
	2.5nm,0.3s,baz=114,slow=20,SNR=2.5						
TEIG				Sn	Sn	00 57 18.3	-0.1
	8.6nm,0.3s,baz=84,slow=19,SNR=5.2						
TXAR	Lajitas Array	20.89	313	P	P	00 59 52.5	+0.6
	0.3nm,0.6s,baz=122,slow=12,SNR=3.6						
PDAR	Pinedale Array	33.46	328	P	P	01 01 47.2	-1.9
	0.3nm,0.4s,baz=131,slow=9.7,SNR=2.4						
YKA	Yellowknife Ar	50.76	344	P	P	01 04 10.1	+0.6
	0.2nm,0.6s,baz=140,slow=7.9,SNR=3.5						

IDC 05 00:58:46.0±3.1, 17°.77S×167°.30E, h0km, mb3.4/3, mb1 3.5/4, mb1mx3.5/19, mbtmp3.4/4, ML3.0/1, Error ellipse: s-maj=71.3km s-min=31.5km az=93.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.36	190	Pn	Pn	00 59 53.6	-0.1
	0.9nm,0.3s,baz=54,slow=19,SNR=8.8						
DZM				Sn	Sn	01 00 46.2	+1.0
	2.2nm,0.3s,baz=15,slow=19,SNR=11						
WRA	Warramunga Arr	31.24	261	P	P	01 05 07.6	0.0
	0.4nm,1.0s,baz=80,slow=6.0,SNR=3.4						
ASAR	Alice Springs	31.73	254	P	P	01 05 11.8	-0.1
	0.4nm,0.8s,baz=84,slow=8.0,SNR=4.1						
SONM	Songino Array	84.94	324	P	P	01 11 23.2	0.0
	0.3nm,0.5s,baz=108,slow=3.2,SNR=2.0						

IDC 05 01:12:13.7±0.6, 15°.49N×86°.26W, h0km, mb3.9/17, mb1 4.2/18, mb1mx4.1/27, mbtmp4.0/18, ML5.0/1, MS3.3/7, Ms1 3.3/7, ms1mx3.0/41, Error ellipse: s-maj=26.4km s-min=13.3km az=64.0
ISCJB 05 01:12:17.0±0.3, 15°.45N±0°.03×86°.37W±0°.05, h33km, mb4.1/33, MS3.7/7, Error ellipse: s-maj=6.6km s-min=5.0km az=172.3
NEIC 05 01:12:18.1±2.3, 15°.42N×86°.43W, h29km±17km, mb4.2/23, Error ellipse: s-maj=11.1km s-min=5.6km az=64.0
NEIC Felt at La Ceiba and Olanchito.
CASC 05 01:12:51.0±1.6, 15°.75N×89°.54W, h0km±15km, MD3.0, mb4.2(NEIC)
ISC 05 01:12:18.7±0.4, 15°.43N±0°.06×86°.37W±0°.06, h35km, n168, σ0s91/166, mb4.1/33, MS3.5/7, 38C-46D, Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	1.62	213	ePn	Pn	01 12 43.8	-0.9
TGUH				eSn	Sn	01 13 05.0	+0.6
MRL	Marmol	3.22	264	eP	Pn	01 13 05.4	-1.6
MRL				eS	Sn	01 13 16.5	-28
NBG	Las Nubes	3.93	258	eP	Pn	01 13 16.5	-0.3
NBG				eS	Sn	01 13 38.2	-24
FUG	Fuego 3	4.43	258	eP	Pn	01 13 23.7	+0.1
FUG				eS	Sn	01 13 48.6	-26
TEIG	Tepich	5.10	339	Pn	Pn	01 13 29.2	-3.4
TEIG				Sn	Sn	01 14 24.2	-6.1
TEIG	Tepich	5.10	339	Pn	Pn	01 13 29.2	-3.4
	60nm,0.3s,baz=151,slow=13,SNR=209						
TEIG				Sn	Sn	01 14 24.2	-6.1
	69nm,0.3s,baz=227,slow=19,SNR=14						
TEIG				LR	LR	01 15 15.0	
	comp=Z,382nm,19.0s,baz=24,slow=36						
JTS	JuntasAbangare	5.30	165	ePn	Pn	01 13 35.5	+0.2
JTS				eLg	Lg	01 14 58.5	
MTDJ	Mount Denham	8.91	71	ePn	Pn	01 14 26.1	+1.1
BCIP	Isla Barro Col	8.92	134	ePn	Pn	01 14 24.2	-0.9
ROSC	El Rosal	15.83	130	Pn	P	01 16 02.3	-0.6
ROSC	El Rosal	15.83	130	Pn	P	01 16 02.3	-0.6
	1.2nm,0.3s,baz=287,slow=19,SNR=2.4						
ROSC				LR	LR	01 23 16.2	
	comp=Z,83nm,18.2s,baz=8.5,slow=42						
HKT	Hockley	16.87	331	ePn	Pn	01 16 11.9	-0.1
	17nm,0.8s						
LRAL	Lakeview Retre	17.53	358	ePn	Pn	01 16 19.1	-1.2
	3.2nm,0.4s						
732A	Laxson Ranch,	18.25	319	⇑P	P	01 16 25.9	-3.2
	baz=18						
632A	Uvalde	18.68	321	⇑P	P	01 16 33.1	-0.8
	baz=19,SNR=10						
631A	Perdido Creek	19.10	319	⇓P	P	01 16 37.8	-0.8
	baz=19,SNR=19						
532A	Rocksprings	19.20	322	⇓P	Pn	01 16 40.5	-0.2
	baz=19,SNR=15						
WHTX	Lake Whitney	19.33	330	⇓P	Pn	01 16 43.2	+1.0
	baz=19,SNR=16						
JCT	Junction City	19.39	323	eP	Pn	01 16 42.9	-0.2
	7.5nm,0.6s						
JCT	Junction City	19.39	323	⇓P	P	01 16 42.1	+0.3
	baz=19						
531A	Rocksprings	19.61	321	⇑P	Pn	01 16 45.6	0.0
	baz=20,SNR=6.6						
432A	Menard	19.68	324	⇑P	Pn	01 16 45.7	-0.8
	baz=20,SNR=9.8						
SWET	Sewanee	19.70	1	eP	P	01 16 45.8	+0.7
	5.4nm,0.8s						
CPCT	Cooper Cave	20.00	4	eP	Pn	01 16 50.8	+0.6
431A	Sonora	20.02	322	⇑P	P	01 16 49.0	+0.4
	baz=20,SNR=9.5						
332A	Millersview	20.03	325	⇑P	P	01 16 49.6	+0.9
	baz=20,SNR=19						
530A	J-C Ranch, Com	20.09	319	⇑P	P	01 16 50.2	+0.8
	baz=20,SNR=7.3						
KMSC	Kings Mountain	20.14	12	⇓P	P	01 16 50.5	+0.7
	baz=20						
TKL	Tuckaleechee C	20.27	6	P	P	01 16 51.5	+0.3
TKL				S	S	01 20 24.5	-12
TKL	Tuckaleechee C	20.27	6	P	P	01 16 51.5	+0.3
	3.5nm,1.0s,baz=183,slow=19,SNR=4.1						
TKL				S	S	01 20 24.5	-12
	6.4nm,0.9s,baz=118,slow=15,SNR=4.8						
331A	San Angelo	20.36	323	⇑P	P	01 16 53.1	+0.7
	baz=20,SNR=5.1						
232A	Coleman	20.36	326	⇑P	P	01 16 52.9	+0.6
	baz=20,SNR=18						
430A	Baggett Ranch,	20.47	321	⇓P	P	01 16 54.2	+0.8
	baz=20,SNR=5.7						
529A	Stev Forest Ra	20.63	318	⇑P	P	01 16 55.6	+0.3
	baz=21,SNR=7.1						
WVT	Waverly	20.65	357	eP	Pn	01 16 58.4	+0.6
	3.3nm,0.6s						
628A	Black Gap, Mar	20.66	315	⇑P	P	01 16 56.1	+0.5
	baz=21,SNR=14						
429A	Davenport Ranc	20.76	319	⇓P	P	01 16 57.1	+0.5
	baz=21,SNR=9.4						
231A	Bronte	20.77	325	⇑P	P	01 16 57.1	+0.4
	baz=21,SNR=8.4						
330A	Mertzon	20.87	322	⇓P	P	01 16 58.2	+0.3
	baz=21						
ABTX	Abilene, Hawle	20.93	327	⇓P	P	01 16 59.1	+0.6
	baz=21,SNR=11						
627A	Terlingua Ranc	20.98	315	⇓P	P	01 16 59.8	+0.6
	baz=21,SNR=12						
528A	Cox Ranch, San	21.03	317	⇑P	P	01 17 00.2	+0.6
	baz=21						
TXAR	Lajitas Array	21.11	314	P	P	01 17 01.2	+0.8
TXAR				S	S	01 20 43.2	-10
TXAR	Lajitas Array	21.11	314	P	P	01 17 01.2	+0.8
	4.9nm,0.6s,baz=131,slow=10.0,SNR=80						
TXAR				S	S	01 20 43.2	-10
	0.2nm,0.6s,baz=128,slow=23,SNR=4.8						
TXAR				LR	LR	01 27 28.3	
	comp=Z,28nm,21.4s,baz=110,slow=43						
230A	Sterling City	21.19	323	⇓P	P	01 17 01.6	+0.4
	baz=21,SNR=5.8						
131A	Roby	21.37	326	⇑P	P	01 17 04.3	+1.1
	baz=21						
Z32A	Haskell	21.39	329	⇓P	P	01 17 03.8	+0.5
	baz=21,SNR=11						
329A	Wagon Wheel Ra	21.41	321	⇓P	P	01 17 04.5	+0.8
	baz=21						
626A	Big Bend Ranch	21.56	314	⇑P	P	01 17 05.7	+0.4
	baz=22,SNR=26						
527A	Woodward Ranch	21.57	316	⇓P	P	01 17 05.9	+0.4
	baz=22						
130A	Snyder	21.63	325	⇓P	P	01 17 06.8	+0.8
	baz=22						
Z31A	Sharp Cattle R	21.74	327	⇑P	P	01 17 08.0	+0.9
	baz=22,SNR=9.5						
526A	Mary Lane Ranc	21.84	315	⇑P	P	01 17 08.6	+0.3
	baz=22,SNR=12						
328A	Wristen Ranch,	21.85	319	⇑P	P	01 17 09.4	+1.0
	baz=22,SNR=14						
Y32A	R-V Farms, Ver	21.93	330	⇓P	P	01 17 09.7	+0.5
	baz=22						
TUL1	Tulsa	22.06	339	⇑P	P	01 17 11.6	+1.1
	baz=22						
426A	McDonald Obser	22.18	316	⇑P	P	01 17 12.3	+0.2
	baz=22,SNR=11						
WMOK	Wichita Mounta	22.23	332	eP	P	01 17 11.3	-1.1
	6.7nm,0.8s						
Z30A	Sanderson Ranc	22.24	326	⇓P	P	01 17 12.7	+0.2
	baz=22,SNR=8.2						
Y31A	Rekieta Farm,	22.31	328	⇑P	P	01 17 13.6	+0.4
	baz=22,SNR=11						
128A	Castleberry Fa	22.52	322	⇑P	P	01 17 15.2	-0.3
	baz=22,SNR=10						
326A	Caldwell Ranch	22.56	318	⇑P	P	01 17 15.2	-0.7
	baz=23,SNR=10						
227A	Bennet, Jal	22.58	320	⇓P	P	01 17 15.3	-0.9
	baz=23						
X31A	McDonald Ranch	22.70	330	⇓P	P	01 17 16.9	-0.5
	baz=23						
WCI	Wyandotte Cave	22.71	0	eP	P	01 17 20.0	+2.5
	14nm,0.8s						
425A	Indio Mountain	22.89	315	⇓P	P	01 17 18.9	-0.7
	baz=23						
226B	Tecolote Peak,	23.17	319	⇑P	P	01 17 22.2	-0.2
	baz=23						
325A	Bean Ranch, Si	23.24	316	⇓P	P	01 17 22.2	-0.9
	baz=23						
OLIL	Olney	23.26	357	eP	P	01 17 24.9	+1.9
	16nm,1.0s						
Z27A	Tatum	23.44	322	⇓P	P	01 17 23.6	-1.4
	baz=24						
324A	Moseley Ranch,	23.63	316	⇑P	P	01 17 26.0	-0.9
	baz=24,SNR=8.7						
BLO	Bloomington	23.65	360	eP	P	01 17 29.4	+2.6
	17nm,0.6s						
MNTX	Cornudas Mount	23.72	316	eP	P	01 17 27.1	-0.5
	2.8nm,1.0s						
AMTX	Amarillo	23.75	327	eP	P	01 17 27.0	-0.9
	8.4nm,0.5s						
Y27A	Causey	23.82	323	⇓P	P	01 17 28.0	-0.6
	baz=24						
125A	Gardner Draw,	23.87	319	⇓P	P	01 17 27.9	-1.2
	baz=24						
224A	Cornudas Mount	24.05	317	⇓P	P	01 17 30.2	-0.6
	baz=24,SNR=6.3						
Z25A	Roswell	24.32	320	⇑P	P	01 17 32.9	-0.4
	baz=24						
124A	Stringfield Ra	24.40	318	⇓P	P	01 17 34.1	-0.1
	baz=24,SNR=5.3						
W27A	Bowe Ranch, En	24.63	326	⇓P	P	01 17 36.0	-0.1
	baz=25						
X26A	CR and CF Fran	24.67	324	⇓P	P	01 17 36.4	0.0
	baz=25						
SFIN	Scholer Farm	24.86	359	⇑P	P	01 17 38.4	+0.4
	baz=25						
Y24A	Capitan	25.20	320	⇓P	P	01 17 40.8	-0.5
	baz=25						
W25A	X Bar L Ranch,	25.52	324	⇓P	P	01 17 43.9	-0.2
	baz=26						
U27A	Thompson Grove	25.53	328	⇓P	P	01 17 43.8	-0.5
	baz=26						
V26A	Tequesquite Ra	25.57	326	⇓P	P	01 17 44.0	-0.6
	baz=26,SNR=5.7						
320A	Kipp Ranch, An	25.69	312	⇑P	P	01 17 46.0	+0.3
	baz=26						
S28A	Manter	26.00	331	⇓P	P	01 17 48.5	0.0
	baz=26						
U25A	Circle Dot Ran	26.35	326	⇓P	P	01 17 51.7	0.0
	baz=26						
ANMO	Albuquerque	26.51	321	eP	P	01 17 51.9	-1.3
	2.0nm,1.0s						
R28A	Tribune	26.57	332	⇓P	P	01 17 53.4	-0.2
	baz=27						
S26A	Kim	26.79	329	⇓P	P	01 17 55.5	-0.1
	baz=27						
T25A	Trinidad	26.90	327	⇑P	P	01 17 56.5	-0.2
	baz=27						
ECSD	EROS Data Cent	29.53	345	eP	P	01 18 17.7	-2.1
	3.3nm,0.8s						
SADO	Sadowa	29.88	10	P	P	01 18 23.7	+0.8
SADO	Sadowa	29.88	10	P	P	01 18 23.7	+0.8
	2.4nm,0.6s,baz=266,slow=5.7,SNR=3.6						
K25A	Mack Ranch, Ha	30.98	334	⇓P	P	01 18 33.4	+0.6
	baz=31						
N20A	Spence Gulch,	31.65	327	⇓P	P	01 18 39.7	+0.8
	baz=32						
PFO	Pinyon Flat Ob	32.63	309	LR	LR	01 34 40.1	
	comp=Z,74nm,18.4s,baz=168,slow=41						
SAML	Samuel	33.39	135	eP	P	01 18 53.3	-0.8
	2.4nm,0.8s						
PDAR	Pinedale Array	33.72	329	P	P	01 18 57.0	0.0
PDAR	Pinedale Array	33.72	329	P	P	01 18 57.0	0.0
	1.1nm,0.7s,baz=136,slow=11,SNR=6.2						
DUG	Dugway	33.75	322	eP	P	01 18 57.7	+0.5
	1.1nm,0.7s						
G20A	Bridger	34.94	333	⇓P	P	01 19 08.4	+1.0
	baz=35						
TPAW	Teton Pass	34.95	328	eP	P	01 19 09.7	+2.1
	4.0nm,0.8s						
RRI2	Red Ridge	35.04	328	eP	P	01 19 10.0	+1.5
	13nm,1.6s						
G18A	Lazy EL Ranch,	35.62	332	⇑P	P	01 19 14.0	+0.7
	baz=36						
E20A	Meyer Farm, Mu	35.91	334	⇑P	P	01 19 16.4	+0.8
	baz=36						
F18A	Big Timber	36.14	332	⇓P	P	01 19 17.7	0.0
	baz=36						
E19A	Rath Farm, Rou	36.16	333	⇓P	P	01 19 18.6	+0.8
	baz=36						
NVAR	Mina Array Bea	36.24	315	P	P	01 19 20.2	+1.5
NVAR				PcP	PcP	01 21 43.9	+0.3
NVAR	Mina Array Bea	36.24	315	P	P	01 19 20.2	+1.5
	0.6nm,0.3s,baz=127,slow=8.5,SNR=4.6						
NVAR				PcP	PcP	01 21 43.9	+0.3
	0.6nm,0.6s,baz=123,slow=3.3,SNR=3.1						
LPAZ	La Paz	36.30	149	P	P	01 19 20.6	+0.7
LPAZ	La Paz	36.30	149	P	P	01 19 20.6	+0.7
	0.5nm,0.6s,baz=356,slow=3.0,SNR=3.9						
LPAZ				LR	LR	01 35 56.8	
	comp=Z,69nm,19.6s,baz=239,slow=39						
F17A	Fitzpatrick Pl	36.57	331	⇓P	P	01 19 22.1	+0.7
	baz=37						
BOZ	Bozeman (W)	36.84	330	eP	P	01 19 23.0	-0.7
	2.0nm,1.0s						
G15A	Dillon	36.92	329	⇑P	P	01 19 24.9	+0.6
	baz=37						
F16A	Kennard Place,	36.94	330	⇑P	P	01 19 25.2	+0.7
	baz=37						
DLMT	Dillon	37.11	329	eP	P	01 19 26.5	+0.5
	3.6nm,0.9s						
LRM	Limekiln Ridge	37.37	330	eP	P	01 19 28.3	+0.1
F15A	Butte	37.40	330	⇑P	P	01 19 29.8	+1.3
	baz=37						
F13A	Darby	38.28	328	⇓P	P	01 19 36.1	+0.2
	baz=38						
G12A	Big Creek, Yel	38.36	326	⇑P	P	01 19 37.2	+0.6
	baz=38						
WVOR	Wild Horse Val	38.60	321	eP	P	01 19 39.1	+0.6
	3.4nm,0.9s						
E13A	Victor	38.66	329	⇓P	P	01 19 39.5	+0.5
	baz=39						
F12A	Elk City	38.74	327	⇓P	P	01 19 40.2	+0.6
	baz=39						
D14A	Greenough	38.77	330	⇓P	P	01 19 40.6	+0.7
	baz=39						
MSO	Missoula	38.81	330	⇑P	P	01 19 40.6	+0.4
	baz=39						
C15A	Salmond Ranch,	38.85	332	⇑P	P	01 19 41.2	+0.6
	baz=39						
D12A	Red Ives Fores	39.66	329	⇑P	P	01 19 47.1	-0.2
	baz=40						
SIV	San Ignacio	39.99	140	P	P	01 19 50.0	-0.3
SIV	San Ignacio	39.99	140	P	P	01 19 50.0	-0.3
	6.0nm,0.8s,baz=320,slow=9.7,SNR=26						
LVC	Limon Verde	41.50	155	eP	P	01 20 04.5	+1.6
	4.6nm,1.0s						
SCHQ	Schefferville	42.14	17	P	P	01 20 06.9	-0.6
SCHQ				PcP	PcP	01 22 01.0	-0.5
SCHQ	Schefferville	42.14	17	P	P	01 20 06.9	-0.6
	1.4nm,0.6s,baz=232,slow=12,SNR=3.4						
SCHQ				PcP	PcP	01 22 01.0	-0.5
	1.4nm,0.6s,baz=246,slow=5.2,SNR=4.3						
LCO	Las Campanas	46.71	161	eP	P	01 20 45.3	+0.7
	26nm,1.4s						
BDFB	Brasilia	48.88	127	LR	LR	01 42 06.6	
	comp=Z,51nm,18.9s,baz=127,slow=37						
BBB	Bella Bella	49.35	327	LR	LR	01 43 06.5	
	comp=Z,45nm,19.0s,baz=164,slow=38						
CFAA	Coronel Fontan	49.90	160	P	P	01 21 09.7	+0.7
CFAA	Coronel Fontan	49.90	160	P	P	01 21 09.7	+0.7
	0.2nm,0.6s,baz=328,slow=3.3,SNR=4.3						
YKA	Yellowknife Ar	51.04	344	P	P	01 21 16.4	-0.7
YKA	Yellowknife Ar	51.04	344	P	P	01 21 16.5	-0.7
	3.0nm,0.7s,baz=139,slow=7.9,SNR=37						
YKW3	Yellowknife Ar	51.10	344	eP	P	01 21 16.5	-1.1
PLCA	Paso Flores	57.78	166	eP	P	01 22 06.6	+0.1
	4.1nm,1.0s						
PLCA	Paso Flores	57.78	166	P	P	01 22 06.3	-0.1
	4.6nm,1.1s,baz=12,slow=6.3,SNR=4.9						
ILAR	Eielson Array	63.74	335	P	P	01 22 46.4	-0.3
ILAR	Eielson Array	63.74	335	P	P	01 22 46.4	-0.3
	0.9nm,0.8s,baz=112,slow=5.2,SNR=13						
ESDC	Sonseca Array	74.55	53	P	P	01 23 53.0	-1.2
ESDC	Sonseca Array	74.55	53	P	P	01 23 53.0	-1.2
	0.5nm,0.5s,baz=288,slow=5.7,SNR=7.4						
ARCES	ARCESS Array B	83.04	19	P	P	01 24 40.1	-0.1
ARCES	ARCESS Array B	83.04	19	P	P	01 24 40.1	-0.1
	2.9nm,0.8s,baz=299,slow=6.0,SNR=4.1						
TORD	Torodi Ar. Bea	84.75	78	P	P	01 24 49.1	-0.9
TORD	Torodi Ar. Bea	84.75	78	P	P	01 24 49.1	-0.9
	0.4nm,0.7s,baz=273,slow=3.5,SNR=7.0						
GERES	GERESS Array B	85.00	41	P	P	01 24 51.6	+0.8
GERES	GERESS Array B	85.00	41	P	P	01 24 51.6	+0.8
	0.1nm,0.2s,baz=270,slow=6.9,SNR=4.4						
KEST	Kesra	85.67	54	P	P	01 24 55.4	+1.1
KEST	Kesra	85.67	54	P	P	01 24 55.4	+1.1
	0.8nm,0.8s,baz=11,slow=5.2,SNR=6.1						
HHC	Hu-ho-hao-te	121.58	344	ePKP	PKPdf	01 31 11.3	+2.2
HHC				PP	PP	01 32 46.1	+6.0
HHC				PKS		01 38 21.3	
HHC				SKKS		01 39 38.1	
HHC	Hu-ho-hao-te	121.58	344	SS	SS	01 49 17.9	+5.2
HHC				AMB	AMB		
	comp=Z,59nm,5.0s						
HHC				LR	LR		
	comp=N,200nm,21.4s						
HHC				LR	LR		
	comp=E,230nm,21.4s						
HHC				LR	LR		
	comp=Z,160nm,21.4s						
LZH	Lanzhou	127.86	350	ePKP	PKPdf	01 31 18.9	-2.5
LZH				pPKP	pPKPdf	01 31 29.3	-3.5
LZH				sPKP		01 31 33.1	
LZH				LR	LR		
	comp=N,120nm,17.2s						
LZH				LR	LR		
	comp=E,100nm,14.6s						
LZH				LR	LR		
	comp=Z,140nm,19.3s						
WRA	Warramunga Arr	141.02	257	PKP	PKPdf	01 31 46.6	+0.5
WRA	Warramunga Arr	141.02	257	PKP	PKPdf	01 31 46.6	+0.5
	comp=Z,1.1nm,0.8s,baz=84,slow=2.0,SNR=8.9						
ASAR	Alice Springs	141.28	251	PKPpre	PKPpre	01 31 39.4	
ASAR				PKP	PKPdf	01 31 47.1	+0.6
ASAR	Alice Springs	141.28	251	PKhKP	PKPpre	01 31 39.4	
	comp=Z,0.6nm,0.9s,baz=103,slow=2.1,SNR=4.1						
ASAR				PKP	PKPdf	01 31 47.1	+0.6
	comp=Z,1.1nm,0.7s,baz=98,slow=2.0,SNR=10						
CMAR	Chiang Mai Arr	145.92	351	PKPbc	PKPbc	01 31 55.4	0.0
CMAR	Chiang Mai Arr	145.92	351	PKPbc	PKPbc	01 31 55.4	0.0
	comp=Z,5.1nm,0.8s,baz=335,slow=3.6,SNR=14						
FITZ	Fitzroy Crossi	149.25	260	PKPbc	PKPbc	01 32 04.9	+0.3
FITZ	Fitzroy Crossi	149.25	260	PKPbc	PKPbc	01 32 04.9	+0.3
	comp=Z,1.5nm,0.6s,baz=121,slow=6.3,SNR=5.7						

BJI 05 01:27:32.4, 52°.79N×165°.61W, h10km, mB5.0/3, mb4.7/7, Ms4.5/2, Ms7 4.1/2
ISCJB 05 01:27:33.6±1.0, 51°.91N±0°.03×166°.19W±0°.04, h10km±6km, mb4.2/59, MS4.1/1, Error ellipse: s-maj=4.9km s-min=4.2km az=168.8
IDC 05 01:27:33.1±0.6, 51°.83N×166°.19W, h0km, mb4.0/25, mb1 4.2/25, mb1mx4.1/34, mbtmp4.0/25, MS2.9/1, Ms1 3.0/1, ms1mx2.0/58, Error ellipse: s-maj=20.4km s-min=12.8km az=176.0
MOS 05 01:27:36.8±0.9, 51°.92N×166°.20W, h33km, mb4.4/34, Error ellipse: s-maj=13.2km s-min=8.2km az=94.4
NEIC 05 01:27:36.3, 51°.89N×166°.16W, h14km, mb4.2/30, ML3.7(AEIC), After AEIC.
ISC 05 01:27:36.1±0.6, 51°.92N±0°.06×166°.17W±0°.04, h18km±2km, n333, σ1s02/355, mb4.2/59, 78C-90D, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OKTU	Okmok Mt. Tuli	1.86	323	P	Pn	01 28 07.0	-0.1
OKSP	Okmok Steeple	1.86	317	P	Pn	01 28 06.5	-0.6
MREP	Makushin Rep't	1.93	350	P	Pn	01 28 07.8	-0.3
OKCE	Okmok Cone E	1.94	322	P	Pn	01 28 07.7	-0.4
OKCE				S	Sn	01 28 30.8	-1.2
UNV	Unalaska Valle	1.94	354	P	Pn	01 28 07.0	-1.2
UNV				S	Sn	01 28 32.1	0.0
NIKH	Nikolski High	1.95	304	P	Pn	01 28 07.2	-1.1
MSOM	Makushin Julie	1.96	346	P	Pn	01 28 07.7	-0.7
MSOM	Makushin Julie	1.96	346	P	Pn	01 28 07.7	-0.7
MSW	Makushin Switc	2.03	350	P	Pn	01 28 08.8	-0.7
MSW				S	Sn	01 28 34.9	+0.5
MTBL	Makushin Table	2.08	352	P	Pn	01 28 09.5	-0.6
MCIR	Makushin Cirqu	2.08	348	P	Pn	01 28 09.9	-0.3
AKRB	Akutan Reef Bi	2.22	2	P	Pn	01 28 11.2	-0.8
AKUT	Akutan	2.23	6	ePn	Pn	01 28 11.3	-0.9
AKUT				eSn	Sn	01 28 38.1	-1.2
AKLV	Akutan Long Va	2.25	3	P	Pn	01 28 11.5	-1.0
AKLV				S	Sn	01 28 39.0	-0.8
AKGG	Akutan Green G	2.29	3	P	Pn	01 28 12.3	-0.6
SSBA	Shishaldin	3.11	22	P	Pn	01 28 24.4	+0.1
SSBA				S	Sn	01 29 02.7	+1.7
SSLW	Shishaldin Wes	3.11	22	P	Pn	01 28 24.6	+0.3
FALS	False Pass	3.38	28	P	Pn	01 28 27.6	-0.2
FALS				S	Sn	01 29 07.6	+0.2
DRIA	Deer Island	3.85	36	P	Pn	01 28 33.8	-0.5
DT1	Dutton Round H	3.95	34	P	Pn	01 28 35.8	0.0
SDPT	Sand Point	4.83	42	P	Pn	01 28 47.8	0.0
SDPT				S	Sn	01 29 40.9	-2.3

KOFP Korovin Flat P 4.90 277 P Pn 01 28 48.5 -0.3
ATKA Atka Island 4.96 276 eP Pn 01 28 49.6 +0.1
GSMY Great Sitkin M 6.11 275 P Pn 01 29 04.6 -0.8
GSTR Great Sitkin T 6.11 276 eP Pn 01 29 06.7 +1.3
GSTD Great Sitkin T 6.16 275 P Pn 01 29 05.4 -0.9
GSTD S Sn 01 30 12.4 -3.7
CHGN Chignik 6.33 43 eP Pn 01 29 08.2 -0.2
ANPK Aniakchak Peak 6.81 40 P Pn 01 29 14.2 -0.9
AMKA Amchitka 9.05 272 eP Pn 01 29 44.0 -1.7
KDAK Kodiak Island 9.79 48 Pn Pn 01 29 53.7 -2.0
KDAK Sn Sn 01 31 38.2 -6.8
KDAK Kodiak Island 9.79 48 Pn Pn 01 29 53.7 -2.0
1.2nm,0.3s,baz=329,slow=20,SNR=8.2
KDAK Sn Sn 01 31 38.2 -6.8
0.5nm,0.3s,baz=283,slow=17,SNR=3.8
SPU Mount Spurr 12.09 34 eP Pn 01 30 27.7 +0.4
SEW Seward 12.41 42 eP Pn 01 30 30.0 -1.6
FX1 Attu Island--F 12.65 283 Pn Pn 01 30 35.3 +0.3
FX1 Attu Island--F 12.65 283 Pn Pn 01 30 35.3 +0.3
0.7nm,0.3s,baz=11,slow=16,SNR=4.5
RC01 Rabbit Creek A 12.88 38 eP Pn 01 30 36.7 -1.3
MCK McKinley 14.91 31 eP Pn 01 31 06.2 +0.4
MCK McKinley 14.91 31 eP Pn 01 31 06.2 +0.4
COLA College 16.06 29 eP Pn 01 31 17.7 -2.9
COLA pmax pmax
comp=Z,2.0nm,0.9s
ILAR Eielson Array 16.28 30 Pn Pn 01 31 19.8 -3.8
ILAR Eielson Array 16.28 30 Pn Pn 01 31 19.8 -3.8
comp=Z,0.2nm,0.3s,baz=225,slow=12,SNR=11
ILAR LR LR 01 37 59.3
comp=Z,46nm,21.6s,baz=4.6,slow=38
DOT Dot Lake 16.53 36 eP Pn 01 31 26.1 -0.7
comp=Z,6.5nm,0.6s
DOT eP P 01 31 29.4 +0.2
COLD Coldfoot 17.26 21 eP Pn 01 31 36.1 +0.3
comp=Z,12nm,1.0s
EGAK Eagle 18.22 35 eP Pn 01 31 47.8 +0.1
comp=Z,10nm,0.8s
BILL Bilibino 20.93 331 eP P 01 32 16.9 -0.5
BILL e 01 32 39.6
BILL pmax pmax
comp=Z,1.0nm,0.8s
DLBC Dease Lake 21.44 58 P P 01 32 22.6 -0.4
DLBC S S 01 36 14.8 -5.2
DLBC Dease Lake 21.44 58 P P 01 32 22.6 -0.4
comp=Z,1.0nm,0.5s,baz=238,slow=12,SNR=2.0
DLBC S S 01 36 14.8 -5.2
comp=Z,0.9nm,0.5s,baz=342,slow=20,SNR=2.2
PEA0B Petropavlovsk- 21.88 287 eP P 01 32 27.0 -0.7
PETK Petropavlovsk- 21.88 287 P P 01 32 27.2 -0.5
PETK pmax pmax
comp=Z,5.0nm,0.6s
PETK Petropavlovsk- 21.88 287 P P 01 32 27.2 -0.5
PETK Petropavlovsk- 21.88 287 P P 01 32 27.2 -0.5
comp=Z,4.6nm,0.6s,baz=93,slow=12,SNR=12
INK Inuvik 22.68 31 P P 01 32 35.7 -0.4
INK Inuvik 22.68 31 P P 01 32 35.7 -0.4
comp=Z,9.2nm,0.6s,baz=244,slow=11,SNR=41
YKW3 Yellowknife Ar 29.05 48 eP P 01 33 36.4 +1.6
YKA Yellowknife Ar 29.06 48 P P 01 33 36.0 +1.1
YKA Yellowknife Ar 29.06 48 P P 01 33 36.0 +1.1
comp=Z,0.3nm,0.4s,baz=276,slow=7.1,SNR=8.3
NEW Newport 31.20 77 eP P 01 33 55.4 +1.3
comp=Z,3.8nm,0.8s
NEW Newport 31.20 77 ⇓P P 01 33 55.0 +1.0
baz=31
BSMT Bassoo Peak 32.79 76 eP P 01 34 09.5 +1.3
D12A Red Ives Fores 32.81 78 ⇓P P 01 34 08.6 +0.3
baz=33
C13A Hot Springs 33.00 77 ⇓P P 01 34 10.2 +0.4
baz=33
A14A Double T Ranch 33.11 74 ⇑P P 01 34 11.6 +0.7
baz=33
D13A Huson 33.34 77 ⇑P P 01 34 13.2 +0.3
baz=33
B14A Marquette Ranc 33.47 75 ⇓P P 01 34 14.4 +0.4
baz=33
F12A Elk City 33.49 80 ⇓P P 01 34 14.8 +0.5
baz=33
B15A Bradely Ranch, 33.92 74 ⇓P P 01 34 18.2 +0.3
baz=34
D14A Greenough 33.92 77 ⇑P P 01 34 18.2 +0.3
baz=34
F13A Darby 34.04 79 ⇑P P 01 34 19.4 +0.4
baz=34
C15A Salmond Ranch, 34.13 75 ⇓P P 01 34 20.6 +0.8
baz=34,SNR=8.0
B16A M & M Farms, S 34.38 74 ⇓P P 01 34 22.0 +0.1
baz=34
ASAJ Asahikawa 34.52 278 eP P 01 34 23.5 +0.6
comp=Z,57nm,2.8s
ASAJ Asahikawa 34.52 278 P P 01 34 23.6 +0.6
comp=Z,2.4nm,0.3s,baz=127,slow=20,SNR=3.1
D15A Lincoln 34.53 76 ⇓P P 01 34 23.6 +0.4
baz=34
C16A Fuhringer Ranc 34.64 75 ⇓P P 01 34 24.6 +0.5
baz=34
A17A Triple J Farms 34.74 72 ⇑P P 01 34 25.5 +0.5
baz=35
E15A Deer Lodge 34.75 77 ⇑P P 01 34 25.8 +0.6
baz=35
HLID Hailey 35.13 83 eP P 01 34 30.1 +1.5
comp=Z,2.8nm,1.1s
HLID Hailey 35.13 83 ⇑P P 01 34 29.6 +1.1
baz=35
G15A Dillon 35.47 79 ⇓P P 01 34 32.4 +0.9
baz=35
I14A Mackay 35.53 82 ⇓P P 01 34 32.9 +0.9
baz=35
B18A Beardsley Farm 35.53 73 ⇓P P 01 34 33.3 +1.5
baz=35
NVAR Mina Array Bea 35.68 93 P P 01 34 34.8 +1.5
NVAR Mina Array Bea 35.68 93 P P 01 34 34.8 +1.5
comp=Z,1.0nm,0.6s,baz=300,slow=10,SNR=4.1
BOZ Bozeman (W) 35.75 78 eP P 01 34 34.5 +0.7
BOZ pmax pmax
comp=Z,1.0nm,0.5s
BOZ Bozeman (W) 35.75 78 eP P 01 34 34.5 +0.7
comp=Z,1.0nm,0.5s
E17A Martinsdale 35.81 76 ⇑P P 01 34 35.4 +1.0
baz=36
G16A Moss Hill, Enn 35.86 79 ⇑P P 01 34 35.2 +0.5
baz=36,SNR=5.5
F17A Fitzpatrick Pl 36.21 77 ⇓P P 01 34 38.6 +0.9
baz=36
C19A Slack Wire Ran 36.27 73 ⇑P P 01 34 39.5 +1.3
baz=36
E18A Harlowton 36.33 76 ⇓P P 01 34 40.1 +1.4
baz=36
G17A Pierce Place, 36.45 78 ⇓P P 01 34 40.8 +1.0
baz=36
H16A Russell Place, 36.47 79 ⇓P P 01 34 40.9 +0.9
baz=36
D19A Cripps Ranch, 36.65 74 ⇓P P 01 34 42.9 +1.5
baz=36
F18A Big Timber 36.78 76 ⇓P P 01 34 43.7 +1.2
baz=37
E19A Rath Farm, Rou 37.05 75 ⇓P P 01 34 45.8 +0.9
baz=37
D20A Manuel Ranch, 37.13 74 ⇓P P 01 34 46.6 +1.1
baz=37
RRI2 Red Ridge 37.15 81 eP P 01 34 47.7 +1.8
comp=Z,2.9nm,0.9s
FFC Flin Flon 37.26 60 eP P 01 34 46.7 +0.3
FFC pmax pmax
comp=Z,3.0nm,0.8s
FFC Flin Flon 37.26 60 eP P 01 34 46.7 +0.3
comp=Z,2.7nm,0.8s
TPAW Teton Pass 37.29 81 eP P 01 34 48.3 +1.2
comp=Z,1.8nm,0.8s
ISA Isabella 37.33 97 ⇓P P 01 34 47.8 +0.5
baz=37
LOHW Long Hollow 37.44 80 eP P 01 34 49.3 +1.0
comp=Z,1.7nm,0.5s
H18A Shoshone NF, C 37.44 78 ⇓P P 01 34 49.5 +1.1
baz=37
A22A Carney Farms, 37.52 70 ⇑P P 01 34 49.3 +0.5
baz=37
BSC Santa Cruz Isl 37.73 100 ⇓P P 01 34 50.7 +0.1
baz=38
H19A Powell 37.86 78 ⇑P P 01 34 52.1 +0.4
baz=38
DUG Dugway 38.02 86 eP P 01 34 54.5 +1.4
DUG pmax pmax
comp=Z,5.0nm,1.3s
DUG Dugway 38.02 86 eP P 01 34 54.5 +1.4
comp=Z,5.4nm,1.3s
DUG Dugway 38.02 86 ⇑P P 01 34 54.1 +0.9
baz=38
G20A Bridger 38.03 77 ⇑P P 01 34 53.9 +0.7
baz=38
D22A Cohagen 38.26 73 ⇑P P 01 34 55.8 +0.8
baz=38
C23A Lambert 38.52 71 ⇑P P 01 34 58.7 +1.5
baz=38
BW06 Boulder Array 38.54 81 eP P 01 34 57.7 0.0
comp=Z,2.9nm,0.6s
PDAR Pinedale Array 38.54 81 P P 01 34 58.3 +0.6
PDAR Pinedale Array 38.54 81 P P 01 34 58.3 +0.6
comp=Z,2.6nm,0.6s,baz=306,slow=3.7,SNR=19
GSC Goldstone 38.59 96 ⇑P P 01 34 58.6 +0.6
baz=38
M17A Scullys Gap (B 38.60 83 ⇓P P 01 34 58.4 +0.3
baz=38
K19A Absolon Red Bu 38.95 80 ⇑P P 01 35 01.2 +0.2
baz=39,SNR=5.4
C24A Savage 39.10 71 ⇓P P 01 35 03.0 +1.0
baz=39
E23A Ismay 39.11 73 ⇓P P 01 35 02.9 +0.8
baz=39
HEC Hector,Ludlow 39.20 96 ⇑P P 01 35 03.2 +0.2
baz=39
I21A Big Tails, Te 39.34 78 ⇓P P 01 35 04.7 +0.4
baz=39
K20A Yellowstone Ra 39.35 80 ⇓P P 01 35 04.3 0.0
baz=39
D24A Glendive 39.37 72 ⇓P P 01 35 05.7 +1.4
baz=39
F23A Volborg 39.45 74 ⇓P P 01 35 05.8 +0.8
baz=39
E24A Baker 39.67 72 ⇓P P 01 35 07.3 +0.5
baz=40
SRU San Rafael 40.08 86 ⇑P P 01 35 10.8 +0.4
baz=40
O19A Miners Draw (B 40.23 84 ⇓P P 01 35 12.4 +0.7
baz=40
L21A Rawlins 40.34 80 ⇓P P 01 35 13.6 +1.0
baz=40
N20A Spence Gulch, 40.44 82 ⇓P P 01 35 14.6 +1.1
baz=40
P19A Cripple Cowboy 40.72 84 ⇓P P 01 35 16.6 +0.9
baz=41
O20A White River Ci 40.87 83 ⇓P P 01 35 17.5 +0.5
baz=41,SNR=8.3
N21A Black Mountain 40.94 82 ⇓P P 01 35 18.1 +0.4
baz=41
RSSD Black Hills 41.14 75 eP P 01 35 19.2 0.0
RSSD pmax pmax
comp=Z,2.0nm,0.5s
RSSD Black Hills 41.14 75 eP P 01 35 19.2 0.0
comp=Z,1.7nm,0.5s
P20A De Beque 41.16 84 ⇓P P 01 35 19.7 +0.3
baz=41
L23A Garrett 41.27 79 ⇓P P 01 35 20.1 -0.2
baz=41
S18A Hurst Farm, Bl 41.28 87 ⇑P P 01 35 20.5 0.0
baz=41,SNR=8.2
O21A Pagoda 41.30 83 ⇓P P 01 35 20.6 0.0
baz=41
Q20A Ridgley Place, 41.55 85 ⇓P P 01 35 22.6 +0.1
baz=41
P21A Newcastle 41.73 83 ⇑P P 01 35 24.8 +0.8
baz=42
WUAZ Wupatki 41.81 91 ⇑P P 01 35 25.6 +0.9
baz=42
N23A Red Feather La 41.83 81 ⇑P P 01 35 25.9 +0.9
baz=42
PV01 Paradox Valley 41.89 86 eP P 01 35 25.7 +0.3
comp=Z,638nm,0.7s
O22A Kremmling 41.90 82 ⇑P P 01 35 26.4 +0.9
baz=42
R20A Redvale 41.97 86 ⇑P P 01 35 26.5 +0.5
baz=42
Q21A Lamborn Mesa, 42.07 84 ⇑P P 01 35 28.1 +1.3
baz=42
S20A Disappointment 42.20 86 ⇓P P 01 35 28.6 +0.5
baz=42,SNR=6.9
SMCO Snowmass 42.23 83 eP P 01 35 28.8 +0.4
comp=Z,3.6nm,1.3s
L25A Engebretsen Ra 42.29 78 ⇓P P 01 35 29.5 +1.0
baz=42
R21A Cimarron 42.37 85 ⇑P P 01 35 30.2 +0.8
baz=42
Q22A Crested Butte, 42.46 84 ⇓P P 01 35 30.8 +0.7
baz=42
ULM Lac du Bonnet 42.61 63 P P 01 35 30.6 -0.3
ULM Lac du Bonnet 42.61 63 P P 01 35 30.6 -0.3
comp=Z,1.3nm,0.5s,baz=310,slow=11,SNR=3.0
S21A Coal Bank Pass 42.66 86 ⇑P P 01 35 32.4 +0.6
baz=42
P23A Jefferson 42.81 82 ⇑P P 01 35 34.1 +1.0
baz=43
R22A Saguache, Gunn 42.95 84 ⇓P P 01 35 35.3 +1.1
baz=43
Q23A Hartsel 43.10 83 ⇑P P 01 35 35.9 +0.6
baz=43
S22A 4UR Ranch, Cre 43.20 85 ⇓P P 01 35 36.6 +0.4
baz=43
T21A Navajo Lake 43.24 86 ⇑P P 01 35 37.3 +0.8
baz=43
O25A Wiggins 43.41 80 ⇑P P 01 35 39.4 +1.7
baz=43
V20A Brimhall 43.43 88 ⇑P P 01 35 39.1 +1.2
baz=43
U21A Nageezi 43.53 87 ⇑P P 01 35 39.5 +0.8
baz=43,SNR=12
T22A Edith 43.62 86 ⇓P P 01 35 40.4 +0.9
baz=44,SNR=7.6
W20A Ramah 43.85 89 ⇑P P 01 35 42.6 +1.2
baz=44
N27A Anderson Farm, 43.96 78 ⇓P P 01 35 43.6 +1.6
baz=44
U22A Llaves 44.06 87 ⇓P P 01 35 44.3 +1.3
baz=44
P26A Davis Ranch, A 44.22 80 ⇑P P 01 35 45.6 +1.5
baz=44
X20A Quemado 44.23 90 ⇓P P 01 35 45.3 +0.9
baz=44
S24A Houchin Ranch, 44.27 84 ⇓P P 01 35 46.0 +1.3
baz=44
V22A San Miguel Ran 44.32 87 ⇑P P 01 35 45.8 +0.7
baz=44
U23A El Rito 44.50 86 ⇑P P 01 35 47.5 +1.0
baz=44,SNR=7.3
Q26A Hugo 44.51 81 ⇓P P 01 35 47.3 +0.8
baz=44
Y20A Horse Springs, 44.73 90 ⇓P P 01 35 49.5 +1.1
baz=45
S25A Robets Cordova 44.73 83 ⇓P P 01 35 49.5 +1.2
baz=45
X21A Alamocita Cree 44.74 89 ⇓P P 01 35 49.3 +0.9
baz=45,SNR=6.3
V23A Ortiz Mt. (NFS 44.88 87 ⇑P P 01 35 50.8 +1.2
baz=45
W22A Albuquerque 44.89 88 ⇑P P 01 35 50.7 +1.1
baz=45
CN2 Changchun 45.03 288 eP P 01 35 51.3 +0.9
CN2 esP sP 01 35 58.3 0.0
CN2 eS S 01 42 27.7 -0.3
CN2 pmax pmax
comp=Z,10.0nm,0.8s
T25A Trinidad 45.08 84 ⇑P P 01 35 51.8 +0.7
baz=45
Z20A Nine Sixteen R 45.13 91 ⇓P P 01 35 52.0 +0.6
baz=45
ANMO Albuquerque 45.23 88 eP P 01 35 52.5 +0.2
comp=Z,1.7nm,1.0s
ANMO Albuquerque 45.23 88 P P 01 35 51.7 -0.6
comp=Z,0.9nm,0.8s,baz=322,slow=9.7,SNR=2.8
W23A Werner Place, 45.28 87 ⇓P P 01 35 53.4 +0.7
baz=45
R27A Eads 45.34 81 ⇑P P 01 35 53.7 +0.6
baz=45
S26A Kim 45.35 83 ⇓P P 01 35 53.5 +0.3
baz=45
V24A Rampart Ranch, 45.45 86 ⇑P P 01 35 55.7 +1.6
baz=45
120A U Bar Ranch, L 45.48 92 ⇓P P 01 35 55.4 +1.0
baz=45
U25A Circle Dot Ran 45.55 85 ⇑P P 01 35 55.3 +0.4
baz=45
T26A Comanche Natio 45.56 83 ⇓P P 01 35 55.9 +1.0
baz=45
Z21A St. Cloud Mine 45.56 90 ⇓P P 01 35 55.7 +0.6
baz=45
Y22A Socorro 45.58 89 ⇑P P 01 35 56.7 +1.6
baz=46
BNM Barren Site 45.65 89 eP P 01 35 56.7 +1.0
comp=Z,2.3nm,0.7s
W24A Lazy 6 Ranch, 45.71 87 ⇓P P 01 35 57.3 +1.2
baz=46
V25A Rancho No Teng 45.79 85 ⇑P P 01 35 57.5 +0.8
baz=46
R28A Tribune 45.91 81 ⇑P P 01 35 58.6 +1.0
baz=46
U26A Atchley Ranch, 45.97 84 ⇓P P 01 35 58.8 +0.7
baz=46
220A Playas Peak, P 45.99 93 ⇑P P 01 35 59.0 +0.7
baz=46
121A Cookes Peak, D 46.02 91 ⇑P P 01 35 59.5 +0.9
baz=46
Y23A Lovelace Mesa, 46.15 88 ⇑P P 01 36 00.7 +1.1
baz=46,SNR=5.8
W25A X Bar L Ranch, 46.29 86 ⇓P P 01 36 01.2 +0.6
baz=46
V26A Tequesquite Ra 46.33 85 ⇓P P 01 36 01.4 +0.5
baz=46
S28A Manter 46.33 82 ⇓P P 01 36 01.8 +0.9
baz=46
320A Kipp Ranch, An 46.38 93 ⇓P P 01 36 02.4 +1.1
baz=46
Y24A Capitan 46.54 88 ⇑P P 01 36 03.6 +1.0
baz=46
Z24A Sheeppen Canyo 46.98 89 ⇑P P 01 36 06.8 +0.7
baz=47
Y25A Mesa, Roswell 47.00 87 ⇓P P 01 36 06.6 +0.4
baz=47
X26A CR and CF Fran 47.13 86 ⇑P P 01 36 08.0 +0.8
baz=47
124A Stringfield Ra 47.35 89 ⇓P P 01 36 09.6 +0.5
baz=47
Z25A Roswell 47.41 88 ⇑P P 01 36 10.0 +0.6
baz=47
224A Cornudas Mount 47.73 90 ⇑P P 01 36 12.6 +0.6
baz=48
U30A WK&E Inc. Balk 47.78 82 ⇓P P 01 36 13.3 +1.2
baz=48
125A Gardner Draw, 47.87 89 ⇓P P 01 36 13.4 +0.5
baz=48
Z26A Caprock 47.88 88 ⇑P P 01 36 13.7 +0.7
baz=48
Y27A Causey 47.97 86 ⇑P P 01 36 14.6 +0.9
baz=48
MNTX Cornudas Mount 48.08 90 eP P 01 36 15.1 +0.7
comp=Z,1.6nm,0.8s
324A Moseley Ranch, 48.19 91 ⇑P P 01 36 16.3 +0.9
baz=48
126A Clayton Basin, 48.27 88 ⇑P P 01 36 16.5 +0.5
baz=48
GDL2 Guadalupe Moun 48.36 89 eP P 01 36 16.5 -0.3
325A Bean Ranch, Si 48.55 90 ⇓P P 01 36 18.8 +0.5
baz=48
226B Tecolote Peak, 48.57 89 ⇓P P 01 36 19.1 +0.7
baz=48
425A Indio Mountain 48.95 91 ⇑P P 01 36 22.0 +0.7
baz=49
326A Caldwell Ranch 49.21 89 ⇑P P 01 36 24.0 +0.7
baz=49
Z29A Hungry Hill Ra 49.29 86 ⇑P P 01 36 24.2 +0.3
baz=49
426A McDonald Obser 49.62 90 ⇓P P 01 36 26.2 -0.4
baz=50
Z30A Sanderson Ranc 49.63 85 ⇓P P 01 36 26.5 +0.1
baz=50
328A Wristen Ranch, 49.88 89 ⇓P P 01 36 28.2 -0.2
baz=50
DAG Danmarks Havn 49.93 9 iP P 01 36 29.2 +1.2
DAG pmax pmax
comp=Z,5.0nm,0.9s
DAG Danmarks Havn 49.93 9 iP P 01 36 29.2 +1.2
comp=Z,6.0nm,0.9s
526A Mary Lane Ranc 50.01 91 ⇓P P 01 36 29.7 +0.3
baz=50
WMOK Wichita Mounta 50.10 82 eP P 01 36 29.7 -0.2
WMOK pmax pmax
comp=Z,4.0nm,1.3s
WMOK Wichita Mounta 50.10 82 eP P 01 36 29.7 -0.2
comp=Z,3.9nm,1.3s
527A Woodward Ranch 50.24 90 ⇓P P 01 36 31.5 +0.3
baz=50
329A Wagon Wheel Ra 50.33 88 ⇑P P 01 36 31.8 +0.1
baz=50
626A Big Bend Ranch 50.34 91 ⇑P P 01 36 31.7 -0.1
baz=50
428A Kincaid Ranch, 50.41 89 ⇓P P 01 36 32.5 0.0
baz=50
131A Roby 50.50 85 ⇑P P 01 36 32.9 -0.1
baz=50
230A Sterling City 50.59 87 ⇑P P 01 36 33.7 0.0
baz=50
SUMG Summit 50.62 18 eP P 01 36 35.2 +1.4
SUMG pmax pmax
comp=Z,14nm,1.1s
SUMG Summit 50.62 18 eP P 01 36 35.2 +1.4
comp=Z,14nm,1.1s
Z32A Haskell 50.63 84 ⇑P P 01 36 34.2 +0.2
baz=50
528A Cox Ranch, San 50.74 90 ⇓P P 01 36 35.1 +0.1
baz=51
TXAR Lajitas Array 50.78 91 P P 01 36 35.5 +0.3
TXAR Lajitas Array 50.78 91 P P 01 36 35.5 +0.3
comp=Z,2.5nm,0.5s,baz=301,slow=5.8,SNR=63
627A Terlingua Ranc 50.87 91 ⇑P P 01 36 36.2 +0.4
baz=51
330A Mertzon 50.88 87 ⇓P P 01 36 36.0 +0.1
baz=51
429A Davenport Ranc 50.98 89 ⇓P P 01 36 36.6 0.0
baz=51
529A Stev Forest Ra 51.12 89 ⇑P P 01 36 37.8 +0.1
baz=51
TUL1 Tulsa 51.15 79 ⇑P P 01 36 37.5 -0.2
baz=51
628A Black Gap, Mar 51.15 90 ⇑P P 01 36 38.1 +0.2
baz=51
430A Baggett Ranch, 51.27 88 ⇓P P 01 36 38.2 -0.6
baz=51
331A San Angelo 51.41 87 ⇓P P 01 36 39.4 -0.5
baz=51
232A Coleman 51.49 86 ⇑P P 01 36 40.0 -0.4
baz=51
530A J-C Ranch, Com 51.65 89 ⇓P P 01 36 41.5 -0.1
baz=52
431A Sonora 51.73 87 ⇑P P 01 36 42.2 -0.1
baz=52
332A Millersview 51.78 86 ⇓P P 01 36 42.6 -0.1
baz=52
531A Rocksprings 52.13 88 ⇓P P 01 36 44.9 -0.4
baz=52
JCT Junction City 52.37 87 ⇓P P 01 36 46.6 -0.4
baz=52
532A Rocksprings 52.55 87 ⇓P P 01 36 47.8 -0.6
baz=52
631A Perdido Creek 52.64 89 ⇑P P 01 36 48.4 -0.6
baz=52
ULN Ulaanbaatar 52.85 302 eP P 01 36 51.0 +0.6
comp=Z,3.2nm,0.8s
SONM Songino Array 53.21 303 P P 01 36 54.1 +1.0
SONM Songino Array 53.21 303 P P 01 36 54.1 +1.0
comp=Z,1.6nm,0.9s,baz=47,slow=7.4,SNR=8.4
SFIN Scholer Farm 53.40 69 ⇑P P 01 36 53.9 -0.5
baz=53
SCHQ Schefferville 54.39 45 P P 01 37 00.3 -1.2
SCHQ Schefferville 54.39 45 P P 01 37 00.3 -1.2
comp=Z,1.8nm,0.7s,baz=293,slow=9.1,SNR=3.7
HHC Hu-ho-hao-te 54.91 293 iP P 01 37 07.0 +1.4
HHC pP pP 01 37 11.6 +0.2
HHC sP sP 01 37 14.0 +0.4
HHC PP PP 01 39 11.1 +2.8
HHC PcS PcS 01 42 07.8 +0.5
HHC S S 01 44 45.1 -1.1
HHC sS sS 01 44 52.7 -3.0
HHC ScS ScS 01 46 52.4 -1.4
HHC SS SS 01 48 27.7 -1.4
HHC pmax pmax
comp=Z,35nm,0.9s
HHC pmax pmax
comp=Z,110nm,5.1s
HHC LR LR
comp=N,140nm,21.4s
HHC LR LR
comp=E,240nm,21.4s
HHC LR LR

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,130nm,21.4s						
SADO	Sadowa	54.98	60	P	P	01 37 04.2	-1.7
SADO	Sadowa	54.98	60	P	P	01 37 04.2	-1.7
	comp=Z,0.8nm,0.4s,baz=321,slow=8.8,SNR=3.7						
WVT	Waverly	55.79	73	eP	P	01 37 10.7	-1.1
WVT				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WVT	Waverly	55.79	73	eP	P	01 37 10.7	-1.1
	comp=Z,4.2nm,1.0s						
KEV	Kevo	58.26	355	ep	P	01 37 29.4	+0.6
	comp=Z,2.0nm,0.6s						
KEV	Kevo	58.26	355	eP	P	01 37 29.4	+0.6
KEV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	58.56	355	P	P	01 37 31.4	+0.5
ARCES	ARCESS Array B	58.56	355	P	P	01 37 31.5	+0.5
	comp=Z,4.3nm,0.9s,baz=19,slow=7.0,SNR=9.5						
ZALV	Zalesovo Beam	59.07	319	P	P	01 37 35.3	+0.7
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	59.07	319	P	P	01 37 35.3	+0.7
ZALV	Zalesovo Beam	59.07	319	P	P	01 37 35.3	+0.7
	comp=Z,1.0nm,0.5s,baz=30,slow=5.6,SNR=5.3						
LZH	Lanzhou	62.58	294	eP	P	01 38 00.5	+1.5
LZH				pP	pP	01 38 05.1	+0.2
LZH				sP	sP	01 38 07.6	+0.5
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
KURK	Kurchatov	64.00	320	eP	P	01 38 08.9	+0.9
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KURK	Kurchatov	64.00	320	eP	P	01 38 08.5	+0.5
	comp=Z,1.9nm,0.6s						
JOF	Joensuu	64.68	351	ep	P	01 38 12.7	+0.5
	comp=Z,2.6nm,0.6s						
JOF	Joensuu	64.68	351	eP	P	01 38 12.7	+0.5
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	Borovoye	65.20	326	eP	P	01 38 17.5	+1.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
BRVK	Borovoye	65.20	326	eP	P	01 38 16.8	+1.0
	comp=Z,4.1nm,0.9s						
MK31	Makanchi Array	65.53	315	eP	P	01 38 18.0	-0.1
MK31	Makanchi Array	65.53	315	eP	P	01 38 17.9	-0.1
MKAR	Makanchi Array	65.53	315	ceP	P	01 38 18.5	+0.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	65.53	315	eP	P	01 38 18.3	+0.2
MKAR	Makanchi Array	65.53	315	P	P	01 38 18.0	-0.1
	comp=Z,0.9nm,0.6s,baz=46,slow=6.3,SNR=12						
FINES	FINESS Array B	66.56	354	P	P	01 38 25.2	+0.8
FINES	FINESS Array B	66.56	354	P	P	01 38 25.2	+0.8
	comp=Z,2.0nm,0.6s,baz=0.0,slow=3.3,SNR=4.1						
NOA	NORSAR Array B	67.37	1	P	P	01 38 30.5	+0.9
NOA	NORSAR Array B	67.37	1	P	P	01 38 30.5	+0.9
	comp=Z,0.9nm,0.7s,baz=0.1,slow=5.8,SNR=3.0						
GYA	Guiyang	67.95	285	eP	P	01 38 35.2	+1.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TKM2	Tokmak 2	71.49	317	eP	P	01 38 56.2	+0.6
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TKM2	Tokmak 2	71.49	317	eP	P	01 38 56.2	+0.6
	comp=Z,1.8nm,0.6s						
OBN	Obninsk	71.67	346	eP	P	01 38 56.2	0.0
OBN				e		01 41 32.0	
OBN				e		01 48 50.4	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ABKAR	Akbulak array	71.83	330	eP	P	01 38 58.0	+0.8
	comp=Z,2.3nm,0.8s						
AAK	Ala-Archa	72.19	317	eP	P	01 39 01.3	+1.5
AAK				pmax	pmax		
	comp=Z,13nm,2.5s						
AAK	Ala-Archa	72.19	317	eP	P	01 39 00.5	+0.7
	comp=Z,3.3nm,0.8s						
EKS2	Erkin-Say	72.46	318	eP	P	01 39 02.8	+1.4
EKS2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
EKS2	Erkin-Say	72.46	318	eP	P	01 39 02.8	+1.4
	comp=Z,2.4nm,0.7s						
KKAR	Karatay Array	73.42	320	eP	P	01 39 07.8	+0.9
KKAR	Karatay Array	73.42	320	eP	P	01 39 07.8	+0.9
KSH	Kashi	74.11	315	P	P	01 39 11.8	+0.6
KSH				pmax	pmax		
	comp=Z,260nm,5.6s						
AKASG	Malin Array Be	76.93	350	ceP	P	01 39 26.8	-0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	76.93	350	P	P	01 39 26.7	-0.2
AKASG	Malin Array Be	76.93	350	P	P	01 39 26.7	-0.2
	comp=Z,0.7nm,0.4s,baz=13,slow=6.4,SNR=4.8						
GERES	GERESS Array B	79.61	0	P	P	01 39 43.3	+1.3
GERES	GERESS Array B	79.61	0	P	P	01 39 43.3	+1.3
	comp=Z,0.5nm,0.7s,baz=4.1,slow=5.6,SNR=6.3						
BUR08	Bucovina Ar. S	80.34	352	eP	P	01 39 46.7	+0.8
PSZ	Piszkesteto	80.41	356	eP	P	01 39 46.3	+0.1
PSZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PSZ	Piszkesteto	80.41	356	eP	P	01 39 46.3	+0.1
	comp=Z,4.4nm,0.9s						
KIV	Kislovodsk	81.30	339	eP	P	01 39 50.8	-0.3
KIV				e		01 42 52.2	
KIV				e		01 50 07.3	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BR131	Keskin Array S	87.11	345	eP	P	01 40 21.8	+1.0
	comp=Z,1.2nm,0.8s						
BRTR	Keskin Array B	87.11	345	P	P	01 40 21.8	+1.0
BRTR	Keskin Array B	87.11	345	P	P	01 40 21.8	+1.0
	comp=Z,1.0nm,0.8s,baz=57,slow=4.0,SNR=7.7						
ESDC	Sonseca Array	87.47	14	P	P	01 40 22.6	+0.2
ESDC	Sonseca Array	87.47	14	P	P	01 40 22.6	+0.2
	comp=Z,0.1nm,0.2s,baz=336,slow=2.8,SNR=3.6						
WRA	Warramunga Arr	88.30	234	P	P	01 40 26.4	0.0
WRA	Warramunga Arr	88.30	234	P	P	01 40 26.4	0.0
	comp=Z,0.3nm,0.6s,baz=32,slow=6.5,SNR=3.8						
FITZ	Fitzroy Crossi	91.35	242	P	P	01 40 39.3	-1.3
FITZ	Fitzroy Crossi	91.35	242	P	P	01 40 39.3	-1.3
	comp=Z,1.9nm,0.9s,baz=23,slow=6.8,SNR=2.4						
ASAR	Alice Springs	91.65	233	P	P	01 40 40.9	-1.1
ASAR	Alice Springs	91.65	233	P	P	01 40 40.9	-1.1
	comp=Z,0.5nm,0.6s,baz=30,slow=4.5,SNR=5.8						
TORD	Torodi Ar. Bea	114.36	13	PKP	PKPdf	01 46 13.4	-1.4
TORD	Torodi Ar. Bea	114.36	13	PKP	PKPdf	01 46 13.4	-1.4
	comp=Z,0.3nm,0.9s,baz=351,slow=4.3,SNR=3.6						
QSPA	South Pole Qui	141.68	180	PKPpre	PKPpre	01 46 59.7	
QSPA	South Pole Qui	141.68	180	PKhKP	PKPpre	01 46 59.7	
	baz=88,slow=4.2						
TSUM	Tsumeb	147.22	353	ePKPbc	PKPbc	01 47 17.9	-0.4
MAW	Mawson	151.73	218	PKPbc	PKPbc	01 47 26.8	-1.1
MAW				PKPab	PKPab	01 47 36.5	-0.5
MAW	Mawson	151.73	218	PKPbc	PKPbc	01 47 26.8	-1.1
	comp=Z,1.5nm,0.8s,baz=49,slow=16,SNR=3.3						
MAW				PKPab	PKPab	01 47 36.5	-0.5
	comp=Z,1.9nm,0.6s,baz=102,slow=10,SNR=4.9						

IDC 05 01:31:05.5±1.9, 2°.75N×127°.20E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/23, mbtmp3.5/4, Error ellipse: s-maj=102.2km s-min=24.1km az=70.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.78	184	P	P	01 35 48.3	-0.1
	1.5nm,1.0s,baz=21,slow=8.6,SNR=2.6						
WRA	Warramunga Arr	23.62	163	P	P	01 36 18.5	+0.1
	1.1nm,0.4s,baz=343,slow=11,SNR=20						
ASAR	Alice Springs	27.06	166	P	P	01 36 49.9	-0.1
	0.2nm,0.5s,baz=343,slow=12,SNR=3.5						
MKAR	Makanchi Array	58.62	325	P	P	01 41 04.4	-0.1
	0.3nm,0.5s,baz=119,slow=7.9,SNR=5.8						

*ISCJB **05** 01:31:20.1±1.1, 36°.74N±0°.05×39°.01E±0°.03, h1km±8km, Error ellipse: s-maj=8.5km s-min=3.6km az=13.4*
*DDA **05** 01:31:20.3, 36°.72N×39°.00E, h7km, MD3.0*
*CSEM **05** 01:31:20.6±0.2, 36°.70N×39°.01E, h2km, ML1.9, Error ellipse: s-maj=7.7km s-min=3.9km az=11.0*
*NSSC **05** 01:31:21.2±2.0, 36°.69N×39°.02E, h4km±16km, MD1.4, ML1.9*
ISC 05 01:31:20.4±1.2, 36°.74N±0°.05×39°.02E±0°.02, h5km±11km, n19, σ0.44/36, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAB	Bozova	0.93	322	i P	Pg	01 31 38.6	+0.4
ATAB				i S	Sg	01 31 49.8	-0.4
ATAB	Bozova	0.93	322	i P	Pg	01 31 38.6	+0.4
ATAB				i S	Sg	01 31 49.8	-0.4
SFNV	Sufian	0.94	110	eP	Pg	01 31 38.0	-0.3
SFNV				eS	Sb	01 31 52.5	+0.6
SFNV				AML	AML	01 31 53.5	
	comp=E,55nm,0.2s						
SFNV				AML	AML	01 31 56.6	
	comp=Z,22nm,0.3s						
SFNV				AML	AML	01 31 57.3	
	comp=N,52nm,0.2s						
SFNV	Sufian	0.94	110	eP	Pg	01 31 38.0	-0.3
	SNR=67						
SFNV				eS	Sb	01 31 52.5	+0.6
	comp=N,52nm,0.2s,SNR=59						
KBSD	Kabsdagh	1.25	78	eP	Pg	01 31 44.6	+0.3
KBSD				eS	Sb	01 32 01.4	+0.6
KBSD				AML	AML	01 32 03.6	
	comp=E,37nm,0.2s						
KBSD				AML	AML	01 32 04.1	
	comp=N,60nm,0.5s						
KBSD	Kabsdagh	1.25	78	eP	Pg	01 31 44.6	+0.3
	SNR=57						
KBSD				eS	Sb	01 32 01.4	+0.6
	comp=N,60nm,0.5s,SNR=49						
GZT	Gaziantep	1.31	298	i P	Pn	01 31 44.7	-0.9
GZT				i S	Sg	01 32 02.2	-0.5
MARD	Mardin	1.52	67	i P	Pb	01 31 49.2	+0.1
MARD				i S	Sn	01 32 07.7	-0.8
KUZU	Kuzuini	1.56	272	i P	Pb	01 31 50.0	+0.2
KUZU				i S	Sg	01 32 10.3	-0.3
KUZU	Kuzuini	1.56	272	i P	Pb	01 31 50.0	+0.2
KUZU				i S	Sg	01 32 10.3	-0.3
MZRK	Al-Mazaregh	1.60	124	eP	Pn	01 31 49.6	+0.2
MZRK				eS	Sn	01 32 10.0	-0.5
MZRK				AML	AML	01 32 11.3	
	comp=Z,32nm,0.4s						
MZRK				AML	AML	01 32 11.9	
	comp=E,25nm,0.5s						
MZRK				AML	AML	01 32 12.2	
	comp=N,15nm,0.2s						
MZRK				AML	AML	01 32 13.5	
	comp=N,13nm,0.2s						
MZRK	Al-Mazaregh	1.60	124	eP	Pn	01 31 49.6	+0.2
	SNR=57						
MZRK				eS	Sn	01 32 10.0	-0.5
	comp=N,13nm,0.2s,SNR=49						
ELZG	Elazig	1.75	359	i P	Pg	01 31 54.2	+0.2
ELZG	Elazig	1.75	359	i P	Pg	01 31 54.2	+0.2
AYKD	Aykdinkavak	1.89	291	i P	Pn	01 31 52.7	-0.7
AYKD				i S	Sn	01 32 18.2	+0.5
DRWC	Darouich	1.90	267	eP	Pn	01 31 53.4	-0.1
DRWC				eS	Sb	01 32 19.7	+0.1
DRWC				AML	AML	01 32 28.0	
	comp=N,13nm,0.4s						
DRWC				AML	AML	01 32 29.3	
	comp=E,15nm,0.5s						
DRWC	Darouich	1.90	267	eP	Pn	01 31 53.4	-0.1
	SNR=45						
DRWC				eS	Sb	01 32 19.7	+0.1
	comp=E,15nm,0.5s,SNR=40						
BTCH	Batrach	2.18	252	eP	Pn	01 31 57.8	+0.4
BTCH				eS	Sn	01 32 24.7	-0.2
BTCH				AMSN		01 32 35.0	
BTCH				AML	AML	01 32 37.9	
	comp=E,18nm,0.8s						
BTCH				AML	AML	01 32 38.7	
	comp=N,18nm,0.4s						
BTCH	Batrach	2.18	252	eP	Pn	01 31 57.8	+0.4
	SNR=45						
BTCH				eS	Sn	01 32 24.7	-0.2
	comp=N,18nm,0.4s,SNR=40						

IDC 05 01:41:52.5±7.6, 30°.53S×178°.88W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.6/17, mbtmp3.5/2, Error ellipse: s-maj=309.7km s-min=63.2km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.34	267	P	P	01 49 48.9	+0.3
	0.2nm,0.3s,baz=100,slow=7.1,SNR=3.7						
WRA	Warramunga Arr	43.34	273	P	P	01 49 56.8	+0.1
	0.4nm,0.3s,baz=111,slow=8.0,SNR=16						
FINES	FINESS Array B	145.00	339	PKPbc	PKPbc	02 01 28.4	-1.9
	6.5nm,1.1s,baz=24,slow=7.6,SNR=3.2						

*ISK **05** 02:15:47.6, 38°.94N×25°.73E, h5km, MD3.4, ML3.3*
*ISCJB **05** 02:15:48.4±0.5, 38°.98N±0°.02×25°.80E±0°.03, h5km±3km, Error ellipse: s-maj=3.6km s-min=2.6km az=156.2*
*CSEM **05** 02:15:48.5±0.2, 38°.95N×25°.78E, h2km, ML2.8/4, Error ellipse: s-maj=4.1km s-min=3.3km az=72.0*
*ATH **05** 02:15:49.0, 39°.02N×25°.94E, h27km, MD3.2/8*
*DDA **05** 02:15:49.0, 39°.02N×25°.89E, h33km, MD3.3*
*THE **05** 02:15:49.3, 39°.01N×25°.87E, h9km±1km, ML2.8/4, Error ellipse: s-maj=1.2km s-min=0.5km az=83.0*
*SOF **05** 02:15:55.2, 39°.62N×25°.61E, h2km, MD3.1*
ISC 05 02:15:48.9±1.1, 38°.99N±0°.02×25°.82E±0°.02, h5km±9km, n151, σ1.10/187, 3C-8D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.23	7	P	Pg	02 15 53.6	+0.3
SIGR				S	Sg	02 15 56.6	+0.3
SIGR	SIGRI	0.23	7	P	Pg	02 15 53.6	+0.3
SIGR				S	Sg	02 15 56.6	+0.3
PRK	Paraskevi	0.44	53	P	Pg	02 15 57.1	-0.2
PRK				S	Sg	02 16 02.8	-0.2
PRK	Paraskevi	0.44	53	ePB	Pg	02 15 57.1	-0.2
PRK				eSB	Sg	02 16 02.7	-0.2
PRK	Paraskevi	0.44	53	P	Pg	02 15 57.1	-0.2
PRK				S	Sg	02 16 02.8	-0.2
CHOS	Chios island	0.63	163	P	Pg	02 16 01.8	+0.9
CHOS				S	Sb	02 16 10.8	-0.6
CHOS	Chios island	0.63	163	ePN	Pg	02 16 01.8	+0.9
CHOS				eSN	Sb	02 16 11.4	0.0
CHOS	Chios island	0.63	163	P	Pg	02 16 01.8	+0.9
CHOS				S	Sb	02 16 10.8	-0.6
AYVA	Ayvalik	0.75	64	i P	Pg	02 16 03.0	-0.3
AYVA				i S	Sg	02 16 12.3	-0.7
AYVA	Ayvalik	0.75	64	i P	Pg	02 16 03.0	-0.3
AYVA				i S	Sg	02 16 12.3	-0.7
URLA	Izmir	0.87	136	i P	Pg	02 16 05.9	+0.3
URLA				i S	Sb	02 16 19.0	+0.5
URLA	Izmir	0.87	136	i P	Pg	02 16 05.9	+0.3
URLA				i S	Sb	02 16 19.0	+0.5
BOZC	Bozcaada	0.87	12	i P	Pg	02 16 04.9	-0.8
BOZC				i S	Sg	02 16 17.0	0.0
EZN	Ezine	0.93	25	ePG	Pg	02 16 06.5	-0.2
EZN	Ezine	0.93	25	ePg	Pg	02 16 06.5	-0.2
LIA	Limnos Island	1.04	332	P	Pg	02 16 08.7	-0.1
LIA				S	Sb	02 16 23.7	+0.5
LIA	Limnos Island	1.04	332	ePN	Pg	02 16 08.9	+0.1
LIA				eSN	Sb	02 16 24.2	+1.0
LIA	Limnos Island	1.04	332	P	Pg	02 16 08.7	-0.1
LIA				S	Sb	02 16 23.7	+0.5
BLCB	Balcova	1.13	122	ePN	Pg	02 16 10.5	0.0
BLCB				eSN	Sb	02 16 26.5	+0.7
BLCB	Balcova	1.13	122	ePn	Pg	02 16 10.5	0.0
BLCB				eSn	Sb	02 16 26.5	+0.7
IZM	Izmir	1.27	117	ePN	Pg	02 16 13.1	-0.2
IZM				eSN	Sn	02 16 31.9	+1.1
IZM	Izmir	1.27	117	ePn	Pg	02 16 13.1	-0.2
IZM				eSn	Sn	02 16 32.0	+1.1
MRMA	Marmari	1.46	231	P	Pn	02 16 15.4	-0.6
MRMA	Marmari	1.46	231	P	Pn	02 16 15.4	-0.6
GELI	Tayfur-Gelibol	1.50	19	ePN	Pn	02 16 16.2	-0.2
GELI				eSN	Sg	02 16 37.4	+0.4
GELI	Tayfur-Gelibol	1.50	19	ePn	Pn	02 16 16.2	-0.2
GELI				eSn	Sg	02 16 37.4	+0.4
SMTH	Samothraki Isl	1.50	351	ePB	Pn	02 16 15.2	-1.3
SMTH				eSN	Sb	02 16 35.7	-0.9
AOS	Alonnisos	1.52	278	P	Pn	02 16 16.7	-0.1
AOS	Alonnisos	1.52	278	P	Pn	02 16 16.7	-0.1
AKHS	Akhisar	1.56	93	i P	Pn	02 16 16.4	-0.9
AKHS				i S	Sb	02 16 38.7	+0.5
AKHS	Akhisar	1.56	93	i P	Pn	02 16 16.4	-0.9
AKHS				i S	Sb	02 16 38.7	+0.5
LPK	Lapseki	1.56	27	ePN	Pn	02 16 17.6	+0.3
LPK	Lapseki	1.56	27	ePn	Pn	02 16 17.6	+0.3
GCAM	G?zelcaml?	1.70	139	i P	Pn	02 16 17.4	-1.8
GCAM				i S	Sn	02 16 42.4	+1.2
GCAM	G?zelcaml?	1.70	139	i P	Pn	02 16 17.4	-1.8
GCAM				i S	Sn	02 16 42.4	+1.2
BALB	Balikesir	1.73	67	ePN	Pn	02 16 19.7	+0.2
BALB	Balikesir	1.73	67	ePn	Pn	02 16 19.7	+0.2
ERIK	Erikli-Kesan	1.77	17	ePN	Pn	02 16 21.0	+0.9
ERIK	Erikli-Kesan	1.77	17	ePn	Pn	02 16 21.0	+0.9
ENEZ	Enez	1.77	8	ePN	Pn	02 16 19.8	-0.3
ENEZ	Enez	1.77	8	ePn	Pn	02 16 19.8	-0.3
GONE	Gonen-Balikesi	1.79	53	ePN	Pn	02 16 21.1	+0.6
GONE	Gonen-Balikesi	1.79	53	ePn	Pn	02 16 21.1	+0.6
KRBG	Karabiga-Canak	1.81	39	ePN	Pb	02 16 21.8	-0.7
KRBG	Karabiga-Canak	1.81	39	ePn	Pb	02 16 21.8	-0.7
ALN	Alexandroupoli	1.92	5	P	Pn	02 16 21.2	-1.0
ALN				S	Sn	02 16 44.9	-1.7
ALN	Alexandroupoli	1.92	5	ePN	Pn	02 16 21.5	-0.7
ALN				eSN	Sn	02 16 45.0	-1.7
ALN	Alexandroupoli	1.92	5	P	Pn	02 16 21.2	-1.0
APE	Apeiranthos	1.93	187	ePN	Pn	02 16 21.0	-1.4
APE	Apeiranthos	1.93	187	P	Pn	02 16 21.3	-1.1
APE	Apeiranthos	1.93	187	ePB	Pn	02 16 22.5	+0.1
APE				eSN	Sn	02 16 47.6	+0.6
APE	Apeiranthos	1.93	187	⇑iP	Pn	02 16 21.9	-0.5
APE	Apeiranthos	1.93	187	ePn	Pn	02 16 21.0	-1.4
APE	Apeiranthos	1.93	187	P	Pn	02 16 21.3	-1.1
APE				S	Sg	02 16 51.4	+0.6
OUR	Ouranopolis	1.96	314	P	Pn	02 16 22.6	-0.1
OUR	Ouranopolis	1.96	314	P	Pn	02 16 22.6	-0.1
RKY	Sarkoy-Tekirda	2.00	31	ePN	Pn	02 16 24.4	+1.1
RKY	Sarkoy-Tekirda	2.00	31	ePn	Pn	02 16 24.4	+1.1
SART	Tekirdag	2.00	31	i P	Pn	02 16 24.3	+0.9
SART				i S	Sn	02 16 49.0	+0.2
SART	Tekirdag	2.00	31	i P	Pn	02 16 24.3	+0.9
SART				i S	Sn	02 16 49.0	+0.2
AYDN	Tasoluk	2.09	129	i P	Pn	02 16 23.7	-0.9
AYDN	Tasoluk	2.09	129	i P	Pn	02 16 23.7	-0.9
MRMT	Marmara Adasi	2.12	40	ePN	Pn	02 16 26.1	+1.1
MRMT	Marmara Adasi	2.12	40	ePn	Pn	02 16 26.1	+1.1
BNT	Bandirma	2.12	49	ePN	Pn	02 16 26.1	+1.1
BNT	Bandirma	2.12	49	ePn	Pn	02 16 26.1	+1.1
MFT	Murefte	2.12	32	ePN	Pn	02 16 26.3	+1.2
MFT	Murefte	2.12	32	ePn	Pn	02 16 26.3	+1.2
DURS	Dursunbey	2.15	73	i P	Pn	02 16 24.4	-1.1
DURS				i S	Sn	02 16 50.5	-2.1
DURS	Dursunbey	2.15	73	i P	Pn	02 16 24.4	-1.1
DURS				i S	Sn	02 16 50.5	-2.1
MANT	Manisa	2.20	102	i P	Pn	02 16 24.2	-2.1
MANT	Manisa	2.20	102	i P	Pn	02 16 24.2	-2.1
BODT	Bodrum	2.25	148	ePN	Pn	02 16 26.1	-0.7
BODT	Bodrum	2.25	148	ePn	Pn	02 16 26.1	-0.7
DEMI	Demirci	2.26	88	i P	Pn	02 16 25.9	-1.0
DEMI				i S	Sg	02 17 00.3	-1.1
DEMI	Demirci	2.26	88	i P	Pn	02 16 25.9	-1.0
DEMI				i S	Sg	02 17 00.3	-1.1
DST	Dursunbey	2.26	73	ePN	Pn	02 16 28.7	+1.8
DST	Dursunbey	2.26	73	ePn	Pn	02 16 28.7	+1.8
KULA	Kula-Manisa	2.27	101	ePN	Pn	02 16 27.2	+0.1
KULA	Kula-Manisa	2.27	101	ePn	Pn	02 16 27.2	+0.1
MLSB	Milas	2.29	137	ePN	Pn	02 16 27.7	+0.4
MLSB	Milas	2.29	137	ePn	Pn	02 16 27.7	+0.4
PLG	Polygyros	2.30	308	ePN	Pn	02 16 27.8	+0.3
PLG				eSN	Sn	02 16 56.5	+0.3
TKR	Tekirdag	2.40	33	ePN	Pn	02 16 30.1	+1.3
TKR	Tekirdag	2.40	33	ePn	Pn	02 16 30.1	+1.3
DID	Didima	2.51	235	P	Pn	02 16 30.2	-0.2
DID	Didima	2.51	235	P	Pn	02 16 30.2	-0.2
SOH	Sokhos	2.64	315	ePN	Pn	02 16 33.2	+1.0
KDZ	Kurdzhali	2.68	353	i P	Pn	02 16 31.6	-1.1
KDZ	Kurdzhali	2.68	353	i P	Pn	02 16 31.6	-1.1
SRS	Serrai	2.73	322	P	Pn	02 16 33.0	-0.4
SRS	Serrai	2.73	322	P	Pn	02 16 33.0	-0.4
MDNY	Mudanya-Bursa	2.74	59	ePN	Pn	02 16 34.7	+1.2
MDNY	Mudanya-Bursa	2.74	59	ePn	Pn	02 16 34.7	+1.2
NVR	Nevrokopi	2.80	328	P	Pn	02 16 34.0	-0.4
NVR	Nevrokopi	2.80	328	P	Pn	02 16 34.0	-0.4
ULDT	Uludag	2.81	65	i P	Pn	02 16 34.0	-0.7
ULDT	Uludag	2.81	65	i P	Pn	02 16 34.0	-0.7
ARMT	Armutlu	2.82	55	ePN	Pn	02 16 35.7	+1.0
ARMT	Armutlu	2.82	55	ePn	Pn	02 16 35.7	+1.0
RZN	Rozhen	2.83	343	i P	Pn	02 16 34.8	-0.1
RZN	Rozhen	2.83	343	i P	Pn	02 16 34.8	-0.1
GDZ	Gediz	2.85	87	i P	Pn	02 16 33.8	-1.4
GDZ	Gediz	2.85	87	i P	Pn	02 16 33.8	-1.4
TVSB	Tavsanli	2.87	80	ePN	Pn	02 16 37.0	+1.7
TVSB	Tavsanli	2.87	80	ePn	Pn	02 16 37.0	+1.7
SLVT	Silivri	2.90	38	ePN	Pn	02 16 37.0	+1.4
SLVT	Silivri	2.90	38	ePn	Pn	02 16 37.0	+1.4
KHAL	Karahalli	2.94	101	i P	Pn	02 16 35.6	-0.7
KHAL	Karahalli	2.94	101	i P	Pn	02 16 35.6	-0.7
EDRB	Edirne	2.94	14	ePN	Pn	02 16 37.4	+1.1
EDRB	Edirne	2.94	14	ePn	Pn	02 16 37.4	+1.1
CTKS	Kestanelik-??a	3.05	42	ePN	Pn	02 16 39.0	+1.3
CTKS	Kestanelik-??a	3.05	42	ePn	Pn	02 16 39.0	+1.3
MMB	Musomiste	3.05	329	i P	Pn	02 16 36.9	-1.0
MMB	Musomiste	3.05	329	i P	Pn	02 16 36.9	-1.0
CTYL	Yal??k??y-??at	3.12	36	ePN	Pn	02 16 40.7	+1.9
CTYL	Yal??k??y-??at	3.12	36	ePn	Pn	02 16 40.7	+1.9
IZI	Iznik	3.12	63	ePN	Pn	02 16 40.4	+1.5
IZI	Iznik	3.12	63	ePn	Pn	02 16 40.4	+1.5
BGKT	Bogazkoy	3.15	45	ePN	Pn	02 16 41.0	+1.9
BGKT	Bogazkoy	3.15	45	ePn	Pn	02 16 41.0	+1.9
ISK	Istanbul-Kandi	3.24	49	ePN	Pn	02 16 42.0	+1.6
ISK	Istanbul-Kandi	3.24	49	ePn	Pn	02 16 42.0	+1.6
ALT	Altintas	3.34	87	ePN	Pn	02 16 43.3	+1.4
ALT	Altintas	3.34	87	ePn	Pn	02 16 43.3	+1.4
ADVT	Abdulvahap	3.35	63	ePN	Pn	02 16 43.4	+1.5
ADVT	Abdulvahap	3.35	63	ePn	Pn	02 16 43.4	+1.5
KLYT	Kilyos	3.35	46	ePN	Pn	02 16 44.0	+2.1
KLYT	Kilyos	3.35	46	ePn	Pn	02 16 44.0	+2.1
KYTH	Kithira	3.49	220	P	Pn	02 16 43.6	-0.3
KYTH	Kithira	3.49	220	P	Pn	02 16 43.6	-0.3
SILT	Sile	3.64	52	ePN	Pn	02 16 47.7	+1.8
SILT	Sile	3.64	52	ePn	Pn	02 16 47.7	+1.8
GULT	Gulveren	3.90	67	ePN	Pn	02 16 51.7	+2.2
GULT	Gulveren	3.90	67	ePn	Pn	02 16 51.7	+2.2
ESKT	Eskisehir	3.94	81	ePN	Pn	02 16 52.0	+1.9
ESKT	Eskisehir	3.94	81	ePn	Pn	02 16 52.0	+1.9
VTS	Vitosha	4.11	332	⇓iP	Pn	02 16 44.6	-7.9
SZH	Strazhica	4.28	1	i P	Pn	02 16 57.1	+2.4
SZH	Strazhica	4.28	1	i P	Pn	02 16 57.1	+2.4
MPEP	Malo Peshtene	4.64	341	i P	Pn	02 16 59.9	+0.3
TIRR	Tirgusor	5.80	19	⇓iP	Pn	02 17 18.6	+3.1
TIRR	Tirgusor	5.80	19	⇓iP	Pn	02 17 18.6	+3.1
MLR	Muntele Rosu	6.50	1	⇓iP	Pn	02 17 24.9	-0.4
MLR	Muntele Rosu	6.50	1	⇓iP	Pn	02 17 24.9	-0.4
LOT	Lotru	6.63	347	⇓iP	Pn	02 17 22.4	-4.7
PLOR	Plostina	6.89	5	⇓iP	Pn	02 17 31.1	+0.6
PLOR	Plostina	6.89	5	⇓iP	Pn	02 17 31.1	+0.6
VRI	Vrincioaia	6.91	5	⇑iP	Pn	02 17 31.0	+0.2
VRI	Vrincioaia	6.91	5	⇑iP	Pn	02 17 31.0	+0.2

*CSEM **05** 02:21:22.1, 46°.05N×14°.17E, h0km, ML0.7, After LJU*
LJU 05 02:21:22.1, 46°.05N×14°.17E, h6km, ML0.7, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRNS	Crni Vrh	0.07	65	⇑iPg	Pg	02 21 23.7	-0.2
CRNS				i Sg	Sg	02 21 24.8	-0.4
CRNS							
	comp=Z,81nm,0.1s						
JAVS	Javornik	0.18	206	i Pg	Pg	02 21 25.9	+0.1
JAVS				i Sg	Sg	02 21 29.0	+0.7
JAVS							
	comp=Z,7.0nm,0.1s						
JAVS	Javornik	0.18	206	i Pg	Pg	02 21 25.9	+0.1
JAVS				i Sg	Sg	02 21 29.0	+0.7
	comp=Z,7.0nm,0.1s						
VOJS	Vojsko	0.20	264	i Pg	Pg	02 21 26.2	-0.1
VOJS				i Sg	Sg	02 21 29.7	+0.5
VOJS	Vojsko	0.20	264	i Pg	Pg	02 21 26.2	-0.1
VOJS				i Sg	Sg	02 21 29.7	+0.5
GORS	Gorjuse	0.29	335	i Pg	Pg	02 21 27.7	-0.3
GORS				i Sg	Sg	02 21 32.1	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GORS							
	comp=Z,3.0nm,0.1s						
GORS	Gorjuse	0.29	335	i Pg	Pg	02 21 27.7	-0.3
GORS				i Sg	Sg	02 21 32.1	+0.1
	comp=Z,3.0nm,0.1s						
MOZS	Mozjanca	0.30	38	i Pg	Pg	02 21 28.6	+0.4
MOZS				i Sg	Sg	02 21 33.5	+1.2
MOZS							
	comp=Z,2.0nm,0.1s						
MOZS	Mozjanca	0.30	38	i Pg	Pg	02 21 28.6	+0.4
MOZS				i Sg	Sg	02 21 33.5	+1.2
	comp=Z,2.0nm,0.1s						
CADS	Cadrg	0.35	300	i Pg	Pg	02 21 28.9	-0.1
CADS				i Sg	Sg	02 21 34.2	+0.5
CADS							
	comp=Z,1.0nm,0.1s						
CADS	Cadrg	0.35	300	i Pg	Pg	02 21 28.9	-0.1
CADS				i Sg	Sg	02 21 34.2	+0.4
	comp=Z,1.0nm,0.1s						
CEY	Cerknica	0.36	151	i Pg	Pg	02 21 29.0	-0.2
CEY	Cerknica	0.36	151	i Pg	Pg	02 21 29.0	-0.2
SKDS	Skadanscina	0.52	192	i Pg	Pg	02 21 32.0	-0.2
SKDS	Skadanscina	0.52	192	i Pg	Pg	02 21 32.0	-0.2
VISS	Visnje	0.53	118	i Pg	Pg	02 21 32.8	+0.4
VISS	Visnje	0.53	118	i Pg	Pg	02 21 32.8	+0.5

*IDC **05** 02:36:02.9±1.8, 38°.02N×21°.93E, h45km±17km, mb3.9/18, mb1 4.0/25, mb1mx4.0/37, mbtmp3.9/25, ML3.9/6, MS2.8/1, Ms1 2.8/1, ms1mx2.2/41, Error ellipse: s-maj=16.5km s-min=13.1km az=7.0*

*PDG **05** 02:36:03.6±0.6, 38°.00N×21°.79E, h58km±2km, ML4.4/10, Error ellipse: s-maj=0.7km s-min=0.7km az=90.0*

*ISCJB **05** 02:36:03.9±0.2, 38°.06N±0°.01×21°.84E±0°.02, h67km±1km, mb4.0/21, Error ellipse: s-maj=2.6km s-min=1.7km az=43.3*

*CSEM **05** 02:36:04.7±0.1, 38°.01N×21°.81E, h57km±2km, ML4.1/8, Ms2.4, Error ellipse: s-maj=3.4km s-min=2.4km az=45.0*

*ATH **05** 02:36:04.5, 38°.03N×21°.86E, h56km±1km, MD3.7/48, ML4.0*

*THE **05** 02:36:05.6, 38°.01N×21°.84E, h48km±1km, ML4.1/8, Error ellipse: s-maj=1.3km s-min=0.5km az=17.0*

*TIR **05** 02:36:05.8±3.3, 38°.83N×21°.91E, h0km±214km*

*HLW **05** 02:36:06.4, 37°.69N×22°.58E, h20km±19km, Md4.5, Ml4.3*

ISC 05 02:36:03.9±0.5, **38°.02N**±0°.02×**21°.84E**±0°.02, **h55**km±3km, **n418**, σ1**s58**/512, **mb4.1**/21, **21C-20D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLV	Kalavryta, Ach	0.25	84	eP	Pn	02 36 13.5	+0.3
KLV				eS	Sn	02 36 21.0	+1.1
LAKA	Lakka	0.25	27	P	Pn	02 36 13.9	+0.8
LAKA				S	Sn	02 36 20.4	+0.6
LAKA	Lakka	0.25	27	eP	Pn	02 36 14.0	+0.8
LAKA				eS	Sn	02 36 21.4	+1.6
LAKA	Lakka	0.25	27	P	Pn	02 36 13.9	+0.8
LAKA				S	Sn	02 36 20.4	+0.6
UPR	University Cam	0.27	351	P	Pn	02 36 14.2	+0.9
UPR				S	Sn	02 36 20.5	+0.5
RLS	Riolos of Patr	0.30	278	P	Pn	02 36 13.8	+0.3
RLS	Riolos of Patr	0.30	278	eP	Pn	02 36 13.9	+0.4
RLS				eS	Sn	02 36 22.0	+1.6
RLS	Riolos of Patr	0.30	278	P	Pn	02 36 13.8	+0.3
RLS				S	Sn	02 36 21.2	+0.8
PSA1	Psathopyrgos	0.31	7	eP	Pn	02 36 14.7	+1.1
PSA1				eS	Sn	02 36 22.5	+2.0
AXS	Araxos	0.41	296	P	Pn	02 36 15.2	+0.7
AXS				S	Sn	02 36 22.8	+0.7
AXS	Araxos	0.41	296	P	Pn	02 36 15.2	+0.7
AXS				S	Sn	02 36 22.8	+0.7
GUR	Goura	0.41	102	P	Pn	02 36 15.3	+0.7
GUR				S	Sn	02 36 23.0	+0.7
GUR	Goura	0.41	102	eP	Pn	02 36 15.5	+0.9
GUR				eS	Sn	02 36 24.0	+1.7
GUR	Goura	0.41	102	P	Pn	02 36 15.3	+0.7
GUR				S	Sn	02 36 23.0	+0.7
EFP	Efpalio	0.41	7	P	Pn	02 36 15.7	+1.2
EFP				S	Sn	02 36 23.7	+1.5
EFP	Efpalio	0.41	7	eP	Pn	02 36 15.8	+1.2
EFP				eS	Sn	02 36 24.9	+2.7
EFP	Efpalio	0.41	7	P	Pn	02 36 15.7	+1.2
EFP				S	Sn	02 36 23.6	+1.4
KALE	Kalithea	0.44	32	P	Pn	02 36 16.1	+1.1
KALE				S	Sn	02 36 24.1	+1.2
KALE	Kalithea	0.44	32	eP	Pn	02 36 16.2	+1.3
KALE				eS	Sn	02 36 24.5	+1.6
KALE	Kalithea	0.44	32	P	Pn	02 36 16.0	+1.1
KALE				S	Sn	02 36 24.1	+1.2
AMT	Artemida-Makis	0.50	192	eP	Pn	02 36 16.0	+0.5
AMT				eS	Sn	02 36 25.9	+2.0
AMT	Artemida-Makis	0.50	192	P	Pn	02 36 15.9	+0.5
AMT				S	Sn	02 36 25.3	+1.4
THAL	Thalero	0.65	88	P	Pn	02 36 18.1	+0.9
THAL				S	Sn	02 36 28.4	+1.4
THAL	Thalero	0.65	88	P	Pn	02 36 18.1	+0.9
THAL				S	Sn	02 36 28.4	+1.4
DSF	Desfina	0.67	54	P	Pn	02 36 18.4	+0.9
DSF				S	Sn	02 36 28.9	+1.4
DSF	Desfina	0.67	54	P	Pn	02 36 18.4	+0.9
DSF				S	Sn	02 36 28.9	+1.4
VLX	Vlachokerasia	0.78	146	P	Pn	02 36 20.2	+1.3
VLX				S	Sn	02 36 31.0	+1.1
VLX	Vlachokerasia	0.78	146	eP	Pn	02 36 20.2	+1.3
VLX				eS	Sn	02 36 32.2	+2.3
VLX	Vlachokerasia	0.78	146	P	Pn	02 36 20.2	+1.3
VLX				S	Sn	02 36 31.0	+1.1
KFL	Anninata	0.83	277	P	Pn	02 36 20.8	+1.2
KFL	Anninata	0.83	277	P	Pn	02 36 20.8	+1.2
ITM	Ithomi	0.84	175	P	Pn	02 36 20.9	+1.2
ITM	Ithomi	0.84	175	eP	Pn	02 36 21.0	+1.2
ITM				eS	Sn	02 36 33.8	+2.5
ITM	Ithomi	0.84	175	P	Pn	02 36 20.9	+1.2
ITM				S	Sn	02 36 33.8	+2.5
LTK	Loutraki	0.89	89	P	Pn	02 36 21.0	+0.7
LTK	Loutraki	0.89	89	eP	Pn	02 36 20.8	+0.5
LTK	Loutraki	0.89	89	P	Pn	02 36 21.0	+0.7
LTK				S	Sn	02 36 33.4	+1.0
EVR	Evrytania	0.90	359	P	Pn	02 36 22.8	+2.3
EVR	Evrytania	0.90	359	eP	Pn	02 36 23.0	+2.5
EVR	Evrytania	0.90	359	P	Pn	02 36 22.8	+2.3
EVR				S	Sn	02 36 37.2	+4.5
AXAR	Agios Charalam	0.99	41	P	Pn	02 36 23.1	+1.5
AXAR	Agios Charalam	0.99	41	P	Pn	02 36 23.1	+1.5
VLS	Valsamata	1.00	279	P	Pn	02 36 22.9	+1.2
VLS	Valsamata	1.00	279	eP	Pn	02 36 23.4	+1.7
VLS				eS	Sn	02 36 38.0	+3.1
VLS	Valsamata	1.00	279	P	Pn	02 36 22.9	+1.2
VLS				S	Sn	02 36 37.3	+2.4
MAKR	Makrakomi, Fth	1.02	13	P	Pn	02 36 24.6	+2.6
MAKR	Makrakomi, Fth	1.02	13	P	Pn	02 36 24.6	+2.6
MAKR				S	Sn	02 36 40.7	+5.2
AGG	Agios Georgios	1.07	21	P	Pn	02 36 24.5	+1.7
AGG				S	Sn	02 36 38.9	+2.1
AGG	Agios Georgios	1.07	21	eP	Pn	02 36 25.0	+2.2
AGG	Agios Georgios	1.07	21	P	Pn	02 36 24.5	+1.7
AGG				S	Sn	02 36 38.9	+2.1
LKR	Lokris	1.11	55	P	Pn	02 36 24.1	+0.9
LKR	Lokris	1.11	55	eP	Pn	02 36 24.1	+0.9
LKR				eS	Sn	02 36 38.9	+1.4
LKR	Lokris	1.11	55	P	Pn	02 36 24.1	+0.9
PYL	PYLOS	1.12	184	P	Pn	02 36 24.6	+1.2
PYL				S	Sn	02 36 39.6	+1.7
PYL	PYLOS	1.12	184	eP	Pn	02 36 25.0	+1.6
PYL				eS	Sn	02 36 41.3	+3.4
PYL	PYLOS	1.12	184	P	Pn	02 36 24.6	+1.2
PYL				S	Sn	02 36 39.0	+1.1
VIL2	Platees	1.14	80	P	Pn	02 36 24.3	+0.6
VIL2				S	Sn	02 36 38.9	+0.5
ATAL	Atalanti	1.15	54	P	Pn	02 36 24.9	+1.2
ATAL	Atalanti	1.15	54	P	Pn	02 36 24.9	+1.2
LKD2	Lefkada island	1.21	310	P	Pn	02 36 26.2	+1.7
LKD2	Lefkada island	1.21	310	eP	Pn	02 36 26.3	+1.7
LKD2				eS	Sn	02 36 42.5	+2.6
LKD2	Lefkada island	1.21	310	P	Pn	02 36 26.2	+1.7
DIDY	Didyma	1.22	116	P	Pn	02 36 25.4	+0.7
DIDY				S	Sn	02 36 41.9	+1.7
DIDY	Didyma	1.22	116	P	Pn	02 36 25.4	+0.7
DIDY				S	Sn	02 36 41.9	+1.7
DID	Didima	1.22	114	P	Pn	02 36 25.4	+0.7
DID	Didima	1.22	114	eP	Pn	02 36 25.6	+0.9
DID				eS	Sn	02 36 42.1	+1.8
DID	Didima	1.22	114	P	Pn	02 36 25.4	+0.7
DID				S	Sn	02 36 41.5	+1.2
DYR	Agios Nikonas	1.31	162	P	Pn	02 36 27.8	+1.8
DYR	Agios Nikonas	1.31	162	eP	Pn	02 36 28.5	+2.5
DYR	Agios Nikonas	1.31	162	P	Pn	02 36 27.8	+1.8
NAIG	Nisos Aigina	1.33	101	eP	Pn	02 36 27.4	+1.2
SMIA	Simia	1.38	51	P	Pn	02 36 27.9	+1.1
SMIA	Simia	1.38	51	P	Pn	02 36 27.9	+1.1
ATH	Athens Observa	1.48	91	P	Pn	02 36 29.1	+0.9
ATH				S	Sn	02 36 47.2	+0.6
ATH	Athens Observa	1.48	91	eP	Pn	02 36 29.1	+0.9
ATH				eS	Sn	02 36 47.8	+1.2
ATH	Athens Observa	1.48	91	P	Pn	02 36 29.1	+0.9
ATH				S	Sn	02 36 47.2	+0.6
MRKA	Markates	1.54	63	P	Pn	02 36 29.8	+0.8
MRKA	Markates	1.54	63	P	Pn	02 36 29.8	+0.8
ATHU	Athens Univers	1.54	91	P	Pn	02 36 29.7	+0.7
ATHU	Athens Univers	1.54	91	P	Pn	02 36 29.7	+0.7
THL	Klokotos Trika	1.55	5	P	Pn	02 36 31.5	+2.4
THL	Klokotos Trika	1.55	5	eP	Pn	02 36 31.6	+2.4
THL				eS	Sn	02 36 50.4	+2.3
THL	Klokotos Trika	1.55	5	P	Pn	02 36 31.5	+2.4
VLI	Veliai	1.57	146	P	Pn	02 36 31.0	+1.7
VLI	Veliai	1.57	146	eP	Pn	02 36 31.1	+1.7
VLI				eS	Sn	02 36 51.5	+2.9
VLI	Veliai	1.57	146	P	Pn	02 36 31.0	+1.7
PTL	Penteli	1.60	88	P	Pn	02 36 30.7	+0.8
PTL	Penteli	1.60	88	eP	Pn	02 36 30.9	+1.1
PTL				eS	Sn	02 36 50.2	+0.8
PTL	Penteli	1.60	88	P	Pn	02 36 30.7	+0.8
NEO	Neokhori	1.68	40	P	Pn	02 36 32.1	+1.1
NEO	Neokhori	1.68	40	eP	Pn	02 36 32.2	+1.2
NEO				eS	Sn	02 36 53.2	+1.8
NEO	Neokhori	1.68	40	P	Pn	02 36 32.1	+1.1
XOR	Xorichti	1.71	38	P	Pn	02 36 32.5	+1.1
XOR	Xorichti	1.71	38	P	Pn	02 36 32.5	+1.1
SKIA	Skiathos	1.71	48	P	Pn	02 36 32.6	+1.2
SKIA	Skiathos	1.71	48	P	Pn	02 36 32.6	+1.2
JAN	Janina	1.81	335	P	Pn	02 36 35.1	+2.4
JAN	Janina	1.81	335	eP	Pn	02 36 35.2	+2.5
JAN				eS	Sn	02 36 57.2	+2.7
JAN	Janina	1.81	335	P	Pn	02 36 35.1	+2.4
IGT	Igoumenitsa	1.92	323	P	Pn	02 36 35.2	+1.1
IGT	Igoumenitsa	1.92	323	P	Pn	02 36 35.2	+1.1
AOS	Alonnisos	1.97	54	P	Pn	02 36 35.5	+0.7
AOS	Alonnisos	1.97	54	P	Pn	02 36 35.5	+0.7
KYTH	Kithira	1.98	151	P	Pn	02 36 38.0	+2.9
KYTH	Kithira	1.98	151	eP	Pn	02 36 37.8	+2.7
KYTH	Kithira	1.98	151	P	Pn	02 36 38.0	+2.9
MRMA	Marmari	2.01	88	P	Pn	02 36 36.5	+1.1
MRMA	Marmari	2.01	88	P	Pn	02 36 36.5	+1.1
KZN	Kozani	2.29	359	P	Pn	02 36 41.4	+2.2
KZN	Kozani	2.29	359	eP	Pn	02 36 41.8	+2.6
KZN				eS	Sn	02 37 08.7	+2.5
KZN	Kozani	2.29	359	P	Pn	02 36 41.4	+2.2
KEK	Kerkira	2.32	317	P	Pn	02 36 40.6	+0.9
KEK	Kerkira	2.32	317	eP	Pn	02 36 40.8	+1.1
KEK				eS	Sn	02 37 08.5	+1.4
KEK	Kerkira	2.32	317	P	Pn	02 36 40.6	+0.9
SRN	Sarande	2.35	323	ePN	Pn	02 36 41.1	+1.1
SRN				i SN	Sn	02 37 08.8	+1.2
SRN	Sarande	2.35	323	P	Pn	02 36 41.2	+1.2
SRN	Sarande	2.35	323	ePn	Pn	02 36 41.1	+1.1
	SNR=4.0						
SRN				i Sn	Sn	02 37 08.8	+1.2
	SNR=4.0						
ANKY	Antikythira Is	2.45	151	eP	Pn	02 36 44.4	+3.0
NEST	Nestorio	2.47	346	P	Pn	02 36 44.6	+2.8
NEST	Nestorio	2.47	346	P	Pn	02 36 44.6	+2.8
PLG	Polygyros	2.66	27	P	Pn	02 36 45.6	+1.2
PLG	Polygyros	2.66	27	eP	Pn	02 36 45.9	+1.5
PLG				eS	Sn	02 37 16.7	+1.3
PLG	Polygyros	2.66	27	P	Pn	02 36 45.6	+1.2
KBN	Korca	2.73	343	P	Pn	02 36 47.9	+2.6
KBN	Korca	2.73	343	P	Pn	02 36 47.9	+2.6
HORT	Hortiatis	2.75	20	P	Pn	02 36 46.9	+1.2
HORT	Hortiatis	2.75	20	P	Pn	02 36 46.9	+1.2
FNA	Florina	2.78	353	P	Pn	02 36 47.8	+1.8
FNA	Florina	2.78	353	eP	Pn	02 36 48.0	+2.0
FNA				eS	Sn	02 37 20.1	+1.6
FNA	Florina	2.78	353	P	Pn	02 36 47.8	+1.8
OUR	Ouranopolis	2.85	35	P	Pn	02 36 47.9	+1.0
OUR	Ouranopolis	2.85	35	P	Pn	02 36 47.9	+1.0
GRG	Griva	2.97	8	P	Pn	02 36 50.7	+2.2
GRG	Griva	2.97	8	eP	Pn	02 36 50.8	+2.2
GRG	Griva	2.97	8	P	Pn	02 36 50.7	+2.2
BIA	Bitola	3.02	353	P	Pn	02 36 50.7	+1.4
BIA	Bitola	3.02	353	⇑i Pn	Pn	02 36 50.7	+1.4
BIA				eSg	Sn	02 37 26.1	+1.7
BIA	Bitola	3.02	353	⇑i Pn	Pn	02 36 50.6	+1.3
BIA				eSg	Sn	02 37 26.0	+1.7
SOH	Sokhos	3.04	22	P	Pn	02 36 51.5	+2.0
SOH	Sokhos	3.04	22	eP	Pn	02 36 51.7	+2.2
SOH				eS	Sn	02 37 26.6	+2.0
SOH	Sokhos	3.04	22	P	Pn	02 36 51.5	+2.0
APE	Apeiranthos	3.08	107	ePN	Pn	02 36 51.2	+1.1
APE	Apeiranthos	3.08	107	P	Pn	02 36 51.0	+0.9
APE	Apeiranthos	3.08	107	eP	Pn	02 36 51.2	+1.1
APE				eS	Sn	02 37 27.1	+1.3
APE	Apeiranthos	3.08	107	⇓i P	Pn	02 36 51.0	+0.9
APE	Apeiranthos	3.08	107	P	Pn	02 36 51.0	+0.9
APE				S	Sn	02 37 25.4	-0.4
LIA	Limnos Island	3.21	53	P	Pn	02 36 52.8	+1.0
LIA	Limnos Island	3.21	53	eP	Pn	02 36 53.0	+1.2
LIA	Limnos Island	3.21	53	P	Pn	02 36 52.8	+1.0
VAM	Vamos	3.22	143	P	Pn	02 36 53.0	+1.0
VAM	Vamos	3.22	143	eP	Pn	02 36 53.2	+1.2
VAM				eS	Sn	02 37 31.3	+2.1
VAM	Vamos	3.22	143	P	Pn	02 36 53.0	+1.0
KNT	Kendrikon	3.24	14	P	Pn	02 36 54.4	+2.1
KNT	Kendrikon	3.24	14	P	Pn	02 36 54.4	+2.1
CHOS	Chios island	3.34	82	P	Pn	02 36 54.9	+1.2
CHOS	Chios island	3.34	82	eP	Pn	02 36 55.5	+1.8
CHOS	Chios island	3.34	82	P	Pn	02 36 54.9	+1.2
VAY	Valandovo	3.35	9	i Pn	Pn	02 36 55.5	+1.8
VAY				eSg	Sn	02 37 33.0	+0.9
VAY	Valandovo	3.35	9	i Pn	Pn	02 36 55.9	+2.2
VAY				eSg	Sn	02 37 33.4	+1.3
SIGR	SIGRI	3.36	68	P	Pn	02 36 56.2	+2.3
SIGR	SIGRI	3.36	68	P	Pn	02 36 56.2	+2.3
SRS	Serrai	3.38	23	P	Pn	02 36 55.8	+1.7
SRS	Serrai	3.38	23	P	Pn	02 36 55.8	+1.7
KAVA	Kavala	3.62	34	P	Pn	02 36 58.1	+0.7
KAVA	Kavala	3.62	34	P	Pn	02 36 58.1	+0.7
GVD	Gavdhos	3.66	150	eP	Pn	02 36 59.5	+1.6
TIR	Tirane	3.66	336	ePN	Pn	02 36 59.6	+1.7
TIR				i SN	Sn	02 37 40.0	+0.2
TIR	Tirane	3.66	336	P	Pn	02 36 59.2	+1.3
TIR	Tirane	3.66	336	P	Pn	02 36 59.2	+1.3
TIR	Tirane	3.66	336	ePn	Pn	02 36 59.6	+1.7
	SNR=4.0						
TIR				i Sn	Sn	02 37 40.0	+0.2
	SNR=4.0						
IDI	Anoyia	3.67	137	P	Pn	02 36 58.4	+0.3
IDI	Anoyia	3.67	137	eP	Pn	02 36 58.5	+0.3
IDI	Anoyia	3.67	137	P	Pn	02 36 58.4	+0.3
NVR	Nevrokopi	3.67	25	eP	Pn	02 37 00.1	+1.9
PRK	Paraskevi	3.68	69	eP	Pn	02 37 00.5	+2.3
BOZC	Bozcaada	3.76	60	i P	Pn	02 37 00.8	+1.5
URLA	Izmir	3.76	83	i P	Pn	02 37 00.9	+1.5
URLA	Izmir	3.76	83	i P	Pn	02 37 00.9	+1.5
SMTH	Samothraki Isl	3.77	48	eP	Pn	02 37 00.5	+1.0
SMTH				eS	Sn	02 37 44.3	+1.7
PHP	Peshkopia	3.82	344	ePN	Pn	02 37 01.4	+1.2
PHP				i SN	Sn	02 37 41.9	-1.9
PHP	Peshkopia	3.82	344	P	Pn	02 37 01.3	+1.1
PHP	Peshkopia	3.82	344	P	Pn	02 37 01.3	+1.1
PHP				i Sn	Sn	02 37 41.9	-1.9
	SNR=4.0						
SIVA	Sivas	3.83	140	P	Pn	02 37 02.7	+2.4
SIVA	Sivas	3.83	140	eP	Pn	02 37 02.8	+2.4
SIVA				eS	Sn	02 37 46.5	+2.3
SIVA	Sivas	3.83	140	P	Pn	02 37 02.7	+2.4
SKO	Skopje	3.96	356	i Pn	Pn	02 37 04.8	+2.8
SKO				eSg	Sn	02 37 48.3	+1.1
SKO	Skopje	3.96	356	i Pn	Pn	02 37 01.3	-0.8
SKO				eSg	Sn	02 37 48.8	+1.6
AYVA	Ayvalik	4.01	70	i P	Pn	02 37 00.7	-2.1
AYVA	Ayvalik	4.01	70	i P	Pn	02 37 00.7	-2.1
LAST	Lasithi	4.09	133	P	Pn	02 37 04.8	+0.9
LAST	Lasithi	4.09	133	eP	Pn	02 37 04.8	+0.9
LAST	Lasithi	4.09	133	P	Pn	02 37 04.8	+0.9
NPS	Neapolis	4.10	131	eP	Pn	02 37 05.0	+1.0
BLCB	Balcova	4.12	83	ePN	Pn	02 37 06.0	+1.8
GCAM	G?zelcaml?	4.28	93	i P	Pn	02 37 07.8	+1.3
GCAM	G?zelcaml?	4.28	93	i P	Pn	02 37 07.8	+1.3
PUK	Puka	4.29	340	ePN	Pn	02 37 07.4	+0.8
PUK				i SN	Sn	02 37 55.8	+0.4
PUK	Puka	4.29	340	ePn	Pn	02 37 07.4	+0.8
	SNR=4.0						
PUK				i Sn	Sn	02 37 55.8	+0.4
	SNR=4.0						
IZM	Izmir	4.29	83	ePN	Pn	02 37 08.5	+1.9
ENEZ	Enez	4.30	50	ePN	Pn	02 37 06.2	-0.6
GELI	Tayfur-Gelibol	4.31	55	ePN	Pn	02 37 07.0	+0.1
ALN	Alexandroupoli	4.34	47	eP	Pn	02 37 08.9	+1.6
ALN				eS	Sn	02 37 56.8	+0.2
ULC	Ulcinj	4.41	334	⇑i Pn	Pn	02 37 08.5	+0.2
ULC				eSn	Sn	02 37 57.7	-0.7
ULC	Ulcinj	4.41	334	⇑i Pn	Pn	02 37 08.5	+0.2
ULC				eSn	Sn	02 37 57.7	-0.7
BODT	Bodrum	4.45	101	ePN	Pn	02 37 10.8	+2.0
NIS1	Nisyros Isl.	4.49	107	eP	Pn	02 37 12.2	+2.9
ERIK	Erikli-Kesan	4.49	52	ePN	Pn	02 37 09.0	-0.2
LPK	Lapseki	4.49	57	ePN	Pn	02 37 09.7	+0.4
BCI	Bajram Curri	4.55	343	ePN	Pn	02 37 11.9	+1.7
BCI	Bajram Curri	4.55	343	ePn	Pn	02 37 11.9	+1.7
	SNR=4.0						
ZKR	Zakros	4.56	128	eP	Pn	02 37 12.6	+2.2
ZKR				eS	Sn	02 38 04.0	+1.9
PLD	Plovdiv	4.63	27	ePn	Pn	02 37 13.7	+2.4
VTS	Vitosha	4.69	12	⇓i P	Pn	02 37 14.5	+2.3
VTS	Vitosha	4.69	12	⇓i P	Pn	02 37 14.5	+2.3
VTS	Vitosha	4.69	12	ePn	Pn	02 37 14.9	+2.7
VTS				S	Sn	02 38 08.2	+2.9
DAT	Datca	4.75	104	ePN	Pn	02 37 14.8	+1.8
MLSB	Milas	4.77	97	ePN	Pn	02 37 15.6	+2.4
PVY	Plav	4.79	343	⇑i Pn	Pn	02 37 14.7	+1.1
PVY				eSn	Sn	02 38 08.1	+0.3
PVY	Plav	4.79	343	⇑i Pn	Pn	02 37 14.7	+1.1
PVY				eSn	Sn	02 38 08.1	+0.3
AYDN	Tasoluk	4.79	92	i P	Pn	02 37 15.4	+1.8
AYDN	Tasoluk	4.79	92	i P	Pn	02 37 15.4	+1.8
PDG	Podgorica	4.83	337	⇓i Pn	Pn	02 37 14.4	+0.4
PDG				eSn	Sn	02 38 07.5	-1.0
TTG	Podgorica	4.83	337	⇓i Pn	Pn	02 37 14.4	+0.4
TTG				eSn	Sn	02 38 07.5	-1.0
BUM	Brajici-Budva	4.83	333	⇓i Pn	Pn	02 37 14.0	-0.1
BUM				eSn	Sn	02 38 08.0	-0.8
BUM	Brajici-Budva	4.83	333	⇓i Pn	Pn	02 37 14.0	-0.1
BUM				eSn	Sn	02 38 08.0	-0.8
KRBG	Karabiga-Canak	4.86	59	ePN	Pn	02 37 15.0	+0.6
BAI	Bari	4.92	310	ePn	Pn	02 37 15.1	-0.1
BAI				eSn	Sn	02 38 07.8	-2.9
RKY	Sarkoy-Tekirda	4.92	56	ePN	Pn	02 37 15.9	+0.6
KARP	Karpathos	4.93	118	eP	Pn	02 37 19.1	+3.6
GONE	Gonen-Balikesi	4.98	64	ePN	Pn	02 37 17.6	+1.5
BALB	Balikesir	4.99	69	ePN	Pn	02 37 17.6	+1.4
MFT	Murefte	5.04	55	ePN	Pn	02 37 17.4	+0.5
BEY	Berane	5.07	344	⇑i Pn	Pn	02 37 18.3	+0.9
BEY				eSn	Sn	02 38 14.6	0.0
IVA	Berane	5.07	344	⇑i Pn	Pn	02 37 18.3	+0.9
IVA				eSn	Sn	02 38 14.6	0.0
HCY	Herceg Novi	5.11	331	⇑i Pn	Pn	02 37 17.2	-0.6
HCY				eSn	Sn	02 38 14.7	-0.8
HCY	Herceg Novi	5.11	331	⇑i Pn	Pn	02 37 17.2	-0.6
HCY				eSn	Sn	02 38 14.7	-0.8
MRMT	Marmara Adasi	5.16	58	ePN	Pn	02 37 19.2	+0.7
YER	Yerkesik	5.19	98	ePN	Pn	02 37 21.1	+2.1
NKY	Niksic	5.26	337	⇓i Pn	Pn	02 37 20.4	+0.4
NKY				eSn	Sn	02 38 18.6	-0.7
NKY	Niksic	5.26	337	⇓i Pn	Pn	02 37 20.4	+0.4
NKY				eSn	Sn	02 38 18.6	-0.7
BNT	Bandirma	5.27	62	ePN	Pn	02 37 20.5	+0.5
CDT	Castel del Mon	5.28	307	ePn	Pn	02 37 20.3	+0.1
CDT				eSn	Sn	02 38 15.7	-3.9
ARG	Arkhangelos	5.34	108	eP	Pn	02 37 23.7	+2.7
EDRB	Edirne	5.37	43	ePN	Pn	02 37 19.9	-1.5
KULA	Kula-Manisa	5.39	83	ePN	Pn	02 37 23.8	+2.0
BRY	Bratogost	5.49	334	⇓i Pn	Pn	02 37 22.9	-0.2
BRY				eSn	Sn	02 38 23.6	-1.4
BRY	Bratogost	5.49	334	⇓i Pn	Pn	02 37 22.9	-0.2
BRY				eSn	Sn	02 38 23.6	-1.4
TURN	Turunc	5.50	100	i P	Pn	02 37 21.5	-1.7
PLE	Pljevlja	5.62	341	⇓i Pn	Pn	02 37 25.6	+0.6
PLE				eSn	Sn	02 38 27.9	-0.3
PLE	Pljevlja	5.62	341	⇓i Pn	Pn	02 37 25.6	+0.6
PLE				eSn	Sn	02 38 27.9	-0.3
UPM	Unac-Piva	5.64	338	ePn	Pn	02 37 25.6	+0.3
UPM				eSn	Sn	02 38 28.3	-0.4
UPM	Unac-Piva	5.64	338	ePn	Pn	02 37 25.6	+0.3
UPM				eSn	Sn	02 38 28.3	-0.4
DNZL	Cakiroluk	5.71	91	i P	Pn	02 37 29.0	+2.7
DNZL	Cakiroluk	5.71	91	i P	Pn	02 37 29.0	+2.7
JMB	Yambol	5.74	38	ePn	Pn	02 37 28.0	+1.6
STON	Ston	5.78	328	ePn	Pn	02 37 25.9	-1.2
STON				Sn	Sn	02 38 26.8	-5.2
MS1	Monte Sant'Ang	5.84	311	ePn	Pn	02 37 28.5	+0.6
FETY	Fethiye	5.94	101	ePN	Pn	02 37 31.9	+2.7
MDNY	Mudanya-Bursa	5.95	65	ePN	Pn	02 37 30.6	+1.2
ARMT	Armutlu	6.01	63	ePN	Pn	02 37 31.6	+1.4
ULDT	Uludag	6.06	67	i P	Pn	02 37 32.5	+1.4
ULDT	Uludag	6.06	67	i P	Pn	02 37 32.5	+1.4
CTKS	Kestanelik-??a	6.07	56	ePN	Pn	02 37 31.9	+1.0
BBLS	Lazići	6.12	343	ePn	Pn	02 37 31.5	-0.3
TVSB	Tavsanli	6.13	74	ePN	Pn	02 37 34.2	+2.3
GLHS	Glhisar (BURDU	6.14	96	ePN	Pn	02 37 34.8	+2.7
GOLH	Golhisar	6.18	95	i P	Pn	02 37 36.4	+3.8
DIVS	Divibare	6.23	348	ePn	Pn	02 37 33.1	-0.2
YLV	Yalova	6.37	64	ePN	Pn	02 37 36.4	+1.2
AKAS	Kas	6.46	104	i P	Pn	02 37 37.7	+1.3
AKAS				i S	Sn	02 38 51.4	+2.6
AKAS	Kas	6.46	104	i P	Pn	02 37 37.7	+1.3
AKAS				i S	Sn	02 38 51.4	+2.6
ELL	Elmali	6.55	99	ePN	Pn	02 37 40.4	+2.7
ADVT	Abdulvahap	6.59	66	ePN	Pn	02 37 39.4	+1.3
TEKS	Tekeris	6.75	346	ePn	Pn	02 37 40.3	0.0
KORT	Korkueli	6.84	96	i P	Pn	02 37 45.7	+4.0
SHUT	Suhut-Afyon	6.87	83	ePN	Pn	02 37 44.3	+2.1
SLUM		7.08	156	AMP		02 38 00.0	
	comp=N,130μm,0.4s,logA/T=5.6,baz=159						
SLUM		7.08	156	P	Pn	02 37 42.0	-2.8
GULT	Gulveren	7.15	68	ePN	Pn	02 37 46.9	+0.9
ESKT	Eskisehir	7.20	75	ePN	Pn	02 37 47.8	+1.3
SEYT	Eskypehyr	7.20	75	i P	Pn	02 37 48.9	+2.3
SEYT	Eskypehyr	7.20	75	i P	Pn	02 37 48.9	+2.3
GZR	Gura Zlata	7.40	5	ePn	Pn	02 37 51.4	+2.1
LOT	Lotru	7.56	10	⇑i P	Pn	02 37 53.5	+2.0
LOT	Lotru	7.56	10	⇑i P	Pn	02 37 53.5	+2.0
BZS	Buzias	7.59	359	⇓i P	Pn	02 37 55.9	+4.1
MDUB	Mudurnu	7.66	68	ePN	Pn	02 37 53.7	+0.8
SVRH	Sivrihisar-ESK	7.70	76	ePN	Pn	02 37 55.0	+1.5
VOIR		7.79	17	⇓i P	Pn	02 37 57.5	+2.9
VOIR		7.79	17	⇓i P	Pn	02 37 57.5	+2.9
KIZT	Kizilcal	7.93	81	ePN	Pn	02 37 58.6	+2.0
MLR	Muntele Rosu	8.07	21	⇓i P	Pn	02 38 00.3	+1.8
MLR	Muntele Rosu	8.07	21	P	Pn	02 38 02.8	+4.3
	comp=N,0.1nm,0.3s,baz=136,slow=12,SNR=9.0						
MLR	Muntele Rosu	8.07	21	⇓i P	Pn	02 38 00.3	+1.8
MLR				S	Sn	02 39 29.8	+1.5
TIRR	Tirgusor	8.12	36	⇑i P	Pn	02 38 00.1	+1.1
TIRR	Tirgusor	8.12	36	⇑i P	Pn	02 38 00.1	+1.1
HMAT	Matruh	8.15	146	S	Sn	02 39 19.2	-11
	baz=149						
HMAT	Matruh	8.15	146	S	Sn	02 39 19.2	-11
PKSM	Moragy	8.52	345	⇑e	Sn	02 39 32.9	-6.3
PLOR	Plostina	8.61	23	⇑i P	Pn	02 38 06.9	+1.2
PLOR	Plostina	8.61	23	⇑i P	Pn	02 38 06.9	+1.2
BOJS	Bojanci	8.95	329	i Pn	Pn	02 38 09.2	-1.2
BOJS	Bojanci	8.95	329	i Pn	Pn	02 38 09.2	-1.2
BEHE	Becsehely	9.24	338	⇓e	Sn	02 39 54.6	-2.2
SWA2		9.26	160	P	Pn	02 38 12.5	-2.2
	baz=163						
SWA2				AMP		02 39 00.0	
	comp=E,180μm,0.3s,logA/T=5.7,baz=163						
SWA2		9.26	160	P	Pn	02 38 12.5	-2.2
BRTR	Keskin Array B	9.36	76	P	Pn	02 38 20.1	+4.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=E,0.5nm,0.3s,baz=257,slow=13,SNR=24						
BUD	**Budapest**	**9.68**	**349**	*e*	**Sn**	**02 40 04.7**	**-2.9**
JAVS	**Javornik**	**9.76**	**326**	*e*Pn	**Pn**	**02 38 20.5**	**-1.1**
JAVS	**Javornik**	**9.76**	**326**	*e*Pn	**Pn**	**02 38 20.5**	**-1.1**
VOY	**Vojsko**	**9.95**	**326**	*e*Pn	**Pn**	**02 38 23.5**	**-0.6**
VOY				*e*Sn	Sn	02 40 07.2	-7.0
VOY	**Vojsko**	**9.95**	**326**	*e*Pn	**Pn**	**02 38 23.5**	**-0.6**
PSZ	**Piszkesteto**	**10.00**	**352**	⇓*e*	**Sn**	**02 40 11.9**	**-3.5**
SOKA	**Soboth**	**10.01**	**332**	⇑*i*Pn	**Pn**	**02 38 23.1**	**-1.8**
SOKA	**Soboth**	**10.01**	**332**	Sn	Sn	02 40 06.5	-9.2
OBKA	**Obir**	**10.05**	**330**	⇑*i*Pn	**Pn**	**02 38 24.3**	**-1.3**
	SNR=13						
OBKA	**Obir**	**10.05**	**330**	Sn	Sn	02 40 06.8	-10
OBKA	**Obir**	**10.05**	**330**	Pn	**Pn**	**02 38 24.3**	**-1.3**
	SNR=13						
KEST	**Kesra**	**10.27**	**261**	P	**Pn**	**02 38 30.1**	**+1.6**
	comp=E,0.1nm,0.3s,baz=196,slow=11,SNR=5.9						
KEST				S	**Sn**	**02 40 18.4**	**-3.7**
	comp=E,0.0nm,0.3s,baz=124,slow=16,SNR=4.1						
KECS	**Kecovo**	**10.51**	**355**	*e*PN	**Pn**	**02 38 32.3**	**+0.7**
KECS	**Kecovo**	**10.51**	**355**	*e*Pn	**Pn**	**02 38 32.3**	**+0.7**
VYHS	**Vyhne**	**10.70**	**349**	*e*PN	**Pn**	**02 38 35.0**	**+0.7**
VYHS				*e*PG		02 40 25.4	
VYHS				*e*SG	**Sn**	**02 40 32.0**	**-0.4**
VYHS	**Vyhne**	**10.70**	**349**	*e*Pn	**Pn**	**02 38 35.0**	**+0.7**
VYHS				*e*Sg	**Sn**	**02 40 32.0**	**-0.4**
PGF	**Pioggiola**	**10.80**	**299**	*e*P	**Pn**	**02 38 38.4**	**+2.6**
PGF	**Pioggiola**	**10.80**	**299**	*e*P	**Pn**	**02 38 38.4**	**+2.6**
CRVS	**Cervenica-Dubn**	**10.88**	**359**	*e*PN	**Pn**	**02 38 37.2**	**+0.4**
CRVS				*e*		02 38 46.1	
CRVS	**Cervenica-Dubn**	**10.88**	**359**	*e*Pn	**Pn**	**02 38 37.2**	**+0.4**
KOLS	**Kolonicke sedl**	**10.91**	**2**	*e*PN	Pn	02 38 43.7	+6.5
MOA	**Molln**	**11.28**	**333**	⇑*i*Pn	**Pn**	**02 38 40.3**	**-2.0**
	SNR=10						
MOA				⇑*i*Sn	Sn	02 40 40.0	-6.6
AWBH		**11.33**	**147**	P	Pn	02 38 39.8	-3.3
	baz=148						
AWBH		**11.33**	**147**	P	Pn	02 38 39.8	-3.3
STHS	**Stebnicka Huta**	**11.40**	**358**	*e*PN	**Pn**	**02 38 45.2**	**+1.3**
STHS				*e*		02 39 01.0	
STHS	**Stebnicka Huta**	**11.40**	**358**	*e*Pn	**Pn**	**02 38 45.2**	**+1.3**
RSH		**12.06**	**122**	P	Pn	02 38 49.9	-3.1
	baz=122						
RSH		**12.06**	**122**	P	Pn	02 38 49.9	-3.1
MMAI	**Mount Meron Ar**	**12.12**	**110**	P	**Pn**	**02 38 53.3**	**-0.6**
	comp=E,1.0nm,0.3s,baz=306,slow=12,SNR=3.3						
MMAI				S	Sn	02 40 57.8	-10
	comp=E,0.8nm,0.3s,baz=296,slow=27,SNR=2.5						
GERES	**GERESS Array B**	**12.32**	**334**	P	**Pn**	**02 38 56.0**	**-0.5**
	comp=E,0.6nm,0.3s,baz=158,slow=14,SNR=22						
GERES				S	Sn	02 41 05.3	-6.9
	comp=E,1.0nm,0.3s,baz=152,slow=24,SNR=10.0						
DAVOX	**Davos/Dischmat**	**12.43**	**319**	P	**Pn**	**02 38 56.5**	**-1.6**
	comp=E,0.2nm,0.3s,baz=108,slow=20,SNR=2.4						
DAVOX				S	**Sn**	**02 41 10.9**	**-4.1**
	comp=E,1.9nm,0.3s,baz=234,slow=8.7,SNR=7.6						
KHC	**Kasperske Hory**	**12.61**	**334**	*e*P	**Pn**	**02 39 03.0**	**+2.6**
KHC				*e*x	x	02 40 08.0	
KHC	**Kasperske Hory**	**12.61**	**334**	P	**Pn**	**02 39 03.0**	**+2.6**
HNKL	**Nakhl**	**12.90**	**125**	P	**Pn**	**02 39 01.6**	**-2.8**
	baz=126						
HNKL	**Nakhl**	**12.90**	**125**	P	**Pn**	**02 39 01.6**	**-2.8**
LPG	**La Plagne**	**13.50**	**308**	*e*P	**Pn**	**02 39 13.5**	**+0.7**
LPL	**La Plagne**	**13.52**	**308**	*e*P	**Pn**	**02 39 15.0**	**+1.9**
EIL	**Elat**	**13.70**	**124**	P	Pn	02 39 11.9	-3.5
	comp=E,0.4nm,0.3s,baz=345,slow=20,SNR=15						
EIL				S	Sn	02 41 33.6	-12
	comp=E,1.2nm,0.3s,baz=334,slow=18,SNR=7.0						
AKASG	**Malin Array Be**	**13.72**	**20**	P	**Pn**	**02 39 14.2**	**-1.3**
	comp=E,0.5nm,0.3s,baz=210,slow=13,SNR=4.1						
CABF	**La Chapelle**	**14.45**	**311**	*e*P	**Pn**	**02 39 25.0**	**-0.4**
	comp=E,5.3nm,0.5s						
HINF	**Hinteralfeld**	**14.69**	**317**	*e*P	**Pn**	**02 39 28.0**	**-0.3**
	comp=E,3.9nm,0.5s						
CDF	**Champ du Feu**	**14.83**	**319**	*e*P	**Pn**	**02 39 31.6**	**+1.4**
	comp=E,2.6nm,0.5s						
HAU	**Haudompre**	**15.07**	**316**	*e*P	**Pn**	**02 39 33.8**	**+0.5**
	comp=E,4.7nm,0.4s						
HAU				*e*R			
	comp=E,34nm,19.5s						
PAGF	**Fort de Pagny**	**15.73**	**317**	*e*P	**Pn**	**02 39 42.6**	**+0.8**
	comp=E,1.1nm,0.6s						
MTLF	**Montolieu**	**15.80**	**296**	*e*P	**P**	**02 39 46.5**	**+0.9**
	comp=E,4.3nm,0.8s						
MTLF	**Montolieu**	**15.80**	**296**	*e*P	**P**	**02 39 46.5**	**+0.9**
	comp=E,2.2nm,0.8s						
SMF	**Signal de Mont**	**15.83**	**309**	*e*P	**P**	**02 39 45.2**	**-0.7**
SMF	**Signal de Mont**	**15.83**	**309**	*e*P	**P**	**02 39 45.2**	**-0.7**
MEZF	**Maizieres J'vi**	**16.07**	**316**	*e*P	**P**	**02 39 47.5**	**-1.0**
	comp=E,7.2nm,0.7s						
MEZF	**Maizieres J'vi**	**16.07**	**316**	*e*P	**P**	**02 39 47.5**	**-1.0**
	comp=E,3.6nm,0.7s						
LOR	**Lormes**	**16.11**	**311**	*e*P	**P**	**02 39 48.5**	**-0.5**
	comp=E,6.1nm,0.6s						
LOR				*e*R			
	comp=E,37nm,21.8s						
LOR	**Lormes**	**16.11**	**311**	*e*P	**P**	**02 39 48.5**	**-0.5**
	comp=E,3.0nm,0.6s						
SSF	**Saint Saulge**	**16.22**	**310**	*e*P	**P**	**02 39 49.7**	**-0.6**
	comp=E,20nm,0.8s						
SSF	**Saint Saulge**	**16.22**	**310**	*e*P	**P**	**02 39 49.7**	**-0.6**
	comp=E,9.9nm,0.8s						
CAF	**Calviac**	**16.33**	**301**	*e*P	**P**	**02 39 52.2**	**+0.7**
CAF	**Calviac**	**16.33**	**301**	*e*P	**P**	**02 39 52.2**	**+0.7**
RJF	**Les Rejaudoux**	**16.82**	**302**	*e*P	**P**	**02 39 57.9**	**+1.1**
RJF				*e*R			
	comp=E,46nm,17.5s						
RJF	**Les Rejaudoux**	**16.82**	**302**	*e*P	**P**	**02 39 57.9**	**+1.1**
KBZ	**Khabaz**	**16.90**	**64**	P	**P**	**02 39 57.3**	**-0.5**
	comp=E,0.1nm,0.3s,baz=271,slow=6.4,SNR=4.9						
EPF	**Esparros**	**17.08**	**294**	*e*P	**P**	**02 40 00.6**	**+0.7**
EPF	**Esparros**	**17.08**	**294**	*e*P	**P**	**02 40 00.6**	**+0.7**
GIVF	**Givet**	**17.14**	**320**	*e*P	**P**	**02 40 00.7**	**+0.3**
GIVF	**Givet**	**17.14**	**320**	*e*P	**P**	**02 40 00.7**	**+0.3**
LFF	**La Frestale**	**17.23**	**300**	*e*P	**P**	**02 40 03.0**	**+1.6**
LFF	**La Frestale**	**17.23**	**300**	*e*P	**P**	**02 40 03.0**	**+1.6**
BAIF	**Baives**	**17.43**	**319**	*e*P	**P**	**02 40 04.5**	**+1.0**
BAIF	**Baives**	**17.43**	**319**	*e*P	**P**	**02 40 04.5**	**+1.0**
ETSF	**Etsaut**	**17.71**	**293**	*e*P	**P**	**02 40 09.0**	**+2.2**
ETSF	**Etsaut**	**17.71**	**293**	*e*P	**P**	**02 40 09.0**	**+2.2**
SJPF	**Ste Jean**	**18.23**	**293**	*e*P	**Pn**	**02 40 16.5**	**+3.7**
MFF	**Saint Martin d**	**18.34**	**305**	*e*P	**Pn**	**02 40 16.2**	**+2.1**
MFF	**Saint Martin d**	**18.34**	**305**	*e*P	**Pn**	**02 40 16.2**	**+2.1**
LDF	**La Druitiere**	**19.09**	**311**	*e*P	**Pn**	**02 40 24.7**	**+1.5**
	comp=E,16nm,1.1s						
LDF	**La Druitiere**	**19.09**	**311**	*e*P	**Pn**	**02 40 24.7**	**+1.5**
	comp=E,7.9nm,1.1s						
FLN	**La Foliniere**	**19.38**	**311**	*e*P	**Pn**	**02 40 28.2**	**+1.6**
FLN				*e*R			
	comp=E,36nm,21.8s						
FLN	**La Foliniere**	**19.38**	**311**	*e*P	**Pn**	**02 40 28.2**	**+1.6**
GRR	**Gorron**	**19.45**	**309**	*e*P	**Pn**	**02 40 26.7**	**-0.7**
GRR	**Gorron**	**19.45**	**309**	*e*P	**Pn**	**02 40 26.7**	**-0.7**
ESDC	**Sonseca Array**	**20.15**	**283**	P	**P**	**02 40 34.0**	**+0.5**
	comp=E,2.0nm,0.6s,baz=76,slow=11,SNR=20						
QUIF	**Quistinic**	**20.72**	**307**	*e*P	Pn	02 40 41.1	-1.2
QUIF	**Quistinic**	**20.72**	**307**	*e*P	Pn	02 40 41.1	-1.2
ROSF	**Rostrenen**	**20.93**	**308**	*e*P	**P**	**02 40 42.0**	**+0.2**
ROSF	**Rostrenen**	**20.93**	**308**	*e*P	**P**	**02 40 42.0**	**+0.2**
MIB	**Mutribah**	**22.64**	**104**	*e*P	**P**	**02 40 58.8**	**-1.5**
MIB				AMb	AMB	02 41 01.7	
	comp=Z,20nm,1.0s						
MIB	**Mutribah**	**22.64**	**104**	*e*P	**P**	**02 40 58.8**	**-1.5**
HFS	**Hagfors**	**22.73**	**349**	P	**P**	**02 40 60.0**	**-1.0**
	comp=Z,7.1nm,0.5s,baz=150,slow=12,SNR=33						
HFS				LR	LR	02 51 06.0	
	comp=Z,26nm,20.5s,baz=277,slow=40						
NAY	**Al-Naaiem**	**22.83**	**105**	*e*P	**P**	**02 41 00.5**	**-1.9**
NAY				AMb	AMB	02 41 02.4	
	comp=Z,8.5nm,0.8s						
FINES	**FINESS Array B**	**23.60**	**5**	P	**P**	**02 41 08.1**	**-1.3**
	comp=Z,3.3nm,0.7s,baz=177,slow=9.5,SNR=5.9						
FINES				PcP	**PcP**	**02 44 53.2**	**+0.5**
	comp=Z,4.3nm,0.8s,baz=180,slow=1.3,SNR=4.1						
NB2	**NORSAR Subarra**	**23.99**	**347**	P	**P**	**02 41 12.8**	**-0.3**
	comp=Z,7.7nm,0.8s,baz=164,slow=10						
NB2	**NORSAR Subarra**	**23.99**	**347**	P	**P**	**02 41 12.8**	**-0.3**
	comp=Z,7.7nm,0.8s,SNR=6.7						
NOA	**NORSAR Array B**	**23.99**	**347**	P	**P**	**02 41 12.9**	**-0.1**
	comp=Z,4.0nm,0.6s,baz=153,slow=9.1,SNR=25						
EKA	**Eskdalemuir Ar**	**24.16**	**324**	P	**P**	**02 41 15.8**	**+1.1**
	comp=Z,5.0nm,0.6s,baz=125,slow=9.3,SNR=29						
KAF	**Kangasniemi**	**24.28**	**5**	*e*p	**P**	**02 41 15.2**	**-0.4**
	comp=Z,1.6nm,0.5s						
KAF	**Kangasniemi**	**24.28**	**5**	*e*P	**P**	**02 41 15.2**	**-0.4**
	comp=Z,1.6nm,0.5s						
JOF	**Joensuu**	**25.59**	**10**	*e*p	**P**	**02 41 26.6**	**-0.9**
	comp=Z,3.3nm,0.5s						
JOF	**Joensuu**	**25.59**	**10**	*e*P	**P**	**02 41 26.6**	**-0.9**
	comp=Z,3.3nm,0.5s						
AKTO	**Aktyubinsk**	**28.45**	**52**	P	**P**	**02 41 53.0**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=281,slow=7.1,SNR=4.0						
TORD	**Torodi Ar. Bea**	**30.58**	**221**	P	**P**	**02 42 12.6**	**+0.1**
	comp=Z,2.9nm,0.7s,baz=34,slow=9.3,SNR=26						
ARCES	**ARCESS Array B**	**31.64**	**2**	P	**P**	**02 42 21.5**	**+0.2**
	comp=Z,1.4nm,0.5s,baz=195,slow=9.9,SNR=38						
MKAR	**Makanchi Array**	**44.50**	**59**	P	**P**	**02 44 09.4**	**-0.3**
	comp=Z,2.2nm,0.4s,baz=279,slow=7.3,SNR=51						
MKAR				PcP	**PcP**	**02 45 52.1**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=278,slow=4.1,SNR=2.6						
ZALV	**Zalesovo Beam**	**45.02**	**48**	P	**P**	**02 44 13.3**	**-0.4**
	comp=Z,6.8nm,0.4s,baz=275,slow=8.8,SNR=27						
SCHQ	**Schefferville**	**59.28**	**318**	P	**P**	**02 45 59.4**	**-0.2**
	comp=Z,3.3nm,0.3s,baz=70,slow=5.5,SNR=15						
SONM	**Songino Array**	**59.75**	**51**	P	**P**	**02 46 02.3**	**-0.8**
	comp=Z,0.7nm,0.5s,baz=262,slow=7.1,SNR=2.7						
CMAR	**Chiang Mai Arr**	**68.88**	**83**	P	**P**	**02 47 01.9**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=302,slow=6.8,SNR=4.5						
YKA	**Yellowknife Ar**	**73.89**	**341**	P	**P**	**02 47 32.6**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=32,slow=5.3,SNR=9.2						
ULM	**Lac du Bonnet**	**76.44**	**324**	P	**P**	**02 47 47.5**	**0.0**
	comp=Z,4.7nm,0.7s,baz=79,slow=3.2,SNR=4.3						
ILAR	**Eielson Array**	**77.16**	**355**	P	**P**	**02 47 52.4**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=346,slow=3.7,SNR=11						
PDAR	**Pinedale Array**	**88.26**	**326**	P	**P**	**02 48 49.5**	**0.0**
	comp=Z,0.7nm,0.8s,baz=26,slow=4.4,SNR=4.2						
TXAR	**Lajitas Array**	**95.83**	**314**	P	**P**	**02 49 25.8**	**+1.2**
	comp=Z,0.1nm,0.5s,baz=72,slow=5.8,SNR=3.7						
WRA	**Warramunga Arr**	**119.49**	**93**	PKP	**PKPdf**	**02 54 46.8**	**-0.8**
	comp=Z,0.1nm,0.4s,baz=318,slow=1.5,SNR=6.7						
ASAR	**Alice Springs**	**121.12**	**97**	PKP	**PKPdf**	**02 54 50.3**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=326,slow=2.2,SNR=2.6						

WEL 05 02:50:41.5±0.2**,37°.20S**×**176°.71E,h189**km±2km**,ML3.8**/10**, 4C-4D,Error ellipse: s-maj=2.8km s-min=2.6km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**1.11**	**163**	⇑PN	Pn	02 51 11.1	+0.1
URZ				SN	Sn	02 51 33.9	0.0
MWZ	**Matawai**	**1.31**	**150**	⇑PN	Pn	02 51 12.5	-0.1
MWZ				SN	Sn	02 51 36.8	-0.1
MWZ				AML	AML	02 51 46.3	
MXZ	**Matakaoa Point**	**1.33**	**107**	PN	Pn	02 51 12.8	+0.1
MXZ				SN	Sn	02 51 36.8	0.0
PUZ	**Puketiti**	**1.51**	**126**	SN	Sn	02 51 39.0	-1.0
PUZ				AML	AML	02 51 39.4	
CNGZ	**Carnagh Statio**	**1.75**	**138**	⇓PN	Pn	02 51 17.2	+0.5
PRGZ	**Paritu Road**	**1.96**	**152**	PN	Pn	02 51 18.6	-0.2
BKZ	**Black Stump Fm**	**1.98**	**185**	⇓PN	Pn	02 51 18.5	-0.6
BKZ				SN	Sn	02 51 47.3	-1.1
KNZ	**Kokohu**	**1.98**	**158**	⇓PN	Pn	02 51 18.6	-0.3
NGZ	**Ngauruhoe**	**2.16**	**203**	PN	Pn	02 51 21.6	+0.4
MHGZ	**Mahia Peninsul**	**2.17**	**155**	PN	Pn	02 51 20.7	-0.4
WPVZ	**Whakapapa**	**2.21**	**204**	PN	Pn	02 51 21.4	-0.1
TUVZ	**Tukino**	**2.23**	**201**	PN	Pn	02 51 21.7	-0.2
MCHZ	**McNeill Hill**	**2.25**	**180**	⇑PN	Pn	02 51 21.9	0.0
FWVZ	**Far West T-bar**	**2.25**	**203**	PN	Pn	02 51 22.1	-0.1
TRVZ	**Turoa**	**2.29**	**203**	PN	Pn	02 51 22.7	0.0
MOVZ	**Moawhango**	**2.33**	**198**	PN	Pn	02 51 22.2	-0.8
BHHZ	**Black Hill Sta**	**2.35**	**192**	PN	Pn	02 51 22.2	-0.8
PKVZ	**Pokaka**	**2.35**	**207**	PN	Pn	02 51 23.0	-0.2
CKHZ	**Cape Kidnapper**	**2.48**	**173**	PN	Pn	02 51 23.8	-0.7
KAHZ	**Kahuranaki**	**2.60**	**177**	⇓PN	Pn	02 51 25.2	-0.8
PNHZ	**Pukenui**	**2.75**	**188**	PN	Pn	02 51 26.1	-1.5
PXZ	**Pawanui**	**2.84**	**178**	PN	Pn	02 51 27.0	-1.6
WPHZ	**Waipukurau**	**2.87**	**184**	PN	Pn	02 51 27.3	-1.8
TSZ	**Takapari Road**	**2.92**	**191**	PN	Pn	02 51 28.0	-1.6
DVHZ	**Dannevirke**	**3.13**	**188**	PN	Pn	02 51 30.1	-2.1
MRZ	**Mangatainoka R**	**3.57**	**194**	PN	Pn	02 51 34.8	-2.8
MRZ				AML	AML	02 52 19.4	
OGWZ	**Otaki Gorge**	**3.81**	**198**	PN	Pn	02 51 37.6	-2.9
HOWZ	**Holdsworth Sta**	**3.81**	**194**	⇑PN	Pn	02 51 37.4	-3.2
KIW	**Kapiti Island**	**3.92**	**200**	PN	Pn	02 51 38.7	-3.2
TMWZ	**Te Maipa**	**3.96**	**189**	PN	Pn	02 51 39.2	-3.2
MTW	**Mount Morrison**	**4.07**	**193**	PN	Pn	02 51 40.1	-3.6
CAW	**Cannon Point**	**4.11**	**198**	PN	Pn	02 51 40.8	-3.5
MSWZ	**Moikau Station**	**4.36**	**195**	PN	Pn	02 51 43.6	-3.9
TCW	**Tory Channel**	**4.43**	**204**	PN	Pn	02 51 44.8	-3.5
PLWZ	**Palliser**	**4.51**	**194**	PN	Pn	02 51 45.2	-4.3

IDC 05 02:51:59.6±3.5**,15°.95N**×**85°.80W,h0**km**,mb3.5**/5**, mb1 4.0**/6**,mb1mx3.7**/23**,mbtmp3.6**/6**,ML4.3**/1**,Error ellipse: s-maj=108.0km s-min=52.2km az=36.0, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	**Tepich**	**4.86**	**331**	Pn	Pn	02 53 14.2	+0.2
	11nm,0.3s,baz=148,slow=15,SNR=86						
TEIG				Sn	Sn	02 54 07.5	-3.5
	2.1nm,0.3s,baz=53,slow=20,SNR=3.2						
TXAR	**Lajitas Array**	**21.16**	**312**	P	P	02 56 45.5	-1.1
	2.3nm,0.8s,baz=131,slow=12,SNR=26						
TXAR				S	S	03 00 31.1	-12
	0.2nm,1.0s,baz=123,slow=23,SNR=3.9						
PDAR	**Pinedale Array**	**33.58**	**328**	P	P	02 58 43.2	+1.5
	0.4nm,0.6s,baz=125,slow=11,SNR=2.8						
NVAR	**Mina Array Bea**	**36.27**	**314**	P	P	02 59 05.3	+0.2
	0.2nm,0.3s,baz=118,slow=7.6,SNR=3.2						
YKA	**Yellowknife Ar**	**50.71**	**343**	P	P	03 00 60.0	-0.8
	0.6nm,0.8s,baz=141,slow=7.9,SNR=9.2						
ILAR	**Eielson Array**	**63.51**	**335**	P	P	03 02 31.3	-0.1
	0.3nm,0.9s,baz=144,slow=5.4,SNR=4.0						
CMAR	**Chiang Mai Arr**	**145.49**	**352**	PKPbc	PKPbc	03 11 39.8	-0.8
	0.7nm,0.4s,baz=340,slow=4.9,SNR=2.5						

*ISCJB **05** 03:03:08.4±0.6,38°.92N±0°.02×26°.92E±0°.04,h10km±5km, Error ellipse: s-maj=5.4km s-min=3.8km az=174.6*
*ISK **05** 03:03:08.0,38°.86N×27°.04E,h24km,MD2.8*
*CSEM **05** 03:03:08.9±0.2,38°.90N×26°.92E,h20km,MD2.8,Error ellipse: s-maj=7.0km s-min=4.7km az=80.0*
*DDA **05** 03:03:09.1,38°.86N×26°.94E,h7km,MD2.8*
ISC 05 03:03:08.7±1.0**,38°.90N**±0°.02×**26°.96E**±0°.03**,h16**km±9km**, n32,**σ**0s.74**/52**,Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.46**	**333**	*i* P	**Pb**	**03 03 18.6**	**+0.2**
AYVA				*i* S	**Sb**	**03 03 25.6**	**+0.6**
AYVA	**Ayvalik**	**0.46**	**333**	*i* P	**Pb**	**03 03 18.6**	**+0.2**
AYVA				*i* S	**Sb**	**03 03 25.6**	**+0.6**
BLCB	**Balcova**	**0.52**	**173**	*e*PG	**Pg**	**03 03 18.8**	**-0.2**
BLCB				*e*SG	**Sg**	**03 03 25.9**	**0.0**
BLCB	**Balcova**	**0.52**	**173**	*e*Pg	**Pg**	**03 03 18.8**	**-0.2**
BLCB				*e*Sg	**Sg**	**03 03 25.9**	**0.0**
URLA	**Izmir**	**0.61**	**208**	*i* P	**Pg**	**03 03 20.4**	**-0.3**
URLA				*i* S	**Sb**	**03 03 29.5**	**+0.2**
URLA	**Izmir**	**0.61**	**208**	*i* P	**Pg**	**03 03 20.4**	**-0.3**
URLA				*i* S	**Sb**	**03 03 29.5**	**+0.2**
AKHS	**Akhisar**	**0.67**	**92**	*i* P	**Pb**	**03 03 23.3**	**+1.3**
AKHS				*i* S	**Sn**	**03 03 33.7**	**0.0**
AKHS	**Akhisar**	**0.67**	**92**	*i* P	**Pb**	**03 03 23.3**	**+1.3**
AKHS				*i* S	**Sn**	**03 03 33.7**	**0.0**
BALB	**Balikesir**	**1.03**	**44**	*e*PG	**Pb**	**03 03 27.4**	**-0.7**
BALB				*e*SG	**Sb**	**03 03 41.0**	**-0.5**
BALB	**Balikesir**	**1.03**	**44**	*e*Pg	**Pb**	**03 03 27.4**	**-0.7**
BALB				*e*Sg	**Sb**	**03 03 41.0**	**-0.5**
EZN	**Ezine**	**1.05**	**332**	*e*PN	**Pb**	**03 03 28.5**	**+0.1**
EZN				*e*SN	**Sn**	**03 03 43.4**	**+0.4**
EZN	**Ezine**	**1.05**	**332**	*e*Pn	**Pb**	**03 03 28.5**	**+0.1**
EZN				*e*Sn	**Sn**	**03 03 43.4**	**+0.4**
GCAM	**G?zelcaml?**	**1.22**	**170**	*i* P	**Pn**	**03 03 31.4**	**+0.3**
GCAM				*i* S	**Sb**	**03 03 45.9**	**-0.9**
GCAM	**G?zelcaml?**	**1.22**	**170**	*i* P	**Pn**	**03 03 31.3**	**+0.3**
GCAM				*i* S	**Sb**	**03 03 45.9**	**-0.9**
GONE	**Gonen-Balikesi**	**1.28**	**26**	*e*PN	**Pn**	**03 03 31.5**	**-0.4**
GONE	**Gonen-Balikesi**	**1.28**	**26**	*e*Pn	**Pn**	**03 03 31.5**	**-0.4**
MANT	**Manisa**	**1.32**	**108**	*i* P	**Pb**	**03 03 33.9**	**+0.7**
MANT				*i* S	**Sb**	**03 03 50.3**	**+0.3**
MANT	**Manisa**	**1.32**	**108**	*i* P	**Pb**	**03 03 33.9**	**+0.7**
MANT				*i* S	**Sb**	**03 03 50.3**	**+0.3**
DURS	**Dursunbey**	**1.37**	**59**	*i* P	**Pg**	**03 03 35.3**	**+0.1**
DURS				*i* S	**Sg**	**03 03 53.8**	**+0.8**
DURS	**Dursunbey**	**1.37**	**59**	*i* P	**Pg**	**03 03 35.3**	**+0.1**
DURS				*i* S	**Sg**	**03 03 53.8**	**+0.8**
KULA	**Kula-Manisa**	**1.39**	**106**	*e*PN	**Pn**	**03 03 31.5**	**-2.0**
KULA	**Kula-Manisa**	**1.39**	**106**	*e*Pn	**Pn**	**03 03 31.5**	**-2.0**
AYDN	**Tasoluk**	**1.44**	**149**	*i* P	**Pg**	**03 03 37.5**	**+1.1**
AYDN				*i* S	**Sg**	**03 03 54.6**	**-0.4**
AYDN	**Tasoluk**	**1.44**	**149**	*i* P	**Pg**	**03 03 37.5**	**+1.1**
AYDN				*i* S	**Sg**	**03 03 54.6**	**-0.4**
LPK	**Lapseki**	**1.48**	**354**	*e*PN	**Pn**	**03 03 34.4**	**-0.3**
LPK	**Lapseki**	**1.48**	**354**	*e*Pn	**Pn**	**03 03 34.4**	**-0.3**
KRBG	**Karabiga-Canak**	**1.51**	**10**	*e*PN	**Pn**	**03 03 34.0**	**-1.1**
KRBG	**Karabiga-Canak**	**1.51**	**10**	*e*Pn	**Pn**	**03 03 34.0**	**-1.1**
GELI	**Tayfur-Gelibol**	**1.54**	**346**	*e*PN	**Pn**	**03 03 35.5**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.54**	**346**	*e*Pn	**Pn**	**03 03 35.5**	**-0.1**
ADVT	**Abdulvahap**	**2.64**	**54**	*e*PN	**Pn**	**03 03 49.8**	**-0.8**
ADVT	**Abdulvahap**	**2.64**	**54**	*e*Pn	**Pn**	**03 03 49.8**	**-0.8**

*NNC **05** 03:03:01.4±6.0,36°.92N×70°.79E,h0km,mb3.8,mpv3.6, Error ellipse: s-maj=64.4km s-min=52.8km az=69.0*
ISC 05 03:03:09.4±3.8**,37°.1N**±0°.3×**71°.4E**±0°.2**,h188**km**,n9, **σ**0s.97**/10**,3C,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.32**	**19**	P	**Pn**	**03 04 27.2**	**-0.7**
	SNR=78						
KZA	**Kyzart**	**5.79**	**30**	P	**Pn**	**03 04 33.1**	**-0.9**
	SNR=5.5						
AAK	**Ala-Archa**	**6.01**	**22**	P	**Pn**	**03 04 36.9**	**+0.1**
	SNR=6.1						
KK31	**Karatay Array**	**6.02**	**354**	P	**Pn**	**03 04 35.9**	**-0.8**
	2.0nm,0.2s,baz=181,slow=13,SNR=160						
KK31				⇑S	**Sn**	**03 05 46.0**	**+0.3**
	0.8nm,0.3s,baz=180,slow=24,SNR=5.1						
CHMS	**Chumysh**	**6.42**	**23**	P	**Pn**	**03 04 42.1**	**+0.2**
	SNR=8.1						
TKM2	**Tokmak 2**	**6.64**	**28**	⇑P	**Pn**	**03 04 44.8**	**-0.2**
	1.9nm,0.5s						
TKM2	**Tokmak 2**	**6.64**	**28**	P	**Pn**	**03 04 45.2**	**+0.2**
	SNR=5.2						
AB31	**Akbulak array**	**14.71**	**329**	P	**Pn**	**03 06 27.9**	**-0.5**
	0.2nm,0.3s,baz=49,slow=40,SNR=17						
AKTO	**Aktyubinsk**	**16.41**	**328**	⇑P	**Pn**	**03 06 51.0**	**+2.0**
	2.0nm,1.0s						

*DDA **05** 03:10:01.4,37°.33N×32°.06E,h4km,MD3.0*
*ISK **05** 03:10:01.7,37°.37N×31°.94E,h3km,MD3.0*
*CSEM **05** 03:10:02.2±0.3,37°.32N×31°.96E,h2km,MD3.0,Error ellipse: s-maj=6.3km s-min=5.0km az=142.0*
ISC 05 03:10:01.7±1.3**,37°.31N**±0°.02×**31°.96E**±0°.02**,h0**km±14km**, n33,**σ**0s.56**/48**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KONT	**Konya--Tatoy**	**0.71**	**27**	*e*PG	**Pg**	**03 10 15.1**	**-0.2**
KONT				*e*SG	**Sg**	**03 10 25.3**	**+0.8**
KONT	**Konya--Tatoy**	**0.71**	**27**	*e*Pg	**Pg**	**03 10 15.1**	**-0.2**
KONT				*e*Sg	**Sg**	**03 10 25.3**	**+0.8**
LADK	**Ladik-KONYA**	**0.94**	**20**	*e*PG	**Pg**	**03 10 19.6**	**-0.2**
LADK				*e*SG	**Sg**	**03 10 32.8**	**+0.8**
LADK	**Ladik-KONYA**	**0.94**	**20**	*e*Pg	**Pg**	**03 10 19.6**	**-0.2**
LADK				*e*Sg	**Sg**	**03 10 32.8**	**+0.8**
ERMK	**Ermenek**	**1.02**	**131**	*i* P	**Pg**	**03 10 20.9**	**-0.3**
ERMK				*i* S	**Sg**	**03 10 33.8**	**-0.6**
BCK	**Bucak**	**1.10**	**278**	*e*PG	**Pg**	**03 10 22.9**	**+0.1**
BCK				*e*SG	**Sb**	**03 10 38.6**	**0.0**
BCK	**Bucak**	**1.10**	**278**	*e*Pg	**Pg**	**03 10 23.0**	**+0.1**
BCK				*e*Sg	**Sb**	**03 10 38.6**	**0.0**
GAZI	**Gazipasa**	**1.11**	**165**	*i* P	Pg	03 10 18.8	-4.3
GAZI				*e*S	**Sg**	**03 10 38.0**	**+0.5**
GAZI	**Gazipasa**	**1.11**	**165**	*e*S	**Sg**	**03 10 38.0**	**+0.5**
ANTB	**Antalya**	**1.12**	**249**	*e*PN	**Pb**	**03 10 23.9**	**-0.1**
ANTB	**Antalya**	**1.12**	**249**	*e*Pn	**Pb**	**03 10 23.9**	**-0.1**
KDHN	**Kadinhani**	**1.21**	**6**	*i* P	**Pg**	**03 10 24.4**	**-0.6**
KDHN				*i* S	**Sg**	**03 10 40.4**	**-0.3**
KDHN	**Kadinhani**	**1.21**	**6**	*i* P	**Pg**	**03 10 24.4**	**-0.6**
KDHN				*i* S	**Sg**	**03 10 40.4**	**-0.3**
ISP	**Isparta**	**1.25**	**294**	*e*PN	**Pg**	**03 10 26.0**	**+0.3**
ISP	**Isparta**	**1.25**	**294**	*e*Pn	**Pg**	**03 10 26.0**	**+0.3**
SULT	**Sultanhani-AKS**	**1.52**	**54**	*e*PN	**Pb**	**03 10 30.5**	**-0.3**
SULT	**Sultanhani-AKS**	**1.52**	**54**	*e*Pn	**Pb**	**03 10 30.5**	**-0.3**
KIZT	**Kizilcal**	**1.56**	**358**	*e*PN	**Pn**	**03 10 30.8**	**-0.1**
KIZT	**Kizilcal**	**1.56**	**358**	*e*Pn	**Pn**	**03 10 30.8**	**-0.1**
BOLV	**Bolvadin**	**1.61**	**331**	*i* P	**Pg**	**03 10 33.1**	**+0.5**
BOLV				*i* S	**Sb**	**03 10 53.5**	**+0.1**
BOLV	**Bolvadin**	**1.61**	**331**	*i* P	**Pg**	**03 10 33.1**	**+0.5**
BOLV				*i* S	**Sb**	**03 10 53.5**	**+0.1**
SHUT	**Suhut-Afyon**	**1.66**	**318**	*e*PN	**Pn**	**03 10 31.7**	**-0.6**
SHUT	**Suhut-Afyon**	**1.66**	**318**	*e*Pn	**Pn**	**03 10 31.7**	**-0.6**
ELL	**Elmali**	**1.73**	**252**	*e*PN	**Pn**	**03 10 33.5**	**+0.3**
ELL	**Elmali**	**1.73**	**252**	*e*Pn	**Pn**	**03 10 33.5**	**+0.3**
SVRH	**Sivrihisar-ESK**	**2.16**	**351**	*e*PN	**Pn**	**03 10 39.5**	**+0.5**
SVRH	**Sivrihisar-ESK**	**2.16**	**351**	*e*Pn	**Pn**	**03 10 39.5**	**+0.5**
KHAL	**Karahalli**	**2.22**	**299**	*i* P	**Pb**	**03 10 41.9**	**-0.9**
KHAL				*i* S	**Sb**	**03 11 10.5**	**-0.4**
KHAL	**Karahalli**	**2.22**	**299**	*i* P	**Pb**	**03 10 41.9**	**-0.9**
KHAL				*i* S	**Sb**	**03 11 10.5**	**-0.4**
GULE	**Gulek**	**2.25**	**90**	*i* P	**Pb**	**03 10 42.2**	**-1.1**
GULE				*i* S	**Sb**	**03 11 12.6**	**+0.9**
GULE	**Gulek**	**2.25**	**90**	*i* P	**Pb**	**03 10 42.2**	**-1.1**
GULE				*i* S	**Sb**	**03 11 12.6**	**+0.9**
AFSR	**Af¯ar-Bala (A**	**2.30**	**22**	*e*PN	**Pn**	**03 10 41.9**	**+0.9**
AFSR	**Af¯ar-Bala (A**	**2.30**	**22**	*e*Pn	**Pn**	**03 10 41.9**	**+0.9**

*DDA **05** 03:16:24.4,37°.34N×32°.05E,h5km,MD3.3*
*ISK **05** 03:16:26.7,37°.43N×31°.92E,h4km,MD3.5*
*ISCJB **05** 03:16:27.1±0.7,37°.41N±0°.03×31°.92E±0°.03,h4km±5km, Error ellipse: s-maj=4.6km s-min=3.5km az=162.7*
*CSEM **05** 03:16:27.5±0.1,37°.43N×31°.91E,h2km,MD3.5,Error ellipse: s-maj=4.2km s-min=3.1km az=157.0*
ISC 05 03:16:25.8±1.1**,37°.34N**±0°.02×**31°.98E**±0°.02**,h7**km±10km**, n88,**σ**1s.26**/110**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KONT	**Konya--Tatoy**	**0.68**	**26**	*e*PG	**Pg**	**03 16 39.4**	**+0.5**
KONT				*e*SG	**Sg**	**03 16 48.3**	**+0.6**
KONT	**Konya--Tatoy**	**0.68**	**26**	*e*Pg	**Pg**	**03 16 39.4**	**+0.5**
KONT				*e*Sg	**Sg**	**03 16 48.3**	**+0.6**
LADK	**Ladik-KONYA**	**0.91**	**19**	*e*PG	**Pg**	**03 16 43.7**	**+0.3**
LADK				*e*SG	**Sb**	**03 16 56.2**	**-0.3**
LADK	**Ladik-KONYA**	**0.91**	**19**	*e*Pg	**Pg**	**03 16 43.7**	**+0.3**
LADK				*e*Sg	**Sb**	**03 16 56.2**	**-0.3**
ERMK	**Ermenek**	**1.02**	**133**	*i* P	**Pg**	**03 16 43.9**	**-1.5**
ERMK				*i* S	**Sg**	**03 16 59.0**	**+0.3**
BCK	**Bucak**	**1.11**	**277**	*e*PG	**Pb**	**03 16 47.3**	**-0.2**
BCK				*e*SG	**Sn**	**03 17 03.0**	**-0.7**
BCK	**Bucak**	**1.11**	**277**	*e*Pg	**Pb**	**03 16 47.3**	**-0.2**
BCK				*e*Sg	**Sn**	**03 17 03.0**	**-0.7**
GAZI	**Gazipasa**	**1.13**	**166**	*i* P	**Pb**	**03 16 46.5**	**-1.3**
GAZI				*i* S	**Sb**	**03 17 00.7**	**-2.1**
ANTB	**Antalya**	**1.15**	**248**	*e*PN	**Pn**	**03 16 48.9**	**+0.6**
ANTB				*e*SN	**Sn**	**03 17 05.7**	**+1.4**
ANTB	**Antalya**	**1.15**	**248**	*e*Pn	**Pn**	**03 16 48.9**	**+0.6**
ANTB				*e*Sn	**Sn**	**03 17 05.7**	**+1.4**
KDHN	**Kadinhani**	**1.19**	**5**	*i* P	**Pb**	**03 16 47.4**	**-1.3**
KDHN				*i* S	**Sb**	**03 17 02.9**	**-1.5**
KDHN	**Kadinhani**	**1.19**	**5**	*i* P	**Pb**	**03 16 47.4**	**-1.3**
KDHN				*i* S	**Sb**	**03 17 02.9**	**-1.5**
ISP	**Isparta**	**1.26**	**293**	*e*PN	**Pg**	**03 16 50.1**	**+0.2**
ISP	**Isparta**	**1.26**	**293**	*e*Pn	**Pg**	**03 16 50.1**	**+0.2**
KORT	**Korkueli**	**1.34**	**256**	*i* P	**Pn**	**03 16 50.5**	**-0.7**
KORT	**Korkueli**	**1.34**	**256**	*i* P	**Pn**	**03 16 50.5**	**-0.7**
SULT	**Sultanhani-AKS**	**1.49**	**54**	*e*PN	**Pg**	**03 16 55.2**	**+0.9**
SULT	**Sultanhani-AKS**	**1.49**	**54**	*e*Pn	**Pg**	**03 16 55.3**	**+0.9**
KIZT	**Kizilcal**	**1.54**	**357**	*e*PN	**Pb**	**03 16 54.7**	**-0.1**
KIZT	**Kizilcal**	**1.54**	**357**	*e*Pn	**Pb**	**03 16 54.7**	**-0.1**
BOLV	**Bolvadin**	**1.60**	**330**	*i* P	**Pb**	**03 16 55.4**	**-0.4**
BOLV				*i* S	**Sg**	**03 17 16.7**	**-0.6**
BOLV	**Bolvadin**	**1.60**	**330**	*i* P	**Pb**	**03 16 55.4**	**-0.4**
BOLV				*i* S	**Sg**	**03 17 16.7**	**-0.6**
SHUT	**Suhut-Afyon**	**1.66**	**317**	*e*PN	**Pb**	**03 16 56.4**	**-0.4**
SHUT	**Suhut-Afyon**	**1.66**	**317**	*e*Pn	**Pb**	**03 16 56.4**	**-0.4**
ELL	**Elmali**	**1.76**	**251**	*e*PN	**Pb**	**03 16 58.8**	**+0.3**
ELL	**Elmali**	**1.76**	**251**	*e*Pn	**Pb**	**03 16 58.8**	**+0.3**
GOLH	**Golhisar**	**1.93**	**268**	*i* P	**Pg**	**03 17 02.2**	**-0.6**
GOLH	**Golhisar**	**1.93**	**268**	*i* P	**Pg**	**03 17 02.2**	**-0.6**
GLHS	**Glhisar (BURDU**	**1.99**	**265**	*e*PN	**Pb**	**03 17 01.9**	**-0.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GLHS	Glhisar (BURDU	1.99	265	ePn	Pb	03 17 01.9	-0.6
SVRH	Sivrihisar-ESK	2.14	350	ePN	Pb	03 17 03.8	-1.1
SVRH	Sivrihisar-ESK	2.14	350	ePn	Pb	03 17 03.8	-1.1
AKAS	Kas	2.20	241	i P	Pg	03 17 07.3	-0.7
AKAS				i S	Sg	03 17 38.8	+2.2
AKAS	Kas	2.20	241	i P	Pg	03 17 07.3	-0.7
KHAL	Karahalli	2.22	298	i P	Pn	03 17 04.5	+1.2
KHAL	Karahalli	2.22	298	i P	Pn	03 17 04.5	+1.2
NIG	Nigde	2.22	69	ePN	Pb	03 17 06.2	-0.2
NIG	Nigde	2.22	69	ePn	Pb	03 17 06.3	-0.2
GULE	Gulek	2.23	91	i P	Pn	03 17 04.9	+1.5
GULE				i S	Sb	03 17 36.2	+1.7
GULE	Gulek	2.23	91	i P	Pn	03 17 04.9	+1.5
GULE				i S	Sb	03 17 36.2	+1.7
ALT	Altintas	2.26	320	ePN	Pn	03 17 04.3	+0.5
ALT	Altintas	2.26	320	ePn	Pn	03 17 04.3	+0.5
AFSR	Af¯ar-Bala (A	2.27	22	ePN	Pn	03 17 04.6	+0.7
AFSR	Af¯ar-Bala (A	2.27	22	ePn	Pn	03 17 04.6	+0.7
LEF	Lefka	2.33	161	ePN	Pb	03 17 08.7	+0.5
LEF	Lefka	2.33	161	ePn	Pb	03 17 08.7	+0.5
ESKT	Eskisehir	2.35	338	ePN	Pn	03 17 06.2	+1.2
ESKT	Eskisehir	2.35	338	ePn	Pn	03 17 06.3	+1.2
SEYT	Eskypehyr	2.35	338	i P	Pn	03 17 04.0	-1.1
SEYT	Eskypehyr	2.35	338	i P	Pn	03 17 04.0	-1.1
BBAL	Bala	2.38	22	i P	Pn	03 17 04.2	-1.2
BBAL	Bala	2.38	22	i P	Pn	03 17 04.2	-1.2
LFK	Lefkose	2.41	148	ePN	Pb	03 17 09.0	-0.5
LFK	Lefkose	2.41	148	ePn	Pb	03 17 09.0	-0.5
FETY	Fethiye	2.42	254	ePN	Pb	03 17 08.2	-1.6
FETY	Fethiye	2.42	254	ePn	Pb	03 17 08.2	-1.6
CSS	Prodhromos	2.61	155	ePN	Pb	03 17 12.4	-0.6
CSS	Prodhromos	2.61	155	ePn	Pb	03 17 12.4	-0.6
GDZ	Gediz	2.63	312	i P	Pn	03 17 09.7	+0.8
GDZ	Gediz	2.63	312	i P	Pn	03 17 09.7	+0.8
TVSB	Tavsanli	2.89	318	ePN	Pn	03 17 13.6	+1.2
TVSB	Tavsanli	2.89	318	ePn	Pn	03 17 13.6	+1.2
MANT	Manisa	2.94	294	i P	Pn	03 17 14.2	+1.0
MANT				i S	Sn	03 17 47.4	-1.5
MANT	Manisa	2.94	294	i P	Pn	03 17 14.2	+1.0
MANT				i S	Sn	03 17 47.4	-1.5
CDAG	Cicekdag	2.95	39	i P	Pn	03 17 14.2	+0.9
CDAG	Cicekdag	2.95	39	i P	Pn	03 17 14.2	+0.9
YER	Yerkesik	2.96	267	ePN	Pn	03 17 15.3	+2.0
YER	Yerkesik	2.96	267	ePn	Pn	03 17 15.3	+2.0
YURE	YUREGIR	2.96	99	i P	Pb	03 17 20.0	+1.0
YURE				i S	Sg	03 17 58.8	-2.2
YURE	YUREGIR	2.96	99	i P	Pb	03 17 20.0	+1.0
CEYT	Ceyhan	3.03	95	ePN	Pb	03 17 17.5	-2.5
CEYT	Ceyhan	3.03	95	ePn	Pb	03 17 17.5	-2.5
KOZT	Kozan	3.07	86	ePN	Pb	03 17 18.1	-2.6
KOZT	Kozan	3.07	86	ePn	Pb	03 17 18.1	-2.6
MDUB	Mudurnu	3.19	349	ePN	Pn	03 17 18.1	+1.6
MDUB	Mudurnu	3.19	349	ePn	Pn	03 17 18.1	+1.6
AYDN	Tasoluk	3.28	277	i P	Pn	03 17 19.8	+2.1
AYDN				i S	Sn	03 17 57.6	+0.6
AYDN	Tasoluk	3.28	277	i P	Pn	03 17 19.8	+2.1
AYDN				i S	Sn	03 17 57.6	+0.6
GULT	Gulveren	3.29	340	ePN	Pn	03 17 19.4	+1.5
GULT	Gulveren	3.29	340	ePn	Pn	03 17 19.5	+1.5
YOZ	Yozgat	3.48	48	ePN	Pn	03 17 23.9	+3.2
YOZ	Yozgat	3.48	48	ePn	Pn	03 17 23.9	+3.2
CORM	Corum	3.51	35	ePN	Pn	03 17 23.6	+2.6
CORM	Corum	3.51	35	ePn	Pn	03 17 23.6	+2.6
DURS	Dursunbey	3.56	310	i P	Pn	03 17 23.1	+1.5
DURS				i S	Sn	03 18 03.0	-1.1
DURS	Dursunbey	3.56	310	i P	Pn	03 17 23.1	+1.5
DURS				i S	Sn	03 18 03.0	-1.1
DAT	Datca	3.58	262	ePN	Pn	03 17 23.9	+2.0
DAT	Datca	3.58	262	ePn	Pn	03 17 23.9	+2.0

*ISCJB **05** 03:26:26.9±0.5, 39°.26N±0°.02×38°.95E±0°.03, h5^{km}±5^{km}, Error ellipse: s-maj=4.3km s-min=3.9km az=25.9*
*DDA **05** 03:26:26.4, 39°.24N×38°.97E, h7^{km}, MD2.8*
*ISK **05** 03:26:26.5, 39°.29N×38°.94E, h9^{km}, MD2.8*
*CSEM **05** 03:26:27.1±0.1, 39°.27N×38°.94E, h8^{km}, MD2.8, Error ellipse: s-maj=3.3km s-min=2.6km az=93.0*
ISC 05 03:26:27.1±0.9**, 39°.27N**±0°.02×**38°.93E**±0°.02**, h12**^{km}±8^{km}**, n26,** σ0^s.**40**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILIC	ilic-Erzincan	0.34	303	ePG	Pg	03 26 33.7	-0.3
ILIC				eSG	Sg	03 26 38.7	+0.1
ILIC	ilic-Erzincan	0.34	303	ePg	Pg	03 26 33.7	-0.3
ILIC				eSg	Sg	03 26 38.7	+0.1
KEMA	Kemaliye	0.34	270	i P	Pg	03 26 34.3	+0.2
KEMA				i S	Sg	03 26 39.3	+0.6
KEMA	Kemaliye	0.34	270	i P	Pg	03 26 34.3	+0.2
KEMA				i S	Sg	03 26 39.3	+0.6
PTK	Pertek	0.52	136	ePG	Pg	03 26 37.2	-0.1
PTK				eSG	Sg	03 26 45.0	+0.7
PTK	Pertek	0.52	136	ePg	Pg	03 26 37.2	-0.1
PTK				eSg	Sg	03 26 45.0	+0.7
EZC	Erzincan	0.58	34	ePG	Pg	03 26 38.0	-0.6
EZC				eSG	Sg	03 26 46.0	-0.3
EZC	Erzincan	0.58	34	ePg	Pg	03 26 38.0	-0.6
EZC				eSg	Sg	03 26 46.0	-0.3
ERZN	Erzincan	0.69	62	ePG	Pg	03 26 40.1	-0.4
ERZN				eSG	Sg	03 26 49.9	+0.3
ELZG	Elazig	0.77	177	i P	Pg	03 26 41.5	-0.6
ELZG				i S	Sg	03 26 52.1	-0.1
ELZG	Elazig	0.77	177	i P	Pg	03 26 41.5	-0.6
ELZG				i S	Sg	03 26 52.1	-0.1
KELT	Kelkit	0.91	16	i P	Pg	03 26 44.7	-0.1
KELT				i S	Sg	03 26 56.9	+0.1
KELT	Kelkit	0.91	16	i P	Pg	03 26 44.7	-0.1
KELT				i S	Sg	03 26 56.9	+0.1
MYA	Malataya	1.02	203	ePG	Pn	03 26 47.5	+0.2
MYA	Malataya	1.02	203	ePg	Pn	03 26 47.5	+0.2
SUSE	Susehri	1.09	329	i P	Pn	03 26 48.9	+0.5
SUSE				i S	Sn	03 27 04.0	+0.4
SUSE	Susehri	1.09	329	i P	Pn	03 26 48.9	+0.5
SUSE				i S	Sn	03 27 04.0	+0.4
AKCD	Akcadag	1.25	219	i P	Pn	03 26 50.4	-0.2
AKCD				i S	Sb	03 27 06.3	-0.6
AKCD	Akcadag	1.25	219	i P	Pn	03 26 50.4	-0.2
AKCD				i S	Sb	03 27 06.3	-0.6
GUMT	Gumushane	1.26	19	ePN	Pn	03 26 50.8	+0.1
GUMT	Gumushane	1.26	19	ePn	Pn	03 26 50.8	+0.1
BINT	Bingol	1.27	107	ePn	Pg	03 26 52.5	+0.9
DARE	Darende-Malaty	1.33	239	ePN	Pb	03 26 51.9	-0.2
BNGB	Bingˆ¶l	1.39	101	ePN	Pn	03 26 52.5	+0.1
BAYT	Ayd˜–ntepe-Bay	1.46	39	ePN	Pb	03 26 54.1	-0.2
BAYT	Ayd˜–ntepe-Bay	1.46	39	ePn	Pb	03 26 54.1	-0.2

*ISCJB **05** 03:30:17.7±0.4, 49°.38N±0°.03×83°.41E±0°.05, h10^{km}, mb4.3/11, Error ellipse: s-maj=4.6km s-min=3.9km az=22.9*
*IDC **05** 03:30:21.3±1.1, 49°.39N×83°.82E, h30^{km}±4^{km}, mb3.8/5, mb1 4.1/11, mb1mx3.9/31, mbtmp4.0/11, ML4.2/6, MS3.1/3, Ms1 3.1/3, ms1mx2.7/48, Error ellipse: s-maj=17.3km s-min=9.1km az=81.0*
*ASRS **05** 03:30:21.1±0.9, 49°.30N×84°.01E, h15^{km}, Ms4.0/3*
*MOS **05** 03:30:22.6±2.7, 49°.33N×83°.15E, h33^{km}, mb4.1/2, Error ellipse: s-maj=10.2km s-min=6.8km az=72.0*
*NEIC **05** 03:30:22.1±0.6, 49°.33N×83°.45E, h26^{km}±4^{km}, mb3.9/5, Error ellipse: s-maj=8.6km s-min=7.6km az=135.0*
NEIC Felt [IV] at Oskemen.
*NNC **05** 03:30:23.3±1.4, 49°.18N×83°.09E, h7^{km}±7^{km}, mb4.6, mpv4.3, Error ellipse: s-maj=11.6km s-min=4.9km az=72.0*
ISC 05 03:30:19.8±0.6**, 49°.36N**±0°.04×**83°.43E**±0°.05**, h10**^{km}**, n101,** σ1^s.**73**/111**, mb4.3**/11**, 23C-7D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UKR	Ust'-Kan	1.80	28	i Pg	Pn	03 30 52.5	+1.5
UKR				i Sg	Sn	03 31 15.1	+1.2
UKR	Ust'-Kan	1.80	28	i PN	Pn	03 30 52.5	+1.5
MK31	Makanchi Array	2.68	197	⇑Pn	Pn	03 31 05.0	+2.0
	120nm,0.3s,baz=24,slow=16,SNR=11						
MK31				⇓Lg	Lg	03 31 39.3	
	1µm,0.5s,baz=35,slow=28,SNR=14						
MK31	Makanchi Array	2.68	197	ePN	Pn	03 31 05.0	+2.0
MK31						03 31 38.6	
MK31				pmax	pmax		
	comp=Z,66nm,0.3s						
MK31				pmax	pmax		
	comp=Z,3µm,0.5s						
MKAR	Makanchi Array	2.68	197	PN	Pn	03 31 04.9	+1.9
MKAR						03 31 38.8	
MKAR				pmax	pmax		
	comp=Z,53nm,0.3s						
MKAR				smax	smax		
	comp=Z,615nm,0.3s						
MKAR	Makanchi Array	2.68	197	Pn	Pn	03 31 04.9	+1.9
MKAR				eSn	Sn	03 31 37.6	+2.0
MKAR				Sn	Sn	03 31 38.8	+3.3
MKAR	Makanchi Array	2.68	197	Pn	Pn	03 31 04.9	+1.9
	comp=Z,53nm,0.3s,baz=28,slow=14,SNR=1433						
MKAR				Sn	Sn	03 31 38.8	+3.3
	comp=Z,614nm,0.3s,baz=32,slow=28,SNR=31						
KURK	Kurchatov	3.38	295	⇑Pn	Pn	03 31 15.1	+2.4
	comp=Z,43nm,0.4s						
KURK				⇑Lg	Lg	03 32 08.3	
	comp=Z,4µm,0.7s						
KURK	Kurchatov	3.38	295	ePN	Pn	03 31 15.8	+3.1
KURK				SG	Sg	03 32 16.0	+7.5
KURK	Kurchatov	3.38	295	ePn	Pn	03 31 15.2	+2.6
KURK				Lg	Lg	03 32 16.0	
KURBB	Kurchatov Arra	3.41	294	Pn	Pn	03 31 15.8	+2.8
	comp=Z,7.2nm,0.3s,baz=106,slow=14,SNR=372						
KURBB				Lg	Lg	03 32 16.0	
	comp=Z,76nm,0.3s,baz=111,slow=30,SNR=23						
KUR16	Kurchatov Arra	3.42	294	⇑Pn	Pn	03 31 16.1	+2.9
	comp=Z,12nm,0.5s						
KUR16				⇑Lg	Lg	03 32 09.1	
	comp=Z,980nm,0.9s						
ELT	Yel'tsovka	4.29	23	ePg	Pb	03 31 37.5	+2.3
ELT	Yel'tsovka	4.29	23	ePN	Pb	03 31 37.5	+2.3
TASR	Tashtagol	4.41	38	eSg	Sb	03 32 32.6	+2.0
ZAA0	Zalesovo Array	4.67	10	ePn	Pn	03 31 30.5	+0.1
ZALV	Zalesovo Beam	4.67	10	PN	Pn	03 31 30.5	+0.1
ZALV						03 32 47.5	
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,110nm,21.6s						
ZALV	Zalesovo Beam	4.67	10	Pn	Pn	03 31 30.4	+0.1
ZALV				Lg	Lg	03 32 47.5	
ZALV	Zalesovo Beam	4.67	10	Pn	Pn	03 31 30.4	+0.1
	comp=Z,8.5nm,0.3s,baz=192,slow=14,SNR=142						
ZALV				Lg	Lg	03 32 47.5	
	comp=Z,107nm,0.3s,baz=193,slow=31,SNR=12						
ZALV				LR	LR	03 33 39.7	
	comp=Z,110nm,21.6s,baz=59,slow=43						
NVS	Novosibirsk	5.49	359	ePg	Pg	03 32 02.6	-2.3
NVS				eSg	Sg	03 33 14.5	-1.4
NVS	Novosibirsk	5.49	359	ePN	Pn	03 31 40.9	-0.7
NVS				e		03 32 02.6	
NVS				e		03 33 14.5	
TKM2	Tokmak 2	8.43	223	⇑Pn	Pn	03 32 22.7	+0.6
	comp=Z,25nm,0.5s						
TKM2				⇓Sn	Sn	03 33 56.7	-0.7
	comp=Z,30nm,0.6s						
TKM2				⇑Lg	Lg	03 34 39.8	
	comp=Z,229nm,1.0s						
TKM2	Tokmak 2	8.43	223	eP	Pn	03 32 22.7	+0.6
TKM2	Tokmak 2	8.43	223	ePn	Pn	03 32 22.7	+0.6
TKM2	Tokmak 2	8.43	223	P	Pn	03 32 22.8	+0.6
	SNR=17						
VOSK	Vostochnaya	8.54	298	⇓Pn	Pn	03 32 24.4	+1.0
	comp=Z,7.4nm,0.4s						
VOSK				⇑Sn	Sn	03 34 01.3	+1.6
	comp=Z,96nm,0.6s						
VOSK				⇑Lg	Lg	03 34 51.6	
	comp=Z,198nm,0.8s						
USP	Ospenovka	8.68	229	P	Pn	03 32 26.6	+1.2
	SNR=8.6						
ULHL	Ulahol	8.70	218	P	Pn	03 32 28.5	+2.5
	SNR=37						
CHMS	Chumysh	8.76	227	P	Pn	03 32 28.3	+1.9
	SNR=9.7						
KBK	Karagaybulak	8.93	225	P	Pn	03 32 29.7	+0.8
	SNR=48						
FRU	Bishkek	8.95	226	⇑iP	Pn	03 32 30.0	+0.9
FRU				pmax	pmax		
	comp=Z,60nm,1.2s						
FRU				pmax	pmax		
	comp=E,1.0nm,1.9s						
BVA0	Borovoye Array	8.97	299	⇑Pn	Pn	03 32 30.9	+1.5
	comp=E,4.9nm,0.5s,baz=107,slow=12,SNR=25						
BVA0				Sn	Sn	03 34 12.6	+2.2
	comp=E,52nm,0.5s,baz=109,slow=21,SNR=12						
BVA0				⇓Lg	Lg	03 35 06.0	
	comp=E,132nm,0.6s,baz=126,slow=25,SNR=4.0						
BVA0	Borovoye Array	8.97	299	i P	Pn	03 32 30.8	+1.5
BVA0				i		03 34 09.9	
BVA0				pmax	pmax		
	comp=Z,5.0nm,0.5s						
BVA0				smax	smax		
	comp=Z,52nm,0.5s						
BVA0				pmax	pmax		
	comp=Z,169nm,0.8s						
BVAR	Borovoye Array	8.97	299	P	Pn	03 32 30.2	+0.8
BVAR						03 34 10.3	
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR				smax	smax		
	comp=Z,27nm,0.3s						
BVAR				MLR	MLR		
	comp=Z,201nm,18.6s						
BVAR	Borovoye Array	8.97	299	Pn	Pn	03 32 30.2	+0.8
BVAR				Sn	Sn	03 34 10.3	-0.1
BVAR				Lg	Lg	03 35 11.1	
BVAR	Borovoye Array	8.97	299	Pn	Pn	03 32 30.2	+0.8
	comp=Z,3.0nm,0.3s,baz=101,slow=13,SNR=38						
BVAR				Sn	Sn	03 34 10.3	-0.1
	comp=Z,27nm,0.3s,baz=106,slow=20,SNR=15						
BVAR				Lg	Lg	03 35 11.1	
	comp=Z,8.6nm,0.3s,baz=122,slow=25,SNR=3.6						
BVAR				LR	LR	03 36 10.1	
	comp=Z,201nm,18.6s,baz=202,slow=38						
BRVK	Borovoye	9.04	299	⇑Pn	Pn	03 32 32.0	+1.6
	comp=Z,8.3nm,0.5s						
BRVK				⇑Sn	Sn	03 34 13.1	+0.9
	comp=Z,156nm,0.5s						
BRVK				⇑Lg	Lg	03 35 07.7	
	comp=Z,282nm,0.8s						
BRVK	Borovoye	9.04	299	eP	Pn	03 32 32.1	+1.8
BRVK	Borovoye	9.04	299	ePn	Pn	03 32 32.1	+1.8
AAK	Ala-Archa	9.16	226	P	Pn	03 32 33.0	+0.9
AAK				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AAK				MLR	MLR		
	comp=Z,148nm,20.0s						
AAK	Ala-Archa	9.16	226	ePn	Pn	03 32 33.0	+0.9
AAK				Lg	Lg	03 35 11.1	
AAK	Ala-Archa	9.16	226	P	Pn	03 32 33.0	+0.9
	SNR=28						
AAK	Ala-Archa	9.16	226	Pn	Pn	03 32 33.0	+0.9
	comp=Z,4.7nm,0.3s,baz=17,slow=6.4,SNR=56						
AAK				Lg	Lg	03 35 11.1	
	comp=Z,5.0nm,0.3s,baz=173,slow=23,SNR=7.4						
AAK				LR	LR	03 36 28.4	
	comp=Z,148nm,20.0s,baz=135,slow=39						
KZA	Kyzart	9.26	221	P	Pn	03 32 35.4	+1.7
	SNR=16						
EKS2	Erkin-Say	9.48	229	eP	Pn	03 32 37.6	+1.1
EKS2	Erkin-Say	9.48	229	ePn	Pn	03 32 37.6	+1.1
EKS2	Erkin-Say	9.48	229	P	Pn	03 32 37.6	+1.1
	SNR=19						
ZRNK	Zerenda	9.75	297	⇑Pn	Pn	03 32 42.9	+2.9
	comp=Z,9.9nm,0.8s						
ZRNK				⇑Sn	Sn	03 34 30.3	+0.8
	comp=Z,104nm,0.8s						
ZRNK				⇑Lg	Lg	03 35 28.7	
	comp=Z,330nm,1.0s						
AML	Almayashu	9.92	227	P	Pn	03 32 45.2	+2.4
	SNR=16						
KK31	Karatay Array	10.91	240	⇑Pn	Pn	03 32 55.0	-1.0
	comp=Z,38nm,0.7s,baz=45,slow=14,SNR=262						
KK31				⇑Sn	Sn	03 34 57.0	-1.1
	comp=Z,30nm,0.9s						
KK31				⇓Lg	Lg	03 36 01.8	
	comp=Z,72nm,0.7s,baz=50,slow=30,SNR=4.0						
KK31	Karatay Array	10.91	240	eP	Pn	03 32 54.9	-1.0
KK31						03 35 06.2	
KK31				pmax	pmax		
	comp=Z,36nm,0.6s						
KK31				smax	smax		
	comp=Z,6.0nm,0.3s						
KK31				pmax	pmax		
	comp=Z,62nm,0.6s						
KKAR	Karatay Array	10.91	240	eP	Pn	03 32 55.3	-0.7
KKAR	Karatay Array	10.91	240	ePn	Pn	03 32 55.2	-0.7
ZAK	Zakamensk	12.85	78	eP	Pn	03 33 29.7	+7.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	15.26	87	Pn	Pn	03 33 55.5	+0.2
SONM	Songino Array	15.26	87	Pn	Pn	03 33 55.5	+0.2
	comp=Z,0.3nm,0.3s,baz=277,slow=12,SNR=3.8						
AB31	Akbulak array	15.31	279	⇑Pn	Pn	03 33 55.4	-0.5
	comp=Z,3.7nm,0.6s,baz=88,slow=10,SNR=22						
AB31				⇓Sn	Sn	03 36 44.9	-0.5
	comp=Z,4.1nm,0.6s,baz=81,slow=12,SNR=5.5						
AB31				⇑Lg	Lg	03 38 26.4	
	comp=Z,16nm,0.7s,baz=97,slow=26,SNR=3.7						
AB31	Akbulak array	15.31	279	i P	Pn	03 33 55.3	-0.5
AB31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ABKAR	Akbulak array	15.31	279	ePn	Pn	03 33 54.3	-1.5
	comp=Z,4.0nm,0.4s						
ULN	Ulaanbaatar	15.68	86	ePn	Pn	03 34 02.6	+1.7
	comp=Z,12nm,1.7s						
AKTO	Aktyubinsk	16.39	283	⇑Pn	Pn	03 34 10.7	+0.9
	comp=Z,5.3nm,0.7s						
AKTO				⇑Sn	Sn	03 37 13.9	+2.4
	comp=Z,18nm,1.1s						
AKTO				⇓Lg	Lg	03 38 59.9	
	comp=Z,78nm,1.2s						
AKTO	Aktyubinsk	16.39	283	P	Pn	03 34 09.1	-0.7
AKTO						03 37 08.1	
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,5µm,21.9s						
AKTO	Aktyubinsk	16.39	283	Pn	Pn	03 34 09.1	-0.7
AKTO				Sn	Sn	03 37 08.1	-3.4
AKTO				Lg	Lg	03 39 01.6	
AKTO	Aktyubinsk	16.39	283	Pn	Pn	03 34 09.1	-0.7
	comp=Z,0.5nm,0.3s,baz=84,slow=14,SNR=15						
AKTO				Sn	Sn	03 37 08.1	-3.4
	comp=Z,0.2nm,0.3s,baz=216,slow=19,SNR=2.7						
AKTO				Lg	Lg	03 39 01.6	
	comp=Z,0.2nm,0.3s,baz=180,slow=20,SNR=3.2						
AKTO				LR	LR	03 40 54.9	
	comp=Z,5µm,21.9s,baz=244,slow=38						
KBL	Kabul	18.22	221	eP	Pn	03 34 31.1	-1.8
KBL				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KBL	Kabul	18.22	221	eP	Pn	03 34 31.1	-1.8
	comp=Z,5.5nm,0.7s						
DANN	Dangsing	20.98	179	eP	P	03 35 00.1	-3.3
GUN	Gumba	21.50	174	eP	P	03 35 06.4	-2.7
KKN	Kakani	21.59	176	eP	P	03 35 06.1	-3.8
DMN	Daman	21.76	176	eP	P	03 35 07.2	-4.5
PKIN	Phulchoki	21.80	175	eP	P	03 35 07.5	-4.7
	comp=Z,16nm,0.6s						
PKI	Pulchoki	21.81	175	eP	P	03 35 07.5	-4.9
TAPN	Taplejung	22.22	170	eP	P	03 35 13.4	-3.4
RAMN	Ramite	22.51	173	eP	P	03 35 14.9	-4.9
ODAN	Odare	22.67	171	eP	P	03 35 17.1	-4.4
	comp=Z,32nm,0.7s						
CMAR	Chiang Mai Arr	33.27	152	pP	pP	03 37 03.0	+2.6
CMAR	Chiang Mai Arr	33.27	152	pP	pP	03 37 03.0	+2.6
	comp=Z,1.8nm,0.3s,baz=337,slow=8.9,SNR=2.9						
FINES	FINESS Array B	33.59	313	sP	sP	03 37 12.1	+8.1
FINES	FINESS Array B	33.59	313	sP	sP	03 37 12.1	+8.1
	comp=Z,2.5nm,0.6s,baz=80,slow=10,SNR=1.9						
BR131	Keskin Array S	36.18	274	eP	P	03 37 23.7	+1.2
	comp=Z,1.2nm,0.6s						
BRTR	Keskin Array B	36.18	274	P	P	03 37 23.4	+0.8
BRTR				sP	sP	03 37 37.2	+10
BRTR	Keskin Array B	36.18	274	P	P	03 37 23.3	+0.8
	comp=Z,1.5nm,0.7s,baz=77,slow=7.6,SNR=15						
BRTR				sP	sP	03 37 37.2	+10
	comp=Z,1.2nm,0.6s,baz=80,slow=6.5,SNR=5.5						
BUR08	Bucovina Ar. S	37.79	290	P	P	03 37 36.2	+0.1
NB2	NORSAR Subarra	40.70	315	P	P	03 38 00.3	+0.2
	comp=Z,3.5nm,0.5s,baz=72,slow=8.6						
NOA	NORSAR Array B	40.70	315	P	P	03 38 00.0	-0.1
NOA				pP	pP	03 38 08.0	+4.8
NOA				sP	sP	03 38 11.8	+7.3
NOA	NORSAR Array B	40.70	315	P	P	03 38 00.0	-0.1
	comp=Z,1.1nm,0.7s,baz=70,slow=7.7,SNR=4.3						
NOA				pP	pP	03 38 08.0	+4.8
	comp=Z,3.4nm,0.5s,baz=70,slow=7.7,SNR=11						
NOA				sP	sP	03 38 11.8	+7.3
	comp=Z,3.4nm,0.5s,baz=72,slow=8.3,SNR=12						
GERES	GERESS Array B	44.14	297	P	P	03 38 28.3	0.0
GERES	GERESS Array B	44.14	297	P	P	03 38 28.3	0.0
	comp=Z,0.3nm,0.6s,baz=90,slow=7.8,SNR=2.9						
BAIF	Baives	48.90	303	eP	P	03 39 04.7	-0.9
LPG	La Plagne	49.92	297	eP	P	03 39 14.2	+0.4
	comp=Z,10nm,0.8s						
LPL	La Plagne	49.92	297	eP	P	03 39 14.1	+0.4
	comp=Z,4.0nm,0.5s						
SBF	Sospel	50.44	294	eP	P	03 39 17.2	-0.2
	comp=Z,96nm,1.3s						
SMRF	Simiane la Rot	51.47	296	eP	P	03 39 25.1	-0.1
LDF	La Druitiere	52.08	303	eP	P	03 39 28.9	-0.7
	comp=Z,6.1nm,0.8s						
FLN	La Foliniere	52.18	304	eP	P	03 39 29.9	-0.4
	comp=Z,9.7nm,0.7s						
QUIF	Quistinic	54.13	304	eP	P	03 39 44.4	-0.3
ESDC	Sonseca Array	59.73	297	P	P	03 40 24.4	-0.2
ESDC	Sonseca Array	59.73	297	P	P	03 40 24.4	-0.2
	comp=Z,1.3nm,0.6s,baz=48,slow=7.1,SNR=12						
TAM	Tamanrasset	65.30	277	eP	P	03 41 02.2	+0.1
	comp=Z,2.2nm,0.8s						
TORD	Torodi Ar. Bea	74.78	272	P	P	03 41 59.2	-1.1
TORD				pP	PcP	03 42 11.2	-3.1
TORD	Torodi Ar. Bea	74.78	272	P	P	03 41 59.2	-1.1
	comp=Z,2.4nm,0.6s,baz=31,slow=5.2,SNR=25						
TORD				pP	PcP	03 42 11.2	-3.1
	comp=Z,0.5nm,0.4s,baz=40,slow=5.1,SNR=3.9						

*NIED **05** 03:30:00, 41°.70N×143°.70E, h29^{km}, Mw6.4 Best double couple: $M_0$4.11000×10^{18} NP1:ϕ_s21.00000°, δ73.00000°, λ86.00000°. NP2:ϕ_s214.00000°, δ17.00000°, λ103.00000°.*
*IDC **05** 03:30:28.2±0.3, 41°.81N×143°.57E, h0^{km}, mb5.6/36, mb1 5.6/40, mb1mx5.6/41, mbtmp5.6/40, ML4.5/4, MS6.3/34, Ms1 6.3/34, ms1mx6.1/43, Error ellipse: s-maj=8.2km s-min=7.5km az=157.0*
*BJI **05** 03:30:29.5, 41°.80N×143°.70E, h36^{km}, mB6.5/56, mb5.8/64, Ms6.6/81, Ms7 6.5/70*
*MOS **05** 03:30:32.4±0.8, 41°.79N×143°.46E, h36^{km}, mb6.2/151, MS6.4/100, Error ellipse: s-maj=5.8km s-min=3.3km az=104.2*
MOS Felt (II) at Yuzhno-Kuril'sk.
*ISCJB **05** 03:30:33.1±0.2, 41°.76N±0°.01×143°.48E±0°.02, h43^{km}±1^{km}, mb6.0/518, MS6.4/252, Error ellipse: s-maj=2.6km s-min=1.9km az=41.1*
*NEIC **05** 03:30:33.1±0.1, 41°.82N×143°.45E, h29^{km}, mb6.0/257, ME6.1, MS6.3/157, MW6.4, MW6.3, MW6.3(NIED), Error ellipse: s-maj=2.7km s-min=1.8km az=151.0 Broadband fault plane solution: P waves. NP1:ϕ_s30.00000°, δ80.00000°, λ90.00000°. NP2:ϕ_s210.00000°, δ10.00000°, λ90.00000°. Principal axes: T Plg55.0000°, Azm300.0000°; N Plg0.0000°, Azm0.0000°; P Plg35.0000°, Azm120.0000°; Moment Tensor Solution. s126 Moment tensor: Scale 10^{18} Nm; M_{rr}1.68; $M_{\theta\theta}$-0.73; $M_{\phi\phi}$-0.95; $M_{r\theta}$1.22; $M_{\theta\phi}$-0.65; $M_{\phi r}$2.42; Best double couple: $M_0$3.10000×10^{18} NP1:ϕ_s29.00000°, δ75.00000°, λ85.00000°. NP2:ϕ_s228.00000°, δ16.00000°, λ108.00000°. Principal axes: T 3.2600, Plg59.0000°, Azm291.0000°; N -0.2400, Plg4.0000°, Azm30.0000°; P -3.0200, Plg29.0000°, Azm122.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [II] at Sapporo. Also felt at Obihiro and Shiraoi. Felt [II] at Misawa, Honshu. Also felt at Goshogawara and Kizukuri. Felt [II] at Yuzhno-Kuril'sk, Kuril Islands. Recorded [4 JMA] in southern Hokkaido, [3 JMA] in southwestern Hokkaido, [2 JMA] in central and eastern Hokkaido and [1 JMA] in northern Hokkaido. Also recorded [3 JMA] in Aomori, [2 JMA] in Iwate and Miyagi and [1 JMA] in Akita, Honshu.
*JMA **05** 03:30:33.8±0.1, 41°.81N×143°.62E, h31^{km}±2^{km}, M6.4 Broadband fault plane solution: P waves. NP1:*

ϕs21.00000°,δ72.00000°,λ100.00000°. NP2: ϕs171.00000°,δ21.00000°,λ61.00000°. Principal axes: T Plg62.0000°, Azm307.0000°; N Plg10.0000°, Azm198.0000°; P Plg26.0000°, Azm103.0000°;

JMA Felt IV J1.

*SZGRF **05** 03:30:34.8, 42.57N×144.21E, h29km, mb6.2, MS6.6, Hokkaido, Japan, region*

*TEH **05** 03:30:35.0, 41.86N×143.40E, h42km, ML6.3*

*DJA **05** 03:30:36.2±2.5, 42°N±12°×14°4E±1°6, h66km±22km, M6.3/56, mb6.0/56, mB6.5/51, Mw(mB)6.3/51, Mwp6.2/15*

*GCMT **05** 03:30:37.6±0.1, 41.70N×143.72E, h32km, MW6.3, Moment Tensor Solution. s113,c276; s98,c154; Moment tensor: Scale 10^18Nm; Mrr1.87±.02; Mθθ-0.52±.01; Mϕϕ-1.34±.02; Mrθ1.69±.03; Mθϕ-1.20±.01; Mϕr2.80±.05; Best double couple: Mo3.90000×10^18 NP1:ϕs221.00000°,δ16.00000°,λ99.00000°. NP2: ϕs32.00000°,δ74.00000°,λ87.00000°. Principal axes: T 3.6900, Plg61.0000°, Azm298.0000°; N 0.3300, Plg3.0000°, Azm32.0000°; P -4.0100, Plg29.0000°, Azm124.0000°; Data Used: II IU CN IC G. LP body wave period 50 sec. Surface waves: sta=117, comp=275, per=50.*

*NSSC **05** 03:30:38.3±2.5, 40.19N×139.25E, h5km±999km*

*NEIC **05** 03:30:48.0±0.0, 41.72N×143.86E, h26km, Moment Tensor Solution. s150 Moment tensor: Scale 10^18Nm; Mrr1.73; Mθθ-0.59; Mϕϕ-1.13; Mrθ2.04; Mθϕ-0.80; Mϕr3.58; Best double couple: Mo4.50000×10^18 NP1:ϕs30.00000°, δ79.00000°,λ88.00000°. NP2:ϕs221.00000°,δ11.00000°, λ101.00000°. Principal axes: T 4.4800, Plg56.0000°, Azm297.0000°; N -0.0300, Plg2.0000°, Azm30.0000°; P -4.4400, Plg33.0000°, Azm121.0000°;*

ISC 05 03:30:33.5±0.2, **41.81N**±0.02×**143.54E**±0.02, **h34km, h34km:pP-P, n2127, σ1.25**/2399, **mb6.0**/529, **MS6.4**/253, **662C-259D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERM	Erimo	0.35	306	eP	Pn	03 30 42.4	+0.1
ERM				e		03 30 51.0	
ERM	Erimo	0.35	306	ePn	Pn	03 30 42.4	+0.1
ERM				eSn	Sb	03 30 51.0	+3.2
JEM	Erimo	0.35	306	⇓P	Pn	03 30 42.2	-0.1
JEM				eS	Sb	03 30 49.6	+1.8
JNBK	Urakawa-nobuka	0.75	309	⇓P	Pb	03 30 49.1	+0.9
JNBK				eS	Sb	03 31 02.0	+3.8
JCH	Churui	0.82	351	⇑P	Pb	03 30 49.1	-0.2
JCH				eS	Sb	03 31 01.5	+1.4
JOB	Onbets	1.12	11	⇑P	Pn	03 30 53.3	+0.6
JOB				eS	Sb	03 31 08.9	+0.3
JBT2	Biratori 2	1.30	318	⇓P	Pb	03 30 56.6	-0.9
JAK	Akkeshi	1.47	35	⇓P	Pn	03 30 57.3	-0.2
JAK				eS	Sn	03 31 16.0	+0.5
JAR	Ashorobuto	1.50	7	⇑P	Pn	03 30 58.1	+0.1
JAR				eS	Sb	03 31 18.1	-1.3
JFR	Furan	1.52	333	⇑P	Pn	03 30 58.2	-0.2
JEW	Eniwo	1.86	304	⇑P	Pb	03 31 05.5	-1.4
JKB	Kayabe	1.87	273	⇑P	Pn	03 31 04.3	+1.2
JOT	Ohata	1.92	258	⇑P	Pn	03 31 04.8	+1.1
JAB	Ashibetsu	1.95	331	⇑P	Pn	03 31 06.2	+2.0
JNB	Noboribetsu	1.97	290	⇑P	Pn	03 31 05.8	+1.3
JNK	Nakash	1.98	26	⇑P	Pn	03 31 03.9	-0.7
JTM	Tenmabayashi	2.12	242	⇑P	Pn	03 31 07.6	+1.1
JKK2	Kamakawa 2	2.14	345	⇑P	Pn	03 31 07.9	+1.0
JTKR	Abashiri--Toko	2.18	7	⇑P	Pn	03 31 08.0	+0.7
JMP	Maruseppu	2.20	357	⇑P	Pn	03 31 08.2	+0.5
NEM2	Nemuro 2	2.25	46	P	Pn	03 31 07.2	-1.1
JTH	Tanohata	2.26	215	⇑P	Pn	03 31 06.8	-1.6
JHR	Hokuryu	2.35	326	⇑P	Pn	03 31 12.0	+2.3
JSR	Shiriuchi	2.35	264	⇑P	Pn	03 31 10.9	+1.2
JYM2	Yakumo 2	2.38	279	⇑P	Pn	03 31 11.6	+1.5
ASAJ	Asahikawa	2.41	344	ePn	Pn	03 31 11.8	+1.3
ASAJ				eSn	Sn	03 31 36.0	-2.8
ASAJ				Sn	Sn	03 31 39.7	+0.9
ASAJ	Asahikawa	2.41	344	⇑P	Pn	03 31 11.8	+1.3
ASAJ	Asahikawa	2.41	344	Pn	Pn	03 31 11.9	+1.3
	283nm,0.3s,baz=204,slow=15,SNR=320						
ASAJ				Sn	Sn	03 31 39.7	+0.9
	774nm,0.3s,baz=68,slow=28,SNR=5.7						
ASAJ				LR	LR	03 32 32.5	
	comp=Z,981μm,20.8s,baz=38,slow=52						
JSI2	Shiura 2	2.47	253	⇑P	Pn	03 31 12.9	+1.6
JKZ	Kuzumaki	2.47	223	⇑P	Pn	03 31 11.2	-0.2
MIYJ	Miyakonagasawa	2.58	211	⇑P	Pn	03 31 11.8	-1.1
JSH	Shimam	2.73	289	⇑P	Pn	03 31 16.6	+1.8
JAH	Hinai	2.73	235	⇑P	Pn	03 31 15.6	+0.7
JSK	Shakotan	2.74	305	⇑P	Pn	03 31 16.7	+1.7
YUK	Yuzh-Kuril'sk	2.81	37	d iP	Pn	03 31 15.7	-0.2
YUK				iS	Sn	03 31 46.7	-1.8
YUK				pmax	pmax		
	comp=N,1μm,0.4s						
YUK				pmax	pmax		
	comp=Z,2μm,0.4s						
YUK				pmax	pmax		
	comp=E,1μm,0.4s						
YUK				smax	smax		
	comp=N,17μm,0.8s						
YUK				smax	smax		
	comp=E,16μm,0.5s						
JSS	Shosan	2.87	335	⇑P	Pn	03 31 19.1	+2.3
JOM	Ohasama	2.89	217	⇑P	Pn	03 31 16.8	-0.3
JIW	Iwasaki	2.93	247	⇑P	Pn	03 31 18.8	+1.2
JYG	Yagishiri	3.04	330	⇑P	Pn	03 31 20.7	+1.6
JOSM	Okushiri--Mats	3.04	277	⇑P	Pn	03 31 20.3	+1.1
OFUJ	Ofunato	3.08	208	⇑P	Pn	03 31 18.9	-0.7
JSE	Soyaes	3.23	348	P	Pn	03 31 22.6	+0.9
JRG	Rokugo	3.27	223	⇑P	Pn	03 31 22.8	+0.5
JMK	Ichinoseki	3.36	213	⇑P	Pn	03 31 23.0	-0.5
JYW	Yuwa	3.40	229	⇑P	Pn	03 31 25.2	+1.2
JOG2	Oga 2	3.41	238	⇑P	Pn	03 31 25.3	+1.0
JWK2	Keihoku	3.70	342	P	Pn	03 31 30.9	+2.6
JIO	Ouri	3.75	207	⇑P	Pn	03 31 27.7	-1.2
JYK	Kaneyama	3.77	221	⇑P	Pn	03 31 29.3	+0.1
JOU	Okura	4.08	214	⇑P	Pn	03 31 33.0	-0.5
JYA	Atsumi	4.34	224	⇑P	Pn	03 31 37.6	+0.5
JYS	Shirataka	4.46	218	⇑P	Pn	03 31 39.0	+0.2
JMM	Marumori	4.47	209	P	Pn	03 31 37.2	-1.6
KUR	Kuril'sk	4.65	41	d iP	Pn	03 31 42.2	+0.9
KUR				iS	Sn	03 32 33.5	-0.5
KUR				pmax	pmax		
	comp=N,376nm,1.0s						
KUR				pmax	pmax		
	comp=Z,2μm,1.0s						
KUR				pmax	pmax		
	comp=E,616nm,0.5s						
KUR				smax	smax		
	comp=N,2μm,1.5s						
KUR				smax	smax		
	comp=E,1μm,1.5s						
KUR				smax	smax		
	comp=E,46μm,8.5s						
KUR				smax	smax		
	comp=N,66μm,8.5s						
JAW	Awa shima	4.69	226	⇑P	Pn	03 31 42.5	+0.7
JFT	Otama	4.94	211	⇑P	Pn	03 31 44.8	-0.6
YSS	Yuzh-Sakhalins	5.18	354	α iP	Pn	03 31 50.0	+1.5
YSS				eS	Sn	03 32 46.5	-0.5
YSS				pmax	pmax		
	comp=N,18μm,7.0s						
YSS				pmax	pmax		
	comp=E,4μm,7.0s						
YSS				pmax	pmax		
	comp=Z,16μm,7.0s						
YSS				pmax	pmax		
	comp=N,500nm,1.2s						
YSS				pmax	pmax		
	comp=Z,780nm,1.2s						
YSS				pmax	pmax		
	comp=E,230nm,1.0s						
YSS				smax	smax		
	comp=E,3μm,1.0s						
YSS				MLR	MLR		
	comp=Z,531μm,16.0s						
YSS				MLR	MLR		
	comp=N,463μm,17.0s						
JSD	Sado	5.53	229	⇑P	Pn	03 31 54.1	+0.7
MAJO	Matsushiro	6.69	220	eP	Pn	03 32 09.8	+0.4
MAJO	Matsushiro	6.69	220	ePn	Pn	03 32 09.8	+0.4
MAT	Matsushiro	6.69	220	P	Pn	03 32 09.7	+0.4
MAT				S	Sn	03 33 25.6	+1.2
MAT	Matsushiro	6.69	220	P	Pn	03 32 09.8	+0.4
MJAR	Matsushiro Arr	6.69	220	Pn	Pn	03 32 09.9	+0.6
MJAR	Matsushiro Arr	6.69	220	Pn	Pn	03 32 09.9	+0.6
	comp=N,20nm,0.3s,baz=26,slow=13,SNR=231						
MJAR				LR	LR	03 35 16.7	
	comp=N,268μm,20.4s,baz=35,slow=43						
JNG	Nsakai	6.85	220	⇑P	Pn	03 32 12.4	+0.8
JJH	Hakui	7.15	229	⇑P	Pn	03 32 17.1	+1.5
UGL	Uglegorsk	7.34	352	α iP	Pn	03 32 19.0	+0.8
UGL				pmax	pmax		
	comp=Z,448nm,1.0s						
UGL				pmax	pmax		
	comp=N,14μm,9.0s						
UGL				pmax	pmax		
	comp=E,2μm,7.0s						
JGN	Niukaw	7.38	223	⇑P	Pn	03 32 20.1	+1.2
USRK	Ussuriysk Arra	8.79	290	Pn	Pn	03 32 38.5	+0.3
	comp=E,7.9nm,0.3s,baz=99,slow=12,SNR=105						
USRK				LR	LR	03 36 18.9	
	comp=E,394μm,19.2s,baz=91,slow=40						
HABR	Khabarovsk	8.96	321	iP	Pn	03 32 42.3	+1.9
HABR				eS	Sn	03 34 21.7	+1.6
HABR				pmax	pmax		
	comp=E,177nm,1.4s						
HABR				pmax	pmax		
	comp=N,152nm,1.4s						
HABR				pmax	pmax		
	comp=Z,290nm,1.4s						
HABR				MLR	MLR		
	comp=N,135μm,16.0s						
HABR				MLR	MLR		
	comp=E,236μm,16.0s						
HABR				MLR	MLR		
	comp=Z,278μm,16.0s						
JHJ	Hachijo jima 2	9.17	200	Pn	Pn	03 32 42.0	-1.4
	comp=Z,117nm,0.3s,baz=63,slow=16,SNR=20						
JHJ				Sn	Sn	03 34 18.4	-7.0
	comp=Z,259nm,0.3s,baz=328,slow=23,SNR=11						
JAD	Aida	10.05	230	P	Pn	03 32 56.5	+1.1
MDJ	Mudanjiang	10.56	290	P	Pn	03 33 03.6	+1.3
MDJ				S	Sn	03 34 57.9	-1.4
MDJ				PcP	PcP	03 39 02.4	-2.3
MDJ				ScP	ScP	03 42 31.8	-2.6
MDJ				ScS	ScS	03 46 09.3	+0.1
MDJ				pmax	pmax		
	comp=Z,200nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,19μm,7.0s						
MDJ				LR	LR		
	comp=N,26μm,13.3s						
MDJ				LR	LR		
	comp=E,221μm,14.5s						
MDJ				LR	LR		
	comp=Z,356μm,16.5s						
MDJ	Mudanjiang	10.56	290	ePn	Pn	03 33 04.3	+2.0
	comp=Z,377nm,0.9s						
KLR	Kul'dur	11.10	316	κ iP	Pn	03 33 07.6	-2.1
KLR				eS	Sn	03 35 18.5	+5.9
KLR				pmax	pmax		
	comp=E,580nm,1.6s						
KLR				pmax	pmax		
	comp=Z,830nm,1.6s						
OKH	Okha	11.76	358	⇑iP	Pn	03 33 18.0	-0.6
OKH				eS	Sn	03 35 35.8	+7.3
OKH				pmax	pmax		
	comp=Z,13μm,8.4s						
OKH				smax	smax		
	comp=N,28μm,14.0s						
OKH				smax	smax		
	comp=E,38μm,14.0s						
SKR	Severo-Kuril's	12.42	40	eP	Pn	03 33 21.0	-6.7
SKR				iS	Sn	03 35 56.0	+11
SKR				pmax	pmax		
	comp=N,5μm,2.0s						
SKR				pmax	pmax		
	comp=E,3μm,2.0s						
SKR				pmax	pmax		
	comp=Z,7μm,2.0s						
SKR				pmax	pmax		
	comp=N,450nm,1.0s						
SKR				pmax	pmax		
	comp=E,580nm,1.0s						
SKR				pmax	pmax		
	comp=Z,1μm,1.0s						
SKR				smax	smax		
	comp=N,10μm,10.0s						
SKR				smax	smax		
	comp=E,14μm,10.0s						
SKR				smax	smax		
	comp=N,270nm,1.0s						
SKR				smax	smax		
	comp=E,370nm,1.0s						
SKR				MLR	MLR		
	comp=E,86μm,18.0s						
SKR				MLR	MLR		
	comp=Z,65μm,18.0s						
SKR				MLR	MLR		
	comp=N,67μm,20.0s						
KSRS	Korea Array	12.80	255	Pn	Pn	03 33 34.5	+1.6
	comp=N,2.1nm,0.3s,baz=70,slow=13,SNR=231						
KSRS				Sn	Sn	03 36 04.5	+10
	comp=N,5.9nm,0.3s,baz=66,slow=24,SNR=6.9						
KSRS				LR	LR	03 38 21.6	
	comp=N,195μm,19.2s,baz=64,slow=37						
KSAR	Wonju Array Be	12.83	255	Pn	Pn	03 33 34.5	+1.1
KSAR				Sn	Sn	03 36 04.5	+10
JNU	Nakatsue	13.26	233	ePn	Pn	03 33 37.9	-1.5
JNU				Sn	Sn	03 36 15.6	+10
JNU	Nakatsue	13.26	233	P	Pn	03 33 38.4	-1.0
JNU	Nakatsue	13.26	233	Pn	Pn	03 33 38.5	-1.0
	comp=N,1.4nm,0.3s,baz=62,slow=8.5,SNR=25						
JNU				Sn	Sn	03 36 15.6	+10
	baz=12,slow=14,SNR=1.3						
JNU				LR	LR	03 39 06.9	
	comp=N,144μm,21.0s,baz=43,slow=39						
CN2	Changchun	13.43	285	⇑P	Pn	03 33 41.2	-0.4
CN2				epP	P	03 33 49.7	-0.8
CN2				PP	PnPn	03 33 52.8	+3.5
CN2				esP		03 33 56.3	
CN2				eS	Sn	03 36 08.4	-1.2
INCN	Inchon	13.72	257	ePn	Pn	03 33 46.2	+0.6
JUR	Ureshino	13.85	235	P	Pn	03 33 46.9	-0.4
PEA0B	Petropavlovsk-	14.78	35	ePn	Pn	03 33 56.4	-3.5
PETK	Petropavlovsk-	14.78	35	P	Pn	03 33 55.9	-4.1
PETK						03 36 53.9	
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,47μm,20.7s						
PETK	Petropavlovsk-	14.78	35	Pn	Pn	03 33 55.9	-4.1
PETK				Sn	S	03 36 53.9	-6.2
PETK	Petropavlovsk-	14.78	35	Pn	Pn	03 33 55.9	-4.1
	comp=Z,3.9nm,0.3s,baz=197,slow=13,SNR=28						
PETK				Sn	S	03 36 53.9	-6.2
	comp=Z,0.6nm,0.3s,baz=235,slow=28,SNR=2.4						
PETK				LR	LR	03 39 55.0	
	comp=Z,47μm,20.7s,baz=70,slow=38						
SNY	Shenyang	14.89	277	⇑P	Pn	03 34 01.5	+0.2
SNY				S	Sn	03 36 52.1	+7.1
SNY				pmax	pmax		
	comp=Z,270nm,2.5s						
SNY				pmax	pmax		
	comp=Z,17μm,9.2s						
SNY				LR	LR		
	comp=N,80μm,13.1s						
SNY				LR	LR		
	comp=E,136μm,14.9s						
SNY				LR	LR		
	comp=Z,174μm,21.7s						
PET	Petropavlovsk	15.15	37	d eP	Pn	03 34 06.9	+2.2
PET				eS	Sn	03 36 56.1	+4.9
PET				pmax	pmax		
	comp=Z,102nm,1.2s						
PET				pmax	pmax		
	comp=N,3μm,7.4s						
PET				pmax	pmax		
	comp=Z,2μm,7.5s						
PET				MLR	MLR		
	comp=Z,79μm,19.0s						
PET				MLR	MLR		
	comp=Z,63μm,18.0s						
DL2	Dalian	16.94	267	P	Pn	03 34 27.4	-0.4
DL2				S	Sn	03 37 33.9	-1.1
DL2				pmax	pmax		
	comp=Z,2μm,1.1s						
DL2				pmax	pmax		
	comp=Z,24μm,4.3s						
DL2				LR	LR		
	comp=E,35μm,18.5s						
DL2				LR	LR		
	comp=Z,51μm,19.4s						
HIA	Hailar	18.21	302	eP	P	03 34 41.2	-2.3
	comp=Z,294nm,0.8s						
CLNS	Chul'man	19.24	328	c iP	P	03 34 52.7	-2.0
CLNS				eS	S	03 38 30.6	+0.1
CLNS				pmax	pmax		
	comp=N,401nm,1.7s						
CLNS				pmax	pmax		
	comp=E,106nm,1.1s						
CLNS				pmax	pmax		
	comp=Z,413nm,1.9s						
CLNS				smax	smax		
	comp=E,2μm,7.8s						
CLNS				smax	smax		
	comp=N,2μm,10.2s						
CLNS				MLR	MLR		
	comp=E,39μm,18.0s						
CLNS				MLR	MLR		
	comp=Z,77μm,16.0s						
CLNS				MLR	MLR		
	comp=N,65μm,16.0s						
JOW	Kunigami	19.50	225	eP	P	03 34 56.7	-1.0
	comp=N,812nm,2.3s						
BJI	Beijing	20.72	274	P	P	03 35 08.7	-2.2
BJI				S	S	03 38 58.4	-1.9
BJI				pmax	pmax		
	comp=Z,560nm,1.0s						
BJI				pmax	pmax		
	comp=Z,11μm,8.4s						
BJI				LR	LR		
	comp=N,101μm,14.2s						
BJI				LR	LR		
	comp=E,173μm,18.7s						
BJI				LR	LR		
	comp=Z,127μm,23.1s						
BJT	Baijiatuau	20.73	274	eP	P	03 35 08.3	-2.7
	comp=Z,483nm,0.9s						
BJT				LR	LR		
	comp=Z,169μm,20.0s						
SSE	Sheshan	20.86	246	⇑P	P	03 35 10.0	-2.4
SSE				pP	pP	03 35 21.2	-0.2
SSE				sP	sP	03 35 25.5	-0.2
SSE				S	S	03 38 59.0	-4.1
SSE				sS	sS	03 39 14.8	-2.7
SSE				pmax	pmax		
	comp=Z,8μm,11.1s						
SSE				LR	LR		
	comp=N,106μm,18.2s						
SSE				LR	LR		
	comp=E,40μm,18.1s						
SSE				LR	LR		
	comp=Z,74μm,20.9s						
TIA	Tai'an	21.23	263	⇑P	P	03 35 14.4	-2.0
TIA				S	S	03 39 04.0	-6.5
TIA				sS	Sn	03 39 16.7	-1.8
TIA				LR	LR		
	comp=N,34μm,20.8s						
TIA				LR	LR		
	comp=E,71μm,22.9s						
TIA				LR	LR		
	comp=Z,83μm,24.1s						
SEY	Seymchan	21.80	11	c iP	P	03 35 18.8	-3.4
YAK	Yakutsk	21.89	342	c iP	P	03 35 18.6	-4.6
YAK				e*PP	pP	03 35 28.5	-3.8
YAK				eS	S	03 39 13.9	-9.0
YAK				e*SS	Sn	03 39 31.7	-2.1
YAK				pmax	pmax		
	comp=Z,1μm,1.0s						
YAK				pmax	pmax		
	comp=E,116nm,1.0s						
YAK				pmax	pmax		
	comp=N,321nm,1.0s						
YAK				smax	smax		
	comp=N,11μm,3.8s						
YAK				smax	smax		
	comp=E,7μm,3.7s						
YAK				MLR	MLR		
	comp=Z,111μm,20.0s						
YAK				MLR	MLR		
	comp=N,102μm,20.0s						
YAK				MLR	MLR		
	comp=E,20μm,15.0s						
NJ2	Nanjing	21.94	252	eP	P	03 35 21.3	-2.7
NJ2				pP	pP	03 35 33.2	+0.1
NJ2				sP	sP	03 35 37.0	-0.4
NJ2				PP	PnPn	03 35 47.5	+1.4
NJ2				S	S	03 39 17.0	-7.3
NJ2				sS	Sn	03 39 35.0	-0.5
NJ2				pmax	pmax		
	comp=Z,50nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,5μm,4.6s						
NJ2				LR	LR		
	comp=N,119μm,19.4s						
NJ2				LR	LR		
	comp=E,145μm,17.6s						
NJ2				LR	LR		
	comp=Z,148μm,18.8s						
CIT	Chita	22.73	307	eP	P	03 35 28.7	-3.7
CIT				e		03 35 46.6	
CIT				e		03 36 01.2	
CIT				e		03 36 11.7	
CIT				eS	S	03 39 42.6	+3.9
CIT				pmax	pmax		
	comp=Z,2μm,3.1s						
FX1	Attu Island--F	22.76	51	eP	P	03 35 33.8	+1.1
FX1				S	S	03 39 42.8	+3.8
FX1	Attu Island--F	22.76	51	P	P	03 35 32.9	+0.2
	comp=Z,306nm,1.0s,baz=271,slow=5.2,SNR=29						
FX1				S	S	03 39 42.8	+3.8
	comp=Z,21nm,0.6s,baz=107,slow=22,SNR=7.9						
HHC	Hu-ho-hao-te	23.96	278	iP	P	03 35 42.5	-2.2
HHC				pP	pP	03 35 54.0	-0.4
HHC				sP	sP	03 35 59.5	+1.0
HHC				PP	PnPn	03 36 16.9	+3.1
HHC				S	S	03 39 51.8	-7.4
HHC				sS	sS	03 40 11.0	-4.2
HHC				SS	SnSn	03 40 43.6	+3.2
HHC				PcS	PcS	03 43 04.8	-1.1
HHC				pmax	pmax		
	comp=Z,340nm,1.8s						
HHC				pmax	pmax		
	comp=Z,18μm,8.0s						
HHC				LR	LR		
	comp=N,134μm,15.4s						
HHC				LR	LR		
	comp=E,240μm,19.5s						
HHC				LR	LR		
	comp=Z,297μm,21.2s						
TIY	Taiyuan	24.19	271	eP	P	03 35 44.8	-2.0
TIY				S	S	03 40 00.3	-2.5
TIY				pmax	pmax		
	comp=Z,120nm,1.0s						
TIY				pmax	pmax		
	comp=Z,7μm,10.2s						
TIY				LR	LR		
	comp=N,43μm,18.6s						
TIY				LR	LR		
	comp=E,71μm,17.5s						
TIY				LR	LR		
	comp=Z,43μm,18.6s						
TATO	Taipei	24.80	234	eP	P	03 35 52.6	+0.2
	comp=Z,2μm,1.8s						
TATO				LR	LR		
	comp=Z,63μm,20.0s						
YHNB	Yeheng	25.10	234	eP	P	03 35 53.4	-1.8
	comp=Z,228nm,0.8s						
YHNB				LR	LR		
	comp=Z,56μm,19.0s						
BTO	Baotou	25.16	279	eP	P	03 35 53.1	-2.5
NACB	Ninganchiao	25.34	233	eP	P	03 35 56.9	-0.2
	comp=Z,130nm,1.2s						
WHN	Wuhan	25.98	254	⇑P	P	03 36 00.5	-2.5
WHN				pP	pP	03 36 08.4	-4.3
WHN				S	S	03 40 25.6	-5.7
WHN				LR	LR		
	comp=N,114μm,19.2s						
WHN				LR	LR		
	comp=E,236μm,18.1s						
WHN				LR	LR		
	comp=Z,293μm,19.2s						
SSLB	Suanglung	26.01	233	eP	P	03 36 02.6	-0.8

comp=Z,66nm,0.8s
YULB Yu-li 26.11 232 *e*P **P 03 36 03.1 -1.1**
comp=Z,92nm,0.9s
AMKA Amchitka 26.14 56 *e*P **P 03 36 04.7 +0.5**
comp=Z,542nm,1.4s
ULN Ulaanbaatar 26.39 296 *e*P **P 03 36 06.8 0.0**
comp=Z,967nm,1.6s
ULN LR LR
comp=Z,180µm,19.0s
ULN Ulaanbaatar 26.39 296 P **P 03 36 06.8 0.0**
comp=Z,399nm,2.1s,comp=Z,19µmcomp=Z,71µm
TPUB Ta-pu 26.57 233 *e*P **P 03 36 07.8 -0.7**
comp=Z,104nm,0.8s
QZH Quanzhou 26.63 239⇑ *i*P **P 03 36 10.1 +1.2**
QZH S **S 03 40 44.8 +3.2**
QZH pmax pmax
comp=Z,280nm,1.2s
QZH pmax pmax
comp=Z,19µm,4.6s
QZH LR LR
comp=N,57µm,19.9s
QZH LR LR
comp=E,73µm,16.6s
QZH LR LR
comp=Z,81µm,16.8s
TWG Pinlang 26.68 232 *e*P **P 03 36 09.0 -0.4**
comp=Z,1µm,1.4s
SONM Songino Array 26.84 296 P **P 03 36 10.8 +0.1**
SONM S **S 03 40 49.8 +4.9**
SONM Songino Array 26.84 296 P **P 03 36 10.8 +0.1**
comp=Z,151nm,0.7s,baz=81,slow=8.5,SNR=147
SONM S **S 03 40 49.8 +4.9**
comp=Z,4.4nm,1.1s,baz=76,slow=6.1,SNR=2.2
SONM LR LR 03 47 53.1
comp=Z,228µm,18.2s,baz=88,slow=39
GUMO Guam 28.14 177 *e*P **P 03 36 22.2 -0.2**
comp=Z,698nm,1.3s
GUMO LR LR
comp=Z,30µm,22.0s
XAN Xi'an 28.24 265 P **P 03 36 22.1 -1.3**
XAN PP **PnPn 03 37 18.5 +6.2**
XAN pmax pmax
comp=Z,23nm,0.7s
XAN pmax pmax
comp=Z,2µm,9.1s
XAN LR LR
comp=N,27µm,19.7s
XAN LR LR
comp=E,20µm,22.0s
XAN LR LR
comp=Z,18µm,23.2s
IRK Irkutsk 28.40 305 *e*P **P 03 36 24.8 +0.3**
IRK *e*S **S 03 41 15.0 +5.9**
TLY Talaya 28.74 304 *c i*P **P 03 36 28.1 +0.5**
TLY *e*PPP PPP 03 37 22.5
TLY *e*S **S 03 41 16.2 +1.7**
TLY *e*SS **SnSn 03 42 36.7 0.0**
TLY *e*SSS SSS 03 43 02.0
TLY pmax pmax
comp=Z,382nm,2.1s
TLY MLR MLR
comp=Z,138µm,18.0s
TLY Talaya 28.74 304 P **P 03 36 28.6 +1.0**
comp=Z,751nm,1.2s,SNR=65
ZAK Zakamensk 28.90 301⇓ *i*P **P 03 36 28.6 -0.5**
ZAK *e* 03 39 32.0
ZAK pmax pmax
comp=Z,137nm,1.4s
BILL Bilibino 28.99 17 *c i*P P 03 36 26.0 -3.6
BILL 03 39 38.1
BILL *e*S **S 03 41 15.6 -2.4**
BILL *e* 03 47 11.3
BILL pmax pmax
comp=Z,32nm,1.2s
BILL MLR MLR
comp=Z,26µm,15.0s
BILL Bilibino 28.99 17 *e*P **P 03 36 26.5 -3.1**
comp=Z,305nm,1.4s
BILL LR LR
comp=Z,24µm,19.0s
ENH Enshi 29.66 258 *e*P **P 03 36 34.8 -1.1**
comp=Z,89nm,0.7s
ENH *e*PcP **PcP 03 39 39.9 +0.2**
ENH LR LR
comp=Z,90µm,20.0s
WAKE Wake Island 29.83 132 *e*P **P 03 36 36.5 -1.0**
comp=Z,242nm,1.1s
WAKE LR LR
comp=Z,35µm,20.0s
ATKA Atka Island 30.24 55 *e*P **P 03 36 43.5 +2.8**
comp=Z,324nm,1.3s
TIXI Tiksi 30.79 351 *c i*P P 03 36 41.6 -3.9
TIXI pmax pmax
comp=Z,35nm,1.2s
TIXI MLR MLR
comp=Z,97µm,20.0s
LZH Lanzhou 31.19 273⇑P **P 03 36 49.6 0.0**
LZH pP **pP 03 37 01.3 +1.9**
LZH sP **sP 03 37 06.9 +3.4**
LZH PP **PnPn 03 37 54.6 +2.7**
LZH S **S 03 41 49.0 -4.6**
LZH sS **sS 03 42 10.0 +0.3**
LZH SS **SnSn 03 43 35.8 -1.2**
LZH pmax pmax
comp=Z,210nm,1.0s
LZH pmax pmax
comp=Z,1µm,5.1s
LZH LR LR
comp=N,63µm,15.4s
LZH LR LR
comp=E,63µm,14.1s
LZH LR LR
comp=Z,91µm,15.8s
GZH Guangzhou 31.35 243 P P 03 36 46.1 -4.8
GZH S S 03 41 49.3 -6.5
GZH LR LR
comp=N,62µm,19.5s
GZH LR LR
comp=E,44µm,20.2s
GZH LR LR
comp=Z,113µm,20.5s
GTA Gaotai 33.02 281⇑ *i*P **P 03 37 06.0 +0.5**
GTA pP **pP 03 37 17.6 +2.2**
GTA sP **sP 03 37 23.5 +4.0**
GTA PcP **PcP 03 39 50.1 +1.4**
GTA S **S 03 42 21.6 -0.3**
GTA sS **sS 03 42 40.1 +2.0**
GTA PcS **PcS 03 43 35.4 +1.2**
GTA SS **SnSn 03 44 24.4 +3.2**
GTA ScS **ScS 03 47 29.8 -0.8**
GTA pmax pmax
comp=Z,180nm,1.2s
GTA pmax pmax
comp=Z,7µm,9.0s
GTA LR LR
comp=N,57µm,17.8s
GTA LR LR
comp=E,118µm,17.8s
GTA LR LR
comp=Z,136µm,17.8s
CD2 Chengdu 33.56 264 P **P 03 37 09.5 -0.8**
CD2 pP **pP 03 37 20.9 +0.8**
CD2 sP **sP 03 37 25.9 +1.7**
CD2 PP **PnPn 03 38 22.3 +0.1**
CD2 PcP **PcP 03 39 50.6 +0.3**
CD2 S **S 03 42 26.8 -3.5**
CD2 sS **sS 03 42 45.9 -0.6**
CD2 SS **SnSn 03 44 31.3 -3.2**
CD2 ScS **ScS 03 47 30.0 -3.5**
CD2 pmax pmax
comp=Z,140nm,1.1s
CD2 pmax pmax
comp=Z,7µm,8.2s
CD2 LR LR
comp=N,65µm,15.5s
CD2 LR LR
comp=E,45µm,22.6s
CD2 LR LR
comp=Z,48µm,16.4s
TGY Tagaytay City 33.85 222 P **P 03 37 13.0 +0.1**
TGY Tagaytay City 33.85 222 P **P 03 37 13.0 +0.1**
comp=Z,121nm,0.3s,baz=135,slow=7.1,SNR=6.4
GYA Guiyang 33.85 255⇑ *i*P **P 03 37 12.1 -0.8**
GYA pP **pP 03 37 24.0 +1.2**
GYA sP **sP 03 37 30.2 +3.3**
GYA PP **PnPn 03 38 24.9 -1.2**
GYA PcP **PcP 03 39 53.0 +1.7**
GYA S S 03 42 28.9 -6.1
GYA sS **sS 03 42 49.3 -2.0**
GYA ScP **ScP 03 43 33.0 -0.3**
GYA ScS **ScS 03 47 34.2 -1.1**
GYA pmax pmax
comp=Z,220nm,1.1s
GYA pmax pmax
comp=Z,5µm,9.0s
GYA LR LR
comp=N,47µm,19.4s
GYA LR LR
comp=E,73µm,18.5s
GYA LR LR
comp=Z,109µm,20.0s
MIDW Midway 34.47 101 PFAKE 03 37 30.0 +12
MIDW LR LR
comp=Z,23µm,22.0s
RCP Roxas 35.20 217⇓ *e*P **P 03 37 25.1 +0.7**
KRAR Krasnoyarsk 35.35 311 *c i*P **P 03 37 25.5 +0.1**
KRAR pmax pmax
comp=Z,895nm,1.7s
KRAR MLR MLR
comp=Z,61µm,19.0s
TNA Tin City 35.92 32 *e*P **P 03 37 30.4 +0.3**
comp=Z,313nm,1.4s
QIZ Qiongzhong 36.52 242 P **P 03 37 35.7 -0.1**
QIZ sP **sP 03 37 51.9 +2.2**
QIZ PP **PP 03 38 59.2 0.0**
QIZ S **S 03 43 16.1 +0.3**
QIZ sS **sS 03 43 34.4 +2.3**
QIZ pmax pmax
comp=Z,5µm,10.4s
QIZ LR LR
comp=N,30µm,20.2s
QIZ LR LR
comp=Z,44µm,19.9s
QIZ Qiongzhong 36.52 242 *e*P **P 03 37 36.8 +1.1**
comp=Z,92nm,1.3s
QIZ LR LR
comp=Z,46µm,20.0s
KMI Kunming 37.49 257⇑P **P 03 37 44.3 0.0**
KMI pP **pP 03 37 55.1 +0.9**
KMI sP **sP 03 37 59.9 +1.6**
KMI PP **PP 03 39 08.8 -1.3**
KMI S **S 03 43 27.9 -3.1**
KMI pmax pmax
comp=Z,170nm,1.3s
KMI pmax pmax
comp=Z,9µm,6.2s
KMI LR LR
comp=N,42µm,19.4s
KMI LR LR
comp=E,46µm,18.8s
KMI LR LR
comp=Z,71µm,19.4s
DAV Davao City (W) 38.09 210⇑ *i*P **P 03 37 49.5 +0.4**
DAV Davao City (W) 38.09 210 P **P 03 37 49.3 +0.2**
DAV S **S 03 43 44.2 +4.5**
DAV Davao City (W) 38.09 210 P **P 03 37 49.3 +0.2**
comp=Z,150nm,0.3s,baz=56,slow=7.3,SNR=11
DAV S **S 03 43 44.2 +4.5**
comp=Z,144nm,0.4s,baz=343,slow=19,SNR=1.9
DAV LR LR 03 52 14.8
comp=Z,15µm,21.6s,baz=44,slow=34
CTBH Cotabato--PC H 38.46 212⇑ *e*P **P 03 37 53.8 +1.6**
ZALV Zalesovo Beam 40.08 308 P **P 03 38 05.3 -0.1**
ZALV 03 40 09.8
ZALV pmax pmax
comp=Z,180nm,0.7s
ZALV MLR MLR
comp=Z,97µm,19.2s
ZALV Zalesovo Beam 40.08 308 P **P 03 38 05.2 -0.1**
ZALV PcP **PcP 03 40 09.8 +0.3**
ZALV Zalesovo Beam 40.08 308 P **P 03 38 05.2 -0.1**
comp=Z,180nm,0.7s,baz=86,slow=7.7,SNR=23
ZALV PcP **PcP 03 40 09.8 +0.3**
comp=Z,114nm,1.1s,baz=95,slow=2.6,SNR=4.0
ZALV LR LR 03 56 03.5
comp=Z,97µm,19.2s,baz=77,slow=38
WMQ Urumqi 40.35 292⇑ *i*P **P 03 38 08.3 +0.4**
WMQ sP **sP 03 38 24.0 +2.1**
WMQ PP **PnPn 03 39 44.0 -0.8**
WMQ PcP **PcP 03 40 13.0 +2.3**
WMQ ScP **ScP 03 43 58.0 +0.8**
WMQ S **S 03 44 12.0 -1.5**
WMQ sS **sS 03 44 33.0 +3.1**
WMQ SS **SS 03 47 06.0 -6.7**
WMQ pmax pmax
comp=Z,280nm,1.3s
WMQ pmax pmax
comp=Z,11µm,6.7s
WMQ LR LR
comp=N,64µm,16.0s
WMQ LR LR
comp=E,199µm,16.0s
WMQ LR LR
comp=Z,136µm,18.2s
SVW2 Sparrevohn 40.78 41 *e*P **P 03 38 12.3 +1.2**
comp=Z,166nm,1.4s
NVS Novosibirsk 40.89 310⇑ *i*P **P 03 38 11.8 -0.2**
NVS pmax pmax
comp=E,897nm,2.4s
NVS pmax pmax
comp=Z,1µm,2.4s
NVS pmax pmax
comp=N,144nm,1.5s
KDM Kudat 42.05 222 P **P 03 38 25.1 +3.1**
RSO Redoubt South 42.19 41 *e*P **P 03 38 23.6 +0.7**
comp=N,468nm,0.9s
OHAK Old Harbor 42.20 46 *e*P **P 03 38 22.8 +0.1**
comp=N,1µm,1.8s
OHAK *e*S **S 03 44 39.7 -0.6**
GAMI Galela, Maluku 42.24 204 P **P 03 38 24.2 +0.7**
comp=N,178nm,1.2s,comp=N,5µm
SPU Mount Spurr 42.49 40 *e*P **P 03 38 25.8 +0.7**
KDAK Kodiak Island 42.51 45 *e*P **P 03 38 24.3 -0.9**
comp=N,526nm,1.4s
KDAK LR LR
comp=Z,17µm,21.0s
KDAK Kodiak Island 42.51 45 P **P 03 38 24.5 -0.7**
comp=Z,811nm,1.4s,SNR=9.5
KDAK Kodiak Island 42.51 45 P **P 03 38 24.9 -0.3**
comp=Z,169nm,1.2s,baz=277,slow=5.2,SNR=12
KDAK S **S 03 44 43.6 -1.3**
comp=Z,31nm,1.3s,baz=291,slow=14,SNR=3.7
MYLDM Lahad Datu 42.76 218 P **P 03 38 29.9 +2.2**
MYLDM Lahad Datu 42.76 218 P **P 03 38 29.8 +2.1**
comp=Z,259nm,1.3s,comp=Z,8µm
SDKM Sandakan 42.98 220 P **P 03 38 30.7 +1.1**
KKM Kota Kinabalu 43.11 222 *e*P **P 03 38 31.9 +1.1**
comp=Z,221nm,1.3s
KKM LR LR
comp=Z,26µm,21.0s
KKM Kota Kinabalu 43.11 222 P **P 03 38 31.8 +1.1**
KKM Kota Kinabalu 43.11 222 P **P 03 38 32.0 +1.3**
comp=Z,134nm,1.4s,comp=Z,5µmcomp=Z,39µm
MK31 Makanchi Array 43.14 298 *i*P **P 03 38 30.3 -0.3**
MK31 pmax pmax
comp=Z,83nm,0.6s
MK31 Makanchi Array 43.14 298 *e*P **P 03 38 30.6 0.0**
MKAR Makanchi Array 43.14 298 P **P 03 38 30.6 0.0**
MKAR S **S 03 45 00.3 +5.7**
MKAR pmax pmax
comp=Z,66nm,0.6s
MKAR MLR MLR
comp=Z,50µm,18.3s
MKAR Makanchi Array 43.14 298 P **P 03 38 30.6 0.0**
MKAR S **S 03 45 00.2 +5.7**
MKAR Makanchi Array 43.14 298 P **P 03 38 30.6 0.0**
comp=Z,66nm,0.6s,baz=85,slow=9.7,SNR=17
MKAR S **S 03 45 00.3 +5.7**
comp=Z,6.3nm,1.1s,baz=60,slow=8.7,SNR=2.7
MKAR LR LR 03 57 37.9
comp=Z,50µm,18.3s,baz=95,slow=38
TRF Thorofare Moun 43.20 37 *e*P **P 03 38 30.7 -0.3**
comp=Z,416nm,1.6s
TRF *e*S S 03 45 03.8 +8.6
COLD Coldfoot 43.20 31 *e*P **P 03 38 30.6 -0.1**
comp=Z,196nm,1.3s
COLD *e*S **S 03 44 55.9 +1.0**
BAKI Biak 43.33 191 P **P 03 38 34.1 +1.8**
comp=Z,125nm,1.2s,comp=Z,5µm
TNTI Ternate 43.38 204 P **P 03 38 32.0 -0.7**
comp=Z,221nm,1.2s,comp=Z,7µmcomp=Z,18µm
MNI Manado 43.57 208 P **P 03 38 35.7 +1.5**
comp=Z,217nm,1.3s,comp=Z,6µm
LSA Lhasa 43.58 271 P **P 03 38 36.2 +1.3**
LSA S **S 03 45 04.1 +1.9**
LSA pmax pmax
comp=Z,90nm,1.2s
LSA pmax pmax
comp=Z,8µm,9.0s
LSA LR LR
comp=N,18µm,16.3s
LSA LR LR
comp=E,65µm,19.0s
LSA LR LR
comp=Z,89µm,18.0s
LSA Lhasa 43.58 271 *e*P **P 03 38 35.7 +0.9**
LSA pmax pmax
comp=Z,224nm,1.1s
LSA MLR MLR
comp=Z,92µm,19.0s
LSA Lhasa 43.58 271 *e*P **P 03 38 35.7 +0.9**
comp=Z,224nm,1.1s
LSA LR LR
comp=Z,92µm,19.0s
RC01 Rabbit Creek A 43.61 40 *e*P **P 03 38 34.5 +0.3**
comp=Z,386nm,1.3s
MCK McKinley 43.79 36 *e*P **P 03 38 35.6 +0.1**
MCK pmax pmax
comp=Z,207nm,1.0s
MCK McKinley 43.79 36 *e*P **P 03 38 35.6 +0.1**
comp=Z,207nm,1.0s
TSM Tawau 43.83 219 P **P 03 38 36.9 +0.5**
PMR Palmer 43.86 40 *e*P **P 03 38 36.2 +0.2**
PMR *e*S **S 03 45 05.4 +0.9**
PMR pmax pmax
comp=Z,138nm,1.0s
PMR Palmer 43.86 40 *e*P **P 03 38 36.2 +0.2**
comp=Z,138nm,1.0s
PMR *e*S **S 03 45 05.4 +0.9**
SEW Seward 43.86 42 *e*P **P 03 38 36.2 +0.1**
comp=Z,394nm,1.3s
RKPI Ransiki, Papua 43.95 194 P **P 03 38 38.6 +1.4**
comp=Z,117nm,1.4s
IMP Imphal 44.17 263 *e*PKP **P 03 38 37.0 -2.2**
IMP *ex* x 03 40 22.0
IMP *ex* x 03 45 21.0
CHTO Chiang Mai 44.18 253 *e*P **P 03 38 39.6 +0.4**
CHTO pmax pmax
comp=Z,100nm,1.0s
CHTO MLR MLR
comp=Z,48µm,21.0s
CHTO Chiang Mai 44.18 253 *e*P **P 03 38 39.6 +0.4**
comp=Z,100nm,1.0s
CHTO LR LR
comp=Z,48µm,21.0s
CHTO Chiang Mai 44.18 253 P **P 03 38 39.3 +0.1**
comp=Z,151nm,1.3s,comp=Z,8µmcomp=Z,42µm
COLA College 44.20 35 *e*P **P 03 38 39.3 +0.6**
COLA pmax pmax
comp=Z,567nm,1.1s
COLA MLR MLR
comp=Z,24µm,20.0s
COLA College 44.20 35 *e*P **P 03 38 39.3 +0.6**
comp=Z,567nm,1.1s
COLA LR LR
comp=Z,24µm,20.0s
SML Sawmill 44.22 39 *e*P **P 03 38 39.2 +0.2**
SML pmax pmax
comp=Z,224nm,1.4s
SML Sawmill 44.22 39 *e*P **P 03 38 39.2 +0.2**
comp=Z,224nm,1.4s
CM31 Chiang Mai Arr 44.41 252 *e*P **P 03 38 41.4 +0.3**
comp=Z,26nm,0.6s
CMAR Chiang Mai Arr 44.41 252 P **P 03 38 41.5 +0.4**
CMAR S **S 03 45 17.1 +3.6**
CMAR Chiang Mai Arr 44.41 252 P **P 03 38 41.4 +0.4**
comp=Z,13nm,0.8s,baz=46,slow=6.8,SNR=37
CMAR S **S 03 45 17.2 +3.6**
comp=Z,0.5nm,0.3s,baz=22,slow=19,SNR=3.2
CMAR LR LR 03 58 20.0
comp=Z,41µm,19.8s,baz=56,slow=38
KURK Kurchatov 44.43 305 P **P 03 38 41.3 +0.5**
KURK S **S 03 45 18.3 +5.2**
KURK pmax pmax
comp=Z,134nm,0.5s
KURK Kurchatov 44.43 305 *e*P **P 03 38 40.2 -0.6**
comp=Z,790nm,1.2s
KURK S **S 03 45 18.3 +5.2**
KURK LR LR
comp=Z,66µm,19.0s
KURBB Kurchatov Arra 44.51 305 P **P 03 38 41.3 -0.1**
comp=Z,134nm,0.5s,baz=78,slow=8.7,SNR=33
KURBB S **S 03 45 18.3 +4.1**
comp=Z,2.2nm,0.8s,baz=80,slow=10,SNR=3.8
ILAR Eielson Array 44.61 35 P **P 03 38 41.8 -0.4**
ILAR PcP **PcP 03 40 24.2 -0.1**
ILAR S **S 03 45 13.9 -1.6**
ILAR Eielson Array 44.61 35 P **P 03 38 41.8 -0.4**
comp=Z,182nm,1.1s,baz=266,slow=5.5,SNR=317
ILAR PcP **PcP 03 40 24.2 -0.1**
comp=Z,7.4nm,0.9s,baz=268,slow=4.3,SNR=1.7
ILAR S **S 03 45 14.0 -1.6**
comp=Z,1.7nm,1.1s,baz=286,slow=6.5,SNR=3.5
ILAR LR LR 03 59 57.5
comp=Z,14µm,19.0s,baz=286,slow=40
LBMI Labuha 44.67 203 P **P 03 38 45.1 +2.0**
comp=Z,172nm,1.5s,comp=Z,4µm
KMSI Cibinong 44.68 208 P P 03 38 47.1 +4.0
comp=Z,547nm,0.9s,comp=Z,11µmcomp=Z,12µm
SHL Shillong 45.25 266 *e*PKP **P 03 38 47.0 -0.9**
SHL *e*S **S 03 45 27.0 +1.0**
PAX Paxson 45.41 37 *e*P **P 03 38 50.5 +1.9**
PAX pmax pmax
comp=Z,691nm,2.5s
PAX Paxson 45.41 37 *e*P **P 03 38 50.5 +1.9**
comp=Z,691nm,2.5s
DIV Divide 45.52 40 *e*P **P 03 38 50.1 +0.6**
comp=Z,794nm,1.4s
DIV *e*S **S 03 45 28.8 -0.1**
MRSI Marisa 45.52 211 P **P 03 38 50.3 +0.5**
comp=Z,462nm,1.3s,comp=Z,7µmcomp=Z,15µm
FAKI Fak Fak 45.68 196 P **P 03 38 51.3 +0.2**
comp=Z,282nm,1.3s,comp=Z,5µm
DOT Dot Lake 45.96 36 *e*P **P 03 38 52.3 -0.5**
comp=Z,200nm,1.3s
DOT *e*S **S 03 45 37.0 +2.0**
RAGM Ragged Mountai 46.17 41 *e*P **P 03 38 55.6 +1.0**
comp=Z,650nm,1.4s
MENT Mentasta 46.21 37 *e*P **P 03 38 55.4 +0.6**
LUWI Luwuk 46.61 209 P **P 03 38 56.8 -1.6**
comp=Z,301nm,1.5s,comp=Z,4µmcomp=Z,20µm
EGAK Eagle 47.05 34 *e*P **P 03 39 00.7 -0.6**
comp=Z,917nm,1.5s
EGAK *e*S **S 03 45 49.6 -0.9**
EGAK LR LR
comp=Z,18µm,19.0s
BTM Bintulu 47.13 224 P **P 03 39 03.1 +0.6**
AAI Ambon 47.38 201 P **P 03 39 05.3 +0.9**
comp=Z,254nm,1.0s,comp=Z,5µm
TAPN Taplejung 47.39 271 *e*P **P 03 39 05.6 +0.8**
comp=Z,473nm,0.9s
AAA Alma-Ata 47.89 295 *e*P **P 03 39 08.7 +0.5**
AAA *e*S S 03 46 14.1 +11
AAA MLR MLR
comp=Z,33µm,13.0s
ODAN Odare 47.89 270 *e*P **P 03 39 09.3 +0.6**
comp=Z,304nm,0.7s
TARA Tarawa 48.18 139 *e*P **P 03 39 11.3 +0.7**
TARA LR LR
comp=Z,19µm,22.0s
SBUM Sibu 48.22 224 P **P 03 39 11.7 +0.8**
SBUM Sibu 48.22 224 P **P 03 39 11.3 +0.4**
comp=Z,119nm,1.9s,comp=Z,4µmcomp=Z,30µm
SGKI Sangatta, Kali 48.23 216 P P 03 39 06.5 -4.5
SMKI Samarinda 48.33 216 P P 03 39 17.0 +5.3
comp=Z,246nm,0.5s,comp=Z,11µm
RAMN Ramite 48.44 271 *e*P **P 03 39 13.3 +0.4**
comp=Z,771nm,1.0s
GUN Gumba 48.46 273 *e*P **P 03 39 13.6 +0.5**
comp=Z,1µm,0.8s
BVA0 Borovoye Array 48.69 310 P **P 03 39 14.1 0.0**
BVA0 pmax pmax
comp=Z,81nm,0.8s
BVAR Borovoye Array 48.69 310 P **P 03 39 14.4 +0.2**
BVAR S **S 03 46 12.9 -1.1**
BVAR pmax pmax
comp=Z,42nm,0.5s

BVAR Borovoye Array 48.69 310 P **P** 03 39 14.4 +0.2
BVAR S **S** 03 46 12.9 -1.1
BVAR Borovoye Array 48.69 310 P **P** 03 39 14.4 +0.2
comp=Z,42nm,0.5s,baz=81,slow=9.5,SNR=28
BVAR S **S** 03 46 12.9 -1.1
comp=Z,2.6nm,0.8s,baz=89,slow=19,SNR=2.3
BRVK Borovoye 48.74 310 *e*P **P** 03 39 14.5 0.0
BRVK *e*S **S** 03 46 18.9 +4.2
BRVK pmax pmax
comp=Z,287nm,1.1s
BRVK MLR MLR
comp=Z,96nm,19.0s
BRVK Borovoye 48.74 310 *e*P **P** 03 39 14.5 0.0
comp=Z,287nm,1.1s
BRVK *e*S **S** 03 46 18.9 +4.2
BRVK LR LR
comp=Z,96µm,19.0s
BRVK Borovoye 48.74 310 P **P** 03 39 15.9 +1.4
comp=Z,778nm,0.6s,SNR=18
ULHL Ulahol 48.77 294 P **P** 03 39 15.5 +0.3
SNR=6.7
PNL Peninsula 48.91 41 *e*P **P** 03 39 16.6 +0.7
comp=Z,31nm,0.7s
TKM2 Tokmak 2 48.94 295 *e*P **P** 03 39 16.7 +0.2
TKM2 pmax pmax
comp=Z,179nm,0.7s
TKM2 MLR MLR
comp=Z,59µm,20.0s
TKM2 Tokmak 2 48.94 295 *e*P **P** 03 39 16.7 +0.2
comp=Z,179nm,0.7s
TKM2 LR LR
comp=Z,59µm,20.0s
TKM2 Tokmak 2 48.94 295 P **P** 03 39 17.2 +0.7
SNR=18
KKN Kakani 48.97 273 *e*P **P** 03 39 17.4 +0.5
comp=Z,498nm,0.9s
PKI Pulchoki 48.99 272 *e*P **P** 03 39 17.2 0.0
comp=Z,483nm,0.9s
PKIN Phulchoki 48.99 273 *e*P **P** 03 39 17.3 +0.1
comp=Z,411nm,0.9s
DMN Daman 49.20 273 *e*P **P** 03 39 19.1 +0.4
comp=Z,956nm,1.2s
INK Inuvik 49.41 29 P **P** 03 39 19.3 -0.1
INK S **S** 03 46 21.7 -2.0
INK Inuvik 49.41 29 P **P** 03 39 19.3 -0.1
comp=Z,51nm,0.8s,baz=295,slow=7.4,SNR=86
INK S **S** 03 46 21.7 -2.0
comp=Z,1.7nm,0.9s,baz=80,slow=19,SNR=4.6
KBK Karagaybulak 49.48 295 P **P** 03 39 21.3 +0.7
SNR=13
KZA Kyzart 49.51 295 P **P** 03 39 22.0 +0.9
SNR=7.8
USP Ospenovka 49.54 296 P **P** 03 39 20.9 0.0
SNR=7.0
TTSI Tana Toraja 49.57 212 P P 03 39 24.7 +3.4
comp=Z,44nm,1.2s,comp=Z,1µm
FRU Bishkek 49.63 296 ⇑*i*P **P** 03 39 22.0 +0.4
FRU *e* 03 41 18.0
FRU *e* 03 46 40.0
FRU *i*S S 03 46 42.0 +14
FRU pmax pmax
comp=Z,620nm,2.1s
FRU pmax pmax
comp=Z,6µm,6.0s
FRU MLR MLR
comp=Z,96µm,18.0s
AAK Ala-Archa 49.80 296 P **P** 03 39 22.8 -0.2
AAK S **S** 03 46 34.8 +4.6
AAK pmax pmax
comp=Z,29nm,0.6s
AAK Ala-Archa 49.80 296 *e*P **P** 03 39 22.8 -0.2
comp=Z,70nm,0.8s
AAK S **S** 03 46 34.8 +4.6
AAK LR LR
comp=Z,81µm,19.0s
AAK Ala-Archa 49.80 296 P **P** 03 39 23.2 +0.2
SNR=5.8
AAK Ala-Archa 49.80 296 P **P** 03 39 23.0 0.0
comp=Z,522nm,0.6s,SNR=10
AAK Ala-Archa 49.80 296 P **P** 03 39 22.8 -0.2
comp=Z,29nm,0.6s,baz=121,slow=8.2,SNR=6.8
AAK S **S** 03 46 34.8 +4.6
comp=Z,1.2nm,0.3s,baz=234,slow=19,SNR=2.0
DANN Dangsing 49.80 274 *e*P **P** 03 39 24.3 +0.9
comp=Z,1µm,0.7s
KSM Kuching 50.05 226 *e*P **P** 03 39 26.1 +1.1
comp=Z,350nm,1.3s
KSM LR LR
comp=Z,11µm,22.0s
KSM Kuching 50.05 226 P **P** 03 39 26.3 +1.4
KSM Kuching 50.05 226 P **P** 03 39 25.6 +0.7
comp=Z,228nm,1.5s,comp=Z,6µmcomp=Z,32µm
KSH Kashi 50.09 291 ⇑*i*P P 03 39 29.0 +3.8
KSH *e*pP pP 03 39 41.6 +6.2
KSH *e*sP sP 03 39 47.1 +7.7
KSH *e*PP PP 03 41 25.8 +5.5
KSH *e*S **S** 03 46 36.3 +2.0
KSH *e*sS sS 03 46 58.8 +7.8
KSH *e*ScS **ScS** 03 49 12.9 -1.0
KSH pmax pmax
comp=Z,120nm,0.8s
KSH pmax pmax
comp=Z,10µm,5.4s
KSH LR LR
comp=N,36µm,14.0s
KSH LR LR
comp=E,47µm,13.7s
KOLN Koldanda 50.23 274 *e*P **P** 03 39 27.1 +0.6
comp=E,442nm,0.8s
EKS2 Erkin-Say 50.27 296 *e*P **P** 03 39 26.3 -0.2
EKS2 pmax pmax
comp=Z,53nm,0.5s
EKS2 MLR MLR
comp=Z,104µm,19.0s
EKS2 Erkin-Say 50.27 296 *e*P **P** 03 39 26.3 -0.2
comp=Z,53nm,0.5s
EKS2 LR LR
comp=Z,104µm,19.0s
EKS2 Erkin-Say 50.27 296 P **P** 03 39 26.9 +0.4
SNR=6.6
SPSI Sidrap Palu 50.43 211 P **P** 03 39 27.4 -0.4
comp=Z,71nm,1.2s,comp=Z,2µm
PYUN Piuthan 50.51 275 *e*P **P** 03 39 29.2 +0.6
comp=Z,1µm,1.2s
AML Almayashu 50.54 295 P **P** 03 39 29.7 +0.8
SNR=8.6
STKI Sintang 50.63 223 P **P** 03 39 30.5 +1.2
comp=Z,374nm,1.1s,comp=Z,18µm
BOK Bokaro 50.74 268 *e*PKP **P** 03 39 31.1 +1.0
BOK AMB AMB 03 39 34.7
comp=Z,204nm,1.3s
BBSI Bau Bau 50.81 207 P **P** 03 39 32.4 +1.7
comp=Z,228nm,1.1s,comp=Z,4µmcomp=Z,133µm
SKAG Skagway 50.96 41 *e*P **P** 03 39 32.9 +1.6
comp=Z,437nm,1.7s
PMG Port Moresby 51.07 175 *e*P **P** 03 39 32.8 +0.3
comp=Z,46nm,1.0s
PMG S **S** 03 46 49.0 +1.2
PMG Port Moresby 51.07 175 P **P** 03 39 32.8 +0.3
comp=Z,6.3nm,0.7s,baz=341,slow=8.8,SNR=3.2
PMG S **S** 03 46 49.0 +1.2
comp=Z,2.9nm,0.4s,baz=225,slow=19,SNR=1.9
PMG LR LR 03 59 23.1
comp=Z,8µm,21.9s,baz=210,slow=34
KTGM Kuala Trenggan 51.09 236 P **P** 03 39 34.2 +1.5
KBKI Kotabaru 51.33 216 P **P** 03 39 34.9 +0.4
comp=Z,94nm,1.2s,comp=Z,3µm
KAPI Kappang 51.40 211 *e*P **P** 03 39 33.9 -1.2
comp=Z,160nm,1.1s
KAPI Kappang 51.40 211 P **P** 03 39 34.8 -0.3
comp=Z,478nm,1.5s,SNR=18
KAPI Kappang 51.40 211 P **P** 03 39 34.4 -0.7
comp=Z,332nm,1.4s,comp=Z,4µm
KAPI Kappang 51.40 211 LR LR 04 00 21.4
comp=Z,5µm,21.9s,baz=161,slow=35
BKSI Bulukumba 51.54 210 P **P** 03 39 35.7 -0.4
comp=Z,73nm,1.2s,comp=Z,2µm
PTH Pithoragarh 51.80 278 *ex* P 03 39 30.4 -7.9
PTH *ex* x 03 39 50.0
LGTI Lohaghat 51.83 278 *ex* pP 03 39 49.1 +0.6
BBKI Banjar Baru 52.06 217 P **P** 03 39 39.8 -0.3
comp=Z,259nm,1.0s,comp=Z,8µm
DGPR DIGLIPUR 52.22 252 *e*PKP **P** 03 39 41.3 +0.1
DGPR AMB AMB 03 39 43.2
comp=Z,389nm,2.8s
KK31 Karatay Array 52.26 298 *i*P **P** 03 39 40.9 -0.4
KK31 pmax pmax
comp=Z,123nm,0.8s
KULM Kulim 52.68 238 *e*P **P** 03 39 45.1 +0.4
comp=Z,186nm,1.2s
KULM LR LR
comp=Z,16µm,20.0s
KULM Kulim 52.68 238 P **P** 03 39 45.6 +1.0
KIP Kipapa 52.72 94 *e*P **P** 03 39 46.5 +1.5
KIP pmax pmax
comp=Z,1µm,2.5s
KIP MLR MLR
comp=Z,27µm,22.0s
KIP Kipapa 52.72 94 *e*P **P** 03 39 46.5 +1.5
comp=Z,1µm,2.5s
KIP LR LR
comp=Z,27µm,22.0s
DDI Dehra Dun 52.99 280 *e*PKP **P** 03 39 45.4 -1.5
DDI AMB AMB 03 39 51.5
comp=Z,998nm,2.2s
IPM Ipoh 53.06 237 *e*P **P** 03 39 47.5 0.0
comp=Z,134nm,1.2s
IPM Ipoh 53.06 237 P **P** 03 39 47.9 +0.4
HNR Honiara 53.17 160 PFAKE 03 40 00.0 +12
HNR LR LR
comp=Z,19µm,22.0s
SMLA Simla 53.23 281 *i*P **P** 03 39 49.0 +0.4
SMLA AMB AMB 03 39 49.4
comp=Z,527nm,2.5s
DHRM DHARAMSHALA 53.29 283 *e*PKP **P** 03 39 49.2 -0.1
DHRM AMB AMB 03 39 52.7
comp=Z,369nm,0.4s
DLH Dalhousie 53.38 283 *ex* **P** 03 39 47.0 -3.0
DLH *ex* x 03 40 20.0
MYKOM Kota Tinggi 53.44 233 P **P** 03 39 51.5 +1.2
CRAG Craig 53.47 45 *e*P **P** 03 39 50.5 +0.5
comp=Z,259nm,1.5s
WRAK Wrangell Islan 53.51 43 *e*P **P** 03 39 51.6 +1.4
comp=Z,242nm,1.6s
WRAK LR LR
comp=Z,17µm,20.0s
KGM Kluang 53.58 233 P **P** 03 39 52.6 +1.3
SOKR Solikamsk 53.60 321 *c i*P **P** 03 39 50.9 +0.1
SOKR pmax pmax
comp=Z,150nm,0.6s
BHK Bhakra 53.63 282 *e*PKP **P** 03 39 52.4 +0.8
FRIM Kepong 53.65 236 P **P** 03 39 52.8 +1.0
FRIM Kepong 53.65 236 P **P** 03 39 53.1 +1.3
MMRI Maumere 53.87 206 P **P** 03 39 53.6 +0.3
comp=Z,381nm,1.2s,comp=Z,5µm
DLBC Dease Lake 53.89 41 *e*P **P** 03 39 54.6 +1.4
ARU Arti 53.94 317 *c i*P **P** 03 39 53.4 0.0
ARU 03 40 57.1
ARU 03 41 52.2
ARU S **S** 03 47 25.1 -1.3
ARU 03 49 38.1
ARU pmax pmax
comp=Z,504nm,1.7s
ARU pmax pmax
comp=Z,5µm,12.8s
ARU MLR MLR
comp=Z,55µm,17.0s
ARU Arti 53.94 317 P **P** 03 39 53.9 +0.5
comp=Z,1µm,0.9s,SNR=7.5
NDI New Delhi 54.48 279 *e*PKP **P** 03 39 56.0 -1.8
NDI *ex* x 03 47 33.0
TPI Tanjungpandan 55.02 226 P **P** 03 40 02.1 +0.4
comp=Z,212nm,1.4s,comp=Z,5µmcomp=Z,31µm
ALE Alert 55.25 4 P **P** 03 40 02.9 +0.3
comp=Z,660nm,1.5s,SNR=13
PPBI Pangkal Pinang 55.35 228 P **P** 03 40 04.7 +0.6
comp=Z,225nm,1.4s,comp=Z,5µm
COEN Coen 55.48 180 *e*P **P** 03 40 06.2 +1.2
comp=Z,600nm,1.0s
JBP Jabalpur 55.51 271 ⇑*i*P **P** 03 40 05.5 +0.2
JBP *ex* x 03 47 42.4
POHA Pohakuloa 55.58 94 *e*P **P** 03 40 06.9 +0.8
comp=Z,308nm,1.3s
KMMI Kalianget 55.64 216 P **P** 03 40 07.6 +1.4
comp=Z,138nm,1.3s,comp=Z,4µm
SRBI Singaraja 56.02 215 P **P** 03 40 09.0 +0.1
comp=Z,247nm,1.6s,comp=Z,7µm
RGRI Rengat 56.05 233 P **P** 03 40 12.0 +2.8
comp=Z,617nm,1.0s,comp=Z,131µm
KHKI Kahang-Kahang 56.11 214 P **P** 03 40 08.7 -0.8
comp=Z,318nm,1.4s,comp=Z,7µm
SPITS Spitsbergen Ar 56.17 349 P **P** 03 40 08.4 -0.8
SPITS Spitsbergen Ar 56.17 349 P **P** 03 40 08.4 -0.8
comp=Z,6.3nm,0.4s,baz=72,slow=8.0,SNR=23
AB31 Akbulak array 56.19 308 *i*P **P** 03 40 09.3 -0.5
AB31 pmax pmax
comp=Z,37nm,0.4s
ABKAR Akbulak array 56.19 308 *e*P **P** 03 40 09.7 -0.1
KBS Kingsbay 56.24 350 *e*P **P** 03 40 09.4 -0.4
KBS AMB AMB 03 40 13.1
comp=Z,279nm,1.6s
KBS *e*S **S** 03 47 59.6 +2.9
KBS AMS AMS 04 05 34.0
comp=Z,21µm,21.4s
KBS Kingsbay 56.24 350 *e*P **P** 03 40 09.7 -0.1
KBS pmax pmax
comp=Z,1µm,2.2s
KBS MLR MLR
comp=Z,24µm,20.0s
KBS Kingsbay 56.24 350 *e*P **P** 03 40 09.7 -0.1
comp=Z,1µm,2.2s
KBS LR LR
comp=Z,24µm,20.0s
BKNI Bangkinang 56.29 234 P **P** 03 40 12.1 +1.2
comp=Z,625nm,1.1s,comp=Z,9µmcomp=Z,34µm
VIS Vishakhapatnam 56.29 264 *e*PKP **P** 03 40 11.6 +0.7
VIS AMB AMB 03 40 12.0
comp=Z,240nm,1.4s
VIS *i*S **S** 03 48 00.7 +2.0
BYJI Banyuwangi 56.51 215 P **P** 03 40 12.9 +0.6
comp=Z,450nm,1.0s,comp=Z,24µm
PMBI Palembang 56.74 228 P P 03 40 17.5 +3.5
comp=Z,491nm,1.0s,comp=Z,10µm
AKTO Aktyubinsk 56.77 310 P **P** 03 40 13.6 -0.3
AKTO S **S** 03 48 02.2 -2.2
AKTO pmax pmax
comp=Z,32nm,0.6s
AKTO MLR MLR
comp=Z,58µm,19.5s
AKTO Aktyubinsk 56.77 310 P **P** 03 40 13.6 -0.3
AKTO S **S** 03 48 02.2 -2.2
AKTO Aktyubinsk 56.77 310 P **P** 03 40 13.6 -0.3
comp=Z,32nm,0.6s,baz=68,slow=9.9,SNR=7.4
AKTO S **S** 03 48 02.2 -2.2
comp=Z,2.3nm,0.9s,baz=25,slow=19,SNR=2.4
AKTO LR LR 04 06 28.6
comp=Z,58µm,19.5s,baz=250,slow=38
JAGI Jajag, Banyuwa 56.82 215 P **P** 03 40 15.1 +0.5
comp=Z,57nm,1.6s,comp=Z,3µm
GMJI Gumukmas 56.96 216 P **P** 03 40 15.8 +0.3
comp=Z,235nm,0.8s,comp=Z,3µm
HSP Hornsund 57.12 348 *e*P **P** 03 40 15.7 -0.3
SJI Sawahan 57.24 218 P **P** 03 40 17.2 -0.5
comp=Z,176nm,1.4s,comp=Z,5µm
SMRI Semarang 57.27 220 P **P** 03 40 18.3 +0.5
comp=Z,390nm,1.1s,comp=Z,8µm
KRKI Karangkates 57.30 217 P **P** 03 40 17.3 -0.7
comp=Z,511nm,1.3s,comp=Z,21µm
PPI Padang Panjang 57.30 234 P **P** 03 40 17.2 -0.8
comp=Z,101nm,1.3s,comp=Z,4µm
KBL Kabul 57.33 289 *e*P **P** 03 40 17.4 -0.9
KBL *e*S **S** 03 48 12.5 -0.1
KBL pmax pmax
comp=Z,88nm,0.8s
KBL Kabul 57.33 289 *e*P **P** 03 40 17.4 -0.9
comp=Z,88nm,0.8s
KBL *e*S **S** 03 48 12.5 -0.1
BHPL Bhopal 57.38 273 *e*PKP **P** 03 40 18.2 -0.5
BHPL AMB AMB 03 40 19.1
comp=Z,453nm,1.3s
NGP Nagpur 57.40 270 *e*PKP **P** 03 40 17.3 -1.5
NGP *ex* x 03 48 35.1
PWJI Pagerwojo 57.48 218 P **P** 03 40 18.1 -1.1
comp=Z,415nm,1.0s,comp=Z,5µm
AJM Ajmer 57.60 278 *i*P **P** 03 40 20.0 -0.2
TGJI Tegal 57.76 222 P **P** 03 40 21.4 +0.2
comp=Z,308nm,1.3s,comp=Z,7µm
BJII Banjamegara 57.87 221 P **P** 03 40 21.8 -0.3
comp=Z,170nm,1.1s,comp=Z,6µm
UGM Wanagama 57.98 220 *e*P **P** 03 40 21.7 -1.1
comp=Z,893nm,1.4s
UGM Wanagama 57.98 220 P **P** 03 40 22.5 -0.3
comp=Z,464nm,1.4s,comp=Z,9µm
BJO Bjornoya 58.24 345 *e*P **P** 03 40 22.9 -0.9
BJO *e* 03 48 22.4
BJO *e*S **S** 03 48 23.5 +0.5
BJO AMS AMS 04 09 28.8
comp=Z,32µm,17.6s
MASI Maura Aman, Be 58.35 231 P **P** 03 40 26.0 +0.5
comp=Z,886nm,1.2s,comp=Z,11µm
LVZ Lovozero 58.45 335 *e*P **P** 03 40 24.3 -1.2
LVZ Lovozero 58.45 335 P **P** 03 40 24.1 -1.4
comp=Z,592nm,0.8s,SNR=6.3
LEM Lembang 58.48 223 P **P** 03 40 26.0 -0.5
comp=Z,298nm,1.6s,comp=Z,7µm
KSI Kapahiang 58.56 230 P **P** 03 40 26.6 -0.4
comp=Z,341nm,1.1s,comp=Z,8µm
YKW3 Yellowknife Ar 58.84 32 *e*P **P** 03 40 27.8 -0.4
YKW3 *e*S **S** 03 48 30.4 -0.6
LWLI Liwa 58.86 228 P **P** 03 40 28.5 -0.6
comp=Z,277nm,1.2s,comp=Z,8µm
YKA Yellowknife Ar 58.88 32 P **P** 03 40 28.2 -0.3
YKA ⇑*e* 04 10 15.2
YKA Yellowknife Ar 58.88 32 P **P** 03 40 28.2 -0.3
comp=Z,1.4nm,0.9s,baz=303,slow=6.6,SNR=7.5
YKA PKP2bc 04 10 15.2
comp=Z,0.6nm,0.8s,baz=126,slow=1.8,SNR=6.8
MNAI Manna 58.94 229 P **P** 03 40 31.2 +1.7
comp=Z,375nm,1.8s
APA Apatity 59.03 335 *b i*P **P** 03 40 28.0 -1.5
APA *i* 03 41 15.0
APA *i* 03 42 36.0
APA *i* PPP PPP 03 44 01.0
APA *i*S **S** 03 48 28.0 -5.4
APA pmax pmax
comp=Z,150nm,1.3s
APA pmax pmax
comp=Z,4µm,11.0s
APA smax smax
comp=N,8µm,22.0s
APA smax smax
comp=E,6µm,22.0s
APA MLR MLR
comp=Z,41µm,24.0s
KASI Kota Agung 59.04 227 P **P** 03 40 28.1 -2.0
comp=Z,132nm,1.0s,comp=Z,3µmcomp=Z,22µm
AKL Akola 59.19 271 ⇑*i*P **P** 03 40 31.5 +0.2
AKL *i*S **S** 03 48 36.3 -0.4
TMCR Tamitsa 59.37 331 *e*P **P** 03 40 31.6 -0.3
TMCR pmax pmax
comp=Z,451nm,1.4s
KEV Kevo 59.58 339 *e*P **P** 03 40 32.7 -0.5
KEV pmax pmax
comp=Z,154nm,0.8s
KEV MLR MLR
comp=Z,36µm,20.0s
KEV Kevo 59.58 339 *e*P **P** 03 40 32.7 -0.5
comp=Z,154nm,0.8s
KEV LR LR
comp=Z,36µm,20.0s
FUNA Funafuti 59.80 138 PFAKE 03 40 50.0 +15
FUNA LR LR
comp=Z,35µm,20.0s
HYB Hyderabad 60.04 267 ⇑*i*P **P** 03 40 36.0 -1.2
comp=Z,200nm,1.0s
HYB *e*pP **pP** 03 40 45.0 -2.6
HYB *e*S **S** 03 48 48.0 +0.2
HYB LR LR 03 58 42.0
comp=Z,16nm,20.0s
HYB Hyderabad 60.04 267 *e*PKP **P** 03 40 37.0 -0.2
HYB AMB AMB 03 40 40.7
comp=Z,151nm,6.0s
ARCES ARCESS Array B 60.12 339 P **P** 03 40 36.5 -0.5
ARCES S **S** 03 48 46.5 -1.0
ARCES ARCESS Array B 60.12 339 P **P** 03 40 36.5 -0.5
comp=Z,130nm,1.1s,baz=46,slow=10,SNR=25
ARCES S **S** 03 48 46.5 -1.0
comp=Z,1.5nm,0.8s,baz=48,slow=26,SNR=2.1
ARCES LR LR 04 12 03.8
comp=Z,35µm,18.6s,baz=34,slow=42
ARE0 ARCESS Array S 60.12 339 *e*P **P** 03 40 36.3 -0.7
KLMR Klimovskoe 60.63 327 *c i*P **P** 03 40 40.1 -0.4
KLMR *e*S **S** 03 48 52.0 -2.1
KLMR SS SS 03 53 00.9 +8.9
KLMR pmax pmax
comp=Z,2µm,1.5s
KLMR pmax pmax
comp=Z,724nm,1.5s
KLMR MLR MLR
comp=Z,44µm,21.0s
LATR Latur 60.91 269 *e*PKP **P** 03 40 41.4 -1.7
KTK1 Kautokeino 61.08 339 ⇑*i*P **P** 03 40 43.0 -0.5
KTK1 AMB AMB 03 40 45.7
comp=Z,1µm,0.9s
KTK1 *e*S **S** 03 48 58.6 -1.1
KTK1 AMS AMS 04 11 07.7
comp=Z,66µm,19.4s
DAG Danmarks Havn 61.16 355 ⇑*i*P **P** 03 40 43.2 -0.7
DAG *i*S **S** 03 48 58.4 -2.1
DAG pmax pmax
comp=Z,78nm,1.0s
DAG MLR MLR
comp=Z,14µm,24.0s
DAG Danmarks Havn 61.16 355 ⇑*i*P **P** 03 40 43.2 -0.7
comp=Z,78nm,1.0s
DAG *i*S **S** 03 48 58.4 -2.1
DAG
comp=Z,12µm,24.0s
CTAO Charters Tower 61.63 177 *e*P **P** 03 40 47.4 -0.3
CTAO pmax pmax
comp=Z,61nm,1.1s
CTAO MLR MLR
comp=Z,7µm,20.0s
CTAO Charters Tower 61.63 177 *e*P **P** 03 40 47.4 -0.3
comp=Z,61nm,1.1s
CTAO LR LR
comp=Z,7µm,20.0s
TRO Tromso 61.74 341 *e*P **P** 03 40 47.5 -0.4
TRO AMB AMB 03 40 50.6
comp=Z,310nm,1.1s
TRO *e*S **S** 03 49 09.9 +1.9
TRO AMS AMS 04 13 05.2
comp=Z,34µm,18.7s
PGC Sidney 61.90 49 *e*P **P** 03 40 49.8 +0.5
comp=Z,18nm,1.9s
WRAB Tennant Creek 62.01 190 *e*P **P** 03 40 49.0 -1.3
WRAB pmax pmax
comp=Z,134nm,1.2s
WRAB MLR MLR
comp=Z,9µm,21.0s
WRAB Tennant Creek 62.01 190 *e*P **P** 03 40 49.0 -1.3
comp=Z,134nm,1.2s
WRAB LR LR
comp=Z,9µm,21.0s
WRAB Tennant Creek 62.01 190 P **P** 03 40 49.0 -1.3
comp=Z,451nm,1.0s,SNR=25
WRA Warramunga Arr 62.02 190 P **P** 03 40 49.3 -1.1
WRA S **S** 03 49 08.2 -4.5
WRA ⇑*e* 04 10 07.7
WRA Warramunga Arr 62.02 190 P **P** 03 40 49.3 -1.1
comp=Z,53nm,1.1s,baz=8.5,slow=7.1,SNR=113
WRA S **S** 03 49 08.2 -4.5
comp=Z,7.8nm,1.3s,baz=7.9,slow=12,SNR=6.6
WRA LR LR 04 08 00.2
comp=Z,9µm,20.4s,baz=20,slow=36
WRA PKP2bc 04 10 07.7
comp=Z,6.9nm,1.1s,baz=198,slow=2.2,SNR=8.3
NLWA Neilton Lookou 62.33 50 *e*P **P** 03 40 53.4 +1.0
comp=Z,113nm,1.3s
NLWA LR LR
comp=Z,13µm,21.0s
JOF Joensuu 62.54 331 *ep* **P** 03 40 52.1 -1.3
comp=Z,106nm,0.6s
JOF Joensuu 62.54 331 *e*P **P** 03 40 52.1 -1.3
JOF pmax pmax
comp=Z,106nm,0.6s
IMYA Miami 62.56 295 *e*P **P** 03 40 54.5 +0.3
POO Poona 62.87 271 ⇑*i*P **P** 03 40 55.0 -1.3
comp=Z,340nm,1.0s
IEMG Emamgholi 62.94 297 *e*P **P** 03 40 57.3 +0.4
JCW Jim Creek 63.00 48 P **P** 03 40 57.4 +0.6
ISRO Mashad 63.00 296 *e*P **P** 03 40 56.9 -0.2
ABKT Ailbek 63.01 298 P **P** 03 40 57.1 0.0
comp=Z,810nm,0.7s,SNR=25
BHJ Bhuj 63.15 278 *e*PKP **P** 03 40 57.6 -0.5
BHJ AMB AMB 03 40 59.4
comp=Z,229nm,1.6s
IMOG Moghan 63.20 296 *e*P **P** 03 40 58.6 0.0
IPAY Payeh 63.24 296 *e*P **P** 03 40 58.2 -0.6

KAD Karad 63.37 270 *i* P P 03 40 59.5 -0.2
IKRD Kardeh 63.39 297 *e*P P 03 40 55.1 -4.7
ISHV Shirvan 63.51 298 *e*P **P** **03 41 00.6 +0.1**
ISFR Sfrayin 63.58 297 *e*P **P** **03 41 01.4 +0.3**
RCM Mount Rainier- 63.86 50 P **P** **03 41 04.5 +1.7**
LON Longmire 63.86 50 *e*P **P** **03 41 03.4 +0.8**
LON pmax pmax
comp=Z,94nm,1.4s
LON Longmire 63.86 50 *e*P **P** **03 41 03.4 +0.8**
comp=Z,94nm,1.4s
STEI Steigen 63.91 341 *e*P **P** **03 41 01.6 -0.8**
STEI AMB AMB 03 41 04.9
comp=Z,169nm,1.1s
WPW White Pass 64.04 50 P **P** **03 41 05.1 +1.3**
TWW Teanaway 64.18 49 P **P** **03 41 05.8 +1.2**
COR Corvallis 64.20 52 *e*P P 03 41 08.5 +3.8
COR pmax pmax
comp=Z,576nm,2.0s
COR Corvallis 64.20 52 *e*P P 03 41 08.5 +3.8
comp=Z,576nm,2.0s
MOS Moscow 64.42 323 *α i*P **P** **03 41 02.9 -3.0**
MOS *e* 03 41 39.5
MOS *e*S **S** **03 49 36.1 -5.8**
MOS *e* 03 50 53.0
MOS *e*SSS SSS 03 56 36.7
MOS pmax pmax
comp=Z,2μm,2.2s
MOS pmax pmax
comp=Z,628nm,1.6s
MOS pmax pmax
comp=N,241nm,1.5s
MOS pmax pmax
comp=E,142nm,1.4s
MOS smax smax
comp=E,2μm,4.5s
MOS smax smax
comp=N,2μm,4.5s
MOS MLR MLR
comp=Z,52μm,17.0s
MOS MLR MLR
comp=E,31μm,16.0s
MOS MLR MLR
comp=N,34μm,18.0s
NAC Naches 64.43 49 P **P** **03 41 07.3 +1.0**
KEBM Edson Butte 64.54 54 *e*P **P** **03 41 09.1 +2.0**
comp=N,294nm,1.2s
VLL Laurance Lake 64.66 51 P **P** **03 41 09.5 +1.6**
IDAH Dahanechah 64.73 292 *e*P **P** **03 41 08.8 +0.1**
GOA Goa 64.77 269 *e*PKP **P** **03 41 08.7 -0.1**
GOA AMB AMB 03 41 12.1
comp=Z,238nm,2.5s
KAF Kangasniemi 64.83 332 *e*p **P** **03 41 07.3 -1.2**
comp=Z,129nm,0.8s
KAF Kangasniemi 64.83 332 *e*P **P** **03 41 07.3 -1.2**
KAF pmax pmax
comp=Z,129nm,0.8s
KBO Bosley Butte 64.98 55 *e*P **P** **03 41 11.8 +1.8**
comp=Z,249nm,1.3s
PALK Pallekele 65.03 257 *e*P **P** **03 41 10.6 +0.1**
comp=Z,151nm,1.2s
PALK Pallekele 65.03 257 P **P** **03 41 10.0 -0.6**
comp=Z,564nm,1.3s,SNR=6.0
OD2 Odessa Site #2 65.24 48 P **P** **03 41 12.2 +0.7**
OBN Obninsk 65.28 323 *c i*P **P** **03 41 11.0 -0.5**
OBN *e**PP **pP** **03 41 20.1 -1.8**
OBN *e* 03 41 42.3
OBN *e* 03 43 35.4
OBN *e* 03 50 59.9
OBN pmax pmax
comp=Z,583nm,1.7s
OBN MLR MLR
comp=Z,50μm,19.0s
VRHR Novokhopersk 65.28 317 *c i*P **P** **03 41 10.3 -1.3**
VRHR *e**SP **sP** **03 41 23.3 -2.8**
VRHR *e* 03 43 33.0
VRHR *e*PPP PPP 03 45 14.7
VRHR *e*S **S** **03 49 49.0 -3.6**
VRHR *e*SS **SS** **03 54 04.8 -0.2**
VRHR pmax pmax
comp=Z,2μm,3.3s
VRHR pmax pmax
comp=N,540nm,1.6s
VRHR pmax pmax
comp=E,370nm,1.6s
VRHR pmax pmax
comp=N,360nm,2.2s
VRHR pmax pmax
comp=E,300nm,2.2s
VRHR pmax pmax
comp=Z,410nm,2.2s
VRHR pmax pmax
comp=N,770nm,3.9s
VRHR pmax pmax
comp=E,1μm,3.9s
VRHR pmax pmax
comp=Z,1μm,3.9s
VRHR smax smax
comp=N,960nm,4.8s
VRHR smax smax
comp=E,2μm,4.8s
VRHR smax smax
comp=Z,480nm,4.8s
VRHR MLR MLR
comp=N,30μm,17.0s
VRHR MLR MLR
comp=E,31μm,17.0s
VRHR MLR MLR
comp=Z,59μm,17.0s
HAWA Hanford 65.36 49 *e*P **P** **03 41 13.7 +1.4**
comp=Z,186nm,1.5s
HAWA LR LR
comp=Z,9μm,21.0s
FINES FINESS Array B 65.37 332 P **P** **03 41 11.6 -0.4**
FINES S **S** **03 49 53.2 -0.1**
FINES FINESS Array B 65.37 332 P **P** **03 41 11.6 -0.4**
comp=Z,301nm,0.8s,baz=47,slow=11,SNR=151
FINES S **S** **03 49 53.2 -0.1**
comp=Z,4.2nm,0.9s,baz=60,slow=16,SNR=1.7
FINES LR LR 04 12 15.5
comp=Z,69μm,21.2s,baz=52,slow=38
ITEG Tejag 65.41 293 *e*P **P** **03 41 13.1 +0.1**
MOR8 Moi Rana 65.46 340 ⇑ *i*P **P** **03 41 10.8 -1.7**
MOR8 AMB AMB 03 41 13.9
comp=Z,466nm,1.0s
HUMO Hull Mountain 65.53 54 *e*P **P** **03 41 14.4 +1.0**
comp=Z,164nm,1.8s
KRMB Red Mountain 65.57 55 *e*P **P** **03 41 15.7 +1.9**
comp=Z,365nm,3.0s
NEW Newport 65.60 46 *e*P **P** **03 41 14.2 +0.4**
comp=Z,181nm,1.4s
NEW LR LR
comp=Z,10μm,22.0s
NEW Newport 65.60 46 ⇓P **P** **03 41 14.3 +0.4**
baz=65,SNR=61
NEW ⇓S **S** **03 49 56.9 0.0**
baz=65
FLOS Flostrand 65.61 340 *e*P **P** **03 41 13.0 -0.4**
FLOS AMB AMB 03 41 20.1
comp=Z,392nm,1.1s
STOK Stokkvaagen 65.70 340 *e*P **P** **03 41 13.4 -0.6**
STOK *e*S **S** **03 49 58.3 +1.1**
JMIC Jan Mayen 65.73 350 *e*P **P** **03 41 14.7 +0.5**
JMIC *e*S **S** **03 49 57.6 +0.1**
JMIC AMS AMS 04 09 38.7
comp=Z,8μm,19.0s
JMIC Jan Mayen 65.73 350 LR LR 04 09 46.2
comp=Z,10μm,21.3s,baz=191,slow=36
AS31 Alice Springs 65.75 190 *e*P **P** **03 41 14.9 0.0**
ASAR Alice Springs 65.75 190 P **P** **03 41 14.6 -0.3**
ASAR S **S** **03 49 55.2 -3.7**
ASAR ⇑ *e* 04 09 56.5
ASAR Alice Springs 65.75 190 P **P** **03 41 14.6 -0.3**
comp=Z,14nm,0.9s,baz=6.7,slow=5.1,SNR=5.2
ASAR S **S** **03 49 55.2 -3.7**
comp=Z,0.5nm,0.8s,baz=329,slow=4.9,SNR=3.0
ASAR PKP2bc 04 09 56.5
comp=Z,1.9nm,1.0s,baz=169,slow=2.7,SNR=6.2
ASAR LR LR 04 10 24.1
comp=Z,13μm,20.6s,baz=2.5,slow=36
SUMG Summit 65.91 1 ⇑ *i*P **P** **03 41 16.3 +0.5**
SUMG *i* S **S** **03 50 00.5 0.0**
SUMG pmax pmax
comp=Z,190nm,0.9s
SUMG MLR MLR
comp=Z,21μm,21.0s
SUMG Summit 65.91 1 *e*P **P** **03 41 16.1 +0.2**
comp=Z,266nm,1.0s
SUMG *e*S **S** **03 50 04.5 +3.9**
SUMG Summit 65.91 1 ⇑ *i*P **P** **03 41 16.3 +0.5**
comp=Z,188nm,0.9s
SUMG *i* S **S** **03 50 00.5 0.0**
SUMG
comp=Z,21μm,21.0s
XMAS Kiritimati 65.91 110 PFAKE 03 41 30.0 +14
XMAS LR LR
comp=Z,44μm,20.0s
A12A Yaak River Ran 66.00 45 ⇑P **P** **03 41 16.9 +0.5**
baz=66
KHMM Horse Mountain 66.05 56 *e*P **P** **03 41 19.1 +2.1**
comp=Z,279nm,1.3s
VOR Voronezh 66.11 319 *e*P **P** **03 41 15.0 -2.0**
VOR pmax pmax
comp=Z,480nm,1.4s
YBH Yreka Blue Hor 66.18 55 *e*P **P** **03 41 19.0 +1.3**
comp=Z,189nm,1.5s
B12A Libby 66.31 46 ⇑P **P** **03 41 19.0 +0.6**
baz=66
C11A Tepee Creek (N 66.32 46 ⇓P **P** **03 41 19.1 +0.6**
baz=66,SNR=77
MBWA Marble Bar 66.42 204 *e*P **P** **03 41 18.8 -0.3**
MBWA LR LR
comp=Z,5μm,22.0s
VSR Storozhevoye 66.44 318 *ce*P **P** **03 41 19.0 -0.1**
VSR *e**SP **sP** **03 41 32.0 -1.6**
VSR *e* 03 43 44.4
VSR *e*PPP PPP 03 45 18.9
VSR *e*S **S** **03 50 05.3 -1.5**
VSR *e*SS **SS** **03 54 24.0 +1.0**
VSR pmax pmax
comp=Z,290nm,1.4s
VSR pmax pmax
comp=N,80nm,0.7s
VSR pmax pmax
comp=E,90nm,0.7s
VSR pmax pmax
comp=Z,1μm,3.8s
VSR smax smax
comp=N,780nm,3.8s
VSR smax smax
comp=E,1μm,3.8s
VSR smax smax
comp=Z,130nm,3.8s
VSR MLR MLR
comp=N,12μm,19.0s
VSR MLR MLR
comp=E,16μm,19.0s
VSR MLR MLR
comp=Z,34μm,19.0s
VORD Divnogorie 66.53 318 *e*P **P** **03 41 19.4 -0.3**
VORD *e**SP **sP** **03 41 32.5 -1.6**
VORD *e* 03 43 44.4
VORD *e*PPP PPP 03 45 20.8
VORD *e*S **S** **03 50 06.7 -1.2**
VORD *e*SS **SS** **03 54 27.6 +3.2**
VORD pmax pmax
comp=Z,360nm,2.0s
VORD pmax pmax
comp=N,100nm,1.0s
VORD pmax pmax
comp=E,110nm,1.0s
VORD pmax pmax
comp=N,690nm,4.8s
VORD pmax pmax
comp=E,970nm,4.8s
VORD pmax pmax
comp=Z,1μm,4.8s
VORD smax smax
comp=N,2μm,4.0s
VORD smax smax
comp=E,1μm,4.0s
VORD smax smax
comp=Z,240nm,4.0s
VORD MLR MLR
comp=N,25μm,18.0s
VORD MLR MLR
comp=E,23μm,18.0s
VORD MLR MLR
comp=Z,29μm,18.0s
A13A Flathead Natio 66.65 45 ⇑P **P** **03 41 20.8 +0.2**
baz=66
C12B Naegeli Ranch, 66.82 46 ⇓P **P** **03 41 22.4 +0.8**
baz=67,SNR=17
KIPM Iron Peak 66.82 57 *e*P **P** **03 41 22.7 +0.8**
comp=Z,232nm,1.4s
KCPM Cahto Peak 66.83 57 *e*P **P** **03 41 23.0 +1.0**
comp=Z,111nm,1.3s
WALA Waterton Lakes 66.84 44 *e*P **P** **03 41 22.0 +0.1**
comp=Z,3.3nm,1.3s
MAK Makhachkala 66.84 307 *e*P **P** **03 41 21.3 -0.4**
MAK *e* 03 41 50.3
MAK *e* 03 43 44.7
MAK *e*S **S** **03 50 07.8 -4.0**
MAK pmax pmax
comp=Z,295nm,1.6s
TRD Trivandrum 66.95 261 *e*PKP **P** **03 41 23.2 +0.4**
TRD AMB AMB 03 41 26.8
comp=Z,147nm,0.3s
WDC Whiskeytown Da 66.96 56 *e*P **P** **03 41 23.2 +0.6**
WDC pmax pmax
comp=Z,166nm,1.4s
WDC Whiskeytown Da 66.96 56 *e*P **P** **03 41 23.2 +0.6**
comp=Z,166nm,1.4s
B13A Whitefish 66.96 45 ⇓P **P** **03 41 23.3 +0.7**
baz=67,SNR=82
DZM Mont Dzumac 67.00 157 *e*P **P** **03 41 23.8 +0.8**
comp=Z,158nm,1.4s
DZM *e*S **S** **03 50 19.4 +5.2**
comp=Z,15μm,29.1s
DZM *e*LR LR 04 02 01.6
comp=Z,28μm,22.5s
DZM Mont Dzumac 67.00 157 *e*P **P** **03 41 23.5 +0.5**
comp=Z,94nm,1.4s
BSMT Bassoo Peak 67.11 46 *e*P **P** **03 41 24.5 +0.8**
A14A Double T Ranch 67.14 44 ⇑P **P** **03 41 23.9 +0.1**
baz=67,SNR=53
EIDS Eidsvold 67.20 173 *e*P **P** **03 41 25.2 +1.2**
comp=Z,39nm,1.0s
BLMT Blacktail Moun 67.24 45 *e*P **P** **03 41 25.5 +1.0**
D12A Red Ives Fores 67.29 47 ⇓P **P** **03 41 24.8 +0.1**
baz=67
MSVF Nonsavu 67.29 144 *e*P **P** **03 41 26.8 +1.9**
MSVF pmax pmax
comp=Z,44nm,1.2s
MSVF MLR MLR
comp=Z,21μm,22.0s
MSVF Nonsavu 67.29 144 *e*P **P** **03 41 26.8 +1.9**
comp=Z,44nm,1.2s
MSVF LR LR
comp=Z,21μm,22.0s
C13A Hot Springs 67.33 46 ⇓P **P** **03 41 25.4 +0.5**
baz=67,SNR=32
NSS Namsos 67.40 339 *e*P **P** **03 41 24.2 -0.7**
ISHM Shahmirzad 67.40 298 *e*P **P** **03 41 26.8 +1.0**
JTMT Jette 67.44 46 *e*P **P** **03 41 26.6 +0.9**
A15A Johnson Ranch, 67.50 44 ⇑P **P** **03 41 25.7 -0.3**
baz=67,SNR=64
YBMT Yellow Bay 67.51 45 *e*P **P** **03 41 27.1 +1.0**
comp=Z,60nm,1.3s
SCO Scoresbysund 67.53 355 ⇑ *i*P **P** **03 41 26.0 +0.4**
comp=Z,44nm,1.1s
SCO *i* S **S** **03 50 21.2 +1.9**
SCO pmax pmax
comp=Z,44nm,1.1s
SCO MLR MLR
comp=Z,12μm,23.0s
SCO Scoresbysund 67.53 355 ⇑ *i*P **P** **03 41 26.0 +0.4**
comp=Z,44nm,1.1s
SCO *i* S **S** **03 50 21.2 +1.9**
SCO
comp=Z,12μm,23.0s
BMO Blue Mountains 67.53 49 *e*P **P** **03 41 26.7 +0.4**
comp=Z,114nm,1.5s
BMO LR LR
comp=Z,11μm,22.0s
HOPS Hopland 67.56 57 *e*P **P** **03 41 27.0 +0.6**
comp=Z,178nm,1.5s
B14A Marquette Ranc 67.60 45 ⇑P **P** **03 41 27.2 +0.5**
baz=67,SNR=55
C14A Swan Lake 67.71 45 ⇓P **P** **03 41 28.1 +0.7**
baz=68
SWMT Swartz Lake 67.74 46 *e*P **P** **03 41 28.2 +0.7**
D13A Huson 67.75 46 ⇑P **P** **03 41 27.8 +0.2**
baz=68,SNR=39
ILAS Lasjerd 67.87 298 *e*P **P** **03 41 29.2 +0.4**
B15A Bradely Ranch, 68.00 44 ⇑P **P** **03 41 29.5 +0.3**
baz=68,SNR=139
A16A West Butte Ran 68.10 43 ⇓P **P** **03 41 29.6 -0.3**
baz=68
F12A Elk City 68.13 48 ⇓P **P** **03 41 30.6 +0.6**
baz=68,SNR=82
GOF Gofitskoye 68.16 311 *e*P **P** **03 41 32.7 +2.6**
GOF *e*S **S** **03 50 31.7 +4.0**
GOF pmax pmax
comp=Z,440nm,1.4s
GOF smax smax
comp=N,80nm,1.2s
GOF smax smax
comp=E,100nm,1.2s
SLMT Seeley Lake 68.17 46 *e*P **P** **03 41 30.6 +0.3**
MCCM Marconi Confer 68.18 58 *e*P **P** **03 41 31.3 +1.0**
comp=E,224nm,1.5s
MSO Missoula 68.19 46 *e*P **P** **03 41 30.6 +0.2**
comp=E,77nm,1.3s
MSO LR LR
comp=Z,6μm,22.0s
MSO Missoula 68.19 46 ⇓P **P** **03 41 30.6 +0.2**
baz=68,SNR=59
WVOR Wild Horse Val 68.22 52 *e*P **P** **03 41 31.3 +0.6**
WVOR pmax pmax
comp=Z,156nm,1.4s
WVOR MLR MLR
comp=Z,9μm,20.0s
WVOR Wild Horse Val 68.22 52 *e*P **P** **03 41 31.3 +0.6**
comp=Z,156nm,1.4s
WVOR LR LR
comp=Z,9μm,20.0s
D14A Greenough 68.27 46 ⇓P **P** **03 41 30.8 -0.1**
baz=68,SNR=52
E13A Victor 68.29 47 ⇓P **P** **03 41 31.0 -0.1**
baz=68,SNR=15
C15A Salmond Ranch, 68.31 45 ⇑P **P** **03 41 32.1 +0.9**
baz=68,SNR=182
OHCM Honcut 68.35 56 *e*P **P** **03 41 31.8 +0.5**
B16A M & M Farms, S 68.38 44 ⇓P **P** **03 41 31.6 +0.1**
baz=68,SNR=40
G12A Big Creek, Yel 68.48 48 ⇓P **P** **03 41 32.0 -0.4**
baz=68
CHMT Chamberlain Mo 68.51 46 *e*P **P** **03 41 32.4 -0.1**
A17A Triple J Farms 68.56 43 ⇓P **P** **03 41 32.8 +0.2**
baz=68,SNR=40
F13A Darby 68.62 47 ⇓P **P** **03 41 32.9 -0.2**
baz=68,SNR=38
E14A Clinton 68.69 46 ⇓P **P** **03 41 33.6 0.0**
baz=68,SNR=6.7
BEKR Beckworth 68.72 55 *e*P **P** **03 41 35.0 +1.0**
comp=Z,95nm,1.3s
C16A Fuhringer Ranc 68.75 44 ⇓P **P** **03 41 34.4 +0.5**
baz=68,SNR=99
COCO West Island 68.78 230 *e*P **P** **03 41 35.4 +1.2**
COCO pmax pmax
comp=Z,655nm,1.4s
COCO MLR MLR
comp=Z,5μm,20.0s
COCO West Island 68.78 230 *e*P **P** **03 41 35.4 +1.2**
comp=Z,655nm,1.4s
COCO LR LR
comp=Z,5μm,20.0s
SAC San Andreas 68.81 58 *e*P **P** **03 41 35.0 +0.7**
SAC pmax pmax
comp=Z,375nm,1.7s
SAC San Andreas 68.81 58 *e*P **P** **03 41 35.0 +0.7**
comp=Z,375nm,1.7s
D15A Lincoln 68.82 45 ⇑P **P** **03 41 34.4 0.0**
baz=69
FFC Flin Flon 68.82 34 *e*P **P** **03 41 33.9 -0.2**
FFC pmax pmax
comp=Z,133nm,1.2s
FFC MLR MLR
comp=Z,11μm,19.0s
FFC Flin Flon 68.82 34 *e*P **P** **03 41 33.9 -0.2**
comp=Z,133nm,1.2s
FFC LR LR
comp=Z,11μm,19.0s
FFC Flin Flon 68.82 34 P **P** **03 41 34.5 +0.4**
comp=Z,488nm,1.3s,SNR=34
TBLU Trondheim 68.88 339 *e*P **P** **03 41 32.9 -1.4**
TBLU AMB AMB 03 41 35.9
comp=Z,328nm,1.2s
TBLU *e* 03 50 38.9
TBLU AMS AMS 04 16 10.8
comp=Z,37μm,19.0s
B17A L&G Farms, Che 68.93 44 ⇑P **P** **03 41 35.1 +0.2**
baz=69,SNR=59
A18A Metzger Ranch, 69.01 43 ⇓P **P** **03 41 35.5 +0.1**
baz=69,SNR=37
KIV Kislovodsk 69.04 311 *c i*P **P** **03 41 36.3 +0.6**
KIV *e* 03 44 07.5
KIV pmax pmax
comp=Z,789nm,1.7s
KIV Kislovodsk 69.04 311 P **P** **03 41 36.1 +0.4**
comp=Z,2μm,1.0s,SNR=58
AFI Afiamalu 69.05 133 PFAKE 03 41 50.0 +14
AFI LR LR
comp=Z,10μm,20.0s
KBZ Khabaz 69.06 310 P **P** **03 41 36.4 +0.7**
KBZ S **S** **03 50 41.1 +2.8**
KBZ pmax pmax
comp=Z,85nm,0.9s
KBZ MLR MLR
comp=Z,48μm,19.7s
KBZ Khabaz 69.06 310 P **P** **03 41 36.4 +0.7**
KBZ S **S** **03 50 41.1 +2.8**
KBZ Khabaz 69.06 310 P **P** **03 41 36.4 +0.7**
comp=Z,85nm,0.9s,baz=58,slow=4.7,SNR=92
KBZ S **S** **03 50 41.1 +2.8**
comp=Z,0.7nm,0.4s,baz=43,slow=18,SNR=2.2
KBZ LR LR 04 17 16.6
comp=Z,48μm,19.6s,baz=139,slow=41
H12A Diamond D Ranc 69.10 49 ⇓P **P** **03 41 36.3 +0.1**
baz=69,SNR=18
F14A Wisdom 69.13 47 ⇑P **P** **03 41 36.6 +0.2**
baz=69,SNR=6.3
E15A Deer Lodge 69.14 46 ⇓P **P** **03 41 36.6 +0.3**
baz=69,SNR=20
TBLG Delisi 69.22 308 *i* P **P** **03 41 37.7 +0.9**
MFID Camas Ranch 69.25 50 *e*P **P** **03 41 37.7 +0.6**
comp=Z,278nm,1.8s
MFID Camas Ranch 69.25 50 ⇓P **P** **03 41 37.6 +0.5**
baz=69,SNR=26
IZAR Zarasai 69.27 328 *e*P **P** **03 41 37.0 +0.2**
IZAR AMB AMB 03 41 37.7
comp=Z,69nm,2.2s
D16A Dana Ranch, Ca 69.34 45 ⇓P **P** **03 41 38.0 +0.4**
baz=69,SNR=51
C17A Wharram Farm, 69.37 44 ⇓P **P** **03 41 37.5 -0.2**
baz=69,SNR=49
IDID Didziasalis 69.38 327 *e*P **P** **03 41 37.6 +0.2**
IDID AMB AMB 03 41 38.5
comp=Z,86nm,1.6s
B18A Beardsley Farm 69.39 43 ⇓P **P** **03 41 38.1 +0.3**
baz=69,SNR=65
HRY Holter Researc 69.39 45 *e*P **P** **03 41 38.6 +0.7**
WCN Washoe City 69.44 55 *e*P **P** **03 41 39.2 +0.8**
WCN pmax pmax
comp=Z,240nm,1.4s
WCN Washoe City 69.44 55 *e*P **P** **03 41 39.2 +0.8**
comp=Z,240nm,1.4s
G14A Jackson 69.44 47 ⇓P **P** **03 41 37.8 -0.6**
baz=69
ISAL Salakas 69.44 327 *e*P **P** **03 41 38.0 +0.2**
ISAL AMB AMB 03 41 39.0
comp=Z,114nm,1.6s
IIGN Ignalina 69.56 327 *e*P **P** **03 41 38.8 +0.2**
IIGN AMB AMB 03 41 39.7
comp=Z,105nm,1.5s
A19A Klindworth Far 69.56 42 ⇓P **P** **03 41 39.4 +0.5**
baz=69,SNR=51
E16A East Helena 69.59 45 ⇓P **P** **03 41 39.3 +0.1**
baz=69,SNR=60
F15A Butte 69.59 46 ⇓P **P** **03 41 39.7 +0.4**
baz=69,SNR=101
LRM Limekiln Ridge 69.62 46 *e*P **P** **03 41 40.0 +0.4**
EGMT Eagleton 69.64 43 *e*P **P** **03 41 39.6 +0.3**
comp=Z,196nm,1.3s
EGMT LR LR
comp=Z,12μm,22.0s
EGMT Eagleton 69.64 43 ⇑P **P** **03 41 39.6 +0.3**
baz=69,SNR=19
NACGM Naroch 69.65 327 *e*P **P** **03 41 36.0 -3.1**
D17A Six Diamond Ra 69.72 44 ⇑P **P** **03 41 40.0 +0.1**

baz=70,SNR=36
B19A Brinkman Farms 69.77 43 ⇑P P 03 41 40.6 +0.4
baz=70,SNR=44
ISRB Sarab 69.82 303 eP P 03 41 41.1 +0.3
CMB Columbia Colle 69.82 57 eP P 03 41 41.3 +0.7
CMB pmax pmax
comp=Z,182nm,1.3s
CMB Columbia Colle 69.82 57 eP P 03 41 41.3 +0.7
comp=Z,182nm,1.3s
DLMT Dillon 69.84 47 eP P 03 41 41.1 +0.4
comp=Z,262nm,1.4s
IHRS Heris 69.91 304 eP P 03 41 41.3 0.0
SAO San Andreas Ge 69.92 58 eP P 03 41 42.2 +1.0
SAO pmax pmax
comp=Z,145nm,1.4s
SAO San Andreas Ge 69.92 58 eP P 03 41 42.2 +1.0
comp=Z,145nm,1.4s
HLID Hailey 69.96 49 eP P 03 41 42.3 +0.7
comp=Z,90nm,1.3s
HLID LR LR
comp=Z,7µm,21.0s
HLID Hailey 69.96 49 ⇓P P 03 41 42.2 +0.7
baz=70,SNR=61
A20A Cobblestone Ra 70.00 42 ⇑P P 03 41 41.8 +0.3
baz=70
G15A Dillon 70.02 47 ⇑P P 03 41 42.1 +0.2
baz=70,SNR=104
MCMT McKenzie Canyo 70.04 47 eP P 03 41 41.9 -0.2
comp=Z,20nm,1.1s
E17A Martinsdale 70.07 45 ⇓P P 03 41 42.7 +0.6
baz=70,SNR=46
F16A Kennard Place, 70.09 46 ⇑P P 03 41 42.6 +0.4
baz=70,SNR=18
MOL Molde 70.15 340 ⇑iP P 03 41 42.2 +0.1
MOL AMB AMB 03 41 45.4
comp=Z,183nm,1.4s
MOL i 03 50 57.6
D18A Linhart Farms, 70.15 44 ⇓P P 03 41 42.9 +0.4
baz=70,SNR=30
IBND Bandar-abas 70.16 289 eP P 03 41 42.9 +0.1
BOZ Bozeman (W) 70.18 46 eP P 03 41 43.4 +0.6
BOZ eS S 03 50 48.2 -3.6
BOZ pmax pmax
comp=Z,108nm,1.1s
BOZ MLR MLR
comp=Z,13µm,22.0s
BOZ Bozeman (W) 70.18 46 eP P 03 41 43.4 +0.6
comp=Z,108nm,1.1s
BOZ eS S 03 50 48.2 -3.6
BOZ LR LR
comp=Z,13µm,22.0s
C19A Slack Wire Ran 70.19 43 ⇑P P 03 41 43.4 +0.7
baz=70,SNR=72
GNI Garni 70.19 306 eP P 03 41 43.8 +0.8
GNI Garni 70.19 306 eP P 03 41 44.2 +1.3
comp=Z,582nm,1.4s
GNI Garni 70.19 306 P P 03 41 43.5 +0.6
comp=Z,25nm,0.6s,baz=205,slow=2.0,SNR=34
GNI S S 03 50 57.8 +5.6
comp=Z,2.9nm,0.3s,baz=336,slow=18,SNR=1.6
GNI LR LR 04 15 39.4
comp=Z,24µm,20.0s,baz=228,slow=39
B20A Solberg Farm, 70.25 42 ⇓P P 03 41 43.2 +0.2
baz=70,SNR=30
I14A Mackay 70.27 48 ⇑P P 03 41 44.3 +0.9
baz=70,SNR=62
BMN Battle Mountai 70.28 53 eP P 03 41 44.8 +1.3
BMN pmax pmax
comp=Z,142nm,1.4s
BMN MLR MLR
comp=Z,11µm,21.0s
BMN Battle Mountai 70.28 53 eP P 03 41 44.8 +1.3
comp=Z,142nm,1.4s
BMN LR LR
comp=Z,11µm,21.0s
H15A Lima 70.28 47 ⇓P P 03 41 43.2 -0.3
baz=70,SNR=18
G16A Moss Hill, Enn 70.35 47 ⇑P P 03 41 44.4 +0.5
baz=70,SNR=71
NB2 NORSAR Subarra 70.42 338 P P 03 41 43.6 -0.2
comp=Z,189nm,0.9s,baz=35,slow=6.2
NB2 NORSAR Subarra 70.42 338 P P 03 41 43.6 -0.2
baz=35,slow=6.2
NOA NORSAR Array B 70.42 338 P P 03 41 43.6 -0.2
NOA S S 03 50 55.3 +1.4
NOA NORSAR Array B 70.42 338 P P 03 41 43.6 -0.2
comp=Z,195nm,1.0s,baz=35,slow=6.1,SNR=130
NOA S S 03 50 55.3 +1.4
comp=Z,0.1nm,0.4s,baz=42,slow=26,SNR=2.8
NOA LR LR 04 16 21.7
comp=Z,36µm,20.0s,baz=25,slow=39
A21A Bergtoll Ranch 70.43 41 ⇓P P 03 41 44.4 +0.3
baz=70,SNR=9.4
IMRD Marand 70.49 305 eP P 03 41 45.2 +0.3
E18A Harlowton 70.50 45 ⇓P P 03 41 45.5 +0.7
baz=70,SNR=45
ITBZ Tabriz 70.51 304 eP P 03 41 45.2 +0.2
F17A Fitzpatrick Pl 70.53 45 ⇓P P 03 41 45.3 +0.4
baz=70,SNR=40
NC602 NORSAR Array S 70.57 337 ⇑iP P 03 41 44.1 -0.6
NC602 eS S 03 50 52.5 -3.1
D19A Cripps Ranch, 70.65 44 ⇓P P 03 41 46.1 +0.5
baz=70,SNR=32
NAO01 NORSAR Array S 70.67 338 eP P 03 41 44.6 -0.7
comp=Z,126nm,1.0s
C20A Veseth Ranch, 70.73 43 ⇑P P 03 41 46.7 +0.7
baz=70,SNR=52
B21A Ellsworth Farm 70.75 42 ⇓P P 03 41 46.4 +0.3
baz=70,SNR=26
I15A Monteview 70.77 48 ⇑P P 03 41 47.1 +0.7
baz=71
ISHB Shabestar 70.81 304 eP P 03 41 47.3 +0.4
QLMT Earthquake Lak 70.81 47 eP P 03 41 47.5 +0.7
DIGO Kars 70.84 307 iP P 03 41 48.4 +1.3
NVAR Mina Array Bea 70.87 55 P P 03 41 48.0 +0.8
NVAR S S 03 50 58.6 -1.6
NVAR Mina Array Bea 70.87 55 P P 03 41 48.0 +0.8
comp=Z,38nm,0.8s,baz=290,slow=5.8,SNR=126
NVAR S S 03 50 58.6 -1.6
comp=Z,0.3nm,0.3s,baz=60,slow=15,SNR=2.7
G17A Pierce Place, 70.87 46 ⇑P P 03 41 47.7 +0.7
baz=71,SNR=15
KARS Kars 70.88 308 eP P 03 41 48.8 +1.7
A22A Carney Farms, 70.92 41 ⇓P P 03 41 47.2 0.0
baz=71,SNR=48
SOC Sochi 70.94 312 ciP P 03 41 47.4 +0.1
SOC e*PP pP 03 41 55.9 -1.9
SOC e*SP sP 03 42 00.4 -1.4
SOC e 03 44 21.8
SOC ePPP PPP 03 46 07.6
SOC iS S 03 51 00.9 +0.4
SOC i 03 51 43.4
SOC iSS SS 03 55 29.3 -3.5
SOC pmax pmax
comp=Z,4µm,5.0s
SOC pmax pmax
comp=Z,103nm,0.9s
SOC MLR MLR
comp=N,18µm,18.0s
SOC MLR MLR
comp=Z,57µm,18.0s
SOC MLR MLR
comp=E,12µm,18.0s
IAZR Azarshahr 70.96 304 eP P 03 41 48.1 +0.3
SFJD Kangerlussuaq 70.99 6 eP P 03 41 46.5 -0.6
comp=E,291nm,1.5s
SFJD LR LR
comp=Z,19µm,20.0s
SFJD Kangerlussuaq 70.99 6 iP P 03 41 46.5 -0.6
comp=Z,57nm,1.0s
SFJD iS S 03 51 02.4 +2.2
SFJD
comp=Z,15µm,24.0s
H16A Russell Place, 70.99 47 ⇓P P 03 41 48.5 +0.7
baz=71,SNR=69
MLAC Mammoth Lakes 71.03 56 ⇓P P 03 41 49.6 +1.3
baz=71,SNR=18
F18A Big Timber 71.03 45 ⇑P P 03 41 48.6 +0.6
baz=71,SNR=46
D20A Manuel Ranch, 71.08 43 ⇓P P 03 41 48.7 +0.6
baz=71,SNR=50
C21A Desert Coulee 71.12 42 ⇓P P 03 41 48.6 +0.3
baz=71,SNR=12
GCMT Greycliff 71.13 45 eP P 03 41 49.2 +0.6
comp=Z,155nm,1.6s
E19A Rath Farm, Rou 71.16 44 ⇑P P 03 41 49.2 +0.5
baz=71,SNR=60

YMR Madison River 71.17 47 eP P 03 41 49.5 +0.5
comp=Z,174nm,1.3s
DYDN Diyadin 71.20 306 iP P 03 41 50.0 +0.8
DBOC Borcka 71.26 309 iP P 03 41 48.9 -0.4
ELK Elko 71.26 52 eP P 03 41 50.5 +0.9
comp=Z,153nm,1.8s
BANOM Banah 71.26 288 P P 03 41 49.7 +0.2
SNR=16
DAGI Agillar 71.28 309 iP P 03 41 50.0 +0.4
CLDR Caldiran 71.31 306 eP P 03 41 51.5 +1.6
B22A Reddig Ranch S 71.35 41 ⇑P P 03 41 49.8 0.0
baz=71,SNR=12
MTUM Tungsten Hills 71.38 56 eP P 03 41 51.1 +0.8
WBK Wadi Bani Khal 71.38 284 P P 03 41 51.6 +1.3
SNR=31
YFT Old Faithful 71.38 47 eP P 03 41 52.5 +2.2
comp=Z,86nm,1.0s
I16A Newdale 71.40 47 ⇓P P 03 41 51.5 +1.2
baz=71,SNR=96
ANN Anapa 71.41 314 ciP P 03 41 49.9 -0.2
ANN e*PP pP 03 41 59.6 -1.0
ANN e 03 44 27.7
ANN ePPP PPP 03 46 15.7
ANN eS S 03 51 04.5 -1.3
ANN e 03 51 50.9
ANN pmax pmax
comp=N,55nm,1.4s
ANN pmax pmax
comp=Z,227nm,1.4s
ANN pmax pmax
comp=E,62nm,1.6s
ANN pmax pmax
comp=Z,3µm,7.9s
ANN pmax pmax
comp=N,880nm,7.8s
ANN pmax pmax
comp=E,794nm,7.8s
A23A Redstone 71.45 40 ⇓P P 03 41 50.5 +0.2
baz=71
DBAD Bademkaya 71.45 309 iP P 03 41 50.0 -0.6
E20A Meyer Farm, Mu 71.47 44 ⇓P P 03 41 51.2 +0.7
baz=71,SNR=39
F19A Roth Farm, Mol 71.47 45 ⇓P P 03 41 51.0 +0.4
baz=71,SNR=65
DDEM Demirkent 71.50 309 iP P 03 41 47.8 -3.0
G18A Lazy EL Ranch, 71.50 45 ⇑P P 03 41 50.9 +0.1
baz=71,SNR=13
AKASG Malin Array Be 71.53 322 P P 03 41 50.4 -0.3
AKASG S S 03 51 10.3 +3.4
AKASG pmax pmax
comp=Z,88nm,0.6s
AKASG MLR MLR
comp=Z,44µm,18.7s
AKASG Malin Array Be 71.53 322 P P 03 41 50.4 -0.3
AKASG S S 03 51 10.3 +3.4
AKASG Malin Array Be 71.53 322 P P 03 41 50.4 -0.3
comp=Z,88nm,0.6s,baz=43,slow=6.1,SNR=271
AKASG S S 03 51 10.3 +3.4
comp=Z,0.4nm,0.2s,baz=39,slow=13,SNR=4.8
AKASG LR LR 04 16 05.6
comp=Z,44µm,18.7s,baz=65,slow=38
AK01 Malin Array Si 71.54 322 eP P 03 41 50.1 -0.6
KIEV Kiev 71.54 322 eP P 03 41 50.4 -0.3
KIEV pmax pmax
comp=Z,138nm,0.8s
KIEV MLR MLR
comp=Z,41µm,20.0s
KIEV Kiev 71.54 322 eP P 03 41 50.4 -0.3
comp=Z,138nm,0.8s
KIEV LR LR
comp=Z,41µm,20.0s
LKWY Lake 71.54 46 eP P 03 41 53.4 +2.2
LKWY pmax pmax
comp=Z,173nm,1.5s
LKWY MLR MLR
comp=Z,16µm,22.0s
LKWY Lake 71.54 46 eP P 03 41 53.4 +2.2
comp=Z,173nm,1.5s
LKWY LR LR
comp=Z,16µm,22.0s
H17A Grant Village 71.56 47 ⇓P P 03 41 53.3 +2.0
baz=71,SNR=60
AK02 Malin Array Si 71.57 322 eP P 03 41 50.5 -0.4
AGRB Hanur-Agry 71.60 307 eP P 03 41 53.3 +1.7
RCTC Rector, Farmer 71.60 58 ⇑P P 03 41 51.8 +0.5
baz=71
D21A La Casta Ranch 71.68 43 ⇑P P 03 41 52.2 +0.4
baz=71,SNR=12
HYA Hoyanger 71.68 340 ⇑iP P 03 41 51.1 -0.3
HYA e 03 51 20.6
HYA AMS AMS 04 17 34.0
comp=Z,28µm,18.5s
IMW Indian Meadow 71.69 47 eP P 03 41 53.5 +1.4
comp=Z,121nm,1.1s
B23A Brockton 71.73 41 ⇑P P 03 41 52.2 +0.2
baz=72,SNR=26
SMMC Simmler 71.74 59 ⇓P P 03 41 53.3 +1.0
baz=72
DCID1 Drake Creek 71.75 48 eP P 03 41 53.8 +1.4
comp=Z,189nm,1.1s
SUW Suwalki 71.75 328 ⇑iP P 03 41 51.4 -0.5
SUW e*PP pP 03 42 01.3 -1.3
SUW e*SP sP 03 42 04.6 -1.9
SUW eS S 03 51 07.8 -1.6
SUW MLR MLR
comp=Z,32µm,23.9s
SUW Suwalki 71.75 328 eP P 03 41 51.6 -0.4
comp=Z,1µm,2.0s
SUW Suwalki 71.75 328 iP P 03 41 51.3 -0.6
SUW epP pP 03 42 01.2 -1.3
SUW esP sP 03 42 04.5 -1.9
SUW eS S 03 51 07.8 -1.6
SUW LMZ LR 04 14 31.0
TPH Tonopah 71.75 55 PFAKE 03 42 10.0 +17
TPH LR LR
comp=Z,8µm,22.0s
SMDO Samad 71.77 285 P P 03 41 53.4 +0.6
SNR=22
TIN Tinemaha 71.77 56 ⇑P P 03 41 53.4 +0.9
baz=72,SNR=11
C22A Vida 71.78 42 ⇓P P 03 41 52.2 -0.1
baz=72,SNR=5.5
RLMT Red Lodge 71.79 45 eP P 03 41 53.3 +0.7
comp=Z,265nm,1.7s
RLMT LR LR
comp=Z,13µm,22.0s
PZAR Pazar-Rize 71.81 309 eP P 03 41 53.6 +1.1
TUTA Tutak 71.81 307 iP P 03 41 53.2 +0.2
RRI2 Red Ridge 71.83 48 eP P 03 41 54.2 +1.2
comp=Z,230nm,1.3s
RRI2 eS S 03 51 11.6 +0.2
H18A Shoshone NF, C 71.87 46 ⇑P P 03 41 53.9 +0.7
baz=72,SNR=18
I17A Pilgrim Ck. 71.87 47 ⇓P P 03 41 54.8 +1.6
baz=72,SNR=19
MOOW Moose Ponds 71.89 47 eP P 03 41 54.5 +1.3
comp=Z,177nm,1.4s
A24A Westby 71.89 40 ⇓P P 03 41 53.1 +0.2
baz=72,SNR=14
F20A Billings 71.93 44 ⇓P P 03 41 53.5 +0.1
baz=72,SNR=14
UOSS Wadi Hilu 71.93 287 P P 03 41 53.0 -0.6
comp=Z,658nm,0.9s,SNR=35
TPAW Teton Pass 71.94 48 eP P 03 41 55.0 +1.3
comp=Z,195nm,1.3s
TPAW eS S 03 51 12.9 +0.3
HOMI Horasan 71.95 308 iP P 03 41 54.1 +0.4
VANB Van 71.98 306 eP P 03 41 55.3 +1.6
HOQ Hoqain 71.98 286 P P 03 41 54.5 +0.6
SNR=36
E21A Keefer Ranch, 71.99 43 ⇓P P 03 41 54.3 +0.7
baz=72,SNR=14
VES Vestal, Richgr 71.99 58 ⇑P P 03 41 53.6 -0.2
baz=72,SNR=20
TVAN Van 72.01 306 iP P 03 41 54.8 +0.7
KONO Kongsberg 72.02 337 ⇑iP P 03 41 53.4 0.0
KONO AMB AMB 03 41 55.3
comp=Z,154nm,1.4s
KONO eS S 03 51 11.9 -0.4
KONO AMS AMS 04 17 01.7
comp=Z,37µm,20.2s
KONO Kongsberg 72.02 337 eP P 03 41 53.2 -0.3
KONO pmax pmax
comp=Z,88nm,1.1s
KONO MLR MLR
comp=Z,49µm,20.0s

KONO Kongsberg 72.02 337 eP P 03 41 53.2 -0.3
comp=Z,88nm,1.1s
KONO LR LR
comp=Z,49µm,20.0s
HVU Hansel Valley 72.03 50 eP P 03 41 55.2 +1.1
HVU pmax pmax
comp=Z,191nm,1.8s
HVU Hansel Valley 72.03 50 eP P 03 41 55.2 +1.1
comp=Z,191nm,1.8s
D22A Cohagen 72.03 42 ⇓P P 03 41 54.2 +0.3
baz=72,SNR=17
ILIN Lien 72.06 301 eP P 03 41 53.4 -1.1
LOHW Long Hollow 72.06 47 eP P 03 41 55.5 +1.2
comp=Z,152nm,1.5s
HATD Hatta, Dubai 72.06 287 P P 03 41 55.0 +0.7
SNR=46
SNOW Snow King Moun 72.07 47 eP P 03 41 55.6 +1.2
comp=Z,159nm,1.5s
REDW Red Top Meadow 72.08 48 eP P 03 41 55.9 +1.4
C23A Lambert 72.08 41 ⇑P P 03 41 54.4 +0.3
baz=72,SNR=20
DGMT Dagmar 72.11 40 eP P 03 41 54.6 +0.4
comp=Z,157nm,1.0s
DGMT LR LR
comp=Z,23µm,22.0s
DGMT Dagmar 72.11 40 ⇑P P 03 41 54.5 +0.2
baz=72,SNR=9.1
PKM Peak Mountain 72.11 59 ⇓P P 03 41 55.6 +0.9
baz=72,SNR=24
SUE Sulen 72.14 340 eP P 03 41 54.2 +0.1
SUE AMB AMB 03 41 57.6
comp=Z,289nm,1.2s
SUE e 03 46 34.0
SUE i 03 51 23.3
SUE AMS AMS 04 17 58.8
comp=Z,24µm,18.9s
JMDO Jabal Madar 72.16 284 P P 03 41 55.6 +0.6
SNR=27
ASHO Ashiyah 72.20 287 P P 03 41 55.7 +0.5
SNR=40
H19A Powell 72.23 46 ⇑P P 03 41 55.8 +0.6
baz=72,SNR=18
CWC Cottonwood Cre 72.25 57 ⇑P P 03 41 55.9 +0.4
baz=72,SNR=15
ARMA Armidale 72.25 173 eP P 03 41 57.0 +1.8
comp=Z,69nm,1.3s
G20A Bridger 72.28 45 ⇑P P 03 41 55.2 -0.3
baz=72,SNR=30
NAZ Nazwa, Dubai 72.29 288 P P 03 41 56.1 +0.4
SNR=12
AHID Auburn Hatcher 72.33 48 eP P 03 41 56.7 +0.8
comp=Z,148nm,1.5s
AHID LR LR
comp=Z,14µm,21.0s
GRAC Grapevine Rang 72.34 56 ⇓P P 03 41 57.1 +1.2
baz=72,SNR=24
EZM Erzurum 72.36 308 eP P 03 41 57.9 +1.7
GEVA Gevas 72.36 306 iP P 03 41 51.0 -5.1
IVIS Veis 72.37 301 eP P 03 41 55.8 -0.4
I18A Diamond G Ranc 72.43 47 ⇓P P 03 41 57.7 +1.1
baz=72,SNR=13
HAKT HAKKARI 72.44 305 iP P 03 41 56.1 -0.6
F21A Absaloka Mine, 72.44 44 ⇑P P 03 41 56.7 +0.3
baz=72
SBC Santa Barbara 72.47 59 ⇓P P 03 41 57.2 +0.6
baz=72
ISA Isabella 72.49 58 eP P 03 41 57.2 +0.4
ISA pmax pmax
comp=Z,84nm,1.2s
ISA Isabella 72.49 58 eP P 03 41 57.2 +0.4
comp=Z,84nm,1.2s
ISA Isabella 72.49 58 ⇑P P 03 41 56.7 -0.2
baz=72,SNR=29
D23A Lindsay 72.50 42 ⇓P P 03 41 57.1 +0.4
baz=72,SNR=39
ASK Askoy 72.52 340 eP P 03 41 55.3 -1.1
ASK AMB AMB 03 42 08.9
comp=Z,487nm,1.7s
RUND Rundenannen 72.53 340 eP P 03 41 55.5 -1.0
RUND AMB AMB 03 41 57.9
comp=Z,432nm,1.6s
IDHR Dehrash 72.56 301 eP P 03 41 56.4 -1.0
BER Bergen 72.57 340 eP P 03 41 56.4 -0.3
BER AMB AMB 03 41 59.2
comp=Z,289nm,1.3s
BER eS S 03 51 16.3 -2.2
BER e 03 51 32.1
BER AMS AMS 04 18 09.8
comp=Z,35µm,16.7s
R11A Troy Canyon, C 72.58 54 ⇑P P 03 41 57.9 +0.5
baz=72,SNR=154
BSY Bisya 72.58 285 P P 03 41 58.1 +0.6
SNR=32
ARVC Arvin 72.60 58 ⇑P P 03 41 57.3 -0.1
baz=72
ODD1 Odda 72.63 339 ⇑iP P 03 41 55.3 -1.9
ODD1 AMB AMB 03 41 58.7
comp=Z,259nm,1.4s
ODD1 e 03 46 16.2
ODD1 AMS AMS 04 18 32.2
comp=Z,26µm,21.4s
E22A Miles City 72.63 43 ⇑P P 03 41 57.6 +0.2
baz=72,SNR=9.7
C24A Savage 72.64 41 ⇓P P 03 41 57.7 +0.2
baz=72,SNR=18
I19A Meeteetse 72.65 46 ⇑P P 03 41 58.3 +0.5
baz=72,SNR=22
IGHG Ghaleghazi 72.68 301 eP P 03 41 57.2 -1.0
EGD Espegrend 72.69 340 eP P 03 41 57.0 -0.5
EGD AMB AMB 03 41 58.7
comp=Z,341nm,1.6s
CUKT Cukurca 72.70 305 eP P 03 41 58.8 +0.7
ARQ Araqi 72.70 286 P P 03 41 58.7 +0.6
SNR=42
TATV Tatvan 72.71 306 iP P 03 41 55.3 -2.9
ASUD Al Ashush, Dub 72.75 288 P P 03 41 59.2 +0.7
SNR=11
BAYT Ayd¯–ntepe-Bay 72.76 309 eP P 03 41 59.9 +1.4
KOPT Kop Dagi 72.79 308 iP P 03 41 57.4 -1.4
BSC Santa Cruz Isl 72.80 60 ⇑P P 03 41 58.7 +0.1
baz=73
G21A Lodge Grass 72.80 44 ⇓P P 03 41 58.2 -0.4
baz=73,SNR=6.0
HWUT Hardware Ranch 72.83 49 eP P 03 41 59.5 +0.6
comp=Z,166nm,1.4s
HWUT LR LR
comp=Z,8µm,19.0s
MPMC Manual Prospec 72.86 57 ⇓P P 03 41 59.6 +0.4
baz=73,SNR=88
H20A Greybull 72.88 45 ⇓P P 03 41 59.1 0.0
baz=73,SNR=16
E23A Ismay 72.92 42 ⇑P P 03 41 59.4 +0.3
baz=73,SNR=47
F22A Rosebud 72.92 43 ⇑P P 03 41 59.1 -0.1
baz=73,SNR=12
D24A Glendive 72.98 41 ⇓P P 03 41 59.9 +0.4
baz=73,SNR=34
FURC Furnace Creek, 72.99 56 ⇓P P 03 42 00.7 +1.1
baz=73,SNR=42
OSI Osito Adit 72.99 59 ⇓P P 03 42 00.3 +0.5
baz=73
DUG Dugway 73.03 51 eP P 03 42 01.1 +1.0
DUG pmax pmax
comp=Z,295nm,1.6s
DUG MLR MLR
comp=Z,10µm,21.0s
DUG Dugway 73.03 51 eP P 03 42 01.1 +1.0
comp=Z,295nm,1.6s
DUG LR LR
comp=Z,10µm,21.0s
DUG Dugway 73.03 51 ⇑P P 03 42 00.9 +0.8
baz=73,SNR=125
SIM Simferopol' 73.08 316 ceP P 03 42 00.1 +0.1
SIM 03 44 43.8
SIM eS S 03 51 25.1 +0.2
SIM pmax pmax
comp=Z,88nm,0.8s
SIM pmax pmax
comp=Z,1µm,11.0s
SIM MLR MLR
comp=Z,35µm,17.0s
BLG Laguna Peak 73.09 59 ⇑P P 03 42 00.3 -0.1
baz=73
BNGL BINGOL 73.09 307 iP P 03 42 02.8 +2.2
GUMT Gumushane 73.10 309 eP P 03 42 01.6 +1.2
LRMC Laurel Mountai 73.10 57 ⇑P P 03 42 01.0 +0.5
baz=73

BORG Borgarnes 73.12 353 *e*P P 03 42 01.5 +1.6
comp=Z,460nm,1.8s
BORG Borgarnes 73.12 353 P P 03 42 01.5 +1.6
comp=Z,532nm,2.0s,SNR=8.6
BORG Borgarnes 73.12 353 LR LR 04 17 21.7
comp=Z,7µm,18.3s,baz=18,slow=38
J19A Crowheart 73.13 47 ⇑P P 03 42 01.3 +0.7
baz=73,SNR=92
I20A Worland 73.17 46 ⇓P P 03 42 01.4 +0.6
baz=73,SNR=81
BW06 Boulder Array 73.19 47 *e*P P 03 42 00.9 -0.1
comp=Z,210nm,1.6s
BW06 LR LR
comp=Z,14µm,22.0s
PDAR Pinedale Array 73.19 47 P P 03 42 01.2 +0.2
PDAR S **SKiKP** 03 51 28.8 -1.3
PDAR Pinedale Array 73.19 47 P P 03 42 01.2 +0.2
comp=Z,34nm,1.0s,baz=288,slow=1.4,SNR=102
PDAR S **SKiKP** 03 51 28.8 -1.3
comp=Z,0.4nm,0.6s,baz=328,slow=3.3,SNR=3.0
PDAR LR LR 04 14 34.9
comp=Z,12µm,21.9s,baz=339,slow=36
ESPY Espiye-Giresun 73.23 310 *e*P P 03 42 01.3 +0.2
SIRN S¨–rnak 73.27 305 *i*P P 03 42 02.8 +1.3
G22A Birney 73.28 44 ⇑P P 03 42 01.5 +0.1
baz=73,SNR=13
EDW2 Edwards Air Fo 73.29 58 ⇑P P 03 42 02.3 +0.7
baz=73,SNR=43
H21A Big Horn, Sher 73.29 45 ⇓P P 03 42 01.6 +0.1
baz=73,SNR=21
CTU Camp Tracy 73.32 50 *e*P P 03 42 02.0 +0.2
comp=Z,93nm,1.2s
STKA Stephens Creek 73.34 182 *e*P P 03 42 02.2 +0.7
comp=Z,9.5nm,1.2s
STKA Stephens Creek 73.34 182 P P 03 42 01.7 +0.2
comp=Z,34nm,1.1s,baz=344,slow=6.3,SNR=13
STKA LR LR 04 12 42.9
comp=Z,9µm,21.8s,baz=6.0,slow=35
BNGB Bing¨ll 73.35 308 *e*P P 03 42 03.4 +1.5
E24A Baker 73.37 42 ⇑P P 03 42 02.0 +0.1
baz=73,SNR=6.9
F23A Volborg 73.40 43 ⇑P P 03 42 02.3 +0.3
baz=73,SNR=39
M17A Scullys Gap (B 73.43 49 ⇑P P 03 42 02.7 +0.2
baz=73,SNR=16
KELT Kelkit 73.43 309 *i*P P 03 42 02.8 +0.3
DECC Green Verdugo 73.47 59 ⇓P P 03 42 03.0 +0.4
baz=73
L18A Fontenelle, Gr 73.48 48 ⇑P P 03 42 03.3 +0.6
baz=73,SNR=35
HOMB Homborsund 73.48 337 *e*P P 03 42 01.9 -0.3
HOMB AMB AMB 03 42 05.2
comp=Z,148nm,1.3s
HOMB *i* 03 51 29.6
HOMB AMS AMS 04 10 39.5
comp=Z,18µm,26.4s
GRSN GIRESUNGRSN 73.49 310 *i*P P 03 42 01.8 -0.8
ERZN Erzincan 73.53 309 *e*P P 03 42 04.6 +1.6
K19A Absolon Red Bu 73.54 47 ⇑P P 03 42 02.6 -0.4
baz=73,SNR=28
JLU Jordanelle 73.56 50 *e*P P 03 42 04.2 +0.9
comp=Z,119nm,1.3s
J20A Shoshoni 73.60 46 ⇓P P 03 42 04.0 +0.6
baz=73,SNR=35
PASC Pasadena Art C 73.62 59 *e*P P 03 42 03.9 +0.5
comp=Z,211nm,1.4s
FORT Forrest 73.62 194 *e*P P 03 42 03.2 0.0
comp=Z,410nm,1.7s
MWC Mount Wilson 73.66 59 *e*P P 03 42 05.0 +1.1
MWC pmax pmax
comp=Z,281nm,1.5s
MWC Mount Wilson 73.66 59 *e*P P 03 42 05.0 +1.1
comp=Z,281nm,1.5s
H22A Clearmont 73.68 44 ⇓P P 03 42 03.9 +0.1
baz=73,SNR=8.1
I21A Big Trails, Te 73.71 45 ⇓P P 03 42 04.5 +0.5
baz=74,SNR=137
SHOC Shoshone 73.72 56 ⇓P P 03 42 04.9 +0.9
baz=74
L19A Farson 73.74 48 ⇑P P 03 42 04.6 +0.3
baz=74,SNR=16
G23A Biddle 73.76 43 ⇑P P 03 42 04.0 -0.2
baz=74,SNR=14
GSC Goldstone 73.77 57 *e*P P 03 42 05.0 +0.6
GSC pmax pmax
comp=Z,144nm,1.3s
GSC Goldstone 73.77 57 *e*P P 03 42 05.0 +0.6
comp=Z,144nm,1.3s
GSC Goldstone 73.77 57 ⇑P P 03 42 05.0 +0.6
baz=74,SNR=28
DAU Daniels Canyon 73.79 50 *e*P P 03 42 05.7 +1.0
DAU Daniels Canyon 73.79 50 *e*P P 03 42 05.7 +1.0
F24A Ekalaka 73.80 42 ⇑P P 03 42 04.5 +0.1
baz=74,SNR=31
SNART Snartemo 73.80 338 *e*P P 03 42 02.1 -1.9
SNART AMB AMB 03 42 05.3
comp=Z,148nm,1.2s
MPU Maple Canyon 73.83 51 *e*P P 03 42 05.8 +0.9
comp=Z,204nm,1.4s
FMP Fort Macarthur 73.84 59 ⇓P P 03 42 05.2 +0.5
baz=74
BFSC Mount Baldy Ra 73.91 58 ⇑P P 03 42 05.8 +0.5
baz=74,SNR=47
RRX Edison Barstow 73.92 58 ⇓P P 03 42 06.1 +0.9
baz=74
K20A Yellowstone Ra 73.93 47 ⇓P P 03 42 05.2 -0.2
baz=74,SNR=25
J21A Lysite 73.95 46 ⇓P P 03 42 05.7 +0.3
baz=74,SNR=35
CIS Catalina Islan 73.96 60 ⇓P P 03 42 05.4 -0.1
baz=74
SUSE Susehri 74.00 310 *i*P P 03 42 03.8 -1.9
BSD Bornholm Skovb 74.01 332 ⇑*i*P P 03 42 05.1 -0.2
BSD *i* S **SKiKP** 03 51 32.5 +1.9
BSD pmax pmax
comp=Z,140nm,1.0s
BSD MLR MLR
comp=Z,29µm,20.0s
BSD Bornholm Skovb 74.01 332 ⇑*i*P P 03 42 05.1 -0.2
comp=Z,139nm,1.0s
BSD *i* S **SKiKP** 03 51 32.5 +1.9
BSD
comp=Z,29µm,20.0s
I22A 9 Mile Ranch, 74.09 45 ⇓P P 03 42 06.5 +0.4
baz=74,SNR=32
SCI San Clemente I 74.14 60 ⇓P P 03 42 06.9 +0.4
baz=74
G24A Alzada 74.17 43 ⇓P P 03 42 06.2 -0.4
baz=74,SNR=5.7
PTK Pertek 74.17 308 *e*P P 03 42 08.4 +1.6
H23A Clabaugh Cattl 74.19 44 ⇓P P 03 42 06.6 -0.1
baz=74
ARUT Antelope Range 74.23 53 *e*P P 03 42 07.6 +0.5
ARUT Antelope Range 74.23 53 *e*P P 03 42 07.6 +0.5
comp=Z,14nm,1.1s
TUQ Turquoise Moun 74.24 57 ⇓P P 03 42 07.9 +0.7
baz=74,SNR=35
M19A Rock Springs 74.25 48 ⇑P P 03 42 07.5 +0.2
baz=74
ILIC ilic-Erzincan 74.29 309 *e*P P 03 42 08.9 +1.5
KIS Kishinev 74.32 320 *i*P P 03 42 06.4 -0.9
comp=Z,700nm,1.6s
KIS Kishinev 74.32 320 *i* PcP **PcP** 03 42 20.0 -2.0
KIS Kishinev 74.32 320 *e*PP PP 03 44 51.0 -1.9
comp=Z,2µm,9.0s
KIS Kishinev 74.32 320 *e*PPP PPP 03 46 47.0
KIS *e*S **S** 03 51 36.0 -2.9
comp=Z,1µm,5.5s
KIS Kishinev 74.32 320 *e*PS 03 52 24.0
KIS *e*SS SS 03 56 11.0 -13
KIS *e*SSS SSS 04 00 16.0
KIS LRM MLR 04 17 04.0
comp=Z,28µm,20.0s
KIS Kishinev 74.32 320 *α i*P P 03 42 06.4 -0.9
KIS *e* 03 44 51.0
KIS *e*S **S** 03 51 36.0 -2.9
KIS *e*PS **PnS** 03 52 24.0 +8.7
KIS pmax pmax
comp=N,380nm,1.6s
KIS pmax pmax
comp=E,320nm,1.6s
KIS pmax pmax
comp=Z,720nm,1.6s
KIS MLR MLR
comp=Z,28µm,20.0s
KIS MLR MLR
comp=Z,31µm,18.5s
KIS MLR MLR
comp=N,28µm,21.0s
KIS MLR MLR
comp=E,18µm,18.0s
KIS Kishinev 74.32 320 ⇓*i*P P 03 42 07.3 0.0
BEL Belsk 74.34 327 ⇑*i*P P 03 42 08.0 +0.7
BEL *e*S S 03 51 39.1 +0.2
BEL MLR MLR
comp=Z,29µm,20.0s
BEL Belsk 74.34 327 *i*P P 03 42 08.0 +0.7
BEL *e*S S 03 51 39.0 +0.2
BEL LMZ LR 04 17 40.2
BBRC Big Bear Solar 74.36 58 ⇑P P 03 42 08.5 +0.4
baz=74
L20A Wamsutter 74.37 47 ⇓P P 03 42 08.4 +0.4
baz=74,SNR=31
HEC Hector,Ludlow 74.37 57 ⇓P P 03 42 08.8 +0.9
baz=74,SNR=55
RSDY Resadiye-TOKAT 74.37 310 *e*P P 03 42 08.9 +1.2
DIYA Diyarbakir 74.38 307 *i*P P 03 42 08.1 +0.2
MARD Mardin 74.38 306 *i*P P 03 42 08.1 +0.1
COP Copenhagen 74.39 334 ⇑*i*P P 03 42 07.9 +0.4
COP *i* 03 42 21.0
COP *i* S S 03 51 39.7 +0.4
COP pmax pmax
comp=Z,100nm,0.9s
COP MLR MLR
comp=Z,19µm,18.0s
COP Copenhagen 74.39 334 ⇑*i*P P 03 42 07.9 +0.4
comp=Z,104nm,0.9s
COP *i* 03 42 21.0
COP *i* S S 03 51 39.7 +0.4
COP
comp=Z,19µm,18.0s
CCUT Cedar City 74.43 53 *e*P P 03 42 09.5 +1.1
comp=Z,135nm,1.3s
KEMA Kemaliye 74.45 309 *i*P P 03 42 04.9 -3.4
LVV L'vov 74.48 324 *i*P P 03 42 07.9 -0.3
LVV *i* PPP PPP 03 46 43.8
LVV *i* S S 03 51 40.0 -0.6
LVV *i* PS PnS 03 52 11.0 -6.3
LVV *i* SS SS 03 56 24.6 -1.8
LVV pmax pmax
comp=Z,970nm,2.0s
LVV MLR MLR
comp=N,16µm,15.0s
LVV MLR MLR
comp=E,16µm,15.0s
LVV MLR MLR
comp=Z,23µm,15.0s
MVU Marysvale 74.49 52 *e*P P 03 42 10.1 +1.3
comp=Z,135nm,1.3s
MVU LR LR
comp=Z,10µm,21.0s
H24A Dirks Ranch, A 74.50 43 ⇑P P 03 42 08.3 -0.3
baz=74,SNR=45
K21A Alcova 74.54 46 ⇑P P 03 42 08.9 0.0
baz=74
BBOO Buckleboo 74.57 187 *e*P P 03 42 09.4 +0.8
comp=Z,2µm,1.4s
I23A Meade Ranch, G 74.58 44 ⇑P P 03 42 08.6 -0.4
baz=74
MURC Murrieta 74.61 59 ⇓P P 03 42 09.6 +0.3
baz=74,SNR=15
GKP Gorka Klasztor 74.62 330 ⇑*i*P P 03 42 09.1 +0.1
GKP *e* 03 42 22.3
GKP *e*S S 03 51 41.1 -0.9
GKP MLR MLR
comp=Z,64µm,21.6s
GKP Gorka Klasztor 74.62 330 *i*P P 03 42 09.0 +0.1
GKP *e*PcP PcP 03 42 22.3 -0.8
GKP *e*S S 03 51 41.0 -0.9
GKP LMZ LR 04 17 41.2
ULM Lac du Bonnet 74.63 35 *e*P P 03 42 08.5 -0.6
comp=Z,216nm,1.7s
ULM Lac du Bonnet 74.63 35 P P 03 42 08.7 -0.4
comp=Z,17nm,1.0s,baz=322,slow=6.6,SNR=18
KVT Kavak 74.64 312 *e*P P 03 42 10.6 +1.3
ELZG Elazig 74.67 308 *i*P P 03 42 08.1 -1.6
DIKM Dikmen 74.69 312 *e*P P 03 42 10.6 +1.0
MDND Maddock 74.73 39 ⇑P P 03 42 10.0 +0.3
baz=74,SNR=20
LLD Lille Linde 74.75 334 *i*P P 03 42 10.2 +0.6
LLD *i* 03 42 23.2
LLD pmax pmax
comp=Z,57nm,0.9s
LLD Lille Linde 74.75 334 *i*P P 03 42 10.2 +0.6
comp=Z,57nm,0.9s
LLD *i* 03 42 23.2
BHD Baghdad 74.75 301 *i*P P 03 42 07.9 -2.1
BHD *i* PcP pP 03 42 18.8 -1.8
BHD *i* PP PP 03 44 46.5 -11
BHD *i* S SKiKP 03 51 36.5 +4.2
IAS Iasi 74.79 321 ⇑P P 03 42 10.4 +0.4
IAS Iasi 74.79 321 ⇑*i*P P 03 42 10.4 +0.4
M20A Sweetwater, Wa 74.80 48 ⇓P P 03 42 11.3 +0.8
baz=75,SNR=22
MUD Monsted U'grnd 74.80 336 ⇑*i*P P 03 42 10.1 +0.2
MUD *i* 03 42 23.1
MUD pmax pmax
comp=Z,58nm,1.0s
MUD MLR MLR
comp=Z,24µm,17.0s
MUD Monsted U'grnd 74.80 336 ⇑*i*P P 03 42 10.1 +0.2
comp=Z,58nm,1.0s
MUD *i* 03 42 23.1
MUD
comp=Z,24µm,17.0s
GMRC Granite Mounta 74.82 57 ⇓P P 03 42 11.2 +0.6
baz=75,SNR=32
HAVZ Havza 74.83 312 *i*P P 03 42 08.1 -2.3
Q16A Castle Valley 74.83 51 ⇓P P 03 42 11.5 +0.9
baz=75,SNR=62
SCER sogukcermik 74.84 310 *i*P P 03 42 10.2 -0.4
TOKA Tokat 74.91 311 *i*P P 03 42 07.0 -3.8
J23A Dilts Ranch, B 74.92 45 ⇓P P 03 42 10.8 -0.2
baz=75
K22A Casper 74.92 46 ⇑P P 03 42 11.3 +0.2
baz=75,SNR=37
L21A Rawlins 74.93 47 ⇑P P 03 42 11.6 +0.4
baz=75,SNR=135
UMR Umm Al-Rimmam 74.94 296 *e*P P 03 42 10.3 -0.8
UMR AMb AMB 03 42 13.1
comp=Z,169nm,0.9s
LEOM Leova 74.97 320 ⇑P P 03 42 11.2 +0.1
LEOM Leova 74.97 320 ⇑*i*P P 03 42 11.2 +0.1
LDFC Landfair 74.97 56 *e*P P 03 42 12.8 +1.3
comp=Z,389nm,1.3s
MIB Mutribah 75.03 297 *e*P P 03 42 11.2 -0.5
MIB AMb AMB 03 42 12.1
comp=Z,207nm,1.1s
SRU San Rafael 75.08 51 ⇓P P 03 42 12.7 +0.6
baz=75,SNR=81
PFO Pinyon Flat Ob 75.08 58 P P 03 42 13.0 +0.9
comp=Z,386nm,1.5s,SNR=16
PFO Pinyon Flat Ob 75.08 58 *e*P P 03 42 12.7 +0.6
comp=Z,172nm,1.4s
PFO LR LR
comp=Z,12µm,21.0s
O19A Miners Draw (B 75.08 49 ⇑P P 03 42 12.1 0.0
baz=75,SNR=37
I24A Kuemmerle Ranc 75.08 44 ⇑P P 03 42 11.4 -0.5
baz=75,SNR=7.5
BYBT Boyabat 75.09 313 *e*P P 03 42 13.1 +1.3
BELC Belle Mtn. Jos 75.12 58 ⇑P P 03 42 12.3 0.0
baz=75,SNR=21
109C Camp Elliot, M 75.13 59 ⇑P P 03 42 12.4 +0.2
baz=75
BZK Bozkurt 75.17 313 *e*P P 03 42 13.0 +0.8
M21A Separation Pea 75.17 47 ⇓P P 03 42 13.0 +0.4
baz=75,SNR=71
KBD Kabd 75.19 296 *e*P P 03 42 12.1 -0.5
KBD AMb AMB 03 42 29.0
comp=Z,206nm,1.5s
KWP Kalwaria Pacla 75.20 325 ⇑*i*P P 03 42 13.1 +0.7
KWP *i* S S 03 51 48.4 -0.2
KWP MLR MLR
comp=Z,59µm,19.7s
KWP Kalwaria Pacla 75.20 325 *e*P P 03 42 12.8 +0.5
comp=Z,604nm,1.3s
KWP LR LR
comp=Z,56µm,19.0s
KWP Kalwaria Pacla 75.20 325 ⇑*i*P P 03 42 13.1 +0.7
KWP Kalwaria Pacla 75.20 325 *i*P P 03 42 13.0 +0.7
KWP *i* S S 03 51 48.4 -0.2
KWP LMZ LR 04 18 16.9
N20A Spence Gulch, 75.20 48 ⇑P P 03 42 13.5 +0.7
baz=75,SNR=80
RSSD Black Hills 75.21 44 *e*P P 03 42 12.0 -0.8
RSSD pmax pmax
comp=Z,161nm,1.6s
RSSD Black Hills 75.21 44 *e*P P 03 42 12.0 -0.8
comp=Z,161nm,1.6s
K23A Bowen Ranch, D 75.32 45 ⇓P P 03 42 13.0 -0.4
baz=75,SNR=15
SFNV Sufian 75.37 306 ⇑*e*P P 03 42 12.3 -1.4
L22A Ellis Ranch, M 75.39 46 ⇑P P 03 42 14.4 +0.5
baz=75,SNR=37
AKCD Akcadag 75.43 308 *i*P P 03 42 15.5 +1.5
MZRK Al-Mazaregh 75.43 305 *e*P P 03 42 13.6 -0.4
J24A Dixon Ranch, L 75.43 44 ⇑P P 03 42 13.3 -0.6
baz=75
RDF Al-Radifah 75.45 296 *e*P P 03 42 14.0 -0.1
RDF AMb AMB 03 42 19.0
comp=Z,216nm,1.1s
NAY Al-Naaiem 75.45 296 *e*P P 03 42 13.5 -0.6
NAY AMb AMB 03 42 16.0
comp=Z,126nm,0.9s
NEE2 Needles Airpor 75.48 56 ⇓P P 03 42 14.6 +0.4
baz=75
DARE Darende-Malaty 75.50 309 *e*P P 03 42 16.1 +1.7
KAST KASTAMONU 75.53 313 *i*P P 03 42 12.4 -2.1
BAR Barrett 75.54 59 *e*P P 03 42 15.6 +0.9
comp=Z,113nm,1.3s
IRM Iron Mountain 75.55 57 ⇑P P 03 42 15.4 +0.8
baz=75,SNR=36
BUR08 Bucovina Ar. S 75.56 322 *e*P P 03 42 14.8 +0.2
BURAR Bucovina Array 75.58 322 ⇑P P 03 42 15.1 +0.4
BURAR Bucovina Array 75.58 322 ⇑*i*P P 03 42 15.2 +0.5
P19A Cripple Cowboy 75.61 50 ⇓P P 03 42 15.5 +0.3
baz=75,SNR=72
TLCR 75.61 318 ⇓P P 03 42 15.2 +0.4
TLCR 75.61 318 ⇓*i*P P 03 42 15.2 +0.4
CTKT Corum 75.65 312 *i*P P 03 42 16.0 +0.7
N21A Black Mountain 75.67 48 ⇓P P 03 42 15.8 +0.3
baz=75,SNR=42
BC3 Big Chuckawall 75.68 58 ⇑P P 03 42 15.8 +0.3
baz=76,SNR=16
O20A White River Ci 75.69 49 ⇑P P 03 42 15.7 +0.1
baz=76,SNR=30
TESR Tescani 75.71 321 ⇑*i*P P 03 42 15.5 +0.2
W13A Hualapai Mount 75.72 56 ⇑P P 03 42 16.6 +0.7
baz=76,SNR=15
L23A Garrett 75.73 46 ⇑P P 03 42 15.6 -0.3
baz=76,SNR=56
M22A Cedar Creek Ra 75.73 47 ⇓P P 03 42 16.0 +0.1
baz=76,SNR=21
ATAB Bozova 75.76 308 *i*P P 03 42 14.5 -1.3
K24A Anderson Ranch 75.78 45 ⇑P P 03 42 15.1 -0.9
baz=76
BALT Daday 75.80 313 *i*P P 03 42 16.9 +0.7
U15A North Rim 75.82 54 ⇑P P 03 42 17.6 +1.1
baz=76,SNR=84
KOLS Kolonicke sedl 75.91 324 *e*P P 03 42 16.9 +0.4
KOLS pmax pmax
comp=Z,96nm,1.3s
KOLS Kolonicke sedl 75.91 324 *e*P P 03 42 16.9 +0.4
KOLS *e*S S 03 51 53.4 -3.1
DVTC Desert V Tower 75.92 59 ⇓P P 03 42 17.5 +0.6
baz=76
SWSC Sam W. Stewart 75.93 58 ⇓P P 03 42 17.2 +0.3
baz=76
ILGA Ilgaz 75.95 313 *i*P P 03 42 18.2 +1.1
OJC Ojcow 75.98 327 ⇑*i*P P 03 42 17.3 +0.5
OJC *e* 03 42 25.7
OJC *e**SP **sP** 03 42 30.5 -0.9
OJC *e* 03 45 05.9
OJC *e*S S 03 51 56.2 -1.0
OJC *e*SS SS 03 56 46.4 -2.7
OJC MLR MLR
comp=Z,24µm,19.7s
OJC Ojcow 75.98 327 *e*P P 03 42 17.0 +0.2
comp=Z,1µm,1.8s
OJC Ojcow 75.98 327 *i*P P 03 42 17.3 +0.5
OJC *e* 03 42 25.7
OJC *e*sP **sP** 03 42 30.5 -0.9
OJC *e*PP PP 03 45 05.9 -1.0
OJC *e*S S 03 51 56.2 -1.0
OJC *e*SS SS 03 56 46.4 -2.7
OJC L L 04 20 49.2
comp=Z,24µm,19.7s
STHS Stebnicka Huta 75.99 325 *e*P P 03 42 17.8 +0.9
STHS pmax pmax
comp=Z,66nm,1.1s
STHS Stebnicka Huta 75.99 325 *e*P P 03 42 17.8 +0.9
PETR Petresti 76.00 320 ⇑*i*P P 03 42 18.0 +1.0
P20A De Beque 76.04 49 ⇓P P 03 42 17.8 +0.2
baz=76,SNR=24
CORM Corum 76.04 312 *e*P P 03 42 18.8 +1.3
PINB Pinarbasi 76.06 310 *i*P P 03 42 16.7 -1.1
O21A Pagoda 76.07 48 ⇓P P 03 42 17.9 +0.1
baz=76,SNR=14
PDMCI Parker Dam,Lak 76.09 56 ⇑P P 03 42 18.1 +0.4
baz=76,SNR=33
UZH Uzhgorod 76.13 324 ⇓*i*P P 03 42 17.3 -0.4
UZH *e* 03 42 30.7
UZH *e* 03 42 37.2
UZH *e* 03 45 09.4
UZH *e*S S 03 51 55.9 -3.0
UZH *e* 03 52 32.1
UZH *e*SS SS 03 56 53.3 +1.9
UZH MLR MLR
comp=N,20µm,16.0s
UZH MLR MLR
comp=E,32µm,16.0s
UZH MLR MLR
comp=Z,20µm,16.0s
VRI Vrincioaia 76.14 320 ⇑P P 03 42 18.5 +0.7
VRI Vrincioaia 76.14 320 ⇑*i*P P 03 42 18.5 +0.7
M23A Laramie 76.16 46 ⇑P P 03 42 18.4 +0.1
baz=76,SNR=59
L24A Wheatland 76.19 46 ⇑P P 03 42 18.4 +0.1
baz=76,SNR=13
PLOR Plostina 76.19 320 ⇑P P 03 42 18.6 +0.5
PLOR Plostina 76.19 320 ⇑*i*P P 03 42 18.6 +0.5
Y12C Blythe 76.21 57 ⇑P P 03 42 19.0 +0.7
baz=76,SNR=37
N22A Wattenberg Ran 76.22 47 ⇓P P 03 42 19.3 +0.6
baz=76,SNR=62
SARI SarD1z-Kayseri 76.23 309 *e*P P 03 42 20.1 +1.4
BNN Bunyan 76.26 310 *e*P P 03 42 19.8 +1.1
GZT Gaziantep 76.27 308 *i*P P 03 42 19.5 +0.6
CRVS Cervenica-Dubn 76.29 325 *e*P P 03 42 17.2 -1.4
CRVS pmax pmax
comp=Z,316nm,2.0s
CRVS Cervenica-Dubn 76.29 325 *e*P P 03 42 17.1 -1.5
CRVS *e*S S 03 51 57.5 -3.1
CANT Cankiri 76.31 313 *e*P P 03 42 20.1 +1.1
BMR Baia Mare 76.32 323 ⇓P P 03 42 19.9 +1.2
BMR Baia Mare 76.32 323 ⇓*i*P P 03 42 19.9 +1.2
TIRR Tirgusor 76.33 318 *e*P P 03 42 18.2 -0.7
TIRR pmax pmax
comp=Z,281nm,1.5s
TIRR Tirgusor 76.33 318 *e*P P 03 42 18.2 -0.7
comp=Z,281nm,1.5s
TIRR Tirgusor 76.33 318 ⇑*i*P P 03 42 19.0 +0.1
S18A Hurst Farm, Bl 76.34 52 ⇑P P 03 42 19.6 +0.2
baz=76,SNR=81
K25A Mack Ranch, Ha 76.35 45 ⇓P P 03 42 19.2 0.0
baz=76
NIE Niedzica 76.38 326 ⇑*i*P P 03 42 20.3 +1.2
NIE *e* 03 42 28.8
NIE *e**SP **sP** 03 42 33.6 -0.1
NIE *e* 03 45 11.3
NIE *e*S S 03 52 02.4 +0.7
NIE Niedzica 76.38 326 *i*P P 03 42 20.3 +1.2
NIE *e* 03 42 28.8
NIE *e*sP **sP** 03 42 33.6 -0.1
NIE *e*PP PP 03 45 11.3 +1.0
NIE *e*S S 03 52 02.4 +0.7
TRPA Tarpa 76.40 324 ⇑*i*P P 03 42 20.0 +0.9
TRPA Tarpa 76.40 324 ⇑*e*P P 03 42 20.1 +0.9
PHWY Pilot Hill 76.42 46 *e*P P 03 42 19.9 +0.1
comp=Z,151nm,1.4s
N23A Red Feather La 76.44 47 ⇓P P 03 42 20.8 +0.8
baz=76,SNR=58
Q20A Ridgley Place, 76.46 50 ⇓P P 03 42 20.2 +0.3
baz=76,SNR=56
GLA Glamis 76.47 58 *e*P P 03 42 21.4 +1.4

GLA pmax pmax
comp=Z,239nm,1.3s
GLA Glamis 76.47 58 *e*P **P 03 42 21.4 +1.4**
comp=Z,239nm,1.3s
GLA Glamis 76.47 58 ⇓P **P 03 42 20.7 +0.7**
baz=76,SNR=19
PV04 Paradox Valley 76.49 50 *e*P **P 03 42 21.1 +0.9**
EFOR EFORIE 76.50 318 ⇓*i*P **P 03 42 20.9 +1.1**
ELDT Eldivan 76.50 313 *i*P **P 03 42 17.7 -2.4**
RUE Ruedersdorf 76.53 331 *e*P **P 03 42 20.3 +0.5**
comp=Z,587nm,1.5s
RUE *ep*P **pP 03 42 28.5 -1.9**
RUE Ruedersdorf 76.53 331 *e*P **P 03 42 19.9 +0.1**
comp=Z,306nm,1.2s
BSEG Bad Segeberg 76.53 334 *e*P **P 03 42 20.4 +0.6**
comp=Z,470nm,1.4s
BSEG Bad Segeberg 76.53 334 *e*P **P 03 42 20.4 +0.6**
BSEG pmax pmax
comp=Z,470nm,1.4s
P21A Newcastle 76.55 49 ⇑P **P 03 42 21.1 +0.6**
baz=76,SNR=65
KMRS Kahramanmaras 76.56 308 *e*P **P 03 42 21.8 +1.4**
CDAG Cicekdag 76.57 311 *i*P **P 03 42 18.8 -1.7**
O22A Kremmling 76.61 48 ⇑P **P 03 42 21.3 +0.3**
baz=76,SNR=72
L25A Engebretsen Ra 76.62 45 ⇓P **P 03 42 20.9 +0.1**
baz=76
CVD Cernavoda 76.63 318 ⇑P **P 03 42 21.6 +1.0**
CVD Cernavoda 76.63 318 ⇑*i*P **P 03 42 21.5 +1.0**
M24A Cheyenne 76.65 46 ⇓P **P 03 42 21.9 +0.9**
baz=76,SNR=62
K26A Motz Farm, Whi 76.65 44 ⇓P **P 03 42 20.6 -0.2**
baz=76,SNR=21
AYKD Aykdinkavak 76.68 308 *i*P **P 03 42 22.0 +1.0**
DOPR Dopca 76.71 321 ⇑*i*P **P 03 42 22.4 +1.4**
PGOR Pogoanele 76.72 319 ⇓*i*P **P 03 42 22.4 +1.4**
RAC Raciborz 76.74 327 *e*P **P 03 42 22.1 +1.0**
RAC *e*S **S 03 52 06.0 +0.5**
RAC MLR MLR
comp=E,30µm,17.0s
RAC MLR MLR
comp=N,41µm,18.0s
RAC MLR MLR
comp=Z,49µm,18.0s
AMRR Amara 76.76 319 ⇑P **P 03 42 22.3 +1.0**
AMRR Amara 76.76 319 ⇑*i*P **P 03 42 22.3 +1.0**
ISR Istrita 76.78 320 ⇑P **P 03 42 22.4 +0.9**
ISR Istrita 76.78 320 ⇑*i*P **P 03 42 22.4 +0.9**
MLR Muntele Rosu 76.79 320 ⇑*i*P **P 03 42 21.9 +0.2**
SLMH Al Salmeh 76.82 307 ⇑*e*P **P 03 42 23.1 +1.2**
ANDN Andirin 76.83 309 *i*P **P 03 42 20.9 -1.1**
PV01 Paradox Valley 76.86 50 *e*P **P 03 42 22.8 +0.4**
AVNT Avonos 76.87 311 *i*P **P 03 42 19.9 -2.4**
P22A Eagle 76.89 48 ⇓P **P 03 42 23.1 +0.7**
baz=77,SNR=53
KSP Ksiaz 76.89 329 ⇑*i*P **P 03 42 22.5 +0.5**
KSP *e**PP **pP 03 42 30.6 -2.0**
KSP *e* 03 45 12.9
KSP *e*S **S 03 52 06.0 -1.2**
KSP MLR MLR
comp=Z,76µm,22.5s
KSP Ksiaz 76.89 329 *i*P **P 03 42 22.5 +0.5**
KSP *e*sP **sP 03 42 35.8 -0.8**
KSP *e*S **S 03 52 07.0 -0.2**
KSP LMZ LR 04 19 02.9
BR131 Keskin Array S 76.91 312 *e*P **P 03 42 22.3 -0.1**
comp=Z,117nm,1.3s
BRTR Keskin Array B 76.91 312 P **P 03 42 22.6 +0.2**
BRTR S **S 03 52 09.6 +1.6**
BRTR P'P' 04 09 34.0
BRTR Keskin Array B 76.91 312 P **P 03 42 22.6 +0.2**
comp=Z,25nm,0.9s,baz=79,slow=3.1,SNR=113
BRTR S **S 03 52 09.6 +1.6**
comp=Z,0.2nm,0.5s,baz=99,slow=7.7,SNR=3.0
BRTR PKPPKP **P'P'df 04 09 34.0 -4.4**
comp=Z,0.5nm,0.9s,baz=232,slow=4.1,SNR=3.7
BRTR LR LR 04 23 13.4
comp=Z,20µm,19.1s,baz=204,slow=41
CAN Canberra 76.92 175 *e*P **P 03 42 23.2 +1.1**
CAN pmax pmax
comp=Z,137nm,1.5s
CAN MLR MLR
comp=Z,6µm,20.0s
CAN Canberra 76.92 175 *e*P **P 03 42 23.2 +1.1**
comp=Z,137nm,1.5s
CAN LR LR
comp=Z,6µm,20.0s
O23A Lake Granby, G 76.93 47 ⇑P **P 03 42 23.8 +1.1**
baz=77,SNR=55
R20A Redvale 76.94 50 ⇑P **P 03 42 23.3 +0.6**
baz=77,SNR=45
OKC Ostrava-Krasne 76.95 327 ⇑*i*P **P 03 42 22.9 +0.6**
OKC *e* 03 42 31.7
OKC *e*S **S 03 52 08.8 +1.0**
OKC MLR MLR
comp=Z,30µm,18.1s
OKC Ostrava-Krasne 76.95 327 ⇑*i*P **P 03 42 22.9 +0.6**
OKC *ep*P **pP 03 42 31.7 -1.2**
OKC *e*PP PP 03 45 09.7 -5.3
OKC *e*S **S 03 52 08.8 +1.0**
OKC AMS AMS 04 19 10.0
comp=Z,30µm,18.1s
KUZU Kuzuini 76.95 308 *i*P **P 03 42 23.1 +0.4**
Q21A Lamborn Mesa, 76.95 49 ⇓P **P 03 42 23.5 +0.7**
baz=77,SNR=33
WUAZ Wupatki 76.98 54 *e*P **P 03 42 23.9 +1.0**
comp=Z,285nm,1.3s
WUAZ LR LR
comp=Z,9µm,22.0s
WUAZ Wupatki 76.98 54 ⇑P **P 03 42 24.0 +1.1**
baz=77,SNR=64
KDZE Karadeniz Ereo 77.00 314 *e*P **P 03 42 22.5 -0.2**
KECS Kecovo 77.03 325 *e*P **P 03 42 23.0 +0.3**
KECS pmax pmax
comp=Z,37nm,1.5s
KECS Kecovo 77.03 325 *e*P **P 03 42 23.0 +0.3**
Y14A Wickenburg 77.03 56 ⇓P **P 03 42 23.7 +0.6**
baz=77,SNR=48
SMCO Snowmass 77.06 49 *e*P **P 03 42 24.1 +0.5**
comp=Z,132nm,1.4s
N24A Carr 77.06 46 ⇓P **P 03 42 24.0 +0.7**
baz=77,SNR=30
SECR 77.07 320 ⇓*i*P **P 03 42 24.4 +1.3**
M25A Palm-Egli Farm 77.08 45 ⇑P **P 03 42 24.1 +0.7**
baz=77,SNR=17
HLG Helgoland 77.11 335 *ep*P pP 03 42 31.3 -2.4
KAMT Kaman 77.11 312 *e*P **P 03 42 24.1 +0.5**
J28A Allard Ranch, 77.13 43 ⇑P **P 03 42 23.8 +0.3**
baz=77,SNR=76
K27A Fluecklinger Fa 77.14 44 ⇓P **P 03 42 23.4 -0.3**
baz=77,SNR=15
L26A Underwood Farm 77.17 45 ⇓P **P 03 42 23.7 -0.1**
baz=77
S20A Disappointment 77.19 51 ⇑P **P 03 42 24.8 +0.5**
baz=77,SNR=103
KOZT Kozan 77.20 309 *e*P **P 03 42 25.4 +1.5**
MORC Moravsky Berou 77.24 327 *e*P **P 03 42 23.6 -0.4**
MORC pmax pmax
comp=Z,333nm,1.4s
MORC Moravsky Berou 77.24 327 *e*P **P 03 42 23.6 -0.4**
comp=Z,333nm,1.4s
MORC Moravsky Berou 77.24 327 ⇑*i*P **P 03 42 24.6 +0.6**
VOIR 77.26 321 ⇑P **P 03 42 24.8 +0.6**
VOIR 77.26 321 ⇑*i*P **P 03 42 24.8 +0.6**
UPC Upice 77.27 329 ⇑*i*P **P 03 42 24.7 +0.6**
UPC *e* 03 42 33.0
UPC Upice 77.27 329 ⇑*i*P **P 03 42 24.7 +0.6**
UPC *ep*P **PcP 03 42 33.0 -1.6**
DPC Dobruska-Polom 77.27 328 ⇑*i*P **P 03 42 25.0 +0.8**
DPC *e* 03 42 33.9
DPC *e* 03 45 18.8
DPC *e*S **S 03 52 13.0 +1.6**
DPC *e* 03 52 28.8
DPC Dobruska-Polom 77.27 328 ⇑*i*P **P 03 42 25.0 +0.8**
DPC *ep*P **PcP 03 42 33.9 -0.8**
DPC *e*PP **PP 03 45 18.8 +1.0**
DPC *ex* x 03 47 25.2
DPC *e*S **S 03 52 13.0 +1.6**
DPC *e*XS **sS 03 52 28.8 -0.2**
DPC AMS AMS 04 20 10.0
comp=Z,268µm,17.0s
ANTO Ankara 77.28 312 *e*P **P 03 42 24.9 +0.5**
ANTO Ankara 77.28 312 *e*P **P 03 42 25.2 +0.8**
ANTO pmax pmax
comp=Z,302nm,1.3s
ANTO MLR MLR
comp=Z,16µm,19.0s
ANTO Ankara 77.28 312 *e*P **P 03 42 25.2 +0.8**
comp=Z,302nm,1.3s
ANTO LR LR
comp=Z,16µm,19.0s
LOD Lodumlu 77.28 312 *e*P **P 03 42 25.8 +1.4**
R21A Cimarron 77.29 50 ⇑P **P 03 42 25.6 +0.9**
baz=77,SNR=54
DRWC Darouich 77.30 308 ⇑*e*P P 03 42 21.3 -3.3
Q22A Crested Butte, 77.31 49 ⇑P **P 03 42 25.7 +0.8**
baz=77,SNR=49
BBAL Bala 77.32 312 *i*P P 03 42 19.9 -4.9
113A Mohawk Valley, 77.33 57 ⇓P **P 03 42 25.2 +0.4**
baz=77,SNR=13
DRGR 77.33 323 ⇑P **P 03 42 25.0 +0.4**
DRGR 77.33 323 ⇑*i*P **P 03 42 25.0 +0.4**
ISCO Idaho Springs 77.38 48 *e*P **P 03 42 26.2 +0.9**
ISCO pmax pmax
comp=Z,226nm,1.6s
ISCO MLR MLR
comp=Z,15µm,22.0s
ISCO Idaho Springs 77.38 48 *e*P **P 03 42 26.2 +0.9**
comp=Z,226nm,1.6s
ISCO LR LR
comp=Z,15µm,22.0s
ISCO Idaho Springs 77.38 48 ⇓P **P 03 42 26.1 +0.9**
baz=77,SNR=74
AFSR Af'ar-Bala (A 77.42 312 *e*P **P 03 42 26.0 +0.8**
Z14A Wintersburg 77.45 56 ⇓P **P 03 42 26.3 +0.9**
baz=77,SNR=17
O24A Longmont 77.45 47 ⇓P **P 03 42 26.6 +1.1**
baz=77,SNR=26
N25A Grover 77.50 46 ⇑P **P 03 42 26.5 +0.7**
baz=77
ARR Arges 77.51 321 ⇑*i*P **P 03 42 26.9 +1.3**
BRSD Miller 77.52 41 ⇑P **P 03 42 25.4 -0.2**
baz=77,SNR=14
L27A T5 Ranch, Ells 77.54 44 ⇓P **P 03 42 26.2 +0.4**
baz=77,SNR=7.7
M26A McRoberts Ranc 77.54 45 ⇑P **P 03 42 26.8 +0.8**
baz=77,SNR=10
P23A Jefferson 77.55 48 ⇓P **P 03 42 27.3 +1.0**
baz=77,SNR=85
CEYT Ceyhan 77.57 309 *e*P **P 03 42 27.6 +1.7**
S21A Coal Bank Pass 77.64 50 ⇑P **P 03 42 28.0 +1.2**
baz=77,SNR=95
X16A Lo Mia Camp, P 77.67 55 ⇓P **P 03 42 28.2 +1.3**
baz=78,SNR=66
PSZ Piszkesteto 77.71 325 ⇑P **P 03 42 27.4 +0.7**
PSZ Piszkesteto 77.71 325 *e*P **P 03 42 27.4 +0.7**
comp=Z,770nm,1.7s
PSZ LR LR
comp=Z,43µm,19.0s
PSZ Piszkesteto 77.71 325 ⇑*i*P **P 03 42 27.4 +0.7**
PSZ Piszkesteto 77.71 325 ⇑*e*P **P 03 42 27.6 +0.9**
VYHS Vyhne 77.72 326 *e*P **P 03 42 27.4 +0.8**
VYHS pmax pmax
comp=Z,206nm,1.8s
VYHS Vyhne 77.72 326 *e*P **P 03 42 27.4 +0.8**
VYHS *e*S **S 03 52 15.6 -0.6**
MDUB Mudurnu 77.72 314 *e*P **P 03 42 27.6 +0.7**
CLL Collm 77.76 331 *e*P **P 03 42 26.8 0.0**
comp=Z,240nm,1.3s
CLL *ep*P **PcP 03 42 35.2 -1.5**
CLL Collm 77.76 331 ⇑*i*P **P 03 42 26.6 -0.2**
CLL *i**PP **PcP 03 42 34.8 -1.9**
CLL *e*S **S 03 52 15.0 -1.5**
CLL MLR MLR
comp=Z,50µm,21.8s
CLL Collm 77.76 331 ⇑*i*P **P 03 42 26.6 -0.2**
comp=Z,236nm,1.3s
CLL *i* Pmax 03 42 27.0
CLL *e*Plp 03 42 29.0
comp=Z,3µm,23.1s
CLL *i* pP **PcP 03 42 34.8 -1.9**
CLL *i* sP **sP 03 42 39.7 -1.7**
CLL *i* 03 42 44.6
CLL *i* 03 45 01.1
CLL *e*PP **PP 03 45 23.0 +1.3**
CLL *es*PP 03 45 34.0
CLL *e*S **S 03 52 15.0 -1.5**
CLL *e*SKSac **SKSac 03 52 35.0 -2.7**
CLL *e*ScS **ScS 03 52 41.0 -1.9**
CLL *e*PS **PnS 03 53 02.0 +2.8**
CLL *e*(SS) 03 58 21.0
CLL *e* 04 01 48.0
CLL Lm MLR 04 19 00.0
comp=N,40µm,20.9s
CLL Lm MLR 04 19 00.0
comp=E,20µm,19.9s
CLL Lm MLR 04 19 00.0
comp=Z,50µm,21.8s
YURE YUREGIR 77.76 309 *i*P **P 03 42 27.1 0.0**
BRG Berggiesshubel 77.77 330 ⇑*i*P **P 03 42 27.0 +0.2**
comp=Z,401nm,1.9s
BRG *i* PCP **PcP 03 42 36.4 -0.3**
comp=Z,250nm,1.6s
BRG *i* 03 42 46.0
BRG PP **PP 03 45 19.0 -2.8**
BRG S **S 03 52 17.0 +0.4**
BRG SS SS 03 57 06.0 -10
BRG *e*PKPPKP **P'P'df 04 09 38.8 +1.6**
comp=Z,3.5nm,0.9s
BRG
comp=N,42µm,20.3s
BRG
comp=E,24µm,21.8s
BRG
comp=Z,45µm,23.1s
BRG Berggiesshubel 77.77 330 *e*P **P 03 42 27.0 +0.2**
comp=Z,400nm,1.9s
BRG Berggiesshubel 77.77 330 ⇑*i*P **P 03 42 27.0 +0.2**
BRG *i* 03 42 36.4
BRG *i* 03 42 46.0
BRG 03 45 19.0
BRG S **S 03 52 17.0 +0.4**
BRG pmax pmax
comp=Z,401nm,1.9s
BRG MLR MLR
comp=N,42µm,20.3s
BRG MLR MLR
comp=E,24µm,21.8s
BRG MLR MLR
comp=Z,45µm,23.1s
NRDL Niedersach Rie 77.80 333 *e*P **P 03 42 27.1 +0.2**
comp=Z,499nm,2.0s
PVCC Panska Ves 77.81 329 ⇑*i*P **P 03 42 27.8 +0.7**
PVCC *e* 03 42 36.1
PVCC *e* 03 45 22.5
PVCC *e*S **S 03 52 17.3 +0.2**
PVCC *e* 03 52 34.0
PVCC MLR MLR
comp=Z,55µm,17.3s
PVCC Panska Ves 77.81 329 ⇑*i*P **P 03 42 27.8 +0.7**
PVCC *ep*P **PcP 03 42 36.1 -0.9**
PVCC *e*PP **PP 03 45 22.5 +0.4**
PVCC *ex* x 03 47 23.2
PVCC *e*S **S 03 52 17.3 +0.2**
PVCC *e*XS **sS 03 52 34.0 -0.7**
PVCC AMS AMS 04 20 20.0
comp=Z,55µm,17.3s
BTCH Batrach 77.82 308 ⇑*e*P **P 03 42 28.2 +0.7**
R22A Saguache, Gunn 77.83 49 ⇓P **P 03 42 29.3 +1.4**
baz=78,SNR=104
LOT Lotru 77.85 321 ⇑*i*P **P 03 42 27.8 +0.2**
Q23A Hartsel 77.89 48 ⇑P **P 03 42 28.9 +0.8**
baz=78,SNR=35
M27A Reverse DX Ran 77.90 45 ⇓P **P 03 42 28.3 +0.4**
baz=78,SNR=5.6
DEV Deva 77.93 322 ⇑P **P 03 42 28.5 +0.7**
DEV Deva 77.93 322 ⇑*i*P **P 03 42 28.5 +0.7**
FBE Freiberg 77.94 330 *e*P **P 03 42 28.4 +0.6**
comp=Z,329nm,1.4s
FBE *ep*P **PcP 03 42 36.7 -0.8**
GULE Gulek 77.95 309 *i*P **P 03 42 25.2 -3.1**
N26A Koester Ranch, 77.95 45 ⇓P **P 03 42 28.9 +0.6**
baz=78,SNR=13
P24A Kohler Place, 77.97 47 ⇓P **P 03 42 29.5 +1.1**
baz=78,SNR=21
O25A Wiggins 77.98 46 ⇑P **P 03 42 28.9 +0.5**
baz=78,SNR=24
VRAC Vranov 77.99 328 ⇑*i*P **P 03 42 29.0 +0.8**
VRAC Vranov 77.99 328 S **S 03 52 18.8 -0.4**
comp=Z,1.1nm,0.4s,baz=76,slow=12,SNR=4.4
YAYL Yayladag 78.03 308 *i*P P 03 42 25.2 -3.5
SULT Sultanhani-AKS 78.03 311 *e*P **P 03 42 29.5 +0.9**
SPNC Sapanca-Adapaz 78.05 314 *e*P **P 03 42 29.4 +0.8**
RBK Rabkut 78.06 283 P **P 03 42 28.7 -0.4**
SNR=6.2
SILT Sile 78.07 315 *e*P **P 03 42 29.4 +0.8**
K29A Lazy Trails An 78.07 43 ⇑P **P 03 42 29.2 +0.4**
baz=78,SNR=38
U20A Newcomb 78.09 52 ⇓P **P 03 42 29.8 +0.7**
baz=78,SNR=12
GULT Gulveren 78.12 314 *e*P **P 03 42 29.6 +0.5**
S22A 4UR Ranch, Cre 78.13 50 ⇑P **P 03 42 30.6 +1.1**
baz=78,SNR=83
NWAO Narrogin (SRO) 78.21 202 *e*P **P 03 42 29.4 +0.1**
comp=Z,166nm,1.3s
NWAO LR LR
comp=Z,4µm,21.0s
ARNB Al Arnab 78.22 308 ⇑*e*P **P 03 42 30.9 +1.1**
Q24A Divide 78.22 48 ⇑P **P 03 42 30.4 +0.4**
baz=78,SNR=26
PRA Prague 78.23 329 ⇑P **P 03 42 30.0 +0.6**
PRA AMS AMS 04 20 30.0
W18A Petrified Fore 78.23 53 ⇑P **P 03 42 30.8 +0.8**
baz=78
T21A Navajo Lake 78.25 51 ⇓P **P 03 42 30.9 +0.8**
baz=78,SNR=19
PRU Pruhonice 78.25 329 ⇑*i*P **P 03 42 30.1 +0.5**
PRU *e* 03 42 38.8
PRU *e* 03 45 23.4
PRU *e*S **S 03 52 23.1 +1.2**
PRU *e* 03 52 42.3
PRU MLR MLR
comp=Z,46µm,17.5s
PRU Pruhonice 78.25 329 ⇑*i*P **P 03 42 30.1 +0.5**
PRU *ep*P **PcP 03 42 38.8 -0.1**
PRU *e*PP **PP 03 45 23.4 -2.5**
PRU *ex* x 03 47 26.0
PRU *e*S **S 03 52 23.1 +1.2**
PRU *e*XS **SKKSac 03 52 42.3 0.0**
PRU AMS AMS 04 20 40.0
comp=Z,46µm,17.5s
EYMN Ely 78.25 34 *e*P **P 03 42 29.2 -0.4**
comp=Z,112nm,1.1s
EYMN LR LR
comp=Z,12µm,20.0s
CLZ Clausthal 78.25 332 *e*P **P 03 42 30.2 +0.6**
comp=Z,390nm,1.4s
CLZ *ep*P **PcP 03 42 38.5 -0.4**
CLZ Clausthal 78.25 332 *e*P **P 03 42 30.2 +0.6**
CLZ *e**PP **PcP 03 42 38.5 -0.4**
CLZ pmax pmax
comp=Z,390nm,1.4s
GVA Apache Junctio 78.26 56 *i*P **P 03 42 31.1 +1.2**
SVRH Ilvirhisar-ESK 78.27 313 *e*P **P 03 42 30.5 +0.6**
SMOL Smolenice 78.28 327 *e*P **P 03 42 31.1 +1.3**
SMOL Smolenice 78.28 327 *e*P **P 03 42 31.1 +1.3**
NEUB Neuenburg 78.28 331 *e*P **P 03 42 29.9 +0.2**
comp=Z,306nm,1.3s
NEUB *ep*P **PcP 03 42 38.4 -0.6**
KLYT Kilyos 78.31 316 *e*P **P 03 42 30.8 +0.8**
O26A Horse Wrangler 78.32 46 ⇓P **P 03 42 30.4 +0.1**
baz=78,SNR=31
N27A Anderson Farm, 78.33 45 ⇓P **P 03 42 30.7 +0.4**
baz=78,SNR=26
GZR Gura Zlata 78.36 322 ⇑P **P 03 42 30.7 +0.4**
GZR Gura Zlata 78.36 322 ⇑*i*P **P 03 42 30.7 +0.4**
P25A Willow Gich B 78.38 47 ⇑P **P 03 42 31.3 +0.6**
baz=78,SNR=45
R23A Moffat 78.39 49 ⇓P **P 03 42 31.9 +1.0**
baz=78,SNR=131
BUD Budapest 78.42 325 ⇑*e*P **P 03 42 31.3 +0.8**
ZIMR 78.42 319 ⇓P **P 03 42 31.7 +1.1**
ZIMR 78.42 319 ⇓*i*P **P 03 42 31.7 +1.1**
ISK Istanbul-Kandi 78.44 315 *e*P **P 03 42 31.2 +0.5**
TREC Trest 78.44 328 ⇑*i*P **P 03 42 31.0 +0.3**
TREC *e* 03 45 25.7
TREC *e*S **S 03 52 25.6 +1.6**
TREC MLR MLR
comp=Z,43µm,17.4s
TREC Trest 78.44 328 ⇑*i*P **P 03 42 31.0 +0.3**
TREC *e*PP **PP 03 45 25.7 -1.8**
TREC *e*S **S 03 52 25.6 +1.6**
TREC AMS AMS 04 20 50.0
comp=Z,43µm,17.4s
214A Organ Pipe Nat 78.47 57 ⇑P **P 03 42 32.1 +1.0**
baz=78,SNR=28
OGNE Ogallala 78.50 45 *e*P **P 03 42 31.2 0.0**
comp=Z,385nm,1.2s
OGNE LR LR
comp=Z,8µm,20.0s
OGNE Ogallala 78.50 45 ⇓P **P 03 42 31.5 +0.3**
baz=78,SNR=17
X18A Snowflake 78.50 54 ⇑P **P 03 42 32.3 +0.8**
baz=78,SNR=39
BGKT Bogazkoy 78.51 316 *e*P **P 03 42 31.6 +0.5**
V20A Brimhall 78.52 52 ⇓P **P 03 42 32.2 +0.6**
baz=78,SNR=32
M28A Bar X Bar Ranc 78.52 44 ⇑P **P 03 42 31.3 0.0**
baz=78,SNR=7.8
ADVT Abdulvahap 78.53 315 *e*P **P 03 42 31.8 +0.6**
CTYL Yal??k??y-??at 78.55 316 *e*P **P 03 42 31.9 +0.6**
BUY Buyukada 78.56 315 *i*P **P 03 42 29.5 -1.9**
U21A Nageezi 78.56 51 ⇓P **P 03 42 32.7 +0.8**
baz=78,SNR=47
SEYT Eskypehyr 78.59 313 *i*P **P 03 42 31.8 +0.1**
ROOS tl_alroos 78.59 306 *e*P **P 03 42 32.4 +0.6**
KDHN Kadinhani 78.59 312 *i*P **P 03 42 30.5 -1.3**
T22A Edith 78.59 50 ⇓P **P 03 42 33.2 +1.2**
baz=78,SNR=81
CTKS Kestanelik-??a 78.61 316 *e*P **P 03 42 32.1 +0.5**
S23A Nye Farm, Mont 78.63 49 ⇑P **P 03 42 33.3 +1.1**
baz=78,SNR=18
YLV Yalova 78.63 315 *e*P **P 03 42 32.0 +0.1**
CAVI Cavuskoy 78.64 314 *e*P **P 03 42 32.7 +0.7**
ZST Bratislava 78.67 327 *e*P **P 03 42 31.9 0.0**
ZST pmax pmax
comp=Z,187nm,1.7s
ZST Bratislava 78.67 327 *e*P **P 03 42 31.9 0.0**
ZST *e*S **S 03 52 26.0 -0.4**
LADK Ladik-KONYA 78.68 311 *e*P **P 03 42 32.7 +0.4**
TANN Tannenbergstha 78.69 331 *e*P **P 03 42 32.2 +0.2**
comp=Z,326nm,1.9s
TANN *ep*P **PcP 03 42 40.7 -0.2**
JMB Yambol 78.70 318 P **P 03 42 33.2 +1.1**
ELBA Catalca 78.71 316 *i*P **P 03 42 32.3 +0.1**
WERD Werda 78.72 331 *e*P **P 03 42 32.4 +0.2**
comp=Z,366nm,1.9s
WERD *ep*P **PcP 03 42 40.7 -0.3**
BZS Buzias 78.72 323 ⇑P **P 03 42 32.2 0.0**
BZS Buzias 78.72 323 ⇑*i*P **P 03 42 32.2 0.0**
PLN Plauen 78.74 331 *e*P **P 03 42 32.5 +0.2**
comp=Z,2µm,2.0s
PLN *ep*P **PcP 03 42 41.0 0.0**
IBBN Ibbenburen 78.74 334 *e*P **P 03 42 32.5 +0.3**
comp=Z,275nm,1.3s
IBBN *ep*P **PcP 03 42 40.8 -0.2**
Q25A Bedland, Calha 78.76 47 ⇑P **P 03 42 33.1 +0.3**
baz=78,SNR=46
PKSG 78.76 325 ⇑*e*P **P 03 42 32.9 +0.5**
R24A Sanders Place, 78.76 48 ⇓P **P 03 42 33.5 +0.7**
baz=78,SNR=45
SLVT Silivri 78.77 316 *e*P **P 03 42 33.5 +1.0**
GUNZ Gunzen 78.78 331 *e*P **P 03 42 32.9 +0.4**
comp=Z,428nm,1.9s
P26A Davis Ranch, A 78.79 46 ⇓P **P 03 42 33.4 +0.5**
baz=79,SNR=25
MOX Moxa 78.81 331 *e*P **P 03 42 32.8 +0.2**
comp=Z,445nm,1.9s
MOX Moxa 78.81 331 *e*P **P 03 42 32.8 +0.2**
MOX pmax pmax
comp=Z,445nm,1.9s
O27A Beecher Island 78.81 46 ⇓P **P 03 42 33.0 0.0**
baz=79,SNR=36
ABTO Aybut 78.82 283 P **P 03 42 33.0 -0.2**
SNR=11
WERN Wernitzgruen 78.82 331 *e*P **P 03 42 33.3 +0.6**
comp=Z,402nm,1.9s
GEMT Gemlik 78.83 315 *e*P **P 03 42 33.5 +0.6**
CSKK Cs˙‡kako 78.84 326 ⇑*e*P **P 03 42 33.3 +0.5**
M29A Burnside Ranch 78.84 44 ⇑P **P 03 42 32.5 -0.6**
baz=79,SNR=11
NKC Novy Kostel 78.84 330 ⇑*i*P **P 03 42 33.1 +0.3**
NKC *e* 03 42 39.6

NKC e 03 45 26.8
NKC e 03 47 30.2
NKC eS S 03 52 28.3 0.0
NKC MLR MLR
comp=Z,44µm,20.6s
NKC Novy Kostel 78.84 330⇑ *i*P P 03 42 33.1 +0.3
NKC epP PcP 03 42 39.6 -1.9
NKC ePP PP 03 45 26.8 -4.0
NKC ex x 03 47 30.2
NKC eS S 03 52 28.3 0.0
NKC AMS AMS 04 20 00.0
comp=Z,44µm,20.6s
HAWK Haweek 78.88 306 eP P 03 42 33.9 +0.4
ARMT Armutlu 78.90 315 eP P 03 42 33.6 +0.3
N28A Pribbeno Ranch 78.95 45 ⇓P P 03 42 33.4 -0.2
baz=79,SNR=12
W20A Ramah 78.96 53 ⇓P P 03 42 34.7 +0.6
baz=79,SNR=73
V21A Milan 79.00 52 ⇑P P 03 42 35.1 +0.9
baz=79,SNR=19
PKST T"s 79.02 326⇑ eP P 03 42 34.1 +0.3
MDNY Mudanya-Bursa 79.03 315 eP P 03 42 34.8 +0.8
ULDT Uludag 79.06 315 *i* P P 03 42 34.4 0.0
U22A Llaves 79.06 51 ⇑P P 03 42 35.8 +1.2
baz=79,SNR=93
EDRB Edirne 79.07 317 eP P 03 42 34.9 +0.8
T23A Casias Ranch, 79.08 50 ⇑P P 03 42 35.7 +1.0
baz=79,SNR=18
BOLV Bolvadin 79.10 313 *i* P P 03 42 31.6 -3.0
S24A Houchin Ranch, 79.12 49 ⇑P P 03 42 35.8 +0.8
baz=79,SNR=55
Q26A Hugo 79.15 47 ⇑P P 03 42 35.3 +0.3
baz=79,SNR=27
RAO Raoul Island 79.16 146 PFAKE 03 42 50.0 +15
RAO LR LR
comp=Z,16µm,20.0s
MANZ Manzenberg 79.17 330 eP P 03 42 35.0 +0.4
comp=Z,349nm,2.0s
ECSD EROS Data Cent 79.18 40 eP P 03 42 34.5 -0.3
comp=Z,257nm,1.5s
ECSD LR LR
comp=Z,24µm,22.0s
ESK Eskdalemuir 79.19 341 eP P 03 42 34.4 -0.2
ESK pmax pmax
comp=Z,285nm,1.6s
ESK MLR MLR
comp=Z,18µm,19.0s
ESK Eskdalemuir 79.19 341 eP P 03 42 34.4 -0.2
comp=Z,285nm,1.6s
ESK LR LR
comp=Z,18µm,19.0s
ESK Eskdalemuir 79.19 341 P P 03 42 34.7 +0.1
comp=Z,357nm,1.1s,SNR=9.5
P27A Ficken Ranch, 79.21 46 ⇓P P 03 42 35.0 -0.1
baz=79
O28A Krutsinger Ran 79.23 45 ⇑P P 03 42 35.0 -0.2
baz=79,SNR=24
UBBA Unterbreizbach 79.24 332 eP P 03 42 35.0 +0.2
comp=Z,355nm,1.9s
R25A Fountain Ranch 79.28 48 ⇓P P 03 42 35.6 0.0
baz=79,SNR=20
TKR Tekirdag 79.29 316 eP P 03 42 36.7 +1.3
SOP Sopron 79.30 327⇑ eP P 03 42 36.4 +1.1
ROTZ Rotzenmuhle 79.31 330 eP P 03 42 36.2 +0.8
comp=Z,547nm,1.9s
KHC Kasperske Hory 79.32 329⇑ *i*P P 03 42 35.9 +0.4
KHC e 03 42 42.0
KHC eS S 03 52 33.9 +0.5
KHC MLR MLR
comp=Z,45µm,17.7s
KHC Kasperske Hory 79.32 329⇑ *i*P P 03 42 35.9 +0.4
KHC epP PcP 03 42 42.0 -1.6
KHC ePP PP 03 45 29.8 -5.0
KHC eS S 03 52 33.9 +0.5
KHC AMS AMS 04 21 10.0
comp=Z,45µm,17.7s
KHC Kasperske Hory 79.32 329 eP P 03 42 35.9 +0.4
comp=Z,459nm,1.5s
ALT Altintas 79.32 313 eP P 03 42 36.4 +0.6
ALT Altintas 79.32 313 *i* P P 03 42 28.4 -7.4
HWQ Hawqa 79.33 307 eP P 03 42 36.1 +0.2
N29A Votaw Ranch, W 79.33 44 ⇑P P 03 42 35.4 -0.3
baz=79,SNR=13
WTSB Winterswijk 79.34 334 eP P 03 42 35.3 -0.1
WTSB epP pP 03 42 48.5 +2.3
V22A San Miguel Ran 79.36 51 ⇑P P 03 42 36.9 +0.7
baz=79,SNR=36
X20A Quemado 79.37 53 ⇑P P 03 42 37.6 +1.4
baz=79,SNR=96
CONA Conrad Observa 79.39 327 *i* P P 03 42 36.8 +0.9
comp=Z,5µm,5.2s,SNR=55
ZALF Zalf 79.41 305 eP P 03 42 36.5 +0.2
SHUT Suhut-Afyon 79.44 313 eP P 03 42 37.3 +0.8
PKS9 Tamasi 79.44 325⇑ eP P 03 42 36.0 -0.1
ERMK Ermenek 79.46 310 *i* P P 03 42 36.0 -0.7
W21A San Fidel 79.47 52 ⇑P P 03 42 37.7 +0.9
baz=79,SNR=10
U23A El Rito 79.48 50 ⇓P P 03 42 37.9 +1.1
baz=79,SNR=147
GEC2 GERESS Array S 79.50 329 eP P 03 42 36.7 +0.1
comp=Z,330nm,2.0s
GEC2 GERESS Array S 79.50 329 eP P 03 42 36.7 +0.1
GEC2 pmax pmax
comp=Z,330nm,2.0s
GERES GERESS Array B 79.50 329 P P 03 42 36.5 -0.1
GERES S S 03 52 34.7 -0.7
GERES GERESS Array B 79.50 329 P P 03 42 36.5 -0.1
comp=Z,12nm,0.7s,baz=34,slow=5.3,SNR=77
GERES S S 03 52 34.7 -0.7
comp=Z,0.1nm,0.3s,baz=45,slow=13,SNR=2.2
GERES LR LR 04 22 06.9
comp=Z,46µm,19.0s,baz=22,slow=39
TUC Tucson 79.50 56 eP P 03 42 37.2 +0.4
TUC pmax pmax
comp=Z,858nm,1.4s
TUC MLR MLR
comp=Z,8µm,21.0s
TUC Tucson 79.50 56 eP P 03 42 37.2 +0.4
comp=Z,858nm,1.4s
TUC LR LR
comp=Z,8µm,21.0s
MRMT Marmara Adasi 79.54 316 eP P 03 42 37.4 +0.5
S25A Robets Cordova 79.54 48 ⇓P P 03 42 37.2 +0.1
baz=79,SNR=44
BNT Bandirma 79.55 316 eP P 03 42 37.8 +0.9
MFT Murefte 79.57 316 eP P 03 42 37.7 +0.6
WET Wettzell 79.57 330 eP P 03 42 37.4 +0.5
comp=Z,447nm,1.8s
WET Wettzell 79.57 330 eP P 03 42 37.4 +0.5
WET pmax pmax
comp=Z,447nm,1.8s
KSCO Kaye Shedlock' 79.57 46 ⇑P P 03 42 37.3 +0.1
baz=79,SNR=23
PKSM Moragy 79.58 325 ⇑P P 03 42 36.5 -0.4
PKSM Moragy 79.58 325⇑ *i*P P 03 42 36.5 -0.4
PKSM Moragy 79.58 325⇑ eP P 03 42 36.8 -0.1
N30A Hueftle Ranch, 79.62 44 ⇑P P 03 42 36.8 -0.5
baz=79
R26A Arlington 79.63 47 ⇓P P 03 42 37.8 +0.3
baz=79,SNR=89
GDZ Gediz 79.64 314 *i* P P 03 42 33.7 -3.8
P28A Saint Francis 79.64 46 ⇓P P 03 42 37.4 -0.1
baz=79,SNR=40
BUG Bochum--Univer 79.64 334 eP P 03 42 37.2 +0.1
comp=Z,390nm,1.6s
TOTH TOTAH 79.66 306⇑ eP P 03 42 36.9 -0.8
SART Tekirdag 79.69 316 *i* P P 03 42 34.8 -2.9
RKY Sarkoy-Tekirda 79.69 316 eP P 03 42 38.4 +0.7
GRF Grafenberg Arr 79.74 331 eP P 03 42 38.5 +0.8
comp=Z,457nm,1.4s
GRF eL L 04 20 14.4
comp=Z,32µm,21.5s
GRF Grafenberg Arr 79.74 331 eP P 03 42 38.5 +0.8
GRF pmax pmax
comp=Z,457nm,1.4s
GRF MLR MLR
comp=Z,32µm,21.5s
O29A 4D Ranch, Culb 79.74 45 ⇑P P 03 42 37.8 -0.2
baz=80,SNR=23
BHL Bhannes 79.76 306 eP P 03 42 38.5 +0.2
SPMN St. Paul 79.80 37 ⇑P P 03 42 37.8 -0.4
baz=80,SNR=22
DURS Dursunbey 79.81 315 *i* P P 03 42 35.9 -2.5
PGB Panagyurishte 79.83 319 *i* P P 03 42 39.2 +0.8
KRBG Karabiga-Canak 79.85 316 eP P 03 42 39.2 +0.8

X21A Alamocita Cree 79.86 53 ⇓P P 03 42 40.4 +1.5
baz=80,SNR=130
Y20A Horse Springs, 79.88 53 ⇓P P 03 42 40.7 +1.6
baz=80,SNR=175
V23A Ortiz Mt. (NFS 79.89 51 ⇓P P 03 42 40.9 +1.8
baz=80,SNR=40
GONE Gonen-Balikesi 79.90 315 eP P 03 42 39.3 +0.6
PLD Plovdiv 79.90 319 P P 03 42 39.3 +0.6
SALA Sala 79.92 305⇑ eP P 03 42 40.1 +0.9
T25A Trinidad 79.92 49 ⇓P P 03 42 39.9 +0.7
baz=80,SNR=97
U24A Moreno Valley 79.95 50 ⇓P P 03 42 40.8 +1.3
baz=80,SNR=40
PHNC Paralimni 79.96 308 P P 03 42 38.6 -0.6
Q28A Sharon Springs 79.97 46 ⇓P P 03 42 39.0 -0.2
baz=80,SNR=16
W22A Albuquerque 79.97 52 ⇓P P 03 42 40.7 +1.3
baz=80,SNR=8.2
ISP Isparta 79.97 312 eP P 03 42 38.5 -0.9
ISP Isparta 79.97 312 eP P 03 42 39.5 +0.2
ISP pmax pmax
comp=Z,159nm,1.3s
ISP MLR MLR
comp=Z,19µm,22.0s
ISP Isparta 79.97 312 eP P 03 42 39.5 +0.2
comp=Z,159nm,1.3s
ISP LR LR
comp=Z,19µm,22.0s
ISP Isparta 79.97 312⇑ *i*P P 03 42 39.2 -0.1
R27A Eads 80.00 47 ⇓P P 03 42 39.5 0.0
baz=80,SNR=76
ERIK Erikli-Kesan 80.05 317 eP P 03 42 40.4 +0.9
P29A Atwood 80.05 45 ⇓P P 03 42 39.4 -0.3
baz=80,SNR=17
LFK Lefkose 80.06 309 eP P 03 42 40.3 +0.5
ARSA Arzberg 80.06 327 *i* P P 03 42 40.1 +0.5
comp=Z,3µm,5.3s,SNR=18
DEMI Demirci 80.08 314 *i* P P 03 42 34.8 -5.1
MOA Molln 80.09 328 *i* P P 03 42 39.9 +0.3
comp=Z,4µm,5.5s,SNR=26
GAZI Gazipasa 80.09 310 *i* P P 03 42 36.9 -3.0
O30A MW Ranch, Wils 80.09 44 ⇓P P 03 42 39.5 -0.3
baz=80,SNR=35
BALB Balikesir 80.09 315 eP P 03 42 40.3 +0.6
S26A Kim 80.11 48 ⇑P P 03 42 40.1 0.0
baz=80,SNR=42
ALN Alexandroupoli 80.12 317 P P 03 42 40.8 +0.9
LPK Lapseki 80.14 316 eP P 03 42 40.9 +0.9
KHAL Karahalli 80.15 313 *i* P P 03 42 36.9 -3.3
BGNE Belgrade 80.16 42 ⇑P P 03 42 39.9 -0.3
baz=80,SNR=22
BEHE Becsehely 80.17 326⇑ eP P 03 42 40.4 +0.3
ENEZ Enez 80.19 317 eP P 03 42 41.1 +0.9
BCK Bucak 80.20 312 eP P 03 42 40.2 -0.3
RDO Rodhopi 80.20 317 P P 03 42 41.0 +0.7
Y21A Point of Rocks 80.23 53 ⇓P P 03 42 42.4 +1.5
baz=80,SNR=88
VTS Vitosha 80.27 320 P P 03 42 41.5 +0.7
VTS Vitosha 80.27 320 ⇑P P 03 42 41.6 +0.7
VTS Vitosha 80.27 320 *i* P P 03 42 41.7 +0.8
VTS Vitosha 80.27 320⇑ *i*P P 03 42 41.6 +0.7
GELI Tayfur-Gelibol 80.27 316 eP P 03 42 41.3 +0.6
LAZ Ladron 80.27 52 eP P 03 42 42.3 +1.2
comp=Z,111nm,1.4s
TNS Taunus Mts 80.28 333 eP P 03 42 40.9 +0.2
comp=Z,338nm,1.8s
TNS Taunus Mts 80.28 333 eP P 03 42 40.9 +0.2
TNS pmax pmax
comp=Z,338nm,1.8s
ANMO Albuquerque 80.29 52 eP P 03 42 42.2 +1.0
comp=Z,170nm,1.4s
ANMO LR LR
comp=Z,7µm,20.0s
Z20A Nine Sixteen R 80.30 54 ⇑P P 03 42 42.5 +1.2
baz=80,SNR=126
SCHQ Schefferville 80.30 17 eP P 03 42 40.7 0.0
comp=Z,247nm,1.5s
SCHQ S S 03 52 44.3 +0.8
SCHQ Schefferville 80.30 17 P P 03 42 40.6 0.0
comp=Z,61nm,1.0s,baz=349,slow=5.9,SNR=44
SCHQ S S 03 52 44.3 +0.8
comp=Z,1.9nm,0.8s,baz=104,slow=18,SNR=6.1
SCHQ LR LR 04 22 08.6
comp=Z,14µm,21.7s,baz=336,slow=39
W23A Werner Place, 80.32 51 ⇑P P 03 42 42.6 +1.2
baz=80,SNR=46
RAYN Ar Rayn 80.35 293 P P 03 42 41.0 -0.5
comp=Z,414nm,1.2s,SNR=42
T26A Comanche Natio 80.36 48 ⇑P P 03 42 41.5 -0.1
baz=80,SNR=96
S27A Las Animas 80.38 48 ⇑P P 03 42 41.6 0.0
baz=80,SNR=12
CSS Prodhromos 80.40 309 P P 03 42 40.8 -0.8
comp=Z,3.8nm,1.6s
CSS Prodhromos 80.40 309 eP P 03 42 41.9 +0.3
CSS Prodhromos 80.40 309 P P 03 42 41.7 +0.1
CSS Prodhromos 80.40 309 eP P 03 42 41.9 +0.3
comp=Z,605nm,2.0s
CSS LR LR
comp=Z,20µm,20.0s
KOGS Kog 80.41 326 *i* P P 03 42 41.1 -0.3
KOGS epP pP 03 42 54.2 +2.1
KOGS ePP PP 03 45 45.5 +1.6
KOGS *e* 03 47 47.7
KOGS eS S 03 52 43.9 -1.0
TCHB Talchebab 80.42 305⇑ eP P 03 42 41.2 -0.5
V24A Rampart Ranch, 80.43 50 ⇑P P 03 42 43.2 +1.2
baz=80,SNR=82
U25A Circle Dot Ran 80.45 49 ⇓P P 03 42 42.5 +0.5
baz=80,SNR=42
P30A Selden 80.46 45 ⇓P P 03 42 41.5 -0.3
baz=80,SNR=45
KULA Kula-Manisa 80.49 314 eP P 03 42 42.4 +0.3
R28A Tribune 80.50 46 ⇑P P 03 42 42.0 -0.1
baz=80,SNR=26
MMAI Mount Meron Ar 80.52 306 P P 03 42 42.8 +0.5
MMAI Mount Meron Ar 80.52 306 P P 03 42 42.8 +0.5
comp=Z,69nm,0.8s,baz=19,slow=5.6,SNR=47
LEF Lefka 80.55 309 eP P 03 42 42.5 +0.2
Q29A Oakley 80.55 46 ⇓P P 03 42 42.2 -0.2
baz=80,SNR=61
ANTB Antalya 80.56 312 eP P 03 42 41.5 -0.9
MANT Manisa 80.57 314 *i* P P 03 42 41.2 -1.5
DIVS Divibare 80.62 323 P P 03 42 42.7 0.0
Y22D IRIS PASSCAL I 80.63 52 ⇓P P 03 42 44.2 +1.2
baz=80
LPM Los Pinos Moun 80.64 52 eP P 03 42 44.2 +1.1
HGN Heimansgroeve 80.65 334 eP P 03 42 42.1 -0.5
comp=Z,742nm,2.0s
HGN epP pP 03 42 55.1 +1.8
HGN ePP PP 03 45 44.3 -1.5
HGN eS S 03 52 47.6 +0.3
HGN eSS SS 03 59 07.8 +69
KORT Korkueli 80.66 312 *i* P P 03 42 39.1 -4.0
120A U Bar Ranch, L 80.66 55 ⇑P P 03 42 44.4 +1.2
baz=80,SNR=49
TOD Tromm 80.67 332⇑ eP P 03 42 43.0 +0.2
TOD Tromm 80.67 332⇑ eP P 03 42 43.0 +0.2
AKHS Akhisar 80.68 315 *i* P P 03 42 42.6 -0.4
ALFC Alevga 80.69 309 P P 03 42 41.6 -1.5
comp=Z,2.8nm,1.5s
Y22A Socorro 80.70 53 ⇑P P 03 42 44.5 +1.0
baz=80,SNR=33
COWI Conover 80.70 34 eP P 03 42 42.1 -0.9
comp=Z,127nm,1.4s
COWI LR LR
comp=Z,15µm,22.0s
X23A Hourglass Bar 80.71 52 ⇓P P 03 42 44.3 +0.9
baz=80,SNR=31
BEBN Eben Emael 80.71 334 P P 03 42 42.8 -0.1
comp=Z,52nm,1.7s
Z21A St. Cloud Mine 80.72 53 ⇓P P 03 42 44.9 +1.4
baz=80
W24A Lazy 6 Ranch, 80.72 51 ⇓P P 03 42 44.9 +1.3
baz=80,SNR=160
PERS Pernice 80.72 327⇑ *i*P P 03 42 43.5 +0.3
PERS epP pP 03 42 56.2 +2.3
PERS eS S 03 52 47.7 -0.6
SOKA Soboth 80.73 327⇑ *i*P P 03 42 43.5 +0.3
comp=Z,1µm,3.3s
V25A Rancho No Teng 80.73 50 ⇑P P 03 42 44.5 +1.0
baz=80,SNR=119
BNM Barren Site 80.75 52 eP P 03 42 44.6 +0.9
comp=Z,89nm,1.2s
RJOB Jochberg 80.75 329 eP P 03 42 44.0 +0.7
comp=Z,691nm,2.1s
MEM Membach 80.76 334 P P 03 42 43.1 0.0
comp=Z,136nm,2.0s
EZN Ezine 80.77 316 eP P 03 42 43.8 +0.4
R29A Marienthal 80.80 46 ⇓P P 03 42 43.7 -0.1
baz=81,SNR=45
KAVA Kavala 80.82 318 P P 03 42 44.2 +0.5
U26A Atchley Ranch, 80.83 49 ⇓P P 03 42 44.7 +0.6
baz=81,SNR=60
ABH Alteburg 80.87 333⇑ eP P 03 42 43.9 +0.1
KKB Krupnik 80.88 319 *i* P P 03 42 44.7 +0.7
DNZL Cakiroluk 80.88 313 *i* P P 03 42 40.1 -4.2
NVR Nevrokopi 80.88 319 P P 03 42 44.6 +0.5
Q30A Quinter 80.89 45 ⇓P P 03 42 43.8 -0.3
baz=81,SNR=60
BOZC Bozcaada 80.90 316 *i* P P 03 42 43.3 -0.8
T27A Campo 80.92 48 ⇓P P 03 42 44.5 0.0
baz=81,SNR=25
GOLH Golhisar 80.93 312 *i* P P 03 42 45.5 +1.0
P31A Stockton 80.93 44 ⇓P P 03 42 43.8 -0.6
baz=81,SNR=103
AKMC Akamas 80.94 309 P P 03 42 43.0 -1.4
AYVA Ayvalik 80.96 316 *i* P P 03 42 43.3 -1.1
FUR Furstenfeldbru 80.98 330 eP P 03 42 45.0 +0.5
comp=Z,331nm,1.2s
FUR Furstenfeldbru 80.98 330 eP P 03 42 45.0 +0.5
FUR pmax pmax
comp=Z,331nm,1.2s
S28A Manter 81.00 47 ⇑P P 03 42 44.9 0.0
baz=81,SNR=17
GLHS Gihisar (BURDU 81.02 312 eP P 03 42 45.3 +0.3
PPCY Paphos 81.03 309 P P 03 42 43.5 -1.4
OBKA Obir 81.06 327 *i* P P 03 42 45.0 0.0
comp=Z,3µm,4.5s,SNR=24
DGAR Diego Garcia 81.07 252 PFAKE 03 43 00.0 +15
DGAR LR LR
comp=Z,11µm,20.0s
319A Douglas 81.07 56 ⇓P P 03 42 46.1 +0.7
baz=81,SNR=38
KBA Koelnbreinsper 81.08 328 *i* P P 03 42 45.5 +0.4
comp=Z,4µm,5.6s,SNR=54
ELL Elmali 81.08 312 eP P 03 42 45.4 +0.1
BCLA Clavier 81.16 334 P P 03 42 45.1 -0.1
comp=Z,124nm,1.6s
X24A Lazy VL Ranch, 81.16 51 ⇑P P 03 42 47.1 +1.2
baz=81
KTD Kalmit 81.17 332⇑ eP P 03 42 45.6 +0.2
KTD Kalmit 81.17 332⇑ eP P 03 42 45.6 +0.2
220A Playas Peak, P 81.17 55 ⇓P P 03 42 46.9 +1.0
baz=81,SNR=62
Z22A Elephant Butte 81.18 53 ⇓P P 03 42 47.0 +1.1
baz=81,SNR=98
121A Cookes Peak, D 81.19 54 ⇑P P 03 42 47.4 +1.3
baz=81,SNR=50
RUP Ruppelstein 81.19 333⇑ eP P 03 42 45.6 0.0
RUP Ruppelstein 81.19 333⇑ eP P 03 42 45.6 0.0
SRS Serrai 81.19 319 P P 03 42 45.8 +0.1
T28A Walsh 81.22 47 ⇓P P 03 42 45.5 -0.5
baz=81
PRK Paraskevi 81.23 316 P P 03 42 45.9 0.0
V26A Tequesquite Ra 81.23 49 ⇓P P 03 42 46.6 +0.4
baz=81,SNR=83
STU Stuttgart 81.24 331 eP P 03 42 46.1 +0.3
comp=Z,160nm,1.1s
STU Stuttgart 81.24 331 eP P 03 42 45.7 -0.1
STU pmax pmax
comp=Z,325nm,1.3s
STU Stuttgart 81.24 331 eP P 03 42 45.7 -0.1
comp=Z,325nm,1.3s
Y23A Lovelace Mesa, 81.24 52 ⇑P P 03 42 47.5 +1.1
baz=81,SNR=84
W25A X Bar L Ranch, 81.26 50 ⇓P P 03 42 47.4 +1.0
baz=81,SNR=179
Q31A Ellis 81.30 45 ⇑P P 03 42 45.8 -0.6
baz=81,SNR=24
LIA Limnos Island 81.31 317 P P 03 42 46.4 +0.1
U27A Thompson Grove 81.33 48 ⇓P P 03 42 47.0 +0.4
baz=81,SNR=81
MYKA Terra Mystica 81.33 328⇑ *i*P P 03 42 46.1 -0.3
comp=Z,850nm,3.0s
IZM Izmir 81.33 315 eP P 03 42 46.7 +0.2
R30A Dighton 81.36 46 ⇑P P 03 42 46.5 -0.2
baz=81,SNR=63
S29A Ulysses 81.40 47 ⇓P P 03 42 46.7 -0.2
baz=81,SNR=9.7
SNF Seneffe 81.40 335 P P 03 42 46.6 0.0
LJU Ljubljana 81.44 327⇑ *i*P P 03 42 46.6 -0.3
LJU *e* 03 42 56.4
LJU epP pP 03 42 59.4 +1.8
LJU ePP PP 03 45 54.5 +2.1
LJU *e* 03 47 57.3
LJU eS S 03 52 53.3 -2.4
BLCB Balcova 81.45 315 eP P 03 42 47.3 +0.2
OUZ Omahuta 81.46 156 eP P 03 42 49.2 +2.4
comp=Z,179nm,1.7s
SIGR SIGRI 81.47 316 P P 03 42 47.3 +0.2
PLE Pljevlja 81.50 322⇑ *i*P P 03 42 46.4 -1.0
KNT Kendrikon 81.50 319 P P 03 42 47.6 +0.3
WLF Walferdange 81.53 334 P P 03 42 47.3 0.0
comp=Z,206nm,2.0s
WLF Walferdange 81.53 334 eP P 03 42 47.5 +0.2
comp=Z,286nm,1.6s
WLF Walferdange 81.53 334 eP P 03 42 47.1 -0.2
WLF pmax pmax
comp=Z,785nm,1.9s
WLF MLR MLR
comp=Z,26µm,20.0s
WLF Walferdange 81.53 334 eP P 03 42 47.1 -0.2
comp=Z,785nm,1.9s
WLF LR LR
comp=Z,26µm,20.0s
SOH Sokhos 81.53 318 P P 03 42 47.4 -0.1
AYDN Tasoluk 81.54 314 *i* P P 03 42 47.6 0.0
VAY Valandovo 81.54 319 P P 03 42 47.4 -0.1
VAY Valandovo 81.54 319⇑ *i*P P 03 42 47.4 -0.1
122A Conniff Cattle 81.54 53 ⇑P P 03 42 49.1 +1.2
baz=81
LANF Langenberg 81.55 332⇑ eP P 03 42 47.8 +0.4
LANF Langenberg 81.55 332⇑ eP P 03 42 47.8 +0.4
LANF Langenberg 81.55 332⇑ eP P 03 42 47.8 +0.4
221A Mesquite Ranch 81.56 54 ⇑P P 03 42 48.8 +0.9
baz=81,SNR=6.7
320A Kipp Ranch, An 81.56 55 ⇓P P 03 42 48.9 +0.9
baz=81,SNR=16
BOJS Bojanci 81.58 326⇑ *i*P P 03 42 47.6 -0.1
BOJS epP pP 03 43 00.3 +2.0
BOJS ePP PP 03 45 56.0 +2.4
BOJS *e* 03 47 52.7
BOJS *e* 03 49 25.4
GIVF Givet 81.58 335⇑ *i*P P 03 42 47.3 -0.3
comp=Z,978nm,1.9s
GIVF Givet 81.58 335⇑ *i*P P 03 42 47.3 -0.3
GIVF pmax pmax
comp=Z,978nm,1.9s
GIVF Givet 81.58 335⇑ *i*P P 03 42 47.3 -0.3
comp=Z,978nm,1.9s
OUR Ouranopolis 81.59 318 P P 03 42 48.0 +0.3
SKO Skopje 81.59 320 P P 03 42 49.2 +1.5
SKO Skopje 81.59 320⇑ *i*P P 03 42 49.2 +1.5
WTTA Wattenberg 81.59 329 *i* P P 03 42 48.3 +0.4
comp=Z,4µm,4.9s,SNR=32
Z23A Rita Site, Whi 81.61 53 ⇓P P 03 42 49.2 +1.0
baz=81,SNR=21
Y24A Capitan 81.61 52 ⇓P P 03 42 49.1 +0.9
baz=81,SNR=29
CADS Cadrg 81.62 327⇑ *i*P P 03 42 46.8 -1.0
CADS epP pP 03 42 59.8 +1.2
IVA Berane 81.62 322 eP P 03 42 48.0 0.0
FETY Fethiye 81.62 312 eP P 03 42 48.1 0.0
AKAS Kas 81.63 312 *i* P P 03 42 43.3 -4.9
X25A Clemmons Ranch 81.64 51 ⇑P P 03 42 49.4 +1.0
baz=81,SNR=29
T29A Hugoton 81.64 47 ⇑P P 03 42 47.9 -0.3
baz=81,SNR=7.7
DOU Dourbes 81.66 335 P P 03 42 47.6 -0.4
comp=Z,120nm,2.1s
ABTA Abfaltersbach 81.68 328⇑ *i*P P 03 42 47.6 -0.7
comp=Z,2µm,5.4s,SNR=21
U28A Mallet 81.69 48 ⇓P P 03 42 48.3 -0.2
baz=82,SNR=30
YER Yerkesik 81.70 313 eP P 03 42 49.6 +1.0
RAR Rarotonga 81.71 128 PFAKE 03 43 00.0 +12
RAR LR LR
comp=Z,11µm,22.0s
URLA Izmir 81.71 315 *i* P P 03 42 48.4 -0.1

VOY Vojsko 81.71 327⇑eP P 03 42 47.4 -1.1
VOY e 03 43 00.3
TURN Turunc 81.72 313 iP P 03 42 47.6 -0.9
MOTA Moosalm 81.73 330 iP P 03 42 48.9 +0.3
comp=Z,755nm,1.4s,SNR=84
S30A Montezuma 81.74 46 ⇓P P 03 42 48.5 -0.2
baz=82,SNR=14
RETA Reutte 81.74 330 iP P 03 42 48.9 +0.3
comp=Z,3μm,3.9s,SNR=44
W26A Owens Ranch, T 81.75 50 ⇓P P 03 42 50.2 +1.3
baz=82,SNR=7.0
R31A Burdett 81.76 45 ⇑P P 03 42 48.0 -0.8
baz=82,SNR=34
V27A Dan Oppiter Fa 81.80 49 ⇑P P 03 42 49.5 +0.4
baz=82,SNR=39
PVY Plav 81.81 322⇑iP P 03 42 48.1 -1.0
UPM Unac-Piva 81.81 323⇑iP P 03 42 48.6 -0.6
BAIF Baives 81.82 335⇑iP P 03 42 48.6 -0.2
comp=Z,700nm,1.8s
BAIF Baives 81.82 335⇑iP P 03 42 48.6 -0.2
BAIF pmax pmax
comp=Z,700nm,1.8s
BAIF Baives 81.82 335⇑iP P 03 42 48.6 -0.2
comp=Z,700nm,1.8s
DLF Lyons Farm 81.82 342 eP P 03 42 48.4 -0.3
PLG Polygyros 81.83 318 P P 03 42 49.2 +0.1
HORT Hortiatis 81.83 318 P P 03 42 48.9 -0.3
GCAM G?zelcaml? 81.86 314 iP P 03 42 49.8 +0.5
MLSB Milas 81.86 313 eP P 03 42 50.2 +0.9
222A Williams Famil 81.90 54 ⇑P P 03 42 50.4 +0.6
baz=82,SNR=13
GRG Griva 81.90 319 P P 03 42 49.7 +0.2
BFO Black Forest 81.92 332 eP P 03 42 49.6 +0.2
comp=Z,463nm,1.8s
BFO Black Forest 81.92 332 eP P 03 42 48.9 -0.5
BFO pmax pmax
comp=Z,598nm,1.6s
BFO MLR MLR
comp=Z,24μm,22.0s
BFO Black Forest 81.92 332 eP P 03 42 48.9 -0.5
comp=Z,598nm,1.6s
BFO LR LR
comp=Z,24μm,22.0s
BFO Black Forest 81.92 332 P P 03 42 49.7 +0.3
comp=Z,504nm,1.8s,SNR=29
BCI Bajram Curri 81.93 321 eP P 03 42 49.9 +0.3
SPAK Spaichingen-Ko 81.95 331⇑eP P 03 42 49.9 +0.3
CHOS Chios island 81.98 315 P P 03 42 50.1 +0.1
TRI Trieste 82.03 327 eP P 03 42 49.2 -0.8
TRI pmax pmax
comp=Z,319nm,1.3s
TRI Trieste 82.03 327 eP P 03 42 49.2 -0.8
comp=Z,319nm,1.3s
123A Bell Site, Whi 82.03 53 ⇓P P 03 42 51.2 +0.8
baz=82
Y25A Mesa, Roswell 82.05 51 ⇑P P 03 42 50.9 +0.4
baz=82,SNR=40
Z24A Sheeppen Canyo 82.07 52 ⇑P P 03 42 51.4 +0.6
baz=82,SNR=39
NKY Niksic 82.08 322⇑iP P 03 42 49.3 -1.2
X26A CR and CF Fran 82.11 50 ⇑P P 03 42 51.7 +0.9
baz=82,SNR=22
T30A Plains 82.13 47 ⇓P P 03 42 50.5 -0.3
baz=82,SNR=6.1
FETA Feichten 82.14 330 iP P 03 42 51.0 +0.2
comp=Z,3μm,5.0s,SNR=70
V28A Channing 82.15 48 ⇓P P 03 42 51.1 +0.2
baz=82,SNR=9.7
U29A Oasis Ranch, S 82.17 47 ⇑P P 03 42 50.9 -0.1
baz=82
W27A Bowe Ranch, En 82.17 49 ⇑P P 03 42 51.9 +0.8
baz=82,SNR=33
BRY Bratogost 82.22 323⇑iP P 03 42 50.6 -0.6
CDF Champ du Feu 82.22 332⇑iP P 03 42 50.9 -0.2
comp=Z,506nm,1.4s
CDF Champ du Feu 82.22 332⇑iP P 03 42 50.9 -0.2
CDF pmax pmax
comp=Z,506nm,1.4s
CDF Champ du Feu 82.22 332⇑iP P 03 42 50.9 -0.2
comp=Z,506nm,1.4s
DAVA Damuels 82.23 330 iP P 03 42 51.5 +0.2
comp=Z,3μm,5.5s,SNR=40
TTG Podgorica 82.26 322⇑iP P 03 42 51.3 +0.1
PUK Puka 82.27 321 eP P 03 42 51.5 +0.1
S31A Mullinville 82.28 46 ⇑P P 03 42 50.8 -0.7
baz=82,SNR=7.9
BODT Bodrum 82.28 314 eP P 03 42 51.8 +0.3
STEIN Stein am Rhein 82.28 331⇑iP P 03 42 51.2 -0.1
comp=Z,1μm,2.3s
PHP Peshkopia 82.28 321 eP P 03 42 52.0 +0.5
PHP Peshkopia 82.28 321 P P 03 42 51.4 -0.1
LIBD Limburg 82.33 332⇑eP P 03 42 51.9 +0.4
LIBD Limburg 82.33 332⇑eP P 03 42 51.9 +0.4
SLE Schleitheim 82.34 331⇑iP P 03 42 51.4 -0.2
comp=Z,μm,4.0s
WEIN Weingarten 82.36 331⇑iP P 03 42 51.5 -0.2
comp=Z,848nm,2.7s
LIENZ Kamor/St.Gall 82.37 330⇑iP P 03 42 51.9 -0.1
comp=Z,1μm,4.3s
223A Chaparral, Ant 82.38 54 ⇓P P 03 42 52.9 +0.6
baz=82,SNR=7.0
BIA Bitola 82.38 320 iP P 03 42 51.6 -0.4
DAT Datca 82.38 313 eP P 03 42 51.9 -0.3
FELD Feldberg im Sc 82.42 332⇑eP P 03 42 51.9 -0.3
ECH Echery 82.43 332 eP P 03 42 51.7 -0.4
ECH pmax pmax
comp=Z,260nm,1.4s
ECH MLR MLR
comp=Z,18μm,20.0s
ECH Echery 82.43 332⇑eP P 03 42 51.7 -0.4
comp=Z,260nm,1.4s
ECH LR LR
comp=Z,18μm,20.0s
ECH Echery 82.43 332⇑eP P 03 42 52.1 0.0
U30A WK&E Inc. Balk 82.45 47 ⇑P P 03 42 52.3 -0.2
baz=82,SNR=20
V29A Stinnett 82.45 48 ⇓P P 03 42 52.7 +0.2
baz=82
X27A F and S Farms, 82.45 50 ⇓P P 03 42 53.5 +0.9
baz=82,SNR=15
ARG Arkhangelos 82.46 313 P P 03 42 51.9 -0.5
124A Stringfield Ra 82.47 53 ⇑P P 03 42 53.3 +0.5
baz=82,SNR=41
FLACH Flaach 82.48 331⇑iP P 03 42 52.1 -0.2
comp=Z,1μm,2.4s
WILA Wila 82.48 331⇑iP P 03 42 52.3 -0.2
comp=Z,2μm,3.9s
Z25A Roswell 82.49 52 ⇑P P 03 42 53.6 +0.8
baz=82,SNR=44
W28A Vega 82.51 49 ⇓P P 03 42 53.4 +0.5
baz=82,SNR=11
AOS Alonnisos 82.52 317 P P 03 42 52.0 -0.7
BUM Brajici-Budva 82.53 322⇑iP P 03 42 52.0 -0.8
FNA Florina 82.53 320 P P 03 42 52.5 -0.3
Y26A Elida 82.55 51 ⇑P P 03 42 53.8 +0.7
baz=82,SNR=32
T31A Randall Ranch, 82.56 46 ⇓P P 03 42 52.7 -0.3
baz=82,SNR=28
HCY Herceg Novi 82.60 322⇑iP P 03 42 51.8 -1.2
PLONS Plons/SG 82.62 330⇑iP P 03 42 53.0 -0.2
comp=Z,1μm,3.5s
STON Ston 82.62 323 P P 03 42 52.0 -1.1
PAGF Fort de Pagny 82.63 333⇑iP P 03 42 53.3 +0.2
comp=Z,345nm,1.4s
PAGF Fort de Pagny 82.63 333⇑iP P 03 42 53.3 +0.2
comp=Z,345nm,1.4s
ULC Ulcinj 82.63 322⇑iP P 03 42 52.5 -0.7
ZUR Degenried 82.64 331⇑iP P 03 42 53.1 -0.1
comp=Z,2μm,4.1s
FUORN Ofenpass-Fuorn 82.65 330⇑iP P 03 42 53.2 -0.4
comp=Z,2μm,2.5s
FUORN Ofenpass-Fuorn 82.65 330 eP P 03 42 54.1 +0.6
comp=Z,311nm,1.1s
DAVOX Davos/Dischmat 82.66 330⇑iP P 03 42 54.0 +0.5
comp=Z,2μm,4.1s
KSU1 Kansas State U 82.67 43 eP P 03 42 53.0 -0.5
comp=Z,89nm,1.0s
KSU1 LR LR
comp=Z,20μm,22.0s
SULZ Cheisacher 82.68 331⇑iP P 03 42 53.8 +0.4
comp=Z,2μm,2.8s
KZN Kozani 82.71 319 P P 03 42 53.2 -0.5
XOR Xorichti 82.72 318 P P 03 42 53.3 -0.5
SKIA Skiathos 82.73 317 P P 03 42 53.3 -0.5
NEO Neokhori 82.75 318 P P 03 42 53.5 -0.4
MOF Molkenrain 82.75 332⇑eP P 03 42 53.6 -0.2
MOF Molkenrain 82.75 332⇑eP P 03 42 53.6 -0.2
JFWS Jewell Farm 82.76 37 eP P 03 42 53.1 -0.8
JFWS pmax pmax
comp=Z,122nm,1.6s
JFWS MLR MLR
comp=Z,19μm,21.0s
JFWS Jewell Farm 82.76 37 eP P 03 42 53.1 -0.8
comp=Z,122nm,1.6s
JFWS LR LR
comp=Z,19μm,21.0s
TIR Tirane 82.82 321 eP P 03 42 54.7 +0.5
TIR Tirane 82.82 321 P P 03 42 54.5 +0.4
TIR Tirane 82.82 321 eP P 03 42 54.6 +0.4
TIR pmax pmax
comp=Z,458nm,1.2s
TIR MLR MLR
comp=Z,24μm,21.0s
TIR Tirane 82.82 321 eP P 03 42 54.6 +0.4
comp=Z,458nm,1.2s
TIR LR LR
comp=Z,24μm,21.0s
THEF They Montfort 82.82 333⇑eP P 03 42 54.0 -0.1
THEF They Montfort 82.82 333⇑eP P 03 42 54.0 -0.1
THEF They Montfort 82.82 333⇑eP P 03 42 54.0 -0.1
224A Cornudas Mount 82.87 53 ⇓P P 03 42 55.7 +0.8
baz=83,SNR=67
HINF Hinteralfeld 82.88 332⇑iP P 03 42 54.0 -0.4
comp=Z,514nm,1.6s
HINF Hinteralfeld 82.88 332⇑iP P 03 42 54.0 -0.4
HINF pmax pmax
comp=Z,515nm,1.6s
HINF Hinteralfeld 82.88 332⇑iP P 03 42 54.0 -0.4
comp=Z,514nm,1.6s
HAU Haudompre 82.89 333⇑iP P 03 42 54.1 -0.4
comp=Z,450nm,1.5s
HAU eR
comp=Z,35μm,22.0s
HAU Haudompre 82.89 333⇑iP P 03 42 54.1 -0.4
HAU pmax pmax
comp=Z,450nm,1.5s
HAU Haudompre 82.89 333⇑iP P 03 42 54.1 -0.4
comp=Z,450nm,1.5s
MEZF Maizieres J'vi 82.90 334⇑iP P 03 42 54.7 +0.2
comp=Z,1μm,1.5s,baz=29
MEZF Maizieres J'vi 82.90 334⇑iP P 03 42 54.7 +0.2
comp=Z,1μm,1.5s
W29A Amraillo 82.93 49 ⇑P P 03 42 55.4 +0.4
baz=83,SNR=8.7
Z26A Caprock 82.93 51 ⇑P P 03 42 55.5 +0.5
baz=83,SNR=120
LLS Linth-Limmern 82.93 330⇑iP P 03 42 54.8 -0.1
comp=Z,2μm,4.5s
KBN Korca 82.94 320 eP P 03 42 55.5 +0.6
KBN Korca 82.94 320 P P 03 42 54.9 -0.1
BBS Basel-Blauen 82.95 332⇑eP P 03 42 54.9 +0.1
BBS Basel-Blauen 82.95 332⇑eP P 03 42 54.9 +0.1
Y27A Causey 82.96 50 ⇑P P 03 42 55.7 +0.4
baz=83,SNR=72
MUO Muotathal 82.96 331⇑iP P 03 42 55.0 -0.1
comp=Z,1μm,2.3s
125A Gardner Draw, 82.97 52 ⇑P P 03 42 56.0 +0.7
baz=83,SNR=68
NEST Nestorio 82.97 320 P P 03 42 55.3 +0.1
BALST Balsthal 82.99 331⇑iP P 03 42 55.0 -0.1
comp=Z,2μm,4.1s
V30A Spur Ranch, Mi 82.99 48 ⇑P P 03 42 55.5 +0.2
baz=83
U31A Nine Bar Ranch 83.00 47 ⇑P P 03 42 55.9 +0.6
baz=83,SNR=12
MRKA Markates 83.02 317 P P 03 42 55.0 -0.3
X28A Dimmitt 83.05 49 ⇑P P 03 42 56.0 +0.3
baz=83
VDL Val di Lei 83.07 330⇑iP P 03 42 55.6 -0.1
comp=Z,2μm,3.6s
AMTX Amarillo 83.08 49 eP P 03 42 56.1 +0.3
comp=Z,126nm,1.4s
AMTX LR LR
comp=Z,6μm,21.0s
MRMA Marmari 83.10 316 P P 03 42 55.4 -0.3
BOURR Bourrignon 83.11 332⇑iP P 03 42 55.8 +0.1
comp=Z,2μm,4.3s
TUE Stuetta 83.12 330 eP P 03 42 55.7 -0.2
comp=Z,1μm,2.3s
TUE LR LR
comp=Z,39μm,20.0s
BNALP Bannalp 83.12 331⇑iP P 03 42 55.8 -0.1
comp=Z,2μm,4.2s
MSTX Muleshoe 83.12 50 ⇓P P 03 42 56.1 +0.1
baz=83,SNR=26
EIL Elat 83.12 304 P P 03 42 56.5 +0.5
EIL Elat 83.12 304 P P 03 42 56.5 +0.5
comp=Z,31nm,0.9s,baz=26,slow=3.5,SNR=43
THL Klokotos Trika 83.16 318 P P 03 42 54.7 -1.3
SFTF Sexfontaines 83.16 333⇑iP P 03 42 55.8 -0.1
comp=Z,880nm,1.4s,baz=37
SFTF Sexfontaines 83.16 333⇑iP P 03 42 55.8 -0.1
comp=Z,880nm,1.4s
MNTX Cornudas Mount 83.22 53 eP P 03 42 56.9 +0.4
comp=Z,146nm,1.4s
MNTX LR LR
comp=Z,5μm,19.0s
APE Apeiranthos 83.23 315 eP P 03 42 55.6 -0.9
APE Apeiranthos 83.23 315 P P 03 42 55.0 -1.5
APE Apeiranthos 83.23 315 ⇓P P 03 42 55.6 -0.9
APE Apeiranthos 83.23 315 ⇓P P 03 42 55.6 -0.9
LOMF Lomont 83.28 332⇑eP P 03 42 56.6 0.0
LOMF Lomont 83.28 332⇑eP P 03 42 56.6 0.0
LOMF Lomont 83.28 332⇑eP P 03 42 56.6 0.0
ATAL Atalanti 83.31 317 P P 03 42 55.9 -0.9
HASLI Hasliberg/Brie 83.32 331⇑iP P 03 42 56.7 -0.1
comp=Z,3μm,4.0s
324A Moseley Ranch, 83.34 53 ⇑P P 03 42 57.6 +0.3
baz=83,SNR=39
Z27A Tatum 83.34 51 ⇓P P 03 42 57.7 +0.4
baz=83,SNR=184
126A Clayton Basin, 83.35 52 ⇑P P 03 42 57.5 +0.2
baz=83,SNR=23
LKR Lokris 83.36 317 P P 03 42 56.2 -0.8
PTL Penteli 83.37 316 P P 03 42 56.1 -1.1
FUSIO Fusio 83.39 330⇑iP P 03 42 57.3 +0.1
comp=Z,2μm,3.6s
X29A Tulia 83.39 49 ⇑P P 03 42 57.8 +0.4
baz=83,SNR=9.3
AGG Agios Georgios 83.41 318 P P 03 42 56.6 -0.8
AXAR Agios Charalam 83.44 318 P P 03 42 56.7 -0.8
V31A Spring Creek L 83.45 47 ⇑P P 03 42 58.3 +0.7
baz=83,SNR=27
Y28A McKinney Farm, 83.47 50 ⇑P P 03 42 58.3 +0.4
baz=83,SNR=23
GDL2 Guadalupe Moun 83.47 52 eP P 03 42 58.7 +0.8
W30A Crocket Farms 83.48 48 ⇓P P 03 42 58.4 +0.6
baz=83
KARP Karpathos 83.48 313 P P 03 42 57.4 -0.4
MAKR Makrakomi, Fth 83.52 318 P P 03 42 57.3 -0.6
WIMIS Wimmis 83.59 331⇑iP P 03 42 57.9 -0.2
comp=Z,1μm,4.2s
JAN Janina 83.66 319 P P 03 42 59.0 +0.4
226B Tecolote Peak, 83.67 52 ⇓P P 03 42 59.5 +0.6
baz=84,SNR=116
VLO Vlora 83.68 321 eP P 03 42 59.3 +0.7
MUGIO Muggio 83.70 330⇑iP P 03 42 58.0 -0.7
comp=Z,1μm,2.9s
325A Bean Ranch, Si 83.70 53 ⇓P P 03 42 59.6 +0.4
baz=84,SNR=45
127A Arkansas Junct 83.72 51 ⇑P P 03 42 59.2 +0.1
baz=84,SNR=14
TORNY Torny/Romont 83.73 332⇑iP P 03 42 58.9 0.0
comp=Z,2μm,4.1s
EVR Evrytania 83.75 318 P P 03 42 58.6 -0.6
BRANT Les Verrieres 83.76 332⇑iP P 03 42 59.1 0.0
comp=Z,2μm,4.0s
DSF Desfina 83.78 317 P P 03 42 57.8 -1.5
SANT Santorini 83.79 314 P P 03 42 57.6 -1.8
SANT Santorini 83.79 314 eP P 03 42 57.4 -2.0
comp=Z,358nm,1.4s
SANT LR LR
comp=Z,12μm,19.0s
LKBD Leukerbad 83.82 331⇑iP P 03 42 59.3 -0.2
comp=Z,567nm,1.8s
W31A Holland Ranch, 83.83 47 ⇓P P 03 43 00.2 +0.6
baz=84,SNR=66
Y29A Porterfield Fa 83.83 49 ⇓P P 03 43 00.3 +0.6
baz=84,SNR=12
Z28A Tucker Farm, M 83.84 50 ⇓P P 03 43 00.3 +0.6
baz=84,SNR=20
LTK Loutraki 83.85 317 P P 03 42 57.8 -1.8
X30A Coker Ranch, T 83.85 49 ⇓P P 03 42 59.8 +0.1
baz=84,SNR=25
VAL Valentia 83.89 344⇑iP P 03 42 59.2 -0.3
VAL Valentia 83.89 344⇑iS S 03 53 19.0 -1.4
SRN Sarande 83.90 320 eP P 03 42 59.5 -0.2
SRN Sarande 83.90 320 P P 03 42 59.5 -0.2
SENIN Lac Senin/Sane 83.96 331⇑iP P 03 43 00.1 -0.2
comp=Z,1μm,3.8s
SENIN Lac Senin/Sane 83.96 331 eP P 03 43 00.3 0.0
comp=Z,314nm,1.6s
MMK Mattmark 83.99 331⇑iP P 03 43 00.6 +0.2
comp=Z,2μm,4.4s
KALE Kalithea 83.99 318 P P 03 42 59.3 -1.1
IGT Igoumenitsa 84.01 319 P P 03 43 00.2 -0.2
AIGLE Aigle 84.10 331⇑iP P 03 43 00.7 -0.1
comp=Z,1μm,3.9s
425A Indio Mountain 84.11 54 ⇓P P 03 43 01.8 +0.6
baz=84,SNR=51
DID Didima 84.11 316 P P 03 42 58.5 -2.4
KEK Kerkira 84.12 320 P P 03 43 00.8 -0.1
GRYON Gryon 84.12 331⇑iP P 03 43 00.8 -0.2
comp=Z,1μm,3.5s
DIDY Didyma 84.14 316 P P 03 42 58.8 -2.4
DIX Grande Dixence 84.16 331⇑iP P 03 43 01.2 -0.2
comp=Z,2μm,4.2s
CABF La Chapelle 84.18 332⇑iP P 03 43 01.2 0.0
comp=Z,798nm,1.9s
CABF La Chapelle 84.18 332⇑iP P 03 43 01.2 0.0
CABF pmax pmax
comp=Z,799nm,1.9s
CABF La Chapelle 84.18 332⇑iP P 03 43 01.2 0.0
comp=Z,798nm,1.9s
GIMEL St. Georges / 84.18 332⇑iP P 03 43 01.6 +0.4
comp=Z,1μm,4.0s
LAKA Lakka 84.19 318 P P 03 43 01.0 -0.3
X31A McDonald Ranch 84.22 48 ⇑P P 03 43 02.0 +0.5
baz=84,SNR=48
227A Bennet, Jal 84.23 52 ⇓P P 03 43 02.1 +0.4
baz=84,SNR=13
GUR Goura 84.24 317 P P 03 43 00.4 -1.3
Z29A Hungry Hill Ra 84.25 50 ⇓P P 03 43 02.6 +0.8
baz=84,SNR=58
Y30A Stafford Cattl 84.26 49 ⇓P P 03 43 02.3 +0.5
baz=84,SNR=14
128A Castleberry Fa 84.27 51 ⇑P P 03 43 02.4 +0.5
baz=84,SNR=116
SALAN Lac Salanfe 84.27 331⇑iP P 03 43 01.6 -0.2
comp=Z,781nm,2.5s
ZKR Zakros 84.32 313 P P 03 43 02.1 +0.1
326A Caldwell Ranch 84.33 53 ⇓P P 03 43 02.8 +0.5
baz=84,SNR=97
LOR Lormes 84.37 334⇑iP P 03 43 01.9 -0.2
comp=Z,851nm,1.4s,baz=38
LOR eR
comp=Z,38μm,22.8s
LOR Lormes 84.37 334⇑iP P 03 43 01.9 -0.2
comp=Z,851nm,1.4s
FLN La Foliniere 84.40 337⇑iP P 03 43 01.8 -0.3
comp=Z,193nm,1.2s,baz=29
FLN eR
comp=Z,28μm,21.8s
FLN La Foliniere 84.40 337⇑iP P 03 43 01.8 -0.3
FLN pmax pmax
comp=Z,193nm,1.2s
FLN La Foliniere 84.40 337⇑iP P 03 43 01.8 -0.3
comp=Z,193nm,1.2s
TAU Tasmania Unive 84.40 177 PFAKE 03 43 10.0 +8.1
TAU LR LR
comp=Z,8μm,22.0s
LKD2 Lefkada island 84.42 319 P P 03 43 02.3 -0.2
LDF La Druitiere 84.44 337⇑iP P 03 43 02.0 -0.4
comp=Z,231nm,1.3s
LDF La Druitiere 84.44 337⇑iP P 03 43 02.0 -0.4
LDF pmax pmax
comp=Z,231nm,1.3s
LDF La Druitiere 84.44 337⇑iP P 03 43 02.0 -0.4
comp=Z,231nm,1.3s
AXS Araxos 84.52 318 P P 03 43 02.7 -0.3
Y31A Rekieta Farm, 84.55 49 ⇓P P 03 43 03.5 +0.2
baz=84,SNR=31
Z30A Sanderson Ranc 84.56 50 ⇓P P 03 43 03.7 +0.4
baz=84,SNR=46
228A UT Block 9, Go 84.57 51 ⇓P P 03 43 04.1 +0.6
baz=84,SNR=32
327A Balmorhea Ranc 84.58 52 ⇓P P 03 43 04.4 +0.9
baz=84
RLS Riolos of Patr 84.59 318 P P 03 43 03.3 0.0
129A Stewart Farms, 84.61 50 ⇑P P 03 43 03.9 +0.2
baz=84,SNR=18
VLX Vlachokerasia 84.65 317 P P 03 43 02.6 -1.2
PMOR Pomario Ree 84.66 115 eT T 05 16 41.7
comp=Z,178nm,0.2s
VLC Villacollemand 84.66 328 eP P 03 43 04.6 +1.0
comp=Z,729nm,1.7s
VLC LR LR
comp=Z,52μm,19.0s
SSF Saint Saulge 84.67 334⇑iP P 03 43 03.4 -0.2
comp=Z,256nm,1.3s
SSF Saint Saulge 84.67 334⇑iP P 03 43 03.4 -0.2
SSF pmax pmax
comp=Z,256nm,1.3s
SSF Saint Saulge 84.67 334⇑iP P 03 43 03.4 -0.2
comp=Z,256nm,1.3s
LAST Lasithi 84.69 313 P P 03 43 03.7 -0.3
426A McDonald Obser 84.76 53 ⇑P P 03 43 04.7 +0.1
baz=85,SNR=81
HYF Humbligny 84.77 334⇑iP P 03 43 04.4 +0.3
HYF Humbligny 84.77 334⇑iP P 03 43 04.4 +0.3
WMOK Wichita Mounta 84.80 47 eP P 03 43 04.3 -0.2
WMOK pmax pmax
comp=Z,203nm,1.4s
WMOK MLR MLR
comp=Z,8μm,21.0s
WMOK Wichita Mounta 84.80 47 eP P 03 43 04.3 -0.2
comp=Z,203nm,1.4s
WMOK LR LR
comp=Z,8μm,21.0s
GRR Gorron 84.84 337⇑iP P 03 43 04.4 0.0
comp=Z,823nm,1.7s
GRR Gorron 84.84 337⇑iP P 03 43 04.4 0.0
GRR pmax pmax
comp=Z,823nm,1.7s
GRR Gorron 84.84 337⇑iP P 03 43 04.4 0.0
comp=Z,823nm,1.7s
LPL La Plagne 84.89 331⇑iP P 03 43 05.3 +0.3
comp=Z,675nm,1.3s
LPL La Plagne 84.89 331⇑iP P 03 43 05.3 +0.3
LPL pmax pmax
comp=Z,675nm,1.3s
LPL La Plagne 84.89 331⇑iP P 03 43 05.3 +0.3
comp=Z,675nm,1.3s
LPG La Plagne 84.90 331⇑iP P 03 43 05.5 +0.4
comp=Z,1μm,1.7s
LPG La Plagne 84.90 331⇑iP P 03 43 05.5 +0.4
LPG pmax pmax
comp=Z,1μm,1.7s
LPG La Plagne 84.90 331⇑iP P 03 43 05.5 +0.4
comp=Z,1μm,1.7s
IDI Anoyia 84.91 314 P P 03 43 04.0 -1.1
IDI Anoyia 84.91 314 eP P 03 43 04.0 -1.1
comp=Z,696nm,1.4s
AQU L'Aquila 84.92 325 eP P 03 43 05.4 +0.5
comp=Z,735nm,1.3s
AQU LR LR
comp=Z,48μm,19.0s
AQU L'Aquila 84.92 325⇑iP P 03 43 05.3 +0.3
SMF Signal de Mont 84.92 333⇑iP P 03 43 04.8 -0.1
comp=Z,1μm,1.5s
SMF Signal de Mont 84.92 333⇑iP P 03 43 04.8 -0.1
SMF pmax pmax
comp=Z,1μm,1.5s
SMF Signal de Mont 84.92 333⇑iP P 03 43 04.8 -0.1
comp=Z,1μm,1.5s
VLS Valsamata 84.93 318 P P 03 43 04.5 -0.6
AVF Avril sur Loir 84.95 334⇑iP P 03 43 05.1 +0.1
comp=Z,1μm,1.4s
AVF Avril sur Loir 84.95 334⇑iP P 03 43 05.1 +0.1
AVF pmax pmax
comp=Z,1μm,1.4s
AVF Avril sur Loir 84.95 334⇑iP P 03 43 05.1 +0.1
comp=Z,1μm,1.4s
328A Wristen Ranch, 84.97 52 ⇑P P 03 43 05.9 +0.4
baz=85,SNR=49
Y32A R-V Farms, Ver 84.98 48 ⇓P P 03 43 05.5 +0.1
baz=85,SNR=24

427A Hayter Ranch, 85.01 53 ⇓P P 03 43 06.3 +0.6
baz=85,SNR=90
ITM Ithomi 85.03 317 P P 03 43 04.8 -0.8
HDIL Hopedale 85.07 38 eP P 03 43 05.5 -0.2
HDIL LR LR
comp=Z,13µm,20.0s
Z31A Sharp Cattle R 85.09 49 ⇑P P 03 43 06.3 +0.3
baz=85,SNR=60
229A Bryant Ranch, 85.13 51 ⇑P P 03 43 07.0 +0.7
baz=85,SNR=32
DYR Agios Nikonas 85.14 316 P P 03 43 05.5 -0.7
SIVA Sivas 85.16 314 P P 03 43 06.1 -0.1
130A Snyder 85.16 50 ⇓P P 03 43 06.5 +0.1
baz=85,SNR=8.0
526A Mary Lane Ranc 85.16 54 ⇓P P 03 43 07.3 +0.7
baz=85,SNR=96
VAM Vamos 85.19 314 P P 03 43 04.5 -1.9
BNI Bardonecchia 85.31 331 eP P 03 43 07.3 +0.3
BNI pmax pmax
comp=Z,296nm,1.3s
BNI MLR MLR
comp=Z,25µm,20.0s
BNI Bardonecchia 85.31 331 eP P 03 43 07.3 +0.3
comp=Z,296nm,1.3s
BNI LR LR
comp=Z,25µm,20.0s
BGF Bois d'Agland 85.33 334⇑ iP P 03 43 07.0 +0.1
comp=Z,816nm,1.7s
BGF Bois d'Agland 85.33 334⇑ iP P 03 43 07.0 +0.1
BGF pmax pmax
comp=Z,816nm,1.7s
BGF Bois d'Agland 85.33 334⇑ iP P 03 43 07.0 +0.1
comp=Z,816nm,1.7s
URZ Urewera 85.36 154 eP P 03 43 06.9 +0.1
comp=Z,35nm,0.9s
PPT Papeete 85.37 118 LR LR 04 17 27.4
comp=Z,14µm,19.0s,baz=306,slow=33
GDM Grand'Maison 85.38 331⇑ eP P 03 43 07.9 +0.5
GDM Grand'Maison 85.38 331⇑ eP P 03 43 07.9 +0.5
329A Wagon Wheel Ra 85.38 51 ⇑P P 03 43 08.0 +0.5
baz=85,SNR=84
PPT2 Papeete2 85.39 118 eP P 03 43 05.7 -1.8
comp=Z,2µm,26.8s,baz=304
PPT2 eS S 03 53 38.8 +2.6
PPT2 eLR LR 04 09 46.9
comp=Z,40µm,24.5s,baz=307
PPT2 Papeete2 85.39 118 eT T 05 17 35.8
comp=Z,33nm,0.3s
527A Woodward Ranch 85.39 53 ⇑P P 03 43 08.3 +0.6
baz=85,SNR=42
131A Roby 85.43 49 ⇓P P 03 43 08.2 +0.5
baz=85,SNR=46
SGMF Saint Gilles 85.45 338⇑ iP P 03 43 07.8 +0.4
comp=Z,2µm,1.8s
SGMF Saint Gilles 85.45 338⇑ iP P 03 43 07.8 +0.4
SGMF pmax pmax
comp=Z,2µm,1.8s
SGMF Saint Gilles 85.45 338⇑ iP P 03 43 07.8 +0.4
comp=Z,2µm,1.8s
Z32A Haskell 85.47 48 ⇓P P 03 43 07.8 -0.1
baz=85,SNR=84
GRN Grenoble 85.48 332⇑ eP P 03 43 08.5 +0.7
GRN Grenoble 85.48 332⇑ eP P 03 43 08.5 +0.7
GRN Grenoble 85.48 332⇑ eP P 03 43 08.5 +0.7
626A Big Bend Ranch 85.50 54 ⇑P P 03 43 08.7 +0.5
baz=85,SNR=79
TUL1 Tulsa 85.51 44 ⇑P P 03 43 08.3 +0.3
baz=85,SNR=45
TIAR Tiarei 85.52 118 eT T 05 17 43.3
comp=Z,37nm,0.3s
428A Kincaid Ranch, 85.52 52 ⇑P P 03 43 09.1 +0.9
baz=85,SNR=97
MBDF Montbardon 85.55 331⇑ iP P 03 43 07.9 -0.3
comp=Z,859nm,1.5s
MBDF Montbardon 85.55 331⇑ iP P 03 43 07.9 -0.3
MBDF pmax pmax
comp=Z,859nm,1.5s
MBDF Montbardon 85.55 331⇑ iP P 03 43 07.9 -0.3
comp=Z,859nm,1.5s
ROSF Rostrenen 85.57 339⇑ iP P 03 43 08.4 +0.4
comp=Z,1µm,1.4s
ROSF Rostrenen 85.57 339⇑ iP P 03 43 08.4 +0.4
ROSF pmax pmax
comp=Z,1µm,1.4s
ROSF Rostrenen 85.57 339⇑ iP P 03 43 08.4 +0.4
comp=Z,1µm,1.4s
230A Sterling City 85.59 50 ⇓P P 03 43 08.8 +0.2
baz=85,SNR=55
AGO Saint Agoulin 85.67 334⇑ eP P 03 43 09.5 +0.8
AGO Saint Agoulin 85.67 334⇑ eP P 03 43 09.5 +0.8
ORIF Oris-en-Rattie 85.71 331⇑ iP P 03 43 09.2 +0.2
comp=Z,981nm,1.6s
ORIF eR
comp=Z,22µm,21.8s
ORIF Oris-en-Rattie 85.71 331⇑ iP P 03 43 09.2 +0.2
ORIF pmax pmax
comp=Z,981nm,1.6s
ORIF Oris-en-Rattie 85.71 331⇑ iP P 03 43 09.2 +0.2
comp=Z,981nm,1.6s
SURF Saint Ours 85.75 331⇑ eP P 03 43 09.5 +0.2
SURF Saint Ours 85.75 331⇑ eP P 03 43 09.5 +0.2
CUC Castrocucco 85.77 322 eP P 03 43 08.0 -1.3
comp=Z,84nm,1.1s
CUC LR LR
comp=Z,22µm,20.0s
TCF Toulx Ste Croi 85.77 334⇑ iP P 03 43 09.5 +0.4
comp=Z,869nm,1.6s
TCF Toulx Ste Croi 85.77 334⇑ iP P 03 43 09.5 +0.4
TCF pmax pmax
comp=Z,869nm,1.6s
TCF Toulx Ste Croi 85.77 334⇑ iP P 03 43 09.5 +0.4
comp=Z,869nm,1.6s
528A Cox Ranch, San 85.87 53 ⇑P P 03 43 10.9 +0.8
baz=86,SNR=115
SSB Saint Sauveur 85.87 332 eP P 03 43 09.6 -0.1
SSB pmax pmax
comp=Z,400nm,1.7s
SSB MLR MLR
comp=Z,15µm,19.0s
SSB Saint Sauveur 85.87 332 eP P 03 43 09.6 -0.1
comp=Z,400nm,1.7s
SSB LR LR
comp=Z,15µm,19.0s
ABTX Abilene, Hawle 85.89 49 ⇑P P 03 43 10.2 +0.3
baz=86,SNR=56
SAOF Saorge 85.90 330⇑ eP P 03 43 09.4 -0.4
SAOF Saorge 85.90 330⇑ eP P 03 43 09.4 -0.4
SAOF Saorge 85.90 330⇑ eP P 03 43 09.4 -0.4
330A Mertzon 85.91 51 ⇓P P 03 43 10.4 +0.3
baz=86,SNR=66
QUIF Quistinic 85.92 338⇑ iP P 03 43 09.8 0.0
comp=Z,1µm,1.8s
QUIF Quistinic 85.92 338⇑ iP P 03 43 09.8 0.0
QUIF pmax pmax
comp=Z,1µm,1.8s
QUIF Quistinic 85.92 338⇑ iP P 03 43 09.8 0.0
comp=Z,1µm,1.8s
AUTN L'Aution 85.94 330⇑ eP P 03 43 09.9 -0.3
AUTN L'Aution 85.94 330⇑ eP P 03 43 09.9 -0.3
AUTN L'Aution 85.94 330⇑ eP P 03 43 09.9 -0.3
TXAR Lajitas Array 85.94 54 P P 03 43 10.7 +0.3
TXAR PKKPbc **PKKPbc 04 01 10.6 +1.8**
TXAR Lajitas Array 85.94 54 P P 03 43 10.7 +0.3
comp=Z,45nm,1.1s,baz=297,slow=2.4,SNR=174
TXAR PKKPbc **PKKPbc 04 01 10.6 +1.8**
comp=Z,1.9nm,1.1s,baz=160,slow=5.5,SNR=7.9
PYM Petit Puy Mans 85.98 334⇑ eP P 03 43 10.9 +0.7
PYM Petit Puy Mans 85.98 334⇑ eP P 03 43 10.9 +0.7
PYM Petit Puy Mans 85.98 334⇑ eP P 03 43 10.9 +0.7
TIP Timpagrande 85.99 321 eP P 03 43 10.4 0.0
comp=Z,497nm,1.3s
TIP LR LR
comp=Z,38µm,22.0s
TOUF Mont Tournerai 85.99 330⇑ eP P 03 43 10.1 -0.4
TOUF Mont Tournerai 85.99 330⇑ eP P 03 43 10.1 -0.4
TOUF Mont Tournerai 85.99 330⇑ eP P 03 43 10.1 -0.4
231A Bronte 86.02 50 ⇓P P 03 43 10.6 0.0
baz=86,SNR=57
627A Terlingua Ranc 86.02 54 ⇑P P 03 43 11.3 +0.5
baz=86
SBF Sospel 86.05 330⇑ iP P 03 43 10.0 -0.6
comp=Z,877nm,1.3s
SBF Sospel 86.05 330⇑ iP P 03 43 10.0 -0.6
SBF pmax pmax
comp=Z,877nm,1.3s
SBF Sospel 86.05 330⇑ iP P 03 43 10.0 -0.6
comp=Z,877nm,1.3s
429A Davenport Ranc 86.06 52 ⇓P P 03 43 10.9 0.0
baz=86,SNR=30
AAM Ann Arbor 86.07 33 eP P 03 43 10.9 +0.2
AAM pmax pmax
comp=Z,323nm,1.9s
AAM MLR MLR
comp=Z,13µm,20.0s
AAM Ann Arbor 86.07 33 eP P 03 43 10.9 +0.2
comp=Z,323nm,1.9s
AAM LR LR
comp=Z,13µm,20.0s
MVIF Mont Vial 86.12 330⇑ eP P 03 43 10.7 -0.4
MVIF Mont Vial 86.12 330⇑ eP P 03 43 10.7 -0.4
MVIF Mont Vial 86.12 330⇑ eP P 03 43 10.7 -0.4
SLM Saint Louis 86.16 39 eP P 03 43 10.8 -0.4
SLM pmax pmax
comp=Z,404nm,1.8s
SLM Saint Louis 86.16 39 eP P 03 43 10.8 -0.4
comp=Z,404nm,1.8s
REVF Revere 86.18 330⇑ eP P 03 43 10.5 -0.7
REVF Revere 86.18 330⇑ eP P 03 43 10.5 -0.7
REVF ⇑eP **PcP 03 43 13.8 0.0**
REVF Revere 86.18 330⇑ eP P 03 43 10.5 -0.7
VIVF Saint-Julien-l 86.19 332⇑ iP P 03 43 11.6 +0.3
comp=Z,1µm,1.4s
VIVF Saint-Julien-l 86.19 332⇑ iP P 03 43 11.6 +0.3
VIVF pmax pmax
comp=Z,1µm,1.4s
VIVF Saint-Julien-l 86.19 332⇑ iP P 03 43 11.6 +0.3
comp=Z,1µm,1.4s
SFIN Scholer Farm 86.20 36 ⇑P P 03 43 10.9 -0.4
baz=86,SNR=18
529A Stev Forest Ra 86.23 52 ⇓P P 03 43 12.2 +0.4
baz=86,SNR=103
MFF Saint Martin d 86.23 336⇑ iP P 03 43 11.8 +0.4
comp=Z,1µm,1.4s
MFF Saint Martin d 86.23 336⇑ iP P 03 43 11.8 +0.4
MFF pmax pmax
comp=Z,1µm,1.4s
MFF Saint Martin d 86.23 336⇑ iP P 03 43 11.8 +0.4
comp=Z,1µm,1.4s
628A Black Gap, Mar 86.30 53 ⇑P P 03 43 12.6 +0.6
baz=86,SNR=51
430A Baggett Ranch, 86.33 51 ⇓P P 03 43 12.1 -0.1
baz=86,SNR=56
CALN Calern 86.35 330⇑ eP P 03 43 11.6 -0.6
CALN Calern 86.35 330⇑ eP P 03 43 11.6 -0.6
CALN Calern 86.35 330⇑ eP P 03 43 11.6 -0.6
LBL Lubilhac 86.36 333 eP P 03 43 12.8 +0.7
LBL Lubilhac 86.36 333 eP P 03 43 12.8 +0.7
LBL Lubilhac 86.36 333 eP P 03 43 12.8 +0.7
331A San Angelo 86.41 50 ⇑P P 03 43 12.6 0.0
baz=86,SNR=44
232A Coleman 86.43 50 ⇑P P 03 43 12.9 +0.2
baz=86,SNR=25
PGF Pioggiola 86.56 328⇑ iP P 03 43 12.6 -0.6
comp=Z,222nm,1.3s
PGF Pioggiola 86.56 328⇑ iP P 03 43 12.6 -0.6
PGF pmax pmax
comp=Z,222nm,1.3s
PGF Pioggiola 86.56 328⇑ iP P 03 43 12.6 -0.6
comp=Z,222nm,1.3s
FRF La Foret Royal 86.60 330⇑ iP P 03 43 12.7 -0.5
comp=Z,740nm,1.4s
FRF La Foret Royal 86.60 330⇑ iP P 03 43 12.7 -0.5
FRF pmax pmax
comp=Z,740nm,1.4s
FRF La Foret Royal 86.60 330⇑ iP P 03 43 12.7 -0.5
comp=Z,740nm,1.4s
SMRF Simiane la Rot 86.64 331⇑ iP P 03 43 13.7 +0.2
comp=Z,587nm,1.5s
SMRF Simiane la Rot 86.64 331⇑ iP P 03 43 13.7 +0.2
comp=Z,587nm,1.5s
530A J-C Ranch, Com 86.74 52 ⇑P P 03 43 14.5 +0.3
baz=86,SNR=50
332A Millersview 86.75 50 ⇓P P 03 43 14.6 +0.4
baz=86,SNR=104
431A Sonora 86.77 51 ⇓P P 03 43 14.5 +0.1
baz=87,SNR=32
LMR La Mourre 86.85 330⇑ iP P 03 43 14.2 -0.2
comp=Z,931nm,1.3s
LMR La Mourre 86.85 330⇑ iP P 03 43 14.2 -0.2
LMR pmax pmax
comp=Z,931nm,1.3s
LMR La Mourre 86.85 330⇑ iP P 03 43 14.2 -0.2
comp=Z,931nm,1.3s
RJF Les Rejaudoux 86.87 334⇑ iP P 03 43 15.0 +0.5
comp=Z,915nm,1.5s
RJF eR
comp=Z,41µm,23.0s
RJF Les Rejaudoux 86.87 334⇑ iP P 03 43 15.0 +0.5
RJF pmax pmax
comp=Z,915nm,1.5s
RJF Les Rejaudoux 86.87 334⇑ iP P 03 43 15.0 +0.5
comp=Z,915nm,1.5s
MSNY Massena 87.00 26 eP P 03 43 14.6 -0.5
comp=Z,349nm,1.0s
CAF Calviac 87.02 334⇑ iP P 03 43 16.3 +1.0
comp=Z,1µm,1.3s
CAF Calviac 87.02 334⇑ iP P 03 43 16.3 +1.0
CAF pmax pmax
comp=Z,1µm,1.3s
CAF Calviac 87.02 334⇑ iP P 03 43 16.3 +1.0
comp=Z,1µm,1.3s
OLIL Olney 87.08 38 eP P 03 43 15.2 -0.5
comp=Z,369nm,1.7s
432A Menard 87.10 50 ⇑P P 03 43 15.8 -0.1
baz=87,SNR=39
CEL Celeste 87.13 321 eP P 03 43 14.5 -1.5
comp=Z,195nm,1.2s
CEL ePP **PP 03 46 38.8 -0.3**
CEL LR LR
comp=Z,18µm,21.0s
LASF Ste Croix 87.16 332⇑ iP P 03 43 16.6 +0.6
comp=Z,882nm,1.5s
LASF Ste Croix 87.16 332⇑ iP P 03 43 16.6 +0.6
comp=Z,882nm,1.5s
531A Rocksprings 87.19 51 ⇑P P 03 43 16.4 0.0
baz=87,SNR=64
RFTA Plano 87.24 47 eP P 03 43 17.3 +0.8
SIUC Southern Illin 87.38 39 eP P 03 43 16.1 -1.0
comp=Z,201nm,1.0s
JCT Junction City 87.39 51 eP P 03 43 17.4 +0.1
JCT pmax pmax
comp=Z,336nm,1.5s
JCT MLR MLR
comp=Z,8µm,21.0s
JCT Junction City 87.39 51 eP P 03 43 17.4 +0.1
comp=Z,336nm,1.5s
JCT LR LR
comp=Z,8µm,21.0s
JCT Junction City 87.39 51 ⇓P P 03 43 17.2 -0.1
baz=87,SNR=21
SNZO South Karori 87.41 157 PFAKE 03 43 30.0 +13
SNZO LR LR
comp=Z,19µm,22.0s
LONY Lake Ozonia 87.43 26 eP P 03 43 16.5 -0.8
comp=Z,121nm,1.7s
LONY LR LR
comp=Z,14µm,20.0s
BLO Bloomington 87.44 37 eP P 03 43 16.6 -0.8
BLO pmax pmax
comp=Z,114nm,1.3s
BLO Bloomington 87.44 37 eP P 03 43 16.6 -0.8
comp=Z,114nm,1.3s
LFF La Frestale 87.44 335⇑ iP P 03 43 18.1 +0.8
comp=Z,1µm,1.4s
LFF La Frestale 87.44 335⇑ iP P 03 43 18.1 +0.8
LFF pmax pmax
comp=Z,1µm,1.4s
LFF La Frestale 87.44 335⇑ iP P 03 43 18.1 +0.8
comp=Z,1µm,1.4s
PQI Presque Isle 87.54 21 eP P 03 43 17.3 -0.4
comp=Z,926nm,1.8s
FRNY Flat Rock 87.56 25 eP P 03 43 17.5 -0.4
comp=Z,100nm,1.8s
WHTX Lake Whitney 87.59 48 ⇓P P 03 43 18.5 +0.3
baz=87,SNR=28
532A Rocksprings 87.59 51 ⇑P P 03 43 18.5 +0.1
baz=87,SNR=66
ERPA Erie 87.68 31 eP P 03 43 18.8 +0.3
comp=Z,212nm,1.4s
ERPA LR LR
comp=Z,13µm,20.0s
631A Perdido Creek 87.72 52 ⇓P P 03 43 19.0 +0.1
baz=88,SNR=24
USIN University of 87.90 38 eP P 03 43 20.3 +0.7
comp=Z,278nm,1.8s
PARMO Parma 87.97 40 eP P 03 43 20.5 +0.6
ALLY Alegheny Colle 88.02 31 eP P 03 43 19.9 -0.2
comp=Z,351nm,1.4s
ACSO Alum Creek Sta 88.08 34 eP P 03 43 20.4 0.0
comp=Z,92nm,0.9s
ACSO LR LR
comp=Z,12µm,20.0s
632A Uvalde 88.12 51 ⇓P P 03 43 21.0 +0.2
baz=88,SNR=13
NCB Newcomb 88.12 26 eP P 03 43 20.3 -0.3
comp=Z,92nm,1.3s
NCB LR LR
comp=Z,12µm,19.0s
UALR University of 88.17 43 eP P 03 43 21.2 +0.2
comp=Z,327nm,2.0s
WCI Wyandotte Cave 88.31 37 eP P 03 43 21.4 -0.2
WCI pmax pmax
comp=Z,190nm,1.4s
WCI Wyandotte Cave 88.31 37 eP P 03 43 21.4 -0.2
comp=Z,190nm,1.4s
MTLF Montolieu 88.37 333⇑ iP P 03 43 22.5 +0.7
comp=Z,787nm,1.6s
MTLF Montolieu 88.37 333⇑ iP P 03 43 22.5 +0.7
MTLF pmax pmax
comp=Z,787nm,1.6s
MTLF Montolieu 88.37 333⇑ iP P 03 43 22.5 +0.7
comp=Z,787nm,1.6s
GNAR Gosnell 88.39 41 eP P 03 43 23.9 +1.9
comp=Z,2µm,1.3s
HBAR Harrisburg 88.41 41 eP P 03 43 22.6 +0.5
MDV Middlebury 88.44 26 eP P 03 43 21.7 -0.3
732A Laxson Ranch, 88.58 52 ⇓P P 03 43 23.4 +0.4
baz=88,SNR=21
LRDF Laroque-de-Fa 88.62 332⇑ eP P 03 43 23.8 +0.9
LBNH Lisbon 88.62 25 eP P 03 43 21.4 -1.5
LBNH pmax pmax
comp=Z,115nm,1.6s
LBNH MLR MLR
comp=Z,13µm,19.0s
LBNH Lisbon 88.62 25 eP P 03 43 21.4 -1.5
comp=Z,115nm,1.6s
LBNH LR LR
comp=Z,13µm,19.0s
UTMT University of 88.65 40 eP P 03 43 23.0 -0.2
comp=Z,262nm,1.2s
HALT Halls 88.77 40 eP P 03 43 24.2 +0.5
ACCN Adirondack Com 88.83 26 eP P 03 43 23.8 -0.1
comp=Z,126nm,1.4s
SJAF Saint Jean de 88.90 332⇑ eP P 03 43 24.3 0.0
FILF Fillols 88.94 332⇑ eP P 03 43 25.1 +0.5
CARF Carcanieres 88.96 333⇑ eP P 03 43 25.1 +0.4
VSL Villasalto 88.98 326 PFAKE 03 43 40.0 +15
VSL LR LR
comp=Z,20µm,20.0s
HNH Hanover 88.99 25 eP P 03 43 25.0 +0.4
BINY Binghamton 89.09 28 eP P 03 43 24.6 -0.6
comp=Z,226nm,1.7s
BINY LR LR
comp=Z,25µm,19.0s
MLS Moulis 89.09 333⇑ eP P 03 43 25.9 +0.7
VALF Valcebollere 89.27 333⇑ eP P 03 43 26.9 +0.7
EPF Esparros 89.28 334⇑ iP P 03 43 26.1 0.0
comp=Z,248nm,1.4s
EPF Esparros 89.28 334⇑ iP P 03 43 26.1 0.0
EPF pmax pmax
comp=Z,248nm,1.4s
EPF Esparros 89.28 334⇑ iP P 03 43 26.1 0.0
comp=Z,248nm,1.4s
MELF Melles 89.28 334⇑ eP P 03 43 26.1 0.0
WVT Waverly 89.31 39 eP P 03 43 26.0 -0.3
WVT pmax pmax
comp=Z,99nm,1.4s
WVT Waverly 89.31 39 eP P 03 43 26.0 -0.3
comp=Z,99nm,1.4s
LABF Labassere 89.35 334⇑ eP P 03 43 26.6 +0.2
FFD Franklin Falls 89.40 25 eP P 03 43 27.0 +0.4
comp=Z,538nm,1.5s
TRY Troy 89.41 26 eP P 03 43 26.7 +0.1
comp=Z,304nm,1.5s
RESF Ens 89.48 334⇑ eP P 03 43 28.4 +1.3
VIEF Viey 89.51 334⇑ eP P 03 43 28.2 +1.0
ORDF Ordiarp 89.52 335⇑ eP P 03 43 27.1 -0.1
OSSF Osses 89.59 335⇑ eP P 03 43 26.9 -0.6
TBI Tubuai 89.61 122 eP P 03 43 34.1 +6.4
comp=Z,1µm,28.0s
TBI eS S 03 54 14.1 -2.3
TBI eLR LR 04 11 48.1
comp=Z,30µm,22.8s,baz=317
TBI Tubuai 89.61 122 eT T 05 22 54.9
comp=Z,60nm,0.3s
ETSF Etsaut 89.69 334⇑ iP P 03 43 28.8 +0.8
comp=Z,85nm,0.7s
ETSF Etsaut 89.69 334⇑ iP P 03 43 28.8 +0.8
ETSF pmax pmax
comp=Z,85nm,0.7s
ETSF Etsaut 89.69 334⇑ iP P 03 43 28.8 +0.8
comp=Z,85nm,0.7s
WDD Wield Dalam 89.70 321 eP P 03 43 27.2 -0.9
WDD LR LR
comp=Z,12µm,20.0s
SJPF Ste Jean 89.71 335⇑ iP P 03 43 28.8 +0.7
comp=Z,411nm,1.9s
SJPF Ste Jean 89.71 335⇑ iP P 03 43 28.8 +0.7
SJPF pmax pmax
comp=Z,411nm,1.9s
SJPF Ste Jean 89.71 335⇑ iP P 03 43 28.8 +0.7
comp=Z,411nm,1.9s
SSPA Standing Stone 89.76 30 eP P 03 43 28.5 +0.2
comp=Z,453nm,1.9s
OXF Oxford 89.85 41 eP P 03 43 29.0 +0.1
OXF pmax pmax
comp=Z,159nm,1.2s
OXF MLR MLR
comp=Z,11µm,20.0s
OXF Oxford 89.85 41 eP P 03 43 29.0 +0.1
comp=Z,159nm,1.2s
OXF LR LR
comp=Z,11µm,20.0s
HKT Hockley 90.04 48 eP P 03 43 30.5 +0.8
HKT pmax pmax
comp=Z,140nm,1.9s
HKT Hockley 90.04 48 eP P 03 43 30.5 +0.8
comp=Z,140nm,1.9s
PLAL Pickwick Lake 90.12 40 eP P 03 43 29.6 -0.5
comp=Z,180nm,2.0s
QUA2 Belchertown 90.25 26 eP P 03 43 30.7 +0.2
comp=Z,76nm,1.3s
HRV Adam Dziewonsk 90.30 25 eP P 03 43 31.0 +0.2
HRV pmax pmax
comp=Z,149nm,1.4s
HRV Adam Dziewonsk 90.30 25 eP P 03 43 31.0 +0.2
comp=Z,149nm,1.4s
WES Weston 90.48 25 eP P 03 43 31.9 +0.2
WES pmax pmax
comp=Z,891nm,1.6s
WES Weston 90.48 25 eP P 03 43 31.9 +0.2
comp=Z,891nm,1.6s
KVTX Kingsville 90.68 51 eP P 03 43 35.2 +2.4
comp=Z,257nm,1.4s
KVTX epP **pP 03 43 45.1 +1.5**
KVTX LR LR
comp=Z,7µm,22.0s
BRYW Bryant College 90.84 25 eP P 03 43 33.5 +0.2
comp=Z,188nm,1.4s
MVL Millersville 90.89 30 eP P 03 43 34.0 +0.5
comp=Z,137nm,1.5s
BRNJ Basking Ridge 90.92 28 eP P 03 43 34.3 +0.6
TZTN Tazewell 90.93 36 eP P 03 43 34.0 +0.2
comp=Z,137nm,1.5s
SWET Sewanee 90.95 38 eP P 03 43 33.7 -0.3
comp=Z,129nm,1.5s
CPNY Central Park 91.04 28 eP P 03 43 35.0 +0.7
comp=Z,127nm,1.4s
VBMS Vicksburg 91.12 43 eP P 03 43 34.8 0.0
comp=Z,380nm,1.5s
VBMS LR LR
comp=Z,7µm,20.0s
SDMD Soldier's Deli 91.22 30 eP P 03 43 36.3 +1.1
comp=Z,60nm,1.4s
SDMD epP **pP 03 43 49.8 +3.8**
CPCT Cooper Cave 91.40 37 eP P 03 43 36.1 +0.1
TKL Tuckaleechee C 91.57 37 LR LR 04 30 25.6

comp=Z,15µm,20.6s,baz=342,slow=39
MSEY Mahe Island 91.63 265 PFAKE 03 43 50.0 +13
MSEY LR LR
comp=Z,23µm,22.0s
BLA Blacksburg 91.70 34 *e*P **P 03 43 37.2 -0.3**
BLA pmax pmax
comp=Z,128nm,1.5s
BLA MLR MLR
comp=Z,10µm,20.0s
BLA Blacksburg 91.70 34 *e*P **P 03 43 37.2 -0.3**
comp=Z,128nm,1.5s
BLA LR LR
comp=Z,10µm,20.0s
CBN Corbin 92.07 31 *e*P **P 03 43 38.9 -0.1**
comp=Z,9.0nm,0.6s
CBN LR LR
comp=Z,9µm,20.0s
KEST Kesra 92.17 324 *e*P **P 03 43 39.3 -0.4**
KEST Kesra 92.17 324 P **P 03 43 39.3 -0.4**
comp=Z,10nm,0.9s,baz=300,slow=2.1,SNR=22
KEST LR LR 04 30 01.2
comp=Z,18µm,20.2s,baz=225,slow=39
LRAL Lakeview Retre 92.22 40 *e*P **P 03 43 39.3 -0.6**
comp=Z,10nm,0.9s
LRAL LR LR
comp=Z,10µm,22.0s
CMAH Djebel Manchou 92.23 326 P **P 03 43 39.0 -1.0**
CAEH 'Ain El Ouahch 92.34 327 P **P 03 43 38.5 -1.9**
PBRG Braganca 92.54 338 *i* P **P 03 43 41.3 0.0**
comp=Z,134nm,1.6s
PBRG Braganca 92.54 338 *e*PP PP 03 47 22.7 +0.9
PBRG *i* S **SKSac 03 54 16.8 +4.5**
CKFL Kef-Lekhel 92.72 326 P **P 03 43 40.0 -2.3**
PGAV Gavieira, Arco 92.81 339 *i* P **P 03 43 42.5 -0.1**
comp=Z,135nm,1.4s
PGAV Gavieira, Arco 92.81 339 *e*PP PP 03 47 23.9 0.0
PGAV *i* S **SKSac 03 54 16.4 +2.5**
PGAV *e*LR LR 04 21 21.4
comp=Z,20µm,17.6s
DESE Dese 92.81 287 *e*P **P 03 43 44.8 +1.5**
DESE *e*S **SKSac 03 54 11.2 -3.9**
CASM Ain Smara 92.93 327 P **P 03 43 41.0 -2.2**
DFRA Djebel Bou Aff 92.94 327 P **P 03 43 42.5 -0.8**
PCAB Cabril 92.98 339 *e*P **P 03 43 41.4 -1.9**
comp=Z,134nm,1.9s
PCAB Cabril 92.98 339 *i* PP PP 03 47 23.9 -1.3
KMSC Kings Mountain 93.08 35 ⇑P **P 03 43 43.1 -0.7**
baz=93,SNR=5.3
MVO Moncorvo 93.22 338 *i* P **P 03 43 44.1 -0.3**
comp=Z,118nm,2.1s
MVO Moncorvo 93.22 338 *e*PP PP 03 47 27.6 +0.5
MVO *i* S **SKSac 03 54 19.9 +3.8**
MVO *e*LR LR 04 21 45.6
comp=Z,22µm,14.7s
POLO Lamas de Olo 93.23 339 *i* P **P 03 43 44.1 -0.4**
comp=Z,64nm,2.6s
POLO Lamas de Olo 93.23 339 *e*PP PP 03 47 27.6 +0.3
PVRL Vila Real 93.30 339 *e*P **P 03 43 43.3 -1.5**
SET Setif 93.43 327 P **P 03 43 46.0 +0.5**
GOGA Godfrey 93.58 38 *e*P **P 03 43 46.6 +0.5**
GOGA *e**PP **pP 03 43 57.0 0.0**
GOGA pmax pmax
comp=Z,62nm,1.5s
GOGA Godfrey 93.58 38 *e*P **P 03 43 46.6 +0.5**
comp=Z,62nm,1.5s
GOGA *e*pP **pP 03 43 57.0 0.0**
ESDC Sonseca Array 93.69 335 P **P 03 43 46.4 -0.2**
ESDC Sonseca Array 93.69 335 P **P 03 43 46.4 -0.2**
comp=Z,10nm,0.9s,baz=19,slow=3.5,SNR=30
ESDC LR LR 04 31 27.9
comp=Z,20µm,20.1s,baz=20,slow=39
ESLA Sonseca Array 93.69 335 *e*P **P 03 43 46.2 -0.4**
comp=Z,166nm,2.0s
PVIS Viseu 93.87 339 *e*P **P 03 43 46.3 -1.1**
comp=Z,102nm,2.0s
PVIS Viseu 93.87 339 *e*PP PP 03 47 34.3 +2.1
PAB San Pablo 93.92 336 *e*P **P 03 43 48.0 +0.3**
PAB pmax pmax
comp=Z,135nm,1.6s
PAB MLR MLR
comp=Z,30µm,22.0s
PAB San Pablo 93.92 336 *e*P **P 03 43 48.0 +0.3**
comp=Z,135nm,1.6s
PAB LR LR
comp=Z,30µm,22.0s
MTE Manteigas 94.07 338 *i* P **P 03 43 47.7 -0.7**
comp=Z,103nm,1.4s
MTE Manteigas 94.07 338 *e*PP PP 03 47 33.0 -0.8
MTE *i* S **SKSac 03 54 23.5 +2.7**
MTE *e*LR LR 04 21 45.6
comp=Z,24µm,17.3s
MTE Manteigas 94.07 338 *e*P **P 03 43 47.9 -0.5**
comp=Z,96nm,1.4s
MTE LR LR
comp=Z,23µm,20.0s
CNNC Cliffs of the 94.44 33 PFAKE 03 44 00.0 +10
CNNC LR LR
comp=Z,12µm,20.0s
PCBR Castelo Branco 94.57 338 *i* P **P 03 43 48.8 -1.8**
comp=Z,77nm,2.0s
PCBR Castelo Branco 94.57 338 *i* PP PP 03 47 33.0 -4.6
PMRV Marv??o 94.93 338 *i* P **P 03 43 51.9 -0.4**
comp=Z,61nm,1.4s
PMRV Marv??o 94.93 338 *e*PP PP 03 47 40.3 -0.2
PMRV *i* S **SKSac 03 54 29.2 +3.9**
PMRV *e*LR LR 04 20 13.7
comp=Z,17µm,28.8s
PTOM Tomar 95.04 339 *e*P **P 03 43 51.2 -1.5**
comp=Z,74nm,1.4s
TIGA Tifton 95.17 39 ⇓P **P 03 43 53.9 +0.5**
baz=95
NHSC New Hope 95.31 36 PFAKE 03 44 10.0 +16
NHSC LR LR
comp=Z,24µm,22.0s
PMTG Montargil 95.50 338 *i* P **P 03 43 52.4 -2.4**
comp=Z,71nm,1.6s
PMTG Montargil 95.50 338 *i* PP PP 03 47 45.2 +0.4
PMTG *i* S **SKSac 03 54 32.9 +4.6**
PESTR Estremoz 95.51 338 *i* P **P 03 43 54.4 -0.5**
comp=Z,60nm,2.4s
PESTR Estremoz 95.51 338 *e*PP PP 03 47 45.3 +0.3
PESTR *i* S **SKSac 03 54 32.5 +4.1**
PMAFR Mafra 95.89 339 *e*P **P 03 43 55.3 -1.3**
PMAFR Mafra 95.89 339 *i* PP PP 03 47 46.4 -1.5
EVO Evora 95.94 338 ⇑*i*P **P 03 43 55.9 -1.0**
comp=Z,161nm,1.6s
EVO *e*R
comp=Z,23µm,22.8s
EVOP Sao Brissos 95.98 338 ⇑*i*P **P 03 43 55.9 -1.1**
EVOP pmax pmax
comp=Z,161nm,1.6s
EVOP Sao Brissos 95.98 338 ⇑*i*P **P 03 43 55.9 -1.1**
comp=Z,161nm,1.6s
PBAR Barrancos 96.00 337 *i* P **P 03 43 56.0 -1.1**
comp=Z,49nm,2.8s
PBAR Barrancos 96.00 337 *e*PP PP 03 47 48.9 +0.2
PBAR *i* S **SKSac 03 54 33.8 +2.8**
LIS Lisbon 96.08 339 *e*P **P 03 43 57.1 -0.4**
LIS *e*PP **PP 03 47 50.1 +0.8**
LIS *e*S **SKSac 03 54 30.2 -1.1**
LIS AMS AMS 04 28 36.1
comp=N,25µm,27.4s
LIS Lisbon 96.08 339 *e*P **P 03 43 57.1 -0.4**
LIS Lisbon 96.08 339 *e*P **P 03 43 57.0 -0.4**
LIS *e* 03 47 50.1
LIS *e*S **SKSac 03 54 30.2 -1.1**
PBEJ Beja 96.37 338 *e*P **P 03 43 58.5 -0.3**
comp=N,69nm,2.1s
PBEJ Beja 96.37 338 *i* PP PP 03 47 45.8 -5.8
PNCL Nicolau / Gran 96.48 338 *i* P **P 03 43 58.8 -0.5**
comp=N,62nm,2.4s
PNCL Nicolau / Gran 96.48 338 *e*PP PP 03 47 53.2 +0.8
PNCL *i* S **SKSac 03 54 29.6 -3.9**
MESJ Messejana 96.64 338 *e*P **P 03 43 59.7 -0.4**
MESJ *e*PP **PP 03 47 54.6 +0.9**
MESJ *e*S **SKSac 03 54 32.5 -1.9**
MESJ *e*SS **SS 04 01 53.6 +2.0**
MESJ AMS AMS 04 30 45.1
comp=Z,18µm,20.7s
MESJ Messejana 96.64 338 *e*P **P 03 43 59.7 -0.4**
MESJ Messejana 96.64 338 *e*PP PP 03 47 54.6 +0.9
MESJ *e*S **SKSac 03 54 32.5 -1.9**
MESJ *e*SS **SS 04 01 53.6 +2.0**
MESJ A A 04 30 45.1
comp=Z,18µm,20.7s
MESJ Messejana 96.64 338 *e*P **P 03 43 59.6 -0.4**
MESJ *e* 03 47 54.6
MESJ *e*S **SKSac 03 54 32.4 -1.9**
PVAQ Vaqueiros 96.91 337 *i* P **P 03 44 00.2 -1.1**
comp=Z,36nm,2.3s
PVAQ Vaqueiros 96.91 337 *i* PP PP 03 47 56.2 +0.5
PVAQ *i* S **SKSac 03 54 37.8 +2.0**
PVAQ *e*LR LR 04 21 26.3
comp=Z,19µm,17.6s
PTEO Sao Teotonio 97.06 338 *e*P **P 03 43 59.1 -2.8**
comp=Z,121nm,2.1s
PTEO Sao Teotonio 97.06 338 *e*PP PP 03 48 02.9 +6.0
PBDV Barranco-do-Ve 97.12 337 *e*P **P 03 44 01.6 -0.7**
comp=Z,34nm,3.0s
PBDV Barranco-do-Ve 97.12 337 *i* PP PP 03 47 55.0 -2.4
PBDV *i* S **SKSac 03 54 37.7 +0.8**
MORF Marmelete 97.26 338 *i* P **P 03 44 02.9 0.0**
comp=Z,87nm,2.1s
MORF Marmelete 97.26 338 *e*PP PP 03 47 59.9 +1.3
MORF *i* S **SKSac 03 54 39.8 +2.1**
MORF Marmelete 97.26 338 *e*P **P 03 44 02.4 -0.5**
MORF *e* 03 47 59.4
MORF *e*S **SKSac 03 54 36.3 -1.4**
PFVI Vila Bisbo 97.48 338 *e*P **P 03 44 02.2 -1.6**
comp=Z,96nm,1.1s
PFVI Vila Bisbo 97.48 338 *i* PP PP 03 48 02.3 +2.2
PFVI *i* S **SKSac 03 54 36.1 -2.6**
RKT Rikitea 99.06 113 *e*S S 03 56 56.3 +77
RKT *e*LR LR 04 16 13.5
comp=Z,24µm,22.8s
PGRA Graciosa 99.17 353 *e*P **Pdif 03 44 11.2 -0.2**
comp=Z,121nm,1.5s
PGRA Graciosa 99.17 353 *e*PP PP 03 48 12.6 -0.3
ROSA Rosais 99.50 353 *e*P **Pdif 03 44 11.5 -1.4**
comp=Z,123nm,0.9s
ROSA Rosais 99.50 353 *e*PP PP 03 48 10.1 -5.4
ROSA *e*LQ LQ 04 12 29.0
RTC Rabat Centre 99.82 335 PFAKE 03 44 30.0 +16
RTC LR LR
comp=Z,20µm,22.0s
PSET Sete Cidades 100.14 351 *e*P **Pdif 03 44 15.7 -0.1**
comp=Z,192nm,2.4s
PSET Sete Cidades 100.14 351 *e*PP PP 03 48 18.6 -1.8
PSET *e*LQ LQ 04 12 42.6
CMLA Cha da Macela 100.18 351 *e*P **Pdif 03 44 17.4 +1.5**
comp=Z,124nm,1.3s
CMLA Cha da Macela 100.18 351 *e*PP PP 03 48 20.0 -0.6
CMLA Cha da Macela 100.18 351 PFAKE 03 44 30.0 +14
CMLA LR LR
comp=Z,6µm,20.0s
PSMN Pico do Norte, 100.88 351 *e*P **Pdif 03 44 18.3 -0.7**
comp=Z,117nm,1.4s
PSMN Pico do Norte, 100.88 351 *e*PP PP 03 48 26.3 +0.4
PSMN *e*LQ LQ 04 12 19.9
BBSR BB Station 101.74 24 PFAKE 03 44 30.0 +7.1
BBSR LR LR
comp=Z,9µm,21.0s
TEIG Tepich 101.88 49 PFAKE 03 44 40.0 +16
TEIG LR LR
comp=Z,6µm,19.0s
RER Riviere de l'E 102.21 253 PFAKE 03 44 40.0 +15
RER LR LR
comp=Z,5µm,21.0s
KMBO Kilima Mbogo 102.86 280 *e*Pdif **Pdif 03 44 29.1 +0.6**
KMBO *e*PP **PP 03 48 40.9 -1.8**
KMBO LR LR
comp=Z,11µm,21.0s
KMBO Kilima Mbogo 102.86 280 P **Pdif 03 44 28.9 +0.4**
comp=Z,7.0nm,1.0s,baz=8.9,slow=4.3,SNR=9.4
KMBO PP **PP 03 48 42.8 +0.2**
comp=Z,4.6nm,1.1s,baz=43,slow=12,SNR=4.3
PMPST Porto Santo, M 103.21 343 *i* PP PP 03 48 42.5 -1.1
PMOZ Porto Moniz, M 103.65 343 *i* PP PP 03 48 47.4 +0.5
TAM Tamanrasset 104.89 320 *e*P **Pdif 03 44 37.6 +0.3**
TAM pmax pmax
comp=Z,3.0nm,1.1s
TAM MLR MLR
comp=Z,11µm,19.0s
TAM Tamanrasset 104.89 320 *e*Pdif **Pdif 03 44 37.6 +0.3**
comp=Z,3.2nm,1.1s
TAM LR LR
comp=Z,11µm,19.0s
ABPO Ambohimpanom 107.03 260 PFAKE 03 49 10.0
ABPO LR LR
comp=Z,10µm,22.0s
TGUH Tegucigalpa,Un 107.35 52 PFAKE 03 49 10.0
TGUH LR LR
comp=Z,6µm,19.0s
DRV Dumont d'Urvil 108.17 181 Pdif **Pdif 03 44 45.0 -5.4**
DRV Dumont d'Urvil 108.17 181 PP PP 03 49 17.0 -4.0
DRV SKKS 03 56 33.0
DRV SS SS 04 04 18.0 -14
GTBY Guantanamo Bay 108.93 38 PFAKE 03 49 10.0
GTBY LR LR
comp=Z,7µm,20.0s
MTDJ Mount Denham 109.22 41 PFAKE 03 49 10.0
MTDJ LR LR
comp=Z,6µm,21.0s
CASY Casey 110.72 194 PFAKE 03 49 10.0
CASY LR LR
comp=Z,6µm,22.0s
PAF Port-aux-Franc 111.23 222 PFAKE 03 49 10.0
PAF LR LR
comp=Z,5µm,21.0s
SDDR Presa de Saban 111.47 35 PFAKE 03 49 20.0
SDDR LR LR
comp=Z,15µm,20.0s
JTS JuntasAbangare 111.70 52 PFAKE 03 49 20.0
JTS LR LR
comp=Z,7µm,20.0s
SJG San Juan 114.36 31 PFAKE 03 49 20.0 +10
SJG LR LR
comp=Z,5µm,21.0s
MTP Monte Pirata 114.60 31 *e*PKP PKPdf 03 49 10.0 -0.4
MTP *e*PP **PP 03 50 07.2 +0.5**
TOA0 Torodi Ar. Sit 115.00 318 *e*PKP PKPdf 03 49 10.7 -0.6
TOA0 *e*PP **PP 03 50 06.4 -3.4**
TORD Torodi Ar. Bea 115.00 318 PKP PKPdf 03 49 10.4 -0.9
TORD PKKPbc **PKKPbc 03 59 45.6 -0.2**
TORD Torodi Ar. Bea 115.00 318 PKP PKPdf 03 49 10.4 -0.9
comp=Z,4.3nm,1.0s,baz=8.1,slow=2.2,SNR=17
TORD PKKPbc **PKKPbc 03 59 45.6 -0.2**
comp=Z,0.3nm,0.6s,baz=213,slow=3.4,SNR=6.8
BCIP Isla Barro Col 115.56 49 PFAKE 03 49 20.0 +7.6
BCIP LR LR
comp=Z,5µm,19.0s
ANWB Willy Bob 116.36 27 PFAKE 03 49 30.0 +16
ANWB LR LR
comp=Z,7µm,21.0s
PAYG Puerto Ayora 116.68 65 PFAKE 03 49 30.0 +15
PAYG LR LR
comp=Z,6µm,20.0s
LSZ Lusaka 118.87 275 *e*PKPdf **PKPdf 03 49 19.1 +0.3**
LSZ *e*PP **PP 03 50 37.0 -1.0**
LSZ LR LR
comp=Z,21µm,19.0s
FDF Fort de France 119.30 28 PFAKE 03 49 30.0 +10
FDF LR LR
comp=Z,7µm,20.0s
VNDA Vanda 119.59 175 *e*PKPdf **PKPdf 03 49 17.9 -0.3**
VNDA PKP **PKPdf 03 49 18.1 -0.1**
VNDA PKKPbc **PKKPbc 03 59 30.4 -0.2**
VNDA Vanda 119.59 175 PKP **PKPdf 03 49 18.1 -0.1**
comp=Z,4.4nm,0.9s,baz=323,slow=3.7,SNR=10
VNDA PKKPbc **PKKPbc 03 59 30.4 -0.2**
comp=Z,1.4nm,0.8s,baz=180,slow=3.0,SNR=3.3
SBA Scott Base 120.23 174 PFAKE 03 49 30.0 +11
SBA LR LR
comp=Z,4µm,21.0s
BBGH Gun Hill 121.32 27 PFAKE 03 49 40.0 +17
BBGH LR LR
comp=Z,12µm,22.0s
GRGR Grenville 121.53 29 PFAKE 03 49 40.0 +16
GRGR LR LR
comp=Z,5µm,20.0s
ROSC El Rosal 122.16 46 *e*PKPdf **PKPdf 03 49 25.5 -0.1**
ROSC PKP **PKPdf 03 49 26.4 +0.8**
ROSC El Rosal 122.16 46 PKP **PKPdf 03 49 26.4 +0.8**
comp=Z,5.6nm,1.0s,baz=297,slow=2.3,SNR=3.3
SACV Santiago Islan 122.27 345 PFAKE 03 49 40.0 +15
SACV LR LR
comp=Z,6µm,20.0s
OTAV Otavalo 123.57 53 *e*PKPdf **PKPdf 03 49 28.9 +0.5**
OTAV LR LR
comp=Z,5µm,21.0s
DBIC Dimbokro 123.77 321 *e*PKPdf **PKPdf 03 49 27.6 -0.6**
DBIC *e*PP PP 03 51 01.9 -8.3
DBIC PP PP 03 51 07.0 -3.2
DBIC Dimbokro 123.77 321 PKP **PKPdf 03 49 27.6 -0.6**
comp=Z,16nm,1.1s,baz=21,slow=3.0,SNR=5.1
DBIC PP **PP 03 51 07.0 -3.2**
comp=Z,19nm,1.0s,baz=35,slow=8.5,SNR=3.3
LIC Lamto 124.24 321 *e*PKIKP **PKPdf 03 49 28.8 -0.3**
comp=Z,38nm,1.1s
LIC *e*R
comp=Z,18µm,19.5s
LIC Lamto 124.24 321 *e*PKPdf **PKPdf 03 49 28.8 -0.3**
MAW Mawson 124.54 207 PKP **PKPdf 03 49 28.5 +0.6**
MAW Mawson 124.54 207 PKP **PKPdf 03 49 28.5 +0.6**
comp=Z,19nm,1.0s,baz=343,slow=2.5,SNR=20
LBTB Lobatse 126.66 268 *e*PKPdf **PKPdf 03 49 34.3 +0.8**
BOSA Boshof 128.89 264 *e*PKPdf **PKPdf 03 49 37.3 -0.3**
BOSA PKP **PKPdf 03 49 38.0 +0.3**
BOSA *e*PP **PP 03 51 43.6 -1.8**
BOSA Boshof 128.89 264 PKP **PKPdf 03 49 38.0 +0.3**
comp=Z,16nm,1.0s,baz=76,slow=2.4,SNR=11
TSUM Tsumeb 129.19 279 *e*PKPdf **PKPdf 03 49 38.9 +0.4**
TSUM LR LR
comp=Z,9µm,20.0s
ATAH Atahualpa 129.34 59 PKP **PKPdf 03 49 39.5 +0.2**
ATAH Atahualpa 129.34 59 PKP **PKPdf 03 49 39.5 +0.2**
comp=Z,25nm,1.1s,baz=275,slow=1.9,SNR=8.5
QSPA South Pole Qui 131.54 180 *e*PKPdf **PKPdf 03 49 41.2 -0.1**
QSPA *e*PP **PP 03 51 57.6 -4.0**
QSPA *e*SKP 03 53 04.3
QSPA LR LR
comp=Z,5µm,22.0s
QSPA South Pole Qui 131.54 180 PKP **PKPdf 03 49 41.3 -0.1**
comp=Z,17nm,0.9s,baz=314,slow=1.6,SNR=12
SYO Syowa Base 133.19 209‖ *e*P **PKPdf 03 49 43.0 -1.3**
NNA Nana 133.97 62 PKP **PKPdf 03 49 47.5 0.0**
NNA *e*PKPdf **PKiKP 03 49 47.8 -1.1**
NNA LR LR
comp=Z,6µm,21.0s
NNA Nana 133.97 62 PKP **PKPdf 03 49 47.5 0.0**
comp=Z,11nm,0.7s,baz=284,slow=1.9,SNR=3.8
SUR Sutherland 134.10 262 PFAKE 03 50 00.0 +13
SUR LR LR
comp=Z,9µm,20.0s
SAML Samuel 139.68 43 *e*PKPpre PKPpre 03 49 51.6
SAML *e*PKPdf **PKPdf 03 49 58.4 +0.3**
SAML LR LR
comp=Z,6µm,22.0s
ASCN Ascension 141.00 324 PFAKE 03 50 10.0 +9.5
ASCN LR LR
comp=Z,2µm,21.0s
LPAZ La Paz 142.77 56 *e*PKPdf PKPpre 03 50 00.3
LPAZ PKPpre PKPpre 03 50 00.6
LPAZ La Paz 142.77 56 PKPbc PKPpre 03 50 00.6
comp=Z,4.1nm,1.0s,baz=307,slow=2.4,SNR=9.2
RCBR Riachuelo 144.17 359 *e*PKPdf **PKPab 03 50 02.5 -1.4**
RCBR LR LR
comp=Z,8µm,22.0s
HMBC Humberstone 144.55 63 ⇑*i*P PKPbc 03 50 05.4 0.0
HMBC Humberstone 144.55 63 ⇑*i*P PKPbc 03 50 05.4 0.0
PB01 Plate Boundary 145.35 64 ⇑*i*P **PKPab 03 50 08.3 +0.2**
PB01 Plate Boundary 145.35 64 ⇑*i*P **PKPab 03 50 08.3 +0.2**
SNAA Sanae 145.79 198 *e*P **PKPdf 03 50 06.8 -0.5**
SNAA Sanae 145.79 198 *e*PP PP 03 53 28.2 -1.3
SNAA Sanae 145.79 198 *e*PKPbc **PKPdf 03 50 06.7 -0.5**
SNAA Sanae 145.79 198 PKPbc **PKPdf 03 50 07.2 0.0**
comp=Z,57nm,1.1s,baz=107,slow=2.5,SNR=104
SIV San Ignacio 146.68 47 PKPbc **PKPbc 03 50 11.5 -0.5**
SIV San Ignacio 146.68 47 PKPbc **PKPbc 03 50 11.5 -0.5**
comp=Z,160nm,1.1s,baz=321,slow=1.9,SNR=95
LVC Limon Verde 146.81 65 ⇑*i*P **PKPdf 03 50 11.6 +0.9**
LVC Limon Verde 146.81 65 ⇑*i*P **PKPdf 03 50 11.6 +0.9**
VNA1 Neumayer--Stat 147.75 197 *e*P **PKPdf 03 50 11.1 +0.7**
VNA1 Neumayer--Stat 147.75 197 *e* PKPab 03 50 22.1 +6.3
VNA1 Neumayer--Stat 147.75 197 *e*PP PP 03 53 35.6 -5.3
LCO Las Campanas 149.52 76 ⇑*i*P **PKPbc 03 50 19.7 +0.2**
LCO Las Campanas 149.52 76 ⇑*i*P **PKPbc 03 50 19.7 +0.2**
TLL Tololo Astrono 150.07 78 ⇑*i*PKIKP **PKPbc 03 50 21.0 +0.1**
TLL Tololo Astrono 150.07 78 ⇑*i*P **PKPbc 03 50 20.9 +0.1**
TLL Tololo Astrono 150.07 78 ⇑*i*P **PKPbc 03 50 20.9 +0.1**
CLCH Cerro Calan 151.87 84 ⇑*i*P **PKPbc 03 50 25.0 +0.3**
BDFB Brasilia 152.08 24 PKP **PKPdf 03 50 19.7 +0.6**
BDFB PKPbc **PKiKP 03 50 25.9 -0.1**
BDFB Brasilia 152.08 24 PKP **PKPdf 03 50 19.7 +0.6**
comp=Z,11nm,1.1s,baz=346,slow=2.9,SNR=6.7
BDFB PKPbc **PKiKP 03 50 25.9 -0.1**
comp=Z,30nm,0.9s,baz=284,slow=1.9,SNR=19
PMSA Palmer Station 152.13 155 PFAKE 03 50 30.0 -3.9
PMSA LR LR
comp=Z,10µm,22.0s
CFAA Coronel Fontan 152.70 78 PKP **PKPdf 03 50 19.9 +0.4**
CFAA PKPbc **PKPbc 03 50 26.6 0.0**
CFAA Coronel Fontan 152.70 78 PKP **PKPdf 03 50 19.9 +0.4**
comp=Z,0.2nm,0.7s,baz=324,slow=5.7,SNR=5.1
CFAA PKPbc **PKPbc 03 50 26.6 0.0**
comp=Z,2.0nm,0.9s,baz=252,slow=2.1,SNR=13
PLCA Paso Flores 154.45 99 *e*PKPdf **PKPdf 03 50 22.1 +0.3**
PLCA PKP **PKPdf 03 50 23.1 +1.3**
PLCA PKPbc **PKiKP 03 50 30.6 +0.4**
PLCA *e*PKPbc PKPab 03 50 30.6 -14
PLCA *e*PKPab PKPab 03 50 46.1 +1.4
PLCA Paso Flores 154.45 99 PKP **PKPdf 03 50 23.1 +1.3**
comp=Z,1.7nm,0.8s,baz=40,slow=8.0,SNR=3.1
PLCA PKPbc **PKiKP 03 50 30.6 +0.4**
comp=Z,14nm,1.0s,baz=261,slow=3.5,SNR=13
CPUP Villa Florida 156.91 55 PKP **PKPdf 03 50 25.2 -0.2**
CPUP PKPab **PKPab 03 50 55.8 +0.4**
CPUP Villa Florida 156.91 55 PKP **PKPdf 03 50 25.2 -0.2**
comp=Z,9.5nm,1.2s,baz=65,slow=2.7,SNR=5.3
CPUP PKPab **PKPab 03 50 55.8 +0.4**
comp=Z,15nm,1.1s,baz=346,slow=4.8,SNR=5.4
SPB Sao Paulo 159.66 30 PFAKE 03 50 40.0 +11
SPB LR LR
comp=Z,9µm,21.0s
TRQA Tornquist 160.10 88 *e*PKPdf **PKPdf 03 50 28.5 -0.4**
TRQA *e*PKPab **PKPab 03 51 09.5 +0.4**
TRQA LR LR
comp=Z,8µm,22.0s
LPA La Plata 161.83 75 *ce*PKIKP **PKPdf 03 50 33.0 +2.2**
LPA PP PP 03 55 08.0 +7.1
EFI East Falkland 162.27 131 PFAKE 03 50 40.0 +9.3
EFI LR LR
comp=Z,13µm,20.0s

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*ISCJB **05** 03:36:52.7±0.2, 43°.65N±0°.04×140°.98E±0°.06, h216km±3km, mb4.2/23, Error ellipse: s-maj=7.3km s-min=5.0km az=33.0*
*MOS **05** 03:36:52.8±0.8, 43°.65N×141°.04E, h221km, mb4.2/16, Error ellipse: s-maj=13.1km s-min=9.6km az=85.0*
*NEIC **05** 03:36:53.8±0.5, 43°.63N×140°.99E, h212km±7km, mb4.5/5, Error ellipse: s-maj=14.2km s-min=6.4km az=138.0*
*IDC **05** 03:36:53.5±0.7, 43°.63N×140°.96E, h208km±7km, mb3.9/15, mb1 3.9/20, mb1mx3.8/34, mbtmp3.9/20, Error ellipse: s-maj=21.9km s-min=11.8km az=148.0*
*JMA **05** 03:36:54.1±0.1, 43°.67N×140°.89E, h206km±1km, M4.2*
ISC 05 03:36:53.6±0.6, 43°.64N±0°.05×140°.97E±0°.05, h211km±5km,
n81, σ0=74/98, mb4.3/23, 3C-7D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSK	**Shakotan**	**0.46**	**232**	‖P	**Pn**	**03 37 21.8**	**0.0**
JSK				*e*S	**S**	**03 37 42.7**	**-1.0**
JHR	**Hokuryu**	**0.56**	**79**	‖P	**Pn**	**03 37 23.0**	**+0.8**
JHR				*e*S	**S**	**03 37 45.3**	**+0.9**
JYG	**Yagishiri**	**0.86**	**23**	P	**Pn**	**03 37 23.6**	**0.0**
JYG				*e*S	**S**	**03 37 46.1**	**-0.9**
JEW	**Eniwo**	**0.87**	**156**	‖P	**Pn**	**03 37 24.4**	**+0.6**
JAB	**Ashibetsu**	**0.92**	**98**	‖P	**Pn**	**03 37 24.8**	**+0.8**
JAB				*e*S	**S**	**03 37 48.6**	**+1.1**
ASAJ	**Asahikawa**	**1.27**	**67**	P	**Pn**	**03 37 26.4**	**-0.1**
ASAJ				S	**S**	**03 37 51.5**	**-0.3**
ASAJ	**Asahikawa** 27nm,0.3s,baz=247,slow=7.7,SNR=18	**1.27**	**67**	P	**Pn**	**03 37 26.4**	**-0.1**
ASAJ	15nm,0.3s,baz=354,slow=19,SNR=7.8			S	**S**	**03 37 51.5**	**-0.3**
JFR	**Furan**	**1.28**	**111**	‖P	**Pn**	**03 37 26.6**	**+0.1**
JKK2	**Kamakawa 2**	**1.31**	**79**	P	**Pn**	**03 37 27.3**	**+0.6**
JKK2				*e*S	**S**	**03 37 52.3**	**0.0**
JKB	**Kayabe**	**1.75**	**178**	‖P	**Pn**	**03 37 30.7**	**+0.2**
JKB				*e*S	**S**	**03 37 58.9**	**0.0**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSE	**Soyaes**	**1.76**	**41**	⇑P	**Pn**	**03 37 30.6**	**+0.1**
JSE				*e*S	**S**	**03 37 59.0**	**-0.1**
JWK2	**Keihoku**	**1.81**	**21**	⇑P	**Pn**	**03 37 31.7**	**+0.7**
JWK2				*e*S	**S**	**03 38 00.7**	**+0.8**
JNBK	**Urakawa-nobuka**	**1.89**	**135**	P	**Pn**	**03 37 32.3**	**+0.5**
JNBK				*e*S	**S**	**03 38 02.8**	**+1.6**
JOSM	**Okushiri--Mats**	**1.90**	**216**	P	**Pn**	**03 37 32.0**	**0.0**
JOSM				*e*S	**S**	**03 38 00.5**	**-1.0**
JCH	**Churui**	**2.03**	**119**	P	**Pn**	**03 37 32.5**	**-0.7**
JCH				*e*S	**S**	**03 38 01.3**	**-2.4**
JAR	**Ashorobuto**	**2.07**	**98**	⇓P	**Pn**	**03 37 34.4**	**+0.8**
JAR				*e*S	**S**	**03 38 05.3**	**+0.9**
JTKR	**Abashiri--Toko**	**2.16**	**80**	P	**Pn**	**03 37 35.2**	**+0.7**
JTKR				*e*S	**S**	**03 38 06.7**	**+0.7**
JOT	**Ohata**	**2.25**	**178**	P	**Pn**	**03 37 35.9**	**+0.3**
JOT				*e*S	**S**	**03 38 08.7**	**+0.8**
JAK	**Akkeshi**	**2.80**	**102**	*e*S	**S**	**03 38 16.8**	**-1.6**
YSS	**Yuzh-Sakhalins**	**3.55**	**20**	⇑*i*PN	**Pn**	**03 37 51.1**	**+0.9**
YSS				*i* S	**S**	**03 38 32.2**	**-2.1**
YSS				pmax	pmax		
	comp=Z,420nm,0.4s						
YSS				pmax	pmax		
	comp=N,270nm,0.5s						
YSS				smax	smax		
	comp=N,390nm,1.0s						
YSS				smax	smax		
	comp=E,330nm,0.8s						
USRK	**Ussuriysk Arra**	**6.50**	**278**	P	**Pn**	**03 38 27.3**	**0.0**
	comp=E,1.4nm,0.3s,baz=85,slow=12,SNR=4.6						
MJAR	**Matsushiro Arr**	**7.39**	**198**	P	**Pn**	**03 38 39.6**	**+0.6**
MJAR	**Matsushiro Arr**	**7.39**	**198**	P	**Pn**	**03 38 39.6**	**+0.6**
	comp=E,0.7nm,0.3s,baz=333,slow=14,SNR=4.3						
JHJ	**Hachijo jima 2**	**10.54**	**185**	P	**Pn**	**03 39 18.3**	**-1.4**
	comp=E,8.7nm,0.3s,baz=24,slow=18,SNR=3.4						
JHJ				S	S	03 41 08.3	-10
	comp=E,9.4nm,0.3s,baz=45,slow=20,SNR=4.2						
KSRS	**Korea Array**	**11.68**	**243**	P	**Pn**	**03 39 34.8**	**+0.7**
	comp=E,0.5nm,0.3s,baz=57,slow=12,SNR=7.7						
KSAR	**Wonju Array Be**	**11.71**	**243**	P	**Pn**	**03 39 34.8**	**+0.3**
SKR	**Severo-Kuril's**	**12.48**	**50**	*e*PN	**Pn**	**03 39 41.2**	**-2.8**
SKR				pmax	pmax		
	comp=E,50nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
PETK	**Petropavlovsk-**	**14.58**	**44**	P	**Pn**	**03 40 09.5**	**-0.5**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**14.58**	**44**	P	**Pn**	**03 40 09.5**	**-0.5**
PETK	**Petropavlovsk-**	**14.58**	**44**	P	**Pn**	**03 40 09.5**	**-0.5**
	comp=Z,0.9nm,0.3s,baz=229,slow=13,SNR=6.1						
SONM	**Songino Array**	**24.36**	**292**	P	**P**	**03 41 52.7**	**+0.4**
SONM	**Songino Array**	**24.36**	**292**	P	**P**	**03 41 52.7**	**+0.4**
	comp=Z,7.1nm,0.8s,baz=100,slow=9.6,SNR=3.7						
ZALV	**Zalesovo Beam**	**37.46**	**306**	P	**P**	**03 43 46.6**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,10.0nm,0.3s						
ZALV	**Zalesovo Beam**	**37.46**	**306**	P	**P**	**03 43 46.6**	**+0.1**
ZALV	**Zalesovo Beam**	**37.46**	**306**	P	**P**	**03 43 46.6**	**+0.1**
	comp=Z,9.5nm,0.3s,baz=90,slow=8.4,SNR=18						
MK31	**Makanchi Array**	**40.62**	**296**	*e*P	**P**	**03 44 13.2**	**+0.4**
MK31	**Makanchi Array**	**40.62**	**296**	*e*P	**P**	**03 44 13.2**	**+0.4**
MKAR	**Makanchi Array**	**40.62**	**296**	P	**P**	**03 44 13.0**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR	**Makanchi Array**	**40.62**	**296**	P	**P**	**03 44 13.0**	**+0.2**
MKAR	**Makanchi Array**	**40.62**	**296**	P	**P**	**03 44 13.0**	**+0.2**
	comp=Z,4.3nm,0.6s,baz=81,slow=9.8,SNR=12						
KURK	**Kurchatov**	**41.84**	**302**	*e*P	**P**	**03 44 22.5**	**0.0**
KURK				pmax	pmax		
	comp=Z,24nm,0.8s						
KURK	**Kurchatov**	**41.84**	**302**	*e*P	**P**	**03 44 22.5**	**0.0**
	comp=Z,24nm,0.8s						
KURBB	**Kurchatov Arra**	**41.92**	**302**	P	**P**	**03 44 23.3**	**+0.1**
	comp=Z,12nm,0.5s,baz=76,slow=9.3,SNR=15						
ILAR	**Eielson Array**	**44.22**	**36**	P	**P**	**03 44 42.9**	**+1.5**
ILAR	**Eielson Array**	**44.22**	**36**	P	**P**	**03 44 42.9**	**+1.5**
	comp=Z,1.3nm,0.9s,baz=291,slow=7.6,SNR=4.2						
BVAR	**Borovoye Array**	**46.06**	**308**	P	**P**	**03 44 56.7**	**+0.6**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
BVAR	**Borovoye Array**	**46.06**	**308**	P	**P**	**03 44 56.7**	**+0.6**
BVAR	**Borovoye Array**	**46.06**	**308**	P	**P**	**03 44 56.7**	**+0.6**
	comp=Z,4.1nm,0.4s,baz=82,slow=9.8,SNR=13						
TKM2	**Tokmak 2**	**46.46**	**293**	*e*P	**P**	**03 45 00.5**	**+0.9**
TKM2				pmax	pmax		
	comp=Z,41nm,1.3s						
TKM2	**Tokmak 2**	**46.46**	**293**	*e*P	**P**	**03 45 00.5**	**+0.9**
	comp=Z,41nm,1.3s						
INK	**Inuvik**	**48.74**	**30**	P	**P**	**03 45 16.2**	**-0.2**
INK	**Inuvik**	**48.74**	**30**	P	**P**	**03 45 16.2**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=273,slow=12,SNR=12						
KULM	**Kulim**	**52.10**	**235**	*e*P	**P**	**03 45 41.2**	**-1.0**
	comp=Z,13nm,1.0s						
ABKAR	**Akbulak array**	**53.58**	**306**	*e*P	**P**	**03 45 53.1**	**+0.5**
	comp=Z,5.2nm,0.4s						
SPITS	**Spitsbergen Ar**	**53.99**	**348**	P	**P**	**03 45 55.1**	**-0.1**
SPITS	**Spitsbergen Ar**	**53.99**	**348**	P	**P**	**03 45 55.1**	**-0.1**
	comp=Z,1.7nm,0.4s,baz=78,slow=8.6,SNR=17						
AKTO	**Aktyubinsk**	**54.15**	**308**	P	**P**	**03 45 56.7**	**0.0**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKTO	**Aktyubinsk**	**54.15**	**308**	P	**P**	**03 45 56.7**	**0.0**
AKTO	**Aktyubinsk**	**54.15**	**308**	P	**P**	**03 45 56.7**	**0.0**
	comp=Z,6.1nm,0.9s,baz=59,slow=5.9,SNR=4.4						
KBL	**Kabul**	**54.96**	**287**	*e*P	**P**	**03 46 02.9**	**-0.2**
KBL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBL	**Kabul**	**54.96**	**287**	*e*P	**P**	**03 46 02.9**	**-0.2**
	comp=Z,5.9nm,0.7s						
KEV	**Kevo**	**57.18**	**338**	*e*p	**P**	**03 46 17.6**	**-0.3**
	comp=Z,6.4nm,0.6s						
KEV	**Kevo**	**57.18**	**338**	*e*P	**P**	**03 46 17.6**	**-0.3**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ARCES	**ARCESS Array B**	**57.73**	**338**	P	**P**	**03 46 21.9**	**+0.1**
ARCES	**ARCESS Array B**	**57.73**	**338**	P	**P**	**03 46 21.9**	**+0.1**
	comp=Z,5.3nm,0.9s,baz=56,slow=7.6,SNR=4.1						
JOF	**Joensuu**	**60.02**	**330**	*e*p	**P**	**03 46 37.2**	**-0.4**
	comp=Z,3.6nm,0.4s						
JOF	**Joensuu**	**60.02**	**330**	*e*P	**P**	**03 46 37.2**	**-0.4**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KAF	**Kangasniemi**	**62.32**	**331**	*e*p	**P**	**03 46 52.7**	**-0.3**
	comp=Z,4.9nm,0.5s						
KAF	**Kangasniemi**	**62.32**	**331**	*e*P	**P**	**03 46 52.7**	**-0.3**
KAF				pmax	pmax		
	comp=Z,5.0nm,0.5s						
FINES	**FINESS Array B**	**62.85**	**331**	P	**P**	**03 46 56.4**	**-0.2**
FINES	**FINESS Array B**	**62.85**	**331**	P	**P**	**03 46 56.4**	**-0.2**
	comp=Z,9.2nm,0.5s,baz=45,slow=9.2,SNR=15						
NB2	**NORSAR Subarra**	**67.99**	**336**	P	**P**	**03 47 29.3**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=36,slow=6.2						
NOA	**NORSAR Array B**	**67.99**	**336**	P	**P**	**03 47 29.6**	**+0.1**
NOA	**NORSAR Array B**	**67.99**	**336**	P	**P**	**03 47 29.6**	**+0.1**
	comp=Z,3.9nm,0.6s,baz=37,slow=6.3,SNR=7.7						
AKASG	**Malin Array Be**	**68.92**	**321**	P	**P**	**03 47 35.5**	**+0.1**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	**68.92**	**321**	P	**P**	**03 47 35.5**	**+0.1**
AKASG	**Malin Array Be**	**68.92**	**321**	P	**P**	**03 47 35.5**	**+0.1**
	comp=Z,1.6nm,0.4s,baz=40,slow=6.3,SNR=4.2						
BRTR	**Keskin Array B**	**74.28**	**310**	P	**P**	**03 48 08.3**	**+0.6**
BRTR	**Keskin Array B**	**74.28**	**310**	P	**P**	**03 48 08.3**	**+0.6**
	comp=Z,1.5nm,0.8s,baz=55,slow=3.6,SNR=3.3						
GERES	**GERESS Array B**	**76.95**	**327**	P	**P**	**03 48 22.4**	**-0.2**
GERES	**GERESS Array B**	**76.95**	**327**	P	**P**	**03 48 22.4**	**-0.2**
	comp=Z,0.6nm,0.4s,baz=35,slow=5.6,SNR=7.6						

*ISCJB **05** 03:50:31.0±0.4, 39°.79N±0°.02×25°.98E±0°.03, h11km±2km, Error ellipse: s-maj=3.4km s-min=2.6km az=163.4*
*ISK **05** 03:50:30.7, 39°.78N×26°.04E, h5km, MD3.3*
*DDA **05** 03:50:30.5, 39°.78N×26°.06E, h23km, MD3.3*
*ATH **05** 03:50:31.1, 39°.77N×26°.01E, h30km, MD3.2/9*
*THE **05** 03:50:31.9, 39°.79N×26°.04E, h10km±1km, ML2.8/3, Error ellipse: s-maj=1.7km s-min=0.4km az=223.0*
*CSEM **05** 03:50:31.7±0.1, 39°.78N×26°.03E, h8km, MD3.3, Error ellipse: s-maj=3.5km s-min=2.5km az=84.0*
ISC 05 03:50:30.8±0.8**, 39°.76N**±0°.02×**26°.00E**±0°.02**, h12**km±6km**,**
n132, σ1ˢ**12**/168**, 8C-2D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.10**	**27**	*i* P	**Pg**	**03 50 34.0**	**+0.4**
BOZC				*i* S	**Sg**	**03 50 35.5**	**-0.2**
EZN	**Ezine**	**0.26**	**75**	*e*PG	**Pg**	**03 50 35.8**	**-0.5**
EZN				*e*SG	**Sg**	**03 50 39.4**	**-0.5**
EZN	**Ezine**	**0.26**	**75**	*e*Pg	**Pg**	**03 50 35.8**	**-0.5**
EZN				*e*Sg	**Sg**	**03 50 39.4**	**-0.5**
PRK	**Paraskevi**	**0.55**	**157**	P	**Pb**	**03 50 43.0**	**+0.6**
PRK				S	**Sb**	**03 50 51.3**	**+1.1**
PRK	**Paraskevi**	**0.55**	**157**	*e*PN	**Pb**	**03 50 42.9**	**+0.6**
PRK				*e*SN	**Sb**	**03 50 51.3**	**+1.1**
PRK	**Paraskevi**	**0.55**	**157**	P	**Pb**	**03 50 43.0**	**+0.6**
PRK				S	**Sb**	**03 50 51.3**	**+1.1**
SIGR	**SIGRI**	**0.56**	**191**	P	**Pn**	**03 50 43.2**	**-1.2**
SIGR				S	**Sn**	**03 50 52.2**	**-1.3**
SIGR	**SIGRI**	**0.56**	**191**	P	**Pn**	**03 50 43.2**	**-1.2**
SIGR				S	**Sn**	**03 50 52.2**	**-1.3**
LIA	**Limnos Island**	**0.64**	**283**	P	**Pn**	**03 50 44.8**	**-0.8**
LIA				S	**Sn**	**03 50 54.2**	**-1.5**
LIA	**Limnos Island**	**0.64**	**283**	*e*PN	**Pn**	**03 50 44.6**	**-1.0**
LIA				*e*SN	**Sb**	**03 50 54.0**	**+1.3**
LIA	**Limnos Island**	**0.64**	**283**	P	**Pn**	**03 50 44.8**	**-0.8**
LIA				S	**Sn**	**03 50 54.2**	**-1.5**
AYVA	**Ayvalik**	**0.70**	**130**	*i* P	**Pb**	**03 50 44.9**	**0.0**
AYVA				*i* S	**Sb**	**03 50 54.7**	**+0.3**
AYVA	**Ayvalik**	**0.70**	**130**	*i* P	**Pb**	**03 50 44.9**	**0.0**
AYVA				*i* S	**Sb**	**03 50 54.7**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.74**	**30**	*e*PG	**Pg**	**03 50 44.8**	**-0.3**
GELI				*e*SG	**Sg**	**03 50 54.8**	**0.0**
GELI	**Tayfur-Gelibol**	**0.74**	**30**	*e*Pg	**Pg**	**03 50 44.8**	**-0.3**
GELI				*e*Sg	**Sg**	**03 50 54.8**	**0.0**
SMTH	**Samothraki Isl**	**0.80**	**334**	*e*PN	**Pb**	**03 50 46.8**	**+0.2**
SMTH				*e*SN	**Sb**	**03 50 58.3**	**+1.0**
LPK	**Lapseki**	**0.85**	**43**	*e*PG	**Pg**	**03 50 46.9**	**-0.3**
LPK	**Lapseki**	**0.85**	**43**	*e*Pg	**Pg**	**03 50 46.9**	**-0.3**
ENEZ	**Enez**	**0.99**	**7**	*e*PG	**Pb**	**03 50 49.3**	**-0.4**
ENEZ				*e*SG	**Sn**	**03 51 03.5**	**-0.7**
ENEZ	**Enez**	**0.99**	**7**	*e*Pg	**Pb**	**03 50 49.3**	**-0.4**
ENEZ				*e*Sg	**Sn**	**03 51 03.5**	**-0.7**
ERIK	**Erikli-Kesan**	**0.99**	**23**	*e*PG	**Pb**	**03 50 49.6**	**-0.3**
ERIK	**Erikli-Kesan**	**0.99**	**23**	*e*Pg	**Pb**	**03 50 49.6**	**-0.3**
ALN	**Alexandroupoli**	**1.14**	**2**	P	**Pb**	**03 50 52.0**	**-0.4**
ALN				S	**Sg**	**03 51 07.6**	**0.0**
ALN	**Alexandroupoli**	**1.14**	**2**	*e*PN	**Pb**	**03 50 52.2**	**-0.2**
ALN				*e*SN	**Sb**	**03 51 07.3**	**+0.2**
ALN	**Alexandroupoli**	**1.14**	**2**	P	**Pb**	**03 50 52.0**	**-0.4**
ALN				S	**Sg**	**03 51 07.6**	**0.0**
KRBG	**Karabiga-Canak**	**1.18**	**57**	*e*PN	**Pn**	**03 50 52.9**	**-0.2**
KRBG	**Karabiga-Canak**	**1.18**	**57**	*e*Pn	**Pn**	**03 50 52.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.30**	**44**	*e*PN	**Pn**	**03 50 54.5**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.30**	**44**	*e*Pn	**Pn**	**03 50 54.5**	**-0.2**
SART	**Tekirdag**	**1.30**	**44**	*i* P	**Pn**	**03 50 54.0**	**-0.8**
SART				*i* S	**Sn**	**03 51 12.2**	**+0.1**
SART	**Tekirdag**	**1.30**	**44**	*i* P	**Pn**	**03 50 54.0**	**-0.8**
SART				*i* S	**Sn**	**03 51 12.2**	**+0.1**
GONE	**Gonen-Balikesi**	**1.33**	**77**	*e*PN	**Pg**	**03 50 56.2**	**-0.2**
GONE	**Gonen-Balikesi**	**1.33**	**77**	*e*Pn	**Pg**	**03 50 56.2**	**-0.2**
CHOS	**Chios island**	**1.37**	**178**	P	**Pb**	**03 50 56.4**	**+0.1**
CHOS	**Chios island**	**1.37**	**178**	*e*PN	**Pb**	**03 50 56.2**	**-0.1**
CHOS				*e*SN	**Sg**	**03 51 14.4**	**-0.5**
CHOS	**Chios island**	**1.37**	**178**	P	**Pb**	**03 50 56.4**	**+0.1**
MFT	**Murefte**	**1.42**	**43**	*e*PN	**Pb**	**03 50 57.0**	**-0.2**
MFT	**Murefte**	**1.42**	**43**	*e*Pn	**Pb**	**03 50 57.0**	**-0.2**
RDO	**Rodhopi**	**1.43**	**346**	P	**Pn**	**03 50 56.7**	**+0.2**
RDO	**Rodhopi**	**1.43**	**346**	*e*PN	**Pb**	**03 50 57.3**	**0.0**
RDO	**Rodhopi**	**1.43**	**346**	P	**Pn**	**03 50 56.7**	**+0.2**
BALB	**Balikesir**	**1.46**	**94**	*e*PN	**Pb**	**03 50 58.0**	**+0.2**
BALB	**Balikesir**	**1.46**	**94**	*e*Pn	**Pb**	**03 50 58.0**	**+0.2**
URLA	**Izmir**	**1.47**	**161**	*i* P	**Pb**	**03 50 57.7**	**-0.3**
URLA				*i* S	**Sb**	**03 51 16.5**	**-0.2**
URLA	**Izmir**	**1.47**	**161**	*i* P	**Pb**	**03 50 57.7**	**-0.3**
URLA				*i* S	**Sb**	**03 51 16.5**	**-0.2**
MRMT	**Marmara Adasi**	**1.49**	**55**	*e*PN	**Pb**	**03 50 58.0**	**-0.4**
MRMT	**Marmara Adasi**	**1.49**	**55**	*e*Pn	**Pb**	**03 50 58.0**	**-0.4**
BLCB	**Balcova**	**1.59**	**149**	*e*PN	**Pg**	**03 51 00.6**	**-0.7**
BLCB	**Balcova**	**1.59**	**149**	*e*Pn	**Pg**	**03 51 00.6**	**-0.7**
BNT	**Bandirma**	**1.59**	**67**	*e*PN	**Pn**	**03 50 59.1**	**+0.4**
BNT	**Bandirma**	**1.59**	**67**	*e*Pn	**Pn**	**03 50 59.1**	**+0.4**
OUR	**Ouranopolis**	**1.65**	**291**	P	**Pb**	**03 51 00.2**	**-0.9**
OUR	**Ouranopolis**	**1.65**	**291**	P	**Pb**	**03 51 00.2**	**-0.9**
AKHS	**Akhisar**	**1.66**	**121**	*i* P	**Pn**	**03 51 00.0**	**+0.3**
AKHS				*i* S	**Sb**	**03 51 22.2**	**+0.1**
AKHS	**Akhisar**	**1.66**	**121**	*i* P	**Pn**	**03 51 00.0**	**+0.3**
AKHS				*i* S	**Sb**	**03 51 22.2**	**+0.1**
IZM	**Izmir**	**1.68**	**144**	*e*PN	**Pb**	**03 51 01.2**	**-0.4**
IZM	**Izmir**	**1.68**	**144**	*e*Pn	**Pb**	**03 51 01.2**	**-0.4**
TKR	**Tekirdag**	**1.70**	**43**	*e*PN	**Pb**	**03 51 01.4**	**-0.5**
TKR	**Tekirdag**	**1.70**	**43**	*e*Pn	**Pb**	**03 51 01.5**	**-0.5**
DURS	**Dursunbey**	**1.92**	**94**	*i* P	**Pn**	**03 51 03.4**	**+0.1**
DURS				*i* S	**Sn**	**03 51 27.3**	**-0.1**
DURS	**Dursunbey**	**1.92**	**94**	*i* P	**Pn**	**03 51 03.4**	**+0.1**
DURS				*i* S	**Sn**	**03 51 27.3**	**-0.1**
DST	**Dursunbey**	**2.03**	**93**	*e*PN	**Pb**	**03 51 06.1**	**-1.5**
DST	**Dursunbey**	**2.03**	**93**	*e*Pn	**Pb**	**03 51 06.1**	**-1.5**
PLG	**Polygyros**	**2.05**	**288**	*e*PN	**Pn**	**03 51 05.5**	**+0.4**
EDRB	**Edirne**	**2.16**	**15**	*e*PN	**Pb**	**03 51 08.1**	**-1.7**
EDRB	**Edirne**	**2.16**	**15**	*e*Pn	**Pb**	**03 51 08.1**	**-1.7**
DEMI	**Demirci**	**2.23**	**108**	*i* P	**Pb**	**03 51 09.4**	**-1.5**
DEMI	**Demirci**	**2.23**	**108**	*i* P	**Pb**	**03 51 09.4**	**-1.5**
SLVT	**Silivri**	**2.24**	**48**	*e*PN	**Pb**	**03 51 09.3**	**-1.8**
SLVT	**Silivri**	**2.24**	**48**	*e*Pn	**Pb**	**03 51 09.3**	**-1.8**
ORLT	**Orhaneli**	**2.25**	**82**	*e*PN	**Pn**	**03 51 09.3**	**+1.5**
ORLT	**Orhaneli**	**2.25**	**82**	*e*Pn	**Pn**	**03 51 09.3**	**+1.5**
GCAM	**G?zelcaml?**	**2.27**	**154**	*i* P	**Pg**	**03 51 12.9**	**-1.4**
GCAM				*i* S	**Sg**	**03 51 43.3**	**-0.4**
GCAM	**G?zelcaml?**	**2.27**	**154**	*i* P	**Pg**	**03 51 12.9**	**-1.4**
GCAM				*i* S	**Sg**	**03 51 43.3**	**-0.4**
NVR	**Nevrokopi**	**2.27**	**315**	*e*PB	**Pn**	**03 51 09.4**	**+1.3**
MDNY	**Mudanya-Bursa**	**2.30**	**74**	*e*PN	**Pn**	**03 51 09.8**	**+1.4**
MDNY	**Mudanya-Bursa**	**2.30**	**74**	*e*Pn	**Pn**	**03 51 09.8**	**+1.4**
ELBA	**Catalca**	**2.32**	**52**	*i* P	**Pn**	**03 51 10.3**	**+1.6**
ELBA				*i* S	**Sn**	**03 51 35.0**	**-2.2**
ELBA	**Catalca**	**2.32**	**52**	*i* P	**Pn**	**03 51 10.3**	**+1.6**
ELBA				*i* S	**Sn**	**03 51 35.0**	**-2.2**
ARMT	**Armutlu**	**2.34**	**69**	*e*PN	**Pn**	**03 51 10.4**	**+1.4**
ARMT	**Armutlu**	**2.34**	**69**	*e*Pn	**Pn**	**03 51 10.4**	**+1.4**
MANT	**Manisa**	**2.36**	**122**	*i* P	**Pn**	**03 51 11.1**	**+1.6**
MANT				*i* S	**Sb**	**03 51 42.3**	**-0.2**
MANT	**Manisa**	**2.36**	**122**	*i* P	**Pn**	**03 51 11.1**	**+1.6**
MANT				*i* S	**Sb**	**03 51 42.3**	**-0.2**
KULA	**Kula-Manisa**	**2.42**	**120**	*e*PN	**Pn**	**03 51 11.6**	**+1.5**
KULA	**Kula-Manisa**	**2.42**	**120**	*e*Pn	**Pn**	**03 51 11.6**	**+1.5**
CTKS	**Kestanelik-??a**	**2.42**	**52**	*e*PN	**Pn**	**03 51 11.6**	**+1.5**
CTKS	**Kestanelik-??a**	**2.42**	**52**	*e*Pn	**Pn**	**03 51 11.6**	**+1.5**
ULDT	**Uludag**	**2.44**	**80**	*i* P	**Pn**	**03 51 10.2**	**-0.4**
ULDT				*i* S	**Sb**	**03 51 45.6**	**+0.7**
ULDT	**Uludag**	**2.44**	**80**	*i* P	**Pn**	**03 51 10.2**	**-0.4**
ULDT				*i* S	**Sb**	**03 51 45.6**	**+0.7**
CTYL	**Yal??k??y-??at**	**2.45**	**45**	*e*PN	**Pn**	**03 51 12.2**	**+1.7**
CTYL	**Yal??k??y-??at**	**2.45**	**45**	*e*Pn	**Pn**	**03 51 12.2**	**+1.7**
BGKT	**Bogazkoy**	**2.55**	**55**	*e*PN	**Pn**	**03 51 13.0**	**+1.1**
BGKT	**Bogazkoy**	**2.55**	**55**	*e*Pn	**Pn**	**03 51 13.0**	**+1.1**
AYDN	**Tasoluk**	**2.56**	**144**	*i* P	**Pn**	**03 51 13.4**	**+1.3**
AYDN	**Tasoluk**	**2.56**	**144**	*i* P	**Pn**	**03 51 13.4**	**+1.3**
BUY	**Buyukada**	**2.63**	**64**	*i* P	**Pb**	**03 51 15.8**	**-2.0**
BUY	**Buyukada**	**2.63**	**64**	*i* P	**Pb**	**03 51 15.7**	**-2.0**
ISK	**Istanbul-Kandi**	**2.68**	**60**	*e*PN	**Pn**	**03 51 15.3**	**+1.7**
ISK	**Istanbul-Kandi**	**2.68**	**60**	*e*Pn	**Pn**	**03 51 15.3**	**+1.7**
TVSB	**Tavsanli**	**2.69**	**95**	*e*PN	**Pn**	**03 51 15.6**	**+1.6**
TVSB	**Tavsanli**	**2.69**	**95**	*e*Pn	**Pn**	**03 51 15.6**	**+1.6**
APE	**Apeiranthos**	**2.71**	**188**	*e*PN	**Pn**	**03 51 16.4**	**+2.3**
APE	**Apeiranthos**	**2.71**	**188**	⇑*i*P	**Sn**	**03 51 48.8**	**+2.0**
APE	**Apeiranthos**	**2.71**	**188**	*e*Pn	**Pn**	**03 51 16.4**	**+2.3**
IZI	**Iznik**	**2.73**	**77**	*e*PN	**Pn**	**03 51 15.9**	**+1.4**
IZI	**Iznik**	**2.73**	**77**	*e*Pn	**Pn**	**03 51 15.9**	**+1.4**
KLYT	**Kilyos**	**2.76**	**56**	*e*PN	**Pn**	**03 51 16.2**	**+1.4**
KLYT	**Kilyos**	**2.76**	**56**	*e*Pn	**Pn**	**03 51 16.2**	**+1.4**
GDZ	**Gediz**	**2.78**	**103**	*i* P	**Pn**	**03 51 15.9**	**+0.7**
GDZ	**Gediz**	**2.78**	**103**	*i* P	**Pn**	**03 51 15.9**	**+0.7**
BODT	**Bodrum**	**2.88**	**159**	*e*PN	**Pn**	**03 51 18.2**	**+1.7**
BODT	**Bodrum**	**2.88**	**159**	*e*Pn	**Pn**	**03 51 18.2**	**+1.7**
ADVT	**Abdulvahap**	**2.95**	**76**	*e*PN	**Pn**	**03 51 19.1**	**+1.7**
ADVT	**Abdulvahap**	**2.95**	**76**	*e*Pn	**Pn**	**03 51 19.1**	**+1.7**
GRG	**Griva**	**3.00**	**295**	*e*PN	**Pn**	**03 51 18.8**	**+0.7**
KHAL	**Karahalli**	**3.05**	**116**	*i* P	**Pn**	**03 51 19.4**	**+0.5**
KHAL	**Karahalli**	**3.05**	**116**	*i* P	**Pn**	**03 51 19.4**	**+0.5**
SILT	**Sile**	**3.11**	**62**	*e*PN	**Pn**	**03 51 21.4**	**+1.8**
SILT	**Sile**	**3.11**	**62**	*e*Pn	**Pn**	**03 51 21.4**	**+1.8**
ALT	**Altintas**	**3.26**	**101**	*e*PN	**Pn**	**03 51 23.7**	**+1.9**
ALT	**Altintas**	**3.26**	**101**	*e*Pn	**Pn**	**03 51 23.7**	**+1.9**
VTS	**Vitosha**	**3.53**	**324**	⇑*i*P	**Sn**	**03 52 07.7**	**+0.5**
GULT	**Gulveren**	**3.53**	**78**	*e*PN	**Pn**	**03 51 27.5**	**+2.0**
GULT	**Gulveren**	**3.53**	**78**	*e*Pn	**Pn**	**03 51 27.5**	**+2.0**
MLR	**Muntele Rosu**	**5.73**	**360**	⇓*i*P	Pn	03 51 59.0	+3.3
MLR	**Muntele Rosu**	**5.73**	**360**	⇓*i*P	Pn	03 51 59.0	+3.3
LOT	**Lotru**	**5.92**	**345**	⇑*i*P	**Pn**	**03 51 59.3**	**+1.0**
LOT	**Lotru**	**5.92**	**345**	⇑*i*P	**Pn**	**03 51 59.3**	**+1.0**
VRI	**Vrincioaia**	**6.13**	**5**	⇑*i*P	**Pn**	**03 52 03.6**	**+2.5**
VRI	**Vrincioaia**	**6.13**	**5**	⇑*i*P	**Pn**	**03 52 03.6**	**+2.5**
BZS	**Buzias**	**6.69**	**333**	⇑*i*P	**Pn**	**03 52 09.6**	**+0.9**
BZS	**Buzias**	**6.69**	**333**	⇑*i*P	**Pn**	**03 52 09.6**	**+0.9**

IDC 05 04:18:40.7±1.3**, 15°.54N**×**86°.24W, h0**km**, mb3.7**/5**, mb1 4.1**/6**, mb1mx3.7**/25**, mbtmp3.9**/6**, ML4.6**/1**, Error ellipse: s-maj=67.5km s-min=22.3km az=59.0, Honduras**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**5.05**	**338**	Pn	Pn	04 19 56.7	-1.0
	25nm,0.3s,baz=152,slow=12,SNR=109						
TEIG				Sn	Sn	04 20 51.7	-5.0
	13nm,0.3s,baz=74,slow=23,SNR=11						
TKL	**Tuckaleechee C**	**20.16**	**6**	P	Pn	04 23 17.6	-0.8
	1.1nm,0.3s,baz=135,slow=10.0,SNR=3.8						
TKL				S	S	04 26 54.5	-9.3
	1.8nm,0.5s,baz=276,slow=19,SNR=4.7						
TXAR	**Lajitas Array**	**21.12**	**313**	P	P	04 23 28.2	+0.8
	3.6nm,0.9s,baz=138,slow=11,SNR=28						
SIV	**San Ignacio**	**39.99**	**140**	P	P	04 26 17.2	-0.3
	1.8nm,0.8s,baz=311,slow=9.0,SNR=7.2						
YKA	**Yellowknife Ar**	**50.98**	**344**	P	P	04 27 43.3	-0.6
	0.8nm,0.7s,baz=137,slow=8.1,SNR=11						
ILAR	**Eielson Array**	**63.70**	**335**	P	P	04 29 13.2	-0.6
	0.4nm,0.7s,baz=133,slow=4.6,SNR=5.2						
WRA	**Warramunga Arr**	**141.17**	**257**	PKP	PKPdf	04 38 13.3	-0.9
	0.3nm,0.7s,baz=96,slow=1.2,SNR=4.8						
ASAR	**Alice Springs**	**141.43**	**251**	PKP	PKPdf	04 38 13.9	-0.7
	0.4nm,0.7s,baz=105,slow=1.9,SNR=5.2						
CMAR	**Chiang Mai Arr**	**145.83**	**351**	PKPbc	PKPbc	04 38 22.9	+0.1
	1.5nm,0.6s,baz=343,slow=3.7,SNR=4.5						

MEX 05 04:44:48.8±1.0**, 18°.01N**×**100°.09W, h54**km±11km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.37**	**318**	*e*P	Pn	04 44 57.1	-1.9
ARIG				*i* S	Sn	04 45 04.7	-1.6
MEIG	**Mezcala**	**0.45**	**100**	*e*P	Pn	04 44 57.8	-2.2
MEIG				*e*S	Sn	04 45 05.8	-2.2
PLIG	**Platanillo**	**0.68**	**55**	*e*P	Pn	04 45 01.3	-1.3
PLIG				*i* S	Sn	04 45 11.6	-1.0
CAIG	**El Cayaco**	**0.97**	**190**	*e*P	Pn	04 45 04.6	-1.7
CAIG				*i* S	Sn	04 45 18.0	-1.2
ACX	**Acapulco**	**1.15**	**169**	*i* P	Pn	04 45 07.4	-1.4
ACX				*e*S	Sn	04 45 21.2	-2.4
YAIG	**Yautepec**	**1.29**	**49**	*i* P	Pn	04 45 09.6	-1.2
YAIG				*i* S	Sn	04 45 25.9	-1.2
ZIIG	**Zihuatanejo**	**1.37**	**253**	*i* P	Pn	04 45 10.9	-0.7
ZIIG				*i* S	Sn	04 45 27.0	-1.8
PPM	**Popocatepetl**	**1.74**	**53**	*i* P	Pn	04 45 16.6	-0.8
PPM				*i* S	Sn	04 45 36.2	-2.7

*MDD **05** 04:52:16.9±2.4, 37°.45N×13°.60W, h0km, mb3.8/7, Error ellipse: s-maj=25.9km s-min=18.7km az=14.0*
*IGIL **05** 04:52:17.2, 37°.40N×13°.64W, h0km, ML2.1*
*INMG **05** 04:52:18.1±1.0, 37°.43N×13°.96W, h0km, ML2.2, Error ellipse: s-maj=7.8km s-min=7.7km az=156.0*
*PDA **05** 04:52:18.1±1.0, 37°.43N×13°.96W, h0km, ML2.2, Error ellipse: s-maj=7.8km s-min=7.7km az=156.0*
*CSEM **05** 04:52:19.8±0.4, 37°.57N×13°.35W, h10km, mb3.8/7, Error ellipse: s-maj=9.5km s-min=6.7km az=20.0*
ISC 05 04:52:17.6±3.5**, 37°.56N**±0°.10×**13°.5W**±0°.2**, h10**km**, n45,**
σ1ˢ**04**/78**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMAFR	**Mafra**	**3.59**	**66**	P	**Pn**	**04 53 14.9**	**+1.6**
	0.7nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**04 53 57.3**	**+1.6**
	6.3nm,0.2s,SNR=7.9						
PMAFR	**Mafra**	**3.59**	**66**	P	**Pn**	**04 53 14.9**	**+1.6**
	0.7nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**04 53 57.3**	**+1.6**
	6.3nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.74**	**95**	*e*Pn	**Pn**	**04 53 15.4**	**+0.1**
PFVI				*e*Sn	**Sn**	**04 53 58.3**	**-1.1**
PFVI				A	A	04 53 59.2	
	2.6nm,0.1s						
PFVI	**Vila Bisbo**	**3.74**	**95**	P	**Pn**	**04 53 15.2**	**-0.1**
	0.7nm,0.0s,SNR=7.9						
PFVI				S	**Sn**	**04 53 58.3**	**-1.1**
	3.5nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**3.74**	**95**	*e*Pn	**Pn**	**04 53 15.4**	**+0.1**
PFVI				S	**Sn**	**04 53 58.3**	**-1.1**
	3.5nm,0.2s,SNR=7.9						
PTEO	**Sao Teotonio**	**3.78**	**89**	*e*Pn	**Pn**	**04 53 18.0**	**+2.0**
PTEO				*e*Sn	**Sn**	**04 54 00.0**	**-0.5**
PTEO	**Sao Teotonio**	**3.78**	**89**	P	**Pn**	**04 53 18.0**	**+2.0**
PTEO				S	**Sn**	**04 54 00.0**	**-0.5**
PTEO	**Sao Teotonio**	**3.78**	**89**	P	**Pn**	**04 53 18.0**	**+2.0**
PTEO				S	**Sn**	**04 54 00.0**	**-0.5**
MORF	**Marmelete**	**3.85**	**92**	*e*Pn	**Pn**	**04 53 17.4**	**+0.4**
MORF				*e*Sn	**Sn**	**04 54 00.7**	**-1.7**
MORF				A	A	04 54 05.1	
	2.4nm,0.1s						
MORF	**Marmelete**	**3.85**	**92**	P	**Pn**	**04 53 17.2**	**+0.2**
MORF				S	**Sn**	**04 54 01.7**	**-0.7**
MORF	**Marmelete**	**3.85**	**92**	*e*Pn	**Pn**	**04 53 17.4**	**+0.4**
MORF				*e*Sn	**Sn**	**04 54 00.7**	**-1.7**
	2.4nm,0.1s						
MORF				S	**Sn**	**04 54 01.7**	**-0.7**
PNCL	**Nicolau / Gran**	**3.96**	**81**	*e*Pn	**Pn**	**04 53 19.3**	**+0.9**
PNCL				*e*Sn	**Sn**	**04 54 05.1**	**+0.2**
PNCL	**Nicolau / Gran**	**3.96**	**81**	*e*Pn	**Pn**	**04 53 19.3**	**+0.9**
PNCL				*e*Sn	**Sn**	**04 54 05.1**	**+0.2**
MOE	**Montemor**	**4.17**	**75**	*e*Sn	**Sn**	**04 54 10.0**	**0.0**
MOE	**Montemor**	**4.17**	**75**	S	**Sn**	**04 54 10.0**	**0.0**
MOE	**Montemor**	**4.17**	**75**	S	**Sn**	**04 54 10.0**	**0.0**
MESJ	**Messejana**	**4.18**	**85**	*e*P	**Pn**	**04 53 21.9**	**+0.4**
MESJ				*e*S	**Sn**	**04 54 10.3**	**-0.1**
MESJ				AML	AML	04 54 14.8	
	comp=N,3.5nm,0.2s						
MESJ	**Messejana**	**4.18**	**85**	*e*P	**Pn**	**04 53 21.9**	**+0.4**
MESJ				*e*S	**Sn**	**04 54 10.3**	**-0.1**
MESJ	**Messejana**	**4.18**	**85**	P	**Pn**	**04 53 21.9**	**+0.4**
MESJ				S	**Sn**	**04 54 10.3**	**-0.1**
MESJ	**Messejana**	**4.18**	**85**	P	**Pn**	**04 53 21.9**	**+0.4**
MESJ				S	**Sn**	**04 54 10.3**	**-0.1**
PBDV	**Barranco-do-Ve**	**4.43**	**92**	*e*Sn	**Sn**	**04 54 16.8**	**+0.2**
PBDV	**Barranco-do-Ve**	**4.43**	**92**	S	**Sn**	**04 54 16.8**	**+0.2**
PBDV	**Barranco-do-Ve**	**4.43**	**92**	S	**Sn**	**04 54 16.8**	**+0.2**
PBEJ	**Beja**	**4.47**	**82**	*e*Sn	**Sn**	**04 54 17.1**	**-0.5**
PBEJ	**Beja**	**4.47**	**82**	S	**Sn**	**04 54 17.1**	**-0.5**
PBEJ	**Beja**	**4.47**	**82**	S	**Sn**	**04 54 17.1**	**-0.5**
PVAQ	**Vaqueiros**	**4.59**	**90**	*e*Pn	**Pn**	**04 53 27.7**	**+0.6**
PVAQ				*e*Sn	**Sn**	**04 54 19.8**	**-0.6**
PVAQ				A	A	04 54 25.0	
	comp=N,2.7nm,0.1s						
PVAQ	**Vaqueiros**	**4.59**	**90**	P	**Pn**	**04 53 27.7**	**+0.6**
PVAQ				S	**Sn**	**04 54 19.8**	**-0.6**
	comp=N,2.7nm,0.1s						
PVAQ	**Vaqueiros**	**4.59**	**90**	P	**Pn**	**04 53 27.7**	**+0.6**
PVAQ				S	**Sn**	**04 54 19.8**	**-0.6**
	comp=N,2.7nm,0.1s						
EGRO	**El Granado**	**4.77**	**88**	P	**Pn**	**04 53 30.0**	**+0.5**
	comp=N,0.2nm,0.0s,SNR=7.9						
EGRO				S	**Sn**	**04 54 24.4**	**-0.5**
	comp=N,2.0nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.77**	**88**	P	**Pn**	**04 53 30.0**	**+0.5**
	comp=N,0.2nm,0.0s,SNR=7.9						
EGRO				S	**Sn**	**04 54 24.4**	**-0.5**
	comp=N,2.0nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**4.82**	**73**	*e*Sn	**Sn**	**04 54 24.9**	**-1.3**
PESTR	**Estremoz**	**4.82**	**73**	S	**Sn**	**04 54 24.9**	**-1.3**
PESTR	**Estremoz**	**4.82**	**73**	S	**Sn**	**04 54 24.9**	**-1.3**
PBAR	**Barrancos**	**5.14**	**81**	*e*Pn	**Pn**	**04 53 35.6**	**+1.0**
PBAR				*e*Sn	**Sn**	**04 54 32.4**	**-1.5**
PBAR	**Barrancos**	**5.14**	**81**	P	**Pn**	**04 53 35.6**	**+1.0**
PBAR				S	**Sn**	**04 54 32.4**	**-1.5**

PBAR	**Barrancos**	**5.14**	**81**	P	**Pn**	**04 53 35.6**	**+1.0**
PBAR				S	**Sn**	**04 54 32.4**	**-1.5**
EBAD	**Badajoz**	**5.24**	**75**	P	**Pn**	**04 53 36.9**	**+0.9**
	comp=N,0.9nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**04 54 35.0**	**-1.4**
	comp=N,1.4nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**5.24**	**75**	P	**Pn**	**04 53 36.9**	**+0.9**
	comp=N,0.9nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**04 54 35.0**	**-1.4**
	comp=N,1.4nm,0.2s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.41**	**86**	P	**Pn**	**04 53 38.2**	**-0.1**
	comp=N,0.1nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**04 54 39.7**	**-0.9**
	comp=N,0.4nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.41**	**86**	P	**Pn**	**04 53 38.2**	**-0.1**
	comp=N,0.1nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**04 54 39.7**	**-0.9**
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**6.16**	**52**	P	**Pn**	**04 53 48.9**	**+0.2**
	comp=N,0.3nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**04 54 58.6**	**-0.7**
	comp=N,0.2nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**6.16**	**52**	P	**Pn**	**04 53 48.9**	**+0.2**
	comp=N,0.3nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**04 54 58.6**	**-0.7**
	comp=N,0.2nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.39**	**31**	P	**Pn**	**04 53 53.0**	**+1.2**
	comp=N,0.5nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**04 55 00.9**	**-3.9**
	comp=N,0.5nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.39**	**31**	P	**Pn**	**04 53 53.0**	**+1.2**
	comp=N,0.5nm,0.1s,SNR=7.9						

IDC 05 05:26:57.1±1.2**, 15°.85N×85°.73W, h0km, mb3.8**/6**, mb1 4.3**/7**, mb1mx3.9**/24**, mbtmp3.9**/7**, ML4.9**/1**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx3.4**/30**, Error ellipse: s-maj=87.1km s-min=22.3km az=53.0, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	**Tepich**	**4.98**	**331**	Pn	Pn	05 28 13.2	-0.1
	42nm,0.3s,baz=146,slow=14,SNR=49						
TEIG				Sn	Sn	05 29 07.9	-3.6
	30nm,0.3s,baz=90,slow=21,SNR=8.8						
TEIG				LR	LR	05 30 21.6	
	comp=Z,412nm,19.0s,baz=337,slow=41						
TKL	**Tuckaleechee C**	**19.80**	**5**	P	Pn	05 31 35.5	+4.7
	0.1nm,0.3s,baz=130,slow=16,SNR=2.2						
TKL				S	S	05 35 10.4	-2.9
	0.2nm,0.3s,baz=302,slow=18,SNR=2.5						
TXAR	**Lajitas Array**	**21.28**	**312**	P	P	05 31 44.9	-0.5
	2.8nm,0.6s,baz=134,slow=11,SNR=47						
TXAR				S	S	05 35 29.2	-14
	0.2nm,0.8s,baz=64,slow=6.1,SNR=3.5						
PDAR	**Pinedale Array**	**33.70**	**328**	P	P	05 33 40.4	0.0
	1.1nm,1.0s,baz=128,slow=9.6,SNR=4.7						
NVAR	**Mina Array Bea**	**36.39**	**315**	P	P	05 34 04.3	+0.6
	0.9nm,0.8s,baz=118,slow=8.0,SNR=5.1						
SIV	**San Ignacio**	**39.92**	**141**	P	P	05 34 33.4	0.0
	1.7nm,1.0s,baz=325,slow=12,SNR=5.0						
YKA	**Yellowknife Ar**	**50.83**	**343**	P	P	05 35 59.3	+0.1
	2.4nm,0.8s,baz=138,slow=8.0,SNR=34						
YKA				PcP	PcP	05 37 15.4	-0.6
	0.5nm,1.0s,baz=141,slow=4.5,SNR=5.1						
ILAR	**Eielson Array**	**63.63**	**335**	P	P	05 37 29.4	-0.3
	0.7nm,0.7s,baz=122,slow=5.3,SNR=12						
ASAR	**Alice Springs**	**141.99**	**252**	PKP	PKPdf	05 46 29.9	-2.1
	0.5nm,0.7s,baz=94,slow=1.8,SNR=4.9						
CMAR	**Chiang Mai Arr**	**145.60**	**352**	PKPbc	PKPdf	05 46 37.7	-0.8
	2.4nm,0.7s,baz=335,slow=3.2,SNR=8.8						

*MOS **05** 05:27:22.6±0.9, 32°.46N×137°.85E, h355km, mb4.1/6, Error ellipse: s-maj=23.0km s-min=11.8km az=92.2*
*ISCJB **05** 05:27:23.5±0.5, 32°.58N±0°.07×137°.93E±0°.06, h356km±3km, mb3.7/13, Error ellipse: s-maj=10.7km s-min=8.0km az=162.6*
*JMA **05** 05:27:23.5±0.2, 32°.63N×138°.03E, h360km, M3.3*
*IDC **05** 05:27:24.0±0.7, 32°.53N×137°.87E, h350km±5km, mb3.3/12, mb1 3.5/17, mb1mx3.3/32, mbtmp3.4/17, Error ellipse: s-maj=14.0km s-min=13.1km az=46.0*
ISC 05 05:27:24.1±0.8**, 32°.57N**±0°.08×**137°.93E**±0°.06**, h350**km±6km**, n44,** σ1**°.01**/56**, mb3.8**/13**, 1C, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TK02	**Tokai 2**	**1.38**	**354**	P	**Pn**	**05 28 12.4**	**+1.1**
TTO2	**TONANKAI O.B.S**	**1.39**	**327**	P	**Pn**	**05 28 12.7**	**+1.4**
TTO1	**TONANKAI O.B.S**	**1.42**	**318**	P	**Pn**	**05 28 12.6**	**+1.1**
TTO4	**TONANKAI O.B.S**	**1.47**	**347**	P	**Pn**	**05 28 13.0**	**+1.3**
JHJ	**Hachijo jima 2**	**1.65**	**70**	P	**Pn**	**05 28 13.8**	**+0.6**
	19nm,0.3s,baz=354,slow=9.2,SNR=12						
JHJ				S	**S**	**05 28 53.6**	**+1.1**
	60nm,0.3s,baz=217,slow=20,SNR=11						
JHJ2	**Mitsune**	**1.68**	**71**	P	**Pn**	**05 28 13.7**	**+0.4**
JHJ2				eS	**S**	**05 28 50.8**	**-2.0**
JIE	**Ise**	**2.08**	**331**	P	**Pn**	**05 28 16.8**	**+0.8**
JWZ	**Kozaga**	**2.09**	**298**	P	**Pn**	**05 28 16.3**	**+0.2**
JWZ				eS	**S**	**05 28 57.0**	**-0.8**
JWY	**Kouya**	**2.56**	**311**	P	**Pn**	**05 28 20.5**	**+0.8**
JOD2	**Odawara 2**	**2.85**	**19**	P	**Pn**	**05 28 22.4**	**+0.2**
JOD2				eS	**S**	**05 29 08.4**	**-0.5**
JYN	**Shimob**	**2.96**	**10**	P	**Pn**	**05 28 23.4**	**+0.2**
JAI	**Aioi**	**3.16**	**294**	P	**Pn**	**05 28 25.2**	**+0.3**
JGM	**Miyama**	**3.28**	**342**	P	**Pn**	**05 28 26.8**	**+0.8**
BSO1	**Boso 1**	**3.28**	**50**	P	**Pn**	**05 28 23.7**	**-1.7**
BSO1				eS	**S**	**05 29 11.2**	**-3.7**
JWT	**Wachi**	**3.43**	**323**	P	**Pn**	**05 28 28.1**	**+0.7**
JWT				eS	**S**	**05 29 16.5**	**-1.9**
JRY	**Ryogami san**	**3.53**	**13**	P	**Pn**	**05 28 29.2**	**+0.8**
JRY				eS	**S**	**05 29 18.3**	**-2.0**
JMN	**Monobe**	**3.59**	**290**	P	**Pn**	**05 28 29.5**	**+0.4**
MJAR	**Matsushiro Arr**	**3.97**	**3**	P	**Pn**	**05 28 32.9**	**+0.1**
	2.0nm,0.3s,baz=184,slow=11,SNR=21						
MJAR				S	**S**	**05 29 28.3**	**+0.1**
	1.0nm,0.3s,baz=178,slow=21,SNR=4.3						
MAT	**Matsushiro**	**3.97**	**3**	P	**Pn**	**05 28 32.9**	**+0.1**
MAT				S	**S**	**05 29 26.9**	**-1.3**
MAT	**Matsushiro**	**3.97**	**3**	P	**Pn**	**05 28 32.9**	**+0.1**
MAT				eS	**S**	**05 29 26.6**	**-1.6**
JTO	**Tosashimizu**	**4.33**	**275**	P	**Pn**	**05 28 36.8**	**+0.2**
JHS	**Saijyo**	**4.68**	**302**	P	**Pn**	**05 28 41.0**	**+0.7**
JNU	**Nakatsue**	**5.96**	**277**	P	**Pn**	**05 28 54.2**	**-0.3**
	4.7nm,0.3s,baz=98,slow=8.1,SNR=21						
KSRS	**Korea Array**	**9.54**	**303**	P	**Pn**	**05 29 37.4**	**+0.8**
	0.5nm,0.3s,baz=119,slow=12,SNR=15						
ASAJ	**Asahikawa**	**12.09**	**16**	P	**P**	**05 30 06.8**	**+0.2**
	1.8nm,0.3s,baz=218,slow=12,SNR=6.6						
USRK	**Ussuriysk Arra**	**12.50**	**340**	P	**P**	**05 30 10.5**	**-0.6**
	1.2nm,0.3s,baz=146,slow=10,SNR=13						
YSS	**Yuzh-Sakhalins**	**14.83**	**13**⇑	iP	**Pn**	**05 30 39.8**	**+1.0**
BILL	**Bilibino**	**39.11**	**16**	eP	**P**	**05 34 20.2**	**+1.8**
BILL				pmax	pmax		
	comp=Z,32nm,0.7s						
ZALV	**Zalesovo Beam**	**42.97**	**316**	P	**P**	**05 34 49.1**	**-0.6**
ZALV						05 36 32.5	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**42.97**	**316**	P	**P**	**05 34 49.1**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=79,slow=7.5,SNR=3.5						
ZALV				PcP	**PcP**	**05 36 32.5**	**-0.4**
	comp=Z,0.7nm,0.5s,baz=104,slow=3.6,SNR=3.7						
MKAR	**Makanchi Array**	**44.22**	**306**	P	**P**	**05 34 59.4**	**-0.3**
MKAR						05 36 36.9	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**44.22**	**306**	P	**P**	**05 34 59.4**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=85,slow=9.8,SNR=12						
MKAR				PcP	**PcP**	**05 36 36.9**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=70,slow=5.1,SNR=3.9						
WRA	**Warramunga Arr**	**52.33**	**184**	P	**P**	**05 36 00.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=0.1,slow=7.6,SNR=10						
KDAK	**Kodiak Island**	**52.34**	**39**	P	**P**	**05 36 01.2**	**+0.3**
	comp=Z,5.6nm,0.6s,baz=308,slow=8.6,SNR=7.7						
ILAR	**Eielson Array**	**54.79**	**30**	P	**P**	**05 36 18.8**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=272,slow=5.9,SNR=13						
ARCES	**ARCESS Array B**	**67.16**	**339**	P	**P**	**05 37 40.9**	**+0.2**
	comp=Z,2.7nm,0.6s,baz=67,slow=9.3,SNR=13						
YKA	**Yellowknife Ar**	**69.09**	**28**	P	**P**	**05 37 53.1**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=304,slow=6.2,SNR=10						
FINES	**FINESS Array B**	**71.41**	**332**	P	**P**	**05 38 06.6**	**-0.1**
	comp=Z,2.7nm,0.6s,baz=83,slow=4.3,SNR=7.7						
AKASG	**Malin Array Be**	**76.04**	**322**	P	**P**	**05 38 33.3**	**-0.2**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**76.04**	**322**	P	**P**	**05 38 33.2**	**-0.2**
	comp=Z,2.0nm,0.5s,baz=51,slow=6.0,SNR=7.9						
NB2	**NORSAR Subarra**	**77.15**	**336**	P	**P**	**05 38 39.0**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=44,slow=5.6						
NOA	**NORSAR Array B**	**77.15**	**336**	P	**P**	**05 38 39.5**	**0.0**
	comp=Z,1.8nm,0.7s,baz=44,slow=5.5,SNR=4.6						
BRTR	**Keskin Array B**	**79.61**	**311**	P	**P**	**05 38 53.5**	**0.0**
	comp=Z,1.1nm,0.7s,baz=100,slow=2.8,SNR=5.6						
TXAR	**Lajitas Array**	**95.14**	**50**	P	**P**	**05 40 08.8**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=310,slow=3.0,SNR=4.5						

IDC 05 06:01:52.5±3.5**, 15°.77N×85°.77W, h0km, mb3.6**/5**, mb1 4.1**/6**, mb1mx3.8**/23**, mbtmp3.8**/6**, ML4.6**/1**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx3.0**/30**, Error ellipse: s-maj=89.2km s-min=59.8km az=50.0, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	**Tepich**	**5.03**	**332**	Pn	Pn	06 03 08.6	-0.7
	22nm,0.3s,baz=147,slow=2.8,SNR=72						
TEIG				Sn	Sn	06 04 03.1	-5.1
	36nm,0.3s,baz=49,slow=20,SNR=11						
TEIG				LR	LR	06 05 08.6	
	comp=Z,232nm,19.8s,baz=29,slow=39						
TXAR	**Lajitas Array**	**21.30**	**312**	P	P	06 06 40.1	-0.9
	5.7nm,1.0s,baz=133,slow=10.0,SNR=39						
PDAR	**Pinedale Array**	**33.74**	**328**	P	P	06 08 36.3	+0.2
	0.4nm,0.5s,baz=125,slow=12,SNR=3.0						
NVAR	**Mina Array Bea**	**36.41**	**315**	P	P	06 09 00.1	+0.9
	0.3nm,0.4s,baz=132,slow=9.1,SNR=5.1						
YKA	**Yellowknife Ar**	**50.89**	**343**	P	P	06 10 54.9	-0.2
	1.0nm,0.9s,baz=138,slow=8.1,SNR=13						
ILAR	**Eielson Array**	**63.68**	**335**	P	P	06 12 25.4	-0.1
	0.4nm,0.7s,baz=109,slow=5.4,SNR=5.4						
WRA	**Warramunga Arr**	**141.66**	**258**	PKP	PKPdf	06 21 25.4	-1.5
	0.3nm,0.7s,baz=94,slow=2.1,SNR=3.1						
ASAR	**Alice Springs**	**141.93**	**252**	PKP	PKPdf	06 21 25.8	-1.5
	0.2nm,0.6s,baz=122,slow=1.2,SNR=2.8						

MAN 05 06:05:14, 11°.22N×124°.52E, h31km, mb4.2, ML3.0, MS2.8, 2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.19**	**152**	eP	Pn	06 05 21.7	+1.0
OCLP				eS	Sn	06 05 27.1	+2.2
PLP	**Palo**	**0.45**	**97**⇓	eP	Pn	06 05 25.9	+1.5
PLP				eS	Sn	06 05 34.2	+2.8
LLP	**Lapu-Lapu**	**1.05**	**211**	eP	Pb	06 05 33.5	-0.1
LLP				eS	Sb	06 05 47.6	+0.6
MSLP	**Maasin**	**1.13**	**163**	eP	Pb	06 05 38.4	+3.5
RCP	**Roxas**	**1.77**	**281**⇓	eP	Pn	06 05 43.2	+0.7
RCP				eS	Sn	06 06 04.6	+0.5
GUIM	**Jordan**	**1.99**	**253**	eP	Pb	06 05 47.5	-2.0

MAN 05 06:19:52, 16°.76N×119°.56E, h30km, mb4.4, ML3.3, MS3.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.50**	**138**	eP	Pn	06 20 04.2	+1.1
BOLP				eS	Sn	06 20 12.9	+2.2
SCZP	**Santa Cruz**	**1.03**	**161**	eP	Pb	06 20 11.3	0.0
ABRA	**Dolores**	**1.41**	**51**	eP	Pb	06 20 17.0	-0.8
SIPP	**Brgy, Tapao**	**1.44**	**36**⇓	iP	Pn	06 20 16.3	+0.2
SIPP				i S	Sn	06 20 32.5	-1.5
APYP	**Conner**	**1.95**	**55**	eP	Pb	06 20 24.9	-1.9
CAUP	**Cauayan**	**2.17**	**85**	eP	Pb	06 20 30.1	-0.6

IDC 05 06:44:17.2±14.0**, 19°.76S×179°.26W, h569**km±136km**, mb3.0**/4**, mb1 3.2**/4**, mb1mx2.9**/19**, mbtmp3.0**/4**, Error ellipse: s-maj=251.5km s-min=57.3km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**43.53**	**262**	P	P	06 51 31.5	-0.1
	0.8nm,0.3s,baz=96,slow=7.5,SNR=62						
ASAR	**Alice Springs**	**43.54**	**256**	P	P	06 51 31.4	-0.3
	2.1nm,0.6s,baz=97,slow=7.5,SNR=24						
FITZ	**Fitzroy Crossi**	**51.95**	**262**	P	P	06 52 34.5	+0.1
	0.6nm,0.4s,baz=111,slow=5.3,SNR=5.7						
ILAR	**Eielson Array**	**87.86**	**13**	P	P	06 56 06.2	+0.1
	0.2nm,0.5s,baz=212,slow=5.4,SNR=6.6						
AKASG	**Malin Array Be**	**141.79**	**331**	PKhKP	PKPpre	07 02 40.0	
	0.8nm,0.3s,baz=44,slow=3.6,SNR=7.3						
BRTR	**Keskin Array B**	**145.46**	**312**	PKPbc	PKPdf	07 02 51.6	+0.3
	0.5nm,0.4s,baz=132,slow=1.0,SNR=2.3						

IDC 05 06:55:28.0±1.3**, 3°.20N×126°.99E, h0km, mb3.7**/7**, mb1 3.9**/7**, mb1mx3.7**/26**, mbtmp3.7**/7**, Error ellipse: s-maj=107.4km s-min=16.8km az=69.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.21**	**184**	P	P	07 00 15.3	-0.2
	0.9nm,0.4s,baz=5.5,slow=8.9,SNR=4.0						
WRA	**Warramunga Arr**	**24.10**	**163**	P	P	07 00 44.6	-1.0
	1.5nm,0.6s,baz=341,slow=9.4,SNR=17						
ASAR	**Alice Springs**	**27.54**	**166**	P	P	07 01 16.4	-0.4
	0.5nm,0.5s,baz=348,slow=7.7,SNR=11						
STKA	**Stephens Creek**	**37.55**	**159**	P	P	07 02 44.2	+0.1
	2.0nm,0.7s,baz=330,slow=10,SNR=3.6						
MKAR	**Makanchi Array**	**58.13**	**325**	P	P	07 05 23.9	+0.2
	0.5nm,0.5s,baz=119,slow=6.8,SNR=5.9						
KURBB	**Kurchatov Arra**	**62.32**	**327**	P	P	07 05 51.8	-0.4
	0.7nm,0.5s,baz=134,slow=6.5,SNR=5.7						
BVAR	**Borovoye Array**	**67.90**	**327**	P	P	07 06 29.3	+0.9
	0.2nm,0.3s,baz=140,slow=7.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**123.33**	**288**	PKP	PKPdf	07 14 28.4	+0.2
	0.8nm,1.0s,baz=40,slow=3.5,SNR=2.7						

*IDC **05** 06:58:48.2±0.7, 32°.89N×82°.19E, h0km, mb4.0/15, mb1 4.2/18, mb1mx4.0/33, mbtmp4.0/18, ML3.2/3, Error ellipse: s-maj=26.4km s-min=13.9km az=47.0*
*ISCJB **05** 06:58:50.9±0.3, 32°.87N±0°.03×82°.08E±0°.06, h33km, mb4.0/18, Error ellipse: s-maj=6.8km s-min=4.7km az=178.7*
*NEIC **05** 06:58:50.2±0.5, 32°.86N×82°.07E, h10km, mb4.3/5, Error ellipse: s-maj=17.0km s-min=7.9km az=52.0*
*NDI **05** 06:58:50.9±3.4, 32°.79N×82°.03E, h10km, ML4.4, mb4.3(NEIC)*
*MOS **05** 06:58:51.8±0.9, 32°.97N×82°.21E, h33km, mb4.6/4, Error ellipse: s-maj=19.1km s-min=7.6km az=112.6*
ISC 05 06:58:53.4±0.5**, 32°.89N**±0°.05×**82°.10E**±0°.07**, h35**km**, n71,** σ1**°.19**/66**, mb3.9**/18**, 1C, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**4.29**	**235**	ex	Pn	07 00 03.0	+6.7
SMLA	**Simla**	**4.54**	**249**	eS	**Sn**	**07 00 52.0**	**+0.8**
SDNR	**Sundarnagar**	**4.56**	**254**	ePKP	**Pn**	**06 59 57.0**	**-3.0**
NDI	**New Delhi**	**5.93**	**226**	ePKP	**Pn**	**07 00 18.6**	**-0.2**
NDI				ex	x	07 01 11.7	
CHCP	**Chirah Chowk**	**7.44**	**278**	P	Pn	07 00 35.4	-4.1
LSA	**Lhasa**	**8.37**	**110**	eP	**Pn**	**07 00 54.5**	**+1.8**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LSA	**Lhasa**	**8.37**	**110**	ePn	**Pn**	**07 00 54.5**	**+1.8**
	comp=Z,9.7nm,0.6s						
CEP	**Cherat**	**8.58**	**279**	P	Pn	07 00 50.7	-4.5
JBP	**Jabalpur**	**9.86**	**191**⇑	ePKP	**Pn**	**07 01 12.8**	**+0.1**
JBP				ex	Sn	07 02 56.2	-6.0
JBP				AML	AML	07 03 17.6	
	comp=N,206nm,0.1s						
JBP				AML	AML	07 03 17.9	
	comp=E,132nm,0.1s						
KBL	**Kabul**	**11.00**	**282**	eP	Pn	07 01 23.0	-5.5
KBL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KBL	**Kabul**	**11.00**	**282**	ePn	Pn	07 01 23.0	-5.5
	comp=Z,6.1nm,0.6s						
SHL	**Shillong**	**11.23**	**128**	ePKP	**Pn**	**07 01 31.0**	**-0.6**
AAK	**Ala-Archa**	**11.44**	**330**	eP	**Pn**	**07 01 35.7**	**+1.3**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AAK	**Ala-Archa**	**11.44**	**330**	ePn	**Pn**	**07 01 35.7**	**+1.3**
	comp=Z,4.5nm,0.8s						
AAK	**Ala-Archa**	**11.44**	**330**	Pn	**Pn**	**07 01 35.1**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=142,slow=14,SNR=5.0						
EKS2	**Erkin-Say**	**11.77**	**328**	eP	**Pn**	**07 01 39.8**	**+1.0**
EKS2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
EKS2	**Erkin-Say**	**11.77**	**328**	ePn	**Pn**	**07 01 39.8**	**+1.0**
	comp=Z,4.5nm,0.7s						
NGP	**Nagpur**	**12.00**	**194**	ePKP	**Pn**	**07 01 40.9**	**-1.1**
NGP				eS	**Sn**	**07 03 54.4**	**-0.3**
KKAR	**Karatay Array**	**13.68**	**322**	eP	Pn	07 02 01.1	-3.8
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KKAR	**Karatay Array**	**13.68**	**322**	ePn	Pn	07 02 01.1	-3.8
	comp=Z,2.6nm,0.6s						
MK31	**Makanchi Array**	**13.89**	**1**	eP	**Pn**	**07 02 08.2**	**+0.4**
MK31	**Makanchi Array**	**13.89**	**1**	ePn	**Pn**	**07 02 08.2**	**+0.4**
MKAR	**Makanchi Array**	**13.89**	**1**	P	**Pn**	**07 02 06.3**	**-1.5**
MKAR						07 04 40.7	
MKAR	**Makanchi Array**	**13.89**	**1**	Pn	**Pn**	**07 02 06.3**	**-1.5**
MKAR				Sn	**Sn**	**07 04 40.7**	**0.0**
MKAR	**Makanchi Array**	**13.89**	**1**	Pn	**Pn**	**07 02 06.3**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=188,slow=14,SNR=15						
MKAR				Sn	**Sn**	**07 04 40.7**	**0.0**
	comp=Z,0.3nm,0.3s,baz=181,slow=24,SNR=9.2						
KURBB	**Kurchatov Arra**	**17.92**	**353**	Pn	**Pn**	**07 02 56.8**	**-2.9**
	comp=Z,0.0nm,0.3s,baz=179,slow=10,SNR=9.9						
KURK	**Kurchatov**	**18.00**	**353**	eP	**Pn**	**07 03 00.6**	**-0.1**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURK	**Kurchatov**	**18.00**	**353**	eP	**Pn**	**07 03 00.6**	**-0.1**
	comp=Z,4.5nm,0.9s						
CHTO	**Chiang Mai**	**20.60**	**129**	eP	**P**	**07 03 30.0**	**+0.4**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CHTO	**Chiang Mai**	**20.60**	**129**	eP	**P**	**07 03 30.0**	**+0.4**
	comp=Z,7.8nm,0.8s						
CMAR	**Chiang Mai Arr**	**20.86**	**129**	P	**P**	**07 03 33.1**	**+0.7**
CMAR	**Chiang Mai Arr**	**20.86**	**129**	P	**P**	**07 03 33.1**	**+0.7**
	comp=Z,17nm,0.7s,baz=311,slow=11,SNR=58						
ZALV	**Zalesovo Beam**	**21.14**	**4**	P	**P**	**07 03 35.9**	**+0.7**
ZALV	**Zalesovo Beam**	**21.14**	**4**	P	**P**	**07 03 35.9**	**+0.7**
ZALV	**Zalesovo Beam**	**21.14**	**4**	P	**P**	**07 03 35.9**	**+0.7**
	comp=Z,3.8nm,0.8s,baz=188,slow=9.7,SNR=10						
BVAR	**Borovoye Array**	**21.82**	**341**	P	**P**	**07 03 41.6**	**-0.9**
BVAR	**Borovoye Array**	**21.82**	**341**	P	**P**	**07 03 41.6**	**-0.9**
BVAR	**Borovoye Array**	**21.82**	**341**	P	**P**	**07 03 41.6**	**-0.9**
	comp=Z,7.8nm,0.9s,baz=146,slow=8.2,SNR=27						
BRVK	**Borovoye**	**21.88**	**341**	eP	**P**	**07 03 42.2**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,20nm,1.0s						
BRVK	**Borovoye**	**21.88**	**341**	eP	**P**	**07 03 42.2**	**-0.9**
	comp=Z,20nm,1.0s						
NVS	**Novosibirsk**	**21.96**	**2**	eP	**P**	**07 03 42.7**	**-1.2**
ABKAR	**Akbulak array**	**23.25**	**321**	eP	**P**	**07 03 54.5**	**-3.0**
	comp=Z,8.7nm,0.8s						
AKTO	**Aktyubinsk**	**24.95**	**322**	P	**P**	**07 04 11.6**	**-1.7**
AKTO	**Aktyubinsk**	**24.95**	**322**	P	**P**	**07 04 11.6**	**-1.7**
AKTO	**Aktyubinsk**	**24.95**	**322**	P	**P**	**07 04 11.6**	**-1.7**
	comp=Z,1.0nm,0.3s,baz=118,slow=11,SNR=5.4						
KIV	**Kislovodsk**	**32.52**	**301**	eP	P	07 05 28.8	+7.9
KIV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BRTR	**Keskin Array B**	**39.26**	**294**	P	**P**	**07 06 20.1**	**+1.3**
BRTR	**Keskin Array B**	**39.26**	**294**	P	**P**	**07 06 20.1**	**+1.3**
	comp=Z,0.7nm,0.6s,baz=93,slow=7.2,SNR=5.1						
AKASG	**Malin Array Be**	**42.27**	**311**	P	**P**	**07 06 43.5**	**+0.2**
AKASG	**Malin Array Be**	**42.27**	**311**	P	**P**	**07 06 43.5**	**+0.2**
AKASG	**Malin Array Be**	**42.27**	**311**	P	**P**	**07 06 43.5**	**+0.2**
	comp=Z,1.6nm,0.7s,baz=80,slow=8.1,SNR=7.5						
MLR	**Muntele Rosu**	**44.46**	**303**	P	**P**	**07 07 03.1**	**+1.9**
MLR	**Muntele Rosu**	**44.46**	**303**	P	**P**	**07 07 03.1**	**+1.9**
	comp=Z,1.7nm,0.8s,baz=124,slow=6.0,SNR=16						
ARCES	**ARCESS Array B**	**48.03**	**337**	P	**P**	**07 07 30.3**	**+1.5**
ARCES	**ARCESS Array B**	**48.03**	**337**	P	**P**	**07 07 30.3**	**+1.5**
	comp=Z,5.2nm,0.8s,baz=83,slow=7.4,SNR=5.4						
GERES	**GERESS Array B**	**52.39**	**309**	P	**P**	**07 08 03.1**	**+0.9**
GERES	**GERESS Array B**	**52.39**	**309**	P	**P**	**07 08 03.1**	**+0.9**
	comp=Z,0.3nm,0.3s,baz=57,slow=9.7,SNR=4.9						
ESDC	**Sonseca Array**	**67.16**	**303**	P	**P**	**07 09 44.6**	**+0.7**
ESDC	**Sonseca Array**	**67.16**	**303**	P	**P**	**07 09 44.6**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=52,slow=5.8,SNR=4.2						
WRA	**Warramunga Arr**	**72.45**	**129**	P	**P**	**07 10 16.4**	**-0.1**
WRA	**Warramunga Arr**	**72.45**	**129**	P	**P**	**07 10 16.4**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=322,slow=6.3,SNR=24						
WRAB	**Tennant Creek**	**72.45**	**129**	eP	**P**	**07 10 16.2**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WRAB	**Tennant Creek**	**72.45**	**129**	eP	**P**	**07 10 16.2**	**-0.3**
	comp=Z,5.8nm,0.9s						
ASAR	**Alice Springs**	**74.85**	**132**	P	**P**	**07 10 30.2**	**-0.4**
ASAR	**Alice Springs**	**74.85**	**132**	P	**P**	**07 10 30.2**	**-0.4**
	comp=Z,1.3nm,0.6s,baz=316,slow=5.9,SNR=17						
TORD	**Torodi Ar. Bea**	**75.00**	**276**	P	**P**	**07 10 30.9**	**-0.7**
TORD	**Torodi Ar. Bea**	**75.00**	**276**	P	**P**	**07 10 30.9**	**-0.7**
	comp=Z,0.6nm,0.6s,baz=53,slow=4.9,SNR=7.1						
ILAR	**Eielson Array**	**75.43**	**20**	P	**P**	**07 10 33.1**	**-0.2**
ILAR	**Eielson Array**	**75.43**	**20**	P	**P**	**07 10 33.1**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=314,slow=4.7,SNR=8.8						
YKA	**Yellowknife Ar**	**84.01**	**8**	P	**P**	**07 11 18.3**	**-1.5**
YKA	**Yellowknife Ar**	**84.01**	**8**	P	**P**	**07 11 18.3**	**-1.5**
	comp=Z,0.8nm,0.8s,baz=340,slow=5.1,SNR=11						

GUC 05 07:06:36.3±0.8**, 29°.21S×71°.35W, h52**km±25km**, ML3.6, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.60**	**71**⇓	iP	Pn	07 06 50.1	+0.9
LCO				i S	Sn	07 06 59.8	+1.2
LCO				AML	AML	07 07 00.5	
	comp=E,4μm,0.5s						
VACH	**Vallenar**	**0.82**	**39**⇑	iP	Pn	07 06 38.7	-13
VACH				i S	Sn	07 06 50.5	-12
VACH				AML	AML	07 06 51.5	
	comp=E,6μm,0.3s						
TLL	**Tololo Astrono**	**1.06**	**154**	eP	Pn	07 06 56.5	+1.2
TLL				i S	Sn	07 07 10.9	+1.5
TLL				AML	AML	07 07 13.4	
	comp=N,1μm,0.7s						
CMCH	**Combarbala**	**1.98**	**171**⇓	iP	Pn	07 07 07.8	+0.3
CMCH				i S	Sn	07 07 32.1	+0.9
CMCH				AML	AML	07 07 46.9	
	comp=E,780nm,0.6s						
CPCH	**Copiapo**	**2.04**	**26**⇑	iP	Pn	07 07 09.0	+0.6
CPCH				i S	Sn	07 07 33.5	+0.8
CPCH				AML	AML	07 07 39.5	
	comp=N,2μm,0.1s						
CDCH	**Caldera**	**2.19**	**12**	eP	Pn	07 07 10.2	0.0

*ISCJB **05** 07:10:49.2±0.4, 41°.92N±0°.02×23°.22E±0°.03, h0km±4km, Error ellipse: s-maj=4.2km s-min=2.9km az=164.9*
*SKO **05** 07:10:49.2, 41°.92N×23°.20E, h15km, M1.9, ML2.3*
*THE **05** 07:10:49.6, 41°.94N×23°.21E, h2km±1km, ML2.4/5, Error ellipse: s-maj=2.2km s-min=0.6km az=283.0*
*ATH **05** 07:10:49.7, 41°.89N×23°.26E, h27km±2km, MD3.3/5*
*SOF **05** 07:10:49.3, 41°.96N×23°.28E, h4km, MD2.5*
*CSEM **05** 07:10:49.9±0.2, 41°.92N×23°.26E, h2km, MD2.5, Error ellipse: s-maj=3.6km s-min=2.8km az=84.0*
*BEO **05** 07:10:51.8±0.3, 41°.94N×23°.18E, h0km, ML2.2/6*
ISC 05 07:10:49.6±1.1**, 41°.93N**±0°.02×**23°.24E**±0°.02**, h4**km±9km**, n47,** σ0**°.69**/77**, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	**0.13**	**242**	i Pg	**Pg**	**07 10 52.7**	**+0.5**
KKB	**Krupnik**	**0.13**	**242**	i Pg	**Pg**	**07 10 52.7**	**+0.5**
MMB	**Musomiste**	**0.50**	**133**	i Pg	**Pg**	**07 11 00.0**	**+0.8**
MMB	**Musomiste**	**0.50**	**133**	i Pg	**Pg**	**07 11 00.0**	**+0.8**
VTS	**Vitosha**	**0.66**	**358**	P	**Pg**	**07 11 02.0**	**-0.4**
VTS				S	**Sg**	**07 11 11.1**	**+0.1**
VTS	**Vitosha**	**0.66**	**358**	Pg	**Pg**	**07 11 02.2**	**-0.2**
VTS	**Vitosha**	**0.66**	**358**	ePg	**Pg**	**07 11 02.4**	**0.0**
VTS				eSg	**Sg**	**07 11 11.5**	**+0.5**
VTS	**Vitosha**	**0.66**	**358**	Pg	**Pg**	**07 11 02.2**	**-0.2**
VTS				S	**Sg**	**07 11 11.1**	**+0.1**
NVR	**Nevrokopi**	**0.74**	**141**	P	**Pg**	**07 11 03.9**	**0.0**
NVR				S	**Sg**	**07 11 13.8**	**+0.3**
NVR	**Nevrokopi**	**0.74**	**141**	ePN	**Pg**	**07 11 03.7**	**-0.2**
NVR				eSN	**Sg**	**07 11 13.9**	**+0.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVR	Nevrokopi	0.74	141	P	Pg	07 11 03.9	0.0
NVR				S	Sg	07 11 13.8	+0.3
VAY	Valandovo	0.79	220	P	Pg	07 11 04.7	0.0
VAY				S	Sg	07 11 15.1	+0.2
VAY	Valandovo	0.79	220	ePg	Pb	07 11 06.3	+0.4
VAY				eSg	Sg	07 11 15.4	+0.5
VAY	Valandovo	0.79	220	i Pg	Pg	07 11 04.5	-0.2
VAY				eLg	Lg	07 11 15.1	
	comp=N,87nm,0.6s						
VAY				eSg	Sg	07 11 15.2	+0.2
VAY				eLg	Lg	07 11 15.2	
	comp=E,105nm,0.6s						
VAY	Valandovo	0.79	220	P	Pg	07 11 04.7	0.0
VAY	Valandovo	0.79	220	ePg	Pb	07 11 06.3	+0.4
VAY				S	Sg	07 11 15.1	+0.2
VAY				eLg	Lg	07 11 15.7	
	comp=E,105nm,0.6s						
KNT	Kendrikon	0.81	199	P	Pg	07 11 05.0	-0.1
KNT				S	Sg	07 11 15.4	-0.2
KNT	Kendrikon	0.81	199	P	Pg	07 11 05.0	-0.1
KNT				S	Sg	07 11 15.4	-0.2
SRS	Serrai	0.85	162	P	Pg	07 11 05.9	-0.1
SRS				S	Sg	07 11 17.9	+0.9
SRS	Serrai	0.85	162	P	Pg	07 11 05.9	-0.1
SRS				S	Sg	07 11 17.9	+0.9
PGB	Panagyurishte	0.93	48	Pg	Pg	07 11 06.5	-0.9
PGB	Panagyurishte	0.93	48	Pg	Pg	07 11 06.5	-0.9
PLD	Plovdiv	1.10	80	ePg	Pn	07 11 12.3	+0.4
PLD				eSg	Sn	07 11 28.5	+0.9
PLD	Plovdiv	1.10	80	ePg	Pn	07 11 12.3	+0.4
PLD				eSg	Sn	07 11 28.5	+0.9
SOH	Sokhos	1.11	175	P	Pg	07 11 10.6	-0.3
SOH				S	Sb	07 11 25.9	-0.4
SOH	Sokhos	1.11	175	ePN	Pg	07 11 10.5	-0.3
SOH				eSN	Sg	07 11 25.6	+0.3
SOH	Sokhos	1.11	175	P	Pg	07 11 10.6	-0.3
SOH				eSn	Sg	07 11 25.6	+0.3
GRG	Griva	1.16	213	P	Pg	07 11 11.6	-0.2
GRG	Griva	1.16	213	ePN	Pg	07 11 11.4	-0.4
GRG				eSN	Sb	07 11 27.3	-0.3
GRG	Griva	1.16	213	P	Pg	07 11 11.6	-0.2
GRG				eSn	Sb	07 11 27.3	-0.3
HORT	Hortiatis	1.33	185	P	Pn	07 11 14.8	-0.3
HORT				S	Sn	07 11 32.9	-0.5
HORT	Hortiatis	1.33	185	P	Pn	07 11 14.8	-0.3
HORT				S	Sn	07 11 32.9	-0.5
KAVA	Kavala	1.34	134	P	Pn	07 11 14.9	-0.2
KAVA				S	Sn	07 11 34.0	+0.7
KAVA	Kavala	1.34	134	P	Pn	07 11 14.9	-0.2
KAVA				S	Sn	07 11 34.0	+0.7
BARS	Barje	1.38	311	eSg	Sb	07 11 33.8	-0.2
BARS	Barje	1.38	311	eSg	Sb	07 11 33.8	-0.2
ZAPS	Zavoj	1.42	342	ePg	Pg	07 11 17.0	+0.2
ZAPS				eSg	Sg	07 11 36.3	+1.2
MPEP	Malo Peshtene	1.47	14	P	Pn	07 11 17.2	+0.2
MPEP				Pg	Pg	07 11 18.3	+0.4
KDZ	Kurdzhali	1.65	99	P	Pn	07 11 20.0	+0.5
KDZ	Kurdzhali	1.65	99	P	Pn	07 11 20.0	+0.5
RDO	Rodhopi	1.90	114	ePN	Pn	07 11 22.8	0.0
RDO	Rodhopi	1.90	114	ePn	Pn	07 11 22.8	0.0
SELS	Selova	2.03	310	ePn	Pb	07 11 26.7	-0.4
SELS				eSn	Sb	07 11 52.9	+0.2
ALN	Alexandroupoli	2.35	115	ePN	Pn	07 11 28.3	-0.7
ALN	Alexandroupoli	2.35	115	ePn	Pn	07 11 28.3	-0.7
GRUS	Gruza	2.70	317	ePn	Pb	07 11 36.1	-2.4
GRUS				eSn	Sn	07 12 09.0	+2.1
GRUS	Gruza	2.70	317	ePn	Pb	07 11 36.1	-2.4
GRUS				eSn	Sn	07 12 09.0	+2.1

JMA 05 07:30:07.5±0.1**, 40°.02N**×**142°.98E, h18**km±2km**, M3.5,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	0.86	265	P	Pb	07 30 23.7	-0.2
JTH				S	Sb	07 30 35.1	-0.1
MIYJ	Miyakonagasawa	1.00	244	P	Pb	07 30 25.9	-0.4
MIYJ				eS	Sb	07 30 38.8	-0.3
JANG	Nango	1.18	288	P	Pn	07 30 28.8	-0.3
JKZ	Kuzumaki	1.27	269	P	Pn	07 30 30.2	-0.2
JOM	Ohasama	1.41	248	P	Pn	07 30 32.6	+0.3
JOM				eS	Sb	07 30 51.5	+0.5
JTM	Tenmabayashi	1.65	298	P	Pn	07 30 36.4	+0.9
JTM				eS	Sb	07 30 57.4	-0.4
JMK	Ichinoseki	1.73	232	P	Pn	07 30 37.4	+0.7
JMK				eS	Sb	07 30 59.6	-0.5
JAH	Hinai	1.81	276	P	Pn	07 30 38.7	+1.0
JAH				eS	Sb	07 31 02.6	+0.3
JRG	Rokugo	1.91	252	P	Pb	07 30 41.1	-0.8
JEM	Erimo	2.00	4	P	Pn	07 30 41.2	+0.9
JEM				eS	Sn	07 31 04.9	0.0
JOT	Ohata	2.00	313	P	Pb	07 30 42.0	-1.4
JIO	Ouri	2.01	220	P	Pn	07 30 40.3	-0.2
MAT	Matsushiro	5.11	229	P	Pn	07 31 25.2	+2.0
MAT				S	Sn	07 32 22.9	+1.1

*ISCJB **05** 07:46:06.7±0.8, 34°.49N±0°.03×23°.76E±0°.02, h9km±4km, mb4.1/31, MS3.4/3, Error ellipse: s-maj=5.5km s-min=3.1km az=10.7*
*IDC **05** 07:46:07.5±0.7, 34°.76N×23°.83E, h0km, mb4.1/18, mb1 4.1/25, mb1mx4.1/38, mbtmp4.0/25, ML3.9/7, MS3.5/2, Ms1 3.5/2, ms1mx2.6/48, Error ellipse: s-maj=15.7km s-min=14.4km az=12.0*
*ATH **05** 07:46:08.1, 34°.61N×23°.76E, h11km±2km, MD3.8/38, ML3.6*
*CSEM **05** 07:46:09.5±0.2, 34°.61N×23°.79E, h10km, mb4.2/21, Error ellipse: s-maj=6.0km s-min=3.8km az=12.0*
*MOS **05** 07:46:11.5±2.0, 34°.62N×23°.87E, h33km, mb4.5/21, Error ellipse: s-maj=8.9km s-min=4.8km az=84.1*
*THE **05** 07:46:12.1, 34°.83N×23°.82E, h0km±3km, Error ellipse: s-maj=4.5km s-min=0.9km az=222.0*
ISC 05 07:46:10.3±0.8**, 34°.69N**±0°.04×**23°.81E**±0°.03**, h16**km±5km**, n320, σ1§48**/340**, mb4.2**/31**, MS3.4**/3**, 6C, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.27	56	P	Pg	07 46 16.7	+0.5
GVD				S	Sb	07 46 21.2	0.0
GVD	Gavdhos	0.27	56	ePG	Pg	07 46 14.5	-1.7
GVD	Gavdhos	0.27	56	ePg	Pg	07 46 14.5	-1.7
GVD	Gavdhos	0.27	56	P	Pg	07 46 16.7	+0.5
GVD				S	Sb	07 46 21.2	0.0
VAM	Vamos	0.79	24	P	Pb	07 46 24.7	-0.8
VAM				S	Sb	07 46 34.8	-1.2
VAM	Vamos	0.79	24	ePB	Pb	07 46 24.8	-0.8
VAM				eSB	Sn	07 46 37.8	-0.4
VAM	Vamos	0.79	24	ePb	Pb	07 46 24.8	-0.8
VAM				eSb	Sn	07 46 37.8	-0.4
SIVA	Sivas	0.88	68	P	Pg	07 46 27.7	+0.2
SIVA	Sivas	0.88	68	ePG	Pb	07 46 25.5	-1.8
SIVA				eSB	Sg	07 46 39.3	+0.2
SIVA	Sivas	0.88	68	ePg	Pb	07 46 25.5	-1.8
SIVA	Sivas	0.88	68	P	Pg	07 46 27.7	+0.2
SIVA				eSb	Sg	07 46 39.3	+0.2
IDI	Anoyia	1.07	56	P	Pb	07 46 29.6	-0.9
IDI				S	Sn	07 46 45.7	+0.5
IDI	Anoyia	1.07	56	ePB	Pb	07 46 29.9	-0.6
IDI				eSB	Sn	07 46 45.6	+0.4
IDI	Anoyia	1.07	56	P	Pb	07 46 29.6	-0.9
IDI	Anoyia	1.07	56	ePb	Pb	07 46 29.9	-0.6
IDI				eSb	Sn	07 46 45.6	+0.4
ANKY	Antikythira Is	1.25	341	ePG	Pn	07 46 32.5	-0.6
ANKY				eSB	Sn	07 46 50.2	+0.6
ANKY	Antikythira Is	1.25	341	ePg	Pn	07 46 32.5	-0.6
ANKY				eSb	Sn	07 46 50.2	+0.6
LAST	Lasithi	1.45	70	P	Pb	07 46 37.4	+0.5
LAST	Lasithi	1.45	70	ePB	Pb	07 46 36.9	0.0
LAST				eSB	Sg	07 46 57.3	+0.2
LAST	Lasithi	1.45	70	ePb	Pb	07 46 36.9	0.0
LAST	Lasithi	1.45	70	P	Pb	07 46 37.4	+0.5
LAST				eSb	Sg	07 46 57.3	+0.2
XRY	Khrisi	1.56	83	ePB	Pb	07 46 38.3	-0.5
XRY	Khrisi	1.56	83	ePb	Pb	07 46 38.3	-0.5
NPS	Neapolis	1.58	68	P	Pb	07 46 39.7	+0.5
NPS	Neapolis	1.58	68	ePG	Pb	07 46 39.6	+0.4
NPS	Neapolis	1.58	68	ePg	Pb	07 46 39.6	+0.4
KYTH	Kithira	1.71	338	P	Pn	07 46 38.9	-0.6
KYTH	Kithira	1.71	338	ePN	Pn	07 46 40.0	+0.5
KYTH	Kithira	1.71	338	P	Pn	07 46 38.9	-0.6
KYTH	Kithira	1.71	338	ePn	Pn	07 46 40.0	+0.5
ZKR	Zakros	2.02	77	P	Pb	07 46 47.0	+0.3
ZKR	Zakros	2.02	77	ePN	Pb	07 46 45.8	-0.9
ZKR	Zakros	2.02	77	ePn	Pb	07 46 45.8	-0.9
VLI	Veliai	2.15	341	P	Pn	07 46 46.9	+1.4
VLI	Veliai	2.15	341	ePN	Pn	07 46 47.1	+1.6
VLI	Veliai	2.15	341	P	Pn	07 46 46.9	+1.4
SANT	Santorini	2.15	38	P	Pn	07 46 46.7	+1.2
SANT	Santorini	2.15	38	ePN	Pn	07 46 46.7	+1.2
SANT	Santorini	2.15	38	P	Pn	07 46 46.7	+1.2
THR3	Thira Island,	2.15	37	P	Pn	07 46 46.6	+1.1
THR3	Thira Island,	2.15	37	P	Pn	07 46 46.6	+1.1
DYR	Agios Nikonas	2.40	330	ePG	Pb	07 46 52.1	-1.0
DYR	Agios Nikonas	2.40	330	ePg	Pb	07 46 52.1	-1.0
LTBQ	Tobruq	2.63	178	i P	Pn	07 46 52.9	+0.8
	SNR=37						
LTBQ				eS	Sn	07 47 24.6	+1.0
	41nm,0.7s,SNR=37						
APE	Apeiranthos	2.75	30	ePN	Pn	07 46 55.0	+1.1
APE	Apeiranthos	2.75	30	P	Pn	07 46 55.1	+1.2
APE	Apeiranthos	2.75	30	ePB	Pn	07 46 55.9	+2.0
APE	Apeiranthos	2.75	30	i P	Pn	07 46 55.3	+1.4
APE	Apeiranthos	2.75	30	P	Pn	07 46 55.1	+1.2
APE	Apeiranthos	2.75	30	ePb	Pn	07 46 55.9	+2.0
PYL	PYLOS	2.77	323	ePB	Pn	07 46 56.0	+1.9
PYL	PYLOS	2.77	323	ePb	Pn	07 46 56.0	+1.9
DID	Didima	2.85	351	P	Pn	07 46 56.2	+1.0
DID	Didima	2.85	351	ePN	Pn	07 46 56.2	+1.0
DID	Didima	2.85	351	P	Pn	07 46 56.2	+1.0
KARP	Karpathos	2.88	72	P	Pn	07 46 57.8	+2.3
KARP	Karpathos	2.88	72	ePN	Pn	07 46 57.3	+1.8
KARP	Karpathos	2.88	72	ePn	Pn	07 46 57.3	+1.8
KARP	Karpathos	2.88	72	P	Pn	07 46 57.8	+2.3
VLX	Vlachokerasia	2.92	337	ePB	Pn	07 46 58.3	+2.1
VLX	Vlachokerasia	2.92	337	ePb	Pn	07 46 58.3	+2.1
ITM	Ithomi	2.92	329	ePB	Pn	07 46 58.5	+2.4
ITM	Ithomi	2.92	329	ePb	Pn	07 46 58.5	+2.4
NAIG	Nisos Aigina	3.08	355	ePN	Pn	07 46 59.3	+1.1
NAIG	Nisos Aigina	3.08	355	ePn	Pn	07 46 59.3	+1.1
ATH	Athens Observa	3.28	359	ePN	Pn	07 47 02.3	+1.3
ATH	Athens Observa	3.28	359	ePn	Pn	07 47 02.3	+1.3
PTL	Penteli	3.35	1	ePN	Pn	07 47 03.0	+0.9
PTL	Penteli	3.35	1	ePn	Pn	07 47 03.0	+0.9
LTK	Loutraki	3.40	349	P	Pn	07 47 03.8	+1.1
LTK	Loutraki	3.40	349	ePN	Pn	07 47 03.6	+0.9
LTK	Loutraki	3.40	349	P	Pn	07 47 03.8	+1.1
GUR	Goura	3.45	340	ePN	Pn	07 47 05.8	+2.3
GUR	Goura	3.45	340	ePn	Pn	07 47 05.8	+2.3
KLV	Kalavryta, Ach	3.61	339	ePN	Pn	07 47 08.4	+2.8
KLV	Kalavryta, Ach	3.61	339	ePn	Pn	07 47 08.4	+2.8
DAT	Datca	3.68	55	ePN	Pn	07 47 07.5	+0.8
BODT	Bodrum	3.70	49	ePN	Pn	07 47 07.5	+0.6
ARG	Arkhangelos	3.84	65	P	Pn	07 47 11.1	+2.4
ARG	Arkhangelos	3.84	65	ePN	Pn	07 47 11.6	+2.9
ARG	Arkhangelos	3.84	65	P	Pn	07 47 11.1	+2.4
ARG	Arkhangelos	3.84	65	ePn	Pn	07 47 11.6	+2.9
LAKA	Lakka	3.84	338	ePN	Pn	07 47 11.3	+2.5
LAKA	Lakka	3.84	338	ePn	Pn	07 47 11.3	+2.5
RLS	Riolos of Patr	3.86	331	ePN	Pn	07 47 12.0	+3.0
RLS	Riolos of Patr	3.86	331	ePn	Pn	07 47 12.0	+3.0
SMG	Samos	3.88	38	ePN	Pn	07 47 10.9	+1.6
SMG	Samos	3.88	38	ePn	Pn	07 47 10.9	+1.6
KALE	Kalithea	3.93	340	ePN	Pn	07 47 12.7	+2.6
KALE	Kalithea	3.93	340	ePn	Pn	07 47 12.7	+2.6
LKR	Lokris	4.01	351	P	Pn	07 47 12.3	+1.2
LKR	Lokris	4.01	351	ePN	Pn	07 47 12.6	+1.5
LKR	Lokris	4.01	351	P	Pn	07 47 12.3	+1.2
LKR	Lokris	4.01	351	ePn	Pn	07 47 12.6	+1.5
EFP	Efpalio	4.04	338	ePN	Pn	07 47 14.6	+3.2
EFP	Efpalio	4.04	338	ePn	Pn	07 47 14.6	+3.2
ATAL	Atalanti	4.05	351	P	Pn	07 47 12.9	+1.3
ATAL	Atalanti	4.05	351	P	Pn	07 47 12.9	+1.3
CHOS	Chios island	4.11	25	P	Pn	07 47 13.5	+1.0
CHOS	Chios island	4.11	25	ePN	Pn	07 47 14.4	+1.9
CHOS	Chios island	4.11	25	P	Pn	07 47 13.5	+1.0
CHOS	Chios island	4.11	25	ePn	Pn	07 47 14.4	+1.9
MLSB	Milas	4.13	50	ePN	Pn	07 47 13.8	+1.0
AXAR	Agios Charalam	4.17	348	P	Pn	07 47 15.1	+1.7
AXAR	Agios Charalam	4.17	348	P	Pn	07 47 15.1	+1.7
VLS	Valsamata	4.34	324	ePN	Pn	07 47 17.0	+1.3
VLS	Valsamata	4.34	324	ePn	Pn	07 47 17.0	+1.3
YER	Yerkesik	4.37	55	ePN	Pn	07 47 17.2	+1.1
AYDN	Tasoluk	4.43	47	i P	Pn	07 47 16.8	-0.1
AYDN				i S	Sb	07 48 18.3	-2.7
AYDN	Tasoluk	4.43	47	i P	Pn	07 47 16.8	-0.1
TURN	Turunc	4.46	59	i P	Pn	07 47 14.4	-2.9
TURN				i S	Sn	07 48 05.1	-3.8
TURN	Turunc	4.46	59	i P	Pn	07 47 14.4	-2.9
TURN				i S	Sn	07 48 05.1	-3.8
AOS	Alonnisos	4.47	1	ePN	Pn	07 47 18.8	+1.3
AOS	Alonnisos	4.47	1	ePn	Pn	07 47 18.8	+1.3
SKIA	Skiathos	4.48	357	P	Pn	07 47 18.6	+1.1
SKIA	Skiathos	4.48	357	P	Pn	07 47 18.6	+1.1
AGG	Agios Georgios	4.49	345	P	Pn	07 47 19.5	+1.9
AGG	Agios Georgios	4.49	345	ePN	Pn	07 47 19.6	+1.9
AGG	Agios Georgios	4.49	345	P	Pn	07 47 19.5	+1.9
EVR	Evrytania	4.52	340	ePN	Pn	07 47 21.1	+3.0
EVR	Evrytania	4.52	340	ePn	Pn	07 47 21.1	+3.0
IZM	Izmir	4.63	36	ePN	Pn	07 47 21.0	+1.4
NEO	Neokhori	4.63	354	P	Pn	07 47 20.9	+1.2
NEO	Neokhori	4.63	354	ePN	Pn	07 47 21.2	+1.5
NEO	Neokhori	4.63	354	P	Pn	07 47 20.9	+1.2
NEO	Neokhori	4.63	354	ePn	Pn	07 47 21.2	+1.5
FETY	Fethiye	4.71	64	ePN	Pn	07 47 21.8	+1.1
KSL	Kastellorizon	4.93	71	ePN	Pn	07 47 25.3	+1.6
KSL	Kastellorizon	4.93	71	ePn	Pn	07 47 25.3	+1.6
AKAS	Kas	4.97	70	i P	Pn	07 47 25.6	+1.2
AKAS				i S	Sn	07 48 25.1	+3.4
AKAS	Kas	4.97	70	i P	Pn	07 47 25.6	+1.2
AKAS				i S	Sn	07 48 25.1	+3.4
THL	Klokotos Trika	5.08	344	ePN	Pn	07 47 28.1	+2.4
THL	Klokotos Trika	5.08	344	ePn	Pn	07 47 28.1	+2.4
DENT	Denizli	5.21	53	ePN	Pn	07 47 29.0	+1.4
GLHS	Glhisar (BURDU	5.23	60	ePN	Pn	07 47 29.2	+1.2
GOLH	Golhisar	5.31	60	i P	Pn	07 47 30.5	+1.4
GOLH				i S	Sn	07 48 34.4	+4.4
GOLH	Golhisar	5.31	60	i P	Pn	07 47 30.5	+1.4
GOLH				i S	Sn	07 48 34.4	+4.4
ELL	Elmali	5.37	66	ePN	Pn	07 47 31.0	+1.2
KULA	Kula-Manisa	5.46	44	ePN	Pn	07 47 32.6	+1.6
PLG	Polygyros	5.68	357	ePN	Pn	07 47 35.5	+1.4
PLG	Polygyros	5.68	357	ePn	Pn	07 47 35.5	+1.4
GELI	Tayfur-Gelibol	6.08	20	ePN	Pn	07 47 41.3	+1.8
GONE	Gonen-Balikesi	6.17	29	ePN	Pn	07 47 42.7	+1.9
ISP	Isparta	6.26	58	i P	Pn	07 47 43.5	+1.4
ISP	Isparta	6.26	58	i P	Pn	07 47 43.5	+1.4
KRBG	Karabiga-Canak	6.33	25	ePN	Pn	07 47 45.1	+2.1
ERIK	Erikli-Kesan	6.34	19	ePN	Pn	07 47 44.9	+1.8
TVSB	Tavsanli	6.55	42	ePN	Pn	07 47 47.7	+1.6
MRMT	Marmara Adasi	6.62	26	ePN	Pn	07 47 48.6	+1.5
ZAPS	Zavoj	8.62	354	ePn	Pn	07 48 14.6	+0.2
SELS	Selova	8.77	347	ePn	Pn	07 48 14.7	-1.8
BRTR	Keskin Array B	9.31	54	Pn	Pn	07 48 26.0	+2.0
	0.3nm,0.3s,baz=235,slow=14,SNR=8.1						
BRTR	Keskin Array B	9.31	54	P	Pn	07 48 26.0	+2.0
GRUS	Gruza	9.50	346	ePn	Pn	07 48 22.1	-4.3
BBLS	Lazići	9.78	341	ePn	Pn	07 48 27.9	-2.4
MMAI	Mount Meron Ar	9.78	97	Pn	Pn	07 48 28.8	-1.6
	3.4nm,0.3s,baz=292,slow=12,SNR=5.1						
MMAI				Sn	Sn	07 50 15.1	-4.9
	1.0nm,0.3s,baz=264,slow=26,SNR=2.9						
DIVS	Divibare	9.85	344	ePn	Pn	07 48 28.0	-3.3
EIL	Elat	10.68	115	Pn	Pn	07 48 41.9	-0.7
	1.5nm,0.3s,baz=184,slow=15,SNR=6.6						
EIL				Sn	Sn	07 50 39.0	-2.9
	1.7nm,0.3s,baz=307,slow=15,SNR=4.5						
MLR	Muntele Rosu	10.91	8	Pn	Pn	07 48 46.4	+0.5
	0.1nm,0.3s,baz=163,slow=14,SNR=3.6						
MLR	Muntele Rosu	10.91	8	P	Pn	07 48 46.4	+0.5
ASF	Jabal al Asfar	11.22	99	Pn	Pn	07 48 49.2	-0.8
	0.2nm,0.3s,baz=295,slow=17,SNR=3.9						
ASF				Sn	Sn	07 50 54.9	-0.3
	0.2nm,0.3s,baz=229,slow=19,SNR=2.4						
KECS	Kecovo	14.01	351	eP	Pn	07 49 30.6	+2.6
KECS	Kecovo	14.01	351	ePN	Pn	07 49 30.6	+2.6
KECS	Kecovo	14.01	351	ePn	Pn	07 49 30.6	+2.6
CRVS	Cervenica-Dubn	14.31	354	eP	P	07 49 41.0	+1.7
CRVS	Cervenica-Dubn	14.31	354	ePN	P	07 49 41.0	+1.7
CRVS	Cervenica-Dubn	14.31	354	eP	P	07 49 41.0	+1.7
ANN	Anapa	14.53	42	eP	Pn	07 49 33.9	-1.3
ANN				pmax	pmax		
	comp=Z,17nm,1.5s						
STHS	Stebnicka Huta	14.84	353	eP	P	07 49 44.9	-0.3
STHS	Stebnicka Huta	14.84	353	ePN	P	07 49 44.9	-0.3
STHS	Stebnicka Huta	14.84	353	eP	P	07 49 44.9	-0.3
VRAC	Vranov	15.55	342	Pn	P	07 49 52.2	-0.9
	comp=Z,0.9nm,0.3s,baz=147,slow=11,SNR=8.7						
VRAC	Vranov	15.55	342	P	P	07 49 52.2	-0.9
	comp=Z,1.0nm,0.3s						
OKC	Ostrava-Krasne	15.70	346	eP	P	07 49 55.4	+0.7
OKC				MLR	MLR		
	comp=Z,200nm,16.7s						
OKC	Ostrava-Krasne	15.70	346	eP	P	07 49 55.4	+0.7
OKC				ex	x	07 50 03.5	
OKC				AMS	AMS	07 58 10.0	
	comp=Z,200nm,16.7s						
OKC	Ostrava-Krasne	15.70	346	eP	P	07 49 55.4	+0.7
	comp=Z,200nm,16.7s						
TREC	Trest	15.84	340	eP	P	07 49 56.9	+0.6
TREC				MLR	MLR		
	comp=Z,300nm,14.2s						
TREC	Trest	15.84	340	eP	P	07 49 56.9	+0.6
TREC				AMS	AMS	07 57 20.0	
	comp=Z,300nm,14.2s						
TREC	Trest	15.84	340	eP	P	07 49 56.9	+0.6
	comp=Z,300nm,14.2s						
GERES	GERESS Array B	16.01	335	Pn	Pn	07 49 53.5	-1.3
	comp=Z,0.2nm,0.3s,baz=149,slow=12,SNR=3.2						
DAVOX	Davos/Dischmat	16.02	323	Pn	Pn	07 49 56.3	+1.3
	comp=Z,0.2nm,0.3s,baz=133,slow=12,SNR=2.3						
KHC	Kasperske Hory	16.30	335	eP	P	07 50 02.5	+1.2
KHC				MLR	MLR		
	comp=Z,300nm,16.2s						
KHC	Kasperske Hory	16.30	335	eP	P	07 50 02.5	+1.2
KHC				ex	x	07 50 09.5	
KHC				AMS	AMS	07 57 30.0	
	comp=Z,300nm,16.2s						
KHC	Kasperske Hory	16.30	335	eP	P	07 50 02.5	+1.2
	comp=Z,300nm,16.2s						
AKASG	Malin Array Be	16.48	12	P	Pn	07 49 59.6	-1.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	Malin Array Be	16.48	12	Pn	Pn	07 49 59.6	-1.1
	comp=Z,2.4nm,0.3s,baz=208,slow=10,SNR=8.9						
DPC	Dobruska-Polom	16.58	343	eP	P	07 50 04.9	+0.4
DPC	Dobruska-Polom	16.58	343	eP	P	07 50 04.9	+0.4
DPC				epP	pP	07 50 10.7	+1.7
DPC	Dobruska-Polom	16.58	343	eP	P	07 50 04.9	+0.4
PRU	Pruhonice	16.73	339	eP	P	07 50 06.6	+0.5
PRU				MLR	MLR		
	comp=Z,200nm,12.0s						
PRU	Pruhonice	16.73	339	eP	P	07 50 06.6	+0.5
PRU				epP	pP	07 50 11.2	+0.6
PRU				AMS	AMS	07 58 00.0	
	comp=Z,200nm,12.0s						
PRU	Pruhonice	16.73	339	eP	P	07 50 06.6	+0.5
	comp=Z,200nm,12.0s						
UPC	Upice	16.80	343	eP	P	07 50 07.7	+0.8
UPC	Upice	16.80	343	eP	P	07 50 07.7	+0.8
UPC	Upice	16.80	343	eP	P	07 50 07.7	+0.8
KIV	Kislovodsk	17.26	52c	i P	P	07 50 13.5	+1.4
KIV				pmax	pmax		
	comp=Z,18nm,0.9s						
KIV				MLR	MLR		
	comp=Z,100nm,20.0s						
KIV	Kislovodsk	17.26	52	i P	P	07 50 13.5	+1.4
	comp=Z,100nm,20.0s						
KBZ	Khabaz	17.30	53	P	P	07 50 12.5	+0.1
KBZ	Khabaz	17.30	53	Pn	P	07 50 12.5	+0.1
	comp=Z,0.2nm,0.3s,baz=264,slow=7.1,SNR=12						
KBZ	Khabaz	17.30	53	P	P	07 50 12.5	+0.1
GNI	Garni	17.48	66	eP	P	07 50 16.9	+2.2
	comp=Z,18nm,1.7s						
GRA1	Grafenberg Arr	17.62	332	eP	P	07 50 17.7	+1.7
	comp=Z,19nm,1.2s						
GRF	Grafenberg Arr	17.62	332	eP	P	07 50 17.7	+1.7
	comp=Z,19nm,1.2s						
GRF	Grafenberg Arr	17.62	332	eP	P	07 50 17.7	+1.7
GRF				pmax	pmax		
	comp=Z,19nm,1.2s						
BRG	Berggiesshubel	17.70	339	eP	P	07 50 17.7	+0.9
	comp=Z,22nm,1.6s						
BRG	Berggiesshubel	17.70	339	eP	P	07 50 17.7	+0.9
BRG				pmax	pmax		
	comp=Z,23nm,1.6s						
BRG	Berggiesshubel	17.70	339	eP	P	07 50 17.7	+0.9
	comp=Z,23nm,1.6s						
CABF	La Chapelle	17.92	317	eP	Pn	07 50 17.7	-1.1
	comp=Z,10nm,0.8s						
HINF	Hinteralfeld	18.24	321	eP	Pn	07 50 22.6	-0.1
HINF	Hinteralfeld	18.24	321	eP	Pn	07 50 22.6	-0.1
CLL	Collm	18.36	338	i P	Pn	07 50 24.3	+0.2
CLL				pmax	pmax		
	comp=Z,236nm,1.1s						
CLL	Collm	18.36	338	i P	Pn	07 50 24.3	+0.2
	comp=Z,5.0nm,1.1s						
CLL				i pP	P	07 50 25.6	+1.5
	comp=Z,9.0nm,0.8s						
CLL				i		07 50 30.4	
CLL	Collm	18.36	338	i P	Pn	07 50 24.3	+0.2
	comp=Z,236nm,1.1s						
CDF	Champ du Feu	18.42	323	eP	Pn	07 50 26.0	+1.1
CDF	Champ du Feu	18.42	323	eP	Pn	07 50 26.0	+1.1
HAU	Haudompre	18.62	321	eP	P	07 50 27.2	+0.2
	comp=Z,12nm,0.7s						
HAU	Haudompre	18.62	321	eP	P	07 50 27.2	+0.2
	comp=Z,6.1nm,0.7s						
AVF	Avril sur Loir	19.59	314	eP	Pn	07 50 38.5	-0.5
AVF	Avril sur Loir	19.59	314	eP	Pn	07 50 38.5	-0.5
SSF	Saint Saulge	19.64	315	eP	Pn	07 50 39.0	-0.6
	comp=Z,8.2nm,0.9s						
SSF	Saint Saulge	19.64	315	eP	Pn	07 50 39.0	-0.6
	comp=Z,4.1nm,0.9s						
VSR	Storozhevoye	19.91	29	eP	Pn	07 50 43.0	+0.3
VSR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
VSR	Storozhevoye	19.91	29	eP	Pn	07 50 43.0	+0.3
	comp=Z,7.0nm,0.5s						
TCF	Toulx Ste Croi	20.04	312	eP	P	07 50 43.4	+0.9
TCF	Toulx Ste Croi	20.04	312	eP	P	07 50 43.4	+0.9
RJF	Les Rejaudoux	20.04	309	eP	Pn	07 50 43.7	-0.7
RJF	Les Rejaudoux	20.04	309	eP	Pn	07 50 43.7	-0.7
MIB	Mutribah	20.47	97	eP	P	07 50 47.4	+0.1
MIB				AMb	AMB	07 50 49.0	
	comp=Z,47nm,0.6s						
MIB	Mutribah	20.47	97	eP	P	07 50 47.4	+0.1
	comp=Z,47nm,0.6s						
NAY	Al-Naaiem	20.59	99	eP	P	07 50 48.5	-0.1
NAY				AMb	AMB	07 50 50.4	
	comp=Z,10.0nm,0.6s						
NAY	Al-Naaiem	20.59	99	eP	P	07 50 48.5	-0.1
	comp=Z,10.0nm,0.6s						
ETSF	Etsaut	20.64	301	eP	P	07 50 50.3	+1.1
	comp=Z,14nm,1.0s						
ETSF	Etsaut	20.64	301	eP	P	07 50 50.3	+1.1
	comp=Z,7.2nm,1.0s						
GIVF	Givet	20.74	324	eP	P	07 50 51.2	+1.1
GIVF	Givet	20.74	324	eP	P	07 50 51.2	+1.1
DOU	Dourbes	20.85	323	P	P	07 50 51.7	+0.4
	comp=Z,6.7nm,1.4s						
UMR	Umm Al-Rimmam	20.86	98	eP	P	07 50 51.1	-0.4
UMR				AMb	AMB	07 50 53.1	
	comp=Z,45nm,0.8s						
UMR	Umm Al-Rimmam	20.86	98	eP	P	07 50 51.2	-0.4
	comp=Z,45nm,0.8s						
BAIF	Baives	21.02	323	eP	P	07 50 53.7	+0.6
	comp=Z,13nm,0.5s						
BAIF	Baives	21.02	323	eP	P	07 50 53.7	+0.6
	comp=Z,6.6nm,0.5s						
MFF	Saint Martin d	21.64	311	eP	P	07 50 59.2	-0.6
MFF	Saint Martin d	21.64	311	eP	P	07 50 59.2	-0.6
OBN	Obninsk	22.27	20⇑	eP	P	07 51 07.1	+0.7
OBN				e		07 55 09.4	
OBN				pmax	pmax		
	comp=Z,33nm,2.5s						
OBN				MLR	MLR		
	comp=Z,100nm,16.0s						
OBN	Obninsk	22.27	20	eP	P	07 51 07.1	+0.7
	comp=Z,100nm,16.0s						
LDF	La Druitiere	22.53	315	eP	P	07 51 08.8	-0.5
	comp=Z,31nm,0.8s						
LDF	La Druitiere	22.53	315	eP	P	07 51 08.8	-0.5
	comp=Z,16nm,0.8s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	22.64	291	P	P	07 51 11.3	+0.7
	comp=Z,0.6nm,0.5s,baz=82,slow=9.2,SNR=9.2						
FLN	La Foliniere	22.82	315	eP	P	07 51 11.7	-0.7
	comp=Z,25nm,0.7s						
FLN	La Foliniere	22.82	315	eP	P	07 51 11.7	-0.7
	comp=Z,13nm,0.7s						
GRR	Gorron	22.86	314	eP	P	07 51 12.3	-0.5
	comp=Z,18nm,0.8s						
GRR	Gorron	22.86	314	eP	P	07 51 12.3	-0.5
	comp=Z,8.8nm,0.8s						
MOS	Moscow	23.11	20	eP	P	07 51 06.7	-8.6
SGMF	Saint Gilles	23.82	313	eP	P	07 51 21.4	-1.0
SGMF	Saint Gilles	23.82	313	eP	P	07 51 21.4	-1.0
ROSF	Rostrenen	24.29	312	eP	P	07 51 25.7	-1.1
ROSF	Rostrenen	24.29	312	eP	P	07 51 25.7	-1.1
EVO	Evora	25.76	288	eP	P	07 51 42.6	+2.3
EVOP	Sao Brissos	25.85	288	eP	P	07 51 42.6	+1.6
HFS	Hagfors	26.30	349	P	P	07 51 43.5	-1.4
	comp=Z,6.9nm,0.5s,baz=176,slow=8.7,SNR=28						
HFS	Hagfors	26.30	349	P	P	07 51 43.5	-1.4
	comp=Z,7.0nm,0.5s						
FINES	FINESS Array B	26.81	2	P	P	07 51 48.1	-1.4
	comp=Z,4.4nm,0.9s,baz=188,slow=9.5,SNR=5.0						
FINES	FINESS Array B	26.81	2	P	P	07 51 48.1	-1.4
	comp=Z,4.0nm,0.9s						
NB2	NORSAR Subarra	27.59	347	P	P	07 51 55.3	-1.2
	comp=Z,0.4nm,0.5s,baz=152,slow=10						
NB2	NORSAR Subarra	27.59	347	P	P	07 51 55.3	-1.2
	comp=Z,0.4nm,0.5s,SNR=9.4						
NOA	NORSAR Array B	27.59	347	P	P	07 51 55.0	-1.5
	comp=Z,2.8nm,0.6s,baz=155,slow=8.8,SNR=13						
TORD	Torodi Ar. Bea	29.34	228	P	P	07 52 12.2	-0.3
	comp=Z,1.4nm,0.6s,baz=36,slow=8.6,SNR=14						
AKTK	Aktyubinsk	29.38	47	P	P	07 52 12.0	-0.6
	comp=Z,3.0nm,0.7s						
AKTO	Aktyubinsk	29.38	47	P	P	07 52 12.0	-0.6
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKTO	Aktyubinsk	29.38	47	P	P	07 52 12.0	-0.6
	comp=Z,3.0nm,0.7s,baz=254,slow=9.6,SNR=11						
ARU	Arti	32.09	37c	iP	P	07 52 39.0	+2.6
ARU						07 53 40.4	
ARU				S	S	07 57 49.1	+1.3
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARU	Arti	32.09	37	iP	P	07 52 39.0	+2.6
	comp=Z,6.0nm,0.7s						
ARU				S	S	07 57 49.1	+1.3
ARCES	ARCESS Array B	34.91	1	P	P	07 52 58.4	-2.5
	comp=Z,1.1nm,0.5s,baz=179,slow=9.0,SNR=8.5						
ARCES				LR	LR	08 08 21.7	
	comp=Z,65nm,20.0s,baz=92,slow=38						
BRVK	Borovoye	37.42	46⇑	eP	P	07 53 26.7	+4.3
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVAR	Borovoye Array	37.47	46	P	P	07 53 21.2	-1.7
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	Borovoye Array	37.47	46	P	P	07 53 21.2	-1.7
	comp=Z,2.4nm,0.8s,baz=244,slow=6.3,SNR=10						
BVAR	Borovoye Array	37.47	46	P	P	07 53 21.2	-1.7
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	39.86	63	P	P	07 53 44.2	+0.9
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	Ala-Archa	39.86	63	P	P	07 53 44.2	+0.9
	comp=Z,1.3nm,0.5s,baz=230,slow=8.5,SNR=3.9						
AAK	Ala-Archa	39.86	63	P	P	07 53 44.2	+0.9
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	42.34	50c	iP	P	07 54 03.3	0.0
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURK	Kurchatov	42.34	50	iP	P	07 54 03.3	0.0
	comp=Z,5.0nm,1.0s						
SPITS	Spitsbergen Ar	43.71	358	LR	LR	08 14 00.1	
	comp=Z,81nm,20.6s,baz=265,slow=38						
MKAR	Makanchi Array	44.96	56	P	P	07 54 23.0	-1.5
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MKAR	Makanchi Array	44.96	56	P	P	07 54 23.0	-1.5
	comp=Z,5.4nm,0.5s,baz=272,slow=7.2,SNR=70						
MKAR	Makanchi Array	44.96	56	P	P	07 54 23.0	-1.5
	comp=Z,5.0nm,0.5s						
NVS	Novosibirsk	45.20	45	eP	P	07 54 26.3	0.0
NVS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
NVS				pmax	pmax		
	comp=N,2.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,5.0nm,1.0s						
NVS	Novosibirsk	45.20	45	eP	P	07 54 26.3	0.0
	comp=E,2.0nm,0.7s						
ZALV	Zalesovo Beam	46.13	46	P	P	07 54 32.7	-1.0
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	Zalesovo Beam	46.13	46	P	P	07 54 32.7	-1.0
	comp=Z,2.2nm,0.4s,baz=273,slow=8.7,SNR=7.0						
ZALV	Zalesovo Beam	46.13	46	P	P	07 54 32.7	-1.0
	comp=Z,2.0nm,0.4s						
KRAR	Krasnoyarsk	50.64	43⇑	eP	P	07 55 11.1	+2.7
KRAR	Krasnoyarsk	50.64	43	eP	P	07 55 11.1	+2.7
DANN	Dangsing	50.85	80	eP	P	07 55 11.5	+0.7
	comp=Z,38nm,0.8s						
KOLN	Koldanda	50.95	80	eP	P	07 55 11.6	+0.2
	comp=Z,7.8nm,0.6s						
DMN	Daman	52.24	80	eP	P	07 55 20.3	-0.8
	comp=Z,30nm,0.9s						
KKN	Kakani	52.30	80	eP	P	07 55 20.0	-1.6
	comp=Z,12nm,0.6s						
PKIN	Phulchoki	52.48	80	eP	P	07 55 21.5	-1.5
	comp=Z,11nm,0.8s						
PKI	Pulchoki	52.50	80	eP	P	07 55 21.6	-1.5
	comp=Z,18nm,0.8s						
GUN	Gumba	52.74	79	eP	P	07 55 23.2	-1.8
	comp=Z,14nm,0.6s						
RAMN	Ramite	53.72	80	eP	P	07 55 28.8	-3.2
TAPN	Taplejung	54.45	79	eP	P	07 55 33.9	-3.6
TLY	Talaya	57.73	46	eP	P	07 56 05.0	+4.8
TLY				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	Songino Array	60.64	50	P	P	07 56 19.8	-0.8
	comp=Z,1.2nm,0.6s,baz=289,slow=9.0,SNR=3.0						
SONM	Songino Array	60.64	50	P	P	07 56 19.8	-0.8
	comp=Z,1.0nm,0.6s						
SCHQ	Schefferville	62.83	319	P	P	07 56 34.9	-0.2
	comp=Z,0.8nm,0.5s,baz=60,slow=8.1,SNR=3.8						
BOSA	Boshof	62.98	179	P	P	07 56 36.5	+0.3
	comp=Z,1.0nm,0.5s,baz=356,slow=6.0,SNR=4.1						
BOSA	Boshof	62.98	179	P	P	07 56 36.6	+0.3
	comp=Z,1.0nm,0.5s						
GYA	Guiyang	69.94	71	eP	P	07 57 21.0	-0.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BILL	Bilibino	73.79	14	eP	P	07 57 44.1	+0.7
BILL				e		08 00 36.0	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BILL	Bilibino	73.79	14	eP	P	07 57 44.1	+0.7
	comp=Z,10.0nm,1.2s						
INK	Inuvik	75.92	352	P	P	07 57 55.5	-0.2
	comp=Z,0.6nm,0.5s,baz=23,slow=7.7,SNR=4.1						
INK	Inuvik	75.92	352	P	P	07 57 55.5	-0.2
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	77.55	342	P	P	07 58 04.7	-0.3
	comp=Z,0.4nm,0.6s,baz=30,slow=5.6,SNR=5.5						
YKA	Yellowknife Ar	77.55	342	P	P	07 58 04.7	-0.3
KSRS	Korea Array	79.44	52	P	P	07 58 16.3	+0.3
	comp=Z,0.5nm,0.4s,baz=330,slow=7.0,SNR=4.9						
KSRS	Korea Array	79.44	52	P	P	07 58 16.3	+0.3
	comp=Z,1.0nm,0.4s						
ILAR	Eielson Array	80.60	356	P	P	07 58 22.3	+0.6
	comp=Z,0.1nm,0.5s,baz=4.0,slow=3.9,SNR=4.1						
ILAR	Eielson Array	80.60	356	P	P	07 58 22.3	+0.6
WRA	Warramunga Arr	117.64	96	PKP	PKPdf	08 04 56.6	+0.5
	comp=Z,0.5nm,1.1s,baz=298,slow=2.8,SNR=2.9						
ASAR	Alice Springs	119.06	100	PKP	PKPdf	08 04 57.4	-1.3
	comp=Z,0.2nm,0.8s,baz=327,slow=1.4,SNR=2.9						

*ATH **05** 07:54:47.6, 34°.66N×23°.69E, h4^{km}, MD3.5/10*
*THE **05** 07:54:48.5, 34°.74N×23°.71E, h14^{km}, Error ellipse: s-maj=1.5km s-min=0.9km az=72.0*
*CSEM **05** 07:54:48.4±0.9, 34°.72N×23°.71E, h2^{km}, MD3.5, Error ellipse: s-maj=15.9km s-min=9.2km az=28.0*
ISC 05 07:54:48.5±2.3, **34°.73N**±0°.08×**23°.71E**±0°.06, **h0**^{km}±16^{km}, **n28**, σ**0^s.83**/39, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.33	71	P	Pg	07 54 55.0	+0.1
GVD				S	Sg	07 55 00.3	+1.1
GVD	Gavdhos	0.33	71	ePG	Pg	07 54 55.2	+0.3
GVD				eSG	Sg	07 55 00.8	+1.6
GVD	Gavdhos	0.33	71	P	Pg	07 54 55.0	+0.1
GVD				S	Sg	07 55 00.3	+1.1
VAM	Vamos	0.78	31	P	Pg	07 55 03.3	-0.3
VAM				S	Sg	07 55 14.6	+0.8
VAM	Vamos	0.78	31	ePG	Pg	07 55 03.0	-0.6
VAM				eSG	Sb	07 55 16.2	-0.1
VAM	Vamos	0.78	31	ePg	Pg	07 55 03.0	-0.6
VAM	Vamos	0.78	31	P	Pg	07 55 03.3	-0.3
VAM				S	Sg	07 55 14.6	+0.8
VAM				eSg	Sb	07 55 16.2	-0.1
SIVA	Sivas	0.95	72	P	Pg	07 55 06.2	-0.5
SIVA	Sivas	0.95	72	ePG	Pg	07 55 06.4	-0.3
SIVA	Sivas	0.95	72	ePg	Pg	07 55 06.4	-0.3
IDI	Anoyia	1.12	60	P	Pg	07 55 08.2	-1.7
IDI				S	Sg	07 55 24.0	-0.5
IDI	Anoyia	1.12	60	ePB	Pg	07 55 08.3	-1.7
IDI				eSB	Sg	07 55 25.3	+0.8
IDI	Anoyia	1.12	60	ePb	Pg	07 55 08.3	-1.7
IDI				S	Sg	07 55 24.0	-0.5
IDI				eSb	Sg	07 55 25.3	+0.8
ANKY	Antikythira Is	1.18	344	ePB	Pb	07 55 11.2	-0.6
ANKY	Antikythira Is	1.18	344	ePb	Pb	07 55 11.2	-0.6
LAST	Lasithi	1.52	73	ePB	Pb	07 55 17.5	-0.1
LAST	Lasithi	1.52	73	ePb	Pb	07 55 17.5	-0.1
KYTH	Kithira	1.64	341	P	Pg	07 55 19.7	-0.3
KYTH	Kithira	1.64	341	ePB	Pg	07 55 19.9	-0.1
KYTH	Kithira	1.64	341	ePb	Pg	07 55 19.9	-0.1
XRY	Khrisi	1.64	84	ePG	Pn	07 55 18.4	-0.2
XRY	Khrisi	1.64	84	ePg	Pn	07 55 18.4	-0.2
NPS	Neapolis	1.65	71	ePG	Pb	07 55 19.6	-0.2
NPS	Neapolis	1.65	71	ePg	Pb	07 55 19.6	-0.2
ZKR	Zakros	2.10	79	ePN	Pb	07 55 26.5	-0.9
ZKR	Zakros	2.10	79	ePn	Pb	07 55 26.5	-0.9
KARP	Karpathos	2.94	73	ePN	Pn	07 55 37.7	+1.1
KARP	Karpathos	2.94	73	ePn	Pn	07 55 37.7	+1.1

*IDC **05** 08:01:02.5±1.1, 53°.97N×164°.10W, h0^{km}, mb4.1/16, mb1 4.2/18, mb1mx4.0/34, mbtmp4.1/18, ML3.5/2, MS3.1/5, Ms1 3.1/5, ms1mx2.7/48, Error ellipse: s-maj=29.2km s-min=16.2km az=178.0*
*NEIC **05** 08:01:07.5, 53°.84N×163°.86W, h10^{km}, mb3.7/1, ML3.8(AEIC), After AEIC.*
ISC 05 08:01:05.5±0.6, **53°.88N**±0°.07×**163°.85W**±0°.04, **h21**^{km}±3^{km}, **n63**, σ**1^s.24**/69, **mb4.3**/17, **MS3.0**/3, **Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WESE	West Dahl East	0.74	324	P	Pn	08 01 21.9	+1.2
SSLW	Shishaldin Wes	0.91	350	P	Pn	08 01 24.5	+1.4
SSBA	Shishaldin	0.91	350	P	Pn	08 01 24.4	+1.3
SSBA				S	Sn	08 01 36.5	+0.9
FALS	False Pass	1.02	14	P	Pb	08 01 25.8	+1.5
FALS				S	Sn	08 01 39.7	+1.7
AKUT	Akutan	1.16	284	P	Pb	08 01 27.7	+0.9
AKUT				S	Sb	08 01 42.8	+1.4
DRIA	Deer Island	1.43	40	P	Pn	08 01 31.1	+0.9
DT1	Dutton Round H	1.54	36	P	Pb	08 01 33.4	+0.2
UNV	Unalaska Valle	1.57	270	P	Pn	08 01 32.8	+0.7
UNV				S	Sn	08 01 51.7	0.0
MTBL	Makushin Table	1.68	274	P	Pb	08 01 35.0	-0.6
DOL	Dolgoi Island	1.72	41	P	Pb	08 01 35.9	-0.5
MSW	Makushin Switc	1.73	272	P	Pb	08 01 35.7	-0.9
MSW				S	Sb	08 01 58.3	+0.4
MCIR	Makushin Cirqu	1.80	274	P	Pb	08 01 37.1	-0.6
PS4A	Pavlof South-4	1.88	37	P	Pb	08 01 39.0	+0.1
PVV	Pavlof Volcano	1.92	38	P	Pb	08 01 39.5	-0.2
SDPT	Sand Point	2.46	52	P	Pn	08 01 46.6	+2.4
SDPT				S	Sb	08 02 17.4	-1.2
OKFG	Magazine Ridge	2.46	261	P	Pn	08 01 46.7	+2.4
OKCE	Okmok Cone E	2.61	262	P	Pn	08 01 48.3	+2.0
OKSP	Okmok Steeple	2.72	259	P	Pn	08 01 49.5	+1.6
NIKH	Nikolski High	3.13	255	P	Pn	08 01 55.2	+1.8
CHGN	Chignik	3.96	50	ePn	Pn	08 02 07.7	+2.9
CHGN				eSn	Sb	08 02 59.3	-2.5
KDAK	Kodiak Island	7.45	54	Pn	Pn	08 02 54.1	+1.3
KDAK				Sn	Sn	08 04 15.6	-1.0
KDAK	Kodiak Island	7.45	54	Pn	Pn	08 02 54.1	+1.3
	1.2nm,0.3s,baz=226,slow=9.3,SNR=9.3						
KDAK				Sn	Sn	08 04 15.6	-1.0
	0.7nm,0.3s,baz=139,slow=19,SNR=3.9						
RSO	Redoubt South	8.93	38	ePn	Pn	08 03 17.9	+4.7
	18nm,0.6s						
FX1	Attu Island--F	13.74	275	LR	LR	08 08 55.0	
	comp=Z,45nm,19.4s,baz=14,slow=35						
ILAR	Eielson Array	13.88	31	Pn	Pn	08 04 19.5	-1.1
ILAR	Eielson Array	13.88	31	Pn	Pn	08 04 19.5	-1.1
	0.1nm,0.3s,baz=224,slow=11,SNR=4.1						
ILAR				LR	LR	08 09 38.6	
	comp=Z,65nm,18.7s,baz=275,slow=37						
COLD	Coldfoot	14.92	21	eP	P	08 04 40.6	+0.3
	6.9nm,1.0s						
EGAK	Eagle	15.80	37	eP	P	08 04 49.5	-0.6
	3.3nm,0.6s						
INK	Inuvik	20.27	33	P	P	08 05 38.2	-0.9
INK	Inuvik	20.27	33	P	P	08 05 38.2	-0.9
	2.1nm,0.4s,baz=241,slow=9.6,SNR=8.7						
INK				LR	LR	08 14 15.9	
	comp=Z,70nm,20.1s,baz=50,slow=39						
PETK	Petropavlovsk-	22.71	284	P	P	08 06 03.9	-1.6
PETK	Petropavlovsk-	22.71	284	P	P	08 06 03.9	-1.6
	1.8nm,0.4s,baz=88,slow=12,SNR=12						
PETK				LR	LR	08 13 42.4	
	comp=Z,34nm,21.1s,baz=60,slow=34						
YKA	Yellowknife Ar	26.72	51	P	P	08 06 43.6	+0.7
YKA	Yellowknife Ar	26.72	51	P	P	08 06 43.6	+0.7
	0.4nm,0.6s,baz=274,slow=10.0,SNR=10						
YBH	Yreka Blue Hor	29.75	97	LR	LR	08 15 30.2	
	comp=Z,59nm,20.7s,baz=2.1,slow=29						
NVAR	Mina Array Bea	34.46	98	P	P	08 07 53.9	+2.1
NVAR	Mina Array Bea	34.46	98	P	P	08 07 53.9	+2.1
	0.5nm,0.5s,baz=310,slow=9.0,SNR=4.1						
DAG	Danmarks Havn	47.76	10	iP	P	08 09 39.0	-1.2
	4.9nm,1.0s						
SUMG	Summit	48.31	19	iP	P	08 09 45.3	+0.3
	5.3nm,1.0s						
TXAR	Lajitas Array	49.47	95	P	P	08 09 55.1	+1.0
TXAR	Lajitas Array	49.47	95	P	P	08 09 55.1	+1.0
	0.4nm,0.6s,baz=318,slow=6.6,SNR=10						
ARCES	ARCESS Array B	56.71	356	P	P	08 10 45.6	-1.2
ARCES	ARCESS Array B	56.71	356	P	P	08 10 45.6	-1.2
	4.1nm,0.9s,baz=7.0,slow=8.2,SNR=3.3						
BVAR	Borovoye Array	64.33	327	P	P	08 11 39.0	0.0
BVAR	Borovoye Array	64.33	327	P	P	08 11 39.0	0.0
	2.6nm,0.7s,baz=43,slow=8.1,SNR=12						
FINES	FINESS Array B	64.76	355	P	P	08 11 40.5	-1.1
FINES	FINESS Array B	64.76	355	P	P	08 11 40.5	-1.1
	3.2nm,0.7s,baz=38,slow=7.0,SNR=4.2						
MKAR	Makanchi Array	65.10	316	P	P	08 11 43.4	-0.8
MKAR	Makanchi Array	65.10	316	P	P	08 11 43.4	-0.8
	0.8nm,0.6s,baz=57,slow=5.3,SNR=5.7						
HFS	Hagfors	66.32	1	P	P	08 11 50.7	-1.1
HFS	Hagfors	66.32	1	P	P	08 11 50.7	-1.1
	1.9nm,0.5s,baz=5.3,slow=6.2,SNR=13						
AKTO	Aktyubinsk	70.27	333	P	P	08 12 16.8	+0.1
AKTO	Aktyubinsk	70.27	333	P	P	08 12 16.8	+0.1
	6.8nm,0.9s,baz=18,slow=6.5,SNR=24						
AKASG	Malin Array Be	75.22	351	P	P	08 12 44.3	-1.7
AKASG	Malin Array Be	75.22	351	P	P	08 12 44.3	-1.7
	1.3nm,0.5s,baz=12,slow=6.6,SNR=4.3						
CMAR	Chiang Mai Arr	79.45	287	P	P	08 13 10.5	+0.3
CMAR	Chiang Mai Arr	79.45	287	P	P	08 13 10.5	+0.3
	0.9nm,0.3s,baz=30,slow=7.3,SNR=4.8						
KBZ	Khabaz	80.11	341	P	P	08 13 14.4	+1.0
KBZ	Khabaz	80.11	341	P	P	08 13 14.4	+1.0
	2.3nm,0.7s,baz=190,slow=4.4,SNR=4.3						
ESDC	Sonseca Array	85.22	15	P	P	08 13 40.7	+0.5
ESDC	Sonseca Array	85.22	15	P	P	08 13 40.7	+0.5
	0.4nm,0.4s,baz=333,slow=4.7,SNR=4.0						
BRTR	Keskin Array B	85.56	347	P	P	08 13 42.1	+0.2
BRTR	Keskin Array B	85.56	347	P	P	08 13 42.1	+0.2
	2.5nm,0.8s,baz=17,slow=4.4,SNR=12						

MEX 05 08:02:13.6±0.3, **18°.06N**×**103°.24W**, **h8**^{km}±2^{km}, **MD3.6**, **Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.25	336	iP	Pg	08 02 18.3	-0.4
MMIG				iS	Sg	08 02 22.1	0.0
R15V		1.31	328	eP	Pn	08 02 34.9	-3.5
R15V				eS	Sb	08 02 51.0	-4.8
EZ5V		1.46	346	eP	Pn	08 02 37.5	-3.2
EZ5V				iS	Sn	08 02 54.8	-5.4
ZIIG	Zihuatanejo	1.75	105	iP	Pn	08 02 40.6	-3.7
ZIIG				eS	Sn	08 03 02.1	-4.7
ARIG	Puente Sto Nin	2.76	85	eP	Pn	08 02 55.8	-2.5
ARIG				iS	Sn	08 03 27.6	-4.2

*ISCJB **05** 08:04:47.7±0.8, 26°.96S±0°.03×26°.81E±0°.03, h8^{km}±6^{km}, mb3.4/2, Error ellipse: s-maj=5.2km s-min=3.7km az=143.6*
*PRE **05** 08:04:47.8±2.3, 26°.91S×26°.84E, h2^{km}, ML3.5*
*IDC **05** 08:04:48.4±1.7, 26°.89S×26°.75E, h0^{km}, mb3.5/2, mb1 3.7/6, mb1mx3.5/29, mbtmp3.7/6, ML3.0/4, Error ellipse: s-maj=27.9km s-min=11.3km az=91.0*
ISC 05 08:04:48.3±1.2, **26°.87S**±0°.03×**26°.80E**±0°.03, **h10**^{km}±9^{km}, **n25**, σ**1^s.58**/42, **2C-4D**, **South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRYS	Parys	0.51	96⇓	iP	Pg	08 04 57.2	-1.0
PRYS				eS	Sg	08 05 04.1	-0.8
PRYS				AML	AML	08 05 09.0	
	comp=Z,2μm,0.6s						
KLOF	Kloof	0.89	55	eP	Pg	08 05 05.8	+0.3
KLOF				eS	Sg	08 05 16.1	-1.2
KLOF				AML	AML	08 05 22.6	
	comp=Z,880nm,0.2s						
KSR	Koster	1.02	5⇓	iP	Pg	08 05 08.1	+0.2
KSR				eS	Sg	08 05 21.8	+0.5
KSR				AML	AML	08 05 30.0	
	comp=Z,591nm,0.5s						
SWZ	Schweizer	1.34	256⇑	iP	Pg	08 05 14.6	+0.4
SWZ				eS	Sn	08 05 32.0	+0.8
SWZ				AML	AML	08 05 41.1	
	comp=Z,739nm,0.8s						
ERPM	east rand prop	1.40	68⇑	iP	Pg	08 05 15.5	+0.3
ERPM				eS	Sb	08 05 32.7	+0.2
ERPM				AML	AML	08 05 36.9	
	comp=Z,180nm,0.6s						
SLR	Silverton	1.75	50⇓	iP	Pb	08 05 20.5	0.0
SLR				eS	Sb	08 05 43.0	+0.3
SLR				AML	AML	08 05 46.0	
	comp=Z,613nm,0.5s						
LBTB	Lobatse	2.14	329⇓	iP	Pb	08 05 26.6	-0.6
LBTB				eS	Sb	08 05 54.5	+0.6
LBTB				AML	AML	08 05 56.9	
	comp=Z,370nm,0.5s						
LBTB	Lobatse	2.14	329	Pn	Pb	08 05 26.8	-0.5
	comp=Z,31nm,0.3s,baz=160,slow=16,SNR=249						
LBTB				Pg	Pg	08 05 28.1	-1.3
	comp=Z,31nm,0.3s,baz=160,slow=17,SNR=253						
LBTB				Lg	Lg	08 05 55.6	
	comp=Z,105nm,0.3s,baz=254,slow=12,SNR=43						
BOSA	Boshof	2.21	218	eP	Pn	08 05 26.4	+1.3
BOSA				eS	Sn	08 05 53.1	+0.5
BOSA				AML	AML	08 05 58.4	
	comp=Z,81nm,0.7s						
BOSA	Boshof	2.21	218	Pn	Pn	08 05 26.5	+1.3
	comp=Z,6.4nm,0.3s,baz=43,slow=16,SNR=83						
BOSA				Pg	Pb	08 05 28.6	+0.2
	comp=Z,6.4nm,0.3s,baz=45,slow=17,SNR=84						
BOSA				Lg	Lg	08 05 56.4	
	comp=Z,12nm,0.3s,baz=313,slow=16,SNR=24						
HVD	Gariep Dam	3.89	197	eP	Pn	08 05 48.7	+0.4
HVD				eS	Sn	08 06 32.7	-1.4
HVD				AML	AML	08 07 05.8	
	comp=Z,40nm,0.6s						
KSD	Kokstad	4.32	148	eP	Pn	08 05 56.2	+2.0
KSD				eS	Sn	08 06 43.5	-1.2
KSD				AML	AML	08 07 03.1	
	comp=Z,118nm,0.6s						
POGA	Pongola	4.32	98	eP	Pn	08 05 55.5	+1.5
POGA				eS	Sn	08 06 45.2	+0.6
POGA				AML	AML	08 07 07.1	
	comp=Z,102nm,0.4s						
UPI	Upington	5.14	252	eP	Pn	08 06 06.5	+1.2
UPI				eS	Sn	08 07 04.8	0.0
UPI				AML	AML	08 07 34.2	
	comp=Z,33nm,0.5s						
GRM	Grahamstown	6.43	182	eS	Sn	08 07 32.5	-4.0
GRM				eS	Sn	08 07 34.0	-2.5
GRM				AML	AML	08 08 07.9	
	comp=Z,12nm,0.7s						
SUR	Sutherland	7.57	222	eP	Pn	08 06 40.1	+1.3
SUR				eS	Sn	08 08 03.5	-1.3
SUR				AML	AML	08 08 48.4	
	comp=Z,10nm,0.6s						
SUR	Sutherland	7.57	222	Pn	Pn	08 06 40.2	+1.4
	comp=Z,0.5nm,0.3s,baz=100,slow=7.0,SNR=8.7						
SUR				Sn	Sn	08 08 00.7	-4.1
	comp=Z,0.6nm,0.3s,baz=25,slow=19,SNR=2.9						
SUR				Lg	Lg	08 08 40.9	
	comp=Z,1.1nm,0.3s,baz=261,slow=19,SNR=4.8						
CVNA	Calvinia	7.67	232	eS	Sn	08 08 04.4	-2.9
CVNA				AML	AML	08 09 00.7	
	comp=Z,32nm,0.6s						
KOMG	Komaggas	8.71	248	eS	Sn	08 08 31.2	-1.5
KOMG				AML	AML	08 09 17.5	
	comp=Z,15nm,0.6s						
TSUM	Tsumeb	11.41	310	eS	Sn	08 09 35.7	-3.4
TSUM	Tsumeb	11.41	310	Pn	Pn	08 07 32.1	+0.6
	comp=Z,0.6nm,0.3s,baz=127,slow=9.0,SNR=5.2						
TSUM				Lg	Lg	08 10 41.8	
	comp=Z,0.4nm,0.3s,baz=241,slow=14,SNR=4.4						
LSZ	Lusaka	11.61	7	Pn	Pn	08 07 33.0	-1.3
	comp=Z,0.7nm,0.3s,baz=181,slow=11,SNR=5.5						
LSZ				Lg	Lg	08 10 46.3	
	comp=Z,0.2nm,0.3s,baz=107,slow=19,SNR=2.9						
TORD	Torodi Ar. Bea	46.66	325	P	P	08 13 18.0	+0.8
	comp=Z,0.5nm,0.7s,baz=141,slow=6.5,SNR=6.0						
SNAA	Sanae	47.77	192	P	P	08 13 27.0	+1.7
	comp=Z,0.3nm,0.9s,baz=38,slow=12,SNR=3.6						
NVAR	Mina Array Bea	148.61	300	PKPbc	PKPbc	08 24 36.8	+0.8
	comp=Z,0.5nm,0.7s,baz=104,slow=3.0,SNR=6.0						

*ISCJB **05** 08:08:50.3±0.3, 13°.18N±0°.05×87°.61W±0°.05, h202^{km}±4^{km}, mb4.0/23, Error ellipse: s-maj=10.7km s-min=4.0km az=139.1*
*NEIC **05** 08:08:50.5±1.1, 13°.11N×87°.83W, h194^{km}±8^{km}, mb4.3/16, Error ellipse: s-maj=21.7km s-min=9.1km az=63.0*
*CASC **05** 08:08:51.7±3.9, 13°.20N×87°.51W, h4^{km}±18^{km}, MD4.1*
*IDC **05** 08:08:52.0±2.9, 13°.19N×87°.55W, h212^{km}±29^{km}, mb3.4/10, mb1 3.6/11, mb1mx3.5/25, mbtmp3.4/11, Error ellipse: s-maj=30.5km s-min=10.5km az=62.0*
ISC 05 08:08:51.2±0.7, **13°.18N**±0°.06×**87°.55W**±0°.07, **h201**^{km}±6^{km}, **n51**, σ**1^s.40**/59, **mb4.2**/23, **2D**, **Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	0.91	17	ePn	Pn	08 09 19.3	-1.2
TGUH				eSn	Sn	08 09 42.9	-0.4
MRL	Marmol	2.80	312	eP	Pn	08 09 38.2	-0.6
MRL				eS	Sn	08 10 14.0	-1.9
NBG	Las Nubes	3.06	298	eP	Pn	08 09 40.2	-1.6
LAPC	Finca la Perla	3.17	139	iP	Pn	08 09 42.9	+0.1
LAPC				iS	Sn	08 10 20.5	-2.9
NY14	Universidad de	3.19	142	iP	Pn	08 09 44.4	+1.2
NY14				iS	Sn	08 10 22.2	-1.7
PCG	Pacaya	3.21	292	eP	Pn	08 09 42.0	-1.6
PCG				eS	Sn	08 10 24.0	-0.6
FUG	Fuego 3	3.44	292	eP	Pn	08 09 44.2	-2.1
FUG				eS	Sn	08 10 28.1	-1.4
VCR	Vista de Mar	3.57	148⇓	iP	Pn	08 09 48.3	+0.5
AMAS	Alto Masis	3.57	135	iP	Pn	08 09 49.0	+1.2
JTS	JuntasAbangare	3.83	138	ePn	Pn	08 09 51.4	+0.4
JTS				eSn	Sn	08 10 36.4	-1.5
JCR	Jicaral	4.08	144⇓	eP	Pn	08 09 54.9	+0.8
CGA2	Cerro Gallo 2	4.36	136	eP	Pn	08 09 59.4	+1.8
CGA2				eS	Sn	08 10 48.4	-1.4
URSC	Urasca	4.97	132	eP	Pn	08 10 08.9	+3.5
QCR	Quepos	4.99	138	eP	Pn	08 10 06.9	+1.3
ACR	Cerro Adams	6.22	136	eP	Pn	08 10 22.2	+0.8
TEIG	Tepich	7.04	354	ePn	Pn	08 10 31.8	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TEIG	Tepich	7.04	354	P	Pn	08 10 32.3	+0.3
	3.9nm,0.3s,baz=343,slow=23,SNR=57						
TEIG				S	Sn	08 11 49.1	-2.9
	0.4nm,0.3s,baz=32,slow=15,SNR=2.2						
GTBY	Guantanamo Bay	13.67	59	ePn	P	08 12 03.0	+3.6
ROSC	El Rosal	15.44	121	P	P	08 12 22.6	+3.2
	0.8nm,0.3s,baz=88,slow=23,SNR=5.2						
OTAV	Otavalo	15.70	144	eP	P	08 12 24.5	+2.1
	2.9nm,0.9s						
LRAL	Lakeview Retre	19.77	1	eP	P	08 13 07.6	+1.6
	13nm,0.8s						
OXF	Oxford	21.30	356	eP	P	08 13 23.6	+1.4
	12nm,0.6s						
MTP	Monte Pirata	21.73	74	eP	P	08 13 28.3	+1.5
	15nm,0.6s						
TXAR	Lajitas Array	21.96	320	P	P	08 13 28.3	-0.8
	0.6nm,0.6s,baz=141,slow=10,SNR=12						
TXAR				pP	pP	08 14 06.4	+2.8
	1.5nm,0.9s,baz=141,slow=10.0,SNR=9.8						
SWET	Sewanee	21.99	4	eP	P	08 13 29.8	+0.6
	6.5nm,0.6s						
STVI	Saint Thomas	22.33	74	eP	P	08 13 34.2	+1.7
	36nm,0.3s						
CPCT	Cooper Cave	22.34	7	eP	P	08 13 33.6	+1.2
TKL	Tuckaleechee C	22.64	8	P	P	08 13 36.1	+1.0
	15nm,0.8s,baz=183,slow=12,SNR=15						
WVT	Waverly	22.85	359	eP	P	08 13 38.0	+0.9
	1.8nm,0.3s						
TZTN	Tazewell	23.54	8	eP	P	08 13 43.6	+0.3
	143nm,2.6s						
WMOK	Wichita Mounta	23.75	337	eP	P	08 13 45.4	+0.1
	1.5nm,0.6s						
SIUC	Southern Illin	24.48	357	eP	P	08 13 51.8	0.0
	8.1nm,0.8s						
ACSO	Alum Creek Sta	27.25	8	eP	P	08 14 17.1	+0.4
	5.8nm,0.4s						
ECSD	EROS Data Cent	31.43	347	eP	P	08 14 52.3	-1.3
	4.4nm,0.8s						
SAML	Samuel	32.69	131	eP	P	08 15 02.5	-2.4
	1.9nm,0.7s						
LONY	Lake Ozonia	33.23	17	eP	P	08 15 09.8	+0.6
	14nm,1.6s						
LPAZ	La Paz	35.01	146	eP	P	08 15 26.3	+0.8
	15nm,2.0s						
LPAZ	La Paz	35.01	146	P	P	08 15 26.5	+1.0
	1.7nm,0.4s,baz=342,slow=5.1,SNR=18						
PDAR	Pinedale Array	35.09	331	P	P	08 15 25.8	+0.2
	0.7nm,0.5s,baz=125,slow=10,SNR=5.4						
SNOW	Snow King Moun	36.19	331	eP	P	08 15 36.1	+1.2
SNOW				e		08 16 16.9	
SIV	San Ignacio	39.06	137	P	P	08 15 57.8	-1.1
	0.8nm,0.4s,baz=312,slow=9.6,SNR=9.1						
SCHQ	Schefferville	44.61	17	eP	P	08 16 43.2	-0.1
	6.9nm,0.7s						
SCHQ	Schefferville	44.61	17	P	P	08 16 43.1	-0.3
	7.4nm,0.6s,baz=224,slow=9.6,SNR=19						
CPUP	Villa Florida	49.05	143	P	P	08 17 17.1	-1.0
	0.3nm,0.4s,baz=300,slow=8.1,SNR=4.5						
YKA	Yellowknife Ar	52.89	345	P	P	08 17 45.5	-0.7
	0.6nm,0.5s,baz=145,slow=6.6,SNR=14						
ILAR	Eielson Array	65.32	336	P	P	08 19 10.8	-0.7
	0.4nm,0.6s,baz=153,slow=5.5,SNR=8.1						
SUMG	Summit	65.91	14	eP	P	08 19 15.7	+0.1
	1.9nm,0.5s						
TORD	Torodi Ar. Bea	86.34	77	P	P	08 21 09.1	-2.2
	0.2nm,0.4s,baz=284,slow=5.1,SNR=3.8						
STKA	Stephens Creek	131.39	239	PKP	PKPdf	08 27 41.2	+1.0
	1.1nm,0.6s,baz=16,slow=5.5,SNR=5.3						
WRA	Warramunga Arr	139.38	255	PKP	PKPdf	08 27 55.9	+0.5
	1.9nm,0.5s,baz=87,slow=2.5,SNR=15						
ASAR	Alice Springs	139.45	249	PKP	PKPdf	08 27 55.9	+0.5
	1.9nm,0.6s,baz=91,slow=1.6,SNR=14						

IDC 05 08:17:52.9±1.6, 4°.22S×131°.73E, h0km, mb3.7/2, mb1 4.0/4, mb1mx3.7/19, mbtmp3.9/4, ML4.1/2, Error ellipse: s-maj=75.5km s-min=29.3km az=83.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	15.03	203	Pn	Pn	08 21 25.2	-1.6
	0.5nm,0.3s,baz=26,slow=12,SNR=9.8						
FITZ				Sn	Sn	08 24 02.6	-11
	0.4nm,0.3s,baz=295,slow=19,SNR=12						
WRA	Warramunga Arr	15.83	171	Pn	Pn	08 21 33.7	-3.7
	0.5nm,0.3s,baz=350,slow=13,SNR=17						
WRA				Sn	Sn	08 24 22.4	-11
	0.1nm,0.3s,baz=348,slow=25,SNR=4.1						
ASAR	Alice Springs	19.45	174	P	P	08 22 21.8	+0.5
	0.5nm,0.3s,baz=350,slow=9.3,SNR=49						
ASAR				S	Sn	08 25 51.7	-10
	0.1nm,0.3s,baz=352,slow=27,SNR=4.2						
MKAR	Makanchi Array	66.89	325	P	P	08 28 47.2	+0.2
	0.9nm,0.5s,baz=114,slow=7.8,SNR=16						
ILAR	Eielson Array	90.12	25	P	P	08 30 54.2	-0.5
	0.1nm,0.6s,baz=266,slow=5.2,SNR=3.0						

*CSEM **05** 08:21:04.2, 37°.65N×25°.25W, h0km, ML3.1, After PDA*

PDA 05 08:21:04.2±1.1, 37°.65N×25°.25W, h0km±7km, MD3.7, ML3.1, Error ellipse: s-maj=4.4km s-min=2.4km az=42.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BART	Pico Bartolome	0.14	27	i P	Pg	08 21 06.7	-0.3
BART				eS	Sg	08 21 09.6	+0.6
BART				A	A	08 21 13.0	
	8μm,0.4s						
CMLA	Cha da Macela	0.25	297	eP	Pg	08 21 08.8	-0.2
CMLA				eS	Sg	08 21 12.5	+0.3
CMLA				A	A	08 21 15.6	
	4μm,0.4s						
CMLA	Cha da Macela	0.25	297	eP	Pg	08 21 08.8	-0.2
CMLA				eS	Sg	08 21 12.5	+0.3
GRON	Grota Negra	0.25	297	eP	Pg	08 21 07.3	-1.9
GRON				eS	Sg	08 21 09.8	-2.7
GRON				A	A	08 21 10.9	
	1μm,0.2s						
PDA	Ponta Delgada	0.34	286	eP	Pg	08 21 10.6	-0.2
PDA				eS	Sg	08 21 15.8	+0.6
PDA				A	A	08 21 17.4	
	782nm,0.2s						
PDA	Ponta Delgada	0.34	286	eP	Pg	08 21 10.6	-0.2
PDA				eS	Sg	08 21 15.8	+0.6
PSET	Sete Cidades	0.41	295	i P	Pg	08 21 11.9	-0.3
PSET				eS	Sg	08 21 17.7	+0.1
PSET				A	A	08 21 19.7	
	3μm,0.5s						
PSMA	Santa Maria	0.66	172	eP	Pg	08 21 15.9	-1.0
PSMA				eS	Sg	08 21 24.3	-1.2
PSMA				A	A	08 21 26.5	
	202nm,0.1s						
PSMN	Pico do Norte,	0.66	167	eP	Pg	08 21 15.9	-1.1
PSMN				eS	Sg	08 21 24.9	-0.7
PSMN				A	A	08 21 26.4	
	122nm,0.4s						
PSMN	Pico do Norte,	0.66	167	eP	Pg	08 21 15.9	-1.1
PSMN				eS	Sg	08 21 24.9	-0.7
PID	Ribeirinha	2.40	290	eP	Pn	08 21 40.5	-4.3
PID	Ribeirinha	2.40	290	eP	Pn	08 21 40.5	-4.3
PMAN	Manadas	2.44	294	eP	Pn	08 21 40.8	-4.6
PMAN	Manadas	2.44	294	eP	Pn	08 21 40.8	-4.6
ROSA	Rosais	2.59	295	eP	Pn	08 21 43.8	-3.6
ROSA	Rosais	2.59	295	eP	Pn	08 21 43.8	-3.6
PCAN	Candelaria	2.68	289	eP	Pn	08 21 43.6	-5.1
PCAN	Candelaria	2.68	289	eP	Pn	08 21 43.6	-5.1

IDC 05 08:46:36.3±8.8, 18°.07S×177°.82W, h546km±111km, mb3.0/9, mb1 3.3/9, mb1mx3.1/20, mbtmp3.0/9, Error ellipse: s-maj=43.8km s-min=23.4km az=7.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	20.59	191	P	P	08 50 37.0	-0.8
	5.6nm,0.8s,baz=349,slow=5.2,SNR=3.7						
WRA	Warramunga Arr	45.15	260	P	P	08 54 04.5	-0.2
	0.5nm,0.4s,baz=96,slow=7.1,SNR=27						
ASAR	Alice Springs	45.28	254	P	P	08 54 06.0	+0.3
	0.7nm,0.4s,baz=92,slow=7.8,SNR=17						
MJAR	Matsushiro Arr	68.37	323	P	P	08 56 43.5	0.0
	0.8nm,0.4s,baz=151,slow=6.4,SNR=4.5						
PETK	Petropavlovsk-	73.98	345	P	P	08 57 15.9	-0.1
	2.5nm,0.7s,baz=126,slow=7.3,SNR=4.1						
NVAR	Mina Array Bea	79.16	44	P	P	08 57 45.6	+0.6
	0.5nm,0.7s,baz=234,slow=7.7,SNR=5.5						
TXAR	Lajitas Array	85.61	57	P	P	08 58 18.7	+1.0
	0.5nm,0.7s,baz=215,slow=7.7,SNR=8.8						
ILAR	Eielson Array	85.92	13	P	P	08 58 16.9	-1.3
	0.5nm,0.4s,baz=218,slow=5.0,SNR=18						
PDAR	Pinedale Array	87.09	43	P	P	08 58 24.3	-0.3
	0.4nm,0.7s,baz=215,slow=4.4,SNR=2.4						
BRTR	Keskin Array B	145.29	315	PKPbc	PKPdf	09 05 12.4	-0.1
	0.7nm,0.6s,baz=215,slow=1.8,SNR=4.3						

*BJI **05** 09:02:37.3, 44°.39N×102°.13E, h30km, mB4.0/2, mb4.2/2, ML4.1/6, Ms4.2/5, Ms7 3.8/4*
*ISCJB **05** 09:02:39.9±0.4, 43°.72N±0°.04×102°.58E±0°.07, h10km, mb4.1/14, MS3.0/3, Error ellipse: s-maj=7.4km s-min=6.2km az=175.3*
*IDC **05** 09:02:40.1±0.6, 43°.72N×102°.53E, h0km, mb3.9/13, mb1 4.1/16, mb1mx3.9/31, mbtmp3.9/16, ML3.8/3, MS3.1/3, Ms1 3.2/3, ms1mx2.5/43, Error ellipse: s-maj=16.7km s-min=14.3km az=71.0*
*MOS **05** 09:02:43.4±0.8, 43°.75N×102°.58E, h33km, mb4.3/13, Error ellipse: s-maj=18.4km s-min=10.6km az=97.7*

ISC 05 09:02:41.4±0.5, 43°.72N±0°.06×102°.64E±0°.07, h10km, n31, σ1s.40/27, mb4.2/14, MS3.0/3, 1D, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	Gaotai	4.80	207	Pn	Pn	09 03 54.5	+0.6
GTA				Pg	Pb	09 04 07.2	+1.5
GTA				Sn	Sn	09 04 49.3	-0.3
GTA				smax	smax		
	comp=N,180nm,1.0s						
GTA				smax	smax		
	comp=E,230nm,0.9s						
GTA				LR	LR		
	comp=N,440nm,4.8s						
GTA				LR	LR		
	comp=E,190nm,4.3s						
GTA				LR	LR		
	comp=Z,360nm,4.5s						
SONM	Songino Array	4.88	31	Pn	Pn	09 03 56.3	+1.3
	comp=Z,23nm,0.3s,baz=213,slow=15,SNR=20						
SONM				Lg	Lg	09 05 15.3	
	comp=Z,42nm,0.3s,baz=212,slow=34,SNR=13						
BTO	Baotou	6.31	117	ePn	Pn	09 04 13.5	-1.1
BTO				Sn	Sb	09 05 42.7	-4.2
ZAK	Zakamensk	6.68	4	eP	Pn	09 04 20.3	+0.7
ZAK				pmax	pmax		
	comp=Z,20nm,0.7s						
HHC	Hu-ho-hao-te	7.21	110	ePn	Pn	09 04 28.4	+1.4
HHC				pP	Pb	09 04 35.1	-12
HHC				sP		09 04 40.3	
HHC				LR	LR		
	comp=N,650nm,6.5s						
HHC				LR	LR		
	comp=E,610nm,5.3s						
HHC				LR	LR		
	comp=Z,370nm,5.0s						
LZH	Lanzhou	7.68	173	eP	Pn	09 04 35.7	+2.2
LZH				eS	Sn	09 06 10.2	+9.4
LZH				sS	Sb	09 06 27.1	+0.7
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,42nm,4.0s						
LZH				LR	LR		
	comp=N,690nm,9.4s						
LZH				LR	LR		
	comp=E,1μm,7.6s						
LZH				LR	LR		
	comp=Z,2μm,10.8s						
KRAR	Krasnoyarsk	13.80	336⇓	eP	Pn	09 05 58.5	+1.6
MKAR	Makanchi Array	14.65	289	P	Pn	09 06 06.8	-1.8
MKAR	Makanchi Array	14.65	289	Pn	Pn	09 06 06.8	-1.8
	comp=Z,0.0nm,0.3s,baz=91,slow=12,SNR=4.4						
MKAR				Lg	Lg	09 10 22.5	
	comp=Z,0.1nm,0.3s,baz=96,slow=28,SNR=4.3						
ZALV	Zalesovo Beam	15.52	317	Lg	Lg	09 10 48.2	
	comp=Z,0.2nm,0.3s,baz=114,slow=24,SNR=4.6						
KURK	Kurchatov	17.70	302	P	P	09 06 47.5	-1.2
KURBB	Kurchatov Arra	17.73	301	P	P	09 06 47.5	-1.6
	comp=Z,0.1nm,0.3s,baz=108,slow=11,SNR=6.1						
KURBB				Lg	Lg	09 12 04.9	
	baz=99,slow=30,SNR=6.2						
KSRS	Korea Array	20.16	99	P	Pn	09 07 17.4	-0.2
	comp=Z,2.4nm,0.7s,baz=288,slow=11,SNR=6.4						
AAK	Ala-Archa	20.52	277	P	Pn	09 07 19.3	-2.8
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AAK	Ala-Archa	20.52	277	P	Pn	09 07 19.3	-2.8
	comp=Z,1.3nm,0.4s,baz=178,slow=10,SNR=3.7						
CMAR	Chiang Mai Arr	25.38	188	P	P	09 08 10.5	+1.7
	comp=Z,1.3nm,0.4s,baz=359,slow=9.2,SNR=7.3						
CMAR				LR	LR	09 19 10.0	
	comp=Z,34nm,21.3s,baz=10.0,slow=39						
BILL	Bilibino	40.60	31	eP	P	09 10 22.4	+1.6
BILL				e		09 11 56.9	
BILL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KIV	Kislovodsk	42.39	292	eP	P	09 10 36.9	+1.0
KIV				e		09 12 13.2	
KIV				e		09 12 24.9	
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
OBN	Obninsk	42.89	310	eP	P	09 10 39.8	+0.1
OBN				e		09 12 18.6	
OBN				e		09 20 33.2	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	45.45	331	P	P	09 10 59.8	-0.3
	comp=Z,2.8nm,0.7s,baz=79,slow=9.3,SNR=12						
BRTR	Keskin Array B	50.30	291	P	P	09 11 39.1	+0.9
	comp=Z,1.3nm,0.8s,baz=75,slow=5.9,SNR=6.4						
NB2	NORSAR Subarra	53.64	323	P	P	09 12 01.5	-1.1
	comp=Z,2.2nm,0.8s,baz=64,slow=7.4						
NOA	NORSAR Array B	53.64	323	P	P	09 12 01.5	-1.1
	comp=Z,1.5nm,0.7s,baz=64,slow=7.3,SNR=5.7						
NOA				LR	LR	09 35 46.1	
	comp=Z,12nm,19.0s,baz=55,slow=37						
ILAR	Eielson Array	59.10	28	P	P	09 12 42.4	+0.9
	comp=Z,0.9nm,0.7s,baz=295,slow=5.6,SNR=14						
INK	Inuvik	60.71	21	P	P	09 12 53.3	+0.9
	comp=Z,4.7nm,1.3s,baz=304,slow=7.9,SNR=4.4						
DAVOX	Davos/Dischmat	61.55	309	LR	LR	09 40 26.8	
	comp=Z,21nm,20.4s,baz=84,slow=37						
WRA	Warramunga Arr	69.71	148	P	P	09 13 51.3	-0.1
	comp=Z,0.7nm,0.5s,baz=345,slow=7.2,SNR=24						
YKA	Yellowknife Ar	70.00	17	P	P	09 13 53.2	+0.5
	comp=Z,1.1nm,0.6s,baz=332,slow=6.1,SNR=16						
ASAR	Alice Springs	72.94	150	P	P	09 14 11.2	+0.2
	comp=Z,0.9nm,0.4s,baz=341,slow=6.3,SNR=25						
STKA	Stephens Creek	83.24	147	P	P	09 15 07.1	-0.7
	comp=Z,1.5nm,0.8s,baz=2.6,slow=6.5,SNR=4.4						
TORD	Torodi Ar. Bea	88.76	287	P	P	09 15 34.8	-0.8
	comp=Z,0.5nm,0.8s,baz=48,slow=3.0,SNR=3.0						

KRSC 05 09:07:58.4±1.7, 58°.27N×165°.07E, h10km±10km, ML4.3, Bering Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TILK	Tilichiki	2.25	14	S	Sn	09 09 04.5	+1.1
SMKR	Semkarok	2.58	231	eP	Pn	09 08 41.5	+1.2
SMKR				S	Sn	09 09 12.9	+1.1
SRKR	Sorokina	2.66	234	eP	Pn	09 08 42.2	+0.8
BDR	Baidarnaya	2.70	232	eP	Pn	09 08 42.9	+1.0
PALN	Palana	2.79	289	eP	Pn	09 08 45.0	+2.0
PALN				eS	Sn	09 09 19.2	+2.5
BKI	Bering	3.11	170	S	Sn	09 09 27.2	+2.5
ZLN	Zelenaya	3.24	228	P	Pn	09 08 49.6	+0.2
BZGR	Bezymyannyi-Gr	3.34	227	eP	Pn	09 08 52.2	+1.4
BZWR	Bezymyannyi-We	3.40	229	P	Pn	09 08 52.0	+0.3
BZMR	Bezymyannaya	3.42	229	P	Pn	09 08 54.3	+2.3
KIRR	Kirishev	3.47	230	eP	Pn	09 08 54.4	+1.8
SRDR	Sredinnyy	3.50	238	eP	Pn	09 08 53.8	+0.8
KPT	Kopyto	3.51	231	P	Pn	09 08 54.2	+1.1
KMNR	Kamenistaya	3.65	228	eP	Pn	09 08 57.3	+2.3
TUMR	Tumrok	4.04	224	P	Pn	09 09 02.2	+1.8
ESO	Esso	4.19	239	P	Pn	09 09 05.1	+2.7
GNL	Ganaly	6.08	224	P	Pn	09 09 31.3	+2.8

KRSC 05 09:12:09.0±1.9, 58°.18N×165°.08E, h9km±10km, ML3.9, Bering Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBG	Krutoberegovo	2.32	215	S	Sn	09 13 15.7	-0.3
TILK	Tilichiki	2.34	13	S	Sb	09 13 18.5	-1.7
SMKR	Semkarok	2.53	232	P	Pn	09 12 51.8	+1.5
PALN	Palana	2.83	291	eP	Pn	09 12 55.9	+1.7
PALN				eS	Sn	09 13 30.0	+1.7
KLY	Klyuchi	3.05	234	P	Pn	09 12 58.1	+0.8
BZGR	Bezymyannyi-Gr	3.28	229	P	Pn	09 13 03.4	+2.7
BZWR	Bezymyannyi-We	3.35	230	P	Pn	09 13 03.3	+1.6
BZMR	Bezymyannaya	3.37	230	P	Pn	09 13 04.6	+2.7
KPT	Kopyto	3.46	232	P	Pn	09 13 05.7	+2.6
SRDR	Sredinnyy	3.46	240	eP	Pn	09 13 05.2	+2.1
KMNR	Kamenistaya	3.60	230	eP	Pn	09 13 07.9	+2.9
TUMR	Tumrok	3.98	225	P	Pn	09 13 12.5	+2.2
ESO	Esso	4.15	240	P	Pn	09 13 13.4	+0.9

*MOS **05** 09:43:00.3±2.7, 48°.92N×156°.08E, h33km, mb4.2/1, Error ellipse: s-maj=99.9km s-min=19.1km az=76.4*

KRSC 05 09:43:00.6±1.0, 48°.98N×156°.06E, h9km±10km, ML4.1, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.71	1	eP	Pn	09 43 29.1	-1.4
SKR				i S	Sn	09 43 50.1	-2.3
SKR	Severo-Kuril's	1.71	1	ePN	Pn	09 43 26.1	-4.4
SKR				eS	Sn	09 43 46.1	-6.3
SKR				pmax	pmax		
	comp=N,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax	smax		
	comp=E,590nm,0.3s						
SKR				smax	smax		
	comp=N,310nm,0.5s						
MIPR	Malaya Ipel'ka	3.33	7	eP	Pn	09 43 53.6	+0.7
MIPR				eS	Sn	09 44 32.7	+0.2
ASAK	Asacha	3.60	18	P	Pn	09 43 57.3	+0.6
ASAK				i S	Sn	09 44 38.5	-0.9
MTVR	Mutnovka	3.76	20	P	Pn	09 43 59.7	+0.8
MTVR				i S	Sn	09 44 43.4	0.0
RUS	Russkaya	3.79	23	eP	Pn	09 43 59.2	0.0
RUS				i S	Sn	09 44 42.9	-0.9
RUS	Russkaya	3.79	23	PN	Pn	09 43 59.2	0.0
RUS				S	Sn	09 44 42.9	-0.9
GRL	Gorelyy	3.80	19	P	Pn	09 43 59.7	+0.3
APC	Apacha	4.01	10	P	Pn	09 44 03.9	+1.7
APC				i S	Sn	09 44 49.5	+0.3
PET	Petropavlovsk	4.37	21	P	Pn	09 44 10.2	+3.2
PET				i S	Sn	09 44 59.7	+1.7
PET	Petropavlovsk	4.37	21	ePN	Pn	09 44 11.8	+4.8
PET				eS	Sn	09 45 01.3	+3.3
PET				smax	smax		
	comp=N,47nm,0.5s						
PET				smax	smax		
	comp=E,47nm,0.5s						
KOK	Koryaka	4.61	20	eP	Pn	09 44 12.7	+2.1
KOK				eS	Sn	09 45 05.3	+1.0
SMAR	Somma	4.62	21	eP	Pn	09 44 13.1	+2.2
KRER	Koryakskii	4.65	20	eP	Pn	09 44 12.9	+1.7
SDLR	Sedlovina	4.66	21	eP	Pn	09 44 13.3	+2.1
SDLR				eS	Sn	09 45 06.1	+0.6
SPN	Mys Shipunski	4.82	30	eP	Pn	09 44 14.6	+1.3
SPN				i S	Sn	09 45 09.3	+0.1
SPN	Mys Shipunski	4.82	30	PN	Pn	09 44 14.6	+1.3
SPN				S	Sn	09 45 09.3	+0.1
GNL	Ganaly	4.87	13	P	Pn	09 44 16.3	+2.2
MKZ	Mys Kozlova	6.60	30	eP	Pn	09 44 38.0	+0.3
MKZ				eS	Sn	09 45 51.1	-1.8
MKZ	Mys Kozlova	6.60	30	PN	Pn	09 44 38.0	+0.3
TUMR	Tumrok	6.79	20	P	Pn	09 44 42.7	+2.2

*GUC **05** 10:02:42.5±0.5, 42°.85S×72°.63W, h13km±5km, ML3.5*
*IDC **05** 10:02:43.9±0.9, 42°.81S×72°.46W, h0km, mb3.8/6, mb1 4.2/7, mb1mx4.0/18, mbtmp3.9/7, ML4.3/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/26, Error ellipse: s-maj=35.0km s-min=15.5km az=122.0*
*ISCJB **05** 10:02:44.1±0.7, 42°.76S±0°.05×72°.4W±0°.1, h10km, mb4.0/5, MS3.4/1, Error ellipse: s-maj=15.7km s-min=4.4km az=155.6*

ISC 05 10:02:44.9±0.8, 42°.72S±0°.05×72°.29W±0°.09, h10km, n15, σ0s.78/18, mb3.8/5, 1C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUNY	Huinay	0.35	345	eP	Pg	10 02 51.8	-0.1
HUNY				i S	Sb	10 02 59.3	+0.4
HUNY				AML	AML	10 03 00.8	
	comp=N,3μm,0.3s						
FUTA	Futaleufœ	0.57	146⇑	i P	Pg	10 02 55.0	-0.9
FUTA				i S	Sb	10 03 04.5	-0.6
FUTA				AML	AML	10 03 06.6	
	comp=N,1μm,0.3s						
CNTO	Contao	0.97	341	eP	Pg	10 03 01.9	-1.7
CNTO				eS	Sb	10 03 16.3	-0.3
CNTO				AML	AML	10 03 22.8	
	comp=E,3μm,0.5s						
PMCH	Puerto Montt	1.31	340	eP	Pn	10 03 08.1	-1.1
PMCH				i S	Sg	10 03 26.7	-0.3
PMCH				AML	AML	10 03 37.1	
	comp=E,2μm,0.3s						
PLCA	Paso Flores	2.37	34	Pn	Pb	10 03 27.4	-0.4
	comp=E,14nm,0.3s,baz=223,slow=16,SNR=137						
PLCA				Pg	Pg	10 03 30.1	-0.3
	comp=E,14nm,0.3s,baz=223,slow=17,SNR=157						
PLCA				Lg	Lg	10 04 04.4	
	comp=E,29nm,0.3s,baz=96,slow=18,SNR=13						
PLCA				LR	LR	10 04 38.5	
	comp=E,473nm,19.6s,baz=209,slow=46						
COYC	Coyhaique	2.86	177	AML	AML	10 04 12.8	
	comp=E,132nm,0.7s						
CPUP	Villa Florida	20.42	42	P	Pn	10 07 24.2	-0.1
	comp=E,0.6nm,0.5s,baz=216,slow=9.3,SNR=3.8						
CPUP				LR	LR	10 16 10.8	
	comp=E,142nm,18.4s,baz=186,slow=39						
QSPA	South Pole Qui	47.53	180	P	P	10 11 20.5	+0.4
	comp=E,10nm,1.1s,baz=148,slow=4.5,SNR=13						
TXAR	Lajitas Array	77.30	332	P	P	10 14 40.0	+0.5
	comp=E,0.5nm,0.8s,baz=150,slow=8.8,SNR=8.2						
TORD	Torodi Ar. Bea	87.40	70	P	P	10 15 32.5	-0.1
	comp=E,0.5nm,0.8s,baz=243,slow=6.3,SNR=2.6						
NVAR	Mina Array Bea	90.94	326	P	P	10 15 50.0	+1.0
	comp=E,0.3nm,0.7s,baz=161,slow=5.7,SNR=3.0						
PDAR	Pinedale Array	91.46	334	P	P	10 15 51.5	+0.3
	comp=E,0.9nm,0.8s,baz=148,slow=6.7,SNR=5.6						
ILAR	Eielson Array	121.79	331	PKP	PKPdf	10 21 38.7	+0.7
	comp=E,0.4nm,0.8s,baz=182,slow=2.4,SNR=5.6						
MKAR	Makanchi Array	161.52	69	PKPab	PKPab	10 23 30.3	+0.1
	comp=E,0.6nm,0.7s,baz=277,slow=3.8,SNR=4.8						
SONM	Songino Array	174.80	10	PKPab	PKPab	10 24 29.9	+1.2
	comp=E,0.5nm,0.8s,baz=321,slow=3.7,SNR=3.4						

MEX 05 10:08:40.4±0.7, 17°.16N×100°.26W, h38km±5km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.11	182	i P	Pn	10 08 45.3	-5.7
CAIG				i S	Sn	10 08 49.5	-11
ACX	Acapulco	0.48	127	eP	Pn	10 08 48.8	-2.1
ACX				i S	Sn	10 08 56.0	-2.2
MEIG	Mezcala	0.98	39	eP	Pn	10 08 55.8	-1.9
MEIG				i S	Sn	10 09 08.5	-1.9
ARIG	Puente Sto Nin	1.12	356	eP	Pn	10 08 58.1	-1.4
ARIG				i S	Sn	10 09 10.5	-3.3
ZIIG	Zihuatanejo	1.23	291	i P	Pn	10 08 59.9	-1.2
ZIIG				i S	Sn	10 09 14.3	-2.1
PLIG	Platanillo	1.42	31	eP	Pn	10 09 02.5	-1.3
PLIG				i S	Sn	10 09 19.8	-1.7
YAIG	Yautepec	2.04	34	eP	Pn	10 09 10.9	-1.5
YAIG				i S	Sn	10 09 34.7	-2.1
PNIG	Pinotepa	2.18	110	eP	Pn	10 09 12.2	-2.0
PNIG				eS	Sn	10 09 38.9	-1.2
PPM	Popocatepetl	2.45	39	eP	Pn	10 09 17.2	-1.3
PPM				i S	Sn	10 09 45.8	-2.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TPIG	Tehuac#an	3.03	65	*i* P	Pn	10 09 23.8	-2.3
TPIG				*i* S	Sn	10 09 58.9	-2.5
HUIG	Huatulco	4.22	109	*e*P	Pn	10 09 41.2	-1.0
HUIG				*i* S	Sn	10 10 28.6	-1.7

IDC 05 10:10:01.3±3.9**, 11°.46S**×**166°.26E, h52**km±31km**, mb3.7**/6**, mb1 3.9**/8**, mb1mx3.6**/23**, mbtmp3.8**/8**, ML4.0**/2**, MS3.2**/2**, Ms1 3.3**/2**, ms1mx2.6**/19**, Error ellipse: s-maj=30.8km s-min=18.9km az=54.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.53	287	P	Pn	10 11 36.3	+1.5
	7.1nm,0.3s,baz=321,slow=6.5,SNR=3.0						
HNR				S	Sn	10 12 46.8	-1.2
	3.6nm,0.3s,baz=193,slow=19,SNR=2.7						
DZM	Mont Dzumac	10.55	179	P	Pn	10 12 31.5	+1.4
	0.6nm,0.3s,baz=3.6,slow=19,SNR=10						
DZM				S	Sn	10 14 24.7	-2.3
	0.2nm,0.3s,baz=139,slow=20,SNR=1.9						
DZM				LR	LR	10 16 09.8	
	comp=Z,101nm,20.7s,baz=16,slow=35						
CTA	Charters Tower	21.06	243	P	P	10 14 45.2	+3.9
	2.3nm,0.7s,baz=77,slow=11,SNR=3.6						
WRA	Warramunga Arr	31.82	251	P	P	10 16 21.7	+0.3
	1.4nm,0.8s,baz=83,slow=9.1,SNR=9.9						
ASAR	Alice Springs	33.06	244	P	P	10 16 32.2	-0.1
	1.1nm,0.8s,baz=66,slow=10.0,SNR=14						
ASAR				PcP	PcP	10 19 15.0	0.0
	0.2nm,0.5s,baz=75,slow=2.0,SNR=5.2						
FITZ	Fitzroy Crossi	39.76	255	P	P	10 17 29.8	+0.3
	1.8nm,0.6s,baz=99,slow=7.2,SNR=8.9						
QSPA	South Pole Qui	78.55	180	P	P	10 21 56.9	-0.2
	0.7nm,0.7s,baz=285,slow=0.6,SNR=5.9						
ILAR	Eielson Array	83.75	18	P	P	10 22 23.8	-0.7
	0.2nm,0.6s,baz=236,slow=4.7,SNR=4.9						
ILAR				LR	LR	10 56 01.4	
	comp=Z,18nm,19.1s,baz=9.3,slow=33						
MKAR	Makanchi Array	94.17	317	P	P	10 23 14.8	+0.1
	0.7nm,0.5s,baz=105,slow=5.8,SNR=9.4						

CASC 05 10:22:44.2±1.9**, 10°.84N**×**85°.22W, h208**km±7km**, MD3.9, 6C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIM1	Limonal	0.15	193	*i* P	Pn	10 23 11.5	0.0
LAPC	Finca la Perla	0.22	251	*i* P	Pn	10 23 11.2	-0.4
LAPC				*i* S	S	10 23 32.8	+0.1
GBS2	Las Lilas	0.23	269	*i* P	Pn	10 23 11.8	+0.3
GBS3	Finca Las Imˆ¡	0.24	256	*i* P	Pn	10 23 11.4	-0.2
GBS3				*i* S	S	10 23 32.9	+0.1
PTEN	Parque Tenorio	0.26	119	⇑*i*P	Pn	10 23 12.0	+0.4
PTEN				*i* S	S	10 23 33.6	+0.6
AMAS	Alto Masis	0.32	136	*i* P	Pn	10 23 12.1	+0.2
AMAS				*i* S	S	10 23 33.5	+0.1
NY14	Universidad de	0.36	238	*i* P	Pn	10 23 12.0	+0.2
NY14				*i* S	S	10 23 33.7	+0.5
A495	El Viejo	0.50	208	*i* P	Pn	10 23 12.7	+0.4
A495				*i* S	S	10 23 35.1	+1.0
A494	Palo Verde	0.51	195	*i* P	Pn	10 23 13.0	+0.7
CEDE	Laguna Cedeˆ–o	0.62	125	*i* P	Pn	10 23 13.3	+0.5
CEDE				*i* S	S	10 23 35.3	+0.3
FORC	Fortuna	0.66	125	⇑*e*P	Pn	10 23 13.6	+0.7
FORC				*e*S	S	10 23 36.8	+1.6
VCR	Vista de Mar	0.82	210	⇑*e*P	Pn	10 23 14.3	+0.4
VCR				*e*S	S	10 23 36.8	0.0
JCR	Jicaral	0.99	174	⇑*e*P	Pn	10 23 15.4	+0.6
JCR				*e*S	S	10 23 39.9	+1.3
CGA2	Cerro Gallo 2	1.11	138	*e*P	Pn	10 23 16.1	+0.4
CGA2				*e*S	S	10 23 40.4	+0.4
SJS	Escuela Geolog	1.46	128	*e*P	Pn	10 23 20.7	+2.3
SJS				*e*S	S	10 23 47.2	+2.5
URSC	Urasca	1.73	125	⇑*e*P	Pn	10 23 21.6	+0.6
URSC				*e*S	S	10 23 50.5	+1.3
QCR	Quepos	1.75	144	⇑*e*P	Pn	10 23 22.6	+1.7
QCR				*e*S	S	10 23 50.9	+1.9
BUS	Buena Vista	1.92	132	*e*P	Pn	10 23 23.9	+0.8
ACR	Cerro Adams	2.97	137	*e*P	Pn	10 23 34.8	+0.8
ACR				*e*S	S	10 24 12.3	-0.1

*ATH **05** 10:34:24.4, 38°.04N×19°.81E, h10km, MD3.5/25*
*CSEM **05** 10:34:25.4±0.3, 38°.06N×19°.85E, h2km, ML3.0/1, Error ellipse: s-maj=7.1km s-min=4.7km az=51.0*
*THE **05** 10:34:26.3, 38°.16N×19°.93E, h0km±3km, ML3.0/1, Error ellipse: s-maj=3.9km s-min=1.1km az=204.0*
ISC 05 10:34:23.5±1.5**, 38°.03N**±0°.03×**19°.80E**±0°.04**, h2**km±13km**, n78, σ1s32**/106**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.65	76	P	Pg	10 34 36.1	+0.2
VLS	Valsamata	0.65	76	*e*PG	Pg	10 34 36.1	+0.2
VLS				*e*SB	Sb	10 34 46.0	-0.9
VLS	Valsamata	0.65	76	*e*Pg	Pg	10 34 36.1	+0.2
VLS				*e*Sb	Sb	10 34 46.0	-0.9
KFL	Anninata	0.79	84	P	Pg	10 34 38.7	+0.1
KFL				S	Sg	10 34 49.1	+0.3
LKD2	Lefkada island	1.02	41	P	Pg	10 34 42.2	-0.8
LKD2				S	Sg	10 34 55.0	-1.3
LKD2	Lefkada island	1.02	41	*e*PG	Pg	10 34 43.2	+0.2
LKD2				*e*SB	Sb	10 34 57.2	-0.5
LKD2	Lefkada island	1.02	41	*e*Pg	Pg	10 34 43.2	+0.2
LKD2				*e*Sb	Sb	10 34 57.2	-0.5
AXS	Araxos	1.26	82	P	Pg	10 34 48.5	+0.9
AXS	Araxos	1.26	82	P	Pg	10 34 48.5	+0.9
RLS	Riolos of Patr	1.32	88	P	Pg	10 34 49.6	+0.8
RLS	Riolos of Patr	1.32	88	*e*PB	Pg	10 34 49.6	+0.8
RLS				*e*SB	Sg	10 35 07.2	+1.3
RLS	Riolos of Patr	1.32	88	P	Pg	10 34 49.6	+0.8
RLS				*e*Sb	Sg	10 35 07.2	+1.3
AMT	Artemida-Makis	1.59	107	*e*PB	Pg	10 34 54.1	0.0
AMT	Artemida-Makis	1.59	107	*e*Pb	Pg	10 34 54.1	0.0
KEK	Kerkira	1.68	0	P	Pb	10 34 54.5	-0.7
KEK	Kerkira	1.68	0	*e*PB	Pg	10 34 55.8	0.0
KEK				*e*SB	Sg	10 35 19.1	+1.5
KEK	Kerkira	1.68	0	P	Pb	10 34 54.5	-0.7
KEK	Kerkira	1.68	0	*e*Pb	Pg	10 34 55.8	0.0
KEK				*e*Sb	Sg	10 35 19.1	+1.5
EFP	Efpalio	1.71	76	*e*PG	Pb	10 34 55.1	-0.5
EFP				*e*SB	Sg	10 35 19.0	+0.6
EFP	Efpalio	1.71	76	*e*Pg	Pb	10 34 55.1	-0.5
EFP				*e*Sb	Sg	10 35 19.0	+0.6
LAKA	Lakka	1.73	82	P	Pb	10 34 55.6	-0.5
LAKA	Lakka	1.73	82	*e*PG	Pb	10 34 55.6	-0.5
LAKA				*e*SN	Sg	10 35 19.8	+0.6
LAKA	Lakka	1.73	82	P	Pb	10 34 55.6	-0.5
LAKA				*e*Sn	Sg	10 35 19.8	+0.6
EVR	Evrytania	1.81	60	*e*PG	Pg	10 34 57.9	-0.4
EVR	Evrytania	1.81	60	*e*Pg	Pg	10 34 57.9	-0.4
JAN	Janina	1.82	27	*e*PN	Pb	10 34 57.5	-0.1
JAN				*e*SN	Sg	10 35 21.7	-0.4
JAN	Janina	1.82	27	*e*Pn	Pb	10 34 57.5	-0.1
JAN				*e*Sn	Sg	10 35 21.7	-0.4
KLV	Kalavryta, Ach	1.86	89	*e*PN	Pb	10 34 57.5	-0.7
KLV				*e*SN	Sg	10 35 22.8	-0.5
KLV	Kalavryta, Ach	1.86	89	*e*Pn	Pb	10 34 57.5	-0.7
KLV				*e*Sn	Sg	10 35 22.8	-0.5
KALE	Kalithea	1.88	78	P	Pb	10 34 57.8	-0.8
KALE	Kalithea	1.88	78	*e*PN	Pb	10 34 57.6	-1.0
KALE				*e*SN	Sb	10 35 23.0	+0.4
KALE	Kalithea	1.88	78	P	Pb	10 34 57.8	-0.8
KALE				*e*Sn	Sb	10 35 23.0	+0.4
ITM	Ithomi	1.89	116	P	Pn	10 34 57.3	+0.5
ITM	Ithomi	1.89	116	*e*PG	Pb	10 34 59.3	+0.5
ITM	Ithomi	1.89	116	P	Pn	10 34 57.3	+0.5
ITM	Ithomi	1.89	116	*e*Pg	Pb	10 34 59.3	+0.5
PYL	PYLOS	1.92	126	*e*PN	Pb	10 34 59.2	0.0
PYL	PYLOS	1.92	126	*e*Pn	Pb	10 34 59.2	0.0
GUR	Goura	2.02	92	P	Pb	10 34 59.9	-1.0
GUR	Goura	2.02	92	*e*PN	Pb	10 35 00.2	-0.7
GUR				*e*SN	Sb	10 35 26.8	+0.3
GUR	Goura	2.02	92	P	Pb	10 34 59.9	-1.0
GUR	Goura	2.02	92	*e*Pn	Pb	10 35 00.2	-0.7
GUR				*e*Sn	Sb	10 35 26.8	+0.3
MAKR	Makrakomi, Fth	2.08	61	P	Pb	10 35 00.9	-1.1
MAKR	Makrakomi, Fth	2.08	61	P	Pb	10 35 00.9	-1.1
VLX	Vlachokerasia	2.15	107	*e*PN	Pb	10 35 02.4	-0.8
VLX				*e*SN	Sb	10 35 30.3	-0.1
VLX	Vlachokerasia	2.15	107	*e*Pn	Pb	10 35 02.4	-0.8
VLX				*e*Sn	Sb	10 35 30.3	-0.1
AGG	Agios Georgios	2.22	63	P	Pb	10 35 02.7	-1.7
AGG	Agios Georgios	2.22	63	*e*PN	Pb	10 35 03.4	-1.0
AGG	Agios Georgios	2.22	63	P	Pb	10 35 02.7	-1.7
AGG	Agios Georgios	2.22	63	*e*Pn	Pb	10 35 03.4	-1.0
THL	Klokotos Trika	2.32	48	P	Pn	10 35 02.2	-0.4
THL	Klokotos Trika	2.32	48	*e*PN	Pb	10 35 04.0	-2.0
THL				*e*SN	Sb	10 35 34.2	-0.8
THL	Klokotos Trika	2.32	48	P	Pn	10 35 02.2	-0.4
THL	Klokotos Trika	2.32	48	*e*Pn	Pb	10 35 04.0	-2.0
THL				*e*Sn	Sb	10 35 34.2	-0.8
DYR	Agios Nikonas	2.38	121	*e*PN	Pb	10 35 06.1	-1.0
DYR	Agios Nikonas	2.38	121	*e*Pn	Pb	10 35 06.1	-1.0
LTK	Loutraki	2.50	89	*e*PN	Pb	10 35 07.3	-1.9
LTK	Loutraki	2.50	89	*e*Pn	Pb	10 35 07.3	-1.9
LKR	Lokris	2.59	75	*e*PN	Pb	10 35 08.6	-2.1
LKR	Lokris	2.59	75	*e*Pn	Pb	10 35 08.6	-2.1
TIP	Timpagrande	2.64	297	P	Pb	10 35 09.9	-1.7
TIP	Timpagrande	2.64	297	P	Pb	10 35 09.9	-1.7
DID	Didima	2.78	100	*e*PN	Pb	10 35 11.4	-2.4
DID				*e*SN	Sb	10 35 45.5	-2.8
DID	Didima	2.78	100	*e*Pn	Pb	10 35 11.4	-2.4
DID				*e*Sn	Sb	10 35 45.5	-2.8
VLI	Veliai	2.82	117	*e*PB	Pb	10 35 12.1	-2.5
VLI	Veliai	2.82	117	*e*Pb	Pb	10 35 12.1	-2.5
NEO	Neokhori	2.97	63	*e*PN	Pn	10 35 13.9	+2.2
NEO	Neokhori	2.97	63	*e*Pn	Pn	10 35 13.9	+2.2
FNA	Florina	3.01	23	*e*PN	Pn	10 35 13.9	+1.6
FNA	Florina	3.01	23	*e*Pn	Pn	10 35 13.9	+1.6
KYTH	Kithira	3.12	123	P	Pn	10 35 16.2	+2.5
KYTH	Kithira	3.12	123	*e*PB	Pb	10 35 16.7	-3.0
KYTH	Kithira	3.12	123	P	Pn	10 35 16.2	+2.5
KYTH	Kithira	3.12	123	*e*Pb	Pb	10 35 16.7	-3.0
GRG	Griva	3.55	34	*e*PN	Pn	10 35 22.2	+2.5
GRG	Griva	3.55	34	*e*Pn	Pn	10 35 22.2	+2.5
SOH	Sokhos	3.92	44	*e*PN	Pn	10 35 26.6	+1.8
SOH	Sokhos	3.92	44	*e*Pn	Pn	10 35 26.6	+1.8

IDC 05 10:51:58.0±2.7**, 19°.28S**×**177°.52W, h0**km**, mb3.6**/4**, mb1 3.9**/4**, mb1mx3.6**/20**, mbtmp3.6**/4**, Error ellipse: s-maj=281.2km s-min=30.1km az=160.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.23	261	P	P	11 00 17.5	+0.1
	0.1nm,0.3s,baz=96,slow=7.5,SNR=18						
ASAR	Alice Springs	45.25	255	P	P	11 00 16.9	-0.6
	0.5nm,0.6s,baz=94,slow=7.9,SNR=10						
FITZ	Fitzroy Crossi	53.64	261	P	P	11 01 22.0	+0.3
	2.0nm,1.0s,baz=82,slow=7.1,SNR=2.3						
TXAR	Lajitas Array	86.02	57	P	P	11 04 40.9	0.0
	0.4nm,1.0s,baz=197,slow=2.8,SNR=2.8						

*ISCJB **05** 11:13:15.3±0.3, 39°.77N±0°.03×82°.64E±0°.05, h10km, mb3.9/16, MS3.5/13, Error ellipse: s-maj=5.3km s-min=3.7km az=162.9*
*IDC **05** 11:13:15.5±0.7, 39°.72N×82°.64E, h0km, mb3.8/14, mb1 4.1/20, mb1mx3.9/34, mbtmp3.9/20, ML4.0/6, MS3.5/16, Ms1 3.5/16, ms1mx3.3/44, Error ellipse: s-maj=17.5km s-min=10.8km az=50.0*
*BJI **05** 11:13:16.7, 39°.68N×82°.58E, h15km, mB4.4/7, mb4.7/10, ML4.7/10, Ms4.1/8, Ms7 3.8/6*
*NNC **05** 11:13:18.6±2.6, 39°.72N×82°.60E, h22km±11km, mb4.5, mpv4.3, Error ellipse: s-maj=17.3km s-min=9.7km az=119.0*
*MOS **05** 11:13:19.0±1.1, 39°.85N×82°.66E, h33km, mb4.2/12, Error ellipse: s-maj=15.0km s-min=8.0km az=111.5*
ISC 05 11:13:17.8±0.5**, 39°.75N**±0°.06×**82°.59E**±0°.04**, h10**km**, n77, σ1s83**/72**, mb4.0**/16**, MS3.5**/13**, 12C-12D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	5.12	270	Pn	Pn	11 14 40.4	+5.8
KSH				Sn	Sb	11 15 42.9	-6.1
KSH				smax	smax		
	comp=N,2µm,0.7s						
KSH				smax	smax		
	comp=E,1µm,0.8s						
ULHL	Ulahol	5.42	300	P	Pn	11 14 39.8	+1.0
	SNR=40						
KNDC	Almaty	5.47	311	⇑Pg	Pg	11 14 58.9	-3.6
KNDC				⇑Lg	Lg	11 16 14.1	
AAA	Alma-Ata	5.51	312	*i* P	Pb	11 14 57.2	+3.0
AAA				pmax	pmax		
	comp=Z,313nm,0.4s						
WMQ	Urumqi	5.58	41	Pn	Pn	11 14 43.5	+2.6
WMQ				Sn	Sn	11 15 48.5	+3.4
WMQ				smax	smax		
	comp=N,280nm,0.8s						
WMQ				smax	smax		
	comp=E,410nm,0.8s						
KZA	Kyzart	6.03	295	P	Pn	11 14 48.4	+0.9
	SNR=14						
TKM2	Tokmak 2	6.15	303	⇑Pn	Pn	11 14 48.7	-0.1
	comp=E,7.4nm,0.3s						
TKM2				⇑Pg	Pg	11 15 11.3	-4.2
	comp=E,104nm,1.4s						
TKM2				⇓Lg	Lg	11 16 34.5	
	comp=E,326nm,0.6s						
TKM2	Tokmak 2	6.15	303	*i* P	Pn	11 14 51.6	+2.7
TKM2	Tokmak 2	6.15	303	P	Pn	11 14 51.6	+2.7
	SNR=19						
KBK	Karagaybulak	6.46	299	P	Pn	11 14 56.1	+3.0
	SNR=8.8						
UCH	Uchtor	6.60	295	P	Pb	11 15 18.9	+6.0
	SNR=9.1						
FRU	Bishkek	6.75	300	*i* P	Pb	11 15 12.0	-3.3
FRU				pmax	pmax		
	comp=Z,220nm,2.0s						
AAK	Ala-Archa	6.75	298	P	Pn	11 14 58.1	+0.9
AAK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AAK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AAK				MLR	MLR		
	comp=Z,375nm,21.4s						
AAK	Ala-Archa	6.75	298	P	Pn	11 14 60.0	+2.8
	SNR=7.3						
AAK	Ala-Archa	6.75	298	Pn	Pn	11 14 58.1	+0.9
	comp=Z,2.3nm,0.3s,baz=103,slow=13,SNR=12						
AAK				Pg	Pb	11 15 20.5	+5.1
	comp=Z,3.0nm,0.3s,baz=104,slow=16,SNR=19						
AAK				Lg	Lg	11 16 53.2	
	comp=Z,9.9nm,0.3s,baz=271,slow=23,SNR=6.7						
AAK				LR	LR	11 18 08.9	
	comp=Z,375nm,21.4s,baz=106,slow=43						
MK31	Makanchi Array	7.05	358	⇑Pn	Pn	11 15 01.6	+0.5
	comp=Z,3.6nm,0.2s,baz=185,slow=13,SNR=488						
MK31				⇓Sn	Sn	11 16 22.1	+0.8
	comp=Z,16nm,0.5s,baz=189,slow=21,SNR=4.3						
MK31				⇑Lg	Lg	11 17 02.9	
	comp=Z,73nm,0.6s,baz=172,slow=25,SNR=4.5						
MKAR	Makanchi Array	7.05	358	P	Pn	11 15 01.5	+0.4
MKAR						11 16 21.4	
MKAR				pmax	pmax		
	comp=Z,14nm,0.3s						
MKAR				smax	smax		
	comp=Z,10.0nm,0.3s						
MKAR	Makanchi Array	7.05	358	Pn	Pn	11 15 01.5	+0.4
	comp=Z,14nm,0.3s,baz=180,slow=13,SNR=106						
MKAR				Sn	Sn	11 16 21.4	+0.1
	comp=Z,9.9nm,0.3s,baz=184,slow=27,SNR=5.5						
MKAR				Lg	Lg	11 17 00.2	
	comp=Z,18nm,0.3s,baz=176,slow=30,SNR=6.2						
EKS2	Erkin-Say	7.26	297	P	Pb	11 15 28.4	+4.4
	SNR=11						
CHCP	Chirah Chowk	9.64	234	P	Pn	11 15 36.9	+0.3
SMLA	Simla	9.67	209	*i* P	Pn	11 15 35.2	-1.7
SMLA				*i* S	Sn	11 17 18.0	-7.6
SMLA				*i* S		11 17 18.7	
SMLA				⇓E		11 17 24.7	
	comp=E,344nm,0.3s						
SMLA				⇓E		11 17 24.7	
	comp=N,361nm,0.4s						
KK31	Karatay Array	9.67	294	Pg	Pn	11 16 15.2	+38
	comp=N,4.2nm,0.6s,baz=106,slow=14,SNR=7.1						
KK31				⇓Lg	Lg	11 18 25.5	
	comp=N,40nm,0.8s,baz=93,slow=27,SNR=3.6						
CEP	Cherat	10.40	239	P	Pn	11 15 45.9	-1.3
KURBB	Kurchatov Arra	11.25	347	Pn	Pn	11 15 58.0	-0.5
	comp=N,0.1nm,0.3s,baz=171,slow=12,SNR=17						
KURBB				Sn	Sn	11 18 15.1	+11
	comp=N,0.5nm,0.3s,baz=166,slow=24,SNR=4.9						
KURBB				Lg	Lg	11 19 14.8	
	comp=N,0.6nm,0.3s,baz=162,slow=31,SNR=4.6						
KUR16	Kurchatov Arra	11.26	347	⇓Lg	Lg	11 19 17.6	
	comp=N,27nm,0.9s						
KURK	Kurchatov	11.32	347	⇓Lg	Lg	11 19 19.8	
	comp=N,160nm,1.4s						
KURK	Kurchatov	11.32	347	P	Pn	11 15 58.0	-1.5
KURK						11 18 15.1	
KURK				smax	smax		
	comp=Z,1.0nm,0.3s						
DANN	Dangsing	11.41	175	*e*P	Pn	11 16 00.7	-0.4
	comp=Z,31nm,0.8s						
KOLN	Koldanda	11.97	176	*e*P	Pn	11 16 10.0	+1.2
	comp=Z,11nm,0.5s						
GUN	Gumba	12.11	166	*e*P	Pn	11 16 12.2	+1.4
	comp=Z,56nm,1.1s						
KKN	Kakani	12.13	169	*e*P	Pn	11 16 11.5	+0.6
DMN	Daman	12.28	169	*e*P	Pn	11 16 13.6	+0.5
PKIN	Phulchoki	12.36	168	*e*P	Pn	11 16 14.2	+0.1
	comp=Z,25nm,0.6s						
PKI	Pulchoki	12.37	168	*e*P	Pn	11 16 14.6	+0.4
	comp=Z,81nm,1.2s						
TAPN	Taplejung	13.07	159	*e*P	Pn	11 16 25.9	+2.0
GTA	Gaotai	13.29	86	*e*P	Pn	11 16 24.7	-2.0
GTA				pP	P	11 16 31.4	-5.1
GTA				sP		11 16 34.4	
GTA				S	Sn	11 18 53.5	-1.1
GTA				pmax	pmax		
	comp=Z,14nm,0.8s						
GTA				pmax	pmax		
	comp=Z,18nm,5.2s						
GTA				LR	LR		
	comp=N,790nm,10.5s						
GTA				LR	LR		
	comp=E,380nm,8.8s						
GTA				LR	LR		
	comp=Z,270nm,12.6s						
ZALV	Zalesovo Beam	14.29	5	P	Pn	11 16 37.6	-2.5
ZALV						11 19 16.6	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV				smax	smax		
	comp=Z,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,59nm,19.7s						
ZALV	Zalesovo Beam	14.29	5	Pn	Pn	11 16 37.5	-2.5
	comp=Z,0.9nm,0.3s,baz=186,slow=14,SNR=22						
ZALV				Sn	Sn	11 19 16.6	-1.9
	comp=Z,0.5nm,0.3s,baz=202,slow=16,SNR=3.5						
ZALV				Lg	Lg	11 20 51.2	
	baz=199,slow=21,SNR=2.1						
ZALV				LR	LR	11 22 24.8	
	comp=Z,58nm,19.7s,baz=251,slow=38						
VOSK	Vostochnaya	15.24	332	⇑Pn	Pn	11 16 51.2	-1.7
	comp=Z,5.3nm,0.5s						
VOSK				⇓Lg	Lg	11 21 25.4	
	comp=Z,43nm,1.4s						
BVA0	Borovoye Array	15.69	332	⇓Pn	Pn	11 16 57.5	-1.4
	comp=Z,18nm,1.5s,baz=144,slow=12,SNR=36						
BVA0				⇑Lg	Lg	11 21 37.7	
	comp=Z,32nm,1.4s						
BVAR	Borovoye Array	15.69	332	P	Pn	11 16 57.4	-1.5
BVAR	Borovoye Array	15.69	332	Pn	Pn	11 16 57.4	-1.5
	comp=Z,0.4nm,0.3s,baz=144,slow=12,SNR=7.7						
BVAR				Lg	Lg	11 21 39.1	
	comp=Z,0.4nm,0.3s,baz=159,slow=25,SNR=2.7						
BRVK	Borovoye	15.76	332	⇑Pn	Pn	11 16 57.7	-2.0
	comp=Z,39nm,1.4s						
BRVK				⇑Lg	Lg	11 21 38.3	
	comp=Z,126nm,2.1s						
BRVK	Borovoye	15.76	332	⇑*i*P	Pn	11 16 58.9	-0.8
BRVK				pmax	pmax		
	comp=Z,20nm,1.1s						
ZRNK	Zerenda	16.16	329	⇓Pn	Pn	11 17 03.5	-1.4
	comp=Z,30nm,1.5s						
ZRNK				⇓Lg	Lg	11 21 52.4	
	comp=Z,43nm,1.4s						
LZH	Lanzhou	17.16	96	*e*P	P	11 17 20.0	+0.5
LZH				pP	pP	11 17 25.3	+3.0
LZH				sP	sP	11 17 27.5	+3.9
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
ZAK	Zakamensk	18.01	47	*e*P	P	11 17 29.2	+0.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
AB31	Akbulak array	18.68	308	⇑P	P	11 17 34.4	-1.6
	comp=Z,1.8nm,0.5s,baz=111,slow=10,SNR=41						
SONM	Songino Array	18.94	57	P	P	11 17 38.5	-0.5
	comp=Z,0.5nm,0.3s,baz=247,slow=12,SNR=14						
SONM				LR	LR	11 24 56.6	
	comp=Z,47nm,21.8s,baz=247,slow=37						
AKTO	Aktyubinsk	20.29	310	⇓P	P	11 17 53.8	+0.3
	comp=Z,9.6nm,1.1s						
AKTO	Aktyubinsk	20.29	310	P	P	11 17 53.3	-0.2
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTO				MLR	MLR		
	comp=Z,68nm,21.7s						
AKTO	Aktyubinsk	20.29	310	P	P	11 17 53.3	-0.2
	comp=Z,2.8nm,0.6s,baz=104,slow=14,SNR=10						
AKTO				LR	LR	11 27 14.6	
	comp=Z,68nm,21.7s,baz=317,slow=41						
HHC	Hu-ho-hao-te	22.09	78	*e*P	P	11 18 12.4	-0.7
HHC				PP	PnPn	11 18 37.9	+2.9
HHC				S	S	11 22 11.1	-5.6
HHC				SS	SnSn	11 22 48.7	+6.0
HHC				pmax	pmax		
	comp=Z,44nm,0.6s						
HHC				pmax	pmax		
	comp=Z,99nm,5.7s						
HHC				LR	LR		
	comp=N,460nm,8.5s						
HHC				LR	LR		
	comp=E,360nm,9.4s						
HHC				LR	LR		
	comp=Z,380nm,8.2s						
CMAR	Chiang Mai Arr	25.49	142	P	P	11 18 44.8	-1.6
	comp=Z,2.2nm,0.7s,baz=321,slow=9.1,SNR=11						
KBZ	Khabaz	29.69	291	LR	LR	11 33 03.6	
	comp=Z,131nm,18.0s,baz=273,slow=40						
KSRS	Korea Array	35.22	79	P	P	11 20 11.5	-0.7
	comp=Z,0.5nm,0.5s,baz=287,slow=9.1,SNR=3.5						
KSRS				LR	LR	11 37 01.5	
	comp=Z,86nm,18.2s,baz=294,slow=41						
USRK	Ussuriysk Arra	36.56	66	LR	LR	11 37 11.1	
	comp=Z,127nm,19.2s,baz=183,slow=39						
BRTR	Keskin Array B	37.26	286	P	P	11 20 29.9	+0.1
	comp=Z,1.7nm,0.5s,baz=94,slow=8.9,SNR=9.6						
JOF	Joensuu	38.10	325	*e*p	P	11 20 36.0	-0.5
	comp=Z,2.5nm,0.5s						
JOF	Joensuu	38.10	325	*e*P	P	11 20 36.0	-0.5
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	Malin Array Be	38.37	305	P	P	11 20 38.5	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	38.37	305	P	P	11 20 38.5	-0.4
	comp=Z,1.1nm,0.4s,baz=65,slow=9.0,SNR=5.0						
FINES	FINESS Array B	40.28	322	P	P	11 20 54.3	-0.4
	comp=Z,2.7nm,0.6s,baz=94,slow=8.4,SNR=5.7						
FINES				LR	LR	11 39 05.8	
	comp=Z,72nm,19.4s,baz=13,slow=38						
KEV	Kevo	41.52	334	*e*p	P	11 21 09.3	+4.5
	comp=Z,2.2nm,0.4s						
KEV	Kevo	41.52	334	*e*P	P	11 21 09.3	+4.5
KEV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ARCES	ARCESS Array B	41.97	334	P	P	11 21 08.7	+0.1
	comp=Z,3.1nm,0.9s,baz=96,slow=8.3,SNR=15						
ARCES				LR	LR	11 38 32.4	
	comp=Z,62nm,18.3s,baz=117,slow=36						
SPITS	Spitsbergen Ar	46.59	345	LR	LR	11 46 28.9	
	comp=Z,43nm,18.4s,baz=50,slow=43						
NB2	NORSAR Subarra	47.46	321	P	P	11 21 51.8	-0.6
	comp=Z,1.1nm,0.6s,baz=81,slow=7.9						
NOA	NORSAR Array B	47.46	321	P	P	11 21 52.0	-0.5
	comp=Z,1.2nm,0.6s,baz=83,slow=7.9,SNR=6.1						
NOA				LR	LR	11 43 42.5	
	comp=Z,40nm,20.0s,baz=285,slow=38						
GERES	GERESS Array B	48.58	305	P	P	11 22 00.7	-0.7
	comp=Z,0.3nm,0.3s,baz=78,slow=8.3,SNR=7.1						
GERES				LR	LR	11 46 55.2	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,98nm,19.3s,baz=283,slow=42						
PETK	Petropavlovsk-	51.13	48	LR	LR	11 47 17.5	
	comp=Z,59nm,18.3s,baz=156,slow=40						
JMIC	Jan Mayen	53.36	336	LR	LR	11 48 10.5	
	comp=Z,23nm,21.4s,baz=70,slow=39						
ILAR	Eielson Array	68.86	20	P	P	11 24 21.1	-1.1
	comp=Z,0.4nm,0.8s,baz=316,slow=4.5,SNR=5.6						
ILAR				LR	LR	11 55 22.4	
	comp=Z,58nm,19.5s,baz=316,slow=37						
TORD	Torodi Ar. Bea	74.77	275	P	P	11 24 56.7	-1.7
	comp=Z,0.4nm,0.8s,baz=53,slow=4.8,SNR=3.2						
TORD				LR	LR	12 05 09.8	
	comp=Z,35nm,18.6s,baz=215,slow=42						
WRA	Warramunga Arr	76.52	131	P	P	11 25 07.3	-0.9
	comp=Z,0.9nm,0.6s,baz=325,slow=5.7,SNR=16						
YKA	Yellowknife Ar	77.17	8	P	P	11 25 10.5	-0.8
	comp=Z,0.4nm,0.6s,baz=339,slow=5.9,SNR=6.1						
ASAR	Alice Springs	79.18	133	P	P	11 25 22.8	-0.3
	comp=Z,0.5nm,0.5s,baz=323,slow=5.5,SNR=12						

IDC 05 11:19:04.8±2.5**, 17°.58S×177°.95W, h0**km**, mb3.8**/4**, mb1 4.2**/4**, mb1mx3.8**/19**, mbtmp3.8**/4**, Error ellipse: s-maj=227.2km s-min=25.5km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.12	259	P	P	11 27 23.1	-0.3
	0.5nm,0.5s,baz=94,slow=7.0,SNR=14						
ASAR	Alice Springs	45.30	254	P	P	11 27 24.9	0.0
	5.4nm,0.5s,baz=89,slow=8.2,SNR=107						
NVAR	Mina Array Bea	78.88	44	P	P	11 31 10.7	+0.4
	0.2nm,0.5s,baz=234,slow=5.4,SNR=3.1						
TXAR	Lajitas Array	85.45	57	P	P	11 31 44.7	-0.2
	0.5nm,0.8s,baz=223,slow=6.4,SNR=8.4						

KRSC 05 11:23:33.4±1.9**, 58°.19N×165°.10E, h10**km±10km**, ML4.1, Bering Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TILK	Tilichiki	2.33	13	S	Sn	11 24 41.1	+0.8
KBG	Krutoberegovo	2.34	215	S	Sn	11 24 39.6	-0.9
SMKR	Semkarok	2.54	232	P	Pn	11 24 16.0	+1.2
PALN	Palana	2.83	291	eP	Pn	11 24 20.2	+1.6
PALN				eS	Sn	11 24 54.3	+1.6
KLY	Klyuchi	3.06	234	eP	Pn	11 24 22.2	+0.4
LGNR	Loginova	3.20	231	P	Pn	11 24 25.8	+1.7
BZGR	Bezymyannyi-Gr	3.30	229	P	Pn	11 24 27.0	+1.8
BZWR	Bezymyannyi-We	3.36	230	P	Pn	11 24 28.5	+2.4
KIRR	Kirishev	3.43	231	eP	Pn	11 24 29.3	+2.2
KPT	Kopyto	3.47	232	P	Pn	11 24 28.9	+1.3
SRDR	Sredinnyy	3.48	240	P	Pn	11 24 29.1	+1.5
KMNR	Kamenistaya	3.61	230	eP	Pn	11 24 32.4	+2.9
TUMR	Tumrok	3.99	225	P	Pn	11 24 37.9	+3.2
ESO	Esso	4.17	240	P	Pn	11 24 40.6	+3.6

*ISCJB **05** 11:37:09.8±0.5, 42°.23N±0°.04×87°.00E±0°.06, h10km, mb3.8/9, MS2.6/1, Error ellipse: s-maj=6.9km s-min=5.9km az=140.0*
*NNC **05** 11:37:12.1±5.3, 42°.34N×87°.04E, h0km, mb3.9, mpv3.5, Error ellipse: s-maj=138.9km s-min=47.8km az=55.0*
*BJI **05** 11:37:12.7, 42°.16N×87°.08E, h8km, mb4.1/2, ML3.8/11*
*IDC **05** 11:37:13.7±0.7, 42°.26N×87°.11E, h24km±5km, mb3.8/9, mb1 3.9/13, mb1mx3.7/32, mbtmp3.8/13, ML3.6/4, MS2.9/3, Ms1 2.8/3, ms1mx2.3/37, Error ellipse: s-maj=21.4km s-min=11.3km az=43.0*
ISC 05 11:37:12.1±0.6**, 42°.26N**±0°.06×**87°.09E**±0°.06**, h10**km**, n24, σ1s.55**/30**, mb3.9**/9**, 3C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	1.62	16	Pg	Pg	11 37 43.9	+0.7
WMQ				Sg	Sg	11 38 05.7	+1.5
WMQ				smax	smax		
	comp=N,2μm,0.4s						
WMQ				smax	smax		
	comp=E,3μm,0.3s						
MK31	Makanchi Array	5.68	324	⇑Pn	Pn	11 38 38.0	+1.4
	comp=E,1.4nm,0.2s,baz=139,slow=13,SNR=176						
MK31				Lg	Lg	11 40 09.7	
	comp=E,28nm,0.7s,baz=144,slow=31,SNR=4.2						
MKAR	Makanchi Array	5.68	324	Pn	Pn	11 38 37.6	+1.1
	comp=E,1.3nm,0.3s,baz=142,slow=14,SNR=41						
MKAR				Sn	Sn	11 39 43.4	+1.5
	comp=E,3.6nm,0.3s,baz=140,slow=21,SNR=4.0						
MKAR				Lg	Lg	11 40 14.6	
	comp=E,13nm,0.3s,baz=142,slow=28,SNR=6.9						
KSH	Kashi	8.86	256	P	Pn	11 39 34.7	+14
KSH				S	Sn	11 41 12.7	+12
AAK	Ala-Archa	9.32	276	Pn	Pn	11 39 27.6	+0.9
	comp=E,0.4nm,0.3s,baz=100,slow=11,SNR=2.8						
AAK				Sn	Sn	11 41 10.2	-1.4
	baz=108,slow=20,SNR=2.6						
AAK				Lg	Lg	11 42 13.8	
	comp=E,0.3nm,0.3s,baz=330,slow=20,SNR=3.8						
GTA	Gaotai	10.06	102	eP	Pn	11 39 36.4	-0.3
GTA				pP		11 39 40.7	
GTA				sP		11 39 44.0	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURBB	Kurchatov Arra	10.23	328	Pn	Pn	11 39 39.6	+0.7
	comp=Z,0.1nm,0.3s,baz=139,slow=12,SNR=6.5						
KURBB				Sn	Sn	11 41 33.4	-0.1
	comp=Z,0.3nm,0.3s,baz=132,slow=18,SNR=4.7						
KURBB				Lg	Lg	11 42 35.7	
	comp=Z,0.2nm,0.3s,baz=235,slow=28,SNR=5.5						
KUR16	Kurchatov Arra	10.24	328	⇓Pn	Pn	11 39 38.5	-0.6
	comp=Z,0.8nm,0.5s						
KUR16				⇑Lg	Lg	11 42 35.8	
	comp=Z,8.3nm,0.9s						
KURK	Kurchatov	10.27	328	⇑Pn	Pn	11 39 37.4	-2.0
	comp=Z,4.8nm,1.1s						
KURK				⇓Lg	Lg	11 42 35.1	
	comp=Z,18nm,0.6s						
ZALV	Zalesovo Beam	11.79	353	Pn	Pn	11 40 00.1	-0.1
	comp=Z,0.5nm,0.3s,baz=160,slow=9.5,SNR=7.2						
ZALV				Sn	Sn	11 42 08.5	-3.2
	comp=Z,1.8nm,0.3s,baz=169,slow=25,SNR=12						
ZALV				LR	LR	11 45 09.8	
	comp=Z,51nm,19.2s,baz=250,slow=40						
SONM	Songino Array	14.73	61	Pn	P	11 40 46.8	+0.1
	comp=Z,0.3nm,0.3s,baz=247,slow=12,SNR=5.9						
SONM				Lg	Lg	11 45 01.8	
	comp=Z,0.2nm,0.3s,baz=246,slow=25,SNR=3.8						
SONM				LR	LR	11 46 39.6	
	comp=Z,77nm,19.1s,baz=80,slow=38						
BVAR	Borovoye Array	15.53	320	Pn	Pn	11 40 51.6	+0.5
	comp=Z,0.7nm,0.3s,baz=137,slow=13,SNR=9.4						
HHC	Hu-ho-hao-te	18.36	86	eP	P	11 41 27.8	+0.9
HHC				pmax	pmax		
	comp=Z,13nm,0.9s						
AKTO	Aktyubinsk	21.56	302	P	P	11 42 01.1	-0.5
	comp=Z,0.8nm,0.3s,baz=102,slow=12,SNR=5.9						
CMAR	Chiang Mai Arr	25.79	153	P	P	11 42 43.9	+0.6
	comp=Z,2.2nm,0.6s,baz=330,slow=9.0,SNR=9.6						
KBZ	Khabaz	32.07	288	LR	LR	11 56 30.1	
	comp=Z,14nm,20.6s,baz=294,slow=36						
BRTR	Keskin Array B	39.87	285	P	P	11 44 46.3	+0.2
	comp=Z,1.0nm,0.6s,baz=116,slow=10,SNR=7.6						
ARCES	ARCESS Array B	41.28	332	P	P	11 44 56.5	-0.6
	comp=Z,3.3nm,1.0s,baz=91,slow=8.1,SNR=3.7						
NB2	NORSAR Subarra	47.66	320	P	P	11 45 47.3	-1.0
	comp=Z,1.0nm,0.6s,baz=75,slow=7.9						
NOA	NORSAR Array B	47.66	320	P	P	11 45 47.3	-1.0
	comp=Z,1.5nm,0.6s,baz=76,slow=7.8,SNR=4.8						
YKA	Yellowknife Ar	74.14	10	P	P	11 48 47.3	-0.9
	comp=Z,0.6nm,0.5s,baz=342,slow=6.2,SNR=10						
WRA	Warramunga Arr	75.71	135	P	P	11 48 56.6	-1.2
	comp=Z,1.0nm,0.8s,baz=327,slow=5.6,SNR=6.8						
WRA				pP	pP	11 49 05.2	+4.1
	comp=Z,1.1nm,0.6s,baz=335,slow=5.3,SNR=8.7						
TORD	Torodi Ar. Bea	77.91	277	P	P	11 49 08.7	-1.8
	comp=Z,1.0nm,0.5s,baz=47,slow=4.9,SNR=8.6						
TORD				pP	pP	11 49 16.9	+3.1
	comp=Z,1.4nm,0.7s,baz=45,slow=4.9,SNR=5.0						
ASAR	Alice Springs	78.56	137	P	P	11 49 12.9	-0.9
	comp=Z,0.3nm,0.8s,baz=322,slow=4.8,SNR=5.6						
ASAR				pP	PcP	11 49 21.4	-1.5
	comp=Z,0.3nm,0.6s,baz=328,slow=5.3,SNR=3.1						

IDC 05 11:49:08.3±2.1**, 0°.50S×127°.55E, h0**km**, mb3.1**/3**, mb1 3.3**/3**, mb1mx3.2**/21**, mbtmp3.2**/3**, Error ellipse: s-maj=163.3km s-min=26.1km az=66.0, Halmahera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.43	161	P	P	11 53 48.1	+0.7
	0.5nm,0.7s,baz=340,slow=11,SNR=8.8						
ASAR	Alice Springs	23.84	165	P	P	11 54 22.9	-0.5
	0.2nm,0.5s,baz=345,slow=11,SNR=4.0						
MKAR	Makanchi Array	61.49	326	P	P	11 59 26.9	-0.1
	0.2nm,0.5s,baz=119,slow=5.3,SNR=2.3						

MAN 05 12:05:10, 18°.51N×120°.95E, h18km**, mb4.1, ML2.9, MS2.6, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.36	240	⇑iP	Pb	12 05 18.0	+0.1
PIP				eS	Sb	12 05 25.1	+1.8
APYP	Conner	0.70	156	eP	Pb	12 05 23.1	-0.6
APYP				eS	Sb	12 05 30.2	-2.8
ABRA	Dolores	0.88	195	eP	Pg	12 05 27.1	-0.1
ABRA				eS	Sb	12 05 35.2	-3.1
CAUP	Cauayan	1.77	152	eP	Pb	12 05 42.0	+0.2

*IDC **05** 12:11:48.3±0.9, 9°.15S×109°.35E, h0km, mb4.1/9, mb1 4.1/10, mb1mx3.9/23, mbtmp4.0/10, ML3.4/1, MS3.4/5, Ms1 3.4/5, ms1mx2.7/31, Error ellipse: s-maj=49.0km s-min=15.4km az=52.0*
*ISCJB **05** 12:11:51.5±0.6, 9°.38S±0°.05×109°.24E±0°.05, h33km, mb4.0/9, MS3.4/4, Error ellipse: s-maj=8.2km s-min=6.0km az=23.7*
*DJA **05** 12:11:51.6±0.5, 9°S±4°×10°9E±°, h12km, M4.3/14, MLv4.3/14*
ISC 05 12:11:53.6±0.8**, 9°.29S**±0°.09×**109°.27E**±0°.06**, h35**km**, n26, σ1s.12**/25**, mb4.0**/9**, MS3.3**/4**, South of Jawa**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UGM	Wanagama	1.85	42	S	Sn	12 12 44.4	-0.6
BJII	Banjamegara	1.99	13	P	Pn	12 12 24.4	-0.5
PCJI	Pacitan	2.18	60	P	Pn	12 12 26.7	-0.7
CISI	Cisompet, Garu	2.25	320	P	Pn	12 12 27.9	-0.5
CISI				S	Sn	12 12 56.2	+1.3
TGJI	Tegal	2.41	356	P	Pn	12 12 30.2	-0.4
SMRI	Semarang	2.51	28	P	Pn	12 12 33.7	+1.7
PWJI	Pagerwojo	2.81	63	P	Pn	12 12 36.4	+0.4
PWJI				S	Sn	12 13 10.8	+2.2
SJI	Sawahan	2.91	58	P	Pn	12 12 38.7	+1.1
LEM	Lembang	2.94	326	P	Pn	12 12 40.5	+2.4
KRKI	Karangkates	3.34	71	P	Pn	12 12 44.7	+1.3
GMJI	Gumukmas	4.25	77	P	Pn	12 12 54.9	-1.0
BLJI	Banyuglugur	4.54	71	P	Pn	12 13 00.8	+0.8
JAGI	Jajag, Banyuwa	4.89	81	P	Pn	12 13 06.3	+1.5
FITZ	Fitzroy Crossi	18.14	121	P	Pn	12 16 02.5	-0.4
	0.1nm,0.3s,baz=284,slow=9.7,SNR=3.7						
FITZ				S	Sn	12 19 07.1	-17
	0.0nm,0.3s,baz=240,slow=20,SNR=1.9						
FITZ				LR	LR	12 22 29.7	
	comp=Z,64nm,20.8s,baz=306,slow=35						
NWAO	Narrogin (SRO)	24.65	164	LR	LR	12 25 14.5	
	comp=Z,56nm,19.8s,baz=77,slow=33						
WRA	Warramunga Arr	26.43	116	P	P	12 17 27.1	-0.3
	2.1nm,0.8s,baz=288,slow=12,SNR=12						
ASAR	Alice Springs	27.54	124	P	P	12 17 37.1	-0.3
	0.7nm,0.8s,baz=297,slow=10,SNR=6.0						
ASAR				LR	LR	12 28 23.9	
	comp=Z,86nm,18.1s,baz=92,slow=36						
CMAR	Chiang Mai Arr	29.39	340	LR	LR	12 30 17.9	
	comp=Z,66nm,18.9s,baz=170,slow=38						
STKA	Stephens Creek	37.45	132	P	P	12 19 03.3	-0.5
	2.8nm,0.4s,baz=294,slow=8.7,SNR=7.4						
SONM	Songino Array	56.93	358	P	P	12 21 34.5	-0.9
	0.6nm,0.4s,baz=170,slow=8.2,SNR=3.8						
MKAR	Makanchi Array	60.80	339	P	P	12 22 01.6	-0.6
	2.1nm,0.7s,baz=145,slow=7.6,SNR=16						
ZALV	Zalesovo Beam	66.31	345	P	P	12 22 37.3	-1.1
	1.1nm,0.3s,baz=161,slow=7.4,SNR=7.1						
BVAR	Borovoye Array	70.35	336	P	P	12 23 03.4	-0.3
	0.5nm,0.3s,baz=155,slow=7.7,SNR=7.8						
KMBO	Kilima Mbogo	72.07	272	LR	LR	12 49 32.1	
	comp=Z,38nm,19.1s,baz=97,slow=31						
VNDA	Vanda	73.32	170	P	P	12 23 22.2	+1.0
	0.7nm,0.9s,baz=310,slow=5.2,SNR=2.9						
BRTR	Keskin Array B	85.02	311	P	P	12 24 26.1	+0.1
	2.7nm,0.9s,baz=125,slow=6.2,SNR=13						

*ISCJB **05** 12:15:33.3±0.4, 40°.27N±0°.03×28°.34E±0°.03, h6km±4km, Error ellipse: s-maj=4.3km s-min=3.3km az=10.0*
*ISK **05** 12:15:33.1, 40°.26N×28°.35E, h8km, MD2.5*
*DDA **05** 12:15:33.8, 40°.23N×28°.40E, h7km, MD2.9*
*CSEM **05** 12:15:33.6±0.1, 40°.27N×28°.35E, h10km, MD2.5, Error ellipse: s-maj=1.7km s-min=1.2km az=7.0*
ISC 05 12:15:33.6±1.0**, 40°.26N**±0°.02×**28°.34E**±0°.02**, h11**km±9km**, n50, σ0s.38**/68**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNT	Bandirma	0.33	287	ePG	Pg	12 15 40.6	+0.3
BNT	Bandirma	0.33	287	ePg	Pg	12 15 40.6	+0.3
MDNY	Mudanya-Bursa	0.43	75	ePG	Pg	12 15 41.9	-0.3
MDNY				eSG	Sg	12 15 48.3	+0.4
MDNY	Mudanya-Bursa	0.43	75	ePg	Pg	12 15 41.9	-0.3
MDNY				eSg	Sg	12 15 48.3	+0.4
ORLT	Orhaneli	0.48	116	ePG	Pg	12 15 42.8	-0.2
ORLT				eSG	Sg	12 15 49.7	+0.3
ORLT	Orhaneli	0.48	116	ePg	Pg	12 15 42.8	-0.2
ORLT				eSg	Sg	12 15 49.7	+0.3
ARMT	Armutlu	0.50	53	ePG	Pg	12 15 43.3	-0.2
ARMT				eSG	Sg	12 15 50.8	+0.6
ARMT	Armutlu	0.50	53	ePg	Pg	12 15 43.3	-0.2
ARMT				eSg	Sg	12 15 50.8	+0.6
GONE	Gonen-Balikesi	0.54	247	ePG	Pg	12 15 44.2	0.0
GONE	Gonen-Balikesi	0.54	247	ePg	Pg	12 15 44.2	0.0
ULDT	Uludag	0.62	101	i P	Pg	12 15 45.8	0.0
ULDT				eS	Sg	12 15 53.7	-0.3
ULDT	Uludag	0.62	101	i P	Pg	12 15 45.8	0.0
ULDT				eS	Sg	12 15 53.7	-0.3
MRMT	Marmara Adasi	0.66	301	ePG	Pg	12 15 46.5	+0.1
MRMT	Marmara Adasi	0.66	301	ePg	Pg	12 15 46.6	+0.1
DURS	Dursunbey	0.67	171	i P	Pg	12 15 46.8	+0.2
DURS				i S	Sg	12 15 54.8	-0.6
DURS	Dursunbey	0.67	171	i P	Pg	12 15 46.8	+0.2
DURS				i S	Sg	12 15 54.8	-0.6
BALY	Balya	0.76	227	i P	Pb	12 15 48.8	-0.2
BALY				i S	Sb	12 15 59.2	-0.1
BALY	Balya	0.76	227	i P	Pb	12 15 48.7	-0.2
BALY				i S	Sb	12 15 59.2	-0.1
YLV	Yalova	0.85	69	ePG	Pg	12 15 49.8	-0.2
YLV	Yalova	0.85	69	ePg	Pg	12 15 49.8	-0.2
MFT	Murefte	0.96	303	ePG	Pg	12 15 52.3	+0.2
MFT	Murefte	0.96	303	ePg	Pg	12 15 52.3	+0.2
SART	Tekirdag	0.98	296	i P	Pb	12 15 53.0	+0.3
SART				eS	Sg	12 16 04.2	-1.1
SART	Tekirdag	0.98	296	i P	Pb	12 15 53.0	+0.3
SART				eS	Sg	12 16 04.2	-1.1
RKY	Sarkoy-Tekirda	0.98	296	ePG	Pg	12 15 52.3	-0.2
RKY	Sarkoy-Tekirda	0.98	296	ePg	Pg	12 15 52.3	-0.2
CTKS	Kestanelik-??a	0.98	7	ePG	Pg	12 15 52.3	-0.3
CTKS	Kestanelik-??a	0.98	7	ePg	Pg	12 15 52.3	-0.3
ADVT	Abdulvahap	1.08	80	ePG	Pg	12 15 54.1	-0.4
ADVT	Abdulvahap	1.08	80	ePg	Pg	12 15 54.1	-0.4
KLYT	Kilyos	1.13	28	ePN	Pb	12 15 55.0	-0.2
KLYT	Kilyos	1.13	28	ePn	Pb	12 15 55.0	-0.2
CAVI	Cavuskoy	1.15	92	ePN	Pb	12 15 55.5	-0.2
CAVI	Cavuskoy	1.15	92	ePn	Pb	12 15 55.5	-0.2
TVSB	Tavsanli	1.19	133	ePN	Pb	12 15 56.0	-0.2
TVSB	Tavsanli	1.19	133	ePn	Pb	12 15 56.0	-0.2
LPK	Lapseki	1.21	276	ePN	Pg	12 15 56.8	-0.1
LPK	Lapseki	1.21	276	ePn	Pg	12 15 56.8	-0.1
DEMI	Demirci	1.25	166	eP	Pg	12 15 57.9	+0.2
DEMI				eS	Sb	12 16 12.8	-0.7
DEMI	Demirci	1.25	166	eP	Pg	12 15 57.9	+0.2
DEMI				eS	Sb	12 16 12.8	-0.7
GELI	Tayfur-Gelibol	1.43	276	ePN	Pn	12 16 00.0	+0.4
GELI	Tayfur-Gelibol	1.43	276	ePn	Pn	12 16 00.0	+0.4
ERIK	Erikli-Kesan	1.45	287	ePN	Pn	12 16 00.2	+0.4
ERIK	Erikli-Kesan	1.45	287	ePn	Pn	12 16 00.3	+0.4
GDZ	Gediz	1.47	143	i P	Pg	12 16 02.0	+0.2
GDZ				i S	Sn	12 16 19.6	+0.1
GDZ	Gediz	1.47	143	i P	Pg	12 16 02.0	+0.2
GDZ				i S	Sn	12 16 19.6	+0.1
GULT	Gulveren	1.67	83	ePN	Pn	12 16 03.4	+0.4
GULT	Gulveren	1.67	83	ePn	Pn	12 16 03.4	+0.4
MDUB	Mudurnu	2.20	84	ePN	Pn	12 16 10.7	+0.5
MDUB	Mudurnu	2.20	84	ePn	Pn	12 16 10.7	+0.5

IDC 05 12:38:11.6±8.8**, 5°.22S×151°.01E, h57**km±65km**, mb3.0**/3**, mb1 3.3**/4**, mb1mx3.1**/19**, mbtmp3.1**/4**, ML2.4**/1**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.4**/9**, Error ellipse: s-maj=120.6km s-min=55.0km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.64	222	P	Pn	12 39 32.8	-0.1
	0.7nm,0.3s,baz=243,slow=18,SNR=3.0						
PMG				S	Sn	12 40 37.1	+0.7
	0.6nm,0.3s,baz=41,slow=20,SNR=2.4						
PMG				LR	LR	12 41 51.3	
	comp=Z,61nm,18.5s,baz=314,slow=39						
WRA	Warramunga Arr	21.84	226	P	P	12 43 00.6	+1.1
	0.3nm,0.6s,baz=53,slow=10,SNR=5.2						
ASAR	Alice Springs	24.66	220	P	P	12 43 27.2	0.0
	0.4nm,0.6s,baz=61,slow=8.7,SNR=5.0						
FITZ	Fitzroy Crossi	27.89	241	P	P	12 43 55.9	-0.6
	1.0nm,0.8s,baz=60,slow=8.1,SNR=3.1						
TORD	Torodi Ar. Bea	148.73	287	PKPbc	PKPbc	12 57 53.0	-0.6
	0.3nm,0.8s,baz=85,slow=3.9,SNR=3.3						

*SKO **05** 12:57:38.9, 41°.30N×22°.70E, h11km, M1.5, ML1.8*
*THE **05** 12:57:39.1, 41°.32N×22°.71E, h7km±2km, ML2.1/6, Error ellipse: s-maj=2.1km s-min=0.8km az=206.0*
*ISCJB **05** 12:57:39.2±0.5, 41°.30N±0°.02×22°.72E±0°.03, h2km±6km, Error ellipse: s-maj=4.0km s-min=3.9km az=148.1*
*ATH **05** 12:57:39.1, 41°.31N×22°.71E, h4km, MD3.1/5*
*CSEM **05** 12:57:39.5±0.1, 41°.29N×22°.72E, h2km, ML1.7, Error ellipse: s-maj=2.8km s-min=2.4km az=52.0*
*BEO **05** 12:57:42.0±0.7, 41°.34N×22°.54E, h0km, ML1.7/4*
ISC 05 12:57:39.2±0.9**, 41°.30N**±0°.02×**22°.71E**±0°.02**, h6**km±7km**, n34, σ0s.69**/65**, 3C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.11	281	P	Pg	12 57 41.1	-0.5
VAY				S	Sg	12 57 43.3	+0.1
VAY	Valandovo	0.11	281	⇑iPg	Pg	12 57 41.5	-0.1
VAY				eSg	Sg	12 57 43.4	+0.2
VAY	Valandovo	0.11	281	⇑iPg	Pg	12 57 41.5	-0.1
VAY				eLg	Lg	12 57 43.4	
	comp=E,429nm,0.3s						
VAY				i Sg	Sg	12 57 43.4	+0.2
VAY				eLg	Lg	12 57 43.6	
	comp=N,1μm,0.3s						
VAY	Valandovo	0.11	281	P	Pg	12 57 41.1	-0.5
VAY	Valandovo	0.11	281	⇑iPg	Pg	12 57 41.9	+0.3
VAY				S	Sg	12 57 43.3	+0.1
VAY				eLg	Lg	12 57 44.0	
	comp=N,1μm,0.3s						
KNT	Kendrikon	0.20	134	P	Pg	12 57 43.8	+0.6
KNT				S	Sg	12 57 46.7	+0.8
KNT	Kendrikon	0.20	134	P	Pg	12 57 43.8	+0.6
KNT				S	Sg	12 57 46.7	+0.8
GRG	Griva	0.41	214	P	Pg	12 57 47.4	+0.1
GRG				S	Sg	12 57 53.5	+0.8
GRG	Griva	0.41	214	ePG	Pg	12 57 47.5	+0.1
GRG				eSG	Sg	12 57 53.3	+0.6
GRG	Griva	0.41	214	P	Pg	12 57 47.4	+0.1
GRG				eSg	Sg	12 57 53.3	+0.6
SOH	Sokhos	0.68	134	P	Pg	12 57 52.1	-0.3
SOH				S	Sg	12 58 02.0	+0.7
SOH	Sokhos	0.68	134	ePG	Pg	12 57 52.0	-0.3
SOH				eSG	Sb	12 58 02.5	-0.8
SOH	Sokhos	0.68	134	P	Pg	12 57 52.1	-0.3
SOH				S	Sg	12 58 02.0	+0.7
SRS	Serrai	0.69	105	P	Pg	12 57 52.2	-0.3
SRS				S	Sb	12 58 02.3	-1.2
SRS	Serrai	0.69	105	P	Pg	12 57 52.2	-0.3
SRS				S	Sb	12 58 02.3	-1.2
THE	Thessaloniki	0.70	164	P	Pg	12 57 52.5	-0.1
THE				S	Sg	12 58 02.5	+0.9
THE	Thessaloniki	0.70	164	P	Pg	12 57 52.5	-0.1
THE				S	Sg	12 58 02.5	+0.9
HORT	Hortiatis	0.76	157	P	Pg	12 57 53.8	-0.1
HORT				S	Sb	12 58 05.2	-0.4
HORT	Hortiatis	0.76	157	P	Pg	12 57 53.8	-0.1
HORT				S	Sb	12 58 05.2	-0.4
NVR	Nevrokopi	0.87	86	P	Pg	12 57 55.9	-0.1
NVR				S	Sg	12 58 07.5	+0.3
NVR	Nevrokopi	0.87	86	ePG	Pg	12 57 55.4	-0.6
NVR				eSG	Sg	12 58 07.2	0.0
NVR	Nevrokopi	0.87	86	ePg	Pg	12 57 55.4	-0.6
NVR	Nevrokopi	0.87	86	P	Pg	12 57 55.9	-0.1
NVR				eSg	Sg	12 58 07.2	0.0
PLG	Polygyros	1.08	149	ePG	Pg	12 57 59.6	-0.4
PLG				eSG	Sg	12 58 13.7	-0.3
PLG	Polygyros	1.08	149	ePg	Pg	12 57 59.6	-0.4
PLG				eSg	Sg	12 58 13.7	-0.3
FNA	Florina	1.13	243	ePB	Pb	12 58 01.4	+0.2
FNA				eSB	Sg	12 58 15.8	+0.1
FNA	Florina	1.13	243	ePb	Pb	12 58 01.4	+0.2
FNA				eSb	Sg	12 58 15.8	+0.1
VTS	Vitosha	1.34	16	P	Pn	12 58 04.3	-0.3
VTS				S	Sb	12 58 21.0	-1.4
VTS	Vitosha	1.34	16	ePg	Pg	12 58 07.1	+2.1
VTS				eSg	Sn	12 58 24.0	+1.2
VTS	Vitosha	1.34	16	P	Pn	12 58 04.3	-0.3
VTS	Vitosha	1.34	16	ePg	Pg	12 58 07.1	+2.1
VTS				S	Sb	12 58 21.0	-1.4
VTS				eSg	Sn	12 58 24.0	+1.2
BARS	Barje	1.65	337	ePn	Pb	12 58 10.1	0.0
BARS				eSn	Sg	12 58 32.1	-0.3
BARS	Barje	1.65	337	ePn	Pb	12 58 10.1	0.0
BARS				eSn	Sg	12 58 32.1	-0.3
ZAPS	Zavoj	1.97	358	eSn	Sg	12 58 41.4	-1.2

IDC 05 13:09:38.4±1.7**, 17°.84S×167°.86E, h0**km**, mb3.9**/7**, mb1 4.1**/8**, mb1mx3.9**/19**, mbtmp3.9**/8**, ML3.2**/1**, MS3.4**/4**, Ms1 3.3**/4**, ms1mx3.0**/24**, Error ellipse: s-maj=47.6km s-min=21.6km az=122.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.41	197	Pn	Pn	13 10 47.7	+0.9
	1.2nm,0.3s,baz=333,slow=22,SNR=32						
DZM				Sn	Sn	13 11 37.5	-1.5
	5.2nm,0.3s,baz=127,slow=20,SNR=4.7						
HNR	Honiara	11.36	316	LR	LR	13 16 15.0	
	comp=Z,113nm,20.8s,baz=123,slow=35						
CTA	Charters Tower	20.56	260	P	Pn	13 14 20.1	-1.0
	2.2nm,0.7s,baz=94,slow=12,SNR=4.9						
URZ	Urewera	21.89	160	LR	LR	13 20 50.5	
	comp=Z,70nm,18.2s,baz=144,slow=31						
STKA	Stephens Creek	27.54	235	P	P	13 15 28.4	+1.5
	1.7nm,0.8s,baz=97,slow=14,SNR=4.8						
STKA				LR	LR	13 25 28.6	
	comp=Z,78nm,18.9s,baz=202,slow=34						
WRA	Warramunga Arr	31.76	261	P	P	13 16 02.9	-1.7
	1.2nm,0.9s,baz=93,slow=9.1,SNR=10						
ASAR	Alice Springs	32.23	254	P	P	13 16 08.0	-0.8
	1.8nm,0.7s,baz=79,slow=8.7,SNR=29						
ASAR				LR	LR	13 28 33.7	
	comp=Z,87nm,19.1s,baz=41,slow=35						
PETK	Petropavlovsk-	71.20	354	P	P	13 20 59.2	+0.3
	5.4nm,1.1s,baz=131,slow=8.1,SNR=3.8						
SONM	Songino Array	85.33	324	P	P	13 22 19.4	+1.9
	0.3nm,0.3s,baz=139,slow=6.8,SNR=3.5						
ILAR	Eielson Array	89.30	18	P	P	13 22 34.9	-1.2
	0.3nm,0.7s,baz=246,slow=5.0,SNR=7.0						

*SOF **05** 13:12:21.5, 39°.21N×23°.95E, h9km, MD3.2*
*DDA **05** 13:12:22.5, 39°.48N×23°.85E, h9km, MD3.5*
*IDC **05** 13:12:24.6±1.2, 39°.24N×23°.79E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.4/29, mbtmp3.4/7, ML3.1/2, MS2.9/3, Ms1 2.9/3, ms1mx2.3/33, Error ellipse: s-maj=32.3km s-min=18.9km az=143.0*

ISCJB **05** *13:12:25.1±0.4, 39°.32N±0°.01×23°.85E±0°.02, h12km±2km, mb3.4/5, MS2.7/2, Error ellipse: s-maj=2.3km s-min=1.8km az=144.0*

ATH **05** *13:12:25.0, 39°.32N×23°.86E, h27km±1km, MD3.7/34, ML3.7*

THE **05** *13:12:25.7, 39°.30N×23°.85E, h7km±1km, ML4.0/5, Error ellipse: s-maj=1.4km s-min=0.6km az=257.0*

CSEM **05** *13:12:25.3±0.1, 39°.31N×23°.84E, h10km, ML4.0/5, Error ellipse: s-maj=2.5km s-min=1.8km az=110.0*

TIR **05** *13:12:28.1, 39°.32N×23°.64E, h39km, ML3.0*

ISC 05 13:12:25.7±0.9**, 39°.32N**±0°.02×**23°.84E**±0°.02**, h9**km±6km**, n254, σ0s.83**/313**, mb3.4**/5**, 11C-6D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AOS	Alonnisos	0.15	169	P	Pg	13 12 29.2	+0.2
AOS				S	Sg	13 12 31.4	+0.1
AOS	Alonnisos	0.15	169	P	Pg	13 12 29.2	+0.2
SKIA	Skiathos	0.33	243	P	Pg	13 12 32.1	-0.1
SKIA				S	Sg	13 12 37.2	+0.6
SKIA	Skiathos	0.33	243	P	Pg	13 12 32.1	-0.1
SKIA				S	Sg	13 12 37.2	+0.6
NEO	Neokhori	0.48	269	P	Pg	13 12 34.9	-0.1
NEO				S	Sb	13 12 42.6	-0.9
NEO	Neokhori	0.48	269	ePB	Pg	13 12 35.0	-0.1
NEO				eSB	Sb	13 12 42.7	-0.8
NEO	Neokhori	0.48	269	ePb	Pg	13 12 35.0	-0.1
NEO				eSb	Sb	13 12 42.7	-0.8
XOR	Xorichti	0.51	275	P	Pg	13 12 35.5	0.0
XOR				S	Sb	13 12 43.8	-0.4
XOR	Xorichti	0.51	275	P	Pg	13 12 35.5	0.0
XOR				S	Sb	13 12 43.8	-0.4
MRKA	Markates	0.64	198	P	Pg	13 12 37.6	-0.5
MRKA				S	Sg	13 12 45.5	-1.1
MRKA	Markates	0.64	198	P	Pg	13 12 37.6	-0.5
MRKA				S	Sg	13 12 45.5	-1.1
SMIA	Simia	0.66	228	P	Pg	13 12 38.4	-0.1
SMIA				S	Sg	13 12 47.5	+0.4
SMIA	Simia	0.66	228	P	Pg	13 12 38.4	-0.1
SMIA				S	Sg	13 12 47.5	+0.4
ATAL	Atalanti	0.90	226	P	Pg	13 12 42.4	-0.5
ATAL				S	Sg	13 12 53.7	-0.9
ATAL	Atalanti	0.90	226	P	Pg	13 12 42.4	-0.5
ATAL				S	Sg	13 12 53.7	-0.9
LKR	Lokris	0.94	225	P	Pg	13 12 43.0	-0.7
LKR	Lokris	0.94	225	ePN	Pg	13 12 43.1	-0.7
LKR				eSN	Sg	13 12 56.1	+0.2
LKR	Lokris	0.94	225	P	Pg	13 12 43.0	-0.7
LKR				eSn	Sg	13 12 56.1	+0.2
OUR	Ouranopolis	1.02	6	P	Pg	13 12 45.1	-0.2
OUR				S	Sn	13 13 00.1	-0.4
OUR	Ouranopolis	1.02	6	P	Pg	13 12 45.1	-0.2
OUR				S	Sn	13 13 00.1	-0.4
AXAR	Agios Charalam	1.07	239	P	Pg	13 12 45.9	-0.4
AXAR				S	Sg	13 12 59.8	-0.5
AXAR	Agios Charalam	1.07	239	P	Pg	13 12 45.9	-0.4
AXAR				S	Sg	13 12 59.8	-0.5
PLG	Polygyros	1.10	344	P	Pg	13 12 46.0	-0.8
PLG	Polygyros	1.10	344	ePN	Pg	13 12 45.9	-0.8
PLG				eSN	Sg	13 13 00.7	-0.3
PLG	Polygyros	1.10	344	P	Pg	13 12 46.0	-0.8
PLG				eSn	Sg	13 13 00.7	-0.3
LIA	Limnos Island	1.19	60	P	Pb	13 12 47.5	-0.8
LIA				S	Sn	13 13 04.5	-0.1
LIA	Limnos Island	1.19	60	ePN	Pb	13 12 47.5	-0.8
LIA				eSN	Sb	13 13 03.5	-0.2
LIA	Limnos Island	1.19	60	P	Pb	13 12 47.5	-0.8
LIA				eSn	Sb	13 13 03.5	-0.2
LIA				S	Sn	13 13 04.5	-0.1
VIL2	Platees	1.19	202	P	Pb	13 12 47.7	-0.8
AGG	Agios Georgios	1.21	256	P	Pb	13 12 47.9	-0.9
AGG				S	Sn	13 13 06.3	+0.9
AGG	Agios Georgios	1.21	256	ePN	Pb	13 12 47.8	-1.0
AGG				eSN	Sn	13 13 05.1	-0.3
AGG	Agios Georgios	1.21	256	P	Pb	13 12 47.9	-0.9
AGG				eSn	Sn	13 13 05.1	-0.3
AGG				S	Sn	13 13 06.3	+0.9
PTL	Penteli	1.27	179	P	Pn	13 12 48.8	-0.8
PTL	Penteli	1.27	179	ePN	Pn	13 12 48.7	-0.8
PTL				eSN	Sb	13 13 05.6	-0.6
PTL	Penteli	1.27	179	P	Pn	13 12 48.8	-0.8
PTL				eSn	Sb	13 13 05.6	-0.6
ATH	Athens Observa	1.35	184	P	Pn	13 12 50.0	-0.6
ATH	Athens Observa	1.35	184	ePN	Pn	13 12 50.0	-0.6
ATH				eSN	Sb	13 13 07.8	-0.6
ATH	Athens Observa	1.35	184	P	Pn	13 12 50.0	-0.6
ATH				eSn	Sb	13 13 07.8	-0.6
ATHU	Athens Univers	1.35	182	P	Pn	13 12 49.9	-0.8
ATHU	Athens Univers	1.35	182	P	Pn	13 12 49.9	-0.8
MAKR	Makrakomi, Fth	1.36	258	P	Pn	13 12 50.3	-0.6
MAKR	Makrakomi, Fth	1.36	258	P	Pn	13 12 50.3	-0.6
DSF	Desfina	1.37	229	P	Pn	13 12 49.8	-1.2
DSF				S	Sb	13 13 07.5	-1.6
DSF	Desfina	1.37	229	P	Pn	13 12 49.8	-1.2
DSF				S	Sb	13 13 07.5	-1.6
HORT	Hortiatis	1.40	336	P	Pn	13 12 50.7	-0.7
HORT	Hortiatis	1.40	336	P	Pn	13 12 50.7	-0.7
THL	Klokotos Trika	1.44	280	P	Pn	13 12 51.2	-0.7
THL	Klokotos Trika	1.44	280	ePN	Pn	13 12 51.2	-0.7
THL				eSN	Sn	13 13 10.2	-0.6
THL	Klokotos Trika	1.44	280	P	Pn	13 12 51.2	-0.7
THL				eSn	Sn	13 13 10.2	-0.6
LTK	Loutraki	1.47	208	P	Pn	13 12 51.4	-0.8
LTK	Loutraki	1.47	208	ePN	Pn	13 12 51.5	-0.8
LTK	Loutraki	1.47	208	ePn	Pn	13 12 51.5	-0.8
THE	Thessaloniki	1.48	333	P	Pn	13 12 51.8	-0.6
THE	Thessaloniki	1.48	333	P	Pn	13 12 51.8	-0.6
SOH	Sokhos	1.55	346	P	Pn	13 12 52.8	-0.6
SOH	Sokhos	1.55	346	ePN	Pn	13 12 52.9	-0.5
SOH				eSN	Sn	13 13 12.9	-0.8
SOH	Sokhos	1.55	346	ePn	Pn	13 12 52.9	-0.5
SOH				eSn	Sn	13 13 12.9	-0.8
SIGR	SIGRI	1.57	93	P	Pn	13 12 53.1	-0.5
SIGR	SIGRI	1.57	93	P	Pn	13 12 53.1	-0.5
THAL	Thalero	1.58	216	P	Pn	13 12 53.1	-0.7
THAL	Thalero	1.58	216	P	Pn	13 12 53.1	-0.7
NAIG	Nisos Aigina	1.58	190	ePN	Pn	13 12 53.2	-0.7
NAIG	Nisos Aigina	1.58	190	ePn	Pn	13 12 53.2	-0.7
KALE	Kalithea	1.62	236	P	Pn	13 12 53.8	-0.7
KALE	Kalithea	1.62	236	ePN	Pn	13 12 53.8	-0.7
KALE				eSN	Sn	13 13 15.8	+0.3
KALE	Kalithea	1.62	236	P	Pn	13 12 53.8	-0.7
KALE				eSn	Sn	13 13 15.8	+0.3
EVR	Evrytania	1.63	256	P	Pn	13 12 54.5	-0.2
EVR	Evrytania	1.63	256	ePN	Pn	13 12 54.8	+0.1
EVR				eSN	Sn	13 13 15.5	-0.3
EVR	Evrytania	1.63	256	P	Pn	13 12 54.5	-0.2
EVR	Evrytania	1.63	256	ePn	Pn	13 12 54.8	+0.1
EVR				eSn	Sn	13 13 15.5	-0.3
SMTH	Samothraki Isl	1.73	48	ePB	Pn	13 12 54.5	-1.5
SMTH	Samothraki Isl	1.73	48	ePb	Pn	13 12 54.5	-1.5
KAVA	Kavala	1.75	17	P	Pn	13 12 54.9	-1.3
KAVA	Kavala	1.75	17	P	Pn	13 12 54.9	-1.3
EFP	Efpalio	1.75	240	ePN	Pn	13 12 55.9	-0.3
EFP				eSN	Sn	13 13 17.6	-1.1
EFP	Efpalio	1.75	240	ePn	Pn	13 12 55.9	-0.3
EFP				eSn	Sn	13 13 17.6	-1.1
BOZC	Bozcaada	1.79	72	iP	Pn	13 12 55.9	-0.8
BOZC				iS	Sb	13 13 20.9	-0.1
SRS	Serrai	1.81	354	P	Pn	13 12 56.1	-0.9
SRS	Serrai	1.81	354	P	Pn	13 12 56.1	-0.9
LAKA	Lakka	1.81	234	P	Pn	13 12 56.9	-0.2
LAKA	Lakka	1.81	234	ePN	Pn	13 12 56.9	-0.2
LAKA	Lakka	1.81	234	P	Pn	13 12 56.9	-0.2
GUR	Goura	1.81	221	P	Pn	13 12 56.5	-0.6
GUR	Goura	1.81	221	ePB	Pn	13 12 56.5	-0.6
GUR	Goura	1.81	221	P	Pn	13 12 56.5	-0.6
KLV	Kalavryta, Ach	1.84	227	ePN	Pn	13 12 57.0	-0.4
KLV				eSN	Sn	13 13 19.8	-1.0
KLV	Kalavryta, Ach	1.84	227	ePn	Pn	13 12 57.0	-0.4
KLV				eSn	Sn	13 13 19.8	-1.0
DID	Didima	1.87	195	P	Pn	13 12 57.1	-0.8
DID	Didima	1.87	195	ePB	Pn	13 12 57.1	-0.8
DID				eSN	Sn	13 13 21.5	-0.1
DID	Didima	1.87	195	P	Pn	13 12 57.1	-0.8
DID				eSn	Sn	13 13 21.5	-0.1
KZN	Kozani	1.88	302	P	Pn	13 12 57.4	-0.6
KZN	Kozani	1.88	302	ePN	Pn	13 12 57.7	-0.3
KZN	Kozani	1.88	302	P	Pn	13 12 57.4	-0.6
KZN	Kozani	1.88	302	ePn	Pn	13 12 57.7	-0.3
PRK	Paraskevi	1.89	91	P	Pn	13 12 57.9	-0.1
PRK	Paraskevi	1.89	91	ePN	Pn	13 12 58.0	-0.1
PRK	Paraskevi	1.89	91	P	Pn	13 12 57.9	-0.1
DIDY	Didyma	1.91	195	P	Pn	13 12 57.5	-0.9
DIDY	Didyma	1.91	195	P	Pn	13 12 57.5	-0.9
CHOS	Chios island	1.96	118	P	Pn	13 12 59.0	-0.2
CHOS	Chios island	1.96	118	ePB	Pn	13 12 59.2	0.0
CHOS				eSN	Sn	13 13 22.6	-1.3
CHOS	Chios island	1.96	118	P	Pn	13 12 59.0	-0.2
CHOS				eSn	Sn	13 13 22.6	-1.3
GRG	Griva	1.97	326	P	Pn	13 12 58.8	-0.5
GRG	Griva	1.97	326	ePB	Pn	13 12 59.0	-0.3
GRG	Griva	1.97	326	P	Pn	13 12 58.8	-0.5
KNT	Kendrikon	1.98	339	P	Pn	13 12 59.1	-0.2
KNT	Kendrikon	1.98	339	P	Pn	13 12 59.1	-0.2
NVR	Nevrokopi	2.03	0	P	Pn	13 12 59.1	-1.0
NVR	Nevrokopi	2.03	0	ePN	Pn	13 12 59.3	-0.8
NVR	Nevrokopi	2.03	0	ePn	Pn	13 12 59.3	-0.8
VAY	Valandovo	2.22	334	P	Pn	13 13 02.6	-0.1
VAY	Valandovo	2.22	334	ePn	Pn	13 13 02.5	-0.2
VAY	Valandovo	2.22	334	ePn	Pn	13 13 01.9	-0.8
VAY	Valandovo	2.22	334	P	Pn	13 13 02.6	-0.1
AXS	Araxos	2.23	241	P	Pn	13 13 03.7	+0.9
AXS	Araxos	2.23	241	P	Pn	13 13 03.7	+0.9
RLS	Riolos of Patr	2.25	237	P	Pn	13 13 04.5	+1.6
RLS	Riolos of Patr	2.25	237	ePB	Pn	13 13 04.6	+1.6
RLS	Riolos of Patr	2.25	237	ePb	Pn	13 13 04.6	+1.6
VLX	Vlachokerasia	2.26	211	P	Pn	13 13 03.3	0.0
VLX	Vlachokerasia	2.26	211	ePN	Pn	13 13 03.3	0.0
VLX	Vlachokerasia	2.26	211	P	Pn	13 13 03.3	0.0
ENEZ	Enez	2.27	51	ePN	Pn	13 13 01.6	-1.7
MMB	Musomiste	2.27	358	iP	Pn	13 13 02.2	-1.2
MMB	Musomiste	2.27	358	iP	Pn	13 13 02.2	-1.2
GELI	Tayfur-Gelibol	2.29	61	ePN	Pn	13 13 02.7	-1.0
GELI				eSN	Sb	13 13 35.1	-0.5
ALN	Alexandroupoli	2.31	46	P	Pn	13 13 02.5	-1.4
ALN	Alexandroupoli	2.31	46	ePN	Pn	13 13 02.5	-1.4
ALN	Alexandroupoli	2.31	46	P	Pn	13 13 02.5	-1.4
URLA	Izmir	2.35	113	iP	Pn	13 13 04.1	-0.4
URLA				iS	Sb	13 13 38.1	+0.7
URLA	Izmir	2.35	113	iP	Pn	13 13 04.1	-0.4
FNA	Florina	2.39	308	P	Pn	13 13 05.2	+0.1
FNA	Florina	2.39	308	ePN	Pn	13 13 05.2	+0.1
FNA	Florina	2.39	308	P	Pn	13 13 05.2	+0.1
NEST	Nestorio	2.41	298	P	Pn	13 13 05.8	+0.4
NEST	Nestorio	2.41	298	P	Pn	13 13 05.8	+0.4
ERIK	Erikli-Kesan	2.46	56	ePN	Pn	13 13 05.0	-0.8
ERIK				eSN	Sb	13 13 39.4	-0.9
RZN	Rozhen	2.46	15	iP	Pn	13 13 05.6	-0.5
RZN	Rozhen	2.46	15	iP	Pn	13 13 05.6	-0.5
LPK	Lapseki	2.48	64	ePN	Pn	13 13 05.8	-0.5
BIA	Bitola	2.57	312	ePn	Pn	13 13 07.5	-0.1
BIA	Bitola	2.57	312	ePn	Pn	13 13 07.4	-0.1
KKB	Krupnik	2.61	347	iP	Pn	13 13 07.5	-0.5
KKB	Krupnik	2.61	347	iP	Pn	13 13 07.5	-0.5
APE	Apeiranthos	2.61	149	ePN	Pn	13 13 07.8	-0.3
APE	Apeiranthos	2.61	149	P	Pn	13 13 07.7	-0.3
APE	Apeiranthos	2.61	149	ePN	Pn	13 13 07.8	-0.3
APE	Apeiranthos	2.61	149	P	Pn	13 13 07.7	-0.3
ITM	Ithomi	2.62	216	P	Pn	13 13 08.9	+0.8
ITM	Ithomi	2.62	216	ePB	Pn	13 13 09.1	+1.0
ITM	Ithomi	2.62	216	ePb	Pn	13 13 09.1	+1.0
KDZ	Kurdzhali	2.62	27	iP	Pn	13 13 06.5	-1.6
KDZ	Kurdzhali	2.62	27	iP	Pn	13 13 06.5	-1.6
BLCB	Balcova	2.67	109	ePN	Pn	13 13 09.1	+0.4
KBN	Korca	2.69	300	ePN	Pn	13 13 09.9	+0.8
KBN				iSN	Sn	13 13 41.6	-0.2
KBN	Korca	2.69	300	ePn	Pn	13 13 09.9	+0.8
KBN				iSn	Sn	13 13 41.6	-0.2
VLI	Veliai	2.69	196	P	Pn	13 13 08.4	-0.7
VLI	Veliai	2.69	196	ePN	Pn	13 13 08.4	-0.7
VLI	Veliai	2.69	196	P	Pn	13 13 08.4	-0.7
VLS	Valsamata	2.79	247	ePB	Pn	13 13 11.8	+1.3
VLS	Valsamata	2.79	247	ePb	Pn	13 13 11.8	+1.3
DYR	Agios Nikonas	2.82	205	P	Pn	13 13 11.1	+0.2
DYR	Agios Nikonas	2.82	205	ePN	Pn	13 13 11.1	+0.2
DYR	Agios Nikonas	2.82	205	P	Pn	13 13 11.1	+0.2
IZM	Izmir	2.82	108	ePN	Pn	13 13 11.3	+0.3
RKY	Sarkoy-Tekirda	2.90	61	ePN	Pn	13 13 12.0	-0.1
PYL	PYLOS	2.93	215	ePB	Pn	13 13 13.8	+1.4
PYL	PYLOS	2.93	215	ePb	Pn	13 13 13.8	+1.4
BALY	Balya	2.95	81	iP	Pn	13 13 12.9	+0.2
BALY				eS	Sn	13 13 49.7	+1.4
BALY	Balya	2.95	81	iP	Pn	13 13 12.9	+0.2
BALY				eS	Sn	13 13 49.7	+1.4
MFT	Murefte	3.02	60	ePN	Pn	13 13 13.1	-0.6
SRN	Sarande	3.02	282	ePN	Pn	13 13 15.7	+2.1
SRN				iSN	Sn	13 13 51.4	+1.5
SRN	Sarande	3.02	282	ePn	Pn	13 13 15.7	+2.1
SRN				iSn	Sn	13 13 51.4	+1.5
GONE	Gonen-Balikesi	3.05	75	ePN	Pn	13 13 14.8	+0.8
KYTH	Kithira	3.10	192	P	Pn	13 13 14.3	-0.5
KYTH	Kithira	3.10	192	ePN	Pn	13 13 14.6	-0.2
KYTH	Kithira	3.10	192	P	Pn	13 13 14.3	-0.5
KYTH	Kithira	3.10	192	ePn	Pn	13 13 14.6	-0.2
BALB	Balikesir	3.14	83	ePN	Pn	13 13 16.1	+0.8
KEK	Kerkira	3.15	278	ePB	Pn	13 13 17.4	+1.9
KEK	Kerkira	3.15	278	ePb	Pn	13 13 17.4	+1.9
MRMT	Marmara Adasi	3.16	65	ePN	Pn	13 13 16.1	+0.6
SANT	Santorini	3.21	156	ePN	Pn	13 13 16.0	-0.3
SANT	Santorini	3.21	156	ePn	Pn	13 13 16.0	-0.3
TKR	Tekirdag	3.29	58	ePN	Pn	13 13 18.1	+0.8
VTS	Vitosha	3.30	352	P	Pn	13 13 17.9	+0.2
VTS	Vitosha	3.30	352	⇑iP	Pn	13 13 17.8	+0.1
VTS				S	Sn	13 13 35.6	-22
VTS	Vitosha	3.30	352	P	Pn	13 13 17.9	+0.2
BNT	Bandirma	3.31	70	ePN	Pn	13 13 18.2	+0.6
EDRB	Edirne	3.35	40	ePN	Pn	13 13 17.4	-0.8
ANKY	Antikythira Is	3.47	187	ePN	Pn	13 13 19.4	-0.5
ANKY	Antikythira Is	3.47	187	ePn	Pn	13 13 19.4	-0.5
BODT	Bodrum	3.54	128	ePN	Pn	13 13 20.9	+0.1
DST	Dursunbey	3.71	84	ePN	Pn	13 13 24.2	+1.0
KULA	Kula-Manisa	3.84	101	ePN	Pn	13 13 25.9	+0.9
VAM	Vamos	3.92	176	ePN	Pn	13 13 26.5	+0.5
VAM	Vamos	3.92	176	ePn	Pn	13 13 26.5	+0.5
DAT	Datca	3.92	130	ePN	Pn	13 13 26.1	-0.1
MDNY	Mudanya-Bursa	4.02	73	ePN	Pn	13 13 28.8	+1.4
MPEP	Malo Peshtene	4.03	359	P	Pn	13 13 27.9	+0.3
CTKS	Kestanelik-??a	4.05	60	ePN	Pn	13 13 28.8	+1.0
PVL	Pavlikeni	4.05	16	P	Pn	13 13 26.2	-1.6
PVL	Pavlikeni	4.05	16	P	Pn	13 13 26.2	-1.6
ARMT	Armutlu	4.05	71	ePN	Pn	13 13 29.3	+1.4
YER	Yerkesik	4.12	121	ePN	Pn	13 13 29.3	+0.5
SZH	Strazhica	4.25	21	P	Pn	13 13 30.5	0.0
SZH	Strazhica	4.25	21	P	Pn	13 13 30.5	0.0
NPS	Neapolis	4.29	160	ePN	Pn	13 13 31.1	0.0
NPS	Neapolis	4.29	160	ePn	Pn	13 13 31.1	0.0
LAST	Lasithi	4.35	162	ePN	Pn	13 13 31.9	-0.1
LAST	Lasithi	4.35	162	ePn	Pn	13 13 31.9	-0.1
TVSB	Tavsanli	4.36	87	ePN	Pn	13 13 32.8	+0.7
KLYT	Kilyos	4.42	62	ePN	Pn	13 13 33.6	+0.7
YLV	Yalova	4.43	72	ePN	Pn	13 13 34.5	+1.4
IZI	Iznik	4.45	75	ePN	Pn	13 13 34.4	+1.0
KARP	Karpathos	4.60	144	ePN	Pn	13 13 36.0	+0.6
KARP	Karpathos	4.60	144	ePn	Pn	13 13 36.0	+0.6
ZKR	Zakros	4.61	155	ePN	Pn	13 13 36.2	+0.8
ZKR	Zakros	4.61	155	ePn	Pn	13 13 36.2	+0.8
XRY	Khrisi	4.68	161	ePN	Pn	13 13 37.2	+0.8
XRY	Khrisi	4.68	161	ePn	Pn	13 13 37.2	+0.8
BOLS	Boljevac	4.72	343	ePn	Pn	13 13 35.3	-1.7
ALT	Altintas	4.88	91	ePN	Pn	13 13 40.6	+1.3
FETY	Fethiye	4.93	121	ePN	Pn	13 13 41.2	+1.3
GRUS	Gruza	5.13	334	ePn	Pn	13 13 45.2	+2.5
DIVS	Divibare	5.58	330	ePn	Pn	13 13 49.8	+1.0
MTUR	Matau	5.97	8	⇑iP	Pn	13 13 52.4	-1.9
MTUR	Matau	5.97	8	⇑iP	Pn	13 13 52.4	-1.9
LOT	Lotru	6.12	360	⇓iP	Pn	13 13 56.0	-0.4
LOT	Lotru	6.12	360	⇓iP	Pn	13 13 56.0	-0.4
TIRR	Tirgusor	6.16	32	⇓iP	Pn	13 13 56.3	-0.5
TIRR	Tirgusor	6.16	32	⇓iP	Pn	13 13 56.3	-0.5
VOIR		6.18	8	⇑iP	Pn	13 13 57.8	+0.7
VOIR		6.18	8	⇑iP	Pn	13 13 57.8	+0.7
MLR	Muntele Rosu	6.36	13	⇑iP	Pn	13 14 00.6	+1.0
MLR	Muntele Rosu	6.36	13	Pn	Pn	13 14 01.3	+1.7
	0.2nm,0.3s,baz=183,slow=13,SNR=5.6						
MLR	Muntele Rosu	6.36	13	⇑iP	Pn	13 14 00.6	+1.0
DOPR	Dopca	6.74	9	⇑iP	Pn	13 14 05.8	+1.0
DOPR	Dopca	6.74	9	⇑iP	Pn	13 14 05.8	+1.0
PLOR	Plostina	6.85	17	⇓iP	Pn	13 14 08.1	+1.8
PLOR	Plostina	6.85	17	⇓iP	Pn	13 14 08.1	+1.8
VRI	Vrincioaia	6.88	17	⇑iP	Pn	13 14 07.9	+1.2
VRI	Vrincioaia	6.88	17	⇑iP	Pn	13 14 07.9	+1.2
BRTR	Keskin Array B	7.58	84	Pn	Pn	13 14 17.6	+1.1
	0.3nm,0.3s,baz=261,slow=14,SNR=5.5						
KECS	Kecovo	9.47	346	ePN	Pn	13 14 42.4	+0.2
KECS	Kecovo	9.47	346	ePn	Pn	13 14 42.4	+0.2
GERES	GERESS Array B	11.98	326	LR	LR	13 20 35.4	
	comp=Z,51nm,18.6s,baz=268,slow=41						
ESDC	Sonseca Array	21.43	280	P	P	13 17 14.3	+0.3
	0.3nm,0.3s,baz=82,slow=9.2,SNR=2.8						
HFS	Hagfors	21.79	346	LR	LR	13 25 07.5	
	comp=Z,23nm,18.0s,baz=166,slow=35						
ARCES	ARCESS Array B	30.29	1	LR	LR	13 31 33.1	
	comp=Z,22nm,19.4s,baz=168,slow=38						
TORD	Torodi Ar. Bea	32.59	223	P	P	13 18 57.0	-0.5
	0.4nm,0.6s,baz=33,slow=9.3,SNR=5.3						
KURBB	Kurchatov Arra	39.46	55	P	P	13 19 56.7	+0.8
	0.4nm,0.8s,baz=282,slow=9.2,SNR=4.3						
MKAR	Makanchi Array	42.49	60	P	P	13 20 22.0	+1.0
	0.5nm,0.6s,baz=285,slow=6.4,SNR=7.4						
ZALV	Zalesovo Beam	42.99	49	P	P	13 20 25.9	+1.0
	1.4nm,0.8s,baz=284,slow=6.0,SNR=4.7						

ISCJB **05** *13:39:07.5±0.4, 35°.44S±0°.07×104°.5W±0°.1, h10km, mb4.6/54, MS5.0/168, Error ellipse: s-maj=14.3km s-min=9.7km az=179.0*

BJI **05** *13:39:07.8, 36°.19S×103°.52W, h10km, mB5.2/12, Ms5.2/14, Ms7 4.9/16*

IDC **05** *13:39:08.4±0.5, 35°.42S×104°.93W, h0km, mb4.5/15, mb1 4.6/15, mb1mx4.5/20, mbtmp4.5/15, MS5.0/17, Ms1 5.0/17, ms1mx4.8/20, Error ellipse: s-maj=19.6km s-min=15.1km az=112.0*

NEIC **05** *13:39:10.2±0.4, 35°.42S×104°.40W, h15km, mb4.8/41, MS5.0/136, MW5.7, MW5.6, Error ellipse: s-maj=13.7km s-min=10.1km az=85.0, Moment Tensor Solution. s36 Moment tensor: Scale 10^{17}Nm; M_{rr}0.09; $M_{\theta\theta}$-1.15; $M_{\phi\phi}$1.06; $M_{r\theta}$0.38; $M_{\theta\phi}$-2.84; $M_{\phi r}$-0.69; Best double couple: $M_0$3.10000×10^{17} NP1:ϕ_s191.00000°, δ81.00000°, λ11.00000°. NP2:ϕ_s100.00000°, δ79.00000°, λ171.00000°. Principal axes: T 3.2000, Plg14.0000°, Azm55.0000°; N -0.1100, Plg75.0000°, Azm229.0000°; P -3.0900, Plg1.0000°, Azm325.0000°;*

GCMT **05** *13:39:15.1±0.1, 35°.51S×104°.88W, h20km, MW5.7, Moment Tensor Solution. s104,c193; s72,c82; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.21±.04; $M_{\theta\theta}$-1.29±.04; $M_{\phi\phi}$1.50±.04; $M_{r\theta}$-0.35±.09; $M_{\theta\phi}$-4.08±.04; $M_{\phi r}$-0.53±.09; Best double couple: $M_0$4.40000×10^{17} NP1:ϕ_s100.00000°, δ82.00000°, λ-176.00000°. NP2:ϕ_s9.00000°, δ86.00000°, λ-8.00000°. Principal axes: T 4.4300, Plg3.0000°, Azm55.0000°; N -0.1400, Plg81.0000°, Azm164.0000°; P -4.2900, Plg8.0000°, Azm324.0000°; Data Used: II IU IC G CN. Surface waves: sta=110, comp=229, per= 50.*

NEIC **05** *13:39:25.7±0.0, 35°.50S×104°.22W, h10km, Moment Tensor Solution. s135 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.47; $M_{\theta\theta}$-0.75; $M_{\phi\phi}$1.22; $M_{r\theta}$0.61; $M_{\theta\phi}$-3.31; $M_{\phi r}$1.30; Best double couple: $M_0$3.80000×10^{17} NP1:ϕ_s187.00000°, δ82.00000°, λ-21.00000°. NP2:ϕ_s280.00000°, δ68.00000°, λ-170.00000°. Principal axes: T 3.8000, Plg9.0000°, Azm235.0000°; N -0.0800, Plg66.0000°, Azm347.0000°; P -3.7300, Plg21.0000°, Azm141.0000°;*

ISC 05 13:39:10.1±0.4**, 35°.46S**±0°.09×**104°.26W**±0°.09**, h10**km**, n266, σ1s.86**/124**, mb4.8**/53**, MS5.0**/169**, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	26.94	111	P	P	13 44 58.1	+6.4
PLCA	Paso Flores	26.94	111	P	P	13 44 58.1	+6.4
	5.4nm,1.0s,baz=258,slow=8.7,SNR=7.4						
PLCA				LR	LR	13 52 50.8	
	comp=Z,2μm,19.2s,baz=97,slow=30						
LCO	Las Campanas	29.01	87	PFAKE		13 45 20.0	+9.4
LCO				LR	LR		
	comp=Z,2μm,19.0s						
USHA	Ushuaia	31.35	139	LR	LR	13 55 16.8	
	comp=Z,7μm,19.4s,baz=262,slow=30						
LVC	Limon Verde	33.27	77	eP	P	13 45 47.0	-1.1
	comp=Z,14nm,1.1s						
LVC				LR	LR		
	comp=Z,5μm,20.0s						
NNA	Nana	34.08	54	PFAKE		13 46 10.0	+15
NNA				LR	LR		
	comp=Z,9μm,20.0s						
EFI	East Falkland	36.51	131	PFAKE		13 46 30.0	+15
EFI				LR	LR		
	comp=Z,4μm,21.0s						
ATAH	Atahualpa	36.84	46	P	P	13 46 23.4	+4.2
ATAH	Atahualpa	36.84	46	P	P	13 46 23.4	+4.2
	comp=Z,14nm,0.8s,baz=165,slow=5.9,SNR=10						
ATAH				LR	LR	13 56 47.5	
	comp=Z,1μm,21.4s,baz=229,slow=28						
PAYG	Puerto Ayora	36.97	24	PFAKE		13 46 30.0	+10
PAYG				LR	LR		
	comp=Z,5μm,20.0s						
LPAZ	La Paz	37.42	69	eP	P	13 46 23.6	-0.6
	comp=Z,24nm,1.3s						
LPAZ	La Paz	37.42	69	P	P	13 46 28.0	+3.7
	comp=Z,7.0nm,0.8s,baz=228,slow=4.2,SNR=20						
LPAZ				LR	LR	13 59 03.0	
	comp=Z,2μm,18.5s,baz=250,slow=32						
PMSA	Palmer Station	37.91	153	LR	LR	13 57 56.6	
	comp=Z,3μm,18.1s,baz=291,slow=30						
CPUP	Villa Florida	40.97	91	LR	LR	14 00 52.5	
	comp=Z,2μm,19.6s,baz=234,slow=31						
OTAV	Otavalo	42.90	40	eP	P	13 47 07.3	-2.2
	comp=Z,35nm,1.4s						
OTAV				LR	LR		
	comp=Z,2μm,21.0s						
SIV	San Ignacio	43.06	75	P	P	13 47 13.1	+2.7
SIV	San Ignacio	43.06	75	P	P	13 47 13.1	+2.7
	comp=Z,12nm,1.0s,baz=253,slow=11,SNR=20						
PPT2	Papeete2	43.86	282	eS	S	13 53 33.4	-15
PPT2				eS	S	13 53 38.8	-9.4
PPT2				eLQ	LQ	13 56 51.9	
	comp=Z,9μm,31.5s						
PPT2				eLR	LR	13 57 21.0	
	comp=Z,1μm,25.0s						
SAML	Samuel	45.79	65	eP	P	13 47 30.0	-2.2
	comp=Z,18nm,1.2s						
SAML				LR	LR		
	comp=Z,4μm,21.0s						
ROSC	El Rosal	48.97	41	eP	P	13 47 57.1	-0.3
ROSC	El Rosal	48.97	41	P	P	13 47 59.1	+1.8
	comp=Z,22nm,0.8s,baz=276,slow=23,SNR=11						
ROSC				LR	LR	14 05 06.4	
	comp=Z,3μm,20.3s,baz=191,slow=32						
JTS	JuntasAbangare	49.02	26	PFAKE		13 48 10.0	+13
JTS				LR	LR		
	comp=Z,6μm,21.0s						
BCIP	Isla Barro Col	50.02	32	PFAKE		13 48 20.0	+15
BCIP				LR	LR		
	comp=Z,2μm,20.0s						
SPB	Sao Paulo	50.23	93	PFAKE		13 48 20.0	+13
SPB				LR	LR		
	comp=Z,2μm,21.0s						
BDFB	Brasilia	53.72	84	P	P	13 48 35.6	+2.9
BDFB	Brasilia	53.72	84	P	P	13 48 35.6	+2.9
	comp=Z,13nm,1.1s,baz=208,slow=4.2,SNR=5.3						
BDFB				LR	LR	14 10 10.1	
	comp=Z,2μm,18.5s,baz=111,slow=34						
SDV	Santo Domingo	54.33	42	eP	P	13 48 35.4	-1.8
	comp=Z,22nm,0.8s						
SDV				LR	LR		
	comp=Z,6.0nm,22.0s						
QSPA	South Pole Qui	54.75	180	eP	P	13 48 38.7	-0.9
	comp=Z,12nm,1.1s						
QSPA				LR	LR		
	comp=Z,807nm,22.0s						
QSPA	South Pole Qui	54.75	180	P	P	13 48 39.3	-0.3
	comp=Z,2.1nm,0.6s,baz=130,slow=1.4,SNR=16						
SBA	Scott Base	55.43	195	eP	P	13 48 43.2	-0.9
	comp=Z,47nm,1.9s						
SBA				LR	LR		
	comp=Z,1μm,20.0s						
VNDA	Vanda	56.52	195	P	P	13 48 52.1	+0.1
VNDA	Vanda	56.52	195	P	P	13 48 52.1	+0.1
	comp=Z,0.5nm,0.7s,baz=106,slow=6.6,SNR=3.0						
VNDA				LR	LR	14 08 43.4	

comp=Z,1µm,18.2s,baz=97,slow=32
TEIG Tepich 57.41 18 P P 13 49 00.9 +2.0
TEIG LR LR
comp=Z,1µm,19.0s
TEIG Tepich 57.41 18 P P 13 49 00.9 +2.0
comp=Z,11nm,0.9s,baz=230,slow=12,SNR=7.0
MTDJ Mount Denham 59.10 30 PFAKE 13 49 20.0 +9.1
MTDJ LR LR
comp=Z,1µm,22.0s
SNAA Sanae 60.22 159 eP P 13 49 18.0 0.0
comp=Z,65nm,2.4s
SNZO South Karori 61.60 238 PFAKE 13 49 40.0 +12
SNZO LR LR
comp=Z,3µm,20.0s
GTBY Guantanamo Bay 61.63 31 PFAKE 13 49 40.0 +12
GTBY LR LR
comp=Z,2µm,22.0s
GRGR Grenville 62.16 48 PFAKE 13 49 40.0 +8.3
GRGR LR LR
comp=Z,2µm,19.0s
SDDR Presa de Saban 62.52 35 PFAKE 13 49 50.0 +16
SDDR LR LR
comp=Z,1µm,20.0s
KVTX Kingsville 62.95 6 PFAKE 13 49 50.0 +13
KVTX LR LR
comp=Z,966nm,19.0s
RPZ Rata Peaks 63.10 234 LR LR 14 10 25.4
comp=Z,1µm,20.1s,baz=115,slow=30
BBGH Gun Hill 64.23 50 PFAKE 13 50 00.0 +15
BBGH LR LR
comp=Z,3µm,20.0s
SJG San Juan 64.37 41 PFAKE 13 50 00.0 +14
SJG LR LR
comp=Z,902nm,19.0s
TXAR Lajitas Array 64.45 1 P P 13 49 47.6 +0.8
TXAR Lajitas Array 64.45 1 P P 13 49 47.6 +0.8
comp=Z,1.7nm,0.8s,baz=181,slow=8.1,SNR=13
TXAR LR LR 14 13 16.9
comp=Z,571nm,18.4s,baz=145,slow=32
FDF Fort de France 64.49 47 PFAKE 13 50 00.0 +13
FDF LR LR
comp=Z,2µm,20.0s
JCT Junction City 65.72 4 eP P 13 49 53.7 -1.2
comp=Z,18nm,1.3s
JCT LR LR
comp=Z,322nm,19.0s
ANWB Willy Bob 66.43 45 PFAKE 13 50 10.0 +10
ANWB LR LR
comp=Z,660nm,19.0s
MNTX Cornudas Mount 66.81 359 PFAKE 13 50 10.0 +8.1
MNTX LR LR
comp=Z,389nm,19.0s
BRAL Brewton 68.07 16 PFAKE 13 50 20.0 +10
BRAL LR LR
comp=Z,1µm,22.0s
VBMS Vicksburg 68.54 12 PFAKE 13 50 20.0 +7.3
VBMS LR LR
comp=Z,495nm,20.0s
RCBR Riachuelo 69.03 82 PFAKE 13 50 30.0 +14
RCBR LR LR
comp=Z,1µm,19.0s
LAZ Ladron 69.55 357 eP P 13 50 18.1 -1.1
comp=Z,5.5nm,1.3s
PFO Pinyon Flat Ob 69.65 349 PFAKE 13 50 30.0 +10
PFO LR LR
comp=Z,729nm,21.0s
AMTX Amarillo 70.02 2 eP P 13 50 20.9 -1.1
comp=Z,28nm,1.3s
AMTX LR LR
comp=Z,459nm,20.0s
WMOK Wichita Mounta 70.02 5 eP P 13 50 20.8 -1.1
comp=Z,1.5nm,1.0s
LRAL Lakeview Retre 70.03 15 eP P 13 50 20.8 -1.1
comp=Z,13nm,1.0s
LRAL LR LR
comp=Z,932nm,22.0s
ANMO Albuquerque 70.07 358 eP P 13 50 21.1 -1.3
comp=Z,2.9nm,1.1s
ANMO LR LR
comp=Z,514nm,19.0s
OXF Oxford 70.98 13 PFAKE 13 50 40.0 +12
OXF LR LR
comp=Z,499nm,19.0s
PLAL Pickwick Lake 71.69 14 eP P 13 50 29.7 -2.3
comp=Z,11nm,1.0s
NHSC New Hope 71.84 21 PFAKE 13 50 40.0 +7.1
NHSC LR LR
comp=Z,1µm,20.0s
ISA Isabella 71.99 348 eP P 13 50 32.3 -1.6
comp=Z,13nm,1.4s
SWET Sewanee 72.36 16 eP P 13 50 35.4 -0.7
comp=Z,18nm,1.0s
CCUT Cedar City 73.13 352 eP P 13 50 40.2 -0.6
comp=Z,11nm,1.1s
PV04 Paradox Valley 73.61 356 eP P 13 50 43.8 +0.2
MVU Marysvale 73.96 354 PFAKE 13 51 00.0 +14
MVU LR LR
comp=Z,806nm,20.0s
FUNA Funafuti 74.16 271 PFAKE 13 51 00.0 +13
FUNA LR LR
comp=Z,16µm,22.0s
TZTN Tazewell 74.18 17 eP P 13 50 45.2 -1.6
SMCO Snowmass 74.31 358 eP P 13 50 47.4 -0.5
comp=Z,9.5nm,1.1s
CNNC Cliffs of the 74.51 22 PFAKE 13 51 00.0 +11
CNNC LR LR
comp=Z,2µm,22.0s
KSU1 Kansas State U 74.52 6 PFAKE 13 51 00.0 +11
KSU1 LR LR
comp=Z,328nm,19.0s
CMB Columbia Colle 74.64 347 eP P 13 50 48.5 -1.0
comp=Z,12nm,1.3s
NVAR Mina Array Bea 74.66 349 P P 13 50 48.9 -0.9
NVAR Mina Array Bea 74.66 349 P P 13 50 48.9 -0.9
comp=Z,5.0nm,1.0s,baz=191,slow=6.9,SNR=11
NVAR LR LR 14 16 40.2
comp=Z,407nm,18.2s,baz=188,slow=30
ISCO Idaho Springs 74.90 359 PFAKE 13 51 00.0 +8.8
ISCO LR LR
comp=Z,648nm,20.0s
CASY Casey 75.11 194 PFAKE 13 51 00.0 +8.1
CASY LR LR
comp=Z,1µm,19.0s
BLA Blacksburg 75.62 19 PFAKE 13 51 10.0 +15
BLA LR LR
comp=Z,754nm,21.0s
DUG Dugway 75.69 353 eP P 13 50 53.6 -2.0
comp=Z,3.5nm,1.0s
DUG LR LR
comp=Z,653nm,20.0s
WCN Washoe City 75.75 348 eP P 13 50 52.9 -3.1
DAU Daniels Canyon 75.77 354 eP P 13 50 55.6 -0.7
OGNE Ogallala 76.06 2 PFAKE 13 51 10.0 +12
OGNE LR LR
comp=Z,401nm,22.0s
HOPS Hopland 76.10 345 eP P 13 50 54.7 -3.1
comp=Z,12nm,1.3s
BEKR Beckworth 76.41 347 eP P 13 50 56.9 -2.8
comp=Z,5.7nm,1.1s
BMN Battle Mountai 76.45 350 PFAKE 13 51 10.0 +10
BMN LR LR
comp=Z,389nm,19.0s
MAW Mawson 76.80 175 P P 13 51 01.3 -0.1
MAW Mawson 76.80 175 P P 13 51 01.3 -0.1
comp=Z,3.0nm,0.9s,baz=233,slow=10,SNR=2.3
MAW LR LR 14 25 53.0
comp=Z,651nm,18.6s,baz=185,slow=36
HDIL Hopedale 76.89 12 PFAKE 13 51 10.0 +7.8
HDIL LR LR
comp=Z,510nm,22.0s
HWUT Hardware Ranch 76.98 354 PFAKE 13 51 10.0 +7.0
HWUT LR LR
comp=Z,674nm,20.0s
DZM Mont Dzumac 77.00 252 eS S 14 00 54.7 +2.4
DZM eLR LR 14 14 28.3
comp=Z,3µm,32.5s
BBSR BB Station 77.00 34 PFAKE 13 51 10.0 +7.0
BBSR LR LR
comp=Z,399nm,21.0s
CBN Corbin 77.41 21 PFAKE 13 51 20.0 +15
CBN LR LR
comp=Z,2µm,21.0s
WDC Whiskeytown Da 77.51 346 eP P 13 51 04.3 -1.3
comp=Z,6.5nm,1.0s
ACSO Alum Creek Sta 77.83 17 PFAKE 13 51 20.0 +13
ACSO LR LR
comp=Z,584nm,22.0s
BW06 Boulder Array 78.00 356 eP P 13 51 07.5 -1.2
comp=Z,15nm,1.1s
BW06 LR LR
comp=Z,351nm,19.0s
PDAR Pinedale Array 78.00 356 P P 13 51 06.8 -1.9
PDAR Pinedale Array 78.00 356 P P 13 51 06.8 -1.9
comp=Z,5.1nm,0.9s,baz=162,slow=6.2,SNR=20
PDAR LR LR 14 19 40.3
comp=Z,270nm,18.9s,baz=7.5,slow=31
KHMM Horse Mountain 78.04 345 eP P 13 51 06.8 -2.1
comp=Z,13nm,1.1s
AHID Auburn Hatcher 78.10 355 PFAKE
AHID LR LR 13 51 20.0 +11
comp=Z,648nm,21.0s
WVOR Wild Horse Val 78.63 349 eP P 13 51 10.6 -1.4
comp=Z,14nm,1.3s
YBH Yreka Blue Hor 78.66 346 eP P 13 51 11.2 -0.9
comp=Z,4.9nm,1.0s
RRI2 Red Ridge 78.69 355 eP P 13 51 11.5 -1.1
comp=Z,17nm,1.3s
TPAW Teton Pass 78.81 355 eP P 13 51 14.8 +1.7
comp=Z,23nm,1.3s
LOHW Long Hollow 78.91 355 eP P 13 51 12.6 -1.0
comp=Z,20nm,1.5s
JFWS Jewell Farm 79.04 10 PFAKE
JFWS LR LR 13 51 20.0 +5.9
comp=Z,521nm,20.0s
ECSD EROS Data Cent 79.12 6 eP P 13 51 13.8 -0.7
comp=Z,11nm,1.0s
ECSD LR LR
comp=Z,426nm,21.0s
HLID Hailey 79.19 353 eP P 13 51 14.8 -0.3
comp=Z,17nm,1.1s
HLID LR LR
comp=Z,372nm,21.0s
RSSD Black Hills 79.20 0 eP P 13 51 14.8 -0.5
comp=Z,10nm,1.2s
HUMO Hull Mountain 79.55 346 eP P 13 51 16.5 -0.4
AAM Ann Arbor 79.65 15 PFAKE
AAM LR LR 13 51 30.0 +13
comp=Z,602nm,20.0s
LKWY Lake 79.84 356 PFAKE 13 51 30.0 +11
LKWY LR LR
comp=Z,512nm,19.0s
MCMT McKenzie Canyo 80.29 354 eP P 13 51 21.5 +0.3
comp=Z,4.4nm,1.3s
RLMT Red Lodge 80.33 356 eP P 13 51 19.7 -1.6
comp=Z,4.5nm,1.0s
RLMT LR LR
comp=Z,712nm,20.0s
ERPA Erie 80.34 18 PFAKE 13 51 30.0 +8.8
ERPA LR LR
comp=Z,807nm,19.0s
DLMT Dillon 80.80 354 eP P 13 51 23.1 -0.6
BMO Blue Mountains 80.81 351 PFAKE
BMO LR LR 13 51 30.0 +6.2
comp=Z,218nm,19.0s
BOZ Bozeman (W) 81.00 355 eP P 13 51 23.0 -1.8
comp=Z,11nm,1.5s
BOZ LR LR
comp=Z,479nm,19.0s
BINY Binghamton 81.50 21 PFAKE 13 51 40.0 +13
BINY LR LR
comp=Z,2µm,20.0s
CAN Canberra 81.95 232 PFAKE 13 51 40.0 +10
CAN LR LR
comp=Z,1µm,22.0s
MSO Missoula 82.37 353 PFAKE 13 51 40.0 +8.0
MSO LR LR
comp=Z,294nm,19.0s
CHMT Chamberlain Mo 82.39 354 eP P 13 51 32.6 +0.4
comp=Z,0.7nm,0.7s
HAWA Hanford 82.63 349 PFAKE 13 51 40.0 +6.8
HAWA LR LR
comp=Z,648nm,20.0s
SLMT Seeley Lake 82.74 354 eP P 13 51 36.9 +2.9
SWMT Swartz Lake 83.05 353 eP P 13 51 38.9 +3.3
EGMT Eagleton 83.25 356 PFAKE 13 51 50.0 +13
EGMT LR LR
comp=Z,546nm,22.0s
BSMT Bassoo Peak 83.47 353 eP P 13 51 37.6 -0.2
comp=Z,3.6nm,1.1s
DGMT Dagmar 83.55 0 PFAKE 13 51 50.0 +12
DGMT LR LR
comp=Z,313nm,21.0s
NCB Newcomb 83.64 21 PFAKE 13 51 50.0 +11
NCB LR LR
comp=Z,933nm,22.0s
AGMN Agassiz Nation 83.72 6 PFAKE 13 51 50.0 +11
AGMN LR LR
comp=Z,364nm,20.0s
EYMN Ely 83.81 9 eP P 13 51 37.9 -1.4
EYMN LR LR
comp=Z,433nm,19.0s
LONY Lake Ozonia 84.13 21 eP P 13 51 39.4 -1.5
comp=Z,20nm,1.3s
LONY LR LR
comp=Z,1µm,20.0s
NEW Newport 84.14 351 eP P 13 51 43.4 +2.4
comp=Z,19nm,1.5s
NEW LR LR
comp=Z,260nm,19.0s
NLWA Neilton Lookou 84.33 347 PFAKE 13 51 50.0 +8.0
NLWA LR LR
comp=Z,526nm,21.0s
LBNH Lisbon 84.59 23 PFAKE 13 51 50.0 +6.7
LBNH LR LR
comp=Z,1µm,22.0s
TARA Tarawa 84.92 275 PFAKE 13 52 00.0 +14
TARA LR LR
comp=Z,932nm,22.0s
ULM Lac du Bonnet 85.66 5 P P 13 51 47.8 -0.7
ULM Lac du Bonnet 85.66 5 P P 13 51 47.8 -0.7
comp=Z,2.4nm,0.5s,baz=240,slow=8.1,SNR=3.0
STKA Stephens Creek 88.89 231 LR LR 14 23 33.9
comp=Z,1µm,21.2s,baz=103,slow=30
HNR Honiara 89.27 259 PFAKE 13 52 20.0 +13
HNR LR LR
comp=Z,412nm,21.0s
FFC Flin Flon 89.84 1 PFAKE 13 52 20.0 +12
FFC LR LR
comp=Z,400nm,19.0s
SACV Santiago Islan 91.15 73 PFAKE 13 52 30.0 +14
SACV LR LR
comp=Z,623nm,20.0s
CTAO Charters Tower 93.37 243 PFAKE 13 52 40.0 +14
CTAO LR LR
comp=Z,799nm,21.0s
SUR Sutherland 95.11 136 PFAKE 13 52 40.0 +6.0
SUR LR LR
comp=Z,1µm,21.0s
SCHQ Schefferville 95.50 21 LR LR 14 31 21.9
comp=Z,816nm,22.0s,baz=29,slow=33
PMG Port Moresby 99.38 251 PFAKE 13 53 00.0 +6.8
PMG LR LR
comp=Z,351nm,20.0s
ASAR Alice Springs 99.46 232 P Pdif 13 52 49.6 -3.9
ASAR Alice Springs 99.46 232 P Pdif 13 52 49.6 -3.9
comp=Z,0.6nm,1.0s,baz=121,slow=3.2,SNR=4.5
ASAR LR LR 14 31 55.0
comp=Z,1µm,19.1s,baz=170,slow=32
KDAK Kodiak Island 101.35 336 PFAKE 13 53 10.0 +9.2
KDAK LR LR
comp=Z,696nm,22.0s
WRAB Tennant Creek 101.79 235 PFAKE 13 53 10.0 +6.1
WRAB LR LR
comp=Z,597nm,19.0s
WRA Warramunga Arr 101.79 235 P Pdif 13 53 00.3 -3.6
WRA Warramunga Arr 101.79 235 P Pdif 13 53 00.3 -3.6
comp=Z,0.4nm,0.8s,baz=138,slow=4.6,SNR=3.6
CMLA Cha da Macela 103.05 53 PFAKE 13 53 20.0 +11
CMLA LR LR
comp=Z,845nm,19.0s
EGAK Eagle 104.01 345 PFAKE 13 53 20.0 +7.5
EGAK LR LR
comp=Z,295nm,22.0s
COLA College 105.65 342 PFAKE 13 57 40.0
COLA LR LR
comp=Z,234nm,19.0s
PMOZ Porto Moniz, M 106.04 61 eLR LR 14 29 37.9
comp=Z,745nm,22.0s
SFJD Kangerlussuaq 109.92 20 PFAKE 13 57 50.0
SFJD LR LR
comp=Z,529nm,19.0s
MBWA Marble Bar 109.94 224 PFAKE 13 57 50.0
MBWA LR LR
comp=Z,435nm,22.0s
TORD Torodi Ar. Bea 110.43 88 PP PP 13 58 17.5 -1.1
TORD Torodi Ar. Bea 110.43 88 PP PP 13 58 17.5 -1.1
comp=Z,1.3nm,1.0s,baz=259,slow=3.8,SNR=2.9
MSKU Masuku 111.40 108 PFAKE 13 58 00.0
MSKU LR LR
comp=Z,1.0nm,19.0s
LSZ Lusaka 112.37 130 PFAKE 13 58 00.0
LSZ LR LR
comp=Z,569nm,22.0s
RTC Rabat Centre 114.12 65 PFAKE 13 58 00.0 +10
RTC LR LR
comp=Z,825nm,22.0s
PFVI Vila Bisbo 114.14 61 ePP PP 13 58 49.0 +4.1
MORF Marmelete 114.34 61 eLR LR 13 59 00.0
PMAFR Mafra 114.63 59 ePP PP 13 58 54.1 +5.7
PNCL Nicolau / Gran 114.79 60 ePP PP 13 58 52.1 +2.6
PBDV Barranco-do-Ve 114.82 61 ePP PP 13 58 54.1 +4.3
PCVE Castro Verde 114.92 60 ePP PP 13 58 56.2 +5.8
PVAQ Vaqueiros 115.05 61 ePP PP 13 58 51.7 +0.4
PVAQ eSS SS 14 15 02.9 +15
PVAQ eLR LR 14 33 03.7
comp=Z,1µm,22.0s
PMTG Montargil 115.42 59 ePP PP 13 59 01.3 +7.4
PESTR Estremoz 115.78 59 ePP PP 13 58 57.2 +0.7
PBAR Barrancos 115.87 60 ePP PP 13 59 05.3 +8.2
PMRV Marv??o 116.16 59 ePP PP 13 59 05.3 +6.1
PMRV eLR LR 14 33 39.5
comp=Z,1µm,22.0s
MTE Manteigas 116.47 58 ePP PP 13 59 04.2 +2.8
MTE eSS SS 14 15 25.5 +19
MTE eLR LR 14 34 32.1
comp=Z,2µm,22.0s
MTE Manteigas 116.47 58 PFAKE 13 58 10.0 +16
MTE LR LR
comp=Z,2µm,21.0s
PGAV Gavieira, Arco 116.63 56 ePP PP 13 59 03.0 +0.5
PGAV eLR LR 14 34 32.0
comp=Z,777nm,20.0s
POLO Lamas de Olo 116.71 57 ePP PP 13 58 58.2 -4.9
PBRG Braganca 117.60 57 ePP PP 13 59 15.5 +6.3
PAB San Pablo 118.35 60 PFAKE 13 58 10.0 +12
PAB LR LR
comp=Z,1µm,20.0s
TAM Tamanrasset 118.52 81 PFAKE 13 58 10.0 +11
TAM LR LR
comp=Z,997nm,20.0s
BORG Borgarnes 118.59 29 PFAKE 13 58 10.0 +13
BORG LR LR
comp=Z,412nm,21.0s
ABPO Ambohimpanom 119.45 149 PFAKE 13 58 10.0 +9.3
ABPO LR LR
comp=Z,373nm,20.0s
BILL Bilibino 122.16 334 PFAKE 13 58 10.0 +6.0
BILL LR LR
comp=Z,155nm,20.0s
KAPI Kappang 122.33 235 PFAKE 13 58 20.0 +14
KAPI LR LR
comp=Z,383nm,19.0s
ESK Eskdalemuir 124.28 43 PFAKE 13 58 20.0 +12
ESK LR LR
comp=Z,431nm,21.0s
MBAR Mbarara 124.83 121 PFAKE 13 58 20.0 +8.9
MBAR LR LR
comp=Z,626nm,19.0s
DAV Davao City (W) 126.39 250 PFAKE 13 58 20.0 +6.2
DAV LR LR
comp=Z,231nm,19.0s
SSB Saint Sauveur 126.49 56 PFAKE 13 58 20.0 +6.9
SSB LR LR
comp=Z,425nm,21.0s
BNI Bardonecchia 127.89 57 PFAKE 13 58 30.0 +14
BNI LR LR
comp=Z,694nm,20.0s
ERM Erimo 128.22 299 PFAKE 13 58 30.0 +14
ERM LR LR
comp=Z,448nm,21.0s
COCO West Island 128.58 207 PFAKE 13 58 30.0 +12
COCO LR LR
comp=Z,399nm,19.0s
WLF Walferdange 128.61 51 PFAKE 13 58 30.0 +13
WLF LR LR
comp=Z,411nm,20.0s
KMBO Kilima Mbogo 128.87 127 PFAKE 13 58 30.0 +11
KMBO LR LR
comp=Z,522nm,21.0s
ECH Echery 128.95 53 PFAKE 13 58 30.0 +12
ECH LR LR
comp=Z,339nm,22.0s
KBS Kingsbay 129.51 13 PFAKE 13 58 30.0 +12
KBS LR LR
comp=Z,425nm,19.0s
BFO Black Forest 129.74 53 PFAKE 13 58 30.0 +11
BFO LR LR
comp=Z,452nm,20.0s
TUE Stuetta 130.04 56 PFAKE 13 58 30.0 +10
TUE LR LR
comp=Z,833nm,20.0s
VLC Villacollemand 130.24 59 PFAKE 13 58 30.0 +10
VLC LR LR
comp=Z,735nm,22.0s
MAJO Matsushiro 130.26 291 PFAKE 13 58 30.0 +9.4
MAJO LR LR
comp=Z,176nm,21.0s
WDD Wield Dalam 131.00 71 PFAKE 13 58 30.0 +8.1
WDD LR LR
comp=Z,610nm,20.0s
KONO Kongsberg 131.69 38 PFAKE 13 58 30.0 +7.5
KONO LR LR
comp=Z,421nm,22.0s
AQU L'Aquila 131.96 62 PFAKE 13 58 30.0 +6.4
AQU LR LR
comp=Z,649nm,22.0s
NKC Novy Kostel 132.71 51 AMS AMS 14 50 50.0
comp=Z,400nm,20.0s
CEL Celeste 132.76 68 PFAKE 13 58 40.0 +15
CEL LR LR
comp=Z,427nm,22.0s
CUC Castrocucco 133.16 66 PFAKE 13 58 40.0 +14
CUC LR LR
comp=Z,457nm,19.0s
KHC Kasperske Hory 133.30 53 AMS AMS 14 55 50.0
comp=Z,500nm,18.1s
GERES GERESS Array B 133.35 53 PKP PKPdf 13 58 27.4 +1.3
GERES GERESS Array B 133.35 53 PKP PKPdf 13 58 27.4 +1.3
comp=Z,0.2nm,0.4s,baz=337,slow=4.3,SNR=2.9
KSM Kuching 133.38 231 PFAKE 13 58 40.0 +13
KSM LR LR
comp=Z,372nm,21.0s
TIP Timpagrande 133.66 67 PFAKE 13 58 40.0 +13
TIP LR LR
comp=Z,696nm,21.0s
PRU Pruhonice 134.02 52 AMS AMS 14 48 30.0
comp=Z,500nm,21.6s
PVCC Panska Ves 134.09 51 AMS AMS 14 48 30.0
comp=Z,600nm,18.8s
TREC Trest 134.56 53 AMS AMS 14 55 10.0
comp=Z,600nm,17.6s
DPC Dobruska-Polom 135.19 52 AMS AMS 14 55 30.0
MSEY Mahe Island 135.78 150 PFAKE 13 58 40.0 +8.3
MSEY LR LR
comp=Z,761nm,21.0s
OKC Ostrava-Krasne 136.33 52 AMS AMS 14 55 50.0
comp=Z,500nm,18.5s
TIR Tirane 136.46 65 PFAKE 13 58 40.0 +8.0
TIR LR LR
comp=Z,501nm,21.0s
KEV Kevo 136.79 22 PFAKE 13 58 40.0 +8.3
KEV LR LR
comp=Z,278nm,20.0s
PSZ Piszkesteto 137.36 55 PFAKE 13 58 40.0 +6.4
PSZ LR LR
comp=Z,700nm,21.0s
MDJ Mudanjiang 138.43 300 P PKPdf 13 58 48.4 +13
MDJ pmax pmax
comp=Z,10.0nm,1.1s
MDJ pmax pmax
comp=Z,72nm,3.8s
MDJ Mudanjiang 138.43 300 PFAKE 13 58 50.0 +14
MDJ LR LR
comp=Z,190nm,20.0s
KWP Kalwaria Pacla 139.28 53 PFAKE 13 58 50.0 +13
KWP LR LR
comp=Z,718nm,22.0s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
YHNB	Yeheng	139.38	267	PFAKE		13 58 50.0	+12
YHNB				LR	LR		
	comp=Z,176nm,19.0s						
INCN	Inchon	139.43	288	PFAKE		13 58 50.0	+12
INCN				LR	LR		
	comp=Z,224nm,21.0s						
SANT	Santorini	139.64	73	PFAKE		13 58 50.0	+12
SANT				LR	LR		
	comp=Z,393nm,22.0s						
CN2	Changchun	141.32	298	ePKP	PKPdf	13 58 36.4	-4.4
CN2				LR	LR		
	comp=N,200nm,19.0s						
CN2				LR	LR		
	comp=E,200nm,19.0s						
CN2				LR	LR		
	comp=Z,300nm,21.0s						
KULM	Kulim	142.21	223	PFAKE		13 58 50.0	+6.6
KULM				LR	LR		
	comp=Z,390nm,20.0s						
KIEV	Kiev	143.40	51	PFAKE		13 59 00.0	+16
KIEV				LR	LR		
	comp=Z,359nm,20.0s						
AKASG	Malin Array Be	143.41	51	PKPpre	PKPpre	13 58 41.1	
AKASG				PKP	PKPdf	13 58 45.0	+0.7
AKASG	Malin Array Be	143.41	51	PKhKP	PKPpre	13 58 41.1	
	comp=Z,0.3nm,0.4s,baz=274,slow=3.7,SNR=3.8						
AKASG				PKP	PKPdf	13 58 45.0	+0.7
	comp=Z,0.3nm,0.3s,baz=277,slow=3.3,SNR=5.7						
ISP	Isparta	143.91	73	PFAKE		13 59 00.0	+14
ISP				LR	LR		
	comp=Z,282nm,20.0s						
NJ2	Nanjing	144.20	277	ePKP	PKPdf	13 58 47.9	+1.6
HIA	Hailar	145.19	307	PFAKE		13 59 00.0	+12
HIA				LR	LR		
	comp=Z,275nm,21.0s						
CSS	Prodhromos	145.54	78	PFAKE		13 59 00.0	+11
CSS				LR	LR		
	comp=Z,263nm,22.0s						
QIZ	Qiongzhong	145.76	251	PKPbc	PKPdf	13 58 47.5	-1.9
QIZ				PP	PP	14 02 14.1	+3.3
QIZ				SS	SS	14 21 06.9	+1.9
QIZ				LR	LR		
	comp=N,220nm,23.9s						
QIZ				LR	LR		
	comp=Z,410nm,33.3s						
ANTO	Ankara	145.96	70	PFAKE		13 59 00.0	+10
ANTO				LR	LR		
	comp=Z,236nm,20.0s						
BRTR	Keskin Array B	146.59	70	PKPbc	PKPab	13 58 52.4	-0.6
BRTR	Keskin Array B	146.59	70	PKPbc	PKPab	13 58 52.4	-0.6
	comp=Z,2.4nm,0.9s,baz=197,slow=4.0,SNR=8.6						
WHN	Wuhan	147.40	272	PKPbc	PKPbc	13 58 54.3	0.0
WHN				LR	LR		
	comp=Z,500nm,23.1s						
BJI	Beijing	147.90	290	PKPbc	PKPdf	13 58 51.8	-0.5
BJI				LR	LR		
	comp=N,99nm,28.9s						
BJI				LR	LR		
	comp=E,71nm,25.2s						
BJI				LR	LR		
	comp=Z,56nm,26.2s						
BJT	Baijiatuau	147.90	290	PFAKE		13 59 00.0	+2.0
BJT				LR	LR		
	comp=Z,306nm,22.0s						
ENH	Enshi	151.28	269	PFAKE		13 59 10.0	-2.1
ENH				LR	LR		
	comp=Z,267nm,21.0s						
HHC	Hu-ho-hao-te	151.45	292	ePKPbc	PKPdf	13 58 59.7	+1.6
HHC				PKS	PKSdf	14 02 32.9	+0.1
HHC				PP	PP	14 02 48.6	+4.5
HHC				SKS	SKSdf	14 06 05.8	0.0
HHC				SKKS	SKKSac	14 09 36.4	+1.9
HHC				SS	SS	14 22 11.5	+2.3
HHC				AMB	AMB		
	comp=Z,170nm,5.0s						
HHC				LR	LR		
	comp=N,350nm,22.9s						
HHC				LR	LR		
	comp=E,1μm,21.0s						
HHC				LR	LR		
	comp=Z,160nm,21.4s						
GYA	Guiyang	152.10	260	ePKPbc	PKPdf	13 58 57.3	-2.3
GYA				PKPab	PKPab	13 59 16.7	+0.9
GYA				PKS	PKSdf	14 02 31.0	-3.3
GYA				PP	PP	14 02 49.8	+1.9
GYA				SKKS		14 09 36.7	
GYA				SS	SS	14 22 15.0	-1.6
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
GYA				LR	LR		
	comp=N,120nm,24.4s						
GYA				LR	LR		
	comp=E,110nm,25.5s						
GYA				LR	LR		
	comp=Z,130nm,24.0s						
BTO	Baotou	152.62	291	ePKPbc	PKPdf	13 58 59.6	-0.3
CMAR	Chiang Mai Arr	153.38	237	PKP	PKPdf	13 59 02.1	+0.6
CMAR				PKPbc	PKPbc	13 59 08.2	-0.9
CMAR	Chiang Mai Arr	153.38	237	PKP	PKPdf	13 59 02.1	+0.6
	comp=Z,1.5nm,1.1s,baz=172,slow=1.4,SNR=3.2						
CMAR				PKPbc	PKPbc	13 59 08.2	-0.9
	comp=Z,2.8nm,1.1s,baz=230,slow=1.5,SNR=4.9						
KBZ	Khabaz	153.51	62	PKP	PKPdf	13 59 03.9	+3.0
KBZ	Khabaz	153.51	62	PKP	PKPdf	13 59 03.9	+3.0
	comp=Z,4.3nm,1.0s,baz=190,slow=3.7,SNR=6.4						
CHTO	Chiang Mai	153.62	237	PFAKE		13 59 10.0	+0.4
CHTO				LR	LR		
	comp=Z,373nm,20.0s						
BHD	Baghdad	154.07	86	ePKP	PKPab	13 59 20.6	-3.1
BHD				ePP	PP	14 01 06.5	-112
BHD				ePPP	PPP	14 03 24.0	
BHD				eSKS	SKSdf	14 06 12.5	+3.6
BHD				eSKKS		14 06 34.0	
SONM	Songino Array	154.15	308	PKP	PKPdf	13 59 01.6	-0.2
SONM				PKPbc	PKiKP	13 59 10.1	0.0
SONM				PKPab	PKPab	13 59 21.8	-2.0
SONM	Songino Array	154.15	308	PKP	PKPdf	13 59 01.6	-0.2
	comp=Z,1.8nm,0.8s,baz=116,slow=1.0,SNR=7.0						
SONM				PKPbc	PKiKP	13 59 10.1	0.0
	comp=Z,2.8nm,0.9s,baz=107,slow=1.8,SNR=9.3						
SONM				PKPab	PKPab	13 59 21.8	-2.0
	comp=Z,7.0nm,1.0s,baz=107,slow=1.8,SNR=10						
GNI	Garni	155.13	70	PFAKE		13 59 10.0	+6.5
GNI				LR	LR		
	comp=Z,214nm,19.0s						
LZH	Lanzhou	157.22	280	ePKP	PKPdf	13 59 05.8	-0.6
LZH				ePP	PP	14 03 19.2	+2.5
LZH				SKKS		14 10 03.1	
LZH				AMB	AMB		
	comp=Z,120nm,6.4s						
LZH				LR	LR		
	comp=N,160nm,16.8s						
LZH				LR	LR		
	comp=E,140nm,17.4s						
LZH				LR	LR		
	comp=Z,190nm,20.6s						
ZALV	Zalesovo Beam	160.45	344	PKP	PKPdf	13 59 07.4	-2.0
ZALV	Zalesovo Beam	160.45	344	PKP	PKPdf	13 59 07.4	-2.0
	comp=Z,0.5nm,0.4s,baz=45,slow=0.4,SNR=3.7						
BRVK	Borovoye	161.98	11	PFAKE		13 59 20.0	+8.9
BRVK				LR	LR		
	comp=Z,741nm,22.0s						
KURK	Kurchatov	164.61	353	PFAKE		13 59 20.0	+6.4
KURK				LR	LR		
	comp=Z,860nm,21.0s						
LSA	Lhasa	165.80	250	PFAKE		13 59 30.0	+14
LSA				LR	LR		
	comp=Z,324nm,21.0s						
WMQ	Urumqi	167.57	316	ePKP	PKPdf	13 59 16.8	+0.5
WMQ				PP	PP	14 04 16.0	+5.2
WMQ				SKS	SKSdf	14 06 18.0	-2.2
WMQ				SKKS	SKKSac	14 11 00.0	+1.8
WMQ				SS	SS	14 25 00.0	+1.8
WMQ				AMB	AMB		
	comp=Z,140nm,6.0s						
WMQ				LR	LR		
	comp=N,310nm,22.0s						
WMQ				LR	LR		
	comp=E,230nm,20.0s						
WMQ				LR	LR		
	comp=Z,440nm,33.0s						
MKAR	Makanchi Array	167.65	339	PKP	PKPdf	13 59 16.0	-0.3
MKAR	Makanchi Array	167.65	339	PKP	PKPdf	13 59 16.0	-0.3
	comp=Z,0.3nm,0.8s,baz=17,slow=1.5,SNR=2.7						
TKM2	Tokmak 2	172.54	1	PFAKE		13 59 30.0	+11
TKM2				LR	LR		
	comp=Z,453nm,22.0s						
EKS2	Erkin-Say	172.65	11	PFAKE		13 59 30.0	+11
EKS2				LR	LR		
	comp=Z,391nm,20.0s						
AAK	Ala-Archa	172.77	7	PFAKE		13 59 30.0	+11
AAK				LR	LR		
	comp=Z,399nm,20.0s						

IDC 05 13:58:15.5±1.7, 1.47N×124.74E, h0km, mb3.6/3, mb1 3.7/4, mb1mx3.5/24, mbtmp3.6/4, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.6/20, Error ellipse: s-maj=124.6km s-min=22.3km az=67.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	2.96	251	P	Sb	13 59 52.0	+6.0
LUWI	Luwuk	3.18	218	P	Sg	13 59 51.2	-6.4
FITZ	Fitzroy Crossi	19.47	177	P	P	14 02 42.6	-1.4
	0.2nm,0.3s,baz=342,slow=9.6,SNR=3.7						
FITZ				LR	LR	14 10 36.4	
	comp=Z,43nm,18.1s,baz=47,slow=38						
WRA	Warramunga Arr	23.27	157	P	P	14 03 25.7	+0.7
	0.8nm,0.3s,baz=337,slow=10,SNR=17						
ASAR	Alice Springs	26.53	161	P	P	14 03 55.0	-0.1
	0.2nm,0.4s,baz=347,slow=15,SNR=6.6						
MKAR	Makanchi Array	58.31	327	P	P	14 08 12.3	0.0
	0.6nm,0.4s,baz=125,slow=8.4,SNR=12						

BJI 05 14:38:35.6, 36.33N×21.64E, h17km, mB4.9/1, mb4.5/5, Ms4.3/1, Ms7 4.2/1
IDC 05 14:38:37.5±0.7, 36.55N×21.87E, h0km, mb4.3/18, mb1 4.3/25, mb1mx4.2/36, mbtmp4.2/25, ML3.9/7, Error ellipse: s-maj=14.9km s-min=14.6km az=76.0
PRU 05 14:38:39.2, 36.61N×21.29E, h0km, M4.6
MOS 05 14:38:41.4±1.0, 36.68N×21.74E, h33km, mb4.6/26, Error ellipse: s-maj=8.2km s-min=3.9km az=82.0
ATH 05 14:38:42.8, 36.52N×21.75E, h37km±1km, MD3.8/31, ML4.1
THE 05 14:38:43.0, 36.47N×21.76E, h19km±4km, ML3.9/2, Error ellipse: s-maj=4.9km s-min=1.8km az=43.0
CSEM 05 14:38:43.3±0.2, 36.48N×21.73E, h46km±1km, mb4.4/34, Error ellipse: s-maj=5.2km s-min=3.7km az=37.0
ISC 05 14:38:42.8±0.5, 36.48N±0.03×21.75E±0.03, h36km±1km, n397, σ1.45/419, mb4.5/40, 30C-13D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	0.41	359	P	Pn	14 38 51.9	-0.2
PYL				S	Sn	14 38 58.3	-0.5
PYL	PYLOS	0.41	359	ePB	Pn	14 38 51.9	-0.2
PYL				eSB	Sn	14 38 58.4	-0.4
PYL	PYLOS	0.41	359	P	Pn	14 38 51.9	-0.2
PYL				eSb	Sn	14 38 58.4	-0.4
DYR	Agios Nikonas	0.55	59	P	Pn	14 38 53.7	-0.4
DYR				S	Sn	14 39 02.3	+0.2
DYR	Agios Nikonas	0.55	59	ePN	Pn	14 38 53.8	-0.4
DYR				eSN	Sn	14 39 03.4	+1.3
DYR	Agios Nikonas	0.55	59	ePn	Pn	14 38 53.8	-0.4
DYR				S	Sn	14 39 02.3	+0.2
DYR				eSn	Sn	14 39 03.4	+1.2
ITM	Ithomi	0.71	12	P	Pn	14 38 56.4	0.0
ITM				S	Sn	14 39 07.0	+1.0
ITM	Ithomi	0.71	12	ePN	Pn	14 38 56.4	0.0
ITM				eSN	Sn	14 39 07.1	+1.0
ITM	Ithomi	0.71	12	P	Pn	14 38 56.4	0.0
ITM				eSn	Sn	14 39 07.1	+1.0
VLI	Veliai	0.98	76	P	Pn	14 39 01.8	+1.7
VLI				S	Sn	14 39 15.6	+2.8
VLI	Veliai	0.98	76	ePN	Pn	14 39 01.9	+1.8
VLI				eSN	Sn	14 39 14.9	+2.1
VLI	Veliai	0.98	76	P	Pn	14 39 01.8	+1.7
VLI				eSn	Sn	14 39 14.9	+2.1
VLI				S		14 39 15.6	
VLX	Vlachokerasia	1.02	30	P	Pn	14 39 01.8	+1.1
VLX				S	Sn	14 39 16.7	+2.9
VLX	Vlachokerasia	1.02	30	ePN	Pn	14 39 01.8	+1.1
VLX				eSN	Sn	14 39 15.6	+1.8
VLX	Vlachokerasia	1.02	30	P	Pn	14 39 01.8	+1.1
VLX				eSn	Sn	14 39 15.6	+1.8
VLX				S		14 39 16.7	
AMT	Artemida-Makis	1.05	358	ePN	Pn	14 39 02.3	+1.3
AMT				eSN	Sn	14 39 16.4	+2.0
AMT	Artemida-Makis	1.05	358	ePn	Pn	14 39 02.3	+1.3
AMT				eSn	Sn	14 39 16.4	+2.0
KYTH	Kithira	1.06	101	ePN	Pn	14 39 03.3	+2.2
KYTH	Kithira	1.06	101	ePn	Pn	14 39 03.3	+2.2
ANKY	Antikythira Is	1.40	116	ePN	Pn	14 39 08.4	+2.6
ANKY				eSN	Sn	14 39 26.1	+3.1
GUR	Goura	1.52	18	P	Pn	14 39 09.9	+2.3
GUR	Goura	1.52	18	ePN	Pn	14 39 09.6	+2.0
GUR	Goura	1.52	18	ePn	Pn	14 39 09.6	+2.0
GUR	Goura	1.52	18	P	Pn	14 39 09.9	+2.3
DIDY	Didyma	1.54	49	P	Pn	14 39 09.0	+1.2
DIDY	Didyma	1.54	49	P	Pn	14 39 09.0	+1.2
DID	Didima	1.57	49	P	Pn	14 39 09.4	+1.2
DID	Didima	1.57	49	ePN	Pn	14 39 09.2	+1.0
DID				eSN	Sn	14 39 29.5	+2.2
DID	Didima	1.57	49	ePn	Pn	14 39 09.2	+1.0
DID				eSn	Sn	14 39 29.5	+2.2
RLS	Riolos of Patr	1.59	352	P	Pn	14 39 10.2	+1.8
RLS	Riolos of Patr	1.59	352	ePB	Pn	14 39 10.6	+2.2
RLS				eSN	Sn	14 39 28.9	+1.3
RLS	Riolos of Patr	1.59	352	P	Pn	14 39 10.2	+1.8
RLS	Riolos of Patr	1.59	352	ePb	Pn	14 39 10.6	+2.2
RLS				eSn	Sn	14 39 28.9	+1.3
KLV	Kalavryta, Ach	1.59	12	ePB	Pn	14 39 10.7	+2.2
KLV				eSN	Sn	14 39 29.7	+1.9
KLV	Kalavryta, Ach	1.59	12	ePb	Pn	14 39 10.7	+2.2
KLV				eSn	Sn	14 39 29.7	+1.9
THAL	Thalero	1.71	25	P	Pn	14 39 11.8	+1.7
THAL	Thalero	1.71	25	P	Pn	14 39 11.8	+1.7
AXS	Araxos	1.73	350	P	Pn	14 39 12.4	+2.0
AXS	Araxos	1.73	350	P	Pn	14 39 12.4	+2.0
LAKA	Lakka	1.76	6	P	Pn	14 39 13.2	+2.4
LAKA	Lakka	1.76	6	ePB	Pn	14 39 13.2	+2.4
LAKA	Lakka	1.76	6	P	Pn	14 39 13.2	+2.4
PSA1	Psathopyrgos	1.84	3	ePB	Pn	14 39 13.6	+1.8
NAIG	Nisos Aigina	1.89	47	ePN	Pn	14 39 13.7	+1.2
NAIG	Nisos Aigina	1.89	47	ePn	Pn	14 39 13.7	+1.2
VLS	Valsamata	1.93	332	P	Pn	14 39 13.7	+0.6
VLS	Valsamata	1.93	332	ePN	Pn	14 39 13.9	+0.8
VLS	Valsamata	1.93	332	ePn	Pn	14 39 13.9	+0.8
KALE	Kalithea	1.93	9	P	Pn	14 39 14.6	+1.5
KALE	Kalithea	1.93	9	ePB	Pn	14 39 15.2	+2.1
KALE	Kalithea	1.93	9	P	Pn	14 39 14.6	+1.5
KALE	Kalithea	1.93	9	ePb	Pn	14 39 15.2	+2.1
EFP	Efpalio	1.94	4	P	Pn	14 39 16.1	+2.8
EFP	Efpalio	1.94	4	ePB	Pn	14 39 16.1	+2.8
EFP	Efpalio	1.94	4	P	Pn	14 39 16.1	+2.8
DSF	Desfina	2.02	18	P	Pn	14 39 15.0	+0.6
DSF	Desfina	2.02	18	P	Pn	14 39 15.0	+0.6
ATH	Athens Observa	2.16	46	ePN	Pn	14 39 17.3	+1.0
ATH	Athens Observa	2.16	46	ePn	Pn	14 39 17.3	+1.0
ATHU	Athens Univers	2.20	47	P	Pn	14 39 17.5	+0.7
ATHU	Athens Univers	2.20	47	P	Pn	14 39 17.5	+0.7
VAM	Vamos	2.26	118	P	Pn	14 39 19.6	+1.9
VAM	Vamos	2.26	118	ePN	Pn	14 39 19.7	+2.0
VAM	Vamos	2.26	118	P	Pn	14 39 19.6	+1.9
PTL	Penteli	2.30	47	P	Pn	14 39 18.9	+0.7
PTL	Penteli	2.30	47	ePN	Pn	14 39 19.1	+0.9
PTL	Penteli	2.30	47	ePn	Pn	14 39 19.1	+0.9
LKR	Lokris	2.38	24	P	Pn	14 39 19.8	+0.5
LKR	Lokris	2.38	24	ePN	Pn	14 39 19.9	+0.6
LKR	Lokris	2.38	24	ePn	Pn	14 39 19.9	+0.6
ATAL	Atalanti	2.43	24	P	Pn	14 39 20.4	+0.5
ATAL	Atalanti	2.43	24	P	Pn	14 39 20.4	+0.5
EVR	Evrytania	2.43	1	P	Pn	14 39 23.9	+3.8
EVR	Evrytania	2.43	1	ePB	Pn	14 39 23.0	+2.9
EVR	Evrytania	2.43	1	ePb	Pn	14 39 23.0	+2.9
EVR	Evrytania	2.43	1	P	Pn	14 39 23.9	+3.8
LKD2	Lefkada island	2.46	340	P	Pn	14 39 22.7	+2.3
LKD2	Lefkada island	2.46	340	ePN	Pn	14 39 22.6	+2.2
LKD2	Lefkada island	2.46	340	ePn	Pn	14 39 22.6	+2.2
MAKR	Makrakomi, Fth	2.54	7	P	Pn	14 39 25.5	+3.9
MAKR	Makrakomi, Fth	2.54	7	P	Pn	14 39 25.5	+3.9
AGG	Agios Georgios	2.58	10	P	Pn	14 39 24.2	+2.2
AGG	Agios Georgios	2.58	10	ePN	Pn	14 39 23.6	+1.6
AGG	Agios Georgios	2.58	10	ePn	Pn	14 39 23.6	+1.6
AGG	Agios Georgios	2.58	10	P	Pn	14 39 24.2	+2.2
MRKA	Markates	2.66	33	P	Pn	14 39 23.4	+0.3
MRKA	Markates	2.66	33	P	Pn	14 39 23.4	+0.3
SMIA	Simia	2.66	25	P	Pn	14 39 23.7	+0.6
SMIA	Simia	2.66	25	P	Pn	14 39 23.7	+0.6
THR3	Thira Island,	2.95	90	P	Pn	14 39 28.3	+1.2
THR3	Thira Island,	2.95	90	P	Pn	14 39 28.3	+1.2
SANT	Santorini	3.00	91	P	Pn	14 39 28.6	+0.8
SANT	Santorini	3.00	91	ePN	Pn	14 39 28.9	+1.1
SANT	Santorini	3.00	91	P	Pn	14 39 28.6	+0.8
SANT	Santorini	3.00	91	ePn	Pn	14 39 28.9	+1.1
SKIA	Skiathos	3.00	26	P	Pn	14 39 28.5	+0.6
SKIA	Skiathos	3.00	26	P	Pn	14 39 28.5	+0.6
NEO	Neokhori	3.05	22	P	Pn	14 39 29.3	+0.8
NEO	Neokhori	3.05	22	ePN	Pn	14 39 29.5	+1.0
NEO	Neokhori	3.05	22	ePn	Pn	14 39 29.5	+1.0
THL	Klokotos Trika	3.08	4	P	Pn	14 39 31.0	+2.1
THL	Klokotos Trika	3.08	4	ePN	Pn	14 39 31.0	+2.1
THL	Klokotos Trika	3.08	4	P	Pn	14 39 31.0	+2.1
APE	Apeiranthos	3.09	78	P	Pn	14 39 29.5	+0.4
APE	Apeiranthos	3.09	78	ePN	Pn	14 39 29.6	+0.4
APE	Apeiranthos	3.09	78	⇑P	Pn	14 39 29.5	+0.4
APE	Apeiranthos	3.09	78	⇑iP	Pn	14 39 29.5	+0.4
APE	Apeiranthos	3.09	78	ePn	Pn	14 39 29.6	+0.4
XOR	Xorichti	3.10	21	P	Pn	14 39 30.0	+0.9
XOR	Xorichti	3.10	21	P	Pn	14 39 30.0	+0.9
AOS	Alonnisos	3.17	32	P	Pn	14 39 30.2	+0.1
AOS	Alonnisos	3.17	32	ePN	Pn	14 39 30.1	0.0
AOS	Alonnisos	3.17	32	P	Pn	14 39 30.2	+0.1
IGT	Igoumenitsa	3.24	340	P	Pn	14 39 32.0	+0.9
IGT	Igoumenitsa	3.24	340	P	Pn	14 39 32.0	+0.9
JAN	Janina	3.25	348	P	Pn	14 39 33.4	+2.2
JAN	Janina	3.25	348	ePN	Pn	14 39 33.5	+2.2
JAN	Janina	3.25	348	P	Pn	14 39 33.4	+2.2
LAST	Lasithi	3.31	112	P	Pn	14 39 34.3	+2.2
LAST	Lasithi	3.31	112	ePN	Pn	14 39 34.3	+2.2
LAST	Lasithi	3.31	112	P	Pn	14 39 34.3	+2.2
NPS	Neapolis	3.37	110	ePN	Pn	14 39 36.3	+3.4
KEK	Kerkira	3.57	335	P	Pn	14 39 36.3	+0.6
KEK	Kerkira	3.57	335	ePN	Pn	14 39 36.6	+0.9
KEK	Kerkira	3.57	335	P	Pn	14 39 36.3	+0.6
KEK	Kerkira	3.57	335	ePn	Pn	14 39 36.6	+0.9
SRN	Sarande	3.66	338	ePN	Pn	14 39 37.8	+1.0
SRN				i SN	Sn	14 40 18.7	0.0
SRN	Sarande	3.66	338	P	Pn	14 39 37.8	+1.0
SRN	Sarande	3.66	338	P	Pn	14 39 37.8	+1.0
SRN				i Sn	Sn	14 40 18.7	0.0
LSK	Leskovik	3.77	346	ePN	Pn	14 39 40.5	+2.0
LSK	Leskovik	3.77	346	ePn	Pn	14 39 40.5	+2.0
KZN	Kozani	3.82	0	ePN	Pn	14 39 41.2	+2.1
KZN	Kozani	3.82	0	ePn	Pn	14 39 41.2	+2.1
ZKR	Zakros	3.88	109	ePN	Pn	14 39 43.9	+4.0
CHOS	Chios island	3.92	60	ePN	Pn	14 39 40.8	+0.3
CHOS	Chios island	3.92	60	ePn	Pn	14 39 40.8	+0.3
PLG	Polygyros	4.11	18	ePN	Pn	14 39 43.6	+0.6
PLG	Polygyros	4.11	18	ePn	Pn	14 39 43.6	+0.6
KBN	Korca	4.20	350	ePN	Pn	14 39 46.7	+2.3
KBN				i SN	Sn	14 40 34.0	+1.8
KBN	Korca	4.20	350	ePn	Pn	14 39 46.7	+2.3
KBN				i Sn	Sn	14 40 34.0	+1.8
FNA	Florina	4.30	356	P	Pn	14 39 47.0	+1.2
FNA	Florina	4.30	356	ePN	Pn	14 39 47.0	+1.2
FNA	Florina	4.30	356	P	Pn	14 39 47.0	+1.2
KARP	Karpathos	4.49	100	ePN	Pn	14 39 49.5	+1.2
KARP	Karpathos	4.49	100	ePn	Pn	14 39 49.5	+1.2
GRG	Griva	4.50	6	ePN	Pn	14 39 49.5	+1.1
GRG	Griva	4.50	6	ePn	Pn	14 39 49.5	+1.1
SOH	Sokhos	4.51	16	ePN	Pn	14 39 49.8	+1.2
SOH	Sokhos	4.51	16	ePn	Pn	14 39 49.8	+1.2
BIA	Bitola	4.54	356	i Pn	Pn	14 39 50.2	+1.2
BIA	Bitola	4.54	356	i Pn	Pn	14 39 50.2	+1.2
LTBQ	Tobruq	4.77	157	i P	Pn	14 39 53.3	+1.2
	SNR=76						
LTBQ				eS	Sn	14 40 44.7	-1.5
	61nm,0.6s,SNR=76						
VAY	Valandovo	4.87	7	i Pn	Pn	14 39 53.9	+0.4
VAY	Valandovo	4.87	7	i Pn	Pn	14 39 54.4	+0.9
TIR	Tirane	5.07	344	ePN	Pn	14 39 56.4	+0.1
TIR	Tirane	5.07	344	ePn	Pn	14 39 56.4	+0.1
NVR	Nevrokopi	5.13	18	ePN	Pn	14 39 58.7	+1.6
NVR	Nevrokopi	5.13	18	ePn	Pn	14 39 58.7	+1.6
ARG	Arkhangelos	5.16	91	ePN	Pn	14 39 59.3	+1.9
ARG	Arkhangelos	5.16	91	ePn	Pn	14 39 59.3	+1.9
MMB	Musomiste	5.33	16	P	Pn	14 40 00.4	+0.6
KKB	Krupnik	5.47	11	P	Pn	14 40 04.5	+2.7
SKO	Skopje	5.49	358	i Pn	Pn	14 40 03.2	+1.3
SKO	Skopje	5.49	358	i Pn	Pn	14 40 01.7	-0.3
RZN	Rozhen	5.69	23	P	Pn	14 40 06.3	+1.4
PUK	Puka	5.73	346	ePN	Pn	14 40 06.2	+0.8
KDZ	Kurdzhali	5.89	28	P	Pn	14 40 07.9	+0.3
BAI	Bari	5.98	322	ePn	Pn	14 40 08.9	+0.2
VTS	Vitosha	6.20	10	⇓P	Pn	14 40 10.5	-1.4
VTS				S	Sn	14 41 19.6	-2.1
VTS	Vitosha	6.20	10	P	Pn	14 40 14.2	+2.3
VTS	Vitosha	6.20	10	⇓iP	Pn	14 40 10.5	-1.4
VTS	Vitosha	6.20	10	P	Pn	14 40 10.5	-1.4
MS1	Monte Sant'Ang	6.89	321	ePn	Pn	14 40 21.1	-0.3
MPEP	Malo Peshtene	7.03	12	P	Pn	14 40 26.3	+3.1
STON	Ston	7.10	335	ePn	Pn	14 40 22.6	-1.5
STON				Sn	Sn	14 41 36.4	-7.1
STON	Ston	7.10	335	ePn	Pn	14 40 22.5	-1.5
ISP	Isparta	7.13	77	i P	Pn	14 40 26.2	+1.5
ISP	Isparta	7.13	77	i P	Pn	14 40 26.2	+1.5
LJFR	Jufra	8.89	216	i P	Pn	14 40 47.5	-1.3
	SNR=70						
GZR	Gura Zlata	8.93	5	⇑P	Pn	14 40 47.5	-1.8
GZR	Gura Zlata	8.93	5	⇑iP	Pn	14 40 47.5	-1.8
BZS	Buzias	9.12	359	⇑P	Pn	14 40 50.1	-1.8
BZS	Buzias	9.12	359	⇑iP	Pn	14 40 50.1	-1.8
VOIR		9.29	15	⇑P	Pn	14 40 53.4	-0.7
VOIR		9.29	15	⇑iP	Pn	14 40 53.4	-0.7
VOIR		9.29	15	P	Pn	14 40 53.4	-0.7
TIRR	Tirgusor	9.44	30	⇑P	Pn	14 40 55.5	-0.7
TIRR	Tirgusor	9.44	30	⇑iP	Pn	14 40 55.5	-0.7
TIRR	Tirgusor	9.44	30	P	Pn	14 40 55.5	-0.7
MLR	Muntele Rosu	9.54	18	⇑iP	Pn	14 40 56.4	-1.3
MLR	Muntele Rosu	9.54	18	Pn	Pn	14 40 57.6	-0.1
	0.1nm,0.3s,baz=150,slow=12,SNR=5.9						
MLR	Muntele Rosu	9.54	18	P	Pn	14 40 56.4	-1.3
BRTR	Keskin Array B	9.91	67	Pn	Pn	14 41 04.1	+1.2
	0.1nm,0.3s,baz=266,slow=7.4,SNR=4.6						
BRTR	Keskin Array B	9.91	67	P	Pn	14 41 04.1	+1.2
PKSM	Moragy	9.99	347	⇑P	Pn	14 41 01.8	-2.0
PKSM	Moragy	9.99	347	⇑iP	Pn	14 41 01.8	-2.0
PKSM	Moragy	9.99	347	⇓e	Pn	14 41 01.6	-2.2
KEST	Kesra	10.06	269	Pn	Pn	14 41 07.9	+3.1
	0.1nm,0.3s,baz=34,slow=20,SNR=4.4						
KEST				Sn	Sn	14 42 52.3	-4.2
	0.0nm,0.3s,baz=233,slow=20,SNR=2.8						
DRGR		10.32	4	⇑P	Pn	14 41 07.6	-0.8
DRGR		10.32	4	⇑iP	Pn	14 41 07.6	-0.8
DRGR		10.32	4	P	Pn	14 41 07.6	-0.8
CRES	Cresnjev	10.46	335	i Pn	Pn	14 41 08.8	-1.4
CRES							
	comp=Z,20nm,0.4s						
BEHE	Becsehely	10.65	341	⇑e	Pn	14 41 07.2	-5.5
BUD	Budapest	11.18	350	⇓e	Pn	14 41 12.9	-7.0
VOY	Vojsko	11.21	331	ePn	Pn	14 41 19.8	-0.8
VOY				eSn	Sn	14 43 14.9	-10
SOKA	Soboth	11.35	336	⇑iPn	Pn	14 41 20.1	-2.4
SOKA				⇓iSn	Sn	14 43 18.5	-9.5
OBKA	Obir	11.37	334	⇑iPn	Pn	14 41 21.2	-1.5
OBKA				⇓iSn	Sn	14 43 20.3	-8.1
OBKA	Obir	11.37	334	Pn	Pn	14 41 21.2	-1.5
PSZ	Piszkesteto	11.51	354	⇑P	Pn	14 41 23.4	-1.2
PSZ	Piszkesteto	11.51	354	⇑iP	Pn	14 41 23.4	-1.2
PSZ	Piszkesteto	11.51	354	⇑e	Pn	14 41 23.4	-1.2
PSZ	Piszkesteto	11.51	354	P	Pn	14 41 23.4	-1.2
MMAI	Mount Meron Ar	11.75	103	Pn	Pn	14 41 26.4	-1.6
	comp=Z,0.9nm,0.3s,baz=309,slow=15,SNR=4.4						
MMAI				Sn	Sn	14 43 28.6	-9.4
	comp=Z,1.8nm,0.3s,baz=284,slow=40,SNR=3.9						
KECS	Kecovo	12.03	356	eP	Pn	14 41 31.1	-0.5
KECS				e		14 43 38.6	
KECS	Kecovo	12.03	356	ePN	Pn	14 41 31.1	-0.5
KECS	Kecovo	12.03	356	eSN	Sn	14 43 38.6	-5.8
KECS	Kecovo	12.03	356	eP	Pn	14 41 31.1	-0.5
VYHS	Vyhne	12.19	351	eP	Pn	14 41 32.5	-1.3

VYHS				*e*		14 43 43.2	
VYHS	Vyhne	12.19	351	*e*PN	Pn	14 41 32.5	-1.3
VYHS	Vyhne	12.19	351	*e*SN	Sn	14 43 43.2	-5.2
VYHS	Vyhne	12.19	351	*e*P	Pn	14 41 32.5	-1.3
CRVS	Cervenica-Dubn	12.41	359	*e*P	Pn	14 41 36.4	-0.5
CRVS	Cervenica-Dubn	12.41	359	*e*PN	Pn	14 41 36.4	-0.5
CRVS	Cervenica-Dubn	12.41	359	*e*P	Pn	14 41 36.4	-0.5
KOLS	Kolonicke sedl	12.45	2	*e*P	Pn	14 41 37.2	-0.1
KOLS	Kolonicke sedl	12.45	2	*e*PN	Pn	14 41 37.2	-0.1
KOLS	Kolonicke sedl	12.45	2	*e*P	Pn	14 41 37.2	-0.1
MOA	Molln	12.63	336	⇑*i*Pn	Pn	14 41 36.9	-3.0
MOA				⇑*i*Sn	Sn	14 43 51.8	-7.4
STHS	Stebnicka Huta	12.93	359	*e*P	Pn	14 41 47.1	+3.1
STHS	Stebnicka Huta	12.93	359	*e*PN	Pn	14 41 47.0	+3.1
STHS	Stebnicka Huta	12.93	359	*e*P	Pn	14 41 47.1	+3.1
NIE	Niedzica	12.97	356	*e*P	Pn	14 41 47.4	+2.9
NIE	Niedzica	12.97	356	*e*P	Pn	14 41 47.4	+2.9
NIE	Niedzica	12.97	356	*e*P	Pn	14 41 47.4	+2.9
EIL	Elat	12.98	118	Pn	Pn	14 41 43.2	-1.6
	comp=Z,0.5nm,0.3s,baz=36,slow=11,SNR=6.9						
EIL				Sn	Sn	14 43 55.8	-12
	comp=Z,0.9nm,0.3s,baz=295,slow=20,SNR=7.6						
VRAC	Vranov	13.36	345	Pn	Pn	14 41 47.8	-1.9
	comp=Z,0.4nm,0.3s,baz=169,slow=12,SNR=3.2						
DAVOX	Davos/Dischmat	13.57	323	Pn	Pn	14 41 52.8	0.0
	comp=Z,0.4nm,0.3s,baz=148,slow=19,SNR=2.2						
DAVOX				Sn	Sn	14 44 07.1	-15
	comp=Z,0.6nm,0.3s,baz=72,slow=9.6,SNR=2.8						
DAVOX	Davos/Dischmat	13.57	323	P	Pn	14 41 52.8	0.0
MORC	Moravsky Berou	13.63	348	⇑P	Pn	14 41 51.9	-1.6
MORC	Moravsky Berou	13.63	348	⇑*i*P	Pn	14 41 51.9	-1.6
GERES	GERESS Array B	13.69	337	Pn	Pn	14 41 51.4	-2.9
	comp=Z,0.4nm,0.3s,baz=156,slow=11,SNR=4.4						
KHC	Kasperske Hory	13.98	337	*e*P	Pn	14 41 56.2	-2.0
KHC	Kasperske Hory	13.98	337	*e*P	Pn	14 41 56.2	-2.0
KHC				*e*x	x	14 42 05.9	
KHC				*e*x	x	14 43 01.5	
DPC	Dobruska-Polom	14.40	346	*e*P	Pn	14 42 05.1	+1.1
DPC	Dobruska-Polom	14.40	346	*e*P	Pn	14 42 05.1	+1.1
DPC				*e*x	x	14 42 11.3	
PRU	Pruhonice	14.47	341	*e*P	Pn	14 42 04.3	-0.6
PRU	Pruhonice	14.47	341	*e*P	Pn	14 42 04.3	-0.6
PRU				*e*sP		14 42 11.6	
ANN	Anapa	14.50	50	*e*P	P	14 42 08.9	-2.6
ANN				pmax	pmax		
	comp=Z,35nm,0.9s						
UPC	Upice	14.62	345	*e*P	Pn	14 42 06.0	-0.9
UPC	Upice	14.62	345	*e*P	Pn	14 42 06.0	-0.9
UPC				*e*pP	P	14 42 13.7	+0.9
KSP	Ksiaz	14.88	346	*e*P	P	14 42 16.8	+1.1
KSP	Ksiaz	14.88	346	*e*P	P	14 42 16.8	+1.1
AKASG	Malin Array Be	15.20	18	P	Pn	14 42 11.9	-2.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	Malin Array Be	15.20	18	Pn	Pn	14 42 11.9	-2.7
	comp=Z,1.5nm,0.3s,baz=208,slow=12,SNR=11						
BRG	Berggiesshubel	15.44	341	*e*P	Pn	14 42 16.8	-0.9
	comp=Z,6.5nm,1.2s						
BRG	Berggiesshubel	15.44	341	*e*P	Pn	14 42 16.8	-0.9
BRG				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CLL	Collm	16.08	340	*e*P	Pn	14 42 25.0	-1.0
CLL	Collm	16.08	340	*e*sP	Pn	14 42 25.0	-1.0
CLL				*i* PP	Pn	14 42 30.1	+4.1
LOR	Lormes	17.09	315	*e*P	Pn	14 42 38.1	-0.7
	comp=Z,11nm,0.9s						
LOR	Lormes	17.09	315	*e*P	Pn	14 42 38.1	-0.7
	comp=Z,5.7nm,0.9s						
KIV	Kislovodsk	17.62	59	*de*P	P	14 42 46.9	+0.7
KIV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KIV	Kislovodsk	17.62	59	*e*P	P	14 42 46.9	+0.7
	comp=Z,5.0nm,0.6s						
KBZ	Khabaz	17.70	59	P	P	14 42 47.4	+0.5
KBZ	Khabaz	17.70	59	P	P	14 42 47.4	+0.5
	comp=Z,0.3nm,0.3s,baz=257,slow=6.7,SNR=13						
KBZ	Khabaz	17.70	59	P	P	14 42 47.4	+0.5
ETSF	Etsaut	18.30	297	*e*P	Pn	14 42 54.3	+0.5
	comp=Z,16nm,1.0s						
ETSF	Etsaut	18.30	297	*e*P	Pn	14 42 54.3	+0.5
	comp=Z,8.1nm,1.0s						
GIVF	Givet	18.30	323	*e*P	Pn	14 42 54.9	+1.3
GIVF	Givet	18.30	323	*e*P	Pn	14 42 54.9	+1.3
GNI	Garni	18.40	72	*e*P	Pn	14 42 55.6	+0.5
	comp=Z,9.0nm,1.2s						
BAIF	Baives	18.57	322	*e*P	Pn	14 42 57.0	+0.1
BAIF	Baives	18.57	322	*e*P	Pn	14 42 57.0	+0.1
SJPF	Ste Jean	18.82	298	*e*P	Pn	14 43 01.3	+1.2
	comp=Z,12nm,0.7s						
SJPF	Ste Jean	18.82	298	*e*P	Pn	14 43 01.3	+1.2
	comp=Z,6.1nm,0.7s						
IIGN	Ignalina	19.12	8	*e*P	P	14 43 00.8	-1.6
IIGN				AMB	AMB	14 43 03.7	
	comp=Z,13nm,1.1s						
IDID	Didziasalis	19.14	9	*e*P	P	14 43 00.9	-1.8
IDID				AMB	AMB	14 43 05.8	
	comp=Z,7.4nm,0.9s						
VORD	Divnogorie	19.17	35	*e*P	P	14 43 02.3	-0.8
VORD				pmax	pmax		
	comp=N,10.0nm,0.7s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.7s						
VORD				pmax	pmax		
	comp=Z,9.0nm,0.7s						
VORD	Divnogorie	19.17	35	*e*P	P	14 43 02.3	-0.8
MFF	Saint Martin d	19.20	309	*e*P	P	14 43 03.7	+0.3
MFF	Saint Martin d	19.20	309	*e*P	P	14 43 03.7	+0.3
BSD	Bornholm Skovb	19.21	348	*i* P	P	14 43 02.3	-1.2
BSD				pmax	pmax		
	comp=Z,43nm,0.9s						
BSD	Bornholm Skovb	19.21	348	*i* P	P	14 43 02.3	-1.2
	comp=Z,43nm,0.9s						
BSD	Bornholm Skovb	19.21	348	*i* P	P	14 43 02.3	-1.2
	comp=Z,43nm,0.9s						
VSR	Storozhevoye	19.28	35	*e*P	P	14 43 02.7	-1.6
VSR				pmax	pmax		
	comp=N,3.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,9.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR	Storozhevoye	19.28	35	*e*P	P	14 43 02.7	-1.6
ISAL	Salakas	19.32	8	*e*P	P	14 43 01.2	-3.4
ISAL				AMB	AMB	14 43 04.0	
	comp=Z,6.1nm,1.0s						
IZAR	Zarasai	19.51	8	*i* P	P	14 43 05.6	-1.2
LDF	La Druitiere	20.07	314	*e*P	P	14 43 13.3	+0.4
	comp=Z,6.8nm,0.5s						
LDF	La Druitiere	20.07	314	*e*P	P	14 43 13.3	+0.4
	comp=Z,3.4nm,0.5s						
FLN	La Foliniere	20.36	314	*e*P	P	14 43 16.7	+0.6
	comp=Z,11nm,0.5s						
FLN	La Foliniere	20.36	314	*e*P	P	14 43 16.7	+0.6
	comp=Z,5.3nm,0.5s						
VRHR	Novokhopersk	20.38	38	*e*P	P	14 43 15.7	-0.5
VRHR				pmax	pmax		
	comp=N,20nm,1.1s						
VRHR				pmax	pmax		
	comp=E,30nm,1.1s						
VRHR				pmax	pmax		
	comp=Z,50nm,1.1s						
VRHR	Novokhopersk	20.38	38	*e*P	P	14 43 15.7	-0.5
GRR	Gorron	20.41	313	*e*P	Pn	14 43 18.6	-0.2
	comp=Z,8.7nm,0.7s						
GRR	Gorron	20.41	313	*e*P	Pn	14 43 18.6	-0.2
	comp=Z,4.3nm,0.7s						
ESDC	Sonseca Array	20.47	287	P	P	14 43 17.9	+0.5
	comp=Z,0.3nm,0.3s,baz=78,slow=10,SNR=4.6						
OBN	Obninsk	21.22	24	⇑*e*P	P	14 43 23.7	-1.6
OBN				*e*		14 43 46.5	
OBN				pmax	pmax		
	comp=Z,31nm,1.0s						
OBN	Obninsk	21.22	24	*e*P	P	14 43 23.7	-1.6
	comp=Z,31nm,1.0s						
SGMF	Saint Gilles	21.37	311	*e*P	P	14 43 27.3	+0.4
SGMF	Saint Gilles	21.37	311	*e*P	P	14 43 27.3	+0.4
QUIF	Quistinic	21.61	310	*e*P	P	14 43 29.8	+0.3
	comp=Z,24nm,1.0s						
QUIF	Quistinic	21.61	310	*e*P	P	14 43 29.8	+0.3
	comp=Z,12nm,1.0s						
ROSF	Rostrenen	21.84	311	*e*P	P	14 43 31.6	-0.4
	comp=Z,18nm,0.7s						
ROSF	Rostrenen	21.84	311	*e*P	P	14 43 31.6	-0.4
	comp=Z,9.1nm,0.7s						
MIB	Mutribah	22.40	100	*e*P	P	14 43 37.0	-1.2
MIB				AMb	AMB	14 43 38.9	
	comp=Z,23nm,0.8s						
MIB	Mutribah	22.40	100	*e*P	P	14 43 37.0	-1.2
NAY	Al-Naaiem	22.56	101	*e*P	P	14 43 38.9	-1.0
NAY				AMb	AMB	14 43 41.0	
	comp=Z,15nm,0.7s						
NAY	Al-Naaiem	22.56	101	*e*P	P	14 43 38.9	-1.0
	comp=Z,15nm,0.7s						
HFS	Hagfors	24.23	350	P	P	14 43 54.7	-1.2
	comp=Z,13nm,0.4s,baz=163,slow=11,SNR=98						
HFS	Hagfors	24.23	350	P	P	14 43 54.7	-1.2
	comp=Z,13nm,0.4s						
FINES	FINESS Array B	25.13	5	P	P	14 44 03.4	-0.7
	comp=Z,12nm,0.7s,baz=168,slow=9.8,SNR=25						
FINES	FINESS Array B	25.13	5	P	P	14 44 03.4	-0.7
	comp=Z,12nm,0.7s						
NB2	NORSAR Subarra	25.47	348	P	P	14 44 06.6	-0.7
	comp=Z,3.6nm,0.5s,baz=156,slow=11						
NB2	NORSAR Subarra	25.47	348	P	P	14 44 06.6	-0.7
	comp=Z,3.6nm,0.5s,SNR=6.6						
NOA	NORSAR Array B	25.47	348	P	P	14 44 06.3	-1.0
	comp=Z,4.5nm,0.6s,baz=152,slow=7.5,SNR=24						
NOA	NORSAR Array B	25.47	348	P	P	14 44 06.3	-1.0
	comp=Z,5.0nm,0.6s						
KAF	Kangasniemi	25.81	5	*e*p	P	14 44 09.1	-1.2
	comp=Z,19nm,0.8s						
KAF	Kangasniemi	25.81	5	*e*P	P	14 44 09.1	-1.2
KAF				pmax	pmax		
	comp=Z,19nm,0.8s						
KAF	Kangasniemi	25.81	5	*e*P	P	14 44 09.1	-1.2
	comp=Z,19nm,0.8s						
KLMR	Klimovskoe	26.88	19	*e*P	P	14 44 21.2	+1.2
KLMR				pmax	pmax		
	comp=Z,30nm,0.9s						
KLMR	Klimovskoe	26.88	19	*e*P	P	14 44 21.2	+1.2
	comp=Z,30nm,0.9s						
JOF	Joensuu	27.11	10	*e*p	P	14 44 20.9	-1.1
	comp=Z,3.3nm,0.5s						
JOF	Joensuu	27.11	10	*e*P	P	14 44 20.9	-1.1
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
JOF	Joensuu	27.11	10	*e*P	P	14 44 20.9	-1.1
	comp=Z,3.0nm,0.5s						
TORD	Torodi Ar. Bea	29.39	223	P	P	14 44 44.0	+1.2
	comp=Z,2.2nm,0.8s,baz=37,slow=8.6,SNR=15						
AKTK	Aktyubinsk	29.46	50	P	P	14 44 41.5	-1.6
	comp=Z,2.0nm,0.4s						
AKTO	Aktyubinsk	29.46	50	P	P	14 44 41.5	-1.6
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKTO	Aktyubinsk	29.46	50	P	P	14 44 41.5	-1.6
	comp=Z,1.7nm,0.4s,baz=263,slow=9.5,SNR=11						
ARU	Arti	31.71	39*c*	*i*P	P	14 45 01.1	-1.8
ARU						14 46 04.5	
ARU				S	S	14 50 09.8	-0.1
ARU				pmax	pmax		
	comp=Z,13nm,1.0s						
ARU	Arti	31.71	39	*i* P	P	14 45 01.1	-1.8
	comp=Z,13nm,1.0s						
ARU				S	S	14 50 09.8	-0.1
SOKR	Solikamsk	32.28	33*d*	*i*P	P	14 45 06.0	-1.8
SOKR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SOKR	Solikamsk	32.28	33	*i* P	P	14 45 06.0	-1.8
	comp=Z,10.0nm,0.9s						
SVE	Sverdlovsk	32.92	39*c*	*i*P	P	14 45 12.8	-0.7
SVE				pmax	pmax		
	comp=Z,40nm,0.9s						
SVE	Sverdlovsk	32.92	39	*i* P	P	14 45 12.8	-0.7
	comp=Z,40nm,0.9s						
ARCES	ARCESS Array B	33.17	2	P	P	14 45 14.9	-0.6
	comp=Z,4.1nm,0.6s,baz=191,slow=9.8,SNR=38						
ARCES	ARCESS Array B	33.17	2	P	P	14 45 14.9	-0.6
	comp=Z,4.0nm,0.6s						
KEV	Kevo	33.45	3	*e*p	P	14 45 17.6	-0.3
	comp=Z,3.2nm,0.6s						
KEV	Kevo	33.45	3	*e*P	P	14 45 17.6	-0.3
KEV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KEV	Kevo	33.45	3	*e*P	P	14 45 17.6	-0.3
	comp=Z,3.0nm,0.6s						
BRVK	Borovoye	37.43	48*c*	*i*P	P	14 45 50.9	-1.4
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRVK	Borovoye	37.43	48	*i* P	P	14 45 50.9	-1.4
	comp=Z,8.0nm,1.0s						
DBIC	Dimbokro	38.36	226	P	P	14 46 01.4	+0.8
	comp=Z,3.7nm,0.9s,baz=325,slow=7.8,SNR=3.7						
DBIC	Dimbokro	38.36	226	P	P	14 46 01.4	+0.8
	comp=Z,4.0nm,0.9s						
EKS2	Erkin-Say	40.05	65	P	P	14 46 14.7	+0.1
	SNR=16						
AAK	Ala-Archa	40.58	65	*i* P	P	14 46 19.0	0.0
AAK	Ala-Archa	40.58	65	P	P	14 46 19.0	0.0
	SNR=5.5						
AAK	Ala-Archa	40.58	65	*i* P	P	14 46 19.0	0.0
FRU	Bishkek	40.63	64⇓	*i*P	P	14 46 19.0	-0.3
FRU				pmax	pmax		
	comp=Z,20nm,1.6s						
FRU	Bishkek	40.63	64	*i* P	P	14 46 19.0	-0.3
	comp=Z,20nm,1.6s						
CHMS	Chumysh	40.70	64	P	P	14 46 19.5	-0.4
	SNR=6.3						
KZA	Kyzart	41.23	65	*i* P	P	14 46 25.1	+0.5
KZA	Kyzart	41.23	65	P	P	14 46 25.1	+0.5
	SNR=9.6						
KZA	Kyzart	41.23	65	*i* P	P	14 46 25.1	+0.5
TKM2	Tokmak 2	41.33	64	*i* P	P	14 46 24.7	-0.5
TKM2	Tokmak 2	41.33	64	P	P	14 46 24.8	-0.5
	SNR=6.3						
TKM2	Tokmak 2	41.33	64	*i* P	P	14 46 24.7	-0.5
SPITS	Spitsbergen Ar	41.86	358	P	P	14 46 29.3	+0.4
	comp=Z,0.9nm,0.4s,baz=146,slow=12,SNR=2.6						
SPITS	Spitsbergen Ar	41.86	358	P	P	14 46 29.3	+0.4
	comp=Z,1.0nm,0.4s						
ULHL	Ulahol	41.92	65	P	P	14 46 30.3	+0.2
	SNR=10						
KSH	Kashi	42.30	69	P	P	14 46 29.1	-4.0
KSH				pmax	pmax		
	comp=Z,74nm,4.1s						
KURK	Kurchatov	42.52	52*d*	*i*P	P	14 46 33.4	-1.2
KURK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
KURK	Kurchatov	42.52	52	*i* P	P	14 46 33.4	-1.2
	comp=Z,7.0nm,1.7s						
NVS	Novosibirsk	45.13	46	*i* P	P	14 46 55.7	+0.2
NVS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NVS				pmax	pmax		
	comp=N,3.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.9s						
NVS	Novosibirsk	45.13	46	*i* P	P	14 46 55.7	+0.2
	comp=E,3.0nm,0.7s						
MKAR	Makanchi Array	45.38	57	P	P	14 46 56.5	-1.1
MKAR						14 48 36.9	
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	Makanchi Array	45.38	57	P	P	14 46 56.5	-1.1
	comp=Z,3.9nm,0.6s,baz=281,slow=6.8,SNR=41						
MKAR				PcP	PcP	14 48 36.9	+0.4
	comp=Z,0.7nm,0.5s,baz=280,slow=3.4,SNR=3.4						
MKAR	Makanchi Array	45.38	57	P	P	14 46 56.5	-1.1
	comp=Z,4.0nm,0.6s						
MKAR	Makanchi Array	45.38	57	PcP	PcP	14 48 36.9	+0.4
	comp=Z,1.0nm,0.5s						
ZALV	Zalesovo Beam	46.11	47	P	P	14 47 01.8	-1.4
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	Zalesovo Beam	46.11	47	P	P	14 47 01.8	-1.4
	comp=Z,2.1nm,0.4s,baz=277,slow=8.2,SNR=11						
ZALV	Zalesovo Beam	46.11	47	P	P	14 47 01.8	-1.4
	comp=Z,2.0nm,0.4s						
SCHQ	Schefferville	60.37	318	P	P	14 48 48.4	+0.3
	comp=Z,3.1nm,0.3s,baz=62,slow=6.1,SNR=9.5						
SONM	Songino Array	60.78	50	P	P	14 48 50.2	-0.9
	comp=Z,1.0nm,0.8s,baz=258,slow=5.9,SNR=6.5						
SONM				PcP	PcP	14 49 35.4	+0.6
	comp=Z,0.7nm,0.6s,baz=291,slow=5.0,SNR=3.2						
SONM	Songino Array	60.78	50	P	P	14 48 50.2	-0.9
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	60.78	50	PcP	PcP	14 49 35.4	+0.6
	comp=Z,1.0nm,0.6s						
TIXI	Tiksi	60.90	20⇓	*i*P	P	14 48 51.0	-0.3
TIXI				pmax	pmax		
	comp=Z,7.0nm,2.5s						
TIXI	Tiksi	60.90	20	*i* P	P	14 48 51.0	-0.3
	comp=Z,7.0nm,2.5s						
ULN	Ulaanbaatar	61.18	50	*e*P	P	14 48 52.4	-1.5
	comp=Z,4.0nm,2.5s						
YAK	Yakutsk	66.10	29	*e*P	P	14 49 24.5	-1.4
YAK				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK	Yakutsk	66.10	29	*e*P	P	14 49 24.5	-1.4
	comp=Z,13nm,0.8s						
CMAR	Chiang Mai Arr	69.16	82	P	P	14 49 45.1	-0.7
	comp=Z,0.6nm,0.3s,baz=306,slow=7.1,SNR=4.9						
CMAR	Chiang Mai Arr	69.16	82	P	P	14 49 45.1	-0.7
	comp=Z,1.0nm,0.3s						
BILL	Bilibino	72.44	13⇓	*e*P	P	14 50 02.9	-2.1
BILL				*e*		14 50 19.6	
BILL				*e*		14 52 46.5	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.7s						
SEY	Seymchan	73.36	21⇑	*e*P	P	14 50 10.8	+0.3
SEY	Seymchan	73.36	21	*e*P	P	14 50 10.8	+0.3
YKA	Yellowknife Ar	75.31	341	P	P	14 50 22.3	+0.4
	comp=Z,0.9nm,0.7s,baz=34,slow=5.3,SNR=10						
YKA	Yellowknife Ar	75.31	341	P	P	14 50 22.3	+0.4
	comp=Z,1.0nm,0.7s						
USRK	Ussuriysk Arra	77.84	44	P	P	14 50 35.5	-1.0
	comp=Z,3.1nm,0.6s,baz=264,slow=8.0,SNR=5.4						
ILAR	Eielson Array	78.68	355	P	P	14 50 41.2	+0.5
	comp=Z,0.7nm,0.8s,baz=355,slow=4.2,SNR=12						
ILAR	Eielson Array	78.68	355	P	P	14 50 41.3	+0.5
	comp=Z,1.0nm,0.8s						
KSRS	Korea Array	79.64	51	P	P	14 50 46.4	-0.1
	comp=Z,6.3nm,0.8s,baz=310,slow=4.7,SNR=28						
KSRS	Korea Array	79.64	51	P	P	14 50 46.4	-0.1
	comp=Z,6.0nm,0.8s						
YSS	Yuzh-Sakhalins	81.55	36⇓	*e*P	P	14 50 58.2	+1.6
YSS				*e*		14 51 10.0	
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS	Yuzh-Sakhalins	81.55	36	*e*P	P	14 50 58.2	+1.6
	comp=Z,20nm,0.9s						
MJAR	Matsushiro Arr	86.46	46	P	P	14 51 21.1	-0.7
	comp=Z,2.6nm,0.8s,baz=310,slow=4.9,SNR=4.9						
WRA	Warramunga Arr	119.47	94	PKP	PKPdf	14 57 28.6	-0.4
	comp=Z,0.5nm,0.7s,baz=325,slow=2.0,SNR=5.3						
ASAR	Alice Springs	121.00	98	PKP	PKPdf	14 57 31.2	-0.6
	comp=Z,0.4nm,0.4s,baz=310,slow=1.8,SNR=15						

IDC 05 14:58:54.1±2.1**, 3°.20N**×**125°.53E, h0**km**, mb3.1**/3**, mb1 3.4**/3**, mb1mx3.2**/22**, mbtmp3.1**/3**, Error ellipse: s-maj=199.5km s-min=25.6km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.57	160	P	P	15 04 16.2	+0.3
	0.3nm,0.5s,baz=338,slow=10,SNR=9.8						
ASAR	Alice Springs	27.92	163	P	P	15 04 46.0	-0.2
	0.2nm,0.7s,baz=344,slow=14,SNR=5.3						
MKAR	Makanchi Array	57.31	326	P	P	15 08 43.7	-0.1
	0.1nm,0.3s,baz=123,slow=9.2,SNR=3.8						

*ISCJB **05** 15:07:50.6±0.5, 42°.89N±0°.02×78°.23W±0°.02, h0km±4km, Error ellipse: s-maj=3.7km s-min=2.7km az=12.2*

*OTT **05** 15:07:52.8±0.3, 42°.86N×78°.25W, h18km, MN3.4/14, 56km east from Fort Erie, On Attica Seismic Zone. Possible blast*

*NEIC **05** 15:07:52.0, 42°.83N×78°.25W, h5km, MD2.9(LDO), After LDO.*

NEIC Felt [IV] at Darien Center; [III] at Attica and Warsaw; [II] at Alden, Alexander and Varysburg. Also felt at Akron, Bowmansville, Buffalo, Cowlesville, Dale, Dunkirk, Lancaster, Lockport, North Java and Strykersville.

ISC 05 15:07:51.9±1.1**, 42°.84N**±0°.02×**78°.26W**±0°.02**, h8**km±9km**, n46,** σ**0s.68**/78**, 1C, New York**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMNY	Mt. Morris Dam	0.28	113	P	Pg	15 07 57.7	+0.2
MMNY				S	Sg	15 08 01.3	+0.2
MEDO	Medina	0.35	336	Pg	Pg	15 07 59.1	+0.2
MEDO				Sg	Sb	15 08 05.7	-0.5
MEDO	Medina	0.35	336	PG	Pg	15 07 59.1	+0.2
MEDO				SG	Sb	15 08 05.7	-0.5
STCO	Saint Catharin	0.77	299	Pg	Pg	15 08 06.4	-0.2
STCO				Sg	Sg	15 08 16.6	0.0
STCO	Saint Catharin	0.77	299	PG	Pg	15 08 06.4	-0.2
STCO				SG	Sg	15 08 16.6	0.0
STCO				Trac		15 08 19.5	
	comp=Z,216nm,0.1s						
EFO	Effingham	0.81	288	Pg	Pg	15 08 07.4	-0.2
EFO	Effingham	0.81	288	PG	Pg	15 08 07.4	-0.2
EFO				Trac		15 08 19.4	
	comp=Z,51nm,0.1s						
DRWO	Darlington Wes	1.09	342	Pg	Pb	15 08 12.4	-0.5
DRWO				Sg	Sb	15 08 26.4	-0.8
DRWO	Darlington Wes	1.09	342	PG	Pb	15 08 12.4	-0.5
DRWO				SG	Sb	15 08 26.4	-0.8
WLVO	Wesleyville	1.09	355	Pg	Pb	15 08 12.2	-0.7
WLVO				Sg	Sb	15 08 26.6	-0.7
WLVO	Wesleyville	1.09	355	PG	Pb	15 08 12.2	-0.7
WLVO				SG	Sb	15 08 26.6	-0.7
WLVO				Trac		15 08 30.7	
	comp=Z,67nm,0.0s						
TORO	Toronto--Lesli	1.11	314	Pg	Pb	15 08 12.9	-0.4
TORO				Sg	Sb	15 08 27.3	-0.6
TORO	Toronto--Lesli	1.11	314	PG	Pb	15 08 12.9	-0.4
TORO				SG	Sb	15 08 27.3	-0.6
TYNO	Tyneside	1.21	283	Pg	Pn	15 08 14.6	-0.6
TYNO				Sg	Sb	15 08 30.4	-0.4
TYNO	Tyneside	1.21	283	PG	Pn	15 08 14.6	-0.6
TYNO				SG	Sb	15 08 30.4	-0.4
TYNO				Trac		15 08 36.7	
	comp=Z,449nm,0.1s						
PKRO	Pickering	1.27	332	Pg	Pn	15 08 15.5	-0.4
PKRO				Sg	Sb	15 08 32.3	-0.2
PKRO	Pickering	1.27	332	⇑PG	Pn	15 08 15.5	-0.4
PKRO				SG	Sb	15 08 32.3	-0.2
PRNY	Paleo Inst,Ith	1.32	106	P	Pn	15 08 16.0	-0.6
PRNY				S	Sb	15 08 33.4	-0.7
PECO	Prince Edward	1.43	40	PG	Pn	15 08 18.0	-0.1
PECO				SG	Sn	15 08 36.6	-0.5
PECO				Trac		15 08 39.0	
	comp=Z,111nm,0.1s						
ERPA	Erie	1.47	241	*e*Pn	Pn	15 08 18.8	0.0
ERPA				*e*Sn	Sn	15 08 37.8	-0.4
ACTO	Acton	1.53	301	PG	Pn	15 08 20.1	+0.6
ACTO				SG	Sb	15 08 40.0	0.0
ACTO				Trac		15 08 43.2	
	comp=Z,391nm,0.1s						
DELO	Deloro Mine	1.74	15	PG	Pn	15 08 23.3	+0.9
DELO				SG	Sb	15 08 46.0	0.0
DELO				Trac		15 08 49.9	
	comp=Z,82nm,0.1s						
BINY	Binghamton	1.80	110	*e*Pn	Pn	15 08 22.8	-0.4
BINY				*e*Sn	Sn	15 08 46.4	+0.2
BINY	Binghamton	1.80	110	PG	Pb	15 08 24.8	-0.3
BINY				SG	Sb	15 08 48.6	+0.9
BINY				Trac		15 08 50.3	
	comp=Z,64nm,0.3s						
ALLY	Alegheny Colle	1.84	230	*e*Pn	Pn	15 08 24.2	+0.4
ALLY				*e*Sn	Sn	15 08 47.4	+0.1
KGNO	Kingston	1.89	42	PN	Pb	15 08 25.9	-0.7
KGNO				SG	Sb	15 08 50.2	0.0
KGNO				Trac		15 08 52.9	
	comp=Z,39nm,0.1s						
SADO	Sadowa	2.03	342	PN	Pn	15 08 27.4	+0.9
SADO				SG	Sb	15 08 55.4	+0.9
SADO				Trac		15 08 56.1	
	comp=Z,31nm,0.1s						
CLWO	Collingwood	2.19	318	PN	Pn	15 08 29.7	+1.1
CLWO				SG	Sb	15 09 00.5	+1.5
CLWO				Trac		15 09 03.0	
	comp=Z,112nm,0.2s						
BANO	Bancroft	2.19	6	PG	Pb	15 08 31.0	-0.8
BANO				SG	Sb	15 09 00.2	+1.1
WCNY	West Carthage	2.21	58	P	Pn	15 08 29.6	+0.8
WCNY				S	Sn	15 08 56.9	+0.5
SSPA	Standing Stone	2.22	173	*e*Pn	Pn	15 08 30.4	+1.4
SSPA				*e*Sg	Sb	15 08 59.5	-0.5
ELFO	Elginfield	2.27	280	PN	Pn	15 08 31.5	+1.7
ELFO				SG	Sb	15 09 01.8	+0.4

ELFO				Trac		15 09 04.5	
	comp=Z,93nm,0.1s						
BWLO	Walkerton	2.46	302	PN	Pn	15 08 33.8	+1.5
BWLO				SG	Sb	15 09 07.1	+0.4
BWLO				Trac		15 09 09.3	
	comp=Z,72nm,0.2s						
BRCO	Bruce Peninsul	2.71	302	SG	Sb	15 09 15.3	+1.4
PTN	Potsdam (NY)	2.94	53	PN	Pn	15 08 39.8	+1.0
PTN				SG	Sb	15 09 20.6	+0.1
WBO	Williamsburg	3.05	44	Trac		15 09 27.2	
	comp=Z,26nm,0.1s						
NCB	Newcomb	3.15	68	ePn	Pn	15 08 42.0	+0.2
NCB				eSn	Sn	15 09 19.6	+0.1
LONY	Lake Ozonia	3.20	55	ePn	Pn	15 08 41.5	-1.0
CRLO	Chalk River	3.26	11	Trac		15 09 34.9	
	comp=Z,18nm,0.1s						
PLIO	Pelee Island,	3.42	253	PN	Pb	15 08 51.7	-1.0
GAC	Glen Almond	3.49	34	LG	Lg	15 09 36.5	
GAC				Trac		15 09 42.5	
	comp=Z,30nm,0.3s						
EEO	Eldee	3.84	352	Pn	Pn	15 08 52.4	+1.0
EEO				Sn	Sn	15 09 36.5	-0.2
EEO	Eldee	3.84	352	PN	Pn	15 08 52.4	+1.0
EEO				SN	Sn	15 09 36.5	-0.2
EEO				Trac		15 09 54.9	
	comp=Z,20nm,0.2s						
MDV	Middlebury	3.87	71	ePn	Pn	15 08 51.7	0.0
MDV				eSn	Sn	15 09 37.9	+0.5
FRNY	Flat Rock	3.92	58	ePn	Pn	15 08 52.3	0.0
LBNH	Lisbon	4.81	71	Trac		15 10 28.2	
	comp=Z,12nm,0.3s						

GUC 05 15:28:01.9±1.0, 21.06S×68.56W, h130km±11km, ML3.8, 8C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	Plate Boundary	0.97	221⇑	iP	Pn	15 28 26.4	+1.6
PB09				i S	Sn	15 28 44.7	+2.5
PB09				AML	AML	15 28 45.9	
	comp=N,3μm,0.3s						
PB07	Plate Boundary	1.40	242⇑	iP	Pn	15 28 30.3	+1.1
PB07				i S	Sn	15 28 51.2	+1.2
PB07				AML	AML	15 28 52.2	
	comp=E,842nm,0.4s						
HMBC	Humberstone	1.47	302⇑	iP	Pn	15 28 30.5	+0.6
HMBC				i S	Sn	15 28 52.3	+1.1
HMBC				AML	AML	15 28 52.6	
	comp=N,1μm,0.2s						
PB04	Plate Boundary	1.48	216⇑	iP	Pn	15 28 36.3	+6.5
PB04				i S	Sn	15 29 02.3	+11
PB04				AML	AML	15 29 04.6	
	comp=E,616nm,0.4s						
LVC	Limon Verde	1.58	192⇑	iP	Pn	15 28 32.4	+1.2
LVC				i S	Sn	15 28 54.7	+1.0
MACH	Maria Elena	1.59	224⇑	iP	Pn	15 28 32.2	+0.9
MACH				i S	Sn	15 28 54.8	+1.0
PSGC	Pisagua	2.07	315⇑	iP	Pn	15 28 36.7	-0.2
PSGC				i S	Sn	15 29 03.6	-0.1
PSGC				AML	AML	15 29 05.3	
	comp=N,365nm,0.2s						
MNMC	Minimini	2.15	333⇑	iP	Pn	15 28 39.0	+0.8
MNMC				i S	Sn	15 29 07.3	+1.3
MNMC				AML	AML	15 29 09.1	
	comp=N,2μm,0.8s						
ANCH	Antofagasta	3.12	213	eP	Pn	15 28 47.4	-2.7
ANCH				i S	Sn	15 29 25.6	-1.7

ISCJB 05 15:56:26.9±0.9, 51.43N±0.04×16.05E±0.04, h0km, Error ellipse: s-maj=6.2km s-min=3.2km az=20.0
WAR 05 15:56:27.3, 51.53N×16.10E
CSEM 05 15:56:28.3±0.5, 51.43N×16.05E, h2km, ML3.3/4, Error ellipse: s-maj=8.1km s-min=4.5km az=10.0
PRU 05 15:56:29.2, 51.42N×16.05E, h0km
ISC 05 15:56:28.4±1.2, 51.43N±0.05×16.05E±0.03, h0km, n25, σ0.62/46, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.61	166	ePg	Pg	15 56 40.4	+0.4
KSP				eSg	Sb	15 56 49.7	-1.3
KSP	Ksiaz	0.61	166	ePg	Pg	15 56 40.4	+0.4
KSP				eSg	Sg	15 56 48.7	+0.8
UPC	Upice	0.93	182	ePG	Pg	15 56 46.5	+0.4
UPC	Upice	0.93	182	Pg	Pg	15 56 46.5	+0.4
DPC	Dobruska-Polom	1.10	171	ePG	Pg	15 56 49.4	0.0
DPC				eSG	Sg	15 57 04.1	+0.6
DPC	Dobruska-Polom	1.10	171	Pg	Pg	15 56 49.4	0.0
DPC				Sg	Sg	15 57 04.1	+0.6
PVCC	Panska Ves	1.30	227	ePG	Pb	15 56 53.6	-0.1
PVCC				eSG	Sn	15 57 11.9	0.0
	comp=Z,114nm,0.3s						
PVCC	Panska Ves	1.30	227	Pg	Pb	15 56 53.6	-0.1
PVCC				Sg	Sn	15 57 11.9	0.0
	114nm,0.3s						
KRLC	Kraliky	1.43	161	ePG	Pn	15 56 55.6	-0.1
KRLC				eSG	Sg	15 57 14.3	-0.1
KRLC	Kraliky	1.43	161	Pg	Pn	15 56 55.6	-0.1
KRLC				Sg	Sg	15 57 14.3	-0.1
BRG	Berggiesshubel	1.44	248	PG	Pn	15 56 55.8	+0.1
BRG				SG	Sn	15 57 15.6	+0.2
	41nm,0.3s						
PRU	Pruhonice	1.74	214	ePG	Pb	15 57 00.6	-0.5
PRU				eSG	Sg	15 57 24.2	+0.1
	comp=Z,15nm,0.4s						
PRU	Pruhonice	1.74	214	Pg	Pb	15 57 00.6	-0.5
PRU				Sg	Sg	15 57 24.2	+0.1
	15nm,0.4s						
MORC	Moravsky Berou	1.91	150	ePn	Pn	15 57 01.0	-1.2
MORC				eSg	Sb	15 57 28.1	-0.4
CLL	Collm	1.92	267	ePg	Pb	15 57 04.0	-0.2
CLL				i Sg	Sg	15 57 29.6	-0.3
	comp=Z,15nm,0.6s						
VRAC	Vranov	2.15	171	ePn	Pn	15 57 05.9	+0.4
VRAC				eSg	Sg	15 57 37.3	-0.2
KRUC	Moravsky	2.38	175	eSg	Sg	15 57 44.6	-0.3
NKC	Novy Kostel	2.58	244	ePN	Pn	15 57 12.3	+0.9
NKC				ePG	Pg	15 57 18.0	+0.2
NKC				eSG	Sg	15 57 51.8	+0.5
	comp=Z,25nm,0.4s						
NKC	Novy Kostel	2.58	244	Pn	Pn	15 57 12.3	+0.9
OJC	Ojcow	2.67	116	ePg	Pg	15 57 19.4	-0.1
OJC				eSg	Sg	15 57 54.4	+0.4
OJC	Ojcow	2.67	116	ePg	Pg	15 57 19.4	-0.1
OJC				eSg	Sg	15 57 54.4	+0.4
JAVC	Velka Javorina	2.78	157	eSg	Sg	15 57 59.9	+2.3
KHC	Kasperske Hory	2.80	216	ePN	Pn	15 57 14.3	-0.1
KHC				ePG	Pb	15 57 19.9	+0.7
KHC				eSG	Sg	15 57 57.3	-0.9
	comp=Z,9.3nm,0.6s						
KHC	Kasperske Hory	2.80	216	Pn	Pn	15 57 14.3	-0.1
KHC	Kasperske Hory	2.80	216	Pg	Pb	15 57 19.9	+0.7
KHC				Sg	Sg	15 57 57.3	-0.9
	comp=Z,9.3nm,0.6s						

ISCJB 05 16:01:45.2±0.4, 30.63S±0.04×179.45W±0.09, h378km±5km, mb4.7/33, Error ellipse: s-maj=12.1km s-min=4.7km az=17.2
MOS 05 16:01:45.9±2.1, 30.47S×179.54W, h366km, mb4.8/15, Error ellipse: s-maj=15.4km s-min=9.4km az=117.5
NEIC 05 16:01:45.3±0.6, 30.64S×179.43W, h357km±5km, mb4.8/13, Error ellipse: s-maj=9.2km s-min=6.6km az=109.0
IDC 05 16:01:46.7±0.6, 30.30S×179.61W, h359km±5km, mb4.3/13, mb1 4.3/16, mb1mx4.2/23, mbtmp4.3/16, Error ellipse: s-maj=11.8km s-min=9.3km az=137.0
DJA 05 16:01:59.2±5.3, 31°S±22°×18°0E±2°6, h501km±47km, M4.7/11, mB5.3/2, mb4.7/11, Mw(mB)4.7/2
ISC 05 16:01:48.6±0.4, 30.74S±0.03×179.59W±0.06, h392km±3km, h392km:pP-P, n274, σ1.59/282, mb4.7/33, 15C-8D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	2.07	44	PN	Pn	16 02 39.4	-5.0
RAO	Raoul Island	2.07	45	ePn	Pn	16 02 37.6	-6.8
RAO				eSn	S	16 03 19.3	-10
RAO	Raoul Island	2.07	45	P	Pn	16 02 39.2	-5.1
	927nm,0.3s,baz=157,slow=1.8,SNR=37						
RAO				S	S	16 03 17.0	-12
	868nm,0.3s,baz=62,slow=24,SNR=5.2						
MXZ	Matakaoa Point	7.03	194	PN	Pn	16 03 31.8	-0.4
WCZ	Waipu Caves	7.26	223	PN	P	16 03 39.2	+3.7
OUZ	Omahuta	7.26	230	ePn	Pn	16 03 32.4	-2.5
PUZ	Puketiti	7.53	193	PN	Pn	16 03 36.7	-1.2
PUZ				SN	S	16 05 02.9	-4.5
OPRZ	Ohinepanea	7.77	203	PN	P	16 03 41.4	+0.2
TGRZ	Tauranga	7.77	205	PN	P	16 03 45.1	+3.9
CNGZ	Carnagh Statio	7.94	193	PN	Pn	16 03 41.7	-0.8
MWZ	Matawai	7.94	197	PN	Pn	16 03 41.2	-1.4
MWZ				SN	S	16 05 14.6	-1.4
URZ	Urewera	7.98	199	ePn	Pn	16 03 41.6	-1.4
URZ				S	S	16 05 16.5	-0.3
URZ	Urewera	7.98	199	PN	Pn	16 03 40.8	-2.2
URZ	Urewera	7.98	199	P	P	16 03 43.7	+0.1
	89nm,0.3s,baz=315,slow=2.4,SNR=86						
URZ				S	S	16 05 16.5	-0.3
	118nm,0.3s,baz=261,slow=22,SNR=18						
KARZ	Kaharoa	8.04	204	PN	P	16 03 45.1	+0.6
OMRZ	Omania	8.07	203	PN	P	16 03 48.4	+3.6
TARZ	Mount Tarawera	8.14	202	PN	P	16 03 49.7	+4.0
UTU	Utuhina	8.19	204	PN	P	16 03 49.4	+3.2
RRRZ	Republican Roa	8.23	202	PN	P	16 03 49.1	+2.5
PRRZ	Plateau Road	8.42	202	PN	P	16 03 48.9	+0.2
PRGZ	Paritu Road	8.42	194	PN	P	16 03 48.9	+0.2
ALRZ	Allen Road	8.49	202	PN	P	16 03 49.9	+0.4
RAHZ	Arahi	8.60	198	PN	Pn	16 03 50.5	+0.2
MHGZ	Mahia Peninsul	8.64	193	PN	P	16 03 51.1	-0.1
MHGZ				SN	S	16 05 27.2	-3.7
WATZ	Wairara	8.83	205	PN	P	16 03 55.4	+2.1
RATZ	Rangitukua	8.96	204	PN	P	16 03 56.8	+2.1
BKZ	Black Stump Fm	9.00	200	PN	Pn	16 03 53.6	-1.3
HIZ	Hauiti	9.00	209	PN	P	16 03 57.4	+2.3
MCHZ	McNeill Hill	9.20	198	PN	Pn	16 03 55.6	-1.6
OTVZ	Oturere	9.26	204	PN	Pn	16 03 58.2	+0.1
NGZ	Ngauruhoe	9.29	204	PN	P	16 04 00.5	+2.0
CKHZ	Cape Kidnapper	9.31	196	PN	P	16 03 59.1	+0.6
WPVZ	Whakapapa	9.34	204	PN	P	16 04 00.8	+1.8
TUVZ	Tukino	9.36	203	PN	Pn	16 03 58.8	-0.3
FWVZ	Far West T-bar	9.38	204	PN	Pn	16 03 59.4	-0.1
WHVZ	Whangaehu Hut	9.39	204	PN	Pn	16 03 59.3	-0.3
DRZ	Dome Shelter	9.39	204	PN	P	16 04 00.9	+1.1
TRVZ	Turoa	9.42	204	PN	Pn	16 03 58.5	-1.5
BHHZ	Black Hill Sta	9.43	201	PN	Pn	16 03 58.8	-1.0
WNVZ	Wahianoa	9.43	203	PN	P	16 04 00.9	+0.8
MOVZ	Moawhango	9.45	203	PN	Pn	16 03 59.3	-0.9
KAHZ	Kahuranaki	9.48	197	PN	Pn	16 04 00.1	-0.4
PKVZ	Pokaka	9.48	205	PN	P	16 04 00.7	+0.1
MTVZ	Mangateitei	9.53	204	PN	P	16 04 02.4	+1.4
VRZ	Vera Road	9.56	207	PN	P	16 04 02.0	+0.6
PXZ	Pawanui	9.71	196	PN	Pn	16 04 00.3	-2.8
PNHZ	Pukenui	9.78	199	PN	Pn	16 04 01.2	-2.6
WPHZ	Waipukurau	9.85	198	PN	P	16 04 04.8	+0.2
TSZ	Takapari Road	9.98	200	PN	P	16 04 04.3	-1.8
PRHZ	Porangahau	9.99	197	PN	P	16 04 06.0	-0.1
WAZ	Wanganui	10.03	205	PN	Pn	16 04 08.0	+1.2
DVHZ	Dannevirke	10.14	199	PN	P	16 04 07.9	+0.1
ANWZ	Angora Road	10.21	197	PN	Pn	16 04 09.2	+0.4
POWZ	Post Office Ro	10.34	200	PN	P	16 04 09.7	-0.3
PRWZ	Pori Road	10.44	199	PN	P	16 04 10.4	-0.6
BFZ	Birch Farm	10.48	198	PN	P	16 04 11.7	+0.2
MRZ	Mangatainoka R	10.65	200	PN	P	16 04 10.8	-2.6
TIWZ	Tintock	10.67	199	PN	Pn	16 04 14.4	+0.2
HOWZ	Holdsworth Sta	10.88	200	PN	P	16 04 14.6	-1.5
OGWZ	Otaki Gorge	10.92	201	PN	P	16 04 15.0	-1.4
TMWZ	Te Maipa	10.97	198	PN	Pn	16 04 17.8	0.0
KIW	Kapiti Island	11.04	202	PN	P	16 04 16.8	-0.9
MTW	Mount Morrison	11.13	200	PN	P	16 04 18.4	-0.3
CAW	Cannon Point	11.21	201	PN	P	16 04 18.0	-1.6
TRWZ	Traveller	11.30	198	PN	Pn	16 04 21.4	-0.1
DUWZ	D'Urville Isla	11.34	206	PN	P	16 04 21.1	+0.1
PAWZ	Paruwai Farm	11.36	199	PN	Pn	16 04 22.4	+0.2
MSWZ	Moikau Station	11.44	200	PN	P	16 04 21.8	-0.4
WEL	Wellington	11.47	202	PN	P	16 04 21.9	-0.5
SNZO	South Karori	11.51	202	eP	P	16 04 22.2	-0.7
SNZO	South Karori	11.51	202	PN	P	16 04 21.3	-1.6
BHW	Baring Head	11.55	201	PN	Pn	16 04 24.0	-0.4
TCW	Tory Channel	11.57	204	PN	P	16 04 22.8	-0.8
PLWZ	Palliser	11.58	200	PN	P	16 04 23.5	-0.2
TUWZ	Tuamarina	11.88	204	PN	P	16 04 25.9	-1.1
NNZ	Nelson	11.90	207	PN	P	16 04 25.7	-1.5
QRZ	Quartz Range	11.92	210	PN	Pn	16 04 29.3	+0.5
BSWZ	Blackbirch Sta	12.15	204	PN	P	16 04 30.0	0.0
THZ	Tophouse	12.55	207	PN	P	16 04 34.2	-0.3
KHZ	Kahutara	12.89	203	eP	P	16 04 37.2	-0.8
KHZ	Kahutara	12.89	203	PN	P	16 04 36.9	-1.2
MSVF	Nonsavu	13.13	350	eP	P	16 04 37.6	-3.6
MSVF	Nonsavu	13.13	350	eP	P	16 04 37.6	-3.6
LTZ	Lake Taylor	13.67	206	PN	P	16 04 48.0	+1.3
OXZ	Oxford	14.22	206	PN	P	16 04 53.1	+0.4
CRLZ	Canterbury Las	14.23	204	PN	P	16 04 53.9	+1.2
MQZ	McQueen's Vall	14.33	203	PN	P	16 04 55.0	+1.2
WVZ	Waitaha Valley	14.53	209	PN	Pn	16 04 58.0	-0.6
RPZ	Rata Peaks	14.93	207	eP	P	16 04 59.7	-0.7
	111nm,1.5s						
RPZ				S	S	16 07 39.2	0.0
RPZ	Rata Peaks	14.93	207	P	P	16 05 00.7	+0.3
	1.5nm,0.3s,baz=45,slow=8.6,SNR=6.3						
RPZ				S	S	16 07 39.2	0.0
	6.5nm,0.3s,baz=344,slow=18,SNR=13						
DZM	Mont Dzumac	15.19	301	eP	P	16 05 03.2	-0.4
DZM	Mont Dzumac	15.19	301	P	P	16 05 02.0	-1.6
	0.7nm,0.3s,baz=69,slow=14,SNR=9.7						
NOUC	Port Laguerre	15.28	301	eP	P	16 05 04.7	+0.2
FOZ	Fox Glacier	15.37	211	PN	P	16 05 06.7	+1.5
ODZ	Otahua Downs	16.21	206	eP	P	16 05 13.0	-1.2
	225nm,1.7s						
ODZ				eP	Pn	16 05 13.7	-4.2
AFI	Afiamalu	18.23	25	eP	P	16 05 31.1	-5.1
	201nm,1.7s						
AFI				S	S	16 08 37.1	-7.2
AFI	Afiamalu	18.23	25	P	P	16 05 32.3	-3.9
	4.8nm,0.3s,baz=218,slow=22,SNR=8.3						
AFI				S	S	16 08 37.1	-7.2
	2.9nm,0.3s,baz=34,slow=22,SNR=3.7						
FUNA	Funafuti	22.13	357	eP	P	16 06 07.6	-5.5
ARMA	Armidale	24.76	263	eP	P	16 06 37.9	+1.1
	24nm,0.6s						
EIDS	Eidsvold	26.39	274	eP	P	16 06 52.5	+1.3
	25nm,0.8s						
HNR	Honiara	28.52	314	eP	P	16 07 08.3	-1.7
	86nm,1.0s						
CTA	Charters Tower	32.51	281	P	P	16 07 46.1	+1.3
CTA	Charters Tower	32.51	281	P	P	16 07 46.1	+1.3
	56nm,0.4s,baz=102,slow=11,SNR=105						
CTAO	Charters Tower	32.51	281	eP	P	16 07 45.5	+0.7
CTAO				pmax	pmax		
	comp=Z,77nm,0.5s						
CTAO	Charters Tower	32.51	281	eP	P	16 07 45.5	+0.7
	comp=Z,77nm,0.5s						
STKA	Stephens Creek	33.07	258	eP	P	16 07 50.7	+1.2
	comp=Z,5.1nm,1.0s						
STKA	Stephens Creek	33.07	258	P	P	16 07 52.0	+2.5
	comp=Z,19nm,0.8s,baz=91,slow=9.4,SNR=47						
BBOO	Buckleboo	37.56	255	eP	P	16 08 28.6	+1.3
	comp=Z,3μm,2.2s						
COEN	Coen	38.06	288	eP	P	16 08 33.4	+1.8
	comp=Z,135nm,0.9s						
ASAR	Alice Springs	41.73	268	P	P	16 09 01.8	+0.5
ASAR				ScP	ScP	16 14 05.0	+3.6
ASAR				S	S	16 14 49.0	+0.3
ASAR	Alice Springs	41.73	268	P	P	16 09 01.8	+0.5
	comp=Z,12nm,0.5s,baz=106,slow=7.1,SNR=446						
ASAR				ScP	ScP	16 14 05.0	+3.6
	comp=Z,2.9nm,0.7s,baz=110,slow=4.1,SNR=10						
ASAR				S	S	16 14 49.0	+0.3
	comp=Z,1.1nm,0.8s,baz=117,slow=15,SNR=6.0						
WRAB	Tennant Creek	42.74	273	eP	P	16 09 08.4	-1.0
WRAB				pmax	pmax		
	comp=Z,28nm,0.6s						
WRAB	Tennant Creek	42.74	273	eP	P	16 09 08.4	-1.0
	comp=Z,28nm,0.6s						
WRA	Warramunga Arr	42.75	273	P	P	16 09 09.7	+0.3
WRA				ScP	ScP	16 14 09.8	+4.2
WRA				S	S	16 15 02.9	-0.7
WRA	Warramunga Arr	42.75	273	P	P	16 09 09.7	+0.3
	comp=Z,31nm,0.5s,baz=111,slow=7.8,SNR=439						
WRA				ScP	ScP	16 14 09.8	+4.2
	comp=Z,2.1nm,0.8s,baz=110,slow=4.2,SNR=6.5						
WRA				S	S	16 15 02.9	-0.7
	comp=Z,3.1nm,0.7s,baz=109,slow=14,SNR=8.2						
VNDA	Vanda	47.62	185	P	P	16 09 50.5	+4.2
	comp=Z,38nm,2.6s						
VNDA				ScP	ScP	16 14 30.6	+5.9
VNDA	Vanda	47.62	185	P	P	16 09 50.5	+4.2
	comp=Z,0.4nm,0.5s,baz=356,slow=6.4,SNR=8.5						
VNDA				ScP	ScP	16 14 30.6	+5.9
	comp=Z,1.9nm,0.6s,baz=347,slow=4.1,SNR=15						
FITZ	Fitzroy Crossi	50.99	271	P	P	16 10 13.7	+1.3
FITZ	Fitzroy Crossi	50.99	271	P	P	16 10 13.7	+1.3
	comp=Z,23nm,0.8s,baz=142,slow=6.4,SNR=54						
QSPA	South Pole Qui	59.37	180	eP	P	16 11 11.4	+0.4
	comp=Z,21nm,0.8s						
QSPA	South Pole Qui	59.37	180	P	P	16 11 15.5	+4.6
	comp=Z,22nm,0.6s,baz=11,slow=1.0,SNR=281						
SBUM	Sibu	72.67	284	P	P	16 12 35.3	+0.1
	comp=Z,11nm,1.1s						
KSM	Kuching	73.75	282	eP	P	16 12 40.4	-1.1
	comp=Z,19nm,1.1s						
KSM	Kuching	73.75	282	P	P	16 12 40.9	-0.6
	comp=Z,15nm,1.1s						
SYO	Syowa Base	76.47	194⇑	eP	P	16 12 56.5	+0.6
MJAR	Matsushiro Arr	77.75	326	P	P	16 13 02.4	-1.1
MJAR	Matsushiro Arr	77.75	326	P	P	16 13 02.4	-1.1
	comp=Z,4.2nm,0.8s,baz=168,slow=6.7,SNR=10						
MAT	Matsushiro	77.76	326	P	P	16 12 58.8	-4.6
SNAA	Sanae	77.85	179	eP	P	16 13 06.4	+2.9
SNAA	Sanae	77.85	179	eP	P	16 13 03.8	+0.3
	comp=Z,4.7nm,0.7s						
MAIT	Maitri	78.45	184	eP	P	16 12 59.8	-6.9
VNA1	Neumayer--Stat	78.71	177	eP	P	16 13 11.5	+3.4
JNU	Nakatsue	78.91	319	P	P	16 13 09.3	-0.5
JNU	Nakatsue	78.91	319	P	P	16 13 09.3	-0.5
	comp=Z,10.0nm,0.7s,baz=117,slow=6.7,SNR=7.1						
ERM	Erimo	80.12	333⇓	eP	P	16 13 15.2	-0.7
ERM				pmax	pmax		
	comp=Z,63nm,1.7s						
ASAJ	Asahikawa	82.12	334	P	P	16 13 27.2	+0.9
ASAJ	Asahikawa	82.12	334	P	P	16 13 27.2	+0.9
	comp=Z,9.0nm,0.8s,baz=196,slow=11,SNR=13						
KSRS	Korea Array	83.73	321	P	P	16 13 35.2	+0.6
	comp=Z,5.1nm,0.9s,baz=141,slow=5.3,SNR=24						
KSAR	Wonju Array Be	83.74	321	P	P	16 13 35.2	+0.5
YSS	Yuzh-Sakhalins	84.47	335⇓	iP	P	16 13 40.3	+2.3
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
PETK	Petropavlovsk-	85.81	347	P	P	16 13 44.8	+0.3
PETK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PETK	Petropavlovsk-	85.81	347	P	P	16 13 44.8	+0.3
PETK	Petropavlovsk-	85.81	347	P	P	16 13 44.8	+0.3
	comp=Z,8.8nm,0.6s,baz=131,slow=6.7,SNR=27						
USRK	Ussuriysk Arra	86.69	327	P	P	16 13 49.8	+0.9
	comp=Z,6.0nm,0.7s,baz=117,slow=2.8,SNR=8.4						
MDJ	Mudanjiang	88.14	326	P	P	16 13 53.9	-1.9
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,54nm,3.8s						
HABR	Khabarovsk	88.69	332	eP	P	16 13 56.6	-1.6
HABR				e		16 17 32.0	
HABR				PPP	PPP	16 19 31.7	
HABR				eS	SKSac	16 23 46.3	-2.6
HABR						16 24 12.9	
HABR				SS	SS	16 30 13.4	-0.2
HABR				SSS	SSS	16 33 54.8	
HABR				MLR	MLR		
	comp=Z,62nm,22.0s						
NVAR	Mina Array Bea	89.42	44	P	P	16 14 03.2	+1.0
NVAR	Mina Array Bea	89.42	44	P	P	16 14 03.2	+1.0
	comp=Z,1.8nm,1.0s,baz=218,slow=7.6,SNR=7.7						
CN2	Changchun	89.59	324	eP	P	16 14 01.6	-1.0
CN2				esP	sP	16 16 19.0	+5.3
CN2				eS	S	16 24 18.3	-0.9
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA	Guiyang	90.54	301	eP	P	16 14 05.6	-1.9
GYA				pP	pP	16 15 39.7	+1.4
GYA				sP	sP	16 16 21.0	+2.3
GYA				PP	PP	16 17 51.4	+2.2
GYA				SKS	SKSac	16 23 57.9	-3.1
GYA				S	S	16 24 27.0	-1.8
GYA				sS	sS	16 27 12.6	+2.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.8s						
KLR	Kul'dur	90.65	331	eP	P	16 14 04.0	-3.3
KMI	Kunming	92.76	298	P	P	16 14 14.7	-3.2
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CD2	Chengdu	95.12	303	eP	P	16 14 24.4	-4.0
CD2				pP	pP	16 16 00.0	+0.7
CD2				sP	sP	16 16 39.2	-0.5
CD2				PP	PP	16 18 25.0	+0.4
CD2				SKS	SKSac	16 24 20.8	-4.9
CD2				S	S	16 25 04.5	-4.1
CD2				sS	sS	16 27 51.7	0.0
CD2				SS	SS	16 31 50.2	+4.1
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,90nm,4.8s						
HHC	Hu-ho-hao-te	95.49	315	eP	P	16 14 26.3	-3.6
HHC				pP	pP	16 16 02.1	+1.2
HHC				sP	sP	16 16 43.7	+2.4
HHC				PP	PP	16 18 28.0	+0.6
HHC				SKS	SKSac	16 24 21.6	-5.7
HHC				S	S	16 25 06.3	-5.2
HHC				sS	sS	16 27 56.5	+1.8
HHC				SS	SS	16 31 53.6	+2.4
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.1s						
SEY	Seymchan	96.01	348⇓	eP	P	16 14 29.8	-1.7
PDAR	Pinedale Array	97.33	44	PKKPbc	PKKPbc	16 31 17.4	+1.6
PDAR	Pinedale Array	97.33	44	PKKPbc	PKKPbc	16 31 17.4	+1.6
	comp=Z,0.5nm,0.5s,baz=90,slow=4.4,SNR=4.3						
LZH	Lanzhou	97.83	307	eP	P	16 14 36.9	-3.7
LZH				pP	pP	16 16 15.0	+3.2
LZH				sP	sP	16 16 54.6	+2.5
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
BILL	Bilibino	99.05	355⇓	eP	Pdif	16 14 43.9	-1.1
BILL				e*PP	pP	16 16 13.4	-2.9
BILL				ePS	PS	16 27 56.4	-3.8
BILL				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YKA	Yellowknife Ar	106.35	26	Pdif	Pdif	16 15 18.1	+0.5
YKA				PKiKP	PKiKP	16 19 26.5	+0.1
YKA	Yellowknife Ar	106.35	26	Pdiff	Pdif	16 15 18.1	+0.5
	comp=Z,0.2nm,0.4s,baz=216,slow=23,SNR=4.6						
YKA				PKiKP	PKiKP	16 19 26.5	+0.1
	comp=Z,0.3nm,0.5s,baz=251,slow=1.5,SNR=6.2						
WMQ	Urumqi	112.36	309	ePKP		16 19 30.6	
BOSA	Boshof	116.40	204	PKP	PKPdf	16 19 48.4	+1.5
BOSA	Boshof	116.40	204	PKP	PKPdf	16 19 48.4	+1.5
	comp=Z,2.3nm,0.8s,baz=22,slow=4.2,SNR=6.0						
MKAR	Makanchi Array	116.95	310	PKIKP	PKPdf	16 19 47.1	-0.1
MKAR						16 30 16.7	
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	116.95	310	PKP	PKPdf	16 19 47.0	-0.1
MKAR				PKKPbc	PKKPab	16 30 16.6	-0.5
MKAR	Makanchi Array	116.95	310	PKP	PKPdf	16 19 47.0	-0.1
	comp=Z,1.4nm,0.6s,baz=211,slow=1.3,SNR=30						
MKAR				PKKPbc	PKKPab	16 30 16.6	-0.5
	comp=Z,0.3nm,0.4s,baz=278,slow=3.5,SNR=6.4						
ZALV	Zalesovo Beam	117.38	319	PKIKP	PKPdf	16 19 47.7	0.0
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	117.38	319	PKP	PKPdf	16 19 47.7	0.0
ZALV	Zalesovo Beam	117.38	319	PKP	PKPdf	16 19 47.7	0.0
	comp=Z,0.7nm,0.4s,baz=132,slow=2.2,SNR=5.0						
KSH	Kashi	119.24	301	ePKP	PKPdf	16 19 53.1	+1.2
KSH				eSKS	SKSdf	16 26 23.7	-2.3
KSH				AMB	AMB		
	comp=Z,95nm,4.3s						
KURK	Kurchatov	120.30	314	PKIKP	PKPdf	16 19 53.4	0.0
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	Kurchatov	120.30	314	PKP	PKPdf	16 19 53.4	0.0
KURBB	Kurchatov Arra	120.33	314	PKP	PKPdf	16 19 53.4	0.0
	comp=Z,5.5nm,0.8s,baz=108,slow=2.0,SNR=62						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AAK	Ala-Archa	121.17	304	PKIKP	PKPdf	16 19 56.7	+1.2
AAK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AAK	Ala-Archa	121.17	304	PKP	PKPdf	16 19 56.7	+1.2
AAK	Ala-Archa	121.17	304	PKP	PKPdf	16 19 56.7	+1.2
	comp=Z,2.7nm,0.6s,baz=154,slow=2.6,SNR=7.4						
BVAR	Borovoye Array	125.69	316	PKIKP	PKPdf	16 20 04.2	+0.5
BVAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BVAR	Borovoye Array	125.69	316	PKP	PKPdf	16 20 04.2	+0.5
BVAR	Borovoye Array	125.69	316	PKP	PKPdf	16 20 04.2	+0.5
	comp=Z,8.3nm,0.9s,baz=110,slow=2.2,SNR=22						
BRVK	Borovoye	125.76	316c	*i* PKIKP	PKPdf	16 20 04.4	+0.6
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ARU	Arti	132.48	320	*i* PKIKP	PKPdf	16 20 16.7	+0.2
ARU						16 22 43.0	
AKTO	Aktyubinsk	133.32	312	PKIKP	PKPdf	16 20 19.3	+1.0
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AKTO	Aktyubinsk	133.32	312	PKP	PKPdf	16 20 19.3	+1.0
AKTO	Aktyubinsk	133.32	312	PKP	PKPdf	16 20 19.3	+1.0
	comp=Z,3.7nm,0.7s,baz=104,slow=2.7,SNR=13						
ARCES	ARCESS Array B	138.62	347	PKP	PKPdf	16 20 29.6	+2.1
ARCES	ARCESS Array B	138.62	347	PKhKP	PKPpre	16 20 18.1	
	comp=Z,3.4nm,0.7s,baz=85,slow=2.0,SNR=10						
ARCES				PKP	PKPdf	16 20 29.6	+2.1
	comp=Z,5.4nm,0.7s,baz=86,slow=1.6,SNR=12						
JOF	Joensuu	142.22	337	*e*p	PKPpre	16 20 29.7	
	comp=Z,4.1nm,0.5s						
JOF	Joensuu	142.22	337	*e*PKHKP	PKPpre	16 20 29.7	
JOF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
VRHR	Novokhopersk	143.44	316	*e*PKIKP	PKPbc	16 20 34.8	+0.1
VRHR				pmax	pmax		
	comp=N,3.0nm,0.5s						
VRHR				pmax	pmax		
	comp=E,4.0nm,0.5s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KBZ	Khabaz	144.16	303	PKIKP	PKPdf	16 20 38.4	+0.2
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KBZ	Khabaz	144.16	303	PKP	PKPdf	16 20 38.4	+0.2
KBZ	Khabaz	144.16	303	PKP	PKPdf	16 20 38.4	+0.2
	comp=Z,8.9nm,0.7s,baz=153,slow=1.6,SNR=20						
KIV	Kislovodsk	144.28	304⇑	*e*PKIKP	PKPbc	16 20 37.2	-0.6
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KAF	Kangasniemi	144.40	339	*e*p	PKPbc	16 20 36.2	-1.3
	comp=Z,37nm,0.5s						
KAF	Kangasniemi	144.40	339	*e*PKIKP	PKPbc	16 20 36.2	-1.3
KAF				pmax	pmax		
	comp=Z,37nm,0.5s						
OBN	Obninsk	144.66	324⇑	*e*PKIKP	PKPbc	16 20 38.3	-0.2
OBN				*e*		16 27 04.1	
OBN				*e*SS	SS	16 42 12.7	-2.5
OBN				pmax	pmax		
	comp=Z,36nm,0.6s						
VSR	Storozhevoye	144.86	317	*e*PKIKP	PKPbc	16 20 39.3	0.0
VSR				pmax	pmax		
	comp=Z,80nm,0.7s						
VSR				pmax	pmax		
	comp=N,10.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,20nm,0.6s						
VORD	Divnogorie	144.87	316	*e*PKIKP	PKPbc	16 20 39.4	+0.1
VORD				pmax	pmax		
	comp=N,20nm,1.0s						
VORD				pmax	pmax		
	comp=E,30nm,1.0s						
VORD				pmax	pmax		
	comp=Z,70nm,1.0s						
FINES	FINESS Array B	144.98	339	PKP	PKPbc	16 20 39.3	0.0
FINES	FINESS Array B	144.98	339	PKP	PKPbc	16 20 39.3	0.0
	comp=Z,82nm,0.8s,baz=46,slow=5.5,SNR=124						
MOL	Molde	147.83	354	*e*P	PKPbc	16 20 47.6	+0.3
ANN	Anapa	147.84	306	*i* PKP2	PKPbc	16 20 47.9	0.0
ANN				pmax	pmax		
	comp=Z,42nm,0.8s						
NB2	NORSAR Subarra	148.86	350	PKP	PKPbc	16 20 50.0	0.0
	comp=Z,7.5nm,0.7s,baz=17,slow=2.6						
NB2	NORSAR Subarra	148.86	350	PKP	PKPbc	16 20 50.2	+0.1
	comp=Z,7.9nm,0.7s,baz=17,slow=2.6						
NB2	NORSAR Subarra	148.86	350	PKP	PKPbc	16 20 50.2	+0.1
	baz=17,slow=2.6						
NOA	NORSAR Array B	148.86	350	PKPbc	PKPbc	16 20 50.1	+0.1
NOA	NORSAR Array B	148.86	350	PKPbc	PKPbc	16 20 50.1	+0.1
	comp=Z,12nm,0.7s,baz=15,slow=4.2,SNR=34						
IZAR	Zarasai	149.06	331	*e*P	PKPbc	16 20 51.1	+0.6
IZAR				AMB	AMB	16 20 57.0	
	comp=Z,10nm,1.2s						
ISAL	Salakas	149.23	331	*e*P	PKPbc	16 20 51.5	+0.6
ISAL				AMB	AMB	16 20 58.8	
	comp=Z,13nm,1.2s						
IIGN	Ignalina	149.34	331	*e*P	PKPbc	16 20 52.0	+0.7
IIGN				AMB	AMB	16 20 58.1	
	comp=Z,11nm,0.7s						
RUND	Rundenannen	150.14	355	*e*P	PKPbc	16 20 52.8	-0.3
KONO	Kongsberg	150.43	351	*e*P	PKPbc	16 20 54.4	+0.6
KONO				AMB	AMB	16 20 54.8	
	comp=Z,24nm,0.8s						
ODD1	Odda	150.53	354	*e*P	PKPbc	16 20 52.8	-1.2
AKASG	Malin Array Be	150.72	321	PKIKP	PKPdf	16 20 50.1	+1.4
AKASG				pmax	pmax		
	comp=Z,22nm,0.8s						
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.3s						
AKASG	Malin Array Be	150.72	321	PKP	PKPdf	16 20 50.1	+1.4
AKASG				PKPbc	PKiKP	16 20 55.2	0.0
AKASG	Malin Array Be	150.72	321	PKP	PKPdf	16 20 50.1	+1.4
	comp=Z,22nm,0.8s,baz=54,slow=2.6,SNR=8.0						
AKASG				PKPbc	PKiKP	16 20 55.2	0.0
	comp=Z,4.5nm,0.3s,baz=48,slow=3.2,SNR=63						
SUW	Suwalki	151.54	331	*e*PKIKP	PKPbc	16 20 57.0	+0.6
SUW				*e*		16 21 06.3	
SUW	Suwalki	151.54	331	*e*PKP	PKPbc	16 20 57.0	+0.6
SUW				*e*		16 21 06.3	
BRTR	Keskin Array B	151.55	297	PKPbc	PKPbc	16 20 57.6	+0.5
BRTR	Keskin Array B	151.55	297	PKPbc	PKPbc	16 20 57.6	+0.5
	comp=Z,7.2nm,0.6s,baz=123,slow=4.6,SNR=36						
HOMB	Homborsund	151.92	351	*e*P	PKPbc	16 20 58.0	+0.8
HOMB				AMB	AMB	16 20 58.6	
	comp=Z,23nm,0.6s						
SNART	Snartemo	152.01	352	*e*P	PKPbc	16 20 56.2	-1.1
SNART				AMB	AMB	16 20 57.8	
	comp=Z,26nm,0.9s						
VRI	Vrincioaia	154.57	314	⇑PKP2	PKPab	16 21 20.7	+0.8
VRI	Vrincioaia	154.57	314⇑	*i*P	PKPab	16 21 20.7	+0.8
BURAR	Bucovina Array	154.60	319⇑	*i*P	PKPab	16 21 20.9	+0.8
PLOR	Plostina	154.63	314	⇑PKP2	PKPab	16 21 20.8	+0.6
PLOR	Plostina	154.63	314⇑	*i*P	PKPab	16 21 20.8	+0.6
MLR	Muntele Rosu	155.23	314⇑	*i*P	PKPab	16 21 23.5	+0.6
KOLS	Kolonicke sedl	155.41	324	*e*PKP2	PKPab	16 21 23.8	+0.4
KOLS	Kolonicke sedl	155.41	324	*e*PKP	PKPab	16 21 23.8	+0.4
STHS	Stebnicka Huta	155.60	326	*e*PKP2	PKPab	16 21 25.8	+1.6
STHS	Stebnicka Huta	155.60	326	*e*PKP	PKPab	16 21 25.8	+1.6
VOIR		155.81	314	⇓PKP2	PKPab	16 21 25.7	+0.3
VOIR		155.81	314⇓	*i*P	PKPab	16 21 25.7	+0.3
CRVS	Cervenica-Dubn	155.84	325	*e*PKP2	PKPab	16 21 23.8	-1.4
CRVS	Cervenica-Dubn	155.84	325	*e*PKP	PKPab	16 21 23.8	-1.4
ARR	Arges	156.10	314⇑	*i*P	PKPab	16 21 27.6	+1.0
DRGR		156.48	319	⇓PKP2	PKPab	16 21 28.8	+0.6
DRGR		156.48	319⇓	*i*P	PKPab	16 21 28.8	+0.6
KECS	Kecovo	156.60	325	*e*PKP2	PKPab	16 21 29.0	+0.5
KECS	Kecovo	156.60	325	*e*PKP	PKPab	16 21 29.0	+0.5
UPC	Upice	157.07	334	*e*PKP2	PKPab	16 21 31.0	+0.5
UPC	Upice	157.07	334	*e*PKPAB	PKPab	16 21 31.0	+0.5
DPC	Dobruska-Polom	157.07	333	*e*PKP2	PKPab	16 21 31.2	+0.7
DPC	Dobruska-Polom	157.07	333	*e*PKPAB	PKPab	16 21 31.2	+0.7
VYHS	Vyhne	157.39	327	*e*PKP2	PKPab	16 21 32.5	+0.5
VYHS	Vyhne	157.39	327	*e*PKP	PKPab	16 21 32.5	+0.5
CLL	Collm	157.43	339⇑	*i*PKP2	PKPab	16 21 32.0	+0.1
CLL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CLL	Collm	157.43	339⇑	*i*PKPab	PKPab	16 21 32.0	+0.1
	comp=Z,13nm,0.6s						
BRG	Berggiesshubel	157.50	337	*e*PKP	PKPab	16 21 32.2	-0.1
	comp=Z,8.3nm,0.8s						
BRG	Berggiesshubel	157.50	337	*e*PKP2	PKPab	16 21 32.2	-0.1
BRG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PVCC	Panska Ves	157.58	336	*e*PKP2	PKPab	16 21 31.1	-1.5
PVCC	Panska Ves	157.58	336	*e*PKPAB	PKPab	16 21 31.1	-1.5
SMOL	Smolenice	158.02	329	*e*PKP2	PKPab	16 21 35.6	+0.9
SMOL	Smolenice	158.02	329	*e*PKP	PKPab	16 21 35.6	+0.9
PRU	Pruhonice	158.04	335	*e*PKP2	PKPab	16 21 35.0	+0.4
PRU	Pruhonice	158.04	335	*e*PKPAB	PKPab	16 21 35.0	+0.4
TREC	Trest	158.24	333	*e*PKP2	PKPab	16 21 36.0	+0.4
TREC	Trest	158.24	333	*e*PKPAB	PKPab	16 21 36.0	+0.4
VTS	Vitosha	158.30	309	⇑PKP2	PKPab	16 21 35.4	-0.9
VTS	Vitosha	158.30	309⇑	*i*P	PKPab	16 21 35.4	-0.9
ZST	Bratislava	158.41	329	*e*PKP2	PKPab	16 21 36.2	-0.1
ZST	Bratislava	158.41	329	*e*PKP	PKPab	16 21 36.2	-0.1
NKC	Novy Kostel	158.54	339	*e*PKP2	PKPab	16 21 37.1	+0.2
NKC	Novy Kostel	158.54	339	*e*PKPAB	PKPab	16 21 37.1	+0.2
KHC	Kasperske Hory	159.10	335	*e*PKP2	PKPab	16 21 39.6	+0.2
KHC	Kasperske Hory	159.10	335	*e*PKPAB	PKPab	16 21 39.6	+0.2
GERES	GERESS Array B	159.29	335	PKPab	PKPab	16 21 39.9	-0.4
GERES	GERESS Array B	159.29	335	PKPab	PKPab	16 21 39.9	-0.4
	comp=Z,1.2nm,0.5s,baz=35,slow=4.9,SNR=13						
TORD	Torodi Ar. Bea	162.45	184	PKP	PKPdf	16 21 05.8	+1.0
TORD				PKPab	PKPab	16 21 57.0	+2.3
TORD				pPKPab	pPKPab	16 23 27.1	+1.0
TORD	Torodi Ar. Bea	162.45	184	PKP	PKPdf	16 21 05.8	+1.0
	comp=Z,2.2nm,0.9s,baz=328,slow=2.1,SNR=9.2						
TORD				PKPab	PKPab	16 21 57.0	+2.3
	comp=Z,6.3nm,0.6s,baz=174,slow=4.6,SNR=36						
TORD				pPKPab	pPKPab	16 23 27.1	+1.0
	comp=Z,2.2nm,0.9s,baz=182,slow=2.7,SNR=4.8						
ESDC	Sonseca Array	170.40	21	PKP	PKPdf	16 21 11.7	+1.5
ESDC	Sonseca Array	170.40	21	PKP	PKPdf	16 21 11.7	+1.5
	comp=Z,0.5nm,0.5s,baz=353,slow=2.0,SNR=8.3						

ISCJB ***05*** *16:08:31.7±0.7, 21°.18S±0°.05×67°.7W±0°.1, h192km±10km, mb3.7/2, Error ellipse: s-maj=15.4km s-min=7.4km az=2.4*
GUC ***05*** *16:08:31.7±1.0, 21°.27S×67°.83W, h193km±13km, ML3.9*
IDC ***05*** *16:08:36.1±3.8, 20°.79S×67°.14W, h208km±23km, mb3.6/2, mb1 3.5/4, mb1mx3.2/19, mbtmp3.3/4, Error ellipse: s-maj=68.5km s-min=22.4km az=52.0*
ISC 05 16:08:32.1±0.9**, 21°.16S**±0°.05×**67°.7W**±0°.1**, h185**km±11km**, n15, σ1s.15**/23**, 2C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	Plate Boundary	1.58	246⇓	*i*P	Pn	16 09 05.9	+0.5
PB09				*i* S	Sn	16 09 31.9	+0.7
PB09				AML	AML	16 09 32.6	
	comp=N,760nm,0.5s						
PB01	Plate Boundary	1.68	274	*e*P	Pn	16 09 06.4	0.0
PB01				*i* S	Sn	16 09 33.0	+0.2
PB01				AML	AML	16 09 35.9	
	comp=N,386nm,0.2s						
LVC	Limon Verde	1.84	218⇓	*i*P	Pn	16 09 07.8	-0.3
LVC				*i* S	Sn	16 09 35.2	-0.9
PB04	Plate Boundary	2.00	236	*e*P	Pn	16 09 15.7	+6.2
PB04				*i* S	Sn	16 09 48.9	+10
PB04				AML	AML	16 09 51.8	
	comp=N,272nm,0.3s						
PB07	Plate Boundary	2.12	254⇓	*i*P	Pn	16 09 10.9	-0.1
PB07				*i* S	Sn	16 09 40.5	-0.7
PB07				AML	AML	16 09 41.0	
	comp=E,544nm,0.3s						
MACH	Maria Elena	2.18	241	*e*P	Pn	16 09 11.6	-0.1
MACH				*i* S	Sn	16 09 41.7	-0.9
HMBC	Humberstone	2.24	293⇑	*i*P	Pn	16 09 12.0	-0.2
HMBC				*e*S	Sn	16 09 42.7	-0.7
HMBC				AML	AML	16 09 47.2	
	comp=N,642nm,0.4s						
MNMC	Minimini	2.70	318⇑	*i*P	Pn	16 09 18.3	+0.6
MNMC				*i* S	Sn	16 09 53.8	+0.7
MNMC				AML	AML	16 09 55.4	
	comp=N,497nm,0.2s						
CEN1	Los Morros	3.22	226	*e*P	Pn	16 09 25.9	+2.2
CEN1				*e*S	Sn	16 10 06.2	+2.2
CEN1				AML	AML	16 10 07.0	
	comp=N,90nm,0.6s						
ANCH	Antofagasta	3.56	225	*e*S	Sn	16 10 08.9	-2.5
LPAZ	La Paz	4.86	355	P	Pn	16 09 45.6	+0.5
	comp=N,4.3nm,0.3s,baz=154,slow=7.4,SNR=69						
LPAZ				S	Sn	16 10 41.8	-0.4
	baz=288,slow=21,SNR=1.2						
CPUP	Villa Florida	10.79	120	P	Pn	16 11 02.5	+0.7
	comp=N,0.3nm,0.3s,baz=284,slow=8.3,SNR=2.9						
TORD	Torodi Ar. Bea	76.17	70	P	P	16 19 58.5	-1.8
	comp=N,1.2nm,0.5s,baz=257,slow=5.4,SNR=18						
YKA	Yellowknife Ar	91.25	340	P	P	16 21 16.5	+0.7
	comp=N,0.4nm,0.5s,baz=132,slow=4.4,SNR=8.8						
MKAR	Makanchi Array	144.69	36	PKP	PKPab	16 27 46.3	+0.3
	comp=N,0.9nm,0.7s,baz=318,slow=3.4,SNR=8.6						

NIED ***05*** *16:12:00, 46°.60N×153°.10E, h32km, Mw4.3 Best double couple: M0 3.38000×10^15 NP1:φs131.00000°, δ88.00000°, λ-29.00000°. NP2:φs223.00000°, δ61.00000°, λ-177.00000°.*
JMA ***05*** *16:12:34.8±1.0, 46°.62N×153°.09E, h30km, M5.2*
ISCJB ***05*** *16:12:35.9±0.5, 46°.54N±0°.04×152°.82E±0°.04, h48km±4km, mb4.6/98, MS3.7/23, Error ellipse: s-maj=7.5km s-min=3.8km az=147.2*
BJI ***05*** *16:12:35.3, 46°.80N×152°.89E, h48km, mB4.7/19, mb4.6/32, Ms4.0/17, Ms7 4.0/19*
MOS ***05*** *16:12:36.9±1.0, 46°.67N×152°.82E, h53km, mb4.8/40, Error ellipse: s-maj=7.6km s-min=5.0km az=95.8*
NEIC ***05*** *16:12:36.8±0.7, 46°.62N×152°.76E, h38km±6km, mb4.8/29, Error ellipse: s-maj=7.4km s-min=4.4km az=152.0*
SKHL ***05*** *16:12:36.8±1.0, 46°.62N×153°.13E, h57km±19km, mb5.1/7, Ms3.7/4, msh4.5/1*
IDC ***05*** *16:12:39.7±2.3, 46°.75N×152°.75E, h62km±20km, mb4.1/28, mb1 4.3/32, mb1mx4.2/36, mbtmp4.1/32, MS3.6/19, Ms1 3.6/19, ms1mx3.4/46, Error ellipse: s-maj=13.7km s-min=10.1km az=149.0*
SZGRF ***05*** *16:12:47.5, 48°.24N×151°.96E, h33km, mb4.8, Kuril Islands, Russia*
ISC 05 16:12:37.9±0.5**, 46°.62N**±0°.05×**152°.73E**±0°.04**, h49**km±3km**:pP-P, n344, σ1s.39**/379**, mb4.6**/98**, MS3.9**/23**, 18C-27D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.67	249d	*i*PN	Pn	16 13 34.0	+2.0
KUR				*i* S	Sn	16 14 16.9	+2.9
KUR				pmax	pmax		
	comp=E,68nm,0.2s						
KUR				pmax	pmax		
	comp=Z,195nm,0.4s						
KUR				pmax	pmax		
	comp=N,109nm,0.2s						
KUR				smax	smax		
	comp=E,457nm,0.6s						
KUR				smax	smax		
	comp=N,216nm,0.3s						
KUR				MLR	MLR		
	comp=E,515nm,16.0s						
KUR				MLR	MLR		
	comp=Z,443nm,16.0s						
KUR	Kuril'sk	3.67	249⇓	*i*P	Pn	16 13 34.1	+2.0
KUR				AMB	AMB	16 13 34.6	
	comp=Z,380nm,0.5s						
KUR				*i* S	Sn	16 14 17.0	+2.9
KUR				A	A	16 14 31.3	
	comp=Z,950nm,0.6s						
KUR				A	A	16 14 31.3	
	comp=Z,1μm,0.6s						
KUR				AMS	AMS	16 14 58.7	
	comp=Z,515nm,16.0s						
KUR				AMS	AMS	16 14 58.7	
	comp=Z,443nm,16.0s						
SKR	Severo-Kuril's	4.64	28	*e*PN	Pn	16 13 42.5	-2.8
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=E,60nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				MLR	MLR		
	comp=E,900nm,16.0s						
SKR				MLR	MLR		
	comp=Z,900nm,16.0s						
SKR	Severo-Kuril's	4.64	28	*e*P	Pn	16 13 42.5	-2.8
SKR				AMB	AMB	16 13 45.5	
	comp=Z,80nm,0.5s						
SKR				AMB	AMB	16 13 45.5	
	comp=Z,60nm,0.5s						
SKR				AMB	AMB	16 13 45.5	
	comp=Z,90nm,0.5s						
SKR				*e*S	Sn	16 14 31.0	-6.8
SKR				A	A	16 14 47.8	
	comp=Z,1μm,10.0s						
SKR				A	A	16 14 47.8	
	comp=Z,320nm,0.5s						
SKR				A	A	16 14 47.8	
	comp=Z,270nm,0.5s						
SKR				A	A	16 14 47.8	
	comp=Z,80nm,0.5s						
SKR				AMS	AMS	16 15 38.0	
	comp=Z,900nm,16.0s						
SKR				AMS	AMS	16 15 38.0	
	comp=Z,900nm,16.0s						
YUK	Yuzh-Kuril'sk	5.49	244d	*i*PN	Pn	16 13 59.4	+2.4
YUK				*i* S	Sn	16 15 02.2	+3.4
YUK				pmax	pmax		
	comp=Z,202nm,0.4s						
YUK				pmax	pmax		
	comp=N,168nm,0.5s						
YUK				pmax	pmax		
	comp=E,117nm,0.4s						
YUK				pmax	pmax		
	comp=Z,57μm,0.2s						
YUK				smax	smax		
	comp=E,717nm,0.6s						
YUK				smax	smax		
	comp=N,565nm,0.7s						
YUK	Yuzh-Kuril'sk	5.49	244⇓	*i*P	Pn	16 13 59.5	+2.4
YUK				AMB	AMB	16 14 03.2	
	comp=N,170nm,0.5s						
YUK				AMB	AMB	16 14 03.2	
	comp=N,120nm,0.5s						
YUK				AMB	AMB	16 14 03.2	
	comp=N,200nm,0.5s						
YUK				*i* S	Sn	16 15 02.3	+3.4
YUK				A	A	16 15 23.3	
	comp=N,570nm,0.6s						
YUK				A	A	16 15 23.3	
	comp=N,720nm,0.6s						
NEM2	Nemuro 2	5.93	239	P	Pn	16 14 02.6	-0.5
NEM2				*e*S	Sn	16 15 07.5	-2.1
JRA	Rausu	6.00	246	P	Pn	16 14 05.8	+1.7
JNK	Nakash	6.43	245	P	Pn	16 14 11.4	+1.4
JNK				*e*S	Sn	16 15 23.7	+1.7
JTKR	Abashiri--Toko	6.76	250	P	Pn	16 14 17.1	+2.6
JAK	Akkeshi	6.77	240	P	Pn	16 14 14.1	-0.4
JAK				*e*S	Sn	16 15 28.0	-2.2
YSS	Yuzh-Sakhalins	6.86	276⇑	*i*PN	Pn	16 14 20.2	+4.4
YSS				pmax	pmax		
	comp=Z,70nm,0.3s						
YSS				pmax	pmax		
	comp=E,80nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,18.0s						
YSS	Yuzh-Sakhalins	6.86	276⇑	*i*P	Pn	16 14 20.2	+4.4
YSS				AMB	AMB	16 14 22.2	
	comp=Z,70nm,0.3s						
YSS				AMB	AMB	16 14 22.2	
	comp=Z,80nm,0.9s						
YSS				*e*S	Sn	16 15 35.4	+3.0
YSS				*e*LQ	LQ	16 16 04.0	
YSS				AMS	AMS	16 16 44.0	
	comp=Z,400nm,18.0s						
JMP	Maruseppu	7.11	252	P	Pn	16 14 22.2	+3.0
JAR	Ashorobuto	7.17	246	P	Pn	16 14 22.0	+1.9
JAR				*e*S	Sn	16 15 42.1	+1.9
PETK	Petropavlovsk-	7.24	24	PN	Pn	16 14 21.7	+0.7
PETK	Petropavlovsk-	7.24	24	P	Pn	16 14 21.7	+0.7
PETK	Petropavlovsk-	7.24	24	P	Pn	16 14 21.7	+0.7
	comp=Z,1.2nm,0.3s,baz=185,slow=13,SNR=18						
JSE	Soyaes	7.29	260	P	Pn	16 14 25.9	+4.3
JOB	Onbets	7.34	243	P	Pn	16 14 23.0	+0.6
JOB				*e*S	Sn	16 15 43.1	-1.3
PET	Petropavlovsk	7.46	29	*e*PN	Pn	16 14 26.2	+2.2
JKK2	Kamakawa 2	7.56	252	P	Pn	16 14 28.7	+3.2
ASAJ	Asahikawa	7.56	254	*e*Pn	Pn	16 14 24.9	-0.6
ASAJ	Asahikawa	7.56	254	P	Pn	16 14 29.3	+3.8
ASAJ	Asahikawa	7.56	254	P	Pn	16 14 29.5	+4.0
	comp=Z,4.2nm,0.3s,baz=80,slow=13,SNR=51						
ASAJ				LR	LR	16 17 16.3	
	comp=Z,276nm,19.6s,baz=223,slow=36						
UGL	Uglegorsk	7.58	293	*e*PN	Pn	16 14 30.0	+4.3
UGL				pmax	pmax		
	comp=Z,98nm,0.9s						
UGL				MLR	MLR		
	comp=N,400nm,17.0s						
UGL				MLR	MLR		
	comp=E,500nm,17.0s						
UGL	Uglegorsk	7.58	293	*e*P	Pn	16 14 30.0	+4.3
UGL				AMB	AMB	16 14 31.0	
	comp=E,98nm,0.9s						
UGL				*e*L	L	16 16 30.0	
UGL				AMS	AMS	16 17 10.0	
	comp=E,400nm,17.0s						
UGL				AMS	AMS	16 17 10.0	
	comp=E,500nm,17.0s						
JWK2	Keihoku	7.66	264	P	Pn	16 14 32.7	+5.9
JCH	Churui	7.79	242	P	Pn	16 14 28.4	-0.2
JCH				*e*S	Sn	16 15 53.0	-2.4
TYV	Tymovskoe	7.89	306	*e*P	Pn	16 14 33.5	+3.6
TYV				AMB	AMB	16 14 36.2	
	comp=E,22nm,1.0s						
TYV				AMB	AMB	16 14 36.2	
	comp=E,13nm,0.8s						
TYV				AMB	AMB	16 14 36.2	
	comp=E,31nm,0.8s						
JFR	Furan	7.99	248	P	Pn	16 14 33.5	+2.2
JAB	Ashibetsu	8.07	251	P	Pn	16 14 35.7	+3.4
JEM	Erimo	8.27	240	P	Pn	16 14 35.8	+0.7
ERM	Erimo	8.27	240c	*i*PN	Pn	16 14 36.5	+1.4
ERM	Erimo	8.27	240	*e*Pn	Pn	16 14 36.0	+1.0
JBT2	Biratori 2	8.32	246	P	Pn	16 14 36.5	+0.6
JNBK	Urakawa-nobuka	8.35	242	P	Pn	16 14 35.9	-0.4
JEW	Eniwo	8.88	249	P	Pn	16 14 45.5	+2.1
JNB	Noboribetsu	9.32	248	P	Pn	16 14 49.9	+0.3
JNB				*e*S	Sn	16 16 30.7	-2.3
JKB	Kayabe	9.63	245	P	Pn	16 14 53.0	-0.8
JKB				*e*S	Sn	16 16 35.9	-4.7
JSH	Shimam	9.88	251	P	Pn	16 14 58.9	+1.8
JYM2	Yakumo 2	9.93	247	P	Pn	16 14 58.2	+0.4
NKL	Nikolayevsk	10.15	314	*i* P	Pn	16 15 02.0	+1.3
NKL				AMB	AMB	16 15 03.5	
	comp=E,30nm,1.0s						
NKL				AMB	AMB	16 15 03.5	
	comp=E,20nm,1.0s						
NKL				AMB	AMB	16 15 03.5	
	comp=E,43nm,1.0s						
NKL				*e*L	L	16 18 00.5	
NKL				AMS	AMS	16 19 42.0	
	comp=E,400nm,15.0s						
NKL				AMS	AMS	16 19 42.0	
	comp=E,500nm,15.0s						
JTM	Tenmabayashi	10.26	240	P	Pn	16 15 00.3	-2.1
JANG	Nango	10.26	237	P	Pn	16 14 59.6	-2.8
JTH	Tanohata	10.36	234	P	Pn	16 15 00.9	-2.8
JTH				*e*S	Sn	16 16 47.6	-11
JOSM	Okushiri--Mats	10.52	249	P	Pn	16 15 06.5	+0.6
TEY	Ternei	11.37	268	*e*P	Pn	16 15 22.0	+4.5
JRG	Rokugo	11.42	235	P	Pn	16 15 16.8	-1.4
JIO	Ouri	11.70	230	P	Pn	16 15 18.4	-3.7
HABR	Khabarovsk	12.09	285	*e*PN	Pn	16 15 27.8	+0.5
HABR				pmax	pmax		
	comp=E,65nm,2.5s						
HABR				pmax	pmax		
	comp=Z,35nm,2.0s						
HABR				pmax	pmax		
	comp=N,28nm,2.0s						
HABR				MLR	MLR		
	comp=Z,202nm,16.0s						
JYA	Atsumi	12.49	235	P	Pn	16 15 30.5	-2.4
FX1	Attu Island--F	14.59	57	*e*Pn	Pn	16 15 59.5	-1.7
FX1	Attu Island--F	14.59	57	P	Pn	16 15 59.8	-1.4
	comp=Z,6.2nm,0.3s,baz=293,slow=16,SNR=18						
FX1				S	Sn	16 18 30.1	-11
	comp=Z,1.6nm,0.3s,baz=253,slow=14,SNR=4.6						
FX1				LR	LR	16 20 36.5	
	comp=Z,62nm,22.0s,baz=70,slow=33						
USRK	Ussuriysk Arra	14.76	268	P	Pn	16 16 05.5	+2.0
	comp=Z,1.4nm,0.3s,baz=80,slow=14,SNR=15						
USRK				LR	LR	16 21 30.7	
	comp=Z,177nm,20.8s,baz=36,slow=36						
MAJO	Matsushiro	14.79	232	*e*P	Pn	16 16 02.2	-1.8
MAJO	Matsushiro	14.79	232	*e*Pn	Pn	16 16 02.2	-1.8

MAT	Matsushiro	14.79	232	P	Pn	16 16 01.8	-2.2
MAT				eS	Sn	16 18 44.9	-1.7
MJAR	Matsushiro Arr	14.79	232	P	Pn	16 16 01.8	-2.2
MJAR	Matsushiro Arr	14.79	232	P	Pn	16 16 01.8	-2.2
	comp=Z,0.5nm,0.3s,baz=33,slow=12,SNR=6.5						
VLA	Vladivostok	15.18	264	⇑iP	Pn	16 16 10.2	+1.3
VLA				pmax	pmax		
	comp=Z,85nm,2.5s						
MDJ	Mudanjiang	16.30	271	P	P	16 16 24.7	-0.9
MDJ				pmax	pmax		
	comp=Z,13nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,45nm,3.5s						
MDJ				LR	LR		
	comp=N,31nm,5.4s						
MDJ				LR	LR		
	comp=E,70nm,7.0s						
MDJ				LR	LR		
	comp=Z,170nm,10.8s						
MDJ	Mudanjiang	16.30	271	ePn	Pn	16 16 22.5	-0.8
	comp=Z,5.8nm,0.5s						
SEY	Seymchan	16.35	359	⇓eP	Pn	16 16 24.4	+0.7
AMKA	Amchitka	18.02	65	ePn	P	16 16 43.7	-0.8
CN2	Changchun	19.39	272	eP	P	16 17 00.0	+0.4
CN2				epP	pP	16 17 10.0	-0.9
CN2				esP	sP	16 17 16.2	-0.8
CN2				eS	S	16 20 30.4	-5.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				LR	LR		
	comp=N,200nm,12.0s						
CN2				LR	LR		
	comp=E,200nm,12.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
YAK	Yakutsk	20.29	328	eP	P	16 17 09.9	+0.8
YAK				e		16 17 28.0	
YAK				eS	Sn	16 20 57.2	-1.6
YAK				eSS	SnSn	16 21 19.7	+5.9
YAK				pmax	pmax		
	comp=Z,14nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,59nm,2.3s						
YAK				pmax	pmax		
	comp=N,46nm,2.2s						
YAK				pmax	pmax		
	comp=E,31nm,1.8s						
YAK				smax	smax		
	comp=N,34nm,2.0s						
YAK				smax	smax		
	comp=E,23nm,2.8s						
YAK				MLR	MLR		
	comp=Z,111nm,22.0s						
YAK				MLR	MLR		
	comp=N,110nm,17.0s						
KSRS	Korea Array	20.51	252	P	Pn	16 17 14.1	-0.3
	comp=N,9.3nm,0.6s,baz=55,slow=10,SNR=24						
KSRS				LR	LR	16 24 03.7	
	comp=N,68nm,20.4s,baz=348,slow=33						
KSAR	Wonju Array Be	20.54	252	P	Pn	16 17 14.1	-0.7
INCN	Inchon	21.34	254	eP	P	16 17 19.5	-1.2
	comp=N,21nm,0.7s						
JNU	Nakatsue	21.43	239	P	P	16 17 23.1	+1.3
	comp=N,8.1nm,1.0s						
JNU	Nakatsue	21.43	239	P	P	16 17 23.1	+1.3
	comp=N,15nm,0.9s,baz=61,slow=6.5,SNR=6.6						
JNU				LR	LR	16 24 52.6	
	comp=N,73nm,20.3s,baz=238,slow=34						
BILL	Bilibino	22.57	13	⇑iP	P	16 17 34.2	+0.5
BILL				e*PP	pP	16 17 47.1	+2.0
BILL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIXI	Tiksi	27.52	344	⇑eP	P	16 18 17.9	-1.4
TIXI				pmax	pmax		
	comp=Z,3.0nm,2.5s						
WAKE	Wake Island	29.57	153	eP	P	16 18 37.4	-0.6
	comp=Z,903nm,2.6s						
ULN	Ulaanbaatar	30.69	289	eP	P	16 18 48.3	+0.4
	comp=Z,5.0nm,0.9s						
SONM	Songino Array	31.13	289	P	P	16 18 52.7	+1.0
SONM				PcP	PcP	16 21 46.8	+0.9
SONM	Songino Array	31.13	289	P	P	16 18 52.7	+1.0
	comp=Z,2.2nm,0.8s,baz=74,slow=6.6,SNR=7.2						
SONM				PcP	PcP	16 21 46.8	+0.9
	comp=Z,0.8nm,0.6s,baz=101,slow=1.5,SNR=4.5						
SONM				LR	LR	16 32 25.3	
	comp=Z,136nm,18.5s,baz=76,slow=38						
ZAK	Zakamensk	32.49	295	eP	P	16 19 02.0	-1.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KDAK	Kodiak Island	34.38	51	P	P	16 19 19.0	-0.9
KDAK	Kodiak Island	34.38	51	P	P	16 19 19.0	-0.9
	comp=Z,8.0nm,0.7s,baz=306,slow=7.4,SNR=10						
XAN	Xi’an	35.24	265	P	P	16 19 28.3	+0.7
XAN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SML	Sawmill	36.24	43	eP	P	16 19 35.7	-0.2
SML				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SML	Sawmill	36.24	43	eP	P	16 19 35.7	-0.2
	comp=Z,2.9nm,1.0s						
COLA	College	36.40	38	eP	P	16 19 36.2	-0.9
COLA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
COLA	College	36.40	38	eP	P	16 19 36.2	-0.9
	comp=Z,5.4nm,0.8s						
ILAR	Eielson Array	36.81	38	P	P	16 19 40.8	+0.2
ILAR	Eielson Array	36.81	38	P	P	16 19 40.8	+0.2
	comp=Z,1.4nm,0.7s,baz=260,slow=7.1,SNR=18						
ENH	Enshi	37.09	259	eP	P	16 19 41.4	-2.0
	comp=Z,3.5nm,0.4s						
LZH	Lanzhou	37.63	272	eP	P	16 19 47.1	-1.0
LZH				pP	pP	16 19 57.5	-3.5
LZH				sP	sP	16 20 05.5	-1.3
LZH				eS	S	16 25 31.0	-3.4
LZH				SS	SnSn	16 28 08.3	-8.2
LZH				pmax	pmax		
	comp=Z,24nm,1.0s						
LZH				pmax	pmax		
	comp=Z,75nm,4.0s						
LZH				LR	LR		
	comp=N,220nm,13.1s						
LZH				LR	LR		
	comp=E,210nm,14.6s						
LZH				LR	LR		
	comp=Z,380nm,15.2s						
DOT	Dot Lake	38.09	40	eP	P	16 19 51.3	-0.2
	comp=Z,24nm,2.0s						
GTA	Gaotai	38.73	279	eP	P	16 19 58.8	+1.5
GTA				pP	pP	16 20 11.5	+1.3
GTA				sP	sP	16 20 16.2	+0.2
GTA				PcP	PcP	16 22 09.9	+1.8
GTA				S	ScP	16 25 52.7	+0.7
GTA				sS	sS	16 26 12.7	0.0
GTA				SS	SS	16 28 34.0	-8.6
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,47nm,8.3s						
GTA				LR	LR		
	comp=N,75nm,6.7s						
GTA				LR	LR		
	comp=E,73nm,10.0s						
GTA				LR	LR		
	comp=Z,64nm,11.2s						
CD2	Chengdu	40.61	265	P	P	16 20 13.9	+1.0
CD2				pP	pP	16 20 24.9	-1.0
CD2				sP	sP	16 20 29.8	-1.8
CD2				PP	PnPn	16 21 51.0	-0.3
CD2				S	S	16 26 18.8	-0.2
CD2				sS	sS	16 26 38.1	-2.8
CD2				SS	SS	16 29 13.9	-6.4
CD2				pmax	pmax		
	comp=Z,20nm,0.7s						
CD2				pmax	pmax		
	comp=Z,120nm,12.0s						
CD2				LR	LR		
	comp=N,90nm,11.9s						
CD2				LR	LR		
	comp=Z,120nm,11.2s						
GYA	Guiyang	41.43	257	eP	P	16 20 19.4	-0.4
GYA				pP	pP	16 20 31.7	-1.1
GYA				sP	sP	16 20 37.0	-1.5
GYA				PP	PnPn	16 21 58.6	-2.4
GYA				PcP	PcP	16 22 17.4	+0.4
GYA				ScP	ScP	16 26 03.5	+0.8
GYA				S	S	16 26 31.2	-0.3
GYA				sS	sS	16 26 51.8	-1.5
GYA				SS	SS	16 29 29.4	-7.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				LR	LR		
	comp=N,460nm,18.4s						
GYA				LR	LR		
	comp=E,310nm,19.5s						
GYA				LR	LR		
	comp=Z,430nm,18.0s						
ZALV	Zalesovo Beam	42.47	306	P	P	16 20 26.6	-1.2
ZALV	Zalesovo Beam	42.47	306	P	P	16 20 26.6	-1.2
ZALV	Zalesovo Beam	42.47	306	P	P	16 20 26.6	-1.2
	comp=Z,3.2nm,0.4s,baz=59,slow=6.8,SNR=22						
ZALV				LR	LR	16 39 16.5	
	comp=Z,175nm,19.1s,baz=69,slow=38						
WMQ	Urumqi	44.73	291	eP	P	16 20 46.6	+0.4
WMQ				pP	pP	16 20 59.0	-0.3
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.5s						
WMQ				pmax	pmax		
	comp=Z,93nm,5.0s						
WMQ				LR	LR		
	comp=N,110nm,21.4s						
WMQ				LR	LR		
	comp=E,110nm,23.6s						
WMQ				LR	LR		
	comp=Z,120nm,20.0s						
MKAR	Makanchi Array	46.77	297	P	P	16 21 01.4	-0.7
MKAR						16 22 35.1	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,151nm,18.9s						
MKAR	Makanchi Array	46.77	297	eP	P	16 21 01.2	-0.9
MKAR				PcP	PcP	16 22 35.0	+0.3
MKAR	Makanchi Array	46.77	297	P	P	16 21 01.4	-0.7
	comp=Z,2.2nm,0.5s,baz=67,slow=7.1,SNR=40						
MKAR				PcP	PcP	16 22 35.0	+0.3
	comp=Z,2.5nm,0.6s,baz=61,slow=4.8,SNR=10						
MKAR				LR	LR	16 41 49.8	
	comp=Z,151nm,18.9s,baz=3.2,slow=38						
KURK	Kurchatov	47.22	304	P	P	16 21 05.2	-0.3
KURK						16 22 36.5	
KURK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	47.22	304	eP	P	16 21 04.2	-1.3
	comp=Z,5.2nm,0.6s						
KURK				PcP	PcP	16 22 36.5	+0.3
KURBB	Kurchatov Arra	47.31	303	P	P	16 21 05.2	-1.1
	comp=Z,3.2nm,0.4s,baz=69,slow=8.3,SNR=26						
KURBB				PcP	PcP	16 22 36.5	0.0
	comp=Z,1.6nm,0.8s,baz=69,slow=3.5,SNR=6.7						
LSA	Lhasa	50.02	273	P	P	16 21 30.4	+2.5
LSA				pmax	pmax		
	comp=Z,40nm,0.5s						
LSA	Lhasa	50.02	273	eP	P	16 21 27.9	0.0
LSA				pmax	pmax		
	comp=Z,28nm,0.6s						
LSA	Lhasa	50.02	273	eP	P	16 21 27.9	0.0
	comp=Z,28nm,0.6s						
BVAR	Borovoye Array	50.73	309	P	P	16 21 32.1	-0.4
BVAR						16 22 49.0	
BVAR	Borovoye Array	50.73	309	P	P	16 21 32.1	-0.4
BVAR				PcP	PcP	16 22 49.0	0.0
BVAR	Borovoye Array	50.73	309	P	P	16 21 32.1	-0.4
	comp=Z,1.5nm,0.4s,baz=48,slow=7.7,SNR=8.9						
BVAR				PcP	PcP	16 22 49.0	0.0
	comp=Z,2.0nm,0.4s,baz=87,slow=3.1,SNR=7.5						
BVAR				LR	LR	16 44 53.2	
	comp=Z,79nm,20.4s,baz=62,slow=38						
BRVK	Borovoye	50.78	309	eP	P	16 21 32.5	-0.3
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	Borovoye	50.78	309	eP	P	16 21 32.5	-0.3
	comp=Z,2.8nm,0.6s						
YKA	Yellowknife Ar	51.18	37	P	P	16 21 36.0	+0.4
YKA				PcP	PcP	16 22 50.4	0.0
YKA	Yellowknife Ar	51.18	37	P	P	16 21 36.0	+0.4
	comp=Z,1.4nm,0.7s,baz=296,slow=7.1,SNR=12						
YKA				PcP	PcP	16 22 50.4	0.0
	comp=Z,0.7nm,0.5s,baz=303,slow=3.5,SNR=5.6						
CHTO	Chiang Mai	51.83	256	eP	P	16 21 40.8	-0.3
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CHTO	Chiang Mai	51.83	256	eP	P	16 21 40.8	-0.3
	comp=Z,7.7nm,0.7s						
CMAR	Chiang Mai Arr	52.09	256	P	P	16 21 44.9	+1.9
CMAR	Chiang Mai Arr	52.09	256	P	P	16 21 44.9	+1.9
	comp=Z,6.1nm,0.8s,baz=36,slow=7.8,SNR=24						
CMAR				LR	LR	16 46 15.2	
	comp=Z,28nm,20.7s,baz=200,slow=39						
AAK	Ala-Archa	53.66	296	⇓eP	P	16 21 55.4	+0.9
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AAK	Ala-Archa	53.66	296	P	P	16 21 55.1	+0.6
AAK	Ala-Archa	53.66	296	P	P	16 21 55.1	+0.6
	comp=Z,1.3nm,0.3s,baz=110,slow=1.8,SNR=5.6						
AAK				LR	LR	16 46 02.7	
	comp=Z,97nm,18.6s,baz=214,slow=37						
TAPN	Taplejung	53.84	273	eP	P	16 21 57.5	+1.3
	comp=Z,31nm,0.6s						
ODAN	Odare	54.38	273	eP	P	16 22 01.5	+1.5
	comp=Z,24nm,0.6s						
GUN	Gumba	54.75	275	eP	P	16 22 03.9	+1.0
	comp=Z,32nm,0.5s						
RAMN	Ramite	54.86	273	eP	P	16 22 04.7	+1.1
	comp=Z,69nm,0.6s						
ARU	Arti	54.93	317	d iP	P	16 22 02.0	-1.3
ARU						16 23 04.5	
ARU						16 24 04.2	
ARU				S	S	16 29 40.3	-0.7
ARU				SS	SS	16 33 17.1	-7.2
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KKN	Kakani	55.24	275	eP	P	16 22 07.6	+1.4
	comp=Z,64nm,0.6s						
PKI	Pulchoki	55.29	275	eP	P	16 22 07.7	+1.0
	comp=Z,31nm,0.6s						
PKIN	Phulchoki	55.29	275	eP	P	16 22 07.6	+0.9
	comp=Z,27nm,0.5s						
DMN	Daman	55.47	275	eP	P	16 22 09.5	+1.5
	comp=Z,79nm,0.7s						
DANN	Dangsing	55.93	277	eP	P	16 22 12.9	+1.6
	comp=Z,88nm,0.6s						
HNR	Honiara	56.17	171	LR	LR	16 41 10.4	
	comp=Z,29nm,20.4s,baz=334,slow=30						
KOLN	Koldanda	56.40	276	eP	P	16 22 16.0	+1.5
	comp=Z,48nm,0.6s						
PYUN	Piuthan	56.61	277	eP	P	16 22 18.2	+2.2
KEV	Kevo	57.37	340	ep	P	16 22 19.5	-1.0
	comp=Z,1.6nm,0.5s						
KEV	Kevo	57.37	340	eP	P	16 22 19.5	-1.0
KEV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARCES	ARCESS Array B	57.88	341	P	P	16 22 24.0	-0.2
ARCES	ARCESS Array B	57.88	341	P	P	16 22 24.0	-0.2
	comp=Z,1.8nm,0.4s,baz=40,slow=7.6,SNR=11						
ARCES				LR	LR	16 50 27.1	
	comp=Z,38nm,19.8s,baz=50,slow=39						
ABKAR	Akbulak array	58.30	310	eP	P	16 22 26.4	-1.0
AKTO	Aktyubinsk	58.61	312	P	P	16 22 29.2	-0.3
AKTO						16 23 19.3	
AKTO	Aktyubinsk	58.61	312	P	P	16 22 29.2	-0.3
AKTO				PcP	PcP	16 23 19.2	0.0
AKTO	Aktyubinsk	58.61	312	P	P	16 22 29.2	-0.3
	comp=Z,1.8nm,0.5s,baz=88,slow=9.9,SNR=6.7						
AKTO				PcP	PcP	16 23 19.2	0.0
	comp=Z,2.1nm,0.9s,baz=52,slow=2.4,SNR=4.0						
AKTO				LR	LR	16 50 12.7	
	comp=Z,140nm,18.3s,baz=203,slow=38						
SLMT	Seeley Lake	60.04	52	eP	P	16 22 39.5	-0.1
SUMG	Summit	60.84	4	iP	P	16 22 44.6	-0.4
SUMG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SUMG	Summit	60.84	4	eP	P	16 22 45.3	+0.3
	comp=Z,11nm,0.6s						
SUMG	Summit	60.84	4	iP	P	16 22 44.6	-0.4
	comp=Z,10nm,1.1s						
FFC	Flin Flon	61.00	40	iP	P	16 22 47.2	+1.3
JOF	Joensuu	61.33	334	ep	P	16 22 46.9	-1.0
	comp=Z,3.6nm,0.6s						
JOF	Joensuu	61.33	334	eP	P	16 22 46.9	-1.0
JOF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LRM	Limekiln Ridge	61.48	52	eP	P	16 22 49.2	-0.3
KBL	Kabul	61.87	292	eP	P	16 22 51.5	-0.8
KBL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KBL	Kabul	61.87	292	eP	P	16 22 51.5	-0.8
	comp=Z,6.3nm,0.6s						
NVAR	Mina Array Bea	62.72	62	P	P	16 22 57.9	-0.1
NVAR	Mina Array Bea	62.72	62	P	P	16 22 57.9	-0.1
	comp=Z,0.9nm,0.6s,baz=299,slow=6.9,SNR=6.5						
SCO	Scoresbysund	63.14	358	iP	P	16 22 59.8	-0.1
SCO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SCO	Scoresbysund	63.14	358	iP	P	16 22 59.8	-0.1
	comp=Z,2.7nm,0.9s						
KAF	Kangasniemi	63.45	335	ep	P	16 23 00.5	-1.6
	comp=Z,3.9nm,0.6s						
KAF	Kangasniemi	63.45	335	eP	P	16 23 00.5	-1.6
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
RRI2	Red Ridge	63.67	54	eP	P	16 23 04.8	+0.5
	comp=Z,6.3nm,0.8s						
HVU	Hansel Valley	63.86	56	eP	P	16 23 05.1	-0.3
HVU				pmax	pmax		
	comp=Z,13nm,0.6s						
HVU	Hansel Valley	63.86	56	eP	P	16 23 05.1	-0.3
	comp=Z,13nm,0.6s						
FINES	FINESS Array B	64.04	335	P	P	16 23 05.3	-0.7
FINES	FINESS Array B	64.04	335	P	P	16 23 05.3	-0.7
	comp=Z,7.5nm,0.4s,baz=38,slow=9.6,SNR=12						
FINES				LR	LR	16 53 47.8	
	comp=Z,37nm,18.2s,baz=30,slow=39						
PDAR	Pinedale Array	65.03	54	P	P	16 23 13.6	+0.5
PDAR	Pinedale Array	65.03	54	P	P	16 23 13.6	+0.5
	comp=Z,0.9nm,0.6s,baz=336,slow=3.3,SNR=6.2						
OBN	Obninsk	65.26	325	deP	P	16 23 13.8	-0.2
OBN				e		16 25 35.1	
OBN				eS	S	16 31 51.0	-2.5
OBN				eSS	SS	16 36 07.2	+1.2
OBN				pmax	pmax		
	comp=Z,6.0nm,0.4s						
SFJD	Kangerlussuaq	65.32	10	iP	P	16 23 07.6	-6.6
AFI	Afiamalu	68.17	143	eP	P	16 23 32.4	-0.7
	comp=Z,83nm,1.3s						
NB2	NORSAR Subarra	68.26	341	P	P	16 23 32.7	-0.4
	comp=Z,8.7nm,0.6s,baz=28,slow=6.5						
NOA	NORSAR Array B	68.26	341	P	P	16 23 32.9	-0.2
NOA	NORSAR Array B	68.26	341	P	P	16 23 32.9	-0.2
	comp=Z,7.6nm,0.5s,baz=28,slow=6.3,SNR=26						
NOA				LR	LR	16 57 23.7	
	comp=Z,26nm,19.3s,baz=265,slow=39						
WRA	Warramunga Arr	68.31	199	P	P	16 23 33.9	+0.1
WRA	Warramunga Arr	68.31	199	P	P	16 23 33.9	+0.1
	comp=Z,1.7nm,0.8s,baz=18,slow=6.7,SNR=16						
FITZ	Fitzroy Crossi	68.91	208	P	P	16 23 38.6	+1.1
FITZ	Fitzroy Crossi	68.91	208	P	P	16 23 38.6	+1.1
	comp=Z,2.0nm,0.7s,baz=203,slow=1.2,SNR=6.9						
KIV	Kislovodsk	70.70	314	⇓eP	P	16 23 48.5	0.0
KIV				e*PP	pP	16 24 03.7	+1.3
KIV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KIV				MLR	MLR		
	comp=Z,100nm,16.0s						
KBZ	Khabaz	70.76	314	P	P	16 23 50.3	+1.6
KBZ	Khabaz	70.76	314	P	P	16 23 50.3	+1.6
KBZ	Khabaz	70.76	314	P	P	16 23 50.3	+1.6
	comp=Z,4.2nm,0.7s,baz=51,slow=7.6,SNR=7.4						
KBZ				LR	LR	16 59 43.9	
	comp=Z,66nm,18.4s,baz=270,slow=40						
AKASG	Malin Array Be	71.50	326	ceP	P	16 23 52.5	-0.6
AKASG				pmax	pmax		
	comp=Z,9.0nm,0.4s						
AKASG	Malin Array Be	71.50	326	P	P	16 23 52.6	-0.6
AKASG	Malin Array Be	71.50	326	P	P	16 23 52.6	-0.6
	comp=Z,9.4nm,0.5s,baz=35,slow=6.4,SNR=27						
KIEV	Kiev	71.52	326	eP	P	16 23 52.3	-0.9
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KIEV	Kiev	71.52	326	eP	P	16 23 52.3	-0.9
	comp=Z,9.7nm,0.6s						
ASAR	Alice Springs	72.01	198	P	P	16 23 57.7	+1.3
ASAR	Alice Springs	72.01	198	P	P	16 23 57.7	+1.3
	comp=Z,2.3nm,0.6s,baz=12,slow=6.0,SNR=77						
GNI	Garni	72.41	310	LR	LR	16 58 54.5	
	comp=Z,52nm,21.9s,baz=105,slow=38						
BSD	Bornholm Skovb	72.56	336	iP	P	16 23 59.4	0.0
BSD	Bornholm Skovb	72.56	336	iP	P	16 23 59.4	0.0
BSD	Bornholm Skovb	72.56	336	iP	P	16 23 59.4	0.0
SCHQ	Schefferville	73.53	23	P	P	16 24 05.2	+0.1
SCHQ	Schefferville	73.53	23	P	P	16 24 05.2	+0.1
	comp=Z,2.0nm,0.8s,baz=321,slow=6.5,SNR=3.6						
STHS	Stebnicka Huta	75.49	330	eP	P	16 24 17.7	+1.1
STHS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
STHS	Stebnicka Huta	75.49	330	eP	P	16 24 17.7	+1.1
KOLS	Kolonicke sedl	75.54	329	eP	P	16 24 16.8	-0.1
KOLS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KOLS	Kolonicke sedl	75.54	329	eP	P	16 24 16.8	-0.1
BURAR	Bucovina Array	75.55	326	⇑iP	P	16 24 17.2	+0.1
CRVS	Cervenica-Dubn	75.85	329	eP	P	16 24 16.9	-1.8
CRVS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CRVS	Cervenica-Dubn	75.85	329	eP	P	16 24 16.9	-1.8
TESR	Tescani	75.90	325	⇓iP	P	16 24 19.0	0.0
TLCR		76.09	323	⇓P	P	16 24 20.0	-0.1
TLCR		76.09	323	⇓iP	P	16 24 20.0	-0.1
TRPA	Tarpa	76.12	328	⇓iP	P	16 24 20.5	+0.4
UPC	Upice	76.28	333	eP	P	16 24 21.4	+0.3
UPC	Upice	76.28	333	eP	P	16 24 21.4	+0.3
DPC	Dobruska-Polom	76.32	333	eP	P	16 24 21.8	+0.5
DPC	Dobruska-Polom	76.32	333	eP	P	16 24 21.8	+0.5
VRI	Vrincioaia	76.39	324	⇓P	P	16 24 21.6	-0.2
VRI	Vrincioaia	76.39	324	⇓iP	P	16 24 21.6	-0.2
MORC	Moravsky Berou	76.43	332	⇓P	P	16 24 22.0	0.0
MORC	Moravsky Berou	76.43	332	⇓iP	P	16 24 22.0	0.0
PLOR	Plostina	76.44	324	⇑P	P	16 24 22.4	+0.3
PLOR	Plostina	76.44	324	⇑iP	P	16 24 22.4	+0.3
CLL	Collm	76.47	335	eP	P	16 24 22.2	+0.1
	comp=Z,12nm,0.7s						
CLL	Collm	76.47	335	⇑iP	P	16 24 21.6	-0.5
CLL				pmax	pmax		
	comp=Z,13nm,0.7s						
CLL	Collm	76.47	335	⇑iP	P	16 24 21.6	-0.5
	comp=Z,13nm,0.7s						
KECS	Kecovo	76.55	330	eP	P	16 24 22.5	-0.1
KECS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KECS	Kecovo	76.55	330	eP	P	16 24 22.5	-0.1
BRG	Berggiesshubel	76.58	335	eP	P	16 24 22.9	+0.1
	comp=Z,6.0nm,1.0s						
FBE	Freiberg	76.71	335	eP	P	16 24 23.9	+0.4
	comp=Z,8.0nm,0.9s						
CLZ	Clausthal	76.72	337	eP	P	16 24 24.3	+0.7
	comp=Z,10.0nm,1.0s						
CLZ	Clausthal	76.72	337	eP	P	16 24 24.3	+0.7
CLZ				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NEUB	Neuenburg	76.91	336	eP	P	16 24 25.8	+1.2
	comp=Z,13nm,1.0s						
MLR	Muntele Rosu	77.02	325	⇓iP	P	16 24 25.8	+0.3
VYHS	Vyhne	77.11	331	eP	P	16 24 26.1	+0.3
VYHS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VYHS	Vyhne	77.11	331	eP	P	16 24 26.1	+0.3
VRAC	Vranov	77.14	332	⇓iP	P	16 24 26.5	+0.5
DRGR		77.18	327	⇓P	P	16 24 26.1	-0.2
DRGR		77.18	327	⇓iP	P	16 24 26.1	-0.2
PRU	Pruhonice	77.18	334	eP	P	16 24 26.5	+0.3
PRU	Pruhonice	77.18	334	eP	P	16 24 26.5	+0.3
PSZ	Piszkesteto	77.24	330	eP	P	16 24 27.4	+0.8
PSZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PSZ	Piszkesteto	77.24	330	eP	P	16 24 27.4	+0.8
	comp=Z,6.6nm,0.8s						
PSZ	Piszkesteto	77.24	330	⇑iP	P	16 24 27.0	+0.4
VOIR		77.42	325	⇓P	P	16 24 28.4	+0.7
VOIR		77.42	325	⇓iP	P	16 24 28.4	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WERD	Werda	77.44	335	eP	P	16 24 28.1	+0.5
	comp=Z,3.0nm,0.8s						
PLN	Plauen	77.45	335	eP	P	16 24 28.0	+0.4
	comp=Z,21nm,1.0s						
MOX	Moxa	77.46	336	eP	P	16 24 28.1	+0.4
	comp=Z,6.0nm,1.0s						
MOX	Moxa	77.46	336	eP	P	16 24 28.1	+0.4
MOX				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TREC	Trest	77.50	333	eP	P	16 24 28.5	+0.5
TREC	Trest	77.50	333	eP	P	16 24 28.5	+0.5
GUNZ	Gunzen	77.51	335	eP	P	16 24 28.5	+0.5
	comp=Z,5.0nm,0.8s						
SMOL	Smolenice	77.56	331	eP	P	16 24 29.4	+1.1
SMOL	Smolenice	77.56	331	eP	P	16 24 29.4	+1.1
WERN	Wernitzgruen	77.56	335	eP	P	16 24 28.7	+0.4
	comp=Z,5.0nm,0.6s						
NKC	Novy Kostel	77.59	335	eP	P	16 24 28.8	+0.3
NKC	Novy Kostel	77.59	335	eP	P	16 24 28.8	+0.3
ARR	Arges	77.64	325	⇑iP	P	16 24 29.9	+1.0
TXAR	Lajitas Array	77.78	60	P	P	16 24 29.1	-0.9
TXAR	Lajitas Array	77.78	60	P	P	16 24 29.1	-0.9
	comp=Z,1.2nm,0.7s,baz=300,slow=4.7,SNR=9.9						
MANZ	Manzenberg	77.91	335	eP	P	16 24 30.7	+0.4
	comp=Z,4.0nm,0.9s						
ZST	Bratislava	77.94	331	eP	P	16 24 30.4	0.0
ZST				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZST	Bratislava	77.94	331	eP	P	16 24 30.4	0.0
ROTZ	Rotzenmuhle	78.08	335	eP	P	16 24 31.8	+0.6
	comp=Z,8.0nm,1.1s						
KHC	Kasperske Hory	78.24	334	eP	P	16 24 32.1	0.0
KHC				e		16 24 55.2	
KHC	Kasperske Hory	78.24	334	eP	P	16 24 32.1	0.0
KHC				ex	x	16 24 55.2	
BRTR	Keskin Array B	78.30	317	P	P	16 24 33.2	+0.4
BRTR	Keskin Array B	78.30	317	P	P	16 24 33.2	+0.4
	comp=Z,3.5nm,0.8s,baz=70,slow=4.3,SNR=14						
GZR	Gura Zlata	78.33	327	⇑P	P	16 24 32.4	-0.3
GZR	Gura Zlata	78.33	327	⇑iP	P	16 24 32.4	-0.3
GRF	Grafenberg Arr	78.43	336	eP	P	16 24 34.0	+0.9
	comp=Z,17nm,0.9s						
GRF	Grafenberg Arr	78.43	336	eP	P	16 24 34.0	+0.9
GRF				pmax	pmax		
	comp=Z,17nm,0.9s						
WET	Wettzell	78.44	334	eP	P	16 24 34.1	+0.9
	comp=Z,8.0nm,1.0s						
WET	Wettzell	78.44	334	eP	P	16 24 34.1	+0.9
WET				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GEC2	GERESS Array S	78.45	334	eP	P	16 24 33.6	+0.2
	comp=Z,3.0nm,0.8s						
GEC2	GERESS Array S	78.45	334	eP	P	16 24 33.6	+0.2
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	78.45	334	P	P	16 24 33.3	-0.1
GERES	GERESS Array B	78.45	334	P	P	16 24 33.3	-0.1
	comp=Z,2.4nm,0.5s,baz=25,slow=4.4,SNR=16						
GERES				LR	LR	17 03 05.8	
	comp=Z,57nm,18.2s,baz=268,slow=39						
UMR	Umm Al-Rimmam	78.47	301	eP	P	16 24 34.2	+0.6
UMR				AMb	AMB	16 24 35.2	
	comp=Z,41nm,0.6s						
MIB	Mutribah	78.50	301	eP	P	16 24 34.3	+0.5
MIB				AMb	AMB	16 24 35.4	
	comp=Z,64nm,0.7s						
BZS	Buzias	78.58	327	⇓P	P	16 24 34.0	0.0
BZS	Buzias	78.58	327	⇓iP	P	16 24 34.0	0.0
TNS	Taunus Mts	78.70	338	eP	P	16 24 35.3	+0.6
	comp=Z,6.0nm,0.8s						
TNS	Taunus Mts	78.70	338	eP	P	16 24 35.3	+0.6
TNS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NAY	Al-Naaiem	78.97	301	eP	P	16 24 36.7	+0.3
NAY				AMb	AMB	16 24 37.9	
	comp=Z,20nm,1.0s						
RDF	Al-Radifah	79.02	300	eP	P	16 24 37.9	+1.2
RDF				AMb	AMB	16 24 39.5	
	comp=Z,44nm,1.0s						
PKSM	Moragy	79.14	329	⇑P	P	16 24 36.7	-0.3
PKSM	Moragy	79.14	329	⇑iP	P	16 24 36.7	-0.3
RJOB	Jochberg	79.72	334	eP	P	16 24 41.1	+0.8
	comp=Z,5.0nm,0.7s						
BFO	Black Forest	80.47	337	eP	P	16 24 44.6	+0.4
	comp=Z,6.0nm,0.9s						
BFO	Black Forest	80.47	337	eP	P	16 24 44.6	+0.4
BFO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BFO	Black Forest	80.47	337	eP	P	16 24 44.0	-0.2
VTS	Vitosha	80.52	325	⇓P	P	16 24 45.1	+0.3
VTS	Vitosha	80.52	325	⇓iP	P	16 24 45.1	+0.3
CDF	Champ du Feu	80.67	337	eP	P	16 24 45.7	+0.3
	comp=Z,14nm,0.9s						
CDF	Champ du Feu	80.67	337	eP	P	16 24 45.7	+0.3
CDF				pmax	pmax		
	comp=Z,14nm,0.9s						
CDF	Champ du Feu	80.67	337	eP	P	16 24 45.7	+0.3
	comp=Z,14nm,0.9s						
PAGF	Fort de Pagny	80.94	339	eP	P	16 24 47.6	+0.9
	comp=Z,5.7nm,0.6s						
PAGF	Fort de Pagny	80.94	339	eP	P	16 24 47.6	+0.9
	comp=Z,5.7nm,0.6s						
MEZF	Maizieres J'vi	81.16	339	eP	P	16 24 48.6	+0.7
MEZF	Maizieres J'vi	81.16	339	eP	P	16 24 48.6	+0.7
SFTF	Sexfontaines	81.44	339	eP	P	16 24 49.8	+0.4
	comp=Z,17nm,0.6s						
SFTF	Sexfontaines	81.44	339	eP	P	16 24 49.8	+0.4
	comp=Z,17nm,0.6s						
FUORN	Ofenpass-Fuorn	81.48	335	eP	P	16 24 50.8	+0.9
	comp=Z,5.1nm,0.8s						
TUE	Stuetta	81.88	335	eP	P	16 24 52.9	+0.9
	comp=Z,6.1nm,0.9s						
LOR	Lormes	82.60	339	eP	P	16 24 55.9	+0.4
	comp=Z,5.4nm,0.6s						
LOR				eR			
	comp=Z,48nm,23.0s						
LOR	Lormes	82.60	339	eP	P	16 24 55.9	+0.4
	comp=Z,5.4nm,0.6s						
CABF	La Chapelle	82.65	338	eP	P	16 24 56.5	+0.6
CABF	La Chapelle	82.65	338	eP	P	16 24 56.5	+0.6
CABF	La Chapelle	82.65	338	eP	P	16 24 56.5	+0.6
SSF	Saint Saulge	82.88	339	eP	P	16 24 58.0	+1.0
SSF	Saint Saulge	82.88	339	eP	P	16 24 58.0	+1.0
SSF	Saint Saulge	82.88	339	eP	P	16 24 58.0	+1.0
AVF	Avril sur Loir	83.17	339	eP	P	16 24 59.1	+0.7
	comp=Z,6.5nm,0.6s						
AVF	Avril sur Loir	83.17	339	eP	P	16 24 59.1	+0.7
AVF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AVF	Avril sur Loir	83.17	339	eP	P	16 24 59.1	+0.7
	comp=Z,6.5nm,0.6s						
SMF	Signal de Mont	83.19	339	eP	P	16 24 59.3	+0.7
SMF	Signal de Mont	83.19	339	eP	P	16 24 59.3	+0.7
SMF	Signal de Mont	83.19	339	eP	P	16 24 59.3	+0.7
LPL	La Plagne	83.48	337	eP	P	16 25 01.3	+0.9
	comp=Z,5.7nm,0.6s						
LPL	La Plagne	83.48	337	eP	P	16 25 01.3	+0.9
LPL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LPL	La Plagne	83.48	337	eP	P	16 25 01.3	+0.9
	comp=Z,5.7nm,0.6s						
LPG	La Plagne	83.50	337	eP	P	16 25 01.5	+1.0
LPG	La Plagne	83.50	337	eP	P	16 25 01.5	+1.0
LPG	La Plagne	83.50	337	eP	P	16 25 01.5	+1.0
TCF	Toulx Ste Croi	83.92	340	eP	P	16 25 03.0	+0.7
TCF	Toulx Ste Croi	83.92	340	eP	P	16 25 03.0	+0.7
TCF	Toulx Ste Croi	83.92	340	eP	P	16 25 03.0	+0.7
ORIF	Oris-en-Rattie	84.27	337	eP	P	16 25 05.9	+1.7
	comp=Z,11nm,0.7s						
ORIF				eR			
	comp=Z,64nm,21.0s						
ORIF	Oris-en-Rattie	84.27	337	eP	P	16 25 05.9	+1.7
ORIF				pmax	pmax		
	comp=Z,11nm,0.7s						
ORIF	Oris-en-Rattie	84.27	337	eP	P	16 25 05.9	+1.7
	comp=Z,11nm,0.7s						
VIVF	Saint-Julien-l	84.64	338	eP	P	16 25 07.0	+0.9
VIVF	Saint-Julien-l	84.64	338	eP	P	16 25 07.0	+0.9
VIVF	Saint-Julien-l	84.64	338	eP	P	16 25 07.0	+0.9
FRF	La Foret Royal	85.31	336	eP	P	16 25 11.4	+2.0
FRF	La Foret Royal	85.31	336	eP	P	16 25 11.4	+2.0
FRF	La Foret Royal	85.31	336	eP	P	16 25 11.4	+2.0
LMR	La Mourre	85.56	336	eP	P	16 25 11.3	+0.7
	comp=Z,37nm,1.1s						
LMR	La Mourre	85.56	336	eP	P	16 25 11.3	+0.7
LMR				pmax	pmax		
	comp=Z,37nm,1.1s						
LMR	La Mourre	85.56	336	eP	P	16 25 11.3	+0.7
	comp=Z,37nm,1.1s						
MTLF	Montolieu	86.69	339	eP	P	16 25 17.0	+0.8
MTLF	Montolieu	86.69	339	eP	P	16 25 17.0	+0.8
MTLF	Montolieu	86.69	339	eP	P	16 25 17.0	+0.8
ESDC	Sonseca Array	91.59	342	P	P	16 25 37.8	-1.6
ESDC	Sonseca Array	91.59	342	P	P	16 25 37.8	-1.6
	comp=Z,0.3nm,0.3s,baz=341,slow=3.8,SNR=4.6						
TORD	Torodi Ar. Bea	115.06	329	PKP	PKPdf	16 31 13.3	-0.4
TORD	Torodi Ar. Bea	115.06	329	PKP	PKPdf	16 31 13.3	-0.4
	comp=Z,0.3nm,0.5s,baz=25,slow=2.0,SNR=3.5						
VNDA	Vanda	124.00	178	PKP	PKPdf	16 31 29.0	0.0
VNDA	Vanda	124.00	178	PKP	PKPdf	16 31 29.0	0.0
	comp=Z,0.4nm,0.7s,baz=309,slow=2.6,SNR=4.7						
PLCA	Paso Flores	148.46	95	PKPbc	PKPbc	16 32 19.1	+0.5
PLCA	Paso Flores	148.46	95	PKPbc	PKPbc	16 32 19.1	+0.5
	comp=Z,2.9nm,0.9s,baz=259,slow=2.3,SNR=4.8						
CPUP	Villa Florida	148.76	60	PKPbc	PKPbc	16 32 20.2	+0.5
CPUP	Villa Florida	148.76	60	PKPbc	PKPbc	16 32 20.2	+0.5
	comp=Z,0.6nm,0.3s,baz=0.3,slow=1.4,SNR=6.5						

*ISCJB **05** 16:22:31.5±0.5, 50°.14N±0°.04×19°.00E±0°.03, h0km, Error ellipse: s-maj=5.4km s-min=2.5km az=8.3*
*PRU **05** 16:22:32.6, 50°.17N×19°.02E, h0km*
*WAR **05** 16:22:33.5, 50°.11N×19°.11E*
*CSEM **05** 16:22:33.2±0.3, 50°.08N×18°.99E, h2km, Error ellipse: s-maj=8.4km s-min=4.4km az=11.0*
ISC 05 16:22:32.6±0.9**, 50°.11N**±0°.04×**19°.05E**±0°.02**, h0km, n29, σ0.94**/47**, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OJC	Ojcow	0.49	77	ePg	Pg	16 22 41.4	-0.6
OJC				eSg	Sg	16 22 47.8	-0.6
OKC	Ostrava-Krasne	0.64	246	ePG	Pg	16 22 45.3	+0.4
OKC				eSG	Sg	16 22 53.2	0.0
OKC	Ostrava-Krasne	0.64	246	Pg	Pg	16 22 45.3	+0.4
OKC				Sg	Sg	16 22 53.2	0.0
MORC	Moravsky Berou	1.03	252	ePg	Pg	16 22 52.2	-0.1
MORC				eSg	Sg	16 23 06.5	+0.9
NIE	Niedzica	1.07	130	ePg	Pg	16 22 53.6	+0.5
NIE				eSg	Sb	16 23 09.0	+0.5
KRLC	Kraliky	1.46	270	eSG	Sg	16 23 18.5	-1.1
KRLC	Kraliky	1.46	270	Sg	Sg	16 23 18.5	-1.1
JAVC	Velka Javorina	1.54	216	ePn	Pn	16 23 01.4	0.0
JAVC				eSg	Sg	16 23 22.6	+0.6
STHS	Stebnicka Huta	1.58	115	ePN	Pg	16 23 03.4	+0.6
STHS				eSN	Sg	16 23 23.7	+0.4
STHS	Stebnicka Huta	1.58	115	ePn	Pg	16 23 03.4	+0.6
STHS				eSn	Sg	16 23 23.7	+0.4
VYHS	Vyhne	1.62	185	ePN	Pn	16 23 01.7	-0.7
VYHS				eSN	Sn	16 23 22.9	-1.1
VYHS	Vyhne	1.62	185	ePn	Pn	16 23 01.7	-0.7
VYHS				eSn	Sn	16 23 22.9	-1.1
DPC	Dobruska-Polom	1.77	279	ePG	Pn	16 23 04.4	-0.1
DPC				eSG	Sn	16 23 27.4	-0.4
DPC	Dobruska-Polom	1.77	279	Pg	Pn	16 23 04.4	-0.1
DPC				Sg	Sn	16 23 27.4	-0.4
VRAC	Vranov	1.79	244	ePn	Pn	16 23 04.9	+0.2
VRAC				eSg	Sb	16 23 28.9	-0.2
KECS	Kecovo	1.88	149	ePN	Pn	16 23 06.8	+0.9
KECS				eSN	Sn	16 23 28.6	-1.7
KECS	Kecovo	1.88	149	ePn	Pn	16 23 06.8	+0.9
KECS				eSn	Sn	16 23 28.6	-1.7
KSP	Ksiaz	1.91	294	ePg	Pg	16 23 10.0	+0.8
KSP				eSg	Sg	16 23 34.4	+0.5
CRVS	Cervenica-Dubn	1.98	127	ePN	Pn	16 23 07.0	-0.3
CRVS				eSN	Sn	16 23 33.0	+0.1
CRVS	Cervenica-Dubn	1.98	127	ePn	Pn	16 23 07.1	-0.3
CRVS				eSn	Sn	16 23 33.0	+0.1
UPC	Upice	1.99	283	eSG	Sb	16 23 35.8	+0.8
UPC	Upice	1.99	283	Sg	Sb	16 23 35.8	+0.8
KRUC	Moravsky	2.02	240	eSn	Sb	16 23 35.2	-0.7
PRU	Pruhonice	2.91	269	eSG	Sb	16 24 03.7	+2.3
PRU	Pruhonice	2.91	269	Sg	Sb	16 24 03.7	+2.3
BRG	Berggiesshubel	3.35	285	SG	Sg	16 24 17.5	-2.7
	2.2nm,0.5s						
KHC	Kasperske Hory	3.69	257	eSG	Sg	16 24 30.3	-0.8
KHC	Kasperske Hory	3.69	257	eP	Sg	16 24 30.8	-0.3
KHC	Kasperske Hory	3.69	257	Sg	Sg	16 24 30.3	-0.8

DDA 05 16:22:52.1, 39°.71N×30°.22E, h7km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SEYT	Eskypehyr	0.52	112	iP	Pg	16 23 02.0	-0.3
SEYT				iS	Sb	16 23 10.7	-1.0
ULDT	Uludag	0.94	297	iP	Pg	16 23 10.2	-0.3
ULDT				iS	Sb	16 23 23.8	-0.2
DURS	Dursunbey	1.35	266	iP	Pn	16 23 17.4	-0.3
DURS				iS	Sn	16 23 37.4	+1.4

JMA 05 16:34:01.8±0.1**, 40°.06N×141°.79E, h56km**±1km**, M0.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTH	Tanohata	0.13	155	P	Pn	16 34 10.5	0.0
JTH				eS	Sn	16 34 16.8	+0.1
JKZ	Kuzumaki	0.36	258	P	Pn	16 34 12.0	-0.1
JKZ				S	Sn	16 34 19.2	-0.3
JANG	Nango	0.38	326	P	Pn	16 34 12.1	-0.1
JANG				eS	Sn	16 34 19.5	-0.2
JOM	Ohasama	0.70	213	P	Pn	16 34 15.5	-0.3
JOM				eS	Sn	16 34 25.5	-0.6

MAN 05 16:34:58, 8°.71N×126°.06E, h28km, mb3.9, ML2.6, MS2.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.51	301	eP	Pn	16 35 09.6	+0.2
BUTP				eS	Sb	16 35 15.3	-0.3
BUKP	Musuan	1.29	230	eP	Pn	16 35 20.7	+0.4
BUKP				eS	Sn	16 35 36.4	-0.2
CGP	Cagayan de Oro	1.38	260	⇑eP	Pb	16 35 23.0	-0.1
CGP				eS	Sn	16 35 39.4	+0.6
MATI	Mati	1.76	174	eP	Pn	16 35 27.4	+0.7

*ISCJB **05** 16:38:00.8±0.6, 39°.80N±0°.05×82°.36E±0°.09, h10km, mb3.4/2, Error ellipse: s-maj=11.0km s-min=6.1km az=26.9*
*IDC **05** 16:38:01.1±1.3, 39°.81N×82°.65E, h0km, mb3.3/2, mb1 3.4/7, mb1mx3.3/32, mbtmp3.3/7, ML3.2/5, Error ellipse: s-maj=37.7km s-min=15.8km az=69.0*
*BJI **05** 16:38:03.0, 39°.71N×82°.56E, h15km, mb4.2/1, ML3.6/11*
*NNC **05** 16:38:09.3±3.7, 40°.14N×82°.37E, h9km±14km, mb3.8, mpv3.5, Error ellipse: s-maj=27.0km s-min=14.1km az=120.0*
ISC 05 16:38:03.0±0.9**, 39°.70N**±0°.07×**82°.41E**±0°.07**, h10km, n17, σ2.25**/18**, 4C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	4.98	270	Pn	Pb	16 39 25.4	-4.9
KSH				Sn	Sb	16 40 28.1	-2.2
KSH				smax	smax		
	comp=N,120nm,0.6s						
KSH				smax	smax		
	comp=E,98nm,0.8s						
WMQ	Urumqi	5.71	42	ePn	Pn	16 39 29.7	+1.8
WMQ				Sn	Sn	16 40 33.5	0.0
WMQ				smax	smax		
	comp=N,51nm,0.8s						
WMQ				smax	smax		
	comp=E,42nm,0.8s						
TKM2	Tokmak 2	6.06	304	⇑Pn	Pn	16 39 35.7	+2.9
	comp=E,0.7nm,0.2s						
TKM2				⇑Pg	Pg	16 39 54.5	-4.6
	comp=E,6.9nm,0.6s						
TKM2				⇑Lg	Lg	16 41 15.1	
	comp=E,31nm,0.9s						
AAK	Ala-Archa	6.66	299	Pg	Pb	16 40 04.4	+5.5
	comp=E,0.6nm,0.3s,baz=109,slow=7.2,SNR=6.0						
AAK				Lg	Lg	16 41 43.2	
	comp=E,0.9nm,0.3s,baz=277,slow=20,SNR=5.2						
MK31	Makanchi Array	7.09	359	⇓Pn	Pn	16 39 47.5	+0.7
	comp=E,1.0nm,0.3s,baz=188,slow=13,SNR=116						
MK31				⇓Sn	Sn	16 41 04.1	-3.4
	comp=E,9.4nm,0.9s,baz=184,slow=25,SNR=5.2						
MK31				⇓Lg	Lg	16 41 40.6	
	comp=E,14nm,0.7s,baz=171,slow=26,SNR=4.7						
MKAR	Makanchi Array	7.09	359	Pn	Pn	16 39 47.1	+0.3
	comp=E,1.1nm,0.3s,baz=172,slow=12,SNR=60						
MKAR				Sn	Sn	16 41 05.9	-1.6
	comp=E,1.3nm,0.3s,baz=186,slow=22,SNR=5.6						
MKAR				Lg	Lg	16 41 41.4	
	comp=E,0.9nm,0.3s,baz=182,slow=27,SNR=5.5						
CHCP	Chirah Chowk	9.50	233	P	Pn	16 40 22.1	+2.1
CEP	Cherat	10.26	238	P	Pn	16 40 32.5	+2.0
CEP				S	Sn	16 42 24.0	-1.6
THW	Thamme Wali	11.03	235	P	Pn	16 40 41.0	+0.2
KURBB	Kurchatov Arra	11.26	347	Pn	Pn	16 40 42.8	-1.1
	comp=E,0.0nm,0.3s,baz=172,slow=12,SNR=12						
KURBB				Sn	Sn	16 42 54.8	+5.1
	comp=E,0.1nm,0.3s,baz=261,slow=31,SNR=4.4						
KUR16	Kurchatov Arra	11.27	347	⇓Lg	Lg	16 43 54.1	
	comp=E,2.4nm,0.8s						
KURK	Kurchatov	11.34	348	⇑Lg	Lg	16 43 56.3	
	comp=E,9.9nm,1.0s						
ZALV	Zalesovo Beam	14.35	6	Pn	Pn	16 41 22.7	-3.3
	comp=E,0.1nm,0.3s,baz=177,slow=11,SNR=2.5						
BVAR	Borovoye Array	15.67	332	Pn	Pn	16 41 42.0	-1.8
	comp=E,0.1nm,0.3s,baz=229,slow=41,SNR=3.1						
SONM	Songino Array	19.08	57	P	P	16 42 24.5	-1.2
	comp=E,0.1nm,0.3s,baz=259,slow=13,SNR=3.8						
WRA	Warramunga Arr	76.59	130	P	P	16 49 53.3	-0.5
	comp=E,1.3nm,1.3s,baz=331,slow=5.3,SNR=3.6						
ASAR	Alice Springs	79.25	133	P	P	16 50 07.4	-1.2
	comp=E,0.2nm,0.7s,baz=323,slow=5.1,SNR=3.0						

IDC 05 16:45:08.5±26.0**, 23°.95S×177°.33W, h0km, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.7**/19**, mbtmp3.9**/4**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.2**/28**, Error ellipse: s-maj=505.5km s-min=138.3km az=93.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	26.05	300	LR	LR	16 59 27.9	
	comp=Z,47nm,18.3s,baz=334,slow=33						
STKA	Stephens Creek	36.97	248	P	P	16 52 19.2	-0.4
	1.4nm,1.0s,baz=85,slow=15,SNR=3.3						
ASAR	Alice Springs	44.43	260	P	P	16 53 21.2	-0.2
	1.1nm,0.5s,baz=97,slow=7.0,SNR=53						
WRA	Warramunga Arr	44.84	265	P	P	16 53 24.8	+0.1
	0.7nm,0.4s,baz=104,slow=8.0,SNR=18						
FITZ	Fitzroy Crossi	53.26	265	P	P	16 54 29.3	0.0
	1.7nm,1.0s,baz=104,slow=8.3,SNR=4.9						

IDC 05 16:46:03.6±4.8**, 0°.06S×122°.98E, h150km**±45km**, mb3.0**/6**, mb1 3.2**/8**, mb1mx3.0**/25**, mbtmp3.1**/8**, Error ellipse: s-maj=46.0km s-min=14.7km az=60.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	5.88	213	P	Pn	16 47 28.4	-0.3
	1.6nm,0.3s,baz=22,slow=8.9,SNR=5.5						
KAPI				S	Sn	16 48 36.2	+0.9
	0.6nm,0.3s,baz=177,slow=22,SNR=2.9						
FITZ	Fitzroy Crossi	18.12	172	P	P	16 50 04.6	+0.4
	0.2nm,0.3s,baz=137,slow=17,SNR=7.4						
WRA	Warramunga Arr	22.68	151	P	P	16 50 51.0	-1.4
	0.6nm,0.5s,baz=332,slow=10,SNR=22						
ASAR	Alice Springs	25.75	156	P	P	16 51 20.8	+0.3
	0.2nm,0.3s,baz=336,slow=10,SNR=10						
ASAR				PcP	PcP	16 54 46.9	+0.3
	0.3nm,0.6s,baz=322,slow=2.0,SNR=6.1						
STKA	Stephens Creek	36.22	153	P	P	16 52 52.8	+0.7
	1.1nm,0.7s,baz=319,slow=19,SNR=3.7						
SONM	Songino Array	49.84	345	P	P	16 54 42.2	+0.7
	0.3nm,0.5s,baz=163,slow=11,SNR=3.6						
MKAR	Makanchi Array	58.65	328	P	P	16 55 44.3	-0.8
	0.3nm,0.4s,baz=118,slow=7.9,SNR=8.0						
MKAR				PcP	PcP	16 56 32.6	-0.9
	0.2nm,0.4s,baz=156,slow=4.6,SNR=4.3						
KURBB	Kurchatov Arra	63.00	330	P	P	16 56 14.6	+0.2
	0.2nm,0.4s,baz=141,slow=6.4,SNR=5.3						
TORD	Torodi Ar. Bea	120.40	285	PKP	PKPdf	17 04 37.7	-0.5
	0.7nm,1.1s,baz=91,slow=2.7,SNR=3.1						

*ISCJB **05** 17:03:42.4±0.5, 48°.16N±0°.07×152°.9E±0°.1, h128km, mb4.0/21, Error ellipse: s-maj=13.9km s-min=4.0km az=40.8*
*MOS **05** 17:03:43.9±1.2, 48°.11N×153°.10E, h151km, mb4.0/17, Error ellipse: s-maj=13.6km s-min=8.2km az=63.4*
*IDC **05** 17:03:46.9±2.2, 48°.18N×152°.98E, h158km±20km, mb3.5/14, mb1 3.6/17, mb1mx3.5/28, mbtmp3.5/17, Error ellipse: s-maj=18.1km s-min=12.8km az=133.0*
*BJI **05** 17:03:53.6, 48°.20N×151°.90E, h160km, mB4.5/5, mb4.5/12*
ISC 05 17:03:43.3±0.7**, 48°.11N**±0°.09×**152°.86E**±0°.10**, h128km, n62, σ1.83**/65**, mb4.0**/21**, 6C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.34	38	ePN	Pn	17 04 32.5	-1.7
SKR				eS	Sn	17 05 10.0	-3.6
SKR				pmax	pmax		
	comp=Z,120nm,0.5s						
SKR				pmax	pmax		
	comp=N,110nm,0.3s						
SKR				pmax	pmax		
	comp=E,90nm,0.3s						
SKR				smax	smax		
	comp=N,390nm,0.3s						
SKR				smax	smax		
	comp=E,170nm,0.3s						
KUR	Kuril'sk	4.48	232	c iPN	Pn	17 04 54.0	+4.6
KUR				iS	Sn	17 05 49.2	+8.5
KUR				pmax	pmax		
	comp=Z,14nm,0.7s						
KUR				pmax	pmax		
	comp=E,3.0nm,0.6s						
KUR				pmax	pmax		
	comp=N,4.0nm,0.3s						
KUR				pmax	pmax		
	comp=Z,3μm,0.7s						
KUR				smax	smax		
	comp=E,5.0nm,0.1s						
KUR				smax	smax		
	comp=N,23nm,0.4s						
PETK	Petropavlovsk-	5.88	30	PN	Pn	17 05 09.9	+1.8
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	5.88	30	P	Pn	17 05 09.9	+1.8
	comp=Z,0.8nm,0.3s,baz=184,slow=13,SNR=17						
PET	Petropavlovsk	6.15	35	ePN	Pn	17 05 12.3	+0.6
PET				eS	Sn	17 06 21.5	+0.8
PET				smax	smax		
	comp=E,43nm,0.7s						
PET				smax	smax		
	comp=N,37nm,0.6s						
YUK	Yuzh-Kuril'sk	6.35	233	d iPN	Pn	17 05 15.1	+0.7
YUK				iS	Sn	17 06 24.4	-1.2
YUK				pmax	pmax		
	comp=Z,56nm,0.4s						
YUK				pmax	pmax		
	comp=N,12nm,0.2s						
YUK				pmax	pmax		
	comp=E,11nm,0.4s						
YUK				smax	smax		
	comp=N,19nm,0.4s						
YUK				smax	smax		
	comp=E,22nm,0.8s						
JRA	Rausu	6.81	235	P	Pn	17 05 23.7	+3.0
NEM2	Nemuro 2	6.88	229	P	Pn	17 05 21.5	0.0
NEM2				eS	Sn	17 06 34.8	-3.5
YSS	Yuzh-Sakhalins	6.94	264	ePN	Pn	17 05 29.5	+7.1
JNK	Nakash	7.26	235	P	Pn	17 05 28.9	+2.1
JTKR	Abashiri--Toko	7.48	240	P	Pn	17 05 33.4	+3.8
JAK	Akkeshi	7.68	231	P	Pn	17 05 32.5	+0.2
JAK				eS	Sn	17 06 54.3	-3.4
JMP	Maruseppu	7.78	242	P	Pn	17 05 38.0	+4.3
JAR	Ashorobuto	7.98	236	P	Pn	17 05 39.3	+2.9
ASAJ	Asahikawa	8.17	245	P	Pn	17 05 44.1	+5.1
ASAJ	Asahikawa	8.17	245	P	Pn	17 05 44.2	+5.2
	comp=E,3.3nm,0.3s,baz=93,slow=17,SNR=51						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JOB	Onbets	8.20	234	P	Pn	17 05 40.5	+1.1
JOB				eS	Sn	17 07 08.3	-2.1
JKK2	Kamakawa 2	8.22	243	P	Pn	17 05 43.8	+4.2
JCH	Churui	8.65	234	P	Pn	17 05 45.7	+0.2
JCH				eS	Sn	17 07 17.4	-3.9
JFR	Furan	8.73	239	P	Pn	17 05 50.2	+3.7
JBT2	Biratori 2	9.10	238	P	Pn	17 05 54.3	+2.8
JEM	Erimo	9.18	232	P	Pn	17 05 53.1	+0.6
ERM	Erimo	9.18	232c	iPN	Pn	17 05 55.5	+3.0
ERM				pmax	pmax		
	comp=Z,25nm,0.7s						
JNBK	Urakawa-nobuka	9.21	234	P	Pn	17 05 52.9	-0.1
JNBK				eS	Sn	17 07 31.1	-3.7
JNB	Noboribetsu	10.06	240	P	Pn	17 06 06.3	+2.0
JKB	Kayabe	10.43	238	P	Pn	17 06 09.0	-0.3
JYM2	Yakumo 2	10.66	240	P	Pn	17 06 13.2	+0.7
JTM	Tenmabayashi	11.15	233	P	Pn	17 06 16.6	-2.4
HABR	Khabarovsk	11.88	278	PN	Pn	17 06 26.1	-2.4
HABR				pmax	pmax		
	comp=N,29nm,2.1s						
HABR				pmax	pmax		
	comp=Z,42nm,3.2s						
HABR				pmax	pmax		
	comp=E,13nm,1.6s						
HABR				MLR	MLR		
	comp=Z,46nm,15.0s						
JRG	Rokugo	12.40	230	P	Pn	17 06 33.2	-2.1
USRK	Ussuriysk Arra	14.97	263	P	P	17 07 12.0	+1.5
	comp=Z,0.4nm,0.3s,baz=70,slow=13,SNR=7.5						
MJA0	Matsu Arr-Jizo	15.79	228	eP	Pn	17 07 19.1	+0.6
MJAR	Matsushiro Arr	15.81	228	P	Pn	17 07 19.2	+0.4
	comp=Z,0.3nm,0.3s,baz=22,slow=13,SNR=4.7						
CN2	Changchun	19.49	267	eP	P	17 08 00.8	+0.6
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
KSRS	Korea Array	21.09	249	P	P	17 08 20.2	+2.9
	comp=Z,6.5nm,0.7s,baz=50,slow=9.8,SNR=20						
BILL	Bilibino	21.11	14	eP	P	17 08 13.6	-3.8
BILL				e		17 12 19.8	
BILL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
TIXI	Tiksi	26.12	343⇑	eP	P	17 09 07.1	+2.3
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.6s						
SONM	Songino Array	30.75	287	P	P	17 09 47.2	+0.8
	comp=Z,0.7nm,0.6s,baz=62,slow=9.7,SNR=6.7						
ZALV	Zalesovo Beam	41.69	304	P	P	17 11 19.5	+0.5
ZALV						17 13 12.9	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	41.69	304	P	P	17 11 19.5	+0.5
	comp=Z,1.8nm,0.6s,baz=62,slow=7.3,SNR=10.0						
ZALV				PcP	PcP	17 13 12.9	-0.2
	comp=Z,0.7nm,0.6s,baz=70,slow=6.5,SNR=3.8						
MKAR	Makanchi Array	46.18	296	eP	P	17 11 55.7	+0.7
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MKAR	Makanchi Array	46.18	296	P	P	17 11 55.3	+0.4
	comp=Z,4.2nm,0.8s,baz=67,slow=8.0,SNR=36						
KURK	Kurchatov	46.48	302⇓	eP	P	17 11 56.6	-0.6
KURK				i *PP	pP	17 12 34.5	+8.1
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BRVK	Borovoye	49.91	309⇓	iP	P	17 12 24.0	+0.5
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
YKA	Yellowknife Ar	49.94	37	P	P	17 12 24.2	+0.6
	comp=Z,0.2nm,0.5s,baz=299,slow=7.0,SNR=2.4						
CMAR	Chiang Mai Arr	52.54	255	P	P	17 12 45.9	+2.4
	comp=Z,3.1nm,0.8s,baz=33,slow=7.1,SNR=14						
AAK	Ala-Archa	53.09	295⇑	eP	P	17 12 48.2	+0.7
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	Arti	53.90	317d	iP	P	17 12 52.7	-0.3
ARU				*PP	pP	17 13 30.2	+7.2
ARU						17 14 53.3	
ARU				S	S	17 20 13.6	-4.4
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
FINES	FINESS Array B	62.74	334	P	P	17 13 54.2	-0.1
	comp=Z,2.1nm,0.4s,baz=38,slow=11,SNR=17						
NB2	NORSAR Subarra	66.89	341	P	P	17 14 21.2	0.0
	comp=Z,1.1nm,0.6s,baz=29,slow=6.5						
NOA	NORSAR Array B	66.89	341	P	P	17 14 21.8	+0.6
	comp=Z,1.4nm,0.8s,baz=28,slow=6.2,SNR=4.3						
WRA	Warramunga Arr	69.74	199	P	P	17 14 39.3	-0.1
	comp=Z,0.4nm,0.8s,baz=19,slow=6.3,SNR=6.9						
AKASG	Malin Array Be	70.33	326	P	P	17 14 42.2	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	70.33	326	P	P	17 14 42.2	-0.4
	comp=Z,0.7nm,0.4s,baz=33,slow=6.6,SNR=3.7						
ASAR	Alice Springs	73.44	198	P	P	17 15 02.2	+0.8
	comp=Z,0.3nm,0.6s,baz=7.7,slow=5.0,SNR=7.9						
CLL	Collm	75.16	335⇑	iP	P	17 15 11.3	+0.1
CLL				e*PP	pP	17 15 51.0	+8.0
CLL				pmax	pmax		
	comp=Z,13nm,0.7s						
CLL	Collm	75.16	335⇑	iP	P	17 15 11.3	+0.1
	comp=Z,6.0nm,0.7s						
CLL				i		17 15 21.5	
CLL				epP	pP	17 15 51.0	+8.0
CLL				ePP	PP	17 18 00.0	-0.3
KHC	Kasperske Hory	76.94	334	eP	P	17 15 22.5	+1.1
KHC	Kasperske Hory	76.94	334	eP	P	17 15 22.5	+1.1
TXAR	Lajitas Array	76.97	61	P	P	17 15 21.5	-0.4
	comp=Z,0.3nm,0.6s,baz=335,slow=6.3,SNR=2.6						
GERES	GERESS Array B	77.16	334	P	P	17 15 22.4	-0.3
	comp=Z,0.6nm,0.5s,baz=32,slow=6.2,SNR=8.1						
BRTR	Keskin Array B	77.29	316	P	P	17 15 23.9	+0.3
	comp=Z,0.7nm,0.6s,baz=71,slow=3.2,SNR=4.9						

NEIC 05 17:04:57.7, 51°.71N×176°.75W, h65km, ML3.5(AEIC), After AEIC., Andreanof Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ETKA	Kagalaska Isla	0.26	54	P	Pn	17 05 07.5	-0.5
ADAG	Mount Adagdak	0.29	18	P	Pn	17 05 08.2	0.0
KIMD	Kanaga Island	0.31	280	P	Pn	17 05 08.0	-0.3
KIKV	Kanaga Island	0.31	303	P	Pn	17 05 08.0	-0.4
KIKV				S	Sn	17 05 16.6	+0.4
KINC	Kanaga Island	0.33	314	P	Pn	17 05 08.0	-0.5
GSCK	Great Sitkin C	0.47	50	P	Pn	17 05 09.2	-0.6
GSTD	Great Sitkin T	0.51	47	P	Pn	17 05 09.4	-0.8
GSTD				S	Sn	17 05 19.1	-0.3
GSTR	Great Sitkin T	0.58	48	ePn	Pn	17 05 10.2	-0.6
TAPA	Tanaga Point A	0.67	280	P	Pn	17 05 11.3	-0.6
TAFP	Tanaga Falls P	0.79	285	P	Pn	17 05 12.4	-0.9
TAFP				S	Sn	17 05 24.2	-0.6
TASE	Tanaga Southea	0.81	280	P	Pn	17 05 13.0	-0.6
TANO	Tanaga North	0.88	284	P	Pn	17 05 13.7	-0.6
GAEA	Gareloi East	1.25	274	P	Pn	17 05 18.5	-0.6
GAEA				S	Sn	17 05 34.8	-0.4
GALAA	Gareloi Lava P	1.26	273	P	Pn	17 05 18.7	-0.6
GANE	Gareloi Northe	1.27	276	P	Pn	17 05 18.6	-0.7
ATKA	Atka Island	1.66	72	P	Pn	17 05 23.4	-1.1
ATKA				S	Sn	17 05 43.6	-1.1
KOKL	Mount Kliuchef	1.69	68	P	Pn	17 05 24.6	-0.5
KOKV	Korovin Volcan	1.72	67	P	Pn	17 05 25.1	-0.4
KOKV				S	Sn	17 05 46.6	0.0
CERAA	Semis' Rag'd T	2.22	277	P	Pn	17 05 31.2	-1.0
CEAP	Semis' Anvil P	2.30	279	P	Pn	17 05 32.4	-0.8
CETU	Semis' Tuman	2.35	278	P	Pn	17 05 33.0	-0.8
AMKA	Amchitka	2.49	264	P	Pn	17 05 34.8	-0.9
AMKA				S	Sn	17 06 03.3	-1.7
LSPA	Little Sitkin	2.91	277	P	Pn	17 05 41.0	-0.6
LSPA				S	Sn	17 06 14.3	-1.1
LSSE	Little Sitkin	2.92	276	P	Pn	17 05 41.0	-0.6
LSNW	Little Sitkin	2.95	277	P	Pn	17 05 41.2	-0.9
LSSA	Little Sitkin	2.95	277	P	Pn	17 05 41.3	-0.8

PRE ***05*** *17:43:38.2±1.1, 21°.55S×32°.99E, h5km, ML3.7*

ISC 05 17:43:43.1±3.7, 21°.8S±0°.2×32°.8E±0°.1, h10km, n5, σ2s08/9, Mozambique

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
POGA	Pongola	5.61	191	i P	Pn	17 45 04.0	-2.6
POGA				i S	Sg	17 46 44.5	+1.3
PRYS	Parys	7.08	223	eP	Pn	17 45 29.1	+2.3
PRYS				eS	Sn	17 46 48.3	+0.9
PRYS				AML	AML	17 47 49.7	
	comp=Z,5.7nm,0.5s						
LBTB	Lobatse	7.32	243	eP	Pn	17 45 30.2	+0.1
LBTB				eS	Sn	17 46 53.8	+0.5
LBTB				AML	AML	17 47 55.1	
	comp=Z,9.1nm,0.6s						
LBTB	Lobatse	7.32	243	i P	Pn	17 45 34.8	+4.7
LBTB				i S	Sg	17 47 35.1	-2.8
BOSA	Boshof	9.58	224	eP	Pn	17 46 02.9	+1.7
BOSA				eS	Sn	17 47 48.4	-0.7
BOSA				AML	AML	17 49 20.1	
	comp=Z,3.1nm,0.6s						

IDC ***05*** *17:46:29.8±0.9, 13°.55N×125°.32E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.6/24, mbtmp3.6/7, MS2.8/1, Ms1 3.0/1, ms1mx2.4/42, Error ellipse: s-maj=79.5km s-min=16.8km az=72.0*

ISCJB ***05*** *17:46:31.3±0.7, 13°.66N±0°.04×125°.42E±0°.09, h24km, mb3.6/7, MS2.6/1, Error ellipse: s-maj=13.0km s-min=5.9km az=175.8*

MAN ***05*** *17:46:33, 13°.56N×125°.20E, h99km, mb4.9, ML3.8, MS3.9*

ISC 05 17:46:33.2±0.8, 13°.63N±0°.05×125°.30E±0°.09, h24km, n18, σ1s07/19, mb3.6/7, 1C-1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CNP	Catarman	1.27	209	eP	Pb	17 46 56.7	+0.2
CNP				eS	Sb	17 47 12.8	+0.4
BESP	Borongan	2.02	176	eP	Pn	17 47 05.7	-0.1
PLP	Palo	2.47	187⇓	eP	Pn	17 47 11.2	-0.8
PLP				eS	Sn	17 47 40.2	-1.2
AUQP	San Andres	2.57	264	eP	Pb	17 47 17.1	-1.5
RCP	Roxas	3.23	231⇑	eP	Pn	17 47 24.5	+2.1
BALP	Baler	4.17	301	eP	Pn	17 47 34.0	-1.4
PALP	Palanan	4.40	321	eP	Pn	17 47 37.9	-0.6
CAUP	Cauayan	4.70	315	eP	Pn	17 47 42.9	+0.2
APYP	Conner	5.74	318	eP	Pn	17 47 57.7	+0.7
KSRS	Korea Array	23.84	5	P	P	17 51 45.4	+0.8
	0.8nm,0.9s,baz=185,slow=7.3,SNR=5.0						
CMAR	Chiang Mai Arr	25.77	284	LR	LR	18 03 33.7	
	comp=Z,20nm,20.1s,baz=210,slow=40						
WRA	Warramunga Arr	34.52	165	P	P	17 53 18.0	-1.9
	0.8nm,0.8s,baz=344,slow=9.3,SNR=5.3						
SONM	Songino Array	37.56	339	P	P	17 53 46.2	+0.4
	0.7nm,0.7s,baz=156,slow=8.1,SNR=5.5						
ASAR	Alice Springs	38.01	167	P	P	17 53 49.4	-0.3
	0.4nm,0.4s,baz=350,slow=6.6,SNR=23						
STKA	Stephens Creek	47.87	161	P	P	17 55 09.7	+0.3
	2.4nm,0.8s,baz=5.7,slow=9.7,SNR=4.0						
MKAR	Makanchi Array	48.81	321	P	P	17 55 17.8	+1.2
	0.3nm,0.7s,baz=121,slow=9.6,SNR=3.8						
ZALV	Zalesovo Beam	51.25	331	P	P	17 55 35.3	+0.4
	0.4nm,0.5s,baz=111,slow=7.9,SNR=2.7						
TORD	Torodi Ar. Bea	118.11	293	PKP	PKPdf	18 05 19.8	+0.6
	0.2nm,0.6s,baz=98,slow=1.0,SNR=2.9						

ISCJB ***05*** *17:50:45.5±0.7, 42°.79S±0°.08×72°.3W±0°.2, h10km, mb4.0/8, MS3.5/4, Error ellipse: s-maj=22.6km s-min=6.7km az=26.9*

IDC ***05*** *17:50:45.5±0.8, 42°.79S×72°.45W, h0km, mb3.9/8, mb1 4.1/8, mb1mx4.0/19, mbtmp3.9/8, MS3.6/4, Ms1 3.6/4, ms1mx3.1/27, Error ellipse: s-maj=33.2km s-min=13.6km az=113.0*

NEIC ***05*** *17:50:46.9±0.6, 42°.79S×72°.41W, h10km, mb4.4/3, Error ellipse: s-maj=22.1km s-min=10.8km az=115.0*

ISC 05 17:50:46.9±0.7, 42°.79S±0°.09×72°.4W±0°.1, h10km, n29, σ0s94/26, mb4.0/8, MS3.5/4, Southern Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.47	34	ePn	Pn	17 51 28.0	+0.8
PLCA				Pg	Pb	17 51 31.9	+0.5
PLCA				eSg	Sg	17 52 06.4	+0.3
PLCA				Lg	Lg	17 52 06.9	
PLCA	Paso Flores	2.47	34	Pg	Pb	17 51 31.9	+0.5
	6.8nm,0.3s,baz=219,slow=16,SNR=94						
PLCA				Lg	Lg	17 52 06.9	
	43nm,0.3s,baz=123,slow=9.6,SNR=20						
TRQA	Tornquist	9.23	63	P	Pn	17 53 00.9	+0.9
	6.8nm,0.9s						
CPUP	Villa Florida	20.52	42	P	Pn	17 55 27.1	-0.2
CPUP	Villa Florida	20.52	42	P	Pn	17 55 27.1	-0.2
	0.3nm,0.3s,baz=216,slow=14,SNR=2.8						
CPUP				LR	LR	18 04 12.0	
	comp=Z,122nm,18.3s,baz=187,slow=39						
PMSA	Palmer Station	22.53	171	LR	LR	18 03 53.9	
	comp=Z,281nm,20.8s,baz=312,slow=35						
SIV	San Ignacio	28.41	23	P	P	17 56 40.4	-1.3
SIV	San Ignacio	28.41	23	P	P	17 56 40.4	-1.3
	0.4nm,0.3s,baz=241,slow=10,SNR=4.7						
BDFB	Brasilia	34.17	45	LR	LR	18 11 10.2	
	comp=Z,68nm,18.5s,baz=53,slow=36						
SNAA	Sanae	43.65	155	eP	P	17 58 50.9	-0.3
	12nm,1.4s						
SNAA	Sanae	43.65	155	P	P	17 58 50.9	-0.3
	2.9nm,1.2s,baz=272,slow=7.5,SNR=6.0						
ROSC	El Rosal	47.46	357	LR	LR	18 19 55.6	
	comp=Z,52nm,19.6s,baz=356,slow=37						
QSPA	South Pole Qui	47.46	180	P	P	17 59 22.1	+0.6
QSPA	South Pole Qui	47.46	180	P	P	17 59 22.1	+0.6
	9.1nm,1.1s,baz=148,slow=5.4,SNR=12						
SBA	Scott Base	54.44	193	P	P	18 00 15.3	+1.7
VNDA	Vanda	55.45	192	eP	P	18 00 22.4	+1.4
	11nm,1.6s						
VNDA	Vanda	55.45	192	P	P	18 00 22.7	+1.7
	3.2nm,1.2s,baz=135,slow=7.9,SNR=5.1						
MAW	Mawson	64.86	163	eP	P	18 01 24.3	-1.2
	1.3nm,1.2s						
TXAR	Lajitas Array	77.33	332	P	P	18 02 42.4	+0.8
TXAR	Lajitas Array	77.33	332	P	P	18 02 42.4	+0.8
	0.2nm,0.6s,baz=171,slow=8.5,SNR=4.7						
TORD	Torodi Ar. Bea	87.49	70	P	P	18 03 34.2	-0.7
TORD	Torodi Ar. Bea	87.49	70	P	P	18 03 34.2	-0.7
	0.6nm,0.9s,baz=205,slow=6.4,SNR=2.9						
PDAR	Pinedale Array	91.49	334	P	P	18 03 53.2	-0.1
PDAR	Pinedale Array	91.49	334	P	P	18 03 53.2	-0.1
	0.4nm,0.5s,baz=145,slow=5.4,SNR=3.9						
ILAR	Eielson Array	121.82	331	PKP	PKPdf	18 09 39.5	-0.5
ILAR	Eielson Array	121.82	331	PKP	PKPdf	18 09 39.5	-0.5
	0.3nm,0.7s,baz=171,slow=2.3,SNR=4.9						
ABKAR	Akbulak array	146.73	62	ePKPdf	PKPdf	18 10 25.1	-1.5
MKAR	Makanchi Array	161.61	69	PKPab	PKPab	18 11 32.2	-0.3
MKAR	Makanchi Array	161.61	69	PKPab	PKPab	18 11 32.2	-0.3
	0.4nm,0.7s,baz=270,slow=2.4,SNR=5.4						

IDC 05 17:56:59.4±4.2, 5°.43S×128°.03E, h0km, mb3.4/1, mb1 3.8/3, mb1mx3.5/21, mbtmp3.6/3, ML3.8/2, Error ellipse: s-maj=537.3km s-min=29.3km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.68	158	Pn	Pn	18 00 43.8	+1.9
	0.3nm,0.3s,baz=340,slow=12,SNR=25						
WRA				Sn	Sn	18 03 34.5	-2.0
	0.1nm,0.3s,baz=327,slow=23,SNR=5.2						
ASAR	Alice Springs	19.00	163	P	P	18 01 22.1	-0.8
	0.5nm,0.3s,baz=346,slow=12,SNR=78						
MKAR	Makanchi Array	65.85	327	P	P	18 07 46.8	0.0
	0.2nm,0.3s,baz=119,slow=6.2,SNR=5.8						

ATH ***05*** *17:58:12.1, 37°.36N×22°.64E, h48km±7km, MD3.0/7*

ISCJB ***05*** *17:58:13.1±0.9, 37°.32N±0°.05×22°.67E±0°.05, h47km±9km, Error ellipse: s-maj=8.1km s-min=6.4km az=152.2*

CSEM ***05*** *17:58:13.4±0.1, 37°.34N×22°.66E, h40km, ML1.8/3, Error ellipse: s-maj=4.3km s-min=3.7km az=138.0*

THE ***05*** *17:58:14.0, 37°.29N×22°.69E, h39km±3km, ML1.8/3, Error ellipse: s-maj=3.3km s-min=1.1km az=321.0*

ISC 05 17:58:13.3±1.5, 37°.33N±0°.04×22°.67E±0°.03, h44km±11km, n24, σ0s52/37, Southern Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VLX	Vlachokerasia	0.23	280	P	Pn	17 58 21.5	0.0
VLX				S	Sn	17 58 27.2	0.0
VLX	Vlachokerasia	0.23	280	P	Pn	17 58 21.5	0.0
VLX				S	Sn	17 58 27.2	0.0
DIDY	Didyma	0.46	71	P	Pn	17 58 23.9	+0.1
DIDY				S	Sn	17 58 31.3	0.0
DIDY	Didyma	0.46	71	P	Pn	17 58 23.9	+0.1
DIDY				S	Sn	17 58 31.3	0.0
DID	Didima	0.48	69	P	Pn	17 58 24.3	+0.1
DID				S	Sn	17 58 32.1	+0.3
DID	Didima	0.48	69	eP	Pn	17 58 24.2	+0.1
DID				eS	Sn	17 58 32.3	+0.5
DID	Didima	0.48	69	P	Pn	17 58 24.3	+0.1
DID				S	Sn	17 58 32.1	+0.3
ITM	Ithomi	0.61	256	eP	Pn	17 58 25.8	+0.1
ITM				eS	Sn	17 58 34.5	-0.1
ITM	Ithomi	0.61	256	eP	Pn	17 58 25.8	+0.1
ITM				eS	Sn	17 58 34.5	-0.1
DYR	Agios Nikonas	0.63	206	P	Pn	17 58 26.2	+0.2
DYR	Agios Nikonas	0.63	206	eP	Pn	17 58 26.2	+0.2
DYR				eS	Sn	17 58 35.5	+0.5
DYR	Agios Nikonas	0.63	206	P	Pn	17 58 26.2	+0.2
DYR				eS	Sn	17 58 35.5	+0.5
VLI	Veliai	0.65	161	P	Pn	17 58 25.5	-0.6
VLI				S	Sn	17 58 34.2	-1.2
VLI	Veliai	0.65	161	eP	Pn	17 58 25.6	-0.6
VLI	Veliai	0.65	161	eP	Pn	17 58 25.6	-0.6
VLI				S	Sn	17 58 34.2	-1.2
KLV	Kalavryta, Ach	0.82	330	eP	Pn	17 58 27.6	-1.0
KLV	Kalavryta, Ach	0.82	330	eP	Pn	17 58 27.6	-1.0
PYL	PYLOS	0.86	240	eP	Pn	17 58 29.5	+0.5
PYL	PYLOS	0.86	240	eP	Pn	17 58 29.5	+0.5
KYTH	Kithira	1.09	164	P	Pn	17 58 32.4	+0.2
KYTH	Kithira	1.09	164	eP	Pn	17 58 32.7	+0.5
KYTH	Kithira	1.09	164	eP	Pn	17 58 32.7	+0.5
AGG	Agios Georgios	1.71	351	P	Pn	17 58 41.1	+0.4
AGG	Agios Georgios	1.71	351	P	Pn	17 58 41.1	+0.4

MEX 05 18:04:19.3±0.7, 16°.81N×99°.72W, h24km±9km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.14	294	eP	Pb	18 04 23.6	-0.8
ACX				i S	Sb	18 04 27.4	-0.3
CAIG	El Cayaco	0.57	294	i P	Pb	18 04 28.6	-2.1
CAIG				i S	Sb	18 04 36.6	-2.0
MEIG	Mezcala	1.11	5	eP	Pn	18 04 36.2	-3.3
MEIG				i S	Sn	18 04 49.9	-4.3
ARIG	Puente Sto Nin	1.58	338	eP	Pn	18 04 43.6	-2.2
ARIG				i S	Sn	18 05 02.9	-2.7
PNIG	Pinotepa	1.58	105	eP	Pn	18 04 43.6	-2.3
PNIG				i S	Sn	18 05 01.9	-3.7
PLIG	Platanillo	1.59	8	i P	Pn	18 04 44.2	-1.8
PLIG				i S	Sn	18 05 02.3	-3.6
ZIIG	Zihuatanejo	1.85	296	eP	Pn	18 04 46.9	-2.5
ZIIG				eS	Sn	18 05 08.5	-3.5
UTMO	Huajuapan	2.09	61	eP	Pn	18 04 51.1	-2.1
UTMO				i S	Sn	18 05 16.2	-2.5

BJI ***05*** *18:08:25.7, 10°.09S×124°.30E, h59km, mB5.2/25, mb5.2/52, Ms4.7/30, Ms7 4.2/30*

ISCJB ***05*** *18:08:32.9±0.2, 9°.19S±0°.03×123°.98E±0°.03, h58km, mb5.1/103, MS3.9/28, Error ellipse: s-maj=5.0km s-min=3.8km az=142.6*

MOS ***05*** *18:08:33.6±1.6, 9°.10S×123°.50E, h52km, mb5.5/40, Error ellipse: s-maj=11.3km s-min=5.9km az=111.1*

NEIC ***05*** *18:08:35.2±1.0, 9°.17S×123°.73E, h56km±8km, mb5.1/36, Error ellipse: s-maj=9.3km s-min=5.4km az=63.0*

IDC ***05*** *18:08:35.8±2.9, 9°.12S×123°.63E, h58km±25km, mb4.7/27, mb1 4.7/27, mb1mx4.7/28, mbtmp4.7/27, MS3.8/19, Ms1 3.8/19, ms1mx3.5/35, Error ellipse: s-maj=15.6km s-min=9.3km az=69.0*

DJA ***05*** *18:08:39.6±0.2, 9°S±2°×12°4E±°, h69km±5km, M5.0/36, mB5.5/24, mb5.2/36, MLv5.4/8, Mw(mB)4.9/24*

GCMT ***05*** *18:08:41.6±0.2, 9°.34S×123°.88E, h77km±3km, MW5.0, Moment Tensor Solution. s40,c51; s74,c120; Moment tensor: Scale 10^{16}Nm; M_{rr}1.60±.15; $M_{\theta\theta}$1.18±.13; $M_{\phi\phi}$-2.78±.14; $M_{r\theta}$2.81±.08; $M_{\theta\phi}$-1.20±.13; $M_{\phi r}$1.24±.10; Best double couple: $M_0$4.10000×10^{16} NP1:ϕ_s162.00000°, δ37.00000°, λ24.00000°. NP2:ϕ_s52.00000°, δ76.00000°, λ125.00000°. Principal axes: T 4.2100, Plg47.0000°, Azm359.0000°; N -0.2500, Plg34.0000°, Azm223.0000°; P -3.9600, Plg23.0000°, Azm116.0000°; Data Used: II IU IC G CN.*

ISC 05 18:08:36.2±0.3, 9°.18S±0°.04×123°.77E±0°.04, h62km±2km, h61km:pP-P, n555, σ1s51/574, mb5.2/113, 115C-112D, Timor region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMRI	Maumere	1.60	290	P	Pn	18 09 06.1	+3.8
MMRI				S	Sn	18 09 27.3	+5.2
BASI	Baing, Sumba	3.31	252	P	Pn	18 09 28.7	+3.2
WSI	Waingapu	3.46	262	P	Pn	18 09 30.5	+2.9
WSI				S	Sn	18 10 08.4	+1.1
BBSI	Bau Bau	3.86	342	P	Pn	18 09 38.2	+5.1
BBSI				S	Sn	18 10 26.5	+9.3
BSSI	Bau Bau, Buton	4.43	313	P	Pn	18 09 46.5	+5.5
BMNI	Bima	5.05	277	P	Pn	18 10 04.6	+15
BKSI	Bulukumba	5.27	316	P	Pn	18 09 57.2	+4.8
	370nm,0.7s,3µm1.2nm						
KAPI	Kappang	5.75	316⇑	iPn	Pn	18 10 02.9	+3.9
	255nm,1.0s						
KAPI				S	Sn	18 11 07.8	+4.2
KAPI	Kappang	5.75	316	Pn	Pn	18 10 04.3	+5.4
	1µm,1.5s,SNR=28						
KAPI	Kappang	5.75	316	P	Pn	18 10 04.1	+5.1
	243nm,1.0s,2µm0.9nm						
KAPI	Kappang	5.75	316	P	Pn	18 10 04.0	+5.1
	23nm,0.3s,baz=148,slow=9.7,SNR=37						
KAPI				S	Sn	18 11 07.8	+4.2
	2.2nm,0.3s,baz=162,slow=20,SNR=1.5						
SPSI	Sidrap Palu	6.53	322	P	Pn	18 10 15.7	+6.0
MSAI	Masohi	7.74	42	P	Pn	18 10 35.0	+8.7
	60nm,1.0s,532nm0.2nm						
KHKI	Kahang-Kahang	8.10	275	P	Pn	18 10 32.4	+1.2
	111nm,0.9s,1µm						
LUWI	Luwuk	8.15	353	P	Pn	18 10 37.0	+5.2
	402nm,1.0s,4µm						
IGBI	Denpasar	8.52	272	P	Pn	18 10 42.4	+5.4
	196nm,0.7s,1.0nm						
FITZ	Fitzroy Crossi	9.05	169	ePn	Pn	18 10 41.8	-2.4
	1.0nm,0.8s						
FITZ				eSn	Sn	18 12 13.6	-11
FITZ				S		18 12 14.8	
FITZ	Fitzroy Crossi	9.05	169	P	Pn	18 10 42.1	-2.1
	44nm,0.3s,baz=2.1,slow=8.1,SNR=702						
FITZ				S	Sn	18 12 14.8	-10
	336nm,0.3s,baz=353,slow=14,SNR=26						
FITZ				LR	LR	18 15 24.8	
	comp=Z,354nm,18.2s,baz=340,slow=45						
LBMI	Labuha	9.27	24	P	Pn	18 10 54.3	+7.1
	230nm,1.3s,2µm						
JAGI	Jajag, Banyuwa	9.53	274	P	Pn	18 11 06.4	+16
BLJI	Banyuglugur	10.16	277	P	Pn	18 11 11.0	+12
FAKI	Fak Fak	10.48	54	P	Pn	18 11 14.8	+11
TNTI	Ternate	10.52	20	P	Pn	18 11 11.0	+6.7
	191nm,1.3s,3µm						
BBKI	Banjar Baru	10.53	302	P	Pn	18 11 12.6	+8.1
MNI	Manado	10.61	6	P	Pn	18 11 14.9	+9.4
	316nm,1.2s,4µm						
SMKI	Samarinda	10.86	323	P	Pn	18 11 18.8	+10
SWI	Sorong	11.13	42	P	Pn	18 11 16.7	+4.0
	106nm,1.2s,998nm						
SJI	Sawahan	11.96	276	P	Pn	18 11 34.9	+11
MBWA	Marble Bar	12.53	198	ePn	Pn	18 11 29.1	-2.6
	74nm,0.8s						
MBWA				eSn	Sn	18 13 17.8	-32
RKPI	Ransiki, Papua	12.86	54	P	Pn	18 11 38.6	+2.3
	127nm,0.7s,2µm						
SMRI	Semarang	13.36	278	P	P	18 11 54.2	+3.6
BJII	Banjamegara	14.03	276	P	P	18 12 04.0	+5.9
SRPI	Serui, Papua	14.38	60	P	P	18 12 02.5	+0.6
	101nm,0.8s						
TSM	Tawau	14.62	336	P	P	18 12 04.9	+0.3
BAKI	Biak	14.62	58	P	P	18 12 05.3	+0.7
	207nm,1.0s,2µm						
WRA	Warramunga Arr	14.79	137	P	Pn	18 11 57.0	-5.0
WRA				S	Sn	18 14 29.9	-15
WRA	Warramunga Arr	14.79	137	P	Pn	18 11 57.0	-5.0

22nm,0.3s,baz=314,slow=14,SNR=616
WRA S Sn 18 14 29.9 -15
52nm,0.3s,baz=316,slow=24,SNR=18
WRA LR LR 18 18 26.1
comp=Z,882nm,20.2s,baz=315,slow=40
WRAB Tennant Creek 14.79 137 *e*P Pn 18 11 57.0 -5.0
WRAB pmax pmax
comp=Z,254nm,0.7s
WRAB Tennant Creek 14.79 137 *e*Pn Pn 18 11 57.0 -5.0
comp=Z,254nm,0.7s
WRAB *e*Sn Sn 18 14 28.6 -16
WRAB Tennant Creek 14.79 137 Pn Pn 18 11 57.0 -5.0
comp=Z,2µm,0.5s,SNR=69
MYLDM Lahad Datu 15.20 340 P **P** **18 12 14.2 +3.2**
MYLDM Lahad Datu 15.20 340 P **P** **18 12 14.6 +3.6**
comp=Z,96nm,1.2s,comp=Z,3µm
STKI Sintang 15.30 306 P P 18 12 17.1 +4.9
SDKM Sandakan 16.12 336 P **P** **18 12 24.9 +3.7**
LEM Lembang 16.16 277 P **Pn** **18 12 20.5 +0.8**
comp=Z,106nm,0.8s
DAV Davao City (W) 16.25 6 LR LR 18 18 21.8
comp=Z,296nm,21.7s,baz=189,slow=36
BTM Bintulu 16.27 319 P **P** **18 12 25.4 +2.5**
CTBH Cotabato--PC H 16.30 2⇑ *i*P **P** **18 12 25.9 +2.7**
SBUM Sibu 16.31 315 P **P** **18 12 25.3 +2.0**
SBUM Sibu 16.31 315 P **P** **18 12 25.0 +1.7**
comp=Z,29nm,1.7s,comp=Z,562nm
MMPI Merauke 16.44 89 P **P** **18 12 27.1 +2.3**
comp=Z,358nm,0.7s,comp=Z,13µm
KKM Kota Kinabalu 16.89 333 *e*Pn **P** **18 12 32.2 +2.2**
comp=Z,38nm,0.4s
KKM Kota Kinabalu 16.89 333 P **P** **18 12 33.2 +3.3**
KKM Kota Kinabalu 16.89 333 P **P** **18 12 33.0 +3.1**
comp=Z,79nm,1.3s,comp=Z,1µm
CBJI Citeko 16.98 278 P **Pn** **18 12 28.7 -1.1**
comp=Z,283nm,0.8s
DBJI Dramaga 17.06 278 P **Pn** **18 12 31.1 +0.4**
comp=Z,120nm,0.9s,comp=Z,2µm
KSM Kuching 17.08 308 *e*Pn **P** **18 12 33.4 +1.5**
comp=Z,20nm,0.6s
KSM Kuching 17.08 308 P **P** **18 12 34.0 +2.1**
KSM Kuching 17.08 308 P **P** **18 12 34.3 +2.4**
comp=Z,44nm,1.2s,comp=Z,622nm
AS31 Alice Springs 17.36 147 *e*Pn **Pn** **18 12 31.9 -2.5**
AS31 *e*Sn Sn 18 15 32.6 -15
ASAR Alice Springs 17.36 147 P **Pn** **18 12 31.6 -2.9**
ASAR S Sn 18 15 33.9 -13
ASAR Alice Springs 17.36 147 P **Pn** **18 12 31.6 -2.9**
comp=Z,17nm,0.3s,baz=324,slow=11,SNR=627
ASAR S Sn 18 15 33.9 -13
comp=Z,31nm,0.3s,baz=316,slow=20,SNR=13
ASAR LR LR 18 20 16.4
comp=Z,508nm,18.1s,baz=319,slow=40
KDM Kudat 17.42 336 P **P** **18 12 39.3 +3.7**
PPBI Pangkal Pinang 18.87 291 P **Pn** **18 12 52.6 -0.2**
comp=Z,34nm,0.7s
KASI Kota Agung 19.45 279 P **P** **18 12 57.2 -0.8**
comp=Z,171nm,0.5s,comp=Z,3µm
COEN Coen 19.59 106 *e*P **P** **18 13 00.5 +1.0**
comp=Z,913nm,0.9s
COEN *e*S S 18 16 25.4 -12
KSI Kapahiang 21.74 283 P P 18 13 28.6 +5.9
comp=Z,90nm,0.7s
FORT Forrest 21.86 170 *e*P **P** **18 13 23.1 -0.7**
comp=Z,273nm,0.8s
FORT *e*S S 18 17 07.6 -14
BTDF Bukit Timah Da 22.50 297 P **P** **18 13 30.7 -0.2**
comp=Z,31nm,0.8s
MYKOM Kota Tinggi 22.64 298 P **P** **18 13 32.5 +0.2**
MYKOM Kota Tinggi 22.64 298 P **P** **18 13 32.0 -0.3**
comp=Z,39nm,1.4s
PMG Port Moresby 23.09 92 *e*P **P** **18 13 38.5 +1.6**
comp=Z,120nm,0.9s
PMG Port Moresby 23.09 92 P **P** **18 13 39.1 +2.2**
PMG Port Moresby 23.09 92 P **P** **18 13 39.3 +2.4**
comp=Z,38nm,0.8s,baz=260,slow=6.2,SNR=12
PMG LR LR 18 24 45.5
comp=Z,470nm,18.1s,baz=57,slow=42
KGM Kluang 23.21 298 P **P** **18 13 38.8 +0.7**
CTA Charters Tower 24.27 119 P **P** **18 13 49.6 +1.7**
CTA Charters Tower 24.27 119 P **P** **18 13 49.6 +1.7**
comp=Z,46nm,0.9s,baz=292,slow=12,SNR=40
CTAO Charters Tower 24.27 119⇓ *e*P **P** **18 13 48.8 +0.9**
CTAO *e*S S 18 18 11.5 +8.9
CTAO pmax pmax
comp=Z,52nm,0.8s
CTAO Charters Tower 24.27 119⇓ *e*P **P** **18 13 48.8 +0.9**
comp=Z,52nm,0.8s
CTAO *e*S S 18 18 11.5 +8.9
NWAO Narrogin (SRO) 24.39 193 *e*P **P** **18 13 47.9 -0.9**
comp=Z,13nm,0.8s
NWAO *e*S **S** **18 18 05.6 +1.4**
NWAO Narrogin (SRO) 24.39 193 P **P** **18 13 47.9 -0.9**
comp=Z,15nm,0.5s,baz=13,slow=9.7,SNR=24
NWAO LR LR 18 23 33.1
comp=Z,293nm,18.5s,baz=177,slow=37
KTGM Kuala Trenggan 25.11 304 P **P** **18 13 56.7 +1.2**
FRIM Kepong 25.28 298 P **P** **18 13 58.6 +1.6**
BBOO Buckleboo 26.12 156⇓ *e*P **P** **18 14 04.2 -0.3**
comp=Z,744nm,0.8s
BBOO *e*S S 18 18 42.6 +11
IPM Ipoh 26.42 300 P **P** **18 14 09.0 +1.6**
KULM Kulim 27.16 301 *e*P **P** **18 14 12.8 -1.2**
comp=Z,7.9nm,0.8s
KULM Kulim 27.16 301 P **P** **18 14 15.8 +1.8**
STKA Stephens Creek 28.00 146⇓ *i*P **P** **18 14 21.7 +0.4**
STKA *e*S S 18 19 28.4 +27
STKA Stephens Creek 28.00 146 P **P** **18 14 22.1 +0.8**
comp=Z,33nm,0.7s,baz=315,slow=8.8,SNR=62
STKA LR LR 18 27 03.9
comp=Z,432nm,19.2s,baz=120,slow=39
QIZ Qiongzhong 31.21 334 P **P** **18 14 51.4 +1.5**
QIZ S **S** **18 19 55.6 +3.6**
QIZ pmax pmax
comp=Z,150nm,4.2s
QIZ LR LR
comp=Z,300nm,38.3s
SSLB Suanglung 32.88 355 *e*P P 18 15 00.9 -3.6
comp=Z,5.7nm,0.4s
ARMA Armidale 33.50 133 *e*P **P** **18 15 12.3 +2.3**
comp=Z,31nm,0.8s
YHNB Yeheng 33.73 356 *e*P **P** **18 15 09.7 -2.2**
comp=Z,33nm,1.1s
HNR Honiara 35.70 93 *e*P **P** **18 15 29.5 +0.5**
comp=Z,50nm,0.7s
HNR Honiara 35.70 93 P **P** **18 15 30.0 +1.0**
comp=Z,60nm,0.6s,baz=315,slow=1.8,SNR=14
HNR LR LR 18 31 44.3
comp=Z,76nm,18.2s,baz=131,slow=39
CM31 Chiang Mai Arr 36.80 318 *e*P **P** **18 15 38.8 +0.5**
comp=Z,14nm,0.7s
CMAR Chiang Mai Arr 36.80 318 P **P** **18 15 39.0 +0.7**
CMAR PcP **PcP** **18 18 00.1 +0.5**
CMAR ScP **ScP** **18 21 39.4 -1.8**
CMAR Chiang Mai Arr 36.80 318 P **P** **18 15 39.0 +0.7**
comp=Z,16nm,0.8s,baz=144,slow=6.8,SNR=62
CMAR PcP **PcP** **18 18 00.1 +0.5**
comp=Z,2.8nm,0.6s,baz=177,slow=2.5,SNR=6.9
CMAR ScP **ScP** **18 21 39.4 -1.8**
comp=Z,3.2nm,0.9s,baz=160,slow=4.1,SNR=9.1
CMAR LR LR 18 29 49.5
comp=Z,194nm,21.4s,baz=141,slow=35
CHTO Chiang Mai 37.06 319 *e*P **P** **18 15 41.1 +0.5**
CHTO pmax pmax
comp=Z,74nm,1.4s
CHTO Chiang Mai 37.06 319 *e*P **P** **18 15 41.0 +0.5**
comp=Z,74nm,1.4s
GYA Guiyang 39.13 335 P **P** **18 15 58.3 +0.3**
GYA pP **pP** **18 16 13.6 +0.1**
GYA sP **sP** **18 16 22.8 +2.1**
GYA PP **PnPn** **18 17 33.5 +1.6**
GYA PcP **PcP** **18 18 06.6 -0.1**
GYA S **S** **18 21 53.0 -0.6**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.0s
GYA LR LR
comp=N,620nm,17.0s
GYA LR LR
comp=E,510nm,18.3s
GYA LR LR
comp=Z,580nm,17.0s
KMI Kunming 39.78 329 P **P** **18 16 05.4 +1.8**
KMI pP **pP** **18 16 15.4 -3.7**
KMI S S 18 22 12.7 +9.1
KMI pmax pmax
comp=Z,20nm,0.5s
KMI LR LR
comp=N,140nm,20.8s
KMI LR LR
comp=E,180nm,16.0s
KMI LR LR
comp=Z,230nm,26.3s
WHN Wuhan 40.52 347⇑ P **P** **18 16 09.7 +0.4**
WHN pmax pmax
comp=Z,75nm,0.6s
WHN LR LR
comp=Z,410nm,23.0s
NJ2 Nanjing 41.27 354 *e*P **P** **18 16 15.9 +0.5**
NJ2 pP **pP** **18 16 29.0 -2.1**
NJ2 sP **sP** **18 16 36.3 -1.9**
NJ2 PP **PnPn** **18 17 55.2 -1.7**
NJ2 S **S** **18 22 25.0 -0.1**
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 pmax pmax
comp=Z,140nm,5.4s
NJ2 LR LR
comp=N,240nm,24.3s
NJ2 LR LR
comp=E,330nm,19.6s
NJ2 LR LR
comp=Z,260nm,22.1s
ENH Enshi 41.56 341 *e*P **P** **18 16 17.1 -0.9**
comp=Z,11nm,0.5s
JNU Nakatsue 42.61 9 P **P** **18 16 24.9 -1.5**
JNU Nakatsue 42.61 9 P **P** **18 16 24.9 -1.5**
comp=Z,5.2nm,0.9s,baz=137,slow=12,SNR=5.3
DZM Mont Dzumac 42.90 113 P **P** **18 16 29.6 +0.5**
DZM Mont Dzumac 42.90 113 P **P** **18 16 29.6 +0.5**
comp=Z,14nm,1.0s,baz=296,slow=21,SNR=4.1
DZM LR LR 18 34 37.5
comp=Z,148nm,19.8s,baz=275,slow=36
CD2 Chengdu 44.24 335 *e*P **P** **18 16 41.3 +1.6**
CD2 pP **pP** **18 16 56.8 +1.4**
CD2 sP **sP** **18 17 04.0 +1.4**
CD2 S **S** **18 23 11.3 +2.3**
CD2 sS **sS** **18 23 37.7 +2.0**
CD2 pmax pmax
comp=Z,40nm,1.4s
CD2 pmax pmax
comp=Z,140nm,11.4s
CD2 LR LR
comp=N,190nm,23.8s
CD2 LR LR
comp=Z,200nm,21.4s
XAN Xi'an 45.23 343 P **P** **18 16 46.3 -1.2**
XAN pmax pmax
comp=Z,9.0nm,0.7s
SHL Shillong 46.43 319 *e*PKP P 18 16 52.0 -5.3
KSAR Wonju Array Be 46.54 5 P **P** **18 16 57.2 -0.4**
KSAR PcP **PcP** **18 18 30.8 -0.3**
KSRS Korea Array 46.55 5 P **P** **18 16 57.2 -0.5**
comp=Z,3.1nm,0.6s,baz=184,slow=9.2,SNR=14
KSRS PcP **PcP** **18 18 30.8 -0.3**
comp=Z,2.8nm,0.9s,baz=186,slow=4.6,SNR=6.4
KSRS LR LR 18 35 08.0
comp=Z,61nm,20.9s,baz=51,slow=34
MJAR Matsushiro Arr 47.47 16 P **P** **18 17 04.0 -0.9**
MJAR Matsushiro Arr 47.47 16 P **P** **18 17 04.0 -0.9**
comp=Z,9.9nm,0.5s,baz=194,slow=9.1,SNR=37
MJAR LR LR 18 36 11.0
comp=Z,48nm,21.1s,baz=325,slow=35
MAJO Matsushiro 47.47 16 *e*P P 18 17 02.4 -2.5
MAJO pmax pmax
comp=Z,56nm,1.2s
MAJO Matsushiro 47.47 16 *e*P P 18 17 02.4 -2.5
comp=Z,56nm,1.2s
MAT Matsushiro 47.47 16 P **P** **18 17 03.7 -1.2**
MAT *e*S **S** **18 23 53.4 -1.7**
LZH Lanzhou 48.78 338⇑ P **P** **18 17 15.2 -0.1**
LZH pP **pP** **18 17 29.6 -1.7**
LZH sP **sP** **18 17 36.3 -2.0**
LZH PP **PP** **18 19 06.3 -2.8**
LZH *e*S **S** **18 24 12.1 -1.9**
LZH pmax pmax
comp=Z,34nm,1.0s
LZH pmax pmax
comp=Z,110nm,4.1s
LZH LR LR
comp=N,190nm,12.0s
LZH LR LR
comp=E,280nm,11.8s
LZH LR LR
comp=Z,320nm,15.4s
BJT Baijiatuan 49.45 352 *e*P **P** **18 17 18.7 -1.4**
comp=Z,21nm,0.4s
BJI Beijing 49.48 352 P **P** **18 17 19.0 -1.2**
BJI S **S** **18 24 27.6 +4.4**
BJI pmax pmax
comp=Z,27nm,0.8s
BJI pmax pmax
comp=Z,170nm,4.3s
BJI LR LR
comp=N,84nm,25.1s
BJI LR LR
comp=E,100nm,21.4s
BJI LR LR
comp=Z,130nm,27.7s
LSA Lhasa 49.80 322 *e*P **P** **18 17 23.7 +0.2**
LSA pmax pmax
comp=Z,41nm,0.6s
LSA Lhasa 49.80 322 *e*P **P** **18 17 23.7 +0.2**
comp=Z,40nm,0.6s
ODAN Odare 50.29 316 *e*P **P** **18 17 26.4 -0.6**
comp=Z,54nm,0.5s
TAPN Taplejung 50.39 317 *e*P **P** **18 17 27.4 -0.4**
comp=Z,114nm,0.4s
RAMN Ramite 50.89 316 *e*P **P** **18 17 31.0 -0.5**
comp=Z,144nm,0.5s
HHC Hu-ho-hao-te 51.04 348 *i*P **P** **18 17 35.1 +2.9**
HHC pP **pP** **18 17 50.7 +2.4**
HHC sP **sP** **18 17 57.5 +2.1**
HHC PP **PP** **18 19 33.7 +4.2**
HHC S **S** **18 24 49.1 +3.9**
HHC sS **sS** **18 25 16.0 +3.6**
HHC SS **SS** **18 28 22.9 +1.7**
HHC pmax pmax
comp=Z,17nm,0.9s
HHC pmax pmax
comp=Z,97nm,6.1s
HHC LR LR
comp=N,280nm,16.1s
HHC LR LR
comp=E,350nm,16.1s
HHC LR LR
comp=Z,170nm,14.7s
GUN Gumba 51.99 316 *e*P **P** **18 17 39.2 -0.7**
comp=Z,87nm,0.5s
PKI Pulchoki 52.10 316 *e*P **P** **18 17 39.5 -1.2**
comp=Z,66nm,0.4s
PKIN Phulchoki 52.11 316 *e*P **P** **18 17 39.3 -1.4**
comp=Z,54nm,0.4s
KKN Kakani 52.32 316 *e*P **P** **18 17 41.3 -0.9**
comp=Z,34nm,0.4s
DMN Daman 52.33 316 *e*P **P** **18 17 41.5 -0.8**
comp=Z,40nm,0.6s
VLA Vladivostok 52.57 7⇑ *i*P **P** **18 17 42.7 -0.8**
VLA pmax pmax
comp=Z,110nm,2.5s
CN2 Changchun 52.75 2 *e*P **P** **18 17 44.2 -0.6**
CN2 *e*sP **sP** **18 18 06.9 -1.1**
CN2 *e*S **S** **18 25 07.3 -1.1**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
GTA Gaotai 53.22 337 *e*P **P** **18 17 48.5 0.0**
GTA pP **pP** **18 18 03.6 -1.1**
GTA sP **sP** **18 18 10.7 -1.0**
GTA S **S** **18 25 15.7 +0.6**
GTA pmax pmax
comp=Z,25nm,1.5s
GTA pmax pmax
comp=Z,170nm,7.6s
GTA LR LR
comp=N,65nm,9.5s
GTA LR LR
comp=E,74nm,12.3s
GTA LR LR
comp=Z,57nm,13.3s
KOLN Koldanda 53.48 315 *e*P **P** **18 17 49.6 -1.1**
comp=Z,85nm,0.5s
RPZ Rata Peaks 53.50 138 P **P** **18 17 50.9 +0.4**
RPZ Rata Peaks 53.50 138 P **P** **18 17 50.9 +0.4**
comp=Z,33nm,0.9s,baz=3.6,slow=6.2,SNR=6.3
USRK Ussuriysk Arra 53.65 7 P **P** **18 17 51.0 -0.4**
comp=Z,18nm,0.5s,baz=194,slow=6.9,SNR=48
USRK LR LR 18 41 08.0
comp=Z,20nm,21.0s,baz=314,slow=36
DANN Dangsing 53.72 315 *e*P **P** **18 17 51.6 -1.0**
comp=Z,237nm,0.5s
MDJ Mudanjiang 53.80 5 P **P** **18 17 52.3 -0.2**
MDJ pP **pP** **18 18 06.0 -2.7**
MDJ sP sP 18 18 10.3 -5.4
MDJ S S 18 25 28.7 +6.1
MDJ pmax pmax
comp=Z,38nm,0.9s
MDJ pmax pmax
comp=Z,87nm,4.6s
MDJ LR LR
comp=N,52nm,3.8s
MDJ LR LR
comp=E,19nm,4.1s
MDJ LR LR
comp=Z,86nm,4.1s
MDJ Mudanjiang 53.80 5 *e*P **P** **18 17 52.0 -0.5**
comp=Z,29nm,0.8s
ERM Erimo 53.96 18⇑ *i*P **P** **18 17 52.5 -1.2**
ERM pmax pmax
comp=Z,49nm,1.7s
ASAJ Asahikawa 55.73 16 *e*P **P** **18 18 05.9 -0.6**
comp=Z,8.5nm,1.1s
YUK Yuzh-Kuril'sk 56.63 19 *d* *i*P **pP** **18 18 30.5 +1.3**
YUK *i* 18 20 16.0
YUK *i* SS **SS** **18 29 45.1 -4.0**
CASY Casey 57.74 186 *e*P **P** **18 18 20.1 -0.2**
comp=Z,18nm,1.2s
HABR Khabarovsk 58.26 9 *e*P **P** **18 18 23.0 -1.2**
HABR *e**SP **sP** **18 18 43.7 -3.9**
HABR *e* 18 19 11.0
HABR *e* 18 20 30.4
HABR *e*S **S** **18 26 21.4 -0.2**
HABR *e**SS **sS** **18 26 46.6 -2.7**
HABR *e* 18 28 04.8
HABR *e*SS **SS** **18 30 13.7 -1.0**
HABR pmax pmax
comp=N,25nm,1.6s
HABR pmax pmax
comp=Z,114nm,2.5s
HABR pmax pmax
comp=E,24nm,2.2s
HABR MLR MLR
comp=Z,66nm,22.0s
HIA Hailar 58.30 357 *e*P **P** **18 18 23.6 -1.0**
comp=Z,14nm,0.6s
YSS Yuzh-Sakhalins 58.39 15 *e*P **P** **18 18 26.2 +1.0**
YSS pmax pmax
comp=Z,20nm,1.0s
DRV Dumont d'Urvil 58.47 172 S S 18 26 34.0 +10
KLR Kul'dur 58.58 6 *e*P P 18 18 22.2 -4.3
KLR pmax pmax
comp=Z,56nm,1.8s
ULN Ulaanbaatar 58.70 347 *e*P **P** **18 18 25.0 -2.5**
comp=Z,23nm,1.1s
SONM Songino Array 58.82 346 P **P** **18 18 27.7 -0.6**
SONM Songino Array 58.82 346 P **P** **18 18 27.7 -0.6**
comp=Z,9.2nm,0.6s,baz=163,slow=8.2,SNR=76
SONM LR LR 18 45 49.4
comp=Z,58nm,19.6s,baz=64,slow=38
SMLA Simla 59.99 314 *i* x **P** **18 18 35.5 -1.0**
SDNR Sundarnagar 60.33 314 *ex* **P** **18 18 40.0 +1.0**
ZAK Zakamensk 61.94 345 *e*P **P** **18 18 47.6 -2.0**
ZAK pmax pmax
comp=Z,9.0nm,1.2s
WMQ Urumqi 62.08 331⇑ *i*P **P** **18 18 50.5 -0.1**
WMQ pP **pP** **18 19 07.0 -0.1**
WMQ sP **sP** **18 19 13.9 -0.1**
WMQ PcP **PcP** **18 19 30.0 -0.4**
WMQ PP **PP** **18 21 10.0 +2.0**
WMQ *e*S **S** **18 27 10.0 -0.9**
WMQ pmax pmax
comp=Z,60nm,0.6s
WMQ LR LR
comp=N,190nm,26.8s
WMQ LR LR
comp=E,170nm,26.8s
WMQ LR LR
comp=Z,190nm,26.8s
TLY Talaya 63.05 346 *c* *i*P **P** **18 18 56.4 -0.4**
TLY pmax pmax
comp=Z,19nm,1.1s
TLY Talaya 63.05 346 P **P** **18 18 56.8 0.0**
comp=Z,82nm,1.1s,SNR=5.2
MOY Mondy 63.71 344 *e*P **P** **18 19 00.8 -0.5**
MOY pmax pmax
comp=Z,33nm,2.2s
KSH Kashi 65.63 321⇑ *i*P **P** **18 19 13.6 -0.5**
KSH *e*pP **pP** **18 19 29.6 -1.2**
KSH *e*sP **sP** **18 19 36.6 -1.1**
KSH *e*PP **PP** **18 21 35.6 -3.7**
KSH *e*S **S** **18 27 51.7 -3.6**
KSH *e*ScS SKSac 18 28 57.6 -6.9
KSH pmax pmax
comp=Z,39nm,0.6s
KSH LR LR
comp=N,110nm,4.6s
KSH LR LR
comp=E,120nm,5.0s
KSH LR LR
comp=Z,210nm,5.4s
CLNS Chul'man 65.79 1 *e*P **P** **18 19 13.8 -0.8**
CLNS *e**PP **pP** **18 19 32.0 +0.7**
CLNS *e* 18 19 36.4
CLNS *e**SS SKSac 18 28 55.0 -10
CLNS pmax pmax
comp=Z,66nm,1.4s
CLNS pmax pmax
comp=Z,4.0nm,1.0s
MK31 Makanchi Array 66.85 330 *e*P **P** **18 19 21.4 -0.3**
MK31 pmax pmax
comp=Z,59nm,0.6s
MK31 Makanchi Array 66.85 330 *e*P **P** **18 19 21.1 -0.5**
MKAR Makanchi Array 66.85 330 P **P** **18 19 21.2 -0.5**
MKAR Makanchi Array 66.85 330 P **P** **18 19 21.2 -0.5**
MKAR Makanchi Array 66.85 330 P **P** **18 19 21.2 -0.5**
comp=Z,70nm,0.6s,baz=135,slow=7.0,SNR=1137
ULHL Ulahol 67.12 324 P **P** **18 19 23.4 -0.2**
SNR=12
KBL Kabul 67.59 313 *e*P **P** **18 19 25.2 -1.6**
KBL pmax pmax
comp=Z,27nm,0.5s
KBL Kabul 67.59 313 *e*P **P** **18 19 25.2 -1.6**
comp=Z,27nm,0.5s
TKM2 Tokmak 2 67.91 324 *e*P **P** **18 19 27.6 -1.0**
TKM2 pmax pmax
comp=Z,16nm,0.6s
TKM2 Tokmak 2 67.91 324 *e*P **P** **18 19 27.6 -1.0**
comp=Z,16nm,0.6s
TKM2 Tokmak 2 67.91 324 P **P** **18 19 28.3 -0.3**
SNR=17
KBK Karagaybulak 68.13 323 P **P** **18 19 29.9 0.0**
SNR=11
AAK Ala-Archa 68.38 323 *e*P **P** **18 19 31.2 -0.3**
AAK *e* 18 19 54.5
AAK pmax pmax
comp=Z,34nm,0.8s
AAK Ala-Archa 68.38 323 *e*P **P** **18 19 31.2 -0.3**
comp=Z,34nm,0.8s
AAK *e* 18 19 54.5
AAK Ala-Archa 68.38 323 P **P** **18 19 31.5 -0.1**
SNR=14
AAK Ala-Archa 68.38 323 P **P** **18 19 31.0 -0.6**
comp=Z,286nm,0.5s,SNR=7.1
FRU Bishkek 68.43 323⇓ *i*P **P** **18 19 32.0 +0.3**
FRU pmax pmax
comp=Z,50nm,2.0s
FRU MLR MLR
comp=Z,200nm,30.0s
PETK Petropavlovsk- 68.44 21 P **P** **18 19 31.7 +0.2**
PETK Petropavlovsk- 68.44 21 P **P** **18 19 31.7 +0.2**
PETK Petropavlovsk- 68.44 21 P **P** **18 19 31.7 +0.2**
comp=Z,7.6nm,0.7s,baz=202,slow=5.6,SNR=32
CHMS Chumysh 68.45 323 P **P** **18 19 31.1 -0.6**
SNR=6.2
PET Petropavlovsk 68.72 22 *i*P **P** **18 19 33.2 0.0**

PET pmax pmax
comp=Z,51nm,1.3s
USP Ospenovka 68.75 324 P **P** **18 19 33.2 -0.5**
SNR=17
EKS2 Erkin-Say 68.83 323 *e*P **P** **18 19 31.9 -2.3**
EKS2 pmax pmax
comp=Z,35nm,1.0s
EKS2 Erkin-Say 68.83 323 *e*P **P** **18 19 31.9 -2.3**
comp=Z,35nm,1.0s
EKS2 Erkin-Say 68.83 323 P **P** **18 19 34.6 +0.4**
SNR=11
KRAR Krasnoyarsk 69.84 342⇓ *i*P **P** **18 19 39.1 -0.9**
KRAR pmax pmax
comp=Z,52nm,1.2s
MAW Mawson 70.70 201 P **P** **18 19 45.8 +0.6**
MAW Mawson 70.70 201 P **P** **18 19 45.8 +0.6**
comp=Z,6.5nm,0.6s,baz=77,slow=6.9,SNR=18
MAW LR LR 18 45 14.3
comp=Z,127nm,21.4s,baz=235,slow=31
ZAA0 Zalesovo Array 70.97 337 *e*P **P** **18 19 45.1 -1.9**
ZALV Zalesovo Beam 70.97 337 P **P** **18 19 45.9 -1.1**
ZALV Zalesovo Beam 70.97 337 P **P** **18 19 45.9 -1.1**
ZALV Zalesovo Beam 70.97 337 P **P** **18 19 45.9 -1.1**
comp=Z,45nm,0.8s,baz=128,slow=4.3,SNR=149
ZALV LR LR 18 56 07.3
comp=Z,29nm,18.3s,baz=340,slow=40
VNDA Vanda 71.11 172 *e*P **P** **18 19 47.5 -0.1**
comp=Z,2.9nm,0.7s
VNDA Vanda 71.11 172 P **P** **18 19 47.4 -0.1**
comp=Z,3.3nm,0.8s,baz=321,slow=5.3,SNR=30
VNDA LR LR 18 49 03.9
comp=Z,167nm,21.9s,baz=327,slow=34
YAK Yakutsk 71.14 3 *e*P **P** **18 19 47.1 -0.7**
YAK *e* 18 20 04.2
YAK *e**PP **PcP** **18 20 10.8 +3.2**
YAK *e*S **S** **18 28 54.4 -5.2**
YAK *e**SS **SKSac** **18 29 40.2 -4.7**
YAK *e* 18 29 44.6
YAK pmax pmax
comp=Z,137nm,1.2s
YAK pmax pmax
comp=N,45nm,1.0s
YAK pmax pmax
comp=E,21nm,1.3s
YAK pmax pmax
comp=Z,62nm,4.1s
YAK pmax pmax
comp=E,16nm,3.0s
YAK pmax pmax
comp=N,32nm,3.3s
YAK smax smax
comp=N,70nm,2.3s
YAK smax smax
comp=E,42nm,2.0s
KURBB Kurchatov Arra 71.30 331 P **P** **18 19 48.1 -1.0**
comp=E,25nm,0.4s,baz=142,slow=5.6,SNR=662
KURK Kurchatov 71.32 332 *e*P **P** **18 19 48.1 -1.1**
KURK pmax pmax
comp=Z,118nm,0.9s
KURK Kurchatov 71.32 332 *e*P **P** **18 19 48.0 -1.1**
comp=Z,118nm,0.9s
KURK Kurchatov 71.32 332 P **P** **18 19 48.4 -0.8**
comp=Z,623nm,0.5s
SBA Scott Base 72.07 171 *e*P **P** **18 19 53.9 +0.6**
SBA pmax pmax
comp=Z,9.0nm,1.1s
SBA Scott Base 72.07 171 *e*P **P** **18 19 53.9 +0.6**
comp=Z,8.7nm,1.1s
NVS Novosibirsk 72.26 337⇑ *i*P **P** **18 19 52.6 -2.1**
NVS *e* 18 20 17.2
NVS pmax pmax
comp=Z,59nm,1.2s
NVS pmax pmax
comp=N,27nm,1.3s
NVS pmax pmax
comp=E,28nm,1.3s
SEY Seymchan 75.19 13*c i*P **P** **18 20 11.5 -0.2**
VOSK Vostochnaya 76.27 330 P **P** **18 20 16.8 -1.3**
VOSK pmax pmax
comp=Z,21nm,0.6s
BVAR Borovoye Array 76.74 330 P **P** **18 19 19.7 -1.0**
BVAR Borovoye Array 76.74 330 P **P** **18 19 19.7 -1.0**
BVAR Borovoye Array 76.74 330 P **P** **18 19 19.7 -1.0**
comp=Z,6.1nm,0.5s,baz=120,slow=7.4,SNR=40
BRVK Borovoye 76.81 330 *e*P **P** **18 20 19.9 -1.3**
BRVK pmax pmax
comp=Z,51nm,1.3s
BRVK Borovoye 76.81 330 *e*P **P** **18 20 19.9 -1.3**
comp=Z,51nm,1.3s
BRVK Borovoye 76.81 330 P **P** **18 20 20.1 -1.1**
comp=Z,128nm,1.2s,SNR=9.6
ZRNK Zerenda 77.38 330 P **P** **18 20 21.9 -2.5**
ZRNK pmax pmax
comp=Z,33nm,1.1s
SYO Syowa Base 79.40 201⇓ *e*P **P** **18 20 34.4 -0.9**
SYO Syowa Base 79.40 201⇑ *e*PcP **PcP** **18 20 45.5 +2.3**
AB31 Akbulak array 80.47 323 *i* P **P** **18 20 39.3 -2.1**
AB31 pmax pmax
comp=Z,4.0nm,0.5s
ABKAR Akbulak array 80.47 323 *e*P **P** **18 20 39.7 -1.6**
comp=Z,4.5nm,0.6s
TIXI Tiksi 80.73 2*c i*P **P** **18 20 40.3 -2.0**
TIXI pmax pmax
comp=Z,27nm,1.1s
QSPA South Pole Qui 80.81 180 P **P** **18 20 42.7 -0.5**
QSPA South Pole Qui 80.81 180 P **P** **18 20 42.7 -0.5**
comp=Z,8.7nm,0.9s,baz=316,slow=2.2,SNR=34
AKTO Aktyubinsk 82.10 324 P **P** **18 20 48.0 -2.0**
AKTO pmax pmax
comp=Z,14nm,0.8s
AKTO Aktyubinsk 82.10 324 P **P** **18 20 49.0 -1.1**
AKTO Aktyubinsk 82.10 324 P **P** **18 20 49.0 -1.1**
comp=Z,11nm,0.6s,baz=114,slow=5.3,SNR=50
RDF Al-Radifah 82.53 301 *e*P **P** **18 20 52.3 -0.4**
RDF AMb AMB 18 20 56.5
comp=Z,48nm,1.2s
UMR Umm Al-Rimmam 82.55 301 *e*P **P** **18 20 51.8 -1.0**
UMR AMb AMB 18 20 53.6
comp=Z,25nm,0.4s
BILL Bilibino 82.71 15⇓ *i*P **P** **18 20 51.9 -0.9**
BILL *e**PP **pP** **18 21 06.2 -3.8**
BILL *e* 18 24 02.7
BILL pmax pmax
comp=Z,6.0nm,1.2s
BILL Bilibino 82.71 15 *e*P **P** **18 20 51.4 -1.4**
comp=Z,5.4nm,1.0s
NAY Al-Naaiem 82.88 301 *e*P **P** **18 20 53.4 -1.2**
NAY AMb AMB 18 20 57.6
comp=Z,26nm,1.0s
MIB Mutribah 82.94 302 *e*P **P** **18 20 53.8 -1.0**
MIB AMb AMB 18 20 58.7
comp=Z,38nm,0.8s
SVE Sverdlovsk 83.52 330⇓ *e*P **P** **18 20 56.4 -0.8**
SVE pmax pmax
comp=Z,44nm,1.1s
ARU Arti 84.36 330*c i*P **P** **18 21 00.2 -1.3**
ARU *PP **pP** **18 21 18.5 -0.3**
ARU S **S** **18 31 17.8 -4.7**
ARU pmax pmax
comp=Z,48nm,1.0s
ARU Arti 84.36 330 P **P** **18 21 00.5 -1.0**
comp=Z,274nm,0.9s,SNR=22
KMBO Kilima Mbogo 86.38 269 *e*P **P** **18 21 13.1 +0.3**
comp=Z,9.0nm,1.0s
KMBO *e* 18 21 35.7
KMBO Kilima Mbogo 86.38 269 P **P** **18 21 13.7 +0.8**
comp=Z,2.9nm,0.5s,baz=63,slow=8.6,SNR=13
KMBO LR LR 18 53 54.7
comp=Z,47nm,20.8s,baz=94,slow=32
SOKR Solikamsk 86.56 332*d i*P **P** **18 21 11.0 -1.3**
SOKR pmax pmax
comp=Z,10.0nm,0.8s
GNI Garni 87.58 311 P **P** **18 21 18.6 +0.6**
KBZ Khabaz 89.75 314 P **P** **18 21 27.2 -0.7**
KBZ Khabaz 89.75 314 P **P** **18 21 27.1 -0.7**
KBZ Khabaz 89.75 314 P **P** **18 21 27.1 -0.7**
comp=Z,5.5nm,0.9s,baz=132,slow=2.8,SNR=11
KIV Kislovodsk 89.95 314⇑ *e*P **P** **18 21 29.1 +0.1**
KIV *e* 18 21 39.3
KIV *e* 18 25 00.7
KIV *e*PS **PnS** **18 33 31.6 +0.6**
KIV pmax pmax
comp=Z,5.0nm,1.0s
SNAA Sanae 92.06 195 *e*P **P** **18 21 38.6 +0.3**
comp=Z,6.8nm,0.9s

VRHR Novokhopersk 92.17 321 *e*P **P** **18 21 37.4 -1.6**
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR pmax pmax
comp=N,2.0nm,0.3s
VRHR pmax pmax
comp=E,8.0nm,0.6s
LSZ Lusaka 92.93 254 *e*P **P** **18 21 44.0 +0.5**
comp=E,3.3nm,0.6s
BOSA Boshof 93.03 241 P **P** **18 21 43.3 -0.5**
BOSA Boshof 93.03 241 P **P** **18 21 43.3 -0.5**
comp=E,1.0nm,0.4s,baz=147,slow=7.6,SNR=6.9
BOSA LR LR 18 56 41.4
comp=E,70nm,19.8s,baz=344,slow=31
LBTB Lobatse 93.48 244 *e*P **P** **18 21 46.0 +0.2**
VORD Divnogorie 93.59 321 *e*P **P** **18 21 44.4 -1.1**
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=E,3.0nm,0.4s
VSR Storozhevoye 93.72 321 *e*P **P** **18 21 43.6 -2.5**
VSR pmax pmax
comp=N,7.0nm,0.7s
VSR pmax pmax
comp=E,4.0nm,0.7s
VSR pmax pmax
comp=Z,9.0nm,0.7s
KLMR Klimovskoe 95.15 331 *e*P P 18 21 49.5 -3.0
KLMR pmax pmax
comp=Z,23nm,1.3s
OBN Obninsk 95.86 325*d i*P **P** **18 21 54.4 -1.4**
OBN *e**PP **pP** **18 22 15.0 +1.8**
OBN *e* 18 25 47.6
OBN *e*PS **PS** **18 34 39.1 +3.6**
OBN *e*SS SS 18 39 38.0 -2.0
OBN pmax pmax
comp=Z,42nm,1.5s
BR131 Keskin Array S 95.89 309 *e*P **P** **18 21 54.1 -2.4**
BRTR Keskin Array B 95.89 309 P **P** **18 21 54.3 -2.3**
BRTR Keskin Array B 95.89 309 P **P** **18 21 54.3 -2.3**
comp=Z,1.5nm,0.7s,baz=110,slow=5.4,SNR=8.1
SML Sawmill 97.03 29 *e*P P 18 21 55.4 -5.7
SML Sawmill 97.03 29 *e*P P 18 21 55.4 -5.7
ILAR Eielson Array 97.96 26 P P 18 22 02.2 -2.9
ILAR Eielson Array 97.96 26 P P 18 22 02.2 -2.9
comp=Z,0.7nm,0.9s,baz=279,slow=5.1,SNR=6.4
AKASG Malin Array Be 99.91 320*c e*P **Pdif** **18 22 12.1 -2.0**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 99.91 320 P **Pdif** **18 22 11.7 -2.5**
AKASG Malin Array Be 99.91 320 P **Pdif** **18 22 11.7 -2.5**
comp=Z,2.3nm,0.7s,baz=79,slow=4.8,SNR=9.5
ARCES ARCESS Array B 101.44 339 P **Pdif** **18 22 19.1 -1.4**
ARCES PKiKP **PKiKP** **18 26 43.0 -1.3**
ARCES ARCESS Array B 101.44 339 P **Pdif** **18 22 19.1 -1.4**
comp=Z,3.8nm,0.9s,baz=66,slow=7.0,SNR=6.0
ARCES PKiKP **PKiKP** **18 26 43.0 -1.3**
comp=Z,3.8nm,1.1s,baz=88,slow=3.9,SNR=4.2
FINES FINESS Array B 101.68 331 P **Pdif** **18 22 21.4 -0.3**
FINES FINESS Array B 101.68 331 P **Pdif** **18 22 21.4 -0.3**
comp=Z,2.7nm,0.9s,baz=55,slow=20,SNR=2.3
CRVS Cervenica-Dubn 104.95 318 *e*P **Pdif** **18 22 39.1 +2.5**
CRVS Cervenica-Dubn 104.95 318 PDIF **Pdif** **18 22 39.1 +2.5**
STHS Stebnicka Huta 105.06 319 pPDIF pPdif 18 22 50.2 -4.4
GERES GERESS Array B 110.05 319 PKiKP **PKiKP** **18 26 59.8 -1.2**
GERES GERESS Array B 110.05 319 PKiKP **PKiKP** **18 26 59.8 -1.2**
comp=Z,0.3nm,0.4s,baz=19,slow=6.2,SNR=4.0
YKA Yellowknife Ar 112.38 25 PKiKP **PKiKP** **18 27 04.0 -0.8**
YKA Yellowknife Ar 112.38 25 PKiKP **PKiKP** **18 27 04.0 -0.8**
comp=Z,0.7nm,0.4s,baz=292,slow=2.0,SNR=14
PGF Pioggiola 114.36 313 *e*PKIKP PKPdf 18 27 08.9 -0.5
PGF Pioggiola 114.36 313 *e*PKIKP PKPdf 18 27 08.9 -0.5
PGF Pioggiola 114.36 313 *e*PKPdf PKPdf 18 27 08.9 -0.5
HINF Hinteralfeld 114.73 319 *e*PKIKP PKPdf 18 27 09.0 -0.8
comp=Z,3.6nm,0.5s
HINF Hinteralfeld 114.73 319 *e*PKIKP PKPdf 18 27 09.0 -0.8
HINF Hinteralfeld 114.73 319 *e*PKPdf PKPdf 18 27 09.0 -0.8
PAGF Fort de Pagny 115.27 320 *e*PKIKP **PKPdf** **18 27 10.3 -0.5**
comp=Z,0.6nm,0.4s
PAGF Fort de Pagny 115.27 320 *e*PKPdf **PKPdf** **18 27 10.3 -0.5**
LPL La Plagne 115.36 316 *e*PKIKP **PKPdf** **18 27 11.0 -0.4**
comp=Z,2.2nm,0.4s
LPL La Plagne 115.36 316 *e*PKIKP **PKPdf** **18 27 11.0 -0.4**
LPL La Plagne 115.36 316 *e*PKPdf **PKPdf** **18 27 11.0 -0.4**
CABF La Chapelle 115.53 317 *e*PKIKP **PKPdf** **18 27 11.4 -0.1**
comp=Z,3.7nm,0.4s
CABF La Chapelle 115.53 317 *e*PKIKP **PKPdf** **18 27 11.4 -0.1**
CABF La Chapelle 115.53 317 *e*PKPdf **PKPdf** **18 27 11.4 -0.1**
FRF La Foret Royal 115.85 314 *e*PKIKP **PKPdf** **18 27 11.6 -0.5**
FRF La Foret Royal 115.85 314 *e*PKIKP **PKPdf** **18 27 11.6 -0.5**
FRF La Foret Royal 115.85 314 *e*PKPdf **PKPdf** **18 27 11.6 -0.5**
ORIF Oris-en-Rattie 116.08 316 *e*PKIKP **PKPdf** **18 27 12.1 -0.5**
ORIF Oris-en-Rattie 116.08 316 *e*PKIKP **PKPdf** **18 27 12.1 -0.5**
ORIF Oris-en-Rattie 116.08 316 *e*PKPdf **PKPdf** **18 27 12.1 -0.5**
LOR Lormes 116.83 319 *e*PKIKP **PKPdf** **18 27 13.9 0.0**
comp=Z,2.9nm,0.5s
LOR Lormes 116.83 319 *e*PKPdf **PKPdf** **18 27 13.9 0.0**
SMF Signal de Mont 117.02 318 *e*PKIKP **PKPdf** **18 27 13.8 -0.4**
SMF Signal de Mont 117.02 318 *e*PKIKP **PKPdf** **18 27 13.8 -0.4**
SMF Signal de Mont 117.02 318 *e*PKPdf **PKPdf** **18 27 13.8 -0.4**
SSF Saint Saulge 117.12 318 *e*PKIKP **PKPdf** **18 27 14.2 -0.2**
comp=Z,4.1nm,0.4s
SSF Saint Saulge 117.12 318 *e*PKIKP **PKPdf** **18 27 14.2 -0.2**
SSF Saint Saulge 117.12 318 *e*PKPdf **PKPdf** **18 27 14.2 -0.2**
AVF Avril sur Loir 117.30 318 *e*PKIKP **PKPdf** **18 27 14.3 -0.4**
comp=Z,2.9nm,0.5s
AVF Avril sur Loir 117.30 318 *e*PKIKP **PKPdf** **18 27 14.3 -0.4**
AVF Avril sur Loir 117.30 318 *e*PKPdf **PKPdf** **18 27 14.3 -0.4**
NVAR Mina Array Bea 117.47 51 PKP **PKPdf** **18 27 16.4 +0.7**
NVAR Mina Array Bea 117.47 51 PKP **PKPdf** **18 27 16.4 +0.7**
comp=Z,1.4nm,0.8s,baz=273,slow=3.6,SNR=6.0
BGF Bois d'Agland 117.70 318 *e*PKIKP **PKPdf** **18 27 15.5 0.0**
comp=Z,9.7nm,0.5s
BGF Bois d'Agland 117.70 318 *e*PKIKP **PKPdf** **18 27 15.5 0.0**
BGF Bois d'Agland 117.70 318 *e*PKPdf **PKPdf** **18 27 15.5 0.0**
MFID Camas Ranch 118.21 45⇓P **PKPdf** **18 27 18.1 +1.3**
baz=118
EDW2 Edwards Air Fo 118.32 55⇓P **PKPdf** **18 27 18.0 +0.9**
baz=118
MPMC Manual Prospec 118.53 54⇓P **PKPdf** **18 27 18.8 +1.1**
baz=119
H12A Diamond D Ranc 118.58 44⇑P **PKPdf** **18 27 18.7 +1.2**
baz=119
CAF Calviac 118.70 316 *e*PKIKP **PKPdf** **18 27 17.7 +0.1**
comp=Z,2.1nm,0.4s
CAF Calviac 118.70 316 *e*PKIKP **PKPdf** **18 27 17.7 +0.1**
CAF Calviac 118.70 316 *e*PKPdf **PKPdf** **18 27 17.7 +0.1**
LDF La Druitiere 118.95 321 *e*PKIKP **PKPdf** **18 27 17.9 0.0**
comp=Z,3.1nm,0.5s
LDF La Druitiere 118.95 321 *e*PKIKP **PKPdf** **18 27 17.9 0.0**
LDF La Druitiere 118.95 321 *e*PKPdf **PKPdf** **18 27 17.9 0.0**
HLID Hailey 119.16 45⇑P **PKPdf** **18 27 20.2 +1.5**
baz=119
GSC Goldstone 119.21 55⇑P **PKPdf** **18 27 20.2 +1.3**
baz=119
BBRC Big Bear Solar 119.29 56⇑P **PKPdf** **18 27 20.0 +0.7**
baz=119
GRR Gorron 119.48 321 *e*PKIKP **PKPdf** **18 27 18.5 -0.4**
comp=Z,6.0nm,0.4s
GRR Gorron 119.48 321 *e*PKIKP **PKPdf** **18 27 18.5 -0.4**
GRR Gorron 119.48 321 *e*PKPdf **PKPdf** **18 27 18.5 -0.4**
LFF La Frestale 119.59 317 *e*PKIKP **PKPdf** **18 27 19.4 +0.2**
comp=Z,7.7nm,0.6s
LFF La Frestale 119.59 317 *e*PKIKP **PKPdf** **18 27 19.4 +0.2**
LFF La Frestale 119.59 317 *e*PKPdf **PKPdf** **18 27 19.4 +0.2**
MFF Saint Martin d 119.65 319 *e*PKIKP **PKPdf** **18 27 19.0 -0.3**
comp=Z,8.5nm,0.5s
MFF Saint Martin d 119.65 319 *e*PKIKP **PKPdf** **18 27 19.0 -0.3**
MFF Saint Martin d 119.65 319 *e*PKPdf **PKPdf** **18 27 19.0 -0.3**
HEC Hector,Ludlow 119.67 55⇑P **PKPdf** **18 27 21.2 +1.4**
baz=120
I14A Mackay 119.73 44⇓P **PKPdf** **18 27 21.1 +1.3**
baz=120
F15A Butte 119.78 42⇓P **PKPdf** **18 27 20.8 +0.9**
baz=120
A17A Triple J Farms 119.84 38⇑P **PKPdf** **18 27 20.7 +1.1**
baz=120
MONP Monument Peak 119.91 57⇓P **PKPdf** **18 27 21.6 +1.1**
baz=120
D16A Dana Ranch, Ca 120.00 41⇓P **PKPdf** **18 27 21.2 +1.0**
baz=120
G15A Dillon 120.00 43⇑P **PKPdf** **18 27 21.4 +1.1**
baz=120

B17A L&G Farms, Che 120.02 39⇑P **PKPdf** **18 27 21.1 +1.0**
baz=120
H15A Lima 120.07 43⇑P **PKPdf** **18 27 21.9 +1.5**
baz=120
BELC Belle Mtn. Jos 120.08 56⇓P **PKPdf** **18 27 21.8 +1.1**
baz=120
GMRC Granite Mounta 120.23 55⇓P **PKPdf** **18 27 22.4 +1.5**
baz=120
C17A Wharram Farm, 120.28 40⇓P **PKPdf** **18 27 21.3 +0.7**
baz=120
F16A Kennard Place, 120.38 42⇓P **PKPdf** **18 27 22.1 +1.2**
baz=120
D17A Six Diamond Ra 120.51 40⇓P **PKPdf** **18 27 21.5 +0.4**
baz=120
BC3 Big Chuckawall 120.59 56⇑P **PKPdf** **18 27 22.1 +0.5**
baz=121
IRM Iron Mountain 120.75 56⇓P **PKPdf** **18 27 22.6 +0.7**
baz=121
EGMT Eagleton 120.77 39⇓P **PKPdf** **18 27 22.4 +0.9**
baz=121
F17A Fitzpatrick Pl 120.97 41⇑P **PKPdf** **18 27 23.4 +1.3**
baz=121
H16A Russell Place, 120.99 43⇓P **PKPdf** **18 27 23.2 +0.9**
baz=121
A19A Klindworth Far 121.03 38⇓P **PKPdf** **18 27 23.1 +1.2**
baz=121
D18A Linhart Farms, 121.05 40⇑P **PKPdf** **18 27 23.3 +1.2**
baz=121
QUIF Quistinic 121.09 321 *e*PKIKP **PKPdf** **18 27 21.5 -0.5**
QUIF Quistinic 121.09 321 *e*PKIKP **PKPdf** **18 27 21.5 -0.5**
QUIF Quistinic 121.09 321 *e*PKPdf **PKPdf** **18 27 21.5 -0.5**
B19A Brinkman Farms 121.10 38⇓P **PKPdf** **18 27 23.4 +1.3**
baz=121
DUG Dugway 121.23 48⇑P **PKPdf** **18 27 23.9 +1.1**
baz=121
F18A Big Timber 121.58 41⇑P **PKPdf** **18 27 24.2 +1.0**
baz=122
W13A Hualapai Mount 121.60 54⇑P **PKPdf** **18 27 24.1 +0.4**
baz=122
D19A Cripps Ranch, 121.64 40⇑P **PKPdf** **18 27 24.2 +1.0**
baz=122
B20A Solberg Farm, 121.67 38⇑P **PKPdf** **18 27 23.9 +0.7**
baz=122
G18A Lazy EL Ranch, 121.90 42⇓P **PKPdf** **18 27 24.8 +0.9**
baz=122
E19A Rath Farm, Rou 121.98 40⇓P **PKPdf** **18 27 24.9 +1.0**
baz=122
H18A Shoshone NF, C 122.06 43⇑P **PKPdf** **18 27 25.3 +1.0**
baz=122
D20A Manuel Ranch, 122.14 39⇓P **PKPdf** **18 27 25.1 +1.0**
baz=122
M17A Scullys Gap (B 122.42 46⇓P **PKPdf** **18 27 25.7 +0.6**
baz=122
C21A Desert Coulee 122.48 38⇓P **PKPdf** **18 27 25.7 +0.9**
baz=122
Y14A Wickenburg 122.54 56⇓P **PKPdf** **18 27 26.6 +1.3**
baz=123
U15A North Rim 122.57 53⇑P **PKPdf** **18 27 26.9 +1.3**
baz=123
A22A Carney Farms, 122.69 37⇓P **PKPdf** **18 27 25.9 +0.8**
baz=123
L18A Fontenelle, Gr 122.73 46⇑P **PKPdf** **18 27 26.7 +1.1**
baz=123
PDAR Pinedale Array 122.79 45 PKP **PKPdf** **18 27 25.7 -0.1**
PDAR Pinedale Array 122.79 45 PKP **PKPdf** **18 27 25.7 -0.1**
comp=Z,1.1nm,0.6s,baz=222,slow=2.0,SNR=9.5
G20A Bridger 122.82 41⇓P **PKPdf** **18 27 26.6 +1.0**
baz=123
D21A La Casta Ranch 122.86 39⇓P **PKPdf** **18 27 27.2 +1.7**
baz=123
J19A Crowheart 122.97 44⇓P **PKPdf** **18 27 27.2 +1.2**
baz=123
TORD Torodi Ar. Bea 123.13 280 PKP **PKPdf** **18 27 26.5 -0.3**
TORD Torodi Ar. Bea 123.13 280 PKP **PKPdf** **18 27 26.5 -0.3**
comp=Z,3.7nm,0.8s,baz=42,slow=2.2,SNR=29
L19A Farson 123.15 45⇑P **PKPdf** **18 27 27.4 +0.9**
baz=123
SRU San Rafael 123.23 49⇓P **PKPdf** **18 27 27.5 +0.9**
baz=123
C22A Vida 123.26 38⇓P **PKPdf** **18 27 27.2 +1.0**
baz=123
K19A Absolon Red Bu 123.26 44⇑P **PKPdf** **18 27 27.5 +0.9**
baz=123
D22A Cohagen 123.33 39⇑P **PKPdf** **18 27 27.9 +1.4**
baz=123
I20A Worland 123.35 43⇑P **PKPdf** **18 27 27.4 +0.8**
baz=123
G21A Lodge Grass 123.47 41⇑P **PKPdf** **18 27 27.5 +0.7**
baz=124
B23A Brockton 123.47 37⇑P **PKPdf** **18 27 27.5 +0.9**
baz=123
C23A Lambert 123.66 38⇓P **PKPdf** **18 27 28.2 +1.2**
baz=124
K20A Yellowstone Ra 123.67 44⇓P **PKPdf** **18 27 28.0 +0.6**
baz=124
E22A Miles City 123.78 39⇑P **PKPdf** **18 27 28.4 +1.1**
baz=124
L20A Wamsutter 123.89 45⇑P **PKPdf** **18 27 28.7 +0.8**
baz=124
O19A Miners Draw (B 123.90 47⇓P **PKPdf** **18 27 28.6 +0.7**
baz=124
D23A Lindsay 123.92 38⇓P **PKPdf** **18 27 28.7 +1.2**
baz=124
I21A Big Trails, Te 123.96 43⇑P **PKPdf** **18 27 28.3 +0.5**
baz=124
S18A Hurst Farm, Bl 124.03 51⇓P **PKPdf** **18 27 29.1 +0.7**
baz=124
E23A Ismay 124.16 39⇓P **PKPdf** **18 27 29.2 +1.2**
baz=124
M20A Sweetwater, Wa 124.18 46⇑P **PKPdf** **18 27 29.1 +0.6**
baz=124
P19A Cripple Cowboy 124.21 48⇑P **PKPdf** **18 27 29.4 +0.8**
baz=124
N20A Spence Gulch, 124.35 46⇓P **PKPdf** **18 27 29.6 +0.7**
baz=124
F23A Volborg 124.43 40⇑P **PKPdf** **18 27 29.8 +1.2**
baz=124
I22A 9 Mile Ranch, 124.47 42⇓P **PKPdf** **18 27 30.1 +1.3**
baz=124
D24A Glendive 124.49 38⇑P **PKPdf** **18 27 30.1 +1.4**
baz=124
ESDC Sonseca Array 124.55 312 PKP **PKPdf** **18 27 28.9 -0.1**
ESDC Sonseca Array 124.55 312 PKP **PKPdf** **18 27 28.9 -0.1**
comp=Z,0.1nm,0.3s,baz=253,slow=26,SNR=5.7
L21A Rawlins 124.59 45⇓P **PKPdf** **18 27 30.5 +1.3**
baz=125
O20A White River Ci 124.59 47⇓P **PKPdf** **18 27 30.6 +1.4**
baz=125
P20A De Beque 124.69 48⇓P **PKPdf** **18 27 30.8 +1.4**
baz=125
M21A Separation Pea 124.72 45⇑P **PKPdf** **18 27 30.5 +1.0**
baz=125
E24A Baker 124.75 39⇑P **PKPdf** **18 27 30.3 +1.1**
baz=125
N21A Black Mountain 124.90 46⇓P **PKPdf** **18 27 31.0 +1.1**
baz=125
W18A Petrified Fore 124.91 53⇓P **PKPdf** **18 27 31.0 +1.0**
baz=125
K22A Casper 124.92 44⇑P **PKPdf** **18 27 30.5 +0.7**
baz=125
Q20A Ridgley Place, 124.93 49⇓P **PKPdf** **18 27 31.4 +1.5**
baz=125
R20A Redvale 125.10 50⇑P **PKPdf** **18 27 31.2 +0.9**
baz=125
O21A Pagoda 125.12 47⇑P **PKPdf** **18 27 31.5 +1.2**
baz=125
L22A Ellis Ranch, M 125.21 44⇑P **PKPdf** **18 27 31.7 +1.3**
baz=125
M22A Cedar Creek Ra 125.33 45⇓P **PKPdf** **18 27 32.0 +1.3**
baz=125
H24A Dirks Ranch, A 125.39 41⇑P **PKPdf** **18 27 31.2 +0.7**
baz=125
Q21A Lamborn Mesa, 125.50 49⇓P **PKPdf** **18 27 32.6 +1.5**
baz=126
N22A Wattenberg Ran 125.65 46⇓P **PKPdf** **18 27 33.2 +1.9**
baz=126
R21A Cimarron 125.67 49⇑P **PKPdf** **18 27 33.0 +1.6**
baz=126
S21A Coal Bank Pass 125.71 50⇑P **PKPdf** **18 27 33.1 +1.5**
baz=126,SNR=10
I24A Kuemmerle Ranc 125.71 42⇑P **PKPdf** **18 27 33.1 +1.9**
baz=126
V20A Brimhall 125.73 52⇑P **PKPdf** **18 27 33.0 +1.4**
baz=126
W20A Ramah 125.88 53⇑P **PKPdf** **18 27 33.3 +1.4**
baz=126
M23A Laramie 125.92 45⇓P **PKPdf** **18 27 33.0 +1.2**
baz=126

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
N23A	Red Feather La	125.97	46	⇑P	PKPdf	18 27 33.1	+1.1
	baz=126						
T21A	Navajo Lake	126.10	51	⇓P	PKPdf	18 27 33.4	+1.1
	baz=126						
319A	Douglas	126.14	58	⇓P	PKPdf	18 27 34.1	+1.8
	baz=126						
U21A	Nageezi	126.18	51	⇑P	PKPdf	18 27 34.0	+1.6
	baz=126,SNR=7.4						
O23A	Lake Granby, G	126.24	46	⇑P	PKPdf	18 27 33.6	+1.1
	baz=126						
R22A	Saguache, Gunn	126.30	49	⇓P	PKPdf	18 27 34.3	+1.6
	baz=126						
Z20A	Nine Sixteen R	126.32	56	⇓P	PKPdf	18 27 34.4	+1.6
	baz=126						
S22A	4UR Ranch, Cre	126.41	50	⇑P	PKPdf	18 27 34.2	+1.2
	baz=126						
120A	U Bar Ranch, L	126.42	56	⇑P	PKPdf	18 27 34.1	+1.1
	baz=126						
T22A	Edith	126.58	50	⇓P	PKPdf	18 27 35.0	+1.8
	baz=127						
P23A	Jefferson	126.59	47	⇑P	PKPdf	18 27 34.4	+1.1
	baz=127						
ISCO	Idaho Springs	126.61	47	⇑P	PKPdf	18 27 34.7	+1.4
	baz=127						
X21A	Alamocita Cree	126.63	54	⇓P	PKPdf	18 27 34.9	+1.6
	baz=127						
220A	Playas Peak, P	126.66	57	⇓P	PKPdf	18 27 34.6	+1.2
	baz=127						
320A	Kipp Ranch, An	126.78	58	⇑P	PKPdf	18 27 35.7	+2.1
	baz=127						
U22A	Llaves	126.81	51	⇑P	PKPdf	18 27 35.8	+2.1
	baz=127						
Y21A	Point of Rocks	126.83	54	⇓P	PKPdf	18 27 35.6	+1.8
	baz=127						
V22A	San Miguel Ran	126.91	52	⇑P	PKPdf	18 27 36.0	+2.1
	baz=127						
R23A	Moffat	127.01	49	⇑P	PKPdf	18 27 36.2	+2.1
	baz=127						
121A	Cookes Peak, D	127.12	56	⇑P	PKPdf	18 27 36.2	+1.9
	baz=127						
T23A	Casias Ranch,	127.23	50	⇓P	PKPdf	18 27 36.3	+1.8
	baz=127						
Y22A	Socorro	127.42	54	⇓P	PKPdf	18 27 36.4	+1.6
	baz=127						
R24A	Sanders Place,	127.53	48	⇑P	PKPdf	18 27 36.7	+1.7
	baz=128						
ANMO	Albuquerque	127.54	53	ePKPdf	PKPdf	18 27 36.4	+1.3
Z22A	Elephant Butte	127.60	55	⇓P	PKPdf	18 27 37.0	+1.9
	baz=128						
S24A	Houchin Ranch,	127.65	49	⇑P	PKPdf	18 27 36.8	+1.4
	baz=128						
W23A	Werner Place,	127.72	52	⇓P	PKPdf	18 27 36.6	+1.2
	baz=128						
P25A	Willow Gulch B	127.75	47	⇓P	PKPdf	18 27 36.8	+1.5
	baz=128						
J28A	Allard Ranch,	128.12	41	⇑P	PKPdf	18 27 36.9	+1.2
	baz=128						
Y23A	Lovelace Mesa,	128.15	54	⇓P	PKPdf	18 27 37.7	+1.5
	baz=128						
R25A	Fountain Ranch	128.16	48	⇑P	PKPdf	18 27 37.5	+1.4
	baz=128						
Z23A	Rita Site, Whi	128.19	55	⇓P	PKPdf	18 27 37.9	+1.6
	baz=128						
S25A	Robets Cordova	128.22	49	⇑P	PKPdf	18 27 38.0	+1.7
	baz=128						
V24A	Rampart Ranch,	128.23	51	⇓P	PKPdf	18 27 38.2	+1.8
	baz=128,SNR=5.3						
W24A	Lazy 6 Ranch,	128.28	52	⇑P	PKPdf	18 27 38.2	+1.7
	baz=128,SNR=6.6						
P26A	Davis Ranch, A	128.32	46	⇓P	PKPdf	18 27 37.8	+1.4
	baz=128						
T25A	Trinidad	128.42	49	⇑P	PKPdf	18 27 38.1	+1.4
	baz=128						
Y24A	Capitan	128.65	54	⇓P	PKPdf	18 27 38.8	+1.6
	baz=129,SNR=7.4						
U25A	Circle Dot Ran	128.67	50	⇑P	PKPdf	18 27 38.7	+1.5
	baz=129						
V25A	Rancho No Teng	128.70	51	⇑P	PKPdf	18 27 38.7	+1.5
	baz=129						
R26A	Arlington	128.72	48	⇓P	PKPdf	18 27 38.4	+1.3
	baz=129						
Z24A	Sheeppen Canyo	128.87	54	⇓P	PKPdf	18 27 39.4	+1.7
	baz=129,SNR=7.7						
S26A	Kim	128.95	49	⇑P	PKPdf	18 27 38.9	+1.3
	baz=129						
124A	Stringfield Ra	128.97	55	⇑P	PKPdf	18 27 39.5	+1.6
	baz=129						
W25A	X Bar L Ranch,	129.02	52	⇓P	PKPdf	18 27 39.2	+1.4
	baz=129						
T26A	Comanche Natio	129.02	49	⇑P	PKPdf	18 27 39.6	+1.8
	baz=129						
DBIC	Dimbokro	129.09	271	ePKPdf	PKPdf	18 27 39.2	+0.8
DBIC	Dimbokro	129.09	271	PKP	PKPdf	18 27 39.1	+0.8
	comp=Z,3.3nm,0.9s,baz=117,slow=20,SNR=6.2						
224A	Cornudas Mount	129.09	56	⇓P	PKPdf	18 27 39.6	+1.6
	baz=129						
U26A	Atchley Ranch,	129.18	50	⇓P	PKPdf	18 27 39.6	+1.5
	baz=129						
R27A	Eads	129.20	48	⇓P	PKPdf	18 27 39.7	+1.7
	baz=129						
Y25A	Mesa, Roswell	129.24	53	⇓P	PKPdf	18 27 39.7	+1.4
	baz=129,SNR=6.3						
324A	Moseley Ranch,	129.28	57	⇑P	PKPdf	18 27 40.1	+1.7
	baz=129						
V26A	Tequesquite Ra	129.35	51	⇓P	PKPdf	18 27 40.3	+1.9
	baz=129						
Z25A	Roswell	129.41	54	⇑P	PKPdf	18 27 39.9	+1.4
	baz=129						
W26A	Owens Ranch, T	129.60	52	⇓P	PKPdf	18 27 40.1	+1.2
	baz=130						
125A	Gardner Draw,	129.63	55	⇑P	PKPdf	18 27 40.2	+1.2
	baz=130						
325A	Bean Ranch, Si	129.73	57	⇓P	PKPdf	18 27 40.5	+1.2
	baz=130						
X26A	CR and CF Fran	129.74	52	⇑P	PKPdf	18 27 40.6	+1.4
	baz=130						
425A	Indio Mountain	129.86	57	⇓P	PKPdf	18 27 41.0	+1.5
	baz=130						
U27A	Thompson Grove	129.87	50	⇑P	PKPdf	18 27 40.8	+1.5
	baz=130						
R28A	Tribune	129.90	47	⇓P	PKPdf	18 27 41.0	+1.7
	baz=130						
T28A	Walsh	130.14	49	⇑P	PKPdf	18 27 41.6	+1.8
	baz=130						
W27A	Bowe Ranch, En	130.15	52	⇓P	PKPdf	18 27 41.7	+1.8
	baz=130						
226B	Tecolote Peak,	130.19	56	⇓P	PKPdf	18 27 41.8	+1.7
	baz=130						
Q29A	Oakley	130.27	46	⇑P	PKPdf	18 27 41.8	+1.9
	baz=130						
Y27A	Causey	130.46	53	⇑P	PKPdf	18 27 41.8	+1.3
	baz=130						
326A	Caldwell Ranch	130.56	56	⇑P	PKPdf	18 27 42.1	+1.3
	baz=131						
Z27A	Tatum	130.60	54	⇑P	PKPdf	18 27 42.5	+1.7
	baz=131						
426A	McDonald Obser	130.69	57	⇑P	PKPdf	18 27 42.7	+1.5
	baz=131						
MSTX	Muleshoe	130.74	53	⇓P	PKPdf	18 27 42.6	+1.5
	baz=131						
526A	Mary Lane Ranc	130.80	58	⇓P	PKPdf	18 27 42.9	+1.6
	baz=131						
626A	Big Bend Ranch	130.89	59	⇓P	PKPdf	18 27 43.2	+1.8
	baz=131						
X28A	Dimmitt	131.01	52	⇓P	PKPdf	18 27 43.2	+1.6
	baz=131						
S30A	Montezuma	131.15	47	⇑P	PKPdf	18 27 43.1	+1.4
	baz=131						
427A	Hayter Ranch,	131.16	57	⇑P	PKPdf	18 27 43.4	+1.4
	baz=131						
527A	Woodward Ranch	131.18	58	⇑P	PKPdf	18 27 43.6	+1.6
	baz=131,SNR=5.6						
TXAR	Lajitas Array	131.34	59	PKP	PKPdf	18 27 43.6	+1.3
TXAR	Lajitas Array	131.34	59	PKP	PKPdf	18 27 43.6	+1.3
	comp=Z,0.4nm,0.4s,baz=225,slow=0.9,SNR=9.3						
128A	Castleberry Fa	131.39	54	⇑P	PKPdf	18 27 44.3	+2.0
	baz=131						
228A	UT Block 9, Go	131.46	55	⇓P	PKPdf	18 27 44.3	+1.8
	baz=132						
328A	Wristen Ranch,	131.50	56	⇑P	PKPdf	18 27 44.2	+1.7
	baz=132						
627A	Terlingua Ranc	131.54	59	⇑P	PKPdf	18 27 44.7	+2.0
	baz=132						
Y29A	Porterfield Fa	131.64	52	⇑P	PKPdf	18 27 44.7	+2.0
	baz=132						
428A	Kincaid Ranch,	131.79	57	⇑P	PKPdf	18 27 45.4	+2.3
	baz=132						
Z29A	Hungry Hill Ra	131.81	53	⇑P	PKPdf	18 27 45.2	+2.1
	baz=132						
528A	Cox Ranch, San	131.86	58	⇓P	PKPdf	18 27 44.4	+1.1
	baz=132						
628A	Black Gap, Mar	131.95	58	⇓P	PKPdf	18 27 45.0	+1.6
	baz=132						
329A	Wagon Wheel Ra	132.15	56	⇓P	PKPdf	18 27 45.6	+1.8
	baz=132						
Y30A	Stafford Cattl	132.24	52	⇓P	PKPdf	18 27 45.6	+1.8
	baz=132						
529A	Stev Forest Ra	132.34	57	⇑P	PKPdf	18 27 45.8	+1.7
	baz=132,SNR=5.5						
429A	Davenport Ranc	132.47	57	⇓P	PKPdf	18 27 45.3	+1.0
	baz=132						
W31A	Holland Ranch,	132.50	50	⇑P	PKPdf	18 27 46.0	+1.7
	baz=132						
X31A	McDonald Ranch	132.68	51	⇑P	PKPdf	18 27 46.1	+1.5
	baz=133						
330A	Mertzon	132.83	55	⇓P	PKPdf	18 27 46.2	+1.2
	baz=133						
430A	Baggett Ranch,	132.97	56	⇓P	PKPdf	18 27 46.8	+1.6
	baz=133						
530A	J-C Ranch, Com	133.07	57	⇓P	PKPdf	18 27 47.4	+1.9
	baz=133						
Y32A	R-V Farms, Ver	133.32	51	⇓P	PKPdf	18 27 47.8	+2.0
	baz=133						
231A	Bronte	133.35	54	⇓P	PKPdf	18 27 47.8	+1.9
	baz=133						
331A	San Angelo	133.47	55	⇓P	PKPdf	18 27 48.1	+1.9
	baz=134						
431A	Sonora	133.51	56	⇑P	PKPdf	18 27 48.0	+1.7
	baz=134						
Z32A	Haskell	133.55	52	⇑P	PKPdf	18 27 48.1	+1.8
	baz=134						
ABTX	Abilene, Hawle	133.66	53	⇑P	PKPdf	18 27 48.3	+1.8
	baz=134						
SCHQ	Schefferville	133.69	8	ePKPdf	PKPdf	18 27 45.4	-0.5
SCHQ				PKP	PKPdf	18 27 46.8	+0.9
SCHQ	Schefferville	133.69	8	PKP	PKPdf	18 27 46.8	+0.9
	comp=Z,2.3nm,0.4s,baz=269,slow=1.7,SNR=11						
531A	Rocksprings	133.72	57	⇓P	PKPdf	18 27 48.6	+1.9
	baz=134						
631A	Perdido Creek	133.91	58	⇓P	PKPdf	18 27 48.8	+1.8
	baz=134						
332A	Millersview	134.00	55	⇑P	PKPdf	18 27 49.1	+2.0
	baz=134						
432A	Menard	134.12	56	⇓P	PKPdf	18 27 48.9	+1.4
	baz=134						
JCT	Junction City	134.24	56	ePKIKP	PKPdf	18 27 48.7	+1.1
JCT	Junction City	134.24	56	ePKPdf	PKPdf	18 27 48.7	+1.1
JCT	Junction City	134.24	56	⇑P	PKPdf	18 27 49.1	+1.4
	baz=134						
532A	Rocksprings	134.26	57	⇑P	PKPdf	18 27 49.0	+1.3
	baz=134						
632A	Uvalde	134.54	57	⇑P	PKPdf	18 27 50.1	+1.9
	baz=135						
CPUP	Villa Florida	144.69	178	PKP	PKPbc	18 28 06.2	+0.7
CPUP	Villa Florida	144.69	178	PKP	PKPbc	18 28 06.2	+0.7
	comp=Z,19nm,0.7s,baz=170,slow=3.0,SNR=30						
KMSC	Kings Mountain	145.45	38	⇓P	PKPdf	18 28 07.8	0.0
	baz=145						
LVC	Limon Verde	146.05	159	ePKPbc	PKPab	18 28 11.8	+0.9
TIGA	Tifton	146.29	45	⇓P	PKPbc	18 28 11.1	+0.6
	baz=146						
TEIG	Tepich	147.19	67	ePKPbc	PKPbc	18 28 13.7	+0.3
TEIG	Tepich	147.19	67	PKPbc	PKPbc	18 28 14.0	+0.6
	comp=Z,11nm,0.4s,baz=325,slow=3.9,SNR=25						
NNA	Nana	150.64	135	ePKPbc	PKPbc	18 28 22.5	+0.1
NNA	Nana	150.64	135	PKPbc	PKPbc	18 28 23.3	+0.9
	comp=Z,31nm,0.8s,baz=241,slow=5.7,SNR=14						
LPAZ	La Paz	152.09	155	PKPbc	PKPbc	18 28 27.3	+0.9
LPAZ	La Paz	152.09	155	PKPbc	PKPbc	18 28 27.3	+0.9
	comp=Z,6.5nm,0.8s,baz=226,slow=1.1,SNR=15						
ATAH	Atahualpa	152.61	126	PKPbc	PKPbc	18 28 28.6	+1.2
ATAH	Atahualpa	152.61	126	PKPbc	PKPbc	18 28 28.6	+1.2
	comp=Z,8.4nm,0.6s,baz=244,slow=5.4,SNR=4.8						
SIV	San Ignacio	154.53	169	PKPbc	PKPbc	18 28 31.4	+0.4
SIV				PKPab	PKPab	18 28 45.8	+0.4
SIV	San Ignacio	154.53	169	PKPbc	PKPbc	18 28 31.4	+0.4
	comp=Z,1.3nm,0.7s,baz=190,slow=4.5,SNR=4.0						
SIV				PKPab	PKPab	18 28 45.8	+0.4
	comp=Z,3.7nm,0.7s,baz=177,slow=5.1,SNR=10						

GUC 05 18:15:36.0±0.6, 21.°14S×68.°77W, h119km±5km, ML3.6, 4C-4D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	Plate Boundary	0.79	214	⇑iP	Pn	18 15 57.3	+1.1
PB09				iS	Sn	18 16 12.8	+1.3
PB09				AML	AML	18 16 13.9	
	comp=N,3μm,0.6s						
PB07	Plate Boundary	1.19	241	⇑iP	Pn	18 16 01.1	+0.9
PB07				iS	Sn	18 16 19.7	+1.2
PB07				AML	AML	18 16 21.0	
	comp=N,1μm,0.1s						
PB04	Plate Boundary	1.30	211	⇑iP	Pn	18 16 07.2	+6.1
PB04				iS	Sn	18 16 31.0	+11
PB04				AML	AML	18 16 38.4	
	comp=N,398nm,0.2s						
HMBC	Humberstone	1.35	309	⇓iP	Pn	18 16 02.5	+0.6
HMBC				iS	Sn	18 16 22.6	+1.1
HMBC				AML	AML	18 16 24.1	
	comp=N,789nm,0.4s						
MACH	Maria Elena	1.40	221	⇓iP	Pn	18 16 03.4	+0.9
MACH				iS	Sn	18 16 23.7	+1.0
LVC	Limon Verde	1.47	185	⇑iP	Pn	18 16 04.2	+0.8
LVC				iS	Sn	18 16 25.5	+1.3
MNMC	Minimini	2.14	339	⇓iP	Pn	18 16 12.3	+0.6
MNMC				iS	Sn	18 16 40.1	+1.2
MNMC				AML	AML	18 16 41.9	
	comp=E,939nm,0.4s						
CEN1	Los Morros	2.60	210	eP	Pn	18 16 21.2	+3.9
CEN1				iS	Sn	18 16 53.6	+4.7
ANCH	Antofagasta	2.95	211	⇓iP	Pn	18 16 22.5	+0.9

*PRE **05** 18:21:55.2±3.7, 21.°31S×33.°45E, h10km, ML4.3*
*ISCJB **05** 18:21:58.3±1.4, 21.°53S±0.°05×33.°1E±0.°1, h15km, Error ellipse: s-maj=14.9km s-min=7.3km az=4.5*
*BUL **05** 18:22:10.8±1.7, 21.°94S×31.°15E, h10km, MD4.3*
ISC 05 18:21:58.6±2.0, 21.°43S±0.°07×33.°2E±0.°1, h15km, n14, σ2.s07/25, Mozambique

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
POGA	Pongola	6.09	193	eP	Pn	18 23 28.3	+0.2
POGA				eS	Sn	18 24 36.2	-1.3
POGA				AML	AML	18 25 34.0	
	comp=Z,25nm,0.5s						
POGA	Pongola	6.09	193	i P	Pn	18 23 30.0	+1.9
POGA				i S	Sn	18 24 34.9	-2.5
SLR	Silverton	6.21	225	eP	Pn	18 23 32.7	+2.9
SLR				eS	Sn	18 24 44.1	+3.5
SLR				AML	AML	18 25 24.5	
	comp=Z,50nm,0.5s						
ERPM	east rand prop	6.66	222	eP	Pn	18 23 36.5	+0.5
ERPM				eS	Sn	18 24 51.6	-0.1
ERPM				AML	AML	18 25 32.5	
	comp=Z,22nm,0.6s						
KLOF	Kloof	7.06	225	eP	Pn	18 23 42.8	+1.1
KLOF				eS	Sn	18 25 02.1	+0.3
KLOF				AML	AML	18 25 49.3	
	comp=Z,37nm,0.6s						
PRYS	Parys	7.62	223	eP	Pn	18 23 49.8	+0.5
PRYS				eS	Sn	18 25 14.4	-1.1
PRYS				AML	AML	18 26 16.8	
	comp=Z,15nm,0.5s						
LSZ	Lusaka	7.73	321	eP	Pn	18 23 50.7	-0.1
LSZ				eS	Sn	18 25 15.5	-2.8
LSZ	Lusaka	7.73	321	i P	Pn	18 23 54.8	+4.0
LSZ				i S	Sn	18 25 18.9	+0.6
LBTB	Lobatse	7.83	241	eP	Pn	18 23 54.4	+2.3
LBTB				eS	Sn	18 25 23.3	+2.8
LBTB				AML	AML	18 26 18.0	
	comp=Z,28nm,0.6s						
SWZ	Schweizer	9.16	230	eP	Pn	18 24 10.8	+0.3
SWZ				eS	Sn	18 25 52.1	-1.3
SWZ				AML	AML	18 26 57.7	
	comp=Z,18nm,0.3s						
KSD	Kokstad	9.68	200	eS	Sn	18 26 05.4	-0.8
KSD				AML	AML	18 27 20.7	
	comp=Z,23nm,0.7s						
BOSA	Boshof	10.13	223	eP	Pn	18 24 23.9	+0.2
BOSA				eS	Sn	18 26 14.9	-2.3
BOSA				AML	AML	18 27 32.0	
	comp=Z,9.1nm,0.7s						
HVD	Gariep Dam	11.45	215	eS	Sn	18 26 49.5	0.0
HVD				AML	AML	18 28 34.7	
	comp=Z,6.7nm,0.9s						
UPI	Upington	12.83	235	eP	Pn	18 25 01.1	+0.5
UPI				eS	Sn	18 27 17.7	-5.5
UPI				AML	AML	18 28 54.5	
	comp=Z,8.1nm,0.6s						

*IDC **05** 18:22:23.4±2.7, 21.°84S×68.°75W, h84km±22km, mb3.6/2, mb1 3.6/5, mb1mx3.4/19, mbtmp3.4/5, Error ellipse: s-maj=43.5km s-min=25.7km az=102.0*
*ISCJB **05** 18:22:24.0±0.6, 21.°77S±0.°04×68.°76W±0.°09, h106km±7km, mb3.6/2, Error ellipse: s-maj=14.3km s-min=5.8km az=177.8*
*GUC **05** 18:22:24.2±0.8, 21.°80S×68.°83W, h104km±4km, ML4.0*
ISC 05 18:22:24.7±0.8, 21.°75S±0.°04×68.°71W±0.°08, h97km±7km, n19, σ1.s23/29, 5C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB09	Plate Boundary	0.50	265	⇑iP	Pn	18 22 40.5	0.0
PB09				i S	Sn	18 22 52.4	+0.3
PB09				AML	AML	18 22 53.3	
	comp=N,25μm,0.4s						
LVC	Limon Verde	0.88	192	⇑iP	Pn	18 22 44.0	0.0
LVC				i S	Sn	18 22 58.4	0.0
PB04	Plate Boundary	0.89	234	⇑iP	Pn	18 22 49.6	+5.9
PB04				i S	Sn	18 23 08.7	+11
PB04				AML	AML	18 23 10.2	
	comp=N,3μm,0.2s						
PB01	Plate Boundary	1.01	314	eP	Pn	18 22 45.1	-0.1
PB01				i S	Sn	18 23 00.9	+0.3
PB01				AML	AML	18 23 03.0	
	comp=E,2μm,0.2s						
MACH	Maria Elena	1.07	245	⇑iP	Pn	18 22 45.4	-0.6
MACH				i S	Sn	18 23 01.2	-0.8
PB07	Plate Boundary	1.09	271	⇑iP	Pn	18 22 45.6	-0.7
PB07				i S	Sn	18 23 01.4	-0.9
PB07				AML	AML	18 23 03.9	
	comp=E,6μm,0.2s						
HMBC	Humberstone	1.83	323	⇓iP	Pn	18 22 55.1	-0.1
HMBC				i S	Sn	18 23 18.7	+0.3
HMBC				AML	AML	18 23 21.2	
	comp=N,1μm,0.3s						
CEN1	Los Morros	2.14	220	eP	Pn	18 23 01.1	+2.0
CEN1				eS	Sn	18 23 29.1	+3.8
CEN1				AML	AML	18 23 34.9	
	comp=N,455nm,0.6s						
ANCH	Antofagasta	2.48	219	eP	Pn	18 23 03.5	-0.1
ANCH				eS	Sn	18 23 32.0	-1.3
PSGC	Pisagua	2.52	328	⇓iP	Pn	18 23 03.0	-1.1
PSGC				i S	Sn	18 23 33.5	-0.9
PSGC				AML	AML	18 23 34.2	
	comp=N,444nm,0.4s						
MNMC	Minimini	2.73	342	⇓iP	Pn	18 23 07.5	+0.3
MNMC				i S	Sn	18 23 40.8	+1.1
MNMC				AML	AML	18 23 44.5	
	comp=N,893nm,0.6s						
LPAZ	La Paz	5.46	6	P	Pn	18 23 45.5	+1.1
	comp=N,2.4nm,0.3s,baz=214,slow=4.5,SNR=29						
SIV	San Ignacio	9.22	53	P	Pn	18 24 33.3	-1.7
	comp=N,1.2nm,0.3s,baz=254,slow=12,SNR=29						
CFAA	Coronel Fontan	9.82	178	P	Pn	18 24 40.6	-2.5
	comp=N,0.0nm,0.3s,baz=340,slow=15,SNR=3.0						
TORD	Torodi Ar. Bea	77.26	70	P	P	18 34 09.9	+1.0
	comp=N,0.4nm,0.4s,baz=255,slow=5.8,SNR=9.4						
TORD				pP	pP	18 34 34.8	+0.8
	comp=N,0.5nm,0.7s,baz=267,slow=5.0,SNR=2.4						
YKA	Yellowknife Ar	91.48	341	P	P	18 35 19.5	-0.2
	comp=N,0.6nm,0.8s,baz=135,slow=4.6,SNR=8.4						
ASAR	Alice Springs	129.78	207	PKP	PKPdf	18 41 23.2	-0.3
	comp=N,0.3nm,0.8s,baz=116,slow=1.8,SNR=4.8						
WRA	Warramunga Arr	132.83	210	PKP	PKPdf	18 41 28.9	-0.4
	comp=N,0.4nm,0.6s,baz=158,slow=1.6,SNR=7.1						
MKAR	Makanchi Array	145.72	36	PKPbc	PKPbc	18 41 52.2	-0.3
	comp=N,0.5nm,0.6s,baz=318,slow=3.2,SNR=6.2						
MKAR				pPKPbc	pPKPbc	18 42 20.0	+1.1
	comp=N,0.7nm,0.8s,baz=340,slow=3.2,SNR=4.8						

*ISCJB **05** 18:58:12.6±0.3, 39.°70N±0.°03×82.°62E±0.°05, h10km, mb3.6/9, MS3.5/6, Error ellipse: s-maj=6.0km s-min=4.0km az=176.9*
*NNC **05** 18:58:12.6±3.5, 39.°55N×82.°87E, h9km±13km, mb4.2, mpv4.1, Error ellipse: s-maj=25.5km s-min=14.4km az=119.0*
*IDC **05** 18:58:12.8±0.8, 39.°70N×82.°76E, h0km, mb3.7/9, mb1 3.9/15, mb1mx3.8/34, mbtmp3.8/15, ML3.6/6, MS3.3/9, Ms1 3.3/9, ms1mx3.1/35, Error ellipse: s-maj=20.7km s-min=12.1km az=54.0*
*BJI **05** 18:58:13.5, 39.°71N×82.°57E, h16km, mB4.5/4, mb4.3/9, ML4.5/11, Ms4.0/6, Ms7 3.6/6*
*MOS **05** 18:58:16.2±1.2, 39.°77N×82.°65E, h33km, mb4.0/5, Error ellipse: s-maj=15.7km s-min=8.5km az=98.4*
ISC 05 18:58:14.2±0.6, 39.°69N±0.°05×82.°57E±0.°05, h10km, n58, σ1.s63/47, mb3.7/9, MS3.5/6, 13C-11D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	Kashi	5.10	270	Pn	Pb	18 59 38.0	-5.6
KSH				Sn	Sb	19 00 40.9	-4.0
KSH				smax	smax		
	comp=N,370nm,1.0s						
KSH				smax	smax		
	comp=E,440nm,1.1s						
KNDC	Almaty	5.49	312	⇑Pn	Pn	18 59 39.0	+2.9
KNDC				⇑Pg	Pg	18 59 56.8	-2.6
KNDC				⇑Lg	Lg	19 01 15.8	
WMQ	Urumqi	5.64	41	Pn	Pn	18 59 39.5	+1.4
WMQ				Sn	Sn	19 00 42.6	-0.3
WMQ				smax	smax		
	comp=N,470nm,0.8s						
WMQ				smax	smax		
	comp=E,500nm,0.7s						
TKM2	Tokmak 2	6.17	304	⇑Pn	Pn	18 59 47.9	+2.3
	comp=E,5.8nm,0.7s						
TKM2				⇑Pg	Pg	19 00 09.9	-2.4
	comp=E,69nm,1.6s						
TKM2				⇑Lg	Lg	19 01 37.8	
	comp=E,73nm,0.8s						
AAK	Ala-Archa	6.77	298	P	Pn	18 59 56.6	+2.9
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK	Ala-Archa	6.77	298	Pn	Pn	18 59 56.6	+2.9
	comp=Z,0.5nm,0.3s,baz=111,slow=4.7,SNR=6.7						
AAK				Pg	Pg	19 00 19.5	-4.3
	comp=Z,1.4nm,0.3s,baz=139,slow=6.1,SNR=16						
AAK				Lg	Lg	19 01 54.3	
	comp=Z,1.8nm,0.3s,baz=200,slow=20,SNR=3.3						
MKAR	Makanchi Array	7.11	358	P	Pn	18 59 59.4	+1.1
MKAR						19 01 19.0	
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.3s						
MKAR				smax	smax		
	comp=Z,5.0nm,0.3s						
MKAR				MLR	MLR		
	comp=Z,51nm,21.6s						
MKAR	Makanchi Array	7.11	358	Pn	Pn	18 59 59.4	+1.1
	comp=Z,4.7nm,0.3s,baz=184,slow=11,SNR=136						
MKAR				Sn	Sn	19 01 19.0	-0.1
	comp=Z,5.1nm,0.3s,baz=186,slow=26,SNR=5.2						
MKAR				Lg	Lg	19 01 57.6	
	comp=Z,6.3nm,0.3s,baz=177,slow=28,SNR=6.1						
MKAR				LR	LR	19 03 05.9	
	comp=Z,51nm,21.6s,baz=174,slow=41						
MK31	Makanchi Array	7.11	358	⇓Pn	Pn	18 59 59.2	+0.9
	comp=Z,1.4nm,0.2s,baz=186,slow=12,SNR=341						
MK31				⇓Pg	Pg	19 00 27.6	-2.6
	comp=Z,7.3nm,0.5s,baz=176,slow=16,SNR=4.8						
MK31				⇑Sn	Sn	19 01 22.7	+3.6
	comp=Z,73nm,1.0s,baz=44,slow=40,SNR=4.8						
MK31				⇑Lg	Lg	19 01 58.4	
	comp=Z,75nm,0.7s,baz=170,slow=25,SNR=3.8						
CHCP	Chirah Chowk	9.59	234	P	Pn	19 00 33.7	+1.3
KK31	Karatay Array	9.68	295	⇓Pg	Pn	19 01 13.6	+40
	comp=Z,7.0nm,0.8s,baz=100,slow=15,SNR=13						
KK31				⇑Lg	Lg	19 03 28.9	
	comp=Z,37nm,1.4s						

CEP	Cherat	10.36	239	P	Pn	19 00 45.1	+2.1
CEP				S	Sn	19 02 35.0	-4.2
THW	Thamme Wali	11.12	235	P	Pn	19 00 53.4	+0.1
KURBB	Kurchatov Arra	11.30	347	Pn	Pn	19 00 56.1	+0.4
	comp=Z,0.0nm,0.3s,baz=170,slow=12,SNR=45						
KURBB				Lg	Lg	19 04 14.3	
	comp=Z,0.2nm,0.3s,baz=182,slow=33,SNR=4.7						
KUR16	Kurchatov Arra	11.31	347	⇑Pn	Pn	19 00 55.6	-0.1
	comp=Z,1.4nm,1.0s						
KUR16				⇓Lg	Lg	19 04 19.0	
	comp=Z,36nm,1.4s						
DANN	Dangsing	11.35	175	eP	Pn	19 00 57.2	+0.5
KURK	Kurchatov	11.37	347	⇑Pn	Pn	19 00 56.7	0.0
	comp=Z,7.9nm,1.0s						
KURK				⇓Lg	Lg	19 04 20.5	
	comp=Z,105nm,1.5s						
KURK	Kurchatov	11.37	347	P	Pn	19 00 56.1	-0.6
KOLN	Koldanda	11.91	176	eP	Pn	19 00 59.8	-4.6
	comp=Z,10nm,0.6s						
GUN	Gumba	12.06	166	eP	Pn	19 01 11.5	+5.0
KKN	Kakani	12.08	168	eP	Pn	19 01 08.3	+1.7
	comp=Z,22nm,1.0s						
PKIN	Phulchoki	12.30	168	eP	Pn	19 01 10.6	+0.9
	comp=Z,14nm,0.8s						
PKI	Pulchoki	12.31	168	eP	Pn	19 01 11.4	+1.5
	comp=Z,34nm,1.0s						
TAPN	Taplejung	13.02	159	eP	Pn	19 01 25.6	+6.0
RAMN	Ramite	13.14	164	eP	Pn	19 01 22.0	+0.9
GTA	Gaotai	13.32	86	eP	Pn	19 01 21.9	-1.5
GTA				pP	P	19 01 26.2	-7.0
GTA				sP		19 01 29.2	
GTA				S	S	19 04 01.6	-14
GTA				sS	Sn	19 04 05.4	+14
GTA				pmax	pmax		
	comp=Z,19nm,0.9s						
GTA				pmax	pmax		
	comp=Z,52nm,6.7s						
GTA				LR	LR		
	comp=N,690nm,10.7s						
GTA				LR	LR		
	comp=E,290nm,8.8s						
GTA				LR	LR		
	comp=Z,160nm,8.6s						
ODAN	Odare	13.41	161	eP	Pn	19 01 26.5	+1.7
ZALV	Zalesovo Beam	14.35	5	P	Pn	19 01 35.1	-2.2
ZALV				MLR	MLR		
	comp=Z,47nm,18.9s						
ZALV	Zalesovo Beam	14.35	5	Pn	Pn	19 01 35.0	-2.2
	comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=12						
ZALV				Lg	Lg	19 05 56.3	
	comp=Z,0.1nm,0.3s,baz=184,slow=21,SNR=3.7						
ZALV				LR	LR	19 07 55.8	
	comp=Z,47nm,18.9s,baz=241,slow=41						
NVS	Novosibirsk	15.17	1	eP	Pn	19 01 48.5	+0.1
NVS				e		19 04 28.5	
VOSK	Vostochnaya	15.28	332	⇓Pn	Pn	19 01 48.8	-1.1
	comp=Z,11nm,1.5s						
VOSK				⇓Lg	Lg	19 06 23.9	
	comp=Z,34nm,1.4s						
BVA0	Borovoye Array	15.74	332	Pn	Pn	19 01 55.2	-0.7
	comp=Z,8.1nm,0.9s,baz=228,slow=39,SNR=30						
BVA0				⇓Lg	Lg	19 06 40.1	
	comp=Z,23nm,1.4s,baz=149,slow=29,SNR=4.0						
BVAR	Borovoye Array	15.74	332	P	Pn	19 01 55.3	-0.6
BVAR				MLR	MLR		
	comp=Z,21nm,18.4s						
BVAR	Borovoye Array	15.74	332	Pn	Pn	19 01 55.3	-0.6
	comp=Z,0.2nm,0.3s,baz=130,slow=11,SNR=6.5						
BVAR				Lg	Lg	19 06 42.2	
	comp=Z,0.1nm,0.3s,baz=147,slow=29,SNR=3.8						
BVAR				LR	LR	19 07 44.4	
	comp=Z,21nm,18.4s,baz=144,slow=36						
BRVK	Borovoye	15.80	332	⇓Pn	P	19 02 00.2	-0.4
	comp=Z,23nm,1.3s						
ZRNK	Zerenda	16.20	329	⇑Pn	Pn	19 02 01.9	+0.1
	comp=Z,14nm,1.0s						
ZRNK				⇑Lg	Lg	19 06 54.1	
	comp=Z,36nm,1.4s						
MOY	Mondy	17.53	41	eP	P	19 02 19.8	0.0
ZAK	Zakamensk	18.07	47	eP	P	19 02 26.7	+1.0
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AB31	Akbulak array	18.71	308	⇓P	P	19 02 31.7	-0.9
	comp=Z,2.5nm,0.8s,baz=113,slow=8.1,SNR=17						
SONM	Songino Array	18.98	57	P	Pn	19 02 36.2	-0.4
	comp=Z,0.3nm,0.3s,baz=255,slow=14,SNR=17						
SONM				Lg	Lg	19 08 28.0	
	comp=Z,0.2nm,0.3s,baz=250,slow=30,SNR=5.9						
AKTO	Aktyubinsk	20.31	310	⇓P	Pn	19 02 53.0	+0.8
	comp=Z,6.1nm,1.2s						
AKTO	Aktyubinsk	20.31	310	P	Pn	19 02 52.7	+0.5
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKTO	Aktyubinsk	20.31	310	P	Pn	19 02 52.7	+0.5
	comp=Z,1.4nm,0.4s,baz=73,slow=12,SNR=6.1						
ARU	Arti	23.01	325	P	P	19 03 19.3	+0.3
ARU						19 03 33.8	
ARU				SS	S	19 07 14.4	-15
GYA	Guiyang	24.03	116	P	P	19 03 33.9	+4.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR	Chiang Mai Arr	25.46	142	P	P	19 03 41.6	-0.8
	comp=Z,1.7nm,0.7s,baz=319,slow=8.6,SNR=11						
GNI	Garni	28.88	283	LR	LR	19 16 19.4	
	comp=Z,33nm,19.3s,baz=247,slow=37						
KSRS	Korea Array	35.24	79	LR	LR	19 21 41.2	
	comp=Z,90nm,18.1s,baz=306,slow=40						
USRK	Ussuriysk Arra	36.60	66	LR	LR	19 21 26.0	
	comp=Z,55nm,20.0s,baz=280,slow=38						
BRTR	Keskin Array B	37.26	286	P	P	19 05 27.4	+1.1
	comp=Z,1.2nm,0.8s,baz=98,slow=8.8,SNR=8.9						
ARCES	ARCESS Array B	42.02	334	P	P	19 06 06.0	+0.7
	comp=Z,2.3nm,0.9s,baz=93,slow=6.1,SNR=3.6						
GERES	GERESS Array B	48.60	305	P	P	19 06 58.5	+0.6
	comp=Z,0.3nm,0.5s,baz=81,slow=8.4,SNR=6.5						
GERES				LR	LR	19 32 02.7	
	comp=Z,64nm,18.9s,baz=281,slow=42						
PETK	Petropavlovsk-	51.18	48	LR	LR	19 32 15.3	
	comp=Z,40nm,18.6s,baz=46,slow=40						
ILAR	Eielson Array	68.92	20	P	P	19 09 19.2	+0.3
	comp=Z,0.3nm,0.6s,baz=320,slow=6.3,SNR=4.4						
WRA	Warramunga Arr	76.49	131	P	P	19 10 04.3	-0.1
	comp=Z,0.7nm,0.8s,baz=320,slow=6.4,SNR=3.4						
YKA	Yellowknife Ar	77.23	8	P	P	19 10 07.8	-0.2
	comp=Z,0.1nm,0.3s,baz=341,slow=5.4,SNR=4.3						
ASAR	Alice Springs	79.15	133	P	P	19 10 18.9	-0.3
	comp=Z,0.4nm,0.6s,baz=313,slow=5.7,SNR=3.4						
STKA	Stephens Creek	89.79	133	LR	LR	19 56 51.1	
	comp=Z,99nm,18.7s,baz=26,slow=39						

IDC 05 19:00:21.4±1.5**, 17°.86S**×**131°.48E, h0km, mb3.4**/1**, mb1 3.6**/5**, mb1mx3.5**/17**, mbtmp3.5**/5**, ML3.6**/3**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx2.3**/15**, Error ellipse: s-maj=21.6km s-min=14.2km az=35.0, Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	3.41	128	Pn	Pn	19 01 16.2	+0.3
	0.1nm,0.3s,baz=307,slow=14,SNR=5.4						
WRA				Pg	Pg	19 01 28.0	+1.2
	9.9nm,0.3s,baz=313,slow=16,SNR=21						
WRA				Sn	Sn	19 01 56.8	-0.3
	13nm,0.3s,baz=309,slow=24,SNR=9.2						
WRA				Lg	Lg	19 02 09.3	
	21nm,0.3s,baz=306,slow=29,SNR=12						
FITZ	Fitzroy Crossi	5.56	267	Pn	Pn	19 01 45.8	+0.3
	0.8nm,0.3s,baz=79,slow=9.1,SNR=16						
FITZ				Sn	Sn	19 02 46.5	-3.6
	2.6nm,0.3s,baz=323,slow=23,SNR=6.4						
FITZ				Lg	Lg	19 03 17.4	
	7.1nm,0.3s,baz=346,slow=22,SNR=12						
ASAR	Alice Springs	6.21	159	Pn	Pn	19 01 55.5	+1.1
	0.8nm,0.3s,baz=337,slow=14,SNR=64						
ASAR				Sn	Sn	19 03 08.2	+2.1
	3.0nm,0.3s,baz=313,slow=15,SNR=9.1						
ASAR				Lg	Lg	19 03 38.0	
	5.9nm,0.3s,baz=336,slow=30,SNR=7.8						
STKA	Stephens Creek	16.69	149	Pn	Pn	19 04 15.6	-1.1
	0.2nm,0.3s,baz=330,slow=15,SNR=4.9						
KAPI	Kappang	17.16	317	LR	LR	19 13 07.0	
	comp=Z,32nm,18.6s,baz=81,slow=45						
MKAR	Makanchi Array	78.10	328	P	P	19 12 22.2	0.0
	0.2nm,0.4s,baz=124,slow=6.7,SNR=5.2						

*IDC **05** 19:00:27.6±1.3, 52°.00N×169°.73W, h0km, mb3.7/4, mb1 3.9/7, mb1mx3.6/31, mbtmp3.7/7, ML3.7/3, Error ellipse: s-maj=40.0km s-min=17.3km az=176.0*
*NEIC **05** 19:00:30.9, 52°.02N×169°.71W, h9km, ML3.1(AEIC), After AEIC.*
ISC 05 19:00:29.0±1.3**, 51°.8N**±0°.1×**169°.1W**±0°.1**, h30km, n18, σ1s47**/20**, mb3.7**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.20	8	P	Pb	19 00 51.2	+0.1
NIKH				S	Sb	19 01 08.2	+2.0
OKSP	Okmok Steeple	1.56	19	P	Pb	19 00 57.6	+0.4
OKSO	Okmok South	1.68	20	P	Pb	19 00 59.3	+0.1
OKSO				S	Sb	19 01 19.9	-0.1
OKTU	Okmok Mt. Tuli	1.73	22	P	Pb	19 01 00.6	+0.5
OKFG	Magazine Ridge	1.79	24	P	Pb	19 01 01.1	+0.1
OKFG				S	Sb	19 01 24.0	+0.9
MSOM	Makushin Julie	2.43	32	P	Pb	19 01 10.4	-1.5
MSW	Makushin Switc	2.56	33	P	Pb	19 01 12.4	-1.9
UNV	Unalaska Valle	2.61	37	P	Pb	19 01 14.1	-0.9
UNV				S	Sb	19 01 46.0	-0.5
MTBL	Makushin Table	2.64	33	P	Pb	19 01 14.5	-1.2
KOFP	Korovin Flat P	3.10	281	P	Pn	19 01 15.1	-0.8
AMKA	Amchitka	7.22	271	ePn	Pn	19 02 12.0	-0.4
FX1	Attu Island--F	10.89	283	Pn	Pn	19 03 00.0	-2.6
	1.0nm,0.3s,baz=280,slow=17,SNR=8.7						
ILAR	Eielson Array	17.36	33	P	P	19 04 29.7	-0.1
	0.1nm,0.3s,baz=222,slow=12,SNR=4.5						
PETK	Petropavlovsk-	20.16	287	P	Pn	19 05 00.1	-2.5
	1.0nm,0.3s,baz=94,slow=13,SNR=16						
YKA	Yellowknife Ar	30.52	48	P	P	19 06 43.7	+4.6
	0.3nm,0.5s,baz=272,slow=8.2,SNR=4.3						
TXAR	Lajitas Array	52.61	89	P	P	19 09 45.2	+5.2
	0.3nm,0.5s,baz=297,slow=5.5,SNR=3.9						
BVAR	Borovoye Array	64.26	325	P	P	19 11 01.9	+1.0
	1.4nm,0.5s,baz=60,slow=6.5,SNR=6.7						
ASAR	Alice Springs	90.13	230	P	P	19 13 28.9	+2.9
	0.5nm,0.6s,baz=27,slow=4.7,SNR=9.7						

*SKO **05** 19:25:27.3, 41°.80N×22°.86E, h15km, M1.6, ML2.1*
*CSEM **05** 19:25:27.4±0.3, 41°.81N×22°.85E, h5km, ML1.6, Error ellipse: s-maj=7.6km s-min=4.8km az=85.0*
*ATH **05** 19:25:28.0, 41°.79N×22°.90E, h3km, MD3.2/5*
*BEO **05** 19:25:29.0±0.4, 41°.83N×22°.84E, h0km, ML1.6/4*
ISC 05 19:25:27.8±1.0**, 41°.80N**±0°.02×**22°.88E**±0°.03**, h12km**±11km**, n20, σ0s40**/32**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.53	206	ePg	Pb	19 25 39.3	+0.2
VAY	Valandovo	0.53	206	i Pg	Pg	19 25 38.0	-0.2
VAY				i Sg	Sg	19 25 45.5	+0.3
VAY				eLg	Lg	19 25 45.7	
	comp=E,104nm,0.4s						
VAY				eLg	Lg	19 25 45.8	
	comp=N,38nm,0.3s						
VAY	Valandovo	0.53	206	i Pg	Pg	19 25 38.4	+0.2
VAY				i Sg	Sg	19 25 45.9	+0.7
VAY				eLg	Lg	19 25 46.3	
	comp=N,38nm,0.3s						
VTS	Vitosha	0.83	17	ePg	Pg	19 25 43.9	+0.1
VTS				eSg	Sg	19 25 54.4	-0.3
VTS	Vitosha	0.83	17	ePg	Pg	19 25 43.9	+0.1
VTS				eSg	Sg	19 25 54.4	-0.3
NVR	Nevrokopi	0.87	121	ePB	Pg	19 25 44.2	-0.3
NVR				eSG	Sg	19 25 55.5	-0.3
NVR	Nevrokopi	0.87	121	ePb	Pg	19 25 44.2	-0.3
NVR				eSg	Sg	19 25 55.5	-0.3
GRG	Griva	0.92	203	ePG	Pg	19 25 45.1	-0.4
GRG				eSG	Sb	19 25 57.9	+0.1
GRG	Griva	0.92	203	ePg	Pg	19 25 45.1	-0.4
GRG				eSg	Sb	19 25 57.9	+0.1
SOH	Sokhos	1.04	160	ePG	Pb	19 25 47.7	-0.1
SOH				eSG	Sb	19 26 01.6	+0.1
SOH	Sokhos	1.04	160	ePg	Pb	19 25 47.7	-0.1
SOH				eSg	Sb	19 26 01.6	+0.1
BARS	Barje	1.28	323	ePg	Pn	19 25 51.6	0.0
BARS				eSg	Sb	19 26 08.5	+0.1
BARS	Barje	1.28	323	ePg	Pn	19 25 51.6	0.0
BARS				eSg	Sb	19 26 08.5	+0.1
PLD	Plovdiv	1.40	77	eSg	Sg	19 26 13.9	+1.1
PLD	Plovdiv	1.40	77	eSg	Sg	19 26 13.9	+1.1
ZAPS	Zavoj	1.48	353	ePg	Pb	19 25 55.1	-0.3
PLG	Polygyros	1.49	163	ePB	Pn	19 25 54.4	-0.1
PLG	Polygyros	1.49	163	ePb	Pn	19 25 54.4	-0.1
RDO	Rodhopi	2.10	107	ePN	Pb	19 26 05.9	0.0
RDO	Rodhopi	2.10	107	ePn	Pb	19 26 05.9	0.0

IDC 05 19:31:17.4±3.0**, 1°.27S**×**133°.43E, h0km, mb3.1**/2**, mb1 3.5**/4**, mb1mx3.3**/22**, mbtmp3.3**/4**, ML3.4**/1**, Error ellipse: s-maj=129.3km s-min=25.1km az=79.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.39	204	P	Pn	19 35 34.0	0.0
	0.1nm,0.3s,baz=14,slow=12,SNR=4.5						
WRA	Warramunga Arr	18.58	177	P	Pn	19 35 36.6	+0.4
	0.2nm,0.3s,baz=356,slow=12,SNR=8.2						
ASAR	Alice Springs	22.27	179	P	P	19 36 15.8	-0.4
	0.4nm,0.7s,baz=359,slow=11,SNR=9.9						
MKAR	Makanchi Array	65.48	324	P	P	19 42 02.4	0.0
	0.2nm,0.6s,baz=122,slow=5.2,SNR=2.2						

*IDC **05** 19:33:14.3±1.0, 22°.63S×174°.99W, h0km, mb4.2/13, mb1 4.4/14, mb1mx4.3/22, mbtmp4.2/14, ML3.8/1, MS3.7/1, Ms1 3.7/1, ms1mx2.4/27, Error ellipse: s-maj=39.9km s-min=18.4km az=145.0*
*NEIC **05** 19:33:15.3±4.8, 22°.54S×175°.08W, h8km±29km, mb4.6/9, Error ellipse: s-maj=14.4km s-min=8.9km az=135.0*
ISC 05 19:33:18.3±0.6**, 22°.93S**±0°.10×**175°.0W**±0°.1**, h30km, n50, σ1s47**/49**, mb4.4**/22**, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	8.32	307	ePn	Pn	19 35 20.9	+4.0
	24nm,0.8s						
AFI	Afiamalu	9.48	19	Pn	Pn	19 35 27.5	-5.4
URZ	Urewera	16.71	202	Pn	P	19 37 14.2	+2.0
URZ				Sn	Sn	19 40 10.3	-4.4
URZ	Urewera	16.71	202	Pn	P	19 37 14.2	+2.0
	0.4nm,0.3s,baz=355,slow=10,SNR=2.6						
URZ				Sn	Sn	19 40 10.3	-4.4
	0.7nm,0.3s,baz=254,slow=18,SNR=5.4						
DZM	Mont Dzumac	17.17	269	eLR	LR	19 42 04.4	
	75nm,20.2s						
PPT2	Papeete2	24.42	82	eLR	LR	19 44 47.0	
	93nm,22.5s						
EIDS	Eidsvold	31.00	259	P	P	19 39 34.5	+1.3
	1.8nm,0.6s						
CTA	Charters Tower	36.09	267	P	P	19 40 18.2	+0.6
CTA	Charters Tower	36.09	267	P	P	19 40 18.2	+0.6
	2.5nm,0.7s,baz=107,slow=11,SNR=7.2						
CTAO	Charters Tower	36.09	267	eP	P	19 40 17.3	-0.3
	4.0nm,0.8s						
PMG	Port Moresby	38.62	284	eP	P	19 40 36.6	-2.4
	20nm,1.0s						
STKA	Stephens Creek	39.33	247	P	P	19 40 47.0	+2.1
STKA	Stephens Creek	39.33	247	P	P	19 40 47.0	+2.1
	2.0nm,0.8s,baz=227,slow=4.4,SNR=6.0						
AS31	Alice Springs	46.72	259	eP	P	19 41 44.7	-0.2
ASAR	Alice Springs	46.72	259	P	P	19 41 45.3	+0.4
ASAR				PcP	PcP	19 43 19.6	+1.4
ASAR	Alice Springs	46.72	259	P	P	19 41 45.3	+0.4
	4.2nm,0.7s,baz=100,slow=6.7,SNR=50						
ASAR				PcP	PcP	19 43 19.6	+1.4
	0.8nm,1.0s,baz=108,slow=4.4,SNR=4.1						
ASAR				LR	LR	20 01 33.8	
	comp=Z,82nm,19.4s,baz=268,slow=36						
WRAB	Tennant Creek	47.06	264	eP	P	19 41 46.8	-0.7
	3.9nm,0.7s						
WRA	Warramunga Arr	47.06	264	P	P	19 41 47.2	-0.3
WRA				PcP	PcP	19 43 20.3	+0.9
WRA	Warramunga Arr	47.06	264	P	P	19 41 47.2	-0.3
	2.2nm,0.6s,baz=93,slow=8.5,SNR=50						
WRA				PcP	PcP	19 43 20.3	+0.9
	0.9nm,0.8s,baz=98,slow=3.7,SNR=4.6						
FITZ	Fitzroy Crossi	55.49	263	P	P	19 42 51.9	+1.1
FITZ	Fitzroy Crossi	55.49	263	P	P	19 42 51.9	+1.1
	1.3nm,0.6s,baz=110,slow=12,SNR=4.9						
VNDA	Vanda	55.77	186	P	P	19 42 60.0	+8.1
	2.6nm,1.2s						
MBWA	Marble Bar	60.06	258	eP	P	19 43 22.3	-0.6
	39nm,1.5s						
CASY	Casey	62.98	206	eP	P	19 43 38.3	-3.5
	4.0nm,0.9s						
QSPA	South Pole Qui	67.15	180	eP	P	19 44 13.5	+4.4
	6.8nm,1.1s						
MJAR	Matsushiro Arr	73.82	322	P	P	19 44 49.0	-1.0
MJAR	Matsushiro Arr	73.82	322	P	P	19 44 49.0	-1.0
	1.7nm,0.6s,baz=156,slow=6.5,SNR=8.4						
KSM	Kuching	76.50	277	eP	P	19 45 04.9	-1.1
	5.6nm,0.9s						
PMSA	Palmer Station	77.95	156	P	P	19 45 14.6	+1.4
	189nm,1.5s						
PETK	Petropavlovsk-	79.35	344	P	P	19 45 20.2	-0.7
PETK	Petropavlovsk-	79.35	344	P	P	19 45 20.2	-0.7
	4.7nm,0.8s,baz=141,slow=9.6,SNR=7.6						
CMB	Columbia Colle	79.41	41	P	P	19 45 19.4	-2.2
KSRS	Korea Array	80.55	317	P	P	19 45 28.8	+1.1
	1.0nm,0.8s,baz=128,slow=8.1,SNR=4.7						
KSAR	Wonju Array Be	80.57	317	P	P	19 45 28.8	+1.0
NVAR	Mina Array Bea	80.93	42	P	P	19 45 29.9	-0.1
NVAR	Mina Array Bea	80.93	42	P	P	19 45 29.9	-0.1
	0.8nm,0.8s,baz=227,slow=7.1,SNR=5.7						
USRK	Ussuriysk Arra	82.54	325	P	P	19 45 38.4	+0.3
	3.3nm,0.8s,baz=144,slow=3.4,SNR=5.1						
TXAR	Lajitas Array	86.06	56	P	P	19 45 56.5	0.0
TXAR	Lajitas Array	86.06	56	P	P	19 45 56.5	0.0
	1.0nm,1.0s,baz=213,slow=4.3,SNR=7.8						
ILAR	Eielson Array	90.09	12	P	P	19 46 13.4	-1.3
ILAR	Eielson Array	90.09	12	P	P	19 46 13.4	-1.3
	0.9nm,1.1s,baz=222,slow=4.2,SNR=4.6						
CMAR	Chiang Mai Arr	93.54	288	P	P	19 46 33.7	+1.9
CMAR	Chiang Mai Arr	93.54	288	P	P	19 46 33.7	+1.9
	3.0nm,0.9s,baz=116,slow=3.2,SNR=12						
AKASG	Malin Array Be	146.47	332	PKPbc	PKPdf	19 52 55.4	+0.5
AKASG	Malin Array Be	146.47	332	PKPbc	PKPdf	19 52 55.4	+0.5
	2.2nm,0.6s,baz=39,slow=4.2,SNR=9.3						
BRTR	Keskin Array B	150.53	311	PKPbc	PKPbc	19 53 07.8	+0.3
BRTR	Keskin Array B	150.53	311	PKPbc	PKPbc	19 53 07.8	+0.3
	1.2nm,0.9s,baz=101,slow=3.9,SNR=7.1						
CLL	Collm	151.00	350	ePKPbc	PKPbc	19 53 08.0	+0.1
GERES	GERESS Array B	153.23	347	PKPbc	PKPbc	19 53 12.5	-0.8
GERES	GERESS Array B	153.23	347	PKPbc	PKPbc	19 53 12.5	-0.8
	0.2nm,0.6s,baz=59,slow=8.1,SNR=2.6						

*CSEM **05** 19:42:05.7±0.1, 51°.55N×3°.55W, h5km, ML3.2/11, Error ellipse: s-maj=4.0km s-min=2.5km az=74.0*
*BGS **05** 19:42:07.1±1.2, 51°.62N×3°.65W, h6km±6km, ML2.9*
*LDG **05** 19:42:07.3±0.3, 51°.58N×3°.59W, h6km, Md3.5/2, Ml3.2/28, Error ellipse: s-maj=4.7km s-min=3.7km az=123.0*
*NEIC **05** 19:42:07.1, 51°.64N×3°.65W, h8km, ML3.0(BGS), After BGS.*
NEIC Felt [III] at Bridgend and Maesteg. Also felt at Kenfig, North Cornelly, Port Talbot and other parts of South Wales.
ISC 05 19:42:06.4±0.8**, 51°.57N**±0°.02×**3°.58W**±0°.02**, h13km**±6km**, n166, σ1s00**/198**, 6C-3D, United Kingdom**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEX	Exmoor	0.53	196	⇓iP	Pg	19 42 18.1	+1.5
HEX	Exmoor	0.53	196	P	Pg	19 42 18.1	+1.5
HEX	Exmoor	0.53	196	⇓iP	Pg	19 42 18.1	+1.5
HEX	Exmoor	0.53	196	⇓iP	Pg	19 42 18.1	+1.5
MCH1	Michaelchurch	0.56	40	eP	Pg	19 42 17.5	+0.2
MCH1				eS	Sg	19 42 24.8	+0.1
MCH1				AML	AML	19 42 25.4	
	comp=E,523nm,0.2s						
MCH1				AML	AML	19 42 25.4	
	comp=N,841nm,0.2s						
MCH1	Michaelchurch	0.56	40	P	Pg	19 42 17.5	+0.2
MCH1				S	Sg	19 42 24.8	+0.1
MCH1				AML	AML	19 42 25.4	
	comp=N,523nm,0.2s						
MCH1				AML	AML	19 42 25.4	
	comp=N,841nm,0.2s						
MCH1	Michaelchurch	0.56	40	eP	Pg	19 42 17.5	+0.2
MCH1				eS	Sg	19 42 24.8	+0.1
MCH1				AML	AML	19 42 25.4	
	comp=E,523nm,0.2s						
MCH1				AML	AML	19 42 25.4	
	comp=N,841nm,0.2s						
MCH1	Michaelchurch	0.56	40	eP	Pg	19 42 17.5	+0.2
MCH1				eS	Sg	19 42 24.8	+0.1
	comp=N,841nm,0.2s						
HTL	Hartland	0.81	225	⇑iP	Pb	19 42 23.3	+0.9
HTL				eS	Sg	19 42 32.9	+0.2
HTL				AML	AML	19 42 34.6	
	comp=N,338nm,0.2s						
HTL				AML	AML	19 42 35.6	
	comp=E,324nm,0.4s						
HTL	Hartland	0.81	225	P	Pb	19 42 23.3	+0.9
HTL				S	Sg	19 42 32.9	+0.2
HTL				AML	AML	19 42 34.6	
	comp=E,338nm,0.2s						
HTL				AML	AML	19 42 35.6	
	comp=E,324nm,0.4s						
HTL	Hartland	0.81	225	⇑iP	Pb	19 42 23.3	+0.9
HTL				eS	Sg	19 42 32.9	+0.2
HTL				AML	AML	19 42 34.6	
	comp=N,338nm,0.2s						
HTL				AML	AML	19 42 35.6	
	comp=E,324nm,0.4s						
HTL	Hartland	0.81	225	⇑iP	Pb	19 42 23.3	+0.9
HTL				eS	Sg	19 42 32.9	+0.2
	comp=E,324nm,0.4s						
HLM1	Long Mynd	1.04	24	eP	Pg	19 42 25.7	-0.7
HLM1				eS	Sg	19 42 39.3	-0.7
HLM1				AML	AML	19 42 42.9	
	comp=E,777nm,0.2s						
HLM1				AML	AML	19 42 42.9	
	comp=N,511nm,0.2s						
HLM1	Long Mynd	1.04	24	P	Pg	19 42 25.7	-0.7
HLM1				S	Sg	19 42 39.3	-0.7
HLM1				AML	AML	19 42 42.9	
	comp=N,777nm,0.2s						
HLM1				AML	AML	19 42 42.9	
	comp=N,511nm,0.2s						
HLM1	Long Mynd	1.04	24	eP	Pg	19 42 25.7	-0.7
HLM1				eS	Sg	19 42 39.3	-0.7
HLM1				AML	AML	19 42 42.9	
	comp=E,777nm,0.2s						
HLM1				AML	AML	19 42 42.9	
	comp=N,511nm,0.2s						
HLM1	Long Mynd	1.04	24	eP	Pg	19 42 25.7	-0.7
HLM1				eS	Sg	19 42 39.3	-0.7
	comp=N,511nm,0.2s						
SWN1	Swindon	1.11	92	eP	Pg	19 42 28.4	+0.7
SWN1				eS	Sg	19 42 44.1	+1.9
SWN1				AML	AML	19 42 45.1	
	comp=N,948nm,0.3s						
SWN1				AML	AML	19 42 47.4	
	comp=E,337nm,0.4s						
SWN1	Swindon	1.11	92	P	Pg	19 42 28.4	+0.7
SWN1				S	Sg	19 42 44.1	+1.9
SWN1				AML	AML	19 42 45.1	
	comp=E,948nm,0.3s						
SWN1				AML	AML	19 42 47.4	
	comp=E,337nm,0.4s						
SWN1	Swindon	1.11	92	eP	Pg	19 42 28.4	+0.7
SWN1				eS	Sg	19 42 44.1	+1.9
SWN1				AML	AML	19 42 45.1	
	comp=N,948nm,0.3s						
SWN1				AML	AML	19 42 47.4	
	comp=E,337nm,0.4s						
SWN1	Swindon	1.11	92	eP	Pg	19 42 28.5	+0.7
SSW	Stow on the Wo	1.15	69	⇑iP	Pg	19 42 28.7	+0.3
SSW	Stow on the Wo	1.15	69	P	Pg	19 42 28.7	+0.3
SSW	Stow on the Wo	1.15	69	⇑iP	Pg	19 42 28.7	+0.3
SSW	Stow on the Wo	1.15	69	⇑iP	Pg	19 42 28.7	+0.3
	comp=E,366nm,0.4s						
DYA	Yadsworthy	1.16	191	AML	AML	19 42 45.4	
	comp=N,462nm,0.2s						
DYA				AML	AML	19 42 45.4	
	comp=E,366nm,0.4s						
DYA	Yadsworthy	1.16	191	AML	AML	19 42 45.4	
	comp=N,462nm,0.2s						
DYA				AML	AML	19 42 45.4	
	comp=E,366nm,0.4s						
DYA	Yadsworthy	1.16	191	AML	AML	19 42 45.4	

comp=E,462nm,0.2s
DYA AML AML 19 42 45.4
comp=E,366nm,0.4s
WOL Wolverton 1.50 99 *e*P **Pn 19 42 34.5 +1.5**
WOL *e*S **Sn 19 42 54.4 +2.0**
WOL AML AML 19 42 56.3
comp=N,399nm,0.5s
WOL AML AML 19 43 04.4
comp=E,180nm,0.5s
WOL Wolverton 1.50 99 P **Pn 19 42 34.5 +1.5**
WOL S **Sn 19 42 54.4 +2.0**
WOL AML AML 19 42 56.3
comp=E,399nm,0.5s
WOL AML AML 19 43 04.4
comp=E,180nm,0.5s
WOL Wolverton 1.50 99 *e*P **Pn 19 42 34.5 +1.5**
WOL *e*S **Sn 19 42 54.4 +2.0**
WOL AML AML 19 42 56.3
comp=N,399nm,0.5s
WOL AML AML 19 43 04.4
comp=E,180nm,0.5s
WOL Wolverton 1.50 99 *e*P **Pn 19 42 34.5 +1.5**
YRE Yr Eifl 1.50 340 *e*P **Pn 19 42 33.6 +0.5**
YRE Yr Eifl 1.50 340 P **Pn 19 42 33.6 +0.5**
YRE Yr Eifl 1.50 340 *e*P **Pn 19 42 33.6 +0.5**
YRE Yr Eifl 1.50 340 *e*P **Pn 19 42 33.6 +0.5**
YLL Llanberis 1.61 347 *e*P **Pn 19 42 34.7 +0.2**
YLL Llanberis 1.61 347 P **Pn 19 42 34.7 +0.2**
YLL Llanberis 1.61 347 *e*P **Pn 19 42 34.7 +0.2**
YLL Llanberis 1.61 347 *e*P **Pn 19 42 34.7 +0.2**
WPM1 Penmaenmawr 1.70 353 *e*P **Pn 19 42 36.1 +0.3**
WPM1 Penmaenmawr 1.70 353 P **Pn 19 42 36.1 +0.3**
WPM1 Penmaenmawr 1.70 353 *e*P **Pn 19 42 36.1 +0.3**
WPM1 Penmaenmawr 1.70 353 *e*P **Pn 19 42 36.1 +0.3**
SKP1 Kophill 1.73 84 *e*P **Pn 19 42 37.3 +1.1**
SKP1 Kophill 1.73 84 P **Pn 19 42 37.3 +1.1**
SKP1 Kophill 1.73 84 *e*P **Pn 19 42 37.3 +1.1**
SKP1 Kophill 1.73 84 *e*P **Pn 19 42 37.3 +1.1**
STNC Stoke 1.74 28 *e*S **Sb 19 43 00.5 +0.6**
STNC AML AML 19 43 01.7
comp=E,402nm,0.4s
STNC AML AML 19 43 01.9
comp=N,655nm,0.5s
STNC Stoke 1.74 28 *e*S **Sb 19 43 00.5 +0.6**
STNC AML AML 19 43 01.7
comp=E,402nm,0.4s
STNC AML AML 19 43 01.9
comp=N,655nm,0.5s
STNC Stoke 1.74 28 S **Sb 19 43 00.5 +0.6**
STNC AML AML 19 43 01.7
comp=N,402nm,0.4s
STNC AML AML 19 43 01.9
comp=N,655nm,0.5s
STNC Stoke 1.74 28 *e*S **Sb 19 43 00.5 +0.6**
comp=N,655nm,0.5s
YRC Rhoscolyn 1.79 340 *e*P **Pn 19 42 37.5 +0.5**
YRC Rhoscolyn 1.79 340 P **Pn 19 42 37.5 +0.5**
YRC Rhoscolyn 1.79 340 *e*P **Pn 19 42 37.5 +0.5**
YRC Rhoscolyn 1.79 340 *e*P **Pn 19 42 37.5 +0.5**
WLF1 Llynfaes 1.79 344 *e*P **Pn 19 42 37.3 +0.3**
WLF1 *e*S **Sn 19 42 58.5 -1.1**
WLF1 AML AML 19 43 01.9
comp=N,47nm,0.3s
WLF1 AML AML 19 43 01.9
comp=E,78nm,0.3s
WLF1 Llynfaes 1.79 344 P **Pn 19 42 37.3 +0.3**
WLF1 S **Sn 19 42 58.5 -1.1**
WLF1 AML AML 19 43 01.9
comp=N,47nm,0.3s
WLF1 AML AML 19 43 01.9
comp=E,78nm,0.3s
WLF1 Llynfaes 1.79 344 *e*P **Pn 19 42 37.3 +0.3**
WLF1 *e*S **Sn 19 42 58.5 -1.1**
WLF1 AML AML 19 43 01.9
comp=N,47nm,0.3s
WLF1 AML AML 19 43 01.9
comp=E,78nm,0.3s
WLF1 Llynfaes 1.79 344 *e*P **Pn 19 42 37.3 +0.3**
WLF1 *e*S **Sn 19 42 58.5 -1.1**
comp=E,78nm,0.3s
WME Myndd Eilian 1.88 347 *e*P **Pn 19 42 38.9 +0.7**
WME Myndd Eilian 1.88 347 P **Pn 19 42 38.9 +0.7**
WME Myndd Eilian 1.88 347 *e*P **Pn 19 42 38.9 +0.7**
WME Myndd Eilian 1.88 347 *e*P **Pn 19 42 38.9 +0.7**
KBI1 Birley Grange 2.10 36 *e*P **Pn 19 42 42.4 +1.0**
KBI1 Birley Grange 2.10 36 P **Pn 19 42 42.4 +1.0**
KBI1 Birley Grange 2.10 36 *e*P **Pn 19 42 42.4 +1.0**
KBI1 Birley Grange 2.10 36 *e*P **Pn 19 42 42.3 +1.0**
DLF Lyons Farm 2.50 315 *e*P **Pn 19 42 46.7 0.0**
DLF *e*S **Sn 19 43 14.6 -2.5**
DLF Lyons Farm 2.50 315 *e*P **Pn 19 42 46.7 0.0**
DLF *e*S **Sn 19 43 14.6 -2.5**
ELSH Elham, Standar 2.98 96 *e*P **Pn 19 42 55.2 +1.8**
ELSH AML AML 19 43 33.3
comp=N,35nm,0.6s
ELSH AML AML 19 43 33.5
comp=E,26nm,0.2s
ELSH Elham, Standar 2.98 96 P **Pn 19 42 55.2 +1.8**
ELSH AML AML 19 43 33.3
comp=E,35nm,0.6s
ELSH AML AML 19 43 33.5
comp=E,26nm,0.2s
ELSH Elham, Standar 2.98 96 *e*P **Pn 19 42 55.2 +1.8**
ELSH AML AML 19 43 33.3
comp=N,35nm,0.6s
ELSH AML AML 19 43 33.5
comp=E,26nm,0.2s
ELSH Elham, Standar 2.98 96 *e*P **Pn 19 42 55.2 +1.8**
comp=E,26nm,0.2s
KESW Keswick, Cumbr 3.04 5 *e*P **Pn 19 42 54.5 +0.4**
KESW AML AML 19 43 42.7
comp=N,30nm,0.6s
KESW AML AML 19 43 51.9
comp=E,39nm,0.5s
KESW Keswick, Cumbr 3.04 5 P **Pn 19 42 54.5 +0.4**
KESW AML AML 19 43 42.7
comp=E,30nm,0.6s
KESW AML AML 19 43 51.9
comp=E,39nm,0.5s
KESW Keswick, Cumbr 3.04 5 *e*P **Pn 19 42 54.5 +0.4**
KESW AML AML 19 43 42.7
comp=N,30nm,0.6s
KESW AML AML 19 43 51.9
comp=E,39nm,0.5s
KESW Keswick, Cumbr 3.04 5 *e*P **Pn 19 42 54.5 +0.4**
comp=E,39nm,0.5s
ROSF Rostrenen 3.25 176 *e*Pn **Pn 19 42 57.4 +0.4**
SNR=1.0
ROSF *e*Sn **Sn 19 43 33.9 -1.6**
ROSF *e*Sg **Sg 19 43 50.1 -0.4**
comp=E,11nm,0.3s,SNR=1.0
ROSF Rostrenen 3.25 176 *e*Pn **Pn 19 42 57.4 +0.4**
SNR=1.0
ROSF *e*Sn **Sn 19 43 33.9 -1.6**
ROSF *e*Sg **Sg 19 43 50.1 -0.4**
comp=E,5.7nm,0.3s,SNR=1.0
GAL1 Galloway 3.37 349 *e*P **Pn 19 42 59.1 +0.5**
GAL1 AML AML 19 43 56.5
comp=E,12nm,0.4s
GAL1 AML AML 19 43 57.6
comp=N,9.8nm,0.4s
GAL1 Galloway 3.37 349 P **Pn 19 42 59.1 +0.5**
GAL1 AML AML 19 43 56.5
comp=N,12nm,0.4s
GAL1 AML AML 19 43 57.6
comp=N,9.8nm,0.4s
GAL1 Galloway 3.37 349 *e*P **Pn 19 42 59.1 +0.5**
GAL1 AML AML 19 43 56.5
comp=E,12nm,0.4s
GAL1 AML AML 19 43 57.6
comp=N,9.8nm,0.4s
GAL1 Galloway 3.37 349 *e*P **Pn 19 42 59.2 +0.5**
comp=N,9.8nm,0.4s
SGMF Saint Gilles 3.39 168 *e*Pn **Pn 19 42 58.4 -0.5**
SNR=1.0
SGMF *e*Sn Sn 19 43 36.0 -3.0
SNR=1.0
SGMF *e*Sg **Sg 19 43 54.5 -0.6**
comp=N,14nm,0.3s,SNR=1.0
SGMF Saint Gilles 3.39 168 *e*Pn **Pn 19 42 58.4 -0.5**
SNR=1.0
SGMF SNR=1.0 *e*Sn Sn 19 43 36.0 -3.0
SGMF *e*Sg **Sg 19 43 54.5 -0.6**
comp=N,7.1nm,0.3s,SNR=1.0
FLN La Foliniere 3.45 144 *e*Pn **Pn 19 42 59.4 -0.3**
baz=321,SNR=1.0
FLN La Foliniere 3.45 144 *e*Pg Pb 19 43 11.9 +4.7
baz=323
FLN *e*Sn Sn 19 43 35.9 -4.5
baz=323
FLN *e*Sg **Sg 19 43 56.2 -0.8**
comp=N,18nm,0.2s,baz=322,SNR=1.0
FLN La Foliniere 3.45 144 *e*Pn **Pn 19 42 59.4 -0.3**
baz=321,SNR=1.0
FLN La Foliniere 3.45 144 *e*Pg Pb 19 43 11.9 +4.7
baz=323
FLN *e*Sn Sn 19 43 35.9 -4.5
baz=323
FLN *e*Sg **Sg 19 43 56.2 -0.8**
comp=N,9.1nm,0.2s,baz=322,SNR=1.0
ECK Cauldkaine Hil 3.63 4 *e*P **Pn 19 43 02.3 +0.1**
ECK Cauldkaine Hil 3.63 4 P **Pn 19 43 02.3 +0.1**
ECK Cauldkaine Hil 3.63 4 *e*P **Pn 19 43 02.3 +0.1**
ECK Cauldkaine Hil 3.63 4 *e*P **Pn 19 43 02.3 +0.1**
GRR Gorron 3.64 150 *e*Pn **Pn 19 43 02.5 +0.1**
GRR Gorron 3.64 150 *e*P Pn 19 43 06.0 +3.6
GRR Gorron 3.64 150 *e*Pg Pb 19 43 15.2 +4.7
GRR *e*Sn Sn 19 43 42.6 -2.6
GRR *e*Sg **Sg 19 44 03.1 0.0**
comp=N,10nm,0.2s,SNR=1.0
GRR Gorron 3.64 150 *e*Pn **Pn 19 43 02.5 +0.1**
GRR Gorron 3.64 150 *e*P Pn 19 43 06.0 +3.6
GRR Gorron 3.64 150 *e*Pg Pb 19 43 15.2 +4.7
GRR *e*Sn Sn 19 43 42.6 -2.6
GRR *e*Sg **Sg 19 44 03.1 0.0**
comp=N,5.1nm,0.2s,SNR=1.0
QUIF Quistinic 3.67 176 *e*Pn **Pn 19 43 02.4 -0.4**
SNR=1.0
QUIF *e*Sn Sn 19 43 43.1 -2.8
SNR=1.0
QUIF *e*Sg **Sg 19 44 03.3 -0.8**
comp=N,14nm,0.3s,SNR=1.0
QUIF Quistinic 3.67 176 *e*Pn **Pn 19 43 02.4 -0.4**
SNR=1.0
QUIF *e*Sn Sn 19 43 43.1 -2.8
SNR=1.0
QUIF *e*Sg **Sg 19 44 03.3 -0.8**
comp=N,6.8nm,0.3s,SNR=1.0
LDF La Druitiere 3.72 142 *e*Pn **Pn 19 43 03.4 -0.1**
SNR=1.0
LDF La Druitiere 3.72 142 *e*Pg **Pg 19 43 16.9 -0.7**
LDF *e*Sn Sn 19 43 43.7 -3.5
LDF *e*Sg **Sg 19 44 05.5 -0.3**
comp=N,17nm,0.3s,SNR=1.0
LDF La Druitiere 3.72 142 *e*Pn **Pn 19 43 03.4 -0.1**
SNR=1.0
LDF La Druitiere 3.72 142 *e*Pg **Pg 19 43 16.9 -0.7**
LDF *e*Sn Sn 19 43 43.7 -3.5
LDF *e*Sg **Sg 19 44 05.5 -0.3**
comp=N,8.4nm,0.3s,SNR=1.0
ESK Eskdalemuir 3.76 3 *e*P **Pn 19 43 04.2 +0.2**
ESK AML AML 19 43 48.0
comp=N,10nm,0.2s
ESK AML AML 19 44 10.4
comp=E,12nm,0.4s
ESK Eskdalemuir 3.76 3 P **Pn 19 43 04.2 +0.2**
ESK AML AML 19 43 48.0
comp=E,10nm,0.2s
ESK AML AML 19 44 10.4
comp=E,12nm,0.4s
ESK Eskdalemuir 3.76 3 *e*P **Pn 19 43 04.2 +0.2**
ESK AML AML 19 43 48.0
comp=N,10nm,0.2s
ESK AML AML 19 44 10.4
comp=E,12nm,0.4s
ESK Eskdalemuir 3.76 3 *e*Pn **Pn 19 43 04.4 +0.3**
ESK *e*Sn Sn 19 43 42.1 -6.0
ESK Eskdalemuir 3.76 3 *e*P **Pn 19 43 04.2 +0.2**
comp=E,523nm,0.2s
ESK Eskdalemuir 3.76 3 *e*Pn **Pn 19 43 04.4 +0.3**
BAIF Baives 5.16 104 *e*Pn **Pn 19 43 23.2 -0.1**
SNR=1.0
BAIF *e*Sn Sn 19 44 18.6 -4.2
comp=E,2.5nm,0.2s,SNR=1.0
BAIF Baives 5.16 104 *e*Pn **Pn 19 43 23.2 -0.1**
SNR=1.0
BAIF *e*Sn Sn 19 44 18.6 -4.2
comp=E,1.2nm,0.2s,SNR=1.0
DOU Dourbes 5.39 103 P **Pn 19 43 27.8 +1.4**
DOU Dourbes 5.39 103 P **Pn 19 43 27.8 +1.4**
MFF Saint Martin d 5.46 154 *e*Pn **Pn 19 43 27.5 +0.1**
SNR=1.0
MFF *e*Sn Sn 19 44 25.1 -5.0
SNR=1.0
MFF *e*Sg Sg 19 44 57.7 -3.9
comp=E,7.1nm,0.5s,SNR=1.0
MFF Saint Martin d 5.46 154 *e*Pn **Pn 19 43 27.5 +0.1**
SNR=1.0
GIVF Givet 5.52 102 *e*Pn **Pn 19 43 28.6 +0.3**
SNR=1.0
GIVF *e*Sn **Sn 19 44 29.2 -2.4**
comp=E,3.4nm,0.2s,SNR=1.0
GIVF *e*Sg **Sg 19 45 01.8 -1.8**
comp=E,2.6nm,0.2s
GIVF Givet 5.52 102 *e*Pn **Pn 19 43 28.6 +0.3**
SNR=1.0
GIVF *e*Sn **Sn 19 44 29.2 -2.4**
comp=E,1.7nm,0.2s,SNR=1.0
GIVF *e*Sg **Sg 19 45 01.8 -1.8**
comp=E,1.3nm,0.2s
BCLA Clavier 5.73 98 P **Pn 19 43 31.5 +0.5**
BCLA Clavier 5.73 98 P **Pn 19 43 31.5 +0.5**
MEM Membach 6.12 95 P **Pn 19 43 36.6 +0.2**
MEM Membach 6.12 95 P **Pn 19 43 36.6 +0.2**
MEZF Maizieres J'vi 6.35 116 *e*Pn **Pn 19 43 39.5 -0.2**
baz=297,SNR=1.0
MEZF *e*Sn Sn 19 44 49.2 -2.8
comp=E,5.6nm,0.4s,baz=287,SNR=1.0
MEZF Maizieres J'vi 6.35 116 *e*Pn **Pn 19 43 39.5 -0.2**
baz=297,SNR=1.0
MEZF *e*Sn Sn 19 44 49.2 -2.8
comp=E,2.8nm,0.4s,baz=287,SNR=1.0
SSF Saint Saulge 6.47 132 *e*Pn **Pn 19 43 40.4 -0.8**
SNR=1.0
SSF *e*Sn Sn 19 44 47.8 -7.1
SSF *e*Sg **Sg 19 45 31.6 -2.2**
comp=E,3.9nm,0.3s
SSF Saint Saulge 6.47 132 *e*Pn **Pn 19 43 40.4 -0.8**
SNR=1.0
SSF *e*Sg **Sg 19 45 31.6 -2.2**
comp=E,2.0nm,0.3s
WLF Walferdange 6.48 103 Pn **Pn 19 43 43.3 +1.9**
WLF *e*Sg **Sg 19 45 31.9 -2.3**
WLF Walferdange 6.48 103 Pn **Pn 19 43 43.3 +1.9**
WLF *e*Sg **Sg 19 45 31.9 -2.3**
LOR Lormes 6.49 129 *e*Pn Pn 19 43 40.3 -1.2
baz=318,SNR=1.0
LOR *e*Sn Sn 19 44 47.2 -8.3
LOR *e*Sg **Sg 19 45 32.0 -2.4**
comp=E,4.0nm,0.4s
LOR Lormes 6.49 129 *e*Pn Pn 19 43 40.3 -1.2
baz=318,SNR=1.0
LOR *e*Sg **Sg 19 45 32.0 -2.4**
comp=E,2.0nm,0.4s
SFTF Sexfontaines 6.51 118 *e*Pn **Pn 19 43 41.7 -0.1**
baz=292
SFTF *e*Sn Sn 19 44 49.6 -6.3
comp=E,3.3nm,0.2s
SFTF Sexfontaines 6.51 118 *e*Pn **Pn 19 43 41.7 -0.1**
baz=292
TCF Toulx Ste Croi 6.52 142 *e*Pn **Pn 19 43 42.0 0.0**
SNR=1.0
TCF *e*Sn Sn 19 44 49.0 -7.3
TCF *e*Sg **Sg 19 45 33.3 -2.1**
comp=E,1.3nm,0.2s
TCF Toulx Ste Croi 6.52 142 *e*Pn **Pn 19 43 42.0 0.0**
SNR=1.0
TCF *e*Sg **Sg 19 45 33.3 -2.1**
comp=E,0.6nm,0.2s
BGF Bois d'Agland 6.56 137 *e*Pn Pn 19 43 40.0 -2.5
SNR=1.0
BGF *e*Sn Sn 19 44 51.7 -5.4
BGF Bois d'Agland 6.56 137 *e*Pn Pn 19 43 40.0 -2.5
SNR=1.0
AVF Avril sur Loir 6.60 134 *e*Pn **Pn 19 43 42.2 -0.8**
AVF *e*Sn Sn 19 44 53.2 -4.9
AVF Avril sur Loir 6.60 134 *e*Pn **Pn 19 43 42.2 -0.8**
PAGF Fort de Pagny 6.71 113 *e*Pn **Pn 19 43 43.9 -0.7**
baz=300
PAGF *e*Sn Sn 19 44 55.1 -5.7
comp=E,0.7nm,0.2s,baz=291
PAGF Fort de Pagny 6.71 113 *e*Pn **Pn 19 43 43.9 -0.7**
baz=300
SMF Signal de Mont 6.93 132 *e*Pn Pn 19 43 46.4 -1.2
SMF *e*Sn Sn 19 44 59.4 -6.9
comp=E,2.0nm,0.2s,SNR=1.0
SMF Signal de Mont 6.93 132 *e*Pn Pn 19 43 46.4 -1.2
RJF Les Rejaudoux 7.13 150 *e*Pn Pn 19 43 49.0 -1.3
SNR=1.0
RJF *e*Sn Sn 19 45 04.6 -6.6
comp=E,2.2nm,0.3s
RJF Les Rejaudoux 7.13 150 *e*Pn Pn 19 43 49.0 -1.3
SNR=1.0
LFF La Frestale 7.24 155 *e*Pn **Pn 19 43 51.5 -0.3**
SNR=1.0
LFF *e*Sn Sn 19 45 07.8 -6.0
comp=E,3.6nm,0.3s,SNR=1.0
LFF La Frestale 7.24 155 *e*Pn **Pn 19 43 51.5 -0.3**
SNR=1.0
HAU Haudompre 7.35 115 *e*Pn **Pn 19 43 53.2 -0.2**
HAU Haudompre 7.35 115 *e*Pn **Pn 19 43 53.2 -0.2**
CAF Calviac 7.64 148 *e*Pn **Pn 19 43 56.6 -0.8**
SNR=1.0
CAF *e*Sn Sn 19 45 16.1 -7.8
comp=E,1.6nm,0.3s
CAF Calviac 7.64 148 *e*Pn **Pn 19 43 56.6 -0.8**
SNR=1.0
CDF Champ du Feu 7.68 110 *e*Pn **Pn 19 43 57.1 -0.8**
SNR=1.0
CDF *e*Sn Sn 19 45 20.2 -4.6
comp=E,1.8nm,0.3s,SNR=1.0
CDF Champ du Feu 7.68 110 *e*Pn **Pn 19 43 57.1 -0.8**
SNR=1.0
ECH Echery 7.70 112 *e*Pn **Pn 19 43 59.7 +1.5**
ECH *e*Sn Sn 19 45 21.1 -4.3
ECH Echery 7.70 112 *e*Pn **Pn 19 43 59.7 +1.5**
HINF Hinteralfeld 7.74 115 *e*Pn **Pn 19 43 58.6 -0.1**
SNR=1.0
HINF *e*Sn Sn 19 45 21.0 -5.2
comp=E,1.8nm,0.2s
HINF Hinteralfeld 7.74 115 *e*Pn **Pn 19 43 58.6 -0.1**
SNR=1.0
CABF La Chapelle 8.05 124 *e*Pn **Pn 19 44 03.0 -0.1**
SNR=1.0
CABF La Chapelle 8.05 124 *e*Pn **Pn 19 44 03.0 -0.1**
SNR=1.0
BFO Black Forest 8.34 108 *e*Pn **Pn 19 44 06.8 -0.1**
BFO *e*Sn Sn 19 45 37.8 -3.1
BFO Black Forest 8.34 108 *e*Pn **Pn 19 44 06.8 -0.1**
BFO *e*Sn Sn 19 45 37.8 -3.1
EPF Esparros 8.95 161 *e*Pn **Pn 19 44 14.6 -0.8**
SNR=1.0
EPF *e*Sn Sn 19 45 50.0 -6.0
comp=E,1.4nm,0.3s
EPF Esparros 8.95 161 *e*Pn **Pn 19 44 14.6 -0.8**
SNR=1.0
LPL La Plagne 9.13 128 *e*Pn **Pn 19 44 17.6 -0.4**
LPL La Plagne 9.13 128 *e*Pn **Pn 19 44 17.6 -0.4**
ORIF Oris-en-Rattie 9.17 133 *e*Sn Sn 19 45 56.5 -4.9
comp=E,1.2nm,0.3s

*ISK **05** 19:49:56.1,35.°75N×28.°05E,h16km,MD2.9*
*ISCJB **05** 19:49:57.1±0.5,35.°84N±0.°03×28.°18E±0.°04,h91km±8km,*
Error ellipse: s-maj=6.0km s-min=5.4km az=139.7
*CSEM **05** 19:49:58.4±0.2,35.°86N×28.°18E,h80km,MD3.0, Error*
ellipse: s-maj=4.9km s-min=4.4km az=62.0
*DDA **05** 19:49:58.8,36.°21N×28.°13E,h7km,MD3.0*
*ATH **05** 19:49:59.6,36.°02N×28.°00E,h70km±2km*

ISC 05 19:49:58.4±1.2,35.°91N±0.°04×28.°12E±0.°04,h79km±8km,
n53,σ1°10/67,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.31**	**0**	*e*P		**Pn**	**Pn**	**19 50 10.8**	**+0.2**
ARG				*e*S		**Sn**	**Sn**	**19 50 19.2**	**-0.4**
ARG	**Arkhangelos**	**0.31**	**0**	*e*P		**Pn**	**Pn**	**19 50 10.8**	**+0.2**
ARG				*e*S		**Sn**	**Sn**	**19 50 19.2**	**-0.4**
KARP	**Karpathos**	**0.86**	**246**	*e*P		**Pn**	**Pn**	**19 50 16.7**	**+1.0**
KARP				*e*S		**Sn**	**Sn**	**19 50 29.3**	**+0.6**
KARP	**Karpathos**	**0.86**	**246**	*e*P		**Pn**	**Pn**	**19 50 16.7**	**+1.0**
KARP				*e*S		**Sn**	**Sn**	**19 50 29.3**	**+0.6**
DAT	**Datca**	**0.93**	**332**	PG		**Pn**	**Pn**	**19 50 17.2**	**+0.5**
DAT	**Datca**	**0.93**	**332**	*i* Pg		**Pn**	**Pn**	**19 50 17.2**	**+0.5**
NIS1	**Nisyros Isl.**	**1.03**	**313**	*e*P		**Pn**	**Pn**	**19 50 17.1**	**-0.6**
NIS1	**Nisyros Isl.**	**1.03**	**313**	*e*P		**Pn**	**Pn**	**19 50 17.1**	**-0.6**
TURN	**Turunc**	**1.04**	**22**	*i* P		**Pn**	**Pn**	**19 50 16.6**	**-1.2**
TURN				*i* S		**Sn**	Sn	19 50 26.3	-6.0
TURN	**Turunc**	**1.04**	**22**	*i* P		**Pn**	**Pn**	**19 50 16.6**	**-1.2**
FETY	**Fethiye**	**1.06**	**47**	*e*PN		**Pn**	**Pn**	**19 50 18.8**	**+0.7**
FETY	**Fethiye**	**1.06**	**47**	*e*Pn		**Pn**	**Pn**	**19 50 18.8**	**+0.7**
YER	**Yerkesik**	**1.23**	**6**	*e*PN		**Pn**	**Pn**	**19 50 21.6**	**+1.3**
YER	**Yerkesik**	**1.23**	**6**	*e*Pn		**Pn**	**Pn**	**19 50 21.6**	**+1.3**
AKAS	**Kas**	**1.24**	**74**	*i* P		**Pn**	**Pn**	**19 50 21.3**	**+0.9**
AKAS				*i* S		**Sn**	**Sn**	**19 50 37.7**	**+0.7**
AKAS	**Kas**	**1.24**	**74**	*i* P		**Pn**	**Pn**	**19 50 21.3**	**+0.9**
AKAS				*i* S		**Sn**	**Sn**	**19 50 37.7**	**+0.7**
BODT	**Bodrum**	**1.33**	**331**	*e*PN		**Pn**	**Pn**	**19 50 22.0**	**+0.6**
BODT	**Bodrum**	**1.33**	**331**	*e*Pn		**Pn**	**Pn**	**19 50 22.0**	**+0.6**
MLSB	**Milas**	**1.41**	**349**	*e*PN		**Pn**	**Pn**	**19 50 23.6**	**+1.1**
MLSB	**Milas**	**1.41**	**349**	*e*Pn		**Pn**	**Pn**	**19 50 23.6**	**+1.1**
ELL	**Elmali**	**1.67**	**59**	*e*PN		**Pn**	**Pn**	**19 50 27.8**	**+1.9**
ELL	**Elmali**	**1.67**	**59**	*e*Pn		**Pn**	**Pn**	**19 50 27.8**	**+1.9**
ZKR	**Zakros**	**1.75**	**244**	*e*P		**Pn**	**Pn**	**19 50 28.9**	**+2.1**
ZKR	**Zakros**	**1.75**	**244**	*e*P		**Pn**	**Pn**	**19 50 28.9**	**+2.1**
GOLH	**Golhisar**	**1.76**	**41**	*i* P		**Pn**	**Pn**	**19 50 29.0**	**+1.9**
GOLH				*i* S		**Sn**	**Sn**	**19 50 50.6**	**+1.6**
GOLH	**Golhisar**	**1.76**	**41**	*i* P		**Pn**	**Pn**	**19 50 29.0**	**+1.9**
GOLH				*i* S		**Sn**	**Sn**	**19 50 50.6**	**+1.6**
DNZL	**Cakiroluk**	**1.93**	**22**	*i* P		**Pn**	**Pn**	**19 50 30.2**	**+0.8**
DNZL				*i* S		**Sn**	**Sn**	**19 50 52.2**	**-0.8**
DNZL	**Cakiroluk**	**1.93**	**22**	*i* P		**Pn**	**Pn**	**19 50 30.2**	**+0.8**
DNZL				*i* S		**Sn**	**Sn**	**19 50 52.2**	**-0.8**
GCAM	**G?zelcaml?**	**1.93**	**338**	*i* P		**Pn**	**Pn**	**19 50 30.2**	**+1.0**
GCAM				*i* S		**Sn**	**Sn**	**19 50 52.4**	**-0.3**
GCAM	**G?zelcaml?**	**1.93**	**338**	*i* P		**Pn**	**Pn**	**19 50 30.2**	**+1.0**
GCAM				*i* S		**Sn**	**Sn**	**19 50 52.4**	**-0.3**
SMG	**Samos**	**2.07**	**331**	*e*P		**Pn**	**Pn**	**19 50 31.8**	**+0.6**
SMG	**Samos**	**2.07**	**331**	*e*P		**Pn**	**Pn**	**19 50 31.8**	**+0.6**
NPS	**Neapolis**	**2.15**	**253**	*e*P		**Pn**	**Pn**	**19 50 33.0**	**+0.8**
NPS	**Neapolis**	**2.15**	**253**	*e*P		**Pn**	**Pn**	**19 50 33.0**	**+0.8**
SANT	**Santorini**	**2.21**	**283**	*e*P		**Pn**	**Pn**	**19 50 33.7**	**+0.7**
SANT	**Santorini**	**2.21**	**283**	*e*P		**Pn**	**Pn**	**19 50 33.7**	**+0.7**
LAST	**Lasithi**	**2.28**	**252**	*e*P		**Pn**	**Pn**	**19 50 35.4**	**+1.3**
LAST	**Lasithi**	**2.28**	**252**	*e*P		**Pn**	**Pn**	**19 50 35.4**	**+1.3**
APE	**Apeiranthos**	**2.39**	**300**	*e*PN		**Pn**	**Pn**	**19 50 35.8**	**+0.3**
APE	**Apeiranthos**	**2.39**	**300**	*e*P		**Pn**	**Pn**	**19 50 36.4**	**+0.9**
APE	**Apeiranthos**	**2.39**	**300**	*e*Pn		**Pn**	**Pn**	**19 50 35.8**	**+0.3**
APE	**Apeiranthos**	**2.39**	**300**	*e*P		**Pn**	**Pn**	**19 50 36.4**	**+0.9**
KHAL	**Karahalli**	**2.69**	**24**	*i* P		**Pn**	**Pn**	**19 50 39.7**	**+0.1**
KHAL				*i* S		**Sn**	**Sn**	**19 51 10.4**	**-0.8**
KHAL	**Karahalli**	**2.69**	**24**	*i* P		**Pn**	**Pn**	**19 50 39.7**	**+0.1**
KHAL				*i* S		**Sn**	**Sn**	**19 51 10.4**	**-0.8**
KYTH	**Kithira**	**4.14**	**277**	*e*P		**Pn**	**Pn**	**19 51 00.4**	**+1.3**
KYTH	**Kithira**	**4.14**	**277**	*e*P		**Pn**	**Pn**	**19 51 00.4**	**+1.3**
HNAT	**Natroun**	**6.60**	**161**	P		**Pn**	**Pn**	**19 51 31.3**	**-1.4**
AMAG	**Maghara**	**6.76**	**140**	P		**Pn**	**Pn**	**19 51 33.4**	**-1.5**
RSH		**6.80**	**135**	P		**Pn**	**Pn**	**19 51 34.8**	**-0.7**
HHAG	**Hagoal**	**6.81**	**150**	P		**Pn**	**Pn**	**19 51 34.1**	**-1.6**
HSAF	**As Saff**	**6.90**	**154**	P		**Pn**	**Pn**	**19 51 35.3**	**-1.6**
GLL	**Jalalah**	**7.00**	**153**	P		**Pn**	**Pn**	**19 51 36.8**	**-1.4**
HNKL	**Nakhl**	**7.73**	**139**	P		**Pn**	**Pn**	**19 51 46.8**	**-1.4**

IDC 05 20:00:16.6±6.3,12.°52N×145.°18E,h0km,mb3.3/3,
mb1 3.5/3,mb1mx3.3/25,mbtmp3.3/3,Error ellipse:
s-maj=227.0km s-min=33.0km az=81.0,South of
Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.98**	**198**	P		P	P	20 07 01.6	-0.5
	0.5nm,0.6s,baz=22,slow=9.8,SNR=9.9								
ASAR	**Alice Springs**	**37.62**	**197**	P		P	P	20 07 33.9	+0.5
	0.2nm,0.7s,baz=15,slow=7.6,SNR=4.1								
MKAR	**Makanchi Array**	**62.47**	**316**	P		P	P	20 10 41.8	-0.1
	0.2nm,0.6s,baz=100,slow=6.3,SNR=3.6								

IDC 05 20:18:42.8±2.8,32.°81N×81.°77E,h0km,mb3.2/5,
mb1 3.4/7,mb1mx3.3/30,mbtmp3.3/7,ML3.0/2,Error
ellipse: s-maj=112.6km s-min=20.5km az=66.0,Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	13.97	1	Pn	Pn	20 22 01.0	-1.1
	0.1nm,0.3s,baz=182,slow=13,SNR=5.1						
KURBB	Kurchatov Arra	17.96	353	P	Pn	20 22 53.7	-0.1
	0.0nm,0.3s,baz=174,slow=10,SNR=4.5						
CMAR	Chiang Mai Arr	21.03	129	P	P	20 23 28.5	+0.2
	1.3nm,0.6s,baz=310,slow=11,SNR=12						
ZALV	Zalesovo Beam	21.24	5	P	P	20 23 30.1	-0.2
	0.5nm,0.6s,baz=198,slow=8.7,SNR=3.1						
BVAR	Borovoye Array	21.80	341	P	P	20 23 36.7	+0.4
	0.4nm,0.5s,baz=148,slow=8.7,SNR=4.2						
WRA	Warramunga Arr	72.62	128	P	P	20 30 12.3	-0.1
	0.1nm,0.6s,baz=317,slow=6.9,SNR=4.1						
ASAR	Alice Springs	75.01	131	P	P	20 30 26.4	0.0
	0.3nm,0.7s,baz=314,slow=5.7,SNR=3.2						

IDC 05 20:31:04.8±2.2, 6°.90S×128°.97E, h0km, mb3.4/1, mb1 3.5/4, mb1mx3.3/20, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=97.4km s-min=28.0km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.60	196	Pn	Pn	20 33 51.0	-0.7
	0.2nm,0.3s,baz=13,slow=12,SNR=12						
FITZ				Sn	Sn	20 35 46.4	-16
	0.7nm,0.3s,baz=0.0,slow=20,SNR=7.4						
WRA	Warramunga Arr	13.97	159	Pn	Pn	20 34 23.1	-1.1
	0.1nm,0.3s,baz=334,slow=15,SNR=16						
WRA				Sn	Sn	20 36 48.2	-12
	0.5nm,0.3s,baz=331,slow=22,SNR=8.6						
ASAR	Alice Springs	17.33	165	P	P	20 35 09.8	0.0
	0.0nm,0.3s,baz=345,slow=12,SNR=4.0						
ASAR				S	Sn	20 38 08.8	-13
	0.1nm,0.3s,baz=340,slow=25,SNR=4.1						
MKAR	Makanchi Array	67.59	327	P	P	20 42 03.3	0.0
	0.1nm,0.3s,baz=117,slow=7.5,SNR=6.6						

IDC 05 20:33:23.9±3.6, 34°.36N×70°.71E, h0km, mb3.4/2, mb1 3.2/6, mb1mx3.1/31, mbtmp3.2/6, ML3.2/3, 1C, Error ellipse: s-maj=83.9km s-min=28.4km az=134.0, Southeastern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	8.74	359	P	Pn	20 35 29.3	-2.2
	0.8nm,0.3s,baz=182,slow=12,SNR=19						
KK31				⇑S	Sn	20 37 02.3	-8.5
	0.7nm,0.6s,baz=189,slow=28,SNR=4.3						
MKAR	Makanchi Array	15.20	32	Pn	Pn	20 37 02.1	+2.3
	0.1nm,0.3s,baz=207,slow=12,SNR=5.1						
KURBB	Kurchatov Arra	17.23	17	P	Pn	20 37 25.7	-0.2
	0.0nm,0.3s,baz=206,slow=11,SNR=3.8						
AKTO	Aktyubinsk	18.56	334	P	P	20 37 41.0	-1.2
	0.1nm,0.3s,baz=139,slow=13,SNR=4.0						
BVAR	Borovoye Array	18.67	359	P	Pn	20 37 45.0	+1.5
	0.1nm,0.3s,baz=180,slow=9.7,SNR=3.1						
ZALV	Zalesovo Beam	21.97	23	P	P	20 38 17.5	-1.6
	0.4nm,0.3s,baz=204,slow=9.5,SNR=3.4						
TORD	Torodi Ar. Bea	65.45	269	P	P	20 44 09.2	+0.1
	0.4nm,0.6s,baz=47,slow=5.7,SNR=5.1						

IDC 05 20:49:55.9±21.0, 4°.77N×123°.45E, h441km±275km, mb2.9/5, mb1 3.0/5, mb1mx2.7/26, mbtmp2.9/5, Error ellipse: s-maj=202.8km s-min=38.5km az=60.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.79	157	P	P	20 54 58.5	-0.4
	0.5nm,0.4s,baz=334,slow=10,SNR=19						
ASAR	Alice Springs	30.04	161	P	P	20 55 27.8	+0.4
	0.4nm,0.3s,baz=336,slow=7.9,SNR=13						
STKA	Stephens Creek	40.33	156	P	P	20 56 53.3	-0.3
	1.1nm,0.8s,baz=11,slow=10,SNR=2.6						
MKAR	Makanchi Array	54.87	326	P	P	20 58 43.6	+0.3
	0.5nm,0.4s,baz=122,slow=8.4,SNR=19						
KURBB	Kurchatov Arra	59.13	328	P	P	20 59 12.1	-0.4
	0.6nm,0.5s,baz=129,slow=6.6,SNR=16						

IDC 05 20:51:34.2±1.0, 17°.50S×167°.82E, h0km, mb4.0/13, mb1 4.2/13, mb1mx4.1/22, mbtmp4.0/13, Error ellipse: s-maj=31.9km s-min=20.7km az=133.0
NEIC 05 20:51:35.0±0.6, 17°.59S×167°.91E, h10km, mb4.6/8, Error ellipse: s-maj=17.1km s-min=10.6km az=111.0
ISCJB 05 20:51:36.2±0.6, 17°.60S±0°.07×167°.8E±0°.1, h27km, mb4.4/19, Error ellipse: s-maj=15.3km s-min=8.8km az=17.0
ISC 05 20:51:38.1±0.7, 17°.56S±0°.09×167°.8E±0°.1, h27km, n47, σ1s.19/43, mb4.4/18, 2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.66	195	Sn	Sn	20 53 39.2	-0.8
DZM	Mont Dzumac	4.66	195	Sn	Sn	20 53 39.2	-0.8
	11nm,0.3s,baz=289,slow=23,SNR=8.3						
EIDS	Eidsvold	17.36	241	P	Pn	20 55 38.6	0.0
	7.6nm,1.1s						
CTA	Charters Tower	20.53	260	P	Pn	20 56 16.7	-0.2
CTA	Charters Tower	20.53	260	P	Pn	20 56 16.7	-0.2
	2.7nm,0.8s,baz=76,slow=12,SNR=3.1						
CTAO	Charters Tower	20.53	260	eP	Pn	20 56 16.2	-0.6
	20nm,1.3s						
STKA	Stephens Creek	27.63	234	P	P	20 57 24.1	+0.5
STKA	Stephens Creek	27.63	234	P	P	20 57 24.1	+0.5
	2.1nm,0.7s,baz=66,slow=8.8,SNR=5.7						
WRA	Warramunga Arr	31.73	260	P	P	20 57 59.5	-0.5
WRA	Warramunga Arr	31.73	260	P	P	20 57 59.5	-0.5
	1.1nm,0.9s,baz=90,slow=8.6,SNR=7.3						
AS31	Alice Springs	32.23	253	eP	P	20 58 03.9	-0.6
ASAR	Alice Springs	32.23	253	P	P	20 58 04.2	-0.2
ASAR	Alice Springs	32.23	253	P	P	20 58 04.2	-0.2
	3.1nm,0.9s,baz=81,slow=8.8,SNR=12						
FITZ	Fitzroy Crossi	40.06	263	P	P	20 59 11.2	-0.1
FITZ	Fitzroy Crossi	40.06	263	P	P	20 59 11.2	-0.1
	2.3nm,0.7s,baz=101,slow=6.4,SNR=4.9						
KSM	Kuching	59.66	282	P	P	21 01 38.2	-2.3
	3.4nm,0.8s						
VNDA	Vanda	60.06	181	P	P	21 01 43.4	+1.1
VNDA	Vanda	60.06	181	P	P	21 01 43.4	+1.1
	0.8nm,0.9s,baz=5.5,slow=6.4,SNR=3.5						
SBA	Scott Base	60.32	180	P	P	21 01 45.0	+1.0
	3.6nm,1.0s						
MJAR	Matsushiro Arr	60.63	333	P	P	21 01 45.7	-1.0
MJAR	Matsushiro Arr	60.63	333	P	P	21 01 45.7	-1.0
	2.6nm,0.8s,baz=158,slow=7.9,SNR=7.2						
MAJO	Matsushiro	60.64	333	P	P	21 01 44.1	-2.6
	9.2nm,1.1s						
ASAJ	Asahikawa	65.56	340	P	P	21 02 19.6	+0.4
ASAJ	Asahikawa	65.56	340	P	P	21 02 19.6	+0.4
	5.2nm,0.9s,baz=209,slow=13,SNR=4.2						
QSPA	South Pole Qui	72.48	180	eP	P	21 02 58.5	-3.7
	7.1nm,0.9s						
CMAR	Chiang Mai Arr	76.56	294	P	P	21 03 28.6	+2.1
CMAR	Chiang Mai Arr	76.56	294	P	P	21 03 28.6	+2.1
	0.6nm,0.8s,baz=132,slow=4.9,SNR=4.6						
ULN	Ulaanbaatar	84.70	324	eP	P	21 04 10.8	+1.0
	7.2nm,0.8s						
SONM	Songino Array	85.06	324	P	P	21 04 13.2	+1.7
SONM	Songino Array	85.06	324	P	P	21 04 13.2	+1.7
	2.4nm,1.1s,baz=121,slow=5.6,SNR=4.7						
NVAR	Mina Array Bea	88.74	49	P	P	21 04 30.5	+0.8
NVAR	Mina Array Bea	88.74	49	P	P	21 04 30.5	+0.8
	0.1nm,0.3s,baz=235,slow=9.4,SNR=2.8						
ILAR	Eielson Array	89.06	18	P	P	21 04 28.7	-1.6
ILAR	Eielson Array	89.06	18	P	P	21 04 28.7	-1.6
	0.4nm,0.7s,baz=238,slow=5.2,SNR=4.6						
SNAA	Sanae	90.76	183	eP	P	21 04 38.4	0.0
	2.8nm,0.9s						
PV01	Paradox Valley	95.81	52	eP	P	21 04 59.6	-2.9
	3μm,0.9s						
MKAR	Makanchi Array	99.58	316	P	Pdif	21 05 19.4	+0.4
MKAR	Makanchi Array	99.58	316	P	Pdif	21 05 19.4	+0.4
	0.2nm,0.6s,baz=100,slow=5.1,SNR=3.1						
ARCES	ARCESS Array B	123.10	345	PKP	PKPdf	21 10 31.8	+0.2
ARCES	ARCESS Array B	123.10	345	PKP	PKPdf	21 10 31.8	+0.2
	1.9nm,0.7s,baz=83,slow=3.8,SNR=7.9						
GERES	GERESS Array B	142.37	332	PKP	PKPdf	21 11 09.6	+1.2
GERES	GERESS Array B	142.37	332	PKP	PKPdf	21 11 09.6	+1.2
	0.6nm,0.9s,baz=51,slow=3.1,SNR=4.1						
BFO	Black Forest	145.03	336	eP	PKPdf	21 11 13.1	+0.1
FETA	Feichten	145.06	332	⇓ipPKPbc	PKPdf	21 11 13.7	+0.5
	16nm,0.9s						
DAVA	Damuels	145.23	333	⇓ipPKPbc	PKPdf	21 11 14.6	+1.1
	21nm,1.0s						
TORD	Torodi Ar. Bea	165.88	254	PKP	PKPdf	21 11 41.2	-0.3
TORD	Torodi Ar. Bea	165.88	254	PKP	PKPdf	21 11 41.2	-0.3
	1.3nm,0.9s,baz=94,slow=0.3,SNR=5.6						

ISCJB 05 20:51:39.8±0.5, 34°.08N±0°.03×135°.74E±0°.03, h52km±6km, mb3.6/1, Error ellipse: s-maj=5.5km s-min=4.2km az=173.6
JMA 05 20:51:40.4, 34°.07N×135°.74E, h48km±1km, M3.3 Broadband fault plane solution: P waves. NP1: φs37.00000°, δ73.00000°, λ-160.00000°. NP2: φs301.00000°, δ70.00000°, λ-18.00000°. Principal axes: T Plg2.0000°, Azm169.0000°; N Plg64.0000°, Azm75.0000°; P Plg26.0000°, Azm260.0000°;
JMA Felt I J1.
IDC 05 20:51:40.4±1.2, 34°.01N×135°.78E, h91km±21km, mb3.0/1, mb1 3.1/5, mb1mx2.9/30, mbtmp3.2/5 Error ellipse: s-maj=26.5km s-min=9.7km az=8.0
ISC 05 20:51:40.9±1.2, 34°.08N±0°.04×135°.76E±0°.03, h43km±9km, n19, σ0s.74/33, 6C-4D, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JWY	Kouya	0.20	316	⇑P	Pn	20 51 48.7	+0.2
JWY				S	Sn	20 51 54.2	+0.3
JWM	Minabe	0.40	236	⇓P	Pn	20 51 50.0	-0.5
JWM				S	Sn	20 51 56.6	-0.7
JKN2	Miekihoku	0.46	69	⇓P	Pn	20 51 51.1	-0.1
JKN2				S	Sn	20 51 58.5	0.0
JWZ	Kozaga	0.55	184	⇑P	Pn	20 51 52.1	-0.3
JWZ				eS	Sn	20 52 00.9	+0.4
JHE	Heguri	0.58	354	⇑P	Pn	20 51 52.5	-0.3
JHE				S	Sn	20 52 01.2	-0.1
JAJ2	Tsuna	0.80	296	⇑P	Pn	20 51 55.7	0.0
JAJ2				S	Sn	20 52 06.5	0.0
TSUJ	Tsu 2	0.84	41	P	Pn	20 51 55.9	-0.3
TSUJ				eS	Sn	20 52 06.5	-0.9
JIE	Ise	0.85	68	⇓P	Pn	20 51 56.4	0.0
JIE				eS	Sn	20 52 08.0	+0.3
TTO1	TONANKAI O.B.S	0.97	118	P	Pn	20 51 57.6	-0.2
TTO2	TONANKAI O.B.S	1.11	108	P	Pn	20 52 00.0	+0.3
JAI	Aioi	1.12	256	⇓P	Pn	20 51 59.8	-0.3
JAI				S	Sn	20 52 13.4	-1.0
JKS	Kasai	1.18	320	⇑P	Pn	20 52 00.6	-0.3
JKS				S	Sn	20 52 15.2	-0.5
JWT	Wachi	1.24	346	⇑P	Pn	20 52 01.5	-0.2
JWT				eS	Sn	20 52 16.9	-0.3
MAT	Matsushiro	3.17	38	P	Pn	20 52 29.6	+1.3
MAT				S	Sn	20 53 02.8	-2.1
MJAR	Matsushiro Arr	3.17	39	P	Pn	20 52 29.3	+0.9
	baz=220,slow=18,SNR=1.2						
JHJ	Hachijo jima 2	3.50	105	P	Pn	20 52 32.8	+0.1
	4.6nm,0.3s,baz=254,slow=19,SNR=2.9						
JHJ				S	Sn	20 53 12.8	0.0
	13nm,0.3s,baz=77,slow=17,SNR=5.1						
JNU	Nakatsue	4.18	258	P	Pn	20 52 42.6	+0.4
	5.1nm,0.3s,baz=57,slow=4.9,SNR=56						
JNU				S	Sn	20 53 30.3	+0.5
	1.1nm,0.3s,baz=241,slow=10.0,SNR=2.3						
KSRS	Korea Array	7.20	300	P	Pn	20 53 25.7	+2.1
	0.2nm,0.3s,baz=117,slow=14,SNR=3.0						
KSRS				S	Sn	20 54 43.6	-0.4
	0.6nm,0.3s,baz=119,slow=23,SNR=8.6						
ASAR	Alice Springs	57.45	182	P	P	21 01 19.2	-6.2
	0.2nm,0.3s,baz=12,slow=8.3,SNR=5.4						

NEIC 05 20:58:20.5±0.3, 17°.44S×167°.84E, h10km, mb4.9/19, Error ellipse: s-maj=9.3km s-min=8.4km az=102.0
IDC 05 20:58:20.0±0.6, 17°.43S×167°.66E, h0km, mb4.4/21, mb1 4.6/23, mb1mx4.5/27, mbtmp4.5/23, ML4.3/2, MS4.5/9, Ms1 4.5/9, ms1mx3.9/39, Error ellipse: s-maj=15.9km s-min=13.7km az=136.0
ISCJB 05 20:58:22.6±1.3, 17°.53S±0°.05×167°.69E±0°.06, h33km±11km, mb4.7/49, MS4.6/15, Error ellipse: s-maj=10.3km s-min=8.3km az=11.1
MOS 05 20:58:23.4±1.4, 17°.45S×167°.65E, h33km, mb4.8/28, MS4.4/6, Error ellipse: s-maj=11.4km s-min=9.1km az=27.0
BJI 05 20:58:25.9, 17°.20S×167°.75E, h52km, mB5.1/19, mb4.6/27, Ms5.1/15, Ms7 4.8/15
NOU 05 20:58:25.8±1.3, 17°.46S×167°.61E, h30km, MD4.0, ML4.2, MS1.9
GCMT 05 20:58:26.9±0.3, 17°.45S×167°.61E, h19km, MW5.1, Moment Tensor Solution. s56,c68; s70,c105; Moment tensor: Scale 10^{16}Nm; Mrr4.97±.22; Mθθ-0.13±.16; Mφφ-4.84±.17; Mrθ1.66±.37; Mθφ0.66±.13; Mφr-4.04±.36; Best double couple: M0 6.60000×10^{16} NP1:φs1.00000°, δ25.00000°, λ107.00000°. NP2:φs163.00000°, δ66.00000°, λ82.00000°. Principal axes: T 6.6900, Plg68.0000°, Azm58.0000°; N -0.1700, Plg7.0000°, Azm166.0000°; P -6.5100, Plg20.0000°, Azm259.0000°; Data Used: II IU IC G CN.
ISC 05 20:58:26.9±0.4, 17°.51S±0°.04×167°.62E±0°.06, h50km±2km, h50km:pP-P, n161, σ1s.82/195, mb4.7/47, MS4.6/15, 7C-2D, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.67	193	eP	Pn	20 59 33.4	-1.6
DZM				eS	Sn	21 00 23.6	-4.3
DZM				AMP		21 00 31.0	
	comp=Z,778nm,4.2s						
DZM	Mont Dzumac	4.67	193	Pn	Pn	20 59 32.3	-2.7
DZM				Sn	Sn	21 00 24.3	-3.6
DZM	Mont Dzumac	4.67	193	Pn	Pn	20 59 32.3	-2.7
	comp=Z,10nm,0.3s,baz=14,slow=17,SNR=34						
DZM				Sn	Sn	21 00 24.3	-3.6
	comp=Z,15nm,0.3s,baz=292,slow=20,SNR=9.0						
DZM				LR	LR	21 01 05.0	
	comp=Z,1μm,21.8s,baz=19,slow=35						
BAYA	Yate Dam	4.67	188	eP	Pn	20 59 33.8	-1.1
BAYA				eS	Sn	21 00 24.7	-3.2
NOUC	Port Laguerre	4.73	195	eP	Pn	20 59 35.5	-0.3
NOUC				eS	Sn	21 00 25.6	-3.7
NOUC				AMP		21 00 47.5	
	comp=Z,34nm,11.4s						
MVNO	Noumea	4.86	193	eP	Pn	20 59 35.8	-1.7
MVNO				eS	Sn	21 00 28.2	-4.3
MSVF	Nonsavu	9.95	93	eP	Pn	21 00 45.7	-1.7
MSVF				e		21 02 45.6	
MSVF				pmax	pmax		
	comp=Z,74nm,1.3s						
MSVF	Nonsavu	9.95	93	ePn	Pn	21 00 45.7	-1.7
	comp=Z,74nm,1.3s						
MSVF				eSn	Sn	21 02 45.6	+7.8
HNR	Honiara	10.96	316	Pn	Pn	21 00 58.5	-2.5
HNR				eSn	Sn	21 02 57.2	-5.0
HNR	Honiara	10.96	316	Pn	Pn	21 00 58.5	-2.5
	comp=Z,2.8nm,0.3s,baz=180,slow=13,SNR=3.6						
HNR				Sn	Sn	21 02 57.3	-5.0
	comp=Z,7.0nm,0.3s,baz=162,slow=20,SNR=2.3						
HNR				LR	LR	21 04 51.8	
	comp=Z,2μm,18.5s,baz=144,slow=36						
EIDS	Eidsvold	17.25	240	ePn	P	21 02 25.9	+0.6
	comp=Z,49nm,1.4s						
ARMA	Armidale	19.43	226	eP	Pn	21 02 53.5	+2.8
	comp=Z,42nm,1.2s						
AFI	Afiamalu	20.16	83	LR	LR	21 08 47.8	
	comp=Z,1μm,21.1s,baz=265,slow=31						
CTA	Charters Tower	20.38	259	P	P	21 03 00.1	+0.4
CTA				S	Sn	21 06 48.1	-3.0
CTA	Charters Tower	20.38	259	P	P	21 03 00.1	+0.4
	comp=Z,20nm,0.8s,baz=88,slow=12,SNR=20						
CTA				S	Sn	21 06 48.1	-3.0
	comp=Z,2.3nm,0.9s,baz=104,slow=19,SNR=2.0						
CTA				LR	LR	21 09 56.9	
	comp=Z,1μm,19.6s,baz=176,slow=34						
CTAO	Charters Tower	20.38	259	eP	P	21 03 00.7	+1.0
CTAO				pmax	pmax		
	comp=Z,23nm,0.8s						
CTAO	Charters Tower	20.38	259	eP	P	21 03 00.7	+1.0
	comp=Z,23nm,0.8s						
PMG	Port Moresby	21.45	289	P	P	21 03 11.1	0.0
PMG	Port Moresby	21.45	289	P	P	21 03 11.1	0.0
	comp=Z,16nm,1.0s,baz=119,slow=15,SNR=2.4						
PMG				LR	LR	21 10 27.0	
	comp=Z,1μm,19.6s,baz=103,slow=34						
URZ	Urewera	22.28	160	P	P	21 03 20.1	+0.2
URZ	Urewera	22.28	160	P	P	21 03 20.1	+0.2
	comp=Z,12nm,0.7s,baz=324,slow=8.7,SNR=6.9						
COEN	Coen	23.78	275	eP	P	21 03 36.3	+1.1
	comp=Z,273nm,1.4s						
STKA	Stephens Creek	27.54	234	eP	P	21 04 09.7	+0.7
	comp=Z,5.1nm,0.9s						
STKA	Stephens Creek	27.54	234	P	P	21 04 10.1	+1.1
	comp=Z,13nm,0.7s,baz=56,slow=7.8,SNR=40						
STKA				LR	LR	21 15 00.9	
	comp=Z,1μm,18.1s,baz=55,slow=36						
WRAB	Tennant Creek	31.57	260	eP	P	21 04 44.4	-0.5
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WRAB	Tennant Creek	31.57	260	eP	P	21 04 44.4	-0.5
	comp=Z,8.1nm,0.9s						
WRA	Warramunga Arr	31.58	260	P	P	21 04 44.4	-0.7
WRA				PcP	PcP	21 07 38.5	+1.8
WRA	Warramunga Arr	31.58	260	P	P	21 04 44.4	-0.7
	comp=Z,5.3nm,0.9s,baz=89,slow=8.7,SNR=33						
WRA				PcP	PcP	21 07 38.5	+1.8
	comp=Z,1.1nm,0.6s,baz=88,slow=3.0,SNR=6.6						
WRA				LR	LR	21 16 25.0	
	comp=Z,727nm,21.0s,baz=80,slow=34						
AS31	Alice Springs	32.09	253	eP	P	21 04 49.0	-0.6
ASAR	Alice Springs	32.09	253	P	P	21 04 49.0	-0.6
ASAR	Alice Springs	32.09	253	P	P	21 04 49.0	-0.6
	comp=Z,16nm,0.8s,baz=79,slow=8.9,SNR=118						
ASAR				LR	LR	21 17 38.0	
	comp=Z,2μm,19.2s,baz=176,slow=36						
FITZ	Fitzroy Crossi	39.91	263	eP	P	21 05 56.1	-0.2
	comp=Z,35nm,1.0s						
FITZ	Fitzroy Crossi	39.91	263	P	P	21 05 56.9	+0.5
	comp=Z,28nm,0.9s,baz=95,slow=9.0,SNR=31						
FITZ				LR	LR	21 22 03.4	
	comp=Z,1μm,19.9s,baz=8.8,slow=36						
MBWA	Marble Bar	45.20	257	eP	P	21 06 40.3	+0.9
	comp=Z,41nm,1.1s						
NWAO	Narrogin (SRO)	47.66	241	P	P	21 06 59.7	+1.2
KAPI	Kappang	48.41	279	P	P	21 07 05.2	+0.6
KAPI	Kappang	48.41	279	P	P	21 07 05.2	+0.6
	comp=Z,8.7nm,0.8s,baz=100,slow=12,SNR=4.6						
TGY	Tagaytay City	55.75	301	P	P	21 08 01.8	+2.7
TGY	Tagaytay City	55.75	301	P	P	21 08 01.8	+2.7
	comp=Z,67nm,0.4s,baz=119,slow=10,SNR=2.5						
KSM	Kuching	59.49	282	P	P	21 08 25.4	0.0
	comp=Z,9.1nm,0.9s						
VNDA	Vanda	60.10	181	eP	P	21 08 28.3	-0.3
	comp=Z,7.5nm,1.3s						
VNDA	Vanda	60.10	181	P	P	21 08 28.7	+0.1
	comp=Z,1.8nm,0.9s,baz=14,slow=7.3,SNR=7.6						
SBA	Scott Base	60.37	180	eP	P	21 08 30.7	+0.3
SBA				e		21 08 40.4	
SBA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SBA	Scott Base	60.37	180	eP	P	21 08 30.7	+0.3
	comp=Z,8.6nm,1.0s						
SBA				e		21 08 40.4	
MJAR	Matsushiro Arr	60.52	333	P	P	21 08 30.7	-1.2
MJAR	Matsushiro Arr	60.52	333	P	P	21 08 30.7	-1.2
	comp=Z,6.2nm,0.9s,baz=162,slow=6.8,SNR=13						
MAJO	Matsushiro	60.52	333	eP	P	21 08 30.6	-1.4
MAJO				pmax	pmax		
	comp=Z,75nm,1.8s						
MAJO	Matsushiro	60.52	333	eP	P	21 08 30.6	-1.4
	comp=Z,75nm,1.8s						
MAT	Matsushiro	60.52	333	P	P	21 08 30.5	-1.5
MAT				S	S	21 16 41.4	-2.7
CASY	Casey	61.10	203	P	P	21 08 36.3	+0.8
YHNB	Yeheng	61.55	312	P	P	21 08 39.4	0.0
	comp=Z,26nm,1.2s						
ASAJ	Asahikawa	65.46	340	P	P	21 09 04.5	-0.1
ASAJ	Asahikawa	65.46	340	P	P	21 09 04.5	-0.1
	comp=Z,6.5nm,0.8s,baz=205,slow=11,SNR=4.6						
QIZ	Qiongzhong	67.39	300	P	P	21 09 17.8	+0.3
QIZ				sP	sP	21 09 36.9	-0.4
QIZ				S	S	21 18 10.2	+0.3
QIZ				sS	sS	21 18 32.3	-1.2
QIZ				pmax	pmax		
	comp=Z,6.0nm,2.3s						
QIZ				pmax	pmax		
	comp=Z,98nm,6.3s						
NJ2	Nanjing	67.90	316	eP	P	21 09 19.2	-1.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS	Yuzh-Sakhalins	67.96	342	eP	P	21 09 22.1	+1.7
USRK	Ussuriysk Arra	69.50	333	P	P	21 09 30.1	+0.1
	comp=Z,1.4nm,0.8s,baz=134,slow=5.6,SNR=2.7						
PETK	Petropavlovsk-	70.85	354	P	P	21 09 37.6	-0.6
PETK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
PETK	Petropavlovsk-	70.85	354	P	P	21 09 37.6	-0.6
PETK	Petropavlovsk-	70.85	354	P	P	21 09 37.6	-0.6
	comp=Z,1.0nm,0.4s,baz=171,slow=13,SNR=3.4						
HABR	Khabarovsk	71.82	338	eP	P	21 09 42.9	-1.2
HABR				*PP	pP	21 09 57.0	-1.4
HABR				e*SP	sP	21 10 02.8	-1.2
HABR				e		21 12 22.8	
HABR				ePPP	PPP	21 14 06.5	
HABR				eS	S	21 19 00.5	-0.3
HABR				e*SS	SKiKP	21 19 25.0	+7.0
HABR				SS	SS	21 23 38.7	+0.4
HABR				pmax	pmax		
	comp=Z,35nm,2.2s						
HABR				pmax	pmax		
	comp=E,26nm,1.6s						
HABR				pmax	pmax		
	comp=N,28nm,2.5s						
HABR				MLR	MLR		
	comp=Z,252nm,18.0s						
CN2	Changchun	72.19	329	eP	P	21 09 46.9	+0.4
CN2				eS	S	21 19 04.5	-0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
QSPA	South Pole Qui	72.53	180	eP	P	21 09 47.4	-1.0
	comp=Z,25nm,1.0s						
ENH	Enshi	73.39	310	P	P	21 09 52.7	-1.3
	comp=Z,10nm,0.9s						
GYA	Guiyang	73.57	305	eP	P	21 09 55.8	+0.6
GYA				pP	PcP	21 10 11.2	+0.2
GYA				sP	sP	21 10 17.6	+2.5
GYA				PP	PP	21 12 43.2	+3.2
GYA				S	S	21 19 22.0	0.0
GYA				SKS	SKSac	21 19 52.8	-5.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				LR	LR		
	comp=N,460nm,18.0s						
GYA				LR	LR		
	comp=E,340nm,19.3s						
GYA				LR	LR		
	comp=Z,480nm,18.0s						
KLR	Kul'dur	73.67	336	eP	P	21 09 51.2	-3.9
BJI	Beijing	74.63	321	P	P	21 10 00.6	-0.3
BJI				S	S	21 19 33.8	+0.8
BJI				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,85nm,3.6s						
BJI				LR	LR		
	comp=N,180nm,18.6s						
BJI				LR	LR		
	comp=E,130nm,10.8s						
BJI				LR	LR		
	comp=Z,55nm,18.9s						
CMAR	Chiang Mai Arr	76.39	295	P	P	21 10 13.1	+1.6
CMAR	Chiang Mai Arr	76.39	295	P	P	21 10 13.1	+1.6
	comp=Z,4.6nm,0.9s,baz=133,slow=4.9,SNR=17						
CHTO	Chiang Mai	76.53	295	eP	P	21 10 13.3	+1.0
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CHTO	Chiang Mai	76.53	295	eP	P	21 10 13.3	+1.0
	comp=Z,6.9nm,1.0s						
HHC	Hu-ho-hao-te	77.91	320	eP	P	21 10 21.1	+1.4
HHC				pP	pP	21 10 37.8	+3.7
HHC				sP	sP	21 10 44.8	+5.1
HHC				S	S	21 20 10.2	+0.9
HHC				SKS	SKSac	21 20 26.0	-3.6
HHC				pmax	pmax		

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,5.2s						
HHC				LR	LR		
	comp=N,370nm,16.1s						
HHC				LR	LR		
	comp=E,300nm,17.9s						
HHC				LR	LR		
	comp=Z,470nm,16.5s						
CD2	**Chengdu**	**77.97**	**308**	*e*P	**P**	**21 10 20.6**	**+0.5**
CD2				PP	**PP**	**21 13 19.5**	**+2.6**
CD2				S	**S**	**21 20 09.3**	**-0.9**
CD2				sS	**SKKSac**	**21 20 32.5**	**+1.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				LR	LR		
	comp=N,120nm,10.2s						
CD2				LR	LR		
	comp=Z,180nm,12.4s						
MAW	**Mawson**	**79.45**	**202**	P	**P**	**21 10 29.9**	**+2.3**
MAW	**Mawson**	**79.45**	**202**	P	**P**	**21 10 29.9**	**+2.3**
	comp=Z,2.1nm,0.8s,baz=68,slow=7.3,SNR=6.0						
LZH	**Lanzhou**	**80.43**	**313**	*e*P	**P**	**21 10 36.2**	**+2.6**
LZH				pP	pP	21 10 53.1	+5.0
LZH				*e*S	**S**	**21 20 39.0**	**+2.6**
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.8s						
LZH				LR	LR		
	comp=N,520nm,15.8s						
LZH				LR	LR		
	comp=E,380nm,13.1s						
LZH				LR	LR		
	comp=Z,680nm,16.7s						
SEY	**Seymchan**	**81.07**	**353**⇑	*e*P	**P**	**21 10 36.2**	**0.0**
ULN	**Ulaanbaatar**	**84.57**	**324**	*e*P	**P**	**21 10 54.7**	**-0.2**
	comp=Z,16nm,1.0s						
YAK	**Yakutsk**	**84.77**	**343**	*e*P	**P**	**21 10 54.4**	**-1.0**
YAK				*e*		21 11 05.3	
YAK				pmax	pmax		
	comp=Z,15nm,1.2s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.8s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
GTA	**Gaotai**	**84.82**	**314**	*e*P	**P**	**21 10 56.7**	**+0.3**
GTA				pP	**pP**	**21 11 13.1**	**+2.2**
GTA				sP	**sP**	**21 11 20.3**	**+3.8**
GTA				S	**S**	**21 21 19.7**	**-1.3**
GTA				sS	**sS**	**21 21 46.8**	**+1.3**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,100nm,5.7s						
GTA				LR	LR		
	comp=N,360nm,14.0s						
GTA				LR	LR		
	comp=E,270nm,17.3s						
GTA				LR	LR		
	comp=Z,390nm,15.7s						
SONM	**Songino Array**	**84.92**	**324**	P	**P**	**21 10 56.1**	**-0.5**
SONM	**Songino Array**	**84.92**	**324**	P	**P**	**21 10 56.1**	**-0.5**
	comp=Z,2.4nm,0.9s,baz=134,slow=4.3,SNR=8.3						
BILL	**Bilibino**	**85.31**	**359**⇓	*e*P	**P**	**21 10 57.7**	**-0.3**
BILL				*e*		21 11 09.7	
BILL				*e*		21 14 15.3	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.1s						
SYO	**Syowa Base**	**86.15**	**197**⇑	*e*P	**P**	**21 11 01.5**	**-0.8**
SYO	**Syowa Base**	**86.15**	**197**⇓	*e*PcP	**P**	**21 11 04.0**	**+1.7**
CMB	**Columbia Colle**	**87.17**	**49**	P	P	21 11 03.7	-4.2
CMB				pmax	pmax		
	comp=Z,4.0nm,1.3s						
CMB	**Columbia Colle**	**87.17**	**49**	P	P	21 11 03.7	-4.2
	comp=Z,3.8nm,1.3s						
LSA	**Lhasa**	**87.31**	**302**	P	**P**	**21 11 10.4**	**+1.1**
LSA	**Lhasa**	**87.31**	**302**	P	**P**	**21 11 10.4**	**+1.1**
ZAK	**Zakamensk**	**88.00**	**325**	*e*P	P	21 11 21.4	+10
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
NVAR	**Mina Array Bea**	**88.83**	**49**	P	**P**	**21 11 14.7**	**-1.3**
NVAR	**Mina Array Bea**	**88.83**	**49**	P	**P**	**21 11 14.7**	**-1.3**
	comp=Z,0.6nm,0.9s,baz=253,slow=6.4,SNR=4.7						
ILAR	**Eielson Array**	**89.06**	**18**	P	**P**	**21 11 16.9**	**+0.7**
ILAR	**Eielson Array**	**89.06**	**18**	P	**P**	**21 11 16.9**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=243,slow=4.9,SNR=5.6						
SNAA	**Sanae**	**90.80**	**183**	*e*P	**P**	**21 11 22.9**	**-1.6**
	comp=Z,6.4nm,1.0s						
TIXI	**Tiksi**	**92.75**	**349**⇑	*e*P	**P**	**21 11 31.7**	**-1.4**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
WMQ	**Urumqi**	**94.90**	**314**	*e*P	**P**	**21 11 43.1**	**-0.7**
WMQ				pP	**pP**	**21 11 57.5**	**-1.0**
WMQ				sP	**sP**	**21 12 03.0**	**-1.0**
WMQ				SKS	**SKSac**	**21 22 14.0**	**-1.3**
WMQ				*e*S	**S**	**21 22 51.0**	**-3.2**
WMQ				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,89nm,3.5s						
WMQ				LR	LR		
	comp=N,360nm,17.0s						
WMQ				LR	LR		
	comp=E,500nm,18.6s						
WMQ				LR	LR		
	comp=Z,340nm,26.0s						
MKAR	**Makanchi Array**	**99.43**	**316**	P	**Pdif**	**21 12 05.8**	**+1.6**
MKAR	**Makanchi Array**	**99.43**	**316**	P	**Pdif**	**21 12 05.8**	**+1.6**
MKAR	**Makanchi Array**	**99.43**	**316**	P	**Pdif**	**21 12 05.8**	**+1.6**
	comp=Z,0.1nm,0.5s,baz=94,slow=6.1,SNR=3.7						
ZALV	**Zalesovo Beam**	**99.82**	**323**	P	**Pdif**	**21 12 05.3**	**-0.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**99.82**	**323**	P	**Pdif**	**21 12 05.3**	**-0.3**
ZALV	**Zalesovo Beam**	**99.82**	**323**	P	**Pdif**	**21 12 05.3**	**-0.3**
	comp=Z,0.8nm,0.7s,baz=94,slow=4.5,SNR=4.5						
YKA	**Yellowknife Ar**	**99.85**	**27**	P	**Pdif**	**21 12 05.4**	**-0.2**
YKA	**Yellowknife Ar**	**99.85**	**27**	P	**Pdif**	**21 12 05.4**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=245,slow=4.0,SNR=3.2						
KURK	**Kurchatov**	**102.72**	**319**	PKiKP	**PKiKP**	**21 16 43.7**	**+4.6**
KURBB	**Kurchatov Arra**	**102.76**	**319**	PKiKP	**PKiKP**	**21 16 43.7**	**+4.5**
	comp=Z,0.1nm,0.4s,baz=112,slow=2.5,SNR=4.0						
ARCES	**ARCESS Array B**	**123.01**	**345**	PKP	**PKPdf**	**21 17 15.6**	**-1.5**
ARCES	**ARCESS Array B**	**123.01**	**345**	PKP	**PKPdf**	**21 17 15.6**	**-1.5**
	comp=Z,2.9nm,0.8s,baz=56,slow=4.5,SNR=8.1						
MOS	**Moscow**	**126.40**	**327**	*e*PKIKP	PKPdf	21 17 38.8	+15
KIV	**Kislovodsk**	**126.97**	**312**	*e*PKIKP	**PKPdf**	**21 17 28.3**	**+2.7**
KIV				*e*PS	**PS**	**21 29 26.8**	**-2.7**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN	**Obninsk**	**127.21**	**327**	*e*PKIKP	**PKPdf**	**21 17 26.0**	**+0.5**
OBN				*e*PS	**PS**	**21 29 29.1**	**-1.6**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ANN	**Anapa**	**130.42**	**314**	*i* PKIKP	**PKPdf**	**21 17 32.5**	**+0.6**
ANN				pmax	pmax		
	comp=Z,21nm,1.1s						
BRTR	**Keskin Array B**	**134.54**	**309**	PKP	**PKPdf**	**21 17 41.2**	**+1.1**
BRTR	**Keskin Array B**	**134.54**	**309**	PKP	**PKPdf**	**21 17 41.3**	**+1.1**
	comp=Z,0.4nm,0.8s,baz=92,slow=4.3,SNR=3.0						
KOLS	**Kolonicke sedl**	**137.94**	**326**	*e*PKIKP	**PKPdf**	**21 17 47.7**	**+1.7**
KOLS	**Kolonicke sedl**	**137.94**	**326**	*e*PKP	**PKPdf**	**21 17 47.7**	**+1.7**
VYHS	**Vyhne**	**140.01**	**328**	*e*	PKPdf	21 18 03.8	+14
BRG	**Berggiesshubel**	**140.65**	**334**	*e*(P)	**PKPdf**	**21 17 52.0**	**+1.2**
	comp=Z,5.1nm,1.3s						
BRG	**Berggiesshubel**	**140.65**	**334**	*e*PKIKP	**PKPdf**	**21 17 52.0**	**+1.2**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CLL	**Collm**	**140.71**	**335**	*e*PKIKP	**PKPdf**	**21 17 49.0**	**-1.9**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
CLL	**Collm**	**140.71**	**335**	*e*PKPdf	**PKPdf**	**21 17 52.0**	**+1.1**
	comp=Z,4.0nm,1.1s						
PRU	**Pruhonice**	**141.04**	**332**	*e*PKIKP	**PKPdf**	**21 17 54.9**	**+3.4**
PRU	**Pruhonice**	**141.04**	**332**	*e*PKPdf	**PKPdf**	**21 17 54.9**	**+3.4**
KHC	**Kasperske Hory**	**142.09**	**332**	*e*PKIKP	**PKPdf**	**21 17 51.0**	**-2.5**
KHC				*e*		21 17 55.3	
KHC	**Kasperske Hory**	**142.09**	**332**	*e*PKPdf	**PKPdf**	**21 17 51.0**	**-2.5**
KHC				*e*pPKP	**PKiKP**	**21 17 55.3**	**-1.2**
KHC				*e*x	x	21 18 12.7	
GERES	**GERESS Array B**	**142.25**	**332**	PKPpre	PKPpre	21 17 49.5	
GERES	**GERESS Array B**	**142.25**	**332**	PKhKP	PKPpre	21 17 49.5	
	comp=Z,0.8nm,0.9s,baz=120,slow=4.8,SNR=6.3						
MEM	**Membach**	**143.84**	**340**	PKP	PKPbc	21 17 55.3	+1.0
ABTA	**Abfaltersbach**	**144.32**	**330**⇑	*i*PKPdf	**PKPab**	**21 17 55.7**	**+0.1**
	comp=Z,18nm,1.2s						
MOTA	**Moosalm**	**144.53**	**332**⇑	*i*PKPdf	**PKPab**	**21 17 56.5**	**0.0**
	comp=Z,16nm,1.0s						
LANF	**Langenberg**	**144.59**	**337**	PKP	PKPbc	21 17 56.9	+0.2
WLF	**Walferdange**	**144.61**	**339**	PKP	**PKPab**	**21 17 56.1**	**-0.4**
DOU	**Dourbes**	**144.74**	**341**	PKP	PKPbc	21 17 57.2	+0.2
BFO	**Black Forest**	**144.92**	**336**	*e*PKIKP	**PKPab**	**21 17 55.4**	**-2.3**
BFO	**Black Forest**	**144.92**	**336**	*e*PKPdf	**PKPab**	**21 17 55.4**	**-2.3**
FETA	**Feichten**	**144.94**	**332**⇑	*i*PKPdf	**PKPab**	**21 17 57.7**	**-0.3**
	comp=Z,38nm,1.2s						
DAVA	**Damuels**	**145.11**	**333**⇑	*i*PKPdf	**PKPbc**	**21 17 58.5**	**-0.1**
	comp=Z,43nm,1.3s						
ECH	**Echery**	**145.46**	**337**	*e*PKP2	**PKPdf**	**21 17 57.2**	**-2.3**
ECH	**Echery**	**145.46**	**337**	*e*PKPdf	**PKPdf**	**21 17 57.2**	**-2.3**
ECH	**Echery**	**145.46**	**337**	PKP	**PKPdf**	**21 17 59.4**	**0.0**
VAL	**Valentia**	**145.61**	**358**	*e*P	**PKPdf**	**21 17 58.3**	**-1.2**
VAL				*e*PP	PP	21 20 00.2	-79
MOF	**Molkenrain**	**145.77**	**336**	PKP	**PKPbc**	**21 18 00.5**	**-0.1**
THEF	**They Montfort**	**145.88**	**338**	PKP	**PKPbc**	**21 18 00.9**	**+0.1**
TUE	**Stuetta**	**145.97**	**333**	*e*PKPdf	**PKPdf**	**21 18 00.5**	**-0.1**
LOMF	**Lomont**	**146.30**	**336**	PKP	**PKPbc**	**21 18 01.8**	**-0.4**
TIP	**Timpagrande**	**146.72**	**316**	*e*PKPdf	**PKPdf**	**21 18 00.7**	**-1.2**
AQU	**L'Aquila**	**146.89**	**324**	*e*PKPdf	**PKPdf**	**21 18 02.9**	**+0.8**
RCBR	**Riachuelo**	**147.18**	**133**	PKPbc	**PKPdf**	**21 18 03.9**	**+0.5**
RCBR	**Riachuelo**	**147.18**	**133**	PKPbc	**PKPdf**	**21 18 03.9**	**+0.5**
	comp=Z,7.0nm,0.8s,baz=294,slow=9.0,SNR=4.6						
CEL	**Celeste**	**147.78**	**316**	PKPdf	**PKPdf**	**21 18 02.5**	**-1.1**
BNI	**Bardonecchia**	**148.24**	**334**	*e*PKP2	**PKPbc**	**21 18 06.2**	**-1.5**
BNI	**Bardonecchia**	**148.24**	**334**	*e*PKPdf	**PKPbc**	**21 18 06.2**	**-1.5**
AGO	**Saint Agoulin**	**148.75**	**339**	PKP	**PKPbc**	**21 18 09.7**	**+0.8**
PYM	**Petit Puy Mans**	**149.06**	**339**	PKP	**PKPbc**	**21 18 09.7**	**0.0**
LBL	**Lubilhac**	**149.42**	**338**	PKP	**PKPbc**	**21 18 11.0**	**+0.4**
ESDC	**Sonseca Array**	**156.74**	**343**	PKPab	**PKPab**	**21 18 47.0**	**+0.6**
ESDC	**Sonseca Array**	**156.74**	**343**	PKPab	**PKPab**	**21 18 47.0**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=12,slow=4.0,SNR=4.3						
TOA0	**Torodi Ar. Sit**	**165.75**	**254**	*e*PKPdf	**PKPdf**	**21 18 25.7**	**-1.3**
TORD	**Torodi Ar. Bea**	**165.75**	**254**	PKP	**PKPdf**	**21 18 26.3**	**-0.7**
TORD				PKPab	**PKPab**	**21 19 27.6**	**+1.1**
TORD	**Torodi Ar. Bea**	**165.75**	**254**	PKP	**PKPdf**	**21 18 26.3**	**-0.7**
	comp=Z,2.4nm,1.0s,baz=176,slow=0.6,SNR=8.9						
TORD				PKPab	**PKPab**	**21 19 27.6**	**+1.1**
	comp=Z,0.7nm,0.8s,baz=96,slow=3.8,SNR=2.5						

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*IDC **05** 21:00:20.7±1.6, 17°.55S×167°.86E, h0^{km}, mb4.3/10, mb1 4.4/11, mb1mx4.2/22, mbtmp4.3/11, Error ellipse: s-maj=46.4km s-min=25.4km az=121.0*
*NEIC **05** 21:00:22.4±0.6, 17°.54S×167°.80E, h10^{km}, mb4.6/5, Error ellipse: s-maj=18.7km s-min=10.5km az=117.0*
*ISCJB **05** 21:00:23.4±0.9, 17°.60S±0°.07×167°.7E±0°.2, h27^{km}, mb4.3/12, Error ellipse: s-maj=25.6km s-min=8.6km az=9.8*
ISC 05 21:00:24.9±1.0**, 17°.60S**±0°.08×**167°.8E**±0°.2**, h27**^{km}**, n33, σ0**^{s}**71**/33**, mb4.3**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.63**	**196**	Pn	**Pn**	**21 01 33.4**	**+0.2**
DZM				Sn	**Sn**	**21 02 25.8**	**-0.3**
DZM	**Mont Dzumac**	**4.63**	**196**	Pn	**Pn**	**21 01 33.4**	**+0.2**
	baz=356,slow=16,SNR=1.7						
DZM				Sn	**Sn**	**21 02 25.8**	**-0.3**
	12nm,0.3s,baz=125,slow=23,SNR=8.2						
CTAO	**Charters Tower**	**20.55**	**260**	*e*P	**P**	**21 05 00.3**	**-1.3**
	20nm,1.1s						
WRA	**Warramunga Arr**	**31.75**	**260**	P	**P**	**21 06 46.8**	**-0.2**
WRA	**Warramunga Arr**	**31.75**	**260**	P	**P**	**21 06 46.8**	**-0.2**
	1.4nm,0.8s,baz=91,slow=8.3,SNR=3.1						
ASAR	**Alice Springs**	**32.25**	**253**	P	**P**	**21 06 51.4**	**0.0**
ASAR	**Alice Springs**	**32.25**	**253**	P	**P**	**21 06 51.4**	**0.0**
	3.6nm,0.8s,baz=78,slow=8.9,SNR=3.5						
FITZ	**Fitzroy Crossi**	**40.08**	**263**	*e*P	**P**	**21 07 57.8**	**-0.6**
	5.6nm,0.7s						
FITZ	**Fitzroy Crossi**	**40.08**	**263**	P	**P**	**21 07 58.3**	**-0.1**
	3.6nm,0.8s,baz=79,slow=10,SNR=2.6						
NWAO	**Narrogin (SRO)**	**47.78**	**241**	*e*P	**P**	**21 09 01.1**	**+1.1**
	32nm,1.3s						
MJAR	**Matsushiro Arr**	**60.68**	**333**	P	**P**	**21 10 32.5**	**-1.3**
MJAR	**Matsushiro Arr**	**60.68**	**333**	P	**P**	**21 10 32.5**	**-1.3**
	6.4nm,0.9s,baz=164,slow=8.0,SNR=7.6						
MAT	**Matsushiro**	**60.68**	**333**	P	**P**	**21 10 32.6**	**-1.2**
ASAJ	**Asahikawa**	**65.60**	**340**	*e*P	**P**	**21 11 06.5**	**+0.1**
	4.4nm,1.0s						
ASAJ	**Asahikawa**	**65.60**	**340**	P	**P**	**21 11 06.2**	**-0.2**
	5.8nm,0.9s,baz=139,slow=11,SNR=3.7						
USRK	**Ussuriysk Arra**	**69.66**	**333**	P	**P**	**21 11 32.8**	**+0.9**
	1.3nm,0.8s,baz=101,slow=10,SNR=3.5						
CMAR	**Chiang Mai Arr**	**76.60**	**294**	P	**P**	**21 12 14.5**	**+1.0**
CMAR	**Chiang Mai Arr**	**76.60**	**294**	P	**P**	**21 12 14.5**	**+1.0**
	2.2nm,1.0s,baz=145,slow=6.6,SNR=4.5						
ULN	**Ulaanbaatar**	**84.75**	**324**	*e*P	**P**	**21 12 57.7**	**+1.0**
	8.6nm,0.9s						
SONM	**Songino Array**	**85.10**	**324**	P	**P**	**21 12 59.4**	**+0.9**
SONM	**Songino Array**	**85.10**	**324**	P	**P**	**21 12 59.4**	**+0.9**
	4.0nm,1.0s,baz=149,slow=6.1,SNR=6.4						
ILAR	**Eielson Array**	**89.08**	**18**	P	**P**	**21 13 16.7**	**-0.5**
ILAR	**Eielson Array**	**89.08**	**18**	P	**P**	**21 13 16.7**	**-0.5**
	0.4nm,0.9s,baz=216,slow=4.1,SNR=2.8						
ZALV	**Zalesovo Beam**	**100.00**	**323**	P	**Pdif**	**21 14 07.6**	**+0.2**
ZALV	**Zalesovo Beam**	**100.00**	**323**	P	**Pdif**	**21 14 07.6**	**+0.2**
	0.5nm,0.6s,baz=104,slow=6.3,SNR=3.9						
ARCES	**ARCESS Array B**	**123.14**	**345**	PKP	**PKPdf**	**21 19 17.8**	**-0.6**
ARCES	**ARCESS Array B**	**123.14**	**345**	PKP	**PKPdf**	**21 19 17.8**	**-0.6**
	2.0nm,0.8s,baz=54,slow=1.7,SNR=4.2						
GERES	**GERESS Array B**	**142.41**	**332**	PKPpre	PKPpre	21 19 50.9	
GERES	**GERESS Array B**	**142.41**	**332**	PKhKP	PKPpre	21 19 50.9	
	0.9nm,0.8s,baz=199,slow=2.8,SNR=3.6						
BFO	**Black Forest**	**145.08**	**336**	*e*PKPbc	**PKPbc**	**21 19 59.0**	**-0.3**
ECH	**Echery**	**145.62**	**337**	*e*PKPbc	**PKPbc**	**21 20 00.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**165.90**	**254**	PKP	**PKPdf**	**21 20 28.2**	**-0.1**
TORD	**Torodi Ar. Bea**	**165.90**	**254**	PKP	**PKPdf**	**21 20 28.2**	**-0.1**
	1.7nm,0.9s,baz=50,slow=1.9,SNR=4.1						

IDC 05 21:09:54.6±0.8**, 5°.52S**×**77°.30W, h0**^{km}**, mb3.6**/5**, mb1 3.8**/7**, mb1mx3.7**/23**, mbtmp3.6**/7**, ML4.0**/2**, Error ellipse: s-maj=25.5km s-min=14.0km az=112.0, Northern Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**1.94**	**214**	Pn	Pn	21 10 29.4	0.0
	47nm,0.3s,baz=22,slow=11,SNR=56						
ATAH				Lg	Lg	21 10 55.9	
	77nm,0.3s,baz=278,slow=15,SNR=12						
NNA	**Nana**	**6.44**	**176**	Pn	Pn	21 11 33.0	+2.1
	4.1nm,0.3s,baz=328,slow=13,SNR=6.8						
NNA				Sn	Sn	21 12 45.4	+0.2
	4.7nm,0.3s,baz=70,slow=23,SNR=6.2						
LPAZ	**La Paz**	**13.97**	**141**	Pn	Pn	21 13 18.7	+3.8
	0.1nm,0.3s,baz=350,slow=9.9,SNR=2.4						
SIV	**San Ignacio**	**19.02**	**124**	P	P	21 14 18.1	-0.2
	0.2nm,0.3s,baz=247,slow=12,SNR=3.5						
NVAR	**Mina Array Bea**	**57.94**	**323**	P	P	21 19 50.4	+1.2
	0.2nm,0.4s,baz=130,slow=7.7,SNR=3.9						
YKA	**Yellowknife Ar**	**73.57**	**343**	P	P	21 21 27.5	-1.8
	0.2nm,0.6s,baz=130,slow=6.5,SNR=4.5						
SNAA	**Sanae**	**79.92**	**162**	P	P	21 22 04.2	-1.1
	0.6nm,0.8s,baz=338,slow=5.4,SNR=3.9						
TORD	**Torodi Ar. Bea**	**80.59**	**76**	P	P	21 22 10.1	+0.3
	0.7nm,0.8s,baz=275,slow=5.3,SNR=4.3						
ILAR	**Eielson Array**	**86.42**	**336**	P	P	21 22 38.9	+0.1
	0.2nm,0.5s,baz=122,slow=3.3,SNR=4.4						
ZALV	**Zalesovo Beam**	**129.57**	**14**	PKP	PKPdf	21 29 05.7	+0.1
	1.0nm,0.7s,baz=305,slow=5.1,SNR=5.3						
MKAR	**Makanchi Array**	**135.27**	**20**	PKP	PKPdf	21 29 17.4	+0.7
	0.3nm,0.7s,baz=14,slow=3.0,SNR=3.7						
WRA	**Warramunga Arr**	**139.90**	**230**	PKP	PKPdf	21 29 27.2	+1.3
	0.4nm,0.7s,baz=115,slow=2.0,SNR=3.9						

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*IDC **05** 21:16:54.2±0.4, 17°.48S×167°.78E, h0^{km}, mb4.9/29, mb1 5.0/32, mb1mx5.0/33, mbtmp4.9/32, ML4.3/3, MS5.1/27, Ms1 5.1/27, ms1mx4.9/37, Error ellipse: s-maj=12.7km s-min=10.9km az=135.0*
*ISCJB **05** 21:16:55.4±1.5, 17°.50S±0°.03×167°.67E±0°.04, h15^{km}±10^{km}, mb5.1/95, MS5.3/213, Error ellipse: s-maj=6.5km s-min=5.1km az=4.1*
*NEIC **05** 21:16:55.6±0.2, 17°.43S×167°.72E, h7^{km}, mb5.3/46, MS5.3/152, MW5.7, MW5.7, Error ellipse: s-maj=5.6km s-min=4.9km az=131.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.69; M$_{\theta\theta}$-0.28; M$_{\phi\phi}$-2.41; M$_{r\theta}$-0.13; M$_{\theta\phi}$0.18; M$_{\phi r}$-2.91; Best double couple: M$_0$3.90000×10^{17} NP1:ϕ_s351.00000°, δ21.00000°, λ81.00000°. NP2:ϕ_s181.00000°, δ69.00000°, λ93.00000°. Principal axes: T 4.0200, Plg65.0000°, Azm96.0000°; N -0.2900, Plg3.0000°, Azm359.0000°; P -3.7300, Plg24.0000°, Azm267.0000°;*
NEIC Felt [III] at Port-Vila. Also felt at Lakatoro.
*BGS **05** 21:16:56.0±3.6, 17°.43S×167°.72E, h10^{km}, MS5.4*
*NOU **05** 21:16:57.2±0.7, 17°.46S×168°.23E, h30^{km}, MD4.0, ML3.1, MS3.4*
*MOS **05** 21:16:59.2±1.4, 17°.35S×167°.59E, h33^{km}, mb5.5/44, MS5.1/41, Error ellipse: s-maj=8.6km s-min=7.1km az=44.3*
*BJI **05** 21:17:01.4, 16°.92S×167°.83E, h41^{km}, mB5.3/40, mb5.0/48, Ms5.3/55, Ms7 5.0/52*
*GCMT **05** 21:17:02.4±0.1, 17°.42S×167°.60E, h20^{km}, MW5.7, Moment Tensor Solution. s107,c204; s65,c70; Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.88±.04; M$_{\theta\theta}$0.13±.03; M$_{\phi\phi}$-3.01±.03; M$_{r\theta}$0.77±.06; M$_{\theta\phi}$0.37±.02; M$_{\phi r}$-2.24±.07; Best double couple: M$_0$3.80000×10^{17} NP1:ϕ_s2.00000°, δ27.00000°, λ104.00000°. NP2:ϕ_s166.00000°, δ64.00000°, λ83.00000°. Principal axes: T 3.7400, Plg70.0000°, Azm61.0000°; N 0.1200, Plg6.0000°, Azm169.0000°; P -3.8600, Plg19.0000°, Azm261.0000°; Data Used: II IU IC G CN. Surface waves: sta=115, comp=232, per= 50.*
*DJA **05** 21:17:02.7±2.3, 17°S±7°×16°8E±1°0, h70^{km}±27^{km}, M5.0/13, mB5.5/6, mb5.0/13, Mw(mB)5.0/6*
*NEIC **05** 21:17:17.6±0.0, 17°.22S×167°.97E, h10^{km}, Moment Tensor Solution. s139 Moment tensor: Scale 10^{17}Nm; M$_{rr}$2.49; M$_{\theta\theta}$-0.11; M$_{\phi\phi}$-2.37; M$_{r\theta}$1.57; M$_{\theta\phi}$0.40; M$_{\phi r}$-2.71; Best double couple: M$_0$4.00000×10^{17} NP1:ϕ_s3.00000°, δ21.00000°, λ116.00000°. NP2:ϕ_s155.00000°, δ71.00000°, λ80.00000°. Principal axes: T 4.1000, Plg62.0000°, Azm49.0000°; N -0.2300, Plg9.0000°, Azm157.0000°; P -3.8600, Plg25.0000°, Azm252.0000°;*
ISC 05 21:16:60.0±0.3**, 17°.54S**±0°.04×**167°.82E**±0°.04**, h34**^{km}±1^{km}**, h35**^{km}**:pP-P, n627, σ1**^{s}**47**/572**, mb5.2**/92**, MS5.3**/217**, 40C-20D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.67**	**191**	*e*P	**Pn**	**21 18 07.3**	**-0.8**
BAYA				AMP		21 19 16.6	
	comp=Z,39nm,1.4s						
DZM	**Mont Dzumac**	**4.69**	**196**	*e*Pn	**Pn**	**21 18 07.2**	**-1.2**
DZM				*e*Sn	**Sn**	**21 19 00.0**	**-1.7**
	comp=Z,1μm,1.0s						
DZM	**Mont Dzumac**	**4.69**	**196**	*e*P	**Pn**	**21 18 07.3**	**-1.2**
DZM				AMP		21 19 31.1	
	comp=Z,4μm,12.9s						
DZM	**Mont Dzumac**	**4.69**	**196**	Pn	**Pn**	**21 18 07.3**	**-1.2**
DZM				Sn	**Sn**	**21 18 59.5**	**-2.2**
DZM	**Mont Dzumac**	**4.69**	**196**	Pn	**Pn**	**21 18 07.3**	**-1.2**
	comp=Z,14nm,0.3s,baz=196,slow=20,SNR=16						
DZM				Sn	**Sn**	**21 18 59.5**	**-2.2**
	comp=Z,45nm,0.3s,baz=293,slow=23,SNR=9.1						
DZM				LR	LR	21 19 40.0	
	comp=Z,10μm,20.2s,baz=19,slow=35						
NOUC	**Port Laguerre**	**4.75**	**197**	*e*P	**Pn**	**21 18 08.8**	**-0.4**
NOUC				*e*S	**Sn**	**21 19 01.5**	**-1.7**
NOUC				AMP		21 19 21.5	
	comp=Z,123nm,2.5s						
NORM	**Noumea**	**4.83**	**195**	*e*P	**Pn**	**21 18 09.0**	**-1.2**
NORM				*e*S	**Sn**	**21 19 02.5**	**-2.5**
NORM				AMP		21 19 19.0	
	comp=Z,359nm,14.3s						
MVNO	**Noumea**	**4.88**	**195**	*e*P	**Pn**	**21 18 09.6**	**-1.3**
MVNO				*e*S	**Sn**	**21 19 03.6**	**-2.6**
MSVF	**Nonsavu**	**9.76**	**93**	Pn	Pn	21 19 24.2	+6.2
	comp=Z,1μm,1.2s,SNR=21						
MSVF	**Nonsavu**	**9.76**	**93**	*e*P	Pn	21 19 23.0	+4.9
MSVF	**Nonsavu**	**9.76**	**93**	*e*Pn	Pn	21 19 22.9	+4.9
HNR	**Honiara**	**11.11**	**315**	*e*Pn	**Pn**	**21 19 34.3**	**-2.2**
HNR				*e*Sn	Sn	21 21 31.3	-8.3
HNR				Sn	Sn	21 21 36.6	-3.1
HNR	**Honiara**	**11.11**	**315**	Pn	**Pn**	**21 19 34.3**	**-2.2**
	comp=Z,14nm,0.3s,baz=164,slow=12,SNR=8.1						
HNR				Sn	**Sn**	**21 21 36.6**	**-3.1**
	comp=Z,6.7nm,0.3s,baz=114,slow=20,SNR=2.8						
HNR				LR	LR	21 23 27.8	
	comp=Z,16μm,18.5s,baz=291,slow=36						
FUNA	**Funafuti**	**14.25**	**52**	*e*Pn	**Pn**	**21 20 20.3**	**+1.0**
EIDS	**Eidsvold**	**17.41**	**241**	*e*Pn	**Pn**	**21 21 00.1**	**-0.1**
	comp=Z,430nm,2.1s						
RAO	**Raoul Island**	**17.51**	**134**	*e*P	**P**	**21 21 04.7**	**+2.4**
	comp=Z,1μm,1.4s						
RAO	**Raoul Island**	**17.51**	**134**	LR	LR	21 26 29.4	
	comp=Z,4μm,18.7s,baz=304,slow=33						
OUZ	**Omahuta**	**18.35**	**165**	*e*Pn	**Pn**	**21 21 13.1**	**+1.4**
	comp=Z,61nm,0.9s						
TARA	**Tarawa**	**19.44**	**16**	*e*Pn	**P**	**21 21 23.3**	**-0.3**
	comp=Z,490nm,1.4s						
ARMA	**Armidale**	**19.54**	**226**	*e*Pn	**Pn**	**21 21 26.4**	**+0.1**
	comp=Z,112nm,1.3s						
AFI	**Afiamalu**	**19.97**	**82**	*e*P	**P**	**21 21 30.6**	**+1.1**
AFI	**Afiamalu**	**19.97**	**82**	P	**P**	**21 21 30.4**	**+0.8**
	comp=Z,5.8nm,0.3s,baz=269,slow=20,SNR=10						
AFI				LR	LR	21 27 22.4	
	comp=Z,10μm,21.6s,baz=255,slow=31						
CTA	**Charters Tower**	**20.57**	**260**	P	**P**	**21 21 35.6**	**-0.4**
CTA				S	**S**	**21 25 27.3**	**+3.0**
CTA	**Charters Tower**	**20.57**	**260**	P	**P**	**21 21 35.6**	**-0.4**
	comp=Z,19nm,0.9s,baz=75,slow=11,SNR=18						
CTA				S	**S**	**21 25 27.3**	**+3.0**
	comp=Z,2.2nm,0.7s,baz=66,slow=19,SNR=4.7						
CTA				LR	LR	21 28 33.0	
	comp=Z,9μm,20.3s,baz=65,slow=34						
CTAO	**Charters Tower**	**20.57**	**260**	*e*P	**P**	**21 21 34.6**	**-1.4**
CTAO				MLR	MLR		
	comp=Z,10μm,20.0s						
CTAO	**Charters Tower**	**20.57**	**260**	*e*P	**P**	**21 21 34.6**	**-1.4**
CTAO				LR	LR		
	comp=Z,10μm,20.0s						
PMG	**Port Moresby**	**21.64**	**289**	*e*P	**P**	**21 21 45.8**	**-1.7**
	comp=Z,88nm,1.1s						
PMG	**Port Moresby**	**21.64**	**289**	P	**P**	**21 21 45.3**	**-2.2**
	comp=Z,82nm,1.6s,comp=Z,2μm						
PMG	**Port Moresby**	**21.64**	**289**	P	**P**	**21 21 49.2**	**+1.7**
	comp=Z,24nm,0.9s,baz=101,slow=6.6,SNR=5.8						
PMG				LR	LR	21 29 03.0	
	comp=Z,9μm,19.2s,baz=100,slow=34						
URZ	**Urewera**	**22.19**	**160**	*e*P	**P**	**21 21 54.7**	**+1.4**
	comp=Z,166nm,1.0s						
URZ	**Urewera**	**22.19**	**160**	P	**P**	**21 21 54.6**	**+1.4**
	comp=Z,48nm,0.9s,baz=15,slow=4.1,SNR=12						
URZ				LR	LR	21 29 38.9	
	comp=Z,5μm,18.8s,baz=351,slow=34						
COEN	**Coen**	**23.98**	**275**	*e*P	**P**	**21 22 08.6**	**-2.9**
	comp=Z,973nm,1.8s						
CAN	**Canberra**	**24.37**	**220**	*e*P	**P**	**21 22 15.4**	**+0.4**
CAN				pmax	pmax		
	comp=Z,56nm,0.9s						
CAN				MLR	MLR		
	comp=Z,7μm,19.0s						
CAN	**Canberra**	**24.37**	**220**	*e*P	**P**	**21 22 15.4**	**+0.4**
	comp=Z,56nm,0.9s						
CAN				LR	LR		
	comp=Z,7μm,19.0s						
SNZO	**South Karori**	**24.42**	**167**	PFAKE		21 22 30.0	+15
SNZO				LR	LR		
	comp=Z,6μm,19.0s						
KHZ	**Kahutara**	**25.27**	**170**	*e*P	**P**	**21 22 23.6**	**+0.6**
	comp=Z,84nm,1.0s						
RPZ	**Rata Peaks**	**26.24**	**175**	*e*P	**P**	**21 22 33.9**	**+2.1**
RPZ	**Rata Peaks**	**26.24**	**175**	P	P	21 22 39.4	+7.6
	comp=Z,23nm,0.8s,baz=310,slow=7.2,SNR=4.7						
STKA	**Stephens Creek**	**27.68**	**234**	*e*P	**P**	**21 22 44.2**	**-0.6**
	comp=Z,12nm,0.9s						
STKA				PcP	**PcP**	**21 26 00.8**	**-0.7**
STKA	**Stephens Creek**	**27.68**	**234**	P	**P**	**21 22 43.8**	**-1.1**
	comp=Z,37nm,0.8s,baz=60,slow=7.7,SNR=14						
STKA				PcP	**PcP**	**21 26 00.8**	**-0.7**
	comp=Z,7.4nm,1.0s,baz=0.0,slow=2.0,SNR=2.9						
STKA				LR	LR	21 33 36.7	
	comp=Z,9μm,18.2s,baz=61,slow=36						
TAU	**Tasmania Unive**	**30.71**	**210**	PFAKE		21 23 20.0	+8.4
TAU				LR	LR		
	comp=Z,4μm,19.0s						
RAR	**Rarotonga**	**30.76**	**102**	LR	LR	21 32 52.7	
	comp=Z,3μm,20.0s,baz=272,slow=31						

WRAB Tennant Creek 31.75 260 *e*P **P** **21 23 18.7 -2.5**
WRAB pmax pmax
comp=Z,40nm,1.3s
WRAB MLR MLR
comp=Z,5µm,19.0s
WRAB Tennant Creek 31.75 260 *e*P **P** **21 23 18.6 -2.5**
comp=Z,40nm,1.3s
WRAB LR LR
comp=Z,5µm,19.0s
WRA Warramunga Arr 31.76 260 P **P** **21 23 18.6 -2.7**
WRA PcP **PcP** **21 26 11.4 -0.8**
WRA ScP **ScP** **21 29 55.7 +2.6**
WRA PKiKP **PKiKP** **21 33 39.9 -1.3**
WRA Warramunga Arr 31.76 260 P **P** **21 23 18.6 -2.7**
comp=Z,6.1nm,1.0s,baz=82,slow=6.0,SNR=18
WRA PcP **PcP** **21 26 11.4 -0.8**
comp=Z,2.2nm,0.8s,baz=82,slow=2.2,SNR=4.1
WRA ScP **ScP** **21 29 55.7 +2.6**
comp=Z,3.5nm,1.3s,baz=87,slow=2.6,SNR=5.5
WRA PKiKP **PKiKP** **21 33 39.9 -1.3**
comp=Z,0.8nm,0.9s,baz=2.6,slow=0.6,SNR=6.1
WRA LR LR 21 35 01.2
comp=Z,5µm,21.9s,baz=90,slow=34
AS31 Alice Springs 32.27 253 *e*P **P** **21 23 23.1 -2.6**
ASAR Alice Springs 32.27 253 P **P** **21 23 23.1 -2.6**
ASAR PcP **PcP** **21 26 10.4 -3.2**
ASAR ScP **ScP** **21 29 59.8 +4.9**
ASAR Alice Springs 32.27 253 P **P** **21 23 23.1 -2.6**
comp=Z,20nm,1.0s,baz=79,slow=7.9,SNR=22
ASAR PcP **PcP** **21 26 10.4 -3.2**
comp=Z,7.0nm,1.2s,baz=64,slow=3.2,SNR=3.1
ASAR ScP **ScP** **21 29 59.8 +4.9**
comp=Z,1.3nm,1.0s,baz=104,slow=3.9,SNR=2.6
ASAR LR LR 21 36 13.7
comp=Z,10µm,18.6s,baz=82,slow=36
BBOO Buckleboo 32.36 236 *e*P **P** **21 23 24.3 -2.0**
comp=Z,520nm,0.8s
WAKE Wake Island 36.61 358 PFAKE 21 24 10.0 +6.9
WAKE LR LR
comp=Z,3µm,21.0s
GUMO Guam 38.34 322 PFAKE 21 24 30.0 +12
GUMO LR LR
comp=Z,3µm,19.0s
FORT Forrest 38.39 242 *e*P **P** **21 24 17.1 -1.1**
comp=Z,41nm,0.6s
XMAS Kiritimati 39.38 64 PFAKE 21 24 40.0 +13
XMAS LR LR
comp=Z,6µm,19.0s
FITZ Fitzroy Crossi 40.09 263 P **P** **21 24 31.5 -1.1**
FITZ Fitzroy Crossi 40.09 263 P **P** **21 24 31.5 -1.1**
comp=Z,40nm,0.9s,baz=107,slow=7.7,SNR=29
FITZ LR LR 21 40 39.1
comp=Z,6µm,19.7s,baz=102,slow=36
TBI Tubuai 40.34 106 *e*S **S** **21 30 35.6 -4.7**
comp=Z,2µm,27.2s
TBI *e*LR LR 21 36 09.7
PPT2 Papeete2 40.56 97 *e*P P 21 24 26.8 -10
comp=Z,411nm,26.8s
PPT2 *e*S **S** **21 30 39.4 -4.4**
comp=Z,2µm,26.2s
PPT2 *e*LR LR 21 36 18.1
comp=Z,8µm,25.0s
PPT Papeete 40.56 97 LR LR 21 37 26.4
comp=Z,3µm,21.0s,baz=256,slow=30
MBWA Marble Bar 45.38 257 *e*P **P** **21 25 14.9 -0.6**
comp=Z,55nm,1.1s
MBWA LR LR
comp=Z,4µm,19.0s
MIDW Midway 47.69 18 PFAKE 21 25 40.0 +6.7
MIDW LR LR
comp=Z,2µm,21.0s
NWAO Narrogin (SRO) 47.81 241 P **P** **21 25 33.9 -0.5**
NWAO Narrogin (SRO) 47.81 241 P **P** **21 25 33.9 -0.5**
comp=Z,20nm,0.8s,baz=113,slow=6.7,SNR=7.9
NWAO LR LR 21 44 27.5
comp=Z,3µm,21.3s,baz=95,slow=35
DAV Davao City (W) 48.36 297 LR LR 21 45 40.1
comp=Z,1µm,18.2s,baz=110,slow=36
KAPI Kappang 48.61 279 *e*P **P** **21 25 41.0 +0.3**
comp=Z,107nm,1.4s
KAPI Kappang 48.61 279 P **P** **21 25 39.3 -1.4**
comp=Z,4.3nm,0.4s,baz=120,slow=8.1,SNR=3.0
KAPI LR LR 21 43 09.5
comp=Z,811nm,21.6s,baz=108,slow=32
KIP Kipapa 51.19 42 PFAKE 21 26 10.0 +10
KIP LR LR
comp=Z,3µm,20.0s
RKT Rikitea 53.66 106 *e*S **S** **21 33 53.0 +2.7**
comp=Z,2µm,28.0s
RKT *e*LR LR 21 42 18.4
KKM Kota Kinabalu 56.08 290 PFAKE 21 26 50.0 +14
KKM LR LR
comp=Z,592nm,20.0s
KSM Kuching 59.69 282 *e*P **P** **21 27 00.7 -0.8**
comp=Z,66nm,1.3s
KSM LR LR
comp=Z,632nm,21.0s
VNDA Vanda 60.08 181 *e*P **P** **21 27 02.1 -1.1**
comp=Z,34nm,1.4s
VNDA Vanda 60.08 181 P **P** **21 27 02.8 -0.5**
comp=Z,4.9nm,0.9s,baz=346,slow=8.2,SNR=14
VNDA LR LR 21 51 07.9
comp=Z,1µm,18.2s,baz=14,slow=34
SBA Scott Base 60.34 180 *e*P **P** **21 27 05.5 +0.5**
SBA pmax pmax
comp=Z,65nm,1.2s
SBA MLR MLR
comp=Z,922nm,19.0s
SBA Scott Base 60.34 180 *e*P **P** **21 27 05.5 +0.5**
comp=Z,65nm,1.2s
SBA LR LR
comp=Z,922nm,19.0s
MJAR Matsushiro Arr 60.63 333 P **P** **21 27 05.3 -2.2**
MJAR Matsushiro Arr 60.63 333 P **P** **21 27 05.3 -2.2**
comp=Z,39nm,1.0s,baz=163,slow=7.5,SNR=49
MAJO Matsushiro 60.63 333 *e*P **P** **21 27 05.7 -1.8**
MAJO pmax pmax
comp=Z,51nm,1.0s
MAJO MLR MLR
comp=Z,644nm,20.0s
MAJO Matsushiro 60.63 333 *e*P **P** **21 27 05.7 -1.8**
comp=Z,51nm,1.0s
MAJO LR LR
comp=Z,644nm,20.0s
MAT Matsushiro 60.63 333 P **P** **21 27 05.8 -1.7**
MAT S **S** **21 35 19.8 -1.8**
CASY Casey 61.15 203 *e*P **P** **21 27 11.4 +0.7**
comp=Z,24nm,1.2s
CASY LR LR
comp=Z,2µm,20.0s
NACB Ninganchiao 61.26 311 *e*P **P** **21 27 11.9 -0.1**
comp=Z,80nm,1.3s
TPUB Ta-pu 61.42 310 *e*P **P** **21 27 12.8 -0.4**
comp=Z,19nm,0.8s
SSLB Suanglung 61.48 310 *e*P **P** **21 27 12.8 -0.8**
comp=Z,12nm,0.7s
JNU Nakatsue 61.51 325 P **P** **21 27 12.5 -1.1**
JNU Nakatsue 61.51 325 P **P** **21 27 12.5 -1.1**
comp=Z,37nm,1.3s,baz=139,slow=9.3,SNR=3.5
YHNB Yeheng 61.72 312 *e*P **P** **21 27 15.8 +0.5**
comp=Z,58nm,0.9s
YHNB LR LR
comp=Z,2µm,21.0s
TATO Taipei 61.83 312 PFAKE 21 27 30.0 +14
TATO LR LR
comp=Z,2µm,22.0s
ERM Erimo 63.49 340 PFAKE 21 27 40.0 +13
ERM LR LR
comp=Z,1µm,20.0s
QZH Quanzhou 63.89 310 P P 21 27 32.6 +3.0
QZH S **S** **21 36 06.2 +3.1**
QZH LR LR
comp=N,800nm,11.3s
QZH LR LR
comp=E,3µm,22.0s
QZH LR LR
comp=Z,2µm,24.5s
YUK Yuzh-Kuril'sk 64.49 343*c* *i*P P 21 27 27.5 -5.5
YUK *i* PPP PPP 21 31 36.8
YUK *i* S S 21 35 57.4 -12
YUK *i* SS **SS** **21 40 16.4 -4.4**
YUK pmax pmax
comp=Z,118nm,1.5s
YUK pmax pmax
comp=N,97nm,1.5s
YUK pmax pmax
comp=E,185nm,1.5s

KUR Kuril'sk 65.06 345*d* *i*P **P** **21 27 34.2 -2.5**
KUR *i* *SP **sP** **21 27 51.1 -0.2**
KUR *i* 21 30 01.5
KUR *i* PPP PPP 21 31 30.2
KUR *i* S **S** **21 36 18.4 +1.8**
KUR *i* SS **SS** **21 40 32.4 +2.7**
KUR pmax pmax
comp=E,2.0nm,0.3s
KUR pmax pmax
comp=N,28nm,1.0s
KUR pmax pmax
comp=Z,68nm,1.0s
KUR pmax pmax
comp=Z,561nm,3.4s
KUR MLR MLR
comp=E,98nm,9.0s
KUR MLR MLR
comp=N,2µm,18.0s
KUR MLR MLR
comp=Z,1µm,18.0s
ASAJ Asahikawa 65.55 340 *e*P **P** **21 27 39.4 -0.6**
comp=Z,23nm,1.7s
ASAJ Asahikawa 65.55 340 P **P** **21 27 39.0 -1.0**
comp=Z,23nm,1.0s,baz=195,slow=11,SNR=15
SSE Sheshan 65.92 317 *e*P **P** **21 27 42.1 -0.5**
SSE pP **pP** **21 27 53.8 +0.6**
SSE sP **sP** **21 27 58.8 +1.6**
SSE S S 21 36 21.9 -5.8
SSE sS **sS** **21 36 40.9 -4.3**
SSE ScS **SKSac** **21 37 34.0 -2.1**
SSE pmax pmax
comp=Z,25nm,0.7s
SSE pmax pmax
comp=Z,150nm,10.6s
SSE LR LR
comp=N,150nm,17.2s
SSE LR LR
comp=E,740nm,17.2s
SSE LR LR
comp=Z,710nm,16.5s
KSRS Korea Array 66.35 326 P **P** **21 27 45.0 -0.3**
comp=Z,1.2nm,0.5s,baz=155,slow=6.7,SNR=7.6
KSAR Wonju Array Be 66.36 326 P **P** **21 27 45.0 -0.4**
INCN Inchon 67.06 325 PFAKE 21 28 00.0 +10
INCN LR LR
comp=Z,689nm,19.0s
QIZ Qiongzhong 67.57 300 P **P** **21 27 52.9 -0.5**
QIZ pP **pP** **21 28 04.7 +0.7**
QIZ S **S** **21 36 46.3 -1.9**
QIZ sS **sS** **21 37 08.1 +2.4**
QIZ SS **SS** **21 41 07.9 -1.7**
QIZ pmax pmax
comp=Z,13nm,1.5s
QIZ LR LR
comp=N,470nm,17.2s
QIZ LR LR
comp=Z,840nm,25.6s
MIR Mirnyy 68.00 205⇑ *i*P **P** **21 27 58.0 +2.6**
MIR *i* 21 28 09.0
MIR pmax pmax
comp=Z,66nm,1.2s
YSS Yuzh-Sakhalins 68.05 342*αe*P **P** **21 27 57.0 +1.2**
YSS *e**PP **pP** **21 28 08.8 +2.4**
YSS *e**SP **sP** **21 28 13.0 +2.6**
YSS *e*S **S** **21 36 52.0 -0.8**
YSS *e* 21 37 41.0
YSS *e* 21 41 14.0
YSS pmax pmax
comp=Z,60nm,1.0s
YSS MLR MLR
comp=Z,800nm,19.0s
NJ2 Nanjing 68.06 316 *e*P **P** **21 27 56.4 +0.2**
NJ2 pP **pP** **21 28 07.2 +0.4**
NJ2 sP **sP** **21 28 12.9 +2.1**
NJ2 PP **PP** **21 30 27.6 +0.7**
NJ2 S **S** **21 36 50.0 -3.5**
NJ2 sS **sS** **21 37 11.5 +0.5**
NJ2 pmax pmax
comp=Z,10.0nm,1.0s
NJ2 pmax pmax
comp=Z,160nm,9.5s
NJ2 LR LR
comp=N,710nm,18.5s
NJ2 LR LR
comp=E,740nm,23.5s
NJ2 LR LR
comp=Z,860nm,19.2s
COCO West Island 68.48 264 PFAKE 21 28 10.0 +11
COCO LR LR
comp=Z,3µm,19.0s
SKR Severo-Kuril's 68.70 352 *e*P P 21 27 54.0 -5.8
SKR *e* 21 28 19.0
SKR *e*PPP PPP 21 32 08.0
SKR *e*S S 21 36 50.0 -10
SKR *e* 21 37 40.0
SKR pmax pmax
comp=N,800nm,8.0s
SKR pmax pmax
comp=E,1µm,8.0s
SKR pmax pmax
comp=Z,1µm,8.0s
SKR smax smax
comp=N,1µm,16.0s
SKR smax smax
comp=E,2µm,16.0s
SKR MLR MLR
comp=N,1µm,16.0s
SKR MLR MLR
comp=E,1µm,16.0s
SKR MLR MLR
comp=Z,1µm,16.0s
IPM Ipoh 69.41 282 *e*P **P** **21 28 05.5 +0.3**
comp=Z,39nm,1.0s
USRK Ussuriysk Arra 69.61 333 P **P** **21 28 05.2 -0.4**
comp=Z,9.9nm,0.8s,baz=123,slow=7.0,SNR=23
USRK LR LR 21 55 05.7
comp=Z,556nm,19.5s,baz=137,slow=33
KULM Kulim 70.05 282 *e*P **P** **21 28 07.5 -1.5**
comp=Z,13nm,1.1s
KULM LR LR
comp=Z,765nm,21.0s
WHN Wuhan 70.21 313 P **P** **21 28 10.7 +1.1**
WHN S **S** **21 37 20.0 +0.9**
WHN pmax pmax
comp=Z,25nm,1.2s
WHN LR LR
comp=N,1µm,13.0s
WHN LR LR
comp=E,2µm,18.6s
WHN LR LR
comp=Z,2µm,19.8s
FX1 Attu Island--F 70.28 3 *e*P **P** **21 28 08.3 -1.2**
FX1 Attu Island--F 70.28 3 P **P** **21 28 08.4 -1.2**
comp=Z,13nm,0.9s,baz=198,slow=9.6,SNR=3.1
PET Petropavlovsk 70.72 354 *e*P **P** **21 28 10.0 -2.2**
PET *e*S **S** **21 37 21.5 -2.5**
PET pmax pmax
comp=Z,400nm,9.0s
PET pmax pmax
comp=Z,300nm,14.4s
PET pmax pmax
comp=Z,32nm,1.2s
DL2 Dalian 70.85 323 P **P** **21 28 14.1 +0.7**
DL2 S **S** **21 37 27.6 +1.4**
DL2 pmax pmax
comp=Z,27nm,1.0s
DL2 pmax pmax
comp=Z,220nm,7.4s
DL2 LR LR
comp=N,400nm,17.2s
DL2 LR LR
comp=E,350nm,19.6s
DL2 LR LR
comp=Z,500nm,18.1s
PEA0B Petropavlovsk- 70.90 354 *e*P **P** **21 28 12.8 -0.5**
PETK Petropavlovsk- 70.90 354 P **P** **21 28 11.8 -1.5**
PETK Petropavlovsk- 70.90 354 P **P** **21 28 11.8 -1.5**
PETK Petropavlovsk- 70.90 354 P **P** **21 28 11.8 -1.5**
comp=Z,5.0nm,0.7s,baz=156,slow=8.9,SNR=7.4
MDJ Mudanjiang 71.00 332 P **P** **21 28 15.1 +1.0**
MDJ pP **pP** **21 28 27.4 +2.6**
MDJ sP **sP** **21 28 32.1 +3.3**
MDJ S **S** **21 37 29.2 +1.5**
MDJ pmax pmax
comp=Z,37nm,1.2s
MDJ pmax pmax
comp=Z,230nm,5.8s
MDJ LR LR
comp=N,720nm,17.0s
MDJ LR LR
comp=E,220nm,12.1s
MDJ LR LR
comp=Z,930nm,17.8s
MDJ Mudanjiang 71.00 332 *e*P **P** **21 28 12.8 -1.4**
comp=Z,51nm,1.1s
MDJ LR LR
comp=Z,984nm,20.0s
HABR Khabarovsk 71.92 338 *e*P **P** **21 28 19.5 -0.1**
HABR *e**PP **pP** **21 28 29.5 -0.8**
HABR *e* 21 28 36.1
HABR 21 30 56.3
HABR S **S** **21 37 36.8 -1.4**
HABR *e* 21 38 19.1
HABR *e*SS **SS** **21 42 11.6 -4.1**
HABR pmax pmax
comp=E,21nm,1.0s
HABR pmax pmax
comp=Z,54nm,1.0s
HABR pmax pmax
comp=N,18nm,1.2s
HABR MLR MLR
comp=Z,494nm,19.0s
CN2 Changchun 72.31 329 *e*P **P** **21 28 22.8 +0.7**
CN2 *e*pP **pP** **21 28 33.2 +0.4**
CN2 *e*sP **sP** **21 28 37.2 +0.5**
CN2 *e*S **S** **21 37 42.7 -0.2**
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,300nm,15.0s
CN2 LR LR
comp=E,600nm,15.0s
CN2 LR LR
comp=Z,800nm,16.0s
QSPA South Pole Qui 72.50 180 P **P** **21 28 23.1 0.0**
QSPA LR LR
comp=Z,1µm,20.0s
QSPA South Pole Qui 72.50 180 P **P** **21 28 23.1 0.0**
comp=Z,58nm,1.0s,baz=18,slow=3.4,SNR=29
ENH Enshi 73.55 310 *e*P **P** **21 28 28.4 -1.4**
comp=Z,28nm,1.0s
ENH LR LR
comp=Z,1µm,20.0s
GYA Guiyang 73.75 305 P **P** **21 28 32.0 +0.9**
GYA pP **pP** **21 28 42.3 +0.5**
GYA sP sP 21 28 49.5 +3.7
GYA PP **PP** **21 31 19.6 +3.5**
GYA S **S** **21 38 02.0 +1.8**
GYA sS **sS** **21 38 19.1 +1.3**
GYA SKS **SKSac** **21 38 34.4 -1.4**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,110nm,4.7s
GYA LR LR
comp=N,820nm,18.7s
GYA LR LR
comp=E,570nm,19.9s
GYA LR LR
comp=Z,750nm,19.1s
KLR Kul'dur 73.78 336 *e*P P 21 28 25.2 -5.4
KLR *e*S **S** **21 38 00.0 +0.7**
KLR *e*SS **SS** **21 42 49.0 +4.9**
KLR pmax pmax
comp=Z,57nm,1.4s
KLR pmax pmax
comp=Z,800nm,7.5s
BJT Baijiatuau 74.77 321 *e*P **P** **21 28 36.4 -0.2**
BJT LR LR
comp=Z,854nm,21.0s
BJI Beijing 74.78 321 P **P** **21 28 37.2 +0.6**
BJI S **S** **21 38 11.3 +0.4**
BJI pmax pmax
comp=Z,20nm,1.1s
BJI pmax pmax
comp=Z,300nm,7.3s
BJI LR LR
comp=N,850nm,20.8s
BJI LR LR
comp=E,450nm,21.2s
BJI LR LR
comp=Z,690nm,23.3s
XAN Xi'an 75.97 313 P **P** **21 28 45.4 +1.7**
XAN S **S** **21 38 23.8 -0.8**
XAN pmax pmax
comp=Z,4.0nm,1.0s
XAN pmax pmax
comp=Z,65nm,8.4s
XAN LR LR
comp=N,420nm,19.8s
XAN LR LR
comp=E,240nm,22.3s
XAN LR LR
comp=Z,260nm,21.6s
KMI Kunming 76.23 302 P **P** **21 28 48.0 +2.4**
KMI pP **PcP** **21 28 57.4 -0.1**
KMI S **S** **21 38 31.4 +3.3**
KMI SS **SS** **21 43 17.8 -4.9**
KMI pmax pmax
comp=Z,33nm,1.3s
KMI pmax pmax
comp=Z,370nm,10.0s
KMI LR LR
comp=N,500nm,20.7s
KMI LR LR
comp=E,680nm,21.6s
KMI LR LR
comp=Z,660nm,23.5s
CM31 Chiang Mai Arr 76.58 294 *e*P **P** **21 28 47.8 +0.4**
comp=Z,27nm,1.1s
CMAR Chiang Mai Arr 76.58 294 P **P** **21 28 47.8 +0.4**
CMAR Chiang Mai Arr 76.58 294 P **P** **21 28 47.8 +0.4**
comp=Z,8.8nm,1.0s,baz=128,slow=4.1,SNR=19
CHTO Chiang Mai 76.72 295 *e*P **P** **21 28 48.1 -0.1**
CHTO pmax pmax
comp=Z,32nm,1.2s
CHTO MLR MLR
comp=Z,645nm,19.0s
CHTO Chiang Mai 76.72 295 *e*P **P** **21 28 48.1 -0.1**
comp=Z,32nm,1.2s
CHTO LR LR
comp=Z,645nm,19.0s
HHC Hu-ho-hao-te 78.06 320 *e*P **P** **21 28 55.2 -0.2**
HHC pP **pP** **21 29 05.6 -0.6**
HHC sP **sP** **21 29 09.5 -0.6**
HHC PP **PP** **21 31 54.1 +1.9**
HHC S **S** **21 38 46.2 -0.9**
HHC sS **sS** **21 39 03.9 -1.0**
HHC pmax pmax
comp=Z,27nm,0.9s
HHC LR LR
comp=E,1µm,16.9s
HHC LR LR
comp=Z,2µm,17.5s
CD2 Chengdu 78.14 308 *e*P **P** **21 28 56.0 0.0**
CD2 sP **sP** **21 29 11.3 +0.6**
CD2 PP **PP** **21 31 55.6 +2.6**
CD2 S **S** **21 38 47.3 -0.9**
CD2 sS **sS** **21 39 05.6 -0.4**
CD2 ScS **SKKSac** **21 39 10.2 +1.2**
CD2 pmax pmax
comp=Z,20nm,1.1s
CD2 pmax pmax
comp=Z,460nm,9.5s
CD2 LR LR
comp=N,1µm,20.2s
CD2 LR LR
comp=Z,360nm,14.3s
HIA Hailar 78.97 330 *e*P **P** **21 28 59.4 -0.8**
comp=Z,32nm,1.0s
HIA LR LR
comp=Z,852nm,20.0s
MAW Mawson 79.49 202 P **P** **21 29 02.7 0.0**
MAW Mawson 79.49 202 P **P** **21 29 02.7 0.0**
comp=Z,8.2nm,1.0s,baz=117,slow=6.2,SNR=11
MAW LR LR 21 59 44.9
comp=Z,1µm,19.4s,baz=99,slow=32
LZH Lanzhou 80.59 312⇓ P P 21 29 12.4 +3.0
LZH sP sP 21 29 23.3 -0.9

LZH PP **PP** 21 32 14.5 +1.0
LZH S **S** 21 39 16.3 +1.9
LZH pmax pmax
comp=Z,25nm,1.0s
LZH pmax pmax
comp=Z,200nm,4.3s
LZH LR LR
comp=N,900nm,19.1s
LZH LR LR
comp=E,580nm,15.8s
LZH LR LR
comp=Z,1μm,19.3s
SEY Seymchan 81.12 353⇑ *e*P **P** 21 29 10.3 -1.0
KDAK Kodiak Island 81.90 20 PFAKE 21 29 30.0 +14
KDAK LR LR
comp=Z,906nm,19.0s
CLNS Chul'man 82.31 338 *e*P **P** 21 29 18.0 +0.1
CLNS *e* 21 29 24.2
CLNS *e**SS S 21 40 27.5 +56
CLNS pmax pmax
comp=E,7.0nm,1.2s
CLNS pmax pmax
comp=N,24nm,1.5s
CLNS pmax pmax
comp=Z,34nm,1.2s
CLNS pmax pmax
comp=Z,7.0nm,1.7s
IMP Imphal 83.35 298 *e*PKP **P** 21 29 24.0 0.0
CIT Chita 83.75 330 *e*P **P** 21 29 26.4 +1.0
CIT *e* 21 29 35.7
CIT *e* 21 29 40.5
CIT pmax pmax
comp=Z,102nm,1.1s
RSO Redoubt South 83.97 18 *e*P **P** 21 29 24.6 -1.9
comp=Z,75nm,0.9s
ULN Ulaanbaatar 84.70 324 *e*P **P** 21 29 30.1 -0.4
comp=Z,60nm,1.0s
ULN LR LR
comp=Z,680nm,21.0s
YAK Yakutsk 84.86 343 *e*P **P** 21 29 29.8 -0.9
YAK *e**PP **pP** 21 29 41.4 -0.2
YAK *e* 21 32 45.4
YAK *e*S S 21 39 50.4 -5.9
YAK *e*SS **SS** 21 45 30.9 +1.2
YAK pmax pmax
comp=Z,83nm,1.3s
YAK pmax pmax
comp=N,26nm,1.5s
YAK pmax pmax
comp=E,14nm,1.5s
YAK pmax pmax
comp=Z,90nm,5.3s
YAK pmax pmax
comp=E,58nm,4.2s
YAK pmax pmax
comp=N,62nm,4.8s
YAK smax smax
comp=E,38nm,2.0s
YAK smax smax
comp=N,75nm,4.8s
YAK MLR MLR
comp=N,881nm,20.0s
YAK MLR MLR
comp=Z,1μm,21.0s
YAK MLR MLR
comp=E,487nm,19.0s
GTA Gaotai 84.98 314 *e*P **P** 21 29 34.0 +1.9
GTA pP pP 21 29 47.2 +4.2
GTA sP sP 21 29 52.2 +5.3
GTA S **S** 21 39 58.2 -0.7
GTA pmax pmax
comp=Z,22nm,1.4s
GTA pmax pmax
comp=Z,290nm,7.8s
GTA LR LR
comp=N,640nm,21.2s
GTA LR LR
comp=E,700nm,20.0s
GTA LR LR
comp=Z,870nm,21.9s
SONM Songino Array 85.06 324 P **P** 21 29 32.0 -0.3
SONM Songino Array 85.06 324 P **P** 21 29 32.0 -0.3
comp=Z,35nm,1.0s,baz=142,slow=3.5,SNR=66
SONM LR LR 22 04 56.3
comp=Z,647nm,19.3s,baz=116,slow=34
BILL Bilibino 85.34 359*c* *i*P **P** 21 29 31.7 -1.3
BILL *e**PP **pP** 21 29 43.7 -0.2
BILL pmax pmax
comp=Z,33nm,1.2s
BILL Bilibino 85.34 359 PFAKE 21 29 40.0 +7.0
BILL LR LR
comp=Z,291nm,21.0s
SHL Shillong 85.36 298 *e*PKP **P** 21 29 34.0 -0.3
SHL *e*S **S** 21 40 06.0 +2.7
KIPM Iron Peak 85.65 46 *e*P **P** 21 29 35.9 +0.5
comp=Z,54nm,1.7s
SAO San Andreas Ge 85.74 49 *e*P **P** 21 29 35.6 -0.2
SAO San Andreas Ge 85.74 49 *e*P **P** 21 29 35.6 -0.2
KRMB Red Mountain 86.14 44 *e*P **P** 21 29 37.2 -0.6
comp=Z,3.7nm,1.2s
SYO Syowa Base 86.17 196⇑ *e*P **P** 21 29 36.6 -0.7
WDC Whiskeytown Da 86.64 46 *e*P **P** 21 29 39.6 -0.5
WDC pmax pmax
comp=Z,16nm,1.5s
WDC Whiskeytown Da 86.64 46 *e*P **P** 21 29 39.5 -0.5
comp=Z,16nm,1.5s
YBH Yreka Blue Hor 87.03 45 *e*P **P** 21 29 41.4 -0.7
comp=Z,5.5nm,1.1s
YBH Yreka Blue Hor 87.03 45 P **P** 21 29 41.8 -0.3
comp=Z,4.2nm,1.0s,baz=211,slow=2.9,SNR=7.9
CMB Columbia Colle 87.05 49 *e*P **P** 21 29 41.1 -1.1
CMB pmax pmax
comp=Z,9.0nm,0.9s
CMB Columbia Colle 87.05 49 *e*P **P** 21 29 41.1 -1.1
comp=Z,9.4nm,0.9s
TRF Thorofare Moun 87.05 17 *e*P **P** 21 29 42.4 +0.6
comp=Z,8.7nm,0.8s
HUMO Hull Mountain 87.26 44 *e*P **P** 21 29 43.3 +0.1
comp=Z,7.4nm,1.0s
ISA Isabella 87.47 51 *e*P **P** 21 29 44.8 +0.4
ISA pmax pmax
comp=Z,10.0nm,1.1s
ISA Isabella 87.47 51 *e*P **P** 21 29 44.8 +0.4
comp=Z,9.9nm,1.1s
LSA Lhasa 87.49 302 *e*P **P** 21 29 44.5 -0.6
LSA pmax pmax
comp=Z,7.0nm,0.7s
LSA MLR MLR
comp=Z,452nm,20.0s
LSA Lhasa 87.49 302 *e*P **P** 21 29 44.5 -0.6
comp=Z,6.7nm,0.7s
LSA LR LR
comp=Z,452nm,20.0s
BEKR Beckworth 87.83 47 *e*P **P** 21 29 45.8 -0.3
comp=Z,8.7nm,1.3s
ZAK Zakamensk 88.14 325⇑ *i*P **P** 21 29 47.0 -0.2
ZAK *e* 21 29 58.4
ZAK pmax pmax
comp=Z,19nm,1.2s
PFO Pinyon Flat Ob 88.21 54 PFAKE 21 30 00.0 +12
PFO LR LR
comp=Z,3μm,20.0s
IRK Irkutsk 88.56 327 *e*P **P** 21 29 47.4 -1.6
IRK pmax pmax
comp=Z,137nm,1.1s
GSC Goldstone 88.59 52 *e*P P 21 29 46.7 -3.0
GSC Goldstone 88.59 52 *e*P P 21 29 46.7 -3.0
TLY Talaya 88.60 326*c* *i*P **P** 21 29 48.3 -1.0
TLY *e*S **S** 21 40 35.2 +2.0
TLY *e* 21 42 01.6
TLY pmax pmax
comp=Z,27nm,1.2s
TLY MLR MLR
comp=Z,284nm,17.0s
TLY Talaya 88.60 326 P **P** 21 29 49.6 +0.3
comp=Z,117nm,1.1s,SNR=5.6
NVAR Mina Array Bea 88.70 49 P **P** 21 29 48.6 -1.7
NVAR PP **PP** 21 33 21.5 +1.9
NVAR Mina Array Bea 88.70 49 P **P** 21 29 48.6 -1.7
comp=Z,3.7nm,1.1s,baz=228,slow=7.4,SNR=15
NVAR PP **PP** 21 33 21.5 +1.9
comp=Z,0.4nm,0.6s,baz=233,slow=8.9,SNR=4.1
NVAR LR LR 22 03 04.2
comp=Z,1μm,19.6s,baz=115,slow=31
COLA College 88.83 17 PFAKE 21 30 00.0 +10
COLA LR LR
comp=Z,879nm,20.0s
NLWA Neilton Lookou 88.87 39 PFAKE 21 30 00.0 +9.4
NLWA LR LR
comp=Z,846nm,19.0s
WRAK Wrangell Islan 89.00 29 PFAKE 21 30 00.0 +9.0
WRAK LR LR
comp=Z,1μm,19.0s
ILAR Eielson Array 89.03 18 P **P** 21 29 50.1 -0.9
ILAR Eielson Array 89.03 18 P **P** 21 29 50.1 -0.9
comp=Z,1.5nm,0.7s,baz=232,slow=5.6,SNR=12
ILAR LR LR 22 09 38.0
comp=Z,814nm,18.5s,baz=237,slow=36
TPH Tonopah 89.34 50 PFAKE 21 30 00.0 +6.7
TPH LR LR
comp=Z,1μm,19.0s
LON Longmire 89.83 40 *e*P **P** 21 29 58.1 +2.9
LON pmax pmax
comp=Z,9.0nm,1.2s
LON Longmire 89.83 40 *e*P **P** 21 29 58.1 +2.9
comp=Z,8.8nm,1.2s
WVOR Wild Horse Val 90.08 45 PFAKE 21 30 10.0 +13
WVOR LR LR
comp=Z,1μm,19.0s
BMN Battle Mountai 90.26 47 PFAKE 21 30 10.0 +12
BMN LR LR
comp=Z,2μm,19.0s
MAIT Maitri 90.36 188 *e*P P 21 29 47.0 -10
EGAK Eagle 90.78 19 PFAKE 21 30 10.0 +11
EGAK LR LR
comp=Z,634nm,19.0s
SNAA Sanae 90.78 183 *e*P **P** 21 29 58.3 -1.0
SNAA Sanae 90.78 183 *e*Vanuatu sP 21 30 11.5 -2.7
SNAA Sanae 90.78 183 *e*P **P** 21 29 58.5 -0.9
comp=Z,65nm,1.3s
SNAA Sanae 90.78 183 P **P** 21 29 58.6 -0.8
comp=Z,9.1nm,1.1s,baz=192,slow=5.2,SNR=23
HAWA Hanford 91.11 41 *e*P **P** 21 30 00.3 -0.8
HAWA LR LR
comp=Z,644nm,19.0s
BMO Blue Mountains 91.92 43 PFAKE 21 30 20.0 +15
BMO LR LR
comp=Z,1μm,20.0s
VNA1 Neumayer--Stat 92.00 181 *e*P **P** 21 30 05.6 +0.8
VNA1 Neumayer--Stat 92.00 181 *e*Vanuatu sP 21 30 16.9 -2.8
TUC Tucson 92.21 57 PFAKE 21 30 20.0 +13
TUC LR LR
comp=Z,718nm,19.0s
WUAZ Wupatki 92.80 54 PFAKE 21 30 20.0 +11
WUAZ LR LR
comp=Z,2μm,20.0s
TIXI Tiksi 92.81 348*c* *i*P **P** 21 30 06.3 -2.1
TIXI pmax pmax
comp=Z,9.0nm,0.9s
DGAR Diego Garcia 92.87 261 PFAKE 21 30 20.0 +10
DGAR LR LR
comp=Z,2μm,19.0s
MVU Marysvale 93.17 51 PFAKE 21 30 20.0 +8.8
MVU LR LR
comp=Z,3μm,19.0s
DUG Dugway 93.31 49 PFAKE 21 30 20.0 +8.4
DUG LR LR
comp=Z,2μm,19.0s
NEW Newport 93.35 40 PFAKE 21 30 20.0 +8.5
NEW LR LR
comp=Z,683nm,20.0s
HLID Hailey 93.37 45 PFAKE 21 30 20.0 +8.1
HLID LR LR
comp=Z,2μm,20.0s
HWUT Hardware Ranch 94.68 48 PFAKE 21 30 30.0 +12
HWUT LR LR
comp=Z,1μm,22.0s
MSO Missoula 94.83 42 PFAKE 21 30 30.0 +12
MSO LR LR
comp=Z,757nm,19.0s
WMQ Urumqi 95.06 314 P **P** 21 30 20.6 +1.1
WMQ pP pP 21 30 35.0 +4.6
WMQ PP **PP** 21 34 12.0 +2.5
WMQ SKS **SKSac** 21 40 52.6 -0.1
WMQ S **S** 21 41 29.0 -2.9
WMQ SS **SS** 21 47 59.0 +0.5
WMQ pmax pmax
comp=Z,13nm,1.2s
WMQ pmax pmax
comp=Z,160nm,6.2s
WMQ LR LR
comp=N,860nm,18.4s
WMQ LR LR
comp=E,640nm,19.6s
WMQ LR LR
comp=Z,720nm,21.4s
INK Inuvik 95.37 19 LR LR 22 07 22.2
comp=Z,859nm,21.3s,baz=238,slow=32
AHID Auburn Hatcher 95.38 47 PFAKE 21 30 30.0 +8.8
AHID LR LR
comp=Z,1μm,19.0s
BOZ Bozeman (W) 95.95 44 PFAKE 21 30 30.0 +6.4
BOZ LR LR
comp=Z,1μm,19.0s
KRAR Krasnoyarsk 96.24 327⇑ *i*P **P** 21 30 24.7 +0.3
KRAR pmax pmax
comp=Z,31nm,1.7s
MNTX Cornudas Mount 96.39 59 PFAKE 21 30 40.0 +14
MNTX LR LR
comp=Z,644nm,19.0s
LKWY Lake 96.43 45 PFAKE 21 30 40.0 +14
LKWY LR LR
comp=Z,4μm,19.0s
ANMO Albuquerque 96.45 56 PFAKE 21 30 40.0 +14
ANMO LR LR
comp=Z,1μm,19.0s
BW06 Boulder Array 96.46 47 PFAKE 21 30 40.0 +14
BW06 LR LR
comp=Z,1μm,22.0s
PDAR Pinedale Array 96.46 47 P **P** 21 30 25.2 -0.9
PDAR PP **PP** 21 34 21.4 +0.8
PDAR Pinedale Array 96.46 47 P **P** 21 30 25.2 -0.9
comp=Z,0.2nm,0.3s,baz=274,slow=3.5,SNR=3.2
PDAR PP **PP** 21 34 21.4 +0.8
comp=Z,0.2nm,0.3s,baz=251,slow=7.4,SNR=4.3
PDAR LR LR 22 09 21.5
comp=Z,776nm,18.1s,baz=222,slow=33
TXAR Lajitas Array 97.15 62 P **P** 21 30 28.7 -0.7
TXAR Lajitas Array 97.15 62 P **P** 21 30 28.7 -0.7
comp=Z,0.2nm,0.5s,baz=309,slow=52,SNR=3.4
TXAR LR LR 22 09 45.7
comp=Z,1μm,18.5s,baz=305,slow=33
RLMT Red Lodge 97.37 45 PFAKE 21 30 40.0 +10
RLMT LR LR
comp=Z,3μm,20.0s
EGMT Eagleton 97.91 42 PFAKE 21 30 40.0 +7.6
EGMT LR LR
comp=Z,735nm,19.0s
ISCO Idaho Springs 98.45 51 PFAKE 21 30 50.0 +15
ISCO LR LR
comp=Z,2μm,20.0s
MKAR Makanchi Array 99.59 316 P **Pdif** 21 30 39.7 -0.1
MKAR Makanchi Array 99.59 316 P **Pdif** 21 30 39.7 -0.1
MKAR PP PP 21 34 38.6 -5.6
MKAR Makanchi Array 99.59 316 P **Pdif** 21 30 39.7 -0.1
comp=Z,1.8nm,0.9s,baz=90,slow=6.4,SNR=9.9
MKAR PP PP 21 34 38.6 -5.6
comp=Z,1.2nm,1.0s,baz=131,slow=7.9,SNR=3.3
MKAR LR LR 22 14 05.1
comp=Z,378nm,21.6s,baz=190,slow=34
YKA Yellowknife Ar 99.79 27 P **Pdif** 21 30 38.8 -1.5
YKA PP **PP** 21 34 42.9 -2.3
YKA Yellowknife Ar 99.79 27 P **Pdif** 21 30 38.8 -1.5
comp=Z,1.1nm,0.9s,baz=252,slow=4.3,SNR=13
YKA PP **PP** 21 34 42.9 -2.3
comp=Z,0.3nm,0.8s,baz=246,slow=6.7,SNR=3.2
ZAA0 Zalesovo Array 99.95 323 *e*Pdif **Pdif** 21 30 40.6 -0.5
ZALV Zalesovo Beam 99.95 323 P **Pdif** 21 30 40.3 -0.9
ZALV 21 34 43.8
ZALV Zalesovo Beam 99.95 323 P **Pdif** 21 30 40.3 -0.9
ZALV PP **PP** 21 34 43.8 -2.9
ZALV Zalesovo Beam 99.95 323 P **Pdif** 21 30 40.3 -0.9
comp=Z,9.4nm,1.0s,baz=107,slow=4.4,SNR=27
ZALV PP **PP** 21 34 43.8 -2.9
comp=Z,0.2nm,0.3s,baz=100,slow=7.5,SNR=2.4
ZALV LR LR 22 16 27.6
comp=Z,468nm,18.8s,baz=250,slow=36
AMTX Amarillo 100.22 57 PFAKE 21 30 50.0 +7.0
AMTX LR LR
comp=Z,892nm,19.0s
JCT Junction City 100.68 61 PFAKE 21 31 00.0 +15
JCT LR LR
comp=Z,789nm,20.0s
NVS Novosibirsk 101.08 324⇓ *i*P **Pdif** 21 30 45.5 -0.7
NVS *i* 21 34 53.4
NVS *e* 21 41 23.8
NVS pmax pmax
comp=N,18nm,2.8s
NVS pmax pmax
comp=Z,58nm,2.8s
NVS pmax pmax
comp=E,21nm,2.3s
NVS pmax pmax
comp=Z,86nm,4.0s
NVS pmax pmax
comp=E,34nm,3.5s
PAYG Puerto Ayora 101.14 94 PFAKE 21 31 00.0 +13
PAYG LR LR
comp=Z,2μm,20.0s
OGNE Ogallala 101.39 51 PFAKE 21 31 00.0 +12
OGNE LR LR
comp=Z,1μm,20.0s
KVTX Kingsville 101.61 65 PFAKE 21 31 00.0 +11
KVTX LR LR
comp=Z,956nm,20.0s
DGMT Dagmar 101.61 43 PFAKE 21 31 00.0 +11
DGMT LR LR
comp=Z,529nm,19.0s
WMOK Wichita Mounta 102.51 57 PFAKE 21 31 00.0 +6.9
WMOK LR LR
comp=Z,928nm,19.0s
KURK Kurchatov 102.87 319⇓ *e*P **Pdif** 21 30 55.4 +1.2
KURK *i* 21 35 17.0
KURK pmax pmax
comp=Z,6.0nm,1.7s
KURK pmax pmax
comp=Z,7.0nm,1.7s
KURK Kurchatov 102.87 319 P **Pdif** 21 30 55.2 +1.0
KURK PP PP 21 35 03.1 -5.7
KURK LR LR
comp=Z,879nm,20.0s
KURBB Kurchatov Arra 102.91 319 P **Pdif** 21 30 55.2 +0.8
comp=Z,1.0nm,0.9s,baz=101,slow=3.6,SNR=8.1
KURBB PP PP 21 35 03.1 -5.9
comp=Z,0.6nm,0.9s,baz=101,slow=6.7,SNR=4.2
RER Riviere de l'E 103.13 243 PFAKE 21 31 10.0 +14
RER LR LR
comp=Z,1μm,21.0s
TKM2 Tokmak 2 103.32 311 PFAKE 21 31 10.0 +13
TKM2 LR LR
comp=Z,612nm,22.0s
AAK Ala-Archa 104.06 311 PFAKE 21 31 10.0 +10
AAK LR LR
comp=Z,391nm,19.0s
FFC Flin Flon 104.24 37 PFAKE 21 31 10.0 +10
FFC LR LR
comp=Z,1μm,19.0s
EKS2 Erkin-Say 104.59 311 PFAKE 21 31 10.0 +7.7
EKS2 LR LR
comp=Z,387nm,19.0s
KSU1 Kansas State U 105.08 53 PFAKE 21 35 30.0
KSU1 LR LR
comp=Z,2μm,20.0s
ECSD EROS Data Cent 105.87 49 PFAKE 21 35 30.0
ECSD LR LR
comp=Z,1μm,19.0s
LCO Las Campanas 106.97 129 PFAKE 21 35 30.0
LCO LR LR
comp=Z,1μm,19.0s
AGMN Agassiz Nation 107.05 44 PFAKE 21 35 30.0
AGMN LR LR
comp=Z,923nm,19.0s
TRQA Tornquist 107.59 141 PFAKE 21 35 40.0
TRQA LR LR
comp=Z,834nm,20.0s
TGUH Tegucigalpa,Un 108.09 81 PFAKE 21 35 40.0
TGUH LR LR
comp=Z,741nm,19.0s
BVAR Borovoye Array 108.25 321 P **Pdif** 21 31 18.5 +0.3
BVAR Borovoye Array 108.25 321 Pdif **Pdif** 21 31 18.5 +0.3
BVAR PKiKP **PKiKP** 21 35 24.9 +0.5
BVAR PKKPbc **PKKPbc** 21 46 36.7 -0.6
BVAR Borovoye Array 108.25 321 Pdiff **Pdif** 21 31 18.5 +0.3
comp=Z,1.1nm,0.9s,baz=101,slow=7.7,SNR=6.9
BVAR PKiKP **PKiKP** 21 35 24.9 +0.5
comp=Z,2.8nm,0.9s,baz=116,slow=3.4,SNR=9.3
BVAR PKKPbc **PKKPbc** 21 46 36.7 -0.6
comp=Z,0.6nm,0.7s,baz=252,slow=2.8,SNR=4.3
BRVK Borovoye 108.32 321 PFAKE 21 35 40.0
BRVK LR LR
comp=Z,568nm,19.0s
TEIG Tepich 108.56 74 PFAKE 21 35 40.0
TEIG LR LR
comp=Z,1μm,19.0s
VBMS Vicksburg 108.81 61 PFAKE 21 35 40.0
VBMS LR LR
comp=Z,1μm,19.0s
MSEY Mahe Island 109.70 258 PFAKE 21 35 40.0
MSEY LR LR
comp=Z,2μm,19.0s
NNA Nana 109.74 110 PFAKE 21 35 40.0
NNA LR LR
comp=Z,1μm,19.0s
EYMN Ely 109.92 45 PFAKE 21 35 40.0
EYMN LR LR
comp=Z,2μm,19.0s
OXF Oxford 110.07 59 PFAKE 21 35 40.0
OXF LR LR
comp=Z,2μm,19.0s
JFWS Jewell Farm 110.38 50 PFAKE 21 35 40.0
JFWS LR LR
comp=Z,3μm,21.0s
HDIL Hopedale 110.86 53 PFAKE 21 35 40.0
HDIL LR LR
comp=Z,964nm,21.0s
ABPO Ambohimpanom 111.24 241 PFAKE 21 35 40.0
ABPO LR LR
comp=Z,1μm,21.0s
COWI Conover 111.41 47 PFAKE 21 35 40.0
COWI LR LR
comp=Z,2μm,20.0s
BRAL Brewton 111.55 63 PFAKE 21 35 40.0
BRAL LR LR
comp=Z,846nm,19.0s
LVC Limon Verde 111.66 124 PFAKE 21 35 40.0
LVC LR LR
comp=Z,759nm,19.0s
LRAL Lakeview Retre 111.87 61 PFAKE 21 35 40.0
LRAL LR LR
comp=Z,813nm,19.0s
OTAV Otavalo 112.66 97 PFAKE 21 35 50.0
OTAV LR LR
comp=Z,1μm,19.0s
BCIP Isla Barro Col 113.93 88 PFAKE 21 35 50.0
BCIP LR LR
comp=Z,749nm,20.0s
ABKAR Akbulak array 114.72 317 *e*PKPdf PKPdf 21 35 36.9 +0.2
ARU Arti 115.08 325 *i* PKIKP **PKPdf** 21 35 37.3 +0.1
ARU 21 36 35.0
ARU PPP PPP 21 38 58.8
ARU 21 42 21.0
ARU SP SP 21 46 06.9 -5.1
ARU PS **PKKPbc** 21 46 16.0 +1.3
AAM Ann Arbor 115.20 51 PFAKE 21 35 50.0 +12
AAM LR LR
comp=Z,985nm,22.0s
LPAZ La Paz 115.44 118 PKP **PKPdf** 21 35 39.8 -0.1
LPAZ La Paz 115.44 118 PKP **PKPdf** 21 35 39.8 -0.1
comp=Z,1.2nm,0.9s,baz=238,slow=3.7,SNR=3.1
SOKR Solikamsk 115.60 328 *i* PKIKP **PKPdf** 21 35 39.1 +1.1
SOKR pmax pmax
comp=Z,10.0nm,1.4s
ACSO Alum Creek Sta 115.65 53 PFAKE 21 35 50.0 +11
ACSO LR LR
comp=Z,663nm,20.0s
AKTO Aktyubinsk 115.91 318 PKIKP **PKPdf** 21 35 39.6 +0.6
AKTO Aktyubinsk 115.91 318 PKP **PKPdf** 21 35 39.6 +0.6
AKTO Aktyubinsk 115.91 318 PKP **PKPdf** 21 35 39.6 +0.6
comp=Z,2.5nm,0.9s,baz=91,slow=5.2,SNR=7.4
KBS Kingsbay 117.53 355 PFAKE 21 35 50.0 +8.6
KBS LR LR
comp=Z,446nm,20.0s
BLA Blacksburg 117.57 57 PFAKE 21 35 50.0 +7.3
BLA LR LR
comp=Z,683nm,20.0s
NHSC New Hope 117.57 61 PFAKE 21 35 50.0 +7.3

NHSC LR LR
comp=Z,886nm,19.0s
ERPA Erie 117.92 51 PFAKE 21 35 50.0 +6.9
ERPA LR LR
comp=Z,1µm,20.0s
MTDJ Mount Denham 118.12 78 PFAKE 21 36 00.0 +16
MTDJ LR LR
comp=Z,630nm,19.0s
CNNC Cliffs of the 119.56 59 PFAKE 21 36 00.0 +14
CNNC LR LR
comp=Z,1µm,20.0s
CBN Corbin 119.99 56 PFAKE 21 36 00.0 +13
CBN LR LR
comp=Z,805nm,20.0s
FRB Frobisher Bay 120.22 25 PKP **PKPdf 21 35 46.6 -0.2**
FRB Frobisher Bay 120.22 25 PKP **PKPdf 21 35 46.6 -0.2**
comp=Z,9.6nm,0.9s,baz=292,slow=1.0,SNR=8.2
DAG Danmarks Havn 120.65 2 *i* PKIKP **PKPdf 21 35 44.9 -2.5**
DAG pmax pmax
comp=Z,5.0nm,0.8s
DAG Danmarks Havn 120.65 2 *i* P **PKPdf 21 35 44.9 -2.5**
comp=Z,6.5nm,0.8s
GTBY Guantanamo Bay 120.67 77 PFAKE 21 36 00.0 +11
GTBY LR LR
comp=Z,603nm,22.0s
BINY Binghamton 120.89 51 PFAKE 21 36 00.0 +11
BINY LR LR
comp=Z,799nm,21.0s
SUR Sutherland 121.16 213 PFAKE 21 36 00.0 +10
SUR LR LR
comp=Z,997nm,19.0s
BOSA Boshof 121.56 219 PKP **PKPdf 21 35 51.8 +1.0**
BOSA Boshof 121.56 219 PKP **PKPdf 21 35 51.8 +1.0**
comp=Z,6.8nm,1.1s,baz=150,slow=2.4,SNR=3.6
LVZ Lovozero 121.62 341⇑ *i* PKIKP **PKPdf 21 35 50.4 +0.9**
LVZ pmax pmax
comp=Z,18nm,1.2s
LONY Lake Ozonia 121.69 48 *e*PKPdf **PKPdf 21 35 49.1 -1.3**
LONY LR LR
comp=Z,1µm,20.0s
NCB Newcomb 122.02 49 PFAKE 21 36 00.0 +9.0
NCB LR LR
comp=Z,2µm,20.0s
APA Apatity 122.20 341⇑ *i* PKIKP **PKPdf 21 35 50.0 -0.6**
APA pmax pmax
comp=Z,30nm,1.1s
APA MLR MLR
comp=Z,700nm,17.0s
TMCR Tamitsa 122.46 336 *e*PKIKP **PKPdf 21 35 48.3 -2.8**
TMCR pmax pmax
comp=Z,25nm,1.3s
ACCN Adirondack Com 122.49 49 *e*Pdif **Pdif 21 32 19.0 -2.6**
KEV Kevo 122.56 345 *ep* **PKPdf 21 35 50.0 -1.2**
comp=Z,8.2nm,0.9s
KEV Kevo 122.56 345 *e*PKIKP **PKPdf 21 35 50.0 -1.2**
KEV pmax pmax
comp=Z,8.0nm,0.9s
KEV Kevo 122.56 345 PFAKE 21 36 00.0 +8.8
KEV LR LR
comp=Z,698nm,20.0s
SUMG Summit 122.91 9 *e*PKIKP **PKPdf 21 35 50.9 -1.5**
SUMG Summit 122.91 9 *e*PKPdf **PKPdf 21 35 50.9 -1.5**
SUMG Summit 122.91 9 *i* P **PKPdf 21 35 53.4 +1.0**
comp=Z,7.9nm,0.9s
ARCES ARCESS Array B 123.09 345 PKP **PKPdf 21 35 51.0 -1.2**
ARCES ARCESS Array B 123.09 345 PKP **PKPdf 21 35 51.0 -1.2**
comp=Z,14nm,0.9s,baz=356,slow=1.7,SNR=16
SAML Samuel 123.16 113 PFAKE 21 36 10.0 +16
SAML LR LR
comp=Z,845nm,21.0s
KLMR Klimovskoe 123.41 333 *e*PKIKP **PKPdf 21 35 51.8 -1.3**
KLMR pmax pmax
comp=Z,59nm,1.3s
LBNH Lisbon 123.63 48 PFAKE 21 36 10.0 +16
LBNH LR LR
comp=Z,2µm,20.0s
MAK Makhachkala 123.84 310 PKIKP **PKPdf 21 35 55.3 +0.8**
SDDR Presa de Saban 124.08 79 PFAKE 21 36 10.0 +14
SDDR LR LR
comp=Z,1µm,20.0s
SCHQ Schefferville 124.31 35 PKP **PKPdf 21 35 53.4 -1.7**
SCHQ Schefferville 124.31 35 PKP **PKPdf 21 35 53.4 -1.7**
comp=Z,7.9nm,1.0s,baz=322,slow=1.3,SNR=6.4
UMR Umm Al-Rimmam 124.33 294 *e*P **PKPdf 21 35 54.5 -1.3**
UMR AMb AMB 21 35 58.5
comp=Z,48nm,1.3s
RDF Al-Radifah 124.45 293 *e*P **PKPdf 21 35 54.7 -1.4**
RDF AMb AMB 21 35 59.2
comp=Z,55nm,1.3s
MIB Mutribah 124.66 294 *e*P **PKPdf 21 35 55.4 -1.1**
MIB AMb AMB 21 36 09.5
comp=Z,37nm,1.1s
SFJD Kangerlussuaq 124.69 17 PFAKE 21 36 10.0 +15
SFJD LR LR
comp=Z,1µm,20.0s
JOF Joensuu 125.67 337 *ep* **PKPdf 21 35 56.9 -0.5**
comp=Z,12nm,0.9s
JOF Joensuu 125.67 337 *e*PKIKP **PKPdf 21 35 56.9 -0.5**
JOF pmax pmax
comp=Z,12nm,0.9s
PQI Presque Isle 125.89 45 *e*PKPdf **PKPdf 21 35 56.6 -1.7**
VRHR Novokhopersk 126.00 321 *e*PKIKP **PKPdf 21 35 58.2 -0.1**
VRHR pmax pmax
comp=Z,20nm,1.0s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,1.0s
VRHR MLR MLR
comp=N,240nm,22.0s
VRHR MLR MLR
comp=E,240nm,22.0s
VRHR MLR MLR
comp=Z,530nm,22.0s
GNI Garni 126.26 307 PFAKE 21 36 10.0 +11
GNI LR LR
comp=Z,267nm,20.0s
MOS Moscow 126.53 327 *e*PKIKP PKPdf 21 35 54.5 -4.7
MOS *e* 21 36 07.4
MOS pmax pmax
comp=Z,26nm,0.8s
SPB Sao Paulo 126.55 139 PFAKE 21 36 10.0 +10
SPB LR LR
comp=Z,680nm,20.0s
SCO Scoresbysund 126.74 4 *i* PKIKP **PKPdf 21 35 58.1 -1.1**
SCO pmax pmax
comp=Z,7.0nm,1.0s
SCO Scoresbysund 126.74 4 *i* P **PKPdf 21 35 58.1 -1.1**
comp=Z,6.9nm,1.0s
KBZ Khabaz 127.03 312 PKIKP **PKPdf 21 36 00.1 -0.4**
KBZ Khabaz 127.03 312 PKP **PKPdf 21 36 00.1 -0.4**
KBZ Khabaz 127.03 312 PKP **PKPdf 21 36 00.1 -0.4**
comp=Z,6.2nm,1.1s,baz=63,slow=1.1,SNR=5.9
KIV Kislovodsk 127.14 312⇓ *i* PKIKP **PKPdf 21 36 01.5 +0.6**
KIV *e* 21 36 12.4
KIV *e*PS **PS 21 48 06.5 +1.0**
KIV pmax pmax
comp=Z,21nm,1.2s
OBN Obninsk 127.34 327⇑ *i* PKIKP **PKPdf 21 36 00.0 -0.8**
OBN pmax pmax
comp=Z,35nm,1.2s
VSR Storozhevoye 127.42 322 *e*PKIKP **PKPdf 21 36 00.2 -0.9**
VSR *e* 21 38 01.0
VSR pmax pmax
comp=Z,20nm,1.1s
VSR pmax pmax
comp=N,3.0nm,0.5s
VSR pmax pmax
comp=E,8.0nm,1.1s
VSR pmax pmax
comp=N,10.0nm,1.7s
VSR pmax pmax
comp=E,10.0nm,1.7s
VSR pmax pmax
comp=Z,10.0nm,1.7s
VSR MLR MLR
comp=N,160nm,20.0s
VSR MLR MLR
comp=E,400nm,20.0s
VSR MLR MLR
comp=Z,750nm,20.0s
VORD Divnogorie 127.43 321 *e*PKIKP **PKPdf 21 36 01.2 +0.1**
VORD pmax pmax
comp=Z,20nm,1.9s
VORD pmax pmax
comp=N,6.0nm,0.6s
VORD pmax pmax
comp=E,40nm,0.9s
VORD MLR MLR
comp=Z,640nm,23.0s
VORD MLR MLR
comp=N,30nm,11.0s
VORD MLR MLR
comp=E,420nm,23.0s
KMBO Kilima Mbogo 127.91 254 PKP **PKPdf 21 36 03.5 0.0**
KMBO *e*PKPdf **PKiKP 21 36 03.7 -0.4**
KMBO LR LR
comp=Z,1µm,20.0s
KMBO Kilima Mbogo 127.91 254 PKP **PKPdf 21 36 03.5 0.0**
comp=Z,3.5nm,1.1s,baz=345,slow=8.0,SNR=3.6
KAF Kangasniemi 127.99 338 *ep* **PKPdf 21 36 00.4 -1.4**
comp=Z,3.7nm,0.7s
KAF Kangasniemi 127.99 338 *e*PKIKP **PKPdf 21 36 00.4 -1.4**
KAF pmax pmax
comp=Z,4.0nm,0.7s
FINES FINESS Array B 128.51 338 PKP **PKPdf 21 36 01.6 -1.2**
FINES FINESS Array B 128.51 338 PKP **PKPdf 21 36 01.6 -1.2**
comp=Z,21nm,1.1s,baz=54,slow=9.8,SNR=11
LSZ Lusaka 128.54 233 *e*PKPdf **PKPdf 21 36 05.4 +0.9**
LSZ LR LR
comp=Z,965nm,19.0s
SJG San Juan 128.78 81 PFAKE 21 36 20.0 +15
SJG LR LR
comp=Z,574nm,19.0s
SOC Sochi 129.31 312 *i* PKIKP **PKPdf 21 36 00.8 -4.1**
SOC *e* 21 38 09.0
SOC MLR MLR
comp=Z,341nm,19.0s
ANN Anapa 130.57 314 *i* PKIKP **PKPdf 21 36 07.9 +0.7**
ANN *e* 21 36 21.0
ANN *e* 21 38 23.6
ANN *e*PPP PPP 21 41 08.2
ANN *e*SS SS 21 55 53.6 +5.1
ANN *e*SSS SSS 22 00 31.2
ANN pmax pmax
comp=Z,29nm,1.7s
ANN MLR MLR
comp=N,517nm,23.0s
ANN MLR MLR
comp=E,565nm,23.0s
ANN MLR MLR
comp=Z,519nm,23.0s
BBSR BB Station 130.61 62 PFAKE 21 36 20.0 +12
BBSR LR LR
comp=Z,494nm,20.0s
GRGR Grenville 131.98 89 PFAKE 21 36 20.0 +9.2
GRGR LR LR
comp=Z,493nm,20.0s
BORG Borgarnes 132.43 5 PFAKE 21 36 20.0 +10
BORG LR LR
comp=Z,602nm,22.0s
SIM Simferopol' 132.76 316 PKIKP **PKPdf 21 36 13.6 +2.2**
SIM pmax pmax
comp=Z,30nm,9.7s
ANWB Willy Bob 132.84 82 PFAKE 21 36 20.0 +7.7
ANWB LR LR
comp=Z,433nm,21.0s
FDF Fort de France 132.98 86 PFAKE 21 36 20.0 +7.3
FDF LR LR
comp=Z,387nm,19.0s
TSUM Tsumeb 133.22 220 PFAKE 21 36 20.0 +6.7
TSUM LR LR
comp=Z,777nm,19.0s
AKASG Malin Array Be 133.33 325 PKIKP **PKPdf 21 36 12.0 -0.3**
AKASG Malin Array Be 133.33 325 PKP **PKPdf 21 36 12.0 -0.3**
AKASG SKPbc **SKPab 21 39 42.2 +2.2**
AKASG Malin Array Be 133.33 325 PKP **PKPdf 21 36 12.0 -0.3**
comp=Z,6.3nm,0.9s,baz=66,slow=2.1,SNR=14
AKASG SKPbc **SKPab 21 39 42.2 +2.2**
comp=Z,0.2nm,0.3s,baz=41,slow=3.4,SNR=4.7
KIEV Kiev 133.34 325 *e*PKIKP **PKPdf 21 36 11.9 -0.4**
KIEV MLR MLR
comp=Z,744nm,20.0s
KIEV Kiev 133.34 325 *e*PKPdf **PKPdf 21 36 11.9 -0.4**
KIEV LR LR
comp=Z,744nm,20.0s
NB2 NORSAR Subarra1 33.46 345 PKPdf **PKPdf 21 36 12.5 +0.2**
comp=Z,7.1nm,1.0s,baz=31,slow=1.9
NB2 NORSAR Subarra1 33.46 345 PKPdf **PKPdf 21 36 12.5 +0.2**
baz=31,slow=1.9
NOA NORSAR Array B 133.46 345 PKP **PKPdf 21 36 12.2 -0.2**
NOA SKP 21 39 53.6
NOA NORSAR Array B 133.46 345 PKP **PKPdf 21 36 12.2 -0.2**
comp=Z,4.9nm,0.9s,baz=31,slow=1.9,SNR=9.8
NOA SKP 21 39 53.6
comp=Z,4.1nm,1.1s,baz=33,slow=2.7,SNR=3.2
MBAR Mbarara 134.07 251 PFAKE 21 36 30.0 +15
MBAR LR LR
comp=Z,344nm,19.0s
SUW Suwalki 134.51 331 *e*PKIKP **PKPdf 21 36 15.8 +1.4**
SUW Suwalki 134.51 331 *e*PKP **PKPdf 21 36 15.8 +1.4**
BRTR Keskin Array B 134.71 309 PKP **PKPdf 21 36 15.8 +0.4**
BRTR PP **PP 21 38 51.3 +2.1**
BRTR Keskin Array B 134.71 309 PKP **PKPdf 21 36 15.8 +0.4**
comp=Z,4.7nm,1.0s,baz=128,slow=2.0,SNR=18
BRTR PP **PP 21 38 51.3 +2.1**
comp=Z,0.8nm,1.0s,baz=94,slow=5.8,SNR=3.3
KONO Kongsberg 135.07 345 PFAKE 21 36 30.0 +15
KONO LR LR
comp=Z,491nm,19.0s
ANTO Ankara 135.29 309 *e*PKIKP **PKPdf 21 36 16.7 +0.3**
ANTO MLR MLR
comp=Z,269nm,20.0s
ANTO Ankara 135.29 309 *e*PKPdf **PKPdf 21 36 16.7 +0.3**
ANTO LR LR
comp=Z,269nm,20.0s
KIS Kishinev 135.34 320 *e*PKP PKPdf 21 36 11.0 -5.2
KIS Kishinev 135.34 320 *e*PP PP 21 38 50.0 -2.5
KIS *e*SKP 21 39 48.0
KIS *e*L L 22 28 16.0
KIS LRM MLR 22 38 40.0
comp=Z,200nm,20.0s
KIS Kishinev 135.34 320 *e*PKIKP PKPdf 21 36 11.0 -5.2
KIS *e* 21 38 50.0
CSS Prodhromos 136.05 302 PFAKE 21 36 30.0 +12
CSS LR LR
comp=Z,478nm,20.0s
BUR08 Bucovina Ar. S 137.16 323 *e*PKPdf **PKPdf 21 36 22.1 +2.4**
KWP Kalwaria Pacla 137.43 327⇑ PKIKP **PKPdf 21 36 19.2 -0.8**
KWP Kalwaria Pacla 137.43 327 *e*PKPdf **PKPdf 21 36 18.4 -1.6**
KWP LR LR
comp=Z,724nm,19.0s
KWP Kalwaria Pacla 137.43 327⇑ *i*P **PKPdf 21 36 19.2 -0.8**
KWP Kalwaria Pacla 137.43 327 *e*PKP **PKPdf 21 36 20.7 +0.7**
ISP Isparta 137.57 307 PFAKE 21 36 30.0 +9.2
ISP LR LR
comp=Z,455nm,20.0s
GKP Gorka Klasztor 137.62 334 *e*PKIKP **PKPdf 21 36 21.3 +1.1**
GKP Gorka Klasztor 137.62 334 *e*PKP **PKPdf 21 36 21.3 +1.1**
MLR Muntele Rosu 137.80 320⇑ *i*P **PKPdf 21 36 21.0 0.0**
KOLS Kolonicke sedl 138.07 326 *e*PKIKP **PKPdf 21 36 22.6 +1.3**
KOLS Kolonicke sedl 138.07 326 *e*PKP **PKPdf 21 36 22.5 +1.3**
KOLS *e*SKP 21 39 57.6
UZH Uzhgorod 138.24 326⇓ *i* PKIKP **PKPdf 21 36 18.2 -3.3**
UZH *e* 21 36 25.2
UZH *e* 21 36 35.0
UZH *e* 21 43 21.0
UZH *i* 21 49 31.0
UZH *e* 21 57 21.0
STHS Stebnicka Huta 138.32 327 *e*PKIKP **PKPdf 21 36 23.2 +1.5**
STHS Stebnicka Huta 138.32 327 *e*PKP **PKPdf 21 36 23.2 +1.5**
STHS *e*SKP 21 40 01.8
VOIR 138.38 320⇓ PKIKP **PKPdf 21 36 23.8 +1.8**
VOIR 138.38 320⇓ *i*P **PKPdf 21 36 23.8 +1.8**
TRPA Tarpa 138.39 325⇓ *e*PKPdf **PKPdf 21 36 22.0 +0.2**
CRVS Cervenica-Dubn 138.52 327 *e*PKIKP **PKPdf 21 36 21.2 -0.9**
CRVS Cervenica-Dubn 138.52 327 *e*PKP **PKPdf 21 36 21.2 -0.9**
CRVS *e*SKPDF 21 39 57.8
OJC Ojcow 138.54 329 *e*PKIKP **PKPdf 21 36 22.5 +0.5**
OJC Ojcow 138.54 329 *e*PKP **PKPdf 21 36 22.5 +0.5**
ARR Arges 138.67 320⇑ *i*P **PKPdf 21 36 24.5 +2.0**
NIE Niedzica 138.79 328 *e*PKIKP **PKPdf 21 36 24.3 +1.7**
NIE Niedzica 138.79 328 *e*PKP **PKPdf 21 36 24.3 +1.7**
DRGR 139.05 323⇓ PKIKP PKPdf 21 36 18.0 -5.2
DRGR 139.05 323⇓ *i*P PKPdf 21 36 18.0 -5.2
KECS Kecovo 139.29 327 *e*PKIKP PKPdf 21 36 28.5 +5.1
KECS Kecovo 139.29 327 *e*PKP PKPdf 21 36 28.5 +5.1
KECS *e*SKP 21 40 09.2
DEV Deva 139.44 322⇑ PKIKP **PKPdf 21 36 25.1 +1.3**
DEV Deva 139.44 322⇑ *i*P **PKPdf 21 36 25.0 +1.3**
OKC Ostrava-Krasne 139.59 330 *e*PKIKP **PKPdf 21 36 24.7 +0.7**
OKC *e* 21 39 20.7
OKC MLR MLR
comp=Z,500nm,21.7s
OKC Ostrava-Krasne 139.59 330 *e*PKPdf **PKPdf 21 36 24.7 +0.7**
OKC *e*PP **PP 21 39 20.7 +2.0**
OKC *e*SS SS 21 57 41.1 +5.3
OKC AMS AMS 22 41 00.0
comp=Z,500nm,21.7s
KSP Ksiaz 139.76 332 *e*PKIKP **PKPdf 21 36 24.6 +0.4**
KSP *e* 21 39 20.0
KSP MLR MLR
comp=Z,2µm,21.2s
GZR Gura Zlata 139.78 321⇑ PKIKP **PKPdf 21 36 25.3 +0.8**
GZR Gura Zlata 139.78 321⇑ *i*P **PKPdf 21 36 25.3 +0.8**
MORC Moravsky Berou 139.93 330⇑ PKIKP PKPpre 21 36 19.6
MORC Moravsky Berou 139.93 330 *e*PKPdf **PKPdf 21 36 24.8 +0.2**
MORC Moravsky Berou 139.93 330⇑ *i*P PKPpre 21 36 19.6
PSZ Piszkesteto 139.95 326 *e*PKIKP **PKPdf 21 36 24.4 -0.4**
PSZ MLR MLR
comp=Z,684nm,19.0s
PSZ Piszkesteto 139.95 326 *e*PKPdf **PKPdf 21 36 24.4 -0.4**
PSZ LR LR
comp=Z,684nm,19.0s
PSZ Piszkesteto 139.95 326⇑ *i*P **PKPdf 21 36 25.4 +0.6**
PSZ Piszkesteto 139.95 326⇓ *e*PKPdf **PKPdf 21 36 25.0 +0.2**
KRLC Kraliky 140.08 331 *e*PKIKP **PKPdf 21 36 25.9 +1.0**
KRLC Kraliky 140.08 331 *e*PKPdf **PKPdf 21 36 25.9 +1.0**
UPC Upice 140.12 332 *e*PKHKP PKPpre 21 36 19.2
UPC *e* 21 36 23.6
UPC Upice 140.12 332 *e*PKPpre PKPpre 21 36 19.2
UPC *e*PKPdf **PKPdf 21 36 23.6 -1.3**
VYHS Vyhne 140.13 328 *e*PKIKP **PKPdf 21 36 25.4 +0.4**
VYHS Vyhne 140.13 328 *e*PKP **PKPdf 21 36 25.4 +0.4**
VYHS *e*SKPDF 21 39 59.1
BZS Buzias 140.34 322⇓ PKIKP **PKPdf 21 36 26.4 +1.0**
BZS Buzias 140.34 322⇓ *i*P **PKPdf 21 36 26.4 +1.0**
BUD Budapest 140.68 326⇓ *e*PKPdf **PKPdf 21 36 26.8 +0.8**
VRAC Vranov 140.70 330⇑ *i*P **PKPdf 21 36 25.8 -0.2**
PVCC Panska Ves 140.75 333 *e*PKIKP PKPpre 21 36 20.9
PVCC MLR MLR
comp=Z,600nm,17.3s
PVCC Panska Ves 140.75 333 *e*PKPpre PKPpre 21 36 20.9
PVCC AMS AMS 22 42 50.0
comp=Z,600nm,17.3s
BRG Berggiesshubel 140.76 334 *e*PKP PKPpre 21 36 21.6
comp=Z,2.4nm,0.7s
BRG *e* 21 36 26.5
comp=Z,17nm,1.3s
BRG *e* 21 39 31.0
BRG SS SS 21 57 57.0 +7.8
BRG
comp=N,395nm,17.8s
BRG
comp=E,243nm,19.8s
BRG
comp=Z,598nm,18.6s
BRG Berggiesshubel 140.76 334 *e*PKIKP PKPpre 21 36 21.6
BRG *e* 21 36 26.5
BRG *e* 21 39 31.0
BRG pmax pmax
comp=Z,2.0nm,0.7s
BRG pmax pmax
comp=Z,17nm,1.3s
BRG MLR MLR
comp=N,395nm,17.8s
BRG MLR MLR
comp=E,243nm,19.8s
BRG MLR MLR
comp=Z,598nm,18.6s
CLL Collm 140.82 335 *e*PKHKP PKPpre 21 36 20.0
CLL *i* 21 36 25.2
CLL *i* 21 36 30.2
CLL pmax pmax
comp=Z,4.0nm,1.6s
CLL MLR MLR
comp=Z,700nm,20.7s
CLL Collm 140.82 335 *e*PKPpre PKPpre 21 36 20.0
CLL *i* PKPdf **PKPdf 21 36 25.2 -0.9**
comp=Z,20nm,1.6s
CLL *i* pPKiKP **PKiKP 21 36 30.2 +1.5**
comp=Z,13nm,1.0s
CLL *e* 21 36 35.0
CLL *e*PP PP 21 39 31.0 +5.0
CLL *i* PKSbc **PKSbc 21 40 03.8 0.0**
CLL *e* 21 44 42.0
CLL *e*Sdif Sdif 21 48 18.0 +24
CLL *e*PSKS 21 49 36.0
CLL *e*PPS PPS 21 51 48.0
CLL *e*SS **SS 21 57 54.0 +4.2**
CLL *e*PSPS 21 58 54.0
CLL *e* 22 01 54.0
CLL *e*SSS SSS 22 02 54.0
CLL *e* 22 04 12.0
CLL *e* 22 09 54.0
CLL LmV 22 41 00.0
comp=Z,700nm,20.7s
VTS Vitosha 140.93 317⇓ PKIKP **PKPdf 21 36 26.8 0.0**
VTS Vitosha 140.93 317⇓ *i*P **PKPdf 21 36 26.8 0.0**
PRA Prague 141.14 333 pPKP **PKPdf 21 36 30.0 +3.3**
PRU Pruhonice 141.15 332 *e*PKIKP PKPpre 21 36 22.3
PRU *e* 21 36 30.3
PRU *e* 21 39 29.6
PRU MLR MLR
comp=Z,600nm,18.8s
PRU Pruhonice 141.15 332 *e*PKPpre PKPpre 21 36 22.3
PRU *ep*PKP **PKiKP 21 36 30.3 +0.8**
PRU *e*PP **PP 21 39 29.6 +1.4**
PRU *ex* x 21 58 09.5
PRU AMS AMS 22 43 00.0
comp=Z,600nm,18.8s
ZST Bratislava 141.20 329 *e*PKIKP **PKPdf 21 36 27.2 +0.3**
ZST Bratislava 141.20 329 *e*PKP **PKPdf 21 36 27.2 +0.3**
TREC Trest 141.22 331 *e*PKIKP PKPpre 21 36 23.2
TREC *e* 21 39 23.9
TREC MLR MLR
comp=Z,600nm,21.1s
TREC Trest 141.22 331 *e*PKPpre PKPpre 21 36 23.2
TREC *e*PP PP 21 39 23.9 -4.8
TREC AMS AMS 22 42 40.0
comp=Z,600nm,21.1s
ESK Eskdalemuir 141.67 352 PFAKE 21 36 40.0 +12
ESK LR LR
comp=Z,548nm,21.0s
PKSM Moragy 141.67 325⇑ PKHKP PKPpre 21 36 21.7
PKSM Moragy 141.67 325⇑ *i*P PKPpre 21 36 21.7
PKSM Moragy 141.67 325⇓ *e*PKPdf **PKPdf 21 36 28.1 +0.3**
SOP Sopron 141.82 328⇓ *e*PKPdf **PKPdf 21 36 25.4 -2.6**
NKC Novy Kostel 141.87 334 AMS AMS 22 44 40.0
comp=Z,600nm,21.2s
SANT Santorini 141.87 307 PFAKE 21 36 40.0 +11
SANT LR LR
comp=Z,241nm,21.0s
CONA Conrad Observa 142.00 329⇑ *i* PKPdf PKPdf 21 36 23.6 -4.9
comp=Z,16nm,1.2s,SNR=9.4
KHC Kasperske Hory 142.21 332 *e*PKIKP PKPpre 21 36 24.2
KHC *e* 21 39 40.5
KHC *e* 21 58 02.4
KHC MLR MLR
comp=Z,800nm,18.7s
KHC Kasperske Hory 142.21 332 *e*PKPpre PKPpre 21 36 24.2
KHC *e*PP PP 21 39 40.5 +5.8
KHC *e*SS SS 21 58 02.4 -3.9
KHC AMS AMS 22 43 30.0
comp=Z,800nm,18.7s
KHC Kasperske Hory 142.21 332 *e*PKPdf PKPpre 21 36 25.0
GERES GERESS Array B 142.37 332 PKP **PKPdf 21 36 26.6 -2.5**
GERES SKPbc **SKiKP 21 40 08.1 +2.2**
GERES GERESS Array B 142.37 332 PKP **PKPdf 21 36 26.6 -2.5**
comp=Z,6.0nm,1.0s,baz=60,slow=3.2,SNR=24
GERES SKPbc **SKiKP 21 40 08.1 +2.2**
comp=Z,1.5nm,1.0s,baz=29,slow=2.2,SNR=4.5
BEHE Becsehely 142.51 327⇓ *e*PKPdf **PKPdf 21 36 25.3 -4.0**
WTSB Winterswijk 142.51 341 *e*PKP **PKPdf 21 36 28.7 -0.4**
GRF Grafenberg Arr 142.79 335 *e*PKIKP **PKPdf 21 36 26.2 -3.5**
GRFO Grafenberg 142.79 335 *e*PKIKP **PKPdf 21 36 27.2 -2.5**
GRFO Grafenberg 142.79 335 *e*PKPdf **PKPdf 21 36 27.2 -2.5**
KOGS Kog 142.80 327 *e*PKPdf **PKPdf 21 36 25.8 -4.0**
MOA Molln 142.82 330⇑ *i* PKPdf **PKPdf 21 36 26.7 -3.2**
comp=Z,25nm,1.1s,SNR=10
SOKA Soboth 143.27 328⇑ *i* PKPdf PKPab 21 36 25.3 -1.3
comp=Z,20nm,1.2s
TIR Tirane 143.71 318 PFAKE 21 36 40.0 +8.4

Code	Station	Δ°	AZ°	Op	ISC	Time	Res
TIR				LR	LR		
	comp=Z,477nm,20.0s						
TOD	Tromm	143.81	337	PKIKP	PKPbc	21 36 30.2	+1.0
TOD	Tromm	143.81	337	PKP	PKPbc	21 36 30.2	+1.0
KBA	Koelnbreinsper	143.81	330⇑	*i*PKPdf	PKPab	21 36 27.6	-1.2
	comp=Z,44nm,1.1s,SNR=13						
HGN	Heimansgroeve	143.83	340	*e*PKP	PKPab	21 36 29.0	+0.5
BEBN	Eben Emael	143.88	341	PKP	PKPdf	21 36 31.4	-0.1
MEM	Membach	143.94	340	PKP	PKPbc	21 36 30.5	+1.0
MEM				APKP	pPKPdf	21 36 41.1	-1.9
BOJS	Bojanci	143.95	327	*e*PKPdf	PKPbc	21 36 30.1	+0.4
LJU	Ljubljana	143.96	328	*e*PKPdf	PKPab	21 36 28.4	-0.8
MYKA	Terra Mystica	143.99	329⇑	*i*PKPdf	PKPab	21 36 28.1	-1.2
	comp=Z,33nm,1.1s						
ABH	Alteburg	144.04	338	PKP	PKPdf	21 36 31.4	-0.5
STON	Ston	144.21	321	P	PKPab	21 36 29.9	-0.2
CADS	Cadrg	144.22	329	*e*PKPdf	PKPab	21 36 28.6	-1.7
UCC	Uccle	144.28	342	PKP	PKPbc	21 36 31.0	+0.4
VOY	Vojsko	144.28	328	*e*PKPdf	PKPab	21 36 29.6	-0.9
VOY				*e*		21 36 37.2	
VOY				*e*		21 36 47.4	
KTD	Kalmit	144.31	337	PKIKP	PKPdf	21 36 32.1	-0.4
KTD	Kalmit	144.31	337	PKP	PKPdf	21 36 32.1	-0.4
BCLA	Clavier	144.33	341	PKP	PKPbc	21 36 31.7	+1.0
STU	Stuttgart	144.33	336	*e*PKIKP	PKPbc	21 36 31.2	+0.4
STU	Stuttgart	144.33	336	*e*PKPdf	PKPbc	21 36 31.2	+0.4
RUP	Ruppelstein	144.36	338	PKIKP	PKPab	21 36 30.9	+0.3
RUP	Ruppelstein	144.36	338	PKP	PKPab	21 36 30.9	+0.3
WATA	Walderalm	144.44	332	*i* PKPdf	PKPdf	21 36 32.9	0.0
	SNR=7.5						
ABTA	Abfaltersbach	144.44	330⇑	*i*PKPdf	PKPab	21 36 30.2	-0.9
	comp=Z,107nm,1.0s,SNR=61						
WTTA	Wattenberg	144.47	332⇑	*i*PKPdf	PKPab	21 36 31.1	-0.2
	comp=Z,54nm,1.0s,SNR=19						
SNF	Seneffe	144.56	342	PKP	PKPab	21 36 31.6	+0.4
MOTA	Moosalm	144.65	332⇑	*i*PKPdf	PKPab	21 36 31.4	-0.5
	comp=Z,96nm,1.0s,SNR=41						
RETA	Reutte	144.69	333⇓	*i*PKPdf	PKPab	21 36 30.7	-1.3
	comp=Z,67nm,1.1s,SNR=18						
SSW	Stow on the Wo	144.69	349	*e*P	PKPab	21 36 30.0	-1.7
SSW	Stow on the Wo	144.69	349	P	PKPab	21 36 30.0	-1.7
LANF	Langenberg	144.69	337	PKIKP	PKPab	21 36 32.0	+0.2
LANF	Langenberg	144.69	337	PKP	PKPab	21 36 32.0	+0.2
LANF	Langenberg	144.69	337	PKP	PKPab	21 36 32.0	+0.2
WLF	Walferdange	144.70	339	PKP	PKPbc	21 36 32.4	+0.4
WLF				APKP	pPKPdf	21 36 43.3	-1.0
WLF	Walferdange	144.70	339	*e*PKIKP	PKPab	21 36 32.2	+0.4
WLF				MLR	MLR		
	comp=Z,598nm,19.0s						
WLF	Walferdange	144.70	339	*e*PKPdf	PKPab	21 36 32.2	+0.4
WLF				LR	LR		
	comp=Z,598nm,19.0s						
ELSH	Elham, Standar	144.83	345	AMS	AMS	22 49 00.4	
	comp=Z,594nm,17.5s						
DOU	Dourbes	144.83	341	PKP	PKPab	21 36 31.6	-0.6
DOU				APKP	pPKPdf	21 36 43.4	-1.1
MCH1	Michaelchurch	144.86	350	*e*P	PKPab	21 36 31.3	-1.0
MCH1				AMS	AMS	22 51 11.4	
	comp=Z,580nm,13.7s						
MCH1	Michaelchurch	144.86	350	P	PKPab	21 36 31.3	-1.0
MCH1				AMS	AMS	22 51 11.4	
	comp=Z,580nm,13.7s						
BFO	Black Forest	145.03	336	*e*PKIKP	PKPbc	21 36 32.0	-1.1
BFO				MLR	MLR		
	comp=Z,466nm,19.0s						
BFO	Black Forest	145.03	336	*e*PKPdf	PKPbc	21 36 32.0	-1.1
BFO				LR	LR		
	comp=Z,466nm,19.0s						
SPAK	Spaichingen-Ko	145.03	335	PKP	PKPbc	21 36 33.0	-0.2
FETA	Feichten	145.06	332⇑	*i*PKPab	PKPbc	21 36 32.1	-1.3
	comp=Z,208nm,1.0s,SNR=128						
SWN1	Swindon	145.12	349	*e*P	PKPbc	21 36 32.5	-0.7
SWN1	Swindon	145.12	349	P	PKPbc	21 36 32.5	-0.7
DAVA	Damuels	145.22	333⇑	*i*PKPab	PKPbc	21 36 32.3	-1.7
	comp=Z,214nm,0.9s,SNR=61						
LIBD	Limburg	145.45	336	PKIKP	PKPbc	21 36 34.5	+0.1
LIBD	Limburg	145.45	336	PKP	PKPbc	21 36 34.5	+0.1
FELD	Feldberg im Sc	145.52	336	PKP	PKPdf	21 36 34.5	-0.2
ECH	Echery	145.57	337	*e*PKIKP	PKPdf	21 36 33.8	-0.9
ECH				MLR	MLR		
	comp=Z,430nm,19.0s						
ECH	Echery	145.57	337	*e*PKPdf	PKPdf	21 36 33.8	-0.9
ECH				LR	LR		
	comp=Z,430nm,19.0s						
ECH	Echery	145.57	337	PKP	PKPdf	21 36 34.7	+0.1
VAL	Valentia	145.64	358	*e*P	PKPdf	21 36 34.2	-0.4
MOF	Molkenrain	145.88	337	PKP2	PKPdf	21 36 35.5	+0.2
MOF	Molkenrain	145.88	337	PKP	PKPdf	21 36 35.5	+0.2
MOF	Molkenrain	145.88	337	PKP	PKPdf	21 36 35.5	+0.2
HEX	Exmoor	145.89	351	*e*P	PKPdf	21 36 35.0	-0.1
HEX	Exmoor	145.89	351	P	PKPdf	21 36 35.0	-0.1
THEF	They Montfort	145.99	338	PKP2	PKPbc	21 36 36.3	+0.2
THEF	They Montfort	145.99	338	PKP	PKPbc	21 36 36.3	+0.2
THEF	They Montfort	145.99	338	PKP	PKPbc	21 36 36.3	+0.2
BBS	Basel-Blauen	146.05	336	PKP2	PKPdf	21 36 36.2	+0.7
BBS	Basel-Blauen	146.05	336	PKP	PKPdf	21 36 36.2	+0.7
HTL	Hartland	146.06	351	*e*P	PKPdf	21 36 35.0	-0.3
HTL				AMS	AMS	22 51 20.4	
	comp=Z,607nm,16.9s						
HTL	Hartland	146.06	351	P	PKPdf	21 36 35.0	-0.3
HTL				AMS	AMS	22 51 20.4	
	comp=Z,607nm,16.9s						
TUE	Stuetta	146.09	333	*e*PKPdf	PKPdf	21 36 36.1	+0.3
TUE				LR	LR		
	comp=Z,612nm,21.0s						
LOMF	Lomont	146.41	336	PKP2	PKPbc	21 36 37.5	0.0
LOMF	Lomont	146.41	336	PKP	PKPbc	21 36 37.5	0.0
LOMF	Lomont	146.41	336	PKP	PKPbc	21 36 37.5	0.0
DYA	Yadsworthy	146.52	350	*e*P	PKPdf	21 36 33.5	-2.6
DYA				AMS	AMS	22 50 17.3	
	comp=Z,455nm,17.2s						
DYA	Yadsworthy	146.52	350	P	PKPdf	21 36 33.5	-2.6
DYA				AMS	AMS	22 50 17.3	
	comp=Z,455nm,17.2s						
TIP	Timpagrande	146.87	317	*e*PKPdf	PKPdf	21 36 37.2	0.0
TIP				LR	LR		
	comp=Z,674nm,19.0s						
RCBR	Riachuelo	147.02	133	PFAKE		21 36 50.0	+8.4
RCBR				LR	LR		
	comp=Z,684nm,20.0s						
AQU	L'Aquila	147.03	324	*e*PKPbc	PKPbc	21 36 39.3	-0.1
AQU				LR	LR		
	comp=Z,856nm,19.0s						
AQU	L'Aquila	147.03	324⇑	*i*P	PKPbc	21 36 39.3	-0.1
CUC	Castrocucco	147.03	318	*e*PKPdf	PKPdf	21 36 37.6	+0.2
CUC				LR	LR		
	comp=Z,388nm,20.0s						
VLC	Villacollemand	147.36	329	*e*PKPbc	PKPbc	21 36 40.2	-0.1
VLC				LR	LR		
	comp=Z,548nm,22.0s						
JSA	Saint Aubin	147.41	348	*e*P	PKPdf	21 36 38.5	+0.9
JSA	Saint Aubin	147.41	348	P	PKPdf	21 36 38.5	+0.9
CEL	Celeste	147.93	316	*e*PKPdf	PKPdf	21 36 38.6	-0.4
CEL				*e*PKPbc	PKiKP	21 36 43.5	-0.4
CEL				LR	LR		
	comp=Z,425nm,19.0s						
BNI	Bardonecchia	148.35	334	*e*PKIKP	PKPdf	21 36 40.5	+0.9
BNI				*e*		21 36 44.3	
BNI				MLR	MLR		
	comp=Z,604nm,20.0s						
BNI	Bardonecchia	148.35	334	*e*PKPdf	PKPdf	21 36 40.5	+0.9
BNI				*e*PKPbc	PKiKP	21 36 44.3	-0.4
BNI				LR	LR		
	comp=Z,604nm,20.0s						
GDM	Grand'Maison	148.46	335	PKP	PKPbc	21 36 43.5	+0.2
GDM	Grand'Maison	148.46	335	PKP	PKPbc	21 36 43.5	+0.2
GRN	Grenoble	148.57	335	PKP2	PKPbc	21 36 43.8	+0.3
GRN	Grenoble	148.57	335	PKP	PKPbc	21 36 43.8	+0.3
GRN	Grenoble	148.57	335	PKP	PKPbc	21 36 43.8	+0.3
SURF	Saint Ours	148.75	333	PKP	PKPbc	21 36 44.6	+0.5
SURF	Saint Ours	148.75	333	PKP	PKPbc	21 36 44.6	+0.5
AGO	Saint Agoulin	148.85	339	PKP	PKPbc	21 36 45.2	+1.1
AUTN	L'Aution	148.87	332	PKP2	PKPbc	21 36 43.2	-1.3
AUTN	L'Aution	148.87	332	PKP	PKPbc	21 36 43.2	-1.3
AUTN	L'Aution	148.87	332	PKP	PKPbc	21 36 43.2	-1.3
TOUF	Mont Tournerai	148.93	332	PKP2	PKPbc	21 36 44.5	-0.1
TOUF	Mont Tournerai	148.93	332	PKP	PKPbc	21 36 44.5	-0.1
TOUF	Mont Tournerai	148.93	332	PKP	PKPbc	21 36 44.5	-0.1
SSB	Saint Sauveur	149.01	337	*e*PKIKP	PKPdf	21 36 41.5	+1.0
SSB				*e*		21 36 45.9	
SSB				MLR	MLR		
	comp=Z,470nm,19.0s						
SSB	Saint Sauveur	149.01	337	*e*PKPdf	PKPdf	21 36 41.5	+1.0
SSB				PKP	PKPbc	21 36 44.5	-0.1
SSB				*e*PKPbc	PKiKP	21 36 45.9	0.0
SSB				LR	LR		
	comp=Z,470nm,19.0s						
MVIF	Mont Vial	149.07	332	PKP2	PKPbc	21 36 44.7	-0.2
MVIF	Mont Vial	149.07	332	PKP	PKPbc	21 36 44.7	-0.2
MVIF	Mont Vial	149.07	332	PKP	PKPbc	21 36 44.7	-0.2
REVF	Revere	149.10	332	PKP2	PKPbc	21 36 44.3	-0.5
REVF	Revere	149.10	332	PKP	PKPbc	21 36 44.3	-0.5
REVF	Revere	149.10	332	PKP	PKPbc	21 36 44.3	-0.5
PYM	Petit Puy Mans	149.16	339	PKP	PKPbc	21 36 46.3	+1.3
CALN	Calern	149.30	332	PKP2	PKPbc	21 36 45.8	+0.3
CALN	Calern	149.30	332	PKP	PKPbc	21 36 45.8	+0.3
CALN	Calern	149.30	332	PKP	PKPbc	21 36 45.8	+0.3
OCF	Saint Nazaire	149.30	335	PKP	PKPbc	21 36 45.5	+0.2
OG26	St.-Nazaire-De	149.30	335	PKP	PKPbc	21 36 45.5	+0.2
LBL	Lubilhac	149.52	338	PKP	PKPbc	21 36 46.8	+0.9
FRNF	Fournols	149.62	339	PKP	PKPbc	21 36 46.4	+0.3
OSPF	L'Ospedale	149.78	327	PKP	PKPbc	21 36 44.9	-1.7
OSPF	L'Ospedale	149.78	327	PKP	PKPbc	21 36 44.9	-1.7
WDD	Wield Dalam	150.11	313	PFAKE		21 36 50.0	+2.5
WDD				LR	LR		
	comp=Z,478nm,19.0s						
FILF	Fillols	152.07	336	PKP	PKPbc	21 36 52.5	+0.5
MLS	Moulis	152.26	339	PKP	PKPbc	21 36 51.9	-0.4
LABF	Labassere	152.52	340	PKP	PKPbc	21 36 53.3	+0.3
RESF	Ens	152.65	340	PKP	PKPbc	21 36 54.8	+1.5
KEST	Kesra	153.67	318	*e*PKPdf	PKPdf	21 36 48.8	+0.8
KEST				PKPbc	PKPbc	21 36 55.6	-0.2
KEST				*e*PKPbc	PKiKP	21 36 56.4	+0.5
KEST	Kesra	153.67	318	PKPbc	PKPbc	21 36 55.6	-0.2
	comp=Z,3.2nm,0.9s,baz=45,slow=1.4,SNR=5.6						
CMAH	Djebel Manchou	154.29	322	P	PKPdf	21 36 45.1	-3.7
PBRG	Braganca	155.37	350	*e*PKPab	PKPab	21 37 15.3	-0.1
PGAV	Gavieira, Arco	155.43	353	PKPab	PKPab	21 37 32.3	+17
PGAV				*e*LR	LR	22 42 56.7	
	comp=Z,745nm,18.0s						
POLO	Lamas de Olo	155.95	352	*e*PKPab	PKPab	21 37 18.6	+0.7
PVRL	Vila Real	156.03	352	*e*PKPab	PKPab	21 37 18.0	-0.2
MVO	Moncorvo	156.04	350	*e*PKPab	PKPab	21 37 19.8	+1.5
MVO				*e*SKS		21 46 12.1	
MVO				*e*LR	LR	22 43 12.6	
	comp=Z,851nm,18.0s						
PVIS	Viseu	156.61	352	*e*PKPab	PKPab	21 37 20.3	-0.4
CMLA	Cha da Macela	156.69	28	PFAKE		21 37 00.0	+8.1
CMLA				LR	LR		
	comp=Z,990nm,20.0s						
ESDC	Sonseca Array	156.82	344	PKP	PKPdf	21 36 53.4	+1.3
ESDC				PKPab	PKPab	21 37 22.5	+0.9
ESDC	Sonseca Array	156.82	344	PKP	PKPdf	21 36 53.4	+1.3
	comp=Z,0.2nm,0.4s,baz=5.7,slow=3.0,SNR=5.4						
ESDC				PKPab	PKPab	21 37 22.5	+0.9
	comp=Z,4.5nm,0.8s,baz=17,slow=3.9,SNR=13						
MTE	Manteigas	156.87	351	*e*PKPab	PKPab	21 37 21.5	-0.3
MTE				*e*SKS		21 45 06.0	
MTE				*e*LR	LR	22 44 34.9	
	comp=Z,564nm,20.0s						
MTE	Manteigas	156.87	351	*e*PKPab	PKPab	21 37 21.1	-0.7
MTE				LR	LR		
	comp=Z,603nm,19.0s						
PAB	San Pablo	157.04	344	PFAKE		21 37 00.0	+7.6
PAB				LR	LR		
	comp=Z,680nm,20.0s						
PCBR	Castelo Branco	157.41	351	*e*PKPab	PKPab	21 37 23.5	-0.6
PMRV	Marv??o	157.80	350	PKPab	PKPab	21 37 39.1	+13
PMRV				*e*LR	LR	22 42 45.7	
	comp=Z,580nm,18.0s						
PMTG	Montargil	158.27	352	*e*PKPab	PKPab	21 37 28.5	+0.7
PESTR	Estremoz	158.38	350	*e*PKPab	PKPab	21 37 29.4	+1.1
LIS	Lisbon	158.74	353	*e*P	PKPdf	21 36 52.7	-1.6
LIS				*e*PP	PP	21 41 09.6	+0.4
LIS				AMS	AMS	22 46 19.6	
	comp=E,1μm,23.2s						
LIS	Lisbon	158.74	353	*e*P	PKPdf	21 36 52.7	-1.6
LIS	Lisbon	158.74	353	*e*PKIKP	PKPdf	21 36 52.7	-1.6
LIS				*e*		21 41 09.5	
EVO	Evora	158.77	351	*e*PKPab	PKPab	21 37 31.0	+1.0
PBAR	Barrancos	158.95	349	*e*PKPab	PKPab	21 37 31.1	+0.3
PBEJ	Beja	159.24	350	*e*PKPab	PKPab	21 37 31.8	-0.3
MESJ	Messejana	159.48	351	*e*P	PKPdf	21 36 55.1	-0.2
MESJ				*e*SS	SS	22 01 17.4	+0.8
MESJ				AMS	AMS	22 55 43.6	
	comp=Z,597nm,18.5s						
MESJ	Messejana	159.48	351	*e*P	PKPdf	21 36 55.1	-0.2
MESJ				*e*SS	SS	22 01 17.4	+0.8
MESJ				A	A	22 55 43.6	
	comp=Z,597nm,18.5s						
MESJ	Messejana	159.48	351	*e*PKIKP	PKPdf	21 36 55.0	-0.2
PVAQ	Vaqueiros	159.82	350	PKPab	PKPab	21 37 42.2	+7.6
PVAQ				*e*SKS		21 41 18.9	
PVAQ				*e*LR	LR	22 43 12.8	
	comp=Z,630nm,18.0s						
MORF	Marmelete	160.06	352	*e*PKPab	PKPab	21 37 37.7	+2.0
MORF	Marmelete	160.06	352	*e*PKIKP	PKPdf	21 36 55.0	-1.0
MORF				*e*		21 41 17.1	
TAM	Tamanrasset	162.58	290	PFAKE		21 37 10.0	+11
TAM				LR	LR		
	comp=Z,904nm,20.0s						
RTC	Rabat Centre	162.94	345	PFAKE		21 37 10.0	+11
RTC				LR	LR		
	comp=Z,862nm,21.0s						
TORD	Torodi Ar. Bea	165.92	254	PKP	PKPdf	21 37 01.2	-1.0
TORD				PKPab	PKPab	21 38 09.6	+7.4
TORD	Torodi Ar. Bea	165.92	254	PKP	PKPdf	21 37 01.2	-1.0
	comp=Z,13nm,1.0s,baz=14,slow=0.6,SNR=32						
TORD				PKPab	PKPab	21 38 09.6	+7.4
	comp=Z,2.1nm,0.8s,baz=99,slow=4.8,SNR=3.7						
DBIC	Dimbokro	167.04	214	PKP	PKPdf	21 37 03.3	+0.2
DBIC	Dimbokro	167.04	214	PKP	PKPdf	21 37 03.3	+0.2
	comp=Z,14nm,1.0s,baz=137,slow=1.7,SNR=6.4						
SACV	Santiago Islan	168.73	101	PFAKE		21 37 20.0	+16
SACV				LR	LR		
	comp=Z,857nm,20.0s						

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*MDD **05** 22:03:11.6±2.0, 36.°82N×12.°24W, h0km, mb4.1/1, Error*
ellipse: s-maj=18.6km s-min=15.1km az=117.0
*INMG **05** 22:03:11.8±1.4, 36.°63N×12.°70W, h10km, ML2.2, Error*
ellipse: s-maj=8.1km s-min=4.3km az=123.0
*PDA **05** 22:03:11.8±1.4, 36.°63N×12.°70W, h10km, ML2.2, Error*
ellipse: s-maj=8.1km s-min=4.3km az=123.0
*IGIL **05** 22:03:12.1, 36.°86N×12.°30W, h2km, ML1.8*
*CSEM **05** 22:03:13.9±0.4, 37.°00N×12.°09W, h10km, ML2.6/7, Error*
ellipse: s-maj=7.0km s-min=5.7km az=105.0
ISC 05 22:03:10.1±3.7**, 36.°9N**±0.°1×**12.°3W**±0.°2**, h10km, n78,**
σ**1.°36**/128**, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	2.80	84	*e*Pn	Pn	22 03 55.2	+0.2
PFVI				*e*Sn	Sn	22 04 27.8	-1.1
PFVI				A	A	22 04 45.3	
	6.2nm,0.8s						
PFVI	Vila Bisbo	2.80	84	P	Pn	22 03 55.2	+0.2
	3.6nm,0.1s,SNR=20						
PFVI				S	Sn	22 04 28.1	-0.8
	2.6nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	2.80	84	P	Pn	22 03 55.2	+0.2
	3.6nm,0.1s,SNR=20						
PFVI				*e*Sn	Sn	22 04 27.8	-1.1
	6.2nm,0.8s						
PFVI				S	Sn	22 04 28.1	-0.8
	2.6nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	2.94	76	*e*Pn	Pn	22 03 57.7	+0.9
PTEO				*e*Sn	Sn	22 04 31.4	-0.8
PTEO				A	A	22 04 47.7	
	7.0nm,0.9s						
PTEO	Sao Teotonio	2.94	76	P	Pn	22 03 57.7	+0.9
PTEO				S	Sn	22 04 31.4	-0.8
	3.5nm,0.9s						
PTEO	Sao Teotonio	2.94	76	P	Pn	22 03 57.7	+0.9
PTEO				S	Sn	22 04 31.4	-0.8
	3.5nm,0.9s						
MORF	Marmelete	2.96	81	*e*Pn	Pn	22 03 57.6	+0.4
MORF				*e*Sn	Sn	22 04 33.1	+0.3
MORF				A	A	22 04 34.5	
	3.8nm,1.0s						
MORF	Marmelete	2.96	81	P	Pn	22 03 57.6	+0.4
MORF				S	Sn	22 04 31.9	-0.9
MORF	Marmelete	2.96	81	P	Pn	22 03 57.6	+0.4
MORF				S	Sn	22 04 31.9	-0.9
MORF				*e*Sn	Sn	22 04 33.1	+0.3
	3.8nm,1.0s						
PMAFR	Mafra	3.15	49	*e*Pn	Pn	22 04 01.6	+1.8
PMAFR				*e*Sn	Sn	22 04 38.6	+1.2
PMAFR				A	A	22 04 39.8	
	26nm,0.2s						
PMAFR	Mafra	3.15	49	P	Pn	22 04 01.4	+1.6
	0.7nm,0.1s,SNR=7.9						
PMAFR				S	Sn	22 04 38.4	+1.0
	44nm,0.2s,SNR=26						
PMAFR	Mafra	3.15	49	*e*Pn	Pn	22 04 01.6	+1.8
PMAFR				S	Sn	22 04 38.4	+1.0
	44nm,0.2s,SNR=26						
PNCL	Nicolau / Gran	3.24	67	*e*Pn	Pn	22 04 02.4	+1.4
PNCL				*e*Sn	Sn	22 04 39.4	-0.3
PNCL				A	A	22 04 44.0	
	2.4nm,0.3s						
PNCL	Nicolau / Gran	3.24	67	*e*Pn	Pn	22 04 02.4	+1.4
PNCL				*e*Sn	Sn	22 04 39.4	-0.3
	2.4nm,0.3s						
MESJ	Messejana	3.39	73	*e*P	Pn	22 04 04.7	+1.6
MESJ				*e*S	Sn	22 04 42.3	-1.1
MESJ				AML	AML	22 04 45.5	
	comp=N,3.1nm,0.6s						
MESJ	Messejana	3.39	73	*e*P	Pn	22 04 04.7	+1.6
MESJ				*e*S	Sn	22 04 42.3	-1.1
MESJ	Messejana	3.39	73	P	Pn	22 04 04.7	+1.6
MESJ				S	Sn	22 04 42.3	-1.1
MESJ	Messejana	3.39	73	P	Pn	22 04 04.7	+1.6
MESJ				S	Sn	22 04 42.3	-1.1
PBDV	Barranco-do-Ve	3.52	83	*e*Pn	Pn	22 04 05.6	+0.7
PBDV				*e*Sn	Sn	22 04 47.9	+1.2
PBDV				A	A	22 05 18.4	
	comp=N,4.5nm,1.0s						
PBDV	Barranco-do-Ve	3.52	83	P	Pn	22 04 05.6	+0.7
PBDV				S	Sn	22 04 47.9	+1.2
	comp=N,4.5nm,1.0s						
PBDV	Barranco-do-Ve	3.52	83	P	Pn	22 04 05.6	+0.7
PBDV				S	Sn	22 04 47.9	+1.2
	comp=N,4.5nm,1.0s						
MOE	Montemor	3.53	62	*e*Sn	Sn	22 04 46.0	-0.9
MOE	Montemor	3.53	62	S	Sn	22 04 46.0	-0.9
MOE	Montemor	3.53	62	S	Sn	22 04 46.0	-0.9
PVAQ	Vaqueiros	3.71	81	*e*Pn	Pn	22 04 08.5	+1.1
PVAQ				*e*Sn	Sn	22 04 51.7	+0.5
PVAQ	Vaqueiros	3.71	81	P	Pn	22 04 08.5	+1.1
PVAQ				S	Sn	22 04 51.7	+0.5
PVAQ	Vaqueiros	3.71	81	P	Pn	22 04 08.5	+1.1
PVAQ				S	Sn	22 04 51.7	+0.5
EVO	Evora	3.78	63	*e*Pn	Pn	22 04 09.9	+1.5
EVO				*e*Sn	Sn	22 04 52.5	-0.4
EVO				A	A	22 04 55.4	
	comp=N,4.6nm,0.1s						
EVO	Evora	3.78	63	P	Pn	22 04 09.9	+1.5
EVO				S	Sn	22 04 52.5	-0.4
	comp=N,4.6nm,0.1s						
EVO	Evora	3.78	63	P	Pn	22 04 09.9	+1.5
EVO				S	Sn	22 04 52.5	-0.4
	comp=N,4.6nm,0.1s						
PMTG	Montargil	3.88	55	*e*Pn	Pn	22 04 11.3	+1.4
PMTG				*e*Sn	Sn	22 04 55.5	0.0
PMTG				A	A	22 04 58.6	
	comp=N,2.4nm,0.3s						
PMTG	Montargil	3.88	55	*e*Pn	Pn	22 04 11.3	+1.4
PMTG				*e*Sn	Sn	22 04 55.5	0.0
	comp=N,2.4nm,0.3s						
EGRO	El Granado	3.91	79	P	Pn	22 04 11.3	+1.1
	comp=N,0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	22 04 55.2	-0.9
	comp=N,0.6nm,0.1s,SNR=4.0						
EGRO	El Granado	3.91	79	P	Pn	22 04 11.3	+1.1
	comp=N,0.4nm,0.1s,SNR=7.9						
EGRO				S	Sn	22 04 55.2	-0.9
	comp=N,0.6nm,0.1s,SNR=4.0						
PTOM	Tomar	4.09	48	*e*Sn	Sn	22 05 02.7	+2.0
PTOM	Tomar	4.09	48	S	Sn	22 05 02.7	+2.0
PTOM	Tomar	4.09	48	*e*Sn	Sn	22 05 02.7	+2.0
PESTR	Estremoz	4.22	61	*e*Pn	Pn	22 04 16.0	+1.5
PESTR				*e*Sn	Sn	22 05 03.0	-0.8
PESTR				A	A	22 05 26.3	
	comp=N,2.8nm,0.6s						
PESTR	Estremoz	4.22	61	P	Pn	22 04 16.0	+1.5
PESTR				S	Sn	22 05 03.0	-0.8
	comp=N,1.4nm,0.6s						
PESTR	Estremoz	4.22	61	P	Pn	22 04 16.0	+1.5
PESTR				S	Sn	22 05 03.0	-0.8
	comp=N,1.4nm,0.6s						
PBAR	Barrancos	4.38	72	*e*Pn	Pn	22 04 18.3	+1.6
PBAR				*e*Sn	Sn	22 05 06.2	-1.6
PBAR				A	A	22 05 16.1	
	comp=N,2.0nm,0.7s						
PBAR	Barrancos	4.38	72	P	Pn	22 04 18.3	+1.6
PBAR				S	Sn	22 05 06.2	-1.6
	comp=N,2.0nm,0.7s						
PBAR	Barrancos	4.38	72	P	Pn	22 04 18.3	+1.6
PBAR				S	Sn	22 05 06.2	-1.6
	comp=N,2.0nm,0.7s						
EMIN	Mina Concepcio	4.58	78	P	Pn	22 04 19.7	+0.3
	comp=N,0.3nm,0.2s,SNR=7.9						
EMIN				S	Sn	22 05 10.7	-2.0
	comp=N,0.2nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	4.58	78	P	Pn	22 04 19.7	+0.3
	comp=N,0.3nm,0.2s,SNR=7.9						
EMIN				S	Sn	22 05 10.7	-2.0
	comp=N,0.2nm,0.1s,SNR=7.9						
EBAD	Badajoz	4.58	65	P	Pn	22 04 20.6	+1.1
	comp=N,0.4nm,0.1s,SNR=6.8						
EBAD				S	Sn	22 05 12.2	-0.6
	comp=N,1.9nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.58	65	P	Pn	22 04 20.6	+1.1
	comp=N,0.4nm,0.1s,SNR=6.8						
EBAD				S	Sn	22 05 12.2	-0.6
	comp=N,1.9nm,0.2s,SNR=7.9						
PMRV	Marv??o	4.62	56	*e*Pn	Pn	22 04 21.3	+1.3
PMRV				*e*Sn	Sn	22 05 12.8	-1.0
PMRV				A	A	22 05 15.1	
	comp=N,2.5nm,1.0s						
PMRV	Marv??o	4.62	56	P	Pn	22 04 21.3	+1.3
PMRV				S	Sn	22 05 12.8	-1.0
	comp=N,2.5nm,1.0s						
PMRV	Marv??o	4.62	56	P	Pn	22 04 21.3	+1.3
PMRV				S	Sn	22 05 12.8	-1.0
	comp=N,2.5nm,1.0s						
PCBR	Castelo Branco	4.80	51	*e*Pn	Pn	22 04 24.2	+1.8
PCBR				*e*Sn	Sn	22 05 17.5	-0.5
PCBR				A	A	22 05 43.2	
	comp=N,1.2nm,0.7s						
PCBR	Castelo Branco	4.80	51	P	Pn	22 04 24.2	+1.8
PCBR				S	Sn	22 05 17.5	-0.5
	comp=N,0.6nm,0.7s						
PCBR	Castelo Branco	4.80	51	P	Pn	22 04 24.2	+1.8
PCBR				S	Sn	22 05 17.5	-0.5
	comp=N,0.6nm,0.7s						
MTE	Manteigas	5.11	46	*e*Sn	Sn	22 05 24.5	-1.3
MTE	Manteigas	5.11	46	S	Sn	22 05 24.5	-1.3
MTE	Manteigas	5.11	46	S	Sn	22 05 24.5	-1.3
PVIS	Viseu	5.13	41	*e*Sn	Sn	22 05 25.7	-0.7
PVIS				A	A	22 05 27.7	
	comp=N,3.6nm,0.3s						
PVIS	Viseu	5.13	41	S	Sn	22 05 25.7	-0.7
	comp=N,1.8nm,0.3s						
PVIS	Viseu	5.13	41	S	Sn	22 05 25.7	-0.7
	comp=N,1.8nm,0.3s						
PMAR	Madeira	5.63	223	*e*Sn	Sn	22 05 17.2	-22
PMAR	Madeira	5.63	223	S	Sn	22 05 17.2	-22
POLO	Lamas de Olo	5.67	37	*e*Sn	Sn	22 05 38.0	-1.8
POLO				A	A	22 05 56.9	
	comp=N,1.0nm,0.8s						
POLO	Lamas de Olo	5.67	37	*e*Sn	Sn	22 05 38.0	-1.8
	comp=N,1.0nm,0.8s						
EPLA	Plasencia	5.82	55	S	Sn	22 05 40.8	-2.5
	comp=N,0.7nm,0.1s,SNR=7.9						
EPLA	Plasencia	5.82	55	S	Sn	22 05 40.8	-2.5
	comp=N,0.7nm,0.1s,SNR=7.9						
PCAB	Cabril	5.83	33	*e*Sn	Sn	22 05 42.1	-1.5
PCAB	Cabril	5.83	33	S	Sn	22 05 42.1	-1.5
PCAB	Cabril	5.83	33	S	Sn	22 05 42.1	-1.5
MVO	Moncorvo	5.91	42	*e*Sn	Sn	22 05 44.1	-1.6
MVO				A	A	22 05 47.4	
	comp=N,2.0nm,0.5s						
MVO	Moncorvo	5.91	42	S	Sn	22 05 43.6	-2.1
	comp=N,1.0nm,0.1s,SNR=7.9						
MVO	Moncorvo	5.91	42	S	Sn	22 05 43.6	-2.1
	comp=N,1.0nm,0.1s,SNR=7.9						
MVO				*e*Sn	Sn	22 05 44.1	-1.6
	comp=N,2.0nm,0.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PGAV	**Gavieira, Arco**	**5.94**	**31**	*e*Sn	**Sn**	**22 05 44.8**	**-1.5**
PGAV				A	A	22 06 02.0	
	comp=N,2.8nm,0.8s						
PGAV	**Gavieira, Arco**	**5.94**	**31**	*e*Sn	**Sn**	**22 05 44.8**	**-1.5**
	comp=N,2.8nm,0.8s						
EADA	**Adamuz**	**6.28**	**76**	P	**Pn**	**22 04 43.3**	**+0.5**
	comp=N,0.6nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**22 05 52.0**	**-2.6**
	comp=N,0.4nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**6.28**	**76**	P	**Pn**	**22 04 43.3**	**+0.5**
	comp=N,0.6nm,0.3s,SNR=7.9						
EADA				S	**Sn**	**22 05 52.0**	**-2.6**
	comp=N,0.4nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.55**	**22**	S	**Sn**	**22 05 56.3**	**-5.0**
	comp=N,1.6nm,0.1s,SNR=7.9						
ECAL	**Calabor**	**6.62**	**39**	S	**Sn**	**22 06 01.0**	**-2.2**
	comp=N,1.8nm,0.4s,SNR=7.9						
ECAL	**Calabor**	**6.62**	**39**	S	**Sn**	**22 06 01.0**	**-2.2**
	comp=N,1.8nm,0.4s,SNR=7.9						

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*IDC **05** 22:03:17.7±0.6, 2°.13N×96°.56W, h0km, mb4.4/16, mb1 4.6/17, mb1mx4.5/25, mbtmp4.4/17, ML5.0/1, MS4.4/14, Ms1 4.5/14, ms1mx4.3/29, Error ellipse: s-maj=25.0km s-min=12.3km az=58.0*

*MOS **05** 22:03:18.9±1.0, 2°.20N×96°.37W, h10km, mb4.9/41, MS4.4/6, Error ellipse: s-maj=19.9km s-min=6.6km az=105.4*

*ISCJB **05** 22:03:19.2±0.4, 2°.21N±0°.06×96°.40W±0°.07, h10km, mb4.7/84, MS4.5/18, Error ellipse: s-maj=11.9km s-min=5.0km az=139.6*

*NEIC **05** 22:03:21.1±2.2, 2°.10N×96°.47W, h16km±13km, mb4.8/69, Error ellipse: s-maj=11.7km s-min=5.0km az=53.0*

*GCMT **05** 22:03:24.5±0.4, 2°.38N×96°.10W, h12km±1km, MW5.0, Moment Tensor Solution. s27,c37; s62,c86; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.01±.26; $M_{\theta\theta}$3.88±.18; $M_{\phi\phi}$-0.87±.24; $M_{r\theta}$2.31±.46; $M_{\theta\phi}$1.09±.13; $M_{\phi r}$0.44±.74; Best double couple: $M_0$4.30000×10^{16} NP1:ϕ_s76.00000°, δ28.00000°, λ-93.00000°. NP2:ϕ_s259.00000°, δ62.00000°, λ-89.00000°. Principal axes: T 4.8200, Plg17.0000°, Azm348.0000°; N -1.1100, Plg1.0000°, Azm78.0000°; P -3.7200, Plg73.0000°, Azm172.0000°; Data Used: II IU IC G CN.*

ISC 05 22:03:19.5±0.4**, 2°.09N**±0°.08×**96°.5W**±0°.1**, h10km, n418, σ1s.12**/427**, mb4.8**/84**, MS4.5**/18**, 115C-112D, West of Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**6.76**	**114**	*e*Pn	Pn	22 05 02.0	+3.1
TGUH	**Tegucigalpa,Un**	**14.96**	**37**	*e*Pn	**Pn**	**22 06 50.0**	**-1.3**
OTAV	**Otavalo**	**18.10**	**96**	*e*Pn	**P**	**22 07 33.5**	**+1.4**
	33nm,1.6s						
TEIG	**Tepich**	**19.72**	**23**	*e*P	**P**	**22 07 50.0**	**+0.7**
	74nm,1.3s						
TEIG	**Tepich**	**19.72**	**23**	P	**P**	**22 07 47.5**	**-1.8**
	4.0nm,0.3s,baz=39,slow=3.9,SNR=9.7						
TEIG				LR	LR	22 14 37.5	
	comp=Z,1µm,19.0s,baz=112,slow=34						
ATAH	**Atahualpa**	**20.23**	**117**	P	Pn	22 07 57.8	+0.4
ATAH	**Atahualpa**	**20.23**	**117**	P	Pn	22 07 57.8	+0.4
	24nm,1.2s,baz=304,slow=15,SNR=12						
ATAH				LR	LR	22 13 43.7	
	comp=Z,2µm,21.2s,baz=296,slow=31						
ROSC	**El Rosal**	**22.26**	**82**	*e*P	**P**	**22 08 16.8**	**-0.6**
ROSC	**El Rosal**	**22.26**	**82**	P	**P**	**22 08 18.3**	**+1.0**
	3.5nm,0.4s,baz=102,slow=22,SNR=9.5						
ROSC				LR	LR	22 15 59.8	
	comp=Z,705nm,18.5s,baz=181,slow=34						
NNA	**Nana**	**24.00**	**126**	*e*P	**P**	**22 08 36.7**	**+2.1**
	108nm,2.1s						
NNA	**Nana**	**24.00**	**126**	LR	LR	22 15 44.8	
	comp=Z,1000nm,18.2s,baz=293,slow=31						
SDV	**Santo Domingo**	**26.57**	**74**	*e*P	**P**	**22 08 59.5**	**+1.2**
	20nm,1.1s						
732A	**Laxson Ranch,**	**26.70**	**353**	⇑P	**P**	**22 09 00.1**	**+1.0**
	baz=27,SNR=10						
632A	**Uvalde**	**27.45**	**354**	⇓P	**P**	**22 09 06.5**	**+0.8**
	baz=28,SNR=8.4						
631A	**Perdido Creek**	**27.45**	**352**	⇓P	**P**	**22 09 06.3**	**+0.5**
	baz=28						
HKT	**Hockley**	**27.71**	**1**	*e*P	**P**	**22 09 08.3**	**+0.3**
HKT				pmax	pmax		
	comp=Z,42nm,2.1s						
HKT	**Hockley**	**27.71**	**1**	*e*P	**P**	**22 09 08.3**	**+0.3**
	comp=Z,42nm,2.1s						
628A	**Black Gap, Mar**	**27.92**	**348**	⇑P	**P**	**22 09 11.3**	**+1.2**
	baz=28,SNR=12						
TXAR	**Lajitas Array**	**27.95**	**346**	P	**P**	**22 09 11.0**	**+0.7**
TXAR				PcP	**PcP**	**22 12 25.9**	**+0.1**
TXAR	**Lajitas Array**	**27.95**	**346**	P	**P**	**22 09 11.0**	**+0.7**
	comp=Z,3.1nm,0.8s,baz=163,slow=12,SNR=22						
TXAR				PcP	**PcP**	**22 12 25.9**	**+0.1**
	comp=Z,1.4nm,0.9s,baz=164,slow=4.9,SNR=6.0						
TXAR				LR	LR	22 18 17.5	
	comp=Z,939nm,18.5s,baz=90,slow=32						
627A	**Terlingua Ranc**	**28.00**	**347**	⇑P	**P**	**22 09 11.6**	**+0.8**
	baz=28,SNR=14						
532A	**Rocksprings**	**28.08**	**354**	⇓P	**P**	**22 09 12.4**	**+1.0**
	baz=28						
531A	**Rocksprings**	**28.19**	**353**	⇓P	**P**	**22 09 13.2**	**+0.7**
	baz=28,SNR=22						
626A	**Big Bend Ranch**	**28.27**	**346**	⇑P	**P**	**22 09 14.4**	**+1.2**
	baz=28,SNR=14						
530A	**J-C Ranch, Com**	**28.29**	**351**	⇑P	**P**	**22 09 14.6**	**+1.2**
	baz=28,SNR=7.7						
529A	**Stev Forest Ra**	**28.41**	**349**	⇑P	**P**	**22 09 15.5**	**+1.1**
	baz=29						
JCT	**Junction City**	**28.41**	**354**	*e*P	**P**	**22 09 15.8**	**+1.4**
JCT				pmax	pmax		
	comp=Z,29nm,1.8s						
JCT	**Junction City**	**28.41**	**354**	*e*P	**P**	**22 09 15.8**	**+1.4**
	comp=Z,29nm,1.8s						
JCT	**Junction City**	**28.41**	**354**	⇓P	**P**	**22 09 15.9**	**+1.5**
	baz=29						
528A	**Cox Ranch, San**	**28.56**	**348**	⇑P	**P**	**22 09 16.7**	**+0.9**
	baz=29						
431A	**Sonora**	**28.71**	**353**	⇓P	**P**	**22 09 17.7**	**+0.6**
	baz=29						
527A	**Woodward Ranch**	**28.72**	**347**	⇓P	**P**	**22 09 17.8**	**+0.5**
	baz=29,SNR=12						
526A	**Mary Lane Ranc**	**28.75**	**346**	⇓P	**P**	**22 09 18.8**	**+1.3**
	baz=29,SNR=25						
429A	**Davenport Ranc**	**28.84**	**350**	⇓P	**P**	**22 09 19.3**	**+1.0**
	baz=29						
430A	**Baggett Ranch,**	**28.90**	**351**	⇓P	**P**	**22 09 19.6**	**+0.9**
	baz=29						
428A	**Kincaid Ranch,**	**29.09**	**349**	⇑P	**P**	**22 09 20.8**	**+0.3**
	baz=29						
332A	**Millersview**	**29.30**	**354**	⇓P	**P**	**22 09 23.1**	**+0.8**
	baz=29						
426A	**McDonald Obser**	**29.31**	**347**	⇑P	**P**	**22 09 23.5**	**+0.8**
	baz=30,SNR=11						
330A	**Mertzon**	**29.50**	**352**	⇑P	**P**	**22 09 24.6**	**+0.5**
	baz=30						
425A	**Indio Mountain**	**29.66**	**345**	⇓P	**P**	**22 09 26.7**	**+1.0**
	baz=30,SNR=23						
329A	**Wagon Wheel Ra**	**29.70**	**350**	⇑P	**P**	**22 09 26.9**	**+1.0**
	baz=30						
WHTX	**Lake Whitney**	**29.76**	**358**	⇑P	**P**	**22 09 27.5**	**+1.2**
	baz=30						
232A	**Coleman**	**29.79**	**355**	⇓P	**P**	**22 09 27.6**	**+0.9**
	baz=30						
326A	**Caldwell Ranch**	**29.93**	**347**	⇑P	**P**	**22 09 28.8**	**+0.9**
	baz=30						
230A	**Sterling City**	**29.96**	**352**	⇑P	**P**	**22 09 29.2**	**+1.0**
	baz=30						
325A	**Bean Ranch, Si**	**30.21**	**345**	⇓P	**P**	**22 09 31.4**	**+0.9**
	baz=30						
324A	**Moseley Ranch,**	**30.41**	**345**	⇑P	**P**	**22 09 33.1**	**+0.8**
	baz=31						
228A	**UT Block 9, Go**	**30.42**	**350**	⇓P	**P**	**22 09 32.7**	**+0.4**
	baz=31						
ABTX	**Abilene, Hawle**	**30.52**	**355**	⇓P	**P**	**22 09 33.5**	**+0.5**
	baz=31						
130A	**Snyder**	**30.64**	**353**	⇑P	**P**	**22 09 35.1**	**+0.9**
	baz=31						
131A	**Roby**	**30.65**	**353**	⇓P	**P**	**22 09 35.0**	**+0.8**
	baz=31						
226B	**Tecolote Peak,**	**30.70**	**347**	⇑P	**P**	**22 09 35.4**	**+0.6**
	baz=31,SNR=11						
129A	**Stewart Farms,**	**30.80**	**351**	⇓P	**P**	**22 09 36.2**	**+0.5**
	baz=31						
CLNB	**Carlsbad**	**30.82**	**348**	*e*P	**P**	**22 09 37.0**	**+1.2**
GDL2	**Guadalupe Moun**	**30.86**	**347**	*e*P	**P**	**22 09 36.9**	**+0.7**
128A	**Castleberry Fa**	**30.89**	**350**	⇓P	**P**	**22 09 36.7**	**+0.3**
	baz=31,SNR=5.7						
224A	**Cornudas Mount**	**31.02**	**345**	⇑P	**P**	**22 09 38.4**	**+0.7**
	baz=31						
Z32A	**Haskell**	**31.18**	**355**	⇑P	**P**	**22 09 39.9**	**+1.0**
	baz=31						
126A	**Clayton Basin,**	**31.21**	**348**	⇓P	**P**	**22 09 40.0**	**+0.8**
	baz=31						
320A	**Kipp Ranch, An**	**31.24**	**340**	⇑P	**P**	**22 09 40.9**	**+1.3**
	baz=31						
Z31A	**Sharp Cattle R**	**31.26**	**354**	⇓P	**P**	**22 09 40.2**	**+0.6**
	baz=31						
Z30A	**Sanderson Ranc**	**31.34**	**352**	⇑P	**P**	**22 09 41.2**	**+0.8**
	baz=32						
125A	**Gardner Draw,**	**31.37**	**347**	⇑P	**P**	**22 09 41.2**	**+0.5**
	baz=32,SNR=20						
Z29A	**Hungry Hill Ra**	**31.39**	**352**	⇑P	**P**	**22 09 41.5**	**+0.7**
	baz=32						
319A	**Douglas**	**31.55**	**339**	⇑P	**P**	**22 09 43.0**	**+0.8**
	baz=32,SNR=9.1						
124A	**Stringfield Ra**	**31.60**	**345**	⇑P	**P**	**22 09 43.1**	**+0.2**
	baz=32,SNR=8.3						
220A	**Playas Peak, P**	**31.76**	**340**	⇑P	**P**	**22 09 45.1**	**+0.9**
	baz=32,SNR=10.0						
Z26A	**Caprock**	**31.81**	**348**	⇓P	**P**	**22 09 44.9**	**+0.4**
	baz=32,SNR=17						
Y31A	**Rekieta Farm,**	**31.91**	**354**	⇑P	**P**	**22 09 45.6**	**+0.4**
	baz=32						
Z25A	**Roswell**	**31.98**	**347**	⇑P	**P**	**22 09 46.9**	**+0.9**
	baz=32,SNR=6.7						
121A	**Cookes Peak, D**	**32.10**	**342**	⇓P	**P**	**22 09 48.3**	**+1.1**
	baz=32,SNR=15						
Z24A	**Sheeppen Canyo**	**32.18**	**346**	⇓P	**P**	**22 09 48.4**	**+0.5**
	baz=32,SNR=7.4						
Y27A	**Causey**	**32.24**	**350**	⇑P	**P**	**22 09 48.9**	**+0.5**
	baz=32						
MSTX	**Muleshoe**	**32.26**	**350**	⇓P	**P**	**22 09 49.2**	**+0.8**
	baz=32						
120A	**U Bar Ranch, L**	**32.39**	**341**	⇑P	**P**	**22 09 50.9**	**+1.3**
	baz=32,SNR=14						
Y26A	**Elida**	**32.41**	**349**	⇓P	**P**	**22 09 50.8**	**+1.0**
	baz=33						
X30A	**Coker Ranch, T**	**32.45**	**353**	⇓P	**P**	**22 09 50.9**	**+0.8**
	baz=33						
X31A	**McDonald Ranch**	**32.54**	**355**	⇑P	**P**	**22 09 51.6**	**+0.7**
	baz=33						
WMOK	**Wichita Mounta**	**32.55**	**356**	*e*P	**P**	**22 09 51.5**	**+0.6**
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
WMOK	**Wichita Mounta**	**32.55**	**356**	*e*P	**P**	**22 09 51.5**	**+0.6**
	comp=Z,8.2nm,1.2s						
Y25A	**Mesa, Roswell**	**32.59**	**347**	⇑P	**P**	**22 09 52.1**	**+0.7**
	baz=33,SNR=15						
UALR	**University of**	**32.75**	**6**	*e*P	**P**	**22 09 54.7**	**+2.1**
	comp=Z,19nm,1.5s						
Y24A	**Capitan**	**32.77**	**346**	⇓P	**P**	**22 09 53.7**	**+0.6**
	baz=33,SNR=5.5						
Z21A	**St. Cloud Mine**	**32.79**	**343**	⇓P	**P**	**22 09 53.6**	**+0.3**
	baz=33						
Z20A	**Nine Sixteen R**	**32.89**	**341**	⇑P	**P**	**22 09 54.8**	**+0.6**
	baz=33,SNR=7.5						
Y23A	**Lovelace Mesa,**	**32.92**	**345**	⇓P	**P**	**22 09 55.3**	**+0.9**
	baz=33						
TUC	**Tucson**	**32.94**	**337**	*e*P	**P**	**22 09 55.4**	**+0.9**
TUC				pmax	pmax		
	comp=Z,57nm,1.2s						
TUC	**Tucson**	**32.94**	**337**	*e*P	**P**	**22 09 55.4**	**+0.9**
	comp=Z,56nm,1.2s						
AMTX	**Amarillo**	**32.99**	**352**	*e*P	**P**	**22 09 56.2**	**+1.4**
	comp=Z,19nm,1.0s						
X26A	**CR and CF Fran**	**33.02**	**349**	⇑P	**P**	**22 09 56.0**	**+0.8**
	baz=33,SNR=6.0						
W31A	**Holland Ranch,**	**33.09**	**355**	⇓P	**P**	**22 09 56.9**	**+1.2**
	baz=33						
Y22A	**Socorro**	**33.17**	**344**	⇑P	**P**	**22 09 57.3**	**+0.8**
	baz=33						
BNM	**Barren Site**	**33.28**	**345**	*e*P	**P**	**22 09 58.4**	**+0.8**
	comp=Z,15nm,1.2s						
W27A	**Bowe Ranch, En**	**33.38**	**350**	⇑P	**P**	**22 09 59.4**	**+1.1**
	baz=34						
LENM	**Lemitar**	**33.39**	**344**	*e*P	**P**	**22 09 59.3**	**+0.9**
LPAZ	**La Paz**	**33.42**	**124**	*e*P	**P**	**22 10 01.7**	**+2.3**
	comp=Z,50nm,2.1s						
LPAZ	**La Paz**	**33.42**	**124**	P	**P**	**22 10 01.1**	**+1.6**
	comp=Z,3.5nm,0.4s,baz=320,slow=5.0,SNR=3.6						
LPAZ				LR	LR	22 22 24.6	
	comp=Z,339nm,18.9s,baz=119,slow=34						
Y21A	**Point of Rocks**	**33.44**	**343**	⇓P	**P**	**22 09 59.4**	**+0.4**
	baz=34,SNR=6.3						
214A	**Organ Pipe Nat**	**33.47**	**334**	⇓P	**P**	**22 09 59.7**	**+0.7**
	baz=34						
W26A	**Owens Ranch, T**	**33.53**	**349**	⇑P	**P**	**22 10 00.5**	**+0.9**
	baz=34,SNR=7.3						
Y20A	**Horse Springs,**	**33.56**	**342**	⇑P	**P**	**22 10 00.4**	**+0.4**
	baz=34,SNR=7.0						
PLAL	**Pickwick Lake**	**33.65**	**12**	*e*P	**P**	**22 10 02.8**	**+2.4**
	comp=Z,30nm,1.4s						
PLAL				*e*ScP	**ScP**	**22 16 24.6**	**-0.9**
LAZ	**Ladron**	**33.66**	**344**	*e*P	**P**	**22 10 00.1**	**-0.7**
W25A	**X Bar L Ranch,**	**33.79**	**348**	⇓P	**P**	**22 10 02.4**	**+0.5**
	baz=34,SNR=17						
X21A	**Alamocita Cree**	**33.88**	**343**	⇓P	**P**	**22 10 03.1**	**+0.3**
	baz=34,SNR=13						
W24A	**Lazy 6 Ranch,**	**33.99**	**347**	⇑P	**P**	**22 10 04.7**	**+1.0**
	baz=34,SNR=10						
ANMO	**Albuquerque**	**33.99**	**345**	*e*P	**P**	**22 10 05.0**	**+1.3**
	comp=Z,11nm,1.3s						
W23A	**Werner Place,**	**34.12**	**346**	⇓P	**P**	**22 10 05.9**	**+1.1**
	baz=34						
V26A	**Tequesquite Ra**	**34.22**	**349**	⇓P	**P**	**22 10 06.0**	**+0.4**
	baz=34,SNR=6.6						
V25A	**Rancho No Teng**	**34.42**	**348**	⇓P	**P**	**22 10 08.5**	**+1.0**
	baz=35						
U27A	**Thompson Grove**	**34.66**	**351**	⇑P	**P**	**22 10 11.2**	**+1.7**
	baz=35						
W20A	**Ramah**	**34.73**	**343**	⇑P	**P**	**22 10 11.4**	**+1.3**
	baz=35						
Z14A	**Wintersburg**	**34.73**	**335**	⇓P	**P**	**22 10 11.5**	**+1.5**
	baz=35						
U26A	**Atchley Ranch,**	**34.79**	**350**	⇓P	**P**	**22 10 11.7**	**+1.0**
	baz=35						
WVT	**Waverly**	**34.80**	**12**	*e*P	**P**	**22 10 09.9**	**-0.6**
WVT				pmax	pmax		
	comp=Z,37nm,1.4s						
WVT	**Waverly**	**34.80**	**12**	*e*P	**P**	**22 10 09.9**	**-0.6**
	comp=Z,36nm,1.4s						
U25A	**Circle Dot Ran**	**34.92**	**349**	⇑P	**P**	**22 10 12.9**	**+1.2**
	baz=35						
SAML	**Samuel**	**34.93**	**109**	*e*P	**P**	**22 10 11.6**	**-0.3**
	comp=Z,15nm,1.4s						
T31A	**Randall Ranch,**	**34.96**	**356**	⇓P	**P**	**22 10 12.8**	**+0.9**
	baz=35						
V22A	**San Miguel Ran**	**35.02**	**345**	⇑P	**P**	**22 10 13.4**	**+0.7**
	baz=35,SNR=12						
X16A	**Lo Mia Camp, P**	**35.07**	**338**	⇓P	**P**	**22 10 13.9**	**+0.8**
	baz=35,SNR=7.7						
T28A	**Walsh**	**35.25**	**352**	⇓P	**P**	**22 10 15.6**	**+1.2**
	baz=35						
Y14A	**Wickenburg**	**35.26**	**336**	⇑P	**P**	**22 10 15.7**	**+1.2**
	baz=35						
T27A	**Campo**	**35.28**	**351**	⇑P	**P**	**22 10 16.0**	**+1.2**
	baz=35						
GLA	**Glamis**	**35.29**	**333**	*e*P	**P**	**22 10 16.0**	**+1.2**
GLA				pmax	pmax		
	comp=Z,42nm,1.5s						
GLA	**Glamis**	**35.29**	**333**	*e*P	**P**	**22 10 16.0**	**+1.2**
	comp=Z,42nm,1.5s						
GLA	**Glamis**	**35.29**	**333**	⇓P	**P**	**22 10 16.0**	**+1.2**
	baz=35						
V20A	**Brimhall**	**35.34**	**343**	⇓P	**P**	**22 10 15.7**	**+0.4**
	baz=36						
TKL	**Tuckaleechee C**	**35.42**	**18**	P	**P**	**22 10 15.4**	**-0.4**
TKL	**Tuckaleechee C**	**35.42**	**18**	P	**P**	**22 10 15.4**	**-0.4**
	comp=Z,5.7nm,1.1s,baz=47,slow=18,SNR=3.2						
U22A	**Llaves**	**35.45**	**345**	⇑P	**P**	**22 10 17.2**	**+0.8**
	baz=36						
T26A	**Comanche Natio**	**35.53**	**350**	⇑P	**P**	**22 10 17.9**	**+0.9**
	baz=36						
T25A	**Trinidad**	**35.64**	**349**	⇑P	**P**	**22 10 18.6**	**+0.6**
	baz=36,SNR=8.6						
SWSC	**Sam W. Stewart**	**35.65**	**331**	⇑P	**P**	**22 10 18.7**	**+0.9**
	baz=36						
S28A	**Manter**	**35.68**	**353**	⇓P	**P**	**22 10 19.3**	**+1.2**
	baz=36						
U21A	**Nageezi**	**35.70**	**344**	⇓P	**P**	**22 10 19.6**	**+1.1**
	baz=36,SNR=9.1						
BAR	**Barrett**	**35.87**	**330**	*e*P	**P**	**22 10 22.9**	**+3.1**
	comp=Z,14nm,1.1s						
U20A	**Newcomb**	**35.89**	**343**	⇑P	**P**	**22 10 20.7**	**+0.7**
	baz=36						
MONP	**Monument Peak**	**35.91**	**331**	⇓P	**P**	**22 10 21.1**	**+0.7**
	baz=36						
S27A	**Las Animas**	**35.91**	**351**	⇓P	**P**	**22 10 21.2**	**+1.0**
	baz=36						
S26A	**Kim**	**35.94**	**351**	⇑P	**P**	**22 10 21.2**	**+0.7**
	baz=36,SNR=9.1						
WUAZ	**Wupatki**	**36.03**	**339**	*e*P	**P**	**22 10 22.1**	**+0.9**
	comp=Z,14nm,0.8s						
WUAZ	**Wupatki**	**36.03**	**339**	⇑P	**P**	**22 10 22.0**	**+0.7**
	baz=36						
PDMCI	**Parker Dam,Lak**	**36.04**	**335**	⇓P	**P**	**22 10 22.6**	**+1.4**
	baz=36						
T22A	**Edith**	**36.06**	**346**	⇑P	**P**	**22 10 22.5**	**+0.8**
	baz=36,SNR=16						
SIUC	**Southern Illin**	**36.07**	**10**	*e*P	**P**	**22 10 22.0**	**+0.6**
	comp=Z,27nm,0.9s						
BC3	**Big Chuckawall**	**36.08**	**333**	⇑P	**P**	**22 10 22.5**	**+0.9**
	baz=36						
R30A	**Dighton**	**36.19**	**355**	⇓P	**P**	**22 10 24.6**	**+2.1**
	baz=36						
S24A	**Houchin Ranch,**	**36.28**	**348**	⇓P	**P**	**22 10 24.6**	**+1.0**
	baz=36						
IRM	**Iron Mountain**	**36.37**	**333**	⇑P	**P**	**22 10 25.2**	**+1.2**
	baz=36,SNR=5.5						
LVC	**Limon Verde**	**36.40**	**134**	*e*P	P	22 10 27.6	+2.8
	comp=Z,9.6nm,1.1s						
R27A	**Eads**	**36.49**	**352**	⇓P	**P**	**22 10 26.1**	**+1.0**
	baz=37,SNR=5.4						
PFO	**Pinyon Flat Ob**	**36.52**	**331**	*e*P	**P**	**22 10 26.7**	**+1.3**
	comp=Z,12nm,1.2s						
R26A	**Arlington**	**36.60**	**351**	⇑P	**P**	**22 10 27.6**	**+1.5**
	baz=37						
USIN	**University of**	**36.61**	**12**	*e*P	**P**	**22 10 26.9**	**+1.0**
	comp=Z,50nm,1.3s						
BELC	**Belle Mtn. Jos**	**36.62**	**332**	⇑P	**P**	**22 10 27.8**	**+1.4**
	baz=37						
W13A	**Hualapai Mount**	**36.62**	**336**	⇑P	**P**	**22 10 27.7**	**+1.3**
	baz=37						
S22A	**4UR Ranch, Cre**	**36.74**	**346**	⇓P	**P**	**22 10 29.2**	**+1.8**
	baz=37,SNR=11						
SLM	**Saint Louis**	**36.82**	**8**	*e*P	**P**	**22 10 28.7**	**+1.0**
SLM				pmax	pmax		
	comp=Z,61nm,1.8s						
SLM	**Saint Louis**	**36.82**	**8**	*e*P	**P**	**22 10 28.7**	**+1.0**
	comp=Z,61nm,1.8s						
R24A	**Sanders Place,**	**36.83**	**349**	⇓P	**P**	**22 10 29.5**	**+1.4**
	baz=37						
KSU1	**Kansas State U**	**36.84**	**360**	*e*P	**P**	**22 10 26.7**	**-1.2**
	comp=Z,9.1nm,0.6s						
Q29A	**Oakley**	**36.86**	**354**	⇑P	**P**	**22 10 29.1**	**+1.0**
	baz=37						
S21A	**Coal Bank Pass**	**36.90**	**345**	⇑P	**P**	**22 10 30.2**	**+1.4**
	baz=37,SNR=6.5						
R23A	**Moffat**	**36.94**	**348**	⇑P	**P**	**22 10 30.7**	**+1.6**
	baz=37,SNR=7.2						
GMRC	**Granite Mounta**	**37.12**	**333**	⇓P	**P**	**22 10 31.7**	**+1.2**
	baz=37						
WCI	**Wyandotte Cave**	**37.16**	**13**	*e*P	**P**	**22 10 29.9**	**-0.8**
WCI				pmax	pmax		
	comp=Z,108nm,1.8s						
WCI	**Wyandotte Cave**	**37.16**	**13**	*e*P	**P**	**22 10 29.9**	**-0.8**
	comp=Z,108nm,1.8s						
U15A	**North Rim**	**37.17**	**339**	⇑P	**P**	**22 10 32.6**	**+1.5**
	baz=37						
KSCO	**Kaye Shedlock'**	**37.18**	**352**	⇑P	**P**	**22 10 32.2**	**+1.3**
	baz=37						
R22A	**Saguache, Gunn**	**37.18**	**347**	⇓P	**P**	**22 10 32.5**	**+1.3**
	baz=37						
S20A	**Disappointment**	**37.21**	**344**	⇓P	**P**	**22 10 32.5**	**+1.1**
	baz=37						
Q26A	**Hugo**	**37.22**	**351**	⇑P	**P**	**22 10 32.9**	**+1.5**
	baz=37,SNR=5.4						
HEC	**Hector,Ludlow**	**37.46**	**333**	⇓P	**P**	**22 10 34.8**	**+1.4**
	baz=38						
R21A	**Cimarron**	**37.51**	**346**	⇑P	**P**	**22 10 35.3**	**+1.3**
	baz=38,SNR=7.2						
R20A	**Redvale**	**37.55**	**345**	⇑P	**P**	**22 10 35.5**	**+1.2**
	baz=38						
Q23A	**Hartsel**	**37.63**	**348**	⇑P	**P**	**22 10 36.2**	**+1.2**
	baz=38						
Q22A	**Crested Butte,**	**37.82**	**347**	⇓P	**P**	**22 10 38.2**	**+1.5**
	baz=38						
PV04	**Paradox Valley**	**37.89**	**344**	*e*P	**P**	**22 10 36.7**	**-0.3**
GSC	**Goldstone**	**38.07**	**333**	*e*P	**P**	**22 10 40.9**	**+2.4**
GSC				pmax	pmax		
	comp=Z,18nm,1.4s						
GSC	**Goldstone**	**38.07**	**333**	*e*P	**P**	**22 10 40.9**	**+2.4**
	comp=Z,18nm,1.4s						
GSC	**Goldstone**	**38.07**	**333**	⇓P	**P**	**22 10 40.0**	**+1.5**
	baz=38						
SMCO	**Snowmass**	**38.14**	**347**	*e*P	**P**	**22 10 40.7**	**+1.3**
	comp=Z,23nm,1.4s						
ISCO	**Idaho Springs**	**38.45**	**349**	*e*P	**P**	**22 10 43.8**	**+1.9**
ISCO				pmax	pmax		
	comp=Z,24nm,1.5s						
ISCO	**Idaho Springs**	**38.45**	**349**	*e*P	**P**	**22 10 43.8**	**+1.9**
	comp=Z,24nm,1.5s						
ISCO	**Idaho Springs**	**38.45**	**349**	⇑P	**P**	**22 10 42.8**	**+0.9**
	baz=39,SNR=8.2						
P22A	**Eagle**	**38.49**	**347**	⇑P	**P**	**22 10 43.7**	**+1.5**
	baz=39						
P20A	**De Beque**	**38.79**	**345**	⇓P	**P**	**22 10 46.0**	**+1.4**
	baz=39						
ARUT	**Antelope Range**	**38.80**	**338**	*e*P	**P**	**22 10 46.5**	**+1.8**
ARUT				pmax	pmax		
	comp=Z,24nm,1.3s						
ARUT	**Antelope Range**	**38.80**	**338**	*e*P	**P**	**22 10 46.5**	**+1.8**
	comp=Z,24nm,1.3s						
HDIL	**Hopedale**	**38.84**	**9**	*e*P	**P**	**22 10 45.3**	**+0.6**
	comp=Z,237nm,2.0s						
O22A	**Kremmling**	**38.99**	**348**	⇓P	**P**	**22 10 47.3**	**+0.9**
	baz=39,SNR=11						
MPMC	**Manual Prospec**	**39.01**	**332**	⇓P	**P**	**22 10 47.5**	**+1.0**
	baz=39,SNR=6.5						
SFIN	**Scholer Farm**	**39.05**	**11**	⇑P	**P**	**22 10 46.9**	**+0.3**
	baz=39						
P19A	**Cripple Cowboy**	**39.07**	**345**	⇑P	**P**	**22 10 48.3**	**+1.2**
	baz=39,SNR=10						
ISA	**Isabella**	**39.15**	**331**	*e*P	**P**	**22 10 48.7**	**+1.1**
ISA				pmax	pmax		
	comp=Z,9.0nm,1.3s						
ISA	**Isabella**	**39.15**	**331**	*e*P	**P**	**22 10 48.7**	**+1.1**
	comp=Z,8.6nm,1.3s						
ISA	**Isabella**	**39.15**	**331**	⇑P	**P**	**22 10 48.8**	**+1.3**
	baz=39						
O21A	**Pagoda**	**39.24**	**347**	⇑P	**P**	**22 10 50.4**	**+1.8**
	baz=39,SNR=6.0						
N24A	**Carr**	**39.31**	**350**	⇓P	**P**	**22 10 50.5**	**+1.6**
	baz=40						
SIV	**San Ignacio**	**39.32**	**118**	P	**P**	**22 10 49.7**	**+0.5**
SIV	**San Ignacio**	**39.32**	**118**	P	**P**	**22 10 49.7**	**+0.5**
	comp=Z,5.2nm,1.1s,baz=300,slow=10,SNR=11						
O20A	**White River Ci**	**39.35**	**346**	⇑P	**P**	**22 10 50.9**	**+1.5**
	baz=40						
N23A	**Red Feather La**	**39.57**	**349**	⇑P	**P**	**22 10 52.6**	**+1.3**
	baz=40						
N22A	**Wattenberg Ran**	**39.58**	**348**	⇑P	**P**	**22 10 52.8**	**+1.5**
	baz=40						
VES	**Vestal, Richgr**	**39.59**	**331**	⇓P	**P**	**22 10 52.4**	**+1.2**
	baz=40						
M24A	**Cheyenne**	**39.92**	**350**	⇓P	**P**	**22 10 55.1**	**+1.1**
	baz=40						
M21A	**Separation Pea**	**40.55**	**347**	⇑P	**P**	**22 11 00.6**	**+1.2**
	baz=41,SNR=6.0						
MTUM	**Tungsten Hills**	**40.56**	**333**	*e*P	**P**	**22 11 01.8**	**+2.3**
M20A	**Sweetwater, Wa**	**40.62**	**346**	⇑P	**P**	**22 11 01.3**	**+1.4**
	baz=41						
L23A	**Garrett**	**40.70**	**349**	⇓P	**P**	**22 11 01.9**	**+1.3**
	baz=41						
DUG	**Dugway**	**40.73**	**341**	*e*P	**P**	**22 11 01.7**	**+1.0**
DUG				pmax	pmax		
	comp=Z,18nm,1.1s						
DUG	**Dugway**	**40.73**	**341**	*e*P	**P**	**22 11 01.7**	**+1.0**
	comp=Z,18nm,1.1s						
DUG	**Dugway**	**40.73**	**341**	⇓P	**P**	**22 11 01.9**	**+1.2**
	baz=41						
L22A	**Ellis Ranch, M**	**40.76**	**349**	⇓P	**P**	**22 11 02.0**	**+0.9**
	baz=41,SNR=5.7						
K26A	**Motz Farm, Whi**	**40.88**	**352**	⇓P	**P**	**22 11 03.9**	**+2.1**
	baz=41						
L21A	**Rawlins**	**40.89**	**348**	⇓P	**P**	**22 11 03.2**	**+1.0**
	baz=41,SNR=7.6						
JFWS	**Jewell Farm**	**41.02**	**7**	*e*P	**P**	**22 11 02.2**	**-0.7**
JFWS				pmax	pmax		
	comp=Z,11nm,0.8s						

JFWS **Jewell Farm** 41.02 7 *e*P P 22 11 02.2 -0.7
comp=Z,11nm,0.8s
M17A **Scullys Gap (B** 41.24 344 ⇑P P 22 11 06.4 +1.4
baz=41
K23A **Bowen Ranch, D** 41.31 350 ⇓P P 22 11 06.4 +0.9
baz=42
NVAR **Mina Array Bea** 41.33 334 P P 22 11 05.6 -0.2
NVAR PcP PcP 22 13 04.5 +0.3
NVAR **Mina Array Bea** 41.33 334 P P 22 11 05.6 -0.2
comp=Z,4.3nm,0.7s,baz=169,slow=8.5,SNR=8.5
NVAR PcP PcP 22 13 04.5 +0.3
comp=Z,1.9nm,1.0s,baz=167,slow=4.5,SNR=5.7
J28A **Allard Ranch,** 41.38 355 ⇑P P 22 11 06.7 +0.8
baz=42
K22A **Casper** 41.38 349 ⇑P P 22 11 07.3 +1.2
baz=42
ECSD **EROS Data Cent** 41.47 360 *e*P P 22 11 05.2 -1.4
comp=Z,17nm,0.9s
HWUT **Hardware Ranch** 41.62 343 *e*P P 22 11 08.4 +0.2
comp=Z,25nm,1.3s
K20A **Yellowstone Ra** 41.77 347 ⇓P P 22 11 09.9 +0.6
baz=42,SNR=5.9
CMB **Columbia Colle** 41.97 331 *e*P P 22 11 11.2 +0.4
CMB pmax pmax
comp=Z,51nm,2.8s
CMB **Columbia Colle** 41.97 331 *e*P P 22 11 11.2 +0.4
comp=Z,51nm,2.8s
K19A **Absolon Red Bu** 42.04 346 ⇓P P 22 11 11.7 +0.2
baz=42,SNR=6.1
HVU **Hansel Valley** 42.15 342 *e*P P 22 11 12.2 -0.2
HVU pmax pmax
comp=Z,32nm,1.3s
HVU **Hansel Valley** 42.15 342 *e*P P 22 11 12.2 -0.2
comp=Z,32nm,1.3s
PDAR **Pinedale Array** 42.16 346 P P 22 11 13.0 +0.5
PDAR **Pinedale Array** 42.16 346 P P 22 11 13.0 +0.5
comp=Z,7.2nm,1.0s,baz=162,slow=6.2,SNR=20
PDAR LR LR 22 28 14.8
comp=Z,1µm,18.3s,baz=205,slow=36
I24A **Kuemmerle Ranc** 42.22 351 ⇑P P 22 11 13.9 +1.1
baz=42
J21A **Lysite** 42.23 348 ⇓P P 22 11 13.9 +0.8
baz=42
J20A **Shoshoni** 42.37 347 ⇑P P 22 11 15.4 +1.3
baz=42
RSSD **Black Hills** 42.39 352 *e*P P 22 11 14.8 +0.4
RSSD pmax pmax
comp=Z,17nm,1.4s
RSSD **Black Hills** 42.39 352 *e*P P 22 11 14.8 +0.4
comp=Z,17nm,1.4s
I21A **Big Trails, Te** 42.65 348 ⇓P P 22 11 17.0 +0.6
baz=43,SNR=6.0
CFAA **Coronel Fontan** 42.91 144 P P 22 11 19.6 +1.0
CFAA **Coronel Fontan** 42.91 144 P P 22 11 19.6 +1.0
comp=Z,0.2nm,0.6s,baz=307,slow=7.9,SNR=4.4
I20A **Worland** 42.95 348 ⇑P P 22 11 19.4 +0.5
baz=43,SNR=15
H24A **Dirks Ranch, A** 43.08 352 ⇑P P 22 11 20.1 +0.3
baz=43,SNR=6.8
SNOW **Snow King Moun** 43.12 345 *e*P P 22 11 21.6 +1.2
comp=Z,120nm,2.4s
TPAW **Teton Pass** 43.20 345 *e*P P 22 11 22.1 +1.1
comp=Z,17nm,1.3s
LOHW **Long Hollow** 43.22 345 *e*P P 22 11 22.2 +1.1
comp=Z,26nm,1.5s
H22A **Clearmont** 43.22 350 ⇑P P 22 11 21.7 +0.7
baz=43
MOOW **Moose Ponds** 43.38 345 *e*P P 22 11 23.7 +1.3
comp=Z,7.1nm,1.0s
BEKR **Beckworth** 43.42 333 *e*P P 22 11 23.7 +1.0
comp=Z,9.2nm,1.4s
H20A **Greybull** 43.44 348 ⇑P P 22 11 23.2 +0.4
baz=44
IMW **Indian Meadow** 43.57 345 *e*P P 22 11 25.1 +1.1
comp=Z,16nm,1.3s
G22A **Birney** 43.82 350 ⇑P P 22 11 26.3 +0.6
baz=44
H19A **Powell** 43.83 347 ⇑P P 22 11 26.7 +0.8
baz=44
H18A **Shoshone NF, C** 43.99 346 ⇑P P 22 11 28.0 +0.6
baz=44
F23A **Volborg** 44.16 351 ⇑P P 22 11 29.6 +1.1
baz=44
G20A **Bridger** 44.18 348 ⇑P P 22 11 29.5 +0.8
baz=44
HLID **Hailey** 44.28 341 *e*P P 22 11 30.1 +0.4
comp=Z,28nm,1.8s
HLID **Hailey** 44.28 341 ⇑P P 22 11 30.5 +0.9
baz=44
I14A **Mackay** 44.31 342 ⇑P P 22 11 31.0 +1.2
baz=44,SNR=8.6
RLMT **Red Lodge** 44.32 347 *e*P P 22 11 31.1 +1.1
comp=Z,20nm,1.6s
H16A **Russell Place,** 44.40 345 ⇑P P 22 11 31.7 +1.0
baz=45,SNR=6.2
G18A **Lazy EL Ranch,** 44.57 347 ⇑P P 22 11 33.5 +1.6
baz=45
QLMT **Earthquake Lak** 44.57 345 *e*P P 22 11 33.3 +1.4
H15A **Lima** 44.70 344 ⇑P P 22 11 34.2 +1.2
baz=45
F20A **Billings** 44.73 348 ⇑P P 22 11 34.6 +1.6
baz=45
KIPM **Iron Peak** 44.86 330 *e*P P 22 11 35.0 +0.8
comp=Z,22nm,1.3s
E23A **Ismay** 44.90 351 ⇓P P 22 11 35.8 +1.4
baz=45
F19A **Roth Farm, Mol** 44.94 348 ⇓P P 22 11 35.5 +0.7
baz=45
E22A **Miles City** 44.94 351 ⇓P P 22 11 36.0 +1.3
baz=45
MCMT **McKenzie Canyo** 44.95 343 *e*P P 22 11 36.1 +1.1
comp=Z,5.3nm,1.2s
GCMT **Greycliff** 45.04 347 *e*P P 22 11 35.8 +0.2
comp=Z,16nm,0.3s
F18A **Big Timber** 45.16 347 ⇓P P 22 11 37.4 +0.9
baz=45,SNR=16
H12A **Diamond D Ranc** 45.30 341 ⇓P P 22 11 38.1 +0.3
baz=46,SNR=7.4
D24A **Glendive** 45.37 352 ⇓P P 22 11 39.1 +1.0
baz=46
DLMT **Dillon** 45.37 344 *e*P P 22 11 39.4 +1.2
comp=Z,14nm,1.3s
BOZ **Bozeman (W)** 45.38 345 *e*P P 22 11 38.3 0.0
BOZ pmax pmax
comp=Z,2.0nm,0.3s
BOZ **Bozeman (W)** 45.38 345 *e*P P 22 11 38.3 0.0
comp=Z,1.9nm,0.3s
F17A **Fitzpatrick Pl** 45.38 346 ⇑P P 22 11 39.4 +1.1
baz=46
E20A **Meyer Farm, Mu** 45.40 349 ⇓P P 22 11 39.3 +1.0
baz=46
E19A **Rath Farm, Rou** 45.49 348 ⇓P P 22 11 39.0 0.0
baz=46,SNR=14
F16A **Kennard Place,** 45.51 345 ⇑P P 22 11 39.9 +0.7
baz=46
D23A **Lindsay** 45.55 352 ⇓P P 22 11 40.4 +0.9
baz=46
D22A **Cohagen** 45.67 351 ⇓P P 22 11 41.5 +1.0
baz=46
D21A **La Casta Ranch** 45.73 350 ⇓P P 22 11 42.1 +1.1
baz=46
LRM **Limekiln Ridge** 45.76 344 *e*P P 22 11 41.3 -0.2
F15A **Butte** 45.79 344 ⇑P P 22 11 43.0 +1.4
baz=46
C24A **Savage** 45.79 352 ⇓P P 22 11 42.4 +1.1
baz=46
KHMM **Horse Mountain** 45.80 331 *e*P P 22 11 43.6 +1.9
comp=Z,13nm,1.1s
E18A **Harlowton** 45.83 347 ⇑P P 22 11 42.5 +0.7
baz=46
E17A **Martinsdale** 45.95 346 ⇓P P 22 11 44.2 +1.3
baz=46
D20A **Manuel Ranch,** 45.96 349 ⇓P P 22 11 42.8 0.0
baz=46,SNR=6.3
G12A **Big Creek, Yel** 45.97 341 ⇓P P 22 11 44.0 +0.9
baz=46
AGMN **Agassiz Nation** 46.03 1 *e*P P 22 11 42.6 -0.7
C23A **Lambert** 46.16 352 ⇓P P 22 11 45.5 +1.2
baz=46
D19A **Cripps Ranch,** 46.18 348 ⇓P P 22 11 45.9 +1.4
baz=46
C22A **Vida** 46.20 351 ⇓P P 22 11 45.8 +1.2
baz=46
F13A **Darby** 46.26 343 ⇓P P 22 11 46.5 +1.2
baz=46
E15A **Deer Lodge** 46.37 345 ⇓P P 22 11 46.3 +0.3
baz=46
HRY **Holter Researc** 46.42 345 *e*ScP ScP 22 17 17.5 +2.5

F12A **Elk City** 46.51 342 ⇓P P 22 11 47.2 0.0
baz=47
C20A **Veseth Ranch,** 46.53 349 ⇑P P 22 11 47.4 +0.2
baz=47
D17A **Six Diamond Ra** 46.56 347 ⇓P P 22 11 48.1 +0.5
baz=47,SNR=9.1
LONY **Lake Ozonia** 46.56 22 *e*P P 22 11 49.6 +2.1
comp=Z,63nm,1.9s
E14A **Clinton** 46.59 344 ⇑P P 22 11 48.7 +0.8
baz=47
D16A **Dana Ranch, Ca** 46.65 346 ⇑P P 22 11 49.1 +0.8
baz=47
DGMT **Dagmar** 46.68 353 *e*P P 22 11 48.6 +0.2
comp=Z,17nm,0.9s
D15A **Lincoln** 46.90 345 ⇑P P 22 11 50.7 +0.4
baz=47
CHMT **Chamberlain Mo** 46.98 344 *e*P P 22 11 51.9 +0.9
C17A **Wharram Farm,** 47.03 347 ⇑P P 22 11 51.8 +0.6
baz=47
MSO **Missoula** 47.09 344 *e*P P 22 11 52.5 +0.8
comp=Z,11nm,1.4s
MSO **Missoula** 47.09 344 ⇓P P 22 11 52.4 +0.7
baz=47
A24A **Westby** 47.10 353 ⇓P P 22 11 52.6 +0.9
baz=47
FRNY **Flat Rock** 47.11 22 *e*P P 22 11 53.4 +1.7
comp=Z,27nm,1.6s
CPUP **Villa Florida** 47.18 129 P P 22 11 53.0 +0.4
CPUP **Villa Florida** 47.18 129 P P 22 11 53.0 +0.4
comp=Z,0.5nm,0.4s,baz=274,slow=13,SNR=2.8
CPUP LR LR 22 28 43.0
comp=Z,338nm,19.4s,baz=279,slow=32
D14A **Greenough** 47.20 344 ⇑P P 22 11 52.8 +0.1
baz=47,SNR=6.2
B20A **Solberg Farm,** 47.23 350 ⇓P P 22 11 53.6 +0.9
baz=47
SLMT **Seeley Lake** 47.35 344 *e*P P 22 11 54.4 +0.6
D13A **Huson** 47.48 343 ⇓P P 22 11 54.9 +0.2
baz=48,SNR=7.4
C15A **Salmond Ranch,** 47.61 345 ⇑P P 22 11 56.5 +0.8
baz=48
KEBM **Edson Butte** 47.62 332 *e*P P 22 11 57.9 +2.0
comp=Z,55nm,1.4s
SWMT **Swartz Lake** 47.73 344 *e*P P 22 11 57.4 +0.7
A19A **Klindworth Far** 47.84 349 ⇓P P 22 11 58.5 +1.0
baz=48
C14A **Swan Lake** 47.90 344 ⇑P P 22 11 58.5 +0.6
baz=48,SNR=7.0
ULM **Lac du Bonnet** 47.99 1 *e*P P 22 11 57.5 -1.0
ULM **Lac du Bonnet** 47.99 1 P P 22 11 57.5 -1.0
comp=Z,7.3nm,0.8s,baz=202,slow=8.0,SNR=5.6
ULM LR LR 22 31 29.9
comp=Z,487nm,19.4s,baz=245,slow=35
JTMT **Jette** 48.02 344 *e*P P 22 11 59.4 +0.4
C13A **Hot Springs** 48.05 344 ⇓P P 22 11 59.2 +0.1
baz=48
A18A **Metzger Ranch,** 48.05 348 ⇓P P 22 11 59.2 +0.2
baz=48
YBMT **Yellow Bay** 48.06 344 *e*P P 22 11 59.7 +0.5
comp=Z,10nm,1.2s
B15A **Bradely Ranch,** 48.09 346 ⇓P P 22 11 59.7 +0.2
baz=48
BSMT **Bassoo Peak** 48.26 344 *e*P P 22 12 02.1 +1.2
BLMT **Blacktail Moun** 48.29 344 *e*P P 22 12 00.8 -0.3
B14A **Marquette Ranc** 48.32 345 ⇑P P 22 12 02.3 +1.0
baz=48
B13A **Whitefish** 48.65 344 ⇑P P 22 12 04.7 +1.0
baz=49,SNR=9.3
PLCA **Paso Flores** 48.74 154 P P 22 12 03.9 -0.6
PLCA **Paso Flores** 48.74 154 P P 22 12 03.9 -0.6
comp=Z,2.2nm,0.8s,baz=2.1,slow=9.0,SNR=3.6
PLCA LR LR 22 28 17.1
comp=Z,705nm,18.1s,baz=346,slow=31
A15A **Johnson Ranch,** 48.75 346 ⇓P P 22 12 05.0 +0.4
baz=49
A14A **Double T Ranch** 48.92 345 ⇓P P 22 12 06.4 +0.5
baz=49
NEW **Newport** 49.33 342 *e*P P 22 12 10.9 +2.0
comp=Z,7.1nm,1.1s
NEW **Newport** 49.33 342 ⇓P P 22 12 09.6 +0.7
baz=50
FFC **Flin Flon** 52.66 356 *e*P P 22 12 31.2 -2.6
FFC pmax pmax
comp=Z,13nm,1.3s
FFC **Flin Flon** 52.66 356 *e*P P 22 12 31.2 -2.6
comp=Z,13nm,1.3s
SCHQ **Schefferville** 57.85 20 *e*P P 22 13 09.5 -1.8
comp=Z,11nm,1.2s
SCHQ **Schefferville** 57.85 20 P P 22 13 09.8 -1.5
comp=Z,4.9nm,0.8s,baz=234,slow=6.0,SNR=6.9
YKA **Yellowknife Ar** 61.77 351 P P 22 13 36.4 -1.7
YKA PcP PcP 22 14 18.1 -1.0
YKA **Yellowknife Ar** 61.77 351 P P 22 13 36.3 -1.7
comp=Z,2.8nm,1.0s,baz=153,slow=6.9,SNR=24
YKA PcP PcP 22 14 18.1 -1.0
comp=Z,0.7nm,0.9s,baz=152,slow=5.4,SNR=4.2
YKW3 **Yellowknife Ar** 61.84 351 *e*P P 22 13 36.7 -1.8
comp=Z,0.1nm,1.0s
DLBC **Dease Lake** 62.04 341 *e*P P 22 13 39.6 -0.5
EFI **East Falkland** 62.66 154 ⇑P P 22 13 48.5 +4.3
EFI pmax pmax
comp=Z,296nm,1.7s
EGAK **Eagle** 70.30 341 *e*P P 22 14 33.0 +0.2
comp=Z,4.6nm,0.9s
DOT **Dot Lake** 70.54 340 *e*P P 22 14 33.5 -1.0
comp=Z,24nm,1.7s
INK **Inuvik** 70.72 346 P P 22 14 35.5 +0.1
INK **Inuvik** 70.72 346 P P 22 14 35.5 +0.1
comp=Z,12nm,0.9s,baz=144,slow=7.2,SNR=20
SML **Sawmill** 71.04 337 *e*P P 22 14 37.8 +0.3
SML pmax pmax
comp=Z,6.0nm,1.0s
SML **Sawmill** 71.04 337 *e*P P 22 14 37.8 +0.3
comp=Z,5.7nm,1.0s
ILAR **Eielson Array** 72.21 340 P P 22 14 44.1 -0.3
ILAR **Eielson Array** 72.21 340 P P 22 14 44.1 -0.3
comp=Z,8.5nm,0.8s,baz=148,slow=4.7,SNR=74
ILAR LR LR 22 47 21.3
comp=Z,280nm,18.3s,baz=237,slow=37
TRF **Thorofare Moun** 72.70 338 *e*P P 22 14 46.9 -0.7
comp=Z,85nm,2.4s
COLD **Coldfoot** 74.72 341 *e*P P 22 15 00.3 +1.0
comp=Z,14nm,1.4s
SUMG **Summit** 78.81 15 *e*P P 22 15 22.8 +0.1
SUMG pmax pmax
comp=Z,8.0nm,0.9s
SUMG **Summit** 78.81 15 *e*P P 22 15 22.8 +0.1
comp=Z,8.4nm,0.9s
ESDC **Sonseca Array** 90.61 50 P P 22 16 22.3 -0.2
ESDC **Sonseca Array** 90.61 50 P P 22 16 22.3 -0.2
comp=Z,0.7nm,0.8s,baz=287,slow=4.6,SNR=4.2
BILL **Bilibino** 90.80 338 ⇓*e*P P 22 16 22.7 0.0
BILL pmax pmax
comp=Z,4.0nm,1.2s
BILL MLR MLR
comp=Z,100nm,18.0s
SNAA **Sanae** 93.12 162 *e*P P 22 16 33.3 -0.1
comp=Z,4.5nm,1.0s
RPZ **Rata Peaks** 93.23 227 LR LR 22 48 04.0
comp=Z,227nm,18.9s,baz=91,slow=29
VNDA **Vanda** 94.55 192 LR LR 22 48 28.2
comp=Z,129nm,19.8s,baz=155,slow=29
PETK **Petropavlovsk-** 97.79 324 LR LR 22 50 38.7
comp=Z,74nm,19.3s,baz=270,slow=29
TIXI **Tiksi** 100.85 347 ⇓*e*P Pdif 22 17 07.7 -0.6
TIXI pmax pmax
comp=Z,2.0nm,1.7s
BRTR **Keskin Array B** 118.26 42 PKP PKPdf 22 22 06.7 -1.0
BRTR **Keskin Array B** 118.26 42 PKP PKPdf 22 22 06.7 -1.0
comp=Z,0.8nm,1.0s,baz=205,slow=2.6,SNR=5.6
CN2 **Changchun** 120.90 326 *e*P PKPdf 22 22 09.6 -2.9
KSRS **Korea Array** 123.12 318 PKP PKPdf 22 22 16.4 -0.6
comp=Z,0.6nm,0.3s,baz=112,slow=1.3,SNR=4.9
KSAR **Wonju Array Be** 123.15 318 PKP PKPdf 22 22 16.4 -0.6
BRVK **Borovoye** 123.94 10 ⇓*i*PKIKP PKPdf 22 22 17.4 -0.6
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BVAR **Borovoye Array** 123.98 10 PKIKP PKPdf 22 22 18.1 0.0
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR **Borovoye Array** 123.98 10 PKP PKPdf 22 22 18.1 0.0
BVAR **Borovoye Array** 123.98 10 PKP PKPdf 22 22 18.1 0.0
comp=Z,1.4nm,0.7s,baz=48,slow=2.2,SNR=12
ZALV **Zalesovo Beam** 124.15 359 PKIKP PKPdf 22 22 17.6 -0.8
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV **Zalesovo Beam** 124.15 359 PKP PKPdf 22 22 17.6 -0.8

ZALV **Zalesovo Beam** 124.15 359 PKP PKPdf 22 22 17.6 -0.8
comp=Z,1.1nm,0.6s,baz=306,slow=1.4,SNR=7.6
ABKAR **Akbulak array** 124.94 19 *e*PKPdf PKPdf 22 22 19.7 -0.4
SONM **Songino Array** 126.42 341 PKP PKPdf 22 22 22.2 -0.9
SONM **Songino Array** 126.42 341 PKP PKPdf 22 22 22.2 -0.9
comp=Z,1.3nm,0.7s,baz=327,slow=2.5,SNR=4.3
ASAR **Alice Springs** 126.79 242 PKP PKPdf 22 22 23.9 -0.5
ASAR **Alice Springs** 126.79 242 PKP PKPdf 22 22 23.9 -0.5
comp=Z,1.5nm,0.9s,baz=120,slow=2.6,SNR=12
KURK **Kurchatov** 127.23 4 *c i*PKIKP PKPdf 22 22 23.8 -0.6
KURK pmax pmax
comp=Z,5.0nm,1.0s
KURK **Kurchatov** 127.23 4 *e*PKPdf PKPdf 22 22 24.0 -0.4
WRA **Warramunga Arr** 127.33 246 PKP PKPdf 22 22 24.0 -1.5
WRA **Warramunga Arr** 127.33 246 PKP PKPdf 22 22 24.0 -1.5
comp=Z,3.1nm,1.1s,baz=95,slow=1.5,SNR=12
HHC **Hu-ho-hao-te** 130.21 332 *e*PKP PKPdf 22 22 31.0 +0.5
HHC PP PP 22 24 47.5 +4.9
HHC PKS PKSdf 22 26 06.8 -0.3
HHC SKS SKSdf 22 29 41.5 -1.1
HHC SS SS 22 42 11.0 +2.4
HHC AMB AMB
comp=Z,310nm,9.0s
HHC LR LR
comp=N,240nm,19.6s
HHC LR LR
comp=E,220nm,19.7s
HHC LR LR
comp=Z,260nm,19.0s
MKAR **Makanchi Array** 131.31 1 PKIKP PKPdf 22 22 31.6 -0.7
MKAR 22 24 46.3
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR pmax pmax
comp=Z,1.0nm,0.9s
MKAR **Makanchi Array** 131.31 1 PKP PKPdf 22 22 31.6 -0.7
MKAR PP PP 22 24 46.2 -2.8
MKAR **Makanchi Array** 131.31 1 PKP PKPdf 22 22 31.6 -0.7
comp=Z,1.8nm,0.9s,baz=332,slow=2.0,SNR=15
MKAR PP PP 22 24 46.2 -2.8
comp=Z,0.5nm,0.9s,baz=321,slow=2.0,SNR=3.7
WMQ **Urumqi** 134.14 356 *e*PKP PKPdf 22 22 37.6 -0.2
WMQ LR LR
comp=N,210nm,20.0s
WMQ LR LR
comp=E,170nm,23.8s
WMQ LR LR
comp=Z,170nm,23.8s
LZH **Lanzhou** 137.55 335 *e*PKP PKPdf 22 22 43.1 -1.4
LZH LR LR
comp=N,110nm,15.9s
LZH LR LR
comp=E,120nm,18.0s
LZH LR LR
comp=Z,160nm,20.2s
CD2 **Chengdu** 141.95 331 *e*PKP PKPdf 22 22 52.6 +0.1
CD2 PP PP 22 26 00.0 +3.7
CD2 PKS PKSdf 22 26 27.0 -1.5
CD2 SKS SKSdf 22 30 00.2 -2.8
CD2 SKKS SKKSac 22 32 49.2 -2.0
CD2 LR LR
comp=N,100nm,14.0s
CD2 LR LR
comp=Z,120nm,14.8s
GYA **Guiyang** 143.88 323 *e*PKP PKPdf 22 22 55.3 -0.9
GYA PP PP 22 26 11.8 +3.4
GYA AMB AMB
comp=Z,110nm,7.4s
KMI **Kunming** 147.16 327 PKPbc PKPdf 22 23 02.4 +0.5
LSA **Lhasa** 147.56 348 PKPbc PKPbc 22 23 05.7 +0.3
LSA **Lhasa** 147.56 348 *e*PKIKP PKPdf 22 23 02.8 0.0
LSA **Lhasa** 147.56 348 *e*PKPdf PKPdf 22 23 02.8 0.0
DANN **Dangsing** 149.73 360 *e*P PKPbc 22 23 10.8 0.0
comp=Z,60nm,1.0s
PYUN **Piuthan** 149.98 1 *e*P PKPbc 22 23 11.2 -0.1
comp=Z,54nm,1.0s
GUN **Gumba** 150.09 356 *e*P PKPbc 22 23 11.4 -0.4
comp=Z,129nm,1.2s
KKN **Kakani** 150.25 357 *e*P PKPbc 22 23 11.6 -0.4
comp=Z,33nm,0.9s
KOLN **Koldanda** 150.31 360 *e*P PKPbc 22 23 11.6 -0.5
comp=Z,14nm,1.0s
DMN **Daman** 150.44 357 *e*P PKPbc 22 23 11.2 -1.3
comp=Z,32nm,1.2s
PKIN **Phulchoki** 150.45 357 *e*P PKPbc 22 23 11.7 -0.8
comp=Z,49nm,1.6s
PKI **Pulchoki** 150.46 357 *e*P PKPbc 22 23 11.9 -0.7
TAPN **Taplejung** 150.46 352 *e*P PKPbc 22 23 11.7 -0.9
comp=Z,75nm,1.3s
RAMN **Ramite** 150.98 354 *e*P PKPbc 22 23 13.0 -0.8
comp=Z,34nm,1.1s
ODAN **Odare** 150.98 353 *e*P PKPbc 22 23 12.0 -1.8
CMAR **Chiang Mai Arr** 154.57 324 PKP PKPdf 22 23 13.4 +0.2
CMAR PKPab PKPab 22 23 34.0 -2.0
CMAR **Chiang Mai Arr** 154.57 324 PKP PKPdf 22 23 13.4 +0.2
comp=Z,0.7nm,0.3s,baz=263,slow=1.6,SNR=5.7
CMAR PKPab PKPab 22 23 34.0 -2.0
comp=Z,1.4nm,0.4s,baz=0.0,slow=3.0,SNR=7.0

*IDC **05** 22:07:43.1±4.3, 17.98S×167.18E, h0km, mb4.0/4, mb1 4.1/6, mb1mx3.8/19, mbtmp4.0/6, ML3.7/2, MS2.8/1, Ms1 2.8/1, ms1mx2.7/23, Error ellipse: s-maj=77.6km s-min=33.0km az=81.0*

ISC 05 22:07:45.6±3.3, 18.0S±0.1×167.3E±0.4, h23km, n8, σ1§14/10, mb3.9/4, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.18**	**191**	*e*P	Pn	P	22 08 47.6	-0.4
DZM				eS	Sn	P	22 09 35.5	-0.7
DZM	**Mont Dzumac**	**4.18**	**191**	Pn	Pn	P	22 08 46.8	-1.3
	2.4nm,0.3s,baz=68,slow=23,SNR=13							
DZM				LR	LR	P	22 09 35.0	
	comp=Z,119nm,20.2s,baz=15,slow=27							
DZM				Sn	Sn	P	22 09 37.2	+0.9
	4.6nm,0.3s,baz=87,slow=19,SNR=6.4							
NOUC	**Port Laguerre**	**4.24**	**193**	eS	Sn	P	22 09 38.8	+1.3
CTA	**Charters Tower**	**20.02**	**261**	P	P	P	22 12 16.8	-0.2
	0.2nm,0.3s,baz=69,slow=8.6,SNR=3.0							
STKA	**Stephens Creek**	**27.05**	**234**	P	P	P	22 13 27.6	+1.2
	2.8nm,0.8s,baz=58,slow=8.9,SNR=4.0							
WRA	**Warramunga Arr**	**31.22**	**261**	P	P	P	22 14 02.2	-1.4
	1.1nm,0.7s,baz=92,slow=9.1,SNR=5.3							
ASAR	**Alice Springs**	**31.69**	**254**	P	P	P	22 14 07.5	-0.2
	2.2nm,0.7s,baz=79,slow=9.0,SNR=21							
CMAR	**Chiang Mai Arr**	**76.31**	**295**	P	P	P	22 19 34.0	+0.8
	0.2nm,0.3s,baz=134,slow=4.1,SNR=4.2							

IDC 05 22:29:36.6±2.3, 1.56N×97.98W, h0km, mb3.7/4, mb1 4.1/4, mb1mx3.7/20, mbtmp3.7/4, Error ellipse: s-maj=317.7km s-min=26.1km az=70.0, West of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
TXAR	**Lajitas Array**	**28.14**	**349**	P	P	P	22 35 29.9	-0.9
	0.4nm,0.7s,baz=170,slow=8.2,SNR=4.2							
PDAR	**Pinedale Array**	**42.31**	**347**	P	P	P	22 37 33.7	+1.1
	0.4nm,0.6s,baz=161,slow=8.6,SNR=3.8							
PLCA	**Paso Flores**	**48.95**	**152**	P	P	P	22 38 24.9	-0.1
	0.7nm,0.4s,baz=304,slow=8.2,SNR=3.1							
ILAR	**Eielson Array**	**72.18**	**340**	P	P	P	22 41 02.9	-0.3
	0.5nm,0.7s,baz=146,slow=5.8,SNR=5.2							

IDC 05 22:36:36.3±59.0, 17.07S×168.80E, h0km, mb3.7/3, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, ML3.4/1, MS3.9/1, Ms1 3.9/1, ms1mx2.7/28, Error ellipse: s-maj=995.7km s-min=58.8km az=74.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.45**	**204**	Pn	Pn	P	22 37 56.8	-2.1
	1.1nm,0.3s,baz=112,slow=22,SNR=19							
DZM				Sn	Sn	P	22 38 49.2	-13
	2.4nm,0.3s,baz=118,slow=23,SNR=12							
STKA	**Stephens Creek**	**28.71**	**234**	P	P	P	22 42 36.1	+0.7
	1.0nm,0.6s,baz=66,slow=10.0,SNR=2.9							
WRA	**Warramunga Arr**	**32.77**	**260**	P	P	P	22 43 11.3	-0.1
	0.5nm,1.1s,baz=82,slow=9.3,SNR=3.9							
ASAR	**Alice Springs**	**33.31**	**253**	P	P	P	22 43 16.1	0.0
	0.6nm,0.7s,baz=78,slow=8.9,SNR=7.3							
JHJ	**Hachijo jima 2**	**57.10**	**331**	LR	LR	P	23 10 37.1	
	comp=Z,97nm,19.0s,baz=174,slow=36							

**KRSC 05 23:04:25.9±0.6, 51°.53N×159°.24E, h23km±22km, ML3.7,
Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	1.01	334	eP	Pb	23 04 44.7	0.0
RUS				i S	Sn	23 04 57.9	-0.2
MTVR	Mutnovka	1.16	326	eP	Pb	23 04 47.3	-0.1
MTVR				i S	Sb	23 05 03.0	+0.9
ASAK	Asacha	1.19	316	eP	Pb	23 04 48.0	+0.1
ASAK				i S	Sb	23 05 03.8	+0.8
GRL	Gorelyy	1.25	325	eP	Pb	23 04 49.2	+0.2
GRL				i S	Sb	23 05 05.8	+1.0
PAU	Pauzhetka	1.52	269	eP	Pb	23 04 53.0	-0.4
PAU				i S	Sb	23 05 12.8	+0.6
PET	Petropavlovsk	1.54	347	eP	Pb	23 04 52.9	-0.8
PET				i S	Sb	23 05 13.0	+0.3
SPN	Mys Shipunski	1.64	17	eP	Pb	23 04 55.0	-0.5
SPN				i S	Sb	23 05 16.4	+0.7
NLC	Nalytchevo	1.65	2	eP	Pn	23 04 54.4	+1.1
NLC				i S	Sb	23 05 14.8	-1.0
UGLR	Uglovaya	1.70	352	eP	Pb	23 04 55.5	-1.1
MIPR	Malaya Ipel'ka	1.71	297	eP	Pb	23 04 55.5	-1.1
MIPR				i S	Sb	23 05 17.4	-0.3
SMAR	Somma	1.76	351	eP	Pb	23 04 57.2	-0.5
AVH	Avacha	1.77	350	eP	Pb	23 04 56.7	-1.0
SDLR	Sedlovina	1.77	353	eP	Pb	23 04 56.7	-1.0
KOK	Koryaka	1.80	348	eP	Pb	23 04 57.4	-1.0
KOK				i S	Sb	23 05 20.4	-0.2
APC	Apacha	1.90	318	eP	Pb	23 04 59.0	-0.8
APC				i S	Sb	23 05 23.0	0.0
SKR	Severo-Kuril's	2.14	248	eP	Pn	23 05 01.0	+0.8
SKR				i S	Sn	23 05 26.7	+0.7
GNL	Ganaly	2.31	340	eP	Pb	23 05 05.0	-2.0
MKZ	Mys Kozlova	3.38	25	eP	Pn	23 05 18.8	+1.6
MKZ				i S	Sn	23 05 56.2	-0.4

*ISCJB **05** 23:06:48.4±0.3, 47°.05N±0°.04×150°.96E±0°.07, h166km, mb4.2/67, Error ellipse: s-maj=8.2km s-min=3.2km az=44.8*
*MOS **05** 23:06:49.8±1.2, 47°.12N×150°.91E, h178km, mb4.5/35, Error ellipse: s-maj=9.9km s-min=5.8km az=92.1*
*NEIC **05** 23:06:50.1±0.9, 46°.98N×151°.12E, h172km±7km, mb4.7/26, Error ellipse: s-maj=32.8km s-min=7.2km az=140.0*
*IDC **05** 23:06:51.4±1.9, 47°.10N×150°.94E, h183km±17km, mb3.7/26, mb1 3.8/31, mb1mx3.8/36, mbtmp3.7/31, MS2.5/1, Ms1 2.5/1, ms1mx1.8/37, Error ellipse: s-maj=15.0km s-min=10.2km az=159.0*
*JMA **05** 23:06:54.2±0.5, 46°.03N×151°.14E, h187km, M4.1*
ISC 05 23:06:48.9±0.5, 46°.94N±0°.07×151°.01E±0°.06, h166km, n220, σ1s.26/222, mb4.3/67, 10C-10D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.77	233	⇓iPN	Pn	23 07 37.5	+3.4
KUR				i		23 08 13.5	
KUR				pmax	pmax		
	comp=Z,58nm,0.3s						
KUR				pmax	pmax		
	comp=E,19nm,0.2s						
KUR				pmax	pmax		
	comp=N,34nm,0.1s						
KUR				pmax	pmax		
	comp=N,274nm,0.3s						
YUK	Yuzh-Kuril'sk	4.64	233c	iPN	Pn	23 08 00.0	+2.2
YUK				i S	Sn	23 08 53.9	+2.2
YUK				pmax	pmax		
	comp=N,54nm,0.2s						
YUK				pmax	pmax		
	comp=E,16nm,0.2s						
YUK				pmax	pmax		
	comp=Z,94nm,0.2s						
YUK				smax	smax		
	comp=N,233nm,0.4s						
YUK				smax	smax		
	comp=E,226nm,0.4s						
SKR	Severo-Kuril's	5.04	40	ePN	Pn	23 08 01.2	-1.8
SKR				eS	Sn	23 08 55.5	-5.5
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				pmax	pmax		
	comp=N,90nm,0.3s						
SKR				pmax	pmax		
	comp=E,90nm,0.3s						
SKR				smax	smax		
	comp=E,200nm,0.3s						
SKR				smax	smax		
	comp=N,80nm,0.4s						
JRA	Rausu	5.12	236	P	Pn	23 08 06.1	+2.1
NEM2	Nemuro 2	5.16	228	P	Pn	23 08 04.3	-0.3
NEM2				eS	Sn	23 08 59.0	-4.9
JNK	Nakash	5.56	235	P	Pn	23 08 11.7	+1.8
YSS	Yuzh-Sakhalins	5.65	273	i PN	Pn	23 08 16.0	+5.0
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
JTKR	Abashiri--Toko	5.81	242	P	Pn	23 08 15.9	+2.7
JTKR				eS	Sn	23 09 21.0	+1.8
JAK	Akkeshi	5.97	231	P	Pn	23 08 15.4	+0.2
JAK				eS	Sn	23 09 18.9	-4.1
JMP	Maruseppu	6.12	244	P	Pn	23 08 20.4	+3.0
JAR	Ashorobuto	6.28	237	P	Pn	23 08 21.7	+2.2
JOB	Onbets	6.50	234	P	Pn	23 08 23.0	+0.7
JOB				eS	Sn	23 09 32.6	-3.0
JWK2	Keihoku	6.54	259	P	Pn	23 08 27.9	+5.2
ASAJ	Asahikawa	6.55	247	ePn	Pn	23 08 26.4	+3.5
	comp=Z,18nm,0.6s						
ASAJ	Asahikawa	6.55	247	P	Pn	23 08 26.6	+3.7
ASAJ	Asahikawa	6.55	247	P	Pn	23 08 26.2	+3.3
	comp=Z,7.8nm,0.3s,baz=72,slow=15,SNR=57						
JKK2	Kamakawa 2	6.57	245	P	Pn	23 08 26.2	+2.9
JCH	Churui	6.95	234	P	Pn	23 08 28.3	+0.1
JCH				eS	Sn	23 09 41.9	-4.5
JBT2	Biratori 2	7.42	239	P	Pn	23 08 35.6	+1.2
JBT2				eS	Sn	23 09 52.8	-4.8
ERM	Erimo	7.47	232	ePN	Pn	23 08 36.4	+1.3
ERM				pmax	pmax		
	comp=Z,26nm,0.6s						
ERM	Erimo	7.47	232	ePn	Pn	23 08 36.4	+1.3
	comp=Z,26nm,0.6s						
JEM	Erimo	7.47	232	P	Pn	23 08 35.4	+0.3
JEM				eS	Sn	23 09 50.5	-8.2
JNBK	Urakawa-nobuka	7.51	235	P	Pn	23 08 35.1	-0.6
JNBK				eS	Sn	23 09 50.3	-9.5
PEA0B	Petropavlovsk-	7.53	32	ePn	Pn	23 08 35.8	0.0
PETK	Petropavlovsk-	7.53	32	ePN	Pn	23 08 36.8	+1.0
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK	Petropavlovsk-	7.53	32	P	Pn	23 08 36.1	+0.4
	comp=Z,3.1nm,0.3s,baz=188,slow=12,SNR=16						
PETK				LR	LR	23 11 22.0	
	comp=Z,36nm,18.2s,baz=35,slow=36						
PET	Petropavlovsk	7.83	36	ePN	Pn	23 08 39.7	-0.1
JEW	Eniwo	7.93	242	P	Pn	23 08 43.6	+2.4
JNB	Noboribetsu	8.39	241	P	Pn	23 08 47.9	+0.6
JNB				eS	Sn	23 10 15.5	-5.3
JKB	Kayabe	8.74	238	P	Pn	23 08 51.3	-0.7
JKB				eS	Sn	23 10 21.5	-7.8
JSH	Shimam	8.90	245	P	Pn	23 08 55.9	+1.9
JYM2	Yakumo 2	9.00	241	P	Pn	23 08 55.7	+0.4
JTM	Tenmabayashi	9.45	233	P	Pn	23 08 59.3	-2.0
JTM				eS	Sn	23 10 36.9	-9.4
JANG	Nango	9.50	230	P	Pn	23 09 00.3	-1.8
JANG				eS	Sn	23 10 37.3	-10
JTH	Tanohata	9.65	227	eS	Sn	23 10 40.1	-11
OFUJ	Ofunato	10.41	224	eS	Sn	23 11 00.0	-9.4
JRG	Rokugo	10.68	229	P	Pn	23 09 16.3	-1.2
JRG				eS	Sn	23 11 07.4	-8.5
HABR	Khabarovsk	10.86	284	ePN	Pn	23 09 17.6	-2.2
HABR				eS	Sn	23 11 18.1	-2.0
HABR				pmax	pmax		
	comp=Z,35nm,2.5s						
HABR				pmax	pmax		
	comp=E,45nm,2.5s						
HABR				pmax	pmax		
	comp=N,41nm,2.5s						
JIO	Ouri	11.06	223	eS	Sn	23 11 14.5	-10
JFK	Kawauchi	12.16	222	eS	Sn	23 11 42.2	-9.3
USRK	Ussuriysk Arra	13.59	265	P	P	23 09 57.1	-1.1
	comp=N,0.7nm,0.3s,baz=78,slow=13,SNR=9.7						
MAJO	Matsushiro	14.10	227	eP	Pn	23 09 56.2	-5.1
FX1	Attu Island--F	15.43	59	P	P	23 10 18.7	+0.2
	comp=N,1.2nm,0.3s,baz=263,slow=16,SNR=5.1						
SEY	Seymchan	16.04	2	⇓eP	P	23 10 25.5	+0.3
YAK	Yakutsk	19.39	329	eP	P	23 11 01.9	+0.2
YAK				pmax	pmax		
	comp=N,21nm,1.1s						
YAK				pmax	pmax		
	comp=E,18nm,1.2s						
KSRS	Korea Array	19.49	249	P	Pn	23 11 06.1	0.0
	comp=E,0.5nm,0.3s,baz=55,slow=11,SNR=8.4						
BILL	Bilibino	22.55	15	⇑eP	P	23 11 34.7	0.0
BILL				e		23 12 14.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.5s						
SML	Sawmill	36.83	44	eP	P	23 13 41.0	+0.4
SML				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SML	Sawmill	36.83	44	eP	P	23 13 41.0	+0.4
	comp=Z,2.1nm,0.7s						
ILAR	Eielson Array	37.30	39	P	P	23 13 44.8	+0.3
	comp=Z,0.7nm,0.4s,baz=263,slow=5.9,SNR=8.7						
ZALV	Zalesovo Beam	41.32	305	P	P	23 14 16.6	-1.2
ZALV						23 16 13.5	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	41.32	305	P	P	23 14 16.6	-1.2
	comp=Z,0.5nm,0.4s,baz=64,slow=9.8,SNR=3.0						
ZALV				PcP	PcP	23 16 13.4	+0.5
	comp=Z,0.4nm,0.4s,baz=45,slow=2.5,SNR=4.2						
MKAR	Makanchi Array	45.56	296	P	P	23 14 51.8	-0.1
MKAR						23 16 27.4	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	45.56	296	P	P	23 14 51.8	-0.1
	comp=Z,2.1nm,0.7s,baz=68,slow=6.8,SNR=25						
MKAR				PcP	PcP	23 16 27.4	-0.1
	comp=Z,0.5nm,0.6s,baz=66,slow=3.1,SNR=5.0						
KURK	Kurchatov	46.05	303	⇓eP	P	23 14 54.5	-1.1
KURK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BRVK	Borovoye	49.65	309	⇓eP	P	23 15 22.6	-0.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
YKA	Yellowknife Ar	51.63	36	P	P	23 15 38.5	+0.6
	comp=Z,2.0nm,0.5s,baz=300,slow=7.0,SNR=20						
AAK	Ala-Archa	52.45	295	⇓eP	P	23 15 44.7	+0.2
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TAPN	Taplejung	52.65	272	eP	P	23 15 48.3	+2.0
ODAN	Odare	53.18	271	eP	P	23 15 52.0	+1.9
GUN	Gumba	53.54	273	eP	P	23 15 54.0	+1.1
RAMN	Ramite	53.66	272	eP	P	23 15 54.8	+1.2
	comp=Z,14nm,0.5s						
ARU	Arti	53.88	317c	iP	P	23 15 53.4	-1.1
ARU				*PP	pP	23 16 35.3	+3.0
ARU						23 16 56.3	
ARU						23 17 53.8	
ARU				S	S	23 23 13.6	-2.8
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
KKN	Kakani	54.03	274	eP	P	23 15 57.6	+1.3
PKI	Pulchoki	54.08	273	eP	P	23 15 58.0	+1.2
PKIN	Phulchoki	54.09	273	eP	P	23 15 58.4	+1.7
DMN	Daman	54.26	274	eP	P	23 15 59.5	+1.5
DANN	Dangsing	54.71	275	eP	P	23 16 03.0	+1.7
	comp=Z,7.6nm,0.3s						
KOLN	Koldanda	55.19	275	eP	P	23 16 06.1	+1.5
KEV	Kevo	56.67	340	ep	P	23 16 12.2	-2.0
	comp=Z,2.5nm,0.8s						
KEV	Kevo	56.67	340	eP	P	23 16 12.2	-2.0
KEV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARCES	ARCESS Array B	57.19	340	P	P	23 16 17.2	-0.6
	comp=Z,3.2nm,0.8s,baz=27,slow=6.6,SNR=9.2						
AKTO	Aktyubinsk	57.51	311	P	P	23 16 20.1	-0.3
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKTO	Aktyubinsk	57.51	311	P	P	23 16 20.1	-0.3
	comp=Z,1.5nm,0.6s,baz=45,slow=6.4,SNR=6.7						
JOF	Joensuu	60.51	333	ep	P	23 16 40.6	-0.2
	comp=Z,3.0nm,0.5s						
JOF	Joensuu	60.51	333	eP	P	23 16 40.6	-0.2
JOF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KAF	Kangasniemi	62.65	334	ep	P	23 16 53.9	-1.2
	comp=Z,4.3nm,0.7s						
KAF	Kangasniemi	62.65	334	eP	P	23 16 53.9	-1.2
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FINES	FINESS Array B	63.24	334	P	P	23 16 57.8	-1.2
	comp=Z,3.8nm,0.4s,baz=45,slow=5.5,SNR=30						
NVAR	Mina Array Bea	63.62	61	P	P	23 17 02.7	+0.4
	comp=Z,0.2nm,0.3s,baz=346,slow=5.6,SNR=3.8						
OBN	Obninsk	64.32	325	⇑eP	P	23 17 06.1	-0.1
OBN				e*PP	pP	23 17 47.0	+1.7
OBN				eS	S	23 25 31.3	+0.8
OBN				pmax	pmax		
	comp=Z,7.0nm,1.7s						
VRHR	Novokhopersk	65.04	319	eP	P	23 17 08.7	-2.3
VRHR				pmax	pmax		
	comp=N,6.0nm,0.9s						
VRHR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VRHR				pmax	pmax		
	comp=E,2.0nm,0.5s						
PDAR	Pinedale Array	65.79	53	P	P	23 17 16.9	+0.6
	comp=E,0.8nm,0.6s,baz=268,slow=0.9,SNR=6.4						
VSR	Storozhevoye	66.05	320	eP	P	23 17 16.2	-1.2
VSR				pmax	pmax		
	comp=N,3.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,1.0nm,0.6s						
VSR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
VORD	Divnogorie	66.17	320	eP	P	23 17 17.1	-1.1
VORD				pmax	pmax		
	comp=N,20nm,0.7s						
VORD				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.5s						
NB2	NORSAR Subarra	67.57	340	P	P	23 17 25.9	-1.0
	comp=Z,4.1nm,0.8s,baz=28,slow=6.5						
NOA	NORSAR Array B	67.57	340	P	P	23 17 26.1	-0.8
	comp=Z,1.5nm,0.4s,baz=28,slow=6.5,SNR=19						
HFS	Hagfors	67.76	338	P	P	23 17 27.0	-1.1
	comp=Z,2.6nm,0.4s,baz=57,slow=5.5,SNR=33						
WRA	Warramunga Arr	68.25	197	P	P	23 17 31.7	+0.1
	comp=Z,0.3nm,0.5s,baz=17,slow=6.8,SNR=4.9						
WRA				pP	pP	23 18 26.0	+15
	comp=Z,0.5nm,0.6s,baz=19,slow=6.9,SNR=5.5						
BORG	Borgarnes	68.49	356	P	P	23 17 33.5	+1.0
	comp=Z,2.3nm,0.6s,baz=2.0,slow=4.9,SNR=6.7						
KIV	Kislovodsk	69.62	313	eP	P	23 17 40.7	+0.7
KIV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	69.67	313	P	P	23 17 40.5	+0.3
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	69.67	313	P	P	23 17 40.5	+0.3
	comp=Z,3.9nm,0.8s,baz=54,slow=6.0,SNR=9.8						
AKASG	Malin Array Be	70.57	325	P	P	23 17 44.4	-1.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	Malin Array Be	70.57	325	P	P	23 17 44.4	-1.1
	comp=Z,0.9nm,0.3s,baz=34,slow=5.8,SNR=7.2						
ASAR	Alice Springs	71.96	196	P	P	23 17 55.8	+1.7
	comp=Z,1.7nm,1.2s,baz=13,slow=5.5,SNR=5.1						
ASAR				pP	pP	23 18 50.8	+17
	comp=Z,0.9nm,0.8s,baz=17,slow=6.3,SNR=6.3						
SCHQ	Schefferville	73.68	22	P	P	23 18 04.1	+0.2
	comp=Z,1.0nm,0.4s,baz=354,slow=5.1,SNR=8.9						
KWP	Kalwaria Pacla	73.90	328	⇑P	P	23 18 05.3	0.0
KWP	Kalwaria Pacla	73.90	328	⇑iP	P	23 18 05.3	0.0
BUR08	Bucovina Ar. S	74.60	325	eP	P	23 18 09.0	-0.5
BURAR	Bucovina Array	74.62	325	⇑iP	P	23 18 09.4	-0.2
VRI	Vrincioaia	75.44	323	⇓iP	P	23 18 13.1	-1.1
CLL	Collm	75.68	334	i P	P	23 18 14.6	-0.8
CLL				pmax	pmax		
	comp=Z,20nm,0.5s						
CLL	Collm	75.68	334	i P	P	23 18 14.6	-0.8
	comp=Z,2.0nm,0.5s						
CLL				i P(2)		23 18 16.0	
	comp=Z,4.0nm,0.5s						
EKA	Eskdalemuir Ar	75.80	345	P	P	23 18 16.2	+0.2
	comp=Z,0.9nm,0.3s,baz=19,slow=5.1,SNR=21						
MLR	Muntele Rosu	76.06	324	⇑iP	P	23 18 18.6	+0.7
MLR	Muntele Rosu	76.06	324	P	P	23 18 18.6	+0.7
	comp=Z,0.3nm,0.5s,baz=140,slow=2.1,SNR=8.5						
VOIR		76.47	324	⇑P	P	23 18 19.9	-0.3
VOIR		76.47	324	⇑iP	P	23 18 19.9	-0.3
BRTR	Keskin Array B	77.25	315	P	P	23 18 24.4	-0.3
	comp=Z,0.9nm,0.6s,baz=66,slow=2.9,SNR=7.1						
MIB	Mutribah	77.32	300	eP	P	23 18 25.5	+0.4
MIB				AMb	AMB	23 18 26.2	
	comp=Z,13nm,0.4s						
GERES	GERESS Array B	77.63	333	P	P	23 18 26.2	-0.4
	comp=Z,0.6nm,0.5s,baz=36,slow=5.4,SNR=9.5						
BZS	Buzias	77.66	326	⇓P	P	23 18 24.8	-1.9
BZS	Buzias	77.66	326	⇓iP	P	23 18 24.8	-1.9
NAY	Al-Naaiem	77.78	300	eP	P	23 18 27.9	+0.2
NAY				AMb	AMB	23 18 29.3	
	comp=Z,3.8nm,0.6s						
RDF	Al-Radifah	77.83	299	eP	P	23 18 28.8	+0.9
RDF				AMb	AMB	23 18 29.6	
	comp=Z,18nm,0.5s						
TXAR	Lajitas Array	78.65	59	P	P	23 18 33.0	+0.4
	comp=Z,0.7nm,0.5s,baz=294,slow=4.2,SNR=20						
BAIF	Baives	79.20	339	eP	P	23 18 35.1	+0.1
BAIF	Baives	79.20	339	eP	P	23 18 35.1	+0.1
BAIF	Baives	79.20	339	eP	P	23 18 35.1	+0.1
VTS	Vitosha	79.57	324	⇓P	P	23 18 37.6	+0.2
VTS	Vitosha	79.57	324	⇓iP	P	23 18 37.6	+0.2
CDF	Champ du Feu	79.91	336	eP	P	23 18 39.1	0.0
	comp=Z,4.0nm,0.6s						
CDF	Champ du Feu	79.91	336	eP	P	23 18 39.1	0.0
CDF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CDF	Champ du Feu	79.91	336	eP	P	23 18 39.1	0.0
	comp=Z,4.0nm,0.6s						
PAGF	Fort de Pagny	80.20	337	eP	P	23 18 41.1	+0.6
	comp=Z,2.6nm,0.5s						
PAGF	Fort de Pagny	80.20	337	eP	P	23 18 41.1	+0.6
	comp=Z,2.6nm,0.5s						
MEZF	Maizieres J'vi	80.42	338	eP	P	23 18 42.1	+0.5
MEZF	Maizieres J'vi	80.42	338	eP	P	23 18 42.1	+0.5
HAU	Haudompre	80.54	337	eP	P	23 18 42.5	+0.2
HAU	Haudompre	80.54	337	eP	P	23 18 42.5	+0.2
HAU	Haudompre	80.54	337	eP	P	23 18 42.5	+0.2
SFTF	Sexfontaines	80.70	338	eP	P	23 18 43.4	+0.2
	comp=Z,14nm,0.4s						
SFTF	Sexfontaines	80.70	338	eP	P	23 18 43.4	+0.2
	comp=Z,14nm,0.4s						
FLN	La Foliniere	81.50	341	eP	P	23 18 47.5	+0.2
	comp=Z,7.7nm,0.5s						
FLN	La Foliniere	81.50	341	eP	P	23 18 47.5	+0.2
FLN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
FLN	La Foliniere	81.50	341	eP	P	23 18 47.5	+0.2
	comp=Z,7.7nm,0.5s						
LDF	La Druitiere	81.58	341	eP	P	23 18 47.7	-0.1
	comp=Z,6.7nm,0.6s						
LDF	La Druitiere	81.58	341	eP	P	23 18 47.7	-0.1
LDF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LDF	La Druitiere	81.58	341	eP	P	23 18 47.7	-0.1
	comp=Z,6.7nm,0.6s						
MMAI	Mount Meron Ar	81.59	310	P	P	23 18 49.3	+1.1
	comp=Z,1.5nm,0.4s,baz=46,slow=6.0,SNR=13						
LOR	Lormes	81.87	338	eP	P	23 18 49.5	+0.1
	comp=Z,11nm,0.7s						
LOR	Lormes	81.87	338	eP	P	23 18 49.5	+0.1
	comp=Z,11nm,0.7s						
CABF	La Chapelle	81.89	336	eP	P	23 18 49.8	+0.3
CABF	La Chapelle	81.89	336	eP	P	23 18 49.8	+0.3
CABF	La Chapelle	81.89	336	eP	P	23 18 49.8	+0.3
GRR	Gorron	81.94	341	eP	P	23 18 50.0	+0.4
	comp=Z,23nm,0.7s						
GRR	Gorron	81.94	341	eP	P	23 18 50.0	+0.4
GRR				pmax	pmax		
	comp=Z,23nm,0.7s						
GRR	Gorron	81.94	341	eP	P	23 18 50.0	+0.4
	comp=Z,23nm,0.7s						
SSF	Saint Saulge	82.15	338	eP	P	23 18 50.9	+0.1
	comp=Z,6.1nm,0.6s						
SSF	Saint Saulge	82.15	338	eP	P	23 18 50.9	+0.1
SSF				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SSF	Saint Saulge	82.15	338	eP	P	23 18 50.9	+0.1
	comp=Z,6.1nm,0.6s						
SGMF	Saint Gilles	82.43	343	eP	P	23 18 52.6	+0.4
	comp=Z,30nm,0.8s						
SGMF	Saint Gilles	82.43	343	eP	P	23 18 52.6	+0.4
SGMF				pmax	pmax		
	comp=Z,30nm,0.8s						
SGMF	Saint Gilles	82.43	343	eP	P	23 18 52.6	+0.4
	comp=Z,30nm,0.8s						
AVF	Avril sur Loir	82.44	338	eP	P	23 18 52.6	+0.3
	comp=Z,5.9nm,0.4s						
AVF	Avril sur Loir	82.44	338	eP	P	23 18 52.6	+0.3
AVF				pmax	pmax		
	comp=Z,6.0nm,0.4s						
AVF	Avril sur Loir	82.44	338	eP	P	23 18 52.6	+0.3
	comp=Z,5.9nm,0.4s						
SMF	Signal de Mont	82.45	338	eP	P	23 18 52.7	+0.3
	comp=Z,3.8nm,0.3s						
SMF	Signal de Mont	82.45	338	eP	P	23 18 52.7	+0.3
SMF				pmax	pmax		
	comp=Z,4.0nm,0.3s						
SMF	Signal de Mont	82.45	338	eP	P	23 18 52.7	+0.3
	comp=Z,3.8nm,0.3s						
ROSF	Rostrenen	82.49	343	eP	P	23 18 53.0	+0.5
	comp=Z,24nm,0.9s						
ROSF	Rostrenen	82.49	343	eP	P	23 18 53.0	+0.5
ROSF				pmax	pmax		
	comp=Z,24nm,0.9s						
ROSF	Rostrenen	82.49	343	eP	P	23 18 53.0	+0.5
	comp=Z,24nm,0.9s						
LPL	La Plagne	82.71	336	eP	P	23 18 54.8	+0.8
	comp=Z,8.0nm,0.6s						
LPL	La Plagne	82.71	336	eP	P	23 18 54.8	+0.8
LPL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LPL	La Plagne	82.71	336	eP	P	23 18 54.8	+0.8
	comp=Z,8.0nm,0.6s						
LPG	La Plagne	82.72	336	eP	P	23 18 54.9	+0.7
	comp=Z,13nm,0.7s						
LPG	La Plagne	82.72	336	eP	P	23 18 54.9	+0.7
LPG				pmax	pmax		
	comp=Z,13nm,0.7s						
LPG	La Plagne	82.72	336	eP	P	23 18 54.9	+0.7
	comp=Z,13nm,0.7s						
BGF	Bois d'Agland	82.79	338	eP	P	23 18 55.0	+0.9
BGF	Bois d'Agland	82.79	338	eP	P	23 18 55.0	+0.9
BGF	Bois d'Agland	82.79	338	eP	P	23 18 55.0	+0.9
QUIF	Quistinic	82.87	343	eP	P	23 18 54.7	+0.2
QUIF	Quistinic	82.87	343	eP	P	23 18 54.7	+0.2
QUIF	Quistinic	82.87	343	eP	P	23 18 54.7	+0.2
TCF	Toulx Ste Croi	83.20	339	eP	P	23 18 56.8	+0.5
	comp=Z,9.8nm,0.9s						
TCF	Toulx Ste Croi	83.20	339	eP	P	23 18 56.8	+0.5
TCF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TCF	Toulx Ste Croi	83.20	339	eP	P	23 18 56.8	+0.5
	comp=Z,9.8nm,0.9s						
MBDF	Montbardon	83.42	335	eP	P	23 18 58.1	+0.5
MBDF	Montbardon	83.42	335	eP	P	23 18 58.1	+0.5
MBDF	Montbardon	83.42	335	eP	P	23 18 58.1	+0.5
MFF	Saint Martin d	83.47	340	eP	P	23 18 58.2	+0.6
	comp=Z,13nm,0.6s						
MFF	Saint Martin d	83.47	340	eP	P	23 18 58.2	+0.6
MFF				pmax	pmax		
	comp=Z,13nm,0.6s						
MFF	Saint Martin d	83.47	340	eP	P	23 18 58.2	+0.6
	comp=Z,13nm,0.6s						
ORIF	Oris-en-Rattie	83.50	336	eP	P	23 18 58.7	+0.8
	comp=Z,12nm,0.7s						
ORIF	Oris-en-Rattie	83.50	336	eP	P	23 18 58.7	+0.8
ORIF				pmax	pmax		
	comp=Z,12nm,0.7s						
ORIF	Oris-en-Rattie	83.50	336	eP	P	23 18 58.7	+0.8
	comp=Z,12nm,0.7s						
VIVF	Saint-Julien-l	83.89	337	eP	P	23 19 00.6	+0.8
	comp=Z,8.6nm,0.7s						
VIVF	Saint-Julien-l	83.89	337	eP	P	23 19 00.6	+0.8
VIVF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
VIVF	Saint-Julien-l	83.89	337	eP	P	23 19 00.6	+0.8
	comp=Z,8.6nm,0.7s						
SBF	Sospel	84.02	334	eP	P	23 19 01.1	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBF	Sospel	84.02	334	eP	P	23 19 01.1	+0.6
SBF	Sospel	84.02	334	eP	P	23 19 01.1	+0.6
RJF	Les Rejaudoux	84.29	339	eP	P	23 19 02.5	+0.7
RJF	Les Rejaudoux	84.29	339	eP	P	23 19 02.5	+0.7
RJF	Les Rejaudoux	84.29	339	eP	P	23 19 02.5	+0.7
EIL	Elat	84.44	308	P	P	23 19 03.8	+0.9
	comp=Z,6.3nm,0.6s,baz=17,slow=6.1,SNR=14						
CAF	Calviac	84.51	338	eP	P	23 19 04.1	+1.2
	comp=Z,13nm,0.8s						
CAF	Calviac	84.51	338	eP	P	23 19 04.1	+1.2
CAF				pmax	pmax		
	comp=Z,13nm,0.8s						
CAF	Calviac	84.51	338	eP	P	23 19 04.1	+1.2
	comp=Z,13nm,0.8s						
LMR	La Mourre	84.77	335	eP	P	23 19 04.6	+0.4
	comp=Z,20nm,0.9s						
LMR	La Mourre	84.77	335	eP	P	23 19 04.6	+0.4
LMR				pmax	pmax		
	comp=Z,20nm,0.9s						
LMR	La Mourre	84.77	335	eP	P	23 19 04.6	+0.4
	comp=Z,20nm,0.9s						
LFF	La Frestale	84.82	339	eP	P	23 19 05.5	+1.1
	comp=Z,10nm,0.6s						
LFF	La Frestale	84.82	339	eP	P	23 19 05.5	+1.1
LFF				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LFF	La Frestale	84.82	339	eP	P	23 19 05.5	+1.1
	comp=Z,10nm,0.6s						
MTLF	Montolieu	85.95	338	eP	P	23 19 11.3	+1.2
	comp=Z,9.5nm,0.7s						
MTLF	Montolieu	85.95	338	eP	P	23 19 11.3	+1.2
MTLF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MTLF	Montolieu	85.95	338	eP	P	23 19 11.3	+1.2
	comp=Z,9.5nm,0.7s						
EPF	Esparros	86.72	339	eP	P	23 19 13.1	-0.8
EPF	Esparros	86.72	339	eP	P	23 19 13.1	-0.8
EPF	Esparros	86.72	339	eP	P	23 19 13.1	-0.8
ETSF	Etsaut	87.06	339	eP	P	23 19 17.0	+1.4
	comp=Z,9.9nm,0.6s						
ETSF	Etsaut	87.06	339	eP	P	23 19 17.0	+1.4
ETSF				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ETSF	Etsaut	87.06	339	eP	P	23 19 17.0	+1.4
	comp=Z,9.9nm,0.6s						
KEST	Kesra	90.79	330	P	P	23 19 33.5	+0.3
	comp=Z,1.0nm,0.7s,baz=24,slow=16,SNR=4.4						
ESDC	Sonseca Array	90.92	341	P	P	23 19 33.3	-0.4
	comp=Z,0.2nm,0.4s,baz=12,slow=3.0,SNR=3.1						
TORD	Torodi Ar. Bea	114.16	327	PKP	PKPdf	23 25 07.4	-1.3
	comp=Z,0.1nm,0.3s,baz=24,slow=2.2,SNR=7.7						
BDFB	Brasilia	145.01	33	PKP	PKPbc	23 26 05.4	-0.9
	comp=Z,0.6nm,0.3s,baz=83,slow=1.4,SNR=3.3						

IDC 05 23:07:19.5±2.3, 6°.91S×156°.23E, h0km, mb4.0/6, mb1 4.1/6, mb1mx3.8/17, mbtmp4.0/6, MS4.0/2, Ms1 4.0/2, ms1mx3.2/28, Error ellipse: s-maj=83.1km s-min=25.4km az=107.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.88	236	P	P	23 12 44.1	-0.1
	1.6nm,0.6s,baz=65,slow=10,SNR=44						
WRA				PcP	PcP	23 16 20.3	-0.2
	0.2nm,0.3s,baz=66,slow=2.8,SNR=6.2						
ASAR	Alice Springs	27.16	230	P	P	23 13 04.0	-0.8
	0.7nm,0.5s,baz=58,slow=10,SNR=19						
STKA	Stephens Creek	28.35	207	P	P	23 13 17.2	+1.8
	12nm,1.4s,baz=27,slow=13,SNR=2.9						
RAO	Raoul Island	32.98	136	LR	LR	23 23 42.1	
	comp=Z,286nm,20.6s,baz=193,slow=30						
SONM	Songino Array	69.93	327	P	P	23 18 34.0	+1.2
	0.7nm,0.5s,baz=141,slow=5.7,SNR=3.7						
MKAR	Makanchi Array	84.15	318	P	P	23 19 53.5	+0.8
	0.8nm,0.5s,baz=100,slow=6.0,SNR=11						
ZALV	Zalesovo Beam	84.80	326	P	P	23 19 54.8	-0.9
	0.6nm,0.5s,baz=132,slow=6.0,SNR=3.2						
AAK	Ala-Archa	88.58	313	LR	LR	23 59 33.7	
	comp=Z,74nm,19.7s,baz=197,slow=35						
TORD	Torodi Ar. Bea	154.19	286	PKPbc	PKPbc	23 27 20.8	-1.8
	0.2nm,0.5s,baz=97,slow=1.3,SNR=7.8						

CSEM 05 23:17:38.9, 38°.32N×21°.84E, h7km, MD2.8, After ATH

ATH 05 23:17:38.9, 38°.32N×21°.84E, h7km±1km, MD2.8/8, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSA1	Psathopyrgos	0.04	81	ePG	Pg	23 17 40.1	-0.2
PSA1				eSG	Sg	23 17 41.6	+0.3
EFP	Efpalio	0.12	26	ePG	Pg	23 17 41.0	-0.5
EFP				eSG	Sg	23 17 43.0	-0.3
EFP	Efpalio	0.12	26	ePg	Pg	23 17 41.0	-0.5
EFP				eSg	Sg	23 17 43.0	-0.3
LAKA	Lakka	0.14	126	ePG	Pg	23 17 41.9	+0.1
LAKA				eSG	Sg	23 17 44.3	+0.5
LAKA	Lakka	0.14	126	ePg	Pg	23 17 41.9	+0.1
LAKA				eSg	Sg	23 17 44.3	+0.5
KALE	Kalithea	0.25	73	ePG	Pg	23 17 43.4	-0.5
KALE				eSG	Sg	23 17 48.3	+1.0
KALE	Kalithea	0.25	73	ePg	Pg	23 17 43.4	-0.5
KALE				eSg	Sg	23 17 48.3	+1.0
KLV	Kalavryta, Ach	0.37	138	ePB	Pg	23 17 46.2	0.0
KLV	Kalavryta, Ach	0.37	138	ePb	Pg	23 17 46.2	0.0
RLS	Riolos of Patr	0.39	228	ePB	Pg	23 17 46.6	0.0
RLS	Riolos of Patr	0.39	228	ePb	Pg	23 17 46.6	0.0
GUR	Goura	0.55	134	ePB	Pg	23 17 48.9	-0.8
GUR	Goura	0.55	134	ePb	Pg	23 17 48.9	-0.8
EVR	Evrytania	0.60	358	ePB	Pg	23 17 50.4	-0.2
EVR	Evrytania	0.60	358	ePb	Pg	23 17 50.4	-0.2

IDC 05 23:28:25.7±3.5, 17°.64S×167°.67E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.7/19, mbtmp3.7/5, ML3.2/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/26, Error ellipse: s-maj=74.8km s-min=32.0km az=95.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.56	194	Pn	Pn	23 29 35.9	-0.3
	1.0nm,0.3s,baz=113,slow=17,SNR=12						
DZM				Sn	Sn	23 30 28.1	-1.9
	3.7nm,0.3s,baz=307,slow=23,SNR=9.4						
PMG	Port Moresby	21.54	290	LR	LR	23 39 08.4	
	comp=Z,53nm,18.4s,baz=354,slow=30						
STKA	Stephens Creek	27.50	234	P	P	23 34 15.0	+1.0
	1.6nm,0.9s,baz=53,slow=15,SNR=3.1						
WRA	Warramunga Arr	31.61	260	P	P	23 34 49.9	-0.7
	0.5nm,1.0s,baz=89,slow=8.8,SNR=3.7						
ASAR	Alice Springs	32.11	253	P	P	23 34 55.2	+0.3
	0.6nm,0.6s,baz=79,slow=8.4,SNR=8.5						
KSRS	Korea Array	66.35	326	LR	LR	00 04 57.0	
	comp=Z,22nm,18.2s,baz=220,slow=33						
SONM	Songino Array	85.05	324	P	P	23 41 03.3	-0.1
	0.9nm,0.8s,baz=108,slow=4.8,SNR=3.9						

WEL 05 23:35:52.4±0.2, 39°.73S×174°.60E, h120km±1km, ML3.5/10, 3C-13D, Error ellipse: s-maj=1.1km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WAZ	Wanganui	0.30	95	⇓PN	Pn	23 36 09.5	+0.2
WAZ				SN	Sn	23 36 22.4	+0.3
RAEZ	Rainy Point	0.47	341	⇓PN	Pn	23 36 10.0	-0.1
DFE	Dawson Falls	0.56	317	PN	Pn	23 36 10.5	-0.3
NEZ	North Egmont	0.60	320	⇓PN	Pn	23 36 11.0	-0.1
NEZ				SN	Sn	23 36 25.1	-0.1
VRZ	Vera Road	0.62	12	⇓PN	Pn	23 36 10.8	-0.4
VRZ				SN	Sn	23 36 23.7	-1.5
DREZ	Durham Road	0.62	330	PN	Pn	23 36 11.0	-0.2
NRZ	Ngariki Road	0.65	307	PN	Pn	23 36 11.2	-0.1
PKVZ	Pokaka	0.73	53	⇓PN	Pn	23 36 11.7	-0.3
MTVZ	Mangateitei	0.76	63	⇓PN	Pn	23 36 12.0	-0.3
MTVZ				SN	Sn	23 36 26.4	-0.8
TRVZ	Turoa	0.85	60	⇓PN	Pn	23 36 12.9	-0.4
TRVZ				SN	Sn	23 36 27.2	-1.9
WNVZ	Wahianoa	0.87	63	PN	Pn	23 36 13.2	-0.2
WNVZ				SN	Sn	23 36 28.1	-1.2
DRZ	Dome Shelter	0.88	59	PN	Pn	23 36 13.2	-0.4
FWVZ	Far West T-bar	0.88	58	⇓PN	Pn	23 36 13.1	-0.4
FWVZ				SN	Sn	23 36 27.7	-1.8
WPVZ	Whakapapa	0.90	55	PN	Pn	23 36 13.3	-0.3
TWVZ	Taurewa	0.93	45	PN	Pn	23 36 13.3	-0.5
TUVZ	Tukino	0.94	61	⇓PN	Pn	23 36 14.0	0.0
MOVZ	Moawhango	0.95	70	PN	Pn	23 36 13.5	-0.5
NGZ	Ngauruhoe	0.96	55	⇑PN	Pn	23 36 14.0	-0.2
NGZ				SN	Sn	23 36 29.3	-1.3
WTVZ	West Tongariro	0.98	52	⇓PN	Pn	23 36 14.1	-0.3
WTVZ				SN	Sn	23 36 29.8	-1.2
OTVZ	Oturere	1.00	56	PN	Pn	23 36 14.6	-0.1
KRVZ	Karewarewa	1.03	52	PN	Pn	23 36 14.5	-0.3
TSZ	Takapari Road	1.10	108	PN	Pn	23 36 15.2	-0.3
POWZ	Post Office Ro	1.12	127	PN	Pn	23 36 15.5	0.0
KIW	Kapiti Island	1.15	168	PN	Pn	23 36 15.8	-0.2
KIW				AML	AML	23 36 32.1	
KIW				AML	AML	23 36 32.1	
BHHZ	Black Hill Sta	1.16	78	PN	Pn	23 36 15.3	-0.8
OGWZ	Otaki Gorge	1.17	158	PN	Pn	23 36 16.3	+0.1
DUWZ	D'Urville Isla	1.19	206	PN	Pn	23 36 15.9	-0.4
MRZ	Mangatainoka R	1.20	141	PN	Pn	23 36 16.2	-0.2
MRZ				AML	AML	23 36 32.8	
MRZ				AML	AML	23 36 33.7	
HIZ	Hauiti	1.23	10	⇓PN	Pn	23 36 16.5	-0.3
PNHZ	Pukenui	1.25	99	PN	Pn	23 36 17.2	+0.2
RATZ	Rangitukua	1.26	47	PN	Pn	23 36 17.5	+0.4
DVHZ	Dannevirke	1.33	116	PN	Pn	23 36 17.7	-0.3
HOWZ	Holdsworth Sta	1.36	149	PN	Pn	23 36 18.0	-0.2
CAW	Cannon Point	1.42	165	PN	Pn	23 36 18.8	-0.1
CAW				AML	AML	23 36 37.0	
CAW				AML	AML	23 36 38.4	
TIWZ	Tintock	1.44	137	PN	Pn	23 36 18.9	-0.2
WPHZ	Waipukurau	1.46	104	PN	Pn	23 36 21.5	+2.2
TCW	Tory Channel	1.50	189	PN	Pn	23 36 19.4	-0.4
TCW				AML	AML	23 36 39.0	
TCW				AML	AML	23 36 39.1	
BKZ	Black Stump Fm	1.57	70	PN	Pn	23 36 20.3	-0.4
BKZ				AML	AML	23 36 41.1	
BKZ				AML	AML	23 36 43.4	
SNZO	South Karori	1.58	177	⇑PN	Pn	23 36 20.3	-0.4
SNZO				AML	AML	23 36 40.1	
SNZO				AML	AML	23 36 40.6	
BFZ	Birch Farm	1.58	127	PN	Pn	23 36 20.5	-0.3
MTW	Mount Morrison	1.58	154	PN	Pn	23 36 20.5	-0.3
MTW				AML	AML	23 36 39.7	
MTW				AML	AML	23 36 39.9	
TMWZ	Te Maipa	1.69	145	⇓PN	Pn	23 36 21.9	-0.2
NNZ	Nelson	1.75	212	PN	Pn	23 36 22.2	-0.5
MSWZ	Moikau Station	1.75	164	PN	Pn	23 36 22.4	-0.4
MSWZ				AML	AML	23 36 43.2	
MSWZ				AML	AML	23 36 44.7	
KAHZ	Kahuranaki	1.76	93	PN	Pn	23 36 23.1	+0.1
PAWZ	Paruwai Farm	1.77	159	PN	Pn	23 36 22.6	-0.3
PAWZ				AML	AML	23 36 43.4	
PAWZ				AML	AML	23 36 43.5	
TUWZ	Tuamarina	1.77	196	PN	Pn	23 36 22.1	-0.8
TUWZ				AML	AML	23 36 44.5	
TUWZ				AML	AML	23 36 46.3	
NMHZ	Naumai	1.83	70	PN	Pn	23 36 24.2	+0.4
PLWZ	Palliser	1.90	165	PN	Pn	23 36 24.0	-0.7
QRZ	Quartz Range	1.92	235	PN	Pn	23 36 23.8	-1.1
BSWZ	Blackbirch Sta	2.05	195	PN	Pn	23 36 26.0	-0.5
THZ	Tophouse	2.40	212	⇓PN	Pn	23 36 30.0	-1.0
URZ	Urewera	2.45	54	PN	Pn	23 36 30.5	-1.0
KNZ	Kokohu	2.49	74	PN	Pn	23 36 31.1	-0.9
MHGZ	Mahia Peninsul	2.63	78	PN	Pn	23 36 33.2	-0.7
MWZ	Matawai	2.68	60	PN	Pn	23 36 33.3	-1.2
KHZ	Kahutara	2.80	196	⇑PN	Pn	23 36 35.1	-0.9
MQZ	McQueen's Vall	4.23	199	PN	Pn	23 36 51.8	-3.1
ODZ	Otahua Downs	6.06	208	PN	Pn	23 37 17.2	-2.4
JCZ	Jackson Bay	6.15	223	PN	Pn	23 37 17.7	-3.1

IDC 05 23:39:26.3±1.5, 17°.61S×167°.82E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.9/19, mbtmp3.9/7, ML3.8/1, MS3.3/2, Ms1 3.3/2, ms1mx3.0/22, Error ellipse: s-maj=41.9km s-min=26.5km az=118.0

ISCJB 05 23:39:30.2±2.1, 17°.65S±0°.06×167°.6E±0°.3, h27km, mb3.8/5, Error ellipse: s-maj=41.2km s-min=9.2km az=178.9

ISC 05 23:39:30.6±1.4, 17°.63S±0°.09×167°.8E±0°.3, h27km, n13, σ0s.76/15, mb4.0/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.59	196	eP	Pn	23 40 38.1	-0.4
DZM				eS	Sn	23 41 30.2	-0.8
DZM	Mont Dzumac	4.59	196	Pn	Pn	23 40 39.0	+0.5
	4.0nm,0.3s,baz=343,slow=21,SNR=12						
DZM				Sn	Sn	23 41 30.8	-0.2
	11nm,0.3s,baz=140,slow=22,SNR=11						
DZM				LR	LR	23 42 20.3	
	comp=Z,340nm,18.1s,baz=24,slow=38						
NOUC	Port Laguerre	4.66	197	eS	Sn	23 41 33.9	+1.3
HNR	Honiara	11.14	316	LR	LR	23 45 52.2	
	comp=Z,140nm,18.0s,baz=148,slow=34						
CTA	Charters Tower	20.51	260	P	Pn	23 44 08.5	-0.7
	3.9nm,0.7s,baz=78,slow=16,SNR=6.4						
STKA	Stephens Creek	27.59	234	P	P	23 45 16.1	+0.4
	2.2nm,0.7s,baz=213,slow=6.3,SNR=7.0						
WRA	Warramunga Arr	31.70	260	P	P	23 45 51.1	-1.3
	0.4nm,0.4s,baz=80,slow=6.1,SNR=13						
WRA				PcP	PcP	23 48 43.9	+0.1
	0.3nm,0.6s,baz=346,slow=1.0,SNR=4.5						
ASAR	Alice Springs	32.20	253	P	P	23 45 56.8	0.0
	0.6nm,0.5s,baz=80,slow=8.6,SNR=11						
ASAR				PcP	PcP	23 48 45.0	-0.2
	0.3nm,0.7s,baz=80,slow=2.9,SNR=4.2						
CMAR	Chiang Mai Arr	76.57	294	P	P	23 51 19.4	+0.3
	0.7nm,0.3s,baz=135,slow=5.9,SNR=4.3						
SONM	Songino Array	85.10	324	P	P	23 52 05.4	+1.2
	0.6nm,0.5s,baz=143,slow=5.2,SNR=4.4						
ARCES	ARCESS Array B	123.16	345	PKP	PKPdf	23 58 23.6	-0.7
	2.4nm,0.9s,baz=54,slow=2.1,SNR=4.4						
GERES	GERESS Array B	142.42	332	PKP	PKPdf	23 59 00.7	-0.4
	0.4nm,0.7s,baz=204,slow=2.9,SNR=4.2						
TORD	Torodi Ar. Bea	165.85	254	PKP	PKPdf	23 59 33.5	-0.5
	0.5nm,0.9s,baz=48,slow=2.1,SNR=3.7						

IDC 05 23:45:03.3±2.4, 36°.75N×69°.66E, h0km, mb3.4/2, mb1 3.5/6, mb1mx3.3/30, mbtmp3.5/6, ML3.3/4, MS3.4/1, Ms1 3.5/1, ms1mx2.5/22, Error ellipse: s-maj=52.0km s-min=19.5km az=140.0

NNC 05 23:45:19.2±4.5, 38°.00N×69°.12E, h20km±18km, mb3.7, mpv3.2, Error ellipse: s-maj=29.8km s-min=15.4km az=20.0

ISC 05 23:45:11.5±1.9, 37°.4N±0°.1×69°.0E±0°.1, h27km, n14, σ1s.80/15, 6C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.83	11	⇑Pn	Pn	23 46 36.9	+0.7
	0.3nm,0.2s,baz=201,slow=16,SNR=43						
KK31				⇑Pg	Pb	23 46 54.5	+2.0
	1.8nm,0.4s,baz=192,slow=51,SNR=5.7						
KK31				⇑Lg	Lg	23 48 04.2	
	5.5nm,0.5s,baz=192,slow=28,SNR=4.8						
AAK	Ala-Archa	6.74	37	Pn	Pn	23 46 48.0	-0.7
	1.2nm,0.3s,baz=200,slow=6.9,SNR=13						
AAK				Pg	Pb	23 47 14.2	+6.3
	0.7nm,0.3s,baz=197,slow=11,SNR=4.2						
AAK				Lg	Lg	23 48 33.8	
	0.5nm,0.3s,baz=333,slow=13,SNR=5.9						
TKM2	Tokmak 2	7.50	40	⇑Pn	Pn	23 46 59.2	0.0
	1.9nm,0.6s						
TKM2				⇑Lg	Lg	23 48 59.8	
	8.0nm,1.1s						
AB31	Akbulak array	13.56	334	P	Pn	23 48 22.3	+0.3
	1.1nm,0.5s,baz=156,slow=12,SNR=44						
AB31				S	Sn	23 50 48.5	-3.1
	0.5nm,0.4s,baz=169,slow=23,SNR=5.1						
MK31	Makanchi Array	13.62	42	P	Pn	23 48 24.1	+1.2
	0.7nm,0.7s,baz=233,slow=14,SNR=10						
MKAR	Makanchi Array	13.62	42	Pn	Pn	23 48 20.4	-2.5
	0.1nm,0.3s,baz=234,slow=14,SNR=12						
KURBB	Kurchatov Arra	14.89	24	Pn	Pn	23 48 37.7	-2.4
	0.0nm,0.3s,baz=206,slow=16,SNR=2.8						
KURBB				Lg	Lg	23 53 12.1	
	0.0nm,0.3s,baz=218,slow=31,SNR=4.5						
AKTO	Aktyubinsk	15.23	332	⇓P	Pn	23 48 46.6	+1.9
	3.5nm,0.8s						
AKTO	Aktyubinsk	15.23	332	Pn	Pn	23 48 46.9	+2.2
	0.2nm,0.3s,baz=146,slow=15,SNR=5.8						
ZRNK	Zerenda	15.57	0	⇑P	Pn	23 48 49.4	+0.4
	1.1nm,0.8s						
BVA0	Borovoye Array	15.68	3	P	Pn	23 48 51.2	+0.9
	2.8nm,1.3s,baz=0.0,slow=0.1,SNR=4.6						
ZALV	Zalesovo Beam	19.84	28	P	P	23 49 39.0	-1.1
	1.0nm,0.5s,baz=219,slow=10,SNR=6.1						
ESDC	Sonseca Array	55.62	297	LR	LR	00 20 26.4	
	comp=Z,29nm,18.4s,baz=210,slow=38						
TORD	Torodi Ar. Bea	64.14	267	P	P	23 55 43.4	-0.4
	0.5nm,1.1s,baz=47,slow=4.9,SNR=2.3						

ISCJB 05 23:54:33.0±0.4, 57°.88N±0°.05×156°.26W±0°.09, h127km±4km, mb3.5/4, Error ellipse: s-maj=9.2km s-min=5.6km az=135.8

NEIC 05 23:54:35.2, 57°.82N×156°.24W, h117km, MG2.9(AEIC), After AEIC.

IDC 05 23:54:37.0±4.8, 58°.17N×155°.85W, h120km±23km, mb3.2/5, mb1 3.6/6, mb1mx3.2/27, mbtmp3.3/6, Error ellipse: s-maj=50.6km s-min=19.4km az=73.0

ISC 05 23:54:34.3±0.9, 57°.83N±0°.06×156°.28W±0°.05, h119km±7km, n49, σ1s.14/55, mb3.4/4, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KJL	Kejulik	0.44	59	P	Pn	23 54 51.9	+0.1
KJL				S	Sn	23 55 05.3	+0.2
CNTC	Contact Creek	0.48	26	P	Pn	23 54 51.9	-0.2
KELA	Mount Kelaz	0.68	25	P	Pn	23 54 53.1	-0.3
KABU	Katmai Buttres	0.69	50	P	Pn	23 54 53.7	+0.1
KABU				S	Sn	23 55 08.9	+0.8
KCE	Katmai Mt Cerb	0.72	54	P	Pn	23 54 54.2	+0.5
KAKN	Katmai Knife C	0.80	54	P	Pn	23 54 54.5	+0.1
KAWH	Katmai	0.96	54	P	Pn	23 54 55.8	-0.1
ANNE	Aniakchak Nort	1.33	227	P	Pn	23 54 59.4	-0.3
ANNW	Aniakchak Nort	1.36	231	P	Pn	23 55 00.6	+0.5
ANNW				S	Sn	23 55 19.9	+0.2
ANPK	Aniakchak Peak	1.41	226	P	Pn	23 55 00.6	-0.1
FONW	Fourpeaked Sta	1.60	50	P	Pn	23 55 03.2	+0.4
MCNL	McNeil River	1.70	36	P	Pn	23 55 03.9	-0.1
OHAK	Old Harbor	1.73	109	P	Pn	23 55 03.7	-0.6
OHAK				S	Sn	23 55 25.5	-1.6
CHGN	Chignik	1.93	218	P	Pn	23 55 05.6	-1.1
KDAK	Kodiak Island	1.98	90	P	Pn	23 55 07.2	-0.2
KDAK				S	Sn	23 55 31.4	-1.3
KDAK	Kodiak Island	1.98	90	P	Pn	23 55 07.2	-0.2
	8.6nm,0.3s,baz=273,slow=4.5,SNR=81						
KDAK				S	Sn	23 55 31.4	-1.3
	13nm,0.3s,baz=344,slow=22,SNR=33						
AUH	Augustine H	2.14	43	P	Pn	23 55 09.9	+0.5
VNSG	Veniaminof 6	2.30	223	P	Pn	23 55 12.0	+0.5
RDWB	Redoubt West	3.20	32	P	Pn	23 55 22.4	-0.8
BRLK	Bradley Lake	3.41	53	P	Pn	23 55 25.7	-0.2
SEW	Seward	4.21	54	P	Pn	23 55 36.6	+0.2
STLK	Strandline Lak	4.32	30	P	Pn	23 55 38.3	+0.3
SUA	Susitna One	4.60	35	P	Pn	23 55 41.8	-0.1
TT01	Tatalina	5.10	1	P	Pn	23 55 48.8	+0.4
CAST	Castle Rocks	5.97	18	P	Pn	23 56 00.5	+0.2
VLZ	Valdez	6.05	53	P	Pn	23 56 00.6	-0.6
DIV	Divide	6.29	54	P	Pn	23 56 04.0	-0.5
TRF	Thorofare Moun	6.36	25	P	Pn	23 56 04.4	-1.1
NICHA	Nichawak Mount	6.80	64	P	Pn	23 56 10.7	-0.6
BERG	Berg Lake	6.97	63	P	Pn	23 56 12.6	-1.0
VRDI	Verde Repeater	7.36	57	P	Pn	23 56 18.3	-0.7
PAX	Paxson	7.43	42	P	Pn	23 56 19.2	-0.6
BARK	Barkley Ridge	7.55	64	P	Pn	23 56 20.9	-0.7
WRH	Wood River Hil	7.75	27	P	Pn	23 56 21.8	-2.3
KIAG	Kiagna River	7.75	61	P	Pn	23 56 23.5	-0.9
PTPK	Patty Peak	7.79	59	P	Pn	23 56 24.0	-0.9
CCB	Clear Creek Bu	7.96	27	P	Pn	23 56 24.8	-2.2
GRNC	Granite Creek	7.99	63	P	Pn	23 56 26.5	-1.0
MDM	Murphy Dome	8.12	25	P	Pn	23 56 26.5	-2.7
RIDG	Independ'e Rid	8.14	39	P	Pn	23 56 28.6	-0.9
ILAR	Eielson Array	8.29	29	P	Pn	23 56 28.6	-2.9
	2.1nm,0.3s,baz=216,slow=13,SNR=69						
ILAR				S	Sn	23 57 55.1	-8.2
	0.7nm,0.3s,baz=218,slow=22,SNR=6.2						
IL1	Eielson Array	8.29	29	P	Pn	23 56 29.1	-2.4
SCRK	Sand Creek	8.58	39	P	Pn	23 56 33.9	-1.7
BCA3	Beaver Creek A	8.87	48	P	Pn	23 56 38.6	-0.7
YKA	Yellowknife Ar	20.96	60	P	P	23 59 06.7	-0.7
	0.8nm,0.4s,baz=271,slow=9.8,SNR=10						
YBH	Yreka Blue Hor	26.63	113	P	P	00 00 04.0	+2.4
	0.7nm,0.6s,baz=262,slow=2.8,SNR=4.5						
NVAR	Mina Array Bea	31.33	112	P	P	00 00 45.5	+2.1
	0.9nm,0.4s,baz=299,slow=9.2,SNR=5.5						
PDAR	Pinedale Array	32.68	97	P	P	00 00 56.4	+1.2
	0.8nm,1.0s,baz=108,slow=1.9,SNR=4.2						
TXAR	Lajitas Array	45.94	105	P	P	00 02 45.3	+0.2
	0.3nm,0.7s,baz=310,slow=5.9,SNR=4.7						

NIED 06 00:39:00, 24°.70N×122°.50E, h119km, Mw4.0 Best double couple: M0 1.05000×10^15 NP1:φs70.00000°, δ74.00000°, λ-121.00000°. NP2:φs315.00000°, δ35.00000°, λ-30.00000°.

ISCJB 06 00:39:24.4±0.2, 24°.57N±0°.02×122°.43E±0°.02, h89km±3km, mb3.5/8, Error ellipse: s-maj=3.5km s-min=2.1km az=154.7

TAP 06 00:39:25.3, 24°.55N×122°.41E, h84km, ML4.6, B

JMA 06 00:39:25.8±0.1, 24°.66N×122°.47E, h81km±1km, M3.8

IDC 06 00:39:29.8±5.6, 24°.63N×122°.44E, h131km±55km, mb3.3/7, mb1 3.5/8, mb1mx3.3/27, mbtmp3.4/8, Error ellipse: s-maj=36.1km s-min=14.8km az=69.0

ISC 06 00:39:25.3±0.7, 24°.53N±0°.03×122°.42E±0°.02, h84km±5km, n91, σ1s.04/158, mb3.6/8, 2C-28D, Taiwan region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWC	Suao	0.52	279	⇓iP	Pn	00 39 39.4	-0.1
	baz=279						
TWC				S	Sn	00 39 49.3	-0.9
	baz=279						
YOJ	Yonaguni jima	0.55	97	⇓iP	Pn	00 39 40.0	+0.2
	baz=99						
YOJ				iS	Sn	00 39 50.7	+0.2
	baz=99						
YOJ	Yonaguni jima	0.55	97	P	Pn	00 39 40.0	+0.2
YOJ				eS	Sn	00 39 50.4	-0.1
TWB1	Santiao Chiao	0.61	321	⇓iP	Pn	00 39 40.2	-0.2
	baz=314						
TWB1				S	Sn	00 39 50.5	-1.0
	baz=314						
ENA	Nanau	0.62	261	⇓iP	Pn	00 39 40.7	+0.2
	baz=253						
ENA				eS	Sn	00 39 52.0	+0.2
	baz=253						
ILA	Ilan	0.65	291	⇓P	Pn	00 39 41.0	+0.3
	baz=289						
ILA				S	Sn	00 39 52.1	-0.1
	baz=289						
EHP	Heping Village	0.65	250	eP	Pn	00 39 41.0	+0.2
	baz=245						
TWE	Neicheng	0.71	286	⇓iP	Pn	00 39 41.5	+0.3
	baz=284						
TWE				eS	Sn	00 39 52.8	-0.4
	baz=284						
ENTT	Nioudou	0.78	278	⇓iP	Pn	00 39 42.7	+0.6
	baz=278						
ENTT				eS	Sn	00 39 54.7	+0.1
	baz=278						
NWF	Wu-fen Shan	0.79	313	⇓iP	Pn	00 39 42.5	+0.2
	baz=305						
NWF				iS	Sn	00 39 54.2	-0.7
	baz=305						
TWD	Chiawan	0.87	239	⇓iP	Pn	00 39 42.9	-0.2
	baz=231						
TWD				iS	Sn	00 39 55.9	-0.4
	baz=231						
HWA	Hwalien	0.92	233	⇓iP	Pn	00 39 43.8	+0.2
	baz=226						
HWA				eS	Sn	00 39 57.9	+0.5
	baz=226						
NNS	Nan Shan	0.95	265	eP	Pn	00 39 44.3	+0.1
	baz=256						
NNS				eS	Sn	00 39 58.0	-0.3
	baz=256						
TAP1	Taipei	0.96	302	⇓iP	Pn	00 39 44.0	0.0
	baz=300						
TAP1				S	Sn	00 39 56.8	-1.2
	baz=300						
TAP	Taipei	0.97	302	P	Pn	00 39 44.0	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=300						
TAP				S	Sn	00 39 57.1	-1.2
	baz=300						
NSK	**Sanguang**	**0.97**	**279**	⇓iP	**Pn**	**00 39 44.8**	**+0.5**
	baz=277						
NSK				S	Sn	00 39 58.3	-0.2
	baz=277						
TWY	**Chenhua**	**1.05**	**315**	⇓P	**Pn**	**00 39 45.3**	**+0.3**
	baz=307						
TWY				S	Sn	00 39 59.6	-0.4
	baz=307						
ESF	**Shoufeng Towns**	**1.06**	**232**	eP	**Pn**	**00 39 44.9**	**-0.4**
	baz=224						
TWS1	**Kuangyinshan**	**1.07**	**302**	⇓iP	**Pn**	**00 39 45.5**	**+0.2**
	baz=301						
TWS1				S	Sn	00 39 59.8	-0.6
	baz=301						
WHF	**Hehuan Shan**	**1.12**	**250**	⇓iP	**Pn**	**00 39 46.6**	**+0.2**
	baz=248						
WHF				eS	Sn	00 40 01.7	-0.5
	baz=248						
PCYT	**Pengchaiyu**	**1.14**	**344**	⇑iP	**Pn**	**00 39 46.9**	**+0.7**
	baz=335						
PCYT				eS	Sn	00 40 02.0	+0.1
	baz=335						
ESL	**Shilin**	**1.15**	**232**	P	**Pn**	**00 39 46.0**	**-0.3**
	baz=240						
ESL				eS	Sn	00 40 01.3	-0.8
	baz=240						
TWT	**Tachien**	**1.16**	**256**	⇓iP	**Pn**	**00 39 47.7**	**+1.0**
	baz=255						
TWT				eS	Sn	00 40 02.8	+0.1
	baz=255						
NCU	**National Centr**	**1.20**	**292**	P	**Pn**	**00 39 47.5**	**+0.5**
	baz=290						
NCU				eS	Sn	00 40 03.2	0.0
	baz=290						
IRIF	**Iriomote-Funau**	**1.21**	**99**	P	**Pn**	**00 39 47.3**	**+0.2**
IRIF				eS	Sn	00 40 03.6	+0.1
NSTT	**Nanjuang**	**1.29**	**275**	P	**Pn**	**00 39 48.5**	**+0.4**
	baz=273						
NSTT				S	Sn	00 40 05.4	+0.1
	baz=273						
HSN	**Hsinchu**	**1.34**	**282**	eP	**Pn**	**00 39 48.9**	**+0.2**
	baz=282						
HSN				eS	Sn	00 40 06.0	-0.4
	baz=282						
HATJ	**Hateruma jima**	**1.35**	**110**	P	**Pn**	**00 39 49.6**	**+0.8**
HATJ				eS	Sn	00 40 07.6	+1.0
EHY	**Hungye**	**1.43**	**225**	⇓iP	**Pn**	**00 39 49.3**	**-0.5**
	baz=224						
EHY				eS	Sn	00 40 06.7	-1.7
	baz=224						
JKRS	**Kuro-shima**	**1.48**	**101**	P	**Pn**	**00 39 51.2**	**+0.7**
JKRS				eS	Sn	00 40 10.5	+1.0
TWQ1	**Liyutan**	**1.51**	**263**	⇓iP	**Pn**	**00 39 51.6**	**+0.7**
	baz=262						
TWQ1				eS	Sn	00 40 10.8	+0.6
	baz=262						
NSY	**Sanyi**	**1.51**	**266**	eP	**Pn**	**00 39 51.9**	**+1.0**
	baz=264						
NSY				eS	Sn	00 40 11.0	+0.7
	baz=264						
SMLT	**Sun Moon Lake**	**1.53**	**245**	⇓P	**Pn**	**00 39 52.0**	**+0.8**
	baz=237						
SMLT				eS	Sn	00 40 12.1	+1.3
	baz=237						
TYC	**Yuchr**	**1.56**	**247**	⇓iP	**Pn**	**00 39 52.4**	**+1.0**
	baz=240						
TYC				eS	Sn	00 40 12.3	+1.1
	baz=240						
JIJ	**Ishigaki jima**	**1.58**	**96**	P	**Pn**	**00 39 51.9**	**+0.1**
JIJ				S	Sn	00 40 11.3	-0.6
TCU	**Taichung**	**1.63**	**257**	⇓P	**Pn**	**00 39 53.3**	**+0.9**
	baz=266						
TCU				S	Sn	00 40 13.8	+0.8
	baz=266						
YUS	**Yu-Shan**	**1.69**	**233**	⇓iP	**Pn**	**00 39 54.5**	**+0.8**
	baz=225						
YUS				S	Sn	00 40 14.9	-0.3
	baz=225						
WNT	**Mingjian**	**1.71**	**248**	eP	**Pn**	**00 39 54.7**	**+1.3**
	baz=246						
WNT				eS	Sn	00 40 16.4	+1.6
	baz=246						
CHKT	**Chengkung**	**1.72**	**214**	⇓eP	**Pn**	**00 39 53.0**	**-0.6**
	baz=207						
CHKT				eS	Sn	00 40 13.2	-1.9
	baz=207						
ALS	**Alishan**	**1.79**	**236**	⇓iP	**Pn**	**00 39 56.0**	**+1.2**
	baz=228						
ALS				eS	Sn	00 40 17.6	+0.4
	baz=228						
CHN5	**Tsauling**	**1.84**	**240**	⇓iP	**Pn**	**00 39 56.6**	**+1.3**
	baz=231						
CHN5				eS	Sn	00 40 19.7	+1.7
	baz=231						
ELDTW	**Lidau**	**1.85**	**224**	⇓P	**Pn**	**00 39 55.2**	**-0.2**
	baz=221						
ELDTW				eS	Sn	00 40 17.6	-0.7
	baz=221						
WGK	**Gukeng**	**1.89**	**244**	eP	**Pn**	**00 39 57.2**	**+1.4**
	baz=254						
WGK				eS	Sn	00 40 20.6	+1.5
	baz=254						
CHN2	**Minshiung**	**2.04**	**241**	eP	**Pn**	**00 39 59.1**	**+1.4**
	baz=251						
CHN2				eS	Sn	00 40 24.5	+2.0
	baz=251						
CHN4	**Tsaushan**	**2.04**	**235**	⇓iP	**Pn**	**00 39 59.3**	**+1.5**
	baz=234						
CHN4				S	Sn	00 40 23.8	+1.1
	baz=234						
WTCT	**Ta-ch'eng**	**2.06**	**252**	eP	**Pn**	**00 39 58.2**	**+0.2**
	baz=259						
WTCT				eS	Sn	00 40 23.2	+0.1
	baz=259						
JTJ	**Tarama**	**2.08**	**87**	P	**Pn**	**00 39 59.1**	**+0.8**
JTJ				eS	Sn	00 40 24.1	+0.5
WTP	**Ta-pu**	**2.09**	**233**	P	**Pn**	**00 39 59.6**	**+1.1**
	baz=231						
WTP				eS	Sn	00 40 25.4	+1.5
	baz=231						
CHY	**Chiayi**	**2.09**	**241**	eP	**Pn**	**00 39 59.3**	**+0.8**
	baz=251						
CHY				eS	Sn	00 40 24.6	+0.8
	baz=251						
TWG	**Pinlang**	**2.10**	**216**	eP	**Pn**	**00 39 58.1**	**-0.5**
	baz=221						
TWG				eS	Sn	00 40 22.6	-1.6
	baz=221						
TTN	**Taitung**	**2.12**	**214**	eP	**Pn**	**00 39 59.2**	**+0.3**
	baz=221						
TTN				eS	Sn	00 40 25.3	+0.8
	baz=221						
TWK	**Hsinying**	**2.17**	**235**	eP	**Pn**	**00 40 00.5**	**+1.0**
	baz=233						
TWK				eS	Sn	00 40 26.8	+1.0
	baz=233						
CHN1	**Nanshi**	**2.19**	**233**	⇓iP	**Pn**	**00 40 00.9**	**+1.1**
	baz=231						
CHN1				eS	Sn	00 40 27.3	+1.2
	baz=231						
WSF	**Szhu**	**2.19**	**247**	eP	**Pn**	**00 40 00.5**	**+0.7**
	baz=254						
WSF				eS	Sn	00 40 26.9	+0.6
	baz=254						
ECL	**Taimali**	**2.35**	**215**	eP	**Pn**	**00 40 01.2**	**-0.6**
	baz=215						
ECL				eS	Sn	00 40 27.9	-2.0
	baz=215						
CHN3	**Shinhua**	**2.37**	**233**	eP	**Pn**	**00 40 03.5**	**+1.2**
	baz=232						
CHN3				eS	Sn	00 40 32.9	+2.3
	baz=232						
SCLT	**Jiali**	**2.44**	**237**	eP	**Pn**	**00 40 04.2**	**+1.0**
	baz=226						
SCLT				eS	Sn	00 40 33.9	+1.7
	baz=226						
TWM1	**Shoushan**	**2.50**	**227**	eP	**Pn**	**00 40 05.8**	**+1.8**
	baz=227						
TAW	**Tawu**	**2.58**	**213**	eP	**Pn**	**00 40 04.7**	**-0.2**
	baz=213						
TAW				eS	Sn	00 40 33.5	-1.9
	baz=213						
EAST	**Anshuo**	**2.58**	**214**	eP	**Pn**	**00 40 04.7**	**-0.3**
	baz=208						
LAY	**Lan-yu**	**2.61**	**198**	eP	**Pn**	**00 40 04.7**	**-0.7**
	baz=198						
LAY				eS	Sn	00 40 33.7	-2.5
	baz=198						
JMJ	**Miyako jima 2**	**2.63**	**83**	eS	**Sn**	**00 40 36.6**	**-0.2**
SCZT	**Fangliau**	**2.71**	**218**	eP	**Pn**	**00 40 07.9**	**+1.1**
	baz=229						
SCZT				eS	Sn	00 40 39.2	+0.6
	baz=229						
JOGS	**Gusukube**	**2.73**	**85**	P	**Pn**	**00 40 08.0**	**+1.0**
JOGS				eS	Sn	00 40 39.4	+0.3
PNG	**Penghu**	**2.79**	**250**	eP	**Pn**	**00 40 06.0**	**-1.8**
	baz=249						
PNG				S	Sn	00 40 38.4	-2.1
	baz=249						
WDGT	**Dungji**	**2.82**	**244**	eP	**Pn**	**00 40 08.3**	**0.0**
	baz=242						
WDGT				eS	Sn	00 40 40.4	-0.9
	baz=242						
TWP	**Hsiaoliuchiu**	**2.88**	**221**	eP	Pn	00 40 12.3	+3.3
	baz=221						
HEN	**Hengchun**	**2.95**	**212**	eP	**Pn**	**00 40 11.6**	**+1.6**
	baz=223						
HEN				eS	Sn	00 40 44.5	+0.1
	baz=223						
TSEB	**Hengchuen, Pin**	**2.97**	**208**	eP	**Pn**	**00 40 12.0**	**+1.7**
	baz=209						
TSEB				eS	Sn	00 40 46.1	+1.2
	baz=209						
TWK1	**Hengchun**	**2.97**	**210**	eP	**Pn**	**00 40 10.6**	**+0.3**
	baz=210						
TWK1				eS	Sn	00 40 43.8	-1.2
	baz=210						
QZH	**Quanzhou**	**3.50**	**278**	⇑iPn	**Pn**	**00 40 18.0**	**+0.6**
QZH				Sn	Sn	00 40 54.9	-2.9
QZH				smax	smax		
	comp=N,660nm,0.6s						
QZH				smax	smax		
	comp=E,320nm,0.5s						
KNM	**Kinmen**	**3.63**	**269**	eP	**Pn**	**00 40 20.9**	**+1.8**
	baz=267						
JKE	**Kume jima 2**	**4.34**	**65**	P	**Pn**	**00 40 30.1**	**+1.3**
JAGN	**Aguni-jima**	**4.82**	**64**	P	**Pn**	**00 40 35.9**	**+0.6**
JAGN				eS	Sn	00 41 29.0	-0.8
JJT2	**Tamagusuku 2**	**5.08**	**71**	P	**Pn**	**00 40 39.3**	**+0.4**
JIH	**Iheya**	**5.59**	**62**	P	**Pn**	**00 40 45.6**	**-0.3**
JIH				eS	Sn	00 41 48.0	-0.7
JOW	**Kunigami**	**5.76**	**65**	eP	**Pn**	**00 40 47.2**	**-0.9**
	baz=66						
JOW	**Kunigami**	**5.76**	**65**	P	**Pn**	**00 40 47.3**	**-0.9**
JTK	**Tokunoshima**	**6.71**	**60**	P	**Pn**	**00 40 59.6**	**-1.5**
JAMN	**Amaminishikomi**	**7.10**	**57**	P	**Pn**	**00 41 04.4**	**-2.0**
JAM	**Amami Oshima**	**7.51**	**57**	P	**Pn**	**00 41 09.9**	**-2.2**
JZK	**Kikaishima**	**7.75**	**59**	P	**Pn**	**00 41 13.3**	**-2.0**
KSRS	**Korea Array**	**13.71**	**19**	P	**Pn**	**00 42 37.9**	**+1.9**
	comp=E,0.8nm,0.3s,baz=196,slow=11,SNR=10.0						
USRK	**Ussuriysk Arra**	**21.12**	**19**	P	**P**	**00 44 02.8**	**-0.3**
	comp=E,2.3nm,0.7s,baz=216,slow=10,SNR=4.0						
SONM	**Songino Array**	**26.50**	**335**	P	**P**	**00 44 54.4**	**-0.5**
	comp=E,0.5nm,0.5s,baz=147,slow=7.0,SNR=2.7						
MKAR	**Makanchi Array**	**38.88**	**315**	P	**P**	**00 46 41.6**	**-0.8**
	comp=E,0.6nm,0.5s,baz=98,slow=12,SNR=8.6						
MKAR				PcP	**PcP**	**00 48 50.9**	**-1.0**
	comp=E,0.1nm,0.4s,baz=88,slow=4.5,SNR=2.8						
KURBB	**Kurchatov Arra**	**42.57**	**319**	P	**P**	**00 47 11.4**	**-1.4**
	comp=E,0.1nm,0.4s,baz=117,slow=8.2,SNR=4.1						
WRA	**Warramunga Arr**	**45.70**	**164**	P	**P**	**00 47 38.0**	**-0.1**
	comp=E,4.1nm,0.6s,baz=346,slow=8.6,SNR=54						
BVAR	**Borovoye Array**	**48.12**	**320**	P	**P**	**00 47 59.1**	**+2.6**
	comp=E,0.4nm,0.6s,baz=93,slow=12,SNR=3.6						
ASAR	**Alice Springs**	**49.19**	**166**	P	**P**	**00 48 05.6**	**+0.5**
	comp=E,1.5nm,0.8s,baz=344,slow=8.4,SNR=19						
YKA	**Yellowknife Ar**	**82.21**	**23**	P	**P**	**00 51 35.0**	**-1.9**
	comp=E,0.2nm,0.6s,baz=313,slow=5.2,SNR=5.5						

*ATH **06** 00:45:35.8, 36°.47N×26°.57E, h140km±1km, ML3.0*
*HLW **06** 00:45:35.9, 36°.50N×26°.90E, h30km±13km, Md4.1, Ml4.2*
*ISCJB **06** 00:45:36.2±0.2, 36°.38N±0°.02×26°.59E±0°.02, h134km±3km, mb3.5/3, Error ellipse: s-maj=3.4km s-min=3.0km az=4.8*
*ISK **06** 00:45:37.5, 36°.47N×26°.58E, h121km, ML3.2*
*CSEM **06** 00:45:37.1±0.1, 36°.39N×26°.59E, h126km±1km, ML3.0, Error ellipse: s-maj=2.4km s-min=2.0km az=23.0*
*IDC **06** 00:45:38.4±3.9, 35°.25N×27°.72E, h132km±37km, mb3.3/3, mb1 3.2/4, mb1mx3.0/24, mbtmp3.2/4, MS3.1/1, Ms1 3.1/1, ms1mx2.2/19, Error ellipse: s-maj=154.6km s-min=18.0km az=143.0*
*THE **06** 00:45:39.3, 36°.45N×26°.56E, h130km±2km, ML3.4/1, Error ellipse: s-maj=2.7km s-min=0.7km az=130.0*
ISC 06 00:45:37.1±0.7**, 36°.41N**±0°.04×**26°.60E**±0°.03**, h126**km±6km**, n202, σ0s.78/229, mb3.6/3, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIS1	**Nisyros Isl.**	**0.51**	**68**	P	**Pn**	**00 45 56.5**	**+0.7**
NIS1				S	**Sn**	**00 46 09.2**	**-0.8**
NIS1	**Nisyros Isl.**	**0.51**	**68**	eP	**Pn**	**00 45 56.3**	**+0.5**
NIS1				eS	**Sn**	**00 46 11.9**	**+1.9**
NIS1	**Nisyros Isl.**	**0.51**	**68**	eP	**Pn**	**00 45 56.3**	**+0.5**
NIS1				eS	**Sn**	**00 46 11.9**	**+1.9**
DAT	**Datca**	**0.85**	**68**	ePG	**Pn**	**00 45 58.7**	**+0.2**
DAT				eSG	**Sn**	**00 46 14.0**	**-0.6**
DAT	**Datca**	**0.85**	**68**	ePg	**Pn**	**00 45 58.7**	**+0.2**
DAT				eSg	**Sn**	**00 46 14.0**	**-0.6**
BODT	**Bodrum**	**0.86**	**41**	ePG	**Pn**	**00 45 58.5**	**0.0**
BODT				eSG	**Sn**	**00 46 13.9**	**-0.8**
BODT	**Bodrum**	**0.86**	**41**	ePg	**Pn**	**00 45 58.5**	**0.0**
BODT				eSg	**Sn**	**00 46 13.9**	**-0.8**
SANT	**Santorini**	**0.92**	**268**	P	**Pn**	**00 45 59.2**	**+0.2**
SANT	**Santorini**	**0.92**	**268**	eP	**Pn**	**00 45 59.2**	**+0.2**
SANT	**Santorini**	**0.92**	**268**	eP	**Pn**	**00 45 59.2**	**+0.2**
THR1	**Thera Island**	**0.92**	**268**	P	**Pn**	**00 45 59.3**	**+0.3**
THR1	**Thera Island**	**0.92**	**268**	P	**Pn**	**00 45 59.3**	**+0.3**
THR2	**Thira island,**	**0.94**	**272**	P	**Pn**	**00 45 59.2**	**+0.1**
THR2	**Thira island,**	**0.94**	**272**	P	**Pn**	**00 45 59.2**	**+0.1**
THR3	**Thira Island,**	**0.96**	**270**	P	**Pn**	**00 45 59.7**	**+0.4**
THR3	**Thira Island,**	**0.96**	**270**	P	**Pn**	**00 45 59.7**	**+0.4**
THR6	**Thira Island,**	**0.97**	**267**	P	**Pn**	**00 45 59.2**	**-0.2**
THR6	**Thira Island,**	**0.97**	**267**	P	**Pn**	**00 45 59.2**	**-0.2**
KARP	**Karpathos**	**0.98**	**152**	P	**Pn**	**00 46 00.5**	**+0.9**
KARP				S	**Sn**	**00 46 16.4**	**-0.1**
KARP	**Karpathos**	**0.98**	**152**	eP	**Pn**	**00 46 00.3**	**+0.7**
KARP	**Karpathos**	**0.98**	**152**	eP	**Pn**	**00 46 00.3**	**+0.7**
KARP				S	**Sn**	**00 46 16.4**	**-0.1**
THR5	**Thira Island,**	**1.01**	**271**	P	**Pn**	**00 45 59.3**	**-0.4**
THR5	**Thira Island,**	**1.01**	**271**	P	**Pn**	**00 45 59.3**	**-0.4**
APE	**Apeiranthos**	**1.08**	**308**	ePG	**Pn**	**00 46 00.6**	**+0.1**
APE	**Apeiranthos**	**1.08**	**308**	P	**Pn**	**00 46 00.6**	**+0.1**
APE	**Apeiranthos**	**1.08**	**308**	eP	**Pn**	**00 46 00.6**	**+0.1**
APE	**Apeiranthos**	**1.08**	**308**	eP	**Pn**	**00 46 00.6**	**+0.1**
ARG	**Arkhangelos**	**1.25**	**99**	P	**Pn**	**00 46 03.3**	**+1.0**
ARG				S	**Sn**	**00 46 21.3**	**0.0**
ARG	**Arkhangelos**	**1.25**	**99**	eP	**Pn**	**00 46 03.2**	**+1.0**
ARG	**Arkhangelos**	**1.25**	**99**	eP	**Pn**	**00 46 03.2**	**+1.0**
ARG				S	**Sn**	**00 46 21.3**	**0.0**
MLSB	**Milas**	**1.29**	**47**	ePN	**Pn**	**00 46 03.5**	**+0.8**
MLSB	**Milas**	**1.29**	**47**	ePn	**Pn**	**00 46 03.5**	**+0.8**
SMG	**Samos**	**1.31**	**8**	eP	**Pn**	**00 46 02.8**	**0.0**
SMG	**Samos**	**1.31**	**8**	eP	**Pn**	**00 46 02.8**	**0.0**
ZKR	**Zakros**	**1.33**	**193**	P	**Pn**	**00 46 04.5**	**+1.4**
ZKR				S	**Sn**	**00 46 23.5**	**+0.6**
ZKR	**Zakros**	**1.33**	**193**	eP	**Pn**	**00 46 04.2**	**+1.1**
ZKR	**Zakros**	**1.33**	**193**	eP	**Pn**	**00 46 04.2**	**+1.1**
ZKR				S	**Sn**	**00 46 23.5**	**+0.6**
NPS	**Neapolis**	**1.40**	**215**	P	**Pn**	**00 46 04.4**	**+0.5**
NPS				S	**Sn**	**00 46 23.9**	**-0.3**
NPS	**Neapolis**	**1.40**	**215**	eP	**Pn**	**00 46 04.3**	**+0.4**
NPS	**Neapolis**	**1.40**	**215**	eP	**Pn**	**00 46 04.3**	**+0.4**
NPS				S	**Sn**	**00 46 23.9**	**-0.3**
YER	**Yerkesik**	**1.53**	**62**	ePN	**Pn**	**00 46 06.7**	**+1.3**
YER	**Yerkesik**	**1.53**	**62**	ePn	**Pn**	**00 46 06.7**	**+1.3**
LAST	**Lasithi**	**1.55**	**216**	P	**Pn**	**00 46 06.0**	**+0.4**
LAST				S	**Sn**	**00 46 26.9**	**-0.3**
LAST	**Lasithi**	**1.55**	**216**	eP	**Pn**	**00 46 06.2**	**+0.6**
LAST	**Lasithi**	**1.55**	**216**	P	**Pn**	**00 46 06.0**	**+0.4**
LAST				S	**Sn**	**00 46 26.9**	**-0.3**
SIVA	**Sivas**	**2.01**	**227**	P	**Pn**	**00 46 12.3**	**+1.2**
SIVA				S	**Sn**	**00 46 37.7**	**+0.7**
SIVA	**Sivas**	**2.01**	**227**	eP	**Pn**	**00 46 12.1**	**+1.0**
SIVA	**Sivas**	**2.01**	**227**	eP	**Pn**	**00 46 12.1**	**+1.0**
SIVA				S	**Sn**	**00 46 37.7**	**+0.7**
CHOS	**Chios island**	**2.02**	**348**	P	**Pn**	**00 46 11.0**	**-0.1**
CHOS	**Chios island**	**2.02**	**348**	eP	**Pn**	**00 46 11.0**	**-0.1**
CHOS	**Chios island**	**2.02**	**348**	eP	**Pn**	**00 46 11.0**	**-0.1**
FETY	**Fethiye**	**2.02**	**83**	ePN	**Pn**	**00 46 11.7**	**+0.6**
FETY	**Fethiye**	**2.02**	**83**	ePn	**Pn**	**00 46 11.7**	**+0.6**
VAM	**Vamos**	**2.19**	**243**	P	**Pn**	**00 46 13.7**	**+0.5**
VAM				S	**Sn**	**00 46 40.7**	**-0.2**
VAM	**Vamos**	**2.19**	**243**	eP	**Pn**	**00 46 13.9**	**+0.7**
VAM	**Vamos**	**2.19**	**243**	P	**Pn**	**00 46 13.7**	**+0.5**
VAM				S	**Sn**	**00 46 40.7**	**-0.2**
DENT	**Denizli**	**2.36**	**55**	ePN	**Pn**	**00 46 16.9**	**+1.5**
DENT	**Denizli**	**2.36**	**55**	ePn	**Pn**	**00 46 16.9**	**+1.5**
MRMA	**Marmari**	**2.41**	**313**	P	**Pn**	**00 46 16.5**	**+0.5**
MRMA	**Marmari**	**2.41**	**313**	P	**Pn**	**00 46 16.5**	**+0.5**
KSL	**Kastellorizon**	**2.43**	**95**	eP	**Pn**	**00 46 17.4**	**+1.2**
KSL	**Kastellorizon**	**2.43**	**95**	eP	**Pn**	**00 46 17.4**	**+1.2**
GLHS	**Glhisar (BURDU**	**2.44**	**72**	ePN	**Pn**	**00 46 17.3**	**+0.8**
GLHS	**Glhisar (BURDU**	**2.44**	**72**	ePn	**Pn**	**00 46 17.3**	**+0.8**
GVD	**Gavdhos**	**2.58**	**233**	P	**Pn**	**00 46 19.5**	**+1.3**
GVD				S	**Sn**	**00 46 50.0**	**+0.3**
GVD	**Gavdhos**	**2.58**	**233**	eP	**Pn**	**00 46 19.1**	**+0.9**
GVD	**Gavdhos**	**2.58**	**233**	eP	**Pn**	**00 46 19.1**	**+0.9**
GVD				S	**Sn**	**00 46 50.0**	**+0.3**
KULA	**Kula-Manisa**	**2.66**	**37**	ePN	**Pn**	**00 46 19.7**	**+0.4**
KULA	**Kula-Manisa**	**2.66**	**37**	ePn	**Pn**	**00 46 19.7**	**+0.4**
ELL	**Elmali**	**2.69**	**82**	ePN	**Pn**	**00 46 20.5**	**+0.9**
ELL	**Elmali**	**2.69**	**82**	ePn	**Pn**	**00 46 20.5**	**+0.9**
ANKY	**Antikythira Is**	**2.72**	**259**	eP	**Pn**	**00 46 20.2**	**+0.2**
ANKY	**Antikythira Is**	**2.72**	**259**	eP	**Pn**	**00 46 20.2**	**+0.2**
PTL	**Penteli**	**2.72**	**308**	P	**Pn**	**00 46 20.6**	**+0.5**
PTL	**Penteli**	**2.72**	**308**	eP	**Pn**	**00 46 20.5**	**+0.5**
PTL	**Penteli**	**2.72**	**308**	eP	**Pn**	**00 46 20.5**	**+0.5**
ATHU	**Athens Univers**	**2.73**	**305**	P	**Pn**	**00 46 20.5**	**+0.4**
ATHU	**Athens Univers**	**2.73**	**305**	P	**Pn**	**00 46 20.5**	**+0.4**
ATH	**Athens Observa**	**2.78**	**305**	eP	**Pn**	**00 46 21.1**	**+0.4**
ATH	**Athens Observa**	**2.78**	**305**	eP	**Pn**	**00 46 21.1**	**+0.4**
NAIG	**Nisos Aigina**	**2.82**	**299**	eP	**Pn**	**00 46 21.3**	**0.0**
NAIG	**Nisos Aigina**	**2.82**	**299**	eP	**Pn**	**00 46 21.3**	**0.0**
PRK	**Paraskevi**	**2.84**	**355**	P	**Pn**	**00 46 21.2**	**-0.3**
PRK	**Paraskevi**	**2.84**	**355**	eP	**Pn**	**00 46 21.1**	**-0.4**
PRK	**Paraskevi**	**2.84**	**355**	P	**Pn**	**00 46 21.2**	**-0.3**
SIGR	**SIGRI**	**2.85**	**348**	P	**Pn**	**00 46 21.4**	**-0.3**
SIGR	**SIGRI**	**2.85**	**348**	P	**Pn**	**00 46 21.4**	**-0.3**
KYTH	**Kithira**	**2.88**	**268**	P	**Pn**	**00 46 22.1**	**+0.1**
KYTH	**Kithira**	**2.88**	**268**	eP	**Pn**	**00 46 22.4**	**+0.4**
KYTH	**Kithira**	**2.88**	**268**	P	**Pn**	**00 46 22.1**	**+0.1**
DID	**Didima**	**2.90**	**293**	P	**Pn**	**00 46 22.6**	**+0.2**
DID	**Didima**	**2.90**	**293**	eP	**Pn**	**00 46 22.6**	**+0.2**
DID	**Didima**	**2.90**	**293**	eP	**Pn**	**00 46 22.6**	**+0.2**
DIDY	**Didyma**	**2.91**	**292**	P	**Pn**	**00 46 22.8**	**+0.3**
DIDY	**Didyma**	**2.91**	**292**	P	**Pn**	**00 46 22.8**	**+0.3**
VLI	**Veliai**	**2.96**	**277**	P	**Pn**	**00 46 23.2**	**+0.1**
VLI				S	**Sn**	**00 46 57.8**	**-0.7**
VLI	**Veliai**	**2.96**	**277**	eP	**Pn**	**00 46 23.1**	**0.0**
VLI	**Veliai**	**2.96**	**277**	P	**Pn**	**00 46 23.2**	**+0.1**
VLI				S	**Sn**	**00 46 57.8**	**-0.7**
LTK	**Loutraki**	**3.31**	**300**	eP	**Pn**	**00 46 27.5**	**-0.2**
LTK	**Loutraki**	**3.31**	**300**	eP	**Pn**	**00 46 27.5**	**-0.2**
BCK	**Bucak**	**3.37**	**71**	ePN	**Pn**	**00 46 29.6**	**+1.1**
BCK	**Bucak**	**3.37**	**71**	ePn	**Pn**	**00 46 29.6**	**+1.1**
EZN	**Ezine**	**3.41**	**356**	ePN	**Pn**	**00 46 28.9**	**-0.1**
EZN	**Ezine**	**3.41**	**356**	ePn	**Pn**	**00 46 28.9**	**-0.1**
ISP	**Isparta**	**3.44**	**65**	ePN	**Pn**	**00 46 30.4**	**+1.0**
ISP	**Isparta**	**3.44**	**65**	ePn	**Pn**	**00 46 30.4**	**+1.0**
DYR	**Agios Nikonas**	**3.45**	**277**	P	**Pn**	**00 46 30.8**	**+1.3**
DYR	**Agios Nikonas**	**3.45**	**277**	eP	**Pn**	**00 46 31.1**	**+1.6**
DYR	**Agios Nikonas**	**3.45**	**277**	P	**Pn**	**00 46 30.8**	**+1.3**
AOS	**Alonnisos**	**3.49**	**323**	P	**Pn**	**00 46 30.3**	**+0.3**
AOS	**Alonnisos**	**3.49**	**323**	P	**Pn**	**00 46 30.3**	**+0.3**
VLX	**Vlachokerasia**	**3.51**	**287**	P	**Pn**	**00 46 30.3**	**-0.1**
VLX	**Vlachokerasia**	**3.51**	**287**	eP	**Pn**	**00 46 30.8**	**+0.4**
VLX	**Vlachokerasia**	**3.51**	**287**	P	**Pn**	**00 46 30.3**	**-0.1**
DST	**Dursunbey**	**3.56**	**26**	ePN	**Pn**	**00 46 31.2**	**+0.2**
DST	**Dursunbey**	**3.56**	**26**	ePn	**Pn**	**00 46 31.2**	**+0.2**
LKR	**Lokris**	**3.63**	**309**	eP	**Pn**	**00 46 32.0**	**+0.2**
LKR	**Lokris**	**3.63**	**309**	eP	**Pn**	**00 46 32.0**	**+0.2**
GUR	**Goura**	**3.72**	**295**	eP	**Pn**	**00 46 33.5**	**+0.3**
GUR	**Goura**	**3.72**	**295**	eP	**Pn**	**00 46 33.5**	**+0.3**
TVSB	**Tavsanli**	**3.78**	**36**	ePN	**Pn**	**00 46 34.9**	**+0.9**
TVSB	**Tavsanli**	**3.78**	**36**	ePn	**Pn**	**00 46 34.9**	**+0.9**
SHUT	**Suhut-Afyon**	**3.80**	**55**	ePN	**Pn**	**00 46 34.2**	**0.0**
SHUT	**Suhut-Afyon**	**3.80**	**55**	ePn	**Pn**	**00 46 34.3**	**0.0**
ITM	**Ithomi**	**3.83**	**283**	P	**Pn**	**00 46 34.6**	**+0.1**
ITM	**Ithomi**	**3.83**	**283**	eP	**Pn**	**00 46 35.1**	**+0.6**
ITM	**Ithomi**	**3.83**	**283**	P	**Pn**	**00 46 34.6**	**+0.1**
ALT	**Altintas**	**3.83**	**46**	ePN	**Pn**	**00 46 35.5**	**+0.8**
ALT	**Altintas**	**3.83**	**46**	ePn	**Pn**	**00 46 35.5**	**+0.8**
KLV	**Kalavryta, Ach**	**3.90**	**296**	eP	**Pn**	**00 46 36.1**	**+0.6**
KLV	**Kalavryta, Ach**	**3.90**	**296**	eP	**Pn**	**00 46 36.1**	**+0.6**
PYL	**PYLOS**	**3.93**	**278**	P	**Pn**	**00 46 35.4**	**-0.4**
PYL	**PYLOS**	**3.93**	**278**	eP	**Pn**	**00 46 35.5**	**-0.4**
PYL	**PYLOS**	**3.93**	**278**	eP	**Pn**	**00 46 35.5**	**-0.4**
AMT	**Artemida-Makis**	**4.07**	**287**	eP	**Pn**	**00 46 39.0**	**+1.3**
AMT	**Artemida-Makis**	**4.07**	**287**	eP	**Pn**	**00 46 39.0**	**+1.3**
SMTH	**Samothraki Isl**	**4.14**	**349**	eP	**Pn**	**00 46 38.2**	**-0.4**
SMTH	**Samothraki Isl**	**4.14**	**349**	eP	**Pn**	**00 46 38.2**	**-0.4**
AGG	**Agios Georgios**	**4.27**	**309**	eP	**Pn**	**00 46 41.1**	**+0.7**
AGG	**Agios Georgios**	**4.27**	**309**	eP	**Pn**	**00 46 41.1**	**+0.7**
ALN	**Alexandroupoli**	**4.50**	**355**	eP	**Pn**	**00 46 42.7**	**-0.6**
ALN	**Alexandroupoli**	**4.50**	**355**	eP	**Pn**	**00 46 42.7**	**-0.6**
EVR	**Evrytania**	**4.55**	**305**	eP	**Pn**	**00 46 45.0**	**+0.9**
EVR	**Evrytania**	**4.55**	**305**	eP	**Pn**	**00 46 45.0**	**+0.9**
LTBQ	**Tobruq**	**4.88**	**208**	i P	**Pn**	**00 46 49.0**	**+0.4**
	SNR=23						
LADK	**Ladik-KONYA**	**4.93**	**67**	ePN	**Pn**	**00 46 50.2**	**+0.9**
LADK	**Ladik-KONYA**	**4.93**	**67**	ePn	**Pn**	**00 46 50.2**	**+0.9**
SLUM		**5.04**	**194**	P	**Pn**	**00 46 50.7**	**0.0**
	baz=197						
SLUM				AMP		00 47 00.0	
	comp=N,280μm,0.2s,logA/T=6.0,baz=197						
SLUM		**5.04**	**194**	P	**Pn**	**00 46 50.7**	**0.0**
HMAT	**Matruh**	**5.32**	**175**	P	**Pn**	**00 46 54.3**	**-0.2**
	baz=178						
HMAT	**Matruh**	**5.32**	**175**	P	**Pn**	**00 46 54.3**	**-0.2**
HBRG	**Burj al 'Arab**	**6.42**	**154**	P	**Pn**	**00 47 08.7**	**-0.6**
	baz=156						
HBRG				S	**Sn**	**00 48 18.5**	**-2.8**
	baz=156						
BRTR	**Keskin Array B**	**6.46**	**57**	P	**Pn**	**00 47 12.0**	**+2.1**
	comp=N,0.4nm,0.3s,baz=232,slow=14,SNR=33						
BRTR				S	**Sn**	**00 48 24.4**	**+2.0**
	comp=N,0.2nm,0.3s,baz=222,slow=25,SNR=5.7						
HMYD	**Mayadein**	**7.48**	**151**	P	**Pn**	**00 47 23.3**	**-0.3**
	baz=152						
HMYD	**Mayadein**	**7.48**	**151**	P	**Pn**	**00 47 23.3**	**-0.3**
HNAT	**Natroun**	**7.56**	**152**	P	**Pn**	**00 47 23.9**	**-0.7**
	baz=154						
HNAT	**Natroun**	**7.56**	**152**	P	**Pn**	**00 47 23.9**	**-0.7**
LJBD	**Adjabya**	**7.65**	**226**	i P	**Pn**	**00 47 25.1**	**-0.7**
	SNR=22						
HLW	**Helwan**	**7.65**	**147**	P	**Pn**	**00 47 25.7**	**-0.2**
	baz=149						
HLW	**Helwan**	**7.65**	**147**	P	**Pn**	**00 47 25.7**	**-0.2**
FYM	**Al Fayyum**	**7.67**	**150**	P	**Pn**	**00 47 25.8**	**-0.4**
	baz=151						
FYM	**Al Fayyum**	**7.67**	**150**	P	**Pn**	**00 47 25.8**	**-0.4**
AYT	**Al 'Ayyat**	**7.71**	**149**	P	**Pn**	**00 47 26.0**	**-0.6**
	baz=151						
AYT	**Al 'Ayyat**	**7.71**	**149**	P	**Pn**	**00 47 26.0**	**-0.6**
KOT	**Kottamia**	**7.81**	**144**	P	**Pn**	**00 47 26.9**	**-1.2**
	baz=146						
KOT	**Kottamia**	**7.81**	**144**	P	**Pn**	**00 47 26.9**	**-1.2**
HHAG	**Hagoal**	**7.92**	**143**	P	**Pn**	**00 47 28.2**	**-1.4**
	baz=144						
HHAG	**Hagoal**	**7.92**	**143**	P	**Pn**	**00 47 28.2**	**-1.4**
HSAF	**As Saff**	**7.95**	**147**	P	**Pn**	**00 47 29.6**	**-0.3**
	baz=149						
HSAF	**As Saff**	**7.95**	**147**	P	**Pn**	**00 47 29.6**	**-0.3**
AMAG	**Maghara**	**7.97**	**134**	P	**Pn**	**00 47 28.4**	**-1.9**
	baz=136						
AMAG	**Maghara**	**7.97**	**134**	P	**Pn**	**00 47 28.4**	**-1.9**
RSH		**8.05**	**130**	P	**Pn**	**00 47 29.9**	**-1.4**
	baz=132						
RSH		**8.05**	**130**	P	**Pn**	**00 47 29.9**	**-1.4**
GLL	**Jalalah**	**8.06**	**146**	P	**Pn**	**00 47 30.3**	**-1.1**
	baz=148						
GLL	**Jalalah**	**8.06**	**146**	P	**Pn**	**00 47 30.3**	**-1.1**
SUZ		**8.38**	**140**	P	**Pn**	**00 47 35.1**	**-0.7**
	baz=141						
SUZ		**8.38**	**140**	P	**Pn**	**00 47 35.1**	**-0.7**
LUJL	**Ujela**	**8.53**	**213**	i P	**Pn**	**00 47 35.7**	**-2.0**
	SNR=22						
ZAF		**8.70**	**143**	P	**Pn**	**00 47 38.6**	**-1.3**

	baz=145						
ZAF		**8.70**	**143**	P	**Pn**	**00 47 38.6**	**-1.3**
ZNM		**8.78**	**141**	P	**Pn**	**00 47 40.8**	**-0.3**
	baz=143						
ZNM		**8.78**	**141**	P	**Pn**	**00 47 40.8**	**-0.3**
HNKL	**Nakhl**	**8.95**	**134**	P	**Pn**	**00 47 42.6**	**-0.8**
	baz=135						
HNKL	**Nakhl**	**8.95**	**134**	P	**Pn**	**00 47 42.6**	**-0.8**
GRB	**Gharib**	**9.66**	**145**	P	**Pn**	**00 47 52.6**	**-0.4**
	baz=147						
GRB	**Gharib**	**9.66**	**145**	P	**Pn**	**00 47 52.6**	**-0.4**
HKAT	**Jabal Katrina**	**10.04**	**139**	P	**Pn**	**00 47 57.6**	**-0.7**
	baz=141						
HKAT	**Jabal Katrina**	**10.04**	**139**	P	**Pn**	**00 47 57.6**	**-0.7**
HHRG	**Al Ghardaqah**	**10.91**	**145**	P	**Pn**	**00 48 11.0**	**+1.2**
	baz=146						
HHRG	**Al Ghardaqah**	**10.91**	**145**	P	**Pn**	**00 48 11.0**	**+1.2**
CLL	**Collm**	**17.78**	**331**	eP	**Pn**	**00 49 37.0**	**+0.6**
CLL				e		00 49 43.0	
CLL				e		00 49 49.0	
MIB	**Mutribah**	**18.57**	**105**	eP	**Pn**	**00 49 45.0**	**-1.0**
MIB				AMb	AMB	00 49 46.9	
	comp=Z,7.3nm,0.6s						
MIB	**Mutribah**	**18.57**	**105**	eP	**Pn**	**00 49 45.0**	**-1.0**
	comp=Z,7.3nm,0.6s						
NAY	**Al-Naaiem**	**18.75**	**106**	eP	**Pn**	**00 49 47.5**	**-0.6**
NAY				AMb	AMB	00 49 49.0	
	comp=Z,8.5nm,0.5s						
NAY	**Al-Naaiem**	**18.75**	**106**	eP	**Pn**	**00 49 47.5**	**-0.6**
	comp=Z,8.5nm,0.5s						
UMR	**Umm Al-Rimmam**	**18.97**	**105**	eP	**Pn**	**00 49 50.2**	**-0.6**
UMR				AMb	AMB	00 49 51.8	
	comp=Z,14nm,0.4s						
UMR	**Umm Al-Rimmam**	**18.97**	**105**	eP	**Pn**	**00 49 50.2**	**-0.6**
	comp=Z,14nm,0.4s						
TORD	**Torodi Ar. Bea**	**32.19**	**230**	P	**P**	**00 51 53.8**	**+0.6**
	comp=Z,0.5nm,0.3s,baz=32,slow=8.9,SNR=19						
KURBB	**Kurchatov Arra**	**39.43**	**52**	P	**P**	**00 52 54.6**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=274,slow=8.6,SNR=9.3						
KURBB				PcP	**PcP**	**00 55 00.0**	**0.0**
	comp=Z,0.3nm,0.6s,baz=268,slow=4.5,SNR=4.4						
BORG	**Borgarnes**	**40.02**	**330**	LR	LR	01 12 12.2	
	comp=Z,23nm,18.7s,baz=185,slow=38						
MKAR	**Makanchi Array**	**42.12**	**58**	P	**P**	**00 53 17.0**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=273,slow=6.9,SNR=7.5						

IDC 06 01:07:50.5±1.4**, 47°.23N×27°.30W, h0km, mb3.5**/5**, mb1 3.6**/6**, mb1mx3.4**/32**, mbtmp3.5**/6**, ML4.6**/1**, MS3.4**/21**, Ms1 3.4**/21**, ms1mx3.3**/37**, Error ellipse: s-maj=42.6km s-min=25.0km az=37.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.51**	**106**	P	Pn	01 12 09.1	+0.7
	0.5nm,0.3s,baz=298,slow=13,SNR=9.0						
ESDC				LR	LR	01 17 44.7	
	comp=Z,132nm,19.4s,baz=290,slow=32						
MDT	**Midelt**	**22.45**	**122**	LR	LR	01 20 56.6	
	comp=Z,63nm,18.2s,baz=6.4,slow=35						
SFJD	**Kangerlussuaq**	**23.23**	**337**	LR	LR	01 20 06.0	
	comp=Z,108nm,19.6s,baz=108,slow=32						
DAVOX	**Davos/Dischmat**	**25.21**	**77**	LR	LR	01 22 19.5	
	comp=Z,89nm,18.8s,baz=261,slow=34						
JMIC	**Jan Mayen**	**25.46**	**14**	LR	LR	01 21 13.2	
	comp=Z,35nm,18.4s,baz=79,slow=32						
SCHQ	**Schefferville**	**25.71**	**302**	LR	LR	01 21 29.0	
	comp=Z,97nm,20.7s,baz=101,slow=32						
NOA	**NORSAR Array B**	**26.00**	**44**	LR	LR	01 22 16.6	
	comp=Z,40nm,19.1s,baz=270,slow=33						
HFS	**Hagfors**	**27.00**	**46**	LR	LR	01 22 47.6	
	comp=Z,31nm,21.4s,baz=111,slow=33						
GERES	**GERESS Array B**	**27.23**	**71**	LR	LR	01 23 33.6	
	comp=Z,130nm,19.8s,baz=154,slow=35						
VRAC	**Vranov**	**28.99**	**69**	LR	LR	01 25 00.1	
	comp=Z,150nm,19.4s,baz=261,slow=36						
KEST	**Kesra**	**29.50**	**100**	LR	LR	01 24 26.0	
	comp=Z,66nm,19.8s,baz=199,slow=34						
FINES	**FINESS Array B**	**33.16**	**45**	LR	LR	01 26 40.0	
	comp=Z,54nm,19.5s,baz=342,slow=34						
ARCES	**ARCESS Array B**	**33.91**	**30**	LR	LR	01 26 28.7	
	comp=Z,31nm,18.9s,baz=18,slow=33						
AKASG	**Malin Array Be**	**36.50**	**63**	P	P	01 14 55.7	-1.6
	0.3nm,0.3s,baz=276,slow=9.2,SNR=3.9						
TORD	**Torodi Ar. Bea**	**41.75**	**135**	P	P	01 15 41.0	-0.5
	2.6nm,0.8s,baz=328,slow=7.8,SNR=14						
TORD				LR	LR	01 31 45.8	
	comp=Z,118nm,18.7s,baz=240,slow=34						
BRTR	**Keskin Array B**	**43.85**	**77**	P	P	01 16 00.3	+1.8
	0.4nm,0.9s,baz=258,slow=7.2,SNR=3.0						
ULM	**Lac du Bonnet**	**43.87**	**300**	LR	LR	01 32 17.3	
	comp=Z,56nm,19.7s,baz=23,slow=33						
DBIC	**Dimbokro**	**44.76**	**147**	LR	LR	01 33 06.8	
	comp=Z,54nm,18.1s,baz=319,slow=34						
YKA	**Yellowknife Ar**	**48.47**	**322**	P	P	01 16 34.8	+0.5
	0.2nm,0.7s,baz=54,slow=8.5,SNR=3.3						
PDAR	**Pinedale Array**	**55.76**	**298**	LR	LR	01 38 43.3	
	comp=Z,49nm,19.6s,baz=74,slow=33						
ILAR	**Eielson Array**	**58.87**	**334**	LR	LR	01 44 05.1	
	comp=Z,38nm,18.9s,baz=321,slow=37						
TXAR	**Lajitas Array**	**60.20**	**282**	LR	LR	01 41 15.1	
	comp=Z,75nm,20.2s,baz=180,slow=33						
ZALV	**Zalesovo Beam**	**63.98**	**38**	LR	LR	01 46 51.2	
	comp=Z,30nm,18.5s,baz=340,slow=37						
MKAR	**Makanchi Array**	**67.99**	**44**	P	P	01 18 51.0	-0.3
	0.3nm,0.8s,baz=344,slow=4.7,SNR=2.9						
KMBO	**Kilima Mbogo**	**73.83**	**110**	LR	LR	01 51 55.1	
	comp=Z,49nm,21.4s,baz=276,slow=36						
WRA	**Warramunga Arr**	**148.94**	**35**	PKPbc	PKPbc	01 27 40.0	-0.5
	0.6nm,1.0s,baz=330,slow=3.0,SNR=5.0						
ASAR	**Alice Springs**	**152.09**	**39**	PKPbc	PKPbc	01 27 47.0	-0.8
	0.2nm,0.6s,baz=318,slow=1.2,SNR=3.2						

*ISCJB **06** 01:11:16.3±0.3, 30°.52S±0°.03×179°.42W±0°.08, h321km, mb4.1/26, Error ellipse: s-maj=9.7km s-min=3.8km az=12.7*

*NEIC **06** 01:11:17.0±0.6, 30°.27S×179°.37W, h314km±5km, mb4.4/17, Error ellipse: s-maj=8.5km s-min=7.7km az=152.0*

*IDC **06** 01:11:17.3±1.1, 30°.11S×179°.38W, h312km±10km, mb3.8/13, mb1 3.9/13, mb1mx3.9/18, mbtmp3.8/13, Error ellipse: s-maj=14.1km s-min=13.3km az=84.0*

ISC 06 01:11:17.6±0.4**, 30°.47S**±0°.05×**179°.46W**±0°.08**, h321**km**, n203,** σ1.**24**/222**, mb4.2**/25**, 10C-6D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**1.80**	**48**	PN	Pn	01 12 01.1	-3.8
RAO	**Raoul Island**	**1.81**	**48**	P	Pn	01 12 01.3	-3.7
RAO				S	S	01 12 26.0	-17
RAO	**Raoul Island**	**1.81**	**48**	P	Pn	01 12 01.3	-3.7
	1µm,0.3s,baz=186,slow=2.5,SNR=64						
RAO				S	S	01 12 26.0	-17
	761nm,0.3s,baz=74,slow=22,SNR=6.0						
PUZ	**Puketiti**	**7.82**	**193**	PN	**Pn**	**01 13 06.8**	**-2.3**
PUZ				SN	**S**	**01 14 35.5**	**-4.2**
CNGZ	**Carnagh Statio**	**8.22**	**193**	ePN	**P**	**01 13 17.2**	**-1.1**
URZ	**Urewera**	**8.27**	**199**	ePn	**Pn**	**01 13 14.9**	**+0.3**
	30nm,0.3s						
URZ				eS	**S**	**01 14 49.3**	**-0.4**
URZ	**Urewera**	**8.27**	**199**	PN	**Pn**	**01 13 12.3**	**-2.2**
URZ				SN	**S**	**01 14 47.4**	**-2.4**
URZ	**Urewera**	**8.27**	**199**	P	**Pn**	**01 13 14.1**	**-0.5**
	7.4nm,0.3s,baz=344,slow=1.6,SNR=34						
URZ				S	**S**	**01 14 47.8**	**-2.0**
	40nm,0.3s,baz=262,slow=20,SNR=11						
ALRZ	**Allen Road**	**8.78**	**202**	ePN	**Pn**	**01 13 21.7**	**+0.9**
KNZ	**Kokohu**	**8.85**	**195**	ePN	**Pn**	**01 13 21.1**	**-0.5**
KNZ				SN	S	01 14 54.9	-7.7
RAHZ	**Arahi**	**8.89**	**198**	PN	**Pn**	**01 13 19.3**	**-2.8**
RAHZ				SN	**S**	**01 15 00.7**	**-3.0**
MHGZ	**Mahia Peninsul**	**8.93**	**193**	PN	**Pn**	**01 13 21.0**	**-1.5**
NMHZ	**Naumai**	**9.14**	**199**	PN	**Pn**	**01 13 22.8**	**-2.3**
BKZ	**Black Stump Fm**	**9.29**	**200**	PN	**Pn**	**01 13 24.5**	**-2.5**
BKZ				SN	**S**	**01 15 10.1**	**-2.5**
MCHZ	**McNeill Hill**	**9.49**	**198**	PN	**Pn**	**01 13 28.8**	**-0.5**
CKHZ	**Cape Kidnapper**	**9.60**	**196**	PN	**Pn**	**01 13 28.9**	**-1.7**
CKHZ				SN	**S**	**01 15 16.5**	**-2.9**
FWVZ	**Far West T-bar**	**9.67**	**204**	ePN	**Pn**	**01 13 30.0**	**-1.8**
FWVZ				SN	**S**	**01 15 22.4**	**+0.9**
WHVZ	**Whangaehu Hut**	**9.69**	**203**	ePN	**Pn**	**01 13 32.1**	**+0.1**
WHVZ				SN	**S**	**01 15 21.2**	**-0.5**
DRZ	**Dome Shelter**	**9.69**	**204**	ePN	**P**	**01 13 34.0**	**-1.1**
TRVZ	**Turoa**	**9.71**	**204**	ePN	**Pn**	**01 13 31.9**	**-0.4**
BHHZ	**Black Hill Sta**	**9.72**	**201**	ePN	**Pn**	**01 13 31.8**	**-0.4**
WNVZ	**Wahianoa**	**9.72**	**203**	PN	**P**	**01 13 33.4**	**-2.0**
MOVZ	**Moawhango**	**9.74**	**202**	PN	**Pn**	**01 13 32.5**	**0.0**
KAHZ	**Kahuranaki**	**9.78**	**197**	ePN	**Pn**	**01 13 32.8**	**0.0**
PKVZ	**Pokaka**	**9.78**	**204**	ePN	**P**	**01 13 34.1**	**-1.7**
PNHZ	**Pukenui**	**10.07**	**199**	PN	Pn	01 13 33.1	-3.3
WPHZ	**Waipukurau**	**10.14**	**198**	ePN	**P**	**01 13 38.9**	**-0.8**
PRHZ	**Porangahau**	**10.28**	**197**	PN	**Pn**	**01 13 39.1**	**+0.2**
DVHZ	**Dannevirke**	**10.44**	**199**	PN	**Pn**	**01 13 40.1**	**-0.7**
HOWZ	**Holdsworth Sta**	**11.18**	**200**	PN	**Pn**	**01 13 47.3**	**-2.5**
OGWZ	**Otaki Gorge**	**11.21**	**201**	PN	**Pn**	**01 13 48.1**	**-2.0**
KIW	**Kapiti Island**	**11.33**	**202**	PN	**Pn**	**01 13 50.2**	**-1.4**
MTW	**Mount Morrison**	**11.42**	**200**	PN	**Pn**	**01 13 49.8**	**-2.9**
CAW	**Cannon Point**	**11.51**	**201**	ePN	**Pn**	**01 13 51.3**	**-2.4**
TRWZ	**Traveller**	**11.59**	**198**	PN	**Pn**	**01 13 53.9**	**-0.9**
PAWZ	**Paruwai Farm**	**11.65**	**199**	SN	S	01 15 58.5	-6.9
MSWZ	**Moikau Station**	**11.73**	**200**	ePN	**Pn**	**01 13 54.8**	**-1.6**
TCW	**Tory Channel**	**11.86**	**204**	ePN	**Pn**	**01 13 56.4**	**-1.6**
PLWZ	**Palliser**	**11.87**	**200**	ePN	**Pn**	**01 13 57.2**	**-1.0**
TUWZ	**Tuamarina**	**12.17**	**204**	PN	**Pn**	**01 13 59.0**	**-2.7**
BSWZ	**Blackbirch Sta**	**12.44**	**204**	ePN	**Pn**	**01 14 03.9**	**-1.1**
MSVF	**Nonsavu**	**12.88**	**349**	eP	**P**	**01 14 08.0**	**-2.5**
	64nm,0.6s						
LTZ	**Lake Taylor**	**13.96**	**206**	PN	**P**	**01 14 21.6**	**-0.5**
MQZ	**McQueen's Vall**	**14.62**	**203**	SN	**S**	**01 17 02.8**	**-5.7**
DZM	**Mont Dzumac**	**15.15**	**300**	eP	**Pn**	**01 14 38.5**	**+1.2**
DZM	**Mont Dzumac**	**15.15**	**300**	P	**Pn**	**01 14 37.8**	**+0.5**
DZM	**Mont Dzumac**	**15.15**	**300**	P	**Pn**	**01 14 37.8**	**+0.5**
	4.1nm,0.3s,baz=104,slow=15,SNR=48						
EIDS	**Eidsvold**	**26.48**	**274**	eP	**P**	**01 16 26.7**	**+0.3**
	3.1nm,0.7s						
CTA	**Charters Tower**	**32.57**	**280**	P	**P**	**01 17 21.4**	**+1.5**
CTA	**Charters Tower**	**32.57**	**280**	P	**P**	**01 17 21.4**	**+1.5**
	2.4nm,0.4s,baz=104,slow=11,SNR=5.3						
CTAO	**Charters Tower**	**32.57**	**280**	eP	**P**	**01 17 21.2**	**+1.3**
	4.1nm,0.7s						
STKA	**Stephens Creek**	**33.23**	**257**	P	**P**	**01 17 27.9**	**+2.3**
STKA	**Stephens Creek**	**33.23**	**257**	P	**P**	**01 17 27.9**	**+2.3**
	6.9nm,0.8s,baz=104,slow=11,SNR=9.0						
AS31	**Alice Springs**	**41.85**	**268**	eP	**P**	**01 18 37.5**	**+0.2**
ASAR	**Alice Springs**	**41.85**	**268**	P	**P**	**01 18 37.8**	**+0.5**
ASAR				ScP	**ScP**	**01 23 47.5**	**+1.9**
ASAR	**Alice Springs**	**41.85**	**268**	P	**P**	**01 18 37.8**	**+0.5**
	2.1nm,0.6s,baz=104,slow=6.2,SNR=23						
ASAR				ScP	**ScP**	**01 23 47.5**	**+1.9**
	1.5nm,0.9s,baz=109,slow=4.4,SNR=7.2						
WRAB	**Tennant Creek**	**42.84**	**273**	eP	**P**	**01 18 44.9**	**-0.3**
	11nm,0.8s						
WRA	**Warramunga Arr**	**42.84**	**273**	P	**P**	**01 18 45.3**	**0.0**
WRA				ScP	**ScP**	**01 23 51.1**	**+1.5**
WRA				PKiKP	**PKiKP**	**01 27 31.7**	**-1.2**
WRA	**Warramunga Arr**	**42.84**	**273**	P	**P**	**01 18 45.3**	**0.0**
	7.1nm,0.5s,baz=110,slow=8.0,SNR=102						
WRA				ScP	**ScP**	**01 23 51.1**	**+1.5**
	1.4nm,0.7s,baz=103,slow=3.9,SNR=9.0						
WRA				PKiKP	**PKiKP**	**01 27 31.7**	**-1.2**
	0.4nm,0.8s,baz=88,slow=0.6,SNR=4.5						
FORT	**Forrest**	**44.81**	**256**	eP	**P**	**01 19 01.6**	**+1.0**
	29nm,0.9s						
VNDA	**Vanda**	**47.90**	**185**	P	P	01 19 27.3	+3.5
VNDA				PcP	**PcP**	**01 20 48.9**	**+2.4**
VNDA				ScP	**ScP**	**01 24 12.1**	**+2.5**
VNDA	**Vanda**	**47.90**	**185**	P	P	01 19 27.3	+3.5
	0.6nm,0.8s,baz=50,slow=7.9,SNR=3.5						
VNDA				PcP	**PcP**	**01 20 48.9**	**+2.4**
	1.9nm,0.8s,baz=353,slow=4.6,SNR=5.8						
VNDA				ScP	**ScP**	**01 24 12.1**	**+2.5**
	0.6nm,0.7s,baz=355,slow=4.1,SNR=4.1						
QSPA	**South Pole Qui**	**59.64**	**180**	P	P	01 20 52.0	+3.5
QSPA				PcP	**PcP**	**01 21 33.8**	**+1.9**
QSPA	**South Pole Qui**	**59.64**	**180**	P	P	01 20 51.9	+3.5
	16nm,0.6s,baz=31,slow=1.2,SNR=135						
QSPA				PcP	**PcP**	**01 21 33.7**	**+1.9**
	4.8nm,0.7s,baz=319,slow=2.3,SNR=4.1						
MAJO	**Matsushiro**	**77.59**	**326**	eP	**P**	**01 22 38.1**	**-0.6**
	17nm,1.1s						
SNAA	**Sanae**	**78.11**	**179**	eP	**P**	**01 22 43.0**	**+1.8**
SNAA	**Sanae**	**78.11**	**179**	eP	**P**	**01 22 42.5**	**+1.3**
	20nm,1.4s						
VNA1	**Neumayer--Stat**	**78.97**	**177**	eP	**P**	**01 22 47.9**	**+2.2**
IPM	**Ipoh**	**83.25**	**279**	eP	**P**	**01 23 08.3**	**-0.9**
	6.0nm,0.7s						
PLCA	**Paso Flores**	**83.38**	**134**	eP	**P**	**01 23 11.2**	**+1.7**
	2.9nm,0.9s						
PLCA	**Paso Flores**	**83.38**	**134**	P	**P**	**01 23 11.6**	**+2.1**
	1.8nm,0.7s,baz=213,slow=6.5,SNR=4.3						
KSRS	**Korea Array**	**83.59**	**320**	P	**P**	**01 23 10.9**	**+0.6**
	5.6nm,1.0s,baz=136,slow=5.3,SNR=12						
KSAR	**Wonju Array Be**	**83.61**	**320**	P	**P**	**01 23 10.9**	**+0.5**
PETK	**Petropavlovsk-**	**85.58**	**346**	P	**P**	**01 23 19.4**	**-0.3**
PETK	**Petropavlovsk-**	**85.58**	**346**	P	**P**	**01 23 19.4**	**-0.3**
	11nm,0.7s,baz=146,slow=7.9,SNR=16						
USRK	**Ussuriysk Arra**	**86.53**	**327**	P	**P**	**01 23 25.1**	**+0.5**
	5.7nm,0.9s,baz=135,slow=3.9,SNR=12						
CMB	**Columbia Colle**	**87.66**	**43**	eP	**P**	**01 23 29.9**	**-0.3**
	1.7nm,0.7s						
GSC	**Goldstone**	**88.04**	**47**	eP	**P**	**01 23 32.3**	**+0.2**
	2.3nm,0.7s						
NVAR	**Mina Array Bea**	**89.15**	**43**	P	**P**	**01 23 37.4**	**0.0**
NVAR				pP	**pP**	**01 24 54.0**	**+0.7**
NVAR	**Mina Array Bea**	**89.15**	**43**	P	**P**	**01 23 37.4**	**0.0**
	3.4nm,1.0s,baz=216,slow=7.4,SNR=14						
NVAR				pP	**pP**	**01 24 54.0**	**+0.7**
	0.6nm,0.6s,baz=216,slow=8.2,SNR=4.8						
HUMO	**Hull Mountain**	**89.34**	**38**	eP	**P**	**01 23 37.7**	**-0.2**
	3.9nm,1.0s						
LCO	**Las Campanas**	**89.98**	**124**	eP	**P**	**01 23 42.1**	**+0.4**
	9.4nm,0.9s						
TUC	**Tucson**	**90.14**	**52**	eP	**P**	**01 23 42.6**	**+0.6**
	4.9nm,0.9s						
ENH	**Enshi**	**90.61**	**305**	eP	**P**	**01 23 44.5**	**+0.4**
	10.0nm,0.7s						
TXAR	**Lajitas Array**	**93.49**	**58**	P	**P**	**01 23 57.2**	**-0.3**
TXAR	**Lajitas Array**	**93.49**	**58**	P	**P**	**01 23 57.2**	**-0.3**
	0.4nm,0.8s,baz=224,slow=3.5,SNR=4.8						
HLID	**Hailey**	**94.69**	**41**	eP	**P**	**01 24 02.5**	**-0.2**
	1.0nm,0.8s						
ILAR	**Eielson Array**	**98.28**	**13**	P	Pdif	01 24 17.6	-0.6
ILAR	**Eielson Array**	**98.28**	**13**	P	Pdif	01 24 17.6	-0.6
	0.2nm,0.6s,baz=234,slow=6.0,SNR=4.9						
WCI	**Wyandotte Cave**	**110.39**	**57**	ePKP	**PKiKP**	**01 29 12.9**	**+1.0**
BOSA	**Boshof**	**116.69**	**204**	ePKPdf	**PKPdf**	**01 29 25.2**	**+0.7**
BOSA				PKP	**PKPdf**	**01 29 25.6**	**+1.1**
BOSA	**Boshof**	**116.69**	**204**	PKP	**PKPdf**	**01 29 25.6**	**+1.1**
	2.3nm,0.7s,baz=87,slow=6.1,SNR=7.8						
MKAR	**Makanchi Array**	**116.86**	**310**	PKP	**PKPdf**	**01 29 22.9**	**-1.1**
MKAR	**Makanchi Array**	**116.86**	**310**	PKP	**PKPdf**	**01 29 22.9**	**-1.1**
	1.2nm,0.6s,baz=224,slow=1.6,SNR=21						
ZALV	**Zalesovo Beam**	**117.25**	**319**	PKP	**PKPdf**	**01 29 23.0**	**-1.4**
ZALV	**Zalesovo Beam**	**117.25**	**319**	PKP	**PKPdf**	**01 29 23.0**	**-1.4**
	0.7nm,0.5s,baz=139,slow=1.4,SNR=5.3						
LBTB	**Lobatse**	**119.83**	**206**	ePKPdf	**PKPdf**	**01 29 31.1**	**+0.5**
KURK	**Kurchatov**	**120.19**	**314**	ePKPdf	**PKPdf**	**01 29 29.1**	**-1.1**
TKM2	**Tokmak 2**	**120.39**	**305**	ePKPdf	**PKPdf**	**01 29 30.2**	**-0.9**
AAK	**Ala-Archa**	**121.11**	**304**	ePKPdf	**PKPdf**	**01 29 32.1**	**-0.3**
EKS2	**Erkin-Say**	**121.63**	**304**	ePKPdf	**PKPdf**	**01 29 33.2**	**-0.2**
KBL	**Kabul**	**123.09**	**294**	ePKPdf	**PKPdf**	**01 29 36.2**	**-0.3**
KKAR	**Karatay Array**	**124.06**	**304**	ePKPdf	**PKPdf**	**01 29 37.6**	**-0.3**
BRVK	**Borovoye**	**125.64**	**316**	ePKPdf	**PKPdf**	**01 29 39.9**	**-0.6**
LSZ	**Lusaka**	**127.30**	**214**	ePKPdf	**PKPdf**	**01 29 46.0**	**+0.9**
TSUM	**Tsumeb**	**127.96**	**201**	ePKPdf	**PKPdf**	**01 29 47.1**	**+0.8**
ABKAR	**Akbulak array**	**132.00**	**311**	ePKPdf	**PKPdf**	**01 29 52.9**	**+0.1**
KEV	**Kevo**	**137.91**	**347**	ep	PKPpre	01 29 53.0	
	0.7nm,0.4s						
ARCES	**ARCESS Array B**	**138.38**	**347**	PKPpre	PKPpre	01 29 56.0	
ARCES	**ARCESS Array B**	**138.38**	**347**	PKhKP	PKPpre	01 29 56.0	
	2.7nm,0.8s,baz=64,slow=1.5,SNR=16						
JOF	**Joensuu**	**142.01**	**338**	ep	PKPpre	01 30 05.2	
	2.3nm,0.5s						
GNI	**Garni**	**142.99**	**297**	ePKPpre	PKPpre	01 30 11.4	
KBZ	**Khabaz**	**144.10**	**304**	PKP	**PKPdf**	**01 30 14.4**	**-0.7**
KBZ	**Khabaz**	**144.10**	**304**	PKP	**PKPdf**	**01 30 14.4**	**-0.7**
	9.4nm,0.7s,baz=153,slow=2.3,SNR=21						
KAF	**Kangasniemi**	**144.18**	**340**	ep	**PKPab**	**01 30 11.1**	**-2.3**
	14nm,0.6s						
FINES	**FINESS Array B**	**144.77**	**339**	PKP	PKPbc	01 30 14.5	-1.0
FINES	**FINESS Array B**	**144.77**	**339**	PKP	PKPbc	01 30 14.5	-1.0
	30nm,0.4s,baz=46,slow=5.0,SNR=273						
NB2	**NORSAR Subarra**	**148.62**	**350**	PKP	**PKPbc**	**01 30 25.1**	**-1.2**
	comp=Z,6.6nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**148.62**	**350**	PKPbc	**PKPbc**	**01 30 25.4**	**-0.9**
NOA	**NORSAR Array B**	**148.62**	**350**	PKPbc	**PKPbc**	**01 30 25.4**	**-0.9**
	comp=Z,7.3nm,0.7s,baz=15,slow=4.2,SNR=30						
NAO01	**NORSAR Array S**	**148.85**	**350**	ePKPbc	**PKPbc**	**01 30 26.1**	**-0.8**
NAO01				ePKPab	**PKPab**	**01 30 30.9**	**-1.0**
HFS	**Hagfors**	**149.05**	**347**	PKPbc	**PKPbc**	**01 30 26.3**	**-1.0**
HFS	**Hagfors**	**149.05**	**347**	PKPbc	**PKPbc**	**01 30 26.3**	**-1.0**
	comp=Z,9.5nm,0.7s,baz=93,slow=3.2,SNR=69						
AKASG	**Malin Array Be**	**150.58**	**322**	PKPbc	**PKPbc**	**01 30 30.9**	**-0.5**
AKASG				PKPab	**PKPab**	**01 30 38.3**	**-1.1**
AKASG	**Malin Array Be**	**150.58**	**322**	PKPbc	**PKPbc**	**01 30 30.9**	**-0.5**
	comp=Z,10nm,0.6s,baz=52,slow=2.7,SNR=52						
AKASG				PKPab	**PKPab**	**01 30 38.3**	**-1.1**
	comp=Z,6.6nm,0.6s,baz=48,slow=4.5,SNR=15						
AK01	**Malin Array Si**	**150.59**	**322**	ePKPbc	**PKPbc**	**01 30 30.7**	**-0.6**
AK01				ePKPab	**PKPab**	**01 30 38.4**	**-1.0**
KIEV	**Kiev**	**150.59**	**322**	ePKPbc	**PKPbc**	**01 30 30.8**	**-0.5**
KIEV				ePKPab	**PKPab**	**01 30 38.4**	**-1.0**
AK02	**Malin Array Si**	**150.62**	**322**	ePKPbc	**PKPbc**	**01 30 30.6**	**-0.8**
AK02				ePKPab	**PKPab**	**01 30 38.7**	**-0.9**
SUW	**Suwalki**	**151.35**	**332**	ePKPbc	**PKPbc**	**01 30 32.5**	**-0.5**
SUW				ePKPab	**PKPab**	**01 30 41.4**	**-1.1**
BR131	**Keskin Array S**	**151.52**	**298**	ePKPbc	**PKPbc**	**01 30 33.3**	**-0.8**
BR131				ePKPab	**PKPab**	**01 30 42.5**	**-1.4**
BRTR	**Keskin Array B**	**151.52**	**298**	PKPbc	**PKPbc**	**01 30 33.7**	**-0.4**
BRTR	**Keskin Array B**	**151.52**	**298**	PKPbc	**PKPbc**	**01 30 33.7**	**-0.4**
	comp=Z,3.4nm,0.5s,baz=141,slow=5.3,SNR=34						
CSS	**Prodhromos**	**152.12**	**288**	ePKPbc	**PKPbc**	**01 30 35.5**	**0.0**
ANTO	**Ankara**	**152.14**	**298**	ePKPbc	**PKPbc**	**01 30 35.5**	**+0.2**
TIRR	**Tirgusor**	**153.99**	**310**	⇑iP	**PKPab**	**01 30 53.7**	**-0.3**
TESR	**Tescani**	**154.20**	**316**	⇓iP	**PKPab**	**01 30 54.4**	**-0.5**
BUR08	**Bucovina Ar. S**	**154.46**	**319**	ePKPdf	**PKPdf**	**01 30 31.3**	**-0.3**
BUR08				ePKPbc	**PKiKP**	**01 30 40.6**	**+0.5**
BUR08				ePKPab	**PKPab**	**01 30 55.8**	**-0.3**
VRI	**Vrincioaia**	**154.46**	**314**	⇑iP	**PKPab**	**01 30 56.3**	**+0.3**
KWP	**Kalwaria Pacla**	**154.59**	**325**	ePKPbc	**PKPbc**	**01 30 40.0**	**-0.2**
KWP				ePKPab	**PKPab**	**01 30 55.9**	**-0.5**
KWP	**Kalwaria Pacla**	**154.59**	**325**	⇑iP	**PKPab**	**01 30 56.1**	**-0.3**
MLR	**Muntele Rosu**	**155.12**	**314**	⇓iP	**PKPab**	**01 30 58.9**	**-0.1**
KOLS	**Kolonicke sedl**	**155.26**	**324**	ePKP	**PKPab**	**01 30 59.0**	**-0.3**
STHS	**Stebnicka Huta**	**155.44**	**326**	ePKP	**PKPab**	**01 31 00.6**	**+0.5**
BSEG	**Bad Segeberg**	**155.50**	**346**	eP	**PKPab**	**01 30 59.5**	**-0.6**
	comp=Z,15nm,1.0s						
TRPA	**Tarpa**	**155.63**	**323**	⇑iP	**PKPab**	**01 30 59.8**	**-1.1**
CRVS	**Cervenica-Dubn**	**155.68**	**325**	ePKP	**PKPab**	**01 30 59.2**	**-1.9**
NIE	**Niedzica**	**155.88**	**327**	ePKP	**PKPab**	**01 31 02.0**	**0.0**
DRGR		**156.34**	**320**	⇓iP	**PKPab**	**01 31 04.1**	**0.0**
KECS	**Kecovo**	**156.44**	**325**	ePKP	**PKPab**	**01 31 04.1**	**-0.3**
LOT	**Lotru**	**156.47**	**316**	⇓iP	**PKPab**	**01 31 05.3**	**+0.5**
OKC	**Ostrava-Krasne**	**156.54**	**331**	ePKPAB	**PKPab**	**01 31 04.2**	**-0.6**
MORC	**Moravsky Berou**	**156.84**	**331**	ePKPab	**PKPab**	**01 31 04.7**	**-1.4**
MORC	**Moravsky Berou**	**156.84**	**331**	⇑iP	**PKPab**	**01 31 05.6**	**-0.5**
UPC	**Upice**	**156.87**	**334**	ePKPAB	**PKPab**	**01 31 05.7**	**-0.5**
KRLC	**Kraliky**	**156.92**	**333**	ePKPAB	**PKPab**	**01 31 05.7**	**-0.8**
PSZ	**Piszkesteto**	**157.12**	**325**	ePKPab	**PKPab**	**01 31 07.0**	**-0.4**
PSZ	**Piszkesteto**	**157.12**	**325**	⇓iP	**PKPab**	**01 31 06.8**	**-0.6**
PSZ	**Piszkesteto**	**157.12**	**325**	⇑ePKPdf	**PKPab**	**01 31 07.2**	**-0.2**
CLL	**Collm**	**157.21**	**340**	eP	**PKPab**	**01 31 06.8**	**-0.8**
	comp=Z,12nm,0.8s						
CLL	**Collm**	**157.21**	**340**	i PKPab	**PKPab**	**01 31 06.5**	**-1.1**
	comp=Z,12nm,0.8s						
VYHS	**Vyhne**	**157.22**	**327**	ePKP	**PKPab**	**01 31 07.9**	**+0.1**
BRG	**Berggiesshubel**	**157.29**	**338**	ePKP	**PKPab**	**01 31 07.4**	**-0.5**
	comp=Z,11nm,0.9s						
BRG				e		01 31 10.1	
	comp=Z,3.2nm,0.7s						
BRG	**Berggiesshubel**	**157.29**	**338**	eP	**PKPab**	**01 31 07.6**	**-0.4**
	comp=Z,11nm,0.9s						
PVCC	**Panska Ves**	**157.38**	**336**	ePKPAB	**PKPab**	**01 31 07.6**	**-0.7**
CLZ	**Clausthal**	**157.44**	**344**	eP	**PKPab**	**01 31 08.0**	**-0.6**
	comp=Z,8.0nm,1.0s						
FBE	**Freiberg**	**157.44**	**339**	eP	**PKPab**	**01 31 08.3**	**-0.3**
	comp=Z,15nm,0.9s						
VRAC	**Vranov**	**157.60**	**332**	PKPab	**PKPab**	**01 31 08.8**	**-0.5**
VRAC	**Vranov**	**157.60**	**332**	⇓iP	**PKPab**	**01 31 08.5**	**-0.9**
VRAC	**Vranov**	**157.60**	**332**	PKPab	**PKPab**	**01 31 08.8**	**-0.5**
	comp=Z,2.8nm,0.5s,baz=337,slow=1.0,SNR=5.7						
NEUB	**Neuenburg**	**157.66**	**341**	eP	**PKPab**	**01 31 09.0**	**-0.5**
	comp=Z,15nm,1.1s						
PRU	**Pruhonice**	**157.84**	**336**	ePKPAB	**PKPab**	**01 31 09.8**	**-0.5**
BUD	**Budapest**	**157.84**	**325**	⇑ePKPdf	**PKPab**	**01 31 10.3**	**-0.2**
SMOL	**Smolenice**	**157.85**	**329**	ePKP	**PKPab**	**01 31 10.7**	**+0.2**
TREC	**Trest**	**158.05**	**333**	ePKPAB	**PKPab**	**01 31 10.8**	**-0.5**
TANN	**Tannenbergstha**	**158.16**	**339**	eP	**PKPab**	**01 31 11.3**	**-0.5**
	comp=Z,7.0nm,1.2s						
WERD	**Werda**	**158.18**	**339**	eP	**PKPab**	**01 31 11.4**	**-0.5**
	comp=Z,9.0nm,1.2s						
PLN	**Plauen**	**158.19**	**340**	eP	**PKPab**	**01 31 11.4**	**-0.5**
	comp=Z,17nm,0.8s						
MOX	**Moxa**	**158.21**	**341**	eP	**PKPab**	**01 31 11.3**	**-0.6**
	comp=Z,9.0nm,1.2s						
VTS	**Vitosha**	**158.21**	**310**	⇑iP	**PKPab**	**01 31 12.7**	**+0.2**
GUNZ	**Gunzen**	**158.25**	**339**	eP	**PKPab**	**01 31 11.9**	**-0.3**
	comp=Z,11nm,1.2s						
WERN	**Wernitzgruen**	**158.30**	**339**	eP	**PKPab**	**01 31 12.2**	**-0.2**
	comp=Z,10.0nm,0.9s						
NKC	**Novy Kostel**	**158.33**	**339**	ePKPAB	**PKPab**	**01 31 12.0**	**-0.5**
MANZ	**Manzenberg**	**158.65**	**339**	eP	**PKPab**	**01 31 13.6**	**-0.3**
	comp=Z,4.0nm,1.0s						
ROTZ	**Rotzenmuhle**	**158.81**	**339**	eP	**PKPab**	**01 31 14.6**	**0.0**
	comp=Z,8.0nm,1.2s						
SOP	**Sopron**	**158.86**	**329**	⇑ePKPdf	**PKPab**	**01 31 14.9**	**0.0**
KHC	**Kasperske Hory**	**158.90**	**336**	ePKPAB	**PKPab**	**01 31 14.5**	**-0.5**
PKSM	**Moragy**	**158.90**	**323**	⇑ePKPdf	**PKPab**	**01 31 14.4**	**-0.7**
GEC2	**GERESS Array S**	**159.09**	**335**	eP	**PKPab**	**01 31 15.3**	**-0.7**
	comp=Z,4.0nm,1.0s						
GERES	**GERESS Array B**	**159.09**	**335**	PKPab	**PKPab**	**01 31 15.3**	**-0.7**
GERES	**GERESS Array B**	**159.09**	**335**	PKPab	**PKPab**	**01 31 15.3**	**-0.7**
	comp=Z,1.8nm,0.6s,baz=36,slow=5.1,SNR=17						
WET	**Wettzell**	**159.13**	**337**	eP	**PKPab**	**01 31 16.0**	**0.0**
	comp=Z,5.0nm,1.0s						
GRF	**Grafenberg Arr**	**159.17**	**340**	eP	**PKPab**	**01 31 16.0**	**-0.2**
	comp=Z,11nm,1.1s						
GVD	**Gavdhos**	**159.72**	**289**	ePKPab	**PKPab**	**01 31 19.5**	**+0.4**
RJOB	**Jochberg**	**160.35**	**335**	eP	**PKPab**	**01 31 21.4**	**-0.1**
	comp=Z,12nm,0.9s						
WLF	**Walferdange**	**160.36**	**349**	eP	**PKPab**	**01 31 22.0**	**+0.7**
	comp=Z,24nm,1.8s						
FUR	**Furstenfeldbru**	**160.51**	**338**	eP	**PKPab**	**01 31 22.0**	**-0.1**
	comp=Z,27nm,1.0s						
BFO	**Black Forest**	**161.19**	**344**	eP	**PKPab**	**01 31 24.2**	**-0.8**
	comp=Z,6.0nm,1.1s						
DAVOX	**Davos/Dischmat**	**162.18**	**339**	PKPab	**PKPab**	**01 31 29.4**	**-0.2**
DAVOX	**Davos/Dischmat**	**162.18**	**339**	PKPab	**PKPab**	**01 31 29.4**	**-0.2**
	comp=Z,4.5nm,0.5s,baz=91,slow=2.3,SNR=9.6						
TORD	**Torodi Ar. Bea**	**162.73**	**184**	PKP	**PKPdf**	**01 30 41.6**	**-0.4**
TORD				PKPab	**PKPab**	**01 31 33.8**	**+1.4**
TORD	**Torodi Ar. Bea**	**162.73**	**184**	PKP	**PKPdf**	**01 30 41.6**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=140,slow=0.0,SNR=9.5						
TORD				PKPab	**PKPab**	**01 31 33.8**	**+1.4**
	comp=Z,5.2nm,0.5s,baz=174,slow=4.1,SNR=47						
TIP	**Timpagrande**	**164.12**	**308**	ePKPab	**PKPab**	**01 31 38.6**	**+0.2**
BNI	**Bardonecchia**	**164.66**	**343**	ePKPab	**PKPab**	**01 31 40.0**	**-0.5**

MAN 06 01:14:35, 9°.14N×122°.04E, h83km, mb4.8, ML3.7, MS3.8, 2C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DCPH	**Dipolog City**	**1.41**	**113**	⇑eP	Pn	01 14 57.1	-2.1
DCPH				eS	Sn	01 15 20.0	+2.5
IPIL	**Ipil**	**1.44**	**159**	eP	Pn	01 14 59.6	-0.1
GUIM	**Jordan**	**1.58**	**20**	eP	Pn	01 15 01.4	0.0
GUIM				eS	Sn	01 15 23.6	+2.1
PAGZ	**Pagadian**	**1.84**	**134**	eP	Pn	01 15 07.7	+2.8
LLP	**Lapu-Lapu**	**2.23**	**58**	eP	Pn	01 15 12.1	+2.1
LLP				eS	Sn	01 15 37.3	+0.4
RCP	**Roxas**	**2.51**	**16**	⇑eP	Pn	01 15 15.9	+2.1
RCP				eS	Sn	01 15 53.9	+10

*ISCJB **06** 01:51:36.8±0.4, 23°.75N±0°.02×121°.91E±0°.03, h23km±4km, Error ellipse: s-maj=4.8km s-min=3.0km az=43.4*

*TAP **06** 01:51:37.5, 23°.76N×121°.84E, h34km, ML3.3, C*

*JMA **06** 01:51:37.8±0.3, 23°.76N×121°.91E, h62km, M2.3*

ISC 06 01:51:37.3±1.1**, 23°.77N**±0°.03×**121°.85E**±0°.03**, h31**km±12km**, n31,** σ0.**62**/59**, 6C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.30**	**313**	eP	**Pn**	**01 51 45.1**	**-0.5**
	baz=316						
HWA				eS	**Sn**	**01 51 51.1**	**+0.1**
	baz=316						
ESL	**Shilin**	**0.38**	**277**	i P	**Pn**	**01 51 46.1**	**-0.6**
	baz=274						
ESL				S	**Sn**	**01 51 52.3**	**-0.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=274						
TWD	**Chiawan**	**0.38**	**324**	*i* P	**Pn**	**01 51 46.2**	**-0.5**
	baz=327						
TWD				*i* S	**Sn**	**01 51 52.5**	**-0.6**
	baz=327						
EHY	**Hungye**	**0.55**	**241**	⇑*i*P	**Pn**	**01 51 48.4**	**-0.6**
	baz=238						
EHY				*e*S	**Sn**	**01 51 56.8**	**-0.3**
	baz=238						
WHF	**Hehuan Shan**	**0.65**	**305**	⇑*i*P	**Pn**	**01 51 50.2**	**-0.6**
	baz=300						
WHF				S	**Sn**	**01 51 59.4**	**-0.8**
	baz=300						
TWF1	**Yuli**	**0.65**	**230**	⇓P	**Pn**	**01 51 50.2**	**-0.3**
	baz=224						
TWF1				*e*S	**Sn**	**01 51 59.4**	**-0.3**
	baz=224						
ENA	**Nanau**	**0.66**	**352**	*e*P	**Pn**	**01 51 50.3**	**-0.3**
	baz=354						
ENA				*e*S	**Sn**	**01 51 59.8**	**-0.1**
	baz=354						
TWT	**Tachien**	**0.78**	**308**	*i* P	**Pn**	**01 51 52.7**	**+0.4**
	baz=308						
TWT				S	**Sn**	**01 52 02.9**	**-0.2**
	baz=308						
NNS	**Nan Shan**	**0.79**	**327**	⇑*i*P	**Pn**	**01 51 52.5**	**0.0**
	baz=329						
NNS				*e*S	**Sn**	**01 52 03.2**	**-0.1**
	baz=329						
CHKT	**Chengkung**	**0.80**	**213**	*e*P	**Pn**	**01 51 53.7**	**+1.2**
	baz=201						
TWC	**Suao**	**0.83**	**0**	*e*P	**Pn**	**01 51 53.5**	**+0.6**
	baz=14						
TWC				S	**Sn**	**01 52 04.7**	**+0.5**
	baz=14						
YUS	**Yu-Shan**	**0.86**	**251**	P	**Pn**	**01 51 53.8**	**0.0**
	baz=250						
YUS				S	**Sn**	**01 52 05.1**	**-0.6**
	baz=250						
SMLT	**Sun Moon Lake**	**0.87**	**278**	⇑*i*P	**Pn**	**01 51 53.8**	**+0.3**
	baz=285						
SMLT				*e*S	**Sn**	**01 52 04.8**	**-0.5**
	baz=285						
ENTT	**Nioudou**	**0.90**	**344**	P	**Pn**	**01 51 54.1**	**+0.2**
	baz=346						
ENTT				S	**Sn**	**01 52 06.0**	**+0.1**
	baz=346						
TYC	**Yuchr**	**0.91**	**279**	⇑*i*P	**Pn**	**01 51 54.3**	**+0.3**
	baz=286						
TYC				S	**Sn**	**01 52 05.9**	**-0.3**
	baz=286						
ELDTW	**Lidau**	**0.95**	**233**	*e*P	**Pn**	**01 51 54.5**	**-0.3**
	baz=231						
ELDTW				*e*S	**Sb**	**01 52 06.2**	**-1.5**
	baz=231						
TWE	**Neicheng**	**0.96**	**350**	*e*P	**Pn**	**01 51 55.2**	**+0.5**
	baz=345						
TWE				*e*S	**Sn**	**01 52 07.6**	**+0.3**
	baz=345						
ALS	**Alishan**	**0.99**	**255**	⇑*i*P	**Pn**	**01 51 56.1**	**+0.8**
	baz=264						
ALS				*e*S	**Sn**	**01 52 08.4**	**0.0**
	baz=264						
NSK	**Sanguang**	**1.00**	**334**	P	**Pn**	**01 51 55.7**	**+0.3**
	baz=336						
NSK				S	**Sn**	**01 52 08.3**	**-0.2**
	baz=336						
CHN5	**Tsauling**	**1.08**	**261**	P	**Pb**	**01 51 57.7**	**+0.1**
	baz=260						
CHN5				*e*S	**Sn**	**01 52 11.6**	**+1.2**
	baz=260						
CHN4	**Tsaushan**	**1.22**	**250**	*e*P	**Pb**	**01 51 59.4**	**-0.5**
	baz=249						
CHN4				*e*S	**Sb**	**01 52 16.5**	**+1.2**
	baz=249						
TWB1	**Santiao Chiao**	**1.24**	**6**	*e*P	**Pb**	**01 52 01.0**	**+0.9**
	baz=9.0						
YOJ	**Yonaguni jima**	**1.27**	**57**	P	**Pb**	**01 51 59.2**	**-1.4**
YOJ				*e*S	**Sn**	**01 52 15.0**	**+0.1**
NWF	**Wu-fen Shan**	**1.30**	**357**	P	**Pb**	**01 52 01.0**	**-0.2**
	baz=360						
NWF				S	**Sb**	**01 52 18.3**	**+0.8**
	baz=360						
TWK	**Hsinying**	**1.34**	**248**	*e*P	**Pb**	**01 52 02.4**	**+0.5**
	baz=246						
TWK				*e*S	**Sb**	**01 52 19.9**	**+1.1**
	baz=246						
TWS1	**Kuangyinshan**	**1.38**	**344**	*e*P	**Pb**	**01 52 01.8**	**-0.7**
	baz=346						
TWS1				*e*S	**Sb**	**01 52 19.4**	**-0.4**
	baz=346						
IRIF	**Iriomote-Funau**	**1.81**	**72**	P	**Pn**	**01 52 07.0**	**+0.6**
IRIF				*e*S	**Sn**	**01 52 28.4**	**+0.1**
HATJ	**Hateruma jima**	**1.82**	**81**	P	**Pn**	**01 52 06.6**	**+0.1**
HATJ				*e*S	**Sn**	**01 52 27.7**	**-0.7**
JKRS	**Kuro-shima**	**2.03**	**76**	*e*S	**Sn**	**01 52 34.2**	**+0.4**
JIJ	**Ishigaki jima**	**2.18**	**74**	P	**Pn**	**01 52 11.4**	**-0.1**
JIJ				*e*S	**Sn**	**01 52 36.4**	**-1.1**
JTJ	**Tarama**	**2.75**	**71**	P	**Pn**	**01 52 19.6**	**+0.3**
JTJ				*e*S	**Sn**	**01 52 52.0**	**+0.5**

*ISCJB **06** 02:06:09.9±0.4, 39°.93N±0°.03×27°.38E±0°.03, h7km±5km, Error ellipse: s-maj=4.8km s-min=3.8km az=8.4*
*DDA **06** 02:06:09.6, 39°.94N×27°.39E, h16km, MD2.9*
*ISK **06** 02:06:09.7, 39°.92N×27°.39E, h10km, MD2.6*
*CSEM **06** 02:06:10.2±0.1, 39°.93N×27°.39E, h8km, MD2.6, Error ellipse: s-maj=2.7km s-min=2.2km az=31.0*
ISC 06 02:06:10.2±0.9**, 39°.94N**±0°.02×**27°.39E**±0°.02**, h15**km±9km**, n54,** σ0^s**50**/63**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GONE	**Gonen-Balikesi**	**0.25**	**65**	PG	**Pg**	**02 06 15.7**	**0.0**
GONE				SG	**Sg**	**02 06 19.9**	**+0.5**
GONE	**Gonen-Balikesi**	**0.25**	**65**	*i* Pg	**Pg**	**02 06 15.7**	**0.0**
GONE				*i* Sg	**Sg**	**02 06 19.9**	**+0.5**
BALY	**Balya**	**0.27**	**138**	*i* P	**Pg**	**02 06 15.7**	**-0.3**
BALB	**Balikesir**	**0.48**	**128**	*e*PG	**Pg**	**02 06 19.4**	**-0.4**
BALB				*e*SG	**Sg**	**02 06 25.7**	**-0.5**
BALB	**Balikesir**	**0.48**	**128**	*e*Pg	**Pg**	**02 06 19.4**	**-0.4**
BALB				*e*Sg	**Sg**	**02 06 25.7**	**-0.5**
BNT	**Bandirma**	**0.58**	**44**	*e*PG	**Pg**	**02 06 20.8**	**-0.9**
BNT	**Bandirma**	**0.58**	**44**	*e*Pg	**Pg**	**02 06 20.8**	**-0.9**
LPK	**Lapseki**	**0.65**	**312**	*e*PG	**Pg**	**02 06 22.7**	**-0.2**
LPK	**Lapseki**	**0.65**	**312**	*e*Pg	**Pg**	**02 06 22.7**	**-0.2**
MRMT	**Marmara Adasi**	**0.68**	**13**	*e*PG	**Pg**	**02 06 23.2**	**-0.4**
MRMT	**Marmara Adasi**	**0.68**	**13**	*e*Pg	**Pg**	**02 06 23.2**	**-0.4**
RKY	**Sarkoy-Tekirda**	**0.77**	**348**	*e*PG	**Pb**	**02 06 25.2**	**-0.1**
RKY	**Sarkoy-Tekirda**	**0.77**	**348**	*e*Pg	**Pb**	**02 06 25.2**	**-0.1**
EZN	**Ezine**	**0.83**	**263**	*e*PG	**Pb**	**02 06 26.6**	**+0.3**
EZN	**Ezine**	**0.83**	**263**	*e*Pg	**Pb**	**02 06 26.6**	**+0.3**
AYVA	**Ayvalik**	**0.83**	**221**	*i* P	**Pg**	**02 06 25.5**	**-0.8**
AYVA				*i* S	**Sb**	**02 06 38.2**	**+0.9**
AYVA	**Ayvalik**	**0.83**	**221**	*i* P	**Pg**	**02 06 25.5**	**-0.8**
AYVA				*i* S	**Sb**	**02 06 38.2**	**+0.9**
GELI	**Tayfur-Gelibol**	**0.84**	**303**	*e*PG	**Pb**	**02 06 26.9**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.84**	**303**	*e*Pg	**Pb**	**02 06 26.9**	**+0.4**
MFT	**Murefte**	**0.85**	**354**	*e*PG	**Pn**	**02 06 27.4**	**-0.3**
MFT	**Murefte**	**0.85**	**354**	*e*Pg	**Pn**	**02 06 27.4**	**-0.3**
DURS	**Dursunbey**	**0.90**	**112**	*i* P	**Pb**	**02 06 27.9**	**+0.3**
DURS				*i* S	**Sg**	**02 06 39.5**	**0.0**
DURS	**Dursunbey**	**0.90**	**112**	*i* P	**Pb**	**02 06 27.9**	**+0.3**
DURS				*i* S	**Sg**	**02 06 39.5**	**0.0**
ERIK	**Erikli-Kesan**	**0.99**	**318**	*e*PG	**Pb**	**02 06 29.1**	**0.0**
ERIK	**Erikli-Kesan**	**0.99**	**318**	*e*Pg	**Pb**	**02 06 29.1**	**0.0**
DST	**Dursunbey**	**1.00**	**109**	*e*PG	**Pb**	**02 06 29.2**	**-0.1**
DST	**Dursunbey**	**1.00**	**109**	*e*Pg	**Pb**	**02 06 29.2**	**-0.1**
BOZC	**Bozcaada**	**1.03**	**265**	*i* P	**Pb**	**02 06 29.4**	**-0.4**
BOZC				*i* S	**Sb**	**02 06 43.3**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.22**	**69**	*e*PN	**Pn**	**02 06 33.0**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.22**	**69**	*e*Pn	**Pn**	**02 06 33.0**	**+0.3**
ENEZ	**Enez**	**1.24**	**310**	*e*PN	**Pn**	**02 06 33.2**	**+0.3**
ENEZ	**Enez**	**1.24**	**310**	*e*Pn	**Pn**	**02 06 33.2**	**+0.3**
ARMT	**Armutlu**	**1.29**	**60**	*e*PN	**Pb**	**02 06 34.1**	**0.0**
ARMT	**Armutlu**	**1.29**	**60**	*e*Pn	**Pb**	**02 06 34.1**	**0.0**
DEMI	**Demirci**	**1.36**	**131**	*i* P	**Pn**	**02 06 35.0**	**+0.3**
DEMI	**Demirci**	**1.36**	**131**	*i* P	**Pn**	**02 06 35.0**	**+0.3**
CTKS	**Kestanelik-??a**	**1.55**	**33**	*e*PN	**Pb**	**02 06 39.0**	**+0.4**
CTKS	**Kestanelik-??a**	**1.55**	**33**	*e*Pn	**Pb**	**02 06 39.0**	**+0.4**
BLCB	**Balcova**	**1.57**	**190**	*e*PN	**Pn**	**02 06 37.9**	**+0.3**
BLCB	**Balcova**	**1.57**	**190**	*e*Pn	**Pn**	**02 06 37.9**	**+0.3**
BGKT	**Bogazkoy**	**1.63**	**40**	*e*PN	**Pb**	**02 06 39.5**	**-0.4**
BGKT	**Bogazkoy**	**1.63**	**40**	*e*Pn	**Pb**	**02 06 39.5**	**-0.4**
YLV	**Yalova**	**1.64**	**67**	*e*PN	**Pb**	**02 06 39.8**	**-0.4**
YLV	**Yalova**	**1.64**	**67**	*e*Pn	**Pb**	**02 06 39.8**	**-0.4**
TVSB	**Tavsanli**	**1.67**	**106**	*e*PN	**Pb**	**02 06 40.3**	**-0.4**
TVSB	**Tavsanli**	**1.67**	**106**	*e*Pn	**Pb**	**02 06 40.3**	**-0.4**
CTYL	**Yal??k??y-??at**	**1.68**	**24**	*e*PN	**Pb**	**02 06 40.6**	**-0.2**
CTYL	**Yal??k??y-??at**	**1.68**	**24**	*e*Pn	**Pb**	**02 06 40.6**	**-0.2**
KULA	**Kula-Manisa**	**1.73**	**145**	*e*PN	**Pb**	**02 06 41.1**	**-0.6**
KULA	**Kula-Manisa**	**1.73**	**145**	*e*Pn	**Pb**	**02 06 41.1**	**-0.6**
ADVT	**Abdulvahap**	**1.86**	**74**	*e*PN	**Pn**	**02 06 42.7**	**+1.1**
ADVT	**Abdulvahap**	**1.86**	**74**	*e*Pn	**Pn**	**02 06 42.7**	**+1.1**
EDRB	**Edirne**	**1.97**	**346**	*e*PN	**Pb**	**02 06 44.8**	**-0.9**
EDRB	**Edirne**	**1.97**	**346**	*e*Pn	**Pb**	**02 06 44.8**	**-0.9**

*ISCJB **06** 02:07:28.5±0.6, 42°.85S±0°.04×72°.64W±0°.08, h2km, mb4.1/13, MS3.9/2, Error ellipse: s-maj=8.5km s-min=4.6km az=161.9*
*GUC **06** 02:07:29.0±0.6, 42°.85S×72°.62W, h2km±5km, ML3.5*
*NEIC **06** 02:07:30.0±1.7, 42°.81S×72°.56W, h1km±10km, mb4.4/9, Error ellipse: s-maj=16.1km s-min=7.7km az=80.0*
*IDC **06** 02:07:30.3±0.9, 42°.79S×72°.44W, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.9/19, mbtmp3.9/7, ML3.9/1, MS3.8/2, Ms1 3.7/2, ms1mx3.1/17, Error ellipse: s-maj=32.8km s-min=13.5km az=113.0*
ISC 06 02:07:29.8±0.8**, 42°.83S**±0°.04×**72°.61W**±0°.08**, h2**km**, n36,** σ0^s**77**/35**, mb4.2**/13**, 1C, Southern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUNY	**Huinay**	**0.47**	**18**	*e*P	**Pg**	**02 07 38.4**	**-0.4**
HUNY				*e*S	**Sg**	**02 07 45.6**	**+0.7**
HUNY	**Huinay**	**0.47**	**18**	*e*P	**Pg**	**02 07 38.4**	**-0.4**
HUNY				*e*S	**Sg**	**02 07 45.6**	**+0.7**
HUNY				AML	AML	02 07 47.2	
	comp=N,4μm,0.4s						
FUTA	**Futaleufœ**	**0.66**	**123**	*e*P	**Pg**	**02 07 41.7**	**-0.7**
FUTA				*i* S	**Sg**	**02 07 51.5**	**+0.5**
FUTA	**Futaleufœ**	**0.66**	**123**	*e*P	**Pg**	**02 07 41.7**	**-0.7**
FUTA				*i* S	**Sg**	**02 07 51.5**	**+0.5**
FUTA				AML	AML	02 07 52.3	
	comp=N,1μm,0.5s						
CNTO	**Contao**	**1.03**	**355**	⇑*i*P	**Pg**	**02 07 48.9**	**-0.6**
CNTO				*i* S	**Sb**	**02 08 03.5**	**-0.7**
CNTO				AML	AML	02 08 08.4	
	comp=E,3μm,0.4s						
PMCH	**Puerto Montt**	**1.36**	**351**	*i* S	**Sb**	**02 08 13.4**	**-0.2**
PMCH				AML	AML	02 08 20.0	
	comp=E,2μm,0.4s						
PLCA	**Paso Flores**	**2.60**	**37**	Pn	**Pn**	**02 08 13.7**	**+0.8**
PLCA				Pg	**Pb**	**02 08 16.9**	**-0.3**
PLCA				Lg	Lg	02 08 50.5	
PLCA	**Paso Flores**	**2.60**	**37**	Pn	**Pn**	**02 08 13.7**	**+0.8**
	comp=E,6.4nm,0.3s,baz=217,slow=16,SNR=84						
PLCA				Pg	**Pb**	**02 08 16.9**	**-0.3**
	comp=E,7.3nm,0.3s,baz=222,slow=17,SNR=126						
PLCA				Lg	Lg	02 08 50.5	
	comp=E,34nm,0.3s,baz=263,slow=22,SNR=18						
COYC	**Coyhaique**	**2.77**	**172**	AML	AML	02 09 01.2	
	comp=E,122nm,0.5s						
TRQA	**Tornquist**	**9.40**	**63**	*e*Pn	**Pn**	**02 09 47.6**	**+1.4**
LVC	**Limon Verde**	**20.39**	**10**	*e*P	Pn	02 12 09.0	-1.3
	comp=E,4.3nm,0.8s						
LPAZ	**La Paz**	**26.73**	**10**	*e*P	**P**	**02 13 11.5**	**+0.1**
	comp=E,7.4nm,1.5s						
SIV	**San Ignacio**	**28.51**	**24**	P	**P**	**02 13 25.3**	**-1.3**
SIV	**San Ignacio**	**28.51**	**24**	P	**P**	**02 13 25.3**	**-1.3**
	comp=E,1.0nm,0.9s,baz=220,slow=9.7,SNR=4.6						
NNA	**Nana**	**30.95**	**352**	*e*P	**P**	**02 13 48.0**	**-0.3**
	comp=E,19nm,1.2s						
BDFB	**Brasilia**	**34.31**	**45**	LR	LR	02 29 31.4	
	comp=E,115nm,20.8s,baz=289,slow=39						
SNAA	**Sanae**	**43.69**	**155**	*e*P	**P**	**02 15 35.4**	**-0.4**
	comp=E,10nm,1.4s						
SNAA	**Sanae**	**43.69**	**155**	P	**P**	**02 15 35.3**	**-0.4**
	comp=E,2.3nm,1.3s,baz=250,slow=5.9,SNR=4.3						
QSPA	**South Pole Qui**	**47.42**	**180**	P	**P**	**02 16 06.4**	**+1.0**
QSPA	**South Pole Qui**	**47.42**	**180**	P	**P**	**02 16 06.4**	**+1.0**
	comp=E,5.5nm,1.1s,baz=144,slow=5.4,SNR=7.5						
VNDA	**Vanda**	**55.38**	**192**	*e*P	P	02 17 07.1	+2.4
	comp=E,7.1nm,1.4s						
VNDA	**Vanda**	**55.38**	**192**	P	P	02 17 07.5	+2.9
	comp=E,4.1nm,1.3s,baz=122,slow=3.4,SNR=5.9						
HKT	**Hockley**	**75.51**	**339**	*e*P	**P**	**02 19 15.5**	**+0.2**
	comp=E,4.1nm,1.2s						
TXAR	**Lajitas Array**	**77.28**	**332**	P	**P**	**02 19 26.7**	**+1.1**
TXAR	**Lajitas Array**	**77.28**	**332**	P	**P**	**02 19 26.7**	**+1.1**
	comp=E,0.7nm,0.8s,baz=151,slow=8.0,SNR=7.7						
MNTX	**Cornudas Mount**	**80.03**	**332**	*e*P	**P**	**02 19 40.2**	**-0.3**
	comp=E,2.0nm,1.3s						
WMOK	**Wichita Mounta**	**80.82**	**338**	*e*P	**P**	**02 19 45.2**	**+0.5**
	comp=E,3.3nm,0.8s						
ANMO	**Albuquerque**	**83.36**	**333**	*e*P	**P**	**02 19 58.5**	**+0.2**
	comp=E,2.3nm,1.1s						
TORD	**Torodi Ar. Bea**	**87.66**	**70**	P	**P**	**02 20 19.2**	**-0.8**
TORD	**Torodi Ar. Bea**	**87.66**	**70**	P	**P**	**02 20 19.2**	**-0.8**
	comp=E,0.4nm,0.8s,baz=212,slow=5.1,SNR=2.2						
NVAR	**Mina Array Bea**	**90.90**	**326**	P	P	02 20 39.7	+4.8
NVAR	**Mina Array Bea**	**90.90**	**326**	P	P	02 20 39.7	+4.8
	comp=E,0.3nm,0.7s,baz=185,slow=7.2,SNR=3.3						
ULM	**Lac du Bonnet**	**94.90**	**345**	LR	LR	03 05 25.1	
	comp=E,70nm,19.7s,baz=325,slow=37						
ILAR	**Eielson Array**	**121.78**	**331**	PKP	**PKPdf**	**02 26 25.0**	**+0.8**
ILAR	**Eielson Array**	**121.78**	**331**	PKP	**PKPdf**	**02 26 25.0**	**+0.8**
	comp=E,0.3nm,0.8s,baz=177,slow=2.6,SNR=4.1						
ABKAR	**Akbulak array**	**146.89**	**62**	*e*PKPbc	**PKPbc**	**02 27 12.4**	**-0.7**

*BJI **06** 02:16:59.2, 36°.42N×69°.67E, h132km, mB4.2/5, mb4.5/8*
*ISCJB **06** 02:17:00.6±0.4, 36°.26N±0°.02×70°.07E±0°.04, h136km±4km, mb4.0/21, Error ellipse: s-maj=5.3km s-min=3.2km az=173.0*
*MOS **06** 02:17:01.4±1.2, 36°.27N×70°.08E, h136km, mb4.0/15, Error ellipse: s-maj=11.3km s-min=5.2km az=80.7*
*IDC **06** 02:17:01.8±1.0, 36°.21N×70°.10E, h136km±8km, mb3.6/11, mb1 3.8/16, mb1mx3.6/30, mbtmp3.7/16, Error ellipse: s-maj=14.1km s-min=11.9km az=123.0*
*NEIC **06** 02:17:02.1±0.7, 36°.33N×69°.92E, h131km±9km, mb4.4/9, Error ellipse: s-maj=10.1km s-min=7.6km az=117.0*
*NNC **06** 02:17:07.6±2.1, 36°.77N×69°.75E, h166km±19km, mb3.9, mpv4.9, Error ellipse: s-maj=15.7km s-min=14.3km az=14.0*
ISC 06 02:17:01.8±0.5**, 36°.32N**±0°.04×**70°.05E**±0°.04**, h129**km±4km**, h128**km**:pP-P, n116,** σ1^s**84**/141**, mb4.0**/21**, 11C-17D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBL	**Kabul**	**1.96**	**205**	*e*PN	**Pn**	**02 17 35.1**	**-0.3**
KBL				*e*		02 17 59.9	
KBL	**Kabul**	**1.96**	**205**	*e*Pn	**Pn**	**02 17 35.1**	**-0.3**
KBL				*e*Sn	**Sn**	**02 17 59.9**	**-1.1**
CEP	**Cherat**	**2.92**	**148**	⇓P	**Pn**	**02 17 48.0**	**+0.5**
CEP				S	**Sn**	**02 18 22.0**	**-0.7**
CHCP	**Chirah Chowk**	**3.74**	**134**	⇓P	**Pn**	**02 17 58.8**	**+0.6**
THW	**Thamme Wali**	**3.78**	**158**	P	**Pn**	**02 17 58.3**	**-0.4**
SARP	**Sargodha**	**4.89**	**153**	P	**Pn**	**02 18 12.4**	**-1.1**
KSH	**Kashi**	**5.67**	**54**	P	**Pn**	**02 18 21.7**	**-2.2**
KSH				S	Sn	02 19 18.7	-9.2
KSH				smax	smax		
	comp=N,730nm,0.6s						
KSH				smax	smax		
	comp=E,520nm,0.6s						
THN	**Thein Dam**	**6.08**	**128**	*e*PKP	**Pn**	**02 18 26.7**	**-2.7**
THN				*e*x	**Sn**	**02 19 34.0**	**-3.7**
AML	**Almayashu**	**6.46**	**25**	*i* PN	**Pn**	**02 18 35.9**	**+1.2**
AML	**Almayashu**	**6.46**	**25**	P	**Pn**	**02 18 36.0**	**+1.2**
	SNR=298						
KK31	**Karatay Array**	**6.79**	**3**	⇓P	**Pn**	**02 18 40.0**	**+1.1**
	comp=E,19nm,0.2s,baz=197,slow=16,SNR=534						
KK31				⇑S	**Sn**	**02 19 51.4**	**-3.3**
	comp=E,42nm,0.3s,baz=191,slow=19,SNR=18						
KK31	**Karatay Array**	**6.79**	**3**	*e*PN	**Pn**	**02 18 39.9**	**+1.1**
KK31				pmax	pmax		
	comp=Z,47nm,0.2s						
KKAR	**Karatay Array**	**6.79**	**3**	*e*PN	**Pn**	**02 18 40.0**	**+1.2**
KKAR	**Karatay Array**	**6.79**	**3**	*e*Pn	**Pn**	**02 18 40.0**	**+1.2**
KKAR				*e*Sn	**Sn**	**02 19 53.9**	**-0.8**
UCH	**Uchtor**	**6.84**	**29**	*i* PN	**Pn**	**02 18 41.7**	**+1.7**
UCH	**Uchtor**	**6.84**	**29**	P	**Pn**	**02 18 41.7**	**+1.7**
	SNR=28						
EKS2	**Erkin-Say**	**6.96**	**23**	*e*PN	**Pn**	**02 18 42.7**	**+1.4**
EKS2	**Erkin-Say**	**6.96**	**23**	*e*Pn	**Pn**	**02 18 42.7**	**+1.4**
EKS2				*e*Sn	**Sn**	**02 19 55.7**	**-3.3**
EKS2	**Erkin-Say**	**6.96**	**23**	P	**Pn**	**02 18 42.8**	**+1.4**
	SNR=65						
KZA	**Kyzart**	**7.03**	**33**	P	**Pn**	**02 18 43.5**	**+1.1**
	SNR=151						
AAK	**Ala-Archa**	**7.18**	**27**	PN	**Pn**	**02 18 45.9**	**+1.6**
AAK				pmax	pmax		
	comp=Z,18nm,0.3s						
AAK	**Ala-Archa**	**7.18**	**27**	*e*Pn	**Pn**	**02 18 45.2**	**+0.9**
AAK				*e*Sn	**Sn**	**02 20 04.9**	**+0.4**
AAK	**Ala-Archa**	**7.18**	**27**	P	**Pn**	**02 18 45.9**	**+1.6**
	SNR=86						
AAK	**Ala-Archa**	**7.18**	**27**	P	**Pn**	**02 18 45.9**	**+1.6**
	comp=Z,18nm,0.3s,baz=198,slow=9.6,SNR=183						
AAK				S	**Sn**	**02 20 05.6**	**+1.1**
	comp=Z,8.3nm,0.3s,baz=304,slow=22,SNR=14						
BHK	**Bhakra**	**7.21**	**131**	*e*S	**Sn**	**02 20 04.2**	**-0.8**
KBK	**Karagaybulak**	**7.37**	**29**	P	**Pn**	**02 18 48.4**	**+1.5**
	SNR=50						
FRU	**Bishkek**	**7.40**	**27**	⇓*i*PN	**Pn**	**02 18 48.0**	**+0.9**
FRU				pmax	pmax		
	comp=Z,150nm,1.6s						
SDNR	**Sundarnagar**	**7.49**	**128**	*e*PKP	**Pn**	**02 18 47.0**	**-1.5**
SDNR				*e*4	Sn	02 20 04.0	-8.0
CHMS	**Chumysh**	**7.59**	**27**	P	**Pn**	**02 18 50.9**	**+1.1**
	SNR=98						
ULHL	**Ulahol**	**7.62**	**37**	*i* PN	**Pn**	**02 18 51.3**	**+1.0**
ULHL	**Ulahol**	**7.62**	**37**	P	**Pn**	**02 18 51.2**	**+1.0**
	SNR=70						
USP	**Ospenovka**	**7.74**	**25**	P	**Pn**	**02 18 52.5**	**+0.8**
	SNR=102						
TKM2	**Tokmak 2**	**7.86**	**31**	⇑P	**Pn**	**02 18 54.2**	**+0.8**
	comp=Z,73nm,0.7s						
TKM2				⇑S	**Sn**	**02 20 23.3**	**+2.4**
	comp=Z,49nm,0.9s						
TKM2	**Tokmak 2**	**7.86**	**31**	*e*PN	**Pn**	**02 18 54.6**	**+1.1**
TKM2	**Tokmak 2**	**7.86**	**31**	*e*Pn	**Pn**	**02 18 54.6**	**+1.1**
TKM2				*e*Sn	**Sn**	**02 20 18.6**	**-2.3**
TKM2	**Tokmak 2**	**7.86**	**31**	P	**Pn**	**02 18 54.6**	**+1.1**
	SNR=116						
SMLA	**Simla**	**7.87**	**129**	*i* P	**Pn**	**02 18 52.2**	**-1.3**
SMLA				*i* x	**Sn**	**02 20 16.5**	**-4.4**
NDI	**New Delhi**	**9.72**	**140**	*e*PKP	Pn	02 19 14.0	-4.4
NDI				*e*x	x	02 20 46.0	
AJM	**Ajmer**	**10.56**	**157**	*e*x	x	02 21 15.0	
PYUN	**Piuthan**	**13.67**	**123**	*e*P	Pn	02 20 07.2	-3.4
MK31	**Makanchi Array**	**13.89**	**37**	⇑P	**Pn**	**02 20 13.3**	**+0.2**
	comp=Z,8.1nm,0.8s,baz=220,slow=12,SNR=58						
MK31				⇓S	**Sn**	**02 22 47.3**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=230,slow=21,SNR=4.6						
MK31	**Makanchi Array**	**13.89**	**37**	*i* P	**Pn**	**02 20 13.3**	**+0.2**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MK31	**Makanchi Array**	**13.89**	**37**	*e*Pn	**Pn**	**02 20 12.8**	**-0.3**
MKAR	**Makanchi Array**	**13.89**	**37**	*e*P	**Pn**	**02 20 13.2**	**+0.1**
MKAR	**Makanchi Array**	**13.89**	**37**	*e*Pn	**Pn**	**02 20 13.2**	**+0.1**
MKAR	**Makanchi Array**	**13.89**	**37**	P	**Pn**	**02 20 13.1**	**0.0**
	comp=Z,0.4nm,0.3s,baz=223,slow=14,SNR=18						
DANN	**Dangsing**	**14.04**	**121**	*e*P	Pn	02 20 11.9	-3.5
	comp=Z,41nm,0.3s						
KOLN	**Koldanda**	**14.30**	**123**	*e*P	Pn	02 20 15.1	-3.5
	comp=Z,26nm,0.3s						
AB31	**Akbulak array**	**14.89**	**333**	P	**Pn**	**02 20 25.1**	**-0.6**
	comp=Z,4.2nm,0.3s,baz=149,slow=12,SNR=428						
AB31				⇓S	Sn	02 22 59.5	-11
	comp=Z,3.5nm,0.4s,baz=149,slow=24,SNR=11						
AB31	**Akbulak array**	**14.89**	**333**	*e*P	**Pn**	**02 20 25.0**	**-0.6**
AB31				*e*S	Sn	02 22 59.7	-11
AB31				pmax	pmax		
	comp=Z,13nm,0.3s						
AB31				smax	smax		
	comp=Z,5.0nm,0.3s						
ABKAR	**Akbulak array**	**14.89**	**333**	*e*Pn	**Pn**	**02 20 25.2**	**-0.4**
ABKAR				*e*Sn	Sn	02 23 00.1	-10
DMN	**Daman**	**15.44**	**120**	*e*P	**Pn**	**02 20 30.6**	**-2.3**
	comp=Z,37nm,0.4s						
KKN	**Kakani**	**15.45**	**119**	*e*P	**Pn**	**02 20 30.5**	**-2.5**
	comp=Z,77nm,0.6s						
KURBB	**Kurchatov Arra**	**15.55**	**21**	⇑P	**Pn**	**02 20 33.7**	**-0.1**
	comp=Z,13nm,1.0s						
KURBB				⇓S	**Sn**	**02 23 23.0**	**-3.2**
	comp=Z,22nm,0.8s						
KURBB	**Kurchatov Arra**	**15.55**	**21**	P	**Pn**	**02 20 33.0**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=209,slow=11,SNR=35						
PKIN	**Phulchoki**	**15.66**	**119**	*e*P	**Pn**	**02 20 33.1**	**-2.6**
	comp=Z,40nm,0.5s						
KURK	**Kurchatov**	**15.66**	**21**	⇓P	**Pn**	**02 20 33.6**	**-1.5**
	comp=Z,28nm,0.8s						
KURK				⇑S	**Sn**	**02 23 25.7**	**-3.1**
	comp=Z,17nm,1.0s						
KURK	**Kurchatov**	**15.66**	**21**	*e*P	**Pn**	**02 20 34.3**	**-0.9**
KURK				pmax	pmax		
	comp=Z,29nm,0.8s						
KURK	**Kurchatov**	**15.66**	**21**	*e*Pn	**Pn**	**02 20 34.2**	**-0.9**
	comp=Z,30nm,0.8s						
PKI	**Pulchoki**	**15.67**	**119**	*e*P	**Pn**	**02 20 33.5**	**-2.4**
	comp=Z,47nm,0.5s						
JBP	**Jabalpur**	**15.68**	**144**	*e*PKP	**Pn**	**02 20 36.3**	**+0.6**
JBP				*i* x	x	02 20 37.9	
	comp=Z,26nm,0.9s						
JBP				*e*x	x	02 23 18.3	
GUN	**Gumba**	**15.80**	**118**	*e*P	**Pn**	**02 20 35.3**	**-2.2**
VOSK	**Vostochnaya**	**16.42**	**2**	⇑P	**Pn**	**02 20 43.8**	**-0.7**
	comp=Z,14nm,0.8s						
VOSK				⇑S	**Sn**	**02 23 40.4**	**-6.6**
	comp=Z,8.8nm,0.8s						
AKTO	**Aktyubinsk**	**16.57**	**332**	⇓P	**Pn**	**02 20 45.2**	**-1.2**
	comp=Z,19nm,0.8s						
AKTO				⇓S	Sn	02 23 43.5	-7.2
	comp=Z,12nm,0.7s						
AKTO	**Aktyubinsk**	**16.57**	**332**	P	**P**	**02 20 46.9**	**+0.2**
AKTO				S	Sn	02 23 43.2	-7.5
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO				smax	smax		
	comp=N,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**16.57**	**332**	P	**P**	**02 20 46.9**	**+0.2**
	comp=N,0.9nm,0.3s,baz=148,slow=12,SNR=87						
AKTO				S	Sn	02 23 43.2	-7.5
	comp=N,0.7nm,0.3s,baz=36,slow=22,SNR=9.1						
ZRNK	**Zerenda**	**16.65**	**358**	⇑P	**Pn**	**02 20 46.2**	**-1.1**
	comp=N,6.8nm,0.6s						
ZRNK				⇓S	**Sn**	**02 23 46.7**	**-5.8**
	comp=N,11nm,1.1s						
BVA0	**Borovoye Array**	**16.71**	**1**	⇓P	**Pn**	**02 20 47.1**	**-1.0**
	comp=N,13nm,0.8s,baz=168,slow=9.8,SNR=86						
BVA0				S	**Sn**	**02 23 48.3**	**-5.7**
	comp=N,0.6nm,0.6s,baz=167,slow=24,SNR=4.9						
BVA0	**Borovoye Array**	**16.71**	**1**	*i* P	**P**	**02 20 48.5**	**+0.3**
BVA0				pmax	pmax		
	comp=Z,13nm,0.8s						
BVAR	**Borovoye Array**	**16.71**	**1**	P	**P**	**02 20 48.1**	**-0.1**
BVAR				S	**Sn**	**02 23 50.4**	**-3.6**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR				smax	smax		
	comp=N,1.0nm,0.3s						
BVAR	**Borovoye Array**	**16.71**	**1**	P	**P**	**02 20 48.1**	**-0.1**
	comp=N,0.7nm,0.3s,baz=171,slow=13,SNR=54						
BVAR				S	**Sn**	**02 23 50.4**	**-3.6**
	comp=N,0.5nm,0.3s,baz=163,slow=21,SNR=5.2						
AKL	**Akola**	**16.71**	**157**	*e*PKP	**P**	**02 20 48.9**	**+0.5**
AKL				AMB	AMB	02 20 54.7	
	comp=Z,20nm,2.4s						
BRVK	**Borovoye**	**16.74**	**0**	⇑P	**Pn**	**02 20 47.3**	**-1.1**
	comp=Z,34nm,1.5s						
BRVK				⇓S	**Sn**	**02 23 48.7**	**-6.0**
BRVK	**Borovoye**	**16.74**	**0**	*e*P	**P**	**02 20 48.7**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BRVK	**Borovoye**	**16.74**	**0**	*e*P	**P**	**02 20 48.7**	**+0.2**
	comp=Z,9.7nm,0.7s						
RAMN	**Ramite**	**16.89**	**119**	*e*P	**P**	**02 20 48.8**	**-1.9**
	comp=Z,74nm,0.6s						
NGP	**Nagpur**	**17.04**	**150**	*e*PKP	**P**	**02 20 51.2**	**-0.8**
NGP				AMB	AMB	02 21 02.4	
	comp=Z,16nm,1.1s						
NGP				*e*x	x	02 23 44.2	
TAPN	**Taplejung**	**17.45**	**116**	*e*P	**P**	**02 20 56.2**	**-0.7**
	comp=Z,86nm,0.5s						
ODAN	**Odare**	**17.50**	**118**	*e*P	**P**	**02 20 56.7**	**-0.7**
	comp=Z,82nm,0.8s						
LSA	**Lhasa**	**18.87**	**104**	*e*P	**Pn**	**02 21 15.6**	**+1.0**
LSA				pmax	pmax		
	comp=Z,55nm,1.8s						

LSA	Lhasa	18.87	104	eP	Pn	02 21 15.6	+1.0
	comp=Z,55nm,1.8s						
MIB	Mutribah	20.09	258	eP	P	02 21 25.4	+0.1
MIB				AMb	AMB	02 21 32.9	
	comp=Z,27nm,0.9s						
GNI	Garni	20.22	289	eP	P	02 21 25.7	-1.1
	comp=Z,28nm,1.1s						
GNI	Garni	20.22	289	P	Pn	02 21 29.9	-0.2
	comp=Z,5.8nm,0.5s,baz=100,slow=12,SNR=5.2						
RDF	Al-Radifah	20.31	255	eP	P	02 21 26.9	-0.7
RDF				AMb	AMB	02 21 33.9	
	comp=Z,12nm,1.0s						
ZAA0	Zalesovo Array	20.40	26	eP	P	02 21 29.9	+1.5
ZALV	Zalesovo Beam	20.40	26	P	Pn	02 21 30.2	-1.6
ZALV				S	S	02 25 10.7	+1.0
ZALV				pmax	pmax		
	comp=Z,42nm,0.6s						
ZALV				smax	smax		
	comp=N,1.0nm,0.8s						
ZALV	Zalesovo Beam	20.40	26	P	Pn	02 21 30.1	-1.6
	comp=N,42nm,0.6s,baz=221,slow=11,SNR=78						
ZALV				S	S	02 25 10.7	+1.0
	comp=N,1.4nm,0.8s,baz=230,slow=18,SNR=3.7						
NAY	Al-Naaiem	20.40	256	eP	P	02 21 28.5	-0.2
NAY				AMb	AMB	02 21 29.8	
	comp=Z,7.3nm,1.0s						
NVS	Novosibirsk	20.63	22	⇓iP	P	02 21 32.4	+1.6
NVS				eS	S	02 25 01.1	-13
NVS				pmax	pmax		
	comp=N,29nm,1.0s						
NVS				pmax	pmax		
	comp=E,18nm,1.0s						
NVS				pmax	pmax		
	comp=Z,40nm,1.0s						
NVS				smax	smax		
	comp=N,5.0nm,2.0s						
NVS				smax	smax		
	comp=E,11nm,1.6s						
BHD	Baghdad	21.28	269	eP	pP	02 21 55.5	-6.0
BHD				eS	Sn	02 25 58.5	+15
SVE	Sverdlovsk	21.47	346	⇓iP	P	02 21 42.1	+2.3
SVE				eS	S	02 25 32.3	+2.2
SVE				pmax	pmax		
	comp=Z,12nm,0.8s						
ARU	Arti	21.57	342	d iP	P	02 21 43.0	+2.2
ARU						02 22 07.8	
ARU				S	S	02 25 33.7	+1.9
ARU				pmax	pmax		
	comp=Z,13nm,1.0s						
GTA	Gaotai	23.65	73	eP	P	02 22 04.8	+3.3
GTA				pmax	pmax		
	comp=Z,14nm,0.8s						
BRTR	Keskin Array B	28.76	288	P	P	02 22 48.2	+0.8
	comp=Z,0.8nm,0.7s,baz=110,slow=9.7,SNR=7.2						
BRTR				pP	pP	02 23 16.6	+1.5
	comp=Z,0.2nm,0.3s,baz=107,slow=12,SNR=2.4						
OBN	Obninsk	29.58	320	⇑eP	P	02 22 57.0	+2.7
OBN				e*PP	pP	02 23 25.3	+3.3
OBN				eS	S	02 27 40.2	+0.5
OBN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CHTO	Chiang Mai	30.82	117	eP	P	02 23 06.7	+1.1
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	Chiang Mai	30.82	117	eP	P	02 23 06.7	+1.1
	comp=Z,3.5nm,0.8s						
CMAR	Chiang Mai Arr	31.05	117	P	P	02 23 07.7	0.0
	comp=Z,1.7nm,0.4s,baz=300,slow=7.2,SNR=5.6						
AKASG	Malin Array Be	32.46	309	pP	pP	02 23 49.5	+1.9
	comp=Z,0.3nm,0.3s,baz=84,slow=7.8,SNR=5.2						
HHC	Hu-ho-hao-te	32.54	69	eP	P	02 23 21.6	+0.9
HHC				pP	pP	02 23 49.0	+0.4
HHC				sP	sP	02 24 04.1	+0.7
HHC				PP	PP	02 24 35.3	-1.3
HHC				S	S	02 28 27.8	+1.2
HHC				sS	sS	02 29 15.1	-0.2
HHC				SS	SnSn	02 30 33.1	-2.2
HHC				pmax	pmax		
	comp=Z,25nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,5.0s						
FINES	FINESS Array B	37.21	327	P	P	02 24 00.7	+0.4
	comp=Z,1.8nm,0.9s,baz=129,slow=15,SNR=3.1						
ARCES	ARCESS Array B	41.02	338	P	P	02 24 33.2	+1.3
	comp=Z,2.4nm,0.9s,baz=108,slow=7.8,SNR=8.4						
TIP	Timpagrande	41.73	291	eP	P	02 24 38.8	+0.6
	comp=Z,12nm,1.4s						
IPM	Ipoh	42.60	131	eP	P	02 24 44.9	-0.5
	comp=Z,8.7nm,0.5s						
NB2	NORSAR Subarra	44.06	323	P	P	02 24 56.4	-0.2
	comp=Z,0.6nm,0.5s,baz=100,slow=7.9						
NOA	NORSAR Array B	44.06	323	P	P	02 24 56.5	-0.1
	comp=Z,0.9nm,0.7s,baz=98,slow=8.0,SNR=3.9						
NOA				pP	pP	02 25 27.5	+1.7
	comp=Z,1.3nm,0.8s,baz=99,slow=8.0,SNR=3.3						
TIXI	Tiksi	46.23	22	⇓iP	P	02 25 14.4	+0.9
TIXI				i*PP	pP	02 25 49.2	+6.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMBO	Kilima Mbogo	48.15	227	eP	P	02 25 29.7	+0.3
	comp=Z,2.5nm,1.1s						
LSZ	Lusaka	64.78	225	eP	P	02 27 26.2	-0.7
	comp=Z,1.8nm,0.8s						
TOA0	Torodi Ar. Sit	64.95	268	eP	P	02 27 26.2	-1.9
TORD	Torodi Ar. Bea	64.95	268	P	P	02 27 26.2	-1.8
	comp=Z,0.9nm,0.4s,baz=48,slow=5.9,SNR=41						
ILAR	Eielson Array	75.16	15	P	P	02 28 28.6	-1.0
	comp=Z,0.3nm,0.7s,baz=312,slow=5.0,SNR=3.7						
YKA	Yellowknife Ar	81.46	2	P	P	02 29 04.8	+0.6
	comp=Z,0.6nm,0.6s,baz=352,slow=5.4,SNR=9.7						
YKA				pP	pP	02 29 37.6	+1.0
	comp=Z,0.3nm,0.6s,baz=350,slow=5.3,SNR=3.3						
WRA	Warramunga Arr	82.55	121	P	P	02 29 08.6	-2.0
	comp=Z,0.8nm,0.6s,baz=326,slow=5.0,SNR=22						
ASAR	Alice Springs	84.78	124	P	P	02 29 20.4	-1.5
	comp=Z,0.9nm,0.6s,baz=309,slow=5.2,SNR=15						

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*IDC **06** 02:23:49.7±2.7, 47°.13N×146°.38E, h301km±58km, mb2.9/4, mb1 3.2/6, mb1mx2.9/26, mbtmp3.0/6, Error ellipse: s-maj=94.0km s-min=22.0km az=172.0*
*ISCJB **06** 02:23:50.1±0.9, 46°.17N±0°.08×146°.6E±0°.2, h339km, mb3.1/4, Error ellipse: s-maj=16.9km s-min=9.0km az=29.1*
*JMA **06** 02:23:50.9±0.6, 46°.10N×146°.76E, h339km, M3.1*
ISC 06 02:23:49.6±1.0, **46°.1N**±0°.1×**146°.6E**±0°.1, **h339**km, **n17**, σ1^{s}**66**/22, **mb3.2**/4, **Northwest of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	2.85	193	P	Pn	02 24 47.2	+0.5
NEM2				eS	S	02 25 32.7	0.0
JTKR	Abashiri--Toko	2.91	223	P	Pn	02 24 49.6	+2.4
JSE	Soyaes	3.08	249	P	Pn	02 24 50.3	+1.5
JMP	Maruseppu	3.15	229	P	Pn	02 24 51.7	+2.1
JAK	Akkeshi	3.44	204	P	Pn	02 24 53.5	+1.3
JAK				eS	S	02 25 42.4	-0.2
JAR	Ashorobuto	3.50	217	P	Pn	02 24 55.0	+2.1
ASAJ	Asahikawa	3.50	236	P	Pn	02 24 55.4	+2.5
ASAJ	Asahikawa	3.50	236	P	Pn	02 24 55.5	+2.7
	4.2nm,0.3s,baz=63,slow=6.8,SNR=18						
JCH	Churui	4.24	215	P	Pn	02 25 01.7	+1.3
JCH				eS	S	02 25 56.6	-0.9
JNBK	Urakawa-nobuka	4.76	217	P	Pn	02 25 07.3	+1.2
JNBK				eS	S	02 26 07.1	-0.7
JKB	Kayabe	5.87	226	P	Pn	02 25 19.6	+1.2
JKB				eS	S	02 26 28.8	-1.6
JOT	Ohata	6.24	222	P	Pn	02 25 23.8	+1.0
JOT				eS	S	02 26 36.1	-2.3
USRK	Ussuriysk Arra	10.52	265	P	Pn	02 26 14.7	+1.1
	0.6nm,0.3s,baz=65,slow=13,SNR=6.4						
ILAR	Eielson Array	39.80	38	P	P	02 30 48.6	-1.8
	0.4nm,0.5s,baz=259,slow=5.6,SNR=8.9						
MKAR	Makanchi Array	43.19	295	P	P	02 31 17.2	-0.7
	0.2nm,0.6s,baz=72,slow=9.4,SNR=2.7						
FINES	FINESS Array B	62.58	332	P	P	02 33 34.4	-3.5
	1.4nm,0.8s,baz=26,slow=9.1,SNR=5.2						
PDAR	Pinedale Array	68.65	50	P	P	02 34 17.9	+0.9
	0.5nm,0.6s,baz=339,slow=4.8,SNR=3.6						

IDC 06 02:31:38.5±0.8, **18°.66N**×**145°.44E**, **h262**km±7km, **mb3.6**/19, **mb1 3.8**/19, **mb1mx3.6**/30, **mbtmp3.6**/19, **Error ellipse: s-maj=15.2km s-min=9.0km az=86.0**, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	24.20	324	P	P	02 36 31.2	-0.3
	1.5nm,0.6s,baz=148,slow=8.8,SNR=5.6						
KSRS				pP	pP	02 37 19.9	+1.0
	2.3nm,0.7s,baz=147,slow=8.7,SNR=4.8						
ASAJ	Asahikawa	25.49	355	P	P	02 36 44.6	+1.6
	3.4nm,0.6s,baz=187,slow=8.1,SNR=4.6						
WRA	Warramunga Arr	39.88	196	P	P	02 38 47.5	+0.1
	9.3nm,0.7s,baz=2.7,slow=9.1,SNR=138						
FITZ	Fitzroy Crossi	41.39	209	P	P	02 39 00.2	+0.5
	2.8nm,0.4s,baz=44,slow=9.0,SNR=30						
SONM	Songino Array	43.02	322	P	P	02 39 11.5	-1.2
	0.9nm,0.5s,baz=125,slow=9.2,SNR=3.6						
ASAR	Alice Springs	43.55	195	P	P	02 39 16.8	-0.2
	1.3nm,0.5s,baz=12,slow=8.2,SNR=22						
ASAR				PcP	PcP	02 40 59.5	-0.2
	0.3nm,0.5s,baz=45,slow=2.8,SNR=3.9						
DZM	Mont Dzumac	45.40	152	P	P	02 39 30.7	-1.0
	9.4nm,1.0s,baz=90,slow=3.0,SNR=4.7						
STKA	Stephens Creek	50.39	184	P	P	02 40 08.3	-1.2
	0.8nm,0.6s,baz=76,slow=8.3,SNR=3.2						
ZALV	Zalesovo Beam	57.90	323	P	P	02 41 03.0	-0.3
	1.0nm,0.7s,baz=103,slow=6.8,SNR=5.0						
ZALV				PcP	PcP	02 41 52.1	-0.4
	0.3nm,0.3s,baz=145,slow=5.3,SNR=2.5						
MKAR	Makanchi Array	58.31	314	P	P	02 41 07.2	+0.9
	0.9nm,0.5s,baz=91,slow=7.8,SNR=15						
MKAR				PcP	PcP	02 41 54.1	-0.2
	0.3nm,0.4s,baz=78,slow=3.7,SNR=5.2						
MKAR				pP	pP	02 42 04.7	+0.6
	0.2nm,0.6s,baz=97,slow=7.8,SNR=2.1						
KDAK	Kodiak Island	59.52	33	P	P	02 41 14.9	+0.6
	2.4nm,0.3s,baz=241,slow=13,SNR=4.7						
KURBB	Kurchatov Arra	61.18	318	P	P	02 41 25.4	-0.3
	1.4nm,0.3s,baz=92,slow=7.6,SNR=24						
KURBB				pP	pP	02 42 23.5	-0.5
	1.3nm,0.8s,baz=95,slow=7.6,SNR=4.4						
ILAR	Eielson Array	63.79	26	P	P	02 41 41.6	-1.0
	0.9nm,0.5s,baz=249,slow=5.4,SNR=20						
BVAR	Borovoye Array	66.35	320	P	P	02 41 59.2	-0.1
	3.9nm,0.5s,baz=95,slow=7.9,SNR=23						
YKA	Yellowknife Ar	78.14	28	P	P	02 43 08.6	+0.1
	1.0nm,0.6s,baz=289,slow=5.3,SNR=11						
YKA				pP	pP	02 44 07.0	-2.9
	0.4nm,0.7s,baz=288,slow=5.3,SNR=3.7						
ARCES	ARCESS Array B	82.45	342	P	P	02 43 31.6	+0.1
	2.9nm,1.0s,baz=82,slow=8.7,SNR=8.3						
NVAR	Mina Array Bea	83.35	52	P	P	02 43 38.0	+1.1
	2.0nm,0.5s,baz=279,slow=5.4,SNR=11						
NVAR				pP	pP	02 44 38.5	-0.6
	0.7nm,0.7s,baz=291,slow=5.7,SNR=2.2						
JOF	Joensuu	83.95	335	ep	P	02 43 37.5	-1.6
	2.4nm,0.4s						
KAF	Kangasniemi	86.35	336	ep	P	02 43 48.9	-2.1
	0.6nm,0.4s						
FINES	FINESS Array B	86.81	335	P	P	02 43 51.4	-1.9
	0.9nm,0.3s,baz=51,slow=6.4,SNR=11						
BRTR	Keskin Array B	93.96	314	P	P	02 44 26.4	-0.7
	0.6nm,0.9s,baz=328,slow=4.4,SNR=3.5						
TORD	Torodi Ar. Bea	132.29	309	PKP	PKPdf	02 50 22.3	-0.1
	1.0nm,1.2s,baz=56,slow=2.0,SNR=5.7						
LPAZ	La Paz	147.92	91	PKPbc	PKPbc	02 50 55.0	+0.5
	1.5nm,0.5s,baz=263,slow=2.5,SNR=11						

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*ISCJB **06** 02:35:34.5±0.8, 35°.51N±0°.04×141°.31E±0°.09, h43km±8km, mb3.8/8, MS3.2/1, Error ellipse: s-maj=12.1km s-min=6.6km az=178.8*
*JMA **06** 02:35:35.5±0.1, 35°.55N×141°.19E, h40km±1km, M3.4*
*IDC **06** 02:35:36.2±3.8, 35°.51N×141°.14E, h37km±33km, mb3.5/8, mb1 3.7/10, mb1mx3.5/29, mbtmp3.6/10, ML3.6/2, MS3.0/2, Ms1 3.0/2, ms1mx2.2/32, Error ellipse: s-maj=28.8km s-min=15.0km az=94.0*
ISC 06 02:35:34.8±1.5, **35°.52N**±0°.05×**141°.31E**±0°.08, **h30**km±10km, **n22**, σ1^{s}**15**/26, **mb3.8**/8, **1D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.41	296	⇓P	Pb	02 35 43.7	-0.1
CHOJ				S	Sb	02 35 49.9	0.0
KTR	Katsuura	0.89	246	P	Pn	02 35 50.9	-0.4
BSO1	Boso 1	0.91	198	P	Pn	02 35 51.6	+0.6
BSO1				eS	Sn	02 36 03.3	+0.5
BSO4	Boso 4	0.95	237	P	Pn	02 35 52.0	-0.1
BSO3	Boso 3	0.97	223	P	Pn	02 35 52.0	-0.2
JAG	Ashikaga	1.75	301	P	Pn	02 36 03.5	+0.3
JOD2	Odawara 2	1.83	263	P	Pn	02 36 04.0	-0.3
JOD2				eS	Sn	02 36 25.1	-1.4
JFK	Kawauchi	1.88	349	P	Pn	02 36 05.6	+0.7
JRY	Ryogami san	2.02	285	P	Pn	02 36 07.6	+0.7
JHJ	Hachijo jima 2	2.71	208	Pn	Pn	02 36 16.4	0.0
	25nm,0.3s,baz=263,slow=22,SNR=11						
JHJ				Sn	Sn	02 36 47.4	-0.7
	27nm,0.3s,baz=52,slow=19,SNR=6.5						
MAT	Matsushiro	2.71	293	P	Pn	02 36 17.0	+0.6
MAT				eS	Sn	02 36 51.2	+2.9
ASAJ	Asahikawa	8.64	6	Pn	Pn	02 37 38.2	+0.4
	0.9nm,0.3s,baz=229,slow=11,SNR=4.0						
ASAJ				Sn	Sn	02 39 11.0	-3.2
	0.5nm,0.3s,baz=270,slow=20,SNR=2.8						
KSRS	Korea Array	10.95	284	LR	LR	02 42 34.9	
	comp=Z,53nm,18.8s,baz=100,slow=39						
ZALV	Zalesovo Beam	42.88	314	P	P	02 43 30.4	+0.1
	0.4nm,0.3s,baz=94,slow=7.8,SNR=2.6						
MKAR	Makanchi Array	44.87	303	P	P	02 43 45.6	-0.8
	0.4nm,0.7s,baz=88,slow=7.9,SNR=3.3						
KURBB	Kurchatov Arra	46.88	309	P	P	02 44 01.4	-0.7
	0.7nm,0.5s,baz=84,slow=7.8,SNR=6.4						
ILAR	Eielson Array	50.82	32	P	P	02 44 34.0	+1.8
	0.6nm,0.6s,baz=267,slow=6.0,SNR=8.1						
FITZ	Fitzroy Crossi	55.36	198	P	P	02 45 06.4	+0.3
	1.4nm,0.7s,baz=36,slow=9.8,SNR=5.5						
WRA	Warramunga Arr	55.55	188	P	P	02 45 07.6	+0.1
	2.8nm,0.5s,baz=1.5,slow=7.6,SNR=43						
ASAR	Alice Springs	59.28	188	P	P	02 45 33.2	-0.5
	0.6nm,0.5s,baz=18,slow=12,SNR=9.6						
YKA	Yellowknife Ar	65.16	30	P	P	02 46 12.8	+0.2
	0.4nm,0.9s,baz=304,slow=5.9,SNR=3.6						
FINES	FINESS Array B	70.11	332	LR	LR	03 22 03.7	
	comp=Z,15nm,20.2s,baz=90,slow=40						

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*ATH **06** 02:46:22.4, 35°.62N×26°.79E, h17km±1km, MD3.4/13*
*ISCJB **06** 02:46:23.8±0.5, 35°.58N±0°.04×26°.80E±0°.03, h20km±5km, Error ellipse: s-maj=6.4km s-min=3.2km az=154.7*
*THE **06** 02:46:23.6, 35°.56N×26°.81E, h9km±2km, ML2.7/2, Error ellipse: s-maj=2.4km s-min=0.5km az=135.0*
*CSEM **06** 02:46:23.5±0.2, 35°.60N×26°.79E, h10km, ML2.7/2, Error ellipse: s-maj=5.5km s-min=3.2km az=155.0*
*ISK **06** 02:46:25.4, 35°.71N×26°.75E, h82km, MD3.6*
ISC 06 02:46:22.8±1.0, **35°.61N**±0°.03×**26°.77E**±0°.02, **h8**km±9km, **n87**, σ**0**^{s}**94**/121, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.32	101	P	Pg	02 46 29.1	-0.1
KARP				S	Sg	02 46 34.1	+0.6
KARP	Karpathos	0.32	101	ePB	Pg	02 46 29.1	-0.1
KARP				eSB	Sg	02 46 33.7	+0.2
KARP	Karpathos	0.32	101	P	Pg	02 46 29.1	-0.1
KARP				eSb	Sg	02 46 33.7	+0.2
KARP				S	Sg	02 46 34.1	+0.6
ZKR	Zakros	0.67	223	P	Pb	02 46 36.2	-0.6
ZKR				S	Sb	02 46 46.4	+0.1
ZKR	Zakros	0.67	223	ePN	Pb	02 46 36.2	-0.6
ZKR				eSN	Sg	02 46 45.2	+0.6
ZKR	Zakros	0.67	223	P	Pb	02 46 36.2	-0.6
ZKR				eSn	Sg	02 46 45.2	+0.6
ZKR				S	Sb	02 46 46.4	+0.1
NPS	Neapolis	1.01	250	P	Pb	02 46 42.7	+0.1
NPS				S	Sn	02 46 56.8	-0.9
NPS	Neapolis	1.01	250	ePN	Pb	02 46 42.7	+0.1
NPS				eSN	Sg	02 46 55.1	-0.3
NPS	Neapolis	1.01	250	P	Pb	02 46 42.7	+0.1
NPS				eSn	Sg	02 46 55.1	-0.3
NPS				S	Sn	02 46 56.8	-0.9
NIS1	Nisyros Isl.	1.04	18	P	Pb	02 46 43.3	+0.2
NIS1	Nisyros Isl.	1.04	18	ePN	Pg	02 46 41.9	-1.0
NIS1	Nisyros Isl.	1.04	18	ePn	Pg	02 46 41.9	-1.0
NIS1	Nisyros Isl.	1.04	18	P	Pb	02 46 43.3	+0.2
LAST	Lasithi	1.15	247	P	Pb	02 46 45.0	0.0
LAST				S	Sb	02 47 00.4	+0.3
LAST	Lasithi	1.15	247	ePN	Pb	02 46 45.0	0.0
LAST				eSN	Sb	02 47 00.3	+0.2
LAST	Lasithi	1.15	247	P	Pb	02 46 45.0	0.0
LAST				eSn	Sb	02 47 00.3	+0.2
ARG	Arkhangelos	1.25	61	P	Pn	02 46 46.3	-0.3
ARG	Arkhangelos	1.25	61	ePN	Pn	02 46 46.3	-0.3
ARG				eSN	Sb	02 47 01.8	-1.2
ARG	Arkhangelos	1.25	61	P	Pn	02 46 46.3	-0.3
ARG				eSn	Sb	02 47 01.8	-1.2
DAT	Datca	1.29	30	ePN	Pb	02 46 47.4	0.0
DAT				eSN	Sn	02 47 04.8	0.0
DAT	Datca	1.29	30	ePn	Pb	02 46 47.4	0.0
DAT				eSn	Sn	02 47 04.8	0.0
SANT	Santorini	1.31	306	P	Pn	02 46 47.3	-0.1
SANT				S	Sn	02 47 05.3	+0.2
SANT	Santorini	1.31	306	ePN	Pn	02 46 47.3	-0.1
SANT				eSN	Sb	02 47 04.7	+0.1
SANT	Santorini	1.31	306	P	Pn	02 46 47.3	-0.1
SANT				eSn	Sb	02 47 04.7	+0.1
SANT				S	Sn	02 47 05.3	+0.2
THR2	Thira island,	1.37	308	P	Pn	02 46 47.9	-0.3
THR2	Thira island,	1.37	308	P	Pn	02 46 47.9	-0.3
THR3	Thira Island,	1.37	306	P	Pb	02 46 48.4	-0.3
THR3	Thira Island,	1.37	306	P	Pb	02 46 48.4	-0.3
BODT	Bodrum	1.51	17	ePN	Pb	02 46 50.6	-0.6
BODT	Bodrum	1.51	17	ePn	Pb	02 46 50.6	-0.6
SIVA	Sivas	1.71	250	P	Pn	02 46 52.2	-0.7
SIVA				S	Sn	02 47 14.4	-0.6
SIVA	Sivas	1.71	250	ePN	Pb	02 46 53.9	-0.6
SIVA				eSN	Sb	02 47 16.3	+0.1
SIVA	Sivas	1.71	250	P	Pn	02 46 52.2	-0.7
SIVA	Sivas	1.71	250	ePn	Pb	02 46 53.9	-0.6
SIVA				S	Sn	02 47 14.4	-0.6
SIVA				eSn	Sb	02 47 16.3	+0.1
APE	Apeiranthos	1.77	326	ePN	Pn	02 46 54.0	+0.2
APE				eSN	Sn	02 47 15.4	-1.0
APE	Apeiranthos	1.77	326	P	Pn	02 46 53.6	-0.2
APE				S	Sn	02 47 17.0	+0.6
APE	Apeiranthos	1.77	326	ePB	Pn	02 46 53.1	-0.7
APE	Apeiranthos	1.77	326	ePb	Pn	02 46 53.1	-0.7
APE	Apeiranthos	1.77	326	P	Pn	02 46 53.6	-0.2
APE	Apeiranthos	1.77	326	ePn	Pn	02 46 54.0	+0.2
APE				eSn	Sn	02 47 15.4	-1.0
APE				S	Sn	02 47 17.0	+0.6
MLSB	Milas	1.86	25	ePN	Pn	02 46 55.7	+0.6
MLSB	Milas	1.86	25	ePn	Pn	02 46 55.7	+0.6
YER	Yerkesik	1.95	38	ePN	Pn	02 46 57.1	+0.8
YER	Yerkesik	1.95	38	ePn	Pn	02 46 57.1	+0.8
SMG	Samos	2.09	1	ePN	Pb	02 46 59.7	-1.4
SMG	Samos	2.09	1	ePn	Pb	02 46 59.7	-1.4
VAM	Vamos	2.11	265	P	Pn	02 46 58.1	-0.3
VAM	Vamos	2.11	265	ePN	Pn	02 46 59.3	+0.9
VAM	Vamos	2.11	265	P	Pn	02 46 58.1	-0.3
VAM	Vamos	2.11	265	ePn	Pn	02 46 59.3	+0.9
FETY	Fethiye	2.13	61	ePN	Pb	02 47 00.3	-1.4
FETY	Fethiye	2.13	61	ePn	Pb	02 47 00.3	-1.4
AYDN	Tasoluk	2.23	23	iP	Pn	02 47 01.3	+1.1
AYDN				iS	Sb	02 47 32.0	+0.8
AYDN	Tasoluk	2.23	23	iP	Pn	02 47 01.3	+1.1
AYDN				iS	Sb	02 47 32.0	+0.8
GLHS	Glhisar (BURDU	2.69	54	ePN	Pn	02 47 07.9	+1.5
GLHS	Glhisar (BURDU	2.69	54	ePn	Pn	02 47 07.9	+1.5
GOLH	Golhisar	2.77	53	iP	Pn	02 47 09.3	+1.7
GOLH				iS	Sb	02 47 47.0	+0.2
GOLH	Golhisar	2.77	53	iP	Pn	02 47 09.3	+1.7
ELL	Elmali	2.78	65	ePN	Pn	02 47 09.6	+1.8
ELL	Elmali	2.78	65	ePn	Pn	02 47 09.6	+1.8
CHOS	Chios island	2.83	348	P	Pn	02 47 08.0	-0.4
CHOS	Chios island	2.83	348	ePN	Pn	02 47 09.3	+0.9
CHOS	Chios island	2.83	348	P	Pn	02 47 08.0	-0.4
CHOS	Chios island	2.83	348	ePn	Pn	02 47 09.3	+0.9
ANKY	Antikythira Is	2.84	276	ePN	Pn	02 47 09.1	+0.7
ANKY	Antikythira Is	2.84	276	ePn	Pn	02 47 09.1	+0.7
KYTH	Kithira	3.10	284	P	Pn	02 47 12.2	+0.1
KYTH	Kithira	3.10	284	ePN	Pn	02 47 12.7	+0.6
KYTH	Kithira	3.10	284	P	Pn	02 47 12.2	+0.1
KYTH	Kithira	3.10	284	ePn	Pn	02 47 12.7	+0.6
KULA	Kula-Manisa	3.27	27	ePN	Pn	02 47 15.0	+0.6
KULA	Kula-Manisa	3.27	27	ePn	Pn	02 47 15.0	+0.6
VLI	Veliai	3.29	291	P	Pn	02 47 15.0	+0.3
VLI	Veliai	3.29	291	ePN	Pn	02 47 15.1	+0.3
VLI	Veliai	3.29	291	P	Pn	02 47 15.0	+0.3
DID	Didima	3.42	305	ePN	Pn	02 47 18.6	+2.2
DID	Didima	3.42	305	ePn	Pn	02 47 18.6	+2.2
DYR	Agios Nikonas	3.77	289	ePN	Pn	02 47 22.3	+1.0
DYR	Agios Nikonas	3.77	289	ePn	Pn	02 47 22.3	+1.0
VLX	Vlachokerasia	3.95	298	ePN	Pn	02 47 25.4	+1.6
VLX	Vlachokerasia	3.95	298	ePn	Pn	02 47 25.4	+1.6
ITM	Ithomi	4.21	293	ePN	Pn	02 47 29.9	+2.6
ITM	Ithomi	4.21	293	ePn	Pn	02 47 29.9	+2.6
GUR	Goura	4.25	304	ePN	Pn	02 47 30.2	+2.3
GUR	Goura	4.25	304	ePn	Pn	02 47 30.2	+2.3
KLV	Kalavryta, Ach	4.43	305	ePN	Pn	02 47 32.5	+2.1
KLV	Kalavryta, Ach	4.43	305	ePn	Pn	02 47 32.5	+2.1

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*IDC **06** 03:01:03.7±1.4, 38°.48N×20°.55E, h0km, mb3.6/5, mb1 3.5/7, mb1mx3.4/28, mbtmp3.5/7, ML3.1/2, Error ellipse: s-maj=28.9km s-min=21.2km az=114.0*
*ATH **06** 03:01:07.0, 38°.30N×20°.54E, h14km, MD3.4/15, ML3.3*
*THE **06** 03:01:07.2, 38°.33N×20°.51E, h0km±1km, ML3.5/8, Error ellipse: s-maj=1.2km s-min=0.4km az=243.0*
*CSEM **06** 03:01:07.0±0.2, 38°.31N×20°.52E, h5km, MD3.4, Error ellipse: s-maj=4.8km s-min=2.3km az=61.0*
ISC 06 03:01:06.6±0.8, **38°.32N**±0°.02×**20°.49E**±0°.03, **h15**km±5km, **n154**, σ1^{s}**18**/190, **mb3.6**/5, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.16	152	P	Pg	03 01 10.4	-0.2
VLS				S	Sg	03 01 13.4	0.0
VLS	Valsamata	0.16	152	ePG	Pg	03 01 10.8	+0.1
VLS				eSG	Sg	03 01 13.7	+0.3
VLS	Valsamata	0.16	152	P	Pg	03 01 10.5	-0.2
VLS	Valsamata	0.16	152	ePg	Pg	03 01 10.8	+0.1
VLS				S	Sg	03 01 13.0	-0.4
KFL	Anninata	0.31	132	P	Pg	03 01 13.0	-0.1
KFL				S	Sg	03 01 17.9	+0.3
KFL	Anninata	0.31	132	P	Pg	03 01 13.0	-0.1
KFL				S	Sg	03 01 17.5	-0.1
LKD2	Lefkada island	0.49	15	P	Pg	03 01 16.3	0.0
LKD2				S	Sg	03 01 22.8	-0.1
LKD2	Lefkada island	0.49	15	ePB	Pg	03 01 16.3	0.0
LKD2				eSB	Sb	03 01 24.2	+0.3
LKD2	Lefkada island	0.49	15	P	Pg	03 01 16.3	0.0
LKD2				S	Sg	03 01 22.8	-0.1
LKD2				eSb	Sb	03 01 24.2	+0.3
AXS	Araxos	0.70	100	P	Pg	03 01 19.8	-0.6
AXS				S	Sg	03 01 30.6	+0.9
AXS	Araxos	0.70	100	P	Pg	03 01 19.8	-0.6
AXS				S	Sg	03 01 30.6	+0.9
RLS	Riolos of Patr	0.81	109	P	Pg	03 01 21.6	-0.8
RLS				S	Sb	03 01 34.4	+1.3
RLS	Riolos of Patr	0.81	109	ePB	Pg	03 01 21.8	-0.6
RLS				eSB	Sg	03 01 33.5	+0.5
RLS	Riolos of Patr	0.81	109	ePb	Pg	03 01 21.8	-0.6
RLS				eSb	Sg	03 01 33.5	+0.5
RLS				S	Sb	03 01 34.4	+1.3
PSA1	Psathopyrgos	1.09	89	ePN	Pn	03 01 27.8	+0.4
EFP	Efpalio	1.11	84	P	Pb	03 01 27.1	-0.5
EFP				S	Sn	03 01 43.8	+1.0
EFP	Efpalio	1.11	84	ePB	Pb	03 01 27.5	-0.1
EFP	Efpalio	1.11	84	P	Pb	03 01 27.1	-0.5
EFP	Efpalio	1.11	84	ePb	Pb	03 01 27.5	-0.1
EFP				S	Sn	03 01 43.8	+1.0
LAKA	Lakka	1.17	93	P	Pn	03 01 28.2	-0.3
LAKA	Lakka	1.17	93	ePG	Pn	03 01 28.1	-0.4
LAKA	Lakka	1.17	93	P	Pn	03 01 28.2	-0.3
EVR	Evrytania	1.19	60	P	Pb	03 01 29.6	+0.6
EVR				S	Sg	03 01 46.0	+0.9
EVR	Evrytania	1.19	60	ePG	Pn	03 01 28.9	+0.1
EVR	Evrytania	1.19	60	ePg	Pn	03 01 28.9	+0.1
EVR	Evrytania	1.19	60	P	Pb	03 01 29.6	+0.6
EVR				S	Sg	03 01 46.0	+0.9
IGT	Igoumenitsa	1.22	354	P	Pb	03 01 30.0	+0.6
IGT				S	Sg	03 01 47.2	+1.2
IGT	Igoumenitsa	1.22	354	P	Pb	03 01 30.0	+0.6
IGT				S	Sg	03 01 47.2	+1.2

AMT	Artemida-Makis	1.24	129	ePB	Pg	03 01 30.7	+0.2
AMT	Artemida-Makis	1.24	129	P	Pg	03 01 30.7	+0.2
AMT				S	Sg	03 01 49.5	+2.8
KALE	Kalithea	1.30	86	P	Pn	03 01 30.9	+0.6
KALE	Kalithea	1.30	86	ePN	Pn	03 01 30.1	-0.2
KALE	Kalithea	1.30	86	ePn	Pn	03 01 30.1	-0.2
KALE	Kalithea	1.30	86	P	Pn	03 01 30.9	+0.6
KALE				S	Sg	03 01 50.3	+1.8
KLV	Kalavryta, Ach	1.33	101	ePN	Pn	03 01 30.7	-0.1
KLV	Kalavryta, Ach	1.33	101	ePn	Pn	03 01 30.7	-0.1
JAN	Janina	1.36	12	P	Pb	03 01 32.8	+0.9
JAN				S	Sg	03 01 52.2	+1.5
JAN	Janina	1.36	12	ePB	Pb	03 01 32.7	+0.9
JAN	Janina	1.36	12	P	Pb	03 01 32.8	+0.9
JAN				S	Sg	03 01 52.2	+1.5
MAKR	Makrakomi, Fth	1.46	61	P	Pb	03 01 33.6	+0.1
MAKR	Makrakomi, Fth	1.46	61	P	Pb	03 01 33.6	+0.1
KEK	Kerkira	1.49	339	P	Pb	03 01 34.3	+0.2
KEK				S	Sg	03 01 55.3	+0.5
KEK	Kerkira	1.49	339	ePB	Pg	03 01 35.7	+0.3
KEK	Kerkira	1.49	339	P	Pb	03 01 34.3	+0.2
KEK	Kerkira	1.49	339	ePb	Pg	03 01 35.7	+0.3
KEK				S	Sg	03 01 55.3	+0.5
GUR	Goura	1.51	104	P	Pn	03 01 34.0	+0.8
GUR				S	Sg	03 01 55.6	+0.4
GUR	Goura	1.51	104	ePN	Pn	03 01 33.5	+0.3
GUR	Goura	1.51	104	ePn	Pn	03 01 33.5	+0.3
GUR	Goura	1.51	104	P	Pn	03 01 34.0	+0.8
GUR				S	Sg	03 01 55.6	+0.4
AGG	Agios Georgios	1.60	63	P	Pb	03 01 35.9	0.0
AGG	Agios Georgios	1.60	63	ePB	Pb	03 01 36.8	+0.9
AGG	Agios Georgios	1.60	63	P	Pb	03 01 35.9	0.0
AGG	Agios Georgios	1.60	63	ePb	Pb	03 01 36.8	+0.9
DSF	Desfina	1.60	86	P	Pn	03 01 35.7	+1.3
DSF	Desfina	1.60	86	P	Pn	03 01 35.7	+1.3
SRN	Sarande	1.60	346	ePN	Pb	03 01 36.4	+0.4
SRN				i SN	Sg	03 02 02.8	+4.4
SRN	Sarande	1.60	346	P	Pb	03 01 35.9	-0.1
SRN	Sarande	1.60	346	P	Pb	03 01 35.9	-0.1
SRN	Sarande	1.60	346	ePn	Pb	03 01 36.4	+0.4
ITM	Ithomi	1.61	135	P	Pn	03 01 35.4	+0.9
ITM				S	Sg	03 01 58.5	+0.1
ITM	Ithomi	1.61	135	ePB	Pb	03 01 37.0	+1.0
ITM	Ithomi	1.61	135	P	Pn	03 01 35.4	+0.9
ITM	Ithomi	1.61	135	ePb	Pb	03 01 37.0	+1.0
ITM				S	Sg	03 01 58.5	+0.1
THL	Klokotos Trika	1.72	43	P	Pb	03 01 37.5	-0.4
THL				S	Sb	03 02 00.7	+1.4
THL	Klokotos Trika	1.72	43	ePG	Pg	03 01 39.3	-0.3
THL	Klokotos Trika	1.72	43	P	Pb	03 01 37.5	-0.4
THL	Klokotos Trika	1.72	43	ePg	Pg	03 01 39.3	-0.3
THL				S	Sb	03 02 00.7	+1.4
PYL	PYLOS	1.73	145	ePG	Pb	03 01 38.9	+0.8
PYL	PYLOS	1.73	145	ePg	Pb	03 01 38.9	+0.8
THAL	Thalero	1.73	99	P	Pb	03 01 37.9	-0.2
THAL	Thalero	1.73	99	P	Pb	03 01 37.9	-0.2
AXAR	Agios Charalam	1.75	75	P	Pb	03 01 38.2	-0.3
AXAR	Agios Charalam	1.75	75	P	Pb	03 01 38.2	-0.3
VLX	Vlachokerasia	1.77	122	P	Pn	03 01 37.7	+0.9
VLX				S	Sb	03 02 02.3	+1.5
VLX	Vlachokerasia	1.77	122	ePG	Pb	03 01 40.0	+1.2
VLX	Vlachokerasia	1.77	122	P	Pn	03 01 37.7	+0.9
VLX	Vlachokerasia	1.77	122	ePg	Pb	03 01 40.0	+1.2
VLX				S	Sb	03 02 02.3	+1.5
LTK	Loutraki	1.97	98	P	Pn	03 01 41.2	+1.7
LTK	Loutraki	1.97	98	ePN	Pn	03 01 41.2	+1.7
LTK	Loutraki	1.97	98	P	Pn	03 01 41.2	+1.7
LKR	Lokris	1.99	80	P	Pn	03 01 40.3	+0.5
LKR	Lokris	1.99	80	ePN	Pb	03 01 42.2	-0.4
LKR	Lokris	1.99	80	P	Pn	03 01 40.3	+0.5
LKR	Lokris	1.99	80	ePn	Pb	03 01 42.2	-0.4
ATAL	Atalanti	2.02	79	P	Pn	03 01 40.8	+0.7
ATAL	Atalanti	2.02	79	P	Pn	03 01 40.8	+0.7
DYR	Agios Nikonas	2.13	136	ePG	Pb	03 01 45.1	+0.1
DYR	Agios Nikonas	2.13	136	ePg	Pb	03 01 45.1	+0.1
NEST	Nestorio	2.14	11	P	Pn	03 01 43.4	+1.5
NEST	Nestorio	2.14	11	P	Pn	03 01 43.4	+1.5
SMIA	Simia	2.20	74	P	Pn	03 01 44.0	+1.4
SMIA	Simia	2.20	74	P	Pn	03 01 44.0	+1.4
KZN	Kozani	2.22	26	P	Pn	03 01 44.6	+1.6
KZN	Kozani	2.22	26	ePN	Pb	03 01 45.3	-1.2
KZN	Kozani	2.22	26	P	Pn	03 01 44.6	+1.6
KZN	Kozani	2.22	26	ePn	Pb	03 01 45.3	-1.2
VLO	Vlora	2.28	340	ePN	Sn	03 02 13.6	+2.0
DIDY	Didyma	2.31	111	P	Pn	03 01 45.4	+1.2
DIDY	Didyma	2.31	111	P	Pn	03 01 45.4	+1.2
KBN	Korca	2.31	6	ePN	Pb	03 01 47.6	-0.5
KBN				i SN	Sb	03 02 15.2	-1.3
KBN	Korca	2.31	6	P	Pn	03 01 45.8	+1.5
KBN	Korca	2.31	6	P	Pn	03 01 45.8	+1.5
KBN	Korca	2.31	6	ePn	Pb	03 01 47.6	-0.5
KBN				i Sn	Sb	03 02 15.2	-1.3
DID	Didima	2.32	110	P	Pn	03 01 45.5	+1.2
DID	Didima	2.32	110	ePN	Pn	03 01 46.3	+2.0
DID	Didima	2.32	110	P	Pn	03 01 45.5	+1.2
DID	Didima	2.32	110	ePn	Pn	03 01 46.3	+2.0
NEO	Neokhori	2.35	64	P	Pn	03 01 46.4	+1.7
NEO	Neokhori	2.35	64	ePN	Pb	03 01 47.4	-1.3
NEO	Neokhori	2.35	64	P	Pn	03 01 46.4	+1.7
NEO	Neokhori	2.35	64	ePn	Pb	03 01 47.4	-1.3
XOR	Xorichti	2.35	63	P	Pn	03 01 46.3	+1.6
XOR	Xorichti	2.35	63	P	Pn	03 01 46.3	+1.6
NAIG	Nisos Aigina	2.43	102	ePB	Pn	03 01 47.6	+1.8
VLI	Veliai	2.52	129	P	Pn	03 01 48.5	+1.5
VLI	Veliai	2.52	129	ePB	Pn	03 01 48.5	+1.5
VLI	Veliai	2.52	129	P	Pn	03 01 48.5	+1.5
FNA	Florina	2.55	15	P	Pn	03 01 49.2	+1.6
FNA	Florina	2.55	15	P	Pn	03 01 49.2	+1.6
ATH	Athens Observa	2.56	97	ePB	Pn	03 01 49.0	+1.4
PTL	Penteli	2.67	95	ePN	Pn	03 01 50.3	+1.2
PTL	Penteli	2.67	95	ePn	Pn	03 01 50.3	+1.2
BIA	Bitola	2.77	13	P	Pn	03 01 52.4	+1.8
BIA	Bitola	2.77	13	ePn	Pn	03 01 52.3	+1.8
BIA	Bitola	2.77	13	ePn	Pn	03 01 52.3	+1.8
KYTH	Kithira	2.87	134	P	Pb	03 01 55.5	-2.1
KYTH	Kithira	2.87	134	P	Pb	03 01 55.5	-2.1
GRG	Griva	3.02	29	P	Pn	03 01 55.2	+1.3
GRG	Griva	3.02	29	P	Pn	03 01 55.2	+1.3
TIR	Tirane	3.06	351	ePN	Pn	03 01 46.5	-8.0
ANKY	Antikythira Is	3.32	137	ePN	Pn	03 02 00.6	+2.6
ANKY	Antikythira Is	3.32	137	ePn	Pn	03 02 00.6	+2.6
PHP	Peshkopia	3.36	359	P	Pn	03 02 00.2	+1.5
PHP	Peshkopia	3.36	359	P	Pn	03 02 00.2	+1.5
KNT	Kendrikon	3.39	32	P	Pn	03 02 00.5	+1.5
KNT	Kendrikon	3.39	32	P	Pn	03 02 00.5	+1.5
VAY	Valandovo	3.40	27	ePn	Pn	03 01 54.7	-4.4
PUK	Puka	3.75	353	ePN	Pn	03 02 04.6	+0.6
PUK	Puka	3.75	353	ePn	Pn	03 02 04.6	+0.6
BAI	Bari	3.94	316	eSn	Sn	03 02 51.9	-0.6
PDG	Podgorica	4.21	347	ePn	Pn	03 02 11.3	+1.0
VTS	Vitosha	4.74	25	ePn	Pn	03 02 19.5	+1.8
STON	Ston	5.02	336	i Pn	Pn	03 02 20.6	-0.7
STON				Sn	Sn	03 03 15.7	-3.4
STON	Ston	5.02	336	i Pn	Pn	03 02 20.6	-0.7
GRUS	Gruza	5.57	2	ePn	Pn	03 02 31.0	+2.1
BBLS	Lazići	5.60	352	ePn	Pn	03 02 32.3	+2.8
DIVS	Divibare	5.79	356	ePn	Pn	03 02 31.5	-0.5
MLR	Muntele Rosu	8.24	28	Pn	Pn	03 03 02.7	-2.9
	0.0nm,0.3s,baz=270,slow=20,SNR=2.0						
GERES	GERESS Array B	11.61	337	Pn	Pn	03 03 50.2	-1.6
	0.1nm,0.3s,baz=159,slow=13,SNR=5.5						
HFS	Hagfors	22.26	351	P	P	03 06 01.3	-1.4
	0.8nm,0.4s,baz=153,slow=13,SNR=8.5						
FINES	FINESS Array B	23.41	7	P	P	03 06 12.4	-2.3
	0.9nm,0.5s,baz=179,slow=7.6,SNR=5.2						
TORD	Torodi Ar. Bea	30.13	219	P	P	03 07 16.1	+0.2
	0.5nm,0.7s,baz=28,slow=8.3,SNR=6.3						
MKAR	Makanchi Array	45.24	59	P	P	03 09 22.1	-1.2
	0.5nm,0.5s,baz=278,slow=7.0,SNR=8.4						
ZALV	Zalesovo Beam	45.61	48	P	P	03 09 24.7	-1.3
	0.7nm,0.4s,baz=283,slow=8.4,SNR=3.7						

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*IDC **06** 03:20:35.4±0.7, 6°.48S×152°.88E, h0km, mb4.1/12, mb1 4.4/14, mb1mx4.2/21, mbtmp4.2/14, ML3.7/2, MS3.4/3, Ms1 3.4/3, ms1mx2.9/27, Error ellipse: s-maj=24.5km s-min=16.4km az=122.0*

*ISCJB **06** 03:20:38.6±0.4, 6°.53S±0°.07×152°.87E±0°.07, h31km, mb4.2/18, MS3.3/2, Error ellipse: s-maj=12.2km s-min=6.9km az=42.3*

*NEIC **06** 03:20:41.3±1.8, 6°.52S×152°.85E, h40km±17km, mb4.5/8, Error ellipse: s-maj=12.9km s-min=12.4km az=106.0*

*AUST **06** 03:21:01.3, 7°.59S×151°.70E, h100km*

ISC 06 03:20:40.3±0.6**, 6°.47S**±0°.09×**152°.89E**±0°.09**, h31**km**, n51, σ1§12**/52**, mb4.2**/18**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.38	242	Pn	Pn	03 22 12.3	0.0
PMG				Sn	Sn	03 23 25.1	+1.0
PMG	Port Moresby	6.38	242	Pn	Pn	03 22 12.3	0.0
	13nm,0.3s,baz=52,slow=9.8,SNR=25						
PMG				Sn	Sn	03 23 25.1	+1.0
	baz=24,slow=20,SNR=2.0						
PMG				LR	LR	03 24 37.2	
	comp=Z,271nm,19.6s,baz=29,slow=38						
COEN	Coen	12.11	231	ePn	Pn	03 23 30.3	-0.6
MTSU	Mount Surprise	14.30	215	P	Pn	03 24 00.4	-0.4
	baz=13,SNR=4.8						
CTA	Charters Tower	15.00	205	Pn	Pn	03 24 10.7	+0.4
CTA	Charters Tower	15.00	205	Pn	Pn	03 24 10.7	+0.4
	0.2nm,0.3s,baz=5.1,slow=18,SNR=3.2						
CTAO	Charters Tower	15.00	205	eP	Pn	03 24 09.5	-0.7
	3.9nm,0.8s						
QIS	Mount Isa	19.03	221	P	P	03 24 57.5	-2.5
	baz=18,SNR=5.0						
RMQ	Roma	20.30	191	P	P	03 25 14.6	+0.9
	baz=19,SNR=11						
DZM	Mont Dzumac	20.30	141	P	P	03 25 14.2	+0.3
DZM	Mont Dzumac	20.30	141	P	P	03 25 14.2	+0.3
	6.1nm,0.9s,baz=313,slow=22,SNR=5.5						
KDU	Kakadu	21.05	251	P	P	03 25 21.1	-0.9
	baz=20,SNR=6.2						
QLP	Quilpie	21.64	201	P	P	03 25 28.0	-0.2
	baz=20,SNR=9.1						
MTN	Manton Dam	22.35	252	P	P	03 25 37.6	+1.6
	baz=21,SNR=11						
WRAB	Tennant Creek	22.43	232	eP	P	03 25 35.4	-1.5
	7.7nm,0.9s						
WRA	Warramunga Arr	22.45	232	P	P	03 25 35.5	-1.5
WRA	Warramunga Arr	22.45	232	P	P	03 25 35.5	-1.5
	8.5nm,1.1s,baz=54,slow=10,SNR=36						
AS31	Alice Springs	25.01	225	eP	P	03 26 01.7	0.0
ASAR	Alice Springs	25.01	225	P	P	03 26 00.5	-1.3
ASAR	Alice Springs	25.01	225	P	P	03 26 00.5	-1.3
	7.8nm,0.7s,baz=59,slow=9.1,SNR=70						
ASAR				LR	LR	03 34 50.9	
	comp=Z,95nm,18.6s,baz=331,slow=34						
KNRA	Kununurra	25.36	247	P	P	03 26 15.2	+10
	baz=24,SNR=4.6						
STKA	Stephens Creek	27.40	201	eP	P	03 26 21.4	-1.8
	1.6nm,0.9s						
STKA	Stephens Creek	27.40	201	P	P	03 26 21.1	-2.0
	5.5nm,0.8s,baz=9.2,slow=12,SNR=11						
STKA	Stephens Creek	27.40	201	P	P	03 26 24.2	+1.0
	baz=26,SNR=8.0						
FITZ	Fitzroy Crossi	28.98	244	P	P	03 26 36.0	-1.5
FITZ	Fitzroy Crossi	28.98	244	P	P	03 26 36.0	-1.5
	6.4nm,0.5s,baz=76,slow=7.7,SNR=33						
FITZ				LR	LR	03 38 37.2	
	comp=Z,78nm,18.6s,baz=75,slow=37						
FITZ	Fitzroy Crossi	28.98	244	P	P	03 26 36.2	-1.2
	baz=27,SNR=18						
CMAR	Chiang Mai Arr	58.67	296	P	P	03 30 36.2	+0.9
CMAR	Chiang Mai Arr	58.67	296	P	P	03 30 36.2	+0.9
	0.7nm,0.3s,baz=131,slow=5.5,SNR=5.0						
CHTO	Chiang Mai	58.79	296	eP	P	03 30 36.3	+0.2
	3.5nm,0.8s						
VNDA	Vanda	71.17	178	P	P	03 31 57.5	+1.9
VNDA	Vanda	71.17	178	P	P	03 31 57.5	+1.9
	0.2nm,0.5s,baz=331,slow=7.6,SNR=3.6						
BILL	Bilibino	74.93	5	eP	P	03 32 17.9	0.0
	7.2nm,0.9s						
MKAR	Makanchi Array	81.63	319	P	P	03 32 57.4	+1.9
MKAR	Makanchi Array	81.63	319	P	P	03 32 57.4	+1.9
	0.3nm,0.6s,baz=101,slow=7.6,SNR=4.1						
MCK	McKinley	82.36	22	eP	P	03 32 58.3	-0.7
	11nm,1.1s						
ZALV	Zalesovo Beam	82.58	326	P	P	03 33 00.7	+0.4
ZALV	Zalesovo Beam	82.58	326	P	P	03 33 00.7	+0.4
	0.6nm,0.4s,baz=131,slow=6.1,SNR=2.6						
COLA	College	83.36	22	eP	P	03 33 03.4	-0.7
	6.0nm,0.8s						
ILAR	Eielson Array	83.66	22	P	P	03 33 04.4	-1.2
ILAR	Eielson Array	83.66	22	P	P	03 33 04.4	-1.2
	1.6nm,0.8s,baz=256,slow=5.1,SNR=21						
TKM2	Tokmak 2	85.14	314	eP	P	03 33 14.1	+0.1
	2.0nm,0.8s						
EGAK	Eagle	85.85	23	eP	P	03 33 17.0	+0.3
	3.2nm,0.8s						
NVAR	Mina Array Bea	93.04	52	P	P	03 33 51.7	+0.1
NVAR	Mina Array Bea	93.04	52	P	P	03 33 51.7	+0.1
	0.5nm,0.7s,baz=251,slow=7.8,SNR=4.5						
YKA	Yellowknife Ar	96.85	28	P	P	03 34 07.8	-0.2
YKA	Yellowknife Ar	96.85	28	P	P	03 34 07.8	-0.2
	0.3nm,0.8s,baz=269,slow=4.4,SNR=5.4						
MDT	Midelt	146.45	324	PKPbc	PKPbc	03 40 18.5	-0.6
MDT	Midelt	146.45	324	PKPbc	PKPbc	03 40 18.5	-0.6
	2.8nm,0.9s,baz=264,slow=6.2,SNR=7.3						
TORD	Torodi Ar. Bea	150.87	285	PKPbc	PKPbc	03 40 29.9	-1.1
TORD	Torodi Ar. Bea	150.87	285	PKPbc	PKPbc	03 40 29.9	-1.1
	1.5nm,0.7s,baz=92,slow=1.9,SNR=11						

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*IDC **06** 03:28:18.7±2.8, 17°.36S×167°.72E, h0km, mb4.1/5, mb1 4.2/6, mb1mx3.9/20, mbtmp4.1/6, ML3.6/1, MS3.7/5, Ms1 3.7/5, ms1mx3.1/25, Error ellipse: s-maj=54.8km s-min=40.3km az=105.0*

*NEIC **06** 03:28:20.6±0.8, 17°.42S×167°.66E, h10km, mb4.6/3, Error ellipse: s-maj=18.1km s-min=18.0km az=104.0*

*ISCJB **06** 03:28:22.4±0.8, 17°.63S±0°.09×167°.41E±0°.09, h19km, mb4.1/8, MS3.6/4, Error ellipse: s-maj=13.0km s-min=12.4km az=178.3*

ISC 06 03:28:22.8±1.1**, 17°.52S**±0°.09×**167°.6E**±0°.2**, h19**km**, n30, σ1§35**/26**, mb4.2**/8**, MS3.6**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.64	193	ePn	Pn	03 29 34.9	+2.9
	46nm,0.8s						
DZM				eSn	Sn	03 30 27.9	+2.4
	138nm,1.1s						
DZM	Mont Dzumac	4.64	193	eP	Pn	03 29 32.2	+0.2
DZM				eS	Sn	03 30 23.4	-2.1
DZM	Mont Dzumac	4.64	193	Pn	Pn	03 29 31.5	-0.6
DZM				Sn	Sn	03 30 23.8	-1.7
DZM	Mont Dzumac	4.64	193	Pn	Pn	03 29 31.5	-0.6
	2.5nm,0.3s,baz=52,slow=18,SNR=32						
DZM				Sn	Sn	03 30 23.8	-1.7
	2.7nm,0.3s,baz=300,slow=22,SNR=3.5						
MSVF	Nonsavu	10.02	93	ePn	Pn	03 30 50.7	+4.9
	22nm,1.1s						
HNR	Honiara	10.92	316	LR	LR	03 34 49.3	
	comp=Z,258nm,18.2s,baz=330,slow=36						
CTA	Charters Tower	20.32	259	P	Pn	03 33 00.6	+0.7
CTA	Charters Tower	20.32	259	P	Pn	03 33 00.6	+0.7
	5.0nm,0.8s,baz=69,slow=11,SNR=5.3						
CTAO	Charters Tower	20.32	259	eP	P	03 32 57.1	-0.7
	5.1nm,0.8s						
PMG	Port Moresby	21.39	290	P	P	03 33 14.1	+4.7
PMG	Port Moresby	21.39	290	P	P	03 33 14.1	+4.7
	9.1nm,0.8s,baz=143,slow=14,SNR=3.6						
STKA	Stephens Creek	27.48	234	P	P	03 34 10.0	+2.1
STKA	Stephens Creek	27.48	234	P	P	03 34 10.0	+2.1
	2.8nm,0.6s,baz=51,slow=7.5,SNR=7.8						
STKA				LR	LR	03 44 49.9	
	comp=Z,152nm,19.5s,baz=24,slow=36						
RAR	Rarotonga	31.02	102	LR	LR	03 45 10.7	
	comp=Z,253nm,19.0s,baz=271,slow=33						
WRA	Warramunga Arr	31.51	260	P	P	03 34 43.5	-0.3
WRA	Warramunga Arr	31.51	260	P	P	03 34 43.5	-0.3
	0.9nm,0.9s,baz=89,slow=8.6,SNR=10.0						
WRA				LR	LR	03 46 10.4	
	comp=Z,58nm,20.4s,baz=60,slow=34						
AS31	Alice Springs	32.03	253	eP	P	03 34 48.2	-0.2
ASAR	Alice Springs	32.03	253	P	P	03 34 48.2	-0.2
ASAR	Alice Springs	32.03	253	P	P	03 34 48.2	-0.2
	2.7nm,0.7s,baz=79,slow=8.7,SNR=28						
ASAR				LR	LR	03 47 35.8	
	comp=Z,151nm,18.2s,baz=149,slow=36						
FITZ	Fitzroy Crossi	39.84	263	P	P	03 35 55.5	+0.2
FITZ	Fitzroy Crossi	39.84	263	P	P	03 35 55.5	+0.2
	2.7nm,0.7s,baz=114,slow=10.0,SNR=6.1						
VNDA	Vanda	60.09	181	P	P	03 38 30.4	+2.2
	0.8nm,0.9s,baz=19,slow=4.3,SNR=3.9						
QSPA	South Pole Qui	72.52	180	eP	P	03 39 48.0	-0.2
	7.0nm,1.1s						
SNAA	Sanae	90.79	183	eP	P	03 41 23.6	-0.8
	7.3nm,1.4s						
STU	Stuttgart	144.20	335	ePKPdf	PKPdf	03 47 56.1	-1.3
WLF	Walferdange	144.59	339	ePKPdf	PKPdf	03 47 57.6	-0.4
ECH	Echery	145.45	337	ePKPbc	PKPab	03 47 59.5	-0.3
DAVOX	Davos/Dischmat	145.48	333	PKPbc	PKPdf	03 47 58.5	-1.4
DAVOX	Davos/Dischmat	145.48	333	PKPbc	PKPdf	03 47 58.5	-1.4
	5.1nm,0.8s,baz=315,slow=1.4,SNR=5.0						

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*HLW **06** 03:35:34.9, 37°.04N×27°.07E, h32km±9km, Md3.8, Ml3.8*

*IDC **06** 03:35:39.7±2.5, 36°.75N×26°.87E, h124km±30km, mb3.5/7, mb1 3.6/11, mb1mx3.3/29, mbtmp3.6/11, Error ellipse: s-maj=22.6km s-min=16.6km az=139.0*

*ISCJB **06** 03:35:40.0±0.2, 36°.57N±0°.02×26°.95E±0°.02, h144km±3km, mb3.7/7, Error ellipse: s-maj=3.4km s-min=2.5km az=11.3*

*CSEM **06** 03:35:40.8±0.1, 36°.60N×26°.96E, h139km±1km, ML3.0, Error ellipse: s-maj=2.8km s-min=1.7km az=22.0*

*DDA **06** 03:35:41.5, 36°.40N×27°.04E, h38km, ML3.7*

*ATH **06** 03:35:41.2, 36°.67N×26°.88E, h129km±2km, ML3.0*

*ISK **06** 03:35:46.5, 37°.05N×26°.88E, h74km, MD3.4*

*THE **06** 03:35:46.2, 36°.68N×26°.66E, h33km±8km, ML3.8/1, Error ellipse: s-maj=8.2km s-min=0.7km az=102.0*

ISC 06 03:35:40.9±0.5**, 36°.62N**±0°.03×**26°.89E**±0°.03**, h130**km±4km**, n201, σ1§51**/246**, mb3.5**/7**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIS1	Nisyros Isl.	0.24	94	P	Pn	03 35 55.9	-2.9
NIS1	Nisyros Isl.	0.24	94	eP	Pn	03 35 58.7	-0.1
NIS1	Nisyros Isl.	0.24	94	eP	Pn	03 35 58.7	-0.1
DAT	Datca	0.57	79	ePG	Pn	03 36 01.8	+1.3
DAT				eSG	Sn	03 36 12.6	-2.7
DAT	Datca	0.57	79	ePg	Pn	03 36 01.8	+1.3
DAT				eSg	Sn	03 36 12.6	-2.7
MLSB	Milas	0.98	46	ePG	Pn	03 36 03.5	-0.1
MLSB	Milas	0.98	46	ePg	Pn	03 36 03.6	-0.1
ARG	Arkhangelos	1.08	112	P	Pn	03 36 06.5	+2.0
ARG				S	Sn	03 36 22.5	+0.1
ARG	Arkhangelos	1.08	112	eP	Pn	03 36 06.3	+1.8
ARG				eS	Sn	03 36 24.0	+1.6
ARG	Arkhangelos	1.08	112	eP	Pn	03 36 06.3	+1.8
ARG				S	Sn	03 36 22.5	+0.1
SMG	Samos	1.09	358	eP	Pn	03 36 05.2	+0.6
SMG	Samos	1.09	358	eP	Pn	03 36 05.2	+0.6
KARP	Karpathos	1.09	168	P	Pn	03 36 06.4	+1.6
KARP				S	Sn	03 36 20.9	-1.9
KARP	Karpathos	1.09	168	eP	Pn	03 36 06.4	+1.6
KARP				eS	Sn	03 36 24.0	+1.2
KARP	Karpathos	1.09	168	eP	Pn	03 36 06.4	+1.6
KARP				eS	Sn	03 36 24.0	+1.2
GCAM	G?zelcaml?	1.11	14	i P	Pn	03 36 05.7	+0.8
GCAM				i S	Sn	03 36 24.0	+0.9
GCAM	G?zelcaml?	1.11	14	i P	Pn	03 36 05.7	+0.8
GCAM				i S	Sn	03 36 24.0	+0.9
APE	Apeiranthos	1.18	293	ePG	Pn	03 36 07.0	+1.4
APE	Apeiranthos	1.18	293	P	Pn	03 36 02.8	-2.7
APE	Apeiranthos	1.18	293	eP	Pn	03 36 06.9	+1.4
APE	Apeiranthos	1.18	293	ePg	Pn	03 36 07.0	+1.4
SANT	Santorini	1.18	258	P	Pn	03 36 03.0	-2.5
SANT	Santorini	1.18	258	eP	Pn	03 36 07.2	+1.6
SANT	Santorini	1.18	258	eP	Pn	03 36 07.2	+1.6
THR1	Thera Island	1.18	258	P	Pn	03 36 03.3	-2.3
THR1	Thera Island	1.18	258	P	Pn	03 36 03.3	-2.3
THR2	Thira island,	1.18	262	P	Pn	03 36 02.9	-2.6
THR2	Thira island,	1.18	262	P	Pn	03 36 02.9	-2.6
THR3	Thira Island,	1.22	260	P	Pn	03 36 03.3	-2.6
THR3	Thira Island,	1.22	260	P	Pn	03 36 03.3	-2.6
YER	Yerkesik	1.23	65	ePN	Pn	03 36 07.5	+1.4
YER	Yerkesik	1.23	65	ePn	Pn	03 36 07.5	+1.4
AYDN	Tasoluk	1.31	37	i P	Pn	03 36 08.0	+1.1
AYDN				i S	Sn	03 36 27.3	+0.5
AYDN	Tasoluk	1.31	37	i P	Pn	03 36 08.0	+1.1
AYDN				i S	Sn	03 36 27.3	+0.5
TURN	Turunc	1.40	79	i P	Pn	03 36 06.0	-1.9
TURN				i S	Sn	03 36 23.6	-4.8
TURN	Turunc	1.40	79	i P	Pn	03 36 06.0	-1.9
TURN				i S	Sn	03 36 23.6	-4.8
ZKR	Zakros	1.60	200	P	Pn	03 36 11.9	+1.8
ZKR				S	Sn	03 36 31.2	-1.2
ZKR	Zakros	1.60	200	eP	Pn	03 36 12.0	+1.8
ZKR	Zakros	1.60	200	P	Pn	03 36 11.9	+1.8
ZKR				S	Sn	03 36 31.2	-1.2
NPS	Neapolis	1.70	218	P	Pn	03 36 12.7	+1.3
NPS				S	Sn	03 36 32.8	-1.8
NPS	Neapolis	1.70	218	eP	Pn	03 36 12.7	+1.3
NPS				eS	Sn	03 36 35.5	+0.9
NPS	Neapolis	1.70	218	eP	Pn	03 36 12.7	+1.3
NPS				eS	Sn	03 36 35.5	+0.9
BLCB	Balcova	1.77	4	ePN	Pn	03 36 10.1	-1.9
BLCB	Balcova	1.77	4	ePn	Pn	03 36 10.1	-1.9
LAST	Lasithi	1.85	219	P	Pn	03 36 14.1	+0.9
LAST				S	Sn	03 36 36.1	-1.7
LAST	Lasithi	1.85	219	eP	Pn	03 36 14.4	+1.2
LAST				eS	Sn	03 36 39.1	+1.3
LAST	Lasithi	1.85	219	eP	Pn	03 36 14.4	+1.2
LAST				eS	Sn	03 36 39.1	+1.3
CHOS	Chios island	1.88	340	P	Pn	03 36 14.1	+0.6
CHOS	Chios island	1.88	340	eP	Pn	03 36 14.1	+0.6
CHOS	Chios island	1.88	340	eP	Pn	03 36 14.1	+0.6
DNZL	Cakiroluk	2.03	58	i P	Pn	03 36 16.5	+1.1
DNZL				i S	Sn	03 36 41.6	-0.2
DNZL	Cakiroluk	2.03	58	i P	Pn	03 36 16.5	+1.1
DNZL				i S	Sn	03 36 41.6	-0.2
DENT	Denizli	2.05	56	ePN	Pn	03 36 16.8	+1.3
DENT	Denizli	2.05	56	ePn	Pn	03 36 16.8	+1.3
AKAS	Kas	2.23	99	i P	Pn	03 36 18.5	+0.7
AKAS				i S	Sn	03 36 45.9	-0.1
AKAS	Kas	2.23	99	i P	Pn	03 36 18.5	+0.7
AKAS				i S	Sn	03 36 45.9	-0.1
KSL	Kastellorizon	2.23	101	eP	Pn	03 36 18.6	+1.0
KSL	Kastellorizon	2.23	101	eP	Pn	03 36 18.6	+1.0
GOLH	Golhisar	2.23	73	i P	Pn	03 36 19.2	+1.4
GOLH				i S	Sn	03 36 47.6	+1.5
GOLH	Golhisar	2.23	73	i P	Pn	03 36 19.2	+1.4
GOLH				i S	Sn	03 36 47.6	+1.5
MANT	Manisa	2.29	35	i P	Pn	03 36 18.8	+0.2
MANT				i S	Sn	03 36 47.6	-0.1
MANT	Manisa	2.29	35	i P	Pn	03 36 18.8	+0.2
MANT				i S	Sn	03 36 47.6	-0.1
SIVA	Sivas	2.33	227	P	Pn	03 36 20.8	+1.9
SIVA	Sivas	2.33	227	eP	Pn	03 36 20.7	+1.9
SIVA				eS	Sn	03 36 49.5	+1.5
SIVA	Sivas	2.33	227	eP	Pn	03 36 20.7	+1.9
SIVA				eS	Sn	03 36 49.5	+1.5
KULA	Kula-Manisa	2.36	36	ePN	Pn	03 36 20.1	+0.7
KULA	Kula-Manisa	2.36	36	ePn	Pn	03 36 20.1	+0.7
VAM	Vamos	2.49	242	P	Pn	03 36 22.3	+1.3
VAM	Vamos	2.49	242	eP	Pn	03 36 22.4	+1.4
VAM				eS	Sn	03 36 52.3	+0.5
VAM	Vamos	2.49	242	eP	Pn	03 36 22.4	+1.4
VAM				eS	Sn	03 36 52.3	+0.5
KHAL	Karahalli	2.71	49	i P	Pn	03 36 24.2	+0.3
KHAL				i S	Sn	03 36 56.9	0.0
KHAL	Karahalli	2.71	49	i P	Pn	03 36 24.2	+0.3
KHAL				i S	Sn	03 36 56.9	0.0
PTL	Penteli	2.80	302	eP	Pn	03 36 26.1	+1.2
PTL	Penteli	2.80	302	eP	Pn	03 36 26.1	+1.2
KORT	Korkueli	2.81	81	i P	Pn	03 36 26.4	+1.3
KORT				i S	Sn	03 37 01.0	+1.8
KORT	Korkueli	2.81	81	i P	Pn	03 36 26.4	+1.3
KORT				i S	Sn	03 37 01.0	+1.8
ATH	Athens Observa	2.87	299	eP	Pn	03 36 27.1	+1.4
ATH	Athens Observa	2.87	299	eP	Pn	03 36 27.1	+1.4
GVD	Gavdhos	2.89	233	P	Pn	03 36 27.9	+1.8
GVD	Gavdhos	2.89	233	eP	Pn	03 36 27.8	+1.7
GVD				eS	Sn	03 37 02.3	+1.4
GVD	Gavdhos	2.89	233	eP	Pn	03 36 27.8	+1.7
GVD				eS	Sn	03 37 02.3	+1.4
ANKY	Antikythira Is	2.99	257	eP	Pn	03 36 28.5	+1.1
ANKY	Antikythira Is	2.99	257	eP	Pn	03 36 28.5	+1.1
DID	Didima	3.05	288	eP	Pn	03 36 29.1	+0.9
DID	Didima	3.05	288	eP	Pn	03 36 29.1	+0.9
KYTH	Kithira	3.12	265	P	Pn	03 36 30.5	+1.4
KYTH	Kithira	3.12	265	eP	Pn	03 36 30.2	+1.1

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
KYTH	**Kithira**	**3.12**	**265**	P	**Pn**	**03 36 30.5**	**+1.4**
VLI	**Veliai**	**3.18**	**273**	P	**Pn**	**03 36 30.7**	**+0.9**
VLI	**Veliai**	**3.18**	**273**	*e*P	**Pn**	**03 36 30.6**	**+0.8**
VLI				*e*S	**Sn**	**03 37 06.3**	**-1.2**
VLI	**Veliai**	**3.18**	**273**	P	**Pn**	**03 36 30.7**	**+0.9**
LTK	**Loutraki**	**3.42**	**295**	P	**Pn**	**03 36 34.4**	**+1.4**
LTK	**Loutraki**	**3.42**	**295**	P	**Pn**	**03 36 34.4**	**+1.4**
AOS	**Alonnisos**	**3.48**	**318**	*e*P	**Pn**	**03 36 34.3**	**+0.5**
AOS	**Alonnisos**	**3.48**	**318**	*e*P	**Pn**	**03 36 34.3**	**+0.5**
DYR	**Agios Nikonas**	**3.66**	**274**	P	**Pn**	**03 36 37.5**	**+1.3**
DYR	**Agios Nikonas**	**3.66**	**274**	*e*P	**Pn**	**03 36 38.6**	**+2.4**
DYR	**Agios Nikonas**	**3.66**	**274**	P	**Pn**	**03 36 37.5**	**+1.3**
VLX	**Vlachokerasia**	**3.68**	**283**	*e*P	**Pn**	**03 36 37.9**	**+1.4**
VLX	**Vlachokerasia**	**3.68**	**283**	*e*P	**Pn**	**03 36 37.9**	**+1.4**
GUR	**Goura**	**3.85**	**291**	P	**Pn**	**03 36 40.6**	**+1.8**
GUR	**Goura**	**3.85**	**291**	*e*P	**Pn**	**03 36 40.1**	**+1.3**
GUR	**Goura**	**3.85**	**291**	*e*P	**Pn**	**03 36 40.1**	**+1.3**
NEO	**Neokhori**	**3.94**	**314**	*e*P	**Pn**	**03 36 40.9**	**+1.0**
NEO	**Neokhori**	**3.94**	**314**	*e*P	**Pn**	**03 36 40.9**	**+1.0**
ITM	**Ithomi**	**4.01**	**279**	P	**Pn**	**03 36 42.6**	**+1.8**
ITM	**Ithomi**	**4.01**	**279**	*e*P	**Pn**	**03 36 42.0**	**+1.2**
ITM	**Ithomi**	**4.01**	**279**	*e*P	**Pn**	**03 36 42.0**	**+1.2**
KLV	**Kalavryta, Ach**	**4.03**	**292**	*e*P	**Pn**	**03 36 42.5**	**+1.4**
KLV	**Kalavryta, Ach**	**4.03**	**292**	*e*P	**Pn**	**03 36 42.5**	**+1.4**
PYL	**PYLOS**	**4.14**	**275**	*e*P	**Pn**	**03 36 42.7**	**+0.2**
PYL	**PYLOS**	**4.14**	**275**	*e*P	**Pn**	**03 36 42.7**	**+0.2**
KALE	**Kalithea**	**4.17**	**297**	*e*P	**Pn**	**03 36 44.6**	**+1.7**
KALE	**Kalithea**	**4.17**	**297**	*e*P	**Pn**	**03 36 44.6**	**+1.7**
LAKA	**Lakka**	**4.23**	**294**	*e*P	**Pn**	**03 36 45.2**	**+1.5**
LAKA	**Lakka**	**4.23**	**294**	*e*P	**Pn**	**03 36 45.2**	**+1.5**
AMT	**Artemida-Makis**	**4.24**	**284**	*e*P	**Pn**	**03 36 45.7**	**+1.9**
AMT	**Artemida-Makis**	**4.24**	**284**	*e*P	**Pn**	**03 36 45.7**	**+1.9**
AGG	**Agios Georgios**	**4.33**	**305**	*e*P	**Pn**	**03 36 46.5**	**+1.5**
AGG	**Agios Georgios**	**4.33**	**305**	*e*P	**Pn**	**03 36 46.5**	**+1.5**
EFP	**Efpalio**	**4.35**	**296**	*e*P	**Pn**	**03 36 46.8**	**+1.6**
EFP	**Efpalio**	**4.35**	**296**	*e*P	**Pn**	**03 36 46.8**	**+1.6**
RLS	**Riolos of Patr**	**4.55**	**290**	*e*P	**Pn**	**03 36 50.5**	**+2.6**
RLS	**Riolos of Patr**	**4.55**	**290**	*e*P	**Pn**	**03 36 50.5**	**+2.6**
EVR	**Evrytania**	**4.63**	**301**	*e*P	**Pn**	**03 36 51.2**	**+2.1**
EVR	**Evrytania**	**4.63**	**301**	*e*P	**Pn**	**03 36 51.2**	**+2.1**
THL	**Klokotos Trika**	**4.84**	**309**	*e*P	**Pn**	**03 36 53.0**	**+1.3**
THL	**Klokotos Trika**	**4.84**	**309**	*e*P	**Pn**	**03 36 53.0**	**+1.3**
ERMK	**Ermenek**	**4.85**	**88**	*i* P	**Pn**	**03 36 53.7**	**+1.6**
ERMK				*i* S	**Sn**	**03 37 50.1**	**+2.6**
ERMK	**Ermenek**	**4.85**	**88**	*i* P	**Pn**	**03 36 53.7**	**+1.6**
ERMK				*i* S	**Sn**	**03 37 50.1**	**+2.6**
VLS	**Valsamata**	**5.25**	**289**	*e*P	**Pn**	**03 36 57.9**	**+0.6**
VLS	**Valsamata**	**5.25**	**289**	*e*P	**Pn**	**03 36 57.9**	**+0.6**
SLUM		**5.30**	**196**	P	**Pn**	**03 36 57.8**	**-0.2**
	baz=196						
SLUM				AMP		03 37 00.0	
	comp=E,90μm,0.2s,logA/T=5.7,baz=196						
SLUM		**5.30**	**196**	P	**Pn**	**03 36 57.8**	**-0.2**
LKD2	**Lefkada island**	**5.39**	**296**	*e*P	**Pn**	**03 37 00.4**	**+1.2**
LKD2	**Lefkada island**	**5.39**	**296**	*e*P	**Pn**	**03 37 00.4**	**+1.2**
HMAT	**Matruh**	**5.51**	**178**	P	**Pn**	**03 37 01.1**	**+0.2**
	baz=179						
HMAT	**Matruh**	**5.51**	**178**	P	**Pn**	**03 37 01.1**	**+0.2**
GRG	**Griva**	**5.57**	**322**	*e*P	**Pn**	**03 37 01.5**	**-0.1**
GRG	**Griva**	**5.57**	**322**	*e*P	**Pn**	**03 37 01.5**	**-0.1**
FNA	**Florina**	**5.99**	**316**	*e*P	**Pn**	**03 37 08.3**	**+1.1**
FNA	**Florina**	**5.99**	**316**	*e*P	**Pn**	**03 37 08.3**	**+1.1**
BRTR	**Keskin Array B**	**6.16**	**58**	P	**Pn**	**03 37 09.6**	**-0.1**
	comp=E,0.3nm,0.3s,baz=225,slow=15,SNR=16						
BRTR				S	**Sn**	**03 38 21.6**	**+2.8**
	comp=E,0.1nm,0.3s,baz=228,slow=22,SNR=5.6						
KEK	**Kerkira**	**6.38**	**301**	*e*P	**Pn**	**03 37 12.6**	**+0.1**
KEK	**Kerkira**	**6.38**	**301**	*e*P	**Pn**	**03 37 12.6**	**+0.1**
HBRG	**Burj al ‘Arab**	**6.51**	**157**	P	**Pn**	**03 37 13.9**	**-0.5**
	baz=159						
HBRG	**Burj al ‘Arab**	**6.51**	**157**	P	**Pn**	**03 37 13.9**	**-0.5**
HNAT	**Natroun**	**7.64**	**155**	P	**Pn**	**03 37 29.2**	**-0.3**
	baz=157						
HNAT	**Natroun**	**7.64**	**155**	P	**Pn**	**03 37 29.2**	**-0.3**
OFRI	**‘Ofer**	**7.78**	**119**	Pn	**Pn**	**03 37 30.0**	**-1.4**
KOT	**Kottamia**	**7.85**	**147**	P	**Pn**	**03 37 32.3**	**-0.1**
	baz=149						
KOT	**Kottamia**	**7.85**	**147**	P	**Pn**	**03 37 32.3**	**-0.1**
MMC7	**Mount Meron ar**	**7.86**	**115**	Pn	**Pn**	**03 37 30.9**	**-1.6**
MMA0	**Mount Meron ar**	**7.87**	**115**	Pn	**Pn**	**03 37 31.4**	**-1.3**
MMAI	**Mount Meron Ar**	**7.87**	**115**	P	**Pn**	**03 37 31.4**	**-1.3**
	comp=E,22nm,0.3s,baz=307,slow=11,SNR=120						
MMAI				S	**Sn**	**03 38 56.7**	**-3.6**
	comp=E,3.5nm,0.3s,baz=316,slow=28,SNR=5.4						
HHAG	**Hagoal**	**7.95**	**145**	P	**Pn**	**03 37 32.7**	**-1.1**
	baz=147						
HHAG	**Hagoal**	**7.95**	**145**	P	**Pn**	**03 37 32.7**	**-1.1**
AMAG	**Maghara**	**7.96**	**137**	P	**Pn**	**03 37 32.3**	**-1.5**
	baz=139						
AMAG	**Maghara**	**7.96**	**137**	P	**Pn**	**03 37 32.3**	**-1.5**
KSDI	**Kefar Szold**	**7.98**	**113**	Pn	**Pn**	**03 37 32.6**	**-1.4**
HSAF	**As Saff**	**8.00**	**149**	P	**Pn**	**03 37 34.1**	**-0.4**
	baz=151						
HSAF	**As Saff**	**8.00**	**149**	P	**Pn**	**03 37 34.1**	**-0.4**
RSH		**8.01**	**133**	P	**Pn**	**03 37 32.4**	**-2.1**
	baz=135						
RSH		**8.01**	**133**	P	**Pn**	**03 37 32.4**	**-2.1**
GLL	**Jalalah**	**8.10**	**149**	P	**Pn**	**03 37 35.0**	**-0.8**
	baz=151						
GLL	**Jalalah**	**8.10**	**149**	P	**Pn**	**03 37 35.0**	**-0.8**
MMLI	**Mount Malkishu**	**8.19**	**118**	Pn	**Pn**	**03 37 35.7**	**-1.2**
MMLI				Sn	**Sn**	**03 39 04.1**	**-3.7**
KSHT	**Keshet**	**8.19**	**114**	Pn	**Pn**	**03 37 36.5**	**-0.4**
HMDT	**Nahal Hemdat**	**8.36**	**119**	Pn	**Pn**	**03 37 38.5**	**-0.7**
SUZ		**8.40**	**142**	P	**Pn**	**03 37 39.3**	**-0.4**
	baz=144						
SUZ		**8.40**	**142**	P	**Pn**	**03 37 39.3**	**-0.4**
KZIT	**Kziot**	**8.46**	**130**	Pn	**Pn**	**03 37 39.2**	**-1.3**
RTMI	**Retamim**	**8.54**	**128**	Pn	**Pn**	**03 37 40.5**	**-1.1**
DSI	**Dead Sea**	**8.66**	**123**	Pn	**Pn**	**03 37 41.9**	**-1.3**
DSI				Sn	**Sn**	**03 39 16.4**	**-2.8**
ZAF		**8.73**	**145**	P	**Pn**	**03 37 43.6**	**-0.5**
	baz=147						
ZAF		**8.73**	**145**	P	**Pn**	**03 37 43.6**	**-0.5**
ZNM		**8.80**	**143**	P	**Pn**	**03 37 44.1**	**-1.0**
	baz=145						
ZNM		**8.80**	**143**	P	**Pn**	**03 37 44.1**	**-1.0**
MZDA	**Masada**	**8.81**	**125**	Pn	**Pn**	**03 37 44.2**	**-1.0**
MZDA				Sn	**Sn**	**03 39 19.0**	**-3.7**
HNKL	**Nakhl**	**8.93**	**136**	P	**Pn**	**03 37 45.4**	**-1.5**
	baz=138						
HNKL				S	Sn	03 39 19.7	-6.1
	baz=138						
HNKL	**Nakhl**	**8.93**	**136**	P	**Pn**	**03 37 45.4**	**-1.5**
ZFRI	**Zfri**	**9.19**	**129**	Pn	**Pn**	**03 37 49.4**	**-0.9**
KRMI	**Paran Flat**	**9.22**	**132**	Pn	**Pn**	**03 37 49.1**	**-1.7**
PRNI	**Paran**	**9.22**	**130**	Pn	**Pn**	**03 37 49.2**	**-1.6**
ASF	**Jabal al Asfar**	**9.39**	**115**	P	**Pn**	**03 37 52.8**	**-0.3**
	comp=E,1.8nm,0.3s,baz=194,slow=10,SNR=14						
HRFI	**Mount Harif**	**9.46**	**132**	Pn	**Pn**	**03 37 52.7**	**-1.4**
MBRI	**Mt Berech**	**9.57**	**133**	Pn	**Pn**	**03 37 54.1**	**-1.4**
EIL	**Elat**	**9.68**	**133**	P	**Pn**	**03 37 55.8**	**-1.2**
	comp=E,1.6nm,0.3s,baz=341,slow=9.5,SNR=21						
EIL				S	Sn	03 39 37.2	-6.7
	comp=E,1.8nm,0.3s,baz=172,slow=9.7,SNR=12						
EIL	**Elat**	**9.68**	**133**	Pn	**Pn**	**03 37 55.6**	**-1.3**
HKAT	**Jabal Katrina**	**10.05**	**141**	P	**Pn**	**03 38 01.5**	**-0.6**
	baz=143						
KBZ	**Khabaz**	**14.14**	**55**	P	**P**	**03 39 00.0**	**+1.2**
	comp=E,0.2nm,0.3s,baz=244,slow=9.0,SNR=12						
AKASG	**Malin Array Be**	**14.18**	**6**	P	**Pn**	**03 38 57.7**	**+2.1**
	comp=E,1.0nm,0.3s,baz=194,slow=11,SNR=5.8						
KEST	**Kesra**	**14.20**	**272**	P	**P**	**03 38 59.6**	**0.0**
	comp=E,0.1nm,0.3s,baz=124,slow=3.6,SNR=5.1						
BHD	**Baghdad**	**14.73**	**98**	*e*P	**Pn**	**03 39 04.0**	**+1.2**
BHD				*e*S	**Sn**	**03 41 42.7**	**-3.2**
ESDC	**Sonseca Array**	**24.39**	**287**	P	**P**	**03 40 46.0**	**-1.1**
	comp=E,0.4nm,0.5s,baz=88,slow=10.0,SNR=4.7						
FINES	**FINESS Array B**	**24.85**	**359**	P	**P**	**03 40 48.3**	**-2.6**
	comp=E,0.8nm,0.5s,baz=169,slow=12,SNR=3.5						
HFS	**Hagfors**	**25.01**	**344**	P	**P**	**03 40 50.8**	**-1.6**
	comp=E,1.5nm,0.8s,baz=144,slow=13,SNR=5.7						
TORD	**Torodi Ar. Bea**	**32.50**	**231**	P	**P**	**03 41 59.6**	**+0.2**
	comp=E,0.7nm,0.4s,baz=33,slow=8.9,SNR=23						
ARCES	**ARCESS Array B**	**32.98**	**359**	P	P	03 42 00.3	-2.7
	comp=E,0.5nm,0.6s,baz=166,slow=9.0,SNR=4.7						
MKAR	**Makanchi Array**	**41.81**	**58**	P	**P**	**03 43 16.9**	**-0.7**
	comp=E,1.7nm,0.3s,baz=270,slow=7.9,SNR=38						
ZALV	**Zalesovo Beam**	**42.98**	**47**	P	**P**	**03 43 25.4**	**-1.5**
	comp=E,1.9nm,0.3s,baz=270,slow=9.4,SNR=9.7						

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*NIED **06** 03:49:00, 35.°60N×141.°30E, h41km, Mw4.2 Best double couple: $M_0$2.21000×10^15 NP1:φs116.00000°, δ58.00000°, λ-73.00000°. NP2:φs266.00000°, δ36.00000°, λ-115.00000°.*

*IDC **06** 03:49:18.6±0.6, 35.°53N×141.°10E, h0km, mb3.9/14, mb1 4.1/16, mb1mx4.0/28, mbtmp3.9/16, ML3.8/2, MS3.0/2, Ms1 3.0/2, ms1mx2.5/42, Error ellipse: s-maj=22.4km s-min=14.1km az=96.0*

*JMA **06** 03:49:21.9±0.2, 35.°55N×141.°29E, h43km±1km, M4.0*

*ISCJB **06** 03:49:22.8±0.7, 35.°53N±0.°03×141.°21E±0.°06, h44km±5km, mb4.0/16, MS2.7/1, Error ellipse: s-maj=8.8km s-min=5.1km az=174.6*

*NEIC **06** 03:49:23.2±3.3, 35.°55N×141.°18E, h30km±23km, mb4.4/2, Error ellipse: s-maj=11.2km s-min=8.7km az=96.0*

ISC 06 03:49:23.4±1.3, **35.°58N**±0.°04×**141.°19E**±0.°06, **h31**km±9km, **n54**, σ**1.s03**/64, **mb3.9**/16, **1C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.29**	**294**	⇓P	**Pb**	**03 49 31.1**	**+0.3**
CHOJ				*e*S	**Sn**	**03 49 38.2**	**+1.4**
JCN	**Nagara**	**0.82**	**259**	P	**Pb**	**03 49 39.4**	**+0.3**
KTR	**Katsuura**	**0.83**	**239**	P	**Pn**	**03 49 38.1**	**-0.8**
KTR				*e*S	**Sn**	**03 49 49.6**	**-0.6**
BSO4	**Boso 4**	**0.91**	**230**	P	**Pn**	**03 49 38.4**	**-1.5**
BSO1	**Boso 1**	**0.94**	**190**	⇓P	**Pn**	**03 49 39.1**	**-0.9**
BSO1				*e*S	**Sn**	**03 49 51.0**	**-1.1**
BSO3	**Boso 3**	**0.96**	**216**	⇑P	**Pn**	**03 49 39.6**	**-0.8**
BSO3				*e*S	**Sb**	**03 49 53.2**	**-0.3**
JYT	**Yasato**	**1.03**	**309**	P	**Pn**	**03 49 41.3**	**-0.4**
JYT				*e*S	**Sn**	**03 49 55.0**	**0.0**
JAG	**Ashikaga**	**1.64**	**301**	P	**Pn**	**03 49 50.8**	**+0.8**
JAG				*e*S	**Sn**	**03 50 09.9**	**-0.1**
JIM2	**Oshima 3**	**1.68**	**239**	P	**Pn**	**03 49 49.0**	**-1.6**
JIM2				*e*S	**Sn**	**03 50 10.4**	**-0.7**
JOD2	**Odawara 2**	**1.74**	**260**	P	**Pn**	**03 49 51.2**	**-0.3**
JOD2				*e*S	**Sn**	**03 50 12.6**	**-0.1**
JFK	**Kawauchi**	**1.80**	**352**	P	**Pn**	**03 49 53.0**	**+0.7**
MAJO	**Matsushiro**	**2.60**	**293**	*e*Pn	**Pn**	**03 50 04.7**	**+1.5**
MAT	**Matsushiro**	**2.60**	**293**	P	**Pn**	**03 50 04.7**	**+1.5**
MAT				*e*S	**Sn**	**03 50 35.4**	**+1.7**
JHJ	**Hachijo jima 2**	**2.72**	**206**	Pn	**Pn**	**03 50 03.6**	**-1.2**
	41nm,0.3s,baz=281,slow=17,SNR=24						
JHJ				Sn	**Sn**	**03 50 35.5**	**-1.2**
	95nm,0.3s,baz=70,slow=23,SNR=10						
ASAJ	**Asahikawa**	**8.59**	**7**	Pn	**Pn**	**03 51 24.8**	**-0.7**
ASAJ				Sn	**Sn**	**03 52 57.8**	**-3.5**
ASAJ	**Asahikawa**	**8.59**	**7**	Pn	**Pn**	**03 51 24.8**	**-0.7**
	1.4nm,0.3s,baz=231,slow=10,SNR=9.8						
ASAJ				Sn	**Sn**	**03 52 57.8**	**-3.5**
	0.8nm,0.3s,baz=274,slow=19,SNR=3.7						
KSRS	**Korea Array**	**10.84**	**284**	LR	LR	03 56 23.8	
	comp=Z,98nm,18.4s,baz=156,slow=39						
PETK	**Petropavlovsk-**	**21.04**	**29**	LR	LR	04 03 26.7	
	comp=Z,30nm,18.2s,baz=85,slow=40						
ZALV	**Zalesovo Beam**	**42.77**	**314**	P	**P**	**03 57 17.6**	**-0.1**
ZALV	**Zalesovo Beam**	**42.77**	**314**	P	**P**	**03 57 17.6**	**-0.1**
	1.0nm,0.5s,baz=117,slow=7.8,SNR=5.2						
MKAR	**Makanchi Array**	**44.75**	**303**	P	**P**	**03 57 33.7**	**-0.1**
MKAR	**Makanchi Array**	**44.75**	**303**	P	**P**	**03 57 33.7**	**-0.1**
	0.6nm,0.6s,baz=93,slow=9.6,SNR=8.2						
KURK	**Kurchatov**	**46.69**	**309**	*e*P	**P**	**03 57 49.5**	**+0.5**
	2.4nm,0.3s						
KURBB	**Kurchatov Arra**	**46.76**	**309**	P	**P**	**03 57 49.0**	**-0.6**
	0.7nm,0.4s,baz=85,slow=8.2,SNR=7.8						
COEN	**Coen**	**49.30**	**177**	*e*P	**P**	**03 58 09.9**	**+0.4**
TKM2	**Tokmak 2**	**50.17**	**299**	*e*P	**P**	**03 58 16.3**	**+0.1**
	1.6nm,0.6s						
ILAR	**Eielson Array**	**50.82**	**32**	P	**P**	**03 58 21.2**	**+0.6**
ILAR	**Eielson Array**	**50.82**	**32**	P	**P**	**03 58 21.2**	**+0.6**
	1.0nm,0.7s,baz=270,slow=6.2,SNR=17						
WRA	**Warramunga Arr**	**55.60**	**188**	P	**P**	**03 58 55.0**	**-1.1**
WRA	**Warramunga Arr**	**55.60**	**188**	P	**P**	**03 58 55.0**	**-1.1**
	4.5nm,0.5s,baz=2.0,slow=7.6,SNR=75						
ABKAR	**Akbulak array**	**58.74**	**311**	*e*P	**P**	**03 59 17.5**	**-0.6**
AS31	**Alice Springs**	**59.33**	**188**	*e*P	**P**	**03 59 21.6**	**-0.8**
ASAR	**Alice Springs**	**59.33**	**188**	P	**P**	**03 59 21.9**	**-0.6**
ASAR	**Alice Springs**	**59.33**	**188**	P	**P**	**03 59 21.9**	**-0.6**
	0.9nm,0.5s,baz=18,slow=12,SNR=19						
YKW3	**Yellowknife Ar**	**65.12**	**30**	*e*P	**P**	**04 00 01.1**	**+0.4**
YKA	**Yellowknife Ar**	**65.15**	**30**	P	**P**	**04 00 00.5**	**-0.5**
YKA	**Yellowknife Ar**	**65.15**	**30**	P	**P**	**04 00 00.4**	**-0.5**
	0.7nm,0.9s,baz=304,slow=6.5,SNR=7.7						
ARCES	**ARCESS Array B**	**65.29**	**340**	P	**P**	**04 00 02.0**	**+0.2**
ARCES	**ARCESS Array B**	**65.29**	**340**	P	**P**	**04 00 02.0**	**+0.2**
	1.9nm,0.9s,baz=37,slow=6.1,SNR=3.3						
STKA	**Stephens Creek**	**67.11**	**180**	P	**P**	**04 00 13.1**	**-0.6**
STKA	**Stephens Creek**	**67.11**	**180**	P	**P**	**04 00 13.1**	**-0.6**
	3.0nm,0.9s,baz=343,slow=7.7,SNR=3.1						
AKASG	**Malin Array Be**	**75.33**	**322**	P	**P**	**04 01 03.0**	**-0.5**
AKASG	**Malin Array Be**	**75.33**	**322**	P	**P**	**04 01 03.0**	**-0.5**
	0.6nm,0.5s,baz=46,slow=7.0,SNR=4.0						
NB2	**NORSAR Subarra**	**75.45**	**337**	P	**P**	**04 01 03.8**	**-0.2**
	comp=Z,1.2nm,0.7s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**75.45**	**337**	P	**P**	**04 01 04.2**	**+0.1**
NOA	**NORSAR Array B**	**75.45**	**337**	P	**P**	**04 01 04.2**	**+0.1**
	comp=Z,1.3nm,0.9s,baz=40,slow=5.7,SNR=4.0						
NVAR	**Mina Array Bea**	**76.01**	**53**	P	**P**	**04 01 09.0**	**+1.1**
NVAR	**Mina Array Bea**	**76.01**	**53**	P	**P**	**04 01 09.0**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=282,slow=7.4,SNR=3.6						
BRTR	**Keskin Array B**	**79.67**	**312**	P	**P**	**04 01 28.3**	**+0.1**
BRTR	**Keskin Array B**	**79.67**	**312**	P	**P**	**04 01 28.3**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=159,slow=3.8,SNR=3.9						
TXAR	**Lajitas Array**	**91.15**	**52**	P	**P**	**04 02 27.2**	**+1.6**
TXAR	**Lajitas Array**	**91.15**	**52**	P	**P**	**04 02 27.2**	**+1.6**
	comp=Z,0.4nm,0.9s,baz=335,slow=4.0,SNR=3.5						
LPAZ	**La Paz**	**147.57**	**61**	PKPbc	**PKPbc**	**04 09 06.0**	**+0.2**
LPAZ	**La Paz**	**147.57**	**61**	PKPbc	**PKPbc**	**04 09 06.0**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=38,slow=4.0,SNR=4.8						

MAN 06 03:51:46, 13.°60N×121.°02E, h0km, mb4.6, ML3.5, MS3.4, Mindoro

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*BJI **06** 04:15:21.3, 54.°83N×161.°09E, h7km, mB4.8/31, mb4.8/37, Ms4.9/40, Ms7 4.7/40*

*DJA **06** 04:15:21.8±1.1, 55°N±12°×16°2E±2°3, h10km, M5.3/10, mB5.7/5, mb5.3/10, Mw(mB)5.2/5*

*TEH **06** 04:15:23.0, 54.°67N×161.°40E, h10km, ML5.2*

*BGS **06** 04:15:23.5±2.0, 54.°18N×161.°45E, h34km±999km, mb5.1*

*MOS **06** 04:15:26.5±1.0, 54.°60N×161.°58E, h52km, mb5.3/151, MS4.7/32, Error ellipse: s-maj=6.8km s-min=3.3km az=90.3*

MOS Felt (II-III)at Petropavlovsk-Kamchatskiy.

*NEIC **06** 04:15:26.3±0.1, 54.°66N×161.°45E, mb5.2/205, Error ellipse: s-maj=4.0km s-min=2.2km az=169.0*

NEIC Felt [III] at Petropavlovsk-Kamchatskiy.

*IDC **06** 04:15:26.5±0.4, 54.°67N×161.°46E, h35km±3km, mb4.6/37, mb1 4.8/38, mb1mx4.8/39, mbtmp4.7/38, ML4.7/1, MS4.5/28, Ms1 4.5/28, ms1mx4.4/45, Error ellipse: s-maj=11.2km s-min=8.6km az=149.0*

*ISCJB **06** 04:15:27.8±0.2, 54.°58N±0.°02×161.°53E±0.°03, h66km±2km, mb5.0/356, Error ellipse: s-maj=3.2km s-min=2.1km az=141.5*

*KRSC **06** 04:15:27.3±0.4, 54.°53N×161.°68E, h40km±20km, ML5.3*

*SZGRF **06** 04:15:28.7, 55.°00N×162.°25E, h36km, mb5.5, MS4.3, Near east coast of Kamchatka Peninsula, Russia*

*GCMT **06** 04:15:32.2±0.2, 54.°51N×162.°06E, h42km, MW5.2, Moment Tensor Solution. s83,c125; s72,c123; Moment tensor: Scale 10^16Nm; M_{rr}6.43±.19; $M_{\theta\theta}$-0.51±.15; $M_{\phi\phi}$-5.92±.15; $M_{r\theta}$2.79±.16; $M_{\theta\phi}$-3.65±.12; $M_{\phi r}$2.12±.15; Best double couple: $M_0$8.00000×10^16 NP1:φs192.00000°, δ35.00000°, λ67.00000°. NP2:φs40.00000°, δ58.00000°, λ105.00000°. Principal axes: T 7.4700, Plg72.0000°, Azm347.0000°; N 0.9700, Plg13.0000°, Azm212.0000°; P -8.4300, Plg12.0000°, Azm119.0000°; Data Used: II IU IC G CN.*

ISC 06 04:15:26.3±0.2, **54.°55N**±0.°02×**161.°63E**±0.°02, **h40**km±1km, **h39**km**:pP-P, n1307,** σ**1.s28**/1447, **mb5.2**/366, **MS4.7**/67, **261C-86D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.06**	**80**	P	**Pn**	**04 15 32.1**	**-0.6**
MKZ	**Mys Kozlova**	**0.06**	**80**	PN	**Pn**	**04 15 32.1**	**-0.6**
TUMR	**Tumrok**	**1.13**	**311**	P	**Pn**	**04 15 47.7**	**+2.0**
KII	**Karymskiy**	**1.38**	**249**	*i* P	**Pn**	**04 15 51.2**	**+2.1**
KMNR	**Kamenistaya**	**1.45**	**327**	P	**Pn**	**04 15 52.7**	**+2.6**
BZGR	**Bezymyannyi-Gr**	**1.50**	**339**	*i* P	**Pn**	**04 15 52.9**	**+2.2**
BZMR	**Bezymyannaya**	**1.54**	**335**	P	Pn	04 15 54.4	+3.1
ZLN	**Zelenaya**	**1.55**	**343**	P	**Pn**	**04 15 53.8**	**+2.4**
BZWR	**Bezymyannyi-We**	**1.56**	**336**	*i* P	**Pn**	**04 15 53.9**	**+2.2**
KIRR	**Kirishev**	**1.59**	**333**	P	**Pn**	**04 15 54.5**	**+2.4**
LGNR	**Loginova**	**1.63**	**341**	*i* P	**Pn**	**04 15 55.3**	**+2.5**
KPT	**Kopyto**	**1.64**	**331**	P	**Pn**	**04 15 55.2**	**+2.6**
SPN	**Mys Shipunski**	**1.74**	**214**	*i* P	**Pn**	**04 15 53.5**	**-0.4**
SPN				*i* S	**Sn**	**04 16 12.6**	**-2.2**
SPN	**Mys Shipunski**	**1.74**	**214**	PN	**Pn**	**04 15 53.5**	**-0.4**
SPN				S	**Sn**	**04 16 12.6**	**-2.2**
KRSR	**Krestovskiy**	**1.78**	**340**	P	**Pn**	**04 15 56.6**	**+1.9**
KBTR	**Krutoberegovo**	**1.80**	**22**	P	**Pn**	**04 15 55.6**	**+0.8**
KBTR	**Krutoberegovo**	**1.80**	**22**	PN	**Pn**	**04 15 55.6**	**+0.8**
KOZR	**Kozyr**	**1.82**	**328**	PN	Pn	04 15 58.0	+2.9
KBG	**Krutoberegovo**	**1.82**	**19**	*i* P	**Pn**	**04 15 56.7**	**+1.7**
KBG				*i* S	**Sn**	**04 16 18.7**	**+1.9**
KBG	**Krutoberegovo**	**1.82**	**19**	PN	**Pn**	**04 15 56.7**	**+1.7**
KBG				S	**Sn**	**04 16 18.7**	**+1.9**
KOZ	**Kozyrevsk**	**1.82**	**327**	P	Pn	04 15 58.0	+2.9
KLY	**Klyuchi**	**1.86**	**343**	P	**Pn**	**04 15 57.3**	**+1.7**
KLY	**Klyuchi**	**1.86**	**343**	PN	**Pn**	**04 15 57.3**	**+1.7**
NLC	**Nalytchevo**	**1.93**	**225**	P	**Pn**	**04 15 57.5**	**+0.9**
NLC				*i* S	**Sn**	**04 16 20.1**	**+0.5**
NLC	**Nalytchevo**	**1.93**	**225**	PN	**Pn**	**04 15 57.5**	**+0.9**
NLC				S	**Sn**	**04 16 20.1**	**+0.5**
BDR	**Baidarnaya**	**2.04**	**353**	*i* P	**Pn**	**04 16 00.4**	**+2.2**
SMKR	**Semkarok**	**2.04**	**357**	P	**Pn**	**04 16 00.0**	**+1.8**
SDLR	**Sedlovina**	**2.06**	**233**	P	**Pn**	**04 16 00.7**	**+2.2**
SRDR	**Sredinnyy**	**2.08**	**329**	P	**Pn**	**04 16 00.0**	**+1.2**
KRER	**Koryakskii**	**2.11**	**235**	P	**Pn**	**04 16 01.7**	**+2.5**
SMAR	**Somma**	**2.11**	**234**	P	**Pn**	**04 16 01.5**	**+2.2**
SMAR				*i* S	**Sn**	**04 16 26.1**	**+1.7**
SRKR	**Sorokina**	**2.13**	**353**	P	**Pn**	**04 16 01.5**	**+2.1**
UGLR	**Uglovaya**	**2.13**	**232**	P	**Pn**	**04 16 01.8**	**+2.3**
AVH	**Avacha**	**2.14**	**234**	P	**Pn**	**04 16 02.1**	**+2.6**
KOK	**Koryaka**	**2.17**	**236**	P	**Pn**	**04 16 02.4**	**+2.4**
KOK				*i* S	**Sn**	**04 16 27.2**	**+1.5**
ESO	**Esso**	**2.17**	**311**	*i* P	**Pn**	**04 16 02.4**	**+2.4**
ESO				*e*S	**Sn**	**04 16 27.9**	**+2.2**
ESO	**Esso**	**2.17**	**311**	PN	**Pn**	**04 16 02.4**	**+2.4**
ESO				S	**Sn**	**04 16 27.9**	**+2.2**
INSR	**Institute**	**2.33**	**232**	*e*P	Pn	04 16 05.2	+3.2
INSR				*i* S	**Sn**	**04 16 32.2**	**+2.8**
GNL	**Ganaly**	**2.33**	**250**	P	Pn	04 16 05.0	+2.8
PET	**Petropavlovsk**	**2.33**	**230**	*i* P	**Pn**	**04 16 04.1**	**+2.0**
PET				*i* S	**Sn**	**04 16 31.1**	**+1.6**
PET	**Petropavlovsk**	**2.33**	**230**	PN	**Pn**	**04 16 04.1**	**+2.0**
PET				S	**Sn**	**04 16 31.1**	**+1.6**
BKI	**Bering**	**2.59**	**74**	*i* P	**Pn**	**04 16 04.6**	**-1.0**
BKI				*i* S	**Sn**	**04 16 31.9**	**-4.0**
BKI	**Bering**	**2.59**	**74**	PN	**Pn**	**04 16 04.6**	**-1.0**
PEA0B	**Petropavlovsk-**	**2.74**	**240**	*e*Pn	**Pn**	**04 16 10.0**	**+2.3**
PEA0B				*e*Sn	**Sn**	**04 16 44.7**	**+5.2**
PETK	**Petropavlovsk-**	**2.74**	**240**	PN	**Pn**	**04 16 10.2**	**+2.5**
PETK				pmax	pmax		
	comp=Z,177nm,0.3s						
PETK	**Petropavlovsk-**	**2.74**	**240**	Pn	**Pn**	**04 16 10.2**	**+2.5**
PETK				Lg	Lg	04 16 48.0	
PETK	**Petropavlovsk-**	**2.74**	**240**	Pn	**Pn**	**04 16 10.2**	**+2.5**
	comp=Z,177nm,0.3s,baz=67,slow=17,SNR=190						
PETK				Lg	Lg	04 16 47.9	
	comp=Z,478nm,0.3s,baz=85,slow=32,SNR=11						
RUS	**Russkaya**	**2.82**	**223**	P	**Pn**	**04 16 09.8**	**+1.0**
RUS				*i* S	**Sn**	**04 16 41.6**	**+0.1**
RUS	**Russkaya**	**2.82**	**223**	PN	**Pn**	**04 16 09.8**	**+1.0**
RUS				S	**Sn**	**04 16 41.6**	**+0.1**
GRL	**Gorelyy**	**2.92**	**228**	*e*P	Pn	04 16 12.9	+2.7
GRL				*i* S	**Sn**	**04 16 46.1**	**+2.1**
MTVR	**Mutnovka**	**2.92**	**226**	P	**Pn**	**04 16 12.3**	**+2.0**
MTVR				*i* S	**Sn**	**04 16 45.7**	**+1.6**
ASAK	**Asacha**	**3.11**	**227**	*i* P	Pn	04 16 16.3	+3.4
ASAK				*e*S	**Sn**	**04 16 52.0**	**+3.2**
APC	**Apacha**	**3.11**	**240**	*e*P	Pn	04 16 16.0	+3.2
APC				*i* S	**Sn**	**04 16 51.8**	**+3.1**
MIPR	**Malaya Ipel’ka**	**3.70**	**234**	*e*P	Pn	04 16 24.3	+3.4
MIPR				*i* S	**Sn**	**04 17 05.7**	**+2.5**
PAU	**Pauzhetka**	**4.24**	**225**	*e*P	Pn	04 16 32.0	+3.7
PAU				*i* S	**Sn**	**04 17 18.9**	**+2.4**
PAU	**Pauzhetka**	**4.24**	**225**	PN	Pn	04 16 32.0	+3.7
PAU				S	**Sn**	**04 17 18.9**	**+2.4**
PALN	**Palana**	**4.65**	**349**	*e*P	Pn	04 16 37.0	+3.2
PALN				*e*S	**Sn**	**04 17 27.6**	**+1.2**
SKR	**Severo-Kuril’s**	**5.12**	**223**	P	Pn	04 16 43.1	+2.7
SKR				*i* S	**Sn**	**04 17 38.7**	**+0.5**
SKR	**Severo-Kuril’s**	**5.12**	**223**	*i* PN	Pn	04 16 45.4	+5.0
SKR				*i* S	**Sn**	**04 17 43.0**	**+4.8**
TILK	**Tilichiki**	**6.39**	**21**	P	**Pn**	**04 17 00.0**	**+2.2**
TILK				*i* S	**Sn**	**04 18 08.3**	**-1.1**
FX1	**Attu Island--F**	**7.05**	**99**	*e*Pn	**Pn**	**04 17 04.9**	**-1.9**
FX1				*e*Sn	Sn	04 18 16.8	-8.7
FX1	**Attu Island--F**	**7.05**	**99**	Pn	**Pn**	**04 17 05.0**	**-1.8**
	comp=Z,670nm,0.3s,baz=328,slow=7.4,SNR=3915						
FX1				Sn	Sn	04 18 18.3	-7.2
	comp=Z,93nm,0.3s,baz=210,slow=21,SNR=18						
SEY	**Seymchan**	**9.68**	**334**	⇓*e*PN	Pn	04 17 46.3	+3.6
OKH	**Okha**	**11.04**	**272**	*i* PN	Pn	04 18 08.0	+6.6
OKH				*e*S	Sn	04 20 12.4	+9.0
OKH				pmax	pmax		
	comp=Z,900nm,4.0s						
OKH				smax	smax		
	comp=N,500nm,6.0s						
OKH				smax	smax		
	comp=E,900nm,6.0s						
OKH				MLR	MLR		
	comp=Z,4μm,11.0s						
AMKA	**Amchitka**	**11.12**	**99**	*e*Pn	**Pn**	**04 18 01.4**	**-1.1**
AMKA				*e*Sn	Sn	04 19 56.8	-8.6
KUR	**Kuril’sk**	**12.85**	**229**	*i* PN	Pn	04 18 28.8	+2.7
KUR				pmax	pmax		
	comp=E,8.0nm,0.6s						
KUR				pmax	pmax		
	comp=Z,21nm,0.5s						
KUR				pmax	pmax		
	comp=N,11nm,0.3s						
KUR				MLR	MLR		
	comp=N,654nm,17.0s						
KUR				MLR	MLR		
	comp=E,769nm,17.0s						
KUR				MLR	MLR		
	comp=Z,761nm,17.0s						
UGL	**Uglegorsk**	**13.27**	**254**	*e*PN	P	04 18 38.0	-2.9
UGL				pmax	pmax		
	comp=Z,90nm,0.9s						
UGL				pmax	pmax		
	comp=N,500nm,6.0s						
UGL				pmax	pmax		
	comp=E,900nm,4.0s						
UGL				MLR	MLR		
	comp=E,2μm,20.0s						
UGL				MLR	MLR		
	comp=N,3μm,18.0s						
BILL	**Bilibino**	**13.72**	**7**	⇑*e*P	**Pn**	**04 18 40.5**	**+2.6**
BILL				*e*S	Sn	04 21 18.2	+10
BILL				pmax	pmax		
	comp=Z,37nm,1.2s						
BILL				MLR	MLR		
	comp=Z,2μm,20.0s						
BILL	**Bilibino**	**13.72**	**7**	*e*Pn	Pn	04 18 41.0	+3.1
	comp=Z,143nm,1.3s						
YSS	**Yuzh-Sakhalins**	**14.13**	**245**	⇑*i*P	P	04 18 47.4	-3.1
YSS				*e*S	**Sn**	**04 21 22.0**	**+3.1**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,2μm,18.0s						
YSS				MLR	MLR		
	comp=N,1μm,20.0s						
YSS				MLR	MLR		
	comp=E,2μm,17.0s						
ATKA	**Atka Island**	**14.60**	**89**	*e*Pn	**Pn**	**04 18 49.2**	**-0.6**
YUK	**Yuzh-Kuril’sk**	**14.68**	**231**	*i* P	**Pn**	**04 18 50.8**	**-0.2**
YUK				*i* S	**Sn**	**04 21 32.1**	**-0.1**
YUK				pmax	pmax		
	comp=N,46nm,0.4s						
YUK				pmax	pmax		
	comp=E,52nm,0.4s						
YUK				pmax	pmax		
	comp=Z,156nm,0.4s						
YUK				pmax	pmax		
	comp=Z,200nm,2.4s						

YUK smax smax
comp=E,86nm,4.0s
YUK smax smax
comp=N,232nm,4.0s
YUK MLR MLR
comp=E,447nm,16.0s
YUK MLR MLR
comp=Z,529nm,16.0s
ASAJ Asahikawa 16.16 238 *e*Pn **P** **04 19 11.8 -1.2**
comp=Z,30nm,0.9s
ASAJ Asahikawa 16.16 238 Pn **P** **04 19 12.0 -1.0**
comp=Z,5.4nm,0.3s,baz=40,slow=6.4,SNR=19
ASAJ LR LR 04 24 57.8
comp=Z,1µm,20.5s,baz=215,slow=35
GAMB Gambell 16.38 45 *e*Pn **Pn** **04 19 13.6 +0.7**
comp=Z,109nm,1.2s
ERM Erimo 17.49 232 *c i*P **Pn** **04 19 24.6 -2.3**
ERM pmax pmax
comp=Z,62nm,2.0s
ERM Erimo 17.49 232 *e*Pn **Pn** **04 19 24.4 -2.5**
comp=Z,62nm,0.5s
ERM Erimo 17.49 232 Pn **Pn** **04 19 24.9 -2.0**
comp=Z,614nm,0.4s,SNR=20
HABR Khabarovsk 17.56 261 *c e*P **P** **04 19 30.7 +2.2**
HABR *e*S **Sn** **04 22 44.8 +2.7**
HABR pmax pmax
comp=E,156nm,1.2s
HABR pmax pmax
comp=Z,199nm,1.2s
HABR pmax pmax
comp=N,63nm,1.2s
HABR MLR MLR
comp=E,2µm,17.0s
HABR MLR MLR
comp=N,1µm,17.0s
HABR MLR MLR
comp=Z,2µm,17.0s
YAK Yakutsk 18.23 307 *e*P **Pn** **04 19 36.4 +0.6**
YAK pmax pmax
comp=Z,125nm,0.9s
YAK pmax pmax
comp=N,15nm,1.0s
YAK pmax pmax
comp=E,27nm,0.9s
YAK MLR MLR
comp=Z,2µm,15.0s
YAK MLR MLR
comp=N,391nm,14.0s
YAK MLR MLR
comp=E,1µm,14.0s
TNA Tin City 18.55 41 *e*P **Pn** **04 19 41.3 +1.6**
comp=E,93nm,1.2s
UNV Unalaska Valle 18.58 79 *e*P **Pn** **04 19 42.4 +2.3**
comp=E,147nm,1.0s
AKUT Akutan 18.92 78 *e*P **Pn** **04 19 46.5 +2.2**
comp=E,495nm,1.4s
KLR Kul'dur 19.11 266 *e*P **P** **04 19 43.0 -2.5**
KLR *e*S **S** **04 23 24.0 +4.1**
KLR pmax pmax
comp=E,67nm,1.4s
KLR pmax pmax
comp=Z,96nm,1.4s
KLR MLR MLR
comp=E,800nm,12.0s
KLR MLR MLR
comp=Z,4µm,12.0s
FALS False Pass 20.08 75 *e*Pn Pn 04 20 00.8 +2.7
comp=Z,276nm,1.0s
CLNS Chul'man 20.68 291 *e*P Pn 04 20 17.3 +12
CLNS *e* 04 20 32.1
CLNS *e* 04 24 11.6
CLNS *e*SS Sn 04 24 36.9 +40
CLNS pmax pmax
comp=Z,25nm,1.1s
CLNS pmax pmax
comp=E,39nm,1.3s
CLNS pmax pmax
comp=N,32nm,1.3s
CLNS MLR MLR
comp=Z,2µm,18.0s
CLNS MLR MLR
comp=N,498nm,18.0s
CLNS MLR MLR
comp=E,2µm,16.0s
USRK Ussuriysk Arra 21.74 254 P **P** **04 20 14.2 +0.2**
comp=E,6.4nm,0.5s,baz=54,slow=11,SNR=24
USRK LR LR 04 28 34.1
comp=E,1µm,21.9s,baz=46,slow=36
TIXI Tiksi 22.17 333 *c i*P **P** **04 20 17.8 -0.6**
TIXI pmax pmax
comp=Z,57nm,1.4s
MDJ Mudanjiang 22.84 257 P **P** **04 20 23.7 -2.0**
MDJ pP pP 04 20 26.5 -9.3
MDJ sP sP 04 20 27.9 -13
MDJ S **S** **04 24 31.8 -0.3**
MDJ ScP **ScP** **04 27 54.1 +4.4**
MDJ PcS **PcS** **04 27 55.4 +1.1**
MDJ pmax pmax
comp=Z,91nm,6.5s
MDJ LR LR
comp=N,780nm,22.4s
MDJ LR LR
comp=E,850nm,24.4s
MDJ LR LR
comp=Z,1µm,19.8s
MDJ Mudanjiang 22.84 257 *e*P **P** **04 20 26.2 +0.5**
comp=Z,99nm,1.6s
SVW2 Sparrevohn 23.35 56 *e*P **P** **04 20 32.7 +2.0**
comp=Z,16nm,1.0s
MAJO Matsushiro 24.17 231 *e*P **P** **04 20 39.6 +1.0**
MAJO pmax pmax
comp=Z,141nm,1.2s
MAJO Matsushiro 24.17 231 *e*P **P** **04 20 39.6 +1.0**
comp=Z,141nm,1.2s
MAT Matsushiro 24.17 231 P **P** **04 20 39.3 +0.7**
MAT S **S** **04 24 53.2 -0.7**
RSO Redoubt South 24.79 58 *e*P **P** **04 20 46.2 +1.9**
SPU Mount Spurr 25.05 56 *e*P **P** **04 20 47.9 +1.4**
OHAK Old Harbor 25.07 65 *e*P **P** **04 20 46.1 -0.5**
comp=Z,54nm,1.0s
KDAK Kodiak Island 25.32 64 *e*P **P** **04 20 49.7 +0.8**
comp=Z,44nm,1.4s
KDAK Kodiak Island 25.32 64 P **P** **04 20 47.9 -0.9**
comp=Z,13nm,0.8s,baz=301,slow=12,SNR=5.7
CN2 Changchun 25.70 260 *e*P **P** **04 20 52.5 +0.1**
CN2 *es*P sP 04 20 59.5 -8.6
CN2 *e*S **S** **04 25 17.1 -1.1**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,800nm,15.0s
CN2 LR LR
comp=E,300nm,15.0s
CN2 LR LR
comp=Z,1µm,15.0s
TRF Thorofare Moun 25.71 50 *e*P **P** **04 20 52.5 -0.2**
comp=Z,62nm,0.9s
COLD Coldfoot 25.86 42 *e*P **P** **04 20 53.1 -0.6**
comp=Z,36nm,1.0s
COLD *e*PcP **PcP** **04 24 22.7 +1.1**
RC01 Rabbit Creek A 26.18 56 *e*P **P** **04 20 57.4 +0.8**
comp=Z,22nm,1.2s
RC01 *e*pP **pP** **04 21 04.9 -2.6**
MCK McKinley 26.31 50 *e*P **P** **04 20 58.3 +0.5**
MCK pmax pmax
comp=Z,51nm,1.3s
MCK McKinley 26.31 50 *e*P **P** **04 20 58.2 +0.5**
comp=Z,50nm,1.3s
PMR Palmer 26.40 55 *e*P **P** **04 20 59.3 +0.7**
PMR pmax pmax
comp=Z,11nm,0.7s
PMR Palmer 26.40 55 *e*P **P** **04 20 59.3 +0.7**
comp=Z,12nm,0.7s
SEW Seward 26.47 58 *e*P **P** **04 20 59.1 -0.1**
comp=Z,46nm,0.9s
COLA College 26.73 47 *e*P **P** **04 21 02.4 +0.9**
COLA pmax pmax
comp=Z,24nm,0.8s
COLA College 26.73 47 *e*P **P** **04 21 02.4 +0.9**
comp=Z,24nm,0.8s
SML Sawmill 26.75 54 *e*P **P** **04 21 02.3 +0.4**
SML pmax pmax
comp=Z,30nm,1.3s
SML Sawmill 26.75 54 *e*P **P** **04 21 02.3 +0.4**
comp=Z,30nm,1.3s

ILAR Eielson Array 27.15 47 P **P** **04 21 05.2 -0.2**
ILAR PcP **PcP** **04 24 23.9 -0.8**
ILAR Eielson Array 27.15 47 P **P** **04 21 05.2 -0.2**
comp=Z,10nm,0.9s,baz=265,slow=8.1,SNR=74
ILAR PcP **PcP** **04 24 23.9 -0.8**
comp=Z,2.5nm,0.6s,baz=297,slow=3.8,SNR=8.7
ILAR LR LR 04 32 16.0
comp=Z,606nm,18.9s,baz=282,slow=37
PAX Paxson 27.93 51 *e*P **P** **04 21 12.5 +0.1**
PAX pmax pmax
comp=Z,12nm,0.8s
PAX Paxson 27.93 51 *e*P **P** **04 21 12.5 +0.1**
comp=Z,12nm,0.8s
SNY Shenyang 28.01 259 ⇓P **P** **04 21 14.5 +1.3**
SNY S **S** **04 25 54.9 +0.3**
SNY pmax pmax
comp=Z,10.0nm,0.5s
SNY pmax pmax
comp=Z,140nm,5.9s
SNY LR LR
comp=N,1µm,16.5s
SNY LR LR
comp=E,1µm,17.1s
SNY LR LR
comp=Z,1µm,17.8s
DIV Divide 28.07 55 *e*P **P** **04 21 14.4 +0.7**
comp=Z,40nm,1.2s
DOT Dot Lake 28.48 49 *e*P **P** **04 21 16.2 -1.1**
comp=Z,16nm,1.0s
DOT *e*PcP **PcP** **04 24 29.3 +1.3**
KSRS Korea Array 28.61 247 P **P** **04 21 19.4 +0.8**
comp=Z,5.8nm,0.8s,baz=44,slow=8.9,SNR=17
KSRS PcP **PcP** **04 24 30.6 +1.9**
comp=Z,3.2nm,0.6s,baz=5.7,slow=2.3,SNR=8.5
KSRS LR LR 04 32 12.7
comp=Z,630nm,18.8s,baz=48,slow=35
KSAR Wonju Array Be 28.64 247 P **P** **04 21 19.4 +0.5**
KSAR PcP **PcP** **04 24 30.6 +1.9**
RAGM Ragged Mountai 28.75 56 *e*P **P** **04 21 20.8 +1.1**
comp=Z,33nm,1.1s
EGAK Eagle 29.59 47 *e*P **P** **04 21 26.4 -0.7**
comp=Z,14nm,0.7s
JNU Nakatsue 30.44 238 *e*P **P** **04 21 35.4 +0.5**
comp=Z,14nm,1.0s
JNU Nakatsue 30.44 238 P **P** **04 21 35.5 +0.7**
comp=Z,27nm,1.0s,baz=24,slow=4.0,SNR=8.7
JNU LR LR 04 34 46.2
comp=Z,477nm,20.3s,baz=36,slow=38
PNL Peninsula 31.49 56 *e*P **P** **04 21 44.5 +0.6**
comp=Z,55nm,1.1s
INK Inuvik 32.16 39 P **P** **04 21 50.2 +0.6**
INK PcP **PcP** **04 24 38.5 +1.0**
INK Inuvik 32.16 39 P **P** **04 21 50.2 +0.6**
comp=Z,7.6nm,0.7s,baz=289,slow=7.0,SNR=21
INK PcP **PcP** **04 24 38.5 +1.0**
comp=Z,2.4nm,0.6s,baz=269,slow=2.8,SNR=6.3
BJI Beijing 33.43 263 P P 04 21 51.8 -9.2
BJI PP **PP** **04 23 17.7 +0.8**
BJI S **S** **04 27 16.1 -3.3**
BJI SS **SS** **04 29 50.1 +5.7**
BJI pmax pmax
comp=Z,6.0nm,0.8s
BJI pmax pmax
comp=Z,67nm,3.2s
BJI LR LR
comp=N,1µm,16.7s
BJI LR LR
comp=E,1µm,18.2s
BJI LR LR
comp=Z,960nm,18.2s
IRK Irkutsk 33.47 290 *e*P **sP** **04 22 17.9 +0.9**
IRK *e* 04 23 32.4
IRK pmax pmax
comp=Z,30nm,1.8s
SKAG Skagway 33.52 56 *e*P **P** **04 22 03.0 +1.4**
comp=Z,92nm,1.3s
TLY Talaya 34.08 290 *e*P **sP** **04 22 23.3 +1.0**
TLY *e* 04 23 25.2
TLY *e*S **S** **04 27 33.3 +4.0**
TLY *e*SS **SnSn** **04 29 42.5 +3.9**
TLY pmax pmax
comp=Z,11nm,1.1s
TLY MLR MLR
comp=Z,1µm,17.0s
SONM Songino Array 34.47 282 P **P** **04 22 10.4 +0.3**
SONM PcP **PcP** **04 24 45.1 +0.6**
SONM Songino Array 34.47 282 P **P** **04 22 10.4 +0.3**
comp=Z,2.7nm,0.6s,baz=61,slow=8.2,SNR=7.9
SONM PcP **PcP** **04 24 45.1 +0.6**
comp=Z,8.5nm,0.7s,baz=48,slow=1.9,SNR=12
SONM LR LR 04 37 18.7
comp=Z,614nm,20.5s,baz=59,slow=38
ZAK Zakamensk 34.91 288 *e*P **P** **04 22 11.5 -2.4**
ZAK *e* 04 22 29.1
ZAK *e* 04 24 45.8
MOY Mondy 35.53 291 *e*P **sP** **04 22 35.5 +0.5**
MOY pmax pmax
comp=Z,32nm,2.5s
HHC Hu-ho-hao-te 35.59 268 *e*P **P** **04 22 18.5 -1.3**
HHC pP pP 04 22 22.4 -8.4
HHC sP sP 04 22 25.7 -10
HHC PP **PnPn** **04 23 38.8 -0.8**
HHC S **S** **04 27 50.5 -2.4**
HHC sS sS 04 27 59.4 -12
HHC SS **SnSn** **04 30 09.3 -6.2**
HHC pmax pmax
comp=Z,48nm,0.6s
HHC pmax pmax
comp=Z,130nm,4.3s
HHC LR LR
comp=N,1µm,13.5s
HHC LR LR
comp=E,2µm,13.4s
HHC LR LR
comp=Z,2µm,12.2s
WRAK Wrangell Islan 36.17 59 *e*P **P** **04 22 26.7 +2.2**
comp=Z,46nm,1.3s
DLBC Dease Lake 36.45 55 *e*P **P** **04 22 29.1 +2.2**
JOW Kunigami 36.90 235 *e*P **P** **04 22 30.8 -0.1**
comp=Z,18nm,0.5s
NJ2 Nanjing 37.59 251 *e*P **P** **04 22 36.2 -0.6**
NJ2 pP pP 04 22 39.5 -8.4
NJ2 S **S** **04 28 25.0 +1.6**
NJ2 sS **ScP** **04 28 31.0 -6.7**
NJ2 PcS **PcS** **04 28 42.0 -0.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
NJ2 pmax pmax
comp=Z,40nm,4.2s
NJ2 LR LR
comp=N,630nm,16.2s
NJ2 LR LR
comp=E,360nm,14.1s
NJ2 LR LR
comp=Z,1µm,17.9s
KRAR Krasnoyarsk 37.72 301 ⇓*e*P **P** **04 22 36.5 -1.1**
KRAR pmax pmax
comp=Z,27nm,0.6s
ALE Alert 41.35 8 P **P** **04 23 08.6 +1.0**
comp=Z,237nm,0.8s,SNR=5.5
YKW3 Yellowknife Ar 41.44 44 *e*P **P** **04 23 08.2 -0.2**
YKA Yellowknife Ar 41.48 44 P **P** **04 23 09.3 +0.6**
YKA pP **pP** **04 23 18.8 -1.2**
YKA PcP **PcP** **04 25 06.5 +0.7**
YKA Yellowknife Ar 41.48 44 P **P** **04 23 09.3 +0.6**
comp=Z,4.7nm,0.5s,baz=299,slow=8.2,SNR=74
YKA pP **pP** **04 23 18.8 -1.2**
comp=Z,13nm,0.7s,baz=300,slow=8.1,SNR=22
YKA PcP **PcP** **04 25 06.4 +0.7**
comp=Z,3.9nm,0.7s,baz=308,slow=3.7,SNR=8.3
ZALV Zalesovo Beam 42.77 302 P **P** **04 23 16.9 -2.5**
ZALV 04 25 10.5
ZALV pmax pmax
comp=Z,2.0nm,0.5s
ZALV MLR MLR
comp=Z,1µm,18.9s
ZALV Zalesovo Beam 42.77 302 P **P** **04 23 16.9 -2.5**
ZALV PcP **PcP** **04 25 10.4 +0.3**
ZALV Zalesovo Beam 42.77 302 P **P** **04 23 16.9 -2.5**
comp=Z,1.7nm,0.5s,baz=67,slow=5.0,SNR=8.0
ZALV PcP **PcP** **04 25 10.4 +0.3**
comp=Z,8.8nm,0.8s,baz=48,slow=5.0,SNR=9.2
ZALV LR LR 04 42 48.8
comp=Z,1µm,18.9s,baz=69,slow=38
NVS Novosibirsk 43.05 304 *e*P P 04 23 18.2 -3.5
NVS *i* 04 25 05.4

NVS pmax pmax
comp=Z,46nm,1.6s
NVS pmax pmax
comp=N,13nm,1.5s
NVS pmax pmax
comp=E,34nm,1.5s
SSLB Suanglung 43.05 241 *e*P **P** **04 23 22.1 0.0**
comp=E,71nm,1.8s
YULB Yu-li 43.20 240 *e*P **P** **04 23 23.6 +0.3**
comp=E,7.5nm,0.4s
LZH Lanzhou 43.27 269 *e*P **P** **04 23 22.0 -1.9**
LZH pP pP 04 23 25.2 -10
LZH sP sP 04 23 26.7 -13
LZH PP **PP** **04 25 04.5 -0.2**
LZH *e*S **S** **04 29 47.1 -1.2**
LZH sS sS 04 29 53.7 -13
LZH *e*SS SS 04 32 52.5 -10
LZH pmax pmax
comp=Z,27nm,1.0s
LZH pmax pmax
comp=Z,140nm,4.5s
LZH LR LR
comp=N,1µm,13.0s
LZH LR LR
comp=E,1µm,13.7s
LZH LR LR
comp=Z,1µm,15.5s
GTA Gaotai 43.36 276 *e*P **P** **04 23 22.8 -1.7**
GTA pP pP 04 23 27.3 -8.5
GTA sP sP 04 23 30.5 -10
GTA S **S** **04 29 47.6 -1.9**
GTA sS sS 04 29 56.4 -12
GTA SS SS 04 32 51.2 -13
GTA pmax pmax
comp=Z,4.0nm,0.8s
GTA pmax pmax
comp=Z,64nm,5.2s
GTA LR LR
comp=N,1µm,17.3s
GTA LR LR
comp=E,1µm,14.0s
GTA LR LR
comp=Z,2µm,14.5s
TPUB Ta-pu 43.62 241 *e*P **P** **04 23 27.2 +0.5**
comp=Z,220nm,2.2s
ENH Enshi 44.20 258 *e*P **P** **04 23 31.5 +0.2**
comp=Z,16nm,0.6s
KBS Kingsbay 45.56 352 *e*P **P** **04 23 40.5 -1.0**
KBS *e*PP **PP** **04 25 27.0 -1.1**
KBS AMS AMS 04 41 33.8
comp=Z,391nm,18.2s
KBS Kingsbay 45.56 352 ⇓*i*P **P** **04 23 41.1 -0.4**
KBS pmax pmax
comp=Z,50nm,1.2s
MBW Mount Baker 45.59 64 P **P** **04 23 43.3 +1.0**
SPITS Spitsbergen Ar 45.85 351 P **P** **04 23 43.9 +0.1**
SPITS pP **pP** **04 23 55.2 +0.1**
SPITS Spitsbergen Ar 45.85 351 P **P** **04 23 43.9 +0.1**
comp=Z,44nm,0.7s,baz=54,slow=7.6,SNR=65
SPITS pP **pP** **04 23 55.2 +0.1**
comp=Z,12nm,0.6s,baz=46,slow=7.1,SNR=4.9
LON Longmire 46.90 66 *e*P **P** **04 23 54.5 +2.0**
LON pmax pmax
comp=Z,18nm,1.5s
LON Longmire 46.90 66 *e*P **P** **04 23 54.5 +2.0**
comp=Z,18nm,1.5s
CD2 Chengdu 47.02 264 *e*P **P** **04 23 54.6 +1.0**
CD2 pP pP 04 23 59.2 -5.7
CD2 sP sP 04 24 01.6 -8.0
CD2 PcP **PcP** **04 25 28.0 +2.7**
CD2 PP **PP** **04 25 44.0 -0.3**
CD2 S **S** **04 30 43.5 +1.1**
CD2 sS sS 04 30 50.8 -10
CD2 ScS **ScS** **04 33 46.5 +2.0**
CD2 SS **SS** **04 34 03.2 -6.1**
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 pmax pmax
comp=Z,90nm,4.8s
CD2 LR LR
comp=N,740nm,19.0s
CD2 LR LR
comp=E,860nm,20.2s
CD2 LR LR
comp=Z,770nm,22.6s
ETW Entiat 47.15 65 P **P** **04 23 55.4 +0.9**
B08A Colville Reser 47.20 63 P **P** **04 23 55.5 +0.8**
WTV Waterville 47.29 64 P **P** **04 23 56.5 +1.0**
WMQ Urumqi 47.35 289 *e*P **P** **04 23 56.8 +0.7**
WMQ pP **pP** **04 24 04.0 -3.4**
WMQ *e*S **S** **04 30 48.0 +1.1**
WMQ sS sS 04 30 58.0 -7.8
WMQ SS **SS** **04 34 08.0 -6.3**
WMQ pmax pmax
comp=Z,21nm,1.5s
WMQ pmax pmax
comp=Z,98nm,5.0s
WMQ LR LR
comp=N,1µm,17.6s
WMQ LR LR
comp=E,730nm,16.0s
WMQ LR LR
comp=Z,1µm,24.0s
KURK Kurchatov 47.74 302 *e*P **P** **04 23 56.1 -2.8**
KURK 04 25 27.4
KURK pmax pmax
comp=Z,20nm,0.5s
KURK Kurchatov 47.74 302 *e*P **P** **04 23 56.1 -2.8**
comp=Z,20nm,0.5s
KURK PcP **PcP** **04 25 27.4 0.0**
KURK Kurchatov 47.74 302 P **P** **04 23 56.0 -2.8**
comp=Z,222nm,0.4s,SNR=39
KURBB Kurchatov Arra 47.85 301 PcP **PcP** **04 25 27.4 -0.4**
comp=Z,3.3nm,0.5s,baz=46,slow=2.8,SNR=4.7
VFP Flag Point 48.00 68 P **P** **04 24 02.5 +1.3**
OD2 Odessa Site #2 48.13 64 P **P** **04 24 02.3 +0.3**
HAWA Hanford 48.34 65 *e*P **P** **04 24 04.8 +1.2**
comp=Z,24nm,1.1s
MK31 Makanchi Array 48.35 295 *i* P P 04 24 00.8 -2.9
MK31 pmax pmax
comp=Z,2.0nm,0.3s
MK31 Makanchi Array 48.35 295 *e*P P 04 24 00.8 -2.9
MKAR Makanchi Array 48.35 295 P **P** **04 24 01.3 -2.4**
MKAR pmax pmax
comp=Z,6.0nm,0.6s
MKAR MLR MLR
comp=Z,821nm,19.3s
MKAR Makanchi Array 48.35 295 *e*P **P** **04 24 01.1 -2.6**
MKAR Makanchi Array 48.35 295 P **P** **04 24 01.2 -2.4**
comp=Z,5.6nm,0.6s,baz=56,slow=7.0,SNR=34
MKAR LR LR 04 45 32.1
comp=Z,820nm,19.3s,baz=44,slow=38
NEW Newport 48.40 62 *e*P **P** **04 24 04.7 +0.7**
comp=Z,22nm,1.1s
NEW Newport 48.40 62 P **P** **04 24 04.8 +0.7**
baz=48,SNR=11
IRO Indian Ridge 48.43 69 P **P** **04 24 06.3 +1.9**
GYA Guiyang 48.70 258 P P 04 24 10.2 +3.5
GYA PP **PP** **04 26 03.4 +3.6**
GYA ScP **ScP** **04 29 27.0 +4.2**
GYA S S 04 31 13.1 +6.7
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,610nm,17.1s
GYA LR LR
comp=E,710nm,18.5s
GYA LR LR
comp=Z,660nm,17.4s
DAG Danmarks Havn 48.95 0 ⇑*i*P **P** **04 24 07.6 -0.2**
DAG pmax pmax
comp=Z,13nm,0.7s
DAG Danmarks Havn 48.95 0 ⇑*i*P **P** **04 24 07.6 -0.2**
comp=Z,19nm,0.7s
HUMO Hull Mountain 48.96 71 *e*P **P** **04 24 10.2 +1.7**
comp=Z,11nm,1.0s
VIPM Ingram Point 48.99 68 P **P** **04 24 09.7 +0.9**
VIPM Ingram Point 48.99 68 P **P** **04 24 09.7 +0.9**
C11A Tepee Creek (N 49.12 62 P **P** **04 24 10.3 +0.7**
baz=49,SNR=18
KRMB Red Mountain 49.16 73 *e*P **P** **04 24 11.3 +1.2**
comp=Z,33nm,2.2s
A13A Flathead Natio 49.35 60 ⇑P **P** **04 24 12.1 +0.7**

baz=49
WALA Waterton Lakes 49.52 59 *e*P **P 04 24 13.2 +0.5**
comp=Z,2.3nm,1.2s
C12B Naegeli Ranch, 49.60 62 ⇑P **P 04 24 14.4 +1.1**
baz=49
B13A Whitefish 49.69 60 P **P 04 24 14.8 +0.8**
baz=50,SNR=15
YBH Yreka Blue Hor 49.69 72 *e*P **P 04 24 15.6 +1.5**
comp=Z,19nm,1.1s
YBH Yreka Blue Hor 49.69 72 LR LR 04 42 53.3
comp=Z,539nm,19.3s,baz=302,slow=33
KHMM Horse Mountain 49.69 74 *e*P **P 04 24 16.4 +2.2**
comp=Z,35nm,1.2s
A14A Double T Ranch 49.82 59 P **P 04 24 16.0 +1.0**
baz=50,SNR=5.4
BSMT Bassoo Peak 49.86 61 *e*P **P 04 24 17.1 +1.7**
BLMT Blacktail Moun 49.98 61 *e*P **P 04 24 17.7 +1.4**
C13A Hot Springs 50.09 61 ⇓P **P 04 24 18.0 +1.0**
baz=50,SNR=6.7
D12A Red Ives Fores 50.10 62 ⇓P **P 04 24 17.3 +0.2**
baz=50
VOSK Vostochnaya 50.13 308 P **P 04 24 15.6 -1.5**
VOSK pmax pmax
comp=Z,4.0nm,0.4s
A15A Johnson Ranch, 50.16 59 P **P 04 24 17.7 +0.1**
baz=50,SNR=17
JTMT Jette 50.19 61 *e*P **P 04 24 19.4 +1.5**
BVA0 Borovoye Array 50.20 308 *i* P **P 04 24 16.2 -1.5**
BVA0 pmax pmax
comp=Z,7.0nm,0.5s
BVAR Borovoye Array 50.20 308 P **P 04 24 15.7 -2.0**
BVAR 04 25 36.1
BVAR pmax pmax
comp=Z,11nm,0.5s
BVAR MLR MLR
comp=Z,788nm,20.1s
BVAR Borovoye Array 50.20 308 P **P 04 24 15.7 -2.0**
BVAR PcP **PcP 04 25 36.1 -0.3**
BVAR Borovoye Array 50.20 308 P **P 04 24 15.7 -2.0**
comp=Z,11nm,0.5s,baz=60,slow=8.5,SNR=44
BVAR PcP **PcP 04 25 36.1 -0.3**
comp=Z,6.2nm,0.3s,baz=63,slow=2.9,SNR=22
BVAR LR LR 04 47 32.9
comp=Z,788nm,20.1s,baz=52,slow=38
BRVK Borovoye 50.23 308 *e*P **P 04 24 17.0 -0.9**
BRVK pmax pmax
comp=Z,12nm,0.9s
BRVK Borovoye 50.23 308 *e*P **P 04 24 17.0 -0.9**
comp=Z,12nm,0.9s
BRVK Borovoye 50.23 308 P **P 04 24 17.3 -0.6**
comp=Z,111nm,0.6s,SNR=6.2
YBMT Yellow Bay 50.25 61 *e*P **P 04 24 19.4 +1.1**
comp=Z,12nm,0.9s
B14A Marquette Ranc 50.30 60 P **P 04 24 19.5 +0.9**
baz=50,SNR=8.4
C14A Swan Lake 50.45 61 ⇑P **P 04 24 20.6 +0.9**
baz=50
SWMT Swartz Lake 50.49 61 *e*P **P 04 24 21.0 +0.9**
D13A Huson 50.53 62 P **P 04 24 21.0 +0.6**
baz=50,SNR=13
BMO Blue Mountains 50.53 66 *e*P **P 04 24 20.8 +0.4**
comp=Z,27nm,1.3s
WDC Whiskeytown Da 50.56 73 *e*P **P 04 24 21.8 +1.3**
WDC pmax pmax
comp=Z,16nm,1.0s
WDC Whiskeytown Da 50.56 73 *e*P **P 04 24 21.8 +1.3**
comp=Z,16nm,1.0s
KIPM Iron Peak 50.56 74 *e*P **P 04 24 22.2 +1.5**
comp=Z,18nm,1.1s
B15A Bradely Ranch, 50.69 59 ⇓P **P 04 24 21.6 +0.1**
baz=50,SNR=20
LTIM Timbered Crate 50.74 72 P **P 04 24 23.7 +1.7**
A16A West Butte Ran 50.75 58 ⇑P **P 04 24 22.2 +0.1**
baz=51
ZRNK Zerenda 50.88 309 P **P 04 24 21.2 -1.6**
ZRNK pmax pmax
comp=Z,5.0nm,0.5s
SLMT Seeley Lake 50.92 61 *e*P **P 04 24 24.1 +0.6**
MSO Missoula 50.97 62 *e*P **P 04 24 24.3 +0.6**
comp=Z,16nm,1.0s
MSO Missoula 50.97 62 P **P 04 24 24.3 +0.6**
baz=51,SNR=21
F12A Elk City 51.01 63 P **P 04 24 25.1 +1.0**
baz=51,SNR=19
C15A Salmond Ranch, 51.02 60 ⇑P **P 04 24 24.9 +0.7**
baz=51,SNR=30
D14A Greenough 51.02 61 P **P 04 24 24.7 +0.6**
baz=51,SNR=35
B16A M & M Farms, S 51.05 59 ⇓P **P 04 24 24.5 +0.3**
baz=51
E13A Victor 51.10 62 ⇓P **P 04 24 25.6 +0.9**
baz=51
A17A Triple J Farms 51.19 58 P **P 04 24 25.6 +0.3**
baz=51,SNR=32
CHMT Chamberlain Mo 51.27 61 *e*P **P 04 24 26.5 +0.4**
HOPS Hopland 51.35 75 *e*P **P 04 24 27.7 +1.2**
comp=Z,31nm,1.4s
FFC Flin Flon 51.36 48 *e*P **P 04 24 26.7 +0.3**
FFC pmax pmax
comp=Z,21nm,1.2s
FFC Flin Flon 51.36 48 *e*P **P 04 24 26.7 +0.3**
comp=Z,21nm,1.2s
FFC Flin Flon 51.36 48 P **P 04 24 26.8 +0.3**
comp=Z,79nm,1.4s,SNR=8.3
G12A Big Creek, Yel 51.39 64 ⇑P **P 04 24 27.8 +0.8**
baz=51
SOKR Solikamsk 51.40 321 *e*P **P 04 24 25.4 -1.1**
SOKR S S 04 31 34.9 -8.0
SOKR SS **SS 04 35 21.3 +3.1**
SOKR pmax pmax
comp=Z,10.0nm,1.0s
SOKR MLR MLR
comp=Z,860nm,13.0s
C16A Fuhringer Ranc 51.44 59 ⇑P **P 04 24 27.2 0.0**
baz=51,SNR=13
WVOR Wild Horse Val 51.45 69 *e*P **P 04 24 28.1 +0.8**
WVOR pmax pmax
comp=Z,17nm,1.1s
WVOR Wild Horse Val 51.45 69 *e*P **P 04 24 28.1 +0.8**
comp=Z,17nm,1.1s
F13A Darby 51.46 63 P **P 04 24 28.0 +0.5**
baz=51,SNR=12
E14A Clinton 51.48 62 ⇑P **P 04 24 28.3 +0.7**
baz=51
D15A Lincoln 51.55 61 P **P 04 24 28.9 +0.8**
baz=51,SNR=18
A18A Metzger Ranch, 51.63 57 P **P 04 24 28.8 +0.2**
baz=51,SNR=7.6
KEV Kevo 51.72 342 *ep* **P 04 24 26.5 -2.4**
comp=Z,4.5nm,0.5s
KEV Kevo 51.72 342 *e*P **P 04 24 26.5 -2.4**
KEV pmax pmax
comp=Z,5.0nm,0.5s
SVE Sverdlovsk 51.84 317 ⇓*e*P **P 04 24 29.8 -0.1**
SVE *eS* S 04 31 40.9 -8.2
SVE pmax pmax
comp=Z,15nm,1.0s
SVE MLR MLR
comp=Z,1μm,18.0s
E15A Deer Lodge 51.91 61 ⇑P **P 04 24 31.7 +0.9**
baz=52,SNR=6.7
F14A Wisdom 51.95 62 ⇓P **P 04 24 31.7 +0.5**
baz=52
KMI Kunming 51.97 260 P **P 04 24 32.1 +0.5**
KMI S **S 04 31 51.2 -0.9**
KMI pmax pmax
comp=Z,9.0nm,0.9s
KMI LR LR
comp=N,690nm,20.8s
KMI LR LR
comp=E,650nm,21.9s
KMI LR LR
comp=Z,620nm,18.5s
OHCM Honcut 52.00 73 *e*P **P 04 24 32.3 +0.9**
B18A Beardsley Farm 52.02 58 ⇓P **P 04 24 32.0 +0.6**
baz=52,SNR=7.8
H12A Diamond D Ranc 52.03 64 ⇑P **P 04 24 31.9 +0.2**
baz=52
C17A Wharram Farm, 52.04 59 P **P 04 24 31.9 +0.2**
baz=52,SNR=16
D16A Dana Ranch, Ca 52.05 60 ⇓P **P 04 24 32.8 +1.0**
baz=52,SNR=28
HRY Holter Researc 52.12 60 *e*P **P 04 24 33.3 +1.0**
A19A Klindworth Far 52.16 57 ⇑P **P 04 24 33.1 +0.6**
baz=52,SNR=6.8
ARCES ARCESS Array B 52.19 342 P **P 04 24 30.9 -1.4**
ARCES PcP **PcP 04 25 43.5 0.0**
ARCES ARCESS Array B 52.19 342 P **P 04 24 30.9 -1.4**
comp=Z,6.9nm,0.6s,baz=42,slow=9.0,SNR=36
ARCES PcP **PcP 04 25 43.5 0.0**
comp=Z,3.9nm,0.5s,baz=44,slow=4.2,SNR=13
ARCES LR LR 04 49 41.5
comp=Z,367nm,19.9s,baz=26,slow=40
ARE0 ARCESS Array S 52.19 342 *e*P **P 04 24 30.9 -1.5**
APA Apatity 52.26 338 ⇑*e*P **P 04 24 32.0 -0.8**
APA MLR MLR
comp=Z,800nm,19.0s
BEKR Beckworth 52.26 72 *e*P **P 04 24 34.5 +1.0**
comp=Z,13nm,1.1s
EGMT Eagleton 52.28 58 *e*P **P 04 24 33.7 +0.3**
comp=Z,58nm,1.3s
EGMT Eagleton 52.28 58 ⇑P **P 04 24 33.8 +0.4**
baz=52
MFID Camas Ranch 52.29 66 *e*P **P 04 24 34.1 +0.5**
comp=Z,18nm,1.1s
MFID Camas Ranch 52.29 66 P **P 04 24 34.4 +0.8**
baz=52,SNR=15
E16A East Helena 52.32 61 ⇑P **P 04 24 35.2 +1.3**
baz=52,SNR=21
F15A Butte 52.38 62 ⇑P **P 04 24 34.8 +0.5**
baz=52,SNR=9.5
B19A Brinkman Farms 52.38 57 ⇓P **P 04 24 34.5 +0.4**
baz=52,SNR=7.1
I12A Atlanta 52.40 65 ⇓P **P 04 24 35.3 +0.8**
baz=52
SUMG Summit 52.40 8 ⇑*i*P **P 04 24 34.9 +0.5**
SUMG pmax pmax
comp=Z,94nm,1.0s
SUMG Summit 52.40 8 *e*P **P 04 24 34.7 +0.3**
comp=Z,176nm,1.1s
SUMG Summit 52.40 8 ⇑*i*P **P 04 24 34.9 +0.5**
comp=Z,94nm,1.0s
D17A Six Diamond Ra 52.40 59 P **P 04 24 35.1 +0.7**
baz=52,SNR=26
LRM Limekiln Ridge 52.41 62 *e*P **P 04 24 35.2 +0.6**
A20A Cobblestone Ra 52.59 56 P **P 04 24 36.5 +0.9**
baz=52,SNR=16
DLMT Dillon 52.65 62 *e*P **P 04 24 36.8 +0.5**
comp=Z,31nm,1.3s
E17A Martinsdale 52.79 60 P **P 04 24 38.8 +1.4**
baz=53,SNR=44
D18A Linhart Farms, 52.82 59 ⇑P **P 04 24 38.2 +0.8**
baz=53,SNR=11
QIZ Qiongzhong 52.82 249 P **P 04 24 39.4 +1.8**
QIZ PP **PP 04 26 37.4 +0.2**
QIZ S **S 04 32 06.1 +2.8**
QIZ sS sS 04 32 10.0 -12
QIZ pmax pmax
comp=Z,17nm,1.1s
QIZ pmax pmax
comp=Z,170nm,4.4s
QIZ LR LR
comp=E,260nm,16.3s
QIZ LR LR
comp=Z,350nm,18.7s
C19A Slack Wire Ran 52.82 58 P **P 04 24 38.5 +1.0**
baz=53,SNR=23
B20A Solberg Farm, 52.84 57 P **P 04 24 38.2 +0.7**
baz=53,SNR=10
F16A Kennard Place, 52.86 61 P **P 04 24 39.0 +1.2**
baz=53,SNR=6.4
MCMT McKenzie Canyo 52.89 63 *e*P **P 04 24 38.3 +0.2**
comp=Z,3.3nm,0.8s
HLID Hailey 52.94 65 *e*P **P 04 24 39.3 +0.8**
comp=Z,18nm,1.4s
HLID Hailey 52.94 65 P **P 04 24 39.5 +1.0**
baz=53,SNR=14
ARU Arti 52.95 317 *d i*P **P 04 24 36.9 -1.2**
ARU 04 25 45.3
ARU 04 26 34.4
ARU PPP PPP 04 27 43.3
ARU S **S 04 32 02.1 -2.1**
ARU SS SS 04 35 35.4 -7.4
ARU pmax pmax
comp=Z,23nm,1.2s
ARU MLR MLR
comp=Z,1μm,19.0s
ARU Arti 52.95 317 P **P 04 24 36.6 -1.5**
comp=Z,235nm,0.4s,SNR=7.5
BOZ Bozeman (W) 52.95 61 *e*P **P 04 24 39.3 +0.8**
BOZ pmax pmax
comp=Z,33nm,1.4s
BOZ Bozeman (W) 52.95 61 *e*P **P 04 24 39.3 +0.8**
comp=Z,33nm,1.4s
WCN Washoe City 52.99 72 *e*P **P 04 24 40.3 +1.4**
WCN pmax pmax
comp=Z,60nm,1.6s
WCN Washoe City 52.99 72 *e*P **P 04 24 40.3 +1.4**
comp=Z,60nm,1.6s
A21A Bergtoll Ranch 53.00 56 P **P 04 24 39.7 +1.0**
baz=53,SNR=9.4
KTK1 Kautokeino 53.04 343 *e*P **P 04 24 38.6 -0.1**
KTK1 *es*P **sP 04 24 53.0 -1.9**
H15A Lima 53.14 63 ⇓P **P 04 24 40.2 +0.2**
baz=53
G16A Moss Hill, Enn 53.15 62 P **P 04 24 41.0 +0.9**
baz=53,SNR=32
I14A Mackay 53.19 64 P **P 04 24 41.4 +1.0**
baz=53,SNR=20
E18A Harlowton 53.19 59 P **P 04 24 41.4 +1.2**
baz=53,SNR=18
TRO Tromso 53.20 345 *e*P **P 04 24 39.4 -0.3**
F17A Fitzpatrick Pl 53.27 61 P **P 04 24 41.8 +1.0**
baz=53,SNR=12
D19A Cripps Ranch, 53.30 58 P **P 04 24 41.9 +0.9**
baz=53,SNR=11
C20A Veseth Ranch, 53.35 57 P **P 04 24 42.4 +1.1**
baz=53,SNR=15
A22A Carney Farms, 53.48 55 P **P 04 24 43.0 +0.8**
baz=53,SNR=11
CMB Columbia Colle 53.52 74 *e*P **P 04 24 43.6 +0.9**
CMB pmax pmax
comp=Z,24nm,1.3s
CMB Columbia Colle 53.52 74 *e*P **P 04 24 43.6 +0.9**
comp=Z,24nm,1.3s
BMN Battle Mountai 53.59 70 *e*P **P 04 24 45.1 +1.8**
BMN pmax pmax
comp=Z,24nm,1.1s
BMN Battle Mountai 53.59 70 *e*P **P 04 24 45.1 +1.8**
comp=Z,24nm,1.1s
QLMT Earthquake Lak 53.62 62 *e*P **P 04 24 44.6 +1.1**
G17A Pierce Place, 53.63 61 P **P 04 24 45.5 +1.9**
baz=53,SNR=5.6
D20A Manuel Ranch, 53.72 58 P **P 04 24 45.2 +1.2**
baz=54,SNR=13
C21A Desert Coulee 53.72 57 ⇑P **P 04 24 44.9 +0.9**
baz=54
F18A Big Timber 53.75 60 P **P 04 24 45.5 +1.1**
baz=54,SNR=16
H16A Russell Place, 53.80 62 P **P 04 24 46.1 +1.3**
baz=54,SNR=19
E19A Rath Farm, Rou 53.83 59 P **P 04 24 46.0 +1.1**
baz=54,SNR=15
SAO San Andreas Ge 53.83 76 *e*P **P 04 24 45.8 +0.9**
SAO pmax pmax
comp=Z,13nm,1.0s
SAO San Andreas Ge 53.83 76 *e*P **P 04 24 45.8 +0.9**
comp=Z,13nm,1.0s
GCMT Greycliff 53.85 60 *e*P **P 04 24 46.1 +1.0**
comp=Z,49nm,1.4s
TMCR Tamitsa 53.89 333 *e*P **P 04 24 44.8 -0.1**
TMCR *e* 04 25 49.5
TMCR pmax pmax
comp=Z,35nm,1.3s
B22A Reddig Ranch S 53.92 56 P **P 04 24 46.4 +0.9**
baz=54,SNR=5.9
YMR Madison River 53.97 62 *e*P **P 04 24 47.1 +1.0**
comp=Z,19nm,0.8s
E20A Meyer Farm, Mu 54.12 58 P **P 04 24 48.2 +1.2**
baz=54,SNR=15
F19A Roth Farm, Mol 54.17 60 P **P 04 24 49.0 +1.6**
baz=54,SNR=17
YFT Old Faithful 54.19 62 *e*P **P 04 24 49.8 +2.2**
comp=Z,35nm,1.1s
G18A Lazy EL Ranch, 54.23 60 ⇑P **P 04 24 48.6 +0.7**
baz=54
I16A Newdale 54.25 63 P **P 04 24 49.6 +1.6**
baz=54,SNR=12
B23A Brockton 54.29 55 P **P 04 24 48.8 +0.7**
baz=54,SNR=9.6
D21A La Casta Ranch 54.29 57 ⇓P **P 04 24 49.3 +1.0**
baz=54
LKWY Lake 54.33 62 *e*P **P 04 24 51.3 +2.5**
LKWY pmax pmax
comp=Z,35nm,1.2s
LKWY Lake 54.33 62 *e*P **P 04 24 51.2 +2.5**
comp=Z,35nm,1.2s
H17A Grant Village 54.36 62 ⇑P **P 04 24 51.2 +2.2**
baz=54,SNR=11
C22A Vida 54.36 56 ⇓P **P 04 24 49.6 +0.9**
baz=54
NVAR Mina Array Bea 54.41 72 P **P 04 24 51.1 +1.8**
NVAR pP **pP 04 25 01.2 +0.4**
NVAR PcP **PcP 04 25 53.7 +1.1**
NVAR Mina Array Bea 54.41 72 P **P 04 24 51.1 +1.8**
comp=Z,12nm,0.8s,baz=300,slow=7.3,SNR=77
NVAR pP **pP 04 25 01.2 +0.4**
comp=Z,16nm,0.8s,baz=293,slow=7.7,SNR=15
NVAR PcP **PcP 04 25 53.7 +1.1**
comp=Z,5.3nm,0.8s,baz=304,slow=5.3,SNR=2.2
A24A Westby 54.44 54 P **P 04 24 50.0 +0.8**
baz=54,SNR=8.1
ELK Elko 54.45 68 *e*P **P 04 24 51.4 +1.8**
comp=Z,16nm,1.2s
TKM2 Tokmak 2 54.48 296 *e*P **P 04 24 47.8 -2.0**
TKM2 *e* 04 25 52.5
TKM2 pmax pmax
comp=Z,6.0nm,1.0s
TKM2 Tokmak 2 54.48 296 *e*P **P 04 24 47.8 -2.0**
comp=Z,5.9nm,1.0s
TKM2 *e*PcP **PcP 04 25 52.5 -0.4**
RLMT Red Lodge 54.52 60 *e*P **P 04 24 51.3 +1.2**
comp=Z,66nm,1.1s
RLMT *ep*P **pP 04 25 01.4 -0.2**
IMW Indian Meadow 54.52 62 *e*P **P 04 24 51.8 +1.6**
comp=Z,34nm,1.3s
DCID1 Drake Creek 54.60 63 *e*P **P 04 24 52.5 +1.8**
comp=Z,45nm,1.3s
DCID1 *ep*P **pP 04 25 02.8 +0.5**
F20A Billings 54.61 59 P **P 04 24 51.8 +1.2**
baz=54,SNR=8.3
ULHL Ulahol 54.61 295 P **P 04 24 49.0 -1.8**
SNR=7.4
H18A Shoshone NF, C 54.63 61 P **P 04 24 52.3 +1.4**
baz=54,SNR=7.2
D22A Cohagen 54.63 57 P **P 04 24 51.7 +1.1**
baz=54,SNR=13
C23A Lambert 54.66 56 P **P 04 24 52.0 +1.2**
baz=54,SNR=12
DGMT Dagmar 54.66 54 *e*P **P 04 24 50.7 -0.2**
comp=Z,49nm,1.2s
RRI2 Red Ridge 54.70 63 *e*P **P 04 24 53.4 +1.9**
comp=Z,47nm,1.8s
MOOW Moose Ponds 54.72 62 *e*P **P 04 24 52.7 +1.1**
comp=Z,22nm,1.3s
TPAW Teton Pass 54.80 63 *e*P **P 04 24 53.9 +1.8**
comp=Z,26nm,1.1s
USP Ospenovka 54.81 297 P **P 04 24 52.0 0.0**
SNR=14
LOHW Long Hollow 54.89 63 *e*P **P 04 24 54.1 +1.3**
comp=Z,22nm,1.1s
SNOW Snow King Moun 54.92 63 *e*P **P 04 24 55.0 +2.0**
comp=Z,49nm,1.5s
H19A Powell 54.98 61 ⇑P **P 04 24 54.5 +1.2**
baz=55,SNR=7.3
G20A Bridger 54.98 60 P **P 04 24 54.2 +0.9**
baz=55,SNR=15
KBK Karagaybulak 55.00 296 P **P 04 24 53.5 0.0**
SNR=7.9
MTUM Tungsten Hills 55.03 73 *e*P **P 04 24 55.8 +1.9**
HVU Hansel Valley 55.04 65 *e*P **P 04 24 55.0 +1.1**
HVU pmax pmax
comp=Z,32nm,1.3s
HVU Hansel Valley 55.04 65 *e*P **P 04 24 55.0 +1.1**
comp=Z,32nm,1.3s
FRU Bishkek 55.05 296 *e*P P 04 25 01.0 +7.3
FRU *i* 04 25 11.0
FRU MLR MLR
comp=Z,600nm,20.0s
D23A Lindsay 55.09 56 ⇑P **P 04 24 54.7 +0.7**
baz=55,SNR=8.1
C24A Savage 55.21 55 ⇓P **P 04 24 55.4 +0.6**
baz=55
AHID Auburn Hatcher 55.23 64 *e*P **P 04 24 55.6 +0.4**
comp=Z,40nm,1.3s
AHID *ep*P **pP 04 25 06.0 -0.7**
E22A Miles City 55.25 57 P **P 04 24 56.0 +0.9**
baz=55,SNR=8.0
SCO Scoresbysund 55.25 1 ⇑*i*P **P 04 24 55.1 +0.4**
SCO pmax pmax
comp=Z,4.0nm,0.6s
SCO Scoresbysund 55.25 1 ⇑*i*P **P 04 24 55.1 +0.4**
comp=Z,3.8nm,0.6s
KZA Kyzart 55.25 295 P **P 04 24 55.8 +0.2**
SNR=7.9
AAK Ala-Archa 55.25 296 *c i*P **P 04 24 54.3 -1.1**
AAK pmax pmax
comp=Z,12nm,0.6s
AAK Ala-Archa 55.25 296 *e*P **P 04 24 53.6 -1.8**
comp=Z,6.6nm,0.8s
AAK Ala-Archa 55.25 296 P **P 04 24 55.4 0.0**
SNR=6.5
PTRM Twissleman Ran 55.32 76 *e*P **P 04 24 57.9 +2.2**
E23A Ismay 55.52 57 ⇑P **P 04 24 57.3 +0.2**
baz=55
D24A Glendive 55.55 56 ⇓P **P 04 24 58.7 +1.4**
baz=55
F22A Rosebud 55.56 58 ⇑P **P 04 24 57.8 +0.4**
baz=55
H20A Greybull 55.61 60 P **P 04 24 58.5 +0.8**
baz=55,SNR=7.1
EKS2 Erkin-Say 55.61 297 *e*P **P 04 24 56.2 -1.6**
EKS2 pmax pmax
comp=Z,8.0nm,0.6s
EKS2 Erkin-Say 55.61 297 *e*P **P 04 24 56.2 -1.6**
comp=Z,8.0nm,0.6s
EKS2 Erkin-Say 55.61 297 P P 04 24 52.5 -5.4
SNR=8.7
HWUT Hardware Ranch 55.80 65 *e*P **P 04 25 00.7 +1.4**
comp=Z,42nm,1.1s
HWUT *ep*P **pP 04 25 11.0 +0.1**
VES Vestal, Richgr 55.82 75 P **P 04 25 00.5 +1.2**
baz=56,SNR=6.4
I20A Worland 55.92 61 P **P 04 25 01.7 +1.6**
baz=56,SNR=8.5
J19A Crowheart 55.94 62 P **P 04 25 01.9 +1.6**
baz=56,SNR=7.9
G22A Birney 55.94 58 ⇑P **P 04 25 00.9 +0.7**
baz=56
GRAC Grapevine Rang 55.94 73 ⇑P **P 04 25 02.2 +2.0**
baz=56
CWC Cottonwood Cre 55.95 74 ⇓P **P 04 25 02.1 +1.6**
baz=56
E24A Baker 55.96 56 ⇑P **P 04 25 01.2 +0.9**
baz=56
R11A Troy Canyon, C 55.96 70 P **P 04 25 01.8 +1.3**
baz=56,SNR=26
H21A Big Horn, Sher 55.99 59 ⇓P **P 04 25 01.7 +1.2**
baz=56
F23A Volborg 56.02 58 P **P 04 25 01.8 +1.0**
baz=56,SNR=8.9
AML Almayashu 56.03 296 P **P 04 25 00.8 -0.3**
SNR=7.3
BW06 Boulder Array 56.03 63 *e*P **P 04 25 01.8 +0.8**
comp=Z,64nm,1.3s
BW06 *ep*P **pP 04 25 12.0 -0.6**
PDAR Pinedale Array 56.03 63 P **P 04 25 02.1 +1.1**
PDAR pP **pP 04 25 12.1 -0.5**
PDAR Pinedale Array 56.03 63 P **P 04 25 02.1 +1.1**
comp=Z,5.1nm,0.9s,baz=318,slow=4.0,SNR=40
PDAR pP **pP 04 25 12.1 -0.5**
comp=Z,19nm,0.9s,baz=318,slow=3.9,SNR=21
PKM Peak Mountain 56.09 76 ⇑P **P 04 25 03.2 +1.7**
baz=56,SNR=7.6
DUG Dugway 56.15 67 *e*P **P 04 25 03.4 +1.6**
DUG pmax pmax
comp=Z,46nm,1.1s
DUG Dugway 56.15 67 *e*P **P 04 25 03.4 +1.6**
comp=Z,46nm,1.1s
DUG Dugway 56.15 67 ⇓P **P 04 25 03.3 +1.6**
baz=56,SNR=20
KLMR Klimovskoe 56.15 330 *e*P **P 04 24 58.9 -2.3**
KLMR SS **SS 04 36 37.5 +4.6**
KLMR pmax pmax
comp=Z,20nm,0.8s
KLMR MLR MLR
comp=Z,792nm,15.0s
ISA Isabella 56.29 75 *e*P **P 04 25 03.7 +1.0**
ISA pmax pmax
comp=Z,21nm,1.0s
ISA Isabella 56.29 75 *e*P **P 04 25 03.7 +1.0**

comp=Z,21nm,1.0s
ISA Isabella 56.29 75 P P 04 25 03.6 +0.8
baz=56,SNR=7.8
K19A Absolon Red Bu 56.35 62 ⇓P P 04 25 03.3 0.0
baz=56
H22A Clearmont 56.36 59 ⇓P P 04 25 03.9 +0.7
baz=56
J20A Shoshoni 56.37 61 ⇓P P 04 25 05.0 +1.7
baz=56
M17A Scullys Gap (B 56.37 64 ⇑P P 04 25 04.7 +1.3
baz=56
L18A Fontenelle, Gr 56.38 64 P P 04 25 05.2 +1.7
baz=56,SNR=6.0
SFJD Kangerlussuaq 56.38 15 *e*P P 04 25 02.3 -0.5
comp=Z,18nm,0.5s
SFJD Kangerlussuaq 56.38 15 *i* P P 04 25 02.7 -0.1
comp=Z,14nm,1.3s
SFJD Kangerlussuaq 56.38 15 LR LR 04 52 59.2
comp=Z,366nm,18.1s,baz=341,slow=40
G23A Biddle 56.40 58 ⇓P P 04 25 04.5 +1.1
baz=56
F24A Ekalaka 56.40 57 ⇑P P 04 25 04.2 +0.7
baz=56
I21A Big Trails, Te 56.44 60 ⇓P P 04 25 04.4 +0.6
baz=56
MPMC Manual Prospec 56.55 73 ⇓P P 04 25 05.9 +1.2
baz=56,SNR=16
JLU Jordanelle 56.58 66 *e*P P 04 25 06.9 +1.9
comp=Z,31nm,1.1s
L19A Farson 56.61 63 ⇓P P 04 25 05.8 +0.7
baz=56
FURC Furnace Creek, 56.61 73 ⇑P P 04 25 06.6 +1.7
baz=56
JOF Joensuu 56.63 335 *e*p P 04 25 03.7 -0.9
comp=Z,24nm,0.6s
JOF Joensuu 56.63 335 *e*P P 04 25 03.7 -0.9
JOF pmax pmax
comp=Z,25nm,0.6s
KSH Kashi 56.69 293 *e*P P 04 25 10.0 +4.4
KSH *e*pP pP 04 25 14.6 -2.6
KSH *e*sP sP 04 25 17.4 -4.4
KSH *e*PcP **PcP** **04 26 04.1 +2.7**
KSH *e*PP PP 04 27 18.1 +6.5
KSH *e*S S 04 33 02.1 +6.9
KSH *e*sS sS 04 33 11.4 -3.0
KSH *e*ScS **ScS** **04 34 55.0 +3.5**
KSH pmax pmax
comp=Z,17nm,0.6s
KSH pmax pmax
comp=Z,200nm,2.9s
KSH LR LR
comp=N,190nm,5.2s
KSH LR LR
comp=E,280nm,6.1s
KSH LR LR
comp=Z,250nm,9.7s
J21A Lysite 56.70 61 ⇑P P 04 25 06.7 +1.0
baz=56
K20A Yellowstone Ra 56.73 62 ⇓P P 04 25 06.5 +0.5
baz=56
I22A 9 Mile Ranch, 56.79 60 P P 04 25 07.5 +1.2
baz=57,SNR=7.2
MPU Maple Canyon 56.91 66 *e*P P 04 25 09.3 +2.1
comp=Z,52nm,1.1s
MPU *e*pP **pP** **04 25 19.3 +0.5**
OSI Osito Adit 56.91 76 *e*P P 04 25 08.8 +1.6
comp=Z,28nm,0.9s
KK31 Karatay Array 56.97 299 *e*P P 04 25 04.9 -2.5
KK31 pmax pmax
comp=Z,3.0nm,0.4s
KKAR Karatay Array 56.97 299 *e*P P 04 25 05.2 -2.3
KKAR pmax pmax
comp=Z,6.0nm,0.5s
KKAR Karatay Array 56.97 299 *e*P P 04 25 05.2 -2.3
comp=Z,6.0nm,0.5s
MOR8 Moi Rana 57.06 345 *e*P P 04 25 06.0 -1.7
EDW2 Edwards Air Fo 57.13 75 P P 04 25 10.1 +1.4
baz=57,SNR=10
H24A Dirks Ranch, A 57.14 58 ⇓P P 04 25 09.2 +0.5
baz=57
M19A Rock Springs 57.14 63 ⇓P P 04 25 09.1 +0.2
baz=57
J22A Midwest 57.14 60 ⇑P P 04 25 10.2 +1.4
baz=57
ULM Lac du Bonnet 57.16 48 P P 04 25 09.2 +0.6
ULM Lac du Bonnet 57.16 48 P P 04 25 09.2 +0.6
comp=Z,6.7nm,0.5s,baz=318,slow=8.7,SNR=9.5
L20A Wamsutter 57.20 62 P P 04 25 10.8 +1.5
baz=57,SNR=8.3
MDND Maddock 57.26 52 ⇑P P 04 25 10.6 +1.2
baz=57
K21A Alcova 57.31 61 ⇑P P 04 25 10.9 +0.8
baz=57
SHOC Shoshone 57.34 73 ⇓P P 04 25 10.8 +0.7
baz=57
GSC Goldstone 57.49 74 *e*P P 04 25 12.6 +1.4
GSC pmax pmax
comp=Z,26nm,0.9s
GSC Goldstone 57.49 74 *e*P P 04 25 12.6 +1.4
comp=Z,26nm,0.9s
GSC Goldstone 57.49 74 P P 04 25 12.7 +1.5
baz=57,SNR=11
AKTO Aktyubinsk 57.51 313 P P 04 25 10.3 -0.8
AKTO 04 26 04.1
AKTO pmax pmax
comp=Z,4.0nm,0.5s
AKTO Aktyubinsk 57.51 313 P P 04 25 10.2 -0.8
AKTO PcP **PcP** **04 26 04.1 -0.2**
AKTO Aktyubinsk 57.51 313 P P 04 25 10.2 -0.8
comp=Z,4.4nm,0.5s,baz=64,slow=6.8,SNR=13
AKTO PcP **PcP** **04 26 04.1 -0.2**
comp=Z,13nm,0.7s,baz=53,slow=4.3,SNR=6.0
ARUT Antelope Range 57.54 69 *e*P P 04 25 13.2 +1.5
ARUT pmax pmax
comp=Z,15nm,0.8s
ARUT Antelope Range 57.54 69 *e*P P 04 25 13.2 +1.5
comp=Z,16nm,0.8s
AB31 Akbulak array 57.54 311 *e*P P 04 25 10.3 -1.0
AB31 pmax pmax
comp=Z,2.0nm,0.3s
ABKAR Akbulak array 57.54 311 *e*P P 04 25 09.5 -1.8
MWC Mount Wilson 57.57 75 *e*P P 04 25 13.2 +1.2
MWC pmax pmax
comp=Z,35nm,1.0s
MWC Mount Wilson 57.57 75 *e*P P 04 25 13.2 +1.2
comp=Z,35nm,1.0s
M20A Sweetwater, Wa 57.66 63 ⇓P P 04 25 13.7 +1.2
baz=58
K22A Casper 57.67 61 P P 04 25 13.9 +1.3
baz=58,SNR=5.9
MVU Marysvale 57.69 68 *e*P P 04 25 14.3 +1.5
comp=Z,21nm,1.3s
MVU *e*pP **pP** **04 25 24.6 +0.1**
L21A Rawlins 57.73 62 P P 04 25 14.1 +1.0
baz=58,SNR=7.5
I24A Kuemmerle Ranc 57.75 59 ⇑P P 04 25 13.2 +0.2
baz=58
CCUT Cedar City 57.75 69 *e*P P 04 25 14.9 +1.6
comp=Z,19nm,1.0s
CCUT *e*pP **pP** **04 25 24.8 -0.1**
BFSC Mount Baldy Ra 57.78 75 ⇓P P 04 25 14.3 +0.9
baz=58
RSSD Black Hills 57.85 58 *e*P P 04 25 14.2 +0.3
RSSD *e**PP **pP** **04 25 25.1 -0.4**
RSSD pmax pmax
comp=Z,46nm,0.9s
RSSD Black Hills 57.85 58 *e*P P 04 25 14.2 +0.3
comp=Z,46nm,0.9s
RSSD *e*pP **pP** **04 25 25.1 -0.4**
M21A Separation Pea 58.00 62 P P 04 25 15.8 +0.9
baz=58,SNR=8.5
O19A Miners Draw (B 58.03 64 P P 04 25 16.2 +1.1
baz=58,SNR=5.5
K23A Bowen Ranch, D 58.05 60 ⇑P P 04 25 15.8 +0.6
baz=58
N20A Spence Gulch, 58.09 63 P P 04 25 17.4 +1.8
baz=58,SNR=20
HEC Hector,Ludlow 58.10 74 ⇑P P 04 25 16.8 +1.2
baz=58
SRU San Rafael 58.15 66 P P 04 25 16.9 +0.9
baz=58,SNR=9.9
L22A Ellis Ranch, M 58.16 61 ⇓P P 04 25 17.9 +1.8
baz=58
L23A Garrett 58.48 61 P P 04 25 19.0 +0.7
baz=58,SNR=9.9
KAF Kangasniemi 58.50 337 *e*p P 04 25 16.3 -1.5
comp=Z,19nm,0.5s
KAF Kangasniemi 58.50 337 *e*P P 04 25 16.3 -1.5
KAF pmax pmax
comp=Z,19nm,0.5s
GMRC Granite Mounta 58.51 73 P P 04 25 19.9 +1.5
baz=58,SNR=11
MURC Murrieta 58.51 75 ⇑P P 04 25 19.7 +1.3
baz=58
N21A Black Mountain 58.53 63 ⇓P P 04 25 18.6 -0.1
baz=58
P19A Cripple Cowboy 58.59 65 ⇑P P 04 25 19.7 +0.6
baz=58
LDFC Landfair 58.60 73 *e*P P 04 25 20.3 +1.2
comp=Z,68nm,1.0s
LDFC *e*pP **pP** **04 25 30.1 -0.6**
O20A White River Ci 58.61 64 P P 04 25 20.6 +1.4
baz=58,SNR=7.9
AGMN Agassiz Nation 58.62 50 *e*P P 04 25 19.2 +0.3
comp=Z,20nm,1.1s
BELC Belle Mtn. Jos 58.89 74 P P 04 25 22.0 +0.8
baz=59,SNR=5.1
L24A Wheatland 58.92 60 ⇑P P 04 25 22.2 +1.0
baz=59
PFO Pinyon Flat Ob 58.92 75 *e*P P 04 25 21.9 +0.6
comp=Z,26nm,1.5s
PFO Pinyon Flat Ob 58.92 75 LR LR 04 46 55.4
comp=Z,655nm,20.8s,baz=357,slow=32
O21A Pagoda 58.96 63 ⇓P P 04 25 22.9 +1.2
baz=59
P20A De Beque 59.00 65 ⇓P P 04 25 22.5 +0.6
baz=59
TAPN Taplejung 59.01 274 *e*P P 04 25 21.6 -0.6
comp=Z,14nm,0.5s
N22A Wattenberg Ran 59.05 62 ⇓P P 04 25 22.5 +0.2
baz=59
CHTO Chiang Mai 59.09 259 *e*P P 04 25 22.9 +0.4
CHTO *e**PP **pP** **04 25 33.2 -0.9**
CHTO pmax pmax
comp=Z,13nm,1.0s
CHTO Chiang Mai 59.09 259 *e*P P 04 25 22.9 +0.4
comp=Z,13nm,1.0s
CHTO *e*pP **pP** **04 25 33.2 -0.9**
CHTO Chiang Mai 59.09 259 P P 04 25 23.9 +1.4
comp=Z,26nm,1.2s
FIA1 FINESS Array S 59.14 337 *e*P P 04 25 21.2 -1.1
FINES FINESS Array B 59.14 337 P P 04 25 21.5 -0.8
FINES pP **pP** **04 25 32.9 -1.1**
FINES FINESS Array B 59.14 337 P P 04 25 21.5 -0.8
comp=Z,22nm,0.5s,baz=37,slow=10,SNR=81
FINES pP **pP** **04 25 32.9 -1.1**
comp=Z,19nm,0.7s,baz=46,slow=8.0,SNR=7.9
FINES LR LR 04 55 12.8
comp=Z,381nm,19.4s,baz=29,slow=40
U15A North Rim 59.16 70 P P 04 25 24.7 +1.5
baz=59,SNR=8.8
PHWY Pilot Hill 59.20 61 *e*P P 04 25 23.9 +0.5
comp=Z,4.3nm,0.8s
N23A Red Feather La 59.25 62 P P 04 25 25.3 +1.6
baz=59,SNR=5.2
IRM Iron Mountain 59.25 73 P P 04 25 25.1 +1.6
baz=59,SNR=12
W13A Hualapai Mount 59.26 72 P P 04 25 25.2 +1.4
baz=59,SNR=8.4
K26A Motz Farm, Whi 59.31 59 ⇓P P 04 25 24.7 +0.8
baz=59
CMAR Chiang Mai Arr 59.37 259 P P 04 25 25.6 +1.1
CMAR Chiang Mai Arr 59.37 259 P P 04 25 25.6 +1.1
comp=Z,6.9nm,0.6s,baz=23,slow=7.4,SNR=20
CMAR LR LR 04 54 08.9
comp=Z,468nm,18.3s,baz=52,slow=39
M24A Cheyenne 59.40 61 ⇑P P 04 25 25.7 +1.1
baz=59
Q20A Ridgley Place, 59.45 65 ⇑P P 04 25 25.8 +0.8
baz=59
BC3 Big Chuckawall 59.45 74 ⇑P P 04 25 25.6 +0.6
baz=59
O22A Kremmling 59.47 63 ⇑P P 04 25 26.1 +0.8
baz=59
P21A Newcastle 59.47 64 ⇓P P 04 25 26.2 +1.0
baz=59
S18A Hurst Farm, Bl 59.47 67 P P 04 25 26.4 +1.1
baz=59,SNR=14
MONP Monument Peak 59.48 75 ⇑P P 04 25 26.4 +1.1
baz=59
BAR Barrett 59.49 76 *e*P P 04 25 25.6 +0.5
comp=Z,24nm,1.2s
PV04 Paradox Valley 59.54 66 *e*P P 04 25 27.8 +2.2
PV04 *e*pP **pP** **04 25 37.2 -0.1**
ODAN Odare 59.56 274 *e*P P 04 25 23.1 -2.9
comp=Z,9.5nm,0.5s
GUN Gumba 59.65 276 *e*P P 04 25 26.2 -0.5
comp=Z,25nm,0.4s
PDMCI Parker Dam,Lak 59.71 73 P P 04 25 27.8 +1.2
baz=60,SNR=6.6
O23A Lake Granby, G 59.76 62 P P 04 25 29.4 +2.1
baz=60,SNR=12
K27A Flueckiger Fa 59.78 58 ⇓P P 04 25 27.8 +0.7
baz=60,SNR=5.5
P22A Eagle 59.78 63 P P 04 25 28.7 +1.3
baz=60,SNR=5.7
Y12C Blythe 59.90 73 ⇑P P 04 25 29.3 +1.4
baz=60
Q21A Lamborn Mesa, 59.92 64 P P 04 25 29.6 +1.4
baz=60,SNR=8.6
RAMN Ramite 59.95 275 *e*P P 04 25 26.2 -2.5
comp=Z,33nm,0.5s
R20A Reevale 59.97 66 ⇑P P 04 25 29.8 +1.1
baz=60
KKN Kakani 60.08 277 *e*P P 04 25 28.2 -1.3
comp=Z,13nm,0.4s
PKI Pulchoki 60.17 276 *e*P P 04 25 28.1 -2.2
comp=Z,18nm,0.5s
PKIN Phulchoki 60.18 276 *e*P P 04 25 28.8 -1.4
comp=Z,14nm,0.5s
K28A Ten Mile Ranch 60.20 57 ⇓P P 04 25 31.2 +1.2
baz=60
ISCO Idaho Springs 60.23 62 *e*P P 04 25 32.3 +1.8
ISCO pmax pmax
comp=Z,33nm,1.0s
ISCO Idaho Springs 60.23 62 *e*P P 04 25 32.2 +1.8
comp=Z,33nm,1.0s
ISCO Idaho Springs 60.23 62 P P 04 25 32.3 +1.8
baz=60,SNR=13
S20A Disappointment 60.24 66 P P 04 25 31.7 +1.1
baz=60,SNR=7.0
Q22A Crested Butte, 60.24 64 P P 04 25 32.5 +1.8
baz=60,SNR=7.6
GLA Glamis 60.25 74 *e*P P 04 25 31.6 +1.2
GLA pmax pmax
comp=Z,50nm,1.2s
GLA Glamis 60.25 74 *e*P P 04 25 31.6 +1.2
comp=Z,50nm,1.2s
GLA Glamis 60.25 74 ⇑P P 04 25 31.9 +1.5
baz=60
R21A Cimarron 60.27 65 P P 04 25 32.4 +1.6
baz=60,SNR=14
DMN Daman 60.32 277 *e*P P 04 25 30.1 -1.1
comp=Z,12nm,0.5s
WUAZ Wupatki 60.33 70 *e*P P 04 25 32.3 +1.3
comp=Z,56nm,1.3s
WUAZ Wupatki 60.33 70 ⇑P P 04 25 32.4 +1.3
baz=60
P23A Jefferson 60.42 63 ⇓P P 04 25 32.9 +1.1
baz=60
DANN Dangsing 60.54 278 *e*P P 04 25 31.1 -1.6
Y14A Wickenburg 60.61 72 P P 04 25 34.4 +1.5
baz=60,SNR=12
S21A Coal Bank Pass 60.67 66 P P 04 25 35.3 +1.8
baz=60,SNR=14
Q23A Hartsel 60.77 63 P P 04 25 36.0 +1.8
baz=61,SNR=8.8
EYMN Ely 60.79 47 *e*P P 04 25 34.1 +0.2
comp=Z,15nm,0.8s
R22A Saguache, Gunn 60.80 64 ⇑P P 04 25 35.6 +1.2
baz=61
BORG Borgarnes 61.02 1 *e*P P 04 25 36.8 +1.8
comp=Z,43nm,1.0s
BORG Borgarnes 61.02 1 P P 04 25 36.8 +1.8
comp=Z,21nm,0.8s,baz=342,slow=2.3,SNR=10
BORG LR LR 04 50 46.9
comp=Z,280nm,21.3s,baz=9.6,slow=35
KOLN Koldanda 61.07 278 *e*P P 04 25 33.8 -2.4
comp=Z,16nm,0.4s
Q24A Divide 61.09 63 ⇑P P 04 25 37.5 +1.1
baz=61
X16A Lo Mia Camp, P 61.11 71 P P 04 25 38.3 +1.9
baz=61,SNR=12
S22A 4UR Ranch, Cre 61.12 65 P P 04 25 38.3 +1.8
baz=61,SNR=12
PYUN Piuthan 61.17 279 *e*P P 04 25 35.2 -1.7
P25A Willow Gulch B 61.18 62 P P 04 25 38.5 +1.6
baz=61,SNR=8.2
OGNE Ogallala 61.19 59 ⇑P P 04 25 37.8 +1.0
baz=61
W18A Petrified Fore 61.52 69 ⇓P P 04 25 41.0 +1.8
baz=61
O27A Beecher Island 61.53 60 P P 04 25 40.2 +1.1
baz=61,SNR=7.3
P26A Davis Ranch, A 61.57 61 P P 04 25 41.0 +1.6
baz=61,SNR=6.9
Q25A Bedland, Calha 61.59 62 P P 04 25 40.9 +1.2
baz=61,SNR=5.1
T22A Edith 61.62 65 P P 04 25 41.8 +1.8
baz=62,SNR=9.0
N28A Pribbeno Ranch 61.63 59 ⇓P P 04 25 40.8 +1.1
baz=61
R24A Sanders Place, 61.66 63 P P 04 25 41.7 +1.6
baz=62,SNR=5.5
U21A Nageezi 61.66 66 P P 04 25 41.6 +1.4
baz=62,SNR=11
ECSD EROS Data Cent 61.72 54 *e*P P 04 25 40.2 +0.1
comp=Z,25nm,1.1s
OBN Obninsk 61.78 328⇓*e*P P 04 25 39.2 -1.1
OBN *e*S S 04 33 55.4 -4.7
OBN *e*SS SS 04 38 07.4 +6.1
OBN pmax pmax
comp=Z,43nm,1.8s
OBN MLR MLR
comp=Z,1μm,21.0s
X18A Snowflake 61.84 69 P P 04 25 43.2 +1.8
baz=62,SNR=8.4
O28A Krutsinger Ran 61.94 60 ⇓P P 04 25 42.6 +0.8
baz=62,SNR=5.7
Q26A Hugo 61.96 62 P P 04 25 43.2 +1.2
baz=62,SNR=7.3
P27A Ficken Ranch, 61.96 61 P P 04 25 43.0 +0.9
baz=62,SNR=6.1
S24A Houchin Ranch, 62.04 64 ⇓P P 04 25 43.9 +1.1
baz=62
U22A Llaves 62.13 66 P P 04 25 44.9 +1.5
baz=62,SNR=6.9
V21A Milan 62.14 67 ⇑P P 04 25 44.5 +1.2
baz=62
R25A Fountain Ranch 62.15 63 ⇑P P 04 25 44.5 +1.2
baz=62
W20A Ramah 62.19 68 P P 04 25 45.0 +1.3
baz=62,SNR=12
214A Organ Pipe Nat 62.20 73 P P 04 25 45.0 +1.4
baz=62,SNR=8.4
SPMN St. Paul 62.32 50 P P 04 25 44.5 +0.4
baz=62,SNR=5.4
P28A Saint Francis 62.37 60 ⇓P P 04 25 45.2 +0.5
baz=62
NB2 NORSAR Subarra 62.40 344 P P 04 25 43.8 -0.7
comp=Z,34nm,0.8s,baz=21,slow=6.9
NB2 NORSAR Subarra 62.40 344 P P 04 25 43.8 -0.7
baz=21,slow=6.9
NOA NORSAR Array B 62.40 344 P P 04 25 44.0 -0.5
NOA pP **pP** **04 25 55.1 -1.1**
NOA PcP **PcP** **04 26 23.1 -0.5**
NOA NORSAR Array B 62.40 344 P P 04 25 44.0 -0.5
comp=Z,20nm,0.7s,baz=20,slow=6.7,SNR=101
NOA pP **pP** **04 25 55.1 -1.1**
comp=Z,5.7nm,0.6s,baz=19,slow=6.7,SNR=6.0
NOA PcP **PcP** **04 26 23.1 -0.5**
comp=Z,5.7nm,0.8s,baz=20,slow=6.8,SNR=3.7
NOA LR LR 04 58 18.9
comp=Z,145nm,18.4s,baz=25,slow=41
O29A 4D Ranch, Culb 62.43 59 ⇑P P 04 25 45.6 +0.6
baz=62
S25A Robets Cordova 62.44 63 ⇓P P 04 25 45.8 +0.5
baz=62,SNR=5.1
V22A San Miguel Ran 62.45 66 ⇑P P 04 25 46.8 +1.3
baz=62
R26A Arlington 62.46 62 P P 04 25 46.4 +1.0
baz=62,SNR=15
U23A El Rito 62.52 65 P P 04 25 47.5 +1.6
baz=62,SNR=13
X20A Quemado 62.62 68 P P 04 25 48.5 +1.8
baz=62,SNR=12
NAO01 NORSAR Array S 62.63 344 *e*P P 04 25 45.0 -1.0
comp=Z,15nm,0.8s
HFS Hagfors 62.84 343 P P 04 25 46.6 -0.8
HFS PcP **PcP** **04 26 24.5 -0.9**
HFS Hagfors 62.84 343 P P 04 25 46.6 -0.8
comp=Z,14nm,0.6s,baz=44,slow=4.5,SNR=65
HFS PcP **PcP** **04 26 24.5 -0.9**
comp=Z,3.3nm,0.4s,baz=57,slow=5.5,SNR=4.7
T25A Trinidad 62.84 64 ⇓P P 04 25 49.0 +1.0
baz=63,SNR=5.7
V23A Ortiz Mt. (NFS 62.96 66 ⇑P P 04 25 50.7 +1.9
baz=63,SNR=6.9
S26A Kim 62.97 63 P P 04 25 49.2 +0.4
baz=63,SNR=7.8
TUC Tucson 63.06 72 *e*P P 04 25 50.6 +1.2
TUC pmax pmax
comp=Z,96nm,1.3s
TUC Tucson 63.06 72 *e*P P 04 25 50.6 +1.2
comp=Z,96nm,1.3s
X21A Alamocita Cree 63.08 68 P P 04 25 51.7 +2.0
baz=63,SNR=19
P30A Selden 63.15 59 ⇑P P 04 25 50.1 +0.3
baz=63,SNR=5.1
Y20A Horse Springs, 63.17 69 P P 04 25 52.3 +2.0
baz=63,SNR=9.6
T26A Comanche Natio 63.24 63 P P 04 25 51.1 +0.5
baz=63,SNR=5.4
Q29A Oakley 63.27 60 ⇓P P 04 25 51.2 +0.5
baz=63
U25A Circle Dot Ran 63.40 64 P P 04 25 52.8 +1.0
baz=63,SNR=9.0
ANMO Albuquerque 63.42 67 *e*P P 04 25 53.1 +1.2
comp=Z,17nm,1.0s
ANMO *e*pP **pP** **04 26 03.2 -0.4**
W23A Werner Place, 63.42 66 ⇑P P 04 25 53.6 +1.7
baz=63
VRHR Novokhopersk 63.45 322 *e*P P 04 25 49.2 -2.3
VRHR pmax pmax
comp=N,10.0nm,0.5s
VRHR pmax pmax
comp=Z,10.0nm,0.5s
VRHR pmax pmax
comp=E,20nm,1.4s
X22A Bernardo 63.45 67 ⇑P P 04 25 54.2 +2.2
baz=63
V24A Rampart Ranch, 63.46 65 P P 04 25 53.8 +1.6
baz=63,SNR=11
LAZ Ladron 63.46 68 *e*P P 04 25 53.6 +1.5
comp=E,22nm,1.3s
Y21A Point of Rocks 63.47 68 P P 04 25 54.6 +2.3
baz=63,SNR=8.9
Q30A Quinter 63.59 59 ⇑P P 04 25 53.7 +1.0
baz=63,SNR=5.7
P31A Stockton 63.60 59 ⇑P P 04 25 53.0 +0.2
baz=63
Z20A Nine Sixteen R 63.65 69 P P 04 25 54.8 +1.4
baz=64,SNR=7.3
V25A Rancho No Teng 63.72 65 P P 04 25 55.0 +1.2
baz=64,SNR=6.7
U26A Atchley Ranch, 63.75 64 ⇓P P 04 25 54.3 +0.3
baz=64,SNR=5.4
W24A Lazy 6 Ranch, 63.78 66 ⇓P P 04 25 55.4 +1.1
baz=64,SNR=7.7
Y22A Socorro 63.91 68 P P 04 25 56.9 +1.8
baz=64,SNR=8.4
BNM Barren Site 63.93 67 *e*P P 04 25 56.2 +0.9
comp=E,48nm,1.6s
SCHQ Schefferville 63.94 29 *e*P P 04 25 54.1 -0.7
comp=E,18nm,1.2s
SCHQ Schefferville 63.94 29 P P 04 25 54.5 -0.3
comp=E,13nm,1.0s,baz=348,slow=7.1,SNR=14
KONO Kongsberg 63.97 345 *e*P P 04 25 55.3 +0.5
KONO AMS AMS 05 00 33.7
comp=Z,391nm,12.3s
KONO Kongsberg 63.97 345 *e*P P 04 25 54.7 -0.1
KONO pmax pmax
comp=Z,9.0nm,0.6s
KONO Kongsberg 63.97 345 *e*P P 04 25 54.7 -0.1
comp=Z,9.2nm,0.6s
Z21A St. Cloud Mine 64.01 69 P P 04 25 57.6 +1.8
baz=64,SNR=10
T28A Walsh 64.05 62 ⇑P P 04 25 56.2 +0.3
baz=64,SNR=5.1
120A U Bar Ranch, L 64.06 70 P P 04 25 57.7 +1.6
baz=64,SNR=11
KBL Kabul 64.09 294 *e*P P 04 25 54.4 -1.9
KBL pmax pmax

comp=Z,14nm,0.8s
KBL Kabul 64.09 294 *e*P **P 04 25 54.4 -1.9**
comp=Z,14nm,0.8s
R30A Dighton 64.09 60 ⇓P **P 04 25 56.5 +0.4**
baz=64,SNR=5.2
IZAR Zarasai 64.16 334 *e*P **P 04 25 56.4 +0.2**
IZAR AMB AMB 04 25 58.1
comp=Z,7.6nm,1.0s
V26A Tequesquite Ra 64.19 64 ⇑P **P 04 25 56.8 0.0**
baz=64
VSR Storozhevoye 64.20 324 *e*P **P 04 25 55.8 -0.7**
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=Z,8.0nm,0.5s
VSR pmax pmax
comp=E,2.0nm,0.7s
VSR MLR MLR
comp=Z,640nm,16.0s
VSR MLR MLR
comp=N,380nm,23.0s
VSR MLR MLR
comp=E,270nm,14.0s
U27A Thompson Grove 64.21 63 P **P 04 25 57.5 +0.5**
baz=64,SNR=12
W25A X Bar L Ranch, 64.27 65 P **P 04 25 58.4 +1.0**
baz=64,SNR=9.2
ISAL Salakas 64.35 334 *e*P **P 04 25 57.6 +0.2**
ISAL AMB AMB 04 25 58.4
comp=Z,9.2nm,1.0s
VORD Divnogorie 64.37 324 *e*P **P 04 25 56.3 -1.3**
VORD pmax pmax
comp=Z,7.0nm,0.7s
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.8s
VORD MLR MLR
comp=Z,640nm,16.0s
VORD MLR MLR
comp=N,400nm,17.0s
VORD MLR MLR
comp=E,350nm,15.0s
Y23A Lovelace Mesa, 64.40 67 P **P 04 26 00.1 +1.7**
baz=64,SNR=14
IDID Didziasalis 64.42 333 *e*P **P 04 25 58.1 +0.2**
IDID AMB AMB 04 25 59.7
comp=Z,7.0nm,1.0s
Z22A Elephant Butte 64.43 68 P **P 04 25 60.0 +1.5**
baz=64,SNR=9.3
IIGN Ignalina 64.52 334 *e*P **P 04 25 58.7 +0.2**
IIGN AMB AMB 04 25 59.4
comp=Z,11nm,0.8s
121A Cookes Peak, D 64.53 69 P **P 04 26 00.8 +1.6**
baz=64,SNR=7.3
U28A Mallet 64.56 63 ⇑P **P 04 25 59.4 +0.2**
baz=64
319A Douglas 64.59 71 P **P 04 26 01.4 +1.9**
baz=64,SNR=7.4
220A Playas Peak, P 64.61 70 P **P 04 26 01.0 +1.3**
baz=64,SNR=8.0
V27A Dan Oppiter Fa 64.71 64 ⇑P **P 04 26 00.7 +0.5**
baz=64
Y24A Capitan 64.74 67 P **P 04 26 02.0 +1.5**
baz=65,SNR=20
122A Conniff Cattle 64.83 69 ⇓P **P 04 26 03.0 +1.9**
baz=65
MICGM Minsk 64.84 332 *e* **P 04 26 02.0 +1.4**
MNK Minsk 64.85 332 *e*P **P 04 26 02.0 +1.3**
221A Mesquite Ranch 64.94 70 ⇑P **P 04 26 03.7 +1.9**
baz=65
320A Kipp Ranch, An 65.04 71 ⇓P **P 04 26 03.8 +1.3**
baz=65
X26A CR and CF Fran 65.13 65 ⇓P **P 04 26 03.7 +0.7**
baz=65
Y25A Mesa, Roswell 65.14 66 P **P 04 26 04.2 +1.1**
baz=65,SNR=25
Z24A Sheeppen Canyo 65.23 67 P **P 04 26 05.2 +1.4**
baz=65,SNR=8.3
SBUM Sibu 65.59 236 P **P 04 26 07.9 +1.9**
comp=Z,28nm,0.8s,comp=Z,723nm
Z25A Roswell 65.62 67 P **P 04 26 07.3 +1.1**
baz=66,SNR=8.0
124A Stringfield Ra 65.67 68 P **P 04 26 07.8 +1.2**
baz=66,SNR=6.4
Y27A Causey 65.98 65 P **P 04 26 09.3 +0.9**
baz=66,SNR=5.4
AMTX Amarillo 65.99 63 *e*P **P 04 26 07.5 -1.0**
comp=Z,15nm,1.0s
Z26A Caprock 66.02 66 P **P 04 26 09.8 +1.0**
baz=66,SNR=8.8
224A Cornudas Mount 66.11 68 P **P 04 26 10.6 +1.2**
baz=66,SNR=9.7
MSTX Muleshoe 66.12 65 P **P 04 26 10.2 +0.8**
baz=66,SNR=6.8
125A Gardner Draw, 66.13 67 P **P 04 26 10.6 +1.2**
baz=66,SNR=13
X29A Tulia 66.32 64 P **P 04 26 11.6 +0.9**
baz=66,SNR=5.1
MNTX Cornudas Mount 66.48 68 *e*P **P 04 26 12.5 +0.9**
comp=Z,35nm,1.2s
126A Clayton Basin, 66.48 67 ⇓P **P 04 26 12.3 +0.6**
baz=66
SUW Suwalki 66.50 335 *e*P **P 04 26 11.1 -0.2**
SUW pmax pmax
comp=Z,39nm,1.0s
SUW Suwalki 66.50 335 *e*P **P 04 26 11.1 -0.2**
comp=Z,39nm,1.0s
SUW Suwalki 66.50 335 *e*P **P 04 26 10.9 -0.4**
324A Moseley Ranch, 66.62 68 ⇓P **P 04 26 13.6 +0.9**
baz=66
GDL2 Guadalupe Moun 66.64 67 *e*P **P 04 26 13.6 +0.9**
X30A Coker Ranch, T 66.75 63 ⇓P **P 04 26 12.8 -0.5**
baz=67
Y29A Porterfield Fa 66.78 64 P **P 04 26 14.5 +0.9**
baz=67,SNR=5.2
127A Arkansas Junct 66.81 66 ⇑P **P 04 26 14.3 +0.5**
baz=67
226B Tecolote Peak, 66.84 67 P **P 04 26 14.9 +0.9**
baz=67,SNR=13
325A Bean Ranch, Si 66.95 68 P **P 04 26 15.7 +0.9**
baz=67,SNR=7.5
ABKT Ailbek 67.06 303 P P 04 26 09.4 -5.8
comp=Z,649nm,0.4s,SNR=9.3
X31A McDonald Ranch 67.07 62 P **P 04 26 15.8 +0.6**
baz=67,SNR=7.0
MUD Monsted U'grnd 67.10 344 *i*P **P 04 26 15.2 +0.2**
MUD pmax pmax
comp=Z,18nm,0.8s
MUD Monsted U'grnd 67.10 344 *i*P **P 04 26 15.2 +0.2**
comp=Z,18nm,0.8s
Z29A Hungry Hill Ra 67.23 64 P **P 04 26 17.1 +0.7**
baz=67,SNR=9.0
128A Castleberry Fa 67.32 65 P **P 04 26 17.7 +0.7**
baz=67,SNR=5.6
BSD Bornholm Skovb 67.33 340 *i*P **P 04 26 17.1 +0.5**
BSD pmax pmax
comp=Z,16nm,0.8s
BSD Bornholm Skovb 67.33 340 *i*P **P 04 26 17.1 +0.5**
comp=Z,16nm,0.8s
KSM Kuching 67.37 238 *e*P **P 04 26 19.1 +1.7**
KSM epP **pP 04 26 29.1 -0.1**
KSM Kuching 67.37 238 P **P 04 26 18.9 +1.5**
comp=Z,34nm,1.3s,comp=Z,460nm
425A Indio Mountain 67.40 69 P **P 04 26 17.4 -0.2**
baz=67,SNR=14
Y31A Rekieta Farm, 67.44 63 ⇓P **P 04 26 17.9 +0.2**
baz=67
Z30A Sanderson Ranc 67.52 64 P **P 04 26 18.5 +0.3**
baz=67,SNR=6.5
326A Caldwell Ranch 67.53 67 P **P 04 26 19.2 +0.9**
baz=67,SNR=11
MCD Coleburn Disti 67.56 351 *e*P **P 04 26 18.0 0.0**
MCD Coleburn Disti 67.56 351 P **P 04 26 18.0 0.0**
HDIL Hopedale 67.58 51 *e*P **P 04 26 18.2 -0.2**
comp=Z,80nm,1.4s
WMOK Wichita Mounta 67.60 61 *e*P **P 04 26 18.6 0.0**
WMOK *e**PP **pP 04 26 29.3 -1.2**
WMOK pmax pmax
comp=Z,42nm,0.9s
WMOK Wichita Mounta 67.60 61 *e*P **P 04 26 18.6 0.0**
comp=Z,42nm,0.9s
WMOK epP **pP 04 26 29.3 -1.2**
LLD Lille Linde 67.64 342 *i*P **P 04 26 18.5 0.0**
LLD pmax pmax
comp=Z,36nm,0.8s
LLD Lille Linde 67.64 342 *i*P **P 04 26 18.5 0.0**
comp=Z,36nm,0.8s
MDO Dochfour 67.79 352 *e*P **P 04 26 19.3 -0.1**
MDO Dochfour 67.79 352 P **P 04 26 19.3 -0.1**
AKASG Malin Array Be 67.83 330 P **P 04 26 18.9 -0.9**
AKASG pmax pmax
comp=Z,6.0nm,0.3s
AKASG MLR MLR
comp=Z,908nm,19.0s
AKASG Malin Array Be 67.83 330 P **P 04 26 18.9 -0.9**
AKASG Malin Array Be 67.83 330 P **P 04 26 18.9 -0.9**
comp=Z,6.1nm,0.3s,baz=27,slow=7.0,SNR=48
AKASG LR LR 04 59 44.0
comp=Z,908nm,19.0s,baz=350,slow=39
Y32A R-V Farms, Ver 67.83 62 ⇓P **P 04 26 20.7 +0.6**
baz=68,SNR=5.2
KIEV Kiev 67.84 330 *e*P **P 04 26 18.3 -1.5**
KIEV pmax pmax
comp=Z,69nm,1.9s
KIEV Kiev 67.84 330 *e*P **P 04 26 18.3 -1.5**
comp=Z,69nm,1.9s
AK01 Malin Array Si 67.84 330 *e*P **P 04 26 18.1 -1.8**
MAK Makhachkala 67.85 314 *e*P P 04 26 08.3 -12
AK02 Malin Array Si 67.87 330 *e*P **P 04 26 18.4 -1.6**
Z31A Sharp Cattle R 68.00 63 P **P 04 26 21.3 +0.1**
baz=68,SNR=5.5
426A McDonald Obser 68.01 68 P **P 04 26 22.2 +0.7**
baz=68,SNR=7.0
KSB Sheil Bridge 68.11 352 *e*P **P 04 26 21.4 0.0**
KSB Sheil Bridge 68.11 352 P **P 04 26 21.4 0.0**
328A Wristen Ranch, 68.11 67 P **P 04 26 22.6 +0.7**
baz=68,SNR=7.7
130A Snyder 68.14 64 P **P 04 26 22.0 -0.1**
baz=68
DRUM Mains of Drumt 68.15 351 *e*P **P 04 26 21.4 -0.3**
DRUM AMB AMB 04 26 24.2
comp=Z,71nm,3.2s
DRUM Mains of Drumt 68.15 351 P **P 04 26 21.4 -0.3**
DRUM AMB AMB 04 26 24.2
comp=Z,71nm,3.2s
RGN Rugen 68.18 341 *e*P **P 04 26 22.5 +0.6**
comp=Z,132nm,1.4s
TUL1 Tulsa 68.19 59 P **P 04 26 22.1 -0.2**
baz=68
427A Hayter Ranch, 68.20 67 P **P 04 26 23.4 +0.8**
baz=68,SNR=11
Z32A Haskell 68.36 63 ⇑P **P 04 26 23.4 -0.1**
baz=68,SNR=6.0
131A Roby 68.38 64 P **P 04 26 24.2 +0.6**
baz=68
526A Mary Lane Ranc 68.45 68 P **P 04 26 25.3 +1.1**
baz=68,SNR=7.4
329A Wagon Wheel Ra 68.47 66 P **P 04 26 25.0 +0.8**
baz=68,SNR=9.3
GKP Gorka Klasztor 68.58 338 *e*P **P 04 26 24.5 +0.1**
GKP Gorka Klasztor 68.58 338 *e*P **P 04 26 24.5 +0.1**
230A Sterling City 68.61 65 P **P 04 26 25.8 +0.7**
baz=68
AAM Ann Arbor 68.64 46 *e*P **P 04 26 25.5 +0.5**
AAM pmax pmax
comp=Z,39nm,1.2s
AAM Ann Arbor 68.64 46 *e*P **P 04 26 25.5 +0.5**
comp=Z,38nm,1.2s
527A Woodward Ranch 68.64 68 P **P 04 26 25.9 +0.5**
baz=68,SNR=14
428A Kincaid Ranch, 68.68 67 P **P 04 26 27.0 +1.4**
baz=68,SNR=17
SFIN Scholer Farm 68.72 50 P **P 04 26 25.0 -0.5**
baz=68
ABTX Abilene, Hawle 68.81 63 P **P 04 26 26.5 +0.2**
baz=69
626A Big Bend Ranch 68.82 69 P **P 04 26 27.3 +0.9**
baz=69,SNR=8.9
330A Mertzon 68.96 65 ⇑P **P 04 26 27.4 +0.2**
baz=69
KIV Kislovodsk 68.99 317 ⇓*e*P **P 04 26 26.3 -1.0**
KIV *e* 04 28 59.1
KIV *i*S **S 04 35 27.3 -1.7**
KIV *e*SS **SS 04 39 48.1 -6.0**
KIV pmax pmax
comp=Z,8.0nm,0.6s
KIV MLR MLR
comp=Z,1μm,23.0s
EAB Aberfoyle 69.03 352 *e*P **P 04 26 26.9 -0.3**
EAB Aberfoyle 69.03 352 P **P 04 26 26.9 -0.3**
528A Cox Ranch, San 69.07 67 P **P 04 26 29.6 +1.5**
baz=69,SNR=5.3
BEL Belsk 69.08 335 *e*P **P 04 26 28.8 +1.2**
BEL Belsk 69.08 335 *e*P **P 04 26 28.8 +1.2**
KBZ Khabaz 69.10 317 P **P 04 26 28.2 +0.4**
KBZ pmax pmax
comp=Z,15nm,0.7s
KBZ MLR MLR
comp=Z,1μm,20.7s
KBZ Khabaz 69.10 317 P **P 04 26 28.2 +0.4**
KBZ Khabaz 69.10 317 P **P 04 26 28.2 +0.4**
comp=Z,15nm,0.7s,baz=59,slow=4.0,SNR=36
KBZ LR LR 05 00 41.3
comp=Z,1μm,20.7s,baz=26,slow=39
ESY Stoneypath 69.14 351 *e*P **P 04 26 27.7 -0.2**
ESY Stoneypath 69.14 351 P **P 04 26 27.7 -0.2**
KULM Kulim 69.15 249 *e*P **P 04 26 28.9 +0.4**
comp=Z,27nm,0.9s
KULM Kulim 69.15 249 P **P 04 26 29.6 +1.1**
comp=Z,31nm,1.0s
429A Davenport Ranc 69.19 66 P **P 04 26 28.9 +0.3**
baz=69,SNR=7.8
TXAR Lajitas Array 69.24 69 P **P 04 26 29.9 +0.8**
TXAR pP **pP 04 26 40.6 -0.3**
TXAR Lajitas Array 69.24 69 P **P 04 26 29.9 +0.8**
comp=Z,7.2nm,0.6s,baz=298,slow=4.9,SNR=167
TXAR pP **pP 04 26 40.6 -0.3**
comp=Z,11nm,0.7s,baz=308,slow=4.4,SNR=19
TXAR LR LR 04 58 05.8
comp=Z,408nm,19.2s,baz=305,slow=37
627A Terlingua Ranc 69.30 68 P **P 04 26 29.5 0.0**
baz=69,SNR=15
BSEG Bad Segeberg 69.32 342 *e*P **P 04 26 29.5 +0.5**
comp=Z,48nm,1.0s
BSEG Bad Segeberg 69.32 342 *e*P **P 04 26 29.5 +0.5**
BSEG pmax pmax
comp=Z,48nm,1.0s
232A Coleman 69.38 64 P **P 04 26 30.2 +0.3**
baz=69,SNR=7.7
529A Stev Forest Ra 69.40 67 P **P 04 26 30.9 +0.8**
baz=69,SNR=15
430A Baggett Ranch, 69.41 66 P **P 04 26 30.4 +0.4**
baz=69,SNR=9.1
PGBU Glenifferbraes 69.42 352 *e*P **P 04 26 29.6 0.0**
PGBU AMB AMB 04 26 30.4
comp=Z,96nm,1.1s
PGBU Glenifferbraes 69.42 352 P **P 04 26 29.6 0.0**
PGBU AMB AMB 04 26 30.4
comp=Z,96nm,1.1s
331A San Angelo 69.43 65 P **P 04 26 30.4 +0.3**
baz=69,SNR=16
GUDG Gudauri 69.52 315 P **P 04 26 31.5 +0.7**
628A Black Gap, Mar 69.54 68 P **P 04 26 31.7 +0.8**
baz=69,SNR=7.5
IPM Ipoh 69.62 248 *e*P **P 04 26 30.9 -0.6**
IPM epP **pP 04 26 40.9 -2.4**
IPM Ipoh 69.62 248 P **P 04 26 31.5 0.0**
comp=Z,38nm,1.0s
332A Millersview 69.73 64 P **P 04 26 32.2 +0.2**
baz=70,SNR=13
EKA Eskdalemuir Ar 69.77 351 P **P 04 26 32.2 +0.4**
EKA Eskdalemuir Ar 69.77 351 P **P 04 26 32.2 +0.4**
comp=Z,15nm,0.7s,baz=20,slow=5.1,SNR=45
ESK Eskdalemuir 69.79 351 *e*P **P 04 26 31.5 -0.5**
ESK AMB AMB 04 26 32.5
comp=Z,49nm,1.3s
ESK Eskdalemuir 69.79 351 P **P 04 26 31.5 -0.5**
ESK AMB AMB 04 26 32.5
comp=Z,49nm,1.3s
ESK Eskdalemuir 69.79 351 *e*P **P 04 26 32.4 +0.5**
ESK pmax pmax
comp=Z,118nm,1.7s
ESK Eskdalemuir 69.79 351 *e*P **P 04 26 32.4 +0.5**
comp=Z,118nm,1.7s
ESK Eskdalemuir 69.79 351 P **P 04 26 32.6 +0.7**
comp=Z,188nm,0.8s,SNR=5.5
431A Sonora 69.83 65 P **P 04 26 32.8 +0.2**
baz=70,SNR=9.8
ONI Oni 69.83 316 P **P 04 26 33.3 +0.8**
530A J-C Ranch, Com 69.86 66 P **P 04 26 33.5 +0.7**
baz=70,SNR=14
SIUC Southern Illin 69.91 53 *e*P **P 04 26 32.9 -0.1**
ECK Cauldkaine Hil 69.92 351 *e*P **P 04 26 32.5 -0.2**
ECK Cauldkaine Hil 69.92 351 P **P 04 26 32.5 -0.2**
BLO Bloomington 69.95 50 *e*P **P 04 26 32.6 -0.6**
BLO Bloomington 69.95 50 *e*P **P 04 26 32.6 -0.6**
DGRG David-gareji 69.99 314 P **P 04 26 34.0 +0.6**
COEN Coen 70.02 199 *e*P **P 04 26 34.4 +0.7**
comp=Z,103nm,1.1s
TBLG Delisi 70.02 315 P **P 04 26 34.6 +1.0**
TBLG Delisi 70.02 315 *e*P **P 04 26 34.6 +1.0**
RUE Ruedersdorf 70.04 340 *e*P **P 04 26 33.8 +0.3**
comp=Z,58nm,0.8s
LVV L'vov 70.09 332 *e*P **P 04 26 33.8 -0.1**
LVV MLR MLR
comp=Z,2μm,17.0s
LVV MLR MLR
comp=N,2μm,16.0s
LVV MLR MLR
comp=E,1μm,16.0s
432A Menard 70.10 65 P **P 04 26 34.6 +0.3**
baz=70,SNR=8.9
XAL Allendale 70.15 350 *e*P **P 04 26 33.8 -0.3**
XAL Allendale 70.15 350 P **P 04 26 33.8 -0.3**
531A Rocksprings 70.27 66 P **P 04 26 35.6 +0.3**
baz=70,SNR=7.3
CHVG Ch'k'valeri 70.27 317 P P 04 26 32.1 -3.0
LONY Lake Ozonia 70.27 39 *e*P **P 04 26 34.3 -0.8**
comp=E,36nm,1.4s
ERPA Erie 70.31 44 *e*P **P 04 26 35.3 0.0**
JCT Junction City 70.41 65 *e*P **P 04 26 36.4 +0.2**
JCT *e**PP **pP 04 26 46.6 -1.5**
JCT pmax pmax
comp=Z,37nm,0.9s
JCT Junction City 70.41 65 *e*P **P 04 26 36.4 +0.2**
comp=Z,37nm,0.9s
JCT epP **pP 04 26 46.6 -1.5**
JCT Junction City 70.41 65 P **P 04 26 36.5 +0.2**
baz=70,SNR=8.4
USIN University of 70.42 52 *e*P **P 04 26 36.4 +0.3**
WHTX Lake Whitney 70.44 62 ⇑P **P 04 26 36.5 +0.2**
baz=70
SOC Sochi 70.46 319 *e*P P 04 26 29.9 -6.3
SOC *e* 04 29 10.1
SOC *e*S **S 04 35 44.8 -1.2**
SOC *e* 04 36 37.6
SOC *e*SS **SS 04 40 14.9 -1.5**
SOC MLR MLR
comp=Z,1μm,20.0s
KESW Keswick, Cumbr 70.50 351 *e*P **P 04 26 36.4 +0.1**
KESW AMB AMB 04 26 37.6
comp=Z,68nm,0.9s
KESW Keswick, Cumbr 70.50 351 P **P 04 26 36.4 +0.1**
KESW AMB AMB 04 26 37.6
comp=Z,68nm,0.9s
PARMO Parma 70.51 54 *e*P **P 04 26 37.4 +0.8**
KWP Kalwaria Pacla 70.62 333 *e*P **P 04 26 37.1 0.0**
KWP *e**PP **pP 04 26 49.9 +0.9**
KWP pmax pmax
comp=Z,72nm,1.3s
KWP Kalwaria Pacla 70.62 333 *e*P **P 04 26 37.1 0.0**
comp=Z,72nm,1.3s
KWP epP **pP 04 26 49.9 +0.9**
KWP Kalwaria Pacla 70.62 333 ⇑*i*P **P 04 26 37.2 +0.1**
KWP Kalwaria Pacla 70.62 333 *e*P **P 04 26 37.3 +0.1**
ACSO Alum Creek Sta 70.63 47 *e*P **P 04 26 37.3 0.0**
comp=Z,23nm,0.9s
532A Rocksprings 70.63 65 P **P 04 26 37.6 0.0**
baz=70,SNR=10.0
NRDL Niedersach Rie 70.73 342 *e*P **P 04 26 37.8 +0.2**
comp=Z,19nm,1.0s
NRDL epP **pP 04 26 48.2 -1.3**
OJC Ojcow 70.82 335 *e*P **P 04 26 38.7 +0.4**
OJC pmax pmax
comp=Z,29nm,1.1s
OJC Ojcow 70.82 335 *e*P **P 04 26 38.7 +0.4**
comp=Z,29nm,1.1s
OJC Ojcow 70.82 335 *i*P **P 04 26 38.5 +0.2**
OJC epP **pP 04 26 49.8 -0.4**
WCI Wyandotte Cave 70.83 51 *e*P **P 04 26 37.9 -0.7**
WCI *e**PP **pP 04 26 48.5 -2.0**
WCI pmax pmax
comp=Z,11nm,1.0s
WCI Wyandotte Cave 70.83 51 *e*P **P 04 26 37.9 -0.7**
comp=Z,11nm,1.0s
WCI epP **pP 04 26 48.5 -2.0**
631A Perdido Creek 70.84 66 P **P 04 26 38.9 +0.1**
baz=71,SNR=11
GNAR Gosnell 70.95 55 *e*P **P 04 26 39.4 +0.1**
comp=Z,1μm,1.3s
GNAR epP **pP 04 26 50.7 -0.5**
KSP Ksiaz 71.05 338 ⇑*e*P **P 04 26 39.8 +0.1**
KSP Ksiaz 71.05 338 *i*P **P 04 26 39.8 +0.1**
GMM Mts of Mourne 71.10 352 *e*P **P 04 26 39.3 -0.6**
GMM Mts of Mourne 71.10 352 P **P 04 26 39.3 -0.6**
632A Uvalde 71.19 66 ⇓P **P 04 26 41.1 +0.2**
baz=71
STHS Stebnicka Huta 71.19 334 *e*P **P 04 26 41.8 +1.2**
STHS pmax pmax
comp=Z,6.0nm,1.0s
STHS Stebnicka Huta 71.19 334 *e*P **P 04 26 41.8 +1.2**
KIS Kishinev 71.25 328 *e*P **P 04 26 39.0 -1.9**
KIS *e*S **S 04 35 50.0 -5.0**
KIS *e*L L 04 52 00.0
KIS LRM MLR 05 01 14.0
comp=Z,900nm,17.0s
KIS Kishinev 71.25 328 *e*P **P 04 26 39.0 -1.9**
KIS *e* 04 26 51.0
KIS *e*S **S 04 35 50.0 -5.0**
KIS *e* 04 36 40.0
KIS MLR MLR
comp=N,600nm,17.0s
KIS MLR MLR
comp=E,400nm,17.0s
KIS MLR MLR
comp=Z,1μm,17.0s
KIS MLR MLR
comp=Z,900nm,17.0s
CLZ Clausthal 71.31 342 *e*P **P 04 26 41.9 +0.6**
comp=Z,98nm,1.4s
CLZ epP **pP 04 26 52.1 -1.1**
CLZ Clausthal 71.31 342 *e*P **P 04 26 41.9 +0.6**
CLZ *e**PP **pP 04 26 52.1 -1.1**
CLZ pmax pmax
comp=Z,98nm,1.4s
CLL Collm 71.31 340 *e*P **P 04 26 41.1 -0.1**
comp=Z,54nm,1.0s
CLL epP **pP 04 26 51.3 -1.8**
CLL Collm 71.31 340 ⇑*i*P **P 04 26 41.2 0.0**
CLL *e* 04 26 51.0
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 71.31 340 ⇑*i*P **P 04 26 41.2 0.0**
comp=Z,55nm,1.0s
CLL epP **pP 04 26 51.0 -2.1**
CLL ePP PP 04 29 30.0 +11
CLL *e* 04 33 00.0
CLL *e*S S 04 36 06.0 +10
CLL *e*ScS **ScS 04 36 48.0 +5.7**
CLL *e*SS SS 04 40 48.0 +19
CLL *e* 04 41 48.0
IBBN Ibbenburen 71.32 343 *e*P **P 04 26 41.5 +0.2**
comp=Z,41nm,0.8s
SIM Simferopol' 71.32 324 P **P 04 26 40.3 -1.1**
SIM MLR MLR
comp=Z,620nm,17.0s
GNI Garni 71.34 314 *e*P **P 04 26 41.5 -0.3**
comp=Z,21nm,0.8s
GNI Garni 71.34 314 P **P 04 26 44.0 +2.1**
comp=Z,5.3nm,0.3s,baz=153,slow=4.5,SNR=3.3
KOLS Kolonicke sedl 71.37 333 *e*P **P 04 26 41.5 -0.2**
KOLS pmax pmax
comp=Z,31nm,1.9s
KOLS Kolonicke sedl 71.37 333 *e*P **P 04 26 41.5 -0.2**
NIE Niedzica 71.43 334 ⇑*i*P **P 04 26 42.8 +0.7**
NIE Niedzica 71.43 334 *i*P **P 04 26 42.8 +0.7**
UPC Upice 71.43 338 ⇑*i*P **P 04 26 42.6 +0.6**
UPC Upice 71.43 338 ⇑*i*P **P 04 26 42.6 +0.6**
DPC Dobruska-Polom 71.51 337 ⇑*i*P **P 04 26 43.3 +0.8**
DPC *e* 04 26 53.8
DPC MLR MLR
comp=Z,2μm,17.4s
DPC Dobruska-Polom 71.51 337 ⇑*i*P **P 04 26 43.3 +0.8**
DPC epP **pP 04 26 53.8 -0.6**
DPC AMS AMS 05 03 00.0
comp=Z,2μm,17.4s

BRG Berggiesshubel 71.53 339 *e*P **P 04 26 42.7 +0.1**
comp=Z,20nm,0.9s
BRG *i* PCP **pP 04 26 52.3 -2.2**
comp=Z,13nm,0.8s
BRG *e*PP **PP 04 29 22.7 +1.8**
comp=Z,7.7nm,1.4s
BRG S S 04 36 05.0 +6.8
BRG SS SS 04 40 46.0 +14
BRG
comp=N,284nm,15.9s
BRG
comp=E,239nm,16.7s
BRG
comp=Z,467nm,14.4s
BRG Berggiesshubel 71.53 339 *e*P **P 04 26 42.6 0.0**
comp=Z,64nm,1.8s
BRG *e*pP **pP 04 26 52.9 -1.6**
BRG Berggiesshubel 71.53 339 *e*P **P 04 26 42.7 +0.1**
BRG *i* 04 26 52.3
BRG *e* 04 29 22.7
BRG S S 04 36 05.0 +6.8
BRG pmax pmax
comp=Z,21nm,0.9s
BRG pmax pmax
comp=Z,8.0nm,1.4s
BRG MLR MLR
comp=N,284nm,15.9s
BRG MLR MLR
comp=E,239nm,16.7s
BRG MLR MLR
comp=Z,467nm,14.4s
OKC Ostrava-Krasne 71.57 336⇑*i*P **P 04 26 43.3 +0.5**
OKC *e* 04 26 54.1
OKC MLR MLR
comp=Z,400nm,15.8s
OKC Ostrava-Krasne 71.57 336⇑*i*P **P 04 26 43.3 +0.5**
OKC *e*pP **pP 04 26 54.1 -0.6**
OKC AMS AMS 05 02 00.0
comp=Z,400nm,15.8s
FBE Freiberg 71.61 339 *e*P **P 04 26 43.4 +0.4**
comp=Z,57nm,1.1s
CRVS Cervenica-Dubn 71.61 334 *e*P **P 04 26 40.9 -2.2**
CRVS pmax pmax
comp=Z,14nm,1.6s
CRVS Cervenica-Dubn 71.61 334 *e*P **P 04 26 40.9 -2.2**
UZH Uzhgorod 71.64 333 *e*P **P 04 26 42.2 -1.1**
UZH *e* 04 26 53.8
NEUB Neuenburg 71.65 341 *e*P **P 04 26 43.4 +0.1**
comp=Z,143nm,2.0s
NEUB *e*pP **pP 04 26 53.7 -1.5**
KRLC Kraliky 71.66 337⇑*i*P **P 04 26 43.9 +0.4**
KRLC Kraliky 71.66 337⇑*i*P **P 04 26 43.9 +0.4**
732A Laxson Ranch, 71.70 66 P **P 04 26 45.0 +1.0**
baz=72,SNR=14
PVCC Panska Ves 71.72 339⇑*i*P **P 04 26 44.2 +0.4**
PVCC MLR MLR
comp=Z,300nm,13.8s
PVCC Panska Ves 71.72 339⇑*i*P **P 04 26 44.2 +0.4**
PVCC AMS AMS 05 03 40.0
comp=Z,300nm,13.8s
BUR08 Bucovina Ar. S 71.74 331 *e*P **P 04 26 43.7 -0.4**
BURAR Bucovina Array 71.76 331⇓*i*P **P 04 26 43.7 -0.5**
MORC Moravsky Berou 71.77 336 *e*P **P 04 26 43.7 -0.4**
MORC pmax pmax
comp=Z,24nm,1.1s
MORC Moravsky Berou 71.77 336 *e*P **P 04 26 43.7 -0.4**
comp=Z,24nm,1.1s
MORC Moravsky Berou 71.77 336⇓*i*P **P 04 26 44.3 +0.2**
WTSB Winterswijk 71.81 344 *e*P **P 04 26 44.3 +0.1**
comp=Z,37nm,0.8s
WVT Waverly 71.84 53 *e*P **P 04 26 44.6 -0.1**
WVT pmax pmax
comp=Z,30nm,1.2s
WVT Waverly 71.84 53 *e*P **P 04 26 44.5 -0.1**
comp=Z,30nm,1.2s
IDMV Damavand 71.86 306 *e*Pn **P 04 26 44.6 -0.6**
IHRS Heris 71.87 311 *e*P **P 04 26 44.7 -0.5**
WPM1 Penmaenmawr 71.89 351 *e*P **P 04 26 44.0 -0.7**
WPM1 Penmaenmawr 71.89 351 P **P 04 26 44.0 -0.7**
ISRB Sarab 72.01 310 *e*P **P 04 26 45.4 -0.5**
TRPA Tarpa 72.04 333⇓*i*P **P 04 26 45.7 +0.1**
TRPA Tarpa 72.04 333⇑*e*P **P 04 26 45.8 +0.1**
IGZV Ghazvin 72.04 308 *e*P **P 04 26 45.3 -0.9**
IMRD Marand 72.13 312 *e*P **P 04 26 46.0 -0.6**
PRA Prague 72.19 338 ⇑P **P 04 26 47.0 +0.5**
FOEL Foel Wylfa 72.19 350 *e*P **P 04 26 46.6 0.0**
FOEL AMB AMB 04 26 47.4
comp=Z,31nm,1.9s
FOEL Foel Wylfa 72.19 350 P **P 04 26 46.6 0.0**
FOEL AMB AMB 04 26 47.4
comp=Z,31nm,1.9s
MOX Moxa 72.22 340 *e*P **P 04 26 47.0 +0.3**
comp=Z,31nm,0.8s
MOX Moxa 72.22 340 *e*P **P 04 26 47.0 +0.3**
MOX pmax pmax
comp=Z,31nm,0.8s
BUG Bochum-Univer 72.24 343 *e*P **P 04 26 46.8 0.0**
comp=Z,123nm,1.9s
PRU Pruhonice 72.24 338⇑*i*P **P 04 26 47.3 +0.4**
PRU MLR MLR
comp=Z,500nm,16.5s
PRU Pruhonice 72.24 338⇑*i*P **P 04 26 47.3 +0.4**
PRU *e*pP **pP 04 26 56.6 -2.2**
PRU *e*XS **SKiKP 04 36 23.8 +4.8**
PRU AMS AMS 05 03 40.0
comp=Z,500nm,16.5s
KECS Kecovo 72.25 334 *e*P **P 04 26 47.1 +0.1**
KECS *e* 04 26 58.7
KECS pmax pmax
comp=Z,6.0nm,1.5s
KECS Kecovo 72.25 334 *e*P **P 04 26 47.1 +0.1**
KECS *e*pP **pP 04 26 58.7 -0.2**
PLN Plauen 72.26 340 *e*P **P 04 26 47.5 +0.5**
comp=Z,157nm,0.9s
PLN *e*pP **pP 04 26 57.7 -1.2**
TANN Tannenbergstha 72.27 340 *e*P **P 04 26 47.6 +0.5**
comp=Z,33nm,1.4s
TANN *e*pP **pP 04 26 57.7 -1.3**
WERD Werda 72.27 340 *e*P **P 04 26 47.5 +0.4**
comp=Z,34nm,1.0s
GUNZ Gunzen 72.34 340 *e*P **P 04 26 48.0 +0.5**
comp=Z,119nm,1.9s
UBBA Unterbreizbach 72.36 342 *e*P **P 04 26 48.2 +0.8**
comp=Z,35nm,1.2s
IMHD Mahdasht 72.41 307 *e*P **P 04 26 47.8 -0.4**
WERN Wernitzgruen 72.41 340 *e*P **P 04 26 48.4 +0.5**
comp=Z,202nm,2.1s
VRAC Vranov 72.42 337 P **P 04 26 48.8 +0.8**
VRAC Vranov 72.42 337⇓*i*P **P 04 26 48.7 +0.8**
VRAC Vranov 72.42 337 P **P 04 26 48.8 +0.8**
comp=Z,10.0nm,0.6s,baz=28,slow=5.6,SNR=19
NKC Novy Kostel 72.44 340⇑*i*P **P 04 26 48.5 +0.4**
NKC MLR MLR
comp=Z,400nm,15.4s
NKC Novy Kostel 72.44 340⇑*i*P **P 04 26 48.5 +0.4**
NKC *e*pP **pP 04 26 57.2 -2.8**
NKC AMS AMS 05 04 20.0
comp=Z,400nm,15.4s
ISHB Shabestar 72.52 312 *e*P **P 04 26 48.8 -0.3**
HLM1 Long Mynd 72.53 350 *e*P **P 04 26 48.2 -0.4**
HLM1 AMB AMB 04 26 49.2
comp=Z,40nm,1.3s
HLM1 Long Mynd 72.53 350 P **P 04 26 48.2 -0.4**
HLM1 AMB AMB 04 26 49.2
comp=Z,40nm,1.3s
VYHS Vyhne 72.65 335 *e*P **P 04 26 49.7 +0.3**
VYHS pmax pmax
comp=Z,21nm,1.7s
VYHS Vyhne 72.65 335 *e*P **P 04 26 49.7 +0.3**
VYHS *e* 04 50 42.3
PLAL Pickwick Lake 72.67 54 *e*P **P 04 26 49.3 -0.3**
comp=Z,22nm,0.8s
TREC Trest 72.69 338⇑*i*P **P 04 26 50.2 +0.6**
TREC MLR MLR
comp=Z,400nm,13.9s
TREC Trest 72.69 338⇑*i*P **P 04 26 50.2 +0.6**
TREC AMS AMS 05 04 30.0
comp=Z,400nm,13.9s
MANZ Manzenberg 72.75 340 *e*P **P 04 26 50.2 +0.3**
comp=Z,27nm,1.1s
TLCR 72.87 327⇓P **P 04 26 50.3 -0.3**
TLCR 72.87 327⇓*i*P **P 04 26 50.3 -0.3**
VRI Vrincioaia 72.90 329 ⇑P **P 04 26 50.6 -0.3**
VRI Vrincioaia 72.90 329⇑*i*P **P 04 26 50.5 -0.3**
HKT Hockley 72.91 62 *e*P **P 04 26 51.9 +0.9**
HKT pmax pmax
comp=Z,27nm,1.4s
HKT Hockley 72.91 62 *e*P **P 04 26 51.9 +0.9**
comp=Z,27nm,1.4s
PSZ Piszkesteto 72.92 334 *e*P **P 04 26 51.0 -0.1**
PSZ pmax pmax
comp=Z,45nm,1.7s
PSZ Piszkesteto 72.92 334 *e*P **P 04 26 51.0 -0.1**
comp=Z,45nm,1.7s
PSZ Piszkesteto 72.92 334⇑*i*P **P 04 26 50.4 -0.7**
PSZ Piszkesteto 72.92 334⇑*e*P **P 04 26 51.6 +0.5**
ROTZ Rotzenmuhle 72.94 340 *e*P **P 04 26 51.8 +0.8**
comp=Z,58nm,1.4s
ROTZ *e*pP **pP 04 27 02.0 -0.9**
IRAZ Razeghan 72.98 307 *e*P **P 04 26 51.3 -0.5**
MCH1 Michaelchurch 73.06 350 *e*P **P 04 26 50.8 -0.9**
MCH1 AMB AMB 04 26 52.7
comp=Z,35nm,3.0s
MCH1 Michaelchurch 73.06 350 P **P 04 26 50.8 -0.9**
MCH1 AMB AMB 04 26 52.7
comp=Z,35nm,3.0s
HGN Heimansgroeve 73.11 344 *e*P **P 04 26 51.9 0.0**
comp=Z,40nm,1.0s
HGN *e*PP **PP 04 29 35.7 +1.4**
HGN *e*S SKiKP 04 36 33.1 +13
BEBN Eben Emael 73.12 344 P **P 04 26 52.2 +0.2**
comp=Z,11nm,1.7s
GRF Grafenberg Arr 73.20 340 *e*P **P 04 26 53.3 +0.7**
comp=Z,176nm,1.7s
GRF *e*L L 05 01 42.6
comp=Z,196nm,21.8s
GRF Grafenberg Arr 73.20 340 *e*P **P 04 26 53.3 +0.7**
GRF pmax pmax
comp=Z,176nm,1.7s
GRF MLR MLR
comp=Z,200nm,21.8s
GRFO Grafenberg 73.20 340 *e*P **P 04 26 53.3 +0.7**
GRFO pmax pmax
comp=Z,18nm,0.5s
GRFO Grafenberg 73.20 340 *e*P **P 04 26 53.3 +0.7**
comp=Z,18nm,0.5s
TNS Taunus Mts 73.21 342 *e*P **P 04 26 53.0 +0.3**
comp=Z,57nm,1.6s
TNS *e*pP **pP 04 27 03.4 -1.2**
TNS Taunus Mts 73.21 342 *e*P **P 04 26 53.0 +0.3**
TNS *e**PP **pP 04 27 03.4 -1.2**
TNS pmax pmax
comp=Z,57nm,1.6s
DRGR 73.22 332⇑P **P 04 26 52.8 0.0**
DRGR 73.22 332⇑*i*P **P 04 26 52.8 0.0**
MEM Membach 73.25 344 P **P 04 26 53.0 +0.2**
comp=Z,47nm,1.1s
MEM XP **sP 04 27 07.7 -1.6**
KHC Kasperske Hory 73.26 339 *e*P **P 04 26 53.2 +0.2**
KHC pmax pmax
comp=Z,36nm,1.2s
KHC Kasperske Hory 73.26 339⇑*i*P **P 04 26 53.7 +0.7**
KHC *e*pP **pP 04 27 04.1 -0.8**
KHC AMS AMS 05 03 40.0
comp=Z,300nm,23.1s
KHC Kasperske Hory 73.26 339 *e*P **P 04 26 53.2 +0.2**
comp=Z,36nm,1.2s
ZST Bratislava 73.35 336 *e*P **P 04 26 53.2 -0.3**
ZST pmax pmax
comp=Z,51nm,2.1s
ZST Bratislava 73.35 336 *e*P **P 04 26 53.2 -0.3**
WET Wettzell 73.39 339 *e*P **P 04 26 54.5 +0.8**
comp=Z,106nm,1.8s
WET Wettzell 73.39 339 *e*P **P 04 26 54.5 +0.8**
WET pmax pmax
comp=Z,106nm,1.8s
ICHK Chekchek 73.42 302 *e*P **P 04 26 52.7 -1.8**
TZTN Tazewell 73.45 50 *e*P **P 04 26 54.5 +0.2**
comp=Z,18nm,1.0s
SWET Senanee 73.47 52 *e*P **P 04 26 54.1 -0.3**
comp=Z,23nm,0.8s
SWET *e*pP **pP 04 27 04.5 -1.9**
MLR Muntele Rosu 73.48 329 P **P 04 26 54.1 -0.3**
MLR Muntele Rosu 73.48 329⇑*i*P **P 04 26 54.2 -0.3**
MLR Muntele Rosu 73.48 329 P **P 04 26 54.1 -0.3**
comp=Z,2.5nm,0.5s,baz=328,slow=5.4,SNR=59
GEC2 GERESS Array S 73.50 339 *e*P **P 04 26 54.8 +0.3**
comp=Z,18nm,0.7s
GEC2 *e*pP **pP 04 27 05.2 -1.2**
GEC2 GERESS Array S 73.50 339 *e*P **P 04 26 54.8 +0.3**
GEC2 *e**PP **pP 04 27 05.2 -1.2**
GEC2 pmax pmax
comp=Z,18nm,0.7s
GERES GERESS Array B 73.50 339 P **P 04 26 55.0 +0.6**
GERES GERESS Array B 73.50 339 P **P 04 26 55.0 +0.6**
comp=Z,8.9nm,0.5s,baz=34,slow=5.7,SNR=136
GERES LR LR 05 04 59.5
comp=Z,481nm,18.1s,baz=197,slow=40
BCLA Clavier 73.54 344 P **P 04 26 53.9 -0.7**
comp=Z,19nm,1.5s
BUD Budapest 73.55 335⇑*e*P **P 04 26 55.6 +1.0**
TIRR Tirgusor 73.65 327 *e*P **P 04 26 54.9 -0.4**
TIRR pmax pmax
comp=Z,17nm,1.3s
TIRR Tirgusor 73.65 327 *e*P **P 04 26 54.9 -0.4**
comp=Z,16nm,1.3s
TIRR Tirgusor 73.65 327⇑*i*P **P 04 26 54.5 -0.7**
ABH Alteburg 73.69 343 *e*P **P 04 26 55.5 0.0**
TOD Tromm 73.74 342 *e*P **P 04 26 56.0 +0.2**
TOD Tromm 73.74 342 *e*P **P 04 26 56.0 +0.2**
PKSG 73.79 335⇑*e*P **P 04 26 56.9 +0.8**
VOIR 73.79 330 ⇓P **P 04 26 56.4 +0.2**
VOIR 73.79 330⇓*i*P **P 04 26 56.4 +0.2**
CSKK Cs^‡kako 73.85 335⇑*e*P **P 04 26 57.3 +0.9**
POO Poona 73.85 279 *ex* P 04 26 53.0 -3.9
CONA Conrad Observa 73.89 337⇓*i*P **P 04 26 57.3 +0.5**
comp=Z,27nm,1.5s,SNR=13
IZEF Zefreh 73.90 304 *e*P **P 04 26 56.3 -1.0**
IKLH Kolahrood 73.92 305 *e*P **P 04 26 56.9 -0.5**
CPCT Cooper Cave 73.92 51 *e*P **P 04 26 57.2 +0.2**
GIVF Givet 73.92 345⇑*i*P **P 04 26 56.7 -0.1**
comp=Z,5.9nm,0.4s
GIVF Givet 73.92 345⇑*i*P **P 04 26 56.7 -0.1**
GIVF pmax pmax
comp=Z,6.0nm,0.4s
GIVF Givet 73.92 345⇑*i*P **P 04 26 56.7 -0.1**
comp=Z,5.9nm,0.4s
RUP Ruppelstein 73.95 343⇑*e*P **P 04 26 57.1 +0.1**
RUP Ruppelstein 73.95 343⇑*e*P **P 04 26 57.1 +0.1**
SOP Sopron 73.96 336⇑*e*P **P 04 26 58.0 +1.0**
DOU Dourbes 73.97 345 P **P 04 26 57.1 +0.1**
comp=Z,8.5nm,1.1s
ARR Arges 73.97 330⇑*i*P **P 04 26 57.9 +0.6**
PKST T``s 74.00 335⇑*e*P **P 04 26 58.0 +0.7**
IMEH Mehriz 74.01 302 *e*P **P 04 26 56.3 -1.7**
BAIF Baives 74.06 345⇑*i*P **P 04 26 57.7 +0.1**
comp=Z,21nm,0.6s
BAIF Baives 74.06 345⇑*i*P **P 04 26 57.7 +0.1**
BAIF pmax pmax
comp=Z,21nm,0.6s
BAIF Baives 74.06 345⇑*i*P **P 04 26 57.7 +0.1**
comp=Z,21nm,0.6s
WLF Walferdange 74.14 344 P **P 04 26 58.9 +0.8**
comp=Z,18nm,1.6s
WLF AP **pP 04 27 07.8 -2.2**
WLF Walferdange 74.14 344 *e*P **P 04 26 58.5 +0.4**
comp=Z,45nm,1.5s
WLF Walferdange 74.14 344 *e*P **P 04 26 58.5 +0.4**
WLF pmax pmax
comp=Z,9.0nm,0.9s
WLF Walferdange 74.14 344 *e*P **P 04 26 58.5 +0.4**
comp=Z,9.1nm,0.9s
KTD Kalmit 74.14 342 *e*P **P 04 26 58.6 +0.4**
KTD Kalmit 74.14 342 *e*P **P 04 26 58.6 +0.4**
MOA Molln 74.32 338⇑*i*P **P 04 26 59.6 +0.4**
comp=Z,18nm,1.3s,SNR=9.0
STU Stuttgart 74.47 341 *e*P **P 04 27 00.1 +0.1**
comp=Z,27nm,1.0s
STU *e*pP **pP 04 27 10.5 -1.5**
STU Stuttgart 74.47 341 *e*P **P 04 27 00.7 +0.7**
STU pmax pmax
comp=Z,57nm,1.4s
STU Stuttgart 74.47 341 *e*P **P 04 27 00.7 +0.7**
comp=Z,57nm,1.4s
GZR Gura Zlata 74.48 331 ⇑P **P 04 27 00.1 -0.1**
GZR Gura Zlata 74.48 331⇑*i*P **P 04 27 00.1 -0.1**
LANF Langenberg 74.52 342⇑*e*P **P 04 27 00.7 +0.4**
LANF Langenberg 74.52 342⇑*e*P **P 04 27 00.7 +0.4**
LANF Langenberg 74.52 342⇑*e*P **P 04 27 00.7 +0.4**
BZS Buzias 74.60 332 ⇑P **P 04 27 00.1 -0.7**
BZS Buzias 74.60 332⇑*i*P **P 04 27 00.1 -0.7**
ARSA Arzberg 74.61 337⇑*i*P **P 04 27 01.7 +0.8**
comp=Z,8.4nm,0.6s
FUR Furstenfeldbru 74.65 340 *e*P **P 04 27 01.6 +0.5**
comp=Z,31nm,0.8s
FUR *e*pP **pP 04 27 11.8 -1.3**
FUR Furstenfeldbru 74.65 340 *e*P **P 04 27 01.6 +0.5**
FUR *e**PP **pP 04 27 11.8 -1.3**
FUR pmax pmax
comp=Z,31nm,0.8s
DYA Yadsworthy 74.69 350 *e*P **P 04 27 01.4 +0.2**
DYA AMB AMB 04 27 02.3
comp=Z,59nm,2.1s
DYA Yadsworthy 74.69 350 P **P 04 27 01.4 +0.2**
DYA AMB AMB 04 27 02.3
comp=Z,59nm,2.1s
ILIN Lien 74.73 309 *e*P **P 04 27 00.8 -1.3**
RJOB Jochberg 74.75 339 *e*P **P 04 27 02.4 +0.7**
comp=Z,20nm,1.0s
IPIR Pirpir 74.76 305 *e*P **P 04 27 02.7 +0.3**
LRAL Lakeview Retre 74.77 54 *e*P **P 04 27 01.3 -0.7**
comp=Z,8.9nm,0.7s
PKSM Moragy 74.83 334 ⇓P **P 04 27 01.6 -0.5**
PKSM Moragy 74.83 334⇓*i*P **P 04 27 01.6 -0.5**
PKSM Moragy 74.83 334⇓*e*P **P 04 27 01.8 -0.3**
BEHE Becsehely 75.04 336⇑*e*P **P 04 27 04.0 +0.6**
BFO Black Forest 75.05 342 *e*P **P 04 27 03.5 +0.1**
comp=Z,102nm,2.0s
BFO Black Forest 75.05 342 *e*P **P 04 27 03.5 +0.1**
BFO pmax pmax
comp=Z,102nm,2.0s
BFO Black Forest 75.05 342 *e*P **P 04 27 03.3 -0.1**
comp=Z,9.1nm,0.6s
BFO Black Forest 75.05 342 P **P 04 27 03.0 -0.4**
comp=Z,114nm,0.7s,SNR=8.3
CDF Champ du Feu 75.16 343⇑*i*P **P 04 27 04.3 +0.2**
comp=Z,62nm,0.9s
CDF Champ du Feu 75.16 343⇑*i*P **P 04 27 04.3 +0.2**
CDF pmax pmax
comp=Z,62nm,0.9s
CDF Champ du Feu 75.16 343⇑*i*P **P 04 27 04.3 +0.2**
comp=Z,62nm,0.9s
SPAK Spaichingen-Ko 75.19 342⇑*e*P **P 04 27 04.4 +0.1**
KBA Koelnbreinsper 75.25 338 *i* P **P 04 27 05.9 +1.1**
comp=Z,38nm,0.6s,SNR=24
SOKA Soboth 75.26 337⇑*i*P **P 04 27 05.3 +0.6**
comp=Z,14nm,0.6s
PERS Pernice 75.28 337 *i* P **P 04 27 05.4 +0.6**
PAGF Fort de Pagny 75.28 344⇑*i*P **P 04 27 05.3 +0.6**
comp=Z,22nm,0.6s
PAGF Fort de Pagny 75.28 344⇑*i*P **P 04 27 05.3 +0.6**
comp=Z,22nm,0.6s
LIBD Limburg 75.36 342 *e*P **P 04 27 05.5 +0.4**
LIBD Limburg 75.36 342 *e*P **P 04 27 05.5 +0.4**
ECH Echery 75.37 343 *e*P **P 04 27 05.2 0.0**
ECH pmax pmax
comp=Z,55nm,1.4s
ECH Echery 75.37 343 *e*P **P 04 27 05.2 0.0**
comp=Z,55nm,1.4s
ECH Echery 75.37 343⇑*e*P **P 04 27 05.3 0.0**
WATA Walderalm 75.38 339⇓*i*P **P 04 27 05.9 +0.4**
comp=Z,9.1nm,0.6s
RETA Reutte 75.40 340⇓*i*P **P 04 27 05.9 +0.4**
comp=Z,18nm,1.1s
WTTA Wattenberg 75.44 339 *i* P **P 04 27 06.7 +0.9**
comp=Z,57nm,1.5s,SNR=9.4
MEZF Maizieres J'vi 75.44 344⇑*i*P **P 04 27 06.0 +0.4**
comp=Z,31nm,0.5s
MEZF Maizieres J'vi 75.44 344⇑*i*P **P 04 27 06.0 +0.4**
comp=Z,31nm,0.5s
MOTA Moosalm 75.47 340 *i* P **P 04 27 06.4 +0.4**
comp=Z,30nm,1.0s,SNR=16
CTAO Charters Tower 75.49 195 *e*P **P 04 27 06.8 +0.7**
CTAO pmax pmax
comp=Z,22nm,1.2s
CTAO Charters Tower 75.49 195 *e*P **P 04 27 06.8 +0.7**
comp=Z,22nm,1.2s
OBKA Obir 75.53 337⇑*i*P **P 04 27 06.8 +0.5**
comp=Z,28nm,0.7s,SNR=11
FELD Feldberg im Sc 75.55 342⇑*e*P **P 04 27 06.4 0.0**
THEF They Montfort 75.56 343⇑*e*P **P 04 27 06.6 +0.3**
THEF They Montfort 75.56 343⇑*e*P **P 04 27 06.6 +0.3**
THEF They Montfort 75.56 343⇑*e*P **P 04 27 06.6 +0.3**
KMSC Kings Mountain 75.60 49 ⇑P **P 04 27 06.2 -0.6**
baz=75
MYKA Terra Mystica 75.61 338⇑*i*P **P 04 27 07.1 +0.4**
comp=Z,14nm,0.7s
HAU Haudompre 75.71 343⇑*i*P **P 04 27 07.3 +0.1**
comp=Z,19nm,0.5s
HAU *e*R
comp=Z,265nm,20.8s
HAU Haudompre 75.71 343⇑*i*P **P 04 27 07.3 +0.1**
HAU pmax pmax
comp=Z,19nm,0.4s
HAU Haudompre 75.71 343⇑*i*P **P 04 27 07.3 +0.1**
comp=Z,19nm,0.4s
MOF Molkenrain 75.73 343⇑*e*P **P 04 27 07.4 0.0**
MOF Molkenrain 75.73 343⇑*e*P **P 04 27 07.4 0.0**
MOF Molkenrain 75.73 343⇑*e*P **P 04 27 07.4 0.0**
SFTF Sexfontaines 75.73 344⇑*i*P **P 04 27 07.5 +0.2**
comp=Z,77nm,0.6s
SFTF Sexfontaines 75.73 344⇑*i*P **P 04 27 07.5 +0.2**
comp=Z,77nm,0.6s
ABTA Abfaltersbach 75.75 339⇑*i*P **P 04 27 07.7 +0.2**
comp=Z,29nm,0.9s,SNR=13
DAVA Damuels 75.77 341⇑*i*P **P 04 27 07.8 +0.1**
comp=Z,36nm,1.4s
HINF Hinteralfeld 75.81 343⇑*i*P **P 04 27 07.6 -0.2**
comp=Z,13nm,0.6s
HINF Hinteralfeld 75.81 343⇑*i*P **P 04 27 07.6 -0.2**
HINF pmax pmax
comp=Z,13nm,0.6s
HINF Hinteralfeld 75.81 343⇑*i*P **P 04 27 07.6 -0.2**
comp=Z,13nm,0.6s
FETA Feichten 75.85 340 *i* P **P 04 27 09.0 +0.7**
comp=Z,27nm,0.8s,SNR=22
FLN La Foliniere 75.97 348⇑*i*P **P 04 27 08.3 -0.3**
comp=Z,44nm,0.8s
FLN *e*R
comp=Z,186nm,17.8s
FLN La Foliniere 75.97 348⇑*i*P **P 04 27 08.3 -0.3**
FLN pmax pmax
comp=Z,44nm,0.8s
FLN La Foliniere 75.97 348⇑*i*P **P 04 27 08.3 -0.3**
comp=Z,44nm,0.8s
BBS Basel-Blauen 76.03 342 *e*P **P 04 27 09.2 +0.1**
BBS Basel-Blauen 76.03 342 *e*P **P 04 27 09.2 +0.1**
BR131 Keskin Array S 76.07 321 *e*P **P 04 27 09.3 -0.2**
comp=Z,3.0nm,0.5s
BRTR Keskin Array B 76.07 321 P **P 04 27 09.6 0.0**
BRTR Keskin Array B 76.07 321 P **P 04 27 09.6 0.0**
comp=Z,4.0nm,0.5s,baz=30,slow=3.0,SNR=37
BRTR LR LR 05 05 58.3
comp=Z,142nm,20.2s,baz=25,slow=40
LDF La Druitiere 76.09 348⇑*i*P **P 04 27 09.0 -0.3**
comp=Z,19nm,0.8s
LDF La Druitiere 76.09 348⇑*i*P **P 04 27 09.0 -0.3**
LDF pmax pmax
comp=Z,19nm,0.8s
LDF La Druitiere 76.09 348⇑*i*P **P 04 27 09.0 -0.3**
comp=Z,19nm,0.8s
VISS Visnje 76.13 337 *i* P **P 04 27 09.2 -0.4**
JAVS Javornik 76.22 337 *i* P **P 04 27 09.6 -0.6**
ANTO Ankara 76.25 322 *e*P **P 04 27 10.6 +0.1**
ANTO pmax pmax
comp=Z,23nm,1.4s
ANTO Ankara 76.25 322 *e*P **P 04 27 10.6 +0.1**
comp=Z,23nm,1.4s
DAVOX Davos/Dischmat 76.25 340 P **P 04 27 10.1 -0.4**
DAVOX Davos/Dischmat 76.25 340 P **P 04 27 10.1 -0.4**
comp=Z,14nm,0.7s,baz=0.6,slow=4.0,SNR=19
LOMF Lomont 76.26 343⇑*e*P **P 04 27 10.9 +0.5**
LOMF Lomont 76.26 343⇑*e*P **P 04 27 10.9 +0.5**
LOMF Lomont 76.26 343⇑*e*P **P 04 27 10.9 +0.5**
BOJS Bojanci 76.31 336 *i* P **P 04 27 10.9 +0.3**
FUORN Ofenpass-Fuorn 76.33 340 *e*P **P 04 27 12.0 +0.9**
GRR Gorron 76.38 348⇑*i*P **P 04 27 10.9 -0.1**
comp=Z,77nm,1.0s
GRR Gorron 76.38 348⇑*i*P **P 04 27 10.9 -0.1**
GRR pmax pmax
comp=Z,77nm,1.0s
GRR Gorron 76.38 348⇑*i*P **P 04 27 10.9 -0.1**
comp=Z,77nm,1.0s
DZM Mont Dzumac 76.41 175 *e*S **S 04 36 50.8 -2.9**
DZM *e*LR LR 04 50 43.1
TUE Stuetta 76.65 341 *e*P **P 04 27 12.9 +0.1**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,26nm,0.8s						
ROSF	**Rostrenen**	**76.70**	**350**	⇑*i*P	**P**	**04 27 13.1**	**+0.3**
	comp=Z,32nm,0.8s						
ROSF	**Rostrenen**	**76.70**	**350**	⇑*i*P	**P**	**04 27 13.1**	**+0.3**
ROSF				pmax	pmax		
	comp=Z,33nm,0.8s						
ROSF	**Rostrenen**	**76.70**	**350**	⇑*i*P	**P**	**04 27 13.1**	**+0.3**
	comp=Z,32nm,0.8s						
SGMF	**Saint Gilles**	**76.71**	**349**	⇑*i*P	**P**	**04 27 13.0**	**+0.2**
	comp=Z,20nm,0.7s						
SGMF	**Saint Gilles**	**76.71**	**349**	⇑*i*P	**P**	**04 27 13.0**	**+0.2**
SGMF				pmax	pmax		
	comp=Z,20nm,0.7s						
SGMF	**Saint Gilles**	**76.71**	**349**	⇑*i*P	**P**	**04 27 13.0**	**+0.2**
	comp=Z,20nm,0.7s						
LOR	**Lormes**	**76.83**	**345**	⇑*i*P	**P**	**04 27 13.5**	**-0.1**
	comp=Z,36nm,0.6s						
LOR				*e*R			
	comp=Z,310nm,22.0s						
LOR	**Lormes**	**76.83**	**345**	⇑*i*P	**P**	**04 27 13.5**	**-0.1**
	comp=Z,36nm,0.6s						
VTS	**Vitosha**	**76.93**	**330**	⇓P	**P**	**04 27 13.5**	**-0.9**
VTS	**Vitosha**	**76.93**	**330**	⇓*i*P	**P**	**04 27 13.5**	**-0.9**
HYF	**Humbligny**	**77.01**	**345**	*e*P	**P**	**04 27 15.0**	**+0.4**
HYF	**Humbligny**	**77.01**	**345**	*e*P	**P**	**04 27 15.0**	**+0.4**
SSF	**Saint Saulge**	**77.09**	**345**	⇑*i*P	**P**	**04 27 15.0**	**0.0**
	comp=Z,14nm,0.5s						
SSF	**Saint Saulge**	**77.09**	**345**	⇑*i*P	**P**	**04 27 15.0**	**0.0**
SSF				pmax	pmax		
	comp=Z,14nm,0.5s						
SSF	**Saint Saulge**	**77.09**	**345**	⇑*i*P	**P**	**04 27 15.0**	**0.0**
	comp=Z,14nm,0.5s						
QUIF	**Quistinic**	**77.11**	**350**	⇑*i*P	**P**	**04 27 15.2**	**+0.2**
	comp=Z,33nm,0.8s						
QUIF	**Quistinic**	**77.11**	**350**	⇑*i*P	**P**	**04 27 15.2**	**+0.2**
QUIF				pmax	pmax		
	comp=Z,33nm,0.8s						
QUIF	**Quistinic**	**77.11**	**350**	⇑*i*P	**P**	**04 27 15.2**	**+0.2**
	comp=Z,33nm,0.8s						
CABF	**La Chapelle**	**77.11**	**343**	⇑*i*P	**P**	**04 27 15.7**	**+0.5**
	comp=Z,28nm,0.7s						
CABF	**La Chapelle**	**77.11**	**343**	⇑*i*P	**P**	**04 27 15.7**	**+0.5**
CABF				pmax	pmax		
	comp=Z,28nm,0.7s						
CABF	**La Chapelle**	**77.11**	**343**	⇑*i*P	**P**	**04 27 15.7**	**+0.5**
	comp=Z,28nm,0.7s						
SENIN	**Lac Senin/Sane**	**77.14**	**342**	*e*P	**P**	**04 27 16.3**	**+0.7**
BHD	**Baghdad**	**77.28**	**310**	*e*P	**P**	**04 27 15.0**	**-1.2**
BHD				*e*S	**S**	**04 37 02.5**	**-0.5**
AVF	**Avril sur Loir**	**77.37**	**345**	⇑*i*P	**P**	**04 27 16.7**	**+0.1**
	comp=Z,32nm,0.7s						
AVF	**Avril sur Loir**	**77.37**	**345**	⇑*i*P	**P**	**04 27 16.7**	**+0.1**
AVF				pmax	pmax		
	comp=Z,32nm,0.6s						
AVF	**Avril sur Loir**	**77.37**	**345**	⇑*i*P	**P**	**04 27 16.7**	**+0.1**
	comp=Z,32nm,0.6s						
SMF	**Signal de Mont**	**77.44**	**345**	⇑*i*P	**P**	**04 27 17.0**	**0.0**
	comp=Z,38nm,1.0s						
SMF	**Signal de Mont**	**77.44**	**345**	⇑*i*P	**P**	**04 27 17.0**	**0.0**
SMF				pmax	pmax		
	comp=Z,38nm,1.0s						
SMF	**Signal de Mont**	**77.44**	**345**	⇑*i*P	**P**	**04 27 17.0**	**0.0**
	comp=Z,38nm,1.0s						
ALN	**Alexandroupoli**	**77.61**	**327**	*e*P	**P**	**04 27 15.7**	**-2.3**
BGF	**Bois d'Agland**	**77.68**	**345**	⇑*i*P	**P**	**04 27 18.4**	**+0.1**
	comp=Z,45nm,1.1s						
BGF	**Bois d'Agland**	**77.68**	**345**	⇑*i*P	**P**	**04 27 18.4**	**+0.1**
BGF				pmax	pmax		
	comp=Z,45nm,1.1s						
BGF	**Bois d'Agland**	**77.68**	**345**	⇑*i*P	**P**	**04 27 18.4**	**+0.1**
	comp=Z,45nm,1.1s						
TIGA	**Tifton**	**77.69**	**53**	⇓P	**P**	**04 27 18.7**	**+0.1**
	baz=78						
WRAB	**Tennant Creek**	**77.78**	**206**	*e*P	**P**	**04 27 19.4**	**+0.4**
WRAB				pmax	pmax		
	comp=Z,12nm,0.7s						
WRAB	**Tennant Creek**	**77.78**	**206**	*e*P	**P**	**04 27 19.4**	**+0.4**
	comp=Z,12nm,0.7s						
WRAB	**Tennant Creek**	**77.78**	**206**	P	**P**	**04 27 19.8**	**+0.8**
	comp=Z,145nm,1.0s,SNR=28						
WRA	**Warramunga Arr**	**77.79**	**206**	P	**P**	**04 27 19.6**	**+0.6**
WRA				pP	**PcP**	**04 27 29.8**	**+0.8**
WRA	**Warramunga Arr**	**77.79**	**206**	P	**P**	**04 27 19.6**	**+0.6**
	comp=Z,10nm,0.5s,baz=20,slow=6.0,SNR=189						
WRA				pP	**PcP**	**04 27 29.8**	**+0.8**
	comp=Z,6.6nm,0.7s,baz=21,slow=5.9,SNR=9.5						
NVR	**Nevrokopi**	**77.87**	**329**	*e*P	**P**	**04 27 19.1**	**-0.4**
RSL	**Roselend**	**77.91**	**342**	*e*P	**P**	**04 27 20.5**	**+0.7**
RSL	**Roselend**	**77.91**	**342**	*e*P	**P**	**04 27 20.5**	**+0.7**
RSL	**Roselend**	**77.91**	**342**	*e*P	**P**	**04 27 20.5**	**+0.7**
TCF	**Toulx Ste Croi**	**78.03**	**346**	⇑*i*P	**P**	**04 27 20.6**	**+0.3**
	comp=Z,30nm,1.0s						
TCF	**Toulx Ste Croi**	**78.03**	**346**	⇑*i*P	**P**	**04 27 20.6**	**+0.3**
TCF				pmax	pmax		
	comp=Z,30nm,1.0s						
TCF	**Toulx Ste Croi**	**78.03**	**346**	⇑*i*P	**P**	**04 27 20.6**	**+0.3**
	comp=Z,30nm,1.0s						
MFF	**Saint Martin d**	**78.05**	**347**	⇑*i*P	**P**	**04 27 20.7**	**+0.3**
	comp=Z,51nm,1.1s						
MFF	**Saint Martin d**	**78.05**	**347**	⇑*i*P	**P**	**04 27 20.7**	**+0.3**
MFF				pmax	pmax		
	comp=Z,51nm,1.1s						
MFF	**Saint Martin d**	**78.05**	**347**	⇑*i*P	**P**	**04 27 20.7**	**+0.3**
	comp=Z,51nm,1.1s						
LPL	**La Plagne**	**78.06**	**342**	⇑*i*P	**P**	**04 27 21.8**	**+1.1**
	comp=Z,107nm,1.1s						
LPL	**La Plagne**	**78.06**	**342**	⇑*i*P	**P**	**04 27 21.8**	**+1.1**
LPL				pmax	pmax		
	comp=Z,107nm,1.1s						
LPL	**La Plagne**	**78.06**	**342**	⇑*i*P	**P**	**04 27 21.8**	**+1.1**
	comp=Z,107nm,1.1s						
LPG	**La Plagne**	**78.07**	**342**	⇑*i*P	**P**	**04 27 22.1**	**+1.2**
	comp=Z,94nm,0.9s						
LPG	**La Plagne**	**78.07**	**342**	⇑*i*P	**P**	**04 27 22.1**	**+1.2**
LPG				pmax	pmax		
	comp=Z,94nm,0.9s						
LPG	**La Plagne**	**78.07**	**342**	⇑*i*P	**P**	**04 27 22.1**	**+1.2**
	comp=Z,94nm,0.9s						
AGO	**Saint Agoulin**	**78.13**	**345**	⇑*e*P	**P**	**04 27 22.7**	**+1.9**
PYM	**Petit Puy Mans**	**78.44**	**345**	⇑*e*P	**P**	**04 27 24.3**	**+1.6**
PYM	**Petit Puy Mans**	**78.44**	**345**	⇑*e*P	**P**	**04 27 24.3**	**+1.6**
UOSS	**Wadi Hilu**	**78.45**	**297**	P	**P**	**04 27 21.0**	**-1.9**
	comp=Z,210nm,0.4s,SNR=7.9						
BNI	**Bardonecchia**	**78.51**	**342**	*e*P	**P**	**04 27 24.0**	**+0.8**
BNI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
BNI	**Bardonecchia**	**78.51**	**342**	*e*P	**P**	**04 27 24.0**	**+0.8**
	comp=Z,10nm,0.5s						
FITZ	**Fitzroy Crossi**	**78.62**	**215**	*e*P	**P**	**04 27 24.4**	**+0.8**
	comp=Z,17nm,1.0s						
SSB	**Saint Sauveur**	**78.66**	**344**	*e*P	**P**	**04 27 24.3**	**+0.5**
SSB				pmax	pmax		
	comp=Z,55nm,1.5s						
SSB	**Saint Sauveur**	**78.66**	**344**	*e*P	**P**	**04 27 24.3**	**+0.5**
	comp=Z,55nm,1.5s						
SSB	**Saint Sauveur**	**78.66**	**344**	*e*P	**P**	**04 27 24.4**	**+0.6**
VLC	**Villacollemand**	**78.66**	**339**	*e*P	**P**	**04 27 24.9**	**+1.1**
GRG	**Griva**	**78.67**	**330**	*e*P	**P**	**04 27 23.0**	**-0.9**
ORIF	**Oris-en-Rattie**	**78.78**	**343**	⇑*i*P	**P**	**04 27 25.7**	**+1.1**
	comp=Z,43nm,0.8s						
ORIF				*e*R			
	comp=Z,262nm,20.2s						
ORIF	**Oris-en-Rattie**	**78.78**	**343**	⇑*i*P	**P**	**04 27 25.7**	**+1.1**
ORIF				pmax	pmax		
	comp=Z,43nm,0.8s						
ORIF	**Oris-en-Rattie**	**78.78**	**343**	⇑*i*P	**P**	**04 27 25.7**	**+1.1**
	comp=Z,43nm,0.8s						
LIA	**Limnos Island**	**78.79**	**327**	*e*P	**P**	**04 27 23.8**	**-0.7**
MBDF	**Montbardon**	**78.81**	**342**	⇑*i*P	**P**	**04 27 25.5**	**+0.7**
	comp=Z,27nm,0.7s						
MBDF	**Montbardon**	**78.81**	**342**	⇑*i*P	**P**	**04 27 25.5**	**+0.7**
MBDF				pmax	pmax		
	comp=Z,27nm,0.7s						
MBDF	**Montbardon**	**78.81**	**342**	⇑*i*P	**P**	**04 27 25.5**	**+0.7**
	comp=Z,27nm,0.7s						
MIB	**Mutribah**	**78.84**	**306**	*e*P	**P**	**04 27 23.7**	**-1.3**
MIB				AMb	AMB	04 27 25.1	
	comp=Z,104nm,0.5s						
PALK	**Pallekele**	**78.85**	**267**	*e*P	**P**	**04 27 25.4**	**+0.1**
	comp=Z,96nm,1.7s						
UMR	**Umm Al-Rimmam**	**78.87**	**306**	*e*P	**P**	**04 27 24.0**	**-1.2**
UMR				AMb	AMB	04 27 25.1	
	comp=Z,90nm,0.4s						
LBL	**Lubilhac**	**78.91**	**345**	⇑*e*P	**P**	**04 27 27.5**	**+2.3**
LBL	**Lubilhac**	**78.91**	**345**	⇑*e*P	**P**	**04 27 27.5**	**+2.3**
VIVF	**Saint-Julien-l**	**79.05**	**344**	⇑*i*P	**P**	**04 27 26.8**	**+0.8**
	comp=Z,58nm,1.1s						
VIVF	**Saint-Julien-l**	**79.05**	**344**	⇑*i*P	**P**	**04 27 26.8**	**+0.8**
VIVF				pmax	pmax		
	comp=Z,58nm,1.1s						
VIVF	**Saint-Julien-l**	**79.05**	**344**	⇑*i*P	**P**	**04 27 26.8**	**+0.8**
	comp=Z,58nm,1.1s						
RJF	**Les Rejaudoux**	**79.10**	**346**	⇑*i*P	**P**	**04 27 26.6**	**+0.4**
	comp=Z,32nm,1.1s						
RJF				*e*R			
	comp=Z,258nm,20.0s						
RJF	**Les Rejaudoux**	**79.10**	**346**	⇑*i*P	**P**	**04 27 26.6**	**+0.4**
RJF				pmax	pmax		
	comp=Z,32nm,1.1s						
RJF	**Les Rejaudoux**	**79.10**	**346**	⇑*i*P	**P**	**04 27 26.6**	**+0.4**
	comp=Z,32nm,1.1s						
NAY	**Al-Naaiem**	**79.35**	**306**	*e*P	**P**	**04 27 26.4**	**-1.4**
NAY				AMb	AMB	04 27 27.8	
	comp=Z,47nm,0.5s						
SAOF	**Saorge**	**79.38**	**341**	*e*P	**P**	**04 27 27.5**	**-0.3**
SAOF	**Saorge**	**79.38**	**341**	*e*P	**P**	**04 27 27.5**	**-0.3**
SAOF	**Saorge**	**79.38**	**341**	*e*P	**P**	**04 27 27.5**	**-0.3**
CAF	**Calviac**	**79.39**	**345**	⇑*i*P	**P**	**04 27 28.7**	**+0.9**
	comp=Z,12nm,0.6s						
CAF	**Calviac**	**79.39**	**345**	⇑*i*P	**P**	**04 27 28.7**	**+0.9**
CAF				pmax	pmax		
	comp=Z,12nm,0.6s						
CAF	**Calviac**	**79.39**	**345**	⇑*i*P	**P**	**04 27 28.7**	**+0.9**
	comp=Z,12nm,0.6s						
TOUF	**Mont Tournerai**	**79.42**	**341**	*e*P	**P**	**04 27 28.6**	**+0.4**
TOUF	**Mont Tournerai**	**79.42**	**341**	*e*P	**P**	**04 27 28.6**	**+0.4**
TOUF	**Mont Tournerai**	**79.42**	**341**	*e*P	**P**	**04 27 28.6**	**+0.4**
RDF	**Al-Radifah**	**79.47**	**306**	*e*P	**P**	**04 27 27.2**	**-1.3**
RDF				AMb	AMB	04 27 29.2	
	comp=Z,91nm,0.5s						
SBF	**Sospel**	**79.53**	**341**	⇑*i*P	**P**	**04 27 28.7**	**+0.1**
	comp=Z,270nm,1.6s						
SBF	**Sospel**	**79.53**	**341**	⇑*i*P	**P**	**04 27 28.7**	**+0.1**
SBF	**Sospel**	**79.53**	**341**	⇑*i*P	**P**	**04 27 28.7**	**+0.1**
	comp=Z,270nm,1.6s						
MVIF	**Mont Vial**	**79.55**	**342**	*e*P	**P**	**04 27 29.3**	**+0.5**
MVIF	**Mont Vial**	**79.55**	**342**	*e*P	**P**	**04 27 29.3**	**+0.5**
MVIF	**Mont Vial**	**79.55**	**342**	*e*P	**P**	**04 27 29.3**	**+0.5**
LFF	**La Frestale**	**79.56**	**346**	⇑*i*P	**P**	**04 27 29.4**	**+0.7**
	comp=Z,128nm,1.4s						
LFF	**La Frestale**	**79.56**	**346**	⇑*i*P	**P**	**04 27 29.4**	**+0.7**
LFF				pmax	pmax		
	comp=Z,128nm,1.4s						
LFF	**La Frestale**	**79.56**	**346**	⇑*i*P	**P**	**04 27 29.4**	**+0.7**
	comp=Z,128nm,1.4s						
REVF	**Revere**	**79.66**	**341**	*e*P	**P**	**04 27 29.3**	**0.0**
REVF	**Revere**	**79.66**	**341**	*e*P	**P**	**04 27 29.3**	**0.0**
REVF	**Revere**	**79.66**	**341**	*e*P	**P**	**04 27 29.3**	**0.0**
AQU	**L'Aquila**	**79.72**	**337**	*e*P	**P**	**04 27 30.2**	**+0.5**
	comp=Z,37nm,0.8s						
CALN	**Calern**	**79.73**	**342**	*e*P	**P**	**04 27 30.4**	**+0.6**
CALN	**Calern**	**79.73**	**342**	*e*P	**P**	**04 27 30.4**	**+0.6**
CALN	**Calern**	**79.73**	**342**	*e*P	**P**	**04 27 30.4**	**+0.6**
SMRF	**Simiane la Rot**	**79.75**	**343**	*e*P	**P**	**04 27 30.0**	**+0.2**
SMRF	**Simiane la Rot**	**79.75**	**343**	*e*P	**P**	**04 27 30.0**	**+0.2**
AOS	**Alonnisos**	**79.86**	**328**	*e*P	**P**	**04 27 29.6**	**-0.8**
CHOS	**Chios island**	**79.89**	**326**	*e*P	**P**	**04 27 28.5**	**-2.2**
LASF	**Ste Croix**	**79.94**	**344**	⇑*i*P	**P**	**04 27 32.0**	**+1.2**
	comp=Z,94nm,1.5s						
LASF	**Ste Croix**	**79.94**	**344**	⇑*i*P	**P**	**04 27 32.0**	**+1.2**
	comp=Z,94nm,1.5s						
EIDS	**Eidsvold**	**80.10**	**190**	*e*P	**P**	**04 27 33.0**	**+1.4**
	comp=Z,100nm,2.1s						
LMR	**La Mourre**	**80.21**	**342**	⇑*i*P	**P**	**04 27 32.8**	**+0.6**
	comp=Z,146nm,1.4s						
LMR	**La Mourre**	**80.21**	**342**	⇑*i*P	**P**	**04 27 32.8**	**+0.6**
LMR				pmax	pmax		
	comp=Z,146nm,1.4s						
LMR	**La Mourre**	**80.21**	**342**	⇑*i*P	**P**	**04 27 32.8**	**+0.6**
	comp=Z,146nm,1.4s						
CSS	**Prodhromos**	**80.39**	**319**	*e*P	**P**	**04 27 33.2**	**-0.1**
	comp=Z,12nm,0.7s						
PGF	**Pioggiola**	**80.49**	**340**	⇑*i*P	**P**	**04 27 34.1**	**+0.2**
	comp=Z,59nm,0.6s						
PGF	**Pioggiola**	**80.49**	**340**	⇑*i*P	**P**	**04 27 34.1**	**+0.2**
PGF				pmax	pmax		
	comp=Z,59nm,0.6s						
PGF	**Pioggiola**	**80.49**	**340**	⇑*i*P	**P**	**04 27 34.1**	**+0.2**
	comp=Z,59nm,0.6s						
MTLF	**Montolieu**	**80.92**	**345**	⇑*i*P	**P**	**04 27 37.1**	**+1.1**
	comp=Z,56nm,1.3s						
MTLF	**Montolieu**	**80.92**	**345**	⇑*i*P	**P**	**04 27 37.1**	**+1.1**
MTLF				pmax	pmax		
	comp=Z,56nm,1.3s						
MTLF	**Montolieu**	**80.92**	**345**	⇑*i*P	**P**	**04 27 37.1**	**+1.1**
	comp=Z,56nm,1.3s						
KALE	**Kalithea**	**81.11**	**329**	*e*P	**P**	**04 27 34.5**	**-2.7**
EFP	**Efpalio**	**81.15**	**329**	*e*P	**P**	**04 27 37.4**	**+0.1**
LKD2	**Lefkada island**	**81.18**	**330**	*e*P	**P**	**04 27 36.9**	**-0.6**
APE	**Apeiranthos**	**81.26**	**326**	*e*P	**P**	**04 27 35.6**	**-2.4**
LAKA	**Lakka**	**81.30**	**329**	*e*P	**P**	**04 27 37.0**	**-1.2**
CUC	**Castrocucco**	**81.37**	**334**	*e*P	**P**	**04 27 37.9**	**-0.6**
	comp=Z,13nm,0.9s						
PMOR	**Pomariorio Ree**	**81.42**	**131**	*e*T	T	05 57 25.9	
	comp=Z,43nm,0.2s						
KLV	**Kalavryta, Ach**	**81.43**	**329**	*e*P	**P**	**04 27 37.7**	**-1.2**
MLS	**Moulis**	**81.46**	**346**	*e*P	**P**	**04 27 39.9**	**+1.0**
MLS	**Moulis**	**81.46**	**346**	*e*P	**P**	**04 27 39.9**	**+1.0**
AS31	**Alice Springs**	**81.46**	**206**	*e*P	**P**	**04 27 40.0**	**+1.0**
ASAR	**Alice Springs**	**81.46**	**206**	P	**P**	**04 27 40.2**	**+1.3**
ASAR				pP	**pP**	**04 27 51.9**	**+0.8**
ASAR	**Alice Springs**	**81.46**	**206**	P	**P**	**04 27 40.2**	**+1.3**
	comp=Z,19nm,0.8s,baz=16,slow=5.2,SNR=161						
ASAR				pP	**pP**	**04 27 51.9**	**+0.8**
	comp=Z,9.4nm,0.8s,baz=14,slow=4.8,SNR=11						
ASAR				LR	LR	05 00 26.1	
	comp=Z,138nm,20.9s,baz=2.5,slow=33						
GUR	**Goura**	**81.47**	**329**	*e*P	**P**	**04 27 37.7**	**-1.5**
EPF	**Esparros**	**81.49**	**346**	*e*P	**P**	**04 27 39.5**	**+0.4**
	comp=Z,92nm,1.5s						
EPF	**Esparros**	**81.49**	**346**	*e*P	**P**	**04 27 39.5**	**+0.4**
EPF				pmax	pmax		
	comp=Z,92nm,1.5s						
EPF	**Esparros**	**81.49**	**346**	*e*P	**P**	**04 27 39.5**	**+0.4**
	comp=Z,92nm,1.5s						
DID	**Didima**	**81.59**	**328**	*e*P	**P**	**04 27 37.2**	**-2.5**
SJPF	**Ste Jean**	**81.62**	**347**	*e*P	**P**	**04 27 40.4**	**+0.6**
	comp=Z,108nm,1.5s						
SJPF	**Ste Jean**	**81.62**	**347**	*e*P	**P**	**04 27 40.4**	**+0.6**
SJPF				pmax	pmax		
	comp=Z,108nm,1.5s						
SJPF	**Ste Jean**	**81.62**	**347**	*e*P	**P**	**04 27 40.4**	**+0.6**
	comp=Z,108nm,1.5s						
ETSF	**Etsaut**	**81.74**	**347**	⇑*i*P	**P**	**04 27 41.6**	**+1.1**
	comp=Z,58nm,1.2s						
ETSF	**Etsaut**	**81.74**	**347**	⇑*i*P	**P**	**04 27 41.6**	**+1.1**
ETSF				pmax	pmax		
	comp=Z,58nm,1.2s						
ETSF	**Etsaut**	**81.74**	**347**	⇑*i*P	**P**	**04 27 41.6**	**+1.1**
	comp=Z,58nm,1.2s						
VLS	**Valsamata**	**81.77**	**330**	*e*P	**P**	**04 27 39.8**	**-0.8**
TIP	**Timpagrande**	**81.90**	**333**	*e*P	**P**	**04 27 41.3**	**-0.1**
	comp=Z,18nm,0.5s						
VLX	**Vlachokerasia**	**81.98**	**328**	*e*P	**P**	**04 27 40.3**	**-1.6**
ITM	**Ithomi**	**82.29**	**329**	*e*P	**P**	**04 27 42.1**	**-1.3**
DYR	**Agios Nikonas**	**82.55**	**328**	*e*P	**P**	**04 27 43.5**	**-1.3**
PYL	**PYLOS**	**82.61**	**329**	*e*P	**P**	**04 27 43.5**	**-1.5**
KYTH	**Kithira**	**82.78**	**327**	*e*P	**P**	**04 27 44.1**	**-1.9**
PPT	**Papeete**	**82.97**	**134**	LR	LR	04 56 34.6	
	comp=Z,654nm,20.0s,baz=353,slow=30						
CEL	**Celeste**	**82.99**	**333**	*e*P	**P**	**04 27 45.5**	**-1.5**
PPT2	**Papeete2**	**82.99**	**134**	*e*LR	LR	04 53 37.2	
	comp=Z,629nm,22.0s,baz=337						
ANKY	**Antikythira Is**	**83.08**	**327**	*e*P	**P**	**04 27 46.3**	**-1.2**
SIVA	**Sivas**	**83.36**	**326**	*e*P	**P**	**04 27 47.9**	**-1.1**
PGAV	**Gavieira, Arco**	**83.47**	**352**	*e*LR	LR	05 02 25.9	
	comp=Z,251nm,20.0s						
PBRG	**Braganca**	**83.51**	**351**	*e*P	**P**	**04 27 50.7**	**+1.0**
	comp=Z,45nm,1.9s						
GVD	**Gavdhos**	**83.77**	**326**	*e*P	**P**	**04 27 49.8**	**-1.3**
	comp=Z,42nm,0.8s						
POLO	**Lamas de Olo**	**84.02**	**352**	*e*P	**P**	**04 27 53.3**	**+0.9**
	comp=Z,19nm,1.3s						
PVRL	**Vila Real**	**84.12**	**352**	*e*P	**P**	**04 27 53.7**	**+0.9**
	comp=Z,76nm,1.5s						
MVO	**Moncorvo**	**84.17**	**351**	*e*P	**P**	**04 27 53.5**	**+0.4**
	comp=Z,56nm,1.6s						
MVO				*e*LR	LR	05 03 25.1	
	comp=Z,245nm,18.0s						
PVIS	**Viseu**	**84.69**	**352**	*e*P	**P**	**04 27 56.5**	**+0.8**
	comp=Z,67nm,1.5s						
MTE	**Manteigas**	**84.97**	**352**	*e*P	**P**	**04 27 58.1**	**+1.0**
	comp=Z,89nm,1.4s						
MTE				*e*SKS		04 48 43.8	
MTE				*e*LR	LR	05 03 19.7	
	comp=Z,170nm,20.0s						
MTE	**Manteigas**	**84.97**	**352**	*e*P	**P**	**04 27 57.5**	**+0.3**
	comp=Z,72nm,1.4s						
ESDC	**Sonseca Array**	**85.34**	**349**	P	**P**	**04 27 59.6**	**+0.6**
ESDC				pP	**pP**	**04 28 10.3**	**-0.8**
ESDC	**Sonseca Array**	**85.34**	**349**	P	**P**	**04 27 59.6**	**+0.6**
	comp=Z,5.3nm,0.6s,baz=0.8,slow=4.9,SNR=45						
ESDC				pP	**pP**	**04 28 10.3**	**-0.8**
	comp=Z,36nm,1.1s,baz=5.1,slow=4.8,SNR=14						
ESLA	**Sonseca Array**	**85.34**	**349**	*e*P	**P**	**04 27 59.2**	**+0.2**
	comp=Z,29nm,1.4s						
ESLA				*e*pP	**pP**	**04 28 10.5**	**-0.6**
PAB	**San Pablo**	**85.51**	**349**	*e*P	**P**	**04 28 00.7**	**+0.8**
PAB	**San Pablo**	**85.51**	**349**	*e*P	**P**	**04 28 00.7**	**+0.8**
PCBR	**Castelo Branco**	**85.52**	**352**	*e*P	**P**	**04 28 00.4**	**+0.6**
	comp=Z,75nm,1.4s						
PMRV	**Marv??o**	**85.92**	**351**	*e*LR	LR	05 03 17.2	
	comp=Z,263nm,19.2s						
PMTG	**Montargil**	**86.35**	**352**	*e*P	**P**	**04 28 04.8**	**+0.9**
	comp=Z,47nm,1.6s						
PESTR	**Estremoz**	**86.50**	**352**	*e*P	**P**	**04 28 04.4**	**-0.3**
	comp=Z,53nm,1.5s						
EVO	**Evora**	**86.86**	**352**	*e*P	**P**	**04 28 06.2**	**-0.2**
EVO				*e*R			
	comp=Z,362nm,19.5s						
EVO	**Evora**	**86.86**	**352**	*e*P	**P**	**04 28 06.2**	**-0.2**
	comp=Z,36nm,1.8s						
EVOP	**Sao Brissos**	**86.88**	**352**	*e*P	**P**	**04 28 06.2**	**-0.3**
EVOP	**Sao Brissos**	**86.88**	**352**	*e*P	**P**	**04 28 06.2**	**-0.3**
KEST	**Kesra**	**86.97**	**338**	*e*P	**P**	**04 28 06.7**	**-0.4**
KEST				*e*pP	**pP**	**04 28 17.4**	**-1.9**
KEST	**Kesra**	**86.97**	**338**	P	**P**	**04 28 07.5**	**+0.4**
	comp=Z,1.3nm,0.4s,baz=281,slow=6.1,SNR=11						
KEST				LR	LR	05 10 39.5	
	comp=Z,117nm,20.8s,baz=321,slow=38						
PBAR	**Barrancos**	**87.14**	**351**	*e*P	**P**	**04 28 07.9**	**+0.1**
	comp=Z,34nm,1.7s						
STKA	**Stephens Creek**	**87.79**	**197**	P	**P**	**04 28 11.7**	**+1.1**
STKA	**Stephens Creek**	**87.79**	**197**	P	**P**	**04 28 11.7**	**+1.1**
	comp=Z,2.4nm,0.6s,baz=338,slow=6.5,SNR=7.8						
STKA				LR	LR	05 02 50.2	
	comp=Z,220nm,21.9s,baz=190,slow=32						
PVAQ	**Vaqueiros**	**87.96**	**352**	*e*LR	LR	05 03 25.0	
	comp=Z,173nm,19.2s						
TBI	**Tubuai**	**88.19**	**136**	*e*LR	LR	04 55 29.9	
	comp=Z,431nm,32.2s,baz=335						
FORT	**Forrest**	**89.77**	**208**	*e*P	**P**	**04 28 20.6**	**+0.6**
	comp=Z,27nm,0.7s						
RKT	**Rikitea**	**94.42**	**124**	*e*LR	LR	04 58 33.0	
	comp=Z,390nm,26.8s						
RKT				*e*T	T	06 13 41.2	
	comp=Z,2.4nm,0.2s						
NWAO	**Narrogin (SRO)**	**95.14**	**216**	LR	LR	05 12 02.4	
	comp=Z,120nm,18.8s,baz=19,slow=36						
RPZ	**Rata Peaks**	**98.22**	**173**	LR	LR	05 10 40.1	
	comp=Z,459nm,19.4s,baz=13,slow=34						
TOA0	**Torodi Ar. Sit**	**110.45**	**339**	*e*PKP		04 33 54.0	
TORD	**Torodi Ar. Bea**	**110.45**	**339**	Pdif	**Pdif**	**04 29 54.5**	**+0.8**
TORD				PKiKP	**PKiKP**	**04 33 54.3**	**0.0**
TORD	**Torodi Ar. Bea**	**110.45**	**339**	Pdiff	**Pdif**	**04 29 54.6**	**+0.8**
	comp=Z,0.2nm,0.7s,baz=1.7,slow=5.2,SNR=3.6						
TORD				PKiKP	**PKiKP**	**04 33 54.3**	**0.0**
	comp=Z,0.4nm,0.4s,baz=2.4,slow=1.9,SNR=22						
DBIC	**Dimbokro**	**117.97**	**345**	*e*PKPdf	**PKPdf**	**04 34 08.6**	**-0.1**
DBIC	**Dimbokro**	**117.97**	**345**	PKP	**PKPdf**	**04 34 08.6**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=24,slow=3.6,SNR=7.1						
DRV	**Dumont d'Urvil**	**121.98**	**190**	SKKS		04 51 55.0	
SAML	**Samuel**	**122.27**	**55**	*e*PKPdf	**PKPdf**	**04 34 16.5**	**-0.4**
LPAZ	**La Paz**	**126.01**	**65**	*e*PKPdf	**PKPdf**	**04 34 24.8**	**+0.1**
LPAZ				PKP	**PKPdf**	**04 34 25.2**	**+0.4**
LPAZ	**La Paz**	**126.01**	**65**	PKP	**PKPdf**	**04 34 25.2**	**+0.4**
	comp=Z,1.7nm,0.9s,baz=352,slow=4.2,SNR=5.9						
LSZ	**Lusaka**	**126.83**	**299**	*e*PKPdf	**PKPdf**	**04 34 26.3**	**+0.6**
LVC	**Limon Verde**	**130.76**	**70**	*e*PKPdf	**PKPdf**	**04 34 34.2**	**+1.0**
VNDA	**Vanda**	**131.80**	**180**	PKPpre	PKPpre	04 34 23.3	
VNDA				*e*PKPdf	**PKiKP**	**04 34 34.6**	**+0.4**
VNDA	**Vanda**	**131.80**	**180**	PKhKP	PKPpre	04 34 23.3	
	comp=Z,1.2nm,0.5s,baz=322,slow=5.4,SNR=10						
BDFB	**Brasilia**	**134.88**	**42**	PKPpre	PKPpre	04 34 30.1	
BDFB				PKP	**PKPdf**	**04 34 39.7**	**-1.3**
BDFB	**Brasilia**	**134.88**	**42**	PKhKP	PKPpre	04 34 30.1	
	comp=Z,0.8nm,0.4s,baz=104,slow=4.2,SNR=2.4						
BDFB				PKP	**PKPdf**	**04 34 39.7**	**-1.3**
	comp=Z,1.7nm,0.5s,baz=253,slow=2.1,SNR=4.0						
LBTB	**Lobatse**	**136.24**	**294**	*e*PKPdf	**PKPdf**	**04 34 45.7**	**+2.5**
BOSA	**Boshof**	**139.29**	**292**	PKPpre	PKPpre	04 34 40.3	
BOSA				PKP	**PKPdf**	**04 34 49.0**	**+0.3**
BOSA				*e*PKPdf	**PKiKP**	**04 34 49.7**	**-1.4**
BOSA	**Boshof**	**139.29**	**292**	PKhKP	PKPpre	04 34 40.3	
	comp=Z,5.1nm,1.0s,baz=202,slow=3.6,SNR=4.3						
BOSA				PKP	**PKPdf**	**04 34 49.0**	**+0.3**
	comp=Z,3.1nm,0.6s,baz=29,slow=3.9,SNR=9.0						
CPUP	**Villa Florida**	**139.92**	**61**	PKPpre	PKPpre	04 34 43.4	
CPUP	**Villa Florida**	**139.92**	**61**	PKhKP	PKPpre	04 34 43.4	
	comp=Z,0.6nm,0.5s,baz=41,slow=11,SNR=3.3						
MAW	**Mawson**	**141.69**	**218**	PKPpre	PKPpre	04 34 44.0	
MAW				PKP	**PKiKP**	**04 34 54.4**	**-0.1**
MAW	**Mawson**	**141.69**	**218**	PKhKP	PKPpre	04 34 44.0	
	comp=Z,2.6nm,0.6s,baz=80,slow=5.8,SNR=11						
MAW				PKP	**PKiKP**	**04 34 54.4**	**-0.1**
	comp=Z,2.2nm,0.6s,baz=198,slow=1.3,SNR=5.5						
PLCA	**Paso Flores**	**143.11**	**90**	*e*PKPdf	**PKPdf**	**04 34 56.1**	**+0.9**
PLCA				PKP	**PKPdf**	**04 34 56.2**	**+1.0**
PLCA	**Paso Flores**	**143.11**	**90**	PKP	**PKPdf**	**04 34 56.2**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=251,slow=2.3,SNR=3.2						
QSPA	**South Pole Qui**	**144.29**	**180**	*e*PKPdf	**PKPab**	**04 34 53.9**	**-0.7**
QSPA				PKPpre	PKPpre	04 34 54.4	
QSPA	**South Pole Qui**	**144.29**	**180**	PKhKP	PKPpre	04 34 54.4	
	comp=Z,26nm,0.7s,baz=342,slow=1.2,SNR=162						
SUR	**Sutherland**	**144.62**	**293**	PKP	**PKPdf**	**04 34 58.0**	**-0.3**
SUR	**Sutherland**	**144.62**	**293**	PKP	**PKPdf**	**04 34 58.0**	**-0.3**
	comp=Z,4.9nm,0.5s,baz=359,slow=7.8,SNR=11						
TRQA	**Tornquist**	**146.30**	**79**	*e*PKPbc	**PKPbc**	**04 35 02.0**	**+0.1**
SYO	**Syowa Base**	**150.40**	**218**	⇓*e*PKPdf	**PKPbc**	**04 35 10.0**	**-1.7**
SYO	**Syowa Base**	**150.40**	**218**	⇑*e*PKPab	**PKPab**	**04 35 21.2**	**+2.8**
SNAA	**Sanae**	**161.55**	**196**	*e*PKPab	**PKPab**	**04 36 05.6**	**-0.6**
SNAA	**Sanae**	**161.55**	**196**	PKPab	**PKPab**	**04 36 06.6**	**+0.4**
	comp=Z,1.0nm,0.7s,baz=205,slow=4.4,SNR=6.8						

CASC ***06*** *04:37:34.5±4.5, 16.°50N×87.°69W, h20km±999km, MD4.8, ML4.7, mb4.7(NEIC)*

ISCJB ***06*** *04:37:36.7±1.3, 16.°29N±0.°02×87.°56W±0.°04, h15km±10km, mb4.5/64, MS4.3/19, Error ellipse: s-maj=6.8km s-min=3.4km az=5.1*

IDC ***06*** *04:37:36.3±0.8, 16.°39N×87.°43W, h0km, mb4.1/16, mb1 4.3/19, mb1mx4.2/27, mbtmp4.1/19, ML4.5/2, MS4.2/18, Ms1 4.2/18, ms1mx4.0/32, Error ellipse: s-maj=26.0km s-min=15.1km az=49.0*

NEIC ***06*** *04:37:37.0±0.3, 16.°17N×87.°65W, h10km, mb4.7/62, Error ellipse: s-maj=7.2km s-min=5.5km az=60.0*

NEIC Felt [IV] at Utila and [II] at El Progreso, La Ceiba and San Pedro Sula. Also felt at Arizona, El Eden, Puerto Cortes, Roatan and San Manuel. Felt [II] at Belize City, Belize. Also felt at Dangriga and San Ignacio.

BJI ***06*** *04:37:39.0, 16.°20N×87.°50W, h20km, mB5.2/3, Ms5.0/5, Ms7 4.7/5*

GCMT ***06*** *04:37:40.9±0.2, 16.°38N×87.°67W, h15km, MW5.0, Moment Tensor Solution. s28,c37; s74,c110; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.19±.13; $M_{\theta\theta}$-3.21±.11; $M_{\phi\phi}$3.40±.13; $M_{r\theta}$-2.19±.38; $M_{\theta\phi}$1.95±.11; $M_{\phi r}$1.04±.38; Best double couple: $M_0$4.50000×10^{16} NP1:ϕ_s57.00000°, δ66.00000°, λ-15.00000°. NP2:ϕ_s153.00000°, δ77.00000°, λ-155.00000°. Principal axes: T 3.9900, Plg7.0000°, Azm283.0000°; N 0.9600, Plg62.0000°, Azm179.0000°; P -4.9500, Plg27.0000°, Azm17.0000°; Data Used: II IU IC G CN.*

ISC 06 04:37:36.6±1.9**, 16.°24N**±0.°03×**87.°70W**±0.°04**, h9**km±12km**, n228,** σ1.°60/225**, mb4.6**/64**, MS4.3**/19**, 15C-29D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**2.21**	**169**	*e*P	**Pn**	**04 38 12.8**	**-0.6**
TGUH				*e*S	**Sn**	**04 38 40.7**	**-0.2**
TGUH	**Tegucigalpa,Un**	**2.21**	**169**	*e*Pn	**Pn**	**04 38 12.3**	**-1.2**
TGUH				*e*Sn	**Sb**	**04 38 40.9**	**-3.3**

MRL Marmol 2.25 239 *e*P Pn 04 38 11.1 -3.1
MTO2 Montecristo 2 2.44 222 *e*P **Pn** **04 38 16.9 +0.1**
CAHU Cacacuatique 2.50 192 *e*P **Pn** **04 38 17.4 -0.3**
LBRS Las Brisas 2.81 208 *e*P **Pn** **04 38 20.1 -1.7**
SNVI San Vicente 2.84 203 *e*P **Pb** **04 38 25.3 -2.2**
SNVI *e*S **Sb** **04 39 01.0 -1.5**
VSM San Miguel 2.85 191 *e*P **Pn** **04 38 23.9 +1.3**
LFRS El Faro 2.92 207 *e*P **Pn** **04 38 22.2 -1.1**
BOQS Boqueron 2.92 212 *e*P **Pn** **04 38 25.8 +2.3**
BOQS *e*S **Sn** **04 39 01.0 +2.0**
SNET Serv Nac Est T 2.94 211 *e*P **Pb** **04 38 26.9 -2.4**
SNET AML AML 04 38 29.4
comp=Z,4µm,0.3s
SNET *e*S **Sn** **04 39 01.2 +2.0**
CNCH Conchagua 2.95 183 *e*P **Pn** **04 38 25.2 +1.5**
CNCH *e*S **Sb** **04 39 03.8 -1.9**
NBG Las Nubes 3.04 238 *e*P **Pn** **04 38 22.7 -2.4**
NBG *e*S **Sg** **04 39 15.1 +0.8**
FUG Fuego 3 3.52 240 *e*P **Pn** **04 38 29.6 -2.1**
TEIG Tepich 4.00 352 *e*Pn **Pn** **04 38 37.0 -1.1**
TEIG Sn **Sn** **04 39 24.4 -0.9**
TEIG Tepich 4.00 352 Pn **Pn** **04 38 37.8 -0.4**
comp=Z,55nm,0.3s,baz=170,slow=1.0,SNR=74
TEIG Sn **Sn** **04 39 24.4 -0.9**
comp=Z,149nm,0.3s,baz=46,slow=22,SNR=3.5
TEIG LR LR 04 39 39.0
comp=Z,437nm,21.7s,baz=94,slow=32
CCIG Comitan 4.27 271 P **Pn** **04 38 40.3 -1.6**
CCIG S **Sb** **04 39 44.3 +0.6**
SCIG Sabancuy 4.29 310 P Pn 04 38 39.8 -2.3
SCIG S **Sb** **04 39 44.3 0.0**
THIG 4.60 254 P **Pn** **04 38 46.2 -0.2**
THIG S **Sb** **04 39 49.4 -3.7**
TGIG 5.23 277 P **Pn** **04 38 54.0 -1.1**
TGIG S **Sb** **04 40 08.1 -3.3**
PCIG 5.34 265 P **Pn** **04 38 56.0 -0.6**
PCIG S Sb 04 40 09.3 -5.0
MTDJ Mount Denham 9.91 77 *e*Pn Pn 04 39 55.7 -3.6
BCIP Isla Barro Col 10.40 132 *e*Pn **Pn** **04 40 04.7 -1.4**
LMGC Las Mercedes 10.85 68 *e* **Pn** **04 40 13.5 +1.3**
BRAL Brewton 14.72 2 *e*Pn **Pn** **04 41 05.2 +0.2**
BRAL *e*Sn **Sn** **04 43 45.6 -2.7**
HKT Hockley 15.56 333 *e*Pn **Pn** **04 41 15.3 -0.8**
comp=Z,14nm,0.8s
HKT *e*Sn Sn 04 43 53.3 -15
VBMS Vicksburg 16.11 351 *e*Pn **Pn** **04 41 24.3 +0.9**
comp=Z,119nm,0.3s
LRAL Lakeview Retre 16.73 2 *e*Pn **Pn** **04 41 32.1 +0.7**
comp=Z,78nm,1.5s
ROSC El Rosal 17.32 129 *e*Pn **P** **04 41 40.3 -0.4**
ROSC El Rosal 17.32 129 Pn **P** **04 41 40.4 -0.3**
comp=Z,0.4nm,0.3s,baz=84,slow=23,SNR=8.1
ROSC LR LR 04 49 21.8
comp=Z,893nm,18.6s,baz=356,slow=41
532A Rocksprings 17.79 323 ⇑P **P** **04 41 46.3 +1.0**
baz=18,SNR=7.2
JCT Junction City 17.99 324 *e*P **P** **04 41 50.2 +2.6**
comp=Z,17nm,0.8s
JCT *e*Sn Sn 04 44 54.8 -13
WHTX Lake Whitney 18.02 332 ⇑P **Pn** **04 41 48.6 +1.2**
baz=18,SNR=19
NHSC New Hope 18.12 21 *e*P **Pn** **04 41 45.2 -3.3**
NHSC *e*Sn Sn 04 45 03.2 -7.6
OXF Oxford 18.26 355 *e*P **Pn** **04 41 50.3 0.0**
comp=Z,49nm,0.8s
OXF *e*S Sn 04 44 56.4 -18
432A Menard 18.29 325 ⇑P **P** **04 41 52.3 +1.5**
baz=18,SNR=7.1
OTAV Otavalo 18.33 149 *e*P **P** **04 41 51.7 -0.2**
comp=Z,12nm,1.3s
332A Millersview 18.65 326 ⇑P **P** **04 41 55.7 +0.9**
baz=19
530A J-C Ranch, Com 18.65 320 ⇓P **Pn** **04 41 56.4 +1.2**
baz=19,SNR=13
PLAL Pickwick Lake 18.67 359 *e*Pn **Pn** **04 41 57.1 +1.8**
comp=Z,14nm,0.9s
PLAL *e*Sn **Sn** **04 45 21.3 -2.9**
UALR University of 18.92 348 *e*P **P** **04 41 56.1 -1.7**
comp=Z,15nm,0.6s
UALR *e*S Sn 04 45 18.1 -12
SWET Sewanee 18.96 4 *e*P **P** **04 41 58.6 +0.3**
comp=Z,32nm,0.8s
331A San Angelo 18.97 325 ⇓P **P** **04 41 58.5 +0.1**
baz=19
232A Coleman 19.00 327 ⇓P **P** **04 42 00.1 +1.4**
baz=19
430A Baggett Ranch, 19.05 322 ⇓P **P** **04 42 00.3 +1.0**
baz=19
529A Stev Forest Ra 19.19 319 ⇓P **P** **04 42 01.9 +1.0**
baz=19
628A Black Gap, Mar 19.20 316 ⇓P **P** **04 42 02.2 +1.2**
baz=19,SNR=12
429A Davenport Ranc 19.33 320 ⇓P **P** **04 42 03.8 +1.4**
baz=19,SNR=13
CPCT Cooper Cave 19.34 8 *e*P **P** **04 42 03.4 +1.0**
CPCT *e*S Sn 04 45 31.9 -8.6
231A Bronte 19.39 326 ⇓P **P** **04 42 04.4 +1.4**
baz=20
330A Mertzon 19.46 323 ⇓P **P** **04 42 05.0 +1.1**
baz=20
627A Terlingua Ranc 19.52 315 P **Pn** **04 42 06.7 +0.9**
baz=20,SNR=16
ABTX Abilene, Hawle 19.58 329 ⇓P **P** **04 42 06.7 +1.6**
baz=20
TXAR Lajitas Array 19.63 314 P **P** **04 42 07.5 +1.7**
TXAR S S 04 45 34.8 -13
TXAR Lajitas Array 19.63 314 P **P** **04 42 07.5 +1.7**
comp=Z,0.3nm,0.3s,baz=131,slow=10.0,SNR=40
TXAR S S 04 45 34.8 -13
comp=Z,0.2nm,0.3s,baz=126,slow=22,SNR=4.7
TKL Tuckaleechee C 19.65 10 P **P** **04 42 07.1 +1.3**
TKL S S 04 45 37.2 -10
TKL Tuckaleechee C 19.65 10 P **P** **04 42 07.1 +1.3**
comp=Z,0.2nm,0.3s,baz=184,slow=13,SNR=9.1
TKL S S 04 45 37.2 -10
comp=Z,0.3nm,0.3s,baz=99,slow=18,SNR=4.4
TKL LR LR 04 49 57.0
comp=Z,366nm,19.5s,baz=186,slow=38
KMSC Kings Mountain 19.67 16 ⇓P **P** **04 42 06.9 +1.0**
baz=20,SNR=7.0
GNAR Gosnell 19.75 354 *e*P **Pn** **04 42 09.3 +0.9**
comp=Z,1µm,1.4s
230A Sterling City 19.79 324 ⇓P **P** **04 42 08.2 +0.9**
baz=20
WVT Waverly 19.81 360 *e*P **P** **04 42 07.8 +0.3**
comp=Z,30nm,0.9s
GLAT Glass 20.00 356 *e*P Pn 04 42 11.7 +0.4
UTMT University of 20.05 357 *e*P **P** **04 42 12.0 +1.9**
comp=Z,267nm,1.7s
Z32A Haskell 20.05 330 ⇑P **P** **04 42 12.1 +1.9**
baz=20,SNR=9.4
626A Big Bend Ranch 20.09 314 ⇓P **P** **04 42 12.4 +1.7**
baz=20,SNR=18
527A Woodward Ranch 20.11 316 P **P** **04 42 12.1 +1.2**
baz=20,SNR=16
130A Snyder 20.24 326 ⇑P **P** **04 42 14.2 +1.8**
baz=20
526A Mary Lane Ranc 20.37 315 ⇑P **P** **04 42 15.5 +1.7**
baz=20,SNR=12
Z31A Sharp Cattle R 20.39 329 ⇑P **P** **04 42 15.4 +1.6**
baz=20
328A Wristen Ranch, 20.42 320 ⇑P **P** **04 42 15.6 +1.3**
baz=20,SNR=14
PARMO Parma 20.43 355 *e*P Pn 04 42 16.5 +0.3
TZTN Tazewell 20.56 10 *e*P **P** **04 42 16.7 +1.1**
comp=Z,42nm,1.3s
426A McDonald Obser 20.72 317 P Pn 04 42 20.1 0.0
baz=21,SNR=11
CNNC Cliffs of the 20.86 23 *e*P **P** **04 42 19.8 +1.0**
comp=Z,39nm,0.9s
TUL1 Tulsa 20.88 341 ⇑P **P** **04 42 20.4 +1.3**
baz=21,SNR=6.3
WMOK Wichita Mounta 20.93 334 *e*P **P** **04 42 22.9 +3.2**
comp=Z,20nm,0.8s
128A Castleberry Fa 21.11 323 P **P** **04 42 22.3 +0.6**
baz=21,SNR=9.5
Z29A Hungry Hill Ra 21.15 326 ⇓P **P** **04 42 22.3 +0.1**
baz=21,SNR=5.3
425A Indio Mountain 21.43 316 P **P** **04 42 26.0 +0.8**
baz=22,SNR=9.2
SIUC Southern Illin 21.43 357 *e*P **P** **04 42 26.7 +1.7**
comp=Z,56nm,0.8s
Y29A Porterfield Fa 21.59 327 ⇓P **P** **04 42 27.8 +0.9**
baz=22,SNR=5.5
USIN University of 21.64 0 *e*P **P** **04 42 28.8 +1.5**
comp=Z,191nm,0.9s

226B Tecolote Peak, 21.73 319 ⇑P **P** **04 42 29.7 +1.3**
baz=22,SNR=11
325A Bean Ranch, Si 21.79 317 P **P** **04 42 29.5 +0.3**
baz=22,SNR=13
BLA Blacksburg 21.86 16 *e*P **P** **04 42 31.0 +1.3**
comp=Z,43nm,0.9s
Y28A McKinney Farm, 21.94 326 ⇓P **P** **04 42 31.1 +0.5**
baz=22,SNR=8.3
WCI Wyandotte Cave 21.94 3 *e*P **P** **04 42 31.9 +1.4**
comp=Z,83nm,1.2s
GDL2 Guadalupe Moun 21.94 319 *e*P **P** **04 42 33.1 +2.4**
comp=Z,3.7nm,0.6s
Z27A Tatum 22.03 323 P **P** **04 42 32.2 +0.5**
baz=22,SNR=10
324A Moseley Ranch, 22.17 316 ⇓P **P** **04 42 33.7 +0.4**
baz=22,SNR=6.7
MNTX Cornudas Mount 22.27 317 *e*P **P** **04 42 33.8 -0.3**
comp=Z,17nm,1.3s
OLIL Olney 22.41 359 *e*P **P** **04 42 37.5 +1.9**
comp=Z,129nm,1.1s
125A Gardner Draw, 22.43 320 P **P** **04 42 38.3 +2.3**
baz=23,SNR=14
224A Cornudas Mount 22.60 317 ⇓P **P** **04 42 38.6 +0.8**
baz=23,SNR=14
BLO Bloomington 22.87 2 *e*P **P** **04 42 42.0 +1.6**
comp=Z,58nm,1.0s
Z25A Roswell 22.89 321 ⇑P **P** **04 42 41.0 +0.1**
baz=23,SNR=9.9
124A Stringfield Ra 22.96 319 P **P** **04 42 43.9 +2.2**
baz=23,SNR=27
Z24A Sheeppen Canyo 23.32 320 P **P** **04 42 48.2 +2.8**
baz=23,SNR=21
W26A Owens Ranch, T 23.65 326 P **P** **04 42 48.9 +0.3**
baz=24,SNR=7.6
Y24A Capitan 23.77 321 P **P** **04 42 51.4 +1.6**
baz=24,SNR=30
SFIN Scholer Farm 24.06 1 ⇓P **P** **04 42 52.6 +0.5**
baz=24,SNR=5.9
KSU1 Kansas State U 24.08 343 *e*P **P** **04 42 52.8 +0.4**
comp=Z,14nm,0.7s
W25A X Bar L Ranch, 24.13 325 ⇓P **P** **04 42 53.8 +0.7**
baz=24,SNR=13
Y23A Lovelace Mesa, 24.15 320 ⇓P **P** **04 42 54.3 +0.9**
baz=24,SNR=22
V26A Tequesquite Ra 24.19 327 ⇓P **P** **04 42 54.4 +0.8**
baz=24,SNR=9.2
ACSO Alum Creek Sta 24.25 9 *e*P **P** **04 42 55.1 +1.1**
comp=Z,37nm,1.1s
HDIL Hopedale 24.27 357 *e*P **P** **04 42 54.3 +0.2**
comp=Z,42nm,0.9s
Z22A Elephant Butte 24.29 318 ⇓P **P** **04 42 55.5 +0.9**
baz=24,SNR=15
220A Playas Peak, P 24.52 313 ⇓P **P** **04 42 57.6 +0.8**
baz=25,SNR=5.9
R30A Dighton 24.59 336 P **P** **04 42 59.5 +2.3**
baz=25,SNR=11
BNM Barren Site 24.65 320 *e*P **P** **04 43 01.5 +3.5**
W24A Lazy 6 Ranch, 24.66 323 ⇓P **P** **04 42 58.5 +0.5**
baz=25,SNR=8.9
Y22A Socorro 24.73 319 ⇓P **P** **04 43 00.4 +1.8**
baz=25,SNR=37
319A Douglas 24.77 311 ⇑P **P** **04 42 59.6 +0.6**
baz=25,SNR=5.1
SDMD Soldier's Deli 24.96 20 *e*P **P** **04 43 01.4 +1.0**
comp=Z,37nm,1.1s
U25A Circle Dot Ran 24.98 327 P **P** **04 43 02.6 +1.8**
baz=25,SNR=6.8
ATAH Atahualpa 24.98 158 LR LR 04 51 45.1
comp=Z,636nm,19.3s,baz=151,slow=34
W23A Werner Place, 25.05 322 P **P** **04 43 03.8 +2.2**
baz=25,SNR=8.3
ANMO Albuquerque 25.09 321 *e*P **P** **04 43 04.0 +2.1**
comp=Z,12nm,1.2s
ANMO Albuquerque 25.09 321 P **P** **04 43 04.1 +2.3**
comp=Z,1.7nm,0.9s,baz=129,slow=11,SNR=6.6
LAZ Ladron 25.14 320 *e*P **P** **04 43 05.7 +3.4**
Y21A Point of Rocks 25.22 318 P **P** **04 43 05.8 +2.6**
baz=25,SNR=30
X21A Alamocita Cree 25.57 319 P **P** **04 43 09.0 +2.7**
baz=26,SNR=24
Y20A Horse Springs, 25.61 317 ⇑P **P** **04 43 07.9 +1.2**
baz=26,SNR=14
SSPA Standing Stone 25.76 17 *e*P **P** **04 43 09.7 +2.1**
comp=Z,20nm,1.1s
U23A El Rito 25.90 324 P **P** **04 43 12.2 +3.0**
baz=26,SNR=5.5
X20A Quemado 26.09 318 ⇓P **P** **04 43 14.3 +3.3**
baz=26,SNR=22
ALLY Alegheny Colle 26.14 13 *e*P **P** **04 43 13.4 +2.2**
comp=Z,196nm,2.3s
TUC Tucson 26.35 312 *e*P **P** **04 43 13.7 +0.5**
comp=Z,34nm,1.1s
LUPA Lehigh Univers 26.52 21 *e*P **P** **04 43 17.4 +2.8**
comp=Z,17nm,1.1s
ERPA Erie 26.63 13 *e*P **P** **04 43 17.2 +1.7**
comp=Z,56nm,1.1s
JFWS Jewell Farm 26.68 356 *e*P **P** **04 43 16.2 +0.3**
comp=Z,30nm,1.1s
ISCO Idaho Springs 28.20 330 *e*P **P** **04 43 30.6 +0.6**
comp=Z,1.5nm,0.7s
ECSD EROS Data Cent 28.43 346 *e*P **P** **04 43 31.5 -0.2**
comp=Z,20nm,1.6s
PV10 Paradox Valley 28.95 324 *e*P P 04 43 32.9 -3.8
TRY Troy 29.00 22 *e*P **P** **04 43 39.4 +2.6**
SADO Sadowa 29.34 12 P **P** **04 43 39.6 -0.2**
SADO Sadowa 29.34 12 P **P** **04 43 39.6 -0.2**
comp=Z,9.8nm,0.9s,baz=208,slow=12,SNR=5.1
SADO LR LR 04 55 01.8
comp=Z,530nm,21.5s,baz=62,slow=36
COWI Conover 29.80 358 *e*P **P** **04 43 43.3 -0.5**
comp=Z,12nm,0.9s
NNA Nana 30.03 158 LR LR 04 55 19.6
comp=Z,312nm,19.1s,baz=323,slow=35
LONY Lake Ozonia 30.38 19 *e*P **P** **04 43 50.4 +1.4**
comp=Z,22nm,1.0s
FRNY Flat Rock 30.89 20 *e*P **P** **04 43 54.3 +0.9**
comp=Z,26nm,1.2s
LBNH Lisbon 30.94 22 *e*P **P** **04 43 53.5 -0.4**
comp=Z,20nm,1.2s
PFO Pinyon Flat Ob 31.14 309 P **P** **04 43 57.5 +1.5**
PFO Pinyon Flat Ob 31.14 309 P **P** **04 43 57.5 +1.5**
comp=Z,1.8nm,0.7s,baz=79,slow=9.3,SNR=3.0
EYMN Ely 31.77 355 *e*P **P** **04 43 59.8 -1.4**
comp=Z,9.6nm,0.9s
JLU Jordanelle 31.83 324 *e*P **P** **04 44 02.6 +0.5**
comp=Z,2.9nm,0.8s
JLU *e*S **S** **04 49 10.2 -2.7**
GSC Goldstone 32.18 312 *e*P P 04 44 13.6 +8.5
comp=Z,11nm,1.5s
PDAR Pinedale Array 32.38 329 P **P** **04 44 08.6 +1.7**
PDAR Pinedale Array 32.38 329 P **P** **04 44 08.6 +1.7**
comp=Z,0.3nm,0.5s,baz=124,slow=8.0,SNR=3.4
AGMN Agassiz Nation 32.67 350 *e*P **P** **04 44 09.0 0.0**
comp=Z,5.2nm,0.8s
SPUT South Promonto 32.87 324 *e*P P 04 44 14.7 +3.6
SNOW Snow King Moun 33.48 329 *e*P **P** **04 44 18.4 +1.9**
comp=Z,19nm,1.3s
ISA Isabella 33.55 311 *e*P P 04 44 26.7 +10
TPAW Teton Pass 33.60 329 *e*P **P** **04 44 19.4 +1.8**
comp=Z,24nm,1.4s
RRI2 Red Ridge 33.68 328 *e*P **P** **04 44 20.1 +1.8**
comp=Z,11nm,1.1s
MOOW Moose Ponds 33.69 329 *e*P **P** **04 44 20.8 +2.5**
comp=Z,2.8nm,0.9s
D23A Lindsay 34.09 339 P **P** **04 44 22.9 +1.4**
baz=34,SNR=6.2
ELK Elko 34.12 321 *e*P **P** **04 44 25.2 +3.1**
comp=Z,5.0nm,1.1s
ULM Lac du Bonnet 34.56 351 P **P** **04 44 25.7 +0.2**
ULM Lac du Bonnet 34.56 351 P **P** **04 44 25.7 +0.2**
comp=Z,2.9nm,0.7s,baz=171,slow=11,SNR=2.6
ULM LR LR 04 59 15.0
comp=Z,472nm,20.7s,baz=143,slow=38
E20A Meyer Farm, Mu 34.64 335 ⇑P **P** **04 44 28.3 +1.9**
baz=35,SNR=8.0
GCMT Greycliff 34.73 333 *e*P **P** **04 44 28.6 +1.4**
comp=Z,2.6nm,0.8s
NVAR Mina Array Bea 34.78 315 P **P** **04 44 30.2 +2.4**
NVAR Mina Array Bea 34.78 315 P **P** **04 44 30.2 +2.4**
comp=Z,1.4nm,0.9s,baz=126,slow=9.2,SNR=11
SAML Samuel 34.86 134 *e*P **P** **04 44 27.7 -0.7**
comp=Z,3.7nm,0.9s
D20A Manuel Ranch, 35.12 335 ⇓P **P** **04 44 32.0 +1.5**
baz=35,SNR=7.1
BMN Battle Mountai 35.16 319 *e*P **P** **04 44 32.6 +1.6**
comp=Z,3.4nm,0.8s
MCMT McKenzie Canyo 35.51 329 *e*P **P** **04 44 36.8 +2.7**
comp=Z,2.4nm,0.8s

BOZ Bozeman (W) 35.51 331 *e*P **P** **04 44 35.0 +1.0**
comp=Z,3.8nm,1.0s
LRM Limekiln Ridge 36.03 330 *e*P **P** **04 44 40.7 +2.2**
A20A Cobblestone Ra 36.51 337 ⇓P **P** **04 44 43.6 +1.3**
baz=37,SNR=6.4
EGMT Eagleton 36.52 335 *e*P **P** **04 44 42.0 -0.5**
comp=Z,16nm,0.9s
WVOR Wild Horse Val 37.18 321 *e*P **P** **04 44 50.8 +2.6**
comp=Z,7.2nm,1.1s
LPAZ La Paz 37.65 148 *e*P **P** **04 44 54.3 +1.4**
comp=Z,0.9nm,0.6s
LPAZ La Paz 37.65 148 LR LR 05 01 12.8
comp=Z,311nm,18.9s,baz=354,slow=38
KCPM Cahto Peak 38.98 314 *e*P **P** **04 45 03.8 +0.3**
comp=Z,3.0nm,1.0s
SIV San Ignacio 41.42 139 P **P** **04 45 21.1 -2.7**
SIV San Ignacio 41.42 139 P **P** **04 45 21.1 -2.7**
comp=Z,1.3nm,0.7s,baz=300,slow=7.6,SNR=5.1
SCHQ Schefferville 41.75 18 P **P** **04 45 25.7 -0.4**
SCHQ Schefferville 41.75 18 P **P** **04 45 25.7 -0.4**
comp=Z,15nm,1.1s,baz=212,slow=5.5,SNR=12
SCHQ LR LR 05 05 08.9
comp=Z,346nm,18.7s,baz=51,slow=40
LVC Limon Verde 42.77 154 *e*P **P** **04 45 35.3 +0.3**
comp=Z,6.5nm,1.0s
YKA Yellowknife Ar 49.92 344 P **P** **04 46 29.9 -0.5**
YKA Yellowknife Ar 49.92 344 P **P** **04 46 29.9 -0.5**
comp=Z,1.3nm,0.7s,baz=140,slow=7.5,SNR=38
YKW3 Yellowknife Ar 49.98 344 *e*P **P** **04 46 30.6 -0.3**
BDFB Brasilia 50.37 127 LR LR 05 09 30.7
comp=Z,387nm,18.5s,baz=181,slow=38
CPUP Villa Florida 51.60 145 LR LR 05 13 08.4
comp=Z,177nm,18.1s,baz=306,slow=41
DLBC Dease Lake 52.42 333 *e*P **P** **04 46 51.8 +2.4**
PLCA Paso Flores 58.88 165 P **P** **04 47 37.9 +2.0**
PLCA Paso Flores 58.88 165 P **P** **04 47 37.9 +2.0**
comp=Z,1.0nm,0.7s,baz=326,slow=9.0,SNR=2.6
ILAR Eielson Array 62.49 335 P **P** **04 48 00.2 +0.1**
ILAR Eielson Array 62.49 335 P **P** **04 48 00.2 +0.1**
comp=Z,1.1nm,0.8s,baz=118,slow=5.7,SNR=8.2
ILAR LR LR 05 17 13.4
comp=Z,233nm,21.8s,baz=304,slow=38
COLA College 62.91 335 *e*P **P** **04 48 04.5 +1.5**
comp=Z,4.2nm,0.8s
SUMG Summit 63.00 15 *e*P **P** **04 48 03.1 -0.9**
comp=Z,19nm,1.2s
SUMG Summit 63.00 15 *i*P **P** **04 48 02.7 -1.3**
comp=Z,9.5nm,0.9s
TRF Thorofare Moun 63.45 334 *e*P **P** **04 48 07.0 +0.2**
comp=Z,20nm,1.3s
PPT Papeete 69.60 244 LR LR 05 12 24.8
comp=Z,341nm,18.4s,baz=39,slow=30
ESDC Sonseca Array 75.07 53 P **P** **04 49 19.7 +0.5**
ESDC Sonseca Array 75.07 53 P **P** **04 49 19.7 +0.5**
comp=Z,1.1nm,0.7s,baz=292,slow=6.3,SNR=6.7
NB2 NORSAR Subarra 80.19 29 P **P** **04 49 45.5 -1.8**
comp=Z,12nm,1.4s,baz=284,slow=5.6
NOA NORSAR Array B 80.19 29 P **P** **04 49 47.2 -0.1**
NOA NORSAR Array B 80.19 29 P **P** **04 49 47.2 -0.1**
comp=Z,0.8nm,0.8s,baz=284,slow=5.4,SNR=3.7
NOA LR LR 05 23 22.5
comp=Z,94nm,18.2s,baz=270,slow=34
DBIC Dimbokro 81.31 86 P **P** **04 49 54.0 -0.2**
DBIC Dimbokro 81.31 86 P **P** **04 49 54.0 -0.2**
comp=Z,2.3nm,0.8s,baz=260,slow=6.1,SNR=2.7
ARCES ARCESS Array B 82.70 19 P **P** **04 49 59.7 -0.7**
ARCES ARCESS Array B 82.70 19 P **P** **04 49 59.7 -0.7**
comp=Z,3.6nm,1.0s,baz=277,slow=7.2,SNR=3.6
ARCES LR LR 05 25 41.0
comp=Z,85nm,21.8s,baz=121,slow=35
GERES GERESS Array B 85.22 41 P **P** **04 50 13.1 -0.8**
GERES GERESS Array B 85.22 41 P **P** **04 50 13.1 -0.8**
comp=Z,0.6nm,0.7s,baz=284,slow=1.1,SNR=5.2
GERES LR LR 05 23 37.5
comp=Z,227nm,19.4s,baz=87,slow=32
TORD Torodi Ar. Bea 85.83 78 P **P** **04 50 15.8 -1.5**
TORD Torodi Ar. Bea 85.83 78 P **P** **04 50 15.8 -1.5**
comp=Z,0.3nm,0.7s,baz=253,slow=1.5,SNR=4.3
TORD LR LR 05 25 15.2
comp=Z,186nm,20.9s,baz=335,slow=33
MORC Moravsky Berou 87.25 39 *e*P **P** **04 50 23.6 -0.2**
comp=Z,4.3nm,1.1s
NACGM Naroch 90.17 32 *e*LQ LQ 04 51 20.0
AKASG Malin Array Be 93.56 35 LR LR 05 31 30.0
comp=Z,120nm,20.0s,baz=340,slow=35
BJI Beijing 119.75 339 PKP **PKPdf** **04 56 26.9 -0.7**
BJI LR LR
comp=N,110nm,31.1s
BJI LR LR
comp=E,120nm,34.2s
BJI LR LR
comp=Z,140nm,31.1s
WMQ Urumqi 120.08 4 *e*PKP **PKPdf** **04 56 30.0 +1.7**
WMQ LR LR
comp=N,220nm,30.8s
WMQ LR LR
comp=E,140nm,32.0s
WMQ LR LR
comp=Z,210nm,29.7s
HHC Hu-ho-hao-te 120.45 343 *e*PKP **PKPdf** **04 56 26.0 -3.1**
HHC sPKP 04 56 40.2
HHC PKS PKSdf 05 00 00.8 -5.1
HHC SKS SKSdf 05 03 33.3 -8.4
HHC AMB AMB
comp=Z,220nm,7.7s
HHC LR LR
comp=N,220nm,19.0s
HHC LR LR
comp=E,220nm,18.4s
HHC LR LR
comp=Z,220nm,20.8s
DRV Dumont d'Urvil 120.83 200 L L 05 06 00.0
DRV R 05 13 00.0
LZH Lanzhou 126.83 348 *e*PKP **PKPdf** **04 56 44.0 +2.5**
LZH sPKP 04 56 48.5
LZH LR LR
comp=N,130nm,18.2s
LZH LR LR
comp=E,120nm,18.0s
LZH LR LR
comp=Z,160nm,20.3s
CD2 Chengdu 131.84 347 *e*PKP **PKPdf** **04 56 51.4 +0.3**
GYA Guiyang 135.32 342 *e*Pdif **Pdif** **04 53 58.7 -1.4**
GYA PKP **PKPdf** **04 56 57.6 -0.2**
GYA PP **PP** **04 59 37.4 +5.1**
GYA AMB AMB
comp=Z,90nm,7.6s
WRAB Tennant Creek 139.94 258 *e*PKPdf **PKPdf** **04 57 06.5 +0.2**
WRA Warramunga Arr 139.95 258 PKPpre PKPpre 04 56 57.2
WRA PKP **PKPdf** **04 57 05.6 -0.7**
WRA Warramunga Arr 139.95 258 PKhKP PKPpre 04 56 57.2
comp=Z,0.5nm,0.9s,baz=79,slow=3.1,SNR=3.4
WRA PKP **PKPdf** **04 57 05.6 -0.7**
comp=Z,1.5nm,0.9s,baz=84,slow=2.5,SNR=8.4
AS31 Alice Springs 140.31 252 *e*PKPdf **PKPdf** **04 57 07.8 +0.9**
ASAR Alice Springs 140.32 252 PKPpre PKPpre 04 57 00.6
ASAR PKP **PKiKP** **04 57 09.5 +0.1**
ASAR Alice Springs 140.32 252 PKhKP PKPpre 04 57 00.6
comp=Z,0.9nm,1.2s,baz=105,slow=2.6,SNR=3.4
ASAR PKP **PKiKP** **04 57 09.5 +0.1**
comp=Z,1.7nm,0.9s,baz=99,slow=3.0,SNR=8.1
CMAR Chiang Mai Arr 144.91 349 PKP PKPbc 04 57 15.1 +0.9
CMAR Chiang Mai Arr 144.91 349 PKP PKPbc 04 57 15.1 +0.9
comp=Z,1.0nm,0.3s,baz=339,slow=4.0,SNR=3.4

DDA ***06*** *04:46:08.2, 37.°93N×29.°21E, h12km, MD3.0*
ISK ***06*** *04:46:08.9, 37.°96N×29.°10E, h8km, MD2.9*
CSEM ***06*** *04:46:08.8±0.1, 37.°96N×29.°15E, h2km, MD2.9, Error ellipse: s-maj=3.1km s-min=2.3km az=99.0*

ISC 06 04:46:08.7±1.1, 37.97N±0.02×29.11E±0.03, h5km±10km, n38, σ0 29/48, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.23**	**195**	PG		**Pg**	**04 46 13.1**	**-0.1**
DENT	**Denizli**	**0.23**	**195**	*i* Pg		**Pg**	**04 46 13.1**	**-0.1**
DNZL	**Cakiroluk**	**0.29**	**190**	*i* P		**Pg**	**04 46 13.9**	**-0.5**
DNZL				*i* S		**Sg**	**04 46 18.4**	**+0.2**
DNZL	**Cakiroluk**	**0.29**	**190**	*i* P		**Pg**	**04 46 13.9**	**-0.5**
DNZL				*i* S		**Sg**	**04 46 18.4**	**+0.2**
KHAL	**Karahalli**	**0.50**	**37**	*i* P		**Pg**	**04 46 17.9**	**-0.4**
KHAL				*i* S		**Sg**	**04 46 25.0**	**+0.2**
KHAL	**Karahalli**	**0.50**	**37**	*i* P		**Pg**	**04 46 17.9**	**-0.4**
KHAL				*i* S		**Sg**	**04 46 25.0**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KULA	Kula-Manisa	0.65	327	ePG	Pb	04 46 22.2	-0.3
KULA				eSG	Sb	04 46 31.7	-0.2
KULA	Kula-Manisa	0.65	327	ePg	Pb	04 46 22.2	-0.3
KULA				eSg	Sb	04 46 31.7	-0.2
MANT	Manisa	0.67	320	i P	Pb	04 46 23.1	-0.1
MANT	Manisa	0.67	320	i P	Pb	04 46 23.1	-0.1
GLHS	Glhisar (BURDU	0.87	159	ePG	Pb	04 46 26.1	-0.3
GLHS	Glhisar (BURDU	0.87	159	ePg	Pb	04 46 26.2	-0.3
AYDN	Tasoluk	1.02	253	i P	Pg	04 46 28.8	+0.4
AYDN				i S	Sn	04 46 44.5	-0.1
AYDN	Tasoluk	1.02	253	i P	Pg	04 46 28.8	+0.4
AYDN				i S	Sn	04 46 44.5	-0.1
YER	Yerkesik	1.06	218	ePG	Pb	04 46 29.6	-0.1
YER	Yerkesik	1.06	218	ePg	Pb	04 46 29.6	-0.1
DEMI	Demirci	1.11	344	i P	Pn	04 46 31.4	+0.3
DEMI				i S	Sn	04 46 46.4	-0.4
DEMI	Demirci	1.11	344	i P	Pn	04 46 31.4	+0.3
DEMI				i S	Sn	04 46 46.4	-0.4
ISP	Isparta	1.13	97	ePN	Pn	04 46 31.2	-0.1
ISP	Isparta	1.13	97	ePn	Pn	04 46 31.2	-0.1
GDZ	Gediz	1.15	15	i P	Pg	04 46 30.7	-0.1
GDZ	Gediz	1.15	15	i P	Pg	04 46 30.7	-0.1
SHUT	Suhut-Afyon	1.27	63	ePN	Pg	04 46 33.5	+0.4
SHUT	Suhut-Afyon	1.27	63	ePn	Pg	04 46 33.6	+0.4
BCK	Bucak	1.28	113	ePN	Pg	04 46 33.5	+0.3
BCK	Bucak	1.28	113	ePn	Pg	04 46 33.6	+0.3
ALT	Altintas	1.33	36	ePN	Pb	04 46 34.4	0.0
ALT	Altintas	1.33	36	ePn	Pb	04 46 34.4	0.0
FETY	Fethiye	1.34	181	ePN	Pg	04 46 34.6	+0.2
FETY	Fethiye	1.34	181	ePn	Pg	04 46 34.6	+0.2
ELL	Elmali	1.38	152	ePN	Pg	04 46 35.4	+0.2
ELL	Elmali	1.38	152	ePn	Pg	04 46 35.4	+0.2
TVSB	Tavsanli	1.50	10	ePN	Pn	04 46 36.9	+0.5
TVSB	Tavsanli	1.50	10	ePn	Pn	04 46 36.9	+0.5
IZM	Izmir	1.52	287	ePN	Pn	04 46 36.7	+0.1
IZM	Izmir	1.52	287	ePn	Pn	04 46 36.7	+0.1
DAT	Datca	1.74	225	ePN	Pn	04 46 39.9	+0.1
DAT	Datca	1.74	225	ePn	Pn	04 46 39.9	+0.1

IDC ***06*** *05:01:03.4±5.5, 32°.14S×179°.74E, h352km±41km, mb3.5/3, mb1 3.6/4, mb1mx3.2/17, mbtmp3.4/4, Error ellipse: s-maj=62.4km s-min=20.5km az=47.0*

ISC 06 05:01:06.5±1.7, 32°.3S±0°.1×179°.2E±0°.2, h350km, n34, σ1s65/38, mb3.8/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	5.29	188	ePN	Pn	05 02 30.4	+1.3
MXZ				SN	S	05 03 36.4	+0.3
PUZ	Puketiti	5.80	187	PN	Pn	05 02 36.2	+1.3
PUZ				SN	S	05 03 46.7	+0.1
MWZ	Matawai	6.16	192	PN	Pn	05 02 40.0	+1.0
MWZ				SN	S	05 03 55.7	+1.6
URZ	Urewera	6.17	195	PN	Pn	05 02 39.5	+0.4
URZ				SN	S	05 03 55.4	+1.1
URZ	Urewera	6.17	195	P	Pn	05 02 39.9	+0.8
	1.5nm,0.3s,baz=155,slow=18,SNR=55						
URZ				S	S	05 03 57.3	+3.0
	6.3nm,0.3s,baz=98,slow=23,SNR=23						
CNGZ	Carnagh Statio	6.21	187	ePN	Pn	05 02 41.4	+1.8
CNGZ				SN	S	05 03 58.6	+3.5
KNZ	Kokohu	6.81	190	ePN	Pn	05 02 47.2	+0.8
KNZ				SN	S	05 04 09.5	+1.8
RAHZ	Arahi	6.81	194	SN	S	05 04 09.1	+1.3
MHGZ	Mahia Peninsul	6.91	188	ePN	Pn	05 02 49.9	+2.3
NMHZ	Naumai	7.04	195	ePN	Pn	05 02 50.5	+1.2
TRVZ	Turoa	7.57	202	ePN	Pn	05 02 57.4	+1.7
BHHZ	Black Hill Sta	7.60	199	ePN	Pn	05 02 57.1	+1.3
KAHZ	Kahuranaki	7.70	193	PN	Pn	05 02 58.7	+1.7
PNHZ	Pukenui	7.96	197	ePN	Pn	05 03 00.6	+0.5
TSZ	Takapari Road	8.16	198	PN	Pn	05 03 02.1	-0.3
TSZ				SN	S	05 04 36.8	-0.2
PRWZ	Pori Road	8.63	197	SN	S	05 04 48.5	+1.4
BFZ	Birch Farm	8.68	195	SN	S	05 04 46.8	-1.5
MRZ	Mangatainoka R	8.82	198	PN	Pn	05 03 08.9	-1.4
MRZ				SN	S	05 04 49.7	-1.8
HOWZ	Holdsworth Sta	9.06	198	SN	S	05 04 55.8	-1.0
OGWZ	Otaki Gorge	9.08	200	ePN	Pn	05 03 13.0	-0.3
OGWZ				SN	S	05 04 57.9	+0.8
KIW	Kapiti Island	9.20	201	SN	S	05 05 00.0	+0.4
CAW	Cannon Point	9.38	199	PN	Pn	05 03 16.5	-0.4
TCW	Tory Channel	9.71	202	PN	Pn	05 03 21.5	+0.7
NNZ	Nelson	10.03	206	SN	S	05 05 19.4	+1.5
THZ	Tophouse	10.68	206	SN	S	05 05 31.8	-0.6
KHZ	Kahutara	11.04	202	SN	S	05 05 40.5	+0.3
LTZ	Lake Taylor	11.80	206	ePN	Pn	05 03 46.1	+0.4
MQZ	McQueen's Vall	12.48	202	SN	S	05 06 10.3	-1.0
ASAR	Alice Springs	40.65	270	P	P	05 08 14.8	+0.7
	0.5nm,0.5s,baz=107,slow=7.3,SNR=10						
WRA	Warramunga Arr	41.82	276	P	P	05 08 23.2	-0.2
	1.7nm,0.3s,baz=114,slow=7.8,SNR=45						
QSPA	South Pole Qui	57.80	180	P	P	05 10 20.6	-1.4
	6.0nm,0.7s,baz=28,slow=1.0,SNR=56						
FINES	FINESS Array B	146.03	337	PKP	PKPdf	05 19 58.2	-5.1
	3.5nm,0.7s,baz=46,slow=6.6,SNR=6.0						
BRTR	Keskin Array B	151.29	295	PKPbc	PKPdf	05 20 17.1	+4.4
	0.3nm,0.5s,baz=66,slow=4.9,SNR=2.4						
TORD	Torodi Ar. Bea	160.79	187	PKPab	PKPab	05 21 04.6	-5.0
	0.6nm,1.0s,baz=149,slow=4.4,SNR=2.9						

IDC 06 05:03:43.3±5.0, 48°.56S×123°.90E, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.8/13, mbtmp4.0/2, Error ellipse: s-maj=287.6km s-min=66.8km az=98.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	26.07	21	P	P	05 09 18.4	-0.1
	3.5nm,0.9s,baz=192,slow=9.7,SNR=16						
WRA	Warramunga Arr	29.76	20	P	P	05 09 51.8	+0.3
	1.5nm,1.1s,baz=190,slow=7.9,SNR=3.2						
YKA	Yellowknife Ar	145.40	44	PKPbc	PKPbc	05 23 20.8	-1.0
	1.0nm,0.8s,baz=277,slow=3.0,SNR=15						

JMA 06 05:10:27.4±0.1, 33°.53N×132°.06E, h57km±1km, M0.5, Shikoku

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNA	Nagahama	0.35	85	P	Pn	05 10 37.5	-0.1
JNA				S	Sn	05 10 44.9	-0.1
JKI	Kunimi	0.42	284	P	Pn	05 10 38.4	+0.1
JKI				eS	Sn	05 10 46.2	0.0
JUS	Usuki	0.53	209	P	Pn	05 10 39.5	0.0
JUS				S	Sn	05 10 48.3	+0.1
JKU	Kubokawa	0.87	104	P	Pn	05 10 43.1	-0.5

JMA 06 05:26:48.7±0.1, 36°.85N×138°.21E, h13km±2km, M0.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	Matsushiro	0.31	180	P	Pg	05 26 54.5	-0.6
MAT				S	Sg	05 26 58.8	-0.5
MAT	Matsushiro	0.31	180	P	Pg	05 26 54.7	-0.4
MAT				S	Sg	05 26 58.8	-0.5
JNG	Nsakai	0.45	191	P	Pg	05 26 57.4	-0.4
JNG				S	Sg	05 27 03.6	-0.3

MEX 06 05:49:04.6±0.4, 16°.98N×100°.51W, h5km±2km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.24	73	i P	Pg	05 49 08.9	-0.4
CAIG				i S	Sg	05 49 12.8	+0.1
ACX	Acapulco	0.64	100	eP	Pg	05 49 15.7	-1.1
ACX				i S	Sg	05 49 23.2	-2.0
ZIIG	Zihuatanejo	1.10	305	eP	Pg	05 49 22.7	-3.1
ZIIG				i S	Sg	05 49 37.1	-3.0
MEIG	Mezcala	1.27	42	i P	Pg	05 49 25.3	-3.9
MEIG				i S	Sg	05 49 41.6	-4.1
ARIG	Puente Sto Nin	1.30	7	eP	Pn	05 49 25.7	-3.9
ARIG				i S	Sg	05 49 42.1	-4.6
PLIG	Platanillo	1.70	34	eP	Pn	05 49 31.7	-3.5
PLIG				eS	Sn	05 49 52.6	-4.9
PNIG	Pinotepa	2.36	104	eP	Pn	05 49 41.0	-3.1
PNIG				eS	Sn	05 50 08.9	-4.6
UTMO	Huajuapan	2.72	71	eP	Pn	05 49 46.7	-2.6
UTMO				eS	Sn	05 50 18.8	-4.0

NIED ***06*** *05:52:00, 35°.60N×141°.40E, h38km, Mw5.8 Best double couple: $M_0$5.48000×10^{17} NP1:ϕ_s122.00000°, δ63.00000°, λ-67.00000°. NP2:ϕ_s259.00000°, δ35.00000°, λ-128.00000°.*

BGS ***06*** *05:52:38.6±1.9, 34°.54N×141°.06E, h33km, mb5.6, MS5.6*

IDC ***06*** *05:52:38.1±0.3, 35°.52N×141°.01E, h0km, mb5.2/31, mb1 5.3/32, mb1mx5.3/33, mbtmp5.2/32, ML5.0/1, MS5.3/41, Ms1 5.3/41, ms1mx5.1/51, Error ellipse: s-maj=12.2km s-min=10.4km az=86.0*

BJI ***06*** *05:52:41.5, 35°.52N×141°.01E, h44km, mB5.5/45, mb5.2/52, Ms5.5/73, Ms7 5.5/68*

JMA ***06*** *05:52:41.0±0.1, 35°.54N×141°.26E, h42km±1km, M5.9 Broadband fault plane solution: P waves. NP1: ϕ_s132.00000°, δ72.00000°, λ-69.00000°. NP2: ϕ_s261.00000°, δ28.00000°, λ-138.00000°. Principal axes: T Plg24.0000°, Azm206.0000°; N Plg20.0000°, Azm305.0000°; P Plg58.0000°, Azm71.0000°;*

JMA Felt III J1.

ISCJB ***06*** *05:52:42.4±0.3, 35°.42N±0°.02×140°.99E±0°.02, h40km±2km, mb5.7/427, MS5.5/229 Error ellipse: s-maj=2.9km s-min=2.5km az=142.7*

NEIC ***06*** *05:52:43.3±0.1, 35°.48N×140°.91E, h34km, mb5.8/238, ME5.1, MS5.4/128, MW5.7, MW5.8(NIED), Error ellipse: s-maj=3.0km s-min=2.2km az=150.0 Broadband fault plane solution: P waves. NP1:ϕ_s135.00000°, δ75.00000°, λ-90.00000°. NP2:ϕ_s315.00000°, δ15.00000°, λ-90.00000°. Principal axes: T Plg30.0000°, Azm225.0000°; N Plg0.0000°, Azm0.0000°; P Plg60.0000°, Azm45.0000°; Moment Tensor Solution. s77 Moment tensor: Scale 10^{17} Nm; M_{rr}-1.94; $M_{\theta\theta}$3.07; $M_{\phi\phi}$-1.13; $M_{r\theta}$-1.40; $M_{\theta\phi}$-2.39; $M_{\phi r}$1.76; Best double couple: $M_0$4.20000×10^{17} NP1:ϕ_s256.00000°, δ43.00000°, λ-153.00000°. NP2:ϕ_s145.00000°, δ72.00000°, λ-50.00000°. Principal axes: T 4.7600, Plg16.0000°, Azm206.0000°; N -1.3900, Plg37.0000°, Azm310.0000°; P -3.3800, Plg47.0000°, Azm97.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [III] at Narita and [II] at Yokohama and Yokosuka. Also felt at Chiba, Inzai, Kawasaki, Kimitsu, Koshigaya, Miura, Mobara, Ryugasaki, Sagamihara, Tomisato, Yamato and Zama. Recorded [3 JMA] in Chiba and Ibaraki; [2 JMA] in Fukushima, Kanagawa, Miyagi, Saitama, Tochigi, Tokyo and Yamanashi; [1 JMA] in Gumma, Nagano, Niigata and Shizuoka.

SZGRF ***06*** *05:52:44.0, 36°.38N×141°.94E, h28km, mb6.1, MS5.5, Near east coast of eastern Honshu, Japan*

MOS ***06*** *05:52:44.7±0.9, 35°.59N×140°.98E, h54km, mb5.9/148, MS5.4/87, Error ellipse: s-maj=6.5km s-min=3.6km az=113.2*

GCMT ***06*** *05:52:45.7±0.1, 35°.44N×141°.09E, h28km, MW5.8, Moment Tensor Solution. s105,c214; s60,c63; Moment tensor: Scale 10^{17}Nm; M_{rr}-3.14±.05; $M_{\theta\theta}$4.35±.04; $M_{\phi\phi}$-1.21±.04; $M_{r\theta}$-1.36±.08; $M_{\theta\phi}$-1.32±.03; $M_{\phi r}$3.18±.10; Best double couple: $M_0$5.40000×10^{17} NP1:ϕ_s253.00000°, δ40.00000°, λ-144.00000°. NP2:ϕ_s134.00000°, δ68.00000°, λ-56.00000°. Principal axes: T 5.2200, Plg16.0000°, Azm199.0000°; N 0.2900, Plg32.0000°, Azm299.0000°; P -5.5100, Plg54.0000°, Azm87.0000°; Data Used: II IU IC G CN. Surface waves: sta=112, comp=250, per= 50.*

TEH ***06*** *05:52:45.0, 35°.44N×140°.93E, h44km, ML5.9*

DJA ***06*** *05:52:52.6±3.6, 35°N±20'×14°1E±1°0, h76km±27km, M5.7/56, mb5.8/56, mB6.1/39, Mw(mB)5.7/39*

ISC 06 05:52:43.4±0.2, 35°.49N±0°.02×141°.09E±0°.02, h37km, h37km:pP-P, n1750, σ1s24/1877, mb5.8/445, MS5.5/230, 51C-236D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.28	319	⇓P	Pn	05 52 50.1	-1.4
CHOJ				eS	Sn	05 52 57.0	-1.7
KTR	Katsuura	0.72	242	P	Pn	05 52 57.4	+0.4
JCN	Nagara	0.73	265	P	Pn	05 52 58.7	+1.6
BSO4	Boso 4	0.79	231	⇑P	Pn	05 52 58.3	+0.5
BSO3	Boso 3	0.83	215	⇑P	Pn	05 52 58.4	+0.1
BSO1	Boso 1	0.84	186	P	Pn	05 52 58.0	-0.1
JYT	Yasato	1.04	316	P	Pn	05 53 00.5	-0.8
JHO	Hitachi	1.20	340	⇑P	Pn	05 53 02.3	-1.2
JIM2	Oshima 3	1.56	241	P	Pn	05 53 08.0	-0.6
JAG	Ashikaga	1.62	306	⇓P	Pn	05 53 09.7	+0.3
JAG				eS	Sn	05 53 32.2	+3.1
JOD2	Odawara 2	1.65	263	P	Pn	05 53 10.2	+0.4
JOD2				eS	Sn	05 53 31.8	+2.1
JFK	Kawauchi	1.88	355	P	Pn	05 53 11.7	-1.3
JFK				eS	Sn	05 53 35.3	-0.2
MAJO	Matsushiro	2.56	295	eP	Pn	05 53 24.1	+1.8
MAJO	Matsushiro	2.56	295	ePn	Pn	05 53 24.1	+1.8
MAT	Matsushiro	2.56	295	P	Pn	05 53 23.8	+1.5
MAT				S	Sn	05 53 56.9	+4.6
JHJ	Hachijo jima 2	2.60	205	Pn	Pn	05 53 24.0	+1.2
	352nm,0.3s,baz=108,slow=1.2,SNR=96						
JHJ				Sn	Sn	05 53 54.6	+1.5
	2μm,0.3s,baz=86,slow=23,SNR=12						
JRG	Rokugo	3.92	355	P	Pn	05 53 41.3	+0.4
JAH	Hinai	4.71	356	P	Pn	05 53 52.2	+0.5
ERM	Erimo	6.71	13	eP	Pn	05 54 16.8	-2.5
ERM				e		05 55 29.7	
ERM	Erimo	6.71	13	ePn	Pn	05 54 16.8	-2.5
ERM				eSn	Sn	05 55 29.7	-4.8
ERM	Erimo	6.71	13	Pn	Pn	05 54 16.4	-2.9
	3μm,1.3s,SNR=38						
JAR	Ashorobuto	8.07	14	P	Pn	05 54 34.0	-3.9
JKK2	Kamakawa 2	8.47	8	P	Pn	05 54 40.4	-3.0
ASAJ	Asahikawa	8.70	7	ePn	Pn	05 54 42.9	-3.5
ASAJ				eSn	Sn	05 56 25.7	+2.5
ASAJ	Asahikawa	8.70	7	Pn	Pn	05 54 43.7	-2.8
	20nm,0.3s,baz=219,slow=14,SNR=40						
ASAJ				Sn	Sn	05 56 16.4	-6.8
	10nm,0.3s,baz=204,slow=18,SNR=2.5						
JNU	Nakatsue	8.77	257	ePn	Pn	05 54 51.3	+3.7
JNU	Nakatsue	8.77	257	P	Pn	05 54 51.1	+3.5
JNU	Nakatsue	8.77	257	Pn	Pn	05 54 51.1	+3.5
	2.3nm,0.3s,baz=86,slow=8.7,SNR=18						
YUK	Yuzh-Kuril'sk	9.29	22	i P	Pn	05 54 51.1	-3.5
YUK				pmax	pmax		
	comp=N,198nm,0.4s						
YUK				pmax	pmax		
	comp=E,259nm,0.8s						
YUK				pmax	pmax		
	comp=Z,368nm,0.8s						
YUK				MLR	MLR		
	comp=Z,8μm,20.0s						
YUK				MLR	MLR		
	comp=E,4μm,20.0s						
YUK				MLR	MLR		
	comp=N,5μm,20.0s						
VLA	Vladivostok	10.43	320c	iP	Pn	05 55 12.5	+2.2
VLA				pmax	pmax		
	comp=Z,433nm,1.9s						
KSRS	Korea Array	10.78	284	Pn	Pn	05 55 19.9	+4.8
	comp=Z,1.0nm,0.3s,baz=102,slow=14,SNR=36						
KSAR	Wonju Array Be	10.81	284	Pn	Pn	05 55 19.9	+4.4
KUR	Kuril'sk	11.02	26	i P	Pn	05 55 14.7	-3.5
KUR				pmax	pmax		
	comp=N,43nm,0.9s						
KUR				pmax	pmax		
	comp=Z,153nm,0.9s						
KUR				pmax	pmax		
	comp=E,49nm,0.5s						
KUR				pmax	pmax		
	comp=Z,1μm,4.4s						
KUR				MLR	MLR		
	comp=N,10μm,20.0s						
KUR				MLR	MLR		
	comp=E,8μm,20.0s						
KUR				MLR	MLR		
	comp=Z,8μm,20.0s						
USRK	Ussuriysk Arra	11.16	324	Pn	Pn	05 55 22.0	+1.8
	comp=Z,1.6nm,0.3s,baz=136,slow=13,SNR=40						
USRK				LR	LR	05 59 28.2	
	comp=Z,19μm,19.8s,baz=251,slow=37						
YSS	Yuzh-Sakhalins	11.52	6α	eP	Pn	05 55 21.8	-3.4
YSS				e		05 57 42.0	
YSS				pmax	pmax		
	comp=Z,250nm,0.8s						
YSS				MLR	MLR		
	comp=N,41μm,19.0s						
YSS				MLR	MLR		
	comp=Z,32μm,19.0s						
INCN	Inchon	11.81	284	P	Pn	05 55 34.2	+5.0
	SNR=12						
INCN	Inchon	11.81	284	ePn	Pn	05 55 32.8	+3.7
MDJ	Mudanjiang	12.66	320	P	Pn	05 55 42.2	+1.4
MDJ				S	Sn	05 58 03.1	+2.7
MDJ				ScP	ScP	06 04 47.2	+0.4
MDJ				PcS	PcS	06 04 52.0	+1.3
MDJ				ScS	ScS	06 08 23.6	+0.7
MDJ				pmax	pmax		
	comp=Z,19nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,850nm,6.9s						
MDJ				LR	LR		
	comp=N,14μm,23.0s						
MDJ				LR	LR		
	comp=E,10μm,23.0s						
MDJ				LR	LR		
	comp=Z,11μm,24.1s						
MDJ	Mudanjiang	12.66	320	ePn	Pn	05 55 42.9	+2.1
	comp=Z,174nm,1.1s						
UGL	Uglegorsk	13.60	3	eP	Pn	05 55 56.0	+2.5
UGL				pmax	pmax		
	comp=Z,190nm,1.0s						
UGL				MLR	MLR		
	comp=N,34μm,17.0s						
UGL				MLR	MLR		
	comp=E,13μm,17.0s						
HABR	Khabarovsk	13.72	343	eP	Pn	05 55 53.4	-1.8
HABR				eS	Sn	05 58 22.2	-4.0
HABR				pmax	pmax		
	comp=E,41nm,1.5s						
HABR				pmax	pmax		
	comp=N,45nm,1.3s						
HABR				pmax	pmax		
	comp=Z,78nm,1.3s						
HABR				pmax	pmax		
	comp=Z,184nm,1.3s						
HABR				MLR	MLR		
	comp=Z,10μm,17.0s						
JOW	Kunigami	13.95	235	ePn	Pn	05 55 58.1	-0.3
CN2	Changchun	14.62	309	eP	Pn	05 56 07.0	-0.4
CN2				epP	P	05 56 15.6	+2.3
CN2				esP		05 56 22.2	
CN2				eS	Sn	05 58 48.2	+0.1
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,8μm,13.0s						
CN2				LR	LR		
	comp=E,3μm,13.0s						
CN2				LR	LR		
	comp=Z,7μm,13.0s						
SNY	Shenyang	15.06	300	⇓P	Pn	05 56 13.2	-0.2
SNY				pmax	pmax		
	comp=Z,21nm,0.8s						
SNY				pmax	pmax		
	comp=Z,1μm,5.6s						
SNY				LR	LR		
	comp=N,9μm,15.2s						
SNY				LR	LR		
	comp=E,11μm,18.6s						
SNY				LR	LR		
	comp=Z,11μm,22.8s						
KLR	Kul'dur	15.35	336	eP	Pn	05 56 10.1	-7.0
KLR				eS	Sn	05 59 11.0	+5.1
KLR				MLR	MLR		
	comp=Z,15μm,12.0s						
DL2	Dalian	15.88	288	P	Pn	05 56 24.7	+0.7
DL2				S	Sn	05 59 20.1	+1.4
DL2				pmax	pmax		
	comp=Z,67nm,1.2s						
DL2				pmax	pmax		
	comp=Z,470nm,4.8s						
DL2				LR	LR		
	comp=N,4μm,10.2s						
DL2				LR	LR		
	comp=E,7μm,21.0s						
DL2				LR	LR		
	comp=Z,10μm,21.0s						
SSE	Sheshan	17.20	261	P	Pn	05 56 39.3	-1.4
SSE				sP	sP	05 56 56.1	0.0
SSE				S	Sn	05 59 48.4	-2.6
SSE				pmax	pmax		
	comp=Z,67nm,1.0s						
SSE				pmax	pmax		
	comp=Z,2μm,6.7s						
SSE				LR	LR		
	comp=N,11μm,17.6s						
SSE				LR	LR		
	comp=E,9μm,17.8s						
SSE				LR	LR		
	comp=Z,20μm,16.1s						
SKR	Severo-Kuril's	18.68	31	⇑iP	P	05 56 56.4	-1.7
SKR				eS	Sn	06 00 22.0	-4.5
SKR				pmax	pmax		
	comp=N,800nm,1.5s						
SKR				pmax	pmax		
	comp=Z,2μm,1.5s						
SKR				pmax	pmax		
	comp=E,310nm,1.3s						
SKR				pmax	pmax		
	comp=N,6μm,12.0s						
SKR				pmax	pmax		
	comp=Z,5μm,12.0s						
SKR				smax	smax		
	comp=N,4μm,15.0s						
SKR				MLR	MLR		
	comp=N,7μm,18.0s						
SKR				MLR	MLR		
	comp=Z,12μm,18.0s						
NJ2	Nanjing	18.79	266	eP	P	05 56 58.9	-0.7
NJ2				pP	pP	05 57 09.0	0.0
NJ2				sP	sP	05 57 14.0	+0.3
NJ2				S	Sn	06 00 20.0	-9.5
NJ2				pmax	pmax		
	comp=Z,48nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,2μm,8.4s						
NJ2				LR	LR		
	comp=N,20μm,23.6s						
NJ2				LR	LR		
	comp=E,18μm,24.7s						
NJ2				LR	LR		
	comp=Z,13μm,23.5s						
TIA	Tai'an	19.43	279	eP	P	05 57 03.2	-3.4
TIA				LR	LR		
	comp=N,9μm,17.8s						
TIA				LR	LR		
	comp=E,14μm,17.8s						
TIA				LR	LR		
	comp=Z,14μm,23.8s						
TATO	Taipei	19.88	244	eP	P	05 57 10.7	-0.7
	comp=Z,23nm,0.5s						
YHNB	Yeheng	20.14	243	eP	P	05 57 12.0	-2.5
	comp=Z,139nm,1.2s						
BJI	Beijing	20.19	290	P	P	05 57 12.1	-2.6
BJI				pP	pP	05 57 24.2	-0.1
BJI				sP	sP	05 57 30.0	+1.1
BJI				S	S	06 00 51.9	-7.4
BJI				pmax	pmax		
	comp=Z,89nm,1.8s						
BJI				pmax	pmax		
	comp=Z,440nm,3.7s						
BJI				LR	LR		
	comp=N,5μm,22.0s						
BJI				LR	LR		
	comp=E,5μm,28.2s						
BJI				LR	LR		
	comp=Z,8μm,25.8s						
BJT	Baijiatuau	20.19	290	eP	P	05 57 12.3	-2.5
	comp=Z,426nm,1.3s						
BJT				LR	LR		
	comp=Z,9μm,22.0s						
NACB	Ninganchiao	20.29	242	eP	P	05 57 13.4	-2.5
	comp=Z,60nm,1.0s						
HIA	Hailar	20.84	318	eP	P	05 57 18.5	-3.2
	comp=Z,66nm,1.1s						

HIA LR LR
comp=Z,8μm,22.0s
SSLB Suanglung 20.98 242 *e*P **P** **05 57 20.8 -2.8**
comp=Z,127nm,1.2s
YULB Yu-li 20.99 240 *e*P **P** **05 57 19.5 -4.0**
comp=Z,35nm,0.6s
PETK Petropavlovsk- 21.16 29 P **P** **05 57 25.9 +0.7**
PETK pmax pmax
comp=Z,234nm,1.2s
PETK MLR MLR
comp=Z,6μm,21.6s
PETK Petropavlovsk- 21.16 29 P **P** **05 57 25.9 +0.7**
PETK Petropavlovsk- 21.16 29 P **P** **05 57 25.9 +0.7**
comp=Z,234nm,1.2s,baz=203,slow=7.2,SNR=68
PETK LR LR 06 05 32.9
comp=Z,6μm,21.6s,baz=218,slow=37
PET Petropavlovsk 21.48 30*d i*P **P** **05 57 28.8 +0.3**
PET *e*S **S** **06 01 18.3 -6.2**
PET pmax pmax
comp=Z,700nm,2.9s
PET pmax pmax
comp=Z,3μm,1.7s
PET pmax pmax
comp=Z,512nm,1.8s
PET MLR MLR
comp=Z,15μm,20.0s
PET MLR MLR
comp=Z,12μm,19.0s
TWG Pinlang 21.51 239 *e*P **P** **05 57 27.1 -2.0**
comp=Z,781nm,1.4s
TPUB Ta-pu 21.52 241 *e*P **P** **05 57 26.4 -2.9**
comp=Z,84nm,1.0s
QZH Quanzhou 22.05 248 P **P** **05 57 35.5 +0.6**
QZH S **S** **06 01 29.7 -6.4**
QZH LR LR
comp=N,10μm,16.8s
QZH LR LR
comp=E,10μm,12.8s
QZH LR LR
comp=Z,19μm,14.5s
GUMO Guam 22.07 170 *e*P **P** **05 57 34.5 -0.6**
comp=Z,2μm,1.4s
GUMO LR LR
comp=Z,9μm,19.0s
WHN Wuhan 22.93 265 P **P** **05 57 42.2 -2.0**
WHN S **S** **06 01 45.0 -6.6**
WHN LR LR
comp=N,14μm,13.3s
WHN LR LR
comp=E,33μm,16.9s
WHN LR LR
comp=Z,36μm,15.9s
HHC Hu-ho-hao-te 23.76 292 *e*P **P** **05 57 49.6 -2.8**
HHC pP **pP** **05 58 00.7 -1.9**
HHC sP **sP** **05 58 07.0 -0.1**
HHC PP **PnPn** **05 58 24.1 +3.3**
HHC S S 06 01 55.4 -10
HHC sS sS 06 02 15.6 -6.8
HHC SS **SnSn** **06 02 48.3 +3.1**
HHC pmax pmax
comp=Z,95nm,1.0s
HHC pmax pmax
comp=Z,2μm,6.7s
HHC LR LR
comp=N,10μm,13.9s
HHC LR LR
comp=E,8μm,11.4s
HHC LR LR
comp=Z,8μm,14.9s
CLNS Chul'man 24.00 338 *e*P **P** **05 57 55.2 +0.8**
CLNS *e*PPP PPP 05 58 32.6
CLNS *e* 06 01 36.4
CLNS *e*S **S** **06 02 10.6 +1.8**
CLNS pmax pmax
comp=Z,142nm,1.3s
CLNS pmax pmax
comp=N,150nm,1.4s
CLNS pmax pmax
comp=E,55nm,1.2s
CLNS pmax pmax
comp=E,54nm,1.1s
CLNS pmax pmax
comp=N,172nm,1.1s
CLNS pmax pmax
comp=Z,77nm,1.1s
CLNS smax smax
comp=N,4μm,12.3s
CLNS smax smax
comp=E,2μm,11.5s
CLNS MLR MLR
comp=E,4μm,17.0s
CLNS MLR MLR
comp=Z,8μm,21.0s
CLNS MLR MLR
comp=N,5μm,20.0s
BTO Baotou 24.92 291 *e*P **P** **05 57 59.4 -3.6**
CIT Chita 25.64 319 *e*P **P** **05 58 08.8 -0.6**
CIT *e* 05 58 20.6
CIT *e* 05 58 33.1
CIT *e* 05 58 47.8
CIT *e* 05 59 03.4
CIT *e* 06 02 35.0
CIT pmax pmax
comp=Z,154nm,1.8s
XAN Xi'an 26.41 276 P **P** **05 58 15.1 -1.4**
XAN pP **pP** **05 58 25.4 -1.4**
XAN sP **sP** **05 58 28.6 -2.7**
XAN S **S** **06 02 42.5 -5.1**
XAN LR LR
comp=N,8μm,18.6s
XAN LR LR
comp=E,4μm,21.4s
XAN LR LR
comp=Z,4μm,21.4s
HKC Hong Kong Obse 26.88 248 P **P** **05 58 20.0 -0.8**
ENH Enshi 26.98 268 *e*P **P** **05 58 20.1 -1.6**
comp=Z,135nm,0.7s
ENH LR LR
comp=Z,11μm,20.0s
GZH Guangzhou 27.07 250 P P 05 58 15.7 -6.8
GZH S S 06 02 43.5 -15
GZH LR LR
comp=N,7μm,18.0s
GZH LR LR
comp=E,11μm,16.8s
GZH LR LR
comp=Z,18μm,16.6s
YAK Yakutsk 27.52 348 *i* P **P** **05 58 25.8 -0.3**
YAK *e**PP **pP** **05 58 37.7 +1.2**
YAK *e*PPP PPP 05 59 16.5
YAK *e* 06 01 43.1
YAK *e*S **S** **06 03 03.0 -1.4**
YAK *e*SSS SSS 06 04 26.0
YAK *e* 06 09 08.9
YAK pmax pmax
comp=N,241nm,1.4s
YAK pmax pmax
comp=E,93nm,1.4s
YAK pmax pmax
comp=Z,294nm,1.4s
YAK pmax pmax
comp=Z,329nm,1.5s
YAK pmax pmax
comp=N,271nm,1.6s
YAK pmax pmax
comp=E,223nm,1.9s
YAK smax smax
comp=E,3μm,2.8s
YAK smax smax
comp=N,4μm,3.0s
YAK MLR MLR
comp=Z,9μm,21.0s
YAK MLR MLR
comp=E,8μm,23.0s
YAK MLR MLR
comp=N,4μm,25.0s
WAKE Wake Island 27.73 119 *e*P **P** **05 58 28.2 -0.3**
comp=N,3μm,2.9s
ULN Ulaanbaatar 28.04 307 P **P** **05 58 31.2 +0.1**
SNR=54
ULN Ulaanbaatar 28.04 307 *e*P **P** **05 58 30.8 -0.3**
comp=N,240nm,1.9s
SEY Seymchan 28.36 11*ce*P **P** **05 58 34.6 +1.0**
SONM Songino Array 28.46 306 P **P** **05 58 34.7 -0.2**
SONM PcP **PcP** **06 01 46.7 +0.5**
SONM ScP **ScP** **06 05 28.7 +4.2**
SONM Songino Array 28.46 306 P **P** **05 58 34.7 -0.2**
comp=N,8.2nm,0.6s,baz=93,slow=6.9,SNR=22
SONM PcP **PcP** **06 01 46.7 +0.5**
comp=N,6.1nm,0.8s,baz=112,slow=1.6,SNR=3.6
SONM ScP **ScP** **06 05 28.7 +4.2**
comp=N,2.5nm,1.0s,baz=90,slow=0.4,SNR=4.0
SONM LR LR 06 10 09.4
comp=N,6μm,21.9s,baz=102,slow=37
FX1 Attu Island--F 28.50 42 *e*P **P** **05 58 36.2 +1.2**
FX1 Attu Island--F 28.50 42 P **P** **05 58 36.1 +1.2**
comp=N,31nm,0.6s,baz=243,slow=7.7,SNR=22
FX1 LR LR 06 08 09.1
comp=N,7μm,20.2s,baz=259,slow=33
LZH Lanzhou 30.10 282 ⇑P **P** **05 58 49.2 -0.4**
LZH pP **pP** **05 59 01.3 +1.3**
LZH sP **sP** **05 59 06.4 +2.0**
LZH PP **PnPn** **05 59 48.6 +1.2**
LZH S **S** **06 03 42.1 -3.8**
LZH sS **sS** **06 04 02.5 -0.6**
LZH SS **SnSn** **06 05 22.3 +2.0**
LZH ScS **ScS** **06 09 23.0 -2.7**
LZH pmax pmax
comp=Z,330nm,1.5s
LZH pmax pmax
comp=Z,830nm,5.6s
LZH LR LR
comp=N,4μm,12.3s
LZH LR LR
comp=E,7μm,15.6s
LZH LR LR
comp=Z,9μm,18.0s
GYA Guiyang 30.73 263 ⇓*i*P **P** **05 58 54.6 -0.6**
GYA pP **pP** **05 59 05.5 -0.1**
GYA sP **sP** **05 59 13.2 +3.2**
GYA PP **PnPn** **05 59 54.1 -1.6**
GYA PcP **PcP** **06 01 52.6 +0.3**
GYA S S 06 03 49.2 -6.7
GYA sS **sS** **06 04 10.1 -3.0**
GYA SS SS 06 05 31.7 -36
GYA ScP **ScP** **06 05 32.8 +0.7**
GYA ScS **ScS** **06 09 25.4 -3.5**
GYA pmax pmax
comp=Z,50nm,1.1s
GYA pmax pmax
comp=Z,150nm,4.6s
GYA LR LR
comp=N,3μm,17.2s
GYA LR LR
comp=E,6μm,15.9s
GYA LR LR
comp=Z,8μm,15.0s
IRK Irkutsk 30.96 314 *e*P **P** **05 58 56.7 -0.1**
IRK *e* 06 00 18.3
IRK *e*S **S** **06 04 01.1 +2.3**
IRK pmax pmax
comp=Z,49nm,1.6s
ZAK Zakamensk 31.05 310 *e*P **P** **05 58 57.2 -0.5**
ZAK pmax pmax
comp=Z,25nm,1.3s
TLY Talaya 31.17 313*c i*P **P** **05 58 59.4 +0.7**
TLY *e* 06 00 19.7
TLY *e*S **S** **06 04 06.5 +4.5**
TLY *e*SS SS 06 06 05.8 -10
TLY pmax pmax
comp=Z,51nm,1.2s
TLY MLR MLR
comp=Z,3μm,15.0s
TLY Talaya 31.17 313 P **P** **05 58 59.2 +0.5**
comp=Z,111nm,0.9s,SNR=8.4
CD2 Chengdu 31.45 272 ⇓*i*P **P** **05 59 00.5 -0.8**
CD2 pP **pP** **05 59 12.5 +0.7**
CD2 sP **sP** **05 59 17.8 +1.6**
CD2 PP **PnPn** **06 00 04.8 -0.1**
CD2 PcP **PcP** **06 01 54.5 +0.4**
CD2 S **S** **06 04 03.0 -3.8**
CD2 sS **sS** **06 04 22.8 -1.3**
CD2 PcS **PcS** **06 05 37.6 -1.0**
CD2 SS **SnSn** **06 05 51.2 -1.7**
CD2 ScS **ScS** **06 09 28.5 -3.6**
CD2 pmax pmax
comp=Z,90nm,1.4s
CD2 pmax pmax
comp=Z,680nm,10.6s
CD2 LR LR
comp=N,14μm,13.0s
CD2 LR LR
comp=E,23μm,17.8s
CD2 LR LR
comp=Z,29μm,17.8s
AMKA Amchitka 31.55 48 *e*P **P** **05 59 03.2 +1.3**
comp=Z,63nm,1.2s
DAV Davao City (W) 31.67 210 LR LR 06 09 55.8
comp=Z,6μm,20.5s,baz=64,slow=33
QIZ Qiongzhong 32.08 248 P **P** **05 59 06.2 -0.7**
QIZ pP **pP** **05 59 17.5 +0.2**
QIZ S **S** **06 04 15.0 -1.7**
QIZ sS **sS** **06 04 34.8 +0.8**
QIZ pmax pmax
comp=Z,220nm,7.6s
QIZ LR LR
comp=N,5μm,20.8s
QIZ LR LR
comp=Z,5μm,24.6s
MOY Mondy 32.76 312 *e*P **P** **05 59 14.5 +1.8**
MOY pmax pmax
comp=Z,54nm,4.0s
GTA Gaotai 32.80 289 P **P** **05 59 13.2 0.0**
GTA pP **pP** **05 59 24.7 +1.0**
GTA sP **sP** **05 59 30.4 +2.3**
GTA PcP **PcP** **06 01 59.3 +1.6**
GTA S **S** **06 04 26.0 -1.9**
GTA ScP **ScP** **06 05 39.2 +0.3**
GTA PcS **PcS** **06 05 43.5 +0.4**
GTA ScS **ScS** **06 09 37.7 -1.2**
GTA pmax pmax
comp=Z,160nm,4.5s
GTA LR LR
comp=N,4μm,18.8s
GTA LR LR
comp=E,6μm,20.9s
GTA LR LR
comp=Z,8μm,19.9s
KMI Kunming 34.49 263 P **P** **05 59 27.2 -1.0**
KMI sP **sP** **05 59 41.7 -1.4**
KMI PP **PP** **06 00 46.2 -0.5**
KMI S S 06 04 44.5 -10
KMI pmax pmax
comp=Z,60nm,1.7s
KMI pmax pmax
comp=Z,580nm,5.7s
KMI LR LR
comp=N,3μm,15.4s
KMI LR LR
comp=E,6μm,15.4s
KMI LR LR
comp=Z,6μm,14.0s
BILL Bilibino 35.58 16⇓*e*P **P** **05 59 36.5 -0.3**
BILL *e* 06 00 57.9
BILL *i*S **S** **06 05 11.9 +1.9**
BILL pmax pmax
comp=Z,127nm,1.3s
BILL MLR MLR
comp=Z,3μm,18.0s
BILL Bilibino 35.58 16 PFAKE 05 59 50.0 +13
BILL LR LR
comp=Z,4μm,22.0s
ATKA Atka Island 35.67 48 *e*P **P** **05 59 38.2 +0.5**
comp=Z,288nm,1.6s
GAMI Galela, Maluku 35.69 203 P **P** **05 59 37.6 -0.7**
MIDW Midway 35.82 90 PFAKE 05 59 50.0 +11
MIDW LR LR
comp=Z,5μm,21.0s
MYLDM Lahad Datu 36.65 220 P **P** **05 59 46.4 -0.1**
MYLDM Lahad Datu 36.65 220 P **P** **05 59 43.7 -2.8**
comp=Z,67nm,1.4s,comp=Z,1μm
BAKI Biak 36.79 188 P **P** **05 59 46.8 -0.8**
comp=Z,265nm,1.1s,comp=Z,4μm
TIXI Tiksi 36.79 354*d i*P **P** **05 59 46.8 -0.3**
TIXI pmax pmax
comp=Z,135nm,2.3s
TNTI Ternate 36.83 203 P **P** **05 59 46.9 -1.1**
comp=Z,314nm,1.5s,comp=Z,4μm
SDKM Sandakan 36.97 222 P **P** **05 59 47.9 -1.3**
KKM Kota Kinabalu 37.18 224 *e*P **P** **05 59 51.5 +0.4**
comp=Z,68nm,1.4s
KKM LR LR
comp=Z,6μm,20.0s
KKM Kota Kinabalu 37.18 224 P **P** **05 59 48.7 -2.4**
KKM Kota Kinabalu 37.18 224 P **P** **05 59 48.0 -3.1**
comp=Z,32nm,1.6s,comp=Z,622nm
RKPI Ransiki, Papua 37.37 191 P **P** **05 59 52.5 -0.1**
comp=Z,316nm,0.6s,comp=Z,6μm
SRPI Serui, Papua 37.44 188 P **P** **05 59 52.8 -0.4**
comp=Z,222nm,0.9s,comp=Z,6μm
TSM Tawau 37.73 220 P **P** **05 59 54.4 -1.3**
KMSI Cibinong 38.22 208 P **P** **05 59 59.1 -0.6**
comp=Z,641nm,1.1s,comp=Z,7μm
FAKI Fak Fak 39.09 194 P **P** **06 00 06.5 -0.6**
comp=Z,287nm,1.0s,comp=Z,3μm
MRSI Marisa 39.13 211 P **P** **06 00 06.0 -1.4**
comp=Z,160nm,1.4s,comp=Z,2μm
LUWI Luwuk 40.17 209 P **P** **06 00 14.7 -1.3**
comp=Z,138nm,1.0s,comp=Z,2μm
GAMB Gambell 40.18 30 *e*P **P** **06 00 17.1 +1.5**
comp=Z,24nm,0.8s
MSAI Masohi 40.28 199 P **P** **06 00 19.0 +2.0**
CHTO Chiang Mai 40.68 257 *e*P **P** **06 00 20.5 +0.2**
CHTO pmax pmax
comp=Z,37nm,1.1s
CHTO MLR MLR
comp=Z,9μm,20.0s
CHTO Chiang Mai 40.68 257 *e*P **P** **06 00 20.5 +0.2**
comp=Z,37nm,1.1s
CHTO LR LR
comp=Z,9μm,20.0s
CHTO Chiang Mai 40.68 257 P **P** **06 00 19.9 -0.4**
CM31 Chiang Mai Arr 40.87 257 *e*P **P** **06 00 20.7 -1.2**
comp=Z,14nm,0.7s
CMAR Chiang Mai Arr 40.87 257 P **P** **06 00 21.2 -0.7**
CMAR PcP **PcP** **06 02 23.8 +1.6**
CMAR Chiang Mai Arr 40.87 257 P **P** **06 00 21.2 -0.7**
comp=Z,4.2nm,0.6s,baz=48,slow=8.4,SNR=12
CMAR PcP **PcP** **06 02 23.8 +1.6**
comp=Z,7.3nm,1.0s,baz=20,slow=3.0,SNR=6.8
CMAR LR LR 06 19 11.1
comp=Z,9μm,18.2s,baz=65,slow=39
BTM Bintulu 41.28 225 P **P** **06 00 24.8 -0.5**
WMQ Urumqi 41.32 298 ⇓*i*P **P** **06 00 26.0 +0.5**
WMQ pP **pP** **06 00 38.0 +1.9**
WMQ sP **sP** **06 00 43.5 +3.0**
WMQ PP **PnPn** **06 02 05.0 -0.9**
WMQ S **S** **06 06 37.0 -0.3**
WMQ sS **sS** **06 06 57.0 +2.1**
WMQ pmax pmax
comp=Z,130nm,1.3s
WMQ pmax pmax
comp=Z,1μm,5.0s
WMQ LR LR
comp=N,5μm,19.5s
WMQ LR LR
comp=E,3μm,24.2s
WMQ LR LR
comp=Z,4μm,22.9s
SKSI Soroako, Sulaw 42.10 210 P **P** **06 00 30.9 -1.1**
comp=Z,53nm,1.4s,comp=Z,836nm
LSA Lhasa 42.11 277 P **P** **06 00 33.8 +1.3**
LSA pP **pP** **06 00 41.4 -1.8**
LSA pmax pmax
comp=Z,40nm,1.0s
LSA pmax pmax
comp=Z,140nm,6.0s
LSA LR LR
comp=N,2μm,22.0s
LSA LR LR
comp=E,4μm,20.0s
LSA LR LR
comp=Z,7μm,20.0s
LSA Lhasa 42.11 277 *e*P **P** **06 00 34.6 +2.1**
LSA pmax pmax
comp=Z,163nm,1.1s
LSA MLR MLR
comp=Z,8μm,22.0s
LSA Lhasa 42.11 277 *e*P **P** **06 00 34.6 +2.1**
comp=Z,163nm,1.1s
LSA LR LR
comp=Z,8μm,22.0s
TNA Tin City 42.33 29 *e*P **P** **06 00 34.8 +1.6**
comp=Z,74nm,0.9s
SBUM Sibu 42.39 226 P **P** **06 00 33.3 -1.0**
SBUM Sibu 42.39 226 P **P** **06 00 32.4 -1.9**
comp=Z,28nm,1.2s,comp=Z,477nm
ZAA0 Zalesovo Array 42.77 314 *e*P **P** **06 00 36.9 -0.1**
ZALV Zalesovo Beam 42.77 314 P **P** **06 00 37.0 -0.1**
ZALV pmax pmax
comp=Z,30nm,0.6s
ZALV pmax pmax
comp=N,6.0nm,1.0s
ZALV MLR MLR
comp=Z,2μm,21.9s
ZALV Zalesovo Beam 42.77 314 P **P** **06 00 37.0 -0.1**
ZALV ScP **ScP** **06 06 18.4 +2.4**
ZALV Zalesovo Beam 42.77 314 P **P** **06 00 37.0 -0.1**
comp=Z,30nm,0.6s,baz=96,slow=7.2,SNR=89
ZALV ScP **ScP** **06 06 18.4 +2.4**
comp=Z,6.2nm,1.0s,baz=116,slow=3.4,SNR=4.8
ZALV LR LR 06 18 43.3
comp=Z,2μm,21.9s,baz=82,slow=37
SHL Shillong 43.15 271 *e*PKP **P** **06 00 41.0 +0.4**
SHL *ex* x 06 07 07.5
TTSI Tana Toraja 43.20 212 P **P** **06 00 42.9 +2.0**
comp=Z,38nm,1.3s,comp=Z,1μm
NVS Novosibirsk 43.73 315 ⇓*i*P **P** **06 00 43.7 -1.0**
NVS *e*S **S** **06 07 10.7 -1.6**
NVS *e*SS **ScS** **06 10 36.7 -4.0**
NVS pmax pmax
comp=N,59nm,1.7s
NVS pmax pmax
comp=E,195nm,1.7s
NVS pmax pmax
comp=Z,262nm,1.7s
NVS pmax pmax
comp=Z,63nm,2.0s
NVS pmax pmax
comp=N,45nm,2.2s
NVS pmax pmax
comp=E,29nm,1.9s
NVS smax smax
comp=N,153nm,3.3s
NVS smax smax
comp=E,162nm,2.9s
SPSI Sidrap Palu 44.05 211 P **P** **06 00 46.4 -1.3**
comp=E,64nm,1.4s,comp=E,1μm
SDPT Sand Point 44.08 44 *e*P **P** **06 00 48.0 +0.5**
comp=E,93nm,0.8s
KSM Kuching 44.30 227 *e*P **P** **06 00 48.9 -1.0**
comp=E,33nm,0.8s
KSM LR LR
comp=Z,2μm,19.0s
KSM Kuching 44.30 227 P **P** **06 00 49.2 -0.6**
KSM Kuching 44.30 227 P **P** **06 00 48.8 -1.0**
comp=Z,58nm,1.1s,comp=Z,887nm
MK31 Makanchi Array 44.73 303 *i* P **P** **06 00 52.7 -0.2**
MK31 pmax pmax
comp=Z,117nm,0.9s
MK31 Makanchi Array 44.73 303 *e*P **P** **06 00 52.5 -0.4**
MKAR Makanchi Array 44.73 303 P **P** **06 00 52.8 -0.1**
MKAR pmax pmax
comp=Z,17nm,0.7s
MKAR MLR MLR
comp=Z,5μm,20.5s
MKAR Makanchi Array 44.73 303 *e*P **P** **06 00 52.8 -0.1**
MKAR Makanchi Array 44.73 303 P **P** **06 00 52.8 -0.1**
comp=Z,17nm,0.7s,baz=86,slow=9.0,SNR=148
MKAR LR LR 06 20 14.0
comp=Z,5μm,20.5s,baz=84,slow=37
STKI Sintang 44.75 225 P **P** **06 00 52.9 -0.5**
comp=Z,71nm,1.0s
KAPI Kappang 45.00 211 P **P** **06 00 55.7 +0.4**
SNR=20
KAPI Kappang 45.00 211 *e*P **P** **06 00 53.5 -1.8**
comp=Z,334nm,1.5s
KAPI LR LR
comp=Z,2μm,21.0s
KAPI Kappang 45.00 211 P **P** **06 00 53.5 -1.8**
comp=Z,719nm,1.4s,SNR=13
KAPI Kappang 45.00 211 P **P** **06 00 53.7 -1.6**
comp=Z,146nm,1.8s,comp=Z,2μm
KAPI Kappang 45.00 211 P **P** **06 00 54.0 -1.3**
comp=Z,26nm,0.5s,baz=20,slow=3.6,SNR=23
PMG Port Moresby 45.02 172 *e*P **P** **06 00 55.9 +0.5**
comp=Z,52nm,0.8s
PMG LR LR

comp=Z,2µm,22.0s
PMG Port Moresby 45.02 172 P **P** **06 00 56.6 +1.2**
comp=Z,81nm,0.9s,comp=Z,1µm
TARA Tarawa 45.03 132 *e*P **P** **06 00 56.3 +0.7**
comp=Z,435nm,1.4s
KBKI Kotabaru 45.10 216 P **P** **06 00 57.2 +1.1**
BKSI Bulukumba 45.13 210 P **P** **06 00 55.5 -0.8**
comp=Z,67nm,0.8s,comp=Z,906nm
TAPN Taplejung 45.80 275 *e*P **P** **06 01 02.4 +0.4**
comp=Z,129nm,1.0s
BBKI Banjar Baru 45.90 218 P **P** **06 01 00.9 -1.5**
comp=Z,148nm,1.0s,comp=Z,4µm
KTGM Kuala Trenggan 46.05 238 P **P** **06 01 04.4 +0.8**
ODAN Odare 46.26 275 *e*P **P** **06 01 05.4 -0.2**
comp=Z,168nm,1.1s
KURK Kurchatov 46.69 309 *e*P **P** **06 01 07.7 -0.6**
KURK pmax pmax
comp=Z,118nm,0.8s
KURK MLR MLR
comp=Z,4µm,20.0s
KURK Kurchatov 46.69 309 P **P** **06 01 08.2 -0.1**
SNR=118
KURK Kurchatov 46.69 309 *e*P **P** **06 01 07.7 -0.6**
comp=Z,118nm,0.8s
KURK LR LR
comp=Z,4µm,20.0s
KURK Kurchatov 46.69 309 P **P** **06 01 07.0 -1.3**
comp=Z,833nm,0.8s,SNR=54
KURBB Kurchatov Arra 46.76 309 P **P** **06 01 08.4 -0.4**
comp=Z,73nm,1.1s,baz=85,slow=8.2,SNR=209
KURBB ScP **ScP** **06 06 33.3 +0.9**
comp=Z,1.9nm,0.9s,baz=82,slow=3.7,SNR=4.1
RAMN Ramite 46.87 275 *e*P **P** **06 01 10.1 -0.2**
comp=Z,554nm,1.0s
SVW2 Sparrevohn 46.91 36 *e*P **P** **06 01 11.7 +1.8**
comp=Z,63nm,1.0s
PBKI Pangkalan Bun 46.92 222 P **P** **06 01 12.2 +1.7**
comp=Z,127nm,0.6s
GUN Gumba 47.06 277 *e*P **P** **06 01 12.5 +0.5**
comp=Z,435nm,1.2s
MMRI Maumere 47.35 206 P **P** **06 01 12.5 -1.3**
comp=Z,259nm,1.1s,comp=Z,3µm
PKI Pulchoki 47.58 277 *e*P **P** **06 01 16.2 +0.2**
comp=Z,152nm,1.0s
PKIN Phulchoki 47.59 277 *e*P **P** **06 01 16.2 +0.2**
comp=Z,90nm,0.8s
KKN Kakani 47.60 277 *e*P **P** **06 01 16.6 +0.6**
comp=Z,265nm,1.0s
DMN Daman 47.81 277 *e*P **P** **06 01 18.3 +0.6**
comp=Z,279nm,1.2s
KULM Kulim 47.82 241 *e*P **P** **06 01 17.0 -0.5**
comp=Z,106nm,1.7s
KULM LR LR
comp=Z,2µm,20.0s
KULM Kulim 47.82 241 P **P** **06 01 17.0 -0.5**
KULM Kulim 47.82 241 P **P** **06 01 16.6 -0.9**
OHAK Old Harbor 48.07 42 *e*P **P** **06 01 18.9 0.0**
comp=Z,134nm,1.2s
HNR Honiara 48.10 155 P **P** **06 01 20.8 +1.3**
HNR Honiara 48.10 155 P **P** **06 01 20.8 +1.3**
comp=Z,34nm,0.5s,baz=180,slow=11,SNR=5.0
HNR LR LR 06 19 51.7
comp=Z,2µm,18.9s,baz=332,slow=34
IPM Ipoh 48.12 240 *e*P **P** **06 01 18.1 -1.7**
comp=Z,30nm,0.8s
IPM Ipoh 48.12 240 P **P** **06 01 18.9 -0.9**
IPM Ipoh 48.12 240 P **P** **06 01 16.9 -3.0**
MYKOM Kota Tinggi 48.14 234 P **P** **06 01 18.9 -1.0**
MYKOM Kota Tinggi 48.14 234 P P 06 01 25.0 +5.0
comp=Z,28nm,1.1s,comp=Z,2µm
RSO Redoubt South 48.28 37 *e*P **P** **06 01 21.8 +1.0**
KGM Kluang 48.33 235 P **P** **06 01 20.9 -0.5**
KDAK Kodiak Island 48.43 41 PFAKE 06 01 30.0 +8.3
KDAK LR LR
comp=Z,6µm,21.0s
KDAK Kodiak Island 48.43 41 P **P** **06 01 22.3 +0.7**
comp=Z,827nm,1.0s,SNR=12
FRIM Kepong 48.59 238 P **P** **06 01 22.7 -0.8**
DANN Dangsing 48.60 278 *e*P **P** **06 01 24.8 +1.0**
comp=Z,594nm,0.9s
DGPR DIGLIPUR 48.61 255 *e*PKP **P** **06 01 25.1 +1.5**
SPU Mount Spurr 48.62 36 *e*P **P** **06 01 24.4 +1.2**
BOK Bokaro 48.82 272 *e*PKP **P** **06 01 26.6 +1.4**
BOK AMB AMB 06 01 37.3
comp=Z,73nm,0.3s
KOLN Koldanda 48.97 278 *e*P **P** **06 01 27.4 +0.9**
comp=Z,292nm,1.2s
COEN Coen 49.21 177 *e*P **P** **06 01 28.8 +0.7**
comp=Z,447nm,0.8s
TPI Tanjungpandan 49.26 227 P **P** **06 01 28.2 -0.3**
comp=Z,53nm,0.6s,comp=Z,609nm
PYUN Piuthan 49.32 279 *e*P **P** **06 01 29.4 +0.2**
comp=Z,1µm,1.1s
KMMI Kalianget 49.42 217 P **P** **06 01 28.5 -1.3**
comp=Z,195nm,0.8s,comp=Z,2µm
TRF Thorofare Moun 49.46 33 *e*P **P** **06 01 29.9 +0.1**
comp=Z,108nm,1.4s
COLD Coldfoot 49.63 28 *e*P **P** **06 01 32.1 +1.4**
comp=Z,36nm,1.0s
PPBI Pangkal Pinang 49.70 229 P **P** **06 01 30.1 -1.8**
comp=Z,48nm,1.1s,comp=Z,11µm
SRBI Singaraja 49.74 214 P **P** **06 01 31.8 -0.3**
comp=Z,178nm,0.8s,comp=Z,3µm
KHKI Kahang-Kahang 49.80 214 P **P** **06 01 31.8 -0.8**
comp=Z,499nm,1.4s,comp=Z,4µm
ULHL Ulaho 49.86 298 P **P** **06 01 33.6 +0.5**
SNR=20
SEW Seward 49.94 38 *e*P **P** **06 01 33.8 +0.6**
comp=Z,180nm,1.2s
PMR Palmer 50.02 36 *e*P **P** **06 01 33.9 +0.1**
PMR pmax pmax
comp=Z,92nm,1.0s
PMR Palmer 50.02 36 *e*P **P** **06 01 33.9 +0.1**
comp=Z,92nm,1.0s
MCK McKinley 50.06 33 *e*P **P** **06 01 34.8 +0.7**
MCK pmax pmax
comp=Z,387nm,2.1s
MCK McKinley 50.06 33 *e*P **P** **06 01 34.8 +0.7**
comp=Z,387nm,2.1s
TKM2 Tokmak 2 50.15 299 *e*P **P** **06 01 36.0 +0.7**
TKM2 pmax pmax
comp=Z,350nm,1.5s
TKM2 MLR MLR
comp=Z,7µm,20.0s
TKM2 Tokmak 2 50.15 299 *e*P **P** **06 01 36.0 +0.7**
comp=Z,350nm,1.5s
TKM2 LR LR
comp=Z,7µm,20.0s
TKM2 Tokmak 2 50.15 299 P **P** **06 01 36.0 +0.7**
SNR=45
BLJI Banyuglugur 50.21 217 P P 06 01 39.0 +3.3
comp=Z,86nm,0.6s,comp=Z,22µm
BYJI Banyuwangi 50.25 215 P **P** **06 01 35.6 -0.4**
comp=Z,389nm,1.7s
DNP Denpasar 50.26 214 P **P** **06 01 35.4 -0.7**
comp=Z,381nm,1.2s
SML Sawmill 50.40 36 *e*P **P** **06 01 37.4 +0.7**
SML pmax pmax
comp=Z,31nm,1.0s
SML Sawmill 50.40 36 *e*P **P** **06 01 37.4 +0.7**
comp=Z,31nm,1.0s
IGBI Denpasar 50.41 214 P **P** **06 01 34.9 -2.3**
comp=Z,42nm,0.7s
COLA College 50.53 32 *e*P **P** **06 01 38.7 +1.1**
COLA pmax pmax
comp=Z,68nm,0.8s
COLA MLR MLR
comp=Z,2µm,20.0s
COLA College 50.53 32 *e*P **P** **06 01 38.6 +1.1**
comp=Z,68nm,0.8s
COLA LR LR
comp=Z,2µm,20.0s
JAGI Jajag, Banyuwa 50.57 215 P **P** **06 01 36.4 -2.1**
comp=Z,105nm,0.8s
KZA Kyzart 50.62 298 P **P** **06 01 40.2 +1.1**
SNR=42
KBK Karagaybulak 50.68 299 P **P** **06 01 39.9 +0.6**
SNR=21
CHMS Chumysh 50.73 300 P **P** **06 01 40.5 +1.0**
SNR=8.6
GMJI Gumukmas 50.74 216 P **P** **06 01 38.4 -1.3**
comp=Z,66nm,1.1s
KSH Kashi 50.81 295 P P 06 01 43.8 +3.5
KSH *e*pP pP 06 01 55.1 +4.0
KSH *e*sP sP 06 02 01.6 +6.2
KSH *e*PcP **PcP** **06 02 59.3 +2.5**
KSH *e*PP **PP** **06 03 41.5 +5.0**

KSH *e*S **S** **06 08 55.5 +1.7**
KSH *e*sS sS 06 09 17.4 +5.8
KSH *e*ScS **ScS** **06 11 27.7 -0.6**
KSH pmax pmax
comp=Z,56nm,1.0s
KSH pmax pmax
comp=Z,2µm,4.9s
KSH LR LR
comp=N,2µm,10.9s
KSH LR LR
comp=E,4µm,15.7s
KSH LR LR
comp=Z,6µm,25.3s
USP Ospenovka 50.84 300 P **P** **06 01 40.3 0.0**
SNR=19
FRU Bishkek 50.87 300 ⇓*i*P **P** **06 01 40.0 -0.5**
FRU *i* 06 01 51.0
FRU pmax pmax
comp=Z,170nm,1.8s
FRU MLR MLR
comp=Z,6µm,21.0s
ILAR Eielson Array 50.94 32 P **P** **06 01 40.5 -0.3**
ILAR ScP **ScP** **06 06 53.8 +3.8**
ILAR P'P' 06 32 23.4
ILAR Eielson Array 50.94 32 P **P** **06 01 40.5 -0.3**
comp=Z,22nm,0.7s,baz=269,slow=5.8,SNR=140
ILAR ScP **ScP** **06 06 53.8 +3.8**
comp=Z,0.5nm,0.7s,baz=254,slow=6.5,SNR=4.1
ILAR PKPPKP P'P'df 06 32 23.4 -7.1
comp=Z,2.0nm,1.3s,baz=153,slow=2.1,SNR=5.2
PTH Pithoragarh 50.97 282 *ex* P 06 01 36.5 -5.2
AAK Ala-Archa 51.01 299 *e*P **P** **06 01 41.2 -0.5**
AAK pmax pmax
comp=Z,58nm,1.1s
AAK MLR MLR
comp=Z,6µm,21.0s
AAK Ala-Archa 51.01 299 P **P** **06 01 42.5 +0.8**
SNR=44
AAK Ala-Archa 51.01 299 *e*P **P** **06 01 41.2 -0.5**
comp=Z,58nm,1.1s
AAK LR LR
comp=Z,6µm,21.0s
AAK Ala-Archa 51.01 299 P **P** **06 01 42.2 +0.4**
SNR=11
AAK Ala-Archa 51.01 299 P **P** **06 01 42.0 +0.2**
comp=Z,198nm,1.0s,SNR=13
AAK Ala-Archa 51.01 299 P **P** **06 01 41.9 +0.2**
comp=Z,6.7nm,0.5s,baz=91,slow=4.6,SNR=33
BKNI Bangkinang 51.10 236 P **P** **06 01 42.4 -0.1**
SJI Sawahan 51.11 219 P **P** **06 01 41.0 -1.6**
KRKI Karangkates 51.12 218 P **P** **06 01 40.8 -1.8**
comp=Z,538nm,0.7s
VOSK Vostochnaya 51.12 313 P **P** **06 01 41.2 -1.1**
VOSK pmax pmax
comp=Z,101nm,1.0s
SMRI Semarang 51.22 220 P **P** **06 01 43.2 -0.1**
comp=Z,135nm,1.5s
PWJI Pagerwojo 51.33 218 P **P** **06 01 42.6 -1.6**
comp=Z,306nm,0.8s,comp=Z,2µm
BVA0 Borovoye Array 51.43 313 *i* P **P** **06 01 44.6 +0.1**
BVA0 pmax pmax
comp=Z,79nm,1.1s
BVAR Borovoye Array 51.43 313 P **P** **06 01 44.6 +0.1**
BVAR pmax pmax
comp=Z,13nm,0.8s
BVAR Borovoye Array 51.43 313 P **P** **06 01 44.6 +0.1**
BVAR Borovoye Array 51.43 313 P **P** **06 01 44.6 +0.1**
comp=Z,13nm,0.8s,baz=79,slow=7.7,SNR=59
BRVK Borovoye 51.48 313 *e*P **P** **06 01 45.3 +0.4**
BRVK pmax pmax
comp=Z,61nm,1.0s
BRVK MLR MLR
comp=Z,2µm,20.0s
BRVK Borovoye 51.48 313 P **P** **06 01 45.4 +0.4**
SNR=69
BRVK Borovoye 51.48 313 *e*P **P** **06 01 45.2 +0.4**
comp=Z,61nm,1.0s
BRVK LR LR
comp=Z,2µm,20.0s
BRVK Borovoye 51.48 313 P **P** **06 01 45.6 +0.7**
comp=Z,362nm,1.0s,SNR=24
EKS2 Erkin-Say 51.51 300 *e*P **P** **06 01 45.8 +0.3**
EKS2 pmax pmax
comp=Z,39nm,1.0s
EKS2 MLR MLR
comp=Z,5µm,21.0s
EKS2 Erkin-Say 51.51 300 *e*P **P** **06 01 45.8 +0.3**
comp=Z,39nm,1.0s
EKS2 LR LR
comp=Z,5µm,21.0s
EKS2 Erkin-Say 51.51 300 P **P** **06 01 45.6 +0.1**
SNR=12
PAX Paxson 51.66 34 *e*P **P** **06 01 47.0 +0.8**
PAX pmax pmax
comp=Z,22nm,0.9s
PAX Paxson 51.66 34 *e*P **P** **06 01 47.0 +0.8**
comp=Z,22nm,0.9s
DIV Divide 51.67 36 *e*P **P** **06 01 48.0 +1.7**
comp=Z,202nm,1.2s
AML Almayashu 51.71 299 P **P** **06 01 47.9 +0.6**
SNR=80
TGJI Tegal 51.77 222 P **P** **06 01 48.1 +0.6**
comp=Z,116nm,1.5s,comp=Z,2µm
BJII Banjamegara 51.84 221 P **P** **06 01 48.3 +0.2**
comp=Z,85nm,2.3s,comp=Z,2µm
UGM Wanagama 51.90 220 *e*P **P** **06 01 47.4 -1.1**
comp=Z,531nm,1.3s
UGM Wanagama 51.90 220 P **P** **06 01 47.0 -1.5**
comp=Z,326nm,1.5s
PPJI Pangpang Panjang 52.11 236 P **P** **06 01 49.5 -0.5**
DOT Dot Lake 52.24 33 *e*P **P** **06 01 50.8 +0.3**
comp=Z,51nm,1.0s
ZRNK Zerenda 52.26 313 P **P** **06 01 50.8 0.0**
ZRNK pmax pmax
comp=Z,209nm,1.6s
RAGM Ragged Mountai 52.28 37 *e*P **P** **06 01 52.8 +1.9**
comp=Z,181nm,1.1s
MENT Mentasta 52.46 34 *e*P **P** **06 01 52.9 +0.8**
LEM Lembang 52.57 224 P **P** **06 01 53.0 -0.6**
comp=Z,297nm,0.9s,comp=Z,4µm
SMLA Simla 52.78 285 *i* P **P** **06 01 54.6 -0.3**
SMLA AMb AMB 06 02 01.6
comp=Z,30nm,0.1s
SMLA *i* S **S** **06 09 20.4 -0.2**
MASI Maura Aman, Be 52.90 232 P **P** **06 01 54.8 -1.2**
comp=Z,288nm,1.2s,comp=Z,3µm
DHRM DHARAMSHALA 53.02 286 *e*PKP **P** **06 01 56.9 -0.1**
DHRM AMB AMB 06 02 11.1
comp=Z,186nm,1.1s
CISI Cisompet, Garu 53.06 223 P **P** **06 01 54.3 -2.8**
comp=Z,99nm,0.8s
KSI Kapahiang 53.07 231 P **P** **06 01 55.9 -1.3**
comp=Z,118nm,0.9s
LWLI Liwa 53.22 229 P **P** **06 01 56.7 -1.6**
comp=Z,262nm,0.8s
KASI Kota Agung 53.35 228 P P 06 01 55.9 -3.3
comp=Z,96nm,0.7s,comp=Z,2µm
EGAK Eagle 53.39 31 *e*P **P** **06 01 58.6 -0.3**
comp=Z,27nm,0.7s
EGAK LR LR
comp=Z,2µm,20.0s
THN Thein Dam 53.41 287 *ex* P 06 01 55.5 -4.0
KK31 Karatay Array 53.68 301 *i* P **P** **06 02 01.3 -0.1**
KK31 pmax pmax
comp=Z,197nm,1.3s
KKAR Karatay Array 53.68 301 *e*P **P** **06 02 01.6 +0.2**
KKAR pmax pmax
comp=Z,60nm,0.8s
KKAR Karatay Array 53.68 301 *e*P **P** **06 02 01.6 +0.2**
comp=Z,60nm,0.8s
NDI New Delhi 53.72 282 *e*PKP **P** **06 01 59.0 -2.9**
NDI *e*S **S** **06 09 30.5 -3.1**
JBP Jabalpur 53.91 274 ⇑*i*P **P** **06 02 04.3 +1.0**
JBP *e*S **S** **06 09 35.0 -1.3**
KIP Kipapa 54.57 88 *e*P **P** **06 02 10.2 +2.1**
KIP pmax pmax
comp=Z,323nm,1.3s
KIP MLR MLR
comp=Z,2µm,20.0s
KIP Kipapa 54.57 88 *e*P **P** **06 02 10.2 +2.1**
comp=Z,323nm,1.3s
KIP LR LR
comp=Z,2µm,20.0s
PNL Peninsula 55.02 38 *e*P **P** **06 02 11.9 +1.0**
comp=Z,166nm,1.4s
FITZ Fitzroy Crossi 55.27 198 *e*P **P** **06 02 12.9 -0.1**
comp=Z,270nm,1.4s

FITZ Fitzroy Crossi 55.27 198 P **P** **06 02 13.5 +0.4**
comp=Z,46nm,0.6s,baz=19,slow=6.6,SNR=212
FITZ LR LR 06 27 11.6
comp=Z,758nm,18.2s,baz=31,slow=38
WRAB Tennant Creek 55.49 188 *e*P **P** **06 02 14.0 -0.6**
WRAB pmax pmax
comp=Z,97nm,0.6s
WRAB Tennant Creek 55.49 188 *e*P **P** **06 02 14.0 -0.6**
comp=Z,97nm,0.6s
WRAB Tennant Creek 55.49 188 P **P** **06 02 13.0 -1.6**
comp=Z,1µm,0.6s
CTAO Charters Tower 55.49 174 *e*P **P** **06 02 13.4 -1.2**
CTAO pmax pmax
comp=Z,152nm,1.6s
CTAO MLR MLR
comp=Z,2µm,20.0s
CTAO Charters Tower 55.49 174 *e*P **P** **06 02 13.4 -1.2**
comp=Z,152nm,1.6s
CTAO LR LR
comp=Z,2µm,20.0s
WRA Warramunga Arr 55.50 188 P **P** **06 02 14.0 -0.7**
WRA P'P' 06 32 15.0
WRA Warramunga Arr 55.50 188 P **P** **06 02 14.0 -0.7**
comp=Z,124nm,0.6s,baz=3.5,slow=7.7,SNR=563
WRA LR LR 06 25 27.0
comp=Z,3µm,20.6s,baz=5.0,slow=36
WRA PKPPKP **P'P'df** **06 32 15.0 +2.9**
comp=Z,2.0nm,1.1s,baz=138,slow=1.9,SNR=5.4
NGP Nagpur 55.63 273 *e*PKP **P** **06 02 15.1 -0.7**
NGP AMB AMB 06 02 15.6
comp=Z,103nm,1.5s
NGP ⇓*ex* x 06 09 55.7
INK Inuvik 55.88 27 LR LR 06 29 23.0
comp=Z,2µm,20.7s,baz=267,slow=40
BHPL Bhopal 55.96 276 *e*PKP **P** **06 02 16.9 -1.2**
BHPL AMB AMB 06 02 18.9
comp=Z,53nm,1.3s
SVE Sverdlovsk 56.14 319 ⇑*i*P **P** **06 02 19.4 +0.5**
SVE *e*S **S** **06 10 03.5 -1.7**
SVE *e* 06 12 02.0
SVE *e*SS **SS** **06 13 52.5 +1.1**
SVE pmax pmax
comp=Z,148nm,1.5s
FUNA Funafuti 56.63 133 PFAKE 06 02 40.0 +17
FUNA LR LR
comp=Z,7µm,19.0s
AJM Ajmer 56.73 281 *i* P **P** **06 02 23.0 -0.6**
AJM *e*PKP **P** **06 02 24.1 +0.5**
AJM AMB AMB 06 02 39.2
comp=Z,793nm,1.3s
SKAG Skagway 57.08 37 *e*P **P** **06 02 27.0 +1.5**
comp=Z,95nm,1.2s
ARU Arti 57.35 319 *d i*P **P** **06 02 26.9 -0.6**
ARU 06 03 20.3
ARU S **S** **06 10 21.1 -0.1**
ARU 06 12 06.5
ARU pmax pmax
comp=Z,230nm,1.7s
ARU Arti 57.35 319 P **P** **06 02 27.4 -0.1**
comp=Z,528nm,1.5s,SNR=24
SOKR Solikamsk 57.40 323 *d i*P **P** **06 02 27.0 -0.7**
SOKR S **S** **06 10 21.0 -0.7**
SOKR pmax pmax
comp=Z,110nm,1.5s
POHA Pohakuloa 57.41 88 *e*P **P** **06 02 30.4 +1.7**
comp=Z,753nm,1.5s
KBL Kabul 57.73 292 *e*P **P** **06 02 30.4 -0.5**
KBL pmax pmax
comp=Z,53nm,1.1s
KBL Kabul 57.73 292 *e*P **P** **06 02 30.4 -0.5**
comp=Z,53nm,1.1s
PUH Pauahi 57.86 88 *e*P P 06 02 34.2 +2.5
HYB Hyderabad 57.91 269 *i* P **P** **06 02 31.0 -1.0**
comp=Z,100nm,1.0s
HYB *e*S **S** **06 10 29.0 -0.7**
HYB Hyderabad 57.91 269 *e*PKP **P** **06 02 32.4 +0.4**
HYB AMB AMB 06 02 33.3
comp=Z,60nm,1.1s
AB31 Akbulak array 58.74 311 *i* P **P** **06 02 36.9 -0.5**
AB31 pmax pmax
comp=Z,162nm,1.3s
ABKAR Akbulak array 58.74 311 *e*P **P** **06 02 36.8 -0.6**
comp=Z,20nm,0.6s
LATR Latur 59.02 271 *e*PKP **P** **06 02 39.4 -0.4**
AS31 Alice Springs 59.22 188 *e*P **P** **06 02 40.7 -0.3**
ASAR Alice Springs 59.22 188 P **P** **06 02 41.3 +0.4**
ASAR PcP **PcP** **06 03 29.6 +0.6**
ASAR P'P' 06 32 09.5
ASAR ⇑*e* 06 32 23.8
ASAR Alice Springs 59.22 188 P **P** **06 02 41.3 +0.4**
comp=Z,25nm,0.7s,baz=19,slow=11,SNR=204
ASAR PcP **PcP** **06 03 29.6 +0.6**
comp=Z,14nm,0.6s,baz=6.0,slow=4.0,SNR=6.0
ASAR LR LR 06 27 50.4
comp=Z,2µm,18.8s,baz=4.7,slow=36
ASAR PKPPKP **P'P'df** **06 32 09.5 +3.0**
comp=Z,1.9nm,1.1s,baz=164,slow=3.0,SNR=5.1
ASAR PKP2bc 06 32 23.8
comp=Z,8.2nm,1.1s,baz=176,slow=1.8,SNR=15
WRAK Wrangell Islan 59.49 40 *e*P **P** **06 02 44.0 +1.6**
comp=Z,40nm,1.1s
AKTO Aktyubinsk 59.52 313 P **P** **06 02 42.3 -0.5**
AKTO pmax pmax
comp=Z,18nm,0.8s
AKTO Aktyubinsk 59.52 313 P **P** **06 02 42.2 -0.5**
AKTO Aktyubinsk 59.52 313 P **P** **06 02 42.2 -0.5**
comp=Z,18nm,0.8s,baz=77,slow=7.2,SNR=44
MBWA Marble Bar 59.87 203 P P 06 02 49.0 +3.7
SNR=7.8
MBWA Marble Bar 59.87 203 *e*P **P** **06 02 45.6 +0.2**
comp=Z,495nm,1.8s
MBWA LR LR
comp=Z,2µm,21.0s
DLBC Dease Lake 60.01 37 *e*P **P** **06 02 48.0 +1.9**
POO Poona 61.18 273 ⇑*i*P **P** **06 02 54.0 -0.6**
comp=Z,70nm,1.0s
POO *e*PKP **P** **06 02 55.1 +0.5**
POO AMB AMB 06 02 56.5
comp=Z,278nm,0.3s
EIDS Eidsvold 61.26 170 *e*P **P** **06 02 55.5 +0.7**
comp=Z,57nm,0.8s
KAD Karad 61.53 272 *i* P **P** **06 02 57.0 0.0**
ALE Alert 61.67 3 P **P** **06 02 57.1 +0.2**
comp=Z,458nm,1.2s,SNR=6.2
PALK Pallekele 61.79 258 *e*P **P** **06 02 58.6 -0.1**
comp=Z,62nm,1.1s
SPA0 Spitsbergen Ar 61.99 349 *e*P **P** **06 02 58.8 -0.4**
NOUC Port Laguerre 62.06 153 *e*P **P** **06 03 01.6 +1.4**
DZM Mont Dzumac 62.09 153 *e*P **P** **06 03 01.1 +0.6**
comp=Z,340nm,1.2s
DZM *e*S S 06 11 45.3 +22
comp=Z,5µm,28.7s
DZM *e*LQ LQ 06 18 23.6
comp=Z,8µm,32.3s
DZM *e*LR LR 06 22 20.5
comp=Z,6µm,24.2s
DZM Mont Dzumac 62.09 153 *e*P **P** **06 03 01.2 +0.7**
comp=Z,340nm,1.2s
DZM *e*S SKSac 06 12 26.9 -23
comp=Z,1µm,26.6s
DZM *e*LQ LQ 06 18 44.4
comp=Z,7µm,40.8s
DZM *e*LR LR 06 24 23.5
DZM Mont Dzumac 62.09 153 *e*P **P** **06 03 01.4 +0.9**
DZM Mont Dzumac 62.09 153 LR LR 06 26 44.9
comp=Z,3µm,21.6s,baz=200,slow=33
KBS Kingsbay 62.13 350 *e*P **P** **06 03 00.0 -0.1**
KBS AMB AMB 06 03 13.7
comp=Z,132nm,1.8s
KBS *e*S **S** **06 11 25.2 +3.0**
KBS AMS AMS 06 29 20.5
comp=Z,2µm,22.6s
KBS Kingsbay 62.13 350 *e*P **P** **06 03 01.0 +1.0**
KBS pmax pmax
comp=Z,122nm,1.3s
KBS MLR MLR
comp=Z,2µm,19.0s
KBS Kingsbay 62.13 350 *e*P **P** **06 03 01.0 +1.0**
comp=Z,122nm,1.3s
KBS LR LR
comp=Z,2µm,19.0s
GOA Goa 62.77 270 *e*PKP **P** **06 03 06.3 +1.0**
GOA AMB AMB 06 03 19.0
comp=Z,190nm,0.5s
HSP Hornsund 62.89 348 *e*P **P** **06 03 06.2 +1.1**
COCO West Island 63.24 230 PFAKE 06 03 20.0 +12

COCO LR LR
comp=Z,2µm,21.0s
LVZ Lovozero 63.41 336 *ce*P **P 06 03 09.6 +0.8**
LVZ pmax pmax
comp=Z,63nm,1.7s
MSVF Nonsavu 63.48 140 P P 06 03 12.3 +2.4
comp=Z,463nm,1.4s,SNR=7.3
MSVF Nonsavu 63.48 140 *e*P P 06 03 12.8 +3.0
MSVF pmax pmax
comp=Z,153nm,1.3s
MSVF MLR MLR
comp=Z,2µm,21.0s
MSVF Nonsavu 63.48 140 *e*P P 06 03 12.8 +3.0
comp=Z,154nm,1.3s
MSVF LR LR
comp=Z,2µm,21.0s
IMYA Miami 63.63 297 *e*P **P 06 03 10.8 -0.1**
BJO Bjornoya 63.85 345 AMS AMS 06 32 29.4
comp=Z,5µm,23.4s
TMCR Tamitsa 63.98 332 *e*P **P 06 03 13.5 +1.0**
TMCR pmax pmax
comp=Z,170nm,1.1s
APA Apatity 63.99 336 ⇑*i*P **P 06 03 12.5 0.0**
APA *i* 06 03 24.0
APA *i* 06 03 56.0
APA *i* S **S 06 11 46.0 +0.3**
APA *i* PS **PnS 06 12 03.0 -3.0**
APA *e* 06 13 00.0
APA *e*SS **SS 06 15 53.0 -0.9**
APA pmax pmax
comp=Z,140nm,1.4s
APA pmax pmax
comp=Z,600nm,4.0s
APA MLR MLR
TRD Trivandrum 64.08 262 *e*PKP **P 06 03 14.1 +0.2**
TRD AMB AMB 06 03 33.8
comp=Z,1µm,1.6s
ISRO Mashad 64.10 297 *e*P **P 06 03 13.6 -0.3**
RES Resolute Bay 64.16 14 LR LR 06 37 32.8
comp=Z,2µm,18.3s,baz=333,slow=42
IEMG Emamgholi 64.20 299 *e*P **P 06 03 15.5 +0.7**
IMOG Moghan 64.28 297 *e*P **P 06 03 16.0 +0.6**
ABKT Ailbek 64.36 299 P **P 06 03 16.4 +0.9**
comp=Z,248nm,1.3s,SNR=14
IAKL Akhelmad 64.49 298 *e*P **P 06 03 17.2 +0.5**
IKRD Kardeh 64.58 298 *e*P P 06 03 13.1 -4.2
KEV Kevo 64.79 339 *ep* **P 06 03 17.4 -0.3**
comp=Z,9.7nm,0.8s
KEV Kevo 64.79 339 *e*P **P 06 03 18.4 +0.7**
KEV pmax pmax
comp=Z,115nm,1.4s
KEV MLR MLR
comp=Z,4µm,22.0s
KEV Kevo 64.79 339 *e*P **P 06 03 18.4 +0.7**
comp=Z,115nm,1.4s
KEV LR LR
comp=Z,4µm,22.0s
ISHV Shirvan 64.83 299 *e*P **P 06 03 20.1 +1.3**
ISFR Sfrayin 64.83 299 *e*P **P 06 03 19.6 +0.7**
KLMR Klimovskoe 64.92 328 *d i*P **P 06 03 18.5 -0.2**
KLMR *e* 06 05 46.0
KLMR S S 06 11 44.6 -13
KLMR pmax pmax
comp=Z,156nm,1.7s
KLMR MLR MLR
comp=Z,6µm,21.0s
YKA Yellowknife Ar 65.28 30 P **P 06 03 20.8 -0.1**
YKA ⇑*e* 06 32 06.7
YKA Yellowknife Ar 65.28 30 P **P 06 03 20.8 -0.1**
comp=Z,10nm,0.8s,baz=296,slow=6.4,SNR=111
YKA PKP2bc 06 32 06.7
comp=Z,1.4nm,1.0s,baz=114,slow=3.3,SNR=6.4
ARCES ARCESS Array B 65.35 340 P **P 06 03 21.4 0.0**
ARCES P'P' 06 32 02.3
ARCES ARCESS Array B 65.35 340 P **P 06 03 21.4 0.0**
comp=Z,15nm,1.0s,baz=42,slow=8.2,SNR=18
ARCES PKPPKP P'P'df 06 32 02.3 -5.8
comp=Z,2.0nm,0.8s,baz=278,slow=1.3,SNR=3.2
ARCES LR LR 06 36 01.3
comp=Z,4µm,19.1s,baz=44,slow=40
ARE0 ARCESS Array S 65.35 340 *e*P **P 06 03 22.7 +1.3**
ARE0 ARCESS Array S 65.35 340 *e*P **P 06 03 21.8 +0.4**
IDAH Dahanechah 65.42 294 *e*P **P 06 03 23.2 +0.4**
ITEG Tejag 66.18 294 *e*P **P 06 03 27.9 +0.3**
ARMA Armidale 66.30 170 *e*P **P 06 03 29.3 +1.3**
comp=Z,64nm,1.0s
KTK1 Kautokeino 66.31 340 *e*P **P 06 03 27.5 -0.1**
AFI Afiamalu 66.36 129 LR LR 06 25 32.5
comp=Z,2µm,21.3s,baz=313,slow=30
STKA Stephens Creek 67.01 180 *e*P **P 06 03 32.6 +0.2**
comp=Z,8.9nm,0.7s
STKA Stephens Creek 67.01 180 P **P 06 03 33.0 +0.6**
comp=Z,49nm,0.7s,baz=343,slow=7.7,SNR=55
STKA LR LR 06 33 48.8
comp=Z,2µm,20.6s,baz=354,slow=37
FORT Forrest 67.05 192 *e*P **P 06 03 32.7 +0.1**
comp=Z,181nm,0.6s
TRO Tromso 67.09 341 *e*P **P 06 03 32.2 -0.3**
TRO AMB AMB 06 03 47.8
comp=Z,173nm,0.8s
TRO *e*S **S 06 12 25.1 +1.6**
TRO *e*SS **SS 06 16 39.7 -2.2**
TRO AMS AMS 06 38 39.4
comp=Z,5µm,17.7s
JOF Joensuu 67.20 332 *ep* **P 06 03 32.1 -1.2**
comp=Z,12nm,0.5s
JOF Joensuu 67.20 332 *e*P **P 06 03 32.1 -1.2**
JOF pmax pmax
comp=Z,12nm,0.5s
DAG Danmarks Havn 67.29 355 ⇓*i*P **P 06 03 33.8 +0.1**
DAG *i* S **S 06 12 27.8 +2.1**
DAG pmax pmax
comp=Z,34nm,1.1s
DAG MLR MLR
comp=Z,2µm,20.0s
DAG Danmarks Havn 67.29 355 ⇓*i*P **P 06 03 33.8 +0.1**
comp=Z,27nm,1.1s
DAG *i* 06 06 17.7
DAG *i* S **S 06 12 27.8 +2.1**
DAG
comp=Z,1µm,20.0s
OTR Olympics--Tyee 67.34 46 P **P 06 03 36.7 +2.1**
PGC Sidney 67.60 46 *e*P **P 06 03 37.4 +1.3**
comp=Z,4.6nm,1.1s
NLWA Neilton Lookou 67.96 47 *e*P **P 06 03 40.3 +1.9**
comp=Z,155nm,1.2s
NLWA LR LR
comp=Z,2µm,22.0s
BBOO Buckleboo 68.11 185 *e*P **P 06 03 39.4 +0.1**
comp=Z,1µm,0.8s
MOS Moscow 68.33 324 *e*P P 06 03 35.8 -4.8
MOS *e*S **S 06 12 33.6 -5.2**
MOS *e*SS **SS 06 16 59.5 -2.2**
MOS *e*SSS SSS 06 20 08.4
MOS pmax pmax
comp=Z,239nm,1.7s
MOS pmax pmax
comp=Z,500nm,1.8s
MOS smax smax
comp=E,700nm,3.3s
MOS MLR MLR
comp=N,3µm,18.0s
MOS MLR MLR
comp=E,2µm,18.0s
MOS MLR MLR
comp=Z,3µm,17.0s
MBW Mount Baker 68.43 45 P **P 06 03 42.4 +0.8**
CMW Cultus Mountai 68.48 45 P **P 06 03 43.1 +1.3**
IANJ Anjilo 68.49 299 *e*P **P 06 03 43.0 +0.8**
VRHR Novokhopersk 68.66 318 *e*P **P 06 03 41.5 -1.2**
VRHR *e**PP **pP 06 03 53.9 0.0**
VRHR *e*S **S 06 12 39.4 -3.4**
VRHR *e**SS **sS 06 13 01.1 -0.2**
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=Z,50nm,0.9s
VRHR pmax pmax
comp=E,30nm,1.3s
VRHR smax smax
comp=N,210nm,3.0s
VRHR smax smax
comp=Z,40nm,3.3s
VRHR smax smax
comp=E,200nm,2.9s

JCW Jim Creek 68.71 45 P **P 06 03 44.4 +1.3**
ISHM Shahmirzad 68.77 299 *e*P **P 06 03 44.6 +0.6**
IBAF Bafgh 69.17 294 *e*P **P 06 03 46.1 -0.3**
OBN Obninsk 69.18 323 ⇓*e*P **P 06 03 45.5 -0.3**
OBN *i* S **S 06 12 49.8 +1.0**
OBN pmax pmax
comp=Z,197nm,1.7s
MAK Makhachkala 69.21 308 *e*P **P 06 03 44.9 -1.3**
MAK *e* 06 04 07.7
MAK *e*S **S 06 12 47.9 -1.7**
MAK *e* 06 13 45.5
MAK pmax pmax
comp=Z,142nm,1.3s
MAK MLR MLR
comp=Z,4µm,15.0s
ILAS Lasjerd 69.21 299 *e*P **P 06 03 47.7 +1.0**
IFIR Firoozkooh 69.23 299 *e*P **P 06 03 47.8 +0.9**
RVC Mount Rainier- 69.30 47 P **P 06 03 48.3 +1.4**
TDL Tradedollar La 69.45 47 P **P 06 03 49.2 +1.3**
LON Longmire 69.50 47 *e*P **P 06 03 49.3 +1.2**
LON pmax pmax
comp=Z,31nm,1.2s
LON Longmire 69.50 47 *e*P **P 06 03 49.3 +1.2**
comp=Z,31nm,1.2s
KAF Kangasniemi 69.56 333 *ep* **P 06 03 46.4 -1.7**
comp=Z,16nm,0.6s
KAF Kangasniemi 69.56 333 *e*P **P 06 03 46.4 -1.7**
KAF pmax pmax
comp=Z,16nm,0.6s
MTMW Mount Mitchell 69.62 48 P **P 06 03 50.7 +1.8**
COR Corvallis 69.68 49 *e*P P 06 03 52.5 +3.4
COR pmax pmax
comp=Z,106nm,1.1s
COR Corvallis 69.68 49 *e*P P 06 03 52.5 +3.4
comp=Z,106nm,1.1s
ICHK Chekchek 69.70 296 *e*P **P 06 03 50.2 +0.4**
IDMV Damavand 69.78 300 *e*P **P 06 03 50.9 +0.6**
KEBM Edson Butte 69.88 51 *e*P **P 06 03 52.8 +2.2**
comp=Z,110nm,1.0s
LTY Liberty 69.91 46 P **P 06 03 51.3 +0.7**
VSR Storozhevoye 69.92 319 *e*P **P 06 03 50.2 -0.3**
VSR *e**PP **pP 06 04 02.5 +0.8**
VSR *e*S **S 06 12 55.8 -1.9**
VSR pmax pmax
comp=Z,90nm,1.2s
VSR pmax pmax
comp=N,20nm,0.7s
VSR pmax pmax
comp=E,40nm,0.8s
VSR smax smax
comp=N,320nm,3.3s
VSR smax smax
comp=Z,100nm,3.2s
VSR smax smax
comp=E,290nm,3.4s
ETW Entiat 69.93 45 P **P 06 03 51.6 +0.8**
IMEH Mehriz 69.97 295 *e*P **P 06 03 50.4 -1.1**
VORD Divnogorie 69.99 319 *e*P **P 06 03 50.5 -0.4**
VORD *e**PP **pP 06 04 02.6 +0.5**
VORD *e*S **S 06 12 55.8 -2.7**
VORD *e**SS **sS 06 13 15.0 -2.0**
VORD pmax pmax
comp=Z,110nm,1.5s
VORD pmax pmax
comp=N,50nm,0.7s
VORD pmax pmax
comp=E,160nm,0.8s
VORD smax smax
comp=E,490nm,4.6s
VORD smax smax
comp=Z,270nm,3.8s
VORD smax smax
comp=N,440nm,4.0s
FIA1 FINESS Array S 70.06 332 *e*P **P 06 03 50.9 -0.2**
FINES FINESS Array B 70.06 332 P **P 06 03 51.0 -0.1**
FINES P'P' 06 31 57.0
FINES FINESS Array B 70.06 332 P **P 06 03 51.0 -0.1**
comp=N,34nm,0.9s,baz=51,slow=12,SNR=34
FINES PKPPKP **P'P'df 06 31 57.0 -3.0**
comp=N,3.4nm,0.9s,baz=5.2,slow=4.2,SNR=3.7
FINES LR LR 06 39 10.6
comp=N,4µm,21.6s,baz=44,slow=40
IVRN Varamin 70.28 299 *e*P **P 06 03 51.9 -1.2**
IVRN *e*P **P 06 03 53.5 +0.4**
KBO Bosley Butte 70.28 52 *e*P **P 06 03 53.4 +0.3**
comp=N,66nm,1.1s
BROR Big Rock Looko 70.36 49 P **P 06 03 54.6 +1.3**
ISAD Sadrabad 70.40 296 *e*P **P 06 03 54.7 +0.6**
IR3 Iran Long-Peri 70.54 300 *e*P **P 06 03 55.7 +1.0**
FRIS Frissel Point 70.61 49 P **P 06 03 57.2 +2.2**
IGZV Ghazvin 70.65 301 *e*P **P 06 03 56.1 +0.6**
IMHD Mahdasht 70.69 300 *e*P **P 06 03 55.9 +0.3**
MOR8 Moi Rana 70.72 340 *e*P **P 06 03 53.9 -1.3**
MOR8 AMB AMB 06 03 57.0
comp=Z,115nm,1.2s
MOR8 *es*P **sP 06 04 07.5 -3.1**
CAN Canberra 70.83 173 *e*P **P 06 03 57.4 +1.3**
CAN pmax pmax
comp=Z,50nm,1.1s
CAN MLR MLR
comp=Z,2µm,20.0s
CAN Canberra 70.83 173 *e*P **P 06 03 57.4 +1.3**
comp=Z,50nm,1.1s
CAN LR LR
comp=Z,2µm,20.0s
KRMB Red Mountain 70.84 52 *e*P **P 06 03 58.2 +1.8**
comp=Z,152nm,2.3s
HUMO Hull Mountain 70.89 51 *e*P **P 06 03 58.1 +1.4**
comp=Z,62nm,1.6s
OD2 Odessa Site #2 70.98 45 P **P 06 03 57.7 +0.6**
IR5 Iran Long-Peri 70.98 300 *e*P **P 06 03 58.0 +0.5**
C09A Chrisman Ranch 71.02 44 P **P 06 03 58.1 +0.8**
HAWA Hanford 71.03 46 *e*P **P 06 03 58.3 +0.9**
comp=Z,56nm,1.2s
HAWA LR LR
comp=Z,1µm,22.0s
WBK Wadi Bani Khal 71.08 285 P **P 06 04 00.1 +2.0**
SNR=13
KHMM Horse Mountain 71.28 53 *e*P **P 06 04 01.0 +1.8**
comp=Z,83nm,1.1s
DGRG David-gareji 71.33 308 P **P 06 03 58.3 -1.1**
IRAZ Razeghan 71.35 300 *e*P **P 06 03 59.0 -0.8**
VIPM Ingram Point 71.36 48 P **P 06 04 00.8 +1.1**
VIPM Ingram Point 71.36 48 P **P 06 04 00.8 +1.1**
GUDG Gudauri 71.38 309 P **P 06 04 00.3 +0.5**
NEW Newport 71.42 44 *e*P **P 06 04 00.5 +0.7**
comp=Z,104nm,1.5s
NEW Newport 71.42 44 LR LR 06 32 53.9
comp=Z,1µm,21.7s,baz=313,slow=34
NEW Newport 71.42 44 P **P 06 04 00.5 +0.7**
baz=71,SNR=22
BANOM Banah 71.46 289 P **P 06 04 01.3 +1.0**
SNR=9.3
YBH Yreka Blue Hor 71.50 52 *e*P **P 06 04 01.6 +1.2**
comp=Z,29nm,0.9s
YBH Yreka Blue Hor 71.50 52 LR LR 06 33 54.0
comp=Z,1µm,19.6s,baz=293,slow=35
SMDO Samad 71.57 285 P **P 06 04 01.8 +0.7**
SNR=15
TBLG Delisi 71.60 308 P **P 06 04 01.1 +0.2**
TBLG Delisi 71.60 308 *e*P **P 06 04 01.1 +0.2**
JMIC Jan Mayen 71.62 350 *e*P **P 06 04 01.9 +1.4**
JMIC *e*S S **06 13 21.1 +4.3**
JMIC AMS AMS 06 32 36.6
comp=Z,886nm,30.3s
JMIC Jan Mayen 71.62 350 LR LR 06 38 37.8
comp=Z,559nm,18.8s,baz=65,slow=39
NWAO Narrogin (SRO) 71.64 201 *e*P **P 06 04 01.2 +0.3**
comp=Z,227nm,1.7s
NWAO LR LR
comp=Z,1µm,22.0s
KBZ Khabaz 71.71 311 P **P 06 04 02.0 +0.5**
KBZ pmax pmax
comp=Z,45nm,1.1s
KBZ MLR MLR
comp=Z,2µm,19.2s
KBZ Khabaz 71.71 311 P **P 06 04 02.0 +0.5**
KBZ Khabaz 71.71 311 P **P 06 04 02.0 +0.5**
comp=Z,45nm,1.1s,baz=69,slow=4.4,SNR=71
KBZ LR LR 06 40 19.5
comp=Z,2µm,19.2s,baz=284,slow=40
KIV Kislovodsk 71.72 311 ⇑*i*P **P 06 04 02.1 +0.4**
KIV *e* 06 06 39.1
KIV *i* S **S 06 13 18.0 -1.1**
KIV *e*SS **SS 06 17 59.5 +4.9**

KIV pmax pmax
comp=Z,282nm,1.7s
KIV Kislovodsk 71.72 311 P **P 06 04 02.8 +1.1**
comp=Z,682nm,1.1s,SNR=26
E09A Wood Farm, Sta 71.78 46 P **P 06 04 02.8 +1.0**
HOQ Hoqain 71.88 286 P **P 06 04 03.3 +0.4**
SNR=16
JMDO Jabal Madar 71.88 285 P **P 06 04 04.0 +1.0**
SNR=9.2
ONI Oni 71.96 310 P **P 06 04 03.7 +0.5**
KCPM Cahto Peak 71.99 54 *e*P **P 06 04 04.7 +1.3**
comp=Z,35nm,1.1s
UOSS Wadi Hilu 72.03 288 P **P 06 04 04.0 +0.2**
comp=Z,269nm,1.0s,SNR=9.1
HATD Hatta, Dubai 72.15 288 P **P 06 04 05.2 +0.7**
SNR=19
WDC Whiskeytown Da 72.21 53 *e*P **P 06 04 05.6 +1.0**
WDC pmax pmax
comp=Z,76nm,1.2s
WDC Whiskeytown Da 72.21 53 *e*P **P 06 04 05.5 +1.0**
comp=Z,76nm,1.2s
SUMG Summit 72.23 360 ⇓*i*P **P 06 04 05.8 +1.2**
SUMG *i* S **S 06 13 27.3 +2.7**
SUMG pmax pmax
comp=Z,77nm,0.9s
SUMG MLR MLR
comp=Z,4µm,23.0s
SUMG Summit 72.23 360 *e*P **P 06 04 05.7 +1.2**
comp=Z,173nm,1.2s
SUMG Summit 72.23 360 ⇓*i*P **P 06 04 05.8 +1.2**
comp=Z,77nm,0.9s
SUMG *i* 06 06 59.8
SUMG *i* S **S 06 13 27.3 +2.7**
SUMG
comp=Z,4µm,23.0s
BSY Bisya 72.40 286 P **P 06 04 07.1 +1.1**
SNR=14
GNI Garni 72.42 307 P **P 06 04 07.7 +1.6**
SNR=32
GNI Garni 72.42 307 *e*P **P 06 04 07.2 +1.2**
comp=Z,145nm,1.1s
GNI LR LR
comp=Z,2µm,19.0s
NAZ Nazwa, Dubai 72.43 288 P **P 06 04 06.5 +0.3**
SNR=12
AKH Akhalkalaki 72.56 309 P **P 06 04 07.5 +0.6**
ARQ Araqi 72.62 287 P **P 06 04 09.0 +1.7**
SNR=10
HOPS Hopland 72.69 54 *e*P **P 06 04 08.3 +0.8**
comp=Z,71nm,1.4s
CHVG Ch'k'valeri 72.75 310 P **P 06 04 08.6 +0.8**
WALA Waterton Lakes 72.76 42 *e*P **P 06 04 08.3 +0.4**
comp=Z,2.2nm,1.2s
B13A Whitefish 72.84 43 P **P 06 04 09.6 +1.3**
baz=73,SNR=32
ASUD Al Ashush, Dub 72.88 288 P **P 06 04 09.5 +0.7**
SNR=6.5
A14A Double T Ranch 73.07 42 P **P 06 04 10.5 +0.7**
baz=73,SNR=25
BLMT Blacktail Moun 73.10 43 *e*P **P 06 04 11.8 +1.7**
DIGO Kars 73.17 308 *i* P **P 06 04 11.6 +1.0**
BMO Blue Mountains 73.17 47 *e*P **P 06 04 11.0 +0.6**
comp=Z,36nm,1.1s
BMO LR LR
comp=Z,1µm,20.0s
C13A Hot Springs 73.17 43 ⇑P **P 06 04 10.9 +0.6**
baz=73,SNR=13
MCCM Marconi Confer 73.27 55 *e*P **P 06 04 11.9 +1.0**
comp=Z,3nm,1.4s
A15A Johnson Ranch, 73.44 41 P **P 06 04 12.2 +0.3**
baz=73,SNR=29
CLDR Caldiran 73.49 306 *e*P **P 06 04 13.6 +1.1**
B14A Marquette Ranc 73.50 42 ⇓P **P 06 04 13.0 +0.7**
baz=73,SNR=28
OHCM Honcut 73.56 53 *e*P **P 06 04 13.2 +0.7**
D13A Huson 73.57 44 ⇑P **P 06 04 12.9 +0.3**
baz=73,SNR=22
IZAR Zarasai 73.57 328 *e*P **P 06 04 12.4 0.0**
IZAR AMB AMB 06 04 14.3
comp=Z,37nm,1.6s
SWMT Swartz Lake 73.59 43 *e*P **P 06 04 13.7 +0.9**
SCO Scoresbysund 73.62 354 ⇓*i*P **P 06 04 13.5 +1.1**
SCO *i* S **S 06 13 41.8 +2.1**
SCO pmax pmax
comp=Z,15nm,1.4s
SCO MLR MLR
comp=Z,2µm,22.0s
SCO Scoresbysund 73.62 354 ⇓*i*P **P 06 04 13.5 +1.1**
comp=Z,15nm,1.4s
SCO *i* S **S 06 13 41.8 +2.1**
SCO
comp=Z,2µm,22.0s
MICGM Minsk 73.63 326 ⇑*i*P **P 06 04 12.0 -0.7**
MNK Minsk 73.65 326 ⇑*i*P **P 06 04 12.0 -0.8**
MNK *e*S **SKiKP 06 13 36.0 -3.6**
MNK pmax pmax
comp=N,280nm,1.8s
MNK pmax pmax
comp=E,300nm,2.0s
MNK pmax pmax
comp=Z,340nm,1.2s
ILIN Lien 73.68 301 *e*P **P 06 04 12.5 -1.2**
WVOR Wild Horse Val 73.69 49 *e*P **P 06 04 14.5 +1.0**
WVOR pmax pmax
comp=Z,59nm,1.2s
WVOR Wild Horse Val 73.69 49 *e*P **P 06 04 14.5 +1.0**
comp=Z,59nm,1.2s
SOC Sochi 73.73 312 *d i*P **P 06 04 13.4 -0.1**
SOC *e**PP **pP 06 04 24.9 +0.1**
SOC *e**SP **sP 06 04 31.0 +1.9**
SOC *e* 06 06 57.9
SOC *e*PPP PPP 06 08 39.2
SOC *e*S **SKiKP 06 13 40.0 0.0**
SOC *e* 06 14 14.2
SOC *e*SS **SS 06 18 26.1 +1.1**
SOC pmax pmax
comp=Z,98nm,1.3s
SOC pmax pmax
comp=Z,380nm,2.0s
SOC MLR MLR
comp=Z,3µm,21.0s
SOC MLR MLR
comp=N,3µm,21.0s
SOC MLR MLR
comp=E,620nm,21.0s
ISAL Salakas 73.74 328 *e*P **P 06 04 13.3 0.0**
ISAL AMB AMB 06 04 15.4
comp=Z,52nm,1.6s
DAGI Agillar 73.74 309 *i* P **P 06 04 12.6 -1.2**
DBOC Borcka 73.75 309 *i* P **P 06 04 13.8 0.0**
IIGN Ignalina 73.83 327 *e*P **P 06 04 13.9 0.0**
IIGN AMB AMB 06 04 15.9
comp=Z,34nm,1.5s
AGRB Hanur-Agry 73.86 307 *e*P **P 06 04 15.7 +1.1**
F12A Elk City 73.87 45 P **P 06 04 15.1 +0.6**
baz=74,SNR=50
NACGM Naroch 73.87 327 *e*P **P 06 04 12.0 -2.1**
DBAD Bademkaya 73.92 309 *i* P **P 06 04 15.4 +0.6**
B15A Bradely Ranch, 73.92 42 P **P 06 04 15.2 +0.5**
baz=74,SNR=77
DDEM Demirkent 73.95 309 *i* P **P 06 04 15.7 +0.7**
IVIS Veis 73.96 301 *e*P **P 06 04 12.4 -2.8**
BEKR Beckworth 74.00 52 *e*P **P 06 04 15.7 +0.3**
comp=Z,30nm,1.0s
MSO Missoula 74.01 44 *e*P **P 06 04 15.7 +0.4**
comp=Z,30nm,1.1s
MSO LR LR
comp=Z,721nm,20.0s
MSO Missoula 74.01 44 ⇑P **P 06 04 15.6 +0.3**
baz=74,SNR=30
A16A West Butte Ran 74.07 41 P **P 06 04 15.9 +0.4**
baz=74,SNR=17
TUTA Tutak 74.08 307 *i* P **P 06 04 17.0 +1.1**
TBLU Trondheim 74.10 339 *e*P **P 06 04 13.9 -1.4**
TBLU *e*S **S 06 13 43.4 -1.9**
TBLU AMS AMS 06 39 37.1
comp=Z,4µm,16.8s
D14A Greenough 74.11 43 P **P 06 04 16.1 +0.3**
baz=74,SNR=22
VANB Van 74.14 306 *e*P **P 06 04 17.4 +1.3**
C15A Salmond Ranch, 74.21 42 ⇑P **P 06 04 17.0 +0.5**
baz=74,SNR=34
IGHG Ghaleghazi 74.26 301 *e*P **P 06 04 15.2 -1.9**
HOMI Horasan 74.31 308 *i* P **P 06 04 18.3 +1.0**
B16A M & M Farms, S 74.33 41 P **P 06 04 17.7 +0.7**
baz=74,SNR=23

CHMT Chamberlain Mo 74.35 43 eP P 06 04 17.4 +0.1
ANN Anapa 74.41 314 d iP P 06 04 17.2 -0.3
ANN e*PP pP 06 04 28.9 +0.1
ANN eS S 06 13 46.1 -3.3
ANN pmax pmax
comp=Z,166nm,1.6s
ANN MLR MLR
comp=N,839nm,17.0s
ANN MLR MLR
comp=E,443nm,17.0s
ANN MLR MLR
comp=Z,1µm,17.0s
HAKT HAKKARI 74.49 305 i P P 06 04 18.3 0.0
GEVA Gevas 74.51 306 i P P 06 04 18.6 +0.2
A17A Triple J Farms 74.55 41 P P 06 04 18.9 +0.6
baz=74,SNR=50
C16A Fuhringer Ranc 74.66 42 P P 06 04 18.9 -0.1
baz=74,SNR=11
WCN Washoe City 74.70 53 eP P 06 04 20.5 +1.0
WCN pmax pmax
comp=Z,38nm,1.1s
WCN Washoe City 74.70 53 eP P 06 04 20.5 +1.0
comp=Z,38nm,1.1s
ERZM Erzurum 74.73 308 i P P 06 04 21.0 +1.2
H12A Diamond D Ranc 74.79 46 P P 06 04 20.4 +0.5
baz=75,SNR=10
MFID Camas Ranch 74.86 47 eP P 06 04 21.1 +0.8
comp=Z,127nm,1.5s
MFID Camas Ranch 74.86 47 P P 06 04 21.1 +0.8
baz=75,SNR=31
B17A L&G Farms, Che 74.89 41 P P 06 04 21.2 +0.9
baz=75,SNR=21
SAO San Andreas Ge 74.97 56 eP P 06 04 21.6 +0.7
SAO pmax pmax
comp=Z,44nm,1.1s
SAO San Andreas Ge 74.97 56 eP P 06 04 21.6 +0.7
comp=Z,44nm,1.1s
E15A Deer Lodge 74.98 43 ⇓P P 06 04 21.1 +0.2
baz=75,SNR=22
CMB Columbia Colle 74.98 54 eP P 06 04 20.8 -0.2
CMB pmax pmax
comp=Z,70nm,1.0s
CMB Columbia Colle 74.98 54 eP P 06 04 20.8 -0.2
comp=Z,70nm,1.0s
A18A Metzger Ranch, 75.02 40 ⇓P P 06 04 21.2 +0.2
baz=75,SNR=20
FFC Flin Flon 75.15 32 eP P 06 04 21.1 -0.4
FFC pmax pmax
comp=Z,75nm,1.0s
FFC Flin Flon 75.15 32 eP P 06 04 21.1 -0.4
comp=Z,75nm,1.0s
FFC Flin Flon 75.15 32 P P 06 04 21.2 -0.3
comp=Z,270nm,1.5s,SNR=31
D16A Dana Ranch, Ca 75.23 42 P P 06 04 22.9 +0.6
baz=75,SNR=24
KOPT Kop Dagi 75.23 309 i P P 06 04 23.4 +0.7
BAYT Ayd¨–ntepe-Bay 75.25 309 eP P 06 04 23.1 +0.5
C17A Wharram Farm, 75.30 42 P P 06 04 23.0 +0.3
baz=75,SNR=21
AKASG Malin Array Be 75.36 322 P P 06 04 22.4 -0.4
AKASG pmax pmax
comp=Z,20nm,0.7s
AKASG MLR MLR
comp=Z,5µm,18.7s
AKASG Malin Array Be 75.36 322 P P 06 04 22.4 -0.4
AKASG Malin Array Be 75.36 322 P P 06 04 22.4 -0.4
comp=Z,20nm,0.7s,baz=46,slow=5.9,SNR=131
AKASG LR LR 06 40 25.9
comp=Z,5µm,18.7s,baz=65,slow=38
B18A Beardsley Farm 75.37 41 P P 06 04 23.9 +0.9
baz=75,SNR=30
AK01 Malin Array Si 75.37 322 eP P 06 04 22.5 -0.4
KIEV Kiev 75.37 322 eP P 06 04 22.3 -0.6
KIEV pmax pmax
comp=Z,103nm,1.2s
KIEV MLR MLR
comp=Z,5µm,19.0s
KIEV Kiev 75.37 322 eP P 06 04 22.3 -0.6
comp=Z,103nm,1.2s
KIEV LR LR
comp=Z,5µm,19.0s
AK02 Malin Array Si 75.39 322 eP P 06 04 22.0 -1.0
BNGL BINGOL 75.40 307 i P P 06 04 25.3 +1.7
F15A Butte 75.40 44 P P 06 04 24.4 +0.9
baz=75,SNR=28
LRM Limekiln Ridge 75.44 44 eP P 06 04 24.6 +0.9
E16A East Helena 75.45 43 P P 06 04 24.6 +1.0
baz=75,SNR=18
NB2 NORSAR Subarra 75.51 337 P P 06 04 23.3 -0.3
comp=Z,169nm,1.4s,baz=42,slow=5.9
NB2 NORSAR Subarra 75.51 337 P P 06 04 23.3 -0.3
baz=42,slow=5.9
NOA NORSAR Array B 75.51 337 P P 06 04 23.6 +0.1
NOA PP PP 06 07 13.6 +1.2
NOA NORSAR Array B 75.51 337 P P 06 04 23.6 +0.1
comp=Z,24nm,0.8s,baz=39,slow=5.8,SNR=54
NOA PP PP 06 07 13.6 +1.2
comp=Z,7.0nm,1.0s,baz=38,slow=8.2,SNR=3.3
NOA LR LR 06 40 32.7
comp=Z,5µm,19.6s,baz=15,slow=38
A19A Klindworth Far 75.59 40 P P 06 04 25.1 +0.8
baz=75,SNR=52
EGMT Eagleton 75.61 41 eP P 06 04 25.1 +0.7
comp=Z,250nm,1.5s
EGMT LR LR
comp=Z,2µm,21.0s
EGMT Eagleton 75.61 41 ⇑P P 06 04 25.1 +0.7
baz=75,SNR=27
HLID Hailey 75.62 47 eP P 06 04 25.8 +1.1
comp=Z,26nm,1.1s
HLID LR LR
comp=Z,815nm,20.0s
HLID Hailey 75.62 47 ⇓P P 06 04 25.6 +0.9
baz=76,SNR=15
DLMT Dillon 75.62 44 eP P 06 04 26.1 +1.4
comp=Z,85nm,1.2s
D17A Six Diamond Ra 75.63 42 P P 06 04 25.4 +0.7
baz=76,SNR=32
NC602 NORSAR Array S 75.64 337 eP P 06 04 24.0 -0.2
BNGB Bing¨ll 75.69 308 eP P 06 04 25.6 +0.5
BMN Battle Mountai 75.69 50 eP P 06 04 26.5 +1.3
BMN pmax pmax
comp=Z,83nm,1.1s
BMN MLR MLR
comp=Z,979nm,22.0s
BMN Battle Mountai 75.69 50 eP P 06 04 26.5 +1.3
comp=Z,83nm,1.1s
BMN LR LR
comp=Z,979nm,22.0s
NAO01 NORSAR Array S 75.76 337 eP P 06 04 24.6 -0.4
comp=Z,21nm,0.8s
B19A Brinkman Farms 75.77 40 P P 06 04 26.2 +0.8
baz=76,SNR=30
G15A Dillon 75.80 44 P P 06 04 26.6 +0.8
baz=76,SNR=28
F16A Kennard Place, 75.92 44 ⇓P P 06 04 27.6 +1.2
baz=76,SNR=12
KELT Kelkit 75.94 309 i P P 06 04 27.1 +0.5
E17A Martinsdale 75.95 43 P P 06 04 27.8 +1.2
baz=76,SNR=20
I14A Mackay 75.97 46 P P 06 04 28.3 +1.6
baz=76,SNR=14
BOZ Bozeman (W) 76.00 44 eP P 06 04 27.8 +0.9
BOZ pmax pmax
comp=Z,61nm,1.1s
BOZ MLR MLR
comp=Z,989nm,20.0s
BOZ Bozeman (W) 76.00 44 eP P 06 04 27.8 +0.9
comp=Z,60nm,1.1s
BOZ LR LR
comp=Z,989nm,20.0s
H15A Lima 76.04 45 P P 06 04 28.2 +1.1
baz=76,SNR=6.6
A20A Cobblestone Ra 76.04 39 P P 06 04 27.5 +0.6
baz=76,SNR=20
SUW Suwalki 76.05 327 eP P 06 04 27.2 +0.5
SUW MLR MLR
comp=Z,3µm,21.5s
SUW Suwalki 76.05 327 eP P 06 04 27.0 +0.3
SUW Suwalki 76.05 327 eP P 06 04 27.2 +0.5
SUW LMZ LR 06 42 58.6
D18A Linhart Farms, 76.08 42 P P 06 04 28.3 +1.1
baz=76,SNR=12
NVAR Mina Array Bea 76.13 53 P P 06 04 28.9 +1.1
NVAR Mina Array Bea 76.13 53 P P 06 04 28.9 +1.1
comp=Z,15nm,0.8s,baz=288,slow=6.1,SNR=73
NVAR LR LR 06 35 23.9
comp=Z,2µm,19.6s,baz=70,slow=34
G16A Moss Hill, Enn 76.16 44 P P 06 04 28.6 +0.9
baz=76,SNR=20
C19A Slack Wire Ran 76.16 41 P P 06 04 28.7 +1.1
baz=76,SNR=102
KBD Kabd 76.23 296 eP P 06 04 27.9 -0.3
KBD AMb AMB 06 04 30.3
comp=Z,131nm,1.1s
SIM Simferopol' 76.25 316 ceP P 06 04 27.9 -0.1
SIM eS S 06 14 08.4 -1.4
SIM pmax pmax
comp=Z,36nm,1.5s
B20A Solberg Farm, 76.27 40 P P 06 04 28.8 +0.6
baz=76,SNR=14
BHD Baghdad 76.37 301 i P P 06 04 20.0 -8.9
BHD i S S 06 13 58.3 -13
BHD i sS sS 06 14 07.7 -22
F17A Fitzpatrick Pl 76.39 43 P P 06 04 30.2 +1.2
baz=76,SNR=13
E18A Harlowton 76.40 42 P P 06 04 30.2 +1.1
baz=76,SNR=38
PTRM Twissleman Ran 76.42 56 eP P 06 04 30.7 +1.5
RDF Al-Radifah 76.47 296 eP P 06 04 29.3 -0.3
RDF AMb AMB 06 04 32.0
comp=Z,290nm,1.3s
A21A Bergtoll Ranch 76.49 39 P P 06 04 30.1 +0.7
baz=76,SNR=60
NAY Al-Naaiem 76.52 296 eP P 06 04 29.1 -0.7
NAY AMb AMB 06 04 31.7
comp=Z,150nm,1.1s
MARD Mardin 76.56 306 i P P 06 04 30.7 +0.5
MTUM Tungsten Hills 76.56 54 eP P 06 04 31.2 +1.0
SUSE Susehri 76.57 310 i P P 06 04 31.0 +0.8
D19A Cripps Ranch, 76.60 41 P P 06 04 31.1 +0.9
baz=76,SNR=42
OUZ Omahuta 76.61 153 eP P 06 04 32.9 +3.0
comp=Z,96nm,1.3s
QLMT Earthquake Lak 76.61 44 eP P 06 04 31.5 +1.2
G17A Pierce Place, 76.70 44 P P 06 04 31.8 +1.0
baz=77,SNR=12
C20A Veseth Ranch, 76.73 40 P P 06 04 31.9 +1.1
baz=77,SNR=40
ELK Elko 76.75 49 eP P 06 04 32.6 +1.4
comp=Z,294nm,2.5s
ELK Elko 76.75 49 LR LR 06 35 00.4
comp=Z,842nm,19.6s,baz=99,slow=33
ILIC ilic-Erzincan 76.77 309 eP P 06 04 32.1 +0.8
H16A Russell Place, 76.79 44 P P 06 04 32.7 +1.3
baz=77,SNR=17
B21A Ellsworth Farm 76.80 39 P P 06 04 31.8 +0.7
baz=77,SNR=29
F18A Big Timber 76.92 43 P P 06 04 33.1 +1.1
baz=77,SNR=31
HYA Hoyanger 76.92 339 eP P 06 04 32.2 +0.7
YMR Madison River 76.97 44 eP P 06 04 33.4 +1.0
A22A Carney Farms, 77.00 38 P P 06 04 32.6 +0.3
baz=77,SNR=55
TPH Tonopah 77.03 52 PFAKE 06 04 50.0 +17
TPH LR LR
comp=Z,2µm,22.0s
D20A Manuel Ranch, 77.04 41 P P 06 04 33.8 +1.2
baz=77,SNR=36
ELZG Elazig 77.06 308 i P P 06 04 34.3 +1.4
VES Vestal, Richgr 77.07 55 P P 06 04 33.2 +0.3
baz=77,SNR=32
E19A Rath Farm, Rou 77.08 42 P P 06 04 33.9 +1.0
baz=77,SNR=83
KONO Kongsberg 77.10 337 eP P 06 04 32.5 -0.1
KONO AMB AMB 06 04 34.1
comp=Z,79nm,1.8s
KONO eS S 06 14 20.6 +2.1
KONO eSS SS 06 19 25.5 +10
KONO AMS AMS 06 45 16.1
comp=Z,5µm,16.6s
KONO Kongsberg 77.10 337 eP P 06 04 32.4 -0.1
KONO pmax pmax
comp=Z,292nm,2.2s
KONO MLR MLR
comp=Z,7µm,20.0s
KONO Kongsberg 77.10 337 eP P 06 04 32.4 -0.1
comp=Z,292nm,2.2s
KONO LR LR
comp=Z,7µm,20.0s
PKM Peak Mountain 77.11 56 P P 06 04 34.8 +1.5
baz=77,SNR=18
C21A Desert Coulee 77.13 40 P P 06 04 34.0 +1.0
baz=77,SNR=16
I16A Newdale 77.15 45 P P 06 04 35.4 +2.0
baz=77,SNR=20
DGAR Diego Garcia 77.25 251 PFAKE 06 04 50.0 +16
DGAR LR LR
comp=Z,2µm,20.0s
LKWY Lake 77.35 44 eP P 06 04 37.2 +2.6
LKWY pmax pmax
comp=Z,67nm,1.1s
LKWY MLR MLR
comp=Z,2µm,20.0s
LKWY Lake 77.35 44 eP P 06 04 37.2 +2.6
comp=Z,67nm,1.1s
LKWY LR LR
comp=Z,2µm,20.0s
H17A Grant Village 77.36 44 P P 06 04 37.5 +2.9
baz=77,SNR=12
F19A Roth Farm, Mol 77.37 42 P P 06 04 35.4 +0.8
baz=77,SNR=28
B22A Reddig Ranch S 77.40 39 P P 06 04 35.1 +0.6
baz=77,SNR=6.2
E20A Meyer Farm, Mu 77.41 41 P P 06 04 35.8 +1.1
baz=77,SNR=47
SFJD Kangerlussuaq 77.44 5 eP P 06 04 34.7 +0.4
comp=Z,117nm,1.4s
SFJD Kangerlussuaq 77.44 5 i P P 06 04 34.6 +0.3
comp=Z,20nm,1.1s
SFJD i S S 06 14 21.0 -1.0
SFJD
comp=Z,2µm,20.0s
SFJD Kangerlussuaq 77.44 5 LR LR 06 40 08.1
comp=Z,2µm,21.5s,baz=353,slow=37
IMW Indian Meadow 77.45 45 eP P 06 04 37.4 +2.2
comp=Z,72nm,1.2s
DCID1 D C Creek 77.49 45 eP P 06 04 37.0 +1.6
comp=Z,95nm,1.1s
SFNV Sufian 77.51 306 eP P 06 04 33.8 -1.6
GRAC Grapevine Rang 77.55 53 P P 06 04 36.9 +1.4
baz=78,SNR=15
A23A Redstone 77.55 38 P P 06 04 36.3 +1.0
baz=77,SNR=5.4
RRI2 Red Ridge 77.56 45 eP P 06 04 37.2 +1.4
comp=Z,54nm,1.2s
ISA Isabella 77.58 55 eP P 06 04 35.9 +0.1
ISA pmax pmax
comp=Z,49nm,1.6s
ISA Isabella 77.58 55 eP P 06 04 35.9 +0.1
comp=Z,49nm,1.6s
ISA Isabella 77.58 55 P P 06 04 36.0 +0.1
baz=78,SNR=8.6
HVU Hansel Valley 77.64 47 eP P 06 04 37.7 +1.5
HVU pmax pmax
comp=Z,49nm,1.0s
HVU Hansel Valley 77.64 47 eP P 06 04 37.7 +1.5
comp=Z,49nm,1.0s
ARVC Arvin 77.64 56 ⇓P P 06 04 37.2 +1.1
baz=78,SNR=6.3
RLMT Red Lodge 77.65 43 eP P 06 04 37.1 +0.9
comp=Z,87nm,1.5s
RLMT LR LR
comp=Z,1µm,21.0s
D21A La Casta Ranch 77.67 40 P P 06 04 36.9 +0.8
baz=78,SNR=20
TPAW Teton Pass 77.69 45 eP P 06 04 38.0 +1.5
comp=Z,95nm,1.5s
H18A Shoshone NF, C 77.70 44 ⇑P P 06 04 37.5 +1.0
baz=78,SNR=12
BER Bergen 77.81 339 eP P 06 04 35.5 -0.9
BER eS S 06 14 25.9 -0.2
BER AMS AMS 06 41 55.8
comp=Z,4µm,22.0s
ODD1 Odda 77.81 338 eP P 06 04 35.6 -1.0
B23A Brockton 77.81 38 P P 06 04 37.4 +0.6
baz=78,SNR=65
C22A Vida 77.82 39 ⇑P P 06 04 37.3 +0.5
baz=78,SNR=5.1
SNOW Snow King Moun 77.82 45 eP P 06 04 38.7 +1.4
comp=Z,27nm,1.1s
REDW Red Top Meadow 77.82 45 eP P 06 04 38.6 +1.4
F20A Billings 77.84 42 P P 06 04 37.7 +0.6
baz=78,SNR=11
AKCD Akcadag 77.85 308 i P P 06 04 38.6 +1.2
KIS Kishinev 77.90 320 i P P 06 04 36.0 -1.2
comp=Z,200nm,1.5s
KIS Kishinev 77.90 320 ePP PP 06 07 32.0 -0.8
KIS eS S 06 14 22.0 -5.6
KIS eScS SKSac 06 14 44.0 -4.3
KIS Kishinev 77.90 320 ePS 06 15 08.0
KIS eLQ LQ 06 32 52.0
comp=Z,3µm,19.0s
KIS eLR LR 06 37 52.0
comp=Z,3µm,17.0s
KIS Kishinev 77.90 320 ⇓iP P 06 04 36.0 -1.2
KIS e 06 07 32.0
KIS eS S 06 14 22.0 -5.6
KIS e 06 14 44.0
KIS ePS PnS 06 15 08.0 -3.1
KIS pmax pmax
comp=Z,180nm,1.5s
KIS pmax pmax
comp=Z,500nm,8.0s
KIS MLR MLR
comp=Z,4µm,17.0s
KIS MLR MLR
comp=N,1µm,19.0s
KIS MLR MLR
comp=E,2µm,15.0s
KIS MLR MLR
comp=Z,3µm,17.0s
R11A Troy Canyon, C 77.92 51 P P 06 04 38.9 +1.1
baz=78,SNR=47
E21A Keefer Ranch, 77.96 41 ⇓P P 06 04 38.6 +1.0
baz=78,SNR=6.7
MPMC Manual Prospec 78.01 54 P P 06 04 39.3 +0.9
baz=78,SNR=23
OSI Osito Adit 78.01 56 eP P 06 04 39.2 +1.0
comp=Z,27nm,0.8s
A24A Westby 78.01 38 P P 06 04 38.4 +0.5
baz=78,SNR=14
AHID Auburn Hatcher 78.04 46 eP P 06 04 39.4 +1.0
comp=Z,30nm,1.0s
AHID LR LR
comp=Z,1µm,21.0s
D22A Cohagen 78.04 40 P P 06 04 39.1 +0.9
baz=78,SNR=29
H19A Powell 78.08 43 P P 06 04 39.8 +1.3
baz=78,SNR=10
BZK Bozkurt 78.10 313 eP P 06 04 38.8 +0.3
C23A Lambert 78.14 39 P P 06 04 39.3 +0.7
baz=78,SNR=22
G20A Bridger 78.17 42 ⇑P P 06 04 39.3 +0.3
baz=78,SNR=10
FURC Furnace Creek, 78.19 54 P P 06 04 40.2 +1.2
baz=78,SNR=15
DGMT Dagmar 78.21 38 eP P 06 04 39.3 +0.3
comp=Z,137nm,1.2s
DGMT LR LR
comp=Z,2µm,22.0s
DGMT Dagmar 78.21 38 P P 06 04 39.4 +0.4
baz=78,SNR=14
TAU Tasmania Unive 78.23 175 eP P 06 04 40.3 +1.5
TAU pmax pmax
comp=Z,70nm,1.1s
TAU MLR MLR
comp=Z,3µm,21.0s
TAU Tasmania Unive 78.23 175 eP P 06 04 40.3 +1.5
comp=Z,70nm,1.1s
TAU LR LR
comp=Z,3µm,21.0s
EDW2 Edwards Air Fo 78.35 56 P P 06 04 41.2 +1.1
baz=78,SNR=26
F21A Absaloka Mine, 78.39 42 P P 06 04 40.8 +0.6
baz=78,SNR=20
CTKT Corum 78.43 312 i P P 06 04 41.3 +0.7
HWUT Hardware Ranch 78.47 47 eP P 06 04 41.4 +0.6
comp=Z,77nm,1.2s
HWUT LR LR
comp=Z,2µm,22.0s
LVV L'vov 78.47 324 ⇑iP P 06 04 40.7 +0.3
LVV e 06 07 39.1
LVV eS S 06 14 32.3 -1.4
LVV e 06 14 50.5
LVV ePS PnS 06 15 31.1 +13
LVV eSS SS 06 19 43.7 +7.4
LVV pmax pmax
comp=Z,400nm,1.7s
LVV pmax pmax
comp=N,120nm,2.3s
LVV MLR MLR
comp=N,2µm,17.0s
LVV MLR MLR
comp=Z,2µm,17.0s
LVV MLR MLR
comp=E,800nm,16.0s
I19A Meeteetse 78.47 44 P P 06 04 42.1 +1.3
baz=78,SNR=8.5
D23A Lindsay 78.54 40 P P 06 04 42.0 +1.1
baz=78,SNR=39
DUG Dugway 78.57 49 eP P 06 04 41.8 +0.5
DUG pmax pmax
comp=Z,68nm,1.1s
DUG MLR MLR
comp=Z,971nm,19.0s
DUG Dugway 78.57 49 eP P 06 04 41.8 +0.5
comp=Z,68nm,1.1s
DUG LR LR
comp=Z,971nm,19.0s
DUG Dugway 78.57 49 P P 06 04 42.6 +1.3
baz=78,SNR=30
BEL Belsk 78.59 327 ⇓eP P 06 04 41.9 +0.9
BEL eS S 06 14 34.8 -0.1
BEL MLR MLR
comp=Z,4µm,18.0s
BEL Belsk 78.59 327 eP P 06 04 41.9 +0.9
BEL eS S 06 14 34.8 -0.1
BEL LMZ LR 06 43 18.2
PINB Pinarbasi 78.59 309 iP P 06 04 42.5 +0.9
PASC Pasadena Art C 78.63 56 eP P 06 04 41.6 0.0
comp=Z,340nm,2.2s
GZT Gaziantep 78.63 308 iP P 06 04 42.8 +1.1
BSD Bornholm Skovb 78.68 332 ⇓iP P 06 04 41.1 -0.3
BSD pmax pmax
comp=Z,38nm,1.2s
BSD MLR MLR
comp=Z,2µm,18.0s
BSD Bornholm Skovb 78.68 332 ⇓iP P 06 04 41.1 -0.3
comp=Z,38nm,1.2s
BSD
comp=Z,2µm,18.0s
MWC Mount Wilson 78.68 56 eP P 06 04 43.3 +1.2
MWC pmax pmax
comp=Z,179nm,1.7s
MWC Mount Wilson 78.68 56 eP P 06 04 43.3 +1.2
comp=Z,179nm,1.7s
C24A Savage 78.71 39 P P 06 04 42.5 +0.7
baz=78,SNR=19
G21A Lodge Grass 78.72 42 P P 06 04 43.0 +1.0
baz=79,SNR=11
BALT Daday 78.73 313 iP P 06 04 42.3 +0.1
SARI SarD1z-Kayseri 78.74 309 eP P 06 04 43.2 +0.9
H20A Greybull 78.75 43 P P 06 04 43.4 +1.2
baz=79,SNR=22
CORM Corum 78.80 311 eP P 06 04 43.6 +1.1
F22A Rosebud 78.88 41 P P 06 04 43.4 +0.6
baz=79,SNR=13
GSC Goldstone 78.90 55 eP P 06 04 44.1 +1.0
GSC pmax pmax
comp=Z,112nm,1.6s
GSC Goldstone 78.90 55 eP P 06 04 44.1 +1.0
comp=Z,112nm,1.6s
GSC Goldstone 78.90 55 ⇑P P 06 04 44.3 +1.2
baz=79,SNR=9.1
CTU Camp Tracy 78.91 48 eP P 06 04 44.9 +1.6
comp=Z,81nm,1.5s
J19A Crowheart 78.92 44 P P 06 04 44.2 +1.0
baz=79,SNR=34
E23A Ismay 78.92 40 P P 06 04 44.0 +1.0
baz=79,SNR=17
BW06 Boulder Array 78.94 45 eP P 06 04 43.5 +0.1
comp=Z,14nm,0.8s
BW06 LR LR
comp=Z,1µm,21.0s
PDAR Pinedale Array 78.94 45 P P 06 04 43.2 -0.2
PDAR Pinedale Array 78.94 45 P P 06 04 43.2 -0.2
comp=Z,8.4nm,0.6s,baz=270,slow=1.0,SNR=38
BFSC Mount Baldy Ra 78.94 56 P P 06 04 44.7 +1.2
baz=79,SNR=14

KMRS **Kahramanmaras** 78.97 308 *e*P **P** 06 04 44.3 +0.9
I20A **Worland** 79.01 43 P **P** 06 04 44.8 +1.1
baz=79,SNR=18
D24A **Glendive** 79.03 39 P **P** 06 04 44.5 +0.9
baz=79,SNR=24
SLMH **Al Salmeh** 79.06 307 *e*P **P** 06 04 41.3 -2.6
AYKD **Aykdinkavak** 79.08 308 *i* P **P** 06 04 44.0 0.0
M17A **Scullys Gap (B** 79.09 47 P **P** 06 04 44.7 +0.5
baz=79,SNR=23
GKP **Gorka Klasztor** 79.10 329⇓*e*P **P** 06 04 44.1 +0.3
GKP *e* 06 07 42.5
GKP *e*S **S** 06 14 40.8 +0.5
GKP MLR MLR
comp=Z,4µm,19.5s
GKP **Gorka Klasztor** 79.10 329 *e*P **P** 06 04 44.0 +0.3
GKP *e*PP **PP** 06 07 42.5 -0.1
GKP *e*S **S** 06 14 40.8 +0.5
GKP LMZ LR 06 42 57.0
BORG **Borgarnes** 79.14 352 *e*P **P** 06 04 46.2 +2.4
comp=Z,59nm,1.0s
BORG LR LR
comp=Z,953nm,19.0s
BORG **Borgarnes** 79.14 352 P P 06 04 46.6 +2.9
comp=Z,302nm,0.9s,SNR=7.8
JLU **Jordanelle** 79.15 48 *e*P **P** 06 04 45.4 +0.8
comp=Z,182nm,1.9s
CANT **Cankiri** 79.15 312 *e*P **P** 06 04 44.8 +0.4
L18A **Fontenelle, Gr** 79.18 46 ⇓P **P** 06 04 45.7 +1.0
baz=79,SNR=10
COP **Copenhagen** 79.19 333⇓*i*P **P** 06 04 44.5 +0.4
COP *i* S **S** 06 14 41.3 +0.3
COP pmax pmax
comp=Z,28nm,0.8s
COP MLR MLR
comp=Z,1µm,18.0s
COP **Copenhagen** 79.19 333⇓*i*P **P** 06 04 44.5 +0.4
comp=Z,28nm,0.8s
COP *i* S **S** 06 14 41.3 +0.3
COP
comp=Z,1µm,18.0s
H21A **Big Horn, Sher** 79.19 42 P **P** 06 04 45.3 +0.7
baz=79,SNR=14
KWP **Kalwaria Pacla** 79.23 324⇓*e*P **P** 06 04 45.5 +0.9
KWP *e*S **S** 06 14 43.0 +1.1
KWP MLR MLR
comp=Z,4µm,21.3s
KWP **Kalwaria Pacla** 79.23 324 *e*P **P** 06 04 45.3 +0.7
comp=Z,356nm,1.4s
KWP LR LR
comp=Z,4µm,20.0s
KWP **Kalwaria Pacla** 79.23 324⇓*i*P **P** 06 04 45.4 +0.9
KWP **Kalwaria Pacla** 79.23 324 *e*P **P** 06 04 45.4 +0.9
KWP *e*S **S** 06 14 43.0 +1.1
KWP LMZ LR 06 43 10.4
KUZU **Kuzuini** 79.29 308 *i* P **P** 06 04 46.3 +1.1
CDAG **Cicekdag** 79.29 311 *i* P **P** 06 04 45.9 +0.6
K19A **Absolon Red Bu** 79.31 45 ⇓P **P** 06 04 45.8 +0.4
baz=79,SNR=7.4
SAFT **Safranbolu** 79.32 313 *e*P **P** 06 04 45.8 +0.6
BUR08 **Bucovina Ar. S** 79.35 322 *e*P **P** 06 04 45.4 0.0
TESR **Tescani** 79.35 320⇓*i*P **P** 06 04 45.3 0.0
BURAR **Bucovina Array** 79.36 322⇑*i*P **P** 06 04 45.9 +0.5
F23A **Volborg** 79.37 41 P **P** 06 04 46.2 +0.7
baz=79,SNR=8.6
DAU **Daniels Canyon** 79.38 48 *e*P **P** 06 04 47.7 +1.7
DAU **Daniels Canyon** 79.38 48 *e*P **P** 06 04 47.6 +1.7
MPU **Maple Canyon** 79.40 48 *e*P **P** 06 04 47.2 +1.3
comp=Z,85nm,1.1s
E24A **Baker** 79.41 40 P **P** 06 04 46.3 +0.7
baz=79,SNR=10
TUQ **Turquoise Moun** 79.41 54 P **P** 06 04 47.6 +1.6
baz=79,SNR=5.7
J20A **Shoshoni** 79.42 44 P **P** 06 04 46.9 +1.0
baz=79,SNR=14
L19A **Farson** 79.47 46 P **P** 06 04 46.9 +0.6
baz=79,SNR=11
RAR **Rarotonga** 79.47 125 LR LR 06 33 30.4
comp=Z,2µm,21.0s,baz=271,slow=31
HEC **Hector,Ludlow** 79.49 55 ⇓P **P** 06 04 47.6 +1.3
baz=79,SNR=8.9
AVNT **Avonos** 79.50 310 *i* P **P** 06 04 46.2 -0.3
LLD **Lille Linde** 79.53 333 *i* P **P** 06 04 46.1 +0.1
LLD pmax pmax
comp=Z,39nm,1.0s
LLD **Lille Linde** 79.53 333 *i* P **P** 06 04 46.1 +0.1
comp=Z,39nm,1.0s
I21A **Big Trails, Te** 79.57 43 P **P** 06 04 47.4 +0.6
baz=79,SNR=22
H22A **Clearmont** 79.59 42 P **P** 06 04 47.4 +0.6
baz=79,SNR=14
ARUT **Antelope Range** 79.62 51 *e*P **P** 06 04 48.1 +0.9
ARUT pmax pmax
comp=Z,45nm,1.2s
ARUT **Antelope Range** 79.62 51 *e*P **P** 06 04 48.0 +0.9
comp=Z,45nm,1.2s
MURC **Murrieta** 79.62 56 P **P** 06 04 48.0 +0.9
baz=80,SNR=13
DRWC **Darouich** 79.64 308 *e*P P 06 04 40.2 -7.0
KOZT **Kozan** 79.67 309 *e*P **P** 06 04 48.8 +1.6
BR131 **Keskin Array S** 79.68 312 *e*P **P** 06 04 47.6 +0.2
comp=Z,24nm,0.9s
BRTR **Keskin Array B** 79.68 312 P **P** 06 04 47.5 +0.2
BRTR PKKPbc **PKKPbc** 06 23 34.9 +1.4
BRTR **Keskin Array B** 79.68 312 P **P** 06 04 47.5 +0.2
comp=Z,20nm,1.0s,baz=98,slow=3.7,SNR=73
BRTR PKKPbc **PKKPbc** 06 23 34.9 +1.4
comp=Z,0.8nm,0.8s,baz=209,slow=2.6,SNR=4.3
BRTR LR LR 06 47 06.6
comp=Z,787nm,20.0s,baz=41,slow=41
K20A **Yellowstone Ra** 79.71 45 P **P** 06 04 47.7 +0.2
baz=80,SNR=7.5
RGN **Rugen** 79.72 332 *e*P **P** 06 04 47.7 +0.7
comp=Z,279nm,1.4s
RGN **Rugen** 79.72 332 *e*P **P** 06 04 47.8 +0.8
comp=Z,123nm,1.1s
G23A **Biddle** 79.72 41 P **P** 06 04 47.9 +0.4
baz=80,SNR=16
VRI **Vrincioaia** 79.73 320 ⇓P **P** 06 04 47.9 +0.5
VRI **Vrincioaia** 79.73 320⇓*i*P **P** 06 04 47.8 +0.4
TIRR **Tirgusor** 79.74 318 *e*P **P** 06 04 47.6 +0.2
TIRR pmax pmax
comp=Z,90nm,1.6s
TIRR **Tirgusor** 79.74 318 *e*P **P** 06 04 47.6 +0.2
comp=Z,90nm,1.6s
TIRR **Tirgusor** 79.74 318⇑*i*P **P** 06 04 47.4 0.0
MUD **Monsted U'grnd** 79.75 335⇓*i*P **P** 06 04 47.4 +0.2
MUD pmax pmax
comp=Z,19nm,1.1s
MUD MLR MLR
comp=Z,3µm,19.0s
MUD **Monsted U'grnd** 79.75 335⇓*i*P **P** 06 04 47.4 +0.2
comp=Z,19nm,1.1s
MUD
comp=Z,3µm,19.0s
J21A **Lysite** 79.78 44 P **P** 06 04 48.5 +0.6
baz=80,SNR=14
F24A **Ekalaka** 79.80 40 P **P** 06 04 48.4 +0.5
baz=80,SNR=23
CCUT **Cedar City** 79.81 51 *e*P **P** 06 04 49.5 +1.2
comp=Z,439nm,2.8s
HARR **Harsova** 79.85 318 ⇓P **P** 06 04 50.3 +2.3
HARR **Harsova** 79.85 318⇓*i*P **P** 06 04 50.3 +2.3
KOLS **Kolonicke sedl** 79.92 324 *e*P **P** 06 04 49.1 +0.8
KOLS pmax pmax
comp=Z,56nm,1.4s
KOLS **Kolonicke sedl** 79.92 324 *e*P **P** 06 04 49.1 +0.8
KOLS *e*PP **PP** 06 07 49.3 -0.2
KOLS *e*S **S** 06 14 49.3 +0.1
KOLS *e*SS **SS** 06 20 01.6 +3.6
MVU **Marysvale** 79.96 50 *e*P **P** 06 04 50.6 +1.6
comp=Z,63nm,1.2s
MVU LR LR
comp=Z,961nm,20.0s
GMRC **Granite Mounta** 79.97 54 P **P** 06 04 50.0 +1.0
baz=80,SNR=18
I22A **9 Mile Ranch,** 79.97 43 P **P** 06 04 49.5 +0.7
baz=80,SNR=18
CEYT **Ceyhan** 80.00 308 *e*P **P** 06 04 50.3 +1.3
NIG **Nigde** 80.06 310 *e*P **P** 06 04 50.9 +1.3
STHS **Stebnicka Huta** 80.07 325 *e*P **P** 06 04 50.3 +1.2
STHS pmax pmax
comp=Z,43nm,1.3s
STHS **Stebnicka Huta** 80.07 325 *e*P **P** 06 04 50.3 +1.2
109C **Camp Elliot, M** 80.10 57 P **P** 06 04 51.1 +1.5
baz=80,SNR=7.5

ANTO **Ankara** 80.10 312 *e*P **P** 06 04 50.2 +0.6
ANTO **Ankara** 80.10 312 *e*P **P** 06 04 50.3 +0.7
ANTO pmax pmax
comp=Z,139nm,1.7s
ANTO MLR MLR
comp=Z,820nm,20.0s
ANTO **Ankara** 80.10 312 P **P** 06 04 50.3 +0.7
SNR=17
ANTO **Ankara** 80.10 312 *e*P **P** 06 04 50.3 +0.7
comp=Z,139nm,1.7s
ANTO LR LR
comp=Z,820nm,20.0s
BBAL **Bala** 80.11 312 *i* P **P** 06 04 50.8 +1.1
LOD **Lodumlu** 80.11 312 *e*P **P** 06 04 50.0 +0.4
UZH **Uzhgorod** 80.11 324 *e*P **P** 06 04 49.2 -0.1
UZH *e* 06 05 02.4
UZH *e* 06 09 45.0
UZH *e*S **S** 06 14 51.0 -0.2
L20A **Wamsutter** 80.12 45 P **P** 06 04 50.8 +1.0
baz=80,SNR=8.1
PFO **Pinyon Flat Ob** 80.12 56 P **P** 06 04 50.0 +0.1
comp=Z,349nm,1.3s,SNR=23
PFO **Pinyon Flat Ob** 80.12 56 *e*P **P** 06 04 50.6 +0.7
comp=Z,153nm,1.4s
PFO **Pinyon Flat Ob** 80.12 56 LR LR 06 34 38.8
comp=Z,4µm,20.3s,baz=294,slow=31
PFO **Pinyon Flat Ob** 80.12 56 P **P** 06 04 50.7 +0.8
baz=80,SNR=30
BTCH **Batrach** 80.13 307 *e*P **P** 06 04 50.1 +0.3
LDFC **Landfair** 80.16 54 *e*P **P** 06 04 50.9 +0.9
comp=Z,131nm,1.3s
OJC **Ojcow** 80.17 326⇓*i*P **P** 06 04 50.1 +0.4
OJC *e*S **S** 06 14 52.4 +0.6
OJC *e* 06 15 02.9
OJC **Ojcow** 80.17 326 *e*P **P** 06 04 49.6 -0.1
comp=Z,220nm,1.4s
OJC **Ojcow** 80.17 326 *i* P **P** 06 04 50.1 +0.4
OJC *e*PcP **PcP** 06 04 58.0 +1.1
OJC *e*S **S** 06 14 52.4 +0.6
OJC *e*SKSac **SKSac** 06 15 02.9 -1.4
OJC L L 06 45 46.2
comp=Z,4µm,19.4s
YURE **YUREGIR** 80.19 308 *i* P **P** 06 04 50.5 +0.5
AFSR **Af'ar-Bala (A** 80.20 312 *e*P **P** 06 04 50.8 +0.6
BELC **Belle Mtn. Jos** 80.20 55 P **P** 06 04 50.8 +0.5
baz=80,SNR=24
CRVS **Cervenica-Dubn** 80.33 324 *e*P **P** 06 04 49.2 -1.3
CRVS pmax pmax
comp=Z,138nm,1.8s
CRVS **Cervenica-Dubn** 80.33 324 *e*P **P** 06 04 49.2 -1.3
CRVS **Cervenica-Dubn** 80.33 324 *e*S **S** 06 14 51.4 -2.1
CRVS *e*SS **SS** 06 20 05.9 +1.8
TRPA **Tarpa** 80.34 323⇓*i*P **P** 06 04 51.4 +0.9
TRPA **Tarpa** 80.34 323⇓*e*P **P** 06 04 51.5 +0.9
Q16A **Castle Valley** 80.35 49 P **P** 06 04 52.1 +1.0
baz=80,SNR=14
DOPR **Dopca** 80.37 320⇑*i*P **P** 06 04 49.0 -1.8
PSN **Preselentsi** 80.37 317 *i* P **P** 06 04 51.6 +0.8
MLR **Muntele Rosu** 80.39 320⇓*i*P **P** 06 04 51.2 +0.1
GULE **Gulek** 80.46 309 *i* P **P** 06 04 52.7 +1.0
H24A **Dirks Ranch, A** 80.47 41 P **P** 06 04 51.6 +0.2
baz=80,SNR=14
WRDH **Warideh** 80.47 307 *e*P P 06 04 44.7 -7.0
NIE **Niedzica** 80.50 325⇓*i*P **P** 06 04 52.7 +1.2
NIE *e* 06 07 56.8
NIE *e*S **S** 06 14 56.6 +1.3
NIE *e* 06 15 06.6
NIE *e*SS **SS** 06 20 12.7 +6.0
NIE **Niedzica** 80.50 325 *i* P **P** 06 04 52.7 +1.2
NIE *e*PcP **pP** 06 05 00.6 -2.3
NIE *e*PP **PP** 06 07 56.8 +2.4
NIE *e*S **S** 06 14 56.6 +1.3
NIE *e*SKSac **SKSac** 06 15 06.6 -0.1
NIE *e*SS **SS** 06 20 12.7 +6.0
BAR **Barrett** 80.52 57 *e*P **P** 06 04 52.7 +0.8
comp=Z,219nm,1.7s
ARNB **Al Arnab** 80.55 307 *e*P **P** 06 04 52.4 +0.3
MONP **Monument Peak** 80.57 56 P **P** 06 04 53.3 +0.9
baz=80,SNR=14
URZ **Urewera** 80.61 152 LR LR 06 35 54.6
comp=Z,999nm,19.0s,baz=150,slow=32
SRU **San Rafael** 80.63 48 P **P** 06 04 53.5 +0.9
baz=80,SNR=11
IRM **Iron Mountain** 80.67 55 P **P** 06 04 53.8 +1.1
baz=81,SNR=31
MDUB **Mudurnu** 80.69 313 *e*P **P** 06 04 53.1 +0.4
SULT **Sultanhani-AKS** 80.69 310 *e*P **P** 06 04 52.6 -0.2
ROOS **tl_alroos** 80.69 305 *e*P P 06 04 58.2 +5.3
L21A **Rawlins** 80.70 45 P **P** 06 04 53.6 +0.7
baz=81,SNR=13
O19A **Miners Draw (B** 80.73 47 P **P** 06 04 53.7 +0.6
baz=81,SNR=9.7
K22A **Casper** 80.74 44 P **P** 06 04 53.6 +0.5
baz=81,SNR=11
BC3 **Big Chuckawall** 80.77 55 P **P** 06 04 54.2 +0.9
baz=81,SNR=22
MDND **Maddock** 80.90 37 P **P** 06 04 54.3 +0.6
baz=81,SNR=15
N20A **Spence Gulch,** 80.90 46 P **P** 06 04 55.3 +1.2
baz=81,SNR=36
DVTC **Desert V Tower** 80.92 56 P **P** 06 04 55.2 +1.1
baz=81,SNR=10
M21A **Separation Pea** 80.94 45 P **P** 06 04 54.9 +0.7
baz=81,SNR=7.8
ULM **Lac du Bonnet** 80.94 33 P **P** 06 04 53.5 -0.3
ULM **Lac du Bonnet** 80.94 33 P **P** 06 04 53.5 -0.3
comp=Z,44nm,1.3s,baz=314,slow=5.9,SNR=18
ULM LR LR 06 40 11.8
comp=Z,2µm,21.8s,baz=140,slow=35
W13A **Hualapai Mount** 80.95 53 ⇑P **P** 06 04 55.3 +1.0
baz=81,SNR=18
SWSC **Sam W. Stewart** 80.96 56 P **P** 06 04 55.5 +1.3
baz=81,SNR=6.2
KECS **Kecovo** 81.08 325 *e*P **P** 06 04 55.4 +0.8
KECS pmax pmax
comp=Z,24nm,1.4s
KECS **Kecovo** 81.08 325 *e*P **P** 06 04 55.4 +0.8
KECS *e*PP **PP** 06 08 01.0 +1.9
RUE **Ruedersdorf** 81.10 331 *e*P **P** 06 04 55.0 +0.5
comp=Z,270nm,1.5s
RUE **Ruedersdorf** 81.10 331 *e*P **P** 06 04 55.6 +1.1
comp=Z,168nm,1.3s
GULT **Gulveren** 81.11 314 *e*P **P** 06 04 54.5 -0.5
PRD **Provadia** 81.11 317 *i* P **P** 06 04 53.5 -1.3
SVRH **Sivrihisar-ESK** 81.13 312 *e*P **P** 06 04 54.5 -0.6
RSSD **Black Hills** 81.16 41 *e*P **P** 06 04 55.5 +0.2
RSSD pmax pmax
comp=Z,16nm,0.8s
RSSD **Black Hills** 81.16 41 *e*P **P** 06 04 55.5 +0.2
comp=Z,16nm,0.8s
ARR **Arges** 81.16 320⇑*i*P **P** 06 04 56.7 +1.6
SILT **Sile** 81.17 315 *e*P **P** 06 04 55.3 +0.2
U15A **North Rim** 81.17 51 P **P** 06 04 57.1 +1.4
baz=81,SNR=34
DRGR 81.17 322 ⇑P **P** 06 04 55.4 +0.2
DRGR 81.17 322⇑*i*P **P** 06 04 55.4 +0.2
OKC **Ostrava-Krasne** 81.19 327⇓*i*P **P** 06 04 55.5 +0.4
OKC *e* 06 15 01.9
OKC MLR MLR
comp=Z,3µm,17.1s
OKC **Ostrava-Krasne** 81.19 327⇓*i*P **P** 06 04 55.5 +0.4
OKC *ex* x 06 08 12.7
OKC *e*S **S** 06 15 01.9 -0.5
OKC AMS AMS 06 44 40.0
comp=Z,3µm,17.1s
L22A **Ellis Ranch, M** 81.19 44 ⇑P **P** 06 04 56.7 +1.1
baz=81,SNR=6.5
P19A **Cripple Cowboy** 81.24 47 P **P** 06 04 56.8 +1.0
baz=81,SNR=16
PDMCI **Parker Dam,Lak** 81.26 54 P **P** 06 04 56.8 +1.0
baz=81,SNR=16
KIZT **Kizilcal** 81.27 312 *e*P **P** 06 04 56.1 +0.2
KSP **Ksiaz** 81.28 328⇓*e*P **P** 06 04 56.0 +0.5
KSP *e* 06 08 00.6
KSP *e*S **S** 06 15 01.5 -1.8
KSP MLR MLR
comp=Z,8µm,20.2s
KSP **Ksiaz** 81.28 328 *e*P **P** 06 04 56.0 +0.5
KSP *e*PP **PP** 06 08 01.8 +1.1
KSP *e*S **S** 06 15 04.6 +1.3
KSP LMZ LR 06 45 05.3
BSEG **Bad Segeberg** 81.32 333 *e*P **P** 06 04 56.1 +0.5
comp=Z,302nm,1.5s
BSEG **Bad Segeberg** 81.32 333 *e*P **P** 06 04 56.1 +0.5

BSEG pmax pmax
comp=Z,302nm,1.5s
Y12C **Blythe** 81.33 55 P **P** 06 04 57.3 +1.1
baz=81,SNR=21
O20A **White River Ci** 81.36 47 P **P** 06 04 57.2 +0.7
baz=81,SNR=12
LADK **Ladik-KONYA** 81.40 311 *e*P **P** 06 04 56.4 -0.2
KLYT **Kilyos** 81.45 315 *e*P **P** 06 04 56.4 -0.2
SEYT **Eskypehyr** 81.49 313 *i* P **P** 06 04 57.0 -0.1
M22A **Cedar Creek Ra** 81.51 45 P **P** 06 04 58.1 +0.8
baz=81,SNR=7.4
MORC **Moravsky Berou** 81.51 327 *e*P **P** 06 04 57.0 +0.1
MORC pmax pmax
comp=Z,92nm,1.3s
MORC **Moravsky Berou** 81.51 327 *e*P **P** 06 04 57.0 +0.1
comp=Z,92nm,1.3s
MORC **Moravsky Berou** 81.51 327⇑*i*P **P** 06 04 57.3 +0.4
HWQ **Hawqa** 81.52 306 *e*P **P** 06 04 57.4 +0.1
GLA **Glamis** 81.55 55 *e*P **P** 06 04 58.7 +1.3
GLA pmax pmax
comp=Z,77nm,0.9s
GLA **Glamis** 81.55 55 *e*P **P** 06 04 58.6 +1.3
comp=Z,77nm,0.9s
GLA **Glamis** 81.55 55 P **P** 06 04 58.7 +1.3
baz=82,SNR=13
L23A **Garrett** 81.56 44 P **P** 06 04 57.7 +0.2
baz=81,SNR=11
ISK **Istanbul-Kandi** 81.56 315 *e*P **P** 06 04 55.3 -1.9
KONT **Konya--Tatoy** 81.56 311 *e*P **P** 06 04 57.9 +0.5
ADVT **Abdulvahap** 81.57 314 *e*P **P** 06 04 57.5 +0.2
DPC **Dobruska-Polom** 81.62 328⇓*i*P **P** 06 04 58.3 +0.8
DPC *e* 06 08 05.3
DPC *e* 06 15 07.4
DPC **Dobruska-Polom** 81.62 328⇓*i*P **P** 06 04 58.3 +0.8
DPC *e*pP **pP** 06 05 06.5 -2.4
DPC *e*PP **PP** 06 08 05.3 +1.7
DPC *e*S **S** 06 15 07.4 +0.4
DPC **Dobruska-Polom** 81.62 328 *e*P **P** 06 04 57.8 +0.3
comp=Z,208nm,1.7s
KRLC **Kraliky** 81.63 327⇓*i*P **P** 06 04 58.0 +0.5
KRLC *e* 06 08 00.7
KRLC **Kraliky** 81.63 327⇓*i*P **P** 06 04 58.0 +0.5
KRLC *e*PP **PP** 06 08 00.7 -2.9
UPC **Upice** 81.64 328⇓*i*P **P** 06 04 58.1 +0.6
UPC *e* 06 08 01.1
UPC **Upice** 81.64 328⇓*i*P **P** 06 04 58.1 +0.6
UPC *e*pP **pP** 06 05 06.4 -2.5
UPC *e*PP **PP** 06 08 01.1 -2.6
BGKT **Bogazkoy** 81.65 315 *e*P **P** 06 04 57.4 -0.3
CAVI **Cavuskoy** 81.66 314 *e*P **P** 06 04 57.9 +0.1
BUY **Buyukada** 81.66 315 *i* P **P** 06 04 57.2 -0.5
P20A **De Beque** 81.67 47 P **P** 06 04 59.3 +1.2
baz=82,SNR=6.1
YLV **Yalova** 81.70 314 *e*P **P** 06 04 57.3 -0.8
CTYL **Yal??k??y-??at** 81.74 316 *e*P **P** 06 04 57.5 -0.7
PSZ **Piszkesteto** 81.76 324 *e*P **P** 06 04 59.0 +0.8
PSZ pmax pmax
comp=Z,186nm,1.4s
PSZ MLR MLR
comp=Z,4µm,19.0s
PSZ **Piszkesteto** 81.76 324 *e*P **P** 06 04 59.0 +0.8
comp=Z,186nm,1.4s
PSZ LR LR
comp=Z,4µm,19.0s
PSZ **Piszkesteto** 81.76 324⇑*i*P **P** 06 04 58.7 +0.4
PSZ **Piszkesteto** 81.76 324⇓*e*P **P** 06 04 59.1 +0.8
CTKS **Kestanelik-??a** 81.77 315 *e*P **P** 06 04 57.9 -0.4
S18A **Hurst Farm, Bl** 81.84 49 P **P** 06 04 59.9 +0.8
baz=82,SNR=17
VYHS **Vyhne** 81.85 325 *e*P **P** 06 04 59.4 +0.8
VYHS pmax pmax
comp=Z,60nm,1.5s
VYHS **Vyhne** 81.85 325 *e*P **P** 06 04 59.4 +0.8
VYHS *e*PP **PP** 06 08 08.2 +2.7
VYHS *e*S **S** 06 15 10.8 +1.5
ELBA **Catalca** 81.87 315 *i* P **P** 06 04 59.4 +0.6
GEMT **Gemlik** 81.89 314 *e*P **P** 06 04 58.6 -0.4
SALA **Sala** 81.94 304 *e*P **P** 06 04 59.9 +0.3
BOLV **Bolvadin** 81.94 312 *i* P **P** 06 05 00.0 +0.6
SLVT **Silivri** 81.94 315 *e*P **P** 06 04 58.6 -0.7
N22A **Wattenberg Ran** 81.98 45 P **P** 06 05 01.6 +1.7
baz=82,SNR=8.1
PV10 **Paradox Valley** 81.99 48 *e*P **P** 06 05 01.0 +1.1
comp=Z,2µm,0.9s
ARMT **Armutlu** 82.00 315 *e*P **P** 06 04 59.3 -0.3
ERMK **Ermenek** 82.03 310 *i* P **P** 06 05 00.3 +0.3
BRBR **Barbar** 82.04 305 *e*P **P** 06 05 00.8 +0.6
PV04 **Paradox Valley** 82.06 48 *e*P **P** 06 05 00.1 0.0
Q20A **Ridgley Place,** 82.08 47 P **P** 06 05 01.0 +0.8
baz=82,SNR=23
GZR **Gura Zlata** 82.10 321 ⇑P **P** 06 04 57.8 -2.3
GZR **Gura Zlata** 82.10 321⇑*i*P **P** 06 04 57.8 -2.3
N23A **Red Feather La** 82.21 45 P **P** 06 05 02.4 +1.4
baz=82,SNR=22
P21A **Newcastle** 82.22 47 P **P** 06 05 02.2 +1.2
baz=82,SNR=12
PHWY **Pilot Hill** 82.22 44 *e*P **P** 06 05 01.7 +0.6
comp=Z,83nm,1.6s
Y14A **Wickenburg** 82.23 54 P **P** 06 05 01.9 +1.0
baz=82,SNR=40
ALT **Altintas** 82.23 313 *e*P **P** 06 04 59.7 -1.3
PVCC **Panska Ves** 82.24 329⇓*i*P **P** 06 05 01.4 +0.8
PVCC *e* 06 15 14.5
PVCC MLR MLR
comp=Z,4µm,16.6s
PVCC **Panska Ves** 82.24 329⇓*i*P **P** 06 05 01.4 +0.8
PVCC *e*pP **pP** 06 05 09.5 -2.6
PVCC *e*S **S** 06 15 14.5 +1.2
PVCC AMS AMS 06 44 50.0
comp=Z,4µm,16.6s
BRG **Berggiesshubel** 82.25 329 *i* P **P** 06 05 00.9 +0.2
comp=Z,185nm,1.8s
BRG *e*PP PP 06 08 00.0 -8.6
comp=Z,58nm,2.0s
BRG *e* 06 15 08.0
BRG *e* 06 15 15.0
BRG SS SS 06 20 13.0 -19
BRG
comp=N,3µm,17.2s
BRG
comp=E,3µm,18.1s
BRG
comp=Z,3µm,16.2s
BRG **Berggiesshubel** 82.25 329 *e*P **P** 06 05 01.1 +0.5
comp=Z,185nm,1.8s
BRG **Berggiesshubel** 82.25 329 *i* P **P** 06 05 00.9 +0.2
BRG *e* 06 15 08.0
BRG *e* 06 15 15.0
BRG pmax pmax
comp=Z,185nm,1.8s
BRG pmax pmax
comp=Z,58nm,2.0s
BRG MLR MLR
comp=N,3µm,17.2s
VRAC **Vranov** 82.27 327⇓*i*P **P** 06 05 01.5 +0.7
SHUT **Suhut-Afyon** 82.28 312 *e*P **P** 06 05 01.6 +0.3
CLL **Collm** 82.30 330 *e*P **P** 06 05 00.9 0.0
comp=Z,147nm,1.3s
CLL *e*pP **pP** 06 05 09.2 -3.2
CLL **Collm** 82.30 330⇓*i*P **P** 06 05 00.9 0.0
CLL *e*S **S** 06 15 13.0 -0.8
CLL pmax pmax
comp=Z,55nm,1.3s
CLL MLR MLR
comp=Z,3µm,20.2s
CLL **Collm** 82.30 330⇓*i*P **P** 06 05 00.9 0.0
comp=Z,147nm,1.3s
CLL *i* pP **pP** 06 05 09.1 -3.3
CLL *i* sP **sP** 06 05 13.0 -3.5
CLL *e*PP **PP** 06 08 12.0 +2.9
CLL *e*S **S** 06 15 13.0 -0.8
CLL *e* 06 18 35.0
CLL *e*SS SS 06 20 45.0 +12
CLL *e* 06 25 12.0
CLL LmV 06 46 00.0
comp=Z,3µm,20.2s
WUAZ **Wupatki** 82.32 52 *e*P **P** 06 05 02.8 +1.2
comp=Z,48nm,1.1s
WUAZ **Wupatki** 82.32 52 ⇓P **P** 06 05 03.1 +1.5
baz=82,SNR=6.5
O22A **Kremmling** 82.34 46 P **P** 06 05 02.4 +0.6
baz=82,SNR=25
AGMN **Agassiz Nation** 82.36 34 *e*P **P** 06 05 00.2 -1.0
comp=Z,48nm,1.3s

AGMN LR LR
comp=Z,2µm,22.0s
TVSB Tavsanli 82.36 313 *e*P **P 06 05 00.5 -1.2**
EDRB Edirne 82.37 317 *e*P **P 06 05 01.0 -0.4**
PV01 Paradox Valley 82.43 48 *e*P **P 06 05 02.3 +0.1**
comp=Z,3µm,1.0s
FBE Freiberg 82.45 330 *e*P **P 06 05 02.3 +0.6**
comp=Z,287nm,1.6s
FBE *e*pP **pP 06 05 10.6 -2.5**
M24A Cheyenne 82.47 44 P **P 06 05 03.8 +1.5**
baz=82,SNR=16
TCHB Talchebab 82.48 305 *e*P **P 06 05 03.1 +0.9**
LFK Lefkose 82.48 308 *e*P **P 06 05 00.2 -2.0**
SMOL Smolenice 82.48 326 *e*P **P 06 05 03.3 +1.4**
SMOL Smolenice 82.48 326 *e*P **P 06 05 03.3 +1.4**
SMOL *e*pP **pP 06 05 11.6 -1.8**
BUD Budapest 82.48 325⇓*e*P **P 06 05 02.2 +0.3**
KCTX Karacabey (Bur 82.49 315 *e*P **P 06 05 01.0 -1.1**
R20A Redvale 82.51 48 P **P 06 05 03.7 +1.1**
baz=82,SNR=31
NRDL Niedersach Rie 82.52 332 *e*P **P 06 05 02.2 +0.2**
comp=Z,104nm,1.6s
K26A Motz Farm, Whi 82.57 42 P **P 06 05 03.5 +0.9**
baz=82,SNR=6.6
P22A Eagle 82.58 46 P **P 06 05 04.2 +1.2**
baz=82,SNR=21
GDZ Gediz 82.58 313 *i* P **P 06 05 02.8 0.0**
Q21A Lamborn Mesa, 82.59 47 P **P 06 05 04.8 +1.8**
baz=82,SNR=12
Z14A Wintersburg 82.62 54 P **P 06 05 04.1 +1.1**
baz=82,SNR=8.7
PRA Prague 82.64 329 ⇓P **P 06 05 03.0 +0.3**
PRA PP **PP 06 08 14.0 +2.1**
PRA AMS AMS 06 45 15.0
PRU Pruhonice 82.66 328⇓*i*P **P 06 05 02.5 -0.3**
PRU *e* 06 08 13.8
PRU *e* 06 15 17.3
PRU MLR MLR
comp=Z,4µm,17.4s
PRU Pruhonice 82.66 328⇓*i*P **P 06 05 02.5 -0.3**
PRU *e*pP **pP 06 05 11.5 -2.8**
PRU *e*PP **PP 06 08 13.8 +1.7**
PRU *e*S **S 06 15 17.3 -0.2**
PRU *e*SS SS 06 20 49.9 +11
PRU AMS AMS 06 44 50.0
comp=Z,4µm,17.4s
O23A Lake Granby, G 82.67 45 P **P 06 05 04.9 +1.4**
baz=82,SNR=15
MRMT Marmara Adasi 82.70 315 *e*P **P 06 05 03.2 -0.1**
S20A Disappointment 82.75 48 P **P 06 05 04.9 +1.0**
baz=83,SNR=16
MFT Murefte 82.76 316 *e*P **P 06 05 03.3 -0.4**
ISP Isparta 82.77 312 *e*P **P 06 05 03.8 0.0**
ISP Isparta 82.77 312 PFAKE 06 05 10.0 +6.2
ISP LR LR
comp=Z,1µm,22.0s
TREC Trest 82.77 328⇓*i*P **P 06 05 03.9 +0.4**
TREC MLR MLR
comp=Z,2µm,19.0s
TREC Trest 82.77 328⇓*i*P **P 06 05 03.9 +0.4**
TREC *e*pP **pP 06 05 12.1 -2.8**
TREC AMS AMS 06 45 50.0
comp=Z,2µm,19.0s
CSS Prodhromos 82.81 308 *e*P **P 06 05 04.5 +0.6**
comp=Z,118nm,1.5s
CSS LR LR
comp=Z,1µm,21.0s
DURS Dursunbey 82.85 314 *i* P **P 06 05 03.7 -0.5**
ZST Bratislava 82.86 326 *e*P **P 06 05 04.5 +0.6**
ZST pmax pmax
comp=Z,181nm,1.8s
ZST Bratislava 82.86 326 *e*P **P 06 05 04.5 +0.6**
ZST *e*PP **PP 06 08 15.9 +2.2**
ZST *e*S **S 06 15 19.4 -0.2**
ZST *e*SS SS 06 20 49.3 +7.6
N24A Carr 82.86 44 P **P 06 05 05.8 +1.5**
baz=83,SNR=7.1
NEUB Neuenburg 82.88 331 *e*P **P 06 05 04.1 +0.2**
comp=Z,206nm,1.4s
NEUB *e*pP **pP 06 05 12.5 -2.8**
SART Tekirdag 82.89 316 *i* P **P 06 05 04.6 +0.4**
RKY Sarkoy-Tekirda 82.89 316 *e*P **P 06 05 03.5 -0.8**
R21A Cimarron 82.90 48 P **P 06 05 06.2 +1.5**
baz=83,SNR=23
CSKK Cs˙ˇkako 82.93 325⇑*e*P **P 06 05 05.0 +0.7**
CLZ Clausthal 82.93 332 *e*P **P 06 05 04.7 +0.4**
comp=Z,185nm,1.5s
CLZ Clausthal 82.93 332 *e*P **P 06 05 04.7 +0.4**
CLZ pmax pmax
comp=Z,185nm,1.5s
X16A Lo Mia Camp, P 82.95 53 P **P 06 05 06.4 +1.5**
baz=83,SNR=39
BCK Bucak 82.96 311 *e*P **P 06 05 01.8 -2.9**
Q22A Crested Butte, 82.97 47 P **P 06 05 06.4 +1.4**
baz=83,SNR=22
LEF Lefka 82.99 308 *e*P **P 06 05 03.2 -1.6**
GONE Gonen-Balikesi 83.02 315 *e*P **P 06 05 04.8 0.0**
KHAL Karahalli 83.04 313 *i* P **P 06 05 05.6 +0.4**
MVCO Mesa Verde 83.06 49 *e*P **P 06 05 06.1 +0.6**
comp=Z,458nm,2.3s
DEMI Demirci 83.07 313 *i* P **P 06 05 03.9 -1.4**
PKST T˙s 83.11 325⇑*e*P **P 06 05 05.9 +0.7**
ISCO Idaho Springs 83.12 45 *e*P **P 06 05 06.9 +1.1**
ISCO pmax pmax
comp=Z,259nm,2.4s
ISCO MLR MLR
comp=Z,804nm,20.0s
ISCO Idaho Springs 83.12 45 *e*P **P 06 05 06.9 +1.1**
comp=Z,258nm,2.4s
ISCO LR LR
comp=Z,804nm,20.0s
ISCO Idaho Springs 83.12 45 P **P 06 05 07.0 +1.1**
baz=83,SNR=16
J28A Allard Ranch, 83.12 41 P **P 06 05 06.2 +0.7**
baz=83,SNR=13
KAC Achnashellach 83.13 342 *e*P **P 06 05 05.6 +0.4**
KAC Achnashellach 83.13 342 P **P 06 05 05.6 +0.4**
BALB Balikesir 83.17 314 *e*P **P 06 05 03.8 -1.9**
S21A Coal Bank Pass 83.21 48 P **P 06 05 07.8 +1.5**
baz=83,SNR=38
TANN Tannenbergstha 83.21 330 *e*P **P 06 05 06.2 +0.5**
comp=Z,109nm,1.6s
O24A Longmont 83.22 45 P **P 06 05 07.6 +1.5**
baz=83,SNR=15
WERD Werda 83.25 330 *e*P **P 06 05 06.3 +0.4**
comp=Z,127nm,1.6s
BALY Balya 83.26 315 *i* P **P 06 05 05.6 -0.6**
PLN Plauen 83.28 330 *e*P **P 06 05 06.7 +0.7**
comp=Z,776nm,1.8s
ERIK Erikli-Kesan 83.28 316 *e*P **P 06 05 06.8 +0.6**
GUNZ Gunzen 83.30 330 *e*P **P 06 05 06.7 +0.5**
comp=Z,181nm,1.7s
GUNZ *e*pP **pP 06 05 14.8 -2.8**
PGB Panagyurishte 83.32 318 *i* P **P 06 05 07.4 +0.9**
PLD Plovdiv 83.33 318 *i* P **P 06 05 06.5 +0.1**
PLD Plovdiv 83.33 318 *i* P **P 06 05 07.0 +0.6**
LPK Lapseki 83.34 316 *e*P **P 06 05 05.9 -0.6**
WERN Wernitzgruen 83.34 330 *e*P **P 06 05 06.9 +0.5**
comp=Z,193nm,1.7s
WERN *e*pP **pP 06 05 14.9 -2.9**
NKC Novy Kostel 83.35 330⇓*i*P **P 06 05 06.8 +0.4**
NKC MLR MLR
comp=Z,3µm,21.2s
NKC Novy Kostel 83.35 330⇓*i*P **P 06 05 06.8 +0.4**
NKC *e*pP **pP 06 05 14.8 -3.1**
NKC AMS AMS 06 47 30.0
comp=Z,3µm,21.2s
KPL Plockton 83.36 343 *e*P **P 06 05 06.5 +0.2**
KPL AMB AMB 06 05 08.8
comp=Z,144nm,2.7s
KPL AMS AMS 06 41 58.7
comp=Z,1µm,22.7s
KPL Plockton 83.36 343 P **P 06 05 06.5 +0.2**
KPL AMB AMB 06 05 08.8
comp=Z,144nm,2.7s
KPL AMS AMS 06 41 58.7
comp=Z,1µm,22.7s
MOX Moxa 83.38 330 *e*P **P 06 05 06.9 +0.4**
comp=Z,176nm,1.7s
MOX Moxa 83.38 330 *e*P **P 06 05 06.9 +0.4**
MOX pmax pmax
comp=Z,176nm,1.7s
ALN Alexandroupoli 83.39 316 P **P 06 05 06.6 -0.2**
ALN Alexandroupoli 83.39 316 *e*P **P 06 05 06.7 -0.1**
KORT Korkueli 83.40 311 *i* P **P 06 05 05.6 -1.5**
ENEZ Enez 83.44 316 *e*P **P 06 05 07.8 +0.8**
KULA Kula-Manisa 83.44 313 *e*P **P 06 05 07.0 -0.2**
R22A Saguache, Gunn 83.47 47 P **P 06 05 08.6 +0.9**
baz=83,SNR=32
GELI Tayfur-Gelibol 83.48 316 *e*P **P 06 05 07.8 +0.6**
PKS9 Tamasi 83.48 324⇑*e*P **P 06 05 07.6 +0.5**
SOP Sopron 83.48 326⇓*e*P **P 06 05 08.2 +1.1**
IBBN Ibbenburen 83.55 333 *e*P **P 06 05 07.4 +0.1**
comp=Z,160nm,1.5s
214A Organ Pipe Nat 83.57 55 P **P 06 05 09.0 +1.1**
baz=84,SNR=39
Q23A Hartsel 83.58 46 P **P 06 05 09.6 +1.4**
baz=83,SNR=5.8
PKSM Moragy 83.58 324 ⇓P **P 06 05 07.5 -0.1**
PKSM Moragy 83.58 324⇓*i*P **P 06 05 07.5 -0.1**
PKSM Moragy 83.58 324⇓*e*P **P 06 05 07.7 +0.1**
U20A Newcomb 83.58 50 P **P 06 05 09.2 +1.2**
baz=84,SNR=8.6
RZN Rozhen 83.60 318 *i* P **P 06 05 08.7 +0.6**
CONA Conrad Observa 83.62 326 *i* PcP **P 06 05 08.9 +0.9**
comp=Z,180nm,1.5s,SNR=88
MANZ Manzenberg 83.68 330 *e*P **P 06 05 08.7 +0.5**
comp=Z,155nm,1.8s
KHC Kasperske Hory 83.72 328⇓*i*P **P 06 05 08.6 +0.2**
KHC *e* 06 15 28.9
KHC MLR MLR
comp=Z,4µm,16.6s
KHC Kasperske Hory 83.72 328⇓*i*P **P 06 05 08.6 +0.2**
KHC *e*pP **pP 06 05 16.8 -3.0**
KHC *e*SKS **S 06 15 28.9 +0.5**
KHC *e*SS SS 06 21 06.5 +12
KHC AMS AMS 06 46 10.0
comp=Z,4µm,16.6s
KHC Kasperske Hory 83.72 328 *e*P **P 06 05 07.6 -0.8**
comp=Z,120nm,1.3s
GOLH Golhisar 83.73 312 *i* P **P 06 05 08.2 -0.5**
S22A 4UR Ranch, Cre 83.74 48 P **P 06 05 10.5 +1.5**
baz=84,SNR=36
DNZL Cakiroluk 83.75 312 *i* P **P 06 05 08.3 -0.6**
O25A Wiggins 83.77 44 P **P 06 05 09.9 +0.9**
baz=84,SNR=16
T21A Navajo Lake 83.80 49 P **P 06 05 10.7 +1.4**
baz=84,SNR=7.4
VTS Vitosha 83.81 319 P **P 06 05 10.2 +1.1**
VTS Vitosha 83.81 319 ⇓P **P 06 05 09.8 +0.7**
VTS Vitosha 83.81 319 *i* P **P 06 05 10.0 +0.9**
VTS Vitosha 83.81 319⇓*i*P **P 06 05 09.8 +0.7**
PMOR Pomariorio Ree 83.81 113 *e*P **P 06 05 07.8 -1.3**
comp=Z,346nm,1.5s
PMOR Pomariorio Ree 83.81 113 *e*T T 07 37 34.5
comp=Z,37nm,0.2s
PMOR Pomariorio Ree 83.81 113 *e*T T 07 37 34.5
comp=Z,37nm,0.2s
ROTZ Rotzenmuhle 83.81 329 *e*P **P 06 05 09.7 +0.9**
comp=Z,281nm,1.6s
ROTZ *e*pP **pP 06 05 17.8 -2.4**
GLHS Glhisar (BURDU 83.82 312 *e*P **P 06 05 08.1 -1.1**
ELL Elmali 83.83 311 *e*P **P 06 05 08.4 -0.9**
X18A Snowflake 83.85 52 P **P 06 05 10.7 +1.2**
baz=84,SNR=25
UBBA Unterbreizbach 83.88 331 *e*P **P 06 05 09.7 +0.7**
comp=Z,122nm,1.7s
GEC2 GERESS Array S 83.88 328 *e*P **P 06 05 09.4 +0.1**
comp=Z,112nm,1.6s
GEC2 GERESS Array S 83.88 328 *e*P **P 06 05 09.4 +0.1**
GEC2 pmax pmax
comp=Z,112nm,1.6s
GERES GERESS Array B 83.88 328 P **P 06 05 09.3 0.0**
GERES PP **PP 06 08 22.6 +0.4**
GERES PKKPbc **PKKPbc 06 23 24.4 +0.2**
GERES GERESS Array B 83.88 328 P **P 06 05 09.3 0.0**
comp=Z,16nm,1.1s,baz=44,slow=4.2,SNR=74
GERES PP **PP 06 08 22.6 +0.4**
comp=Z,2.9nm,1.0s,baz=47,slow=8.6,SNR=4.9
GERES PKKPbc **PKKPbc 06 23 24.4 +0.2**
comp=Z,1.8nm,1.0s,baz=197,slow=3.1,SNR=6.7
GERES LR LR 06 46 09.5
comp=Z,3µm,20.0s,baz=29,slow=38
Q24A Divide 83.94 46 P **P 06 05 11.1 +1.1**
baz=84,SNR=6.4
EZN Ezine 83.95 315 *e*P **P 06 05 09.2 -0.4**
SMTH Samothraki Isl 83.97 316 *e*P **P 06 05 09.3 -0.5**
V20A Brimhall 83.98 50 P **P 06 05 11.3 +1.1**
baz=84,SNR=13
WET Wettzell 84.01 329 *e*P **P 06 05 10.5 +0.7**
comp=Z,151nm,1.6s
WET *e*pP **pP 06 05 18.6 -2.7**
WET Wettzell 84.01 329 *e*P **P 06 05 10.5 +0.7**
WET pmax pmax
comp=Z,151nm,1.6s
EAB Aberfoyle 84.06 341 *e*P **P 06 05 10.6 +0.7**
EAB Aberfoyle 84.06 341 P **P 06 05 10.6 +0.7**
EBL Broad Law 84.08 341 *e*P **P 06 05 10.8 +0.8**
EBL Broad Law 84.08 341 P **P 06 05 10.8 +0.8**
U21A Nageezi 84.08 49 P **P 06 05 11.8 +1.1**
baz=84,SNR=24
BOZC Bozcaada 84.09 315 *i* P **P 06 05 09.5 -0.9**
EAU Auchinoon 84.12 341 *e*P **P 06 05 10.9 +0.7**
EAU Auchinoon 84.12 341 P **P 06 05 10.9 +0.7**
T22A Edith 84.17 48 P **P 06 05 12.7 +1.6**
baz=84,SNR=45
WTSB Winterswijk 84.17 334 *e*P **P 06 05 10.1 -0.4**
comp=Z,398nm,2.7s
KAVA Kavala 84.18 317 P **P 06 05 11.6 +0.8**
PPT Papeete 84.18 116 LR LR 06 35 38.6
comp=Z,2µm,19.9s,baz=304,slow=31
PPT2 Papeete2 84.20 116 *e*P P 06 05 00.6 -11
PPT2 *e*S S 06 16 07.6 +34
comp=Z,424nm,24.2s
PPT2 *e*LQ LQ 06 26 54.7
comp=Z,1µm,34.5s
PPT2 *e*LR LR 06 31 45.7
comp=Z,4µm,22.2s,baz=309
PPT2 Papeete2 84.20 116 *e*P P 06 05 04.9 -6.3
comp=Z,385nm,26.2s
PPT2 *e*S S 06 16 23.1 +49
comp=Z,424nm,24.2s
PPT2 *e*LR LR 06 31 29.2
comp=Z,4µm,22.2s
PPT2 Papeete2 84.20 116 *e*T T 07 38 02.5
comp=Z,12nm,0.3s
PPT2 Papeete2 84.20 116 *e*T T 07 38 02.5
comp=Z,12nm,0.3s
N27A Anderson Farm, 84.20 43 P **P 06 05 11.7 +0.6**
baz=84,SNR=8.6
MMB Musomiste 84.21 318 *i* P **P 06 05 11.7 +0.7**
GRF Grafenberg Arr 84.27 330 *e*P **P 06 05 12.0 +0.8**
comp=Z,430nm,1.5s
GRF *e*L L 06 45 25.3
comp=Z,2µm,20.7s
GRF Grafenberg Arr 84.27 330 *e*P **P 06 05 12.0 +0.8**
GRF pmax pmax
comp=Z,430nm,1.5s
GRF MLR MLR
comp=Z,2µm,20.7s
GRFO Grafenberg 84.28 330 *e*P **P 06 05 11.7 +0.5**
GRFO pmax pmax
comp=Z,337nm,1.4s
GRFO Grafenberg 84.28 330 *e*P **P 06 05 11.7 +0.5**
comp=Z,338nm,1.4s
ARSA Arzberg 84.28 326⇓*i*PcP **P 06 05 11.7 +0.4**
comp=Z,94nm,1.4s,SNR=33
BEHE Becsehely 84.28 325⇓*e*P **P 06 05 11.6 +0.4**
NVR Nevrokopi 84.30 318 P **P 06 05 12.2 +0.7**
NVR Nevrokopi 84.30 318 *e*P **P 06 05 11.9 +0.4**
TIAR Tiarei 84.34 116 *e*T T 07 38 11.0
comp=Z,20nm,0.2s
TIAR Tiarei 84.34 116 *e*T T 07 38 11.0
comp=Z,20nm,0.2s
AKAS Kas 84.35 311 *i* P **P 06 05 11.0 -1.0**
IZM Izmir 84.35 314 *e*P **P 06 05 10.3 -1.5**
PRK Paraskevi 84.36 315 P **P 06 05 11.6 -0.2**
PRK Paraskevi 84.36 315 *e*P **P 06 05 12.1 +0.3**
OGNE Ogallala 84.39 43 *e*P **P 06 05 12.3 +0.3**
comp=Z,33nm,0.9s
OGNE LR LR
comp=Z,961nm,20.0s
W20A Ramah 84.39 51 P **P 06 05 13.1 +0.8**
baz=84,SNR=27
MOA Molln 84.39 327⇓*i*PcP **P 06 05 12.1 +0.3**
comp=Z,108nm,1.4s,SNR=21
FETY Fethiye 84.41 311 *e*P **P 06 05 10.7 -1.4**
DIVS Divibare 84.43 322 P **P 06 05 12.7 +0.6**
BUG Bochum--Univer 84.43 333 *e*P **P 06 05 11.9 +0.1**
comp=Z,181nm,1.6s
PGBU Glenifferbraes 84.43 341 *e*P **P 06 05 12.0 +0.3**
PGBU AMB AMB 06 05 14.2
comp=Z,190nm,1.7s
PGBU AMS AMS 06 46 26.5
comp=Z,2µm,18.1s
PGBU Glenifferbraes 84.43 341 P **P 06 05 12.0 +0.3**
PGBU AMB AMB 06 05 14.2
comp=Z,190nm,1.7s
PGBU AMS AMS 06 46 26.5
comp=Z,2µm,18.1s
R24A Sanders Place, 84.45 46 P **P 06 05 13.9 +1.4**
baz=84,SNR=34
BLCB Balcova 84.49 314 *e*P P 06 05 08.4 -4.0
V21A Milan 84.49 50 P **P 06 05 14.1 +1.3**
baz=84,SNR=5.7
Q25A Bedland, Calha 84.50 45 P **P 06 05 13.5 +0.7**
baz=84,SNR=22
ESK Eskdalemuir 84.53 340 *e*P **P 06 05 13.1 +0.8**
ESK AMB AMB 06 05 13.5
comp=Z,73nm,2.1s
ESK AMS AMS 06 46 24.2
comp=Z,2µm,20.2s
ESK Eskdalemuir 84.53 340 P **P 06 05 13.1 +0.8**
ESK AMB AMB 06 05 13.5
comp=Z,73nm,2.1s
ESK AMS AMS 06 46 24.2
comp=Z,2µm,20.2s
ESK Eskdalemuir 84.53 340 *e*P **P 06 05 13.1 +0.8**
ESK pmax pmax
comp=Z,166nm,2.0s
ESK MLR MLR
comp=Z,3µm,20.0s
ESK Eskdalemuir 84.53 340 *e*P **P 06 05 13.1 +0.8**
comp=Z,166nm,2.0s
ESK LR LR
comp=Z,3µm,20.0s
TURN Turunc 84.55 312 *i* P **P 06 05 14.2 +1.5**
LIA Limnos Island 84.55 316 P **P 06 05 12.9 +0.2**
LIA Limnos Island 84.55 316 *e*P **P 06 05 12.6 -0.1**
EYMN Ely 84.58 32 *e*P **P 06 05 12.2 -0.5**
comp=Z,103nm,1.4s
EYMN LR LR
comp=Z,2µm,21.0s
P26A Davis Ranch, A 84.58 44 P **P 06 05 14.3 +1.2**
baz=84,SNR=9.2
U22A Llaves 84.61 49 P **P 06 05 14.8 +1.5**
baz=84,SNR=22
SRS Serrai 84.61 318 P **P 06 05 13.4 +0.4**
ECK Cauldkaine Hil 84.62 340 *e*P **P 06 05 13.1 +0.3**
ECK Cauldkaine Hil 84.62 340 P **P 06 05 13.1 +0.3**
SIGR SIGRI 84.63 315 P **P 06 05 13.4 +0.3**
T23A Casias Ranch, 84.68 48 P **P 06 05 15.3 +1.6**
baz=84,SNR=29
TUC Tucson 84.70 54 *e*P **P 06 05 14.2 +0.5**
TUC pmax pmax
comp=Z,473nm,1.5s
TUC Tucson 84.70 54 *e*P **P 06 05 14.2 +0.5**
comp=Z,473nm,1.5s
X20A Quemado 84.77 51 P **P 06 05 15.9 +1.7**
baz=85,SNR=57
URLA Izmir 84.77 314 *i* P **P 06 05 12.3 -1.6**
MLSB Milas 84.77 313 *e*P **P 06 05 13.6 -0.3**
S24A Houchin Ranch, 84.77 47 P **P 06 05 15.7 +1.4**
baz=85,SNR=37
GCAM G?zelcaml? 84.83 313 *i* P **P 06 05 14.7 +0.5**
V22A San Miguel Ran 84.88 49 P **P 06 05 15.9 +1.1**
baz=85,SNR=24
Q26A Hugo 84.91 45 P **P 06 05 15.5 +0.7**
baz=85,SNR=18
PERS Pernice 84.92 326 *i* P **P 06 05 14.7 +0.2**
PERS *e*S S 06 15 34.0 -6.5
SOKA Soboth 84.93 326⇓*i*PcP **P 06 05 14.8 +0.2**
comp=Z,182nm,1.3s
OUR Ouranopolis 84.93 317 P **P 06 05 13.8 -0.8**
SOH Sokhos 84.94 318 P **P 06 05 12.5 -2.3**
KNT Kendrikon 84.96 318 P **P 06 05 15.2 +0.4**
TNS Taunus Mts 84.96 332 *e*P **P 06 05 14.9 +0.2**
comp=Z,167nm,1.6s
TNS Taunus Mts 84.96 332 *e*P **P 06 05 14.9 +0.2**
TNS pmax pmax
comp=Z,167nm,1.6s
R25A Fountain Ranch 84.99 46 P **P 06 05 15.9 +0.7**
baz=85,SNR=34
P27A Ficken Ranch, 85.03 44 P **P 06 05 16.1 +0.8**
baz=85,SNR=12
VAY Valandovo 85.03 318 P **P 06 05 15.4 +0.3**
VAY Valandovo 85.03 318 *i* P **P 06 05 14.8 -0.3**
U23A El Rito 85.05 48 P **P 06 05 16.9 +1.3**
baz=85,SNR=88
SMG Samos 85.06 313 *e*P **P 06 05 15.0 -0.3**
CHOS Chios island 85.06 314 P **P 06 05 15.4 0.0**
CHOS Chios island 85.06 314 *e*P **P 06 05 15.0 -0.4**
O28A Krutsinger Ran 85.09 43 P **P 06 05 15.8 +0.3**
baz=85,SNR=11
RJOB Jochberg 85.12 328 *e*P **P 06 05 16.2 +0.7**
comp=Z,206nm,1.7s
KESW Keswick, Cumbr 85.14 340 AMS AMS 06 46 53.2
comp=Z,3µm,18.0s
SKO Skopje 85.18 319 P **P 06 05 17.2 +1.3**
SKO Skopje 85.18 319 *i* P **P 06 05 17.2 +1.3**
PLG Polygyros 85.20 317 P **P 06 05 15.6 -0.4**
PLG Polygyros 85.20 317 *e*P **P 06 05 15.9 -0.1**
S25A Robets Cordova 85.22 46 P **P 06 05 17.4 +1.0**
baz=85,SNR=24
HORT Hortiatis 85.24 318 P **P 06 05 15.5 -0.8**
Y20A Horse Springs, 85.25 51 P **P 06 05 18.2 +1.5**
baz=85,SNR=65
HPK Haverah Park 85.27 339 AMS AMS 06 46 24.4
comp=Z,3µm,20.3s
ARG Arkhangelos 85.27 312 *e*P **P 06 05 16.6 +0.2**
X21A Alamocita Cree 85.28 51 P **P 06 05 18.2 +1.4**
baz=85,SNR=47
THE Thessaloniki 85.29 318 P **P 06 05 15.7 -0.7**
ECSD EROS Data Cent 85.29 38 *e*P **P 06 05 16.2 -0.2**
comp=Z,47nm,1.0s
ECSD LR LR
comp=Z,1µm,20.0s
TOD Tromm 85.31 331 *e*P **P 06 05 16.7 +0.3**
TOD Tromm 85.31 331 *e*P **P 06 05 16.7 +0.3**
GAL1 Galloway 85.33 341 *e*P **P 06 05 16.2 -0.1**
GAL1 AMB AMB 06 05 17.5
comp=Z,100nm,1.4s
GAL1 AMS AMS 06 46 51.5
comp=Z,2µm,21.2s
GAL1 Galloway 85.33 341 P **P 06 05 16.2 -0.1**
GAL1 AMB AMB 06 05 17.5
comp=Z,100nm,1.4s
GAL1 AMS AMS 06 46 51.5
comp=Z,2µm,21.2s
IVA Berane 85.35 321⇓*i*P **P 06 05 17.8 +1.0**
KSCO Kaye Shedlock' 85.37 44 P **P 06 05 18.2 +1.2**
baz=85,SNR=13
GRG Griva 85.37 318 P **P 06 05 17.0 +0.1**
GRG Griva 85.37 318 *e*P **P 06 05 16.5 -0.4**
R26A Arlington 85.37 45 P **P 06 05 17.7 +0.6**
baz=85,SNR=70
KBA Koelnbreinsper 85.38 327⇓*i*P **P 06 05 16.7 -0.3**
comp=Z,86nm,1.8s,SNR=18
V23A Ortiz Mt. (NFS 85.43 49 P **P 06 05 19.6 +2.1**
baz=85,SNR=17
FUR Furstenfeldbru 85.44 329 *e*P **P 06 05 17.5 +0.4**
comp=Z,355nm,1.7s
FUR *e*pP **pP 06 05 25.8 -2.7**
FUR Furstenfeldbru 85.44 329 *e*P **P 06 05 17.5 +0.4**
FUR pmax pmax
comp=Z,355nm,1.7s
HGN Heimansgroeve 85.47 333 *e*P **P 06 05 17.0 -0.1**
comp=Z,212nm,1.5s
HGN Heimansgroeve 85.47 333 *e*S **S 06 15 42.5 -3.1**
P28A Saint Francis 85.48 44 P **P 06 05 17.9 +0.4**
baz=85,SNR=14
MEH Mehetia 85.49 116 *e*T T 07 39 32.1
comp=Z,153nm,0.2s
MEH Mehetia 85.49 116 *e*T T 07 39 32.1
comp=Z,153nm,0.2s
PVY Plav 85.52 321⇓*i*P **P 06 05 17.9 +0.2**
BEBN Eben Emael 85.54 333 P **P 06 05 18.0 +0.6**
comp=Z,40nm,1.8s
U24A Moreno Valley 85.55 48 P **P 06 05 20.1 +1.9**
baz=85,SNR=18
MEM Membach 85.57 333 P **P 06 05 17.4 -0.2**
comp=Z,54nm,1.8s
ABH Alteburg 85.58 332 *e*P **P 06 05 17.8 +0.1**
T25A Trinidad 85.58 47 P **P 06 05 19.4 +1.1**
baz=85,SNR=36
MYKA Terra Mystica 85.59 327⇓*i*P **P 06 05 17.5 -0.4**

comp=Z,85nm,1.7s
Z20A Nine Sixteen R 85.62 52 P P 06 05 19.8 +1.3
baz=86,SNR=74
UPM Unac-Piva 85.62 322 ⇓*i*P P 06 05 18.1 -0.2
Y21A Point of Rocks 85.63 51 P P 06 05 20.1 +1.6
baz=86,SNR=23
O29A 4D Ranch, Culb 85.63 43 P P 06 05 18.6 +0.4
baz=86,SNR=12
LJU Ljubljana 85.64 326 *i* P P 06 05 17.6 -0.4
LJU *e*PP PP 06 08 38.4 +1.9
LJU *e*S S 06 15 38.7 -8.8
BOJS Bojanci 85.71 325 *i* P P 06 05 18.4 0.0
BOJS *e*PP PP 06 08 39.2 +2.3
BOJS *e*S S 06 15 39.7 -8.5
BOJS *e*SKSac ScS 06 15 56.2 -1.5
R27A Eads 85.76 45 P P 06 05 19.5 +0.6
baz=86,SNR=23
AOS Alonnisos 85.78 316 P P 06 05 19.0 +0.1
AOS Alonnisos 85.78 316 *e*P P 06 05 17.6 -1.3
ANMO Albuquerque 85.78 50 *e*P P 06 05 20.1 +0.9
comp=Z,79nm,1.5s
ANMO LR LR
comp=Z,1μm,22.0s
Q28A Sharon Springs 85.78 44 P P 06 05 19.5 +0.4
baz=86,SNR=16
S26A Kim 85.82 46 P P 06 05 19.7 +0.4
baz=86,SNR=23
STU Stuttgart 85.82 330 *e*P P 06 05 19.1 +0.2
comp=Z,214nm,1.3s
STU *e*pP pP 06 05 27.5 -2.9
STU Stuttgart 85.82 330 *e*P P 06 05 19.2 +0.3
STU pmax pmax
comp=Z,152nm,1.2s
STU Stuttgart 85.82 330 *e*P P 06 05 19.2 +0.3
comp=Z,152nm,1.2s
KTD Kalmit 85.82 331 *e*P P 06 05 19.3 +0.3
KTD Kalmit 85.82 331 *e*P P 06 05 19.3 +0.3
W23A Werner Place, 85.83 49 P P 06 05 20.9 +1.3
baz=86,SNR=16
KBI1 Birley Grange 85.85 339 *e*P P 06 05 18.5 -0.5
KBI1 Birley Grange 85.85 339 P P 06 05 18.5 -0.5
NKY Niksic 85.86 321 ⇓*i*P P 06 05 19.3 0.0
PHP Peshkopia 85.91 320 P P 06 05 19.1 -0.5
RUP Ruppelstein 85.91 332 *e*P P 06 05 19.8 +0.4
RUP Ruppelstein 85.91 332 *e*P P 06 05 19.8 +0.4
P29A Atwood 85.92 43 P P 06 05 20.4 +0.7
baz=86,SNR=11
120A U Bar Ranch, L 85.95 53 P P 06 05 21.4 +1.3
baz=86,SNR=17
JAVS Javornik 85.96 326 *i* P P 06 05 18.9 -0.9
JAVS *e*S S 06 15 37.6 -13
BCLA Clavier 85.98 333 P P 06 05 19.7 0.0
comp=Z,66nm,1.6s
WTTA Wattenberg 85.99 328 ⇓*i*PcP P 06 05 19.8 -0.1
comp=Z,59nm,1.7s
PDG Podgorica 86.00 321 P P 06 05 18.9 -1.0
TTG Podgorica 86.00 321 ⇓*i*P P 06 05 20.1 +0.2
V24A Rampart Ranch, 86.00 48 P P 06 05 22.1 +1.7
baz=86,SNR=29
ABTA Abfaltersbach 86.00 327 ⇓*i*P P 06 05 19.0 -1.0
comp=Z,46nm,1.3s,SNR=14
O30A MW Ranch, Wils 86.00 42 P P 06 05 20.6 +0.5
baz=86,SNR=8.3
BRY Bratogost 86.02 322 ⇓*i*P P 06 05 20.2 0.0
SPMN St. Paul 86.04 35 P P 06 05 20.2 +0.1
baz=86,SNR=9.6
T26A Comanche Natio 86.04 46 P P 06 05 20.9 +0.5
baz=86,SNR=27
U25A Circle Dot Ran 86.08 47 P P 06 05 21.8 +1.1
baz=86,SNR=57
Z21A St. Cloud Mine 86.08 51 P P 06 05 22.1 +1.3
baz=86,SNR=38
LPM Los Pinos Moun 86.09 50 *e*P P 06 05 21.6 +0.9
Y22A Socorro 86.12 51 P P 06 05 21.9 +1.0
baz=86,SNR=18
MOTA Moosalm 86.15 329 ⇓*i*PcP P 06 05 20.4 -0.3
comp=Z,88nm,1.6s,SNR=15
KZN Kozani 86.17 318 P P 06 05 19.5 -1.4
RETA Reutte 86.19 329 *i* PcP P 06 05 21.1 +0.3
comp=Z,115nm,1.4s,SNR=30
STNC Stoke 86.19 339 AMS AMS 06 45 58.2
comp=Z,3μm,18.0s
LANF Langenberg 86.21 331 ⇓*e*P P 06 05 21.1 +0.3
LANF Langenberg 86.21 331 ⇓*e*P P 06 05 21.1 +0.3
LANF Langenberg 86.21 331 ⇓*e*P P 06 05 21.1 +0.3
TRI Trieste 86.24 326 *e*P P 06 05 20.5 -0.5
TRI pmax pmax
comp=Z,146nm,1.4s
TRI Trieste 86.24 326 *e*P P 06 05 20.5 -0.5
comp=Z,146nm,1.4s
APE Apeiranthos 86.26 314 *e*P P 06 05 28.9 +7.5
APE Apeiranthos 86.26 314 ⇑P P 06 05 18.7 -2.7
APE Apeiranthos 86.26 314 ⇑*i*P P 06 05 18.7 -2.7
W24A Lazy 6 Ranch, 86.26 49 P P 06 05 23.2 +1.6
baz=86,SNR=31
BUM Brajici-Budva 86.28 321 ⇓*i*P P 06 05 21.4 0.0
319A Douglas 86.28 54 P P 06 05 23.2 +1.6
baz=86,SNR=9.4
SNF Seneffe 86.28 334 P P 06 05 21.3 +0.2
WLF Walferdange 86.29 333 P P 06 05 21.6 +0.5
comp=Z,134nm,1.9s
WLF AP pP 06 05 29.9 -2.8
WLF Walferdange 86.29 333 *e*P P 06 05 21.8 +0.6
comp=Z,304nm,1.6s
WLF *e*pP pP 06 05 30.1 -2.6
WLF Walferdange 86.29 333 *e*P P 06 05 21.9 +0.7
WLF pmax pmax
comp=Z,275nm,1.5s
WLF Walferdange 86.29 333 *e*P P 06 05 21.9 +0.7
comp=Z,275nm,1.5s
R28A Tribune 86.29 45 P P 06 05 22.4 +0.8
baz=86,SNR=14
KARP Karpathos 86.30 312 *e*P P 06 05 21.4 -0.2
V25A Rancho No Teng 86.33 48 P P 06 05 23.3 +1.4
baz=86,SNR=50
ULC Ulcinj 86.34 321 ⇓*i*P P 06 05 22.0 +0.4
P30A Selden 86.34 43 P P 06 05 21.9 +0.2
baz=86,SNR=9.7
Q29A Oakley 86.39 44 P P 06 05 22.1 +0.1
baz=86,SNR=18
GIVF Givet 86.42 334 ⇓*i*P P 06 05 21.5 -0.3
comp=Z,318nm,1.6s
GIVF Givet 86.42 334 ⇓*i*P P 06 05 21.5 -0.3
GIVF pmax pmax
comp=Z,318nm,1.6s
GIVF Givet 86.42 334 ⇓*i*P P 06 05 21.5 -0.3
comp=Z,318nm,1.6s
220A Playas Peak, P 86.43 53 P P 06 05 23.4 +0.9
baz=86,SNR=27
TIR Tirane 86.45 320 *e*P P 06 05 22.4 +0.2
TIR Tirane 86.45 320 P P 06 05 21.3 -0.9
TIR Tirane 86.45 320 PFAKE 06 05 30.0 +7.8
TIR LR LR
comp=Z,4μm,20.0s
U26A Atchley Ranch, 86.48 47 P P 06 05 23.7 +1.0
baz=86,SNR=32
DOU Dourbes 86.51 334 P P 06 05 22.0 -0.2
comp=Z,48nm,1.9s
121A Cookes Peak, D 86.51 52 P P 06 05 24.1 +1.2
baz=86,SNR=26
SPAK Spaichingen-Ko 86.52 330 *e*P P 06 05 22.4 -0.1
BFO Black Forest 86.52 331 *e*P P 06 05 22.4 0.0
comp=Z,204nm,1.5s
BFO *e*pP pP 06 05 30.7 -3.2
BFO Black Forest 86.52 331 *e*P P 06 05 22.4 0.0
BFO pmax pmax
comp=Z,204nm,1.5s
BFO Black Forest 86.52 331 *e*P P 06 05 21.9 -0.4
comp=Z,146nm,1.3s
BFO LR LR
comp=Z,2μm,22.0s
BFO Black Forest 86.52 331 P P 06 05 22.0 -0.4
comp=Z,439nm,1.5s,SNR=24
WME Myndd Eilian 86.53 340 *e*P P 06 05 21.8 -0.4
WME Myndd Eilian 86.53 340 P P 06 05 21.8 -0.4
WPM1 Penmaenmawr 86.54 340 *e*P P 06 05 21.9 -0.4
WPM1 Penmaenmawr 86.54 340 P P 06 05 21.9 -0.4
THL Klokotos Trika 86.55 317 *e*P P 06 05 22.4 -0.3
FETA Feichten 86.56 329 ⇓*i*PcP P 06 05 22.6 -0.2
comp=Z,48nm,1.4s,SNR=12
Z22A Elephant Butte 86.57 51 P P 06 05 24.1 +1.0
baz=86,SNR=29
R29A Marienthal 86.62 44 P P 06 05 23.9 +0.8
baz=86,SNR=7.4
T27A Campo 86.63 46 P P 06 05 24.5 +1.1
baz=86,SNR=13
WLF1 Llynfaes 86.65 340 *e*P P 06 05 22.9 +0.1
WLF1 AMB AMB 06 05 24.8
comp=Z,164nm,1.8s
WLF1 AMS AMS 06 47 17.8
comp=Z,3μm,20.3s
WLF1 Llynfaes 86.65 340 P P 06 05 22.9 +0.1
WLF1 AMB AMB 06 05 24.8
comp=Z,164nm,1.8s
WLF1 AMS AMS 06 47 17.8
comp=Z,3μm,20.3s
FOEL Foel Wylfa 86.66 339 *e*P P 06 05 22.9 -0.1
FOEL AMB AMB 06 05 25.1
comp=Z,165nm,1.8s
FOEL AMS AMS 06 47 17.0
comp=Z,3μm,20.8s
FOEL Foel Wylfa 86.66 339 P P 06 05 22.9 -0.1
FOEL AMB AMB 06 05 25.1
comp=Z,165nm,1.8s
FOEL AMS AMS 06 47 17.0
comp=Z,3μm,20.8s
BAIF Baives 86.68 334 ⇓*i*P P 06 05 22.8 -0.3
comp=Z,182nm,1.5s
BAIF Baives 86.68 334 ⇓*i*P P 06 05 22.8 -0.3
BAIF pmax pmax
comp=Z,183nm,1.5s
BAIF Baives 86.68 334 ⇓*i*P P 06 05 22.8 -0.3
comp=Z,182nm,1.5s
Y23A Lovelace Mesa, 86.70 50 P P 06 05 24.4 +0.7
baz=87,SNR=26
DAVA Damuels 86.71 329 ⇓*i*PcP P 06 05 23.5 0.0
comp=Z,112nm,1.4s,SNR=26
YRC Rhoscolyn 86.73 340 *e*P P 06 05 22.2 -1.0
YRC Rhoscolyn 86.73 340 P P 06 05 22.2 -1.0
Q30A Quinter 86.75 43 P P 06 05 23.9 +0.2
baz=87,SNR=14
S28A Manter 86.75 45 P P 06 05 24.5 +0.7
baz=87,SNR=30
AGG Agios Georgios 86.76 317 *e*P P 06 05 23.0 -0.8
SANT Santorini 86.77 313 PFAKE 06 05 30.0 +6.1
SANT LR LR
comp=Z,878nm,20.0s
320A Kipp Ranch, An 86.80 53 P P 06 05 25.9 +1.7
baz=87,SNR=7.2
ELSH Elham, Standar 86.82 336 *e*P P 06 05 22.7 -1.0
ELSH AMB AMB 06 05 25.3
comp=Z,159nm,1.3s
ELSH AMS AMS 06 47 26.0
comp=Z,4μm,18.9s
ELSH Elham, Standar 86.82 336 P P 06 05 22.7 -1.0
ELSH AMB AMB 06 05 25.3
comp=Z,159nm,1.3s
ELSH AMS AMS 06 47 26.0
comp=Z,4μm,18.9s
W25A X Bar L Ranch, 86.83 48 P P 06 05 25.5 +1.2
baz=87,SNR=36
P31A Stockton 86.84 42 P P 06 05 24.7 +0.5
baz=87,SNR=11
V26A Tequesquite Ra 86.86 47 P P 06 05 25.3 +0.8
baz=87,SNR=38
CDF Champ du Feu 86.87 331 ⇓*i*P P 06 05 23.9 -0.3
comp=Z,302nm,1.5s
CDF Champ du Feu 86.87 331 ⇓*i*P P 06 05 23.9 -0.3
CDF pmax pmax
comp=Z,302nm,1.5s
CDF Champ du Feu 86.87 331 ⇓*i*P P 06 05 23.9 -0.3
comp=Z,302nm,1.5s
SCHQ Schefferville 86.89 16 *e*P P 06 05 24.3 +0.2
comp=Z,96nm,1.3s
SCHQ Schefferville 86.89 16 P P 06 05 24.5 +0.4
comp=Z,16nm,0.7s,baz=348,slow=5.0,SNR=42
SCHQ LR LR 06 46 23.6
comp=Z,3μm,21.1s,baz=344,slow=37
YRE Yr Eifl 86.93 340 *e*P P 06 05 23.6 -0.6
YRE Yr Eifl 86.93 340 P P 06 05 23.6 -0.6
T28A Walsh 86.95 46 P P 06 05 25.7 +0.9
baz=87,SNR=11
LIBD Limburg 86.95 331 *e*P P 06 05 24.7 +0.2
LIBD Limburg 86.95 331 *e*P P 06 05 24.7 +0.2
U27A Thompson Grove 87.01 47 P P 06 05 25.9 +0.8
baz=87,SNR=21
FELD Feldberg im Sc 87.01 331 ⇓*e*P P 06 05 24.5 -0.5
Z23A Rita Site, Whi 87.03 51 P P 06 05 26.8 +1.4
baz=87,SNR=5.8
COWI Conover 87.03 32 *e*P P 06 05 24.5 -0.4
comp=Z,42nm,1.2s
COWI LR LR
comp=Z,2μm,22.0s
ECH Echery 87.08 331 *e*P P 06 05 24.8 -0.3
ECH pmax pmax
comp=Z,100nm,1.4s
ECH MLR MLR
comp=Z,3μm,19.0s
ECH Echery 87.08 331 *e*P P 06 05 24.8 -0.3
comp=Z,100nm,1.4s
ECH LR LR
comp=Z,3μm,19.0s
ECH Echery 87.08 331 ⇓*e*P P 06 05 24.7 -0.3
FUORN Ofenpass-Fuorn 87.08 329 *e*P P 06 05 25.8 +0.4
comp=Z,163nm,1.4s
Y24A Capitan 87.09 50 P P 06 05 26.7 +1.0
baz=87,SNR=13
LTK Loutraki 87.09 316 *e*P P 06 05 23.1 -2.3
EVR Evrytania 87.12 317 *e*P P 06 05 25.8 +0.2
X25A Clemmons Ranch 87.17 49 P P 06 05 27.0 +1.0
baz=87,SNR=10.0
S29A Ulysses 87.18 45 P P 06 05 26.6 +0.7
baz=87,SNR=6.9
R30A Dighton 87.20 44 P P 06 05 26.1 +0.1
baz=87,SNR=22
DLF Lyons Farm 87.22 341 ⇑*i*P P 06 05 26.5 +0.9
DID Didima 87.30 315 *e*P P 06 05 23.3 -3.1
W26A Owens Ranch, T 87.34 48 P P 06 05 28.1 +1.3
baz=87,SNR=9.8
PAGF Fort de Pagny 87.36 332 ⇓*i*P P 06 05 26.5 +0.1
comp=Z,142nm,1.5s
PAGF Fort de Pagny 87.36 332 ⇓*i*P P 06 05 26.5 +0.1
comp=Z,142nm,1.5s
MOF Molkenrain 87.38 331 ⇓*e*P P 06 05 26.3 -0.4
MOF Molkenrain 87.38 331 ⇓*e*P P 06 05 26.3 -0.4
MOF Molkenrain 87.38 331 ⇓*e*P P 06 05 26.3 -0.4
MCH1 Michaelchurch 87.39 339 *e*P P 06 05 26.5 0.0
MCH1 AMB AMB 06 05 27.5
comp=Z,146nm,1.8s
MCH1 AMS AMS 06 46 56.5
comp=Z,2μm,19.4s
MCH1 Michaelchurch 87.39 339 P P 06 05 26.5 0.0
MCH1 AMB AMB 06 05 27.5
comp=Z,146nm,1.8s
MCH1 AMS AMS 06 46 56.5
comp=Z,2μm,19.4s
U28A Mallet 87.39 46 P P 06 05 27.5 +0.5
baz=87,SNR=10
WOL Wolverton 87.44 337 AMS AMS 06 48 04.3
comp=Z,1μm,21.9s
V27A Dan Oppiter Fa 87.45 47 P P 06 05 28.1 +0.8
baz=87,SNR=13
GUR Goura 87.51 316 *e*P P 06 05 25.3 -2.2
HINF Hinteralfeld 87.52 331 ⇓*i*P P 06 05 26.6 -0.7
comp=Z,205nm,1.7s
HINF Hinteralfeld 87.52 331 ⇓*i*P P 06 05 26.6 -0.7
HINF pmax pmax
comp=Z,205nm,1.7s
HINF Hinteralfeld 87.52 331 ⇓*i*P P 06 05 26.6 -0.7
comp=Z,205nm,1.7s
THEF They Montfort 87.53 332 ⇓*e*P P 06 05 27.3 0.0
THEF They Montfort 87.53 332 ⇓*e*P P 06 05 27.3 0.0
THEF They Montfort 87.53 332 ⇓*e*P P 06 05 27.3 0.0
Z24A Sheeppen Canyo 87.53 50 P P 06 05 28.4 +0.6
baz=87,SNR=8.9
KLV Kalavryta, Ach 87.54 316 *e*P P 06 05 27.6 0.0
S30A Montezuma 87.54 44 P P 06 05 28.6 +1.0
baz=87,SNR=15
BBS Basel-Blauen 87.55 331 *e*P P 06 05 27.3 -0.1
BBS Basel-Blauen 87.55 331 *e*P P 06 05 27.3 -0.1
Y25A Mesa, Roswell 87.55 49 P P 06 05 28.1 +0.3
baz=87,SNR=22
HAU Haudompre 87.56 331 ⇓*i*P P 06 05 26.9 -0.6
comp=Z,160nm,1.5s
HAU *e*R
comp=Z,4μm,22.2s
HAU Haudompre 87.56 331 ⇓*i*P P 06 05 26.9 -0.6
HAU pmax pmax
comp=Z,160nm,1.5s
HAU Haudompre 87.56 331 ⇓*i*P P 06 05 26.9 -0.6
comp=Z,160nm,1.5s
LAST Lasithi 87.58 312 *e*P P 06 05 27.2 -0.6
TUE Stuetta 87.58 329 *e*P P 06 05 28.2 +0.4
comp=Z,132nm,1.6s
TUE LR LR
comp=Z,3μm,19.0s
R31A Burdett 87.62 43 P P 06 05 27.9 -0.1
baz=88,SNR=13
MEZF Maizieres J'vi 87.66 332 ⇓*i*P P 06 05 27.9 +0.1
comp=Z,425nm,1.6s
MEZF Maizieres J'vi 87.66 332 ⇓*i*P P 06 05 27.9 +0.1
comp=Z,425nm,1.6s
X26A CR and CR Fran 87.68 48 P P 06 05 29.2 +0.8
baz=88,SNR=14
W27A Bowe Ranch, En 87.78 48 P P 06 05 30.1 +1.2
baz=88,SNR=49
V28A Channing 87.82 47 P P 06 05 30.0 +1.0
baz=88,SNR=8.5
LKD2 Lefkada Island 87.85 318 *e*P P 06 05 27.5 -1.5
124A Stringfield Ra 87.89 51 P P 06 05 30.2 +0.6
baz=88,SNR=16
SFTF Sexfontaines 87.91 332 ⇓*i*P P 06 05 28.9 -0.2
comp=Z,442nm,1.5s
SFTF Sexfontaines 87.91 332 ⇓*i*P P 06 05 28.9 -0.2
comp=Z,442nm,1.5s
LOMF Lomont 87.91 331 ⇓*e*P P 06 05 28.6 -0.6
LOMF Lomont 87.91 331 ⇓*e*P P 06 05 28.6 -0.6
LOMF Lomont 87.91 331 ⇓*e*P P 06 05 28.6 -0.6
TBI Tubuai 87.97 121 *e*P P 06 05 22.5 -7.1
comp=Z,295nm,27.8s
TBI *e*S S 06 16 07.6 -2.8
comp=Z,935nm,28.5s
TBI *e*LQ LQ 06 29 18.6
comp=Z,1μm,42.5s
TBI *e*LR LR 06 33 37.6
baz=304
TBI Tubuai 87.97 121 *e*P P 06 05 27.2 -2.4
TBI *e*S S 06 16 16.3 +5.9
comp=Z,935nm,28.5s
TBI *e*LR LR 06 33 18.7
TBI Tubuai 87.97 121 *e*T T 07 42 41.2
comp=Z,19nm,0.3s
TBI Tubuai 87.97 121 *e*T T 07 42 41.2
comp=Z,19nm,0.3s
Z25A Roswell 87.97 50 P P 06 05 30.7 +0.9
baz=88,SNR=25
VLI Veliai 88.01 315 *e*P P 06 05 28.6 -1.2
X27A F and S Farms, 88.05 48 P P 06 05 31.7 +1.6
baz=88,SNR=7.9
VAM Vamos 88.17 313 *e*P P 06 05 30.8 +0.2
224A Cornudas Mount 88.26 51 P P 06 05 31.8 +0.6
baz=88,SNR=15
ITM Ithomi 88.27 316 P P 06 05 29.8 -1.2
ITM Ithomi 88.27 316 *e*P P 06 05 30.3 -0.7
DYR Agios Nikonas 88.33 315 *e*P P 06 05 28.0 -3.3
T31A Randall Ranch, 88.37 44 P P 06 05 32.1 +0.5
baz=88,SNR=16
ANKY Antikythira Is 88.39 314 *e*P P 06 05 32.0 +0.4
125A Gardner Draw, 88.42 50 P P 06 05 32.6 +0.6
baz=88,SNR=19
Z26A Caprock 88.43 49 P P 06 05 33.0 +1.0
baz=88,SNR=8.2
HEX Exmoor 88.44 339 *e*P P 06 05 32.0 +0.5
HEX Exmoor 88.44 339 P P 06 05 32.0 +0.5
SENIN Lac Senin/Sane 88.52 330 *e*P P 06 05 32.5 +0.2
comp=Z,108nm,1.8s
Y27A Causey 88.52 49 P P 06 05 32.9 +0.4
baz=88,SNR=11
PYL PYLOS 88.58 316 *e*P P 06 05 29.8 -2.7
MNTX Cornudas Mount 88.60 51 PFAKE 06 05 40.0 +7.3
MNTX LR LR
comp=Z,799nm,20.0s
GVD Gavdhos 88.63 313 P P 06 05 39.1 +6.4
GVD Gavdhos 88.63 313 *e*P P 06 05 31.9 -0.9
comp=Z,17nm,0.4s
KSU1 Kansas State U 88.64 41 *e*P P 06 05 32.8 0.0
comp=Z,78nm,1.0s
KSU1 LR LR
comp=Z,1μm,19.0s
X28A Dimmitt 88.68 48 P P 06 05 33.9 +0.8
baz=88,SNR=5.6
HTL Hartland 88.71 339 AMS AMS 06 47 57.5
comp=Z,2μm,21.7s
AMTX Amarillo 88.74 47 *e*P P 06 05 34.0 +0.6
comp=Z,79nm,1.0s
AMTX LR LR
comp=Z,1μm,19.0s
OG01 Vacheresse 88.80 330 *e*P P 06 05 33.4 0.0
OG01 Vacheresse 88.80 330 *e*P P 06 05 33.4 0.0
CABF La Chapelle 88.81 331 ⇓*i*P P 06 05 33.2 -0.3
comp=Z,106nm,1.4s
CABF La Chapelle 88.81 331 ⇓*i*P P 06 05 33.2 -0.3
CABF pmax pmax
comp=Z,106nm,1.4s
CABF La Chapelle 88.81 331 ⇓*i*P P 06 05 33.2 -0.3
comp=Z,106nm,1.4s
Z27A Tatum 88.87 49 P P 06 05 35.0 +0.9
baz=89,SNR=19
GDL2 Guadalupe Moun 88.91 50 *e*P P 06 05 35.0 +0.7
AQU L'Aquila 88.96 324 *e*P P 06 05 34.6 +0.4
comp=Z,179nm,1.3s
AQU LR LR
comp=Z,7μm,20.0s
AQU L'Aquila 88.96 324 ⇓*i*P P 06 05 33.8 -0.4
JFWS Jewell Farm 88.99 35 *e*P P 06 05 33.9 -0.4
JFWS pmax pmax
comp=Z,221nm,2.2s
JFWS MLR MLR
comp=Z,3μm,22.0s
JFWS Jewell Farm 88.99 35 *e*P P 06 05 33.9 -0.4
comp=Z,221nm,2.2s
JFWS LR LR
comp=Z,3μm,22.0s
X29A Tulia 89.03 47 P P 06 05 35.9 +1.1
baz=89,SNR=18
DYA Yadsworthy 89.04 338 *e*P P 06 05 33.8 -0.5
DYA AMB AMB 06 05 36.0
comp=Z,95nm,1.8s
DYA AMS AMS 06 44 51.5
comp=Z,2μm,25.0s
DYA Yadsworthy 89.04 338 P P 06 05 33.8 -0.5
DYA AMB AMB 06 05 36.0
comp=Z,95nm,1.8s
DYA AMS AMS 06 44 51.5
comp=Z,2μm,25.0s
Y28A McKinney Farm, 89.06 48 P P 06 05 35.9 +1.0
baz=89,SNR=5.9
325A Bean Ranch, Si 89.08 51 P P 06 05 35.7 +0.6
baz=89,SNR=10
MSEY Mahe Island 89.11 264 PFAKE 06 05 50.0 +15
MSEY LR LR
comp=Z,2μm,19.0s
226B Tecolote Peak, 89.11 50 P P 06 05 35.8 +0.6
baz=89,SNR=13
LOR Lormes 89.13 332 ⇓*i*P P 06 05 34.7 -0.2
comp=Z,337nm,1.6s
LOR *e*R
comp=Z,4μm,19.8s
LOR Lormes 89.13 332 ⇓*i*P P 06 05 34.7 -0.2
comp=Z,337nm,1.6s
V31A Spring Creek L 89.20 45 P P 06 05 37.4 +1.9
baz=89,SNR=6.9
RSL Roselend 89.34 330 *e*P P 06 05 35.4 -0.7
RSL Roselend 89.34 330 *e*P P 06 05 35.4 -0.7
RSL Roselend 89.34 330 *e*P P 06 05 35.4 -0.7
Z28A Tucker Farm, M 89.40 49 P P 06 05 37.6 +1.0
baz=89,SNR=12
FLN La Foliniere 89.41 336 ⇓*i*P P 06 05 35.9 -0.2
comp=Z,343nm,1.7s
FLN *e*R
comp=Z,5μm,21.0s
FLN La Foliniere 89.41 336 ⇓*i*P P 06 05 35.9 -0.2
FLN pmax pmax
comp=Z,343nm,1.7s
FLN La Foliniere 89.41 336 ⇓*i*P P 06 05 35.9 -0.2
comp=Z,343nm,1.7s
LDF La Druitiere 89.43 335 ⇓*i*P P 06 05 36.0 -0.2
comp=Z,350nm,1.8s
LDF La Druitiere 89.43 335 ⇓*i*P P 06 05 36.0 -0.2
LDF pmax pmax
comp=Z,350nm,1.8s
LDF La Druitiere 89.43 335 ⇓*i*P P 06 05 36.0 -0.2
comp=Z,350nm,1.8s
SSF Saint Saulge 89.43 333 ⇓*i*P P 06 05 36.2 -0.1
comp=Z,162nm,1.5s
SSF Saint Saulge 89.43 333 ⇓*i*P P 06 05 36.2 -0.1
SSF pmax pmax
comp=Z,162nm,1.5s

SSF Saint Saulge 89.43 333 ⇓*i*P P 06 05 36.2 -0.1
comp=Z,162nm,1.5s
LPL La Plagne 89.44 330 ⇓*i*P P 06 05 36.5 -0.1
comp=Z,90nm,1.3s
LPL La Plagne 89.44 330 ⇓*i*P P 06 05 36.5 -0.1
LPL pmax pmax
comp=Z,90nm,1.3s
LPL La Plagne 89.44 330 ⇓*i*P P 06 05 36.5 -0.1
comp=Z,90nm,1.3s
LPG La Plagne 89.44 330 ⇓*i*P P 06 05 36.6 -0.1
comp=Z,176nm,1.6s
LPG La Plagne 89.44 330 ⇓*i*P P 06 05 36.6 -0.1
LPG pmax pmax
comp=Z,176nm,1.6s
LPG La Plagne 89.44 330 ⇓*i*P P 06 05 36.6 -0.1
comp=Z,176nm,1.6s
Y29A Porterfield Fa 89.44 48 P P 06 05 37.6 +0.9
baz=89,SNR=9.3
425A Indio Mountain 89.45 52 P P 06 05 38.2 +1.3
baz=89,SNR=7.6
OG35 Corcelles 89.47 331 *e*P P 06 05 36.1 -0.5
X30A Coker Ranch, T 89.52 47 P P 06 05 37.4 +0.4
baz=89,SNR=6.3
CUC Castrocucco 89.55 321 *e*P P 06 05 35.8 -1.2
comp=Z,24nm,1.1s
CUC LR LR
comp=Z,3µm,20.0s
W31A Holland Ranch, 89.55 46 P P 06 05 38.3 +1.1
baz=89,SNR=12
HYF Humbligny 89.58 333 *e*P P 06 05 37.4 +0.4
HYF Humbligny 89.58 333 *e*P P 06 05 37.4 +0.4
JSA Saint Aubin 89.59 337 *e*P P 06 05 35.3 -1.6
JSA AMB AMB 06 05 38.8
comp=Z,79nm,2.5s
JSA AMS AMS 06 48 53.3
comp=Z,2µm,21.0s
JSA Saint Aubin 89.59 337 P P 06 05 35.3 -1.6
JSA AMB AMB 06 05 38.8
comp=Z,79nm,2.5s
JSA AMS AMS 06 48 53.3
comp=Z,2µm,21.0s
SMF Signal de Mont 89.65 332 ⇓*i*P P 06 05 37.1 -0.2
comp=Z,339nm,1.6s
SMF Signal de Mont 89.65 332 ⇓*i*P P 06 05 37.1 -0.2
SMF pmax pmax
comp=Z,339nm,1.6s
SMF Signal de Mont 89.65 332 ⇓*i*P P 06 05 37.1 -0.2
comp=Z,339nm,1.6s
TIP Timpagrande 89.66 320 *e*P P 06 05 37.5 -0.1
comp=Z,49nm,1.2s
TIP LR LR
comp=Z,3µm,22.0s
AVF Avril sur Loir 89.72 332 ⇓*i*P P 06 05 37.5 -0.1
comp=Z,302nm,1.4s
AVF Avril sur Loir 89.72 332 ⇓*i*P P 06 05 37.5 -0.1
AVF pmax pmax
comp=Z,302nm,1.4s
AVF Avril sur Loir 89.72 332 ⇓*i*P P 06 05 37.5 -0.1
comp=Z,302nm,1.4s
326A Caldwell Ranch 89.74 51 P P 06 05 38.7 +0.5
baz=90,SNR=6.8
128A Castleberry Fa 89.79 49 P P 06 05 38.9 +0.5
baz=90,SNR=7.3
Z29A Hungry Hill Ra 89.83 48 P P 06 05 39.4 +0.8
baz=90,SNR=19
BNI Bardonecchia 89.84 330 *e*P P 06 05 38.3 -0.1
BNI pmax pmax
comp=Z,152nm,2.0s
BNI MLR MLR
comp=Z,3µm,21.0s
BNI Bardonecchia 89.84 330 *e*P P 06 05 38.3 -0.1
comp=Z,152nm,2.0s
BNI LR LR
comp=Z,3µm,21.0s
GRR Gorron 89.86 336 ⇓*i*P P 06 05 38.2 0.0
comp=Z,270nm,1.5s
GRR Gorron 89.86 336 ⇓*i*P P 06 05 38.2 0.0
GRR pmax pmax
comp=Z,270nm,1.5s
GRR Gorron 89.86 336 ⇓*i*P P 06 05 38.2 0.0
comp=Z,270nm,1.5s
X31A McDonald Ranch 89.92 46 P P 06 05 39.7 +0.8
baz=90,SNR=18
MBDF Montbardon 90.06 329 *e*P P 06 05 38.5 -1.0
comp=Z,46nm,1.0s
MBDF Montbardon 90.06 329 *e*P P 06 05 38.5 -1.0
MBDF pmax pmax
comp=Z,46nm,1.0s
MBDF Montbardon 90.06 329 *e*P P 06 05 38.5 -1.0
comp=Z,46nm,1.0s
BGF Bois d'Agland 90.10 333 ⇓*i*P P 06 05 39.4 0.0
comp=Z,157nm,1.5s
BGF Bois d'Agland 90.10 333 ⇓*i*P P 06 05 39.4 0.0
BGF pmax pmax
comp=Z,157nm,1.5s
BGF Bois d'Agland 90.10 333 ⇓*i*P P 06 05 39.4 0.0
comp=Z,157nm,1.5s
426A McDonald Obser 90.14 51 P P 06 05 40.5 +0.3
baz=90,SNR=12
Z30A Sanderson Ranc 90.17 48 P P 06 05 40.5 +0.5
baz=90,SNR=17
Y31A Rekieta Farm, 90.22 47 P P 06 05 40.9 +0.7
baz=90,SNR=17
ORIF Oris-en-Rattie 90.27 330 ⇓*i*P P 06 05 40.1 -0.3
comp=Z,129nm,1.6s
ORIF *e*R
comp=Z,3µm,19.0s
ORIF Oris-en-Rattie 90.27 330 ⇓*i*P P 06 05 40.1 -0.3
ORIF pmax pmax
comp=Z,129nm,1.6s
ORIF Oris-en-Rattie 90.27 330 ⇓*i*P P 06 05 40.1 -0.3
comp=Z,129nm,1.6s
SAOF Saorge 90.33 328 *e*P P 06 05 40.1 -0.5
SAOF Saorge 90.33 328 *e*P P 06 05 40.1 -0.5
SAOF Saorge 90.33 328 *e*P P 06 05 40.1 -0.5
AGO Saint Agoulin 90.42 332 ⇓*e*P P 06 05 42.4 +1.5
AGO Saint Agoulin 90.42 332 ⇓*e*P P 06 05 42.4 +1.5
427A Hayter Ranch, 90.42 51 P P 06 05 42.0 +0.6
baz=90,SNR=9.1
328A Wristen Ranch, 90.44 50 P P 06 05 41.9 +0.6
baz=90,SNR=8.1
TOUF Mont Tournerai 90.44 329 *e*P P 06 05 40.7 -0.6
TOUF Mont Tournerai 90.44 329 *e*P P 06 05 40.7 -0.6
TOUF Mont Tournerai 90.44 329 *e*P P 06 05 40.7 -0.6
SBF Sospel 90.48 328 ⇓*i*P P 06 05 40.2 -1.1
comp=Z,320nm,1.4s
SBF Sospel 90.48 328 ⇓*i*P P 06 05 40.2 -1.1
SBF pmax pmax
comp=Z,321nm,1.4s
SBF Sospel 90.48 328 ⇓*i*P P 06 05 40.2 -1.1
comp=Z,320nm,1.4s
526A Mary Lane Ranc 90.51 52 P P 06 05 42.8 +0.9
baz=90,SNR=27
SSB Saint Sauveur 90.52 331 *e*P P 06 05 41.2 -0.2
SSB pmax pmax
comp=Z,55nm,1.4s
SSB MLR MLR
comp=Z,2µm,19.0s
SSB Saint Sauveur 90.52 331 *e*P P 06 05 41.2 -0.2
comp=Z,55nm,1.4s
SSB LR LR
comp=Z,2µm,19.0s
SSB Saint Sauveur 90.52 331 *e*P P 06 05 41.5 +0.1
SGMF Saint Gilles 90.53 337 ⇓*i*P P 06 05 41.5 +0.1
comp=Z,309nm,1.5s
SGMF Saint Gilles 90.53 337 ⇓*i*P P 06 05 41.5 +0.1
SGMF pmax pmax
comp=Z,309nm,1.5s
SGMF Saint Gilles 90.53 337 ⇓*i*P P 06 05 41.5 +0.1
comp=Z,309nm,1.5s
WMOK Wichita Mounta 90.55 45 *e*P P 06 05 42.3 +0.5
WMOK pmax pmax
comp=Z,61nm,1.3s
WMOK Wichita Mounta 90.55 45 *e*P P 06 05 42.3 +0.5
comp=Z,61nm,1.3s
TCF Toulx Ste Croi 90.57 333 ⇓*i*P P 06 05 41.7 +0.1
comp=Z,265nm,1.6s
TCF Toulx Ste Croi 90.57 333 ⇓*i*P P 06 05 41.7 +0.1
TCF pmax pmax
comp=Z,265nm,1.6s
TCF Toulx Ste Croi 90.57 333 ⇓*i*P P 06 05 41.7 +0.1
comp=Z,265nm,1.6s
MVIF Mont Vial 90.57 329 *e*P P 06 05 40.7 -1.2
MVIF Mont Vial 90.57 329 *e*P P 06 05 40.7 -1.2
MVIF Mont Vial 90.57 329 *e*P P 06 05 40.7 -1.2
REVF Revere 90.61 328 *e*P P 06 05 40.7 -1.2
REVF Revere 90.61 328 *e*P P 06 05 40.7 -1.2

REVF Revere 90.61 328 *e*P P 06 05 40.7 -1.2
Y32A R-V Farms, Ver 90.68 46 P P 06 05 42.9 +0.5
baz=90,SNR=12
ROSF Rostrenen 90.69 337 ⇓*i*P P 06 05 42.2 +0.1
comp=Z,372nm,1.7s
ROSF Rostrenen 90.69 337 ⇓*i*P P 06 05 42.2 +0.1
ROSF pmax pmax
comp=Z,372nm,1.7s
ROSF Rostrenen 90.69 337 ⇓*i*P P 06 05 42.2 +0.1
comp=Z,372nm,1.7s
PYM Petit Puy Mans 90.72 332 ⇓*e*P P 06 05 43.3 +0.9
PYM Petit Puy Mans 90.72 332 ⇓*e*P P 06 05 43.3 +0.9
PYM Petit Puy Mans 90.72 332 ⇓*e*P P 06 05 43.3 +0.9
Z31A Sharp Cattle R 90.74 47 P P 06 05 43.2 +0.5
baz=91,SNR=21
527A Woodward Ranch 90.76 52 P P 06 05 43.6 +0.6
baz=91,SNR=13
OCF Saint Nazaire 90.79 330 *e*P P 06 05 43.1 +0.4
OG26 St.-Nazaire-De 90.79 330 *e*P P 06 05 43.1 +0.4
CEL Celeste 90.80 320 *e*P P 06 05 43.5 +0.6
comp=Z,66nm,1.4s
CEL LR LR
comp=Z,2µm,20.0s
CALN Calern 90.80 329 *e*P P 06 05 42.7 -0.2
CALN Calern 90.80 329 *e*P P 06 05 42.7 -0.2
CALN Calern 90.80 329 *e*P P 06 05 42.7 -0.2
VIVF Saint-Julien-l 90.81 331 ⇓*i*P P 06 05 42.6 -0.2
comp=Z,190nm,1.5s
VIVF Saint-Julien-l 90.81 331 ⇓*i*P P 06 05 42.6 -0.2
VIVF pmax pmax
comp=Z,190nm,1.5s
VIVF Saint-Julien-l 90.81 331 ⇓*i*P P 06 05 42.6 -0.2
comp=Z,190nm,1.5s
626A Big Bend Ranch 90.82 52 P P 06 05 44.0 +0.7
baz=91,SNR=16
PGF Pioggiola 90.85 327 ⇓*i*P P 06 05 42.3 -0.8
comp=Z,285nm,1.6s
PGF Pioggiola 90.85 327 ⇓*i*P P 06 05 42.3 -0.8
PGF pmax pmax
comp=Z,285nm,1.6s
PGF Pioggiola 90.85 327 ⇓*i*P P 06 05 42.3 -0.8
comp=Z,285nm,1.6s
329A Wagon Wheel Ra 90.88 50 P P 06 05 44.1 +0.7
baz=91,SNR=17
428A Kincaid Ranch, 90.96 51 P P 06 05 44.8 +1.0
baz=91,SNR=19
QUIF Quistinic 91.03 337 ⇓*i*P P 06 05 43.6 -0.1
comp=Z,202nm,1.6s
QUIF Quistinic 91.03 337 ⇓*i*P P 06 05 43.6 -0.1
QUIF pmax pmax
comp=Z,202nm,1.6s
QUIF Quistinic 91.03 337 ⇓*i*P P 06 05 43.6 -0.1
comp=Z,202nm,1.6s
131A Roby 91.04 48 P P 06 05 45.4 +1.3
baz=91,SNR=12
LBL Lubilhac 91.06 332 *e*P P 06 05 45.2 +1.2
LBL Lubilhac 91.06 332 *e*P P 06 05 45.2 +1.2
LBL Lubilhac 91.06 332 *e*P P 06 05 45.2 +1.2
230A Sterling City 91.14 49 P P 06 05 45.0 +0.4
baz=91,SNR=6.1
Z32A Haskell 91.14 47 P P 06 05 45.3 +0.7
baz=91,SNR=66
MFF Saint Martin d 91.15 334 ⇓*i*P P 06 05 44.5 +0.2
comp=Z,305nm,1.4s
MFF Saint Martin d 91.15 334 ⇓*i*P P 06 05 44.5 +0.2
MFF pmax pmax
comp=Z,305nm,1.4s
MFF Saint Martin d 91.15 334 ⇓*i*P P 06 05 44.5 +0.2
comp=Z,305nm,1.4s
SMRF Simiane la Rot 91.17 330 ⇓*i*P P 06 05 44.4 -0.1
comp=Z,131nm,1.3s
SMRF Simiane la Rot 91.17 330 ⇓*i*P P 06 05 44.4 -0.1
comp=Z,131nm,1.3s
FRNF Fournols 91.19 332 *e*P P 06 05 45.4 +0.8
FRNF Fournols 91.19 332 *e*P P 06 05 45.4 +0.8
HDIL Hopedale 91.27 36 *e*P P 06 05 45.3 +0.3
comp=Z,63nm,1.0s
HDIL LR LR
comp=Z,2µm,20.0s
TXAR Lajitas Array 91.27 52 P PKKPbc **PKKPbc** 06 05 46.0 +0.7
TXAR PKKPbc **PKKPbc** 06 23 07.0 +1.0
TXAR Lajitas Array 91.27 52 P P 06 05 46.0 +0.7
comp=Z,5.7nm,0.8s,baz=298,slow=2.7,SNR=78
TXAR PKKPbc **PKKPbc** 06 23 07.0 +1.0
comp=Z,0.5nm,0.6s,baz=164,slow=4.7,SNR=11
TXAR LR LR 06 43 45.7
comp=Z,2µm,20.1s,baz=0.0,slow=34
528A Cox Ranch, San 91.28 51 P P 06 05 46.3 +0.9
baz=91,SNR=25
LMR La Mourre 91.30 329 ⇓*i*P P 06 05 44.3 -0.8
comp=Z,360nm,1.5s
LMR La Mourre 91.30 329 ⇓*i*P P 06 05 44.3 -0.8
LMR pmax pmax
comp=Z,361nm,1.5s
LMR La Mourre 91.30 329 ⇓*i*P P 06 05 44.3 -0.8
comp=Z,360nm,1.5s
627A Terlingua Ranc 91.37 52 P P 06 05 46.5 +0.7
baz=91,SNR=26
TUL1 Tulsa 91.40 43 P P 06 05 46.3 +0.6
baz=91,SNR=13
330A Mertzon 91.44 49 P P 06 05 46.2 +0.3
baz=91,SNR=16
ABTX Abilene, Hawle 91.52 47 P P 06 05 47.1 +0.8
baz=91,SNR=14
231A Bronte 91.60 48 P P 06 05 47.0 +0.3
baz=92,SNR=11
RJF Les Rejaudoux 91.66 333 ⇓*i*P P 06 05 46.9 +0.2
comp=Z,269nm,1.5s
RJF *e*R
comp=Z,4µm,20.2s
RJF Les Rejaudoux 91.66 333 ⇓*i*P P 06 05 46.9 +0.2
RJF pmax pmax
comp=Z,269nm,1.5s
RJF Les Rejaudoux 91.66 333 ⇓*i*P P 06 05 46.9 +0.2
comp=Z,269nm,1.5s
529A Stev Forest Ra 91.66 51 P P 06 05 47.6 +0.6
baz=92,SNR=24
628A Black Gap, Mar 91.67 52 P P 06 05 48.2 +1.1
baz=92,SNR=12
CAF Calviac 91.77 332 ⇓*i*P P 06 05 47.7 +0.4
comp=Z,256nm,1.5s
CAF Calviac 91.77 332 ⇓*i*P P 06 05 47.7 +0.4
CAF pmax pmax
comp=Z,256nm,1.5s
CAF Calviac 91.77 332 ⇓*i*P P 06 05 47.7 +0.4
comp=Z,256nm,1.5s
LASF Ste Croix 91.79 331 ⇓*i*P P 06 05 47.4 +0.1
comp=Z,214nm,1.4s
LASF Ste Croix 91.79 331 ⇓*i*P P 06 05 47.4 +0.1
comp=Z,214nm,1.4s
430A Baggett Ranch, 91.82 50 P P 06 05 48.0 +0.2
baz=92,SNR=12
331A San Angelo 91.96 49 P P 06 05 48.5 +0.1
baz=92,SNR=14
232A Coleman 92.04 48 P P 06 05 49.2 +0.5
baz=92,SNR=16
SADO Sadowa 92.19 27 LR LR 06 54 21.1
comp=Z,1µm,18.9s,baz=349,slow=40
530A J-C Ranch, Com 92.20 50 P P 06 05 50.1 +0.5
baz=92,SNR=29
LFF La Frestale 92.26 333 ⇓*i*P P 06 05 49.8 +0.4
comp=Z,377nm,1.5s
LFF La Frestale 92.26 333 ⇓*i*P P 06 05 49.8 +0.4
LFF pmax pmax
comp=Z,377nm,1.5s
LFF La Frestale 92.26 333 ⇓*i*P P 06 05 49.8 +0.4
comp=Z,377nm,1.5s
431A Sonora 92.29 49 P P 06 05 50.1 +0.2
baz=92,SNR=12
SLM Saint Louis 92.29 38 *e*P P 06 05 49.7 0.0
SLM pmax pmax
comp=Z,38nm,0.9s
SLM Saint Louis 92.29 38 *e*P P 06 05 49.7 0.0
comp=Z,38nm,0.9s
332A Millersview 92.33 48 P P 06 05 50.8 +0.7
baz=92,SNR=31
AAM Ann Arbor 92.43 32 PFAKE 06 06 00.0 +10
AAM LR LR
comp=Z,2µm,20.0s
SFIN Scholer Farm 92.45 35 P P 06 05 51.2 +0.8
baz=92,SNR=5.5
432A Menard 92.65 49 P P 06 05 51.9 +0.2
baz=92,SNR=13
531A Rocksprings 92.68 50 P P 06 05 52.4 +0.6
baz=93,SNR=19
JCT Junction City 92.92 49 *e*P P 06 05 53.1 +0.2
JCT pmax pmax
comp=Z,134nm,1.8s
JCT MLR MLR
comp=Z,2µm,22.0s
JCT Junction City 92.92 49 *e*P P 06 05 53.1 +0.2
comp=Z,134nm,1.8s
JCT LR LR
comp=Z,2µm,22.0s
JCT Junction City 92.92 49 P P 06 05 53.2 +0.3
baz=93,SNR=15
MTLF Montolieu 93.05 331 ⇓*i*P P 06 05 53.4 +0.2
comp=Z,192nm,1.5s
MTLF Montolieu 93.05 331 ⇓*i*P P 06 05 53.4 +0.2
MTLF pmax pmax
comp=Z,192nm,1.5s
MTLF Montolieu 93.05 331 ⇓*i*P P 06 05 53.4 +0.2
comp=Z,192nm,1.5s
532A Rocksprings 93.11 49 P P 06 05 54.1 +0.3
baz=93,SNR=30
631A Perdido Creek 93.19 50 P P 06 05 54.4 +0.3
baz=93,SNR=40
LRDF Laroque-de-Fa 93.26 331 *e*P P 06 05 54.5 +0.4
LRDF Laroque-de-Fa 93.26 331 *e*P P 06 05 54.5 +0.4
OLIL Olney 93.27 36 *e*P P 06 05 55.1 +0.9
comp=Z,75nm,1.2s
WHTX Lake Whitney 93.28 47 P P 06 05 55.3 +0.9
baz=93,SNR=16
SJAF Saint Jean de 93.51 330 *e*P P 06 05 55.1 -0.2
SJAF Saint Jean de 93.51 330 *e*P P 06 05 55.1 -0.2
SIUC Southern Illin 93.51 38 *e*P P 06 05 56.1 +0.7
comp=Z,87nm,1.3s
632A Uvalde 93.61 50 P P 06 05 57.1 +1.1
baz=94,SNR=7.6
CARF Carcanieres 93.62 331 *e*P P 06 05 55.3 -0.6
CARF Carcanieres 93.62 331 *e*P P 06 05 55.3 -0.6
BLO Bloomington 93.67 35 *e*P P 06 05 56.3 +0.2
BLO pmax pmax
comp=Z,216nm,2.5s
BLO Bloomington 93.67 35 *e*P P 06 05 56.3 +0.2
comp=Z,216nm,2.5s
MLS Moulis 93.81 332 *e*P P 06 05 56.8 +0.1
MLS Moulis 93.81 332 *e*P P 06 05 56.8 +0.1
VALF Valcebollere 93.92 331 *e*P P 06 05 57.5 +0.1
VALF Valcebollere 93.92 331 *e*P P 06 05 57.5 +0.1
LONY Lake Ozonia 93.95 25 PFAKE 06 06 10.0 +13
LONY LR LR
comp=Z,2µm,21.0s
EPF Esparros 94.04 332 ⇓*i*P P 06 05 57.3 -0.5
comp=Z,140nm,1.7s
EPF Esparros 94.04 332 ⇓*i*P P 06 05 57.3 -0.5
EPF pmax pmax
comp=Z,140nm,1.7s
EPF Esparros 94.04 332 ⇓*i*P P 06 05 57.3 -0.5
comp=Z,140nm,1.7s
732A Laxson Ranch, 94.04 50 P P 06 05 58.9 +0.9
baz=94,SNR=23
PARMO Parma 94.06 39 *e*P P 06 05 58.7 +0.8
ERPA Erie 94.10 29 PFAKE 06 06 10.0 +12
ERPA LR LR
comp=Z,2µm,20.0s
PQI Presque Isle 94.12 20 *e*P P 06 05 58.3 +0.3
comp=Z,62nm,1.0s
UALR University of 94.13 42 *e*P P 06 05 59.1 +0.8
comp=Z,136nm,1.9s
ACSO Alum Creek Sta 94.42 32 *e*P P 06 05 60.0 +0.5
comp=Z,24nm,0.9s
ACSO LR LR
comp=Z,2µm,20.0s
HBAR Harrisburg 94.44 40 *e*P P 06 06 00.4 +0.7
ETSF Etsaut 94.49 333 ⇓*i*P P 06 06 00.4 +0.5
comp=Z,119nm,1.5s
ETSF Etsaut 94.49 333 ⇓*i*P P 06 06 00.4 +0.5
ETSF pmax pmax
comp=Z,119nm,1.5s
ETSF Etsaut 94.49 333 ⇓*i*P P 06 06 00.4 +0.5
comp=Z,119nm,1.5s
WCI Wyandotte Cave 94.53 36 *e*P P 06 05 59.8 -0.3
WCI pmax pmax
comp=Z,38nm,1.2s
WCI Wyandotte Cave 94.53 36 *e*P P 06 05 59.8 -0.3
comp=Z,38nm,1.2s
NCB Newcomb 94.64 25 *e*P P 06 06 00.7 +0.3
comp=Z,80nm,1.7s
NCB LR LR
comp=Z,3µm,21.0s
UTMT University of 94.76 38 *e*P P 06 06 02.0 +0.9
comp=Z,183nm,1.1s
LBNH Lisbon 95.17 23 PFAKE 06 06 10.0 +7.2
LBNH LR LR
comp=Z,2µm,20.0s
WVT Waverly 95.44 38 *e*P P 06 06 04.1 -0.2
WVT pmax pmax
comp=Z,13nm,1.3s
WVT Waverly 95.44 38 *e*P P 06 06 04.1 -0.2
comp=Z,13nm,1.3s
BINY Binghamton 95.57 27 PFAKE 06 06 20.0 +15
BINY LR LR
comp=Z,3µm,19.0s
HKT Hockley 95.71 47 *e*P P 06 06 06.2 +0.7
HKT pmax pmax
comp=Z,81nm,1.8s
HKT Hockley 95.71 47 *e*P P 06 06 06.2 +0.7
comp=Z,81nm,1.8s
OXF Oxford 95.89 40 *e*P P 06 06 06.3 0.0
OXF pmax pmax
comp=Z,61nm,1.2s
OXF MLR MLR
comp=Z,1µm,19.0s
OXF Oxford 95.89 40 *e*P P 06 06 06.3 0.0
comp=Z,61nm,1.2s
OXF LR LR
comp=Z,1µm,19.0s
KEST Kesra 96.09 322 *e*P P 06 06 07.5 +0.2
KEST Kesra 96.09 322 P P 06 06 07.0 -0.3
comp=Z,4.5nm,1.1s,baz=200,slow=6.4,SNR=5.5
KEST LR LR 06 53 51.1
comp=Z,1µm,21.4s,baz=167,slow=38
KVTX Kingsville 96.17 50 PFAKE 06 06 20.0 +12
KVTX LR LR
comp=Z,2µm,19.0s
PLAL Pickwick Lake 96.22 39 *e*P P 06 06 07.8 0.0
comp=Z,50nm,1.8s
VBMS Vicksburg 97.06 42 PFAKE 06 06 20.0 +8.3
VBMS LR LR
comp=Z,1µm,19.0s
SWET Sewanee 97.11 37 *e*P Pdif 06 06 12.6 +0.6
comp=Z,23nm,1.1s
TKL Tuckaleechee C 97.80 35 LR LR 06 47 16.7
comp=Z,1µm,21.4s,baz=328,slow=34
BLA Blacksburg 98.04 32 PFAKE 06 06 30.0 +14
BLA LR LR
comp=Z,2µm,21.0s
LRAL Lakeview Retre 98.30 39 PFAKE 06 06 30.0 +13
LRAL LR LR
comp=Z,1µm,19.0s
RER Riviere de l'E 98.37 250 PFAKE 06 06 30.0 +12
RER LR LR
comp=Z,1µm,22.0s
RKT Rikitea 98.41 112 *e*P P 06 06 13.8 -3.9
comp=Z,188nm,30.2s
RKT *e*S **S** **06 17 46.8 +3.2**
comp=Z,895nm,29.0s
RKT *e*LQ LQ 06 33 56.4
RKT *e*LR LR 06 38 27.8
baz=308
RKT Rikitea 98.41 112 *e*S S 06 17 55.9 +12
comp=Z,895nm,29.0s
RKT *e*LR LR 06 38 07.5
CBN Corbin 98.48 30 PFAKE 06 06 30.0 +12
CBN LR LR
comp=Z,1µm,20.0s
ESDC Sonseca Array 98.56 333 P Pdif 06 06 18.0 -0.4
ESDC PP **PP** **06 10 14.3 -3.8**
ESDC Sonseca Array 98.56 333 P Pdif 06 06 18.0 -0.4
comp=Z,0.8nm,0.7s,baz=55,slow=3.1,SNR=8.0
ESDC PP **PP** **06 10 14.3 -3.8**
comp=Z,0.4nm,0.4s,baz=29,slow=7.3,SNR=5.1
ESDC LR LR 06 55 14.8
comp=Z,2µm,20.0s,baz=40,slow=38
PAB San Pablo 98.81 334 PFAKE 06 06 30.0 +10
PAB LR LR
comp=Z,3µm,19.0s
MTE Manteigas 99.15 336 PFAKE 06 06 30.0 +9.0
MTE LR LR
comp=Z,2µm,19.0s
BRAL Brewton 99.86 40 PFAKE 06 06 40.0 +16
BRAL LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,1µm,22.0s						
CNNC	Cliffs of the	100.80	32	PFAKE		06 06 40.0	+12
CNNC				LR	LR		
	comp=Z,2µm,21.0s						
NHSC	New Hope	101.58	34	PFAKE		06 06 40.0	+8.2
NHSC				LR	LR		
	comp=Z,3µm,22.0s						
KMBO	Kilima Mbogo	101.91	277	PFAKE		06 06 50.0	+16
KMBO				LR	LR		
	comp=Z,1µm,20.0s						
CASY	Casey	104.14	192	PFAKE		06 06 50.0	+7.9
CASY				LR	LR		
	comp=Z,916nm,20.0s						
RTC	Rabat Centre	104.66	333	PFAKE		06 07 00.0	+14
RTC				LR	LR		
	comp=Z,1µm,20.0s						
CMLA	Cha da Macela	106.07	349	PFAKE		06 11 20.0	
CMLA				LR	LR		
	comp=Z,990nm,21.0s						
MBAR	Mbarara	106.85	282	PFAKE		06 11 20.0	
MBAR				LR	LR		
	comp=Z,965nm,22.0s						
BBSR	BB Station	108.29	23	PFAKE		06 11 20.0	
BBSR				LR	LR		
	comp=Z,603nm,20.0s						
TAM	Tamanrasset	108.37	317	PFAKE		06 11 20.0	
TAM				LR	LR		
	comp=Z,1µm,20.0s						
VNDA	Vanda	113.46	175	PP	PP	06 12 10.8	+2.4
VNDA	Vanda	113.46	175	PP	PP	06 12 10.8	+2.4
	comp=Z,1.4nm,0.8s,baz=316,slow=9.7,SNR=3.7						
SBA	Scott Base	114.14	174	*e*PKIKP	PKPdf	06 11 19.1	+1.7
SBA	Scott Base	114.14	174	*e*PKPdf	PKPdf	06 11 19.1	+1.7
GTBY	Guantanamo Bay	115.07	38	PFAKE		06 11 30.0	+9.0
GTBY				LR	LR		
	comp=Z,1µm,22.0s						
MTDJ	Mount Denham	115.23	41	PFAKE		06 11 30.0	+8.5
MTDJ				LR	LR		
	comp=Z,917nm,19.0s						
LSZ	Lusaka	117.25	270	PFAKE		06 11 40.0	+15
LSZ				LR	LR		
	comp=Z,2µm,20.0s						
MAW	Mawson	118.03	205	PKP	PKPdf	06 11 26.0	+0.9
MAW	Mawson	118.03	205	PKP	PKPdf	06 11 26.0	+0.9
	comp=Z,4.2nm,0.7s,baz=26,slow=1.4,SNR=15						
TOA0	Torodi Ar. Sit	118.22	314	*e*PKPdf	PKPdf	06 11 26.2	-1.0
TORD	Torodi Ar. Bea	118.22	314	PKP	PKPdf	06 11 26.6	-0.6
TORD				PP	PP	06 12 42.4	+0.3
TORD				PKKPbc	PKKPbc	06 21 46.2	+1.6
TORD	Torodi Ar. Bea	118.22	314	PKP	PKPdf	06 11 26.6	-0.6
	comp=Z,4.0nm,0.6s,baz=20,slow=1.5,SNR=62						
TORD				PP	PP	06 12 42.4	+0.3
	comp=Z,3.3nm,1.0s,baz=37,slow=5.6,SNR=4.7						
TORD				PKKPbc	PKKPbc	06 21 46.2	+1.6
	comp=Z,3.2nm,0.7s,baz=209,slow=2.8,SNR=11						
PAYG	Puerto Ayora	121.07	66	PFAKE		06 11 40.0	+7.3
PAYG				LR	LR		
	comp=Z,2µm,20.0s						
BCIP	Isla Barro Col	121.16	49	PFAKE		06 11 40.0	+7.2
BCIP				LR	LR		
	comp=Z,924nm,22.0s						
ANWB	Willy Bob	122.86	26	PFAKE		06 11 50.0	+14
ANWB				LR	LR		
	comp=Z,1µm,20.0s						
LBTB	Lobatse	124.17	262	*e*PKPdf	PKPdf	06 11 38.5	+0.2
QSPA	South Pole Qui	125.23	180	*e*PKPdf	PKPdf	06 11 38.9	-0.2
QSPA				LR	LR		
	comp=Z,2µm,21.0s						
FDF	Fort de France	125.79	27	PFAKE		06 11 50.0	+8.3
FDF				LR	LR		
	comp=Z,1µm,21.0s						
BOSA	Boshof	126.02	258	PKP	PKPdf	06 11 41.6	-0.3
BOSA				*e*PKPdf	PKiKP	06 11 42.0	-0.3
BOSA	Boshof	126.02	258	PKP	PKPdf	06 11 41.6	-0.3
	comp=Z,7.7nm,0.7s,baz=129,slow=1.5,SNR=17						
SYO	Syowa Base	126.71	206	⇑*e*PKPdf	PKPdf	06 11 40.7	-1.0
DBIC	Dimbokro	127.22	316	*e*PKPdf	PKPdf	06 11 44.2	-0.2
DBIC	Dimbokro	127.22	316	PKP	PKPdf	06 11 44.3	-0.2
	comp=Z,19nm,1.1s,baz=266,slow=3.2,SNR=8.7						
LIC	Lamto	127.68	316	*e*PKIKP	PKPdf	06 11 45.1	-0.3
	comp=Z,54nm,1.2s						
LIC				*e*R			
	comp=Z,3µm,21.8s						
LIC	Lamto	127.68	316	*e*PKPdf	PKPdf	06 11 45.1	-0.3
SACV	Santiago Islan	127.76	341	PFAKE		06 12 00.0	+15
SACV				LR	LR		
	comp=Z,1µm,19.0s						
BBGH	Gun Hill	127.83	26	PFAKE		06 12 00.0	+14
BBGH				LR	LR		
	comp=Z,3µm,22.0s						
ROSC	El Rosal	127.89	47	*e*PKPdf	PKPdf	06 11 46.9	+0.6
ROSC				PKP	PKPdf	06 11 47.1	+0.9
ROSC	El Rosal	127.89	47	PKP	PKPdf	06 11 47.1	+0.9
	comp=Z,19nm,1.2s,baz=46,slow=0.9,SNR=20						
GRGR	Grenville	127.98	29	PFAKE		06 12 00.0	+14
GRGR				LR	LR		
	comp=Z,1µm,22.0s						
OTAV	Otavalo	128.83	55	*e*PKPdf	PKPdf	06 11 48.9	+0.7
OTAV				LR	LR		
	comp=Z,1µm,20.0s						
SUR	Sutherland	131.01	256	PFAKE		06 12 00.0	+8.7
SUR				LR	LR		
	comp=Z,2µm,20.0s						
ATAH	Atahualpa	134.13	62	PKPpre	PKPpre	06 11 43.9	
ATAH				PKP	PKPdf	06 11 57.6	-0.4
ATAH	Atahualpa	134.13	62	PKhKP	PKPpre	06 11 43.9	
	comp=Z,2.4nm,0.5s,baz=90,slow=3.0,SNR=2.9						
ATAH				PKP	PKPdf	06 11 57.6	-0.4
	comp=Z,11nm,1.1s,baz=324,slow=1.1,SNR=16						
MAIT	Maitri	135.78	202	*e*P	PKPdf	06 11 51.5	-7.3
NNA	Nana	138.51	65	*e*PKPdf	PKPdf	06 12 05.2	-0.4
NNA				PKP	PKPdf	06 12 06.2	+0.6
NNA				LR	LR		
	comp=Z,2µm,20.0s						
NNA	Nana	138.51	65	PKP	PKPdf	06 12 06.2	+0.6
	comp=Z,22nm,1.0s,baz=294,slow=4.5,SNR=5.1						
SNAA	Sanae	139.20	197	*e*P	PKPpre	06 11 55.3	
SNAA	Sanae	139.20	197	*e*near	PKPdf	06 12 06.4	+1.1
SNAA	Sanae	139.20	197	*e*PKPpre	PKPpre	06 11 54.8	
SNAA				*e*PKPdf	PKiKP	06 12 06.2	-1.4
VNA1	Neumayer--Stat	141.16	196	*e*P	PKPpre	06 12 02.4	
VNA1	Neumayer--Stat	141.16	196	*e*near	PKPdf	06 12 10.3	+1.6
SAML	Samuel	145.52	46	*e*PKPdf	PKPab	06 12 17.9	-0.6
LPAZ	La Paz	147.68	61	*e*PKPdf	PKPbc	06 12 23.6	-1.7
LPAZ	La Paz	147.68	61	PKPbc	PKPbc	06 12 23.6	-1.7
	comp=Z,39nm,1.1s,baz=353,slow=2.8,SNR=46						
PSGC	Pisagua	148.29	68	*e*P	PKPdf	06 12 21.8	-0.9
PSGC	Pisagua	148.29	68	*e*P	PKPdf	06 12 21.8	-0.9
MNMC	Minimini	148.41	67	⇓*i*P	PKPbc	06 12 24.4	-2.3
MNMC	Minimini	148.41	67	⇓*i*P	PKPbc	06 12 24.4	-2.3
HMBC	Humberstone	148.87	69	⇓*i*P	PKPdf	06 12 22.3	-1.4
HMBC	Humberstone	148.87	69	⇓*i*P	PKPdf	06 12 22.3	-1.4
PB01	Plate Boundary	149.61	70	⇓*i*P	PKPdf	06 12 25.8	+0.9
PB01	Plate Boundary	149.61	70	⇓*i*P	PKPdf	06 12 25.8	+0.9
RCBR	Riachuelo	150.35	354	*e*PKPbc	PKPbc	06 12 31.2	-0.2
LVC	Limon Verde	150.93	72	*e*PKPdf	PKPdf	06 12 28.5	+1.4
LVC				*e*PKPbc	PKiKP	06 12 33.7	+0.3
LVC				*e*PKPab	PKPab	06 12 41.7	+1.5
LVC				LR	LR		
	comp=Z,1µm,20.0s						
SIV	San Ignacio	152.27	51	PKP	PKPdf	06 12 29.7	+0.8
SIV				PKPbc	PKiKP	06 12 36.7	+0.7
SIV	San Ignacio	152.27	51	PKP	PKPdf	06 12 29.7	+0.8
	comp=Z,14nm,1.1s,baz=305,slow=1.3,SNR=30						
SIV				PKPbc	PKiKP	06 12 36.7	+0.7
	comp=Z,57nm,1.1s,baz=314,slow=2.6,SNR=44						
LCO	Las Campanas	152.43	85	*e*PKPdf	PKPdf	06 12 30.9	+1.7
LCO				*e*PKPbc	PKiKP	06 12 36.7	+0.3
LCO				*e*PKPab	PKPab	06 12 49.2	+2.9
LCO				LR	LR		
	comp=Z,1µm,19.0s						
TLL	Tololo Astrono	152.75	88	*e*P	PKPbc	06 12 37.4	+0.6
CLCH	Cerro Calan	153.89	95	*e*P	PKPbc	06 12 36.5	-2.4
PLCA	Paso Flores	154.64	111	*e*PKPdf	PKPdf	06 12 31.2	-0.6
PLCA				PKP	PKPdf	06 12 31.6	-0.1
PLCA				*e*PKPbc	PKiKP	06 12 40.6	+0.4
PLCA				PKPbc	PKPab	06 12 41.7	-14
PLCA				*e*PKPab	PKPab	06 12 57.0	+1.8
PLCA	Paso Flores	154.64	111	PKP	PKPdf	06 12 31.6	-0.1
	comp=Z,3.8nm,1.0s,baz=195,slow=2.1,SNR=3.3						
PLCA				PKPbc	PKiKP	06 12 41.7	+1.4
	comp=Z,3.9nm,0.8s,baz=264,slow=3.6,SNR=5.3						
PLCA				PKPab	PKPab	06 12 57.0	+1.8
	comp=Z,15nm,1.1s,baz=246,slow=6.0,SNR=8.5						
CFAA	Coronel Fontan	155.30	89	PKP	PKPdf	06 12 33.2	+0.3
CFAA				PKPab	PKPab	06 12 59.5	+1.2
CFAA	Coronel Fontan	155.30	89	PKP	PKPdf	06 12 33.2	+0.3
	comp=Z,1.1nm,1.1s,baz=243,slow=1.6,SNR=11						
CFAA				PKPab	PKPab	06 12 59.5	+1.2
	comp=Z,3.8nm,1.1s,baz=291,slow=3.1,SNR=15						
BDFB	Brasilia	158.62	25	PKP	PKPdf	06 12 38.2	+0.6
BDFB				PKPab	PKPab	06 13 13.5	+0.8
BDFB	Brasilia	158.62	25	PKP	PKPdf	06 12 38.2	+0.6
	comp=Z,14nm,1.3s,baz=1.3,slow=4.9,SNR=8.1						
BDFB				PKPab	PKPab	06 13 13.5	+0.8
	comp=Z,4.6nm,0.7s,baz=335,slow=9.3,SNR=4.7						
EFI	East Falkland	158.79	146	PFAKE		06 12 50.0	+13
EFI				LR	LR		
	comp=Z,2µm,21.0s						
TRQA	Tornquist	161.35	105	*e*PKPdf	PKPdf	06 12 39.2	-0.8
TRQA				*e*PKPab	PKPab	06 13 25.6	+1.3
CPUP	Villa Florida	161.77	65	PKP	PKPdf	06 12 40.8	+0.1
CPUP	Villa Florida	161.77	65	PKP	PKPdf	06 12 40.8	+0.1
	comp=Z,9.4nm,1.1s,baz=302,slow=1.3,SNR=7.0						
SPB	Sao Paulo	166.03	34	*e*PKPdf	PKPdf	06 12 46.0	+1.3
SPB				LR	LR		
	comp=Z,944nm,20.0s						

JMA 06 05:53:16.6, 33.°81N×135.°44E, h44km±1km, M0.7, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JWM	Minabe	0.08	299	P	Pn	05 53 23.6	0.0
JWM				S	Sn	05 53 28.6	0.0
JWZ	Kozaga	0.36	140	P	Pn	05 53 25.6	-0.3
JWZ				*e*S	Sn	05 53 32.1	-0.3
JWY	Kouya	0.43	17	S	Sn	05 53 33.7	-0.2

SKHL 06 06:07:02.7±1.0, 50.°46N×136.°01E, h10km±8km, mb3.9/2, Ms3.1/1, 1D, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GRNR	Gornyy	0.41	40	⇓*i*Pg	Pg	06 07 11.2	+0.4
GRNR				*e*Sg	Sg	06 07 16.3	+0.1
GRNR				A	A	06 07 18.2	
	1µm,0.5s						
GRNR				A	A	06 07 18.2	
	2µm,0.5s						
KLR	Kul'dur	3.02	248	*e*Pg	Pb	06 07 56.8	+0.3
KLR				*e*Sg	Sg	06 08 36.8	-2.9
KLR				AMS	AMS	06 09 08.8	
	64nm,1.8s						
KLR				AMS	AMS	06 09 08.8	
	70nm,1.8s						
EKMR	Ekimchan	3.23	325	*e*Pn	Pn	06 07 52.3	-1.2
EKMR				*e*Pg	Pb	06 08 01.0	+0.8
EKMR				AMB	AMB	06 08 02.3	
	46nm,0.3s						
EKMR				AMB	AMB	06 08 02.3	
	4.0nm,0.3s						
EKMR				AMB	AMB	06 08 02.3	
	14nm,0.3s						
EKMR				*e*Sg	Sg	06 08 43.3	-3.3
EKMR				A	A	06 08 50.0	
	45nm,0.3s						
NKL	Nikolayevsk	3.96	45	*e*Pg	Pb	06 08 13.0	+0.5
NKL				AMB	AMB	06 08 16.0	
	10.0nm,0.3s						
NKL				*e*rx	rx	06 08 18.0	
NKL				*e*Sg	Sg	06 09 05.0	-4.7
NKL				A	A	06 09 16.0	
	60nm,0.8s						
NKL				A	A	06 09 16.0	
	50nm,0.8s						
BMKR	Bomnak	6.10	317	*e*Pg	Pb	06 08 52.9	+3.9
BMKR				*e*Sg	Sg	06 10 13.5	-4.9
BMKR				A	A	06 10 19.5	
	14nm,0.5s						
KROS	Kirovskiy	6.81	309	*e*Sg	Sg	06 10 35.1	-6.0
KROS				A	A	06 10 39.8	
	4.0nm,0.5s						

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*ISCJB **06** 06:24:29.0±0.7, 31.°85S±0.°05×68.°28W±0.°07, h116km±6km, mb3.3/2, Error ellipse: s-maj=10.4km s-min=6.8km az=29.1*

*IDC **06** 06:24:28.8±1.5, 31.°85S×68.°33W, h105km±6km, mb3.2/2, mb1 3.4/3, mb1mx3.2/16, mbtmp3.2/3, MS3.1/1, Ms1 3.1/1, ms1mx2.9/8, Error ellipse: s-maj=43.5km s-min=37.3km az=41.0*

*GUC **06** 06:24:29.2±0.8, 31.°86S×68.°46W, h150km±25km, ML3.6*

ISC 06 06:24:29.4±0.9, 31.°84S±0.°06×68.°27W±0.°07, h113km±7km, n22, σ0.s62/31, 4C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	0.23	6	P	Pn	06 24 45.6	+0.2
	28nm,0.3s,baz=186,slow=4.6,SNR=3922						
CFAA				S	Sn	06 24 56.8	-0.6
	10nm,0.3s,baz=337,slow=22,SNR=99						
JACH	Jahuel	2.14	246	*e*P	Pn	06 25 05.3	+0.8
PEL	Peldehue	2.42	237	⇑*i*P	Pn	06 25 07.8	-0.2
PEL				*i* S	Sn	06 25 37.9	+0.2
PEL				AML	AML	06 25 43.1	
	comp=E,278nm,0.7s						
CMCH	Combarbala	2.43	285	*e*P	Pn	06 25 07.9	-0.1
CMCH				*e*S	Sn	06 25 38.1	+0.4
CMCH				AML	AML	06 25 43.2	
	comp=N,749nm,0.6s						
CLCH	Cerro Calan	2.47	230	*e*P	Pn	06 25 08.7	+0.2
CLCH				*i* S	Sn	06 25 38.9	+0.3
CLCH				AML	AML	06 25 42.3	
	comp=E,316nm,0.6s						
ROCH	El Roble	2.58	243	⇓*i*P	Pn	06 25 09.7	-0.5
ROCH				*e*S	Sn	06 25 41.1	-0.5
ROCH				AML	AML	06 25 45.6	
	comp=N,275nm,0.3s						
LMEL	Las Melosas	2.58	219	⇑*i*P	Pn	06 25 10.8	+0.6
LMEL				AML	AML	06 25 57.3	
	comp=N,99nm,0.1s						
PCH	Pirque	2.60	226	⇑*i*P	Pn	06 25 10.7	+0.4
PCH				*e*S	Sn	06 25 42.5	+0.8
ANTU	Antumapu	2.64	228	*e*S	Sn	06 25 42.9	+0.3
ANTU				AML	AML	06 25 47.4	
	comp=E,147nm,0.5s						
TLL	Tololo Astrono	2.74	307	*e*P	Pn	06 25 13.2	+0.8
TLL				*i* S	Sn	06 25 46.1	+0.8
TLL				AML	AML	06 25 55.6	
	comp=E,134nm,0.5s						
CHNG	Los Chungos	2.75	268	*e*P	Pn	06 25 12.2	+0.1
CHNG				*i* S	Sn	06 25 44.0	-1.1
CHNG				AML	AML	06 25 50.8	
	comp=E,76nm,0.7s						
TACH	Talagante	2.89	230	⇑*i*P	Pn	06 25 13.7	-0.3
TACH				*i* S	Sn	06 25 48.2	-0.2
CHCH	Chadas Angostu	2.90	223	*e*P	Pn	06 25 14.7	+0.6
CPUP	Villa Florida	11.03	63	LR	LR	06 31 36.8	
	comp=E,118nm,22.0s,baz=205,slow=39						
LPAZ	La Paz	15.48	0	P	P	06 28 03.6	-0.6
	comp=E,0.1nm,0.3s,baz=148,slow=11,SNR=5.1						
TXAR	Lajitas Array	69.52	327	P	P	06 35 25.9	0.0
	comp=E,0.2nm,0.6s,baz=142,slow=8.0,SNR=3.5						
TORD	Torodi Ar. Bea	80.48	68	P	P	06 36 29.6	+0.4
	comp=E,0.6nm,0.8s,baz=254,slow=4.3,SNR=3.1						
WRA	Warramunga Arr	124.14	206	PKP	PKPdf	06 43 13.8	-1.4
	comp=E,0.2nm,0.4s,baz=161,slow=1.7,SNR=10.0						
AAK	Ala-Archa	148.68	59	PKPbc	PKPbc	06 44 04.2	+0.8
	comp=E,1.1nm,0.5s,baz=268,slow=4.8,SNR=3.6						
KURBB	Kurchatov Arra	149.13	43	PKPbc	PKPbc	06 44 04.8	+0.8
	comp=E,0.7nm,0.6s,baz=299,slow=3.4,SNR=8.8						
ZALV	Zalesovo Beam	150.70	33	PKPbc	PKPbc	06 44 08.2	+0.5
	comp=E,1.6nm,0.5s,baz=305,slow=3.7,SNR=8.8						
MKAR	Makanchi Array	152.96	48	PKPbc	PKPbc	06 44 12.9	-0.2
	comp=E,0.2nm,0.6s,baz=321,slow=1.8,SNR=2.6						
MKAR				PKPab	PKPab	06 44 24.3	-0.5
	comp=E,0.2nm,0.4s,baz=280,slow=4.0,SNR=4.0						

MEX 06 06:36:33.0±0.7, 17.°42N×97.°51W, h52km±11km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UTMO	Huajuapan	0.50	326	*e*P	Pn	06 36 42.5	-2.1
UTMO				*i* S	Sn	06 36 51.4	-1.6
TPIG	Tehuac#an	1.01	8	*e*P	Pn	06 36 49.2	-2.0
TPIG				*i* S	Sn	06 37 02.4	-2.1
PNIG	Pinotepa	1.18	210	*e*P	Pn	06 36 50.9	-2.3
PNIG				*i* S	Sn	06 37 06.9	-1.4
PPM	Popocatepetl	1.96	327	*i* P	Pn	06 37 03.3	-1.2
PPM				*e*S	Sn	06 37 25.8	-2.6
YAIG	Yautepec	2.07	314	*i* P	Pn	06 37 04.4	-1.1
YAIG				*i* S	Sn	06 37 27.7	-2.5
HUIG	Huatulco	2.12	140	*i* P	Pn	06 37 05.3	-0.7
HUIG				*i* S	Sn	06 37 28.5	-2.6
PLIG	Platanillo	2.13	297	*i* P	Pn	06 37 05.3	-1.0
PLIG				*i* S	Sn	06 37 29.6	-2.2
ARIG	Puente Sto Nin	2.84	288	*e*P	Pn	06 37 15.0	-0.9
ARIG				*i* S	Sn	06 37 46.6	-2.3

MEX 06 06:53:40.5±0.3, 17.°55N×99.°52W, h9km±2km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MEIG	Mezcala	0.39	346	*e*P	Pg	06 53 47.7	-0.6
MEIG				*i* S	Sg	06 53 53.6	0.0
PLIG	Platanillo	0.84	1	*e*P	Pg	06 53 54.8	-2.1
PLIG				*i* S	Sg	06 54 05.6	-2.4
CAIG	El Cayaco	0.87	235	*e*P	Pg	06 53 55.7	-1.6
CAIG				*e*S	Sg	06 54 06.0	-2.5
ARIG	Puente Sto Nin	1.07	313	*e*P	Pn	06 54 01.6	-0.2
ARIG				*i* S	Sg	06 54 15.4	+0.1
YAIG	Yautepec	1.38	18	*e*P	Pn	06 54 03.2	-2.9
YAIG				*e*S	Sb	06 54 19.9	-4.6
UTMO	Huajuapan	1.66	80	*e*P	Pn	06 54 06.5	-3.6
UTMO				*i* S	Sn	06 54 26.6	-5.2
PPM	Popocatepetl	1.73	29	*e*P	Pn	06 54 08.7	-2.8
PPM				*e*S	Sn	06 54 29.4	-4.9
PNIG	Pinotepa	1.76	130	*e*P	Pn	06 54 08.2	-3.0
PNIG				*e*S	Sn	06 54 28.8	-5.0
ZIIG	Zihuatanejo	1.85	272	*i* P	Pn	06 54 09.2	-3.3
ZIIG				*i* S	Sn	06 54 31.1	-4.9
TPIG	Tehuac#an	2.23	67	*e*P	Pn	06 54 15.0	-2.9
TPIG				*e*S	Sn	06 54 41.5	-4.3
HUIG	Huatulco	3.72	118	*i* P	Pn	06 54 35.4	-2.8
HUIG				*i* S	Sn	06 55 18.0	-4.2

CASC 06 07:14:30.8±1.5, 16.°22N×87.°01W, h35km±225km, MD4.2, North of Honduras

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	2.17	187	*e*P	Pn	07 15 03.9	-0.4
TGUH				*e*S	Sn	07 15 30.5	+0.5
MRL	Marmol	2.82	246	*e*P	Pn	07 15 06.2	-7.4
MRL				*e*S	Sn	07 15 52.5	+5.8
VSM	San Miguel	3.03	204	*e*P	Pn	07 15 17.0	+0.4
VSM				*e*S	Sn	07 15 53.8	+1.8
CNCH	Conchagua	3.03	195	*e*P	Pn	07 15 17.1	+0.7
CNCH				*e*S	Sn	07 15 53.0	+1.3
SNVI	San Vicente	3.14	214	*e*P	Pn	07 15 17.8	-0.1
LBRS	Las Brisas	3.15	219	*e*P	Pn	07 15 18.8	+0.8
LBRS				*e*S	Sn	07 15 54.9	+0.3
LFRS	El Faro	3.25	218	*e*P	Pn	07 15 18.9	-0.6
BOQS	Boqueron	3.30	222	*e*P	Pn	07 15 21.5	+1.2
BOQS				*e*S	Sn	07 15 59.3	+0.7
SNET	Serv Nac Est T	3.31	221	*e*P	Pn	07 15 20.9	+0.7
SNET				*e*P		07 15 21.6	
SNET				*e*S	Sn	07 15 59.3	+0.9

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*IDC **06** 07:19:54.3±1.5, 21.°77N×93.°35E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.6/27, mbtmp3.8/7, Error ellipse: s-maj=95.9km s-min=16.1km az=53.0*

*ISCJB **06** 07:20:09.1±1.0, 22.°62N±0.°09×94.°37E±0.°08, h106km, mb3.9/6, Error ellipse: s-maj=13.8km s-min=8.4km az=32.6*

ISC 06 07:20:09.0±1.2, 22.°5N±0.°1×94.°4E±0.°1, h106km, n20, σ1.s62/26, mb4.2/6, Myanmar

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMP	Imphal	2.27	350	*e*PN	Pn	07 20 48.0	+2.6
IMP				*e*SN	Sn	07 21 11.0	-2.3
SHL	Shillong	3.78	323	*e*PN	Pn	07 21 09.0	+3.5
SHL				*e*SN	Sn	07 21 49.0	-0.2
CMAR	Chiang Mai Arr	5.90	133	Pn	Pn	07 21 25.9	-8.1
	baz=313,slow=13,SNR=2.4						
CMAR				Pg		07 21 48.5	
	0.5nm,0.3s,baz=309,slow=16,SNR=10						
CMAR				Lg	Lg	07 23 05.5	
	0.4nm,0.3s,baz=310,slow=31,SNR=4.2						
ODAN	Odare	7.67	306	*e*Pn	Pn	07 22 00.6	+2.3
ODAN				*e*Sn	Sn	07 23 23.7	0.0
	121nm,0.4s						
TAPN	Taplejung	7.72	310	*e*Pn	Pn	07 22 00.5	+1.6
TAPN				*e*Sn	Sn	07 23 25.3	+0.4
	76nm,0.4s						
RAMN	Ramite	8.32	303	*e*Pn	Pn	07 22 09.3	+2.2
GUN	Gumba	9.37	307	*e*Pn	Pn	07 22 23.0	+1.6
GUN				*e*Sn	Sn	07 24 04.0	-1.1
	44nm,0.3s						
PKI	Pulchoki	9.55	303	*e*Pn	Pn	07 22 25.2	+1.4
PKIN	Phulchoki	9.56	303	*e*Pn	Pn	07 22 26.0	+2.0
KKN	Kakani	9.76	304	*e*Pn	Pn	07 22 27.8	+1.2
DMN	Daman	9.80	303	*e*Pn	Pn	07 22 28.4	+1.2
KOLN	Koldanda	11.06	300	*e*Pn	Pn	07 22 45.0	+0.7
KOLN				*e*Sn	Sn	07 24 43.6	-2.5
	34nm,0.3s						
DANN	Dangsing	11.20	303	*e*Pn	Pn	07 22 46.7	+0.5
DANN				*e*Sn	Sn	07 24 47.4	-2.2
	23nm,0.3s						
PYUN	Piuthan	11.69	301	*e*Pn	Pn	07 22 53.7	+1.0
PYUN				*e*Sn	Sn	07 24 59.2	-2.1
	59nm,0.5s						
MKAR	Makanchi Array	26.10	341	P	P	07 25 34.2	+1.4
	0.4nm,0.3s,baz=144,slow=10,SNR=20						
KURBB	Kurchatov Arra	30.65	340	P	P	07 26 14.3	+1.2
	0.3nm,0.3s,baz=156,slow=7.5,SNR=4.4						
WRA	Warramunga Arr	57.49	134	P	P	07 29 46.4	-1.1
	1.1nm,0.4s,baz=320,slow=7.5,SNR=73						
ASAR	Alice Springs	59.89	138	P	P	07 30 03.3	-0.7
	0.9nm,0.5s,baz=321,slow=7.0,SNR=21						
FINES	FINESS Array B	60.10	329	P	P	07 30 04.5	-0.4
	1.0nm,0.5s,baz=134,slow=14,SNR=4.5						
ARCES	ARCESS Array B	61.71	338	P	P	07 30 15.0	-0.6
	2.9nm,1.0s,baz=90,slow=8.5,SNR=3.6						

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*ISK **06** 07:22:39.6, 39.°08N×29.°04E, h6km, MD2.8*

*CSEM **06** 07:22:40.3±0.1, 39.°11N×29.°02E, h2km, MD2.8, Error ellipse: s-maj=2.2km s-min=1.8km az=101.0*

*DDA **06** 07:22:40.3, 39.°12N×29.°02E, h7km, MD2.8*

ISC 06 07:22:40.5±1.1, 39.°11N±0.°02×29.°02E±0.°02, h4km±10km, n38, σ0.s54/53, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DEMI	Demirci	0.25	253	*i* P	Pg	07 22 45.6	+0.3
DEMI				*i* S	Sg	07 22 49.4	+0.8
DEMI	Demirci	0.25	253	*i* P	Pg	07 22 45.6	+0.3
DEMI				*i* S	Sg	07 22 49.4	+0.8
GDZ	Gediz	0.36	94	*i* P	Pg	07 22 47.5	+0.1
GDZ				*i* S	Sg	07 22 52.8	+0.6
GDZ	Gediz	0.36	94	*i* P	Pg	07 22 47.5	+0.1
GDZ				*i* S	Sg	07 22 52.8	+0.6
TVSB	Tavsanli	0.48	45	*e*PG	Pg	07 22 49.6	-0.1
TVSB				*e*SG	Sg	07 22 56.2	+0.2
TVSB	Tavsanli	0.48	45	*e*Pg	Pg	07 22 49.6	-0.1
TVSB				*e*Sg	Sg	07 22 56.2	+0.2
DURS	Dursunbey	0.65	319	*e*P	Pg	07 22 52.6	-0.3
DURS				*e*S	Sg	07 22 58.7	-2.6
DURS	Dursunbey	0.65	319	*e*P	Pg	07 22 52.6	-0.3
KULA	Kula-Manisa	0.66	205	*e*PG	Pg	07 22 52.4	-0.8
KULA				*e*SG	Sg	07 23 01.4	-0.4
KULA	Kula-Manisa	0.66	205	*e*Pg	Pg	07 22 52.4	-0.8
KULA				*e*Sg	Sg	07 23 01.4	-0.4
MANT	Manisa	0.72	210	*i* P	Pg	07 22 54.3	0.0
MANT				*i* S	Sg	07 23 03.3	-0.3
MANT	Manisa	0.72	210	*i* P	Pg	07 22 54.3	0.0
MANT				*i* S	Sg	07 23 03.3	-0.3
KHAL	Karahalli	0.83	153	*i* P	Pg	07 22 56.5	+0.1
KHAL				*i* S	Sb	07 23 09.1	0.0
KHAL	Karahalli	0.83	153	*i* P	Pg	07 22 56.5	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KHAL				iS	Sb	07 23 09.1	0.0
ALT	Altintas	0.85	94	ePG	Pg	07 22 56.3	-0.5
ALT	Altintas	0.85	94	ePg	Pg	07 22 56.3	-0.5
ORLT	Orhaneli	0.94	354	ePG	Pg	07 22 58.8	+0.3
ORLT	Orhaneli	0.94	354	ePg	Pg	07 22 58.8	+0.3
CAVI	Cavuskoy	1.26	30	ePN	Pg	07 23 04.5	-0.1
CAVI	Cavuskoy	1.26	30	ePn	Pg	07 23 04.6	-0.1
KCTX	Karacabey (Bur	1.26	336	ePN	Pn	07 23 05.2	+0.2
KCTX				eSN	Sn	07 23 23.0	+0.6
KCTX	Karacabey (Bur	1.26	336	ePn	Pn	07 23 05.2	+0.2
KCTX				eSn	Sn	07 23 23.0	+0.6
IZI	Iznik	1.27	16	ePN	Pn	07 23 05.1	-0.1
IZI	Iznik	1.27	16	ePn	Pn	07 23 05.1	-0.1
GONE	Gonen-Balikesi	1.39	312	ePN	Pb	07 23 06.8	-0.3
GONE	Gonen-Balikesi	1.39	312	ePn	Pb	07 23 06.8	-0.3
ADVT	Abdulvahap	1.43	23	ePN	Pn	07 23 07.1	-0.2
ADVT	Abdulvahap	1.43	23	ePn	Pn	07 23 07.1	-0.2
ARMT	Armutlu	1.46	355	ePN	Pb	07 23 07.9	-0.3
ARMT	Armutlu	1.46	355	ePn	Pb	07 23 07.9	-0.3
GULT	Gulveren	1.75	41	ePN	Pn	07 23 11.4	-0.3
GULT	Gulveren	1.75	41	ePn	Pn	07 23 11.4	-0.3
MRMT	Marmara Adasi	1.85	324	ePN	Pn	07 23 13.4	+0.3
MRMT	Marmara Adasi	1.85	324	ePn	Pn	07 23 13.4	+0.3
RKY	Sarkoy-Tekirda	2.12	319	ePN	Pn	07 23 17.3	+0.5
RKY	Sarkoy-Tekirda	2.12	319	ePn	Pn	07 23 17.3	+0.5
KLYT	Kilyos	2.14	0	ePN	Pn	07 23 17.3	+0.3
KLYT	Kilyos	2.14	0	ePn	Pn	07 23 17.3	+0.3

*IDC **06** 07:22:49.5±0.8, 35°.53N×63°.83E, h0km, mb4.0/10, mb1 4.1/16, mb1mx3.9/31, mbtmp4.0/16, ML4.0/6, MS3.5/1, Ms1 3.5/1, ms1mx2.8/33, Error ellipse: s-maj=18.9km s-min=15.2km az=173.0*
*MOS **06** 07:22:53.6±1.3, 35°.86N×63°.98E, h30km, mb4.2/16, Error ellipse: s-maj=12.6km s-min=6.5km az=70.8*
*ISCJB **06** 07:22:57.0±0.7, 36°.19N±0°.06×64°.00E±0°.06, h33km, mb4.0/15, MS3.5/2, Error ellipse: s-maj=8.9km s-min=6.5km az=151.6*
*CSEM **06** 07:22:59.6±1.0, 36°.22N×64°.03E, h40km, mb4.0/6, Error ellipse: s-maj=28.8km s-min=14.9km az=7.0*
*NNC **06** 07:23:00.6±2.9, 36°.66N×64°.09E, h0km, mb4.3, mpv4.5, Error ellipse: s-maj=23.1km s-min=20.2km az=167.0*
ISC 06 07:22:58.3±1.1**, 36°.16N**±0°.09×**63°.90E**±0°.07**, h35**km**, n90, σ1.98**/105**, mb4.0**/15**, 12C-10D, Turkmenistan-Afghanistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	8.60	34	⇑P	Pn	07 25 01.1	+0.8
	15nm,0.7s,baz=218,slow=14,SNR=178						
KK31				⇑S	Sn	07 26 34.2	-1.9
	4.8nm,0.3s,baz=5.9,slow=23,SNR=11						
KK31	Karatay Array	8.60	34	P	Pn	07 25 01.4	+1.1
KK31				S	Sn	07 26 37.5	+1.4
KK31				pmax	pmax		
	comp=Z,5.0nm,0.2s						
KK31				smax	smax		
	comp=Z,15nm,0.3s						
KK31	Karatay Array	8.60	34	P	Pn	07 25 01.1	+0.8
	comp=Z,15nm,0.7s,SNR=178						
KK31				S	Sn	07 26 37.5	+1.4
	comp=Z,15nm,0.3s						
AML	Almayashu	9.66	49	iP	Pn	07 25 14.6	-0.5
AML	Almayashu	9.66	49	P	Pn	07 25 14.6	-0.5
	SNR=16						
AML	Almayashu	9.66	49	iP	Pn	07 25 14.6	-0.5
EKS2	Erkin-Say	10.02	47	P	Pn	07 25 21.8	+1.9
	SNR=10.0						
AAK	Ala-Archa	10.43	49	P	Pn	07 25 24.9	-0.6
AAK						07 27 25.7	
AAK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AAK				smax	smax		
	comp=N,1.0nm,0.3s						
AAK	Ala-Archa	10.43	49	P	Pn	07 25 26.8	+1.2
	SNR=15						
AAK	Ala-Archa	10.43	49	Pn	Pn	07 25 24.9	-0.6
	comp=N,4.2nm,0.3s,baz=153,slow=2.3,SNR=33						
AAK				Sn	Sn	07 27 25.7	+4.5
	comp=N,1.4nm,0.3s,baz=182,slow=19,SNR=6.7						
AAK	Ala-Archa	10.43	49	P	Pn	07 25 24.9	-0.6
	comp=N,4.0nm,0.3s						
AAK				S	Sn	07 27 25.7	+4.5
	comp=N,1.0nm,0.3s						
KZA	Kyzart	10.61	53	P	Pn	07 25 27.9	-0.3
	SNR=34						
FRU	Bishkek	10.62	48	eP	Pn	07 25 28.8	+0.8
FRU				eS	Sn	07 27 29.4	+3.7
FRU				pmax	pmax		
	comp=Z,30nm,1.2s						
FRU				smax	smax		
	comp=E,136nm,1.8s						
FRU	Bishkek	10.62	48	eP	Pn	07 25 28.8	+0.8
	comp=E,30nm,1.2s						
FRU				eS	Sn	07 27 29.4	+3.7
KBK	Karagaybulak	10.72	49	iP	Pn	07 25 31.1	+1.6
KBK	Karagaybulak	10.72	49	P	Pn	07 25 31.1	+1.6
	SNR=13						
KBK	Karagaybulak	10.72	49	iP	Pn	07 25 31.1	+1.6
CHMS	Chumysh	10.80	47	P	Pn	07 25 31.2	+0.8
	SNR=5.5						
USP	Ospenovka	10.81	46	P	Pn	07 25 31.0	+0.4
	SNR=7.1						
TKM2	Tokmak 2	11.27	50	⇓P	Pn	07 25 36.1	-0.9
	comp=E,10nm,0.5s						
TKM2				⇓S	Sn	07 27 40.2	-1.5
	comp=E,14nm,1.0s						
TKM2	Tokmak 2	11.27	50	P	Pn	07 25 36.0	-0.9
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TKM2	Tokmak 2	11.27	50	P	Pn	07 25 36.3	-0.7
	SNR=22						
TKM2	Tokmak 2	11.27	50	P	Pn	07 25 36.1	-0.9
	comp=Z,10nm,0.5s						
TKM2				S	Sn	07 27 40.2	-1.5
	comp=Z,14nm,1.0s						
AB31	Akbulak array	13.40	349	⇑P	Pn	07 26 06.3	+0.4
	comp=Z,0.9nm,0.5s,baz=149,slow=15,SNR=31						
AB31				⇑S	Sn	07 28 31.1	-2.4
	comp=Z,11nm,0.7s,baz=192,slow=26,SNR=18						
AB31	Akbulak array	13.40	349	P	Pn	07 26 07.2	+1.3
AB31				pmax	pmax		
	comp=Z,1.0nm,0.2s						
AB31	Akbulak array	13.40	349	P	Pn	07 26 06.3	+0.4
	comp=Z,0.9nm,0.5s,SNR=31						
AB31				S	Sn	07 28 31.1	-2.4
	comp=Z,11nm,0.7s,SNR=18						
AKTK	Aktyubinsk	14.89	345	P	Pn	07 26 27.2	+1.1
	comp=Z,1.0nm,0.3s						
AKTK				S	Sn	07 29 06.2	-3.5
AKTO	Aktyubinsk	14.89	345	⇑P	Pn	07 26 26.8	+0.8
	comp=Z,7.0nm,0.8s						
AKTO				⇑S	Sn	07 29 06.0	-3.7
	comp=Z,9.6nm,0.7s						
AKTO	Aktyubinsk	14.89	345	P	Pn	07 26 27.2	+1.1
AKTO						07 29 06.2	
AKTO				smax	smax		
	comp=N,1.0nm,0.3s						
AKTO	Aktyubinsk	14.89	345	Pn	Pn	07 26 27.1	+1.1
	comp=N,0.4nm,0.3s,baz=169,slow=14,SNR=8.0						
AKTO				Sn	Sn	07 29 06.2	-3.4
	comp=N,1.4nm,0.3s,baz=259,slow=22,SNR=12						
AKTO	Aktyubinsk	14.89	345	P	Pn	07 26 26.8	+0.8
	comp=N,7.0nm,0.8s						
AKTO				S	Sn	07 29 06.0	-3.7
	comp=N,9.6nm,0.7s						
ZRNK	Zerenda	17.17	11	⇑P	Pn	07 26 55.7	+0.4
	comp=N,5.6nm,0.7s						
ZRNK				⇓S	Sn	07 30 02.6	-2.4
	comp=N,8.5nm,0.5s						
ZRNK	Zerenda	17.17	11	P	Pn	07 26 54.3	-1.0
ZRNK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ZRNK	Zerenda	17.17	11	P	Pn	07 26 55.7	+0.4
	comp=Z,5.6nm,0.7s						
VOSK	Vostochnaya	17.30	15	⇓P	Pn	07 26 56.4	-0.4
	comp=Z,7.3nm,0.8s						
VOSK				⇑S	Sn	07 30 05.6	-2.5
	comp=Z,7.2nm,0.7s						
VOSK	Vostochnaya	17.30	15	P	Pn	07 26 52.4	-4.5
VOSK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VOSK	Vostochnaya	17.30	15	P	Pn	07 26 52.4	-4.5
	comp=Z,7.0nm,0.9s						
MK31	Makanchi Array	17.36	47	P	Pn	07 26 55.9	-1.8
	comp=Z,1.7nm,0.6s,baz=239,slow=12,SNR=9.4						
MK31	Makanchi Array	17.36	47	P	Pn	07 26 55.9	-1.8
	comp=Z,1.7nm,0.6s,SNR=9.4						
MKAR	Makanchi Array	17.36	47	P	Pn	07 26 55.9	-1.8
MKAR	Makanchi Array	17.36	47	Pn	Pn	07 26 55.9	-1.8
	comp=Z,0.2nm,0.3s,baz=242,slow=15,SNR=9.0						
MKAR	Makanchi Array	17.36	47	P	Pn	07 26 55.9	-1.8
BVA0	Borovoye Array	17.47	13	⇓P	P	07 26 59.7	-0.2
	comp=Z,7.4nm,0.6s,baz=192,slow=13,SNR=63						
BVA0				⇓S	Sn	07 30 08.4	-3.9
	comp=Z,17nm,0.8s,baz=198,slow=22,SNR=14						
BVA0	Borovoye Array	17.47	13	iP	P	07 27 03.8	+3.9
BVA0				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BVA0	Borovoye Array	17.47	13	P	P	07 26 59.7	-0.2
	comp=Z,7.4nm,0.6s,SNR=63						
BVA0				S	Sn	07 30 08.4	-3.9
	comp=Z,17nm,0.8s,SNR=14						
BVAR	Borovoye Array	17.47	13	P	P	07 27 00.3	+0.4
BVAR				S	Sn	07 30 12.8	+0.5
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR				smax	smax		
	comp=N,3.0nm,0.3s						
BVAR	Borovoye Array	17.47	13	P	P	07 27 00.3	+0.4
	comp=N,2.7nm,0.3s,baz=181,slow=13,SNR=38						
BVAR				S	Sn	07 30 12.8	+0.5
	comp=N,2.9nm,0.3s,baz=198,slow=24,SNR=14						
BVAR	Borovoye Array	17.47	13	P	P	07 27 00.3	+0.4
	comp=N,3.0nm,0.3s						
BVAR				S	Sn	07 30 12.8	+0.5
	comp=N,3.0nm,0.3s						
BRVK	Borovoye	17.48	13	⇓P	P	07 26 59.9	-0.1
	comp=N,13nm,0.6s						
BRVK				⇑S	Sn	07 30 08.8	-3.8
	comp=N,28nm,1.0s						
BRVK	Borovoye	17.48	13	eP	P	07 27 00.4	+0.4
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BRVK	Borovoye	17.48	13	P	P	07 26 59.9	-0.1
	comp=Z,13nm,0.6s						
KBZ	Khabaz	17.76	302	P	Pn	07 27 00.8	-1.8
KBZ	Khabaz	17.76	302	P	Pn	07 27 00.8	-1.8
	comp=Z,0.2nm,0.3s,baz=68,slow=5.4,SNR=3.0						
KBZ	Khabaz	17.76	302	P	Pn	07 27 00.8	-1.8
KURBB	Kurchatov Arra	17.89	32	⇓P	P	07 27 04.7	+0.1
	comp=Z,3.7nm,1.2s						
KURBB				⇑S	Sn	07 30 19.5	-3.0
	comp=Z,11nm,0.8s						
KURBB	Kurchatov Arra	17.89	32	P	P	07 27 04.8	+0.2
	comp=Z,0.0nm,0.3s,baz=224,slow=11,SNR=28						
KURBB	Kurchatov Arra	17.89	32	P	P	07 27 04.7	+0.1
	comp=Z,3.7nm,1.2s						
KURBB				S	Sn	07 30 19.5	-3.0
	comp=Z,11nm,0.8s						
KURK	Kurchatov	18.00	32	⇑P	Pn	07 27 05.6	+0.1
	comp=Z,3.2nm,0.8s						
KURK				⇑S	Sn	07 30 21.8	-3.3
	comp=Z,10nm,1.0s						
KURK	Kurchatov	18.00	32	P	Pn	07 27 04.8	-0.7
KURK	Kurchatov	18.00	32	P	Pn	07 27 05.6	+0.1
	comp=Z,3.2nm,0.8s						
KURK				S	Sn	07 30 21.8	-3.3
	comp=Z,10nm,1.0s						
ARU	Arti	20.59	352	d iP	Pn	07 27 35.9	-0.6
ARU						07 27 53.4	
ARU				PPP	PPP	07 28 03.8	
ARU				S	Sn	07 31 28.9	+1.3
ARU				SS	SnSn	07 31 48.2	+5.8
ARU				SSS	SSS	07 32 02.7	
ARU				pmax	pmax		
	comp=Z,7.0nm,1.7s						
ARU				MLR	MLR		
	comp=Z,231nm,17.0s						
ARU	Arti	20.59	352	iP	Pn	07 27 35.9	-0.6
	comp=Z,7.0nm,1.7s						
SVE	Sverdlovsk	20.79	355	⇓eP	Pn	07 27 39.3	+0.6
SVE				eS	Sn	07 31 32.1	-0.2
SVE				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SVE	Sverdlovsk	20.79	355	eP	Pn	07 27 39.3	+0.6
	comp=Z,7.0nm,0.7s						
SVE				eS	Sn	07 31 32.1	-0.2
VRHR	Novokhopersk	21.85	320	eP	P	07 28 02.8	+15
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ASF	Jabal al Asfar	22.66	268	LR	LR	07 38 30.5	
	comp=Z,124nm,19.4s,baz=291,slow=42						
NVS	Novosibirsk	22.94	29	eP	P	07 28 00.3	+1.1
NVS				pmax	pmax		
	comp=N,3.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,2.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NVS	Novosibirsk	22.94	29	eP	P	07 28 00.3	+1.1
ZALV	Zalesovo Beam	22.98	33	P	P	07 27 59.9	+0.4
ZALV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZALV	Zalesovo Beam	22.98	33	P	P	07 27 59.9	+0.4
	comp=Z,5.2nm,0.8s,baz=234,slow=9.5,SNR=22						
ZALV	Zalesovo Beam	22.98	33	P	P	07 27 59.9	+0.4
	comp=Z,5.0nm,0.8s						
VORD	Divnogorie	23.02	318	eP	P	07 28 11.9	+12
VORD				pmax	pmax		
	comp=Z,9.0nm,0.5s						
VORD				pmax	pmax		
	comp=N,230nm,0.9s						
VORD				pmax	pmax		
	comp=E,90nm,0.6s						
VORD	Divnogorie	23.02	318	eP	P	07 28 11.9	+12
	comp=E,230nm,0.9s						
VSR	Storozhevoye	23.22	318	eP	P	07 28 13.7	+12
VSR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
VSR				pmax	pmax		
	comp=N,8.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,6.0nm,0.5s						
BRTR	Keskin Array B	24.07	288	P	P	07 28 09.3	-1.2
	comp=E,2.7nm,0.7s,baz=105,slow=9.3,SNR=17						
BRTR	Keskin Array B	24.07	288	P	P	07 28 09.3	-1.2
	comp=E,3.0nm,0.7s						
SONM	Songino Array	33.27	56	P	P	07 29 32.8	+0.4
	comp=E,0.8nm,0.7s,baz=260,slow=8.6,SNR=4.4						
SONM	Songino Array	33.27	56	P	P	07 29 32.8	+0.4
	comp=E,1.0nm,0.7s						
ULN	Ulaanbaatar	33.71	56	iP	P	07 29 36.8	+0.6
	comp=E,3.0nm,1.1s						
CMAR	Chiang Mai Arr	35.54	110	P	P	07 29 47.2	-4.9
	comp=E,1.0nm,0.3s,baz=293,slow=5.3,SNR=5.0						
ARCES	ARCESS Array B	39.37	340	P	P	07 30 25.9	+1.9
	comp=E,2.7nm,0.8s,baz=129,slow=9.6,SNR=5.4						
ARCES	ARCESS Array B	39.37	340	P	P	07 30 26.0	+1.9
	comp=E,3.0nm,0.8s						
NB2	NORSAR Subarra	41.24	324	P	P	07 30 39.9	+0.3
	comp=Z,1.5nm,0.6s,baz=104,slow=7.9						
NOA	NORSAR Array B	41.24	324	P	P	07 30 39.3	-0.3
	comp=Z,1.8nm,0.7s,baz=103,slow=8.1,SNR=6.7						
NOA	NORSAR Array B	41.24	324	P	P	07 30 39.3	-0.3
	comp=Z,2.0nm,0.7s						
TORD	Torodi Ar. Bea	59.98	264	P	P	07 32 56.0	-5.5
	comp=Z,1.4nm,0.9s,baz=53,slow=5.8,SNR=7.6						
YKA	Yellowknife Ar	81.68	359	P	P	07 35 13.2	+0.6
	comp=Z,0.5nm,0.7s,baz=356,slow=5.4,SNR=9.9						
YKA	Yellowknife Ar	81.68	359	P	P	07 35 13.2	+0.6
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	86.81	117	P	P	07 35 34.7	-4.6
	comp=Z,0.7nm,0.7s,baz=321,slow=4.7,SNR=15						
ASAR	Alice Springs	88.90	120	P	P	07 35 45.1	-4.1
	comp=Z,0.6nm,0.6s,baz=311,slow=5.2,SNR=10.0						

*DDA **06** 07:36:29.1, 39°.07N×41°.99E, h7km, MD2.9*
*CSEM **06** 07:36:36.6, 39°.55N×40°.96E, h10km, MD3.0, After ISK*
*ISK **06** 07:36:36.6, 39°.55N×40°.96E, h10km, MD3.0*
ISC 06 07:36:28.3±1.7**, 39°.23N**±0°.05×**41°.86E**±0°.04**, h17**km±14km**, n13, σ1.20**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.62	243	iP	Pb	07 36 40.9	+0.1
BNGL				iS	Sn	07 36 53.3	+1.1
TUTA	Tutak	0.76	77	iP	Pb	07 36 42.4	-0.8
TUTA				iS	Sn	07 36 54.9	-0.9
EZM	Erzurum	0.77	331	ePG	Pn	07 36 45.5	+0.8
EZM				eSG	Sg	07 36 54.1	+0.4
HOMI	Horasan	0.81	3	iP	Pn	07 36 47.2	+2.0
HOMI				iS	Sb	07 36 55.5	+0.6
BNGB	Bing˜¶l	0.95	256	ePG	Pn	07 36 48.7	+1.7
BINT	Bingol	1.12	252	ePg	Pb	07 36 48.7	-0.6
BEST	Besiri	1.42	199	iP	Pb	07 36 53.7	-0.6
BEST				iS	Sg	07 37 14.4	+0.3
ERZN	Erzincan	1.69	283	ePG	Pn	07 36 55.3	-1.9
BAYT	Ayd˜–ntepe-Bay	1.76	312	ePG	Pn	07 36 57.2	-1.0
BAYT	Ayd˜–ntepe-Bay	1.76	312	ePg	Pn	07 36 57.2	-1.0
PTK	Pertek	1.95	261	ePN	Pb	07 37 02.6	-0.9
PTK	Pertek	1.95	261	ePn	Pb	07 37 02.6	-0.9
EZC	Erzincan	2.00	286	ePg	Pn	07 36 55.3	-6.2

KRSC 06 07:54:56.6±0.8**, 51°.31N**×**158°.33E, h41**km±40km**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.96	280	eP	Pn	07 55 14.0	+0.4
PAU				iS	Sn	07 55 26.4	+0.2
ASAK	Asacha	1.11	346	P	Pn	07 55 16.3	+0.6
ASAK				iS	Sn	07 55 30.5	+0.6
RUS	Russkaya	1.13	6	eP	Pn	07 55 15.9	0.0
RUS				iS	Sn	07 55 29.9	-0.3
MTVR	Mutnovka	1.18	356	eP	Pn	07 55 17.3	+0.5
MTVR				iS	Sn	07 55 32.4	+0.6
GRL	Gorelyy	1.25	353	eP	Pn	07 55 18.7	+0.9
GRL				iS	Sn	07 55 34.2	+0.6
MIPR	Malaya Ipel'ka	1.37	315	P	Pn	07 55 20.3	+1.0
MIPR				iS	Sn	07 55 37.5	+1.2
SKR	Severo-Kuril's	1.53	247	eP	Pn	07 55 20.6	-0.8
SKR				iS	Sn	07 55 37.8	-2.3
PET	Petropavlovsk	1.73	6	P	Pn	07 55 24.8	+0.7
PET				iS	Sn	07 55 45.5	+0.6
APC	Apacha	1.77	336	eP	Pn	07 55 26.0	+1.3
APC				iS	Sn	07 55 47.7	+1.7
UGLR	Uglovaya	1.93	9	P	Pn	07 55 28.9	+1.9
UGLR				iS	Sn	07 55 52.4	+2.3
AVH	Avacha	1.97	7	eP	Pn	07 55 30.1	+2.5
AVH				iS	Sn	07 55 54.6	+3.4
SMAR	Somma	1.98	8	P	Pn	07 55 29.8	+1.9
SMAR				iS	Sn	07 55 54.1	+2.5
KOK	Koryaka	1.99	5	eP	Pn	07 55 30.0	+2.1
KOK				iS	Sn	07 55 54.4	+2.6
SDLR	Sedlovina	2.00	10	eP	Pn	07 55 29.6	+1.6
SDLR				iS	Sn	07 55 53.8	+1.8
KRER	Koryakskii	2.01	7	eP	Pn	07 55 30.3	+2.0
KRER				iS	Sn	07 55 54.8	+2.3
SPN	Mys Shipunski	2.07	30	P	Pn	07 55 30.4	+1.6
SPN				iS	Sn	07 55 55.0	+1.6
GNL	Ganaly	2.40	354	P	Pn	07 55 35.6	+2.1
MKZ	Mys Kozlova	3.85	31	P	Pn	07 55 53.9	+0.7
MKZ				iS	Sn	07 56 36.4	-0.7
TUMR	Tumrok	4.13	15	P	Pn	07 55 59.3	+2.1
KMNR	Kamenistaya	4.60	14	P	Pn	07 56 08.9	+5.2
KBTR	Krutoberegovo	5.58	27	P	Pn	07 56 18.9	+1.9

NNC 06 08:06:51.7±3.1**, 36°.69N**×**63°.89E, h0**km**, mb3.8, mpv3.7, 5C-11D, Error ellipse: s-maj=26.7km s-min=21.3km az=42.0, Turkmenistan-Afghanistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	8.18	36	P	Pn	08 08 52.0	+0.2
	1.0nm,0.2s,baz=217,slow=12,SNR=46						
KK31				⇑S	Sn	08 10 26.9	+1.9
	2.9nm,0.3s,baz=220,slow=25,SNR=5.6						
TKM2	Tokmak 2	10.94	52	⇓P	Pn	08 09 28.7	-1.1
	2.5nm,0.6s						
TKM2				⇓S	Sn	08 11 33.4	+0.3
	0.6nm,0.5s						
AB31	Akbulak array	12.89	348	⇓P	Pn	08 09 56.1	0.0
	0.1nm,0.3s,baz=153,slow=14,SNR=8.7						
AB31				⇓S	Sn	08 12 20.8	+0.6
	0.7nm,0.4s,baz=191,slow=25,SNR=9.8						
AKTO	Aktyubinsk	14.38	345	⇓P	Pn	08 10 16.2	-0.3
	2.3nm,0.9s						
AKTO				⇑S	Sn	08 12 55.8	-0.9
	1.7nm,0.5s						
ZRNK	Zerenda	16.66	11	⇓P	Pn	08 10 46.8	+0.3
	1.1nm,0.5s						
ZRNK				⇓S	Sn	08 13 53.2	+1.2
	2.0nm,0.7s						
VOSK	Vostochnaya	16.79	15	⇓P	Pn	08 10 48.4	+0.2
	2.1nm,0.8s						
VOSK				⇑S	Sn	08 13 56.5	+1.2
	1.7nm,0.8s						
BVA0	Borovoye Array	16.96	14	P	Pn	08 10 51.3	+1.0
	1.7nm,0.6s,baz=187,slow=14,SNR=13						
BVA0				⇓S	Sn	08 14 00.3	+0.9
	1.3nm,0.6s						
BRVK	Borovoye	16.97	13	⇓P	Pn	08 10 51.3	+0.9
	3.2nm,0.7s						
BRVK				⇑S	Sn	08 14 01.0	+1.4
	3.4nm,0.8s						
MK31	Makanchi Array	17.01	48	P	Pn	08 10 50.9	-0.1
	0.7nm,0.7s,baz=231,slow=13,SNR=7.9						
KURBB	Kurchatov Arra	17.45	32	⇓P	Pn	08 10 56.5	+0.1
	2.1nm,0.8s						
KURK	Kurchatov	17.56	32	⇑P	P	08 10 58.4	-0.6
	3.0nm,1.3s						

*IDC **06** 08:24:04.2±0.7, 35°.47N×141°.38E, h0km, mb3.6/11, mb1 3.9/14, mb1mx3.8/29, mbtmp3.7/14, ML3.5/3, MS3.0/3, Ms1 3.0/3, ms1mx2.5/51, Error ellipse: s-maj=22.5km s-min=15.1km az=103.0*
*ISCJB **06** 08:24:08.1±0.8, 35°.50N±0°.04×141°.24E±0°.09, h40km±8km, mb3.7/11, Error ellipse: s-maj=11.6km s-min=5.9km az=2.0*
*JMA **06** 08:24:08.5±0.1, 35°.54N×141°.22E, h40km±1km, M3.4*
ISC 06 08:24:08.5±1.4**, 35°.53N**±0°.05×**141°.27E**±0°.07**, h30**km±9km**, n27, σ1.35**/33**, mb3.6**/11**, 1C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.38	298	⇓P	Pb	08 24 17.0	0.0
CHOJ				eS	Sb	08 24 23.2	+0.4
KTR	Katsuura	0.86	244	P	Pn	08 24 24.2	-0.4
KTR				eS	Sn	08 24 34.7	-1.5
JCN	Nagara	0.88	263	P	Pn	08 24 24.7	-0.1
BSO1	Boso 1	0.90	195	P	Pn	08 24 24.6	-0.1
BSO4	Boso 4	0.93	235	P	Pn	08 24 25.2	-0.3
BSO3	Boso 3	0.95	221	⇑P	Pn	08 24 25.2	-0.4
JYT	Yasato	1.12	309	P	Pn	08 24 27.3	-0.9
JYT				eS	Sn	08 24 41.1	-1.4
JIM2	Oshima 3	1.71	242	P	Pn	08 24 34.9	-1.4
JAG	Ashikaga	1.72	302	P	Pn	08 24 36.3	-0.2
JOD2	Odawara 2	1.80	262	P	Pn	08 24 37.0	-0.6
JFK	Kawauchi	1.86	350	P	Pn	08 24 38.8	+0.3
JFK				eS	Sn	08 25 00.4	-0.7
MAT	Matsushiro	2.68	293	P	Pn	08 24 51.2	+1.5
MAT				eS	Sn	08 25 20.6	-0.5
JHJ	Hachijo jima 2	2.69	207	Pn	Pn	08 24 49.2	-0.6
	37nm,0.3s,baz=70,slow=20,SNR=15						
JHJ				Sn	Sn	08 25 20.0	-1.5
	71nm,0.3s,baz=80,slow=23,SNR=8.3						
JHJ				LR	LR	08 25 21.3	
	comp=Z,305nm,19.8s,baz=91,slow=29						
ASAJ	Asahikawa	8.64	6	Pn	Pn	08 26 10.4	-1.1
	1.1nm,0.3s,baz=249,slow=6.4,SNR=6.4						
ASAJ				Sn	Sn	08 27 43.0	-4.9
	0.3nm,0.3s,baz=336,slow=20,SNR=3.4						
JNU	Nakatsue	8.92	257	Pn	Pn	08 26 14.2	-1.2
	0.2nm,0.3s,baz=265,slow=0.4,SNR=4.0						
JNU				LR	LR	08 28 44.4	
	comp=Z,54nm,18.5s,baz=93,slow=31						
KSRS	Korea Array	10.91	284	LR	LR	08 30 59.5	
	comp=Z,89nm,21.2s,baz=356,slow=38						
SONM	Songino Array	28.55	306	P	P	08 30 03.1	+1.4
	0.3nm,0.5s,baz=87,slow=8.8,SNR=2.9						
ZALV	Zalesovo Beam	42.85	314	P	P	08 32 04.7	+0.9
	0.4nm,0.4s,baz=100,slow=6.0,SNR=2.6						
MKAR	Makanchi Array	44.83	303	P	P	08 32 21.9	+2.1
	0.3nm,0.6s,baz=89,slow=10,SNR=4.7						
ILAR	Eielson Array	50.84	32	P	P	08 33 07.0	+0.9
	0.6nm,0.6s,baz=266,slow=5.8,SNR=8.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	55.35	198	P	P	08 33 39.4	-0.3
	0.9nm,0.6s,baz=32,slow=13,SNR=2.5						
WRA	Warramunga Arr	55.55	188	P	P	08 33 40.6	-0.5
	1.0nm,0.5s,baz=4.1,slow=7.8,SNR=32						
ASAR	Alice Springs	59.28	188	P	P	08 34 07.5	0.0
	0.4nm,0.6s,baz=17,slow=12,SNR=9.9						
YKA	Yellowknife Ar	65.17	30	P	P	08 34 45.0	-1.4
	0.3nm,0.8s,baz=306,slow=6.6,SNR=4.3						
ARCES	ARCESS Array B	65.36	340	P	P	08 34 47.4	-0.2
	2.3nm,0.8s,baz=20,slow=13,SNR=2.9						
NVAR	Mina Array Bea	75.99	53	P	P	08 35 53.4	+0.2
	0.4nm,0.6s,baz=274,slow=9.4,SNR=5.4						
TXAR	Lajitas Array	91.14	52	P	P	08 37 12.5	+1.6
	0.3nm,0.9s,baz=279,slow=6.2,SNR=3.5						

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*AUST **06** 08:34:55.7, 0°.98S×133°.50E, h0km*
*IDC **06** 08:34:57.6±3.1, 1°.18S×133°.02E, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.5/21, mbtmp3.7/4, ML3.7/2, Error ellipse: s-maj=90.4km s-min=28.1km az=86.0*
ISC 06 08:34:59.2±2.7**, 0°.9S**±0°.2×**133°.3E**±0°.3**, h29km, n9, σ1s.52**/11**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.24	208	P	Pn	08 35 34.4	0.0
	baz=2.3,SNR=144						
KDU	Kakadu	11.71	184	P	Pn	08 37 45.5	+1.1
	baz=12,SNR=13						
KDU				S	Sn	08 40 00.9	+6.8
	baz=12,SNR=5.0						
MTN	Manton Dam	12.03	190	P	Pn	08 37 47.5	-1.3
	baz=12,SNR=17						
MTN				S	Sn	08 40 03.4	+1.3
	baz=12,SNR=6.8						
KNRA	Kununurra	15.32	197	P	Pn	08 38 32.6	-1.0
	baz=15,SNR=3.5						
FITZ	Fitzroy Crossi	18.65	203	P	P	08 39 12.8	-2.1
	0.2nm,0.3s,baz=36,slow=12,SNR=4.6						
FITZ	Fitzroy Crossi	18.65	203	P	Pn	08 39 17.8	+2.4
	baz=19,SNR=4.6						
WRA	Warramunga Arr	18.92	177	P	Pn	08 39 17.8	-0.8
	0.2nm,0.3s,baz=353,slow=11,SNR=21						
WRA				S	Sn	08 42 48.8	-1.0
	0.1nm,0.3s,baz=359,slow=23,SNR=3.3						
ASAR	Alice Springs	22.60	179	P	P	08 39 58.0	+0.2
	0.9nm,0.5s,baz=355,slow=10,SNR=13						
STKA	Stephens Creek	31.75	167	P	P	08 41 21.9	+0.9
	2.3nm,0.9s,baz=327,slow=7.1,SNR=2.7						

IDC 06 08:43:57.3±1.9**, 3°.54N×127°.00E, h0km, mb3.4**/4**, mb1 3.7**/4**, mb1mx3.4**/23**, mbtmp3.5**/4**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.8**/22**, Error ellipse: s-maj=105.7km s-min=23.7km az=70.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	11.17	220	LR	LR	08 50 45.0	
	comp=Z,82nm,18.4s,baz=44,slow=36						
FITZ	Fitzroy Crossi	21.55	184	P	P	08 48 49.4	+1.0
	3.2nm,1.1s,baz=344,slow=12,SNR=2.2						
WRA	Warramunga Arr	24.43	163	P	P	08 49 16.6	-1.2
	2.1nm,0.9s,baz=342,slow=11,SNR=19						
ASAR	Alice Springs	27.87	166	P	P	08 49 49.8	+0.8
	0.2nm,0.3s,baz=350,slow=14,SNR=3.9						
MKAR	Makanchi Array	57.86	325	P	P	08 53 50.8	-0.2
	0.1nm,0.4s,baz=120,slow=8.5,SNR=3.7						
MKAR				LR	LR	09 19 08.2	
	comp=Z,34nm,19.1s,baz=180,slow=36						

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*ISCJB **06** 08:47:55.9±0.6, 39°.47N±0°.05×28°.18E±0°.04, h11km, Error ellipse: s-maj=7.2km s-min=4.0km az=23.3*
*ISK **06** 08:47:55.7, 39°.46N×28°.15E, h19km, MD2.9*
*CSEM **06** 08:47:55.9±0.1, 39°.46N×28°.17E, h15km, MD2.9, Error ellipse: s-maj=4.3km s-min=2.6km az=29.0*
*DDA **06** 08:47:57.0, 39°.49N×28°.18E, h7km, MD2.9*
ISC 06 08:47:55.6±0.9**, 39°.46N**±0°.04×**28°.18E**±0°.03**, h11km, n32, σ0s.53**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DURS	Dursunbey	0.27	59	*i* P	Pg	08 48 02.1	+0.9
DURS				*i* S	Sb	08 48 06.3	-0.9
DURS	Dursunbey	0.27	59	*i* P	Pg	08 48 02.1	+0.9
DURS				*i* S	Sb	08 48 06.3	-0.9
BALB	Balikesir	0.29	308	*e*PG	Pg	08 48 02.1	+0.6
BALB				*e*SG	Sb	08 48 07.3	-0.4
BALB	Balikesir	0.29	308	*e*Pg	Pg	08 48 02.1	+0.6
BALB				*e*Sg	Sb	08 48 07.3	-0.4
BALY	Balya	0.51	303	*i* P	Pg	08 48 05.6	0.0
BALY				*i* S	Sb	08 48 15.4	+1.2
BALY	Balya	0.51	303	*i* P	Pg	08 48 05.6	0.0
BALY				*i* S	Sb	08 48 15.4	+1.2
DEMI	Demirci	0.59	135	*i* P	Pb	08 48 08.3	+0.2
DEMI				*i* S	Sn	08 48 18.9	-0.9
DEMI	Demirci	0.59	135	*i* P	Pb	08 48 08.3	+0.2
GONE	Gonen-Balikesi	0.69	327	*e*PG	Pg	08 48 09.4	+0.4
GONE	Gonen-Balikesi	0.69	327	*e*Pg	Pg	08 48 09.5	+0.4
ORLT	Orhaneli	0.81	43	*e*PG	Pn	08 48 12.6	-0.4
ORLT	Orhaneli	0.81	43	*e*Pg	Pn	08 48 12.6	-0.4
TVSB	Tavsanli	1.00	90	*e*PG	Pb	08 48 15.4	+0.5
TVSB	Tavsanli	1.00	90	*e*Pg	Pb	08 48 15.5	+0.5
KULA	Kula-Manisa	1.02	158	*e*PG	Pg	08 48 15.5	+0.2
KULA	Kula-Manisa	1.02	158	*e*Pg	Pg	08 48 15.5	+0.2
MDNY	Mudanya-Bursa	1.06	31	*e*PG	Pb	08 48 16.1	+0.1
MDNY	Mudanya-Bursa	1.06	31	*e*Pg	Pb	08 48 16.1	+0.1
KRBG	Karabiga-Canak	1.15	324	*e*PN	Pb	08 48 17.1	-0.3
KRBG	Karabiga-Canak	1.15	324	*e*Pn	Pb	08 48 17.2	-0.3
ARMT	Armutlu	1.22	25	*e*PN	Pn	08 48 18.5	-0.2
ARMT	Armutlu	1.22	25	*e*Pn	Pn	08 48 18.5	-0.2
MRMT	Marmara Adasi	1.22	339	*e*PN	Pn	08 48 18.5	-0.3
MRMT	Marmara Adasi	1.22	339	*e*Pn	Pn	08 48 18.5	-0.3
IZI	Iznik	1.33	48	*e*PN	Pn	08 48 20.1	-0.1
IZI	Iznik	1.33	48	*e*Pn	Pn	08 48 20.1	-0.1
LPK	Lapseki	1.42	310	*e*PN	Pn	08 48 21.2	-0.2
LPK	Lapseki	1.42	310	*e*Pn	Pn	08 48 21.2	-0.2
RKY	Sarkoy-Tekirda	1.44	328	*e*PN	Pn	08 48 21.8	0.0
RKY	Sarkoy-Tekirda	1.44	328	*e*Pn	Pn	08 48 21.8	0.0
GELI	Tayfur-Gelibol	1.61	306	*e*PN	Pn	08 48 23.7	-0.3
GELI	Tayfur-Gelibol	1.61	306	*e*Pn	Pn	08 48 23.7	-0.3

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*IDC **06** 08:55:57.3±4.2, 12°.11N×89°.07W, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.5/23, mbtmp3.6/4, ML4.1/1, Error ellipse: s-maj=67.1km s-min=57.5km az=150.0*
*ISCJB **06** 08:56:11.8±1.8, 13°.04N±0°.09×89°.64W±0°.06, h30km±8km, mb3.6/2, Error ellipse: s-maj=15.8km s-min=8.0km az=19.7*
*CASC **06** 08:56:12.6±2.1, 13°.06N×89°.55W, h24km±7km, MD3.7*
ISC 06 08:56:13.8±2.1**, 13°.1N**±0°.1×**89°.54W**±0°.09**, h50km**±18km**, n16, σ1s.48**/21**, 1C-4D, El Salvador**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SNET	Serv Nac Est T	0.65	28	*e*P	Pn	08 56 26.1	-0.9
SNET				*e*S	Sn	08 56 36.1	-0.3
BOQS	Boqueron	0.67	22	⇑*i*P	Pn	08 56 26.7	-0.7
BOQS				*e*S	Sn	08 56 37.0	-0.2
LFRS	El Faro	0.69	43	⇓*i*P	Pn	08 56 27.1	-0.5
LBRS	Las Brisas	0.79	38	⇓*i*P	Pn	08 56 28.6	-0.2
SNVI	San Vicente	0.84	54	*e*P	Pn	08 56 29.5	-0.1
RBDL	Robledal	1.00	352	⇓*i*P	Pn	08 56 30.8	-1.0
VSM	San Miguel	1.27	76	*e*P	Pn	08 56 36.1	+0.6
VSM				*e*S	Sn	08 56 53.8	+2.1
MTO2	Montecristo 2	1.29	8	⇓*i*P	Pn	08 56 35.2	-0.6
NBG	Las Nubes	1.66	332	*e*P	Pn	08 56 41.1	+0.3
NBG				*e*S	Sn	08 57 05.5	+4.4
CNCH	Conchagua	1.67	84	*e*P	Pn	08 56 41.4	+0.6
CNCH				*e*S	Sn	08 57 01.6	+0.4
FUG	Fuego 3	1.83	317	*e*P	Pn	08 56 42.3	-0.8
MRL	Marmol	1.95	356	*e*P	Pn	08 56 45.4	+0.8
MRL				*e*S	Sn	08 57 09.2	+1.2
TEIG	Tepich	7.18	10	Pn	Pn	08 57 56.8	+0.6
	2.6nm,0.3s,baz=141,slow=6.5,SNR=32						
TEIG				Sn	Sn	08 59 30.2	+14
	0.1nm,0.3s,baz=127,slow=5.0,SNR=2.3						
TXAR	Lajitas Array	20.79	323	P	P	09 00 51.9	+0.9
	0.3nm,0.4s,baz=144,slow=11,SNR=11						
SCHQ	Schefferville	45.26	18	P	P	09 04 23.3	-3.0
	0.9nm,0.7s,baz=252,slow=9.6,SNR=3.4						
YKA	Yellowknife Ar	52.45	346	P	P	09 05 18.8	-2.4
	0.3nm,0.5s,baz=131,slow=7.7,SNR=5.1						

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*IDC **06** 08:59:37.3±0.8, 4°.13S×129°.63E, h0km, mb4.1/9, mb1 4.2/11, mb1mx4.0/23, mbtmp4.1/11, ML3.9/2, MS3.3/3, Ms1 3.3/3, ms1mx2.7/40, Error ellipse: s-maj=56.2km s-min=15.9km az=63.0*
*ISCJB **06** 08:59:39.8±0.4, 4°.20S±0°.04×129°.72E±0°.04, h36km, mb4.2/11, MS3.9/1, Error ellipse: s-maj=6.4km s-min=4.7km az=141.1*
*DJA **06** 08:59:41.1±0.9, 4°S±4°×13°0E±°, h19km±11km, M4.4/6, mb4.9/3, mB5.7/1, MLv4.2/6, Mw(mB)5.2/1*
*NEIC **06** 08:59:41.9±0.6, 4°.26S×129°.67E, h35km, mb4.5/6, Error ellipse: s-maj=21.9km s-min=8.6km az=60.0*
ISC 06 08:59:41.9±0.6**, 4°.20S**±0°.06×**129°.72E**±0°.05**, h36km, n39, σ1s.42**/43**, mb4.1**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSAI	Masohi	1.16	317	P	Pn	08 59 59.2	-2.3
MSAI				S	Sn	09 00 14.3	-1.8
NLAI	Namlea	2.78	290	P	Pn	09 00 24.3	+0.4
FAKI	Fak Fak	2.83	63	P	Pn	09 00 24.5	0.0
FAKI				S	Sn	09 00 57.6	+0.2
LBMI	Labuha	4.17	328	P	Pn	09 00 43.6	+0.5
LBMI				S	Sn	09 01 29.4	-1.2
RKPI	Ransiki, Papua	5.19	59	P	Pn	09 00 56.7	-0.4
	305nm,0.8s,7μm1.8nm						
RKPI				S	Sn	09 01 54.3	-1.4
	305nm,0.8s,7μm1.8nm						
TNTI	Ternate	5.47	334	P	Pn	09 00 59.8	-1.1
	61nm,1.2s,0.3nm						
KAPI	Kappang	9.97	265	LR	LR	09 05 49.3	
	comp=Z,95nm,21.5s,baz=300,slow=38						
FITZ	Fitzroy Crossi	14.39	196	Pn	Pn	09 03 02.2	-0.9
FITZ	Fitzroy Crossi	14.39	196	Pn	Pn	09 03 02.2	-0.9
	0.2nm,0.3s,baz=350,slow=18,SNR=4.9						
FITZ				LR	LR	09 08 04.6	
	comp=Z,94nm,19.3s,baz=31,slow=35						
WRAB	Tennant Creek	16.28	164	*e*P	Pn	09 03 24.4	-3.5
	10nm,0.9s						
WRA	Warramunga Arr	16.29	164	Pn	Pn	09 03 24.8	-3.3
WRA				Sn	Sn	09 06 24.7	-3.0
WRA	Warramunga Arr	16.29	164	Pn	Pn	09 03 24.8	-3.3
	0.4nm,0.3s,baz=338,slow=13,SNR=22						
WRA				Sn	Sn	09 06 24.7	-3.0
	0.3nm,0.3s,baz=347,slow=22,SNR=3.8						
COEN	Coen	16.44	127	*e*P	Pn	09 03 29.5	-0.5
	98nm,1.1s						
AS31	Alice Springs	19.77	169	*e*P	Pn	09 04 10.4	-0.4
ASAR	Alice Springs	19.77	169	P	Pn	09 04 10.3	-0.5
ASAR	Alice Springs	19.77	169	P	Pn	09 04 10.3	-0.5
	0.9nm,0.3s,baz=349,slow=12,SNR=47						
KSM	Kuching	20.20	286	*e*P	P	09 04 14.5	+0.8
	21nm,1.0s						
CTA	Charters Tower	22.56	136	P	P	09 04 40.1	+0.9
CTA	Charters Tower	22.56	136	P	P	09 04 40.1	+0.9
	3.6nm,0.6s,baz=311,slow=12,SNR=8.8						
CTAO	Charters Tower	22.56	136	*e*P	P	09 04 40.0	+0.8
	5.4nm,0.8s						
STKA	Stephens Creek	29.71	159	P	P	09 05 46.5	+1.9
STKA	Stephens Creek	29.71	159	P	P	09 05 46.5	+1.9
	1.0nm,0.4s,baz=315,slow=7.1,SNR=2.4						
CMAR	Chiang Mai Arr	37.77	308	P	P	09 06 55.0	+0.1
CMAR	Chiang Mai Arr	37.77	308	P	P	09 06 55.0	+0.1
	1.6nm,0.6s,baz=134,slow=7.1,SNR=6.4						
SONM	Songino Array	55.71	341	P	P	09 09 16.1	+1.1
SONM	Songino Array	55.71	341	P	P	09 09 16.1	+1.1
	1.8nm,1.0s,baz=156,slow=5.2,SNR=7.8						
MK31	Makanchi Array	65.75	326	*e*P	P	09 10 22.9	-0.3
MKAR	Makanchi Array	65.75	326	P	P	09 10 23.4	+0.2
MKAR	Makanchi Array	65.75	326	P	P	09 10 23.4	+0.2
	1.6nm,0.5s,baz=118,slow=8.0,SNR=28						
ZALV	Zalesovo Beam	68.96	333	P	P	09 10 43.2	-0.1
ZALV	Zalesovo Beam	68.96	333	P	P	09 10 43.2	-0.1
	0.7nm,0.5s,baz=129,slow=4.0,SNR=4.4						
KURBB	Kurchatov Arra	69.99	328	P	P	09 10 50.0	+0.3
	2.8nm,0.6s,baz=128,slow=5.7,SNR=24						
KURK	Kurchatov	70.00	328	*e*P	P	09 10 49.4	-0.4
	6.7nm,0.9s						
BVAR	Borovoye Array	75.56	328	P	P	09 11 22.9	+0.1
BVAR	Borovoye Array	75.56	328	P	P	09 11 22.9	+0.1
	1.0nm,0.5s,baz=116,slow=8.4,SNR=5.8						
ABKAR	Akbulak array	80.16	321	*e*P	P	09 11 48.5	+0.1
	6.5nm,0.7s						
AKTO	Aktyubinsk	81.70	322	P	P	09 11 56.7	+0.1
AKTO	Aktyubinsk	81.70	322	P	P	09 11 56.7	+0.1
	1.8nm,0.7s,baz=118,slow=3.6,SNR=4.2						
KDAK	Kodiak Island	86.99	32	LR	LR	09 49 52.0	
	comp=Z,42nm,18.8s,baz=287,slow=35						

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*IDC **06** 09:08:19.8±0.6, 34°.93N×73°.12E, h0km, mb4.2/18, mb1 4.3/23, mb1mx4.2/31, mbtmp4.2/23, ML4.1/5, MS3.5/7, Ms1 3.5/7, ms1mx3.0/38, Error ellipse: s-maj=14.7km s-min=13.6km az=70.0*
*NDI **06** 09:08:23.0±2.4, 34°.94N×73°.01E, h10km, ML4.4, mb4.3(NEIC)*
*ISCJB **06** 09:08:24.3±0.4, 34°.97N±0°.02×73°.30E±0°.04, h44km±5km, mb4.3/37, MS3.7/8, Error ellipse: s-maj=5.4km s-min=3.0km az=157.7*
*MOS **06** 09:08:25.6±0.9, 34°.98N×73°.17E, h53km, mb4.6/23, Error ellipse: s-maj=11.8km s-min=6.2km az=90.0*
*NNC **06** 09:08:27.8±2.5, 35°.45N×72°.33E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=19.7km s-min=15.6km az=33.0*
*NEIC **06** 09:08:28.5±0.8, 35°.01N×73°.16E, h66km±6km, mb4.3/5, Error ellipse: s-maj=7.1km s-min=5.1km az=161.0*
*BJI **06** 09:08:33.0, 35°.09N×74°.03E, h69km, mB4.7/11, mb4.6/22, ML4.0/3, Ms4.1/11, Ms7 3.8/10*
ISC 06 09:08:28.1±0.5**, 34°.99N**±0°.04×**73°.23E**±0°.04**, h65km**±4km**, n145, σ1s.60**/160**, mb4.4**/37**, 15C-6D, Pakistan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	1.33	179	⇑P	Pn	09 08 46.9	-3.9
CEP	Cherat	1.60	224	⇑P	Pn	09 08 50.7	-3.7
THW	Thamme Wali	2.52	210	⇓P	Pn	09 09 05.0	-1.8
JMU	Jammu	2.66	148	*i* P	Pn	09 09 04.5	-4.1
JMU				*i* S	Sn	09 09 35.5	-4.2
SARP	Sargodha	3.10	189	⇓P	Pn	09 09 12.4	-2.2
SARP				S	Sn	09 09 50.0	-0.5
THN	Thein Dam	3.29	140	*i* P	Pn	09 09 14.0	-3.2
THN				*e*S	Sn	09 09 53.0	-2.1
KBL	Kabul	3.48	264	*e*P	Pn	09 09 19.4	-0.6
KBL				*e*		09 10 02.5	
KBL	Kabul	3.48	264	*e*Pn	Pn	09 09 19.4	-0.6
KBL				*e*Sn	Sn	09 10 02.5	+2.4
DHRM	DHARAMSHALA	3.75	136	*e*PKP	Pn	09 09 23.1	-0.6
DHRM				*e*S	Sn	09 10 07.1	+0.4
SDNR	Sundarnagar	4.68	137	*e*PKP	Pn	09 09 34.5	-1.8
SDNR				*e*S	Sn	09 10 26.5	-2.9
KSH	Kashi	5.02	25	P	Pn	09 09 38.1	-2.9
KSH				S	Sn	09 10 30.7	-7.0
KSH				LR	LR		
	comp=Z,3μm,7.8s						
SMLA	Simla	5.08	138	*i* P	Pn	09 09 40.9	-0.7
SMLA				*i* S	Sn	09 10 37.3	-1.6
SMLA				AML	AML	09 11 09.5	
	comp=E,1μm,0.5s						
SMLA				AML	AML	09 11 12.2	
	comp=N,1μm,0.4s						
DDI	Dehra Dun	6.18	138	*e*PKP	Pn	09 09 55.4	-1.5
DDI				*e*PKP		09 09 56.0	
DDI				*e*x	x	09 10 59.0	
DDI				*e*S	Sn	09 11 03.4	-2.8
NDI	New Delhi	7.14	151	*e*x	Pn	09 10 04.0	-6.0
NDI				*e*S	Sn	09 11 23.0	-6.7
EKS2	Erkin-Say	7.67	3	*e*P	Pn	09 10 17.9	+0.7
EKS2				*e*		09 11 44.7	
EKS2	Erkin-Say	7.67	3	*e*Pn	Pn	09 10 17.9	+0.7
EKS2				*e*Sn	Sn	09 11 44.7	+2.0
AAK	Ala-Archa	7.69	7	P	Pn	09 10 17.6	0.0
AAK						09 11 43.9	
AAK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AAK				smax	smax		
	comp=N,2.0nm,0.3s						
AAK				MLR	MLR		
	comp=Z,317nm,19.6s						
AAK	Ala-Archa	7.69	7	Pn	Pn	09 10 17.6	0.0
AAK				Sn	Sn	09 11 43.9	+0.6
AAK				*e*Sn	Sn	09 11 44.6	+1.1
AAK	Ala-Archa	7.69	7	Pn	Pn	09 10 17.6	0.0
	comp=Z,1.7nm,0.3s,baz=184,slow=6.7,SNR=8.4						
AAK				Sn	Sn	09 11 43.9	+0.6
	comp=Z,2.1nm,0.3s,baz=96,slow=23,SNR=6.0						
AAK				LR	LR	09 13 26.9	
	comp=Z,316nm,19.6s,baz=163,slow=40						
FRU	Bishkek	7.90	7	*e*P	Pn	09 10 23.0	+2.6
LGTI	Lohaghat	8.11	131	*e*PKP9	x	09 10 33.1	
LGTI				*e*S	Sn	09 11 59.2	+5.8
TKM2	Tokmak 2	8.13	12	⇓P	Pn	09 10 24.8	+1.3
	comp=Z,7.4nm,0.8s						
TKM2				⇑S	Sn	09 11 53.9	-0.2
	comp=Z,42nm,0.8s						
TKM2	Tokmak 2	8.13	12	*e*P	Pn	09 10 24.9	+1.3
TKM2				*e*		09 11 53.5	
TKM2	Tokmak 2	8.13	12	*e*Pn	Pn	09 10 24.9	+1.3
TKM2				*e*Sn	Sn	09 11 53.5	-0.5
KK31	Karatay Array	8.37	346	⇑P	Pn	09 10 24.6	-2.1
	comp=Z,7.9nm,0.3s,baz=157,slow=12,SNR=277						
KK31				S	Sn	09 11 51.4	-8.3
	comp=Z,41nm,0.8s,baz=158,slow=23,SNR=10						
KKAR	Karatay Array	8.37	346	*e*P	Pn	09 10 26.3	-0.4
KKAR				*e*		09 12 00.3	
KKAR	Karatay Array	8.37	346	*e*Pn	Pn	09 10 26.3	-0.4
KKAR				*e*Sn	Sn	09 12 00.3	+0.6
AJM	Ajmer	8.57	171	*i* x	Pn	09 10 26.0	-3.6
AJM				*i* S	Sn	09 11 57.0	-7.8
PYUN	Piuthan	10.79	127	*e*P	Pn	09 10 57.1	-2.9
	comp=Z,115nm,0.4s						
PYUN				*e*S	Sn	09 12 51.4	-7.8
DANN	Dangsing	11.14	124	*e*P	Pn	09 11 00.4	-4.5
DANN				*e*S	Sn	09 12 59.7	-8.3
KOLN	Koldanda	11.41	126	*e*P	Pn	09 11 04.9	-3.6
	comp=Z,43nm,0.3s						
BHPL	Bhopal	12.27	162	*e*x	Pn	09 11 13.8	-6.3
BHPL				*e*S	Sn	09 13 24.0	-11
BHPL				AML	AML	09 13 28.5	
	comp=N,42nm,1.0s						
BHPL				AML	AML	09 13 28.9	
	comp=E,65nm,0.5s						
DMN	Daman	12.53	123	*e*P	Pn	09 11 19.5	-4.4
	comp=E,54nm,0.5s						
DMN				*e*S	Sn	09 13 31.9	-10
KKN	Kakani	12.54	122	*e*P	Pn	09 11 19.6	-4.4
	comp=E,50nm,0.5s						
PKIN	Phulchoki	12.76	122	*e*P	Pn	09 11 22.4	-4.5
PKI	Pulchoki	12.77	122	*e*P	Pn	09 11 22.9	-4.2
PKI				*e*S	Sn	09 13 37.3	-10
GUN	Gumba	12.89	120	*e*P	Pn	09 11 23.6	-5.2
	comp=E,43nm,0.4s						
JBP	Jabalpur	13.17	152	*e*PKP	Pn	09 11 31.1	-1.2
JBP				*e*x	x	09 13 40.3	
MK31	Makanchi Array	13.62	27	⇑P	Pn	09 11 40.2	+2.0
	comp=E,4.5nm,0.8s,baz=220,slow=17,SNR=20						
MK31	Makanchi Array	13.62	27	*e*P	Pn	09 11 38.8	+0.5
MK31	Makanchi Array	13.62	27	*e*Pn	Pn	09 11 38.8	+0.5
MKAR	Makanchi Array	13.62	27	P	Pn	09 11 36.4	-1.9
MKAR	Makanchi Array	13.62	27	*e*Pn	Pn	09 11 38.5	+0.3
MKAR	Makanchi Array	13.62	27	Pn	Pn	09 11 36.4	-1.9
	comp=E,0.3nm,0.3s,baz=217,slow=17,SNR=6.7						
RAMN	Ramite	13.98	121	*e*P	Pn	09 11 37.8	-5.6
	comp=E,73nm,0.5s						
WMQ	Urumqi	14.22	47	*e*P	P	09 11 49.3	-2.4
WMQ				pP	pP	09 12 00.5	
WMQ				sP		09 12 11.3	
WMQ				*e*S	Sn	09 14 25.5	+3.0
WMQ				pmax	pmax		
	comp=Z,11nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,110nm,4.4s						
WMQ				LR	LR		
	comp=N,400nm,12.0s						
WMQ				LR	LR		
	comp=E,440nm,9.6s						
WMQ				LR	LR		
	comp=Z,380nm,13.0s						
TAPN	Taplejung	14.54	118	*e*P	Pn	09 11 45.2	-5.5
	comp=Z,29nm,0.3s						
ODAN	Odare	14.60	120	*e*P	Pn	09 11 46.4	-5.0
	comp=Z,35nm,0.4s						
AKL	Akola	14.62	166	*e*PKP	Pn	09 11 47.0	-4.5
AKL				*e*x	x	09 14 19.1	
NGP	Nagpur	14.71	158	*e*x	Pn	09 11 43.8	-8.9
NGP				*e*x	x	09 14 18.5	
BOK	Bokaro	15.67	132	*e*S	Sn	09 14 44.8	-13
KURBB	Kurchatov Arra	16.09	12	P	Pn	09 12 10.3	+0.2
KURBB	Kurchatov Arra	16.09	12	Pn	Pn	09 12 07.4	-2.7
	comp=Z,0.1nm,0.3s,baz=200,slow=11,SNR=3.6						
KURK	Kurchatov	16.20	12	⇑P	Pn	09 12 11.3	-0.1
	comp=Z,9.8nm,1.0s						
KURK	Kurchatov	16.20	12	P	Pn	09 12 07.4	-4.0
KURK	Kurchatov	16.20	12	*e*Pn	Pn	09 12 12.2	+0.8
POO	Poona	16.41	178	*e*PKP	Pn	09 12 11.0	-3.3
LATR	Latur	16.77	169	*e*S	Sn	09 15 08.2	-16
AB31	Akbulak array	17.29	330	P	Pn	09 12 21.0	-4.0
	comp=Z,2.9nm,0.6s,baz=139,slow=12,SNR=14						
AB31				S	Sn	09 15 24.3	-12
	comp=Z,6.2nm,0.8s,baz=147,slow=23,SNR=8.8						
ABKAR	Akbulak array	17.29	330	*e*Pn	Pn	09 12 24.6	-0.4
	comp=Z,2.5nm,0.5s						
ABKAR				*e*Sn	Sn	09 15 26.5	-10
VOSK	Vostochnaya	17.80	356	⇓P	P	09 12 29.4	-1.7
	comp=Z,5.5nm,0.9s						
VOSK				⇑S	Sn	09 15 44.2	-4.6
	comp=Z,3.1nm,1.1s						
BVA0	Borovoye Array	18.14	354	P	P	09 12 34.4	-0.5
	comp=Z,6.3nm,0.5s,baz=169,slow=11,SNR=17						
BVA0				⇑S	Sn	09 15 54.2	-2.9
	comp=Z,3.8nm,1.1s						
BVAR	Borovoye Array	18.14	354	P	P	09 12 33.4	-1.5
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR				MLR	MLR		
	comp=Z,182nm,19.2s						
BVAR	Borovoye Array	18.14	354	P	P	09 12 33.4	-1.5
BVAR	Borovoye Array	18.14	354	P	P	09 12 33.4	-1.5
	comp=Z,1.9nm,0.3s,baz=170,slow=10,SNR=20						
BVAR				LR	LR	09 19 49.2	
	comp=Z,182nm,19.2s,baz=96,slow=38						
BRVK	Borovoye	18.18	354	⇑P	P	09 12 34.3	-1.1
	comp=Z,18nm,0.7s						
BRVK				⇑S	Sn	09 15 53.0	-5.0
	comp=Z,6.5nm,1.1s						
BRVK	Borovoye	18.18	354	*e*P	P	09 12 35.2	-0.2
BRVK				pmax	pmax		
	comp=Z,12nm,0.7s						
BRVK	Borovoye	18.18	354	*e*P	P	09 12 35.2	-0.2
	comp=Z,12nm,0.7s						
ZRNK	Zerenda	18.20	352	⇑P	P	09 12 35.1	-0.5
	comp=Z,12nm,0.8s						
ZRNK				⇑S	Sn	09 15 53.4	-5.2
	comp=Z,3.0nm,1.0s						
AKTO	Aktyubinsk	19.00	329	⇓P	P	09 12 42.4	-1.9
	comp=Z,14nm,0.6s						
AKTO				⇑S	S	09 16 07.0	-9.4
	comp=Z,5.6nm,0.9s						
AKTO	Aktyubinsk	19.00	329	P	P	09 12 44.1	-0.3
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKTO				MLR	MLR		
	comp=Z,66nm,22.0s						
AKTO	Aktyubinsk	19.00	329	P	P	09 12 44.0	-0.3
AKTO	Aktyubinsk	19.00	329	P	P	09 12 44.0	-0.3
	comp=Z,2.9nm,0.3s,baz=130,slow=12,SNR=36						
AKTO				LR	LR	09 20 32.1	
	comp=Z,66nm,22.0s,baz=153,slow=38						
ZAA0	Zalesovo Array	20.63	20	*e*P	P	09 13 01.6	-0.4
ZALV	Zalesovo Beam	20.63	20	P	P	09 13 01.6	-0.4
ZALV				pmax	pmax		
	comp=Z,11nm,0.4s						
ZALV				MLR	MLR		
	comp=Z,125nm,18.5s						
ZALV	Zalesovo Beam	20.63	20	P	P	09 13 01.6	-0.4
ZALV	Zalesovo Beam	20.63	20	P	P	09 13 01.6	-0.4
	comp=Z,11nm,0.4s,baz=212,slow=10,SNR=54						
ZALV				LR	LR	09 21 46.0	
	comp=Z,125nm,18.5s,baz=254,slow=39						
NVS	Novosibirsk	21.03	16	⇑*i*P	P	09 13 04.1	-2.2
NVS				*e*S	S	09 16 48.6	-8.1
NVS				pmax	pmax		
	comp=Z,30nm,1.7s						
NVS				pmax	pmax		
	comp=N,21nm,1.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NVS				pmax	pmax		
	comp=E,3.0nm,0.8s						
NVS				smax	smax		
	comp=N,18nm,1.5s						
NVS				smax	smax		
	comp=E,8.0nm,1.3s						
GTA	**Gaotai**	**21.60**	**70**	*e*P	**P**	**09 13 13.2**	**+0.5**
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GNI	**Garni**	**23.11**	**291**	P	**P**	**09 13 28.6**	**-0.1**
	comp=Z,14nm,0.8s						
SVE	**Sverdlovsk**	**23.46**	**342**	⇓*e*P	**P**	**09 13 32.1**	**+0.5**
SVE				pmax	pmax		
	comp=Z,12nm,0.7s						
ARU	**Arti**	**23.66**	**339**	*c i*P	**P**	**09 13 34.0**	**+0.5**
ARU				S	**S**	**09 17 41.5**	**-1.7**
ARU				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LZH	**Lanzhou**	**24.89**	**79**	*e*P	**P**	**09 13 45.0**	**0.0**
LZH				pP	**pP**	**09 14 01.2**	**+0.6**
LZH				sP	**sP**	**09 14 10.0**	**+1.6**
LZH				*e*PP	**PnPn**	**09 14 25.6**	**+4.8**
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,45nm,4.1s						
LZH				LR	LR		
	comp=N,380nm,12.0s						
LZH				LR	LR		
	comp=E,370nm,12.3s						
LZH				LR	LR		
	comp=Z,450nm,15.0s						
CD2	**Chengdu**	**25.89**	**90**	*e*P	**P**	**09 13 55.0**	**+1.0**
CD2				pP	**pP**	**09 14 11.0**	**+1.4**
CD2				sP	**sP**	**09 14 19.5**	**+2.2**
CD2				PP	**PnPn**	**09 14 38.2**	**+3.8**
CD2				S	**S**	**09 18 18.0**	**-1.3**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,100nm,5.2s						
CD2				LR	LR		
	comp=E,140nm,13.2s						
CD2				LR	LR		
	comp=Z,110nm,13.1s						
ZAK	**Zakamensk**	**26.68**	**46**	*e*P	**P**	**09 14 01.6**	**+0.6**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	**Songino Array**	**27.76**	**52**	P	**P**	**09 14 12.4**	**+1.7**
SONM	**Songino Array**	**27.76**	**52**	P	**P**	**09 14 12.4**	**+1.7**
	comp=Z,0.8nm,0.5s,baz=255,slow=10,SNR=7.8						
SONM				LR	LR	09 26 57.8	
	comp=Z,159nm,19.8s,baz=54,slow=40						
CMAR	**Chiang Mai Arr**	**28.14**	**119**	P	**P**	**09 14 14.2**	**0.0**
CMAR	**Chiang Mai Arr**	**28.14**	**119**	P	**P**	**09 14 14.2**	**0.0**
	comp=Z,1.3nm,0.4s,baz=319,slow=11,SNR=3.9						
ULN	**Ulaanbaatar**	**28.19**	**52**	*e*P	**P**	**09 14 14.9**	**+0.2**
	comp=Z,2.2nm,0.3s						
GYA	**Guiyang**	**29.86**	**97**	*e*P	**P**	**09 14 31.2**	**+1.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**30.62**	**67**	*e*P	**P**	**09 14 36.4**	**+0.2**
HHC				pP	**pP**	**09 14 52.2**	**+0.2**
HHC				sP	**sP**	**09 15 00.7**	**+1.0**
HHC				PP	**PnPn**	**09 15 40.3**	**+2.4**
HHC				S	**S**	**09 19 33.6**	**-0.2**
HHC				pmax	pmax		
	comp=Z,22nm,0.7s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
HHC				LR	LR		
	comp=N,260nm,14.3s						
HHC				LR	LR		
	comp=E,240nm,14.3s						
HHC				LR	LR		
	comp=Z,120nm,13.1s						
BJI	**Beijing**	**34.19**	**69**	P	**P**	**09 15 06.2**	**-1.0**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AKASG	**Malin Array Be**	**35.30**	**310**	P	**P**	**09 15 16.0**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**35.30**	**310**	P	**P**	**09 15 16.0**	**-0.7**
AKASG	**Malin Array Be**	**35.30**	**310**	P	**P**	**09 15 16.0**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=80,slow=7.1,SNR=5.5						
JOF	**Joensuu**	**38.08**	**330**	*e*p	**P**	**09 15 39.8**	**-0.3**
	comp=Z,17nm,0.5s						
JOF	**Joensuu**	**38.08**	**330**	*e*P	**P**	**09 15 39.8**	**-0.3**
JOF				pmax	pmax		
	comp=Z,17nm,0.5s						
FINES	**FINESS Array B**	**39.74**	**327**	P	**P**	**09 15 54.3**	**+0.3**
FINES	**FINESS Array B**	**39.74**	**327**	P	**P**	**09 15 54.3**	**+0.3**
	comp=Z,7.6nm,0.6s,baz=111,slow=10,SNR=22						
KAF	**Kangasniemi**	**39.87**	**328**	*e*p	**P**	**09 15 53.8**	**-1.3**
	comp=Z,3.3nm,0.5s						
KAF	**Kangasniemi**	**39.87**	**328**	*e*P	**P**	**09 15 53.8**	**-1.3**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
CN2	**Changchun**	**40.71**	**61**	*e*P	**P**	**09 16 02.8**	**+0.5**
KEV	**Kevo**	**42.87**	**338**	*e*p	**P**	**09 16 19.2**	**-0.3**
	comp=Z,5.7nm,0.7s						
KEV	**Kevo**	**42.87**	**338**	*e*P	**P**	**09 16 19.2**	**-0.3**
KEV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARCES	**ARCESS Array B**	**43.23**	**338**	P	**P**	**09 16 22.6**	**+0.2**
ARCES	**ARCESS Array B**	**43.23**	**338**	P	**P**	**09 16 22.6**	**+0.2**
	comp=Z,6.0nm,0.5s,baz=117,slow=9.6,SNR=62						
ARCES				LR	LR	09 35 40.7	
	comp=Z,139nm,18.9s,baz=121,slow=38						
MDJ	**Mudanjiang**	**43.58**	**60**	P	**P**	**09 16 26.7**	**+1.1**
MDJ				pP	**pP**	**09 16 42.0**	**0.0**
MDJ				sP	**sP**	**09 16 49.2**	**-0.4**
MDJ				ScP	**ScP**	**09 21 59.4**	**+1.4**
MDJ				PcS	**PcS**	**09 22 06.1**	**+1.2**
MDJ				S	**S**	**09 22 52.1**	**+2.0**
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MDJ				LR	LR		
	comp=N,43nm,13.9s						
MDJ				LR	LR		
	comp=E,71nm,19.4s						
MDJ				LR	LR		
	comp=Z,78nm,15.1s						
KSAR	**Wonju Array Be**	**43.64**	**70**	P	**P**	**09 16 27.6**	**+1.3**
KSRS	**Korea Array**	**43.67**	**70**	P	**P**	**09 16 27.6**	**+1.1**
	comp=Z,2.1nm,0.5s,baz=280,slow=7.5,SNR=8.0						
NB2	**NORSAR Subarra**	**46.67**	**324**	P	**P**	**09 16 49.5**	**-0.4**
	comp=Z,3.1nm,0.6s,baz=96,slow=7.9						
NOA	**NORSAR Array B**	**46.67**	**324**	P	**P**	**09 16 49.5**	**-0.4**
NOA	**NORSAR Array B**	**46.67**	**324**	P	**P**	**09 16 49.5**	**-0.4**
	comp=Z,2.9nm,0.6s,baz=96,slow=7.7,SNR=16						
NOA				LR	LR	09 37 31.3	
	comp=Z,34nm,19.6s,baz=90,slow=38						
KMBO	**Kilima Mbogo**	**49.22**	**231**	P	**P**	**09 17 11.2**	**+0.7**
KMBO	**Kilima Mbogo**	**49.22**	**231**	P	**P**	**09 17 11.2**	**+0.7**
	comp=Z,0.9nm,0.5s,baz=39,slow=17,SNR=2.8						
LPL	**La Plagne**	**50.50**	**303**	*e*P	**P**	**09 17 20.8**	**+1.0**
	comp=Z,8.0nm,0.9s						
LPL	**La Plagne**	**50.50**	**303**	*e*P	**P**	**09 17 20.8**	**+1.0**
LPL				pmax	pmax		
	comp=Z,8.0nm,0.9s						
LPL	**La Plagne**	**50.50**	**303**	*e*P	**P**	**09 17 20.8**	**+1.0**
	comp=Z,8.0nm,0.9s						
CABF	**La Chapelle**	**50.70**	**305**	*e*P	**P**	**09 17 22.0**	**+0.9**
	comp=Z,12nm,0.8s						
CABF	**La Chapelle**	**50.70**	**305**	*e*P	**P**	**09 17 22.0**	**+0.9**
CABF				pmax	pmax		
	comp=Z,12nm,0.8s						
CABF	**La Chapelle**	**50.70**	**305**	*e*P	**P**	**09 17 22.0**	**+0.9**
	comp=Z,12nm,0.8s						
MAJO	**Matsushiro**	**51.82**	**68**	*e*P	**P**	**09 17 30.4**	**+0.8**
MAJO				pmax	pmax		
	comp=Z,12nm,0.7s						
MAJO	**Matsushiro**	**51.82**	**68**	*e*P	**P**	**09 17 30.4**	**+0.8**
	comp=Z,12nm,0.7s						
MAT	**Matsushiro**	**51.82**	**68**	P	**P**	**09 17 29.7**	**+0.1**
ASAJ	**Asahikawa**	**52.81**	**58**	P	**P**	**09 17 36.7**	**0.0**
	comp=Z,7.0nm,0.5s						
ESDC	**Sonseca Array**	**59.77**	**299**	P	**P**	**09 18 25.7**	**-0.7**
ESDC	**Sonseca Array**	**59.77**	**299**	P	**P**	**09 18 25.7**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=61,slow=8.5,SNR=4.2						
PETK	**Petropavlovsk-**	**59.79**	**44**	P	**P**	**09 18 27.0**	**+0.7**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PETK	**Petropavlovsk-**	**59.79**	**44**	P	**P**	**09 18 27.0**	**+0.7**
PETK	**Petropavlovsk-**	**59.79**	**44**	P	**P**	**09 18 27.0**	**+0.7**
	comp=Z,2.5nm,0.9s,baz=180,slow=1.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**67.52**	**271**	P	**P**	**09 19 16.8**	**-1.0**
TORD	**Torodi Ar. Bea**	**67.52**	**271**	P	**P**	**09 19 16.8**	**-1.0**
	comp=Z,1.1nm,0.5s,baz=47,slow=5.6,SNR=22						
ILAR	**Eielson Array**	**75.72**	**17**	P	**P**	**09 20 06.7**	**+0.4**
ILAR	**Eielson Array**	**75.72**	**17**	P	**P**	**09 20 06.7**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=312,slow=5.2,SNR=11						
BOSA	**Boshof**	**77.80**	**222**	P	**P**	**09 20 19.0**	**+0.4**
BOSA	**Boshof**	**77.80**	**222**	P	**P**	**09 20 19.0**	**+0.4**
	comp=Z,1.5nm,0.5s,baz=130,slow=12,SNR=7.1						
WRA	**Warramunga Arr**	**79.65**	**123**	P	**P**	**09 20 28.9**	**+0.2**
WRA	**Warramunga Arr**	**79.65**	**123**	P	**P**	**09 20 28.9**	**+0.2**
	comp=Z,1.5nm,0.4s,baz=322,slow=5.1,SNR=32						
ASAR	**Alice Springs**	**81.90**	**126**	P	**P**	**09 20 41.2**	**+0.5**
ASAR	**Alice Springs**	**81.90**	**126**	P	**P**	**09 20 41.2**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=310,slow=5.0,SNR=27						
YKW3	**Yellowknife Ar**	**82.58**	**4**	*e*P	**P**	**09 20 44.0**	**+0.4**
YKA	**Yellowknife Ar**	**82.65**	**4**	P	**P**	**09 20 44.6**	**+0.6**
YKA	**Yellowknife Ar**	**82.65**	**4**	P	**P**	**09 20 44.6**	**+0.6**
	comp=Z,2.3nm,0.5s,baz=347,slow=5.3,SNR=35						
SCHQ	**Schefferville**	**84.18**	**338**	P	**P**	**09 20 52.4**	**+0.3**
SCHQ	**Schefferville**	**84.18**	**338**	P	**P**	**09 20 52.4**	**+0.3**
	comp=Z,1.1nm,0.7s,baz=338,slow=5.4,SNR=3.0						

*NIED **06** 09:16:00, 43°70N×147°50E, h35^{km}, Mw3.7 Best double couple: Mo4.31000×10^{14} NP1:φs44.00000°, δ74.00000°, λ85.00000°. NP2:φs240.00000°, δ17.00000°, λ106.00000°.*
*ISCJB **06** 09:16:59.6±1.0, 43°87N±0°07×147°61E±0°09, h52^{km}±8^{km}, mb3.9/10, Error ellipse: s-maj=14.9km s-min=5.8km az=139.3*
*JMA **06** 09:16:59.4±0.2, 43°71N×147°49E, h14^{km}, M4.1*
*MOS **06** 09:17:00.8±1.6, 44°10N×147°43E, h57^{km}, mb4.2/4, Error ellipse: s-maj=17.2km s-min=12.6km az=73.9*
*IDC **06** 09:17:02.3±3.2, 43°93N×147°49E, h59^{km}±28^{km}, mb3.5/9, mb1 3.8/11, mb1mx3.5/26, mbtmp3.5/11, ML3.4/2, MS2.8/2, Ms1 2.8/2, ms1mx2.4/36, Error ellipse: s-maj=28.6km s-min=20.5km az=151.0*
ISC 06 09:17:00.5±1.0**, 43°86N**±0°08×**147°64E**±0°07**, h42**^{km}±9^{km}**, n33, σ0^{s}93**/42**, mb3.8**/10**, 1C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**1.29**	**278**	*d i*PN	**Pn**	**09 17 21.5**	**-0.5**
YUK				*i* S	**Sn**	**09 17 37.1**	**-1.0**
YUK				pmax	pmax		
	comp=Z,401nm,0.2s						
YUK				pmax	pmax		
	comp=E,222nm,0.1s						
YUK				pmax	pmax		
	comp=N,72nm,0.1s						
YUK				smax	smax		
	comp=N,455nm,0.3s						
YUK				smax	smax		
	comp=E,921nm,0.3s						
KUR	**Kuril'sk**	**1.38**	**7**	⇑*i*PN	**Pn**	**09 17 22.8**	**-0.4**
KUR				*i* S	**Sn**	**09 17 39.4**	**-0.8**
KUR				pmax	pmax		
	comp=N,7μm,0.1s						
KUR				pmax	pmax		
	comp=Z,105nm,0.2s						
KUR				pmax	pmax		
	comp=E,13μm,0.1s						
KUR				smax	smax		
	comp=N,538nm,0.1s						
KUR				smax	smax		
	comp=E,82nm,0.1s						
NEM2	**Nemuro 2**	**1.46**	**251**	P	**Pn**	**09 17 23.4**	**-0.9**
NEM2				*e*S	**Sn**	**09 17 40.6**	**-1.7**
JRA	**Rausu**	**1.82**	**273**	P	**Pn**	**09 17 29.4**	**+0.2**
JRA				*e*S	**Sn**	**09 17 51.6**	**+0.6**
JNK	**Nakash**	**2.13**	**263**	P	**Pn**	**09 17 33.4**	**-0.2**
JNK				*e*S	**Sn**	**09 17 58.0**	**-0.8**
JAK	**Akkeshi**	**2.31**	**249**	P	**Pn**	**09 17 35.4**	**-0.6**
JAK				*e*S	**Sn**	**09 18 01.9**	**-1.2**
JTKR	**Abashiri--Toko**	**2.70**	**274**	P	**Pn**	**09 17 42.2**	**+0.9**
JAR	**Ashorobuto**	**2.87**	**260**	P	**Pn**	**09 17 44.4**	**+0.8**
JAR				*e*S	**Sn**	**09 18 17.2**	**+0.3**
JOB	**Onbets**	**2.93**	**252**	P	**Pn**	**09 17 44.8**	**+0.3**
JOB				*e*S	**Sn**	**09 18 18.5**	**0.0**
JMP	**Maruseppu**	**3.09**	**274**	P	**Pn**	**09 17 48.0**	**+1.2**
JCH	**Churui**	**3.36**	**250**	P	**Pn**	**09 17 50.4**	**0.0**
ASAJ	**Asahikawa**	**3.65**	**276**	P	**Pn**	**09 17 56.3**	**+2.0**
ASAJ	**Asahikawa**	**3.65**	**276**	P	**Pn**	**09 17 55.4**	**+1.1**
	comp=E,3.0nm,0.3s,baz=88,slow=20,SNR=13						
ASAJ				S	Sn	09 18 45.1	+9.0
	comp=E,1.0nm,0.3s,baz=21,slow=17,SNR=1.6						
ASAJ				LR	LR	09 19 31.5	
	comp=E,163nm,19.3s,baz=137,slow=42						
ERM	**Erimo**	**3.77**	**242**	*i* PN	**Pn**	**09 17 58.6**	**+2.6**
JSE	**Soyaes**	**3.78**	**289**	P	**Pn**	**09 17 57.3**	**+1.1**
JNBK	**Urakawa-nobuka**	**3.91**	**248**	P	**Pn**	**09 17 58.1**	**+0.1**
JNBK				*e*S	**Sn**	**09 18 42.3**	**-0.3**
YSS	**Yuzh-Sakhalins**	**4.62**	**314**	*e*PN	Pn	09 18 03.0	-4.7
PETK	**Petropavlovsk-**	**11.40**	**32**	PN	**Pn**	**09 19 41.0**	**+0.5**
PETK				MLR	MLR		
	comp=Z,42nm,19.7s						
PETK	**Petropavlovsk-**	**11.40**	**32**	P	**Pn**	**09 19 41.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=193,slow=12,SNR=3.9						
PETK				LR	LR	09 23 57.4	
	comp=Z,42nm,19.7s,baz=152,slow=36						
ILAR	**Eielson Array**	**41.19**	**36**	P	**P**	**09 24 40.6**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=261,slow=5.9,SNR=8.4						
YKA	**Yellowknife Ar**	**55.51**	**34**	P	**P**	**09 26 31.0**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=299,slow=7.0,SNR=7.0						
WRA	**Warramunga Arr**	**64.65**	**194**	P	**P**	**09 27 33.6**	**-0.2**
	comp=Z,0.9nm,1.0s,baz=9.7,slow=7.2,SNR=4.9						
FINES	**FINESS Array B**	**64.93**	**333**	P	**P**	**09 27 33.7**	**-1.4**
	comp=Z,0.8nm,0.5s,baz=24,slow=11,SNR=4.6						
NVAR	**Mina Array Bea**	**67.22**	**58**	P	**P**	**09 27 51.2**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=284,slow=7.3,SNR=3.6						
NB2	**NORSAR Subarra**	**69.62**	**339**	P	**P**	**09 28 03.8**	**-1.1**
	comp=Z,0.6nm,0.5s,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**69.62**	**339**	P	**P**	**09 28 04.1**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=42,slow=5.8,SNR=6.9						
KBZ	**Khabaz**	**69.99**	**312**	P	**P**	**09 28 07.7**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KBZ	**Khabaz**	**69.99**	**312**	P	**P**	**09 28 07.7**	**+0.3**
	comp=Z,1.7nm,0.5s,baz=36,slow=4.9,SNR=6.3						
AKASG	**Malin Array Be**	**71.69**	**324**	*e*P	**P**	**09 28 18.4**	**+0.8**
AKASG	**Malin Array Be**	**71.69**	**324**	P	**P**	**09 28 16.3**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=38,slow=4.3,SNR=4.6						
CLL	**Collm**	**77.38**	**333**	⇓*i*P	**P**	**09 28 50.2**	**-0.4**
CLL				pmax	pmax		
	comp=Z,147nm,1.2s						
CLL	**Collm**	**77.38**	**333**	⇓*i*P	**P**	**09 28 50.2**	**-0.4**
	comp=Z,6.0nm,1.2s						
TXAR	**Lajitas Array**	**82.29**	**57**	P	**P**	**09 29 18.2**	**+0.5**
	comp=Z,0.3nm,0.5s,baz=295,slow=3.5,SNR=5.4						
TXAR				pP	**pP**	**09 29 30.5**	**+0.1**
	comp=Z,0.3nm,0.6s,baz=302,slow=4.1,SNR=5.8						

WEL 06 09:27:48.3±0.3**, 38°00S**×**176°38E, h156**^{km}±2^{km}**, ML3.9**/12**, 16C-2D, Error ellipse: s-maj=1.7km s-min=1.6km az=0.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARZ	**Kaharoa**	**0.11**	**261**	PN	Pn	09 28 09.0	-0.1
OPRZ	**Ohinepanea**	**0.21**	**41**	PN	Pn	09 28 08.6	-0.6
OPRZ				SN	Sn	09 28 25.0	-0.1
MARZ	**Manawahe**	**0.23**	**86**	⇑PN	Pn	09 28 09.3	0.0
TARZ	**Mount Tarawera**	**0.25**	**157**	PN	Pn	09 28 09.6	+0.2
TGRZ	**Tauranga**	**0.29**	**340**	⇑PN	Pn	09 28 09.4	-0.1
RRRZ	**Republican Roa**	**0.35**	**163**	⇑PN	Pn	09 28 09.6	0.0
PRRZ	**Plateau Road**	**0.49**	**179**	PN	Pn	09 28 10.2	0.0
ALRZ	**Allen Road**	**0.56**	**183**	PN	Pn	09 28 10.4	-0.1
URZ	**Urewera**	**0.63**	**114**	⇑PN	Pn	09 28 10.4	-0.5
URZ				SN	Sn	09 28 27.0	-1.1
URZ				AML	AML	09 28 27.7	
TOZ	**Tahuroa Road**	**0.75**	**291**	⇑PN	Pn	09 28 11.8	+0.2
TOZ				SN	Sn	09 28 29.4	0.0
WATZ	**Wairara**	**0.87**	**216**	PN	Pn	09 28 12.7	+0.2
MWZ	**Matawai**	**0.96**	**111**	⇓PN	Pn	09 28 13.1	-0.2
MWZ				AML	AML	09 28 32.5	
MWZ				AML	AML	09 28 34.2	
MWZ				AML	AML	09 28 34.2	
MWZ				AML	AML	09 28 34.2	
RAHZ	**Arahi**	**1.07**	**149**	PN	Pn	09 28 14.4	+0.3
RAHZ				SN	Sn	09 28 34.0	0.0
KATZ	**Kakaramea**	**1.11**	**209**	PN	Pn	09 28 14.6	-0.1
NMHZ	**Naumai**	**1.14**	**163**	PN	Pn	09 28 15.5	+0.7
BKZ	**Black Stump Fm**	**1.17**	**176**	⇑PN	Pn	09 28 14.7	-0.3
BKZ				AML	AML	09 28 36.4	
BKZ				AML	AML	09 28 38.8	
KRVZ	**Karewarewa**	**1.24**	**208**	PN	Pn	09 28 15.6	-0.1
WTVZ	**West Tongariro**	**1.27**	**209**	⇑PN	Pn	09 28 16.0	-0.1
OTVZ	**Oturere**	**1.29**	**206**	PN	Pn	09 28 16.5	+0.2
TWVZ	**Taurewa**	**1.30**	**215**	PN	Pn	09 28 16.3	0.0
HIZ	**Hauiti**	**1.31**	**247**	⇑PN	Pn	09 28 16.6	+0.3
HIZ				SN	Sn	09 28 38.6	+0.8
NGZ	**Ngauruhoe**	**1.32**	**207**	PN	Pn	09 28 16.6	0.0
WPVZ	**Whakapapa**	**1.37**	**208**	PN	Pn	09 28 17.0	-0.1
TUVZ	**Tukino**	**1.39**	**204**	⇑PN	Pn	09 28 17.2	0.0
FWVZ	**Far West T-bar**	**1.41**	**207**	⇑PN	Pn	09 28 17.1	-0.5
DRZ	**Dome Shelter**	**1.42**	**207**	PN	Pn	09 28 17.8	-0.1
KNZ	**Kokohu**	**1.43**	**136**	PN	Pn	09 28 17.4	0.0
TRVZ	**Turoa**	**1.45**	**207**	PN	Pn	09 28 17.2	-0.8
MCHZ	**McNeill Hill**	**1.46**	**170**	PN	Pn	09 28 18.2	+0.4
WNVZ	**Wahianoa**	**1.46**	**205**	⇑PN	Pn	09 28 17.8	-0.2
PUZ	**Puketiti**	**1.48**	**93**	⇑PN	Pn	09 28 17.6	-0.4
PUZ				AML	AML	09 28 41.9	
PUZ				AML	AML	09 28 42.1	
MOVZ	**Moawhango**	**1.49**	**199**	PN	Pn	09 28 17.5	-0.6
PRGZ	**Paritu Road**	**1.49**	**128**	PN	Pn	09 28 18.3	+0.2
BHHZ	**Black Hill Sta**	**1.50**	**190**	⇑PN	Pn	09 28 17.9	-0.5
CNGZ	**Carnagh Statio**	**1.51**	**109**	PN	Pn	09 28 18.9	+0.6
PKVZ	**Pokaka**	**1.52**	**212**	PN	Pn	09 28 18.3	-0.2
MTVZ	**Mangateitei**	**1.55**	**207**	PN	Pn	09 28 18.7	-0.1
MXZ	**Matakaoa Point**	**1.58**	**74**	⇓PN	Pn	09 28 19.3	+0.2
MXZ				AML	AML	09 28 44.3	
MXZ				AML	AML	09 28 45.8	
MHGZ	**Mahia Peninsul**	**1.66**	**134**	PN	Pn	09 28 20.1	+0.2
VRZ	**Vera Road**	**1.70**	**228**	PN	Pn	09 28 20.5	+0.2
CKHZ	**Cape Kidnapper**	**1.74**	**162**	SN	Sn	09 28 44.7	-1.2
KAHZ	**Kahuranaki**	**1.83**	**168**	PN	Pn	09 28 21.7	-0.1
PNHZ	**Pukenui**	**1.91**	**184**	PN	Pn	09 28 21.9	-0.9
PXZ	**Pawanui**	**2.06**	**170**	⇑PN	Pn	09 28 23.8	-0.6
PXZ				AML	AML	09 28 52.5	
PXZ				AML	AML	09 28 52.5	
PXZ				AML	AML	09 28 53.8	
PXZ				AML	AML	09 28 53.8	
WPHZ	**Waipukurau**	**2.06**	**179**	PN	Pn	09 28 23.3	-1.0
TSZ	**Takapari Road**	**2.08**	**189**	PN	Pn	09 28 23.6	-1.1
TSZ				AML	AML	09 28 51.9	
TSZ				AML	AML	09 28 52.8	
PRHZ	**Porangahau**	**2.27**	**175**	PN	Pn	09 28 25.9	-1.0
DVHZ	**Dannevirke**	**2.30**	**184**	PN	Pn	09 28 25.8	-1.4
POWZ	**Post Office Ro**	**2.43**	**191**	PN	Pn	09 28 27.4	-1.4
BFZ	**Birch Farm**	**2.68**	**182**	PN	Pn	09 28 30.3	-1.5
MRZ	**Mangatainoka R**	**2.73**	**193**	⇑PN	Pn	09 28 30.4	-2.0
MRZ				AML	AML	09 29 04.6	
MRZ				AML	AML	09 29 05.2	
OGWZ	**Otaki Gorge**	**2.96**	**198**	PN	Pn	09 28 33.2	-2.1
HOWZ	**Holdsworth Sta**	**2.97**	**193**	⇑PN	Pn	09 28 33.1	-2.3
KIW	**Kapiti Island**	**3.07**	**201**	PN	Pn	09 28 34.3	-2.5
MTW	**Mount Morrison**	**3.22**	**192**	PN	Pn	09 28 35.9	-2.7
MTW				AML	AML	09 29 14.8	
MTW				AML	AML	09 29 15.5	
CAW	**Cannon Point**	**3.26**	**198**	PN	Pn	09 28 36.6	-2.5
CAW				AML	AML	09 29 17.4	
CAW				AML	AML	09 29 17.5	
PAWZ	**Paruwai Farm**	**3.45**	**192**	PN	Pn	09 28 38.6	-2.9
PAWZ				AML	AML	09 29 19.6	
PAWZ				AML	AML	09 29 21.6	
MSWZ	**Moikau Station**	**3.52**	**194**	PN	Pn	09 28 39.3	-3.0
MSWZ				AML	AML	09 29 20.6	
MSWZ				AML	AML	09 29 20.7	
TCW	**Tory Channel**	**3.59**	**206**	PN	Pn	09 28 40.6	-2.8
PLWZ	**Palliser**	**3.67**	**193**	PN	Pn	09 28 41.1	-3.2
TUWZ	**Tuamarina**	**3.91**	**208**	PN	Pn	09 28 44.5	-2.8
QRZ	**Quartz Range**	**4.11**	**225**	PN	Pn	09 28 46.7	-3.3
MQZ	**McQueen's Vall**	**6.36**	**205**	SN	Sn	09 30 20.7	-11

JMA 06 09:40:06.9±0.7**, 44°87N**×**149°64E, h30**^{km}**, M3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**3.18**	**243**	P	Pn	09 40 54.1	-0.8
NEM2				*e*S	Sn	09 41 29.3	-2.5
JRA	**Rausu**	**3.37**	**256**	P	Pn	09 40 58.9	+1.5
JRA				*e*S	Sn	09 41 37.7	+1.3
JNK	**Nakash**	**3.76**	**252**	P	Pn	09 41 03.5	+0.6
JNK				*e*S	Sn	09 41 44.0	-2.1
JAK	**Akkeshi**	**4.03**	**244**	P	Pn	09 41 06.0	-0.5
JTKR	**Abashiri--Toko**	**4.20**	**260**	P	Pn	09 41 10.3	+1.4
JAR	**Ashorobuto**	**4.51**	**252**	P	Pn	09 41 14.2	+1.0
JAR				*e*S	Sn	09 42 03.1	-1.5
JMP	**Maruseppu**	**4.58**	**261**	P	Pn	09 41 17.1	+3.0
JOB	**Onbets**	**4.63**	**247**	P	Pn	09 41 14.9	+0.1
JCH	**Churui**	**5.08**	**246**	P	Pn	09 41 20.6	-0.3
JNBK	**Urakawa-nobuka**	**5.63**	**245**	P	Pn	09 41 28.2	-0.3
JNBK				*e*S	Sn	09 42 29.5	-2.7
JKB	**Kayabe**	**6.94**	**248**	P	Pn	09 41 46.2	-0.3
JKB				*e*S	Sn	09 43 00.2	-4.2
JTM	**Tenmabayashi**	**7.50**	**240**	P	Pn	09 41 52.7	-1.5

*IDC **06** 09:44:24.6±2.0, 36°02N×139°02E, h0^{km}, mb3.5/3, mb1 3.8/4, mb1mx3.5/26, mbtmp3.7/4, Error ellipse: s-maj=110.9km s-min=26.4km az=103.0*
*ISCJB **06** 09:44:31.7±0.9, 35°52N±0°04×141°23E±0°10, h46^{km}±8^{km}, mb3.6/3, Error ellipse: s-maj=13.2km s-min=6.3km az=173.2*
*JMA **06** 09:44:31.5±0.2, 35°54N×141°27E, h39^{km}±1^{km}, M3.2*
ISC 06 09:44:32.2±2.0**, 35°54N**±0°05×**141°3E**±0°1**, h36**^{km}±2^{km}**, n15, σ0^{s}87**/22**, mb3.6**/3**, 1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.37**	**297**	⇓P	**Pn**	**09 44 40.5**	**-0.4**
CHOJ				S	**Sn**	**09 44 47.1**	**-0.3**
KTR	**Katsuura**	**0.87**	**244**	P	**Pn**	**09 44 48.1**	**+0.2**
KTR				S	**Sn**	**09 44 59.0**	**-0.4**
BSO1	**Boso 1**	**0.91**	**195**	P	**Pn**	**09 44 48.2**	**+0.2**
BSO1				*e*S	**Sn**	**09 44 58.5**	**-1.1**
BSO4	**Boso 4**	**0.94**	**235**	P	**Pn**	**09 44 48.6**	**-0.1**
BSO4				*e*S	**Sn**	**09 44 59.1**	**-1.7**
BSO3	**Boso 3**	**0.96**	**220**	P	**Pn**	**09 44 48.9**	**0.0**
BSO3				S	**Sn**	**09 45 02.4**	**+1.2**
JYT	**Yasato**	**1.11**	**309**	P	**Pn**	**09 44 51.0**	**-0.2**
JYT				*e*S	**Sn**	**09 45 05.0**	**-0.3**
JIM2	**Oshima 3**	**1.71**	**242**	P	**Pn**	**09 44 58.6**	**-0.9**
JAG	**Ashikaga**	**1.72**	**302**	P	**Pn**	**09 45 00.0**	**+0.4**
JOD2	**Odawara 2**	**1.80**	**262**	P	**Pn**	**09 45 00.8**	**+0.1**
JRY	**Ryogami san**	**1.98**	**285**	P	**Pn**	**09 45 04.4**	**+1.2**
MAT	**Matsushiro**	**2.67**	**293**	P	**Pn**	**09 45 13.8**	**+1.0**
MAT				*e*S	**Sn**	**09 45 42.5**	**-1.4**
JHJ	**Hachijo jima 2**	**2.71**	**207**	Pn	**Pn**	**09 45 13.4**	**+0.3**
	21nm,0.3s,baz=77,slow=2.2,SNR=9.1						
JHJ				Sn	**Sn**	**09 45 45.8**	**+1.1**
	22nm,0.3s,baz=90,slow=23,SNR=6.7						
ILAR	**Eielson Array**	**50.82**	**32**	P	P	09 53 30.6	+1.8
	0.5nm,0.6s,baz=272,slow=6.1,SNR=6.1						
WRA	**Warramunga Arr**	**55.56**	**188**	P	**P**	**09 54 03.9**	**-0.2**
	0.5nm,0.5s,baz=3.3,slow=7.8,SNR=18						
ASAR	**Alice Springs**	**59.29**	**188**	P	**P**	**09 54 29.6**	**-0.7**
	0.3nm,0.6s,baz=19,slow=12,SNR=5.6						

*DMN **06** 09:44:29.8±0.7, 31°90N×86°29E, h10^{km}, Ml4.8/4, Error ellipse: s-maj=15.0km s-min=7.5km az=174.0*
*IDC **06** 09:44:34.9±0.5, 30°91N×86°27E, h0^{km}, mb4.2/27, mb1 4.4/30, mb1mx4.3/36, mbtmp4.3/30, ML4.2/3, MS4.0/25, Ms1 4.0/25, ms1mx3.9/32, Error ellipse: s-maj=14.7km s-min=11.9km az=36.0*
*BJI **06** 09:44:35.4, 31°00N×86°32E, h10^{km}, mB4.7/24, mb4.7/34, Ms4.6/45, Ms7 4.4/37*
*LDG **06** 09:44:36.7±0.3, 31°11N×85°88E, h10^{km}, Mb4.9/17, Ms3.9/6, Error ellipse: s-maj=14.0km s-min=8.5km az=110.0*
*ISCJB **06** 09:44:36.9±1.1, 31°05N±0°03×86°29E±0°03, h15^{km}±7^{km}, mb4.5/73, MS4.2/39, Error ellipse: s-maj=4.4km s-min=3.8km az=24.1*
*NEIC **06** 09:44:37.0±0.3, 31°00N×86°31E, h10^{km}, mb4.6/14, Error ellipse: s-maj=8.4km s-min=5.6km az=55.0*

NDI ***06*** *09:44:37.5±2.7, 31°.13N×86°.31E, h10km, ML4.5, mb4.6(NEIC)*

MOS ***06*** *09:44:38.6±1.4, 30°.98N×86°.30E, h33km, mb4.7/42, MS4.0/18, Error ellipse: s-maj=10.0km s-min=4.7km az=117.1*

GCMT ***06*** *09:44:42.4±0.3, 30°.99N×86°.43E, h32km±1km, MW4.9, Moment Tensor Solution. s16,c20; s63,c85; Moment tensor: Scale 10^16 Nm; Mrr-0.50±.21; Mθθ-2.78±.15; Mφφ3.28±.15; Mrθ0.78±.23; Mθφ-0.60±.14; Mφr-0.17±.21; Best double couple: M0 3.20000×10^16 NP1:φs218.00000°, δ76.00000°, λ-9.00000°. NP2:φs311.00000°, δ81.00000°, λ-166.00000°. Principal axes: T 3.3600, Plg4.0000°, Azm84.0000°; N -0.2900, Plg73.0000°, Azm342.0000°; P -3.0700, Plg17.0000°, Azm175.0000°; Data Used: IU IC CN G II.*

ISC 06 09:44:36.9±0.3**, 30°.93N**±0°.02×**86°.21E**±0°.02**, h10**km±2km**, h10**km**:pP-P, n260, σ1s.74**/303**, mb4.6**/73**, MS4.2**/39**, 7C-3D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUN	Gumba	3.02	186	ePn	Pb	09 45 29.0	-2.1
GUN				eSn	Sg	09 46 13.3	-0.9
	1μm,0.7s						
KKN	Kakani	3.23	195	ePn	Pn	09 45 31.5	+3.6
DANN	Dangsing	3.34	220	ePn	Pn	09 45 32.1	+2.6
DANN				eSn	Sb	09 46 16.9	-0.3
	1μm,0.8s						
PKIN	Phulchoki	3.42	192	ePn	Pn	09 45 34.4	+3.9
PKI	Pulchoki	3.42	192	ePn	Pn	09 45 34.2	+3.6
DMN	Daman	3.45	196	ePn	Pn	09 45 34.4	+3.5
TAPN	Taplejung	3.80	159	ePn	Pn	09 45 39.1	+3.3
TAPN	Taplejung	3.80	159	ePn	Pn	09 45 39.2	+3.4
KOLN	Koldanda	3.89	216	ePn	Pn	09 45 38.7	+1.8
KOLN				eSn	Sb	09 46 31.2	-1.7
	329nm,0.6s						
PYUN	Piuthan	3.98	226	ePn	Pn	09 45 39.5	+1.3
PYUN				eSn	Sn	09 46 30.7	+5.7
	1μm,0.7s						
RAMN	Ramite	3.98	175	ePn	Pn	09 45 40.9	+2.6
ODAN	Odare	4.19	165	ePn	Pn	09 45 44.0	+2.9
LSA	Lhasa	4.45	105	Pg	Pn	09 45 47.8	+3.0
LSA				Sg	Sb	09 46 53.2	+4.0
PTH	Pithoragarh	5.36	257	ePKP9	Pn	09 45 54.0	-3.2
PTH				eS	Sn	09 46 54.0	-5.1
LGTI	Lohaghat	5.37	256	ex	Pb	09 46 12.2	+1.4
LGTI				ex	Sg	09 47 26.3	-3.0
DDI	Dehra Dun	7.05	267	ePKP	Pn	09 46 22.1	+1.9
DDI				eS	Sn	09 47 37.6	-2.9
DDI				AML	AML	09 47 44.0	
	comp=N,2μm,0.5s						
DDI				AML	AML	09 47 45.4	
	comp=E,965nm,0.5s						
BOK	Bokaro	7.12	182	ePKP	Pn	09 46 22.5	+1.4
BOK				eS	Sn	09 47 42.6	+0.6
SHL	Shillong	7.32	136	ePKP	Pn	09 46 24.5	+0.4
SHL				eS	Sn	09 47 44.9	-2.4
SMLA	Simla	7.76	274	i P	Pn	09 46 29.8	-0.1
SMLA				i x	Sn	09 47 55.5	-2.3
BHK	Bhakra	8.40	276	ePKP	Pn	09 46 40.8	+2.0
DHRM	DHARAMSHALA	8.55	281	ePKP	Pn	09 46 42.0	+1.0
DHRM				eS	Sn	09 48 13.6	-4.1
DHRM				AML	AML	09 48 32.0	
	comp=E,259nm,0.1s						
DHRM				AML	AML	09 48 35.4	
	comp=N,192nm,0.5s						
IMP	Imphal	9.18	130	ex	Pn	09 46 53.0	+3.6
IMP				ex	Sn	09 48 31.0	-1.8
JBP	Jabalpur	9.52	217⇑	iP	Pn	09 46 56.9	+2.9
JBP				ex	Sn	09 48 43.3	+2.3
BHPL	Bhopal	10.95	228	ex	Pn	09 47 11.0	-2.6
BHPL				ex	Sn	09 49 13.1	-3.2
BHPL				AML	AML	09 49 17.8	
	comp=E,68nm,0.5s						
BHPL				AML	AML	09 49 18.6	
	comp=N,93nm,0.8s						
AJM	Ajmer	11.08	249	ePKP	Pn	09 47 16.0	+0.5
AJM				i x	Sn	09 49 15.0	-4.4
NGP	Nagpur	11.67	215	ePKP	Pn	09 47 25.9	+2.3
NGP				ex	x	09 47 27.4	
	comp=Z,61nm,1.4s						
NGP				ex	Sn	09 49 30.6	-3.3
KSH	Kashi	11.97	318	P	Pn	09 47 28.3	+0.7
KSH				pP		09 47 31.6	
KSH				sP		09 47 34.7	
KSH				PP	PnPn	09 47 38.0	+2.6
KSH				S	Sn	09 49 41.6	+0.4
KSH				SS	SnSn	09 49 55.1	+1.8
KSH				pmax	pmax		
	comp=Z,19nm,0.4s						
KSH				LR	LR		
	comp=N,4μm,10.4s						
KSH				LR	LR		
	comp=E,5μm,11.1s						
KSH				LR	LR		
	comp=Z,2μm,8.7s						
CEP	Cherat	12.43	287	P	Pn	09 47 30.1	-3.9
WMQ	Urumqi	12.92	5	eP	Pn	09 47 43.0	+2.4
WMQ				pP	P	09 47 50.0	-1.3
WMQ				S	Sn	09 50 07.0	+2.6
WMQ				SS	SnSn	09 50 23.0	+6.2
WMQ				pmax	pmax		
	comp=Z,17nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,100nm,3.3s						
WMQ				LR	LR		
	comp=N,750nm,12.2s						
WMQ				LR	LR		
	comp=E,850nm,12.0s						
WMQ				LR	LR		
	comp=Z,580nm,17.6s						
GTA	Gaotai	13.97	49	eP	Pn	09 47 52.8	-2.2
GTA				pP	P	09 47 57.4	-5.7
GTA				sP		09 48 00.5	
GTA				S	Sn	09 50 26.9	-3.2
GTA				sS	sS	09 50 32.8	
GTA				SS	SnSn	09 50 44.7	+2.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,49nm,5.2s						
GTA				LR	LR		
	comp=N,3μm,15.0s						
GTA				LR	LR		
	comp=E,1μm,13.5s						
GTA				LR	LR		
	comp=Z,1μm,9.3s						
TKM2	Tokmak 2	14.65	328	eP	Pn	09 48 05.5	+1.1
TKM2	Tokmak 2	14.65	328	ePn	Pn	09 48 05.5	+1.1
KBL	Kabul	14.89	289	eP	Pn	09 48 02.5	-5.2
KBL				e		09 50 47.8	
KBL	Kabul	14.89	289	ePn	Pn	09 48 02.5	-5.2
KBL				eSn	Sn	09 50 47.8	-5.0
AAK	Ala-Archa	14.96	325⇑	eP	Pn	09 48 11.1	+2.5
AAK				pmax	pmax		
	comp=Z,18nm,1.1s						
AAK	Ala-Archa	14.96	325	Pn	Pn	09 48 10.0	+1.4
AAK	Ala-Archa	14.96	325	Pn	Pn	09 48 10.0	+1.4
	comp=Z,0.3nm,0.3s,baz=181,slow=9.0,SNR=10						
AAK				LR	LR	09 53 59.3	
	comp=Z,454nm,20.1s,baz=126,slow=38						
FRU	Bishkek	15.05	325	eP	Pn	09 48 12.0	+2.4
FRU				e		09 51 04.0	
FRU				pmax	pmax		
	comp=Z,53nm,1.6s						
CD2	Chengdu	15.07	86	eP	Pn	09 48 08.9	-1.0
CD2				pP	P	09 48 12.3	-3.0
CD2				sP	sP	09 48 15.9	-3.7
CD2				PP	pP	09 48 20.9	+2.7
CD2				S	Sn	09 50 55.4	-1.5
CD2				sS	sS	09 51 00.2	-19
CD2				SS	S	09 51 12.5	-1.9
CD2				pmax	pmax		
	comp=Z,30nm,1.2s						
CD2				pmax	pmax		
	comp=Z,110nm,4.8s						
CD2				LR	LR		
	comp=N,1μm,13.2s						
CD2				LR	LR		
	comp=Z,1μm,10.7s						
HYB	Hyderabad	15.15	209	i P	P	09 48 16.0	-0.2
HYB				eS	Sn	09 50 55.0	-4.0
HYB	Hyderabad	15.15	209	eP	P	09 48 15.0	-1.2
HYB	Hyderabad	15.15	209	eP	P	09 48 15.0	-1.2
HYB				eS	Sn	09 50 50.0	-9.0
EKS2	Erkin-Say	15.35	323	eP	Pn	09 48 14.1	+0.4
EKS2				pmax	pmax		
	comp=Z,14nm,0.8s						
EKS2	Erkin-Say	15.35	323	ePn	Pn	09 48 14.1	+0.4
	comp=Z,14nm,0.8s						
LZH	Lanzhou	15.58	66	eP	Pn	09 48 15.0	-1.7
LZH				pP	P	09 48 17.3	-3.7
LZH				sP	sP	09 48 19.7	-5.6
LZH				eS	Sn	09 51 06.1	-3.3
LZH				sS	sS	09 51 11.2	-18
LZH				SS	S	09 51 24.3	-0.7
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,5.5s						
LZH				LR	LR		
	comp=N,2μm,11.0s						
LZH				LR	LR		
	comp=E,1μm,10.2s						
LZH				LR	LR		
	comp=Z,2μm,12.5s						
KMI	Kunming	15.70	108	P	P	09 48 21.8	-0.7
KMI				S	Sn	09 51 16.9	+4.4
KMI				pmax	pmax		
	comp=Z,62nm,0.9s						
KMI				pmax	pmax		
	comp=Z,76nm,3.1s						
KMI				LR	LR		
	comp=N,800nm,11.3s						
KMI				LR	LR		
	comp=E,560nm,12.2s						
KMI				LR	LR		
	comp=Z,720nm,14.6s						
MK31	Makanchi Array	16.13	350	eP	Pn	09 48 21.0	-2.6
MK31	Makanchi Array	16.13	350	ePn	Pn	09 48 21.0	-2.6
MKAR	Makanchi Array	16.13	350	P	Pn	09 48 21.9	-1.7
MKAR				MLR	MLR		
	comp=Z,268nm,20.1s						
MKAR	Makanchi Array	16.13	350	Pn	Pn	09 48 21.9	-1.7
MKAR	Makanchi Array	16.13	350	Pn	Pn	09 48 21.9	-1.7
	comp=Z,0.3nm,0.3s,baz=164,slow=10,SNR=51						
MKAR				LR	LR	09 55 51.6	
	comp=Z,268nm,20.1s,baz=75,slow=42						
POO	Poona	16.67	225⇑	iP	P	09 48 33.0	-0.1
CHTO	Chiang Mai	16.69	133	eP	Pn	09 48 31.9	+1.0
CHTO				pmax	pmax		
	comp=Z,20nm,1.2s						
CHTO	Chiang Mai	16.69	133	ePn	Pn	09 48 31.9	+1.0
	comp=Z,20nm,1.2s						
CHTO				eS	S	09 51 51.4	+3.8
CM31	Chiang Mai Arr	16.95	134	ePn	P	09 48 35.9	-0.3
	comp=Z,5.1nm,0.4s						
CM31				eS	S	09 51 56.6	+3.6
CMAR	Chiang Mai Arr	16.95	134	Pn	Pn	09 48 32.2	-2.1
CMAR	Chiang Mai Arr	16.95	134	Pn	Pn	09 48 32.2	-2.1
	comp=Z,1.4nm,0.3s,baz=319,slow=12,SNR=12						
CMAR				LR	LR	09 55 30.2	
	comp=Z,692nm,19.2s,baz=321,slow=39						
KK31	Karatay Array	17.42	319	i P	Pn	09 48 40.5	+0.5
KK31				pmax	pmax		
	comp=Z,14nm,0.8s						
KKAR	Karatay Array	17.42	319	eP	P	09 48 41.1	-0.2
KKAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KKAR	Karatay Array	17.42	319	eP	P	09 48 41.1	-0.2
	comp=Z,9.0nm,0.8s						
GYA	Guiyang	18.49	99	P	P	09 48 51.9	-1.3
GYA				PP	PnPn	09 49 08.6	+3.7
GYA				S	Sn	09 52 21.4	+1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,100nm,4.2s						
GYA				LR	LR		
	comp=N,2μm,13.0s						
GYA				LR	LR		
	comp=E,330nm,13.3s						
GYA				LR	LR		
	comp=Z,480nm,10.5s						
XAN	Xi'an	19.40	75	P	P	09 49 00.8	-2.4
XAN				pP	pP	09 49 10.6	+4.5
XAN				sP	sP	09 49 14.3	+6.8
XAN				S	Sn	09 52 37.4	-4.6
XAN				LR	LR		
	comp=N,330nm,9.6s						
XAN				LR	LR		
	comp=E,160nm,9.1s						
XAN				LR	LR		
	comp=Z,200nm,8.9s						
KURBB	Kurchatov Arra	20.49	346	P	P	09 49 13.1	-1.7
	comp=Z,22nm,1.0s,baz=163,slow=9.9,SNR=24						
KURK	Kurchatov	20.56	346	ceP	P	09 49 15.5	0.0
KURK				pmax	pmax		
	comp=Z,46nm,1.2s						
KURK	Kurchatov	20.56	346	eP	P	09 49 15.6	0.0
BTO	Baotou	21.54	57	eP	P	09 49 25.0	-1.4
HHC	Hu-ho-hao-te	22.73	57	eP	P	09 49 35.6	-3.5
HHC				pP	pP	09 49 42.0	-0.1
HHC				sP	sP	09 49 44.3	+0.8
HHC				PP	PnPn	09 50 05.0	+2.0
HHC				S	S	09 53 38.5	-9.3
HHC				sS	sS	09 53 51.1	-1.8
HHC				pmax	pmax		
	comp=Z,40nm,0.8s						
HHC				pmax	pmax		
	comp=Z,240nm,4.8s						
HHC				LR	LR		
	comp=N,660nm,9.8s						
HHC				LR	LR		
	comp=E,1μm,10.4s						
HHC				LR	LR		
	comp=Z,1μm,13.5s						
SONM	Songino Array	22.88	37	P	P	09 49 40.5	-0.1
SONM	Songino Array	22.88	37	P	P	09 49 40.5	-0.1
	comp=Z,7.4nm,0.8s,baz=220,slow=9.9,SNR=13						
ZAA0	Zalesovo Array	23.02	358	eP	P	09 49 41.8	-0.1
ZALV	Zalesovo Beam	23.02	358	P	P	09 49 42.8	+0.9
ZALV				pmax	pmax		
	comp=Z,13nm,1.1s						
ZALV				MLR	MLR		
	comp=Z,320nm,20.6s						
ZALV	Zalesovo Beam	23.02	358	P	P	09 49 42.8	+0.9
ZALV	Zalesovo Beam	23.02	358	P	P	09 49 42.8	+0.9
	comp=Z,13nm,1.1s,baz=183,slow=10,SNR=26						
ZALV				LR	LR	10 00 04.3	
	comp=Z,320nm,20.6s,baz=69,slow=40						
ULN	Ulaanbaatar	23.24	37	eP	P	09 49 44.1	-0.2
	comp=Z,16nm,0.8s						
ZAK	Zakamensk	23.25	28	eP	P	09 49 43.6	-0.8
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.6s						
MOY	Mondy	23.42	24	eP	P	09 49 48.6	+2.5
WHN	Wuhan	24.17	84	⇓P	P	09 49 52.2	-1.2
WHN				LR	LR		
	comp=N,360nm,9.8s						
WHN				LR	LR		
	comp=E,1μm,7.9s						
WHN				LR	LR		
	comp=Z,1μm,11.4s						
QIZ	Qiongzhong	24.43	113	P	P	09 49 56.2	+0.4
QIZ				S	S	09 54 16.7	+1.0
QIZ				sS	sS	09 54 22.0	+1.1
QIZ				LR	LR		
	comp=N,650nm,20.9s						
QIZ				LR	LR		
	comp=E,280nm,20.9s						
QIZ				LR	LR		
	comp=Z,340nm,11.1s						
VOSK	Vostochnaya	24.45	337	P	P	09 49 56.4	+0.6
VOSK				pmax	pmax		
	comp=Z,11nm,0.9s						
BVAR	Borovoye Array	24.90	337	P	P	09 49 59.4	-0.4
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR				pmax	pmax		
	comp=N,3.0nm,0.8s						
BVAR				MLR	MLR		
	comp=Z,213nm,19.2s						
BVAR	Borovoye Array	24.90	337	P	P	09 49 59.4	-0.4
BVAR				ScP	ScP	09 57 15.2	+0.9
BVAR	Borovoye Array	24.90	337	P	P	09 49 59.4	-0.4
	comp=Z,4.0nm,0.9s,baz=146,slow=8.2,SNR=11						
BVAR				ScP	ScP	09 57 15.2	+0.9
	comp=Z,2.9nm,0.8s,baz=174,slow=4.3,SNR=7.9						
BVAR				LR	LR	10 00 01.8	
	comp=Z,213nm,19.2s,baz=332,slow=37						
BRVK	Borovoye	24.97	337	ceP	P	09 50 01.5	+1.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BRVK	Borovoye	24.97	337	eP	P	09 50 01.2	+0.9
	comp=Z,11nm,1.1s						
ZRNK	Zerenda	25.32	335	P	P	09 50 03.5	-0.1
ZRNK				pmax	pmax		
	comp=Z,31nm,1.2s						
BJI	Beijing	25.94	61	P	P	09 50 11.4	+2.1
BJI				S	S	09 54 44.3	+4.8
BJI				pmax	pmax		
	comp=Z,10.0nm,1.4s						
BJI				pmax	pmax		
	comp=Z,55nm,4.1s						
BJI				LR	LR		
	comp=N,2μm,18.8s						
BJI				LR	LR		
	comp=E,430nm,14.4s						
ABKAR	Akbulak array	26.96	320	eP	P	09 50 19.2	+0.7
	comp=E,6.9nm,0.6s						
NJ2	Nanjing	27.80	79	eP	P	09 50 25.0	-1.2
NJ2				pP	pP	09 50 28.8	-0.6
NJ2				sP	sP	09 50 31.5	+0.8
NJ2				S	S	09 55 08.0	-1.1
NJ2				sS	sS	09 55 12.0	-2.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,40nm,3.5s						
NJ2				LR	LR		
	comp=N,120nm,9.4s						
NJ2				LR	LR		
	comp=E,130nm,8.8s						
NJ2				LR	LR		
	comp=Z,5μm,12.0s						
AKTO	Aktyubinsk	28.65	321	P	P	09 50 35.0	+1.4
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKTO				MLR	MLR		
	comp=Z,398nm,19.3s						
AKTO	Aktyubinsk	28.65	321	P	P	09 50 35.0	+1.4
AKTO	Aktyubinsk	28.65	321	P	P	09 50 35.0	+1.4
	comp=Z,2.0nm,0.7s,baz=120,slow=8.8,SNR=8.9						
AKTO				LR	LR	10 02 25.7	
	comp=Z,398nm,19.3s,baz=129,slow=37						
SVE	Sverdlovsk	31.42	333⇓	eP	P	09 51 00.0	+2.0
SVE				eS	S	09 55 59.1	-6.3
SVE				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SVE				MLR	MLR		
	comp=Z,254nm,12.0s						
CN2	Changchun	33.42	56	eP	P	09 51 16.0	+0.3
CN2				esP	sP	09 51 23.0	+2.8
CN2				eS	S	09 56 34.3	-2.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,700nm,15.0s						
CN2				LR	LR		
	comp=E,200nm,15.0s						
CN2				LR	LR		
	comp=Z,800nm,18.0s						
MIB	Mutribah	33.44	278	eP	P	09 51 13.3	-2.7
MIB				AMb	AMB	09 51 18.4	
	comp=Z,39nm,0.8s						
RDF	Al-Radifah	33.45	277	eP	P	09 51 13.1	-3.1
RDF				AMb	AMB	09 51 21.1	
	comp=Z,32nm,1.0s						
NAY	Al-Naaiem	33.64	277	eP	P	09 51 14.4	-3.4
NAY				AMb	AMB	09 51 21.4	
	comp=Z,18nm,1.1s						
SOKR	Solikamsk	34.79	334	eP	P	09 51 29.4	+2.1
SOKR				pmax	pmax		
	comp=Z,20nm,1.2s						
KSAR	Wonju Array Be	34.87	68	P	P	09 51 25.9	-2.4
KSRS	Korea Array	34.90	68	P	P	09 51 25.9	-2.6
	comp=Z,0.7nm,0.6s,baz=279,slow=9.2,SNR=3.5						
KSRS				LR	LR	10 06 20.2	
	comp=Z,226nm,20.3s,baz=274,slow=38						
BHD	Baghdad	35.34	285	eP	P	09 51 35.5	+3.0
BHD				eS	S	09 57 13.5	+6.8
KBZ	Khabaz	36.33	303	LR	LR	10 07 43.5	
	comp=Z,240nm,19.1s,baz=88,slow=38						
MDJ	Mudanjiang	36.48	56	P	P	09 51 40.4	-1.7
MDJ				pP	pP	09 51 43.4	-1.9
MDJ				S	S	09 57 20.9	-3.1
MDJ				ScP	ScP	09 57 52.0	-0.5
MDJ				PcS	PcS	09 57 53.4	-0.1
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
MDJ				LR	LR		
	comp=N,870nm,19.7s						
MDJ				LR	LR		
	comp=E,130nm,16.8s						
MDJ				LR	LR		
	comp=Z,300nm,17.5s						
USRK	Ussuriysk Arra	38.16	57	P	P	09 51 55.8	-0.5
	comp=Z,1.5nm,0.7s,baz=148,slow=38,SNR=2.9						
USRK				LR	LR	10 08 44.6	
	comp=Z,278nm,20.0s,baz=258,slow=38						
KLR	Kul'dur	38.67	48	eP	P	09 52 04.0	+3.4
KLR				MLR	MLR		
	comp=E,500nm,12.0s						
KLR				MLR	MLR		
	comp=Z,1μm,12.0s						
ASF	Jabal al Asfar	41.74	285	P	P	09 52 27.3	+0.9
ASF	Jabal al Asfar	41.74	285	P	P	09 52 27.3	+0.9
	comp=Z,1.5nm,0.5s,baz=145,slow=19,SNR=4.0						
YAK	Yakutsk	41.84	29	eP	P	09 52 27.5	+0.9
YAK				e*PP	pP	09 52 33.2	+3.4
YAK				e		09 54 21.4	
YAK				ePPP	PPP	09 54 35.2	
YAK				eS	S	09 58 45.6	+1.6
YAK				eSS	SS	10 01 48.7	-1.2
YAK				eSSS	SSS	10 02 24.7	
YAK				e		10 02 26.6	
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.4s						
YAK				smax	smax		
	comp=N,43nm,3.5s						
YAK				smax	smax		
	comp=E,30nm,3.7s						
YAK				MLR	MLR		
	comp=Z,172nm,15.0s						
YAK				MLR	MLR		
	comp=E,131nm,13.0s						
YAK				MLR	MLR		
	comp=N,125nm,15.0s						
KLMR	Klimovskoe	42.73	328	eP	P	09 52 34.5	+0.6
KLMR				pmax	pmax		
	comp=Z,21nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,270nm,13.0s						
MMAI	Mount Meron Ar	42.81	287	P	P	09 52 36.0	+0.9
MMAI	Mount Meron Ar	42.81	287	P	P	09 52 36.0	+0.9
	comp=Z,4.4nm,0.8s,baz=26,slow=8.3,SNR=4.5						
BRTR	Keskin Array B	43.25	297	P	P	09 52 39.7	+1.1
BRTR	Keskin Array B	43.25	297	P	P	09 52 39.7	+1.1
	comp=Z,0.9nm,0.6s,baz=111,slow=7.2,SNR=6.7						
EIL	Elat	43.95	282	P	P	09 52 46.1	+1.9
EIL	Elat	43.95	282	P	P	09 52 46.1	+1.9
	comp=Z,3.8nm,0.9s,baz=16,slow=4.9,SNR=3.7						
TMCR	Tamitsa	44.70	332	eP	P	09 52 49.3	-0.4
TMCR				pmax	pmax		
	comp=Z,34nm,1.1s						
AKASG	Malin Array Be	46.17	312	P	P	09 53 00.9	-0.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	46.17	312	P	P	09 53 00.9	-0.7
AKASG	Malin Array Be	46.17	312	P	P	09 53 00.9	-0.7
	comp=Z,1.1nm,0.4s,baz=80,slow=7.3,SNR=9.5						
TIXI	Tiksi	46.74	17	ceP	P	09 53 06.8	+1.1
TIXI				pmax	pmax		
	comp=Z,16nm,1.7s						
JOF	Joensuu	47.08	329	ep	P	09 53 06.6	-1.9
	comp=Z,9.8nm,0.8s						

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
JOF	Joensuu	47.08	329	eP	P	09 53 06.6	-1.9
JOF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
APA	Apatity	47.80	336⇑	eP	P	09 53 09.4	-4.7
APA				MLR	MLR		
	comp=Z,300nm,18.0s						
FINES	FINESS Array B	49.14	327	P	P	09 53 23.2	-1.3
FINES	FINESS Array B	49.14	327	P	P	09 53 23.2	-1.3
	comp=Z,4.4nm,0.7s,baz=113,slow=15,SNR=9.7						
FINES				LR	LR	10 15 06.2	
	comp=Z,213nm,18.9s,baz=100,slow=37						
KAF	Kangasniemi	49.15	327	ep	P	09 53 21.4	-3.2
	comp=Z,2.4nm,0.8s						
KAF	Kangasniemi	49.15	327	eP	P	09 53 21.4	-3.2
KAF				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KEV	Kevo	50.75	337	ep	P	09 53 35.8	-0.8
	comp=Z,4.3nm,0.6s						
KEV	Kevo	50.75	337	eP	P	09 53 35.8	-0.8
KEV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARCES	ARCESS Array B	51.19	337	P	P	09 53 38.6	-1.4
ARCES				PcP	PcP	09 54 55.9	+0.7
ARCES	ARCESS Array B	51.19	337	P	P	09 53 38.6	-1.4
	comp=Z,4.4nm,0.8s,baz=118,slow=9.8,SNR=9.5						
ARCES				PcP	PcP	09 54 55.9	+0.7
	comp=Z,2.9nm,0.8s,baz=120,slow=4.3,SNR=4.7						
ARCES				LR	LR	10 17 01.3	
	comp=Z,186nm,18.0s,baz=111,slow=38						
OKC	Ostrava-Krasne	53.30	311	eP	P	09 53 57.3	+1.4
OKC				MLR	MLR		
	comp=Z,200nm,28.2s						
OKC	Ostrava-Krasne	53.30	311	eP	P	09 53 57.3	+1.4
OKC				epP	pP	09 54 01.4	+2.2
OKC				AMS	AMS	10 16 20.0	
	comp=Z,200nm,28.2s						
MORC	Moravsky Berou	53.69	311	eP	P	09 53 59.9	+1.0
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MORC	Moravsky Berou	53.69	311	eP	P	09 53 59.9	+1.0
	comp=Z,4.3nm,0.9s						
UPC	Upice	54.58	313	eP	P	09 54 07.7	+2.4
UPC	Upice	54.58	313	eP	P	09 54 07.7	+2.4
PETK	Petropavlovsk-	55.07	44	LR	LR	10 17 38.6	
	comp=Z,108nm,18.2s,baz=117,slow=36						
TREC	Trest	55.08	311	AMS	AMS	10 17 20.0	
	comp=Z,300nm,22.2s						
PRU	Pruhonice	55.59	312	eP	P	09 54 11.0	-1.5
PRU				MLR	MLR		
	comp=Z,200nm,18.8s						
PRU	Pruhonice	55.59	312	eP	P	09 54 11.0	-1.5
PRU				epP	pP	09 54 14.1	-1.8
PRU				AMS	AMS	10 18 30.0	
	comp=Z,200nm,18.8s						
BRG	Berggiesshubel	55.84	313	eP	P	09 54 15.6	+1.3
	comp=Z,4.8nm,0.8s						
BRG	Berggiesshubel	55.84	313	eP	P	09 54 15.6	+1.3
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NB2	NORSAR Subarra	56.28	326	P	P	09 54 15.3	-2.1
	comp=Z,1.1nm,0.8s,baz=87,slow=7.9						
NOA	NORSAR Array B	56.28	326	P	P	09 54 15.7	-1.7
NOA	NORSAR Array B	56.28	326	P	P	09 54 15.7	-1.7
	comp=Z,7.1nm,0.8s,baz=87,slow=7.0,SNR=18						
NOA				LR	LR	10 19 15.4	
	comp=Z,194nm,18.5s,baz=90,slow=37						
GEC2	GERESS Array S	56.31	311	eP	P	09 54 18.2	+0.3
GEC2	GERESS Array S	56.31	311	eP	P	09 54 18.2	+0.3
GERES	GERESS Array B	56.31	311	P	P	09 54 16.4	-1.5
GERES	GERESS Array B	56.31	311	P	P	09 54 16.4	-1.5
	comp=Z,2.2nm,0.7s,baz=76,slow=5.6,SNR=16						
GERES				LR	LR	10 22 04.7	
	comp=Z,127nm,18.7s,baz=259,slow=40						
KHC	Kasperske Hory	56.35	311	P	P	09 54 18.4	+0.4
KHC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KHC	Kasperske Hory	56.35	311	eP	P	09 54 16.2	-1.8
KHC				epP	pP	09 54 19.2	-2.2
KHC				AMS	AMS	10 18 00.0	
	comp=Z,200nm,24.6s						
KHC	Kasperske Hory	56.35	311	P	P	09 54 18.4	+0.4
	comp=Z,3.0nm,0.8s						
KMBO	Kilima Mbogo	56.35	245	eP	P	09 54 20.2	+1.5
KMBO	Kilima Mbogo	56.35	245	P	P	09 54 17.4	-1.3
	comp=Z,6.2nm,0.9s,baz=38,slow=11,SNR=12						
KMBO				LR	LR	10 16 17.0	
	comp=Z,78nm,19.5s,baz=98,slow=34						
NAO01	NORSAR Array S	56.45	325	eP	P	09 54 19.3	+0.8
	comp=Z,7.8nm,0.8s						
CUC	Castrocucco	56.70	300	eP	P	09 54 22.0	+1.2
	comp=Z,14nm,0.8s						
NKC	Novy Kostel	56.88	313	AMS	AMS	10 19 20.0	
	comp=Z,300nm,20.5s						
BILL	Bilibino	58.02	26⇓	eP	P	09 54 31.3	+1.8
BILL				e		09 56 39.0	
BILL				eS	S	10 02 21.6	-8.1
BILL				pmax	pmax		
	comp=Z,46nm,1.0s						
CDF	Champ du Feu	60.57	311	eP	P	09 54 47.6	0.0
	comp=Z,12nm,1.0s						
CDF	Champ du Feu	60.57	311	eP	P	09 54 47.6	0.0
CDF				pmax	pmax		
	comp=Z,12nm,1.0s						
CDF	Champ du Feu	60.57	311	eP	P	09 54 47.6	0.0
	comp=Z,12nm,1.0s						
PGF	Pioggiola	60.98	304	eP	P	09 54 50.2	-0.3
PGF	Pioggiola	60.98	304	eP	P	09 54 50.2	-0.3
PGF	Pioggiola	60.98	304	eP	P	09 54 50.2	-0.3
HINF	Hinteralfeld	61.00	311	eP	P	09 54 50.5	0.0
	comp=Z,6.4nm,0.7s						
HINF	Hinteralfeld	61.00	311	eP	P	09 54 50.5	0.0
HINF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HINF	Hinteralfeld	61.00	311	eP	P	09 54 50.5	0.0
	comp=Z,6.4nm,0.7s						
PAGF	Fort de Pagny	61.53	312	eP	P	09 54 53.8	-0.2
PAGF	Fort de Pagny	61.53	312	eP	P	09 54 53.8	-0.2
LPG	La Plagne	61.69	308	eP	P	09 54 56.7	+1.2
	comp=Z,32nm,1.2s						
LPG	La Plagne	61.69	308	eP	P	09 54 56.7	+1.2
LPG				pmax	pmax		
	comp=Z,32nm,1.2s						
LPG	La Plagne	61.69	308	eP	P	09 54 56.7	+1.2
	comp=Z,32nm,1.2s						
LPL	La Plagne	61.70	308	eP	P	09 54 56.6	+1.1
	comp=Z,8.3nm,0.6s						
LPL	La Plagne	61.70	308	eP	P	09 54 56.6	+1.1
LPL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LPL	La Plagne	61.70	308	eP	P	09 54 56.6	+1.1
	comp=Z,8.3nm,0.6s						
MEZF	Maizieres J'vi	61.98	312	eP	P	09 54 57.5	+0.5
	comp=Z,25nm,1.0s						
MEZF	Maizieres J'vi	61.98	312	eP	P	09 54 57.5	+0.5
	comp=Z,25nm,1.0s						
BAIF	Baives	62.09	314	eP	P	09 54 57.5	-0.2
BAIF	Baives	62.09	314	eP	P	09 54 57.5	-0.2
BAIF	Baives	62.09	314	eP	P	09 54 57.5	-0.2
KEST	Kesra	62.85	297	LR	LR	10 26 19.5	
	comp=Z,33nm,21.5s,baz=214,slow=40						
VIVF	Saint-Julien-l	63.29	308	eP	P	09 55 06.0	+0.1
VIVF	Saint-Julien-l	63.29	308	eP	P	09 55 06.0	+0.1
VIVF	Saint-Julien-l	63.29	308	eP	P	09 55 06.0	+0.1
SMF	Signal de Mont	63.30	310	eP	P	09 55 05.9	0.0
	comp=Z,18nm,1.0s						
SMF	Signal de Mont	63.30	310	eP	P	09 55 05.9	0.0
SMF				pmax	pmax		
	comp=Z,18nm,1.0s						
SMF	Signal de Mont	63.30	310	eP	P	09 55 05.9	0.0
	comp=Z,18nm,1.0s						
SSF	Saint Saulge	63.39	311	eP	P	09 55 06.2	-0.3
	comp=Z,12nm,0.9s						
SSF	Saint Saulge	63.39	311	eP	P	09 55 06.2	-0.3
SSF				pmax	pmax		
	comp=Z,12nm,0.9s						
SSF	Saint Saulge	63.39	311	eP	P	09 55 06.2	-0.3
	comp=Z,12nm,0.9s						
TCF	Toulx Ste Croi	64.48	310	eP	P	09 55 13.5	-0.2
	comp=Z,25nm,1.1s						
TCF	Toulx Ste Croi	64.48	310	eP	P	09 55 13.5	-0.2
TCF				pmax	pmax		
	comp=Z,25nm,1.1s						
TCF	Toulx Ste Croi	64.48	310	eP	P	09 55 13.5	-0.2
	comp=Z,25nm,1.1s						
ESK	Eskdalemuir	64.87	321	iP	P	09 55 18.4	+2.4
CAF	Calviac	65.02	309	eP	P	09 55 17.6	+0.3
	comp=Z,13nm,0.9s						
CAF	Calviac	65.02	309	eP	P	09 55 17.6	+0.3
CAF				pmax	pmax		
	comp=Z,13nm,0.9s						
CAF	Calviac	65.02	309	eP	P	09 55 17.6	+0.3
	comp=Z,13nm,0.9s						
LDF	La Druitiere	65.23	313	eP	P	09 55 18.7	+0.2
	comp=Z,10nm,0.7s						
LDF	La Druitiere	65.23	313	eP	P	09 55 18.7	+0.2
LDF				pmax	pmax		
	comp=Z,11nm,0.7s						
LDF	La Druitiere	65.23	313	eP	P	09 55 18.7	+0.2
	comp=Z,10nm,0.7s						
RJF	Les Rejaudoux	65.26	309	eP	P	09 55 18.5	-0.3
RJF				eR			
	comp=Z,68nm,21.8s						
RJF	Les Rejaudoux	65.26	309	eP	P	09 55 18.5	-0.3
RJF	Les Rejaudoux	65.26	309	eP	P	09 55 18.5	-0.3
GRR	Gorron	65.76	313	eP	P	09 55 22.4	+0.5
	comp=Z,18nm,0.9s						
GRR	Gorron	65.76	313	eP	P	09 55 22.4	+0.5
GRR				pmax	pmax		
	comp=Z,18nm,0.9s						
GRR	Gorron	65.76	313	eP	P	09 55 22.4	+0.5
	comp=Z,18nm,0.9s						
SGMF	Saint Gilles	66.87	313	eP	P	09 55 29.2	+0.2
SGMF	Saint Gilles	66.87	313	eP	P	09 55 29.2	+0.2
SGMF	Saint Gilles	66.87	313	eP	P	09 55 29.2	+0.2
ROSF	Rostrenen	67.28	314	eP	P	09 55 31.9	+0.2
	comp=Z,42nm,1.0s						
ROSF	Rostrenen	67.28	314	eP	P	09 55 31.9	+0.2
ROSF				pmax	pmax		
	comp=Z,42nm,1.0s						
ROSF	Rostrenen	67.28	314	eP	P	09 55 31.9	+0.2
	comp=Z,42nm,1.0s						
QUIF	Quistinic	67.37	313	eP	P	09 55 31.9	-0.3
	comp=Z,9.8nm,0.8s						
QUIF	Quistinic	67.37	313	eP	P	09 55 31.9	-0.3
QUIF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
QUIF	Quistinic	67.37	313	eP	P	09 55 31.9	-0.3
	comp=Z,9.8nm,0.8s						
WRA	Warramunga Arr	68.52	131	P	P	09 55 38.2	-1.6
WRA	Warramunga Arr	68.52	131	P	P	09 55 38.2	-1.6
	comp=Z,1.9nm,0.5s,baz=325,slow=6.5,SNR=18						
SUMG	Summit	70.09	345	eP	P	09 55 50.9	+1.6
SUMG				pmax	pmax		
	comp=Z,84nm,2.4s						
SUMG	Summit	70.09	345	eP	P	09 55 50.9	+1.6
	comp=Z,84nm,2.4s						
AS31	Alice Springs	70.97	134	eP	P	09 55 54.4	-0.4
ASAR	Alice Springs	70.97	134	P	P	09 55 53.3	-1.5
ASAR	Alice Springs	70.97	134	P	P	09 55 53.3	-1.5
	comp=Z,1.3nm,0.5s,baz=320,slow=6.2,SNR=17						
ASAR				LR	LR	10 27 42.1	
	comp=Z,81nm,20.4s,baz=133,slow=36						
TAM	Tamanrasset	71.01	286	eP	P	09 55 55.7	+0.3
TAM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TAM	Tamanrasset	71.01	286	eP	P	09 55 55.7	+0.3
	comp=Z,3.5nm,0.8s						
ESDC	Sonseca Array	71.14	305	P	P	09 55 55.2	-0.6
ESDC	Sonseca Array	71.14	305	P	P	09 55 55.2	-0.6
	comp=Z,0.3nm,0.3s,baz=50,slow=6.4,SNR=7.1						
ESDC				LR	LR	10 28 28.0	
	comp=Z,83nm,21.0s,baz=120,slow=37						
LSZ	Lusaka	72.22	239	eP	P	09 56 03.8	+1.1
	comp=Z,8.0nm,0.9s						
ILAR	Eielson Array	76.06	21	P	P	09 56 24.6	+0.5
ILAR				PP	PP	09 59 14.4	+0.2
ILAR	Eielson Array	76.06	21	P	P	09 56 24.6	+0.5
	comp=Z,1.4nm,0.8s,baz=307,slow=4.6,SNR=14						
ILAR				PP	PP	09 59 14.4	+0.2
	comp=Z,0.4nm,0.8s,baz=299,slow=7.0,SNR=4.5						
INK	Inuvik	76.75	14	P	P	09 56 28.1	+0.1
INK	Inuvik	76.75	14	P	P	09 56 28.1	+0.1
	comp=Z,1.8nm,0.8s,baz=7.8,slow=4.8,SNR=5.6						
TORD	Torodi Ar. Bea	78.72	279	P	P	09 56 39.3	-0.6
TORD	Torodi Ar. Bea	78.72	279	P	P	09 56 39.3	-0.6
	comp=Z,3.1nm,0.8s,baz=52,slow=4.8,SNR=15						
TORD				LR	LR	10 36 38.6	
	comp=Z,104nm,18.2s,baz=185,slow=40						
KDAK	Kodiak Island	78.85	28	LR	LR	10 34 57.9	
	comp=Z,117nm,19.7s,baz=306,slow=38						
STKA	Stephens Creek	81.58	135	P	P	09 56 56.3	+1.4
STKA	Stephens Creek	81.58	135	P	P	09 56 56.3	+1.4
	comp=Z,5.4nm,1.0s,baz=59,slow=3.4,SNR=4.3						
STKA				LR	LR	10 37 00.4	
	comp=Z,99nm,18.0s,baz=201,slow=39						
BOSA	Boshof	82.93	231	P	P	09 57 02.5	+0.3
BOSA	Boshof	82.93	231	P	P	09 57 02.5	+0.3
	comp=Z,3.3nm,0.9s,baz=57,slow=0.5,SNR=4.0						
BOSA				LR	LR	10 32 47.3	
	comp=Z,80nm,18.0s,baz=168,slow=35						
YKW3	Yellowknife Ar	85.34	10	eP	P	09 57 15.0	+1.1
	comp=Z,0.1nm,0.8s						
YKA	Yellowknife Ar	85.41	10	P	P	09 57 15.4	+1.2
YKA	Yellowknife Ar	85.41	10	P	P	09 57 15.4	+1.2
	comp=Z,2.0nm,0.8s,baz=339,slow=5.0,SNR=15						
DBIC	Dimbokro	87.53	276	P	P	09 57 25.0	-0.5
DBIC	Dimbokro	87.53	276	P	P	09 57 25.0	-0.5
	comp=Z,9.7nm,0.9s,baz=25,slow=6.3,SNR=5.6						
DBIC				LR	LR	10 41 36.1	
	comp=Z,80nm,18.6s,baz=140,slow=39						
LIC	Lamto	87.90	276	eP	P	09 57 24.9	-2.4
	comp=Z,14nm,0.8s						
LIC				eR			
	comp=Z,113nm,19.5s						
LIC	Lamto	87.90	276	eP	P	09 57 24.9	-2.4
	comp=Z,14nm,0.8s						
SCHQ	Schefferville	91.49	345	LR	LR	10 46 30.8	
	comp=Z,67nm,18.5s,baz=15,slow=41						
FFC	Flin Flon	94.40	5	iP	P	09 58 01.6	+4.8
MAW	Mawson	99.79	189	LR	LR	10 38 36.1	
	comp=Z,89nm,19.5s,baz=276,slow=32						
SNAA	Sanae	118.73	201	PKP	PKPdf	10 03 24.7	+0.4
SNAA	Sanae	118.73	201	PKP	PKPdf	10 03 24.7	+0.4
	comp=Z,0.5nm,0.9s,baz=216,slow=6.3,SNR=9.9						
QSPA	South Pole Qui	120.72	180	PKP	PKPdf	10 03 29.4	+1.1
QSPA	South Pole Qui	120.72	180	PKP	PKPdf	10 03 29.4	+1.1
	comp=Z,1.3nm,0.7s,baz=256,slow=2.1,SNR=10						
SAML	Samuel	144.07	301	ePKPdf	PKPbc	10 04 12.2	+0.8
OTAV	Otavalo	145.75	332	ePKPdf	PKPab	10 04 19.3	+1.6
SIV	San Ignacio	146.65	289	PKPbc	PKPbc	10 04 19.7	+0.3
SIV	San Ignacio	146.65	289	PKPbc	PKPbc	10 04 19.7	+0.3
	comp=Z,3.1nm,0.8s,baz=70,slow=5.2,SNR=11						
CPUP	Villa Florida	147.76	269	PKPbc	PKPdf	10 04 20.3	+0.9
CPUP	Villa Florida	147.76	269	PKPbc	PKPdf	10 04 20.3	+0.9
	comp=Z,1.0nm,0.5s,baz=210,slow=4.1,SNR=2.9						
LPAZ	La Paz	152.43	296	PKPbc	PKPbc	10 04 34.5	-0.2
LPAZ	La Paz	152.43	296	PKPbc	PKPbc	10 04 34.5	-0.2
	comp=Z,1.0nm,0.3s,baz=216,slow=0.6,SNR=6.2						

BJI 06 09:48:01.9, 35°.68N×79°.59E, h7^km, ML3.6/3, Kashmir-Xizang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	Lanzhou	19.65	82	eP	Pn	09 52 38.6	+5.8
LZH				pP	pP	09 52 41.0	+7.6
LZH				sP	sP	09 52 43.3	+9.0
LZH				ePP	PnPn	09 52 57.2	+11

IDC 06 09:55:00.0±8.0, 16°.61S×169°.05E, h0^km, Error ellipse: s-maj=188.0km s-min=40.3km az=24.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	17.37	139	P	Pn	09 59 04.0	0.0
	95nm,0.3s,baz=174,slow=22,SNR=3.2						
STKA	Stephens Creek	29.17	234	P	P	10 01 03.1	-0.2
	1.1nm,0.6s,baz=70,slow=12,SNR=4.0						
WRA	Warramunga Arr	33.09	259	P	P	10 01 38.1	+0.2
	0.1nm,0.4s,baz=79,slow=6.1,SNR=5.4						
ASAR	Alice Springs	33.67	252	P	P	10 01 42.9	-0.2
	0.3nm,0.4s,baz=78,slow=9.2,SNR=9.8						

IDC 06 10:23:46.4±2.0, 22°.28S×179°.61W, h0^km, mb4.0/4, mb1 4.3/4, mb1mx3.9/17, mbtmp4.0/4, Error ellipse: s-maj=154.7km s-min=32.3km az=159.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.69	246	P	P	10 30 45.7	-0.9
	1.7nm,0.6s,baz=83,slow=8.6,SNR=7.8						
ASAR	Alice Springs	42.68	259	P	P	10 31 45.0	-0.2
	0.9nm,0.4s,baz=95,slow=7.3,SNR=43						
WRA	Warramunga Arr	42.90	264	P	P	10 31 47.6	+0.6
	1.8nm,0.3s,baz=97,slow=8.4,SNR=144						
TXAR	Lajitas Array	89.27	58	P	P	10 36 44.8	0.0
	0.4nm,0.8s,baz=228,slow=4.9,SNR=4.5						

*NOU **06** 10:37:10.4±1.2, 20°.43S×168°.65E, h10^km, MD2.6, ML3.9*
*ISCJB **06** 10:37:12.9±0.8, 21°.1S±0°.1×168°.8E±0°.1, h30^km, mb3.9/8, MS3.3/1, Error ellipse: s-maj=23.0km s-min=7.1km az=147.8*
*IDC **06** 10:37:16.9±1.0, 21°.24S×168°.61E, h39^km±6^km, mb3.7/8, mb1 3.8/9, mb1mx3.6/20, mbtmp3.7/9, ML3.8/1, MS3.4/1, Ms1 3.3/1, ms1mx2.8/21, Error ellipse: s-maj=25.2km s-min=20.6km az=156.0*
ISC 06 10:37:15.4±0.9, 21°.1S±0°.2×168°.7E±0°.1, h30^km, n18, σ1.13/28, mb4.0/8, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	1.99	238	eP	Pn	10 37 45.6	-1.4
BAYA				eS	Sn	10 38 11.8	+1.0
BAYA				AMP		10 38 16.7	
	comp=Z,77nm,5.6s						
PLUM	Mont Dore	2.24	238	eP	Pn	10 37 49.2	-1.3
PLUM				eS	Sn	10 38 19.3	+2.1
PLUM				AMP		10 38 21.0	
	comp=Z,1μm,0.6s						
LASL	Noumea	2.30	241	eP	Pn	10 37 50.8	-0.5
LASL				AMP		10 38 21.3	
	comp=Z,1μm,3.4s						
DZM	Mont Dzumac	2.31	245	eP	Pn	10 37 49.6	-2.0
DZM				eS	Sn	10 38 19.2	+0.1
DZM				AMP		10 38 23.5	
	comp=Z,4μm,0.0s						
DZM	Mont Dzumac	2.31	245	Pn	Pn	10 37 50.0	-1.5
	comp=Z,28nm,0.3s,baz=62,slow=16,SNR=1192						
DZM				Sn	Sn	10 38 18.9	-0.2
	comp=Z,82nm,0.3s,baz=81,slow=24,SNR=12						
NORM	Noumea	2.35	241	eP	Pn	10 37 50.5	-1.4
NORM				eS	Sn	10 38 20.8	+1.0
NORM				AMP		10 38 23.2	
	comp=Z,777nm,1.0s						
MVNO	Noumea	2.40	241	eP	Pn	10 37 52.0	-0.6
MVNO				eS	Sn	10 38 21.3	+0.2
NOUC	Port Laguerre	2.44	246	eP	Pn	10 37 52.0	-1.2
NOUC				eS	Sn	10 38 22.7	+0.5
NOUC				AMP		10 38 24.2	
	comp=Z,277nm,1.7s						
CTA	Charters Tower	21.04	269	P	P	10 41 57.8	+0.8
	comp=Z,0.5nm,0.4s,baz=141,slow=15,SNR=2.6						
STKA	Stephens Creek	26.46	240	P	P	10 42 50.2	+0.3
	comp=Z,3.6nm,1.0s,baz=50,slow=7.9,SNR=4.0						
STKA				LR	LR	10 52 38.2	
	comp=Z,84nm,21.3s,baz=26,slow=35						
WRA	Warramunga Arr	32.17	266	P	P	10 43 39.9	-0.9
	comp=Z,0.5nm,0.7s,baz=95,slow=8.3,SNR=13						
WRA				pP	pP	10 43 50.2	+0.7
	comp=Z,0.5nm,0.6s,baz=100,slow=7.5,SNR=3.8						
ASAR	Alice Springs	32.23	259	P	P	10 43 40.5	-0.8
	comp=Z,1.4nm,0.6s,baz=76,slow=8.0,SNR=44						
ASAR				pP	pP	10 43 51.4	+1.3
	comp=Z,2.5nm,0.7s,baz=85,slow=9.0,SNR=14						
QSPA	South Pole Qui	68.96	180	P	P	10 48 16.9	-0.7
	comp=Z,1.8nm,1.1s,baz=27,slow=7.2,SNR=6.1						
USRK	Ussuriysk Arra	73.16	333	P	P	10 48 43.9	+0.8
	comp=Z,3.6nm,0.8s,baz=198,slow=4.4,SNR=4.9						
SNAA	Sanae	87.28	183	P	P	10 49 58.4	-0.5
	comp=Z,0.5nm,0.8s,baz=218,slow=1.8,SNR=6.5						
SNAA				pP	pP	10 50 10.7	+2.2
	comp=Z,0.3nm,0.6s,baz=203,slow=14,SNR=2.0						
SONM	Songino Array	88.41	323	P	P	10 50 04.5	-0.1
	comp=Z,1.9nm,0.8s,baz=123,slow=5.5,SNR=5.3						
KHC	Kasperske Hory	145.73	331	eP	PKPab	10 56 51.5	-0.2
GERES	GERESS Array B	145.87	330	PKPbc	PKPab	10 56 52.0	-0.4
	comp=Z,2.5nm,0.8s,baz=49,slow=4.1,SNR=16						
GERES				pPKPbc	pPKPbc	10 57 04.2	+2.5
	comp=Z,2.0nm,0.8s,baz=35,slow=3.3,SNR=8.5						

*DJA **06** 10:37:47.5±1.3, 45°N±11°×14°9E±2°3, h10^km, M5.2/9, mB5.7/3, mb5.2/9, Mw(mB)5.2/3*
*SKHL **06** 10:37:50.8±1.6, 44°.48N×149°.44E, h38^km±4^km, mb5.5/4, mbh5.5/1, Ms4.6/7, msh4.9/5*
*JMA **06** 10:37:51.4±0.5, 44°.67N×149°.16E, h30^km, M5.0*
JMA Felt I J1.
*BJI **06** 10:37:51.1, 44°.53N×149°.24E, h47^km, mB5.0/33, mb5.0/53, Ms4.6/48, Ms7 4.5/46*
*ISCJB **06** 10:37:52.9±0.4, 44°.46N±0°.03×149°.01E±0°.03, h48^km±3^km, mb5.0/262, MS4.5/54, Error ellipse: s-maj=5.0km s-min=2.7km az=154.6*
*MOS **06** 10:37:53.2±0.8, 44°.50N×148°.97E, h50^km, mb5.3/106, MS4.4/33, Error ellipse: s-maj=6.6km s-min=4.0km az=107.9*
*IDC **06** 10:37:54.3±0.4, 44°.56N×148°.99E, h45^km±4^km, mb4.5/31, mb1 4.6/37, mb1mx4.6/38, mbtmp4.5/37, MS4.3/28, Ms1 4.3/28, ms1mx4.2/36, Error ellipse: s-maj=11.3km s-min=9.7km az=142.0*
*NEIC **06** 10:37:54.1±0.1, 44°.55N×148°.95E, mb5.1/123, Error ellipse: s-maj=4.7km s-min=2.5km az=158.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.
*TEH **06** 10:37:55.0, 44°.54N×148°.98E, h41^km, ML4.9*
*GCMT **06** 10:37:56.6±0.3, 44°.39N×149°.27E, h39^km±1^km, MW5.0, Moment Tensor Solution. s35,c42; s61,c85; Moment tensor: Scale 10^{16}Nm; M_{rr}2.74±.18; $M_{\theta\theta}$-1.17±.12; $M_{\phi\phi}$-1.57±.12; $M_{r\theta}$0.70±.13; $M_{\theta\phi}$-2.15±.08; $M_{\phi r}$1.65±.10; Best double couple: $M_0$3.60000×10^{16} NP1:ϕ_s237.00000°, δ32.00000°, λ113.00000°. NP2:ϕ_s30.00000°, δ60.00000°, λ76.00000°. Principal axes: T 3.3000, Plg71.0000°, Azm269.0000°; N 0.6600, Plg12.0000°, Azm37.0000°; P -3.9600, Plg14.0000°, Azm131.0000°; Data Used: II IU IC G CN.*
*NIED **06** 10:38:00, 44°.80N×149°.10E, h35^km, Mw4.9 Best double couple: $M_0$2.91000×10^{16} NP1:ϕ_s8.00000°, δ68.00000°, λ73.00000°. NP2:ϕ_s228.00000°, δ28.00000°, λ127.00000°.*
*SZGRF **06** 10:38:02.3, 45°.98N×148°.64E, h33^km, mb5.4, MS4.2, Kuril Islands, Russia*
ISC 06 10:37:53.8±0.3, 44°.51N±0°.04×149°.03E±0°.03, h43^km±1^km, h42^km:pP-P, n944, σ1.08/1039, mb5.1/272, MS4.5/54, 118C-34D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.10	311 d	iPN	Pn	10 38 12.8	+0.1
KUR				iS	Sn	10 38 28.0	+1.4
KUR				pmax	pmax		
	comp=E,2μm,0.4s						
KUR				pmax	pmax		
	comp=Z,5μm,0.4s						
KUR				pmax	pmax		
	comp=N,2μm,0.4s						
KUR				smax	smax		
	comp=E,3μm,0.5s						
KUR				smax	smax		
	comp=N,10μm,0.5s						
KUR	Kuril'sk	1.10	311⇓	iP	Pn	10 38 12.8	+0.1
KUR				AMB	AMB	10 38 14.0	
	comp=N,20μm,1.6s						
KUR				AMB	AMB	10 38 14.0	
	comp=N,15μm,2.0s						
KUR				AMB	AMB	10 38 14.0	
	comp=N,20μm,4.0s						
KUR				AMB	AMB	10 38 14.0	
	comp=N,38μm,1.8s						
KUR				iS	Sn	10 38 28.1	+1.4
KUR				A	A	10 38 30.2	
	comp=N,40μm,2.0s						
KUR				A	A	10 38 30.2	
	comp=N,60μm,1.4s						
KUR				A	A	10 38 32.8	
	comp=N,30μm,3.0s						
KUR				A	A	10 38 32.8	
	comp=N,25μm,2.0s						
YUK	Yuzh-Kuril'sk	2.33	259	iPN	Pn	10 38 29.8	+0.3
YUK				iS	Sn	10 39 00.2	+3.3
YUK				pmax	pmax		
	comp=N,613nm,0.2s						

YUK pmax pmax
comp=Z,2μm,0.2s
YUK pmax pmax
comp=E,97nm,0.1s
YUK smax smax
comp=N,3μm,0.4s
YUK smax smax
comp=E,3μm,0.4s
YUK MLR MLR
comp=Z,6μm,15.0s
YUK Yuzh-Kuril'sk 2.33 259 ⇓ *i*P **Pn 10 38 29.8 +0.3**
YUK AMB AMB 10 38 39.3
comp=Z,610nm,0.2s
YUK AMB AMB 10 38 39.3
comp=Z,100nm,0.2s
YUK AMB AMB 10 38 39.3
comp=Z,2μm,0.2s
YUK *i*S **Sn 10 39 00.2 +3.3**
YUK A A 10 39 08.0
comp=Z,3μm,0.4s
YUK A A 10 39 08.0
comp=Z,3μm,0.4s
YUK AMS AMS 10 39 27.2
comp=Z,6μm,15.0s
NEM2 Nemuro 2 2.64 245 P **Pn 10 38 32.5 -1.3**
NEM2 *e*S **Sn 10 39 04.2 -0.4**
JRA Rausu 2.87 260 P **Pn 10 38 37.6 +0.6**
JRA *e*S **Sn 10 39 12.6 +2.4**
JNK Nakash 3.25 255 P **Pn 10 38 42.2 0.0**
JNK *e*S **Sn 10 39 19.8 +0.3**
JAK Akkeshi 3.49 246 P **Pn 10 38 44.7 -0.8**
JAK *e*S **Sn 10 39 25.1 -0.4**
JTKR Abashiri--Toko 3.72 263 P **Pn 10 38 49.7 +1.0**
JAR Ashorobuto 3.99 254 P **Pn 10 38 53.2 +0.8**
JAR *e*S **Sn 10 39 40.1 +2.1**
JOB Onbets 4.10 249 P **Pn 10 38 54.2 +0.3**
JMP Maruseppu 4.11 265 P **Pn 10 38 55.4 +1.4**
JCH Churui 4.54 247 P **Pn 10 38 59.8 -0.1**
JCH *e*S **Sn 10 39 52.1 +0.8**
JKK2 Kamakawa 2 4.56 264 P **Pn 10 39 02.5 +2.2**
JSE Soyaes 4.62 278 P **Pn 10 39 02.5 +1.5**
ASAJ Asahikawa 4.64 267 P **Pn 10 39 03.1 +1.8**
ASAJ *e*Sn Sn 10 39 42.9 -11
ASAJ Asahikawa 4.64 267 P **Pn 10 39 03.6 +2.3**
ASAJ Asahikawa 4.64 267 P **Pn 10 39 03.1 +1.8**
comp=Z,12nm,0.3s,baz=90,slow=13,SNR=70
ASAJ LR LR 10 41 06.8
comp=Z,7μm,18.9s,baz=102,slow=42
JFR Furan 4.85 256 P **Pn 10 39 06.1 +1.9**
JFR *e*S **Sn 10 40 01.9 +2.8**
JEM Erimo 4.96 242 P **Pn 10 39 06.8 +1.1**
JEM *e*S **Sn 10 40 02.8 +1.0**
ERM Erimo 4.96 242 *e*PN **Pn 10 39 07.2 +1.5**
ERM *e* 10 40 03.6
ERM Erimo 4.96 242 *e*Pn **Pn 10 39 07.2 +1.5**
ERM *e*Sn **Sn 10 40 03.6 +1.8**
JAB Ashibetsu 5.01 261 P **Pn 10 39 09.5 +3.0**
YSS Yuzh-Sakhalins 5.03 301 ⇓ *i*PN **Pn 10 39 08.8 +2.2**
YSS *e*S **Sn 10 40 03.8 +0.4**
YSS smax smax
comp=N,320nm,1.1s
YSS MLR MLR
comp=Z,5μm,15.0s
YSS MLR MLR
comp=N,2μm,16.0s
YSS MLR MLR
comp=E,4μm,16.0s
YSS Yuzh-Sakhalins 5.03 301 ⇓ *i*P **Pn 10 39 08.8 +2.2**
YSS *e*sP sP 10 39 25.4
YSS *e*S **Sn 10 40 03.8 +0.4**
YSS A A 10 40 09.7
comp=E,320nm,1.1s
YSS *e*LQ LQ 10 40 26.0
YSS *e*LR LR 10 40 50.0
YSS AMS AMS 10 41 14.0
comp=E,2μm,16.0s
YSS AMS AMS 10 41 14.0
comp=E,4μm,16.0s
JNBK Urakawa-nobuka 5.09 246 P **Pn 10 39 07.3 -0.2**
JNBK *e*S **Sn 10 40 04.6 -0.4**
JWK2 Keihoku 5.13 282 P Pn 10 39 11.9 +3.9
JBT2 Biratori 2 5.14 253 P **Pn 10 39 08.6 +0.4**
JBT2 *e*S **Sn 10 40 08.6 +2.4**
JSS Shosan 5.14 271 P **Pn 10 39 11.2 +3.0**
JHR Hokuryu 5.32 264 P Pn 10 39 13.9 +3.3
JEW Eniwo 5.75 256 P **Pn 10 39 19.0 +2.5**
JNB Noboribetsu 6.16 253 P **Pn 10 39 23.3 +1.1**
JNB *e*S **Sn 10 40 32.0 +0.6**
JSK Shakotan 6.29 262 P Pn 10 39 27.1 +3.2
JKB Kayabe 6.41 249 P **Pn 10 39 25.7 +0.1**
JKB *e*S **Sn 10 40 34.7 -2.7**
UGL Uglegorsk 6.61 316 *e*PN **Pn 10 39 31.0 +2.7**
UGL pmax pmax
comp=Z,317nm,1.2s
UGL MLR MLR
comp=N,4μm,17.0s
UGL MLR MLR
comp=E,1μm,17.0s
UGL Uglegorsk 6.61 316 *e*P **Pn 10 39 31.0 +2.7**
UGL AMB AMB 10 39 33.5
comp=E,317nm,1.2s
UGL pP 10 39 44.0
UGL AMS AMS 10 42 10.0
comp=E,4μm,17.0s
UGL AMS AMS 10 42 10.0
comp=E,1μm,17.0s
JYM2 Yakumo 2 6.76 252 P **Pn 10 39 31.3 +0.9**
JANG Nango 6.93 236 P **Pn 10 39 30.3 -2.4**
JANG *e*S Sn 10 40 43.1 -7.1
JTM Tenmabayashi 6.95 240 P **Pn 10 39 31.9 -1.1**
JTM *e*S **Sn 10 40 45.2 -5.6**
JSR Shiriuchi 6.98 248 P **Pn 10 39 33.2 -0.2**
JTH Tanohata 7.01 232 *e*S Sn 10 40 42.0 -10
JOSM Okushiri--Mats 7.38 254 P **Pn 10 39 39.8 +0.9**
TYV Tymovskoe 7.67 328 *e*P **Pn 10 39 45.5 +2.7**
TYV AMB AMB 10 39 49.0
comp=E,44nm,0.8s
TYV AMB AMB 10 39 49.0
comp=E,40nm,1.0s
TYV AMB AMB 10 39 49.0
comp=E,66nm,1.0s
TYV A A 10 41 26.0
comp=E,1μm,6.0s
TYV AMS AMS 10 42 45.0
comp=E,2μm,18.0s
TYV AMS AMS 10 42 45.0
comp=E,2μm,18.0s
OFUJ Ofunato 7.73 228 P **Pn 10 39 40.8 -2.9**
SKR Severo-Kuril's 7.81 35 *e*PN **Pn 10 39 42.0 -2.7**
SKR pmax pmax
comp=Z,90nm,0.5s
SKR MLR MLR
comp=N,1μm,16.0s
SKR MLR MLR
comp=E,1μm,16.0s
SKR MLR MLR
comp=Z,1μm,16.0s
SKR Severo-Kuril's 7.81 35 *e*P **Pn 10 39 42.0 -2.7**
SKR AMB AMB 10 39 43.6
comp=Z,90nm,0.5s
SKR A A 10 41 36.0
comp=Z,190nm,0.9s
SKR A A 10 41 36.0
comp=Z,160nm,0.9s
SKR A A 10 41 36.0
comp=Z,170nm,0.8s
SKR A A 10 41 36.0
comp=Z,1μm,8.0s
SKR A A 10 41 36.0
comp=Z,1μm,8.0s
SKR AMS AMS 10 44 08.0
comp=Z,1μm,16.0s
SKR AMS AMS 10 44 08.0
comp=Z,1μm,16.0s
JRG Rokugo 8.08 234 P **Pn 10 39 46.6 -1.9**
JOG2 Oga 2 8.25 239 P **Pn 10 39 50.3 -0.6**
JIO Ouri 8.36 226 P Pn 10 39 49.1 -3.2
JIO *e*S Sn 10 41 15.5 -10
TEY Ternei 8.86 278 *e*P Pn 10 40 03.8 +4.6
TEY AMB AMB 10 40 04.0
comp=Z,1μm,4.0s
TEY AMB AMB 10 40 04.0
comp=Z,52nm,1.0s
TEY AMB AMB 10 40 04.0
comp=Z,120nm,1.0s
TEY *e*LR LR 10 43 00.0
TEY AMS AMS 10 43 12.0
comp=Z,17μm,20.0s
TEY AMS AMS 10 43 12.0
comp=Z,2μm,18.0s
TEY AMS AMS 10 43 12.0
comp=Z,4μm,20.0s
JYA Atsumi 9.15 233 P **Pn 10 40 01.6 -1.6**
JFK Kawauchi 9.43 224 P Pn 10 40 03.9 -3.2
JFK *e*S Sn 10 41 39.7 -12
OKH Okha 9.89 338 *e*P **Pn 10 40 15.0 +1.8**
OKH AMB AMB 10 40 18.0
comp=Z,500nm,3.0s
OKH A A 10 42 21.2
comp=Z,1μm,6.0s
OKH *e*LQ LQ 10 43 46.0
OKH AMS AMS 10 45 32.0
comp=Z,1μm,14.0s
OKH AMS AMS 10 45 32.0
comp=Z,600nm,10.0s
OKH AMS AMS 10 45 32.0
comp=Z,1μm,14.0s
JFY Yanaizu 10.00 228 P **Pn 10 40 12.6 -2.3**
NKL Nikolayevsk 10.24 331 *e*P **Pn 10 40 18.0 0.0**
NKL *i*P 10 40 18.8
NKL AMB AMB 10 40 20.0
comp=Z,500nm,3.5s
NKL AMB AMB 10 40 20.0
comp=Z,400nm,3.0s
NKL AMB AMB 10 40 20.2
comp=Z,140nm,1.4s
NKL AMB AMB 10 40 20.2
comp=Z,120nm,1.4s
NKL AMB AMB 10 40 20.2
comp=Z,210nm,1.4s
NKL *e*S Sn 10 42 19.0 +7.7
NKL A A 10 42 40.0
comp=Z,500nm,9.0s
NKL *e*L L 10 43 14.0
NKL AMS AMS 10 44 30.0
comp=Z,1μm,20.0s
NKL AMS AMS 10 44 30.0
comp=Z,2μm,20.0s
PEA0B Petropavlovsk- 10.32 30 *e*Pn **Pn 10 40 20.2 +1.1**
PETK Petropavlovsk- 10.32 30 PN **Pn 10 40 20.3 +1.2**
PETK pmax pmax
comp=Z,2.0nm,0.3s
PETK MLR MLR
comp=Z,780nm,21.5s
PETK Petropavlovsk- 10.32 30 P **Pn 10 40 20.3 +1.2**
PETK Petropavlovsk- 10.32 30 P **Pn 10 40 20.3 +1.2**
comp=Z,2.2nm,0.3s,baz=200,slow=15,SNR=20
PETK LR LR 10 44 13.5
comp=Z,780nm,21.5s,baz=216,slow=37
HABR Khabarovsk 10.42 297 *e*PN **Pn** 10 40 23.9 +3.4
HABR *e* 10 42 31.4
HABR pmax pmax
comp=E,110nm,1.5s
HABR pmax pmax
comp=Z,116nm,1.5s
HABR pmax pmax
comp=N,28nm,1.8s
HABR MLR MLR
comp=Z,2μm,19.0s
PET Petropavlovsk 10.61 33 *e*PN Pn 10 40 27.0 +3.9
PET pmax pmax
comp=Z,100nm,5.9s
PET MLR MLR
comp=Z,2μm,19.0s
PET MLR MLR
comp=Z,2μm,18.0s
JSZ Suzu 11.29 235 P **Pn 10 40 31.1 -1.3**
MAJO Matsushiro 11.45 230 *e*PN **Pn 10 40 32.9 -1.8**
MAJO Matsushiro 11.45 230 *e*Pn **Pn 10 40 32.9 -1.8**
MAJO *e*Sn Sn 10 42 34.2 -6.9
MAT Matsushiro 11.45 230 P **Pn 10 40 32.1 -2.5**
MAT *e*S **Sn 10 42 39.9 -1.2**
USRK Ussuriysk Arra 12.21 275 P **Pn 10 40 46.3 +1.4**
comp=Z,0.7nm,0.3s,baz=90,slow=12,SNR=23
USRK LR LR 10 45 40.3
comp=Z,2μm,19.4s,baz=80,slow=38
KLR Kul'dur 12.73 298 *e*PN Pn 10 40 56.5 +4.5
KLR *e* 10 43 21.5
KLR MLR MLR
comp=E,500nm,12.0s
KLR MLR MLR
comp=Z,4μm,12.0s
JHJ Hachijo jima 2 13.46 215 LR LR 10 47 11.7
comp=Z,256nm,18.2s,baz=77,slow=41
MDJ Mudanjiang 13.87 277 P **Pn 10 41 07.5 -0.1**
MDJ S **Sn 10 43 39.6 -0.4**
MDJ ScP **ScP 10 49 59.0 +1.5**
MDJ PcS **PcS 10 50 03.6 +1.4**
MDJ ScS **ScS 10 53 36.0 +1.5**
MDJ pmax pmax
comp=Z,9.0nm,1.2s
MDJ pmax pmax
comp=Z,100nm,4.8s
MDJ LR LR
comp=N,720nm,20.4s
MDJ LR LR
comp=E,770nm,24.3s
MDJ LR LR
comp=Z,1μm,22.4s
ZEA Zeya 16.92 311 *e*P **Pn 10 41 46.1 -1.1**
ZEA AMB AMB 10 41 47.4
comp=Z,59nm,1.0s
ZEA AMB AMB 10 42 05.0
comp=Z,500nm,10.0s
ZEA AMB AMB 10 42 05.0
comp=Z,300nm,10.0s
ZEA A A 10 45 06.0
comp=Z,200nm,10.0s
CN2 Changchun 16.93 276 *e*P **Pn 10 41 47.5 +0.1**
CN2 *e*sP **sP 10 42 03.0 -1.7**
CN2 *e*S **Sn 10 44 51.6 -2.9**
CN2 pmax pmax
comp=Z,20nm,1.4s
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,500nm,17.0s
CN2 LR LR
comp=E,400nm,17.0s
CN2 LR LR
comp=Z,1μm,20.0s
KSRS Korea Array 17.40 253 P **Pn 10 41 52.0 -1.3**
comp=Z,0.3nm,0.3s,baz=64,slow=12,SNR=18
KSRS LR LR 10 48 54.3
comp=Z,1μm,18.7s,baz=46,slow=38
KSAR Wonju Array Be 17.43 253 P **Pn 10 41 52.0 -1.7**
FX1 Attu Island--F 17.93 54 P **Pn 10 41 59.4 -0.3**
FX1 Attu Island--F 17.93 54 P **Pn 10 41 59.4 -0.3**
comp=Z,2.2nm,0.3s,baz=81,slow=6.1,SNR=7.9
JNU Nakatsue 18.11 237 P **P 10 42 01.4 -0.6**
JNU Nakatsue 18.11 237 P **P 10 42 01.4 -0.6**
comp=Z,0.4nm,0.3s,baz=36,slow=11,SNR=5.9
JNU LR LR 10 50 09.2
comp=Z,604nm,19.2s,baz=39,slow=41
INCN Inchon 18.28 255 *e*P **Pn 10 42 05.1 +1.0**
comp=Z,49nm,1.0s
SEY Seymchan 18.56 5 *ce*P **P 10 42 05.2 -1.5**
SNY Shenyang 18.74 271 ⇓ P **Pn 10 42 10.1 +0.5**
SNY S **Sn 10 45 32.8 -5.3**
SNY pmax pmax
comp=Z,24nm,1.2s
SNY pmax pmax
comp=Z,250nm,7.3s
SNY LR LR
comp=N,480nm,15.2s
SNY LR LR
comp=E,850nm,19.1s
SNY LR LR
comp=Z,1μm,19.8s
CLNS Chul'man 19.52 318 *e*P **Pn 10 42 22.1 +3.2**
CLNS *e*S **Sn 10 45 58.9 +2.0**
CLNS pmax pmax
comp=N,21nm,1.3s
CLNS pmax pmax
comp=Z,32nm,1.0s
CLNS pmax pmax
comp=E,17nm,1.1s
CLNS smax smax
comp=E,329nm,14.9s
CLNS smax smax
CLNS MLR MLR
comp=N,268nm,12.8s
CLNS MLR MLR
comp=N,1μm,16.0s
CLNS MLR MLR
comp=E,1μm,15.0s
CLNS MLR MLR
comp=Z,2μm,15.0s
YAK Yakutsk 20.87 334 *e*P **P 10 42 30.4 -1.4**
YAK *e* 10 42 44.1
YAK *e*S **S 10 46 16.3 -5.6**
YAK *e*SS Sn 10 46 36.3 +7.2
YAK *e*SSS SSS 10 46 48.0
YAK *e* 10 53 50.7
YAK pmax pmax
comp=Z,34nm,1.0s
YAK pmax pmax
comp=N,12nm,1.0s
YAK smax smax
comp=N,200nm,3.0s
YAK smax smax
comp=E,136nm,3.0s
YAK MLR MLR
comp=Z,1μm,21.0s
YAK MLR MLR
comp=N,813nm,19.0s
YAK MLR MLR
comp=E,401nm,18.0s
JOW Kunigami 24.29 230 *e*P **P 10 43 07.7 +0.6**
comp=E,56nm,0.9s
BJI Beijing 24.62 271 P **P 10 43 10.1 +0.1**
BJI pP **pP 10 43 17.8 -3.6**
BJI S **S 10 47 28.7 +0.5**
BJI pmax pmax
comp=Z,58nm,1.8s
BJI pmax pmax
comp=Z,310nm,6.3s
BJI LR LR
comp=N,320nm,17.0s
BJI LR LR
comp=E,990nm,20.3s
BJI LR LR
comp=Z,840nm,22.3s
BILL Bilibino 25.26 15 ⇓ *e*P **P 10 43 13.3 -2.2**
BILL *e* 10 43 49.0
BILL *e*S S 10 47 26.8 -11
BILL pmax pmax
comp=Z,8.0nm,1.1s
BILL MLR MLR
comp=Z,100nm,16.0s
BILL Bilibino 25.26 15 *e*P **P 10 43 13.6 -1.9**
comp=Z,5.9nm,0.6s
SSE Sheshan 25.61 248 P **P 10 43 16.8 -2.2**
SSE sP **sP 10 43 32.8 -2.8**
SSE S **S 10 47 43.0 -1.2**
SSE pmax pmax
comp=Z,23nm,0.9s
SSE pmax pmax
comp=Z,160nm,8.2s
SSE LR LR
comp=N,320nm,23.5s
SSE LR LR
comp=E,440nm,23.5s
SSE LR LR
comp=Z,640nm,18.4s
NJ2 Nanjing 26.60 252 *e*P **P 10 43 28.2 +0.3**
NJ2 pP **pP 10 43 38.5 -0.9**
NJ2 sP **sP 10 43 45.5 +1.0**
NJ2 PcP **PcP 10 46 53.6 +2.4**
NJ2 S **S 10 48 01.5 +1.8**
NJ2 sS **sS 10 48 21.0 +2.0**
NJ2 pmax pmax
comp=Z,30nm,1.1s
NJ2 pmax pmax
comp=Z,110nm,6.6s
NJ2 LR LR
comp=N,650nm,15.2s
NJ2 LR LR
comp=E,1μm,15.1s
NJ2 LR LR
comp=Z,7μm,18.1s
HHC Hu-ho-hao-te 27.63 276 *e*P **P 10 43 36.3 -1.0**
HHC pP **pP 10 43 48.5 -0.3**
HHC sP **sP 10 43 55.0 +1.1**
HHC PP **PnPn 10 44 26.2 +2.3**
HHC S **S 10 48 14.7 -1.4**
HHC sS **sS 10 48 34.3 -1.0**
HHC SS **SnSn 10 49 34.4 +4.5**
HHC pmax pmax
comp=Z,83nm,1.1s
HHC pmax pmax
comp=Z,510nm,5.2s
HHC LR LR
comp=N,600nm,15.3s
HHC LR LR
comp=E,2μm,15.9s
HHC LR LR
comp=Z,2μm,16.0s
BTO Baotou 28.81 276 *e*P **P 10 43 47.7 -0.1**
ULN Ulaanbaatar 29.00 292 P **P 10 43 50.5 +1.1**
SNR=5.9
ULN Ulaanbaatar 29.00 292 *e*P **P 10 43 49.9 +0.4**
ULN Ulaanbaatar 29.00 292 P **P 10 43 50.3 +0.9**
comp=Z,13nm,0.9s
SONM Songino Array 29.44 292 P **P 10 43 53.1 -0.2**
SONM PcP **PcP 10 46 58.2 +0.1**
SONM Songino Array 29.44 292 P **P 10 43 53.1 -0.2**
comp=Z,7.2nm,0.8s,baz=76,slow=9.0,SNR=21
SONM PcP **PcP 10 46 58.2 +0.1**
comp=Z,0.7nm,0.4s,baz=103,slow=3.7,SNR=3.5
SONM LR LR 10 56 43.1
comp=Z,1μm,19.2s,baz=70,slow=38
WHN Wuhan 30.59 255 ⇓ P **P 10 44 04.0 +0.5**
WHN S **S 10 49 04.8 +2.4**
WHN LR LR
comp=N,1μm,16.2s
WHN LR LR
comp=E,350nm,9.3s
WHN LR LR
comp=Z,2μm,18.5s
TLY Talaya 30.73 300 *e*P **P 10 44 03.1 -1.5**
TLY *e* 10 45 21.1
TLY *e*SS SS 10 51 13.8 -2.7
TLY pmax pmax
comp=Z,5.0nm,0.7s
TLY MLR MLR
comp=Z,758nm,16.0s
ZAK Zakamensk 31.09 297 *e*P **P 10 44 06.0 -1.9**
ZAK *e* 10 47 02.2
ZAK pmax pmax
comp=Z,4.0nm,1.2s
TPUB Ta-pu 31.42 237 *e*P **P 10 44 11.2 +0.4**
comp=Z,34nm,1.0s
TNA Tin City 31.48 33 *e*P **P 10 44 13.0 +2.1**
TWG Pinlang 31.52 236 *e*P P 10 44 15.6 +3.9
comp=Z,23nm,0.4s
LZH Lanzhou 35.10 272 ⇑ P **P 10 44 44.2 +1.1**
LZH pP **pP 10 44 56.1 +1.4**
LZH sP **sP 10 45 01.5 +1.7**
LZH PP **PP 10 46 03.1 0.0**
LZH *e*S **S 10 50 12.5 -0.3**
LZH sS **sS 10 50 32.2 -0.1**
LZH *e*SS **SnSn 10 52 28.5 -3.2**
LZH pmax pmax
comp=Z,32nm,1.3s
LZH pmax pmax
comp=Z,150nm,5.6s
LZH LR LR
comp=N,410nm,12.0s
LZH LR LR
comp=E,370nm,13.1s
LZH LR LR
comp=Z,750nm,17.0s
GTA Gaotai 36.51 280 ⇑ P **P 10 44 56.0 +1.0**
GTA pP **pP 10 45 08.0 +1.3**
GTA sP **sP 10 45 13.3 +1.5**
GTA PcP **PcP 10 47 19.4 +1.4**
GTA S **S 10 50 36.8 +2.6**
GTA sS **sS 10 50 54.6 +0.9**
GTA SS **SnSn 10 53 04.1 -1.4**
GTA pmax pmax
comp=Z,51nm,0.9s
GTA pmax pmax
comp=Z,170nm,5.9s
GTA LR LR
comp=N,320nm,16.6s

GTA LR LR
comp=E,270nm,16.2s
GTA LR LR
comp=Z,320nm,21.1s
KDAK Kodiak Island 37.73 48 P **P** **10 45 04.7 -0.3**
KDAK Kodiak Island 37.73 48 P **P** **10 45 04.7 -0.3**
comp=Z,8.9nm,0.6s,baz=304,slow=0.8,SNR=8.0
SPU Mount Spurr 37.80 43 *eP* **P** **10 45 06.9 +1.3**
CD2 Chengdu 37.83 265⇑*iP* **P** **10 45 06.6 +0.4**
CD2 pP **pP** **10 45 17.9 -0.1**
CD2 sP **sP** **10 45 22.8 -0.2**
CD2 PP **PnPn** **10 46 36.2 +1.7**
CD2 S **S** **10 50 53.4 -0.9**
CD2 sS **sS** **10 51 12.6 -1.3**
CD2 SS **SnSn** **10 53 29.6 -8.0**
CD2 pmax pmax
comp=Z,130nm,8.2s
CD2 LR LR
comp=N,380nm,19.0s
CD2 LR LR
comp=E,320nm,17.8s
CD2 LR LR
comp=Z,310nm,13.0s
GYA Guiyang 38.42 256⇑*iP* **P** **10 45 11.2 -0.1**
GYA pP **pP** **10 45 23.4 +0.3**
GYA sP **sP** **10 45 29.0 +0.8**
GYA PP **PnPn** **10 46 42.8 +1.0**
GYA S **S** **10 50 59.6 -3.9**
GYA ScP **ScP** **10 51 09.0 +0.7**
GYA sS **sS** **10 51 21.7 -1.4**
GYA SS SnSn 10 53 41.2 -11
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.1s
GYA LR LR
comp=N,390nm,19.6s
GYA LR LR
comp=E,520nm,17.1s
GYA LR LR
comp=Z,730nm,19.0s
TRF Thorofare Moun 38.59 39 *eP* **P** **10 45 12.5 +0.1**
comp=Z,8.4nm,0.9s
COLD Coldfoot 38.78 33 *eP* **P** **10 45 14.3 +0.6**
comp=Z,16nm,1.2s
PMR Palmer 39.19 42 *eP* **P** **10 45 17.7 +0.5**
PMR pmax pmax
comp=Z,10.0nm,0.7s
PMR Palmer 39.19 42 *eP* **P** **10 45 17.7 +0.5**
comp=Z,10nm,0.7s
MCK McKinley 39.20 38 *eP* **P** **10 45 17.8 +0.5**
MCK pmax pmax
comp=Z,14nm,0.8s
MCK McKinley 39.20 38 *eP* **P** **10 45 17.8 +0.5**
comp=Z,14nm,0.8s
SML Sawmill 39.55 41 *eP* **P** **10 45 20.5 +0.2**
SML pmax pmax
comp=Z,16nm,0.9s
SML Sawmill 39.55 41 *eP* **P** **10 45 20.5 +0.2**
comp=Z,16nm,0.9s
COLA College 39.65 37 *eP* **P** **10 45 21.7 +0.7**
COLA pmax pmax
comp=Z,23nm,0.9s
COLA College 39.65 37 *eP* **P** **10 45 21.7 +0.7**
comp=Z,23nm,0.9s
ILAR Eielson Array 40.07 37 P **P** **10 45 24.4 -0.1**
ILAR Eielson Array 40.07 37 P **P** **10 45 24.4 -0.1**
comp=Z,8.6nm,0.8s,baz=256,slow=7.7,SNR=52
DIV Divide 40.84 42 *eP* **P** **10 45 31.7 +0.7**
comp=Z,22nm,1.2s
QIZ Qiongzhong 41.32 245 P **P** **10 45 36.6 +1.3**
QIZ S **S** **10 51 48.8 +2.1**
QIZ sS **sS** **10 52 06.6 +0.1**
QIZ LR LR
comp=N,350nm,19.9s
QIZ LR LR
comp=Z,440nm,21.5s
DOT Dot Lake 41.37 38 *eP* **P** **10 45 35.1 -0.1**
comp=Z,15nm,1.1s
MENT Mentasta 41.59 39 *eP* **P** **10 45 38.0 +0.9**
ZAA0 Zalesovo Array 41.63 307 *eP* **P** **10 45 36.7 -0.8**
ZALV Zalesovo Beam 41.63 307 P **P** **10 45 36.2 -1.2**
ZALV 10 47 33.8
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV MLR MLR
comp=Z,428nm,20.2s
ZALV Zalesovo Beam 41.63 307 P **P** **10 45 36.2 -1.2**
ZALV PcP **PcP** **10 47 33.8 +0.1**
ZALV ScP **ScP** **10 51 18.6 -1.5**
ZALV Zalesovo Beam 41.63 307 P **P** **10 45 36.2 -1.2**
comp=Z,0.9nm,0.3s,baz=45,slow=7.3,SNR=8.2
ZALV PcP **PcP** **10 47 33.8 +0.1**
comp=Z,10nm,0.8s,baz=82,slow=2.9,SNR=19
ZALV ScP **ScP** **10 51 18.6 -1.5**
comp=Z,0.4nm,0.4s,baz=104,slow=6.1,SNR=3.7
ZALV LR LR 11 04 01.5
comp=Z,428nm,20.2s,baz=69,slow=38
KMI Kunming 42.00 258 P **P** **10 45 41.5 +0.4**
KMI pP **pP** **10 45 51.5 -1.5**
KMI S **S** **10 51 58.5 +1.3**
KMI SS SS 10 54 57.2 -8.0
KMI pmax pmax
comp=Z,48nm,1.2s
KMI pmax pmax
comp=Z,190nm,3.4s
KMI LR LR
comp=N,330nm,15.8s
KMI LR LR
comp=E,270nm,15.8s
KMI LR LR
comp=Z,410nm,19.0s
NVS Novosibirsk 42.30 308 *eP* **P** **10 45 42.0 -0.9**
NVS *e* 10 47 33.0
EGAK Eagle 42.52 37 *eP* **P** **10 45 44.5 0.0**
comp=Z,32nm,1.1s
WMQ Urumqi 43.08 292⇑*iP* **P** **10 45 50.2 +0.7**
WMQ pP **pP** **10 46 02.5 +1.2**
WMQ sP **sP** **10 46 08.0 +1.6**
WMQ PP **PP** **10 47 33.0 +3.2**
WMQ S **S** **10 52 12.5 +0.2**
WMQ sS **sS** **10 52 33.0 +0.9**
WMQ ScS **ScS** **10 55 45.0 -1.0**
WMQ pmax pmax
comp=Z,28nm,0.8s
WMQ pmax pmax
comp=Z,130nm,3.6s
WMQ LR LR
comp=N,870nm,18.8s
WMQ LR LR
comp=E,660nm,16.0s
WMQ LR LR
comp=Z,610nm,19.7s
MK31 Makanchi Array 45.43 298 *i* P **P** **10 46 08.1 -0.1**
MK31 pmax pmax
comp=Z,4.0nm,0.4s
MK31 Makanchi Array 45.43 298 *eP* **P** **10 46 08.2 -0.1**
MK31 *e*PcP **PcP** **10 47 47.1 +0.3**
MKAR Makanchi Array 45.43 298 P **P** **10 46 08.2 -0.1**
MKAR *PP **pP** **10 46 19.8 -0.4**
MKAR 10 47 46.9
MKAR 10 47 58.8
MKAR pmax pmax
comp=Z,4.0nm,0.5s
MKAR pmax pmax
comp=Z,5.0nm,0.8s
MKAR MLR MLR
comp=Z,1μm,18.2s
MKAR Makanchi Array 45.43 298 P **P** **10 46 08.2 -0.1**
MKAR pP **pP** **10 46 19.8 -0.4**
MKAR PcP **PcP** **10 47 46.9 +0.1**
MKAR pPcP 10 47 58.8
MKAR Makanchi Array 45.43 298 P **P** **10 46 08.2 -0.1**
comp=Z,3.8nm,0.5s,baz=73,slow=9.0,SNR=42
MKAR pP **pP** **10 46 19.8 -0.4**
comp=Z,5.1nm,0.8s,baz=76,slow=10,SNR=8.8
MKAR PcP **PcP** **10 47 46.9 +0.1**
comp=Z,2.8nm,0.6s,baz=67,slow=4.7,SNR=6.4
MKAR pPcP 10 47 58.8
comp=Z,5.0nm,0.8s,baz=57,slow=4.5,SNR=5.2
MKAR LR LR 11 06 28.1
comp=Z,1μm,18.2s,baz=62,slow=38
KURK Kurchatov 46.23 304 *eP* **P** **10 46 14.6 +0.2**
KURK *e* 10 47 49.7
KURK *e* 10 48 01.6
KURK pmax pmax
comp=Z,5.0nm,0.4s
KURK Kurchatov 46.23 304 P **P** **10 46 16.4 +2.0**
SNR=5.4
KURK Kurchatov 46.23 304 *eP* **P** **10 46 14.6 +0.2**
comp=Z,5.4nm,0.4s
KURK *e*PcP **PcP** **10 47 49.7 +0.3**
KURK *e*PP **PP** **10 48 01.6 -1.6**
CHTO Chiang Mai 48.79 255 *eP* **P** **10 46 35.3 +0.6**
CHTO pmax pmax
comp=Z,18nm,0.9s
CHTO Chiang Mai 48.79 255 *eP* **P** **10 46 35.3 +0.6**
comp=Z,18nm,0.9s
CHTO Chiang Mai 48.79 255 P **P** **10 46 35.1 +0.4**
comp=Z,25nm,1.0s
CMAR Chiang Mai Arr 49.04 255 P **P** **10 46 37.4 +0.8**
CMAR Chiang Mai Arr 49.04 255 P **P** **10 46 37.4 +0.8**
comp=Z,6.2nm,0.8s,baz=43,slow=7.3,SNR=29
CMAR LR LR 11 09 31.5
comp=Z,458nm,18.7s,baz=54,slow=39
VOSK Vostochnaya 49.86 309 P **P** **10 46 42.2 -0.2**
VOSK pmax pmax
comp=Z,9.0nm,0.8s
BVAR Borovoye Array 50.07 309 LR LR 11 09 41.3
comp=Z,529nm,18.0s,baz=266,slow=38
BRVK Borovoye 50.11 310 *eP* **P** **10 46 45.0 +0.7**
BRVK *e* 10 48 03.2
BRVK pmax pmax
comp=Z,9.0nm,0.8s
BRVK Borovoye 50.11 310 *eP* **P** **10 46 45.0 +0.7**
comp=Z,9.5nm,0.8s
BRVK *e*PcP **PcP** **10 48 03.2 -0.1**
ULHL Ulahol 51.31 295 P **P** **10 46 54.8 +1.0**
SNR=23
TAPN Taplejung 51.34 272 *eP* **P** **10 46 55.1 +0.8**
comp=Z,50nm,0.7s
TKM2 Tokmak 2 51.40 296 *i* P **P** **10 46 55.6 +1.2**
TKM2 Tokmak 2 51.40 296 *eP* **P** **10 46 55.2 +0.8**
TKM2 Tokmak 2 51.40 296 P **P** **10 46 55.7 +1.2**
SNR=28
ODAN Odare 51.86 272 *eP* **P** **10 46 58.6 +0.5**
comp=Z,38nm,0.8s
USP Ospenovka 51.94 297 P **P** **10 46 59.2 +1.0**
SNR=16
KBK Karagaybulak 51.95 296 P **P** **10 46 59.3 +0.8**
SNR=21
KZA Kyzart 52.03 295 P **P** **10 47 00.9 +1.5**
SNR=74
FRU Bishkek 52.07 296 *eP* **P** **10 46 59.0 -0.2**
AAK Ala-Archa 52.25 296⇓*iP* **P** **10 47 00.8 +0.1**
AAK pmax pmax
comp=Z,75nm,1.3s
AAK Ala-Archa 52.25 296 P **P** **10 47 01.6 +0.9**
SNR=11
AAK Ala-Archa 52.25 296 *eP* **P** **10 47 01.1 +0.4**
AAK Ala-Archa 52.25 296 P **P** **10 47 01.7 +0.9**
SNR=9.8
GUN Gumba 52.32 274 *eP* **P** **10 47 02.2 +0.6**
RAMN Ramite 52.37 272 *eP* **P** **10 47 02.2 +0.3**
EKS2 Erkin-Say 52.70 296 *eP* **P** **10 47 04.7 +0.7**
EKS2 *e* 10 48 13.5
EKS2 pmax pmax
comp=Z,22nm,0.7s
EKS2 Erkin-Say 52.70 296 *eP* **P** **10 47 04.7 +0.7**
comp=Z,22nm,0.7s
EKS2 *e*PcP **PcP** **10 48 13.5 +0.2**
EKS2 Erkin-Say 52.70 296 P **P** **10 47 04.8 +0.7**
SNR=17
KKN Kakani 52.82 274 *eP* **P** **10 47 05.6 +0.4**
comp=Z,80nm,0.8s
KSH Kashi 52.84 292⇑*iP* P 10 47 09.3 +4.2
KSH *e*pP pP 10 47 22.0 +4.8
KSH *e*sP sP 10 47 27.2 +5.0
KSH *e*PP PP 10 49 12.4 +7.9
KSH *e*S **S** **10 54 33.8 +3.1**
KSH *e*sS sS 10 54 56.7 +5.7
KSH *e*ScS **ScS** **10 56 51.8 +0.6**
KSH pmax pmax
comp=Z,49nm,0.8s
KSH pmax pmax
comp=Z,360nm,5.4s
KSH LR LR
comp=N,150nm,4.4s
KSH LR LR
comp=E,130nm,5.7s
KSH LR LR
comp=Z,190nm,5.1s
PKI Pulchoki 52.86 274 *eP* **P** **10 47 05.9 +0.3**
comp=Z,61nm,0.9s
PKIN Phulchoki 52.86 274 *eP* **P** **10 47 05.6 +0.1**
comp=Z,44nm,0.9s
SBUM Sibu 52.99 229 P **P** **10 47 07.4 +1.2**
comp=Z,7.5nm,1.1s
AML Almayashu 53.01 296 P **P** **10 47 07.6 +1.0**
SNR=28
DMN Daman 53.05 274 *eP* **P** **10 47 07.6 +0.7**
comp=Z,111nm,0.8s
SVE Sverdlovsk 53.51 317⇓*iP* **P** **10 47 09.3 -0.3**
SVE *e*S S 10 54 28.9 -10
SVE *e* 10 56 47.1
SVE *e*SS **SKiKP** **10 58 23.8 +2.9**
SVE pmax pmax
comp=Z,14nm,0.8s
SVE MLR MLR
comp=Z,649nm,16.0s
DANN Dangsing 53.57 276 *eP* **P** **10 47 11.7 +0.9**
comp=Z,174nm,0.9s
KOLN Koldanda 54.03 275 *eP* **P** **10 47 14.7 +0.7**
comp=Z,66nm,0.8s
PYUN Piuthan 54.27 276 *eP* **P** **10 47 16.4 +0.6**
comp=Z,238nm,1.1s
SPITS Spitsbergen Ar 54.29 349 P **P** **10 47 13.1 -1.9**
SPITS Spitsbergen Ar 54.29 349 P **P** **10 47 13.1 -1.9**
comp=Z,0.7nm,0.3s,baz=72,slow=8.0,SNR=11
YKW3 Yellowknife Ar 54.37 35 *eP* **P** **10 47 16.1 +0.3**
comp=Z,0.3nm,0.9s
YKA Yellowknife Ar 54.41 35 P **P** **10 47 16.3 +0.3**
YKA Yellowknife Ar 54.41 35 P **P** **10 47 16.3 +0.3**
comp=Z,9.5nm,0.7s,baz=298,slow=7.0,SNR=97
KK31 Karatay Array 54.55 298 *i* P **P** **10 47 17.4 0.0**
KK31 pmax pmax
comp=Z,14nm,0.7s
KKAR Karatay Array 54.55 298 *eP* **P** **10 47 17.5 +0.1**
KKAR pmax pmax
comp=Z,19nm,0.8s
KKAR Karatay Array 54.55 298 *eP* **P** **10 47 17.5 +0.1**
comp=Z,19nm,0.8s
KKAR *e*PP PP 10 49 13.7 -6.0
ARU Arti 54.71 317*d iP* **P** **10 47 17.2 -1.1**
ARU 10 48 19.9
ARU S **S** **10 54 52.2 -3.1**
ARU pmax pmax
comp=Z,11nm,1.0s
ARU MLR MLR
comp=Z,607nm,17.0s
BOK Bokaro 54.81 270 *e*PKP **P** **10 47 19.8 +0.3**
BOK AMB AMB 10 47 20.4
comp=Z,17nm,1.2s
KSM Kuching 54.84 230 *eP* **P** **10 47 20.9 +1.2**
KSM *ep*P **pP** **10 47 33.5 +1.5**
KSM Kuching 54.84 230 P **P** **10 47 21.3 +1.5**
comp=Z,22nm,1.2s
LGTI Lohaghat 55.42 279 *ex* pP 10 47 32.2 -3.8
DDI Dehra Dun 56.45 281 *e*PKP **P** **10 47 31.4 +0.1**
DHRM DHARAMSHALA 56.57 284 *e*PKP **P** **10 47 33.0 +0.7**
SMLA Simla 56.61 283 *e*PKP **P** **10 47 32.6 +0.3**
SMLA AMB AMB 10 47 34.0
comp=Z,142nm,1.3s
DGPR DIGLIPUR 56.84 255 *e*PKP **P** **10 47 32.6 -1.5**
KULM Kulim 57.51 242 *eP* **P** **10 47 40.1 +1.3**
KULM Kulim 57.51 242 P **P** **10 47 41.1 +2.3**
comp=Z,25nm,1.3s
AB31 Akbulak array 57.64 309 *i* P **P** **10 47 39.1 -0.2**
AB31 pmax pmax
comp=Z,5.0nm,0.3s
NDI New Delhi 58.01 280 *e*PKP **P** **10 47 40.5 -1.7**
PBA Port Blair 58.05 254 *e*PKP P 10 47 39.1 -3.4
PBA AMB AMB 10 47 40.0
comp=Z,244nm,2.1s
AKTO Aktyubinsk 58.06 311 P **P** **10 47 41.9 -0.4**
AKTO pmax pmax
comp=Z,8.0nm,0.9s
AKTO Aktyubinsk 58.06 311 LR LR 11 14 49.5
comp=Z,373nm,18.6s,baz=249,slow=38
APA Apatity 58.24 336⇑*eP* P 10 47 47.0 +3.8
APA pmax pmax
comp=Z,26nm,1.3s
APA MLR MLR
comp=Z,400nm,20.0s
KEV Kevo 58.47 340 *ep* **P** **10 47 42.6 -2.2**
comp=Z,4.1nm,0.7s
KEV Kevo 58.47 340 *eP* **P** **10 47 42.6 -2.2**
KEV pmax pmax
comp=Z,4.0nm,0.7s
DAG Danmarks Havn 58.74 357 *i* P **P** **10 47 44.5 -2.1**
DAG pmax pmax
comp=Z,3.0nm,0.8s
DAG Danmarks Havn 58.74 357 *i* P **P** **10 47 44.5 -2.1**
comp=Z,4.0nm,0.8s
TMCR Tamitsa 58.96 331 *eP* **P** **10 47 48.2 0.0**
TMCR *e* 10 48 36.7
TMCR pmax pmax
comp=Z,34nm,1.4s
ARCES ARCESS Array B 59.00 340 P **P** **10 47 47.0 -1.5**
ARCES ARCESS Array B 59.00 340 P **P** **10 47 47.0 -1.5**
comp=Z,0.7nm,0.4s,baz=33,slow=9.1,SNR=12
ARCES LR LR 11 18 05.1
comp=Z,142nm,19.6s,baz=215,slow=41
KBL Kabul 60.20 290 *eP* **P** **10 47 56.9 -0.7**
KBL *e**PP **pP** **10 48 07.0 -2.9**
KBL pmax pmax
comp=Z,65nm,1.0s
KBL Kabul 60.20 290 *eP* **P** **10 47 56.9 -0.7**
comp=Z,65nm,1.0s
KBL *epP **pP** **10 48 07.0 -2.9**
KLMR Klimovskoe 60.51 328 *eP* **P** **10 47 57.4 -1.6**
KLMR pmax pmax
comp=Z,23nm,1.4s
KLMR MLR MLR
comp=Z,403nm,19.0s
VIS Vishakhapatnam 60.53 266 *ex* P 10 47 52.4 -7.3
VIS AMB AMB 10 48 08.2
comp=Z,27nm,1.3s
CMBY CAMPBELL BAY 60.60 249 *e*PKP **P** **10 47 59.2 -1.0**
NEW Newport 60.81 50 *eP* **P** **10 48 02.0 +0.7**
NEW Newport 60.81 50⇓*P* **P** **10 48 01.8 +0.5**
baz=61,SNR=5.9
BHPL Bhopal 61.20 275 *e*PKP **P** **10 48 04.7 +0.4**
BHPL AMB AMB 10 48 18.0
comp=Z,30nm,0.8s
KHMM Horse Mountain 61.21 60 *eP* **P** **10 48 06.4 +2.2**
YBH Yreka Blue Hor 61.34 58 *eP* **P** **10 48 06.3 +1.2**
comp=Z,7.8nm,1.0s
KCPM Cahto Peak 61.99 61 P **P** **10 48 10.6 +1.1**
comp=Z,5.3nm,1.0s
JOF Joensuu 62.04 333 *ep* **P** **10 48 08.0 -1.3**
comp=Z,11nm,0.7s
JOF Joensuu 62.04 333 *eP* **P** **10 48 08.0 -1.3**
JOF pmax pmax
comp=Z,11nm,0.7s
WALA Waterton Lakes 62.07 48 *eP* **P** **10 48 10.3 +0.4**
comp=Z,0.2nm,1.0s
WDC Whiskeytown Da 62.12 59 *eP* **P** **10 48 11.5 +1.3**
WDC Whiskeytown Da 62.12 59 *eP* **P** **10 48 11.5 +1.3**
B13A Whitefish 62.18 49⇓*P* **P** **10 48 10.7 +0.1**
baz=62,SNR=9.4
A14A Double T Ranch 62.38 47 P **P** **10 48 12.4 +0.4**
baz=62,SNR=8.7
BLMT Blacktail Moun 62.45 49 *eP* **P** **10 48 14.4 +1.8**
A15A Johnson Ranch, 62.74 47 P **P** **10 48 14.6 +0.2**
baz=62,SNR=5.5
B14A Marquette Ranc 62.83 48⇓*P* **P** **10 48 15.6 +0.6**
baz=63,SNR=7.9
C14A Swan Lake 62.93 49 P **P** **10 48 15.6 0.0**
baz=63
SWMT Swartz Lake 62.95 49 *eP* **P** **10 48 16.9 +1.1**
comp=Z,17nm,1.0s
D13A Huson 62.95 50 P **P** **10 48 16.4 +0.6**
baz=63,SNR=7.0
SUMG Summit 63.10 3⇑*iP* **P** **10 48 16.3 -0.4**
SUMG pmax pmax
comp=Z,10.0nm,0.8s
SUMG Summit 63.10 3 *eP* **P** **10 48 16.1 -0.6**
SUMG Summit 63.10 3⇑*iP* **P** **10 48 16.3 -0.4**
comp=Z,10nm,0.8s
B15A Bradely Ranch, 63.23 48 P **P** **10 48 18.0 +0.4**
baz=63,SNR=8.3
F12A Elk City 63.32 51 P **P** **10 48 18.1 -0.2**
baz=63
A16A West Butte Ran 63.35 47 P **P** **10 48 18.4 -0.1**
baz=63
WVOR Wild Horse Val 63.37 56 *eP* **P** **10 48 19.9 +1.2**
WVOR Wild Horse Val 63.37 56 *eP* **P** **10 48 19.9 +1.2**
SLMT Seeley Lake 63.39 49 *eP* **P** **10 48 19.1 +0.3**
SLMT *epP **pP** **10 48 31.2 0.0**
MSO Missoula 63.39 50 *eP* **P** **10 48 19.2 +0.5**
comp=Z,16nm,1.1s
D14A Greenough 63.48 49 P **P** **10 48 19.8 +0.5**
baz=63,SNR=14
E13A Victor 63.49 50 P **P** **10 48 19.5 +0.1**
baz=63
C15A Salmond Ranch, 63.54 48 P **P** **10 48 20.5 +0.8**
baz=63,SNR=16
B16A M & M Farms, S 63.62 47 P **P** **10 48 20.9 +0.7**
baz=63,SNR=6.7
CHMT Chamberlain Mo 63.72 49 *eP* **P** **10 48 21.5 +0.5**
A17A Triple J Farms 63.82 46 P **P** **10 48 21.1 -0.3**
baz=64
BEKR Beckworth 63.88 59 *eP* **P** **10 48 22.6 +0.5**
comp=Z,4.3nm,0.9s
C16A Fuhringer Ranc 63.98 48 P **P** **10 48 23.3 +0.7**
baz=64,SNR=7.6
HYB Hyderabad 64.15 269 *i* P **P** **10 48 22.0 -2.0**
HYB Hyderabad 64.15 269 *e*PKP **P** **10 48 23.6 -0.4**
HYB AMB AMB 10 48 24.0
comp=Z,33nm,1.4s
B17A L&G Farms, Che 64.17 47 P **P** **10 48 24.4 +0.6**
baz=64,SNR=5.5
KAF Kangasniemi 64.23 334 *ep* **P** **10 48 22.7 -1.1**
comp=Z,6.3nm,0.8s
KAF Kangasniemi 64.23 334 *eP* **P** **10 48 22.7 -1.1**
KAF pmax pmax
comp=Z,6.0nm,0.8s
A18A Metzger Ranch, 64.27 46 P **P** **10 48 24.5 +0.1**
baz=64,SNR=5.7
FFC Flin Flon 64.28 38 *eP* **P** **10 48 24.7 +0.4**
FFC *e**PP **pP** **10 48 36.4 -0.3**
FFC pmax pmax
comp=Z,26nm,1.1s
FFC Flin Flon 64.28 38 *eP* **P** **10 48 24.7 +0.4**
comp=Z,26nm,1.1s
FFC *epP **pP** **10 48 36.4 -0.3**
E15A Deer Lodge 64.35 49 P **P** **10 48 25.9 +0.8**
baz=64,SNR=8.9
D16A Dana Ranch, Ca 64.56 48 P **P** **10 48 27.2 +0.8**
baz=64,SNR=11
I12A Atlanta 64.58 53 P **P** **10 48 27.3 +0.6**
baz=64
WCN Washoe City 64.59 59 *eP* **P** **10 48 27.6 +0.8**
WCN pmax pmax
comp=Z,6.0nm,0.8s
WCN Washoe City 64.59 59 *eP* **P** **10 48 27.6 +0.8**
comp=Z,5.8nm,0.8s
C17A Wharram Farm, 64.60 47 P **P** **10 48 26.7 0.0**
baz=64,SNR=13
B18A Beardsley Farm 64.64 46 P **P** **10 48 27.2 +0.4**
baz=64,SNR=9.7
F15A Butte 64.79 50 P **P** **10 48 28.4 +0.3**
baz=65,SNR=12
FIA1 FINESS Array S 64.80 334 *eP* **P** **10 48 27.6 0.0**
FINES FINESS Array B 64.81 334 P **P** **10 48 27.4 -0.2**
FINES FINESS Array B 64.81 334 P **P** **10 48 27.4 -0.2**
comp=Z,12nm,0.7s,baz=40,slow=12,SNR=21
FINES LR LR 11 19 51.3
comp=Z,273nm,18.2s,baz=193,slow=39
LRM Limekiln Ridge 64.83 50 *eP* **P** **10 48 29.1 +0.8**
comp=Z,163nm,1.0s
A19A Klindworth Far 64.83 45 P **P** **10 48 28.5 +0.4**
baz=65,SNR=16
D17A Six Diamond Ra 64.94 48 P **P** **10 48 29.3 +0.3**
baz=65,SNR=9.0
IMYA Miami 64.98 297 *eP* **P** **10 48 30.0 +0.6**
CMB Columbia Colle 64.98 61 *eP* **P** **10 48 29.9 +0.7**
CMB pmax pmax
comp=Z,4.0nm,0.9s
CMB Columbia Colle 64.98 61 *eP* **P** **10 48 29.9 +0.7**
comp=Z,4.3nm,0.9s
B19A Brinkman Farms 65.03 46 P **P** **10 48 30.2 +0.8**
baz=65,SNR=11
DLMT Dillon 65.03 50 *eP* **P** **10 48 30.8 +1.2**
comp=Z,7.3nm,1.0s

SCO Scoresbysund 65.13 357 *i* P **P 10 48 28.3 -1.2**
SCO pmax pmax
comp=Z,5.0nm,1.0s
SCO Scoresbysund 65.13 357 *i* P **P 10 48 28.3 -1.2**
comp=Z,4.5nm,1.0s
HLID Hailey 65.14 53 *e*P **P 10 48 31.3 +1.0**
HLID Hailey 65.14 53 P **P 10 48 30.5 +0.2**
baz=65
G15A Dillon 65.22 50 P **P 10 48 31.6 +0.8**
baz=65,SNR=10
MCMT McKenzie Canyo 65.23 51 *e*P **P 10 48 32.0 +1.0**
comp=Z,0.1nm,1.0s
IEMG Emamgholi 65.23 299 *e*P **P 10 48 31.6 +0.4**
ABKT Ailbek 65.25 299 P **P 10 48 31.2 +0.2**
comp=Z,223nm,0.8s,SNR=9.2
A20A Cobblestone Ra 65.28 45 P **P 10 48 31.5 +0.5**
baz=65,SNR=9.8
E17A Martinsdale 65.29 49 P **P 10 48 32.1 +0.9**
baz=65,SNR=12
F16A Kennard Place, 65.30 49 P **P 10 48 31.8 +0.5**
baz=65,SNR=6.5
BOZ Bozeman (W) 65.39 50 *e*P **P 10 48 32.7 +0.8**
BOZ pmax pmax
comp=Z,11nm,0.9s
BOZ Bozeman (W) 65.39 50 *e*P **P 10 48 32.7 +0.8**
comp=Z,11nm,0.9s
C19A Slack Wire Ran 65.44 47 P **P 10 48 32.8 +0.7**
baz=65,SNR=18
I14A Mackay 65.45 52 P **P 10 48 33.3 +1.0**
baz=65,SNR=12
OBN Obninsk 65.50 324⇑ *e*P **P 10 48 31.4 -0.7**
OBN *e*S **S 10 57 18.1 +4.6**
OBN pmax pmax
comp=Z,34nm,1.2s
OBN MLR MLR
comp=Z,400nm,19.0s
B20A Solberg Farm, 65.51 45 P **P 10 48 33.0 +0.6**
baz=65,SNR=14
WRAB Tennant Creek 65.52 195 *e*P **P 10 48 31.6 -1.1**
WRAB Tennant Creek 65.52 195 *e*P **P 10 48 31.6 -1.1**
WRA Warramunga Arr 65.53 195 P **P 10 48 32.6 -0.1**
WRA pP **pP 10 48 46.1 +0.8**
WRA Warramunga Arr 65.53 195 P **P 10 48 32.6 -0.1**
comp=Z,6.6nm,0.8s,baz=16,slow=6.9,SNR=48
WRA pP **pP 10 48 46.1 +0.8**
comp=Z,11nm,0.8s,baz=14,slow=6.8,SNR=17
G16A Moss Hill, Enn 65.55 50 P **P 10 48 33.9 +1.0**
baz=65,SNR=11
IMOG Moghan 65.61 297 *e*P **P 10 48 33.3 -0.3**
IAKL Akhelmad 65.67 298 *e*P **P 10 48 34.5 +0.5**
IKRD Kardeh 65.72 298 *e*P P 10 48 30.7 -3.5
E18A Harlowton 65.73 48 P **P 10 48 35.1 +1.1**
baz=66,SNR=7.7
F17A Fitzpatrick Pl 65.75 49 P **P 10 48 34.7 +0.5**
baz=66,SNR=6.6
D19A Cripps Ranch, 65.89 47 P **P 10 48 35.9 +0.9**
baz=66,SNR=10
VRHR Novokhopersk 65.97 319 *e*P **P 10 48 33.7 -1.6**
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,10.0nm,0.6s
VRHR pmax pmax
comp=N,20nm,1.2s
C20A Veseth Ranch, 65.99 46 P **P 10 48 36.7 +1.1**
baz=66,SNR=15
QLMT Earthquake Lak 66.01 50 *e*P **P 10 48 37.1 +1.2**
comp=N,2.0nm,1.1s
NVAR Mina Array Bea 66.02 59 P **P 10 48 37.0 +0.8**
NVAR pP **pP 10 48 49.8 +1.1**
NVAR Mina Array Bea 66.02 59 P **P 10 48 37.0 +0.8**
comp=N,1.7nm,0.6s,baz=298,slow=7.6,SNR=17
NVAR pP **pP 10 48 49.8 +1.1**
comp=N,7.2nm,0.8s,baz=288,slow=7.8,SNR=10.0
NVAR LR LR 11 15 00.5
comp=N,119nm,20.7s,baz=78,slow=34
B21A Ellsworth Farm 66.03 45 P **P 10 48 36.3 +0.5**
baz=66,SNR=5.5
H16A Russell Place, 66.19 50 P **P 10 48 38.0 +0.9**
baz=66,SNR=6.1
A22A Carney Farms, 66.21 44 P **P 10 48 37.7 +0.7**
baz=66,SNR=13
F18A Big Timber 66.25 48 P **P 10 48 38.3 +0.9**
baz=66,SNR=15
D20A Manuel Ranch, 66.32 47 P **P 10 48 38.8 +1.0**
baz=66
GCMT Greycliff 66.35 49 *e*P **P 10 48 39.2 +1.2**
comp=N,12nm,1.0s
YMR Madison River 66.37 50 *e*P **P 10 48 39.4 +1.1**
comp=N,5.5nm,0.7s
C21A Desert Coulee 66.38 46 P **P 10 48 38.9 +0.8**
baz=66
E19A Rath Farm, Rou 66.39 48 P **P 10 48 39.2 +1.0**
baz=66,SNR=12
ELK Elko 66.42 56 *e*P **P 10 48 41.0 +2.3**
comp=N,2.1nm,0.8s
F19A Roth Farm, Mol 66.70 48 P **P 10 48 41.0 +0.8**
baz=66,SNR=15
E20A Meyer Farm, Mu 66.71 47 P **P 10 48 41.2 +1.0**
baz=66,SNR=7.6
LKWY Lake 66.75 50 *e*P **P 10 48 43.4 +2.7**
LKWY pmax pmax
comp=Z,9.0nm,0.8s
LKWY Lake 66.75 50 *e*P **P 10 48 43.4 +2.7**
comp=Z,9.4nm,0.8s
H17A Grant Village 66.76 50 P **P 10 48 43.1 +2.3**
baz=66,SNR=7.9
POO Poona 66.78 274⇑ *i x* **P 10 48 38.0 -3.0**
comp=Z,40nm,1.0s
IMW Indian Meadow 66.88 51 *e*P **P 10 48 43.1 +1.5**
comp=Z,13nm,1.0s
D21A La Casta Ranch 66.93 46 P **P 10 48 42.2 +0.5**
baz=67,SNR=6.9
DCID1 Drake Creek 66.94 51 *e*P **P 10 48 43.5 +1.6**
comp=Z,18nm,0.9s
RLMT Red Lodge 67.00 49 *e*P **P 10 48 42.3 0.0**
comp=Z,22nm,1.2s
RRI2 Red Ridge 67.02 51 *e*P **P 10 48 43.9 +1.4**
comp=Z,24nm,1.0s
B23A Brockton 67.02 44 P **P 10 48 42.6 +0.4**
baz=67
VSR Storozhevoye 67.03 320 *e*P **P 10 48 41.9 -0.2**
VSR pmax pmax
comp=Z,30nm,0.9s
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,20nm,0.6s
TPAW Teton Pass 67.13 51 *e*P **P 10 48 44.1 +0.9**
comp=E,22nm,1.0s
VORD Divnogorie 67.14 320 *e*P **P 10 48 42.7 -0.1**
VORD pmax pmax
comp=N,50nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s
VORD pmax pmax
comp=E,50nm,0.7s
HVU Hansel Valley 67.20 53 *e*P **P 10 48 44.7 +1.1**
HVU pmax pmax
comp=Z,7.0nm,0.9s
HVU Hansel Valley 67.20 53 *e*P **P 10 48 44.6 +1.1**
comp=Z,7.2nm,0.9s
A24A Westby 67.20 43 P **P 10 48 43.9 +0.6**
baz=67,SNR=6.3
SNOW Snow King Moun 67.26 51 *e*P **P 10 48 45.4 +1.4**
comp=Z,16nm,1.0s
D22A Cohagen 67.30 46 P **P 10 48 44.3 +0.4**
baz=67,SNR=7.3
C23A Lambert 67.37 45 P **P 10 48 44.6 +0.2**
baz=67,SNR=6.1
IDAH Dahanechah 67.37 294 *e*P **P 10 48 44.5 -0.4**
DGMT Dagmar 67.41 44 *e*P **P 10 48 45.0 +0.4**
comp=Z,21nm,0.8s
DGMT Dagmar 67.41 44 P **P 10 48 45.1 +0.5**
baz=67,SNR=7.6
G20A Bridger 67.50 48 P **P 10 48 45.7 +0.3**
baz=67,SNR=6.6
R11A Troy Canyon, C 67.73 58 P **P 10 48 47.1 +0.1**
baz=68,SNR=12
D23A Lindsay 67.78 45 P **P 10 48 47.0 +0.1**
baz=68,SNR=8.3
SFJD Kangerlussuaq 67.81 8 *i* P **P 10 48 46.9 +0.2**
comp=Z,14nm,0.9s
SFJD Kangerlussuaq 67.81 8 LR LR 11 16 13.4
comp=Z,184nm,21.4s,baz=58,slow=34
HWUT Hardware Ranch 68.00 53 *e*P **P 10 48 49.6 +0.9**
comp=Z,10nm,1.0s
MPMC Manual Prospec 68.02 61 P **P 10 48 48.8 -0.1**
baz=68
IKOO Kooshah 68.13 294 *e*P **P 10 48 50.5 +0.8**
DZM Mont Dzumac 68.15 163 *e*LR LR 11 09 52.6
FURC Furnace Creek, 68.15 60 P **P 10 48 50.5 +1.1**
baz=68,SNR=5.3
F22A Rosebud 68.17 47 P **P 10 48 49.9 +0.5**
baz=68,SNR=5.5
E23A Ismay 68.18 46 P **P 10 48 50.4 +0.9**
baz=68,SNR=17
DUG Dugway 68.20 55 *e*P **P 10 48 50.8 +1.0**
DUG pmax pmax
comp=Z,10.0nm,0.9s
DUG Dugway 68.20 55 *e*P **P 10 48 50.8 +1.0**
comp=Z,10nm,0.9s
D24A Glendive 68.26 45 P **P 10 48 50.9 +0.9**
baz=68,SNR=5.4
MAK Makhachkala 68.32 309 *e*P P 10 48 46.9 -3.4
MAK MLR MLR
comp=Z,306nm,15.0s
J19A Crowheart 68.33 50⇑ P **P 10 48 51.2 +0.6**
baz=68,SNR=9.6
BW06 Boulder Array 68.38 51 *e*P **P 10 48 51.3 +0.2**
comp=Z,12nm,1.0s
PDAR Pinedale Array 68.38 51 P **P 10 48 51.2 +0.2**
PDAR Pinedale Array 68.38 51 P **P 10 48 51.2 +0.2**
comp=Z,2.7nm,0.9s,baz=280,slow=2.6,SNR=17
PDAR LR LR 11 15 46.3
comp=Z,88nm,20.4s,baz=112,slow=33
I20A Worland 68.38 49 P **P 10 48 51.8 +0.9**
baz=68,SNR=9.3
H21A Big Horn, Sher 68.52 48 P **P 10 48 52.5 +0.7**
baz=68
G22A Birney 68.52 47 P **P 10 48 52.6 +0.9**
baz=68
E24A Baker 68.64 45 P **P 10 48 52.8 +0.4**
baz=68
F23A Volborg 68.65 46 P **P 10 48 52.5 0.0**
baz=68,SNR=15
JLU Jordanelle 68.72 54 *e*P **P 10 48 54.3 +1.1**
comp=Z,8.7nm,1.1s
I21A Big Trails, Te 68.93 49 P **P 10 48 54.6 +0.2**
baz=69,SNR=16
L19A Farson 68.93 51 P **P 10 48 53.8 -0.7**
baz=69
MPU Maple Canyon 69.00 54 *e*P **P 10 48 55.2 +0.3**
comp=Z,7.0nm,0.9s
G23A Biddle 69.00 47 P **P 10 48 55.0 +0.3**
baz=69,SNR=8.4
F24A Ekalaka 69.06 46 P **P 10 48 55.5 +0.4**
baz=69,SNR=7.2
IZAR Zarasai 69.07 329 *e*P **P 10 48 54.9 +0.1**
IZAR AMB AMB 10 48 56.3
comp=Z,11nm,0.9s
IDID Didziasalis 69.22 329 *e*P **P 10 48 55.9 +0.1**
IDID AMB AMB 10 48 57.3
comp=Z,16nm,1.0s
AS31 Alice Springs 69.24 195 *e*P **P 10 48 56.6 +0.4**
ASAR Alice Springs 69.25 195 P **P 10 48 56.6 +0.5**
ASAR pP **pP 10 49 09.7 +0.9**
ASAR Alice Springs 69.25 195 P **P 10 48 56.6 +0.5**
comp=Z,5.8nm,0.8s,baz=10,slow=5.1,SNR=59
ASAR pP **pP 10 49 09.7 +0.9**
comp=Z,7.7nm,0.8s,baz=14,slow=6.0,SNR=16
ISAL Salakas 69.25 329 *e*P **P 10 48 56.0 +0.2**
ISAL AMB AMB 10 48 57.6
comp=Z,22nm,1.0s
I22A 9 Ie Ranch, 69.31 48 P **P 10 48 56.9 +0.2**
baz=66,SNR=6.8
NB2 NORSAR Subarra 69.37 340 P **P 10 48 55.3 -1.3**
comp=Z,19nm,0.8s,baz=31,slow=6.5
NB2 NORSAR Subarra 69.37 340 P **P 10 48 55.3 -1.3**
baz=31,slow=6.5
NOA NORSAR Array B 69.37 340 P **P 10 48 55.4 -1.3**
NOA NORSAR Array B 69.37 340 P **P 10 48 55.4 -1.3**
comp=Z,14nm,0.8s,baz=32,slow=6.1,SNR=48
NOA LR LR 11 24 57.8
comp=Z,108nm,18.1s,baz=30,slow=41
IIGN Ignalina 69.39 329 *e*P **P 10 48 56.9 +0.1**
IIGN AMB AMB 10 48 57.5
comp=Z,16nm,0.7s
ARUT Antelope Range 69.39 57 *e*P **P 10 48 57.5 +0.2**
ARUT pmax pmax
comp=Z,8.0nm,0.9s
ARUT Antelope Range 69.39 57 *e*P **P 10 48 57.5 +0.2**
comp=Z,7.5nm,0.9s
HFS Hagfors 69.50 338 P **P 10 48 56.9 -0.5**
HFS Hagfors 69.50 338 P **P 10 48 56.9 -0.5**
comp=Z,13nm,0.8s,baz=55,slow=6.2,SNR=24
CCUT Cedar City 69.59 57 *e*P **P 10 48 59.5 +0.8**
comp=Z,8.7nm,1.1s
NAO01 NORSAR Array S 69.62 340 *e*P **P 10 48 57.8 -0.3**
comp=Z,9.7nm,0.8s
J22A Midwest 69.63 49 P **P 10 48 58.9 +0.2**
baz=69
MVU Marysvale 69.65 56 *e*P **P 10 48 59.4 +0.4**
comp=Z,4.7nm,1.0s
H24A Dida Ranch, A 69.75 47⇓ P **P 10 48 58.4 -1.0**
baz=70,SNR=7.1
ULM Lac du Bonnet 70.07 38 P **P 10 49 00.8 -0.3**
ULM Lac du Bonnet 70.07 38 P **P 10 49 00.8 -0.3**
comp=Z,3.8nm,0.4s,baz=326,slow=7.1,SNR=6.2
ULM LR LR 11 23 13.9
comp=Z,133nm,19.3s,baz=320,slow=39
MDND Maddock 70.07 42 P **P 10 49 01.8 +0.6**
baz=70
K22A Casper 70.12 49 P **P 10 49 02.2 +0.5**
baz=70,SNR=5.4
L21A Rawlins 70.12 50 P **P 10 49 02.4 +0.6**
baz=70,SNR=5.5
SRU San Rafael 70.24 54 P **P 10 49 03.4 +0.8**
baz=70,SNR=9.0
KIV Kislovodsk 70.26 313⇑ *e*P **P 10 49 03.2 +0.8**
KIV *e* 10 51 39.3
KIV *e*S **SKiKP 10 58 38.2 -5.4**
KIV pmax pmax
comp=Z,83nm,1.0s
KIV MLR MLR
comp=Z,600nm,20.0s
KIV Kislovodsk 70.26 313 P **P 10 49 03.5 +1.1**
comp=Z,405nm,0.9s,SNR=7.1
O19A Miners Draw (B 70.26 53 P **P 10 49 02.8 +0.2**
baz=70
KBZ Khabaz 70.30 312 P **P 10 49 03.7 +1.1**
KBZ pmax pmax
comp=Z,32nm,0.9s
KBZ MLR MLR
comp=Z,729nm,18.1s
KBZ Khabaz 70.30 312 P **P 10 49 03.6 +1.1**
KBZ Khabaz 70.30 312 P **P 10 49 03.6 +1.1**
comp=Z,32nm,0.9s,baz=52,slow=4.6,SNR=64
KBZ LR LR 11 25 00.4
comp=Z,729nm,18.1s,baz=39,slow=40
RSSD Black Hills 70.45 47 *e*P **P 10 49 03.6 -0.2**
RSSD pmax pmax
comp=Z,14nm,1.0s
RSSD Black Hills 70.45 47 *e*P **P 10 49 03.6 -0.2**
comp=Z,14nm,1.0s
BORG Borgarnes 70.82 356 P **P 10 49 06.1 +0.8**
BORG Borgarnes 70.82 356 P **P 10 49 06.1 +0.8**
comp=Z,21nm,0.8s,baz=19,slow=3.9,SNR=7.5
O20A White River Ci 70.87 52⇓ P **P 10 49 06.5 +0.2**
baz=71,SNR=5.5
IBAF Bafgh 70.90 296 *e*P **P 10 49 06.7 +0.1**
U15A North Rim 70.97 57 P **P 10 49 08.1 +0.9**
baz=71,SNR=8.5
IVRN Varamin 71.08 301 *e*P **P 10 49 08.1 +0.5**
AGMN Agassiz Nation 71.50 40 *e*P **P 10 49 09.6 -0.1**
comp=Z,7.1nm,0.7s
S18A Hurst Farm, Bl 71.50 55 P **P 10 49 10.3 0.0**
baz=71,SNR=8.5
SUW Suwalki 71.54 330 *e*P **P 10 49 09.6 -0.3**
SUW Suwalki 71.54 330 *e*P **P 10 49 09.6 -0.3**
Q20A Ridgley Place, 71.63 53 P **P 10 49 11.5 +0.5**
baz=71
PV04 Paradox Valley 71.66 54 *e*P **P 10 49 11.4 +0.2**
P21A Newcastle 71.73 52 P **P 10 49 12.0 +0.4**
baz=72
GNI Garni 71.74 309 *e*P **P 10 49 12.6 +1.0**
comp=Z,31nm,1.0s
AKASG Malin Array Be 71.76 324 P **P 10 49 11.0 -0.3**
AKASG pmax pmax
comp=Z,34nm,0.8s
AKASG MLR MLR
comp=Z,295nm,19.0s
AKASG Malin Array Be 71.76 324 P **P 10 49 11.0 -0.3**
AKASG Malin Array Be 71.76 324 P **P 10 49 11.0 -0.3**
comp=Z,34nm,0.8s,baz=38,slow=6.2,SNR=85
AKASG LR LR 11 23 57.0
comp=Z,295nm,19.0s,baz=35,slow=38
AK01 Malin Array Si 71.77 324 *e*P **P 10 49 10.8 -0.5**
KIEV Kiev 71.77 324 *e*P **P 10 49 10.7 -0.6**
KIEV pmax pmax
comp=Z,38nm,0.9s
KIEV Kiev 71.77 324 *e*P **P 10 49 10.7 -0.6**
comp=Z,38nm,0.9s
AK02 Malin Array Si 71.80 324 *e*P **P 10 49 11.1 -0.5**
O22A Kremmling 71.80 51 P **P 10 49 12.3 +0.1**
baz=72
M24A Cheyenne 71.86 49 P **P 10 49 12.7 +0.4**
baz=72,SNR=5.1
K26A Motz Farm, Whi 71.88 48 P **P 10 49 12.7 +0.4**
baz=72
ISAD Sadrabad 71.89 297 *e*P **P 10 49 12.8 0.0**
IRAZ Razeghan 71.91 302 *e*P **P 10 49 13.2 +0.4**
PV01 Paradox Valley 72.03 54 *e*P P 10 49 06.0 -7.5
comp=Z,590nm,0.8s
SOC Sochi 72.06 314 *c i*P **P 10 49 12.5 -0.7**
SOC *e*S **S 10 58 35.8 +4.0**
SOC pmax pmax
comp=Z,33nm,0.7s
SOC MLR MLR
comp=Z,460nm,19.0s
P22A Eagle 72.07 52 P **P 10 49 14.3 +0.7**
baz=72
IZEF Zefrah 72.10 299 *e*P **P 10 49 14.1 +0.1**
R20A Redvale 72.10 54 P **P 10 49 14.6 +0.7**
baz=72
O23A Lake Granby, G 72.12 51 P **P 10 49 13.9 -0.1**
baz=72,SNR=7.0
Q21A Lamborn Mesa, 72.13 53 P **P 10 49 13.7 -0.2**
baz=72
Y14A Wickenburg 72.19 60 P **P 10 49 14.8 +0.6**
baz=72
IKLH Kolahrood 72.29 299 *e*P **P 10 49 15.2 +0.1**
ANN Anapa 72.36 316 *e*P **P 10 49 11.8 -3.1**
ANN *e*PP **pP 10 49 24.8 -2.8**
ANN *e*S **S 10 58 33.4 -1.6**
ANN pmax pmax
comp=Z,27nm,0.6s
S20A Disappointment 72.36 54 P **P 10 49 15.6 +0.2**
baz=72
K27A Flueckinger Fa 72.38 47 P **P 10 49 15.2 0.0**
baz=72
J28A Allard Ranch, 72.39 46 P **P 10 49 15.2 0.0**
baz=72,SNR=6.2
R21A Cimarron 72.46 53 P **P 10 49 16.8 +0.8**
baz=72
Q22A Crested Butte, 72.49 53 P **P 10 49 17.0 +0.7**
baz=72
ISCO Idaho Springs 72.57 51 *e*P **P 10 49 17.2 +0.4**
ISCO pmax pmax
comp=Z,10.0nm,0.9s
ISCO Idaho Springs 72.57 51 *e*P **P 10 49 17.1 +0.4**
comp=Z,9.8nm,0.9s
ISCO Idaho Springs 72.57 51 P **P 10 49 17.1 +0.4**
baz=72,SNR=7.0
M26A McRoberts Ranc 72.76 49 P **P 10 49 18.0 +0.3**
baz=72
S21A Coal Bank Pass 72.80 54 P **P 10 49 18.5 +0.3**
baz=73
K28A Ten Mile Ranch 72.82 47 P **P 10 49 18.3 +0.4**
baz=73
X16A Lo Mia Camp, P 72.83 59 P **P 10 49 19.0 +0.8**
baz=73,SNR=7.7
R22A Saguache, Gunn 73.01 53 P **P 10 49 20.4 +1.0**
baz=73
P24A Kohler Place, 73.16 51 P **P 10 49 20.4 +0.2**
baz=73
O25A Wiggins 73.18 50 P **P 10 49 20.8 +0.6**
baz=73
S22A 4UR Ranch, Cre 73.30 53 P **P 10 49 21.6 +0.5**
baz=73
K29A Lazy Trails An 73.33 46 P **P 10 49 21.0 +0.1**
baz=73
BSD Bornholm Skovb 73.40 335 *i* P **P 10 49 20.8 -0.1**
BSD pmax pmax
comp=Z,22nm,0.8s
BSD Bornholm Skovb 73.40 335 *i* P **P 10 49 20.8 -0.1**
comp=Z,22nm,0.8s
R23A Moffat 73.56 52 P **P 10 49 23.3 +0.7**
baz=73
P25A Willow Gulch B 73.57 51 P **P 10 49 23.3 +0.8**
baz=73
214A Organ Pipe Nat 73.64 61 P **P 10 49 23.5 +0.7**
baz=74
COP Copenhagen 73.65 336 *i* P **P 10 49 22.6 +0.2**
COP pmax pmax
comp=Z,19nm,0.8s
COP Copenhagen 73.65 336 *i* P **P 10 49 22.6 +0.2**
comp=Z,19nm,0.8s
EYMN Ely 73.71 38 *e*P **P 10 49 22.4 -0.5**
comp=Z,36nm,1.3s
OGNE Ogallala 73.72 48 *e*P **P 10 49 23.4 +0.1**
comp=Z,59nm,0.9s
OGNE Ogallala 73.72 48 P **P 10 49 23.4 +0.1**
baz=74,SNR=5.1
U21A Nageezi 73.73 55 P **P 10 49 23.9 +0.4**
baz=74
T22A Edith 73.76 54 P **P 10 49 24.3 +0.6**
baz=74
MUD Monsted U'grnd 73.89 338 *i* P **P 10 49 23.8 0.0**
MUD pmax pmax
comp=Z,13nm,0.8s
MUD Monsted U'grnd 73.89 338 *i* P **P 10 49 23.8 0.0**
comp=Z,13nm,0.8s
R24A Sanders Place, 73.94 52 P **P 10 49 24.9 +0.2**
baz=74
Q25A Bedland, Calha 73.95 51 P **P 10 49 25.0 +0.2**
baz=74
P26A Davis Ranch, A 73.99 50 P **P 10 49 25.3 +0.3**
baz=74
O27A Beecher Island 74.02 49 P **P 10 49 25.0 0.0**
baz=74
W20A Ramah 74.12 56 P **P 10 49 26.4 +0.5**
baz=74
BEL Belsk 74.15 330 *e*P **P 10 49 26.3 +0.9**
BEL Belsk 74.15 330 *e*P **P 10 49 26.3 +0.9**
GKP Gorka Klasztor 74.20 332 *e*P **P 10 49 25.7 0.0**
GKP Gorka Klasztor 74.20 332 *e*P **P 10 49 25.6 -0.1**
Q26A Hugo 74.34 51 P **P 10 49 27.3 +0.3**
baz=74
R25A Fountain Ranch 74.47 52 P **P 10 49 27.8 +0.1**
baz=74
ECSD EROS Data Cent 74.49 43 *e*P **P 10 49 27.1 -0.4**
comp=Z,26nm,1.3s
V22A San Miguel Ran 74.52 55 P **P 10 49 28.9 +0.7**
baz=74
X20A Quemado 74.52 57 P **P 10 49 28.6 +0.4**
baz=74,SNR=5.5
LVV L'vov 74.55 327 *i* P **P 10 49 27.3 -0.5**
LVV MLR MLR
comp=Z,200nm,18.0s
LVV MLR MLR
comp=N,200nm,17.0s
LVV MLR MLR
comp=E,300nm,17.0s
U23A El Rito 74.65 54 P **P 10 49 29.5 +0.6**
baz=74,SNR=10
TUC Tucson 74.66 60 *e*P **P 10 49 29.6 +0.8**
TUC *e*PP **pP 10 49 41.9 +0.4**
TUC *e*SP **sP 10 49 46.7 +0.3**
TUC pmax pmax
comp=Z,6.0nm,1.0s
TUC Tucson 74.66 60 *e*P **P 10 49 29.6 +0.8**
comp=Z,6.2nm,1.0s
TUC *e*pP **pP 10 49 41.9 +0.4**
TUC *e*sP **sP 10 49 46.6 +0.3**
S25A Robets Cordova 74.72 52 P **P 10 49 29.3 0.0**
baz=74
KIS Kishinev 74.76 322 *e*P **P 10 49 26.0 -3.0**
KIS *e*L L 11 20 28.0
KIS LRM MLR 11 24 54.0
comp=Z,600nm,18.0s
KIS Kishinev 74.76 322 *e*P **P 10 49 26.0 -3.0**
KIS *e* 10 49 46.0
KIS *e* 10 49 50.0
KIS MLR MLR
comp=E,300nm,18.0s
KIS MLR MLR
comp=Z,500nm,18.0s
KIS MLR MLR
comp=N,400nm,19.0s
KIS MLR MLR

comp=Z,600nm,18.0s
R26A Arlington 74.82 51 P **P** 10 49 29.2 -0.6
baz=75
UOSS Wadi Hilu 74.87 290 P **P** 10 49 30.9 +0.8
comp=Z,183nm,0.9s,SNR=8.4
O29A 4D Ranch, Culb 74.97 48 P **P** 10 49 30.4 -0.1
baz=75
HATD Hatta, Dubai 75.00 290 P **P** 10 49 31.6 +0.8
SNR=11
X21A Alamocita Cree 75.02 56 P **P** 10 49 31.9 +0.9
baz=75
Y20A Horse Springs, 75.03 57 P **P** 10 49 31.9 +0.7
baz=75,SNR=5.9
T25A Trinidad 75.10 52 P **P** 10 49 31.4 -0.1
baz=75
SPMN St. Paul 75.19 40 P **P** 10 49 31.6 0.0
baz=75
R27A Eads 75.19 51 P **P** 10 49 31.8 -0.1
baz=75,SNR=6.0
KWP Kalwaria Pacla 75.21 327 *e*P **P** 10 49 32.3 +0.7
KWP pmax pmax
comp=Z,31nm,0.5s
KWP Kalwaria Pacla 75.21 327 *e*P **P** 10 49 32.3 +0.7
comp=Z,31nm,0.5s
KWP Kalwaria Pacla 75.21 327 *e*P **P** 10 49 32.4 +0.8
LAZ Ladron 75.43 56 *e*P **P** 10 49 34.2 +0.8
comp=Z,3.7nm,1.0s
Z20A Nine Sixteen R 75.45 58 P **P** 10 49 34.0 +0.5
baz=75,SNR=5.8
ANMO Albuquerque 75.45 55 *e*P **P** 10 49 33.9 +0.3
comp=Z,5.4nm,1.0s
T26A Comanche Natio 75.54 52 P **P** 10 49 33.4 -0.6
baz=75
U25A Circle Dot Ran 75.62 53 P **P** 10 49 34.5 0.0
baz=75
BSY Bisya 75.67 288 P **P** 10 49 36.0 +1.2
SNR=6.3
Q29A Oakley 75.76 49 P **P** 10 49 35.2 +0.1
baz=76
BSEG Bad Segeberg 75.78 336 *e*P **P** 10 49 35.2 +0.4
comp=Z,46nm,0.9s
BSEG Bad Segeberg 75.78 336 *e*P **P** 10 49 35.2 +0.4
BSEG pmax pmax
comp=Z,46nm,0.9s
BUR08 Bucovina Ar. S 75.80 325 *e*P **P** 10 49 35.3 +0.2
BURAR Bucovina Array 75.81 325 *i*P **P** 10 49 35.6 +0.4
120A U Bar Ranch, L 75.82 58 P **P** 10 49 36.0 +0.4
baz=76,SNR=5.5
OJC Ojcow 75.83 329 ⇑*i*P **P** 10 49 35.3 +0.1
OJC Ojcow 75.83 329 *i* P **P** 10 49 35.3 +0.1
Z21A St. Cloud Mine 75.87 57 P **P** 10 49 37.0 +1.0
baz=76,SNR=7.8
W24A Lazy 6 Ranch, 75.88 54 P **P** 10 49 36.1 +0.2
baz=76,SNR=6.6
BNM Barren Site 75.91 56 *e*P **P** 10 49 36.9 +0.7
comp=Z,6.4nm,1.2s
KOLS Kolonicke sedl 75.94 327 *e*P **P** 10 49 36.3 +0.5
KOLS pmax pmax
comp=Z,25nm,1.0s
KOLS Kolonicke sedl 75.94 327 *e*P **P** 10 49 36.3 +0.5
STHS Stebnicka Huta 75.95 328 *e*P **P** 10 49 37.1 +1.2
STHS pmax pmax
comp=Z,23nm,0.9s
STHS Stebnicka Huta 75.95 328 *e*P **P** 10 49 37.1 +1.2
RUE Ruedersdorf 76.00 334 *e*P **P** 10 49 36.3 +0.3
comp=Z,63nm,1.0s
TESR Tescani 76.08 323 ⇓*i*P **P** 10 49 36.7 +0.1
TLCR 76.15 321 ⇑*i*P **P** 10 49 37.8 +0.8
TLCR 76.15 321 ⇑*i*P **P** 10 49 37.8 +0.8
UZH Uzhgorod 76.18 327 *e*P **P** 10 49 37.0 -0.1
UZH *e* 10 49 49.2
UZH *e* 10 49 58.8
319A Douglas 76.23 60 P **P** 10 49 38.6 +0.7
baz=76,SNR=5.9
CRVS Cervenica-Dubn 76.28 327 *e*P **P** 10 49 36.3 -1.5
CRVS pmax pmax
comp=Z,15nm,1.0s
CRVS Cervenica-Dubn 76.28 327 *e*P **P** 10 49 36.3 -1.5
NIE Niedzica 76.30 328 ⇑*i*P **P** 10 49 39.2 +1.3
NIE Niedzica 76.30 328 *i* P **P** 10 49 39.2 +1.3
220A Playas Peak, P 76.33 59 P **P** 10 49 39.0 +0.5
baz=76,SNR=6.0
STKA Stephens Creek 76.33 187 P **P** 10 49 38.8 +0.8
STKA pP **pP** 10 49 52.0 +1.4
STKA Stephens Creek 76.33 187 P **P** 10 49 38.8 +0.8
comp=Z,3.5nm,0.8s,baz=345,slow=7.6,SNR=6.1
STKA pP **pP** 10 49 52.0 +1.4
comp=Z,6.6nm,0.9s,baz=328,slow=5.0,SNR=6.3
Z22A Elephant Butte 76.33 57 P **P** 10 49 38.9 +0.4
baz=76,SNR=5.4
Y23A Lovelace Mesa, 76.40 56 P **P** 10 49 39.6 +0.6
baz=76,SNR=7.2
W25A X Bar L Ranch, 76.43 54 P **P** 10 49 39.2 +0.2
baz=76,SNR=7.1
SCHQ Schefferville 76.44 20 P **P** 10 49 39.2 +0.6
comp=Z,6.9nm,1.5s
SCHQ Schefferville 76.44 20 P **P** 10 49 39.2 +0.6
comp=Z,8.4nm,0.9s,baz=352,slow=6.7,SNR=11
SCHQ LR LR 11 28 06.1
comp=Z,172nm,19.6s,baz=94,slow=39
TRPA Tarpa 76.49 326 ⇓*i*P **P** 10 49 39.2 +0.3
TRPA Tarpa 76.49 326 ⇓*e*P **P** 10 49 39.9 +1.0
VRI Vrincioaia 76.55 323 ⇓P **P** 10 49 39.5 +0.2
VRI Vrincioaia 76.55 323 ⇓*i*P **P** 10 49 39.5 +0.2
KSP Ksiaz 76.56 331 ⇑*e*P **P** 10 49 39.5 +0.3
KSP Ksiaz 76.56 331 *e*P **P** 10 49 39.6 +0.3
PLOR Plostina 76.59 323 ⇑P **P** 10 49 39.8 +0.2
PLOR Plostina 76.59 323 ⇑*i*P **P** 10 49 39.8 +0.2
OKC Ostrava-Krasne 76.75 330 ⇑*i*P **P** 10 49 40.9 +0.5
OKC MLR MLR
comp=Z,200nm,15.3s
OKC Ostrava-Krasne 76.75 330 ⇑*i*P **P** 10 49 40.9 +0.5
OKC AMS AMS 11 27 10.0
comp=Z,200nm,15.3s
TIRR Tirgusor 76.90 321 ⇑P **P** 10 49 41.4 +0.1
TIRR Tirgusor 76.90 321 *e*P **P** 10 49 41.4 +0.1
comp=Z,25nm,1.0s
TIRR Tirgusor 76.90 321 ⇑*i*P **P** 10 49 41.4 +0.1
HARR Harsova 76.94 321 ⇑P **P** 10 49 42.4 +0.9
HARR Harsova 76.94 321 ⇑*i*P **P** 10 49 42.4 +0.9
UPC Upice 76.94 331 ⇑*i*P **P** 10 49 41.8 +0.4
UPC Upice 76.94 331 ⇑*i*P **P** 10 49 41.8 +0.4
KECS Kecovo 77.00 328 *e*P **P** 10 49 42.1 +0.3
KECS pmax pmax
comp=Z,9.0nm,0.9s
KECS Kecovo 77.00 328 *e*P **P** 10 49 42.1 +0.3
MORC Moravsky Berou 77.02 330 *e*P **P** 10 49 41.9 0.0
MORC pmax pmax
comp=Z,65nm,1.2s
MORC Moravsky Berou 77.02 330 *e*P **P** 10 49 41.9 0.0
comp=Z,65nm,1.2s
MORC Moravsky Berou 77.02 330 ⇑*i*P **P** 10 49 42.3 +0.4
KRLC Kraliky 77.03 331 ⇑*i*P **P** 10 49 42.6 +0.6
KRLC Kraliky 77.03 331 ⇑*i*P **P** 10 49 42.6 +0.6
NRDL Niedersach Rie 77.11 336 *e*P **P** 10 49 42.4 +0.2
comp=Z,23nm,1.1s
MLR Muntele Rosu 77.18 323 P **P** 10 49 43.7 +0.7
MLR Muntele Rosu 77.18 323 ⇑*i*P **P** 10 49 43.2 +0.1
MLR Muntele Rosu 77.18 323 P **P** 10 49 43.7 +0.7
comp=Z,3.7nm,0.6s,baz=326,slow=4.6,SNR=35
CLL Collm 77.25 333 *e*P **P** 10 49 42.9 -0.2
comp=Z,63nm,0.8s
CLL Collm 77.25 333 ⇑*i*P **P** 10 49 43.0 -0.2
CLL pmax pmax
comp=Z,6.0nm,0.8s
CLL MLR MLR
comp=Z,200nm,22.1s
CLL Collm 77.25 333 ⇑*i*P **P** 10 49 43.0 -0.2
comp=Z,63nm,0.8s
CLL *i* PcP **PcP** 10 49 52.6 -1.1
UMR Umm Al-Rimmam 77.26 299 *e*P **P** 10 49 43.4 -0.2
BRG Berggiesshubel 77.32 333 *e*P **P** 10 49 43.7 +0.1
comp=Z,26nm,1.1s
BRG Berggiesshubel 77.32 333 *e*P **P** 10 49 43.6 +0.1
comp=Z,26nm,1.1s
BRG Berggiesshubel 77.32 333 *e*P **P** 10 49 43.7 +0.1
BRG pmax pmax
comp=Z,5.0nm,1.2s
MIB Mutribah 77.32 299 *e*P **P** 10 49 43.7 -0.2
MIB AMb AMB 10 49 45.2
comp=Z,67nm,1.3s
PVCC Panska Ves 77.41 332 *e*P **P** 10 49 44.5 +0.5
PVCC Panska Ves 77.41 332 ⇑*e*P **P** 10 49 44.5 +0.5
FBE Freiberg 77.47 333 *e*P **P** 10 49 44.7 +0.3
comp=Z,39nm,0.9s

DRGR 77.50 325 ⇓P **P** 10 49 45.0 +0.3
DRGR 77.50 325 ⇓*i*P **P** 10 49 45.0 +0.3
CLZ Clausthal 77.60 335 *e*P **P** 10 49 45.7 +0.5
comp=Z,69nm,1.2s
CLZ Clausthal 77.60 335 *e*P **P** 10 49 45.7 +0.5
CLZ pmax pmax
comp=Z,69nm,1.2s
VOIR 77.61 323 ⇑P **P** 10 49 46.4 +1.0
VOIR 77.61 323 ⇑*i*P **P** 10 49 46.4 +1.0
VYHS Vyhne 77.61 329 *e*P **P** 10 49 45.8 +0.5
VYHS pmax pmax
comp=Z,24nm,1.4s
VYHS Vyhne 77.61 329 *e*P **P** 10 49 45.8 +0.5
PSZ Piszkesteto 77.69 328 ⇑P **P** 10 49 46.3 +0.5
PSZ Piszkesteto 77.69 328 *e*P **P** 10 49 46.3 +0.5
comp=Z,80nm,1.5s
PSZ Piszkesteto 77.69 328 ⇑*i*P **P** 10 49 46.3 +0.5
PSZ Piszkesteto 77.69 328 ⇑*e*P **P** 10 49 46.6 +0.8
NEUB Neuenburg 77.73 334 *e*P **P** 10 49 45.8 0.0
comp=Z,68nm,1.1s
VRAC Vranov 77.75 330 P **P** 10 49 46.8 +0.8
VRAC Vranov 77.75 330 ⇓*i*P **P** 10 49 46.7 +0.8
VRAC Vranov 77.75 330 P **P** 10 49 46.8 +0.8
comp=Z,35nm,1.0s,baz=33,slow=5.5,SNR=40
NAY Al-Naaiem 77.77 299 *e*P **P** 10 49 46.2 -0.2
NAY AMb AMB 10 49 48.3
comp=Z,41nm,1.6s
EKA Eskdalemuir Ar 77.77 344 P **P** 10 49 46.2 +0.2
EKA Eskdalemuir Ar 77.77 344 P **P** 10 49 46.2 +0.2
comp=Z,16nm,0.7s,baz=20,slow=5.0,SNR=27
ESK Eskdalemuir 77.80 344 *i* P **P** 10 49 47.1 +1.0
RDF Al-Radifah 77.80 298 *e*P **P** 10 49 47.1 +0.5
RDF AMb AMB 10 49 48.0
comp=Z,86nm,0.8s
ARR Arges 77.84 323 ⇓*i*P **P** 10 49 47.5 +0.8
PRA Prague 77.84 332 ⇑P **P** 10 49 47.0 +0.5
PRU Pruhonice 77.88 332 ⇑*i*P **P** 10 49 47.2 +0.5
PRU MLR MLR
comp=Z,300nm,16.2s
PRU Pruhonice 77.88 332 ⇑*i*P **P** 10 49 47.2 +0.5
PRU AMS AMS 11 27 40.0
comp=Z,300nm,16.2s
IBBN Ibbenburen 77.95 337 *e*P **P** 10 49 47.2 +0.2
comp=Z,32nm,0.9s
BR131 Keskin Array S 77.99 315 *e*P **P** 10 49 47.9 +0.3
comp=Z,24nm,1.1s
BRTR Keskin Array B 77.99 315 P **P** 10 49 48.2 +0.5
BRTR Keskin Array B 77.99 315 P **P** 10 49 48.2 +0.5
comp=Z,9.5nm,0.9s,baz=72,slow=4.0,SNR=48
BRTR LR LR 11 30 28.1
comp=Z,146nm,18.8s,baz=215,slow=40
SMOL Smolenice 78.11 329 *e*P **P** 10 49 49.8 +1.8
SMOL Smolenice 78.11 329 *e*P **P** 10 49 49.8 +1.8
TREC Trest 78.15 331 *e*P **P** 10 49 48.6 +0.4
TREC MLR MLR
comp=Z,200nm,16.3s
TREC Trest 78.15 331 ⇑*e*P **P** 10 49 48.6 +0.4
TREC AMS AMS 11 28 00.0
comp=Z,200nm,16.3s
TANN Tannenbergstha 78.20 333 *e*P **P** 10 49 48.7 +0.2
comp=Z,49nm,1.9s
WERD Werda 78.22 333 *e*P **P** 10 49 48.8 +0.2
comp=Z,22nm,1.0s
PLN Plauen 78.23 334 *e*P **P** 10 49 48.9 +0.2
comp=Z,104nm,1.0s
AMTX Amarillo 78.26 52 *e*P **P** 10 49 49.3 +0.1
comp=Z,17nm,0.9s
MOX Moxa 78.27 334 *e*P **P** 10 49 49.0 +0.2
comp=Z,32nm,1.1s
MOX Moxa 78.27 334 *e*P **P** 10 49 49.0 +0.2
MOX pmax pmax
comp=Z,32nm,1.1s
GUNZ Gunzen 78.28 333 *e*P **P** 10 49 49.2 +0.2
comp=Z,29nm,0.9s
ANTO Ankara 78.31 315 *e*P **P** 10 49 50.3 +0.9
ANTO pmax pmax
comp=Z,19nm,0.9s
ANTO Ankara 78.31 315 P **P** 10 49 50.8 +1.4
SNR=10
ANTO Ankara 78.31 315 *e*P **P** 10 49 50.3 +0.9
comp=Z,19nm,0.9s
WERN Wernitzgruen 78.33 333 *e*P **P** 10 49 49.6 +0.3
comp=Z,31nm,0.9s
NKC Novy Kostel 78.36 333 ⇑*i*P **P** 10 49 49.5 +0.1
NKC *e* 10 49 56.9
NKC MLR MLR
comp=Z,200nm,15.2s
NKC Novy Kostel 78.36 333 ⇑*i*P **P** 10 49 49.5 +0.1
NKC *e*PCP **PcP** 10 49 56.9 -1.7
NKC AMS AMS 11 28 30.0
comp=Z,200nm,15.2s
MNTX Cornudas Mount 78.38 57 *e*P **P** 10 49 50.2 +0.5
comp=Z,5.4nm,1.1s
BUD Budapest 78.38 328 ⇓*e*P **P** 10 49 47.6 -1.9
ZST Bratislava 78.50 329 *e*P **P** 10 49 50.1 0.0
ZST pmax pmax
comp=Z,25nm,1.2s
ZST Bratislava 78.50 329 *e*P **P** 10 49 50.1 0.0
Z27A Tatum 78.50 54 P **P** 10 49 50.8 +0.1
baz=78,SNR=8.6
WTSB Winterswijk 78.52 337 *e*P **P** 10 49 50.1 0.0
comp=Z,46nm,1.0s
UBBA Unterbreizbach 78.61 335 *e*P **P** 10 49 51.0 +0.4
comp=Z,35nm,1.8s
MANZ Manzenberg 78.68 333 *e*P **P** 10 49 51.3 +0.1
comp=Z,23nm,1.0s
PKSG 78.70 328 ⇓*e*P **P** 10 49 52.3 +1.1
CSKK Cs˘tkako 78.77 328 ⇓*e*P **P** 10 49 52.6 +0.9
226B Tecolote Peak, 78.83 56 P **P** 10 49 52.6 +0.2
baz=79,SNR=7.0
ROTZ Rotzenmuhle 78.84 333 *e*P **P** 10 49 52.7 +0.7
comp=Z,33nm,1.1s
BUG Bochum--Univer 78.86 337 *e*P **P** 10 49 52.1 +0.1
comp=Z,48nm,1.2s
BZS Buzias 78.90 325 ⇑P **P** 10 49 52.2 -0.2
BZS Buzias 78.90 325 ⇑*i*P **P** 10 49 52.2 -0.2
KHC Kasperske Hory 78.94 332 *e*P **P** 10 49 53.0 +0.4
KHC pmax pmax
comp=Z,40nm,0.9s
KHC Kasperske Hory 78.94 332 ⇑*i*P **P** 10 49 53.2 +0.6
KHC *e*pP **PcP** 10 50 02.7 +1.6
KHC AMS AMS 11 28 20.0
comp=Z,400nm,16.9s
KHC Kasperske Hory 78.94 332 *e*P **P** 10 49 53.0 +0.4
comp=Z,40nm,0.9s
PKST T˘s 78.94 328 ⇑*e*P **P** 10 49 52.9 +0.3
SZH Strazhica 78.94 321 *i* P **P** 10 49 52.8 +0.1
SOP Sopron 79.13 330 ⇑*e*P **P** 10 49 54.6 +1.0
GEC2 GERESS Array S 79.14 332 *e*P **P** 10 49 53.8 0.0
comp=Z,19nm,1.1s
GEC2 GERESS Array S 79.14 332 *e*P **P** 10 49 53.8 0.0
GEC2 pmax pmax
comp=Z,19nm,1.1s
GERES GERESS Array B 79.14 332 P **P** 10 49 53.8 0.0
GERES GERESS Array B 79.14 332 P **P** 10 49 53.8 0.0
comp=Z,8.2nm,0.6s,baz=32,slow=5.3,SNR=74
GERES LR LR 11 29 11.7
comp=Z,317nm,19.1s,baz=251,slow=39
WET Wettzell 79.16 332 *e*P **P** 10 49 54.4 +0.6
comp=Z,57nm,1.1s
WET Wettzell 79.16 332 *e*P **P** 10 49 54.4 +0.6
WET pmax pmax
comp=Z,57nm,1.1s
CONA Conrad Observa 79.17 330 ⇑*i*P **P** 10 49 54.7 +0.7
comp=Z,53nm,1.5s,SNR=21
GRF Grafenberg Arr 79.22 334 *e*P **P** 10 49 54.7 +0.6
comp=Z,63nm,0.9s
GRF *e*L L 11 27 30.5
comp=Z,115nm,20.5s
GRF Grafenberg Arr 79.22 334 *e*P **P** 10 49 54.7 +0.6
GRF pmax pmax
comp=Z,63nm,0.9s
GRF MLR MLR
comp=Z,100nm,20.5s
GRFO Grafenberg 79.22 334 *e*P **P** 10 49 54.7 +0.6
GRFO pmax pmax
comp=Z,58nm,1.0s
GRFO Grafenberg 79.22 334 *e*P **P** 10 49 54.6 +0.6
comp=Z,58nm,1.0s
425A Indio Mountain 79.26 57 P **P** 10 49 54.8 0.0
baz=79,SNR=5.7
PKS9 Tamasi 79.41 328 ⇓*e*P **P** 10 49 55.6 +0.4
326A Caldwell Ranch 79.49 56 P **P** 10 49 56.1 +0.1
baz=79,SNR=6.5
PKSM Moragy 79.58 327 ⇓P **P** 10 49 55.6 -0.5

PKSM Moragy 79.58 327 ⇓*i*P **P** 10 49 55.6 -0.5
PKSM Moragy 79.58 327 ⇑*e*P **P** 10 49 55.8 -0.3
TNS Taunus Mts 79.61 336 *e*P **P** 10 49 56.4 +0.2
comp=Z,31nm,1.2s
TNS Taunus Mts 79.61 336 *e*P **P** 10 49 56.4 +0.2
TNS pmax pmax
comp=Z,31nm,1.2s
HGN Heimansgroeve 79.84 337 *e*P **P** 10 49 57.3 -0.1
comp=Z,35nm,1.0s
ARSA Arzberg 79.87 330 ⇑*i*P **P** 10 49 58.2 +0.5
comp=Z,16nm,1.0s
BEBN Eben Emael 79.88 337 P **P** 10 49 58.2 +0.5
comp=Z,14nm,1.2s
MEM Membach 79.96 337 P **P** 10 49 58.1 +0.1
comp=Z,21nm,1.2s
WMOK Wichita Mounta 79.99 51 *e*P **P** 10 49 56.8 -1.8
WMOK pmax pmax
comp=Z,11nm,1.0s
WMOK Wichita Mounta 79.99 51 *e*P **P** 10 49 56.8 -1.8
comp=Z,11nm,1.0s
TOD Tromm 80.05 335 *e*P **P** 10 49 58.3 -0.3
TOD Tromm 80.05 335 *e*P **P** 10 49 58.3 -0.3
BEHE Becsehely 80.07 329 ⇓*e*P P 10 50 02.0 +3.2
328A Wristen Ranch, 80.13 56 P **P** 10 49 59.8 +0.3
baz=80,SNR=5.8
526A Mary Lane Ranc 80.32 57 P **P** 10 50 00.8 +0.2
baz=80,SNR=7.9
BCLA Clavier 80.33 337 P **P** 10 50 00.4 +0.4
comp=Z,15nm,1.3s
RJOB Jochberg 80.40 332 *e*P **P** 10 50 01.3 +0.7
comp=Z,28nm,1.1s
RUP Ruppelstein 80.48 336 *e*P **P** 10 50 00.7 -0.2
RUP Ruppelstein 80.48 336 *e*P **P** 10 50 00.7 -0.2
SNF Seneffe 80.52 338 P **P** 10 50 01.8 +0.7
SOKA Soboth 80.53 330 ⇑*i*P **P** 10 50 01.6 +0.2
comp=Z,41nm,1.0s
FUR Furstenfeldbru 80.54 333 *e*P **P** 10 50 01.7 +0.4
comp=Z,63nm,1.0s
FUR Furstenfeldbru 80.54 333 *e*P **P** 10 50 01.7 +0.4
FUR pmax pmax
comp=Z,63nm,1.0s
PERS Pernice 80.54 330 *i* P **P** 10 50 01.5 +0.2
527A Woodward Ranch 80.55 57 P **P** 10 50 02.2 +0.4
baz=80,SNR=6.7
626A Big Bend Ranch 80.66 58 P **P** 10 50 02.2 -0.1
baz=80,SNR=7.9
STU Stuttgart 80.67 334 *e*P **P** 10 50 02.1 +0.2
comp=Z,42nm,1.0s
STU Stuttgart 80.67 334 *e*P **P** 10 50 02.1 +0.2
STU pmax pmax
comp=Z,19nm,0.8s
STU Stuttgart 80.67 334 *e*P **P** 10 50 02.1 +0.2
comp=Z,19nm,0.8s
428A Kincaid Ranch, 80.68 56 P **P** 10 50 03.0 +0.6
baz=80,SNR=6.9
VTS Vitosha 80.69 323 ⇓P **P** 10 50 02.1 -0.2
VTS Vitosha 80.69 323 *i* P **P** 10 50 01.4 -0.9
VTS Vitosha 80.69 323 ⇓*i*P **P** 10 50 02.1 -0.2
GIVF Givet 80.75 338 *e*P **P** 10 50 01.8 -0.5
comp=Z,34nm,1.0s
GIVF Givet 80.75 338 *e*P **P** 10 50 01.8 -0.5
GIVF pmax pmax
comp=Z,34nm,1.0s
GIVF Givet 80.75 338 *e*P **P** 10 50 01.8 -0.5
comp=Z,34nm,1.0s
ALN Alexandroupoli 80.77 320 *e*P **P** 10 50 02.6 0.0
WLF Walferdange 80.77 337 P **P** 10 50 03.4 +0.9
KBA Koelnbreinsper 80.78 331 ⇑*i*P **P** 10 50 03.5 +0.7
comp=Z,41nm,1.0s,SNR=22
DOU Dourbes 80.81 338 P **P** 10 50 02.9 +0.2
LANF Langenberg 80.90 335 *e*P **P** 10 50 03.3 +0.1
LANF Langenberg 80.90 335 *e*P **P** 10 50 03.3 +0.1
LANF Langenberg 80.90 335 *e*P **P** 10 50 03.3 +0.1
BAIF Baives 80.95 338 ⇑*i*P **P** 10 50 03.0 -0.4
comp=Z,46nm,1.2s
BAIF Baives 80.95 338 ⇑*i*P **P** 10 50 03.0 -0.4
BAIF pmax pmax
comp=Z,46nm,1.2s
BAIF Baives 80.95 338 ⇑*i*P **P** 10 50 03.0 -0.4
comp=Z,46nm,1.2s
528A Cox Ranch, San 81.03 56 P **P** 10 50 04.7 +0.4
baz=81,SNR=7.5
MYKA Terra Mystica 81.07 331 ⇑*i*P **P** 10 50 03.9 -0.3
comp=Z,18nm,1.2s
TXAR Lajitas Array 81.10 58 P **P** 10 50 04.9 +0.2
TXAR Lajitas Array 81.10 58 P **P** 10 50 04.9 +0.2
comp=Z,4.5nm,0.7s,baz=301,slow=4.1,SNR=97
TXAR LR LR 11 24 01.3
comp=Z,87nm,19.4s,baz=5.0,slow=34
WATA Walderalm 81.16 332 ⇑*i*P **P** 10 50 05.1 +0.3
comp=Z,20nm,0.7s,SNR=12
627A Terlingua Ranc 81.18 57 P **P** 10 50 05.3 +0.2
baz=81,SNR=5.7
WTTA Wattenberg 81.20 332 *i* P **P** 10 50 05.5 +0.5
comp=Z,45nm,0.9s,SNR=15
RETA Reutte 81.30 333 ⇓*i*P **P** 10 50 05.9 +0.5
comp=Z,38nm,1.3s,SNR=9.7
MOTA Moosalm 81.31 333 ⇑*i*P **P** 10 50 05.9 +0.3
comp=Z,40nm,0.9s,SNR=18
BFO Black Forest 81.32 335 *e*P **P** 10 50 05.6 +0.1
comp=Z,25nm,1.1s
BFO Black Forest 81.32 335 *e*P **P** 10 50 05.4 -0.1
BFO pmax pmax
comp=Z,22nm,1.1s
BFO Black Forest 81.32 335 *e*P **P** 10 50 05.4 -0.1
comp=Z,22nm,1.1s
KKB Krupnik 81.33 322 *i* P **P** 10 50 05.6 0.0
VISS Visnje 81.35 330 *i* P **P** 10 50 05.9 +0.2
SPAK Spaichingen-Ko 81.39 334 *e*P **P** 10 50 06.1 +0.2
529A Stev Forest Ra 81.39 56 P **P** 10 50 06.4 +0.2
baz=81,SNR=9.5
BOJS Bojanci 81.45 329 *i* P **P** 10 50 08.0 +1.9
430A Baggett Ranch, 81.49 55 P **P** 10 50 06.5 -0.2
baz=81,SNR=6.5
JAVS Javornik 81.55 330 *i* P **P** 10 50 06.5 -0.3
CDF Champ du Feu 81.57 335 ⇑*i*P **P** 10 50 06.4 -0.4
comp=Z,78nm,1.3s
CDF Champ du Feu 81.57 335 ⇑*i*P **P** 10 50 06.4 -0.4
CDF pmax pmax
comp=Z,78nm,1.3s
CDF Champ du Feu 81.57 335 ⇑*i*P **P** 10 50 06.4 -0.4
comp=Z,78nm,1.3s
FETA Feichten 81.72 333 ⇑*i*P **P** 10 50 08.0 +0.3
comp=Z,28nm,1.0s
CSS Prodhromos 81.74 312 *e*P **P** 10 50 07.9 0.0
comp=Z,13nm,0.7s
DAVA Damuels 81.76 333 ⇑*i*P **P** 10 50 08.1 +0.2
comp=Z,30nm,0.9s
ECH Echery 81.78 335 *e*P **P** 10 50 07.7 -0.2
ECH pmax pmax
comp=Z,19nm,1.1s
ECH Echery 81.78 335 *e*P **P** 10 50 07.7 -0.2
comp=Z,19nm,1.1s
ECH Echery 81.78 335 *e*P **P** 10 50 07.6 -0.3
FELD Feldberg im Sc 81.83 335 *e*P **P** 10 50 08.3 0.0
PAGF Fort de Pagny 81.89 336 ⇑*i*P **P** 10 50 08.4 0.0
comp=Z,14nm,0.9s
PAGF Fort de Pagny 81.89 336 ⇑*i*P **P** 10 50 08.4 0.0
comp=Z,14nm,0.9s
530A J-C Ranch, Com 81.90 55 P **P** 10 50 09.2 +0.4
baz=82,SNR=6.6
431A Sonora 81.93 55 P **P** 10 50 08.8 -0.2
baz=82,SNR=5.4
MOF Molkenrain 82.11 335 *e*P **P** 10 50 09.2 -0.5
MOF Molkenrain 82.11 335 *e*P **P** 10 50 09.2 -0.5
MOF Molkenrain 82.11 335 *e*P **P** 10 50 09.2 -0.5
THEF They Montfort 82.11 336 *e*P **P** 10 50 09.6 0.0
THEF They Montfort 82.11 336 *e*P **P** 10 50 09.6 0.0
THEF They Montfort 82.11 336 *e*P **P** 10 50 09.6 0.0
MEZF Maizieres J'vi 82.13 337 ⇑*i*P **P** 10 50 09.6 -0.1
comp=Z,93nm,1.3s
MEZF Maizieres J'vi 82.13 337 ⇑*i*P **P** 10 50 09.6 -0.1
comp=Z,93nm,1.3s
DAVOX Davos/Dischmat 82.21 333 P **P** 10 50 11.2 +0.8
DAVOX Davos/Dischmat 82.21 333 P **P** 10 50 11.2 +0.8
comp=Z,12nm,0.7s,baz=199,slow=1.3,SNR=13
HAU Haudompre 82.21 336 ⇑*i*P **P** 10 50 09.5 -0.6
comp=Z,22nm,0.8s
HAU *e*R
comp=Z,194nm,20.5s
HAU Haudompre 82.21 336 ⇑*i*P **P** 10 50 09.5 -0.6
HAU pmax pmax
comp=Z,22nm,0.8s
HAU Haudompre 82.21 336 ⇑*i*P **P** 10 50 09.5 -0.6
comp=Z,22nm,0.8s
HINF Hinteralfeld 82.23 335 ⇑*i*P **P** 10 50 09.4 -0.9

comp=Z,20nm,1.2s
HINF Hinteralfeld 82.23 335⇑ iP P 10 50 09.4 -0.9
HINF pmax pmax
comp=Z,21nm,1.2s
HINF Hinteralfeld 82.23 335⇑ iP P 10 50 09.4 -0.9
comp=Z,20nm,1.2s
432A Menard 82.27 54 P **P 10 50 10.8 +0.1**
baz=82,SNR=5.1
VAL Valentia 82.27 347 eP **P 10 50 10.4 +0.1**
PMOR Pomariorio Ree 82.33 120 eT T 12 21 13.1
comp=Z,62nm,0.2s
BBS Basel-Blauen 82.35 335 eP **P 10 50 10.7 -0.2**
BBS Basel-Blauen 82.35 335 eP **P 10 50 10.7 -0.2**
531A Rocksprings 82.35 55 P **P 10 50 11.2 0.0**
baz=82,SNR=5.4
SFTF Sexfontaines 82.41 337⇑ iP P 10 50 10.8 -0.3
comp=Z,58nm,1.1s
SFTF Sexfontaines 82.41 337⇑ iP P 10 50 10.8 -0.3
comp=Z,58nm,1.0s
JCT Junction City 82.55 54 eP **P 10 50 12.0 -0.3**
JCT pmax pmax
comp=Z,18nm,1.2s
JCT Junction City 82.55 54 eP **P 10 50 12.0 -0.3**
comp=Z,18nm,1.2s
JCT Junction City 82.55 54 P **P 10 50 11.9 -0.3**
baz=82,SNR=5.2
TUE Stuetta 82.65 333 eP **P 10 50 12.9 +0.3**
comp=Z,26nm,0.9s
LOMF Lomont 82.65 335 eP **P 10 50 12.2 -0.3**
LOMF Lomont 82.65 335 eP **P 10 50 12.2 -0.3**
LOMF Lomont 82.65 335 eP **P 10 50 12.2 -0.3**
SIUC Southern Illin 82.70 43 eP **P 10 50 13.2 +0.4**
comp=Z,27nm,0.9s
532A Rocksprings 82.75 55 P **P 10 50 13.3 0.0**
baz=82,SNR=6.8
CHOS Chios island 82.76 318 eP **P 10 50 12.8 -0.4**
631A Perdido Creek 82.89 56 P **P 10 50 14.1 +0.1**
baz=83,SNR=14
FNA Florina 82.95 323 eP **P 10 50 13.6 -0.6**
AOS Alonnisos 83.15 320 eP **P 10 50 14.6 -0.5**
PPT Papeete 83.27 123 LR LR 11 18 41.7
comp=Z,375nm,20.3s,baz=206,slow=29
PPT2 Papeete2 83.28 123 eLR LR 11 16 03.5
comp=Z,416nm,25.8s
PPT2 eT T 12 22 30.4
comp=Z,13nm,0.3s
FLN La Foliniere 83.34 340⇑ iP P 10 50 15.6 -0.4
comp=Z,98nm,1.2s
FLN eR
comp=Z,166nm,18.5s
FLN La Foliniere 83.34 340⇑ iP P 10 50 15.6 -0.4
FLN pmax pmax
comp=Z,98nm,1.2s
FLN La Foliniere 83.34 340⇑ iP P 10 50 15.6 -0.4
comp=Z,98nm,1.2s
TIAR Tiarei 83.40 122 eT T 12 22 37.0
comp=Z,30nm,0.3s
LDF La Druitiere 83.42 340 eP **P 10 50 16.0 -0.3**
comp=Z,29nm,1.0s
LDF La Druitiere 83.42 340 eP **P 10 50 16.0 -0.3**
LDF pmax pmax
comp=Z,29nm,1.0s
LDF La Druitiere 83.42 340 eP **P 10 50 16.0 -0.3**
comp=Z,29nm,1.0s
CABF La Chapelle 83.54 335 eP **P 10 50 16.9 -0.2**
CABF La Chapelle 83.54 335 eP **P 10 50 16.9 -0.2**
CABF La Chapelle 83.54 335 eP **P 10 50 16.9 -0.2**
LOR Lormes 83.59 337⇑ iP P 10 50 16.8 -0.5
comp=Z,41nm,1.0s
LOR eR
comp=Z,199nm,19.0s
LOR Lormes 83.59 337⇑ iP P 10 50 16.8 -0.5
comp=Z,41nm,1.0s
GRR Gorron 83.78 340⇑ iP P 10 50 18.1 -0.1
comp=Z,65nm,1.0s
GRR Gorron 83.78 340⇑ iP P 10 50 18.1 -0.1
GRR pmax pmax
comp=Z,65nm,1.0s
GRR Gorron 83.78 340⇑ iP P 10 50 18.1 -0.1
comp=Z,65nm,1.0s
SSF Saint Saulge 83.88 337 eP **P 10 50 19.0 +0.3**
comp=Z,17nm,0.9s
SSF Saint Saulge 83.88 337 eP **P 10 50 19.0 +0.3**
SSF pmax pmax
comp=Z,17nm,0.9s
SSF Saint Saulge 83.88 337 eP **P 10 50 19.0 +0.3**
comp=Z,17nm,0.9s
HYF Humbligny 83.93 338 eP **P 10 50 19.2 +0.2**
HYF Humbligny 83.93 338 eP **P 10 50 19.2 +0.2**
SMF Signal de Mont 84.16 337⇑ iP P 10 50 20.0 -0.2
comp=Z,42nm,0.8s
SMF Signal de Mont 84.16 337⇑ iP P 10 50 20.0 -0.2
SMF pmax pmax
comp=Z,42nm,0.8s
SMF Signal de Mont 84.16 337⇑ iP P 10 50 20.0 -0.2
comp=Z,42nm,0.8s
SGMF Saint Gilles 84.31 341 eP **P 10 50 21.1 +0.2**
comp=Z,42nm,0.8s
SGMF Saint Gilles 84.31 341 eP **P 10 50 21.1 +0.2**
SGMF pmax pmax
comp=Z,42nm,0.8s
SGMF Saint Gilles 84.31 341 eP **P 10 50 21.1 +0.2**
comp=Z,42nm,0.8s
LPL La Plagne 84.33 334 eP **P 10 50 21.4 0.0**
comp=Z,36nm,1.0s
LPL La Plagne 84.33 334 eP **P 10 50 21.4 0.0**
LPL pmax pmax
comp=Z,36nm,1.0s
LPL La Plagne 84.33 334 eP **P 10 50 21.4 0.0**
comp=Z,36nm,1.0s
LPG La Plagne 84.34 334⇑ iP P 10 50 21.6 +0.1
comp=Z,32nm,0.9s
LPG La Plagne 84.34 334⇑ iP P 10 50 21.6 +0.1
LPG pmax pmax
comp=Z,32nm,0.9s
LPG La Plagne 84.34 334⇑ iP P 10 50 21.6 +0.1
comp=Z,32nm,0.9s
ROSF Rostrenen 84.39 342⇑ iP P 10 50 21.5 +0.2
comp=Z,84nm,1.0s
ROSF Rostrenen 84.39 342⇑ iP P 10 50 21.5 +0.2
ROSF pmax pmax
comp=Z,84nm,1.0s
ROSF Rostrenen 84.39 342⇑ iP P 10 50 21.5 +0.2
comp=Z,84nm,1.0s
MEH Mehetia 84.42 122 eT T 12 23 44.5
comp=Z,109nm,0.3s
BGF Bois d'Agland 84.52 337 eP **P 10 50 22.1 +0.1**
comp=Z,22nm,0.8s
BGF Bois d'Agland 84.52 337 eP **P 10 50 22.1 +0.1**
BGF pmax pmax
comp=Z,22nm,0.8s
BGF Bois d'Agland 84.52 337 eP **P 10 50 22.1 +0.1**
comp=Z,22nm,0.8s
WVT Waverly 84.63 43 eP **P 10 50 22.6 -0.1**
WVT pmax pmax
comp=Z,7.0nm,0.8s
WVT Waverly 84.63 43 eP **P 10 50 22.6 -0.1**
comp=Z,7.0nm,0.8s
BNI Bardonecchia 84.76 334 eP **P 10 50 23.2 -0.3**
BNI pmax pmax
comp=Z,15nm,1.0s
BNI Bardonecchia 84.76 334 eP **P 10 50 23.2 -0.3**
comp=Z,15nm,1.0s
QUIF Quistinic 84.77 342 eP **P 10 50 23.2 0.0**
comp=Z,32nm,0.9s
QUIF Quistinic 84.77 342 eP **P 10 50 23.2 0.0**
QUIF pmax pmax
comp=Z,32nm,0.9s
QUIF Quistinic 84.77 342 eP **P 10 50 23.2 0.0**
comp=Z,32nm,0.9s
DID Didima 84.79 320 eP **P 10 50 20.9 -2.7**
GUR Goura 84.85 320 eP **P 10 50 22.6 -1.4**
KLV Kalavryta, Ach 84.85 321 eP **P 10 50 22.9 -1.0**
AGO Saint Agoulin 84.91 337 eP **P 10 50 24.4 +0.4**
AGO Saint Agoulin 84.91 337 eP **P 10 50 24.4 +0.4**
TCF Toulx Ste Croi 84.94 338⇑ iP P 10 50 24.4 +0.2
comp=Z,37nm,1.0s
TCF Toulx Ste Croi 84.94 338⇑ iP P 10 50 24.4 +0.2
TCF pmax pmax
comp=Z,37nm,1.0s
TCF Toulx Ste Croi 84.94 338⇑ iP P 10 50 24.4 +0.2
comp=Z,37nm,1.0s
MBDF Montbardon 85.03 334 eP **P 10 50 24.3 -0.5**
MBDF Montbardon 85.03 334 eP **P 10 50 24.3 -0.5**
MBDF Montbardon 85.03 334 eP **P 10 50 24.3 -0.5**
ORIF Oris-en-Rattie 85.13 335⇑ iP P 10 50 25.6 +0.4
comp=Z,46nm,0.8s
ORIF eR
comp=Z,171nm,20.5s
ORIF Oris-en-Rattie 85.13 335⇑ iP P 10 50 25.6 +0.4
ORIF pmax pmax
comp=Z,46nm,0.8s
ORIF Oris-en-Rattie 85.13 335⇑ iP P 10 50 25.6 +0.4
comp=Z,46nm,0.8s
OXF Oxford 85.13 45 eP **P 10 50 25.3 0.0**
OXF pmax pmax
comp=Z,42nm,1.1s
OXF Oxford 85.13 45 eP **P 10 50 25.3 0.0**
comp=Z,42nm,1.1s
RLS Riolos of Patr 85.15 321 eP **P 10 50 23.8 -1.5**
SSB Saint Sauveur 85.21 336 eP **P 10 50 25.8 +0.3**
SSB Saint Sauveur 85.21 336 eP **P 10 50 25.8 +0.3**
SSB Saint Sauveur 85.21 336 eP **P 10 50 25.8 +0.3**
PYM Petit Puy Mans 85.22 337 eP **P 10 50 25.8 +0.2**
PYM Petit Puy Mans 85.22 337 eP **P 10 50 25.8 +0.2**
PYM Petit Puy Mans 85.22 337 eP **P 10 50 25.8 +0.2**
MFF Saint Martin d 85.27 339 eP **P 10 50 25.9 +0.1**
comp=Z,51nm,1.0s
MFF Saint Martin d 85.27 339 eP **P 10 50 25.9 +0.1**
MFF pmax pmax
comp=Z,51nm,1.0s
MFF Saint Martin d 85.27 339 eP **P 10 50 25.9 +0.1**
comp=Z,51nm,1.0s
EMMW East Machias 85.43 25 eP **P 10 50 24.1 -2.4**
comp=Z,319nm,1.1s
VLS Valsamata 85.44 322 eP **P 10 50 26.1 -0.7**
VIVF Saint-Julien-l 85.55 335⇑ iP P 10 50 27.5 +0.2
comp=Z,56nm,1.0s
VIVF Saint-Julien-l 85.55 335⇑ iP P 10 50 27.5 +0.2
VIVF pmax pmax
comp=Z,57nm,1.0s
VIVF Saint-Julien-l 85.55 335⇑ iP P 10 50 27.5 +0.2
comp=Z,56nm,1.0s
VLI Velïai 85.57 319 eP **P 10 50 24.8 -2.6**
SBF Sospel 85.59 333⇑ iP P 10 50 26.9 -0.6
comp=Z,54nm,0.9s
SBF Sospel 85.59 333⇑ iP P 10 50 26.9 -0.6
SBF pmax pmax
comp=Z,54nm,0.9s
SBF Sospel 85.59 333⇑ iP P 10 50 26.9 -0.6
comp=Z,54nm,0.9s
LAST Lasithi 85.61 317 eP **P 10 50 27.9 +0.1**
LBL Lubilhac 85.62 337 eP **P 10 50 28.2 +0.5**
LBL Lubilhac 85.62 337 eP **P 10 50 28.2 +0.5**
LBL Lubilhac 85.62 337 eP **P 10 50 28.2 +0.5**
DYR Agios Nikonas 85.81 320 eP **P 10 50 27.6 -1.1**
PYL PYLOS 85.98 320 eP **P 10 50 27.8 -1.7**
VAM Vamos 86.03 318 eP **P 10 50 30.3 +0.5**
RJF Les Rejaudoux 86.04 338 eP **P 10 50 29.9 +0.3**
comp=Z,26nm,1.1s
RJF eR
comp=Z,356nm,20.5s
RJF Les Rejaudoux 86.04 338 eP **P 10 50 29.9 +0.3**
RJF pmax pmax
comp=Z,26nm,1.1s
RJF Les Rejaudoux 86.04 338 eP **P 10 50 29.9 +0.3**
comp=Z,26nm,1.1s
SIVA Sivas 86.05 317 eP **P 10 50 29.9 +0.1**
SMRF Simiane la Rot 86.08 334 eP **P 10 50 30.2 +0.3**
comp=Z,15nm,0.9s
SMRF Simiane la Rot 86.08 334 eP **P 10 50 30.2 +0.3**
comp=Z,15nm,0.9s
ANKY Antikythira Is 86.09 319 eP **P 10 50 28.0 -2.0**
CAF Calviac 86.24 337 eP **P 10 50 31.2 +0.6**
comp=Z,119nm,1.5s
CAF Calviac 86.24 337 eP **P 10 50 31.2 +0.6**
CAF pmax pmax
comp=Z,119nm,1.5s
CAF Calviac 86.24 337 eP **P 10 50 31.2 +0.6**
comp=Z,119nm,1.5s
PGF Pioggiola 86.24 332 eP **P 10 50 30.2 -0.6**
comp=Z,22nm,0.8s
PGF Pioggiola 86.24 332 eP **P 10 50 30.2 -0.6**
PGF pmax pmax
comp=Z,22nm,0.8s
PGF Pioggiola 86.24 332 eP **P 10 50 30.2 -0.6**
comp=Z,22nm,0.8s
TIP Timpagrande 86.24 325 eP **P 10 50 30.0 -0.8**
comp=Z,26nm,1.2s
SWET Sewanee 86.28 42 eP **P 10 50 30.9 -0.2**
comp=Z,24nm,1.1s
LMR La Mourre 86.36 334⇑ iP P 10 50 31.0 -0.2
comp=Z,151nm,1.4s
LMR La Mourre 86.36 334⇑ iP P 10 50 31.0 -0.2
LMR pmax pmax
comp=Z,151nm,1.4s
LMR La Mourre 86.36 334⇑ iP P 10 50 31.0 -0.2
comp=Z,151nm,1.4s
LASF Ste Croix 86.50 336 eP **P 10 50 32.3 +0.3**
LASF Ste Croix 86.50 336 eP **P 10 50 32.3 +0.3**
GVD Gavdhos 86.55 318 eP **P 10 50 32.1 -0.1**
comp=Z,84nm,0.9s
LFF La Frestale 86.59 338 eP **P 10 50 32.7 +0.4**
comp=Z,55nm,0.9s
LFF La Frestale 86.59 338 eP **P 10 50 32.7 +0.4**
LFF pmax pmax
comp=Z,55nm,0.9s
LFF La Frestale 86.59 338 eP **P 10 50 32.7 +0.4**
comp=Z,55nm,0.9s
MTLF Montolieu 87.65 336⇑ iP P 10 50 38.6 +1.1
comp=Z,22nm,1.1s
MTLF Montolieu 87.65 336⇑ iP P 10 50 38.6 +1.1
MTLF pmax pmax
comp=Z,22nm,1.1s
MTLF Montolieu 87.65 336⇑ iP P 10 50 38.6 +1.1
comp=Z,22nm,1.1s
TBI Tubuai 87.80 126 eLR LR 11 18 03.8
TBI eT T 12 28 04.9
comp=Z,12nm,0.3s
EPF Esparros 88.46 338 eP **P 10 50 42.0 +0.6**
comp=Z,37nm,1.3s
EPF Esparros 88.46 338 eP **P 10 50 42.0 +0.6**
EPF pmax pmax
comp=Z,37nm,1.3s
EPF Esparros 88.46 338 eP **P 10 50 42.0 +0.6**
comp=Z,37nm,1.3s
ETSF Etsaut 88.83 338 eP **P 10 50 43.3 +0.1**
comp=Z,18nm,0.7s
ETSF Etsaut 88.83 338 eP **P 10 50 43.3 +0.1**
ETSF pmax pmax
comp=Z,18nm,0.7s
ETSF Etsaut 88.83 338 eP **P 10 50 43.3 +0.1**
comp=Z,18nm,0.7s
SJPF Ste Jean 88.80 339 eP **P 10 50 42.4 -0.6**
SJPF Ste Jean 88.80 339 eP **P 10 50 42.4 -0.6**
SJPF Ste Jean 88.80 339 eP **P 10 50 42.4 -0.6**
KEST Kesra 92.16 328 P **P 10 50 58.6 -0.2**
KEST Kesra 92.16 328 P **P 10 50 58.6 -0.2**
comp=Z,1.8nm,0.8s,baz=226,slow=2.0,SNR=4.4
KEST LR LR 11 37 08.1
comp=Z,110nm,18.9s,baz=299,slow=39
ESDC Sonseca Array 92.73 339 P **P 10 51 00.5 -0.9**
ESDC Sonseca Array 92.73 339 P **P 10 51 00.5 -0.9**
comp=Z,0.3nm,0.3s,baz=9.1,slow=4.4,SNR=6.0
ESDC LR LR 11 37 00.2
comp=Z,121nm,21.6s,baz=0.0,slow=38
RKT Rikitea 96.51 116 eLR LR 11 22 22.3
comp=Z,205nm,24.5s
TORD Torodi Ar. Bea 115.39 324 PKP **PKPdf 10 56 30.0 -1.1**
TORD Torodi Ar. Bea 115.39 324 PKP **PKPdf 10 56 30.0 -1.1**
comp=Z,0.5nm,0.4s,baz=23,slow=1.9,SNR=13
VNDA Vanda 122.02 177 PKP **PKPdf 10 56 40.7 -1.3**
VNDA Vanda 122.02 177 PKP **PKPdf 10 56 40.7 -1.3**
comp=Z,1.2nm,0.8s,baz=342,slow=2.0,SNR=7.8
QSPA South Pole Qui 134.25 180 PKP **PKPdf 10 57 05.9 +0.3**
QSPA ePKPdf **PKiKP 10 57 06.1 -0.8**
QSPA South Pole Qui 134.25 180 PKP **PKPdf 10 57 05.9 +0.3**
comp=Z,2.4nm,1.0s,baz=299,slow=2.8,SNR=11
LPAZ La Paz 137.93 60 PKP **PKPdf 10 57 16.2 +1.5**
LPAZ La Paz 137.93 60 PKP **PKPdf 10 57 16.2 +1.5**
comp=Z,0.7nm,0.6s,baz=25,slow=6.1,SNR=3.9
LCO Las Campanas 144.99 77 ePKPbc **PKPdf 10 57 26.3 -0.3**
BDFB Brasilia 147.80 32 PKPbc **PKPbc 10 57 34.1 -0.2**
BDFB Brasilia 147.80 32 PKPbc **PKPbc 10 57 34.1 -0.2**
comp=Z,5.3nm,0.8s,baz=271,slow=2.5,SNR=6.9
CFAA Coronel Fontan 148.23 79 PKPbc **PKPbc 10 57 34.0 -1.0**
CFAA Coronel Fontan 148.23 79 PKPbc **PKPbc 10 57 34.0 -1.0**
comp=Z,0.7nm,0.4s,baz=299,slow=2.4,SNR=24
SNAA Sanae 149.59 197 eP **PKPbc 10 57 37.3 +0.1**
SNAA Sanae 149.59 197 eKuril 10 57 50.8
SNAA Sanae 149.59 197 PKPbc **PKPbc 10 57 37.5 +0.3**
SNAA Sanae 149.59 197 PKPbc **PKPbc 10 57 37.5 +0.3**
comp=Z,2.5nm,0.9s,baz=150,slow=4.1,SNR=16
PLCA Paso Flores 150.83 97 PKPbc **PKPbc 10 57 41.5 +0.4**
PLCA pPKPbc **pPKPbc 10 57 55.0 +0.5**
PLCA Paso Flores 150.83 97 PKPbc **PKPbc 10 57 41.5 +0.4**
comp=Z,6.5nm,0.8s,baz=234,slow=3.1,SNR=11
PLCA pPKPbc **pPKPbc 10 57 55.0 +0.5**
comp=Z,6.9nm,0.8s,baz=240,slow=2.9,SNR=7.0
VNA1 Neumayer--Stat 151.49 196 eP **PKPbc 10 57 42.3 +0.7**
VNA1 Neumayer--Stat 151.49 196 eKuril pPKPbc 10 57 56.4 +1.4
CPUP Villa Florida 152.07 58 PKPbc **PKPbc 10 57 44.8 +0.5**
CPUP Villa Florida 152.07 58 PKPbc **PKPbc 10 57 44.8 +0.5**
comp=Z,0.7nm,0.4s,baz=236,slow=3.3,SNR=4.8

IDC 06 10:46:17.7±1.9, 17°41.S×167°81.E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.7/20, mbtmp3.8/5, ML3.6/1, MS3.1/3, Ms1 3.1/3, ms1mx3.0/22, Error ellipse: s-maj=52.7km s-min=33.3km az=130.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.81**	**195**	eP	Pn	10 47 29.7	-2.0
DZM				eS	Sn	10 48 22.7	-5.6
DZM	**Mont Dzumac**	**4.81**	**195**	Pn	Pn	10 47 30.8	-0.9
	2.3nm,0.3s,baz=51,slow=18,SNR=20						
DZM				Sn	Sn	10 48 23.4	-4.9
	5.1nm,0.3s,baz=121,slow=23,SNR=11						
DZM				LR	LR	10 49 13.8	
	comp=Z,192nm,18.5s,baz=36,slow=37						
HNR	**Honiara**	**11.01**	**315**	LR	LR	10 52 50.4	
	comp=Z,79nm,18.3s,baz=219,slow=36						
RAO	**Raoul Island**	**17.61**	**135**	LR	LR	10 55 32.1	
	comp=Z,105nm,21.6s,baz=260,slow=32						
CTA	**Charters Tower**	**20.58**	**259**	P	Pn	10 51 00.1	-0.6
	3.0nm,0.9s,baz=90,slow=12,SNR=1.7						
STKA	**Stephens Creek**	**27.75**	**234**	P	P	10 52 08.2	0.0
	2.9nm,1.1s,baz=63,slow=9.0,SNR=3.1						
WRA	**Warramunga Arr**	**31.78**	**260**	P	P	10 52 43.9	-0.2
	0.1nm,0.4s,baz=87,slow=8.7,SNR=4.6						
ASAR	**Alice Springs**	**32.30**	**253**	P	P	10 52 47.8	-0.9
	0.5nm,0.6s,baz=74,slow=8.3,SNR=13						
ARCES	**ARCESS Array B**	**122.96**	**345**	PKP	PKPdf	11 05 14.7	-0.7
	1.0nm,0.9s,baz=22,slow=1.3,SNR=4.2						
DAVOX	**Davos/Dischmat**	**145.49**	**333**	PKPbc	PKPbc	11 05 58.2	0.0
	6.1nm,0.7s,baz=67,slow=4.8,SNR=6.8						

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*ISCJB **06** 11:00:17.3±0.6, 48°.40N±0°.03×123°.49W±0°.04, h12km±3km, Error ellipse: s-maj=5.7km s-min=3.9km az=171.2*
*PNSN **06** 11:00:18.3, 48°.41N×123°.47W, h13km, MD2.6, Fault plane solution: NP1:φs160.00000°, δ60.00000°, NP2: φs47.00000°, δ56.00000°, Principal axes: T Plg48.0000°, Azm15.0000°; P Plg2.0000°, Azm283.0000°; Fault plane solution: NP1:φs235.00000°, δ65.00000°, NP2: φs339.00000°, δ63.00000°, Principal axes: T Plg38.0000°, Azm196.0000°; P Plg1.0000°, Azm287.0000°;*
*PGC **06** 11:00:18.2±0.0, 48°.40N×123°.50W, h2km, ML2.2/16*
PGC 10km Wsw of Victoria, Bc Vancouver Island Region Felt (II) around greater Victoria.
*NEIC **06** 11:00:18.2, 48°.40N×123°.50W, h2km, ML2.2(PGC), After PGC.*
NEIC Felt [II] at Victoria. Felt from Sooke to Oak Bay.

ISC 06 11:00:17.8±0.9, 48°43N±0°.03×123°50W±0°.02, h16km±5km, n32, σ1s26/63, 26D, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VGZ	**Gonzales**	**0.12**	**96**	P	**Pg**	**11 00 20.6**	**-0.7**
VGZ				S	**Sg**	**11 00 22.3**	**-1.4**
VGZ	**Gonzales**	**0.12**	**96**	⇑P	**Pg**	**11 00 20.6**	**-0.7**
VGZ				⇓S	**Sg**	**11 00 22.3**	**-1.4**
PGC	**Sidney**	**0.23**	**8**	ePg	**Pg**	**11 00 23.2**	**+0.2**
PGC				eSg	**Sg**	**11 00 26.6**	**+0.2**
PGC	**Sidney**	**0.23**	**8**	⇑P	**Pg**	**11 00 23.1**	**+0.2**
PGC				⇑S	**Sg**	**11 00 26.6**	**+0.2**
LZB	**Mount Lazard**	**0.28**	**311**	P	**Pg**	**11 00 24.0**	**+0.1**
LZB				S	**Sg**	**11 00 28.2**	**0.0**
LZB	**Mount Lazard**	**0.28**	**311**	⇓P	**Pg**	**11 00 24.0**	**+0.1**
LZB				⇓S	**Sg**	**11 00 28.2**	**0.0**
SNB	**Saturna Island**	**0.41**	**32**	P	**Pg**	**11 00 26.3**	**+0.2**
SNB				S	**Sg**	**11 00 32.1**	**+0.3**
SNB	**Saturna Island**	**0.41**	**32**	⇑P	**Pg**	**11 00 26.3**	**+0.2**
SNB				⇑S	**Sg**	**11 00 32.1**	**+0.3**
GOBB	**Galiano Island**	**0.52**	**359**	P	**Pb**	**11 00 28.3**	**-0.3**
GOBB				S	**Sb**	**11 00 36.3**	**+0.4**
GOBB	**Galiano Island**	**0.52**	**359**	⇑P	**Pb**	**11 00 28.3**	**-0.3**
GOBB				⇓S	**Sb**	**11 00 36.3**	**+0.4**
PFB	**Port Renfrew**	**0.64**	**284**	P	**Pg**	**11 00 29.9**	**-0.5**
PFB				S	**Sg**	**11 00 38.7**	**-0.3**
PFB	**Port Renfrew**	**0.64**	**284**	⇓P	**Pg**	**11 00 29.9**	**-0.5**
PFB				⇓S	**Sg**	**11 00 38.7**	**-0.3**
NLLB	**Nanaimo Lost L**	**0.86**	**338**	P	**Sg**	**11 00 33.7**	**-0.9**
NLLB				S	**Sg**	**11 00 45.3**	**-0.7**
NLLB	**Nanaimo Lost L**	**0.86**	**338**	⇓P	**Pg**	**11 00 33.7**	**-0.9**
NLLB				⇓S	**Sg**	**11 00 45.3**	**-0.7**
MGB	**Mount Grey**	**0.98**	**306**	P	**Pg**	**11 00 35.6**	**-1.1**
MGB				S	**Sg**	**11 00 48.5**	**-1.0**
MGB	**Mount Grey**	**0.98**	**306**	⇓P	**Pg**	**11 00 35.6**	**-1.1**
MGB				⇓S	**Sg**	**11 00 48.5**	**-1.0**
BIB	**Bowen Island**	**0.99**	**7**	⇑P	**Pg**	**11 00 35.9**	**-1.0**
BIB				⇑S	**Sg**	**11 00 49.0**	**-0.9**
GHNB	**Nanoose**	**1.01**	**331**	⇑P	**Pg**	**11 00 36.1**	**-1.2**
GHNB				⇓S	**Sg**	**11 00 49.4**	**-1.0**
NLWA	**Neilton Lookou**	**1.06**	**194**	ePg	**Pg**	**11 00 38.1**	**-0.3**
VDB	**Vedder Mountai**	**1.10**	**56**	⇓P	**Pg**	**11 00 37.4**	**-1.6**
VDB				⇑S	**Sg**	**11 00 51.2**	**-2.3**
BMSB	**Bamfield Mari**	**1.16**	**291**	⇑P	**Pg**	**11 00 38.1**	**-2.0**
BMSB				⇑S	**Sg**	**11 00 53.6**	**-1.7**
SHB	**Sechelt**	**1.20**	**348**	⇓P	**Pg**	**11 00 39.1**	**-1.9**
SHB				⇑S	**Sg**	**11 00 54.8**	**-1.8**
ALB	**Alberni**	**1.22**	**314**	⇓P	**Pg**	**11 00 39.4**	**-1.9**
ALB				⇑S	**Sg**	**11 00 55.3**	**-2.0**
WPB	**Watts Point**	**1.25**	**9**	⇓P	**Pg**	**11 00 40.1**	**-1.7**
WPB				⇑S	**Sg**	**11 00 56.0**	**-2.1**
TXB	**Texada**	**1.41**	**335**	⇓P	**Pn**	**11 00 42.6**	**-0.3**
TXB				⇑S	**Sg**	**11 01 00.8**	**-2.7**
HOPB	**Hope**	**1.68**	**54**	⇓P	**Pn**	**11 00 47.0**	**+0.6**
HOPB				⇓S	**Sn**	**11 01 07.6**	**0.0**
BTB	**Buttle Lake**	**1.69**	**309**	⇓P	**Pn**	**11 00 46.8**	**-0.1**
BTB				⇑S	**Sn**	**11 01 08.2**	**0.0**
WSLR	**Whistler**	**1.74**	**12**	⇓P	**Pn**	**11 00 49.4**	**+1.9**
WSLR				⇓S	**Sn**	**11 01 10.6**	**+1.2**
CBB	**Campbell River**	**2.02**	**323**	⇓P	**Pn**	**11 00 51.9**	**+0.7**
CBB				⇓S	**Sn**	**11 01 18.6**	**+2.5**
GDR	**Gold River**	**2.15**	**310**	⇑P	**Pn**	**11 00 55.6**	**+2.7**
GDR				⇑S	**Sb**	**11 01 23.1**	**+0.4**
LLLB	**Lillooet**	**2.43**	**25**	⇓P	**Pn**	**11 00 59.6**	**+2.8**
LLLB				⇑S	**Sb**	**11 01 30.6**	**-0.2**
NCRB	**Newcastle Ridg**	**2.59**	**321**	⇑P	**Pn**	**11 01 01.4**	**+2.2**
NCRB				⇓S	**Sb**	**11 01 35.4**	**-0.1**

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*IDC **06** 11:17:21.5±0.5, 14°.76S×168°.17E, h0km, mb4.7/19, mb1 4.8/21, mb1mx4.8/23, mbtmp4.7/21, ML4.7/2, MS4.0/15, Ms1 4.0/15, ms1mx3.9/31, Error ellipse: s-maj=18.0km s-min=14.5km az=110.0*
*DJA **06** 11:17:24.9±2.9, 14°S±10°×16°9E±1°4, h72km±41km, M4.7/9, mB5.2/1, mb4.7/9, Mw(mB)4.5/1*
*ISCJB **06** 11:17:24.6±2.7, 14°.72S±0°.05×168°.01E±0°.04, h28km±19km, mb4.9/62, MS4.2/22, Error ellipse: s-maj=8.0km s-min=7.2km az=15.0*
*AUST **06** 11:17:25.3±3.4, 14°.74S×168°.04E, h14km, Error ellipse: s-maj=1.3km s-min=0.9km az=44.0*
*MOS **06** 11:17:26.2±1.2, 14°.75S×167°.97E, h40km, mb5.1/30, MS4.1/6, Error ellipse: s-maj=10.7km s-min=9.0km az=15.7*
*GCMT **06** 11:17:27.2±0.3, 14°.74S×168°.08E, h19km±1km, MW5.0, Moment Tensor Solution. s31,c34; s56,c71; Moment tensor: Scale 10^16 Nm; Mrr2.45±.20; Mθθ0.09±.16; Mφφ-2.54±.14; Mrθ1.68±.36; Mrφ1.06±.10; Mθφ1.44±.26; Best double couple: M0 3.40000×10^16 NP1:φs135.00000°, δ43.00000°, λ43.00000°. NP2:φs11.00000°, δ62.00000°, λ124.00000°. Principal axes: T 3.8200, Plg58.0000°, Azm330.0000°; N -0.7500, Plg30.0000°, Azm173.0000°; P -3.0600, Plg10.0000°, Azm77.0000°; Data Used: II IU G IC CN.*
*NEIC **06** 11:17:28.6±1.0, 14°.76S×168°.03E, h48km±9km, mb4.9/27*

Error ellipse: s-maj=7.1km s-min=6.3km az=168.0
*BJI **06** 11:17:29.1, 14°.30S×168°.08E, h54km, mB5.0/24, mb5.0/38, Ms4.8/14, Ms7 4.3/17*
ISC 06 11:17:28.7±0.4**, 14°.82S**±0°.04×**168°.02E**±0°.05**, h50**km±2km**, h50**km**:pP-P, n186,** σ**1.28**/227**, mb4.9**/60**, MS4.2**/22**, 4C, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.37	191	eP	Pn	11 19 11.7	-2.1
DZM				eS	Sn	11 20 33.2	-3.0
DZM	Mont Dzumac	7.37	191	Pn	Pn	11 19 12.0	-1.8
DZM				Sn	Sn	11 20 35.1	-1.1
DZM	Mont Dzumac	7.37	191	Pn	Pn	11 19 12.0	-1.8
	5.6nm,0.3s,baz=47,slow=18,SNR=52						
DZM				Sn	Sn	11 20 35.1	-1.1
	3.1nm,0.3s,baz=319,slow=19,SNR=3.5						
BAYA	Yate Dam	7.38	188	eP	Pn	11 19 12.1	-1.8
HNR	Honiara	9.54	303	Pn	Pn	11 19 42.8	-0.7
HNR				eSn	Sn	11 21 27.1	-2.2
HNR				Sn	Sn	11 21 28.1	-1.1
HNR	Honiara	9.54	303	Pn	Pn	11 19 42.8	-0.7
	16nm,0.3s,baz=157,slow=7.3,SNR=19						
HNR				Sn	Sn	11 21 28.1	-1.1
	6.7nm,0.3s,baz=102,slow=19,SNR=3.0						
HNR				LR	LR	11 22 07.1	
	comp=Z,205nm,18.2s,baz=132,slow=30						
MSVF	Nonsavu	10.06	108	eP	Pn	11 19 51.7	+1.0
MSVF	Nonsavu	10.06	108	ePn	Pn	11 19 51.7	+1.0
LHI	Lord Howe Isla	18.54	205	S	S	11 25 41.2	+31
	baz=19,SNR=3.7						
EIDS	Eidsvold	19.04	234	eP	Pn	11 21 48.9	+0.9
	33nm,0.7s						
EIDS	Eidsvold	19.04	234	P	Pn	11 21 49.5	+1.5
	baz=19,SNR=22						
RAO	Raoul Island	19.37	140	LR	LR	11 27 47.6	
	comp=Z,220nm,20.3s,baz=104,slow=32						
AFI	Afiamalu	19.59	90	LR	LR	11 27 35.5	
	comp=Z,499nm,20.9s,baz=232,slow=32						
OUZ	Omahuta	20.93	167	eP	P	11 22 09.0	+1.8
	102nm,1.7s						
PMG	Port Moresby	21.09	282	eP	P	11 22 09.6	+0.5
	70nm,1.0s						
PMG	Port Moresby	21.09	282	P	P	11 22 09.2	+0.1
	77nm,1.1s,977nm						
PMG	Port Moresby	21.09	282	P	P	11 22 09.8	+0.7
	53nm,0.9s,baz=87,slow=6.5,SNR=10						
PMG				LR	LR	11 29 44.9	
	comp=Z,968nm,18.4s,baz=115,slow=35						
RMQ	Roma	21.41	234	P	P	11 22 14.7	+2.2
	baz=22,SNR=12						
CTA	Charters Tower	21.41	253	P	P	11 22 14.6	+2.0
CTA	Charters Tower	21.41	253	P	P	11 22 14.6	+2.0
	23nm,0.8s,baz=79,slow=12,SNR=56						
CTAO	Charters Tower	21.41	253	eP	P	11 22 13.7	+1.2
CTAO				pmax	pmax		
	comp=Z,27nm,0.7s						
CTAO	Charters Tower	21.41	253	eP	P	11 22 13.7	+1.2
	comp=Z,27nm,0.7s						
ARMA	Armidale	21.64	221	eP	P	11 22 16.3	+1.3
	comp=Z,38nm,1.2s						
ARMA	Armidale	21.64	221	P	P	11 22 18.0	+3.0
	baz=22,SNR=5.0						
MTSU	Mount Surprise	22.97	258	P	P	11 22 29.8	+0.6
	baz=23,SNR=29						
MGCD	Mangrove Creek	23.90	217	P	P	11 22 39.5	+1.7
	baz=24,SNR=6.0						
COEN	Coen	24.08	269	eP	P	11 22 40.2	+0.5
	comp=Z,547nm,1.9s						
COEN	Coen	24.08	269	P	P	11 22 40.7	+1.0
	baz=24,SNR=4.8						
URZ	Urewera	24.70	163	P	P	11 22 46.0	+0.9
URZ	Urewera	24.70	163	P	P	11 22 46.0	+0.9
	comp=Z,28nm,0.9s,baz=325,slow=5.3,SNR=6.5						
URZ				LR	LR	11 30 49.0	
	comp=Z,356nm,18.1s,baz=352,slow=33						
QLP	Quilpie	25.09	238	P	P	11 22 49.9	+1.0
	baz=25,SNR=18						
CMSA	Cobar Meteorol	26.34	227	P	P	11 23 00.7	+0.7
	baz=26,SNR=13						
CNB	Canberra Magne	26.41	216	P	P	11 23 02.0	+1.2
	baz=26,SNR=5.2						
QIS	Mount Isa	27.65	254	P	P	11 23 12.6	+0.6
	baz=28,SNR=5.8						
STKA	Stephens Creek	29.50	230	eP	P	11 23 29.3	+1.0
	comp=Z,6.9nm,0.8s						
STKA				PcP	PcP	11 26 32.4	-0.4
STKA	Stephens Creek	29.50	230	P	P	11 23 29.8	+1.5
	comp=Z,28nm,0.7s,baz=52,slow=7.4,SNR=39						
STKA				PcP	PcP	11 26 32.4	-0.4
	comp=Z,4.8nm,0.8s,baz=27,slow=3.5,SNR=4.6						
STKA				LR	LR	11 35 47.8	
	comp=Z,331nm,18.3s,baz=294,slow=37						
STKA	Stephens Creek	29.50	230	P	P	11 23 29.8	+1.5
	baz=30,SNR=9.1						
TOO	Toolangi	30.22	217	P	P	11 23 35.8	+1.1
	baz=30,SNR=5.2						
WRAB	Tennant Creek	32.50	256	eP	P	11 23 53.7	-1.2
WRAB				pmax	pmax		
	comp=Z,13nm,1.0s						
WRAB	Tennant Creek	32.50	256	eP	P	11 23 53.6	-1.2
	comp=Z,13nm,1.0s						
WRA	Warramunga Arr	32.51	256	P	P	11 23 53.7	-1.3
WRA	Warramunga Arr	32.51	256	P	P	11 23 53.7	-1.3
	comp=Z,12nm,0.9s,baz=86,slow=9.1,SNR=57						
WRA				LR	LR	11 36 35.8	
	comp=Z,784nm,18.7s,baz=85,slow=35						
AS31	Alice Springs	33.32	249	eP	P	11 24 01.7	-0.4
ASAR	Alice Springs	33.32	249	P	P	11 24 01.2	-0.9
ASAR				PcP	PcP	11 26 43.0	-0.4
ASAR				ScP	ScP	11 30 31.4	+7.6
ASAR	Alice Springs	33.32	249	P	P	11 24 01.2	-0.9
	comp=Z,38nm,0.8s,baz=79,slow=9.0,SNR=224						
ASAR				PcP	PcP	11 26 43.0	-0.4
	comp=Z,1.9nm,0.8s,baz=96,slow=2.8,SNR=4.4						
ASAR				ScP	ScP	11 30 31.4	+7.6
	comp=Z,0.5nm,0.9s,baz=62,slow=5.8,SNR=4.3						
ASAR				LR	LR	11 36 56.4	
	comp=Z,500nm,18.3s,baz=77,slow=35						
BBOO	Buckleboo	34.10	233	eP	P	11 24 09.7	+1.0
	comp=Z,455nm,0.8s						
BBOO	Buckleboo	34.10	233	P	P	11 24 09.7	+1.0
	baz=34,SNR=30						
KDU	Kakadu	34.57	269	P	P	11 24 12.9	-0.1
	baz=35,SNR=5.8						
MTN	Manton Dam	35.85	268	P	P	11 24 31.0	+7.0
	baz=36,SNR=3.4						
KNRA	Kununurra	37.85	263	P	P	11 24 40.4	-0.5
	baz=38,SNR=21						
SWI	Sorong	38.87	288	P	P	11 24 50.7	+1.1
	baz=39,SNR=3.6						
FORT	Forrest	39.88	240	eP	P	11 24 58.6	+0.8
	comp=Z,50nm,0.6s						
FORT	Forrest	39.88	240	P	P	11 24 58.4	+0.6
	baz=40,SNR=16						
FITZ	Fitzroy Crossi	40.72	259	LR	LR	11 41 56.5	
	comp=Z,571nm,18.0s,baz=24,slow=36						
FITZ	Fitzroy Crossi	40.72	259	P	P	11 25 04.9	+0.1
	baz=41,SNR=20						
PPT	Papeete	40.75	100	LR	LR	11 39 55.0	
	comp=Z,289nm,19.0s,baz=342,slow=33						
KMBL	Kambalda	45.18	240	P	P	11 25 40.9	0.0
	baz=45,SNR=8.9						
MEEK	Meekatharra	47.42	247	P	P	11 25 58.6	0.0
	baz=47,SNR=29						
KAPI	Kappang	48.44	276	eP	P	11 26 06.7	+0.1
KAPI				epP	pP	11 26 15.7	-4.4
KLBR	Kellerberrin	48.70	241	P	P	11 26 08.1	-0.3
	baz=49,SNR=11						
KIP	Kipapa	49.07	44c	eP	P	11 26 11.0	-0.2
KIP				pmax	pmax		
	comp=Z,107nm,1.7s						
NWAO	Narrogin (SRO)	49.33	239	eP	P	11 26 11.8	-1.4
	comp=Z,15nm,0.7s						
NWAO	Narrogin (SRO)	49.33	239	LR	LR	11 47 15.3	
	comp=Z,293nm,19.1s,baz=224,slow=36						
MORW	Morawa	49.89	244	P	P	11 26 17.5	0.0
	baz=50,SNR=7.7						
KKM	Kota Kinabalu	55.38	288	eP	P	11 26 59.0	+0.6
KKM	Kota Kinabalu	55.38	288	P	P	11 26 59.4	+1.1
	baz=55,SNR=7.7						
UGM	Wanagama	56.66	270	P	P	11 27 07.9	+0.4
	baz=57,SNR=3.2						
SBUM	Sibu	57.84	283	P	P	11 27 16.7	+1.0
MAJO	Matsushiro	58.32	332	eP	P	11 27 18.1	-0.6
MAJO	Matsushiro	58.32	332	eP	P	11 27 18.1	-0.6
MAT	Matsushiro	58.32	332	P	P	11 27 16.9	-1.7
KSM	Kuching	59.34	281	eP	P	11 27 25.9	-0.3
	comp=Z,36nm,1.2s						
KSM	Kuching	59.34	281	P	P	11 27 26.7	+0.6
KSM	Kuching	59.34	281	P	P	11 27 26.8	+0.6
	baz=59,SNR=13						
TPUB	Ta-pu	59.87	309	eP	P	11 27 28.8	-0.8
	comp=Z,35nm,1.3s						
YHNB	Yeheng	60.09	310	eP	P	11 27 30.5	-0.7
	comp=Z,44nm,1.0s						
VNDA	Vanda	62.80	182	P	P	11 27 48.6	+0.1
VNDA	Vanda	62.80	182	P	P	11 27 48.6	+0.1
	comp=Z,1.8nm,0.7s,baz=357,slow=8.1,SNR=9.5						
VNDA				LR	LR	11 51 56.4	
	comp=Z,128nm,20.2s,baz=0.4,slow=33						
SBA	Scott Base	63.05	180	eP	P	11 27 51.5	+1.2
SBA				pmax	pmax		
	comp=Z,34nm,1.4s						
SBA	Scott Base	63.05	180	eP	P	11 27 51.5	+1.2
	comp=Z,34nm,1.4s						
ASAJ	Asahikawa	63.07	340	eP	P	11 27 51.5	+0.7
	comp=Z,8.3nm,1.4s						
KSRS	Korea Array	64.22	325	P	P	11 27 58.8	+0.3
	comp=Z,2.7nm,0.8s,baz=139,slow=7.9,SNR=8.3						
KSRS				LR	LR	11 53 12.5	
	comp=Z,56nm,18.3s,baz=332,slow=34						
KSAR	Wonju Array Be	64.23	325	P	P	11 27 58.8	+0.2
YSS	Yuzh-Sakhalins	65.54	341	eP	P	11 28 08.0	+1.1
YSS				e		11 28 16.8	
NJ2	Nanjing	66.25	315	eP	P	11 28 12.2	+0.5
NJ2				pP	pP	11 28 25.9	0.0
NJ2				sP	sP	11 28 32.0	+0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USRK	Ussuriysk Arra	67.29	333	P	P	11 28 18.9	+0.8
	comp=Z,5.1nm,0.9s,baz=155,slow=6.3,SNR=15						
PETK	Petropavlovsk-	68.23	353	P	P	11 28 23.9	0.0
PETK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PETK	Petropavlovsk-	68.23	353	P	P	11 28 23.9	0.0
PETK	Petropavlovsk-	68.23	353	P	P	11 28 23.9	0.0
	comp=Z,2.6nm,0.9s,baz=144,slow=5.2,SNR=2.8						
PETK				LR	LR	11 55 34.8	
	comp=Z,37nm,18.2s,baz=308,slow=34						
MDJ	Mudanjiang	68.70	332	P	P	11 28 27.3	+0.3
MDJ				pP	pP	11 28 41.3	+0.1
MDJ				sP	sP	11 28 47.2	+0.3
MDJ				S	S	11 37 27.3	+0.9
MDJ				sS	sS	11 37 51.5	+1.3
MDJ				pmax	pmax		
	comp=Z,16nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,80nm,4.3s						
IPM	Ipoh	69.08	281	eP	P	11 28 30.4	+0.4
	comp=Z,22nm,1.0s						
HABR	Khabarovsk	69.49	337	eP	P	11 28 29.8	-2.0
HABR				e*SP	sP	11 28 44.0	-7.7
HABR				e		11 28 52.4	
HABR				e		11 31 03.5	
HABR				ePPP	PPP	11 32 44.9	
HABR				eS	S	11 37 36.1	+0.5
HABR				e		11 38 28.1	
HABR				eSS	SS	11 42 05.1	+0.8
HABR				pmax	pmax		
	comp=N,23nm,2.1s						
HABR				pmax	pmax		
	comp=Z,44nm,1.7s						
HABR				pmax	pmax		
	comp=E,42nm,2.1s						
HABR				MLR	MLR		
	comp=Z,45nm,20.0s						
CN2	Changchun	70.10	329	eP	P	11 28 36.0	+0.4
CN2				epP	pP	11 28 52.5	+2.6
CN2				eS	S	11 37 41.6	-1.3
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,14.0s						
CN2				LR	LR		
	comp=E,200nm,14.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
KLR	Kul'dur	71.38	336	eP	P	11 28 40.0	-3.3
KLR				pmax	pmax		
	comp=Z,50nm,1.6s						
GYA	Guiyang	72.36	304	eP	P	11 28 49.0	-0.9
GYA				pP	PcP	11 29 06.3	-1.3
GYA				sP	sP	11 29 13.1	+3.3
GYA				PP	PP	11 31 35.0	+3.5
GYA				S	S	11 38 09.3	-0.8
GYA				SKS	SKSac	11 38 45.7	-5.1
GYA				SS	SS	11 42 51.0	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=N,490nm,20.6s						
GYA				LR	LR		
	comp=E,320nm,19.1s						
GYA				LR	LR		
	comp=Z,430nm,20.0s						
BJI	Beijing	72.79	321	P	P	11 28 52.3	+0.4
BJI				pP	pP	11 29 05.6	-0.6
BJI				S	S	11 38 13.6	-0.5
BJI				pmax	pmax		
	comp=Z,18nm,1.3s						
BJI				pmax	pmax		
	comp=Z,120nm,5.1s						
BJI				LR	LR		
	comp=N,84nm,30.9s						
BJI				LR	LR		
	comp=E,86nm,20.6s						
BJI				LR	LR		
	comp=Z,100nm,26.4s						
KMI	Kunming	74.97	302	P	P	11 29 05.3	0.0
KMI				pmax	pmax		
	comp=Z,15nm,1.3s						
QSPA	South Pole Qui	75.21	180	eP	P	11 29 05.8	-0.1
	comp=Z,10nm,1.0s						
CMAR	Chiang Mai Arr	75.65	294	P	P	11 29 10.6	+1.5
CMAR	Chiang Mai Arr	75.65	294	P	P	11 29 10.6	+1.5
	comp=Z,5.0nm,0.6s,baz=128,slow=4.7,SNR=23						
CMAR				LR	LR	12 01 02.9	
	comp=Z,48nm,18.9s,baz=278,slow=35						
CHTO	Chiang Mai	75.78	294	eP	P	11 29 10.9	+1.1
CHTO				pmax	pmax		
	comp=Z,18nm,1.4s						
CHTO	Chiang Mai	75.78	294	eP	P	11 29 10.9	+1.1
	comp=Z,18nm,1.4s						
HHC	Hu-ho-hao-te	76.12	319	eP	P	11 29 14.1	+2.6
HHC				pP	pP	11 29 26.3	+0.4
HHC				sP	sP	11 29 32.3	+0.8
HHC				PP	PP	11 32 07.4	+4.3
HHC				S	S	11 38 54.8	+3.1
HHC				sS	SKSac	11 39 16.1	-2.3
HHC				pmax	pmax		
	comp=Z,33nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,5.9s						
HHC				LR	LR		
	comp=N,190nm,15.1s						
HHC				LR	LR		
	comp=E,160nm,16.4s						
HHC				LR	LR		
	comp=Z,260nm,17.7s						
CD2	Chengdu	76.64	307	eP	P	11 29 15.8	+1.3
CD2				pP	pP	11 29 30.5	+1.6
CD2				sP	sP	11 29 36.5	+1.9
CD2				PP	PP	11 32 10.2	+2.6
CD2				S	S	11 38 57.3	-0.3
CD2				sS	SKSac	11 39 22.3	-0.2
CD2				SS	SS	11 43 56.2	+1.9
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,100nm,4.8s						
CD2				LR	LR		
	comp=N,150nm,14.2s						
CD2				LR	LR		
	comp=Z,90nm,13.2s						
LZH	Lanzhou	78.92	312	eP	P	11 29 27.3	0.0
LZH				pP	pP	11 29 41.8	+0.1
LZH				sP	sP	11 29 47.5	+0.2
LZH				ePP	PP	11 32 28.6	+1.9
LZH				eS	S	11 39 21.1	-1.1
LZH				sS	ScS	11 39 44.8	-0.6
LZH				pmax	pmax		
	comp=Z,41nm,1.5s						
LZH				pmax	pmax		
	comp=Z,120nm,6.3s						
LZH				LR	LR		
	comp=N,280nm,16.0s						
LZH				LR	LR		
	comp=E,260nm,17.2s						
LZH				LR	LR		
	comp=Z,350nm,19.6s						
RSO	Redoubt South	81.34	18	eP	P	11 29 41.0	+1.2
	comp=Z,46nm,0.6s						
MAW	Mawson	82.08	202	P	P	11 29 43.6	+0.2
MAW	Mawson	82.08	202	P	P	11 29 43.6	+0.2
	comp=Z,1.4nm,0.6s,baz=98,slow=9.5,SNR=4.2						
YAK	Yakutsk	82.33	343	eP	P	11 29 43.3	-1.3
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.2s						
YAK				MLR	MLR		
	comp=Z,102nm,21.0s						
YAK				MLR	MLR		
	comp=N,89nm,20.0s						
YAK				MLR	MLR		
	comp=E,37nm,19.0s						
BILL	Bilibino	82.64	359⇑	eP	P	11 29 44.6	-1.6
BILL				e		11 32 55.5	
BILL				eS	S	11 39 58.1	-1.2
BILL				pmax	pmax		
	comp=Z,16nm,1.9s						
BILL	Bilibino	82.64	359	eP	P	11 29 45.5	-0.6
	comp=Z,2.5nm,0.9s						
ULN	Ulaanbaatar	82.64	324	eP	P	11 29 47.0	+0.2
	comp=Z,25nm,1.1s						
SONM	Songino Array	83.00	323	P	P	11 29 48.8	+0.1
SONM	Songino Array	83.00	323	P	P	11 29 48.8	+0.1
	comp=Z,7.7nm,0.9s,baz=137,slow=5.9,SNR=33						
GTA	Gaotai	83.25	314	P	P	11 29 51.0	+0.8
GTA				pP	pP	11 30 04.5	-0.3
GTA				sP	sP	11 30 09.3	-1.0
GTA				SKS	S	11 40 05.1	-2.0
GTA				S	SKSac	11 40 07.0	-1.4
GTA				sS	sS	11 40 28.3	-3.3
GTA				SS	SS	11 45 33.8	+0.6
GTA				pmax	pmax		
	comp=Z,22nm,1.2s						
GTA				pmax	pmax		
	comp=Z,130nm,5.2s						
GTA				LR	LR		
	comp=N,52nm,12.3s						
GTA				LR	LR		
	comp=E,43nm,11.6s						
GTA				LR	LR		
	comp=Z,66nm,13.1s						
SML	Sawmill	83.76	19	eP	P	11 29 52.7	+0.5
SML				pmax	pmax		
	comp=Z,2.0nm,0.3s						
SML	Sawmill	83.76	19	eP	P	11 29 52.6	+0.5
	comp=Z,1.8nm,0.3s						
TRF	Thorofare Moun	84.40	17	eP	P	11 29 53.3	-2.2
	comp=Z,9.7nm,1.1s						
YBH	Yreka Blue Hor	84.97	45	eP	P	11 29 59.4	+0.6
	comp=Z,23nm,2.1s						
CMB	Columbia Colle	85.11	49	eP	P	11 29 59.2	-0.4
CMB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CMB	Columbia Colle	85.11	49	eP	P	11 29 59.2	-0.4
	comp=Z,4.5nm,1.1s						
ZAK	Zakamensk	86.04	325	eP	P	11 30 03.2	-0.8
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MENT	Mentasta	86.07	20	eP	P	11 30 01.5	-2.3
ILAR	Eielson Array	86.38	18	P	P	11 30 03.5	-1.7
ILAR	Eielson Array	86.38	18	P	P	11 30 03.5	-1.7
	comp=Z,3.6nm,0.7s,baz=234,slow=5.6,SNR=34						
TLY	Talaya	86.47	326c	iP	P	11 30 05.4	-0.5
TLY				pmax	pmax		
	comp=Z,10.0nm,1.2s						
NVAR	Mina Array Bea	86.78	49	P	P	11 30 07.5	-0.5
NVAR	Mina Array Bea	86.78	49	P	P	11 30 07.5	-0.5
	comp=Z,1.7nm,0.9s,baz=233,slow=7.5,SNR=12						
TAPN	Taplejung	88.36	299	eP	P	11 30 15.8	-0.2
	comp=Z,24nm,0.8s						
ODAN	Odare	88.48	298	eP	P	11 30 16.5	0.0
	comp=Z,48nm,0.8s						
RAMN	Ramite	89.19	298	eP	P	11 30 19.9	+0.1
	comp=Z,11nm,0.5s						
GUN	Gumba	90.08	299	eP	P	11 30 22.9	-1.2
	comp=Z,45nm,1.2s						
CCUT	Cedar City	90.14	51	eP	P	11 30 23.7	-0.3
	comp=Z,9.0nm,1.4s						
TIXI	Tiksi	90.20	348c	eP	P	11 30 25.2	+2.1
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.5s						
PKI	Pulchoki	90.38	298	eP	P	11 30 25.1	-0.4
PKIN	Phulchoki	90.39	298	eP	P	11 30 24.8	-0.6
KKN	Kakani	90.55	298	eP	P	11 30 25.8	-0.3
TUC	Tucson	90.56	57	eP	P	11 30 26.9	+1.0
TUC				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TUC	Tucson	90.56	57	eP	P	11 30 26.9	+1.0
	comp=Z,4.1nm,1.3s						
DMN	Daman	90.65	298	eP	P	11 30 26.6	0.0
	comp=Z,47nm,1.0s						
KOLN	Koldanda	91.97	298	eP	P	11 30 32.0	-0.7
	comp=Z,3.6nm,0.4s						
DANN	Dangsing	92.00	299	eP	P	11 30 32.1	-0.8
WMQ	Urumqi	93.31	314	P	P	11 30 38.0	-0.3
WMQ				pP	pP	11 30 52.0	-1.0
WMQ				sP	sP	11 30 57.0	-1.6
WMQ				pmax	pmax		
	comp=Z,13nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.9s						
WMQ				LR	LR		
	comp=Z,87nm,21.0s						
SMCO	Snowmass	95.42	51	eP	P	11 30 48.4	-0.2
	comp=Z,70nm,0.6s						
TXAR	Lajitas Array	95.68	61	P	P	11 30 50.0	+0.5
TXAR	Lajitas Array	95.68	61	P	P	11 30 50.0	+0.5
	comp=Z,0.5nm,0.6s,baz=224,slow=5.1,SNR=11						
YKA	Yellowknife Ar	97.29	27	P	P	11 30 54.6	-1.3
YKA	Yellowknife Ar	97.29	27	P	P	11 30 54.6	-1.3
	comp=Z,2.8nm,0.9s,baz=254,slow=4.6,SNR=29						
MK31	Makanchi Array	97.77	316	eP	Pdif	11 30 58.6	0.0
MK31	Makanchi Array	97.77	316	eP	Pdif	11 30 58.6	0.0
MKAR	Makanchi Array	97.77	316	P	Pdif	11 30 58.7	+0.1
MKAR				pmax	pmax		
	comp=Z,11nm,0.8s						
MKAR	Makanchi Array	97.77	316	P	Pdif	11 30 58.7	+0.1
MKAR	Makanchi Array	97.77	316	P	Pdif	11 30 58.7	+0.1
	comp=Z,11nm,0.8s,baz=93,slow=6.4,SNR=90						
ZALV	Zalesovo Beam	97.89	324	P	P	11 30 57.9	-0.9
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZALV	Zalesovo Beam	97.89	324	P	P	11 30 57.9	-0.9
ZALV	Zalesovo Beam	97.89	324	P	P	11 30 57.9	-0.9
	comp=Z,2.9nm,0.7s,baz=116,slow=4.0,SNR=16						
TMCR	Tamitsa	120.05	337	ePKIKP	PKPdf	11 36 23.4	+10
TMCR				pmax	pmax		
	comp=Z,22nm,0.6s						
ARCES	ARCESS Array B	120.52	346	PKP	PKPdf	11 36 13.7	-0.5
ARCES	ARCESS Array B	120.52	346	PKP	PKPdf	11 36 13.7	-0.5
	comp=Z,1.7nm,0.5s,baz=90,slow=2.4,SNR=19						
BOSA	Boshof	123.78	220	PKP	PKPdf	11 36 21.0	-0.9
BOSA	Boshof	123.78	220	PKP	PKPdf	11 36 21.0	-0.9
	comp=Z,2.5nm,0.9s,baz=70,slow=12,SNR=3.3						
AKASG	Malin Array Be	131.21	326	PKIKP	PKPdf	11 36 35.1	0.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	Malin Array Be	131.21	326	PKP	PKPdf	11 36 35.1	0.0
AKASG	Malin Array Be	131.21	326	PKP	PKPdf	11 36 35.1	0.0
	comp=Z,0.6nm,0.4s,baz=57,slow=3.9,SNR=8.4						
BRTR	Keskin Array B	133.12	311	PKP	PKPdf	11 36 38.9	-0.4
BRTR	Keskin Array B	133.12	311	PKP	PKPdf	11 36 38.9	-0.4
	comp=Z,1.2nm,0.8s,baz=90,slow=3.0,SNR=6.5						
KOLS	Kolonicke sedl	135.91	328	ePKIKP	PKPdf	11 36 45.3	+1.3
KOLS	Kolonicke sedl	135.91	328	ePKP	PKPdf	11 36 45.3	+1.3
CRVS	Cervenica-Dubn	136.34	328	ePKIKP	PKPdf	11 36 44.9	+0.1
CRVS	Cervenica-Dubn	136.34	328	ePKP	PKPdf	11 36 44.9	+0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
VYHS	Vyhne	137.93	329	ePKIKP	PKPdf	11 36 54.3	+6.5
VYHS	Vyhne	137.93	329	ePKP	PKPdf	11 36 54.3	+6.5
KHC	Kasperske Hory	139.88	334	ePKIKP	PKPdf	11 36 54.0	+2.6
KHC				e		11 37 06.9	
KHC	Kasperske Hory	139.88	334	ePKPdf	PKPdf	11 36 54.0	+2.6
KHC				epPKP	pPKPdf	11 37 06.9	+0.3
GERES	GERESS Array B	140.05	334	PKP	PKPdf	11 36 52.8	+1.0
GERES	GERESS Array B	140.05	334	PKP	PKPdf	11 36 52.8	+1.0
	comp=Z,0.2nm,0.2s,baz=104,slow=2.8,SNR=4.2						
TIP	Timpagrande	144.99	319	ePKPdf	PKPdf	11 37 00.7	-0.1
BNI	Bardonecchia	145.97	336	ePKP2	PKPbc	11 37 03.1	-0.1
BNI	Bardonecchia	145.97	336	ePKPdf	PKPbc	11 37 03.1	-0.1
CEL	Celeste	146.07	319	ePKPbc	PKPab	11 37 03.9	-0.3
KEST	Kesra	151.74	321	ePKPbc	PKPbc	11 37 18.9	+0.7
KEST				ePKPab	PKPab	11 37 27.2	+0.1
KEST	Kesra	151.74	321	PKPbc	PKPbc	11 37 19.1	+0.8
	comp=Z,8.1nm,1.0s,baz=12,slow=1.6,SNR=12						
ESDC	Sonseca Array	154.25	346	PKPab	PKPab	11 37 38.1	+0.5
ESDC	Sonseca Array	154.25	346	PKPab	PKPab	11 37 38.1	+0.5
	comp=Z,0.9nm,0.7s,baz=3.3,slow=3.1,SNR=4.6						
TORD	Torodi Ar. Bea	166.63	265	PKP	PKPdf	11 37 29.4	-0.1
TORD				PKPab	PKPab	11 38 32.0	-0.2
TORD	Torodi Ar. Bea	166.63	265	PKP	PKPdf	11 37 29.4	-0.1
	comp=Z,2.0nm,1.0s,baz=353,slow=2.3,SNR=7.5						
TORD				PKPab	PKPab	11 38 32.0	-0.2
	comp=Z,3.8nm,0.9s,baz=105,slow=4.2,SNR=12						

*ISCJB **06** 11:24:23.0±0.7, 40°.43N±0°.04×21°.90E±0°.07, h6km±12km, Error ellipse: s-maj=8.7km s-min=6.2km az=173.7*
*ATH **06** 11:24:23.2, 40°.43N×21°.86E, h5km±4km, MD3.2/6*
*THE **06** 11:24:23.5, 40°.42N×21°.89E, h8km±3km, ML1.9/3, Error ellipse: s-maj=3.0km s-min=0.6km az=206.0*
*CSEM **06** 11:24:23.2±0.1, 40°.42N×21°.90E, h2km, MD3.2, Error ellipse: s-maj=3.0km s-min=2.6km az=141.0*
ISC 06 11:24:23.1±1.0, **40°.42N**±0°.03×**21°.88E**±0°.04, **h8**km±10km, **n21**, σ**0.65**/28, **Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KZN	Kozani	0.14	217	P	Pg	11 24 26.1	-0.2
KZN				S	Sg	11 24 29.0	+0.6
KZN	Kozani	0.14	217	ePG	Pg	11 24 26.0	-0.2
KZN				eSG	Sg	11 24 28.6	+0.2
KZN	Kozani	0.14	217	ePg	Pg	11 24 26.0	-0.2
KZN				eSg	Sg	11 24 28.6	+0.2
KZN				S		11 24 29.0	
FNA	Florina	0.53	314	P	Pg	11 24 33.3	-0.1
FNA				S	Sg	11 24 41.5	+1.1
FNA	Florina	0.53	314	ePB	Pg	11 24 33.3	-0.1
FNA	Florina	0.53	314	P	Pg	11 24 33.3	-0.1
FNA				S	Sg	11 24 41.5	+1.1
NEST	Nestorio	0.64	270	P	Pg	11 24 35.4	0.0
NEST				S	Sg	11 24 45.0	+1.2
NEST	Nestorio	0.64	270	P	Pg	11 24 35.4	0.0
NEST				S	Sg	11 24 45.0	+1.2
GRG	Griva	0.67	36	P	Pg	11 24 36.2	+0.2
GRG	Griva	0.67	36	ePB	Pg	11 24 36.4	+0.4
GRG	Griva	0.67	36	P	Pg	11 24 36.2	+0.2
THL	Klokotos Trika	0.86	173	P	Pg	11 24 39.8	+0.1
THL	Klokotos Trika	0.86	173	ePG	Pg	11 24 39.7	+0.1
THL	Klokotos Trika	0.86	173	P	Pg	11 24 39.8	+0.1
VAY	Valandovo	1.04	30	ePn	Pb	11 24 41.7	-1.7
KNT	Kendrikon	1.07	46	P	Pb	11 24 43.5	-0.4
KNT	Kendrikon	1.07	46	P	Pb	11 24 43.5	-0.4
PLG	Polygyros	1.20	92	ePB	Pn	11 24 46.0	-0.1
PLG	Polygyros	1.20	92	ePb	Pn	11 24 46.0	-0.1
AGG	Agios Georgios	1.44	166	ePB	Pg	11 24 51.2	+0.5
AGG	Agios Georgios	1.44	166	ePb	Pg	11 24 51.2	+0.5

*DDA **06** 11:25:16.6, 39°.10N×41°.96E, h16km, MD3.5*
*CSEM **06** 11:25:16.6, 39°.10N×41°.96E, h16km, MD3.5, After DDA*
ISC 06 11:25:16.8±1.0, **39°.14N**±0°.03×**42°.00E**±0°.03, **h17**km±9km, **n19**, σ**1.57**/34, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TATV	Tatvan	0.67	162	i P	Pg	11 25 28.6	-1.4
TATV				i S	Sb	11 25 40.1	+0.8
TATV	Tatvan	0.67	162	i P	Pg	11 25 28.6	-1.4
TATV				i S	Sb	11 25 40.1	+0.8
TUTA	Tutak	0.68	68	i P	Pg	11 25 29.7	-0.7
TUTA				i S	Sn	11 25 41.9	-0.5
TUTA	Tutak	0.68	68	i P	Pg	11 25 29.7	-0.7
TUTA				i S	Sn	11 25 41.9	-0.5
BNGL	BINGOL	0.69	254	i P	Pg	11 25 28.5	-1.9
BNGL				i S	Sg	11 25 39.1	-0.4
HOMI	Horasan	0.90	356	i P	Pb	11 25 35.2	+0.9
ERZM	Erzurum	0.90	327	i P	Pb	11 25 34.3	0.0
ERZM				i S	Sb	11 25 44.7	-1.5
ERZM	Erzurum	0.90	327	i P	Pb	11 25 34.3	0.0
ERZM				i S	Sb	11 25 44.7	-1.5
GEVA	Gevas	1.17	135	i P	Pn	11 25 37.1	-1.6
GEVA				i S	Sg	11 25 55.7	+0.8
GEVA	Gevas	1.17	135	i P	Pn	11 25 37.1	-1.6
GEVA				i S	Sg	11 25 55.7	+0.8
BEST	Besiri	1.38	205	i P	Pn	11 25 41.8	+0.4
BEST				i S	Sg	11 26 01.2	-0.1
KOPT	Kop Dagi	1.45	307	eP	Pb	11 25 44.8	+1.2
KOPT				i S	Sg	11 26 06.7	+2.9
KOPT	Kop Dagi	1.45	307	eP	Pb	11 25 44.8	+1.2
KOPT				i S	Sg	11 26 06.7	+2.9
MARD	Mardin	2.06	208	i P	Pn	11 25 51.6	+0.7
MARD				i S	Sg	11 26 22.0	-1.3
HAKT	HAKKARI	2.08	139	i P	Pb	11 25 55.2	+0.9
HAKT	HAKKARI	2.08	139	i P	Pb	11 25 55.2	+0.9
KELT	Kelkit	2.34	296	i P	Pb	11 26 00.6	+1.8
KELT	Kelkit	2.34	296	i P	Pb	11 26 00.6	+1.8
BHD	Baghdad	6.17	161	ePn	Pn	11 26 46.0	-1.2
BHD				ePg	Pg	11 27 10.0	-5.0
BHD				eSn	Sn	11 27 57.3	-0.1
BHD				eSg	Sg	11 28 39.3	+4.5

*DDA **06** 11:47:03.0, 39°.10N×29°.07E, h7km, MD2.9*
*ISK **06** 11:47:02.5, 39°.08N×29°.16E, h6km, MD2.9*
*ISCJB **06** 11:47:03.0±0.5, 39°.10N±0°.03×29°.10E±0°.03, h4km±6km, Error ellipse: s-maj=5.3km s-min=3.7km az=151.3*
*CSEM **06** 11:47:03.2±0.1, 39°.09N×29°.11E, h5km, MD2.9, Error ellipse: s-maj=3.0km s-min=2.7km az=134.0*
ISC 06 11:47:02.8±1.0, **39°.10N**±0°.02×**29°.12E**±0°.02, **h9**km±11km, **n48**, σ**0.73**/64, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GDZ	Gediz	0.28	91	i P	Pb	11 47 09.7	-0.4
GDZ				i S	Sb	11 47 14.5	-0.5
GDZ	Gediz	0.28	91	i P	Pb	11 47 09.7	-0.4
GDZ				i S	Sb	11 47 14.5	-0.5
DEMI	Demirci	0.32	261	i P	Pg	11 47 09.3	+0.1
DEMI				i S	Sg	11 47 13.5	0.0
DEMI	Demirci	0.32	261	i P	Pg	11 47 09.3	+0.1
DEMI				i S	Sg	11 47 13.5	0.0
TVSB	Tavsanli	0.44	37	ePG	Pg	11 47 11.6	+0.2
TVSB				eSG	Sg	11 47 17.6	+0.3
TVSB	Tavsanli	0.44	37	ePg	Pg	11 47 11.6	+0.2
TVSB				eSg	Sg	11 47 17.6	+0.3
KULA	Kula-Manisa	0.68	212	ePG	Pb	11 47 16.3	-0.7
KULA				eSG	Sg	11 47 25.2	+0.3
KULA	Kula-Manisa	0.68	212	ePg	Pb	11 47 16.3	-0.7
KULA				eSg	Sg	11 47 25.2	+0.3
DURS	Dursunbey	0.71	315	i P	Pg	11 47 15.8	-0.8
DURS	Dursunbey	0.71	315	i P	Pg	11 47 15.8	-0.8
MANT	Manisa	0.75	216	i P	Pb	11 47 17.6	-0.6
MANT				i S	Sg	11 47 27.1	+0.1
MANT	Manisa	0.75	216	i P	Pb	11 47 17.6	-0.6
MANT				i S	Sg	11 47 27.1	+0.1
KHAL	Karahalli	0.78	158	i P	Pb	11 47 19.1	+0.5
KHAL				i S	Sb	11 47 29.2	-0.2
KHAL	Karahalli	0.78	158	i P	Pb	11 47 19.1	+0.5
KHAL				i S	Sb	11 47 29.2	-0.2
AKHS	Akhisar	1.04	258	i P	Pg	11 47 22.5	-0.3
AKHS				i S	Sb	11 47 37.5	+0.6
AKHS	Akhisar	1.04	258	i P	Pg	11 47 22.5	-0.3
AKHS				i S	Sb	11 47 37.5	+0.6
BALB	Balikesir	1.11	300	ePN	Pn	11 47 24.8	+0.3
BALB	Balikesir	1.11	300	ePn	Pn	11 47 24.8	+0.3
CAVI	Cavuskoy	1.24	26	ePN	Pg	11 47 26.6	0.0
CAVI	Cavuskoy	1.24	26	ePn	Pg	11 47 26.6	0.0
SHUT	Suhut-Afyon	1.24	115	ePN	Pn	11 47 25.8	-0.7
SHUT	Suhut-Afyon	1.24	115	ePn	Pn	11 47 25.8	-0.7
MDNY	Mudanya-Bursa	1.28	352	ePN	Pg	11 47 27.9	+0.4
MDNY	Mudanya-Bursa	1.28	352	ePn	Pg	11 47 27.9	+0.4
BALY	Balya	1.33	299	i P	Pb	11 47 27.9	-0.1
BALY				i S	Sb	11 47 44.1	-1.1
BALY	Balya	1.33	299	i P	Pb	11 47 27.9	-0.1
BALY				i S	Sb	11 47 44.1	-1.1
ADVT	Abdulvahap	1.42	19	ePN	Pg	11 47 29.7	-0.3
ADVT	Abdulvahap	1.42	19	ePn	Pg	11 47 29.7	-0.3
GONE	Gonen-Balikesi	1.46	311	ePN	Pg	11 47 30.5	-0.4
GONE	Gonen-Balikesi	1.46	311	ePn	Pg	11 47 30.5	-0.4
ARMT	Armutlu	1.48	352	ePN	Pg	11 47 30.8	-0.4
ARMT	Armutlu	1.48	352	ePn	Pg	11 47 30.8	-0.4
GULT	Gulveren	1.71	38	ePN	Pb	11 47 33.9	-0.6
GULT	Gulveren	1.71	38	ePn	Pb	11 47 33.9	-0.6
SVRH	Sivrihisar-ESK	1.90	79	ePN	Pn	11 47 36.0	+0.5
SVRH	Sivrihisar-ESK	1.90	79	ePn	Pn	11 47 36.0	+0.5
MRMT	Marmara Adasi	1.91	323	ePN	Pb	11 47 37.0	-0.9
MRMT	Marmara Adasi	1.91	323	ePn	Pb	11 47 37.0	-0.9
KRBG	Karabiga-Canak	1.91	313	ePN	Pb	11 47 36.7	-1.2
KRBG	Karabiga-Canak	1.91	313	ePn	Pb	11 47 36.7	-1.2
KLYT	Kilyos	2.16	358	ePN	Pn	11 47 40.3	+1.4
KLYT	Kilyos	2.16	358	ePn	Pn	11 47 40.3	+1.4
RKY	Sarkoy-Tekirda	2.18	317	ePN	Pn	11 47 40.8	+1.4
RKY	Sarkoy-Tekirda	2.18	317	ePn	Pn	11 47 40.8	+1.4
CTKS	Kestanelik-??a	2.19	348	ePN	Pn	11 47 40.7	+1.3
CTKS	Kestanelik-??a	2.19	348	ePn	Pn	11 47 40.7	+1.3
GELI	Tayfur-Gelibol	2.42	303	ePN	Pn	11 47 44.2	+1.6
GELI	Tayfur-Gelibol	2.42	303	ePn	Pn	11 47 44.2	+1.6

*IDC **06** 11:53:41.7±1.1, 16°.17N×86°.97W, h0km, mb3.9/15, mb1 4.2/17, mb1mx4.1/28, mbtmp4.0/17, ML4.1/2, MS3.6/6, Ms1 3.6/6, ms1mx3.3/33, Error ellipse: s-maj=29.8km s-min=20.8km az=49.0*
*NEIC **06** 11:53:45.6±0.5, 16°.36N×87°.07W, h10km, mb4.5/26, Error ellipse: s-maj=11.5km s-min=7.9km az=63.0*
NEIC Felt [III] at Utila and [II] at La Ceiba, Roatan and San Pedro Sula. Also felt at Cerro Grande, French Harbor and Tocoa. Felt at Belize City and Dangriga, Belize.
*ISCJB **06** 11:53:47.8±0.4, 16°.51N±0°.03×86°.99W±0°.07, h33km, mb4.2/37, MS3.9/6, Error ellipse: s-maj=9.1km s-min=3.6km az=6.3*
*CASC **06** 11:53:47.1±2.2, 16°.46N×86°.68W, h36km±999km, MD4.4, mb4.5(NEIC)*
ISC 06 11:53:47.3±0.5, **16°.53N**±0°.04×**86°.95W**±0°.07, **h22**km, **n240**, σ**1.37**/235, **mb4.3**/37, **MS3.6**/6, **35C-31D**, **North of Honduras**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	2.48	187	eP	Pn	11 54 24.4	-2.0
TGUH				eS	Sn	11 54 53.6	-2.4
TGUH	Tegucigalpa,Un	2.48	187	ePn	Pn	11 54 23.9	-2.5
MRL	Marmol	3.02	241	eP	Pn	11 54 26.2	-7.7
VSM	San Miguel	3.34	203	eP	Pn	11 54 38.2	-0.3
VSM				eS	Sn	11 55 18.7	+1.0
CNCH	Conchagua	3.35	195	eP	Pn	11 54 38.4	-0.1
SNVI	San Vicente	3.43	212	eP	Pn	11 54 40.9	+1.2
LBRS	Las Brisas	3.44	216	eP	Pn	11 54 40.1	+0.5
LFRS	El Faro	3.54	216	eP	Pn	11 54 40.0	-1.1
SNET	Serv Nac Est T	3.59	218	eP	Pn	11 54 41.8	+0.1
SNET				eS	Sn	11 55 25.0	+1.5
NBG	Las Nubes	3.80	240	eP	Pn	11 54 37.9	-7.0
NBG				eS	Sb	11 55 45.7	+6.0
TEIG	Tepich	3.88	341	Pn	Pn	11 54 45.5	-0.2
TEIG				Sn	Sn	11 55 29.7	-1.1
TEIG	Tepich	3.88	341	Pn	Pn	11 54 45.5	-0.2
	22nm,0.3s,baz=14,slow=1.6,SNR=64						
TEIG				Sn	Sn	11 55 29.7	-1.1
	52nm,0.3s,baz=73,slow=19,SNR=10.0						
FUG	Fuego 3	4.29	242	eP	Pn	11 54 44.1	-7.4
FUG				eS	Sb	11 55 56.1	+2.6
HKT	Hockley	15.64	330	ePn	Pn	11 57 27.6	+1.2
	23nm,0.9s						
HKT				eSn	Sn	12 00 13.3	-5.9
ROSC	El Rosal	16.96	132	ePn	P	11 57 46.0	+0.4
ROSC	El Rosal	16.96	132	LR	LR	12 05 09.3	
	comp=Z,187nm,18.3s,baz=193,slow=41						
632A	Uvalde	17.48	320	P	Pn	11 57 45.5	-4.4
	baz=18,SNR=15						
631A	Perdido Creek	17.92	318	⇓P	Pn	11 57 52.0	-3.2
	baz=18,SNR=12						
OXF	Oxford	18.04	353	eP	P	11 58 00.5	+3.5
	35nm,0.9s						
WHTX	Lake Whitney	18.11	330	⇓P	P	11 57 59.8	+2.1
	baz=18,SNR=20						
JCT	Junction City	18.19	322	eP	Pn	11 57 58.8	+0.2
	16nm,0.8s						
JCT				eSn	Sn	12 01 13.4	-7.7
JCT	Junction City	18.19	322	P	P	11 57 59.0	+0.3
	baz=18						
531A	Rocksprings	18.41	320	P	P	11 57 58.6	-2.6
	baz=18,SNR=11						
432A	Menard	18.47	323	P	Pn	11 58 02.5	+0.5
	baz=19,SNR=5.6						
UALR	University of	18.80	346	P	Pn	11 58 08.3	+2.4
	15nm,0.7s						
431A	Sonora	18.82	321	P	P	11 58 03.6	-2.1
	baz=19,SNR=14						
332A	Millersview	18.82	324	⇑P	P	11 58 06.1	+0.4
	baz=19,SNR=6.9						
530A	J-C Ranch, Com	18.90	318	⇓P	P	11 58 06.2	-0.4
	baz=19,SNR=24						
232A	Coleman	19.15	325	P	P	11 58 08.3	-1.0
	baz=19,SNR=9.1						
331A	San Angelo	19.16	323	P	Pn	11 58 10.7	+0.4
	baz=19						
KMSC	Kings Mountain	19.20	14	P	Pn	11 58 12.2	+1.5
	baz=20						
TKL	Tuckaleechee C	19.26	8	P	P	11 58 11.7	+1.3
TKL	Tuckaleechee C	19.26	8	P	P	11 58 11.7	+1.3
	0.3nm,0.3s,baz=192,slow=13,SNR=4.6						
430A	Baggett Ranch,	19.27	320	P	P	11 58 10.1	-0.6
	baz=19,SNR=10						
529A	Stev Forest Ra	19.46	317	⇑P	P	11 58 12.4	-0.2
	baz=20,SNR=8.1						
628A	Black Gap, Mar	19.50	314	P	P	11 58 13.1	-0.1
	baz=20,SNR=14						
WVT	Waverly	19.54	358	eP	Pn	11 58 16.4	+1.6
	9.0nm,1.0s						
231A	Bronte	19.56	324	P	P	11 58 13.7	-0.1
	baz=20,SNR=5.3						
429A	Davenport Ranc	19.58	318	P	P	11 58 13.9	0.0
	baz=20,SNR=28						
330A	Mertzon	19.67	321	P	P	11 58 15.2	+0.1
	baz=20,SNR=12						
ABTX	Abilene, Hawle	19.72	327	⇑P	Pn	11 58 16.9	-0.1
	baz=20,SNR=5.5						
627A	Terlingua Ranc	19.83	313	P	P	11 58 17.5	+0.7
	baz=20,SNR=19						
528A	Cox Ranch, San	19.86	316	P	P	11 58 16.6	-0.5
	baz=20,SNR=6.7						
TXAR	Lajitas Array	19.95	313	P	P	11 58 18.2	0.0
TXAR				S	S	12 01 47.1	-15
TXAR	Lajitas Array	19.95	313	P	P	11 58 18.2	0.0
	2.8nm,0.6s,baz=129,slow=12,SNR=62						
TXAR				S	S	12 01 47.1	-15
	0.8nm,0.9s,baz=127,slow=18,SNR=4.3						
TXAR				LR	LR	12 07 22.2	
	comp=Z,114nm,18.4s,baz=195,slow=41						
230A	Sterling City	19.98	322	P	P	11 58 18.9	+0.5
	baz=20						
428A	Kincaid Ranch,	20.15	317	P	P	11 58 20.8	+0.5
	baz=20						
Z32A	Haskell	20.17	328	P	Pn	11 58 21.9	-0.4
	baz=20,SNR=11						
329A	Wagon Wheel Ra	20.22	320	P	P	11 58 20.8	-0.2
	baz=20						
527A	Woodward Ranch	20.40	315	P	P	11 58 23.1	0.0
	baz=20,SNR=12						
626A	Big Bend Ranch	20.41	312	P	P	11 58 23.6	+0.5
	baz=20,SNR=27						
Z31A	Sharp Cattle R	20.52	327	P	P	11 58 25.1	+0.8
	baz=21,SNR=5.9						
328A	Wristen Ranch,	20.66	319	P	P	11 58 25.7	-0.2
	baz=21						
526A	Mary Lane Ranc	20.68	314	P	P	11 58 26.1	0.0
	baz=21,SNR=11						
427A	Hayter Ranch,	20.70	316	P	P	11 58 25.8	-0.5
	baz=21,SNR=6.3						
Y32A	R-V Farms, Ver	20.71	329	P	P	11 58 26.9	+0.6
	baz=21						
WMOK	Wichita Mounta	21.00	332	eP	P	11 58 30.8	+1.3
	19nm,1.0s						
WMOK				eS	S	12 02 14.1	-8.3
426A	McDonald Obser	21.01	315	P	P	11 58 29.5	-0.2
	baz=21,SNR=9.7						
128A	Castleberry Fa	21.32	322	P	P	11 58 32.6	-0.3
	baz=21,SNR=8.0						
Z29A	Hungry Hill Ra	21.33	324	⇓P	P	11 58 32.7	-0.3
	baz=21,SNR=5.1						
USIN	University of	21.36	358	eP	P	11 58 34.8	+1.6
	15nm,0.4s						
227A	Bennet, Jal	21.39	319	⇓P	P	11 58 33.4	-0.3
	baz=22,SNR=7.2						
X31A	McDonald Ranch	21.48	329	P	P	11 58 35.4	+0.9
	baz=22						
WCI	Wyandotte Cave	21.62	1	eP	P	11 58 37.7	+1.7
	45nm,0.9s						
425A	Indio Mountain	21.73	314	P	P	11 58 37.2	-0.2
	baz=22,SNR=9.8						
Z28A	Tucker Farm, M	21.73	323	P	P	11 58 37.0	-0.4
	baz=22						
127A	Arkansas Junct	21.88	320	P	P	11 58 38.6	-0.3
	baz=22						
226B	Tecolote Peak,	21.99	318	⇓P	P	11 58 41.0	+0.9
	baz=22,SNR=6.5						
325A	Bean Ranch, Si	22.08	315	P	P	11 58 40.2	-0.9
	baz=22,SNR=11						
Y28A	McKinney Farm,	22.11	324	P	P	11 58 41.6	+0.2
	baz=22						
OLIL	Olney	22.14	358	eP	P	11 58 43.8	+2.2
GDL2	Guadalupe Moun	22.20	318	eP	P	11 58 42.8	+0.4
	6.1nm,0.7s						
X29A	Tulia	22.21	326	P	P	11 58 41.5	-1.0
	baz=22						
Z27A	Tatum	22.24	322	P	P	11 58 42.0	-0.8
	baz=22,SNR=7.9						
V31A	Spring Creek L	22.34	331	⇑P	P	11 58 45.8	+2.0
	baz=22,SNR=6.8						
324A	Moseley Ranch,	22.47	315	P	P	11 58 45.0	-0.3
	baz=22						
AMTX	Amarillo	22.54	327	eP	P	11 58 45.9	-0.1
	16nm,0.8s						
MNTX	Cornudas Mount	22.55	315	eP	P	11 58 45.2	-0.9
	11nm,1.0s						
BLO	Bloomington	22.56	1	eP	P	11 58 47.6	+1.5
	34nm,1.2s						
Y27A	Causey	22.61	323	P	P	11 58 46.3	-0.5
	baz=23						
Z26A	Caprock	22.67	320	⇓P	P	11 58 48.0	+0.6
	baz=23,SNR=5.5						
125A	Gardner Draw,	22.68	318	⇑P	P	11 58 47.3	-0.3
	baz=23,SNR=11						
224A	Cornudas Mount	22.88	316	⇑P	P	11 58 50.4	+0.7
	baz=23,SNR=6.2						
Z25A	Roswell	23.13	319	⇓P	P	11 58 52.4	+0.2
	baz=23,SNR=5.7						
124A	Stringfield Ra	23.23	317	⇑P	P	11 58 54.3	+1.0
	baz=23,SNR=12						
U30A	WK&E Inc. Balk	23.34	331	⇑P	P	11 58 56.1	+1.9
	baz=24,SNR=5.2						
W27A	Bowe Ranch, En	23.41	325	P	P	11 58 56.0	+1.0
	baz=24						
X26A	CR and CF Fran	23.46	323	P	P	11 58 55.7	+0.2
	baz=24						
Y25A	Mesa, Roswell	23.55	321	P	P	11 58 57.5	+1.1
	baz=24						
Z24A	Sheeppen Canyo	23.57	319	⇓P	P	11 58 56.8	+0.1
	baz=24,SNR=6.3						
ACSO	Alum Creek Sta	23.86	8	eP	P	11 59 01.3	+2.1
Y24A	Capitan	24.01	320	P	P	11 59 01.3	+0.5
	baz=24,SNR=22						
T29A	Hugoton	24.15	331	⇓P	P	11 59 03.3	+1.4
	baz=24,SNR=5.7						
S30A	Montezuma	24.17	333	P	P	11 59 03.0	+0.8
	baz=24						
W25A	X Bar L Ranch,	24.31	323	P	P	11 59 04.1	+0.5
	baz=24,SNR=6.6						
U27A	Thompson Grove	24.31	328	P	P	11 59 04.4	+0.8
	baz=24						
R31A	Burdett	24.33	335	P	P	11 59 05.0	+1.4
	baz=24						
V26A	Tequesquite Ra	24.35	325	⇓P	P	11 59 04.9	+0.9
	baz=24,SNR=9.8						
Y23A	Lovelace Mesa,	24.40	319	⇓P	P	11 59 05.9	+1.5
	baz=24,SNR=6.5						
X24A	Lazy VL Ranch,	24.43	321	P	P	11 59 05.8	+1.1
	baz=24						
320A	Kipp Ranch, An	24.55	311	⇑P	P	11 59 05.8	-0.1
	baz=25,SNR=6.6						
Z22A	Elephant Butte	24.56	316	P	P	11 59 06.2	+0.3
	baz=25,SNR=12						
R30A	Dighton	24.63	334	⇑P	P	11 59 07.6	+1.2
	baz=25,SNR=7.0						
121A	Cookes Peak, D	24.69	314	⇑P	P	11 59 08.2	+1.1
	baz=25,SNR=12						
T27A	Campo	24.76	329	P	P	11 59 08.7	+1.1
	baz=25						
U26A	Atchley Ranch,	24.77	326	⇓P	P	11 59 08.4	+0.6
	baz=25,SNR=8.4						
V25A	Rancho No Teng	24.84	324	P	P	11 59 09.3	+0.8
	baz=25						
220A	Playas Peak, P	24.86	312	⇓P	P	11 59 08.8	+0.3
	baz=25,SNR=11						
W24A	Lazy 6 Ranch,	24.86	322	P	P	11 59 09.9	+1.3
	baz=25,SNR=11						
BNM	Barren Site	24.90	318	eP	P	11 59 10.0	+0.9
Y22A	Socorro	24.98	318	⇑P	P	11 59 10.7	+0.9
	baz=25,SNR=8.5						
Z21A	St. Cloud Mine	25.07	316	⇑P	P	11 59 11.2	+0.7
	baz=25,SNR=16						
319A	Douglas	25.12	310	P	P	11 59 11.6	+0.6
	baz=25						
U25A	Circle Dot Ran	25.14	325	⇓P	P	11 59 13.3	+2.2
	baz=25,SNR=6.4						
V24A	Rampart Ranch,	25.14	323	⇓P	P	11 59 12.3	+1.1
	baz=25,SNR=6.0						
W23A	Werner Place,	25.27	321	⇑P	P	11 59 14.3	+2.0
	baz=25,SNR=5.9						
120A	U Bar Ranch, L	25.29	313	P	P	11 59 12.7	+0.3
	baz=25						
ANMO	Albuquerque	25.31	320	P	P	11 59 13.8	+1.0
ANMO	Albuquerque	25.31	320	P	P	11 59 13.8	+1.0
	2.9nm,1.1s,baz=138,slow=11,SNR=5.6						
R28A	Tribune	25.35	332	⇑P	P	11 59 13.8	+0.9
	baz=26,SNR=10						
LAZ	Ladron	25.39	318	eP	P	11 59 22.0	+8.6
Q29A	Oakley	25.44	334	⇓P	P	11 59 15.0	+1.4
	baz=26,SNR=9.4						
Y21A	Point of Rocks	25.49	317	P	P	11 59 15.8	+1.4
	baz=26						
S26A	Kim	25.57	328	P	P	11 59 17.2	+2.3
	baz=26,SNR=6.5						
T25A	Trinidad	25.69	326	P	P	11 59 17.3	+1.2
	baz=26,SNR=6.0						
V23A	Ortiz Mt. (NFS	25.69	322	P	P	11 59 18.9	+2.8
	baz=26						
R27A	Eads	25.76	330	P	P	11 59 17.8	+1.1
	baz=26,SNR=6.5						
X21A	Alamocita Cree	25.83	318	⇓P	P	11 59 20.4	+2.9
	baz=26,SNR=6.8						
Y20A	Horse Springs,	25.89	316	⇑P	P	11 59 18.2	+0.1
	baz=26,SNR=13						
R26A	Arlington	26.09	329	⇑P	P	11 59 20.7	+1.1
	baz=26,SNR=5.5						
S25A	Robets Cordova	26.09	327	P	P	11 59 23.2	+3.5
	baz=26						
U23A	El Rito	26.09	323	⇑P	P	11 59 20.3	+0.5
	baz=26,SNR=7.1						
W21A	San Fidel	26.17	319	P	P	11 59 23.6	+3.1
	baz=26						
V22A	San Miguel Ran	26.23	321	⇓P	P	11 59 23.8	+2.7
	baz=26,SNR=6.2						
X20A	Quemado	26.36	317	⇓P	P	11 59 25.9	+3.7
	baz=26,SNR=5.7						
R25A	Fountain Ranch	26.38	328	P	P	11 59 25.9	+3.6
	baz=26						
JFWS	Jewell Farm	26.45	355	eP	P	11 59 26.4	+3.8
	13nm,0.8s						
Q26A	Hugo	26.61	330	P	P	11 59 25.6	+1.2
	baz=27						
W20A	Ramah	26.71	318	⇑P	P	11 59 28.8	+3.4
	baz=27,SNR=5.6						
S22A	4UR Ranch, Cre	27.45	324	⇓P	P	11 59 32.6	+0.5
	baz=28,SNR=8.4						
MVCO	Mesa Verde	28.05	321	P	P	11 59 38.9	+1.5
	5.3nm,0.9s						
X16A	Lo Mia Camp, P	28.27	314	P	P	11 59 39.6	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=28						
ISCO	**Idaho Springs**	**28.31**	**329**	*e*P	**P**	**11 59 41.4**	**+1.6**
R20A	**Redvale**	**28.64**	**323**	⇑P	**P**	**11 59 43.1**	**+0.5**
	baz=29,SNR=5.7						
WUAZ	**Wupatki**	**28.84**	**316**	*e*P	**P**	**11 59 44.9**	**+0.6**
	8.2nm,1.1s						
SADO	**Sadowa**	**28.91**	**12**	P	**P**	**11 59 46.2**	**+1.6**
SADO	**Sadowa**	**28.91**	**12**	P	**P**	**11 59 46.2**	**+1.6**
	7.4nm,0.7s,baz=217,slow=10,SNR=7.1						
SADO				LR	LR	12 11 39.7	
	comp=Z,87nm,19.1s,baz=146,slow=37						
S18A	**Hurst Farm, Bl**	**29.27**	**321**	⇑P	**P**	**11 59 49.9**	**+1.7**
	baz=29,SNR=6.4						
LONY	**Lake Ozonia**	**29.88**	**18**	P	**P**	**11 59 55.7**	**+2.4**
	9.3nm,0.9s						
J22A	**Midwest**	**31.52**	**332**	P	**P**	**12 00 09.0**	**+1.0**
	baz=32						
J21A	**Lysite**	**31.91**	**331**	P	**P**	**12 00 12.6**	**+1.1**
	baz=32						
I21A	**Big Trails, Te**	**32.20**	**332**	P	**P**	**12 00 14.2**	**+0.2**
	baz=32						
PDAR	**Pinedale Array**	**32.50**	**328**	P	**P**	**12 00 16.9**	**+0.1**
PDAR	**Pinedale Array**	**32.50**	**328**	P	**P**	**12 00 16.9**	**+0.1**
	0.8nm,0.9s,baz=131,slow=6.8,SNR=5.2						
DUG	**Dugway**	**32.55**	**322**	⇓P	**P**	**12 00 17.9**	**+0.8**
	baz=33,SNR=5.3						
I20A	**Worland**	**32.69**	**331**	⇓P	**P**	**12 00 19.3**	**+1.1**
	baz=33,SNR=5.7						
H20A	**Greybull**	**33.05**	**332**	⇑P	**P**	**12 00 21.6**	**+0.3**
	baz=33,SNR=5.6						
SPUT	**South Promonto**	**33.05**	**324**	*e*P	**P**	**12 00 20.8**	**-0.7**
REDW	**Red Top Meadow**	**33.59**	**328**	*e*P	**P**	**12 00 28.2**	**+2.0**
	1.1nm,0.6s						
SNOW	**Snow King Moun**	**33.61**	**328**	*e*P	**P**	**12 00 27.9**	**+1.4**
	12nm,0.9s						
G20A	**Bridger**	**33.71**	**332**	⇓P	**P**	**12 00 27.2**	**0.0**
	baz=34,SNR=7.6						
TPAW	**Teton Pass**	**33.73**	**328**	*e*P	**P**	**12 00 28.3**	**+0.8**
	9.6nm,0.9s						
RRI2	**Red Ridge**	**33.82**	**327**	*e*P	**P**	**12 00 29.2**	**+0.9**
	9.0nm,1.1s						
IMW	**Indian Meadow**	**34.02**	**328**	*e*P	**P**	**12 00 32.2**	**+2.2**
RLMT	**Red Lodge**	**34.11**	**331**	*e*P	**P**	**12 00 31.1**	**+0.3**
	8.1nm,1.0s						
ELK	**Elko**	**34.35**	**320**	*e*P	**P**	**12 00 34.7**	**+1.8**
	4.9nm,1.3s						
ULM	**Lac du Bonnet**	**34.40**	**350**	P	**P**	**12 00 32.1**	**-0.7**
ULM	**Lac du Bonnet**	**34.40**	**350**	P	**P**	**12 00 32.1**	**-0.7**
	1.1nm,0.3s,baz=176,slow=6.6,SNR=3.4						
G18A	**Lazy EL Ranch,**	**34.40**	**331**	P	**P**	**12 00 33.5**	**+0.3**
	baz=34						
F19A	**Roth Farm, Mol**	**34.53**	**332**	⇓P	**P**	**12 00 35.2**	**+1.0**
	baz=35,SNR=7.9						
E20A	**Meyer Farm, Mu**	**34.69**	**334**	⇑P	**P**	**12 00 37.1**	**+1.6**
	baz=35,SNR=11						
GCMT	**Greycliff**	**34.81**	**332**	*e*P	**P**	**12 00 37.4**	**+0.8**
F18A	**Big Timber**	**34.91**	**332**	⇑P	**P**	**12 00 37.9**	**+0.4**
	baz=35,SNR=7.8						
E19A	**Rath Farm, Rou**	**34.93**	**333**	⇓P	**P**	**12 00 38.3**	**+0.6**
	baz=35,SNR=7.0						
NVAR	**Mina Array Bea**	**35.08**	**315**	P	**P**	**12 00 39.8**	**+0.6**
NVAR	**Mina Array Bea**	**35.08**	**315**	P	**P**	**12 00 39.8**	**+0.6**
	0.7nm,0.9s,baz=128,slow=8.1,SNR=5.1						
NVAR				LR	LR	12 17 25.3	
	comp=Z,80nm,20.9s,baz=100,slow=40						
D20A	**Manuel Ranch,**	**35.16**	**335**	P	**P**	**12 00 40.2**	**+0.7**
	baz=35						
I14A	**Mackay**	**35.34**	**326**	P	**P**	**12 00 42.4**	**+1.0**
	baz=36						
F17A	**Fitzpatrick Pl**	**35.35**	**331**	⇑P	**P**	**12 00 42.4**	**+1.1**
	baz=36,SNR=6.2						
G16A	**Moss Hill, Enn**	**35.40**	**329**	⇓P	**P**	**12 00 42.9**	**+1.1**
	baz=36,SNR=5.3						
E18A	**Harlowton**	**35.51**	**332**	⇑P	**P**	**12 00 43.4**	**+0.8**
	baz=36,SNR=8.3						
D19A	**Cripps Ranch,**	**35.52**	**334**	⇑P	**P**	**12 00 44.0**	**+1.3**
	baz=36,SNR=9.0						
BOZ	**Bozeman (W)**	**35.62**	**330**	*e*P	**P**	**12 00 44.2**	**+0.5**
	12nm,1.0s						
MCMT	**McKenzie Canyo**	**35.64**	**328**	*e*P	**P**	**12 00 46.1**	**+2.2**
G15A	**Dillon**	**35.70**	**328**	P	**P**	**12 00 45.4**	**+1.0**
	baz=36						
F16A	**Kennard Place,**	**35.72**	**330**	P	**P**	**12 00 45.5**	**+1.1**
	baz=36						
E17A	**Martinsdale**	**35.86**	**331**	⇑P	**P**	**12 00 46.3**	**+0.6**
	baz=36,SNR=6.8						
DLMT	**Dillon**	**35.89**	**329**	*e*P	**P**	**12 00 47.6**	**+1.6**
C19A	**Slack Wire Ran**	**36.05**	**334**	P	**P**	**12 00 47.8**	**+0.7**
	baz=36						
LRM	**Limekiln Ridge**	**36.14**	**329**	*e*P	**P**	**12 00 49.6**	**+1.3**
F15A	**Butte**	**36.18**	**329**	P	**P**	**12 00 49.5**	**+1.1**
	baz=36,SNR=5.1						
B20A	**Solberg Farm,**	**36.20**	**336**	P	**P**	**12 00 49.4**	**+1.0**
	baz=36						
D17A	**Six Diamond Ra**	**36.30**	**332**	⇓P	**P**	**12 00 50.1**	**+0.7**
	baz=36,SNR=9.7						
D16A	**Dana Ranch, Ca**	**36.60**	**331**	⇑P	**P**	**12 00 52.1**	**+0.2**
	baz=37,SNR=9.0						
E15A	**Deer Lodge**	**36.67**	**330**	⇑P	**P**	**12 00 52.9**	**+0.3**
	baz=37,SNR=6.5						
C17A	**Wharram Farm,**	**36.70**	**333**	⇑P	**P**	**12 00 53.9**	**+1.2**
	baz=37,SNR=11						
D15A	**Lincoln**	**37.06**	**331**	⇓P	**P**	**12 00 56.5**	**+0.6**
	baz=37,SNR=5.6						
F13A	**Darby**	**37.06**	**328**	P	**P**	**12 00 56.9**	**+0.9**
	baz=37						
BEKR	**Beckworth**	**37.17**	**315**	*e*P	P	12 01 00.6	+3.5
	1.0nm,0.8s						
CHMT	**Chamberlain Mo**	**37.31**	**330**	*e*P	**P**	**12 00 58.6**	**+0.5**
F12A	**Elk City**	**37.52**	**327**	P	**P**	**12 01 01.0**	**+1.2**
	baz=38						
LPAZ	**La Paz**	**37.52**	**149**	LR	LR	12 18 01.9	
	comp=Z,65nm,21.2s,baz=72,slow=39						
MSO	**Missoula**	**37.59**	**329**	*e*P	**P**	**12 01 01.2**	**+0.9**
	4.6nm,1.0s						
MSO	**Missoula**	**37.59**	**329**	⇓P	**P**	**12 01 00.7**	**+0.3**
	baz=38,SNR=5.8						
C15A	**Salmond Ranch,**	**37.63**	**331**	⇓P	**P**	**12 01 01.7**	**+0.9**
	baz=38,SNR=9.3						
SLMT	**Seeley Lake**	**37.66**	**330**	P	P	12 00 54.4	-6.7
	9.1nm,1.5s						
B15A	**Bradely Ranch,**	**38.01**	**332**	⇑P	**P**	**12 01 04.7**	**+0.8**
	baz=38,SNR=5.8						
D12A	**Red Ives Fores**	**38.44**	**328**	P	**P**	**12 01 07.9**	**+0.4**
	baz=39						
A15A	**Johnson Ranch,**	**38.58**	**333**	⇑P	**P**	**12 01 10.2**	**+1.5**
	baz=39,SNR=6.1						
A14A	**Double T Ranch**	**38.88**	**332**	⇑P	**P**	**12 01 11.6**	**+0.4**
	baz=39,SNR=9.0						
C11A	**Tepee Creek (N**	**39.42**	**329**	P	**P**	**12 01 16.9**	**+1.2**
	baz=40						
NEW	**Newport**	**40.14**	**329**	P	**P**	**12 01 21.4**	**-0.2**
NEW	**Newport**	**40.14**	**329**	P	**P**	**12 01 21.4**	**-0.2**
	1.1nm,0.7s,baz=282,slow=22,SNR=1.7						
NEW	**Newport**	**40.14**	**329**	⇑P	**P**	**12 01 21.9**	**+0.2**
	baz=40,SNR=5.2						
SCHQ	**Schefferville**	**41.26**	**18**	P	**P**	**12 01 31.2**	**+0.5**
SCHQ	**Schefferville**	**41.26**	**18**	P	**P**	**12 01 31.2**	**+0.5**
	2.6nm,0.9s,baz=236,slow=4.0,SNR=4.3						
YKA	**Yellowknife Ar**	**49.84**	**344**	P	**P**	**12 02 38.6**	**+0.2**
YKA	**Yellowknife Ar**	**49.84**	**344**	P	**P**	**12 02 38.6**	**+0.2**
	1.2nm,0.8s,baz=138,slow=8.0,SNR=8.3						
YKW3	**Yellowknife Ar**	**49.90**	**344**	*e*P	**P**	**12 02 38.1**	**-0.8**
	0.1nm,0.8s						
BDFB	**Brasilia**	**49.98**	**128**	LR	LR	12 24 01.7	
	comp=Z,113nm,21.2s,baz=358,slow=37						
DLBC	**Dease Lake**	**52.48**	**333**	*e*P	**P**	**12 02 59.8**	**+1.3**
DLBC	**Dease Lake**	**52.48**	**333**	P	**P**	**12 02 58.3**	**-0.2**
	2.6nm,0.7s,baz=121,slow=8.2,SNR=4.4						
PLCA	**Paso Flores**	**58.97**	**166**	P	P	12 03 39.9	-5.3
PLCA	**Paso Flores**	**58.97**	**166**	P	P	12 03 39.9	-5.3
	2.4nm,1.0s,baz=289,slow=7.2,SNR=3.4						
ILAR	**Eielson Array**	**62.52**	**335**	P	**P**	**12 04 08.5**	**-0.6**
ILAR	**Eielson Array**	**62.52**	**335**	P	**P**	**12 04 08.5**	**-0.6**
	0.8nm,0.8s,baz=110,slow=5.6,SNR=8.1						
SUMG	**Summit**	**62.54**	**15**	*i* P	P	12 04 18.6	+9.1
	8.0nm,0.9s						
ESDC	**Sonseca Array**	**74.32**	**53**	P	**P**	**12 05 22.7**	**-0.7**
ESDC	**Sonseca Array**	**74.32**	**53**	P	**P**	**12 05 22.7**	**-0.7**
	0.9nm,0.8s,baz=292,slow=5.1,SNR=5.7						
NOA	**NORSAR Array B**	**79.59**	**29**	P	**P**	**12 05 52.4**	**-0.3**
NOA	**NORSAR Array B**	**79.59**	**29**	P	**P**	**12 05 52.4**	**-0.3**
	0.5nm,0.8s,baz=281,slow=5.5,SNR=3.6						
GERES	**GERESS Array B**	**84.54**	**41**	P	**P**	**12 06 19.6**	**+0.7**
GERES	**GERESS Array B**	**84.54**	**41**	P	**P**	**12 06 19.6**	**+0.7**
	0.2nm,0.4s,baz=216,slow=8.1,SNR=3.5						
HHC	**Hu-ho-hao-te**	**120.38**	**344**	*e*PKP	**PKPdf**	**12 12 33.6**	**-3.9**
HHC				sPKP		12 12 47.8	
HHC				PP	**PP**	**12 14 01.8**	**-0.6**
HHC				PKS	PKSdf	12 16 08.3	-5.9
HHC				SKS	SKSdf	12 19 40.4	-8.2
HHC				SKKS	SKKSac	12 20 51.2	-11
HHC	**Hu-ho-hao-te**	**120.38**	**344**	SS	SS	12 30 25.6	-3.4
HHC				AMB	AMB		
	comp=Z,140nm,8.0s						
HHC				LR	LR		
	comp=N,180nm,19.0s						
HHC				LR	LR		
	comp=E,150nm,19.3s						
HHC				LR	LR		
	comp=Z,130nm,19.0s						
LZH	**Lanzhou**	**126.68**	**349**	*e*PKP	**PKPdf**	**12 12 47.5**	**-2.3**
LZH				pPKP	**PKiKP**	**12 12 50.7**	**+0.5**
LZH				sPKP		12 12 52.1	
LZH				LR	LR		
	comp=N,110nm,17.9s						
LZH				LR	LR		
	comp=E,110nm,18.1s						
LZH				LR	LR		
	comp=Z,140nm,20.0s						
WRA	**Warramunga Arr**	**140.71**	**259**	PKP	**PKPdf**	**12 13 14.4**	**-1.7**
WRA	**Warramunga Arr**	**140.71**	**259**	PKP	**PKPdf**	**12 13 14.4**	**-1.7**
	comp=Z,0.3nm,0.7s,baz=86,slow=3.7,SNR=6.4						
ASAR	**Alice Springs**	**141.09**	**253**	PKP	**PKPdf**	**12 13 15.7**	**-1.2**
ASAR	**Alice Springs**	**141.09**	**253**	PKP	**PKPdf**	**12 13 15.7**	**-1.2**
	comp=Z,0.6nm,0.8s,baz=76,slow=5.3,SNR=5.3						

IDC ***06*** *12:08:59.6±1.2, 12°.41N×124°.88E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/24, mbtmp3.8/7, Error ellipse: s-maj=65.5km s-min=16.7km az=63.0*

ISCJB ***06*** *12:09:02.5±1.0, 12°.81N±0°.08×125°.9E±0°.1, h40km, mb3.8/7, Error ellipse: s-maj=18.6km s-min=10.7km az=174.5*

MAN ***06*** *12:09:18, 10°.93N×126°.07E, h16km, mb4.4, ML3.2, MS3.0*

ISC 06 12:09:04.2±1.1**, 12°.76N**±0°.09×**126°.0E**±0°.1**, h40km, n13, σ1s.97**/11**, mb3.8**/7**, 1C, Samar**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.26**	**203**	*e*P	**Sn**	**12 09 38.4**	**-2.5**
CNP	**Catarman**	**1.28**	**259**	*e*P	Pn	12 09 31.7	+6.2
CNP				*e*S	**Sn**	**12 09 44.6**	**+3.2**
MSLP	**Maasin**	**2.82**	**202**	*e*P	Pn	12 09 51.4	+4.6
MSLP				*e*S	**Sn**	**12 10 19.7**	**+0.2**
AUQP	**San Andres**	**3.24**	**280**	*e*P	**Pn**	**12 09 50.8**	**-1.7**
RCP	**Roxas**	**3.35**	**249**	⇑*e*P	Pn	12 09 47.3	-6.8
OTRP	**Odiongan**	**3.85**	**265**	*e*P	Pn	12 09 53.5	-7.4
CMAR	**Chiang Mai Arr**	**26.60**	**286**	P	P	12 14 31.5	-7.5
	2.3nm,1.1s,baz=105,slow=7.0,SNR=4.9						
FITZ	**Fitzroy Crossi**	**30.67**	**181**	P	P	12 15 12.8	-2.3
	2.4nm,1.1s,baz=6.3,slow=9.2,SNR=2.8						
WRA	**Warramunga Arr**	**33.53**	**166**	P	**P**	**12 15 41.2**	**+0.9**
	0.5nm,0.7s,baz=341,slow=8.6,SNR=11						
WRA				PcP	**PcP**	**12 18 19.8**	**-0.7**
	0.2nm,0.7s,baz=342,slow=2.7,SNR=4.7						
ASAR	**Alice Springs**	**37.03**	**168**	P	**P**	**12 16 10.3**	**-0.1**
	0.6nm,0.4s,baz=346,slow=6.9,SNR=19						
STKA	**Stephens Creek**	**46.85**	**162**	P	**P**	**12 17 33.1**	**+2.7**
	2.6nm,0.8s,baz=353,slow=8.1,SNR=4.6						
MKAR	**Makanchi Array**	**49.88**	**322**	P	**P**	**12 17 53.0**	**-0.6**
	0.8nm,0.6s,baz=117,slow=8.0,SNR=10						
MKAR				PcP	**PcP**	**12 19 12.1**	**-1.6**
	0.1nm,0.5s,baz=109,slow=4.5,SNR=3.6						
ZALV	**Zalesovo Beam**	**52.31**	**331**	P	**P**	**12 18 11.6**	**-0.1**
	0.4nm,0.4s,baz=120,slow=8.5,SNR=3.3						

CSEM ***06*** *12:13:57.7±0.5, 38°.81N×41°.93E, h2km, MD3.3, Error ellipse: s-maj=13.1km s-min=6.2km az=167.0*

ISK ***06*** *12:13:59.0, 38°.90N×41°.97E, h14km, MD3.3*

ISCJB ***06*** *12:14:01.0±0.8, 39°.07N±0°.05×41°.90E±0°.04, h3km±8km, Error ellipse: s-maj=9.3km s-min=5.2km az=162.5*

DDA ***06*** *12:14:02.4, 39°.10N×41°.96E, h8km, ML3.1*

ISC 06 12:13:58.6±1.5**, 38°.86N**±0°.05×**41°.96E**±0°.03**, h12**km±12km**, n27, σ0s.96**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.64**	**279**	*i* P	**Pn**	**12 14 14.0**	**+0.2**
BNGL				*i* S	**Sn**	**12 14 25.1**	**+1.1**
TUTA	**Tutak**	**0.86**	**50**	*i* P	**Pg**	**12 14 14.7**	**-0.5**
TUTA				*i* S	**Sn**	**12 14 28.0**	**-1.4**
TUTA	**Tutak**	**0.86**	**50**	*i* P	**Pg**	**12 14 14.7**	**-0.5**
TUTA				*i* S	**Sn**	**12 14 28.0**	**-1.4**
BNGB	**Bingˆ¶l**	**1.01**	**278**	*e*PG	**Pn**	**12 14 19.2**	**+0.5**
BNGB				*e*SG	**Sn**	**12 14 33.3**	**+0.4**
GEVA	**Gevas**	**1.02**	**122**	*i* P	Pn	12 14 24.2	+5.3
AGRB	**Hanur-Agry**	**1.07**	**48**	*e*PG	**Pb**	**12 14 19.2**	**-0.1**
AGRB	**Hanur-Agry**	**1.07**	**48**	*e*Pg	**Pb**	**12 14 19.2**	**-0.1**
BEST	**Besiri**	**1.11**	**210**	*i* P	Pg	12 14 27.1	+7.2
BEST				*i* S	Sn	12 14 47.2	+12
ERZM	**Erzurum**	**1.15**	**336**	*i* P	**Pg**	**12 14 20.8**	**+0.1**
ERZM	**Erzurum**	**1.15**	**336**	*i* P	**Pg**	**12 14 20.8**	**+0.1**
VANB	**Van**	**1.15**	**103**	*e*PN	**Pg**	**12 14 21.5**	**+0.8**
VANB	**Van**	**1.15**	**103**	*e*Pn	**Pg**	**12 14 21.5**	**+0.8**
EZM	**Erzurum**	**1.15**	**336**	*e*PN	**Pg**	**12 14 20.9**	**+0.2**
BINT	**Bingol**	**1.15**	**271**	*e*Pg	**Pn**	**12 14 19.2**	**-1.5**
BINT				*e*Sg	**Sb**	**12 14 33.3**	**-2.2**
HOMI	**Horasan**	**1.19**	**358**	*i* P	**Pb**	**12 14 20.6**	**-0.6**
HOMI				*i* S	**Sn**	**12 14 40.1**	**+2.6**
ERZN	**Erzincan**	**1.89**	**293**	*e*PN	**Pn**	**12 14 31.2**	**+0.4**
KARS	**Kars**	**1.97**	**26**	*e*PN	**Pn**	**12 14 32.4**	**+0.5**
KARS	**Kars**	**1.97**	**26**	*e*Pn	**Pn**	**12 14 32.4**	**+0.5**
PTK	**Pertek**	**2.01**	**272**	*e*PN	**Pn**	**12 14 33.2**	**+0.7**
PTK	**Pertek**	**2.01**	**272**	*e*Pn	**Pn**	**12 14 33.2**	**+0.7**
DBAD	**Bademkaya**	**2.17**	**355**	*i* P	**Pb**	**12 14 37.7**	**-0.2**
DBAD	**Bademkaya**	**2.17**	**355**	*i* P	**Pb**	**12 14 37.7**	**-0.2**
EZC	**Erzincan**	**2.21**	**295**	*e*PN	**Pn**	**12 14 35.8**	**+0.5**
EZC	**Erzincan**	**2.21**	**295**	*e*Pn	**Pn**	**12 14 35.8**	**+0.5**
DAGI	**Agillar**	**2.22**	**359**	*i* P	**Pb**	**12 14 39.1**	**+0.4**
BCA	**Borcka**	**2.60**	**354**	*e*PN	**Pn**	**12 14 41.3**	**+0.8**
BCA	**Borcka**	**2.60**	**354**	*e*Pn	**Pn**	**12 14 41.3**	**+0.8**

MOS ***06*** *12:21:37.0±1.0, 54°.34N×162°.62W, h19km, mb5.6/107, MS4.6/24, Error ellipse: s-maj=7.2km s-min=3.7km az=88.7*

BGS ***06*** *12:21:39.4±2.0, 54°.12N×163°.32W, h33km, mb5.2*

IDC ***06*** *12:21:40.5±0.5, 54°.27N×162°.74W, h34km±3km, mb4.6/26, mb1 4.8/30, mb1mx4.8/33, mbtmp4.6/30, ML4.4/4, MS4.6/40, Ms1 4.6/40, ms1mx4.5/49, Error ellipse: s-maj=13.9km s-min=8.6km az=1.0*

ISCJB ***06*** *12:21:40.5±0.3, 54°.26N±0°.03×162°.62W±0°.02, h46km±2km, mb5.2/297, MS4.7/76, Error ellipse: s-maj=4.2km s-min=2.2km az=0.0*

BJI ***06*** *12:21:41.1, 54°.61N×163°.25W, h39km, mB5.2/35, mb5.2/53, Ms5.0/50, Ms7 4.8/49*

NEIC ***06*** *12:21:41.8±0.1, 54°.31N×162°.63W, mb5.2/154, MW5.2, ML4.9(AEIC), MW5.2(USGS), Error ellipse: s-maj=3.2km s-min=2.0km az=177.0, Moment Tensor Solution. s44 Moment tensor: Scale 10^{16}Nm; M_{rr}5.48; $M_{\theta\theta}$-3.76; $M_{\phi\phi}$-1.72; $M_{r\theta}$3.56; $M_{\theta\phi}$-3.80; $M_{\phi r}$1.66; Best double couple: $M_0$7.30000×10^{16} NP1:ϕ_s61.00000°, δ62.00000°, λ99.00000°. NP2:ϕ_s223.00000°, δ30.00000°, λ74.00000°. Principal axes: T 6.7100, Plg71.0000°, Azm350.0000°; N 1.0800, Plg7.0000°, Azm236.0000°; P -7.7900, Plg16.0000°, Azm144.0000°;*

NEIC Felt at King Cove.

GCMT ***06*** *12:21:42.6±0.2, 53°.96N×162°.35W, h36km, MW5.3, Moment Tensor Solution. s84,c141; s88,c165; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s238.00000°, δ26.00000°, λ89.00000°. NP2:ϕ_s59.00000°, δ64.00000°, λ90.00000°. Principal axes: T 1.1000, Plg71.0000°, Azm330.0000°; N 0.1100, Plg0.0000°, Azm239.0000°; P -1.2200, Plg19.0000°, Azm149.0000°; Data Used: II IU IC G CN.*

SZGRF ***06*** *12:21:51.1, 55°.86N×162°.94W, h33km, mb5.5, MS4.6, Alaska Peninsula, United States*

ISC 06 12:21:40.8±0.2**, 54°.30N**±0°.04×**162°.64W**±0°.02**, h40**km±1km**, h39km:pP-P, n1179, σ1s.21**/1309**, mb5.3**/299**, MS4.7**/78**, 154C-23D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DRIA	**Deer Island**	**0.70**	**18**	P	**Pn**	**12 21 54.6**	**+0.3**
FALS	**False Pass**	**0.71**	**321**	P	**Pn**	**12 21 55.9**	**+1.4**
FALS				S	**Sn**	**12 22 07.8**	**+3.6**
DT1	**Dutton Round H**	**0.83**	**14**	P	**Pn**	**12 21 56.7**	**+0.7**
DOL	**Dolgoi Island**	**0.96**	**28**	P	**Pn**	**12 21 58.1**	**+0.3**
SSLW	**Shishaldin Wes**	**0.98**	**299**	P	**Pn**	**12 21 59.8**	**+1.6**
SSBA	**Shishaldin**	**0.98**	**299**	P	**Pn**	**12 21 59.7**	**+1.5**
SSBA				S	**Sn**	**12 22 15.5**	**+4.5**
PS4A	**Pavlof South-4**	**1.14**	**23**	P	**Pn**	**12 22 01.8**	**+1.5**
PVV	**Pavlof Volcano**	**1.18**	**24**	P	**Pn**	**12 22 02.4**	**+1.5**
SDPT	**Sand Point**	**1.63**	**49**	P	**Pn**	**12 22 07.9**	**+0.9**
SDPT				S	**Sn**	**12 22 29.8**	**+3.0**
AKUT	**Akutan**	**1.85**	**266**	P	**Pn**	**12 22 10.6**	**+0.6**
AKUT				S	**Sn**	**12 22 34.9**	**+2.9**
AKLV	**Akutan Long Va**	**1.95**	**267**	P	**Pn**	**12 22 12.1**	**+0.7**
AKGG	**Akutan Green G**	**1.97**	**268**	P	**Pn**	**12 22 12.8**	**+1.1**
AKRB	**Akutan Reef Bi**	**2.02**	**266**	P	**Pn**	**12 22 13.5**	**+1.1**
UNV	**Unalaska Valle**	**2.32**	**260**	P	**Pn**	**12 22 16.2**	**-0.3**
MTBL	**Makushin Table**	**2.40**	**264**	P	**Pn**	**12 22 18.5**	**+0.8**
MREP	**Makushin Rep't**	**2.47**	**260**	P	**Pn**	**12 22 19.4**	**+0.8**
MCIR	**Makushin Cirqu**	**2.53**	**264**	P	**Pn**	**12 22 20.5**	**+1.1**
MCIR				S	Sn	12 22 55.3	+6.4
VNWF	**Veniaminof 8**	**2.56**	**42**	P	Pn	12 22 23.2	+3.4
VNHG	**Veniaminof 1**	**2.77**	**45**	P	**Pn**	**12 22 25.5**	**+2.8**
CHGN	**Chignik**	**3.14**	**49**	*e*Pn	**Pn**	**12 22 29.4**	**+1.7**
OKFG	**Magazine Ridge**	**3.25**	**256**	P	**Pn**	**12 22 30.8**	**+1.6**
OKFG				S	**Sn**	**12 23 11.2**	**+4.6**
OKCE	**Okmok Cone E**	**3.39**	**257**	P	**Pn**	**12 22 33.2**	**+2.1**
OKSP	**Okmok Steeple**	**3.51**	**255**	P	**Pn**	**12 22 34.1**	**+1.2**
ANPK	**Aniakchak Peak**	**3.61**	**43**	P	**Pn**	**12 22 36.3**	**+2.0**
ANNW	**Aniakchak Nort**	**3.66**	**41**	P	**Pn**	**12 22 37.5**	**+2.5**
NIKH	**Nikolski High**	**3.93**	**253**	P	**Pn**	**12 22 38.7**	**+0.1**
SPIA	**Saint Paul Isl**	**5.17**	**307**	P	Pn	12 22 59.8	+4.2
KELA	**Mount Kelaz**	**5.65**	**40**	P	**Pn**	**12 23 04.1**	**+1.9**
KABU	**Katmai Buttres**	**5.71**	**43**	P	**Pn**	**12 23 04.9**	**+1.8**
KCE	**Katmai Mt Cerb**	**5.73**	**43**	P	**Pn**	**12 23 04.9**	**+1.6**
KABR	**Katmai Barrier**	**5.75**	**45**	P	**Pn**	**12 23 04.7**	**+1.1**
KAKN	**Katmai Knife C**	**5.81**	**43**	P	**Pn**	**12 23 06.5**	**+1.9**
KAWH	**Katmai**	**5.98**	**44**	P	**Pn**	**12 23 07.9**	**+1.2**
OHAK	**Old Harbor**	**6.04**	**57**	*e*Pn	**Pn**	**12 23 06.5**	**-0.9**
KDAK	**Kodiak Island**	**6.62**	**54**	*e*Pn	**Pn**	**12 23 14.8**	**-0.7**
	477nm,1.0s						
KDAK				Sn	**Sn**	**12 24 25.4**	**-4.2**
KDAK				*e*Sn	Sn	12 24 32.7	+3.1
KDAK				Lg	Lg	12 24 52.7	
KDAK	**Kodiak Island**	**6.62**	**54**	Pn	**Pn**	**12 23 14.0**	**-1.5**
	866nm,0.5s,SNR=31						
KDAK	**Kodiak Island**	**6.62**	**54**	Pn	**Pn**	**12 23 14.8**	**-0.7**
	5.3nm,0.3s,baz=234,slow=6.7,SNR=43						
KDAK				Sn	**Sn**	**12 24 25.4**	**-4.2**
	19nm,0.3s,baz=306,slow=5.2,SNR=6.0						
KDAK				Lg	Lg	12 24 52.7	
	18nm,0.3s,baz=134,slow=22,SNR=12						
ATKA	**Atka Island**	**7.25**	**258**	*e*Pn	**Pn**	**12 23 25.4**	**+1.3**
SVW2	**Sparrevohn**	**7.79**	**26**	*e*Pn	Pn	12 23 34.6	+3.1
RSO	**Redoubt South**	**8.16**	**37**	*e*Pn	Pn	12 23 39.9	+3.2
GSTR	**Great Sitkin T**	**8.36**	**260**	*e*Pn	**Pn**	**12 23 41.6**	**+2.2**
SPU	**Mount Spurr**	**8.91**	**35**	*e*Pn	**Pn**	**12 23 49.4**	**+2.5**
SEW	**Seward**	**9.21**	**46**	*e*Pn	**Pn**	**12 23 51.4**	**+0.4**
PMR	**Palmer**	**10.23**	**39**	*e*P	**Pn**	**12 24 03.6**	**-1.2**
PMR	**Palmer**	**10.23**	**39**	*e*Pn	**Pn**	**12 24 03.6**	**-1.2**
PMR				*e*PcP	**PcP**	**12 30 14.8**	**+4.5**
MID	**Middleton Isla**	**10.28**	**53**	*e*P	**Pn**	**12 24 04.8**	**-0.8**
MID	**Middleton Isla**	**10.28**	**53**	*e*Pn	**Pn**	**12 24 04.8**	**-0.8**
MID				Sn	Sn	12 25 47.2	-12
GAMB	**Gambell**	**10.57**	**338**	*e*Pn	**Pn**	**12 24 12.4**	**+2.9**
SML	**Sawmill**	**10.66**	**39**	*e*P	**Pn**	**12 24 09.8**	**-1.0**
SML	**Sawmill**	**10.66**	**39**	*e*Pn	**Pn**	**12 24 09.8**	**-1.0**
TRF	**Thorofare Moun**	**11.16**	**30**	*e*Pn	**Pn**	**12 24 18.8**	**+1.1**
DIV	**Divide**	**11.29**	**46**	*e*Pn	**Pn**	**12 24 19.2**	**-0.3**
AMKA	**Amchitka**	**11.30**	**262**	*e*Pn	**Pn**	**12 24 19.9**	**+0.3**
RAGM	**Ragged Mountai**	**11.44**	**51**	*e*Pn	**Pn**	**12 24 20.7**	**-0.7**
TNA	**Tin City**	**11.59**	**349**	*e*Pn	**Pn**	**12 24 24.1**	**+0.6**
MCK	**McKinley**	**11.77**	**31**	*e*P	**Pn**	**12 24 25.8**	**-0.2**
MCK	**McKinley**	**11.77**	**31**	*e*Pn	**Pn**	**12 24 25.8**	**-0.2**
PAX	**Paxson**	**12.43**	**39**	*e*P	**Pn**	**12 24 33.9**	**-1.1**
PAX	**Paxson**	**12.43**	**39**	*e*Pn	**Pn**	**12 24 33.9**	**-1.1**
COLA	**College**	**12.93**	**29**	*e*P	**Pn**	**12 24 40.7**	**-1.0**
COLA	**College**	**12.93**	**29**	*e*Pn	**Pn**	**12 24 40.7**	**-1.0**
MENT	**Mentasta**	**13.07**	**41**	*e*Pn	**Pn**	**12 24 42.5**	**-1.2**
MENT				*e*Sn	**Sn**	**12 27 02.9**	**-4.6**
ILAR	**Eielson Array**	**13.14**	**31**	Pn	**Pn**	**12 24 41.9**	**-2.7**
ILAR				Sn	**Sn**	**12 27 08.4**	**-0.8**
ILAR	**Eielson Array**	**13.14**	**31**	Pn	**Pn**	**12 24 41.9**	**-2.7**
	1.4nm,0.3s,baz=219,slow=14,SNR=44						
ILAR				Sn	**Sn**	**12 27 08.4**	**-0.8**
	0.6nm,0.3s,baz=220,slow=18,SNR=3.5						
ILAR				LR	LR	12 30 16.9	
	comp=Z,6μm,19.5s,baz=236,slow=39						
DOT	**Dot Lake**	**13.34**	**38**	*e*Pn	**Pn**	**12 24 47.0**	**-0.4**
PNL	**Peninsula**	**13.72**	**58**	*e*Pn	**Pn**	**12 24 52.7**	**+0.1**
COLD	**Coldfoot**	**14.27**	**20**	*e*Pn	**Pn**	**12 25 02.5**	**+2.5**
FX1	**Attu Island--F**	**14.42**	**274**	Pn	**Pn**	**12 25 03.8**	**+1.7**
FX1	**Attu Island--F**	**14.42**	**274**	Pn	**Pn**	**12 25 03.8**	**+1.7**
	6.5nm,0.3s,baz=347,slow=3.8,SNR=36						
FX1				LR	LR	12 30 19.0	
	comp=Z,1μm,19.3s,baz=332,slow=36						
EGAK	**Eagle**	**15.03**	**37**	*e*Pn	**Pn**	**12 25 09.1**	**-1.1**
SKAG	**Skagway**	**15.73**	**60**	*e*Pn	**Pn**	**12 25 20.7**	**+1.6**
	180nm,1.0s						
CRAG	**Craig**	**16.97**	**74**	*e*P	**P**	**12 25 37.5**	**+1.1**
	238nm,1.7s						
WRAK	**Wrangell Islan**	**17.28**	**71**	*e*P	**P**	**12 25 40.8**	**+0.9**
	187nm,1.4s						
DIB	**Dawson Inlet,**	**17.81**	**81**	T	T	12 43 58.4	
DLBC	**Dease Lake**	**18.42**	**64**	P	**Pn**	**12 25 54.8**	**+2.0**
DLBC				*e*Pn	**P**	**12 25 55.0**	**+2.5**
DLBC				S	**Sn**	**12 29 16.4**	**-1.0**
DLBC	**Dease Lake**	**18.42**	**64**	P	**Pn**	**12 25 54.8**	**+2.0**
	0.6nm,0.3s,baz=269,slow=10,SNR=27						
DLBC				S	**Sn**	**12 29 16.4**	**-1.0**
	0.5nm,0.3s,baz=270,slow=20,SNR=3.3						
DLBC				LR	LR	12 32 07.1	
	comp=Z,1μm,21.9s,baz=275,slow=34						
INK	**Inuvik**	**19.52**	**33**	P	**P**	**12 26 02.8**	**-1.6**
INK	**Inuvik**	**19.52**	**33**	P	**P**	**12 26 02.8**	**-1.6**
	4.0nm,0.3s,baz=230,slow=10,SNR=66						
INK				LR	LR	12 34 29.5	
	comp=Z,6μm,20.0s,baz=234,slow=39						
BILL	**Bilibino**	**20.03**	**325**	⇓*e*P	Pn	12 26 11.9	0.0
BILL				*e*		12 26 29.2	
BILL				*e*S	Sn	12 29 59.7	+3.8
BILL				pmax	pmax		
	comp=Z,66nm,1.4s						
BILL				MLR	MLR		
	comp=Z,2μm,15.0s						
BILL	**Bilibino**	**20.03**	**325**	*e*P	**P**	**12 26 11.0**	**+1.1**
	comp=Z,67nm,1.2s						
BILL				*e*S	Sn	12 30 04.0	+8.2
PET	**Petropavlovsk**	**22.78**	**283** *j*	*i*P	**P**	**12 26 38.2**	**-1.4**
PET				*e*S	**S**	**12 30 39.4**	**-6.1**
PET				pmax	pmax		
	comp=Z,400nm,1.9s						
PET				pmax	pmax		
	comp=Z,300nm,13.0s						
PET				pmax	pmax		
	comp=Z,133nm,1.4s						
PET				MLR	MLR		
	comp=Z,2μm,21.0s						
PET				MLR	MLR		
	comp=Z,2μm,18.0s						
PEA0B	**Petropavlovsk-**	**23.30**	**283**	*e*P	**P**	**12 26 45.0**	**+0.1**
PETK	**Petropavlovsk-**	**23.30**	**283**	P	**P**	**12 26 44.5**	**-0.4**
PETK						12 30 31.9	
PETK						12 30 43.7	
PETK	**Petropavlovsk-**	**23.30**	**283**	P	**P**	**12 26 44.5**	**-0.4**
PETK				PcP	**PcP**	**12 30 31.9**	**+1.1**
PETK				pPcP		12 30 43.7	
PETK	**Petropavlovsk-**	**23.30**	**283**	P	**P**	**12 26 44.5**	**-0.4**
	comp=Z,78nm,0.5s,baz=84,slow=12,SNR=261						
PETK				PcP	**PcP**	**12 30 31.9**	**+1.1**
	comp=Z,4.2nm,0.9s,baz=95,slow=4.8,SNR=4.6						
PETK				pPcP		12 30 43.7	
	comp=Z,3.3nm,0.9s,baz=99,slow=4.8,SNR=3.8						
PETK				LR	LR	12 35 09.9	
	comp=Z,1μm,21.7s,baz=86,slow=35						
SEY	**Seymchan**	**24.47**	**309** *c*	*e*P	**P**	**12 26 55.9**	**+0.2**
PGC	**Sidney**	**24.81**	**87**	*e*P	**P**	**12 27 00.4**	**+1.6**
SKR	**Severo-Kuril's**	**25.11**	**279**	*e*P	P	12 26 54.6	-6.9
NLWA	**Neilton Lookou**	**25.18**	**90**	*e*P	**P**	**12 27 04.2**	**+1.9**
	comp=Z,68nm,1.1s						

YKW3 **Yellowknife Ar** 25.89 52 *e*P P **12 27 09.2 +0.7**
comp=Z,0.7nm,0.9s
YKA **Yellowknife Ar** 25.90 52 P P **12 27 09.3 +0.7**
YKA PcP **PcP** **12 30 37.2 +0.9**
YKA pPcP 12 30 50.5
YKA ScP **ScP** **12 34 13.0 +0.6**
YKA **Yellowknife Ar** 25.90 52 P P **12 27 09.3 +0.7**
comp=Z,19nm,0.7s,baz=272,slow=8.9,SNR=56
YKA PcP **PcP** **12 30 37.2 +0.9**
comp=Z,1.5nm,0.7s,baz=291,slow=2.2,SNR=4.0
YKA pPcP 12 30 50.5
comp=Z,1.3nm,0.6s,baz=284,slow=2.1,SNR=4.0
YKA ScP **ScP** **12 34 13.0 +0.6**
comp=Z,0.8nm,0.9s,baz=264,slow=2.0,SNR=3.9
LON **Longmire** 26.72 89 *e*P P **12 27 18.4 +2.1**
LON pmax pmax
comp=Z,27nm,1.2s
LON **Longmire** 26.72 89 *e*P P **12 27 18.4 +2.1**
comp=Z,27nm,1.2s
ETW **Entiat** 27.15 87 P P **12 27 21.6 +1.4**
BROR **Big Rock Looko** 27.72 95 P P **12 27 26.6 +1.5**
KBO **Bosley Butte** 27.93 100 *e*P P **12 27 28.5 +1.4**
comp=Z,50nm,1.4s
FRIS **Frissel Point** 27.95 94 P P **12 27 30.3 +2.9**
OD2 **Odessa Site #2** 28.20 86 P P **12 27 30.6 +1.1**
HAWA **Hanford** 28.24 88 *e*P P **12 27 31.2 +1.4**
comp=Z,38nm,1.2s
BBOR **Butler Butte** 28.41 97 P P **12 27 33.4 +1.9**
HUMO **Hull Mountain** 28.42 98 *e*P P **12 27 33.1 +1.7**
comp=Z,10nm,0.9s
KRMB **Red Mountain** 28.55 101 *e*P P **12 27 34.9 +2.2**
comp=Z,40nm,2.1s
KTRM **Thompson Ridge** 28.61 99 P P **12 27 35.0 +1.8**
NEW **Newport** 28.69 83 *e*P P **12 27 35.0 +1.2**
NEW *e*pP **pP** **12 27 47.6 +2.8**
NEW **Newport** 28.69 83 P P **12 27 35.1 +1.2**
comp=Z,2.4nm,0.7s,baz=326,slow=11,SNR=3.2
NEW LR LR 12 37 00.5
comp=Z,1μm,21.7s,baz=291,slow=32
NEW **Newport** 28.69 83 P P **12 27 34.8 +1.0**
baz=29
KHMM **Horse Mountain** 29.07 101 *e*P P **12 27 39.4 +2.0**
comp=Z,23nm,1.0s
YBH **Yreka Blue Hor** 29.11 99 P P **12 27 39.4 +1.8**
YBH sP **sP** **12 27 52.3 -1.1**
YBH **Yreka Blue Hor** 29.11 99 P P **12 27 39.4 +1.8**
comp=Z,9.2nm,0.8s,baz=322,slow=4.6,SNR=46
YBH sP **sP** **12 27 52.3 -1.1**
comp=Z,11nm,0.8s,baz=243,slow=7.1,SNR=11
YBH LR LR 12 36 32.6
comp=Z,3μm,20.9s,baz=310,slow=31
A13A **Flathead Natio** 29.94 80 P P **12 27 45.8 +0.8**
baz=30
KCPM **Cahto Peak** 29.94 103 *e*P P **12 27 47.0 +1.9**
comp=Z,10nm,1.0s
WDC **Whiskeytown Da** 29.95 101 *e*P P **12 27 46.5 +1.5**
WDC pmax pmax
comp=Z,14nm,1.1s
WDC **Whiskeytown Da** 29.95 101 *e*P P **12 27 46.5 +1.5**
comp=Z,14nm,1.1s
WALA **Waterton Lakes** 30.16 80 *e*P P **12 27 48.0 +1.0**
LTIM **Timbered Crate** 30.17 99 P P **12 27 49.2 +2.2**
B13A **Whitefish** 30.18 81 P P **12 27 47.9 +0.9**
baz=30
D12A **Red Ives Fores** 30.34 84 P P **12 27 49.1 +0.6**
baz=30
BMO **Blue Mountains** 30.39 89 *e*P P **12 27 49.3 +0.3**
comp=Z,17nm,1.2s
C13A **Hot Springs** 30.47 83 P P **12 27 49.9 +0.3**
baz=30
LBCM **Butte Creek Ri** 30.47 99 P P **12 27 51.3 +1.5**
A14A **Double T Ranch** 30.49 80 P P **12 27 50.4 +0.5**
baz=30,SNR=7.4
HOPS **Hopland** 30.70 104 *e*P P **12 27 53.1 +1.5**
comp=Z,41nm,1.1s
D13A **Huson** 30.84 83 P P **12 27 53.1 +0.2**
baz=31
B14A **Marquette Ranc** 30.88 80 P P **12 27 53.5 +0.2**
baz=31
A15A **Johnson Ranch,** 30.88 79 P P **12 27 53.4 +0.1**
baz=31,SNR=6.5
C14A **Swan Lake** 30.90 82 P P **12 27 53.7 +0.3**
baz=31
WVOR **Wild Horse Val** 31.04 94 *e*P P **12 27 56.2 +1.4**
WVOR pmax pmax
comp=Z,29nm,1.0s
WVOR **Wild Horse Val** 31.04 94 *e*P P **12 27 56.2 +1.4**
comp=Z,29nm,1.0s
F12A **Elk City** 31.09 86 P P **12 27 55.9 +0.7**
baz=31,SNR=7.2
MSO **Missoula** 31.28 83 *e*P P **12 27 57.3 +0.5**
comp=Z,8.7nm,1.2s
MSO *e*PcP **PcP** **12 30 49.8 -0.4**
MSO **Missoula** 31.28 83 P P **12 27 57.3 +0.5**
baz=31
SLMT **Seeley Lake** 31.32 82 *e*P P **12 27 58.0 +0.8**
comp=Z,7.0nm,0.9s
E13A **Victor** 31.34 84 P P **12 27 58.0 +0.7**
baz=31
D14A **Greenough** 31.40 83 P P **12 27 58.5 +0.6**
baz=31
G12A **Big Creek, Yel** 31.40 87 P P **12 27 58.5 +0.5**
baz=31
A16A **West Butte Ran** 31.55 78 P P **12 27 59.2 0.0**
baz=31
C15A **Salmond Ranch,** 31.56 81 P P **12 28 00.6 +1.3**
baz=31,SNR=16
F13A **Darby** 31.61 85 P P **12 28 00.3 +0.6**
baz=32
CHMT **Chamberlain Mo** 31.63 83 *e*P P **12 28 00.8 +0.7**
BEKR **Beckworth** 31.68 100 *e*P P **12 28 01.5 +1.0**
comp=Z,6.6nm,0.9s
BEKR *e*PcP **PcP** **12 30 51.7 +0.2**
D15A **Lincoln** 31.99 82 P P **12 28 03.8 +0.7**
baz=32
H12A **Diamond D Ranc** 32.00 88 P P **12 28 04.0 +0.7**
baz=32
C16A **Fuhringer Ranc** 32.04 80 P P **12 28 04.3 +0.8**
baz=32,SNR=5.1
A17A **Triple J Farms** 32.07 78 P P **12 28 04.2 +0.5**
baz=32,SNR=6.4
MFID **Camas Ranch** 32.09 90 P P **12 28 05.0 +1.0**
baz=32,SNR=9.3
F14A **Wisdom** 32.16 85 P P **12 28 05.4 +0.8**
baz=32
E15A **Deer Lodge** 32.25 83 P P **12 28 05.8 +0.4**
baz=32
I12A **Atlanta** 32.28 89 P P **12 28 06.4 +0.7**
baz=32
B17A **L&G Farms, Che** 32.34 79 P P **12 28 05.6 -0.4**
baz=32
WCN **Washoe City** 32.40 100 *e*P P **12 28 08.4 +1.6**
WCN pmax pmax
comp=Z,21nm,1.1s
WCN **Washoe City** 32.40 100 *e*P P **12 28 08.3 +1.6**
comp=Z,21nm,1.1s
A18A **Metzger Ranch,** 32.57 77 P P **12 28 08.1 0.0**
baz=32
KUR **Kuril'sk** 32.61 275 *i*P P 12 28 05.5 -2.8
KUR *i*S **S** **12 33 20.6 -0.6**
KUR *i*SS **SnSn** **12 35 26.8 +9.1**
KUR pmax pmax
comp=Z,14nm,1.5s
KUR pmax pmax
comp=Z,61nm,1.5s
KUR pmax pmax
comp=E,12nm,1.5s
KUR MLR MLR
comp=E,478nm,23.0s
KUR MLR MLR
comp=Z,438nm,23.0s
F15A **Butte** 32.66 84 P P **12 28 09.0 0.0**
baz=32
LRM **Limekiln Ridge** 32.69 84 *e*P P **12 28 09.3 -0.1**
comp=Z,74nm,1.3s
LRM *e*PcP **PcP** **12 30 54.8 +0.6**
C17A **Wharram Farm,** 32.70 80 P P **12 28 09.4 +0.2**
baz=33
E16A **East Helena** 32.75 82 P P **12 28 10.2 +0.4**
baz=33
HLID **Hailey** 32.84 89 *e*P P **12 28 11.1 +0.5**
comp=Z,50nm,1.8s
HLID *e*PcP PcP 12 30 59.8 +5.2
HLID *e*ScP **ScP** **12 34 37.6 +2.5**
HLID **Hailey** 32.84 89 ⇓P P **12 28 11.1 +0.5**
baz=33,SNR=6.7
DLMT **Dillon** 32.86 85 *e*P P **12 28 10.6 -0.2**
comp=Z,26nm,1.4s
DLMT *e*PcP **PcP** **12 30 55.2 +0.6**
DLMT *e*ScP **ScP** **12 34 36.5 +1.3**
B18A **Beardsley Farm** 32.87 78 P P **12 28 10.8 +0.1**
baz=33
CMB **Columbia Colle** 32.89 102 *e*P P **12 28 10.9 -0.1**
CMB *e* 12 30 53.5
CMB pmax pmax
comp=Z,13nm,1.0s
CMB **Columbia Colle** 32.89 102 *e*P P **12 28 10.9 -0.1**
comp=Z,13nm,1.0s
CMB *e*PcP **PcP** **12 30 53.5 -1.2**
D17A **Six Diamond Ra** 32.99 81 ⇓P P **12 28 12.1 +0.2**
baz=33,SNR=5.3
MCMT **McKenzie Canyo** 33.02 86 *e*P P **12 28 11.6 -0.6**
MCMT *e*ScP **ScP** **12 34 39.2 +3.3**
G15A **Dillon** 33.03 85 P P **12 28 12.8 +0.4**
baz=33
EGMT **Eagleton** 33.08 79 *e*P P **12 28 12.8 +0.3**
comp=Z,62nm,1.6s
EGMT **Eagleton** 33.08 79 P P **12 28 12.8 +0.3**
baz=33,SNR=5.9
BMN **Battle Mountai** 33.13 96 *e*P P **12 28 14.4 +1.3**
BMN pmax pmax
comp=Z,15nm,0.9s
BMN **Battle Mountai** 33.13 96 *e*P P **12 28 14.4 +1.3**
comp=Z,15nm,0.9s
SAO **San Andreas Ge** 33.17 105 *e*P P **12 28 14.2 +0.8**
SAO *e*PP **pP** **12 28 25.6 +1.2**
SAO **San Andreas Ge** 33.17 105 *e*P P **12 28 14.2 +0.8**
SAO *e*pP **pP** **12 28 25.6 +1.2**
I14A **Mackay** 33.18 88 P P **12 28 14.2 +0.6**
baz=33
A19A **Klindworth Far** 33.20 77 P P **12 28 13.9 +0.4**
baz=33
TIXI **Tiksi** 33.22 327 ⇓*e*P P **12 28 13.0 -0.4**
TIXI pmax pmax
comp=Z,17nm,1.0s
H15A **Lima** 33.26 86 P P **12 28 14.7 +0.4**
baz=33
BOZ **Bozeman (W)** 33.27 84 *e*P P **12 28 15.2 +0.9**
BOZ *e* 12 30 56.1
BOZ pmax pmax
comp=Z,14nm,1.4s
BOZ **Bozeman (W)** 33.27 84 *e*P P **12 28 15.2 +0.9**
comp=Z,14nm,1.4s
BOZ *e*PcP **PcP** **12 30 56.1 +0.4**
E17A **Martinsdale** 33.27 82 P P **12 28 15.0 +0.7**
baz=33
B19A **Brinkman Farms** 33.32 78 P P **12 28 15.0 +0.4**
baz=33,SNR=12
G16A **Moss Hill, Enn** 33.40 84 P P **12 28 16.1 +0.6**
baz=33,SNR=6.5
D18A **Linhart Farms,** 33.48 80 P P **12 28 17.7 +1.6**
baz=33,SNR=5.1
C19A **Slack Wire Ran** 33.63 79 P P **12 28 18.5 +1.1**
baz=34,SNR=28
A20A **Cobblestone Ra** 33.69 76 P P **12 28 18.5 +0.7**
baz=34
F17A **Fitzpatrick Pl** 33.69 83 P P **12 28 18.4 +0.4**
baz=34
E18A **Harlowton** 33.76 81 P P **12 28 19.9 +1.3**
baz=34,SNR=5.9
NVAR **Mina Array Bea** 33.82 100 P P **12 28 20.3 +1.0**
NVAR ScP **ScP** **12 34 40.4 +1.6**
NVAR **Mina Array Bea** 33.82 100 P P **12 28 20.3 +1.0**
comp=Z,11nm,0.8s,baz=296,slow=8.8,SNR=89
NVAR ScP **ScP** **12 34 40.4 +1.6**
comp=Z,1.5nm,1.1s,baz=282,slow=4.2,SNR=4.4
NVAR LR LR 12 39 38.3
comp=Z,2μm,20.5s,baz=56,slow=32
QLMT **Earthquake Lak** 33.84 85 *e*P P **12 28 20.3 +0.9**
B20A **Solberg Farm,** 33.86 77 P P **12 28 19.9 +0.6**
baz=34
H16A **Russell Place,** 34.02 85 P P **12 28 21.8 +0.8**
baz=34,SNR=5.8
D19A **Cripps Ranch,** 34.03 80 P P **12 28 22.1 +1.3**
baz=34,SNR=8.9
ELK **Elko** 34.09 94 *e*P P **12 28 22.6 +1.1**
comp=Z,25nm,1.0s
A21A **Bergtoll Ranch** 34.20 76 P P **12 28 23.0 +0.8**
baz=34
YMR **Madison River** 34.21 85 *e*P P **12 28 24.0 +1.4**
comp=Z,29nm,1.1s
F18A **Big Timber** 34.24 82 P P **12 28 23.8 +1.1**
baz=34
C20A **Veseth Ranch,** 34.24 78 P P **12 28 23.4 +0.8**
baz=34,SNR=10
FFC **Flin Flon** 34.25 64 *e*P P **12 28 23.3 +0.7**
FFC pmax pmax
comp=Z,14nm,0.9s
FFC **Flin Flon** 34.25 64 *e*P P **12 28 23.3 +0.7**
comp=Z,14nm,0.9s
FFC **Flin Flon** 34.25 64 P P **12 28 23.7 +1.1**
comp=Z,85nm,1.0s,SNR=7.9
GCMT **Greycliff** 34.33 82 *e*P P **12 28 23.5 0.0**
YFT **Old Faithful** 34.41 85 *e*P P **12 28 25.6 +1.3**
comp=Z,34nm,1.3s
B21A **Ellsworth Farm** 34.43 76 P P **12 28 24.7 +0.5**
baz=34
E19A **Rath Farm, Rou** 34.47 81 P P **12 28 25.9 +1.2**
baz=34,SNR=7.1
YUK **Yuzh-Kuril'sk** 34.47 274 *i*P P **12 28 22.6 -1.9**
YUK *i* 12 29 36.5
YUK *i*SSS SSS 12 36 36.7
YUK pmax pmax
comp=N,44nm,1.5s
YUK pmax pmax
comp=Z,190nm,1.5s
YUK pmax pmax
comp=E,125nm,1.5s
YUK MLR MLR
comp=E,313nm,22.0s
YUK MLR MLR
comp=Z,578nm,22.0s
D20A **Manuel Ranch,** 34.50 79 ⇑P P **12 28 26.0 +1.2**
baz=34,SNR=14
LKWY **Lake** 34.60 84 *e*P P **12 28 28.2 +2.2**
LKWY pmax pmax
comp=Z,19nm,1.2s
LKWY **Lake** 34.60 84 *e*P P **12 28 28.2 +2.2**
comp=Z,19nm,1.2s
YSS **Yuzh-Sakhalins** 34.63 281 *e*P P **12 28 26.2 +0.3**
YSS pmax pmax
comp=Z,30nm,1.0s
YSS MLR MLR
comp=Z,1μm,20.0s
YSS MLR MLR
comp=E,1μm,19.0s
IMW **Indian Meadow** 34.67 86 *e*P P **12 28 28.3 +1.7**
comp=E,18nm,1.2s
C21A **Desert Coulee** 34.70 77 P P **12 28 27.7 +1.1**
baz=35
F19A **Roth Farm, Mol** 34.71 82 P P **12 28 27.9 +1.1**
baz=35
RCTC **Rector, Farmer** 34.75 103 P P **12 28 28.3 +1.3**
baz=35
A22A **Carney Farms,** 34.77 75 P P **12 28 28.1 +1.0**
baz=35,SNR=7.9
RRI2 **Red Ridge** 34.77 87 *e*P P **12 28 26.9 -0.6**
comp=E,52nm,1.8s
E20A **Meyer Farm, Mu** 34.82 80 P P **12 28 28.9 +1.2**
baz=35,SNR=7.3
HVU **Hansel Valley** 34.88 90 *e*P P **12 28 29.5 +1.2**
HVU pmax pmax
comp=Z,18nm,1.0s
HVU **Hansel Valley** 34.88 90 *e*P P **12 28 29.5 +1.2**
comp=Z,18nm,1.0s
TPAW **Teton Pass** 34.91 86 *e*P P **12 28 29.4 +0.7**
RLMT **Red Lodge** 34.94 83 *e*P P **12 28 28.9 0.0**
comp=Z,22nm,1.0s
YAK **Yakutsk** 34.97 310 *c*⇓P P **12 28 27.5 -1.1**
YAK *e*PP **pP** **12 28 37.6 -2.0**
YAK *e* 12 30 59.9
YAK *e*S **S** **12 33 57.1 -0.1**
YAK *e*SSS SSS 12 36 38.3
YAK *e* 12 38 46.1
YAK pmax pmax
comp=Z,29nm,1.0s
YAK pmax pmax
comp=E,13nm,1.1s
YAK pmax pmax
comp=N,4.0nm,1.3s
YAK pmax pmax
comp=Z,30nm,1.4s
YAK pmax pmax
comp=N,7.0nm,1.4s
YAK pmax pmax
comp=E,26nm,1.4s
YAK smax smax
comp=E,537nm,25.2s
YAK MLR MLR
comp=Z,2μm,20.0s
YAK MLR MLR
comp=E,1μm,20.0s
YAK MLR MLR
comp=N,342nm,19.0s
B22A **Reddig Ranch S** 35.08 76 P P **12 28 30.9 +1.0**
baz=35,SNR=5.8
D21A **La Casta Ranch** 35.17 78 P P **12 28 31.7 +1.1**
baz=35
VES **Vestal, Richgr** 35.17 104 P P **12 28 31.3 +0.7**
baz=35,SNR=8.6
F20A **Billings** 35.20 81 P P **12 28 31.4 +0.4**
baz=35
AHID **Auburn Hatcher** 35.25 87 *e*P P **12 28 31.9 +0.3**
comp=N,11nm,0.9s
AHID *e*pP **pP** **12 28 45.3 +2.7**
CWC **Cottonwood Cre** 35.32 102 P P **12 28 33.6 +1.4**
baz=35,SNR=10.0
GRAC **Grapevine Rang** 35.34 100 ⇓P P **12 28 33.8 +1.6**
baz=35,SNR=9.3
H19A **Powell** 35.36 83 P P **12 28 33.7 +1.3**
baz=35
SPUT **South Promonto** 35.36 91 *e*P P **12 28 33.8 +1.3**
PKM **Peak Mountain** 35.43 105 P P **12 28 34.4 +1.2**
baz=35,SNR=8.9
R11A **Troy Canyon, C** 35.45 97 ⇑P P **12 28 34.4 +1.0**
baz=35,SNR=50
G20A **Bridger** 35.49 82 P P **12 28 34.2 +0.7**
baz=35,SNR=5.7
B23A **Brockton** 35.57 75 P P **12 28 34.7 +0.7**
baz=35
D22A **Cohagen** 35.59 78 P P **12 28 35.6 +1.3**
baz=35,SNR=16
ISA **Isabella** 35.65 103 *e*P P **12 28 36.0 +1.1**
ISA pmax pmax
comp=Z,21nm,1.1s
ISA **Isabella** 35.65 103 *e*P P **12 28 36.0 +1.1**
comp=Z,21nm,1.1s
ISA **Isabella** 35.65 103 P P **12 28 35.7 +0.9**
baz=36,SNR=6.4
HWUT **Hardware Ranch** 35.69 89 *e*P P **12 28 35.9 +0.6**
comp=Z,20nm,1.3s
C23A **Lambert** 35.81 76 P P **12 28 37.2 +1.2**
baz=36,SNR=20
ARVC **Arvin** 35.83 104 P P **12 28 36.8 +0.5**
baz=36
DUG **Dugway** 35.86 92 *e*P P **12 28 37.8 +1.1**
DUG pmax pmax
comp=Z,55nm,1.3s
DUG **Dugway** 35.86 92 *e*P P **12 28 37.8 +1.1**
comp=Z,55nm,1.3s
DUG **Dugway** 35.86 92 P P **12 28 37.9 +1.1**
baz=36,SNR=14
A24A **Westby** 35.88 74 P P **12 28 37.9 +1.2**
baz=36,SNR=21
MPMC **Manual Prospec** 35.93 102 P P **12 28 38.9 +1.5**
baz=36,SNR=32
FURC **Furnace Creek,** 36.00 101 P P **12 28 39.3 +1.5**
baz=36,SNR=26
DGMT **Dagmar** 36.01 75 *e*P P **12 28 38.9 +1.1**
comp=Z,31nm,0.9s
DGMT **Dagmar** 36.01 75 P P **12 28 38.6 +0.8**
baz=36
H20A **Greybull** 36.04 83 P P **12 28 38.7 +0.5**
baz=36
E22A **Miles City** 36.12 79 P P **12 28 39.5 +0.8**
baz=36
D23A **Lindsay** 36.13 77 P P **12 28 39.8 +0.9**
baz=36,SNR=6.6
BW06 **Boulder Array** 36.16 86 P P **12 28 39.1 -0.2**
comp=Z,27nm,1.5s
PDAR **Pinedale Array** 36.16 86 P P **12 28 39.6 +0.2**
PDAR pP **pP** **12 28 50.9 +0.5**
PDAR **Pinedale Array** 36.16 86 P P **12 28 39.6 +0.2**
comp=Z,0.8nm,0.7s,baz=354,slow=3.0,SNR=6.2
PDAR pP **pP** **12 28 50.9 +0.5**
comp=Z,3.0nm,0.8s,baz=306,slow=5.7,SNR=7.6
PDAR LR LR 12 41 38.2
comp=Z,568nm,19.4s,baz=189,slow=33
LRMC **Laurel Mountai** 36.23 103 P P **12 28 41.0 +1.2**
baz=36
OSI **Osito Adit** 36.26 105 *e*P P **12 28 41.8 +1.7**
comp=Z,17nm,0.8s
OSI **Osito Adit** 36.26 105 P P **12 28 41.4 +1.4**
baz=36
I20A **Worland** 36.28 84 P P **12 28 41.5 +1.3**
baz=36
M17A **Scullys Gap (B** 36.30 89 P P **12 28 41.1 +0.5**
baz=36
ASAJ **Asahikawa** 36.33 277 *e*P P **12 28 41.3 +0.8**
comp=Z,63nm,1.2s
ASAJ **Asahikawa** 36.33 277 LR LR 12 42 32.9
comp=Z,579nm,21.7s,baz=215,slow=34
C24A **Savage** 36.39 76 P P **12 28 43.0 +1.9**
baz=36,SNR=31
L18A **Fontenelle, Gr** 36.39 88 P P **12 28 42.0 +0.7**
baz=36
JLU **Jordanelle** 36.40 91 *e*P P **12 28 41.9 +0.4**
comp=Z,54nm,1.7s
JLU *e*PcP **PcP** **12 31 05.1 +0.1**
E23A **Ismay** 36.45 78 P P **12 28 43.2 +1.6**
baz=36,SNR=13
EDW2 **Edwards Air Fo** 36.48 104 P P **12 28 42.5 +0.5**
baz=36
G22A **Birney** 36.61 81 P P **12 28 43.6 +0.6**
baz=36
DAU **Daniels Canyon** 36.63 91 *e*P P **12 28 42.6 -0.9**
DAU **Daniels Canyon** 36.63 91 *e*P P **12 28 42.6 -0.9**
J20A **Shoshoni** 36.66 84 P P **12 28 44.6 +1.0**
baz=36
MPU **Maple Canyon** 36.66 92 *e*P P **12 28 44.4 +0.7**
comp=Z,39nm,1.5s
D24A **Glendive** 36.67 77 P P **12 28 45.6 +2.2**
baz=36,SNR=41
L19A **Farson** 36.68 87 P P **12 28 44.1 +0.3**
baz=36
SHOC **Shoshone** 36.74 101 P P **12 28 45.6 +1.5**
baz=37,SNR=8.7
F23A **Volborg** 36.83 79 P P **12 28 45.8 +0.9**
baz=37,SNR=6.5
I21A **Big Trails, Te** 36.85 83 P P **12 28 45.5 +0.3**
baz=37
GSC **Goldstone** 36.86 102 *e*P P **12 28 46.2 +1.0**
GSC pmax pmax
comp=Z,40nm,1.2s
GSC **Goldstone** 36.86 102 *e*P P **12 28 46.2 +1.0**
comp=Z,40nm,1.2s
GSC **Goldstone** 36.86 102 P P **12 28 46.3 +1.0**
baz=37,SNR=13
MWC **Mount Wilson** 36.92 104 *e*P P **12 28 47.2 +1.3**
MWC pmax pmax
comp=Z,22nm,1.0s
MWC **Mount Wilson** 36.92 104 *e*P P **12 28 47.2 +1.3**
comp=Z,22nm,1.0s
K20A **Yellowstone Ra** 36.93 86 P P **12 28 45.7 -0.2**
baz=37
H22A **Clearmont** 36.94 82 P P **12 28 46.3 +0.5**
baz=37
E24A **Baker** 36.99 77 P P **12 28 47.7 +1.5**
baz=37,SNR=8.7
J21A **Lysite** 37.04 84 P P **12 28 47.0 +0.2**
baz=37
ARUT **Antelope Range** 37.08 96 *e*P P **12 28 48.1 +0.9**
ARUT pmax pmax
comp=Z,43nm,1.2s
ARUT **Antelope Range** 37.08 96 *e*P P **12 28 48.1 +0.9**
comp=Z,43nm,1.2s
BFSC **Mount Baldy Ra** 37.13 104 P P **12 28 49.0 +1.4**
baz=37,SNR=8.5
G23A **Biddle** 37.14 80 P P **12 28 48.3 +0.8**
baz=37,SNR=6.0
TUQ **Turquoise Moun** 37.27 101 P P **12 28 49.7 +1.0**
baz=37
ERM **Erimo** 37.27 274 *ce*P P **12 28 48.9 +0.4**
ERM pmax pmax
comp=Z,50nm,1.2s
I22A **9 Mile Ranch,** 37.27 83 P P **12 28 50.2 +1.5**
baz=37
CCUT **Cedar City** 37.29 96 *e*P P **12 28 49.8 +0.8**
comp=Z,51nm,1.5s
CCUT *e*S **S** **12 34 38.4 +4.6**
F24A **Ekalaka** 37.31 79 P P **12 28 50.2 +1.2**
baz=37,SNR=7.4

MVU	**Marysvale**	**37.32**	**94**	*e*P	**P**	**12 28 50.5**	**+1.3**
	comp=Z,19nm,1.0s						
BBRC	**Big Bear Solar**	**37.54**	**103**	P	**P**	**12 28 52.3**	**+1.1**
	baz=37						
J22A	**Midwest**	**37.56**	**83**	P	**P**	**12 28 51.9**	**+0.7**
	baz=37						
K21A	**Alcova**	**37.59**	**85**	P	**P**	**12 28 51.5**	**+0.1**
	baz=37						
Q16A	**Castle Valley**	**37.65**	**93**	P	**P**	**12 28 53.1**	**+1.0**
	baz=38,SNR=14						
MURC	**Murrieta**	**37.86**	**104**	P	**P**	**12 28 54.0**	**+0.3**
	baz=38						
H24A	**Dirks Ranch, A**	**37.89**	**80**	P	**P**	**12 28 53.9**	**0.0**
	baz=38						
GMRC	**Granite Mounta**	**37.89**	**101**	P	**P**	**12 28 55.2**	**+1.2**
	baz=38,SNR=9.5						
SRU	**San Rafael**	**37.90**	**92**	P	**P**	**12 28 55.1**	**+0.9**
	baz=38,SNR=18						
L21A	**Rawlins**	**37.93**	**86**	P	**P**	**12 28 54.1**	**-0.3**
	baz=38,SNR=7.3						
O19A	**Miners Draw (B**	**37.95**	**89**	P	**P**	**12 28 54.8**	**+0.2**
	baz=38,SNR=8.4						
LDFC	**Landfair**	**37.99**	**101**	*e*P	**P**	**12 28 56.2**	**+1.3**
	comp=Z,47nm,0.8s						
K22A	**Casper**	**38.00**	**84**	P	**P**	**12 28 55.2**	**+0.3**
	baz=38						
N20A	**Spence Gulch,**	**38.12**	**88**	P	**P**	**12 28 56.1**	**+0.1**
	baz=38						
M21A	**Separation Pea**	**38.15**	**86**	P	**P**	**12 28 55.9**	**-0.4**
	baz=38						
HABR	**Khabarovsk**	**38.18**	**288***c*	*i*P	**P**	**12 28 55.6**	**-0.5**
HABR				*e**PP	**pP**	**12 29 06.8**	**-0.5**
HABR						12 30 23.4	
HABR				PPP	PPP	12 30 43.6	
HABR				*e*		12 31 09.3	
HABR				*e*S	**S**	**12 34 47.1**	**+0.6**
HABR				*e*		12 34 58.4	
HABR				SS	**SS**	**12 37 34.6**	**+0.4**
HABR				*e*		12 39 03.3	
HABR				pmax	pmax		
	comp=Z,104nm,1.6s						
HABR				pmax	pmax		
	comp=N,33nm,1.5s						
HABR				pmax	pmax		
	comp=E,33nm,1.2s						
HABR				MLR	MLR		
	comp=E,1μm,22.0s						
HABR				MLR	MLR		
	comp=N,366nm,22.0s						
HABR				MLR	MLR		
	comp=Z,1μm,20.0s						
BELC	**Belle Mtn. Jos**	**38.25**	**103**	P	**P**	**12 28 57.7**	**+0.6**
	baz=38,SNR=17						
PFO	**Pinyon Flat Ob**	**38.28**	**104**	P	**P**	**12 28 58.0**	**+0.7**
	comp=Z,58nm,0.6s,SNR=5.8						
PFO	**Pinyon Flat Ob**	**38.28**	**104**	*e*P	**P**	**12 28 57.9**	**+0.7**
	comp=Z,18nm,1.0s						
PFO				*e*PcP	**PcP**	**12 31 11.0**	**+0.3**
PFO	**Pinyon Flat Ob**	**38.28**	**104**	P	**P**	**12 28 58.1**	**+0.7**
	baz=38,SNR=6.3						
109C	**Camp Elliot, M**	**38.44**	**105**	P	**P**	**12 28 59.4**	**+0.9**
	baz=38						
P19A	**Cripple Cowboy**	**38.47**	**90**	P	**P**	**12 28 59.4**	**+0.4**
	baz=38						
RSSD	**Black Hills**	**38.55**	**81**	*e*P	**P**	**12 28 59.9**	**+0.3**
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
RSSD	**Black Hills**	**38.55**	**81**	*e*P	**P**	**12 28 59.9**	**+0.3**
	comp=Z,10nm,0.8s						
O20A	**White River Ci**	**38.58**	**89**	P	**P**	**12 29 00.1**	**+0.3**
	baz=38,SNR=10						
N21A	**Black Mountain**	**38.60**	**87**	P	**P**	**12 29 00.1**	**0.0**
	baz=38,SNR=5.2						
IRM	**Iron Mountain**	**38.62**	**102**	P	**P**	**12 29 01.2**	**+1.1**
	baz=38,SNR=13						
U15A	**North Rim**	**38.68**	**96**	P	**P**	**12 29 02.1**	**+1.3**
	baz=39,SNR=15						
W13A	**Hualapai Mount**	**38.68**	**99**	P	**P**	**12 29 02.0**	**+1.3**
	baz=39,SNR=18						
L23A	**Garrett**	**38.81**	**84**	P	**P**	**12 29 01.7**	**-0.1**
	baz=39						
BC3	**Big Chuckawall**	**38.81**	**103**	P	**P**	**12 29 02.2**	**+0.4**
	baz=39						
MONP	**Monument Peak**	**38.82**	**104**	P	**P**	**12 29 03.3**	**+1.3**
	baz=39,SNR=5.7						
BAR	**Barrett**	**38.84**	**105**	*e*P	**P**	**12 29 02.7**	**+0.9**
	comp=Z,28nm,1.1s						
MDND	**Maddock**	**38.94**	**73**	P	**P**	**12 29 04.0**	**+1.5**
	baz=39,SNR=18						
PDMCI	**Parker Dam,Lak**	**39.10**	**101**	P	**P**	**12 29 04.7**	**+0.7**
	baz=39,SNR=5.3						
S18A	**Hurst Farm, Bl**	**39.16**	**93**	P	**P**	**12 29 04.9**	**+0.1**
	baz=39,SNR=19						
N22A	**Wattenberg Ran**	**39.19**	**86**	P	**P**	**12 29 05.7**	**+0.6**
	baz=39						
PV10	**Paradox Valley**	**39.26**	**91**	*e*P	**P**	**12 29 06.3**	**+0.7**
Y12C	**Blythe**	**39.28**	**102**	P	**P**	**12 29 06.7**	**+1.2**
	baz=39,SNR=6.8						
CLNS	**Chul'man**	**39.29**	**304**	*e*P	**P**	**12 29 06.2**	**+0.8**
CLNS				pmax	pmax		
	comp=Z,13nm,1.3s						
CLNS				pmax	pmax		
	comp=E,10.0nm,1.4s						
CLNS				pmax	pmax		
	comp=N,6.0nm,1.3s						
Q20A	**Ridgley Place,**	**39.31**	**90**	P	**P**	**12 29 05.8**	**-0.1**
	baz=39						
PV04	**Paradox Valley**	**39.33**	**91**	*e*P	**P**	**12 29 06.2**	**+0.1**
N23A	**Red Feather La**	**39.43**	**86**	P	**P**	**12 29 07.3**	**+0.2**
	baz=39						
P21A	**Newcastle**	**39.44**	**89**	P	**P**	**12 29 07.4**	**+0.3**
	baz=39						
O22A	**Kremmling**	**39.55**	**87**	P	**P**	**12 29 08.2**	**+0.1**
	baz=39						
KLR	**Kul'dur**	**39.60**	**291**	*e*P	P	12 29 03.0	-5.0
KLR				pmax	pmax		
	comp=Z,43nm,1.4s						
KLR				MLR	MLR		
	comp=Z,1μm,13.0s						
GLA	**Glamis**	**39.61**	**103**	*e*P	**P**	**12 29 09.9**	**+1.5**
GLA				pmax	pmax		
	comp=Z,30nm,1.0s						
GLA	**Glamis**	**39.61**	**103**	*e*P	**P**	**12 29 09.9**	**+1.5**
	comp=Z,30nm,1.0s						
GLA	**Glamis**	**39.61**	**103**	P	**P**	**12 29 09.3**	**+0.9**
	baz=40						
ULM	**Lac du Bonnet**	**39.68**	**68**	*e*P	**P**	**12 29 09.3**	**+0.7**
ULM				pP	**pP**	**12 29 19.9**	**0.0**
ULM	**Lac du Bonnet**	**39.68**	**68**	P	**P**	**12 29 08.7**	**0.0**
	comp=Z,45nm,0.8s,baz=303,slow=8.6,SNR=46						
ULM				pP	**pP**	**12 29 19.9**	**0.0**
	comp=Z,57nm,0.9s,baz=308,slow=7.6,SNR=12						
ULM				LR	LR	12 45 12.3	
	comp=Z,620nm,19.9s,baz=147,slow=36						
PV01	**Paradox Valley**	**39.70**	**91**	*e*P	**P**	**12 29 09.5**	**+0.3**
R20A	**Redvale**	**39.77**	**91**	P	**P**	**12 29 10.1**	**+0.3**
	baz=40						
Q21A	**Lamborn Mesa,**	**39.81**	**90**	P	**P**	**12 29 10.4**	**+0.2**
	baz=40						
WUAZ	**Wupatki**	**39.85**	**97**	P	**P**	**12 29 11.6**	**+1.1**
	baz=40,SNR=11						
O23A	**Lake Granby, G**	**39.89**	**87**	P	**P**	**12 29 11.8**	**+0.9**
	baz=40,SNR=5.4						
S20A	**Disappointment**	**40.02**	**91**	P	**P**	**12 29 12.2**	**+0.2**
	baz=40,SNR=9.0						
ISCO	**Idaho Springs**	**40.33**	**87**	*e*P	**P**	**12 29 15.1**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ISCO	**Idaho Springs**	**40.33**	**87**	*e*P	**P**	**12 29 15.1**	**+0.5**
	comp=Z,3.6nm,0.8s						
MVCO	**Mesa Verde**	**40.36**	**92**	*e*P	**P**	**12 29 15.0**	**+0.3**
	comp=Z,24nm,1.1s						
MVCO	**Mesa Verde**	**40.36**	**92**	P	**P**	**12 29 15.1**	**+0.3**
	baz=40						
Z14A	**Wintersburg**	**40.47**	**100**	P	**P**	**12 29 16.6**	**+1.2**
	baz=40,SNR=5.3						
S21A	**Coal Bank Pass**	**40.47**	**91**	P	**P**	**12 29 16.4**	**+0.6**
	baz=40,SNR=7.1						
X16A	**Lo Mia Camp, P**	**40.58**	**98**	P	**P**	**12 29 17.9**	**+1.4**
	baz=40,SNR=21						
J28A	**Allard Ranch,**	**40.59**	**79**	P	**P**	**12 29 16.9**	**+0.5**
	baz=40						
R22A	**Saguache, Gunn**	**40.70**	**90**	P	**P**	**12 29 18.1**	**+0.5**
	baz=41						
AGMN	**Agassiz Nation**	**40.76**	**70**	*e*P	**P**	**12 29 17.6**	**-0.1**
	comp=Z,74nm,0.9s						
Q23A	**Hartsel**	**40.79**	**88**	P	**P**	**12 29 19.3**	**+1.0**
	baz=41,SNR=6.3						
S22A	**4UR Ranch, Cre**	**40.98**	**90**	P	**P**	**12 29 20.5**	**+0.6**
	baz=41						
O25A	**Wiggins**	**41.00**	**85**	P	**P**	**12 29 20.8**	**+0.9**
	baz=41						
BRSD	**Miller**	**41.28**	**77**	P	**P**	**12 29 22.6**	**+0.6**
	baz=41,SNR=6.1						
V20A	**Brimhall**	**41.35**	**94**	P	**P**	**12 29 23.2**	**+0.3**
	baz=41						
X18A	**Snowflake**	**41.37**	**96**	P	**P**	**12 29 24.1**	**+1.1**
	baz=41,SNR=9.4						
U21A	**Nageezi**	**41.39**	**92**	P	**P**	**12 29 23.9**	**+0.7**
	baz=41,SNR=19						
T22A	**Edith**	**41.43**	**91**	P	**P**	**12 29 24.8**	**+1.2**
	baz=41,SNR=7.2						
K29A	**Lazy Trails An**	**41.53**	**80**	P	**P**	**12 29 24.7**	**+0.6**
	baz=41						
214A	**Organ Pipe Nat**	**41.57**	**102**	P	**P**	**12 29 25.5**	**+1.0**
	baz=42						
R24A	**Sanders Place,**	**41.66**	**88**	P	**P**	**12 29 25.8**	**+0.4**
	baz=42						
W20A	**Ramah**	**41.80**	**95**	P	**P**	**12 29 27.2**	**+0.7**
	baz=42,SNR=6.8						
P26A	**Davis Ranch, A**	**41.81**	**86**	P	**P**	**12 29 27.6**	**+1.1**
	baz=42						
U22A	**Llaves**	**41.89**	**92**	P	**P**	**12 29 27.8**	**+0.4**
	baz=42						
T23A	**Casias Ranch,**	**41.92**	**90**	P	**P**	**12 29 28.1**	**+0.5**
	baz=42						
S24A	**Houchin Ranch,**	**41.99**	**89**	P	**P**	**12 29 28.7**	**+0.4**
	baz=42						
Q26A	**Hugo**	**42.13**	**86**	P	**P**	**12 29 29.2**	**0.0**
	baz=42						
V22A	**San Miguel Ran**	**42.18**	**92**	P	**P**	**12 29 29.9**	**+0.2**
	baz=42						
R25A	**Fountain Ranch**	**42.20**	**88**	P	**P**	**12 29 29.6**	**-0.2**
	baz=42						
X20A	**Quemado**	**42.21**	**95**	P	**P**	**12 29 31.1**	**+1.2**
	baz=42,SNR=5.3						
U23A	**El Rito**	**42.31**	**91**	P	**P**	**12 29 31.6**	**+0.9**
	baz=42,SNR=17						
USRK	**Ussuriysk Arra**	**42.39**	**284**	P	**P**	**12 29 29.8**	**-1.2**
	comp=Z,2.4nm,0.7s,baz=24,slow=9.5,SNR=6.0						
USRK				PcP	**PcP**	**12 31 22.7**	**-0.9**
	comp=Z,0.7nm,0.4s,baz=64,slow=4.5,SNR=5.2						
USRK				LR	LR	12 47 54.3	
	comp=Z,1μm,20.1s,baz=53,slow=37						
S25A	**Robets Cordova**	**42.44**	**88**	P	**P**	**12 29 31.6**	**-0.1**
	baz=42						
TUC	**Tucson**	**42.48**	**100**	*e*P	**P**	**12 29 32.8**	**+0.8**
TUC				pmax	pmax		
	comp=Z,144nm,1.3s						
TUC	**Tucson**	**42.48**	**100**	*e*P	**P**	**12 29 32.8**	**+0.8**
	comp=Z,144nm,1.3s						
R26A	**Arlington**	**42.59**	**87**	P	**P**	**12 29 32.9**	**+0.1**
	baz=42						
X21A	**Alamocita Cree**	**42.69**	**95**	P	**P**	**12 29 35.3**	**+1.4**
	baz=43,SNR=19						
V23A	**Ortiz Mt. (NFS**	**42.72**	**92**	P	**P**	**12 29 34.9**	**+0.8**
	baz=43						
Y20A	**Horse Springs,**	**42.73**	**96**	P	**P**	**12 29 35.2**	**+1.0**
	baz=43,SNR=12						
U24A	**Moreno Valley**	**42.79**	**91**	P	**P**	**12 29 35.3**	**+0.6**
	baz=43						
T25A	**Trinidad**	**42.80**	**89**	P	**P**	**12 29 35.0**	**+0.3**
	baz=43						
O29A	**4D Ranch, Culb**	**42.93**	**83**	P	**P**	**12 29 36.0**	**+0.5**
	baz=43						
R27A	**Eads**	**42.98**	**87**	P	**P**	**12 29 36.3**	**+0.3**
	baz=43						
S26A	**Kim**	**43.03**	**88**	P	**P**	**12 29 36.8**	**+0.4**
	baz=43						
ECSD	**EROS Data Cent**	**43.05**	**76**	*e*P	**P**	**12 29 36.2**	**-0.2**
	comp=Z,15nm,0.6s						
Y21A	**Point of Rocks**	**43.06**	**95**	P	**P**	**12 29 38.2**	**+1.2**
	baz=43						
LAZ	**Ladron**	**43.10**	**94**	*e*P	**P**	**12 29 38.1**	**+1.0**
X22A	**Bernardo**	**43.10**	**94**	P	**P**	**12 29 37.4**	**+0.2**
	baz=43						
ANMO	**Albuquerque**	**43.12**	**93**	*e*P	**P**	**12 29 37.5**	**+0.2**
	comp=Z,13nm,1.3s						
ANMO				*e*PcP	**PcP**	**12 31 27.5**	**+1.0**
W23A	**Werner Place,**	**43.15**	**93**	P	**P**	**12 29 37.9**	**+0.4**
	baz=43						
Z20A	**Nine Sixteen R**	**43.17**	**97**	P	**P**	**12 29 38.6**	**+1.0**
	baz=43,SNR=13						
T26A	**Comanche Natio**	**43.26**	**88**	P	**P**	**12 29 38.5**	**+0.1**
	baz=43						
V24A	**Rampart Ranch,**	**43.27**	**91**	P	**P**	**12 29 39.2**	**+0.6**
	baz=43						
U25A	**Circle Dot Ran**	**43.31**	**90**	P	**P**	**12 29 39.4**	**+0.6**
	baz=43,SNR=6.2						
EYMN	**Ely**	**43.35**	**68**	*e*P	**P**	**12 29 38.8**	**0.0**
	comp=Z,64nm,0.9s						
MDJ	**Mudanjiang**	**43.49**	**286**	P	**P**	**12 29 39.1**	**-0.8**
MDJ				pP	**pP**	**12 29 50.3**	**-0.9**
MDJ				sP	**sP**	**12 29 55.4**	**-0.5**
MDJ				ScP	**ScP**	**12 35 15.6**	**+0.4**
MDJ				PcS	**PcS**	**12 35 20.3**	**+0.4**
MDJ				S	**S**	**12 36 04.0**	**-1.5**
MDJ				sS	**sS**	**12 36 23.1**	**-1.1**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MDJ				LR	LR		
	comp=N,650nm,27.7s						
MDJ				LR	LR		
	comp=E,370nm,22.0s						
MDJ				LR	LR		
	comp=Z,1μm,21.4s						
R28A	**Tribune**	**43.52**	**86**	P	**P**	**12 29 40.5**	**+0.2**
	baz=43						
Y22A	**Socorro**	**43.53**	**95**	P	**P**	**12 29 41.9**	**+1.3**
	baz=43,SNR=10						
W24A	**Lazy 6 Ranch,**	**43.55**	**92**	P	**P**	**12 29 41.5**	**+0.8**
	baz=43						
120A	**U Bar Ranch, L**	**43.55**	**97**	P	**P**	**12 29 42.0**	**+1.2**
	baz=43,SNR=9.0						
Z21A	**St. Cloud Mine**	**43.57**	**96**	P	**P**	**12 29 41.8**	**+0.9**
	baz=44						
V25A	**Rancho No Teng**	**43.57**	**91**	P	**P**	**12 29 41.4**	**+0.5**
	baz=43						
BNM	**Barren Site**	**43.58**	**94**	*e*P	**P**	**12 29 42.0**	**+1.0**
Q29A	**Oakley**	**43.64**	**84**	P	**P**	**12 29 42.1**	**+0.8**
	baz=44						
U26A	**Atchley Ranch,**	**43.70**	**89**	P	**P**	**12 29 42.2**	**+0.2**
	baz=44						
MAJO	**Matsushiro**	**43.75**	**271**	*e*P	**P**	**12 29 42.2**	**+0.1**
MAJO				pmax	pmax		
	comp=Z,28nm,0.7s						
MAJO	**Matsushiro**	**43.75**	**271**	*e*P	**P**	**12 29 42.2**	**+0.1**
	comp=Z,28nm,0.7s						
MAT	**Matsushiro**	**43.75**	**271**	P	**P**	**12 29 42.0**	**-0.1**
MAT				S	**S**	**12 36 11.8**	**+2.2**
S28A	**Manter**	**43.97**	**87**	P	**P**	**12 29 44.6**	**+0.6**
	baz=44						
Z22A	**Elephant Butte**	**44.02**	**95**	P	**P**	**12 29 45.6**	**+1.1**
	baz=44,SNR=9.1						
Q30A	**Quinter**	**44.02**	**84**	P	**P**	**12 29 44.9**	**+0.6**
	baz=44						
319A	**Douglas**	**44.03**	**99**	P	**P**	**12 29 45.4**	**+0.9**
	baz=44,SNR=5.4						
121A	**Cookes Peak, D**	**44.06**	**97**	P	**P**	**12 29 45.6**	**+0.8**
	baz=44,SNR=12						
Y23A	**Lovelace Mesa,**	**44.07**	**94**	P	**P**	**12 29 45.9**	**+1.0**
	baz=44,SNR=9.2						
220A	**Playas Peak, P**	**44.08**	**98**	P	**P**	**12 29 45.9**	**+0.8**
	baz=44,SNR=21						
V26A	**Tequesquite Ra**	**44.09**	**90**	P	**P**	**12 29 45.5**	**+0.5**
	baz=44,SNR=7.1						
W25A	**X Bar L Ranch,**	**44.10**	**91**	P	**P**	**12 29 45.8**	**+0.7**
	baz=44,SNR=5.5						
T28A	**Walsh**	**44.16**	**87**	P	**P**	**12 29 45.4**	**-0.1**
	baz=44						
U27A	**Thompson Grove**	**44.22**	**89**	P	**P**	**12 29 46.2**	**+0.2**
	baz=44						
SPMN	**St. Paul**	**44.27**	**72**	P	**P**	**12 29 46.5**	**+0.3**
	baz=44,SNR=7.2						
122A	**Conniff Cattle**	**44.39**	**96**	P	**P**	**12 29 48.5**	**+1.0**
	baz=44						
Y24A	**Capitan**	**44.43**	**93**	P	**P**	**12 29 48.8**	**+0.9**
	baz=44,SNR=6.9						
221A	**Mesquite Ranch**	**44.44**	**97**	P	**P**	**12 29 48.9**	**+1.0**
	baz=44						
X25A	**Clemmons Ranch**	**44.46**	**92**	P	**P**	**12 29 48.7**	**+0.7**
	baz=44						
320A	**Kipp Ranch, An**	**44.50**	**98**	P	**P**	**12 29 49.2**	**+0.9**
	baz=44						
W26A	**Owens Ranch, T**	**44.59**	**91**	P	**P**	**12 29 49.9**	**+0.9**
	baz=44						
Y25A	**Mesa, Roswell**	**44.87**	**93**	P	**P**	**12 29 51.8**	**+0.6**
	baz=45						
Z24A	**Sheeppen Canyo**	**44.90**	**94**	P	**P**	**12 29 52.2**	**+0.6**
	baz=45						
X26A	**CR and CF Fran**	**44.94**	**91**	P	**P**	**12 29 52.4**	**+0.5**
	baz=45						
JHJ	**Hachijo jima 2**	**45.22**	**266**	LR	LR	12 47 50.6	
	comp=Z,181nm,19.1s,baz=82,slow=35						
124A	**Stringfield Ra**	**45.30**	**94**	P	**P**	**12 29 55.3**	**+0.5**
	baz=45,SNR=7.3						
Z25A	**Roswell**	**45.31**	**93**	P	**P**	**12 29 54.4**	**-0.3**
	baz=45						
224A	**Cornudas Mount**	**45.71**	**95**	P	**P**	**12 29 58.3**	**+0.4**
	baz=46,SNR=12						
Z26A	**Caprock**	**45.75**	**93**	P	**P**	**12 29 58.3**	**+0.1**
	baz=46						
125A	**Gardner Draw,**	**45.79**	**94**	P	**P**	**12 29 58.9**	**+0.3**
	baz=46						
Y27A	**Causey**	**45.79**	**91**	P	**P**	**12 29 58.5**	**-0.1**
	baz=46						
AMTX	**Amarillo**	**45.96**	**89**	P	**P**	**12 30 00.3**	**+0.5**
	comp=Z,3.5nm,0.4s						
MSTX	**Muleshoe**	**45.96**	**91**	P	**P**	**12 30 00.2**	**+0.4**
	baz=46						
KSU1	**Kansas State U**	**46.04**	**81**	*e*P	**P**	**12 29 59.6**	**-0.6**
	comp=Z,7.3nm,0.4s						
MNTX	**Cornudas Mount**	**46.06**	**95**	*e*P	**P**	**12 30 01.1**	**+0.5**
	comp=Z,13nm,1.0s						
MNTX				*e*PcP	**PcP**	**12 31 36.1**	**-0.3**
Z27A	**Tatum**	**46.17**	**92**	P	**P**	**12 30 01.1**	**-0.4**
	baz=46						
126A	**Clayton Basin,**	**46.17**	**93**	P	**P**	**12 30 02.0**	**+0.5**
	baz=46,SNR=5.8						
324A	**Moseley Ranch,**	**46.19**	**96**	P	**P**	**12 30 02.2**	**+0.5**
	baz=46,SNR=5.5						
GDL2	**Guadalupe Moun**	**46.29**	**94**	*e*P	**P**	**12 30 01.9**	**-0.7**
	comp=Z,1.0nm,0.4s						
CN2	**Changchun**	**46.32**	**288**	*e*P	**P**	**12 30 02.4**	**0.0**
CN2				*e*pP	**pP**	**12 30 12.3**	**-1.5**
CN2				*e*S	**S**	**12 36 45.7**	**-0.8**
CN2				pmax	pmax		
	comp=Z,50nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,200nm,22.0s						
CN2				LR	LR		
	comp=E,200nm,22.0s						
CN2				LR	LR		
	comp=Z,600nm,24.0s						
226B	**Tecolote Peak,**	**46.50**	**94**	P	**P**	**12 30 04.7**	**+0.6**
	baz=46,SNR=8.1						
127A	**Arkansas Junct**	**46.54**	**93**	P	**P**	**12 30 04.5**	**+0.1**
	baz=46						
325A	**Bean Ranch, Si**	**46.54**	**95**	P	**P**	**12 30 05.2**	**+0.7**
	baz=46,SNR=15						
Y29A	**Porterfield Fa**	**46.68**	**90**	P	**P**	**12 30 05.2**	**-0.4**
	baz=47						
425A	**Indio Mountain**	**46.96**	**96**	P	**P**	**12 30 08.5**	**+0.7**
	baz=47,SNR=17						
KBS	**Kingsbay**	**46.99**	**1**	*e*P	**P**	**12 30 09.1**	**+1.9**
KBS				pmax	pmax		
	comp=Z,56nm,1.1s						
KBS	**Kingsbay**	**46.99**	**1**	*e*P	**P**	**12 30 09.1**	**+1.9**
	comp=Z,56nm,1.1s						
Z29A	**Hungry Hill Ra**	**47.09**	**91**	P	**P**	**12 30 08.4**	**-0.3**
	baz=47						
128A	**Castleberry Fa**	**47.09**	**92**	P	**P**	**12 30 08.9**	**+0.2**
	baz=47,SNR=8.7						
326A	**Caldwell Ranch**	**47.16**	**94**	P	**P**	**12 30 10.1**	**+0.8**
	baz=47						
JFWS	**Jewell Farm**	**47.16**	**73**	*e*P	**P**	**12 30 08.4**	**-0.6**
JFWS				pmax	pmax		
	comp=Z,39nm,0.8s						
JFWS	**Jewell Farm**	**47.16**	**73**	*e*P	**P**	**12 30 08.4**	**-0.6**
	comp=Z,39nm,0.8s						
DAG	**Danmarks Havn**	**47.21**	**11**⇑	*i*P	**P**	**12 30 09.4**	**+0.4**
DAG				pmax	pmax		
	comp=Z,37nm,0.9s						
DAG	**Danmarks Havn**	**47.21**	**11**⇑	*i*P	**P**	**12 30 09.4**	**+0.4**
	comp=Z,44nm,0.9s						
129A	**Stewart Farms,**	**47.45**	**92**	P	**P**	**12 30 11.5**	**0.0**
	baz=47						
426A	**McDonald Obser**	**47.60**	**95**	P	**P**	**12 30 12.7**	**-0.2**
	baz=48						
SUMG	**Summit**	**47.67**	**20**⇑	*i*P	**P**	**12 30 14.4**	**+1.3**
SUMG				pmax	pmax		
	comp=Z,52nm,1.0s						
SUMG	**Summit**	**47.67**	**20**	*e*P	**P**	**12 30 14.3**	**+1.2**
	comp=Z,106nm,1.1s						
SUMG	**Summit**	**47.67**	**20**⇑	*i*P	**P**	**12 30 14.4**	**+1.3**
	comp=Z,52nm,1.0s						
WMOK	**Wichita Mounta**	**47.76**	**87**	*e*P	**P**	**12 30 12.8**	**-1.0**
WMOK				pmax	pmax		
	comp=Z,12nm,0.8s						
WMOK	**Wichita Mounta**	**47.76**	**87**	*e*P	**P**	**12 30 12.8**	**-1.0**
	comp=Z,12nm,0.8s						
328A	**Wristen Ranch,**	**47.80**	**93**	P	**P**	**12 30 14.0**	**-0.1**
	baz=48						
Z31A	**Sharp Cattle R**	**47.96**	**89**	P	**P**	**12 30 15.2**	**-0.2**
	baz=48						
130A	**Snyder**	**48.00**	**91**	P	**P**	**12 30 15.6**	**-0.1**
	baz=48						
526A	**Mary Lane Ranc**	**48.02**	**96**	P	**P**	**12 30 16.5**	**+0.5**
	baz=48,SNR=8.5						
329A	**Wagon Wheel Ra**	**48.20**	**93**	P	**P**	**12 30 17.2**	**-0.2**
	baz=48,SNR=5.6						
527A	**Woodward Ranch**	**48.23**	**95**	P	**P**	**12 30 17.7**	**0.0**
	baz=48						
131A	**Roby**	**48.28**	**90**	P	**P**	**12 30 17.9**	**0.0**
	baz=48						
428A	**Kincaid Ranch,**	**48.35**	**94**	P	**P**	**12 30 18.8**	**+0.3**
	baz=48,SNR=5.8						
Z32A	**Haskell**	**48.36**	**89**	P	**P**	**12 30 17.8**	**-0.7**
	baz=48						
626A	**Big Bend Ranch**	**48.37**	**96**	P	**P**	**12 30 19.2**	**+0.6**
	baz=48,SNR=12						
230A	**Sterling City**	**48.42**	**92**	P	**P**	**12 30 18.6**	**-0.4**
	baz=48						
SNY	**Shenyang**	**48.65**	**287**	⇑P	**P**	**12 30 21.0**	**+0.5**
SNY				S	**S**	**12 37 19.8**	**+0.2**
SNY				pmax	pmax		
	comp=Z,50nm,1.6s						
SNY				pmax	pmax		
	comp=Z,360nm,4.0s						
SNY				LR	LR		
	comp=N,700nm,20.0s						
SNY				LR	LR		
	comp=E,310nm,24.7s						
SNY				LR	LR		
	comp=Z,940nm,20.8s						
TUL1	**Tulsa**	**48.69**	**84**	P	**P**	**12 30 20.4**	**-0.5**
	baz=48						
528A	**Cox Ranch, San**	**48.70**	**95**	P	**P**	**12 30 21.8**	**+0.5**
	baz=49,SNR=10						
330A	**Mertzon**	**48.73**	**92**	P	**P**	**12 30 21.1**	**-0.3**
	baz=49,SNR=6.4						
ABTX	**Abilene, Hawle**	**48.75**	**90**	P	**P**	**12 30 21.4**	**-0.1**
	baz=49						
SFJD	**Kangerlussuaq**	**48.80**	**29**	*e*P	**P**	**12 30 22.4**	**+1.0**
	comp=Z,84nm,1.0s						
SFJD	**Kangerlussuaq**	**48.80**	**29**	*i* P	**P**	**12 30 22.7**	**+1.4**
	comp=Z,42nm,1.0s						
TXAR	**Lajitas Array**	**48.80**	**96**	P	**P**	**12 30 21.9**	**-0.1**
TXAR				pP	**pP**	**12 30 33.3**	**-0.1**
TXAR	**Lajitas Array**	**48.80**	**96**	P	**P**	**12 30 21.9**	**-0.1**
	comp=Z,8.0nm,0.8s,baz=298,slow=5.6,SNR=95						
TXAR				pP	**pP**	**12 30 33.3**	**-0.1**
	comp=Z,10nm,0.9s,baz=304,slow=4.7,SNR=12						
TXAR				LR	LR	12 49 45.1	
	comp=Z,788nm,18.5s,baz=110,slow=34						
231A	**Bronte**	**48.85**	**91**	P	**P**	**12 30 21.9**	**-0.4**
	baz=49						
627A	**Terlingua Ranc**	**48.87**	**96**	P	**P**	**12 30 22.7**	**+0.1**
	baz=49,SNR=15						
429A	**Davenport Ranc**	**48.88**	**93**	P	**P**	**12 30 22.2**	**-0.3**
	baz=49,SNR=7.7						
529A	**Stev Forest Ra**	**49.06**	**94**	P	**P**	**12 30 24.0**	**+0.1**
	baz=49,SNR=9.8						
KSRS	**Korea Array**	**49.12**	**280**	P	**P**	**12 30 24.9**	**+0.7**
	comp=Z,21nm,0.7s,baz=49,slow=7.0,SNR=74						
KSRS				LR	LR	12 50 17.9	
	comp=Z,302nm,20.7s,baz=52,slow=35						
628A	**Black Gap, Mar**	**49.14**	**95**	P	**P**	**12 30 25.0**	**+0.5**
	baz=49,SNR=22						
430A	**Baggett Ranch,**	**49.15**	**93**	P	**P**	**12 30 24.6**	**-0.1**
	baz=49,SNR=6.7						

KSAR	Wonju Array Be	49.15	280	P	P	12 30 24.9	+0.4
331A	San Angelo	49.24	92	P	P	12 30 24.5	-0.8
	baz=49						
HDIL	Hopedale	49.25	74	eP	P	12 30 24.9	-0.2
530A	J-C Ranch, Com	49.56	93	P	P	12 30 27.4	-0.3
	baz=49,SNR=8.2						
332A	Millersview	49.59	91	P	P	12 30 28.0	+0.1
	baz=50						
431A	Sonora	49.59	92	P	P	12 30 27.7	-0.3
	baz=50,SNR=7.7						
INCN	Inchon	49.84	281	eP	P	12 30 30.7	+1.0
	comp=Z,58nm,1.1s						
432A	Menard	49.93	91	P	P	12 30 30.2	-0.3
	baz=50,SNR=5.9						
531A	Rocksprings	50.01	93	P	P	12 30 30.9	-0.2
	baz=50,SNR=6.6						
SLM	Saint Louis	50.02	77	eP	P	12 30 30.4	-0.6
SLM				pmax	pmax		
	comp=Z,53nm,0.7s						
SLM	Saint Louis	50.02	77	eP	P	12 30 30.4	-0.6
	comp=Z,53nm,0.7s						
JCT	Junction City	50.22	92	P	P	12 30 32.4	-0.3
	baz=50,SNR=6.6						
532A	Rocksprings	50.41	92	P	P	12 30 33.6	-0.6
	baz=50						
JNU	Nakatsue	50.44	274	eP	P	12 30 35.2	+0.9
JNU	Nakatsue	50.44	274	P	P	12 30 34.8	+0.4
	comp=Z,11nm,0.9s,baz=87,slow=7.6,SNR=10						
WHTX	Lake Whitney	50.49	89	P	P	12 30 33.3	-1.4
	baz=50						
SFIN	Scholer Farm	50.61	73	P	P	12 30 35.1	-0.4
	baz=50,SNR=13						
632A	Uvalde	50.94	93	P	P	12 30 37.4	-0.7
	baz=51						
OLIL	Olney	51.16	75	eP	P	12 30 39.3	-0.3
	comp=Z,98nm,1.1s						
SCHQ	Schefferville	51.20	48	eP	P	12 30 40.3	+0.5
	comp=Z,40nm,1.2s						
SCHQ	Schefferville	51.20	48	P	P	12 30 39.9	+0.1
	comp=Z,17nm,1.1s,baz=313,slow=7.4,SNR=16						
SCHQ				LR	LR	12 53 19.5	
	comp=Z,989nm,21.6s,baz=308,slow=37						
SIUC	Southern Illin	51.23	77	eP	P	12 30 39.4	-0.7
	comp=Z,187nm,1.8s						
732A	Laxson Ranch,	51.41	93	P	P	12 30 41.0	-0.6
	baz=51						
BLO	Bloomington	51.76	74	eP	P	12 30 43.1	-1.0
BLO				e*PP	pP	12 30 55.9	+0.3
BLO	Bloomington	51.76	74	eP	P	12 30 43.1	-1.0
BLO				epP	pP	12 30 55.9	+0.3
USIN	University of	51.94	76	eP	P	12 30 44.5	-1.0
	comp=Z,144nm,1.2s						
SCO	Scoresbysund	52.36	16⇑	iP	P	12 30 48.7	+0.6
SCO				pmax	pmax		
	comp=Z,18nm,1.2s						
SCO	Scoresbysund	52.36	16⇑	iP	P	12 30 48.7	+0.6
	comp=Z,18nm,1.2s						
TLY	Talaya	52.38	308	eP	P	12 30 49.4	+0.8
TLY				e		12 32 44.9	
TLY				eS	S	12 38 32.7	+21
TLY				pmax	pmax		
	comp=Z,26nm,1.5s						
TLY				MLR	MLR		
	comp=Z,565nm,18.0s						
TLY	Talaya	52.38	308	P	P	12 30 49.0	+0.4
	comp=Z,86nm,0.9s,SNR=5.1						
UTMT	University of	52.39	78	eP	P	12 30 48.8	0.0
	comp=Z,43nm,0.5s						
WCI	Wyandotte Cave	52.54	75	eP	P	12 30 49.2	-0.7
WCI				e*PP	pP	12 31 01.6	+0.2
WCI	Wyandotte Cave	52.54	75	eP	P	12 30 49.2	-0.7
WCI				epP	pP	12 31 01.6	+0.2
HKT	Hockley	52.93	89	eP	P	12 30 53.2	+0.4
HKT				pmax	pmax		
	comp=Z,29nm,1.4s						
HKT	Hockley	52.93	89	eP	P	12 30 53.2	+0.4
	comp=Z,29nm,1.4s						
WVT	Waverly	53.13	78	eP	P	12 30 53.3	-1.0
WVT				pmax	pmax		
	comp=Z,60nm,0.8s						
WVT	Waverly	53.13	78	eP	P	12 30 53.2	-1.0
	comp=Z,60nm,0.8s						
ERPA	Erie	53.33	67	eP	P	12 30 55.5	-0.2
	comp=Z,35nm,0.9s						
ULN	Ulaanbaatar	53.35	303	eP	P	12 30 56.7	+0.7
	comp=Z,24nm,1.4s						
OXF	Oxford	53.37	80	eP	P	12 30 55.0	-1.1
OXF				pmax	pmax		
	comp=Z,122nm,1.0s						
OXF	Oxford	53.37	80	eP	P	12 30 55.0	-1.1
	comp=Z,122nm,1.0s						
ZAK	Zakamensk	53.43	307	eP	P	12 30 56.2	-0.3
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.6s						
ALLY	Alegheny Colle	53.57	67	eP	P	12 30 56.7	-0.8
	comp=Z,81nm,1.0s						
MOY	Mondy	53.60	310	eP	P	12 30 58.8	+1.1
SONM	Songino Array	53.69	303	P	P	12 30 58.9	+0.5
SONM				PcP	PcP	12 32 05.5	+1.3
SONM	Songino Array	53.69	303	P	P	12 30 58.9	+0.5
	comp=Z,22nm,1.2s,baz=47,slow=6.3,SNR=31						
SONM				PcP	PcP	12 32 05.5	+1.3
	comp=Z,7.9nm,0.9s,baz=50,slow=2.2,SNR=6.9						
SONM				LR	LR	12 56 33.2	
	comp=Z,2μm,19.0s,baz=55,slow=39						
PLAL	Pickwick Lake	53.81	79	eP	P	12 30 58.2	-1.0
	comp=Z,30nm,0.9s						
BJI	Beijing	53.97	290	P	P	12 31 01.2	+0.8
BJI				pP	pP	12 31 10.0	-1.9
BJI				PP	PP	12 33 01.3	-0.4
BJI				S	S	12 38 35.4	+2.3
BJI				pmax	pmax		
	comp=Z,18nm,0.9s						
BJI				pmax	pmax		
	comp=Z,160nm,8.1s						
BJI				LR	LR		
	comp=N,660nm,22.3s						
BJI				LR	LR		
	comp=E,570nm,23.2s						
BJI				LR	LR		
	comp=Z,570nm,19.8s						
SWET	Sewanee	54.87	77	eP	P	12 31 05.3	-1.7
	comp=Z,11nm,1.0s						
NCB	Newcomb	55.09	62	eP	P	12 31 08.4	-0.1
	comp=Z,181nm,2.4s						
TZTN	Tazewell	55.27	74	eP	P	12 31 09.4	-0.5
	comp=Z,93nm,1.4s						
BINY	Binghamton	55.41	64	eP	P	12 31 10.1	-0.7
	comp=Z,18nm,1.2s						
SSPA	Standing Stone	55.50	67	eP	P	12 31 10.7	-0.7
	comp=Z,32nm,1.0s						
CPCT	Cooper Cave	55.50	76	eP	P	12 31 10.9	-0.7
ACCN	Adirondack Com	55.79	62	eP	P	12 31 13.6	+0.1
	comp=Z,30nm,1.1s						
HHC	Hu-ho-hao-te	55.91	294	eP	P	12 31 15.6	+1.1
HHC				pP	pP	12 31 25.8	-0.3
HHC				sP	sP	12 31 30.6	-0.2
HHC				PP	PP	12 33 21.5	+2.4
HHC				S	S	12 38 59.4	+0.1
HHC				sS	sS	12 39 16.4	-2.1
HHC				SS	SS	12 42 44.3	-0.5
HHC				pmax	pmax		
	comp=Z,52nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,5.1s						
HHC				LR	LR		
	comp=N,470nm,16.7s						
HHC				LR	LR		
	comp=E,800nm,17.1s						
HHC				LR	LR		
	comp=Z,970nm,17.6s						
KEV	Kevo	56.05	356	ep	P	12 31 14.1	-0.9
	comp=Z,9.0nm,0.7s						
KEV	Kevo	56.05	356	eP	P	12 31 15.1	+0.1
KEV				e*PP	pP	12 31 26.8	+0.2
KEV				pmax	pmax		
	comp=Z,36nm,1.1s						
KEV	Kevo	56.05	356	eP	P	12 31 15.1	+0.1
	comp=Z,36nm,1.1s						
KEV				epP	pP	12 31 26.8	+0.2
ARCES	ARCESS Array B	56.33	357	P	P	12 31 16.9	-0.1
ARCES	ARCESS Array B	56.33	357	P	P	12 31 16.9	-0.1
	comp=Z,7.5nm,0.8s,baz=13,slow=8.1,SNR=49						
ARCES				LR	LR	12 54 56.7	
	comp=Z,654nm,21.7s,baz=10,slow=35						
ARE0	ARCESS Array S	56.33	357	eP	P	12 31 16.4	-0.6
BLA	Blacksburg	56.55	71	eP	P	12 31 18.6	-0.5
BLA				e*PP	pP	12 31 31.1	+0.4
BLA	Blacksburg	56.55	71	eP	P	12 31 18.6	-0.5
BLA				epP	pP	12 31 31.1	+0.4
LUPA	Lehigh Univers	56.87	65	eP	P	12 31 21.2	-0.1
	comp=Z,35nm,1.4s						
BTO	Baotou	56.91	295	eP	P	12 31 21.2	-0.4
LVZ	Lovozero	57.44	352c	eP	P	12 31 24.9	0.0
LVZ				pmax	pmax		
	comp=Z,57nm,1.7s						
KMSC	Kings Mountain	57.53	74	P	P	12 31 25.1	-0.9
	baz=57						
SSE	Sheshan	57.55	279	P	P	12 31 27.2	+1.1
SSE				sP	sP	12 31 39.8	-2.6
SSE				S	S	12 39 21.0	+0.1
SSE				pmax	pmax		
	comp=Z,52nm,1.1s						
SSE				pmax	pmax		
	comp=Z,130nm,4.7s						
SSE				LR	LR		
	comp=N,180nm,26.8s						
SSE				LR	LR		
	comp=E,160nm,26.8s						
SSE				LR	LR		
	comp=Z,350nm,29.4s						
BORG	Borgarnes	57.61	19	eP	P	12 31 27.2	+1.2
	comp=Z,129nm,1.5s						
WES	Weston	57.71	61	eP	P	12 31 27.2	+0.1
WES	Weston	57.71	61	eP	P	12 31 27.2	+0.1
APA	Apatity	57.85	353⇑	eP	P	12 31 17.0	-11
APA				i		12 31 28.0	
APA				pmax	pmax		
	comp=Z,18nm,1.2s						
APA				MLR	MLR		
	comp=Z,800nm,19.0s						
NJ2	Nanjing	58.19	282	eP	P	12 31 30.6	0.0
NJ2				pP	pP	12 31 40.0	-2.3
NJ2				sP	sP	12 31 44.6	-2.3
NJ2				PP	PP	12 33 40.9	+1.5
NJ2				S	S	12 39 34.0	+4.7
NJ2				sS	sS	12 39 48.0	-0.6
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,1μm,6.2s						
NJ2				LR	LR		
	comp=N,270nm,18.5s						
NJ2				LR	LR		
	comp=E,430nm,17.5s						
NJ2				LR	LR		
	comp=Z,6μm,17.0s						
NVS	Novosibirsk	58.51	322	eP	P	12 31 31.2	-1.3
NVS				e		12 32 19.8	
NVS				pmax	pmax		
	comp=Z,28nm,1.4s						
ZAA0	Zalesovo Array	58.62	320	eP	P	12 31 34.1	+0.8
ZAA0				ePcP	PcP	12 32 23.9	+0.9
ZALV	Zalesovo Beam	58.62	320	i P	P	12 31 34.0	+0.7
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZALV	Zalesovo Beam	58.62	320	P	P	12 31 33.9	+0.6
ZALV				PcP	PcP	12 32 23.6	+0.5
ZALV	Zalesovo Beam	58.62	320	P	P	12 31 33.9	+0.6
	comp=Z,3.1nm,0.3s,baz=41,slow=6.9,SNR=24						
ZALV				PcP	PcP	12 32 23.6	+0.5
	comp=Z,7.8nm,1.0s,baz=57,slow=5.5,SNR=5.1						
ZALV				LR	LR	12 58 48.0	
	comp=Z,1μm,22.0s,baz=69,slow=38						
DRLN	Deer Lake	59.21	47	eP	P	12 31 37.6	+0.1
TMCR	Tamitsa	60.79	350	eP	P	12 31 47.9	-0.1
TMCR				pmax	pmax		
	comp=Z,92nm,1.3s						
WHN	Wuhan	61.88	284	⇑P	P	12 31 55.9	-0.1
WHN				S	S	12 40 15.6	-1.1
WHN				LR	LR		
	comp=Z,780nm,31.4s						
SOKR	Solikamsk	62.14	339c	iP	P	12 31 57.3	+0.1
SOKR				pmax	pmax		
	comp=Z,50nm,0.8s						
XAN	Xi'an	62.31	290	P	P	12 31 57.8	-1.0
XAN				pP	pP	12 32 08.5	-2.1
XAN				sP	sP	12 32 13.3	-1.9
XAN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
JOF	Joensuu	62.61	353	ep	P	12 31 58.5	-1.8
	comp=Z,5.8nm,0.5s						
JOF	Joensuu	62.61	353	eP	P	12 31 58.5	-1.8
JOF				pmax	pmax		
	comp=Z,6.0nm,0.5s						
GTA	Gaotai	63.08	301	P	P	12 32 04.2	+0.2
GTA				pP	pP	12 32 14.4	-1.4
GTA				sP	sP	12 32 18.6	-1.8
GTA				S	S	12 40 31.0	-0.9
GTA				sS	sS	12 40 47.9	-3.5
GTA				pmax	pmax		
	comp=Z,24nm,1.6s						
GTA				pmax	pmax		
	comp=Z,200nm,4.0s						
GTA				LR	LR		
	comp=N,460nm,17.6s						
GTA				LR	LR		
	comp=E,220nm,15.4s						
GTA				LR	LR		
	comp=Z,360nm,20.4s						
SSLB	Suanglung	63.18	274	eP	P	12 32 04.7	-0.1
YULB	Yu-li	63.28	273	eP	P	12 32 07.4	+2.0
KURK	Kurchatov	63.49	321c	iP	P	12 32 06.8	+0.4
KURK				pmax	pmax		
	comp=Z,53nm,1.2s						
KURK	Kurchatov	63.49	321	eP	P	12 32 07.1	+0.7
KURK	Kurchatov	63.49	321	P	P	12 32 07.4	+1.0
	comp=Z,205nm,1.1s,SNR=22						
LZH	Lanzhou	63.51	295	⇑P	P	12 32 07.5	+0.5
LZH				pP	pP	12 32 18.4	-0.3
LZH				sP	sP	12 32 21.6	-1.7
LZH				PP	PP	12 34 28.7	+2.2
LZH				eS	S	12 40 37.0	-0.4
LZH				sS	sS	12 40 52.5	-4.4
LZH				SS	SS	12 44 45.7	+1.5
LZH				pmax	pmax		
	comp=Z,70nm,1.5s						
LZH				pmax	pmax		
	comp=Z,160nm,5.2s						
LZH				LR	LR		
	comp=N,490nm,16.0s						
LZH				LR	LR		
	comp=E,680nm,17.1s						
LZH				LR	LR		
	comp=Z,970nm,19.3s						
KAF	Kangasniemi	63.71	355	ep	P	12 32 06.4	-1.2
	comp=Z,11nm,0.6s						
KAF	Kangasniemi	63.71	355	eP	P	12 32 06.4	-1.2
KAF				pmax	pmax		
	comp=Z,11nm,0.6s						
SVE	Sverdlovsk	63.75	335⇓	iP	P	12 32 08.5	+0.5
SVE				eS	S	12 40 44.2	+4.8
SVE				eSS	SS	12 44 47.6	+1.0
SVE				pmax	pmax		
	comp=Z,60nm,1.2s						
KLMR	Klimovskoe	63.84	348c	iP	P	12 32 08.5	0.0
KLMR				pmax	pmax		
	comp=Z,65nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,712nm,22.0s						
BVA0	Borovoye Array	64.35	328	P	P	12 32 12.3	+0.3
BVA0				pmax	pmax		
	comp=Z,65nm,1.4s						
BRVK	Borovoye	64.36	328c	iP	P	12 32 12.8	+0.7
BRVK				pmax	pmax		
	comp=Z,79nm,1.7s						
BRVK	Borovoye	64.36	328	eP	P	12 32 12.7	+0.7
BRVK	Borovoye	64.36	328	P	P	12 32 12.1	+0.1
	comp=Z,245nm,0.7s,SNR=13						
FIA1	FINESS Array S	64.39	355	eP	P	12 32 12.2	+0.1
FINES	FINESS Array B	64.39	355	P	P	12 32 12.0	-0.1
FINES	FINESS Array B	64.39	355	P	P	12 32 12.0	-0.1
	comp=Z,24nm,0.9s,baz=18,slow=8.8,SNR=24						
FINES				LR	LR	13 00 02.0	
	comp=Z,411nm,21.3s,baz=23,slow=36						
VOSK	Vostochnaya	64.42	327	P	P	12 32 12.6	+0.1
VOSK				pmax	pmax		
	comp=Z,43nm,1.4s						
ARU	Arti	64.61	336c	iP	P	12 32 13.5	-0.1
ARU						12 34 33.5	
ARU				PPP	PPP	12 36 06.7	
ARU				S	S	12 40 51.5	+1.4
ARU				SSS	SSS	12 47 53.2	
ARU				pmax	pmax		
	comp=Z,61nm,1.2s						
ARU				MLR	MLR		
	comp=Z,643nm,18.0s						
ARU	Arti	64.61	336	P	P	12 32 13.3	-0.3
	comp=Z,238nm,0.8s,SNR=8.0						
ZRNK	Zerenda	64.85	328	P	P	12 32 15.4	+0.2
ZRNK				pmax	pmax		
	comp=Z,47nm,0.9s						
NB2	NORSAR Subarra	64.90	3	P	P	12 32 16.0	+0.5
	comp=Z,42nm,1.1s,baz=358,slow=6.5						
NB2	NORSAR Subarra	64.90	3	P	P	12 32 16.0	+0.5
	baz=358,slow=6.5						
NOA	NORSAR Array B	64.90	3	P	P	12 32 15.8	+0.3
NOA	NORSAR Array B	64.90	3	P	P	12 32 15.8	+0.3
	comp=Z,15nm,0.9s,baz=356,slow=6.6,SNR=31						
NOA				LR	LR	13 02 53.3	
	comp=Z,176nm,19.0s,baz=345,slow=38						
LRW	Lerwick	64.95	10	eP	P	12 32 16.4	+0.6
LRW				AMB	AMB	12 32 18.0	
	comp=Z,71nm,1.4s						
LRW	Lerwick	64.95	10	P	P	12 32 16.4	+0.6
LRW				AMB	AMB	12 32 18.0	
	comp=Z,71nm,1.4s						
NAO01	NORSAR Array S	65.08	3	eP	P	12 32 16.9	+0.2
	comp=Z,44nm,1.3s						
MK31	Makanchi Array	65.28	317	i P	P	12 32 18.0	-0.2
MK31				pmax	pmax		
	comp=Z,1.0nm,0.2s						
MK31	Makanchi Array	65.28	317	eP	P	12 32 18.3	+0.1
MKAR	Makanchi Array	65.28	317	P	P	12 32 18.1	-0.2
MKAR	Makanchi Array	65.28	317	P	P	12 32 18.1	-0.2
MKAR	Makanchi Array	65.28	317	P	P	12 32 18.1	-0.2
	comp=Z,7.4nm,0.8s,baz=51,slow=7.9,SNR=47						
MKAR				LR	LR	13 03 23.2	
	comp=Z,732nm,18.3s,baz=29,slow=38						
WMQ	Urumqi	65.40	311	P	P	12 32 19.6	+0.5
WMQ				pP	pP	12 32 30.0	-0.9
WMQ				PcP	PcP	12 32 51.0	+0.1
WMQ				PP	PP	12 34 46.0	+3.3
WMQ				S	S	12 41 01.0	+0.7
WMQ				sS	sS	12 41 20.0	+0.2
WMQ				pmax	pmax		
	comp=Z,20nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,140nm,6.5s						
WMQ				LR	LR		
	comp=N,470nm,20.9s						
WMQ				LR	LR		
	comp=E,580nm,20.0s						
WMQ				LR	LR		
	comp=Z,530nm,22.8s						
TAOE	Nuku Hiva Isla	65.72	155	eT	T	13 43 42.4	
	comp=Z,620nm,0.2s						
KONO	Kongsberg	66.23	4	eP	P	12 32 25.3	+1.3
KONO	Kongsberg	66.23	4	eP	P	12 32 25.3	+1.3
MVH1	Achvaich	66.77	12	eP	P	12 32 28.0	+0.5
MVH1	Achvaich	66.77	12	P	P	12 32 28.0	+0.5
KPL	Plockton	67.15	13	eP	P	12 32 31.0	+1.1
KPL				AMB	AMB	12 32 32.1	
	comp=Z,36nm,1.3s						
KPL	Plockton	67.15	13	P	P	12 32 31.0	+1.1
KPL				AMB	AMB	12 32 32.1	
	comp=Z,36nm,1.3s						
MCD	Coleburn Disti	67.22	12	eP	P	12 32 31.4	+1.0
MCD	Coleburn Disti	67.22	12	P	P	12 32 31.4	+1.0
MDO	Dochfour	67.22	13	eP	P	12 32 31.3	+0.9
MDO	Dochfour	67.22	13	P	P	12 32 31.3	+0.9
KSB	Sheil Bridge	67.31	13	eP	P	12 32 31.5	+0.6
KSB	Sheil Bridge	67.31	13	P	P	12 32 31.5	+0.6
CD2	Chengdu	67.51	292⇑	iP	P	12 32 33.6	+0.9
CD2				pP	pP	12 32 47.0	+2.4
CD2				sP	sP	12 32 51.9	+2.8
CD2				PcP	PcP	12 33 00.8	+1.0
CD2				PP	PP	12 35 04.0	+2.6
CD2				S	S	12 41 24.2	-2.0
CD2				sS	sS	12 41 46.3	+0.5
CD2				ScS	SKiKP	12 42 24.5	-2.7
CD2				SS	SS	12 45 46.2	-0.2
CD2				pmax	pmax		
	comp=Z,60nm,1.1s						
CD2				pmax	pmax		
	comp=Z,260nm,9.5s						
CD2				LR	LR		
	comp=N,310nm,17.8s						
CD2				LR	LR		
	comp=E,510nm,16.6s						
CD2				LR	LR		
	comp=Z,510nm,19.0s						
MME1	Meikle Cairn	67.52	12	eP	P	12 32 32.8	+0.5
MME1	Meikle Cairn	67.52	12	P	P	12 32 32.8	+0.5
DRUM	Mains of Drumt	67.97	12	eP	P	12 32 36.1	+1.0
DRUM				AMB	AMB	12 32 37.1	
	comp=Z,110nm,1.0s						
DRUM	Mains of Drumt	67.97	12	P	P	12 32 36.1	+1.0
DRUM				AMB	AMB	12 32 37.1	
	comp=Z,110nm,1.0s						
AFI	Afiamalu	68.39	190	LR	LR	12 54 20.5	
	comp=Z,622nm,21.1s,baz=57,slow=29						
EAB	Aberfoyle	68.45	13	eP	P	12 32 38.8	+0.6
EAB	Aberfoyle	68.45	13	P	P	12 32 38.8	+0.6
MOS	Moscow	69.07	348	eP	P	12 32 37.9	-4.1
MOS				pmax	pmax		
	comp=Z,49nm,1.3s						
GYA	Guiyang	69.35	287⇑	iP	P	12 32 44.8	+0.5
GYA				pP	pP	12 32 58.1	+1.9
GYA				sP	sP	12 33 05.4	+4.6
GYA				PP	PP	12 35 19.7	+2.1
GYA				ScP		12 37 08.0	
GYA				S	S	12 41 47.7	-0.6
GYA				sS	sS	12 42 03.0	-5.0
GYA				SKS	SKSac	12 42 37.6	-3.8
GYA				SS	SS	12 46 13.7	-1.4
GYA				pmax	pmax		
	comp=Z,40nm,1.1s						
GYA				pmax	pmax		
	comp=Z,150nm,5.8s						
GYA				LR	LR		
	comp=N,540nm,20.5s						
GYA				LR	LR		
	comp=E,460nm,21.4s						
GYA				LR	LR		
	comp=Z,510nm,22.7s						
MUD	Monsted U'grnd	69.40	5⇑	iP	P	12 32 45.3	+1.3
MUD				pmax	pmax		
	comp=Z,17nm,1.0s						
MUD	Monsted U'grnd	69.40	5⇑	iP	P	12 32 45.3	+1.3
	comp=Z,17nm,1.0s						
ESK	Eskdalemuir	69.44	12	eP	P	12 32 44.8	+0.4
ESK				AMB	AMB	12 32 46.1	
	comp=Z,31nm,1.3s						
ESK	Eskdalemuir	69.44	12	P	P	12 32 44.8	+0.4
ESK				AMB	AMB	12 32 46.1	
	comp=Z,31nm,1.3s						
ESK	Eskdalemuir	69.44	12	i P	P	12 32 46.3	+2.0
OBN	Obninsk	69.81	348⇑	eP	P	12 32 46.5	0.0
OBN				e		12 35 20.5	
OBN				eS	S	12 41 57.0	+4.5
OBN				pmax	pmax		
	comp=Z,76nm,1.6s						
OBN				MLR	MLR		
	comp=Z,400nm,19.0s						
IZAR	Zarasai	70.07	355	eP	P	12 32 49.1	+0.9
IZAR				AMB	AMB	12 32 50.6	
	comp=Z,18nm,1.3s						
PMOR	Pomariorio Ree	70.17	165	eT	T	13 49 15.6	
	comp=Z,269nm,0.2s						
ISAL	Salakas	70.25	355	eP	P	12 32 50.2	+1.0
ISAL				AMB	AMB	12 32 51.9	
	comp=Z,12nm,1.2s						
COP	Copenhagen	70.30	3	eP	P	12 32 51.6	+2.1
COP	Copenhagen	70.30	3	i P	P	12 32 51.6	+2.1
IIGN	Ignalina	70.47	355	eP	P	12 32 51.5	+0.9
IIGN				AMB	AMB	12 32 53.1	
	comp=Z,18nm,1.1s						
IDID	Didziasalis	70.47	354	eP	P	12 32 51.5	+0.9
IDID				AMB	AMB	12 32 53.1	
	comp=Z,18nm,1.1s						
TGY	Tagaytay City	70.75	267	P	P	12 32 55.5	+2.5
TGY	Tagaytay City	70.75	267	P	P	12 32 55.5	+2.5
	comp=Z,70nm,0.3s,baz=344,slow=19,SNR=3.2						
AB31	Akbulak array	70.77	332	i P	P	12 32 53.2	+0.7

AB31 pmax pmax
comp=Z,37nm,0.8s
ABKAR Akbulak array 70.77 332 *e*P **P 12 32 53.4 +0.8**
NACGM Naroch 70.88 354 *e* P 12 32 50.0 -3.1
HNR Honiara 70.89 219 LR LR 12 58 25.6
comp=Z,153nm,18.9s,baz=359,slow=31
BSD Bornholm Skovb 70.93 1 *e*P **P 12 32 54.3 +0.9**
BSD Bornholm Skovb 70.93 1 *i* P **P 12 32 54.3 +0.9**
TKM2 Tokmak 2 71.15 319 *e*P **P 12 32 56.3 +1.1**
TKM2 Tokmak 2 71.15 319 *e*P **P 12 32 56.3 +1.1**
TKM2 Tokmak 2 71.15 319 P **P 12 32 56.4 +1.1**
SNR=26
USP Ospenovka 71.27 320 P **P 12 32 56.7 +0.9**
SNR=22
CHMS Chumysh 71.41 319 P **P 12 32 58.0 +1.4**
SNR=18
FRU Bishkek 71.60 319⇑ *i*P **P 12 32 58.0 +0.3**
FRU *i* 12 33 04.0
FRU pmax pmax
comp=Z,80nm,1.8s
FRU MLR MLR
comp=Z,2μm,21.0s
KBK Karagaybulak 71.62 319 P **P 12 32 59.3 +1.2**
SNR=20
AAK Ala-Archa 71.81 319 *e*P **P 12 33 00.4 +1.2**
AAK Ala-Archa 71.81 319 *e*P **P 12 33 00.3 +1.2**
AAK Ala-Archa 71.81 319 P **P 12 33 00.4 +1.2**
SNR=13
AAK Ala-Archa 71.81 319 P **P 12 33 00.2 +1.0**
comp=Z,180nm,1.1s,SNR=8.0
SUW Suwalki 71.94 356 *e*P **P 12 33 00.0 +0.5**
SUW Suwalki 71.94 356 *e*P **P 12 32 60.0 +0.5**
SUW Suwalki 71.94 356 *e*P **P 12 32 59.5 0.0**
BSEG Bad Segeberg 71.97 4 *e*P **P 12 33 00.6 +0.9**
comp=Z,115nm,1.3s
BSEG Bad Segeberg 71.97 4 *e*P **P 12 33 00.6 +0.9**
BSEG pmax pmax
comp=Z,115nm,1.3s
KZA Kyzart 72.00 318 P **P 12 33 02.1 +1.4**
SNR=23
EKS2 Erkin-Say 72.06 320 *e*P **P 12 33 02.0 +1.3**
EKS2 Erkin-Say 72.06 320 *e*P **P 12 33 02.0 +1.3**
EKS2 Erkin-Say 72.06 320 P **P 12 33 01.9 +1.3**
SNR=12
PPT Papeete 72.45 167 LR LR 12 59 37.5
comp=Z,809nm,18.3s,baz=338,slow=31
PPT2 Papeete2 72.47 167 *e*S **SKiKP 12 42 34.3 -0.2**
comp=Z,408nm,30.0s
PPT2 *e*LR LR 12 55 11.4
comp=Z,1μm,23.8s,baz=338
PPT2 *e*T T 13 52 09.9
comp=Z,5.0nm,0.2s
TIAR Tiarei 72.47 167 *e*T T 13 52 12.3
comp=Z,167nm,0.2s
AML Almayashu 72.55 320 P **P 12 33 05.4 +1.5**
SNR=24
KMI Kunming 72.58 289 P **P 12 33 04.8 +0.7**
KMI pP **pP 12 33 18.1 +2.0**
KMI S **S 12 42 26.0 0.0**
KMI pmax pmax
comp=Z,10.0nm,1.3s
KMI LR LR
comp=N,330nm,20.2s
KMI LR LR
comp=E,290nm,17.2s
KMI LR LR
comp=Z,510nm,19.2s
TVO Taravao 72.70 167 *e*T T 13 52 23.4
comp=Z,20nm,0.3s
MCH1 Michaelchurch 72.72 13 *e*P **P 12 33 04.9 +0.7**
MCH1 AMB AMB 12 33 06.6
comp=Z,65nm,1.5s
MCH1 Michaelchurch 72.72 13 P **P 12 33 04.9 +0.7**
MCH1 AMB AMB 12 33 06.6
comp=Z,65nm,1.5s
VRHR Novokhopersk 73.03 344 *e*P **P 12 33 05.1 -0.9**
VRHR pmax pmax
comp=Z,60nm,1.8s
VRHR pmax pmax
comp=N,60nm,1.5s
VRHR pmax pmax
comp=E,50nm,2.2s
VSR Storozhevoye 73.28 346 *e*P **P 12 33 07.5 0.0**
VSR pmax pmax
comp=N,60nm,1.2s
VSR pmax pmax
comp=Z,80nm,1.2s
VSR pmax pmax
comp=E,20nm,1.0s
QIZ Qiongzhong 73.34 279 P **P 12 33 09.7 +1.3**
QIZ S **SKiKP 12 42 36.6 +0.6**
QIZ sS **sS 12 42 53.3 -0.9**
QIZ LR LR
comp=N,270nm,19.6s
QIZ LR LR
comp=Z,260nm,27.5s
NRDL Niedersach Rie 73.40 5 *e*P **P 12 33 08.7 +0.6**
comp=Z,57nm,1.2s
IBBN Ibbenburen 73.46 6 *e*P **P 12 33 09.3 +0.8**
comp=Z,116nm,1.3s
VORD Divnogorie 73.50 346 *e*P **P 12 33 08.0 -0.8**
VORD pmax pmax
comp=N,120nm,0.9s
VORD pmax pmax
comp=E,220nm,0.9s
VORD pmax pmax
comp=Z,50nm,0.9s
RUE Ruedersdorf 73.54 2 *e*P **P 12 33 09.6 +0.6**
comp=Z,101nm,1.2s
DAV Davao City (W) 73.68 259 LR LR 13 03 27.7
comp=Z,243nm,21.0s,baz=15,slow=34
WTSB Winterswijk 73.73 7 *e*P **P 12 33 11.1 +0.9**
comp=Z,73nm,1.2s
KSH Kashi 73.89 317 P P 12 33 15.5 +4.0
KSH *e*pP **PcP 12 33 25.9 -0.9**
KSH *e*sP sP 12 33 29.9 +1.8
KSH *e*PcP pP 12 33 31.4 +7.9
KSH *e*PP PP 12 36 02.6 +6.5
KSH *e*S **S 12 42 43.3 +3.0**
KSH *e*sS sS 12 43 01.6 +1.4
KSH *e*SKS **SKSac 12 43 15.5 +0.1**
KSH *e*ScS **ScS 12 43 19.6 +1.4**
KSH pmax pmax
comp=Z,140nm,1.2s
KSH pmax pmax
comp=Z,350nm,3.7s
KSH LR LR
comp=N,2μm,10.9s
KSH LR LR
comp=E,850nm,11.8s
KSH LR LR
comp=Z,4μm,20.0s
CLZ Clausthal 74.06 5 *e*P **P 12 33 13.1 +0.9**
comp=Z,94nm,1.3s
CLZ Clausthal 74.06 5 *e*P **P 12 33 13.1 +0.9**
CLZ pmax pmax
comp=Z,94nm,1.3s
BUG Bochum--Univer 74.29 7 *e*P **P 12 33 13.7 +0.3**
comp=Z,80nm,1.2s
CLL Collm 74.70 3 *e*P **P 12 33 16.0 +0.2**
comp=Z,45nm,1.2s
CLL Collm 74.70 3⇑ *i*P **P 12 33 16.5 +0.7**
CLL pmax pmax
comp=Z,63nm,1.2s
CLL MLR MLR
comp=Z,200nm,20.2s
CLL Collm 74.70 3⇑ *i*P **P 12 33 16.5 +0.7**
comp=Z,45nm,1.2s
CLL *e*PPP PPP 12 37 48.0
CLL *e* 12 43 54.0
CLL *e*SS SS 12 47 54.0 +19
CLL *e* 12 52 00.0
CLL LV 13 15 00.0
comp=Z,200nm,20.2s
NEUB Neuenburg 74.75 4 *e*P **P 12 33 16.8 +0.7**
comp=Z,87nm,1.3s
BEBN Eben Emael 74.81 8 P **P 12 33 17.9 +1.4**
comp=Z,13nm,1.6s
HGN Heimansgroeve 74.87 7 *e*P **P 12 33 17.6 +0.8**
comp=Z,86nm,1.3s
HGN *e*PP PP 12 35 50.5 -13
AKASG Malin Array Be 74.89 352 *i* P **P 12 33 16.8 -0.1**
AKASG pmax pmax
comp=Z,11nm,0.4s
AKASG Malin Array Be 74.89 352 P **P 12 33 16.9 -0.1**
AKASG Malin Array Be 74.89 352 P **P 12 33 16.9 -0.1**
comp=Z,11nm,0.4s,baz=7.2,slow=5.6,SNR=111
AKASG LR LR 13 12 04.8
comp=Z,588nm,19.1s,baz=345,slow=40
KIEV Kiev 74.90 352 *e*P **P 12 33 16.8 -0.2**
KIEV pmax pmax
comp=Z,74nm,1.1s
KIEV Kiev 74.90 352 *e*P **P 12 33 16.8 -0.2**
comp=Z,74nm,1.1s
AK01 Malin Array Si 74.91 352 *e*P **P 12 33 17.2 +0.2**
AK02 Malin Array Si 74.94 352 *e*P **P 12 33 17.1 -0.1**
MEM Membach 75.03 7 P **P 12 33 18.8 +1.1**
comp=Z,32nm,1.5s
UBBA Unterbreizbach 75.07 5 *e*P **P 12 33 18.7 +0.9**
comp=Z,37nm,1.6s
FBE Freiberg 75.09 3 *e*P **P 12 33 18.9 +0.8**
comp=Z,86nm,1.3s
BRG Berggiesshubel 75.16 2⇓ *i*P **P 12 33 19.3 +0.8**
comp=Z,42nm,1.2s
BRG
comp=N,221nm,25.4s
BRG
comp=E,278nm,17.7s
BRG
comp=Z,338nm,22.3s
BRG Berggiesshubel 75.16 2 *e*P **P 12 33 18.9 +0.4**
comp=Z,43nm,1.2s
BRG Berggiesshubel 75.16 2⇓ *i*P **P 12 33 19.3 +0.8**
BRG pmax pmax
comp=Z,26nm,1.2s
BRG MLR MLR
comp=N,42μm,25.4s
BRG MLR MLR
comp=E,221nm,17.7s
BRG MLR MLR
comp=Z,278nm,22.3s
BCLA Clavier 75.16 8 P **P 12 33 19.6 +1.1**
comp=Z,27nm,1.7s
KSP Ksiaz 75.22 1⇑ *e*P **P 12 33 19.5 +0.6**
KSP Ksiaz 75.22 1 *e*P **P 12 33 19.7 +0.8**
RAR Rarotonga 75.24 177 LR LR 12 59 19.2
comp=Z,643nm,19.3s,baz=276,slow=30
MOX Moxa 75.31 4 *e*P **P 12 33 20.0 +0.6**
comp=Z,78nm,1.3s
MOX Moxa 75.31 4 *e*P **P 12 33 20.0 +0.6**
MOX pmax pmax
comp=Z,78nm,1.3s
DOU Dourbes 75.42 8 P **P 12 33 21.0 +1.0**
comp=Z,23nm,1.8s
BAIF Baives 75.42 9⇑ *i*P **P 12 33 21.0 +1.0**
comp=Z,156nm,1.5s
BAIF Baives 75.42 9⇑ *i*P **P 12 33 21.0 +1.0**
BAIF pmax pmax
comp=Z,156nm,1.5s
BAIF Baives 75.42 9⇑ *i*P **P 12 33 21.0 +1.0**
comp=Z,156nm,1.5s
GIVF Givet 75.44 8⇑ *i*P **P 12 33 20.9 +0.8**
comp=Z,271nm,1.7s
GIVF Givet 75.44 8⇑ *i*P **P 12 33 20.9 +0.8**
GIVF pmax pmax
comp=Z,271nm,1.7s
GIVF Givet 75.44 8⇑ *i*P **P 12 33 20.9 +0.8**
comp=Z,271nm,1.7s
PLN Plauen 75.49 3 *e*P **P 12 33 21.2 +0.8**
comp=Z,155nm,1.2s
PVCC Panska Ves 75.51 2 *e*P **P 12 33 21.6 +1.1**
PVCC MLR MLR
comp=Z,400nm,18.3s
PVCC Panska Ves 75.51 2⇑ *e*P **P 12 33 21.6 +1.1**
PVCC AMS AMS 13 14 10.0
comp=Z,400nm,18.3s
WERD Werda 75.53 3 *e*P **P 12 33 21.4 +0.7**
comp=Z,70nm,1.9s
UPC Upice 75.56 1 *e*P **P 12 33 22.0 +1.2**
UPC Upice 75.56 1⇑ *e*P **P 12 33 22.0 +1.2**
TANN Tannenbergstha 75.57 3 *e*P **P 12 33 21.7 +0.7**
comp=Z,60nm,1.7s
TNS Taunus Mts 75.58 6 *e*P **P 12 33 21.6 +0.6**
comp=Z,53nm,1.2s
TNS Taunus Mts 75.58 6 *e*P **P 12 33 21.6 +0.6**
TNS pmax pmax
comp=Z,53nm,1.2s
SDDR Presa de Saban 75.59 78 *e*P **P 12 33 21.1 -0.4**
comp=Z,9.1nm,0.2s
GUNZ Gunzen 75.62 3 *e*P **P 12 33 22.0 +0.8**
comp=Z,59nm,1.6s
WERN Wernitzgruen 75.70 3 *e*P **P 12 33 22.5 +0.8**
comp=Z,62nm,1.4s
NKC Novy Kostel 75.75 3⇑ *i*P **P 12 33 23.0 +1.0**
NKC MLR MLR
comp=Z,200nm,15.2s
NKC Novy Kostel 75.75 3⇑ *i*P **P 12 33 23.0 +1.0**
NKC AMS AMS 13 15 40.0
comp=Z,200nm,15.2s
OJC Ojcow 75.83 358 *e*P **P 12 33 23.5 +1.1**
OJC Ojcow 75.83 358 *e*P **P 12 33 23.4 +1.1**
OJC Ojcow 75.83 358 *i* P **P 12 33 23.0 +0.6**
ABH Alteburg 75.86 7 *e*P **P 12 33 23.6 +1.0**
PRA Prague 75.97 2⇑P **P 12 33 25.0 +1.9**
WLF Walferdange 75.98 7 P **P 12 33 24.9 +1.7**
comp=Z,46nm,1.5s
WLF Walferdange 75.98 7 *e*P **P 12 33 24.2 +1.0**
comp=Z,87nm,1.3s
WLF Walferdange 75.98 7 *e*P **P 12 33 23.2 0.0**
WLF pmax pmax
comp=Z,75nm,1.3s
WLF Walferdange 75.98 7 *e*P **P 12 33 23.2 0.0**
comp=Z,75nm,1.3s
MANZ Manzenberg 75.99 3 *e*P **P 12 33 23.9 +0.6**
comp=Z,50nm,1.5s
KRLC Kraliky 75.99 0 *e*P **P 12 33 24.8 +1.4**
KRLC Kraliky 75.99 0⇑ *e*P **P 12 33 24.8 +1.4**
RUP Ruppelstein 76.01 7 *e*P **P 12 33 24.4 +1.0**
RUP Ruppelstein 76.01 7 *e*P **P 12 33 24.4 +1.0**
PRU Pruhonice 76.05 2⇑ *i*P **P 12 33 24.6 +1.0**
PRU MLR MLR
comp=Z,300nm,21.5s
PRU Pruhonice 76.05 2⇑ *i*P **P 12 33 24.6 +1.0**
PRU AMS AMS 13 11 30.0
comp=Z,300nm,21.5s
LVV L'vov 76.10 356 *e*P **P 12 33 24.3 +0.4**
LVV MLR MLR
comp=Z,400nm,21.0s
PMG Port Moresby 76.19 231 LR LR 13 03 34.8
comp=Z,347nm,19.7s,baz=99,slow=33
FLN La Foliniere 76.21 12⇑ *i*P **P 12 33 25.1 +0.6**
comp=Z,91nm,1.2s
FLN *e*R
comp=Z,497nm,20.2s
FLN La Foliniere 76.21 12⇑ *i*P **P 12 33 25.1 +0.6**
FLN pmax pmax
comp=Z,91nm,1.2s
FLN La Foliniere 76.21 12⇑ *i*P **P 12 33 25.1 +0.6**
comp=Z,91nm,1.2s
ROTZ Rotzenmuhle 76.21 3 *e*P **P 12 33 25.6 +1.0**
comp=Z,48nm,1.4s
TOD Tromm 76.21 6 *e*P **P 12 33 25.5 +0.9**
TOD Tromm 76.21 6 *e*P **P 12 33 25.5 +0.9**
OKC Ostrava-Krasne 76.23 359 *e*P **P 12 33 25.6 +1.0**
OKC MLR MLR
comp=Z,300nm,18.1s
OKC Ostrava-Krasne 76.23 359⇑ *e*P **P 12 33 25.6 +1.0**
OKC AMS AMS 13 13 00.0
comp=Z,300nm,18.1s
GRF Grafenberg Arr 76.25 4 *e*P **P 12 33 25.8 +1.0**
comp=Z,92nm,1.4s
GRF *e*L L 13 14 37.4
comp=Z,287nm,18.7s
GRF Grafenberg Arr 76.25 4 *e*P **P 12 33 25.8 +1.0**
GRF pmax pmax
comp=Z,92nm,1.4s
GRFO Grafenberg 76.25 4 *e*P **P 12 33 25.5 +0.8**
GRFO pmax pmax
comp=Z,89nm,1.4s
GRFO Grafenberg 76.25 4 *e*P **P 12 33 25.5 +0.8**
comp=Z,89nm,1.4s
ROSF Rostrenen 76.26 14 *e*P **P 12 33 25.8 +1.0**
comp=Z,270nm,1.8s
ROSF Rostrenen 76.26 14 *e*P **P 12 33 25.8 +1.0**
ROSF pmax pmax
comp=Z,270nm,1.8s
ROSF Rostrenen 76.26 14 *e*P **P 12 33 25.8 +1.0**
comp=Z,270nm,1.8s
MORC Moravsky Berou 76.29 360 *e*P **P 12 33 25.4 +0.3**
MORC pmax pmax
comp=Z,45nm,1.4s
MORC Moravsky Berou 76.29 360 *e*P **P 12 33 25.4 +0.3**
comp=Z,45nm,1.4s
MORC Moravsky Berou 76.29 360⇓ *i*P **P 12 33 26.4 +1.3**
KWP Kalwaria Pacla 76.34 356⇑ P **P 12 33 26.7 +1.4**
KWP Kalwaria Pacla 76.34 356 *e*P **P 12 33 26.6 +1.2**
comp=Z,98nm,1.1s
KWP Kalwaria Pacla 76.34 356⇑ *i*P **P 12 33 26.7 +1.4**
KWP Kalwaria Pacla 76.34 356 *e*P **P 12 33 26.5 +1.2**
LDF La Druitiere 76.42 12⇑ *i*P **P 12 33 26.2 +0.5**
comp=Z,89nm,1.3s
LDF La Druitiere 76.42 12⇑ *i*P **P 12 33 26.2 +0.5**
LDF pmax pmax
comp=Z,89nm,1.3s
LDF La Druitiere 76.42 12⇑ *i*P **P 12 33 26.2 +0.5**
comp=Z,89nm,1.3s
SGMF Saint Gilles 76.44 14⇑ *i*P **P 12 33 26.7 +0.9**
comp=Z,105nm,1.2s
SGMF Saint Gilles 76.44 14⇑ *i*P **P 12 33 26.7 +0.9**
SGMF pmax pmax
comp=Z,105nm,1.2s
SGMF Saint Gilles 76.44 14⇑ *i*P **P 12 33 26.7 +0.9**
comp=Z,105nm,1.2s
KTD Kalmit 76.45 6 *e*P **P 12 33 27.0 +1.0**
KTD Kalmit 76.45 6 *e*P **P 12 33 27.0 +1.0**
GRR Gorron 76.53 12⇑ *i*P **P 12 33 27.0 +0.6**
comp=Z,82nm,1.2s
GRR Gorron 76.53 12⇑ *i*P **P 12 33 27.0 +0.6**
GRR pmax pmax
comp=Z,82nm,1.2s
GRR Gorron 76.53 12⇑ *i*P **P 12 33 27.0 +0.6**
comp=Z,82nm,1.2s
NIE Niedzica 76.62 358⇑ *i*P **P 12 33 28.5 +1.6**
NIE Niedzica 76.62 358 *i* P **P 12 33 28.5 +1.6**
QUIF Quistinic 76.69 14 *e*P **P 12 33 28.0 +0.8**
QUIF Quistinic 76.69 14 *e*P **P 12 33 28.0 +0.8**
QUIF Quistinic 76.69 14 *e*P **P 12 33 28.0 +0.8**
VRAC Vranov 76.76 1⇓ *i*P **P 12 33 28.8 +1.1**
TREC Trest 76.76 1 *e*P **P 12 33 28.4 +0.7**
TREC MLR MLR
comp=Z,400nm,20.1s
TREC Trest 76.76 1⇑ *e*P **P 12 33 28.4 +0.7**
TREC AMS AMS 13 11 10.0
comp=Z,400nm,20.1s
LANF Langenberg 76.77 6 *e*P **P 12 33 28.9 +1.1**
LANF Langenberg 76.77 6 *e*P **P 12 33 28.9 +1.1**
LANF Langenberg 76.77 6 *e*P **P 12 33 28.9 +1.1**
WET Wettzell 76.86 3 *e*P **P 12 33 29.2 +1.0**
comp=Z,43nm,1.3s
WET Wettzell 76.86 3 *e*P **P 12 33 29.2 +1.0**
WET pmax pmax
comp=Z,43nm,1.3s
KHC Kasperske Hory 76.89 3⇑ *i*P **P 12 33 29.8 +1.4**
KHC *e* 12 33 37.3
KHC MLR MLR
comp=Z,300nm,18.1s
KHC Kasperske Hory 76.89 3⇑ *i*P **P 12 33 29.8 +1.4**
KHC *ex* x 12 33 37.3
KHC AMS AMS 13 14 50.0
comp=Z,300nm,18.1s
KHC Kasperske Hory 76.89 3 *e*P **P 12 33 29.2 +0.7**
MEZF Maizieres J'vi 77.04 8⇑ *i*P **P 12 33 30.3 +1.1**
comp=Z,111nm,1.3s
MEZF Maizieres J'vi 77.04 8⇑ *i*P **P 12 33 30.3 +1.1**
comp=Z,111nm,1.3s
PAGF Fort de Pagny 77.05 8⇑ *i*P **P 12 33 30.5 +1.2**
comp=Z,45nm,1.2s
PAGF Fort de Pagny 77.05 8⇑ *i*P **P 12 33 30.5 +1.2**
comp=Z,45nm,1.2s
KOLS Kolonicke sedl 77.05 357 *e*P **P 12 33 30.5 +1.2**
KOLS pmax pmax
comp=Z,30nm,1.2s
KOLS Kolonicke sedl 77.05 357 *e*P **P 12 33 30.5 +1.2**
STU Stuttgart 77.07 6 *e*P **P 12 33 30.0 +0.6**
comp=Z,47nm,1.2s
STU Stuttgart 77.07 6 *e*P **P 12 33 30.9 +1.5**
STU Stuttgart 77.07 6 *e*P **P 12 33 30.9 +1.5**
CRVS Cervenica-Dubn 77.11 357 *e*P **P 12 33 29.0 -0.6**
CRVS pmax pmax
comp=Z,36nm,1.5s
CRVS Cervenica-Dubn 77.11 357 *e*P **P 12 33 29.0 -0.6**
GEC2 GERESS Array S 77.18 2 *e*P **P 12 33 30.7 +0.6**
comp=Z,33nm,1.2s
GEC2 GERESS Array S 77.18 2 *e*P **P 12 33 30.7 +0.6**
GEC2 pmax pmax
comp=Z,33nm,1.2s
GERES GERESS Array B 77.18 2 P **P 12 33 31.0 +0.9**
GERES sP **sP 12 33 44.5 -2.2**
GERES GERESS Array B 77.18 2 P **P 12 33 31.0 +0.9**
comp=Z,9.7nm,0.9s,baz=356,slow=4.0,SNR=65
GERES sP **sP 12 33 44.5 -2.2**
comp=Z,4.3nm,0.7s,baz=22,slow=7.4,SNR=8.4
CDF Champ du Feu 77.30 7⇑ *i*P **P 12 33 31.6 +0.8**
comp=Z,109nm,1.4s
CDF Champ du Feu 77.30 7⇑ *i*P **P 12 33 31.6 +0.8**
CDF pmax pmax
comp=Z,109nm,1.4s
CDF Champ du Feu 77.30 7⇑ *i*P **P 12 33 31.6 +0.8**
comp=Z,109nm,1.4s
SFTF Sexfontaines 77.34 8⇑ *i*P **P 12 33 31.8 +0.9**
comp=Z,164nm,1.3s
SFTF Sexfontaines 77.34 8⇑ *i*P **P 12 33 31.8 +0.9**
comp=Z,164nm,1.3s
UZH Uzhgorod 77.36 357 *e*P **P 12 33 31.4 +0.4**
UZH *e* 12 33 47.4
THEF They Montfort 77.39 8 *e*P **P 12 33 32.2 +1.0**
THEF They Montfort 77.39 8 *e*P **P 12 33 32.2 +1.0**
THEF They Montfort 77.39 8 *e*P **P 12 33 32.2 +1.0**
BFO Black Forest 77.46 6 *e*P **P 12 33 32.1 +0.5**
comp=Z,58nm,1.6s
BFO Black Forest 77.46 6 *e*P **P 12 33 32.4 +0.8**
BFO pmax pmax
comp=Z,50nm,1.5s
BFO Black Forest 77.46 6 *e*P **P 12 33 32.4 +0.8**
comp=Z,50nm,1.5s
BFO Black Forest 77.46 6 P **P 12 33 32.4 +0.8**
comp=Z,93nm,1.2s,SNR=6.5
ECH Echery 77.49 7 *e*P **P 12 33 32.6 +0.8**
ECH pmax pmax
comp=Z,35nm,1.0s
ECH Echery 77.49 7 *e*P **P 12 33 32.6 +0.8**
comp=Z,35nm,1.0s
ECH Echery 77.49 7 *e*P **P 12 33 32.6 +0.8**
KECS Kecovo 77.55 358 *e*P **P 12 33 33.6 +1.5**
KECS pmax pmax
comp=Z,14nm,1.0s
KECS Kecovo 77.55 358 *e*P **P 12 33 33.6 +1.5**
VYHS Vyhne 77.57 359 *e*P **P 12 33 33.1 +0.9**
VYHS pmax pmax
comp=Z,22nm,1.2s
VYHS Vyhne 77.57 359 *e*P **P 12 33 33.1 +0.9**
LIBD Limburg 77.59 7 *e*P **P 12 33 33.3 +1.0**
LIBD Limburg 77.59 7 *e*P **P 12 33 33.3 +1.0**
HAU Haudompre 77.64 8⇑ *i*P **P 12 33 33.4 +0.8**
comp=Z,89nm,1.2s
HAU *e*R
comp=Z,429nm,19.5s
HAU Haudompre 77.64 8⇑ *i*P **P 12 33 33.4 +0.8**
HAU pmax pmax
comp=Z,89nm,1.2s
HAU Haudompre 77.64 8⇑ *i*P **P 12 33 33.4 +0.8**
comp=Z,89nm,1.2s
SPAK Spaichingen-Ko 77.71 6 *e*P **P 12 33 34.3 +1.2**
FUR Furstenfeldbru 77.78 4 *e*P **P 12 33 34.2 +0.8**
comp=Z,111nm,1.5s
FUR Furstenfeldbru 77.78 4 *e*P **P 12 33 34.2 +0.8**
FUR pmax pmax
comp=Z,111nm,1.5s
TRPA Tarpa 77.85 356⇑ *i*P **P 12 33 35.4 +1.7**
TRPA Tarpa 77.85 356⇑ *e*P **P 12 33 35.0 +1.3**
MOF Molkenrain 77.85 7 *e*P **P 12 33 34.5 +0.6**
MOF Molkenrain 77.85 7 *e*P **P 12 33 34.5 +0.6**
MOF Molkenrain 77.85 7 *e*P **P 12 33 34.5 +0.6**
HINF Hinteralfeld 77.87 7⇑ *i*P **P 12 33 34.6 +0.7**
comp=Z,83nm,1.3s
HINF Hinteralfeld 77.87 7⇑ *i*P **P 12 33 34.6 +0.7**
HINF pmax pmax
comp=Z,83nm,1.3s
HINF Hinteralfeld 77.87 7⇑ *i*P **P 12 33 34.6 +0.7**
comp=Z,83nm,1.3s
ZST Bratislava 77.87 0 *e*P **P 12 33 34.4 +0.5**
ZST pmax pmax
comp=Z,39nm,1.2s
ZST Bratislava 77.87 0 *e*P **P 12 33 34.4 +0.5**
FELD Feldberg im Sc 77.89 6 *e*P **P 12 33 34.8 +0.6**
HYF Humbligny 78.04 10 *e*P **P 12 33 35.9 +1.1**
HYF Humbligny 78.04 10 *e*P **P 12 33 35.9 +1.1**

PSZ **Piszkesteto** 78.13 358 *e*P **P** 12 33 37.0 +1.6
PSZ pmax pmax
comp=Z,61nm,1.3s
PSZ Piszkesteto 78.13 358 *e*P **P** 12 33 37.0 +1.6
comp=Z,61nm,1.3s
PSZ Piszkesteto 78.13 358⇑ *i*P **P** 12 33 37.5 +2.1
PSZ Piszkesteto 78.13 358⇑ *e*P **P** 12 33 37.1 +1.6
CONA Conrad Observa 78.14 1⇑ *i*P **P** 12 33 36.8 +1.4
comp=Z,49nm,1.2s,SNR=22
LOR Lormes 78.16 9⇑ *i*P **P** 12 33 36.3 +0.8
comp=Z,94nm,1.3s
LOR *e*R
comp=Z,613nm,22.0s
LOR Lormes 78.16 9⇑ *i*P **P** 12 33 36.3 +0.8
comp=Z,94nm,1.3s
TBI Tubuai 78.16 168 *e*LR LR 12 57 25.9
comp=Z,1μm,24.8s,baz=345
MOA Molln 78.19 2⇑ *i*P **P** 12 33 36.9 +1.2
comp=Z,21nm,1.4s
BUR08 Bucovina Ar. S 78.21 355 *e*P **P** 12 33 36.6 +0.7
BURAR Bucovina Array 78.24 355⇑ *i*P **P** 12 33 37.1 +1.0
RJOB Jochberg 78.26 3 *e*P **P** 12 33 36.8 +0.7
comp=Z,32nm,1.0s
LOMF Lomont 78.33 7 *e*P **P** 12 33 37.8 +1.3
LOMF Lomont 78.33 7 *e*P **P** 12 33 37.8 +1.3
LOMF Lomont 78.33 7 *e*P **P** 12 33 37.8 +1.3
SSF Saint Saulge 78.33 10⇑ *i*P **P** 12 33 37.2 +0.8
comp=Z,122nm,1.3s
SSF Saint Saulge 78.33 10⇑ *i*P **P** 12 33 37.2 +0.8
SSF pmax pmax
comp=Z,122nm,1.3s
SSF Saint Saulge 78.33 10⇑ *i*P **P** 12 33 37.2 +0.8
comp=Z,122nm,1.3s
MFF Saint Martin d 78.38 12⇑ *i*P **P** 12 33 37.7 +1.0
comp=Z,148nm,1.3s
MFF Saint Martin d 78.38 12⇑ *i*P **P** 12 33 37.7 +1.0
MFF pmax pmax
comp=Z,148nm,1.3s
MFF Saint Martin d 78.38 12⇑ *i*P **P** 12 33 37.7 +1.0
comp=Z,148nm,1.3s
SOP Sopron 78.39 1⇑ *e*P **P** 12 33 38.5 +1.8
BUD Budapest 78.58 359⇓ *e*P P 12 33 34.5 -3.3
MOTA Moosalm 78.59 4⇑ *i*P **P** 12 33 39.0 +0.9
comp=Z,58nm,1.2s,SNR=16
KIS Kishinev 78.61 352 *e*P **P** 12 33 36.0 -2.0
comp=Z,100nm,1.3s
KIS *e*S S 12 43 26.0 -5.5
KIS *es*S **SKSac** **12 43 48.0 -1.5**
KIS Kishinev 78.61 352 *e*P **P** 12 33 36.0 -2.0
KIS *e* 12 33 43.0
KIS *e*S S 12 43 26.0 -5.5
KIS *e*'SS **SKSac** **12 43 48.0 -1.5**
KIS *e*PS **PnS** **12 44 12.0 -4.5**
KIS pmax pmax
comp=Z,140nm,1.3s
KIS MLR MLR
comp=N,400nm,20.0s
KIS MLR MLR
comp=E,200nm,20.0s
KIS MLR MLR
comp=Z,600nm,20.0s
KIS MLR MLR
comp=Z,600nm,20.0s
WATA Walderalm 78.62 4⇓ *i*P **P** 12 33 39.3 +1.1
comp=Z,66nm,1.3s
PKSG 78.68 359⇓ *e*P **P** 12 33 40.6 +2.3
WTTA Wattenberg 78.69 4⇑ *i*P **P** 12 33 40.1 +1.4
comp=Z,55nm,1.1s
BGF Bois d'Agland 78.76 10 *e*P **P** 12 33 39.5 +0.7
comp=Z,67nm,1.1s
BGF Bois d'Agland 78.76 10 *e*P **P** 12 33 39.5 +0.7
BGF pmax pmax
comp=Z,67nm,1.1s
BGF Bois d'Agland 78.76 10 *e*P **P** 12 33 39.5 +0.7
comp=Z,67nm,1.1s
SMF Signal de Mont 78.77 9⇑ *i*P **P** 12 33 39.5 +0.6
comp=Z,110nm,1.2s
SMF Signal de Mont 78.77 9⇑ *i*P **P** 12 33 39.5 +0.6
SMF pmax pmax
comp=Z,110nm,1.2s
SMF Signal de Mont 78.77 9⇑ *i*P **P** 12 33 39.5 +0.6
comp=Z,110nm,1.2s
ARSA Arzberg 78.81 1⇑ *i*P **P** 12 33 40.2 +1.1
comp=Z,41nm,1.2s,SNR=12
PKST T"s 78.81 360⇑ *e*P **P** 12 33 41.0 +1.9
FETA Feichten 78.89 5⇑ *i*P **P** 12 33 41.1 +1.4
comp=Z,47nm,1.1s,SNR=18
KBA Koelnbreinsper 78.94 3⇑ *i*P **P** 12 33 41.7 +1.7
comp=Z,97nm,1.2s,SNR=16
TCF Toulx Ste Croi 78.96 11⇑ *i*P **P** 12 33 40.6 +0.6
comp=Z,70nm,1.4s
TCF Toulx Ste Croi 78.96 11⇑ *i*P **P** 12 33 40.6 +0.6
TCF pmax pmax
comp=Z,70nm,1.4s
TCF Toulx Ste Croi 78.96 11⇑ *i*P **P** 12 33 40.6 +0.6
comp=Z,70nm,1.4s
CABF La Chapelle 79.01 8⇑ *i*P **P** 12 33 41.5 +1.2
comp=Z,81nm,1.2s
CABF La Chapelle 79.01 8⇑ *i*P **P** 12 33 41.5 +1.2
CABF pmax pmax
comp=Z,81nm,1.2s
CABF La Chapelle 79.01 8⇑ *i*P **P** 12 33 41.5 +1.2
comp=Z,81nm,1.2s
DRGR 79.18 356 ⇓P **P** 12 33 42.3 +1.1
GUN Gumba 79.20 303 *e*P **P** 12 33 43.0 +1.0
ABTA Abfaltersbach 79.24 3⇑ *i*P **P** 12 33 42.4 +0.9
comp=Z,45nm,1.2s,SNR=8.5
TESR Tescani 79.25 353⇓ *i*P **P** 12 33 42.3 +0.8
AGO Saint Agoulin 79.29 10 *e*P **P** 12 33 44.1 +2.3
AGO Saint Agoulin 79.29 10 *e*P **P** 12 33 44.1 +2.3
TUE Stuetta 79.37 6 *e*P **P** 12 33 43.5 +1.1
comp=Z,75nm,1.6s
SOKA Soboth 79.37 2⇑ *i*P **P** 12 33 43.3 +1.0
comp=Z,74nm,1.2s
MYKA Terra Mystica 79.39 3⇑ *i*P **P** 12 33 43.2 +0.8
comp=Z,26nm,1.2s
PERS Pernice 79.42 2 *i*P **P** 12 33 43.8 +1.3
PKS9 Tamasi 79.48 359⇓ *e*P **P** 12 33 44.5 +1.7
OBKA Obir 79.53 2⇑ *i*P **P** 12 33 44.0 +0.8
comp=Z,45nm,0.6s,SNR=17
KKN Kakani 79.59 303 *e*P **P** 12 33 44.4 +0.4
BEHE Becsehely 79.60 0⇑ *e*P **P** 12 33 45.1 +1.7
PKI Pulchoki 79.71 303 *e*P **P** 12 33 45.3 +0.5
PKIN Phulchoki 79.72 303 *e*P **P** 12 33 45.1 +0.4
comp=Z,200nm,1.3s
CHTO Chiang Mai 79.72 288 *e*P **P** 12 33 44.4 -0.1
CHTO pmax pmax
comp=Z,27nm,1.4s
CHTO Chiang Mai 79.72 288 *e*P **P** 12 33 44.4 -0.1
comp=Z,27nm,1.4s
MAK Makhachkala 79.74 338 *e*P **P** 12 33 45.4 +1.2
MAK *e*S **S** **12 43 46.8 +3.2**
MAK *e* 12 44 03.2
MAK pmax pmax
comp=Z,172nm,1.3s
KIV Kislovodsk 79.76 342⇓ *e*P **P** 12 33 45.3 +0.9
KIV *e*S S 12 43 51.0 +7.0
KIV pmax pmax
comp=Z,64nm,1.2s
KIV MLR MLR
comp=Z,400nm,21.0s
ANN Anapa 79.80 346 *e*P **P** 12 33 43.3 -1.2
ANN *e*S **S** **12 43 42.6 -1.6**
ANN pmax pmax
comp=Z,44nm,1.4s
DMN Daman 79.83 303 *e*P **P** 12 33 46.0 +0.7
PKSM Moragy 79.85 359⇑ *e*P **P** 12 33 45.8 +1.0
RJF Les Rejaudoux 79.85 11 *e*P **P** 12 33 45.3 +0.5
RJF *e*R
comp=Z,608nm,18.8s
RJF Les Rejaudoux 79.85 11 *e*P **P** 12 33 45.3 +0.5
RJF Les Rejaudoux 79.85 11 *e*P **P** 12 33 45.3 +0.5
DANN Dangsing 79.87 305 *e*P **P** 12 33 46.5 +1.0
DOPR Dopca 79.87 354⇑ *i*P **P** 12 33 47.1 +2.2
VRI Vrincioaia 79.89 353 ⇓P **P** 12 33 46.6 +1.6
VRI Vrincioaia 79.89 353⇓ *i*P **P** 12 33 46.6 +1.6
PLOR Plostina 79.91 353 ⇑P **P** 12 33 46.1 +0.9
PLOR Plostina 79.91 353⇑ *i*P **P** 12 33 46.1 +0.9
KBZ Khabaz 79.94 341 P **P** 12 33 46.6 +1.4
KBZ Khabaz 79.94 341 P **P** 12 33 46.6 +1.4
KBZ Khabaz 79.94 341 P **P** 12 33 46.6 +1.4
comp=Z,24nm,1.0s,baz=336,slow=2.7,SNR=35
KBZ LR LR 13 17 25.8
comp=Z,242nm,19.6s,baz=12,slow=42
CM31 Chiang Mai Arr 80.00 288 *e*P **P** 12 33 46.3 +0.3
comp=Z,17nm,0.9s
CMAR Chiang Mai Arr 80.00 288 P **P** 12 33 46.5 +0.5
CMAR Chiang Mai Arr 80.00 288 P **P** 12 33 46.5 +0.5
comp=Z,34nm,1.1s,baz=16,slow=5.3,SNR=57
CMAR LR LR 13 11 11.5
comp=Z,304nm,19.9s,baz=40,slow=37
LFF La Frestale 80.12 12 *e*P **P** 12 33 47.1 +0.8
comp=Z,206nm,1.6s
LFF La Frestale 80.12 12 *e*P **P** 12 33 47.1 +0.8
LFF pmax pmax
comp=Z,206nm,1.6s
LFF La Frestale 80.12 12 *e*P **P** 12 33 47.1 +0.8
comp=Z,206nm,1.6s
JAVS Javornik 80.14 2 *i*P **P** 12 33 47.0 +0.5
LPL La Plagne 80.14 8⇑ *i*P **P** 12 33 48.4 +1.7
comp=Z,68nm,1.4s
LPL La Plagne 80.14 8⇑ *i*P **P** 12 33 48.4 +1.7
LPL pmax pmax
comp=Z,68nm,1.4s
LPL La Plagne 80.14 8⇑ *i*P **P** 12 33 48.4 +1.7
comp=Z,68nm,1.4s
LPG La Plagne 80.17 8⇑ *i*P **P** 12 33 48.7 +1.8
comp=Z,41nm,1.2s
LPG La Plagne 80.17 8⇑ *i*P **P** 12 33 48.7 +1.8
LPG pmax pmax
comp=Z,41nm,1.2s
LPG La Plagne 80.17 8⇑ *i*P **P** 12 33 48.7 +1.8
comp=Z,41nm,1.2s
SSB Saint Sauveur 80.19 9 *e*P **P** 12 33 46.7 0.0
SSB pmax pmax
comp=Z,22nm,1.3s
SSB Saint Sauveur 80.19 9 *e*P **P** 12 33 46.7 0.0
comp=Z,22nm,1.3s
CAF Calviac 80.29 11⇑ *i*P **P** 12 33 47.9 +0.7
comp=Z,54nm,1.3s
CAF Calviac 80.29 11⇑ *i*P **P** 12 33 47.9 +0.7
CAF pmax pmax
comp=Z,54nm,1.3s
CAF Calviac 80.29 11⇑ *i*P **P** 12 33 47.9 +0.7
comp=Z,54nm,1.3s
MLR Muntele Rosu 80.31 354⇓ *i*P **P** 12 33 49.6 +2.1
BZS Buzias 80.39 357 ⇑P **P** 12 33 48.6 +0.9
BZS Buzias 80.39 357⇑ *i*P **P** 12 33 48.6 +0.9
VOIR 80.42 355 ⇑P **P** 12 33 49.6 +1.6
VOIR 80.42 355⇑ *i*P **P** 12 33 49.6 +1.6
KOLN Koldanda 80.43 305 *e*P **P** 12 33 49.0 +0.5
PYUN Piuthan 80.44 305 *e*P **P** 12 33 49.1 +0.6
comp=Z,170nm,0.9s
ARR Arges 80.51 355⇑ *i*P **P** 12 33 50.4 +2.0
BOJS Bojanci 80.55 2 *i*P **P** 12 33 49.6 +1.1
GZR Gura Zlata 80.57 356 ⇓P **P** 12 33 50.1 +1.3
GZR Gura Zlata 80.57 356⇓ *i*P **P** 12 33 50.1 +1.3
DZM Mont Dzumac 80.58 209 *e*S S 12 44 48.7 +56
comp=Z,179nm,25.8s
DZM *e*LR LR 12 59 21.0
comp=Z,1μm,22.4s
DZM Mont Dzumac 80.58 209 LR LR 13 04 55.7
comp=Z,625nm,18.2s,baz=34,slow=32
BNI Bardonecchia 80.60 8 *e*P **P** 12 33 48.8 -0.2
BNI pmax pmax
comp=Z,52nm,1.3s
BNI Bardonecchia 80.60 8 *e*P **P** 12 33 48.8 -0.2
comp=Z,52nm,1.3s
VIVF Saint-Julien-l 80.62 9⇑ *i*P **P** 12 33 50.1 +1.1
comp=Z,68nm,1.2s
VIVF Saint-Julien-l 80.62 9⇑ *i*P **P** 12 33 50.1 +1.1
VIVF pmax pmax
comp=Z,68nm,1.2s
VIVF Saint-Julien-l 80.62 9⇑ *i*P **P** 12 33 50.1 +1.1
comp=Z,68nm,1.2s
SOC Sochi 80.63 344 *c i*P **P** 12 33 49.2 +0.2
SOC *e* 12 33 53.4
SOC *e*'PP **pP** **12 33 59.1 -2.0**
SOC *e*S **S** **12 43 54.2 +1.2**
SOC *e*SS SS 12 49 17.0 +12
SOC pmax pmax
comp=Z,61nm,1.0s
SOC MLR MLR
comp=Z,388nm,20.0s
ORIF Oris-en-Rattie 80.67 8 *e*P **P** 12 33 49.6 +0.3
comp=Z,23nm,0.9s
ORIF *e*R
comp=Z,598nm,21.5s
ORIF Oris-en-Rattie 80.67 8 *e*P **P** 12 33 49.6 +0.3
ORIF pmax pmax
comp=Z,23nm,0.9s
ORIF Oris-en-Rattie 80.67 8 *e*P **P** 12 33 49.6 +0.3
comp=Z,23nm,0.9s
RKT Rikitea 80.70 154 *e*LR LR 12 58 45.8
comp=Z,1μm,29.2s
RKT *e*T T 14 02 35.0
comp=Z,3.0nm,0.3s
GUDG Gudauri 80.85 340 P **P** 12 33 51.8 +1.3
ONI Oni 80.93 341 P **P** 12 33 52.0 +1.3
MBDF Montbardon 80.93 8⇑ *i*P **P** 12 33 52.7 +1.9
comp=Z,89nm,1.2s
MBDF Montbardon 80.93 8⇑ *i*P **P** 12 33 52.7 +1.9
MBDF pmax pmax
comp=Z,89nm,1.2s
MBDF Montbardon 80.93 8⇑ *i*P **P** 12 33 52.7 +1.9
comp=Z,89nm,1.2s
KBL Kabul 80.95 319 *e*P **P** 12 33 50.4 -0.7
KBL pmax pmax
comp=Z,7.0nm,0.6s
KBL Kabul 80.95 319 *e*P **P** 12 33 50.4 -0.7
comp=Z,6.5nm,0.6s
TIRR Tirgusor 81.16 352 *e*P **P** 12 33 52.3 +0.5
TIRR pmax pmax
comp=Z,45nm,1.3s
TIRR Tirgusor 81.16 352 *e*P **P** 12 33 52.3 +0.5
comp=Z,45nm,1.3s
TIRR Tirgusor 81.16 352⇓ *i*P **P** 12 33 52.9 +1.1
LASF Ste Croix 81.32 10⇑ *i*P **P** 12 33 54.0 +1.3
comp=Z,30nm,1.3s
LASF Ste Croix 81.32 10⇑ *i*P **P** 12 33 54.0 +1.3
comp=Z,30nm,1.3s
TBLG Delisi 81.50 340 P **P** 12 33 55.2 +1.4
TBLG Delisi 81.50 340 *e*P **P** 12 33 55.1 +1.4
SMRF Simiane la Rot 81.58 9⇑ *i*P **P** 12 33 55.9 +1.8
comp=Z,138nm,1.7s
SMRF Simiane la Rot 81.58 9⇑ *i*P **P** 12 33 55.9 +1.8
comp=Z,138nm,1.7s
DGRG David-gareji 81.64 339 P **P** 12 33 56.1 +1.6
SJPF Ste Jean 81.66 14 *e*P **P** 12 33 55.8 +1.2
comp=Z,56nm,1.4s
SJPF Ste Jean 81.66 14 *e*P **P** 12 33 55.8 +1.2
SJPF pmax pmax
comp=Z,56nm,1.4s
SJPF Ste Jean 81.66 14 *e*P **P** 12 33 55.8 +1.2
comp=Z,56nm,1.4s
ABKT Ailbek 81.67 329 P **P** 12 33 56.4 +1.7
comp=Z,119nm,1.3s,SNR=5.7
SBF Sospel 81.84 7 *e*P **P** 12 33 56.4 +0.9
comp=Z,126nm,1.1s
SBF Sospel 81.84 7 *e*P **P** 12 33 56.4 +0.9
SBF pmax pmax
comp=Z,126nm,1.1s
SBF Sospel 81.84 7 *e*P **P** 12 33 56.4 +0.9
comp=Z,126nm,1.1s
MTLF Montolieu 81.87 11⇑ *i*P **P** 12 33 56.6 +1.0
comp=Z,34nm,1.2s
MTLF Montolieu 81.87 11⇑ *i*P **P** 12 33 56.6 +1.0
MTLF pmax pmax
comp=Z,34nm,1.2s
MTLF Montolieu 81.87 11⇑ *i*P **P** 12 33 56.6 +1.0
comp=Z,34nm,1.2s
EPF Esparros 81.95 13 *e*P **P** 12 33 56.4 +0.3
EPF Esparros 81.95 13 *e*P **P** 12 33 56.4 +0.3
EPF Esparros 81.95 13 *e*P **P** 12 33 56.4 +0.3
ETSF Etsaut 81.97 13⇑ *i*P **P** 12 33 57.5 +1.3
comp=Z,129nm,1.7s
ETSF Etsaut 81.97 13⇑ *i*P **P** 12 33 57.5 +1.3
ETSF pmax pmax
comp=Z,129nm,1.7s
ETSF Etsaut 81.97 13⇑ *i*P **P** 12 33 57.5 +1.3
comp=Z,129nm,1.7s
AKH Akhalkalaki 82.06 340 P **P** 12 33 58.2 +1.3
LMR La Mourre 82.30 8 *e*P **P** 12 33 59.0 +1.2
comp=Z,60nm,1.1s
LMR La Mourre 82.30 8 *e*P **P** 12 33 59.0 +1.2
LMR pmax pmax
comp=Z,60nm,1.1s
LMR La Mourre 82.30 8 *e*P **P** 12 33 59.0 +1.2
comp=Z,60nm,1.1s
PRD Provadia 82.49 353 *i*P **P** 12 33 59.7 +0.9
SZH Strazhica 82.53 354 *i*P **P** 12 33 59.4 +0.3
PGF Pioggiola 83.26 6 *e*P **P** 12 34 04.0 +1.0
comp=Z,231nm,1.6s
PGF Pioggiola 83.26 6 *e*P **P** 12 34 04.0 +1.0
PGF pmax pmax
comp=Z,231nm,1.6s
PGF Pioggiola 83.26 6 *e*P **P** 12 34 04.0 +1.0
comp=Z,231nm,1.6s
JMB Vambol 83.28 353 P **P** 12 34 03.2 +0.2
VTS Vitosha 83.35 356 P **P** 12 34 03.8 +0.3
VTS Vitosha 83.35 356⇑ *i*P **P** 12 34 04.6 +1.1
VTS Vitosha 83.35 356 *i*P **P** 12 34 02.7 -0.8
VTS Vitosha 83.35 356⇑ *i*P **P** 12 34 04.6 +1.1
PLD Plovdiv 83.76 355 P **P** 12 34 06.0 +0.6
SKO Skopje 84.03 357 P **P** 12 34 08.7 +1.9
SKO Skopje 84.03 357 *i*P **P** 12 34 08.8 +1.9
KKB Krupnik 84.08 356 *i*P **P** 12 34 07.3 +0.2
KDZ Kurdzhali 84.17 354 *i*P **P** 12 34 07.8 +0.2
MMB Musomiste 84.33 355 *i*P **P** 12 34 08.6 +0.2
PHP Peshkopia 84.35 358 P **P** 12 34 09.1 +0.6
NVR Nevrokopi 84.56 355 P **P** 12 34 10.6 +1.1
NVR Nevrokopi 84.56 355 *e*P **P** 12 34 10.6 +1.1
ESDC Sonseca Array 84.61 16 P **P** 12 34 10.6 +0.7
ESDC pP **pP** **12 34 21.4 -0.6**
ESDC Sonseca Array 84.61 16 P **P** 12 34 10.6 +0.7
comp=Z,6.5nm,0.8s,baz=343,slow=4.7,SNR=30
ESDC pP **pP** **12 34 21.4 -0.6**
comp=Z,12nm,0.9s,baz=341,slow=4.9,SNR=9.9
ESDC LR LR 13 15 19.1
comp=Z,216nm,19.6s,baz=345,slow=38
ESLA Sonseca Array 84.61 16 *e*P **P** 12 34 10.0 +0.1
comp=Z,5.4nm,1.1s
VAY Valandovo 84.64 356 P **P** 12 34 10.6 +0.7
VAY Valandovo 84.64 356 *i*P **P** 12 34 10.6 +0.7
PAB San Pablo 84.68 17 *e*P **P** 12 34 11.1 +0.9
PAB pmax pmax
comp=Z,4.0nm,0.9s
PAB San Pablo 84.68 17 *e*P **P** 12 34 11.1 +0.9
comp=Z,4.3nm,0.9s
TIR Tirane 84.70 358 P **P** 12 34 10.8 +0.6
KNT Kendrikon 84.79 356 P **P** 12 34 11.1 +0.4
SRS Serrai 84.80 355 P **P** 12 34 11.6 +0.8
KAVA Kavala 84.87 355 P **P** 12 34 12.0 +0.9
ALN Alexandroupoli 84.88 353 P **P** 12 34 11.7 +0.6
ALN Alexandroupoli 84.88 353 *e*P **P** 12 34 11.9 +0.8
GRG Griva 85.01 356 P **P** 12 34 11.4 -0.4
GRG Griva 85.01 356 *e*P **P** 12 34 13.0 +1.2
ROSC El Rosal 85.10 89 LR LR 13 12 51.8
comp=Z,112nm,18.7s,baz=12,slow=36
SOH Sokhos 85.11 355 P **P** 12 34 13.2 +0.9
FNA Florina 85.22 357 P **P** 12 34 13.4 +0.5
FNA Florina 85.22 357 *e*P **P** 12 34 13.4 +0.5
ANTO Ankara 85.27 348 *e*P **P** 12 34 14.4 +1.2
ANTO pmax pmax
comp=Z,80nm,1.6s
ANTO Ankara 85.27 348 *e*P **P** 12 34 14.4 +1.2
comp=Z,80nm,1.6s
BR131 Keskin Array S 85.30 347 *e*P **P** 12 34 14.7 +1.2
comp=Z,5.7nm,0.3s
BRTR Keskin Array B 85.30 347 P **P** 12 34 14.4 +0.9
BRTR Keskin Array B 85.30 347 P **P** 12 34 14.4 +0.9
comp=Z,11nm,0.8s,baz=38,slow=2.2,SNR=63
BRTR LR LR 13 14 29.9
comp=Z,287nm,21.5s,baz=353,slow=37
SMTH Samothraki Isl 85.34 354 *e*P **P** 12 34 13.8 +0.4
PLG Polygyros 85.55 355 P **P** 12 34 14.9 +0.4
OUR Ouranopolis 85.56 355 P **P** 12 34 14.9 +0.4
NEST Nestorio 85.60 357 P **P** 12 34 15.6 +0.7
MESJ Messejana 85.62 20 *e*P **P** 12 34 15.6 +0.8
MESJ AMb AMB 12 34 17.3
comp=Z,34nm,2.2s
MESJ Messejana 85.62 20 *e*P **P** 12 34 15.6 +0.8
KZN Kozani 85.69 357 P **P** 12 34 15.7 +0.4
KZN Kozani 85.69 357 *e*P **P** 12 34 15.7 +0.4
LIA Limnos Island 85.93 354 P **P** 12 34 16.9 +0.6
LIA Limnos Island 85.93 354 *e*P **P** 12 34 17.0 +0.6
CTAO Charters Tower 86.03 227 *e*P **P** 12 34 15.9 -1.0
CTAO pmax pmax
comp=Z,4.0nm,1.0s
CTAO Charters Tower 86.03 227 *e*P **P** 12 34 15.9 -1.0
comp=Z,3.8nm,1.0s
MORF Marmelete 86.04 21 *e*P **P** 12 34 17.8 +0.7
CUC Castrocucco 86.07 1 *e*P **P** 12 34 17.3 +0.2
comp=Z,17nm,1.0s
SRN Sarande 86.16 358 P **P** 12 34 18.4 +0.9
KEK Kerkira 86.33 358 *e*P **P** 12 34 18.7 +0.3
JAN Janina 86.36 357 P **P** 12 34 20.3 +1.7
THL Klokotos Trika 86.42 356 *e*P **P** 12 34 18.8 0.0
IGT Igoumenitsa 86.50 358 P **P** 12 34 19.9 +0.7
PRK Paraskevi 86.51 353 P **P** 12 34 19.6 +0.4
XOR Xorichti 86.57 355 P **P** 12 34 19.6 0.0
SIGR SIGRI 86.57 353 P **P** 12 34 19.8 +0.3
NEO Neokhori 86.62 355 P **P** 12 34 19.4 -0.4
AOS Alonnisos 86.73 355 P **P** 12 34 19.8 -0.5
AOS Alonnisos 86.73 355 *e*P **P** 12 34 20.1 -0.2
SKIA Skiathos 86.75 355 P **P** 12 34 20.6 +0.2
TIP Timpagrande 86.89 0 P **P** 12 34 22.0 +0.8
TIP Timpagrande 86.89 0 *e*P **P** 12 34 22.1 +0.8
comp=Z,35nm,1.3s
AGG Agios Georgios 86.95 356 P **P** 12 34 20.8 -0.6
AGG Agios Georgios 86.95 356 *e*P **P** 12 34 21.3 -0.1
MAKR Makrakomi, Fth 86.96 356 P **P** 12 34 21.9 +0.4
EVR Evrytania 87.07 357 P **P** 12 34 23.0 +0.9
EVR Evrytania 87.07 357 *e*P **P** 12 34 23.0 +0.9
KSM Kuching 87.09 268 *e*P **P** 12 34 23.2 +0.9
comp=Z,8.0nm,1.0s
KSM *e*pP **pP** **12 34 36.1 +1.6**
AXAR Agios Charalam 87.19 356 P **P** 12 34 22.1 -0.5
LKD2 Lefkada island 87.23 357 *e*P **P** 12 34 23.2 +0.4
LKR Lokris 87.29 356 P **P** 12 34 22.6 -0.4
LKR Lokris 87.29 356 *e*P **P** 12 34 22.2 -0.8
CHOS Chios island 87.38 353 P **P** 12 34 23.6 0.0
CHOS Chios island 87.38 353 *e*P **P** 12 34 23.5 0.0
ISP Isparta 87.54 350 P **P** 12 34 24.7 +0.3
DSF Desfina 87.55 356 P **P** 12 34 23.7 -0.7
EFP Efpalio 87.56 356 P **P** 12 34 25.3 +1.0
EFP Efpalio 87.56 356 *e*P **P** 12 34 25.5 +1.2
LAKA Lakka 87.74 356 P **P** 12 34 25.8 +0.5
MRMA Marmari 87.81 354 P **P** 12 34 25.2 +0.4
PTL Penteli 87.85 355 P **P** 12 34 25.4 -0.4
VLS Valsamata 87.85 357 P **P** 12 34 25.4 -0.4
THAL Thalero 87.92 356 P **P** 12 34 25.7 -0.3
KLV Kalavryta, Ach 87.93 356 *e*P **P** 12 34 26.5 +0.3
RLS Riolos of Patr 87.94 357 P **P** 12 34 26.5 +0.3
GUR Goura 88.03 356 P **P** 12 34 26.2 -0.5
GUR Goura 88.03 356 *e*P **P** 12 34 26.9 +0.2
DID Didima 88.42 355 P **P** 12 34 27.5 -1.0
DID Didima 88.42 355 *e*P **P** 12 34 27.5 -1.0
DIDY Didyma 88.45 355 P **P** 12 34 27.8 -0.9
VLX Vlachokerasia 88.59 356 P **P** 12 34 29.1 -0.3
ITM Ithomi 88.80 356 P **P** 12 34 30.3 0.0
ITM Ithomi 88.80 356 *e*P **P** 12 34 30.4 +0.1
PYL PYLOS 89.09 356 *e*P **P** 12 34 30.4 -1.2
DYR Agios Nikonas 89.20 356 P **P** 12 34 31.4 -0.8
DYR Agios Nikonas 89.20 356 *e*P **P** 12 34 32.5 +0.3
VLI Veliai 89.22 356 P **P** 12 34 31.2 -1.0
VLI Veliai 89.22 356 *e*P **P** 12 34 31.4 -0.8
BHD Baghdad 89.71 338 *e*P **P** 12 34 35.3 +0.7
BHD *e*PcP **pP** **12 34 43.0 -3.8**
BHD *e*S **S** **12 45 26.0 +3.0**
ANKY Antikythira Is 90.05 355 *e*P **P** 12 34 33.9 -2.2
KEST Kesra 90.06 7 P **P** 12 34 36.6 +0.3
KEST Kesra 90.06 7 P **P** 12 34 36.6 +0.3
comp=Z,1.5nm,0.9s,baz=11,slow=16,SNR=2.3
KEST LR LR 13 19 39.4
comp=Z,137nm,19.7s,baz=312,slow=39
WRA Warramunga Arr 91.41 237 P **P** 12 34 41.5 -1.0
WRA Warramunga Arr 91.41 237 P **P** 12 34 41.5 -1.0
comp=Z,4.4nm,1.1s,baz=36,slow=5.8,SNR=8.9
HYB Hyderabad 91.64 303 *i*P **P** 12 34 43.0 -0.8
URZ Urewera 93.83 196 LR LR 13 10 26.5
comp=Z,316nm,19.8s,baz=211,slow=31
FITZ Fitzroy Crossi 94.32 245 LR LR 13 17 57.7
comp=Z,128nm,18.0s,baz=23,slow=36
ASAR Alice Springs 94.78 235 P **P** 12 34 57.5 -0.5
ASAR Alice Springs 94.78 235 P **P** 12 34 57.5 -0.5
comp=Z,1.5nm,1.0s,baz=39,slow=6.0,SNR=6.8
ASAR LR LR 13 14 28.0
comp=Z,284nm,19.8s,baz=27,slow=33
STKA Stephens Creek 98.35 225 LR LR 13 16 20.7
comp=Z,303nm,18.2s,baz=25,slow=33
TORD Torodi Ar. Bea 111.50 16 PKiKP **PKiKP** **12 40 10.2 -0.6**
TORD PP **PP** **12 40 55.1 +4.0**

TORD	**Torodi Ar. Bea**	**111.50**	**16**	PKiKP	**PKiKP**	**12 40 10.2**	**-0.6**
	comp=Z,0.6nm,0.9s,baz=265,slow=1.0,SNR=3.2						
TORD				PP	**PP**	**12 40 55.1**	**+4.0**
	comp=Z,1.6nm,1.1s,baz=351,slow=8.3,SNR=4.2						
CPUP	**Villa Florida**	**119.76**	**94**	PKP	**PKPdf**	**12 40 25.2**	**-1.0**
CPUP	**Villa Florida**	**119.76**	**94**	PKP	**PKPdf**	**12 40 25.2**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=96,slow=8.3,SNR=3.2						
PLCA	**Paso Flores**	**122.88**	**115**	PKP	**PKPdf**	**12 40 30.8**	**-1.1**
PLCA	**Paso Flores**	**122.88**	**115**	PKP	**PKPdf**	**12 40 30.8**	**-1.1**
	comp=Z,2.7nm,1.0s,baz=252,slow=10,SNR=2.5						
KMBO	**Kilima Mbogo**	**124.53**	**336**	PKP	**PKPdf**	**12 40 37.3**	**+1.1**
KMBO				*e*PKPdf	**PKiKP**	**12 40 37.8**	**+1.3**
KMBO	**Kilima Mbogo**	**124.53**	**336**	PKP	**PKPdf**	**12 40 37.3**	**+1.1**
	comp=Z,5.1nm,0.9s,baz=9.9,slow=5.4,SNR=7.5						
VNDA	**Vanda**	**133.40**	**190**	PKP	**PKPdf**	**12 40 53.7**	**+3.0**
VNDA	**Vanda**	**133.40**	**190**	PKP	**PKPdf**	**12 40 53.7**	**+3.0**
	comp=Z,0.5nm,0.9s,baz=22,slow=1.8,SNR=4.3						
QSPA	**South Pole Qui**	**144.08**	**180**	*e*PKPdf	PKPbc	12 41 09.7	+0.9
TSUM	**Tsumeb**	**144.96**	**360**	*e*PKPbc	**PKPab**	**12 41 13.5**	**+0.5**
LBTB	**Lobatse**	**150.11**	**345**	*e*PKPdf	**PKPdf**	**12 41 22.9**	**+0.9**
LBTB				*e*PKPbc	**PKiKP**	**12 41 28.0**	**+0.1**
BOSA	**Boshof**	**153.69**	**344**	PKPbc	**PKPbc**	**12 41 35.9**	**+0.8**
BOSA	**Boshof**	**153.69**	**344**	PKPbc	**PKPbc**	**12 41 35.9**	**+0.8**
	comp=Z,1.5nm,0.4s,baz=148,slow=18,SNR=7.6						
MAW	**Mawson**	**154.93**	**220**	PKP	**PKPdf**	**12 41 27.6**	**+0.1**
MAW				PKPbc	**PKPbc**	**12 41 36.3**	**0.0**
MAW				PKPab	**PKPab**	**12 41 52.2**	**+0.2**
MAW	**Mawson**	**154.93**	**220**	PKP	**PKPdf**	**12 41 27.6**	**+0.1**
	comp=Z,1.9nm,0.7s,baz=283,slow=2.2,SNR=2.2						
MAW				PKPbc	**PKPbc**	**12 41 36.3**	**0.0**
	comp=Z,3.1nm,0.9s,baz=323,slow=3.3,SNR=4.3						
MAW				PKPab	**PKPab**	**12 41 52.2**	**+0.2**
	comp=Z,4.8nm,1.0s,baz=214,slow=3.9,SNR=4.4						
SNAA	**Sanae**	**160.50**	**161**	*e*PKPdf	**PKPdf**	**12 41 31.8**	**-2.7**
SNAA	**Sanae**	**160.50**	**161**	*e*PKPab	**PKPab**	**12 42 14.9**	**-1.2**
SNAA	**Sanae**	**160.50**	**161**	PKP	**PKPdf**	**12 41 32.0**	**-2.5**
SNAA				PKPab	**PKPab**	**12 42 14.3**	**-1.9**
SNAA				*e*PKPab	PKPab	12 42 15.1	-1.0
SNAA	**Sanae**	**160.50**	**161**	PKP	**PKPdf**	**12 41 32.0**	**-2.5**
	comp=Z,0.8nm,1.0s,baz=182,slow=5.1,SNR=4.4						
SNAA				PKPab	**PKPab**	**12 42 14.3**	**-1.9**
	comp=Z,0.6nm,1.0s,baz=230,slow=2.6,SNR=6.8						

IDC 06 12:32:33.8±1.6**,2°.94N**×**127°.44E,h0**km**,mb3.7**/5**, mb1 4.0**/5**,mb1mx3.6**/23**,mbtmp3.8**/5**,MS3.3**/1**,Ms1 3.3**/1**, ms1mx2.3**/36**,Error ellipse: s-maj=91.9km s-min=22.3km az=68.0,Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.98**	**185**	P	P	12 37 19.1	+0.2
	0.9nm,0.5s,baz=357,slow=14,SNR=3.8						
WRA	**Warramunga Arr**	**23.73**	**164**	P	P	12 37 47.7	-0.1
	4.4nm,0.6s,baz=343,slow=10,SNR=52						
ASAR	**Alice Springs**	**27.19**	**167**	P	P	12 38 19.3	-0.1
	0.7nm,0.5s,baz=356,slow=8.0,SNR=16						
ASAR				LR	LR	12 49 15.5	
	comp=Z,60nm,20.4s,baz=165,slow=37						
STKA	**Stephens Creek**	**37.15**	**160**	P	P	12 39 46.2	-0.3
	2.1nm,0.7s,baz=342,slow=11,SNR=5.3						
MKAR	**Makanchi Array**	**58.60**	**325**	P	P	12 42 32.7	+0.1
	0.2nm,0.6s,baz=115,slow=6.5,SNR=4.1						

CASC 06 12:40:21.3±3.2**,16°.36N**×**88°.24W,h20**km±196km**,MD3.8, Belize**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**1.90**	**228**	*e*P	Pn	12 40 51.1	-1.7
MRL				*e*S	Sb	12 41 17.8	-1.3
NBG	**Las Nubes**	**2.69**	**229**	*e*P	Pn	12 41 03.1	-0.8
NBG				*e*S	Sn	12 41 37.9	+1.8
LBRS	**Las Brisas**	**2.72**	**197**	*e*P	Pn	12 41 03.0	-1.0
BOQS	**Boqueron**	**2.80**	**201**	*e*P	Pn	12 41 05.8	+0.6
LFRS	**El Faro**	**2.83**	**196**	*e*P	Pn	12 41 06.6	+1.0
VSM	**San Miguel**	**2.92**	**181**	*e*P	Pn	12 41 09.3	+2.4
CNCH	**Conchagua**	**3.09**	**173**	*e*P	Pn	12 41 10.8	+1.7
CNCH				*e*S	Sn	12 41 44.2	-1.5
FUG	**Fuego 3**	**3.15**	**233**	*e*P	Pn	12 41 09.0	-1.0

*MOS **06** 12:44:57.3±1.2, 54°.31N×162°.52W, h12km, mb4.4/20, Error ellipse: s-maj=15.9km s-min=7.8km az=80.1*
*IDC **06** 12:44:57.1±1.0, 54°.29N×162°.70W, h0km, mb4.0/17, mb1 4.2/20, mb1mx4.0/30, mbtmp4.0/20, ML4.0/3, MS3.7/1, Ms1 3.7/1, ms1mx2.4/48, Error ellipse: s-maj=26.1km s-min=14.3km az=173.0*
*ISCJB **06** 12:45:00.9±0.5, 54°.12N±0°.05×162°.46W±0°.04, h43km±3km, mb4.2/32, MS3.9/7, Error ellipse: s-maj=8.4km s-min=3.2km az=160.1*
*NEIC **06** 12:45:00.4, 54°.15N×162°.54W, h10km, mb4.2/3, ML3.9(AEIC), After AEIC.*
*BJI **06** 12:45:02.8, 54°.44N×163°.45W, h29km, mB5.1/5, mb4.7/5, Ms4.5/3, Ms7 4.0/4*
ISC 06 12:45:02.1±0.6**,54°.25N**±0°.06×**162°.49W**±0°.03**,h33**km±1km**, h33**km**:pP-P,n129,**σ1s.52/158**,mb4.2**/32**,MS3.9**/7**,5C-2D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	**Deer Island**	**0.73**	**10**	P	**Pn**	**12 45 16.2**	**+0.2**
FALS	**False Pass**	**0.81**	**319**	P	**Pb**	**12 45 17.3**	**-0.5**
FALS				S	**Sn**	**12 45 29.4**	**+1.4**
DT1	**Dutton Round H**	**0.87**	**8**	P	**Pb**	**12 45 18.3**	**-0.4**
DTNA	**Dutton South F**	**0.91**	**9**	P	**Pb**	**12 45 19.2**	**-0.2**
DOL	**Dolgoi Island**	**0.97**	**22**	P	**Pb**	**12 45 19.8**	**-0.6**
SSLS	**Shishaldin Sou**	**0.99**	**298**	P	**Pn**	**12 45 19.9**	**+0.1**
SSLW	**Shishaldin Wes**	**1.08**	**299**	P	**Pn**	**12 45 21.1**	**+0.2**
SSBA	**Shishaldin**	**1.08**	**299**	P	**Pn**	**12 45 21.2**	**+0.2**
SSBA				S	**Sb**	**12 45 37.7**	**+1.4**
PS4A	**Pavlof South-4**	**1.16**	**18**	P	**Pb**	**12 45 23.4**	**-0.2**
PVV	**Pavlof Volcano**	**1.20**	**20**	P	**Pb**	**12 45 23.9**	**-0.2**
SDPT	**Sand Point**	**1.60**	**46**	P	**Pb**	**12 45 29.8**	**-1.3**
SDPT				S	**Sb**	**12 45 51.2**	**+0.3**
AKUT	**Akutan**	**1.93**	**268**	P	**Pn**	**12 45 32.0**	**-0.5**
AKUT				S	**Sn**	**12 45 56.2**	**+0.6**
AKLV	**Akutan Long Va**	**2.04**	**269**	P	**Pn**	**12 45 33.6**	**-0.4**
AKGG	**Akutan Green G**	**2.06**	**270**	P	**Pn**	**12 45 34.0**	**-0.3**
AKRB	**Akutan Reef Bi**	**2.10**	**268**	P	**Pn**	**12 45 35.0**	**+0.1**
UNV	**Unalaska Valle**	**2.40**	**262**	P	**Pn**	**12 45 37.8**	**-1.1**
UNV				S	**Sn**	**12 46 09.0**	**+1.8**
MTBL	**Makushin Table**	**2.48**	**265**	P	**Pn**	**12 45 39.6**	**-0.6**
VNWF	**Veniaminof 8**	**2.54**	**40**	P	**Pb**	**12 45 44.8**	**-2.2**
MREP	**Makushin Rep't**	**2.55**	**262**	P	**Pn**	**12 45 41.2**	**+0.1**
MCIR	**Makushin Cirqu**	**2.61**	**265**	P	**Pn**	**12 45 41.7**	**-0.2**
VNFG	**Veniaminof 2**	**2.64**	**38**	P	**Pn**	**12 45 43.9**	**+1.5**
VNHG	**Veniaminof 1**	**2.74**	**43**	P	**Pb**	**12 45 47.3**	**-3.1**
CHGN	**Chignik**	**3.11**	**47**	*e*Pn	**Pn**	**12 45 50.2**	**+1.5**
CHGN				*e*Sn	**Sn**	**12 46 27.6**	**+3.0**
OKFG	**Magazine Ridge**	**3.32**	**257**	P	**Pn**	**12 45 52.1**	**+0.5**
OKSP	**Okmok Steeple**	**3.58**	**256**	P	**Pn**	**12 45 55.3**	**0.0**
ANPK	**Aniakchak Peak**	**3.59**	**42**	P	**Pn**	**12 45 57.8**	**+2.3**
ANNW	**Aniakchak Nort**	**3.64**	**40**	P	**Pn**	**12 45 58.9**	**+2.7**
ANNE	**Aniakchak Nort**	**3.67**	**42**	P	**Pn**	**12 45 58.1**	**+1.6**
NIKH	**Nikolski High**	**4.00**	**254**	P	**Pn**	**12 45 59.9**	**-1.0**
KABU	**Katmai Buttres**	**5.69**	**42**	P	**Pn**	**12 46 26.1**	**+1.9**
KABR	**Katmai Barrier**	**5.72**	**44**	P	**Pn**	**12 46 26.2**	**+1.5**
OHAK	**Old Harbor**	**5.99**	**56**	*e*Pn	**Pn**	**12 46 27.8**	**-0.5**
OHAK				*e*Sn	**Sn**	**12 47 33.1**	**-2.5**
KDAK	**Kodiak Island**	**6.58**	**54**	Pn	**Pn**	**12 46 35.6**	**-0.8**
KDAK				Sn	**Sn**	**12 47 47.2**	**-3.0**
KDAK				Lg	Lg	12 48 14.2	
KDAK	**Kodiak Island**	**6.58**	**54**	Pn	**Pn**	**12 46 35.6**	**-0.8**
	1.7nm,0.3s,baz=228,slow=4.3,SNR=15						
KDAK				Sn	**Sn**	**12 47 47.2**	**-3.0**
	3.4nm,0.3s,baz=323,slow=22,SNR=8.6						
KDAK				Lg	Lg	12 48 14.2	
	1.8nm,0.3s,baz=133,slow=16,SNR=3.8						
ATKA	**Atka Island**	**7.32**	**258**	*e*Pn	**Pn**	**12 46 46.5**	**0.0**
SVW2	**Sparrevohn**	**7.79**	**26**	*e*Pn	Pn	12 46 57.1	+4.0
RSO	**Redoubt South**	**8.15**	**36**	*e*Pn	**Pn**	**12 47 00.7**	**+2.6**
RSO				*e*Sn	**Sn**	**12 48 24.5**	**-4.4**
SPU	**Mount Spurr**	**8.90**	**35**	*e*Pn	**Pn**	**12 47 11.2**	**+2.9**
SEW	**Seward**	**9.19**	**45**	*e*Pn	**Pn**	**12 47 12.8**	**+0.8**
RC01	**Rabbit Creek A**	**9.66**	**40**	*e*Pn	**Pn**	**12 47 20.3**	**+1.7**
	10.0nm,0.3s						
SML	**Sawmill**	**10.64**	**39**	*e*P	**Pn**	**12 47 31.1**	**-0.9**
SML	**Sawmill**	**10.64**	**39**	*e*Pn	**Pn**	**12 47 31.1**	**-0.9**
TRF	**Thorofare Moun**	**11.16**	**29**	*e*Pn	**Pn**	**12 47 40.6**	**+1.4**
DIV	**Divide**	**11.27**	**46**	*e*Pn	**Pn**	**12 47 40.6**	**-0.1**
AMKA	**Amchitka**	**11.38**	**263**	*e*Pn	**Pn**	**12 47 41.4**	**-0.7**
TNA	**Tin City**	**11.66**	**349**	*e*Pn	**Pn**	**12 47 48.9**	**+3.0**
MCK	**McKinley**	**11.77**	**31**	*e*P	**Pn**	**12 47 49.4**	**+2.0**
MCK	**McKinley**	**11.77**	**31**	*e*Pn	**Pn**	**12 47 49.4**	**+2.0**
PAX	**Paxson**	**12.41**	**38**	*e*P	**Pn**	**12 47 56.4**	**+0.1**
PAX	**Paxson**	**12.41**	**38**	*e*Pn	**Pn**	**12 47 56.4**	**+0.1**
COLA	**College**	**12.94**	**29**	*e*P	**Pn**	**12 48 04.0**	**+0.7**
COLA	**College**	**12.94**	**29**	*e*Pn	**Pn**	**12 48 04.0**	**+0.7**
ILAR	**Eielson Array**	**13.14**	**30**	Pn	**Pn**	**12 48 03.4**	**-2.7**
ILAR	**Eielson Array**	**13.14**	**30**	Pn	**Pn**	**12 48 03.4**	**-2.7**
	0.3nm,0.3s,baz=212,slow=13,SNR=13						
DOT	**Dot Lake**	**13.33**	**38**	*e*Pn	**Pn**	**12 48 07.9**	**-0.8**
PNL	**Peninsula**	**13.68**	**57**	*e*Pn	**Pn**	**12 48 14.3**	**+0.8**
PNL				*e*Sn	Sn	12 50 32.2	-12
COLD	**Coldfoot**	**14.29**	**20**	*e*Pn	**Pn**	**12 48 24.4**	**+2.6**
SKAG	**Skagway**	**15.68**	**60**	*e*Pn	**Pn**	**12 48 40.4**	**+0.2**
	16nm,1.1s						
INK	**Inuvik**	**19.52**	**33**	P	**P**	**12 49 24.9**	**-1.2**
INK	**Inuvik**	**19.52**	**33**	P	**P**	**12 49 24.9**	**-1.2**
	0.7nm,0.3s,baz=229,slow=10,SNR=16						
BILL	**Bilibino**	**20.12**	**325**	⇑*e*P	Pn	12 49 34.0	-0.7
BILL				*e*		12 49 50.1	
BILL				*e*S	**S**	**12 53 15.9**	**-0.7**
BILL				pmax	pmax		
	comp=Z,7.0nm,2.1s						
BILL				MLR	MLR		
	comp=Z,100nm,15.0s						
PETK	**Petropavlovsk-**	**23.39**	**284**	P	**P**	**12 50 06.6**	**-1.0**
PETK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PETK	**Petropavlovsk-**	**23.39**	**284**	P	**P**	**12 50 06.6**	**-1.0**
PETK	**Petropavlovsk-**	**23.39**	**284**	P	**P**	**12 50 06.6**	**-1.0**
	comp=Z,9.7nm,0.6s,baz=87,slow=12,SNR=40						
SEY	**Seymchan**	**24.57**	**309**	⇑*e*P	**P**	**12 50 17.2**	**-1.3**
YKA	**Yellowknife Ar**	**25.86**	**52**	P	**P**	**12 50 31.8**	**+1.6**
YKA	**Yellowknife Ar**	**25.86**	**52**	P	**P**	**12 50 31.7**	**+1.6**
	comp=Z,2.2nm,0.6s,baz=270,slow=9.1,SNR=16						
YBH	**Yreka Blue Hor**	**29.01**	**99**	LR	LR	13 00 13.2	
	comp=Z,140nm,18.1s,baz=338,slow=31						
NVAR	**Mina Array Bea**	**33.73**	**100**	P	**P**	**12 51 42.1**	**+1.7**
NVAR	**Mina Array Bea**	**33.73**	**100**	P	**P**	**12 51 42.1**	**+1.7**
	comp=Z,0.5nm,0.6s,baz=307,slow=7.3,SNR=6.3						
REDW	**Red Top Meadow**	**34.96**	**86**	*e*P	P	12 51 48.2	-2.8
REDW				*e*S	**S**	**12 57 23.2**	**+2.7**
YAK	**Yakutsk**	**35.06**	**311**	*e*P	**P**	**12 51 52.7**	**+1.3**
YAK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ERM	**Erimo**	**37.36**	**274**	⇓*i*P	**P**	**12 52 11.3**	**0.0**
HABR	**Khabarovsk**	**38.28**	**288**	*e*P	**P**	**12 52 18.0**	**-0.9**
HABR				*e**PP	**pP**	**12 52 27.7**	**-0.9**
HABR				*e*		12 53 46.0	
HABR				*e*PPP	PPP	12 54 06.0	
HABR				*e*S	**S**	**12 58 10.6**	**+0.1**
HABR				*e*		12 58 20.6	
HABR				*e*SS	**SS**	**13 00 58.0**	**-1.2**
HABR				*e*SSS	SSS	13 01 15.9	
HABR				*e*		13 02 26.7	
HABR				pmax	pmax		
	comp=N,29nm,2.0s						
HABR				pmax	pmax		
	comp=E,43nm,2.7s						
HABR				pmax	pmax		
	comp=Z,28nm,2.0s						
HABR				MLR	MLR		
	comp=Z,119nm,19.0s						
PV01	**Paradox Valley**	**39.61**	**91**	*e*P	**P**	**12 52 30.9**	**+0.4**
ULM	**Lac du Bonnet**	**39.62**	**68**	P	**P**	**12 52 29.5**	**-0.6**
ULM	**Lac du Bonnet**	**39.62**	**68**	P	**P**	**12 52 29.5**	**-0.6**
	comp=Z,2.9nm,0.8s,baz=313,slow=11,SNR=3.1						
AGMN	**Agassiz Nation**	**40.70**	**70**	*e*P	**P**	**12 52 40.1**	**+1.0**
	comp=Z,5.6nm,1.0s						
EYMN	**Ely**	**43.29**	**68**	*e*P	**P**	**12 53 01.1**	**+0.8**
	comp=Z,3.8nm,0.8s						
MDJ	**Mudanjiang**	**43.59**	**286**	P	**P**	**12 53 01.7**	**-1.0**
MDJ				pP	**pP**	**12 53 10.6**	**-1.9**
MDJ				sP	**sP**	**12 53 14.5**	**-1.9**
MDJ				ScP	**ScP**	**12 58 38.6**	**+0.2**
MDJ				PcS	**PcS**	**12 58 42.3**	**-0.1**
MDJ				S	**S**	**12 59 28.4**	**-1.1**
MDJ				sS	**sS**	**12 59 43.7**	**-1.9**
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,290nm,10.0s						
MDJ				LR	LR		
	comp=N,53nm,16.3s						
MDJ				LR	LR		
	comp=E,85nm,17.7s						
MDJ				LR	LR		
	comp=Z,170nm,16.3s						
CN2	**Changchun**	**46.42**	**288**	*e*P	**P**	**12 53 25.6**	**+0.4**
DAG	**Danmarks Havn**	**47.24**	**11**	⇑*i*P	**P**	**12 53 31.4**	**+0.2**
DAG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
DAG	**Danmarks Havn**	**47.24**	**11**	⇑*i*P	**P**	**12 53 31.4**	**+0.2**
	comp=Z,7.1nm,0.7s						
TXAR	**Lajitas Array**	**48.71**	**96**	P	**P**	**12 53 43.7**	**+0.4**
TXAR	**Lajitas Array**	**48.71**	**96**	P	**P**	**12 53 43.7**	**+0.4**
	comp=Z,0.6nm,0.8s,baz=297,slow=5.5,SNR=7.8						
KSRS	**Korea Array**	**49.22**	**280**	P	**P**	**12 53 46.8**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=48,slow=6.8,SNR=11						
KSAR	**Wonju Array Be**	**49.24**	**280**	P	**P**	**12 53 46.8**	**-0.4**
SCO	**Scoresbysund**	**52.38**	**16**	*i* P	**P**	**12 54 11.1**	**+0.8**
SCO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SCO	**Scoresbysund**	**52.38**	**16**	*i* P	**P**	**12 54 11.1**	**+0.8**
	comp=Z,1.6nm,0.7s						
HHC	**Hu-ho-hao-te**	**56.01**	**294**	*e*P	**P**	**12 54 36.2**	**-1.1**
HHC				pP	**pP**	**12 54 48.8**	**+1.5**
HHC				sP	**sP**	**12 54 52.8**	**+1.6**
HHC				PP	**PP**	**12 56 44.3**	**+2.3**
HHC				S	**S**	**13 02 20.6**	**-2.6**
HHC				sS	**sS**	**13 02 36.7**	**-3.0**
HHC				SS	**SS**	**13 06 03.1**	**-5.8**
HHC				pmax	pmax		
	comp=Z,690nm,7.8s						
HHC				LR	LR		
	comp=N,120nm,14.3s						
HHC				LR	LR		
	comp=E,220nm,14.3s						
HHC				LR	LR		
	comp=Z,59nm,15.5s						
ARCES	**ARCESS Array B**	**56.38**	**357**	P	**P**	**12 54 38.0**	**-1.4**
ARCES	**ARCESS Array B**	**56.38**	**357**	P	**P**	**12 54 38.0**	**-1.4**
	comp=Z,0.6nm,0.5s,baz=10,slow=8.6,SNR=5.2						
ZALV	**Zalesovo Beam**	**58.71**	**320**	P	**P**	**12 54 55.4**	**-0.6**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**58.71**	**320**	P	**P**	**12 54 55.5**	**-0.6**
ZALV	**Zalesovo Beam**	**58.71**	**320**	P	**P**	**12 54 55.4**	**-0.6**
	comp=Z,0.6nm,0.3s,baz=35,slow=5.3,SNR=3.2						
KURK	**Kurchatov**	**63.59**	**322**	⇓*i*P	**P**	**12 55 30.0**	**+1.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LZH	**Lanzhou**	**63.61**	**296**	*e*P	**P**	**12 55 31.0**	**+1.3**
LZH				pP	**pP**	**12 55 41.0**	**+1.2**
LZH				sP	**sP**	**12 55 43.3**	**-0.4**
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,49nm,4.5s						
LZH				LR	LR		
	comp=N,130nm,16.3s						
LZH				LR	LR		
	comp=E,140nm,17.0s						
LZH				LR	LR		
	comp=Z,170nm,19.6s						
BRVK	**Borovoye**	**64.45**	**328**	*ce*P	**P**	**12 55 35.1**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
FINES	**FINESS Array B**	**64.45**	**355**	P	**P**	**12 55 33.4**	**-1.1**
FINES	**FINESS Array B**	**64.45**	**355**	P	**P**	**12 55 33.4**	**-1.1**
	comp=Z,1.5nm,0.5s,baz=2.3,slow=9.5,SNR=6.8						
NOA	**NORSAR Array B**	**64.94**	**3**	P	**P**	**12 55 37.4**	**-0.5**
NOA	**NORSAR Array B**	**64.94**	**3**	P	**P**	**12 55 37.4**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=358,slow=6.8,SNR=3.3						
MKAR	**Makanchi Array**	**65.38**	**317**	P	**P**	**12 55 40.4**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**65.38**	**317**	P	**P**	**12 55 40.4**	**-0.5**
MKAR	**Makanchi Array**	**65.38**	**317**	P	**P**	**12 55 40.4**	**-0.5**
	comp=Z,0.7nm,0.6s,baz=46,slow=6.4,SNR=6.4						
WMQ	**Urumqi**	**65.50**	**312**	*e*P	P	12 55 45.0	+3.3
WMQ				LR	LR		
	comp=Z,97nm,19.8s						
CD2	**Chengdu**	**67.61**	**292**	*e*P	**P**	**12 55 56.0**	**+0.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	**Guiyang**	**69.45**	**287**	*e*P	**P**	**12 56 07.2**	**+0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRHR	**Novokhopersk**	**73.10**	**344**	*e*P	P	12 56 19.2	-9.3
VRHR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VRHR				pmax	pmax		
	comp=N,100nm,0.5s						
VRHR				pmax	pmax		
	comp=E,120nm,0.6s						
KSH	**Kashi**	**73.99**	**317**	*e*P	**P**	**12 56 36.3**	**+2.1**
KSH				*e*pP	**pP**	**12 56 46.3**	**+1.8**
KSH				*e*sP	**sP**	**12 56 50.4**	**+2.0**
KSH				*e*PP	**PP**	**12 59 23.1**	**+4.2**
KSH				*e*S	**S**	**13 06 04.0**	**-0.1**
KSH				*e*sS	**sS**	**13 06 22.3**	**+1.1**
KSH				*e*SKS	**SKSac**	**13 06 35.0**	**-3.9**
KSH				pmax	pmax		
	comp=Z,1.0nm,0.1s						
KSH				pmax	pmax		
	comp=Z,120nm,4.9s						
AKASG	**Malin Array Be**	**74.96**	**352**	P	**P**	**12 56 38.6**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKASG	**Malin Array Be**	**74.96**	**352**	P	**P**	**12 56 38.6**	**-0.8**
AKASG	**Malin Array Be**	**74.96**	**352**	P	**P**	**12 56 38.6**	**-0.8**
	comp=Z,2.8nm,0.4s,baz=11,slow=6.0,SNR=8.0						
KHC	**Kasperske Hory**	**76.94**	**3**	*e*P	**P**	**12 56 52.5**	**+1.7**
KHC	**Kasperske Hory**	**76.94**	**3**	*e*P	**P**	**12 56 52.5**	**+1.7**
KOLS	**Kolonicke sedl**	**77.11**	**357**	*e*P	**P**	**12 56 53.0**	**+1.3**
KOLS				pmax	pmax		
	comp=Z,4.0nm,1.6s						
KOLS	**Kolonicke sedl**	**77.11**	**357**	*e*P	**P**	**12 56 53.0**	**+1.3**
GERES	**GERESS Array B**	**77.23**	**3**	P	**P**	**12 56 52.7**	**+0.2**
GERES	**GERESS Array B**	**77.23**	**3**	P	**P**	**12 56 52.7**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=12,slow=7.4,SNR=4.1						
BUR08	**Bucovina Ar. S**	**78.27**	**355**	*e*P	**P**	**12 56 58.9**	**+0.6**
KBZ	**Khabaz**	**80.01**	**342**	P	**P**	**12 57 07.8**	**+0.1**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	**Khabaz**	**80.01**	**342**	P	**P**	**12 57 07.8**	**+0.1**
KBZ	**Khabaz**	**80.01**	**342**	P	**P**	**12 57 07.8**	**+0.1**
	comp=Z,2.1nm,0.9s,baz=50,slow=3.7,SNR=4.4						
CMAR	**Chiang Mai Arr**	**80.10**	**288**	P	**P**	**12 57 08.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**80.10**	**288**	P	**P**	**12 57 08.6**	**-0.1**
	comp=Z,1.2nm,0.8s,baz=356,slow=6.2,SNR=5.8						
ESDC	**Sonseca Array**	**84.64**	**16**	P	**P**	**12 57 32.3**	**+0.2**
ESDC	**Sonseca Array**	**84.64**	**16**	P	**P**	**12 57 32.3**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=347,slow=5.9,SNR=2.6						
BRTR	**Keskin Array B**	**85.37**	**348**	P	**P**	**12 57 35.6**	**-0.2**
BRTR	**Keskin Array B**	**85.37**	**348**	P	**P**	**12 57 35.6**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=354,slow=2.5,SNR=4.0						

IDC 06 13:00:21.8±2.6**,4°.24S**×**130°.23E,h0**km**,mb3.5**/1**, mb1 3.7**/4**,mb1mx3.5**/19**,mbtmp3.5**/4**,ML3.1**/2**,Error ellipse: s-maj=130.1km s-min=28.6km az=75.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.49**	**198**	Pn	Pn	13 03 47.1	-1.2
	0.1nm,0.3s,baz=23,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**16.11**	**166**	Pn	Pn	13 04 09.1	-0.8
	0.1nm,0.3s,baz=350,slow=13,SNR=6.0						
WRA				Sn	Sn	13 07 04.2	-5.3
	0.1nm,0.3s,baz=346,slow=24,SNR=2.9						
ASAR	**Alice Springs**	**19.64**	**170**	P	Pn	13 04 53.0	-0.6
	0.2nm,0.3s,baz=352,slow=12,SNR=23						
MKAR	**Makanchi Array**	**66.07**	**326**	P	P	13 11 10.6	0.0
	0.4nm,0.8s,baz=128,slow=7.7,SNR=4.2						

IDC 06 13:04:22.4±2.6**,21°.83S**×**175°.95W,h0**km**,mb3.9**/5**, mb1 4.1**/5**,mb1mx3.8**/20**,mbtmp3.9**/5**,Error ellipse: s-maj=127.0km s-min=30.3km az=149.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**35.28**	**266**	P	P	13 11 20.9	+1.6
	1.5nm,0.3s,baz=82,slow=12,SNR=3.8						
ASAR	**Alice Springs**	**46.09**	**258**	P	P	13 12 48.4	-0.2
	2.2nm,0.8s,baz=89,slow=8.5,SNR=25						
ASAR				PcP	PcP	13 14 24.6	-0.4
	0.4nm,0.5s,baz=114,slow=4.2,SNR=7.3						
WRA	**Warramunga Arr**	**46.33**	**263**	P	P	13 12 49.6	-0.9
	0.5nm,0.4s,baz=96,slow=7.8,SNR=32						
WRA				PcP	PcP	13 14 25.0	-0.8
	0.4nm,0.9s,baz=96,slow=3.6,SNR=3.4						
FITZ	**Fitzroy Crossi**	**54.76**	**263**	P	P	13 13 53.7	-0.5
	1.7nm,0.8s,baz=104,slow=4.2,SNR=4.4						
ILAR	**Eielson Array**	**89.19**	**12**	P	P	13 17 20.3	+0.8
	0.3nm,0.9s,baz=224,slow=4.7,SNR=3.6						
AKASG	**Malin Array Be**	**145.09**	**332**	PKPbc	PKPbc	13 23 59.8	-1.3
	0.7nm,0.3s,baz=48,slow=3.3,SNR=5.0						
BRTR	**Keskin Array B**	**149.14**	**312**	PKPbc	PKPbc	13 24 12.4	-0.7
	0.8nm,0.6s,baz=155,slow=4.2,SNR=4.5						

GUC 06 13:04:58.5±0.6**,31°.56S**×**69°.24W,h151**km±11km**,ML3.5, 3C,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**1.56**	**284**	⇑*i*P	Pn	13 05 29.3	+0.4
CMCH				*i* S	Sn	13 05 52.6	+0.5
CMCH				AML	AML	13 05 56.3	
	comp=N,895nm,1.0s						
TLL	**Tololo Astrono**	**1.93**	**315**	*e*P	Pn	13 05 34.1	+0.9
TLL				*i* S	Sn	13 06 00.7	+0.7
TLL				AML	AML	13 06 04.0	
	comp=N,244nm,0.5s						
CHNG	**Los Chungos**	**1.95**	**260**	*e*P	Pn	13 05 33.5	+0.4
CHNG				*i* S	Sn	13 05 59.9	+0.2
PEL	**Peldehue**	**2.00**	**217**	⇑*i*P	Pn	13 05 34.1	+0.3
PEL				*i* S	Sn	13 06 01.2	+0.3
PEL				AML	AML	13 06 02.8	
	comp=E,238nm,0.4s						
ROCH	**El Roble**	**2.06**	**226**	*e*P	Pn	13 05 35.3	+0.6
ROCH				*e*S	Sn	13 06 03.4	+0.8
ROCH				AML	AML	13 06 06.5	
	comp=N,222nm,0.4s						
CLCH	**Cerro Calan**	**2.14**	**211**	*e*P	Pn	13 05 36.2	+0.8
CLCH				*i* S	Sn	13 06 04.3	+0.4
CLCH				AML	AML	13 06 05.8	
	comp=E,259nm,0.6s						
PCH	**Pirque**	**2.32**	**207**	*e*P	Pn	13 05 38.2	+0.6
ANTU	**Antumapu**	**2.33**	**210**	*i* S	Sn	13 06 08.4	+0.6
ANTU				AML	AML	13 06 10.4	
	comp=N,150nm,0.2s						
CACH	**El Canelo**	**2.80**	**204**	⇑*i*P	Pn	13 05 44.5	+0.9
CACH				*i* S	Sn	13 06 19.3	+0.9
LCO	**Las Campanas**	**2.83**	**333**	*e*P	Pn	13 05 44.6	+0.3
LCO				AML	AML	13 06 21.3	
	comp=N,141nm,0.4s						

IDC 06 13:07:14.2±14.0**,12°.50S**×**166°.99E,h460**km±216km**, mb3.0**/5**,mb1 3.2**/6**,mb1mx3.0**/21**,mbtmp3.0**/6**,Error ellipse: s-maj=189.2km s-min=27.5km az=163.0,Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.53**	**183**	P	P	13 09 26.4	+0.1
	0.2nm,0.3s,baz=351,slow=19,SNR=4.0						
CTA	**Charters Tower**	**21.27**	**247**	P	P	13 11 27.1	+0.4
	3.3nm,0.6s,baz=68,slow=12,SNR=6.6						
WRA	**Warramunga Arr**	**32.16**	**252**	P	P	13 13 02.0	-0.9
	0.7nm,0.6s,baz=85,slow=9.0,SNR=7.6						
ASAR	**Alice Springs**	**33.27**	**246**	P	P	13 13 12.4	+0.2
	0.8nm,0.7s,baz=72,slow=10,SNR=7.8						
FITZ	**Fitzroy Crossi**	**40.21**	**257**	P	P	13 14 09.6	-0.1
	2.2nm,0.8s,baz=87,slow=6.8,SNR=4.4						
ILAR	**Eielson Array**	**84.50**	**18**	P	P	13 18 57.2	0.0
	0.9nm,0.7s,baz=235,slow=5.3,SNR=14						

*IDC **06** 13:08:13.3±3.8, 37°.00N×71°.28E, h0km, mb3.7/2, mb1 3.8/4, mb1mx3.4/27, mbtmp3.7/4, ML3.7/2, Error*

ellipse: s-maj=99.8km s-min=27.4km az=140.0
*ISCJB **06** 13:08:23.5±0.7, 37°.13N±0°.04×71°.51E±0°.10, h106km, mb3.5/2, Error ellipse: s-maj=11.4km s-min=4.5km az=165.2*
*NNC **06** 13:08:31.7±4.0, 37°.73N×71°.33E, h193km±41km, mb2.9, mpv3.9, Error ellipse: s-maj=37.8km s-min=19.4km az=20.0*
ISC 06 13:08:23.6±0.8**, 37°.24N**±0°.06×**71°.37E**±0°.09**, h106km, n38, σ2s.48**/38**, 3C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.44**	**173**	P	Pn	13 09 20.0	+4.5
CEP				S	**Sn**	**13 09 58.0**	**+2.4**
CHCP	**Chirah Chowk**	**3.89**	**156**	P	Pn	13 09 25.5	+3.9
THW	**Thamme Wali**	**4.45**	**176**	P	Pn	13 09 32.5	+3.5
AML	**Almayashu**	**5.20**	**19**	P	**Pn**	**13 09 42.1**	**+2.7**
	SNR=157						
KZA	**Kyzart**	**5.68**	**31**	P	**Pn**	**13 09 48.0**	**+2.0**
	SNR=25						
EKS2	**Erkin-Say**	**5.72**	**18**	P	**Pn**	**13 09 49.2**	**+3.0**
	SNR=15						
KK31	**Karatay Array**	**5.89**	**354**	⇓P	**Pn**	**13 09 51.6**	**+3.1**
	4.0nm,0.4s,baz=186,slow=15,SNR=150						
KK31				⇓S	**Sn**	**13 10 54.0**	**-0.6**
	6.2nm,0.4s,baz=168,slow=16,SNR=6.7						
AAK	**Ala-Archa**	**5.89**	**23**	P	**Pn**	**13 09 51.7**	**+3.1**
	SNR=24						
THN	**Thein Dam**	**5.98**	**142**	*e*PKP	**Pn**	**13 09 49.0**	**-0.7**
THN				*e*4	**Sn**	**13 10 56.0**	**-0.8**
KBK	**Karagaybulak**	**6.06**	**26**	P	**Pn**	**13 09 53.9**	**+2.9**
	SNR=8.3						
ULHL	**Ulahol**	**6.25**	**35**	P	**Pn**	**13 09 56.3**	**+2.9**
	SNR=13						
CHMS	**Chumysh**	**6.30**	**23**	P	**Pn**	**13 09 56.8**	**+2.7**
	SNR=15						
USP	**Ospenovka**	**6.47**	**21**	P	**Pn**	**13 09 58.7**	**+2.3**
	SNR=23						
TKM2	**Tokmak 2**	**6.53**	**28**	⇑P	**Pn**	**13 09 59.7**	**+2.4**
	10nm,0.5s						
TKM2				⇑S	**Sn**	**13 11 12.0**	**+1.6**
	8.1nm,0.7s						
TKM2	**Tokmak 2**	**6.53**	**28**	P	**Pn**	**13 09 59.7**	**+2.4**
	SNR=6.9						
SDNR	**Sundarnagar**	**7.36**	**139**	*e*PKP	**Pn**	**13 10 10.0**	**+1.5**
SDNR				*e*S	**Sn**	**13 11 26.4**	**-4.1**
SMLA	**Simla**	**7.76**	**140**	*i* P	**Pn**	**13 10 14.7**	**+0.9**
SMLA				*i* S	Sn	13 11 32.3	-7.7
SMLA				AML	AML	13 11 37.6	
	comp=N,123nm,0.4s						
SMLA				AML	AML	13 11 39.9	
	comp=E,128nm,0.3s						
NDI	**New Delhi**	**9.84**	**148**	*e*x	**Pn**	**13 10 40.0**	**-2.1**
NDI				*e*S	Sn	13 12 22.0	-8.8
KHET	**Khetri**	**9.87**	**157**	*e*PKP	**Pn**	**13 10 44.5**	**+1.9**
KHET				*e*S	Sn	13 12 23.3	-8.3
KHET				AML	AML	13 12 40.4	
	comp=E,112nm,0.1s						
KHET				AML	AML	13 12 40.5	
	comp=N,165nm,0.1s						
KALG	**Kalgarh**	**9.88**	**139**	*e*x	Pn	13 10 32.8	-10
KALG				*e*S	Sn	13 12 21.4	-10
AYAN	**Aya Nagar**	**9.98**	**149**	*e*S	Sn	13 12 26.3	-7.8
AGRA	**Agra**	**11.42**	**149**	*e*S	Sn	13 12 58.1	-11
AGRA				AML	AML	13 13 13.2	
	comp=E,46nm,0.4s						
AGRA				AML	AML	13 13 13.4	
	comp=N,42nm,0.1s						
MK31	**Makanchi Array**	**12.52**	**37**	⇓P	**Pn**	**13 11 18.2**	**+0.3**
	comp=N,0.8nm,0.6s,baz=225,slow=15,SNR=12						
MKAR	**Makanchi Array**	**12.52**	**37**	Pn	**Pn**	**13 11 18.4**	**+0.5**
	comp=N,0.3nm,0.3s,baz=228,slow=16,SNR=13						
DANN	**Dangsing**	**13.67**	**127**	*e*P	**Pn**	**13 11 30.9**	**-2.4**
	comp=N,12nm,0.3s						
DANN				*e*S	Sn	13 13 51.6	-13
KOLN	**Koldanda**	**13.97**	**129**	*e*P	**Pn**	**13 11 34.9**	**-2.3**
	comp=N,15nm,0.3s						
AB31	**Akbulak array**	**14.59**	**329**	⇑P	**Pn**	**13 11 44.8**	**+0.1**
	comp=N,0.7nm,0.3s,baz=159,slow=10.0,SNR=70						
AB31				S	**Sn**	**13 14 20.9**	**-4.6**
	comp=N,1.7nm,0.5s,baz=151,slow=22,SNR=8.6						
KKN	**Kakani**	**15.03**	**125**	*e*P	**Pn**	**13 11 48.1**	**-2.6**
PKIN	**Phulchoki**	**15.25**	**125**	*e*P	**Pn**	**13 11 51.9**	**-1.6**
	comp=N,16nm,0.4s						
PKI	**Pulchoki**	**15.26**	**125**	*e*P	**Pn**	**13 11 52.0**	**-1.7**
GUN	**Gumba**	**15.35**	**123**	*e*P	**Pn**	**13 11 53.9**	**-0.9**
	comp=N,23nm,0.4s						
AKTO	**Aktyubinsk**	**16.30**	**328**	⇓P	**Pn**	**13 12 05.2**	**-0.9**
	comp=N,1.3nm,0.5s						
AKTO				⇓S	**Sn**	**13 15 00.3**	**-6.4**
	comp=N,2.4nm,0.9s						
RAMN	**Ramite**	**16.46**	**124**	*e*P	**Pn**	**13 12 07.0**	**-1.6**
TAPN	**Taplejung**	**16.95**	**121**	*e*P	**Pn**	**13 12 13.9**	**-0.7**
	comp=N,14nm,0.5s						
ODAN	**Odare**	**17.05**	**123**	*e*P	**Pn**	**13 12 15.1**	**-0.6**
ZALV	**Zalesovo Beam**	**19.12**	**25**	P	**P**	**13 12 38.7**	**+0.7**
	comp=N,0.4nm,0.3s,baz=206,slow=13,SNR=4.6						
ARCES	**ARCESS Array B**	**40.58**	**337**	P	P	13 15 56.0	+3.7
	comp=N,2.1nm,0.9s,baz=116,slow=10,SNR=3.1						
TORD	**Torodi Ar. Bea**	**66.04**	**269**	P	**P**	**13 19 01.6**	**+2.3**
	comp=N,0.2nm,0.6s,baz=49,slow=5.9,SNR=3.0						

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*NSSC **06** 13:12:39.4±1.7, 33°.82N×36°.51E, h0km±8km, ML1.6*
*CSEM **06** 13:12:39.6±0.3, 33°.82N×36°.51E, h5km, ML1.6, Error ellipse: s-maj=7.1km s-min=4.9km az=68.0*
*GRAL **06** 13:12:41.4±0.3, 33°.78N×36°.43E, h7km±5km, MD3.1*
ISC 06 13:12:39.1±1.4**, 33°.83N**±0°.03×**36°.53E**±0°.05**, h6**km±12km**, n13, σ0s.46**/23**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRBR	**Barbar**	**0.64**	**229**	*e*P	**Pb**	**13 12 52.6**	**-0.2**
BRBR				*e*S	**Sg**	**13 13 00.5**	**+0.8**
BRBR				AML	AML	13 13 06.5	
	comp=N,54nm,0.6s						
BRBR				AML	AML	13 13 09.6	
	comp=E,33nm,0.4s						
BRBR	**Barbar**	**0.64**	**229**	*e*P	**Pb**	**13 12 52.6**	**-0.2**
	SNR=92						
BRBR				*e*S	**Sg**	**13 13 00.5**	**+0.8**
	comp=E,33nm,0.4s,SNR=59						
HWQ	**Hawqa**	**0.66**	**313**	*e*P	**Pb**	**13 12 53.0**	**0.0**
HWQ				*e*S	**Sb**	**13 13 01.6**	**-0.9**
HWQ	**Hawqa**	**0.66**	**313**	*e*P	**Pb**	**13 12 53.0**	**0.0**
RCY	**Rachaya**	**0.67**	**240**	*e*P	**Pg**	**13 12 51.8**	**-0.2**
RCY				*e*S	**Sg**	**13 12 59.4**	**-1.2**
HAWK	**Haweek**	**0.70**	**352**	*e*P	**Pg**	**13 12 52.6**	**+0.1**
HAWK				*e*S	**Sb**	**13 13 03.7**	**+0.1**
HAWK				AML	AML	13 13 07.2	
	comp=N,44nm,0.4s						
HAWK				AML	AML	13 13 08.2	
	comp=E,21nm,0.5s						
HAWK	**Haweek**	**0.70**	**352**	*e*P	**Pg**	**13 12 52.6**	**+0.1**
	SNR=75						
HAWK				*e*S	**Sb**	**13 13 03.7**	**+0.1**
	comp=E,21nm,0.5s,SNR=59						
BHL	**Bhannes**	**0.73**	**276**	*e*P	**Pg**	**13 12 53.4**	**+0.3**
BHL	**Bhannes**	**0.73**	**276**	*e*P	**Pg**	**13 12 53.4**	**+0.3**
SALA	**Sala**	**1.13**	**171**	*e*P	**Pn**	**13 13 01.6**	**0.0**
SALA				*e*S	**Sb**	**13 13 16.3**	**+0.2**
SALA				AML	AML	13 13 23.7	
	comp=E,2.8nm,0.5s						
SALA				AML	AML	13 13 26.7	
	comp=N,31nm,0.4s						
SALA	**Sala**	**1.13**	**171**	*e*P	**Pn**	**13 13 01.6**	**0.0**
	SNR=57						
SALA				*e*S	**Sb**	**13 13 16.3**	**+0.2**
	comp=N,31nm,0.4s,SNR=49						
ZALF	**Zalf**	**1.13**	**143**	*e*P	**Pg**	**13 13 00.5**	**-0.2**
ZALF				*e*S	**Sn**	**13 13 17.6**	**+0.3**
ZALF				AML	AML	13 13 24.6	
	comp=N,25nm,0.6s						
ZALF				AML	AML	13 13 31.8	
	comp=E,13nm,0.4s						
ZALF	**Zalf**	**1.13**	**143**	*e*P	**Pg**	**13 13 00.5**	**-0.2**
	SNR=57						
ZALF				*e*S	**Sn**	**13 13 17.6**	**+0.3**
	comp=E,13nm,0.4s,SNR=49						

IDC 06 13:13:25.9±0.9**, 12°.16N**×**144°.09E, h0km, mb3.6**/9**, mb1 3.9**/9**, mb1mx3.7**/24**, mbtmp3.6**/9**, Error ellipse: s-maj=38.1km s-min=20.7km az=100.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.31**	**197**	P	P	13 20 05.4	-0.3
	0.2nm,0.5s,baz=20,slow=9.5,SNR=4.3						
ASAR	**Alice Springs**	**36.97**	**196**	P	P	13 20 37.2	-0.1
	0.1nm,0.7s,baz=13,slow=9.5,SNR=3.1						
MKAR	**Makanchi Array**	**61.99**	**317**	P	P	13 23 49.0	+0.9
	0.2nm,0.4s,baz=96,slow=8.6,SNR=6.7						
ZALV	**Zalesovo Beam**	**62.34**	**325**	P	P	13 23 49.6	-0.6
	0.3nm,0.3s,baz=97,slow=8.1,SNR=2.5						
ILAR	**Eielson Array**	**70.18**	**25**	P	P	13 24 40.0	-0.2
	0.3nm,0.5s,baz=254,slow=5.7,SNR=11						
YKA	**Yellowknife Ar**	**84.47**	**27**	P	P	13 25 59.7	-0.7
	0.1nm,0.3s,baz=284,slow=5.0,SNR=3.1						
ARCES	**ARCESS Array B**	**88.20**	**342**	P	P	13 26 19.2	+0.5
	1.9nm,0.9s,baz=37,slow=8.3,SNR=3.6						
NVAR	**Mina Array Bea**	**88.41**	**51**	P	P	13 26 21.6	+1.0
	0.3nm,0.6s,baz=263,slow=5.4,SNR=2.7						
FINES	**FINESS Array B**	**92.13**	**335**	P	P	13 26 36.3	-0.8
	0.7nm,0.6s,baz=67,slow=6.4,SNR=5.2						

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*BJI **06** 13:28:58.2, 35°.55N×79°.80E, h5km, ML3.5/4*
*ISCJB **06** 13:28:59.9±1.2, 35°.91N±0°.08×79°.99E±0°.10, h10km, mb3.3/1, Error ellipse: s-maj=11.9km s-min=11.4km az=39.4*
*IDC **06** 13:29:02.1±2.6, 35°.92N×79°.57E, h0km, mb3.4/1, mb1 3.5/6, mb1mx3.3/30, mbtmp3.5/6, ML3.3/5, Error ellipse: s-maj=51.1km s-min=25.9km az=105.0*
ISC 06 13:29:01.3±1.6**, 35°.8N**±0°.1×**80°.1E**±0°.1**, h10km, n10, σ2s.07**/13**, 1C-3D, Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**5.00**	**320**	Pn	Pn	13 30 12.9	-3.6
KSH				Sn	**Sn**	**13 31 09.9**	**-4.6**
AAK	**Ala-Archa**	**8.15**	**329**	Pn	**Pn**	**13 30 59.5**	**-0.2**
	0.4nm,0.3s,baz=191,slow=5.2,SNR=3.6						
AAK				Pg	**Pb**	**13 31 24.5**	**+1.9**
	0.4nm,0.3s,baz=124,slow=3.6,SNR=4.1						
AAK				Sn	**Sn**	**13 32 35.2**	**+3.3**
	0.3nm,0.3s,baz=164,slow=15,SNR=2.9						
AAK				Lg	Lg	13 33 08.7	
	0.5nm,0.3s,baz=15,slow=19,SNR=4.3						
KK31	**Karatay Array**	**10.45**	**318**	⇑Pn	Pn	13 31 27.0	-4.2
	0.3nm,0.5s,baz=147,slow=14,SNR=7.1						
KK31				⇓Sn	Sn	13 33 17.8	-11
	0.7nm,0.6s						
KK31				⇓Lg	Lg	13 34 14.3	
	1.6nm,0.7s						
MK31	**Makanchi Array**	**11.15**	**8**	Pn	**Pn**	**13 31 41.3**	**+0.5**
	0.8nm,0.5s,baz=187,slow=12,SNR=20						
MK31				⇓Sn	**Sn**	**13 33 43.7**	**-1.7**
	5.2nm,1.1s,baz=182,slow=22,SNR=5.9						
MKAR	**Makanchi Array**	**11.15**	**8**	Pn	**Pn**	**13 31 41.2**	**+0.5**
	0.4nm,0.3s,baz=198,slow=16,SNR=16						
MKAR				Sn	**Sn**	**13 33 44.1**	**-1.4**
	0.2nm,0.3s,baz=188,slow=20,SNR=6.2						
KURBB	**Kurchatov Arra**	**14.91**	**356**	Pn	**Pn**	**13 32 31.4**	**-0.6**
	0.0nm,0.3s,baz=181,slow=12,SNR=4.9						
ZALV	**Zalesovo Beam**	**18.49**	**9**	P	**Pn**	**13 33 18.2**	**+0.8**
	0.2nm,0.3s,baz=201,slow=12,SNR=4.7						
BVAR	**Borovoye Array**	**18.59**	**341**	Pn	**P**	**13 33 17.6**	**-0.8**
	0.2nm,0.3s,baz=160,slow=12,SNR=3.7						
LZH	**Lanzhou**	**19.20**	**82**	*e*P	**P**	**13 33 25.6**	**+0.1**
LZH				pP	pP	13 33 36.5	+8.2
LZH				sP	sP	13 33 40.2	+11
TORD	**Torodi Ar. Bea**	**73.12**	**274**	P	**P**	**13 40 31.9**	**-0.4**
	0.3nm,0.7s,baz=46,slow=6.2,SNR=3.1						

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*PRE **06** 13:47:51.5±0.4, 21°.15S×32°.76E, h5km, ML3.5*
*BUL **06** 13:48:14.9±1.8, 21°.03S×31°.10E, h10km, MD4.0*
ISC 06 13:48:04.6±2.1**, 20°.96S**±0°.07×**31°.6E**±0°.2**, h10km, n6, σ2s.94**/8**, Zimbabwe**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
POGA	**Pongola**	**6.38**	**180**	*i* P	Pn	13 49 45.2	+6.5
POGA				*i* S	**Sn**	**13 50 54.0**	**+2.4**
LSZ	**Lusaka**	**6.53**	**330**	*e*P	**Pn**	**13 49 39.6**	**-1.2**
LSZ				*e*S	**Sn**	**13 50 58.4**	**+3.0**
LSZ	**Lusaka**	**6.53**	**330**	*i* P	Pn	13 49 46.1	+5.3
LSZ				*i* S	**Sn**	**13 50 54.7**	**-0.7**
LBTB	**Lobatse**	**6.86**	**233**	*e*P	**Pn**	**13 49 44.7**	**-0.6**
LBTB				*e*S	**Sn**	**13 51 06.8**	**+3.3**
LBTB				AML	AML	13 52 00.0	
	comp=Z,4.6nm,0.5s						
PRYS	**Parys**	**7.10**	**212**	*e*P	Pn	13 49 43.4	-5.3
PRYS				*e*S	**Sn**	**13 51 05.6**	**-4.0**
PRYS				AML	AML	13 52 08.7	
	comp=Z,6.3nm,0.6s						
BOSA	**Boshof**	**9.56**	**216**	*i* P	**Pn**	**13 50 22.6**	**+0.1**
BOSA				*i* S	Sn	13 52 00.0	-10

IDC 06 14:19:05.0±1.6**, 42°.86S**×**72°.48W, h0km, mb3.6**/2**, mb1 4.0**/3**, mb1mx3.7**/18**, mbtmp3.7**/3**, ML3.9**/1**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.8**/24**, Error ellipse: s-maj=48.7km s-min=21.2km az=128.0, Southern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.57**	**35**	Pn	Pn	14 19 49.6	+1.6
	5.5nm,0.3s,baz=216,slow=16,SNR=72						
PLCA				Pg	Pb	14 19 52.1	0.0
	6.5nm,0.3s,baz=222,slow=17,SNR=125						
PLCA				Lg	Lg	14 20 26.2	
	16nm,0.3s,baz=212,slow=16,SNR=9.6						
CPUP	**Villa Florida**	**20.62**	**42**	LR	LR	14 31 38.5	
	comp=Z,86nm,19.9s,baz=265,slow=36						
SIV	**San Ignacio**	**28.51**	**23**	P	P	14 25 01.3	-0.8
	0.3nm,0.3s,baz=217,slow=16,SNR=2.8						
TXAR	**Lajitas Array**	**77.36**	**332**	P	P	14 31 02.1	+0.5
	0.4nm,0.8s,baz=168,slow=4.6,SNR=4.1						
PDAR	**Pinedale Array**	**91.53**	**334**	LR	LR	15 07 11.2	
	comp=Z,21nm,18.2s,baz=71,slow=32						
ZALV	**Zalesovo Beam**	**161.38**	**46**	PKPab	PKPab	14 39 50.8	-0.2
	0.3nm,0.3s,baz=285,slow=5.5,SNR=2.5						
MKAR	**Makanchi Array**	**161.70**	**69**	PKPab	PKPab	14 39 51.8	-1.0
	0.4nm,0.9s,baz=256,slow=4.2,SNR=3.9						

IDC 06 14:35:29.1±1.1**, 47°.95S**×**99°.73E, h0km, mb3.9**/7**, mb1 4.1**/7**, mb1mx3.9**/17**, mbtmp3.9**/7**, MS3.9**/14**, Ms1 3.9**/14**, ms1mx3.7**/21**, Error ellipse: s-maj=42.3km s-min=19.3km az=116.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NWAO	**Narrogin (SRO)**	**19.99**	**48**	LR	LR	14 45 38.1	
	comp=Z,239nm,20.3s,baz=39,slow=30						
MAW	**Mawson**	**27.14**	**210**	LR	LR	14 49 12.1	
	comp=Z,151nm,21.0s,baz=232,slow=30						
STKA	**Stephens Creek**	**35.41**	**78**	LR	LR	14 54 30.6	
	comp=Z,140nm,19.5s,baz=206,slow=32						
ASAR	**Alice Springs**	**36.34**	**60**	P	P	14 42 34.0	-0.8
	3.2nm,1.1s,baz=218,slow=7.8,SNR=14						
ASAR				PcP	PcP	14 44 58.2	-1.2
	1.0nm,1.1s,baz=208,slow=2.2,SNR=4.7						
ASAR				LR	LR	14 56 04.5	
	comp=Z,159nm,18.8s,baz=209,slow=34						
FITZ	**Fitzroy Crossi**	**36.51**	**44**	LR	LR	14 56 49.9	
	comp=Z,150nm,18.9s,baz=221,slow=35						
VNDA	**Vanda**	**37.73**	**162**	P	P	14 42 45.5	-0.5
	0.6nm,0.8s,baz=284,slow=9.8,SNR=4.3						
VNDA				LR	LR	14 56 50.3	
	comp=Z,318nm,19.7s,baz=290,slow=34						
WRA	**Warramunga Arr**	**39.50**	**57**	P	P	14 43 01.1	-0.3
	6.1nm,1.1s,baz=220,slow=9.0,SNR=20						
QSPA	**South Pole Qui**	**42.19**	**180**	P	P	14 43 23.1	-0.3
	1.4nm,0.9s,baz=338,slow=2.4,SNR=5.7						
QSPA				LR	LR	14 58 40.3	
	comp=Z,143nm,21.5s,baz=150,slow=33						
KAPI	**Kappang**	**46.09**	**28**	LR	LR	15 00 53.9	
	comp=Z,58nm,18.2s,baz=46,slow=33						
CTA	**Charters Tower**	**46.56**	**70**	P	P	14 43 58.8	+0.1
	3.9nm,1.0s,baz=239,slow=8.9,SNR=4.6						
SNAA	**Sanae**	**49.01**	**204**	P	P	14 44 16.6	-0.5
	1.2nm,1.1s,baz=115,slow=7.3,SNR=5.4						
PMG	**Port Moresby**	**55.32**	**62**	LR	LR	15 06 14.6	
	comp=Z,119nm,18.2s,baz=19,slow=33						
BOSA	**Boshof**	**59.28**	**260**	LR	LR	15 06 11.7	
	comp=Z,73nm,19.1s,baz=166,slow=31						
HNR	**Honiara**	**63.25**	**74**	LR	LR	15 10 53.3	
	comp=Z,122nm,18.4s,baz=185,slow=34						
CMAR	**Chiang Mai Arr**	**66.10**	**359**	P	P	14 46 17.9	0.0
	2.9nm,1.1s,baz=185,slow=5.9,SNR=4.6						
CMAR				LR	LR	15 11 56.0	
	comp=Z,125nm,18.3s,baz=186,slow=33						
PLCA	**Paso Flores**	**91.28**	**187**	LR	LR	15 32 23.6	
	comp=Z,156nm,19.0s,baz=12,slow=37						
MKAR	**Makanchi Array**	**95.58**	**348**	LR	LR	15 31 48.3	
	comp=Z,31nm,20.7s,baz=3.5,slow=35						
YBH	**Yreka Blue Hor**	**149.57**	**86**	PKPab	PKPab	14 55 25.9	+0.8
	0.7nm,0.6s,baz=262,slow=7.1,SNR=4.2						
NVAR	**Mina Array Bea**	**150.94**	**95**	PKPbc	PKPbc	14 55 24.2	+0.6
	0.5nm,0.6s,baz=235,slow=3.2,SNR=4.8						
NVAR				PKPab	PKPab	14 55 31.1	+0.1
	0.7nm,0.6s,baz=224,slow=3.8,SNR=10.0						

IDC 06 14:50:31.5±2.4**, 4°.50S**×**101°.16E, h0km, mb3.8**/8**, mb1 3.9**/8**, mb1mx3.7**/22**, mbtmp3.8**/8**, MS3.6**/4**, Ms1 3.6**/4**, ms1mx3.1**/30**, Error ellipse: s-maj=79.4km s-min=20.0km az=57.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**22.92**	**355**	P	P	14 55 36.1	-1.1
	1.2nm,0.7s,baz=182,slow=8.6,SNR=7.9						
WRA	**Warramunga Arr**	**35.77**	**118**	P	P	14 57 31.7	-0.9
	0.5nm,0.7s,baz=304,slow=9.1,SNR=6.6						
ASAR	**Alice Springs**	**36.88**	**124**	P	P	14 57 41.9	-0.2
	0.3nm,0.7s,baz=302,slow=7.8,SNR=3.2						
STKA	**Stephens Creek**	**46.65**	**131**	LR	LR	15 19 24.5	
	comp=Z,118nm,18.1s,baz=204,slow=37						
KSRS	**Korea Array**	**48.61**	**29**	P	P	14 59 15.8	-1.2
	1.2nm,0.9s,baz=240,slow=5.7,SNR=4.6						
SONM	**Songino Array**	**52.32**	**4**	P	P	14 59 45.4	+0.2
	1.8nm,0.8s,baz=181,slow=8.8,SNR=7.0						
MKAR	**Makanchi Array**	**53.73**	**344**	P	P	14 59 55.4	0.0
	1.0nm,0.7s,baz=145,slow=8.4,SNR=10						
ZALV	**Zalesovo Beam**	**59.83**	**349**	P	P	15 00 37.7	-0.8
	0.9nm,0.5s,baz=177,slow=3.0,SNR=5.5						
PETK	**Petropavlovsk-**	**74.39**	**31**	P	P	15 02 12.8	+1.6
	3.8nm,0.9s,baz=254,slow=10,SNR=3.2						
FINES	**FINESS Array B**	**86.85**	**332**	LR	LR	15 46 11.1	
	comp=Z,30nm,21.2s,baz=11,slow=38						
ARCES	**ARCESS Array B**	**89.20**	**340**	LR	LR	15 50 11.6	
	comp=Z,32nm,19.3s,baz=30,slow=40						
NOA	**NORSAR Array B**	**93.88**	**331**	LR	LR	15 50 12.2	
	comp=Z,17nm,21.4s,baz=90,slow=38						
TXAR	**Lajitas Array**	**145.91**	**41**	PKPbc	PKPbc	15 10 13.9	+0.1
	0.6nm,0.7s,baz=352,slow=2.5,SNR=5.7						

MEX 06 14:53:02.9±0.4**, 15°.38N**×**95°.66W, h2**km±8km**, MD3.5, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.58**	**312**	*e*P	Pg	14 53 13.8	-0.3
HUIG				*i* S	Sg	14 53 22.1	+0.4
PCIG		**2.38**	**82**	*i* P	Pn	14 53 38.9	-4.0
PCIG				*i* S	Sn	14 54 08.9	-3.7
PNIG	**Pinotepa**	**2.58**	**293**	*e*P	Pn	14 53 42.5	-3.2
PNIG				*i* S	Sn	14 54 13.9	-3.9

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*IDC **06** 15:17:34.6±1.0, 54°.19N×162°.68W, h0km, mb4.0/17, mb1 4.2/21, mb1mx4.1/31, mbtmp4.0/21, ML3.8/4, MS3.1/2, Ms1 3.1/2, ms1mx2.6/37, Error ellipse: s-maj=27.6km s-min=12.8km az=170.0*
*ISCJB **06** 15:17:39.9±0.6, 54°.15N±0°.06×162°.52W±0°.06, h56km±5km, mb4.0/17, MS3.0/1, Error ellipse: s-maj=10.9km s-min=3.7km az=153.9*
*NEIC **06** 15:17:39.4, 54°.15N×162°.56W, h16km, ML3.8(AEIC), After AEIC.*
ISC 06 15:17:40.7±1.2**, 54°.17N**±0°.07×**162°.52W**±0°.04**, h44**km±11km**, n72, σ1s.35**/79**, mb4.0**/17**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DRIA	**Deer Island**	**0.82**	**10**	P	**Pn**	**15 17 54.8**	**-1.1**
DRIA				S	**Sn**	**15 18 05.3**	**-1.5**
FALS	**False Pass**	**0.87**	**323**	P	**Pn**	**15 17 55.9**	**-0.6**
FALS				S	**Sn**	**15 18 08.8**	**+0.7**
DT1	**Dutton Round H**	**0.95**	**8**	P	**Pn**	**15 17 56.9**	**-0.8**
DOL	**Dolgoi Island**	**1.06**	**21**	P	**Pn**	**15 17 58.4**	**-0.7**
SSLW	**Shishaldin Wes**	**1.12**	**304**	P	**Pn**	**15 17 59.8**	**-0.2**
SSBA	**Shishaldin**	**1.12**	**304**	P	**Pn**	**15 17 59.8**	**-0.2**
SSBA				S	**Sn**	**15 18 15.6**	**+1.4**
PS4A	**Pavlof South-4**	**1.24**	**18**	P	**Pn**	**15 18 01.9**	**+0.2**
PVV	**Pavlof Volcano**	**1.28**	**19**	P	**Pn**	**15 18 02.5**	**+0.3**
PVV				S	**Sn**	**15 18 20.7**	**+2.5**
SDPT	**Sand Point**	**1.68**	**44**	P	**Pn**	**15 18 08.3**	**+0.7**
SDPT				S	**Sn**	**15 18 30.4**	**+2.6**
AKLV	**Akutan Long Va**	**2.02**	**271**	P	**Pn**	**15 18 12.3**	**-0.1**
AKGG	**Akutan Green G**	**2.04**	**272**	P	**Pn**	**15 18 12.5**	**0.0**
AKRB	**Akutan Reef Bi**	**2.09**	**270**	P	**Pn**	**15 18 13.7**	**+0.5**
UNV	**Unalaska Valle**	**2.37**	**264**	P	**Pn**	**15 18 17.1**	**0.0**
UNV				S	**Sn**	**15 18 46.3**	**+1.3**
MTBL	**Makushin Table**	**2.46**	**267**	P	**Pn**	**15 18 18.3**	**-0.1**
MREP	**Makushin Rep't**	**2.52**	**264**	P	**Pn**	**15 18 19.2**	**0.0**
MCIR	**Makushin Cirqu**	**2.59**	**267**	P	**Pn**	**15 18 20.4**	**+0.3**
VNWF	**Veniaminof 8**	**2.62**	**39**	P	**Pn**	**15 18 23.0**	**+2.4**
VNFG	**Veniaminof 2**	**2.72**	**37**	P	**Pn**	**15 18 24.4**	**+2.4**
VNHG	**Veniaminof 1**	**2.82**	**42**	P	**Pn**	**15 18 25.4**	**+2.1**
CHGN	**Chignik**	**3.18**	**46**	*e*Pn	**Pn**	**15 18 29.2**	**+1.1**
CHGN				*e*Sn	**Sn**	**15 19 06.5**	**+1.8**
OKFG	**Magazine Ridge**	**3.29**	**259**	P	**Pn**	**15 18 30.2**	**+0.5**
OKCE	**Okmok Cone E**	**3.43**	**260**	P	**Pn**	**15 18 32.5**	**+0.8**
OKSP	**Okmok Steeple**	**3.55**	**257**	P	**Pn**	**15 18 34.0**	**+0.7**
ANPK	**Aniakchak Peak**	**3.67**	**41**	P	**Pn**	**15 18 36.3**	**+1.4**
NIKH	**Nikolski High**	**3.96**	**255**	P	**Pn**	**15 18 38.3**	**-0.6**
SPIA	**Saint Paul Isl**	**5.31**	**308**	P	**Pn**	**15 18 58.8**	**+1.4**
KABR	**Katmai Barrier**	**5.79**	**44**	P	**Pn**	**15 19 04.5**	**+0.4**
OHAK	**Old Harbor**	**6.05**	**56**	*e*Pn	**Pn**	**15 19 06.3**	**-1.3**
	17nm,0.5s						
OHAK				*e*Sn	**Sn**	**15 20 16.9**	**+1.6**
KDAK	**Kodiak Island**	**6.65**	**53**	Pn	**Pn**	**15 19 14.5**	**-1.2**
KDAK				Sn	**Sn**	**15 20 25.2**	**-4.8**
KDAK				Lg	Lg	15 20 58.6	
KDAK	**Kodiak Island**	**6.65**	**53**	Pn	**Pn**	**15 19 14.5**	**-1.2**
	1.0nm,0.3s,baz=144,slow=17,SNR=7.7						
KDAK				Sn	**Sn**	**15 20 25.2**	**-4.8**
	1.5nm,0.3s,baz=345,slow=22,SNR=6.6						
KDAK				Lg	Lg	15 20 58.6	
	1.5nm,0.3s,baz=69,slow=19,SNR=6.5						
RSO	**Redoubt South**	**8.22**	**36**	*e*Pn	**Pn**	**15 19 37.9**	**+0.3**
TRF	**Thorofare Moun**	**11.24**	**29**	*e*Pn	**Pn**	**15 20 18.3**	**-0.4**
	11nm,0.9s						
AMKA	**Amchitka**	**11.36**	**263**	*e*Pn	**Pn**	**15 20 19.5**	**-0.7**
	26nm,0.4s						
PAX	**Paxson**	**12.49**	**38**	*e*Pn	**Pn**	**15 20 33.9**	**-1.8**
	5.0nm,0.6s						
ILAR	**Eielson Array**	**13.22**	**30**	Pn	Pn	15 20 42.1	-3.5
ILAR	**Eielson Array**	**13.22**	**30**	Pn	Pn	15 20 42.1	-3.5
	0.3nm,0.3s,baz=207,slow=13,SNR=6.8						
ILAR				LR	LR	15 26 16.4	
	comp=Z,74nm,21.2s,baz=280,slow=39						
COLD	**Coldfoot**	**14.38**	**20**	*e*Pn	**Pn**	**15 21 01.2**	**0.0**
	12nm,1.0s						
FX1	**Attu Island--F**	**14.51**	**275**	Pn	**Pn**	**15 21 03.4**	**+0.4**
FX1	**Attu Island--F**	**14.51**	**275**	Pn	**Pn**	**15 21 03.4**	**+0.4**
	1.3nm,0.3s,baz=178,slow=20,SNR=12						
INK	**Inuvik**	**19.60**	**33**	P	**P**	**15 22 04.0**	**-0.7**
INK	**Inuvik**	**19.60**	**33**	P	**P**	**15 22 04.0**	**-0.7**
	0.4nm,0.3s,baz=225,slow=17,SNR=6.4						
PETK	**Petropavlovsk-**	**23.40**	**284**	P	**P**	**15 22 44.8**	**-0.6**
PETK	**Petropavlovsk-**	**23.40**	**284**	P	**P**	**15 22 44.8**	**-0.6**
	9.6nm,0.5s,baz=90,slow=12,SNR=63						
YKA	**Yellowknife Ar**	**25.93**	**52**	P	**P**	**15 23 08.8**	**+0.4**
YKA	**Yellowknife Ar**	**25.93**	**52**	P	**P**	**15 23 08.8**	**+0.4**
	1.0nm,0.4s,baz=271,slow=9.2,SNR=7.1						
YBH	**Yreka Blue Hor**	**29.01**	**99**	LR	LR	15 33 27.0	
	comp=Z,39nm,19.3s,baz=246,slow=33						
NVAR	**Mina Array Bea**	**33.73**	**99**	P	**P**	**15 24 19.8**	**+1.8**
NVAR	**Mina Array Bea**	**33.73**	**99**	P	**P**	**15 24 19.8**	**+1.8**
	0.4nm,0.7s,baz=289,slow=9.4,SNR=4.1						
ULM	**Lac du Bonnet**	**39.66**	**67**	P	**P**	**15 25 08.7**	**+0.7**
ULM	**Lac du Bonnet**	**39.66**	**67**	P	**P**	**15 25 08.7**	**+0.7**
	2.5nm,0.4s,baz=288,slow=5.6,SNR=4.1						
TXAR	**Lajitas Array**	**48.71**	**96**	P	**P**	**15 26 20.1**	**-0.7**
TXAR	**Lajitas Array**	**48.71**	**96**	P	**P**	**15 26 20.1**	**-0.7**
	0.6nm,0.9s,baz=257,slow=5.0,SNR=4.0						
KSRS	**Korea Array**	**49.22**	**280**	P	**P**	**15 26 23.3**	**-1.0**
	3.1nm,0.8s,baz=47,slow=7.3,SNR=14						

KSAR	Wonju Array Be	49.25	280	P	P	15 26 23.3	-1.3
ARCES	ARCESS Array B	56.47	357	P	P	15 27 16.0	-1.5
ARCES	ARCESS Array B	56.47	357	P	P	15 27 16.0	-1.5
	3.2nm,1.1s,baz=15,slow=7.1,SNR=5.1						
ZALV	Zalesovo Beam	58.77	320	P	P	15 27 33.4	-0.4
ZALV	Zalesovo Beam	58.77	320	P	P	15 27 33.4	-0.4
	0.7nm,0.3s,baz=32,slow=8.3,SNR=4.4						
FINES	FINESS Array B	64.53	355	P	P	15 28 11.5	-1.0
	1.7nm,0.5s,baz=67,slow=5.0,SNR=7.5						
NOA	NORSAR Array B	65.03	3	P	P	15 28 15.6	-0.2
NOA	NORSAR Array B	65.03	3	P	P	15 28 15.6	-0.2
	1.0nm,0.7s,baz=357,slow=7.0,SNR=4.1						
MKAR	Makanchi Array	65.44	317	P	P	15 28 18.0	-0.6
	1.0nm,0.7s,baz=45,slow=6.4,SNR=12						
AKASG	Malin Array Be	75.04	352	P	P	15 29 16.8	-0.4
	1.6nm,0.3s,baz=9.2,slow=5.6,SNR=12						
GERES	GERESS Array B	77.31	3	P	P	15 29 30.8	+0.5
GERES	GERESS Array B	77.31	3	P	P	15 29 30.8	+0.5
	0.8nm,0.7s,baz=356,slow=4.3,SNR=6.3						
KBZ	Khabaz	80.09	342	P	P	15 29 47.1	+1.6
KBZ	Khabaz	80.09	342	P	P	15 29 47.1	+1.6
	0.7nm,0.4s,baz=181,slow=3.3,SNR=3.6						
CMAR	Chiang Mai Arr	80.12	288	P	P	15 29 46.4	+0.3
CMAR	Chiang Mai Arr	80.12	288	P	P	15 29 46.4	+0.3
	1.6nm,0.8s,baz=12,slow=5.3,SNR=7.8						
ESDC	Sonseca Array	84.73	16	P	P	15 30 11.1	+1.2
ESDC	Sonseca Array	84.73	16	P	P	15 30 11.0	+1.2
	0.1nm,0.3s,baz=332,slow=3.8,SNR=3.9						
BRTR	Keskin Array B	85.45	348	P	P	15 30 13.1	-0.6
	0.6nm,0.5s,baz=79,slow=2.6,SNR=4.8						

IDC 06 15:24:42.9±2.5**, 6°.25S×127°.81E, h0^{km}, mb3.3**/1, **mb1 3.5**/3, **mb1mx3.4**/18, **mbtmp3.3**/3, **ML3.3**/2, **Error ellipse: s-maj=303.3km s-min=30.2km az=66.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.02	156	Pn	Pn	15 28 14.9	-1.8
	0.1nm,0.3s,baz=333,slow=13,SNR=8.8						
WRA				Sn	Sn	15 30 52.6	-11
	0.1nm,0.3s,baz=330,slow=22,SNR=5.3						
ASAR	Alice Springs	18.29	162	P	P	15 28 59.0	+0.6
	0.2nm,0.3s,baz=338,slow=12,SNR=16						
MKAR	Makanchi Array	66.42	328	P	P	15 35 33.9	0.0
	0.3nm,0.7s,baz=112,slow=6.4,SNR=3.3						

*BJI **06** 15:37:33.8, 47°.80S×99°.30E, h10^{km}, mB5.2/25, mb4.9/29, Ms5.3/28, Ms7 5.0/28*

*ISCJB **06** 15:37:35.6±0.3, 47°.90S±0°.06×99°.65E±0°.10, h10^{km}, mb4.9/36, MS5.1/26, Error ellipse: s-maj=10.3km s-min=7.2km az=37.5*

*IDC **06** 15:37:36.1±0.4, 47°.90S×99°.56E, h0^{km}, mb4.5/17, mb1 4.7/17, mb1mx4.6/21, mbtmp4.5/17, MS5.1/12, Ms1 5.1/12, ms1mx5.1/14, Error ellipse: s-maj=17.8km s-min=12.3km az=145.0*

*NEIC **06** 15:37:37.6±0.2, 47°.88S×99°.67E, h10^{km}, mb5.2/15, Error ellipse: s-maj=9.6km s-min=6.4km az=142.0*

*GCMT **06** 15:37:42.4±0.1, 47°.90S×99°.52E, h12^{km}, MW5.4, Moment Tensor Solution. s73,c122; s99,c192; Moment tensor: Scale 10^{17}Nm; M_{rr}0.16±.02; $M_{\theta\theta}$1.40±.02; $M_{\phi\phi}$-1.55±.02; $M_{r\theta}$0.27±.05; $M_{\theta\phi}$0.40±.02; $M_{\phi r}$0.20±.05; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s128.00000°, δ78.00000°, λ5.00000°. NP2:ϕ_s37.00000°, δ85.00000°, λ168.00000°. Principal axes: T 1.5200, Plg12.0000°, Azm352.0000°; N 0.1100, Plg77.0000°, Azm196.0000°; P -1.6200, Plg5.0000°, Azm83.0000°; Data Used: II IU IC G CN. Surface waves from 102 sta.*

*DJA **06** 15:38:05.2±6.5, 48°S±17°×10°0E±5°5, h333^{km}±93^{km}, M4.6/5, mB5.3/3, mb4.5/5, Mw(mB)4.8/3*

ISC 06 15:37:38.1±0.4**, 47°.89S**±0°.05×**99°.59E**±0°.08**, h13**^{km}±1^{km}**, n130,** σ1**s**.**62**/186**, mb4.9**/37**, MS5.1**/26**, 5C-7D, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CASY	Casey	19.32	167	eP	P	15 42 02.3	-0.3
	151nm,1.6s						
NWAO	Narrogin (SRO)	20.02	48	ePn	P	15 42 11.0	+0.4
	268nm,1.9s						
NWAO	Narrogin (SRO)	20.02	48	P	Pn	15 42 13.2	+0.8
	16nm,0.9s,baz=212,slow=9.1,SNR=8.4						
NWAO				LR	LR	15 48 06.9	
	comp=Z,4μm,19.3s,baz=216,slow=32						
MAW	Mawson	27.14	210	P	P	15 43 20.2	-0.3
MAW	Mawson	27.14	210	P	P	15 43 20.2	-0.3
	17nm,1.1s,baz=72,slow=11,SNR=13						
MAW				LR	LR	15 51 18.8	
	comp=Z,3μm,20.9s,baz=54,slow=30						
FORT	Forrest	27.65	62	eP	P	15 43 24.3	-1.1
	449nm,2.6s						
DRV	Dumont d'Urvil	28.06	147	S	S	15 48 02.0	-11
DRV				L	L	15 49 00.0	
DRV				R		15 51 00.0	
STKA	Stephens Creek	35.49	79	eP	P	15 44 33.9	-0.4
	10nm,1.4s						
STKA	Stephens Creek	35.49	79	P	P	15 44 33.5	-0.9
	14nm,1.0s,baz=227,slow=7.8,SNR=10						
STKA				LR	LR	15 56 16.4	
	comp=Z,4μm,21.3s,baz=222,slow=32						
SYO	Syowa Base	35.79	212	⇓eP	P	15 44 35.4	-1.0
ASAR	Alice Springs	36.40	61	P	P	15 44 41.5	-0.7
ASAR				PcP	PcP	15 47 05.3	-1.0
ASAR	Alice Springs	36.40	61	P	P	15 44 41.5	-0.7
	18nm,1.0s,baz=219,slow=7.4,SNR=58						
ASAR				PcP	PcP	15 47 05.3	-1.0
	2.3nm,0.9s,baz=209,slow=2.7,SNR=11						
ASAR				LR	LR	15 57 53.6	
	comp=Z,3μm,18.7s,baz=213,slow=33						
AS31	Alice Springs	36.40	61	eP	P	15 44 41.4	-0.8
FITZ	Fitzroy Crossi	36.53	45	eP	P	15 44 43.0	-0.2
	40nm,1.4s						
FITZ	Fitzroy Crossi	36.53	45	P	P	15 44 43.7	+0.5
	11nm,1.1s,baz=210,slow=10,SNR=7.3						
VNDA	Vanda	37.82	162	eP	P	15 44 53.3	-0.2
	12nm,1.0s						
VNDA	Vanda	37.82	162	P	P	15 44 53.4	-0.2
	5.5nm,0.9s,baz=282,slow=7.7,SNR=27						
VNDA				LR	LR	15 59 14.9	
	comp=Z,4μm,18.2s,baz=291,slow=34						
SBA	Scott Base	38.91	162	eP	P	15 45 03.5	+0.7
	254nm,3.0s						
WRA	Warramunga Arr	39.55	57	P	P	15 45 08.3	-0.5
WRA	Warramunga Arr	39.55	57	P	P	15 45 08.3	-0.5
	14nm,0.8s,baz=220,slow=8.9,SNR=94						
WRA				LR	LR	15 59 39.9	
	comp=Z,4μm,19.6s,baz=210,slow=33						
WRAB	Tennant Creek	39.57	57	eP	P	15 45 08.4	-0.5
	39nm,1.0s						
WRAB	Tennant Creek	39.57	57	P	P	15 45 08.8	-0.1
	177nm,0.9s,SNR=12						
QSPA	South Pole Qui	42.26	180	P	P	15 45 30.4	-0.4
QSPA	South Pole Qui	42.26	180	P	P	15 45 30.3	-0.4
	8.4nm,0.8s,baz=309,slow=3.5,SNR=40						
QSPA				LR	LR	16 02 04.9	
	comp=Z,4μm,18.3s,baz=324,slow=35						
ARMA	Armidale	43.10	85	eP	P	15 45 34.6	-3.3
	38nm,1.4s						
MAIT	Maitri	45.08	208	eP	P	15 45 43.3	-10
EIDS	Eidsvold	46.03	80	eP	P	15 46 00.7	-0.6
	39nm,1.4s						
CTAO	Charters Tower	46.63	70	eP	P	15 46 05.6	-0.5
	70nm,1.4s						
SNAA	Sanae	49.02	204	eP	P	15 46 24.2	+0.1
SNAA	Sanae	49.02	204	eP	P	15 46 23.9	-0.2
	51nm,1.3s						
SNAA	Sanae	49.02	204	P	P	15 46 23.6	-0.5
	9.7nm,1.1s,baz=122,slow=7.6,SNR=28						
SNAA				LR	LR	16 05 27.5	
	comp=Z,2μm,18.6s,baz=110,slow=34						
VNA1	Neumayer--Stat	51.06	204	eP	P	15 46 41.8	+2.4
SBUM	Sibu	51.33	16	P	P	15 46 43.1	+1.0
PMG	Port Moresby	55.38	62	LR	LR	16 08 33.2	
	comp=Z,1μm,19.7s,baz=313,slow=34						
DZM	Mont Dzumac	58.55	89	eS	S	15 55 51.1	+13
	886nm,29.1s						
DZM				eLR	LR	16 05 36.8	
	2μm,24.9s						
BOSA	Boshof	59.19	260	P	P	15 47 38.2	-0.7
BOSA	Boshof	59.19	260	P	P	15 47 38.2	-0.7
	9.1nm,1.0s,baz=123,slow=8.3,SNR=5.7						
BOSA				LR	LR	16 08 18.1	
	comp=Z,1μm,18.5s,baz=144,slow=31						
SUR	Sutherland	59.67	254	P	P	15 47 41.6	-0.6
SUR	Sutherland	59.67	254	P	P	15 47 41.6	-0.6
	8.8nm,0.9s,baz=131,slow=8.3,SNR=2.9						
LBTB	Lobatse	61.35	264	P	P	15 47 52.4	-1.3
LBTB	Lobatse	61.35	264	P	P	15 47 52.4	-1.3
	3.8nm,1.1s,baz=149,slow=5.9,SNR=3.5						
HNR	Honiara	63.33	74	eP	P	15 48 06.5	-0.4
	84nm,1.2s						
CMAR	Chiang Mai Arr	66.04	359	P	P	15 48 24.6	+0.2
CMAR	Chiang Mai Arr	66.04	359	P	P	15 48 24.6	+0.2
	6.3nm,1.1s,baz=198,slow=5.7,SNR=13						
CMAR				LR	LR	16 13 54.9	
	comp=Z,2μm,19.7s,baz=198,slow=33						
LSZ	Lusaka	66.37	273	eP	P	15 48 27.1	+0.3
	26nm,1.3s						
LSZ	Lusaka	66.37	273	P	P	15 48 26.5	-0.4
	8.6nm,1.1s,baz=79,slow=9.3,SNR=7.1						
QIZ	Qiongzhong	67.24	11	P	P	15 48 30.1	-1.9
QIZ				S	S	15 57 27.6	+1.2
QIZ				sS	sS	15 57 33.0	-0.4
QIZ				SS	SS	16 01 48.9	+2.4
QIZ				LR	LR		
	comp=N,890nm,20.7s						
QIZ				LR	LR		
	comp=Z,1μm,20.2s						
TSUM	Tsumeb	70.72	263	P	P	15 48 54.9	+0.9
TSUM	Tsumeb	70.72	263	P	P	15 48 54.9	+0.9
	comp=Z,3.3nm,0.9s,baz=126,slow=8.7,SNR=3.2						
KMBO	Kilima Mbogo	70.92	290	P	P	15 48 56.0	+0.6
KMBO	Kilima Mbogo	70.92	290	P	P	15 48 56.0	+0.6
	comp=Z,1.1nm,0.6s,baz=159,slow=8.6,SNR=3.5						
KMBO				LR	LR	16 13 22.6	
	comp=Z,556nm,20.9s,baz=97,slow=30						
KMI	Kunming	72.72	3	P	P	15 49 06.3	+0.5
KMI				S	S	15 58 30.6	-0.4
KMI				SS	SS	16 03 08.2	-3.2
KMI				pmax	pmax		
	comp=Z,15nm,1.5s						
KMI				pmax	pmax		
	comp=Z,110nm,3.2s						
KMI				LR	LR		
	comp=N,610nm,21.1s						
KMI				LR	LR		
	comp=E,190nm,19.7s						
KMI				LR	LR		
	comp=Z,1μm,24.1s						
GYA	Guiyang	74.27	7	P	P	15 49 17.6	+2.8
GYA				S	S	15 58 54.7	+6.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.8s						
GYA				LR	LR		
	comp=N,390nm,18.6s						
GYA				LR	LR		
	comp=E,700nm,20.2s						
GYA				LR	LR		
	comp=Z,710nm,21.4s						
CD2	Chengdu	78.52	4	P	P	15 49 37.8	-0.9
CD2				pP	pP	15 49 42.5	-0.5
CD2				sP	sP	15 49 44.8	+0.2
CD2				PcP	PcP	15 49 46.9	-0.9
CD2				PP	PP	15 52 38.1	+1.2
CD2				S	S	15 59 34.5	-0.1
CD2				sS	sS	15 59 42.0	+0.3
CD2				ScS	SKKSac	15 59 56.3	+2.2
CD2				SS	SS	16 04 42.0	+3.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,70nm,11.2s						
CD2				LR	LR		
	comp=N,1μm,25.0s						
CD2				LR	LR		
	comp=E,1μm,22.6s						
CD2				LR	LR		
	comp=Z,520nm,20.2s						
SSE	Sheshan	80.98	19	P	P	15 49 49.7	-2.3
SSE				S	S	16 00 00.9	+0.5
SSE				sS	sS	16 00 06.7	-0.8
SSE				pmax	pmax		
	comp=Z,28nm,0.7s						
SSE				pmax	pmax		
	comp=Z,62nm,9.0s						
SSE				LR	LR		
	comp=N,210nm,18.9s						
SSE				LR	LR		
	comp=E,220nm,18.9s						
SSE				LR	LR		
	comp=Z,310nm,16.8s						
NJ2	Nanjing	81.43	16	eP	P	15 49 53.0	-1.3
NJ2				pP	pP	15 49 56.0	-2.7
NJ2				sP	sP	15 49 58.0	-2.2
NJ2				S	S	16 00 07.0	+2.0
NJ2				sS	SKSac	16 00 13.0	-0.1
NJ2				pmax	pmax		
	comp=Z,1μm,8.9s						
NJ2				LR	LR		
	comp=N,1μm,23.5s						
NJ2				LR	LR		
	comp=E,5μm,24.0s						
NJ2				LR	LR		
	comp=Z,6μm,27.8s						
XAN	Xi'an	81.98	8	P	P	15 49 57.8	+0.5
XAN				pP	pP	15 50 02.1	+0.5
XAN				sP	sP	15 50 03.5	+0.3
XAN				PP	PP	15 53 08.6	+3.1
XAN				S	S	16 00 13.2	+2.4
XAN				sS	SKKSac	16 00 21.0	+0.9
XAN				pmax	pmax		
	comp=Z,13nm,4.7s						
XAN				LR	LR		
	comp=N,650nm,20.4s						
XAN				LR	LR		
	comp=E,150nm,19.6s						
XAN				LR	LR		
	comp=Z,320nm,20.4s						
LZH	Lanzhou	83.68	3	eP	P	15 50 07.5	+1.3
LZH				pP	PcP	15 50 10.7	+0.3
LZH				sP	sP	15 50 12.2	+0.1
LZH				PP	PP	15 53 23.1	+3.5
LZH				SKS	S	16 00 26.2	-2.1
LZH				eS	SKKSac	16 00 31.5	-1.6
LZH				sS	sS	16 00 38.1	+2.6
LZH				pmax	pmax		
	comp=Z,23nm,1.3s						
LZH				pmax	pmax		
	comp=Z,120nm,8.0s						
LZH				LR	LR		
	comp=N,970nm,18.9s						
LZH				LR	LR		
	comp=E,810nm,19.5s						
LZH				LR	LR		
	comp=Z,1μm,20.0s						
KBL	Kabul	86.50	335	eP	P	15 50 20.3	-0.2
	comp=Z,52nm,1.6s						
GTA	Gaotai	86.92	0	eP	P	15 50 23.7	+1.4
GTA				pP	pP	15 50 28.0	+1.4
GTA				sP	sP	15 50 31.2	+3.0
GTA				SKS	SKSac	16 00 49.2	+0.6
GTA				S	S	16 01 03.9	+3.9
GTA				sS	ScS	16 01 12.7	+5.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,66nm,5.5s						
GTA				LR	LR		
	comp=N,620nm,20.9s						
GTA				LR	LR		
	comp=E,250nm,20.9s						
GTA				LR	LR		
	comp=Z,790nm,21.6s						
KSAR	Wonju Array Be	88.62	22	P	P	15 50 31.8	+1.5
KSRS	Korea Array	88.64	22	P	P	15 50 31.8	+1.4
	comp=Z,0.6nm,0.6s,baz=205,slow=5.4,SNR=4.0						
BJI	Beijing	88.78	13	P	P	15 50 30.5	-0.4
BJI				S	S	16 01 20.7	+3.3
BJI				SS	SS	16 07 11.2	+0.8
BJI				pmax	pmax		
	comp=Z,13nm,1.6s						
BJI				pmax	pmax		
	comp=Z,110nm,4.7s						
BJI				LR	LR		
	comp=N,300nm,20.0s						
BJI				LR	LR		
	comp=E,370nm,20.8s						
BJI				LR	LR		
	comp=Z,470nm,26.7s						
HHC	Hu-ho-hao-te	88.99	9	eP	P	15 50 26.8	-5.3
HHC				PP	PP	15 54 00.2	-2.2
HHC				SKS	SKSac	16 00 55.2	-5.8
HHC				S	SKKSac	16 01 13.5	+0.8
HHC				sS	ScS	16 01 25.2	+0.5
HHC				pmax	pmax		
	comp=Z,50nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,5.3s						
HHC				LR	LR		
	comp=N,860nm,15.5s						
HHC				LR	LR		
	comp=E,410nm,16.2s						
HHC				LR	LR		
	comp=Z,820nm,15.5s						
KSH	Kashi	89.52	342	eP	P	15 50 31.8	-2.9
KSH				epP	PcP	15 50 36.6	+0.6
KSH				esP	sP	15 50 38.8	-1.8
KSH				ePP	PP	15 54 06.6	-0.1
KSH				eSKS	SKSac	16 00 59.9	-4.4
KSH				eS	SKKSac	16 01 19.4	+2.6
KSH				esS	ScS	16 01 28.8	-0.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KSH				pmax	pmax		
	comp=Z,180nm,3.9s						
KSH				LR	LR		
	comp=N,660nm,14.0s						
KSH				LR	LR		
	comp=E,930nm,14.0s						
KSH				LR	LR		
	comp=Z,600nm,12.5s						
PLCA	Paso Flores	91.33	187	P	P	15 50 44.0	+0.6
PLCA	Paso Flores	91.33	187	P	P	15 50 44.0	+0.6
	comp=Z,1.7nm,0.9s,baz=213,slow=8.0,SNR=3.0						
WMQ	Urumqi	91.92	351	eP	P	15 50 40.2	-5.4
WMQ				PP	PP	15 54 22.0	-3.7
WMQ				SKS	SKSac	16 01 11.0	-6.7
WMQ				S	S	16 01 46.0	-0.4
WMQ				SS	SS	16 07 52.0	-4.0
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.5s						
WMQ				LR	LR		
	comp=N,470nm,19.1s						
WMQ				LR	LR		
	comp=E,350nm,19.1s						
WMQ				LR	LR		
	comp=Z,720nm,25.0s						
CN2	Changchun	94.10	18	eP	P	15 50 54.5	-1.1
CN2				esP	sP	15 51 01.5	0.0
CN2				eS	S	16 02 03.0	-2.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,13.0s						
CN2				LR	LR		
	comp=E,200nm,13.0s						
CN2				LR	LR		
	comp=Z,200nm,17.0s						
BHD	Baghdad	94.70	316	eP	P	15 50 58.6	0.0
BHD				eSKS	SKSac	16 01 31.7	-1.7
BHD				eS	S	16 02 10.7	-0.6
MDJ	Mudanjiang	95.82	21	P	P	15 51 02.0	-1.4
MDJ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TORD	Torodi Ar. Bea	104.90	273	PP	PP	15 56 04.6	-0.6
TORD	Torodi Ar. Bea	104.90	273	PP	PP	15 56 04.6	-0.6
	comp=Z,1.3nm,1.1s,baz=126,slow=7.3,SNR=4.0						
KECS	Kecovo	117.87	312	PDIF	Pdif	15 52 44.8	+3.2
GERES	GERESS Array B	121.55	309	PKP	PKPdf	15 56 31.1	+0.5
GERES	GERESS Array B	121.55	309	PKP	PKPdf	15 56 31.1	+0.5
	comp=Z,0.5nm,0.6s,baz=151,slow=2.2,SNR=4.1						
ILAR	Eielson Array	141.57	39	PKP	PKPdf	15 57 06.0	-1.6
ILAR	Eielson Array	141.57	39	PKhKP	PKPpre	15 57 01.3	
	comp=Z,0.4nm,0.8s,baz=273,slow=3.2,SNR=4.6						
ILAR				PKP	PKPdf	15 57 06.0	-1.6
	comp=Z,0.7nm,0.9s,baz=314,slow=3.0,SNR=5.4						
EGAK	Eagle	144.01	40	eP	PKPbc	15 57 10.9	+0.9
INK	Inuvik	146.80	33	PKPbc	PKPdf	15 57 17.3	+0.7
INK	Inuvik	146.80	33	PKPbc	PKPdf	15 57 17.3	+0.7
	comp=Z,17nm,1.2s,baz=306,slow=3.5,SNR=12						
PKM	Peak Mountain	148.07	99	⇓P	PKPab	15 57 25.9	-0.2
	baz=148,SNR=6.1						
KCPM	Cahto Peak	148.12	89	ePKPab	PKPab	15 57 25.2	-0.9
KHMM	Horse Mountain	148.59	87	ePKPdf	PKPdf	15 57 20.7	0.0
KRMB	Red Mountain	148.77	85	ePKPdf	PKPdf	15 57 21.8	+0.9
MWC	Mount Wilson	148.83	102	ePKPdf	PKPdf	15 57 21.8	+0.4
SUMG	Summit	148.87	337	ePKPbc	PKPbc	15 57 24.5	+0.1
WDC	Whiskeytown Da	149.25	88	ePKPdf	PKPdf	15 57 21.9	+0.4
EDW2	Edwards Air Fo	149.27	101	⇓P	PKPbc	15 57 27.6	+1.4
	baz=149,SNR=9.8						
ISA	Isabella	149.41	99	ePKPdf	PKPdf	15 57 22.4	+0.3
ISA	Isabella	149.41	99	⇑P	PKPbc	15 57 27.2	+0.7
	baz=149,SNR=7.1						
CMB	Columbia Colle	149.44	94	ePKPbc	PKPbc	15 57 27.1	+0.6
PFO	Pinyon Flat Ob	149.50	105	ePKPbc	PKPbc	15 57 27.6	+0.7
YBH	Yreka Blue Hor	149.66	86	ePKPbc	PKPbc	15 57 27.1	+0.1
LRMC	Laurel Mountai	149.82	100	⇑P	PKPbc	15 57 29.7	+2.1
	baz=150,SNR=10						
HUMO	Hull Mountain	149.88	84	ePKPdf	PKPdf	15 57 22.6	+0.1
BELC	Belle Mtn. Jos	150.04	104	P	PKPbc	15 57 30.4	+2.3
	baz=150						
BC3	Big Chuckawall	150.18	106	P	PKPbc	15 57 30.3	+1.8
	baz=150						
MPMC	Manual Prospec	150.29	100	P	PKPbc	15 57 30.5	+1.7
	baz=150						
GSC	Goldstone	150.30	102	ePKPbc	PKPbc	15 57 29.0	+0.3
GSC	Goldstone	150.30	102	P	PKPbc	15 57 30.6	+1.9
	baz=150,SNR=10						
HEC	Hector,Ludlow	150.33	103	⇑P	PKPbc	15 57 29.9	+1.1
	baz=150,SNR=6.2						
BEKR	Beckworth	150.38	91	ePKPbc	PKPbc	15 57 29.2	+0.3
WCN	Washoe City	150.51	92	ePKPdf	PKPdf	15 57 24.4	+0.6
IRM	Iron Mountain	150.69	105	⇑P	PKPbc	15 57 30.7	+1.1
	baz=151,SNR=6.8						
GMRC	Granite Mounta	150.74	104	⇑P	PKPbc	15 57 30.8	+1.0
	baz=151,SNR=9.5						
214A	Organ Pipe Nat	150.77	111	P	PKPbc	15 57 31.5	+1.7
	baz=151						
Y12C	Blythe	150.84	106	P	PKPbc	15 57 31.7	+1.8
	baz=151						
GRAC	Grapevine Rang	150.90	98	P	PKPbc	15 57 31.9	+1.8
	baz=151						
FURC	Furnace Creek,	150.94	100	P	PKPbc	15 57 31.8	+1.8
	baz=151						
TUQ	Turquoise Moun	150.96	102	P	PKPbc	15 57 31.9	+1.5
	baz=151						
SHOC	Shoshone	151.00	101	P	PKPbc	15 57 31.6	+1.4
	baz=151						
NVAR	Mina Array Bea	151.04	95	PKP	PKPdf	15 57 27.1	+2.4
NVAR				PKPbc	PKiKP	15 57 31.9	+0.9
NVAR	Mina Array Bea	151.04	95	PKP	PKPdf	15 57 27.1	+2.4
	comp=Z,0.8nm,0.7s,baz=261,slow=5.4,SNR=5.2						
NVAR				PKPbc	PKiKP	15 57 31.9	+0.9
	comp=Z,16nm,1.0s,baz=226,slow=6.0,SNR=6.4						
PDMCI	Parker Dam,Lak	151.44	106	P	PKPbc	15 57 32.5	+1.3
	baz=151						
Z14A	Wintersburg	151.61	109	P	PKPbc	15 57 33.1	+1.4
	baz=152						
Y14A	Wickenburg	151.94	108	⇓P	PKPbc	15 57 33.2	+0.6
	baz=152,SNR=7.7						
W13A	Hualapai Mount	152.09	105	⇓P	PKPbc	15 57 34.2	+1.2
	baz=152,SNR=9.5						
319A	Douglas	152.54	116	P	PKPbc	15 57 35.5	+1.4
	baz=152						
WVOR	Wild Horse Val	152.70	87	ePKPbc	PKPbc	15 57 34.4	+0.4
X16A	Lo Mia Camp, P	153.24	109	⇓P	PKPbc	15 57 37.4	+1.8
	baz=153,SNR=5.7						
220A	Playas Peak, P	153.37	117	⇓P	PKPbc	15 57 37.0	+1.1
	baz=153,SNR=6.1						
120A	U Bar Ranch, L	153.75	115	P	PKPbc	15 57 36.9	+0.1
	baz=154						
TXAR	Lajitas Array	154.22	128	PKP	PKPdf	15 57 29.8	+0.3
TXAR				PKPbc	PKiKP	15 57 39.0	+1.2
TXAR				PKPab	PKPab	15 57 52.6	+1.1
TXAR	Lajitas Array	154.22	128	PKP	PKPdf	15 57 29.8	+0.3
	comp=Z,0.3nm,0.9s,baz=358,slow=3.8,SNR=3.4						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TXAR				PKPbc	PKiKP	15 57 39.0	+1.2
	comp=Z,1.0nm,0.9s,baz=198,slow=3.6,SNR=8.0						
TXAR				PKPab	PKPab	15 57 52.6	+1.1
	comp=Z,2.0nm,0.9s,baz=201,slow=6.3,SNR=8.8						
627A	Terlingua Ranc	154.46	128	P	PKPbc	15 57 38.4	+0.1
	baz=154						
YKA	Yellowknife Ar	155.99	40	PKP	PKPdf	15 57 30.9	+0.2
YKA				PKPab	PKPab	15 57 58.8	+0.6
YKA	Yellowknife Ar	155.99	40	PKP	PKPdf	15 57 30.9	+0.2
	comp=Z,0.3nm,0.7s,baz=307,slow=2.6,SNR=3.6						
YKA				PKPab	PKPab	15 57 58.7	+0.6
	comp=Z,1.9nm,1.0s,baz=300,slow=4.2,SNR=8.8						
PDAR	Pinedale Array	158.95	93	PKP	PKPdf	15 57 36.9	+1.4
PDAR				PKPab	PKPab	15 58 11.2	-0.7
PDAR	Pinedale Array	158.95	93	PKP	PKPdf	15 57 36.9	+1.4
	comp=Z,2.0nm,1.1s,baz=132,slow=2.2,SNR=7.2						
PDAR				PKPab	PKPab	15 58 11.2	-0.7
	comp=Z,1.4nm,0.9s,baz=202,slow=3.2,SNR=6.7						

IDC 06 15:39:47.7±0.9, 48°.54S×100°.92E, h0^{km}, mb4.2/6, mb1 4.4/6, mb1mx4.1/16, mbtmp4.2/6, MS4.3/1, Ms1 4.3/1, ms1mx4.0/12, Error ellipse: s-maj=47.0km s-min=18.4km az=120.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	Mawson	27.03	211	P	P	15 45 29.8	-1.2
	7.0nm,0.7s,baz=85,slow=11,SNR=17						
ASAR	Alice Springs	35.97	58	P	P	15 46 50.1	0.0
	3.9nm,1.0s,baz=213,slow=8.7,SNR=4.2						
ASAR				PcP	PcP	15 49 15.0	-1.9
	0.2nm,0.5s,baz=205,slow=2.7,SNR=4.2						
WRA	Warramunga Arr	39.18	55	P	P	15 47 16.3	-1.0
	5.5nm,1.0s,baz=220,slow=8.7,SNR=6.9						
QSPA	South Pole Qui	41.60	180	P	P	15 47 38.3	+1.3
	6.8nm,1.1s,baz=315,slow=17,SNR=4.2						
SNAA	Sanae	48.79	204	P	P	15 48 33.6	-0.3
	0.6nm,0.9s,baz=148,slow=15,SNR=2.6						
CMAR	Chiang Mai Arr	66.72	358	P	P	15 50 41.2	+0.8
	1.8nm,0.9s,baz=195,slow=5.6,SNR=3.1						
CFAA	Coronel Fontan	99.63	189	LR	LR	16 35 12.6	
	comp=Z,138nm,21.5s,baz=114,slow=33						
NVAR	Mina Array Bea	150.10	95	PKPbc	PKPbc	15 59 40.5	+0.4
	1.3nm,0.9s,baz=224,slow=5.0,SNR=3.6						

IDC 06 15:56:24.6±11.0, 47°.74S×102°.10E, h0^{km}, mb3.4/2, mb1 3.7/2, mb1mx3.5/14, mbtmp3.4/2, Error ellipse: s-maj=767.6km s-min=63.9km az=132.0, Southeast Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	34.87	58	P	P	16 03 17.5	-0.1
	0.2nm,0.7s,baz=217,slow=8.4,SNR=4.9						
WRA	Warramunga Arr	38.07	54	P	P	16 03 44.8	-0.1
	0.7nm,0.9s,baz=216,slow=8.4,SNR=5.2						
NVAR	Mina Array Bea	149.36	93	PKPbc	PKPbc	16 16 14.7	-0.5
	0.2nm,0.6s,baz=212,slow=3.2,SNR=2.1						

*DDA **06** 16:06:20.9, 39°.17N×41°.91E, h30^{km}, MD3.5*
*CSEM **06** 16:06:20.9, 39°.17N×41°.91E, h30^{km}, MD3.5, After DDA*
*ISCJB **06** 16:06:21.6±0.8, 39°.12N±0°.04×41°.94E±0°.04, h3^{km}±8^{km}, Error ellipse: s-maj=7.3km s-min=5.5km az=167.9*
ISC 06 16:06:22.0±1.2, 39°.12N±0°.03×41°.98E±0°.03, h8^{km}±10^{km}, n12, σ0^{s}83/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATV	Tatvan	0.65	159	eP	Pg	16 06 35.1	+0.6
TATV				eS	Sg	16 06 44.0	+1.0
TATV	Tatvan	0.65	159	eP	Pg	16 06 35.1	+0.6
TATV				eS	Sg	16 06 44.0	+1.0
BNGL	BINGOL	0.67	256	eP	Pg	16 06 33.8	-1.1
BNGL				eS	Sg	16 06 43.6	0.0
TUTA	Tutak	0.71	66	eP	Pg	16 06 35.5	-0.2
TUTA				eS	Sb	16 06 46.5	-0.2
TUTA	Tutak	0.71	66	eP	Pg	16 06 35.5	-0.2
TUTA				eS	Sb	16 06 46.5	-0.2
ERZM	Erzurum	0.92	329	eP	Pb	16 06 40.2	-0.1
ERZM				eS	Sn	16 06 56.5	+1.6
ERZM	Erzurum	0.92	329	eP	Pb	16 06 40.2	-0.1
ERZM				eS	Sn	16 06 56.5	+1.6
GEVA	Gevas	1.17	133	eP	Pb	16 06 43.7	-0.8
GEVA				eS	Sn	16 07 01.1	+0.2
GEVA	Gevas	1.17	133	eP	Pb	16 06 43.7	-0.8
GEVA				eS	Sn	16 07 01.1	+0.2
BEST	Besiri	1.34	205	eP	Pn	16 06 45.8	-1.3
BEST				eS	Sb	16 07 05.2	+0.4
MARD	Mardin	2.03	208	eP	Pg	16 07 01.3	+0.4
MARD				eS	Sn	16 07 23.3	+1.1
BHD	Baghdad	6.15	161	ePn	Pn	16 07 53.0	0.0
BHD				eSn	Sn	16 09 03.0	-0.5

IDC 06 16:07:38.9±13.0, 17°.34S×178°.68W, h568^{km}±170^{km}, mb2.8/5, mb1 3.1/5, mb1mx2.9/18, mbtmp2.8/5, Error ellipse: s-maj=143.9km s-min=41.3km az=165.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.68	240	P	P	16 14 14.5	-0.3
	2.9nm,0.8s,baz=84,slow=10,SNR=3.7						
WRA	Warramunga Arr	44.48	259	P	P	16 15 00.5	-0.3
	0.3nm,0.9s,baz=96,slow=7.7,SNR=4.7						
ASAR	Alice Springs	44.70	254	P	P	16 15 02.4	0.0
	1.1nm,0.6s,baz=88,slow=8.4,SNR=26						
NVAR	Mina Array Bea	79.20	44	P	P	16 18 45.9	-0.1
	0.4nm,0.8s,baz=235,slow=8.3,SNR=3.6						
TXAR	Lajitas Array	85.91	58	P	P	16 19 19.8	0.0
	0.1nm,0.3s,baz=208,slow=7.1,SNR=4.7						
GERES	GERESS Array B	147.00	345	PKPbc	PKPbc	16 26 17.7	-0.8
	0.3nm,0.7s,baz=20,slow=3.1,SNR=4.1						

*IDC **06** 16:22:18.1±0.9, 54°.25N×162°.68W, h0^{km}, mb4.2/16, mb1 4.3/20, mb1mx4.1/31, mbtmp4.1/20, ML4.0/4, MS3.2/1, Ms1 3.3/1, ms1mx2.2/53, Error ellipse: s-maj=23.8km s-min=12.0km az=163.0*
*MOS **06** 16:22:19.9±1.0, 54°.39N×162°.52W, h18^{km}, mb4.5/25, Error ellipse: s-maj=14.3km s-min=6.9km az=80.7*
*NEIC **06** 16:22:22.4, 54°.17N×162°.52W, h14^{km}, mb3.8/2, ML3.9(AEIC), After AEIC.*
ISC 06 16:22:20.5±1.4, 54°.17N±0°.06×162°.42W±0°.03, h16^{km}±7^{km}, n136, σ1^{s}29/143, mb4.4/30, 7C-4D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	Deer Island	0.81	6	P	Pn	16 22 37.8	+0.5
FALS	False Pass	0.90	320	P	Pn	16 22 39.0	+0.5
FALS				eS	Sn	16 22 50.4	-0.8
FALS				S	Sg	16 22 50.8	+0.9
BRPK	Brown Peak	0.91	302	P	Pn	16 22 38.5	-0.1
DT1	Dutton Round H	0.94	5	P	Pn	16 22 39.9	+0.8
DOL	Dolgoi Island	1.03	18	P	Pg	16 22 41.3	+0.8
SSLW	Shishaldin Wes	1.16	302	P	Pg	16 22 42.9	-0.1
SSBA	Shishaldin	1.17	302	P	Pg	16 22 42.9	-0.1
SSBA				S	Sg	16 22 58.3	+0.1
PS4A	Pavlof South-4	1.23	15	P	Pg	16 22 44.9	+0.7
PVV	Pavlof Volcano	1.26	17	P	Pg	16 22 45.4	+0.6
PVV				S	Sg	16 23 02.9	+1.6
SDPT	Sand Point	1.63	43	P	Pg	16 22 51.2	-0.7
SDPT				eS	Sb	16 23 10.3	-0.3
SDPT				S	Sg	16 23 12.8	-0.4
AKUT	Akutan	1.97	270	P	Pn	16 22 53.4	+0.2
AKUT				S	Sn	16 23 18.2	+0.7
AKLV	Akutan Long Va	2.08	271	P	Pn	16 22 55.5	+0.7
AKGG	Akutan Green G	2.10	272	P	Pn	16 22 55.8	+0.8
AKRB	Akutan Reef Bi	2.15	270	P	Pn	16 22 57.0	+1.3
UNV	Unalaska Valle	2.43	264	P	Pn	16 23 00.2	+0.7
UNV				eSn	Sn	16 23 28.4	-0.4
MTBL	Makushin Table	2.52	267	P	Pn	16 23 01.4	+0.7
VNWF	Veniaminof 8	2.58	38	P	Pb	16 23 05.7	-0.7
MREP	Makushin Rep't	2.58	264	P	Pn	16 23 03.0	+1.4
MCIR	Makushin Cirqu	2.64	267	P	Pn	16 23 03.4	+0.9
VNFG	Veniaminof 2	2.68	37	P	Pb	16 23 06.3	-1.9
VNHG	Veniaminof 1	2.78	41	P	Pb	16 23 08.3	-1.5
CHGN	Chignik	3.14	45	ePn	Pn	16 23 12.1	+2.9
OKFG	Magazine Ridge	3.34	259	P	Pn	16 23 13.4	+1.4
OKCE	Okmok Cone E	3.49	260	P	Pn	16 23 15.8	+1.7
OKSP	Okmok Steeple	3.61	258	P	Pn	16 23 17.1	+1.3
ANPK	Aniakchak Peak	3.62	41	P	Pn	16 23 19.2	+3.2
ANNW	Aniakchak Nort	3.68	39	P	Pn	16 23 20.3	+3.5
SPIA	Saint Paul Isl	5.36	307	P	Pn	16 23 42.7	+3.1
ANCK	Angle Creek	5.59	41	P	Pn	16 23 46.0	+3.0
KABR	Katmai Barrier	5.75	43	P	Pn	16 23 47.7	+2.5
OHAK	Old Harbor	6.00	56	ePn	Pn	16 23 49.3	+0.8
	36nm,0.8s						
KDAK	Kodiak Island	6.60	53	ePn	Pn	16 23 57.7	+0.9
KDAK	Kodiak Island	6.60	53	Pn	Pn	16 23 57.2	+0.5
	1.6nm,0.3s,baz=252,slow=16,SNR=17						
KDAK				Sn	Sn	16 25 07.9	-3.7
	2.3nm,0.3s,baz=3.5,slow=19,SNR=8.2						
RSO	Redoubt South	8.19	36	ePn	Pn	16 24 20.3	+1.6
SPU	Mount Spurr	8.95	34	ePn	Pn	16 24 33.7	+4.6
PMR	Palmer	10.25	38	eP	Pn	16 24 47.3	+0.6
PMR	Palmer	10.25	38	ePn	Pn	16 24 47.3	+0.6
SML	Sawmill	10.68	39	eP	Pn	16 24 52.9	+0.2
SML	Sawmill	10.68	39	ePn	Pn	16 24 52.9	+0.2
TRF	Thorofare Moun	11.21	29	ePn	Pn	16 25 01.2	+1.2
	14nm,0.9s						
DIV	Divide	11.30	45	ePn	Pn	16 25 01.7	+0.5
AMKA	Amchitka	11.41	263	ePn	Pn	16 25 02.0	-0.7
	24nm,0.5s						
TNA	Tin City	11.75	349	ePn	Pn	16 25 07.1	-0.2
MCK	McKinley	11.82	30	eP	Pn	16 25 09.6	+1.3
MCK	McKinley	11.82	30	ePn	Pn	16 25 09.6	+1.3
PAX	Paxson	12.45	38	eP	Pn	16 25 16.7	-0.2
PAX				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PAX	Paxson	12.45	38	ePn	Pn	16 25 16.7	-0.2
	comp=Z,4.8nm,0.6s						
COLA	College	12.99	29	eP	Pn	16 25 23.1	-1.0
MENT	Mentasta	13.08	40	ePn	Pn	16 25 27.3	+1.8
ILAR	Eielson Array	13.19	30	Pn	Pn	16 25 24.7	-2.3
ILAR				Sn	Sn	16 27 45.6	-7.5
ILAR	Eielson Array	13.19	30	Pn	Pn	16 25 24.7	-2.3
	comp=Z,0.3nm,0.3s,baz=222,slow=14,SNR=8.0						
ILAR				Sn	Sn	16 27 45.6	-7.5
	comp=Z,0.0nm,0.3s,baz=262,slow=21,SNR=2.7						
ILAR				LR	LR	16 30 59.2	
	comp=Z,102nm,20.6s,baz=328,slow=40						
COLD	Coldfoot	14.36	19	ePn	Pn	16 25 45.5	+2.7
	comp=Z,9.0nm,0.7s						
FX1	Attu Island--F	14.56	275	ePn	Pn	16 25 46.9	+1.2
FX1	Attu Island--F	14.56	275	Pn	Pn	16 25 46.5	+0.8
	comp=Z,1.9nm,0.3s,baz=90,slow=20,SNR=9.3						
EGAK	Eagle	15.06	37	ePn	Pn	16 25 53.3	+0.9
SKAG	Skagway	15.68	59	ePn	P	16 26 02.7	-1.9
	comp=Z,9.5nm,1.1s						
INK	Inuvik	19.57	32	P	P	16 26 46.9	-0.3
INK	Inuvik	19.57	32	P	P	16 26 46.9	-0.3
	comp=Z,0.6nm,0.3s,baz=246,slow=10.0,SNR=8.5						
BILL	Bilibino	20.21	326⇓	eP	P	16 26 54.0	-0.3
BILL				pmax	pmax		
	comp=Z,5.0nm,1.4s						
BILL	Bilibino	20.21	326	eP	P	16 26 54.7	+0.4
	comp=Z,3.2nm,0.9s						
PET	Petropavlovsk	22.94	283⇓	iP	P	16 27 23.0	-0.6
PET				pmax	pmax		
	comp=Z,14nm,1.1s						
PET				MLR	MLR		
	comp=Z,100nm,20.0s						
PETK	Petropavlovsk-	23.46	284	P	P	16 27 27.7	-1.2
PETK				pmax	pmax		
	comp=Z,11nm,0.5s						
PETK	Petropavlovsk-	23.46	284	P	P	16 27 27.7	-1.2
PETK	Petropavlovsk-	23.46	284	P	P	16 27 27.7	-1.2
	comp=Z,11nm,0.5s,baz=89,slow=12,SNR=82						
YKW3	Yellowknife Ar	25.87	52	eP	P	16 27 53.1	+2.1
YKA	Yellowknife Ar	25.88	52	P	P	16 27 51.9	+0.8
YKA	Yellowknife Ar	25.88	52	P	P	16 27 51.9	+0.8
	comp=Z,1.4nm,0.5s,baz=272,slow=9.0,SNR=13						
TIXI	Tiksi	33.40	328	ceP	P	16 28 57.3	-0.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.5s						
NVAR	Mina Array Bea	33.67	100	P	P	16 29 03.1	+2.4
NVAR	Mina Array Bea	33.67	100	P	P	16 29 03.1	+2.4
	comp=Z,0.5nm,0.7s,baz=299,slow=9.8,SNR=3.9						
YAK	Yakutsk	35.15	311	eP	P	16 29 12.2	-0.7
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULM	Lac du Bonnet	39.61	67	P	P	16 29 51.2	+0.4
ULM	Lac du Bonnet	39.61	67	P	P	16 29 51.2	+0.4
	comp=Z,2.6nm,0.5s,baz=320,slow=6.1,SNR=3.1						
MDJ	Mudanjiang	43.65	286	P	P	16 30 26.5	+2.5
MDJ				pmax	pmax		
	comp=Z,6.0nm,2.5s						
MDJ				pmax	pmax		
	comp=Z,65nm,3.5s						
CN2	Changchun	46.49	288	eP	P	16 30 49.2	+2.6
DAG	Danmarks Havn	47.32	11⇑	iP	P	16 30 52.4	-0.3
DAG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DAG	Danmarks Havn	47.32	11⇑	iP	P	16 30 52.4	-0.3
	comp=Z,5.4nm,0.7s						
SUMG	Summit	47.76	20	eP	P	16 30 57.4	+0.8
SUMG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SUMG	Summit	47.76	20	iP	P	16 30 57.4	+0.8
	comp=Z,4.0nm,0.9s						
TXAR	Lajitas Array	48.66	96	P	P	16 31 04.5	+0.7
TXAR	Lajitas Array	48.66	96	P	P	16 31 04.4	+0.7
	comp=Z,0.3nm,0.7s,baz=290,slow=4.8,SNR=4.2						
KSRS	Korea Array	49.27	280	P	P	16 31 07.8	-0.4
	comp=Z,3.8nm,0.8s,baz=53,slow=7.1,SNR=16						
KSAR	Wonju Array Be	49.30	280	P	P	16 31 07.8	-0.7
SCO	Scoresbysund	52.45	16	iP	P	16 31 31.6	-0.1
SCO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SCO	Scoresbysund	52.45	16	iP	P	16 31 31.6	-0.1
	comp=Z,1.4nm,0.7s						
ARCES	ARCESS Array B	56.47	357	P	P	16 31 59.4	-1.5
ARCES	ARCESS Array B	56.47	357	P	P	16 31 59.4	-1.5
	comp=Z,14nm,1.3s,baz=13,slow=8.3,SNR=6.7						
ZALV	Zalesovo Beam	58.80	320	P	P	16 32 16.6	-1.0
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	Zalesovo Beam	58.80	320	P	P	16 32 16.6	-1.0
ZALV	Zalesovo Beam	58.80	320	P	P	16 32 16.6	-1.0
	comp=Z,0.9nm,0.3s,baz=39,slow=7.7,SNR=5.3						
KURK	Kurchatov	63.68	322⇑	iP	P	16 32 50.9	+0.3
KURK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
FINES	FINESS Array B	64.54	355	P	P	16 32 54.7	-1.3
FINES	FINESS Array B	64.54	355	P	P	16 32 54.7	-1.3
	comp=Z,1.2nm,0.5s,baz=28,slow=8.6,SNR=8.4						
BRVK	Borovoye	64.54	328	ceP	P	16 32 56.3	+0.1
BRVK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
ARU	Arti	64.79	336	d iP	P	16 32 57.0	-0.8
ARU						16 33 30.7	
ARU						16 35 17.6	
ARU				S	S	16 41 36.1	-1.3
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NB2	NORSAR Subarra	65.03	3	P	P	16 32 58.9	-0.4
	comp=Z,2.6nm,0.9s,baz=358,slow=6.9						
NOA	NORSAR Array B	65.03	3	P	P	16 32 57.5	-1.8
NOA	NORSAR Array B	65.03	3	P	P	16 32 57.5	-1.8
	comp=Z,1.7nm,0.8s,baz=357,slow=6.6,SNR=6.4						
MKAR	Makanchi Array	65.47	317	P	P	16 33 01.1	-1.4
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	65.47	317	P	P	16 33 01.1	-1.4
MKAR	Makanchi Array	65.47	317	P	P	16 33 01.1	-1.4
	comp=Z,1.1nm,0.7s,baz=45,slow=5.9,SNR=17						
OBN	Obninsk	69.97	349⇓	eP	P	16 33 29.4	-1.1
OBN				e		16 36 09.0	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AAK	Ala-Archa	72.00	319	ceP	P	16 33 43.6	+0.2
AAK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CLL	Collm	74.83	3	eP	P	16 33 58.0	-1.6
CLL				pmax	pmax		
	comp=Z,45nm,1.0s						
CLL	Collm	74.83	3	eP	P	16 33 58.0	-1.6
	comp=Z,4.0nm,1.0s						
AKASG	Malin Array Be	75.05	352	P	P	16 33 59.6	-1.3
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	Malin Array Be	75.05	352	P	P	16 33 59.6	-1.3
AKASG	Malin Array Be	75.05	352	P	P	16 33 59.6	-1.3
	comp=Z,1.6nm,0.3s,baz=10,slow=5.8,SNR=15						
KHC	Kasperske Hory	77.02	3	eP	P	16 34 13.0	+0.8
KHC	Kasperske Hory	77.02	3	eP	P	16 34 13.0	+0.8
KOLS	Kolonicke sedl	77.20	357	eP	P	16 34 13.4	+0.2
KOLS	Kolonicke sedl	77.20	357	eP	P	16 34 13.4	+0.2
CRVS	Cervenica-Dubn	77.25	357	eP	P	16 34 14.0	+0.5
CRVS	Cervenica-Dubn	77.25	357	eP	P	16 34 14.0	+0.5
GERES	GERESS Array B	77.31	3	P	P	16 34 14.1	+0.1
GERES	GERESS Array B	77.31	3	P	P	16 34 14.1	+0.1
	comp=Z,1.1nm,0.7s,baz=356,slow=4.0,SNR=10						
KIS	Kishinev	78.76	352	eL	L	16 34 30.0	
TAPN	Taplejung	78.94	302	eP	P	16 34 22.4	-1.2
	comp=Z,5.6nm,0.6s						
GUN	Gumba	79.38	303	eP	P	16 34 25.8	-0.3
	comp=Z,13nm,0.6s						
ODAN	Odare	79.50	301	eP	P	16 34 24.6	-2.0
KKN	Kakani	79.78	304	eP	P	16 34 28.1	+0.1
	comp=Z,5.6nm,0.5s						
RAMN	Ramite	79.82	302	eP	P	16 34 27.7	-0.6
	comp=Z,10nm,0.5s						
PKI	Pulchoki	79.90	303	eP	P	16 34 28.2	-0.6
PKIN	Phulchoki	79.90	303	eP	P	16 34 27.9	-0.9
	comp=Z,7.1nm,0.6s						
KIV	Kislovodsk	79.92	342⇑	eP	P	16 34 28.5	+0.1
KIV				e		16 37 27.1	
KIV				eS	S	16 44 36.0	+4.8
KIV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
DMN	Daman	80.01	304	eP	P	16 34 28.9	-0.5
	comp=Z,5.0nm,0.5s						
DANN	Dangsing	80.05	305	eP	P	16 34 29.3	-0.3
	comp=Z,14nm,0.5s						
KBZ	Khabaz	80.11	342	P	P	16 34 30.5	+1.2
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	Khabaz	80.11	342	P	P	16 34 30.4	+1.2
KBZ	Khabaz	80.11	342	P	P	16 34 30.4	+1.2
	comp=Z,2.7nm,0.9s,baz=93,slow=1.8,SNR=5.2						
CMAR	Chiang Mai Arr	80.17	288	P	P	16 34 29.3	-0.7
CMAR	Chiang Mai Arr	80.17	288	P	P	16 34 29.3	-0.7
	comp=Z,2.7nm,0.9s,baz=16,slow=5.6,SNR=8.7						
KOLN	Koldanda	80.61	305	eP	P	16 34 31.9	-0.6
	comp=Z,5.8nm,0.5s						
PYUN	Piuthan	80.63	305	eP	P	16 34 31.9	-0.7
BRTR	Keskin Array B	85.46	348	P	P	16 34 56.9	-0.5
BRTR	Keskin Array B	85.46	348	P	P	16 34 56.9	-0.5
	comp=Z,1.1nm,0.6s,baz=24,slow=3.1,SNR=8.7						

IDC 06 16:45:41.6±3.7, 21°.66S×178°.29W, h454^{km}±38^{km}, mb3.6/13, mb1 3.9/14, mb1mx3.7/22, mbtmp3.6/14, 1D, Error ellipse: s-maj=18.0km s-min=16.8km az=68.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.18	266	P	P	16 48 44.4	+0.3
	2.1nm,0.3s,baz=191,slow=23,SNR=27						
CTA	Charters Tower	33.12	266	P	P	16 51 38.8	-0.1
	4.0nm,0.5s,baz=101,slow=9.6,SNR=12						
PMG	Port Moresby	35.35	285	P	P	16 51 57.9	+0.1
	11nm,0.8s,baz=120,slow=8.1,SNR=5.2						
STKA	Stephens Creek	37.05	245	P	P	16 52 11.6	-0.1
	13nm,0.5s,baz=82,slow=10,SNR=27						
ASAR	Alice Springs	44.00	258	P	P	16 53 07.4	-0.3
	12nm,0.7s,baz=90,slow=8.4,SNR=203						
ASAR				PcP	PcP	16 54 43.6	-0.2
	1.2nm,0.8s,baz=90,slow=4.7,SNR=4.6						
WRA	Warramunga Arr	44.19	263	P	P	16 53 08.4	-0.8
	4.0nm,0.4s,baz=95,slow=8.2,SNR=215						
FITZ	Fitzroy Crossi	52.62	263	P	P	16 54 12.4	0.0
	2.6nm,0.4s,baz=83,slow=8.7,SNR=16						
VNDA	Vanda	56.74	185	P	P	16 54 40.6	+0.2
	0.3nm,0.4s,baz=7.6,slow=7.5,SNR=2.9						
QSPA	South Pole Qui	68.42	180	P	P	16 55 56.6	-0.1
	2.5nm,0.9s,baz=35,slow=1.4,SNR=15						
NVAR	Mina Array Bea	82.05	43	P	P	16 57 13.9	+0.2
	2.5nm,0.7s,baz=225,slow=9.4,SNR=17						
TXAR	Lajitas Array	87.90	57	P	P	16 57 42.9	+0.6
	1.0nm,0.8s,baz=209,slow=7.2,SNR=11						
ILAR	Eielson Array	89.50	13	P	P	16 57 47.8	-1.1
	1.3nm,0.6s,baz=218,slow=5.2,SNR=11						
PDAR	Pinedale Array	89.99	43	P	P	16 57 51.7	-0.2
	1.9nm,0.7s,baz=197,slow=2.8,SNR=12						
CMAR	Chiang Mai Arr	90.25	290	P	P	16 57 54.4	+1.0
	1.0nm,0.6s,baz=121,slow=3.6,SNR=7.0						
MKAR	Makanchi Array	111.79	313	PKiKP	PKiKP	17 03 23.9	-0.1
	0.2nm,0.4s,baz=126,slow=2.0,SNR=4.1						
BVAR	Borovoye Array	119.78	320	PKP	PKPdf	17 03 38.1	-0.9
	1.3nm,0.6s,baz=75,slow=1.3,SNR=3.7						
ARCES	ARCESS Array B	130.00	349	PKP	PKPdf	17 03 57.7	-0.5
	1.4nm,0.4s,baz=41,slow=1.8,SNR=18						
FINES	FINESS Array B	136.80	343	PKhKP	PKPpre	17 04 04.3	
	1.5nm,0.9s,baz=93,slow=2.8,SNR=3.5						
FINES				PKP	PKPdf	17 04 10.7	-0.4
	1.0nm,0.6s,baz=60,slow=3.4,SNR=5.2						
NB2	NORSAR Subarra	140.09	353	PKP	PKPpre	17 04 10.3	
	comp=Z,1.4nm,1.1s,baz=16,slow=3.2						
NOA	NORSAR Array B	140.09	353	PKhKP	PKPpre	17 04 11.0	
	comp=Z,0.4nm,0.6s,baz=10,slow=2.3,SNR=5.5						
NOA				PKP	PKiKP	17 04 18.6	-1.2
	comp=Z,0.7nm,0.7s,baz=15,slow=3.8,SNR=3.4						
AKASG	Malin Array Be	143.88	330	PKP	PKPab	17 04 22.0	-1.0
	comp=Z,2.8nm,0.4s,baz=44,slow=3.9,SNR=29						
BRTR	Keskin Array B	147.40	311	PKPbc	PKPbc	17 04 33.4	-0.5
	comp=Z,1.6nm,0.7s,baz=111,slow=2.8,SNR=9.4						
MMAI	Mount Meron Ar	148.13	298	PKPbc	PKPbc	17 04 36.2	+0.3
	comp=Z,2.8nm,0.5s,baz=64,slow=6.6,SNR=12						
CLL	Collm	149.12	346⇓	iPKP	PKPbc	17 04 37.8	+0.2
	comp=Z,8.0nm,0.6s						
BRG	Berggiesshubel	149.30	345	i PKP	PKPbc	17 04 38.4	+0.3
	comp=Z,4.8nm,0.6s						
GERES	GERESS Array B	151.23	343	PKPbc	PKPbc	17 04 42.5	-0.3
	comp=Z,1.0nm,0.4s,baz=48,slow=1.5,SNR=12						
TORD	Torodi Ar. Bea	171.54	180	PKP	PKPdf	17 04 56.8	-1.2
	comp=Z,0.8nm,0.8s,baz=4.6,slow=1.4,SNR=3.7						
TORD				PKPab	PKPab	17 06 21.4	-0.5
	comp=Z,1.5nm,0.7s,baz=177,slow=3.7,SNR=8.1						

*IDC **06** 16:46:18.4±1.1, 7°.34N×92°.99E, h0^{km}, mb3.9/7, mb1 4.1/8, mb1mx3.7/27, mbtmp3.9/8, ML4.1/1, Error ellipse: s-maj=57.1km s-min=17.4km az=62.0*
*ISCJB **06** 16:46:21.9±0.8, 7°.4N±0°.1×93°.2E±0°.2, h33^{km}, mb4.0/7, Error ellipse: s-maj=28.6km s-min=10.7km az=152.0*
ISC 06 16:46:23.8±1.0, 7°.3N±0°.1×93°.1E±0°.2, h35^{km}, n18, σ0^{s}57/18, mb4.0/7, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	12.45	27	Pn	Pn	16 49 18.9	+0.3
	0.3nm,0.3s,baz=210,slow=14,SNR=17						
ODAN	Odare	20.14	345	eP	P	16 50 55.1	-0.2
RAMN	Ramite	20.44	343	eP	P	16 50 59.2	+0.7
TAPN	Taplejung	20.54	346	eP	P	16 50 59.5	-0.1
PKI	Pulchoki	21.39	341	eP	P	16 51 08.6	-0.2
	8.7nm,0.5s						
PKIN	Phulchoki	21.39	341	eP	P	16 51 08.6	-0.2
	6.4nm,0.5s						
DMN	Daman	21.52	340	eP	P	16 51 10.4	+0.3
GUN	Gumba	21.56	343	eP	P	16 51 10.2	-0.4
	16nm,0.7s						
KKN	Kakani	21.63	341	eP	P	16 51 12.3	+1.0
	6.1nm,0.6s						
KOLN	Koldanda	22.20	337	eP	P	16 51 17.9	+0.5
DANN	Dangsing	22.67	338	eP	P	16 51 22.4	-0.1
MKAR	Makanchi Array	40.38	349	P	P	16 53 57.0	-1.3
	0.6nm,0.5s,baz=169,slow=7.5,SNR=14						
NWAO	Narrogin (SRO)	46.19	151	P	P	16 54 45.2	-0.1
	4.6nm,0.6s,baz=308,slow=5.3,SNR=8.6						
ZALV	Zalesovo Beam	46.95	353	P	P	16 54 50.2	-0.8
	1.0nm,0.4s,baz=180,slow=7.6,SNR=7.8						
WRA	Warramunga Arr	48.84	124	P	P	16 55 06.0	-0.2
	1.1nm,0.4s,baz=305,slow=8.6,SNR=12						
ASAR	Alice Springs	50.41	129	P	P	16 55 18.3	+0.2
	0.5nm,0.3s,baz=304,slow=7.6,SNR=6.8						
ARCES	ARCESS Array B	75.40	340	P	P	16 58 04.2	+0.6
	0.6nm,0.4s,baz=100,slow=4.8,SNR=13						
NOA	NORSAR Array B	79.66	331	P	P	16 58 28.0	+0.4
	1.7nm,1.2s,baz=97,slow=5.7,SNR=2.8						

*IDC **06** 16:57:07.9±0.9, 36°.15N×67°.39E, h0^{km}, mb3.8/8, mb1 4.0/13, mb1mx3.7/31, mbtmp3.9/13, ML4.1/5, Error ellipse: s-maj=19.9km s-min=16.7km az=118.0*
*ISCJB **06** 16:57:10.3±0.6, 36°.48N±0°.03×67°.19E±0°.07, h33^{km},*

mb3.9/9, Error ellipse: s-maj=7.8km s-min=4.2km az=163.3
*MOS **06** 16:57:10.7±1.4, 36°.46N×67°.33E, h31km, mb4.1/6, Error ellipse: s-maj=18.9km s-min=7.6km az=80.4*
*NNC **06** 16:57:14.9±1.9, 36°.77N×66°.99E, h25km, mb4.3, mpv4.0, Error ellipse: s-maj=14.9km s-min=11.5km az=10.0*
ISC 06 16:57:11.9±1.0**, 36°.48N**±0°.06×**67°.06E**±0°.09**, h35km, n59, σ1s.79**/64**, mb3.8**/9**, 10C-9D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	4.77	122	P	Pn	16 58 23.6	+2.2
CEP				S	Sn	16 59 19.0	+3.5
THW	Thamme Wali	5.33	132	P	Pn	16 58 34.3	+5.4
KK31	Karatay Array	7.13	21	⇑Pn	Pn	16 58 55.3	+1.7
	6.5nm,0.6s,baz=209,slow=13,SNR=151						
KK31				⇓Sn	Sn	17 00 14.0	+0.5
	9.6nm,0.6s,baz=205,slow=21,SNR=5.2						
KK31				⇑Lg	Lg	17 00 53.4	
	20nm,0.6s,baz=204,slow=29,SNR=5.6						
KK31	Karatay Array	7.13	21	PN	Pn	16 58 55.6	+1.9
KK31				i		17 00 15.1	
KK31				pmax	pmax		
	comp=Z,8.0nm,0.2s						
KK31				smax	smax		
	comp=Z,5.0nm,0.3s						
AML	Almayashu	7.64	40	P	Pn	16 59 01.9	+1.0
	SNR=23						
EKS2	Erkin-Say	8.06	38	P	Pn	16 59 08.4	+1.8
	SNR=10						
AAK	Ala-Archa	8.41	41	P	Pn	16 59 12.4	+1.1
AAK						17 00 47.5	
AAK				pmax	pmax		
	comp=Z,6.0nm,0.3s						
AAK				smax	smax		
	comp=N,1.0nm,0.3s						
AAK	Ala-Archa	8.41	41	P	Pn	16 59 12.5	+1.1
	SNR=9.4						
AAK	Ala-Archa	8.41	41	Pn	Pn	16 59 12.4	+1.1
	comp=N,5.6nm,0.3s,baz=201,slow=5.6,SNR=19						
AAK				Sn	Sn	17 00 47.5	+2.4
	comp=N,0.7nm,0.3s,baz=18,slow=19,SNR=4.2						
KZA	Kyzart	8.46	46	P	Pn	16 59 13.1	+0.8
	SNR=32						
KBK	Karagaybulak	8.67	42	P	Pn	16 59 16.4	+1.5
	SNR=21						
CHMS	Chumysh	8.80	40	P	Pn	16 59 17.8	+1.2
	SNR=12						
USP	Ospenovka	8.87	38	P	Pn	16 59 18.1	+0.6
	SNR=8.8						
ULHL	Ulahol	9.15	48	P	Pn	16 59 22.1	+0.6
	SNR=8.9						
TKM2	Tokmak 2	9.20	43	⇓Pn	Pn	16 59 23.2	+1.0
	comp=N,9.9nm,0.7s						
TKM2				⇑Sn	Sn	17 01 05.3	+0.8
	comp=N,7.8nm,0.7s						
TKM2				⇓Lg	Lg	17 02 01.0	
	comp=N,11nm,0.8s						
TKM2	Tokmak 2	9.20	43	P	Pn	16 59 22.3	+0.1
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TKM2	Tokmak 2	9.20	43	P	Pn	16 59 22.6	+0.4
	SNR=15						
AB31	Akbulak array	13.79	340	⇓Pn	Pn	17 00 26.0	+1.2
	comp=Z,1.7nm,0.5s,baz=154,slow=15,SNR=34						
AB31				Sn	Sn	17 02 54.3	-2.1
AB31	Akbulak array	13.79	340	P	Pn	17 00 25.9	+1.2
AB31				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MK31	Makanchi Array	15.33	43	Pn	Pn	17 00 45.9	+0.4
	comp=Z,2.1nm,0.8s,baz=248,slow=12,SNR=11						
MKAR	Makanchi Array	15.33	43	P	Pn	17 00 44.2	-1.4
MKAR	Makanchi Array	15.33	43	Pn	Pn	17 00 44.2	-1.4
	comp=Z,0.1nm,0.3s,baz=230,slow=14,SNR=11						
AKTO	Aktyubinsk	15.40	338	⇓Pn	Pn	17 00 48.0	+1.6
	comp=Z,4.5nm,1.1s						
AKTO				Sn	Sn	17 03 34.2	-1.6
AKTO	Aktyubinsk	15.40	338	P	Pn	17 00 48.4	+2.0
AKTO	Aktyubinsk	15.40	338	Pn	Pn	17 00 48.4	+2.0
	comp=Z,0.2nm,0.3s,baz=154,slow=14,SNR=8.7						
PYUN	Piuthan	15.83	117	eP	Pn	17 00 49.8	-2.5
DANN	Dangsing	16.25	115	eP	Pn	17 00 54.3	-3.4
KURBB	Kurchatov Arra	16.37	27	⇑Pn	Pn	17 00 58.8	0.0
	comp=Z,5.8nm,0.8s						
KURBB	Kurchatov Arra	16.37	27	Pn	Pn	17 00 57.5	-1.3
	comp=Z,0.6nm,0.3s,baz=216,slow=12,SNR=18						
KOLN	Koldanda	16.46	117	eP	Pn	17 00 57.7	-2.7
VOSK	Vostochnaya	16.48	8	⇓Pn	Pn	17 00 59.4	-0.8
	comp=Z,4.3nm,0.9s						
VOSK				⇑Sn	Sn	17 03 58.9	-3.0
	comp=Z,2.6nm,1.0s						
KURK	Kurchatov	16.48	27	⇑Pn	Pn	17 01 01.3	+1.1
	comp=Z,16nm,1.0s						
KURK	Kurchatov	16.48	27	P	Pn	17 00 57.5	-2.7
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZRNK	Zerenda	16.53	4	⇑Pn	Pn	17 01 00.9	+0.1
	comp=Z,6.7nm,0.5s						
ZRNK				⇓Sn	Sn	17 03 58.5	-4.6
	comp=Z,2.1nm,0.6s						
ZRNK	Zerenda	16.53	4	P	Pn	17 01 00.9	+0.1
ZRNK				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BVA0	Borovoye Array	16.71	7	⇓Pn	Pn	17 01 03.4	+0.2
	comp=Z,3.5nm,0.5s						
BVA0				⇓Sn	Sn	17 04 06.5	-1.0
	comp=Z,2.9nm,0.7s						
BVA0	Borovoye Array	16.71	7	P	Pn	17 01 03.3	+0.2
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BVAR	Borovoye Array	16.71	7	P	Pn	17 01 03.2	+0.1
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR	Borovoye Array	16.71	7	Pn	Pn	17 01 03.2	+0.1
	comp=Z,1.6nm,0.3s,baz=180,slow=12,SNR=24						
BRVK	Borovoye	16.73	7	⇑Pn	Pn	17 01 02.6	-0.7
	comp=Z,8.4nm,0.5s						
BRVK				⇑Sn	Sn	17 04 05.4	-2.7
	comp=Z,6.8nm,1.1s						
DMN	Daman	17.65	115	eP	Pn	17 01 13.1	-2.1
KKN	Kakani	17.67	114	eP	Pn	17 01 11.8	-3.7
	comp=Z,10nm,0.6s						
PKIN	Phulchoki	17.88	115	eP	Pn	17 01 16.1	-1.9
	comp=Z,12nm,0.5s						
PKI	Pulchoki	17.89	115	eP	Pn	17 01 16.3	-2.0
GUN	Gumba	18.05	113	eP	Pn	17 01 17.2	-3.0
RAMN	Ramite	19.11	114	eP	P	17 01 30.2	-1.8
	comp=Z,16nm,0.5s						
TAPN	Taplejung	19.72	112	eP	P	17 01 38.4	-0.3
ODAN	Odare	19.75	113	eP	P	17 01 38.7	-0.3
	comp=Z,13nm,0.5s						
ARU	Arti	20.77	347c	iP	Pn	17 01 53.9	+1.8
ARU						17 02 14.6	
ARU				SS	SS	17 06 10.5	
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ZALV	Zalesovo Beam	21.38	30	P	P	17 01 57.5	+1.3
ZALV				pmax	pmax		
	comp=Z,16nm,0.6s						
ZALV	Zalesovo Beam	21.38	30	P	P	17 01 57.5	+1.3
	comp=Z,16nm,0.6s,baz=226,slow=10,SNR=97						
NVS	Novosibirsk	21.47	26	eP	P	17 01 56.8	-0.3
NVS				pmax	pmax		
	comp=Z,13nm,0.8s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,5.0nm,0.7s						
CMAR	Chiang Mai Arr	33.29	114	P	P	17 03 45.7	-0.6
	comp=E,0.8nm,0.7s,baz=298,slow=8.0,SNR=5.0						
NOA	NORSAR Array B	42.50	323	P	P	17 05 06.9	+3.4
	comp=E,0.6nm,0.7s,baz=100,slow=8.0,SNR=2.9						
TORD	Torodi Ar. Bea	62.55	266	P	P	17 07 35.9	+3.4
	comp=E,1.2nm,0.7s,baz=48,slow=5.9,SNR=3.2						
ILAR	Eielson Array	75.63	14	P	P	17 08 55.6	+2.8
	comp=E,0.9nm,0.9s,baz=328,slow=4.6,SNR=7.0						
YKA	Yellowknife Ar	81.36	1	P	P	17 09 27.8	+3.4
	comp=E,1.0nm,0.9s,baz=347,slow=4.9,SNR=7.4						
WRA	Warramunga Arr	84.71	119	P	P	17 09 41.2	-1.2
	comp=E,0.3nm,0.9s,baz=316,slow=5.8,SNR=2.6						
ASAR	Alice Springs	86.88	122	P	P	17 09 52.0	-1.1
	comp=E,0.2nm,0.4s,baz=311,slow=4.5,SNR=4.2						

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*ISCJB **06** 17:02:21.0±0.4, 41°.26N±0°.02×22°.69E±0°.03, h6km±4km, Error ellipse: s-maj=4.0km s-min=3.5km az=154.7*
*SKO **06** 17:02:20.3, 41°.28N×22°.69E, h15km, M1.6, ML1.7*
*ATH **06** 17:02:20.6, 41°.25N×22°.70E, h23km±3km, MD3.1/6*
*THE **06** 17:02:21.4, 41°.26N×22°.70E, h0km±1km, ML2.3/7, Error ellipse: s-maj=1.3km s-min=0.4km az=235.0*
*CSEM **06** 17:02:21.5±0.1, 41°.25N×22°.70E, h2km, ML1.8, Error ellipse: s-maj=3.2km s-min=2.5km az=64.0*
*BEO **06** 17:02:24.0±0.4, 41°.35N×22°.58E, h0km, ML1.8/4*
ISC 06 17:02:21.6±1.0**, 41°.27N**±0°.02×**22°.70E**±0°.02**, h3km**±10km**, n42, σ0s.61**/70**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.11	299	P	Pg	17 02 23.3	-0.5
VAY				S	Sg	17 02 25.6	+0.3
VAY	Valandovo	0.11	299	ePg	Pg	17 02 23.5	-0.3
VAY				eSg	Sg	17 02 25.6	+0.3
VAY	Valandovo	0.11	299	i Pg	Pg	17 02 23.4	-0.3
VAY				eLg	Lg	17 02 25.4	
	comp=E,268nm,0.2s						
VAY				i Sg	Sg	17 02 25.5	+0.2
VAY				eLg	Lg	17 02 25.6	
	comp=N,644nm,0.2s						
VAY	Valandovo	0.11	299	P	Pg	17 02 23.3	-0.5
VAY	Valandovo	0.11	299	i Pg	Pg	17 02 23.9	+0.1
VAY				S	Sg	17 02 25.6	+0.3
VAY				eLg	Lg	17 02 26.1	
	comp=N,644nm,0.2s						
KNT	Kendrikon	0.18	125	P	Pg	17 02 25.0	-0.1
KNT				S	Sg	17 02 27.6	+0.2
KNT	Kendrikon	0.18	125	P	Pg	17 02 25.0	-0.1
KNT				S	Sg	17 02 27.6	+0.2
GRG	Griva	0.38	216	P	Pg	17 02 28.9	0.0
GRG				S	Sg	17 02 34.3	+0.4
GRG	Griva	0.38	216	ePB	Pg	17 02 28.8	-0.1
GRG				eSB	Sg	17 02 34.9	+1.0
GRG	Griva	0.38	216	P	Pg	17 02 28.9	0.0
GRG				S	Sg	17 02 34.3	+0.4
SOH	Sokhos	0.66	132	P	Pg	17 02 33.8	-0.5
SOH				S	Sg	17 02 43.8	+0.9
SOH	Sokhos	0.66	132	ePN	Pg	17 02 33.5	-0.8
SOH				eSN	Sg	17 02 42.8	-0.1
SOH	Sokhos	0.66	132	ePn	Pg	17 02 33.5	-0.8
SOH	Sokhos	0.66	132	P	Pg	17 02 33.8	-0.5
SOH				eSn	Sg	17 02 42.8	-0.1
SOH				S	Sg	17 02 43.8	+0.9
THE	Thessaloniki	0.66	162	P	Pg	17 02 33.9	-0.4
THE				S	Sg	17 02 43.5	+0.6
THE	Thessaloniki	0.66	162	P	Pg	17 02 33.9	-0.4
THE				S	Sg	17 02 43.5	+0.6
SRS	Serrai	0.69	102	P	Pg	17 02 34.6	-0.2
SRS				S	Sg	17 02 44.7	+1.0
SRS	Serrai	0.69	102	P	Pg	17 02 34.6	-0.2
SRS				S	Sg	17 02 44.7	+1.0
HORT	Hortiatis	0.73	156	P	Pg	17 02 35.1	-0.5
HORT				S	Sg	17 02 45.5	+0.4
HORT	Hortiatis	0.73	156	P	Pg	17 02 35.1	-0.5
HORT				S	Sg	17 02 45.5	+0.4
NVR	Nevrokopi	0.88	84	P	Pg	17 02 37.9	-0.5
NVR				S	Sb	17 02 50.8	-0.9
NVR	Nevrokopi	0.88	84	ePN	Pg	17 02 37.8	-0.6
NVR	Nevrokopi	0.88	84	P	Pg	17 02 37.9	-0.5
NVR				S	Sb	17 02 50.8	-0.9
PLG	Polygyros	1.05	147	P	Pg	17 02 41.6	-0.2
PLG				S	Sb	17 02 56.8	+0.1
PLG	Polygyros	1.05	147	ePN	Pg	17 02 40.8	-1.0
PLG	Polygyros	1.05	147	ePn	Pg	17 02 40.8	-1.0
PLG	Polygyros	1.05	147	P	Pg	17 02 41.6	-0.2
PLG				S	Sb	17 02 56.8	+0.1
FNA	Florina	1.11	245	P	Pg	17 02 42.0	-0.9
FNA	Florina	1.11	245	ePN	Pg	17 02 41.3	-1.6
FNA	Florina	1.11	245	ePn	Pg	17 02 41.3	-1.6
FNA	Florina	1.11	245	P	Pg	17 02 42.0	-0.9
VTS	Vitosha	1.38	16	P	Pn	17 02 47.5	-0.4
VTS				S	Sn	17 03 07.5	+0.8
VTS	Vitosha	1.38	16	ePg	Pn	17 02 48.1	+0.2
VTS				eSg	Sg	17 03 05.8	0.0
VTS	Vitosha	1.38	16	P	Pn	17 02 47.5	-0.4
VTS	Vitosha	1.38	16	ePg	Pn	17 02 48.1	+0.2
VTS				eSg	Sg	17 03 05.8	0.0
VTS				S	Sn	17 03 07.5	+0.8
KAVA	Kavala	1.40	101	P	Pn	17 02 47.6	-0.4
KAVA	Kavala	1.40	101	P	Pn	17 02 47.6	-0.4
BARS	Barje	1.68	337	ePn	Pn	17 02 52.4	+0.4
BARS	Barje	1.68	337	ePn	Pn	17 02 52.4	+0.4
ZAPS	Zavoj	2.01	359	ePn	Pb	17 02 59.1	+0.4
ZAPS				eSn	Sn	17 03 22.7	+0.6
RDO	Rodhopi	2.14	92	ePB	Pn	17 02 57.4	-0.8
RDO	Rodhopi	2.14	92	ePb	Pn	17 02 57.4	-0.8

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*NEIC **06** 17:13:30.2±4.3, 26°.88S×176°.17W, h1km±27km, mb4.6/5, Error ellipse: s-maj=18.3km s-min=11.1km az=112.0*
*IDC **06** 17:13:31.2±1.5, 27°.00S×176°.26W, h0km, mb4.2/5, mb1 4.3/7, mb1mx4.0/20, mbtmp4.2/7, ML4.0/2, MS3.3/4, Ms1 3.3/4, ms1mx2.9/22, Error ellipse: s-maj=44.4km s-min=24.1km az=129.0*
*ISCJB **06** 17:13:32.5±0.9, 26°.93S±0°.08×176°.1W±0°.2, h35km, mb4.4/9, MS3.4/2, Error ellipse: s-maj=20.2km s-min=9.4km az=19.8*
ISC 06 17:13:36.3±0.9**, 27°.00S**±0°.10×**176°.3W**±0°.2**, h35km, n36, σ1s.08**/35**, mb4.4**/9**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.66	212	Pn	Pn	17 14 16.1	-0.5
RAO				Sn	Sn	17 14 48.0	+0.4
RAO	Raoul Island	2.66	212	Pn	Pn	17 14 16.1	-0.5
	95nm,0.3s,baz=74,slow=20,SNR=6.1						
RAO				Sn	Sn	17 14 48.0	+0.4
	298nm,0.3s,baz=270,slow=23,SNR=13						
RAO				LR	LR	17 14 51.9	
	comp=Z,243nm,21.5s,baz=297,slow=30						
URZ	Urewera	12.52	205	Pn	Pn	17 16 32.1	+0.2
URZ	Urewera	12.52	205	Pn	Pn	17 16 32.1	+0.2
	0.2nm,0.3s,baz=32,slow=16,SNR=3.9						
AFI	Afiamalu	13.70	19	Pn	Pn	17 16 43.2	-4.9
DZM	Mont Dzumac	16.45	284	LR	LR	17 22 33.6	
	comp=Z,125nm,19.6s,baz=190,slow=33						
HNR	Honiara	28.44	303	LR	LR	17 29 29.9	
	comp=Z,74nm,19.4s,baz=124,slow=34						
CTA	Charters Tower	34.91	273	P	P	17 20 26.4	+1.5
CTA	Charters Tower	34.91	273	P	P	17 20 26.4	+1.5
	4.9nm,0.6s,baz=94,slow=11,SNR=11						
CTAO	Charters Tower	34.91	273	eP	P	17 20 25.9	+1.1
	6.7nm,0.7s						
STKA	Stephens Creek	36.82	252	eP	P	17 20 41.2	+0.1
	0.7nm,0.9s						
STKA	Stephens Creek	36.82	252	P	P	17 20 42.4	+1.3
	1.4nm,0.4s,baz=96,slow=11,SNR=4.6						
STKA				LR	LR	17 33 06.8	
	comp=Z,86nm,19.0s,baz=26,slow=32						
AS31	Alice Springs	44.90	263	eP	P	17 21 47.3	-0.5
ASAR	Alice Springs	44.90	263	P	P	17 21 47.7	-0.1
ASAR	Alice Springs	44.90	263	P	P	17 21 47.7	-0.1
	0.8nm,0.4s,baz=98,slow=7.0,SNR=78						
WRAB	Tennant Creek	45.58	268	P	P	17 21 53.1	-0.1
WRA	Warramunga Arr	45.59	268	P	P	17 21 52.9	-0.4
WRA	Warramunga Arr	45.59	268	P	P	17 21 52.9	-0.4
	1.5nm,0.5s,baz=108,slow=7.4,SNR=23						
SBA	Scott Base	51.53	185	P	P	17 22 38.6	+0.4
FITZ	Fitzroy Crossi	53.95	267	P	P	17 22 56.9	0.0
FITZ	Fitzroy Crossi	53.95	267	P	P	17 22 56.9	0.0
	3.1nm,1.0s,baz=76,slow=7.0,SNR=4.6						
MBWA	Marble Bar	58.16	261	P	P	17 23 25.8	-1.2
	26nm,1.3s						
CASY	Casey	58.83	207	eP	P	17 23 30.4	-0.5
	3.8nm,0.6s						
QSPA	South Pole Qui	63.10	180	eP	P	17 23 60.0	-0.1
	3.7nm,1.2s						
CHTO	Chiang Mai	93.87	289	P	P	17 26 47.8	-2.7
	2.5nm,0.9s						
MKAR	Makanchi Array	116.70	311	PKP	PKPdf	17 32 15.1	-1.6
MKAR	Makanchi Array	116.70	311	PKP	PKPdf	17 32 15.1	-1.6
	0.6nm,0.8s,baz=101,slow=1.5,SNR=4.2						
ARCES	ARCESS Array B	135.57	349	PKP	PKPdf	17 32 54.2	+2.2
ARCES	ARCESS Array B	135.57	349	PKP	PKPdf	17 32 54.2	+2.2
	3.6nm,1.1s,baz=48,slow=1.3,SNR=4.6						
NB2	NORSAR Subarra	145.59	354	PKP	PKPab	17 33 11.6	+0.8
	comp=Z,0.9nm,0.6s,baz=6.0,slow=3.0						
NOA	NORSAR Array B	145.59	354	PKPbc	PKPab	17 33 11.4	+0.6
NOA	NORSAR Array B	145.59	354	PKPbc	PKPab	17 33 11.4	+0.6
	comp=Z,1.0nm,0.7s,baz=12,slow=4.5,SNR=5.4						
AKASG	Malin Array Be	149.37	327	PKPbc	PKPbc	17 33 22.2	+1.0
AKASG	Malin Array Be	149.37	327	PKPbc	PKPbc	17 33 22.2	+1.0
	comp=Z,1.4nm,0.7s,baz=45,slow=2.7,SNR=5.6						
BRTR	Keskin Array B	152.10	305	PKPbc	PKPbc	17 33 27.7	-0.5
BRTR	Keskin Array B	152.10	305	PKPbc	PKPbc	17 33 27.7	-0.5
	comp=Z,0.2nm,0.4s,baz=182,slow=3.9,SNR=2.6						

IDC 06 17:19:59.2±2.0**, 15°.29S**×**174°.26W, h0km, mb4.1**/3**, mb1 4.2**/4**, mb1mx3.8**/19**, mbtmp4.1**/4**, Error ellipse: s-maj=134.5km s-min=26.3km az=152.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.77	61	Pn	Pn	17 20 45.4	+0.4
	32nm,0.3s,baz=195,slow=2.2,SNR=27						
AFI				Sn	Sn	17 21 10.9	-8.3
	105nm,0.3s,baz=12,slow=20,SNR=5.0						
STKA	Stephens Creek	43.37	240	P	P	17 28 02.8	-0.7
	2.1nm,0.8s,baz=79,slow=10,SNR=3.3						
WRA	Warramunga Arr	49.06	257	P	P	17 28 48.9	+0.4
	0.5nm,0.3s,baz=93,slow=7.4,SNR=38						
ASAR	Alice Springs	49.35	252	P	P	17 28 51.0	+0.2
	3.7nm,0.6s,baz=88,slow=8.0,SNR=94						
BRTR	Keskin Array B	145.54	320	PKPbc	PKPdf	17 39 38.3	-1.6
	0.7nm,0.7s,baz=81,slow=2.5,SNR=5.5						

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*JMA **06** 17:22:45.9±0.3, 36°.35N×142°.31E, h71km, M3.1*
*IDC **06** 17:22:51.5±2.7, 36°.27N×140°.76E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/26, mbtmp3.6/6, ML3.5/1, MS2.8/1, Ms1 2.8/1, ms1mx1.6/32, Error ellipse: s-maj=85.7km s-min=19.5km az=72.0*
ISC 06 17:22:47.7±2.7**, 36°.35N**±0°.05×**142°.2E**±0°.1**, h78km**±31km**, n17, σ1s.54**/16**, mb3.6**/5**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.24	239	P	Pn	17 23 09.0	-0.5
CHOJ				eS	Sn	17 23 26.9	+1.0
JHO	Hitachi	1.31	282	P	Pn	17 23 09.9	-0.6
ONAJ	Iwakimizuishiy	1.33	305	P	Pn	17 23 10.2	-0.6
JFK	Kawauchi	1.45	315	eS	Sn	17 23 30.1	-0.8
JMM	Marumori	1.87	325	P	Pn	17 23 17.6	-0.2
JMM				eS	Sn	17 23 41.1	+0.4
JFT	Otama	1.88	309	P	Pn	17 23 18.9	+1.1
BSO1	Boso 1	1.94	210	P	Pn	17 23 18.5	+0.2
BSO1				S	Sn	17 23 43.2	+1.6
JAG	Ashikaga	2.19	273	P	Pn	17 23 22.3	+0.3
JAG				S	Sn	17 23 49.9	+1.6
JRY	Ryogami san	2.66	264	P	Pn	17 23 29.0	+0.6
MAT	Matsushiro	3.20	275	P	Pn	17 23 37.3	+1.6
MAT				S	Sn	17 24 09.6	-3.1
JHJ	Hachijo jima 2	3.77	212	Pn	Pn	17 23 45.0	+1.6
	12nm,0.3s,baz=343,slow=19,SNR=6.8						
JHJ				Sn	Sn	17 24 24.0	-2.6
	26nm,0.3s,baz=59,slow=19,SNR=7.4						
ASAJ	Asahikawa	7.77	2	LR	LR	17 28 44.3	
	comp=Z,64nm,18.8s,baz=17,slow=44						
SONM	Songino Array	28.67	305	P	P	17 28 41.6	+4.4
	0.9nm,0.6s,baz=98,slow=7.9,SNR=4.8						
ZALV	Zalesovo Beam	42.82	313	P	P	17 30 44.6	+6.9
	0.4nm,0.5s,baz=99,slow=7.4,SNR=2.6						
MKAR	Makanchi Array	45.00	303	P	P	17 31 01.7	+6.4
	0.7nm,0.6s,baz=83,slow=8.5,SNR=12						
WRA	Warramunga Arr	56.47	189	P	P	17 32 31.8	+10
	0.3nm,0.7s,baz=3.1,slow=7.4,SNR=5.5						
ASAR	Alice Springs	60.20	189	P	P	17 33 00.4	+13
	0.3nm,0.7s,baz=358,slow=6.4,SNR=4.4						

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*DDA **06** 17:26:28.6, 37°.89N×30°.98E, h5km, ML3.4*
*ISK **06** 17:26:29.4, 37°.92N×30°.89E, h6km, MD3.3*
*CSEM **06** 17:26:29.9±0.1, 37°.93N×30°.91E, h2km, MD3.3, Error ellipse: s-maj=4.0km s-min=3.0km az=114.0*
ISC 06 17:26:30.0±1.1**, 37°.91N**±0°.02×**30°.92E**±0°.02**, h5km**±11km**, n68, σ0s.73**/84**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BCK	Bucak	0.52	210	ePG	Pg	17 26 39.0	-1.1
BCK				eSG	Sg	17 26 47.4	+0.5
BCK	Bucak	0.52	210	ePg	Pg	17 26 39.0	-1.1
BCK				eSg	Sg	17 26 47.4	+0.5
SHUT	Suhut-Afyon	0.70	336	ePG	Pg	17 26 43.4	-0.1
SHUT	Suhut-Afyon	0.70	336	ePg	Pg	17 26 43.4	-0.1
BOLV	Bolvadin	0.80	2	i P	Pg	17 26 45.0	-0.5
BOLV				i S	Sb	17 26 57.3	-0.6
BOLV	Bolvadin	0.80	2	i P	Pg	17 26 45.0	-0.5
BOLV				i S	Sb	17 26 57.3	-0.6
KORT	Korkueli	1.02	207	eP	Pg	17 26 48.7	-0.8
KORT				eS	Sg	17 27 03.3	+0.6
KORT	Korkueli	1.02	207	eP	Pg	17 26 48.7	-0.8
KORT				eS	Sg	17 27 03.3	+0.6
ANTB	Antalya	1.03	192	ePG	Pg	17 26 50.0	+0.2
ANTB	Antalya	1.03	192	ePg	Pg	17 26 50.0	+0.2
KONT	Konya--Tatoy	1.14	88	ePN	Pn	17 26 52.3	-0.4
KONT	Konya--Tatoy	1.14	88	ePn	Pn	17 26 52.3	-0.4
LADK	Ladik-KONYA	1.18	76	ePN	Pb	17 26 52.8	-0.1
LADK	Ladik-KONYA	1.18	76	ePn	Pb	17 26 52.8	-0.1
KHAL	Karahalli	1.22	292	i P	Pg	17 26 52.1	-1.2
KHAL				i S	Sn	17 27 10.9	+0.1
KHAL	Karahalli	1.22	292	i P	Pg	17 26 52.1	-1.2
KHAL				i S	Sn	17 27 10.9	+0.1
KIZT	Kizilcal	1.22	38	ePN	Pg	17 26 53.3	-0.2
KIZT	Kizilcal	1.22	38	ePn	Pg	17 26 53.3	-0.2
GOLH	Golhisar	1.27	238	eP	Pg	17 26 54.2	-0.2
GOLH				eS	Sn	17 27 12.7	+0.5
GOLH	Golhisar	1.27	238	eP	Pg	17 26 54.2	-0.2
GOLH				eS	Sn	17 27 12.7	+0.5
ALT	Altintas	1.30	331	ePN	Pn	17 26 54.1	-0.9
ALT	Altintas	1.30	331	ePn	Pn	17 26 54.2	-0.9
GLHS	Glhisar (BURDU	1.36	237	ePN	Pn	17 26 55.4	-0.4
GLHS	Glhisar (BURDU	1.36	237	ePn	Pn	17 26 55.4	-0.4
ELL	Elmali	1.42	215	ePN	Pn	17 26 56.4	-0.2
ELL	Elmali	1.42	215	ePn	Pn	17 26 56.4	-0.2
DNZL	Cakiroluk	1.50	262	eP	Pn	17 26 57.1	-0.7
DNZL				eS	Sg	17 27 19.5	+1.2
DNZL	Cakiroluk	1.50	262	eP	Pn	17 26 57.1	-0.7
DNZL				eS	Sg	17 27 19.5	+1.2
DENT	Denizli	1.50	264	ePN	Pn	17 26 57.5	-0.2
DENT	Denizli	1.50	264	ePn	Pn	17 26 57.5	-0.2
SVRH	Sivrihisar-ESK	1.60	17	ePN	Pn	17 26 58.8	-0.3
SVRH	Sivrihisar-ESK	1.60	17	ePn	Pn	17 26 58.8	-0.3
ESKT	Eskisehir	1.60	358	ePN	Pn	17 26 58.8	-0.4
ESKT	Eskisehir	1.60	358	ePn	Pn	17 26 58.8	-0.4
KULA	Kula-Manisa	1.88	289	ePN	Pn	17 27 02.3	-0.6
KULA	Kula-Manisa	1.88	289	ePn	Pn	17 27 02.3	-0.6
TVSB	Tavsanli	1.91	324	ePN	Pn	17 27 03.1	-0.3
TVSB	Tavsanli	1.91	324	ePn	Pn	17 27 03.1	-0.3
FETY	Fethiye	1.94	229	ePN	Pn	17 27 03.9	+0.1
FETY	Fethiye	1.94	229	ePn	Pn	17 27 03.9	+0.1
AKAS	Kas	1.98	212	eP	Pb	17 27 06.2	-0.4
AKAS				eS	Sg	17 27 37.9	+4.3
AKAS	Kas	1.98	212	eP	Pb	17 27 06.2	-0.4
GAZI	Gazipasa	2.01	146	eP	Pb	17 27 06.6	-0.6
GAZI				eS	Sg	17 27 34.6	-0.1
GAZI	Gazipasa	2.01	146	eP	Pb	17 27 06.6	-0.6
GAZI				eS	Sg	17 27 34.6	-0.1
ERMK	Ermenek	2.03	128	eP	Pb	17 27 07.3	-0.3
ERMK				eS	Sg	17 27 35.9	+0.5
ERMK	Ermenek	2.03	128	eP	Pb	17 27 07.3	-0.3
SULT	Sultanhani-AKS	2.07	81	ePN	Pn	17 27 05.8	+0.2
SULT	Sultanhani-AKS	2.07	81	ePn	Pn	17 27 05.8	+0.2
YER	Yerkesik	2.24	250	ePN	Pn	17 27 08.2	+0.4
YER	Yerkesik	2.24	250	ePn	Pn	17 27 08.2	+0.4
AFSR	Af¯ar-Bala (A	2.27	47	ePN	Pn	17 27 09.3	+0.9
AFSR	Af¯ar-Bala (A	2.27	47	ePn	Pn	17 27 09.3	+0.9
CAVI	Cavuskoy	2.43	340	ePN	Pn	17 27 10.9	+0.4
CAVI	Cavuskoy	2.43	340	ePn	Pn	17 27 10.9	+0.4
ANTO	Ankara	2.44	36	ePN	Pn	17 27 10.4	-0.2
ANTO	Ankara	2.44	36	ePn	Pn	17 27 10.4	-0.2
GULT	Gulveren	2.53	353	ePN	Pn	17 27 11.7	-0.3
GULT	Gulveren	2.53	353	ePn	Pn	17 27 11.7	-0.3
MDUB	Mudurnu	2.56	5	ePN	Pn	17 27 12.8	+0.4
MDUB	Mudurnu	2.56	5	ePn	Pn	17 27 12.8	+0.4
YLV	Yalova	2.91	336	ePN	Pn	17 27 17.4	+0.3
YLV	Yalova	2.91	336	ePn	Pn	17 27 17.4	+0.3
KCTX	Karacabey (Bur	3.08	320	ePN	Pn	17 27 20.0	+0.6
KCTX	Karacabey (Bur	3.08	320	ePn	Pn	17 27 20.0	+0.6
ARMT	Armutlu	3.09	330	ePN	Pn	17 27 20.2	+0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARMT	**Armutlu**	**3.09**	**330**	*e*Pn	**Pn**	**17 27 20.3**	**+0.7**
GONE	**Gonen-Balikesi**	**3.30**	**311**	*e*PN	**Pn**	**17 27 22.7**	**+0.3**
GONE	**Gonen-Balikesi**	**3.30**	**311**	*e*Pn	**Pn**	**17 27 22.7**	**+0.3**

*ATH **06** 17:34:52.9, 41.°32N×22.°67E, h3km, MD3.0/5*
*SKO **06** 17:34:53.0, 41.°29N×22.°66E, h11km, M1.7, ML2.1*
*CSEM **06** 17:34:53.2±0.2, 41.°29N×22.°67E, h2km, ML1.8, Error ellipse: s-maj=3.9km s-min=3.0km az=54.0*
*ISCJB **06** 17:34:53.2±0.5, 41.°28N±0.°03×22.°69E±0.°04, h3km±6km, Error ellipse: s-maj=5.2km s-min=3.9km az=43.4*
*THE **06** 17:34:53.6, 41.°30N×22.°69E, h2km±1km, ML1.9/6, Error ellipse: s-maj=1.7km s-min=0.4km az=338.0*
*BEO **06** 17:34:54.9±1.1, 41.°30N×22.°49E, h0km, ML1.8/4*
ISC 06 17:34:53.5±0.9**, 41.°29N**±0.°03×**22.°67E**±0.°02**, h7**km±6km**, n34, σ0.s56**/54**, 2C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.08**	**290**	P	**Pg**	**17 34 55.0**	**-0.4**
VAY				S	**Sg**	**17 34 57.0**	**+0.2**
VAY	**Valandovo**	**0.08**	**290**	*e*Pg	**Pg**	**17 34 55.2**	**-0.2**
VAY				*e*Sg	**Sg**	**17 34 57.0**	**+0.2**
VAY	**Valandovo**	**0.08**	**290**	⇑*i*Pg	**Pg**	**17 34 55.2**	**-0.2**
VAY				*i* Sg	**Sg**	**17 34 57.0**	**+0.2**
VAY				*e*Lg	Lg	17 34 57.0	
	comp=E,1μm,0.3s						
VAY				*e*Lg	Lg	17 34 57.2	
	comp=N,1μm,0.3s						
VAY	**Valandovo**	**0.08**	**290**	P	**Pg**	**17 34 55.0**	**-0.4**
VAY	**Valandovo**	**0.08**	**290**	⇑*i*Pg	**Pg**	**17 34 55.7**	**+0.3**
VAY				S	**Sg**	**17 34 57.0**	**+0.2**
VAY				*e*Lg	Lg	17 34 57.7	
	comp=N,1μm,0.3s						
KNT	**Kendrikon**	**0.22**	**127**	P	**Pg**	**17 34 57.8**	**0.0**
KNT				S	**Sg**	**17 35 00.9**	**+0.2**
KNT	**Kendrikon**	**0.22**	**127**	P	**Pg**	**17 34 57.8**	**0.0**
KNT				S	**Sg**	**17 35 00.9**	**+0.2**
GRG	**Griva**	**0.39**	**211**	P	**Pg**	**17 35 01.4**	**+0.3**
GRG				S	**Sg**	**17 35 07.1**	**+0.8**
GRG	**Griva**	**0.39**	**211**	*e*PG	**Pg**	**17 35 01.3**	**+0.2**
GRG				*e*SG	**Sg**	**17 35 07.0**	**+0.8**
GRG	**Griva**	**0.39**	**211**	P	**Pg**	**17 35 01.4**	**+0.3**
GRG				*e*Sg	**Sg**	**17 35 07.0**	**+0.8**
THE	**Thessaloniki**	**0.70**	**161**	P	**Pg**	**17 35 06.5**	**-0.4**
THE				S	**Sg**	**17 35 16.3**	**+0.4**
THE	**Thessaloniki**	**0.70**	**161**	P	**Pg**	**17 35 06.5**	**-0.4**
THE				S	**Sg**	**17 35 16.3**	**+0.4**
SOH	**Sokhos**	**0.70**	**132**	P	**Pg**	**17 35 06.4**	**-0.5**
SOH				S	**Sg**	**17 35 16.7**	**+0.7**
SOH	**Sokhos**	**0.70**	**132**	*e*PG	**Pg**	**17 35 06.2**	**-0.7**
SOH	**Sokhos**	**0.70**	**132**	P	**Pg**	**17 35 06.4**	**-0.5**
SOH				S	**Sg**	**17 35 16.7**	**+0.7**
SRS	**Serrai**	**0.72**	**104**	P	**Pg**	**17 35 07.0**	**-0.2**
SRS				S	**Sg**	**17 35 17.2**	**+0.6**
SRS	**Serrai**	**0.72**	**104**	P	**Pg**	**17 35 07.0**	**-0.2**
SRS				S	**Sg**	**17 35 17.2**	**+0.6**
HORT	**Hortiatis**	**0.77**	**155**	P	**Pg**	**17 35 08.0**	**-0.2**
HORT	**Hortiatis**	**0.77**	**155**	P	**Pg**	**17 35 08.0**	**-0.2**
NVR	**Nevrokopi**	**0.90**	**86**	P	**Pg**	**17 35 10.1**	**-0.7**
NVR				S	**Sg**	**17 35 22.9**	**+0.5**
NVR	**Nevrokopi**	**0.90**	**86**	*e*PG	**Pg**	**17 35 10.0**	**-0.7**
NVR	**Nevrokopi**	**0.90**	**86**	P	**Pg**	**17 35 10.1**	**-0.7**
NVR				S	**Sg**	**17 35 22.9**	**+0.5**
PLG	**Polygyros**	**1.09**	**147**	*e*PG	**Pg**	**17 35 13.9**	**-0.5**
PLG	**Polygyros**	**1.09**	**147**	*e*Pg	**Pg**	**17 35 13.9**	**-0.5**
FNA	**Florina**	**1.10**	**243**	*e*PB	**Pg**	**17 35 13.8**	**-0.8**
FNA	**Florina**	**1.10**	**243**	*e*Pb	**Pg**	**17 35 13.8**	**-0.8**
VTS	**Vitosha**	**1.36**	**17**	P	**Pn**	**17 35 18.7**	**-0.3**
VTS	**Vitosha**	**1.36**	**17**	*e*Sg	**Sg**	**17 35 39.4**	**+2.3**
VTS	**Vitosha**	**1.36**	**17**	P	**Pn**	**17 35 18.7**	**-0.3**
KAVA	**Kavala**	**1.42**	**101**	P	**Pn**	**17 35 19.6**	**-0.1**
KAVA	**Kavala**	**1.42**	**101**	P	**Pn**	**17 35 19.6**	**-0.1**
BARS	**Barje**	**1.65**	**338**	*e*Pg	**Pb**	**17 35 24.1**	**-0.1**
BARS				*e*Sg	**Sn**	**17 35 44.3**	**0.0**
BARS	**Barje**	**1.65**	**338**	*e*Pg	**Pb**	**17 35 24.1**	**-0.1**
BARS				*e*Sg	**Sn**	**17 35 44.3**	**0.0**
ZAPS	**Zavoj**	**1.98**	**359**	*e*Pn	**Pb**	**17 35 29.6**	**-0.2**
ZAPS				*e*Sn	**Sb**	**17 35 55.1**	**+0.4**

*ISCJB **06** 17:48:04.5±0.6, 24.°69N±0.°04×122.°11E±0.°03, h65km±6km, Error ellipse: s-maj=7.0km s-min=3.6km az=169.2*
*JMA **06** 17:48:04.3±0.2, 24.°73N×122.°13E, h71km, M2.0*
*TAP **06** 17:48:04.1, 24.°67N×122.°07E, h69km, ML3.0, C*
ISC 06 17:48:04.9±1.4**, 24.°69N**±0.°05×**122.°11E**±0.°03**, h63**km±9km**, n28, σ0.s61**/51**, 5D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	**Suao**	**0.25**	**251**	*i* P	**Pn**	**17 48 14.8**	**-0.2**
	baz=253						
TWC				S	**Sn**	**17 48 22.5**	**+0.2**
	baz=253						
TWB1	**Santiao Chiao**	**0.33**	**341**	*i* P	**Pn**	**17 48 15.6**	**0.0**
	baz=342						
TWB1				S	**Sn**	**17 48 23.3**	**-0.1**
	baz=342						
TWE	**Neicheng**	**0.40**	**274**	⇓*i*P	**Pn**	**17 48 16.3**	**+0.1**
	baz=285						
TWE				*e*S	**Sn**	**17 48 24.9**	**+0.6**
	baz=285						
ENA	**Nanau**	**0.42**	**232**	⇓*i*P	**Pn**	**17 48 16.4**	**0.0**
	baz=226						
ENA				S	**Sn**	**17 48 25.2**	**+0.5**
	baz=226						
NWF	**Wu-fen Shan**	**0.48**	**322**	*i* P	**Pn**	**17 48 17.0**	**0.0**
	baz=319						
NWF				*i* S	**Sn**	**17 48 25.9**	**+0.1**
	baz=319						
ENTT	**Nioudou**	**0.49**	**264**	⇓P	**Pn**	**17 48 17.3**	**+0.2**
	baz=268						
ENTT				*e*S	**Sn**	**17 48 26.8**	**+0.8**
	baz=268						
NSK	**Sanguang**	**0.68**	**269**	⇓*i*P	**Pn**	**17 48 19.2**	**0.0**
	baz=270						
NSK				*i* S	**Sn**	**17 48 29.6**	**-0.1**
	baz=270						
NNS	**Nan Shan**	**0.71**	**250**	⇓*i*P	**Pn**	**17 48 19.5**	**-0.2**
	baz=243						
NNS				S	**Sn**	**17 48 30.1**	**-0.4**
	baz=243						
TWY	**Chenhua**	**0.74**	**322**	*e*P	**Pn**	**17 48 19.0**	**-0.8**
	baz=325						
TWS1	**Kuangyinshan**	**0.75**	**303**	P	**Pn**	**17 48 19.8**	**-0.1**
	baz=309						
TWS1				*e*S	**Sn**	**17 48 30.8**	**-0.1**
	baz=309						
TWD	**Chiawan**	**0.77**	**217**	*e*P	**Pn**	**17 48 19.7**	**-0.4**
	baz=228						
TWD				*e*S	**Sn**	**17 48 30.3**	**-1.1**
	baz=228						
YOJ	**Yonaguni jima**	**0.85**	**105**	P	**Pn**	**17 48 21.0**	**-0.2**
YOJ				*e*S	**Sn**	**17 48 33.4**	**+0.1**
NCU	**National Centr**	**0.88**	**288**	*e*P	**Pn**	**17 48 21.2**	**-0.3**
	baz=289						
NCU				*e*S	**Sn**	**17 48 34.5**	**+0.7**
	baz=289						
WHF	**Hehuan Shan**	**0.94**	**235**	*e*P	**Pn**	**17 48 22.0**	**-0.8**
	baz=234						
WHF				*e*S	**Sn**	**17 48 35.1**	**-0.8**
	baz=234						
TWT	**Tachien**	**0.95**	**243**	*e*P	**Pn**	**17 48 22.9**	**+0.2**
	baz=234						
TWT				S	**Sn**	**17 48 35.7**	**-0.1**
	baz=234						
NSTT	**Nanjuang**	**1.01**	**267**	P	**Pn**	**17 48 22.9**	**-0.3**
	baz=266						
NSTT				*e*S	**Sn**	**17 48 36.5**	**-0.3**
	baz=266						
ESL	**Shilin**	**1.07**	**215**	*e*P	**Pn**	**17 48 22.4**	**-1.6**
	baz=222						
TWQ1	**Liyutan**	**1.26**	**255**	*e*P	**Pn**	**17 48 25.6**	**-1.0**
	baz=253						
TWQ1				*e*S	**Sn**	**17 48 42.2**	**-0.5**
	baz=253						
SMLT	**Sun Moon Lake**	**1.36**	**234**	*e*P	**Pn**	**17 48 28.4**	**+0.4**
	baz=233						
SMLT				*e*S	**Sn**	**17 48 46.5**	**+1.3**
	baz=233						
TYC	**Yuchr**	**1.39**	**236**	*e*P	**Pn**	**17 48 28.5**	**+0.3**
	baz=234						
TYC				*e*S	**Sn**	**17 48 45.8**	**+0.2**
	baz=234						
IRIF	**Iriomote-Funau**	**1.52**	**103**	P	**Pn**	**17 48 29.6**	**-0.4**
IRIF				*e*S	**Sn**	**17 48 48.6**	**-0.2**
TWF1	**Yuli**	**1.53**	**209**	*e*P	**Pn**	**17 48 29.4**	**-0.7**
	baz=215						
YUS	**Yu-Shan**	**1.60**	**222**	*e*P	**Pn**	**17 48 32.6**	**+1.1**
	baz=215						
ALS	**Alishan**	**1.67**	**226**	*e*P	**Pn**	**17 48 33.0**	**+0.6**
	baz=236						
ALS				*e*S	**Sn**	**17 48 53.7**	**+0.7**
	baz=236						
CHN5	**Tsauling**	**1.70**	**230**	*e*P	**Pn**	**17 48 32.8**	**+0.3**
	baz=239						
CHN5				*e*S	**Sn**	**17 48 54.0**	**+0.7**
	baz=239						
JKRS	**Kuro-shima**	**1.79**	**104**	P	**Pn**	**17 48 33.7**	**+0.1**
JKRS				*e*S	**Sn**	**17 48 55.7**	**+0.3**
JIJ	**Ishigaki jima**	**1.88**	**100**	P	**Pn**	**17 48 34.5**	**-0.4**
JIJ				*e*S	**Sn**	**17 48 57.0**	**-0.6**
JTJ	**Tarama**	**2.36**	**91**	*e*S	**Sn**	**17 49 10.7**	**+1.5**

*ISCJB **06** 17:49:34.2±0.4, 23.°97N±0.°03×121.°89E±0.°03, h40km±9km, Error ellipse: s-maj=5.0km s-min=3.6km az=147.5*
*JMA **06** 17:49:34.5±0.4, 24.°13N×121.°92E, h80km, M1.8*
*TAP **06** 17:49:34.0, 23.°99N×121.°84E, h45km, ML2.7, C*
ISC 06 17:49:34.5±1.1**, 23.°97N**±0.°03×**121.°87E**±0.°03**, h33**km±3km**, n29, σ0.s69**/49**, 1C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.24**	**272**	*e*P	**Pn**	**17 49 41.9**	**+0.5**
	baz=267						
HWA				*e*S	**Sb**	**17 49 47.6**	**+1.3**
	baz=267						
TWD	**Chiawan**	**0.27**	**294**	P	**Pn**	**17 49 42.2**	**+0.2**
	baz=289						
TWD				*e*S	**Sb**	**17 49 48.2**	**+1.3**
	baz=289						
ESL	**Shilin**	**0.43**	**249**	P	**Pb**	**17 49 43.9**	**-0.2**
	baz=255						
ESL				*e*S	**Sn**	**17 49 51.4**	**+0.4**
	baz=255						
ENA	**Nanau**	**0.47**	**346**	P	**Pb**	**17 49 44.4**	**-0.3**
	baz=343						
ENA				*e*S	**Sb**	**17 49 52.2**	**+0.5**
	baz=343						
WHF	**Hehuan Shan**	**0.58**	**288**	⇑P	**Pn**	**17 49 45.9**	**-0.8**
	baz=280						
WHF				*e*S	**Sn**	**17 49 54.8**	**-0.6**
	baz=280						
TWC	**Suao**	**0.64**	**359**	⇓P	**Pn**	**17 49 47.0**	**-0.2**
	baz=9.0						
TWC				S	**Sb**	**17 49 56.6**	**+0.5**
	baz=9.0						
NNS	**Nan Shan**	**0.65**	**316**	*e*P	**Pn**	**17 49 46.9**	**-0.6**
	baz=317						
NNS				*e*S	**Sn**	**17 49 56.0**	**-0.7**
	baz=317						
EHY	**Hungye**	**0.68**	**227**	*e*P	**Pn**	**17 49 46.7**	**-1.1**
	baz=224						
EHY				*e*S	**Sn**	**17 49 56.7**	**-0.5**
	baz=224						
TWT	**Tachien**	**0.69**	**294**	*e*P	**Pn**	**17 49 47.9**	**-0.2**
	baz=289						
TWT				*e*S	**Sn**	**17 49 57.4**	**-0.4**
	baz=289						
ENTT	**Nioudou**	**0.72**	**338**	P	**Pn**	**17 49 47.9**	**-0.5**
	baz=334						
ENTT				*e*S	**Sn**	**17 49 58.0**	**-0.3**
	baz=334						
TWE	**Neicheng**	**0.77**	**346**	*e*P	**Pn**	**17 49 48.8**	**-0.3**
	baz=349						
TWE				*e*S	**Sn**	**17 49 59.4**	**-0.1**
	baz=349						
TWF1	**Yuli**	**0.81**	**220**	*e*P	**Pn**	**17 49 48.5**	**-1.1**
	baz=228						
NSK	**Sanguang**	**0.84**	**327**	P	**Pn**	**17 49 49.7**	**-0.4**
	baz=328						
NSK				*e*S	**Sn**	**17 50 00.2**	**-1.2**
	baz=328						
SMLT	**Sun Moon Lake**	**0.89**	**265**	*e*P	**Pn**	**17 49 50.5**	**-0.3**
	baz=257						
TYC	**Yuchr**	**0.93**	**266**	*e*P	**Pn**	**17 49 50.9**	**-0.3**
	baz=265						
TYC				*e*S	**Sb**	**17 50 05.4**	**+1.3**
	baz=265						
YUS	**Yu-Shan**	**0.96**	**240**	*e*P	**Pn**	**17 49 52.0**	**-0.1**
	baz=239						
CHKT	**Chengkung**	**0.98**	**208**	*e*P	**Pn**	**17 49 52.3**	**+0.4**
	baz=196						
CHKT				*e*S	**Sn**	**17 50 03.3**	**-1.4**
	baz=196						
NSTT	**Nanjuang**	**1.03**	**310**	*e*P	**Pn**	**17 49 52.8**	**+0.2**
	baz=316						
ALS	**Alishan**	**1.07**	**245**	*e*P	**Pn**	**17 49 53.7**	**+0.1**
	baz=235						
ELDTW	**Lidau**	**1.10**	**225**	*e*P	**Pn**	**17 49 53.5**	**-0.3**
	baz=218						
CHN5	**Tsauling**	**1.15**	**251**	*e*P	**Pn**	**17 49 54.4**	**0.0**
	baz=250						
YOJ	**Yonaguni jima**	**1.15**	**65**	P	**Pn**	**17 49 54.4**	**+0.1**
YOJ				*e*S	**Sn**	**17 50 09.3**	**+0.3**
CHN4	**Tsaushan**	**1.32**	**242**	*e*P	**Pn**	**17 49 57.9**	**+1.2**
	baz=231						
CHN4				*e*S	**Sb**	**17 50 15.1**	**-0.3**
	baz=231						
WTP	**Ta-pu**	**1.36**	**238**	*e*P	**Pn**	**17 49 57.9**	**+0.7**
	baz=237						
IRIF	**Iriomote-Funau**	**1.74**	**78**	P	**Pn**	**17 50 02.2**	**-0.2**
IRIF				*e*S	**Sn**	**17 50 22.7**	**-0.8**
HATJ	**Hateruma jima**	**1.77**	**87**	P	**Pn**	**17 50 03.1**	**+0.2**
JKRS	**Kuro-shima**	**1.98**	**82**	P	**Pn**	**17 50 06.2**	**+0.5**
JKRS				*e*S	**Sn**	**17 50 30.3**	**+1.0**
JIJ	**Ishigaki jima**	**2.12**	**79**	P	**Pn**	**17 50 07.2**	**-0.4**
JIJ				S	**Sn**	**17 50 31.6**	**-1.1**
JTJ	**Tarama**	**2.67**	**75**	P	**Pn**	**17 50 15.4**	**+0.2**
JTJ				*e*S	**Sn**	**17 50 46.1**	**-0.4**

*IDC **06** 18:07:37.1±1.4, 4.°61S×102.°57E, h0km, mb4.0/11, mb1 4.0/11, mb1mx3.9/25, mbtmp4.0/11, MS3.6/1, Ms1 3.6/1, ms1mx2.2/36, Error ellipse: s-maj=64.5km s-min=14.4km az=52.0*
*NEIC **06** 18:07:42.6±0.7, 4.°44S×102.°78E, h35km, mb4.3/6, Error ellipse: s-maj=29.2km s-min=7.6km az=49.0*
*ISCJB **06** 18:07:43.7±0.9, 4.°5S±0.°2×102.°8E±0.°2, h64km, mb4.1/17, Error ellipse: s-maj=36.6km s-min=9.8km az=139.2*
ISC 06 18:07:46.4±1.0**, 4.°4S**±0.°2×**102.°9E**±0.°2**, h64**km**, n37, σ1.s06**/34**, mb4.2**/17**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**23.02**	**350**	P	**P**	**18 12 45.8**	**-0.5**
CMAR	**Chiang Mai Arr**	**23.02**	**350**	P	**P**	**18 12 45.8**	**-0.5**
	1.8nm,1.1s,baz=180,slow=9.0,SNR=4.5						
KNRA	**Kununurra**	**27.80**	**116**	P	S	18 17 25.7	-43
	baz=9.8,SNR=4.9						
MTN	**Manton Dam**	**29.14**	**109**	P	**PcP**	**18 16 49.3**	**+1.0**
	baz=7.0,SNR=14						
MTN				S	S	18 18 01.8	-28
	baz=7.0,SNR=6.8						
FAKI	**Fak Fak**	**29.34**	**88**	S	**PcP**	**18 16 52.2**	**+3.4**
	baz=3.9,SNR=4.1						
KDU	**Kakadu**	**30.37**	**108**	P	**PcP**	**18 16 50.1**	**-1.3**
	baz=7.2,SNR=30						
KDU				S	S	18 18 03.3	-46
	baz=7.2,SNR=5.5						
WRA	**Warramunga Arr**	**34.31**	**119**	P	**P**	**18 14 26.6**	**-0.5**
WRA	**Warramunga Arr**	**34.31**	**119**	P	**P**	**18 14 26.6**	**-0.5**
	0.4nm,0.5s,baz=293,slow=10,SNR=18						
WRAB	**Tennant Creek**	**34.32**	**119**	*e*P	**P**	**18 14 26.6**	**-0.7**
	2.8nm,0.8s						
ASAR	**Alice Springs**	**35.53**	**126**	P	**P**	**18 14 37.5**	**-0.1**
ASAR	**Alice Springs**	**35.53**	**126**	P	**P**	**18 14 37.5**	**-0.1**
	0.3nm,0.3s,baz=298,slow=7.6,SNR=31						
CTA	**Charters Tower**	**44.99**	**114**	P	**P**	**18 15 56.2**	**+0.3**
CTA	**Charters Tower**	**44.99**	**114**	P	**P**	**18 15 56.2**	**+0.3**
	1.2nm,0.7s,baz=309,slow=9.7,SNR=4.1						
CTAO	**Charters Tower**	**44.99**	**114**	P	**P**	**18 15 55.8**	**-0.1**
	3.2nm,0.9s						
GUMO	**Guam**	**45.33**	**66**	P	**P**	**18 15 57.3**	**-1.3**
	27nm,0.8s						
STKA	**Stephens Creek**	**45.43**	**132**	P	**P**	**18 15 59.0**	**-0.2**
STKA	**Stephens Creek**	**45.43**	**132**	P	**P**	**18 15 59.0**	**-0.2**
	2.2nm,0.6s,baz=305,slow=9.8,SNR=8.0						
SONM	**Songino Array**	**52.08**	**3**	P	**P**	**18 16 51.5**	**+1.5**
SONM	**Songino Array**	**52.08**	**3**	P	**P**	**18 16 51.5**	**+1.5**
	2.4nm,0.6s,baz=179,slow=9.1,SNR=17						
SONM				LR	LR	18 42 34.8	
	comp=Z,50nm,18.4s,baz=71,slow=40						
TKM2	**Tokmak 2**	**53.17**	**335**	*e*P	**P**	**18 16 58.3**	**+0.1**
	2.2nm,0.5s						
MK31	**Makanchi Array**	**54.11**	**343**	*e*P	**P**	**18 17 04.2**	**-0.6**
MKAR	**Makanchi Array**	**54.11**	**343**	P	**P**	**18 17 05.1**	**+0.2**
MKAR	**Makanchi Array**	**54.11**	**343**	P	**P**	**18 17 05.1**	**+0.2**
	1.4nm,0.4s,baz=153,slow=8.9,SNR=30						
TLY	**Talaya**	**55.84**	**1**	*e*P	**P**	**18 17 19.4**	**+2.2**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**58.66**	**342**	P	**P**	**18 17 36.9**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=160,slow=6.7,SNR=12						
KURK	**Kurchatov**	**58.71**	**342**	P	**P**	**18 17 36.9**	**-0.5**
ZAA0	**Zalesovo Array**	**60.05**	**348**	*e*P	**P**	**18 17 45.6**	**-1.0**
ZALV	**Zalesovo Beam**	**60.05**	**348**	P	**P**	**18 17 46.4**	**-0.2**
ZALV	**Zalesovo Beam**	**60.05**	**348**	P	**P**	**18 17 46.4**	**-0.2**
	comp=Z,2.6nm,0.5s,baz=163,slow=5.9,SNR=18						
BVAR	**Borovoye Array**	**63.41**	**339**	P	**P**	**18 18 08.5**	**-0.8**
BVAR	**Borovoye Array**	**63.41**	**339**	P	**P**	**18 18 08.5**	**-0.8**
	comp=Z,1.0nm,0.4s,baz=132,slow=8.4,SNR=8.5						
BRVK	**Borovoye**	**63.48**	**339**	P	**P**	**18 18 07.8**	**-1.9**
	comp=Z,1.1nm,0.4s						
ABKAR	**Akbulak array**	**65.11**	**331**	P	**P**	**18 18 19.4**	**-1.0**
	comp=Z,1.0nm,0.5s						
BRTR	**Keskin Array B**	**77.04**	**312**	P	**P**	**18 19 32.5**	**-0.6**
BRTR	**Keskin Array B**	**77.04**	**312**	P	**P**	**18 19 32.5**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=138,slow=7.2,SNR=4.7						
TXAR	**Lajitas Array**	**144.66**	**42**	PKPbc	PKPbc	18 27 15.4	-0.3
TXAR	**Lajitas Array**	**144.66**	**42**	PKPbc	PKPbc	18 27 15.4	-0.3
	comp=Z,0.7nm,0.6s,baz=346,slow=1.9,SNR=8.1						

*BJI **06** 18:07:46.1, 54.°14N×162.°76W, h11km, mB4.7/2, mb4.4/4, Ms4.5/2, Ms7 4.1/2*
*IDC **06** 18:07:47.6±0.9, 54.°23N×162.°71W, h0km, mb4.2/22, mb1 4.3/25, mb1mx4.2/34, mbtmp4.2/25, ML3.9/3, MS3.4/5, Ms1 3.5/5, ms1mx3.0/38, Error ellipse: s-maj=25.3km s-min=12.7km az=173.0*
*MOS **06** 18:07:48.5±1.0, 54.°37N×162.°63W, h15km, mb4.5/34, Error ellipse: s-maj=14.1km s-min=6.7km az=84.6*
*NEIC **06** 18:07:52.6, 54.°22N×162.°64W, h14km, mb4.2/9, ML4.0(AEIC), After AEIC.*
ISC 06 18:07:51.2±0.6**, 54.°14N**±0.°05×**162.°57W**±0.°03**, h30**km±3km**, h29**km**:pP-P, n166, σ1.s37**/184**, mb4.2**/43**, MS3.5**/6**, 5C-2D, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRIA	**Deer Island**	**0.85**	**12**	P	**Pn**	**18 08 07.3**	**+0.2**
BRPK	**Brown Peak**	**0.85**	**307**	P	**Pn**	**18 08 07.9**	**+0.7**
BRPK				S	**Sb**	**18 08 17.3**	**-1.2**
FALS	**False Pass**	**0.87**	**326**	P	**Pn**	**18 08 08.4**	**+1.0**
FALS				S	**Sn**	**18 08 20.9**	**+1.8**
DT1	**Dutton Round H**	**0.98**	**10**	P	**Pn**	**18 08 09.4**	**+0.4**
SSLS	**Shishaldin Sou**	**1.01**	**305**	P	**Pn**	**18 08 11.1**	**+1.6**
SSLS				S	**Sn**	**18 08 26.2**	**+3.5**
DTNA	**Dutton South F**	**1.03**	**10**	P	**Pn**	**18 08 10.3**	**+0.7**
DOL	**Dolgoi Island**	**1.09**	**22**	P	**Pb**	**18 08 10.9**	**-0.6**
SSLW	**Shishaldin Wes**	**1.10**	**306**	P	**Pb**	**18 08 12.3**	**+0.6**
SSBA	**Shishaldin**	**1.11**	**306**	P	**Pb**	**18 08 12.1**	**+0.4**
SSBA				S	**Sn**	**18 08 28.9**	**+3.9**
PS4A	**Pavlof South-4**	**1.28**	**19**	P	**Pb**	**18 08 14.5**	**-0.2**
PVV	**Pavlof Volcano**	**1.32**	**20**	P	**Pb**	**18 08 15.0**	**-0.2**
PVV				S	**Sb**	**18 08 33.9**	**+2.1**
SDPT	**Sand Point**	**1.72**	**44**	P	**Pb**	**18 08 20.8**	**-1.2**
SDPT				S	**Sb**	**18 08 42.3**	**-0.9**
AKUT	**Akutan**	**1.88**	**271**	P	**Pb**	**18 08 22.8**	**-2.1**
AKUT				S	**Sb**	**18 08 47.1**	**-0.8**
AKLV	**Akutan Long Va**	**1.99**	**272**	P	**Pb**	**18 08 24.8**	**-1.9**
AKGG	**Akutan Green G**	**2.01**	**273**	P	**Pb**	**18 08 25.0**	**-2.0**
AKRB	**Akutan Reef Bi**	**2.06**	**271**	P	**Pb**	**18 08 26.6**	**-1.3**
UNV	**Unalaska Valle**	**2.34**	**264**	P	**Pn**	**18 08 29.5**	**+1.9**
UNV				S	**Sb**	**18 08 58.7**	**-2.3**
MTBL	**Makushin Table**	**2.43**	**268**	P	**Pn**	**18 08 30.6**	**+1.7**
MREP	**Makushin Rep't**	**2.49**	**264**	P	**Pn**	**18 08 32.1**	**+2.4**
MCIR	**Makushin Cirqu**	**2.56**	**268**	P	**Pn**	**18 08 32.8**	**+2.2**
VNWF	**Veniaminof 8**	**2.66**	**39**	P	**Pb**	**18 08 35.6**	**-2.5**
VNFG	**Veniaminof 2**	**2.76**	**38**	P	Pb	18 08 35.6	-4.2
VNHG	**Veniaminof 1**	**2.86**	**42**	P	Pb	18 08 38.1	-3.4
CHGN	**Chignik**	**3.22**	**46**	*e*Pn	**Pn**	**18 08 41.3**	**+1.6**
CHGN				*e*Sn	**Sn**	**18 09 18.9**	**+2.0**
OKFG	**Magazine Ridge**	**3.25**	**259**	P	**Pn**	**18 08 43.1**	**+3.0**
OKCE	**Okmok Cone E**	**3.39**	**260**	P	**Pn**	**18 08 44.7**	**+2.6**
OKSP	**Okmok Steeple**	**3.51**	**258**	P	**Pn**	**18 08 46.4**	**+2.6**
ANPK	**Aniakchak Peak**	**3.71**	**41**	P	**Pn**	**18 08 48.8**	**+2.3**
ANNW	**Aniakchak Nort**	**3.76**	**39**	P	Pn	18 08 49.8	+2.6
KDAK	**Kodiak Island**	**6.69**	**53**	*e*Pn	**Pn**	**18 09 26.8**	**-0.5**
KDAK				*e*Sn	Sb	18 10 57.2	-8.7
KDAK	**Kodiak Island**	**6.69**	**53**	Pn	**Pn**	**18 09 26.4**	**-0.9**
	1.7nm,0.3s,baz=299,slow=15,SNR=18						
KDAK				Sn	**Sn**	**18 10 39.3**	**-3.1**
	2.2nm,0.3s,baz=1.6,slow=19,SNR=4.0						
RSO	**Redoubt South**	**8.27**	**36**	*e*P	**Pn**	**18 09 50.1**	**+1.0**
SEW	**Seward**	**9.30**	**45**	*e*Pn	**Pn**	**18 10 03.5**	**+0.5**
SEW				*e*Sn	Sn	18 11 40.2	-6.2
RC01	**Rabbit Creek A**	**9.78**	**39**	*e*Pn	**Pn**	**18 10 11.1**	**+1.4**
PMR	**Palmer**	**10.33**	**38**	*e*P	**Pn**	**18 10 17.8**	**+0.7**
PMR	**Palmer**	**10.33**	**38**	*e*Pn	**Pn**	**18 10 17.8**	**+0.7**
SML	**Sawmill**	**10.76**	**39**	*e*P	**Pn**	**18 10 21.6**	**-1.5**
SML	**Sawmill**	**10.76**	**39**	*e*Pn	**Pn**	**18 10 21.6**	**-1.5**
AMKA	**Amchitka**	**11.32**	**263**	*e*Pn	**Pn**	**18 10 31.3**	**+0.5**
DIV	**Divide**	**11.38**	**45**	*e*Pn	**Pn**	**18 10 30.0**	**-1.6**
TNA	**Tin City**	**11.76**	**349**	*e*Pn	**Pn**	**18 10 38.6**	**+1.9**
MCK	**McKinley**	**11.89**	**31**	P	**Pn**	**18 10 38.9**	**+0.4**
MCK	**McKinley**	**11.89**	**31**	Pn	**Pn**	**18 10 38.9**	**+0.4**
PAX	**Paxson**	**12.53**	**38**	*e*P	**Pn**	**18 10 46.1**	**-1.2**
PAX	**Paxson**	**12.53**	**38**	*e*Pn	**Pn**	**18 10 46.1**	**-1.2**
COLA	**College**	**13.06**	**29**	*e*P	**Pn**	**18 10 54.5**	**+0.1**
COLA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MENT	**Mentasta**	**13.16**	**40**	*e*Pn	**Pn**	**18 10 56.5**	**+0.6**
ILAR	**Eielson Array**	**13.26**	**30**	Pn	**Pn**	**18 10 55.0**	**-2.2**
ILAR	**Eielson Array**	**13.26**	**30**	Pn	**Pn**	**18 10 55.0**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=224,slow=13,SNR=7.1						
ILAR				LR	LR	18 16 29.4	
	comp=Z,164nm,19.4s,baz=174,slow=40						
DOT	**Dot Lake**	**13.45**	**38**	*e*Pn	Pn	18 10 53.6	-6.2
PNL	**Peninsula**	**13.78**	**57**	*e*Pn	**Pn**	**18 11 04.2**	**-0.1**
COLD	**Coldfoot**	**14.41**	**20**	*e*Pn	**Pn**	**18 11 14.4**	**+1.6**
	comp=Z,19nm,0.9s						
SKAG	**Skagway**	**15.77**	**59**	Pn	**Pn**	**18 11 30.0**	**-0.9**
INK	**Inuvik**	**19.64**	**32**	P	**P**	**18 12 16.6**	**-0.4**
INK	**Inuvik**	**19.64**	**32**	P	**P**	**18 12 16.6**	**-0.4**
	comp=Z,0.4nm,0.3s,baz=246,slow=11,SNR=9.1						
INK				LR	LR	18 20 42.0	
	comp=Z,142nm,19.3s,baz=258,slow=40						
BILL	**Bilibino**	**20.18**	**326**	⇓*e*P	**P**	**18 12 23.2**	**+0.2**
BILL				*e*S	**S**	**18 16 05.7**	**-2.0**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.9s						
PEA0B	**Petropavlovsk-**	**23.38**	**284**	*e*P	**P**	**18 12 57.2**	**+0.2**
PETK	**Petropavlovsk-**	**23.38**	**284**	P	**P**	**18 12 57.2**	**+0.1**
PETK				pmax	pmax		
	comp=Z,11nm,0.5s						
PETK	**Petropavlovsk-**	**23.38**	**284**	P	**P**	**18 12 57.2**	**+0.1**
PETK	**Petropavlovsk-**	**23.38**	**284**	P	**P**	**18 12 57.2**	**+0.1**
	comp=Z,11nm,0.5s,baz=88,slow=11,SNR=64						
YKW3	**Yellowknife Ar**	**25.96**	**52**	*e*P	**P**	**18 13 21.8**	**+1.2**
YKA	**Yellowknife Ar**	**25.97**	**52**	P	**P**	**18 13 21.5**	**+0.8**
YKA	**Yellowknife Ar**	**25.97**	**52**	P	**P**	**18 13 21.5**	**+0.8**
	comp=Z,2.1nm,0.5s,baz=271,slow=9.1,SNR=29						
YBH	**Yreka Blue Hor**	**29.04**	**99**	LR	LR	18 22 35.5	
	comp=Z,95nm,21.7s,baz=118,slow=30						
TIXI	**Tiksi**	**33.38**	**328**	*ce*P	**P**	**18 14 26.0**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.7s						
NVAR	**Mina Array Bea**	**33.76**	**99**	P	**P**	**18 14 32.1**	**+1.9**
NVAR	**Mina Array Bea**	**33.76**	**99**	P	**P**	**18 14 32.1**	**+1.9**
	comp=Z,0.8nm,0.8s,baz=315,slow=9.5,SNR=5.9						
HABR	**Khabarovsk**	**38.27**	**288**	*e*P	**P**	**18 15 07.6**	**-0.9**
HABR				*e**PP	**pP**	**18 15 17.7**	**+0.5**
HABR				*e*		18 16 35.6	
HABR				*e*S	**S**	**18 20 59.3**	**-1.0**
HABR				*e*		18 21 11.2	
HABR				*e*SS	**SnSn**	**18 23 45.9**	**0.0**
HABR				*e*		18 25 16.2	
HABR				pmax	pmax		

	comp=N,34nm,2.6s						
HABR				pmax	pmax		
	comp=Z,40nm,2.6s						
HABR				pmax	pmax		
	comp=E,28nm,1.6s						
HABR				MLR	MLR		
	comp=Z,55nm,20.0s						
ULM	Lac du Bonnet	39.70	67	P	P	18 15 21.4	+1.0
ULM	Lac du Bonnet	39.70	67	P	P	18 15 21.4	+1.0
	comp=Z,6.4nm,0.7s,baz=305,slow=9.2,SNR=6.3						
AGMN	Agassiz Nation	40.78	70	eP	P	18 15 29.5	+0.1
	comp=Z,1.5nm,0.5s						
USRK	Ussuriysk Arra	42.46	284	P	P	18 15 43.2	+0.1
	comp=Z,1.0nm,0.6s,baz=106,slow=28,SNR=3.4						
EYMN	Ely	43.38	68	eP	P	18 15 50.5	0.0
	comp=Z,2.8nm,0.7s						
MAJO	Matsushiro	43.79	271	eP	P	18 15 53.5	-0.6
MAJO	Matsushiro	43.79	271	eP	P	18 15 53.5	-0.6
CN2	Changchun	46.41	288	eP	P	18 16 15.6	+0.9
TXAR	Lajitas Array	48.74	96	P	P	18 16 34.4	+1.2
TXAR	Lajitas Array	48.74	96	P	P	18 16 34.4	+1.2
	comp=Z,0.7nm,0.8s,baz=321,slow=6.9,SNR=7.6						
KSRS	Korea Array	49.19	280	P	P	18 16 37.3	+1.0
	comp=Z,3.7nm,0.7s,baz=50,slow=7.0,SNR=16						
KSAR	Wonju Array Be	49.22	280	P	P	18 16 37.3	+0.8
ULN	Ulaanbaatar	53.47	303	eP	P	18 17 08.0	-0.6
	comp=Z,1.7nm,0.8s						
SONM	Songino Array	53.82	303	P	P	18 17 11.4	+0.4
SONM				PcP	PcP	18 18 17.2	+0.8
SONM	Songino Array	53.82	303	P	P	18 17 11.4	+0.4
	comp=Z,1.2nm,0.9s,baz=49,slow=6.6,SNR=5.2						
SONM				PcP	PcP	18 18 17.2	+0.8
	comp=Z,1.2nm,0.7s,baz=34,slow=3.4,SNR=5.2						
HHC	Hu-ho-hao-te	56.01	294	eP	P	18 17 25.3	-1.6
HHC				pP	pP	18 17 35.3	-0.7
HHC				sP	sP	18 17 39.6	+0.1
HHC				PP	PP	18 19 31.6	0.0
HHC				S	S	18 25 09.2	-4.0
HHC				sS	sS	18 25 24.6	-3.5
HHC				SS	SS	18 28 54.1	-4.7
HHC				pmax	pmax		
	comp=Z,160nm,6.8s						
HHC				LR	LR		
	comp=N,170nm,15.3s						
HHC				LR	LR		
	comp=E,190nm,15.4s						
HHC				LR	LR		
	comp=Z,160nm,16.6s						
KEV	Kevo	56.22	356	ep	P	18 17 26.8	-1.0
	comp=Z,0.5nm,0.3s						
KEV	Kevo	56.22	356	eP	P	18 17 26.8	-1.0
KEV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ARCES	ARCESS Array B	56.49	357	P	P	18 17 29.1	-0.7
ARCES	ARCESS Array B	56.49	357	P	P	18 17 29.1	-0.7
	comp=Z,2.2nm,1.0s,baz=13,slow=8.3,SNR=7.7						
ARCES				LR	LR	18 40 38.1	
	comp=Z,23nm,19.0s,baz=27,slow=35						
ZALV	Zalesovo Beam	58.77	320	LR	LR	18 44 12.3	
	comp=Z,41nm,20.2s,baz=254,slow=37						
JOF	Joensuu	62.78	353	ep	P	18 18 11.6	-1.5
	comp=Z,2.3nm,0.5s						
JOF	Joensuu	62.78	353	eP	P	18 18 11.6	-1.5
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
LZH	Lanzhou	63.62	296	eP	P	18 18 20.1	+0.8
LZH				pP	pP	18 18 31.2	+2.7
LZH				ePP	PP	18 20 41.5	+2.5
LZH				pmax	pmax		
	comp=Z,16nm,1.4s						
LZH				pmax	pmax		
	comp=Z,43nm,7.9s						
LZH				LR	LR		
	comp=N,110nm,17.2s						
LZH				LR	LR		
	comp=E,100nm,17.5s						
LZH				LR	LR		
	comp=Z,140nm,19.8s						
KURK	Kurchatov	63.65	322	P	P	18 18 19.9	+0.8
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	63.65	322	P	P	18 18 19.9	+0.8
KURBB	Kurchatov Arra	63.76	322	P	P	18 18 19.9	+0.1
	comp=Z,1.8nm,0.8s,baz=32,slow=7.6,SNR=15						
KAF	Kangasniemi	63.88	355	ep	P	18 18 19.5	-0.9
	comp=Z,3.9nm,0.6s						
KAF	Kangasniemi	63.88	355	eP	P	18 18 19.5	-0.9
KAF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BVAR	Borovoye Array	64.51	328	P	P	18 18 25.0	+0.3
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BVAR	Borovoye Array	64.51	328	P	P	18 18 25.0	+0.3
BVAR	Borovoye Array	64.51	328	P	P	18 18 25.0	+0.3
	comp=Z,4.1nm,0.6s,baz=37,slow=6.9,SNR=29						
BRVK	Borovoye	64.52	328c	eP	P	18 18 25.3	+0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BRVK	Borovoye	64.52	328	eP	P	18 18 25.2	+0.5
	comp=Z,1.7nm,0.6s						
FINES	FINESS Array B	64.56	355	P	P	18 18 24.3	-0.5
FINES	FINESS Array B	64.56	355	P	P	18 18 24.3	-0.5
	comp=Z,1.9nm,0.5s,baz=24,slow=7.9,SNR=11						
ARU	Arti	64.78	336c	iP	P	18 18 26.1	-0.3
ARU						18 20 47.0	
ARU				S	S	18 27 05.0	+0.3
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NB2	NORSAR Subarra	65.06	3	P	P	18 18 28.1	-0.1
	comp=Z,1.5nm,0.9s,baz=358,slow=6.9						
NOA	NORSAR Array B	65.06	3	P	P	18 18 28.3	+0.1
NOA	NORSAR Array B	65.06	3	P	P	18 18 28.3	+0.1
	comp=Z,1.6nm,0.8s,baz=357,slow=6.6,SNR=6.0						
MK31	Makanchi Array	65.43	317	eP	P	18 18 29.2	-1.7
MK31	Makanchi Array	65.43	317	eP	P	18 18 29.2	-1.7
MKAR	Makanchi Array	65.43	317c	eP	P	18 18 31.1	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	65.43	317	P	P	18 18 30.6	-0.3
MKAR	Makanchi Array	65.43	317	P	P	18 18 30.6	-0.3
	comp=Z,1.2nm,0.6s,baz=41,slow=6.9,SNR=14						
WMQ	Urumqi	65.54	312	eP	P	18 18 34.0	+2.4
CD2	Chengdu	67.61	292	eP	P	18 18 44.5	-0.5
GYA	Guiyang	69.43	287	eP	P	18 18 57.0	+0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AKTO	Aktyubinsk	70.37	334	P	P	18 19 01.9	+0.1
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKTO	Aktyubinsk	70.37	334	P	P	18 19 01.9	+0.1
AKTO	Aktyubinsk	70.37	334	P	P	18 19 01.9	+0.1
	comp=Z,3.2nm,0.7s,baz=27,slow=7.9,SNR=17						
ABKAR	Akbulak array	70.93	332	eP	P	18 19 05.5	+0.3
	comp=Z,5.5nm,0.8s						
AAK	Ala-Archa	71.97	319	P	P	18 19 12.8	+1.0
AAK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AAK	Ala-Archa	71.97	319	P	P	18 19 12.8	+1.0
AAK	Ala-Archa	71.97	319	P	P	18 19 12.8	+1.0
	comp=Z,1.3nm,0.5s,baz=322,slow=11,SNR=3.8						
EKS2	Erkin-Say	72.22	320	eP	P	18 19 14.4	+1.1
EKS2				pmax	pmax		
	comp=Z,1.0nm,0.4s						
EKS2	Erkin-Say	72.22	320	eP	P	18 19 14.4	+1.1
	comp=Z,0.7nm,0.4s						
KKAR	Karatay Array	73.04	322	eP	P	18 19 17.9	-0.1
KKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KKAR	Karatay Array	73.04	322	eP	P	18 19 17.9	-0.1
	comp=Z,2.0nm,0.9s						
AKASG	Malin Array Be	75.06	352c	eP	P	18 19 29.3	-0.3
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKASG	Malin Array Be	75.06	352	P	P	18 19 29.1	-0.5
AKASG	Malin Array Be	75.06	352	P	P	18 19 29.1	-0.5
	comp=Z,2.7nm,0.4s,baz=10.0,slow=5.8,SNR=18						
KIEV	Kiev	75.07	352	eP	P	18 19 29.0	-0.7
KIEV				pmax	pmax		
	comp=Z,12nm,1.2s						
KIEV	Kiev	75.07	352	eP	P	18 19 29.0	-0.7
	comp=Z,12nm,1.2s						
AK01	Malin Array Si	75.07	352	eP	P	18 19 28.7	-1.0
KHC	Kasperske Hory	77.05	3	eP	P	18 19 42.2	+1.1
KHC	Kasperske Hory	77.05	3	eP	P	18 19 42.2	+1.1
KOLS	Kolonicke sedl	77.22	357	eP	P	18 19 42.9	+0.9
KOLS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KOLS	Kolonicke sedl	77.22	357	eP	P	18 19 42.9	+0.9
CRVS	Cervenica-Dubn	77.28	357	eP	P	18 19 45.9	+3.6
CRVS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CRVS	Cervenica-Dubn	77.28	357	eP	P	18 19 45.9	+3.6
GERES	GERESS Array B	77.34	3	P	P	18 19 43.4	+0.6
GERES	GERESS Array B	77.34	3	P	P	18 19 43.4	+0.6
	comp=Z,1.4nm,0.6s,baz=1.1,slow=5.1,SNR=14						
KECS	Kecovo	77.72	358	eP	P	18 19 46.2	+1.5
KECS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KECS	Kecovo	77.72	358	eP	P	18 19 46.2	+1.5
VYHS	Vyhne	77.73	359	eP	P	18 19 45.9	+1.1
VYHS	Vyhne	77.73	359	eP	P	18 19 45.9	+1.1
BUR08	Bucovina Ar. S	78.38	355	eP	P	18 19 49.0	+0.5
TAPN	Taplejung	78.88	301	eP	P	18 19 52.6	+0.7
	comp=Z,12nm,0.8s						
GUN	Gumba	79.33	303	eP	P	18 19 53.8	-0.6
	comp=Z,9.6nm,0.4s						
KKN	Kakani	79.72	303	eP	P	18 19 55.0	-1.4
RAMN	Ramite	79.76	302	eP	P	18 19 56.8	+0.2
	comp=Z,13nm,0.5s						
PKI	Pulchoki	79.84	303	eP	P	18 19 56.5	-0.6
	comp=Z,7.8nm,0.6s						
PKIN	Phulchoki	79.84	303	eP	P	18 19 56.4	-0.7
	comp=Z,7.2nm,0.6s						
KIV	Kislovodsk	79.92	342⇓	eP	P	18 19 57.5	+0.4
KIV				e		18 22 55.2	
KIV				eS	S	18 29 50.6	-7.8
KIV				eSS	SS	18 35 01.8	-4.9
KIV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
DMN	Daman	79.95	304	eP	P	18 19 57.0	-0.7
DANN	Dangsing	79.99	305	eP	P	18 19 57.1	-0.8
	comp=Z,17nm,0.5s						
CMAR	Chiang Mai Arr	80.09	288	P	P	18 19 58.6	+0.4
CMAR	Chiang Mai Arr	80.09	288	P	P	18 19 58.6	+0.4
	comp=Z,1.8nm,0.8s,baz=16,slow=5.2,SNR=8.0						
KBZ	Khabaz	80.10	342	P	P	18 19 59.2	+1.3
KBZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	Khabaz	80.10	342	P	P	18 19 59.2	+1.3
KBZ	Khabaz	80.10	342	P	P	18 19 59.2	+1.3
	comp=Z,3.5nm,1.0s,baz=12,slow=9.3,SNR=5.5						
KOLN	Koldanda	80.55	305	eP	P	18 20 00.1	-0.8
	comp=Z,6.5nm,0.5s						
ESDC	Sonseca Array	84.76	16	P	P	18 20 23.0	+0.6
ESDC	Sonseca Array	84.76	16	P	P	18 20 23.0	+0.6
	comp=Z,0.6nm,0.6s,baz=351,slow=4.7,SNR=3.8						
BR131	Keskin Array S	85.47	348	eP	P	18 20 26.7	+0.6
	comp=Z,0.4nm,0.3s						
BRTR	Keskin Array B	85.47	348	P	P	18 20 26.3	+0.3
BRTR	Keskin Array B	85.47	348	P	P	18 20 26.3	+0.3
	comp=Z,1.5nm,0.7s,baz=31,slow=3.7,SNR=10						

NNC 06 18:17:40.0±3.5, 40.°02N×81.°81E, h0km, mb3.5, mpv3.1, 3C-1D, Error ellipse: s-maj=32.0km s-min=23.9km az=82.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	4.52	266	Pn	Pb	18 18 58.9	-1.5
KSH				Sn	Sg	18 20 03.1	-2.2
KSH				smax	smax		
	comp=N,24nm,0.4s						
KSH				smax	smax		
	comp=E,23nm,0.5s						
MK31	Makanchi Array	6.78	3	Pn	Pn	18 19 20.9	+0.1
	comp=E,0.4nm,0.2s,baz=182,slow=12,SNR=54						
MK31				⇑Sn	Sn	18 20 39.8	+1.0
	comp=E,1.4nm,0.5s,baz=184,slow=23						
MK31				⇑Lg	Lg	18 21 16.6	
	comp=E,2.3nm,0.7s,baz=172,slow=27,SNR=4.6						
KURBB	Kurchatov Arra	10.85	349	⇑Lg	Lg	18 23 25.0	
	comp=E,2.6nm,1.1s						
KURK	Kurchatov	10.93	349	⇓Lg	Lg	18 23 27.7	
	comp=E,0.9nm,0.9s						

CSEM 06 18:28:33.6±0.1, 41.°28N×22.°68E, h2km, ML2.2, Error ellipse: s-maj=2.6km s-min=2.5km az=81.0
SOF 06 18:28:33.1, 41.°32N×22.°70E, h8km, MD2.7
ISCJB 06 18:28:33.5±0.3, 41.°28N±0.°02×22.°68E±0.°03, h8km±3km, Error ellipse: s-maj=3.4km s-min=2.9km az=138.4
SKO 06 18:28:33.2, 41.°30N×22.°69E, h12km, M1.8, ML2.2
ATH 06 18:28:33.5, 41.°27N×22.°70E, h20km±2km, MD3.3/5
THE 06 18:28:33.9, 41.°29N×22.°69E, h0km±1km, ML2.4/8, Error ellipse: s-maj=1.3km s-min=0.4km az=242.0
BEO 06 18:28:34.8±1.0, 41.°31N×22.°46E, h0km, ML2.2/4
ISC 06 18:28:33.8±0.8, 41.°29N±0.°02×22.°68E±0.°02, h7km±5km, n72, σ0.s61/108, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	293	P	Pg	18 28 35.9	0.0
VAY				S	Sg	18 28 37.5	+0.1
VAY	Valandovo	0.09	293	ePg	Pg	18 28 35.6	-0.3
VAY				eSg	Sg	18 28 37.5	+0.1
VAY	Valandovo	0.09	293	i Pg	Pg	18 28 35.6	-0.3
VAY				i Sg	Sg	18 28 37.5	+0.1
VAY				eLg	Lg	18 28 37.5	
	comp=E,2μm,0.3s						
VAY				eLg	Lg	18 28 37.6	
	comp=N,1μm,0.2s						
VAY	Valandovo	0.09	293	ePg	Pg	18 28 35.6	-0.3
VAY	Valandovo	0.09	293	P	Pg	18 28 35.9	0.0
VAY				S	Sg	18 28 37.5	+0.1
VAY				eLg	Lg	18 28 38.1	
	comp=N,1μm,0.2s						
KNT	Kendrikon	0.21	127	P	Pg	18 28 38.1	+0.1
KNT				S	Sg	18 28 41.2	+0.4
KNT	Kendrikon	0.21	127	P	Pg	18 28 38.1	+0.1
KNT				S	Sg	18 28 41.2	+0.4
GRG	Griva	0.39	212	P	Pg	18 28 41.6	+0.2
GRG				S	Sg	18 28 47.6	+1.1
GRG	Griva	0.39	212	P	Pg	18 28 41.6	+0.2
GRG				S	Sg	18 28 47.6	+1.1
KKB	Krupnik	0.66	28	i Pg	Pg	18 28 45.8	-0.6
KKB	Krupnik	0.66	28	i Pg	Pg	18 28 45.8	-0.6
THE	Thessaloniki	0.69	162	P	Pg	18 28 47.0	0.0
THE				S	Sg	18 28 56.6	+0.6
THE	Thessaloniki	0.69	162	P	Pg	18 28 47.0	0.0
THE				S	Sg	18 28 56.6	+0.6
SOH	Sokhos	0.69	132	P	Pg	18 28 46.7	-0.3
SOH				S	Sg	18 28 56.9	+0.8
SOH	Sokhos	0.69	132	ePN	Pg	18 28 46.8	-0.3
SOH				eSN	Sg	18 28 56.8	+0.7
SOH	Sokhos	0.69	132	ePn	Pg	18 28 46.8	-0.3
SOH				eSn	Sg	18 28 56.8	+0.7
SRS	Serrai	0.71	103	P	Pg	18 28 47.1	-0.4
SRS				S	Sb	18 28 58.0	-0.5
SRS	Serrai	0.71	103	P	Pg	18 28 47.1	-0.4
SRS				S	Sb	18 28 58.0	-0.5
HORT	Hortiatis	0.76	155	P	Pg	18 28 48.2	-0.2
HORT				S	Sg	18 28 59.2	+1.0
HORT	Hortiatis	0.76	155	P	Pg	18 28 48.2	-0.2
HORT				S	Sg	18 28 59.2	+1.0
MMB	Musomiste	0.84	69	i Pg	Pg	18 28 49.6	-0.4
MMB	Musomiste	0.84	69	i Pg	Pg	18 28 49.6	-0.4
NVR	Nevrokopi	0.89	86	P	Pg	18 28 50.5	-0.5
NVR				S	Sb	18 29 04.0	+0.2
NVR	Nevrokopi	0.89	86	ePN	Pg	18 28 50.2	-0.8
NVR				eSN	Sg	18 29 02.5	-0.1
NVR	Nevrokopi	0.89	86	ePn	Pg	18 28 50.2	-0.8
NVR	Nevrokopi	0.89	86	P	Pg	18 28 50.5	-0.5
NVR				eSn	Sg	18 29 02.5	-0.1
NVR				S	Sb	18 29 04.0	+0.2
BIA	Bitola	1.06	256	ePg	Pg	18 28 54.2	+0.1
BIA				i Sg	Sg	18 29 07.9	0.0
BIA				eLg	Lg	18 29 08.5	
	comp=E,12nm,0.2s						
BIA				eLg	Lg	18 29 09.1	
	comp=N,14nm,0.2s						
BIA	Bitola	1.06	256	ePg	Pg	18 28 54.1	+0.1
BIA				i Sg	Sg	18 29 07.8	0.0
BIA				eLg	Lg	18 29 09.0	
	comp=N,14nm,0.2s						
PLG	Polygyros	1.08	147	P	Pg	18 28 53.9	-0.6
PLG	Polygyros	1.08	147	ePN	Pg	18 28 54.3	-0.2
PLG				eSN	Sg	18 29 07.3	-1.3
PLG	Polygyros	1.08	147	P	Pg	18 28 53.9	-0.6
PLG	Polygyros	1.08	147	ePn	Pg	18 28 54.3	-0.2
PLG				eSn	Sg	18 29 07.3	-1.3
FNA	Florina	1.10	243	P	Pg	18 28 54.6	-0.4
FNA	Florina	1.10	243	ePN	Pg	18 28 54.7	-0.3
FNA	Florina	1.10	243	P	Pg	18 28 54.6	-0.4
SKO	Skopje	1.15	307	ePn	Pn	18 28 56.6	+0.2
SKO				i Sn	Sn	18 29 12.1	-0.3
SKO				eLg	Lg	18 29 13.4	
	comp=E,14nm,0.2s						
SKO				eLg	Lg	18 29 16.4	
	comp=N,36nm,0.3s						
SKO	Skopje	1.15	307	ePn	Pn	18 28 57.0	+0.6
SKO				i Sn	Sn	18 29 12.6	+0.2
SKO				eLg	Lg	18 29 16.8	
	comp=N,36nm,0.3s						
KZN	Kozani	1.20	215	ePN	Pb	18 28 56.2	-0.6
KZN	Kozani	1.20	215	ePn	Pb	18 28 56.2	-0.6
VTS	Vitosha	1.36	17	P	Pn	18 28 59.3	-0.1
VTS				S	Sg	18 29 18.3	+0.7
VTS	Vitosha	1.36	17	i P	Pb	18 28 59.4	-0.3
VTS	Vitosha	1.36	17	ePg	Pg	18 28 59.8	-0.2
VTS				eSg	Sg	18 29 19.5	+1.9
VTS	Vitosha	1.36	17	P	Pn	18 28 59.3	-0.1
VTS	Vitosha	1.36	17	ePg	Pg	18 28 59.8	-0.2
VTS				S	Sg	18 29 18.3	+0.7
VTS				eSg	Sg	18 29 19.5	+1.9
OUR	Ouranopolis	1.37	133	P	Pn	18 28 59.7	+0.4
OUR				S	Sg	18 29 19.4	+1.5
OUR	Ouranopolis	1.37	133	P	Pn	18 28 59.7	+0.4
OUR				S	Sg	18 29 19.4	+1.5
KAVA	Kavala	1.42	101	P	Pn	18 28 59.9	0.0
KAVA	Kavala	1.42	101	P	Pn	18 28 59.9	0.0
NEST	Nestorio	1.51	235	P	Pb	18 29 02.1	-0.1
NEST	Nestorio	1.51	235	P	Pb	18 29 02.1	-0.1
RZN	Rozhen	1.58	75	P	Pb	18 29 03.5	0.0
RZN	Rozhen	1.58	75	P	Pb	18 29 03.5	0.0
BARS	Barje	1.66	337	ePn	Pn	18 29 03.8	+0.5
BARS				eSn	Sn	18 29 24.2	-0.6
BARS	Barje	1.66	337	ePn	Pn	18 29 03.8	+0.5
BARS				eSn	Sn	18 29 24.2	-0.6
PGB	Panagyurishte	1.68	41	Pg	Pb	18 29 04.8	-0.3
PGB	Panagyurishte	1.68	41	Pg	Pb	18 29 04.8	-0.3
THL	Klokotos Trika	1.79	197	ePN	Pn	18 29 05.7	+0.6
THL	Klokotos Trika	1.79	197	ePn	Pn	18 29 05.7	+0.6
XOR	Xorichti	1.96	168	P	Pn	18 29 07.4	0.0
XOR	Xorichti	1.96	168	P	Pn	18 29 07.4	0.0
ZAPS	Zavoj	1.99	359	ePn	Pb	18 29 10.9	+0.6
ZAPS				eSn	Sb	18 29 34.3	-0.9
NEO	Neokhori	2.02	168	ePB	Pn	18 29 07.7	-0.6
NEO	Neokhori	2.02	168	ePb	Pn	18 29 07.7	-0.6
KDZ	Kurdzhali	2.09	79	P	Pn	18 29 10.4	+1.2
KDZ	Kurdzhali	2.09	79	P	Pn	18 29 10.4	+1.2
RDO	Rodhopi	2.16	93	P	Pn	18 29 10.6	+0.4
RDO	Rodhopi	2.16	93	ePN	Pn	18 29 10.7	+0.5
RDO	Rodhopi	2.16	93	P	Pn	18 29 10.6	+0.4
SMTH	Samothraki Isl	2.31	110	ePB	Pn	18 29 13.0	+0.7
SMTH	Samothraki Isl	2.31	110	ePb	Pn	18 29 13.0	+0.7
ALN	Alexandroupoli	2.58	98	P	Pn	18 29 15.8	-0.1
ALN	Alexandroupoli	2.58	98	P	Pn	18 29 15.8	-0.1

IDC 06 18:35:38.5±0.9, 5.°41S×131.°26E, h0km, mb4.0/8, mb1 4.3/10, mb1mx4.1/20, mbtmp4.1/10, ML4.4/2, MS3.0/1, Ms1 3.0/1, ms1mx2.3/31, Error ellipse: s-maj=52.5km s-min=16.9km az=65.0
ISCJB 06 18:35:41.9±0.3, 5.°46S±0.°03×131.°65E±0.°05, h54km, mb4.0/7, Error ellipse: s-maj=7.1km s-min=4.1km az=160.9
DJA 06 18:35:41.7±0.5, 5°S±4°×13°2E±°, h10km, M4.7/7, mb4.6/5, mB5.5/2, MLv4.7/7, Mw(mB)4.9/2
AUST 06 18:35:43.0, 5.°47S×131.°53E, h25km
ISC 06 18:35:44.0±0.5, 5.°43S±0.°05×131.°63E±0.°07, h54km, n46, σ1.s87/45, mb3.9/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.56	14	P	Pn	18 36 23.4	+0.2
FAKI				S	Sn	18 36 51.1	-2.1
FAKI	Fak Fak	2.56	14	P	Pn	18 36 23.0	-0.2
	baz=2.7,SNR=116						
FAKI				S	Sn	18 36 50.1	-3.0
	baz=2.7,SNR=11						
MSAI	Masohi	3.40	307	P	Pn	18 36 36.0	+1.4
SWI	Sorong	4.55	355	P	Pn	18 36 48.5	-1.8
SWI	Sorong	4.55	355	P	Pn	18 36 48.3	-2.0
	baz=4.6,SNR=39						
SWI				S	Sn	18 37 35.0	-6.9
	baz=4.6,SNR=6.3						
RKPI	Ransiki, Papua	4.64	33	P	Pn	18 36 53.1	+1.4
LBMI	Labuha	6.29	319	P	Pn	18 37 15.3	+1.0
	39nm,0.9s,1μm0.3nm						
KDU	Kakadu	7.26	174	P	Pn	18 37 28.4	+0.8
	baz=7.3,SNR=189						
KDU				S	Sn	18 38 45.7	-3.1
	baz=7.3,SNR=6.3						
MTN	Manton Dam	7.39	184	P	Pn	18 37 30.7	+1.4
	baz=7.4,SNR=15						
MTN				S	Sn	18 38 50.4	-1.4
	baz=7.4,SNR=15						
BBSI	Bau Bau	9.02	269	P	Pn	18 38 00.3	+8.6
KNRA	Kununurra	10.57	195	P	Pn	18 38 12.2	-0.7
	baz=11,SNR=90						
KNRA				S	Sn	18 40 01.8	-8.1
	baz=11,SNR=13						
MRSI	Marisa	11.32	301	P	Pn	18 38 24.2	+1.1
	12nm,0.6s						
BKSI	Bulukumba	11.46	270	P	Pn	18 38 29.3	+4.2
	25nm,1.1s						
KAPI	Kappang	11.84	271	P	Pn	18 38 34.3	+4.0
KAPI	Kappang	11.84	271	Pn	Pn	18 38 32.2	+1.9
	1.1nm,0.3s,baz=107,slow=15,SNR=11						
KAPI				LR	LR	18 43 15.9	
	comp=Z,62nm,18.3s,baz=97,slow=40						
FITZ	Fitzroy Crossi	13.89	204	Pn	Pn	18 38 55.6	-2.7
	1.1nm,0.3s,baz=33,slow=13,SNR=28						
FITZ				Sn	Sn	18 41 18.9	-12
	2.3nm,0.3s,baz=238,slow=19,SNR=7.7						
FITZ	Fitzroy Crossi	13.89	204	P	Pn	18 38 57.2	-1.1
	baz=14,SNR=9.6						
FITZ				S	Sn	18 41 20.3	-11
	baz=14,SNR=4.8						
COEN	Coen	14.18	128	P	Pn	18 39 02.9	+0.8
	baz=14,SNR=28						
COEN				S	Sn	18 41 36.8	-1.3
	baz=14,SNR=4.1						
WRA	Warramunga Arr	14.67	170	Pn	Pn	18 39 06.0	-2.6
	2.1nm,0.3s,baz=356,slow=13,SNR=51						
WRA				Sn	Sn	18 41 42.4	-7.5
	3.6nm,0.3s,baz=347,slow=23,SNR=8.8						
QIS	Mount Isa	16.92	153	P	P	18 39 38.0	-0.5
	baz=17,SNR=6.0						
JAGI	Jajag, Banyuwa	17.61	259	P	Pn	18 39 44.1	-1.8
	baz=18,SNR=8.3						
MTSU	Mount Surprise	17.70	137	P	P	18 39 50.3	+3.2
	baz=18,SNR=99						
MTSU				S	Sn	18 42 56.9	-6.4
	baz=18,SNR=4.1						
ASAR	Alice Springs	18.27	173	P	Pn	18 39 53.9	+0.1
	2.1nm,0.3s,baz=350,slow=10,SNR=44						
ASAR				S	Sn	18 43 06.3	-11
	0.9nm,0.3s,baz=354,slow=26,SNR=5.6						
CTA	Charters Tower	20.36	137	P	Pn	18 40 20.7	+2.0
	9.0nm,0.9s,baz=313,slow=13,SNR=9.9						
CISI	Cisompet, Garu	23.76	264	P	P	18 40 51.0	-0.8
	baz=24,SNR=3.5						
QLP	Quilpie	24.24	152	P	P	18 41 00.6	+4.6
	baz=24,SNR=10						
MEEK	Meekatharra	24.48	209	P	P	18 40 58.9	+0.6
	baz=24,SNR=6.6						
KMBL	Kambalda	27.38	198	P	P	18 41 26.0	+1.6
	baz=27,SNR=5.6						
MORW	Morawa	27.76	210	P	P	18 41 28.3	+0.4
	baz=28,SNR=4.7						
STKA	Stephens Creek	27.92	162	P	P	18 41 31.3	+2.1
	2.4nm,0.8s,baz=332,slow=9.6,SNR=7.5						
STKA	Stephens Creek	27.92	162	P	P	18 41 32.4	+3.2
	baz=28,SNR=7.0						
CMAR	Chiang Mai Arr	40.02	307	P	P	18 43 13.8	-0.3
	3.0nm,0.5s,baz=128,slow=7.5,SNR=33						
ODAN	Odare	53.49	309	eP	P	18 44 59.4	-0.2
	17nm,0.9s						

TAPN	Taplejung	53.49	310	eP	P	18 44 57.9	-1.7
	9.4nm,0.4s						
RAMN	Ramite	54.15	309	eP	P	18 45 04.0	-0.4
	12nm,0.5s						
GUN	Gumba	55.18	309	eP	P	18 45 08.4	-3.5
PKIN	Phulchoki	55.39	309	eP	P	18 45 12.3	-1.1
KKN	Kakani	55.58	309	eP	P	18 45 13.5	-1.2
DMN	Daman	55.63	309	eP	P	18 45 14.3	-0.8
KOLN	Koldanda	56.88	308	eP	P	18 45 23.4	-0.5
DANN	Dangsing	57.03	309	eP	P	18 45 21.2	-3.9
SONM	Songino Array	57.50	340	P	P	18 45 29.8	+2.0
	0.2nm,0.3s,baz=156,slow=7.9,SNR=2.6						
MKAR	Makanchi Array	67.83	326	P	P	18 46 37.3	+0.8
	1.9nm,0.4s,baz=121,slow=8.1,SNR=41						
ZALV	Zalesovo Beam	70.91	333	P	P	18 46 55.3	-0.1
	0.7nm,0.4s,baz=121,slow=7.6,SNR=4.1						
KURBB	Kurchatov Arra	72.04	328	P	P	18 47 02.5	+0.3
	0.8nm,0.5s,baz=120,slow=4.5,SNR=11						
BVAR	Borovoye Array	77.62	327	P	P	18 47 34.5	+0.1
	0.4nm,0.5s,baz=110,slow=7.8,SNR=4.2						

MAN 06 18:38:05, 18°.08N×120°.55E, h32km, mb3.7, ML2.4, MS2.0, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PIP	Pasuquin	0.26	16	⇓iP	Pn	18 38 13.0	+0.4
ABRA	Dolores	0.45	159	eP	Pn	18 38 16.5	+1.2
ABRA				eS	Sn	18 38 23.2	+0.9
APYP	Conner	0.70	108	eP	Pn	18 38 18.7	0.0
APYP				eS	Sb	18 38 27.1	-1.1
SGCP	Mt. Cagua	1.44	83	eP	Pb	18 38 30.0	-1.1
SGCP				eS	Sn	18 38 47.3	+0.7

*CSEM **06** 18:42:50.9±0.3, 38°.37N×26°.59E, h12km, MD2.8, Error ellipse: s-maj=7.7km s-min=6.6km az=44.0*
*ISK **06** 18:42:50.0, 38°.37N×26°.57E, h10km, MD2.9*
*DDA **06** 18:42:52.9, 38°.52N×26°.84E, h7km, MD2.8*
ISC 06 18:42:52.0±0.9, 38°.37N±0°.05×26°.73E±0°.04, h32km±6km, n29, σ1.31/37, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.10	266	i P	Pn	18 42 58.9	+1.4
URLA				i S	Sb	18 43 02.6	+1.0
URLA	Izmir	0.10	266	i P	Pn	18 42 58.9	+1.4
URLA				i S	Sb	18 43 02.6	+1.0
BLCB	Balcova	0.25	86	PG	Pb	18 42 58.3	-0.7
BLCB	Balcova	0.25	86	i Pg	Pb	18 42 58.3	-0.7
IZM	Izmir	0.42	86	PG	Pb	18 43 01.1	-0.3
IZM				eSG	Sn	18 43 08.8	+0.3
IZM	Izmir	0.42	86	i Pg	Pb	18 43 01.1	-0.3
IZM				eSg	Sn	18 43 08.8	+0.3
AYVA	Ayvalik	0.94	358	eP	Pn	18 43 09.1	+0.2
AYVA				eS	Sb	18 43 20.8	-1.1
AYVA	Ayvalik	0.94	358	eP	Pn	18 43 09.1	+0.2
AYVA				eS	Sb	18 43 20.8	-1.1
AKHS	Akhisar	0.99	59	eP	Pn	18 43 09.9	+0.2
AKHS				eS	Sb	18 43 21.2	-2.3
AKHS	Akhisar	0.99	59	eP	Pn	18 43 09.9	+0.2
EZN	Ezine	1.49	348	ePN	Pn	18 43 17.4	+0.9
EZN	Ezine	1.49	348	ePn	Pn	18 43 17.4	+0.9
KULA	Kula-Manisa	1.52	84	ePN	Pb	18 43 19.6	-0.1
KULA	Kula-Manisa	1.52	84	ePn	Pb	18 43 19.6	-0.1
BALY	Balya	1.54	27	eP	Pn	18 43 18.3	+1.1
BALY				eS	Sn	18 43 37.5	+1.4
BALY	Balya	1.54	27	eP	Pn	18 43 18.3	+1.1
BALY				eS	Sn	18 43 37.5	+1.4
BOZC	Bozcaada	1.56	341	eP	Pb	18 43 19.4	-0.9
BOZC				eS	Sb	18 43 38.4	-1.3
APE	Apeiranthos	1.61	217	ePN	Pn	18 43 18.0	-0.1
APE	Apeiranthos	1.61	217	ePn	Pn	18 43 18.0	-0.1
GONE	Gonen-Balikesi	1.83	24	ePN	Pn	18 43 23.1	+1.9
GONE	Gonen-Balikesi	1.83	24	ePn	Pn	18 43 23.1	+1.9
GELI	Tayfur-Gelibol	2.04	355	ePN	Pn	18 43 24.7	+0.7
GELI	Tayfur-Gelibol	2.04	355	ePn	Pn	18 43 24.7	+0.7
KRBG	Karabiga-Canak	2.07	12	ePN	Pn	18 43 26.3	+1.8
KRBG	Karabiga-Canak	2.07	12	ePn	Pn	18 43 26.3	+1.8
KCTX	Karacabey (Bur	2.28	33	ePN	Pn	18 43 30.0	+2.6
KCTX	Karacabey (Bur	2.28	33	ePn	Pn	18 43 30.0	+2.6
TVSB	Tavsanli	2.39	62	ePN	Pb	18 43 32.6	-1.8
TVSB	Tavsanli	2.39	62	ePn	Pb	18 43 32.6	-1.8

IDC 06 18:49:21.4±3.2, 1°.36N×97°.31E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/25, mbtmp3.4/6, Error ellipse: s-maj=126.8km s-min=21.8km az=60.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	17.06	5	Pn	Pn	18 53 20.7	-0.9
	baz=187,slow=11,SNR=2.3						
WRA	Warramunga Arr	42.03	122	P	P	18 57 15.3	+0.3
	0.5nm,0.9s,baz=300,slow=9.0,SNR=4.8						
ASAR	Alice Springs	43.41	127	P	P	18 57 25.7	-0.5
	0.3nm,0.9s,baz=297,slow=8.0,SNR=3.5						
SONM	Songino Array	46.95	8	P	P	18 57 54.5	+0.3
	0.5nm,0.5s,baz=187,slow=8.7,SNR=3.7						
MKAR	Makanchi Array	47.11	346	P	P	18 57 55.3	0.0
	0.4nm,0.8s,baz=164,slow=8.3,SNR=5.6						
ZALV	Zalesovo Beam	53.41	351	P	P	18 58 42.6	-0.3
	0.8nm,0.4s,baz=190,slow=7.0,SNR=6.5						

*GUC **06** 18:52:48.2±0.5, 42°.86S×72°.65W, h11km±8km, ML3.3*
*IDC **06** 18:52:49.8±1.2, 42°.96S×72°.64W, h0km, mb3.9/3, mb1 4.2/4, mb1mx3.8/18, mbtmp4.0/4, ML4.1/1, MS3.3/2, Ms1 3.3/2, ms1mx2.8/28, Error ellipse: s-maj=48.7km s-min=21.4km az=105.0*
*ISCJB **06** 18:52:50.1±0.6, 42°.82S±0°.04×72°.5W±0°.1, h10km, mb4.2/7, MS3.6/1, Error ellipse: s-maj=11.3km s-min=4.4km az=163.9*
*NEIC **06** 18:52:50.4±1.8, 42°.78S×72°.39W, h3km±11km, mb4.6/6, Error ellipse: s-maj=25.4km s-min=8.9km az=79.0*
ISC 06 18:52:51.0±0.7, 42°.80S±0°.03×72°.46W±0°.07, h10km, n29, σ1.24/30, mb4.6/7, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUNY	Huinay	0.42	5	eP	Pg	18 52 57.9	-1.3
HUNY				i S	Sg	18 53 05.2	+0.3
HUNY	Huinay	0.42	5	eP	Pg	18 52 57.9	-1.3
HUNY				i S	Sg	18 53 05.2	+0.3
HUNY				AML	AML	18 53 06.1	
	comp=N,3μm,0.3s						
FUTA	Futaleufœ	0.59	131	eP	Pg	18 53 00.9	-1.6
FUTA				i S	Sg	18 53 10.4	+0.2
FUTA	Futaleufœ	0.59	131	eP	Pg	18 53 00.9	-1.6
FUTA				i S	Sg	18 53 10.4	+0.2
FUTA				AML	AML	18 53 12.8	
	comp=N,1μm,0.5s						
HOCH	HornopirØn	0.89	3	eS	Sg	18 53 19.2	-0.6
HOCH				AML	AML	18 53 24.8	
	comp=E,2μm,0.3s						
PMCH	Puerto Montt	1.35	346	eS	Sb	18 53 32.8	-0.8
PMCH				AML	AML	18 53 37.7	
	comp=E,1μm,0.3s						
PLCA	Paso Flores	2.51	35	ePn	Pn	18 53 33.2	+1.3
PLCA				eSn	Sb	18 54 09.6	+2.4
PLCA				Sn	Sg	18 54 11.0	-0.7
PLCA	Paso Flores	2.51	35	Pn	Pb	18 53 35.5	-0.7
	comp=E,7.1nm,0.3s,baz=211,slow=14,SNR=97						
PLCA				Sn	Sg	18 54 11.0	-0.7
	comp=E,32nm,0.3s,baz=125,slow=8.4,SNR=17						
PLCA				LR	LR	18 54 45.7	
	comp=E,289nm,20.8s,baz=79,slow=43						
COYC	Coyhaique	2.79	175	AML	AML	18 54 18.6	
	comp=N,83nm,0.8s						
CFAA	Coronel Fontan	11.67	18	Pn	Pn	18 55 42.1	+4.5
CFAA	Coronel Fontan	11.67	18	Pn	Pn	18 55 42.1	+4.5
	comp=N,0.0nm,0.3s,baz=184,slow=13,SNR=3.0						
LVC	Limon Verde	20.35	9	eP	Pn	18 57 28.1	-1.7
	comp=N,3.3nm,0.8s						
LPAZ	La Paz	26.68	9	eP	P	18 58 32.1	+1.2
LPAZ	La Paz	26.68	9	P	P	18 58 33.9	+3.0
	comp=N,0.6nm,0.8s,baz=198,slow=6.4,SNR=3.8						
BDFB	Brasilia	34.22	45	LR	LR	19 15 00.0	
	comp=N,96nm,18.2s,baz=178,slow=39						
OTAV	Otavalo	43.18	351	P	P	19 00 52.6	0.0
	comp=N,11nm,1.5s						
SNAA	Sanae	43.67	155	eP	P	19 00 54.8	-0.7
	comp=N,16nm,1.5s						
QSPA	South Pole Qui	47.45	180	eP	P	19 01 25.7	+0.1
	comp=N,5.5nm,1.0s						
QSPA	South Pole Qui	47.45	180	P	P	19 01 25.9	+0.3
	comp=N,7.0nm,1.1s,baz=150,slow=6.1,SNR=11						
BCIP	Isla Barro Col	52.15	351	P	P	19 01 59.9	-1.7
SBA	Scott Base	54.42	193	eP	P	19 02 19.6	+2.0
	comp=N,9.3nm,1.5s						
CASY	Casey	71.23	181	eP	P	19 04 12.6	+2.9
	comp=N,7.4nm,0.8s						
TXAR	Lajitas Array	77.31	332	P	P	19 04 46.1	+0.5
TXAR	Lajitas Array	77.31	332	P	P	19 04 46.1	+0.5
	comp=N,0.5nm,0.8s,baz=158,slow=7.6,SNR=5.6						
AKTO	Aktyubinsk	145.69	60	PKPbc	PKPbc	19 12 28.6	-0.7
AKTO	Aktyubinsk	145.69	60	PKPbc	PKPbc	19 12 28.6	-0.7
	comp=N,1.8nm,0.9s,baz=270,slow=2.0,SNR=5.9						
ABKAR	Akbulak array	146.78	62	ePKP	PKPbc	19 12 31.1	-1.5
MKAR	Makanchi Array	161.67	69	PKPab	PKPab	19 13 36.0	-0.9
MKAR	Makanchi Array	161.67	69	PKPab	PKPab	19 13 36.0	-0.9
	comp=N,0.6nm,0.8s,baz=259,slow=3.9,SNR=5.3						

IDC 06 18:54:12.4±1.5, 29°.40S×178°.59W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.7/16, mbtmp3.7/3, Error ellipse: s-maj=180.9km s-min=12.9km az=169.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.60	76	Pn	Pn	18 54 28.4	+0.2
	34nm,0.3s,baz=174,slow=22,SNR=4.5						
RAO				Sn	Sn	18 54 39.2	+0.5
	370nm,0.3s,baz=2.7,slow=23,SNR=14						
STKA	Stephens Creek	34.22	256	P	P	19 00 59.6	-0.3
	3.7nm,1.1s,baz=120,slow=8.1,SNR=3.3						
ASAR	Alice Springs	42.66	266	P	P	19 02 10.5	-0.6
	0.2nm,0.4s,baz=105,slow=7.3,SNR=12						
WRA	Warramunga Arr	43.56	271	P	P	19 02 18.6	+0.3
	0.5nm,0.3s,baz=108,slow=8.1,SNR=27						

IDC 06 19:26:34.3±1.8, 3°.55N×125°.87E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/22, mbtmp3.5/4, Error ellipse: s-maj=117.9km s-min=23.4km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.52	181	P	P	19 31 26.8	+1.8
	1.1nm,0.5s,baz=13,slow=12,SNR=7.8						
WRA	Warramunga Arr	24.78	161	P	P	19 31 57.0	-1.1
	1.2nm,0.7s,baz=336,slow=11,SNR=15						
ASAR	Alice Springs	28.16	164	P	P	19 32 28.6	0.0
	0.2nm,0.4s,baz=343,slow=11,SNR=8.4						
MKAR	Makanchi Array	57.22	326	P	P	19 36 23.3	0.0
	0.4nm,0.5s,baz=124,slow=7.9,SNR=9.1						

*NIED **06** 19:38:00, 36°.60N×141°.50E, h32km, Mw3.9 Best double couple: M0 7.71000×10^14 NP1:φs 177.00000°, δ86.00000°, λ-70.00000°. NP2:φs 279.00000°, δ20.00000°, λ-168.00000°.*
*IDC **06** 19:38:21.8±0.7, 36°.55N×141°.54E, h0km, mb3.8/12, mb1 3.9/15, mb1mx3.8/31, mbtmp3.8/15, ML3.3/3, MS3.0/6, Ms1 3.0/6, ms1mx2.8/32, Error ellipse: s-maj=21.1km s-min=15.0km az=90.0*
*NEIC **06** 19:38:26.9±1.2, 36°.62N×141°.59E, h35km±10km, mb4.3/3, Error ellipse: s-maj=13.6km s-min=9.0km az=132.0*
*JMA **06** 19:38:26.5±0.1, 36°.57N×141°.36E, h48km±2km, M3.8*
JMA Felt I J1.
ISC 06 19:38:23.9±2.4, 36°.54N±0°.04×141°.51E±0°.06, h14km±14km, n50, σ1.02/52, mb3.9/15, MS3.1/3, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.76	275	P	Pb	19 38 39.2	+0.2
JHO				S	Sg	19 38 48.2	-0.5
ONAJ	Iwakimizuishiy	0.80	315	S	Sb	19 38 49.6	-0.8
JFK	Kawauchi	0.97	328	⇓P	Pb	19 38 42.2	-0.3
JFK				eS	Sb	19 38 54.1	-1.1
JYT	Yasato	1.11	254	P	Pb	19 38 44.3	-0.6
JYT				eS	Sb	19 38 57.2	-1.9
JFT	Otama	1.35	316	P	Pn	19 38 48.7	+0.2
JFT				S	Sn	19 39 04.9	-1.3
JMM	Marumori	1.44	337	P	Pn	19 38 49.2	-0.4
JMM				S	Sn	19 39 06.6	-1.7
JAG	Ashikaga	1.66	267	P	Pn	19 38 52.6	-0.1
JAG				eS	Sn	19 39 11.0	-2.8
JFY	Yanaizu	1.68	301	P	Pn	19 38 53.5	+0.5
JFY				S	Sn	19 39 13.4	-1.0
JKT	Katashina	1.83	278	P	Pn	19 38 55.6	+0.5
JKT				eS	Sn	19 39 17.5	-0.7
MAJO	Matsushiro	2.66	271	ePn	Pn	19 39 07.7	+1.2
MAT	Matsushiro	2.66	271	P	Pn	19 39 07.8	+1.4
MAT				S	Sn	19 39 40.9	+2.4
JHJ	Hachijo jima 2	3.70	203	Pn	Pn	19 39 22.1	+1.4
	13nm,0.3s,baz=276,slow=17,SNR=11						
JHJ				Sn	Sn	19 40 00.8	-3.3
	24nm,0.3s,baz=233,slow=22,SNR=7.3						
ERM	Erimo	5.61	13	ePn	Pn	19 39 44.8	-2.1
ERM				eSn	Sn	19 40 44.4	-6.8
ASAJ	Asahikawa	7.61	6	Pn	Pn	19 40 14.6	+0.2
ASAJ				Sn	Sn	19 41 40.4	-0.1
ASAJ				Lg	Lg	19 42 11.2	
ASAJ	Asahikawa	7.61	6	Pn	Pn	19 40 14.6	+0.2
	0.5nm,0.3s,baz=235,slow=12,SNR=4.6						
ASAJ				Sn	Sn	19 41 40.4	-0.1
	1.1nm,0.3s,baz=245,slow=33,SNR=2.1						
ASAJ				Lg	Lg	19 42 11.2	
	0.3nm,0.3s,baz=287,slow=32,SNR=4.7						
ASAJ				LR	LR	19 43 21.5	
	comp=Z,44nm,18.5s,baz=212,slow=39						
JNU	Nakatsue	9.38	252	Pn	Pn	19 40 42.9	+4.2
JNU	Nakatsue	9.38	252	Pn	Pn	19 40 42.9	+4.2
	0.1nm,0.3s,baz=60,slow=14,SNR=3.4						
USRK	Ussuriysk Arra	10.54	319	Pn	Pn	19 41 00.4	+6.0
	0.2nm,0.3s,baz=145,slow=13,SNR=5.3						
USRK				LR	LR	19 45 03.9	
	comp=Z,95nm,19.1s,baz=193,slow=38						
KSRS	Korea Array	10.91	279	Pn	Pn	19 41 01.3	+1.7
	0.1nm,0.3s,baz=87,slow=14,SNR=3.3						
KSRS				LR	LR	19 45 00.7	
	comp=Z,94nm,21.1s,baz=161,slow=36						
KSAR	Wonju Array Be	10.94	279	Pn	Pn	19 41 01.3	+1.3
PETK	Petropavlovsk-	20.07	29	LR	LR	19 51 15.1	
	comp=Z,27nm,19.2s,baz=355,slow=39						
ULN	Ulaanbaatar	27.70	305	P	P	19 44 12.2	+0.5
	2.0nm,0.9s						
SONM	Songino Array	28.13	305	P	P	19 44 16.3	+0.7
SONM	Songino Array	28.13	305	P	P	19 44 16.3	+0.7
	2.7nm,0.7s,baz=103,slow=8.4,SNR=12						
ZALV	Zalesovo Beam	42.30	313	P	P	19 46 17.0	0.0
ZALV	Zalesovo Beam	42.30	313	P	P	19 46 17.0	0.0
	0.8nm,0.4s,baz=96,slow=5.2,SNR=5.0						
ZALV				LR	LR	20 04 43.3	
	comp=Z,32nm,18.2s,baz=250,slow=37						
MK31	Makanchi Array	44.45	303	P	P	19 46 33.6	-0.9
MK31				e		19 46 41.2	
MKAR	Makanchi Array	44.45	303	P	P	19 46 34.1	-0.3
MKAR	Makanchi Array	44.45	303	P	P	19 46 34.1	-0.3
	0.5nm,0.6s,baz=83,slow=9.9,SNR=3.8						
MKAR				LR	LR	20 05 49.7	
	comp=Z,22nm,19.2s,baz=268,slow=37						
KURK	Kurchatov	46.30	308	eP	P	19 46 48.1	-0.9
	4.7nm,0.8s						
KURBB	Kurchatov Arra	46.37	308	P	P	19 46 48.8	-0.8
	1.3nm,0.7s,baz=84,slow=8.2,SNR=12						
ILAR	Eielson Array	49.87	32	P	P	19 47 16.9	+0.5
ILAR	Eielson Array	49.87	32	P	P	19 47 16.9	+0.5
	0.5nm,0.8s,baz=282,slow=6.4,SNR=5.5						
TKM2	Tokmak 2	49.93	299	P	P	19 47 17.6	+0.1
	2.5nm,0.6s						
TKM2				e		19 47 23.9	
BVAR	Borovoye Array	50.96	313	P	P	19 47 24.9	+0.1
BVAR	Borovoye Array	50.96	313	P	P	19 47 24.9	+0.1
	0.2nm,0.4s,baz=147,slow=3.4,SNR=2.2						
FITZ	Fitzroy Crossi	56.38	198	P	P	19 48 05.2	+0.4
FITZ	Fitzroy Crossi	56.38	198	P	P	19 48 05.2	+0.4
	2.3nm,1.0s,baz=51,slow=13,SNR=2.8						
WRA	Warramunga Arr	56.59	188	P	P	19 48 05.7	-0.6
WRA	Warramunga Arr	56.59	188	P	P	19 48 05.6	-0.6
	2.3nm,1.1s,baz=7.4,slow=7.6,SNR=11						
ASAR	Alice Springs	60.31	188	P	P	19 48 32.0	-0.2
ASAR	Alice Springs	60.31	188	P	P	19 48 32.0	-0.2
	0.8nm,0.8s,baz=7.7,slow=5.5,SNR=8.8						
YKA	Yellowknife Ar	64.19	30	P	P	19 48 56.9	-0.9
YKA	Yellowknife Ar	64.19	30	P	P	19 48 56.9	-0.9
	0.6nm,0.8s,baz=289,slow=6.4,SNR=4.2						
NOA	NORSAR Array B	74.67	337	P	P	19 50 02.5	-0.1
NOA	NORSAR Array B	74.67	337	P	P	19 50 02.6	-0.1
	0.6nm,0.8s,baz=39,slow=5.8,SNR=3.6						
NVAR	Mina Array Bea	75.22	53	P	P	19 50 07.7	+1.1
NVAR	Mina Array Bea	75.22	53	P	P	19 50 07.7	+1.1
	0.1nm,0.3s,baz=292,slow=7.7,SNR=4.8						
LPAZ	La Paz	146.87	60	PKPbc	PKPdf	19 58 05.9	+0.7
LPAZ	La Paz	146.87	60	PKPbc	PKPdf	19 58 05.9	+0.7
	0.3nm,0.4s,baz=11,slow=5.2,SNR=3.9						

*IDC **06** 19:39:27.5±1.2, 36°.63N×142°.14E, h0km, mb3.7/7, mb1 3.8/10, mb1mx3.7/28, mbtmp3.8/10, ML3.5/3, Error ellipse: s-maj=30.4km s-min=19.1km az=86.0*
*ISCJB **06** 19:39:32.3±0.8, 36°.54N±0°.04×141°.52E±0°.07, h26km, mb3.6/7, Error ellipse: s-maj=8.3km s-min=5.4km az=170.7*
*JMA **06** 19:39:34.6±0.1, 36°.58N×141°.35E, h46km±3km, M3.6*
JMA Felt I J1.
ISC 06 19:39:33.4±1.1, 36°.59N±0°.05×141°.49E±0°.08, h26km, n20, σ1.17/24, mb3.7/7, 1D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.74	272	P	Pb	19 39 47.3	-0.5
JHO				S	Sb	19 39 56.2	-1.4
ONAJ	Iwakimizuishiy	0.76	313	P	Pb	19 39 47.7	-0.4
JFK	Kawauchi	0.92	328	⇓P	Pn	19 39 50.3	-0.5
JFK				eS	Sb	19 40 01.6	-1.1
JYT	Yasato	1.11	252	P	Pn	19 39 52.5	-0.7
JFT	Otama	1.31	316	P	Pb	19 39 56.8	-0.6
JFT				S	Sb	19 40 13.4	-0.5
JMM	Marumori	1.40	337	P	Pn	19 39 57.3	+0.1
JMM				eS	Sn	19 40 14.7	-0.1
JFY	Yanaizu	1.65	300	P	Pb	19 40 02.3	-0.9
JFY				eS	Sn	19 40 21.5	+0.4
JAG	Ashikaga	1.65	265	P	Pn	19 40 01.3	+0.6
JKT	Katashina	1.81	276	eS	Sn	19 40 23.8	-1.4
MAT	Matsushiro	2.65	270	P	Pn	19 40 15.9	+1.5
MAT				eS	Sn	19 40 47.4	+1.7
JHJ	Hachijo jima 2	3.73	203	Pn	Pn	19 40 30.8	+1.4
	28nm,0.3s,baz=59,slow=19,SNR=2.4						
JHJ				Sn	Sn	19 41 10.8	-1.7
	50nm,0.3s,baz=56,slow=23,SNR=5.5						
ASAJ	Asahikawa	7.57	6	Pn	Pn	19 41 16.4	-5.6
	0.7nm,0.3s,baz=135,slow=19,SNR=2.3						
JNU	Nakatsue	9.38	251	Pn	Pn	19 41 50.8	+3.8
	0.2nm,0.3s,baz=97,slow=19,SNR=3.9						
SONM	Songino Array	28.09	305	P	P	19 45 24.5	+1.6
	1.2nm,0.6s,baz=104,slow=9.2,SNR=6.0						
ZALV	Zalesovo Beam	42.27	313	P	P	19 47 25.3	+0.9
	0.6nm,0.5s,baz=93,slow=7.2,SNR=2.6						
MKAR	Makanchi Array	44.41	303	P	P	19 47 43.5	+1.6
	0.4nm,0.7s,baz=85,slow=9.6,SNR=2.9						
KURBB	Kurchatov Arra	46.33	308	P	P	19 47 57.5	+0.6
	1.0nm,0.6s,baz=84,slow=7.9,SNR=3.2						
ILAR	Eielson Array	49.84	32	P	P	19 48 20.1	-3.8
	0.3nm,0.6s,baz=183,slow=9.9,SNR=4.3						
WRA	Warramunga Arr	56.63	188	P	P	19 49 13.6	-0.7
	0.4nm,0.5s,baz=7.2,slow=7.5,SNR=7.4						
ASAR	Alice Springs	60.35	188	P	P	19 49 38.2	-2.0
	0.6nm,0.9s,baz=5.8,slow=6.7,SNR=4.7						

*ISK **06** 19:53:05.2, 38°.71N×26°.52E, h28km, MD2.7*
*DDA **06** 19:53:07.1, 37°.91N×26°.87E, h12km, MD3.1*
*CSEM **06** 19:53:07.9±0.3, 37°.92N×26°.93E, h2km, MD3.1, Error ellipse: s-maj=6.8km s-min=4.9km az=65.0*
ISC 06 19:53:07.5±1.1, 37°.96N±0°.04×26°.92E±0°.04, h8km±11km, n19, σ0.41/30, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.36	136	i P	Pg	19 53 14.4	-0.1
GCAM				i S	Sg	19 53 19.6	+0.4
GCAM	G?zelcaml?	0.36	136	i P	Pg	19 53 14.4	-0.1
GCAM				i S	Sg	19 53 19.6	+0.4
BLCB	Balcova	0.44	12	PG	Pb	19 53 17.3	-0.3
BLCB				eSG	Sb	19 53 24.1	-0.2
BLCB	Balcova	0.44	12	i Pg	Pb	19 53 17.3	-0.3
BLCB				eSg	Sb	19 53 24.1	-0.2
URLA	Izmir	0.48	327	i P	Pg	19 53 17.1	+0.3
URLA				i S	Sb	19 53 24.8	-0.7
URLA	Izmir	0.48	327	i P	Pg	19 53 17.1	+0.3
URLA				i S	Sb	19 53 24.8	-0.7
IZM	Izmir	0.51	31	ePG	Pb	19 53 18.8	-0.1
IZM	Izmir	0.51	31	ePg	Pb	19 53 18.8	-0.1
AYDN	Tasoluk	0.81	111	eP	Pg	19 53 23.4	+0.2
AYDN				eS	Sg	19 53 33.6	-0.2
AYDN	Tasoluk	0.81	111	eP	Pg	19 53 23.4	+0.2
AYDN				eS	Sg	19 53 33.6	-0.2
MLSB	Milas	0.95	134	ePN	Pn	19 53 34.1	+7.0
AKHS	Akhisar	1.16	37	eP	Pn	19 53 30.5	+0.5
AKHS				eS	Sn	19 53 46.6	+0.6
AKHS	Akhisar	1.16	37	eP	Pn	19 53 30.5	+0.5
AKHS				eS	Sn	19 53 46.6	+0.6
APE	Apeiranthos	1.42	232	ePN	Pg	19 53 34.9	+0.1
APE	Apeiranthos	1.42	232	ePn	Pg	19 53 34.9	+0.1
KULA	Kula-Manisa	1.48	67	ePN	Pn	19 53 33.9	-0.6
KULA	Kula-Manisa	1.48	67	ePn	Pn	19 53 33.9	-0.6
BALY	Balya	1.86	17	eP	Pb	19 53 42.2	+0.3
BALY				eS	Sg	19 54 06.9	-0.5
BALY	Balya	1.86	17	eP	Pb	19 53 42.2	+0.3
BALY				eS	Sg	19 54 06.9	-0.5

MAN 06 19:53:08, 16°.83N×120°.45E, h109km, mb4.5, ML3.3, MS3.2, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.68	229	eP	Pn	19 53 27.6	+1.5
BOLP				eS	Sn	19 53 42.5	+2.8
ABRA	Dolores	0.85	17	eP	Pn	19 53 28.4	+0.8
ABRA				eS	Sn	19 53 43.7	+1.3
SIPP	Brgy, Tapao	1.08	1	⇓iP	Pn	19 53 31.7	+1.7
SIPP				i S	Sn	19 53 49.2	+2.6
SCZP	Santa Cruz	1.17	206	eP	Pn	19 53 31.7	+0.7
SCZP				eS	Sn	19 53 49.9	+1.6
APYP	Conner	1.27	36	eP	Pn	19 53 32.7	+0.6
APYP				eS	Sn	19 53 51.0	+0.6
CAUP	Cauayan	1.32	85	eP	Pn	19 53 34.0	+1.4
CAUP				eS	Sn	19 53 54.2	+2.9
PIP	Pasuquin	1.49	6	⇑iP	Pn	19 53 35.7	+1.0
PIP				eS	Sn	19 53 57.2	+2.3
BALP	Baler	1.53	135	eP	Pn	19 53 36.2	+1.1
BALP				eS	Sn	19 53 57.7	+1.9
PALP	Palanan	1.91	83	eP	Pn	19 53 40.7	+0.9
PALP				eS	Sn	19 54 04.6	+0.6
SGCP	Mt. Cagua	2.07	47	eP	Pn	19 53 42.0	+0.1
SGCP				eS	Sn	19 54 09.2	+1.5

KRSC 06 19:56:30.6±1.4, 49°.39N×156°.14E, h10km±10km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.29	359	P	Pn	19 56 54.3	-0.4
SKR				eS	Sn	19 57 12.0	-0.1
PAU	Pauzhetka	2.12	11	S	Sb	19 57 34.4	-1.1
MIPR	Malaya Ipel'ka	2.92	7	P	Pn	19 57 18.0	+0.9
ASAK	Asacha	3.20	20	P	Pn	19 57 22.7	+1.7
MTVR	Mutnovka	3.36	22	P	Pn	19 57 25.5	+2.2
MTVR				S	Sn	19 58 05.0	+1.7
RUS	Russkaya	3.40	25	P	Pn	19 57 25.3	+1.7
RUS				S	Sn	19 58 05.2	+1.3
UGLR	Uglovaya	4.18	23	P	Pn	19 57 37.4	+2.9
KOK	Koryaka	4.21	21	P	Pn	19 57 37.6	+2.7
SDLR	Sedlovina	4.26	23	P	Pn	19 57 37.8	+2.2
NLC	Nalytchevo	4.29	27	S	Sn	19 58 26.7	+0.9
SPN	Mys Shipunski	4.44	32	P	Pn	19 57 40.1	+2.1
SPN				S	Sn	19 58 30.8	+1.1
GNL	Ganaly	4.46	14	P	Pn	19 57 41.2	+2.9
MKZ	Mys Kozlova	6.22	32	P	Pn	19 58 05.3	+3.0

MEX 06 20:11:05.1±0.8, 15.°31N×93.°10W, h97km±10km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.41	344	i P	Pn	20 11 18.6	-1.4
PCIG				i S	Sn	20 11 29.7	-1.4
THIG		0.90	116	i P	Pn	20 11 23.4	-0.8
THIG				i S	Sn	20 11 36.5	-2.0
CCIG	Comitan	1.34	44	i P	Pn	20 11 28.8	-0.7
CCIG				i S	Sn	20 11 46.6	-1.4
TGIG		1.46	359	i P	Pn	20 11 29.5	-1.4
TGIG				i S	Sn	20 11 48.1	-2.2

IDC 06 20:19:48.9±3.8, 0.°58N×98.°88E, h0km, mb3.5/5, mb1 3.6/5, mb1mx3.4/24, mbtmp3.5/5, Error ellipse: s-maj=206.0km s-min=22.2km az=54.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.29	122	P	P	20 27 28.4	+0.2
	0.4nm,0.5s,baz=303,slow=9.0,SNR=7.3						
ASAR	Alice Springs	41.69	128	P	P	20 27 39.2	-0.5
	0.2nm,0.7s,baz=298,slow=7.2,SNR=3.5						
MKAR	Makanchi Array	48.26	345	P	P	20 28 31.1	-0.6
	0.3nm,0.7s,baz=158,slow=9.5,SNR=3.4						
ZALV	Zalesovo Beam	54.45	350	P	P	20 29 19.1	+1.2
	0.6nm,0.4s,baz=180,slow=8.1,SNR=4.4						
ARCES	ARCESS Array B	83.68	340	P	P	20 32 18.5	-0.7
	1.2nm,1.0s,baz=88,slow=9.1,SNR=4.0						

*SZGRF **06** 20:33:24.3, 22.°99N×46.°66W, h34km, mb6.0, MS5.9, Northern Mid-Atlantic Ridge*

*ISCJB **06** 20:33:26.8±0.1, 23.°94N±0.°02×46.°15W±0.°01, h10km, mb5.8/470, MS5.7/244, Error ellipse: s-maj=3.3km s-min=1.5km az=163.1*

*BGS **06** 20:33:26.7±2.0, 23.°71N×46.°19W, h10km, mb5.7, MS5.8*

*MOS **06** 20:33:26.9±0.9, 23.°98N×46.°17W, h10km, mb6.0/138, MS5.7/89, Error ellipse: s-maj=5.3km s-min=3.1km az=48.5*

*IDC **06** 20:33:26.9±0.3, 23.°94N×46.°12W, h0km, mb5.3/42, mb1 5.5/42, mb1mx5.5/42, mbtmp5.3/42, MS5.7/32, Ms1 5.7/32, ms1mx5.6/34, Error ellipse: s-maj=9.8km s-min=9.0km az=145.0*

*BJI **06** 20:33:28.0, 23.°90N×46.°10W, h10km, mB5.9/27, mb5.7/7, Ms6.1/39, Ms7 5.9/37*

*NEIC **06** 20:33:28.8±0.1, 23.°86N×46.°11W, h14km, mb6.0/237, ME6.5, MS5.7/146, MW6.0, MW5.9, Error ellipse: s-maj=3.3km s-min=2.0km az=171.0 Broadband fault plane solution: P waves. NP1:ϕ_s195.00000°, δ85.00000°, λ5.00000°. NP2:ϕ_s105.00000°, δ85.00000°, λ175.00000°. Principal axes: T Plg7.0000°, Azm60.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm150.0000°; Moment Tensor Solution. s82 Moment tensor: Scale 10^{17} Nm; M_{rr}2.00; $M_{\theta\theta}$-4.35; $M_{\phi\phi}$2.35; $M_{r\theta}$-0.99; $M_{\theta\phi}$-6.70; $M_{\phi r}$-0.96; Best double couple: $M_0$7.80000×10^{17} NP1:ϕ_s104.00000°, δ82.00000°, λ-178.00000°. NP2:ϕ_s13.00000°, δ88.00000°, λ-8.00000°. Principal axes: T 6.5100, Plg3.0000°, Azm58.0000°; N 2.1500, Plg81.0000°, Azm177.0000°; P -8.6600, Plg7.0000°, Azm328.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*DJA **06** 20:33:30.6±1.1, 24°N±13°×4°6W±3°0, h10km, M5.7/11, mB6.3/5, mb5.5/11, Mw(mB)6.0/5*

*GCMT **06** 20:33:33.0±0.1, 23.°94N×46.°12W, h12km, MW6.0, Moment Tensor Solution. s102,c198; s92,c139; Moment tensor: Scale 10^{18}Nm; M_{rr}0.12±.01; $M_{\theta\theta}$-0.55±.01; $M_{\phi\phi}$0.43±.01; $M_{r\theta}$0.08±.02; $M_{\theta\phi}$-1.14±.01; $M_{\phi r}$0.17±.03; Best double couple: $M_0$1.30000×10^{18} NP1:ϕ_s282.00000°, δ82.00000°, λ-179.00000°. NP2: ϕ_s192.00000°, δ89.00000°, λ-8.00000°. Principal axes: T 1.1900, Plg5.0000°, Azm237.0000°; N 0.1300, Plg82.0000°, Azm6.0000°; P -1.3200, Plg6.0000°, Azm146.0000°; Data Used: II IU IC G CN. Surface waves: sta=120, comp=263, per= 50.*

*NEIC **06** 20:33:40.6±0.0, 23.°88N×46.°36W, h10km, Moment Tensor Solution. s128 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.08; $M_{\theta\theta}$-0.43; $M_{\phi\phi}$0.51; $M_{r\theta}$-0.02; $M_{\theta\phi}$-1.02; $M_{\phi r}$0.33; Best double couple: $M_0$1.20000×10^{18} NP1:ϕ_s13.00000°, δ88.00000°, λ16.00000°. NP2:ϕ_s282.00000°, δ74.00000°, λ178.00000°. Principal axes: T 1.2300, Plg12.0000°, Azm238.0000°; N -0.1200, Plg74.0000°, Azm20.0000°; P -1.1100, Plg9.0000°, Azm146.0000°;*

ISC 06 20:33:29.2±0.5, 23.°83N±0.°04×46.°22W±0.°03, h15km±2km, h14km:pP-P, n1864, σ1.°42/1990, mb5.9/471, MS5.7/245, 352C-99D, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANWB	Willy Bob	15.79	250⇑	ePn	Pn	20 37 09.8	-1.4
BPA	Boggy Peak	16.13	248	eP	Pn	20 37 15.8	+0.2
BPA	Boggy Peak	16.13	248	e	S	20 40 24.7	-2.9
SEG	Port Louis	16.14	246	eP	Pn	20 37 16.4	+0.8
MGG	Marie-Galante	16.23	244	eP	Pn	20 37 16.8	0.0
BCG	Bois Riant Cap	16.39	245	eP	Pn	20 37 19.9	+1.0
DOG	Dongo Capester	16.42	245	eP	Pn	20 37 19.6	+0.4
PHG	Guadaloupe-2	16.45	245	eP	Pn	20 37 19.3	-0.4
BBSP	Saint Philip	16.46	232	e	P	20 37 26.0	+3.5
LZG	Guadaloupe-1	16.49	245	eP	Pn	20 37 20.3	+0.2
BBGH	Gun Hill	16.51	232⇑	ePn	P	20 37 23.3	+0.3
	9µm,1.8s						
HMG	Houelmont	16.51	245	eP	Pn	20 37 21.3	+0.9
TBG	Guadaloupe-3	16.53	244	eP	Pn	20 37 19.8	-0.9
DBCT	Belle View Cho	16.60	242	eP	P	20 37 26.8	+2.8
MDN	Morne-Daniel	16.61	242	eP	P	20 37 23.5	-0.6
DPMT	Pointe Michel	16.63	242	eP	P	20 37 23.7	-0.6
DSHT	Scott's Head	16.65	242	eP	Pn	20 37 23.3	+1.1
FDF	Fort de France	16.74	240	eP	Pn	20 37 23.8	+0.4
FDF	Fort de France	16.74	240⇑	iP	Pn	20 37 24.0	+0.7
FDF	Fort de France	16.74	240⇑	iP	Pn	20 37 23.7	+0.4
FDF				pmax	pmax		
	comp=Z,3µm,1.8s						
FDF	Fort de France	16.74	240⇑	iPn	Pn	20 37 23.7	+0.4
	comp=Z,3µm,1.8s						
SKI	Saint Kitts	16.76	250	eP	Pn	20 37 24.2	+0.7
SKI	Saint Kitts	16.76	250	e	S	20 40 49.7	+9.3
SLW	Petit Monier	16.99	238	e	P	20 37 29.9	+1.6
SLPE	Piton Saint Es	17.14	237	e	P	20 37 30.0	0.0
MCLT	Moule a Chique	17.18	237	eP	P	20 37 30.9	+0.5
MCLT	Moule a Chique	17.18	237	e	S	20 40 46.7	-2.4
SLB	Belfond	17.19	237	e	P	20 37 32.5	+2.0
SLDE	Delcer	17.21	237	e	P	20 37 32.9	+2.1
SVB	Belmont	17.69	236	eP	P	20 37 36.8	+0.8
STVI	Saint Thomas	18.31	256⇑	eP	P	20 37 43.0	+0.2
STVI				eSn	Sn	20 40 52.5	-15
CDVI	St. Croix	18.36	254⇑	eP	P	20 37 43.8	+0.4
	comp=Z,1µm,1.3s						
BBSR	BB Station	18.37	302	ePn	P	20 37 40.7	-2.8
	comp=Z,509nm,1.3s						
TOSP	Speyside	18.46	230	eP	Pn	20 37 47.2	+2.5
GRSS	Sisters	18.57	235	e	Pn	20 37 47.6	+1.6
GRHS	Sauteurs	18.64	234	e	Pn	20 37 48.0	+1.2
GRW	Mount Saint Ca	18.70	234	e	Pn	20 37 48.9	+1.3
GRGR	Grenville	18.71	234⇑	iP	Pn	20 37 48.8	+1.0
	comp=Z,3µm,1.6s						
MTP	Monte Pirata	18.93	256⇑	iP	Pn	20 37 50.3	0.0
	comp=Z,3µm,1.7s						
MTP				ePcP	PcP	20 42 09.4	-6.2
CBYP	Canovanas	19.14	257⇑	iP	Pn	20 37 52.7	-0.2
	comp=Z,1µm,1.6s						
HUMP	Col San Antoni	19.18	257	eP	Pn	20 37 54.6	+1.2
TBH	Brigand Hill	19.40	229	e	Pn	20 37 58.8	+2.8
SJG	San Juan	19.46	257⇑	eP	Pn	20 37 56.1	-0.6
	comp=Z,2µm,1.7s						
TRN	Trinidad (W)	19.52	230	e	Pn	20 38 00.7	+3.2
TPP	Pointe-a-Pierr	19.79	230	e	Pn	20 38 04.1	+3.4
CELP	Cerrillos	19.85	257	eP	Pn	20 38 01.6	+0.1
OBIP	Obispado Ponce	19.89	257⇑	iP	Pn	20 38 01.6	-0.3
AOPR	Arecibo Observ	19.92	258	eP	Pn	20 38 02.2	0.0
	comp=Z,4µm,1.8s						
LRS	Lares	20.02	258	eP	Pn	20 38 02.8	-0.6
ALNG	Atlantic LNG	20.05	230	e	Pn	20 38 06.6	+2.9
AGPR	Aguadilla, PR	20.20	259⇑	eP	P	20 38 04.0	+0.4
	comp=Z,5µm,1.6s						
LSP	Las Mesas	20.27	258	eP	Pn	20 38 06.1	-0.3
MPR	Mayaguez	20.31	258	eP	Pn	20 38 06.6	-0.2
	comp=Z,2µm,1.1s						
CRPR	Cabo Rojo, PR	20.35	257	eP	Pn	20 38 07.4	+0.1
CALA	Caldeira	20.94	41	eP	Pn	20 38 14.9	+0.8
HOR	Horta	20.95	42	eP	Pn	20 38 18.4	+4.3
PCED	Cedros	20.97	41	eP	P	20 38 12.5	+0.7
	comp=Z,335nm,1.1s						
PCAN	Candelaria	21.00	42	eP	P	20 38 11.3	-0.8
	comp=Z,904nm,1.3s						
PICO	Pico	21.05	42	eP	P	20 38 13.5	+0.7
ROSA	Rosais	21.30	42	eP	P	20 38 15.9	+0.5
	comp=Z,530nm,1.1s						
PMAN	Manadas	21.34	42	eP	P	20 38 16.4	+0.6
	comp=Z,776nm,1.5s						
PGRA	Graciosa	21.66	41	eP	P	20 38 19.3	+0.1
	comp=Z,429nm,1.1s						
ADH	Angra Heroismo	21.89	43	eP	P	20 38 21.9	+0.3
	comp=Z,691nm,1.2s						
PSMA	Santa Maria	22.36	49	eP	P	20 38 24.0	-2.8
	comp=Z,325nm,1.2s						
PDA	Ponta Delgada	22.39	47	eP	P	20 38 21.9	-5.1
PSET	Sete Cidades	22.39	47	eP	P	20 38 25.8	-1.3
	comp=Z,513nm,1.2s						
PSMN	Pico do Norte,	22.41	49	eP	P	20 38 25.3	-2.0
	comp=Z,346nm,1.2s						
CMLA	Cha da Macela	22.49	47	eP	P	20 38 27.1	-1.0
	comp=Z,320nm,1.6s						
CMLA	Cha da Macela	22.49	47⇑	iP	P	20 38 27.2	-1.0
CMLA				MLR	MLR		
	comp=Z,44µm,21.0s						
CMLA	Cha da Macela	22.49	47⇑	iP	P	20 38 27.2	-1.0
CMLA				LR	LR		
	comp=Z,44µm,21.0s						
CMLA	Cha da Macela	22.49	47	P	P	20 38 27.5	-0.7
	comp=Z,2µm,0.9s,SNR=6.0						
BART	Pico Bartolome	22.74	47	eP	P	20 38 30.4	-0.4
	comp=Z,568nm,1.1s						
SACV	Santiago Islan	23.05	108	eP	P	20 38 32.7	-1.5
	comp=Z,1µm,1.8s						
SACV	Santiago Islan	23.05	108	P	P	20 38 35.1	+0.9
	comp=Z,817nm,0.9s,SNR=9.7						
SDDR	Presa de Saban	23.82	263⇑	eP	P	20 38 43.1	+1.2
SDDR				LR	LR		
	comp=Z,14µm,19.0s						
MASC	Masc	26.21	268	eP	P	20 39 04.5	+0.9
MOAC	Moa	26.77	269	eP	P	20 39 10.4	+1.8
PMOZ	Porto Moniz, M	27.00	64	eP	P	20 39 09.3	-1.5
	comp=Z,268nm,1.9s						
PMOZ				eLR	LR	20 44 55.0	
	comp=Z,17µm,22.0s						
PMOZ				eT	T	21 06 30.6	
GTBY	Guantanamo Bay	27.07	267	eP	P	20 39 12.1	+0.7
	comp=Z,441nm,1.5s						
GTBY				LR	LR		
	comp=Z,22µm,20.0s						
EMMW	East Machias	27.09	325	eP	P	20 39 11.4	+0.1
	comp=Z,818nm,1.4s						
PMAR	Madeira	27.21	64	eP	P	20 39 10.6	-2.2
	comp=Z,282nm,2.4s						
PMAR				eT	T	21 06 46.5	
FUL	Funchal	27.22	65	eP	P	20 39 11.7	-0.9
	comp=Z,263nm,2.4s						
RCC	Rio Carpintero	27.59	268	eP	P	20 39 15.3	-0.8
RCC				eS	S	20 43 58.9	+1.7
	comp=N,297nm,1.5s						
RCC				e			
	comp=E,42nm,1.4s						
BRYW	Bryant College	27.73	317	eP	P	20 39 17.0	-0.1
	comp=E,839nm,1.5s						
BRYW				ePcP	PcP	20 42 34.7	+1.0
PMPST	Porto Santo, M	27.76	64	eP	P	20 39 16.1	-1.4
	comp=E,206nm,1.5s						
PMPST				eT	T	21 07 18.1	
WES	Weston	27.85	318	eP	P	20 39 17.5	-0.6
WES				e		20 42 36.2	
WES				pmax	pmax		
	comp=Z,798nm,1.5s						
WES	Weston	27.85	318	eP	P	20 39 17.5	-0.6
	comp=Z,798nm,1.5s						
WES				ePcP	PcP	20 42 36.2	+2.3
HRV	Adam Dziewonsk	28.06	318	eP	P	20 39 20.5	+0.5
HRV				pmax	pmax		
	comp=Z,150nm,1.3s						
HRV	Adam Dziewonsk	28.06	318	eP	P	20 39 20.5	+0.5
	comp=Z,150nm,1.3s						
YLE	Yale	28.31	314	eP	P	20 39 22.2	0.0
	comp=Z,1µm,1.8s						
FFD	Franklin Falls	28.66	319	eP	P	20 39 25.8	+0.5
	comp=Z,762nm,1.4s						
PQI	Presque Isle	28.74	328⇓	iP	P	20 39 25.9	-0.2
	comp=Z,4µm,1.8s						
CPNY	Central Park	28.74	313	eP	P	20 39 25.3	-0.8
	comp=Z,97nm,1.2s						
LMGC	Las Mercedes	28.77	269	eP	P	20 39 28.6	+2.0
LMGC				eS	S	20 44 25.5	+10
	comp=N,9µm,16.8s						
LMGC				e			
	comp=E,10µm,18.7s						
BRNJ	Basking Ridge	29.10	312	eP	P	20 39 30.6	+1.3
	comp=E,40µm,1.3s						
HNH	Hanover	29.17	319⇓	iP	P	20 39 30.5	+0.6
	comp=E,348nm,1.1s						
LBNH	Lisbon	29.27	320⇓	eP	P	20 39 31.2	+0.4
LBNH				pmax	pmax		
	comp=Z,627nm,1.8s						
LBNH				MLR	MLR		
	comp=Z,16µm,20.0s						
LBNH	Lisbon	29.27	320⇓	eP	P	20 39 31.1	+0.4
	comp=Z,627nm,1.8s						
LBNH				LR	LR		
	comp=Z,16µm,20.0s						
BBTS	Babate	29.42	103	P	P	20 39 32.1	-0.2
BBTS	Babate	29.42	103	P	P	20 39 32.1	-0.2
	comp=Z,53nm,1.0s,baz=345,slow=2.3,SNR=5.4						
BBTS				LR	LR	20 48 49.4	
	comp=Z,7µm,18.1s,baz=128,slow=31						
TRY	Troy	29.50	316	eP	P	20 39 33.2	+0.4
	comp=Z,1µm,1.8s						
CNNC	Cliffs of the	29.69	300	eP	P	20 39 35.6	+1.1
	comp=Z,38nm,0.8s						
CNNC				LR	LR		
	comp=Z,6µm,22.0s						
MTDJ	Mount Denham	29.72	265	eP	P	20 39 36.8	+1.6
	comp=Z,258nm,1.0s						
MTDJ				LR	LR		
	comp=Z,10µm,21.0s						
ACCN	Adirondack Com	29.84	318	eP	P	20 39 35.5	-0.3
	comp=Z,250nm,1.6s						
MDV	Middlebury	29.87	319	eP	P	20 39 36.5	+0.3
CBN	Corbin	30.14	306	PFAKE		20 39 50.0	+11
CBN				LR	LR		
	comp=Z,9µm,20.0s						
SDMD	Soldier's Deli	30.17	308	eP	P	20 39 40.0	+1.2
	comp=Z,630nm,2.0s						
JSRW	J. Sargeant Re	30.35	305	eP	P	20 39 40.4	-0.1
NCB	Newcomb	30.49	318⇓	iP	P	20 39 42.4	+0.8
	comp=Z,218nm,1.3s						
NCB				LR	LR		
	comp=Z,11µm,22.0s						
FRNY	Flat Rock	30.58	320⇓	iP	P	20 39 43.1	+0.7
	comp=Z,186nm,0.9s						
BINY	Binghamton	30.74	314	eP	P	20 39 43.8	-0.1
	comp=Z,553nm,1.9s						
BINY				LR	LR		
	comp=Z,7µm,20.0s						
LONY	Lake Ozonia	31.05	319⇓	iP	P	20 39 46.8	+0.2
	comp=Z,168nm,1.3s						
LONY				LR	LR		
	comp=Z,11µm,20.0s						
NHSC	New Hope	31.14	295	eP	P	20 39 48.8	+1.3
	comp=Z,230nm,1.0s						
NHSC				LR	LR		
	comp=Z,4µm,19.0s						
RCBR	Riachuelo	31.15	160	eP	P	20 39 43.5	-4.2
RCBR				LR	LR		
	comp=Z,22µm,20.0s						
SSPA	Standing Stone	31.38	310⇓	iP	P	20 39 50.5	+1.0
	comp=Z,505nm,1.9s						
MSNY	Massena	31.43	319	eP	P	20 39 51.0	+1.2
	comp=Z,1µm,1.0s						
BLA	Blacksburg	32.16	303	PFAKE		20 40 10.0	+14
BLA				LR	LR		
	comp=Z,11µm,20.0s						
KMSC	Kings Mountain	32.42	298	P	P	20 40 00.2	+1.5
	baz=32						
ROSC	El Rosal	33.01	240	P	P	20 40 04.7	+0.3
ROSC	El Rosal	33.01	240	P	P	20 40 04.7	+0.3
	comp=Z,7.9nm,0.5s,baz=110,slow=16,SNR=18						
ROSC				LR	LR	20 53 01.2	
	comp=Z,11µm,19.9s,baz=14,slow=35						
ALLY	Alegheny Colle	33.34	310	eP	P	20 40 07.9	+1.2
ERPA	Erie	33.41	311	eP	P	20 40 08.2	+1.0
	comp=Z,806nm,1.9s						
ERPA				LR	LR		
	comp=Z,8µm,20.0s						
SOR	Soroa	33.75	276	eP	P	20 40 11.9	+1.5
SADO	Sadowa	33.95	316	P	P	20 40 12.6	+0.6
SADO	Sadowa	33.95	316	P	P	20 40 12.6	+0.6
	comp=Z,13nm,0.8s,baz=136,slow=9.1,SNR=14						
TKL	Tuckaleechee C	34.48	299	P	P	20 40 17.7	+1.0
TKL	Tuckaleechee C	34.48	299	P	P	20 40 17.7	+1.0
	comp=Z,41nm,0.9s,baz=123,slow=16,SNR=18						
SCHQ	Schefferville	34.56	339⇓	eP	P	20 40 16.1	-1.0
	comp=Z,364nm,1.4s						
SCHQ	Schefferville	34.56	339	P	P	20 40 16.9	-0.2
	comp=Z,82nm,1.0s,baz=139,slow=8.0,SNR=46						
SCHQ				LR	LR	20 52 35.9	
	comp=Z,14µm,21.0s,baz=154,slow=33						
PFVI	Vila Bisbo	34.62	59	eP	P	20 40 16.7	-1.1
	comp=Z,195nm,1.4s						
PFVI				i S	S	20 45 52.0	+5.2
PMAFR	Mafra	34.69	55	eP	P	20 40 17.1	-1.3
	comp=Z,196nm,1.4s						
PMAFR				i S	S	20 45 50.5	+2.7
LIS	Lisbon	34.73	56	eP	P	20 40 18.1	-0.7
LIS				AMb	AMB	20 40 23.5	
	comp=Z,349nm,2.4s						
LIS				eS	S	20 45 48.2	-0.2
LIS	Lisbon	34.73	56	eP	P	20 40 18.1	-0.7
	comp=Z,349nm,2.4s						
LIS				eS	S	20 45 48.2	-0.2
LIS	Lisbon	34.73	56	eP	P	20 40 18.0	-0.7
LIS				eS	S	20 45 48.2	-0.2
PTEO	Sao Teotonio	34.78	58	eP	P	20 40 18.2	-1.0
	comp=Z,184nm,1.6s						
MORF	Marmelete	34.79	58	eP	P	20 40 18.2	-1.2
	comp=Z,269nm,1.4s						
MORF				i S	S	20 45 53.5	+3.9
MORF	Marmelete	34.79	58	eP	P	20 40 18.5	-0.9
MORF				eS	S	20 45 49.4	-0.2
ACSO	Alum Creek Sta	34.91	307	PFAKE		20 40 30.0	+10
ACSO				LR	LR		
	comp=Z,8µm,19.0s						
CPCT	Cooper Cave	35.05	298⇓	eP	P	20 40 22.2	+0.6
CPCT				ePP	PnPn	20 41 39.4	+0.6
PNCL	Nicolau / Gran	35.06	57	eP	P	20 40 20.4	-1.2
	comp=Z,206nm,1.7s						
PNCL				i S	S	20 46 01.0	+7.5
MESJ	Messejana	35.24	58	eP	P	20 40 22.3	-0.9
MESJ				AMb	AMB	20 40 28.2	
	comp=Z,108nm,2.0s						
MESJ	Messejana	35.24	58	eP	P	20 40 22.3	-0.9
	comp=Z,108nm,2.0s						
BCIP	Isla Barro Col	35.26	251⇑	iP	P	20 40 24.3	+0.7
	comp=Z,649nm,1.7s						
BCIP				LR	LR		
	comp=Z,7µm,21.0s						
PCVE	Castro Verde	35.33	58	eP	P	20 40 23.0	-1.0
	comp=Z,124nm,1.5s						
PCVE				i S	S	20 46 02.5	+4.7
PBDV	Barranco-do-Ve	35.34	59	eP	P	20 40 23.5	-0.6
	comp=Z,346nm,1.5s						
PBDV				i S	S	20 46 04.0	+6.0
EVOP	Sao Brissos	35.46	57⇑	iP	P	20 40 23.8	-1.3
EVOP				pmax	pmax		
	comp=Z,449nm,1.9s						
EVOP	Sao Brissos	35.46	57⇑	iP	P	20 40 23.8	-1.3
	comp=Z,449nm,1.9s						
PTOM	Tomar	35.51	55	eP	P	20 40 24.1	-1.4
	comp=Z,177nm,1.7s						
PMTG	Montargil	35.51	56	eP	P	20 40 24.2	-1.3
	comp=Z,190nm,1.7s						
PMTG				i S	S	20 46 05.5	+5.0
PVAQ	Vaqueiros	35.54	59	eP	P	20 40 24.9	-0.9
	comp=Z,394nm,1.8s						
PVAQ				eS	S	20 46 03.6	+2.6
PVAQ				eLR	LR	20 49 16.8	
	comp=Z,16µm,20.0s						
EVO	Evora	35.55	57⇑	iP	P	20 40 23.8	-2.0
	comp=Z,449nm,1.9s						
EVO				eR			
	comp=Z,28µm,20.0s						
EVO	Evora	35.55	57	eP	P	20 40 24.5	-1.3
	comp=Z,142nm,1.8s						
PBEJ	Beja	35.55	57	eP	P	20 40 24.7	-1.2
	comp=Z,247nm,1.8s						
RTC	Rabat Centre	35.72	64	PFAKE		20 40 40.0	+13
RTC				LR	LR		
	comp=Z,26µm,19.0s						
PTO	Porto	35.79	52	eP	P	20 40 27.2	-0.6
	comp=Z,250nm,1.7s						
PESTR	Estremoz	35.95	56	eP	P	20 40 28.0	-1.3
	comp=Z,93nm,1.5s						
PESTR				i S	S	20 46 10.0	+2.8
AAM	Ann Arbor	36.02	310⇓	iP	P	20 40 30.3	+0.5
AAM				pmax	pmax		
	comp=Z,718nm,1.8s						
AAM				MLR	MLR		
	comp=Z,7µm,21.0s						
AAM	Ann Arbor	36.02	310⇓	iP	P	20 40 30.3	+0.5
	comp=Z,718nm,1.8s						
AAM				LR	LR		
	comp=Z,7µm,21.0s						
SWET	Sewanee	36.16	298⇓	eP	P	20 40 32.1	+0.9
	comp=Z,47nm,0.8s						
PVIS	Viseu	36.18	53	eP	P	20 40 30.0	-1.3
	comp=Z,148nm,1.7s						
PBAR	Barrancos	36.22	57	eP	P	20 40 30.4	-1.2
	comp=Z,188nm,1.5s						
PBAR				i S	S	20 46 17.5	+6.1
PMRV	Marv??o	36.23	55	eP	P	20 40 30.3	-1.4
	comp=Z,133nm,2.1s						
PMRV				eS	S	20 46 12.1	+0.6
PMRV				eLR	LR	20 49 47.6	
	comp=Z,18µm,20.0s						
PCBR	Castelo Branco	36.26	55	eP	P	20 40 30.5	-1.4
	comp=Z,170nm,1.7s						
PGAV	Gavieira, Arco	36.27	51	eP	P	20 40 31.0	-1.1
	comp=Z,353nm,1.7s						
PGAV				i S	S	20 46 22.0	+10
PGAV				eLR	LR	20 49 41.1	
	comp=Z,14µm,20.0s						
MTE	Manteigas	36.35	54	eP	P	20 40 31.7	-1.1
	comp=Z,368nm,1.5s						
MTE				eS	S	20 46 13.6	0.0
MTE				eLR	LR	20 49 51.5	
	comp=Z,17µm,20.0s						
MTE	Manteigas	36.35	54⇑	iP	P	20 40 31.6	-1.2
	comp=Z,192nm,1.1s						
MTE				LR	LR		
	comp=Z,15µm,19.0s						
PCAB	Cabril	36.37	51	eP	P	20 40 31.6	-1.3
	comp=Z,226nm,1.6s						
POLO	Lamas de Olo	36.44	52	eP	P	20 40 32.3	-1.2
	comp=Z,137nm,1.5s						
POLO				i S	S	20 46 16.0	+1.1
PVRL	Vila Real	36.47	52	eP	P	20 40 32.5	-1.2
	comp=Z,186nm,2.1s						
SAML	Samuel	36.56	209⇑	iP	P	20 40 34.5	-0.1
	comp=Z,327nm,1.6s						
SAML				LR	LR		
	comp=Z,23µm,20.0s						
BRAL	Brewton	36.79	290	eP	P	20 40 37.8	+1.2
	comp=Z,442nm,1.3s						
BRAL				LR	LR		
	comp=Z,6µm,20.0s						
LRAL	Lakeview Retre	36.83	294⇓	eP	P	20 40 37.6	+0.8
	comp=Z,131nm,1.0s						
LRAL				LR	LR		
	comp=Z,4µm,19.0s						
WCI	Wyandotte Cave	36.92	302	eP	P	20 40 35.4	-2.3
WCI				pmax	pmax		
	comp=Z,166nm,1.0s						
WCI	Wyandotte Cave	36.92	302	eP	P	20 40 35.4	-2.3
	comp=Z,166nm,1.0s						
MVO	Moncorvo	36.93	53	eP	P	20 40 36.7	-1.0
	comp=Z,250nm,1.9s						
MVO				eS	S	20 46 25.5	+3.1
MVO				eLR	LR	20 50 12.9	
	comp=Z,13µm,18.0s						

BLO	**Bloomington**	**37.29**	**304**⇓	iP	**P**	**20 40 41.4**	**+0.7**
BLO				pmax	pmax		
	comp=Z,131nm,1.0s						
BLO	**Bloomington**	**37.29**	**304**⇓	iP	**P**	**20 40 41.4**	**+0.7**
	comp=Z,131nm,1.0s						
PBRG	**Braganca**	**37.32**	**52**	eP	**P**	**20 40 40.0**	**-1.0**
	comp=Z,220nm,1.8s						
PBRG				iS	**S**	**20 46 34.0**	**+5.8**
WVT	**Waverly**	**37.80**	**299**⇓	eP	**P**	**20 40 45.5**	**+0.4**
WVT	**Waverly**	**37.80**	**299**⇓	eP	**P**	**20 40 45.5**	**+0.4**
USIN	**University of**	**37.94**	**302**⇓	eP	**P**	**20 40 47.1**	**+0.8**
	comp=Z,290nm,1.4s						
SFIN	**Scholer Farm**	**37.98**	**306**	P	**P**	**20 40 47.6**	**+1.0**
	baz=38,SNR=27						
OLIL	**Olney**	**38.41**	**303**⇓	eP	**P**	**20 40 50.9**	**+0.7**
	comp=Z,322nm,1.3s						
PAB	**San Pablo**	**38.55**	**56**⇑	iP	**P**	**20 40 50.1**	**-1.3**
PAB				e		20 42 16.9	
PAB				pmax	pmax		
	comp=Z,47nm,1.1s						
PAB				MLR	MLR		
	comp=Z,17µm,20.0s						
PAB	**San Pablo**	**38.55**	**56**⇑	iP	**P**	**20 40 50.1**	**-1.3**
	comp=Z,47nm,1.1s						
PAB				ePP	**PP**	**20 42 16.9**	**-2.7**
PAB				LR	LR		
	comp=Z,17µm,20.0s						
UTMT	**University of**	**38.66**	**299**⇓	eP	**P**	**20 40 53.3**	**+1.0**
	comp=Z,422nm,1.0s						
ESDC	**Sonseca Array**	**38.87**	**56**	P	**P**	**20 40 52.7**	**-1.4**
ESDC				PcP	**PcP**	**20 43 05.3**	**+0.4**
ESDC	**Sonseca Array**	**38.87**	**56**	P	**P**	**20 40 52.7**	**-1.4**
	comp=Z,24nm,1.0s,baz=259,slow=8.2,SNR=54						
ESDC				PcP	**PcP**	**20 43 05.3**	**+0.4**
	comp=Z,20nm,1.1s,baz=272,slow=3.3,SNR=7.4						
ESDC				LR	LR	20 52 50.9	
	comp=Z,13µm,21.2s,baz=265,slow=30						
ESLA	**Sonseca Array**	**38.87**	**56**⇑	iP	**P**	**20 40 52.7**	**-1.4**
OXF	**Oxford**	**38.93**	**296**	eP	**P**	**20 40 55.0**	**+0.4**
OXF				pmax	pmax		
	comp=Z,313nm,0.9s						
OXF				MLR	MLR		
	comp=Z,6µm,19.0s						
OXF	**Oxford**	**38.93**	**296**	eP	**P**	**20 40 55.0**	**+0.4**
	comp=Z,313nm,0.9s						
OXF				LR	LR		
	comp=Z,6µm,19.0s						
GLAT	**Glass**	**38.99**	**299**	eP	**P**	**20 40 56.2**	**+1.1**
HALT	**Halls**	**38.99**	**298**	eP	**P**	**20 40 54.4**	**-0.7**
TEIG	**Tepich**	**39.05**	**273**	eP	**P**	**20 40 57.3**	**+1.5**
	comp=Z,130nm,1.0s						
TEIG	**Tepich**	**39.05**	**273**	P	**P**	**20 40 57.5**	**+1.7**
	comp=Z,93nm,0.8s,baz=55,slow=5.6,SNR=32						
TEIG				LR	LR	20 55 04.6	
	comp=Z,8µm,18.4s,baz=244,slow=33						
OTAV	**Otavalo**	**39.08**	**238**⇑	iP	**P**	**20 40 56.9**	**+0.4**
	comp=Z,514nm,1.6s						
OTAV				LR	LR		
	comp=Z,14µm,22.0s						
SIUC	**Southern Illin**	**39.12**	**301**	eP	**P**	**20 40 57.2**	**+1.1**
	comp=Z,187nm,1.1s						
VAL	**Valentia**	**39.26**	**35**	eP	**P**	**20 40 54.7**	**-2.3**
VAL				eS	**S**	**20 46 58.7**	**+1.6**
VAL				eLQ	LQ	20 49 58.7	
BDFB	**Brasilia**	**39.27**	**183**	P	**P**	**20 40 58.9**	**+1.3**
BDFB	**Brasilia**	**39.27**	**183**	P	**P**	**20 40 58.9**	**+1.3**
	comp=Z,87nm,1.1s,baz=352,slow=11,SNR=46						
BDFB				LR	LR	20 56 07.4	
	comp=Z,13µm,18.6s,baz=356,slow=34						
PVMO	**Portageville**	**39.34**	**299**	P	**P**	**20 40 58.2**	**+0.2**
	comp=Z,649nm,0.9s						
MET	**Memphis--Engin**	**39.41**	**297**	eP	**P**	**20 41 01.5**	**+2.9**
	comp=Z,395nm,0.9s						
GNAR	**Gosnell**	**39.55**	**298**	eP	**P**	**20 41 00.9**	**+1.1**
	comp=Z,5µm,1.2s						
HDIL	**Hopedale**	**39.66**	**305**	eP	**P**	**20 41 01.5**	**+0.9**
	comp=Z,106nm,1.1s						
HDIL				LR	LR		
	comp=Z,8µm,19.0s						
VBMS	**Vicksburg**	**39.76**	**292**	eP	**P**	**20 41 02.5**	**+1.0**
	comp=Z,323nm,1.3s						
VBMS				LR	LR		
	comp=Z,8µm,20.0s						
TGUH	**Tegucigalpa,Un**	**39.91**	**263**	eP	**P**	**20 41 04.9**	**+2.0**
	comp=Z,107nm,0.8s						
TGUH				LR	LR		
	comp=Z,11µm,22.0s						
HBAR	**Harrisburg**	**40.03**	**297**	eP	**P**	**20 41 03.5**	**-0.2**
SLM	**Saint Louis**	**40.05**	**302**	eP	**P**	**20 41 04.9**	**+1.1**
SLM				pmax	pmax		
	comp=Z,261nm,1.3s						
SLM	**Saint Louis**	**40.05**	**302**	eP	**P**	**20 41 04.9**	**+1.1**
	comp=Z,261nm,1.3s						
JFWS	**Jewell Farm**	**40.87**	**309**	eP	**P**	**20 41 10.9**	**+0.3**
JFWS				pmax	pmax		
	comp=Z,70nm,0.7s						
JFWS				MLR	MLR		
	comp=Z,7µm,20.0s						
JFWS	**Jewell Farm**	**40.87**	**309**	eP	**P**	**20 41 10.9**	**+0.3**
	comp=Z,70nm,0.7s						
JFWS				LR	LR		
	comp=Z,7µm,20.0s						
COWI	**Conover**	**40.96**	**314**	eP	**P**	**20 41 11.6**	**+0.2**
	comp=Z,321nm,1.8s						
COWI				LR	LR		
	comp=Z,6µm,20.0s						
UALR	**University of**	**41.36**	**296**	eP	**P**	**20 41 15.4**	**+0.6**
	comp=Z,108nm,0.9s						
SJPF	**Ste Jean**	**41.60**	**51**⇑	iP	**P**	**20 41 16.1**	**-0.5**
	comp=Z,605nm,1.7s						
SJPF	**Ste Jean**	**41.60**	**51**⇑	iP	**P**	**20 41 16.1**	**-0.5**
SJPF				pmax	pmax		
	comp=Z,605nm,1.7s						
SJPF	**Ste Jean**	**41.60**	**51**⇑	iP	**P**	**20 41 16.1**	**-0.5**
	comp=Z,605nm,1.7s						
OSSF	**Osses**	**41.60**	**51**	eP	**P**	**20 41 15.4**	**-1.2**
OSSF	**Osses**	**41.60**	**51**	eP	**P**	**20 41 15.4**	**-1.2**
QUIF	**Quistinic**	**41.63**	**44**⇑	iP	**P**	**20 41 15.9**	**-0.9**
	comp=Z,760nm,1.6s						
QUIF	**Quistinic**	**41.63**	**44**⇑	iP	**P**	**20 41 15.9**	**-0.9**
QUIF				pmax	pmax		
	comp=Z,760nm,1.6s						
QUIF	**Quistinic**	**41.63**	**44**⇑	iP	**P**	**20 41 15.9**	**-0.9**
	comp=Z,760nm,1.6s						
ROSF	**Rostrenen**	**41.71**	**43**⇑	iP	**P**	**20 41 16.7**	**-0.7**
	comp=Z,634nm,1.4s						
ROSF	**Rostrenen**	**41.71**	**43**⇑	iP	**P**	**20 41 16.7**	**-0.7**
ROSF				pmax	pmax		
	comp=Z,634nm,1.4s						
ROSF	**Rostrenen**	**41.71**	**43**⇑	iP	**P**	**20 41 16.7**	**-0.7**
	comp=Z,634nm,1.4s						
ORDF	**Ordiarp**	**41.82**	**51**	eP	**P**	**20 41 17.5**	**-0.9**
ORDF	**Ordiarp**	**41.82**	**51**	eP	**P**	**20 41 17.5**	**-0.9**
DLF	**Lyons Farm**	**41.90**	**35**⇑	iP	**P**	**20 41 18.1**	**-0.8**
HTL	**Hartland**	**41.99**	**39**	eP	**P**	**20 41 17.2**	**-2.4**
HTL				AMS	AMS	20 54 00.3	
	comp=Z,7µm,20.4s						
HTL	**Hartland**	**41.99**	**39**	P	**P**	**20 41 17.2**	**-2.4**
HTL				AMS	AMS	20 54 00.3	
	comp=Z,7µm,20.4s						
ETSF	**Etsaut**	**42.03**	**52**⇑	iP	**P**	**20 41 19.8**	**-0.4**
	comp=Z,429nm,1.4s						
ETSF	**Etsaut**	**42.03**	**52**⇑	iP	**P**	**20 41 19.8**	**-0.4**
ETSF				pmax	pmax		
	comp=Z,429nm,1.4s						
ETSF	**Etsaut**	**42.03**	**52**⇑	iP	**P**	**20 41 19.8**	**-0.4**
	comp=Z,429nm,1.4s						
DYA	**Yadsworthy**	**42.09**	**40**	AMB	AMB	20 41 23.4	
	comp=Z,224nm,1.4s						
DYA				AMS	AMS	20 54 05.4	
	comp=Z,11µm,21.2s						
SGMF	**Saint Gilles**	**42.13**	**43**⇑	iP	**P**	**20 41 20.3**	**-0.6**
	comp=Z,1µm,1.4s						
SGMF	**Saint Gilles**	**42.13**	**43**⇑	iP	**P**	**20 41 20.3**	**-0.6**
SGMF				pmax	pmax		
	comp=Z,1µm,1.4s						
SGMF	**Saint Gilles**	**42.13**	**43**⇑	iP	**P**	**20 41 20.3**	**-0.6**
	comp=Z,1µm,1.4s						
SIV	**San Ignacio**	**42.16**	**202**	P	**P**	**20 41 21.7**	**+0.3**
SIV	**San Ignacio**	**42.16**	**202**	P	**P**	**20 41 21.7**	**+0.3**
	comp=Z,80nm,1.3s,baz=51,slow=7.7,SNR=48						
SIV				LR	LR	20 57 32.4	
	comp=Z,10µm,21.0s,slow=34						
REYF	**Montagne du Re**	**42.18**	**52**	eP	**P**	**20 41 21.2**	**-0.3**
REYF	**Montagne du Re**	**42.18**	**52**	eP	**P**	**20 41 21.2**	**-0.3**
EANR	**'Ain N'Sour**	**42.39**	**62**	P	**P**	**20 41 22.6**	**-0.7**
HEX	**Exmoor**	**42.41**	**39**⇑	eP	**P**	**20 41 22.6**	**-0.6**
HEX	**Exmoor**	**42.41**	**39**	P	**P**	**20 41 22.6**	**-0.6**
VIEF	**Viey**	**42.44**	**52**	eP	**P**	**20 41 23.5**	**-0.1**
VIEF	**Viey**	**42.44**	**52**	eP	**P**	**20 41 23.5**	**-0.1**
LABF	**Labassere**	**42.51**	**52**	eP	**P**	**20 41 23.9**	**-0.2**
LABF	**Labassere**	**42.51**	**52**	eP	**P**	**20 41 23.9**	**-0.2**
ETRT	**Tiaret**	**42.53**	**63**	P	**P**	**20 41 23.3**	**-1.1**
FRB	**Frobisher Bay**	**42.56**	**346**	P	**P**	**20 41 23.6**	**-0.5**
FRB	**Frobisher Bay**	**42.56**	**346**	P	**P**	**20 41 23.6**	**-0.5**
	comp=Z,109nm,1.2s,baz=149,slow=7.7,SNR=24						
FRB				LR	LR	20 57 17.9	
	comp=Z,19µm,21.0s,baz=139,slow=34						
ECHA	**Ech Chlef**	**42.62**	**62**	P	**P**	**20 41 24.0**	**-1.0**
GMM	**Mts of Mourne**	**42.66**	**34**	eP	**P**	**20 41 24.0**	**-1.0**
GMM	**Mts of Mourne**	**42.66**	**34**	P	**P**	**20 41 24.0**	**-1.0**
JVM	**Valle D.L. Mar**	**42.68**	**42**	eP	**P**	**20 41 25.0**	**-0.3**
JVM	**Valle D.L. Mar**	**42.68**	**42**	P	**P**	**20 41 25.0**	**-0.3**
JSA	**Saint Aubin**	**42.69**	**42**	eP	**P**	**20 41 22.5**	**-2.9**
JSA				AMB	AMB	20 41 28.3	
	comp=Z,230nm,1.4s						
JSA				AMS	AMS	20 53 54.2	
	comp=Z,16µm,23.5s						
JSA	**Saint Aubin**	**42.69**	**42**	P	**P**	**20 41 22.5**	**-2.9**
JSA				AMB	AMB	20 41 28.3	
	comp=Z,230nm,1.4s						
JSA				AMS	AMS	20 53 54.2	
	comp=Z,16µm,23.5s						
EPF	**Esparros**	**42.70**	**52**⇑	iP	**P**	**20 41 25.2**	**-0.5**
	comp=Z,435nm,1.6s						
EPF	**Esparros**	**42.70**	**52**⇑	iP	**P**	**20 41 25.2**	**-0.5**
EPF				pmax	pmax		
	comp=Z,435nm,1.6s						
EPF	**Esparros**	**42.70**	**52**⇑	iP	**P**	**20 41 25.2**	**-0.5**
	comp=Z,435nm,1.6s						
JRS	**Jersey**	**42.74**	**42**	eP	**P**	**20 41 24.5**	**-1.3**
JRS	**Jersey**	**42.74**	**42**	P	**P**	**20 41 24.5**	**-1.3**
EBNR	**Beni Rached**	**42.76**	**62**	P	**P**	**20 41 25.8**	**-0.4**
JQE	**Queens East**	**42.77**	**42**	eP	**P**	**20 41 25.5**	**-0.5**
JQE	**Queens East**	**42.77**	**42**	P	**P**	**20 41 25.5**	**-0.5**
YRE	**Yr Eifl**	**42.88**	**36**⇑	eP	**P**	**20 41 25.7**	**-1.1**
YRE	**Yr Eifl**	**42.88**	**36**	P	**P**	**20 41 25.7**	**-1.1**
MELF	**Melles**	**42.97**	**52**	eP	**P**	**20 41 27.5**	**-0.4**
MELF	**Melles**	**42.97**	**52**	eP	**P**	**20 41 27.5**	**-0.4**
WLF1	**Llynfaes**	**43.03**	**36**	eP	**P**	**20 41 27.5**	**-0.6**
WLF1				AMB	AMB	20 41 31.7	
	comp=Z,141nm,1.3s						
WLF1				AMS	AMS	20 54 11.2	
	comp=Z,10µm,23.1s						
WLF1	**Llynfaes**	**43.03**	**36**	P	**P**	**20 41 27.5**	**-0.6**
WLF1				AMB	AMB	20 41 31.7	
	comp=Z,141nm,1.3s						
WLF1				AMS	AMS	20 54 11.2	
	comp=Z,10µm,23.1s						
EYMN	**Ely**	**43.06**	**316**	eP	**P**	**20 41 28.0**	**-0.5**
	comp=Z,675nm,2.0s						
EYMN				LR	LR		
	comp=Z,10µm,22.0s						
WME	**Myndd Eilian**	**43.13**	**36**⇑	eP	**P**	**20 41 28.1**	**-0.8**
WME	**Myndd Eilian**	**43.13**	**36**	P	**P**	**20 41 28.1**	**-0.8**
DBIC	**Dimbokro**	**43.19**	**106**	eP	**P**	**20 41 28.2**	**-1.7**
DBIC	**Dimbokro**	**43.19**	**106**	eP	**P**	**20 41 28.0**	**-1.9**
DBIC	**Dimbokro**	**43.19**	**106**	P	**P**	**20 41 28.5**	**-1.4**
	comp=Z,31nm,0.8s,baz=269,slow=8.9,SNR=21						
DBIC				LR	LR	20 57 05.5	
	comp=Z,9µm,18.3s,baz=273,slow=33						
MFF	**Saint Martin d**	**43.19**	**47**⇑	iP	**P**	**20 41 29.1**	**-0.4**
	comp=Z,1µm,1.5s						
MFF	**Saint Martin d**	**43.19**	**47**⇑	iP	**P**	**20 41 29.1**	**-0.4**
MFF				pmax	pmax		
	comp=Z,1µm,1.5s						
MFF	**Saint Martin d**	**43.19**	**47**⇑	iP	**P**	**20 41 29.1**	**-0.4**
	comp=Z,1µm,1.5s						
SPMN	**St. Paul**	**43.20**	**311**	P	**P**	**20 41 30.2**	**+0.6**
	baz=43,SNR=33						
MLS	**Moulis**	**43.23**	**52**	eP	**P**	**20 41 29.6**	**-0.3**
MLS	**Moulis**	**43.23**	**52**	eP	**P**	**20 41 29.6**	**-0.3**
GRR	**Gorron**	**43.25**	**44**⇑	iP	**P**	**20 41 29.2**	**-0.7**
	comp=Z,702nm,1.3s						
GRR	**Gorron**	**43.25**	**44**⇑	iP	**P**	**20 41 29.2**	**-0.7**
GRR				pmax	pmax		
	comp=Z,702nm,1.3s						
GRR	**Gorron**	**43.25**	**44**⇑	iP	**P**	**20 41 29.2**	**-0.7**
	comp=Z,702nm,1.3s						
LIC	**Lamto**	**43.25**	**107**	eP	**P**	**20 41 28.3**	**-2.1**
	comp=Z,140nm,1.1s,baz=286						
LIC				eR			
	comp=Z,13µm,19.8s						
LIC	**Lamto**	**43.25**	**107**	eP	**P**	**20 41 28.3**	**-2.1**
	comp=Z,140nm,1.1s						
MCH1	**Michaelchurch**	**43.25**	**38**	eP	**P**	**20 41 27.1**	**-2.8**
MCH1				AMB	AMB	20 41 33.1	
	comp=Z,130nm,1.3s						
MCH1				AMS	AMS	20 55 19.0	
	comp=Z,9µm,17.1s						
MCH1	**Michaelchurch**	**43.25**	**38**	P	**P**	**20 41 27.1**	**-2.8**
MCH1				AMB	AMB	20 41 33.1	
	comp=Z,130nm,1.3s						
MCH1				AMS	AMS	20 55 19.0	
	comp=Z,9µm,17.1s						
SFJD	**Kangerlussuaq**	**43.26**	**357**	eP	**P**	**20 41 29.5**	**-0.2**
	comp=Z,919nm,2.1s						
SFJD				PcP	**PcP**	**20 43 20.0**	**+1.4**
SFJD				LR	LR		
	comp=Z,5µm,20.0s						
SFJD	**Kangerlussuaq**	**43.26**	**357**	iP	**P**	**20 41 29.7**	**0.0**
	comp=Z,41nm,0.9s						
SFJD				iS	**S**	**20 47 57.5**	**+1.4**
SFJD	**Kangerlussuaq**	**43.26**	**357**	P	**P**	**20 41 29.5**	**-0.2**
	comp=Z,46nm,0.9s,baz=180,slow=8.7,SNR=14						
SFJD				PcP	**PcP**	**20 43 20.0**	**+1.4**
	comp=Z,29nm,1.2s,baz=226,slow=3.5,SNR=4.5						
WPM1	**Penmaenmawr**	**43.28**	**36**⇑	eP	**P**	**20 41 29.2**	**-0.9**
WPM1	**Penmaenmawr**	**43.28**	**36**	P	**P**	**20 41 29.2**	**-0.9**
LFF	**La Frestale**	**43.38**	**49**⇑	iP	**P**	**20 41 30.2**	**-0.9**
	comp=Z,803nm,1.3s						
LFF	**La Frestale**	**43.38**	**49**⇑	iP	**P**	**20 41 30.2**	**-0.9**
LFF				pmax	pmax		
	comp=Z,803nm,1.3s						
LFF	**La Frestale**	**43.38**	**49**⇑	iP	**P**	**20 41 30.2**	**-0.9**
	comp=Z,803nm,1.3s						
FOEL	**Foel Wylfa**	**43.51**	**37**⇑	eP	**P**	**20 41 31.1**	**-0.9**
FOEL				AMB	AMB	20 41 35.5	
	comp=Z,198nm,1.3s						
FOEL				AMS	AMS	20 54 04.8	
	comp=Z,9µm,32.7s						
FOEL	**Foel Wylfa**	**43.51**	**37**	P	**P**	**20 41 31.1**	**-0.9**
FOEL				AMB	AMB	20 41 35.5	
	comp=Z,198nm,1.3s						
FOEL				AMS	AMS	20 54 04.8	
	comp=Z,9µm,32.7s						
HLM1	**Long Mynd**	**43.53**	**38**⇑	eP	**P**	**20 41 30.5**	**-1.7**
HLM1				AMB	AMB	20 41 33.5	
	comp=Z,137nm,3.0s						
HLM1	**Long Mynd**	**43.53**	**38**	P	**P**	**20 41 30.5**	**-1.7**
HLM1				AMB	AMB	20 41 33.5	
	comp=Z,137nm,3.0s						
GAL1	**Galloway**	**43.59**	**34**	eP	**P**	**20 41 31.2**	**-1.4**
GAL1				AMB	AMB	20 41 35.4	
	comp=Z,139nm,1.2s						
GAL1				AMS	AMS	20 55 11.1	
	comp=Z,24µm,19.5s						
GAL1	**Galloway**	**43.59**	**34**	P	**P**	**20 41 31.2**	**-1.4**
GAL1				AMB	AMB	20 41 35.4	
	comp=Z,139nm,1.2s						
GAL1				AMS	AMS	20 55 11.1	
	comp=Z,24µm,19.5s						
FLN	**La Foliniere**	**43.60**	**43**⇑	iP	**P**	**20 41 32.0**	**-0.8**
	comp=Z,254nm,1.0s						
FLN				eR			
	comp=Z,14µm,18.8s						
FLN	**La Foliniere**	**43.60**	**43**⇑	iP	**P**	**20 41 32.0**	**-0.8**
FLN				pmax	pmax		
	comp=Z,254nm,1.0s						
FLN	**La Foliniere**	**43.60**	**43**⇑	iP	**P**	**20 41 32.0**	**-0.8**
	comp=Z,254nm,1.0s						
LDF	**La Druitiere**	**43.78**	**44**⇑	iP	**P**	**20 41 33.3**	**-0.9**
	comp=Z,530nm,1.2s						
LDF	**La Druitiere**	**43.78**	**44**⇑	iP	**P**	**20 41 33.3**	**-0.9**
LDF				pmax	pmax		
	comp=Z,530nm,1.2s						
LDF	**La Druitiere**	**43.78**	**44**⇑	iP	**P**	**20 41 33.3**	**-0.9**
	comp=Z,530nm,1.2s						
VALF	**Valcebollere**	**43.80**	**53**	eP	**P**	**20 41 34.6**	**-0.1**
VALF	**Valcebollere**	**43.80**	**53**	eP	**P**	**20 41 34.6**	**-0.1**
EMHD	**Djebel Mahouad**	**43.90**	**62**	P	**P**	**20 41 34.3**	**-1.3**
CARF	**Carcanieres**	**43.92**	**53**	eP	**P**	**20 41 35.2**	**-0.4**
CARF	**Carcanieres**	**43.92**	**53**	eP	**P**	**20 41 35.2**	**-0.4**
ATAH	**Atahualpa**	**43.98**	**230**	P	**P**	**20 41 37.7**	**+1.0**
ATAH	**Atahualpa**	**43.98**	**230**	P	**P**	**20 41 37.7**	**+1.0**
	comp=Z,40nm,0.8s,baz=57,slow=4.9,SNR=44						
ATAH				LR	LR	20 59 58.2	
	comp=Z,9µm,21.9s,baz=19,slow=36						
ABA	**Alger-Bouzarea**	**43.99**	**61**	P	**P**	**20 41 38.1**	**+1.9**
RJF	**Les Rejaudoux**	**44.00**	**49**⇑	iP	**P**	**20 41 34.9**	**-1.2**
	comp=Z,488nm,1.5s						
RJF				eR			
	comp=Z,28µm,21.5s						
RJF	**Les Rejaudoux**	**44.00**	**49**⇑	iP	**P**	**20 41 34.9**	**-1.2**
RJF				pmax	pmax		
	comp=Z,489nm,1.5s						
RJF	**Les Rejaudoux**	**44.00**	**49**⇑	iP	**P**	**20 41 34.9**	**-1.2**
	comp=Z,488nm,1.5s						
BORG	**Borgarnes**	**44.01**	**15**	eP	**P**	**20 41 36.1**	**+0.4**
	comp=Z,75nm,1.0s						
BORG				LR	LR		
	comp=Z,3µm,19.0s						
BORG	**Borgarnes**	**44.01**	**15**	P	**P**	**20 41 36.4**	**+0.6**
	comp=Z,43nm,0.9s,baz=188,slow=6.6,SNR=11						
WOL	**Wolverton**	**44.01**	**40**⇑	eP	**P**	**20 41 34.8**	**-1.2**
WOL				AMB	AMB	20 41 39.7	
	comp=Z,325nm,1.4s						
WOL	**Wolverton**	**44.01**	**40**	P	**P**	**20 41 34.8**	**-1.2**
WOL				AMB	AMB	20 41 39.7	
	comp=Z,325nm,1.4s						
MTLF	**Montolieu**	**44.11**	**52**⇑	iP	**P**	**20 41 35.9**	**-1.1**
	comp=Z,308nm,1.3s						
MTLF	**Montolieu**	**44.11**	**52**⇑	iP	**P**	**20 41 35.9**	**-1.1**
MTLF				pmax	pmax		
	comp=Z,308nm,1.3s						
MTLF	**Montolieu**	**44.11**	**52**⇑	iP	**P**	**20 41 35.9**	**-1.1**
	comp=Z,308nm,1.3s						
STNC	**Stoke**	**44.14**	**37**	AMS	AMS	20 54 24.2	
	comp=Z,9µm,32.3s						
PGBU	**Glenifferbraes**	**44.16**	**33**	eP	**P**	**20 41 37.0**	**-0.2**
PGBU				AMB	AMB	20 41 41.1	
	comp=Z,137nm,1.3s						
PGBU				AMS	AMS	20 55 17.6	
	comp=Z,26µm,20.0s						
PGBU	**Glenifferbraes**	**44.16**	**33**	P	**P**	**20 41 37.0**	**-0.2**
PGBU				AMB	AMB	20 41 41.1	
	comp=Z,137nm,1.3s						
PGBU				AMS	AMS	20 55 17.6	
	comp=Z,26µm,20.0s						
TUL1	**Tulsa**	**44.22**	**298**	P	**P**	**20 41 38.4**	**+0.4**
	baz=44						
FILF	**Fillols**	**44.23**	**53**	eP	**P**	**20 41 36.7**	**-1.3**
FILF	**Fillols**	**44.23**	**53**	eP	**P**	**20 41 36.7**	**-1.3**
LRDF	**Laroque-de-Fa**	**44.27**	**52**	eP	**P**	**20 41 37.1**	**-1.2**
LRDF	**Laroque-de-Fa**	**44.27**	**52**	eP	**P**	**20 41 37.1**	**-1.2**
ADJB	**Djebel Djouab**	**44.29**	**62**	P	**P**	**20 41 38.2**	**-0.5**
KESW	**Keswick, Cumbr**	**44.29**	**35**	eP	**P**	**20 41 37.2**	**-1.0**
KESW				AMB	AMB	20 41 39.6	
	comp=Z,227nm,3.5s						
KESW				AMS	AMS	20 55 22.2	
	comp=Z,17µm,20.3s						
KESW	**Keswick, Cumbr**	**44.29**	**35**	P	**P**	**20 41 37.2**	**-1.0**
KESW				AMB	AMB	20 41 39.6	
	comp=Z,227nm,3.5s						
KESW				AMS	AMS	20 55 22.2	
	comp=Z,17µm,20.3s						
CAF	**Calviac**	**44.30**	**49**⇑	iP	**P**	**20 41 37.5**	**-1.0**
	comp=Z,375nm,1.4s						
CAF	**Calviac**	**44.30**	**49**⇑	iP	**P**	**20 41 37.5**	**-1.0**
CAF				pmax	pmax		
	comp=Z,375nm,1.4s						
CAF	**Calviac**	**44.30**	**49**⇑	iP	**P**	**20 41 37.5**	**-1.0**
	comp=Z,375nm,1.4s						
ASCN	**Ascension**	**44.33**	**132**	PFAKE		20 41 50.0	+11
ASCN				LR	LR		
	comp=Z,3µm,21.0s						
KPL	**Plockton**	**44.37**	**30**⇑	eP	**P**	**20 41 37.8**	**-1.0**
KPL				AMB	AMB	20 41 41.1	
	comp=Z,201nm,1.0s						
KPL				AMS	AMS	20 55 24.7	
	comp=Z,7µm,19.0s						
KPL	**Plockton**	**44.37**	**30**	P	**P**	**20 41 37.8**	**-1.0**
KPL				AMB	AMB	20 41 41.1	
	comp=Z,201nm,1.0s						
KPL				AMS	AMS	20 55 24.7	
	comp=Z,7µm,19.0s						
KSB	**Sheil Bridge**	**44.41**	**31**⇑	eP	**P**	**20 41 37.2**	**-1.9**
KSB	**Sheil Bridge**	**44.41**	**31**	P	**P**	**20 41 37.2**	**-1.9**
EAB	**Aberfoyle**	**44.41**	**32**⇑	eP	**P**	**20 41 38.0**	**-1.1**
EAB	**Aberfoyle**	**44.41**	**32**	P	**P**	**20 41 38.0**	**-1.1**
SJAF	**Saint Jean de**	**44.45**	**53**	eP	**P**	**20 41 39.4**	**-0.3**
SJAF	**Saint Jean de**	**44.45**	**53**	eP	**P**	**20 41 39.4**	**-0.3**
ECK	**Cauldkaine Hil**	**44.55**	**34**⇑	eP	**P**	**20 41 39.1**	**-1.2**
ECK	**Cauldkaine Hil**	**44.55**	**34**	P	**P**	**20 41 39.1**	**-1.2**
ESK	**Eskdalemuir**	**44.57**	**34**⇑	eP	**P**	**20 41 38.6**	**-1.8**
ESK				AMB	AMB	20 41 43.4	
	comp=Z,172nm,1.3s						
ESK				AMS	AMS	20 56 09.5	
	comp=Z,24µm,16.8s						
ESK	**Eskdalemuir**	**44.57**	**34**	P	**P**	**20 41 38.6**	**-1.8**
ESK				AMB	AMB	20 41 43.4	
	comp=Z,172nm,1.3s						
ESK				AMS	AMS	20 56 09.5	
	comp=Z,24µm,16.8s						
ESK	**Eskdalemuir**	**44.57**	**34**⇑	eP	**P**	**20 41 39.3**	**-1.1**
ESK				pmax	pmax		
	comp=Z,219nm,1.1s						
ESK				MLR	MLR		
	comp=Z,27µm,20.0s						
ESK	**Eskdalemuir**	**44.57**	**34**⇑	eP	**P**	**20 41 39.3**	**-1.1**
	comp=Z,219nm,1.1s						
ESK				LR	LR		
	comp=Z,27µm,20.0s						
ESK	**Eskdalemuir**	**44.57**	**34**	P	**P**	**20 41 40.4**	**0.0**
	comp=Z,896nm,1.0s,SNR=13						
KBI1	**Birley Grange**	**44.58**	**37**⇑	eP	**P**	**20 41 40.1**	**-0.5**
KBI1	**Birley Grange**	**44.58**	**37**	P	**P**	**20 41 40.1**	**-0.5**
KAC	**Achnashellach**	**44.62**	**30**	eP	**P**	**20 41 41.6**	**+0.8**
KAC	**Achnashellach**	**44.62**	**30**	P	**P**	**20 41 41.6**	**+0.8**
EAU	**Auchinoon**	**44.69**	**33**⇑	eP	**P**	**20 41 40.5**	**-0.9**
EAU	**Auchinoon**	**44.69**	**33**	P	**P**	**20 41 40.5**	**-0.9**
TCF	**Toulx Ste Croi**	**44.70**	**48**⇑	iP	**P**	**20 41 41.0**	**-0.7**
	comp=Z,751nm,1.5s						
TCF	**Toulx Ste Croi**	**44.70**	**48**⇑	iP	**P**	**20 41 41.0**	**-0.7**
TCF				pmax	pmax		
	comp=Z,751nm,1.5s						
TCF	**Toulx Ste Croi**	**44.70**	**48**⇑	iP	**P**	**20 41 41.0**	**-0.7**
	comp=Z,751nm,1.5s						
FRNF	**Fournols**	**44.74**	**49**	eP	**P**	**20 41 41.7**	**-0.3**
FRNF	**Fournols**	**44.74**	**49**	eP	**P**	**20 41 41.7**	**-0.3**
EDI	**Edinburgh**	**44.86**	**33**	AMB	AMB	20 41 41.8	
	comp=Z,154nm,2.4s						
EDI				AMS	AMS	20 55 46.9	
	comp=Z,29µm,19.5s						
EDI	**Edinburgh**	**44.86**	**33**	AMB	AMB	20 41 41.8	
	comp=Z,154nm,2.4s						
EDI				AMS	AMS	20 55 46.9	
	comp=Z,29µm,19.5s						
ELO	**Logie Almond**	**44.86**	**32**⇑	eP	**P**	**20 41 41.0**	**-1.7**
ELO	**Logie Almond**	**44.86**	**32**	P	**P**	**20 41 41.0**	**-1.7**
EBL	**Broad Law**	**44.86**	**33**⇑	eP	**P**	**20 41 41.9**	**-0.9**
EBL	**Broad Law**	**44.86**	**33**	P	**P**	**20 41 41.9**	**-0.9**
XAL	**Allendale**	**44.88**	**35**⇑	eP	**P**	**20 41 42.0**	**-0.9**
XAL	**Allendale**	**44.88**	**35**	P	**P**	**20 41 42.0**	**-0.9**
RFTA	**Plano**	**44.97**	**293**	P	**P**	**20 41 44.8**	**+0.8**
MDO	**Dochfour**	**45.02**	**31**⇑	eP	**P**	**20 41 42.9**	**-1.2**
MDO	**Dochfour**	**45.02**	**31**	P	**P**	**20 41 42.9**	**-1.2**
KSU1	**Kansas State U**	**45.04**	**302**⇓	iP	**P**	**20 41 43.9**	**-0.6**
	comp=Z,162nm,0.9s						
KSU1				ePP	**PP**	**20 43 28.6**	**-1.2**
KSU1				LR	LR		
	comp=Z,9µm,21.0s						
PYM	**Petit Puy Mans**	**45.12**	**48**	eP	**P**	**20 41 45.0**	**-0.1**
PYM	**Petit Puy Mans**	**45.12**	**48**	eP	**P**	**20 41 45.0**	**-0.1**
PYM	**Petit Puy Mans**	**45.12**	**48**	eP	**P**	**20 41 45.0**	**-0.1**
ESY	**Stoneypath**	**45.14**	**33**⇑	eP	**P**	**20 41 43.4**	**-1.6**
ESY	**Stoneypath**	**45.14**	**33**	P	**P**	**20 41 43.4**	**-1.6**
LBL	**Lubilhac**	**45.18**	**49**	eP	**P**	**20 41 45.4**	**-0.2**
LBL	**Lubilhac**	**45.18**	**49**	eP	**P**	**20 41 45.4**	**-0.2**
LBL	**Lubilhac**	**45.18**	**49**	eP	**P**	**20 41 45.4**	**-0.2**
BGF	**Bois d'Agland**	**45.18**	**47**⇑	iP	**P**	**20 41 44.7**	**-0.8**
	comp=Z,524nm,1.3s						
BGF	**Bois d'Agland**	**45.18**	**47**⇑	iP	**P**	**20 41 44.7**	**-0.8**
BGF				pmax	pmax		
	comp=Z,524nm,1.3s						
BGF	**Bois d'Agland**	**45.18**	**47**⇑	iP	**P**	**20 41 44.7**	**-0.8**

comp=Z,524nm,1.3s
HYF Humbligny 45.21 46⇑*iP* P 20 41 45.2 -0.5
HYF Humbligny 45.21 46⇑*iP* P 20 41 45.2 -0.5
LPAZ La Paz 45.26 210⇑*iP* P 20 41 47.4 +0.4
LPAZ La Paz 45.26 210 P P 20 41 47.6 +0.5
comp=Z,64nm,0.8s,baz=19,slow=8.1,SNR=82
LPAZ LR LR 21 00 28.7
comp=Z,12µm,18.4s,baz=27,slow=36
AGO Saint Agoulin 45.27 48 *eP* P 20 41 45.9 -0.3
AGO Saint Agoulin 45.27 48 *eP* P 20 41 45.9 -0.3
ELSH Elham, Standar 45.34 41 *eP* P 20 41 46.0 -0.6
ELSH AMB AMB 20 41 50.2
comp=Z,611nm,1.2s
ELSH AMS AMS 20 55 41.6
comp=Z,17µm,25.6s
ELSH Elham, Standar 45.34 41 P P 20 41 46.0 -0.6
ELSH AMB AMB 20 41 50.2
comp=Z,611nm,1.2s
ELSH AMS AMS 20 55 41.6
comp=Z,17µm,25.6s
MVH1 Achvaich 45.35 30 *eP* P 20 41 46.0 -0.6
MVH1 Achvaich 45.35 30 P P 20 41 46.0 -0.6
LASF Ste Croix 45.40 51⇑*iP* P 20 41 46.9 -0.4
comp=Z,354nm,1.3s
LASF Ste Croix 45.40 51⇑*iP* P 20 41 46.9 -0.4
comp=Z,354nm,1.3s
ECSD EROS Data Cent 45.58 309⇓*eP* P 20 41 48.3 -0.4
comp=Z,129nm,1.7s
ECSD *ePcP* **PcP 20 43 28.6 +1.5**
ECSD LR LR
comp=Z,6µm,19.0s
MCD Coleburn Disti 45.62 31 *eP* P 20 41 46.7 -2.0
MCD Coleburn Disti 45.62 31 P P 20 41 46.7 -2.0
MME1 Meikle Cairn 45.62 31⇑*eP* P 20 41 47.5 -1.4
MME1 Meikle Cairn 45.62 31 P P 20 41 47.5 -1.4
WHTX Lake Whitney 45.66 292 ⇑P P 20 41 50.8 +1.4
baz=46,SNR=7.9
DRUM Mains of Drumt 45.66 32⇑*eP* P 20 41 48.1 -1.0
DRUM AMB AMB 20 41 51.6
comp=Z,466nm,1.0s
DRUM Mains of Drumt 45.66 32 P P 20 41 48.1 -1.0
DRUM AMB AMB 20 41 51.6
comp=Z,466nm,1.0s
SSF Saint Saulge 45.74 47⇑*iP* P 20 41 49.0 -0.9
comp=Z,268nm,1.1s
SSF Saint Saulge 45.74 47⇑*iP* P 20 41 49.0 -0.9
SSF pmax pmax
comp=Z,269nm,1.1s
SSF Saint Saulge 45.74 47⇑*iP* P 20 41 49.0 -0.9
comp=Z,268nm,1.1s
SMF Signal de Mont 45.87 47⇑*iP* P 20 41 50.3 -0.7
comp=Z,792nm,1.5s
SMF Signal de Mont 45.87 47⇑*iP* P 20 41 50.3 -0.7
SMF pmax pmax
comp=Z,792nm,1.5s
SMF Signal de Mont 45.87 47⇑*iP* P 20 41 50.3 -0.7
comp=Z,792nm,1.5s
SET Setif 45.88 62 P P 20 41 51.0 -0.3
CKHR Kef el Ahmar 45.97 62 P P 20 41 51.9 -0.1
AGMN Agassiz Nation 45.97 315⇓*iP* P 20 41 51.5 -0.2
comp=Z,1µm,2.1s
AGMN LR LR
comp=Z,6µm,20.0s
LOR Lormes 46.02 47⇑*iP* P 20 41 51.2 -0.9
comp=Z,582nm,1.6s
LOR *eR*
comp=Z,22µm,22.2s
LOR Lormes 46.02 47⇑*iP* P 20 41 51.2 -0.9
comp=Z,582nm,1.6s
SSB Saint Sauveur 46.09 49⇑*iP* P 20 41 52.2 -0.6
SSB pmax pmax
comp=Z,183nm,1.5s
SSB MLR MLR
comp=Z,14µm,21.0s
SSB Saint Sauveur 46.09 49⇑*iP* P 20 41 52.2 -0.6
comp=Z,183nm,1.5s
SSB LR LR
comp=Z,14µm,21.0s
SSB Saint Sauveur 46.09 49 *eP* P 20 41 52.7 -0.1
VIVF Saint-Julien-I 46.11 50⇑*iP* P 20 41 52.8 -0.1
comp=Z,368nm,1.4s
VIVF Saint-Julien-I 46.11 50⇑*iP* P 20 41 52.8 -0.1
VIVF pmax pmax
comp=Z,368nm,1.4s
VIVF Saint-Julien-I 46.11 50⇑*iP* P 20 41 52.8 -0.1
comp=Z,368nm,1.4s
DFRA Djebel Bou Aff 46.27 62 P P 20 41 54.2 -0.2
BGNE Belgrade 46.41 305 P P 20 41 56.1 +0.7
baz=46,SNR=9.8
KVTX Kingsville 46.45 286 PFAKE 20 42 10.0 +14
KVTX LR LR
comp=Z,9µm,22.0s
TOA0 Torodi Ar. Sit 46.47 94⇑*iP* P 20 41 54.6 -1.4
TORD Torodi Ar. Bea 46.47 94 P P 20 41 54.7 -1.4
TORD Torodi Ar. Bea 46.47 94 P P 20 41 54.7 -1.4
comp=Z,95nm,0.9s,baz=298,slow=8.0,SNR=378
TORD LR LR 20 58 14.7
comp=Z,5µm,19.3s,baz=280,slow=32
ULM Lac du Bonnet 46.48 318 P P 20 41 55.0 -0.7
ULM Lac du Bonnet 46.48 318 P P 20 41 55.0 -0.7
comp=Z,101nm,1.0s,baz=98,slow=7.3,SNR=83
ULM LR LR 20 59 28.2
comp=Z,9µm,19.1s,baz=109,slow=34
SOFL Sornfelli, Far 46.50 24 *eP* P 20 41 54.6 -1.1
SOFL AMB AMB 20 41 59.2
comp=Z,290nm,1.0s
SOFL AMS AMS 20 56 21.3
comp=Z,4µm,15.8s
SOFL Sornfelli, Far 46.50 24 P P 20 41 54.6 -1.1
SOFL AMB AMB 20 41 59.2
comp=Z,290nm,1.0s
SOFL AMS AMS 20 56 21.3
comp=Z,4µm,15.8s
OCF Saint Nazaire 46.51 50 *eP* P 20 41 56.9 +0.8
OG26 St.-Nazaire-De 46.51 50 *eP* P 20 41 56.9 +0.8
NNA Nana 46.52 223⇑*iP* P 20 41 55.3 -1.1
NNA Nana 46.52 223 P P 20 41 55.7 -0.7
comp=Z,488nm,1.0s,SNR=7.5
NNA Nana 46.52 223 LR LR 21 01 06.5
comp=Z,5µm,20.6s,baz=358,slow=36
SMRF Simiane la Rot 46.61 51⇑*iP* P 20 41 57.3 +0.4
comp=Z,466nm,1.3s
SMRF Simiane la Rot 46.61 51⇑*iP* P 20 41 57.3 +0.4
comp=Z,466nm,1.3s
WMOK Wichita Mounta 46.66 296⇓*iP* P 20 41 57.5 +0.1
WMOK pmax pmax
comp=Z,190nm,1.2s
WMOK MLR MLR
comp=Z,4µm,19.0s
WMOK Wichita Mounta 46.66 296⇓*iP* P 20 41 57.5 +0.1
comp=Z,190nm,1.2s
WMOK LR LR
comp=Z,4µm,19.0s
CTEI Djebel Teioual 46.69 62 P P 20 41 57.5 -0.2
CASM Ain Smara 46.76 62 P P 20 41 58.1 -0.1
BAIF Baives 46.91 43⇑*iP* P 20 41 58.0 -1.0
comp=Z,438nm,1.4s
BAIF Baives 46.91 43⇑*iP* P 20 41 58.0 -1.0
BAIF pmax pmax
comp=Z,439nm,1.4s
BAIF Baives 46.91 43⇑*iP* P 20 41 58.0 -1.0
comp=Z,438nm,1.4s
GRN Grenoble 46.92 50 *eP* P 20 42 00.0 +0.7
GRN Grenoble 46.92 50 *eP* P 20 42 00.0 +0.7
GRN Grenoble 46.92 50 *eP* P 20 42 00.0 +0.7
CKFL Kef-Lekhel 46.95 62 P P 20 41 59.3 -0.4
ORIF Oris-en-Rattie 46.97 50⇑*iP* P 20 42 00.1 +0.4
comp=Z,165nm,1.3s
ORIF *eR*
comp=Z,21µm,20.8s
ORIF Oris-en-Rattie 46.97 50⇑*iP* P 20 42 00.1 +0.4
ORIF pmax pmax
comp=Z,165nm,1.3s
ORIF Oris-en-Rattie 46.97 50⇑*iP* P 20 42 00.1 +0.4
comp=Z,165nm,1.3s
SFTF Sexfontaines 47.00 46⇑*iP* P 20 41 58.9 -0.9
comp=Z,947nm,1.3s
SFTF Sexfontaines 47.00 46⇑*iP* P 20 41 58.9 -0.9
comp=Z,947nm,1.3s
CAEH 'Ain El Ouahch 47.05 61 P P 20 41 59.7 -0.7
SNF Seneffe 47.07 42 P P 20 41 58.1 -2.1
MEZF Maizieres J'vi 47.07 45⇑*iP* P 20 41 59.7 -0.6
comp=Z,775nm,1.1s
MEZF Maizieres J'vi 47.07 45⇑*iP* P 20 41 59.7 -0.6
comp=Z,775nm,1.1s
SPB Sao Paulo 47.15 182 *eP* P 20 42 02.4 +1.3
comp=Z,188nm,1.7s
SPB LR LR
comp=Z,13µm,21.0s
GDM Grand'Maison 47.17 50 *eP* P 20 42 01.3 -0.1
GDM Grand'Maison 47.17 50 *eP* P 20 42 01.3 -0.1
Q31A Ellis 47.20 302 P P 20 42 01.7 +0.2
baz=47,SNR=8.2
LMR La Mourre 47.20 52⇑*iP* P 20 42 00.9 -0.5
comp=Z,335nm,1.4s
LMR La Mourre 47.20 52⇑*iP* P 20 42 00.9 -0.5
LMR pmax pmax
comp=Z,335nm,1.4s
LMR La Mourre 47.20 52⇑*iP* P 20 42 00.9 -0.5
comp=Z,335nm,1.4s
P31A Stockton 47.21 302 P P 20 42 02.2 +0.6
baz=47,SNR=15
Y32A R-V Farms, Ver 47.23 295 ⇑P P 20 42 02.6 +0.8
baz=47,SNR=8.4
R31A Burdett 47.28 301 ⇑P P 20 42 02.8 +0.7
baz=47,SNR=10
Z32A Haskell 47.29 294 P P 20 42 03.5 +1.2
baz=47,SNR=19
GIVF Givet 47.30 43⇑*iP* P 20 42 01.1 -1.0
comp=Z,306nm,1.3s
GIVF Givet 47.30 43⇑*iP* P 20 42 01.1 -1.0
GIVF pmax pmax
comp=Z,306nm,1.3s
GIVF Givet 47.30 43⇑*iP* P 20 42 01.1 -1.0
comp=Z,306nm,1.3s
TAM Tamanrasset 47.31 80⇑*iP* P 20 42 03.4 +0.7
TAM MLR MLR
comp=Z,9µm,21.0s
TAM Tamanrasset 47.31 80⇑*iP* P 20 42 03.4 +0.7
TAM LR LR
comp=Z,9µm,21.0s
FRF La Foret Royal 47.33 52⇑*iP* P 20 42 01.9 -0.5
comp=Z,426nm,1.6s
FRF La Foret Royal 47.33 52⇑*iP* P 20 42 01.9 -0.5
FRF pmax pmax
comp=Z,426nm,1.6s
FRF La Foret Royal 47.33 52⇑*iP* P 20 42 01.9 -0.5
comp=Z,426nm,1.6s
BRSD Miller 47.35 309 P P 20 42 03.5 +0.8
baz=47,SNR=17
T31A Randall Ranch, 47.37 299 ⇑P P 20 42 03.9 +1.0
baz=47,SNR=14
CABF La Chapelle 47.39 48⇑*iP* P 20 42 02.5 -0.4
comp=Z,749nm,1.4s
CABF La Chapelle 47.39 48⇑*iP* P 20 42 02.5 -0.4
CABF pmax pmax
comp=Z,749nm,1.4s
CABF La Chapelle 47.39 48⇑*iP* P 20 42 02.5 -0.4
comp=Z,749nm,1.4s
ABTX Abilene, Hawle 47.47 293 P P 20 42 04.8 +1.1
baz=48,SNR=7.4
GIMEL St. Georges / 47.49 48⇑*iP* P 20 42 03.5 -0.3
comp=Z,769nm,2.5s
V31A Spring Creek L 47.51 297 P P 20 42 06.0 +2.0
baz=48,SNR=17
CMAH Djebel Manchou 47.51 61 P P 20 42 03.4 -0.6
232A Coleman 47.52 292 P P 20 42 05.1 +1.0
baz=48,SNR=34
PAGF Fort de Pagny 47.52 45⇑*iP* P 20 42 03.1 -0.7
comp=Z,216nm,1.4s
PAGF Fort de Pagny 47.52 45⇑*iP* P 20 42 03.1 -0.7
comp=Z,216nm,1.4s
CALN Calern 47.53 52 *eP* P 20 42 04.0 -0.1
CALN Calern 47.53 52 *eP* P 20 42 04.0 -0.1
CALN Calern 47.53 52 *eP* P 20 42 04.0 -0.1
BNI Bardonecchia 47.55 50⇑*iP* P 20 42 04.5 +0.2
BNI MLR MLR
comp=Z,22µm,21.0s
BNI Bardonecchia 47.55 50⇑*iP* P 20 42 04.5 +0.2
BNI LR LR
comp=Z,22µm,21.0s
ABSA Djebel Ababsia 47.56 62 P P 20 42 04.3 -0.2
SURF Saint Ours 47.56 51 *eP* P 20 42 05.2 +0.7
SURF Saint Ours 47.56 51 *eP* P 20 42 05.2 +0.7
MBDF Montbardon 47.57 50⇑*iP* P 20 42 04.8 +0.4
comp=Z,647nm,1.3s
MBDF Montbardon 47.57 50⇑*iP* P 20 42 04.8 +0.4
MBDF pmax pmax
comp=Z,647nm,1.3s
MBDF Montbardon 47.57 50⇑*iP* P 20 42 04.8 +0.4
comp=Z,647nm,1.3s
RSL Roselend 47.60 49 *eP* P 20 42 04.7 0.0
W31A Holland Ranch, 47.60 297 P P 20 42 06.1 +1.4
baz=48,SNR=9.8
THEF They Montfort 47.62 46 *eP* P 20 42 04.2 -0.5
THEF They Montfort 47.62 46 *eP* P 20 42 04.2 -0.5
THEF They Montfort 47.62 46 *eP* P 20 42 04.2 -0.5
332A Millersview 47.64 291 P P 20 42 05.7 +0.6
baz=48,SNR=22
X31A McDonald Ranch 47.65 296 P P 20 42 06.2 +1.1
baz=48,SNR=13
LPL La Plagne 47.65 49⇑*iP* P 20 42 05.4 +0.2
comp=Z,386nm,1.4s
LPL La Plagne 47.65 49⇑*iP* P 20 42 05.4 +0.2
LPL pmax pmax
comp=Z,386nm,1.4s
LPL La Plagne 47.65 49⇑*iP* P 20 42 05.4 +0.2
comp=Z,386nm,1.4s
LPG La Plagne 47.66 49⇑*iP* P 20 42 05.7 +0.4
comp=Z,538nm,1.4s
LPG La Plagne 47.66 49⇑*iP* P 20 42 05.7 +0.4
LPG pmax pmax
comp=Z,538nm,1.4s
LPG La Plagne 47.66 49⇑*iP* P 20 42 05.7 +0.4
comp=Z,538nm,1.4s
BCLA Clavier 47.68 43 P P 20 42 04.1 -0.9
comp=Z,116nm,1.6s
BRANT Les Verrieres 47.70 47⇑*iP* P 20 42 05.0 -0.4
comp=Z,654nm,1.9s
M30A Dale-Ortello V 47.71 305 P P 20 42 05.9 +0.4
baz=48,SNR=6.6
432A Menard 47.73 291 P P 20 42 06.4 +0.6
baz=48,SNR=27
MVIF Mont Vial 47.73 52 *eP* P 20 42 05.7 0.0
MVIF Mont Vial 47.73 52 *eP* P 20 42 05.7 0.0
MVIF Mont Vial 47.73 52 *eP* P 20 42 05.7 0.0
OG01 Vacheresse 47.74 48 *eP* P 20 42 05.4 -0.3
OG01 Vacheresse 47.74 48 *eP* P 20 42 05.4 -0.3
O30A MW Ranch, Wils 47.77 303 P P 20 42 06.5 +0.5
baz=48,SNR=14
JCT Junction City 47.77 290 *eP* P 20 42 06.2 +0.1
JCT pmax pmax
comp=Z,127nm,1.4s
JCT MLR MLR
comp=Z,3µm,20.0s
JCT Junction City 47.77 290 *eP* P 20 42 06.2 +0.1
comp=Z,126nm,1.4s
JCT LR LR
comp=Z,3µm,20.0s
JCT Junction City 47.77 290 P P 20 42 06.7 +0.6
baz=48,SNR=13
LRW Lerwick 47.80 29 *eP* P 20 42 04.4 -1.4
LRW AMB AMB 20 42 08.5
comp=Z,159nm,1.4s
LRW AMS AMS 20 56 53.3
comp=Z,9µm,21.7s
LRW Lerwick 47.80 29 P P 20 42 04.4 -1.4
LRW AMB AMB 20 42 08.5
comp=Z,159nm,1.4s
LRW AMS AMS 20 56 53.3
comp=Z,9µm,21.7s
HAU Haudompre 47.82 46⇑*iP* P 20 42 05.1 -1.1
comp=Z,438nm,1.4s
HAU *eR*
comp=Z,17µm,20.2s
HAU Haudompre 47.82 46⇑*iP* P 20 42 05.1 -1.1
HAU pmax pmax
comp=Z,438nm,1.4s
HAU Haudompre 47.82 46⇑*iP* P 20 42 05.1 -1.1
comp=Z,438nm,1.4s
TOUF Mont Tournerai 47.82 51 *eP* P 20 42 06.3 -0.1
TOUF Mont Tournerai 47.82 51 *eP* P 20 42 06.3 -0.1
TOUF Mont Tournerai 47.82 51 *eP* P 20 42 06.3 -0.1
N30A Hueftle Ranch, 47.83 304 P P 20 42 07.5 +1.0
baz=48,SNR=12
Q30A Quinter 47.84 302 P P 20 42 07.2 +0.7
baz=48,SNR=14
Z31A Sharp Cattle R 47.85 294 P P 20 42 07.8 +1.1
baz=48,SNR=31
632A Uvalde 47.86 289 P P 20 42 07.4 +0.6
baz=48
R30A Dighton 47.87 301 P P 20 42 07.5 +0.7
baz=48,SNR=46
REVF Revere 47.87 52 *eP* P 20 42 06.6 -0.1
REVF Revere 47.87 52 *eP* P 20 42 06.6 -0.1
REVF Revere 47.87 52 *eP* P 20 42 06.6 -0.1
P30A Selden 47.88 302 P P 20 42 07.6 +0.7
baz=48,SNR=8.1
532A Rocksprings 47.90 290 P P 20 42 07.8 +0.7
baz=48,SNR=20
Y31A Rekieta Farm, 47.91 295 P P 20 42 08.3 +1.2
baz=48,SNR=16
SALAN Lac Salanfe 47.91 49⇑*iP* P 20 42 06.8 -0.4
comp=Z,528nm,2.7s
AIGLE Aigle 47.93 48⇑*iP* P 20 42 06.9 -0.2
comp=Z,451nm,1.8s
SBF Sospel 47.93 52⇑*iP* P 20 42 06.6 -0.6
comp=Z,532nm,1.5s
SBF Sospel 47.93 52⇑*iP* P 20 42 06.6 -0.6
SBF pmax pmax
comp=Z,532nm,1.5s
SBF Sospel 47.93 52⇑*iP* P 20 42 06.6 -0.6
comp=Z,532nm,1.5s
AUTN L'Aution 47.94 52 *eP* P 20 42 07.2 -0.3
AUTN L'Aution 47.94 52 *eP* P 20 42 07.2 -0.3
AUTN L'Aution 47.94 52 *eP* P 20 42 07.2 -0.3
BEBN Eben Emael 48.00 42 P P 20 42 06.9 -0.6
comp=Z,45nm,1.4s
TORNY Torny/Romont 48.00 48⇑*iP* P 20 42 07.5 -0.2
comp=Z,848nm,1.8s
S30A Montezuma 48.01 300 P P 20 42 08.6 +0.8
baz=48
LOMF Lomont 48.01 47 *eP* P 20 42 07.4 -0.4
LOMF Lomont 48.01 47 *eP* P 20 42 07.4 -0.4
LOMF Lomont 48.01 47 *eP* P 20 42 07.4 -0.4
GRYON Gryon 48.02 48⇑*iP* P 20 42 07.8 -0.1
comp=Z,527nm,2.4s
SAOF Saorge 48.03 52 *eP* P 20 42 07.6 -0.3
SAOF Saorge 48.03 52 *eP* P 20 42 07.6 -0.3
SAOF Saorge 48.03 52 *eP* P 20 42 07.6 -0.3
WLF Walferdange 48.03 44 P P 20 42 07.0 -0.8
comp=Z,139nm,2.2s
WLF Walferdange 48.03 44⇑*iP* P 20 42 06.9 -0.8
WLF *eS* S 20 49 07.6 +2.1
WLF MLR MLR
comp=Z,18µm,20.0s
WLF Walferdange 48.03 44⇑*iP* P 20 42 06.9 -0.9
WLF *eS* S 20 49 07.6 +2.1
WLF LR LR
comp=Z,18µm,20.0s
T30A Plains 48.05 299 P P 20 42 09.5 +1.3
baz=48,SNR=6.4
231A Bronte 48.08 292 P P 20 42 09.2 +0.7
baz=48,SNR=7.6
131A Roby 48.09 293 P P 20 42 09.7 +1.1
baz=48,SNR=6.7
732A Laxson Ranch, 48.12 288 ⇓P P 20 42 09.1 +0.4
baz=48,SNR=11
HINF Hinteralfeld 48.12 46⇑*iP* P 20 42 07.2 -1.3
comp=Z,253nm,1.4s
HINF Hinteralfeld 48.12 46⇑*iP* P 20 42 07.2 -1.3
HINF pmax pmax
comp=Z,253nm,1.4s
HINF Hinteralfeld 48.12 46⇑*iP* P 20 42 07.2 -1.3
comp=Z,253nm,1.4s
K29A Lazy Trails An 48.15 307 P P 20 42 09.7 +0.8
baz=48,SNR=19
HGN Heimansgroeve 48.15 42 *eP* P 20 42 07.8 -0.8
comp=Z,263nm,1.7s
HGN *ePP* **PP 20 44 04.4 +3.6**
HGN *eS* S 20 49 08.4 +1.3
HGN *eL* L 20 57 01.6
comp=Z,16µm,25.2s
U30A WK&E Inc. Balk 48.16 298 P P 20 42 10.4 +1.4
baz=48,SNR=13
MEM Membach 48.16 43 P P 20 42 08.2 -0.5
comp=Z,114nm,1.8s
SENIN Lac Senin/Sane 48.17 48⇑*iP* P 20 42 09.1 -0.1
comp=Z,940nm,2.6s
DIX Grande Dixence 48.20 49⇑*iP* P 20 42 09.2 -0.3
comp=Z,562nm,2.3s
L29A Maesberg Ranch 48.21 306 P P 20 42 10.0 +0.6
baz=48
331A San Angelo 48.23 291 P P 20 42 10.3 +0.7
baz=48,SNR=19
N29A Votaw Ranch, W 48.23 304 ⇑P P 20 42 10.0 +0.4
baz=48,SNR=7.1
BOURR Bourrignon 48.29 47⇑*iP* P 20 42 09.7 -0.2
comp=Z,791nm,2.5s
MOF Molkenrain 48.31 46 *eP* P 20 42 09.2 -0.9
MOF Molkenrain 48.31 46 *eP* P 20 42 09.2 -0.9
MOF Molkenrain 48.31 46 *eP* P 20 42 09.2 -0.9
O29A 4D Ranch, Culb 48.33 303 P P 20 42 11.1 +0.8
baz=48,SNR=19
MDND Maddock 48.33 314 P P 20 42 10.8 +0.7
baz=48
ECH Echery 48.39 46⇑*iP* P 20 42 09.1 -1.5
ECH *eS* S 20 49 13.8 +3.2
ECH pmax pmax
comp=Z,145nm,1.4s
ECH MLR MLR
comp=Z,12µm,19.0s
ECH Echery 48.39 46⇑*iP* P 20 42 09.1 -1.5
comp=Z,145nm,1.4s
ECH *eS* S 20 49 13.8 +3.2
ECH LR LR
comp=Z,12µm,19.0s
ECH Echery 48.39 46 *eP* P 20 42 09.8 -0.8
X30A Coker Ranch, T 48.40 296 P P 20 42 12.0 +1.1
baz=48,SNR=10
LKBD Leukerbad 48.40 48⇑*iP* P 20 42 10.8 -0.1
comp=Z,852nm,2.4s
P29A Atwood 48.41 303 P P 20 42 11.9 +0.9
baz=48,SNR=5.7
Q29A Oakley 48.43 302 P P 20 42 11.8 +0.7
baz=48,SNR=17
WIMIS Wimmis 48.44 48⇑*iP* P 20 42 10.9 -0.1
comp=Z,558nm,2.5s
431A Sonora 48.45 291 P P 20 42 11.9 +0.6
baz=48,SNR=22
531A Rocksprings 48.45 290 P P 20 42 11.6 +0.2
baz=48,SNR=37
BBS Basel-Blauen 48.49 47 *eP* P 20 42 10.5 -0.9
BBS Basel-Blauen 48.49 47 *eP* P 20 42 10.5 -0.9
CDF Champ du Feu 48.50 46⇑*iP* P 20 42 10.5 -1.1
comp=Z,518nm,1.5s
CDF Champ du Feu 48.50 46⇑*iP* P 20 42 10.5 -1.1
CDF pmax pmax
comp=Z,519nm,1.5s
CDF Champ du Feu 48.50 46⇑*iP* P 20 42 10.5 -1.1
comp=Z,518nm,1.5s
S29A Ulysses 48.52 300 P P 20 42 12.9 +1.1
baz=48,SNR=7.9
R29A Marienthal 48.55 301 P P 20 42 13.0 +1.0
baz=48,SNR=21
631A Perdido Creek 48.56 289 P P 20 42 12.4 +0.3
baz=49,SNR=18
130A Snyder 48.58 293 P P 20 42 13.7 +1.3
baz=49,SNR=8.6
MMK Mattmark 48.58 49⇑*iP* P 20 42 12.9 +0.5
comp=Z,888nm,2.4s
BALST Balsthal 48.59 47⇑*iP* P 20 42 11.3 -0.9
comp=Z,480nm,1.9s
RUP Ruppelstein 48.62 44 *eP* P 20 42 11.8 -0.6
RUP Ruppelstein 48.62 44 *eP* P 20 42 11.8 -0.6
T29A Hugoton 48.67 299 P P 20 42 14.3 +1.3
baz=49,SNR=8.5
LIBD Limburg 48.67 46 *eP* P 20 42 12.0 -0.7
LIBD Limburg 48.67 46 *eP* P 20 42 12.0 -0.7
Z30A Sanderson Ranc 48.67 294 P P 20 42 13.5 +0.4
baz=49,SNR=35
230A Sterling City 48.76 292 P P 20 42 14.8 +1.0
baz=49,SNR=20
SCO Scoresbysund 48.78 11⇑*iP* P 20 42 13.3 +0.1
SCO pmax pmax
comp=Z,30nm,1.0s
SCO MLR MLR
comp=Z,2µm,20.0s
SCO Scoresbysund 48.78 11⇑*iP* P 20 42 13.3 +0.1
comp=Z,30nm,1.0s
SCO
comp=Z,2µm,20.0s
HASLI Hasliberg/Brie 48.81 48⇑*iP* P 20 42 13.6 -0.4
comp=Z,598nm,2.4s
M28A Bar X Bar Ranc 48.83 305 P P 20 42 14.9 +0.8
baz=49,SNR=15
330A Mertzon 48.86 292 P P 20 42 14.6 +0.1
baz=49,SNR=28

V29A Stinnett 48.87 298 P P 20 42 15.8 +1.2
baz=49
J28A Allard Ranch, 48.88 308 P P 20 42 14.9 +0.4
baz=49,SNR=45
FELD Feldberg im Sc 48.89 46 eP P 20 42 12.8 -1.8
SULZ Cheisacher 48.90 47⇑iP P 20 42 13.7 -0.9
comp=Z,515nm,2.4s
K28A Ten Mile Ranch 48.91 307 P P 20 42 15.2 +0.4
baz=49
N28A Pribbeno Ranch 48.92 304 P P 20 42 15.7 +0.8
baz=49,SNR=13
PGF Pioggiola 48.95 54⇑iP P 20 42 14.1 -1.0
comp=Z,357nm,1.3s
PGF Pioggiola 48.95 54⇑iP P 20 42 14.1 -1.0
PGF pmax pmax
comp=Z,357nm,1.3s
PGF Pioggiola 48.95 54⇑iP P 20 42 14.1 -1.0
comp=Z,357nm,1.3s
LANF Langenberg 48.95 45 eP P 20 42 14.1 -0.8
LANF Langenberg 48.95 45 eP P 20 42 14.1 -0.8
LANF Langenberg 48.95 45 eP P 20 42 14.1 -0.8
ABH Alteburg 48.96 44 eP P 20 42 14.6 -0.4
WTSB Winterswijk 48.97 41 eP P 20 42 14.3 -0.6
comp=Z,244nm,1.4s
WTSB eS S 20 49 23.5 +5.0
SUMG Summit 48.97 3⇓iP P 20 42 16.4 +1.3
SUMG i S S 20 49 19.3 +0.5
SUMG pmax pmax
comp=Z,49nm,0.9s
SUMG MLR MLR
comp=Z,3µm,16.0s
SUMG Summit 48.97 3 eP P 20 42 15.1 0.0
SUMG Summit 48.97 3⇓iP P 20 42 16.4 +1.3
comp=Z,49nm,0.9s
SUMG i S S 20 49 19.3 +0.5
SUMG
comp=Z,3µm,16.0s
430A Baggett Ranch, 48.97 291 P P 20 42 15.9 +0.5
baz=49,SNR=27
W29A Amraillo 49.00 297 P P 20 42 17.2 +1.6
baz=49,SNR=13
BNALP Bannalp 49.01 48⇑iP P 20 42 15.3 -0.3
comp=Z,596nm,2.3s
AMTX Amarillo 49.04 296⇓eP P 20 42 16.2 +0.3
comp=Z,400nm,1.2s
AMTX LR LR
comp=Z,4µm,19.0s
R28A Tribune 49.07 301 P P 20 42 16.4 +0.3
baz=49,SNR=43
O28A Krutsinger Ran 49.08 303 P P 20 42 17.0 +0.9
baz=49,SNR=13
X29A Tulia 49.08 296 P P 20 42 17.1 +0.9
baz=49,SNR=6.8
KEST Kesra 49.09 63⇑iP P 20 42 15.9 -0.3
KEST Kesra 49.09 63 P P 20 42 16.3 +0.1
comp=Z,78nm,1.0s,baz=197,slow=3.0,SNR=110
KEST LR LR 20 59 54.7
comp=Z,4µm,21.9s,baz=223,slow=32
Q28A Sharon Springs 49.10 302 ⇓P P 20 42 17.0 +0.7
baz=49,SNR=16
FUSIO Fusio 49.12 48⇑iP P 20 42 16.1 -0.3
comp=Z,705nm,2.0s
BUG Bochum--Univer 49.13 42 eP P 20 42 15.7 -0.4
comp=Z,146nm,1.3s
BUG epP pP 20 42 24.9 +4.1
530A J-C Ranch, Com 49.13 290 P P 20 42 17.0 +0.4
baz=49,SNR=22
S28A Manter 49.14 300 P P 20 42 17.5 +0.8
baz=49,SNR=48
Z29A Hungry Hill Ra 49.16 294 P P 20 42 17.8 +1.0
baz=49,SNR=21
MUO Muotathal 49.17 48⇑iP P 20 42 16.7 -0.2
comp=Z,957nm,2.4s
BFO Black Forest 49.18 46 eP P 20 42 15.9 -0.8
comp=Z,256nm,1.2s
BFO epP pP 20 42 25.3 +4.0
BFO Black Forest 49.18 46⇑iP P 20 42 15.7 -1.0
BFO eS S 20 49 24.5 +2.8
BFO pmax pmax
comp=Z,297nm,1.3s
BFO MLR MLR
comp=Z,11µm,19.0s
BFO Black Forest 49.18 46⇑iP P 20 42 15.7 -1.0
comp=Z,297nm,1.3s
BFO eS S 20 49 24.5 +2.8
BFO LR LR
comp=Z,11µm,19.0s
BFO Black Forest 49.18 46 P P 20 42 15.2 -1.5
comp=Z,948nm,1.2s,SNR=78
ZUR Degenried 49.19 47⇑iP P 20 42 16.3 -0.5
comp=Z,413nm,1.7s
SLE Schleitheim 49.20 47⇑iP P 20 42 15.7 -1.1
comp=Z,710nm,3.7s
KTD Kalmit 49.20 45 eP P 20 42 16.1 -0.7
KTD Kalmit 49.20 45 eP P 20 42 16.1 -0.7
FLACH Flaach 49.22 47⇑iP P 20 42 16.7 -0.2
comp=Z,524nm,2.4s
PAYG Puerto Ayora 49.22 247 P P 20 42 16.4 -1.0
comp=Z,124nm,1.2s
PAYG LR LR
comp=Z,6µm,22.0s
YAIG Yautepec 49.25 275 P P 20 42 17.8 0.0
OGNE Ogallala 49.31 304 eP P 20 42 18.2 +0.4
comp=Z,540nm,1.5s
OGNE LR LR
comp=Z,10µm,19.0s
OGNE Ogallala 49.31 304 P P 20 42 18.9 +1.0
baz=49,SNR=23
T28A Walsh 49.32 299 P P 20 42 19.4 +1.4
baz=49,SNR=13
129A Stewart Farms, 49.34 293 P P 20 42 19.3 +1.1
baz=49,SNR=6.8
229A Bryant Ranch, 49.35 292 P P 20 42 19.2 +1.0
baz=49,SNR=8.0
LLS Linth-Limmern 49.41 48⇑iP P 20 42 18.3 -0.3
comp=Z,802nm,3.9s
WILA Wila 49.42 47⇑iP P 20 42 18.0 -0.6
comp=Z,837nm,3.4s
U28A Mallet 49.43 298 P P 20 42 20.4 +1.6
baz=49,SNR=8.8
STEIN Stein am Rhein 49.43 47⇑iP P 20 42 17.8 -0.8
comp=Z,952nm,2.5s
SPAK Spaichingen-Ko 49.44 46 eP P 20 42 18.2 -0.6
V28A Channing 49.45 297 P P 20 42 19.8 +0.8
baz=50
X28A Dimmitt 49.48 296 P P 20 42 19.8 +0.5
baz=50
329A Wagon Wheel Ra 49.54 292 P P 20 42 20.4 +0.7
baz=50,SNR=20
K27A Flueckinger Fa 49.55 307 P P 20 42 20.2 +0.5
baz=50,SNR=5.2
429A Davenport Ranc 49.55 291 P P 20 42 19.8 -0.1
baz=50,SNR=52
Y28A McKinney Farm, 49.56 295 P P 20 42 20.4 +0.5
baz=50
L27A T5 Ranch, Ells 49.57 306 P P 20 42 20.8 +0.9
baz=50,SNR=7.2
TUE Stuetta 49.59 48 eP P 20 42 19.5 -0.5
comp=Z,147nm,1.4s
TUE LR LR
comp=Z,16µm,20.0s
M27A Reverse DX Ran 49.60 305 P P 20 42 21.2 +1.1
baz=50,SNR=6.2
TNS Taunus Mts 49.60 43 eP P 20 42 19.6 -0.3
comp=Z,236nm,1.2s
TNS Taunus Mts 49.60 43 eP P 20 42 19.6 -0.3
TNS pmax pmax
comp=Z,236nm,1.2s
IBBN Ibbenburen 49.62 41 eP P 20 42 19.5 -0.4
comp=Z,319nm,1.2s
VDL Val di Lei 49.66 48⇑iP P 20 42 20.3 -0.3
comp=Z,800nm,2.6s
N27A Anderson Farm, 49.68 304 P P 20 42 22.0 +1.3
baz=50,SNR=30
P27A Ficken Ranch, 49.68 302 P P 20 42 21.9 +1.1
baz=50,SNR=14
PLONS Plons/SG 49.69 48⇑iP P 20 42 20.3 -0.3
comp=Z,659nm,2.3s
TOD Tromm 49.71 44 eP P 20 42 20.0 -0.7
TOD Tromm 49.71 44 eP P 20 42 20.0 -0.7
KSCO Kaye Shedlock' 49.72 302 P P 20 42 22.2 +1.2
baz=50,SNR=8.7
PLIG Platanillo 49.77 274 P P 20 42 23.4 +1.8
LIENZ Kamor/St.Gall 49.80 47⇑iP P 20 42 21.3 -0.3
comp=Z,843nm,2.4s
T27A Campo 49.81 299 P P 20 42 22.7 +0.9
baz=50

STU Stuttgart 49.82 45 eP P 20 42 20.5 -1.0
comp=Z,244nm,1.2s
STU Stuttgart 49.82 45 eP P 20 42 20.3 -1.2
STU pmax pmax
comp=Z,276nm,1.2s
STU Stuttgart 49.82 45 eP P 20 42 20.3 -1.2
comp=Z,276nm,1.2s
R27A Eads 49.85 301 P P 20 42 23.2 +1.1
baz=50,SNR=19
128A Castleberry Fa 49.86 293 P P 20 42 22.9 +0.8
baz=50,SNR=9.3
529A Stev Forest Ra 49.89 290 P P 20 42 22.8 +0.4
baz=50,SNR=24
U27A Thompson Grove 49.91 298 ⇓P P 20 42 23.4 +0.8
baz=50,SNR=5.9
S27A Las Animas 49.94 300 P P 20 42 23.8 +1.1
baz=50
V27A Dan Oppiter Fa 49.95 297 P P 20 42 23.9 +1.1
baz=50
DAVOX Davos/Dischmat 49.99 48⇑iP P 20 42 23.0 -0.1
comp=Z,1µm,3.6s
MSTX Muleshoe 49.99 295 P P 20 42 24.1 +0.9
baz=50,SNR=15
228A UT Block 9, Go 49.99 293 P P 20 42 23.7 +0.5
baz=50,SNR=8.4
MEIG Mezcala 50.01 274 P P 20 42 24.7 +1.3
DAVA Damuels 50.06 47⇑iP P 20 42 23.2 -0.4
comp=Z,281nm,1.2s,SNR=42
VLC Villacollemand 50.08 52 eP P 20 42 21.6 -2.0
VLC LR LR
comp=Z,13µm,20.0s
L26A Underwood Farm 50.14 306 ⇑P P 20 42 24.7 +0.5
baz=50,SNR=8.9
W27A Bowe Ranch, En 50.16 297 P P 20 42 25.4 +0.9
baz=50,SNR=11
N26A Koester Ranch, 50.20 304 P P 20 42 26.0 +1.3
baz=50,SNR=8.6
X27A F and S Farms, 50.22 296 P P 20 42 25.9 +1.0
baz=50,SNR=5.7
428A Kincaid Ranch, 50.22 291 P P 20 42 25.9 +1.0
baz=50
FUORN Ofenpass-Fuorn 50.23 48⇑iP P 20 42 24.8 -0.2
comp=Z,898nm,2.5s
K26A Motz Farm, Whi 50.24 307 P P 20 42 25.8 +0.8
baz=50,SNR=13
328A Wristen Ranch, 50.25 292 P P 20 42 25.1 0.0
baz=50,SNR=16
O26A Horse Wrangler 50.26 303 P P 20 42 26.5 +1.3
baz=50,SNR=30
P26A Davis Ranch, A 50.28 302 P P 20 42 26.8 +1.4
baz=50,SNR=39
Y27A Causey 50.32 295 P P 20 42 27.0 +1.2
baz=50,SNR=41
R26A Arlington 50.36 301 P P 20 42 27.5 +1.5
baz=50,SNR=16
528A Cox Ranch, San 50.38 290 P P 20 42 26.9 +0.8
baz=50,SNR=56
S26A Kim 50.39 300 P P 20 42 27.1 +0.8
baz=50,SNR=19
Z27A Tatum 50.41 294 P P 20 42 26.7 +0.3
baz=50,SNR=25
Q26A Hugo 50.41 302 P P 20 42 28.0 +1.6
baz=50,SNR=17
STAV Stavanger 50.48 32 eP P 20 42 26.7 +0.4
T26A Comanche Natio 50.50 299 P P 20 42 28.6 +1.5
baz=50,SNR=15
628A Black Gap, Mar 50.55 289 P P 20 42 28.3 +0.9
baz=51,SNR=56
127A Arkansas Junct 50.59 294 P P 20 42 28.2 +0.5
baz=51
FETA Feichten 50.60 48⇑iP P 20 42 27.1 -0.6
comp=Z,238nm,1.4s,SNR=67
U26A Atchley Ranch, 50.65 298 P P 20 42 29.0 +0.7
baz=51
RETA Reutte 50.68 47 i P P 20 42 27.4 -0.7
comp=Z,148nm,1.4s,SNR=34
UBBA Unterbreizbach 50.69 43 eP P 20 42 27.8 -0.1
comp=Z,125nm,1.6s
V26A Tequesquite Ra 50.71 298 P P 20 42 29.9 +1.2
baz=51,SNR=6.8
W26A Owens Ranch, T 50.74 297 P P 20 42 30.0 +1.1
baz=51
EGD Espegrend 50.74 30 eP P 20 42 26.4 -1.8
EGD AMB AMB 20 42 30.3
comp=Z,153nm,1.2s
K25A Mack Ranch, Ha 50.75 306 P P 20 42 29.7 +0.9
baz=51,SNR=40
L25A Engebretsen Ra 50.80 306 P P 20 42 30.2 +0.9
baz=51
ASK Askoy 50.81 30 eP P 20 42 26.9 -1.8
ASK AMB AMB 20 42 30.7
comp=Z,246nm,1.0s
X26A CR and CF Fran 50.81 296 P P 20 42 30.7 +1.2
baz=51,SNR=22
427A Hayter Ranch, 50.82 291 P P 20 42 29.9 +0.4
baz=51,SNR=28
BER Bergen 50.84 30 eP P 20 42 26.6 -2.4
BER AMB AMB 20 42 30.8
comp=Z,205nm,0.9s
BER eS S 20 49 47.6 +3.2
BER AMS AMS 20 59 06.5
comp=Z,7µm,18.2s
SUE Sulen 50.84 29 eP P 20 42 29.5 +0.5
SUE AMB AMB 20 42 33.5
comp=Z,214nm,1.4s
M25A Palm-Egli Farm 50.85 305 P P 20 42 31.0 +1.3
baz=51,SNR=8.7
RUND Rundenannen 50.86 30 eP P 20 42 27.3 -1.9
RUND AMB AMB 20 42 31.3
comp=Z,279nm,1.6s
O25A Wiggins 50.88 303 P P 20 42 31.0 +1.2
baz=51
MOTA Moosalm 50.89 48⇑iP P 20 42 29.1 -0.8
comp=Z,119nm,1.2s,SNR=44
P25A Willow Gulch B 50.91 302 P P 20 42 31.9 +1.7
baz=51,SNR=18
RSSD Black Hills 50.95 308 eP P 20 42 30.2 -0.2
RSSD pmax pmax
comp=Z,167nm,1.8s
RSSD Black Hills 50.95 308 eP P 20 42 30.2 -0.2
comp=Z,167nm,1.8s
627A Terlingua Ranc 50.98 289 P P 20 42 31.4 +0.6
baz=51,SNR=22
BLS5 Blasjo 51.01 32⇑iP P 20 42 29.4 -1.0
BLS5 AMB AMB 20 42 32.5
comp=Z,79nm,0.9s
CPUP Villa Florida 51.01 193 P P 20 42 30.9 +0.3
CPUP Villa Florida 51.01 193 P P 20 42 30.9 +0.3
comp=Z,54nm,1.1s,baz=358,slow=7.6,SNR=29
CPUP LR LR 21 05 05.5
comp=Z,3µm,19.0s,baz=355,slow=37
SNART Snartemo 51.01 33⇑iP P 20 42 27.4 -2.9
SNART AMB AMB 20 42 33.0
comp=Z,142nm,0.9s
Z26A Caprock 51.05 294 P P 20 42 32.2 +1.0
baz=51,SNR=11
CLNB Carlsbad 51.07 293 eP P 20 42 31.5 +0.2
comp=Z,6.7nm,1.0s
NRDL Niedersach Rie 51.07 41 eP P 20 42 30.7 -0.1
comp=Z,392nm,1.2s
NRDL epP pP 20 42 40.1 +4.7
527A Woodward Ranch 51.09 290 P P 20 42 32.3 +0.7
baz=51,SNR=47
CLZ Clausthal 51.10 42 eP P 20 42 30.7 -0.5
comp=Z,187nm,1.2s
CLZ epP pP 20 42 40.4 +4.6
CLZ Clausthal 51.10 42 eP P 20 42 30.7 -0.5
CLZ pmax pmax
comp=Z,187nm,1.2s
FUR Furstenfeldbru 51.10 47 eP P 20 42 30.7 -0.6
comp=Z,214nm,1.5s
FUR Furstenfeldbru 51.10 47 eP P 20 42 30.7 -0.6
FUR pmax pmax
comp=Z,214nm,1.5s
126A Clayton Basin, 51.15 294 P P 20 42 32.6 +0.7
baz=51,SNR=13
S25A Robets Cordova 51.16 300 P P 20 42 33.1 +1.0
baz=51,SNR=20
T25A Trinidad 51.16 299 P P 20 42 33.8 +1.7
baz=51,SNR=10
LVC Limon Verde 51.17 207 eP P 20 42 31.7 -0.5
LVC LR LR
comp=Z,9µm,20.0s
U25A Circle Dot Ran 51.19 298 P P 20 42 34.1 +1.8
baz=51,SNR=6.3
WATA Walderalm 51.21 48⇑iP P 20 42 31.3 -0.9
comp=Z,186nm,1.3s,SNR=16

FFC Flin Flon 51.23 322 eP P 20 42 31.3 -0.8
FFC eS S 20 49 50.6 +0.5
FFC pmax pmax
comp=Z,464nm,1.6s
FFC Flin Flon 51.23 322 eP P 20 42 31.3 -0.8
comp=Z,464nm,1.6s
FFC eS S 20 49 50.5 +0.5
FFC Flin Flon 51.23 322 P P 20 42 32.2 +0.1
comp=Z,704nm,1.2s,SNR=86
WTTA Wattenberg 51.24 48 i P P 20 42 31.8 -0.7
comp=Z,281nm,1.3s,SNR=42
TXAR Lajitas Array 51.24 289 P P 20 42 32.8 +0.1
TXAR PcP PcP 20 43 56.4 +8.5
TXAR PP PP 20 44 31.2 +1.7
TXAR P'P'ab P'P'ab 21 14 01.7 -1.5
TXAR Lajitas Array 51.24 289 P P 20 42 32.8 +0.1
comp=Z,7.5nm,0.8s,baz=100,slow=8.0,SNR=53
TXAR PcP PcP 20 43 56.4 +8.5
comp=Z,13nm,0.9s,baz=101,slow=6.5,SNR=6.0
TXAR PP PP 20 44 31.2 +1.7
comp=Z,4.7nm,1.0s,baz=111,slow=10.0,SNR=2.4
TXAR LR LR 21 02 41.1
comp=Z,2µm,21.5s,baz=0.0,slow=34
TXAR PKP2ab 21 14 01.7
comp=Z,0.4nm,0.7s,baz=197,slow=2.8,SNR=2.9
326A Caldwell Ranch 51.25 292 P P 20 42 33.6 +0.8
baz=51
ODD1 Odda 51.27 31 eP P 20 42 29.8 -2.5
ODD1 AMB AMB 20 42 35.3
comp=Z,144nm,1.2s
GRFO Grafenberg 51.27 45 eP P 20 42 31.4 -1.1
GRFO pmax pmax
comp=Z,138nm,1.1s
GRFO Grafenberg 51.27 45 eP P 20 42 31.4 -1.1
comp=Z,138nm,1.1s
GRF Grafenberg Arr 51.27 45 eP P 20 42 31.8 -0.7
comp=Z,172nm,1.2s
GRF epP pP 20 42 40.8 +3.7
GRF eL L 21 00 27.0
comp=E,11µm,19.6s
GRF Grafenberg Arr 51.27 45 eP P 20 42 31.8 -0.7
GRF e*PP pP 20 42 40.8 +3.7
GRF pmax pmax
comp=Z,172nm,1.2s
GRF MLR MLR
comp=E,11µm,19.6s
W25A X Bar L Ranch, 51.30 297 ⇑P P 20 42 34.0 +0.9
baz=51,SNR=7.1
226B Tecolote Peak, 51.33 293 P P 20 42 34.1 +0.9
baz=51,SNR=11
H24A Dirks Ranch, A 51.36 309 P P 20 42 33.3 -0.1
baz=51,SNR=43
I24A Kuemmerle Ranc 51.36 308 P P 20 42 33.9 +0.4
baz=51
J24A Dixon Ranch, L 51.36 307 P P 20 42 33.9 +0.5
baz=51
426A McDonald Obser 51.38 291 P P 20 42 34.6 +0.8
baz=51,SNR=27
V25A Rancho No Teng 51.39 298 P P 20 42 35.2 +1.4
baz=51,SNR=12
A24A Westby 51.39 314 P P 20 42 33.5 0.0
baz=51,SNR=13
D24A Glendive 51.40 312 P P 20 42 33.4 -0.2
baz=51,SNR=11
M24A Cheyenne 51.43 305 P P 20 42 35.2 +1.2
baz=51,SNR=21
N24A Carr 51.46 304 ⇑P P 20 42 35.8 +1.5
baz=52,SNR=36
DGMT Dagmar 51.46 314 eP P 20 42 34.1 +0.1
comp=E,732nm,1.9s
DGMT LR LR
comp=Z,8µm,22.0s
DGMT Dagmar 51.46 314 P P 20 42 34.7 +0.7
baz=51,SNR=13
MUD Monsted U'grnd 51.47 36⇑iP P 20 42 33.3 -0.5
MUD i S S 20 49 56.4 +3.2
MUD pmax pmax
comp=Z,77nm,1.1s
MUD MLR MLR
comp=Z,9µm,16.0s
MUD Monsted U'grnd 51.47 36⇑iP P 20 42 33.3 -0.5
comp=Z,77nm,1.1s
MUD i S S 20 49 56.4 +3.2
MUD
comp=Z,9µm,16.0s
GDL2 Guadalupe Moun 51.48 293 eP P 20 42 34.9 +0.4
comp=Z,24nm,1.2s
BSEG Bad Segeberg 51.49 39 eP P 20 42 33.6 -0.4
comp=Z,783nm,1.2s
BSEG epP pP 20 42 42.9 +4.3
BSEG Bad Segeberg 51.49 39 eP P 20 42 33.6 -0.4
BSEG pmax pmax
comp=Z,783nm,1.2s
526A Mary Lane Ranc 51.51 290 P P 20 42 36.0 +1.3
baz=52,SNR=50
C24A Savage 51.51 313 P P 20 42 34.4 0.0
baz=52,SNR=27
X25A Clemmons Ranch 51.51 296 P P 20 42 36.2 +1.5
baz=52,SNR=31
HYA Hoyanger 51.52 29 eP P 20 42 34.1 0.0
HYA AMB AMB 20 42 36.7
comp=Z,5µm,0.9s
HYA AMS AMS 20 59 25.9
comp=Z,183µm,20.2s
Y25A Mesa, Roswell 51.59 295 P P 20 42 36.9 +1.6
baz=52,SNR=19
O24A Longmont 51.61 303 P P 20 42 36.8 +1.4
baz=52
626A Big Bend Ranch 51.61 290 P P 20 42 36.4 +0.9
baz=52,SNR=21
HOMB Homborsund 51.64 33 eP P 20 42 36.4 +1.3
HOMB AMB AMB 20 42 40.1
comp=Z,76nm,1.2s
HOMB eS S 20 49 56.6 +1.1
HOMB AMS AMS 20 59 47.3
comp=Z,11µm,23.9s
Z25A Roswell 51.67 294 ⇓P P 20 42 37.0 +1.1
baz=52,SNR=22
MOX Moxa 51.67 43 eP P 20 42 34.8 -0.6
comp=Z,180nm,1.2s
MOX epP pP 20 42 44.3 +4.2
MOX Moxa 51.67 43 eP P 20 42 34.8 -0.6
MOX pmax pmax
comp=Z,180nm,1.2s
R24A Sanders Place, 51.67 301 P P 20 42 38.2 +2.3
baz=52,SNR=24
125A Gardner Draw, 51.68 294 P P 20 42 36.9 +1.0
baz=52,SNR=29
Q24A Divide 51.68 302 P P 20 42 37.2 +1.1
baz=52,SNR=34
S24A Houchin Ranch, 51.77 300 P P 20 42 38.9 +2.1
baz=52,SNR=8.5
ABTA Abfaltersbach 51.79 48⇑iP P 20 42 35.3 -1.2
comp=Z,229nm,1.3s,SNR=44
NEUB Neuenburg 51.86 43 eP P 20 42 36.1 -0.7
comp=Z,207nm,1.1s
NEUB epP pP 20 42 45.1 +3.7
MANZ Manzenberg 51.88 44 eP P 20 42 36.3 -0.8
comp=Z,161nm,1.3s
MANZ epP pP 20 42 45.6 +3.9
PHWY Pilot Hill 51.90 305 eP P 20 42 38.5 +0.8
comp=Z,623nm,2.1s
JMIC Jan Mayen 51.90 15 eP P 20 42 36.7 -0.1
JMIC AMS AMS 20 58 00.3
comp=Z,3µm,16.3s
JMIC Jan Mayen 51.90 15 P P 20 42 39.5 +2.7
JMIC Jan Mayen 51.90 15 P P 20 42 39.5 +2.7
comp=Z,24nm,0.7s,baz=165,slow=12,SNR=2.4
ROTZ Rotzenmuhle 51.92 45 eP P 20 42 36.8 -0.5
comp=Z,135nm,1.3s
ROTZ epP pP 20 42 46.2 +4.2
V24A Rampart Ranch, 51.92 298 P P 20 42 39.8 +1.9
baz=52,SNR=12
H23A Clabaugh Cattl 51.95 309 P P 20 42 39.2 +1.4
baz=52,SNR=8.3
G23A Biddle 51.98 310 P P 20 42 38.5 +0.5
baz=52,SNR=16
PLN Plauen 51.99 44 eP P 20 42 37.3 -0.5
comp=Z,342nm,1.1s
PLN epP pP 20 42 46.4 +4.0
B23A Brockton 51.99 314 P P 20 42 38.5 +0.6
baz=52
D23A Lindsay 52.01 312 P P 20 42 38.8 +0.7
baz=52,SNR=20
J23A Dilts Ranch, B 52.01 307 P P 20 42 39.3 +1.0
baz=52
E23A Ismay 52.02 311 P P 20 42 38.5 +0.3

baz=52,SNR=6.3
ISCO Idaho Springs 52.03 303 *e*P P 20 42 39.2 +0.5
ISCO pmax pmax
comp=Z,270nm,2.0s
ISCO MLR MLR
comp=Z,7µm,19.0s
ISCO Idaho Springs 52.03 303 *e*P P 20 42 39.2 +0.5
comp=Z,270nm,2.0s
ISCO LR LR
comp=Z,7µm,19.0s
ISCO Idaho Springs 52.03 303 P P 20 42 39.9 +1.2
baz=52,SNR=26
F23A Volborg 52.03 310 P P 20 42 37.9 -0.4
baz=52,SNR=15
K23A Bowen Ranch, D 52.05 306 P P 20 42 38.9 +0.3
baz=52,SNR=15
C23A Lambert 52.05 313 P P 20 42 38.6 +0.3
baz=52,SNR=18
RJOB Jochberg 52.07 47 *e*P P 20 42 37.5 -1.1
comp=Z,104nm,1.3s
RJOB *e*pP **pP 20 42 46.7 +3.5**
W24A Lazy 6 Ranch, 52.07 297 P P 20 42 39.8 +0.8
baz=52,SNR=10
325A Bean Ranch, Si 52.09 292 P P 20 42 39.6 +0.5
baz=52,SNR=25
L23A Garrett 52.09 306 P P 20 42 39.9 +0.9
baz=52,SNR=9.0
WERN Wernitzgruen 52.10 44 *e*P P 20 42 38.4 -0.3
comp=Z,306nm,1.3s
M23A Laramie 52.10 305 P P 20 42 40.0 +0.9
baz=52,SNR=13
NKC Novy Kostel 52.13 44⇑*i*P P 20 42 38.3 -0.6
NKC *e*S **S 20 50 06.8 +4.1**
NKC MLR MLR
comp=Z,17µm,17.7s
NKC Novy Kostel 52.13 44⇑*i*P P 20 42 38.3 -0.6
NKC *e*S **S 20 50 06.8 +4.1**
NKC AMS AMS 21 01 10.0
comp=Z,17µm,17.7s
X24A Lazy VL Ranch, 52.15 296 P P 20 42 41.3 +1.8
baz=52,SNR=7.3
TANN Tannenbergstha 52.17 44 *e*P P 20 42 38.6 -0.6
comp=Z,146nm,1.4s
425A Indio Mountain 52.18 291 P P 20 42 40.5 +0.8
baz=52,SNR=37
AQU L'Aquila 52.20 54 *e*P P 20 42 39.0 -0.6
comp=Z,309nm,1.2s
AQU LR LR
comp=Z,12µm,19.0s
Z24A Sheeppen Canyo 52.20 295 P P 20 42 41.9 +2.0
baz=52,SNR=20
Y24A Capitan 52.20 295 P P 20 42 41.6 +1.7
baz=52,SNR=28
P23A Jefferson 52.21 302 P P 20 42 42.0 +1.9
baz=52
Q23A Hartsel 52.22 302 P P 20 42 42.3 +2.2
baz=52,SNR=16
R23A Moffat 52.24 301 P P 20 42 42.3 +2.0
baz=52,SNR=14
N23A Red Feather La 52.27 304 P P 20 42 42.0 +1.6
baz=52,SNR=23
WET Wettzell 52.28 45 *e*P P 20 42 39.2 -0.8
comp=Z,178nm,1.3s
WET *e*pP **pP 20 42 48.6 +3.9**
WET Wettzell 52.28 45 *e*P P 20 42 39.2 -0.8
WET pmax pmax
comp=Z,178nm,1.3s
124A Stringfield Ra 52.34 294 P P 20 42 42.5 +1.4
baz=52,SNR=16
KBA Koelnbreinsper 52.38 48 *i*P P 20 42 39.9 -1.2
comp=Z,216nm,1.1s,SNR=45
MNTX Cornudas Mount 52.40 293 *e*P P 20 42 40.4 -0.8
comp=Z,14nm,1.1s
MNTX LR LR
comp=Z,3µm,20.0s
E22A Miles City 52.45 311 P P 20 42 41.8 +0.3
baz=52,SNR=13
T23A Casias Ranch, 52.46 299 P P 20 42 44.0 +2.1
baz=52,SNR=8.1
224A Cornudas Mount 52.47 293 P P 20 42 42.6 +0.7
baz=52,SNR=24
C22A Vida 52.51 313 P P 20 42 42.1 +0.3
baz=52,SNR=17
324A Moseley Ranch, 52.52 292 P P 20 42 42.7 +0.4
baz=52,SNR=45
MYKA Terra Mystica 52.55 49⇑*i*P P 20 42 40.8 -1.4
comp=Z,224nm,1.2s
TRI Trieste 52.58 50 *e*P P 20 42 40.2 -2.1
TRI pmax pmax
comp=Z,187nm,1.4s
TRI Trieste 52.58 50 *e*P P 20 42 40.2 -2.1
comp=Z,187nm,1.4s
KONO Kongsberg 52.60 32⇑*i*P P 20 42 41.5 -0.7
KONO AMB AMB 20 42 47.0
comp=Z,203nm,1.5s
KONO *e*PP **PP 20 44 41.0 -0.1**
KONO *e*S **S 20 50 07.9 -0.7**
KONO AMS AMS 20 59 24.6
comp=Z,10µm,24.6s
KONO Kongsberg 52.60 32 *e*P P 20 42 41.2 -1.0
KONO MLR MLR
comp=Z,13µm,21.0s
KONO Kongsberg 52.60 32 *e*P P 20 42 41.2 -1.0
KONO LR LR
comp=Z,13µm,21.0s
G22A Birney 52.62 310 P P 20 42 43.8 +1.1
baz=53,SNR=30
F22A Rosebud 52.63 310 P P 20 42 43.5 +0.7
baz=53,SNR=18
U23A El Rito 52.63 298 P P 20 42 44.9 +1.8
baz=53,SNR=18
CLL Collm 52.63 43 *e*P P 20 42 41.8 -0.8
comp=Z,172nm,1.1s
CLL Collm 52.63 43⇑*i*P P 20 42 42.8 +0.2
CLL *e*S **S 20 50 15.0 +5.6**
CLL pmax pmax
comp=Z,8.0nm,1.1s
CLL MLR MLR
comp=Z,12µm,19.5s
CLL Collm 52.63 43⇑*i*P P 20 42 42.8 +0.2
comp=Z,173nm,1.1s
CLL *e*S **S 20 50 15.0 +5.6**
comp=N,2µm,23.9s
CLL *e*S **S 20 50 15.0 +5.6**
comp=E,4µm,24.6s
CLL *e*SS **SS 20 53 48.0 +0.4**
CLL *e*SSSS 20 55 54.0
CLL LH 21 01 00.0
comp=N,4µm,20.4s
CLL LH 21 01 00.0
comp=E,7µm,19.2s
CLL LmV 21 01 00.0
comp=Z,12µm,19.5s
H22A Clearmont 52.63 309 P P 20 42 44.4 +1.5
baz=53,SNR=30
B22A Reddig Ranch S 52.64 313 P P 20 42 43.5 +0.8
baz=53,SNR=8.7
MOL Molde 52.64 28⇑*i*P P 20 42 41.8 -0.7
MOL AMB AMB 20 42 45.9
comp=Z,140nm,1.3s
A22A Carney Farms, 52.65 314 P P 20 42 43.0 +0.1
baz=53,SNR=16
N22A Wattenberg Ran 52.66 304 P P 20 42 44.2 +1.0
baz=53,SNR=12
V23A Ortiz Mt. (NFS 52.66 298 P P 20 42 46.1 +2.8
baz=53,SNR=15
D22A Cohagen 52.66 312 P P 20 42 43.2 +0.3
baz=53,SNR=15
J22A Midwest 52.69 307 P P 20 42 43.2 -0.1
baz=53
VOY Vojsko 52.69 49 *e*P P 20 42 41.9 -1.3
VOY *e* 20 43 09.5
VOY *e* 20 43 34.3
I22A 9 Mile Ranch, 52.70 308 P P 20 42 44.0 +0.6
baz=53,SNR=84
K22A Casper 52.71 306 P P 20 42 43.9 +0.4
baz=53,SNR=11
Y23A Lovelace Mesa, 52.72 295 P P 20 42 45.6 +1.8
baz=53,SNR=23
KHC Kasperske Hory 52.73 46⇑*i*P P 20 42 42.4 -1.0
KHC *e* 20 42 51.2
KHC *e*S **S 20 50 13.5 +2.6**
KHC MLR MLR
comp=Z,7µm,16.3s
KHC Kasperske Hory 52.73 46⇑*i*P P 20 42 42.4 -1.0
KHC *e*x x 20 42 51.2
KHC *e*S **S 20 50 13.5 +2.6**
KHC AMS AMS 21 05 50.0
comp=Z,7µm,16.3s
KHC Kasperske Hory 52.73 46 *e*P P 20 42 42.0 -1.4
comp=Z,229nm,1.2s
O22A Kremmling 52.74 303 P P 20 42 44.8 +0.9
baz=53,SNR=40
GEC2 GERESS Array S 52.78 46 *e*P P 20 42 43.0 -0.9
comp=Z,312nm,1.3s
GEC2 *e*pP **pP 20 42 52.2 +3.7**
GEC2 GERESS Array S 52.78 46 *e*P P 20 42 43.0 -0.9
GEC2 *e**PP **pP 20 42 52.2 +3.7**
GEC2 pmax pmax
comp=Z,312nm,1.3s
GERES GERESS Array B 52.78 46 P P 20 42 42.2 -1.7
GERES GERESS Array B 52.78 46 P P 20 42 42.2 -1.7
comp=Z,136nm,1.1s,baz=258,slow=5.3,SNR=116
GERES LR LR 21 01 34.3
comp=Z,7µm,18.4s,baz=263,slow=32
FBE Freiberg 52.80 43 *e*P P 20 42 43.4 -0.4
comp=Z,296nm,1.2s
FBE *e*pP **pP 20 42 52.7 +4.2**
JAVS Javornik 52.80 50 *i*P P 20 42 43.1 -0.9
JAVS *e*S **S 20 50 14.3 +2.2**
LLD Lille Linde 52.87 38 *i*P P 20 42 45.7 +1.5
LLD pmax pmax
comp=Z,110nm,0.9s
LLD Lille Linde 52.87 38 *i*P P 20 42 45.7 +1.5
comp=Z,110nm,0.9s
P22A Eagle 52.91 303 P P 20 42 46.6 +1.5
baz=53,SNR=24
Z23A Rita Site, Whi 52.93 295 P P 20 42 47.1 +1.9
baz=53,SNR=22
ANMO Albuquerque 52.95 297 P P 20 42 46.0 +0.5
ANMO LR LR
comp=Z,3µm,21.0s
ANMO Albuquerque 52.95 297 P P 20 42 46.0 +0.5
comp=Z,9.5nm,0.9s,baz=101,slow=8.2,SNR=35
R22A Saguache, Gunn 52.97 301 P P 20 42 48.2 +2.6
baz=53,SNR=16
S22A 4UR Ranch, Cre 53.05 300 P P 20 42 48.5 +2.3
baz=53,SNR=36
COP Copenhagen 53.06 37⇑*i*P P 20 42 45.2 -0.4
COP *i*S **S 20 50 20.1 +5.0**
COP pmax pmax
comp=Z,52nm,0.9s
COP MLR MLR
comp=Z,3µm,16.0s
COP Copenhagen 53.06 37⇑*i*P P 20 42 45.2 -0.4
comp=Z,52nm,0.9s
COP *i*S **S 20 50 20.1 +5.0**
COP
comp=Z,3µm,16.0s
MOA Molln 53.07 47⇑*i*P P 20 42 44.4 -1.5
comp=Z,142nm,1.2s,SNR=35
H21A Big Horn, Sher 53.13 309 P P 20 42 46.9 +0.4
baz=53,SNR=39
LJU Ljubljana 53.13 49 *i*P P 20 42 45.7 -0.7
LJU *e*S **S 20 50 17.1 +0.7**
T22A Edith 53.15 299 P P 20 42 49.1 +2.1
baz=53,SNR=30
LPM Los Pinos Moun 53.16 296 *e*P P 20 42 47.8 +0.9
comp=Z,65nm,1.3s
U22A Llaves 53.16 298 P P 20 42 49.5 +2.5
baz=53,SNR=12
BRG Berggiesshubel 53.16 43⇑*i*P P 20 42 45.6 -0.9
comp=Z,143nm,1.5s
BRG *i* 20 43 04.7
comp=Z,87nm,1.2s
BRG S S 20 50 23.0 +6.3
BRG SS **SKiKP 20 54 01.0 -3.1**
BRG
comp=N,5µm,20.5s
BRG
comp=E,12µm,18.8s
BRG
comp=Z,17µm,18.5s
BRG Berggiesshubel 53.16 43 *e*P P 20 42 45.9 -0.6
comp=Z,162nm,1.2s
BRG *e*pP **pP 20 42 55.2 +4.1**
BRG Berggiesshubel 53.16 43⇑*i*P P 20 42 45.6 -0.9
BRG S S 20 50 23.0 +6.3
BRG pmax pmax
comp=Z,1.0nm,1.5s
BRG pmax pmax
comp=Z,143nm,1.2s
BRG MLR MLR
comp=N,87µm,20.5s
BRG MLR MLR
comp=E,5µm,18.8s
BRG MLR MLR
comp=Z,12µm,18.5s
BNM Barren Site 53.17 296 *e*P P 20 42 48.7 +1.6
comp=Z,90nm,1.4s
OBKA Obir 53.17 49 *i*P P 20 42 45.7 -1.1
comp=Z,482nm,1.1s,SNR=126
D21A La Casta Ranch 53.21 312 P P 20 42 47.9 +0.9
baz=53,SNR=12
F21A Absaloka Mine, 53.23 310 P P 20 42 48.0 +0.8
baz=53,SNR=7.4
E21A Keefer Ranch, 53.24 311 P P 20 42 48.2 +1.0
baz=53,SNR=19
V22A San Miguel Ran 53.24 298 P P 20 42 50.1 +2.5
baz=53,SNR=18
K21A Alcova 53.24 306 P P 20 42 48.2 +0.7
baz=53,SNR=28
G21A Lodge Grass 53.27 310 ⇑P P 20 42 47.9 +0.4
baz=53,SNR=26
RUE Ruedersdorf 53.28 41 *e*P P 20 42 46.7 -0.6
comp=Z,414nm,1.2s
RUE Ruedersdorf 53.28 41 *e*P P 20 42 46.2 -1.0
comp=Z,326nm,1.1s
WDD Wield Dalam 53.28 62 PFAKE 20 43 00.0 +12
WDD LR LR
comp=Z,3µm,20.0s
I21A Big Trails, Te 53.29 308 P P 20 42 47.7 -0.1
baz=53,SNR=88
MMIG Aquila 53.31 276 P P 20 42 48.7 +0.7
A21A Bergtoll Ranch 53.32 314 ⇓P P 20 42 48.3 +0.5
baz=53,SNR=18
M21A Separation Pea 53.33 305 P P 20 42 49.6 +1.4
baz=53,SNR=12
L21A Rawlins 53.33 305 P P 20 42 48.8 +0.6
baz=53,SNR=43
RGN Rugen 53.34 39 P P 20 42 47.4 -0.3
comp=Z,322nm,1.3s
PRA Prague 53.38 44 ⇑P P 20 42 48.0 -0.1
PRA S S 20 50 25.0 +5.3
PRA AMS AMS 21 02 00.0
J21A Lysite 53.39 307 P P 20 42 48.6 0.0
baz=53,SNR=27
PRU Pruhonice 53.44 45⇑*i*P P 20 42 48.0 -0.6
PRU *e*S **S 20 50 24.9 +4.4**
PRU MLR MLR
comp=Z,13µm,17.5s
PRU Pruhonice 53.44 45⇑*i*P P 20 42 48.0 -0.6
PRU *e*S **S 20 50 24.9 +4.4**
PRU AMS AMS 21 02 10.0
comp=Z,13µm,17.5s
X22A Bernardo 53.45 296 P P 20 42 51.7 +2.6
baz=53,SNR=7.7
P21A Newcastle 53.45 302 P P 20 42 51.2 +2.1
baz=53,SNR=12
LENM Lemitar 53.45 296 *e*P P 20 42 47.5 -1.6
comp=Z,145nm,1.8s
N21A Black Mountain 53.47 304 P P 20 42 51.1 +1.9
baz=53,SNR=18
Y22A Socorro 53.47 295 P P 20 42 51.0 +1.7
baz=54,SNR=13
SOKA Soboth 53.51 49⇑*i*P P 20 42 47.6 -1.6
comp=Z,109nm,1.3s
PVCC Panska Ves 53.52 44 *e*P P 20 42 48.3 -0.8
PVCC *e*S **S 20 50 26.0 +4.5**
PVCC MLR MLR
comp=Z,17µm,19.0s
PVCC Panska Ves 53.52 44⇑*e*P P 20 42 48.3 -0.8
PVCC *e*S **S 20 50 26.0 +4.5**
PVCC AMS AMS 21 02 00.0
comp=Z,17µm,19.0s
Z22A Elephant Butte 53.54 295 P P 20 42 50.8 +1.0
baz=54,SNR=15
PERS Pernice 53.57 49 *i*P P 20 42 47.9 -1.8
PERS *e*S **S 20 50 23.6 +1.1**
NAO01 NORSAR Array S 53.57 31 *e*P P 20 42 48.5 -0.8
comp=Z,112nm,1.0s
Q21A Lamborn Mesa, 53.58 302 P P 20 42 51.9 +1.9
baz=54,SNR=13
R21A Cimarron 53.58 301 P P 20 42 52.6 +2.4
baz=54,SNR=26
BOJS Bojanci 53.61 50 *i*P P 20 42 49.2 -0.7
BOJS *e*S **S 20 50 22.8 -0.2**
T21A Navajo Lake 53.66 299 P P 20 42 53.1 +2.4
baz=54,SNR=11
NB2 NORSAR Subarra 53.78 31 P P 20 42 50.5 -0.4
comp=Z,142nm,0.9s,baz=253,slow=7.9
NB2 NORSAR Subarra 53.78 31 P P 20 42 50.5 -0.4
baz=253,slow=7.9
NOA NORSAR Array B 53.78 31 P P 20 42 50.2 -0.7
NOA NORSAR Array B 53.78 31 P P 20 42 50.3 -0.7
comp=Z,102nm,0.8s,baz=254,slow=7.6,SNR=136
NOA LR LR 21 01 54.8
comp=Z,8µm,19.3s,baz=250,slow=32
U21A Nageezi 53.80 299 P P 20 42 53.6 +1.9
baz=54,SNR=10
H20A Greybull 53.81 309 P P 20 42 52.4 +0.8
baz=54,SNR=14
S21A Coal Bank Pass 53.82 300 P P 20 42 53.5 +1.5
baz=54,SNR=28
NC602 NORSAR Array S 53.84 31⇑*i*P P 20 42 50.4 -0.9
J20A Shoshoni 53.86 307 P P 20 42 52.4 +0.5
baz=54,SNR=57
ARSA Arzberg 53.88 48⇑*i*P P 20 42 50.2 -1.6
comp=Z,188nm,1.2s,SNR=54
I20A Worland 53.90 308 P P 20 42 52.5 +0.4
baz=54,SNR=74
C20A Veseth Ranch, 53.94 313 P P 20 42 52.7 +0.3
baz=54,SNR=34
F20A Billings 53.95 310 P P 20 42 53.7 +1.2
baz=54,SNR=32
M20A Sweetwater, Wa 53.95 305 P P 20 42 54.0 +1.3
baz=54,SNR=39
E20A Meyer Farm, Mu 53.96 311 P P 20 42 53.1 +0.6
baz=54,SNR=92
A20A Cobblestone Ra 53.96 314 P P 20 42 53.2 +0.7
baz=54,SNR=11
G20A Bridger 53.98 310 P P 20 42 53.0 +0.3
baz=54,SNR=84
TREC Trest 53.99 45 *e*P P 20 42 51.4 -1.3
TREC *e*S **S 20 50 30.4 +2.4**
TREC MLR MLR
comp=Z,6µm,16.0s
TREC Trest 53.99 45⇑*e*P P 20 42 51.4 -1.3
TREC *e*S **S 20 50 30.4 +2.4**
TREC AMS AMS 21 02 50.0
comp=Z,6µm,16.0s
D20A Manuel Ranch, 53.99 312 P P 20 42 53.2 +0.5
baz=54,SNR=78
B20A Solberg Farm, 54.00 313 P P 20 42 53.7 +1.0
baz=54,SNR=9.4
N20A Spence Gulch, 54.03 304 P P 20 42 55.0 +1.7
baz=54,SNR=32
O20A White River Ci 54.04 303 P P 20 42 55.0 +1.6
baz=54,SNR=17
Y21A Point of Rocks 54.05 296 P P 20 42 56.0 +2.4
baz=54,SNR=17
CUC Castrocucco 54.05 57 *e*P P 20 42 51.3 -1.9
comp=Z,145nm,1.3s
CUC LR LR
comp=Z,10µm,19.0s
TBLU Trondheim 54.05 28⇑*i*P P 20 42 51.8 -1.0
TBLU AMB AMB 20 43 05.8
comp=Z,204nm,1.9s
TBLU AMS AMS 21 00 27.8
comp=Z,5µm,24.6s
K20A Yellowstone Ra 54.05 306 P P 20 42 53.4 0.0
baz=54,SNR=20
L20A Wamsutter 54.06 306 P P 20 42 54.1 +0.6
baz=54,SNR=22
X21A Alamocita Cree 54.09 296 P P 20 42 56.3 +2.4
baz=54,SNR=23
Z21A St. Cloud Mine 54.12 295 P P 20 42 56.2 +2.1
baz=54,SNR=19
Q20A Ridgley Place, 54.13 302 P P 20 42 55.4 +1.3
baz=54,SNR=31
CONA Conrad Observa 54.15 47 *i*P P 20 42 52.6 -1.3
comp=Z,170nm,1.2s,SNR=98
P20A De Beque 54.18 302 P P 20 42 55.9 +1.5
baz=54,SNR=28
CEL Celeste 54.20 59 PFAKE 20 43 10.0 +16
CEL LR LR
comp=Z,5µm,21.0s
R20A Redvale 54.24 301 P P 20 42 56.7 +1.7
baz=54,SNR=23
S20A Disappointment 54.26 300 P P 20 42 57.1 +2.0
baz=54,SNR=26
121A Cookes Peak, D 54.32 294 P P 20 42 57.2 +1.7
baz=54,SNR=38
BSD Bornholm Skovb 54.35 38⇑*i*P P 20 42 53.9 -1.2
BSD *i*S **S 20 50 34.9 +2.4**
BSD pmax pmax
comp=Z,40nm,1.0s
BSD MLR MLR
comp=Z,10µm,16.0s
BSD Bornholm Skovb 54.35 38⇑*i*P P 20 42 53.9 -1.2
comp=Z,40nm,1.0s
BSD *i*S **S 20 50 34.9 +2.4**
BSD
comp=Z,10µm,16.0s
PV01 Paradox Valley 54.40 301 *e*P P 20 42 57.5 +1.4
comp=Z,6µm,1.3s
E19A Rath Farm, Rou 54.41 311 P P 20 42 56.2 +0.4
baz=54,SNR=70
K19A Absolon Red Bu 54.42 307 P P 20 42 55.9 -0.3
baz=54,SNR=46
UPC Upice 54.43 44⇑*i*P P 20 42 55.1 -0.7
UPC Upice 54.43 44⇑*i*P P 20 42 55.1 -0.7
U20A Newcomb 54.50 299 P P 20 42 58.3 +1.6
baz=54,SNR=15
D19A Cripps Ranch, 54.50 312 P P 20 42 56.8 +0.3
baz=54,SNR=64
A19A Klindworth Far 54.51 314 P P 20 42 56.9 +0.4
baz=54,SNR=72
F19A Roth Farm, Mol 54.51 310 P P 20 42 57.4 +0.8
baz=54,SNR=36
H19A Powell 54.52 309 P P 20 42 57.7 +1.0
baz=54,SNR=43
I19A Meeteetse 54.52 308 P P 20 42 57.3 +0.5
baz=54,SNR=49
J19A Crowheart 54.57 307 P P 20 42 57.8 +0.6
baz=54,SNR=12
SOP Sopron 54.60 47⇑*e*P P 20 42 56.1 -1.0
B19A Brinkman Farms 54.61 313 P P 20 42 57.6 +0.4
baz=55,SNR=60
P19A Cripple Cowboy 54.63 303 P P 20 42 59.0 +1.3
baz=55,SNR=29
Y20A Horse Springs, 54.64 296 P P 20 43 00.5 +2.6
baz=55,SNR=22
KSP Ksiaz 54.64 44⇑*e*P P 20 42 56.5 -0.8
KSP *e**PP **pP 20 42 59.3 -2.7**
KSP *e*S **S 20 50 36.0 -0.7**
KSP *e*SS **SS 20 54 17.0 -2.3**
KSP MLR MLR
comp=Z,37µm,18.6s
KSP Ksiaz 54.64 44 *i*P P 20 42 56.5 -0.8
KSP *e*S **S 20 50 38.2 +1.5**
KSP LMZ LR 21 02 34.7
C19A Slack Wire Ran 54.64 313 P P 20 42 58.0 +0.5
baz=55,SNR=63
M19A Rock Springs 54.68 305 P P 20 42 58.8 +0.7
baz=55,SNR=6.3
DAG Danmarks Havn 54.70 8⇑*i*P P 20 42 56.9 -0.4
DAG pmax pmax
comp=Z,16nm,1.0s
DAG MLR MLR
comp=Z,2µm,15.0s
DAG Danmarks Havn 54.70 8⇑*i*P P 20 42 56.9 -0.4
comp=Z,16nm,1.0s
DAG
comp=Z,2µm,15.0s
O19A Miners Draw (B 54.70 303 P P 20 42 59.0 +0.8
baz=55,SNR=22
BEHE Becsehely 54.71 49⇑*e*P P 20 42 57.2 -0.7
VRAC Vranov 54.72 45⇑*i*P P 20 42 57.0 -0.9
RLMT Red Lodge 54.72 309 *e*P P 20 42 58.8 +0.5
comp=Z,207nm,1.4s
RLMT LR LR
comp=Z,5µm,21.0s
L19A Farson 54.81 306 P P 20 42 59.3 +0.3
baz=55,SNR=22
TIP Timpagrande 54.82 58 *e*P P 20 42 56.5 -2.4
TIP LR LR
comp=Z,17µm,20.0s
KRLC Kraliky 54.89 45 *e*P P 20 42 59.3 +0.1
KRLC Kraliky 54.89 45⇑*e*P P 20 42 59.3 +0.1

Z20A	Nine Sixteen R	54.91	295	P	P	20 43 02.1	+2.3
	baz=55,SNR=7.6						
G18A	Lazy EL Ranch,	54.93	310	P	P	20 43 00.2	+0.4
	baz=55,SNR=47						
PDAR	Pinedale Array	54.94	306	P	P	20 42 59.9	-0.1
PDAR	Pinedale Array	54.94	306	P	P	20 42 59.9	-0.1
	comp=Z,50nm,1.0s,baz=103,slow=6.5,SNR=166						
PDAR				LR	LR	21 03 51.9	
	comp=Z,6μm,19.9s,baz=93,slow=33						
BW06	Boulder Array	54.95	306	eP	P	20 42 59.5	-0.5
	comp=Z,97nm,1.1s						
BW06				LR	LR		
	comp=Z,8μm,20.0s						
ZST	Bratislava	54.99	47	eP	P	20 42 57.6	-2.3
ZST				pmax	pmax		
	comp=Z,127nm,1.2s						
ZST	Bratislava	54.99	47	eP	P	20 42 57.6	-2.3
ZST				eS	S	20 50 38.8	-2.6
ZST				eSS	SS	20 54 22.3	-2.6
H18A	Shoshone NF, C	55.00	309	P	P	20 43 00.6	+0.3
	baz=55,SNR=33						
GCMT	Greycliff	55.01	310	eP	P	20 43 00.9	+0.6
	comp=Z,89nm,1.0s						
120A	U Bar Ranch, L	55.02	294	P	P	20 43 03.0	+2.4
	baz=55,SNR=52						
220A	Playas Peak, P	55.02	293	P	P	20 43 02.0	+1.4
	baz=55,SNR=18						
F18A	Big Timber	55.05	310	P	P	20 43 01.4	+1.0
	baz=55,SNR=117						
320A	Kipp Ranch, An	55.11	293	P	P	20 43 03.6	+2.4
	baz=55,SNR=13						
I18A	Diamond G Ranc	55.12	308	P	P	20 43 02.1	+0.9
	baz=55,SNR=26						
EGMT	Eagleton	55.13	313	eP	P	20 43 00.9	-0.2
	comp=Z,409nm,1.4s						
EGMT				LR	LR		
	comp=Z,5μm,20.0s						
EGMT	Eagleton	55.13	313	P	P	20 43 01.6	+0.6
	baz=55,SNR=39						
D18A	Linhart Farms,	55.13	312	P	P	20 43 01.9	+0.9
	baz=55,SNR=25						
B18A	Beardsley Farm	55.16	313	P	P	20 43 01.6	+0.4
	baz=55,SNR=101						
E18A	Harlowton	55.20	311	P	P	20 43 02.5	+0.9
	baz=55,SNR=106						
SMOL	Smolenice	55.22	47	eP	P	20 43 01.6	0.0
SMOL	Smolenice	55.22	47	eP	P	20 43 01.6	0.0
A18A	Metzger Ranch,	55.23	314	P	P	20 43 01.8	+0.1
	baz=55,SNR=32						
L18A	Fontenelle, Gr	55.32	305	P	P	20 43 03.6	+1.0
	baz=55,SNR=11						
MORC	Moravsky Berou	55.36	45	⇑iP	P	20 43 00.9	-1.7
MORC				eS	S	20 50 50.7	+4.2
MORC	Moravsky Berou	55.36	45	⇑iP	P	20 43 00.9	-1.7
MORC				eS	S	20 50 50.7	+4.2
MORC	Moravsky Berou	55.36	45	⇓iP	P	20 43 02.4	-0.2
GKP	Gorka Klasztor	55.46	41	⇑eP	P	20 43 02.6	-0.6
GKP				eS	S	20 50 50.1	+2.6
GKP				MLR	MLR		
	comp=Z,14μm,25.0s						
GKP	Gorka Klasztor	55.46	41	eP	P	20 43 02.5	-0.6
GKP				e		20 43 30.2	
GKP				eS	S	20 50 50.0	+2.6
GKP				LMZ	LR	21 01 22.4	
LKWY	Lake	55.53	309	⇓iP	P	20 43 05.5	+1.3
LKWY				pmax	pmax		
	comp=Z,485nm,1.7s						
LKWY				MLR	MLR		
	comp=Z,11μm,19.0s						
LKWY	Lake	55.53	309	⇓iP	P	20 43 05.5	+1.3
	comp=Z,485nm,1.7s						
LKWY				LR	LR		
	comp=Z,11μm,19.0s						
S18A	Hurst Farm, Bl	55.56	300	P	P	20 43 06.2	+1.7
	baz=56,SNR=15						
PKST	T˜'s	55.59	48	⇑eP	P	20 43 03.1	-1.2
W18A	Petrified Fore	55.61	297	⇓P	P	20 43 06.6	+1.8
	baz=56,SNR=5.6						
LOHW	Long Hollow	55.69	308	eP	P	20 43 05.1	-0.2
	comp=Z,268nm,1.8s						
F17A	Fitzpatrick Pl	55.70	310	P	P	20 43 06.4	+1.1
	baz=56,SNR=79						
D17A	Six Diamond Ra	55.74	312	P	P	20 43 06.0	+0.5
	baz=56,SNR=85						
CSKK	Csˆ‡kako	55.74	48	⇑eP	P	20 43 04.4	-0.9
PKS9	Tamasi	55.75	49	⇑eP	P	20 43 04.5	-0.9
OKC	Ostrava-Krasne	55.76	45	⇑iP	P	20 43 04.6	-0.8
OKC				eS	S	20 50 54.2	+2.6
OKC				MLR	MLR		
	comp=Z,8μm,17.6s						
OKC	Ostrava-Krasne	55.76	45	⇑iP	P	20 43 04.6	-0.8
OKC				eS	S	20 50 54.2	+2.6
OKC				AMS	AMS	21 04 00.0	
	comp=Z,8μm,17.6s						
G17A	Pierce Place,	55.76	310	P	P	20 43 07.2	+1.4
	baz=56,SNR=23						
MOOW	Moose Ponds	55.79	308	eP	P	20 43 05.5	-0.5
	comp=Z,59nm,1.3s						
A17A	Triple J Farms	55.80	314	P	P	20 43 06.3	+0.5
	baz=56,SNR=97						
C17A	Wharram Farm,	55.80	312	P	P	20 43 06.0	+0.2
	baz=56,SNR=55						
RAC	Raciborz	55.80	45	eP	P	20 43 05.5	-0.2
RAC				eS	S	20 50 53.2	+1.0
RAC				MLR	MLR		
	comp=Z,12μm,18.0s						
SNOW	Snow King Moun	55.80	307	⇓iP	P	20 43 06.1	-0.1
	comp=Z,80nm,1.2s						
M17A	Scullys Gap (B	55.81	305	P	P	20 43 07.0	+0.7
	baz=56,SNR=15						
PKSG		55.83	48	⇑eP	P	20 43 04.7	-1.3
B17A	L&G Farms, Che	55.84	313	P	P	20 43 06.3	+0.2
	baz=56,SNR=30						
YFT	Old Faithful	55.84	309	⇓eP	P	20 43 08.4	+2.0
	comp=Z,372nm,1.7s						
E17A	Martinsdale	55.85	311	P	P	20 43 06.9	+0.6
	baz=56,SNR=83						
SRU	San Rafael	55.85	302	P	P	20 43 07.5	+1.0
	baz=56,SNR=44						
REDW	Red Top Meadow	55.88	307	eP	P	20 43 07.2	+0.5
	comp=Z,6.5nm,2.0s						
SHEL	Horse Pasture	55.92	131	PFAKE		20 43 20.0	+13
SHEL				LR	LR		
	comp=Z,4μm,20.0s						
IMW	Indian Meadow	55.93	308	⇓iP	P	20 43 07.4	+0.3
	comp=Z,201nm,1.5s						
YMR	Madison River	55.93	309	⇓iP	P	20 43 07.8	+0.8
	comp=Z,221nm,1.2s						
TPAW	Teton Pass	55.95	307	⇓eP	P	20 43 07.3	+0.1
	comp=Z,124nm,1.2s						
HCY	Herceg Novi	55.96	54	⇑iP	P	20 43 06.3	-0.7
BRY	Bratogost	55.98	53	⇑iP	P	20 43 06.2	-1.1
PKSM	Moragy	55.99	49	⇓iP	P	20 43 06.6	-0.5
PKSM	Moragy	55.99	49	⇑eP	P	20 43 06.0	-1.1
AHID	Auburn Hatcher	56.08	307	⇓iP	P	20 43 07.8	-0.2
	comp=Z,72nm,1.2s						
AHID				LR	LR		
	comp=Z,6μm,21.0s						
DCID1	Drake Creek	56.11	308	eP	P	20 43 09.1	+0.8
	comp=Z,222nm,1.3s						
H16A	Russell Place,	56.13	309	P	P	20 43 09.7	+1.3
	baz=56,SNR=31						
VYHS	Vyhne	56.16	47	eP	P	20 43 07.1	-1.2
VYHS				pmax	pmax		
	comp=Z,63nm,1.2s						
VYHS	Vyhne	56.16	47	eP	P	20 43 07.1	-1.2
VYHS				eS	S	20 50 56.2	-0.9
RRI2	Red Ridge	56.22	307	⇓iP	P	20 43 09.2	0.0
	comp=Z,124nm,1.1s						
UPM	Unac-Piva	56.24	53	⇑iP	P	20 43 07.7	-1.5
QLMT	Earthquake Lak	56.26	309	eP	P	20 43 11.1	+1.7
	comp=Z,30nm,1.6s						
BUD	Budapest	56.27	48	⇑eP	P	20 43 08.0	-1.0
BUM	Brajici-Budva	56.27	54	⇑iP	P	20 43 07.6	-1.7
I16A	Newdale	56.32	308	P	P	20 43 11.1	+1.3
	baz=56,SNR=34						
D16A	Dana Ranch, Ca	56.32	312	P	P	20 43 10.0	+0.3
	baz=56,SNR=35						
DAU	Daniels Canyon	56.32	304	eP	P	20 43 10.6	+0.6
DAU				pmax	pmax		
	comp=Z,54nm,0.9s						
DAU	Daniels Canyon	56.32	304	eP	P	20 43 10.6	+0.6
	comp=Z,54nm,0.9s						
PKS7	Kunszentmiklos	56.35	48	⇓eP	P	20 43 08.9	-0.8
Q16A	Castle Valley	56.37	302	P	P	20 43 11.8	+1.5
	baz=56,SNR=22						
F16A	Kennard Place,	56.38	310	P	P	20 43 10.9	+0.8
	baz=56						
BOZ	Bozeman (W)	56.38	310	⇓iP	P	20 43 10.3	+0.1
BOZ				e		20 45 11.2	
BOZ				pmax	pmax		
	comp=Z,104nm,1.4s						
BOZ				MLR	MLR		
	comp=Z,3μm,19.0s						
BOZ	Bozeman (W)	56.38	310	⇓iP	P	20 43 10.3	+0.1
	comp=Z,104nm,1.4s						
BOZ				ePP	PP	20 45 11.2	-4.4
BOZ				LR	LR		
	comp=Z,3μm,19.0s						
A16A	West Butte Ran	56.39	314	P	P	20 43 10.5	+0.4
	baz=56						
PKS2	Kecel	56.39	49	⇓eP	P	20 43 09.8	-0.1
E16A	East Helena	56.41	311	P	P	20 43 11.5	+1.2
	baz=56,SNR=29						
B16A	M & M Farms, S	56.45	313	P	P	20 43 11.3	+0.8
	baz=56,SNR=13						
JLU	Jordanelle	56.46	304	⇓iP	P	20 43 10.9	+0.1
	comp=Z,142nm,1.4s						
C16A	Fuhringer Ranc	56.46	313	P	P	20 43 10.9	+0.3
	baz=56,SNR=46						
HWUT	Hardware Ranch	56.48	305	⇓iP	P	20 43 10.2	-0.7
HWUT				LR	LR		
	comp=Z,10μm,19.0s						
G16A	Moss Hill, Enn	56.52	310	P	P	20 43 11.8	+0.7
	baz=56,SNR=51						
HRY	Holter Researc	56.52	311	eP	P	20 43 11.8	+0.7
	comp=Z,118nm,1.1s						
TTG	Podgorica	56.53	54	⇑iP	P	20 43 10.8	-0.2
ULC	Ulcinj	56.55	54	⇑iP	P	20 43 09.8	-1.4
MPU	Maple Canyon	56.64	303	⇓iP	P	20 43 12.4	+0.3
	comp=Z,194nm,1.4s						
CTU	Camp Tracy	56.68	304	eP	P	20 43 12.7	+0.3
	comp=Z,111nm,1.3s						
RES	Resolute Bay	56.77	346	P	P	20 43 09.9	-2.3
RES	Resolute Bay	56.77	346	P	P	20 43 09.9	-2.3
	comp=Z,29nm,1.1s,baz=133,slow=6.6,SNR=13						
OJC	Ojcow	56.84	45	⇑iP	P	20 43 12.5	-0.6
OJC				eS	S	20 51 08.2	+2.2
OJC				eSS	SS	20 54 56.0	+2.1
OJC				MLR	MLR		
	comp=Z,12μm,17.9s						
OJC	Ojcow	56.84	45	i P	P	20 43 12.5	-0.6
OJC				eS	S	20 51 08.2	+2.2
OJC				eSS	SS	20 54 56.0	+2.1
OJC				L	L	21 04 38.4	
	comp=Z,12μm,17.9s						
PSZ	Piszkesteto	56.86	47	⇑iP	P	20 43 12.3	-1.0
PSZ				MLR	MLR		
	comp=Z,8μm,20.0s						
PSZ	Piszkesteto	56.86	47	⇑iP	P	20 43 12.3	-1.0
PSZ				LR	LR		
	comp=Z,8μm,20.0s						
PSZ	Piszkesteto	56.86	47	⇑iP	P	20 43 13.9	+0.5
PSZ	Piszkesteto	56.86	47	⇑eP	P	20 43 12.6	-0.8
TUC	Tucson	56.86	294	⇑iP	P	20 43 14.7	+1.0
TUC				pmax	pmax		
	comp=Z,37nm,1.0s						
TUC				MLR	MLR		
	comp=Z,3μm,20.0s						
TUC	Tucson	56.86	294	⇑iP	P	20 43 14.7	+1.0
	comp=Z,37nm,1.0s						
TUC				LR	LR		
	comp=Z,3μm,20.0s						
WUAZ	Wupatki	56.89	298	eP	P	20 43 15.9	+1.9
	comp=Z,121nm,1.3s						
WUAZ				LR	LR		
	comp=Z,3μm,20.0s						
WUAZ	Wupatki	56.89	298	P	P	20 43 15.4	+1.5
	baz=57,SNR=9.3						
LRM	Limekiln Ridge	56.96	310	eP	P	20 43 14.4	0.0
	comp=Z,473nm,1.0s						
IVA	Berane	56.98	53	⇑iP	P	20 43 13.3	-1.0
F15A	Butte	56.99	310	P	P	20 43 15.0	+0.5
	baz=57,SNR=58						
D15A	Lincoln	56.99	312	P	P	20 43 14.7	+0.2
	baz=57,SNR=45						
DIVS	Divibare	56.99	52	P	P	20 43 06.3	-8.1
G15A	Dillon	57.00	309	P	P	20 43 15.4	+0.8
	baz=57,SNR=36						
B15A	Bradely Ranch,	57.02	313	P	P	20 43 14.3	-0.2
	baz=57,SNR=95						
PVY	Plav	57.04	54	⇑iP	P	20 43 13.0	-1.8
C15A	Salmond Ranch,	57.05	313	P	P	20 43 15.4	+0.6
	baz=57						
TIR	Tirane	57.05	55	eP	P	20 43 13.7	-1.0
TIR				pmax	pmax		
	comp=Z,135nm,1.1s						
TIR				MLR	MLR		
	comp=Z,10μm,22.0s						
TIR	Tirane	57.05	55	eP	P	20 43 13.7	-1.0
	comp=Z,134nm,1.1s						
TIR				LR	LR		
	comp=Z,10μm,22.0s						
DLMT	Dillon	57.07	310	eP	P	20 43 15.4	+0.4
	comp=Z,235nm,1.8s						
E15A	Deer Lodge	57.08	311	P	P	20 43 15.4	+0.4
	baz=57,SNR=55						
X16A	Lo Mia Camp, P	57.09	297	P	P	20 43 17.8	+2.4
	baz=57,SNR=20						
KEK	Kerkira	57.12	57	P	P	20 43 14.6	-0.7
KEK	Kerkira	57.12	57	eP	P	20 43 15.4	+0.1
A15A	Johnson Ranch,	57.13	314	P	P	20 43 15.2	-0.2
	baz=57,SNR=51						
NIE	Niedzica	57.15	45	⇑iP	P	20 43 16.0	+0.6
NIE				e		20 45 20.8	
NIE				eS	S	20 51 13.8	+3.6
NIE				eSS	SS	20 55 02.1	+3.2
NIE	Niedzica	57.15	45	i P	P	20 43 16.0	+0.6
NIE				ePP	PP	20 45 20.8	-1.4
NIE				eS	S	20 51 13.8	+3.6
NIE				eSS	SS	20 55 02.1	+3.2
MVU	Marysvale	57.22	302	⇑iP	P	20 43 17.5	+1.2
	comp=Z,163nm,1.6s						
MVU				LR	LR		
	comp=Z,6μm,19.0s						
KECS	Kecovo	57.25	47	eP	P	20 43 15.4	-0.7
KECS				pmax	pmax		
	comp=Z,36nm,1.3s						
KECS	Kecovo	57.25	47	eP	P	20 43 15.4	-0.7
SRN	Sarande	57.27	57	P	P	20 43 16.2	-0.1
MCMT	McKenzie Canyo	57.27	309	eP	P	20 43 17.1	+0.6
	comp=Z,67nm,1.4s						
HVU	Hansel Valley	57.38	305	⇑eP	P	20 43 16.7	-0.6
HVU				pmax	pmax		
	comp=Z,60nm,1.2s						
HVU	Hansel Valley	57.38	305	⇑eP	P	20 43 16.6	-0.6
	comp=Z,60nm,1.2s						
PHP	Peshkopia	57.45	55	P	P	20 43 17.7	0.0
B14A	Marquette Ranc	57.49	313	P	P	20 43 17.8	-0.2
	baz=57,SNR=22						
CHMT	Chamberlain Mo	57.49	312	eP	P	20 43 17.9	-0.1
	comp=Z,114nm,1.9s						
U15A	North Rim	57.52	299	P	P	20 43 20.2	+1.7
	baz=58,SNR=15						
BEL	Belsk	57.52	43	⇑eP	P	20 43 17.5	-0.4
BEL				eS	S	20 51 18.3	+3.4
BEL				MLR	MLR		
	comp=Z,11μm,20.7s						
BEL	Belsk	57.52	43	eP	P	20 43 17.5	-0.4
BEL				eS	S	20 51 18.2	+3.4
BEL				LMZ	LR	21 03 59.1	
DUG	Dugway	57.53	304	⇓iP	P	20 43 18.7	+0.4
DUG				pmax	pmax		
	comp=Z,103nm,1.2s						
DUG				MLR	MLR		
	comp=Z,8μm,19.0s						
DUG	Dugway	57.53	304	⇓iP	P	20 43 18.7	+0.4
	comp=Z,103nm,1.2s						
DUG				LR	LR		
	comp=Z,8μm,19.0s						
DUG	Dugway	57.53	304	P	P	20 43 19.3	+0.9
	baz=58,SNR=72						
IGT	Igoumenitsa	57.55	57	P	P	20 43 18.3	0.0
LCO	Las Campanas	57.58	205	eP	P	20 43 18.2	-0.6
LCO				LR	LR		
	comp=Z,7μm,22.0s						
A14A	Double T Ranch	57.59	314	P	P	20 43 18.3	-0.3
	baz=58,SNR=30						
F14A	Wisdom	57.60	310	P	P	20 43 20.2	+1.4
	baz=58,SNR=13						
SLMT	Seeley Lake	57.65	312	eP	P	20 43 18.9	-0.2
	comp=Z,84nm,1.0s						
D14A	Greenough	57.66	312	P	P	20 43 19.4	+0.2
	baz=58,SNR=73						
G14A	Jackson	57.68	310	P	P	20 43 21.0	+1.6
	baz=58,SNR=10.0						
I14A	Mackay	57.74	308	P	P	20 43 20.6	+0.7
	baz=58,SNR=32						
KBN	Korca	57.80	56	P	P	20 43 20.5	+0.3
TIM	Timisoara	57.80	50	i P	P	20 43 21.2	+1.3
C14A	Swan Lake	57.81	313	P	P	20 43 20.5	+0.3
	baz=58						
LKD2	Lefkada island	57.88	58	P	P	20 43 20.4	-0.3
LKD2	Lefkada island	57.88	58	eP	P	20 43 20.6	-0.1
VLS	Valsamata	57.89	59	P	P	20 43 20.0	-0.8
VLS	Valsamata	57.89	59	eP	P	20 43 20.0	-0.8
CRVS	Cervenica-Dubn	57.90	46	eP	P	20 43 18.6	-2.0
CRVS				pmax	pmax		
	comp=Z,132nm,1.2s						
CRVS	Cervenica-Dubn	57.90	46	eP	P	20 43 18.6	-2.0
CRVS				eS	S	20 51 20.5	+0.4
CRVS				eSS	SS	20 55 00.4	-10
WALA	Waterton Lakes	57.91	314	⇓iP	P	20 43 20.1	-0.7
	comp=Z,12nm,1.9s						
JAN	Janina	57.94	57	eP	P	20 43 21.6	+0.5
MSO	Missoula	57.97	311	⇓iP	P	20 43 21.0	-0.3
	comp=Z,89nm,1.6s						
MSO				LR	LR		
	comp=Z,5μm,19.0s						
MSO	Missoula	57.97	311	P	P	20 43 22.0	+0.7
	baz=58,SNR=13						
SWMT	Swartz Lake	57.99	312	eP	P	20 43 21.4	-0.1
	comp=Z,74nm,0.9s						
YBMT	Yellow Bay	57.99	313	eP	P	20 43 21.6	+0.2
	comp=Z,68nm,1.5s						
NEST	Nestorio	58.02	56	P	P	20 43 21.9	+0.2
BZS	Buzias	58.08	50	⇑iP	P	20 43 21.8	-0.2
E13A	Victor	58.15	311	P	P	20 43 22.6	+0.1
	baz=58,SNR=37						
BIA	Bitola	58.17	55	eP	P	20 43 22.8	+0.1
JTMT	Jette	58.17	313	eP	P	20 43 22.8	0.0
	comp=Z,261nm,2.0s						
SKO	Skopje	58.18	54	eP	P	20 43 23.0	+0.3
BLMT	Blacktail Moun	58.22	313	eP	P	20 43 22.9	-0.3
	comp=Z,82nm,1.5s						
CCUT	Cedar City	58.23	301	eP	P	20 43 24.2	+0.8
	comp=Z,120nm,1.3s						
FNA	Florina	58.23	56	P	P	20 43 22.4	-0.8
FNA	Florina	58.23	56	eP	P	20 43 22.8	-0.4
ARUT	Antelope Range	58.26	301	eP	P	20 43 24.1	+0.5
ARUT				pmax	pmax		
	comp=Z,90nm,1.2s						
ARUT	Antelope Range	58.26	301	eP	P	20 43 24.1	+0.5
	comp=Z,90nm,1.2s						
F13A	Darby	58.27	310	P	P	20 43 23.9	+0.4
	baz=58,SNR=24						
B13A	Whitefish	58.29	313	P	P	20 43 23.8	+0.3
	baz=58,SNR=17						
D13A	Huson	58.31	312	P	P	20 43 24.2	+0.6
	baz=58,SNR=19						
C13A	Hot Springs	58.37	312	P	P	20 43 24.3	+0.2
	baz=58,SNR=16						
KOLS	Kolonicke sedl	58.44	46	eP	P	20 43 24.1	-0.3
KOLS				pmax	pmax		
	comp=Z,102nm,1.5s						
KOLS	Kolonicke sedl	58.44	46	eP	P	20 43 24.1	-0.3
KOLS				eS	S	20 51 29.2	+2.2
KOLS				eSS	SS	20 55 19.8	+0.7
Y14A	Wickenburg	58.45	296	P	P	20 43 26.9	+2.1
	baz=58,SNR=23						
UZH	Uzhgorod	58.45	46	eP	P	20 43 23.8	-0.7
UZH				e		20 45 39.8	
UZH				eS	S	20 51 25.0	-2.2
UZH				MLR	MLR		
	comp=N,300nm,14.0s						
UZH				MLR	MLR		
	comp=E,3μm,14.0s						
UZH				MLR	MLR		
	comp=Z,700nm,14.0s						
HLID	Hailey	58.46	308	⇓iP	P	20 43 25.0	+0.1
HLID				LR	LR		
	comp=Z,7μm,19.0s						
HLID	Hailey	58.46	308	P	P	20 43 25.3	+0.4
	baz=58,SNR=80						
Z14A	Wintersburg	58.49	296	P	P	20 43 27.1	+2.1
	baz=58,SNR=9.0						
AXS	Araxos	58.50	59	P	P	20 43 24.9	-0.1
BSMT	Bassoo Peak	58.51	313	eP	P	20 43 24.3	-0.9
	comp=Z,146nm,1.8s						
KZN	Kozani	58.58	56	P	P	20 43 25.4	-0.2
KZN	Kozani	58.58	56	eP	P	20 43 25.3	-0.3
RLS	Riolos of Patr	58.59	59	P	P	20 43 25.7	+0.1
RLS	Riolos of Patr	58.59	59	eP	P	20 43 25.5	-0.1
214A	Organ Pipe Nat	58.61	294	P	P	20 43 27.6	+1.7
	baz=59,SNR=41						
TRPA	Tarpa	58.63	47	⇓iP	P	20 43 26.0	+0.3
TRPA	Tarpa	58.63	47	⇑eP	P	20 43 25.2	-0.5
H12A	Diamond D Ranc	58.71	309	P	P	20 43 27.8	+1.2
	baz=59,SNR=18						
KWP	Kalwaria Pacla	58.71	45	⇑eP	P	20 43 26.5	+0.2
KWP				eS	S	20 51 36.5	+5.9
KWP				MLR	MLR		
	comp=Z,6μm,22.5s						
KWP	Kalwaria Pacla	58.71	45	eP	P	20 43 26.0	-0.3
KWP				LR	LR		
	comp=Z,6μm,21.0s						
KWP	Kalwaria Pacla	58.71	45	⇑iP	P	20 43 26.5	+0.2
KWP	Kalwaria Pacla	58.71	45	eP	P	20 43 26.4	+0.2
KWP				eS	S	20 51 36.5	+5.9
KWP				LMZ	LR	21 05 15.1	
EVR	Evrytania	58.76	58	P	P	20 43 27.6	+0.6
EVR	Evrytania	58.76	58	eP	P	20 43 27.5	+0.6
DRGR		58.79	49	⇓P	P	20 43 26.2	-0.8
DRGR		58.79	49	⇓iP	P	20 43 26.2	-0.8
THL	Klokotos Trika	58.84	57	P	P	20 43 26.7	-0.6
THL	Klokotos Trika	58.84	57	eP	P	20 43 27.1	-0.2
AMT	Artemida-Makis	58.85	59	eP	P	20 43 27.1	-0.4
EFP	Efpalio	58.89	58	eP	P	20 43 27.8	+0.1
GZR	Gura Zlata	58.91	50	⇓P	P	20 43 27.9	+0.1
GZR	Gura Zlata	58.91	50	⇓iP	P	20 43 27.9	+0.1
F12A	Elk City	58.92	310	P	P	20 43 28.6	+0.6
	baz=59,SNR=69						
D12A	Red Ives Fores	58.92	312	P	P	20 43 27.6	-0.3
	baz=59,SNR=27						
PYL	PYLOS	58.96	60	eP	P	20 43 27.4	-0.8
LAKA	Lakka	58.97	59	P	P	20 43 28.1	-0.2
LAKA	Lakka	58.97	59	eP	P	20 43 28.4	+0.1
DEV	Deva	58.97	50	⇓P	P	20 43 28.1	0.0
DEV	Deva	58.97	50	⇓iP	P	20 43 28.1	0.0
C12B	Naegeli Ranch,	58.98	313	P	P	20 43 28.7	+0.4
	baz=59,SNR=14						
W13A	Hualapai Mount	58.98	298	P	P	20 43 30.6	+1.9
	baz=59,SNR=11						
GRG	Griva	58.99	55	P	P	20 43 28.1	-0.3
GRG	Griva	58.99	55	eP	P	20 43 28.3	-0.1
MAKR	Makrakomi, Fth	58.99	58	P	P	20 43 28.6	+0.1
G12A	Big Creek, Yel	59.01	310	P	P	20 43 29.3	+0.7
	baz=59						
CFAA	Coronel Fontan	59.01	202	LR	LR	21 11 59.7	
	comp=Z,360nm,19.1s,baz=346,slow=39						
CFAA				PKP2bc		21 13 08.0	
	comp=Z,0.2nm,0.7s,baz=153,slow=9.0,SNR=3.2						
B12A	Libby	59.03	313	P	P	20 43 29.9	+1.3
	baz=59,SNR=5.2						
SUW	Suwalki	59.03	40	⇑eP	P	20 43 26.9	-1.5
SUW				eS	S	20 51 35.5	+0.9
SUW				MLR	MLR		
	comp=Z,16μm,24.5s						
SUW	Suwalki	59.03	40	⇑eP	P	20 43 26.5	-1.9
	comp=Z,155nm,1.1s						
SUW	Suwalki	59.03	40	eP	P	20 43 26.9	-1.5
SUW				e		20 43 54.6	
SUW				eS	S	20 51 35.4	+0.9
SUW				LMZ	LR	21 03 49.5	
A12A	Yaak River Ran	59.06	314	P	P	20 43 29.7	+0.9
	baz=59,SNR=8.1						
ITM	Ithomi	59.07	60	P	P	20 43 28.4	-0.6
ITM	Ithomi	59.07	60	eP	P	20 43 28.4	-0.6
KALE	Kalithea	59.08	58	P	P	20 43 29.4	+0.3
KALE	Kalithea	59.08	58	eP	P	20 43 29.1	0.0
VAY	Valandovo	59.08	55	P	P	20 43 27.9	-1.1
VAY	Valandovo	59.08	55	i P	P	20 43 28.1	-0.9
ALE	Alert	59.08	358	P	P	20 43 27.6	-0.8
	comp=Z,670nm,1.1s,SNR=27						
KLV	Kalavryta, Ach	59.13	59	eP	P	20 43 29.5	0.0
LIT	Litokhoron	59.15	56	eP	P	20 43 28.5	-1.0

AGG	Agios Georgios	59.15	58	P	P	20 43 29.1	-0.4
AGG	Agios Georgios	59.15	58	eP	P	20 43 29.7	+0.2
YKA	Yellowknife Ar	59.17	330	P	P	20 43 27.6	-1.7
YKA				⇑e		21 13 08.5	
YKA	Yellowknife Ar	59.17	330	P	P	20 43 27.6	-1.7
	comp=Z,59nm,0.9s,baz=98,slow=7.6,SNR=200						
YKA				PKP2bc		21 13 08.5	
	comp=Z,1.3nm,0.9s,baz=270,slow=2.2,SNR=5.2						
YKW3	Yellowknife Ar	59.19	330	eP	P	20 43 26.3	-3.1
	comp=Z,3.6nm,1.4s						
TRO	Tromso	59.26	22	eP	P	20 43 27.2	-2.5
TRO				AMB	AMB	20 43 35.0	
	comp=Z,176nm,1.8s						
TRO				eS	S	20 51 39.6	+2.6
TRO				AMS	AMS	21 03 25.3	
	comp=Z,3µm,18.7s						
BMR	Baia Mare	59.29	48	⇑P	P	20 43 30.3	0.0
BMR	Baia Mare	59.29	48	⇑iP	P	20 43 30.3	0.0
GUR	Goura	59.29	59	P	P	20 43 30.6	-0.1
GUR	Goura	59.29	59	eP	P	20 43 30.5	-0.1
ELK	Elko	59.32	304	⇓iP	P	20 43 31.1	+0.1
	comp=Z,100nm,1.4s						
PDMCI	Parker Dam,Lak	59.32	297	P	P	20 43 32.7	+2.0
	baz=59,SNR=6.9						
KNT	Kendrikon	59.34	55	P	P	20 43 29.9	-0.9
DSF	Desfina	59.38	58	P	P	20 43 30.6	-0.6
VLX	Vlachokerasia	59.40	60	P	P	20 43 31.6	+0.2
VLX	Vlachokerasia	59.40	60	eP	P	20 43 32.0	+0.6
KKB	Krupnik	59.41	54	iP	P	20 43 31.9	+0.6
VTS	Vitosha	59.43	53	P	P	20 43 31.2	-0.3
VTS	Vitosha	59.43	53	⇑P	P	20 43 31.3	-0.3
VTS	Vitosha	59.43	53	iP	P	20 43 31.6	0.0
VTS	Vitosha	59.43	53	⇑iP	P	20 43 31.3	-0.3
DYR	Agios Nikonas	59.45	60	P	P	20 43 30.9	-0.7
DYR	Agios Nikonas	59.45	60	eP	P	20 43 31.3	-0.3
MFID	Camas Ranch	59.49	308	eP	P	20 43 32.1	+0.1
	comp=Z,398nm,1.8s						
MFID	Camas Ranch	59.49	308	P	P	20 43 32.5	+0.5
	baz=60,SNR=36						
C11A	Tepee Creek (N	59.50	313	P	P	20 43 32.1	+0.2
	baz=59						
HORT	Hortiatis	59.55	56	P	P	20 43 32.0	-0.4
LVV	L'vov	59.56	45	⇑iP	P	20 43 31.1	-1.1
LVV				e		20 45 38.9	
LVV				eS	S	20 51 41.7	+0.1
LVV				MLR	MLR		
	comp=Z,5µm,16.5s						
LVV				MLR	MLR		
	comp=N,2µm,17.0s						
LVV				MLR	MLR		
	comp=E,6µm,16.4s						
LKR	Lokris	59.71	58	P	P	20 43 32.9	-0.4
LKR	Lokris	59.71	58	eP	P	20 43 33.0	-0.4
SOH	Sokhos	59.72	55	P	P	20 43 33.6	+0.1
SOH	Sokhos	59.72	55	eP	P	20 43 33.4	-0.1
Y12C	Blythe	59.72	296	⇓P	P	20 43 34.4	+0.8
	baz=60,SNR=7.2						
ATAL	Atalanti	59.72	58	P	P	20 43 32.8	-0.7
XOR	Xorichti	59.77	57	P	P	20 43 33.2	-0.6
LTK	Loutraki	59.77	59	P	P	20 43 33.3	-0.5
LTK	Loutraki	59.77	59	eP	P	20 43 33.3	-0.5
NEO	Neokhori	59.80	57	P	P	20 43 32.7	-1.3
NEO	Neokhori	59.80	57	eP	P	20 43 32.8	-1.3
PLG	Polygyros	59.84	56	P	P	20 43 33.9	-0.4
PLG	Polygyros	59.84	56	eP	P	20 43 33.9	-0.4
SRS	Serrai	59.87	55	P	P	20 43 33.8	-0.6
R11A	Troy Canyon, C	59.87	302	P	P	20 43 35.4	+0.6
	baz=60,SNR=51						
MMB	Musomiste	59.92	55	iP	P	20 43 35.0	+0.2
VLI	Veliai	59.93	60	P	P	20 43 35.2	+0.3
VLI	Veliai	59.93	60	eP	P	20 43 35.1	+0.2
LDFC	Landfair	59.98	298	⇓eP	P	20 43 36.6	+1.2
	comp=E,130nm,1.3s						
SKIA	Skiathos	60.01	57	P	P	20 43 34.8	-0.6
DIDY	Didyma	60.04	59	P	P	20 43 34.9	-0.9
NVR	Nevrokopi	60.04	55	P	P	20 43 35.7	+0.1
NVR	Nevrokopi	60.04	55	eP	P	20 43 35.8	+0.1
DID	Didima	60.05	59	P	P	20 43 35.1	-0.7
DID	Didima	60.05	59	eP	P	20 43 34.9	-0.9
NEW	Newport	60.06	313	⇓iP	P	20 43 35.4	-0.3
	comp=E,148nm,1.0s						
NEW				LR	LR		
	comp=Z,7µm,22.0s						
NEW	Newport	60.06	313	P	P	20 43 35.5	-0.3
	comp=Z,94nm,0.9s,baz=104,slow=5.8,SNR=99						
NEW	Newport	60.06	313	P	P	20 43 36.0	+0.3
	baz=60,SNR=93						
KYTH	Kithira	60.08	61	eP	P	20 43 36.7	+0.7
PGB	Panagyurishte	60.14	53	iP	P	20 43 35.9	-0.5
IRM	Iron Mountain	60.16	297	P	P	20 43 38.6	+1.9
	baz=60,SNR=21						
NAIG	Nisos Aigina	60.22	59	eP	P	20 43 36.4	-0.5
ARR	Arges	60.22	50	⇑iP	P	20 43 36.2	-0.6
OUR	Ouranopolis	60.25	56	P	P	20 43 36.8	-0.3
AOS	Alonnisos	60.33	57	P	P	20 43 36.7	-0.9
AOS	Alonnisos	60.33	57	eP	P	20 43 36.5	-1.1
ANKY	Antikythira Is	60.35	61	eP	P	20 43 38.2	+0.4
ATH	Athens Observa	60.36	59	eP	P	20 43 37.6	-0.3
ATHU	Athens Univers	60.42	59	P	P	20 43 37.8	-0.5
BMO	Blue Mountains	60.43	309	⇓iP	P	20 43 37.6	-0.7
BMO				pmax	pmax		
	comp=Z,37nm,1.0s						
BMO				MLR	MLR		
	comp=Z,3µm,22.0s						
BMO	Blue Mountains	60.43	309	⇓iP	P	20 43 37.6	-0.7
	comp=Z,37nm,1.0s						
BMO				LR	LR		
	comp=Z,3µm,22.0s						
BUR08	Bucovina Ar. S	60.44	47	⇑iP	P	20 43 37.6	-0.8
BURAR	Bucovina Array	60.45	47	⇑iP	P	20 43 38.1	-0.4
PTL	Penteli	60.47	59	P	P	20 43 38.1	-0.5
PTL	Penteli	60.47	59	eP	P	20 43 38.1	-0.5
GMRC	Granite Mounta	60.48	298	P	P	20 43 40.0	+1.2
	baz=60,SNR=36						
BC3	Big Chuckawall	60.50	296	P	P	20 43 40.6	+1.6
	baz=60,SNR=13						
VOIR		60.50	50	⇑iP	P	20 43 41.6	+2.8
HUMR	Humele	60.53	51	⇑iP	P	20 43 38.2	-0.7
KAVA	Kavala	60.57	55	P	P	20 43 39.0	-0.2
PLD	Plovdiv	60.58	54	P	P	20 43 39.1	-0.2
PLD	Plovdiv	60.58	54	iP	P	20 43 38.4	-0.9
KTK1	Kautokeino	60.62	23	eP	P	20 43 38.0	-1.1
KTK1				AMB	AMB	20 43 43.3	
	comp=Z,121nm,1.0s						
RZN	Rozhen	60.64	54	iP	P	20 43 39.7	-0.3
ISAL	Salakas	60.76	38	eP	P	20 43 39.4	-0.9
ISAL				AMB	AMB	20 43 42.9	
	comp=Z,58nm,1.1s						
SHOC	Shoshone	60.79	299	P	P	20 43 41.9	+1.0
	baz=61						
IIGN	Ignalina	60.82	39	eP	P	20 43 39.8	-0.9
IIGN				AMB	AMB	20 43 44.5	
	comp=Z,50nm,1.2s						
KBS	Kingsbay	60.82	11	eP	P	20 43 41.0	+0.7
KBS				eS	S	20 52 07.8	+11
KBS				AMS	AMS	21 05 49.8	
	comp=Z,2µm,17.5s						
KBS	Kingsbay	60.82	11	diP	P	20 43 42.5	+2.2
KBS				pmax	pmax		
	comp=Z,86nm,1.9s						
KBS	Kingsbay	60.82	11	PFAKE		20 43 50.0	+10
KBS				LR	LR		
	comp=Z,2µm,20.0s						
IZAR	Zarasai	60.83	38	eP	P	20 43 39.9	-0.9
IZAR				AMB	AMB	20 43 43.4	
	comp=Z,39nm,1.2s						
BMN	Battle Mountai	60.85	304	P	P	20 43 41.5	+0.1
BMN				pmax	pmax		
	comp=Z,56nm,1.3s						
BMN				MLR	MLR		
	comp=Z,5µm,21.0s						
BMN	Battle Mountai	60.85	304	P	P	20 43 41.5	+0.1
	comp=Z,56nm,1.3s						
BMN				LR	LR		
	comp=Z,5µm,21.0s						
MRMA	Marmari	60.87	58	P	P	20 43 41.1	-0.2
BELC	Belle Mtn. Jos	60.89	297	P	P	20 43 43.7	+2.0
	baz=61,SNR=11						
FINES	FINESS Array B	60.91	32	P	P	20 43 39.7	-1.5
FINES	FINESS Array B	60.91	32	P	P	20 43 39.7	-1.5
	comp=Z,48nm,1.0s,baz=333,slow=3.0,SNR=30						
FINES				LR	LR	21 06 50.2	
	comp=Z,9µm,18.8s,baz=269,slow=33						
FIA1	FINESS Array S	60.91	32	eP	P	20 43 39.8	-1.4

SWSC	Sam W. Stewart	60.91	296	P	P	20 43 43.6	+1.8
	baz=61,SNR=8.1						
KAF	Kangasniemi	61.06	31	ep	P	20 43 39.6	-2.6
	comp=Z,21nm,0.8s						
KAF	Kangasniemi	61.06	31	eP	P	20 43 39.6	-2.6
KAF				pmax	pmax		
	comp=Z,21nm,0.8s						
IDID	Didziasalis	61.11	39	eP	P	20 43 41.8	-0.8
IDID				AMB	AMB	20 43 45.2	
	comp=Z,62nm,1.0s						
MLR	Muntele Rosu	61.13	50	⇓iP	P	20 43 42.2	-0.9
NACGM	Naroch	61.14	39	eP	P	20 43 38.0	-4.9
VAM	Vamos	61.15	61	P	P	20 43 43.4	+0.1
VAM	Vamos	61.15	61	eP	P	20 43 43.6	+0.3
FURC	Furnace Creek,	61.16	300	⇓P	P	20 43 45.3	+2.0
	baz=61,SNR=23						
GVD	Gavdhos	61.16	62	P	P	20 43 42.8	-0.6
GVD	Gavdhos	61.16	62	eP	P	20 43 42.7	-0.6
GVD	Gavdhos	61.16	62	⇑iP	P	20 43 42.6	-0.7
	comp=Z,634nm,1.3s						
KDZ	Kurdzhali	61.17	54	iP	P	20 43 42.7	-0.6
TPH	Tonopah	61.19	302	PFAKE		20 44 00.0	+16
TPH				LR	LR		
	comp=Z,4µm,19.0s						
DVTC	Desert V Tower	61.22	295	P	P	20 43 46.3	+2.4
	baz=61,SNR=7.7						
LIA	Limnos Island	61.22	56	P	P	20 43 43.3	-0.4
LIA	Limnos Island	61.22	56	eP	P	20 43 43.4	-0.3
SECR		61.26	50	⇑iP	P	20 43 43.8	-0.1
SPITS	Spitsbergen Ar	61.31	12	P	P	20 43 43.7	0.0
SPITS	Spitsbergen Ar	61.31	12	P	P	20 43 43.7	0.0
	comp=Z,6.6nm,0.6s,baz=169,slow=4.8,SNR=14						
GSC	Goldstone	61.31	298	eP	P	20 43 45.2	+0.7
GSC				pmax	pmax		
	comp=Z,184nm,1.9s						
GSC	Goldstone	61.31	298	eP	P	20 43 45.2	+0.7
	comp=Z,184nm,1.9s						
GSC	Goldstone	61.31	298	P	P	20 43 46.1	+1.6
	baz=61,SNR=18						
RDO	Rodhopi	61.32	55	P	P	20 43 43.8	-0.5
RDO	Rodhopi	61.32	55	eP	P	20 43 44.0	-0.3
PFO	Pinyon Flat Ob	61.33	296	P	P	20 43 46.0	+1.3
	comp=Z,97nm,1.1s,SNR=16						
PFO	Pinyon Flat Ob	61.33	296	eP	P	20 43 45.7	+1.0
	comp=Z,68nm,1.4s						
PFO				LR	LR		
	comp=Z,3µm,21.0s						
PFO	Pinyon Flat Ob	61.33	296	P	P	20 43 46.1	+1.3
	comp=Z,6.3nm,1.0s,baz=79,slow=9.5,SNR=17						
D08A	Wollman Farm,	61.36	312	P	P	20 43 44.9	+0.4
SMTH	Samothraki Isl	61.41	56	eP	P	20 43 43.9	-1.1
SULR		61.43	51	⇓iP	P	20 43 44.4	-0.6
MONP	Monument Peak	61.44	296	P	P	20 43 47.2	+1.7
	baz=61,SNR=12						
GRAC	Grapevine Rang	61.47	300	P	P	20 43 46.8	+1.3
	baz=61,SNR=21						
ARCES	ARCESS Array B	61.50	22	P	P	20 43 43.6	-1.5
ARCES				P'P'		21 13 00.9	
ARCES	ARCESS Array B	61.50	22	P	P	20 43 43.6	-1.5
	comp=Z,57nm,0.8s,baz=284,slow=9.8,SNR=49						
ARCES				LR	LR	21 05 02.1	
	comp=Z,4µm,21.6s,baz=262,slow=31						
ARCES				PKPPKP	P'P'df	21 13 00.9	-2.6
	comp=Z,3.6nm,1.1s,baz=23,slow=6.6,SNR=3.6						
ARE0	ARCESS Array S	61.50	22	⇑iP	P	20 43 44.1	-1.0
ARE0	ARCESS Array S	61.50	22	⇑iP	P	20 43 43.3	-1.8
TESR	Tescani	61.52	49	⇑iP	P	20 43 45.3	-0.3
WRD	Warden	61.53	312	P	P	20 43 46.5	+0.8
PLOR	Plostina	61.58	49	⇓P	P	20 43 45.3	-0.8
PLOR	Plostina	61.58	49	⇓iP	P	20 43 45.3	-0.8
VRI	Vrincioaia	61.63	49	⇑P	P	20 43 45.1	-1.3
VRI	Vrincioaia	61.63	49	⇑iP	P	20 43 45.1	-1.3
WVOR	Wild Horse Val	61.65	307	⇓iP	P	20 43 46.1	-0.6
WVOR				pmax	pmax		
	comp=Z,133nm,1.9s						
WVOR				MLR	MLR		
	comp=Z,6µm,21.0s						
WVOR	Wild Horse Val	61.65	307	⇓iP	P	20 43 46.1	-0.6
	comp=Z,133nm,1.9s						
WVOR				LR	LR		
	comp=Z,6µm,21.0s						
BAR	Barrett	61.69	295	eP	P	20 43 47.4	+0.4
	comp=Z,35nm,1.1s						
SIVA	Sivas	61.71	62	eP	P	20 43 47.0	-0.1
MPMC	Manual Prospec	61.73	299	P	P	20 43 48.8	+1.3
	baz=62,SNR=49						
ALN	Alexandroupoli	61.74	55	P	P	20 43 46.6	-0.5
ALN	Alexandroupoli	61.74	55	eP	P	20 43 47.0	-0.1
MNK	Minsk	61.76	40	⇓iP	P	20 43 43.0	-4.1
MNK				eS	S	20 52 06.0	-3.5
MNK				ePS	PnS	20 52 35.0	+11
MNK				eSS	SS	20 56 18.0	+7.1
MNK				pmax	pmax		
	comp=Z,180nm,1.4s						
MICGM	Minsk	61.79	40	⇓iP	P	20 43 43.0	-4.2
SIGR	SIGRI	61.84	57	P	P	20 43 47.9	+0.1
HAWA	Hanford	61.84	311	⇓iP	P	20 43 47.8	0.0
	comp=Z,173nm,1.1s						
HAWA				LR	LR		
	comp=Z,4µm,19.0s						
NV11	Mina Array Sit	61.86	302	eP	P	20 43 47.4	-0.8
GRER		61.86	50	⇓iP	P	20 43 47.9	0.0
BOZC	Bozcaada	61.89	56	iP	P	20 43 48.1	-0.1
PGOR	Pogoanele	61.92	50	⇑iP	P	20 43 47.5	-0.8
JMB	Yambol	61.92	53	P	P	20 43 47.9	-0.5
JMB	Yambol	61.92	53	iP	P	20 43 47.8	-0.6
APE	Apeiranthos	61.93	59	P	P	20 43 47.6	-1.0
APE	Apeiranthos	61.93	59	eP	P	20 43 47.8	-0.8
APE	Apeiranthos	61.93	59	⇑P	P	20 43 47.9	-0.7
APE	Apeiranthos	61.93	59	⇑iP	P	20 43 47.8	-0.8
MURC	Murrieta	61.94	297	P	P	20 43 50.5	+1.7
	baz=62						
NVAR	Mina Array Bea	61.97	302	P	P	20 43 49.0	-0.1
NVAR				⇑e		21 13 07.7	
NVAR	Mina Array Bea	61.97	302	P	P	20 43 49.0	-0.1
	comp=Z,6.3nm,0.8s,baz=80,slow=6.3,SNR=40						
NVAR				LR	LR	21 09 14.6	
	comp=Z,6µm,18.1s,baz=279,slow=35						
NVAR				PKP2bc		21 13 07.7	
	comp=Z,1.2nm,0.8s,baz=267,slow=3.7,SNR=5.2						
MDW	Midway	61.98	312	P	P	20 43 49.3	+0.6
MDW	Midway	61.98	312	P	P	20 43 49.3	+0.6
LRMC	Laurel Mountai	61.99	299	P	P	20 43 50.7	+1.6
	baz=62						
SANT	Santorini	61.99	60	P	P	20 43 47.9	-1.1
SANT	Santorini	61.99	60	eP	P	20 43 48.1	-0.9
SANT	Santorini	61.99	60	⇑iP	P	20 43 47.8	-1.3
	comp=Z,223nm,1.4s						
SANT				LR	LR		
	comp=Z,3µm,19.0s						
THR1	Thera Island	61.99	60	P	P	20 43 48.2	-0.8
PETR	Petresti	62.00	50	⇑iP	P	20 43 48.3	-0.5
E07A	Sunnyside	62.05	311	P	P	20 43 49.7	+0.5
KEV	Kevo	62.05	22	ep	P	20 43 47.7	-1.1
	comp=Z,31nm,0.8s						
KEV	Kevo	62.05	22	eP	P	20 43 47.4	-1.4
KEV				pmax	pmax		
	comp=Z,118nm,1.1s						
KEV				MLR	MLR		
	comp=Z,3µm,20.0s						
KEV	Kevo	62.05	22	eP	P	20 43 47.4	-1.4
	comp=Z,118nm,1.1s						
KEV				LR	LR		
	comp=Z,3µm,20.0s						
CHOS	Chios island	62.12	58	P	P	20 43 49.5	-0.4
CHOS	Chios island	62.12	58	eP	P	20 43 49.7	-0.2
PRK	Paraskevi	62.15	57	P	P	20 43 49.0	-1.0
PRK	Paraskevi	62.15	57	eP	P	20 43 49.9	-0.1
BFSC	Mount Baldy Ra	62.20	297	P	P	20 43 51.9	+1.4
	baz=62,SNR=12						
LAST	Lasithi	62.23	62	P	P	20 43 50.6	-0.1
LAST	Lasithi	62.23	62	eP	P	20 43 50.6	-0.1
ETW	Entiat	62.26	313	P	P	20 43 50.3	-0.5
NPS	Neapolis	62.31	61	P	P	20 43 50.6	-0.6
NPS	Neapolis	62.31	61	eP	P	20 43 50.5	-0.6
EDW2	Edwards Air Fo	62.34	298	P	P	20 43 53.2	+1.8
	baz=62,SNR=7.3						
MXC	Moxie City	62.34	312	P	P	20 43 52.3	+1.2
PRD	Provadia	62.42	52	iP	P	20 43 50.8	-0.9
AYVA	Ayvalik	62.46	57	iP	P	20 43 52.0	0.0
MWC	Mount Wilson	62.52	297	eP	P	20 43 53.0	+0.2
MWC				pmax	pmax		
	comp=Z,79nm,1.4s						
MWC	Mount Wilson	62.52	297	eP	P	20 43 53.0	+0.2

	comp=Z,80nm,1.4s						
LTY	Liberty	62.53	312	P	P	20 43 52.2	-0.3
URLA	Izmir	62.55	58	iP	P	20 43 52.6	0.0
TRW	Toppenish Ridg	62.55	311	P	P	20 43 53.6	+1.1
ISA	Isabella	62.59	299	⇓iP	P	20 43 54.2	+1.1
ISA	Isabella	62.59	299	⇓iP	P	20 43 54.2	+1.1
ISA	Isabella	62.59	299	P	P	20 43 54.9	+1.8
	baz=63,SNR=33						
SART	Tekirdag	62.62	55	iP	P	20 43 52.9	-0.3
LEOM	Leova	62.62	49	⇑P	P	20 43 52.0	-0.9
LEOM	Leova	62.62	49	⇑iP	P	20 43 52.0	-0.9
PASC	Pasadena Art C	62.64	297	eP	P	20 43 53.2	-0.1
	comp=Z,64nm,1.3s						
VIPM	Ingram Point	62.82	309	P	P	20 43 56.0	+1.5
VIPM	Ingram Point	62.82	309	P	P	20 43 56.0	+1.5
ZKR	Zakros	62.83	61	eP	P	20 43 54.0	-0.6
KIEV	Kiev	62.83	44	⇑iP	P	20 43 52.5	-1.8
KIEV				pmax	pmax		
	comp=Z,104nm,1.2s						
KIEV				MLR	MLR		
	comp=Z,6µm,20.0s						
KIEV	Kiev	62.83	44	⇑iP	P	20 43 52.5	-1.8
	comp=Z,104nm,1.2s						
KIEV				LR	LR		
	comp=Z,6µm,20.0s						
AK02	Malin Array Si	62.83	44	⇑iP	P	20 43 52.3	-2.0
AK01	Malin Array Si	62.84	44	⇑iP	P	20 43 52.1	-2.2
AKASG	Malin Array Be	62.84	44	P	P	20 43 52.1	-2.3
AKASG				pmax	pmax		
	comp=Z,53nm,0.8s						
AKASG				MLR	MLR		
	comp=Z,8µm,18.4s						
AKASG	Malin Array Be	62.84	44	P	P	20 43 52.1	-2.3
AKASG				⇑e		21 13 00.2	
AKASG				P'P'ab	P'P'ab	21 13 10.2	-5.3
AKASG	Malin Array Be	62.84	44	P	P	20 43 52.1	-2.3
	comp=Z,53nm,0.8s,baz=274,slow=5.6,SNR=44						
AKASG				LR	LR	21 08 29.5	
	comp=Z,8µm,18.4s,baz=280,slow=34						
AKASG				PKP2bc		21 13 00.2	
	comp=Z,0.2nm,0.4s,baz=60,slow=5.6,SNR=5.4						
AKASG				PKP2ab		21 13 10.2	
	comp=Z,0.2nm,0.4s,baz=89,slow=2.5,SNR=6.1						
WCN	Washoe City	62.95	303	eP	P	20 43 54.6	-0.9
WCN				pmax	pmax		
	comp=Z,32nm,1.4s						
WCN	Washoe City	62.95	303	eP	P	20 43 54.6	-0.9
	comp=Z,32nm,1.4s						
KIS	Kishinev	62.95	48	iP	P	20 43 52.0	-3.2
	comp=Z,900nm,6.5s						
KIS	Kishinev	62.95	48	iPcP	PcP	20 44 26.0	-7.2
KIS	Kishinev	62.95	48	ePP	PP	20 46 10.0	-3.4
KIS	Kishinev	62.95	48	⇑iP	P	20 43 52.0	-3.2
KIS				i		20 44 26.0	
KIS				e		20 46 10.0	
KIS				eS	S	20 52 16.0	-8.7
KIS				ePS	PnS	20 52 35.0	-5.8
KIS				pmax	pmax		
	comp=Z,640nm,2.6s						
KIS				pmax	pmax		
	comp=Z,900nm,6.5s						
KIS				MLR	MLR		
	comp=Z,5µm,21.0s						
KIS				MLR	MLR		
	comp=N,4µm,20.0s						
KIS				MLR	MLR		
	comp=E,5µm,21.0s						
KIS				MLR	MLR		
	comp=Z,6µm,22.0s						
KIS	Kishinev	62.95	48	⇑iP	P	20 43 54.4	-0.8
ARVC	Arvin	62.97	299	P	P	20 43 57.9	+2.4
	baz=63,SNR=7.4						
TIRR	Tirgusor	62.98	51	⇓P	P	20 43 54.3	-1.1
TIRR	Tirgusor	62.98	51	⇑iP	P	20 43 53.5	-1.9
TIRR	Tirgusor	62.98	51	⇓iP	P	20 43 54.3	-1.1
OSI	Osito Adit	62.99	298	eP	P	20 43 56.7	+1.0
	comp=Z,122nm,1.2s						
OSI	Osito Adit	62.99	298	P	P	20 43 57.5	+1.8
	baz=63						
VES	Vestal, Richgr	63.04	299	P	P	20 43 57.4	+1.4
	baz=63						
RCTC	Rector, Farmer	63.08	300	P	P	20 43 57.6	+1.4
	baz=63,SNR=5.4						
BALY	Balya	63.10	56	iP	P	20 43 56.3	-0.1
GCAM	G?zelcaml?	63.16	58	iP	P	20 43 56.2	-0.5
TLCR		63.17	50	⇓P	P	20 43 54.8	-1.8
TLCR		63.17	50	⇓iP	P	20 43 54.8	-1.8
SCI	San Clemente I	63.17	296	P	P	20 43 58.4	+1.5
	baz=63						
BEKR	Beckworth	63.31	304	eP	P	20 43 57.6	-0.3
	comp=Z,10nm,1.1s						
BEKR				ePP	PP	20 46 12.7	-4.4
TRQA	Tornquist	63.31	194	P	P	20 43 56.8	-0.7
TRQA				LR	LR		
	comp=Z,8µm,19.0s						
LON	Longmire	63.36	312	eP	P	20 43 57.0	-1.0
LON				pmax	pmax		
	comp=Z,30nm,1.2s						
LON	Longmire	63.36	312	eP	P	20 43 57.0	-1.0
	comp=Z,30nm,1.2s						
AKHS	Akhisar	63.40	57	iP	P	20 43 58.0	-0.3
JOF	Joensuu	63.40	30	ep	P	20 43 54.4	-3.5
	comp=Z,12nm,0.9s						
JOF	Joensuu	63.40	30	eP	P	20 43 54.4	-3.5
JOF				pmax	pmax		
	comp=Z,12nm,0.9s						
ELBA	Catalca	63.48	54	iP	P	20 43 58.6	-0.3
KARP	Karpathos	63.50	61	P	P	20 43 58.5	-0.6
KARP	Karpathos	63.50	61	eP	P	20 43 58.0	-1.1
CMB	Columbia Colle	63.66	302	⇓iP	P	20 44 00.4	+0.3
CMB				pmax	pmax		
	comp=Z,63nm,1.3s						
CMB	Columbia Colle	63.66	302	⇓iP	P	20 44 00.4	+0.3
	comp=Z,63nm,1.3s						
AYDN	Tasoluk	63.67	58	iP	P	20 44 00.1	-0.1
DURS	Dursunbey	63.78	56	iP	P	20 44 00.4	-0.5
PKM	Peak Mountain	63.81	299	P	P	20 44 03.3	+2.0
	baz=64,SNR=16						
ISK	Istanbul-Kandi	63.97	54	P	P	20 44 01.2	-0.8
BUY	Buyukada	64.05	55	iP	P	20 44 01.5	-1.0
DEMI	Demirci	64.06	57	iP	P	20 44 02.6	-0.2
ARG	Arkhangelos	64.14	60	eP	P	20 44 02.2	-1.0
PGC	Sidney	64.22	314	⇓iP	P	20 44 02.4	-1.1
	comp=Z,17nm,1.4s						
APA	Apatity	64.26	25	⇑iP	P	20 44 03.4	0.0
APA				i		20 44 12.2	
APA				e		20 46 20.0	
APA				iS	S	20 52 40.0	-0.4
APA				ePS	PnS	20 53 00.0	+2.0
APA				iSS	SS	20 56 49.0	-0.4
APA				pmax	pmax		
	comp=Z,1.0nm,4.0s						
APA				pmax	pmax		
	comp=Z,100nm,1.2s						
APA				MLR	MLR		
	comp=Z,4µm,19.0s						
TURN	Turunc	64.38	59	iP	P	20 44 01.4	-3.4
DNZL	Cakiroluk	64.57	58	iP	P	20 44 05.7	-0.6
GDZ	Gediz	64.64	57	iP	P	20 44 06.1	-0.5
NLWA	Neilton Lookou	64.67	313	eP	P	20 44 06.8	+0.3
	comp=Z,180nm,1.1s						
NLWA				LR	LR		
	comp=Z,7µm,21.0s						
COR	Corvallis	64.70	310	eP	P	20 44 09.0	+2.2
COR				pmax	pmax		
	comp=Z,110nm,1.0s						
COR	Corvallis	64.70	310	eP	P	20 44 09.0	+2.2
	comp=Z,110nm,1.0s						
OBC	Olympics--Boni	64.72	313	P	P	20 44 08.2	+1.2
LVZ	Lovozero	64.73	24	⇓iP	P	20 44 06.9	+0.3
LVZ				pmax	pmax		
	comp=Z,86nm,2.8s						
SAO	San Andreas Ge	64.73	301	eP	P	20 44 07.8	+0.7
SAO				pmax	pmax		
	comp=Z,60nm,1.5s						
SAO	San Andreas Ge	64.73	301	eP	P	20 44 07.8	+0.7
	comp=Z,60nm,1.5s						
YBH	Yreka Blue Hor	64.75	306	⇓iP	P	20 44 05.7	-1.6
	comp=Z,88nm,1.5s						
HUMO	Hull Mountain	64.78	307	⇓iP	P	20 44 06.2	-1.2
	comp=Z,22nm,0.8s						
WDC	Whiskeytown Da	64.83	305	eP	P	20 44 05.1	-2.6
WDC				pmax	pmax		
	comp=Z,41nm,1.3s						
WDC	Whiskeytown Da	64.83	305	eP	P	20 44 05.0	-2.6

comp=Z,41nm,1.3s
GOLH Golhisar 65.06 59 *i* P **P** **20 44 09.8 +0.4**
AKAS Kas 65.31 60 *i* P **P** **20 44 10.3 -0.7**
HOPS Hopland 65.54 304 *e*P **P** **20 44 14.2 +1.9**
comp=Z,219nm,1.3s
MCCM Marconi Confer 65.56 303 *e*P **P** **20 44 13.8 +1.3**
comp=Z,127nm,1.4s
KHMM Horse Mountain 65.67 306 *e*P **P** **20 44 12.8 -0.5**
comp=Z,51nm,1.0s
KRMB Red Mountain 65.67 306 *e*P **P** **20 44 13.2 -0.1**
comp=Z,164nm,1.9s
KIPM Iron Peak 65.69 304 *e*P **P** **20 44 14.3 +0.8**
comp=Z,55nm,1.1s
ISP Isparta 65.69 58 PFAKE 20 44 20.0 +6.6
ISP LR LR
comp=Z,5μm,22.0s
KEBM Edson Butte 65.73 308 *e*P **P** **20 44 14.2 +0.7**
comp=Z,189nm,1.2s
KBO Bosley Butte 65.78 307 *e*P **P** **20 44 14.5 +0.6**
comp=Z,791nm,1.5s
KCPM Cahto Peak 65.79 304 *e*P **P** **20 44 15.4 +1.3**
comp=Z,111nm,1.5s
BOLV Bolvadin 65.83 57 *i* P **P** **20 44 14.2 -0.2**
TMCR Tamitsa 66.34 28 *e*P **P** **20 44 16.6 -0.3**
TMCR pmax pmax
comp=Z,78nm,1.3s
OBN Obninsk 66.74 38⇑ *e*P **P** **20 44 19.0 -0.7**
OBN *e* 20 46 41.2
OBN *i* S **S** **20 53 12.4 +1.3**
OBN *e*SS **SS** **20 57 22.9 -5.5**
OBN pmax pmax
comp=Z,310nm,1.2s
KDHN Kadinhani 66.77 57 *i* P **P** **20 44 20.3 -0.1**
DLBC Dease Lake 66.82 325 *e*P **P** **20 44 20.4 +0.1**
SIM Simferopol' 66.92 50*c e*P **P** **20 44 20.3 -0.7**
SIM *e*S S 20 53 04.9 -8.7
SIM pmax pmax
comp=Z,27nm,1.1s
ANTO Ankara 66.99 55 *e*P **P** **20 44 21.1 -0.6**
ANTO MLR MLR
comp=Z,4μm,22.0s
ANTO Ankara 66.99 55 P **P** **20 44 21.6 -0.1**
SNR=54
ANTO Ankara 66.99 55 *e*P **P** **20 44 21.1 -0.6**
ANTO LR LR
comp=Z,4μm,22.0s
INK Inuvik 67.11 336 P **P** **20 44 20.2 -1.6**
INK PP **PP** **20 46 47.1 -2.3**
INK Inuvik 67.11 336 P **P** **20 44 20.2 -1.6**
comp=Z,55nm,1.0s,baz=78,slow=7.2,SNR=45
INK PP **PP** **20 46 47.1 -2.3**
comp=Z,11nm,1.0s,baz=70,slow=8.1,SNR=3.5
MOS Moscow 67.24 38 *e*P P 20 44 17.4 -5.4
MOS *e* 20 44 46.7
MOS *e*S S 20 53 10.5 -6.6
MOS *e* 20 53 48.3
MOS *e*SSS SSS 21 00 37.6
MOS pmax pmax
comp=E,55nm,1.2s
MOS pmax pmax
comp=N,83nm,1.3s
MOS pmax pmax
comp=Z,153nm,1.3s
MOS pmax pmax
comp=Z,700nm,3.0s
MOS pmax pmax
comp=N,500nm,3.7s
MOS pmax pmax
comp=E,800nm,3.7s
MOS smax smax
comp=N,1μm,6.3s
MOS smax smax
comp=E,2μm,10.8s
BBAL Bala 67.31 55 *i* P **P** **20 44 24.8 +1.0**
ILGA Ilgaz 67.42 54 *i* P **P** **20 44 23.9 -0.7**
KLMR Klimovskoe 67.44 32*c i*P **P** **20 44 22.7 -1.3**
KLMR *e* 20 46 51.7
KLMR pmax pmax
comp=Z,184nm,1.3s
KLMR pmax pmax
comp=Z,377nm,2.7s
BR131 Keskin Array S 67.66 55 *e*P **P** **20 44 25.2 -0.8**
BRTR Keskin Array B 67.66 55 P **P** **20 44 25.2 -0.8**
BRTR ⇑*e* 21 12 52.2
BRTR Keskin Array B 67.66 55 P **P** **20 44 25.2 -0.8**
comp=Z,54nm,0.9s,baz=270,slow=4.9,SNR=173
BRTR LR LR 21 10 26.6
comp=Z,4μm,21.8s,baz=292,slow=33
BRTR PKP2bc 21 12 52.2
comp=Z,1.3nm,1.2s,baz=97,slow=6.3,SNR=4.5
ERMK Ermenek 67.81 59 *i* P **P** **20 44 26.5 -0.6**
PLCA Paso Flores 68.10 200 *e*P **P** **20 44 28.7 +0.2**
PLCA Paso Flores 68.10 200 P **P** **20 44 29.2 +0.7**
comp=Z,54nm,1.0s,baz=25,slow=7.8,SNR=14
PLCA LR LR 21 17 10.1
comp=Z,4μm,19.2s,baz=19,slow=38
CDAG Cicekdag 68.23 55 *i* P **P** **20 44 29.2 -0.4**
WRAK Wrangell Islan 68.39 323 *e*P **P** **20 44 30.7 +0.7**
comp=Z,268nm,1.7s
WRAK LR LR
comp=Z,5μm,20.0s
TRIS Tristan da Cun 68.48 151 PFAKE 20 44 40.0 +9.2
TRIS LR LR
comp=Z,5μm,20.0s
CSS Prodhromos 68.55 60 P **P** **20 44 30.8 -0.8**
CSS Prodhromos 68.55 60 *e*P **P** **20 44 30.1 -1.5**
CSS LR LR
comp=Z,2μm,20.0s
VSR Storozhevoye 68.98 42*c i*P **P** **20 44 32.8 -1.1**
VSR *e**PP **pP** **20 44 36.1 -2.5**
VSR *e*S **S** **20 53 38.5 +0.4**
VSR *e*SS **SS** **20 58 08.8 +5.6**
VSR pmax pmax
comp=Z,110nm,1.2s
VSR pmax pmax
comp=N,20nm,1.0s
VSR pmax pmax
comp=E,70nm,0.9s
VSR smax smax
comp=E,320nm,5.1s
VSR smax smax
comp=Z,150nm,4.1s
VSR smax smax
comp=N,20nm,2.1s
GULE Gulek 69.10 57 *i* P **P** **20 44 35.0 -0.1**
VORD Divnogorie 69.11 42 *e*P **P** **20 44 33.7 -1.0**
VORD *e**PP **pP** **20 44 37.1 -2.3**
VORD *e*S **S** **20 53 39.3 -0.3**
VORD pmax pmax
comp=Z,120nm,1.4s
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,60nm,0.6s
VORD smax smax
comp=E,960nm,8.7s
VORD smax smax
comp=Z,300nm,4.9s
VORD smax smax
comp=N,450nm,7.5s
ANN Anapa 69.25 49*c i*P **P** **20 44 34.3 -1.4**
ANN *i* S **S** **20 53 42.6 +1.1**
ANN pmax pmax
comp=Z,148nm,1.8s
SKAG Skagway 69.35 327 *e*P **P** **20 44 36.4 +0.4**
comp=Z,700nm,2.2s
TOKA Tokat 69.64 54 *i* P **P** **20 44 37.8 -0.5**
VRHR Novokhopersk 70.51 42 *e*P **P** **20 44 42.8 -0.5**
VRHR *e**PP **pP** **20 44 46.0 -2.1**
VRHR *e*S **S** **20 53 56.9 +0.8**
VRHR *e*SS **SS** **20 58 22.2 -4.6**
VRHR pmax pmax
comp=Z,120nm,0.9s
VRHR pmax pmax
comp=N,50nm,1.2s
VRHR pmax pmax
comp=E,70nm,1.2s
VRHR smax smax
comp=E,950nm,8.6s
VRHR smax smax
comp=Z,310nm,4.6s
VRHR smax smax
comp=N,410nm,7.8s
BHL Bhannes 70.68 61 *e*P **P** **20 44 44.6 -0.3**
EGAK Eagle 70.78 333 *e*P **P** **20 44 43.0 -1.7**
comp=N,97nm,1.4s
EGAK LR LR
comp=Z,10μm,20.0s
HWQ Hawqa 70.81 60 *e*P **P** **20 44 45.3 -0.3**
SUSE Susehri 70.94 54 *i* P **P** **20 44 46.2 -0.1**
KUZU Kuzuini 71.01 57 *i* P **P** **20 44 47.3 +0.6**
SOC Sochi 71.14 50*c i*P **P** **20 44 47.4 +0.1**
SOC *e* 20 45 06.6
SOC *e* 20 47 27.6
SOC *e*PPP PPP 20 49 05.0
SOC *e*S **S** **20 54 04.2 +0.5**
SOC *e* 20 54 52.2
SOC pmax pmax
comp=Z,638nm,2.7s
SOC pmax pmax
comp=Z,680nm,2.7s
SOC MLR MLR
comp=Z,2μm,17.0s
SOC MLR MLR
comp=N,2μm,18.0s
SOC MLR MLR
comp=E,1μm,17.0s
AKCD Akcadag 71.24 56 *i* P **P** **20 44 48.2 0.0**
PNL Peninsula 71.31 328 *e*P **P** **20 44 48.6 +0.5**
comp=E,652nm,1.8s
ATAB Bozova 71.76 57 *i* P **P** **20 44 51.1 -0.1**
ELZG Elazig 71.99 55 *i* P **P** **20 44 52.9 +0.2**
DOT Dot Lake 72.32 332 *e*P **P** **20 44 53.5 -0.5**
comp=E,166nm,1.6s
MENT Mentasta 72.39 332 *e*P **P** **20 44 53.6 -0.9**
CHVG Ch'k'valeri 73.05 50 P P 20 45 04.6 +5.8
KIV Kislovodsk 73.11 49‖ *e*P **P** **20 44 59.6 +0.4**
KIV *i* S **SKiKP** **20 54 34.0 +2.7**
KIV *e*SS **SS** **20 59 11.1 +4.0**
KIV pmax pmax
comp=Z,189nm,1.2s
KIV Kislovodsk 73.11 49 P **P** **20 44 59.7 +0.5**
comp=Z,736nm,1.1s,SNR=39
ILAR Eielson Array 73.12 334 P **P** **20 44 58.1 -0.7**
ILAR Eielson Array 73.12 334 P **P** **20 44 58.1 -0.7**
comp=Z,69nm,1.0s,baz=70,slow=4.3,SNR=162
ILAR LR LR 21 17 52.2
comp=Z,10μm,18.2s,baz=71,slow=36
PAX Paxson 73.14 332 *e*P **P** **20 44 57.3 -1.7**
PAX pmax pmax
comp=Z,229nm,1.6s
PAX Paxson 73.14 332 *e*P **P** **20 44 57.3 -1.7**
comp=Z,229nm,1.6s
KBZ Khabaz 73.32 49 P **P** **20 45 00.8 +0.5**
KBZ pmax pmax
comp=Z,62nm,0.9s
KBZ MLR MLR
comp=Z,2μm,19.1s
KBZ Khabaz 73.32 49 P **P** **20 45 00.8 +0.5**
KBZ Khabaz 73.32 49 P **P** **20 45 00.8 +0.5**
comp=Z,62nm,0.9s,baz=278,slow=5.1,SNR=44
KBZ LR LR 21 18 05.1
comp=Z,2μm,19.1s,baz=162,slow=37
COLA College 73.47 334 *e*P **P** **20 45 00.0 -0.8**
COLA *e* 20 47 39.1
COLA MLR MLR
comp=Z,11μm,19.0s
COLA College 73.47 334 *e*P **P** **20 45 00.0 -0.8**
COLA *e*PP **PP** **20 47 39.1 -5.1**
COLA LR LR
comp=Z,11μm,19.0s
COLD Coldfoot 73.51 337 *e*P **P** **20 45 01.1 0.0**
comp=Z,160nm,1.3s
DIV Divide 73.89 330 *e*P **P** **20 45 02.3 -1.1**
comp=Z,174nm,1.4s
ONI Oni 74.05 50 P **P** **20 45 04.9 +0.2**
MCK McKinley 74.33 333 *e*P **P** **20 45 04.7 -1.2**
MCK McKinley 74.33 333 *e*P **P** **20 45 04.7 -1.2**
AKH Akhalkalaki 74.44 51 P **P** **20 45 07.4 +0.2**
GOR Gori 74.70 51 P **P** **20 45 08.1 -0.4**
SML Sawmill 74.79 331 *e*P **P** **20 45 07.4 -1.3**
SML pmax pmax
comp=Z,109nm,1.9s
SML Sawmill 74.79 331 *e*P **P** **20 45 07.4 -1.3**
comp=Z,109nm,1.9s
GUDG Gudauri 74.81 50 P **P** **20 45 09.5 +0.2**
TRF Thorofare Moun 75.00 333 *e*P **P** **20 45 08.7 -1.3**
comp=Z,1μm,2.0s
TRF *e*PP **PP** **20 47 53.1 -4.3**
DUS Dusheti 75.08 50 P **P** **20 45 11.7 +0.9**
KZR Kazreti 75.11 51 P **P** **20 45 11.6 +0.7**
TBLG Delisi 75.23 51 P **P** **20 45 11.6 +0.1**
TBLG Delisi 75.23 51 *e*P **P** **20 45 11.6 +0.1**
PMR Palmer 75.23 331 *e*P **P** **20 45 10.5 -0.6**
PMR Palmer 75.23 331 *e*P **P** **20 45 10.5 -0.6**
PMR *e*PP PP 20 47 48.5 -11
TSUM Tsumeb 75.48 119 *e*P **P** **20 45 12.3 -1.1**
TSUM Tsumeb 75.48 119 *e*P **P** **20 45 13.0 -0.4**
TSUM LR LR
comp=Z,4μm,20.0s
GNI Garni 75.74 52 P **P** **20 45 15.7 +1.0**
SNR=29
GNI Garni 75.74 52 *e*P **P** **20 45 15.4 +0.7**
GNI *e*PP **PP** **20 48 05.1 +0.8**
GNI LR LR
comp=Z,2μm,21.0s
DGRG David-gareji 75.77 51 P **P** **20 45 15.1 +0.4**
EFI East Falkland 75.89 188 *e*P **P** **20 45 16.2 +1.4**
EFI pmax pmax
comp=Z,248nm,1.1s
EFI MLR MLR
comp=Z,6μm,22.0s
EFI East Falkland 75.89 188 *e*P **P** **20 45 16.2 +1.4**
comp=Z,248nm,1.1s
EFI LR LR
comp=Z,6μm,22.0s
EFI East Falkland 75.89 188 P **P** **20 45 16.2 +1.4**
comp=Z,1μm,1.3s,SNR=6.0
SEW Seward 75.95 330 *e*P **P** **20 45 14.2 -1.0**
comp=Z,389nm,1.9s
SOKR Solikamsk 76.05 31*c i*P **P** **20 45 15.6 -0.2**
SOKR S **S** **20 54 59.8 +1.3**
SOKR pmax pmax
comp=Z,70nm,0.9s
MAK Makhachkala 76.75 49 *e*P **P** **20 45 19.8 -0.3**
MAK *e* 20 45 35.0
MAK *e* 20 48 12.0
MAK *e*PPP PPP 20 50 07.8
MAK *e*S **S** **20 55 10.8 +3.9**
MAK *e* 20 55 36.1
MAK *e*SS **SS** **20 59 59.5 -2.7**
MAK pmax pmax
comp=Z,70nm,1.2s
MAK MLR MLR
comp=Z,4μm,17.0s
RSO Redoubt South 77.30 331 *e*P **P** **20 45 22.8 -0.4**
comp=Z,144nm,0.9s
BHD Baghdad 77.80 59 *i* P **P** **20 45 26.0 -0.2**
BHD *i* S **S** **20 55 17.0 -1.6**
BHD *i* sS **sS** **20 55 24.2 -2.3**
ARU Arti 78.21 33*c i*P **P** **20 45 27.9 -0.2**
ARU 20 48 22.1
ARU S **S** **20 55 20.3 -1.9**
ARU SSS SSS 21 03 36.5
ARU pmax pmax
comp=Z,44nm,1.2s
ARU Arti 78.21 33 P **P** **20 45 27.6 -0.5**
comp=Z,182nm,1.7s,SNR=19
MBAR Mbarara 78.32 96 *e*P **P** **20 45 28.2 -1.4**
MBAR Mbarara 78.32 96 PFAKE 20 45 40.0 +10
MBAR LR LR
comp=Z,307nm,20.0s
MBAR Mbarara 78.32 96 P **P** **20 45 29.3 -0.3**
comp=Z,142nm,1.3s,SNR=5.5
KDAK Kodiak Island 78.40 328 *e*P **P** **20 45 28.2 -0.8**
KDAK comp=Z,216nm,1.5s LR LR
comp=Z,6μm,19.0s
OHAK Old Harbor 79.00 328 *e*P **P** **20 45 31.3 -1.1**
comp=Z,242nm,1.5s
SVE Sverdlovsk 79.07 32*d i*P **P** **20 45 32.8 0.0**
SVE *e* 20 48 39.7
SVE *e*PPP PPP 20 50 28.8
SVE *e*S **S** **20 55 34.4 +3.0**
SVE pmax pmax
comp=Z,157nm,1.6s
KOMG Komaggas 81.14 128 *e*P **P** **20 45 46.2 +1.9**
KOMG AMB AMB 20 45 47.4
comp=Z,98nm,1.5s
NAY Al-Naaiem 81.55 62 *e*P **P** **20 45 46.6 -0.1**
NAY AMb AMB 20 45 50.3
comp=Z,100nm,0.9s
UMR Umm Al-Rimmam 81.81 61 *e*P **P** **20 45 47.6 -0.4**
UMR AMb AMB 20 45 53.1
comp=Z,223nm,1.2s
DESE Dese 81.84 81 *i* P **P** **20 45 50.9 +2.1**
DESE *i* S S 20 56 11.6 +9.1
CHGN Chignik 81.91 329 *e*P **P** **20 45 48.1 +0.1**
RDF Al-Radifah 81.92 62 *e*P **P** **20 45 49.1 +0.4**
RDF AMb AMB 20 45 54.0
comp=Z,224nm,1.1s
KBD Kabd 81.94 62 *e*P **P** **20 45 49.0 +0.3**
KBD AMb AMB 20 46 01.4
comp=Z,160nm,1.4s
ABKAR Akbulak array 82.15 39 *e*P **P** **20 45 49.1 -0.3**
comp=Z,41nm,0.9s
RAYN Ar Rayn 82.29 68 P **P** **20 45 50.2 -0.5**
comp=Z,148nm,1.2s,SNR=17
LSZ Lusaka 82.39 110 *e*P **P** **20 45 52.0 +0.7**
LSZ Lusaka 82.39 110 P **P** **20 45 52.6 +1.2**
SNR=17
LSZ Lusaka 82.39 110 *e*P **P** **20 45 51.7 +0.4**
LSZ LR LR
comp=Z,2μm,19.0s
WNDE Wendo Genet 82.48 86 *e*P **P** **20 45 54.7 +2.6**
GAMB Gambell 82.89 339 *e*P **P** **20 45 53.5 +0.6**
comp=Z,196nm,1.8s
UPI Upington 83.14 125 *e*P **P** **20 45 54.6 -0.4**
UPI AMB AMB 20 46 03.9
comp=Z,163nm,3.0s
SDPT Sand Point 83.40 328 *e*P **P** **20 45 55.8 -0.1**
comp=Z,748nm,1.7s
CVNA Calvinia 83.70 128 *e*P **P** **20 45 58.4 +0.6**
CVNA AMB AMB 20 46 01.7
comp=Z,228nm,3.2s
KMBO Kilima Mbogo 84.47 94 *e*P **P** **20 46 04.2 +1.9**
KMBO Kilima Mbogo 84.47 94 P **P** **20 46 05.3 +2.9**
SNR=18
KMBO Kilima Mbogo 84.47 94 *e*P **P** **20 46 03.8 +1.4**
KMBO PP **PP** **20 49 17.1 -0.6**
KMBO *e*PP PP 20 49 25.2 +7.5
KMBO Kilima Mbogo 84.47 94 P **P** **20 46 03.9 +1.6**
comp=Z,33nm,1.0s,baz=305,slow=4.5,SNR=26
KMBO PP **PP** **20 49 17.1 -0.6**
comp=Z,0.8nm,0.3s,baz=293,slow=7.6,SNR=2.5
KMBO LR LR 21 21 41.4
comp=Z,4μm,18.6s,baz=286,slow=34
TIXI Tiksi 84.72 2‖ *i*P **P** **20 46 02.1 -0.1**
TIXI pmax pmax
comp=Z,181nm,2.5s
TIXI MLR MLR
comp=Z,1μm,22.0s
LBTB Lobatse 84.81 120 *e*P **P** **20 46 04.4 +0.8**
LBTB AMB AMB 20 46 06.2
comp=Z,72nm,3.0s
LBTB Lobatse 84.81 120 *e*P **P** **20 46 04.0 +0.3**
SUR Sutherland 84.94 129 *e*P **P** **20 46 04.2 0.0**
SUR AMB AMB 20 46 13.6
comp=Z,74nm,1.9s
SUR Sutherland 84.94 129 *e*P **P** **20 46 04.5 +0.3**
SUR LR LR
comp=Z,5μm,20.0s
SUR Sutherland 84.94 129 P **P** **20 46 05.7 +1.5**
comp=Z,320nm,0.8s,SNR=6.0
BILL Bilibino 85.31 348⇑ *e*P **P** **20 46 05.8 +0.5**
BILL *i* S S 20 56 26.6 -8.5
BILL *e*SS **SS** **21 02 10.4 +2.0**
BILL pmax pmax
comp=Z,173nm,1.8s
BILL MLR MLR
comp=Z,500nm,22.0s
BILL Bilibino 85.31 348 PFAKE 20 46 20.0 +15
BILL LR LR
comp=Z,2μm,22.0s
ELIM Elim 85.37 131 *e*P **P** **20 46 07.8 +1.6**
ELIM AMB AMB 20 46 08.9
comp=Z,116nm,1.3s
SWZ Schweizer 85.66 122 *e*P **P** **20 46 07.5 -0.4**
SWZ AMB AMB 20 46 16.7
comp=Z,95nm,2.2s
BRVK Borovoye 85.77 33*c i*P **P** **20 46 08.1 +0.2**
BRVK pmax pmax
comp=Z,110nm,1.2s
BRVK Borovoye 85.77 33 P **P** **20 46 08.5 +0.6**
SNR=56
BRVK Borovoye 85.77 33 *e*P **P** **20 46 07.6 -0.2**
BRVK *e*PP **PP** **20 49 26.9 +0.3**
BRVK LR LR
comp=Z,8μm,21.0s
BRVK Borovoye 85.77 33 P **P** **20 46 08.8 +0.9**
comp=Z,458nm,0.9s,SNR=39
ABKT Ailbek 86.18 50 P **P** **20 46 10.3 0.0**
comp=Z,169nm,1.0s,SNR=14
BOSA Boshof 86.31 123 *e*P **P** **20 46 11.2 +0.3**
BOSA AMB AMB 20 46 19.6
comp=Z,53nm,2.5s
BOSA Boshof 86.31 123 *e*P **P** **20 46 11.1 +0.1**
BOSA Boshof 86.31 123 P **P** **20 46 11.3 +0.3**
comp=Z,28nm,1.1s,baz=280,slow=4.2,SNR=20
BOSA LR LR 21 21 20.7
comp=Z,3μm,18.5s,baz=301,slow=33
PRYS Parys 87.12 121 *e*P **P** **20 46 15.5 +0.4**
PRYS AMB AMB 20 46 24.9
comp=Z,45nm,3.3s
UNV Unalaska Valle 87.14 329 *e*P **P** **20 46 14.4 -0.1**
comp=Z,209nm,1.4s
SLR Silverton 87.29 120 *e*P **P** **20 46 16.0 +0.1**
SLR AMB AMB 20 46 26.3
comp=Z,105nm,1.5s
HVD Gariep Dam 87.47 125 *e*P **P** **20 46 15.8 -0.9**
HVD AMB AMB 20 46 27.0
comp=Z,104nm,3.2s
ERPM east rand prop 87.54 120 *e*P **P** **20 46 17.9 +0.7**
ERPM AMB AMB 20 46 19.4
comp=Z,81nm,3.3s
SOE Somerset East 88.55 127 *e*P **P** **20 46 22.6 +0.9**
SOE AMB AMB 20 46 30.6
comp=Z,106nm,2.8s
PMSA Palmer Station 89.39 188 PFAKE 20 46 40.0 +15
PMSA LR LR
comp=Z,4μm,21.0s
GRM Grahamstown 89.54 127 *e*P **P** **20 46 24.1 -2.1**
GRM AMB AMB 20 46 34.9
comp=Z,120nm,3.4s
ASUD Al Ashush, Dub 90.02 63 P **P** **20 46 29.3 +0.6**
SNR=6.2
NAZ Nazwa, Dubai 90.13 63 P **P** **20 46 30.1 +0.8**
SNR=7.1
BANOM Banah 90.23 62 P **P** **20 46 30.6 +0.8**
SNR=16
NVS Novosibirsk 90.51 27⇑ *i*P **P** **20 46 29.0 -1.4**
NVS pmax pmax
comp=Z,131nm,1.9s
NVS pmax pmax
comp=N,25nm,2.0s
NVS pmax pmax
comp=E,16nm,1.3s
HATD Hatta, Dubai 90.58 63 P **P** **20 46 31.8 +0.4**
SNR=44
UOSS Wadi Hilu 90.59 62 P **P** **20 46 31.0 -0.5**
comp=E,750nm,1.0s,SNR=34
POGA Pongola 90.69 120 *e*P **P** **20 46 34.3 +2.6**
POGA AMB AMB 20 46 43.1
comp=Z,78nm,3.2s
KURK Kurchatov 91.28 31*c i*P **P** **20 46 33.1 -1.0**
KURK pmax pmax
comp=Z,86nm,1.2s
KURK Kurchatov 91.28 31 P **P** **20 46 34.3 +0.1**
SNR=43
KURK Kurchatov 91.28 31 *e*P **P** **20 46 34.0 -0.1**
KURK LR LR
comp=Z,4μm,20.0s
KURK Kurchatov 91.28 31 P **P** **20 46 33.6 -0.5**
comp=Z,268nm,0.9s,SNR=55
ARQ Araqi 91.57 64 P **P** **20 46 36.8 +0.7**
SNR=16
KKAR Karatay Array 91.61 41 *e*P **P** **20 46 35.3 -0.5**
KKAR pmax pmax
comp=Z,15nm,1.0s
KKAR Karatay Array 91.61 41 *e*P **P** **20 46 35.3 -0.5**
comp=Z,15nm,1.0s
ZAA0 Zalesovo Array 91.79 26 *e*P **P** **20 46 35.5 -0.9**
ZALV Zalesovo Beam 91.79 26 P **P** **20 46 36.0 -0.4**
ZALV 20 50 11.7
ZALV pmax pmax
comp=Z,14nm,0.9s

ZALV pmax pmax
comp=Z,5.0nm,0.9s
ZALV MLR MLR
comp=Z,5µm,21.7s
ZALV Zalesovo Beam 91.79 26 P **P** **20 46 36.0 -0.4**
ZALV PP **PP** **20 50 11.7 -2.9**
ZALV Zalesovo Beam 91.79 26 P **P** **20 46 36.0 -0.4**
comp=Z,14nm,0.9s,baz=312,slow=4.3,SNR=45
ZALV PP **PP** **20 50 11.7 -2.9**
comp=Z,4.7nm,0.9s,baz=312,slow=8.1,SNR=5.8
ZALV LR LR 21 25 18.6
comp=Z,5µm,21.7s,baz=258,slow=34
HOQ Hoqain 92.10 63 P **P** **20 46 38.4 -0.1**
SNR=22
SEY Seymchan 92.28 352⇑ *i*P **P** **20 46 40.1 +1.6**
SMDO Samad 92.94 63 P **P** **20 46 42.9 +0.4**
SNR=9.2
EKS2 Erkin-Say 93.81 40⇑ *i*P **P** **20 46 46.3 +0.2**
EKS2 MLR MLR
comp=Z,4µm,20.0s
EKS2 Erkin-Say 93.81 40⇑ *i*P **P** **20 46 46.3 +0.2**
EKS2 LR LR
comp=Z,4µm,20.0s
EKS2 Erkin-Say 93.81 40 P **P** **20 46 46.8 +0.6**
SNR=21
AML Almayashu 94.08 40 P **P** **20 46 49.0 +1.3**
SNR=27
CHMS Chumysh 94.17 39 P **P** **20 46 48.7 +1.0**
SNR=15
FRU Bishkek 94.19 39 *e*P **P** **20 46 48.0 +0.2**
FRU pmax pmax
comp=Z,110nm,2.0s
FRU MLR MLR
comp=Z,4µm,20.0s
AAK Ala-Archa 94.24 40⇑ *i*P **P** **20 46 48.7 +0.5**
AAK *e* 20 50 30.3
AAK MLR MLR
comp=Z,5µm,19.0s
AAK Ala-Archa 94.24 40 P **P** **20 46 49.3 +1.1**
SNR=20
AAK Ala-Archa 94.24 40⇑ *i*P **P** **20 46 48.7 +0.5**
AAK *e*PP **PP** **20 50 30.3 -4.1**
AAK LR LR
comp=Z,5µm,19.0s
AAK Ala-Archa 94.24 40 P **P** **20 46 49.2 +1.0**
SNR=9.7
AAK Ala-Archa 94.24 40 P **P** **20 46 49.3 +1.0**
comp=Z,148nm,1.1s,SNR=8.4
YAK Yakutsk 94.38 2*d i*P **P** **20 46 49.3 +1.2**
YAK *e**PP pP 20 46 58.4 +5.4
YAK *e* 20 50 36.6
YAK *e*PPP PPP 20 52 39.3
YAK *e*S **SKSac** **20 57 23.2 +0.5**
YAK *e* 20 57 58.2
YAK pmax pmax
comp=Z,15nm,1.2s
YAK pmax pmax
comp=N,11nm,1.4s
YAK pmax pmax
comp=E,2.0nm,1.3s
YAK pmax pmax
comp=Z,178nm,2.3s
YAK pmax pmax
comp=E,23nm,2.0s
YAK pmax pmax
comp=N,132nm,1.9s
YAK smax smax
comp=N,113nm,4.2s
KBK Karagaybulak 94.49 39 P **P** **20 46 50.6 +1.2**
SNR=16
TKM2 Tokmak 2 94.70 39 *e*P **P** **20 46 50.4 0.0**
TKM2 MLR MLR
comp=Z,6µm,21.0s
TKM2 Tokmak 2 94.70 39 *e*P **P** **20 46 50.4 0.0**
TKM2 LR LR
comp=Z,6µm,21.0s
TKM2 Tokmak 2 94.70 39 P **P** **20 46 50.8 +0.4**
SNR=22
KZA Kyzart 95.03 40 P **P** **20 46 53.7 +1.6**
SNR=19
AAA Alma-Ata 95.25 38 *i* P **P** **20 46 53.2 +0.5**
AAA pmax pmax
comp=Z,400nm,4.6s
AAA MLR MLR
comp=Z,9µm,22.0s
KBL Kabul 95.50 49 *e*P **P** **20 46 52.7 -1.5**
KBL Kabul 95.50 49 *e*P **P** **20 46 52.7 -1.5**
MKAR Makanchi Array 95.73 33 P **P** **20 46 53.6 -1.2**
MKAR 20 50 44.7
MKAR pmax pmax
comp=Z,3.0nm,0.9s
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR pmax pmax
comp=Z,3.0nm,1.0s
MKAR MLR MLR
comp=Z,4µm,19.0s
MKAR Makanchi Array 95.73 33 P **P** **20 46 53.6 -1.2**
MKAR PP **PP** **20 50 44.7 -0.9**
MKAR PKKPbc **PKKPdf** **21 03 44.5 -0.2**
MKAR Makanchi Array 95.73 33 P **P** **20 46 53.6 -1.2**
comp=Z,3.3nm,0.9s,baz=315,slow=2.7,SNR=30
MKAR PP **PP** **20 50 44.7 -0.9**
comp=Z,1.8nm,0.8s,baz=348,slow=6.5,SNR=3.2
MKAR PKKPbc **PKKPdf** **21 03 44.5 -0.2**
comp=Z,2.9nm,0.9s,baz=104,slow=5.1,SNR=13
MKAR LR LR 21 29 44.7
comp=Z,4µm,18.9s,baz=314,slow=35
KSH Kashi 97.05 41 P Pdif 20 47 02.0 +0.9
KSH pP pP 20 47 06.8 +0.9
KSH sP sP 20 47 09.1 +1.5
KSH PP **PP** **20 50 58.2 +2.0**
KSH SKS **SKSac** **20 57 37.1 -1.0**
KSH S **S** **20 58 20.8 -3.0**
KSH sS sS 20 58 30.6 -1.3
KSH pmax pmax
comp=Z,40nm,1.2s
KSH pmax pmax
comp=Z,530nm,3.2s
KSH LR LR
comp=N,4µm,15.1s
KSH LR LR
comp=E,14µm,16.6s
KSH LR LR
comp=Z,13µm,18.1s
VNA1 Neumayer--Stat 97.94 168 *e*P Pdif 20 47 06.3 +2.4
MOY Mondy 99.50 20 *e*P **Pdif** **20 47 14.9 +3.2**
SNAA Sanae 99.82 167 *e*P **Pdif** **20 47 13.4 +1.0**
SNAA Sanae 99.82 167 *e*PP PP 20 51 18.3 +0.9
SNAA Sanae 99.82 167 *e*P **Pdif** **20 47 12.8 +0.4**
SNAA Sanae 99.82 167 *e*Pdif **Pdif** **20 47 12.4 0.0**
KIP Kipapa 99.84 299 PFAKE 20 47 30.0 +16
KIP LR LR
comp=Z,2µm,19.0s
IRK Irkutsk 99.97 18 *e*P **Pdif** **20 47 14.4 +0.7**
IRK pmax pmax
comp=Z,25nm,2.6s
PET Petropavlovsk 100.47 345 *e*P **Pdif** **20 47 10.7 -5.1**
PET *e*S SKKSac 20 58 38.7 +10
PET pmax pmax
comp=Z,100nm,2.9s
PET pmax pmax
comp=Z,100nm,5.7s
PET pmax pmax
comp=Z,100nm,8.6s
PET MLR MLR
comp=Z,2µm,22.0s
PET MLR MLR
comp=Z,2µm,21.0s
WMQ Urumqi 100.52 32 *e*P **Pdif** **20 47 15.6 -0.8**
WMQ pP pP 20 47 21.0 -0.3
WMQ PP **PP** **20 51 25.0 +2.7**
WMQ SKS **SKSac** **20 57 53.0 -2.2**
WMQ S **Sdif** **20 58 50.0 -2.8**
WMQ SS **SS** **21 05 49.0 +1.8**
WMQ pmax pmax
comp=Z,11nm,1.2s
WMQ pmax pmax
comp=Z,82nm,4.0s
WMQ LR LR
comp=N,6µm,18.6s
WMQ LR LR
comp=E,4µm,17.8s
WMQ LR LR
comp=Z,4µm,26.2s
PETK Petropavlovsk- 100.61 346 PP PP 20 51 22.7 +0.2
comp=Z,7.2nm,1.1s,baz=264,slow=8.8,SNR=4.0
ZAK Zakamensk 101.33 19 *e*P **Pdif** **20 47 21.8 +1.9**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
DHRM DHARAMSHALA 101.76 47 *e*PKP **Pdif** **20 47 21.8 -0.5**
MSEY Mahe Island 102.56 90 PFAKE 20 47 40.0 +14
MSEY LR LR
comp=Z,3µm,19.0s
SMLA Simla 103.03 47 *ex* **Pdif** **20 47 26.1 -1.6**
SONM Songino Array 104.53 19 Pdif **Pdif** **20 47 37.5 +3.3**
SONM PP PKiKP 20 51 44.0 -6.2
SONM PKKPbc **PKKPbc** **21 03 16.6 -3.9**
SONM Songino Array 104.53 19 Pdiff **Pdif** **20 47 37.5 +3.3**
comp=Z,0.6nm,1.1s,baz=239,slow=2.6,SNR=4.0
SONM PP PKiKP 20 51 44.0 -6.2
comp=Z,2.4nm,1.2s,baz=330,slow=8.3,SNR=2.8
SONM PKKPbc **PKKPbc** **21 03 16.6 -3.9**
comp=Z,1.6nm,1.0s,baz=158,slow=4.3,SNR=3.6
ULN Ulaanbaatar 104.70 18 PFAKE 20 47 50.0 +15
ULN LR LR
comp=Z,3µm,21.0s
HABR Khabarovsk 108.02 359 *e*P **Pdif** **20 47 48.7 -0.8**
HABR *e* 20 52 17.1
HABR *e*PS **PS** **21 01 40.5 -0.6**
HABR *e*SS SS 21 07 30.1 +1.1
HABR *e*SSS SSS 21 11 32.7
HABR MLR MLR
comp=Z,2µm,21.0s
XMAS Kiritimati 108.49 281 PFAKE 20 52 10.0
XMAS LR LR
comp=Z,2µm,21.0s
RER Riviere de l'E 108.74 105 PFAKE 20 52 10.0
RER LR LR
comp=Z,3µm,19.0s
GTA Gaotai 109.53 27 PKPbc PKiKP 20 51 52.4 -7.3
GTA PP **PP** **20 52 28.8 -0.3**
GTA PKS PKSdf 20 55 25.8 -11
GTA SKS **SKSdf** **20 59 05.0 -6.6**
GTA SKKS SKKSac 20 59 25.9 -7.5
GTA Gaotai 109.53 27 SS SS 21 07 55.7 +5.2
GTA AMB AMB
comp=Z,250nm,5.0s
GTA LR LR
comp=N,980nm,30.2s
GTA LR LR
comp=E,1µm,27.1s
GTA LR LR
comp=Z,850nm,32.3s
MIDW Midway 110.05 315 PFAKE 20 52 10.0
MIDW LR LR
comp=Z,2µm,21.0s
TBI Tubuai 110.56 253 *e*LR LR 21 26 44.3
comp=Z,4µm,29.0s
MDJ Mudanjiang 111.78 3 Pdif **Pdif** **20 48 04.7 -1.7**
MDJ SS SS 21 08 23.0 +3.5
MDJ LR LR
comp=N,1µm,23.8s
MDJ LR LR
comp=E,910nm,26.4s
MDJ LR LR
comp=Z,2µm,25.8s
CN2 Changchun 112.27 7 *e*Pdif **Pdif** **20 48 08.5 0.0**
CN2 PP **PP** **20 52 51.6 +3.4**
CN2 *e*S **Sdif** **21 00 26.5 -4.2**
CN2 SS **SS** **21 08 25.4 -0.6**
CN2 LR LR
comp=N,2µm,18.0s
CN2 LR LR
comp=E,700nm,18.0s
CN2 LR LR
comp=Z,2µm,20.0s
USRK Ussuriysk Arra 112.28 1 PP PP 20 52 47.2 -1.2
comp=Z,0.7nm,0.7s,baz=44,slow=11,SNR=4.2
HHC Hu-ho-hao-te 112.42 18 *e*PKP **PKiKP** **20 52 00.6 -4.5**
HHC PP **PP** **20 52 48.4 -1.2**
HHC PKS PKSdf 20 55 35.0 -6.9
HHC AMB AMB
comp=Z,240nm,8.6s
HHC LR LR
comp=N,6µm,18.2s
HHC LR LR
comp=E,4µm,18.0s
HHC LR LR
comp=Z,6µm,18.8s
LSA Lhasa 112.84 40 PKP **PKiKP** **20 52 05.2 -1.5**
QSPA South Pole Qui 113.76 180 *e*PKPdf **PKiKP** **20 52 02.6 -4.1**
QSPA LR LR
comp=Z,2µm,21.0s
ERM Erimo 113.92 352 PFAKE 20 52 20.0
ERM LR LR
comp=Z,2µm,20.0s
SHL Shillong 116.31 42 *ex* **PKPdf** **20 52 13.3 +0.2**
SHL Shillong 116.31 42 *e*PKP **PKPdf** **20 52 16.0 +2.9**
DL2 Dalian 116.56 11 PKP PKPdf 20 52 05.4 -7.5
DL2 PP **PP** **20 53 17.8 -0.8**
DL2 Dalian 116.56 11 SS SS 21 09 27.5 +4.8
DL2 AMB AMB
comp=Z,100nm,5.9s
DL2 LR LR
comp=N,450nm,17.4s
DL2 LR LR
comp=E,960nm,16.8s
DL2 LR LR
comp=Z,1µm,19.8s
XAN Xi'an 117.78 23 PKP **PKPdf** **20 52 16.5 +1.0**
XAN PP **PP** **20 53 27.5 0.0**
XAN PKS **PKSdf** **20 55 51.9 -0.4**
XAN SKS **SKSdf** **20 59 26.5 -1.0**
XAN SKKS SKKSac 21 00 20.5 -8.8
XAN AMB AMB
comp=Z,54nm,6.3s
XAN LR LR
comp=N,2µm,23.0s
XAN LR LR
comp=E,1µm,23.0s
XAN LR LR
comp=Z,1µm,21.9s
INCN Inchon 118.64 6 PFAKE 20 52 30.0 +13
INCN LR LR
comp=Z,2µm,19.0s
MAW Mawson 119.07 156 PKP **PKPdf** **20 52 17.1 +0.4**
MAW Mawson 119.07 156 PKP **PKPdf** **20 52 17.1 +0.4**
comp=Z,6.0nm,0.9s,baz=26,slow=1.5,SNR=9.3
DGAR Diego Garcia 119.16 85 PFAKE 20 52 30.0 +12
DGAR LR LR
comp=Z,2µm,20.0s
MAJO Matsushiro 119.81 356 *e*PKIKP **PKPdf** **20 52 15.9 -3.4**
MAJO MLR MLR
comp=Z,2µm,22.0s
MAJO Matsushiro 119.81 356 *e*PKPdf **PKPdf** **20 52 15.9 -3.4**
MAJO LR LR
comp=Z,2µm,22.0s
MAT Matsushiro 119.81 356 PKP **PKPdf** **20 52 19.0 -0.3**
NJ2 Nanjing 122.63 15 *e*PKP **PKPdf** **20 52 21.1 -3.7**
NJ2 sPKP 20 52 29.9
NJ2 PKS **PKSdf** **20 56 01.0 -0.5**
NJ2 SS SS 21 10 44.0 +3.0
NJ2 LR LR
comp=N,3µm,17.7s
NJ2 LR LR
comp=E,3µm,19.1s
NJ2 LR LR
comp=Z,4µm,17.6s
KMI Kunming 122.79 34 PKP **PKPdf** **20 52 24.6 -1.0**
KMI PP **PP** **20 54 01.7 -0.7**
KMI SKKS 21 00 55.7
KMI SS **SS** **21 10 40.3 -4.2**
KMI LR LR
comp=N,2µm,23.1s
KMI LR LR
comp=E,1µm,22.0s
KMI LR LR
comp=Z,3µm,25.2s
GYA Guiyang 123.55 29 Pdif **Pdif** **20 48 57.8 -1.4**
GYA PKP **PKiKP** **20 52 28.4 +1.3**
GYA PP PP 20 54 16.9 +10
GYA PKS **PKSdf** **20 56 01.4 -2.4**
GYA SKS **SKSdf** **20 59 35.9 -2.9**
GYA SKKS **SKKSac** **21 01 02.5 -4.8**
GYA SS **SS** **21 10 59.0 +5.4**
GYA AMB AMB
comp=Z,270nm,6.8s
GYA LR LR
comp=N,1µm,18.7s
GYA LR LR
comp=E,1µm,21.5s
GYA LR LR
comp=Z,2µm,19.3s
SBA Scott Base 123.74 188 *e*PKIKP **PKPdf** **20 52 26.1 +0.6**
SBA MLR MLR
comp=Z,2µm,21.0s
SBA Scott Base 123.74 188 *e*PKPdf **PKPdf** **20 52 26.1 +0.6**
SBA LR LR
comp=Z,2µm,21.0s
SSE Sheshan 124.07 13 PKP **PKPdf** **20 52 28.5 +0.9**
SSE PP **PP** **20 54 15.1 +4.9**
SSE SS SS 21 11 01.8 +2.6
SSE AMB AMB
comp=Z,95nm,8.1s
SSE LR LR
comp=N,2µm,21.8s
SSE LR LR
comp=E,1µm,21.8s
SSE LR LR
comp=Z,2µm,16.4s
VNDA Vanda 124.61 187 *e*PKPdf **PKPdf** **20 52 27.7 +0.6**
VNDA PKP **PKPdf** **20 52 27.9 +0.8**
VNDA Vanda 124.61 187 PKP **PKPdf** **20 52 27.9 +0.8**
comp=Z,13nm,1.0s,baz=256,slow=1.7,SNR=29
PAF Port-aux-Franc 124.78 135 PFAKE 20 52 40.0 +12
PAF LR LR
comp=Z,4µm,20.0s
CHTO Chiang Mai 125.67 42 *e*PKIKP **PKPdf** **20 52 29.1 -1.9**
CHTO MLR MLR
comp=Z,2µm,21.0s
CHTO Chiang Mai 125.67 42 *e*PKPdf **PKPdf** **20 52 29.1 -1.9**
CHTO LR LR
comp=Z,2µm,21.0s
CM31 Chiang Mai Arr 125.94 42 *e*PKPdf **PKPdf** **20 52 30.9 -0.6**
CMAR Chiang Mai Arr 125.94 42 PKP **PKPdf** **20 52 31.2 -0.3**
CMAR Chiang Mai Arr 125.94 42 PKP **PKPdf** **20 52 31.2 -0.3**
comp=Z,8.0nm,0.8s,baz=304,slow=2.3,SNR=37
WAKE Wake Island 126.49 320 PFAKE 20 52 40.0 +7.5
WAKE LR LR
comp=Z,2µm,22.0s
AFI Afiamalu 127.81 271 PKP **PKPdf** **20 52 38.9 +3.8**
AFI Afiamalu 127.81 271 PKP **PKPdf** **20 52 38.9 +3.8**
comp=Z,20nm,0.8s,baz=75,slow=18,SNR=4.6
TATO Taipei 130.04 15 PFAKE 20 52 50.0 +11
TATO LR LR
comp=Z,3µm,20.0s
YHNB Yeheng 130.31 15 PFAKE 20 52 50.0 +10
YHNB LR LR
comp=Z,3µm,20.0s
SSLB Suanglung 131.06 16 *e*PKPdf **PKPdf** **20 52 42.2 +1.1**
QIZ Qiongzhong 131.42 31 PKP **PKPdf** **20 52 40.7 -1.2**
QIZ PP **PP** **20 54 58.0 -1.1**
QIZ SS SS 21 12 31.8 +0.3
QIZ AMB AMB
comp=Z,200nm,6.0s
QIZ LR LR
comp=N,2µm,19.5s
QIZ LR LR
comp=Z,3µm,22.3s
TPUB Ta-pu 131.44 16 PKPdf **PKPdf** **20 52 39.8 -2.1**
FUNA Funafuti 134.03 282 PFAKE 20 53 00.0 +13
FUNA LR LR
comp=Z,6µm,19.0s
TARA Tarawa 134.48 298 PFAKE 20 53 00.0 +12
TARA LR LR
comp=Z,2µm,22.0s
CASY Casey 135.06 167 *e*PKPdf **PKPdf** **20 52 45.0 -2.2**
CASY LR LR
comp=Z,3µm,21.0s
KULM Kulim 136.62 52 PFAKE 20 53 00.0 +8.2
KULM LR LR
comp=Z,2µm,21.0s
KULM Kulim 136.62 52 P **PKPdf** **20 52 54.7 +2.9**
DRV Dumont d'Urvil 136.98 184 SS SS 21 13 10.0 -28
DRV Dumont d'Urvil 136.98 184 L L 21 28 00.0
IPM Ipoh 137.44 53 P **PKPdf** **20 52 57.1 +3.8**
MSVF Nonsavu 138.30 270 PFAKE 20 53 10.0 +15
MSVF LR LR
comp=Z,1µm,20.0s
KTGM Kuala Trenggan 138.37 50 P **PKPdf** **20 52 57.4 +2.4**
FRIM Kepong 138.72 54 P **PKPdf** **20 52 58.9 +3.2**
URZ Urewera 140.55 238 PKP **PKPdf** **20 53 00.4 +2.2**
URZ Urewera 140.55 238 PKP **PKPdf** **20 53 00.4 +2.2**
comp=Z,16nm,0.8s,baz=319,slow=4.8,SNR=4.9
KGM Kluang 140.79 53 P **PKPdf** **20 53 01.5 +2.0**
GUMO Guam 141.26 343 PFAKE 20 53 10.0 +10
GUMO LR LR
comp=Z,2µm,22.0s
MYKOM Kota Tinggi 141.33 53 P **PKPdf** **20 53 03.9 +3.5**
SNZO South Karori 141.76 233 PFAKE 20 53 10.0 +10
SNZO LR LR
comp=Z,2µm,21.0s
COCO West Island 143.12 78 PFAKE 20 53 10.0 +6.6
COCO LR LR
comp=Z,2µm,20.0s
RPZ Rata Peaks 143.62 228 *e*PKPdf PKPbc 20 53 02.2 +1.3
BATP Bataraza 144.01 28 *e*P **PKPdf** **20 53 05.5 +0.4**
OCLP Ormoc 144.19 16 *e*P **PKPab** **20 52 59.2 -3.8**
MSLP Maasin 145.13 15 *e*P **PKPbc** **20 53 06.4 0.0**
KDM Kudat 145.25 31 P **PKPdf** **20 53 09.4 +2.1**
KKM Kota Kinabalu 145.71 32 PFAKE 20 53 20.0 +11
KKM LR LR
comp=Z,2µm,20.0s
KKM Kota Kinabalu 145.71 32 P **PKPab** **20 53 09.8 +1.0**
KSM Kuching 146.04 45 PFAKE 20 53 20.0 +10
KSM LR LR
comp=Z,2µm,22.0s
KSM Kuching 146.04 45 P **PKPbc** **20 53 09.5 0.0**
BTM Bintulu 146.41 40 P **PKPab** **20 53 11.6 +0.2**
BUTP Butuan 146.44 15 *e*P **PKPab** **20 53 12.2 +0.9**
SBUM Sibu 146.49 42 P **PKPab** **20 53 11.5 -0.2**
SDKM Sandakan 146.53 31 P **PKPab** **20 53 12.0 +0.2**
IPIL Ipil 146.72 21 *e*P **PKPab** **20 53 12.7 +0.2**
PAGZ Pagadian 146.92 19 *e*P **PKPab** **20 53 13.3 +0.1**
BUKP Musuan 147.35 16 *e*P **PKPdf** **20 53 03.1 -7.8**
MYLDM Lahad Datu 147.54 29 P **PKPab** **20 53 17.5 +1.8**
TSM Tawau 148.03 31 P **PKPab** **20 53 16.7 -1.0**
DAV Davao City (W) 148.26 16 PFAKE 20 53 20.0 +1.4
DAV LR LR
comp=Z,2µm,20.0s
MATI Mati 148.54 14 *e*P **PKPdf** **20 53 14.5 +1.6**
DZM Mont Dzumac 149.91 267 *e*LR LR 21 43 31.2
comp=Z,2µm,23.4s
DZM Mont Dzumac 149.91 267 *e*P **PKPbc** **20 53 19.9 +0.2**
DZM Mont Dzumac 149.91 267 PKPbc **PKPbc** **20 53 20.2 +0.4**
DZM Mont Dzumac 149.91 267 PKPbc **PKPbc** **20 53 20.2 +0.4**
comp=Z,84nm,1.1s,baz=95,slow=8.7,SNR=16
NOUC Port Laguerre 150.04 267 *e*P **PKPbc** **20 53 22.6 +2.7**
HNR Honiara 151.21 295 PFAKE 20 53 30.0 -0.7
HNR LR LR
comp=Z,1µm,22.0s
KAPI Kappang 156.92 38 PFAKE 20 53 40.0 -15
KAPI LR LR
comp=Z,2µm,19.0s
TAU Tasmania Unive 157.92 207 PFAKE 20 53 40.0 +15
TAU LR LR
comp=Z,1µm,21.0s
PMG Port Moresby 160.79 316 PFAKE 20 53 40.0 +10
PMG LR LR
comp=Z,2µm,20.0s
CAN Canberra 162.52 226 PFAKE 20 53 40.0 +9.1
CAN LR LR
comp=Z,2µm,19.0s
NWAO Narrogin (SRO) 162.86 126 PFAKE 20 53 40.0 +8.8
NWAO LR LR
comp=Z,2µm,20.0s
MBWA Marble Bar 166.74 81 PFAKE 20 53 50.0 +15
MBWA LR LR
comp=Z,3µm,19.0s
CTAO Charters Tower 167.84 285 *e*PKIKP **PKPdf** **20 53 35.9 +0.1**
CTAO MLR MLR
comp=Z,4µm,22.0s
CTAO Charters Tower 167.84 285 *e*PKPdf **PKPdf** **20 53 35.9 +0.1**
CTAO LR LR
comp=Z,4µm,22.0s
STKA Stephens Creek 169.42 219 PKP **PKPdf** **20 53 37.0 +0.6**
STKA *e*PKPdf PKPdf 20 53 37.5 +1.1
STKA Stephens Creek 169.42 219 PKP **PKPdf** **20 53 37.0 +0.6**
comp=Z,12nm,1.1s,baz=48,slow=4.1,SNR=7.3
FITZ Fitzroy Crossi 170.50 55 *e*PKPdf **PKPdf** **20 53 38.0 +0.6**
FITZ *e*PKPab **PKPab** **20 54 53.6 -0.7**
WRAB Tennant Creek 176.09 352 *e*PKIKP **PKPdf** **20 53 40.1 +0.5**
WRAB *e* 20 59 04.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRAB				MLR	MLR		
	comp=Z,3µm,20.0s						
WRAB	Tennant Creek	176.09	352	ePKPdf	PKPdf	20 53 40.1	+0.5
WRAB				ePKPab	PKPab	20 55 19.4	+0.6
WRAB				ePP	PP	20 59 04.7	-5.6
WRAB				LR	LR		
	comp=Z,3µm,20.0s						
WRA	Warramunga Arr	176.10	352	PKP	PKPdf	20 53 40.5	+0.9
WRA				PKPab	PKPab	20 55 19.3	+0.4
WRA				PP	PP	20 59 10.1	-0.3
WRA	Warramunga Arr	176.10	352	PKP	PKPdf	20 53 40.4	+0.9
	comp=Z,15nm,1.3s,baz=348,slow=0.2,SNR=18						
WRA				PKPab	PKPab	20 55 19.3	+0.4
	comp=Z,24nm,1.0s,baz=12,slow=5.1,SNR=37						
WRA				PP	PP	20 59 10.1	-0.3
	comp=Z,6.0nm,1.2s,baz=2.1,slow=6.0,SNR=4.8						
AS31	Alice Springs	179.80	326	ePKPdf	PKPdf	20 53 38.3	-1.7
AS31				e		20 55 34.9	
ASAR	Alice Springs	179.80	326	PKP	PKPdf	20 53 40.4	+0.4
ASAR				PKPab		20 55 35.7	
ASAR				PP	PP	20 59 28.0	-0.5
ASAR	Alice Springs	179.80	326	PKP	PKPdf	20 53 40.4	+0.4
	comp=Z,12nm,1.1s,baz=244,slow=0.1,SNR=30						
ASAR				PKPab		20 55 35.7	
	comp=Z,16nm,1.0s,baz=198,slow=0.8,SNR=23						
ASAR				PP	PP	20 59 28.0	-0.5
	comp=Z,2.8nm,0.9s,baz=29,slow=2.1,SNR=5.0						

IDC 06 20:53:12.6±1.4, 16°.45S×73°.51W, h0km, mb3.7/2, mb1 3.9/4, mb1mx3.6/20, mbtmp3.8/4, ML3.9/2, Error ellipse: s-maj=36.5km s-min=30.0km az=32.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	5.16	89	Pn	Pn	20 54 34.0	+1.9
	3.0nm,0.3s,baz=269,slow=11,SNR=49						
LPAZ				Sn	Sn	20 55 30.2	-2.7
	baz=153,slow=20,SNR=0.8						
NNA	Nana	5.49	323	Pn	Pn	20 54 40.5	+4.7
	1.2nm,0.3s,baz=165,slow=12,SNR=2.1						
NNA				Pg	Pg	20 54 54.0	-4.0
	1.7nm,0.3s,baz=143,slow=16,SNR=4.7						
NNA				Lg	Lg	20 55 58.9	
	1.8nm,0.3s,baz=245,slow=18,SNR=1.7						
SIV	San Ignacio	11.95	90	Pn	Pn	20 56 06.2	+1.8
	0.3nm,0.3s,baz=265,slow=12,SNR=4.7						
PLCA	Paso Flores	24.33	175	P	P	20 58 32.4	+0.1
	1.1nm,0.9s,baz=337,slow=7.7,SNR=3.3						
TORD	Torodi Ar. Bea	79.91	73	P	P	21 05 22.4	-1.7
	1.1nm,0.7s,baz=260,slow=5.3,SNR=8.6						
WRA	Warramunga Arr	134.65	218	PKP	PKPdf	21 12 34.5	+0.4
	0.4nm,0.8s,baz=146,slow=1.9,SNR=5.1						
SONM	Songino Array	148.71	0	PKPbc	PKPbc	21 13 02.3	+0.2
	0.6nm,0.7s,baz=25,slow=3.2,SNR=4.8						

CASC 06 21:00:38.6±3.9, 16°.42N×87°.92W, h117km±108km, MD4.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRL	Marmol	2.17	232	eP	Pn	21 01 12.7	-1.7
MRL				eS	Sn	21 01 43.7	+2.0
TGUH	Tegucigalpa,Un	2.43	165	eP	Pn	21 01 21.7	+4.4
TGUH				eS	Sn	21 01 49.0	+1.8
MTO2	Montecristo 2	2.44	215	eP	Pn	21 01 16.4	-1.5
MTO2				eS	Sn	21 01 39.1	-8.9
CAHU	Cacacuatique	2.65	186	eP	Pn	21 01 22.3	+1.8
CAHU				eS	Sn	21 01 49.2	-3.5
RBDL	Robledal	2.86	217	eP	Pn	21 01 23.5	+0.3
LBRS	Las Brisas	2.88	202	eP	Pn	21 01 24.0	+0.6
NBG	Las Nubes	2.97	233	eP	Pn	21 01 24.2	-0.5
NBG				eS	Sn	21 02 04.1	+3.8
BOQS	Boqueron	2.97	206	eP	Pn	21 01 25.5	+0.7
IXG	Ixpaco	3.31	228	eP	Pn	21 01 30.0	+0.8
IXG				eS	Sn	21 02 10.2	+1.9
FUG	Fuego 3	3.43	236	eP	Pn	21 01 32.0	+1.2
FUG				eS	Sn	21 02 15.1	+3.9

ISK 06 21:06:22.6, 39°.04N×41°.79E, h12km, MD3.0
ISCJB 06 21:06:23.3±0.6, 39°.07N±0°.03×41°.81E±0°.04, h9km±6km, Error ellipse: s-maj=5.4km s-min=4.3km az=31.3
DDA 06 21:06:23.9, 39°.09N×41°.79E, h14km, MD3.1
CSEM 06 21:06:23.0±0.2, 39°.05N×41°.72E, h5km, MD3.1, Error ellipse: s-maj=5.1km s-min=4.2km az=37.0
ISC 06 21:06:24.0±1.0, 39°.06N±0°.03×41°.78E±0°.02, h17km±11km, n35, σ1§04/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNGL	BINGOL	0.51	258	eP	Pg	21 06 33.9	-0.3
BNGL				eS	Sg	21 06 41.9	+0.8
TATV	Tatvan	0.67	146	eP	Pg	21 06 36.4	-0.9
TATV				eS	Sg	21 06 45.7	-0.5
TATV	Tatvan	0.67	146	eP	Pg	21 06 36.3	-0.9
TATV				eS	Sg	21 06 45.7	-0.5
BNGB	Bingˆ¶l	0.86	266	ePG	Pb	21 06 40.0	-0.6
BNGB				eSG	Sb	21 06 53.0	+1.1
TUTA	Tutak	0.87	67	eP	Pb	21 06 41.0	+0.2
TUTA				eS	Sb	21 06 50.0	-2.1
TUTA	Tutak	0.87	67	eP	Pb	21 06 41.0	+0.2
BTMT	Batman	0.90	195	ePG	Pb	21 06 41.6	+0.5
BTMT	Batman	0.90	195	ePg	Pb	21 06 41.6	+0.5
ERZM	Erzurum	0.90	339	eP	Pb	21 06 41.0	-0.4
ERZM				eS	Sb	21 06 53.5	+0.3
ERZM	Erzurum	0.90	339	eP	Pb	21 06 41.0	-0.4
ERZM				eS	Sb	21 06 53.5	+0.3
EZM	Erzurum	0.90	339	ePG	Pb	21 06 40.8	-0.6
EZM				eSG	Sb	21 06 53.5	+0.3
BINT	Bingol	1.03	260	ePg	Pb	21 06 40.0	-3.4
BINT				eSg	Sb	21 06 53.0	-3.6
AGRB	Hanur-Agry	1.07	61	ePG	Pb	21 06 43.8	-0.4
AGRB	Hanur-Agry	1.07	61	ePg	Pb	21 06 43.8	-0.4
BEST	Besiri	1.24	199	eP	Pn	21 06 47.5	+0.9
BEST				eS	Sg	21 07 07.1	+3.0
KOPT	Kop Dagi	1.38	314	eP	Pn	21 06 49.6	+0.9
KOPT				eS	Sg	21 07 10.0	+1.3
KOPT	Kop Dagi	1.38	314	eP	Pn	21 06 49.6	+0.9
ERZN	Erzincan	1.68	289	ePN	Pn	21 06 52.5	-0.3
BAYT	Ayd˜–ntepe-Bay	1.84	317	ePN	Pn	21 06 54.9	0.0
BAYT	Ayd˜–ntepe-Bay	1.84	317	ePn	Pn	21 06 54.9	0.0
KARS	Kars	1.85	32	ePN	Pn	21 06 55.9	+0.8
KARS	Kars	1.85	32	ePn	Pn	21 06 55.9	+0.8
PTK	Pertek	1.87	266	ePN	Pn	21 06 54.9	-0.5
PTK	Pertek	1.87	266	ePn	Pn	21 06 54.9	-0.5
EZC	Erzincan	2.01	291	ePn	Pn	21 06 52.5	-4.7
GUMT	Gumushane	2.26	309	ePN	Pn	21 07 01.2	+0.5
GUMT	Gumushane	2.26	309	ePn	Pn	21 07 01.2	+0.5
CUKT	Cukurca	2.31	141	ePN	Pn	21 07 02.2	+0.8
CUKT	Cukurca	2.31	141	ePn	Pn	21 07 02.2	+0.8
ILIC	ilic-Erzincan	2.53	280	ePN	Pn	21 07 04.4	+0.1
ILIC	ilic-Erzincan	2.53	280	ePn	Pn	21 07 04.4	+0.1
GNI	Garni	2.53	64	ePN	Pn	21 07 05.6	+1.2
GNI	Garni	2.53	64	ePn	Pn	21 07 05.6	+1.2
ESPY	Espiye-Giresun	2.99	309	ePN	Pn	21 07 11.0	+0.4
ESPY	Espiye-Giresun	2.99	309	ePn	Pn	21 07 11.0	+0.4

IDC 06 21:34:43.5±2.4, 5°.74N×123°.41E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/24, mbtmp3.5/3, Error ellipse: s-maj=292.7km s-min=25.0km az=63.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.69	157	P	P	21 40 33.6	0.0
	0.5nm,0.4s,baz=337,slow=9.4,SNR=16						
ASAR	Alice Springs	30.97	161	P	P	21 41 02.6	-0.1
	0.3nm,0.3s,baz=340,slow=7.1,SNR=14						
MKAR	Makanchi Array	54.04	326	P	P	21 44 09.7	-0.1
	0.1nm,0.4s,baz=117,slow=8.8,SNR=3.2						

ISCJB 06 21:40:26.8±0.3, 41°.28N±0°.01×22°.66E±0°.02, h6km±2km, mb3.4/3, Error ellipse: s-maj=2.2km s-min=1.8km az=37.3
SKO 06 21:40:26.6, 41°.29N×22°.68E, h15km, M2.8, ML3.3
ATH 06 21:40:26.6, 41°.31N×22°.68E, h23km±1km, MD3.0/4
BEO 06 21:40:26.7±0.4, 41°.17N×22°.66E, h0km, ML3.4/1
CSEM 06 21:40:27.3±0.1, 41°.26N×22°.67E, h2km, ML3.3, Error ellipse: s-maj=2.4km s-min=2.1km az=41.0
THE 06 21:40:27.6, 41°.28N×22°.69E, h4km, ML3.8/10, Error ellipse: s-maj=1.0km s-min=0.4km az=207.0
IDC 06 21:40:27.2±1.2, 41°.27N×22°.61E, h0km, mb3.3/5, mb1 3.6/9, mb1mx3.5/29, mbtmp3.5/9, ML3.3/4, Error ellipse: s-maj=20.2km s-min=16.1km az=158.0
SOF 06 21:40:27.1, 41°.32N×22°.72E, h5km, MD3.4
ISC 06 21:40:27.7±0.8, 41°.28N±0°.01×22°.67E±0°.01, h6km±5km, n272, σ1§18/333, mb3.7/3, 28C-25D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	300	P	Pg	21 40 29.9	+0.3
VAY				S	Sg	21 40 31.0	0.0
VAY	Valandovo	0.09	300	ePg	Pg	21 40 29.2	-0.4
VAY				eSg	Sg	21 40 31.7	+0.7
VAY	Valandovo	0.09	300	⇑iPg	Pg	21 40 29.2	-0.4
VAY				iSg	Sg	21 40 31.1	0.0
VAY				eLg	Lg	21 40 31.4	
	comp=E,26µm,0.5s						
VAY				eLg	Lg	21 40 31.5	
	comp=N,26µm,0.3s						
VAY	Valandovo	0.09	300	ePg	Pg	21 40 29.2	-0.4
VAY	Valandovo	0.09	300	P	Pg	21 40 29.9	+0.3
VAY				S	Sg	21 40 31.0	0.0
VAY				eLg	Lg	21 40 32.0	
	comp=N,26µm,0.3s						
KNT	Kendrikon	0.21	124	P	Pg	21 40 31.8	0.0
KNT				S	Sg	21 40 34.9	+0.4
KNT	Kendrikon	0.21	124	P	Pg	21 40 31.8	0.0
KNT				S	Sg	21 40 34.9	+0.4
GRG	Griva	0.38	212	P	Pg	21 40 35.2	+0.2
GRG				S	Sg	21 40 40.9	+0.9
GRG	Griva	0.38	212	ePB	Pg	21 40 35.3	+0.2
GRG				eSB	Sg	21 40 41.0	+0.9
GRG	Griva	0.38	212	P	Pg	21 40 35.2	+0.2
GRG				S	Sg	21 40 40.9	+0.9
KKB	Krupnik	0.67	28	iPg	Pg	21 40 39.7	-0.8
KKB	Krupnik	0.67	28	iPg	Pg	21 40 39.7	-0.8
THE	Thessaloniki	0.68	161	P	Pg	21 40 40.3	-0.5
THE				S	Sb	21 40 50.8	-0.9
THE	Thessaloniki	0.68	161	P	Pg	21 40 40.3	-0.5
THE				S	Sb	21 40 50.8	-0.9
SOH	Sokhos	0.69	131	P	Pg	21 40 40.3	-0.6
SOH				S	Sg	21 40 50.4	+0.6
SOH	Sokhos	0.69	131	ePN	Pg	21 40 40.3	-0.6
SOH				eSN	Sg	21 40 50.5	+0.6
SOH	Sokhos	0.69	131	P	Pg	21 40 40.3	-0.6
SOH				S	Sg	21 40 50.4	+0.6
SRS	Serrai	0.71	103	P	Pg	21 40 40.6	-0.8
SRS				S	Sg	21 40 50.6	-0.1
SRS	Serrai	0.71	103	P	Pg	21 40 40.6	-0.8
SRS				S	Sg	21 40 50.6	-0.1
HORT	Hortiatis	0.75	154	P	Pg	21 40 41.8	-0.3
HORT				S	Sb	21 40 53.1	-0.7
HORT	Hortiatis	0.75	154	P	Pg	21 40 41.8	-0.3
HORT				S	Sb	21 40 53.1	-0.7
MMB	Musomiste	0.85	68	iPg	Pg	21 40 43.3	-0.8
MMB	Musomiste	0.85	68	iPg	Pg	21 40 43.3	-0.8
NVR	Nevrokopi	0.90	85	P	Pg	21 40 44.1	-0.9
NVR				S	Sg	21 40 56.7	0.0
NVR	Nevrokopi	0.90	85	ePN	Pg	21 40 44.0	-0.9
NVR				eSN	Sg	21 40 56.3	-0.4
NVR	Nevrokopi	0.90	85	P	Pg	21 40 44.1	-0.9
NVR				eSn	Sg	21 40 56.3	-0.4
BIA	Bitola	1.05	256	P	Pg	21 40 46.9	-0.9
BIA	Bitola	1.05	256	iPg	Pg	21 40 46.8	-1.0
BIA				iSg	Sg	21 41 01.9	+0.5
BIA	Bitola	1.05	256	P	Pg	21 40 46.9	-0.9
BIA				iSg	Sg	21 41 01.9	+0.5
PLG	Polygyros	1.08	147	P	Pg	21 40 47.4	-0.9
PLG				S	Sn	21 41 04.0	-0.7
PLG	Polygyros	1.08	147	ePN	Pg	21 40 47.6	-0.7
PLG				eSN	Sb	21 41 02.9	-0.2
PLG	Polygyros	1.08	147	P	Pg	21 40 47.4	-0.9
PLG				eSn	Sb	21 41 02.9	-0.2
PLG				S	Sn	21 41 04.0	-0.7
FNA	Florina	1.10	244	P	Pg	21 40 48.0	-0.6
FNA	Florina	1.10	244	ePN	Pg	21 40 48.1	-0.6
FNA				eSN	Sb	21 41 03.9	+0.3
FNA	Florina	1.10	244	P	Pg	21 40 48.0	-0.6
FNA				eSn	Sb	21 41 03.9	+0.3
SKO	Skopje	1.15	307	P	Pg	21 40 48.1	-1.7
SKO	Skopje	1.15	307	ePg	Pg	21 40 48.9	-0.9
SKO	Skopje	1.15	307	ePg	Pg	21 40 49.7	-0.1
SKO				iSg	Sn	21 41 06.9	+0.4
SKO				eLg	Lg	21 41 06.9	
	comp=N,641nm,0.8s						
SKO				eLg	Lg	21 41 08.0	
	comp=E,414nm,0.6s						
SKO	Skopje	1.15	307	P	Pg	21 40 48.1	-1.7
SKO	Skopje	1.15	307	ePg	Pb	21 40 50.1	+0.1
SKO				eLg	Lg	21 41 01.4	
	comp=E,414nm,0.6s						
KZN	Kozani	1.19	215	P	Pg	21 40 50.0	-0.4
KZN				S	Sn	21 41 07.0	-0.4
KZN	Kozani	1.19	215	ePN	Pg	21 40 49.9	-0.4
KZN				eSN	Sn	21 41 07.2	-0.2
KZN	Kozani	1.19	215	P	Pg	21 40 50.0	-0.4
KZN				eSn	Sn	21 41 07.2	-0.2
OUR	Ouranopolis	1.37	133	P	Pn	21 40 52.5	-0.8
OUR				S	Sn	21 41 11.8	0.0
OUR	Ouranopolis	1.37	133	P	Pn	21 40 52.5	-0.8
OUR				S	Sn	21 41 11.8	0.0
VTS	Vitosha	1.37	17	P	Pn	21 40 53.1	-0.5
VTS				S	Sb	21 41 12.0	+0.3
VTS	Vitosha	1.37	17	iP	Pn	21 40 53.5	-0.1
VTS				iP	Pn	21 40 53.5	-0.1
VTS	Vitosha	1.37	17	ePg	Pb	21 40 53.8	-0.1
VTS				eSg	Sn	21 41 13.3	+1.2
VTS	Vitosha	1.37	17	⇑iP	Pn	21 40 53.1	-0.5
VTS				S	Sb	21 41 11.3	-0.4
VTS	Vitosha	1.37	17	P	Pn	21 40 53.1	-0.5
VTS	Vitosha	1.37	17	ePg	Pb	21 40 53.8	-0.1
VTS				S	Sb	21 41 12.0	+0.3
VTS				eSg	Sn	21 41 13.3	+1.2
KAVA	Kavala	1.42	101	P	Pn	21 40 53.2	-0.8
KAVA				S	Sb	21 41 12.5	-0.4
KAVA	Kavala	1.42	101	P	Pn	21 40 53.2	-0.8
KAVA				S	Sb	21 41 12.5	-0.4
NEST	Nestorio	1.50	235	P	Pn	21 40 55.3	+0.1
NEST	Nestorio	1.50	235	P	Pn	21 40 55.3	+0.1
KBN	Korca	1.57	246	ePN	Pn	21 40 56.1	0.0
KBN				iSN	Sg	21 41 21.4	+3.3
KBN	Korca	1.57	246	P	Pn	21 40 56.3	+0.2
KBN	Korca	1.57	246	P	Pn	21 40 56.3	+0.2
KBN				iSn	Sg	21 41 21.4	+3.3
RZN	Rozhen	1.59	74	P	Pn	21 40 56.6	0.0
RZN	Rozhen	1.59	74	P	Pn	21 40 56.6	0.0
BARS	Barje	1.66	338	ePn	Pn	21 40 56.8	-0.6
BARS				eSn	Sg	21 41 22.0	+0.9
BARS	Barje	1.66	338	ePn	Pn	21 40 56.8	-0.6
BARS				eSn	Sg	21 41 22.0	+0.9
PGB	Panagyurishte	1.69	41	iP	Pb	21 40 58.8	-0.5
PGB	Panagyurishte	1.69	41	iP	Pb	21 40 58.8	-0.5
PHP	Peshkopia	1.72	284	ePN	Pn	21 40 58.0	-0.2
PHP				iSN	Sn	21 41 20.2	-0.4
PHP	Peshkopia	1.72	284	P	Pn	21 40 58.1	-0.2
PHP	Peshkopia	1.72	284	P	Pn	21 40 58.1	-0.2
PHP				iSn	Sn	21 41 20.2	-0.4
PLD	Plovdiv	1.73	61	P	Pn	21 40 57.7	-0.6
PLD				S	Sn	21 41 20.9	+0.1
PLD	Plovdiv	1.73	61	P	Pb	21 40 59.3	-0.6
PLD				Pg	Pg	21 41 01.0	+0.1
PLD	Plovdiv	1.73	61	ePn	Pn	21 40 59.0	+0.7
PLD				eSn	Sg	21 41 23.2	-0.1
PLD	Plovdiv	1.73	61	P	Pn	21 40 57.7	-0.6
PLD	Plovdiv	1.73	61	ePn	Pn	21 40 59.0	+0.7
PLD	Plovdiv	1.73	61	Pg	Pg	21 41 01.0	+0.1
PLD				S	Sn	21 41 20.9	+0.1
PLD				eSn	Sg	21 41 23.2	-0.1
THL	Klokotos Trika	1.78	197	P	Pn	21 40 58.9	-0.1
THL	Klokotos Trika	1.78	197	ePN	Pn	21 40 58.7	-0.3
THL	Klokotos Trika	1.78	197	P	Pn	21 40 58.9	-0.1
LSK	Leskovik	1.94	235	ePN	Pn	21 41 01.6	+0.4
LSK				iSN	Sn	21 41 14.0	-12
LSK	Leskovik	1.94	235	ePn	Pn	21 41 01.6	+0.4
XOR	Xorichti	1.95	168	P	Pn	21 41 00.4	-1.0
XOR	Xorichti	1.95	168	P	Pn	21 41 00.4	-1.0
ZAPS	Zavoj	2.00	359	ePn	Pb	21 41 03.3	-1.1
ZAPS				eSn	Sb	21 41 30.2	+0.7
NEO	Neokhori	2.01	168	P	Pn	21 41 01.3	-0.9
NEO	Neokhori	2.01	168	P	Pn	21 41 01.3	-0.9
KDZ	Kurdzhali	2.10	79	iP	Pn	21 41 03.0	-0.4
KDZ	Kurdzhali	2.10	79	iP	Pn	21 41 03.0	-0.4
RDO	Rodhopi	2.17	93	P	Pn	21 41 03.4	-0.8
RDO	Rodhopi	2.17	93	ePN	Pn	21 41 03.5	-0.8
RDO	Rodhopi	2.17	93	ePn	Pn	21 41 03.5	-0.8
SKIA	Skiathos	2.19	164	P	Pn	21 41 03.8	-0.9
SKIA	Skiathos	2.19	164	P	Pn	21 41 03.8	-0.9
PUK	Puka	2.22	291	iPN	Pn	21 41 05.9	+0.8
PUK				iSN	Sn	21 41 32.7	-0.1
PUK	Puka	2.22	291	iPn	Pn	21 41 05.9	+0.8
PUK				iSn	Sn	21 41 32.7	-0.1
MPEP	Malo Peshtene	2.22	21	iP	Pn	21 41 05.7	+0.6
BCI	Bajram Curri	2.23	300	ePN	Pn	21 41 05.4	+0.2
BCI	Bajram Curri	2.23	300	ePn	Pn	21 41 05.4	+0.2
SELS	Selova	2.26	330	ePn	Pn	21 41 04.6	-1.0
SELS				eSn	Sb	21 41 36.2	-0.8
AGG	Agios Georgios	2.27	187	ePN	Pn	21 41 05.5	-0.2
AGG	Agios Georgios	2.27	187	ePn	Pn	21 41 05.5	-0.2
DIM	Dimitrovgrad	2.28	69	iP	Pn	21 41 07.2	+1.3
DIM	Dimitrovgrad	2.28	69	iP	Pn	21 41 07.2	+1.3
AOS	Alonnisos	2.30	156	P	Pn	21 41 05.1	-1.0
AOS	Alonnisos	2.30	156	P	Pn	21 41 05.1	-1.0
SMTH	Samothraki Isl	2.31	109	ePN	Pn	21 41 05.2	-1.1
SMTH	Samothraki Isl	2.31	109	ePn	Pn	21 41 05.2	-1.1
LIA	Limnos Island	2.36	125	P	Pn	21 41 05.8	-1.1
LIA	Limnos Island	2.36	125	ePN	Pn	21 41 05.9	-1.0
LIA	Limnos Island	2.36	125	ePn	Pn	21 41 05.9	-1.0
SRN	Sarande	2.47	236	ePN	Pb	21 41 11.3	-1.1
SRN	Sarande	2.47	236	P	Pb	21 41 10.5	-1.9
SRN	Sarande	2.47	236	P	Pb	21 41 10.5	-1.9
SRN	Sarande	2.47	236	ePn	Pb	21 41 11.3	-1.1
IGT	Igoumenitsa	2.50	226	P	Pb	21 41 11.2	-1.7
IGT	Igoumenitsa	2.50	226	P	Pb	21 41 11.2	-1.7
ALN	Alexandroupoli	2.58	97	P	Pn	21 41 09.1	-0.9
ALN	Alexandroupoli	2.58	97	ePN	Pn	21 41 09.2	-0.8
ALN	Alexandroupoli	2.58	97	ePn	Pn	21 41 09.2	-0.8
BOLS	Boljevac	2.60	349	ePn	Pn	21 41 12.2	+1.9
BOLS				eSn	Sb	21 41 45.1	-1.9
BOLS	Boljevac	2.60	349	ePn	Pn	21 41 12.2	+1.9
BOLS				eSn	Sb	21 41 45.1	-1.9
KEK	Kerkira	2.69	235	ePB	Pn	21 41 12.8	+1.3
KEK	Kerkira	2.69	235	ePb	Pn	21 41 12.8	+1.3
ENEZ	Enez	2.69	100	eP	Pg	21 41 18.7	-0.5
PVL	Pavlikeni	2.77	45	P	Pn	21 41 11.2	-1.4
PVL	Pavlikeni	2.77	45	P	Pn	21 41 11.2	-1.4
PDG	Podgorica	2.80	295	ePn	Pn	21 41 14.2	+1.2
PDG				eSn	Sn	21 41 48.7	+1.7
PDG	Podgorica	2.80	295	ePn	Pn	21 41 14.2	+1.2
PDG				eSn	Sn	21 41 48.7	+1.7
ERIK	Erikli-Kesan	2.97	101	eP	Pn	21 41 16.9	+1.5
GRUS	Gruza	2.98	332	ePn	Pn	21 41 14.9	-0.6
GRUS	Gruza	2.98	332	ePn	Pn	21 41 14.9	-0.6
GELI	Tayfur-Gelibol	3.02	106	eP	Pn	21 41 14.2	-1.8
EDRB	Edirne	3.11	78	eP	Pn	21 41 19.2	+1.9
SZH	Strazhica	3.13	50	iP	Pn	21 41 17.9	+0.3
SZH	Strazhica	3.13	50	iP	Pn	21 41 17.9	+0.3
EZN	Ezine	3.14	116	eP	Pn	21 41 20.3	+2.6
JMB	Yambol	3.15	67	P	Pn	21 41 18.4	+0.5
JMB	Yambol	3.15	67	P	Pn	21 41 17.4	-0.5
JMB	Yambol	3.15	67	ePn	Pn	21 41 17.8	-0.1
JMB				eSn	Sn	21 41 57.1	+1.3
JMB	Yambol	3.15	67	P	Pn	21 41 17.4	-0.5
JMB	Yambol	3.15	67	ePn	Pn	21 41 17.8	-0.1
JMB				eSn	Sn	21 41 57.1	+1.3
SIGR	SIGRI	3.19	129	P	Pn	21 41 18.7	+0.3
SIGR	SIGRI	3.19	129	P	Pn	21 41 18.7	+0.3
LPK	Lapseki	3.23	105	eP	Pn	21 41 17.0	-2.0
DJES	Djerdap	3.39	358	ePn	Pn	21 41 22.9	+1.8
DJES				eSn	Sn	21 42 03.9	+2.3
PRK	Paraskevi	3.42	125	P	Pn	21 41 21.2	-0.3
PRK	Paraskevi	3.42	125	P	Pn	21 41 21.2	-0.3
DIVS	Divibare	3.44	326	P	Pn	21 41 21.1	-0.8
DIVS	Divibare	3.44	326	ePn	Pn	21 41 21.3	-0.6
DIVS				eSn	Sn	21 42 04.6	+1.5
DIVS	Divibare	3.44	326	ePn	Pn	21 41 21.3	-0.6
DIVS				eSn	Sn	21 42 04.6	+1.5
RKY	Sarkoy-Tekirda	3.46	98	eP	Pb	21 41 31.6	+2.2
MFT	Murefte	3.52	96	eP	Pn	21 41 26.4	+3.4
BBLS	Lazići	3.54	318	ePn	Pn	21 41 24.4	+1.2
BBLS				eSn	Sn	21 42 06.9	+1.5
BBLS	Lazići	3.54	318	ePn	Pn	21 41 24.4	+1.2
BBLS				eSn	Sn	21 42 06.9	+1.5
KRBG	Karabiga-Canak	3.62	103	eP	Pn	21 41 22.2	-2.1
TKR	Tekirdag	3.69	93	eP	Pb	21 41 34.9	+1.7
MRMT	Marmara Adasi	3.79	99	eP	Pn	21 41 22.2	-4.5
CHOS	Chios island	3.89	137	ePN	Pn	21 41 28.3	+0.2
CHOS	Chios island	3.89	137	ePn	Pn	21 41 28.3	+0.2
GONE	Gonen-Balikesi	4.01	106	eP	Pn	21 41 29.2	-0.4
BNT	Bandirma	4.09	101	eP	Pn	21 41 34.0	+3.2
GZR	Gura Zlata	4.12	1	⇓iP	Pn	21 41 31.7	+0.6
GZR	Gura Zlata	4.12	1	⇓iP	Pn	21 41 31.7	+0.6
SLVT	Silivri	4.18	89	eP	Pn	21 41 33.0	+1.1
CTYL	Yal??k??y-??at	4.23	85	eP	Pn	21 41 34.5	+1.8
LOT	Lotru	4.25	11	⇓iP	Pn	21 41 33.2	+0.2
LOT	Lotru	4.25	11	⇓iP	Pn	21 41 33.2	+0.2
SULR		4.30	37	⇑iP	Pn	21 41 35.1	+1.5
SULR		4.30	37	⇑iP	Pn	21 41 35.1	+1.5
ARR	Arges	4.33	19	⇑iP	Pn	21 41 34.1	0.0
ARR	Arges	4.33	19	⇑iP	Pn	21 41 34.1	0.0
CTKS	Kestanelik-??a	4.40	89	eP	Pn	21 41 31.6	-3.4
BZS	Buzias	4.40	350	ePn	Pn	21 41 36.3	+1.2
BZS	Buzias	4.40	350	⇑iP	Pn	21 41 33.8	-1.3
BZS	Buzias	4.40	350	⇑iP	Pn	21 41 33.8	-1.3
BZS	Buzias	4.40	350	ePn	Pn	21 41 36.3	+1.2
FGSL	Fruska Gora	4.40	333	ePn	Pn	21 41 35.5	+0.4
FRGS	Fruska Gora	4.41	333	ePn	Pn	21 41 35.5	+0.4
KCTX	Karacabey (Bur	4.43	101	eP	Pg	21 41 51.4	-1.3
VOIR		4.50	22	⇑iP	Pn	21 41 37.1	+0.6
VOIR		4.50	22	⇑iP	Pn	21 41 37.1	+0.6
IZM	Izmir	4.56	128	eP	Pn	21 41 38.2	+1.0
BGKT	Bogazkoy	4.60	89	eP	Pn	21 41 39.1	+1.4
ARMT	Armutlu	4.75	97	eP	Pn	21 41 40.5	+0.8
APE	Apeiranthos	4.75	151	eP	Pn	21 41 39.5	-0.4
AMRR	Amara	4.78	44	⇓iP	Pn	21 41 43.2	+3.1
AMRR	Amara	4.78	44	⇓iP	Pn	21 41 43.2	+3.1
KLYT	Kilyos	4.80	88	eP	Pn	21 41 35.4	-5.2
ISK	Istanbul-Kandi	4.83	90	eP	Pb	21 41 49.0	-3.6
MLR	Muntele Rosu	4.84	28	⇓iP	Pn	21 41 43.3	+2.1
MLR	Muntele Rosu	4.84	28	Pn	Pn	21 41 43.7	+2.5
	comp=E,1.1nm,0.3s,baz=207,slow=6.0,SNR=31						
MLR				Sn	Sb	21 42 50.6	-0.8
	comp=E,0.9nm,0.3s,baz=291,slow=22,SNR=3.7						
MLR	Muntele Rosu	4.84	28	⇓iP	Pn	21 41 43.3	+2.1
BUY	Buyukada	4.89	93	eP	Pn	21 41 41.0	-0.8
DOPR	Dopca	5.09	22	⇑iP	Pn	21 41 45.9	+1.5
DOPR	Dopca	5.09	22	⇑iP	Pn	21 41 45.9	+1.5
GRER		5.16	36	⇑iP	Pn	21 41 47.5	+2.0
GRER		5.16	36	⇑iP	Pn	21 41 47.5	+2.0
SILT	Sile	5.26	89	eP	Pn	21 41 48.5	+1.7
TIRR	Tirgusor	5.28	51	⇓iP	Pn	21 41 49.8	+2.7
TIRR	Tirgusor	5.28	51	⇓iP	Pn	21 41 49.8	+2.7
KULA	Kula-Manisa	5.37	119	eP	Pn	21 41 50.9	+2.5
PLOR	Plostina	5.41	31	⇓iP	Pn	21 41 51.3	+2.4
PLOR	Plostina	5.41	31	⇓iP	Pn	21 41 51.3	+2.4
VRI	Vrincioaia	5.45	31	⇑iP	Pn	21 41 51.7	+2.2
VRI	Vrincioaia	5.45	31	⇑iP	Pn	21 41 51.7	+2.2
TVSB	Tavsanli	5.50	107	eP	Pn	21 41 50.0	-0.3
DRGR		5.51	0	⇓iP	Pn	21 41 50.4	+0.1
DRGR		5.51	0	S	Sb	21 43 17.6	+6.9
DRGR		5.51	0	⇓iP	Pn	21 41 50.4	+0.1
PETR	Petresti	5.54	35	⇓iP	Pn	21 41 52.6	+1.9
PETR	Petresti	5.54	35	⇓iP	Pn	21 41 52.6	+1.9
MLSB	Milas	5.61	133	eP	Pn	21 41 49.0	-2.7
PKSM	Moragy	5.73	331	ePn	Pn	21 41 52.5	-0.7
PKSM	Moragy	5.73	331	⇑iP	Pn	21 41 52.7	-0.5
PKSM	Moragy	5.73	331	⇑e	Pn	21 41 52.6	-0.7
PKSM	Moragy	5.73	331	⇑iP	Pn	21 41 52.7	-0.5
PKS6	Bocsa	5.77	338	⇑e	Pn	21 41 52.7	-1.1
PKS2	Kecel	5.78	336	⇑e	Pn	21 41 53.3	-0.6
TLCR		5.95	47	⇓iP	Pn	21 41 57.3	+1.0
TLCR		5.95	47	⇓iP	Pn	21 41 57.3	+1.0
TESR	Tescani	5.97	27	⇑iP	Pn	21 41 58.3	+1.7
TESR	Tescani	5.97	27	⇑iP	Pn	21 41 58.3	+1.7
GULT	Gulveren	6.01	96	eP	Pn	21 41 55.6	-1.6
PKS9	Tamasi	6.18	331	⇓e	Pn	21 41 59.1	-0.3
PKS7	Kunszentmiklos	6.29	338	⇑e	Pn	21 41 56.7	-4.3

BEHE	Becsehely	6.71	323⇑	*e*	Pn	21 42 01.1	-5.7
PKSG		6.84	335⇓	*e*	Pn	21 42 08.0	-0.5
PKST	T̂'s	6.84	332⇓	*e*	Pn	21 42 08.5	0.0
BOJS	Bojanci	6.86	310	*i* Pn	Pn	21 42 12.1	+3.4
CRES	Cresnjev	6.94	313	*i* Pn	Pn	21 42 09.5	-0.3
CRES	Cresnjev	6.94	313	Pn	Pn	21 42 09.5	-0.3
KIS	Kishinev	7.23	36	*e*	Sg	21 44 12.0	-7.6
KECS	Kecovo	7.37	349	*e*SG	Sg	21 44 29.9	+5.8
SKDS	Skadanscina	7.61	307	*i* Pn	Pn	21 42 19.6	+0.4
SKDS	Skadanscina	7.61	307	*i* Pn	Pn	21 42 19.5	+0.4
PERS	Pernice	7.64	317	*i* Pn	Pn	21 42 20.2	+0.7
PERS	Pernice	7.64	317	*i* Pn	Pn	21 42 20.2	+0.7
KOLS	Kolonicke sedl	7.66	358	*e*PN	Pn	21 42 18.7	-1.1
KOLS	Kolonicke sedl	7.66	358	*e*SG	Sg	21 44 31.0	-2.5
KOLS	Kolonicke sedl	7.66	358	*e*Pn	Pn	21 42 18.7	-1.1
CRVS	Cervenica-Dubn	7.67	354	*e*PN	Pn	21 42 25.0	+5.1
CRVS	Cervenica-Dubn	7.67	354	*e*SG	Sg	21 44 33.0	-0.8
CRVS	Cervenica-Dubn	7.67	354	*e*Sg	Sg	21 44 33.0	-0.8
SOKA	Soboth	7.71	317⇓	*i*Pn	Pn	21 42 20.6	+0.1
SOKA			⇑	*i*Sn	Sn	21 43 46.2	-2.0
SOKA	Soboth	7.71	317	Pn	Pn	21 42 20.6	+0.1
VYHS	Vyhne	7.71	341	*e*PN	Pn	21 42 20.8	+0.3
VYHS	Vyhne	7.71	341	*e*Pn	Pn	21 42 20.8	+0.3
SOP	Sopron	7.75	328⇓	*e*	Pn	21 42 21.1	+0.1
ARSA	Arzberg	7.87	322⇓	*i*Pn	Pn	21 42 23.5	+0.9
ARSA			⇓	*i*Sn	Sn	21 43 47.0	-5.0
ARSA	Arzberg	7.87	322	Pn	Pn	21 42 22.3	-0.3
ZST	Bratislava	7.97	332	*e*PN	Pn	21 42 23.7	-0.3
ZST	Bratislava	7.97	332	*e*Pn	Pn	21 42 23.7	-0.3
BRTR	Keskin Array B	8.50	97	Pn	Pn	21 42 32.2	+0.7
	comp=E,0.1nm,0.3s,baz=280,slow=11,SNR=5.7						
MOA	Molln	8.89	320⇑	*i*Pn	Pn	21 42 35.1	-1.6
MOA			⇑	*i*Sn	Sn	21 44 12.8	-4.4
MOA	Molln	8.89	320	Pn	Pn	21 42 35.1	-1.6
GERES	GERESS Array B	9.87	323	Pn	Pn	21 42 50.7	+0.6
	comp=E,0.2nm,0.3s,baz=155,slow=13,SNR=5.9						
KHC	Kasperske Hory	10.13	324	*e*PN	Pn	21 42 55.4	+1.7
KHC				*e*x	x	21 43 26.0	
KHC	Kasperske Hory	10.13	324	Pn	Pn	21 42 55.4	+1.7
DAVOX	Davos/Dischmat	10.72	305	Pn	Pn	21 43 02.7	+0.8
	comp=E,0.4nm,0.3s,baz=131,slow=23,SNR=6.1						
MBDF	Montbardon	12.14	292	*e*P	Pn	21 43 20.2	-1.0
MBDF	Montbardon	12.14	292	*e*P	Pn	21 43 20.2	-1.0
LPG	La Plagne	12.32	295	*e*P	Pn	21 43 23.2	-0.7
	comp=E,4.6nm,0.5s						
LPG	La Plagne	12.32	295	*e*P	Pn	21 43 23.2	-0.7
	comp=E,4.0nm,0.5s						
LPL	La Plagne	12.34	295	*e*P	Pn	21 43 23.6	-0.4
	comp=E,4.1nm,0.4s						
LPL	La Plagne	12.34	295	*e*P	Pn	21 43 23.6	-0.4
	comp=E,4.0nm,0.4s						
SMF	Signal de Mont	14.57	298	*e*P	Pn	21 43 53.6	-0.7
	comp=E,5.2nm,0.7s						
LOR	Lormes	14.73	300	*e*P	Pn	21 43 55.1	-1.4
ESDC	Sonseca Array	20.30	274	P	P	21 45 03.7	-0.6
	comp=E,1.1nm,0.7s,baz=75,slow=11,SNR=6.1						
NB2	NORSAR Subarra	20.99	344	P	P	21 45 11.1	-0.4
	comp=Z,1.6nm,1.1s,baz=156,slow=12						
NB2	NORSAR Subarra	20.99	344	P	P	21 45 11.1	-0.4
	comp=Z,1.6nm,1.1s,baz=156,slow=11,SNR=4.4						
NOA	NORSAR Array B	20.99	344	P	P	21 45 11.9	+0.3
	comp=Z,0.5nm,0.7s,baz=158,slow=11,SNR=5.0						
TORD	Torodi Ar. Bea	33.48	219	P	P	21 47 08.1	+0.3
	comp=Z,0.9nm,0.8s,baz=28,slow=9.4,SNR=5.2						
MKAR	Makanchi Array	42.32	62	P	P	21 48 22.3	+0.1
	comp=Z,0.1nm,0.4s,baz=302,slow=8.3,SNR=3.5						
ZALV	Zalesovo Beam	42.42	51	P	P	21 48 22.9	0.0
	comp=Z,0.9nm,0.6s,baz=289,slow=9.0,SNR=4.7						
VNDA	Vanda	139.96	167	PKP	PKPdf	21 59 57.7	+2.2
	comp=Z,0.6nm,0.7s,baz=281,slow=5.2,SNR=5.5						

SKO 06 21:40:56.8, 41°.34N×22°.68E, h15^{km}, M2.6, ML3.1, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	257	*i* Pg	Pg	21 40 59.9	+0.1
VAY				*i* Sg	Sg	21 41 01.6	-0.2
VAY				*e*Lg	Lg	21 41 01.7	
	comp=E,14μm,0.3s						
VAY				*e*Lg	Lg	21 41 01.9	
	comp=N,15μm,0.2s						

*CSEM **06** 21:41:02.1, 40°.79N×22°.63E, h4^{km}, MD3.0, After ATH*

ATH 06 21:41:02.1, 40°.79N×22°.63E, h4^{km}, MD3.0/4, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRG	Griva	0.24	314	*e*PG	Pg	21 41 06.1	-0.8
GRG				*e*SG	Sg	21 41 10.4	+0.3
GRG	Griva	0.24	314	*e*Pg	Pg	21 41 06.1	-0.8
GRG				*e*Sg	Sg	21 41 10.4	+0.3
SOH	Sokhos	0.55	86	*e*PG	Pg	21 41 12.1	-0.7
SOH				*e*SG	Sg	21 41 20.0	0.0
SOH	Sokhos	0.55	86	*e*Pg	Pg	21 41 12.1	-0.7
SOH				*e*Sg	Sg	21 41 20.0	0.0
NVR	Nevrokopi	1.09	59	*e*PG	Pg	21 41 23.2	+0.2
NVR	Nevrokopi	1.09	59	*e*Pg	Pg	21 41 23.2	+0.2
AGG	Agios Georgios	1.78	188	*e*PB	Pb	21 41 35.7	+0.3
AGG	Agios Georgios	1.78	188	*e*Pb	Pb	21 41 35.7	+0.3

*ISCJB **06** 21:41:43.2±0.4, 20°.19S±0°.03×68°.66W±0°.07, h121^{km}±6^{km}, mb4.0/5, Error ellipse: s-maj=11.1km s-min=5.1km az=166.0*

*GUC **06** 21:41:44.8±0.7, 20°.27S×69°.01W, h131^{km}±5^{km}, ML4.4*

*NEIC **06** 21:41:44.5±0.5, 20°.20S×68°.60W, h114^{km}±6^{km}, mb4.5/3, Error ellipse: s-maj=10.1km s-min=7.2km az=87.0*

*IDC **06** 21:41:45.9±0.8, 20°.19S×68°.52W, h125^{km}±6^{km}, mb3.8/7, mb1 4.0/10, mb1mx3.8/20, mbtmp3.9/10, MS3.1/1, Ms1 3.2/1, ms1mx2.9/32, Error ellipse: s-maj=20.1km s-min=17.4km az=34.0*

ISC 06 21:41:45.0±0.5**, 20°.19S**±0°.04×**68°.74W**±0°.07**, h121**^{km}±4^{km}**, n54, σ1^{s}55**/77**, mb4.3**/5**, 15C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HMBC	Humberstone	1.08	265⇑	*i*P	Pn	21 42 06.8	-1.3
HMBC				*i* S	Sn	21 42 23.7	-1.8
HMBC	Humberstone	1.08	265⇑	*i*P	Pn	21 42 06.8	-1.3
HMBC				*i* S	Sn	21 42 23.7	-1.8
HMBC				AML	AML	21 42 24.8	
	comp=N,10μm,0.5s						
PB01	Plate Boundary	1.10	219⇑	*i*P	Pn	21 42 07.4	-0.8
PB01				*i* S	Sn	21 42 24.1	-1.7
PB01	Plate Boundary	1.10	219⇑	*i*P	Pn	21 42 07.4	-0.8
PB01				*i* S	Sn	21 42 24.1	-1.7
PB01				AML	AML	21 42 26.3	
	comp=N,8μm,0.3s						
MNMC	Minimini	1.33	323⇑	*i*P	Pn	21 42 11.2	+0.3
MNMC				*i* S	Sn	21 42 31.1	+0.6
MNMC	Minimini	1.33	323⇑	*i*P	Pn	21 42 11.2	+0.3
MNMC				*i* S	Sn	21 42 31.1	+0.6
MNMC				AML	AML	21 42 31.9	
	comp=E,20μm,0.5s						
PSGC	Pisagua	1.43	294⇑	*i*P	Pn	21 42 11.0	-0.9
PSGC				*i* S	Sn	21 42 30.4	-1.7
PSGC	Pisagua	1.43	294⇑	*i*P	Pn	21 42 11.0	-0.9
PSGC				*i* S	Sn	21 42 30.4	-1.7
PSGC				AML	AML	21 42 33.7	
	comp=N,6μm,0.6s						
PB09	Plate Boundary	1.66	196⇑	*i*P	Pn	21 42 14.4	-0.3
PB09				*i* S	Sn	21 42 37.2	0.0
PB09	Plate Boundary	1.66	196⇑	*i*P	Pn	21 42 14.4	-0.3
PB09				*i* S	Sn	21 42 37.2	0.0
PB09				AML	AML	21 42 40.6	
	comp=E,8μm,0.3s						
PB07	Plate Boundary	1.86	215⇑	*i*P	Pn	21 42 15.9	-1.2
PB07				*i* S	Sn	21 42 39.3	-2.2
PB07	Plate Boundary	1.86	215⇑	*i*P	Pn	21 42 15.9	-1.2
PB07				*i* S	Sn	21 42 39.3	-2.2
PB07				AML	AML	21 42 44.3	
	comp=E,3μm,0.4s						
PB04	Plate Boundary	2.18	199⇑	*i*P	Pn	21 42 23.9	+3.1
PB04				*e*S	Sn	21 42 53.4	+5.3
PB04	Plate Boundary	2.18	199⇑	*i*P	Pn	21 42 23.9	+3.1
PB04				*e*S	Sn	21 42 53.4	+5.3
PB04				AML	AML	21 43 01.3	
	comp=N,2μm,0.6s						
ARCH	Arica	2.24	319	*e*P	Pn	21 42 21.2	-0.4
ARCH				*i* S	Sn	21 42 49.4	-0.2
ARCH	Arica	2.24	319	*e*P	Pn	21 42 21.2	-0.4
ARCH				*i* S	Sn	21 42 49.4	-0.2
ARCH				AML	AML	21 42 50.9	
	comp=E,2μm,0.3s						
LVC	Limon Verde	2.41	184	*e*Pn	Pn	21 42 24.2	+0.2
LVC				*e*Sn	Sn	21 42 53.2	-0.8
LVC	Limon Verde	2.41	184⇑	*i*P	Pn	21 42 24.2	+0.2
LVC				*i* S	Sn	21 42 54.4	+0.4
LPAZ	La Paz	3.93	9	*e*Pn	Pn	21 42 46.3	+2.1
LPAZ	La Paz	3.93	9	P	Pn	21 42 46.4	+2.1
	comp=E,13nm,0.3s,baz=178,slow=6.6,SNR=260						
LPAZ				LR	LR	21 44 38.7	
	comp=E,238nm,18.7s,baz=166,slow=44						
ARE	Arequipa	4.54	324	*e*P	Pn	21 42 53.0	+0.9
ARE				*e*S	Sn	21 43 44.0	-0.2
SIV	San Ignacio	8.40	61	P	Pn	21 43 41.8	-2.3
SIV	San Ignacio	8.40	61	P	Pn	21 43 41.8	-2.3
	comp=E,10.0nm,0.3s,baz=259,slow=12,SNR=199						
LCO	Las Campanas	8.96	191	*e*Pn	Pn	21 43 50.2	-1.5
	comp=E,9.8nm,0.6s						
LCO				*e*Sn	Sn	21 45 21.4	-10
CFAA	Coronel Fontan	11.37	178	P	Pn	21 44 19.1	-4.8
CFAA				S	Sn	21 46 16.1	-13
CFAA	Coronel Fontan	11.37	178	P	Pn	21 44 19.1	-4.8
	comp=E,0.1nm,0.3s,baz=14,slow=14,SNR=13						
CFAA				S	Sn	21 46 16.1	-13
	comp=E,0.1nm,0.3s,baz=195,slow=20,SNR=3.8						
CPUP	Villa Florida	12.13	122	P	Pn	21 44 32.4	-1.6
CPUP	Villa Florida	12.13	122	P	Pn	21 44 32.4	-1.6
	comp=E,0.7nm,0.3s,baz=284,slow=12,SNR=21						
SAML	Samuel	12.40	26	*e*Pn	Pn	21 44 35.0	-2.6
	comp=E,6.7nm,0.6s						
SAML				*e*Sn	Sn	21 46 41.3	-13
TRQA	Tornquist	18.74	163	*e*P	P	21 45 53.4	-1.1
SPB	Sao Paulo	20.06	104	*e*P	P	21 46 05.1	-3.8
BDFB	Brasilia	20.23	80	P	P	21 46 10.0	-0.9
BDFB	Brasilia	20.23	80	P	P	21 46 10.0	-0.9
	comp=E,3.1nm,0.4s,baz=252,slow=12,SNR=9.8						
PLCA	Paso Flores	20.53	184	*e*P	P	21 46 14.4	+0.5
	comp=E,10nm,0.9s						
PLCA	Paso Flores	20.53	184	P	P	21 46 14.8	+0.9
	comp=E,8.4nm,0.8s,baz=8.7,slow=15,SNR=20						
TXAR	Lajitas Array	59.66	325	P	P	21 51 37.5	+0.8
TXAR	Lajitas Array	59.66	325	P	P	21 51 37.6	+0.8
	comp=E,0.3nm,0.7s,baz=121,slow=11,SNR=2.9						
DBIC	Dimbokro	68.22	74	*e*P	P	21 52 32.7	-0.4
DBIC	Dimbokro	68.22	74	P	P	21 52 31.8	-1.2
	comp=E,16nm,1.1s,baz=208,slow=6.5,SNR=12						
NVAR	Mina Array Bea	74.57	322	P	P	21 53 12.2	+1.2
NVAR	Mina Array Bea	74.57	322	P	P	21 53 12.2	+1.2
	comp=E,0.3nm,0.5s,baz=142,slow=4.6,SNR=3.5						
TOA0	Torodi Ar. Sit	76.77	71	*e*P	P	21 53 23.0	-0.8
TORD	Torodi Ar. Bea	76.77	71	P	P	21 53 23.1	-0.6
TORD	Torodi Ar. Bea	76.77	71	P	P	21 53 23.1	-0.6
	comp=E,4.8nm,0.5s,baz=253,slow=5.4,SNR=172						
YKA	Yellowknife Ar	90.01	341	P	P	21 54 31.1	+0.7
YKA				pP	pP	21 55 03.3	+1.6
YKA				sP	sP	21 55 16.1	+1.6
YKA	Yellowknife Ar	90.01	341	P	P	21 54 31.1	+0.7
	comp=E,1.9nm,0.8s,baz=135,slow=4.6,SNR=20						
YKA				pP	pP	21 55 03.3	+1.6
	comp=E,1.4nm,0.8s,baz=134,slow=4.6,SNR=5.4						
YKA				sP	sP	21 55 16.0	+1.6
	comp=E,1.4nm,0.7s,baz=132,slow=4.7,SNR=5.4						
ASAR	Alice Springs	131.14	208	PKP	PKPdf	22 00 44.0	+0.6
ASAR	Alice Springs	131.14	208	PKP	PKPdf	22 00 44.0	+0.6
	comp=E,0.5nm,0.8s,baz=128,slow=1.4,SNR=5.9						
WRA	Warramunga Arr	134.15	211	PKP	PKPdf	22 00 49.7	+0.5
WRA				pPKP	pPKPdf	22 01 22.7	+0.8
WRA	Warramunga Arr	134.15	211	PKP	PKPdf	22 00 49.7	+0.5
	comp=E,0.7nm,0.6s,baz=152,slow=1.9,SNR=14						
WRA				pPKP	pPKPdf	22 01 22.7	+0.8
	comp=E,0.4nm,0.7s,baz=146,slow=1.5,SNR=2.6						
ZALV	Zalesovo Beam	140.71	25	PKP	PKPdf	22 01 01.6	+1.5
ZALV	Zalesovo Beam	140.71	25	PKP	PKPdf	22 01 01.6	+1.5
	comp=E,0.3nm,0.3s,baz=320,slow=4.3,SNR=2.5						
MKAR	Makanchi Array	144.48	35	PKP	PKPdf	22 01 06.7	-0.4
MKAR				pPKP	pPKPdf	22 01 41.1	+1.3
MKAR	Makanchi Array	144.48	35	PKP	PKPdf	22 01 06.7	-0.4
	comp=E,0.3nm,0.7s,baz=350,slow=0.9,SNR=3.9						
MKAR				pPKP	pPKPdf	22 01 41.1	+1.3
	comp=E,0.6nm,0.7s,baz=294,slow=3.3,SNR=3.4						

MAN 06 21:44:53, 9°.14N×121°.91E, h13^{km}, mb4.4, ML3.2, MS3.1, 1C, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPIL	Ipil	1.50	154	*e*P	Pb	21 45 20.3	-0.3
IPIL				*e*S	Sn	21 45 37.8	-1.1
GUIM	Jordan	1.62	24	*e*P	Pn	21 45 21.2	-0.2
GUIM				*e*S	Sn	21 45 41.8	-0.3
PAGZ	Pagadian	1.94	131	*e*P	Pn	21 45 26.4	+0.6
RCP	Roxas	2.54	19⇑	*e*P	Pg	21 45 41.4	-0.4

*BJI **06** 21:51:13.4, 8°.70S×74°.70W, h60^{km}, mB5.4/10, Ms5.3/7, Ms7 4.9/7*

*ISCJB **06** 21:51:19.2±0.6, 8°.57S±0°.03×74°.74W±0°.03, h122^{km}±6^{km}, mb5.1/228, Error ellipse: s-maj=5.9km s-min=4.1km az=38.8*

*MOS **06** 21:51:19.0±0.9, 8°.52S×74°.76W, h119^{km}, mb5.4/59, Error ellipse: s-maj=8.2km s-min=5.4km az=93.4*

*NEIC **06** 21:51:21.7±0.1, 8°.63S×74°.68W, mb5.2/165, Error ellipse: s-maj=4.1km s-min=2.7km az=46.0*

NEIC Felt [III] at Pucallpa. Also felt at Campoverde, Laredo and Tingo Maria. Felt [II] at Ipixuna, Brazil. Also felt at Cruzeiro do Sul.

*IDC **06** 21:51:21.8±0.3, 8°.68S×74°.72W, h134^{km}±2^{km}, mb4.6/25, mb1 4.7/29, mb1mx4.7/31, mbtmp4.6/29, Error ellipse: s-maj=9.2km s-min=7.4km az=80.0*

ISC 06 21:51:21.6±0.3**, 8°.65S**±0°.04×**74°.66W**±0°.05**, h135**^{km}±2^{km}**:pP-P, n944, σ0^{s}92**/1028**, mb5.1**/228**, 94C-5D, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.95	213	*e*Pn	Pn	21 52 19.9	-1.0
NNA				*e*Sn	Sn	21 53 05.8	-1.0
NNA	Nana	3.95	213	Pn	Pn	21 52 20.0	-0.8
	4μm,0.9s,SNR=80						
NNA	Nana	3.95	213	P	Pn	21 52 20.1	-0.8
	36nm,0.3s,baz=23,slow=8.9,SNR=169						
NNA				S	Sn	21 53 03.4	-3.4
	151nm,0.3s,baz=297,slow=19,SNR=10						
ATAH	Atahualpa	4.00	292	P	Pn	21 52 20.6	-1.2
ATAH				S	Sn	21 53 04.5	-4.0
ATAH	Atahualpa	4.00	292	P	Pn	21 52 20.6	-1.2
	92nm,0.3s,baz=119,slow=7.3,SNR=261						
ATAH				S	Sn	21 53 04.5	-4.0
	59nm,0.3s,baz=100,slow=12,SNR=13						
ARE	Arequipa	8.35	159	*e*P	Pn	21 53 22.0	+1.9
ARE	Arequipa	8.35	159	*e*P	Pn	21 53 22.0	+1.9
OTAV	Otavalo	9.61	337	*e*Pn	Pn	21 53 36.5	-0.6
LPAZ	La Paz	9.90	141	*e*Pn	Pn	21 53 41.8	+0.7
LPAZ	La Paz	9.90	141	P	Pn	21 53 41.4	+0.2
	2.1nm,0.3s,baz=328,slow=12,SNR=56						
SAML	Samuel	11.34	92	*e*Pn	Pn	21 53 57.8	-2.0
	2.0nm,0.9s						
SAML				*e*Sn	Sn	21 56 00.3	-4.6
ROSC	El Rosal	13.43	1	*e*Pn	Pn	21 54 21.1	-6.2
ROSC	El Rosal	13.43	1	P	P	21 54 29.8	-2.1
	3.6nm,0.3s,baz=189,slow=4.5,SNR=6.9						
LVC	Limon Verde	14.94	159	*e*P	P	21 54 47.0	-1.4
SIV	San Ignacio	15.13	120	P	Pn	21 54 48.3	-0.2
SIV				S	Sn	21 57 28.6	-7.8
SIV	San Ignacio	15.13	120	P	Pn	21 54 48.3	-0.2
	9.8nm,0.3s,baz=300,slow=13,SNR=158						
SIV				S	Sn	21 57 28.6	-7.8
	2.3nm,0.3s,baz=238,slow=19,SNR=3.2						
PAYG	Puerto Ayora	17.47	296	*e*P	P	21 55 13.4	-2.9
	240nm,1.4s						
BCIP	Isla Barro Col	18.44	344	*e*Pn	P	21 55 26.6	-0.2
	44nm,0.7s						
LCO	Las Campanas	20.59	170	*e*P	P	21 55 46.2	-4.1
LCO				*e*Pn	Pn	21 55 48.5	-5.5
TPP	Pointe-a-Pierr	22.98	35	*e*	P	21 56 17.3	+2.7
TRN	Trinidad (W)	23.27	35	*e*	P	21 56 18.5	+1.2
TBH	Brigand Hill	23.33	36	*e*	P	21 56 20.3	+2.4
CFAA	Coronel Fontan	23.61	166	P	P	21 56 21.4	+1.1
CFAA				pP	pP	21 56 46.3	-0.7
CFAA	Coronel Fontan	23.61	166	P	P	21 56 21.4	+1.1
	0.6nm,0.8s,baz=339,slow=9.1,SNR=12						
CFAA				pP	pP	21 56 46.3	-0.7
	0.9nm,0.8s,baz=328,slow=11,SNR=3.9						
CPUP	Villa Florida	24.07	139	P	P	21 56 24.5	0.0
CPUP	Villa Florida	24.07	139	P	P	21 56 24.5	0.0
	17nm,0.7s,baz=306,slow=9.6,SNR=36						
TOSP	Speyside	24.29	36	*e*	P	21 56 27.4	+0.8
GRGR	Grenville	24.36	32	*e*P	P	21 56 27.0	-0.2
	1μm,1.0s						
GRW	Mount Saint Ca	24.38	32	*e*	P	21 56 29.8	+2.2
GRHS	Sauteurs	24.45	32	*e*	P	21 56 28.6	+0.6
GRSS	Sisters	24.52	32	*e*	P	21 56 29.4	+0.7
SVB	Belmont	25.53	32	*e*	P	21 56 37.1	-0.8
TGUH	Tegucigalpa,Un	25.80	331	*e*P	P	21 56 40.8	+0.5
	64nm,1.0s						
MCLT	Moule a Chique	26.06	32	*e*	P	21 56 41.5	-1.1
SLDE	Delcer	26.08	31	*e*	P	21 56 43.4	+0.6
SLB	Belfond	26.11	31	*e*	P	21 56 43.2	+0.1
SLPE	Piton Saint Es	26.14	31	*e*	P	21 56 45.2	+1.8
SLW	Petit Monier	26.32	31	*e*	P	21 56 45.5	+0.5
BBGH	Gun Hill	26.34	35	*e*P	P	21 56 45.3	+0.1
	612nm,0.8s						
MVM	Montagne Vaucl	26.79	31	*e*P	P	21 56 47.0	-2.3
FDF	Fort de France	26.82	30	*e*P	P	21 56 46.8	-2.7
FDF	Fort de France	26.82	30	*e*P	P	21 56 46.5	-3.0
FDF				pmax	pmax		
	comp=Z,205nm,0.9s						
FDF	Fort de France	26.82	30	*e*P	P	21 56 46.5	-3.0
	comp=Z,205nm,0.9s						
MTDJ	Mount Denham	26.86	354	*e*P	P	21 56 57.9	+8.0
	comp=Z,120nm,0.7s						
BDFB	Brasilia	26.93	107	P	P	21 56 51.0	+0.4
BDFB				pP	pP	21 57 21.1	+1.7
BDFB	Brasilia	26.93	107	P	P	21 56 51.0	+0.4
	comp=Z,25nm,0.6s,baz=270,slow=11,SNR=34						
BDFB				pP	pP	21 57 21.1	+1.7
	comp=Z,56nm,0.8s,baz=266,slow=11,SNR=8.5						
CRPR	Cabo Rojo, PR	27.52	16	*e*P	P	21 56 56.5	+0.9
	comp=Z,44nm,0.7s						
SDDR	Presa de Saban	27.66	7	*e*P	P	21 56 58.9	+2.0
	comp=Z,48nm,0.6s						
LSP	Las Mesas	27.69	16	*e*P	P	21 56 57.7	+0.6
OBIP	Obispado Ponce	27.69	17	*e*P	P	21 56 56.9	-0.2
	comp=Z,95nm,0.6s						
MPR	Mayaguez	27.71	16	*e*P	P	21 56 57.7	+0.4
	comp=Z,114nm,0.8s						
CELP	Cerrillos	27.73	17	*e*P	P	21 56 58.1	+0.6
LRS	Lares	27.86	16	*e*P	P	21 56 59.1	+0.4
CPD	Cerro la Pandu	27.89	18	*e*P	P	21 56 58.9	-0.1
CPD				pmax	pmax		
	comp=Z,108nm,0.6s						
CPD	Cerro la Pandu	27.89	18	*e*P	P	21 56 58.9	-0.1
	comp=Z,108nm,0.6s						
SJG	San Juan	27.89	18	*e*P	P	21 56 55.7	-3.2
	comp=Z,167nm,0.6s						
AGP	Aguadilla	27.89	15	*e*P	P	21 56 59.2	+0.2
AOPR	Arecibo Observ	27.94	16	*e*P	P	21 56 59.7	+0.3
	comp=Z,202nm,0.7s						
AGPR	Aguadilla, PR	27.96	15	*e*P	P	21 56 59.9	+0.3
CDVI	St. Croix	28.00	20	*e*P	P	21 56 59.8	0.0
	comp=Z,248nm,0.6s						
HUMP	Col San Antoni	28.01	18	*e*P	P	21 57 00.1	+0.1
	comp=Z,160nm,1.4s						
MTP	Monte Pirata	28.06	19	*e*P	P	21 57 00.6	+0.1
	comp=Z,94nm,0.9s						
CBYP	Canovanas	28.13	18	*e*P	P	21 57 00.5	-0.7
	comp=Z,166nm,1.1s						
GTBY	Guantanamo Bay	28.40	359	*e*P	P	21 57 03.2	-0.3
	comp=Z,34nm,0.8s						
STVI	Saint Thomas	28.49	20	*e*P	P	21 57 03.5	-0.7
	comp=Z,115nm,0.5s						
BPA	Boggy Peak	28.50	26	*e*	P	21 57 02.7	-1.7
ANWB	Willy Bob	29.08	26	*e*P	P	21 57 07.5	-2.0
	comp=Z,455nm,0.6s						
SPB	Sao Paulo	29.99	123	*e*P	P	21 57 16.0	-1.6
	comp=Z,72nm,1.0s						
TRQA	Tornquist	31.43	161	*e*P	P	21 57 31.4	+1.3
TEIG	Tepich	31.68	335	*e*P	P	21 57 32.3	0.0
	comp=Z,43nm,1.0s						
TEIG	Tepich	31.68	335	P	P	21 57 32.8	+0.5
	comp=Z,38nm,0.9s,baz=152,slow=8.5,SNR=17						
PLCA	Paso Flores	32.15	174	P	P	21 57 37.1	+0.6
PLCA				pP	pP	21 58 06.4	+0.8
PLCA				ScP	ScP	22 03 54.5	+1.0
PLCA	Paso Flores	32.15	174	P	P	21 57 37.1	+0.6
	comp=Z,3.5nm,1.0s,baz=349,slow=10,SNR=5.3						
PLCA				pP	pP	21 58 06.4	+0.8
	comp=Z,5.8nm,0.9s,baz=340,slow=9.7,SNR=6.2						
PLCA				ScP	ScP	22 03 54.5	+1.0
	comp=Z,2.8nm,0.9s,baz=335,slow=6.0,SNR=4.2						
RCBR	Riachuelo	38.53	89	*e*P	P	21 58 31.4	0.0
RCBR				pP	pP	21 59 02.9	+1.7
RCBR	Riachuelo	38.53	89	P	P	21 58 31.0	-0.4
	comp=Z,10nm,0.7s,baz=246,slow=9.8,SNR=10						
RCBR				pP	pP	21 59 02.9	+1.7
	comp=Z,33nm,0.8s,baz=259,slow=9.8,SNR=9.8						
COW	Cow Castle Cre	42.20	352	*e*P	P	21 59 01.5	+0.4
KVTX	Kingsville	42.44	329	*e*P	P	21 59 04.2	+1.0
	comp=Z,80nm,1.0s						
GOGA	Godfrey	42.66	349	*e*P	P	21 59 05.6	+0.7
GOGA				pmax	pmax		
	comp=Z,38nm,1.0s						
GOGA	Godfrey	42.66	349	*e*P	P	21 59 05.6	+0.7
	comp=Z,38nm,1.0s						
LRAL	Lakeview Retre	43.09	345	*e*P	P	21 59 07.4	-1.0
	comp=Z,20nm,0.8s						
LRAL				*e*pP	pP	21 59 23.7	-15
CNNC	Cliffs of the	43.76	356	*e*P	P	21 59 14.7	+1.0
	comp=Z,45nm,1.2s						
732A	Laxson Ranch,	44.48	328	P	P	21 59 20.4	+0.9
	baz=45,SNR=7.6						
CPCT	Cooper Cave	44.84	349	*e*P	P	21 59 21.6	-0.7
CPCT				*e*pP	pP	21 59 36.0	-17
SWET	Sewanee	44.91	347	*e*P	P	21 59 22.4	-0.6
	comp=Z,25nm,0.8s						
SWET				*e*pP	pP	21 59 36.4	-17
632A	Uvalde	45.00	328	P	P	21 59 24.8	+1.1
	baz=45						
PLAL	Pickwick Lake	45.22	344	*e*P	P	21 59 23.9	-1.4
	comp=Z,8.9nm,0.6s						
631A	Perdido Creek	45.34	328	P	P	21 59 26.8	+0.4
	baz=46,SNR=25						
532A	Rocksprings	45.56	329	P	P	21 59 29.0	+0.8
	baz=46,SNR=14						
TZTN	Tazewell	45.73	350	*e*P	P	21 59 28.8	-0.5
	comp=Z,40nm,0.5s						
TZTN				*e*pP	pP	21 59 42.7	-17
JCT	Junction City	45.79	329	*e*P	P	21 59 30.1	+0.1
JCT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JCT	Junction City	45.79	329	*e*P	P	21 59 30.1	+0.1
	comp=Z,9.3nm,0.8s						
JCT	Junction City	45.79	329	P	P	21 59 30.4	+0.4
	baz=46,SNR=5.7						
WHTX	Lake Whitney	45.92	333	P	P	21 59 31.7	+0.9
	baz=46						
531A	Rocksprings	45.92	328	P	P	21 59 32.1	+1.1
	baz=46,SNR=14						
BLA	Blacksburg	45.94	354	*e*P	P	21 59 31.9	+0.9
BLA				pmax	pmax		
	comp=Z,34nm,0.8s						
BLA	Blacksburg	45.94	354	*e*P	P	21 59 31.9	+0.9
	comp=Z,34nm,0.8s						
432A	Menard	46.11	330	P	P	21 59 32.7	+0.3
	baz=46,SNR=9.2						
WVT	Waverly	46.24	345	*e*P	P	21 59 31.3	-2.0
WVT				pmax	pmax		
	comp=Z,8.0nm,0.4s						
WVT	Waverly	46.24	345	*e*P	P	21 59 31.3	-2.0
	comp=Z,8.2nm,0.4s						
WVT				*e*pP	pP	21 59 48.3	-16
UALR	University of	46.32	340	*e*P	P	21 59 33.6	-0.3
	comp=Z,27nm,0.9s						
UALR				*e*pP	pP	21 59 51.1	-14
530A	J-C Ranch, Com	46.33	327	P	P	21 59 35.0	+0.8
	baz=46,SNR=12						
431A	Sonora	46.37	329	P	P	21 59 35.0	+0.5
	baz=46,SNR=15						
RFTA	Plano	46.45	334	*e*P	P	21 59 34.0	-0.9
332A	Millersview	46.50	330	P	P	21 59 35.7	+0.3
	baz=47,SNR=27						
628A	Black Gap, Mar	46.66	325	P	P	21 59 37.6	+0.9
	baz=47,SNR=28						
CBN	Corbin	46.68	357	*e*P	P	21 59 37.5	+0.8
	comp=Z,16nm,0.5s						

331A	**San Angelo** baz=47,SNR=14	46.78	329	P		P		21 59 38.0	+0.4
430A	**Baggett Ranch,** baz=47,SNR=19	46.78	328	P		P		21 59 38.0	+0.3
529A	**Stev Forest Ra** baz=47,SNR=20	46.78	327	P		P		21 59 38.2	+0.4
232A	**Coleman** baz=47,SNR=28	46.86	330	P		P		21 59 38.7	+0.4
627A	**Terlingua Ranc** baz=47,SNR=16	46.92	325	P		P		21 59 39.2	+0.4
TXAR	**Lajitas Array**	46.99	325	P		P		21 59 39.5	+0.2
TXAR				PcP		PcP		22 01 10.3	+0.7
TXAR	**Lajitas Array** comp=Z,8.9nm,0.8s,baz=148,slow=8.6,SNR=66	46.99	325	P		P		21 59 39.5	+0.2
				PcP		PcP		22 01 10.3	+0.7
	comp=Z,3.1nm,0.8s,baz=144,slow=6.3,SNR=2.0								
429A	**Davenport Ranc** baz=47,SNR=19	47.00	327	P		P		21 59 39.8	+0.4
528A	**Cox Ranch, San** baz=47,SNR=24	47.12	326	P		P		21 59 40.7	+0.3
231A	**Bronte** baz=47,SNR=7.1	47.23	330	P		P		21 59 41.3	+0.2
330A	**Mertzon** baz=47,SNR=13	47.24	329	P		P		21 59 41.6	+0.3
626A	**Big Bend Ranch** baz=48,SNR=73	47.42	324	P		P		21 59 43.4	+0.7
ABTX	**Abilene, Hawle** baz=48,SNR=17	47.46	331	P		P		21 59 43.6	+0.7
428A	**Kincaid Ranch,** baz=48	47.50	327	P		P		21 59 44.2	+0.9
527A	**Woodward Ranch** baz=48,SNR=18	47.57	325	P		P		21 59 44.2	+0.3
230A	**Sterling City** baz=48,SNR=11	47.59	329	P		P		21 59 44.5	+0.5
329A	**Wagon Wheel Ra** baz=48,SNR=12	47.72	328	P		P		21 59 45.2	+0.3
526A	**Mary Lane Ranc** baz=48,SNR=18	47.77	325	P		P		21 59 46.1	+0.6
131A	**Roby** baz=48	47.86	330	P		P		21 59 46.7	+0.7
WCI	**Wyandotte Cave**	47.89	348	*e*P		P		21 59 44.8	-1.3
WCI				pmax		pmax			
	comp=Z,50nm,0.4s								
WCI	**Wyandotte Cave** comp=Z,50nm,0.4s	47.89	348	*e*P		P		21 59 44.8	-1.3
USIN	**University of** comp=Z,33nm,0.6s	47.94	346	*e*P		P		21 59 45.2	-1.3
Z32A	**Haskell** baz=48,SNR=8.6	47.95	332	P		P		21 59 47.2	+0.6
427A	**Hayter Ranch,** baz=48,SNR=9.7	47.99	326	P		P		21 59 47.3	+0.2
229A	**Bryant Ranch,** baz=48,SNR=6.7	48.01	329	P		P		21 59 47.5	+0.3
328A	**Wristen Ranch,** baz=48,SNR=17	48.08	327	P		P		21 59 48.0	+0.3
130A	**Snyder** baz=48,SNR=7.6	48.08	330	P		P		21 59 48.1	+0.4
SIUC	**Southern Illin** comp=Z,41nm,0.9s	48.10	344	*e*P		P		21 59 46.5	-1.1
SIUC				*e*pP		pP		22 00 02.8	-16
426A	**McDonald Obser** baz=48,SNR=23	48.20	325	P		P		21 59 49.1	+0.3
Z31A	**Sharp Cattle R** baz=48,SNR=18	48.27	331	P		P		21 59 49.8	+0.7
MVL	**Millersville** comp=Z,24nm,0.7s	48.43	358	*e*P		P		21 59 51.4	+1.2
Y32A	**R-V Farms, Ver** baz=49,SNR=7.2	48.51	332	P		P		21 59 51.7	+0.8
228A	**UT Block 9, Go** baz=49,SNR=6.8	48.53	328	P		P		21 59 51.0	-0.2
TUL1	**Tulsa** baz=49,SNR=6.4	48.59	337	P		P		21 59 52.0	+0.5
326A	**Caldwell Ranch** baz=49,SNR=24	48.66	326	P		P		21 59 52.5	+0.3
Z30A	**Sanderson Ranc** baz=49,SNR=59	48.72	330	P		P		21 59 53.0	+0.3
OLIL	**Olney** comp=Z,38nm,0.6s	48.78	346	*e*P		P		21 59 53.6	+0.8
OLIL				*e*pP		pP		22 00 07.5	-16
227A	**Bennet, Jal** baz=49,SNR=15	48.82	327	P		P		21 59 54.3	+0.9
WMOK	**Wichita Mounta** comp=Z,6.7nm,0.8s	48.82	333	*e*P		P		21 59 50.0	-3.3
425A	**Indio Mountain** baz=49,SNR=44	48.83	325	P		P		21 59 53.7	+0.2
BLO	**Bloomington**	48.84	348	*e*P		P		21 59 52.4	-0.9
BLO				pmax		pmax			
	comp=Z,128nm,0.5s								
BLO	**Bloomington** comp=Z,128nm,0.5s	48.84	348	*e*P		P		21 59 52.4	-0.9
BLO				*e*pP		pP		22 00 07.3	-17
Y31A	**Rekieta Farm,** baz=49,SNR=18	48.85	332	P		P		21 59 54.4	+0.8
128A	**Castleberry Fa** baz=49,SNR=22	48.88	328	P		P		21 59 54.0	+0.1
Z29A	**Hungry Hill Ra** baz=49,SNR=8.9	48.99	330	P		P		21 59 54.9	+0.2
Y30A	**Stafford Cattl** baz=49	49.09	331	P		P		21 59 56.1	+0.7
SSPA	**Standing Stone**	49.13	357	*e*P		P		21 59 58.3	+2.8
ACSO	**Alum Creek Sta** comp=Z,20nm,0.7s	49.24	352	*e*P		P		21 59 56.0	-0.4
ACSO				*e*pP		pP		22 00 08.8	-19
325A	**Bean Ranch, Si** baz=49,SNR=12	49.26	325	P		P		21 59 57.3	+0.4
X31A	**McDonald Ranch** baz=49,SNR=17	49.27	332	P		P		21 59 57.3	+0.6
226B	**Tecolote Peak,** baz=50,SNR=20	49.35	327	P		P		21 59 58.4	+0.9
Z28A	**Tucker Farm, M** baz=50	49.35	329	P		P		21 59 57.8	+0.4
127A	**Arkansas Junct** baz=50,SNR=17	49.37	328	P		P		21 59 57.9	+0.2
Y29A	**Porterfield Fa** baz=50,SNR=8.4	49.45	330	P		P		21 59 58.8	+0.6
X30A	**Coker Ranch, T** baz=50,SNR=21	49.54	331	P		P		21 59 59.1	+0.3
GDL2	**Guadalupe Moun**	49.55	326	*e*P		P		21 59 59.5	+0.5
324A	**Moseley Ranch,** baz=50,SNR=26	49.60	325	P		P		21 59 59.0	-0.4
126A	**Clayton Basin,** baz=50,SNR=15	49.70	327	P		P		22 00 00.7	+0.6
W31A	**Holland Ranch,** baz=50	49.72	333	P		P		22 00 00.2	+0.1
MNTX	**Cornudas Mount** comp=Z,22nm,1.4s	49.73	325	*e*P		P		21 59 59.6	-0.7
Y28A	**McKinney Farm,** baz=50	49.78	330	P		P		22 00 00.7	0.0
Z27A	**Tatum** baz=50,SNR=24	49.80	328	P		P		22 00 00.7	-0.2
X29A	**Tulia** baz=50	49.94	331	P		P		22 00 02.0	+0.1
125A	**Gardner Draw,** baz=50,SNR=25	50.06	327	P		P		22 00 03.0	+0.1
MSTX	**Muleshoe** baz=50,SNR=15	50.09	329	P		P		22 00 02.9	-0.1
224A	**Cornudas Mount** baz=50,SNR=9.0	50.09	325	P		P		22 00 03.0	-0.2
V31A	**Spring Creek L** baz=50,SNR=8.5	50.16	333	P		P		22 00 04.5	+1.0
Z26A	**Caprock** baz=50,SNR=18	50.16	328	P		P		22 00 03.9	+0.3
Y27A	**Causey** baz=50,SNR=12	50.22	329	P		P		22 00 03.8	-0.2
X28A	**Dimmitt** baz=50	50.24	330	P		P		22 00 04.2	0.0
AMTX	**Amarillo** comp=Z,9.6nm,0.6s	50.28	331	*e*P		P		22 00 04.0	-0.5
ALLY	**Alegheny Colle** comp=Z,91nm,0.9s	50.31	355	*e*P		P		22 00 04.5	+0.1
W29A	**Amarillo** baz=51	50.46	331	P		P		22 00 05.8	0.0
124A	**Stringfield Ra** baz=51,SNR=20	50.53	326	P		P		22 00 07.2	+0.7
Z25A	**Roswell** baz=51,SNR=31	50.56	327	P		P		22 00 06.8	+0.1
Y26A	**Elida** baz=51	50.59	328	P		P		22 00 06.8	0.0
BINY	**Binghamton** comp=Z,50nm,0.8s	50.62	359	*e*P		P		22 00 07.4	+0.6
X27A	**F and S Farms,** baz=51,SNR=9.7	50.79	330	P		P		22 00 08.8	+0.5
HDIL	**Hopedale** comp=Z,106nm,0.6s	50.80	346	*e*P		P		22 00 07.2	-0.9
Z24A	**Sheeppen Canyo** baz=51,SNR=28	50.95	327	P		P		22 00 09.9	+0.3
HRV	**Adam Dziewonsk**	50.99	3	*e*P		P		22 00 09.8	+0.3
HRV				pmax		pmax			
	comp=Z,22nm,0.7s								
HRV	**Adam Dziewonsk** comp=Z,22nm,0.7s	50.99	3	*e*P		P		22 00 09.8	+0.3
222A	**Williams Famil** baz=51,SNR=21	51.02	324	P		P		22 00 10.8	+0.7
Y25A	**Mesa, Roswell** baz=51,SNR=9.3	51.04	328	P		P		22 00 10.2	0.0
X26A	**CR and CF Fran** baz=51,SNR=40	51.07	329	P		P		22 00 10.4	0.0
W27A	**Bowe Ranch, En** baz=51,SNR=18	51.10	330	P		P		22 00 10.7	0.0
U30A	**WK&E Inc. Balk** baz=51	51.15	333	P		P		22 00 11.5	+0.5
T31A	**Randall Ranch,** baz=51	51.20	334	P		P		22 00 11.7	+0.5
V28A	**Channing** baz=51,SNR=6.4	51.24	331	P		P		22 00 11.7	0.0
320A	**Kipp Ranch, An** baz=51	51.31	322	P		P		22 00 13.1	+0.8
AAM	**Ann Arbor**	51.37	351	*e*P		P		22 00 12.4	+0.1
AAM				pmax		pmax			
	comp=Z,25nm,0.6s								
AAM	**Ann Arbor** comp=Z,26nm,0.6s	51.37	351	*e*P		P		22 00 12.4	+0.1
Z23A	**Rita Site, Whi** baz=52,SNR=9.2	51.38	326	P		P		22 00 13.4	+0.7
122A	**Conniff Cattle** baz=52	51.39	325	P		P		22 00 13.8	+0.9
Y24A	**Capitan** baz=52,SNR=13	51.44	327	P		P		22 00 13.1	-0.2
W26A	**Owens Ranch, T** baz=52	51.47	329	P		P		22 00 13.8	+0.4
X25A	**Clemmons Ranch** baz=52	51.49	328	P		P		22 00 13.8	+0.2
T30A	**Plains** baz=52	51.53	334	P		P		22 00 14.1	+0.4
KSU1	**Kansas State U** comp=Z,36nm,0.6s	51.71	338	*e*P		P		22 00 13.7	-1.3
220A	**Playas Peak, P** baz=52,SNR=12	51.71	323	P		P		22 00 16.0	+0.7
121A	**Cookes Peak, D** baz=52,SNR=16	51.72	324	P		P		22 00 16.3	+0.9
U28A	**Mallet** baz=52	51.75	332	P		P		22 00 15.9	+0.5
Y23A	**Lovelace Mesa,** baz=52,SNR=15	51.78	327	P		P		22 00 16.0	+0.2
Z22A	**Elephant Butte** baz=52,SNR=7.4	51.78	325	P		P		22 00 16.8	+1.0
319A	**Douglas** baz=52,SNR=11	51.80	322	P		P		22 00 16.8	+0.9
ACCN	**Adirondack Com** comp=Z,13nm,0.6s	51.80	1	*e*P		P		22 00 16.6	+1.0
W25A	**X Bar L Ranch,** baz=52,SNR=7.1	51.93	329	P		P		22 00 17.2	+0.4
X24A	**Lazy VL Ranch,** baz=52,SNR=11	51.93	328	P		P		22 00 17.3	+0.4
T29A	**Hugoton** baz=52,SNR=18	51.96	333	P		P		22 00 17.6	+0.6
V26A	**Tequesquite Ra** baz=52,SNR=31	52.04	330	P		P		22 00 17.8	+0.1
U27A	**Thompson Grove** baz=52,SNR=5.4	52.07	331	P		P		22 00 18.2	+0.4
Z21A	**St. Cloud Mine** baz=52	52.22	325	P		P		22 00 20.0	+0.9
120A	**U Bar Ranch, L** baz=52	52.23	323	P		P		22 00 19.9	+0.7
BNM	**Barren Site** comp=Z,6.6nm,0.9s	52.26	326	*e*P		P		22 00 19.3	-0.1
S29A	**Ulysses** baz=52,SNR=5.1	52.27	333	P		P		22 00 20.0	+0.8
Y22A	**Socorro** baz=52,SNR=6.7	52.29	326	P		P		22 00 20.3	+0.8
T28A	**Walsh** baz=52,SNR=8.2	52.30	332	P		P		22 00 19.3	-0.2
X23A	**Hourglass Bar** baz=52,SNR=16	52.34	327	P		P		22 00 20.1	+0.1
NCB	**Newcomb** comp=Z,20nm,1.0s	52.38	0	*e*P		P		22 00 19.6	-0.2
W24A	**Lazy 6 Ranch,** baz=53,SNR=10	52.41	328	P		P		22 00 20.6	+0.1
MDV	**Middlebury**	52.42	1	*e*P		P		22 00 20.5	+0.4
R30A	**Dighton** baz=53,SNR=14	52.45	335	P		P		22 00 21.1	+0.6
V25A	**Rancho No Teng** baz=53,SNR=40	52.49	329	P		P		22 00 21.0	0.0
U26A	**Atchley Ranch,** baz=53	52.49	330	P		P		22 00 21.5	+0.5
T27A	**Campo** baz=53,SNR=13	52.54	332	P		P		22 00 21.4	+0.2
S28A	**Manter** baz=53,SNR=34	52.59	333	P		P		22 00 21.7	+0.1
Z20A	**Nine Sixteen R** baz=53,SNR=25	52.61	324	P		P		22 00 22.9	+1.0
Q31A	**Ellis** baz=53	52.70	336	P		P		22 00 23.2	+0.8
LBNH	**Lisbon**	52.70	2	*e*P		P		22 00 22.6	+0.4
LBNH				pmax		pmax			
	comp=Z,28nm,0.6s								
LBNH	**Lisbon** comp=Z,28nm,0.6s	52.70	2	*e*P		P		22 00 22.6	+0.4
LAZ	**Ladron** comp=Z,10nm,1.1s	52.73	326	*e*P		P		22 00 22.8	0.0
V24A	**Rampart Ranch,** baz=53,SNR=20	52.74	329	P		P		22 00 22.9	0.0
Y21A	**Point of Rocks** baz=53,SNR=15	52.74	325	P		P		22 00 24.1	+1.2
W23A	**Werner Place,** baz=53	52.76	327	P		P		22 00 23.7	+0.6
ANMO	**Albuquerque** comp=Z,22nm,1.1s	52.77	327	*e*P		P		22 00 23.2	+0.2
ANMO	**Albuquerque** comp=Z,13nm,1.0s,baz=138,slow=8.9,SNR=26	52.77	327	P		P		22 00 23.4	+0.2
U25A	**Circle Dot Ran** baz=53,SNR=16	52.83	330	P		P		22 00 23.8	+0.3
R29A	**Marienthal** baz=53,SNR=8.4	52.94	334	P		P		22 00 24.6	+0.5
Q30A	**Quinter** baz=53,SNR=11	53.02	335	P		P		22 00 25.3	+0.6
LONY	**Lake Ozonia** comp=Z,28nm,0.6s	53.02	0	*e*P		P		22 00 25.2	+0.7
T26A	**Comanche Natio** baz=53,SNR=5.9	53.04	331	P		P		22 00 25.6	+0.6
Y20A	**Horse Springs,** baz=53,SNR=9.2	53.06	325	P		P		22 00 26.2	+0.9
X21A	**Alamocita Cree** baz=53,SNR=23	53.12	326	P		P		22 00 26.8	+1.0
P31A	**Stockton** baz=53,SNR=7.1	53.13	336	P		P		22 00 26.1	+0.6
V23A	**Ortiz Mt. (NFS** baz=53	53.23	328	P		P		22 00 26.8	+0.4
FRNY	**Flat Rock** comp=Z,17nm,0.6s	53.25	1	*e*P		P		22 00 26.3	+0.2
JFWS	**Jewell Farm**	53.26	346	*e*P		P		22 00 25.3	-1.0
JFWS				pmax		pmax			
	comp=Z,47nm,0.4s								
JFWS	**Jewell Farm** comp=Z,47nm,0.4s	53.26	346	*e*P		P		22 00 25.3	-1.0
Q29A	**Oakley** baz=53,SNR=6.6	53.26	334	P		P		22 00 27.5	+1.0
U24A	**Moreno Valley** baz=53	53.27	329	P		P		22 00 27.4	+0.5
S26A	**Kim** baz=54,SNR=23	53.34	332	P		P		22 00 27.8	+0.6
TUC	**Tucson**	53.36	322	*e*P		P		22 00 27.5	+0.1
TUC				pmax		pmax			
	comp=Z,49nm,1.0s								
TUC	**Tucson** comp=Z,49nm,1.0s	53.36	322	*e*P		P		22 00 27.4	+0.1
T25A	**Trinidad** baz=54,SNR=36	53.41	330	P		P		22 00 28.4	+0.6
P30A	**Selden** baz=54	53.51	335	P		P		22 00 28.4	+0.2
W21A	**San Fidel** baz=54,SNR=8.5	53.54	326	P		P		22 00 29.4	+0.6
R27A	**Eads** baz=54,SNR=16	53.57	333	P		P		22 00 28.6	-0.1
U23A	**El Rito** baz=54,SNR=7.3	53.68	328	P		P		22 00 30.7	+0.9
V22A	**San Miguel Ran** baz=54,SNR=21	53.74	328	P		P		22 00 31.2	+1.0
Q28A	**Sharon Springs** baz=54,SNR=6.8	53.77	334	P		P		22 00 30.7	+0.5
S25A	**Robets Cordova** baz=54,SNR=18	53.83	331	P		P		22 00 31.2	+0.4
P29A	**Atwood** baz=54	53.84	335	P		P		22 00 31.2	+0.5
R26A	**Arlington** baz=54,SNR=18	53.88	332	P		P		22 00 31.2	+0.1
O30A	**MW Ranch, Wils** baz=54	53.97	336	P		P		22 00 31.9	+0.4
W20A	**Ramah** baz=54,SNR=7.2	54.02	326	P		P		22 00 33.0	+0.8
V21A	**Milan** baz=54	54.05	327	P		P		22 00 33.0	+0.5
U22A	**Llaves** baz=54	54.06	328	P		P		22 00 33.0	+0.5
KSCO	**Kaye Shedlock'** baz=54,SNR=9.6	54.08	333	P		P		22 00 33.0	+0.4
T23A	**Casias Ranch,** baz=54	54.14	329	P		P		22 00 33.7	+0.5
R25A	**Fountain Ranch** baz=54	54.15	331	P		P		22 00 33.3	+0.3
S24A	**Houchin Ranch,** baz=54,SNR=8.6	54.20	330	P		P		22 00 34.3	+0.7
O29A	**4D Ranch, Culb** baz=54,SNR=9.9	54.22	335	P		P		22 00 34.0	+0.5
BGNE	**Belgrade** baz=54,SNR=6.0	54.30	338	P		P		22 00 34.0	+0.1
214A	**Organ Pipe Nat** baz=54,SNR=27	54.40	320	P		P		22 00 35.5	+0.7
X18A	**Snowflake** baz=55,SNR=8.3	54.41	324	P		P		22 00 36.1	+1.1
Q26A	**Hugo** baz=55,SNR=7.4	54.41	332	P		P		22 00 35.7	+0.7
P27A	**Ficken Ranch,** baz=55	54.51	334	P		P		22 00 36.3	+0.7
U21A	**Nageezi** baz=55,SNR=5.2	54.52	327	P		P		22 00 36.7	+0.8
T22A	**Edith** baz=55,SNR=6.4	54.57	328	P		P		22 00 37.0	+0.8
O28A	**Krutsinger Ran** baz=55	54.63	335	P		P		22 00 37.0	+0.5
W18A	**Petrified Fore** baz=55,SNR=8.5	54.71	325	P		P		22 00 38.2	+1.0
P26A	**Davis Ranch, A** baz=55	54.85	333	P		P		22 00 38.7	+0.5
T21A	**Navajo Lake** baz=55	54.88	328	P		P		22 00 39.1	+0.7
R23A	**Moffat** baz=55,SNR=6.2	54.93	330	P		P		22 00 39.7	+0.8
U20A	**Newcomb** baz=55,SNR=5.4	54.95	327	P		P		22 00 39.5	+0.6
O27A	**Beecher Island** baz=55	54.99	334	P		P		22 00 40.2	+1.2
S22A	**4UR Ranch, Cre** baz=55,SNR=15	55.09	329	P		P		22 00 40.8	+0.8
P25A	**Willow Gulch B** baz=55,SNR=7.4	55.19	332	P		P		22 00 41.1	+0.6
Q24A	**Divide** baz=55	55.21	331	P		P		22 00 41.3	+0.4
X16A	**Lo Mia Camp, P** baz=55,SNR=12	55.21	323	P		P		22 00 42.0	+1.2
M29A	**Burnside Ranch** baz=56	55.29	336	P		P		22 00 42.1	+0.9
O26A	**Horse Wrangler** baz=56	55.39	334	P		P		22 00 42.4	+0.4
R22A	**Saguache, Gunn** baz=56,SNR=13	55.42	329	P		P		22 00 43.3	+0.9
OGNE	**Ogallala** comp=Z,23nm,0.9s	55.42	335	*e*P		P		22 00 42.4	+0.3
OGNE	**Ogallala** baz=56	55.42	335	P		P		22 00 42.6	+0.5
Q23A	**Hartsel** baz=56,SNR=8.1	55.49	331	P		P		22 00 43.5	+0.5
S21A	**Coal Bank Pass** baz=56,SNR=7.0	55.52	328	P		P		22 00 43.2	+0.1
N27A	**Anderson Farm,** baz=56	55.52	334	P		P		22 00 43.2	+0.4
M28A	**Bar X Bar Ranc** baz=56	55.53	336	P		P		22 00 43.6	+0.8
P24A	**Kohler Place,** baz=56	55.53	332	P		P		22 00 43.5	+0.5
O25A	**Wiggins** baz=56	55.65	333	P		P		22 00 44.5	+0.7
ECSD	**EROS Data Cent** comp=Z,11nm,0.7s	55.82	341	*e*P		P		22 00 43.8	-1.0
Y14A	**Wickenburg** baz=56,SNR=5.3	55.83	321	P		P		22 00 45.9	+0.8
P23A	**Jefferson** baz=56	55.86	331	P		P		22 00 45.7	+0.2
R21A	**Cimarron** baz=56,SNR=9.1	55.93	329	P		P		22 00 46.4	+0.4
WUAZ	**Wupatki** baz=56,SNR=10	55.94	324	P		P		22 00 46.9	+0.9
S20A	**Disappointment** baz=56,SNR=17	55.94	328	P		P		22 00 46.7	+0.6
Q22A	**Crested Butte,** baz=56,SNR=12	55.98	330	P		P		22 00 47.3	+0.9
COWI	**Conover** comp=Z,11nm,0.6s	56.03	348	*e*P		P		22 00 44.9	-1.3
SPMN	**St. Paul** baz=56,SNR=11	56.06	345	P		P		22 00 45.6	-0.8
ISCO	**Idaho Springs**	56.09	331	*e*P		P		22 00 47.5	+0.4
ISCO				pmax		pmax			
	comp=Z,9.0nm,0.9s								
ISCO	**Idaho Springs** comp=Z,9.3nm,0.9s	56.09	331	*e*P		P		22 00 47.5	+0.4
ISCO	**Idaho Springs** baz=56,SNR=12	56.09	331	P		P		22 00 47.4	+0.2
O24A	**Longmont** baz=56,SNR=6.5	56.09	332	P		P		22 00 47.9	+1.0
N25A	**Grover** baz=56	56.20	333	P		P		22 00 48.5	+0.8
R20A	**Redvale** baz=56,SNR=22	56.22	328	P		P		22 00 49.1	+1.1
K29A	**Lazy Trails An** baz=56	56.27	337	P		P		22 00 48.4	+0.3
PV01	**Paradox Valley** comp=Z,3µm,0.9s	56.28	328	*e*P		P		22 00 48.9	+0.5
Q21A	**Lamborn Mesa,** baz=56	56.30	329	P		P		22 00 49.2	+0.7
P22A	**Eagle** baz=57,SNR=13	56.48	330	P		P		22 00 50.5	+0.7
O23A	**Lake Granby, G** baz=57,SNR=12	56.56	332	P		P		22 00 51.2	+0.8
N24A	**Carr** baz=57,SNR=9.4	56.57	333	P		P		22 00 51.2	+0.9
K28A	**Ten Mile Ranch** baz=57	56.64	337	P		P		22 00 51.7	+1.0
PV04	**Paradox Valley**	56.65	328	*e*P		P		22 00 51.5	+0.5
Y12C	**Blythe** baz=57,SNR=5.7	56.66	320	P		P		22 00 52.0	+1.1
M25A	**Palm-Egli Farm** baz=57,SNR=5.3	56.69	334	P		P		22 00 52.2	+1.0
S18A	**Hurst Farm, Bl** baz=57,SNR=20	56.71	327	P		P		22 00 51.7	+0.2
Q20A	**Ridgley Place,** baz=57	56.75	329	P		P		22 00 51.8	+0.1
P21A	**Newcastle** baz=57,SNR=20	56.76	330	P		P		22 00 52.6	+0.8
PDMCI	**Parker Dam,Lak** baz=57	56.78	321	P		P		22 00 52.8	+1.0
O22A	**Kremmling** baz=57,SNR=19	56.82	331	P		P		22 00 52.2	0.0
K27A	**Fleckinger Fa** baz=57,SNR=6.7	56.97	336	P		P		22 00 54.0	+0.9
M24A	**Cheyenne** baz=57,SNR=14	57.06	333	P		P		22 00 54.4	+0.6
U15A	**North Rim** baz=57,SNR=20	57.10	324	P		P		22 00 55.1	+0.7
N23A	**Red Feather La** baz=57,SNR=8.1	57.11	332	P		P		22 00 54.5	+0.2
W13A	**Hualapai Mount** baz=57,SNR=21	57.15	322	P		P		22 00 55.4	+0.8
BC3	**Big Chuckawall** baz=57,SNR=16	57.19	320	P		P		22 00 55.4	+0.6
J28A	**Allard Ranch,** baz=57,SNR=15	57.19	337	P		P		22 00 55.0	+0.4
P20A	**De Beque** baz=57,SNR=5.8	57.21	329	P		P		22 00 55.6	+0.6
BRSD	**Miller** baz=57,SNR=11	57.24	339	P		P		22 00 54.4	-0.4
L25A	**Engebretsen Ra** baz=57	57.24	334	P		P		22 00 55.9	+0.9
N22A	**Wattenberg Ran** baz=57	57.27	332	P		P		22 00 55.7	+0.2
O21A	**Pagoda** baz=58,SNR=5.2	57.30	330	P		P		22 00 56.5	+0.8
IRM	**Iron Mountain** baz=57,SNR=42	57.32	320	P		P		22 00 56.4	+0.8
M23A	**Laramie** baz=58	57.46	333	P		P		22 00 57.4	+0.7
L24A	**Wheatland** baz=58	57.57	334	P		P		22 00 57.9	+0.6
P19A	**Cripple Cowboy** baz=58,SNR=8.4	57.61	329	P		P		22 00 58.0	+0.2

O20A White River Ci 57.62 330 P P 22 00 58.3 +0.5
baz=58,SNR=5.2
N21A Black Mountain 57.75 331 P P 22 00 59.9 +1.2
baz=58,SNR=11
BELC Belle Mtn. Jos 57.76 320 P P 22 00 59.5 +0.7
baz=58,SNR=17
109C Camp Elliot, M 57.79 318 P P 22 00 59.3 +0.4
baz=58
PFO Pinyon Flat Ob 57.81 319 P P 22 01 00.3 +1.1
comp=Z,108nm,0.9s,SNR=8.3
PFO Pinyon Flat Ob 57.81 319 eP P 22 00 59.8 +0.6
comp=Z,17nm,0.9s
L23A Garrett 57.97 333 P P 22 01 00.5 +0.2
baz=58,SNR=8.3
SRU San Rafael 58.03 327 P P 22 01 00.9 +0.2
baz=58,SNR=10
GMRC Granite Mounta 58.04 320 P P 22 01 01.5 +0.7
baz=58,SNR=21
N20A Spence Gulch, 58.16 330 P P 22 01 01.8 +0.1
baz=58
O19A Miners Draw (B 58.19 329 P P 22 01 01.9 +0.2
baz=58,SNR=13
L22A Ellis Ranch, M 58.23 333 P P 22 01 02.7 +0.7
baz=58,SNR=6.7
Q16A Castle Valley 58.24 327 P P 22 01 02.5 +0.4
baz=58,SNR=7.0
EYMN Ely 58.29 347 eP P 22 01 01.2 -0.9
comp=Z,30nm,0.6s
M21A Separation Pea 58.33 332 P P 22 01 03.2 +0.4
baz=58,SNR=16
K23A Bowen Ranch, D 58.44 334 P P 22 01 03.9 +0.5
baz=59,SNR=7.4
HEC Hector,Ludlow 58.50 320 P P 22 01 04.9 +1.1
baz=59,SNR=5.1
CCUT Cedar City 58.50 324 eP P 22 01 05.1 +1.1
comp=Z,14nm,1.0s
MVU Marysvale 58.51 326 eP P 22 01 04.0 -0.2
L21A Rawlins 58.61 332 P P 22 01 04.8 +0.1
baz=59,SNR=11
TUQ Turquoise Moun 58.63 321 P P 22 01 05.7 +0.8
baz=59
M20A Sweetwater, Wa 58.63 331 P P 22 01 05.3 +0.4
baz=59,SNR=8.2
K22A Casper 58.76 333 P P 22 01 06.0 +0.3
baz=59,SNR=11
RSSD Black Hills 58.88 336 eP P 22 01 06.8 +0.3
RSSD pmax pmax
comp=Z,28nm,1.2s
RSSD Black Hills 58.88 336 eP P 22 01 06.8 +0.3
comp=Z,28nm,1.2s
I24A Kuemmerle Ranc 58.91 335 P P 22 01 07.3 +0.7
baz=59
BFSC Mount Baldy Ra 58.98 319 P P 22 01 07.7 +0.4
baz=59
K21A Alcova 59.08 332 P P 22 01 08.4 +0.5
baz=59
GSC Goldstone 59.10 320 eP P 22 01 08.6 +0.6
GSC pmax pmax
comp=Z,17nm,0.9s
GSC Goldstone 59.10 320 eP P 22 01 08.6 +0.6
comp=Z,17nm,0.9s
GSC Goldstone 59.10 320 P P 22 01 08.8 +0.8
baz=59,SNR=9.3
M19A Rock Springs 59.11 330 P P 22 01 08.5 +0.3
baz=59
MWC Mount Wilson 59.23 319 eP P 22 01 09.6 +0.5
MWC pmax pmax
comp=Z,20nm,1.1s
MWC Mount Wilson 59.23 319 eP P 22 01 09.6 +0.5
comp=Z,20nm,1.1s
MPU Maple Canyon 59.28 327 eP P 22 01 09.3 0.0
comp=Z,16nm,0.9s
MPU esP sP 22 01 34.0 -22
J22A Midwest 59.35 333 P P 22 01 09.7 0.0
baz=60
DAU Daniels Canyon 59.37 328 eP P 22 01 10.8 +0.7
DAU Daniels Canyon 59.37 328 eP P 22 01 10.8 +0.7
EDW2 Edwards Air Fo 59.59 319 P P 22 01 11.6 +0.2
baz=60,SNR=6.6
K20A Yellowstone Ra 59.60 332 P P 22 01 11.3 -0.1
baz=60,SNR=12
JLU Jordanelle 59.60 328 eP P 22 01 12.2 +0.5
comp=Z,21nm,0.8s
H24A Dirks Ranch, A 59.61 336 P P 22 01 11.6 +0.3
baz=60,SNR=15
L19A Farson 59.66 331 P P 22 01 12.1 +0.1
baz=60,SNR=9.4
AGMN Agassiz Nation 59.72 344 eP P 22 01 11.3 -0.6
comp=Z,14nm,0.6s
J21A Lysite 59.73 333 P P 22 01 13.0 +0.7
baz=60,SNR=8.4
I22A 9 Mile Ranch, 59.73 334 P P 22 01 12.4 +0.2
baz=60,SNR=16
LRMC Laurel Mountai 59.77 320 P P 22 01 13.3 +0.6
baz=60
H23A Clabaugh Cattl 59.80 335 P P 22 01 13.1 +0.4
baz=60
M17A Scullys Gap (B 59.84 329 P P 22 01 13.1 0.0
baz=60,SNR=16
L18A Fontenelle, Gr 59.86 330 P P 22 01 13.4 +0.1
baz=60
FURC Furnace Creek, 59.87 321 P P 22 01 14.1 +0.9
baz=60,SNR=20
K19A Absolon Red Bu 59.97 331 P P 22 01 13.7 -0.3
baz=60,SNR=14
MPMC Manual Prospec 60.01 320 P P 22 01 14.6 +0.2
baz=60,SNR=16
J20A Shoshoni 60.02 332 P P 22 01 14.8 +0.5
baz=60,SNR=22
I21A Big Trails, Te 60.02 333 P P 22 01 14.1 -0.2
baz=60,SNR=13
G24A Alzada 60.03 336 P P 22 01 14.5 +0.3
baz=60
DUG Dugway 60.04 327 eP P 22 01 15.1 +0.7
DUG pmax pmax
comp=Z,36nm,0.8s
DUG Dugway 60.04 327 eP P 22 01 15.1 +0.7
comp=Z,36nm,0.8s
DUG Dugway 60.04 327 P P 22 01 15.2 +0.7
baz=60,SNR=60
BW06 Boulder Array 60.26 331 eP P 22 01 15.5 -0.6
comp=Z,16nm,1.1s
PDAR Pinedale Array 60.26 331 P P 22 01 15.6 -0.5
PDAR Pinedale Array 60.26 331 P P 22 01 15.6 -0.5
comp=Z,9.5nm,0.9s,baz=145,slow=8.2,SNR=49
ARVC Arvin 60.29 319 P P 22 01 16.7 +0.6
baz=60
G23A Biddle 60.32 335 P P 22 01 16.3 +0.1
baz=60
R11A Troy Canyon, C 60.33 324 P P 22 01 17.4 +0.8
baz=60,SNR=54
ISA Isabella 60.38 320 eP P 22 01 17.0 +0.2
ISA pmax pmax
comp=Z,10.0nm,0.8s
ISA Isabella 60.38 320 eP P 22 01 17.0 +0.2
comp=Z,9.9nm,0.8s
ISA Isabella 60.38 320 P P 22 01 17.4 +0.6
baz=60,SNR=7.2
HWUT Hardware Ranch 60.40 329 eP P 22 01 16.5 -0.4
comp=Z,38nm,0.7s
J19A Crowheart 60.40 332 P P 22 01 17.1 +0.2
baz=61,SNR=6.4
MDND Maddock 60.44 341 P P 22 01 17.7 +0.9
baz=61,SNR=9.0
F24A Ekalaka 60.47 336 P P 22 01 17.2 0.0
baz=61,SNR=22
I20A Worland 60.51 333 P P 22 01 17.6 0.0
baz=61,SNR=19
GRAC Grapevine Rang 60.53 321 P P 22 01 18.6 +0.9
baz=61,SNR=14
H21A Big Horn, Sher 60.56 334 P P 22 01 17.8 -0.1
baz=61,SNR=6.4
G22A Birney 60.71 335 P P 22 01 18.7 -0.2
baz=61,SNR=8.9
F23A Volborg 60.75 336 P P 22 01 19.1 0.0
baz=61,SNR=19
PKM Peak Mountain 60.80 318 P P 22 01 20.5 +0.7
baz=61,SNR=8.3
H20A Greybull 60.87 333 P P 22 01 19.6 -0.3
baz=61,SNR=23
VES Vestal, Richgr 60.88 319 P P 22 01 20.9 +0.8
baz=61,SNR=5.9
I19A Meeteetse 60.97 332 P P 22 01 21.1 +0.4
baz=61,SNR=5.1
E24A Baker 61.01 337 P P 22 01 21.1 +0.3
baz=61,SNR=8.3
TIN Tinemaha 61.09 321 P P 22 01 22.5 +0.9
baz=61

I18A Diamond G Ranc 61.10 332 P P 22 01 21.8 +0.1
baz=61,SNR=17
G21A Lodge Grass 61.10 334 P P 22 01 21.4 -0.2
baz=61,SNR=7.6
F22A Rosebud 61.15 335 P P 22 01 21.8 0.0
baz=61,SNR=5.6
HVU Hansel Valley 61.15 328 eP P 22 01 21.5 -0.5
HVU pmax pmax
comp=Z,20nm,0.9s
HVU Hansel Valley 61.15 328 eP P 22 01 21.4 -0.5
comp=Z,20nm,0.9s
SMMC Simmler 61.16 318 P P 22 01 22.5 +0.5
baz=61
RCTC Rector, Farmer 61.27 320 P P 22 01 22.6 -0.1
baz=61
E23A Ismay 61.34 336 P P 22 01 23.0 -0.1
baz=62,SNR=8.0
SNOW Snow King Moun 61.36 331 eP P 22 01 23.1 -0.4
comp=Z,13nm,0.7s
LOHW Long Hollow 61.40 331 eP P 22 01 23.2 -0.5
comp=Z,10nm,0.8s
H19A Powell 61.45 333 P P 22 01 23.7 -0.3
baz=62
D24A Glendive 61.47 337 P P 22 01 24.7 +0.8
baz=62,SNR=13
TPAW Teton Pass 61.48 331 eP P 22 01 24.1 -0.2
comp=Z,7.0nm,0.7s
MTUM Tungsten Hills 61.49 321 eP P 22 01 24.9 +0.6
ULM Lac du Bonnet 61.50 345 eP P 22 01 23.4 -0.6
ULM pP pP 22 01 56.2 0.0
ULM Lac du Bonnet 61.50 345 P P 22 01 23.3 -0.6
comp=Z,11nm,0.8s,baz=162,slow=6.0,SNR=8.7
ULM pP pP 22 01 56.2 0.0
comp=Z,13nm,0.8s,baz=176,slow=8.2,SNR=3.4
G20A Bridger 61.54 334 P P 22 01 24.2 -0.2
baz=62,SNR=23
RRI2 Red Ridge 61.55 330 eP P 22 01 24.8 0.0
comp=Z,35nm,0.8s
E22A Miles City 61.55 336 P P 22 01 24.6 +0.1
baz=62,SNR=5.1
MOOW Moose Ponds 61.57 331 eP P 22 01 24.3 -0.6
comp=Z,7.3nm,0.9s
DCID1 Drake Creek 61.67 331 eP P 22 01 24.9 -0.5
ELK Elko 61.75 326 eP P 22 01 25.3 -0.9
comp=Z,12nm,1.1s
H18A Shoshone NF, C 61.77 332 P P 22 01 26.1 0.0
baz=62,SNR=7.1
IMW Indian Meadow 61.78 331 eP P 22 01 26.3 0.0
comp=Z,20nm,1.1s
C24A Savage 61.85 338 P P 22 01 27.2 +0.8
baz=62,SNR=12
D23A Lindsay 61.86 337 P P 22 01 27.4 +0.9
baz=62,SNR=11
NV11 Mina Array Sit 61.92 322 eP P 22 01 27.2 0.0
RLMT Red Lodge 61.93 333 eP P 22 01 27.0 -0.2
comp=Z,13nm,1.0s
F20A Billings 61.96 334 P P 22 01 27.6 +0.3
baz=62,SNR=5.5
NVAR Mina Array Bea 62.01 322 P P 22 01 28.4 +0.5
NVAR Mina Array Bea 62.01 322 P P 22 01 28.4 +0.5
comp=Z,10nm,0.8s,baz=142,slow=7.0,SNR=42
I16A Newdale 62.02 331 P P 22 01 28.2 +0.4
baz=62,SNR=12
E21A Keefer Ranch, 62.10 335 P P 22 01 28.6 +0.4
baz=62
BBTS Babate 62.11 68 P P 22 01 29.7 +1.0
BBTS Babate 62.11 68 P P 22 01 29.7 +1.0
comp=Z,60nm,0.8s,baz=272,slow=3.0,SNR=9.4
YFT Old Faithful 62.14 331 eP P 22 01 29.6 +0.9
comp=Z,29nm,1.1s
G18A Lazy EL Ranch, 62.21 333 P P 22 01 29.3 +0.2
baz=62
D22A Cohagen 62.22 336 P P 22 01 29.8 +0.8
baz=62,SNR=47
F19A Roth Farm, Mol 62.35 334 P P 22 01 30.4 +0.5
baz=62,SNR=31
YMR Madison River 62.37 332 eP P 22 01 30.9 +0.8
comp=Z,30nm,0.8s
C23A Lambert 62.37 337 P P 22 01 30.8 +0.9
baz=62,SNR=11
D21A La Casta Ranch 62.48 336 P P 22 01 31.7 +1.0
baz=63,SNR=15
E20A Meyer Farm, Mu 62.51 335 P P 22 01 31.4 +0.6
baz=63,SNR=21
H16A Russell Place, 62.53 331 P P 22 01 32.2 +1.0
baz=63,SNR=10
DGMT Dagmar 62.55 338 eP P 22 01 32.3 +1.2
comp=Z,43nm,0.8s
DGMT Dagmar 62.55 338 P P 22 01 32.3 +1.2
baz=63,SNR=7.2
C22A Vida 62.59 337 P P 22 01 32.2 +0.9
baz=63,SNR=11
GCMT Greycliff 62.62 333 eP P 22 01 32.0 +0.3
comp=Z,42nm,1.0s
BMN Battle Mountai 62.66 324 eP P 22 01 32.1 0.0
BMN pmax pmax
comp=Z,15nm,0.8s
BMN Battle Mountai 62.66 324 eP P 22 01 32.1 0.0
comp=Z,15nm,0.8s
QLMT Earthquake Lak 62.71 331 eP P 22 01 32.6 +0.2
F18A Big Timber 62.73 333 P P 22 01 32.9 +0.5
baz=63,SNR=38
E19A Rath Farm, Rou 62.76 334 P P 22 01 32.9 +0.3
baz=63,SNR=24
A24A Westby 62.86 339 P P 22 01 34.4 +1.2
baz=63,SNR=35
D20A Manuel Ranch, 62.98 335 P P 22 01 34.4 +0.4
baz=63,SNR=24
I14A Mackay 63.03 329 P P 22 01 35.2 +0.6
baz=63,SNR=40
CMB Columbia Colle 63.05 321 eP P 22 01 34.3 -0.3
CMB pmax pmax
comp=Z,7.0nm,0.9s
CMB Columbia Colle 63.05 321 eP P 22 01 34.3 -0.3
comp=Z,6.8nm,0.9s
B22A Reddig Ranch S 63.09 337 P P 22 01 35.5 +0.8
baz=63,SNR=12
H15A Lima 63.13 330 P P 22 01 36.5 +1.3
baz=63,SNR=5.9
C21A Desert Coulee 63.14 336 P P 22 01 35.5 +0.6
baz=63,SNR=17
F17A Fitzpatrick Pl 63.16 333 P P 22 01 35.8 +0.5
baz=63,SNR=17
G16A Moss Hill, Enn 63.18 331 P P 22 01 35.8 +0.3
baz=63,SNR=13
A23A Redstone 63.21 338 P P 22 01 36.7 +1.3
baz=63
HLID Hailey 63.26 329 eP P 22 01 36.5 +0.4
comp=Z,15nm,0.9s
HLID Hailey 63.26 329 P P 22 01 36.6 +0.5
baz=63,SNR=26
E18A Harlowton 63.33 334 P P 22 01 36.8 +0.4
baz=64,SNR=20
D19A Cripps Ranch, 63.35 335 P P 22 01 36.7 +0.3
baz=64,SNR=20
MCMT McKenzie Canyo 63.39 331 eP P 22 01 37.5 +0.6
comp=Z,12nm,1.2s
C20A Veseth Ranch, 63.41 335 P P 22 01 37.3 +0.5
baz=64,SNR=5.4
WCN Washoe City 63.43 322 eP P 22 01 38.1 +0.8
WCN pmax pmax
comp=Z,27nm,1.0s
WCN Washoe City 63.43 322 eP P 22 01 38.1 +0.8
comp=Z,27nm,1.0s
G15A Dillon 63.46 331 P P 22 01 38.0 +0.7
baz=64,SNR=11
F16A Kennard Place, 63.51 332 P P 22 01 38.2 +0.6
baz=64,SNR=6.2
SCHQ Schefferville 63.59 5 eP P 22 01 38.0 +0.3
comp=Z,34nm,0.8s
SCHQ pP pP 22 02 11.1 +0.8
SCHQ Schefferville 63.59 5 P P 22 01 37.9 +0.2
comp=Z,14nm,1.1s,baz=156,slow=5.3,SNR=9.9
SCHQ pP pP 22 02 11.1 +0.8
comp=Z,39nm,0.9s,baz=210,slow=5.0,SNR=9.0
B21A Ellsworth Farm 63.59 337 P P 22 01 39.1 +1.2
baz=64,SNR=10
A22A Carney Farms, 63.62 338 P P 22 01 39.2 +1.0
baz=64,SNR=25
DLMT Dillon 63.66 331 eP P 22 01 38.5 -0.1
comp=Z,12nm,1.0s
DLMT esP sP 22 02 03.1 -23
E17A Martinsdale 63.67 333 P P 22 01 39.0 +0.4
baz=64,SNR=23
D18A Linhart Farms, 63.77 334 P P 22 01 39.7 +0.5
baz=64,SNR=10
I12A Atlanta 63.80 328 P P 22 01 40.3 +0.7
baz=64

C19A Slack Wire Ran 63.87 335 P P 22 01 40.2 +0.5
baz=64,SNR=30
MFID Camas Ranch 63.90 328 eP P 22 01 40.8 +0.6
comp=Z,52nm,0.8s
MFID Camas Ranch 63.90 328 P P 22 01 40.8 +0.6
baz=64,SNR=57
LRM Limekiln Ridge 63.93 332 eP P 22 01 40.5 +0.1
F15A Butte 63.96 331 P P 22 01 40.8 +0.2
baz=64,SNR=6.7
B20A Solberg Farm, 64.00 336 P P 22 01 41.2 +0.5
baz=64
A21A Bergtoll Ranch 64.01 337 P P 22 01 41.4 +0.7
baz=64,SNR=17
D17A Six Diamond Ra 64.12 333 P P 22 01 41.9 +0.3
baz=64,SNR=21
BEKR Beckworth 64.15 322 eP P 22 01 42.4 +0.5
comp=Z,12nm,0.9s
H12A Diamond D Ranc 64.19 329 P P 22 01 42.9 +0.8
baz=64,SNR=17
HRY Holter Researc 64.30 333 eP P 22 01 43.2 +0.5
F14A Wisdom 64.36 331 P P 22 01 43.3 +0.1
baz=64
B19A Brinkman Farms 64.39 335 P P 22 01 43.7 +0.6
baz=65,SNR=19
EGMT Eagleton 64.39 335 eP P 22 01 43.5 +0.3
comp=Z,37nm,1.1s
EGMT Eagleton 64.39 335 P P 22 01 43.5 +0.3
baz=65,SNR=9.9
D16A Dana Ranch, Ca 64.41 333 P P 22 01 44.1 +0.7
baz=65,SNR=20
E15A Deer Lodge 64.46 332 P P 22 01 44.1 +0.3
baz=65,SNR=7.6
OHCM Honcut 64.52 321 eP P 22 01 45.0 +0.9
C17A Wharram Farm, 64.52 334 P P 22 01 44.4 +0.4
baz=65,SNR=17
A19A Klindworth Far 64.68 336 P P 22 01 45.5 +0.5
baz=65,SNR=31
B18A Beardsley Farm 64.69 335 P P 22 01 45.6 +0.5
baz=65,SNR=33
WVOR Wild Horse Val 64.77 325 eP P 22 01 45.6 -0.3
WVOR e 22 02 17.6
WVOR pmax pmax
comp=Z,18nm,1.0s
WVOR Wild Horse Val 64.77 325 eP P 22 01 45.6 -0.3
comp=Z,18nm,1.0s
WVOR ePcP PcP 22 02 17.6 -0.7
F13A Darby 64.81 330 P P 22 01 46.4 +0.3
baz=65,SNR=12
G12A Big Creek, Yel 64.83 329 P P 22 01 46.3 +0.1
baz=65,SNR=8.3
E14A Clinton 64.86 331 P P 22 01 46.9 +0.5
baz=65
D15A Lincoln 64.86 332 P P 22 01 46.3 -0.1
baz=65,SNR=7.6
PSET Sete Cidades 64.97 41 eP P 22 01 42.5 -4.6
comp=Z,73nm,0.9s
B17A L&G Farms, Che 65.04 334 P P 22 01 47.7 +0.3
baz=65
CMLA Cha da Macela 65.06 41 eP P 22 01 43.1 -4.6
comp=Z,71nm,1.8s
C16A Fuhringer Ranc 65.08 333 P P 22 01 48.3 +0.5
baz=65,SNR=9.2
CHMT Chamberlain Mo 65.11 332 eP P 22 01 48.5 +0.4
A18A Metzger Ranch, 65.12 335 P P 22 01 48.1 +0.2
baz=65,SNR=16
E13A Victor 65.21 331 P P 22 01 49.0 +0.4
baz=65,SNR=17
F12A Elk City 65.24 330 P P 22 01 49.1 +0.2
baz=65,SNR=17
D14A Greenough 65.35 332 P P 22 01 49.8 +0.3
baz=66,SNR=10
MSO Missoula 65.37 331 eP P 22 01 50.1 +0.5
MSO Missoula 65.37 331 P P 22 01 50.3 +0.7
baz=66,SNR=31
C15A Salmond Ranch, 65.45 333 P P 22 01 51.2 +1.0
baz=66
SLMT Seeley Lake 65.46 332 eP P 22 01 50.4 +0.1
A17A Triple J Farms 65.50 335 P P 22 01 50.6 +0.3
baz=66,SNR=37
B16A M & M Farms, S 65.53 334 P P 22 01 50.9 +0.3
baz=66,SNR=8.3
LTIM Timbered Crate 65.63 323 P P 22 01 51.7 +0.3
BMO Blue Mountains 65.66 328 eP P 22 01 51.0 -0.5
comp=Z,3.2nm,0.7s
D13A Huson 65.80 331 P P 22 01 52.8 +0.5
baz=66,SNR=12
B15A Bradely Ranch, 65.83 333 P P 22 01 52.5 0.0
baz=66,SNR=16
A16A West Butte Ran 65.88 334 P P 22 01 53.2 +0.3
baz=66
SWMT Swartz Lake 65.89 332 eP P 22 01 54.0 +1.0
WDC Whiskeytown Da 65.91 322 eP P 22 01 51.5 -1.6
WDC pmax pmax
comp=Z,10.0nm,0.8s
WDC Whiskeytown Da 65.91 322 eP P 22 01 51.5 -1.6
comp=Z,10nm,0.8s
C14A Swan Lake 65.96 332 P P 22 01 54.0 +0.6
baz=66,SNR=15
KCPM Cahto Peak 66.03 320 eP P 22 01 54.9 +0.9
comp=Z,24nm,1.2s
KIPM Iron Peak 66.04 321 eP P 22 01 54.9 +0.8
comp=Z,22nm,0.8s
B14A Marquette Ranc 66.18 333 P P 22 01 55.3 +0.5
baz=66,SNR=9.1
JTMT Jette 66.19 332 eP P 22 01 55.7 +0.8
D12A Red Ives Fores 66.20 331 P P 22 01 55.2 +0.2
baz=66
C13A Hot Springs 66.28 332 P P 22 01 56.0 +0.7
baz=66,SNR=15
A15A Johnson Ranch, 66.40 334 P P 22 01 55.9 -0.2
baz=67,SNR=9.3
HOG Hogback Mounta 66.41 324 P P 22 01 57.2 +0.7
BLMT Blacktail Moun 66.42 332 eP P 22 01 57.0 +0.5
BSMT Bassoo Peak 66.50 332 eP P 22 01 57.7 +0.7
A14A Double T Ranch 66.70 333 P P 22 01 58.1 0.0
baz=67,SNR=11
YBH Yreka Blue Hor 66.70 323 eP P 22 01 56.9 -1.3
comp=Z,14nm,0.9s
C12B Naegeli Ranch, 66.73 331 P P 22 01 59.1 +0.9
baz=67,SNR=9.8
B13A Whitefish 66.73 332 P P 22 01 59.1 +0.8
baz=67,SNR=6.0
BUOR Burton Butte 66.75 323 P P 22 01 59.0 +0.4
KHMM Horse Mountain 66.81 321 eP P 22 01 59.7 +0.7
comp=Z,35nm,0.8s
WALA Waterton Lakes 66.98 333 eP P 22 01 59.4 -0.5
comp=Z,0.4nm,0.7s
A13A Flathead Natio 67.11 333 P P 22 02 01.3 +0.6
baz=67
FFC Flin Flon 67.18 343 eP P 22 02 00.6 -0.3
FFC pmax pmax
comp=Z,19nm,0.7s
FFC Flin Flon 67.18 343 eP P 22 02 00.6 -0.3
comp=Z,19nm,0.7s
FFC Flin Flon 67.18 343 P pP 22 02 16.3 -17
comp=Z,159nm,0.6s,SNR=5.1
C11A Tepee Creek (N 67.19 331 P P 22 02 01.5 +0.4
baz=67
KRMB Red Mountain 67.30 322 eP P 22 02 02.8 +0.8
comp=Z,24nm,1.1s
B12A Libby 67.32 332 P P 22 02 02.8 +0.9
baz=68
HUMO Hull Mountain 67.37 323 eP P 22 02 01.2 -1.2
comp=Z,7.1nm,1.1s
A12A Yaak River Ran 67.68 332 P P 22 02 05.2 +0.9
baz=68
KBO Bosley Butte 67.89 322 eP P 22 02 06.0 +0.3
comp=Z,52nm,1.3s
NEW Newport 67.91 331 eP P 22 02 05.6 0.0
comp=Z,14nm,1.1s
NEW Newport 67.91 331 P P 22 02 05.7 +0.1
baz=68,SNR=6.0
BROR Big Rock Looko 68.09 325 P P 22 02 06.7 0.0
OD2 Odessa Site #2 68.09 329 P P 22 02 07.5 +0.8
KEBM Edson Butte 68.34 323 eP P 22 02 09.8 +1.3
comp=Z,46nm,1.1s
PMOZ Porto Moniz, M 68.46 50 eP P 22 02 09.7 +0.2
comp=Z,89nm,0.5s
PMAR Madeira 68.63 50 eP P 22 02 11.4 +0.8
comp=Z,82nm,1.8s
WTV Waterville 68.92 329 P P 22 02 12.9 +0.9
LON Longmire 69.28 327 eP P 22 02 14.2 0.0
LON pmax pmax
comp=Z,8.0nm,0.9s
LON Longmire 69.28 327 eP P 22 02 14.2 0.0
comp=Z,8.0nm,0.9s
CMW Cultus Mountai 70.50 329 P P 22 02 21.9 +0.2

NLWA **Neilton Lookou** 70.78 327 *e*P P 22 02 24.8 +1.5
comp=Z,26nm,0.8s
OSD **Olympics--Snow** 70.95 327 P P 22 02 26.0 +1.4
LIC **Lamto** 70.97 80⇑*i*P P 22 02 24.8 -0.3
comp=Z,46nm,0.5s,baz=261
LIC **Lamto** 70.97 80⇑*i*P P 22 02 24.8 -0.3
comp=Z,46nm,0.5s
DBIC **Dimbokro** 71.22 80 *e*P P 22 02 26.6 0.0
comp=Z,95nm,0.8s
DBIC pP pP 22 02 59.3 -0.4
DBIC **Dimbokro** 71.22 80 P P 22 02 26.5 0.0
comp=Z,98nm,0.9s,baz=236,slow=5.8,SNR=78
DBIC pP pP 22 02 59.3 -0.4
comp=Z,30nm,0.6s,baz=244,slow=7.6,SNR=4.1
PGC **Sidney** 71.33 328 *e*P P 22 02 27.1 +0.6
comp=Z,1.2nm,0.9s
VNA1 **Neumayer--Stat** 74.16 161 *e*P pP 22 02 56.1 -20
SNAA **Sanae** 76.15 162 *e*P P 22 02 55.4 +1.0
SNAA **Sanae** 76.15 162 *e*PcP PcP 22 03 07.7 +1.8
SNAA **Sanae** 76.15 162 *es*P sP 22 03 37.0 -5.4
SNAA **Sanae** 76.15 162 *e*P P 22 02 54.2 -0.2
comp=Z,16nm,1.0s
SNAA pP pP 22 03 27.6 -0.3
SNAA **Sanae** 76.15 162 P P 22 02 55.6 +1.2
comp=Z,0.9nm,0.6s,baz=283,slow=4.4,SNR=9.5
SNAA pP pP 22 03 27.6 -0.3
comp=Z,2.6nm,0.7s,baz=285,slow=5.6,SNR=5.4
PFVI **Vila Bisbo** 76.48 49 *e*P P 22 02 57.9 +1.1
comp=Z,90nm,1.3s
MORF **Marmelete** 76.68 48 *e*P P 22 02 59.2 +1.2
comp=Z,109nm,1.1s
PNCL **Nicolau / Gran** 77.07 48 *e*P P 22 03 01.2 +1.1
comp=Z,45nm,1.0s
PBDV **Barranco-do-Ve** 77.19 49 *e*P P 22 03 02.1 +1.3
comp=Z,76nm,1.7s
PCVE **Castro Verde** 77.25 48 *e*P P 22 03 02.4 +1.3
comp=Z,54nm,1.1s
YKA **Yellowknife Ar** 77.32 342 P P 22 03 00.5 -0.4
YKA pP pP 22 03 35.4 +0.8
YKA **Yellowknife Ar** 77.32 342 P P 22 03 00.5 -0.4
comp=Z,10.0nm,0.8s,baz=137,slow=6.2,SNR=95
YKA pP pP 22 03 35.4 +0.8
comp=Z,6.2nm,0.5s,baz=140,slow=6.1,SNR=5.7
YKW3 **Yellowknife Ar** 77.37 342 *e*P P 22 03 00.5 -0.7
comp=Z,0.5nm,0.9s
SFJD **Kangerlussuaq** 77.44 9 *i*P P 22 03 09.0 +7.5
comp=Z,14nm,0.8s
SFJD *i* 22 03 35.2
EVOP **Sao Brissos** 77.52 47⇑*i*P P 22 03 03.4 +0.8
EVOP *e**PP pP 22 03 36.4 +0.2
EVOP pmax pmax
comp=Z,86nm,1.0s
EVOP **Sao Brissos** 77.52 47⇑*i*P P 22 03 03.4 +0.8
comp=Z,86nm,1.0s
EVOP *ep*P pP 22 03 36.4 +0.2
PBEJ **Beja** 77.52 48 *e*P P 22 03 04.0 +1.4
comp=Z,23nm,1.3s
EVO **Evora** 77.60 47⇑*i*P P 22 03 03.4 +0.4
comp=Z,86nm,1.0s
EVO *ep*P pP 22 03 36.4 -0.3
EVO **Evora** 77.60 47 *e*P P 22 03 03.8 +0.8
comp=Z,33nm,1.1s
PMTG **Montargil** 77.65 47 *e*P P 22 03 04.0 +0.7
comp=Z,31nm,1.3s
PTOM **Tomar** 77.72 46 *e*P P 22 03 04.4 +0.7
comp=Z,55nm,2.1s
PESTR **Estremoz** 78.03 47 *e*P P 22 03 06.2 +0.8
comp=Z,57nm,1.2s
PTO **Porto** 78.16 45 *e*P P 22 03 06.8 +0.8
PBAR **Barrancos** 78.19 48 *e*P P 22 03 07.1 +0.8
comp=Z,27nm,1.8s
MDT **Midelt** 78.25 54 P P 22 03 08.3 +1.3
MDT pP pP 22 03 40.7 +0.1
MDT **Midelt** 78.25 54 P P 22 03 08.3 +1.3
comp=Z,17nm,0.8s,baz=250,slow=4.1,SNR=25
MDT pP pP 22 03 40.7 +0.1
comp=Z,7.4nm,0.9s,baz=273,slow=7.8,SNR=3.2
PMRV **Marv??o** 78.38 47 *e*P P 22 03 07.7 +0.3
comp=Z,21nm,1.9s
PCBR **Castelo Branco** 78.47 46 *e*P P 22 03 08.5 +0.7
comp=Z,22nm,1.6s
PVIS **Viseu** 78.50 45 *e*P P 22 03 08.5 +0.5
comp=Z,38nm,1.1s
MTE **Manteigas** 78.63 46 *e*P P 22 03 09.4 +0.7
comp=Z,38nm,1.4s
POLO **Lamas de Olo** 78.81 45 *e*P P 22 03 11.2 +1.4
comp=Z,17nm,1.9s
PVRL **Vila Real** 78.83 45 *e*P P 22 03 10.4 +0.6
comp=Z,33nm,1.4s
TOA0 **Torodi Ar. Sit** 78.84 75 *e*P P 22 03 09.9 -0.5
TORD **Torodi Ar. Bea** 78.84 75 P P 22 03 10.0 -0.4
TORD pP pP 22 03 43.5 -0.6
TORD **Torodi Ar. Bea** 78.84 75 P P 22 03 10.0 -0.4
comp=Z,17nm,0.6s,baz=261,slow=4.1,SNR=198
TORD pP pP 22 03 43.5 -0.6
comp=Z,22nm,0.7s,baz=284,slow=5.9,SNR=5.4
MVO **Moncorvo** 79.27 45 *e*P P 22 03 13.0 +0.7
comp=Z,41nm,1.5s
PBRG **Braganca** 79.71 45 *e*P P 22 03 15.2 +0.6
comp=Z,40nm,2.1s
DLBC **Dease Lake** 80.31 334 *e*P P 22 03 18.1 +0.7
DLBC *ep*P PcP 22 03 36.4 +12
PAB **San Pablo** 80.63 48 *e*P P 22 03 20.6 +1.0
PAB pmax pmax
comp=Z,26nm,0.8s
PAB **San Pablo** 80.63 48 *e*P P 22 03 20.6 +1.0
comp=Z,26nm,0.8s
ESDC **Sonseca Array** 80.95 48 P P 22 03 22.0 +0.7
ESDC pP pP 22 03 55.5 +0.3
ESDC **Sonseca Array** 80.95 48 P P 22 03 22.0 +0.7
comp=Z,17nm,0.9s,baz=255,slow=5.9,SNR=56
ESDC pP pP 22 03 55.5 +0.3
comp=Z,5.8nm,0.8s,baz=258,slow=6.4,SNR=3.5
ESLA **Sonseca Array** 80.95 48 *e*P P 22 03 21.9 +0.6
comp=Z,6.8nm,1.0s
QSPA **South Pole Qui** 81.46 180 *e*P P 22 03 23.9 +0.3
comp=Z,5.7nm,0.6s
QSPA **South Pole Qui** 81.46 180 P P 22 03 24.7 +1.1
comp=Z,9.5nm,1.0s,baz=163,slow=3.6,SNR=22
SJPF **Ste Jean** 83.99 45⇑*i*P P 22 03 38.0 +1.1
comp=Z,76nm,0.8s
SJPF **Ste Jean** 83.99 45⇑*i*P P 22 03 38.0 +1.1
SJPF pmax pmax
comp=Z,76nm,0.8s
SJPF **Ste Jean** 83.99 45⇑*i*P P 22 03 38.0 +1.1
comp=Z,76nm,0.8s
OSSF **Osses** 84.01 45 *e*P P 22 03 37.8 +0.8
OSSF **Osses** 84.01 45 *e*P P 22 03 37.8 +0.8
QUIF **Quistinic** 84.23 40 *e*P P 22 03 37.6 -0.4
QUIF **Quistinic** 84.23 40 *e*P P 22 03 37.6 -0.4
QUIF **Quistinic** 84.23 40 *e*P P 22 03 37.6 -0.4
ROSF **Rostrenen** 84.30 39⇑*i*P P 22 03 38.6 +0.3
comp=Z,85nm,1.1s
ROSF **Rostrenen** 84.30 39⇑*i*P P 22 03 38.6 +0.3
ROSF pmax pmax
comp=Z,85nm,1.1s
ROSF **Rostrenen** 84.30 39⇑*i*P P 22 03 38.6 +0.3
comp=Z,85nm,1.1s
TAM **Tamanrasset** 84.37 66 *e*P P 22 03 40.3 +0.8
TAM pmax pmax
comp=Z,35nm,0.8s
TAM **Tamanrasset** 84.37 66 *e*P P 22 03 40.3 +0.8
comp=Z,35nm,0.8s
SUMG **Summit** 84.39 10⇑*i*P P 22 03 39.3 +0.5
SUMG *i* 22 04 13.7
SUMG pmax pmax
comp=Z,19nm,0.8s
SUMG **Summit** 84.39 10 *e*P P 22 03 38.7 -0.1
SUMG **Summit** 84.39 10⇑*i*P P 22 03 39.3 +0.5
comp=Z,19nm,0.8s
SUMG *i* 22 04 13.7
ETSF **Etsaut** 84.39 45 *e*P P 22 03 40.1 +1.1
comp=Z,40nm,0.9s
ETSF **Etsaut** 84.39 45 *e*P P 22 03 40.1 +1.1
ETSF pmax pmax
comp=Z,41nm,0.9s
ETSF **Etsaut** 84.39 45 *e*P P 22 03 40.1 +1.1
comp=Z,40nm,0.9s
REYF **Montagne du Re** 84.56 45 *e*P P 22 03 41.4 +1.5
REYF **Montagne du Re** 84.56 45 *e*P P 22 03 41.4 +1.5
SGMF **Saint Gilles** 84.73 40 *e*P P 22 03 40.6 +0.1
comp=Z,98nm,1.3s
SGMF **Saint Gilles** 84.73 40 *e*P P 22 03 40.6 +0.1
SGMF pmax pmax
comp=Z,98nm,1.3s
SGMF **Saint Gilles** 84.73 40 *e*P P 22 03 40.6 +0.1
comp=Z,98nm,1.3s
LABF **Labassere** 84.88 45 *e*P P 22 03 42.6 +1.1
LABF **Labassere** 84.88 45 *e*P P 22 03 42.6 +1.1
EPF **Esparros** 85.06 45⇑*i*P P 22 03 42.2 -0.2
comp=Z,58nm,1.1s
EPF *ep*P pP 22 04 17.0 +0.4
EPF **Esparros** 85.06 45⇑*i*P P 22 03 42.2 -0.2
EPF *e**PP pP 22 04 17.0 +0.4
EPF pmax pmax
comp=Z,58nm,1.1s
EPF **Esparros** 85.06 45⇑*i*P P 22 03 42.2 -0.2
comp=Z,58nm,1.1s
EPF *ep*P pP 22 04 17.0 +0.4
MELF **Melles** 85.31 46 *e*P P 22 03 45.1 +1.4
MELF **Melles** 85.31 46 *e*P P 22 03 45.1 +1.4
MLS **Moulis** 85.57 46 *e*P P 22 03 45.6 +0.7
MLS **Moulis** 85.57 46 *e*P P 22 03 45.6 +0.7
MFF **Saint Martin d** 85.77 42⇑*i*P P 22 03 46.1 +0.4
comp=Z,55nm,0.9s
MFF **Saint Martin d** 85.77 42⇑*i*P P 22 03 46.1 +0.4
MFF pmax pmax
comp=Z,55nm,0.9s
MFF **Saint Martin d** 85.77 42⇑*i*P P 22 03 46.1 +0.4
comp=Z,55nm,0.9s
GRR **Gorron** 85.84 40 *e*P P 22 03 46.1 +0.1
comp=Z,36nm,0.7s
GRR *ep*P pP 22 04 19.7 -0.6
GRR **Gorron** 85.84 40 *e*P P 22 03 46.1 +0.1
GRR *e**PP pP 22 04 19.7 -0.6
GRR pmax pmax
comp=Z,36nm,0.7s
GRR **Gorron** 85.84 40 *e*P P 22 03 46.1 +0.1
comp=Z,36nm,0.7s
GRR *ep*P pP 22 04 19.7 -0.6
LFF **La Frestale** 85.88 44⇑*i*P P 22 03 46.5 +0.2
comp=Z,80nm,0.8s
LFF **La Frestale** 85.88 44⇑*i*P P 22 03 46.5 +0.2
LFF pmax pmax
comp=Z,80nm,0.8s
LFF **La Frestale** 85.88 44⇑*i*P P 22 03 46.5 +0.2
comp=Z,80nm,0.8s
FLN **La Foliniere** 86.19 40⇑*i*P P 22 03 48.0 +0.3
comp=Z,61nm,0.8s
FLN **La Foliniere** 86.19 40⇑*i*P P 22 03 48.0 +0.3
FLN pmax pmax
comp=Z,61nm,0.8s
FLN **La Foliniere** 86.19 40⇑*i*P P 22 03 48.0 +0.3
comp=Z,61nm,0.8s
LDF **La Druitiere** 86.37 40 *e*P P 22 03 48.8 +0.2
comp=Z,31nm,0.7s
LDF *ep*P pP 22 04 22.5 -0.4
LDF **La Druitiere** 86.37 40 *e*P P 22 03 48.8 +0.2
LDF *e**PP pP 22 04 22.5 -0.4
LDF pmax pmax
comp=Z,31nm,0.7s
LDF **La Druitiere** 86.37 40 *e*P P 22 03 48.8 +0.2
comp=Z,31nm,0.7s
LDF *ep*P pP 22 04 22.5 -0.4
MTLF **Montolieu** 86.47 45⇑*i*P P 22 03 49.1 -0.1
comp=Z,14nm,0.8s
MTLF *ep*P pP 22 04 22.9 -0.6
MTLF **Montolieu** 86.47 45⇑*i*P P 22 03 49.1 -0.1
MTLF *e**PP pP 22 04 22.9 -0.6
MTLF pmax pmax
comp=Z,14nm,0.8s
MTLF **Montolieu** 86.47 45⇑*i*P P 22 03 49.1 -0.1
comp=Z,14nm,0.8s
MTLF *ep*P pP 22 04 22.9 -0.6
RJF **Les Rejaudoux** 86.51 43⇑*i*P P 22 03 49.3 -0.1
comp=Z,30nm,1.0s
RJF *ep*P pP 22 04 23.2 -0.5
RJF **Les Rejaudoux** 86.51 43⇑*i*P P 22 03 49.3 -0.1
RJF *e**PP pP 22 04 23.2 -0.5
RJF pmax pmax
comp=Z,30nm,1.0s
RJF **Les Rejaudoux** 86.51 43⇑*i*P P 22 03 49.3 -0.1
comp=Z,30nm,1.0s
RJF *ep*P pP 22 04 23.2 -0.5
SCO **Scoresbysund** 86.53 16⇓*i*P P 22 03 49.8 +0.9
SCO pmax pmax
comp=Z,5.0nm,0.8s
SCO **Scoresbysund** 86.53 16⇓*i*P P 22 03 49.8 +0.9
comp=Z,4.5nm,0.8s
SCO *i* 22 03 57.3
EKA **Eskdalemuir Ar** 86.75 33 P P 22 03 50.5 +0.1
EKA pP pP 22 04 24.1 -0.5
EKA **Eskdalemuir Ar** 86.75 33 P P 22 03 50.5 +0.1
comp=Z,7.0nm,0.9s,baz=236,slow=5.9,SNR=8.8
EKA pP pP 22 04 24.1 -0.5
comp=Z,7.0nm,0.8s,baz=240,slow=4.7,SNR=5.5
CAF **Calviac** 86.78 44⇑*i*P P 22 03 50.7 -0.1
comp=Z,12nm,0.5s
CAF *ep*P pP 22 04 24.8 -0.3
CAF **Calviac** 86.78 44⇑*i*P P 22 03 50.7 -0.1
CAF *e**PP pP 22 04 24.8 -0.3
CAF pmax pmax
comp=Z,12nm,0.5s
CAF **Calviac** 86.78 44⇑*i*P P 22 03 50.7 -0.1
comp=Z,12nm,0.5s
CAF *ep*P pP 22 04 24.8 -0.3
TCF **Toulx Ste Croi** 87.24 43⇑*i*P P 22 03 52.6 -0.4
comp=Z,20nm,0.7s
TCF *ep*P pP 22 04 26.6 -0.7
TCF **Toulx Ste Croi** 87.24 43⇑*i*P P 22 03 52.6 -0.4
TCF *e**PP pP 22 04 26.6 -0.7
TCF pmax pmax
comp=Z,20nm,0.7s
TCF **Toulx Ste Croi** 87.24 43⇑*i*P P 22 03 52.6 -0.4
comp=Z,20nm,0.7s
TCF *ep*P pP 22 04 26.6 -0.7
PYM **Petit Puy Mans** 87.64 43 *e*P P 22 03 56.1 +1.2
PYM **Petit Puy Mans** 87.64 43 *e*P P 22 03 56.1 +1.2
PYM **Petit Puy Mans** 87.64 43 *e*P P 22 03 56.1 +1.2
LBL **Lubilhac** 87.67 44 *e*P P 22 03 56.3 +1.2
LBL **Lubilhac** 87.67 44 *e*P P 22 03 56.3 +1.2
LBL **Lubilhac** 87.67 44 *e*P P 22 03 56.3 +1.2
BGF **Bois d'Agland** 87.74 42⇑*i*P P 22 03 55.1 -0.2
comp=Z,58nm,0.8s
BGF **Bois d'Agland** 87.74 42⇑*i*P P 22 03 55.1 -0.2
BGF pmax pmax
comp=Z,58nm,0.8s
BGF **Bois d'Agland** 87.74 42⇑*i*P P 22 03 55.1 -0.2
comp=Z,58nm,0.8s
HYF **Humbligny** 87.79 42⇑*i*P P 22 03 55.6 +0.1
HYF **Humbligny** 87.79 42⇑*i*P P 22 03 55.6 +0.1
AGO **Saint Agoulin** 87.80 43 *e*P P 22 03 56.5 +0.9
AGO **Saint Agoulin** 87.80 43 *e*P P 22 03 56.5 +0.9
LASF **Ste Croix** 87.80 45 *e*P P 22 03 55.3 -0.4
comp=Z,36nm,1.2s
LASF **Ste Croix** 87.80 45 *e*P P 22 03 55.3 -0.4
comp=Z,36nm,1.2s
EGAK **Eagle** 88.06 337 *e*P P 22 03 56.2 -0.1
comp=Z,18nm,0.8s
SSF **Saint Saulge** 88.30 42⇑*i*P P 22 03 57.3 -0.6
comp=Z,28nm,1.1s
SSF **Saint Saulge** 88.30 42⇑*i*P P 22 03 57.3 -0.6
SSF pmax pmax
comp=Z,28nm,1.1s
SSF **Saint Saulge** 88.30 42⇑*i*P P 22 03 57.3 -0.6
comp=Z,28nm,1.1s
MENT **Mentasta** 88.36 335 *e*P P 22 03 57.5 -0.4
SMF **Signal de Mont** 88.42 42⇑*i*P P 22 03 58.3 -0.2
comp=Z,54nm,0.9s
SMF *ep*P pP 22 04 31.9 -1.1
SMF **Signal de Mont** 88.42 42⇑*i*P P 22 03 58.3 -0.2
SMF *e**PP pP 22 04 31.9 -1.1
SMF pmax pmax
comp=Z,54nm,0.9s
SMF **Signal de Mont** 88.42 42⇑*i*P P 22 03 58.3 -0.2
comp=Z,54nm,0.9s
SMF *ep*P pP 22 04 31.9 -1.1
VNDA **Vanda** 88.44 190 P P 22 03 59.3 +1.3
VNDA pP pP 22 04 33.6 +1.1
VNDA **Vanda** 88.44 190 P P 22 03 59.3 +1.3
comp=Z,3.2nm,0.8s,baz=123,slow=4.3,SNR=18
VNDA pP pP 22 04 33.6 +1.1
comp=Z,1.2nm,0.7s,baz=56,slow=4.2,SNR=3.4
VIVF **Saint-Julien-l** 88.56 44⇑*i*P P 22 03 59.6 +0.4
comp=Z,40nm,1.0s
VIVF *ep*P pP 22 04 33.4 -0.3
VIVF **Saint-Julien-l** 88.56 44⇑*i*P P 22 03 59.6 +0.4
VIVF *e**PP pP 22 04 33.4 -0.3
VIVF pmax pmax
comp=Z,40nm,1.0s
VIVF **Saint-Julien-l** 88.56 44⇑*i*P P 22 03 59.6 +0.4
comp=Z,40nm,1.0s
VIVF *ep*P pP 22 04 33.4 -0.3
SSB **Saint Sauveur** 88.57 44 *e*P P 22 03 59.2 -0.1
SSB pmax pmax
comp=Z,25nm,1.1s
SSB **Saint Sauveur** 88.57 44 *e*P P 22 03 59.1 -0.1
comp=Z,25nm,1.1s
LOR **Lormes** 88.59 42⇑*i*P P 22 03 58.8 -0.5
comp=Z,22nm,0.8s
LOR **Lormes** 88.59 42⇑*i*P P 22 03 58.8 -0.5
comp=Z,22nm,0.8s
DIV **Divide** 88.59 333 *e*P P 22 03 58.5 -0.5
DOT **Dot Lake** 88.77 335 *e*P P 22 04 00.2 +0.4
DOT *ep*P PcP 22 04 17.7 +16
SMRF **Simiane la Rot** 88.99 45 *e*P P 22 04 01.9 +0.6
comp=Z,49nm,1.3s
SMRF **Simiane la Rot** 88.99 45 *e*P P 22 04 01.9 +0.6
comp=Z,49nm,1.3s
PAX **Paxson** 89.11 334 *e*P P 22 04 01.2 -0.3
PAX **Paxson** 89.11 334 *e*P P 22 04 01.2 -0.3
TSUM **Tsumeb** 89.29 109 *e*P P 22 04 04.5 +1.1
ORIF **Oris-en-Rattie** 89.41 44⇑*i*P P 22 04 04.0 +0.7
comp=Z,57nm,0.7s
ORIF **Oris-en-Rattie** 89.41 44⇑*i*P P 22 04 04.0 +0.7
ORIF pmax pmax
comp=Z,57nm,0.7s
ORIF **Oris-en-Rattie** 89.41 44⇑*i*P P 22 04 04.0 +0.7
comp=Z,57nm,0.7s
BAIF **Baives** 89.50 39⇑*i*P P 22 04 03.4 0.0
comp=Z,16nm,0.9s
BAIF **Baives** 89.50 39⇑*i*P P 22 04 03.4 0.0
BAIF pmax pmax
comp=Z,16nm,0.9s
BAIF **Baives** 89.50 39⇑*i*P P 22 04 03.4 0.0
comp=Z,16nm,0.9s
LMR **La Mourre** 89.51 46⇑*i*P P 22 04 03.8 +0.2
comp=Z,79nm,1.3s
LMR **La Mourre** 89.51 46⇑*i*P P 22 04 03.8 +0.2
LMR pmax pmax
comp=Z,79nm,1.3s
LMR **La Mourre** 89.51 46⇑*i*P P 22 04 03.8 +0.2
comp=Z,79nm,1.3s
SFTF **Sexfontaines** 89.59 41⇑*i*P P 22 04 03.7 -0.2
comp=Z,31nm,0.9s
SFTF **Sexfontaines** 89.59 41⇑*i*P P 22 04 03.7 -0.2
comp=Z,31nm,0.9s
SNF **Seneffe** 89.65 39 P P 22 04 04.6 +0.5
FRF **La Foret Royal** 89.65 46⇑*i*P P 22 04 04.4 +0.1
comp=Z,76nm,1.1s
FRF **La Foret Royal** 89.65 46⇑*i*P P 22 04 04.4 +0.1
FRF pmax pmax
comp=Z,76nm,1.1s
FRF **La Foret Royal** 89.65 46⇑*i*P P 22 04 04.4 +0.1
comp=Z,76nm,1.1s
MEZF **Maizieres J'vi** 89.66 41⇑*i*P P 22 04 04.1 -0.2
comp=Z,12nm,0.6s
MEZF **Maizieres J'vi** 89.66 41⇑*i*P P 22 04 04.1 -0.2
comp=Z,12nm,0.6s
DOU **Dourbes** 89.75 39 P P 22 04 04.7 +0.1
comp=Z,14nm,1.0s
GIVF **Givet** 89.89 39⇑*i*P P 22 04 05.5 +0.2
comp=Z,85nm,0.8s
GIVF *ep*P pP 22 04 39.4 -0.4
GIVF **Givet** 89.89 39⇑*i*P P 22 04 05.5 +0.2
GIVF *e**PP pP 22 04 39.4 -0.4
GIVF pmax pmax
comp=Z,85nm,0.8s
GIVF **Givet** 89.89 39⇑*i*P P 22 04 05.5 +0.2
comp=Z,85nm,0.8s
GIVF *ep*P pP 22 04 39.4 -0.4
CABF **La Chapelle** 89.92 43⇑*i*P P 22 04 05.7 +0.1
comp=Z,24nm,0.9s
CABF **La Chapelle** 89.92 43⇑*i*P P 22 04 05.7 +0.1
CABF pmax pmax
comp=Z,24nm,0.9s
CABF **La Chapelle** 89.92 43⇑*i*P P 22 04 05.7 +0.1
comp=Z,24nm,0.9s
SML **Sawmill** 89.98 333 *e*P P 22 04 05.3 -0.2
SML pmax pmax
comp=Z,9.0nm,0.8s
SML **Sawmill** 89.98 333 *e*P P 22 04 05.3 -0.2
comp=Z,9.0nm,0.8s
MBDF **Montbardon** 89.99 45 *e*P P 22 04 06.4 +0.3
comp=Z,32nm,1.1s
MBDF **Montbardon** 89.99 45 *e*P P 22 04 06.4 +0.3
MBDF pmax pmax
comp=Z,32nm,1.1s
MBDF **Montbardon** 89.99 45 *e*P P 22 04 06.4 +0.3
comp=Z,32nm,1.1s
PAGF **Fort de Pagny** 90.11 41⇑*i*P P 22 04 06.4 0.0
comp=Z,111nm,1.2s
PAGF **Fort de Pagny** 90.11 41⇑*i*P P 22 04 06.4 0.0
comp=Z,111nm,1.2s
LPL **La Plagne** 90.12 44⇑*i*P P 22 04 07.5 +0.7
comp=Z,42nm,0.7s
LPL *ep*P pP 22 04 41.1 -0.2
LPL **La Plagne** 90.12 44⇑*i*P P 22 04 07.5 +0.7
LPL *e**PP pP 22 04 41.1 -0.2
LPL pmax pmax
comp=Z,42nm,0.7s
LPL **La Plagne** 90.12 44⇑*i*P P 22 04 07.5 +0.7
comp=Z,42nm,0.7s
LPL *ep*P pP 22 04 41.1 -0.2
LPG **La Plagne** 90.14 44⇑*i*P P 22 04 07.7 +0.8
comp=Z,68nm,0.9s
LPG **La Plagne** 90.14 44⇑*i*P P 22 04 07.7 +0.8
LPG pmax pmax
comp=Z,68nm,0.9s
LPG **La Plagne** 90.14 44⇑*i*P P 22 04 07.7 +0.8
comp=Z,68nm,0.9s
KEST **Kesra** 90.16 54 *e*P P 22 04 05.6 -1.4
KEST **Kesra** 90.16 54 P P 22 04 07.3 +0.3
comp=Z,4.9nm,0.8s,baz=265,slow=3.4,SNR=12
BCLA **Clavier** 90.26 39 P P 22 04 07.0 0.0
SBF **Sospel** 90.28 46 *e*P P 22 04 07.4 +0.1
comp=Z,54nm,0.9s
SBF **Sospel** 90.28 46 *e*P P 22 04 07.4 +0.1
SBF pmax pmax
comp=Z,54nm,0.9s
SBF **Sospel** 90.28 46 *e*P P 22 04 07.4 +0.1
comp=Z,54nm,0.9s
ILAR **Eielson Array** 90.33 336 P P 22 04 06.7 -0.4
ILAR pP pP 22 04 42.4 +0.9
ILAR PP PP 22 07 42.0 -1.0
ILAR **Eielson Array** 90.33 336 P P 22 04 06.7 -0.4
comp=Z,4.1nm,0.9s,baz=145,slow=3.4,SNR=31
ILAR pP pP 22 04 42.4 +0.9
comp=Z,8.1nm,0.9s,baz=137,slow=3.1,SNR=12
ILAR PP PP 22 07 42.0 -1.0
comp=Z,1.2nm,0.9s,baz=114,slow=7.1,SNR=5.2
SYO **Syowa Base** 90.39 161⇑*e*P P 22 04 04.8 -2.5
SYO **Syowa Base** 90.39 161⇑*e*X P 22 04 12.0 +4.7
SYO **Syowa Base** 90.39 161⇓*e*P pP 22 04 42.8 +1.0
HAU **Haudompre** 90.40 42⇑*i*P P 22 04 07.4 -0.3
comp=Z,7.8nm,0.6s
HAU **Haudompre** 90.40 42⇑*i*P P 22 04 07.4 -0.3
HAU pmax pmax
comp=Z,8.0nm,0.6s
HAU **Haudompre** 90.40 42⇑*i*P P 22 04 07.4 -0.3
comp=Z,7.8nm,0.6s
RC01 **Rabbit Creek A** 90.40 332 *e*P P 22 04 07.2 -0.1
comp=Z,10nm,1.0s
LOMF **Lomont** 90.58 42 *e*P P 22 04 09.2 +0.5
LOMF **Lomont** 90.58 42 *e*P P 22 04 09.2 +0.5
LOMF **Lomont** 90.58 42 *e*P P 22 04 09.2 +0.5
WLF **Walferdange** 90.63 40 P P 22 04 09.5 +0.8
comp=Z,26nm,1.5s
HINF **Hinteralfeld** 90.69 42 *e*P P 22 04 08.7 -0.4
HINF **Hinteralfeld** 90.69 42 *e*P P 22 04 08.7 -0.4
HINF **Hinteralfeld** 90.69 42 *e*P P 22 04 08.7 -0.4
HGN **Heimansgroeve** 90.73 39 *e*P P 22 04 09.2 0.0
comp=Z,27nm,1.0s
MEM **Membach** 90.74 39 P P 22 04 10.7 +1.4
comp=Z,7.6nm,1.2s
COLA **College** 90.75 336 *e*P P 22 04 09.4 +0.5
COLA **College** 90.75 336 *e*P P 22 04 09.4 +0.5
MCK **McKinley** 90.84 335 *e*P P 22 04 09.4 0.0
MCK pmax pmax
comp=Z,7.0nm,1.0s
MCK **McKinley** 90.84 335 *e*P P 22 04 09.4 0.0
comp=Z,6.6nm,1.0s
MCK *ep*P pP 22 04 28.1 -16
MOF **Molkenrain** 90.88 42 *e*P P 22 04 05.3 -4.8
MOF **Molkenrain** 90.88 42 *e*P P 22 04 05.3 -4.8
ECH **Echery** 90.97 41 *e*P P 22 04 09.7 -0.7
ECH pmax pmax

	comp=Z,13nm,0.9s						
ECH	Echery	90.97	41	eP	P	22 04 09.7	-0.7
	comp=Z,13nm,0.9s						
ECH	Echery	90.97	41	eP	P	22 04 10.9	+0.5
DAG	Danmarks Havn	91.04	11	⇓iP	P	22 04 19.1	+9.0
DAG				i		22 04 45.7	
DAG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DAG	Danmarks Havn	91.04	11	⇓iP	P	22 04 19.1	+9.0
	comp=Z,8.6nm,0.9s						
DAG				i pP	pP	22 04 45.7	+1.1
BBS	Basel-Blauen	91.05	42	eP	P	22 04 11.1	+0.3
BBS	Basel-Blauen	91.05	42	eP	P	22 04 11.1	+0.3
CDF	Champ du Feu	91.09	41	⇑iP	P	22 04 10.8	-0.2
	comp=Z,26nm,0.7s						
CDF	Champ du Feu	91.09	41	⇑iP	P	22 04 10.8	-0.2
CDF				pmax	pmax		
	comp=Z,26nm,0.7s						
CDF	Champ du Feu	91.09	41	⇑iP	P	22 04 10.8	-0.2
	comp=Z,26nm,0.7s						
RUP	Ruppelstein	91.21	40	eP	P	22 04 12.4	+0.9
RUP	Ruppelstein	91.21	40	eP	P	22 04 12.4	+0.9
TRF	Thorofare Moun	91.33	334	eP	P	22 04 11.0	-0.9
FELD	Feldberg im Sc	91.46	42	eP	P	22 04 13.1	+0.3
WTSB	Winterswijk	91.52	38	eP	P	22 04 12.9	+0.2
	comp=Z,50nm,1.3s						
LANF	Langenberg	91.55	41	eP	P	22 04 13.7	+0.7
LANF	Langenberg	91.55	41	eP	P	22 04 13.7	+0.7
LANF	Langenberg	91.55	41	eP	P	22 04 13.7	+0.7
RSO	Redoubt South	91.65	331	eP	P	22 04 13.5	0.0
TUE	Stuetta	92.10	43	eP	P	22 04 16.6	+0.6
COLD	Coldfoot	92.39	338	eP	P	22 04 17.4	+0.9
COLD				epP	pP	22 04 35.1	-16
STU	Stuttgart	92.41	41	eP	P	22 04 19.3	+2.3
STU				pmax	pmax		
	comp=Z,11nm,0.7s						
STU	Stuttgart	92.41	41	eP	P	22 04 19.3	+2.3
	comp=Z,10nm,0.7s						
MOTA	Moosalm	93.43	43	⇑iP	P	22 04 22.0	+0.1
	comp=Z,9.7nm,0.7s						
MUD	Monsted U'grnd	93.75	34	i P	P	22 04 24.2	+1.3
MUD				pmax	pmax		
	comp=Z,11nm,0.9s						
MUD	Monsted U'grnd	93.75	34	i P	P	22 04 24.2	+1.3
	comp=Z,11nm,0.9s						
WTTA	Wattenberg	93.78	43	⇑iPcP	PcP	22 04 24.0	0.0
	comp=Z,16nm,1.3s						
ABTA	Abfaltersbach	94.30	44	⇑iPcP	PcP	22 04 26.3	+0.1
	comp=Z,23nm,1.3s						
BOSA	Boshof	94.50	120	P	P	22 04 27.6	+0.3
BOSA	Boshof	94.50	120	P	P	22 04 27.6	+0.3
	comp=Z,8.2nm,1.1s,baz=149,slow=0.5,SNR=4.4						
CLL	Collm	95.22	39	i P	P	22 04 30.4	+0.6
CLL				pmax	pmax		
	comp=Z,173nm,1.1s						
CLL	Collm	95.22	39	i P	P	22 04 30.4	+0.6
	comp=Z,7.0nm,1.1s						
CLL				epP	pP	22 05 05.0	+0.6
JAVS	Javornik	95.25	45	i P	P	22 04 31.1	+0.9
KHC	Kasperske Hory	95.32	41	eP	P	22 04 30.9	+0.5
KHC				e		22 05 17.0	
KHC	Kasperske Hory	95.32	41	eP	P	22 04 30.9	+0.5
KHC				esP	sP	22 05 17.0	-2.2
GERES	GERESS Array B	95.36	42	P	P	22 04 31.0	+0.3
GERES	GERESS Array B	95.36	42	P	P	22 04 31.0	+0.3
	comp=Z,1.0nm,0.8s,baz=250,slow=4.0,SNR=3.7						
CRNS	Crni Vrh	95.41	44	i P	P	22 04 31.3	+0.4
NB2	NORSAR Subarra	95.50	29	P	P	22 04 31.8	+0.8
	comp=Z,16nm,1.0s,baz=262,slow=4.6						
NB2	NORSAR Subarra	95.50	29	P	P	22 04 31.8	+0.8
	baz=262,slow=4.6						
NOA	NORSAR Array B	95.50	29	P	P	22 04 31.9	+0.9
NOA				pP	pP	22 05 06.7	+1.1
NOA	NORSAR Array B	95.50	29	P	P	22 04 31.9	+0.9
	comp=Z,4.0nm,1.0s,baz=259,slow=4.5,SNR=9.6						
NOA				pP	pP	22 05 06.7	+1.1
	comp=Z,9.1nm,0.9s,baz=259,slow=4.6,SNR=9.9						
LBTB	Lobatse	95.56	116	eP	P	22 04 33.0	+0.8
BRG	Berggiesshubel	95.76	40	eP	P	22 04 32.7	+0.4
	comp=Z,6.5nm,1.1s						
BRG	Berggiesshubel	95.76	40	eP	P	22 04 32.7	+0.4
BRG				pmax	pmax		
	comp=Z,17nm,1.1s						
PRU	Pruhonice	96.04	40	eP	P	22 04 34.2	+0.6
PRU	Pruhonice	96.04	40	eP	P	22 04 34.2	+0.6
UPC	Upice	97.03	40	eP	Pdif	22 04 39.2	+1.0
UPC	Upice	97.03	40	eP	Pdif	22 04 39.2	+1.0
MORC	Moravsky Berou	97.95	41	eP	Pdif	22 04 43.4	+1.0
MORC	Moravsky Berou	97.95	41	eP	Pdif	22 04 43.4	+1.0
VYHS	Vyhne	98.72	42	eP	Pdif	22 04 46.4	+0.6
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
VYHS	Vyhne	98.72	42	PDIF	Pdif	22 04 46.3	+0.5
VYHS				e		22 04 52.1	
OJC	Ojcow	99.43	40	eP	Pdif	22 04 50.4	+1.5
OJC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
OJC	Ojcow	99.43	40	ePdif	Pdif	22 04 50.4	+1.5
	comp=Z,7.8nm,1.1s						
ARCES	ARCESS Array B	101.61	21	pP	pP	22 05 33.2	+0.2
ARCES	ARCESS Array B	101.61	21	pP	pP	22 05 33.2	+0.2
	comp=Z,1.2nm,0.7s,baz=276,slow=4.8,SNR=1.6						
BRTR	Keskin Array B	109.54	51	PP	PP	22 10 06.5	-3.0
BRTR	Keskin Array B	109.54	51	PP	PP	22 10 06.5	-3.0
	comp=Z,0.8nm,0.9s,baz=232,slow=6.1,SNR=4.9						
BHD	Baghdad	118.92	57	ePdiff	Pdif	22 06 18.7	+2.8
BHD				ePKP	PKiKP	22 09 57.3	+2.6
BHD				ePP	PP	22 11 16.0	+0.4
BHD				eSKS	SKSdf	22 17 01.6	+7.2
BHD				eSKKS	SKSac	22 17 12.0	+34
ABKAR	Akbulak array	124.60	35	ePKPdf	PKPdf	22 10 05.8	+0.7
STKA	Stephens Creek	126.86	219	PKP	PKPdf	22 10 10.6	+0.6
STKA	Stephens Creek	126.86	219	PKP	PKPdf	22 10 10.6	+0.6
	comp=Z,4.7nm,0.8s,baz=322,slow=4.2,SNR=8.9						
BRVK	Borovoye	127.42	26	i PKIKP	PKPdf	22 10 09.7	-0.7
NVS	Novosibirsk	130.68	17	ePKIKP	PKPdf	22 10 27.8	+11
NVS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZALV	Zalesovo Beam	131.91	16	PKIKP	PKPdf	22 10 19.8	+0.9
ZALV						22 10 56.6	
ZALV	Zalesovo Beam	131.91	16	PKP	PKPdf	22 10 19.8	+0.9
ZALV				pPKP	pPKPdf	22 10 56.5	+1.6
ZALV	Zalesovo Beam	131.91	16	PKP	PKPdf	22 10 19.8	+0.9
	comp=Z,1.5nm,0.6s,baz=267,slow=3.0,SNR=11						
ZALV				pPKP	pPKPdf	22 10 56.5	+1.6
	comp=Z,24nm,1.0s,baz=304,slow=2.7,SNR=10						
KURK	Kurchatov	132.60	23	ePKIKP	PKPdf	22 10 22.0	+1.7
KURK	Kurchatov	132.60	23	ePKPdf	PKPdf	22 10 22.0	+1.7
EKS2	Erkin-Say	136.25	34	ePKIKP	PKPdf	22 10 29.2	+1.6
EKS2	Erkin-Say	136.25	34	ePKPdf	PKPdf	22 10 29.2	+1.6
AAK	Ala-Archa	136.66	33	i PKIKP	PKPdf	22 10 27.8	-0.6
MKAR	Makanchi Array	137.20	23	PKIKP	PKPdf	22 10 29.1	0.0
MKAR						22 11 05.6	
MKAR	Makanchi Array	137.20	23	PKP	PKPdf	22 10 29.1	0.0
MKAR				pPKP	pPKPdf	22 11 05.5	+0.4
MKAR	Makanchi Array	137.20	23	PKP	PKPdf	22 10 29.1	0.0
	comp=Z,0.5nm,0.7s,baz=323,slow=3.5,SNR=6.5						
MKAR				pPKP	pPKPdf	22 11 05.5	+0.4
	comp=Z,6.2nm,0.8s,baz=359,slow=1.8,SNR=11						
ASAR	Alice Springs	137.44	220	PKPpre	PKPpre	22 10 21.2	
ASAR				PKP	PKPdf	22 10 29.9	-0.3
ASAR				pPKP	pPKPdf	22 11 05.2	-1.2
ASAR				SKPbc	SKPbc	22 13 50.2	-1.2
ASAR	Alice Springs	137.44	220	PKhKP	PKPpre	22 10 21.2	
	comp=Z,0.6nm,0.7s,baz=132,slow=2.3,SNR=9.1						
ASAR				PKP	PKPdf	22 10 29.9	-0.3
	comp=Z,5.7nm,1.0s,baz=131,slow=2.1,SNR=16						
ASAR				pPKP	pPKPdf	22 11 05.2	-1.2
	comp=Z,4.5nm,1.0s,baz=144,slow=2.2,SNR=4.3						
ASAR				SKPbc	SKPbc	22 13 50.2	-1.2
	comp=Z,1.2nm,0.7s,baz=132,slow=3.4,SNR=4.7						
USRK	Ussuriysk Arra	137.69	331	PKP	PKPdf	22 10 30.9	+0.9
	comp=Z,2.7nm,0.8s,baz=254,slow=3.8,SNR=4.8						
USRK				SKPbc	SKPbc	22 13 51.9	+0.5
	comp=Z,4.2nm,0.9s,baz=35,slow=7.0,SNR=7.6						
ZAK	Zakamensk	138.37	2	ePKIKP	PKPdf	22 10 40.2	+9.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MDJ	Mudanjiang	138.46	334	PKP	PKPdf	22 10 30.5	-0.9
MDJ				AMB	AMB		
	comp=Z,86nm,9.9s						
KSH	Kashi	139.57	36	ePKPbc	PKPdf	22 10 42.1	+8.3
KSH				epPKP	pPKPdf	22 11 24.1	+14
KSH				esPKP		22 11 41.1	
KSH				ePP	PP	22 13 08.2	-21
KSH				eSKS	SKSdf	22 17 32.6	+0.6
KSH	Kashi	139.57	36	eSKKS	SKKSac	22 20 48.6	+38
KSH				AMB	AMB		
	comp=Z,220nm,4.9s						
KSH				LR	LR		
	comp=N,960nm,10.4s						
KSH				LR	LR		
	comp=E,440nm,7.0s						
KSH				LR	LR		
	comp=Z,780nm,23.8s						
WRAB	Tennant Creek	139.72	225	ePKIKP	PKPdf	22 10 33.6	-0.9
WRAB	Tennant Creek	139.72	225	ePKPdf	PKPdf	22 10 33.5	-0.9
WRA	Warramunga Arr	139.72	225	PKPpre	PKPpre	22 10 28.4	
WRA				PKP	PKPdf	22 10 34.7	+0.2
WRA				pPKP	pPKPdf	22 11 09.9	-0.7
WRA				SKPbc	SKPbc	22 13 57.4	-0.5
WRA	Warramunga Arr	139.72	225	PKhKP	PKPpre	22 10 28.4	
	comp=Z,1.9nm,1.0s,baz=138,slow=2.7,SNR=6.4						
WRA				PKP	PKPdf	22 10 34.7	+0.2
	comp=Z,5.8nm,0.7s,baz=137,slow=1.7,SNR=26						
WRA				pPKP	pPKPdf	22 11 09.9	-0.7
	comp=Z,2.5nm,0.6s,baz=129,slow=1.8,SNR=4.4						
WRA				SKPbc	SKPbc	22 13 57.4	-0.5
	comp=Z,1.3nm,0.8s,baz=132,slow=2.4,SNR=3.7						
CN2	Changchun	140.84	337	ePKP	PKPdf	22 10 32.5	-3.2
CN2				PP	PP	22 13 37.7	+1.2
CN2				AMB	AMB		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,200nm,17.0s						
CN2				LR	LR		
	comp=E,200nm,17.0s						
CN2				LR	LR		
	comp=Z,200nm,22.0s						
ULN	Ulaanbaatar	140.90	358	ePKPdf	PKPdf	22 10 39.1	+3.1
SONM	Songino Array	140.94	359	PKP	PKPdf	22 10 33.5	-2.5
SONM				SKPab	SKPab	22 14 10.5	-2.9
SONM	Songino Array	140.94	359	PKP	PKPdf	22 10 33.5	-2.5
	comp=Z,0.8nm,0.7s,baz=347,slow=3.3,SNR=3.9						
SONM				SKPab	SKPab	22 14 10.5	-2.9
	comp=Z,2.0nm,0.9s,baz=340,slow=3.8,SNR=5.3						
WMQ	Urumqi	141.73	21	ePKP	PKPdf	22 10 34.2	-3.3
KSRS	Korea Array	144.79	328	PKP	PKPab	22 10 42.0	-0.1
	comp=Z,9.0nm,0.8s,baz=51,slow=2.5,SNR=31						
KSRS				pPKP	pPKPdf	22 11 18.9	-0.2
	comp=Z,6.7nm,1.0s,baz=30,slow=3.7,SNR=2.6						
KSRS				SKPbc	SKiKP	22 14 10.3	-0.2
	comp=Z,3.1nm,0.8s,baz=18,slow=1.6,SNR=5.5						
KSAR	Wonju Array Be	144.82	328	PKP	PKPab	22 10 42.0	-0.2
KSAR				pPKP	pPKPdf	22 11 18.9	-0.3
KSAR				SKPbc	SKiKP	22 14 10.3	-0.2
FITZ	Fitzroy Crossi	146.71	217	PKPbc	PKPbc	22 10 48.9	+0.3
FITZ				pPKPbc	pPKPbc	22 11 22.3	-1.9
FITZ	Fitzroy Crossi	146.71	217	PKPbc	PKPbc	22 10 48.9	+0.3
	comp=Z,44nm,0.9s,baz=181,slow=3.7,SNR=42						
FITZ				pPKPbc	pPKPbc	22 11 22.3	-1.9
	comp=Z,16nm,0.9s,baz=164,slow=5.8,SNR=3.6						
BJI	Beijing	147.28	345	PKPbc	PKPdf	22 10 47.7	+0.7
BJI				pPKP	PKiKP	22 11 05.0	+13
BJI				sPKP		22 11 10.5	
HHC	Hu-ho-hao-te	147.46	351	ePKPbc	PKPdf	22 10 47.5	0.0
HHC				pPKP	pPKPdf	22 11 08.8	-15
HHC				PP	PP	22 14 19.7	+3.8
HHC				SS	SS	22 33 13.8	+6.5
HHC				AMB	AMB		
	comp=Z,320nm,8.6s						
HHC				LR	LR		
	comp=N,130nm,19.3s						
HHC				LR	LR		
	comp=E,220nm,19.3s						
HHC				LR	LR		
	comp=Z,190nm,19.2s						
GTA	Gaotai	148.98	8	eP	PKPbc	22 10 55.2	+1.0
GTA				pP	PKPab	22 11 03.9	+5.3
GTA				sP		22 11 07.4	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HYB	Hyderabad	152.51	69	i PKP	PKPab	22 11 11.5	-2.4
LZH	Lanzhou	152.66	3	ePKPbc	PKPdf	22 10 53.1	-2.8
LZH				ePP	PP	22 14 45.6	-0.2
LZH				AMB	AMB		
	comp=Z,140nm,8.7s						
LZH				LR	LR		
	comp=N,160nm,17.8s						
LZH				LR	LR		
	comp=E,150nm,18.0s						
LZH				LR	LR		
	comp=Z,180nm,20.3s						
KKN	Kakani	153.15	42	eP	PKPab	22 11 14.9	-1.5
DMN	Daman	153.15	43	eP	PKPab	22 11 15.2	-1.3
	comp=Z,18nm,0.4s						
PKIN	Phulchoki	153.36	42	eP	PKPab	22 11 14.8	-2.6
PKI	Pulchoki	153.38	42	eP	PKPab	22 11 15.7	-1.8
XAN	Xi'an	154.52	353	P	PKPab	22 11 21.6	-0.1
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,60nm,12.3s						
RAMN	Ramite	154.58	42	eP	PKPab	22 11 18.8	-3.8
TAPN	Taplejung	155.02	40	eP	PKPab	22 11 19.9	-4.6
	comp=Z,16nm,0.5s						
ODAN	Odare	155.16	41	eP	PKPab	22 11 20.1	-4.9
CD2	Chengdu	157.81	4	ePKP	PKPdf	22 11 01.0	-1.8
CD2				PP	PP	22 15 17.3	+3.0
CD2				AMB	AMB		
	comp=Z,460nm,10.2s						
CD2				LR	LR		
	comp=E,240nm,17.8s						
CD2				LR	LR		
	comp=Z,120nm,14.3s						
GYA	Guiyang	162.25	356	ePKP	PKPdf	22 11 05.4	-2.6
GYA				PKPab	PKPab	22 11 55.8	+0.4
GYA				PKS	PKSdf	22 14 38.0	-3.4
GYA				PP	PP	22 15 41.2	+2.8
GYA				AMB	AMB		
	comp=Z,120nm,8.0s						
KMI	Kunming	163.43	8	PKP	PKPdf	22 11 07.5	-1.8
CMAR	Chiang Mai Arr	168.44	32	PKP	PKPdf	22 11 14.1	+0.8
CMAR				pPKP	pPKPdf	22 11 50.6	+1.0
CMAR				PKPab	PKPab	22 12 23.9	+1.1
CMAR				pPKPab	pPKPab	22 12 58.6	+1.0
CMAR	Chiang Mai Arr	168.44	32	PKP	PKPdf	22 11 14.1	+0.8
	comp=Z,0.7nm,0.8s,baz=293,slow=1.1,SNR=4.8						
CMAR				pPKP	pPKPdf	22 11 50.6	+1.0
	comp=Z,1.3nm,0.8s,baz=277,slow=2.3,SNR=3.7						
CMAR				PKPab	PKPab	22 12 23.9	+1.1
	comp=Z,4.1nm,0.9s,baz=314,slow=6.2,SNR=12						
CMAR				pPKPab	pPKPab	22 12 58.6	+1.0
	comp=Z,5.5nm,0.8s,baz=318,slow=6.1,SNR=8.5						

ROM 06 22:02:59.7±0.2**, 42°.31N×13°.42E, h11**km±1km**, Md1.5**/4**, Ml1.3**/1**, Error ellipse: s-maj=2.5km s-min=0.8km az=29.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	340	Pg	Pg	22 03 02.3	+0.4
AQU				Sg	Sg	22 03 04.0	+0.5
	134nm,0.4s						
FAGN	Fagnano	0.13	111	Pg	Pg	22 03 03.3	+0.4
FAGN				Sg	Sg	22 03 05.9	+0.7
	82nm,0.4s						

*CSEM **06** 22:10:16.9±0.3, 41°.33N×22°.66E, h15km, MD2.8, Error ellipse: s-maj=6.4km s-min=4.1km az=172.0*
*ISCJB **06** 22:10:17.2±1.5, 41°.33N±0°.08×22°.70E±0°.06, h7km±13km, Error ellipse: s-maj=13.8km s-min=6.7km az=159.1*
*SKO **06** 22:10:17.2, 41°.29N×22°.69E, h12km, M0.9, ML1.3*
*ATH **06** 22:10:17.0, 41°.35N×22°.65E, h4km, MD2.8/3*
ISC 06 22:10:17.4±1.3**, 41°.32N**±0°.06×**22°.69E**±0°.05**, h10**km±12km**, n10, σ0s.40**/20**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	270	i Pg	Pg	22 10 19.7	-0.2
VAY				i Sg	Sg	22 10 21.5	-0.3
VAY				eLg	Lg	22 10 21.6	
	comp=N,290nm,0.2s						
VAY				eLg	Lg	22 10 21.9	
	comp=E,79nm,0.3s						
VAY	Valandovo	0.09	270	i Pg	Pg	22 10 20.2	+0.3
VAY				i Sg	Sg	22 10 21.9	+0.1
VAY				eLg	Lg	22 10 22.4	
	comp=E,79nm,0.3s						
GRG	Griva	0.42	211	ePG	Pg	22 10 25.5	-0.3
GRG				eSG	Sg	22 10 31.3	-0.1
GRG	Griva	0.42	211	ePg	Pg	22 10 25.5	-0.3
GRG				eSg	Sg	22 10 31.3	-0.1
SOH	Sokhos	0.71	135	ePG	Pg	22 10 30.3	-0.8
SOH				eSG	Sb	22 10 41.9	+0.3
SOH	Sokhos	0.71	135	ePg	Pg	22 10 30.3	-0.8
SOH				eSg	Sb	22 10 41.9	+0.3
NVR	Nevrokopi	0.88	88	ePG	Pb	22 10 34.8	0.0
NVR				eSG	Sg	22 10 46.1	+0.2
NVR	Nevrokopi	0.88	88	ePg	Pb	22 10 34.8	0.0
NVR				eSg	Sg	22 10 46.1	+0.2
PLG	Polygyros	1.10	149	ePG	Pg	22 10 38.8	+0.1
PLG				eSB	Sg	22 10 53.6	+0.6
PLG	Polygyros	1.10	149	ePg	Pg	22 10 38.8	+0.1
PLG				eSb	Sg	22 10 53.6	+0.6

IDC 06 22:15:21.5±1.7**, 7°.70S×120°.52E, h204**km±16km**, mb3.3**/5**, mb1 3.4**/7**, mb1mx3.2**/22**, mbtmp3.2**/7**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx1.8**/20**, Error ellipse: s-maj=53.1km s-min=10.7km az=54.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	2.77	344	P	Pn	22 16 08.6	-0.2
	4.2nm,0.3s,baz=184,slow=5.1,SNR=8.3						
KAPI				LR	LR	22 16 58.3	
	comp=Z,350nm,20.4s,baz=66,slow=35						
FITZ	Fitzroy Crossi	11.48	155	P	Pn	22 17 56.6	-3.2
	0.2nm,0.3s,baz=7.6,slow=15,SNR=5.4						
FITZ				S	S	22 19 55.0	-12
	0.2nm,0.3s,baz=248,slow=19,SNR=5.9						
WRA	Warramunga Arr	18.10	134	P	P	22 19 18.4	+0.2
	0.5nm,0.3s,baz=299,slow=12,SNR=41						
WRA				S	S	22 22 35.5	+0.4
	0.2nm,0.3s,baz=310,slow=23,SNR=5.5						
ASAR	Alice Springs	20.42	143	P	P	22 19 43.0	-0.3
	1.8nm,0.4s,baz=321,slow=9.3,SNR=42						
ASAR				ScP	ScP	22 27 03.3	-0.8
	0.3nm,0.6s,baz=330,slow=2.6,SNR=4.2						
STKA	Stephens Creek	31.05	144	P	P	22 21 21.2	+0.8
	2.9nm,0.4s,baz=306,slow=9.2,SNR=22						
MKAR	Makanchi Array	64.01	332	P	P	22 25 33.6	+0.3
	0.5nm,0.5s,baz=147,slow=7.7,SNR=8.3						
ZALV	Zalesovo Beam	68.38	338	P	P	22 26 00.5	-0.4
	0.7nm,0.4s,baz=139,slow=5.7,SNR=4.7						
VNDA	Vanda	73.04	171	P	P	22 26 28.3	-0.3
	0.4nm,0.9s,baz=323,slow=8.1,SNR=3.2						

IDC 06 22:19:56.0±2.2**, 18°.25S×175°.67W, h166**km±29km**, mb3.9**/7**, mb1 4.0**/8**, mb1mx3.6**/23**, mbtmp3.9**/8**, Error ellipse: s-maj=31.6km s-min=18.0km az=115.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	5.71	42	P	Pn	22 21 21.1	+1.9
	9.3nm,0.3s,baz=185,slow=2.0,SNR=10						
AFI				S	Sn	22 22 23.4	-1.0
	8.5nm,0.3s,baz=17,slow=19,SNR=3.9						
URZ	Urewera	20.91	196	P	P	22 24 23.7	-1.8
	12nm,0.5s,baz=58,slow=5.7,SNR=26						
RPZ	Rata Peaks	27.75	201	P	P	22 25 30.8	+1.6
	9.7nm,0.7s,baz=346,slow=8.3,SNR=4.7						
CTA	Charters Tower	35.96	261	P	P	22 26 40.8	-0.3
	2.7nm,0.5s,baz=104,slow=10,SNR=11						
STKA	Stephens Creek	40.76	242	P	P	22 27 20.9	-0.2
	2.3nm,0.8s,baz=90,slow=12,SNR=5.8						
WRA	Warramunga Arr	47.13	259	P	P	22 28 11.7	-0.2
	1.6nm,0.5s,baz=97,slow=7.7,SNR=41						
WRA				PcP	PcP	22 29 40.5	-0.6
	0.3nm,0.5s,baz=95,slow=3.3,SNR=3.3						
ASAR	Alice Springs	47.21	254	P	P	22 28 12.5	-0.1
	6.2nm,0.6s,baz=87,slow=8.6,SNR=139						
ASAR				PcP	PcP	22 29 40.3	-1.0
	0.6nm,0.6s,baz=104,slow=3.8,SNR=4.9						
FITZ	Fitzroy Crossi	55.54	260	P	P	22 29 14.8	+0.3
	1.3nm,0.6s,baz=85,slow=11,SNR=3.9						
BRTR	Keskin Array B	146.85	316	PKPbc	PKPbc	22 39 18.6	-0.7
	0.2nm,0.6s,baz=113,slow=3.3,SNR=3.1						

IDC 06 22:30:31.4±1.9**, 56°.69S×27°.35W, h0**km**, mb4.1**/2**, mb1 4.2**/2**, mb1mx3.7**/16**, mbtmp4.1**/2**, Error ellipse: s-maj=74.5km s-min=43.9km az=4.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	50.68	306	P	P	22 39 33.1	-0.1
	0.6nm,0.4s,baz=220,slow=6.9,SNR=5.3						
TORD	Torodi Ar. Bea	73.66	30	P	P	22 42 06.6	0.0
	1.5nm,0.5s,baz=201,slow=6.6,SNR=38						
ILAR	Eielson Array	150.47	311	PKPbc	PKPbc	22 50 22.9	-0.5
	1.4nm,0.7s,baz=128,slow=1.5,SNR=14						
SONM	Songino Array	150.85	88	PKPbc	PKPbc	22 50 24.7	-0.2
	0.6nm,0.4s,baz=244,slow=3.2,SNR=3.3						

IDC 06 22:32:46.4±1.8**, 2°.68N×127°.82E, h0**km**, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/21**, mbtmp3.5**/4**, Error ellipse: s-maj=134.7km s-min=23.4km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.37	164	P	P	22 37 57.9	+1.1
	0.4nm,0.3s,baz=343,slow=10,SNR=9.4						
ASAR	Alice Springs	26.85	168	P	P	22 38 28.5	-0.4
	0.3nm,0.4s,baz=354,slow=6.9,SNR=4.3						
STKA	Stephens Creek	36.77	160	P	P	22 39 54.4	-1.4
	2.4nm,0.8s,baz=323,slow=10,SNR=3.7						
MKAR	Makanchi Array	59.03	325	P	P	22 42 48.6	+0.4
	0.2nm,0.4s,baz=110,slow=7.7,SNR=3.0						

*IDC **06** 22:34:31.0±1.2, 35°.52N×79°.78E, h0km, mb3.4/4, mb1 3.6/9, mb1mx3.4/30, mbtmp3.6/9, ML3.5/5, Error ellipse: s-maj=31.3km s-min=20.6km az=66.0*
*ISCJB **06** 22:34:32.3±0.4, 35°.69N±0°.05×79°.68E±0°.09, h10km, mb3.4/5, Error ellipse: s-maj=11.7km s-min=4.1km az=152.8*
*BJI **06** 22:34:32.6, 35°.61N×79°.57E, h7km, mb4.5/2, ML3.9/6, Ms3.6/2, Ms7 3.3/2*
*NNC **06** 22:34:38.6±0.8, 36°.15N×79°.50E, h0km, mb3.8, mpv4.0, Error ellipse: s-maj=7.9km s-min=6.3km az=168.0*
ISC 06 22:34:35.3±0.8**, 35°.74N**±0°.07×**79°.62E**±0°.08**, h10**km**, n34, σ1s.92**/36**, mb3.5**/5**, 4C-12D, Kashmir-Xizang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	4.75	324	Pn	Pn	22 35 47.1	0.0
KSH				Sn	Sn	22 36 44.6	+2.2
KSH				smax	smax		
	comp=N,250nm,0.8s						
KSH				smax	smax		
	comp=E,370nm,1.1s						
TKM2	Tokmak 2	7.82	338	⇑Pg	Pb	22 36 53.3	+2.2
	comp=E,12nm,1.1s						
TKM2				⇓Lg	Lg	22 38 34.3	
	comp=E,31nm,0.8s						
AAK	Ala-Archa	7.95	332	Pn	Pn	22 36 36.2	+5.1
	comp=E,0.9nm,0.3s,baz=148,slow=10,SNR=6.2						
AAK				Sn	Sn	22 38 09.6	+8.4
	comp=E,0.5nm,0.3s,baz=141,slow=13,SNR=2.8						
AAK				Lg	Lg	22 38 41.6	
	comp=E,0.9nm,0.3s,baz=9.7,slow=18,SNR=4.4						
PYUN	Piuthan	8.14	158	eP	Pn	22 36 32.0	-1.7
DANN	Dangsing	8.16	153	eP	Pn	22 36 33.7	-0.4
	comp=E,7.6nm,0.3s						
KOLN	Koldanda	8.64	156	eP	Pn	22 36 39.7	-0.9
	comp=E,7.8nm,0.5s						
KKN	Kakani	9.27	147	eP	Pn	22 36 48.8	-0.5
	comp=E,10.0nm,0.7s						
GUN	Gumba	9.45	144	eP	Pn	22 36 51.8	0.0
PKIN	Phulchoki	9.51	147	eP	Pn	22 36 52.2	-0.4
	comp=E,4.8nm,0.4s						
PKI	Pulchoki	9.52	147	eP	Pn	22 36 52.5	-0.3
	comp=E,7.9nm,0.5s						

KK31	**Karatay Array**	**10.18**	**319**	⇓Pn	**Pn**	**22 37 00.9**	**-0.6**
	comp=E,0.6nm,0.4s,baz=137,slow=12,SNR=3.7						
KK31				⇓Sn	**Sn**	**22 38 53.2**	**-2.5**
	comp=E,1.9nm,0.7s,baz=136,slow=24,SNR=3.9						
KK31				⇓Lg	Lg	22 39 50.7	
	comp=E,3.3nm,0.7s						
WMQ	**Urumqi**	**10.18**	**35**	*e*P	**Pn**	**22 37 03.1**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,12nm,0.6s						
RAMN	**Ramite**	**10.60**	**144**	*e*P	**Pn**	**22 37 05.8**	**-1.7**
TAPN	**Taplejung**	**10.84**	**138**	*e*P	Pn	22 37 08.1	-2.7
ODAN	**Odare**	**11.06**	**141**	*e*P	**Pn**	**22 37 11.6**	**-2.3**
	comp=Z,8.8nm,0.5s						
MK31	**Makanchi Array**	**11.22**	**9**	Pn	**Pn**	**22 37 15.2**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=191,slow=12,SNR=66						
MK31				⇑Sn	**Sn**	**22 39 17.8**	**-3.4**
	comp=Z,2.8nm,0.6s,baz=150,slow=35,SNR=4.7						
MKAR	**Makanchi Array**	**11.22**	**9**	Pn	**Pn**	**22 37 15.3**	**-0.5**
	comp=Z,1.2nm,0.3s,baz=189,slow=13,SNR=38						
MKAR				Sn	**Sn**	**22 39 18.4**	**-2.8**
	comp=Z,0.7nm,0.3s,baz=186,slow=21,SNR=7.6						
KURBB	**Kurchatov Arra**	**14.90**	**357**	⇑Pn	**Pn**	**22 38 04.5**	**-1.4**
	comp=Z,1.1nm,0.6s						
KURBB				⇓Lg	Lg	22 42 17.5	
	comp=Z,2.4nm,0.7s						
KURBB	**Kurchatov Arra**	**14.90**	**357**	Pn	**Pn**	**22 38 05.0**	**-0.9**
	comp=Z,0.0nm,0.3s,baz=181,slow=12,SNR=11						
KURK	**Kurchatov**	**14.98**	**358**	⇓Pn	**Pn**	**22 38 06.7**	**-0.4**
	comp=Z,5.5nm,1.2s						
KURK				⇓Lg	Lg	22 42 21.6	
	comp=Z,3.0nm,1.2s						
VOSK	**Vostochnaya**	**18.05**	**343**	⇓Pn	**Pn**	**22 38 45.7**	**-0.4**
	comp=Z,1.5nm,0.9s						
BVA0	**Borovoye Array**	**18.47**	**342**	⇓Pn	**P**	**22 38 50.9**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=152,slow=12,SNR=5.9						
BVAR	**Borovoye Array**	**18.47**	**342**	P	**Pn**	**22 38 51.8**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=156,slow=14,SNR=6.8						
BRVK	**Borovoye**	**18.53**	**342**	⇓Pn	**P**	**22 38 51.9**	**+0.1**
	comp=Z,4.1nm,1.1s						
ZALV	**Zalesovo Beam**	**18.57**	**10**	P	**P**	**22 38 50.3**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=192,slow=14,SNR=9.5						
ZRNK	**Zerenda**	**18.77**	**340**	⇓Pn	**P**	**22 38 54.3**	**-0.2**
	comp=Z,2.4nm,1.0s						
LZH	**Lanzhou**	**19.62**	**82**	*e*P	**P**	**22 39 04.5**	**+0.5**
LZH				*e*PP	**PnPn**	**22 39 24.3**	**+5.5**
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				LR	LR		
	comp=N,100nm,11.2s						
LZH				LR	LR		
	comp=E,110nm,11.5s						
LZH				LR	LR		
	comp=Z,140nm,14.6s						
AB31	**Akbulak array**	**19.74**	**319**	⇓Pn	**P**	**22 39 06.3**	**+1.2**
	comp=Z,0.7nm,0.6s,baz=122,slow=12,SNR=9.6						
AKTO	**Aktyubinsk**	**21.44**	**320**	⇑Pn	**P**	**22 39 27.0**	**+3.4**
	comp=Z,2.4nm,0.7s						
AKTO	**Aktyubinsk**	**21.44**	**320**	P	**P**	**22 39 21.5**	**-2.0**
	comp=Z,0.9nm,0.8s,baz=141,slow=14,SNR=3.7						
BRTR	**Keskin Array B**	**36.28**	**290**	P	**P**	**22 41 38.4**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=104,slow=9.9,SNR=3.7						
ARCES	**ARCESS Array B**	**44.59**	**336**	P	**P**	**22 42 50.4**	**+3.1**
	comp=Z,0.8nm,0.8s,baz=116,slow=10,SNR=3.2						
TORD	**Torodi Ar. Bea**	**72.71**	**274**	P	**P**	**22 46 01.7**	**-2.2**
	comp=Z,0.4nm,0.9s,baz=52,slow=6.2,SNR=5.3						
ASAR	**Alice Springs**	**78.27**	**131**	P	P	22 46 32.0	-3.6
	comp=Z,0.2nm,0.6s,baz=324,slow=5.8,SNR=2.9						

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*ISK **06** 22:56:37.7, 38.89N×29.36E, h5km, MD2.4*
*DDA **06** 22:56:38.7, 39.10N×28.99E, h7km, MD3.0*
*ISCJB **06** 22:56:40.0±0.5, 39.02N±0.03×29.03E±0.05, h9km, Error ellipse: s-maj=6.0km s-min=4.7km az=5.0*
*CSEM **06** 22:56:39.6±0.4, 39.05N×29.07E, h2km, MD3.0, Error ellipse: s-maj=12.5km s-min=8.8km az=98.0*
ISC 06 22:56:38.1±0.8**, 38.98N**±0.03×**29.11E**±0.04**, h9km, n30, σ1.46**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.31**	**282**	*i* P	**Pg**	**22 56 43.9**	**-0.4**
DEMI				*i* S	**Sg**	**22 56 47.0**	**-1.5**
DEMI	**Demirci**	**0.31**	**282**	*i* P	**Pg**	**22 56 43.9**	**-0.4**
DEMI				*i* S	**Sg**	**22 56 47.0**	**-1.5**
TVSB	**Tavsanli**	**0.55**	**30**	*e*PG	**Pg**	**22 56 48.6**	**-0.1**
TVSB	**Tavsanli**	**0.55**	**30**	*e*Pg	**Pg**	**22 56 48.6**	**-0.1**
KULA	**Kula-Manisa**	**0.58**	**217**	*e*PG	**Pb**	**22 56 51.4**	**+1.0**
KULA				*e*SG	**Sb**	**22 56 59.9**	**+1.1**
KULA	**Kula-Manisa**	**0.58**	**217**	*e*Pg	**Pb**	**22 56 51.4**	**+1.0**
KULA				*e*Sg	**Sb**	**22 56 59.9**	**+1.1**
KHAL	**Karahalli**	**0.68**	**153**	*e*P	**Pn**	**22 56 54.7**	**+0.8**
KHAL				*e*S	**Sn**	**22 57 05.0**	**+0.4**
KHAL	**Karahalli**	**0.68**	**153**	*e*P	**Pn**	**22 56 54.7**	**+0.8**
KHAL				*e*S	**Sn**	**22 57 05.0**	**+0.4**
DST	**Dursunbey**	**0.73**	**329**	*e*PG	**Pn**	**22 56 55.9**	**+1.2**
DST	**Dursunbey**	**0.73**	**329**	*e*Pg	**Pn**	**22 56 55.9**	**+1.2**
DURS	**Dursunbey**	**0.79**	**322**	*e*P	**Pg**	**22 56 51.2**	**-2.2**
DURS				*e*S	**Sg**	**22 57 00.1**	**-3.7**
DURS	**Dursunbey**	**0.79**	**322**	*e*P	**Pg**	**22 56 51.2**	**-2.2**
DURS				*e*S	**Sg**	**22 57 00.1**	**-3.7**
CAVI	**Cavuskoy**	**1.35**	**25**	*e*PN	**Pb**	**22 57 04.0**	**+0.4**
CAVI	**Cavuskoy**	**1.35**	**25**	*e*Pn	**Pb**	**22 57 04.0**	**+0.4**
IZI	**Iznik**	**1.39**	**12**	*e*PN	**Pg**	**22 57 05.2**	**+0.5**
IZI	**Iznik**	**1.39**	**12**	*e*Pn	**Pg**	**22 57 05.2**	**+0.5**
MDNY	**Mudanya-Bursa**	**1.40**	**353**	*e*PN	**Pg**	**22 57 06.1**	**+1.1**
MDNY	**Mudanya-Bursa**	**1.40**	**353**	*e*Pn	**Pg**	**22 57 06.1**	**+1.1**
KCTX	**Karacabey (Bur**	**1.41**	**336**	*e*PN	**Pg**	**22 57 07.1**	**+2.0**
KCTX	**Karacabey (Bur**	**1.41**	**336**	*e*Pn	**Pg**	**22 57 07.1**	**+2.0**
GONE	**Gonen-Balikesi**	**1.53**	**315**	*e*PN	**Pg**	**22 57 09.2**	**+1.8**
GONE	**Gonen-Balikesi**	**1.53**	**315**	*e*Pn	**Pg**	**22 57 09.2**	**+1.8**
ARMT	**Armutlu**	**1.60**	**353**	*e*PN	**Pg**	**22 57 09.0**	**+0.3**
ARMT	**Armutlu**	**1.60**	**353**	*e*Pn	**Pg**	**22 57 09.0**	**+0.3**
GULT	**Gulveren**	**1.81**	**36**	*e*PN	**Pn**	**22 57 10.0**	**+0.5**
GULT	**Gulveren**	**1.81**	**36**	*e*Pn	**Pn**	**22 57 10.0**	**+0.5**
BCK	**Bucak**	**1.91**	**142**	*e*PN	**Pn**	**22 57 09.0**	**-1.9**
BCK	**Bucak**	**1.91**	**142**	*e*Pn	**Pn**	**22 57 09.0**	**-1.9**
MRMT	**Marmara Adasi**	**2.00**	**325**	*e*PN	**Pg**	**22 57 16.1**	**-0.3**
MRMT	**Marmara Adasi**	**2.00**	**325**	*e*Pn	**Pg**	**22 57 16.1**	**-0.3**

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*SKO **06** 23:24:35.7, 41.32N×22.74E, h15km, M0.8, ML1.2*
*ISCJB **06** 23:24:35.9±0.5, 41.31N±0.02×22.74E±0.03, h1km±5km, Error ellipse: s-maj=4.2km s-min=3.6km az=24.9*
*ATH **06** 23:24:36.2, 41.31N×22.74E, h3km±2km, MD2.9/5*
*THE **06** 23:24:36.1, 41.32N×22.75E, h10km, ML2.0/6, Error ellipse: s-maj=0.9km s-min=0.4km az=301.0*
*CSEM **06** 23:24:36.1±0.2, 41.30N×22.74E, h2km, ML1.5, Error ellipse: s-maj=4.3km s-min=3.7km az=55.0*
*BEO **06** 23:24:37.7±0.8, 41.31N×22.62E, h8km±3km, ML1.5/5*
ISC 06 23:24:35.9±0.8**, 41.31N**±0.02×**22.74E**±0.02**, h10km**±**6km, n36, σ0.51**/63**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.13**	**276**	P	**Pg**	**23 24 38.9**	**-0.1**
VAY				S	**Sg**	**23 24 41.4**	**+0.3**
VAY	**Valandovo**	**0.13**	**276**	*e*Pg	**Pg**	**23 24 38.9**	**-0.1**
VAY				*e*Sg	**Sg**	**23 24 41.4**	**+0.3**
VAY	**Valandovo**	**0.13**	**276**	*i* Pg	**Pg**	**23 24 38.9**	**-0.1**
VAY				*i* Sg	**Sg**	**23 24 41.3**	**+0.2**
VAY				*e*Lg	Lg	23 24 41.4	
	comp=E,149nm,0.3s						
VAY				*e*Lg	Lg	23 24 42.1	
	comp=N,189nm,0.6s						
VAY	**Valandovo**	**0.13**	**276**	P	**Pg**	**23 24 38.9**	**-0.1**
VAY				S	**Sg**	**23 24 41.4**	**+0.3**
VAY				*e*Lg	Lg	23 24 42.5	
	comp=N,189nm,0.6s						
KNT	**Kendrikon**	**0.19**	**141**	P	**Pg**	**23 24 40.5**	**+0.6**
KNT				S	**Sg**	**23 24 43.2**	**+0.5**
KNT	**Kendrikon**	**0.19**	**141**	P	**Pg**	**23 24 40.5**	**+0.6**
KNT				S	**Sg**	**23 24 43.2**	**+0.5**
GRG	**Griva**	**0.43**	**216**	P	**Pg**	**23 24 44.8**	**+0.3**
GRG				S	**Sg**	**23 24 51.2**	**+1.0**
GRG	**Griva**	**0.43**	**216**	*e*PG	**Pg**	**23 24 44.8**	**+0.3**
GRG				*e*SG	**Sg**	**23 24 51.0**	**+0.8**
GRG	**Griva**	**0.43**	**216**	P	**Pg**	**23 24 44.8**	**+0.3**
GRG				*e*Sb	**Sg**	**23 24 51.0**	**+0.8**
SRS	**Serrai**	**0.67**	**106**	P	**Pg**	**23 24 48.9**	**0.0**
SRS				S	**Sb**	**23 24 58.7**	**-0.3**
SRS	**Serrai**	**0.67**	**106**	P	**Pg**	**23 24 48.9**	**0.0**
SRS				S	**Sb**	**23 24 58.7**	**-0.3**
SOH	**Sokhos**	**0.67**	**136**	P	**Pg**	**23 24 49.3**	**+0.4**
SOH				S	**Sb**	**23 24 58.9**	**-0.2**
SOH	**Sokhos**	**0.67**	**136**	*e*PG	**Pg**	**23 24 49.1**	**+0.2**
SOH				*e*SG	**Sg**	**23 24 58.2**	**+0.5**
SOH	**Sokhos**	**0.67**	**136**	P	**Pg**	**23 24 49.3**	**+0.4**
SOH				*e*Sb	**Sg**	**23 24 58.2**	**+0.5**
HORT	**Hortiatis**	**0.76**	**159**	P	**Pg**	**23 24 50.7**	**+0.1**
HORT				S	**Sb**	**23 25 01.8**	**+0.1**
HORT	**Hortiatis**	**0.76**	**159**	P	**Pg**	**23 24 50.7**	**+0.1**
HORT				S	**Sb**	**23 25 01.8**	**+0.1**
NVR	**Nevrokopi**	**0.84**	**87**	P	**Pg**	**23 24 52.3**	**0.0**
NVR				S	**Sg**	**23 25 04.0**	**+0.7**
NVR	**Nevrokopi**	**0.84**	**87**	*e*PG	**Pg**	**23 24 52.2**	**0.0**
NVR				*e*SG	**Sg**	**23 25 03.9**	**+0.7**
NVR	**Nevrokopi**	**0.84**	**87**	P	**Pg**	**23 24 52.3**	**0.0**
NVR				*e*Sb	**Sg**	**23 25 03.9**	**+0.7**
PLG	**Polygyros**	**1.07**	**150**	P	**Pb**	**23 24 56.2**	**-0.4**
PLG				S	**Sn**	**23 25 12.0**	**-0.1**
PLG	**Polygyros**	**1.07**	**150**	*e*PG	**Pb**	**23 24 56.4**	**-0.2**
PLG	**Polygyros**	**1.07**	**150**	*e*Pg	**Pb**	**23 24 56.4**	**-0.2**
PLG				*e*Sb	**Sn**	**23 25 11.9**	**-0.1**
FNA	**Florina**	**1.16**	**244**	*e*PG	**Pb**	**23 24 57.6**	**-0.4**
FNA				*e*SB	**Sg**	**23 25 14.0**	**+0.8**
FNA	**Florina**	**1.16**	**244**	*e*Pg	**Pb**	**23 24 57.6**	**-0.4**
FNA				*e*Sb	**Sg**	**23 25 14.0**	**+0.8**
VTS	**Vitosha**	**1.33**	**15**	P	**Pn**	**23 25 01.0**	**+0.3**
VTS	**Vitosha**	**1.33**	**15**	P	**Pn**	**23 25 01.0**	**+0.3**
VTS				*e*Sg	**Sg**	**23 25 20.2**	**+1.4**
OUR	**Ouranopolis**	**1.35**	**136**	P	**Pn**	**23 25 00.5**	**-0.3**
OUR	**Ouranopolis**	**1.35**	**136**	P	**Pn**	**23 25 00.5**	**-0.3**
KAVA	**Kavala**	**1.37**	**102**	P	**Pn**	**23 25 00.3**	**-0.8**
KAVA	**Kavala**	**1.37**	**102**	P	**Pn**	**23 25 00.3**	**-0.8**
BARS	**Barje**	**1.66**	**336**	*e*Pn	**Pb**	**23 25 06.4**	**-0.2**
BARS				*e*Sn	**Sb**	**23 25 27.3**	**-0.2**
BARS	**Barje**	**1.66**	**336**	*e*Pn	**Pb**	**23 25 06.4**	**-0.2**
BARS				*e*Sn	**Sb**	**23 25 27.3**	**-0.2**
PLD	**Plovdiv**	**1.67**	**61**	*e*Sn	**Sg**	**23 25 30.9**	**+1.2**
ZAPS	**Zavoj**	**1.97**	**358**	*e*Pn	**Pb**	**23 25 11.3**	**-0.5**
ZAPS				*e*Sn	**Sb**	**23 25 36.5**	**+0.1**
ALN	**Alexandroupoli**	**2.53**	**98**	*e*PN	**Pb**	**23 25 20.7**	**-0.7**
ALN	**Alexandroupoli**	**2.53**	**98**	*e*Pn	**Pb**	**23 25 20.7**	**-0.7**

MAN 06 23:31:11, 18.27N×120.75E, h14km, mb4.3, ML3.1, MS2.9, Luzon

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KRSC 06 23:34:13.5±0.8**, 53.45N×157.45E, h304km**±43km**, ML3.8, Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GNL	**Ganaly**	**0.38**	**50**	*e*P	Pn	23 34 53.5	+1.1
APC	**Apacha**	**0.56**	**199**	P	Pn	23 34 53.4	+0.7
PET	**Petropavlovsk**	**0.84**	**120**	P	Pn	23 34 54.3	+0.7
SDLR	**Sedlovina**	**0.88**	**101**	P	Pn	23 34 54.4	+0.5
MTVR	**Mutnovka**	**1.06**	**155**	S	S	23 35 27.0	-0.8
ASAK	**Asacha**	**1.10**	**166**	*e*P	Pn	23 34 55.5	+0.5
NLC	**Nalytchevo**	**1.17**	**103**	S	S	23 35 28.9	+0.7
RUS	**Russkaya**	**1.21**	**147**	*e*P	Pn	23 34 56.2	+0.9
RUS				*e*S	S	23 35 28.0	-0.6
MIPR	**Malaya Ipel'ka**	**1.25**	**200**	P	Pn	23 34 56.3	+0.7
SPN	**Mys Shipunski**	**1.58**	**102**	*e*P	Pn	23 34 58.8	+1.2
SPN				*e*S	S	23 35 31.4	-1.3
TUMR	**Tumrok**	**2.42**	**40**	P	Pn	23 35 06.7	+2.5
MKZ	**Mys Kozlova**	**2.76**	**65**	*e*P	Pn	23 35 08.3	+1.2
MKZ				*e*S	S	23 35 47.3	-2.6
KMNR	**Kamenistaya**	**2.82**	**34**	P	Pn	23 35 08.2	+0.4

IDC 06 23:35:28.5±2.1**, 5.89S×146.93E, h0km, mb3.4**/2**, mb1 3.7**/4**, mb1mx3.4**/18**, mbtmp3.5**/4**, ML3.3**/2**, Error ellipse: s-maj=51.0km s-min=20.3km az=81.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.50**	**176**	Pn	Pn	23 36 25.9	+1.8
	14nm,0.3s,baz=357,slow=5.0,SNR=23						
PMG				Pg	Pg	23 36 34.0	-1.6
	25nm,0.3s,baz=350,slow=10,SNR=40						
PMG				Lg	Lg	23 37 19.4	
	9.8nm,0.3s,baz=18,slow=20,SNR=3.2						
WRA	**Warramunga Arr**	**18.57**	**220**	P	Pn	23 39 47.9	+0.6
	0.1nm,0.3s,baz=43,slow=11,SNR=3.0						
ASAR	**Alice Springs**	**21.67**	**214**	P	P	23 40 20.6	-0.3
	0.4nm,0.5s,baz=54,slow=9.8,SNR=9.7						
FITZ	**Fitzroy Crossi**	**24.07**	**238**	P	P	23 40 44.4	-1.3
	2.9nm,0.8s,baz=88,slow=11,SNR=4.7						
TORD	**Torodi Ar. Bea**	**145.00**	**284**	PKPbc	PKPab	23 55 07.6	-0.5
	0.9nm,0.7s,baz=91,slow=3.3,SNR=11						
DBIC	**Dimbokro**	**151.95**	**273**	PKPbc	PKPbc	23 55 27.0	+0.3
	2.2nm,0.7s,baz=153,slow=6.8,SNR=4.7						

IDC 06 23:47:00.1±1.9**, 8.75S×74.83W, h136km**±20km**, mb3.3**/6**, mb1 3.6**/10**, mb1mx3.5**/23**, mbtmp3.4**/10**, Error ellipse: s-maj=25.3km s-min=10.9km az=56.0, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**3.78**	**211**	P	Pn	23 47 58.7	+1.5
	7.0nm,0.3s,baz=36,slow=7.7,SNR=14						
NNA				S	Sn	23 48 41.5	0.0
	46nm,0.3s,baz=175,slow=18,SNR=16						
ATAH	**Atahualpa**	**3.87**	**294**	P	Pn	23 47 59.4	+0.5
	16nm,0.3s,baz=103,slow=8.0,SNR=102						
ATAH				S	Sn	23 48 43.9	-0.5
	20nm,0.3s,baz=42,slow=14,SNR=15						
LPAZ	**La Paz**	**9.95**	**140**	P	Pn	23 49 21.6	+1.0
	0.3nm,0.3s,baz=338,slow=12,SNR=7.9						
SIV	**San Ignacio**	**15.24**	**120**	P	Pn	23 50 28.0	-0.4
	0.9nm,0.3s,baz=307,slow=12,SNR=29						
CPUP	**Villa Florida**	**24.12**	**139**	P	P	23 52 03.1	-0.3
	0.5nm,0.4s,baz=292,slow=16,SNR=3.9						
BDFB	**Brasilia**	**27.07**	**107**	P	P	23 52 33.3	+2.8
	1.0nm,0.6s,baz=270,slow=6.1,SNR=4.0						
TXAR	**Lajitas Array**	**46.96**	**325**	P	P	23 55 18.6	+0.9
	0.3nm,0.6s,baz=154,slow=8.2,SNR=4.5						
PDAR	**Pinedale Array**	**60.26**	**331**	P	P	23 56 54.5	0.0
	0.3nm,0.4s,baz=149,slow=7.2,SNR=2.7						
DBIC	**Dimbokro**	**71.41**	**80**	P	P	23 58 09.9	+3.7
	4.3nm,0.8s,baz=249,slow=3.0,SNR=7.0						
YKA	**Yellowknife Ar**	**77.35**	**342**	P	P	23 58 39.5	0.0
	0.8nm,0.5s,baz=141,slow=6.1,SNR=11						
TORD	**Torodi Ar. Bea**	**79.04**	**75**	P	P	23 58 49.2	-0.7
	1.1nm,0.5s,baz=288,slow=5.8,SNR=17						
INK	**Inuvik**	**87.09**	**341**	P	P	23 59 30.5	+0.4
	0.3nm,0.4s,baz=158,slow=1.8,SNR=5.3						
ZALV	**Zalesovo Beam**	**132.04**	**16**	PKP	PKPdf	00 05 58.5	+0.9
	0.7nm,0.6s,baz=286,slow=5.2,SNR=4.4						
ASAR	**Alice Springs**	**137.26**	**221**	PKP	PKPdf	00 06 08.9	+0.5
	0.3nm,0.6s,baz=121,slow=2.1,SNR=3.5						
KSRS	**Korea Array**	**144.78**	**328**	PKP	PKPab	00 06 19.0	-1.5
	0.8nm,0.5s,baz=81,slow=2.3,SNR=3.4						

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*ISCJB **06** 23:48:36.0±0.8, 41.27N±0.03×22.77E±0.04, h4km±6km, Error ellipse: s-maj=5.3km s-min=4.4km az=17.1*
*SKO **06** 23:48:36.4, 41.30N×22.68E, h15km, M1.8, ML2.2*
*ATH **06** 23:48:36.8, 41.30N×22.71E, h20km±2km, MD2.9/4*
*CSEM **06** 23:48:36.9±0.2, 41.26N×22.75E, h5km, ML1.9, Error ellipse: s-maj=5.6km s-min=4.5km az=82.0*
*BEO **06** 23:48:39.0±0.6, 41.36N×22.53E, h0km±3km, ML1.9/5*
ISC 06 23:48:37.1±0.9**, 41.30N**±0.02×**22.70E**±0.02**, h6km**±**7km, n29, σ0.45**/51**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**283**	*e*Pg	**Pg**	**23 48 39.1**	**-0.3**
VAY				*e*Sg	**Sg**	**23 48 40.9**	**+0.1**
VAY	**Valandovo**	**0.10**	**283**	*i* Pg	**Pg**	**23 48 39.0**	**-0.3**
VAY				*i* Sg	**Sg**	**23 48 40.9**	**+0.1**
VAY				*e*Lg	Lg	23 48 41.0	
	comp=E,1μm,0.3s						
VAY				*e*Lg	Lg	23 48 41.0	
	comp=N,2μm,0.2s						
VAY	**Valandovo**	**0.10**	**283**	*i* Pg	**Pg**	**23 48 39.5**	**+0.2**
VAY				*e*Sg	**Sg**	**23 48 40.9**	**+0.1**
VAY				*e*Lg	Lg	23 48 41.5	
	comp=N,2μm,0.2s						
GRG	**Griva**	**0.41**	**214**	*e*PB	**Pg**	**23 48 45.1**	**0.0**
GRG				*e*SB	**Sg**	**23 48 51.0**	**+0.6**
GRG	**Griva**	**0.41**	**214**	*e*Pb	**Pg**	**23 48 45.1**	**0.0**
GRG				*e*Sb	**Sg**	**23 48 51.0**	**+0.6**
SOH	**Sokhos**	**0.69**	**134**	*e*PN	**Pg**	**23 48 50.2**	**-0.1**
SOH				*e*SN	**Sg**	**23 48 59.1**	**-0.1**
SOH	**Sokhos**	**0.69**	**134**	*e*Pn	**Pg**	**23 48 50.2**	**-0.1**
SOH				*e*Sn	**Sg**	**23 48 59.1**	**-0.1**
NVR	**Nevrokopi**	**0.88**	**86**	*e*PN	**Pg**	**23 48 53.8**	**-0.1**
NVR				*e*SN	**Sb**	**23 49 05.7**	**-1.1**
NVR	**Nevrokopi**	**0.88**	**86**	*e*Pn	**Pg**	**23 48 53.8**	**-0.1**
NVR				*e*Sn	**Sb**	**23 49 05.7**	**-1.1**
PLG	**Polygyros**	**1.08**	**148**	*e*PN	**Pg**	**23 48 57.6**	**-0.3**
PLG				*e*SN	**Sb**	**23 49 12.8**	**+0.1**
PLG	**Polygyros**	**1.08**	**148**	*e*Pn	**Pg**	**23 48 57.6**	**-0.3**
PLG				*e*Sn	**Sb**	**23 49 12.8**	**+0.1**
FNA	**Florina**	**1.13**	**243**	*e*PN	**Pg**	**23 48 58.3**	**-0.4**
FNA				*e*SN	**Sb**	**23 49 13.8**	**-0.2**
FNA	**Florina**	**1.13**	**243**	*e*Pn	**Pg**	**23 48 58.3**	**-0.4**
FNA				*e*Sn	**Sb**	**23 49 13.8**	**-0.2**
KZN	**Kozani**	**1.22**	**216**	*e*PN	**Pn**	**23 49 00.8**	**0.0**
KZN				*e*SN	**Sn**	**23 49 18.5**	**+0.9**
KZN	**Kozani**	**1.22**	**216**	*e*Pn	**Pn**	**23 49 00.8**	**0.0**
KZN				*e*Sn	**Sn**	**23 49 18.5**	**+0.9**
VTS	**Vitosha**	**1.35**	**16**	*e*Pg	**Pg**	**23 49 03.3**	**+0.3**
VTS				*e*Sg	**Sn**	**23 49 21.0**	**0.0**
VTS	**Vitosha**	**1.35**	**16**	*e*Pg	**Pg**	**23 49 03.3**	**+0.3**
VTS				*e*Sg	**Sn**	**23 49 21.0**	**0.0**
BARS	**Barje**	**1.66**	**337**	*e*Pn	**Pb**	**23 49 08.0**	**-0.1**
BARS				*e*Sn	**Sn**	**23 49 27.9**	**-0.5**
BARS	**Barje**	**1.66**	**337**	*e*Pn	**Pb**	**23 49 08.0**	**-0.1**
BARS				*e*Sn	**Sn**	**23 49 27.9**	**-0.5**
PLD	**Plovdiv**	**1.70**	**61**	*e*Pn	**Pg**	**23 49 11.0**	**+1.2**
THL	**Klokotos Trika**	**1.81**	**197**	*e*PN	**Pn**	**23 49 09.2**	**+0.3**
THL	**Klokotos Trika**	**1.81**	**197**	*e*Pn	**Pn**	**23 49 09.2**	**+0.3**
ZAPS	**Zavoj**	**1.98**	**359**	*e*Pn	**Pb**	**23 49 13.5**	**0.0**
ZAPS				*e*Sn	**Sb**	**23 49 38.0**	**-0.4**
NEO	**Neokhori**	**2.03**	**168**	*e*PN	**Pn**	**23 49 12.0**	**+0.1**
NEO				*e*SN	**Sn**	**23 49 37.1**	**-0.5**
NEO	**Neokhori**	**2.03**	**168**	*e*Pn	**Pn**	**23 49 12.0**	**+0.1**
NEO				*e*Sn	**Sn**	**23 49 37.1**	**-0.5**
AGG	**Agios Georgios**	**2.29**	**187**	*e*PN	**Pn**	**23 49 15.9**	**+0.4**
AGG	**Agios Georgios**	**2.29**	**187**	*e*Pn	**Pn**	**23 49 15.9**	**+0.4**
AOS	**Alonnisos**	**2.31**	**157**	*e*PB	**Pn**	**23 49 16.2**	**+0.5**
AOS	**Alonnisos**	**2.31**	**157**	*e*Pb	**Pn**	**23 49 16.2**	**+0.5**

ROM 06 23:53:38.3±0.2**, 42.26N×13.52E, h8km**±2km**, Md1.6**/1**, Ml1.6**/2**, Error ellipse: s-maj=1.6km s-min=0.8km az=63.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	**Fagnano**	**0.05**	**78**	Pg	Pg	23 53 40.3	+0.2
FAGN				Sg	Sg	23 53 41.6	+0.2
AQU	**L'Aquila**	**0.13**	**318**	Pg	Pg	23 53 41.8	+0.5
AQU				Sg	Sg	23 53 44.3	+0.9
	353nm,2.0s						
PTQR	**Pietraquaria**	**0.25**	**201**	Pg	Pg	23 53 44.0	+0.6
PTQR				Sg	Sb	23 53 48.5	-1.3
	3.0nm,0.4s						

IDC 06 23:57:19.1±1.4**, 3.84N×126.32E, h0km, mb3.6**/6**, mb1 3.8**/6**, mb1mx3.5**/24**, mbtmp3.6**/6**, Error ellipse: s-maj=111.0km s-min=18.0km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.81**	**182**	P	P	00 02 13.4	+0.3
	1.2nm,0.6s,baz=18,slow=13,SNR=3.4						
WRA	**Warramunga Arr**	**24.91**	**162**	P	P	00 02 43.0	-1.0
	0.8nm,0.4s,baz=340,slow=10,SNR=4.6						
ASAR	**Alice Springs**	**28.32**	**165**	P	P	00 03 14.8	0.0
	0.3nm,0.7s,baz=334,slow=7.2,SNR=3.9						
STKA	**Stephens Creek**	**38.38**	**159**	P	P	00 04 42.5	+0.3
	2.5nm,0.9s,baz=344,slow=7.4,SNR=3.2						
MKAR	**Makanchi Array**	**57.23**	**325**	P	P	00 07 08.2	-0.1
	0.2nm,0.3s,baz=119,slow=7.4,SNR=9.1						
KURBB	**Kurchatov Arra**	**61.43**	**328**	P	P	00 07 37.2	0.0
	0.7nm,0.7s,baz=126,slow=6.3,SNR=9.6						

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*ISCJB **07** 00:01:06.4±0.5, 5.49S±0.08×11.4W±0.1, h13km, mb4.4/35, MS3.9/23, Error ellipse: s-maj=15.2km s-min=11.2km az=16.1*
*IDC **07** 00:01:06.3±0.7, 5.35S×11.51W, h0km, mb4.1/16, mb1 4.2/17, mb1mx4.1/32, mbtmp4.1/17, ML3.3/1, MS3.8/24, Ms1 3.8/24, ms1mx3.8/32, Error ellipse: s-maj=20.6km s-min=16.6km az=110.0*
*NEIC **07** 00:01:07.8±0.6, 5.55S×11.37W, h10km, mb4.9/19, Error ellipse: s-maj=16.5km s-min=12.2km az=102.0*
ISC 07 00:01:08.2±0.6**, 5.40S**±0.10×**11.5W**±0.1**, h13km, n91, σ1.53**/71**, mb4.5**/35**, MS3.9**/23**, Ascension Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DBIC	**Dimbokro**	**13.68**	**29**	*e*P	**Pn**	**00 04 19.6**	**-2.5**
	32nm,1.2s						
DBIC	**Dimbokro**	**13.68**	**29**	Pn	**Pn**	**00 04 21.1**	**-1.0**
	0.2nm,0.3s,baz=197,slow=16,SNR=5.7						
DBIC				LR	LR	00 08 46.5	
	comp=Z,382nm,18.4s,baz=180,slow=34						
BBTS	**Babate**	**20.56**	**346**	LR	LR	00 12 29.2	
	comp=Z,122nm,21.0s,baz=155,slow=33						
TOA0	**Torodi Ar. Sit**	**22.58**	**35**	*e*P	**P**	**00 06 07.6**	**-1.0**
TORD	**Torodi Ar. Bea**	**22.58**	**35**	P	**P**	**00 06 06.5**	**-2.1**
TORD	**Torodi Ar. Bea**	**22.58**	**35**	P	**P**	**00 06 06.5**	**-2.1**
	6.4nm,0.6s,baz=214,slow=12,SNR=79						
TORD				LR	LR	00 13 58.0	
	comp=Z,411nm,20.1s,baz=210,slow=34						
RCBR	**Riachuelo**	**24.34**	**268**	LR	LR	00 13 20.4	
	comp=Z,340nm,19.5s,baz=82,slow=30						
TSUM	**Tsumeb**	**31.43**	**118**	LR	LR	00 17 48.6	
	comp=Z,305nm,20.6s,baz=333,slow=32						
TAM	**Tamanrasset**	**32.57**	**30**	*e*P	**P**	**00 07 41.3**	**+1.6**
	1.9nm,1.0s						
BDFB	**Brasilia**	**37.30**	**251**	P	**P**	**00 08 19.6**	**-1.0**
BDFB	**Brasilia**	**37.30**	**251**	P	**P**	**00 08 19.6**	**-1.0**
	3.7nm,0.8s,baz=79,slow=10,SNR=5.8						
BDFB				LR	LR	00 20 35.7	
	comp=Z,295nm,19.6s,baz=173,slow=31						
LSZ	**Lusaka**	**40.14**	**107**	*e*P	**P**	**00 08 43.2**	**-1.3**
	9.3nm,1.1s						
LSZ	**Lusaka**	**40.14**	**107**	P	**P**	**00 08 44.7**	**+0.2**
	3.8nm,0.9s,baz=257,slow=4.9,SNR=5.1						
LBTB	**Lobatse**	**40.51**	**123**	*e*P	**P**	**00 08 45.3**	**-2.1**
	29nm,1.4s						
LBTB	**Lobatse**	**40.51**	**123**	P	**P**	**00 08 46.1**	**-1.3**
	6.3nm,1.0s,baz=309,slow=9.8,SNR=6.2						
BOSA	**Boshof**	**41.72**	**128**	*e*P	**P**	**00 08 56.4**	**-0.9**
	12nm,1.1s						
BOSA	**Boshof**	**41.72**	**128**	P	**P**	**00 08 59.5**	**+2.2**
	6.7nm,1.0s,baz=307,slow=9.8,SNR=4.1						
BOSA				LR	LR	00 21 29.0	
	comp=Z,106nm,21.2s,baz=320,slow=29						
KEST	**Kesra**	**45.34**	**24**	*e*P	**P**	**00 09 27.5**	**+1.2**
KEST	**Kesra**	**45.34**	**24**	P	**P**	**00 09 27.6**	**+1.2**
	0.9nm,0.7s,baz=192,slow=9.3,SNR=3.4						
KEST				LR	LR	00 29 07.9	
	comp=Z,135nm,18.7s,baz=241,slow=37						
ESDC	**Sonseca Array**	**45.38**	**8**	P	**P**	**00 09 25.5**	**-1.0**
ESDC	**Sonseca Array**	**45.38**	**8**	P	**P**	**00 09 25.5**	**-1.0**
	0.1nm,0.3s,baz=183,slow=8.3,SNR=2.8						
CPUP	**Villa Florida**	**48.45**	**239**	LR	LR	00 26 49.8	
	comp=Z,110nm,21.5s,baz=234,slow=32						
KMBO	**Kilima Mbogo**	**48.79**	**87**	LR	LR	00 29 15.3	
	comp=Z,478nm,18.8s,baz=276,slow=35						
SJPF	**Ste Jean**	**49.17**	**10**	*e*P	**P**	**00 09 58.2**	**+2.2**
	92nm,1.5s						
SJPF	**Ste Jean**	**49.17**	**10**	*e*P	**P**	**00 09 58.2**	**+2.2**
	92nm,1.5s						
EPF	**Esparros**	**49.38**	**11**	*e*P	**P**	**00 09 59.0**	**+1.4**
	28nm,1.2s						
EPF	**Esparros**	**49.38**	**11**	*e*P	**P**	**00 09 59.0**	**+1.4**
	28nm,1.3s						
SIV	**San Ignacio**	**49.77**	**254**	P	**P**	**00 09 59.7**	**-1.3**
SIV	**San Ignacio**	**49.77**	**254**	P	**P**	**00 09 59.7**	**-1.3**
	0.7nm,0.4s,baz=71,slow=9.1,SNR=3.9						
LFF	**La Frestale**	**51.29**	**11**	*e*P	**P**	**00 10 14.5**	**+2.5**
	144nm,1.7s						
LFF	**La Frestale**	**51.29**	**11**	*e*P	**P**	**00 10 14.5**	**+2.5**
	144nm,1.7s						
MBDF	**Montbardon**	**52.52**	**16**	*e*P	**P**	**00 10 23.1**	**+1.8**
	25nm,1.1s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MBDF	Montbardon	52.52	16	eP	P	00 10 23.1	+1.8
	25nm,1.1s						
MFF	Saint Martin d	52.74	10	eP	P	00 10 24.9	+2.1
	16nm,1.0s						
MFF	Saint Martin d	52.74	10	eP	P	00 10 24.9	+2.1
	16nm,1.0s						
TCF	Toulx Ste Croi	52.88	12	eP	P	00 10 25.8	+2.0
	28nm,1.3s						
TCF	Toulx Ste Croi	52.88	12	eP	P	00 10 25.8	+2.0
	28nm,1.3s						
LPG	La Plagne	53.22	16	eP	P	00 10 28.8	+2.1
	14nm,0.9s						
LPG	La Plagne	53.22	16	eP	P	00 10 28.8	+2.1
	14nm,0.9s						
LPL	La Plagne	53.23	16	eP	P	00 10 28.9	+2.2
	14nm,0.9s						
LPL	La Plagne	53.23	16	eP	P	00 10 28.9	+2.2
	14nm,0.9s						
BGF	Bois d'Agland	53.27	12	eP	P	00 10 28.9	+2.2
	27nm,1.1s						
BGF	Bois d'Agland	53.27	12	eP	P	00 10 28.9	+2.2
	27nm,1.1s						
SMF	Signal de Mont	53.57	13	eP	P	00 10 31.0	+2.1
SMF	Signal de Mont	53.57	13	eP	P	00 10 31.0	+2.1
SSF	Saint Saulge	53.89	13	eP	P	00 10 32.0	+0.8
	9.3nm,1.0s						
SSF	Saint Saulge	53.89	13	eP	P	00 10 32.0	+0.8
	9.3nm,1.0s						
CABF	La Chapelle	54.08	15	eP	P	00 10 34.0	+1.3
	12nm,1.0s						
CABF	La Chapelle	54.08	15	eP	P	00 10 34.0	+1.3
	12nm,1.0s						
LOR	Lormes	54.16	13	eP	P	00 10 35.1	+1.9
	10nm,0.9s						
LOR	Lormes	54.16	13	eP	P	00 10 35.1	+1.9
	10nm,0.9s						
DAVOX	Davos/Dischmat	55.29	18	P	P	00 10 41.5	-0.2
DAVOX	Davos/Dischmat	55.29	18	P	P	00 10 41.5	-0.2
	4.3nm,0.8s,baz=153,slow=6.8,SNR=3.5						
LPAZ	La Paz	56.55	254	LR	LR	00 35 52.1	
	comp=Z,124nm,18.6s,baz=65,slow=37						
GERES	GERESS Array B	58.32	19	P	P	00 11 02.5	-0.5
GERES	GERESS Array B	58.32	19	P	P	00 11 02.5	-0.5
	1.2nm,0.7s,baz=191,slow=6.4,SNR=7.7						
GERES				LR	LR	00 36 28.1	
	comp=Z,93nm,18.7s,baz=270,slow=36						
ASF	Jabal al Asfar	59.23	48	LR	LR	00 34 06.7	
	comp=Z,39nm,22.0s,baz=289,slow=33						
VRAC	Vranov	59.71	21	P	P	00 11 13.3	+0.8
VRAC	Vranov	59.71	21	P	P	00 11 13.3	+0.8
	1.6nm,0.6s,baz=180,slow=16,SNR=3.0						
PSZ	Piszkesteto	59.81	24	eP	P	00 11 14.3	+0.9
	7.8nm,0.9s						
KECS	Kecovo	60.50	24	e	P	00 11 24.6	+6.6
MLR	Muntele Rosu	60.66	29	P	P	00 11 24.3	+5.0
MLR	Muntele Rosu	60.66	29	P	P	00 11 24.3	+5.0
	1.0nm,0.9s,baz=207,slow=2.5,SNR=4.6						
BR131	Keskin Array S	61.14	39	eP	P	00 11 24.3	+1.6
	1.6nm,0.7s						
BRTR	Keskin Array B	61.14	39	P	P	00 11 23.3	+0.6
BRTR	Keskin Array B	61.14	39	P	P	00 11 23.3	+0.6
	1.4nm,0.9s,baz=211,slow=6.9,SNR=10						
BRTR				LR	LR	00 39 52.0	
	comp=Z,25nm,19.5s,baz=39,slow=38						
CRVS	Cervenica-Dubn	61.23	24	eP	P	00 11 22.7	-0.2
KOLS	Kolonicke sedl	61.59	25	eP	P	00 11 28.8	+3.4
PLCA	Paso Flores	63.30	227	LR	LR	00 32 27.2	
	comp=Z,123nm,21.7s,baz=268,slow=30						
ROSC	El Rosal	63.62	278	LR	LR	00 37 43.9	
	comp=Z,112nm,19.7s,baz=18,slow=35						
AK02	Malin Array Si	65.88	27	eP	P	00 11 52.2	-1.4
AK01	Malin Array Si	65.91	27	eP	P	00 11 52.8	-1.0
KIEV	Kiev	65.91	27	eP	P	00 11 53.8	+0.1
	8.1nm,0.9s						
AKASG	Malin Array Be	65.92	27	P	P	00 11 53.9	0.0
AKASG	Malin Array Be	65.92	27	P	P	00 11 53.9	0.0
	1.6nm,0.6s,baz=226,slow=6.7,SNR=9.0						
AKASG				LR	LR	00 42 33.0	
	comp=Z,56nm,21.3s,baz=40,slow=38						
SNAA	Sanae	66.41	177	P	P	00 11 58.4	+1.6
SNAA	Sanae	66.41	177	P	P	00 11 58.4	+1.6
	0.3nm,0.8s,baz=357,slow=8.9,SNR=4.1						
IIGN	Ignalina	68.08	22	eP	P	00 12 07.5	0.0
IIGN				AMB	AMB	00 12 09.1	
	comp=Z,2.5nm,1.1s						
ISAL	Salakas	68.21	22	eP	P	00 12 08.3	0.0
ISAL				AMB	AMB	00 12 13.6	
	comp=Z,8.2nm,1.5s						
IDID	Didziasalis	68.25	22	eP	P	00 12 08.6	0.0
IDID				AMB	AMB	00 12 10.7	
	comp=Z,6.4nm,1.3s						
KBZ	Khabaz	69.13	39	P	P	00 12 15.2	+0.9
KBZ	Khabaz	69.13	39	P	P	00 12 15.2	+0.9
	comp=Z,2.2nm,0.8s,baz=277,slow=8.1,SNR=3.0						
FINES	FINESS Array B	72.70	18	LR	LR	00 43 18.8	
	comp=Z,48nm,21.4s,baz=211,slow=35						
SCHQ	Schefferville	75.47	331	P	P	00 12 52.5	+0.5
SCHQ	Schefferville	75.47	331	P	P	00 12 52.5	+0.5
	comp=Z,1.6nm,0.8s,baz=116,slow=7.9,SNR=4.5						
ARCES	ARCESS Array B	78.91	12	LR	LR	00 51 17.2	
	comp=Z,41nm,18.7s,baz=87,slow=38						
ULM	Lac du Bonnet	90.55	320	LR	LR	00 48 06.2	
	comp=Z,70nm,18.3s,baz=6.7,slow=31						
TXAR	Lajitas Array	94.55	299	LR	LR	00 53 02.5	
	comp=Z,54nm,20.4s,baz=5.0,slow=33						
MKAR	Makanchi Array	96.46	44	LR	LR	01 04 00.2	
	comp=Z,37nm,19.1s,baz=281,slow=39						
ZALV	Zalesovo Beam	98.03	36	LR	LR	01 04 07.1	
	comp=Z,26nm,19.2s,baz=159,slow=39						
PDAR	Pinedale Array	99.60	312	LR	LR	00 50 46.3	
	comp=Z,63nm,20.9s,baz=79,slow=30						

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*ATH **07** 00:03:18.9, 38°.59N×21°.94E, h27km±1km, MD2.7/14*
*ISCJB **07** 00:03:19.5±0.4, 38°.58N±0°.02×21°.94E±0°.04, h24km±3km, Error ellipse: s-maj=5.9km s-min=3.5km az=179.3*
*THE **07** 00:03:19.9, 38°.59N×21°.95E, h17km, ML2.2/5, Error ellipse: s-maj=0.6km s-min=0.4km az=271.0*
*CSEM **07** 00:03:19.4±0.1, 38°.58N×21°.95E, h16km, MD2.7, Error ellipse: s-maj=2.1km s-min=1.5km az=93.0*
ISC 07 00:03:19.6±1.0**, 38°.59N**±0°.02×**21°.95E**±0°.02**, h17**km±8km**, n60, σ0ˢ.36**/81**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EFP	Efpalio	0.17	192	P	Pb	00 03 24.1	-0.1
EFP				S	Sb	00 03 27.6	+0.4
EFP	Efpalio	0.17	192	ePB	Pb	00 03 24.1	-0.1
EFP	Efpalio	0.17	192	P	Pb	00 03 24.1	-0.1
EFP				S	Sb	00 03 27.6	+0.4
KALE	Kalithea	0.25	143	P	Pb	00 03 25.4	-0.2
KALE				S	Sb	00 03 29.9	+0.2
KALE	Kalithea	0.25	143	ePB	Pg	00 03 25.3	+0.1
KALE	Kalithea	0.25	143	P	Pb	00 03 25.4	-0.2
KALE				S	Sb	00 03 29.9	+0.2
PSA1	Psathopyrgos	0.27	191	ePB	Pb	00 03 25.6	-0.3
EVR	Evrytania	0.34	341	P	Pg	00 03 27.0	0.0
EVR				S	Sb	00 03 32.3	-0.2
EVR	Evrytania	0.34	341	ePB	Pg	00 03 26.9	0.0
EVR				eSB	Sb	00 03 32.6	+0.1
EVR	Evrytania	0.34	341	ePb	Pg	00 03 26.9	0.0
EVR				S	Sb	00 03 32.3	-0.2
LAKA	Lakka	0.35	176	P	Pg	00 03 26.8	-0.1
LAKA				S	Sb	00 03 33.1	+0.5
LAKA	Lakka	0.35	176	ePB	Pg	00 03 26.8	-0.1
LAKA	Lakka	0.35	176	P	Pg	00 03 26.8	-0.1
LAKA				S	Sb	00 03 33.1	+0.5
MAKR	Makrakomi, Fth	0.45	19	P	Pb	00 03 29.1	+0.1
MAKR				S	Sb	00 03 35.8	+0.4
MAKR	Makrakomi, Fth	0.45	19	P	Pb	00 03 29.1	+0.1
MAKR				S	Sb	00 03 35.8	+0.4
DSF	Desfina	0.49	111	P	Pg	00 03 28.9	-0.5
DSF				S	Sb	00 03 36.6	+0.1
DSF	Desfina	0.49	111	P	Pg	00 03 28.9	-0.5
DSF				S	Sb	00 03 36.6	+0.1
AGG	Agios Georgios	0.53	34	P	Pg	00 03 29.6	-0.5
AGG				S	Sb	00 03 38.1	+0.5
AGG	Agios Georgios	0.53	34	ePN	Pg	00 03 29.8	-0.3
AGG	Agios Georgios	0.53	34	ePn	Pg	00 03 29.8	-0.3
AGG				S	Sb	00 03 38.1	+0.5
KLV	Kalavryta, Ach	0.57	164	ePN	Pg	00 03 30.4	-0.5
KLV				eSN	Sb	00 03 39.3	+0.4
KLV	Kalavryta, Ach	0.57	164	ePn	Pg	00 03 30.4	-0.5
KLV				eSn	Sb	00 03 39.3	+0.4
AXAR	Agios Charalam	0.58	72	P	Pb	00 03 31.2	-0.1
AXAR	Agios Charalam	0.58	72	P	Pb	00 03 31.2	-0.1
AXS	Araxos	0.60	229	P	Pg	00 03 31.1	-0.3
AXS	Araxos	0.60	229	P	Pg	00 03 31.1	-0.3
RLS	Riolos of Patr	0.65	216	P	Pg	00 03 32.1	-0.3
RLS	Riolos of Patr	0.65	216	ePN	Pg	00 03 32.1	-0.3
RLS	Riolos of Patr	0.65	216	P	Pg	00 03 32.1	-0.3
GUR	Goura	0.72	155	P	Pb	00 03 33.1	-0.7
GUR				S	Sg	00 03 43.7	+0.4
GUR	Goura	0.72	155	ePN	Pb	00 03 33.0	-0.7
GUR	Goura	0.72	155	P	Pb	00 03 33.1	-0.7
GUR				S	Sg	00 03 43.7	+0.4
LKR	Lokris	0.82	85	P	Pg	00 03 35.4	-0.2
LKR	Lokris	0.82	85	ePN	Pg	00 03 35.4	-0.2
LKR	Lokris	0.82	85	P	Pg	00 03 35.4	-0.2
ATAL	Atalanti	0.85	83	P	Pb	00 03 35.5	-0.3
ATAL	Atalanti	0.85	83	P	Pb	00 03 35.5	-0.3
THL	Klokotos Trika	0.97	3	P	Pb	00 03 37.5	-0.5
THL	Klokotos Trika	0.97	3	ePN	Pb	00 03 37.7	-0.3
THL				eSN	Sn	00 03 52.3	+0.4
THL	Klokotos Trika	0.97	3	P	Pb	00 03 37.5	-0.5
THL				eSn	Sn	00 03 52.3	+0.4
LTK	Loutraki	0.98	125	P	Pb	00 03 38.1	0.0
LTK	Loutraki	0.98	125	ePN	Pg	00 03 38.5	-0.1
LTK	Loutraki	0.98	125	P	Pb	00 03 38.1	0.0
LTK	Loutraki	0.98	125	ePn	Pg	00 03 38.5	-0.1
LKD2	Lefkada island	1.03	282	P	Pn	00 03 39.0	-0.2
LKD2	Lefkada island	1.03	282	P	Pn	00 03 39.0	-0.2
AMT	Artemida-Makis	1.07	190	ePN	Pn	00 03 39.8	0.0
AMT	Artemida-Makis	1.07	190	ePn	Pn	00 03 39.8	0.0
NEO	Neokhori	1.23	54	ePN	Pn	00 03 41.7	-0.2
NEO	Neokhori	1.23	54	ePn	Pn	00 03 41.7	-0.2
XOR	Xorichti	1.24	51	P	Pn	00 03 41.9	-0.2
XOR	Xorichti	1.24	51	P	Pn	00 03 41.9	-0.2
VLX	Vlachokerasia	1.26	164	P	Pn	00 03 41.9	-0.6
VLX	Vlachokerasia	1.26	164	P	Pn	00 03 41.9	-0.6
DID	Didima	1.48	136	P	Pn	00 03 45.4	-0.1
DID	Didima	1.48	136	ePN	Pb	00 03 46.0	-0.7
DID	Didima	1.48	136	P	Pn	00 03 45.4	-0.1
DID	Didima	1.48	136	ePn	Pb	00 03 46.0	-0.7
VLI	Veliai	2.03	157	ePN	Pn	00 03 53.5	+0.6
VLI	Veliai	2.03	157	ePn	Pn	00 03 53.5	+0.6

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*CSEM **07** 00:03:28.6±0.2, 76°.88N×17°.76E, h2km, ML3.9, Error ellipse: s-maj=7.4km s-min=4.3km az=64.0*
*NAO **07** 00:03:29.5±0.9, 76°.99N×18°.74E, ML3.9*
*ISCJB **07** 00:03:30.3±0.5, 76°.89N±0°.06×18°.6E±0°.3, h16km, mb3.5/4, Error ellipse: s-maj=10.7km s-min=5.4km az=139.3*
*IDC **07** 00:03:30.6±0.7, 77°.05N×18°.33E, h0km, mb3.6/4, mb1 3.8/7, mb1mx3.5/27, mbtmp3.7/7, ML3.1/3, MS2.5/1, Ms1 2.5/1, ms1mx2.3/35, Error ellipse: s-maj=55.1km s-min=7.8km az=73.0*
*BER **07** 00:03:33.0, 76°.99N×18°.24E, h22km, MD2.3, ML3.9, ML3.9(NAO)*
ISC 07 00:03:31.6±0.6**, 76°.88N**±0°.05×**18°.17E**±0°.06**, h16**km**, n37, σ1ˢ.73**/47**, mb3.5**/4**, 2C, Svalbard region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HSP	Hornsund	0.61	284	eP	Pg	00 03 44.5	+0.9
HSP				eS	Sg	00 03 52.6	+1.0
SPA0	Spitsbergen Ar	1.37	344	Pg	Pn	00 03 54.2	-1.8
	baz=151,slow=22						
SPA0				Lg	Lg	00 04 10.7	
	baz=160,slow=22						
SPA0	Spitsbergen Ar	1.37	344	Pg	Pn	00 03 54.2	-1.8
	baz=151,slow=22						
SPA0				Lg	Lg	00 04 10.7	
	baz=160,slow=22						
SPA0	Spitsbergen Ar	1.37	344	Pg	Pn	00 03 54.2	-1.8
	baz=151,slow=21,SNR=95						
SPA0				Lg	Lg	00 04 10.7	
	baz=160,slow=21						
SPITS	Spitsbergen Ar	1.37	344	Pn	Pn	00 03 54.2	-1.8
	baz=160,slow=20,SNR=4386						
SPITS				Sn	Sn	00 04 10.8	-3.0
	baz=135,slow=22,SNR=7.0						
HOPEN	Hopen	1.63	100	eP	Pn	00 03 59.7	+0.2
HOPEN				eSg	Sb	00 04 22.5	+1.1
HOPEN	Hopen	1.63	100	eP	Pn	00 03 59.7	+0.2
	SNR=62						
HOPEN				eSg	Sb	00 04 22.5	+1.1
	SNR=93						
KBS	Kingsbay	2.44	331	Pn	Pn	00 04 09.3	-1.5
KBS				Pg	Pb	00 04 14.2	-0.9
KBS				Lg	Lg	00 04 45.2	
KBS	Kingsbay	2.44	331	⇑iP	Pn	00 04 09.2	-1.5
KBS				ePg	Pb	00 04 15.1	0.0
KBS				Lg	Lg	00 04 45.2	
KBS				AML	AML	00 04 50.0	
	comp=Z,1μm,0.3s						
KBS	Kingsbay	2.44	331	⇑iP	Pn	00 04 09.2	-1.5
	SNR=62						
KBS				Lg	Lg	00 04 45.2	
	comp=Z,1μm,0.3s						
KEV	Kevo	7.58	156	ep	Pn	00 05 23.6	+2.4
ARA0	ARCESS Array S	7.67	160	Pn	Pn	00 05 22.9	+0.5
	baz=354,slow=12						
ARA0				Sn	Sn	00 06 44.9	-3.9
	baz=349,slow=22						
ARA0	ARCESS Array S	7.67	160	Pn	Pn	00 05 22.9	+0.5
	baz=354,slow=12						
ARA0				Sn	Sn	00 06 44.9	-3.9
	baz=349,slow=22						
ARA0	ARCESS Array S	7.67	160	Pn	Pn	00 05 23.0	+0.5
	baz=354,slow=12,SNR=62						
ARCES	ARCESS Array B	7.67	160	Pn	Pn	00 05 24.2	+1.7
	comp=Z,0.8nm,0.3s,baz=352,slow=12,SNR=39						
ARCES				Sn	Sn	00 06 46.4	-2.4
	comp=Z,6.3nm,0.3s,baz=354,slow=21,SNR=7.4						
ARCES				LR	LR	00 09 38.9	
	comp=Z,32nm,18.2s,baz=5.7,slow=47						
APA0	Apatity Array	10.30	147	Pn	Pn	00 05 58.4	0.0
	baz=341,slow=11						
APA0				Sn	Sn	00 07 47.6	-5.7
	baz=343,slow=22						
APA0	Apatity Array	10.30	147	Pn	Pn	00 05 58.4	0.0
	baz=341,slow=11						
APA0				Sn	Sn	00 07 47.6	-5.7
	baz=343,slow=22						
APA0	Apatity Array	10.30	147	Pn	Pn	00 05 58.4	0.0
	baz=341,slow=11,SNR=62						
JOF	Joensuu	14.66	156	ep	Pn	00 06 54.7	-3.3
	comp=Z,3.2nm,0.6s						
KAF	Kangasniemi	15.08	165	ep	Pn	00 07 01.5	-2.1
	comp=Z,2.9nm,0.6s						
FIA0	FINESS Array S	15.73	166	P	Pn	00 07 12.3	+0.3
	baz=354,slow=14						
FIA0	FINESS Array S	15.73	166	P	Pn	00 07 12.3	+0.3
	baz=354,slow=14						
FIA0	FINESS Array S	15.73	166	P	Pn	00 07 12.4	+0.3
	baz=354,slow=13,SNR=57						
FINES	FINESS Array B	15.73	166	Pn	Pn	00 07 12.2	+0.1
	comp=Z,0.1nm,0.3s,baz=22,slow=11,SNR=5.3						
FINES				Sn	Sn	00 10 00.0	-5.7
	comp=Z,0.4nm,0.3s,baz=10.0,slow=25,SNR=4.3						
NB2	NORSAR Subarra	16.08	192	P	P	00 07 19.5	-0.5
	baz=2.6,slow=11						
NB2	NORSAR Subarra	16.08	192	P	P	00 07 19.5	-0.5
	baz=2.6,slow=11						
NB2	NORSAR Subarra	16.08	192	P	P	00 07 19.5	-0.5
	baz=2.6,slow=11,SNR=57						
NOA	NORSAR Array B	16.08	192	Pn	P	00 07 21.7	+1.7
	comp=Z,0.2nm,0.3s,baz=8.4,slow=12,SNR=3.6						
HFS	Hagfors	16.89	188	P	Pn	00 07 26.4	-0.5
	baz=16,slow=9.3						
HFS	Hagfors	16.89	188	P	Pn	00 07 26.4	-0.5
	baz=16,slow=9.3						
HFS	Hagfors	16.89	188	P	P	00 07 29.4	+0.6
	comp=Z,0.3nm,0.3s,baz=27,slow=10,SNR=13						
HFS	Hagfors	16.89	188	P	Pn	00 07 26.4	-0.5
	baz=16,slow=9.1,SNR=57						
AKASG	Malin Array Be	26.62	164	P	P	00 09 10.1	+1.3
	comp=Z,0.4nm,0.4s,baz=355,slow=9.7,SNR=4.6						
ILAR	Eielson Array	38.28	350	P	P	00 10 51.2	+0.7
	comp=Z,0.8nm,0.9s,baz=354,slow=7.4,SNR=9.7						
ILAR				PcP	PcP	00 13 05.0	+1.0
	comp=Z,0.2nm,0.6s,baz=29,slow=2.1,SNR=3.7						
TORD	Torodi Ar. Bea	64.31	198	P	P	00 14 08.0	+2.0
	comp=Z,0.4nm,0.6s,baz=345,slow=7.9,SNR=8.0						
TXAR	Lajitas Array	68.33	307	P	P	00 14 33.5	+1.7
	comp=Z,0.3nm,0.6s,baz=38,slow=4.7,SNR=4.1						
ASAR	Alice Springs	118.66	70	PKP	PKPdf	00 22 17.8	-0.3
	comp=Z,0.2nm,0.5s,baz=348,slow=1.6,SNR=4.2						

TIR 07 00:04:02.2±0.3**, 40°.43N**×**20°.86E, h0**km**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBN	Korca	0.20	345	ePG	Pg	00 04 07.0	+0.8
KBN				i SG	Sg	00 04 10.7	+1.8
KBN	Korca	0.20	345	ePg	Pg	00 04 07.0	+0.8
	SNR=9.0						
SRN	Sarande	0.86	230	ePN	Pb	00 04 20.5	+0.6

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*MOS **07** 00:05:30.8±0.8, 36°.48N×70°.10E, h210km, mb4.1/22, Error ellipse: s-maj=11.6km s-min=5.4km az=78.6*
*ISCJB **07** 00:05:31.2±0.3, 36°.52N±0°.03×70°.14E±0°.05, h213km, mb4.0/27, Error ellipse: s-maj=5.7km s-min=3.1km az=159.3*
*BJI **07** 00:05:31.8, 36°.61N×70°.12E, h205km, mB4.5/3, mb4.6/7*
*IDC **07** 00:05:32.4±2.0, 36°.51N×70°.16E, h210km±18km, mb3.7/19, mb1 3.8/24, mb1mx3.6/34, mbtmp3.7/24, Error ellipse: s-maj=11.0km s-min=10.0km az=141.0*
*NNC **07** 00:05:42.5±3.3, 37°.34N×70°.70E, h231km±23km, mb3.4, mpv4.3, Error ellipse: s-maj=29.0km s-min=24.1km az=30.0*
ISC 07 00:05:32.6±0.4**, 36°.54N**±0°.04×**70°.18E**±0°.05**, h213**km**, n103, σ1ˢ.66**/120**, mb4.1**/27**, 19C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.06	152	⇓P	Pn	00 06 24.1	+0.2
CEP				S	S	00 07 03.0	-0.6
CHCP	Chirah Chowk	3.83	138	P	Pn	00 06 33.9	+1.0
THW	Thamme Wali	3.96	161	⇓P	Pn	00 06 34.1	-0.3
SARP	Sargodha	5.05	155	P	Pn	00 06 47.6	-0.4
KSH	Kashi	5.45	55	P	Pn	00 06 48.7	-4.4
KSH				S	S	00 07 46.3	-10
KSH				smax	smax		
	comp=N,310nm,0.5s						
KSH				smax	smax		
	comp=E,300nm,0.6s						
AML	Almayashu	6.21	25	i PN	Pn	00 07 02.8	-0.2
AML	Almayashu	6.21	25	P	Pn	00 07 02.8	-0.2
	SNR=196						
KK31	Karatay Array	6.56	2	⇑P	Pn	00 07 06.4	-0.7
	comp=E,9.0nm,0.3s,baz=195,slow=14,SNR=411						
KK31				⇑S	S	00 08 16.4	-5.8
	comp=E,14nm,0.5s,baz=187,slow=20,SNR=5.9						
KK31	Karatay Array	6.56	2	PN	Pn	00 07 06.5	-0.7
KK31				pmax	pmax		
	comp=Z,20nm,0.2s						
UCH	Uchtor	6.59	29	i PN	Pn	00 07 08.6	+0.5
UCH	Uchtor	6.59	29	P	Pn	00 07 08.6	+0.5
	SNR=14						
DHRM	DHARAMSHALA	6.63	128	ePKP	Pn	00 07 07.4	-1.0
DHRM				eS	S	00 08 20.4	-4.0
DHRM				AML	AML	00 08 22.1	
	comp=E,1μm,0.2s						
DHRM				AML	AML	00 08 22.1	
	comp=N,751nm,0.6s						
EKS2	Erkin-Say	6.71	23	P	S	00 08 24.3	-1.7
	SNR=6.4						
KZA	Kyzart	6.78	34	i PN	Pn	00 07 10.1	-0.3
KZA	Kyzart	6.78	34	P	Pn	00 07 10.1	-0.3
	SNR=76						
AAK	Ala-Archa	6.93	27	PN	Pn	00 07 12.4	+0.3
AAK				pmax	pmax		
	comp=Z,11nm,0.3s						
AAK	Ala-Archa	6.93	27	P	Pn	00 07 13.8	+1.7
	SNR=19						
AAK	Ala-Archa	6.93	27	P	Pn	00 07 12.4	+0.3
	comp=Z,11nm,0.3s,baz=188,slow=5.0,SNR=54						
AAK				S	S	00 08 28.8	-2.5
	comp=Z,17nm,0.3s,baz=327,slow=23,SNR=24						
KBK	Karagaybulak	7.13	30	P	Pn	00 07 15.2	+0.5
	SNR=28						
FRU	Bishkek	7.15	27	ePN	Pn	00 07 15.0	+0.2
FRU				pmax	pmax		
	comp=Z,38nm,1.8s						
BHK	Bhakra	7.28	133	eS	S	00 08 33.8	-5.5
CHMS	Chumysh	7.34	27	P	Pn	00 07 17.4	+0.1
	SNR=21						
ULHL	Ulahol	7.38	38	i PN	Pn	00 07 17.3	-0.6
ULHL	Ulahol	7.38	38	P	Pn	00 07 17.3	-0.6
	SNR=5.5						
SDNR	Sundarnagar	7.55	130	ePKP	Pn	00 07 18.6	-1.6
SDNR				eS	S	00 08 38.6	-7.3
TKM2	Tokmak 2	7.61	32	⇑P	Pn	00 07 20.8	-0.2
	comp=Z,17nm,0.5s						
TKM2				⇑S	S	00 08 34.9	-13
	comp=Z,37nm,0.6s						
TKM2	Tokmak 2	7.61	32	PN	Pn	00 07 20.7	-0.2
TKM2				pmax	pmax		
	comp=Z,17nm,0.5s						
TKM2	Tokmak 2	7.61	32	P	Pn	00 07 21.0	0.0
	SNR=30						
SMLA	Simla	7.93	131	i P	Pn	00 07 24.4	-0.7
SMLA				i S	S	00 08 48.9	-5.8
SMLA				i S	S	00 08 49.3	-5.5
SMLA				AML	AML	00 08 52.8	
	comp=N,238nm,0.5s						
SMLA				AML	AML	00 08 53.5	
	comp=E,208nm,0.3s						
DDI	Dehra Dun	9.04	131	ePKP	Pn	00 07 38.3	-1.1
DDI				eS	S	00 09 13.5	-7.7
DDI				AML	AML	00 09 18.4	
	comp=N,493nm,0.6s						
DDI				AML	AML	00 09 19.9	
	comp=E,372nm,0.3s						
NDI	New Delhi	9.83	141	ePKP9	Pn	00 07 46.0	-3.5
NDI				eS	S	00 09 28.5	-11
AJM	Ajmer	10.73	158	i P	Pn	00 07 59.0	-2.1
AJM				i S	S	00 09 53.0	-8.4
MK31	Makanchi Array	13.65	38	⇓P	Pn	00 08 37.7	0.0
	comp=E,7.6nm,0.4s,baz=222,slow=13,SNR=121						
MK31	Makanchi Array	13.65	38	eP	Pn	00 08 37.4	-0.2
MK31				pmax	pmax		
	comp=Z,12nm,0.5s						
MKAR	Makanchi Array	13.65	38	P	Pn	00 08 37.8	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	Makanchi Array	13.65	38	P	Pn	00 08 37.8	+0.2
	comp=Z,0.8nm,0.3s,baz=217,slow=16,SNR=33						
DANN	Dangsing	14.07	122	eP	Pn	00 08 42.4	-0.9
	comp=Z,64nm,0.7s						
KOLN	Koldanda	14.33	124	eP	Pn	00 08 45.6	-0.8
	comp=Z,12nm,0.2s						
BHPL	Bhopal	14.66	153	ePKP	P	00 08 54.5	+3.5
BHPL				ex	x	00 11 25.6	
AB31	Akbulak array	14.73	333	⇑P	P	00 08 52.2	+0.7
	comp=Z,2.5nm,0.3s,baz=118,slow=7.2,SNR=214						
AB31	Akbulak array	14.73	333	P	Pn	00 08 49.3	-1.5
AB31				pmax	pmax		
	comp=Z,8.0nm,0.3s						
WMQ	Urumqi	15.22	56	P	P	00 08 57.7	+0.7
WMQ				pmax	pmax		
	comp=Z,26nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,250nm,4.0s						
KUR17	Kurchatov Arra	15.29	20	⇓P	Pn	00 08 56.9	-0.7
	comp=Z,4.4nm,0.8s						
KURBB	Kurchatov Arra	15.30	21	P	Pn	00 08 56.9	-0.8
	comp=Z,0.4nm,0.3s,baz=210,slow=11,SNR=49						
KURBB				S	S	00 11 46.5	-0.4
	baz=205,slow=17,SNR=3.9						
KURK	Kurchatov	15.41	21	⇓P	P	00 08 57.9	-1.1
	comp=Z,11nm,1.1s						
KURK	Kurchatov	15.41	21	P	P	00 08 56.9	-2.1
KURK				S	S	00 11 46.5	-2.9
DMN	Daman	15.46	121	eP	P	00 08 59.8	-0.3
	comp=Z,20nm,0.3s						
KKN	Kakani	15.47	120	eP	P	00 08 59.6	-0.5
	comp=Z,112nm,0.5s						
PKIN	Phulchoki	15.68	120	eP	Pn	00 09 03.0	+0.2
	comp=Z,34nm,0.3s						
PKI	Pulchoki	15.69	120	eP	P	00 09 02.5	-0.2
GUN	Gumba	15.82	119	eP	P	00 09 04.0	-0.1
	comp=Z,84nm,0.6s						
VOSK	Vostochnaya	16.19	2	⇑P	P	00 09 07.9	+0.4
	comp=Z,2.8nm,0.4s						
VOSK				⇑S	S	00 11 57.9	-8.5
	comp=Z,4.5nm,1.1s						

AKTO	Aktyubinsk	16.42	332	⇑P	P	00 09 10.3	+0.2
	comp=Z,11nm,0.8s						
AKTO				⇑S	S	00 12 08.5	-2.6
	comp=Z,8.8nm,1.3s						
AKTO	Aktyubinsk	16.42	332	P	Pn	00 09 11.0	-0.2
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	Aktyubinsk	16.42	332	P	Pn	00 09 10.9	-0.2
	comp=Z,1.2nm,0.3s,baz=146,slow=9.9,SNR=21						
ZRNK	Zerenda	16.43	357	⇑P	Pn	00 09 11.2	0.0
	comp=Z,8.6nm,0.8s						
ZRNK				⇑S	S	00 12 04.5	-6.6
	comp=Z,7.1nm,1.2s						
BVA0	Borovoye Array	16.48	0	⇑P	Pn	00 09 11.5	-0.3
	comp=Z,12nm,1.1s,baz=152,slow=8.5,SNR=48						
BVA0				S	S	00 12 04.9	-7.3
	comp=Z,0.4nm,0.8s,baz=168,slow=26,SNR=9.3						
BVA0	Borovoye Array	16.48	0	i P	Pn	00 09 11.7	-0.1
BVA0				pmax	pmax		
	comp=Z,12nm,1.1s						
BVAR	Borovoye Array	16.48	0	P	Pn	00 09 11.8	0.0
BVAR				S	S	00 12 12.9	+0.7
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR	Borovoye Array	16.48	0	P	Pn	00 09 11.8	0.0
	comp=Z,2.6nm,0.3s,baz=178,slow=7.4,SNR=33						
BVAR				S	S	00 12 12.9	+0.7
	baz=165,slow=20,SNR=7.3						
BRVK	Borovoye	16.51	0	ceP	Pn	00 09 12.0	-0.2
BRVK				pmax	pmax		
	comp=Z,23nm,1.2s						
RAMN	Ramite	16.91	120	eP	Pn	00 09 17.0	-0.4
	comp=Z,76nm,0.5s						
TAPN	Taplejung	17.45	117	eP	Pn	00 09 23.7	-0.2
	comp=Z,90nm,0.9s						
ODAN	Odare	17.52	119	eP	Pn	00 09 23.9	-0.7
	comp=Z,86nm,0.7s						
BOK	Bokaro	18.57	129	ex	P	00 09 34.5	+0.7
BOK				ex	S	00 12 57.0	+2.8
ZALV	Zalesovo Beam	20.16	26	P	P	00 09 50.9	+0.4
ZALV				S	S	00 13 25.0	+0.3
ZALV				pmax	pmax		
	comp=Z,22nm,0.6s						
ZALV				smax	smax		
	comp=N,2.0nm,0.8s						
ZALV	Zalesovo Beam	20.16	26	P	P	00 09 50.9	+0.4
	comp=N,22nm,0.6s,baz=218,slow=12,SNR=72						
ZALV				S	S	00 13 25.0	+0.3
	comp=N,1.7nm,0.8s,baz=221,slow=17,SNR=4.6						
NVS	Novosibirsk	20.38	22	⇑iP	P	00 09 52.2	-0.7
NVS				eS	S	00 13 27.1	-1.8
NVS				pmax	pmax		
	comp=Z,28nm,1.4s						
NVS				pmax	pmax		
	comp=N,23nm,1.6s						
NVS				smax	smax		
	comp=N,13nm,1.9s						
SVE	Sverdlovsk	21.28	345	eP	P	00 10 03.1	+0.8
ARU	Arti	21.38	342	d iP	P	00 10 03.8	+0.5
ARU				S	S	00 13 49.4	+2.9
ARU				pmax	pmax		
	comp=Z,28nm,1.2s						
BHD	Baghdad	21.39	269	eP	P	00 10 09.7	+6.0
BHD				eS	S	00 13 57.0	+10
KIV	Kislovodsk	22.18	298	eP	P	00 10 10.1	-1.3
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA	Gaotai	23.49	74	eP	P	00 10 26.3	+3.0
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ANN	Anapa	26.03	299	eP	P	00 10 44.0	-2.1
ANN				e		00 11 22.6	
ANN				pmax	pmax		
	comp=Z,13nm,0.7s						
ZAK	Zakamensk	27.46	49	eP	P	00 11 00.3	+1.4
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	28.86	56	P	P	00 11 12.8	+1.5
	comp=Z,2.5nm,0.6s,baz=257,slow=9.5,SNR=17						
OBN	Obninsk	29.48	320	⇑iP	P	00 11 16.8	+0.3
OBN				e*PP	pP	00 12 04.0	+4.6
OBN				eS	S	00 15 49.5	-5.1
OBN				pmax	pmax		
	comp=Z,11nm,1.2s						
CMAR	Chiang Mai Arr	31.06	118	P	P	00 11 31.9	+1.0
	comp=Z,1.7nm,0.6s,baz=292,slow=8.0,SNR=6.8						
AKASG	Malin Array Be	32.40	309	ceP	P	00 11 42.5	+0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	Malin Array Be	32.40	309	P	P	00 11 41.9	-0.3
	comp=Z,1.4nm,0.5s,baz=81,slow=7.1,SNR=7.4						
FINES	FINESS Array B	37.08	326	P	P	00 12 22.8	+0.8
	comp=Z,5.8nm,0.7s,baz=127,slow=8.9,SNR=3.5						
ARCES	ARCESS Array B	40.85	338	P	P	00 12 54.1	+0.9
	comp=Z,6.6nm,0.7s,baz=107,slow=7.6,SNR=20						
HFS	Hagfors	42.62	322	P	P	00 13 07.8	+0.2
	comp=Z,3.2nm,0.4s,baz=97,slow=12,SNR=37						
NB2	NORSAR Subarra	43.95	323	P	P	00 13 18.0	-0.3
	comp=Z,12nm,1.2s,baz=98,slow=7.9						
NOA	NORSAR Array B	43.95	323	P	P	00 13 18.1	-0.1
	comp=Z,3.0nm,0.7s,baz=97,slow=7.9,SNR=9.4						
YAK	Yakutsk	44.31	36	eP	P	00 13 22.6	+1.5
YAK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KSRS	Korea Array	45.49	71	P	P	00 13 31.1	+0.5
	comp=Z,2.4nm,0.5s,baz=278,slow=6.8,SNR=9.5						
TIXI	Tiksi	45.98	22	ceP	P	00 13 35.1	+1.1
TIXI				pmax	pmax		
	comp=Z,12nm,1.0s						
SPITS	Spitsbergen Ar	47.30	347	P	P	00 13 45.8	+1.6
	comp=Z,5.4nm,0.6s,baz=108,slow=8.0,SNR=9.3						
KMBO	Kilima Mbogo	48.38	227	P	P	00 13 54.2	+0.7
	comp=Z,1.4nm,0.4s,baz=34,slow=16,SNR=6.9						
YSS	Yuzh-Sakhalins	53.34	55	⇑iP	P	00 14 31.9	+2.1
SEY	Seymchan	54.75	34	⇓iP	P	00 14 40.5	+0.8
BILL	Bilibino	58.86	26	⇑eP	P	00 15 07.9	-0.6
BILL				e		00 17 17.5	
BILL				eS	S	00 22 57.3	+0.6
BILL				pmax	pmax		
	comp=Z,35nm,1.2s						
PETK	Petropavlovsk-	60.40	44	P	P	00 15 19.9	+0.7
PETK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PETK	Petropavlovsk-	60.40	44	P	P	00 15 19.9	+0.7
	comp=Z,1.2nm,0.7s,baz=266,slow=4.3,SNR=2.8						
TORD	Torodi Ar. Bea	65.06	268	P	P	00 15 49.6	-0.9
	comp=Z,0.6nm,0.5s,baz=46,slow=5.8,SNR=15						
TORD				pP	pP	00 16 39.5	-0.2
	comp=Z,0.3nm,0.4s,baz=53,slow=5.2,SNR=1.7						
LBTB	Lobatse	74.27	221	P	P	00 16 45.6	-0.9
	comp=Z,1.7nm,0.6s,baz=41,slow=11,SNR=4.4						
ILAR	Eielson Array	74.92	16	P	P	00 16 49.9	+0.2
	comp=Z,1.2nm,0.8s,baz=322,slow=5.4,SNR=9.3						
BOSA	Boshof	77.36	220	P	P	00 17 03.2	-0.7
	comp=Z,3.3nm,0.9s,baz=31,slow=5.9,SNR=3.4						
YKA	Yellowknife Ar	81.23	2	P	P	00 17 24.6	+0.3
	comp=Z,1.1nm,0.7s,baz=350,slow=5.1,SNR=13						
YKA				pP	pP	00 18 16.2	+0.6
	comp=Z,0.4nm,0.5s,baz=346,slow=5.3,SNR=3.1						
WRA	Warramunga Arr	82.58	121	P	P	00 17 31.6	-0.4
	comp=Z,0.8nm,0.5s,baz=323,slow=4.8,SNR=6.0						
ASAR	Alice Springs	84.82	124	P	P	00 17 41.9	-1.4
	comp=Z,1.1nm,0.5s,baz=309,slow=4.9,SNR=21						
QSPA	South Pole Qui	126.34	180	PKP	PKPdf	00 24 08.4	-0.6
	comp=Z,1.1nm,1.1s,baz=274,slow=0.8,SNR=4.4						

*CSEM **07** 00:08:41.5, 42°.30N×13°.58E, h6km, MD2.1/7, After ROM*
ROM 07 00:08:41.5±0.1**, 42°.30N×13°.58E, h6**km±1km**, Md2.1**/7**, Ml1.7**/3**, Error ellipse: s-maj=0.9km s-min=0.6km az=13.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAGN	Fagnano	0.03	168	Pg	Pg	00 08 42.7	0.0
FAGN				Sg	Sg	00 08 43.9	+0.3
	1μm,0.3s						
FAGN	Fagnano	0.03	168	Pg	Pg	00 08 42.7	0.0
FAGN				Sg	Sg	00 08 43.9	+0.3
	1μm,0.3s						
AQU	L'Aquila	0.14	295	Pg	Pg	00 08 44.8	+0.3
AQU				Sg	Sg	00 08 47.6	+1.1
	147nm,0.4s						
AQU	L'Aquila	0.14	295	Pg	Pg	00 08 44.8	+0.3
AQU				Sg	Sg	00 08 47.6	+1.1
	147nm,0.4s						
VCEL	Villa Celiera	0.22	63	Pg	Pg	00 08 46.5	+0.5
VCEL				Sg	Sg	00 08 50.5	+1.4
	279nm,1.4s						
VCEL	Villa Celiera	0.22	63	Pg	Pg	00 08 46.5	+0.5
VCEL				Sg	Sg	00 08 50.5	+1.4
	279nm,1.4s						
PTQR	Pietraquaria	0.30	206	Pg	Pb	00 08 48.6	-0.9
PTQR				Sg	Sb	00 08 53.5	-1.3
	3.0nm,0.2s						
PTQR	Pietraquaria	0.30	206	Pg	Pb	00 08 48.6	-0.9
PTQR				Sg	Sb	00 08 53.5	-1.3
	3.0nm,0.2s						

IDC 07 00:15:43.2±9.5**, 31°.29S×178°.51W, h0**km**, mb4.0**/3**, mb1 4.2**/4**, mb1mx3.9**/18**, mbtmp4.0**/4**, Error ellipse: s-maj=215.0km s-min=24.7km az=126.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.09	14	Pn	Pn	00 16 19.9	+0.4
	76nm,0.3s,baz=204,slow=22,SNR=5.2						
RAO				Sn	Sn	00 16 46.1	-0.2
	33nm,0.3s,baz=18,slow=20,SNR=3.7						
STKA	Stephens Creek	33.86	258	P	P	00 22 26.3	-1.2
	1.6nm,0.9s,baz=111,slow=14,SNR=2.5						
ASAR	Alice Springs	42.63	268	P	P	00 23 41.9	+0.2
	0.7nm,0.5s,baz=106,slow=7.4,SNR=12						
WRA	Warramunga Arr	43.70	273	P	P	00 23 50.6	+0.3
	1.9nm,0.3s,baz=111,slow=8.0,SNR=15						

NNC 07 00:16:15.7±1.8**, 42°.67N×80°.86E, h0**km**, mb3.8, mpv3.5, 11C-6D, Error ellipse: s-maj=17.4km s-min=5.0km az=143.0, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNDC	Almaty	2.91	282	⇑Pn	Pn	00 17 04.6	+1.2
	36nm,0.7s						
KNDC				⇑Lg	Lg	00 17 49.5	
	121nm,0.8s						
TKM2	Tokmak 2	3.88	276	⇑Pn	Pn	00 17 16.7	-0.3
	6.1nm,0.6s						
TKM2				⇓Pg	Pb	00 17 27.6	+2.2
	10nm,0.8s						
TKM2				⇓Sn	Sn	00 18 02.8	-0.6
	5.8nm,0.6s						
TKM2				⇑Lg	Lg	00 18 18.0	
	17nm,0.6s						
MK31	Makanchi Array	4.25	13	⇓Pn	Pn	00 17 23.7	+2.0
	2.9nm,0.5s,baz=190,slow=14,SNR=49						
MK31				⇑Sn	Sb	00 18 18.6	-4.7
	6.5nm,0.7s,baz=191,slow=23,SNR=4.3						
MK31				⇑Lg	Lg	00 18 30.4	
	9.7nm,0.7s,baz=206,slow=24,SNR=4.3						
KK31	Karatay Array	7.61	277	⇓Pg	Pg	00 18 36.4	-5.2
	0.9nm,0.6s,baz=85,slow=16,SNR=7.3						
KK31				⇑Lg	Lg	00 20 17.0	
	2.3nm,0.6s						
KUR15	Kurchatov Arra	8.11	350	⇑Lg	Lg	00 20 34.0	
	4.4nm,1.1s						
KURK	Kurchatov	8.20	350	⇑Lg	Lg	00 20 36.2	
	15nm,1.0s						
VOSK	Vostochnaya	12.05	330	⇑Lg	Lg	00 22 42.2	
	3.7nm,1.1s						
BVA0	Borovoye Array	12.51	330	⇓Lg	Lg	00 22 55.6	
	6.5nm,1.4s,baz=131,slow=29,SNR=4.2						
BRVK	Borovoye	12.57	329	⇑Lg	Lg	00 22 58.8	
	4.5nm,0.9s						
ZRNK	Zerenda	12.99	326	⇓Lg	Lg	00 23 09.9	
	3.1nm,1.1s						

MEX 07 01:00:48.0±0.6**, 15°.98N×94°.31W, h75**km±15km**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.08	105	i P	Pn	01 01 06.4	-1.4
PCIG				i S	Sn	01 01 20.9	-1.7
TGIG		1.39	55	i P	Pn	01 01 10.2	-1.6
TGIG				i S	Sn	01 01 28.0	-1.6
HUIG	Huatulco	1.75	263	i P	Pn	01 01 15.7	-0.7
HUIG				i S	Sn	01 01 35.8	-2.2
CCIG	Comitan	2.11	82	i P	Pn	01 01 20.2	-1.3
CCIG				i S	Sn	01 01 44.5	-2.4
PNIG	Pinotepa	3.69	277	i P	Pn	01 01 42.2	-0.6
PNIG				i S	Sn	01 02 23.5	-1.7

*ISCJB **07** 01:09:11.1±0.9, 18°.7S±0°.1×169°.2E±0°.2, h246km, mb3.7/8, Error ellipse: s-maj=32.5km s-min=10.0km az=34.5*
*IDC **07** 01:09:11.7±2.8, 18°.88S×169°.30E, h245km±29km, mb3.6/8, mb1 3.8/9, mb1mx3.6/18, mbtmp3.6/9, Error ellipse: s-maj=47.9km s-min=20.1km az=156.0*
ISC 07 01:09:11.6±1.0**, 18°.9S**±0°.2**×169°.3E**±0°.2**, h246**km**, n15, σ0.94**/17**, mb3.9**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.17	220	eP	Pn	01 10 15.4	-1.9
DZM				eS	S	01 11 10.7	+1.3
DZM	Mont Dzumac	4.17	220	P	Pn	01 10 17.1	-0.2
	9.7nm,0.3s,baz=58,slow=19,SNR=88						
NOUC	Port Laguerre	4.28	221	eP	Pn	01 10 18.2	-0.2
WRA	Warramunga Arr	32.99	262	P	P	01 15 23.0	-0.9
	0.3nm,0.3s,baz=88,slow=8.4,SNR=9.0						
WRA				PcP	PcP	01 18 01.0	-0.8
	0.4nm,0.6s,baz=92,slow=4.8,SNR=5.2						
ASAR	Alice Springs	33.31	256	P	P	01 15 26.8	+0.2
	1.8nm,0.5s,baz=83,slow=8.7,SNR=50						
PETK	Petropavlovsk-	72.41	353	P	P	01 20 10.6	-0.2
	3.5nm,0.7s,baz=160,slow=9.5,SNR=5.7						
CMAR	Chiang Mai Arr	78.45	294	P	P	01 20 47.2	+1.3
	1.1nm,0.3s,baz=141,slow=5.5,SNR=4.0						
YBH	Yreka Blue Hor	86.98	44	P	P	01 21 30.1	+0.8
	1.3nm,0.5s,baz=194,slow=4.2,SNR=6.3						
SONM	Songino Array	87.01	323	P	P	01 21 29.6	+0.4
	1.1nm,0.8s,baz=136,slow=5.0,SNR=4.9						
NVAR	Mina Array Bea	88.50	48	P	P	01 21 37.6	+0.9
	0.6nm,0.7s,baz=218,slow=5.7,SNR=3.4						
ILAR	Eielson Array	89.88	17	P	P	01 21 41.1	-1.0
	0.6nm,0.7s,baz=236,slow=5.1,SNR=12						
YKA	Yellowknife Ar	100.32	27	P	Pdif	01 22 30.5	+0.8
	0.1nm,0.5s,baz=245,slow=4.6,SNR=4.9						
ARCES	ARCESS Array B	124.76	345	PKP	PKPdf	01 27 40.9	-0.5
	0.3nm,0.4s,baz=75,slow=2.4,SNR=11						
GERES	GERESS Array B	144.24	332	PKP	PKPab	01 28 16.5	-0.3
	0.9nm,0.9s,baz=57,slow=4.9,SNR=4.4						
TORD	Torodi Ar. Bea	166.82	246	PKP	PKPdf	01 28 48.6	0.0
	0.6nm,0.9s,baz=143,slow=0.7,SNR=6.7						

IDC 07 01:18:23.9±2.1**, 8°.39S×127°.43E, h0**km**, mb3.8**/1**, mb1 3.9**/3**, mb1mx3.5**/18**, mbtmp3.7**/3**, ML3.8**/2**, Error ellipse: s-maj=272.7km s-min=32.0km az=62.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.29	150	Pn	Pn	01 21 33.0	-1.0
	0.5nm,0.3s,baz=328,slow=13,SNR=15						
WRA				Sn	Sn	01 23 52.4	-10
	1.3nm,0.3s,baz=330,slow=23,SNR=11						
ASAR	Alice Springs	16.41	159	Pn	Pn	01 22 16.8	+1.0
	0.3nm,0.3s,baz=334,slow=9.9,SNR=12						
ASAR				Sn	Sn	01 25 12.6	-6.2
	0.4nm,0.3s,baz=347,slow=25,SNR=5.7						
MKAR	Makanchi Array	68.02	328	P	P	01 29 25.1	0.0
	0.5nm,0.5s,baz=127,slow=7.6,SNR=6.2						

IDC 07 01:18:29.1±4.7**, 15°.90S×175°.99W, h0**km**, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.8**/18**, mbtmp4.2**/3**, Error ellipse: s-maj=177.2km s-min=94.6km az=154.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.63	240	P	P	01 26 19.1	-0.2
	1.5nm,0.4s,baz=94,slow=8.2,SNR=5.1						
WRA	Warramunga Arr	47.30	257	P	P	01 27 04.8	-0.1
	0.7nm,0.5s,baz=91,slow=7.2,SNR=4.8						
ASAR	Alice Springs	47.59	252	P	P	01 27 07.0	-0.1
	7.2nm,0.6s,baz=89,slow=8.2,SNR=36						
ASAR				PcP	PcP	01 28 36.8	-0.2
	0.3nm,0.5s,baz=103,slow=4.2,SNR=2.9						

*SKO **07** 01:18:53.4, 41°.30N×22°.68E, h15km, M1.5, ML1.9*
*CSEM **07** 01:18:54.3±0.1, 41°.28N×22°.68E, h0km±1km, ML1.7, Error ellipse: s-maj=2.7km s-min=2.1km az=35.0*
*ATH **07** 01:18:54.3, 41°.30N×22°.69E, h4km, MD2.8/4*
*THE **07** 01:18:54.2, 41°.28N×22°.69E, h0km±1km, ML1.9/8, Error ellipse: s-maj=1.3km s-min=0.4km az=296.0*
*BEO **07** 01:18:56.3±1.0, 41°.32N×22°.52E, h0km, ML1.7/4*
ISC 07 01:18:54.4±0.9**, 41°.29N**±0°.02**×22°.68E**±0°.02**, h4**km±7km**, n41, σ0.49**/75**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	294	P	Pg	01 18 56.0	-0.3
VAY				S	Sg	01 18 57.8	+0.3
VAY	Valandovo	0.09	294	eSg	Sg	01 18 57.8	+0.3
VAY	Valandovo	0.09	294	i Pg	Pg	01 18 56.0	-0.3
VAY				eLg	Lg	01 18 58.0	
	comp=E,926nm,0.3s						
VAY				i Sg	Sg	01 18 58.0	+0.5
VAY				eLg	Lg	01 18 58.0	
	comp=N,886nm,0.2s						
VAY	Valandovo	0.09	294	P	Pg	01 18 56.0	-0.3
VAY	Valandovo	0.09	294	i Pg	Pg	01 18 56.4	+0.1
VAY				S	Sg	01 18 57.8	+0.3
VAY				eLg	Lg	01 18 58.5	
	comp=N,886nm,0.2s						
KNT	Kendrikon	0.21	126	P	Pg	01 18 58.6	+0.1
KNT				S	Sg	01 19 01.6	+0.4
KNT	Kendrikon	0.21	126	P	Pg	01 18 58.6	+0.1
KNT				S	Sg	01 19 01.6	+0.4
GRG	Griva	0.39	212	P	Pg	01 19 02.0	+0.1
GRG				S	Sg	01 19 07.5	+0.5
GRG	Griva	0.39	212	ePG	Pg	01 19 02.0	+0.1
GRG				eSG	Sg	01 19 07.8	+0.8
GRG	Griva	0.39	212	P	Pg	01 19 02.0	+0.1
GRG				S	Sg	01 19 07.5	+0.5
THE	Thessaloniki	0.69	161	P	Pg	01 19 07.3	-0.3
THE				S	Sg	01 19 16.9	+0.3
THE	Thessaloniki	0.69	161	P	Pg	01 19 07.3	-0.3
THE				S	Sg	01 19 16.9	+0.3
SOH	Sokhos	0.69	132	P	Pg	01 19 07.2	-0.4
SOH				S	Sg	01 19 17.4	+0.7
SOH	Sokhos	0.69	132	ePG	Pg	01 19 07.3	-0.4
SOH				eSG	Sg	01 19 17.1	+0.4
SOH	Sokhos	0.69	132	ePg	Pg	01 19 07.3	-0.4
SOH				eSg	Sg	01 19 17.1	+0.4
SRS	Serrai	0.71	103	P	Pg	01 19 07.5	-0.6
SRS				S	Sg	01 19 17.9	+0.6
SRS	Serrai	0.71	103	P	Pg	01 19 07.5	-0.6
SRS				S	Sg	01 19 17.9	+0.6
HORT	Hortiatis	0.76	155	P	Pg	01 19 08.7	-0.3
HORT	Hortiatis	0.76	155	P	Pg	01 19 08.7	-0.3
NVR	Nevrokopi	0.90	86	P	Pg	01 19 10.9	-0.7
NVR				S	Sg	01 19 23.6	+0.4
NVR	Nevrokopi	0.90	86	ePB	Pg	01 19 11.9	+0.3
NVR				eSG	Sg	01 19 22.8	-0.4
NVR	Nevrokopi	0.90	86	P	Pg	01 19 10.9	-0.7
NVR	Nevrokopi	0.90	86	ePb	Pg	01 19 11.9	+0.3
NVR				eSg	Sg	01 19 22.8	-0.4
NVR				S	Sg	01 19 23.6	+0.4
PLG	Polygyros	1.08	147	P	Pg	01 19 14.6	-0.6
PLG				S	Sb	01 19 30.3	+0.1
PLG	Polygyros	1.08	147	ePG	Pg	01 19 14.7	-0.5
PLG				eSG	Sg	01 19 29.8	+0.6
PLG	Polygyros	1.08	147	ePg	Pg	01 19 14.7	-0.5
PLG				eSg	Sg	01 19 29.8	+0.6
PLG				S	Sb	01 19 30.3	+0.1
FNA	Florina	1.10	243	P	Pg	01 19 14.6	-1.0
FNA	Florina	1.10	243	ePB	Pg	01 19 15.5	-0.1
FNA				eSB	Sb	01 19 31.1	+0.3
FNA	Florina	1.10	243	P	Pg	01 19 14.6	-1.0
FNA	Florina	1.10	243	ePb	Pg	01 19 15.5	-0.1
FNA				eSb	Sb	01 19 31.1	+0.3
VTS	Vitosha	1.36	17	P	Pn	01 19 20.1	-0.3
VTS	Vitosha	1.36	17	ePg	Pg	01 19 21.0	+0.4
VTS				eSg	Sn	01 19 39.6	+0.7
VTS	Vitosha	1.36	17	P	Pn	01 19 20.1	-0.3
VTS	Vitosha	1.36	17	ePg	Pg	01 19 21.0	+0.4
VTS				eSg	Sn	01 19 39.6	+0.7
OUR	Ouranopolis	1.37	133	P	Pn	01 19 19.7	-0.6
OUR				S	Sn	01 19 39.8	+0.9
OUR	Ouranopolis	1.37	133	P	Pn	01 19 19.7	-0.6
OUR				S	Sn	01 19 39.8	+0.9
KAVA	Kavala	1.42	101	P	Pn	01 19 20.1	-0.8
KAVA				S	Sg	01 19 40.6	+0.6
KAVA	Kavala	1.42	101	P	Pn	01 19 20.1	-0.8
KAVA				S	Sg	01 19 40.6	+0.6
BARS	Barje	1.66	338	ePn	Pg	01 19 26.0	-0.2
BARS				eSn	Sn	01 19 46.1	+0.1
BARS	Barje	1.66	338	ePn	Pg	01 19 26.0	-0.2
BARS				eSn	Sn	01 19 46.1	+0.1
ZAPS	Zavoj	1.99	359	ePn	Pb	01 19 30.8	-0.3
ZAPS				eSn	Sb	01 19 56.2	0.0

MAN 07 01:20:19, 9°.59N×126°.25E, h42km**, mb4.6, ML3.5, MS3.5, 1C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	0.88	225	eP	Pn	01 20 36.1	+1.1
MSLP	Maasin	1.48	292	eP	Pn	01 20 45.7	+2.6
MSLP				eS	Sn	01 21 06.5	+5.2
PLP	Palo	2.01	321	⇓eP	Pn	01 20 52.1	+1.7
PLP				eS	Sn	01 21 15.5	+1.2
BUKP	Musuan	2.07	215	eP	Pn	01 20 52.7	+1.4
TBP	Tagbilaran	2.36	273	eP	Pn	01 20 56.7	+1.4
TBP				eS	Sn	01 21 24.0	+1.0
LLP	Lapu-Lapu	2.37	288	⇓iP	Pn	01 20 57.2	+1.9
CNP	Catarman	3.30	332	eP	Pn	01 21 09.5	+1.4
PAGZ	Pagadian	3.32	239	eP	Pn	01 21 10.6	+2.0
GUIM	Jordan	3.75	286	eP	Pn	01 21 15.9	+1.5
RCP	Roxas	3.97	300	⇑eP	Pn	01 21 20.3	+2.9

*JMA **07** 01:24:10.8±0.2, 25°.33N×122°.08E, h0km, M2.7*
*TAP **07** 01:24:12.4, 24°.20N×121°.77E, h12km, ML3.4, B*
ISC 07 01:24:12.4±0.9**, 24°.21N**±0°.02**×121°.81E**±0°.02**, h11**km±6km**, n45, σ0.65**/77**, 7C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	Heping Village	0.12	329	i P	Pg	01 24 15.5	+0.1
	baz=349						
EHP				i S	Sg	01 24 18.1	+0.4
	baz=349						
ENA	Nanau	0.23	344	⇑iP	Pg	01 24 17.4	+0.2
	baz=354						
ENA				S	Sg	01 24 20.9	+0.4
	baz=354						
TWD	Chiawan	0.23	237	i P	Pg	01 24 16.9	-0.3
	baz=240						
TWD				S	Sg	01 24 20.3	-0.2
	baz=240						
HWA	Hwalien	0.29	220	eP	Pb	01 24 19.6	-0.1
	baz=224						
TWC	Suao	0.40	5	⇑iP	Pb	01 24 20.8	-0.7
	baz=4.0						
TWC				i S	Sb	01 24 26.8	-0.8
	baz=4.0						
NNS	Nan Shan	0.46	300	⇑iP	Pg	01 24 21.4	-0.1
	baz=304						
NNS				S	Sg	01 24 27.3	-0.4
	baz=304						
ENTT	Nioudou	0.49	333	⇑iP	Pb	01 24 22.2	-0.7
	baz=337						
ENTT				S	Sb	01 24 28.9	-1.2
	baz=337						
WHF	Hehuan Shan	0.50	263	⇑iP	Pg	01 24 22.0	-0.3
	baz=265						
WHF				S	Sg	01 24 28.4	-0.6
	baz=265						
ESL	Shilin	0.52	222	eP	Pg	01 24 22.3	-0.2
	baz=229						
TWE	Neicheng	0.53	346	⇑iP	Pb	01 24 23.2	-0.5
	baz=351						
TWE				S	Sb	01 24 30.8	-0.5
	baz=351						
ILA	Ilan	0.56	354	eP	Pg	01 24 22.1	-1.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=353						
ILA				eS	Sb	01 24 32.1	-0.1
	baz=353						
TWT	Tachien	0.58	275	eP	Pg	01 24 23.8	+0.1
	baz=276						
TWT				S	Sg	01 24 31.5	0.0
	baz=276						
NSK	Sanguang	0.62	319	⇑iP	Pb	01 24 24.8	-0.5
	baz=322						
NSK				S	Sg	01 24 33.0	+0.2
	baz=322						
TWB1	Santiao Chiao	0.82	11	eP	Pb	01 24 28.4	-0.1
	baz=14						
TWB1				eS	Sb	01 24 39.6	+0.1
	baz=14						
EHY	Hungye	0.83	213	eP	Pg	01 24 27.8	-0.6
	baz=223						
NSTT	Nanjuang	0.85	300	P	Pb	01 24 29.1	-0.1
	baz=302						
NSTT				S	Sg	01 24 39.7	-0.2
	baz=302						
NWF	Wu-fen Shan	0.86	358	P	Pb	01 24 29.7	+0.3
	baz=353						
NWF				S	Sb	01 24 41.0	0.0
	baz=353						
SMLT	Sun Moon Lake	0.89	249	eP	Pg	01 24 29.6	0.0
	baz=250						
SMLT				eS	Sg	01 24 40.6	-0.6
	baz=250						
TYC	Yuchr	0.92	251	eP	Pg	01 24 29.7	-0.5
	baz=245						
TYC				eS	Sg	01 24 42.1	0.0
	baz=245						
NCU	National Centr	0.95	323	eP	Pn	01 24 31.4	-0.2
	baz=321						
TWQ1	Liyutan	0.96	279	eP	Pn	01 24 31.4	-0.4
	baz=280						
TWQ1				eS	Sb	01 24 44.1	+0.5
	baz=280						
TWS1	Kuangyinshan	0.96	338	eP	Pn	01 24 32.0	+0.2
	baz=340						
TWS1				eS	Sn	01 24 45.6	+0.2
	baz=340						
TWF1	Yuli	0.97	209	eP	Pg	01 24 29.5	-1.6
	baz=220						
TWF1				eS	Sb	01 24 44.3	+0.3
	baz=220						
NSY	Sanyi	0.98	283	eP	Pn	01 24 32.1	+0.1
	baz=284						
NSY				eS	Sn	01 24 45.5	-0.4
	baz=284						
TCU	Taichung	1.04	267	eP	Pn	01 24 33.4	+0.6
	baz=269						
YUS	Yu-Shan	1.06	228	eP	Pb	01 24 32.5	-0.6
	baz=229						
YUS				eS	Sg	01 24 47.6	+0.9
	baz=229						
WNT	Mingjian	1.08	253	eP	Pn	01 24 33.4	0.0
	baz=249						
WNT				eS	Sn	01 24 49.2	+0.8
	baz=249						
TWY	Chenhua	1.08	350	eP	Pn	01 24 34.1	+0.7
	baz=345						
TWY				eS	Sn	01 24 49.5	+1.1
	baz=345						
YOJ	Yonaguni jima	1.12	77	⇓P	Pn	01 24 34.2	+0.2
	baz=67						
YOJ				S	Sn	01 24 50.7	+1.3
	baz=67						
YOJ	Yonaguni jima	1.12	77	P	Pn	01 24 34.0	0.0
YOJ				eS	Sn	01 24 50.6	+1.2
ALS	Alishan	1.15	233	eP	Pb	01 24 33.6	-0.8
	baz=243						
CHN5	Tsauling	1.20	240	eP	Pn	01 24 35.2	0.0
	baz=242						
CHN5				S	Sn	01 24 52.7	+1.3
	baz=242						
ELDTW	Lidau	1.25	216	eP	Pn	01 24 34.3	-1.5
	baz=202						
CHN4	Tsaushan	1.40	233	eP	Pb	01 24 38.5	-0.1
	baz=235						
CHN4				eS	Sg	01 24 58.6	+1.0
	baz=235						
PCYT	Pengchaiyu	1.44	9	eP	Pg	01 24 39.4	-0.6
	baz=9.0						
WTP	Ta-pu	1.45	229	eP	Pb	01 24 39.8	+0.4
	baz=231						
WTP				eS	Sg	01 24 59.2	+0.1
	baz=231						
TWK	Hsinying	1.53	233	eP	Pb	01 24 40.6	-0.1
	baz=235						
CHN1	Nanshi	1.55	229	eP	Pb	01 24 41.4	+0.2
	baz=222						
CHN1				eS	Sg	01 25 02.2	-0.2
	baz=222						
IRIF	Iriomote-Funau	1.76	85	P	Pb	01 24 43.7	-0.9
IRIF				eS	Sb	01 25 07.1	+0.5
JKRS	Kuro-shima	2.01	89	P	Pn	01 24 47.4	+1.2
JKRS				eS	Sb	01 25 13.1	-0.8
EAST	Anshuo	2.02	206	eP	Pb	01 24 48.1	-1.0
	baz=195						
SCZT	Fangliau	2.13	211	eP	Pn	01 24 48.9	+1.1
	baz=197						
JIJ	Ishigaki jima	2.13	85	P	Pn	01 24 48.1	+0.2
JIJ				eS	Sn	01 25 14.8	+0.4
PNG	Penghu	2.16	253	eP	Pn	01 24 49.1	+0.9
	baz=257						
WDGT	Dungji	2.18	245	eP	Pn	01 24 49.4	+0.8
	baz=248						

*KRSC **07** 01:28:59.1±1.7, 53°.25N×154°.75E, h542^{km}±72^{km}, ML4.4*
*MOS **07** 01:29:03.4±1.4, 53°.55N×154°.07E, h462^{km}, mb3.5/3, Error ellipse: s-maj=20.0km s-min=15.7km az=60.5*
*ISCJB **07** 01:29:04.6±0.4, 53°.59N±0°.07×154°.3E±0°.1, h471^{km}±5^{km}, mb3.1/10, Error ellipse: s-maj=15.1km s-min=9.1km az=33.6*
*IDC **07** 01:29:05.0±1.2, 53°.63N×154°.05E, h460^{km}±15^{km}, mb2.8/10, mb1 3.1/13, mb1mx2.9/28, mbtmp2.9/13, Error ellipse: s-maj=18.0km s-min=13.6km az=146.0*
ISC 07 01:29:05.3±0.7**, 53°.56N**±0°.08×**154°.47E**±0°.09**, h470**^{km}±8^{km}**, n56,** σ1^{s}58/71**, mb3.1**/10**, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
APC	Apacha	1.73	110	iP	P	01 30 07.0	+0.7
APC				eS	S	01 30 56.2	+0.4
MIPR	Malaya Ipel'ka	1.89	132	iP	P	01 30 07.8	+0.7
PETK	Petropavlovsk-	1.99	102	PN	P	01 30 08.3	+0.8
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK	Petropavlovsk-	1.99	102	P	P	01 30 08.3	+0.8
	comp=Z,4.2nm,0.3s,baz=216,slow=3.7,SNR=34						
GNL	Ganaly	2.07	85	iP	P	01 30 09.2	+1.1
ASAK	Asacha	2.38	118	eP	P	01 30 10.7	+0.8
ASAK				eS	S	01 31 02.6	+0.2
GRL	Gorelyy	2.40	113	P	P	01 30 10.6	+0.6
MTVR	Mutnovka	2.49	114	eP	P	01 30 11.1	+0.5
MTVR				eS	S	01 31 03.0	-0.7
KOK	Koryaka	2.51	94	eP	P	01 30 12.1	+1.5
PET	Petropavlovsk	2.57	100	eP	P	01 30 11.7	+0.8
PET				eS	S	01 31 04.2	0.0
PET	Petropavlovsk	2.57	100	PN	P	01 30 11.7	+0.8
PET				S	S	01 31 04.2	0.0
AVH	Avacha	2.57	95	eP	P	01 30 12.3	+1.3
KRER	Koryakskii	2.57	94	eP	P	01 30 12.1	+0.9
SMAR	Somma	2.61	95	iP	P	01 30 12.7	+1.3
UGLR	Uglovaya	2.63	96	iP	P	01 30 12.9	+1.5
UGLR				eS	S	01 31 05.8	+0.5
SDLR	Sedlovina	2.66	94	eP	P	01 30 12.6	+1.0
RUS	Russkaya	2.69	113	eP	P	01 30 11.5	-0.2
RUS				eS	S	01 31 03.7	-2.0
RUS	Russkaya	2.69	113	PN	P	01 30 11.5	-0.2
RUS				S	S	01 31 03.7	-2.0
NLC	Nalytchevo	2.95	96	eP	P	01 30 13.8	+0.4
NLC				eS	S	01 31 07.7	-1.2
NLC	Nalytchevo	2.95	96	PN	P	01 30 13.8	+0.4
NLC				S	S	01 31 07.7	-1.2
SKR	Severo-Kuril's	3.05	160	eP	P	01 30 14.1	-0.2
SKR	Severo-Kuril's	3.05	160	ePN	P	01 30 10.0	-4.3
SKR				e		01 31 04.5	
SPN	Mys Shipunski	3.36	96	eP	P	01 30 16.0	-0.5
SPN				eS	S	01 31 11.0	-3.5
SPN	Mys Shipunski	3.36	96	PN	P	01 30 16.0	-0.5
SPN				S	S	01 31 11.0	-3.5
ESO	Esso	3.41	44	iP	P	01 30 18.7	+1.9
ESO	Esso	3.41	44	PN	P	01 30 18.7	+1.9
TUMR	Tumrok	3.74	60	eP	P	01 30 20.9	+1.4
TUMR				eS	S	01 31 19.7	-0.5
KOZ	Kozyrevsk	4.01	49	P	P	01 30 23.1	+1.5
KMNR	Kamenistaya	4.01	54	P	P	01 30 23.5	+1.8
KOZR	Kozyr	4.02	49	PN	P	01 30 23.1	+1.4
SRDR	Sredinnyy	4.10	45	eP	P	01 30 23.1	+0.7
SRDR				eS	S	01 31 25.6	+0.1
KPT	Kopyto	4.11	52	P	P	01 30 23.6	+1.0
BZMR	Bezymyannaya	4.22	53	P	P	01 30 24.8	+1.2
BZWR	Bezymyannyi-We	4.24	53	P	P	01 30 24.8	+1.0
BZGR	Bezymyannyi-Gr	4.33	54	P	P	01 30 25.2	+0.7
MKZ	Mys Kozlova	4.39	74	P	P	01 30 24.3	-0.6
MKZ				eS	S	01 31 25.6	-4.4
MKZ	Mys Kozlova	4.39	74	PN	P	01 30 24.3	-0.6
MKZ				S	S	01 31 25.6	-4.4
KRSR	Krestovskiy	4.41	50	P	P	01 30 26.1	+0.9
SMKR	Semkarok	5.04	50	P	P	01 30 31.3	+0.4
KBG	Krutoberegovo	5.47	57	eS	S	01 31 46.1	-2.1
KBTR	Krutoberegovo	5.50	58	P	P	01 30 33.9	-1.4
KBTR	Krutoberegovo	5.50	58	PN	P	01 30 33.9	-1.4
BKI	Bering	6.92	72	eS	S	01 32 11.3	-3.6
FX1	Attu Island--F	11.23	86	P	P	01 31 37.6	+2.1
	comp=Z,4.9nm,0.3s,baz=269,slow=19,SNR=14						
USRK	Ussuriysk Arra	17.43	247	P	P	01 32 39.2	-2.1
	comp=Z,0.1nm,0.3s,baz=54,slow=11,SNR=4.3						
SONM	Songino Array	30.50	279	P	P	01 34 36.9	-1.8
	comp=Z,0.3nm,0.3s,baz=69,slow=7.9,SNR=2.5						
ILAR	Eielson Array	30.89	45	P	P	01 34 41.7	+0.1
	comp=Z,0.3nm,0.6s,baz=279,slow=8.6,SNR=5.7						
MKAR	Makanchi Array	44.88	292	P	P	01 36 35.1	-1.3
MKAR	Makanchi Array	44.88	292	P	P	01 36 35.1	-1.3
	comp=Z,0.3nm,0.5s,baz=50,slow=8.5,SNR=5.3						
YKA	Yellowknife Ar	45.06	41	P	P	01 36 39.1	+1.6
	comp=Z,0.4nm,0.6s,baz=304,slow=7.3,SNR=3.6						
ARCES	ARCESS Array B	51.73	340	P	P	01 37 26.4	-0.9
	comp=Z,1.7nm,1.1s,baz=37,slow=7.9,SNR=4.5						
FINES	FINESS Array B	58.28	334	P	P	01 38 12.5	-0.8
	comp=Z,1.5nm,1.1s,baz=38,slow=7.0,SNR=3.3						
PDAR	Pinedale Array	60.18	58	P	P	01 38 29.0	+2.3
	comp=Z,0.4nm,0.5s,baz=316,slow=7.7,SNR=3.2						
TXAR	Lajitas Array	73.50	63	P	P	01 39 51.7	+2.5
	comp=Z,0.3nm,0.5s,baz=296,slow=4.1,SNR=5.3						
WRA	Warramunga Arr	75.23	200	P	P	01 39 58.9	+0.1
	comp=Z,0.3nm,0.8s,baz=16,slow=6.2,SNR=6.2						
ASAR	Alice Springs	78.94	199	P	P	01 40 19.8	+0.7
	comp=Z,0.6nm,0.4s,baz=10,slow=5.4,SNR=12						

*ISK **07** 01:32:49.8, 37°.98N×26°.84E, h6^{km}, MD2.7*
*ISCJB **07** 01:32:51.7±0.7, 37°.99N±0°.03×26°.97E±0°.07, h11^{km}±6^{km}, Error ellipse: s-maj=9.5km s-min=4.8km az=155.5*
*CSEM **07** 01:32:51.6±0.3, 37°.97N×26°.94E, h12^{km}, MD2.8, Error ellipse: s-maj=8.5km s-min=5.3km az=65.0*
*DDA **07** 01:32:52.2, 38°.03N×27°.05E, h7^{km}, MD2.8*
ISC 07 01:32:50.3±1.4**, 37°.95N**±0°.03×**26°.90E**±0°.04**, h3**^{km}±15^{km}**, n22,** σ0^{s}59/32**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.36	134	iP	Pb	01 32 59.9	+0.5
GCAM				iS	Sb	01 33 04.9	-0.6
GCAM	G?zelcaml?	0.36	134	iP	Pb	01 32 59.9	+0.5
GCAM				iS	Sb	01 33 04.9	-0.6
BLCB	Balcova	0.45	14	ePG	Pg	01 32 59.2	+0.3
BLCB				eSG	Sg	01 33 04.3	-0.4
BLCB	Balcova	0.45	14	ePg	Pg	01 32 59.2	+0.3
BLCB				eSg	Sg	01 33 04.3	-0.4
URLA	Izmir	0.47	329	iP	Pb	01 33 01.9	+0.6
URLA				eS	Sb	01 33 08.7	0.0
URLA	Izmir	0.47	329	iP	Pb	01 33 01.9	+0.6
URLA				eS	Sb	01 33 08.7	0.0
IZM	Izmir	0.53	33	ePG	Pg	01 33 00.6	+0.1
IZM	Izmir	0.53	33	ePg	Pg	01 33 00.6	+0.1
AYDN	Tasoluk	0.83	110	eP	Pb	01 33 07.4	+0.1
AYDN				eS	Sg	01 33 17.0	+0.1
AYDN	Tasoluk	0.83	110	eP	Pb	01 33 07.4	+0.1
AYDN				eS	Sg	01 33 17.0	+0.1
MLSB	Milas	0.96	133	ePG	Pg	01 33 09.4	+0.8
MLSB	Milas	0.96	133	ePg	Pg	01 33 09.4	+0.8
AKHS	Akhisar	1.17	37	eP	Pg	01 33 12.4	-0.4
AKHS				eS	Sg	01 33 26.8	-1.1
AKHS	Akhisar	1.17	37	eP	Pg	01 33 12.4	-0.4
AKHS				eS	Sg	01 33 26.8	-1.1
APE	Apeiranthos	1.40	231	ePN	Pn	01 33 15.9	-0.8
APE	Apeiranthos	1.40	231	ePn	Pn	01 33 16.0	-0.8
KULA	Kula-Manisa	1.49	67	ePN	Pb	01 33 18.7	0.0
KULA	Kula-Manisa	1.49	67	ePn	Pb	01 33 18.7	0.0
BALB	Balikesir	1.85	24	ePN	Pn	01 33 23.3	+0.4
BALB	Balikesir	1.85	24	ePn	Pn	01 33 23.3	+0.4
GONE	Gonen-Balikesi	2.18	16	ePN	Pn	01 33 28.3	+0.9
GONE	Gonen-Balikesi	2.18	16	ePn	Pn	01 33 28.3	+0.9

PRE 07 01:49:14.4±2.2**, 25°.72S**×**15°.87E, h10**^{km}**, ML4.8, Namibia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KOMG	Komaggas	4.30	161	eP	Pn	01 50 20.1	0.0
KOMG				eS	Sn	01 51 09.2	-1.1
KOMG				AML	AML	01 51 29.5	
	comp=Z,208nm,0.4s						
UPI	Upington	5.47	120	eP	Pn	01 50 37.1	+0.9
UPI				eS	Sn	01 51 39.1	-0.2
UPI				AML	AML	01 52 06.4	
	comp=Z,134nm,0.7s						
TSUM	Tsumeb	6.68	14	eP	Pn	01 50 53.3	+0.5
TSUM				eS	Sn	01 52 06.5	-2.6
CVNA	Calvinia	6.68	150	eP	Pn	01 50 53.1	+0.3
CVNA				eS	Sn	01 52 06.6	-2.5
CVNA				AML	AML	01 52 46.0	
	comp=Z,157nm,0.4s						
SUR	Sutherland	7.92	148	eP	Pn	01 51 10.6	+0.7
SUR				eS	Sn	01 52 36.6	-3.1
SUR				AML	AML	01 53 22.1	
	comp=Z,68nm,0.7s						
SWZ	Schweizer	8.60	102	eP	Pn	01 51 19.2	-0.1
SWZ				eS	Sn	01 52 51.4	-5.2
SWZ				AML	AML	01 53 48.9	
	comp=Z,56nm,0.6s						
LBTB	Lobatse	8.82	88	eP	Pn	01 51 24.8	+2.6
LBTB				eS	Sn	01 52 55.9	-6.0
LBTB				AML	AML	01 53 57.2	
	comp=Z,19nm,0.7s						
BOSA	Boshof	8.84	111	eP	Pn	01 51 22.9	+0.4
BOSA				eS	Sn	01 52 58.5	-3.8
BOSA				AML	AML	01 53 52.7	
	comp=Z,35nm,0.7s						
HVD	Gariep Dam	9.79	122	eP	Pn	01 51 34.8	-0.7
HVD				eS	Sn	01 53 19.2	-6.4
HVD				AML	AML	01 54 24.3	
	comp=Z,60nm,0.6s						
PRYS	Parys	10.38	99	eS	Sn	01 53 35.3	-4.8
PRYS				AML	AML	01 54 46.9	
	comp=Z,29nm,0.5s						
ERPM	east rand prop	11.14	96	eP	Pn	01 51 56.0	+1.9
ERPM				eS	Sn	01 53 52.1	-6.9
ERPM				AML	AML	01 55 05.9	
	comp=Z,20nm,0.6s						
SLR	Silverton	11.19	93	eP	Pn	01 51 56.7	+2.0
SLR				eS	Sn	01 53 55.0	-5.1
SLR				AML	AML	01 55 17.8	
	comp=Z,37nm,0.6s						
KSD	Kokstad	12.88	115	eS	Sn	01 54 33.5	-7.9
KSD				AML	AML	01 56 13.4	
	comp=Z,19nm,0.8s						
POGA	Pongola	14.19	100	eS	Sn	01 55 07.2	-5.8
POGA				AML	AML	01 56 50.3	
	comp=Z,16nm,0.6s						

*CASC **07** 02:13:08.6±3.0, 16°.93N×87°.55W, h0^{km}±90^{km}, MD4.2, ML4.4*
*ISCJB **07** 02:13:26.4±0.5, 15°.86N±0°.03×88°.26W±0°.06, h10^{km}, mb3.6/2, MS2.8/3, Error ellipse: s-maj=8.9km s-min=4.5km az=4.4*
*IDC **07** 02:13:26.4±2.5, 15°.86N×87°.85W, h0^{km}, mb3.3/2, mb1 3.8/4, mb1mx3.5/23, mbtmp3.4/4, ML3.8/2, MS3.0/4, Ms1 3.0/4, ms1mx2.8/18, Error ellipse: s-maj=37.5km s-min=26.2km az=60.0*
ISC 07 02:13:25.6±0.9**, 16°.01N**±0°.05×**88°.19W**±0°.06**, h10**^{km}**, n24,** σ2^{s}31/25**, Belize**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRL	Marmol	1.73	237	eP	Pn	02 13 53.3	-2.7
MTO2	Montecristo 2	1.96	216	eP	Pn	02 13 57.0	-2.2
MTO2				eS	Sn	02 14 21.3	-2.8
TGUH	Tegucigalpa,Un	2.13	155	eP	Pn	02 13 59.7	-1.6
TGUH				eS	Sn	02 14 26.7	-1.1
CAHU	Cacacuatique	2.23	181	eP	Pn	02 14 01.0	-1.8
RBDL	Robledal	2.38	218	eP	Pn	02 14 03.8	-1.1
LBRS	Las Brisas	2.41	200	eP	Pn	02 14 04.6	-0.6
SNVI	San Vicente	2.47	195	eP	Pn	02 14 04.6	-1.5
SNVI				eS	Sn	02 14 34.7	-1.7
BOQS	Boqueron	2.50	205	eP	Pn	02 14 05.4	-1.2
BOQS				eS	Sn	02 14 35.5	-1.7
LFRS	El Faro	2.52	200	eP	Pn	02 14 05.2	-1.6
NBG	Las Nubes	2.52	236	eP	Pn	02 14 05.3	-1.6
NBG				eS	Sg	02 14 50.5	+3.8
SNET	Serv Nac Est T	2.52	204	AML	AML	02 14 42.1	
	comp=Z,2µm,0.4s						
BLLM	Bellamira	2.55	181	eP	Pn	02 14 06.7	-0.5
SBLS	San Blas	2.57	213	eP	Pn	02 14 06.8	-0.8
VSM	San Miguel	2.57	182	eP	Pn	02 14 06.3	-1.3
CNCH	Conchagua	2.74	173	eP	Pn	02 14 09.7	-0.1
FUG	Fuego 3	3.00	239	eP	Pn	02 14 11.9	-1.5
FUG				eS	Sg	02 15 01.7	-0.4
TEIG	Tepich	4.19	359	Pn	Pn	02 14 34.3	+4.6
	comp=Z,3.3nm,0.3s,baz=203,slow=14,SNR=12						
TEIG				Pg	Pg	02 14 46.8	+0.8
	comp=Z,10nm,0.3s,baz=175,slow=11,SNR=20						
TEIG				Sn	Sb	02 15 24.7	-5.5
	comp=Z,8.5nm,0.3s,baz=289,slow=20,SNR=6.4						
TEIG				Lg	Lg	02 15 45.8	
	comp=Z,18nm,0.3s,baz=82,slow=23,SNR=4.1						
ROSC	El Rosal	17.55	128	LR	LR	02 23 26.6	
	comp=Z,36nm,21.7s,baz=192,slow=35						
TXAR	Lajitas Array	19.46	316	P	Pn	02 17 58.3	+4.4
	comp=Z,0.1nm,0.3s,baz=149,slow=12,SNR=14						
TXAR				S	S	02 21 43.2	+10
	comp=Z,0.0nm,0.3s,baz=116,slow=22,SNR=2.7						
TKL	Tuckaleechee C	19.96	11	P	Pn	02 18 05.3	+5.6
	comp=Z,1.7nm,0.6s,baz=173,slow=16,SNR=2.7						
TKL				LR	LR	02 25 46.1	
	comp=Z,33nm,19.0s,baz=36,slow=37						
ATAH	Atahualpa	24.96	156	LR	LR	02 28 30.0	
	comp=Z,40nm,18.0s,baz=164,slow=37						
ANMO	Albuquerque	24.97	322	LR	LR	02 30 11.7	
	comp=Z,37nm,21.9s,baz=310,slow=40						
YKA	Yellowknife Ar	50.01	344	P	P	02 22 22.2	+2.2
	comp=Z,0.8nm,0.8s,baz=140,slow=7.9,SNR=12						
ILAR	Eielson Array	62.50	336	P	P	02 23 55.1	+6.0
	comp=Z,0.3nm,0.8s,baz=119,slow=7.3,SNR=4.3						

*IDC **07** 02:22:07.3±1.4, 36°.46N×21°.86E, h0^{km}, mb3.7/7, mb1 3.6/8, mb1mx3.5/29, mbtmp3.6/8, ML2.3/1, Error ellipse: s-maj=35.7km s-min=22.7km az=141.0*
*ATH **07** 02:22:09.0, 36°.42N×21°.71E, h4^{km}±1^{km}, MD3.5/21, ML3.4*
*THE **07** 02:22:11.9, 36°.56N×21°.88E, h0^{km}±2^{km}, ML3.6/3, Error ellipse: s-maj=2.8km s-min=0.6km az=214.0*
*CSEM **07** 02:22:11.2±0.4, 36°.50N×21°.85E, h2^{km}, ML3.6/3, Error ellipse: s-maj=8.1km s-min=3.8km az=48.0*
ISC 07 02:22:11.0±1.1**, 36°.49N**±0°.03×**21°.83E**±0°.03**, h9**^{km}±8^{km}**, n144,** σ1^{s}16/178**, mb3.6**/7**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PYL	PYLOS	0.41	350	P	Pg	02 22 18.5	-0.4
PYL				S	Sg	02 22 24.4	+0.1
PYL	PYLOS	0.41	350	ePG	Pg	02 22 18.0	-0.9
PYL				eSG	Sg	02 22 25.2	+0.9
PYL	PYLOS	0.41	350	ePb	Pg	02 22 18.0	-0.9
PYL	PYLOS	0.41	350	P	Pg	02 22 18.5	-0.4
PYL				S	Sg	02 22 24.2	-0.1
PYL				eSb	Sb	02 22 25.6	-1.1
DYR	Agios Nikonas	0.49	57	P	Pg	02 22 20.2	-0.3
DYR				S	Sg	02 22 26.6	-0.3
DYR	Agios Nikonas	0.49	57	ePG	Pg	02 22 20.0	-0.5
DYR				eSG	Sb	02 22 29.6	+0.6
DYR	Agios Nikonas	0.49	57	P	Pg	02 22 20.2	-0.3
DYR				S	Sg	02 22 26.6	-0.3
DYR				eSb	Sb	02 22 29.9	+0.9
ITM	Ithomi	0.69	7	P	Pg	02 22 23.6	-0.7
ITM				S	Sg	02 22 33.1	-0.2
ITM	Ithomi	0.69	7	ePB	Pg	02 22 24.0	-0.3
ITM				eSG	Sg	02 22 34.1	+0.8
ITM	Ithomi	0.69	7	P	Pg	02 22 23.6	-0.7
ITM	Ithomi	0.69	7	ePb	Pg	02 22 24.0	-0.3
ITM				S	Sg	02 22 33.1	-0.2
ITM				eSb	Sg	02 22 34.1	+0.8
VLI	Veliai	0.92	76	P	Pg	02 22 28.5	-0.1
VLI				S	Sb	02 22 41.4	-0.1
VLI	Veliai	0.92	76	ePG	Pg	02 22 28.6	-0.1
VLI				eSG	Sn	02 22 43.3	-0.2
VLI	Veliai	0.92	76	P	Pg	02 22 28.2	-0.5
VLI	Veliai	0.92	76	ePb	Pg	02 22 28.6	-0.1
VLI				S	Sb	02 22 41.2	-0.3
VLI				eSb	Sn	02 22 43.3	-0.2
VLX	Vlachokerasia	0.98	27	P	Pg	02 22 28.9	-0.9
VLX				S	Sg	02 22 42.3	-0.3
VLX	Vlachokerasia	0.98	27	ePG	Pg	02 22 29.5	-0.3
VLX	Vlachokerasia	0.98	27	ePg	Pg	02 22 29.5	-0.3
VLX				S	Sg	02 22 42.3	-0.3
VLX				eSb	Sn	02 22 45.6	+0.5
KYTH	Kithira	1.00	102	P	Pg	02 22 30.1	-0.1
KYTH	Kithira	1.00	102	ePG	Pg	02 22 29.8	-0.4
KYTH	Kithira	1.00	102	P	Pg	02 22 29.4	-0.8
KYTH	Kithira	1.00	102	ePn	Pg	02 22 29.8	-0.4
AMT	Artemida-Makis	1.04	355	ePB	Pg	02 22 30.5	-0.5
AMT				eSB	Sb	02 22 45.3	+0.3
AMT	Artemida-Makis	1.04	355	P	Pg	02 22 30.0	-1.0
AMT	Artemida-Makis	1.04	355	ePn	Pg	02 22 30.5	-0.5
AMT				S	Sg	02 22 45.0	+0.5
ANKY	Antikythira Is	1.35	117	ePB	Pn	02 22 35.3	-0.6
ANKY				eSB	Sb	02 22 54.5	+0.8
ANKY	Antikythira Is	1.35	117	ePg	Pn	02 22 35.3	-0.6
ANKY				eSb	Sb	02 22 54.5	+0.8
DIDY	Didyma	1.48	48	P	Pn	02 22 38.3	+0.4
DIDY	Didyma	1.48	48	P	Pn	02 22 38.4	+0.5
GUR	Goura	1.50	16	P	Pn	02 22 38.0	-0.1
GUR	Goura	1.50	16	ePN	Pn	02 22 37.8	-0.3
GUR				eSB	Sg	02 23 00.8	+1.6
GUR	Goura	1.50	16	P	Pn	02 22 38.0	-0.1
GUR				eSb	Sg	02 23 00.8	+1.6
DID	Didima	1.52	48	P	Pn	02 22 38.6	+0.3
DID	Didima	1.52	48	ePG	Pb	02 22 39.3	0.0
DID	Didima	1.52	48	P	Pn	02 22 38.9	+0.6
DID	Didima	1.52	48	ePg	Pb	02 22 39.3	0.0
KLV	Kalavryta, Ach	1.57	9	ePG	Pn	02 22 39.4	+0.3
KLV				eSB	Sg	02 23 02.6	+1.2
KLV	Kalavryta, Ach	1.57	9	ePg	Pn	02 22 39.4	+0.3
KLV				eSb	Sg	02 23 02.6	+1.2
RLS	Riolos of Patr	1.59	350	P	Pn	02 22 40.0	+0.7
RLS	Riolos of Patr	1.59	350	ePB	Pn	02 22 39.9	+0.7
RLS				eSB	Sg	02 23 02.4	+0.4
RLS	Riolos of Patr	1.59	350	P	Pn	02 22 40.0	+0.7
RLS				S	Sg	02 23 02.1	+0.1
THAL	Thalero	1.68	23	P	Pn	02 22 41.0	+0.5
THAL	Thalero	1.68	23	P	Pn	02 22 41.0	+0.5
AXS	Araxos	1.74	348	P	Pn	02 22 42.4	+1.1
AXS	Araxos	1.74	348	P	Pn	02 22 42.4	+1.1
LAKA	Lakka	1.75	4	P	Pn	02 22 42.4	+0.9
LAKA	Lakka	1.75	4	ePG	Pn	02 22 42.7	+1.2
LAKA				eSB	Sg	02 23 08.5	+1.4
LAKA	Lakka	1.75	4	P	Pn	02 22 42.4	+0.9
LAKA	Lakka	1.75	4	ePg	Pn	02 22 42.7	+1.2
LAKA				S	Sn	02 23 05.2	+1.3
LAKA				eSn	Sg	02 23 08.5	+1.4
LTK	Loutraki	1.78	30	P	Pn	02 22 42.3	+0.4
LTK	Loutraki	1.78	30	ePG	Pb	02 22 43.9	+0.2
LTK				eSB	Sg	02 23 09.7	+1.6
LTK	Loutraki	1.78	30	P	Pn	02 22 42.3	+0.4
LTK	Loutraki	1.78	30	ePn	Pb	02 22 43.9	+0.2
LTK				eSn	Sg	02 23 09.7	+1.6
PSA1	Psathopyrgos	1.83	1	ePN	Pn	02 22 44.2	+1.6
PSA1				eSN	Sg	02 23 09.8	+0.1
NAIG	Nisos Aigina	1.83	46	ePN	Pb	02 22 44.5	-0.2
NAIG	Nisos Aigina	1.83	46	ePn	Pb	02 22 44.5	-0.2
KALE	Kalithea	1.91	7	P	Pb	02 22 46.2	+0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KALE	Kalithea	1.91	7	*e*PG	Pb	02 22 46.1	+0.1
KALE				*e*SN	Sg	02 23 13.0	+0.6
KALE	Kalithea	1.91	7	P	Pb	02 22 46.2	+0.2
KALE				*e*Sn	Sg	02 23 13.0	+0.6
EFP	Efpalio	1.93	2	*e*PG	Pb	02 22 45.9	-0.4
EFP	Efpalio	1.93	2	*e*Pn	Pb	02 22 45.9	-0.4
VLS	Valsamata	1.95	330	*e*PN	Pn	02 22 45.3	+1.1
VLS				*e*SN	Sb	02 23 12.5	+1.5
VLS	Valsamata	1.95	330	*e*Pn	Pn	02 22 45.3	+1.1
VLS				*e*Sn	Sb	02 23 12.5	+1.5
DSF	Desfina	1.99	16	P	Pn	02 22 45.0	+0.1
DSF	Desfina	1.99	16	P	Pn	02 22 45.0	+0.1
VIL2	Platees	2.06	33	P	Pn	02 22 45.8	0.0
ATH	Athens Observa	2.11	45	*e*PN	Pn	02 22 48.3	+1.9
ATH	Athens Observa	2.11	45	*e*Pn	Pn	02 22 48.3	+1.9
ATH				*e*Sn	Sb	02 23 16.6	+0.9
ATHU	Athens Univers	2.15	46	P	Pn	02 22 47.1	+0.2
ATHU	Athens Univers	2.15	46	P	Pn	02 22 47.1	+0.2
VAM	Vamos	2.21	119	P	Pn	02 22 49.5	+1.7
VAM	Vamos	2.21	119	*e*PN	Pn	02 22 49.6	+1.7
VAM				*e*SN	Sb	02 23 19.4	+0.8
VAM	Vamos	2.21	119	P	Pn	02 22 49.5	+1.7
VAM				*e*Sn	Sb	02 23 19.4	+0.8
PTL	Penteli	2.25	46	P	Pn	02 22 49.3	+0.9
PTL	Penteli	2.25	46	*e*PN	Pn	02 22 49.5	+1.1
PTL				*e*SN	Sb	02 23 20.2	+0.5
PTL	Penteli	2.25	46	P	Pn	02 22 49.3	+0.9
PTL				*e*Sn	Sb	02 23 20.2	+0.5
LKR	Lokris	2.35	23	P	Pn	02 22 49.8	+0.1
LKR	Lokris	2.35	23	*e*PN	Pn	02 22 50.2	+0.5
LKR	Lokris	2.35	23	P	Pn	02 22 49.8	+0.1
AXAR	Agios Charalam	2.36	16	P	Pn	02 22 51.2	+1.3
AXAR	Agios Charalam	2.36	16	P	Pn	02 22 51.2	+1.3
ATAL	Atalanti	2.39	23	P	Pn	02 22 49.4	-0.9
ATAL	Atalanti	2.39	23	P	Pn	02 22 49.4	-0.9
EVR	Evrytania	2.42	360	P	Pb	02 22 54.8	+0.1
EVR	Evrytania	2.42	360	*e*PN	Pn	02 22 53.2	+2.4
EVR	Evrytania	2.42	360	*e*Pn	Pn	02 22 53.2	+2.4
LKD2	Lefkada island	2.47	338	*e*PG	Pn	02 22 54.1	+2.6
LKD2	Lefkada island	2.47	338	*e*Pg	Pn	02 22 54.1	+2.6
MAKR	Makrakomi, Fth	2.53	5	P	Pb	02 22 55.6	-0.9
MAKR	Makrakomi, Fth	2.53	5	P	Pb	02 22 55.6	-0.9
AGG	Agios Georgios	2.56	9	P	Pn	02 22 54.6	+2.0
AGG	Agios Georgios	2.56	9	*e*PB	Pn	02 22 54.8	+2.2
AGG	Agios Georgios	2.56	9	P	Pn	02 22 54.6	+2.0
MRMA	Marmari	2.56	52	P	Pn	02 22 53.0	+0.3
MRMA	Marmari	2.56	52	P	Pn	02 22 53.0	+0.3
SIVA	Sivas	2.84	120	*e*PB	Pn	02 22 58.5	+2.0
SIVA	Sivas	2.84	120	*e*Pn	Pn	02 22 58.5	+2.0
SKIA	Skiathos	2.97	25	P	Pn	02 22 58.4	+0.2
SKIA	Skiathos	2.97	25	P	Pn	02 22 58.4	+0.2
NEO	Neokhori	3.02	21	P	Pn	02 22 59.1	+0.1
NEO	Neokhori	3.02	21	*e*PN	Pn	02 23 00.2	+1.2
NEO	Neokhori	3.02	21	P	Pn	02 22 59.1	+0.1
NEO	Neokhori	3.02	21	*e*Pn	Pn	02 23 00.2	+1.2
APE	Apeiranthos	3.03	78	*e*PN	Pn	02 23 01.3	+2.2
APE	Apeiranthos	3.03	78	*e*Pn	Pn	02 23 01.3	+2.2
XOR	Xorichti	3.06	20	P	Pn	02 22 59.5	-0.1
XOR	Xorichti	3.06	20	P	Pn	02 22 59.5	-0.1
THL	Klokotos Trika	3.07	3	*e*PN	Pn	02 23 01.6	+2.0
THL	Klokotos Trika	3.07	3	*e*Pn	Pn	02 23 01.6	+2.0
AOS	Alonnisos	3.13	31	P	Pn	02 23 00.1	-0.3
AOS	Alonnisos	3.13	31	P	Pn	02 23 00.1	-0.3
JAN	Janina	3.25	347	*e*PN	Pn	02 23 03.1	+0.9
JAN	Janina	3.25	347	*e*Pn	Pn	02 23 03.1	+0.9
NPS	Neapolis	3.31	111	*e*PN	Pn	02 23 05.1	+2.1
NPS	Neapolis	3.31	111	*e*Pn	Pn	02 23 05.1	+2.1
KEK	Kerkira	3.59	334	*e*PN	Pn	02 23 08.3	+1.5
KEK	Kerkira	3.59	334	*e*Pn	Pn	02 23 08.3	+1.5
KEK				*e*Sn	Sn	02 23 51.5	+2.2
KZN	Kozani	3.81	359	*e*PN	Pn	02 23 12.2	+2.3
KZN	Kozani	3.81	359	*e*Pn	Pn	02 23 12.2	+2.3
CHOS	Chios island	3.86	59	P	Pn	02 23 10.7	+0.1
CHOS	Chios island	3.86	59	P	Pn	02 23 10.7	+0.1
PLG	Polygyros	4.08	18	*e*PN	Pn	02 23 15.5	+2.0
PLG	Polygyros	4.08	18	*e*Pn	Pn	02 23 15.5	+2.0
SMG	Samos	4.18	72	*e*PN	Pn	02 23 17.3	+2.3
SMG	Samos	4.18	72	*e*Pn	Pn	02 23 17.3	+2.3
LIA	Limnos Island	4.31	37	*e*PN	Pn	02 23 19.4	+2.8
LIA	Limnos Island	4.31	37	*e*Pn	Pn	02 23 19.4	+2.8
KARP	Karpathos	4.43	101	*e*PN	Pn	02 23 22.5	+4.2
KARP	Karpathos	4.43	101	*e*Pn	Pn	02 23 22.5	+4.2
SMTH	Samothraki Isl	4.92	35	*e*PN	Pn	02 23 28.5	+3.4
SMTH	Samothraki Isl	4.92	35	*e*Pn	Pn	02 23 28.5	+3.4
NVR	Nevrokopi	5.10	18	*e*PN	Pn	02 23 30.7	+3.1
NVR	Nevrokopi	5.10	18	*e*Pn	Pn	02 23 30.7	+3.1
BARS	Barje	6.31	360	*e*Pn	Pn	02 23 44.0	-0.2
MLR	Muntele Rosu	9.51	18	Pn	Pn	02 24 36.0	+7.8
	0.0nm,0.3s,baz=214,slow=11,SNR=2.8						
BRTR	Keskin Array B	9.85	67	Pn	Pn	02 24 37.6	+4.7
	0.1nm,0.3s,baz=243,slow=11,SNR=4.2						
KEST	Kesra	10.13	269	Pn	Pn	02 24 35.0	-1.6
	0.0nm,0.3s,baz=71,slow=18,SNR=2.7						
HFS	Hagfors	24.23	350	P	P	02 27 25.0	-2.8
	0.9nm,0.5s,baz=160,slow=11,SNR=16						
FINES	FINESS Array B	25.11	5	P	P	02 27 33.7	-2.1
	1.4nm,0.7s,baz=170,slow=12,SNR=5.0						
TORD	Torodi Ar. Bea	29.44	223	P	P	02 28 12.7	-2.4
	0.5nm,0.8s,baz=33,slow=8.4,SNR=4.5						
ARCES	ARCESS Array B	33.16	2	P	P	02 28 46.3	-1.0
	0.6nm,0.8s,baz=189,slow=11,SNR=3.9						
KURBB	Kurchatov Arra	42.42	52	P	P	02 30 02.9	-2.8
	0.2nm,0.2s,baz=281,slow=9.0,SNR=3.8						
MKAR	Makanchi Array	45.32	57	P	P	02 30 26.4	-2.8
	0.3nm,0.4s,baz=268,slow=7.6,SNR=8.1						
ZALV	Zalesovo Beam	46.06	47	P	P	02 30 33.6	-1.2
	0.4nm,0.4s,baz=265,slow=9.3,SNR=2.2						

IDC 07 02:28:47.0±1.9**, 30°.49N×83°.15E, h0km, mb3.6**/5**, mb1 3.8**/6**, mb1mx3.4**/28**, mbtmp3.6**/6**, ML2.9**/1**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx1.8**/35**, Error ellipse: s-maj=88.2km s-min=26.1km az=60.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	16.30	358	Pn	Pn	02 32 37.1	0.0
	0.1nm,0.3s,baz=188,slow=11,SNR=3.7						
MKAR				Sn	S	02 35 47.9	-3.9
	0.2nm,0.3s,baz=184,slow=25,SNR=8.2						
KURBB	Kurchatov Arra	20.41	352	P	P	02 33 24.6	-0.8
	0.4nm,0.5s,baz=169,slow=11,SNR=4.2						
SONM	Songino Array	24.85	39	LR	LR	02 44 41.1	
	comp=Z,30nm,20.5s,baz=231,slow=38						
FINES	FINESS Array B	48.07	327	P	P	02 37 27.5	-0.4
	1.1nm,0.7s,baz=104,slow=12,SNR=2.5						
ARCES	ARCESS Array B	50.58	337	P	P	02 37 47.3	+0.3
	1.0nm,0.7s,baz=99,slow=11,SNR=4.2						
WRA	Warramunga Arr	70.26	129	P	P	02 40 02.4	+0.1
	0.7nm,0.6s,baz=322,slow=6.2,SNR=7.8						
ILAR	Eielson Array	77.38	20	P	P	02 40 43.2	-0.2
	0.3nm,0.7s,baz=304,slow=4.2,SNR=5.0						

*NIED **07** 02:39:00, 42°.60N×141°.90E, h116km, Mw3.8 Best double couple: M₀6.58000×10^14 NP1:φs256.00000°, δ62.00000°, λ-75.00000°. NP2:φs45.00000°, δ31.00000°, λ-117.00000°.*
*ISCJB **07** 02:39:10.7±0.3, 42°.56N±0°.03×141°.95E±0°.05, h132km±2km, mb3.8/16, Error ellipse: s-maj=6.4km s-min=4.7km az=138.2*
*MOS **07** 02:39:10.4±1.0, 42°.50N×142°.02E, h137km, mb3.9/12, Error ellipse: s-maj=17.7km s-min=10.5km az=94.4*
*JMA **07** 02:39:11.5±0.2, 42°.62N×141°.86E, h132km±2km, M3.6*
*IDC **07** 02:39:11.0±1.3, 42°.52N×142°.09E, h124km±10km, mb3.5/13, mb1 3.6/15, mb1mx3.5/30, mbtmp3.5/15, Error ellipse: s-maj=17.3km s-min=14.9km az=106.0*
ISC 07 02:39:11.8±0.7**, 42°.55N**±0°.04×**141°.95E**±0°.04**, h128**km±5km**, n46, σ0.80**/62**, mb3.9**/16**, 1C, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JBT2	Biratori 2	0.38	53	P	Pn	02 39 30.4	+0.4
JBT2				*e*S	Sn	02 39 44.7	+0.9
JEW	Eniwo	0.47	309	P	Pn	02 39 30.2	-0.3
JEW				*e*S	Sn	02 39 43.9	-0.7
JNBK	Urakawa-nobuka	0.65	114	P	Pn	02 39 32.4	+0.8
JNBK				*e*S	Sn	02 39 48.1	+1.6
JNB	Noboribetsu	0.68	264	P	Pn	02 39 31.4	-0.4
JNB				*e*S	Sn	02 39 46.5	-0.4
JFR	Furan	0.78	37	P	Pn	02 39 32.2	-0.4
JFR				*e*S	Sn	02 39 48.0	-0.3
JKB	Kayabe	0.95	226	P	Pn	02 39 33.7	-0.3
JKB				*e*S	Sn	02 39 49.9	-0.9
JCH	Churui	1.05	86	P	Pn	02 39 35.1	+0.2
JCH				*e*S	Sn	02 39 52.3	-0.2
JHR	Hokuryu	1.21	352	P	Pn	02 39 36.8	+0.2
JHR				*e*S	Sn	02 39 55.5	+0.1
JOT	Ohata	1.34	210	P	Pn	02 39 38.0	0.0
JOT				*e*S	Sn	02 39 57.6	-0.3
JSK	Shakotan	1.35	307	P	Pn	02 39 37.9	-0.1
JSK				*e*S	Sn	02 39 57.6	-0.4
JKK2	Kamakawa 2	1.45	24	P	Pn	02 39 39.1	-0.1
JKK2				*e*S	Sn	02 39 59.7	-0.4
JAR	Ashorobuto	1.53	60	P	Pn	02 39 39.8	-0.3
JAR				*e*S	Sn	02 40 00.8	-0.9
ASAJ	Asahikawa	1.64	17	P	Pn	02 39 41.1	-0.2
	20nm,0.3s,baz=226,slow=11,SNR=200						
ASAJ				S	Sn	02 40 02.5	-1.3
	16nm,0.3s,baz=295,slow=30,SNR=23						
JOSM	Okushiri--Mats	1.89	257	P	Pn	02 39 44.3	0.0
JYG	Yagishiri	1.92	349	P	Pn	02 39 44.7	+0.1
JYG				*e*S	Sn	02 40 09.1	-0.6
JTKR	Abashiri--Toko	2.02	45	P	Pn	02 39 46.2	+0.4
JTKR				*e*S	Sn	02 40 12.2	+0.3
JAK	Akkeshi	2.07	77	P	Pn	02 39 46.0	-0.5
JAK				*e*S	Sn	02 40 11.5	-1.6
YSS	Yuzh-Sakhalins	4.44	7	⇑*i*PN	Pn	02 40 18.4	+1.0
YSS				*e*S	Sn	02 41 07.9	-0.4
YSS				pmax	pmax		
	comp=Z,70nm,0.9s						
YSS				smax	smax		
	comp=E,30nm,1.0s						
KLR	Kul'dur	9.75	317	*e*PN	Pn	02 41 24.8	-3.9
KSRS	Korea Array	11.89	249	P	Pn	02 41 57.2	-0.1
	comp=E,0.1nm,0.3s,baz=55,slow=14,SNR=8.6						
PETK	Petropavlovsk-	14.91	39	P	Pn	02 42 36.5	+0.5
PETK	Petropavlovsk-	14.91	39	P	Pn	02 42 36.5	+0.5
	comp=E,0.1nm,0.3s,baz=250,slow=16,SNR=2.9						
CLNS	Chul'man	17.99	329	*e*P	P	02 43 11.6	-0.7
CLNS				pmax	pmax		
	comp=N,4.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,4.0nm,0.9s						
SONM	Songino Array	25.45	294	P	P	02 44 28.9	+1.0
	comp=E,1.5nm,0.9s,baz=76,slow=12,SNR=4.3						
ZALV	Zalesovo Beam	38.69	307	P	P	02 46 22.9	0.0
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	Zalesovo Beam	38.69	307	P	P	02 46 22.9	0.0
	comp=Z,1.2nm,0.3s,baz=82,slow=11,SNR=11						
MKAR	Makanchi Array	41.75	297	P	P	02 46 48.2	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	Makanchi Array	41.75	297	P	P	02 46 48.2	0.0
	comp=Z,0.9nm,0.7s,baz=82,slow=10.0,SNR=10.0						
KURK	Kurchatov	43.03	304	P	P	02 46 59.1	+0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KURBB	Kurchatov Arra	43.11	304	P	P	02 46 59.1	0.0
	comp=Z,3.8nm,0.4s,baz=74,slow=9.0,SNR=22						
ILAR	Eielson Array	44.69	35	P	P	02 47 11.0	-0.5
	comp=Z,0.5nm,0.8s,baz=281,slow=7.5,SNR=7.9						
BVAR	Borovoye Array	47.30	309	P	P	02 47 32.3	+0.1
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BVAR	Borovoye Array	47.30	309	P	P	02 47 32.3	+0.1
	comp=Z,1.5nm,0.4s,baz=78,slow=9.6,SNR=7.3						
AKTO	Aktyubinsk	55.40	309	P	P	02 48 34.1	+1.6
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKTO	Aktyubinsk	55.40	309	P	P	02 48 34.1	+1.6
	comp=Z,0.9nm,0.7s,baz=49,slow=7.6,SNR=7.0						
YKA	Yellowknife Ar	58.88	32	P	P	02 48 55.1	-1.6
	comp=Z,0.1nm,0.4s,baz=304,slow=6.9,SNR=3.2						
JOF	Joensuu	61.33	331	*e*p	P	02 49 12.4	-1.0
	comp=Z,0.9nm,0.3s						
JOF	Joensuu	61.33	331	*e*P	P	02 49 12.4	-1.0
JOF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WRA	Warramunga Arr	62.57	188	P	P	02 49 21.3	-0.9
	comp=Z,0.5nm,0.5s,baz=6.8,slow=6.9,SNR=9.7						
KAF	Kangasniemi	63.62	332	*e*p	P	02 49 30.3	+1.6
	comp=Z,0.7nm,0.4s						
KAF	Kangasniemi	63.62	332	*e*P	P	02 49 30.3	+1.6
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES	FINESS Array B	64.16	331	P	P	02 49 31.8	-0.3
	comp=Z,2.1nm,0.5s,baz=46,slow=8.2,SNR=15						
ASAR	Alice Springs	66.30	188	P	P	02 49 46.5	+0.1
	comp=Z,0.6nm,0.8s,baz=3.9,slow=6.3,SNR=7.4						
HFS	Hagfors	69.25	335	P	P	02 50 04.1	-0.4
	comp=Z,1.4nm,0.5s,baz=39,slow=5.9,SNR=22						
NB2	NORSAR Subarra	69.28	337	P	P	02 50 06.4	+1.7
	comp=Z,0.7nm,0.6s,baz=36,slow=6.5						
NOA	NORSAR Array B	69.28	337	P	P	02 50 06.0	+1.3
	comp=Z,0.8nm,0.5s,baz=35,slow=6.3,SNR=6.0						

IDC 07 02:40:02.0±2.5**, 20°.38N×70°.81W, h0km, mb3.5**/4**, mb1 3.8**/4**, mb1mx3.5**/24**, mbtmp3.5**/4**, Error ellipse: s-maj=90.8km s-min=30.1km az=13.0, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TXAR	Lajitas Array	31.04	293	P	P	02 46 21.7	-0.1
	0.4nm,0.7s,baz=108,slow=12,SNR=6.8						
ILAR	Eielson Array	65.83	333	P	P	02 50 49.1	+0.2
	0.4nm,0.9s,baz=84,slow=4.3,SNR=4.8						
TORD	Torodi Ar. Bea	69.33	83	P	P	02 51 12.0	+0.1
	0.2nm,0.8s,baz=305,slow=5.1,SNR=2.5						
ARCES	ARCESS Array B	73.28	21	P	P	02 51 34.8	-0.1
	1.3nm,1.0s,baz=266,slow=4.2,SNR=4.8						

IDC 07 02:41:13.6±3.1**, 6°.44S×147°.74E, h0km, mb3.4**/2**, mb1 3.4**/4**, mb1mx3.3**/18**, mbtmp3.3**/4**, ML2.8**/2**, Error ellipse: s-maj=74.7km s-min=32.8km az=96.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.00	191	Pn	Pn	02 42 03.9	+1.4
	6.5nm,0.3s,baz=21,slow=14,SNR=18						
PMG				Sn	Sn	02 42 38.4	-0.8
	1.9nm,0.3s,baz=356,slow=16,SNR=2.9						
WRA	Warramunga Arr	18.70	223	P	P	02 45 33.4	-0.3
	0.1nm,0.3s,baz=46,slow=11,SNR=4.6						
ASAR	Alice Springs	21.69	216	P	P	02 46 05.7	-0.6
	0.4nm,0.6s,baz=56,slow=9.3,SNR=7.9						
FITZ	Fitzroy Crossi	24.48	240	P	P	02 46 34.8	+0.1
	3.2nm,1.2s,baz=57,slow=9.3,SNR=4.9						
TORD	Torodi Ar. Bea	145.91	284	PKPbc	PKPdf	03 00 55.4	-0.2
	0.2nm,0.4s,baz=76,slow=3.0,SNR=11						

*ROM **07** 02:48:34.8±0.3, 43°.51N×10°.54E, h8km±2km, Md2.5/14, Ml2.4/7, Error ellipse: s-maj=3.3km s-min=2.0km az=65.0*
*CSEM **07** 02:48:34.9±0.1, 43°.50N×10°.54E, h15km, ML2.7/12, Error ellipse: s-maj=2.0km s-min=1.7km az=161.0*
*ISCJB **07** 02:48:35.1±0.4, 43°.51N±0°.03×10°.51E±0°.04, h24km±6km, Error ellipse: s-maj=5.7km s-min=4.4km az=139.2*
*LDG **07** 02:48:35.0±0.1, 43°.44N×10°.64E, h5km, Ml2.6/8, Error ellipse: s-maj=3.8km s-min=2.5km az=149.0*
*GEN **07** 02:48:35.4, 43°.53N×10°.54E, h27km, ML2.3*
ISC 07 02:48:34.9±0.9**, 43°.50N**±0°.02×**10°.54E**±0°.03**, h16**km±6km**, n60, σ0.55**/86**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PII	Pisa	0.22	357	Pg	Pg	02 48 40.1	+0.1
PII				Sg	Sg	02 48 43.0	-0.4
	176nm,0.2s						
PII	Pisa	0.22	357	Pg	Pg	02 48 40.1	+0.1
PII				Sg	Sg	02 48 43.0	-0.4
	176nm,0.2s						
MAIM	Mastiano	0.42	355	Pg	Pg	02 48 43.6	+0.2
MAIM				Sg	Sg	02 48 49.3	+0.2
	199nm,0.5s						
MAIM	Mastiano	0.42	355	P	Pg	02 48 43.5	+0.2
MAIM				S	Sg	02 48 49.2	+0.2
CRMI	Carmignano	0.43	47	Pg	Pg	02 48 43.7	+0.2
CRMI				Sg	Sb	02 48 50.1	-0.2
CRMI	Carmignano	0.43	47	Pg	Pg	02 48 43.7	+0.2
CRMI				Sg	Sb	02 48 50.1	-0.2
GRFL	Gerfalco	0.47	138	Pg	Pg	02 48 44.2	-0.2
	43nm,0.5s						
GRFL	Gerfalco	0.47	138	Pg	Pg	02 48 44.2	-0.2
	43nm,0.5s						
CSNT	Castellina Chi	0.55	93	Pg	Pg	02 48 45.1	-0.6
CSNT				Sg	Sg	02 48 53.3	+0.3
	67nm,0.6s						
CSNT	Castellina Chi	0.55	93	Pg	Pg	02 48 45.1	-0.6
CSNT				Sg	Sg	02 48 53.3	+0.3
	67nm,0.6s						
BDI	Bagni Di Lucca	0.56	4	Pg	Pg	02 48 46.1	0.0
BDI				Sg	Sb	02 48 54.1	-0.2
	167nm,0.6s						
BDI	Bagni Di Lucca	0.56	4	Pg	Pg	02 48 46.1	0.0
BDI				Sg	Sb	02 48 54.1	-0.2
	167nm,0.6s						
VLC	Villacollemand	0.67	350	Pg	Pg	02 48 48.2	+0.2
VLC				Sg	Sb	02 48 57.3	0.0
VLC	Villacollemand	0.67	350	Pg	Pg	02 48 48.2	+0.2
VLC				Sg	Sb	02 48 57.3	0.0
PZZT	Monte Pizzetto	0.67	20	Pg	Pg	02 48 48.3	+0.2
	1µm,1.9s						
PZZT	Monte Pizzetto	0.67	20	Pg	Pg	02 48 48.3	+0.2
	1µm,1.9s						
VINC	Vinca	0.70	336	P	Pg	02 48 48.5	-0.1
VINC				S	Sg	02 48 57.6	-0.3
CASP	Castiglione de	0.75	161	Pg	Pb	02 48 49.6	+0.1
CASP	Castiglione de	0.75	161	Pg	Pb	02 48 49.6	+0.1
FNVD	Fontana Vidola	0.79	32	Pg	Pb	02 48 50.3	0.0
FNVD				Sg	Sn	02 49 02.1	-0.9
	364nm,0.6s						
FNVD	Fontana Vidola	0.79	32	Pg	Pb	02 48 50.3	0.0
FNVD				Sg	Sn	02 49 02.1	-0.9
	364nm,0.6s						
SEI	Scarperia	0.81	47	Pg	Pg	02 48 51.1	+0.4
	235nm,0.4s						
SEI	Scarperia	0.81	47	Pg	Pg	02 48 51.1	+0.4
	235nm,0.4s						
GSCL	Gusciola	0.85	2	Pg	Pg	02 48 51.8	+0.3
	1.0nm,0.3s						
GSCL	Gusciola	0.85	2	Pg	Pg	02 48 51.8	+0.3
	1.0nm,0.3s						
VMG	Vicchio	0.86	57	Pg	Pg	02 48 51.8	+0.2
VMG				Sg	Sg	02 49 03.5	+0.5
	27nm,0.2s						
VMG	Vicchio	0.86	57	Pg	Pg	02 48 51.8	+0.2
VMG				Sg	Sg	02 49 03.5	+0.5
	27nm,0.2s						
ERBM	Eremo	0.92	354	Pg	Pb	02 48 52.6	0.0
	195nm,1.1s						
ERBM	Eremo	0.92	354	Pg	Pb	02 48 52.6	0.0
	195nm,1.1s						
CODM	Codolo	1.02	331	P	Pb	02 48 53.1	-1.1
SFI	Santa Sofia	1.03	66	Pg	Pb	02 48 54.7	+0.3
SFI				Sg	Sg	02 49 08.3	0.0
	140nm,1.0s						
SFI	Santa Sofia	1.03	66	Pg	Pb	02 48 54.7	+0.3
SFI				Sg	Sg	02 49 08.3	0.0
	140nm,1.0s						
PGF	Pioggiola	1.48	230	*e*Pn	Pn	02 49 00.8	-0.1
PGF				*e*Sn	Sn	02 49 20.0	0.0
	10nm,0.3s						
PGF	Pioggiola	1.48	230	*e*Pn	Pn	02 49 00.8	-0.1
PGF				*e*Sn	Sn	02 49 20.0	0.0
	5.2nm,0.3s						
SBF	Sospel	2.28	280	*e*Pn	Pn	02 49 12.9	+0.9
SBF				*e*Sn	Sn	02 49 40.3	+0.5
	11nm,0.5s						
SBF	Sospel	2.28	280	*e*Pn	Pn	02 49 12.9	+0.9
SBF				*e*Sn	Sn	02 49 40.3	+0.5
	5.6nm,0.5s						
FRF	La Foret Royal	2.83	273	*e*Pn	Pn	02 49 19.4	-0.1
FRF				*e*Sn	Sn	02 49 53.1	-0.2
	3.1nm,0.4s						
FRF	La Foret Royal	2.83	273	*e*Pn	Pn	02 49 19.4	-0.1
FRF				*e*Sn	Sn	02 49 53.1	-0.2
	1.5nm,0.4s						
LMR	La Mourre	2.94	268	*e*Pn	Pn	02 49 20.6	-0.4
LMR	La Mourre	2.94	268	*e*Pn	Pn	02 49 20.6	-0.4
LPG	La Plagne	3.37	308	*e*P	Pb	02 49 31.3	-3.1
LPG	La Plagne	3.37	308	*e*P	Pb	02 49 31.3	-3.1
LPL	La Plagne	3.39	308	*e*P	Pb	02 49 31.6	-3.1
LPL	La Plagne	3.39	308	*e*P	Pb	02 49 31.6	-3.1
SMRF	Simiane la Rot	3.63	279	*e*Pn	Pn	02 49 31.6	+1.1
SMRF	Simiane la Rot	3.63	279	*e*Pn	Pn	02 49 31.6	+1.1
ORIF	Oris-en-Rattie	3.64	295	*e*P	Pn	02 49 34.2	+3.6
ORIF				*e*Sn	Sn	02 50 13.2	-0.1
	5.7nm,0.6s						
ORIF	Oris-en-Rattie	3.64	295	*e*P	Pn	02 49 34.2	+3.6
ORIF				*e*Sn	Sn	02 50 13.2	-0.1
	2.8nm,0.6s						
CABF	La Chapelle	4.43	316	*e*Pn	Pn	02 49 41.9	+0.4
CABF	La Chapelle	4.43	316	*e*Pn	Pn	02 49 41.9	+0.4
LASF	Ste Croix	4.87	279	*e*Pn	Pn	02 49 47.6	+0.1
LASF	Ste Croix	4.87	279	*e*Pn	Pn	02 49 47.6	+0.1
HINF	Hinteralfeld	5.03	330	*e*Pn	Pn	02 49 50.2	+0.5
HINF				*e*Sn	Sn	02 50 46.7	-0.8
	1.1nm,0.3s						
HINF	Hinteralfeld	5.03	330	*e*Pn	Pn	02 49 50.2	+0.5
HINF				*e*Sn	Sn	02 50 46.7	-0.8
	0.6nm,0.3s						
HAU	Haudompre	5.38	328	*e*Pn	Pn	02 49 55.1	+0.7
HAU				*e*Sn	Sn	02 50 55.1	-0.9
	4.5nm,0.5s						
HAU	Haudompre	5.38	328	*e*Pn	Pn	02 49 55.1	+0.7
HAU				*e*Sn	Sn	02 50 55.1	-0.9
	2.2nm,0.5s						
CDF	Champ du Feu	5.42	336	*e*Pn	Pn	02 49 55.8	+0.8
CDF				*e*Sn	Sn	02 50 54.8	-2.2
	1.7nm,0.4s						
CDF	Champ du Feu	5.42	336	*e*Pn	Pn	02 49 55.8	+0.8
CAF	Calviac	6.26	286	*e*Pn	Pn	02 50 07.6	+1.1
CAF	Calviac	6.26	286	*e*Pn	Pn	02 50 07.6	+1.1

*IDC **07** 02:50:08.7±0.5, 38°.99N×92°.05E, h0km, mb4.3/22, mb1 4.4/27, mb1mx4.4/35, mbtmp4.3/27, ML4.0/5, MS3.9/20, Ms1 3.9/20, ms1mx3.7/36, Error ellipse: s-maj=16.2km s-min=10.6km az=46.0*
*ISCJB **07** 02:50:10.3±0.2, 39°.14N±0°.03×91°.84E±0°.03, h9km, mb4.6/82, MS4.0/30, Error ellipse: s-maj=4.7km s-min=2.6km az=20.1*
*MOS **07** 02:50:10.0±1.5, 39°.01N×91°.91E, h14km, mb4.8/47, MS3.9/22, Error ellipse: s-maj=8.1km s-min=4.5km az=134.7*
*NEIC **07** 02:50:11.2±0.3, 39°.03N×91°.88E, h10km, mb4.7/29, Error ellipse: s-maj=7.4km s-min=5.3km az=30.0*
*BJI **07** 02:50:12.5, 38°.98N×92°.18E, h10km, mB4.7/19, mb4.7/32, ML4.9/7, Ms4.6/39, Ms7 4.4/39*
*TEH **07** 02:50:13.0, 39°.08N×91°.78E, h10km, ML4.8*
*NNC **07** 02:50:15.1±1.3, 39°.67N×91°.57E, h0km, mb4.7, Error ellipse: s-maj=18.7km s-min=10.6km az=61.0*
*DJA **07** 02:50:16.1±0.4, 39°N±8°×9°2E±°, h10km, M5.0/9, mB4.9/2, mb5.0/9, Mw(mB)4.2/2*
ISC 07 02:50:11.9±0.4**, 39°.09N**±0°.04×**91°.75E**±0°.03**, h11**km±2km**, h10**km**:pP-P, n304, σ1.73**/316**, mb4.7**/82**, MS4.1**/30**, 28C-16D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	5.62	329	Pn	Pn	02 51 36.4	+0.9
WMQ				Sn	Sn	02 52 41.0	+0.8
WMQ				smax	smax		
	comp=N,2µm,0.8s						
WMQ				smax	smax		
	comp=E,2µm,0.9s						
WMQ				LR	LR		
	comp=N,3µm,4.2s						
WMQ				LR	LR		
	comp=E,3µm,4.6s						
WMQ				LR	LR		
	comp=Z,2µm,10.9s						
GTA	Gaotai	6.27	85	*e*Pn	Pn	02 51 43.2	-1.3
GTA				Sn	Sn	02 52 55.8	-0.4
GTA				LR	LR		
	comp=N,5µm,11.6s						
GTA				LR	LR		
	comp=E,3µm,12.1s						
GTA				LR	LR		

comp=Z,4μm,10.7s
LSA Lhasa 9.38 183 P **Pn** **02 52 27.5 0.0**
LSA LR LR
comp=N,510nm,9.0s
LSA LR LR
comp=E,1μm,9.0s
LSA LR LR
comp=Z,620nm,9.0s
LZH Lanzhou 10.06 104 *e*P **Pn** **02 52 35.1 -1.4**
LZH pP 02 52 38.7
LZH sP 02 52 41.3
LZH *e*S **Sn** **02 54 29.0 -0.4**
LZH sS 02 54 33.3
LZH pmax pmax
comp=Z,69nm,1.0s
LZH pmax pmax
comp=Z,240nm,4.0s
LZH LR LR
comp=N,2μm,6.6s
LZH LR LR
comp=E,2μm,4.0s
LZH LR LR
comp=Z,2μm,7.8s
MK31 Makanchi Array 10.35 321 Pn **Pn** **02 52 39.7 -0.7**
comp=Z,9.7nm,0.5s,baz=128,slow=14,SNR=290
MK31 ⇓Sn **Sn** **02 54 34.6 -1.8**
comp=Z,20nm,0.6s,baz=128,slow=14,SNR=7.2
MK31 ⇓Lg Lg 02 55 26.0
comp=Z,76nm,0.8s
MK31 Makanchi Array 10.35 321 P **Pn** **02 52 39.7 -0.7**
MK31 *i* 02 54 34.6
MK31 pmax pmax
comp=Z,25nm,0.5s
MK31 smax smax
comp=Z,38nm,0.7s
MK31 pmax pmax
comp=Z,301nm,1.4s
MK31 Makanchi Array 10.35 321 *e*Pn **Pn** **02 52 40.2 -0.2**
MK31 *e*Sn **Sn** **02 54 35.8 -0.6**
MKAR Makanchi Array 10.35 321 P **Pn** **02 52 40.0 -0.4**
MKAR 02 54 36.5
MKAR pmax pmax
comp=Z,7.0nm,0.3s
MKAR smax smax
comp=N,4.0nm,0.3s
MKAR MLR MLR
comp=Z,722nm,20.3s
MKAR Makanchi Array 10.35 321 *e*Pn **Pn** **02 52 40.5 +0.1**
MKAR Sn **Sn** **02 54 36.5 +0.1**
MKAR Lg Lg 02 55 43.8
MKAR Makanchi Array 10.35 321 Pn **Pn** **02 52 40.0 -0.4**
comp=Z,6.6nm,0.3s,baz=134,slow=14,SNR=154
MKAR Sn **Sn** **02 54 36.5 +0.1**
comp=Z,3.5nm,0.3s,baz=136,slow=24,SNR=3.8
MKAR Lg Lg 02 55 43.8
comp=Z,2.4nm,0.3s,baz=138,slow=28,SNR=3.8
MKAR LR LR 02 57 21.6
comp=Z,722nm,20.3s,baz=118,slow=41
KNDC Almaty 11.88 295 ⇑Pn **Pn** **02 53 02.7 +1.4**
comp=Z,101nm,0.9s
KNDC ⇑Sn **Sn** **02 55 13.5 -0.4**
comp=Z,242nm,1.0s
ULHL Ulahol 12.19 290 *i* P **Pn** **02 53 06.4 +0.7**
ULHL Ulahol 12.19 290 P **Pn** **02 53 06.4 +0.7**
SNR=9.3
KSH Kashi 12.23 277 P Pn 02 53 12.1 +5.9
KSH *e*pP P 02 53 15.2 -3.5
KSH *e*sP 02 53 18.6
KSH *e*PP PnPn 02 53 22.3 +8.4
KSH *e*S Sn 02 55 31.5 +8.9
KSH *e*sS 02 55 40.4
KSH *e*SS SnSn 02 55 50.1 +16
KSH pmax pmax
comp=Z,150nm,0.8s
KSH pmax pmax
comp=Z,390nm,1.9s
KSH LR LR
comp=N,2μm,2.8s
KSH LR LR
comp=E,3μm,2.2s
KSH LR LR
comp=Z,2μm,2.7s
CD2 Chengdu 12.78 126 *e*P **Pn** **02 53 16.2 +2.6**
CD2 pP P 02 53 19.5 -5.2
CD2 sP 02 53 22.8
CD2 PP **PnPn** **02 53 26.5 +5.1**
CD2 S **Sn** **02 55 39.4 +3.5**
CD2 sS 02 55 44.2
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,30nm,4.2s
CD2 LR LR
comp=N,1μm,8.2s
CD2 LR LR
comp=E,1μm,9.4s
CD2 LR LR
comp=Z,470nm,9.2s
TKM2 Tokmak 2 12.79 293 ⇓Pn **Pn** **02 53 14.3 +0.4**
comp=Z,98nm,1.1s
TKM2 ⇑Sn **Sn** **02 55 35.3 -0.9**
comp=Z,52nm,1.1s
TKM2 ⇓Lg Lg 02 56 50.4
comp=Z,75nm,1.1s
TKM2 Tokmak 2 12.79 293 *e*P **Pn** **02 53 14.7 +0.8**
TKM2 *e* 02 55 33.4
TKM2 Tokmak 2 12.79 293 *e*Pn **Pn** **02 53 14.7 +0.8**
TKM2 *e*Sn **Sn** **02 55 33.4 -2.9**
TKM2 Tokmak 2 12.79 293 P **Pn** **02 53 14.9 +1.0**
SNR=67
KZA Kyzart 12.89 289 *i* P **Pn** **02 53 18.2 +2.7**
KZA Kyzart 12.89 289 P **Pn** **02 53 18.2 +2.7**
SNR=27
KBK Karagaybulak 13.20 291 P **Pn** **02 53 20.4 +0.9**
SNR=6.6
CHMS Chumysh 13.41 292 *i* P **Pn** **02 53 23.8 +1.6**
CHMS Chumysh 13.41 292 P **Pn** **02 53 23.8 +1.6**
SNR=15
FRU Bishkek 13.47 292 *e*P **Pn** **02 53 24.0 +0.9**
FRU MLR MLR
comp=Z,500nm,10.0s
AAK Ala-Archa 13.53 291 *i* P **Pn** **02 53 25.6 +1.7**
AAK Ala-Archa 13.53 291 *e*Pn **Pn** **02 53 25.7 +1.7**
AAK Ala-Archa 13.53 291 P **Pn** **02 53 26.0 +2.1**
SNR=15
AAK Ala-Archa 13.53 291 Pn **Pn** **02 53 25.5 +1.5**
comp=Z,0.8nm,0.3s,baz=84,slow=8.8,SNR=22
AAK LR LR 02 59 38.5
comp=Z,1μm,21.0s,baz=89,slow=41
USP Ospenovka 13.64 293 *i* P **Pn** **02 53 24.9 -0.5**
USP Ospenovka 13.64 293 P **Pn** **02 53 24.9 -0.5**
SNR=36
SONM Songino Array 13.75 46 Pn **Pn** **02 53 24.0 -2.9**
SONM Lg Lg 02 57 20.8
SONM Songino Array 13.75 46 Pn **Pn** **02 53 24.0 -2.9**
comp=Z,0.8nm,0.3s,baz=231,slow=15,SNR=8.9
SONM Lg Lg 02 57 20.8
comp=Z,1.1nm,0.3s,baz=235,slow=31,SNR=15
SONM LR LR 02 58 36.2
comp=Z,713nm,18.0s,baz=244,slow=37
ZAK Zakamensk 13.93 32 *e*P Pn 02 53 20.1 -9.2
ZAK pmax pmax
comp=Z,4.0nm,1.2s
AML Almayashu 14.05 288 *i* P **Pn** **02 53 34.4 +3.2**
AML Almayashu 14.05 288 P **Pn** **02 53 34.4 +3.2**
SNR=5.3
EKS2 Erkin-Say 14.06 290 *e*P **Pn** **02 53 31.7 +0.6**
EKS2 Erkin-Say 14.06 290 *e*Pn **Pn** **02 53 31.7 +0.6**
ULN Ulaanbaatar 14.13 47 *e*Pn **Pn** **02 53 31.2 -1.0**
comp=Z,21nm,1.1s
ULN *e*P **P** **02 53 40.4 +0.5**
ULN *e*Lg Lg 02 57 29.4
ULN Ulaanbaatar 14.13 47 P **P** **02 53 40.3 +0.4**
comp=Z,19nm,1.1s,comp=Z,213nm
MOY Mondy 14.14 24 *e*P **Pn** **02 53 34.1 +1.9**
XAN Xi'an 14.69 105 P **Pn** **02 53 41.8 +2.1**
XAN pP **P** **02 53 44.8 -1.1**
XAN S **Sn** **02 56 24.5 +2.0**
XAN LR LR
comp=N,510nm,8.8s
XAN LR LR
comp=E,280nm,8.9s
XAN LR LR
comp=Z,240nm,9.5s
KURBB Kurchatov Arra 14.83 325 Pn **Pn** **02 53 39.0 -2.5**
comp=Z,0.1nm,0.3s,baz=130,slow=13,SNR=9.8
KURBB Lg Lg 02 58 10.6
baz=128,slow=23,SNR=4.1
KUR16 Kurchatov Arra 14.85 325 ⇑Pn **Pn** **02 53 39.4 -2.4**
comp=Z,4.9nm,0.7s
KUR16 ⇑Sn Sn 02 56 18.9 -7.3
comp=Z,12nm,1.6s
KUR16 ⇓Lg Lg 02 57 51.0
comp=Z,34nm,1.2s
KURK Kurchatov 14.86 326 ⇑Pn Pn 02 53 38.6 -3.2
comp=Z,20nm,1.0s
KURK ⇑Sn **Sn** **02 56 20.8 -5.6**
comp=Z,30nm,1.3s
KURK ⇑Lg Lg 02 57 50.2
comp=Z,98nm,1.2s
KURK Kurchatov 14.86 326 *e*P **Pn** **02 53 39.1 -2.8**
KURK *e* 02 56 21.0
KURK Kurchatov 14.86 326 *e*Pn **Pn** **02 53 39.1 -2.8**
KURK *e*Sn **Sn** **02 56 21.0 -5.4**
KURK Lg Lg 02 58 10.7
TLY Talaya 15.08 30 *e*P P 02 53 54.7 +4.5
TLY *e*SS **Sn** **02 56 38.2 +6.3**
TLY pmax pmax
comp=Z,6.0nm,0.9s
TLY MLR MLR
comp=Z,361nm,9.0s
HHC Hu-ho-hao-te 15.30 77 *e*P **P** **02 53 50.8 -1.9**
HHC pP **pP** **02 53 54.0 -1.7**
HHC sP **sP** **02 53 58.1 +1.0**
HHC PP PnPn 02 54 03.2 +7.3
HHC S **Sn** **02 56 38.3 +1.0**
HHC sS S 02 56 42.8 -11
HHC SS **SnSn** **02 56 54.8 +4.9**
HHC pmax pmax
comp=Z,84nm,1.1s
HHC pmax pmax
comp=Z,290nm,3.7s
HHC LR LR
comp=N,1μm,6.2s
HHC LR LR
comp=E,880nm,6.5s
HHC LR LR
comp=Z,520nm,6.0s
HHC Hu-ho-hao-te 15.30 77 *e*P **Pn** **02 53 49.0 +1.1**
HHC pP **P** **02 53 52.4 -0.3**
HHC sP **sP** **02 53 56.0 -1.1**
HHC PP **PnPn** **02 54 01.6 +5.7**
HHC S **Sn** **02 56 39.2 +1.9**
HHC sS S 02 56 44.4 -10
HHC pmax pmax
comp=Z,84nm,0.9s
HHC pmax pmax
comp=Z,290nm,4.3s
HHC LR LR
comp=N,1μm,6.6s
HHC LR LR
comp=E,1μm,7.1s
HHC LR LR
comp=Z,910nm,7.8s
ZAA0 Zalesovo Array 15.60 345 *e*Pn **Pn** **02 53 50.8 -0.8**
ZALV Zalesovo Beam 15.60 345 P **Pn** **02 53 51.4 -0.2**
ZALV MLR MLR
comp=Z,174nm,19.0s
ZALV Zalesovo Beam 15.60 345 Pn **Pn** **02 53 51.4 -0.2**
ZALV Lg Lg 02 58 28.4
ZALV Zalesovo Beam 15.60 345 Pn **Pn** **02 53 51.4 -0.2**
comp=Z,0.2nm,0.3s,baz=165,slow=12,SNR=30
ZALV Lg Lg 02 58 28.4
comp=Z,0.1nm,0.3s,baz=162,slow=24,SNR=4.4
ZALV LR LR 03 00 26.7
comp=Z,174nm,19.0s,baz=251,slow=39
CHCP Chirah Chowk 15.84 256 P **Pn** **02 53 55.8 +0.9**
KK31 Karatay Array 16.50 291 Pn **Pn** **02 54 04.5 +1.2**
comp=Z,9.2nm,0.8s,baz=91,slow=11,SNR=76
KK31 Karatay Array 16.50 291 *i* P **Pn** **02 54 04.4 +1.2**
KK31 pmax pmax
comp=Z,13nm,0.8s
KKAR Karatay Array 16.50 291 *e*P **P** **02 54 05.2 -0.8**
KKAR Karatay Array 16.50 291 *e*Pn **P** **02 54 05.2 -0.8**
KMI Kunming 16.73 143 P **Pn** **02 54 05.5 -1.1**
KMI PP **PnPn** **02 54 18.5 +2.6**
KMI S **Sn** **02 57 08.9 -3.6**
KMI pmax pmax
comp=Z,16nm,1.2s
KMI pmax pmax
comp=Z,38nm,3.1s
KMI LR LR
comp=N,880nm,10.3s
KMI LR LR
comp=E,740nm,11.7s
KMI LR LR
comp=Z,1μm,10.9s
NVS Novosibirsk 16.77 343 *e*P **Pn** **02 54 04.4 -2.2**
NVS pmax pmax
comp=N,15nm,1.6s
NVS pmax pmax
comp=E,10.0nm,1.6s
NVS pmax pmax
comp=Z,20nm,1.6s
CEP Cherat 16.80 258 P **Pn** **02 54 06.4 -0.9**
CEP S Px 02 55 31.0
THW Thamme Wali 17.36 255 P **Pn** **02 54 12.8 -1.5**
GYA Guiyang 17.75 131 ⇓*i*P **Pn** **02 54 17.1 -2.0**
GYA PP **PnPn** **02 54 32.1 +2.4**
GYA S **Sn** **02 57 37.7 +0.8**
GYA pmax pmax
comp=Z,20nm,1.1s
GYA pmax pmax
comp=Z,110nm,4.4s
GYA LR LR
comp=N,490nm,9.6s
GYA LR LR
comp=E,380nm,12.7s
GYA LR LR
comp=Z,480nm,12.1s
KBL Kabul 18.72 263 *e*P **P** **02 54 31.1 +0.3**
KBL pmax pmax
comp=Z,90nm,1.1s
KBL Kabul 18.72 263 *e*P **P** **02 54 31.1 +0.3**
comp=Z,90nm,1.1s
BJI Beijing 18.85 79 P **P** **02 54 30.4 -1.5**
BJI S **Sn** **02 58 02.5 -0.7**
BJI pmax pmax
comp=Z,61nm,0.9s
BJI pmax pmax
comp=Z,200nm,6.1s
BJI LR LR
comp=N,370nm,20.3s
BJI LR LR
comp=E,640nm,17.3s
BJI LR LR
comp=Z,400nm,18.1s
VOSK Vostochnaya 19.77 320 ⇑Pn **P** **02 54 41.6 -0.3**
comp=Z,50nm,1.3s
VOSK Vostochnaya 19.77 320 P **P** **02 54 41.6 -0.3**
VOSK pmax pmax
comp=Z,50nm,1.3s
BVA0 Borovoye Array 20.24 321 Pn Pn 02 54 48.1 -0.9
comp=Z,22nm,0.9s,baz=117,slow=12,SNR=47
BVA0 Borovoye Array 20.24 321 *i* P Pn 02 54 48.0 -0.9
BVA0 pmax pmax
comp=Z,22nm,1.0s
BVAR Borovoye Array 20.24 321 P **P** **02 54 47.4 +0.4**
BVAR pmax pmax
comp=Z,10.0nm,1.0s
BVAR MLR MLR
comp=Z,477nm,21.5s
BVAR Borovoye Array 20.24 321 P **P** **02 54 47.4 +0.4**
BVAR Borovoye Array 20.24 321 P **P** **02 54 47.4 +0.4**
comp=Z,10nm,1.0s,baz=118,slow=10,SNR=20
BVAR LR LR 03 02 52.8
comp=Z,477nm,21.5s,baz=112,slow=37
BRVK Borovoye 20.31 320 ⇓Pn **P** **02 54 47.9 +0.2**
comp=Z,38nm,1.0s
BRVK Borovoye 20.31 320 *e*P **P** **02 54 47.6 -0.1**
BRVK pmax pmax
comp=Z,21nm,0.9s
BRVK Borovoye 20.31 320 *e*P **P** **02 54 47.6 -0.1**
comp=Z,21nm,0.9s
WHN Wuhan 20.38 108 P **P** **02 54 45.1 -3.6**
WHN S **S** **02 58 37.1 +0.1**
WHN LR LR
comp=N,860nm,8.9s
WHN LR LR
comp=E,1μm,7.9s
WHN LR LR
comp=Z,1μm,6.9s
ZRNK Zerenda 20.89 319 ⇑Pn **P** **02 54 54.0 -0.1**
comp=Z,14nm,0.8s
ZRNK Zerenda 20.89 319 P **P** **02 54 53.9 -0.1**
ZRNK pmax pmax
comp=Z,14nm,0.9s
CHTO Chiang Mai 21.15 161 *e*P **P** **02 54 57.2 +0.1**
CHTO pmax pmax
comp=Z,21nm,1.6s
CHTO Chiang Mai 21.15 161 *e*P **P** **02 54 57.2 +0.1**
comp=Z,21nm,1.6s
CMAR Chiang Mai Arr 21.49 161 P **P** **02 54 57.5 -3.3**
CMAR Chiang Mai Arr 21.49 161 P **P** **02 54 57.5 -3.3**
comp=Z,2.4nm,0.7s,baz=339,slow=10,SNR=10.0
NJ2 Nanjing 23.09 99 *e*P **P** **02 55 17.6 0.0**
NJ2 pP **pP** **02 55 19.2 -1.5**
NJ2 sP **sP** **02 55 21.2 -0.9**
NJ2 S **S** **02 59 28.0 -0.7**
NJ2 sS **sS** **02 59 33.0 -1.0**
NJ2 pmax pmax
comp=Z,30nm,1.1s
NJ2 pmax pmax
comp=Z,180nm,8.6s
NJ2 LR LR
comp=N,1μm,18.4s
NJ2 LR LR
comp=E,650nm,20.5s
NJ2 LR LR
comp=Z,630nm,11.0s
SNY Shenyang 24.30 73 ⇓P **P** **02 55 28.8 -0.6**
SNY S **S** **02 59 51.5 +3.4**
SNY pmax pmax
comp=Z,73nm,4.8s
SNY LR LR
comp=N,300nm,9.9s
SNY LR LR
comp=E,710nm,10.2s
SNY LR LR
comp=Z,1μm,10.8s
AB31 Akbulak array 24.80 305 ⇑P **P** **02 55 34.3 +0.4**
comp=Z,11nm,1.1s,baz=109,slow=8.9,SNR=6.9
ABKAR Akbulak array 24.80 305 *e*P **P** **02 55 33.6 -0.3**
comp=Z,2.9nm,0.6s
IMYA Miami 25.12 274 *e*P **P** **02 55 39.4 +2.3**
QIZ Qiongzhong 25.40 137 P **P** **02 55 40.7 +1.2**
QIZ S **S** **03 00 08.9 +2.8**
QIZ sS **sS** **03 00 13.6 +2.2**
QIZ LR LR
comp=N,360nm,13.4s
QIZ LR LR
comp=E,250nm,12.5s
QIZ LR LR
comp=Z,650nm,12.0s
CN2 Changchun 25.59 68 *e*P **P** **02 55 40.8 -0.2**
CN2 *e*S **S** **03 00 08.9 +0.2**
CN2 pmax pmax
comp=Z,10.0nm,1.2s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,13.0s
CN2 LR LR
comp=E,500nm,13.0s
CN2 LR LR
comp=Z,600nm,11.0s
ISRO Mashad 25.62 274 *e*P **P** **02 55 43.2 +1.7**
IPAY Payeh 25.95 275 *e*P **P** **02 55 45.1 +0.4**
IAKL Akhelmad 26.09 275 *e*P **P** **02 55 48.9 +2.9**
AKTO Aktyubinsk 26.27 307 ⇑P **P** **02 55 49.1 +1.9**
comp=Z,13nm,1.1s
AKTO Aktyubinsk 26.27 307 P **P** **02 55 49.3 +2.1**
AKTO pmax pmax
comp=Z,5.0nm,0.8s
AKTO MLR MLR
comp=Z,450nm,20.8s
AKTO Aktyubinsk 26.27 307 P **P** **02 55 49.3 +2.1**
AKTO Aktyubinsk 26.27 307 P **P** **02 55 49.3 +2.1**
comp=Z,5.4nm,0.8s,baz=106,slow=11,SNR=18
AKTO LR LR 03 06 47.2
comp=Z,450nm,20.8s,baz=126,slow=38
IDAH Dahanechah 26.50 266 *e*P **P** **02 55 51.9 +2.2**
ISHV Shirvan 26.67 277 *e*P **P** **02 55 54.2 +3.0**
IKOO Kooshah 27.29 266 *e*P **P** **02 55 58.7 +1.9**
ITEG Tejag 27.31 267 *e*P **P** **02 55 59.0 +2.1**
ARU Arti 27.87 319 *d*P **P** **02 56 02.4 +0.9**
ARU PPP PPP 02 56 56.8
ARU S **S** **03 00 45.3 +0.7**
ARU pmax pmax
comp=Z,20nm,1.7s
ARU MLR MLR
comp=Z,303nm,24.0s
KSAR Wonju Array Be 28.31 82 P **P** **02 56 03.0 -2.5**
KSRS Korea Array 28.33 82 P **P** **02 56 03.0 -2.7**
comp=Z,3.1nm,0.8s,baz=282,slow=8.3,SNR=11
KSRS LR LR 03 08 24.6
comp=Z,288nm,18.6s,baz=280,slow=39
MDJ Mudanjiang 28.54 66 P **P** **02 56 07.0 -0.6**
MDJ pP **pP** **02 56 10.0 -0.8**
MDJ S **S** **03 00 56.4 +1.0**
MDJ sS **sS** **03 01 03.5 +2.8**
MDJ pmax pmax
comp=Z,6.0nm,0.4s
MDJ pmax pmax
comp=Z,30nm,4.4s
MDJ LR LR
comp=N,260nm,8.1s
MDJ LR LR
comp=E,440nm,9.3s
MDJ LR LR
comp=Z,570nm,8.9s
KLR Kul'dur 30.11 57 *e*P P 02 56 17.2 -4.3
USRK Ussuriysk Arra 30.29 67 LR LR 03 09 37.4
comp=Z,130nm,20.4s,baz=95,slow=39
HABR Khabarovsk 32.26 59 *e*P **P** **02 56 39.9 -0.5**
HABR *e**PP **pP** **02 56 42.9 -0.7**
HABR *e* 02 57 45.5
HABR *e*PPP PPP 02 57 55.1
HABR *e*S **S** **03 01 53.6 +0.1**
HABR *e**SS **sS** **03 01 58.7 -0.1**
HABR *e*SS **SnSn** **03 03 45.1 +0.5**
HABR pmax pmax
comp=Z,21nm,1.3s
HABR pmax pmax
comp=E,35nm,2.7s
HABR pmax pmax
comp=N,8.0nm,0.9s
HABR MLR MLR
comp=Z,302nm,15.0s
MAK Makhachkala 33.31 291 *e*P P 02 56 56.5 +6.9
MAK MLR MLR
comp=Z,591nm,18.0s
DGRG David-gareji 35.14 289 P P 02 57 10.0 +4.4
DUS Dusheti 35.50 290 P P 02 57 15.8 +7.0
TBLG Delisi 35.55 290 P P 02 57 12.8 +3.7
TBLG Delisi 35.55 290 *e*P P 02 57 12.8 +3.7
GUDG Gudauri 35.59 291 P P **02 57 12.5 +2.8**
GNI Garni 35.90 287 *e*P **P** **02 57 13.4 +1.1**
comp=Z,4.2nm,0.5s
GOR Gori 35.96 290 P P 02 57 16.4 +3.8
ONI Oni 36.31 291 P P 02 57 19.5 +3.8
KBZ Khabaz 36.51 293 P P 02 57 21.0 +3.8
KBZ pmax pmax
comp=Z,2.0nm,0.7s
KBZ MLR MLR
comp=Z,285nm,18.8s
KBZ Khabaz 36.51 293 P P 02 57 21.0 +3.8
KBZ Khabaz 36.51 293 P P 02 57 21.0 +3.8
comp=Z,2.4nm,0.7s,baz=114,slow=7.9,SNR=6.2
KBZ LR LR 03 15 10.9
comp=Z,285nm,18.8s,baz=281,slow=41
AKH Akhalkalaki 36.53 289 P **P** **02 57 20.8 +3.2**
KIV Kislovodsk 36.62 294 *e*P P 02 57 14.8 -3.5
KIV *e*S **S** **03 02 57.7 -3.4**
KIV pmax pmax
comp=Z,192nm,15.6s
KIV MLR MLR
comp=Z,192nm,16.0s
VRHR Novokhopersk 36.68 306 *e*P **P** **02 57 19.0 +0.5**
VRHR pmax pmax
comp=Z,10.0nm,0.8s
VRHR pmax pmax
comp=N,9.0nm,1.7s
VRHR pmax pmax
comp=E,8.0nm,0.8s
CHVG Ch'k'valeri 37.28 292 P P 02 57 12.3 -12
MIB Mutribah 37.46 270 *e*P **P** **02 57 26.5 +1.0**

MIB AMb AMB 02 57 31.8
comp=Z,54nm,0.9s
TIXI Tiksi 37.61 18⇑ *eP* **P 02 57 28.4 +2.2**
TIXI pmax pmax
comp=Z,7.0nm,2.2s
RDF Al-Radifah 37.70 268 *eP* **P 02 57 29.0 +1.5**
RDF AMb AMB 02 57 30.6
comp=Z,88nm,1.2s
NAY Al-Naaiem 37.79 269 *eP* **P 02 57 29.5 +1.2**
NAY AMb AMB 02 57 31.0
comp=Z,44nm,1.0s
VSR Storozhevoye 38.22 306 *eP* **P 02 57 32.5 +0.9**
VSR pmax pmax
comp=Z,20nm,1.3s
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,30nm,1.1s
BHD Baghdad 38.33 276 *eS* **S 03 03 30.2 +3.1**
KLMR Klimovskoe 38.65 322 *eP* **P 02 57 37.1 +2.0**
KLMR pmax pmax
comp=Z,27nm,1.2s
KLMR MLR MLR
comp=Z,214nm,13.0s
MOS Moscow 39.12 313 *eP* P 02 57 27.3 -12
MOS pmax pmax
comp=Z,56nm,1.1s
KKM Kota Kinabalu 39.63 140 *eP* **P 02 57 44.0 0.0**
comp=Z,22nm,1.0s
OBN Obninsk 39.71 312⇑ *iP* **P 02 57 44.4 +0.4**
OBN *e* 02 59 15.0
OBN *eSS* SS 03 07 17.1 +35
OBN pmax pmax
comp=Z,25nm,1.0s
OBN MLR MLR
comp=Z,400nm,20.0s
SBUM Sibu 40.97 148 P **P 02 57 57.6 +2.8**
comp=Z,8.4nm,0.8s
MYLDM Lahad Datu 41.54 137 P P 02 58 03.0 +3.4
comp=Z,37nm,1.0s
RAYN Ar Rayn 41.99 262 *eP* **P 02 58 04.2 +0.9**
comp=Z,15nm,1.1s
SIM Simferopol' 42.44 297 *eP* **P 02 58 07.9 +1.2**
SIM pmax pmax
comp=Z,37nm,0.5s
SIM MLR MLR
comp=Z,260nm,21.9s
JOF Joensuu 42.77 324 *ep* **P 02 58 09.1 0.0**
comp=Z,4.8nm,0.8s
JOF Joensuu 42.77 324 *eP* **P 02 58 09.1 0.0**
JOF pmax pmax
comp=Z,5.0nm,0.8s
SEY Seymchan 42.86 36⇓ *iP* **P 02 58 11.4 +1.6**
DAV Davao City (W) 44.08 127 LR LR 03 18 20.0
comp=Z,160nm,18.7s,baz=357,slow=39
BR131 Keskin Array S 44.21 290 *eP* **P 02 58 22.5 +1.3**
comp=Z,10nm,0.9s
BRTR Keskin Array B 44.21 290 P **P 02 58 22.4 +1.2**
BRTR Keskin Array B 44.21 290 P **P 02 58 22.4 +1.2**
comp=Z,9.3nm,0.9s,baz=99,slow=6.4,SNR=30
BRTR LR LR 03 20 46.8
comp=Z,92nm,20.1s,baz=220,slow=41
AKASG Malin Array Be 44.52 306 P **P 02 58 23.9 +0.5**
AKASG pmax pmax
comp=Z,4.0nm,0.8s
AKASG Malin Array Be 44.52 306 P **P 02 58 23.9 +0.5**
AKASG Malin Array Be 44.52 306 P **P 02 58 23.9 +0.5**
comp=Z,3.6nm,0.8s,baz=70,slow=7.5,SNR=12
AK01 Malin Array Si 44.53 306 *eP* **P 02 58 22.6 -0.9**
KIEV Kiev 44.53 306 *eP* **P 02 58 24.4 +1.0**
KIEV pmax pmax
comp=Z,16nm,1.4s
KIEV Kiev 44.53 306 *eP* **P 02 58 24.4 +1.0**
comp=Z,16nm,1.4s
AK02 Malin Array Si 44.54 306 *eP* **P 02 58 23.8 +0.3**
ANTO Ankara 44.78 291 *eP* **P 02 58 26.8 +1.1**
ANTO pmax pmax
comp=Z,21nm,1.4s
ANTO Ankara 44.78 291 *eP* **P 02 58 26.8 +1.1**
comp=Z,21nm,1.4s
KAF Kangasniemi 45.06 323 *ep* P 02 58 37.4 +10
KAF Kangasniemi 45.06 323 *eP* P 02 58 37.4 +10
FINES FINESS Array B 45.19 322 P **P 02 58 28.1 -0.5**
FINES FINESS Array B 45.19 322 P **P 02 58 28.1 -0.5**
comp=Z,1.9nm,0.8s,baz=69,slow=10,SNR=5.5
KIS Kishinev 45.55 301 *eP* **P 02 58 33.0 +1.4**
KIS Kishinev 45.55 301 *eP* **P 02 58 33.0 +1.4**
ARCES ARCESS Array B 45.72 333 P **P 02 58 31.6 -1.1**
ARCES ARCESS Array B 45.72 333 P **P 02 58 31.6 -1.1**
comp=Z,2.2nm,0.8s,baz=89,slow=7.7,SNR=7.6
ARCES LR LR 03 19 44.3
comp=Z,378nm,18.7s,baz=95,slow=39
PETK Petropavlovsk- 46.19 50 P **P 02 58 36.9 +0.3**
PETK pmax pmax
comp=Z,5.0nm,0.8s
PETK MLR MLR
comp=Z,187nm,18.3s
PETK Petropavlovsk- 46.19 50 P **P 02 58 36.9 +0.3**
PETK Petropavlovsk- 46.19 50 P **P 02 58 36.9 +0.3**
comp=Z,5.3nm,0.8s,baz=301,slow=6.4,SNR=6.6
PETK LR LR 03 19 21.2
comp=Z,186nm,18.3s,baz=109,slow=38
PET Petropavlovsk 46.77 50 *eP* **P 02 58 40.0 -1.1**
PET *eS* **S 03 05 25.7 -5.2**
PET pmax pmax
comp=Z,28nm,1.2s
PET MLR MLR
comp=Z,420nm,13.3s
VRI Vrincioaia 47.24 300⇑ *iP* **P 02 58 47.5 +2.5**
VRI Vrincioaia 47.24 300⇑ *iP* **P 02 58 47.5 +2.5**
SUW Suwalki 47.56 312 *eP* **P 02 58 45.9 -1.4**
SUW pmax pmax
comp=Z,25nm,1.0s
SUW Suwalki 47.56 312 *eP* **P 02 58 45.9 -1.4**
comp=Z,25nm,1.0s
BUR08 Bucovina Ar. S 47.77 303 *eP* **P 02 58 49.9 +0.7**
MLR Muntele Rosu 47.88 300⇑ *iP* **P 02 58 53.1 +3.1**
LVV L'vov 47.97 306 *eP* **P 02 58 51.4 +0.9**
VOIR 48.49 300⇓ *eP* **P 02 58 56.6 +1.9**
VOIR 48.49 300⇓ *iP* **P 02 58 56.6 +1.9**
BILL Bilibino 48.70 29⇑ *eP* **P 02 58 58.8 +2.9**
BILL *e* 03 00 51.6
BILL pmax pmax
comp=Z,29nm,1.5s
BILL MLR MLR
comp=Z,100nm,17.0s
ARR Arges 48.80 300⇑ *iP* **P 02 58 58.5 +1.5**
KOLS Kolonicke sedl 49.31 305 *eP* **P 02 59 03.2 +2.4**
KOLS pmax pmax
comp=Z,28nm,2.6s
KOLS Kolonicke sedl 49.31 305 *eP* **P 02 59 03.2 +2.4**
TRPA Tarpa 49.36 304⇑ *iP* **P 02 59 04.3 +3.1**
DRGR 49.64 303⇑ P P 02 59 06.7 +3.2
DRGR 49.64 303⇑ *iP* P 02 59 06.7 +3.2
CRVS Cervenica-Dubn 49.83 306 *eP* **P 02 59 06.2 +1.4**
CRVS Cervenica-Dubn 49.83 306 *eP* **P 02 59 06.2 +1.4**
GZR Gura Zlata 50.03 301⇑ P **P 02 59 07.8 +1.3**
GZR Gura Zlata 50.03 301⇑ *iP* **P 02 59 07.8 +1.3**
NIE Niedzica 50.40 307 *eP* **P 02 59 11.9 +2.7**
NIE Niedzica 50.40 307 *eP* **P 02 59 11.9 +2.7**
OJC Ojcow 50.49 308 *eP* **P 02 59 10.9 +1.1**
OJC pmax pmax
comp=Z,24nm,1.5s
OJC Ojcow 50.49 308 *eP* **P 02 59 10.9 +1.1**
comp=Z,24nm,1.5s
OJC Ojcow 50.49 308 *eP* **P 02 59 11.9 +2.1**
KECS Kecovo 50.57 305 *eP* **P 02 59 13.2 +2.8**
KECS pmax pmax
comp=Z,2.0nm,0.9s
KECS Kecovo 50.57 305 *eP* **P 02 59 13.2 +2.8**
VTS Vitosha 50.68 297⇑ P **P 02 59 10.1 -1.4**
VTS Vitosha 50.68 297⇑ *iP* **P 02 59 10.1 -1.4**
KAPI Kappang 50.95 143 LR LR 03 22 29.2
comp=Z,52nm,19.3s,baz=288,slow=38
APE Apeiranthos 51.10 290⇓ P P 02 59 08.9 -5.8
APE Apeiranthos 51.10 290⇓ *iP* P 02 59 08.9 -5.8
VYHS Vyhne 51.61 306 *eP* **P 02 59 19.9 +1.6**
VYHS pmax pmax
comp=Z,21nm,2.1s
VYHS Vyhne 51.61 306 *eP* **P 02 59 19.9 +1.6**
MORC Moravsky Berou 52.01 308 *eP* **P 02 59 21.7 +0.4**
MORC pmax pmax
comp=Z,5.0nm,1.1s
MORC Moravsky Berou 52.01 308 *eP* **P 02 59 21.6 +0.4**
comp=Z,4.9nm,1.1s
MORC Moravsky Berou 52.01 308⇓ *iP* **P 02 59 22.5 +1.2**
NB2 NORSAR Subarra 52.35 323 P **P 02 59 22.3 -1.3**
comp=Z,4.7nm,1.0s,baz=75,slow=7.9
NOA NORSAR Array B 52.35 323 P **P 02 59 22.2 -1.3**
NOA NORSAR Array B 52.35 323 P **P 02 59 22.2 -1.3**
comp=Z,3.8nm,0.9s,baz=75,slow=7.6,SNR=12
PKSM Moragy 52.49 303⇑ P **P 02 59 25.4 +0.6**
PKSM Moragy 52.49 303⇑ *iP* **P 02 59 25.4 +0.6**
VRAC Vranov 52.75 307⇓ *iP* **P 02 59 28.1 +1.4**
GVD Gavdhos 53.10 288 *eP* **P 02 59 29.7 +0.2**
comp=Z,98nm,1.2s
PRU Pruhonice 53.78 309 *eP* P 02 59 25.2 -9.1
BRG Berggiesshubel 53.84 310 *eP* **P 02 59 34.4 -0.3**
comp=Z,9.7nm,1.4s
BRG Berggiesshubel 53.84 310 *eP* **P 02 59 34.4 -0.3**
BRG pmax pmax
comp=Z,10.0nm,1.5s
CLL Collm 54.25 311 *iP* **P 02 59 38.4 +0.7**
CLL *i* 02 59 40.7
CLL pmax pmax
comp=Z,7.0nm,0.9s
CLL MLR MLR
comp=Z,200nm,18.7s
CLL Collm 54.25 311 *iP* **P 02 59 38.4 +0.7**
comp=Z,4.0nm,0.9s
CLL *i* pP **pP 02 59 40.7 -0.4**
comp=Z,5.0nm,0.9s
CLL *e*SS SKiKP 03 11 00.0 +11
CLL Lm MLR 03 23 00.0
comp=Z,200nm,18.7s
KHC Kasperske Hory 54.67 308 *eP* **P 02 59 40.7 -0.1**
KHC pmax pmax
comp=Z,2.0nm,0.8s
KHC Kasperske Hory 54.67 308 *eP* **P 02 59 40.7 -0.1**
comp=Z,1.5nm,0.8s
GERES GERESS Array B 54.70 308 P **P 02 59 41.9 +0.8**
GERES GERESS Array B 54.70 308 P **P 02 59 41.9 +0.8**
comp=Z,0.8nm,0.7s,baz=67,slow=7.4,SNR=8.3
FUORN Ofenpass-Fuorn 57.70 306 *eP* P 03 00 07.9 +5.1
comp=Z,10nm,1.1s
TUE Stuetta 58.33 306 *eP* **P 03 00 09.4 +2.2**
comp=Z,7.8nm,0.9s
SENIN Lac Senin/Sane 59.66 307 *eP* P 03 00 21.1 +4.8
comp=Z,6.2nm,0.9s
LPG La Plagne 60.39 306 *eP* **P 03 00 22.0 +0.5**
comp=Z,42nm,1.1s
LPG La Plagne 60.39 306 *eP* **P 03 00 22.0 +0.5**
LPG pmax pmax
comp=Z,42nm,1.1s
LPG La Plagne 60.39 306 *eP* **P 03 00 22.0 +0.5**
comp=Z,42nm,1.1s
LPL La Plagne 60.39 306 *eP* **P 03 00 21.9 +0.5**
comp=Z,32nm,1.1s
LPL La Plagne 60.39 306 *eP* **P 03 00 21.9 +0.5**
LPL pmax pmax
comp=Z,33nm,1.1s
LPL La Plagne 60.39 306 *eP* **P 03 00 21.9 +0.5**
comp=Z,32nm,1.1s
SBF Sospel 60.70 304 *eP* **P 03 00 22.6 -0.8**
comp=Z,94nm,1.0s
SBF Sospel 60.70 304 *eP* **P 03 00 22.6 -0.8**
SBF pmax pmax
comp=Z,94nm,1.0s
SBF Sospel 60.70 304 *eP* **P 03 00 22.6 -0.8**
comp=Z,94nm,1.0s
MBDF Montbardon 60.73 306 *eP* **P 03 00 23.1 -0.5**
comp=Z,19nm,0.7s
MBDF Montbardon 60.73 306 *eP* **P 03 00 23.1 -0.5**
MBDF pmax pmax
comp=Z,19nm,0.7s
MBDF Montbardon 60.73 306 *eP* **P 03 00 23.1 -0.5**
comp=Z,19nm,0.7s
ORIF Oris-en-Rattie 61.20 306 *eP* **P 03 00 26.5 -0.3**
comp=Z,11nm,0.7s
ORIF Oris-en-Rattie 61.20 306 *eP* **P 03 00 26.5 -0.3**
ORIF pmax pmax
comp=Z,11nm,0.7s
ORIF Oris-en-Rattie 61.20 306 *eP* **P 03 00 26.5 -0.3**
comp=Z,11nm,0.7s
SMF Signal de Mont 61.66 309 *eP* **P 03 00 29.3 -0.4**
comp=Z,17nm,0.9s
SMF Signal de Mont 61.66 309 *eP* **P 03 00 29.3 -0.4**
SMF pmax pmax
comp=Z,17nm,0.9s
SMF Signal de Mont 61.66 309 *eP* **P 03 00 29.3 -0.4**
comp=Z,17nm,0.9s
TCF Toulx Ste Croi 62.82 309 *eP* **P 03 00 37.4 -0.2**
comp=Z,31nm,1.1s
TCF Toulx Ste Croi 62.82 309 *eP* **P 03 00 37.4 -0.2**
TCF pmax pmax
comp=Z,31nm,1.1s
TCF Toulx Ste Croi 62.82 309 *eP* **P 03 00 37.4 -0.2**
comp=Z,31nm,1.1s
LASF Ste Croix 62.87 306 *eP* **P 03 00 38.2 +0.2**
comp=Z,25nm,1.0s
LASF Ste Croix 62.87 306 *eP* **P 03 00 38.2 +0.2**
comp=Z,25nm,1.0s
KEST Kesra 63.33 296 LR LR 03 31 24.4
comp=Z,31nm,20.1s,baz=264,slow=39
KMBO Kilima Mbogo 63.92 245 *eP* **P 03 00 45.9 +0.4**
comp=Z,7.5nm,1.1s
KMBO Kilima Mbogo 63.92 245 P **P 03 00 45.6 +0.2**
comp=Z,3.7nm,0.9s,baz=234,slow=23,SNR=6.6
KMBO LR LR 03 29 56.7
comp=Z,70nm,21.3s,baz=96,slow=37
COLD Coldfoot 64.15 22 *eP* **P 03 00 47.6 +1.6**
comp=Z,7.2nm,1.1s
FITZ Fitzroy Crossi 65.14 144 P **P 03 00 50.5 -2.4**
FITZ Fitzroy Crossi 65.14 144 P **P 03 00 50.5 -2.4**
comp=Z,2.7nm,0.7s,baz=31,slow=5.6,SNR=4.0
AKUT Akutan 65.87 39 *eP* P 03 00 52.5 -4.9
COLA College 66.44 24 *eP* **P 03 01 02.0 +1.2**
COLA pmax pmax
comp=Z,8.0nm,0.8s
COLA College 66.44 24 *eP* **P 03 01 02.0 +1.2**
comp=Z,8.5nm,0.8s
ILAR Eielson Array 66.81 23 P **P 03 01 01.8 -1.5**
ILAR Eielson Array 66.81 23 P **P 03 01 01.8 -1.5**
comp=Z,2.9nm,0.9s,baz=302,slow=3.4,SNR=22
ILAR LR LR 03 33 46.6
comp=Z,53nm,18.4s,baz=321,slow=39
INK Inuvik 67.71 17 LR LR 03 32 39.8
comp=Z,33nm,21.5s,baz=84,slow=38
MBAR Mbarara 68.25 250 P **P 03 01 11.8 -1.4**
MBAR Mbarara 68.25 250 P **P 03 01 11.8 -1.4**
comp=Z,3.1nm,0.6s,baz=36,slow=17,SNR=5.9
PMR Palmer 68.26 27 *eP* **P 03 01 14.3 +1.9**
PMR pmax pmax
comp=Z,15nm,1.4s
PMR Palmer 68.26 27 *eP* **P 03 01 14.3 +1.9**
comp=Z,15nm,1.4s
EGAK Eagle 68.51 22 *eP* **P 03 01 13.5 -0.4**
comp=Z,5.8nm,1.1s
OHAK Old Harbor 69.62 32 *eP* **P 03 01 21.5 +0.6**
comp=Z,7.4nm,0.7s
ESDC Sonseca Array 70.15 305 P **P 03 01 24.7 +0.1**
ESDC Sonseca Array 70.15 305 P **P 03 01 24.7 +0.1**
comp=Z,1.2nm,0.6s,baz=56,slow=6.9,SNR=6.2
OPO Ambohidratompo 70.90 225 P **P 03 01 28.3 -1.2**
OPO Ambohidratompo 70.90 225 P **P 03 01 28.3 -1.2**
comp=Z,0.7nm,0.4s,baz=31,slow=5.7,SNR=3.7
WRAB Tennant Creek 70.97 138 *eP* **P 03 01 26.8 -2.8**
WRAB pmax pmax
comp=Z,10.0nm,1.1s
WRAB Tennant Creek 70.97 138 *eP* **P 03 01 26.8 -2.8**
comp=Z,10nm,1.1s
WRA Warramunga Arr 70.97 138 P **P 03 01 26.6 -3.0**
WRA Warramunga Arr 70.97 138 P **P 03 01 26.6 -3.0**
comp=Z,6.0nm,1.1s,baz=336,slow=6.5,SNR=14
COEN Coen 71.30 127 *eP* **P 03 01 31.0 -0.8**
comp=Z,102nm,1.2s
TAM Tamanrasset 73.19 286 *eP* **P 03 01 43.6 +0.3**
TAM pmax pmax
comp=Z,3.0nm,0.8s
TAM Tamanrasset 73.19 286 *eP* **P 03 01 43.6 +0.3**
comp=Z,2.5nm,0.8s
ASAR Alice Springs 73.84 140 P **P 03 01 44.1 -2.6**
ASAR Alice Springs 73.84 140 P **P 03 01 44.1 -2.6**
comp=Z,2.6nm,0.9s,baz=331,slow=5.9,SNR=20
YKA Yellowknife Ar 76.56 12 P **P 03 02 00.6 -1.3**
YKA Yellowknife Ar 76.56 12 P **P 03 02 00.6 -1.3**
comp=Z,3.5nm,1.1s,baz=340,slow=5.4,SNR=9.6
CTA Charters Tower 77.86 128 P **P 03 02 06.9 -2.9**
CTA Charters Tower 77.86 128 P **P 03 02 06.9 -2.9**
comp=Z,1.2nm,0.5s,baz=317,slow=9.0,SNR=5.0
CTAO Charters Tower 77.86 128 *eP* **P 03 02 09.7 -0.1**
CTAO pmax pmax
comp=Z,11nm,1.3s
CTAO Charters Tower 77.86 128 *eP* **P 03 02 09.7 -0.1**
comp=Z,11nm,1.3s
TOA0 Torodi Ar. Sit 81.88 280 *eP* **P 03 02 31.1 -0.6**
TORD Torodi Ar. Bea 81.88 280 P **P 03 02 31.5 -0.3**
TORD Torodi Ar. Bea 81.88 280 P **P 03 02 31.5 -0.3**
comp=Z,12nm,1.1s,baz=48,slow=4.7,SNR=59
STKA Stephens Creek 84.44 139 LR LR 03 47 24.2
comp=Z,79nm,18.8s,baz=24,slow=41
FFC Flin Flon 85.81 8 *eP* **P 03 02 49.2 -2.0**
FFC pmax pmax
comp=Z,3.0nm,0.9s
FFC Flin Flon 85.81 8 *eP* **P 03 02 49.2 -2.0**
comp=Z,2.7nm,0.9s
NEW Newport 89.32 19 *eP* **P 03 03 10.2 +1.9**
BLMT Blacktail Moun 90.22 17 *eP* P 03 03 16.1 +3.4
DBIC Dimbokro 90.94 279 P **P 03 03 15.6 -0.7**
DBIC Dimbokro 90.94 279 P **P 03 03 15.6 -0.7**
comp=Z,9.2nm,1.1s,baz=14,slow=5.8,SNR=3.1
BOSA Boshof 91.51 234 LR LR 03 42 37.5
comp=Z,61nm,18.4s,baz=354,slow=34
BOZ Bozeman (W) 93.07 16 *eP* **P 03 03 24.6 -1.3**
BOZ pmax pmax
comp=Z,2.0nm,1.0s
BOZ Bozeman (W) 93.07 16 *eP* **P 03 03 24.6 -1.3**
comp=Z,2.0nm,1.0s
MCMT McKenzie Canyo 93.57 17 *eP* **P 03 03 30.0 +1.7**
QSPA South Pole Qui 128.86 180 *e*PKPdf **PKPdf 03 09 18.0 -0.6**
QTAV Otavalo 139.84 345 *e*PKPdf **PKPdf 03 09 42.0 +0.7**
SAML Samuel 142.51 317 *e*PKPdf **PKPdf 03 09 45.6 +0.2**
CPUP Villa Florida 151.19 287 PKPbc **PKPbc 03 10 04.0 -1.5**
CPUP Villa Florida 151.19 287 PKPbc **PKPbc 03 10 04.0 -1.5**
comp=Z,7.3nm,0.9s,baz=85,slow=2.9,SNR=8.8
LPAZ La Paz 151.26 317 PKPbc **PKPbc 03 10 05.2 -1.5**
LPAZ La Paz 151.26 317 PKPbc **PKPbc 03 10 05.2 -1.5**
comp=Z,1.9nm,0.8s,baz=21,slow=6.0,SNR=6.2

*IDC **07** 03:03:51.3±7.2, 32.99N×139.23E, h140km±80km, mb3.2/4, mb1 3.4/5, mb1mx3.1/26, mbtmp3.3/5, MS3.8/1, Ms1 3.8/1, ms1mx2.5/17, Error ellipse: s-maj=76.0km s-min=24.2km az=72.0*
*ISCJB **07** 03:03:54.0±0.8, 33°15N±0°08×139°48E±0°07, h189km, mb3.4/4, Error ellipse: s-maj=11.5km s-min=8.1km az=160.9*
*JMA **07** 03:03:54.5±0.3, 33°20N×139°48E, h189km±3km, M3.5*

ISC 07 03:03:55.3±1.1, 33°17N±0°09×139°47E±0°07, h189km, n23, σ0.6s74/26, mb3.4/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.30**	**100**	P		**Pn**		**03 04 20.2**	**-0.2**
JMY	**Miyakejima3**	**0.90**	**2**	P		**Pn**		**03 04 22.6**	**-0.7**
JKO	**Kozu shima**	**1.05**	**345**	P		**Pn**		**03 04 23.3**	**-0.9**
JIM2	**Oshima 3**	**1.55**	**359**	P		**Pn**		**03 04 27.9**	**-0.5**
JIZS	**Izushimoda**	**1.62**	**343**	P		**Pn**		**03 04 28.5**	**-0.6**
JIZS				*eS*		**Sn**		**03 04 54.1**	**-1.5**
TK02	**Tokai 2**	**1.63**	**299**	P		**Pn**		**03 04 28.4**	**-0.5**
TK02				*eS*		**Sn**		**03 04 54.5**	**-0.6**
TK04	**Tokai 4**	**1.80**	**313**	P		**Pn**		**03 04 30.4**	**-0.3**
TK04				*eS*		**Sn**		**03 04 58.0**	**-0.4**
BSO3	**Boso 3**	**1.85**	**28**	P		**Pn**		**03 04 30.4**	**-0.6**
BSO1	**Boso 1**	**1.94**	**40**	P		**Pn**		**03 04 31.3**	**-0.4**
BSO1				*eS*		**Sn**		**03 05 00.0**	**-0.3**
JOD2	**Odawara 2**	**2.12**	**352**	P		**Pn**		**03 04 34.0**	**-0.2**
TTO1	**TONANKAI O.B.S**	**2.29**	**282**	P		**Pn**		**03 04 35.2**	**-0.6**
JIE	**Ise**	**2.60**	**299**	P		**Pn**		**03 04 39.0**	**-0.6**
JRY	**Ryogami san**	**2.88**	**351**	P		**Pn**		**03 04 43.0**	**+0.1**
JWZ	**Kozaga**	**3.16**	**278**	P		**Pn**		**03 04 45.3**	**-1.0**
JAG	**Ashikaga**	**3.25**	**360**	P		**Pn**		**03 04 46.0**	**-1.3**
JWY	**Kouya**	**3.40**	**289**	P		**Pn**		**03 04 48.9**	**-0.3**
JGM	**Miyama**	**3.40**	**319**	P		**Pn**		**03 04 49.3**	**+0.1**
JNU	**Nakatsue**	**7.21**	**272**	LR		LR		03 07 31.4	
	comp=Z,847nm,22.0s,baz=279,slow=31								
ASAJ	**Asahikawa**	**11.20**	**12**	P		**Pn**		**03 06 30.0**	**-0.1**
	1.1nm,0.3s,baz=214,slow=9.2,SNR=12								
MKAR	**Makanchi Array**	**44.93**	**305**	P		**P**		**03 11 51.8**	**+0.6**
	0.2nm,0.4s,baz=83,slow=9.6,SNR=4.0								
KURBB	**Kurchatov Arra**	**47.21**	**311**	P		**P**		**03 12 09.7**	**+0.8**
	0.5nm,0.4s,baz=90,slow=7.9,SNR=7.4								
WRA	**Warramunga Arr**	**53.04**	**186**	P		**P**		**03 12 52.4**	**-0.5**
	0.4nm,0.3s,baz=0.4,slow=7.5,SNR=7.0								
FINES	**FINESS Array B**	**71.49**	**332**	P		**P**		**03 14 56.4**	**+1.4**
	0.4nm,0.4s,baz=74,slow=4.9,SNR=4.5								

IDC 07 03:07:21.4±1.6, 2.94S×129.97E, h0km, mb3.7/4, mb1 3.9/6, mb1mx3.7/22, mbtmp3.7/6, ML3.6/2, MS3.3/1, Ms1 3.2/1, ms1mx2.4/30, Error ellipse: s-maj=99.5km s-min=22.0km az=75.0, Seram

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.65**	**195**	Pn		Pn		03 11 03.4	-0.1
	0.2nm,0.3s,baz=33,slow=22,SNR=6.2								
WRA	**Warramunga Arr**	**17.43**	**166**	P		Pn		03 11 24.9	-1.3
	0.2nm,0.3s,baz=346,slow=11,SNR=15								
ASAR	**Alice Springs**	**20.95**	**170**	P		P		03 12 06.8	+0.7
	2.9nm,0.5s,baz=352,slow=12,SNR=44								
STKA	**Stephens Creek**	**30.79**	**160**	LR		LR		03 25 59.5	
	comp=Z,52nm,19.2s,baz=202,slow=36								
MKAR	**Makanchi Array**	**64.85**	**326**	P		P		03 18 02.3	-0.1
	0.3nm,0.6s,baz=125,slow=8.5,SNR=4.9								
ZALV	**Zalesovo Beam**	**67.96**	**333**	P		P		03 18 22.8	+0.6
	0.4nm,0.5s,baz=111,slow=6.8,SNR=3.2								
KURBB	**Kurchatov Arra**	**69.07**	**328**	P		P		03 18 28.6	-0.5
	0.6nm,0.6s,baz=128,slow=5.6,SNR=7.3								

IDC 07 03:11:38.6±3.9, 26.84N×139.65E, h581km±50km, mb2.8/10, mb1 2.9/11, mb1mx2.7/25, mbtmp2.7/11, Error ellipse: s-maj=29.8km s-min=16.4km az=76.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KSRS	**Korea Array**	**14.50**	**320**	P		P		03 14 42.9	+0.5
	0.3nm,0.3s,baz=148,slow=8.9,SNR=7.1								
SONM	**Songino Array**	**33.36**	**318**	P		P		03 17 29.2	-0.7
	0.6nm,0.6s,baz=129,slow=4.6,SNR=3.2								
WRA	**Warramunga Arr**	**46.79**	**187**	P		P		03 19 16.7	-0.2
	0.3nm,0.3s,baz=6.8,slow=7.7,SNR=17								
ZALV	**Zalesovo Beam**	**48.21**	**320**	P		P		03 19 25.7	-1.4
	0.3nm,0.3s,baz=99,slow=9.1,SNR=3.1								
MKAR	**Makanchi Array**	**48.90**	**310**	P		P		03 19 32.8	+0.4
	0.3nm,0.4s,baz=90,slow=9.7,SNR=7.8								
KURBB	**Kurchatov Arra**	**51.61**	**315**	P		P		03 19 52.1	+0.2
	0.9nm,0.4s,baz=92,slow=8.0,SNR=12								
ILAR	**Eielson Array**	**59.02**	**29**	P		P		03 20 43.2	+0.1
	0.1nm,0.5s,baz=275,slow=4.4,SNR=3.2								
ARCES	**ARCESS Array B**	**73.03**	**340**	P		P		03 22 10.0	+0.1
	1.1nm,0.8s,baz=45,slow=6.6,SNR=7.2								
JOF	**Joensuu**	**74.30**	**333**	*ep*		P		03 22 16.7	-0.4
	0.6nm,0.4s								
KAF	**Kangasniemi**	**76.71**	**334**	*ep*		P		03 22 30.5	0.0
	0.7nm,0.3s								
FINES	**FINESS Array B**	**77.17**	**333**	P		P		03 22 32.9	0.0
	1.3nm,0.3s,baz=72,slow=6.2,SNR=17								
NOA	**NORSAR Array B**	**83.00**	**337**	P		P		03 23 02.6	-0.8
	0.5nm,0.7s,baz=53,slow=6.7,SNR=4.5								
BRTR	**Keskin Array B**	**84.50**	**312**	P		P		03 23 12.1	+0.6
	0.2nm,0.5s,baz=120,slow=5.4,SNR=3.6								

IDC 07 03:27:49.2±40.0, 20.19S×176.78W, h550km±418km, mb3.0/4, mb1 3.2/4, mb1mx2.9/19, mbtmp3.0/4, Error ellipse: s-maj=334.3km s-min=85.6km az=128.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**34.66**	**264**	P		P		03 33 53.9	+0.5
	2.7nm,0.4s,baz=97,slow=11,SNR=5.9								
ASAR	**Alice Springs**	**45.70**	**256**	P		P		03 35 20.4	-1.2
	1.1nm,0.8s,baz=95,slow=7.3,SNR=13								
WRA	**Warramunga Arr**	**45.78**	**261**	P		P		03 35 22.6	+0.4
	0.8nm,0.3s,baz=93,slow=8.5,SNR=37								
ILAR	**Eielson Array**	**87.76**	**12**	P		P		03 39 39.3	-0.1
	0.3nm,0.6s,baz=203,slow=6.5,SNR=6.0								

IDC 07 03:30:29.9±1.1, 26.64N×44.43W, h0km, mb3.6/9, mb1 3.9/9, mb1mx3.6/28, mbtmp3.6/9, MS3.7/8, Ms1 3.7/8,

ms1mx3.2/27, Error ellipse: s-maj=31.1km s-min=25.4km az=176.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKL	Tuckaleechee C	34.66	295	LR	LR	03 48 32.8	
	comp=Z,96nm,21.5s,baz=289,slow=31						
DBIC	Dimbokro	42.55	111	LR	LR	03 53 10.0	
	comp=Z,87nm,18.8s,baz=342,slow=32						
TORD	Torodi Ar. Bea	45.17	98	P	P	03 38 48.6	-0.1
	0.8nm,1.1s,baz=305,slow=9.5,SNR=3.0						
TORD				LR	LR	03 56 29.0	
	comp=Z,86nm,19.0s,baz=255,slow=34						
LPAZ	La Paz	48.49	211	P	P	03 39 15.0	-0.4
	1.1nm,0.8s,baz=39,slow=6.7,SNR=3.7						
TXAR	Lajitas Array	51.89	288	P	P	03 39 40.9	+0.3
	0.2nm,0.8s,baz=89,slow=10.0,SNR=2.3						
TXAR				LR	LR	04 02 22.8	
	comp=Z,48nm,20.0s,baz=0.0,slow=37						
PDAR	Pinedale Array	54.62	305	P	P	03 40 00.3	-0.4
	1.9nm,0.9s,baz=92,slow=8.9,SNR=6.3						
PDAR				LR	LR	04 01 15.7	
	comp=Z,54nm,18.5s,baz=185,slow=34						
YKA	Yellowknife Ar	57.59	329	P	P	03 40 20.2	-1.1
	0.5nm,0.8s,baz=92,slow=7.6,SNR=6.8						
ARCES	ARCESS Array B	58.30	23	P	P	03 40 25.4	-0.8
	0.7nm,0.7s,baz=292,slow=6.4,SNR=5.7						
AKASG	Malin Array Be	59.71	45	P	P	03 40 36.7	+0.4
	0.3nm,0.4s,baz=283,slow=6.3,SNR=2.2						
ILAR	Eielson Array	71.32	334	P	P	03 41 52.3	+1.2
	1.3nm,1.0s,baz=68,slow=4.7,SNR=8.7						
ILAR				LR	LR	04 11 45.6	
	comp=Z,30nm,18.1s,baz=63,slow=35						
KMBO	Kilima Mbogo	83.07	95	LR	LR	04 17 04.0	
	comp=Z,61nm,18.0s,baz=266,slow=34						
BOSA	Boshof	86.52	124	LR	LR	04 16 30.5	
	comp=Z,58nm,19.4s,baz=347,slow=32						
ZALV	Zalesovo Beam	88.57	27	P	P	03 43 24.5	0.0
	1.0nm,0.4s,baz=302,slow=6.6,SNR=3.7						

MAN 07 03:36:22, 9°.21N×122°.13E, h23km, mb5.2, ML4.2, MS4.4, 1C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	Dipolog City	1.36	117⇑	eP	Pb	03 36 47.1	+0.3
GUIM	Jordan	1.48	18	eP	Pn	03 36 47.4	+0.1
IPIL	Ipil	1.48	163	eP	Pn	03 36 46.5	-0.8
IPIL				eS	Sb	03 37 06.8	-0.4
TBP	Tagbilaran	1.78	74	eP	Pb	03 36 53.6	-0.4
PAGZ	Pagadian	1.84	137	eP	Pb	03 36 53.6	-1.4
LLP	Lapu-Lapu	2.12	59	eP	Pb	03 37 02.3	+2.5
LLP				eS	Sb	03 37 24.1	-1.7
RCP	Roxas	2.41	15⇓	eP	Pb	03 37 05.5	+0.8

IDC 07 03:45:16.1±3.7, 6°.29S×154°.61E, h0km, mb3.1/2, mb1 3.4/2, mb1mx3.1/17, mbtmp3.1/2, Error ellipse: s-maj=183.3km s-min=52.4km az=128.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.92	234	P	P	03 50 32.6	+0.6
	0.4nm,0.7s,baz=58,slow=9.5,SNR=5.6						
ASAR	Alice Springs	26.37	227	P	P	03 50 53.6	-0.7
	0.2nm,0.6s,baz=58,slow=10,SNR=4.1						
TORD	Torodi Ar. Bea	152.47	286	PKPbc	PKPbc	04 05 15.5	0.0
	0.5nm,0.9s,baz=67,slow=4.3,SNR=3.5						

IDC 07 04:16:31.1±3.9, 21°.02S×66°.37W, h237km±22km, mb3.0/1, mb1 3.1/3, mb1mx2.9/18, mbtmp2.9/3, Error ellipse: s-maj=97.5km s-min=23.5km az=55.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	5.00	340	P	Pn	04 17 47.2	0.0
	1.9nm,0.3s,baz=152,slow=8.9,SNR=58						
LPAZ				S	S	04 18 47.8	+0.1
	baz=296,slow=18,SNR=1.9						
CPUP	Villa Florida	9.82	124	P	Pn	04 18 47.4	-0.1
	0.3nm,0.3s,baz=283,slow=17,SNR=4.3						
TORD	Torodi Ar. Bea	74.96	69	P	P	04 27 46.9	+0.1
	0.2nm,0.4s,baz=253,slow=5.2,SNR=11						
MKAR	Makanchi Array	143.84	37	PKP	PKPbc	04 35 37.2	+0.8
	0.3nm,0.5s,baz=321,slow=4.8,SNR=4.8						

ISCJB ***07*** *04:51:41.3±0.8, 41°.22N±0°.03×22°.73E±0°.05, h3km±7km, Error ellipse: s-maj=6.9km s-min=5.3km az=147.1*
SKO ***07*** *04:51:41.7, 41°.27N×22°.71E, h8km, M1.2, ML1.5*
CSEM ***07*** *04:51:41.8±0.2, 41°.23N×22°.75E, h4km±2km, ML1.6, Error ellipse: s-maj=4.6km s-min=3.3km az=52.0*
ATH ***07*** *04:51:42.5, 41°.23N×22°.74E, h5km, MD3.0/4*
BEO ***07*** *04:51:43.1±1.3, 41°.25N×22°.58E, h3km±2km, ML1.6/4*
ISC 07 04:51:41.5±0.9, 41°.27N±0°.03×22°.70E±0°.04, h10km±8km, n16, σ0s.55/28, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.11	298	ePg	Pg	04 51 44.4	+0.2
VAY				eSg	Sg	04 51 46.2	0.0
VAY	Valandovo	0.11	298	i Pg	Pg	04 51 44.0	-0.3
VAY				eLg	Lg	04 51 46.1	
	comp=E,170nm,0.2s						
VAY				i Sg	Sg	04 51 46.2	0.0
VAY				eLg	Lg	04 51 46.3	
	comp=N,272nm,0.3s						
VAY	Valandovo	0.11	298	ePg	Pg	04 51 44.4	+0.2
VAY				i Sg	Sg	04 51 46.6	+0.4
VAY				eLg	Lg	04 51 46.7	
	comp=N,272nm,0.3s						
GRG	Griva	0.39	216	ePG	Pg	04 51 49.4	+0.3
GRG				eSB	Sg	04 51 55.1	+0.9
GRG	Griva	0.39	216	ePg	Pg	04 51 49.4	+0.3
GRG				eSb	Sg	04 51 55.1	+0.9
SOH	Sokhos	0.67	132	ePB	Pb	04 51 54.5	-0.7
SOH				eSB	Sg	04 52 02.7	-0.4
SOH	Sokhos	0.67	132	ePb	Pb	04 51 54.5	-0.7
SOH				eSb	Sg	04 52 02.7	-0.4
NVR	Nevrokopi	0.88	84	ePB	Pb	04 51 59.0	+0.2
NVR				eSB	Sb	04 52 10.3	-0.4
NVR	Nevrokopi	0.88	84	ePb	Pb	04 51 59.0	+0.2
NVR				eSb	Sb	04 52 10.3	-0.4
PLG	Polygyros	1.06	147	ePN	Pb	04 52 01.8	-0.1
PLG	Polygyros	1.06	147	ePn	Pb	04 52 01.8	-0.1
VTS	Vitosha	1.37	16	ePg	Pg	04 52 09.0	+1.1
VTS	Vitosha	1.37	16	ePg	Pg	04 52 09.0	+1.1
BARS	Barje	1.68	337	ePn	Pg	04 52 13.3	-0.4
BARS				eSn	Sg	04 52 35.4	-0.1
BARS	Barje	1.68	337	ePn	Pg	04 52 13.3	-0.4
BARS				eSn	Sg	04 52 35.4	-0.1
ZAPS	Zavoj	2.00	359	ePn	Pb	04 52 17.5	-0.5
ZAPS				eSn	Sb	04 52 43.5	+0.5

ISCJB ***07*** *05:19:08.5±0.9, 8°.74S±0°.07×121°.89E±0°.05, h150km, mb3.6/2, Error ellipse: s-maj=10.0km s-min=7.3km az=15.4*
IDC ***07*** *05:19:11.4±2.2, 8°.34S×122°.05E, h189km±27km, mb3.3/2, mb1 3.4/5, mb1mx3.1/20, mbtmp3.2/5, Error ellipse: s-maj=189.8km s-min=16.0km az=56.0*
AUST ***07*** *05:19:15.4, 9°.50S×121°.99E, h100km*
ISC 07 05:19:09.3±1.1, 8°.78S±0°.08×121°.89E±0°.08, h150km, n13, σ2s.30/16, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	1.80	241	S	Sn	05 20 06.2	-1.2
	baz=1.7,SNR=4.8						
KAPI	Kappang	4.30	330	P	Pn	05 20 12.7	-0.9
	1.4nm,0.3s,baz=155,slow=12,SNR=12						
AAI	Ambon	8.06	51	P	Pn	05 21 12.6	+9.0
	baz=8.5,SNR=3.6						
KNRA	Kununurra	9.60	136	P	Pn	05 21 24.9	+0.9
	baz=9.0,SNR=10						
MTN	Manton Dam	9.94	115	P	Pn	05 21 30.3	+1.7
	baz=9.6,SNR=22						
MTN				S	Sn	05 23 16.9	-1.8
	baz=9.6,SNR=6.9						
FITZ	Fitzroy Crossi	9.96	159	S	Sn	05 23 18.6	-0.5
	0.7nm,0.3s,baz=146,slow=7.9,SNR=6.0						
FITZ	Fitzroy Crossi	9.96	159	P	Pn	05 21 30.2	+1.4
	baz=9.3,SNR=6.6						
FITZ				S	Sn	05 23 19.9	+0.8
	baz=9.3,SNR=3.5						
KDU	Kakadu	11.10	111	P	Pn	05 21 45.2	+1.3
	baz=11,SNR=5.0						
KDU				S	Sn	05 23 45.6	-1.2
	baz=11,SNR=4.1						
WRA	Warramunga Arr	16.38	134	P	P	05 22 52.3	+1.4
	0.6nm,0.3s,baz=310,slow=12,SNR=39						
WRA				S	S	05 25 46.5	-6.3
	0.4nm,0.3s,baz=315,slow=23,SNR=7.9						
MEEK	Meekatharra	18.03	190	S	S	05 26 26.0	-2.0
	baz=17,SNR=4.3						
ASAR	Alice Springs	18.75	144	P	Pn	05 23 19.5	+0.5
	0.4nm,0.3s,baz=326,slow=13,SNR=19						
ASAR				S	S	05 26 44.9	+2.5
	0.1nm,0.3s,baz=322,slow=25,SNR=4.1						
STKA	Stephens Creek	29.38	144	P	P	05 24 59.6	+1.1
	1.3nm,0.4s,baz=339,slow=6.6,SNR=4.8						
MKAR	Makanchi Array	65.60	331	P	P	05 29 33.0	-4.1
	0.2nm,0.5s,baz=145,slow=7.2,SNR=3.5						

MOS ***07*** *05:25:20.5±1.2, 8°.25S×118°.36E, h108km, mb5.3/42, Error ellipse: s-maj=9.5km s-min=5.7km az=113.4*
AUST ***07*** *05:25:24.1±0.2, 8°.58S×118°.42E, h123km, Error ellipse: s-maj=0.6km s-min=0.5km az=27.0*
BJI ***07*** *05:25:24.1, 8°.50S×118°.40E, h141km, mB5.2/31, mb5.4/61*
IDC ***07*** *05:25:25.3±1.0, 8°.37S×118°.35E, h142km±7km, mb4.8/33, mb1 4.8/35, mb1mx4.8/36, mbtmp4.8/35, Error ellipse: s-maj=11.0km s-min=7.0km az=74.0*
ISCJB ***07*** *05:25:25.2±0.3, 8°.50S±0°.02×118°.37E±0°.02, h162km±2km, mb5.1/120, Error ellipse: s-maj=4.0km s-min=3.2km az=35.2*
TEH ***07*** *05:25:25.0, 8°.52S×118°.42E, h142km, ML5.1*
NEIC ***07*** *05:25:25.7±0.5, 8°.44S×118°.39E, h146km±4km, mb5.0/47, Error ellipse: s-maj=5.2km s-min=3.3km az=56.0*
NEIC Felt [IV] at Bima. Felt [II] at Labuhanbajo and Ruteng, Flores. Also felt at Denpasar, Bali.
DJA ***07*** *05:25:26.5±0.7, 9°S±17°×11°8E±°, h105km±18km, M5.9/14, mb5.7/4, mB6.0/4, MLv6.2/14, Mw(mB)5.6/4*
GCMT ***07*** *05:25:27.2±0.2, 8°.60S×118°.47E, h146km±1km, MW5.2, Moment Tensor Solution. s80,c110; s99,c184; Moment tensor: Scale 10^{16}Nm; M_{rr}4.60±.15; $M_{\theta\theta}$-1.14±.20; $M_{\phi\phi}$-3.46±.20; $M_{r\theta}$6.72±.12; $M_{\theta\phi}$4.86±.17; $M_{\phi r}$0.77±.14; Best double couple: $M_0$9.20000×10^{16} NP1:ϕ_s352.00000°, δ39.00000°, λ150.00000°. NP2:ϕ_s106.00000°, δ72.00000°, λ55.00000°. Principal axes: T 9.9200, Plg51.0000°, Azm336.0000°; N -1.3800, Plg33.0000°, Azm119.0000°; P -8.5400, Plg19.0000°, Azm222.0000°; Data Used: II IU IC G CN. Surface waves from 101 sta.*
ISC 07 05:25:25.3±0.2, 8°.49S±0°.03×118°.39E±0°.03, h146km±1km, h146km:pP-P, n881, σ1s.40/1029, mb5.2/124, 40C-35D, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	2.22	122	P	Pn	05 26 01.0	-1.8
WSI	Waingapu	2.22	122	S	Sn	05 26 34.5	+2.8
	baz=2.1,SNR=8.1						
KHKI	Kahang-Kahang	2.75	272	P	Pn	05 26 09.4	0.0
BASI	Baing, Sumba	2.76	129	P	Pn	05 26 08.1	-1.4
DNP	Denpasar	3.15	266	P	Pn	05 26 15.0	+0.6
SRBI	Singaraja	3.17	277	P	Pn	05 26 15.1	+0.4
IGBI	Denpasar	3.22	264	P	Pn	05 26 15.3	-0.1
BKSI	Bulukumba	3.59	29	P	Pn	05 26 21.4	+1.3
KAPI	Kappang	3.71	22	P	Pn	05 26 21.5	-0.2
KAPI				eSn	Sn	05 27 07.7	+2.3
KAPI	Kappang	3.71	22	Pn	Pn	05 26 22.0	+0.3
	23µm,0.8s						
KAPI	Kappang	3.71	22	P	Pn	05 26 22.0	+0.3
KAPI	Kappang	3.71	22	P	Pn	05 26 21.5	-0.2
	157nm,0.3s,baz=204,slow=13,SNR=1099						
MMRI	Maumere	3.81	92	P	Pn	05 26 22.1	-0.9
BYJI	Banyuwangi	4.00	274	P	Pn	05 26 26.4	+1.0
JAGI	Jajag, Banyuwa	4.19	270	P	Pn	05 26 26.7	-1.3
JAGI	Jajag, Banyuwa	4.19	270	P	Pn	05 26 27.0	-1.0
	baz=4.2,SNR=789						
KMMI	Kalianget	4.61	288	P	Pn	05 26 37.1	+3.6
BLJI	Banyuglugur	4.80	278	P	Pn	05 26 37.3	+1.2
GMJI	Gumukmas	4.90	272	P	Pn	05 26 36.8	-0.5
BBSI	Bau Bau	5.11	55	P	Pn	05 26 42.6	+2.4
KRKI	Karangkates	5.88	273	P	Pn	05 26 53.6	+3.2
BBKI	Banjar Baru	6.11	325	P	Pn	05 26 57.3	+3.8
PWJI	Pagerwojo	6.53	274	P	Pn	05 26 59.9	+0.8
	718nm,0.7s,17µm8.4nm						
SJI	Sawahan	6.60	276	P	Pn	05 27 01.9	+1.8
	861nm,0.7s,26µm9.4nm						
PCJI	Pacitan	7.14	272	P	Pn	05 27 07.6	+0.3
	1µm,1.1s,14µm9.0nm						
UGM	Wanagama	7.81	274	ePn	Pn	05 27 16.4	+0.1
UGM	Wanagama	7.81	274	P	Pn	05 27 16.2	0.0
	baz=7.8,SNR=86						
SMRI	Semarang	8.00	280	P	Pn	05 27 20.8	+2.0
SMRI	Semarang	8.00	280	P	Pn	05 27 20.8	+2.0
	baz=8.1,SNR=7.0						
LUWI	Luwuk	8.59	31	P	Pn	05 27 29.4	+2.7
	baz=8.7,SNR=7.9						
CISI	Cisompet, Garu	10.51	274	P	Pn	05 27 50.1	-2.2
	baz=11,SNR=24						
LEM	Lembang	10.80	278	P	Pn	05 27 57.8	+1.6
	baz=11,SNR=5.3						
AAI	Ambon	10.85	65	P	Pn	05 28 00.6	+3.8
	baz=11,SNR=5.2						
FITZ	Fitzroy Crossi	11.88	144	P	Pn	05 28 08.4	-1.7
FITZ				eSn	Sn	05 30 09.8	-12
FITZ				S	Sn	05 30 12.6	-8.8
FITZ	Fitzroy Crossi	11.88	144	P	Pn	05 28 08.4	-1.7
	3.3nm,0.3s,baz=325,slow=11,SNR=69						
FITZ				S	Sn	05 30 12.6	-8.8
	27nm,0.3s,baz=163,slow=12,SNR=12						
FITZ	Fitzroy Crossi	11.88	144	P	Pn	05 28 07.6	-2.5
	baz=12,SNR=181						
FITZ				S	Sn	05 30 14.4	-7.0
	baz=12,SNR=4.6						
KNRA	Kununurra	12.40	126	P	Pn	05 28 14.4	-2.7
	baz=12,SNR=98						
KNRA				S	Sn	05 30 23.6	-11
	baz=12,SNR=7.0						
SBUM	Sibu	12.48	330	P	P	05 28 21.3	-2.7
MBWA	Marble Bar	12.66	174	ePn	Pn	05 28 17.8	-2.6
MBWA				eSn	Sn	05 30 27.1	-13
XMI	Christmas Isla	12.68	260	P	Pn	05 28 20.1	-0.5
	baz=13,SNR=5.2						
XMI				S	Sn	05 30 28.7	-12
	baz=13,SNR=5.5						
TSM	Tawau	12.71	358	P	P	05 28 25.3	-1.2
XMIS	Christmas Isla	12.72	260	ePn	Pn	05 28 16.8	-4.3
XMIS				eSn	Sn	05 30 26.6	-15
XMIS	Christmas Isla	12.72	260	P	Pn	05 28 18.7	-2.4
	baz=13,SNR=6.0						
XMIS				S	Sn	05 30 27.3	-15
	baz=13,SNR=8.9						
BTM	Bintulu	12.76	335	P	P	05 28 25.8	-1.2
KSM	Kuching	12.76	320	ePn	Pn	05 28 24.1	+2.5
KSM				eSn	S	05 30 50.9	-6.8
KSM	Kuching	12.76	320	P	P	05 28 24.8	-2.2
KSM	Kuching	12.76	320	P	P	05 28 24.5	-2.5
	baz=13,SNR=38						
KSM				S	S	05 31 04.9	+7.2
	baz=13,SNR=6.9						
MTN	Manton Dam	13.25	110	P	Pn	05 28 25.2	-2.8
	baz=13,SNR=306						
MTN				S	Sn	05 30 44.3	-10
	baz=13,SNR=7.8						
MYLDM	Lahad Datu	13.58	0	P	P	05 28 38.4	+2.3
SDKM	Sandakan	14.09	355	P	P	05 28 45.0	+3.2
KDU	Kakadu	14.46	108	P	Pn	05 28 41.3	-2.0
	baz=14,SNR=166						
KKM	Kota Kinabalu	14.60	351	ePn	P	05 28 47.6	0.0
KKM	Kota Kinabalu	14.60	351	P	P	05 28 48.2	+0.6
KKM	Kota Kinabalu	14.60	351	P	P	05 28 48.5	+0.9
	baz=15,SNR=39						
FAKI	Fak Fak	14.86	69	P	Pn	05 28 46.9	-1.4
	baz=15,SNR=60						
FAKI				S	Sn	05 31 30.3	-3.0
	baz=15,SNR=14						
KDM	Kudat	15.38	354	P	P	05 28 56.4	+0.3
MNAI	Manna	15.87	284	P	Pn	05 29 01.2	+0.3
	baz=16,SNR=48						
MNAI				S	Sn	05 31 53.2	-4.5
	baz=16,SNR=4.3						
CTBH	Cotabato--PC H	16.66	21⇓	eP	Pn	05 29 13.5	+3.0
PAGZ	Pagadian	16.97	17	eP	Pn	05 29 17.6	+3.4
BTDF	Bukit Timah Da	17.55	303	P	Pn	05 29 25.0	+3.8
	baz=18,SNR=3.7						
BTDF				P	Pn	05 29 25.0	+3.8
	baz=18,SNR=3.7						
BUKP	Musuan	17.57	22	eP	Pn	05 29 23.7	+2.3
MYKOM	Kota Tinggi	17.73	305	P	Pn	05 29 26.1	+2.8
MEEK	Meekatharra	18.05	179	P	Pn	05 29 26.3	-0.8
	baz=18,SNR=169						
MEEK				S	S	05 32 34.2	-11
	baz=18,SNR=22						
PPR	Puerto Princes	18.15	1⇓	eP	Pn	05 29 34.0	+5.8
KGM	Kluang	18.29	304	P	Pn	05 29 31.0	+1.0
WRA	Warramunga Arr	19.18	128	P	P	05 29 37.5	-0.4
WRA				S	S	05 33 03.7	-3.9
WRA				ScP	ScP	05 37 17.1	-0.9
WRA	Warramunga Arr	19.18	128	P	P	05 29 37.5	-0.4
	6.7nm,0.3s,baz=301,slow=13,SNR=143						
WRA				S	S	05 33 03.7	-3.9
	6.0nm,0.3s,baz=306,slow=23,SNR=16						
WRA				ScP	ScP	05 37 17.1	-0.9
	1.3nm,0.3s,baz=320,slow=2.2,SNR=6.6						
WRAB	Tennant Creek	19.18	128	eP	P	05 29 37.4	-0.5
WRAB				pmax	pmax		
	comp=Z,78nm,0.8s						
WRAB	Tennant Creek	19.18	128	eP	P	05 29 37.4	-0.5
	comp=Z,78nm,0.8s						
WRAB	Tennant Creek	19.18	128	P	P	05 29 37.0	-0.9
	comp=Z,608nm,1.1s,SNR=98						
CUYO	Cuyo Island	19.39	8	eP	Pn	05 29 43.3	+0.5
FRIM	Kepong	20.37	304	P	Pn	05 29 54.2	-0.2
RCP	Roxas	20.38	12⇑	eP	Pn	05 29 54.1	-0.3
KTGM	Kuala Trenggan	20.49	312	P	Pn	05 29 56.0	+0.2
MORW	Morawa	20.59	186	P	P	05 29 53.0	+0.1
	baz=21,SNR=41						
MORW				S	S	05 33 34.4	-0.8
	baz=21,SNR=8.4						
SJMP	San Jose	20.99	7	eP	Pn	05 29 60.0	-1.7
OTRP	Odiongan	21.03	10	eP	P	05 29 59.9	+2.2
AS31	Alice Springs	21.18	137	eP	P	05 29 59.0	-0.4
AS31				eS	S	05 33 44.5	-2.1
ASAR	Alice Springs	21.18	137	P	P	05 29 59.3	-0.1
ASAR				S	S	05 33 42.6	-4.1
ASAR				ScP	ScP	05 37 22.6	-0.1
ASAR	Alice Springs	21.18	137	P	P	05 29 59.3	-0.1
	comp=Z,47nm,0.6s,baz=311,slow=9.5,SNR=477						
ASAR				S	S	05 33 42.6	-4.1
	comp=Z,24nm,1.1s,baz=313,slow=16,SNR=4.0						
ASAR				ScP	ScP	05 37 22.6	-0.1
	comp=Z,13nm,0.7s,baz=344,slow=2.4,SNR=6.3						
IPM	Ipoh	21.58	306	eP	P	05 30 04.7	+1.0
	comp=Z,35nm,0.9s						
IPM	Ipoh	21.58	306	P	P	05 30 05.6	+1.9
KULM	Kulim	22.36	307	eP	P	05 30 12.8	+1.1
	comp=Z,61nm,1.2s						
KULM	Kulim	22.36	307	P	P	05 30 13.2	+1.6
TGY	Tagaytay City	22.59	6	P	P	05 30 14.3	+0.5
TGY	Tagaytay City	22.59	6	P	P	05 30 14.3	+0.5
	comp=Z,636nm,0.8s,baz=135,slow=10.0,SNR=35						
KLBR	Kellerberrin	23.00	181	P	P	05 30 17.4	0.0
	baz=23,SNR=39						
KLBR				S	S	05 34 27.3	+10
	baz=23,SNR=9.0						
KMBL	Kambalda	23.00	172	P	P	05 30 17.2	-0.2
	baz=23,SNR=24						
QIS	Mount Isa	23.75	123	P	P	05 30 24.5	0.0
	baz=24,SNR=91						
QIS				S	Sn	05 34 53.9	-12
	baz=24,SNR=4.2						
FORT	Forrest	23.95	159	eP	P	05 30 26.5	+0.4
	comp=Z,203nm,0.7s						
FORT	Forrest	23.95	159	P	P	05 30 26.2	+0.1
	baz=24,SNR=58						
NWAO	Narrogin (SRO)	24.34	182	P	P	05 30 30.1	+0.4
	comp=Z,4.9nm,0.8s						
NWAO	Narrogin (SRO)	24.34	182	P	P	05 30 30.1	+0.4
	comp=Z,72nm,0.7s,baz=2.4,slow=9.1,SNR=45						
COEN	Coen	24.90	105	eP	P	05 30 34.9	-0.1
	comp=Z,645nm,0.8s						
COEN	Coen	24.90	105	P	P	05 30 34.6	-0.3
	baz=25,SNR=136						
COEN				S	S	05 35 02.1	+14
	baz=25,SNR=3.9						
RKGY	Rocky Gully	26.03	183	P	P	05 30 46.5	+1.5
	baz=26,SNR=17						
MTSU	Mount Surprise	26.96	113	P	P	05 30 54.0	+0.4
	baz=27,SNR=33						
PMG	Port Moresby	28.43	94	P	P	05 31 06.6	0.0
PMG	Port Moresby	28.43	94	P	P	05 31 06.6	0.0
	comp=Z,14nm,0.7s,baz=243,slow=9.0,SNR=3.9						
QIZ	Qiongzhong	28.61	343	P	P	05 31 09.6	+1.5
QIZ				sP	sP	05 31 56.2	+0.4
QIZ				S	S	05 35 50.1	+4.1
QIZ				sS	sS	05 36 43.0	+2.6
QIZ				pmax	pmax		
	comp=Z,37nm,2.0s						
QIZ				LR	LR		
	comp=N,380nm,15.9s						
QIZ				LR	LR		
	comp=Z,440nm,22.5s						
BBOO	Buckleboo	29.22	148	eP	P	05 31 13.5	+0.2
	comp=Z,390nm,0.9s						
BBOO	Buckleboo	29.22	148	P	P	05 31 13.5	+0.2
	baz=29,SNR=32						
CTA	Charters Tower	29.31	116	P	P	05 31 15.1	+0.7
CTA				PcP	PcP	05 34 18.7	+1.2
CTA	Charters Tower	29.31	116	P	P	05 31 15.1	+0.7
	comp=Z,14nm,0.7s,baz=284,slow=12,SNR=27						
CTA				PcP	PcP	05 34 18.7	+1.2
	comp=Z,11nm,0.8s,baz=280,slow=6.1,SNR=3.1						
CTAO	Charters Tower	29.31	116	eP	P	05 31 14.8	+0.4
CTAO	Charters Tower	29.31	116	eP	P	05 31 14.8	+0.4
CTAO				epP	pP	05 31 46.2	+0.9
QLP	Quilpie	30.41	130	P	P	05 31 25.1	+1.2
	baz=30,SNR=14						
TPUB	Ta-pu	31.67	4	eP	P	05 31 35.9	+0.9
	comp=Z,22nm,0.9s						
STKA	Stephens Creek	31.73	140	eP	P	05 31 35.9	+0.3
	comp=Z,8.2nm,0.7s						
STKA				PcP	PcP	05 34 22.5	-1.2
STKA				ScP	ScP	05 37 53.8	+0.2
STKA	Stephens Creek	31.73	140	P	P	05 31 36.1	+0.6
	comp=Z,30nm,0.7s,baz=322,slow=9.5,SNR=54						
STKA				PcP	PcP	05 34 22.5	-1.2
	comp=Z,18nm,0.7s,baz=335,slow=6.9,SNR=3.1						
STKA				ScP	ScP	05 37 53.8	+0.2
	comp=Z,9.7nm,0.9s,baz=295,slow=11,SNR=3.7						
STKA	Stephens Creek	31.73	140	P	P	05 31 36.0	+0.5
	baz=32,SNR=40						
YULB	Yu-li	31.81	5	eP	P	05 31 35.5	-0.8
	comp=Z,15nm,1.0s						
SSLB	Suanglung	32.18	4	eP	P	05 31 39.5	0.0
	comp=Z,18nm,1.0s						
CM31	Chiang Mai Arr	32.94	324	eP	P	05 31 46.6	+0.4
	comp=Z,5.1nm,0.4s						
CM31				ePcP	PcP	05 34 28.6	+1.4
CMAR	Chiang Mai Arr	32.94	324	P	P	05 31 45.4	-0.9
CMAR				PcP	PcP	05 34 26.9	-0.4
CMAR				ScP	ScP	05 37 58.8	+0.8
CMAR	Chiang Mai Arr	32.94	324	P	P	05 31 45.4	-0.9
	comp=Z,8.0nm,0.6s,baz=153,slow=7.3,SNR=38						
CMAR				PcP	PcP	05 34 26.9	-0.4
	comp=Z,10nm,0.9s,baz=172,slow=3.3,SNR=6.0						
CMAR				ScP	ScP	05 37 58.8	+0.8
	comp=Z,15nm,0.9s,baz=174,slow=3.1,SNR=25						
YHNB	Yeheng	33.09	5	eP	P	05 31 47.2	-0.2
	comp=Z,69nm,1.5s						
CHTO	Chiang Mai	33.22	325	eP	P	05 31 49.3	+0.6
CHTO				pmax	pmax		
	comp=Z,18nm,1.0s						
CHTO	Chiang Mai	33.22	325	eP	P	05 31 49.3	+0.6
	comp=Z,18nm,1.0s						
TATO	Taipei	33.40	5	eP	P	05 31 49.8	-0.2
	comp=Z,74nm,1.1s						
RMQ	Roma	33.91	126	P	P	05 31 56.2	+1.7
	baz=34,SNR=18						
CMSA	Cobar Meteorol	34.22	136	P	P	05 31 58.4	+1.2
	baz=34,SNR=21						
EIDS	Eidsvold	35.35	122	eP	P	05 32 06.6	-0.4
	comp=Z,3.6nm,0.6s						
JOW	Kunigami	36.40	15	eP	P	05 32 16.6	+0.9
	comp=Z,225nm,1.4s						
GYA	Guiyang	36.56	342⇑	iP	P	05 32 18.4	+1.1
GYA				pP	pP	05 32 49.3	+0.4

GYA				sP	sP	05 33 05.6	0.0
GYA				PP	PnPn	05 33 46.9	+1.6
GYA				PcP	PcP	05 34 40.1	+2.4
GYA				S	S	05 37 49.2	0.0
GYA				ScP	ScP	05 38 11.3	+0.4
GYA				PcS	PcS	05 38 25.6	-0.4
GYA				sS	sS	05 38 42.6	-1.9
GYA				SS	SS	05 40 23.1	-12
GYA				ScS	ScS	05 42 19.6	+1.6
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,170nm,5.8s						
KMI	**Kunming**	**36.72**	**336**	⇑P	**P**	**05 32 21.4**	**+2.6**
KMI				pP	**pP**	**05 32 53.8**	**+3.3**
KMI				sP	**sP**	**05 33 10.1**	**+3.0**
KMI				PP	**PnPn**	**05 33 52.5**	**+5.0**
KMI				S	**S**	**05 37 54.9**	**+3.0**
KMI				ScP	**ScP**	**05 38 12.8**	**+1.1**
KMI				PcS	**PcS**	**05 38 27.8**	**+0.9**
KMI				sS	**sS**	**05 38 50.1**	**+2.8**
KMI				pmax	pmax		
	comp=Z,49nm,1.2s						
KMI				pmax	pmax		
	comp=Z,260nm,5.1s						
KMI				LR	LR		
	comp=N,200nm,20.4s						
KMI				LR	LR		
	comp=E,190nm,15.0s						
KMI				LR	LR		
	comp=Z,340nm,24.5s						
YNG	**Young**	**37.68**	**137**	P	**P**	**05 32 28.2**	**+1.5**
	baz=38,SNR=40						
TOO	**Toolangi**	**37.94**	**144**	P	**P**	**05 32 31.0**	**+2.3**
	baz=38,SNR=14						
ARMA	**Armidale**	**37.95**	**130**	eP	**P**	**05 32 31.5**	**+2.4**
	comp=Z,21nm,0.8s						
ARMA	**Armidale**	**37.95**	**130**	P	**P**	**05 32 31.6**	**+2.6**
	baz=38,SNR=13						
CAN	**Canberra**	**38.69**	**138**	eP	**P**	**05 32 36.6**	**+1.5**
CAN				pmax	pmax		
	comp=Z,19nm,0.8s						
CAN	**Canberra**	**38.69**	**138**	eP	**P**	**05 32 36.6**	**+1.5**
	comp=Z,19nm,0.8s						
CNB	**Canberra Magne**	**38.92**	**138**	P	**P**	**05 32 38.7**	**+1.6**
	baz=39,SNR=13						
MGCD	**Mangrove Creek**	**38.96**	**134**	P	**P**	**05 32 40.1**	**+2.8**
	baz=39,SNR=16						
WHN	**Wuhan**	**39.00**	**354**	⇑P	**P**	**05 32 39.2**	**+1.6**
WHN				sP	**sP**	**05 33 27.8**	**+1.7**
WHN				S	**S**	**05 38 28.7**	**+3.0**
WHN				pmax	pmax		
	comp=Z,300nm,1.4s						
WHN				pmax	pmax		
	comp=Z,380nm,9.2s						
WHN				LR	LR		
	comp=Z,500nm,16.1s						
SSE	**Sheshan**	**39.45**	**4**	P	**P**	**05 32 43.1**	**+1.8**
SSE				pmax	pmax		
	comp=Z,59nm,1.0s						
SSE				pmax	pmax		
	comp=Z,170nm,7.2s						
SSE				LR	LR		
	comp=N,230nm,24.6s						
SSE				LR	LR		
	comp=E,160nm,24.7s						
SSE				LR	LR		
	comp=Z,200nm,26.6s						
NJ2	**Nanjing**	**40.31**	**1**	eP	**P**	**05 32 50.0**	**+1.6**
NJ2				pP	**pP**	**05 33 21.2**	**+0.6**
NJ2				sP	**sP**	**05 33 37.8**	**+0.7**
NJ2				PP	**PP**	**05 34 26.7**	**+2.3**
NJ2				S	**S**	**05 38 49.0**	**+3.8**
NJ2				sS	**sS**	**05 39 45.0**	**+3.8**
NJ2				pmax	pmax		
	comp=Z,150nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,180nm,8.6s						
NJ2				LR	LR		
	comp=N,150nm,25.2s						
NJ2				LR	LR		
	comp=E,750nm,19.5s						
NJ2				LR	LR		
	comp=Z,140nm,14.6s						
HNR	**Honiara**	**41.05**	**95**	P	**P**	**05 32 54.8**	**0.0**
HNR	**Honiara**	**41.05**	**95**	P	**P**	**05 32 54.8**	**0.0**
	comp=Z,137nm,0.8s,baz=214,slow=11,SNR=15						
CD2	**Chengdu**	**41.61**	**341**	⇑iP	**P**	**05 32 59.8**	**+0.6**
CD2				pP	**pP**	**05 33 32.3**	**+0.8**
CD2				sP	**sP**	**05 33 48.7**	**+0.8**
CD2				PP	**PnPn**	**05 34 42.5**	**-2.3**
CD2				PcP	**PcP**	**05 34 54.0**	**+0.5**
CD2				S	**S**	**05 39 07.1**	**+2.5**
CD2				sS	**sS**	**05 40 02.9**	**+2.1**
CD2				SS	**SS**	**05 42 12.6**	**-3.3**
CD2				ScS	**ScS**	**05 42 45.6**	**-1.7**
CD2				pmax	pmax		
	comp=Z,160nm,1.0s						
CD2				pmax	pmax		
	comp=Z,270nm,7.2s						
CD2				LR	LR		
	comp=N,390nm,16.6s						
CD2				LR	LR		
	comp=Z,260nm,13.2s						
SHL	**Shillong**	**42.56**	**323**	iP	**P**	**05 33 06.5**	**-0.6**
SHL				eS	S	05 39 12.0	-7.0
JNU	**Nakatsue**	**43.05**	**15**	eP	**P**	**05 33 10.6**	**-0.2**
JNU	**Nakatsue**	**43.05**	**15**	P	**P**	**05 33 09.8**	**-1.0**
	comp=Z,15nm,0.4s,baz=201,slow=10,SNR=35						
XAN	**Xi'an**	**43.24**	**348**	P	**P**	**05 33 12.3**	**0.0**
XAN				pP	**pP**	**05 33 44.8**	**0.0**
XAN				sP	**sP**	**05 34 00.6**	**-0.6**
XAN				pmax	pmax		
	comp=Z,19nm,1.5s						
XAN				pmax	pmax		
	comp=Z,52nm,6.3s						
ODAN	**Odare**	**46.24**	**320**	eP	**P**	**05 33 36.2**	**-0.2**
TAPN	**Taplejung**	**46.39**	**321**	eP	**P**	**05 33 37.4**	**-0.3**
	comp=Z,80nm,0.6s						
LZH	**Lanzhou**	**46.40**	**344**	eP	**P**	**05 33 38.8**	**+1.4**
LZH				pP	**pP**	**05 34 11.8**	**+1.5**
LZH				sP	**sP**	**05 34 27.7**	**+1.1**
LZH				PcP	**PcP**	**05 35 11.4**	**+1.5**
LZH				PP	**PP**	**05 35 31.0**	**+2.2**
LZH				ScP	**ScP**	**05 38 50.7**	**+0.8**
LZH				eS	**S**	**05 40 18.0**	**+3.8**
LZH				sS	**sS**	**05 41 12.3**	**+1.0**
LZH				ScS	**ScS**	**05 43 16.7**	**-1.0**
LZH				SS	**SS**	**05 43 38.0**	**-4.1**
LZH				pmax	pmax		
	comp=Z,49nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,4.3s						
LZH				LR	LR		
	comp=N,1µm,15.2s						
LZH				LR	LR		
	comp=E,1µm,10.3s						
LZH				LR	LR		
	comp=Z,1µm,16.4s						
KSAR	**Wonju Array Be**	**46.55**	**10**	P	**P**	**05 33 37.8**	**-0.5**
KSAR				PcP	**PcP**	**05 35 11.3**	**+1.1**
KSAR				ScP	**ScP**	**05 38 51.0**	**+0.8**
KSRS	**Korea Array**	**46.56**	**10**	P	**P**	**05 33 37.8**	**-0.6**
	comp=Z,114nm,1.1s,baz=191,slow=8.0,SNR=169						
KSRS				PcP	**PcP**	**05 35 11.3**	**+1.1**
	comp=Z,12nm,0.8s,baz=181,slow=2.9,SNR=7.2						
KSRS				ScP	**ScP**	**05 38 51.0**	**+0.7**
	comp=Z,6.7nm,0.8s,baz=186,slow=3.5,SNR=15						
RAMN	**Ramite**	**46.81**	**320**	eP	**P**	**05 33 40.3**	**-0.6**
	comp=Z,101nm,0.9s						
HYB	**Hyderabad**	**47.03**	**303**	iP	**P**	**05 33 42.0**	**-0.5**
HYB				epP	**pP**	**05 34 15.0**	**-0.5**
DL2	**Dalian**	**47.25**	**3**	P	**P**	**05 33 43.5**	**-0.2**
DL2				S	**S**	**05 40 20.4**	**-5.3**
DL2				pmax	pmax		
	comp=Z,230nm,1.6s						
DL2				LR	LR		
	comp=E,120nm,20.4s						
DL2				LR	LR		
	comp=Z,59nm,17.2s						
GUN	**Gumba**	**47.94**	**320**	eP	**P**	**05 33 49.2**	**-0.5**
	comp=Z,117nm,0.7s						
PKI	**Pulchoki**	**48.00**	**319**	eP	**P**	**05 33 49.3**	**-0.9**
	comp=Z,40nm,0.7s						
PKIN	**Phulchoki**	**48.01**	**319**	eP	**P**	**05 33 48.8**	**-1.4**
DZM	**Mont Dzumac**	**48.08**	**112**	P	**P**	**05 33 52.0**	**+1.4**
DZM	**Mont Dzumac**	**48.08**	**112**	P	**P**	**05 33 52.0**	**+1.4**
	comp=Z,11nm,0.8s,baz=283,slow=6.4,SNR=8.0						
DMN	**Daman**	**48.22**	**319**	eP	**P**	**05 33 51.0**	**-0.8**
KKN	**Kakani**	**48.23**	**320**	eP	**P**	**05 33 50.9**	**-0.9**
BJI	**Beijing**	**48.33**	**358**	P	**P**	**05 33 52.1**	**+0.1**
BJI				pP	**pP**	**05 34 26.0**	**+0.9**
BJI				sP	**sP**	**05 34 42.1**	**+0.7**
BJI				PP	**PP**	**05 35 48.4**	**+2.4**
BJI				S	**S**	**05 40 35.2**	**-5.7**
BJI				sS	**sS**	**05 41 41.6**	**+3.2**
BJI				pmax	pmax		
	comp=Z,83nm,1.1s						
BJI				pmax	pmax		
	comp=Z,330nm,3.9s						
BJI				LR	LR		
	comp=N,100nm,24.1s						
BJI				LR	LR		
	comp=E,280nm,23.7s						
BJI				LR	LR		
	comp=Z,75nm,20.7s						
MAJO	**Matsushiro**	**48.51**	**21**	eP	**P**	**05 33 52.5**	**-1.0**
MAJO				e		05 35 17.8	
MAJO				pmax	pmax		
	comp=Z,163nm,1.7s						
MAJO	**Matsushiro**	**48.51**	**21**	eP	**P**	**05 33 52.5**	**-1.0**
	comp=Z,163nm,1.7s						
MAJO				ePcP	**PcP**	**05 35 17.8**	**+0.5**
MAT	**Matsushiro**	**48.51**	**21**	P	**P**	**05 33 52.0**	**-1.5**
MAT				eS	S	05 40 53.6	+10
KOLN	**Koldanda**	**49.31**	**318**	eP	**P**	**05 33 59.3**	**-0.8**
	comp=Z,54nm,0.5s						
BTO	**Baotou**	**49.45**	**352**	eP	**P**	**05 34 00.3**	**-0.4**
HHC	**Hu-ho-hao-te**	**49.49**	**353**	eP	**P**	**05 34 01.0**	**0.0**
HHC				pP	**pP**	**05 34 36.3**	**+2.0**
HHC				sP	**sP**	**05 34 55.1**	**+4.6**
HHC				PP	**PP**	**05 35 56.8**	**0.0**
HHC				S	**S**	**05 40 56.2**	**-1.3**
HHC				sS	**sS**	**05 41 57.2**	**+2.0**
HHC				SS	**SS**	**05 44 28.6**	**-3.1**
HHC				pmax	pmax		
	comp=Z,73nm,1.1s						
HHC				pmax	pmax		
	comp=Z,240nm,5.1s						
DANN	**Dangsing**	**49.60**	**319**	eP	**P**	**05 34 01.3**	**-1.0**
PYUN	**Piuthan**	**49.94**	**318**	eP	**P**	**05 34 03.2**	**-1.6**
	comp=Z,73nm,0.5s						
SNY	**Shenyang**	**50.30**	**5**	⇑P	**P**	**05 34 06.6**	**-0.3**
SNY				sP	**sP**	**05 34 52.4**	**-4.1**
SNY				S	**S**	**05 41 07.7**	**-0.6**
SNY				pmax	pmax		
	comp=Z,62nm,1.2s						
SNY				LR	LR		
	comp=N,180nm,17.4s						
SNY				LR	LR		
	comp=E,140nm,14.7s						
SNY				LR	LR		
	comp=Z,130nm,18.0s						
GTA	**Gaotai**	**50.68**	**341**	⇑P	**P**	**05 34 11.1**	**+1.1**
GTA				pP	**pP**	**05 34 43.2**	**-0.3**
GTA				sP	**sP**	**05 34 59.4**	**-0.2**
GTA				ScP	**ScP**	**05 39 07.7**	**-0.2**
GTA				S	**S**	**05 41 15.0**	**+1.0**
GTA				sS	**sS**	**05 42 11.1**	**-0.8**
GTA				ScS	**ScS**	**05 43 44.6**	**-1.6**
GTA				SS	**SS**	**05 44 49.1**	**-1.4**
GTA				pmax	pmax		
	comp=Z,98nm,1.1s						
GTA				pmax	pmax		
	comp=Z,340nm,5.7s						
GTA				LR	LR		
	comp=N,140nm,16.6s						
GTA				LR	LR		
	comp=E,140nm,15.4s						
GTA				LR	LR		
	comp=Z,120nm,13.8s						
CN2	**Changchun**	**52.44**	**6**	eP	**P**	**05 34 22.5**	**-0.3**
CN2				epP	**pP**	**05 34 55.0**	**-1.5**
CN2				esP	**sP**	**05 35 11.0**	**-1.6**
CN2				eS	S	05 41 46.7	+9.0
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,22.0s						
CN2				LR	LR		
	comp=E,300nm,22.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
MDJ	**Mudanjiang**	**53.82**	**10**	P	**P**	**05 34 33.1**	**+0.2**
MDJ				pP	**pP**	**05 35 05.6**	**-1.1**
MDJ				sP	**sP**	**05 35 20.9**	**-1.9**
MDJ				PP	**PP**	**05 36 34.2**	**-1.5**
MDJ				S	**S**	**05 41 52.4**	**-4.0**
MDJ				sS	**sS**	**05 42 50.1**	**-4.8**
MDJ				ScS	**ScS**	**05 44 08.0**	**+0.4**
MDJ				SS	**SKiKP**	**05 45 35.4**	**+4.1**
MDJ				pmax	pmax		
	comp=Z,120nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,150nm,4.0s						
MDJ				LR	LR		
	comp=N,69nm,22.1s						
MDJ				LR	LR		
	comp=E,260nm,16.0s						
MDJ				LR	LR		
	comp=Z,180nm,23.5s						
USRK	**Ussuriysk Arra**	**53.87**	**12**	P	**P**	**05 34 33.2**	**-0.1**
	comp=Z,60nm,0.6s,baz=189,slow=6.8,SNR=116						
USRK				ScP	**ScP**	**05 39 21.3**	**-0.2**
	comp=Z,3.7nm,0.9s,baz=219,slow=4.9,SNR=4.7						
ERM	**Erimo**	**55.14**	**22**	iP	**P**	**05 34 42.1**	**-0.4**
ASAJ	**Asahikawa**	**56.76**	**21**	eP	**P**	**05 34 53.7**	**-0.3**
	comp=Z,20nm,1.0s						
ASAJ	**Asahikawa**	**56.76**	**21**	P	**P**	**05 34 53.8**	**-0.3**
	comp=Z,22nm,0.8s,baz=222,slow=7.1,SNR=10						
ULN	**Ulaanbaatar**	**57.00**	**351**	eP	**P**	**05 34 56.0**	**+0.1**
	comp=Z,118nm,1.4s						
ULN				eScP	**ScP**	**05 39 36.0**	**+0.6**
ULN				eS	**S**	**05 42 39.3**	**+0.5**
SONM	**Songino Array**	**57.07**	**350**	P	**P**	**05 34 56.0**	**-0.4**
SONM				ScP	**ScP**	**05 39 36.9**	**+1.3**
SONM	**Songino Array**	**57.07**	**350**	P	**P**	**05 34 56.0**	**-0.4**
	comp=Z,34nm,0.7s,baz=168,slow=8.2,SNR=208						
SONM				ScP	**ScP**	**05 39 36.9**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=182,slow=4.1,SNR=3.8						
RPZ	**Rata Peaks**	**57.59**	**137**	P	**P**	**05 35 01.2**	**+1.2**
	comp=Z,31nm,0.8s						
RPZ	**Rata Peaks**	**57.59**	**137**	P	**P**	**05 35 01.2**	**+1.2**
	comp=Z,99nm,0.8s,baz=270,slow=2.0,SNR=33						
HABR	**Khabarovsk**	**58.59**	**13**	iP	**P**	**05 35 06.7**	**0.0**
HABR				e*PP	**pP**	**05 35 36.7**	**-4.3**
HABR				e		05 35 52.9	
HABR				eS	**S**	**05 42 59.3**	**+0.1**
HABR				e		05 44 39.3	
HABR				eSS	**SS**	**05 46 52.3**	**-2.3**
HABR				pmax	pmax		
	comp=N,133nm,2.1s						
HABR				pmax	pmax		
	comp=Z,457nm,2.1s						
HABR				pmax	pmax		
	comp=E,194nm,2.1s						
HABR				MLR	MLR		
	comp=Z,55nm,16.0s						
MSVF	**Nonsavu**	**58.63**	**106**	P	**P**	**05 35 09.3**	**+1.6**
	comp=Z,238nm,0.8s,SNR=5.4						
MSVF	**Nonsavu**	**58.63**	**106**	eP	**P**	**05 35 09.1**	**+1.4**
MSVF				pmax	pmax		
	comp=Z,29nm,0.8s						
MSVF	**Nonsavu**	**58.63**	**106**	eP	**P**	**05 35 09.1**	**+1.4**
	comp=Z,29nm,0.8s						
KLR	**Kul'dur**	**58.66**	**10**	⇓iP	P	05 35 02.8	-4.4
KLR				pmax	pmax		
	comp=N,50nm,1.8s						
KLR				pmax	pmax		
	comp=Z,270nm,1.8s						
WMQ	**Urumqi**	**59.03**	**334**	P	**P**	**05 35 09.8**	**-0.2**
WMQ				pP	**pP**	**05 35 43.0**	**-1.4**
WMQ				sP	**sP**	**05 35 58.5**	**-1.8**
WMQ				PP	**PP**	**05 37 24.0**	**+1.7**
WMQ				S	**S**	**05 43 03.0**	**-2.3**
WMQ				sS	**sS**	**05 44 03.0**	**-1.8**
WMQ				pmax	pmax		
	comp=Z,56nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,260nm,4.6s						
WMQ				LR	LR		
	comp=N,440nm,28.8s						
WMQ				LR	LR		
	comp=E,270nm,29.4s						
WMQ				LR	LR		
	comp=Z,290nm,28.0s						
YSS	**Yuzh-Sakhalins**	**59.31**	**19**	iP	**P**	**05 35 11.5**	**-0.2**
YSS				pmax	pmax		
	comp=Z,78nm,1.5s						
KUR	**Kuril'sk**	**59.69**	**24**	iP	**P**	**05 35 16.4**	**+2.1**
KUR				iS	**S**	**05 43 18.6**	**+5.1**
ZAK	**Zakamensk**	**60.08**	**349**	⇓iP	**P**	**05 35 16.1**	**-1.0**
ZAK				pmax	pmax		
	comp=Z,22nm,1.4s						
URZ	**Urewera**	**60.35**	**129**	eP	**P**	**05 35 19.3**	**+0.2**
	comp=Z,28nm,0.8s						
CIT	**Chita**	**60.41**	**357**	eP	**P**	**05 35 20.0**	**+0.8**
MIR	**Mirnyy**	**60.52**	**191**	eP	**P**	**05 35 22.0**	**+2.3**
MIR				e		05 35 57.0	
MIR				pmax	pmax		
	comp=Z,42nm,1.0s						
TLY	**Talaya**	**61.26**	**350c**	iP	**P**	**05 35 25.2**	**+0.3**
TLY				e		05 36 05.4	
TLY				eS	**S**	**05 43 33.3**	**-0.1**
TLY				pmax	pmax		
	comp=Z,63nm,1.6s						
TLY	**Talaya**	**61.26**	**350**	P	**P**	**05 35 25.6**	**+0.7**
	comp=Z,145nm,1.0s,SNR=7.5						
IRK	**Irkutsk**	**61.69**	**350**	eP	**P**	**05 35 27.9**	**+0.1**
IRK				pmax	pmax		
	comp=Z,76nm,1.9s						
MOY	**Mondy**	**61.76**	**348**	eP	**P**	**05 35 28.9**	**+0.5**
MOY				pmax	pmax		
	comp=Z,78nm,1.9s						
KSH	**Kashi**	**61.84**	**324**	P	**P**	**05 35 28.0**	**-1.2**
KSH				epP	**pP**	**05 36 01.6**	**-2.2**
KSH				ePcP	**PcP**	**05 36 08.5**	**-0.3**
KSH				esP	**sP**	**05 36 17.1**	**-2.6**
KSH				ePP	**PP**	**05 37 47.2**	**0.0**
KSH				eS	S	05 43 33.4	-7.9
KSH				pmax	pmax		
	comp=Z,66nm,0.9s						
KSH				LR	LR		
	comp=N,790nm,9.0s						
KSH				LR	LR		
	comp=E,450nm,6.6s						
KSH				LR	LR		
	comp=Z,140nm,5.1s						
KBL	**Kabul**	**63.30**	**315**	eP	**P**	**05 35 37.6**	**-1.5**
KBL				pmax	pmax		
	comp=Z,35nm,0.6s						
KBL	**Kabul**	**63.30**	**315**	eP	**P**	**05 35 37.6**	**-1.5**
	comp=Z,35nm,0.6s						
KBL	**Kabul**	**63.30**	**315**	P	**P**	**05 35 37.7**	**-1.5**
	baz=64,SNR=11						
MK31	**Makanchi Array**	**63.73**	**333**	iP	**P**	**05 35 40.5**	**-0.9**
MK31				pmax	pmax		
	comp=Z,39nm,0.9s						
MK31	**Makanchi Array**	**63.73**	**333**	eP	**P**	**05 35 40.8**	**-0.6**
MKAR	**Makanchi Array**	**63.73**	**333**	P	**P**	**05 35 40.9**	**-0.5**
MKAR	**Makanchi Array**	**63.73**	**333**	P	**P**	**05 35 40.9**	**-0.5**
MKAR				⇑e		06 04 41.0	
MKAR	**Makanchi Array**	**63.73**	**333**	P	**P**	**05 35 40.9**	**-0.5**
	comp=Z,20nm,0.8s,baz=143,slow=7.6,SNR=180						
MKAR				PKP2bc		06 04 41.0	
	comp=Z,1.8nm,0.9s,baz=318,slow=3.4,SNR=9.3						
KZA	**Kyzart**	**63.93**	**325**	P	**P**	**05 35 43.0**	**-0.3**
	SNR=31						
TKM2	**Tokmak 2**	**64.30**	**326**	eP	**P**	**05 35 44.7**	**-0.7**
TKM2				pmax	pmax		
	comp=Z,38nm,1.4s						
TKM2	**Tokmak 2**	**64.30**	**326**	eP	**P**	**05 35 44.7**	**-0.7**
	comp=Z,38nm,1.4s						
TKM2	**Tokmak 2**	**64.30**	**326**	P	**P**	**05 35 45.1**	**-0.4**
	SNR=10.0						
KBK	**Karagaybulak**	**64.48**	**326**	P	**P**	**05 35 46.8**	**+0.2**
	SNR=18						
AAK	**Ala-Archa**	**64.72**	**326**	eP	**P**	**05 35 47.9**	**-0.2**
AAK				pmax	pmax		
	comp=Z,46nm,1.4s						
AAK	**Ala-Archa**	**64.72**	**326**	eP	**P**	**05 35 47.9**	**-0.2**
	comp=Z,46nm,1.4s						
AAK	**Ala-Archa**	**64.72**	**326**	P	**P**	**05 35 48.0**	**-0.2**
	SNR=14						
AAK	**Ala-Archa**	**64.72**	**326**	P	**P**	**05 35 47.8**	**-0.3**
	comp=Z,129nm,1.0s,SNR=7.4						
FRU	**Bishkek**	**64.78**	**326**	eP	**P**	**05 35 48.0**	**-0.4**
FRU				pmax	pmax		
	comp=Z,70nm,1.6s						
AML	**Almayashu**	**64.84**	**325**	P	**P**	**05 35 48.7**	**-0.6**
	SNR=33						
USP	**Ospenovka**	**65.13**	**326**	P	**P**	**05 35 50.2**	**-0.5**
	SNR=13						
EKS2	**Erkin-Say**	**65.14**	**325**	eP	**P**	**05 35 50.7**	**-0.1**
EKS2				pmax	pmax		
	comp=Z,57nm,1.3s						
EKS2	**Erkin-Say**	**65.14**	**325**	eP	**P**	**05 35 50.7**	**-0.1**
	comp=Z,57nm,1.3s						
EKS2	**Erkin-Say**	**65.14**	**325**	P	**P**	**05 35 50.9**	**+0.1**
	SNR=16						
CLNS	**Chul'man**	**65.31**	**4**	eP	**P**	**05 35 51.7**	**+0.2**
CLNS				e		05 36 24.0	
CLNS				e		05 38 12.7	
CLNS				ePPP	PPP	05 39 47.9	
CLNS				eS	**S**	**05 44 26.7**	**+3.2**
CLNS				e*SS	**pS**	**05 45 00.5**	**-3.2**
CLNS				e		05 45 30.1	
CLNS				pmax	pmax		
	comp=Z,51nm,1.1s						
CLNS				pmax	pmax		
	comp=E,12nm,0.9s						
CLNS				pmax	pmax		
	comp=N,32nm,1.0s						
CLNS				pmax	pmax		
	comp=N,2.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,3.0nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KK31	**Karatay Array**	**67.29**	**324**	iP	**P**	**05 36 02.5**	**-1.9**
KK31				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KKAR	**Karatay Array**	**67.29**	**324**	eP	**P**	**05 36 02.5**	**-1.9**
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KKAR	**Karatay Array**	**67.29**	**324**	eP	**P**	**05 36 02.5**	**-1.9**
	comp=Z,2.6nm,0.4s						
KURBB	**Kurchatov Arra**	**68.25**	**334**	P	**P**	**05 36 09.3**	**-0.8**
	comp=Z,13nm,0.7s,baz=146,slow=5.5,SNR=99						
KURK	**Kurchatov**	**68.27**	**334c**	iP	**P**	**05 36 09.5**	**-0.9**
KURK				pmax	pmax		
	comp=Z,87nm,1.9s						
KURK	**Kurchatov**	**68.27**	**334**	eP	**P**	**05 36 09.4**	**-0.9**
	comp=Z,50nm,1.1s						
KURK	**Kurchatov**	**68.27**	**334**	P	**P**	**05 36 09.1**	**-1.2**
	comp=Z,222nm,1.0s,SNR=15						
ZAA0	**Zalesovo Array**	**68.35**	**339**	eP	**P**	**05 36 09.4**	**-1.3**
ZALV	**Zalesovo Beam**	**68.35**	**339**	P	**P**	**05 36 09.6**	**-1.1**
ZALV				S	**S**	**05 44 56.6**	**-3.4**
ZALV	**Zalesovo Beam**	**68.35**	**339**	P	**P**	**05 36 09.6**	**-1.1**
ZALV				S	**S**	**05 44 56.6**	**-3.4**
ZALV	**Zalesovo Beam**	**68.35**	**339**	P	**P**	**05 36 09.6**	**-1.1**
	comp=Z,23nm,0.5s,baz=139,slow=4.2,SNR=136						
ZALV				S	**S**	**05 44 56.6**	**-3.4**
	comp=Z,0.5nm,0.3s,baz=130,slow=16,SNR=3.6						
IDAH	**Dahanechah**	**69.12**	**310**	eP	**P**	**05 36 15.3**	**-1.0**
MAW	**Mawson**	**69.51**	**200**	P	**P**	**05 36 18.9**	**+1.2**
MAW				⇑e		06 04 23.1	
MAW	**Mawson**	**69.51**	**200**	P	**P**	**05 36 18.9**	**+1.2**
	comp=Z,16nm,0.7s,baz=70,slow=7.6,SNR=47						
MAW				PKP2bc		06 04 23.1	
	comp=Z,10nm,1.1s,baz=240,slow=5.6,SNR=7.9						
MAW	**Mawson**	**69.51**	**200**	P	**P**	**05 36 19.8**	**+2.1**
	baz=69,SNR=33						
ABPO	**Ambohimpanom**	**69.53**	**253**	eP	**P**	**05 36 20.5**	**+1.5**
ABPO				pmax	pmax		
	comp=Z,23nm,1.4s						
ABPO	**Ambohimpanom**	**69.53**	**253**	eP	**P**	**05 36 20.5**	**+1.5**
	comp=Z,22nm,1.4s						
OPO	**Ambohidratompo**	**69.58**	**253**	P	**P**	**05 36 19.6**	**+0.3**
OPO	**Ambohidratompo**	**69.58**	**253**	P	**P**	**05 36 19.6**	**+0.3**
	comp=Z,12nm,1.0s,baz=86,slow=5.5,SNR=9.2						
NVS	**Novosibirsk**	**69.62**	**339**	⇑iP	P	05 36 15.3	-3.3
NVS				i		05 36 55.1	

NVS pmax pmax
comp=N,38nm,1.6s
NVS pmax pmax
comp=Z,78nm,1.6s
NVS pmax pmax
comp=E,34nm,1.5s
PEA0B Petropavlovsk- 69.85 24 *e*P **P 05 36 20.4 +0.4**
PETK Petropavlovsk- 69.85 24 P **P 05 36 20.4 +0.4**
PETK Petropavlovsk- 69.85 24 P **P 05 36 20.4 +0.4**
PETK Petropavlovsk- 69.85 24 P **P 05 36 20.4 +0.4**
comp=E,50nm,0.9s,baz=218,slow=6.2,SNR=55
ITEG Tejag 70.04 309 *e*P **P 05 36 20.0 -1.9**
PET Petropavlovsk 70.18 25 *e*P **P 05 36 22.5 +0.5**
PET *e*S **S 05 45 19.6 -1.9**
PET pmax pmax
comp=Z,100nm,12.8s
PET MLR MLR
comp=Z,100nm,20.0s
IMYA Miami 70.53 313 *e*P **P 05 36 23.9 -0.9**
YAK Yakutsk 70.85 6*c i*P **P 05 36 25.4 -0.5**
YAK *e* 05 36 46.2
YAK *e**PP **pP 05 36 59.7 -1.7**
YAK *e* 05 39 02.2
YAK *e*S **S 05 45 24.9 -4.1**
YAK *e*SS **SS 05 49 59.6 -5.2**
YAK *e*SSS SSS 05 53 16.8
YAK pmax pmax
comp=Z,88nm,0.9s
YAK pmax pmax
comp=E,13nm,1.3s
YAK pmax pmax
comp=N,66nm,1.3s
YAK pmax pmax
comp=Z,5.0nm,0.6s
YAK smax smax
comp=E,112nm,1.5s
ISRO Mashad 70.97 313 *e*P **P 05 36 26.1 -1.3**
IMOG Moghan 70.98 313 *e*P **P 05 36 27.0 -0.6**
IPAY Payeh 71.38 313 *e*P **P 05 36 28.3 -1.6**
IBAF Bafgh 71.99 307 *e*P **P 05 36 31.6 -2.0**
VNDA Vanda 72.58 171 *e*P **P 05 36 36.8 +0.6**
comp=E,5.8nm,0.4s
VNDA Vanda 72.58 171 P **P 05 36 37.8 +1.6**
comp=E,10nm,0.6s,baz=317,slow=6.0,SNR=130
IMEH Mehriz 72.67 307 *e*P **P 05 36 35.8 -2.0**
ICHK Chekchek 73.15 307 *e*P **P 05 36 38.0 -2.6**
BVA0 Borovoye Array 73.56 332 *i* P **P 05 36 40.8 -1.4**
BVA0 pmax pmax
comp=Z,33nm,1.2s
SBA Scott Base 73.59 170 *e*P **P 05 36 41.9 -0.1**
SBA pmax pmax
comp=Z,11nm,0.7s
SBA Scott Base 73.59 170 *e*P **P 05 36 41.9 -0.1**
comp=Z,11nm,0.7s
ISAD Sadrabad 73.60 307 *e*P **P 05 36 40.8 -2.5**
BRVK Borovoye 73.63 332*ce*P **P 05 36 41.8 -0.8**
BRVK pmax pmax
comp=Z,48nm,1.2s
BRVK Borovoye 73.63 332 *e*P **P 05 36 41.5 -1.1**
comp=Z,67nm,1.4s
BRVK Borovoye 73.63 332 P **P 05 36 41.6 -1.1**
comp=Z,143nm,1.3s,SNR=10
IKLH Kolahrood 75.76 307 *e*P **P 05 36 55.7 0.0**
SEY Seymchan 75.83 15*ce*P **P 05 36 54.4 -0.7**
IPIR Pirpir 76.08 307 *e*P **P 05 36 56.5 -1.1**
FX1 Attu Island--F 76.75 31 *e*P **P 05 37 01.0 +0.6**
FX1 Attu Island--F 76.75 31 P **P 05 37 01.1 +0.6**
comp=Z,106nm,0.9s,baz=288,slow=3.2,SNR=17
AB31 Akbulak array 76.80 325 *i* P **P 05 36 59.1 -1.7**
AB31 pmax pmax
comp=Z,17nm,0.7s
ABKAR Akbulak array 76.80 325 *e*P **P 05 36 59.5 -1.3**
comp=Z,12nm,0.6s
RDF Al-Radifah 77.64 302 *e*P **P 05 37 05.0 -1.0**
RDF AMb AMB 05 37 08.1
comp=Z,109nm,2.0s
UMR Umm Al-Rimmam 77.68 303 *e*P **P 05 37 05.0 -1.2**
UMR AMb AMB 05 37 06.8
comp=Z,68nm,0.9s
NAY Al-Naaiem 77.99 302 *e*P **P 05 37 06.4 -1.6**
NAY AMb AMB 05 37 08.3
comp=Z,23nm,0.9s
SYO Syowa Base 78.11 201⇑*e*P **P 05 37 07.8 0.0**
IVIS Veis 79.87 307 *e*P **P 05 37 15.8 -2.4**
TIXI Tiksi 80.27 3*ce*P **P 05 37 18.1 -1.3**
TIXI pmax pmax
comp=Z,122nm,1.7s
SVE Sverdlovsk 80.35 332*de*P **P 05 37 18.7 -1.4**
SVE *e*S **S 05 47 15.3 +1.7**
SVE pmax pmax
comp=Z,35nm,1.6s
KMBO Kilima Mbogo 81.07 270 *e*P **P 05 37 25.9 +0.6**
comp=Z,34nm,1.0s
KMBO Kilima Mbogo 81.07 270 P **P 05 37 25.8 +0.6**
comp=Z,26nm,1.0s,baz=105,slow=5.8,SNR=40
KMBO Kilima Mbogo 81.07 270 P **P 05 37 26.5 +1.3**
baz=81,SNR=8.6
ARU Arti 81.12 331*c i*P **P 05 37 21.7 -2.5**
ARU *PP **pP 05 37 59.3 -1.3**
ARU 05 40 26.8
ARU S **S 05 47 19.6 -2.1**
ARU pmax pmax
comp=Z,30nm,1.7s
BHD Baghdad 81.47 305 *e*P **P 05 37 26.9 +0.3**
BHD *e*S **S 05 47 26.4 +0.1**
QSPA South Pole Qui 81.50 180 *e*P **P 05 37 27.1 +0.8**
comp=Z,32nm,1.1s
QSPA PKKPbc **PKKPbc 05 55 58.5 -3.8**
QSPA P'P' 06 04 03.2
QSPA South Pole Qui 81.50 180 P **P 05 37 27.6 +1.3**
comp=Z,10nm,1.0s,baz=328,slow=2.1,SNR=43
QSPA PKKPbc **PKKPbc 05 55 58.5 -3.8**
comp=Z,2.8nm,0.8s,baz=160,slow=2.1,SNR=10
QSPA PKPPKP **P'P'df 06 04 03.2 -0.2**
comp=Z,2.2nm,1.0s,baz=317,slow=1.6,SNR=4.5
DGRG David-gareji 83.08 314 P **P 05 37 35.5 +0.7**
BILL Bilibino 83.47 16⇓*i*P **P 05 37 36.0 -0.2**
BILL *e* 05 40 47.2
BILL *e*S **S 05 47 42.7 -2.5**
BILL pmax pmax
comp=Z,98nm,1.6s
BILL Bilibino 83.47 16 *e*P **P 05 37 36.2 0.0**
comp=Z,15nm,0.9s
SOKR Solikamsk 83.51 333 *e*P **P 05 37 33.9 -2.6**
SOKR pmax pmax
comp=Z,20nm,1.5s
TBLG Delisi 83.62 314 P **P 05 37 37.3 -0.3**
TBLG Delisi 83.62 314 *e*P **P 05 37 37.3 -0.3**
DUS Dusheti 83.75 314 P **P 05 37 39.9 +1.5**
GUDG Gudauri 84.02 314 P **P 05 37 40.4 +0.5**
AKH Akhalkalaki 84.42 313 P **P 05 37 40.7 -1.2**
ONI Oni 84.78 314 P **P 05 37 43.8 +0.3**
KBZ Khabaz 85.49 315 P **P 05 37 46.4 -0.4**
KBZ Khabaz 85.49 315 P **P 05 37 46.4 -0.4**
KBZ Khabaz 85.49 315 P **P 05 37 46.4 -0.4**
comp=Z,9.4nm,0.9s,baz=134,slow=4.9,SNR=19
SFNV Sufian 85.67 308 *e*P **P 05 37 48.3 +0.2**
SFNV Sufian 85.67 308 *e*P **P 05 37 48.3 +0.2**
SNR=46
KIV Kislovodsk 85.70 315 *e*P **P 05 37 47.3 -0.7**
KIV pmax pmax
comp=Z,8.0nm,1.1s
MNKR ALMNKUR 86.22 307 *e*P P 05 37 42.5 -8.2
MNKR ALMNKUR 86.22 307 *e*P P 05 37 42.5 -8.2
SNR=46
KSRV Kasrt alli 86.42 307 *e*P P 05 37 42.9 -8.7
KSRV Kasrt alli 86.42 307 *e*P P 05 37 42.9 -8.7
SNR=46
SLMH Al Salmeh 87.34 307 *e*P **P 05 37 55.2 -1.0**
SLMH Al Salmeh 87.34 307 *e*P **P 05 37 55.2 -1.0**
SNR=46
SALA Sala 87.58 303 *e*P P 05 37 53.4 -4.2
SALA Sala 87.58 303 *e*P P 05 37 53.4 -4.2
SNR=46
MBAR Mbarara 87.59 270 P **P 05 37 58.3 +0.3**
comp=Z,145nm,0.9s,SNR=15
TOTH TOTAH 87.96 304 *e*P P 05 37 48.2 -11
TOTH TOTAH 87.96 304 *e*P P 05 37 48.2 -11
SNR=46
LSZ Lusaka 87.99 255 *e*P **P 05 38 00.8 +1.0**
comp=Z,39nm,1.0s
UNV Unalaska Valle 88.14 35 *e*P **P 05 37 59.7 +0.2**
comp=Z,34nm,1.0s
HAWK Haweek 88.21 305 *e*P P 05 37 54.0 -6.4
HAWK Haweek 88.21 305 *e*P P 05 37 54.0 -6.4
SNR=46
VRHR Novokhopersk 88.34 322 *e*P **P 05 37 58.8 -1.6**
VRHR pmax pmax
comp=Z,20nm,0.9s
VRHR pmax pmax
comp=N,7.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,2.2s
DRWC Darouich 88.42 307 *e*P P 05 37 54.0 -7.3
DRWC Darouich 88.42 307 *e*P P 05 37 54.0 -7.3
SNR=46
BTCH Batrach 88.47 307 *e*P **P 05 38 00.9 -0.7**
BTCH Batrach 88.47 307 *e*P **P 05 38 00.9 -0.7**
SNR=46
BOSA Boshof 88.72 241 P **P 05 38 03.8 +0.8**
BOSA Boshof 88.72 241 P **P 05 38 03.8 +0.8**
comp=E,4.0nm,0.7s,baz=31,slow=2.8,SNR=9.3
LBTB Lobatse 88.97 245 *e*P **P 05 38 05.5 +1.3**
comp=E,43nm,1.5s
ANN Anapa 89.56 315 *e*P **P 05 38 04.4 -1.9**
ANN *e* 05 41 39.5
ANN *e*S **SKSac 05 48 20.9 -2.2**
ANN pmax pmax
comp=Z,13nm,0.8s
VSR Storozhevoye 89.86 322 *e*P **P 05 38 05.8 -1.8**
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR pmax pmax
comp=N,4.0nm,0.6s
VSR pmax pmax
comp=E,9.0nm,0.6s
SNAA Sanae 91.33 196 *e*P **P 05 38 16.0 +1.8**
comp=E,10nm,0.8s
SNAA Sanae 91.33 196 P **P 05 38 16.0 +1.8**
comp=E,3.3nm,0.7s,baz=132,slow=3.8,SNR=12
BR131 Keskin Array S 91.35 310 *e*P **P 05 38 13.2 -1.7**
comp=E,1.7nm,0.7s
BRTR Keskin Array B 91.35 310 P **P 05 38 13.9 -1.1**
BRTR Keskin Array B 91.35 310 P **P 05 38 13.9 -1.1**
comp=E,2.4nm,0.8s,baz=124,slow=5.3,SNR=16
KLMR Klimovskoe 91.97 331 *e*P **P 05 38 14.2 -2.9**
KLMR pmax pmax
comp=Z,23nm,1.5s
OBN Obninsk 92.24 325⇓*i*P **P 05 38 17.1 -1.4**
OBN *e* 05 41 57.1
OBN pmax pmax
comp=Z,23nm,1.7s
APA Apatity 95.87 337⇓*e*P **P 05 38 32.6 -2.3**
APA MLR MLR
comp=Z,200nm,23.0s
AKASG Malin Array Be 95.97 320 P **P 05 38 33.4 -2.3**
AKASG Malin Array Be 95.97 320 P **P 05 38 33.4 -2.3**
AKASG Malin Array Be 95.97 320 P **P 05 38 33.4 -2.3**
comp=Z,1.8nm,0.8s,baz=82,slow=4.5,SNR=8.3
KDAK Kodiak Island 96.59 33 P **P 05 38 38.4 0.0**
KDAK Kodiak Island 96.59 33 P **P 05 38 38.4 0.0**
comp=Z,7.9nm,0.8s,baz=47,slow=4.7,SNR=4.1
TRF Thorofare Moun 98.12 27 *e*P **P 05 38 43.2 -2.2**
comp=Z,25nm,1.5s
TRF *e*PP **PP 05 42 44.5 -2.0**
COLD Coldfoot 98.31 23 *e*P Pdif 05 38 46.5 +0.5
comp=Z,13nm,1.0s
BUR08 Bucovina Ar. S 98.35 317 *e*P **P 05 38 45.9 -0.8**
FIA1 FINESS Array S 98.50 331 *e*P **P 05 38 44.9 -2.0**
FINES FINESS Array B 98.50 331 P **P 05 38 45.5 -1.4**
FINES PKiKP **PKiKP 05 43 18.4 +0.4**
FINES FINESS Array B 98.50 331 P **P 05 38 45.5 -1.4**
comp=Z,4.8nm,0.8s,baz=78,slow=9.0,SNR=10
FINES PKiKP **PKiKP 05 43 18.4 +0.4**
comp=Z,1.6nm,0.7s,baz=209,slow=2.6,SNR=3.4
MCK McKinley 98.74 27 *e*P **P 05 38 46.9 -1.1**
MCK pmax pmax
comp=Z,35nm,1.5s
MCK McKinley 98.74 27 *e*P **P 05 38 46.9 -1.1**
comp=Z,35nm,1.5s
ARCES ARCESS Array B 98.90 339 P **P 05 38 47.2 -1.4**
ARCES PKiKP **PKiKP 05 43 19.1 +0.5**
ARCES ARCESS Array B 98.90 339 P **P 05 38 47.2 -1.4**
comp=Z,2.4nm,0.9s,baz=107,slow=4.5,SNR=9.6
ARCES PKiKP **PKiKP 05 43 19.1 +0.5**
comp=Z,1.9nm,0.9s,baz=66,slow=2.2,SNR=7.1
SML Sawmill 98.97 29 *e*P **P 05 38 48.7 -0.4**
SML pmax pmax
comp=Z,4.0nm,0.9s
SML Sawmill 98.97 29 *e*P **P 05 38 48.7 -0.4**
comp=Z,3.8nm,0.9s
ILAR Eielson Array 99.64 26 P **Pdif 05 38 50.5 -1.4**
ILAR PKKPbc **PKKPbc 05 55 13.7 -2.2**
ILAR Eielson Array 99.64 26 P **Pdif 05 38 50.5 -1.4**
comp=Z,1.3nm,1.0s,baz=274,slow=3.8,SNR=9.6
ILAR PKKPbc **PKKPbc 05 55 13.7 -2.2**
comp=Z,1.1nm,0.8s,baz=102,slow=1.9,SNR=9.3
EGAK Eagle 102.09 26 *e*Pdif **Pdif 05 39 02.8 0.0**
comp=Z,2.4nm,0.8s
INK Inuvik 104.50 21 Pdif **Pdif 05 39 12.9 -0.5**
INK PKiKP **PKiKP 05 43 29.8 +1.1**
INK Inuvik 104.50 21 Pdiff **Pdif 05 39 12.9 -0.5**
comp=Z,5.8nm,1.1s,baz=324,slow=3.7,SNR=4.8
INK PKiKP **PKiKP 05 43 29.8 +1.1**
comp=Z,1.7nm,0.7s,baz=296,slow=1.8,SNR=5.9
NOA NORSAR Array B 105.68 331 PKiKP **PKiKP 05 43 31.0 -0.2**
NOA NORSAR Array B 105.68 331 PKiKP **PKiKP 05 43 31.0 -0.2**
comp=Z,1.3nm,0.8s,baz=75,slow=1.8,SNR=3.7
GERES GERESS Array B 106.01 318 PKiKP **PKiKP 05 43 32.5 +0.2**
GERES GERESS Array B 106.01 318 PKiKP **PKiKP 05 43 32.5 +0.2**
comp=Z,2.2nm,0.8s,baz=139,slow=3.0,SNR=10
CLL Collm 106.19 321 *e*PKiKP **PKiKP 05 43 31.0 -1.3**
CLL *e*PPS PPS 05 54 00.0
CLL *e*(SS) 05 59 24.0
PGF Pioggiola 109.97 312 *e*PKiKP **PKiKP 05 43 39.7 -0.1**
PGF Pioggiola 109.97 312 *e*PKPdf **PKiKP 05 43 39.7 -0.1**
HINF Hinteralfeld 110.67 318 *e*PKiKP **PKiKP 05 43 40.5 -0.4**
comp=Z,12nm,1.0s
HINF Hinteralfeld 110.67 318 *e*PKiKP **PKiKP 05 43 40.5 -0.4**
HINF Hinteralfeld 110.67 318 *e*PKPdf **PKiKP 05 43 40.5 -0.4**
HAU Haudompre 110.97 318 *e*PKiKP **PKiKP 05 43 41.3 -0.1**
comp=Z,15nm,1.0s
HAU Haudompre 110.97 318 *e*PKiKP **PKiKP 05 43 41.3 -0.1**
HAU Haudompre 110.97 318 *e*PKPdf **PKiKP 05 43 41.3 -0.1**
LPG La Plagne 111.15 315 *e*PKiKP **PKiKP 05 43 42.4 +0.2**
comp=Z,17nm,1.1s
LPG La Plagne 111.15 315 *e*PKiKP **PKiKP 05 43 42.4 +0.2**
LPG La Plagne 111.15 315 *e*PKPdf **PKiKP 05 43 42.4 +0.2**
LPL La Plagne 111.16 316 *e*PKiKP **PKiKP 05 43 42.3 +0.2**
LPL La Plagne 111.16 316 *e*PKiKP **PKiKP 05 43 42.3 +0.2**
LPL La Plagne 111.16 316 *e*PKPdf **PKiKP 05 43 42.3 +0.2**
PAGF Fort de Pagny 111.27 319 *e*PKiKP **PKiKP 05 43 42.8 +0.8**
PAGF Fort de Pagny 111.27 319 *e*PKPdf **PKiKP 05 43 42.8 +0.8**
CABF La Chapelle 111.41 317 *e*PKiKP **PKiKP 05 43 42.8 +0.4**
comp=Z,20nm,1.1s
CABF La Chapelle 111.41 317 *e*PKiKP **PKiKP 05 43 42.8 +0.4**
CABF La Chapelle 111.41 317 *e*PKPdf **PKiKP 05 43 42.8 +0.4**
FRF La Foret Royal 111.53 313 *e*PKiKP **PKiKP 05 43 42.9 +0.3**
comp=Z,16nm,0.9s
FRF La Foret Royal 111.53 313 *e*PKiKP **PKiKP 05 43 42.9 +0.3**
FRF La Foret Royal 111.53 313 *e*PKPdf **PKiKP 05 43 42.9 +0.3**
LMR La Mourre 111.67 313 *e*PKiKP **PKiKP 05 43 43.2 +0.3**
LMR La Mourre 111.67 313 *e*PKiKP **PKiKP 05 43 43.2 +0.3**
LMR La Mourre 111.67 313 *e*PKPdf **PKiKP 05 43 43.2 +0.3**
MEZF Maizieres J'vi 111.72 319 *e*PKiKP **PKiKP 05 43 42.9 +0.1**
MEZF Maizieres J'vi 111.72 319 *e*PKPdf **PKiKP 05 43 42.9 +0.1**
ORIF Oris-en-Rattie 111.85 315 *e*PKiKP **PKiKP 05 43 43.3 0.0**
ORIF Oris-en-Rattie 111.85 315 *e*PKiKP **PKiKP 05 43 43.3 0.0**
ORIF Oris-en-Rattie 111.85 315 *e*PKPdf **PKiKP 05 43 43.3 0.0**
SMRF Simiane la Rot 112.23 314 *e*PKiKP **PKiKP 05 43 44.2 +0.2**
SMRF Simiane la Rot 112.23 314 *e*PKPdf **PKiKP 05 43 44.2 +0.2**
VIVF Saint-Julien-l 112.71 315 *e*PKiKP **PKiKP 05 43 45.0 +0.1**
VIVF Saint-Julien-l 112.71 315 *e*PKiKP **PKiKP 05 43 45.0 +0.1**
VIVF Saint-Julien-l 112.71 315 *e*PKPdf **PKiKP 05 43 45.0 +0.1**
LOR Lormes 112.77 318 *e*PKiKP **PKiKP 05 43 45.1 +0.2**
LOR Lormes 112.77 318 *e*PKPdf **PKiKP 05 43 45.1 +0.2**
SMF Signal de Mont 112.92 317 *e*PKiKP **PKiKP 05 43 45.1 -0.1**
SMF Signal de Mont 112.92 317 *e*PKiKP **PKiKP 05 43 45.1 -0.1**
SMF Signal de Mont 112.92 317 *e*PKPdf **PKiKP 05 43 45.1 -0.1**
SSF Saint Saulge 113.05 318 *e*PKiKP **PKiKP 05 43 45.7 +0.3**
comp=Z,23nm,1.0s
SSF Saint Saulge 113.05 318 *e*PKiKP **PKiKP 05 43 45.7 +0.3**
SSF Saint Saulge 113.05 318 *e*PKPdf **PKiKP 05 43 45.7 +0.3**
LASF Ste Croix 113.43 314 *e*PKiKP **PKiKP 05 43 46.7 +0.5**
LASF Ste Croix 113.43 314 *e*PKPdf **PKiKP 05 43 46.7 +0.5**
BGF Bois d'Agland 113.61 317 *e*PKiKP **PKiKP 05 43 46.9 +0.4**
comp=Z,38nm,1.0s
BGF Bois d'Agland 113.61 317 *e*PKiKP **PKiKP 05 43 46.9 +0.4**
BGF Bois d'Agland 113.61 317 *e*PKPdf **PKiKP 05 43 46.9 +0.4**
YKW3 Yellowknife Ar 113.94 24 *e*PKPdf **PKiKP 05 43 45.8 -0.8**
YKW3 *e*SKPdf **SKPdf 05 47 06.2 -2.4**
YKA Yellowknife Ar 113.97 24 PKiKP **PKiKP 05 43 46.6 -0.1**
YKA SKP 05 47 07.7
YKA PKKPbc **PKKPbc 05 54 28.2 -2.9**
YKA SKKPbc SKKPbc 05 57 58.9 -5.0
YKA Yellowknife Ar 113.97 24 PKiKP **PKiKP 05 43 46.6 -0.1**
comp=Z,2.5nm,0.5s,baz=301,slow=1.9,SNR=60
YKA SKP 05 47 07.7
comp=Z,1.0nm,0.8s,baz=312,slow=2.3,SNR=4.6
YKA PKKPbc **PKKPbc 05 54 28.2 -2.9**
comp=Z,0.1nm,0.3s,baz=115,slow=3.2,SNR=4.9
YKA SKKPbc SKKPbc 05 57 58.9 -5.0
comp=Z,0.8nm,0.9s,baz=112,slow=2.1,SNR=6.8
TCF Toulx Ste Croi 114.10 317 *e*PKiKP PKPdf 05 43 47.8 +0.3
TCF Toulx Ste Croi 114.10 317 *e*PKiKP PKPdf 05 43 47.8 +0.3
TCF Toulx Ste Croi 114.10 317 *e*PKPdf PKPdf 05 43 47.8 +0.3
CAF Calviac 114.51 316 *e*PKiKP PKPdf 05 43 48.9 +0.6
comp=Z,18nm,1.0s
CAF Calviac 114.51 316 *e*PKiKP PKPdf 05 43 48.9 +0.6
CAF Calviac 114.51 316 *e*PKPdf PKPdf 05 43 48.9 +0.6
MTLF Montolieu 114.74 314 *e*PKiKP PKPdf 05 43 49.0 +0.2
MTLF Montolieu 114.74 314 *e*PKiKP PKPdf 05 43 49.0 +0.2
MTLF Montolieu 114.74 314 *e*PKPdf PKPdf 05 43 49.0 +0.2
RJF Les Rejaudoux 114.80 316 *e*PKiKP PKPdf 05 43 49.3 +0.5
comp=Z,54nm,1.2s
RJF Les Rejaudoux 114.80 316 *e*PKiKP PKPdf 05 43 49.3 +0.5
RJF Les Rejaudoux 114.80 316 *e*PKPdf PKPdf 05 43 49.3 +0.5
LDF La Druitiere 115.03 320 *e*PKiKP **PKPdf 05 43 50.0 +0.9**
LDF La Druitiere 115.03 320 *e*PKiKP **PKPdf 05 43 50.0 +0.9**
LDF La Druitiere 115.03 320 *e*PKPdf **PKPdf 05 43 50.0 +0.9**
FLN La Foliniere 115.21 320 *e*PKiKP **PKPdf 05 43 49.7 +0.2**
FLN La Foliniere 115.21 320 *e*PKiKP **PKPdf 05 43 49.7 +0.2**
FLN La Foliniere 115.21 320 *e*PKPdf **PKPdf 05 43 49.7 +0.2**
LFF La Frestale 115.42 316 *e*PKiKP **PKPdf 05 43 50.7 +0.7**
LFF La Frestale 115.42 316 *e*PKiKP **PKPdf 05 43 50.7 +0.7**
LFF La Frestale 115.42 316 *e*PKPdf **PKPdf 05 43 50.7 +0.7**
MFF Saint Martin d 115.59 318 *e*PKiKP **PKPdf 05 43 50.2 -0.1**
comp=Z,24nm,1.0s
MFF Saint Martin d 115.59 318 *e*PKiKP **PKPdf 05 43 50.2 -0.1**
MFF Saint Martin d 115.59 318 *e*PKPdf **PKPdf 05 43 50.2 -0.1**
EPF Esparros 116.15 314 *e*PKiKP **PKPdf 05 43 51.7 +0.1**
EPF Esparros 116.15 314 *e*PKiKP **PKPdf 05 43 51.7 +0.1**
EPF Esparros 116.15 314 *e*PKPdf **PKPdf 05 43 51.7 +0.1**
KHMM Horse Mountain 116.51 49 *e*PKPdf **PKPdf 05 43 53.6 +1.1**
HUMO Hull Mountain 116.69 46 *e*PKPdf **PKPdf 05 43 53.0 +0.4**
ETSF Etsaut 116.83 314 *e*PKiKP **PKPdf 05 43 52.8 -0.1**
ETSF Etsaut 116.83 314 *e*PKiKP **PKPdf 05 43 52.8 -0.1**
ETSF Etsaut 116.83 314 *e*PKPdf **PKPdf 05 43 52.8 -0.1**
YBH Yreka Blue Hor 117.07 47 *e*PKPdf **PKPdf 05 43 53.8 +0.4**
YBH Yreka Blue Hor 117.07 47 PKP **PKPdf 05 43 53.9 +0.4**
comp=Z,2.7nm,0.9s,baz=144,slow=3.1,SNR=7.0
SJPF Ste Jean 117.25 314 *e*PKiKP **PKPdf 05 43 53.6 0.0**
SJPF Ste Jean 117.25 314 *e*PKiKP **PKPdf 05 43 53.6 0.0**
SJPF Ste Jean 117.25 314 *e*PKPdf **PKPdf 05 43 53.6 0.0**
TOA0 Torodi Ar. Sit 117.77 280 *e*PKPdf **PKPdf 05 43 55.3 -0.1**
TOA0 *e*SKPdf **SKiKP 05 47 18.0 +0.4**
TORD Torodi Ar. Bea 117.77 280 PKP **PKPdf 05 43 55.5 +0.2**
TORD SKP 05 47 18.4
TORD Torodi Ar. Bea 117.77 280 PKP **PKPdf 05 43 55.6 +0.2**
comp=Z,5.8nm,0.4s,baz=73,slow=1.5,SNR=72
TORD SKP 05 47 18.4
comp=Z,2.1nm,0.7s,baz=73,slow=1.7,SNR=5.6
NEW Newport 118.91 39 *e*PKPdf **PKPdf 05 43 57.0 +0.4**
BEKR Beckworth 119.25 49 *e*PKPdf **PKPdf 05 43 58.1 +0.3**
C11A Tepee Creek (N 119.60 39 P **PKPdf 05 43 58.3 +0.3**
baz=120
CMB Columbia Colle 119.66 51 *e*PKiKP **PKPdf 05 43 59.1 +0.6**
CMB Columbia Colle 119.66 51 *e*PKPdf **PKPdf 05 43 59.1 +0.6**
B12A Libby 119.78 38 P **PKPdf 05 43 58.4 +0.1**
baz=120
WVOR Wild Horse Val 119.81 46 *e*PKiKP **PKPdf 05 43 59.7 +1.0**
WVOR Wild Horse Val 119.81 46 *e*PKPdf **PKPdf 05 43 59.7 +1.0**
WCN Washoe City 119.84 49 *e*PKiKP **PKPdf 05 44 00.1 +1.1**
WCN Washoe City 119.84 49 *e*PKPdf **PKPdf 05 44 00.1 +1.1**
ESDC Sonseca Array 120.12 311 PKP **PKPdf 05 43 59.5 +0.2**
ESDC Sonseca Array 120.12 311 PKP **PKPdf 05 43 59.5 +0.2**
comp=Z,2.8nm,0.8s,baz=28,slow=3.1,SNR=14
C12B Naegeli Ranch, 120.14 39 P **PKPdf 05 43 59.1 0.0**
baz=120
A13A Flathead Natio 120.31 37 P **PKPdf 05 43 59.5 +0.1**
baz=120
D12A Red Ives Fores 120.47 40 P **PKPdf 05 43 59.8 0.0**
baz=120
B13A Whitefish 120.50 38 P **PKPdf 05 43 59.8 0.0**
baz=120
BSMT Bassoo Peak 120.51 39 *e*PKPdf **PKPdf 05 44 00.3 +0.3**
WALA Waterton Lakes 120.56 37 *e*PKPdf **PKPdf 05 44 00.1 +0.1**
C13A Hot Springs 120.71 39 P **PKPdf 05 44 00.4 +0.2**
baz=121
D13A Huson 121.02 39 P **PKPdf 05 44 00.9 +0.1**
baz=121
SWMT Swartz Lake 121.14 39 *e*PKPdf **PKPdf 05 44 01.7 +0.6**
NVAR Mina Array Bea 121.16 50 PKP **PKPdf 05 44 02.5 +1.0**
NVAR PKKPbc **PKKPab 05 54 04.0 -1.1**
NVAR Mina Array Bea 121.16 50 PKP **PKPdf 05 44 02.5 +1.0**
comp=Z,8.1nm,0.8s,baz=252,slow=2.3,SNR=51
NVAR PKKPbc **PKKPab 05 54 04.0 -1.1**
comp=Z,1.2nm,0.8s,baz=144,slow=4.0,SNR=8.6
VES Vestal, Richgr 121.17 53 P **PKPdf 05 44 01.6 +0.2**
baz=121
C14A Swan Lake 121.19 39 P **PKPdf 05 44 01.8 +0.7**
baz=121
G12A Big Creek, Yel 121.20 42 P **PKPdf 05 44 01.7 +0.3**
baz=121
NV11 Mina Array Sit 121.27 50 *e*PKPdf **PKPdf 05 44 02.8 +1.1**
A15A Johnson Ranch, 121.29 37 P **PKPdf 05 44 01.2 -0.2**
baz=121
E13A Victor 121.44 40 P **PKPdf 05 44 02.1 +0.4**
baz=121
MSO Missoula 121.44 40 *e*PKPdf **PKPdf 05 44 01.9 +0.2**
MSO *e*SKPdf **SKPdf 05 47 23.6 -0.1**
MSO Missoula 121.44 40 P **PKPdf 05 44 01.9 +0.2**
baz=121
MFID Camas Ranch 121.46 44 *e*PKPdf **PKPdf 05 44 02.8 +0.9**
MFID Camas Ranch 121.46 44 P **PKPdf 05 44 02.7 +0.9**
baz=121
ARVC Arvin 121.53 54 P **PKPdf 05 44 03.1 +1.0**
baz=122
SLMT Seeley Lake 121.56 39 *e*PKPdf **PKPdf 05 44 01.9 -0.1**
F13A Darby 121.60 41 P **PKPdf 05 44 01.8 -0.3**
baz=122
D14A Greenough 121.62 39 P **PKPdf 05 44 01.7 -0.4**
baz=122
B15A Bradely Ranch, 121.68 38 P **PKPdf 05 44 01.7 -0.4**
baz=122
ISA Isabella 121.70 53 *e*PKiKP **PKPdf 05 44 03.4 +0.9**
ISA Isabella 121.70 53 *e*PKPdf **PKPdf 05 44 03.4 +0.9**
ISA Isabella 121.70 53 P **PKPdf 05 44 02.8 +0.3**
baz=122
H12A Diamond D Ranc 121.72 42 P **PKPdf 05 44 02.7 +0.3**
baz=122
OSI Osito Adit 121.73 55 P **PKPdf 05 44 03.6 +1.0**
baz=122
I12A Atlanta 121.80 43 P **PKPdf 05 44 03.5 +0.9**
baz=122
CHMT Chamberlain Mo 121.84 39 *e*PKPdf **PKPdf 05 44 02.8 +0.2**
C15A Salmond Ranch, 121.88 38 P **PKPdf 05 44 02.5 0.0**
baz=122
E14A Clinton 121.89 40 P **PKPdf 05 44 03.0 +0.4**
baz=122
MVO Moncorvo 121.94 314 *e*PKPdf **PKPdf 05 44 03.5 +0.7**
A16A West Butte Ran 121.98 37 P **PKPdf 05 44 02.6 -0.1**
baz=122
B16A M & M Farms, S 122.15 37 P **PKPdf 05 44 03.0 +0.1**
baz=122,SNR=7.4
D15A Lincoln 122.25 39 P **PKPdf 05 44 03.5 +0.2**
baz=122
PASC Pasadena Art C 122.26 55 *e*PKPdf **PKPdf 05 44 04.4 +0.9**
EDW2 Edwards Air Fo 122.26 54 P **PKPdf 05 44 04.6 +1.0**
baz=122
MWC Mount Wilson 122.35 55 *e*PKiKP **PKPdf 05 44 04.9 +1.0**
MWC Mount Wilson 122.35 55 *e*PKPdf **PKPdf 05 44 04.9 +1.0**
HLID Hailey 122.37 43 *e*PKPdf **PKPdf 05 44 04.8 +1.1**
HLID Hailey 122.37 43 P **PKPdf 05 44 04.8 +1.1**
baz=122
MPMC Manual Prospec 122.38 53 P **PKPdf 05 44 05.1 +1.2**
baz=122
C16A Fuhringer Ranc 122.40 38 P **PKPdf 05 44 03.4 -0.1**
baz=122
POLO Lamas de Olo 122.42 314 *e*PKPdf **PKPdf 05 44 04.9 +1.2**
E15A Deer Lodge 122.43 40 P **PKPdf 05 44 03.8 +0.2**
baz=122
A17A Triple J Farms 122.50 36 P **PKPdf 05 44 04.0 +0.4**

baz=122,SNR=31
MTE Manteigas 122.55 313 ePKPdf PKPdf 05 44 04.6 +0.6
PCBR Castelo Branco 122.67 312 ePKPdf PKPdf 05 44 05.0 +0.9
BFSC Mount Baldy Ra 122.67 55 P PKPdf 05 44 04.1 -0.4
baz=123
PVIS Viseu 122.70 313 ePKPdf PKPdf 05 44 05.0 +0.8
PMRV Marv??o 122.73 312 ePKPdf PKPdf 05 44 05.1 +0.8
B17A L&G Farms, Che 122.75 37 P PKPdf 05 44 04.4 +0.3
baz=123,SNR=8.2
ELK Elko 122.76 47 ePKPdf PKPdf 05 44 05.5 +0.9
F15A Butte 122.76 40 P PKPdf 05 44 04.6 +0.2
baz=123
FURC Furnace Creek, 122.77 52 P PKPdf 05 44 05.4 +1.0
baz=123
LRM Limekiln Ridge 122.80 40 ePKPdf PKPdf 05 44 04.8 +0.3
HRY Holter Researc 122.81 39 ePKPdf PKPdf 05 44 04.8 +0.4
PBAR Barrancos 122.83 310 ePKPdf PKPdf 05 44 05.4 +0.9
D16A Dana Ranch, Ca 122.85 39 P PKPdf 05 44 04.8 +0.4
baz=123
I14A Mackay 122.89 43 P PKPdf 05 44 05.5 +0.8
baz=123
DLMT Dillon 122.89 41 ePKPdf PKPdf 05 44 05.4 +0.8
MCMT McKenzie Canyo 122.94 41 ePKPdf PKPdf 05 44 05.7 +0.9
A18A Metzger Ranch, 123.01 36 ⇓P PKPdf 05 44 04.7 +0.2
baz=123,SNR=15
G15A Dillon 123.04 41 P PKPdf 05 44 05.5 +0.6
baz=123
PESTR Estremoz 123.05 311 ePKPdf PKPdf 05 44 05.6 +0.7
C17A Wharram Farm, 123.07 38 P PKPdf 05 44 05.0 +0.3
baz=123,SNR=12
GSC Goldstone 123.11 53 ePKIKP PKPdf 05 44 06.7 +1.5
GSC Goldstone 123.11 53 ePKPdf PKPdf 05 44 06.7 +1.5
H15A Lima 123.16 42 P PKPdf 05 44 05.4 +0.3
baz=123
R11A Troy Canyon, C 123.23 49 P PKPdf 05 44 06.1 +0.6
baz=123
B18A Beardsley Farm 123.30 36 P PKPdf 05 44 05.5 +0.3
baz=123,SNR=12
D17A Six Diamond Ra 123.33 38 P PKPdf 05 44 05.7 +0.3
baz=123,SNR=5.8
F16A Kennard Place, 123.34 40 P PKPdf 05 44 05.8 +0.5
baz=123
BOZ Bozeman (W) 123.39 40 ePKIKP PKPdf 05 44 06.4 +0.9
BOZ e 05 44 43.0
BOZ Bozeman (W) 123.39 40 ePKPdf PKPdf 05 44 06.4 +0.9
BOZ epPKPdf pPKPdf 05 44 43.0 -1.3
PTOM Tomar 123.42 312 ePKPdf PKPdf 05 44 06.3 +0.7
G16A Moss Hill, Enn 123.45 41 P PKPdf 05 44 06.5 +0.8
baz=123
PMTG Montargil 123.46 312 ePKPdf PKPdf 05 44 06.0 +0.4
EVO Evora 123.46 311 ePKIKP PKPdf 05 44 06.5 +0.8
comp=Z,40nm,1.2s
EVO Evora 123.46 311 ePKPdf PKPdf 05 44 06.7 +1.0
EGMT Eagleton 123.49 37 ePKPdf PKPdf 05 44 05.9 +0.4
EGMT Eagleton 123.49 37 P PKPdf 05 44 06.0 +0.4
baz=123,SNR=19
PBEJ Beja 123.50 310 ePKPdf PKPdf 05 44 06.6 +0.8
E17A Martinsdale 123.53 39 P PKPdf 05 44 06.1 +0.3
baz=123
EVOP Sao Brissos 123.54 311 ePKIKP PKPdf 05 44 06.5 +0.7
EVOP Sao Brissos 123.54 311 ePKPdf PKPdf 05 44 06.5 +0.7
PVAQ Vaqueiros 123.56 309 ePKPdf PKPdf 05 44 06.2 +0.3
A19A Klindworth Far 123.65 35 ⇑P PKPdf 05 44 05.8 0.0
baz=124,SNR=12
PCVE Castro Verde 123.74 310 ePKPdf PKPdf 05 44 07.3 +1.1
DBIC Dimbokro 123.75 272 ePKPdf PKPdf 05 44 07.3 +0.3
DBIC Dimbokro 123.75 272 PKP PKPdf 05 44 07.2 +0.3
comp=Z,13nm,0.7s,baz=87,slow=2.5,SNR=12
B19A Brinkman Farms 123.76 36 ⇑P PKPdf 05 44 06.4 +0.3
baz=124,SNR=7.4
PBDV Barranco-do-Ve 123.77 309 ePKPdf PKPdf 05 44 07.3 +0.9
PFO Pinyon Flat Ob 123.79 55 PKP PKPdf 05 44 07.5 +0.9
PFO Pinyon Flat Ob 123.79 55 PKP PKPdf 05 44 07.5 +0.9
comp=Z,8.5nm,0.9s,baz=221,slow=1.2,SNR=8.4
FFC Flin Flon 123.82 27 ePKIKP PKPdf 05 44 06.1 +0.2
FFC Flin Flon 123.82 27 eP PKPdf 05 44 06.0 +0.2
D18A Linhart Farms, 123.85 38 ⇓P PKPdf 05 44 06.6 +0.3
baz=124,SNR=6.3
LIC Lamto 123.87 272 ePKIKP PKPdf 05 44 07.4 +0.2
comp=Z,34nm,0.7s
LIC Lamto 123.87 272 ePKPdf PKPdf 05 44 07.4 +0.2
F17A Fitzpatrick Pl 123.90 39 P PKPdf 05 44 07.6 +1.1
baz=124
PNCL Nicolau / Gran 123.97 310 ePKPdf PKPdf 05 44 07.7 +1.1
MONP Monument Peak 123.98 56 P PKPdf 05 44 08.0 +0.9
baz=124
C19A Slack Wire Ran 124.05 37 P PKPdf 05 44 07.2 +0.6
baz=124,SNR=17
E18A Harlowton 124.07 38 P PKPdf 05 44 07.4 +0.6
baz=124
BELC Belle Mtn. Jos 124.07 55 P PKPdf 05 44 08.6 +1.4
baz=124
G17A Pierce Place, 124.10 40 P PKPdf 05 44 08.0 +1.1
baz=124
A20A Cobblestone Ra 124.14 35 P PKPdf 05 44 07.2 +0.4
baz=124,SNR=6.0
HVU Hansel Valley 124.15 45 ePKIKP PKPdf 05 44 08.1 +1.0
HVU Hansel Valley 124.15 45 ePKPdf PKPdf 05 44 08.1 +1.0
HVU eSKPdf SKPdf 05 47 26.8 -2.3
GMRC Granite Mounta 124.15 54 P PKPdf 05 44 09.0 +1.7
baz=124
I16A Newdale 124.22 42 P PKPdf 05 44 08.6 +1.4
baz=124
B20A Solberg Farm, 124.30 36 P PKPdf 05 44 07.8 +0.7
baz=124,SNR=21
MORF Marmelete 124.30 310 ePKPdf PKPdf 05 44 08.5 +1.1
D19A Cripps Ranch, 124.42 37 P PKPdf 05 44 07.4 0.0
baz=124,SNR=13
F18A Big Timber 124.49 39 P PKPdf 05 44 08.8 +1.2
baz=124,SNR=18
RRI2 Red Ridge 124.54 42 ePKPdf PKPdf 05 44 09.1 +1.1
GCMT Greycliff 124.57 39 ePKPdf PKPdf 05 44 07.0 -0.8
IMW Indian Meadow 124.57 42 ePKPdf PKPdf 05 44 09.2 +1.2
BC3 Big Chuckawall 124.59 55 P PKPdf 05 44 09.5 +1.4
baz=125
A21A Bergtoll Ranch 124.65 35 P PKPdf 05 44 08.2 +0.5
baz=125,SNR=8.7
C20A Veseth Ranch, 124.67 36 P PKPdf 05 44 08.7 +0.9
baz=125,SNR=26
DUG Dugway 124.68 47 ePKIKP PKPdf 05 44 09.2 +1.0
DUG e 05 44 46.7
DUG Dugway 124.68 47 ePKPdf PKPdf 05 44 09.2 +1.0
DUG epPKPdf pPKPdf 05 44 46.7 -0.3
DUG Dugway 124.68 47 P PKPdf 05 44 09.3 +1.1
baz=125
TPAW Teton Pass 124.73 42 ePKPdf PKPdf 05 44 08.9 +0.6
TPAW eSKPdf SKiKP 05 47 33.1 +2.0
MOOW Moose Ponds 124.76 42 ePKPdf PKPdf 05 44 09.3 +1.0
E19A Rath Farm, Rou 124.81 38 P PKPdf 05 44 08.8 +0.7
baz=125,SNR=10
REDW Red Top Meadow 124.84 42 ePKPdf PKPdf 05 44 09.3 +0.8
SNOW Snow King Moun 124.87 42 ePKPdf PKPdf 05 44 09.7 +1.2
SNOW eSKPdf SKiKP 05 47 32.1 +0.8
B21A Ellsworth Farm 124.89 35 P PKPdf 05 44 09.0 +0.9
baz=125,SNR=9.8
D20A Manuel Ranch, 124.90 37 ⇑P PKPdf 05 44 08.8 +0.6
baz=125,SNR=12
LOHW Long Hollow 124.91 42 ePKPdf PKPdf 05 44 09.7 +1.1
F19A Roth Farm, Mol 124.99 39 ⇑P PKPdf 05 44 09.0 +0.5
baz=125,SNR=5.4
ARUT Antelope Range 125.02 50 ePKIKP PKPdf 05 44 10.2 +1.3
ARUT Antelope Range 125.02 50 ePKPdf PKPdf 05 44 10.2 +1.3
HWUT Hardware Ranch 125.05 45 ePKPdf PKPdf 05 44 09.8 +0.9
RLMT Red Lodge 125.12 40 ePKPdf PKPdf 05 44 09.0 0.0
C21A Desert Coulee 125.15 36 ⇑P PKPdf 05 44 09.2 +0.5
baz=125,SNR=8.3
CCUT Cedar City 125.15 50 ePKPdf PKPdf 05 44 10.8 +1.6
E20A Meyer Farm, Mu 125.19 38 ⇓P PKPdf 05 44 09.1 +0.3
baz=125,SNR=6.1
A22A Carney Farms, 125.21 34 P PKPdf 05 44 09.5 +0.7
baz=125,SNR=7.9
I18A Diamond G Ranc 125.39 42 P PKPdf 05 44 10.5 +1.0
baz=125
W13A Hualapai Mount 125.47 53 P PKPdf 05 44 11.3 +1.4
baz=125
H19A Powell 125.50 40 P PKPdf 05 44 11.2 +1.6
baz=125,SNR=6.1
F20A Billings 125.51 39 P PKPdf 05 44 10.0 +0.4
baz=125
JLU Jordanelle 125.51 46 ePKPdf PKPdf 05 44 10.9 +1.1
B22A Reddig Ranch S 125.53 35 P PKPdf 05 44 10.5 +1.1
baz=125
D21A La Casita Ranch 125.59 37 P PKPdf 05 44 10.6 +1.0
baz=126,SNR=5.8
MVU Marysvale 125.70 48 ePKPdf PKPdf 05 44 11.8 +1.5
DAU Daniels Canyon 125.72 46 ePKIKP PKPdf 05 44 11.4 +1.0
DAU Daniels Canyon 125.72 46 ePKPdf PKPdf 05 44 11.4 +1.0
M17A Scullys Gap (B 125.72 44 P PKPdf 05 44 11.0 +0.8
baz=126
G20A Bridger 125.74 39 P PKPdf 05 44 11.1 +1.1
baz=126,SNR=12
E21A Keefer Ranch, 125.80 37 P PKPdf 05 44 11.2 +1.2
baz=126,SNR=14
BW06 Boulder Array 125.95 42 ePKPdf PKPdf 05 44 10.6 -0.1
PDAR Pinedale Array 125.95 42 PKP PKPdf 05 44 11.3 +0.6
PDAR SKKPbc SKKPbc 05 57 21.2 -3.5
PDAR Pinedale Array 125.95 42 PKP PKPdf 05 44 11.3 +0.6
comp=Z,7.9nm,1.1s,baz=215,slow=1.8,SNR=19
PDAR SKKPbc SKKPbc 05 57 21.2 -3.5
comp=Z,0.9nm,0.9s,baz=119,slow=3.3,SNR=4.3
L18A Fontenelle, Gr 125.98 44 P PKPdf 05 44 11.6 +0.9
baz=126
B23A Brockton 126.01 34 P PKPdf 05 44 11.2 +0.9
baz=126,SNR=8.0
D22A Cohagen 126.03 36 P PKPdf 05 44 11.4 +1.0
baz=126,SNR=47
J19A Crowheart 126.08 42 P PKPdf 05 44 11.9 +1.1
baz=126,SNR=11
H20A Greybull 126.21 40 P PKPdf 05 44 11.7 +0.8
baz=126,SNR=7.7
C23A Lambert 126.26 35 P PKPdf 05 44 12.3 +1.5
baz=126,SNR=9.3
A24A Westby 126.31 33 P PKPdf 05 44 11.6 +0.7
baz=126
U15A North Rim 126.31 51 P PKPdf 05 44 13.2 +1.6
baz=126
Q16A Castle Valley 126.32 47 P PKPdf 05 44 12.7 +1.2
baz=126
G21A Lodge Grass 126.36 39 P PKPdf 05 44 12.3 +1.1
baz=126
L19A Farson 126.37 43 P PKPdf 05 44 12.2 +0.8
baz=126
I20A Worland 126.38 41 P PKPdf 05 44 11.8 +0.6
baz=126,SNR=21
K19A Absolon Red Bu 126.40 42 P PKPdf 05 44 12.1 +0.7
baz=126,SNR=15
Y14A Wickenburg 126.49 54 P PKPdf 05 44 12.9 +1.2
baz=126
E22A Miles City 126.53 37 P PKPdf 05 44 12.3 +0.9
baz=126,SNR=20
D23A Lindsay 126.58 36 P PKPdf 05 44 13.1 +1.6
baz=126,SNR=12
J20A Shoshoni 126.67 41 P PKPdf 05 44 13.0 +1.1
baz=127,SNR=6.2
F22A Rosebud 126.67 38 P PKPdf 05 44 12.3 +0.6
baz=127
Z14A Wintersburg 126.69 55 P PKPdf 05 44 13.0 +1.0
baz=127
SRU San Rafael 126.72 47 P PKPdf 05 44 13.0 +0.9
baz=127
H21A Big Horn, Sher 126.75 39 P PKPdf 05 44 12.8 +0.8
baz=127
M19A Rock Springs 126.75 44 P PKPdf 05 44 13.2 +1.0
baz=127
C24A Savage 126.84 35 P PKPdf 05 44 13.2 +1.2
baz=127,SNR=11
E23A Ismay 126.88 37 P PKPdf 05 44 13.0 +1.0
baz=127,SNR=20
G22A Birney 126.93 38 P PKPdf 05 44 12.7 +0.5
baz=127
I21A Big Trails, Te 126.98 40 P PKPdf 05 44 12.8 +0.4
baz=127,SNR=10
J21A Lysite 127.09 41 P PKPdf 05 44 13.2 +0.5
baz=127
L20A Wamsutter 127.09 43 P PKPdf 05 44 13.9 +1.1
baz=127,SNR=6.2
D24A Glendive 127.12 36 P PKPdf 05 44 13.3 +0.8
baz=127,SNR=5.7
214A Organ Pipe Nat 127.17 56 P PKPdf 05 44 14.3 +1.3
baz=127
H22A Clearmont 127.20 39 P PKPdf 05 44 13.2 +0.4
baz=127
F23A Volborg 127.22 38 P PKPdf 05 44 13.5 +0.7
baz=127,SNR=14
O19A Miners Draw (B 127.26 45 P PKPdf 05 44 14.0 +0.8
baz=127
WUAZ Wupatki 127.31 52 ePKPdf PKPdf 05 44 14.8 +1.5
WUAZ Wupatki 127.31 52 P PKPdf 05 44 14.9 +1.5
baz=127
M20A Sweetwater, Wa 127.42 43 P PKPdf 05 44 14.6 +1.2
baz=127
E24A Baker 127.43 36 P PKPdf 05 44 14.4 +1.3
baz=127
G23A Biddle 127.49 38 P PKPdf 05 44 13.9 +0.6
baz=127,SNR=8.0
K21A Alcova 127.54 42 P PKPdf 05 44 14.2 +0.6
baz=128,SNR=11
X16A Lo Mia Camp, P 127.59 53 P PKPdf 05 44 15.5 +1.5
baz=128
S18A Hurst Farm, Bl 127.62 48 P PKPdf 05 44 14.9 +0.9
baz=128
P19A Cripple Cowboy 127.63 46 P PKPdf 05 44 15.3 +1.3
baz=128
N20A Spence Gulch, 127.64 44 P PKPdf 05 44 14.4 +0.5
baz=128,SNR=10
J22A Midwest 127.69 41 P PKPdf 05 44 13.5 -0.3
baz=128
F24A Hallaka 127.73 37 P PKPdf 05 44 14.4 +0.6
baz=128,SNR=8.1
L21A Rawlins 127.76 43 P PKPdf 05 44 14.8 +0.7
baz=128,SNR=16
M21A Separation Pea 127.92 43 P PKPdf 05 44 15.3 +0.8
baz=128,SNR=13
O20A White River Ci 127.95 45 P PKPdf 05 44 15.7 +1.2
baz=128,SNR=15
K22A Casper 128.01 41 P PKPdf 05 44 15.5 +1.0
baz=128,SNR=7.0
G24A Alzada 128.02 37 P PKPdf 05 44 14.5 +0.2
baz=128,SNR=6.1
P20A De Beque 128.10 46 P PKPdf 05 44 16.8 +2.0
baz=128,SNR=14
N21A Black Mountain 128.19 44 ⇑P PKPdf 05 44 16.5 +1.5
baz=128,SNR=14
H24A Dirks Ranch, A 128.24 38 P PKPdf 05 44 15.1 +0.3
baz=128,SNR=12
L22A Ellis Ranch, M 128.36 42 ⇑P PKPdf 05 44 16.7 +1.5
baz=128,SNR=5.1
Q20A Ridgley Place, 128.38 46 ⇓P PKPdf 05 44 16.5 +1.1
baz=128,SNR=23
PV01 Paradox Valley 128.50 47 ePKPdf PKPdf 05 44 16.9 +1.3
M22A Cedar Creek Ra 128.53 43 P PKPdf 05 44 16.9 +1.3
baz=128
R20A Redvale 128.62 47 P PKPdf 05 44 17.4 +1.6
baz=129,SNR=10
TUC Tucson 128.73 55 ePKIKP PKPdf 05 44 17.4 +1.3
TUC Tucson 128.73 55 ePKPdf PKPdf 05 44 17.4 +1.3
S20A Disappointment 128.77 48 P PKPdf 05 44 17.7 +1.5
baz=129,SNR=7.3
RSSD Black Hills 128.88 39 ePKIKP PKPdf 05 44 15.8 -0.4
RSSD Black Hills 128.88 39 ePKPdf PKPdf 05 44 15.8 -0.4
N22A Wattenberg Ran 128.90 43 ⇑P PKPdf 05 44 17.3 +1.0
baz=129,SNR=8.7
Q21A Lamborn Mesa, 128.95 46 ⇓P PKPdf 05 44 18.3 +1.9
baz=129,SNR=5.6
M23A Laramie 129.09 42 P PKPdf 05 44 17.2 +0.6
baz=129
O22A Kremmling 129.11 44 P PKPdf 05 44 17.4 +0.6
baz=129
N23A Red Feather La 129.20 43 P PKPdf 05 44 18.4 +1.4
baz=129
P22A Eagle 129.21 45 ⇑P PKPdf 05 44 18.4 +1.4
baz=129,SNR=6.1
S21A Coal Bank Pass 129.25 48 P PKPdf 05 44 19.0 +1.8
baz=129,SNR=25
MDND Maddock 129.31 32 P PKPdf 05 44 17.7 +1.1
baz=129
J25A Sunshine Ranch 129.40 39 P PKPdf 05 44 17.9 +0.8
baz=129
Q22A Crested Butte, 129.41 46 ⇑P PKPdf 05 44 19.4 +1.9
baz=129,SNR=9.3
V20A Brimhall 129.44 50 P PKPdf 05 44 18.4 +0.9
baz=129
O23A Lake Granby, G 129.52 44 ⇓P PKPdf 05 44 19.0 +1.4
baz=129,SNR=12
ULM Lac du Bonnet 129.59 28 PKP PKPdf 05 44 17.3 +0.3
ULM SKPbc SKPab 05 47 23.9 -1.2
ULM Lac du Bonnet 129.59 28 PKP PKPdf 05 44 17.3 +0.3
comp=Z,7.0nm,0.6s,baz=308,slow=1.6,SNR=7.7
ULM SKPbc SKPab 05 47 23.9 -1.2
comp=Z,10.0nm,0.7s,baz=305,slow=3.7,SNR=8.8
W20A Ramah 129.65 51 P PKPdf 05 44 19.6 +1.6
baz=130,SNR=11
K25A Mack Ranch, Ha 129.75 40 P PKPdf 05 44 18.7 +0.9
baz=130
R22A Saguache, Gunn 129.78 47 ⇑P PKPdf 05 44 20.4 +2.2
baz=130,SNR=9.4
U21A Nageezi 129.82 49 P PKPdf 05 44 19.8 +1.6
baz=130,SNR=16
X20A Quemado 129.85 52 P PKPdf 05 44 19.8 +1.5
baz=130
L25A Engebretsen Ra 129.91 41 P PKPdf 05 44 19.4 +1.3
baz=130
ISCO Idaho Springs 129.92 44 ePKIKP PKPdf 05 44 19.2 +0.8
ISCO Idaho Springs 129.92 44 ePKPdf PKPdf 05 44 19.2 +0.8
ISCO Idaho Springs 129.92 44 ⇓P PKPdf 05 44 19.4 +1.0
baz=130,SNR=7.6
S22A 4UR Ranch, Cre 129.92 47 ⇓P PKPdf 05 44 20.5 +2.0
baz=130,SNR=18
N24A Carr 129.95 43 P PKPdf 05 44 19.0 +0.8
baz=130
K26A Motz Farm, Whi 130.14 40 P PKPdf 05 44 19.4 +1.0
baz=130
Q23A Hartsel 130.15 45 ⇓P PKPdf 05 44 20.6 +1.7
baz=130,SNR=5.6
T22A Edith 130.16 48 ⇓P PKPdf 05 44 21.1 +2.2
baz=130,SNR=11
Y20A Horse Springs, 130.16 52 P PKPdf 05 44 20.7 +1.7
baz=130,SNR=5.9
319A Douglas 130.22 56 P PKPdf 05 44 21.6 +2.6
baz=130,SNR=6.0
Z20A Nine Sixteen R 130.25 54 P PKPdf 05 44 20.9 +1.9
baz=130,SNR=6.2
PLCA Paso Flores 130.34 171 PKP PKPdf 05 44 19.7 +0.8
PLCA Paso Flores 130.34 171 PKP PKPdf 05 44 19.7 +0.8
comp=Z,3.3nm,0.9s,baz=228,slow=3.5,SNR=5.7
120A U Bar Ranch, L 130.40 54 ⇓P PKPdf 05 44 20.9 +1.6
baz=130,SNR=5.9
X21A Alamocita Cree 130.44 52 P PKPdf 05 44 20.8 +1.4
baz=130,SNR=17
U22A Llaves 130.44 49 ⇓P PKPdf 05 44 21.3 +1.9
baz=130,SNR=17
R23A Moffat 130.46 46 ⇓P PKPdf 05 44 21.1 +1.7
baz=130,SNR=6.8
V22A San Miguel Ran 130.58 49 ⇑P PKPdf 05 44 21.7 +2.0
baz=130,SNR=13
Y21A Point of Rocks 130.68 52 ⇓P PKPdf 05 44 21.6 +1.7
baz=131,SNR=8.5
220A Playas Peak, P 130.68 55 P PKPdf 05 44 22.2 +2.3
baz=131,SNR=5.3
T23A Casias Ranch, 130.79 48 ⇓P PKPdf 05 44 21.8 +1.7
baz=131,SNR=12
320A Kipp Ranch, An 130.85 56 ⇓P PKPdf 05 44 22.1 +1.9
baz=131,SNR=12
AGMN Agassiz Nation 130.93 30 ePKPdf PKPdf 05 44 19.4 -0.3
U23A El Rito 130.95 49 ⇓P PKPdf 05 44 21.9 +1.5
baz=131,SNR=11
J28A Allard Ranch, 130.96 38 P PKPdf 05 44 20.2 +0.3
baz=131
P25A Willow Gulch B 131.04 44 P PKPdf 05 44 21.6 +1.2
baz=131,SNR=11
121A Cookes Peak, D 131.08 54 ⇓P PKPdf 05 44 22.1 +1.4
baz=131,SNR=6.4
V23A Ortiz Mt. (NFS 131.19 49 ⇑P PKPdf 05 44 22.9 +2.1
baz=131,SNR=8.1
Y22A Socorro 131.25 52 ⇓P PKPdf 05 44 22.6 +1.6
baz=131,SNR=8.4
Q25A Bedland, Calha 131.26 45 ⇓P PKPdf 05 44 21.4 +0.6
baz=131,SNR=5.4
K28A Ten Mile Ranch 131.27 39 P PKPdf 05 44 20.8 +0.3
baz=131
ANMO Albuquerque 131.28 50 ePKPdf PKPdf 05 44 22.2 +1.2
W23A Werner Place, 131.44 50 ⇑P PKPdf 05 44 23.0 +1.7
baz=131,SNR=6.8
BNM Barren Site 131.44 51 ePKPdf PKPdf 05 44 21.7 +0.3
Z22A Elephant Butte 131.49 53 P PKPdf 05 44 22.9 +1.6
baz=131,SNR=28
P26A Davis Ranch, A 131.58 43 ⇑P PKPdf 05 44 22.4 +1.0
baz=131,SNR=7.1
122A Conniff Cattle 131.65 53 ⇑P PKPdf 05 44 23.6 +1.9
baz=132,SNR=6.1
S25A Robets Cordova 131.68 46 ⇑P PKPdf 05 44 22.7 +1.0
baz=132,SNR=5.5
Q26A Hugo 131.76 44 P PKPdf 05 44 22.6 +0.9
baz=132
O27A Beecher Island 131.86 42 P PKPdf 05 44 22.6 +0.8
baz=132
V24A Rampart Ranch, 131.88 49 P PKPdf 05 44 23.9 +1.8
baz=132,SNR=17
K29A Lazy Trails An 131.89 38 P PKPdf 05 44 22.2 +0.5
baz=132
T25A Trinidad 131.93 47 P PKPdf 05 44 23.6 +1.5
baz=132,SNR=6.0
Y23A Lovelace Mesa, 131.96 52 ⇓P PKPdf 05 44 22.7 +0.4
baz=132,SNR=7.2
W24A Lazy 6 Ranch, 131.98 50 P PKPdf 05 44 23.9 +1.6
baz=132,SNR=14
Z23A Rita Site, Whi 132.06 52 P PKPdf 05 44 23.0 +0.6
baz=132
R26A Arlington 132.10 45 ⇑P PKPdf 05 44 23.3 +1.0
baz=132,SNR=10
P27A Ficken Ranch, 132.10 43 P PKPdf 05 44 23.0 +0.7
baz=132
U25A Circle Dot Ran 132.24 48 ⇓P PKPdf 05 44 24.4 +1.6
baz=132,SNR=5.5
V25A Rancho No Teng 132.32 49 P PKPdf 05 44 24.4 +1.5
baz=132,SNR=13
S26A Kim 132.39 46 P PKPdf 05 44 23.9 +1.0
baz=132,SNR=6.8
Y24A Capitan 132.44 51 ⇓P PKPdf 05 44 24.1 +0.9
baz=132,SNR=24
T26A Comanche Natio 132.50 46 ⇓P PKPdf 05 44 23.8 +0.6
baz=132,SNR=19
R27A Eads 132.56 45 ⇑P PKPdf 05 44 23.8 +0.6
baz=132,SNR=5.9
W25A X Bar L Ranch, 132.69 49 P PKPdf 05 44 24.8 +1.2
baz=133,SNR=8.4
Z24A Sheeppen Canyo 132.72 52 P PKPdf 05 44 25.3 +1.5
baz=133,SNR=14
U26A Atchley Ranch, 132.73 47 P PKPdf 05 44 24.8 +1.1
baz=133
X25A Clemmons Ranch 132.81 50 P PKPdf 05 44 24.9 +1.1
baz=133
Q28A Sharon Springs 132.85 43 P PKPdf 05 44 24.4 +0.7
baz=133
124A Stringfield Ra 132.88 53 P PKPdf 05 44 25.7 +1.6
baz=133,SNR=15
V26A Tequesquite Ra 132.95 48 ⇓P PKPdf 05 44 25.2 +1.2
baz=133,SNR=8.3
Y25A Mesa, Roswell 133.02 51 ⇑P PKPdf 05 44 24.6 +0.3
baz=133,SNR=13
224A Cornudas Mount 133.04 54 ⇑P PKPdf 05 44 25.4 +1.1
baz=133,SNR=6.1
R28A Tribune 133.21 44 P PKPdf 05 44 25.0 +0.6
baz=133
Z25A Roswell 133.24 52 ⇓P PKPdf 05 44 25.4 +0.8
baz=133,SNR=7.3
EYMN Ely 133.25 27 ePKPdf PKPdf 05 44 24.2 +0.2
EYMN eSKPbc SKPbc 05 47 37.9 -0.9
MNTX Cornudas Mount 133.28 54 ePKPdf PKPdf 05 44 25.7 +1.1
324A Moseley Ranch, 133.28 54 P PKPdf 05 44 25.9 +1.1
baz=133,SNR=16
U27A Thompson Grove 133.38 47 P PKPdf 05 44 26.1 +1.3
baz=133,SNR=9.7
ECSD EROS Data Cent 133.50 35 ePKPdf PKPdf 05 44 23.7 -0.9
T28A Walsh 133.58 46 P PKPdf 05 44 25.9 +0.8
baz=134
SCHQ Schefferville 133.59 4 ePKPdf PKPdf 05 44 24.5 0.0
SCHQ PKP PKPdf 05 44 24.7 +0.2
SCHQ SKPbc SKPbc 05 47 40.0 +0.2
SCHQ Schefferville 133.59 4 PKP PKPdf 05 44 24.7 +0.2
comp=Z,4.7nm,0.3s,baz=41,slow=1.9,SNR=24
SCHQ SKPbc SKPbc 05 47 40.0 +0.2
comp=Z,19nm,0.9s,baz=5.5,slow=4.2,SNR=13
325A Bean Ranch, Si 133.72 54 P PKPdf 05 44 26.1 +0.5
baz=134
W27A Bowe Ranch, En 133.79 49 ⇓P PKPdf 05 44 26.7 +1.1
baz=134,SNR=6.1
425A Indio Mountain 133.91 55 ⇑P PKPdf 05 44 26.8 +0.8
baz=134,SNR=5.7
BGNE Belgrade 133.99 38 P PKPdf 05 44 25.7 0.0
baz=134
126A Clayton Basin, 134.02 52 P PKPdf 05 44 26.8 +0.8
baz=134
226B Tecolote Peak, 134.12 53 P PKPdf 05 44 27.0 +0.7
baz=134
V28A Channing 134.12 48 P PKPdf 05 44 27.0 +0.8
baz=134
T29A Hugoton 134.14 45 P PKPdf 05 44 27.0 +0.9
baz=134
Y27A Causey 134.20 50 P PKPdf 05 44 26.9 +0.5
baz=134

P31A	Stockton	134.25	41	P	PKPdf	05 44 27.3	+1.1
	baz=134						
R30A	Dighton	134.29	43	P	PKPdf	05 44 27.4	+1.0
	baz=134						
Z27A	Tatum	134.39	51	P	PKPdf	05 44 27.3	+0.5
	baz=134						
MSTX	Muleshoe	134.47	50	P	PKPdf	05 44 27.6	+0.7
	baz=134						
326A	Caldwell Ranch	134.54	54	P	PKPdf	05 44 27.7	+0.6
	baz=134						
X28A	Dimmitt	134.67	49	P	PKPdf	05 44 27.8	+0.5
	baz=135						
R31A	Burdett	134.80	43	P	PKPdf	05 44 28.1	+0.8
	baz=135						
526A	Mary Lane Ranc	134.88	56	P	PKPdf	05 44 28.7	+0.9
	baz=135						
Y28A	McKinney Farm,	134.89	50	P	PKPdf	05 44 28.7	+1.0
	baz=135						
U30A	WK&E Inc. Balk	134.89	46	P	PKPdf	05 44 28.5	+0.9
	baz=135						
Y29A	Porterfield Fa	135.34	50	P	PKPdf	05 44 29.3	+0.8
	baz=135						
TXAR	Lajitas Array	135.46	57	SKPbc	SKPbc	05 47 46.1	-0.6
TXAR	Lajitas Array	135.46	57	PKhKP	PKPpre	05 44 16.1	
	comp=Z,1.2nm,0.7s,baz=269,slow=3.9,SNR=16						
TXAR				SKPbc	SKPbc	05 47 46.1	-0.6
	comp=Z,6.3nm,0.9s,baz=241,slow=2.4,SNR=20						
COWI	Conover	135.70	27	*e*PKPdf	PKPdf	05 44 28.8	+0.1
KSU1	Kansas State U	136.27	40	*e*PKPdf	PKPdf	05 44 29.5	-0.5
JFWS	Jewell Farm	137.50	31	*e*PKIKP	PKPdf	05 44 31.6	-0.5
JFWS	Jewell Farm	137.50	31	*e*PKPdf	PKPdf	05 44 31.6	-0.5
JCT	Junction City	138.18	53	*e*PKIKP	PKPdf	05 44 34.6	+0.8
JCT	Junction City	138.18	53	*e*PKPdf	PKPdf	05 44 34.6	+0.8
RFTA	Plano	139.44	48	*e*PKPdf	PKPdf	05 44 36.8	+0.8
UALR	University of	141.56	43	*e*PKPdf	PKPdf	05 44 34.6	-5.1
PQI	Presque Isle	141.56	7	*e*PKPdf	PKPdf	05 44 33.4	-5.9
OLIL	Olney	141.61	34	*e*PKPdf	PKPdf	05 44 33.9	-5.8
LCO	Las Campanas	141.70	167	*e*PKPdf	PKPdf	05 44 36.8	-3.7
PARMO	Parma	142.05	38	*e*PKPdf	PKPdf	05 44 35.8	-4.7
BLO	Bloomington	142.15	32	PKIKP	PKPdf	05 44 40.2	-0.5
BLO	Bloomington	142.15	32	PKPdf	PKPdf	05 44 40.2	-0.5
HBAR	Harrisburg	142.19	40	*e*PKPdf	PKPdf	05 44 37.1	-3.7
PVMO	Portageville	142.24	38	*e*PKPdf	PKPdf	05 44 37.5	-3.4
USIN	University of	142.39	35	*e*PKPdf	PKPdf	05 44 36.6	-4.5
GLAT	Glass	142.59	38	*e*PKPdf	PKPdf	05 44 37.8	-3.8
ERPA	Erie	142.79	23	*e*PKPdf	PKPdf	05 44 38.9	-2.8
WCI	Wyandotte Cave	142.96	33	*e*PKIKP	PKPdf	05 44 38.4	-3.8
WCI	Wyandotte Cave	142.96	33	*e*PKPdf	PKPdf	05 44 38.4	-3.8
NCB	Newcomb	142.98	15	*e*PKPdf	PKPdf	05 44 38.6	-3.4
ACSO	Alum Creek Sta	143.09	28	PKPdf	PKPab	05 44 38.6	+0.6
ALLY	Alegheny Colle	143.13	23	*e*PKPdf	PKPbc	05 44 39.0	-0.6
MDV	Middlebury	143.21	14	*e*PKPdf	PKPab	05 44 38.4	+0.1
WVT	Waverly	143.56	37	*e*PKIKP	PKPab	05 44 40.2	+0.2
WVT	Waverly	143.56	37	*e*PKPdf	PKPab	05 44 40.2	+0.2
WVT				*e*SKPbc	SKPbc	05 48 07.5	-0.9
OXF	Oxford	143.64	41	*e*PKIKP	PKPbc	05 44 40.9	-0.3
OXF	Oxford	143.64	41	*e*PKPdf	PKPbc	05 44 40.9	-0.3
ACCN	Adirondack Com	143.67	15	*e*PKPdf	PKPbc	05 44 40.7	-0.4
FFD	Franklin Falls	144.06	12	*e*PKPdf	PKPbc	05 44 42.6	+0.5
BINY	Binghamton	144.11	18	*e*PKPdf	PKPbc	05 44 42.2	-0.2
BINY				*e*SKPbc	SKPbc	05 48 09.5	-0.1
VBMS	Vicksburg	144.27	45	*e*PKPdf	PKPdf	05 44 44.9	+0.3
TRY	Troy	144.28	15	*e*PKPdf	PKPbc	05 44 43.1	+0.2
SSPA	Standing Stone	144.86	22	*e*PKPbc	PKPbc	05 44 44.8	0.0
HRV	Adam Dziewonsk	145.00	13	*e*PKIKP	PKPdf	05 44 45.8	+0.3
HRV	Adam Dziewonsk	145.00	13	*e*PKPbc	PKPdf	05 44 45.8	+0.3
QUA2	Belchertown	145.04	14	*e*PKPbc	PKPdf	05 44 45.8	+0.2
CPUP	Villa Florida	145.14	187	PKPbc	PKPdf	05 44 46.7	+0.4
CPUP				SKPbc	SKiKP	05 48 12.7	-0.2
CPUP	Villa Florida	145.14	187	PKPbc	PKPdf	05 44 46.7	+0.4
	comp=Z,53nm,0.9s,baz=190,slow=2.9,SNR=95						
CPUP				SKPbc	SKiKP	05 48 12.7	-0.2
	comp=Z,3.4nm,0.7s,baz=172,slow=1.6,SNR=3.1						
WES	Weston	145.17	13	*e*PKIKP	PKPab	05 44 46.1	+0.3
WES	Weston	145.17	13	*e*PKPbc	PKPab	05 44 46.1	+0.3
SPB	Sao Paulo	145.23	203	*e*PKPdf	PKPab	05 44 47.0	+0.4
SWET	Sewanee	145.31	36	*e*PKPbc	PKPdf	05 44 45.8	-0.5
BRYW	Bryant College	145.57	13	*e*PKPbc	PKPab	05 44 47.4	0.0
TZTN	Tazewell	145.68	32	*e*PKPbc	PKPab	05 44 47.7	-0.2
YLE	Yale	145.80	15	*e*PKPbc	PKPbc	05 44 47.6	0.0
CPCT	Cooper Cave	145.96	35	*e*PKPdf	PKPbc	05 44 48.2	-0.2
CPCT				*e*PKPbc	PKPab	05 44 49.5	+0.5
CPNY	Central Park	146.01	17	*e*PKPdf	PKPdf	05 44 47.3	0.0
CPNY				*e*PKPbc	PKPab	05 44 49.0	-0.1
LRAL	Lakeview Retre	146.12	40	*e*PKPdf	PKPdf	05 44 47.7	-0.1
LRAL				*e*PKPbc	PKPbc	05 44 49.2	+0.3
LRAL				*e*SKPbc	SKPbc	05 48 14.6	+0.1
TKL	Tuckaleechee C	146.22	34	SKPbc	SKPbc	05 48 14.0	-0.6
TKL	Tuckaleechee C	146.22	34	SKPbc	SKPbc	05 48 14.0	-0.6
	comp=Z,5.3nm,0.6s,baz=329,slow=5.9,SNR=4.8						
SDMD	Soldier's Deli	146.32	22	*e*PKPdf	PKPdf	05 44 47.7	-0.2
SDMD				*e*PKPbc	PKPbc	05 44 49.4	+0.1
BLA	Blacksburg	146.71	28	*e*PKIKP	PKPdf	05 44 48.8	+0.1
BLA				*e*		05 44 50.6	
BLA	Blacksburg	146.71	28	*e*PKPdf	PKPdf	05 44 48.8	+0.1
BLA				*e*PKPbc	PKPbc	05 44 50.6	+0.1
CBN	Corbin	147.17	23	*e*PKPdf	PKPdf	05 44 50.1	+0.8
CBN				*e*PKPbc	PKPbc	05 44 52.1	+0.4
CBN				*e*PKPab	PKiKP	05 44 54.2	+0.2
BRAL	Brewton	147.36	43	*e*PKPbc	PKPbc	05 44 53.0	+0.5
JSRW	J. Sargeant Re	147.41	24	*e*PKPdf	PKPdf	05 44 50.0	+0.2
JSRW				*e*PKPbc	PKPbc	05 44 52.8	+0.4
LVC	Limon Verde	148.28	167	*e*PKPbc	PKPab	05 44 57.7	-1.1
CNNC	Cliffs of the	149.48	27	*e*PKPbc	PKPbc	05 44 58.1	+0.3
TEIG	Tepich	151.71	63	PKPbc	PKPbc	05 45 04.0	+0.5
TEIG	Tepich	151.71	63	PKPbc	PKPbc	05 45 04.0	+0.5
	comp=Z,18nm,0.9s,baz=4.0,slow=3.5,SNR=6.0						
BDFB	Brasilia	152.50	209	PKP	PKPdf	05 45 00.0	+1.5
BDFB				PKPbc	PKiKP	05 45 06.7	+1.0
BDFB	Brasilia	152.50	209	PKP	PKPdf	05 45 00.0	+1.5
	comp=Z,4.1nm,1.0s,baz=118,slow=3.3,SNR=5.1						
BDFB				PKPbc	PKiKP	05 45 06.7	+1.0
	comp=Z,7.7nm,0.9s,baz=160,slow=3.5,SNR=10.0						
LPAZ	La Paz	154.55	165	*e*PKPdf	PKPdf	05 45 02.5	+0.4
LPAZ				PKP	PKPdf	05 45 03.6	+1.6
LPAZ				*e*PKPbc	PKPbc	05 45 11.1	+0.5
LPAZ				PKPbc	PKiKP	05 45 11.8	+1.2
LPAZ				PKPab	PKPab	05 45 26.3	+0.9
LPAZ	La Paz	154.55	165	PKP	PKPdf	05 45 03.6	+1.6
	comp=Z,3.6nm,1.0s,baz=169,slow=1.4,SNR=11						
LPAZ				PKPbc	PKiKP	05 45 11.8	+1.2
	comp=Z,6.5nm,1.1s,baz=188,slow=2.2,SNR=9.1						
LPAZ				PKPab	PKPab	05 45 26.3	+0.9
	comp=Z,4.1nm,0.6s,baz=156,slow=3.1,SNR=6.6						
NNA	Nana	154.64	143	*e*PKPdf	PKPdf	05 45 02.9	+1.4
NNA				PKP	PKPdf	05 45 03.0	+1.5
NNA				PKPbc	PKiKP	05 45 11.3	+1.1
NNA				*e*PKPbc	PKPbc	05 45 11.8	+1.6
NNA	Nana	154.64	143	PKP	PKPdf	05 45 03.0	+1.5
	comp=Z,2.6nm,0.5s,baz=240,slow=3.4,SNR=4.3						
NNA				PKPbc	PKiKP	05 45 11.3	+1.1
	comp=Z,13nm,0.9s,baz=274,slow=5.3,SNR=6.2						
SIV	San Ignacio	155.67	181	PKP	PKPdf	05 45 03.4	+0.6
SIV				PKPab	PKPab	05 45 30.5	+1.0
SIV	San Ignacio	155.67	181	PKP	PKPdf	05 45 03.4	+0.6
	comp=Z,3.2nm,0.9s,baz=228,slow=1.8,SNR=12						
SIV				PKPab	PKPab	05 45 30.5	+1.0
	comp=Z,7.4nm,0.9s,baz=171,slow=3.9,SNR=4.2						
ATAH	Atahualpa	157.18	132	PKP	PKPdf	05 45 06.1	+0.7
ATAH	Atahualpa	157.18	132	PKP	PKPdf	05 45 06.1	+0.7
	comp=Z,6.6nm,1.0s,baz=141,slow=2.6,SNR=4.5						
OTAV	Otavalo	161.33	115	*e*PKPdf	PKPdf	05 45 10.8	+0.5
SAML	Samuel	162.61	175	*e*PKPdf	PKPdf	05 45 12.0	+1.1
SAML				*e*PKPab	PKPab	05 46 00.9	+1.3
ROSC	El Rosal	166.87	105	*e*PKPdf	PKPdf	05 45 15.4	+0.3
ROSC				PKPab	PKPab	05 46 21.1	+1.8
ROSC	El Rosal	166.87	105	PKPab	PKPab	05 46 21.1	+1.8
	comp=Z,8.1nm,1.0s,baz=178,slow=3.3,SNR=5.0						

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*NIED **07** 05:29:00, 43.°70N×147.°80E, h50km, Mw3.9 Best double couple: $M_0$8.45000×10^14 NP1:ϕ_s240.00000°, δ82.00000°, λ-145.00000°. NP2:ϕ_s144.00000°, δ55.00000°, λ-10.00000°.*

*ISCJB **07** 05:29:34.4±0.9, 43.°93N±0.°06×147.°93E±0.°08, h76km±6km, mb3.9/18, Error ellipse: s-maj=12.6km s-min=5.6km az=44.8*

*JMA **07** 05:29:34.2±0.2, 43.°73N×147.°82E, h12km, M4.3*

*MOS **07** 05:29:34.8±0.9, 44.°01N×147.°96E, h77km, mb4.4/13, Error ellipse: s-maj=16.2km s-min=10.5km az=92.4*

*IDC **07** 05:29:36.4±3.8, 43.°94N×147.°89E, h80km±25km, mb3.8/11, mb1 3.9/13, mb1mx3.7/28, mbtmp3.7/13, Error ellipse: s-maj=57.9km s-min=18.5km az=170.0*

ISC 07 05:29:34.5±1.3**, 43.°87N**±0.°07×**148.°06E**±0.°08**, h66**km±10km**, n50, σ1.24**/60**, mb4.1**/18**, 1C-3D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.37	354	*d i*PN	Pn	05 29 57.1	-0.5
KUR				*i* S	Sn	05 30 13.8	-1.1
KUR				pmax	pmax		
	comp=Z,23μm,0.2s						
KUR				smax	smax		
	comp=E,627nm,0.5s						
KUR				smax	smax		
	comp=N,913nm,0.5s						
NEM2	Nemuro 2	1.75	254	P	Pn	05 30 02.0	-0.7
NEM2				*e*S	Sn	05 30 21.9	-2.2
JRA	Rausu	2.12	273	P	Pn	05 30 07.9	+0.3
JRA				*e*S	Sn	05 30 32.7	-0.3
JNK	Nakash	2.44	264	P	Pn	05 30 11.8	-0.1
JAK	Akkeshi	2.60	252	P	Pn	05 30 13.7	-0.4
JAK				*e*S	Sn	05 30 42.6	-2.0
JTKR	Abashiri--Toko	3.00	273	P	Pn	05 30 20.3	+0.7
JAR	Ashorobuto	3.17	261	P	Pn	05 30 22.4	+0.5
JAR				*e*S	Sn	05 30 57.9	-0.6
JOB	Onbets	3.23	254	P	Pn	05 30 23.0	+0.3
JOB				*e*S	Sn	05 30 58.8	-1.1
JMP	Maruseppu	3.40	274	P	Pn	05 30 26.0	+1.0
JCH	Churui	3.65	252	P	Pn	05 30 28.4	-0.1
JCH				*e*S	Sn	05 31 08.5	-1.8
JKK2	Kamakawa 2	3.84	272	P	Pn	05 30 32.6	+1.5
ASAJ	Asahikawa	3.95	275	P	Pn	05 30 33.1	+0.5
	comp=N,1.7nm,0.3s,baz=103,slow=14,SNR=20						
ASAJ				S	Sn	05 31 27.6	+10
	comp=N,1.9nm,0.3s,baz=18,slow=22,SNR=5.1						
JFR	Furan	4.04	262	*e*S	Sn	05 31 19.7	-0.1
ERM	Erimo	4.05	244	*d i*PN	Pn	05 30 35.6	+1.7
JSE	Soyaes	4.07	287	P	Pn	05 30 35.1	+0.9
JNBK	Urakawa-nobuka	4.20	250	P	Pn	05 30 36.1	+0.2
JNBK				*e*S	Sn	05 31 21.5	-2.2
JWK2	Keihoku	4.63	290	P	Pn	05 30 44.4	+2.5
YSS	Yuzh-Sakhalins	4.84	311	⇑ *i*PN	Pn	05 30 46.3	+1.6
YSS				*e*S	Sn	05 31 37.6	-1.9
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS				smax	smax		
	comp=N,50nm,1.0s						
JEW	Eniwo	4.93	260	P	Pn	05 30 47.2	+1.3
PETK	Petropavlovsk-	11.23	31	PN	Pn	05 32 12.8	+0.8
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	11.23	31	P	Pn	05 32 12.8	+0.8
	comp=Z,0.5nm,0.3s,baz=206,slow=12,SNR=5.0						
YAK	Yakutsk	21.16	336	*e*P	P	05 34 08.6	-5.1
YAK				pmax	pmax		
	comp=Z,22nm,0.9s						
BILL	Bilibino	26.07	16	⇓ *e*P	P	05 35 00.7	-0.6
BILL				*e*S	S	05 39 22.4	-5.0
BILL				pmax	pmax		
	comp=Z,1.0nm,0.3s						
WHN	Wuhan	29.74	255	P	P	05 35 36.4	+2.0
ILAR	Eielson Array	41.00	36	P	P	05 37 10.9	+0.4
	comp=Z,0.4nm,0.4s,baz=270,slow=9.0,SNR=8.7						
MKAR	Makanchi Array	45.11	298	P	P	05 37 43.7	-0.3
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	Makanchi Array	45.11	298	P	P	05 37 43.7	-0.3
	comp=Z,3.1nm,0.7s,baz=85,slow=9.3,SNR=2.6						
INK	Inuvik	45.97	30	P	P	05 37 51.5	+1.2
	comp=Z,5.0nm,0.9s,baz=304,slow=7.2,SNR=31						
KURK	Kurchatov	46.01	304	P	P	05 37 51.0	+0.1
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KURBB	Kurchatov Arra	46.09	304	P	P	05 37 51.0	-0.7
	comp=Z,3.3nm,0.5s,baz=74,slow=8.5,SNR=4.8						
YKA	Yellowknife Ar	55.34	34	P	P	05 39 01.4	+0.5
	comp=Z,0.3nm,0.6s,baz=300,slow=7.1,SNR=4.7						
YKA				PcP	PcP	05 39 59.5	-1.2
	comp=Z,0.3nm,0.8s,baz=296,slow=4.9,SNR=3.5						
ARCES	ARCESS Array B	59.36	340	P	P	05 39 28.6	-0.6
	comp=Z,1.0nm,0.5s,baz=48,slow=8.2,SNR=7.0						
FINES	FINESS Array B	65.07	333	P	P	05 40 06.4	-1.0
	comp=Z,2.3nm,0.5s,baz=44,slow=8.5,SNR=9.2						
NB2	NORSAR Subarra	69.73	339	P	P	05 40 36.2	-0.7
	comp=Z,2.5nm,0.7s,baz=32,slow=6.5						
NOA	NORSAR Array B	69.73	339	P	P	05 40 36.5	-0.4
	comp=Z,2.4nm,0.7s,baz=31,slow=6.2,SNR=15						
AKASG	Malin Array Be	71.87	324	*e*P	P	05 40 49.9	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	Malin Array Be	71.87	324	P	P	05 40 49.6	-0.5
	comp=Z,1.5nm,0.5s,baz=37,slow=5.8,SNR=11						
KOLS	Kolonicke sedl	76.10	327	*e*P	P	05 41 15.8	+1.1
KOLS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KOLS	Kolonicke sedl	76.10	327	*e*P	P	05 41 15.8	+1.1
STHS	Stebnicka Huta	76.12	327	*e*P	P	05 41 16.2	+1.3
STHS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
STHS	Stebnicka Huta	76.12	327	*e*P	P	05 41 16.2	+1.3
KECS	Kecovo	77.17	327	*e*P	P	05 41 20.5	-0.3
KECS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KECS	Kecovo	77.17	327	*e*P	P	05 41 20.5	-0.3
CLL	Collm	77.51	333	*e*P	P	05 41 22.0	-0.6
BRG	Berggiesshubel	77.57	332	*e*P	P	05 41 22.7	-0.2
	comp=Z,2.1nm,1.0s						
BRG	Berggiesshubel	77.57	332	*e*P	P	05 41 22.7	-0.2
BRG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KHC	Kasperske Hory	79.17	332	*e*P	P	05 41 31.5	-0.4
KHC	Kasperske Hory	79.17	332	*e*P	P	05 41 31.5	-0.4
GERES	GERESS Array B	79.37	331	P	P	05 41 33.0	0.0
	comp=Z,0.5nm,0.3s,baz=37,slow=6.9,SNR=9.4						
TXAR	Lajitas Array	82.04	57	P	P	05 41 48.5	+0.8
	comp=Z,0.2nm,0.5s,baz=303,slow=4.2,SNR=6.0						

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*IDC **07** 05:38:47.1±1.8, 35.°55N×141.°35E, h0km, mb3.6/4, mb1 3.7/6, mb1mx3.4/28, mbtmp3.7/6, ML3.3/2, MS3.6/3, Ms1 3.6/3, ms1mx2.7/33, Error ellipse: s-maj=60.6km s-min=23.1km az=82.0*

*ISCJB **07** 05:38:51.8±1.0, 35.°47N±0.°04×141.°17E±0.°10, h43km±8km, mb3.5/4, MS3.6/3, Error ellipse: s-maj=13.7km s-min=7.1km az=170.8*

*JMA **07** 05:38:52.1±0.1, 35.°53N×141.°17E, h37km±1km, M3.1*

ISC 07 05:38:50.3±1.9**, 35.°53N**±0.°06×**141.°27E**±0.°08**, h25**km±14km**, n19, σ1.33**/23**, mb3.6**/4**, MS3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.38	297	P	Pn	05 39 00.1	0.0
CHOJ				S	Sn	05 39 05.8	-0.8
KTR	Katsuura	0.87	244	P	Pn	05 39 07.1	+0.2
JCN	Nagara	0.88	263	P	Pn	05 39 08.2	+1.1
BSO1	Boso 1	0.91	195	P	Pn	05 39 08.1	+1.1
BSO1				S	Sb	05 39 17.4	-1.1
BSO4	Boso 4	0.94	235	P	Pb	05 39 08.2	+0.5
BSO4				S	Sb	05 39 19.0	-0.7
BSO3	Boso 3	0.96	221	P	Pb	05 39 08.4	+0.3
JIM2	Oshima 3	1.71	242	P	Pn	05 39 18.1	-0.5
JIM2				S	Sn	05 39 37.6	-2.1
JAG	Ashikaga	1.72	302	P	Pn	05 39 19.9	+1.2
JOD2	Odawara 2	1.80	262	P	Pn	05 39 20.3	+0.5
MAT	Matsushiro	2.68	293	P	Pn	05 39 33.7	+1.9
MAT				*e*S	Sn	05 40 03.0	-0.5
JHJ	Hachijo jima 2	2.71	207	Pn	Pn	05 39 33.0	+0.9
	11nm,0.3s,baz=233,slow=20,SNR=4.2						
JHJ				Sn	Sn	05 40 02.0	-2.1
	22nm,0.3s,baz=281,slow=19,SNR=3.1						
ASAJ	Asahikawa	8.63	6	Pn	Pn	05 40 53.0	-0.5
	0.5nm,0.3s,baz=218,slow=12,SNR=3.8						
ASAJ				Sn	Sn	05 42 26.9	-3.2
	0.2nm,0.3s,baz=270,slow=20,SNR=1.7						
SONM	Songino Array	28.55	306	LR	LR	05 57 19.3	
	comp=Z,103nm,21.3s,baz=308,slow=39						
ZALV	Zalesovo Beam	42.85	314	LR	LR	06 06 36.4	
	comp=Z,54nm,18.1s,baz=339,slow=39						
MKAR	Makanchi Array	44.83	303	P	P	05 47 02.9	+0.6
	0.2nm,0.5s,baz=95,slow=9.6,SNR=2.8						
KURBB	Kurchatov Arra	46.84	309	P	P	05 47 19.0	+1.0
	0.4nm,0.6s,baz=82,slow=7.4,SNR=3.1						
WRA	Warramunga Arr	55.56	188	P	P	05 48 24.2	+0.5
	1.0nm,0.7s,baz=4.5,slow=7.7,SNR=12						
ASAR	Alice Springs	59.29	188	P	P	05 48 51.0	+1.0
	0.3nm,0.7s,baz=21,slow=13,SNR=4.3						
GERES	GERESS Array B	83.92	328	LR	LR	06 35 54.1	
	comp=Z,45nm,18.5s,baz=302,slow=41						

MEX 07 05:42:40.4±0.3**, 15.°52N**×**93.°75W, h63**km±5km**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.54	70	*i* P	Pn	05 42 51.8	-1.3
PCIG				*e*S	Sn	05 43 00.3	-1.9
TGIG		1.39	25	*i* P	Pn	05 43 02.3	-1.5
TGIG				*i* S	Sn	05 43 19.4	-1.9
THIG		1.55	113	*i* P	Pn	05 43 03.7	-2.1
THIG				*i* S	Sn	05 43 23.3	-1.8
CCIG	Comitan	1.73	64	*i* P	Pn	05 43 06.9	-1.5
CCIG				*i* S	Sn	05 43 27.3	-2.4
HUIG	Huatulco	2.29	277	*e*P	Pn	05 43 14.6	-1.3
HUIG				*i* S	Sn	05 43 40.9	-2.1

MEX 07 05:43:47.0±0.5**, 16.°60N**×**93.°76W, h143**km±6km**, MD3.6, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		0.64	74	*i* P	Pn	05 44 07.4	-1.1
TGIG				*i* S	Sn	05 44 22.5	-2.2
PCIG		1.03	150	*i* P	Pn	05 44 09.9	-1.5
PCIG				*i* S	Sn	05 44 27.9	-2.1
CCIG	Comitan	1.59	101	*i* P	Pn	05 44 15.7	-1.6
CCIG				*i* S	Sn	05 44 38.5	-1.9
THIG		2.22	139	*i* P	Pn	05 44 23.6	-0.7
THIG				*i* S	Sn	05 44 51.6	-1.3
HUIG	Huatulco	2.40	250	*i* P	Pn	05 44 24.8	-1.8
HUIG				*i* S	Sn	05 44 55.5	-1.5

MEX 07 05:56:27.9±0.8**, 16.°98N**×**100.°10W, h4**km±8km**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.18	292	*e*P	Pg	05 56 30.6	-0.8
CAIG				*i* S	Sg	05 56 33.8	0.0
ACX	Acapulco	0.25	116	*i* P	Pg	05 56 31.8	-1.1
ACX				*e*S	Sg	05 56 34.9	-1.3
MEIG	Mezcala	1.04	26	*i* P	Pg	05 56 44.5	-3.6
MEIG				*i* S	Sg	05 56 58.5	-3.2
ARIG	Puente Sto Nin	1.31	350	*i* P	Pn	05 56 49.5	-3.6
ARIG				*i* S	Sg	05 57 06.2	-4.1
ZIIG	Zihuatanejo	1.45	296	*i* P	Pn	05 56 51.5	-3.3
ZIIG				*e*S	Sb	05 57 09.1	-5.2
PLIG	Platanillo	1.51	22	*e*P	Pn	05 56 52.7	-3.2
PLIG				*e*S	Sn	05 57 11.4	-4.8
PNIG	Pinotepa	1.98	107	*i* P	Pn	05 56 58.4	-3.8
PNIG				*i* S	Sn	05 57 22.1	-5.3
YAIG	Yautepec	2.11	27	*i* P	Pn	05 57 01.8	-2.5
YAIG				*i* S	Sn	05 57 26.3	-4.7

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*TAP **07** 06:26:36.0, 24.°02N×121.°67E, h53km, ML3.5, C*

*ISCJB **07** 06:26:36.1±0.3, 24.°01N±0.°02×121.°76E±0.°02, h51km±4km, Error ellipse: s-maj=3.4km s-min=2.3km az=136.8*

*JMA **07** 06:26:36.5±0.2, 24.°21N×121.°79E, h79km, M2.6*

ISC 07 06:26:36.7±1.2**, 24.°02N**±0.°02×**121.°74E**±0.°02**, h47**km±6km**, n53, σ0.82**/101**, 7D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	Hwalien	0.13	252	P	Pn	06 26 44.7	+0.5
	baz=245						
HWA				*e*S	Sn	06 26 50.4	+0.8
	baz=245						
TWD	Chiawan	0.15	295	*i* P	Pn	06 26 44.2	-0.1
	baz=296						
TWD				*i* S	Sn	06 26 50.1	+0.4
	baz=296						
ESF	Shoufeng Towns	0.26	236	*e*P	Pn	06 26 44.7	-0.5
	baz=237						
ESF				*e*S	Sn	06 26 51.7	+0.6
	baz=237						
ESL	Shilin	0.35	235	⇓ *i*P	Pn	06 26 45.2	-0.8
	baz=234						
ESL				*e*S	Sn	06 26 51.6	-0.9
	baz=234						
ENA	Nanau	0.41	360	*e*P	Pn	06 26 46.5	-0.2
	baz=3.0						
ENA				*e*S	Sn	06 26 54.9	+1.1
	baz=3.0						
WHF	Hehuan Shan	0.46	286	⇓ *i*P	Pn	06 26 47.0	-0.6
	baz=284						
WHF				S	Sn	06 26 54.7	-0.7
	baz=284						
NNS	Nan Shan	0.54	321	⇓ *i*P	Pn	06 26 47.7	-0.6
	baz=333						
NNS				S	Sn	06 26 56.3	-0.4
	baz=333						
TWT	Tachien	0.57	294	*i* P	Pn	06 26 48.6	-0.2
	baz=296						
TWT				S	Sn	06 26 57.0	-0.4
	baz=296						
TWC	Suao	0.60	9	*i* P	Pn	06 26 49.4	+0.4
	baz=22						
TWC				S	Sn	06 26 58.9	+1.1
	baz=22						
EHY	Hungye	0.64	217	*e*P	Pn	06 26 48.0	-1.5
	baz=213						
EHY				*e*S	Sn	06 26 58.9	+0.1
	baz=213						
ENTT	Nioudou	0.64	345	⇓P	Pn	06 26 49.0	-0.5
	baz=350						
ENTT				*e*S	Sn	06 26 58.2	-0.6
	baz=350						
TWE	Neicheng	0.70	354	*e*P	Pn	06 26 50.1	-0.3
	baz=354						
TWE				*e*S	Sn	06 27 00.6	+0.4
	baz=354						
NSK	Sanguang	0.74	332	⇓ *i*P	Pn	06 26 50.4	-0.5
	baz=341						
NSK				*e*S	Sn	06 27 00.1	-1.1
	baz=341						
TWF1	Yuli	0.78	212	*e*P	Pn	06 26 50.0	-1.4
	baz=216						
TWF1				*e*S	Sn	06 27 00.7	-1.3
	baz=216						
SMLT	Sun Moon Lake	0.78	260	P	Pn	06 26 51.0	-0.5
	baz=260						
SMLT				*e*S	Sn	06 27 03.6	+1.3
	baz=260						
TYC	Yuchr	0.82	262	P	Pn	06 26 51.5	-0.4
	baz=260						
TYC				*e*S	Sn	06 27 03.6	+0.7
	baz=260						
YUS	Yu-Shan	0.90	234	⇓ *i*P	Pn	06 26 53.1	-0.2
	baz=226						
YUS				*i* S	Sn	06 27 04.6	-0.9
	baz=226						
NSTT	Nanjuang	0.91	312	⇓ *i*P	Pn	06 26 53.2	+0.1
	baz=303						
NSTT				*e*S	Sn	06 27 05.2	0.0
	baz=303						
TWQ1	Liyutan	0.94	291	P	Pn	06 26 53.2	-0.4
	baz=292						
TWQ1				*e*S	Sn	06 27 05.8	-0.2
	baz=292						
CHKT	Chengkung	0.98	201	*e*P	Pn	06 26 55.0	+1.0
	baz=199						
CHKT				*e*S	Sn	06 27 07.0	+0.2
	baz=199						
WNT	Mingjian	0.98	262	*e*P	Pn	06 26 54.3	+0.3
	baz=261						
WNT				*e*S	Sn	06 27 08.0	+1.2
	baz=261						
NSY	Sanyi	0.98	294	*e*P	Pn	06 26 53.8	-0.3
	baz=295						
NSY				*e*S	Sn	06 27 06.9	0.0
	baz=295						
TCU	Taichung	0.98	278	*e*P	Pn	06 26 54.1	0.0
	baz=278						
TCU				*e*S	Sn	06 27 07.2	+0.3
	baz=278						
ALS	Alishan	1.00	240	P	Pn	06 26 54.8	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=233						
ALS				*e*S	**Sn**	**06 27 08.0**	**+0.3**
	baz=233						
TWB1	**Santiao Chiao**	**1.01**	**13**	P	**Pn**	**06 26 54.8**	**+0.3**
	baz=23						
TWB1				S	**Sn**	**06 27 08.3**	**+0.7**
	baz=23						
NWF	**Wu-fen Shan**	**1.05**	**2**	*e*P	**Pn**	**06 26 54.9**	**-0.2**
	baz=351						
NWF				*e*S	**Sn**	**06 27 09.6**	**+0.9**
	baz=351						
ELDTW	**Lidau**	**1.06**	**219**	*e*P	**Pn**	**06 26 54.4**	**-0.9**
	baz=212						
CHN5	**Tsauling**	**1.06**	**247**	P	**Pn**	**06 26 55.2**	**0.0**
	baz=239						
CHN5				*e*S	**Sn**	**06 27 09.8**	**+0.9**
	baz=239						
NCU	**National Centr**	**1.07**	**332**	*e*P	**Pn**	**06 26 55.5**	**+0.1**
	baz=334						
NCU				*e*S	**Sn**	**06 27 08.9**	**-0.3**
	baz=334						
TWS1	**Kuangyinshan**	**1.12**	**345**	*e*P	**Pn**	**06 26 55.8**	**-0.1**
	baz=357						
TWS1				*e*S	**Sn**	**06 27 10.3**	**+0.1**
	baz=357						
WGK	**Gukeng**	**1.13**	**253**	*e*P	**Pn**	**06 26 56.0**	**-0.1**
	baz=243						
WGK				*e*S	**Sn**	**06 27 11.8**	**+1.3**
	baz=243						
YOJ	**Yonaguni jima**	**1.24**	**69**	P	**Pn**	**06 26 57.5**	**-0.1**
YOJ				S	**Sn**	**06 27 12.9**	**-0.2**
CHN4	**Tsaushan**	**1.25**	**238**	*e*P	**Pn**	**06 26 58.1**	**+0.4**
	baz=237						
CHN4				*e*S	**Sn**	**06 27 14.7**	**+1.3**
	baz=237						
CHN2	**Minshiung**	**1.26**	**248**	*e*P	**Pn**	**06 26 58.3**	**+0.5**
	baz=239						
CHN2				*e*S	**Sn**	**06 27 16.0**	**+2.4**
	baz=239						
TWY	**Chenhua**	**1.26**	**354**	*e*P	**Pn**	**06 26 56.3**	**-1.5**
	baz=347						
WTP	**Ta-pu**	**1.29**	**234**	*e*P	**Pn**	**06 26 58.8**	**+0.4**
	baz=232						
WTP				*e*S	**Sn**	**06 27 15.6**	**+1.2**
	baz=232						
CHY	**Chiayi**	**1.31**	**247**	*e*P	**Pn**	**06 26 58.0**	**-0.6**
	baz=237						
CHY				*e*S	**Sn**	**06 27 16.2**	**+1.2**
	baz=237						
TWG	**Pinlang**	**1.34**	**208**	*e*P	**Pn**	**06 26 59.4**	**+0.4**
	baz=198						
TWG				*e*S	**Sn**	**06 27 16.1**	**+0.4**
	baz=198						
WTCT	**Ta-ch'eng**	**1.35**	**264**	*e*P	**Pn**	**06 26 59.1**	**0.0**
	baz=275						
WTCT				*e*S	**Sn**	**06 27 16.3**	**+0.6**
	baz=275						
TWK	**Hsinying**	**1.37**	**237**	*e*P	**Pn**	**06 26 59.8**	**+0.3**
	baz=236						
TWK				*e*S	**Sn**	**06 27 17.6**	**+1.1**
	baz=236						
CHN1	**Nanshi**	**1.39**	**234**	*e*P	**Pn**	**06 27 00.2**	**+0.5**
	baz=233						
CHN1				*e*S	**Sn**	**06 27 17.6**	**+0.7**
	baz=233						
ECL	**Taimali**	**1.59**	**207**	*e*P	**Pn**	**06 27 03.5**	**+1.2**
	baz=202						
ECL				*e*S	**Sn**	**06 27 20.3**	**-1.4**
	baz=202						
SCLT	**Jiali**	**1.65**	**240**	*e*P	**Pn**	**06 27 03.4**	**+0.2**
	baz=239						
SCLT				*e*S	**Sn**	**06 27 24.7**	**+1.5**
	baz=239						
TWM1	**Shoushan**	**1.70**	**226**	*e*P	Pn	06 27 08.1	+4.2
	baz=233						
EAST	**Anshuo**	**1.82**	**207**	*e*P	**Pn**	**06 27 05.9**	**+0.2**
	baz=203						
EAST				*e*S	**Sn**	**06 27 27.8**	**+0.3**
	baz=203						
IRIF	**Iriomote-Funau**	**1.84**	**80**	P	**Pn**	**06 27 05.7**	**-0.1**
IRIF				S	**Sn**	**06 27 27.8**	**-0.1**
HATJ	**Hateruma jima**	**1.89**	**88**	P	**Pn**	**06 27 06.7**	**+0.3**
HATJ				S	**Sn**	**06 27 29.4**	**+0.4**
SCZT	**Fangliau**	**1.94**	**212**	*e*P	**Pn**	**06 27 08.1**	**+1.0**
	baz=202						
LAY	**Lan-yu**	**1.98**	**185**	*e*P	**Pn**	**06 27 07.0**	**-0.8**
	baz=181						
LAY				*e*S	**Sn**	**06 27 29.8**	**-1.5**
	baz=181						
WDGT	**Dungji**	**2.05**	**249**	*e*P	**Pn**	**06 27 06.8**	**-1.9**
	baz=248						
WDGT				*e*S	**Sn**	**06 27 31.0**	**-2.2**
	baz=248						
JKRS	**Kuro-shima**	**2.08**	**84**	P	**Pn**	**06 27 09.4**	**+0.3**
JKRS				S	**Sn**	**06 27 35.1**	**+1.3**
JIJ	**Ishigaki jima**	**2.22**	**81**	P	**Pn**	**06 27 10.7**	**-0.3**
JIJ				S	**Sn**	**06 27 36.1**	**-1.1**
JTJ	**Tarama**	**2.77**	**76**	P	**Pn**	**06 27 18.6**	**+0.1**
JTJ				S	**Sn**	**06 27 50.0**	**-0.7**

*DDA **07** 06:27:27.6, 38.°34N×38.°96E, h9^{km}, MD2.8*
*ISK **07** 06:27:27.9, 38.°38N×38.°95E, h5^{km}, MD2.8*
*ISCJB **07** 06:27:28.4±0.7, 38.°37N±0.°03×38.°91E±0.°04, h0^{km}±6^{km}, Error ellipse: s-maj=6.4km s-min=4.5km az=35.3*
*CSEM **07** 06:27:28.6±0.3, 38.°38N×38.°92E, h2^{km}, MD2.8, Error ellipse: s-maj=10.4km s-min=6.0km az=133.0*
ISC 07 06:27:28.2±1.0**, 38.°35N**±0.°03×**38.°96E**±0.°03**, h9**^{km}±8^{km}**, n19,** σ**0.^{s}44**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.15**	**8**	*i* P	**Pg**	**06 27 31.5**	**-0.1**
ELZG				*i* S	**Sg**	**06 27 33.9**	**0.0**
ELZG	**Elazig**	**0.15**	**8**	*i* P	**Pg**	**06 27 31.5**	**-0.1**
ELZG				*i* S	**Sg**	**06 27 33.9**	**0.0**
MYA	**Malataya**	**0.42**	**267**	*e*PG	**Pg**	**06 27 36.2**	**-0.3**
MYA	**Malataya**	**0.42**	**267**	*e*Pg	**Pg**	**06 27 36.2**	**-0.3**
PTK	**Pertek**	**0.64**	**32**	*e*PG	**Pg**	**06 27 40.5**	**-0.1**
PTK				*e*SG	**Sg**	**06 27 49.5**	**+0.5**
PTK	**Pertek**	**0.64**	**32**	*e*Pg	**Pg**	**06 27 40.5**	**-0.1**
PTK				*e*Sg	**Sg**	**06 27 49.5**	**+0.5**
AKCD	**Akcadag**	**0.82**	**266**	*i* P	**Pg**	**06 27 43.3**	**-0.7**
AKCD				*i* S	**Sg**	**06 27 55.0**	**+0.4**
AKCD	**Akcadag**	**0.82**	**266**	*i* P	**Pg**	**06 27 43.3**	**-0.7**
AKCD				*i* S	**Sg**	**06 27 55.0**	**+0.4**
URFA	**Urfa**	**0.92**	**187**	*e*PG	**Pb**	**06 27 46.5**	**+0.2**
URFA				*e*SG	**Sb**	**06 27 59.8**	**+1.2**
URFA	**Urfa**	**0.92**	**187**	*e*Pg	**Pb**	**06 27 46.5**	**+0.2**
ILIC	**ilic-Erzincan**	**1.14**	**345**	*e*PN	**Pb**	**06 27 50.2**	**0.0**
ILIC				*e*SN	**Sb**	**06 28 05.0**	**-0.1**
ILIC	**ilic-Erzincan**	**1.14**	**345**	*e*Pn	**Pb**	**06 27 50.2**	**0.0**
ILIC				*e*Sn	**Sb**	**06 28 05.0**	**-0.1**
DARE	**Darende-Malaty**	**1.18**	**281**	*e*PN	**Pn**	**06 27 51.1**	**+0.1**
DARE	**Darende-Malaty**	**1.18**	**281**	*e*Pn	**Pn**	**06 27 51.1**	**+0.1**
KELT	**Kelkit**	**1.81**	**7**	*i* P	**Pg**	**06 28 02.5**	**-0.4**
KELT				*i* S	**Sg**	**06 28 26.9**	**+0.6**
KELT	**Kelkit**	**1.81**	**7**	*i* P	**Pg**	**06 28 02.5**	**-0.4**
KMRS	**Kahramanmaras**	**1.83**	**243**	*e*PN	**Pb**	**06 28 01.6**	**-0.4**
KMRS	**Kahramanmaras**	**1.83**	**243**	*e*Pn	**Pb**	**06 28 01.6**	**-0.4**
BEST	**Besiri**	**1.88**	**103**	*i* P	**Pb**	**06 28 02.1**	**-0.7**
BEST				*i* S	**Sg**	**06 28 28.1**	**-0.5**

IDC 07 07:26:47.3±4.6**, 5.°16S**×**153.°50E, h58**^{km}±38^{km}**, mb3.8**/11**, mb1 3.9**/12**, mb1mx3.8**/21**, mbtmp3.9**/12**, ML3.3**/1**, MS3.4**/3**, Ms1 3.4**/3**, ms1mx3.0**/18**, Error ellipse: s-maj=29.2km s-min=18.1km az=66.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.57**	**236**	P	Pn	07 28 36.3	+1.2
	2.7nm,0.3s,baz=40,slow=7.9,SNR=7.5						
PMG				S	Sn	07 30 00.1	+0.6
	4.8nm,0.3s,baz=85,slow=22,SNR=14						
PMG				LR	LR	07 31 17.2	
	comp=Z,113nm,19.9s,baz=323,slow=36						
DZM	**Mont Dzumac**	**20.97**	**144**	P	P	07 31 25.6	-0.3
	8.5nm,0.5s,baz=325,slow=12,SNR=21						
WRA	**Warramunga Arr**	**23.74**	**230**	P	P	07 31 53.6	-0.9
	1.0nm,0.5s,baz=55,slow=9.9,SNR=18						
WRA				PcP	PcP	07 35 37.6	+0.3
	1.4nm,0.8s,baz=57,slow=2.7,SNR=9.6						
ASAR	**Alice Springs**	**26.36**	**224**	P	P	07 32 17.7	-0.7
	0.3nm,0.4s,baz=56,slow=8.8,SNR=7.1						
ASAR				PcP	PcP	07 35 43.3	+0.2
	0.5nm,0.9s,baz=66,slow=2.1,SNR=6.5						
ASAR				LR	LR	07 42 23.0	
	comp=Z,75nm,19.7s,baz=253,slow=36						
KSRS	**Korea Array**	**48.64**	**333**	P	P	07 35 25.5	0.0
	0.8nm,0.7s,baz=160,slow=10,SNR=3.7						
CMAR	**Chiang Mai Arr**	**58.66**	**295**	P	P	07 36 40.5	+1.2
	2.8nm,0.8s,baz=118,slow=5.4,SNR=10.0						
VNDA	**Vanda**	**72.45**	**178**	P	P	07 38 07.8	+0.6
	1.0nm,0.8s,baz=2.8,slow=5.8,SNR=9.4						
MKAR	**Makanchi Array**	**81.05**	**319**	P	P	07 38 56.5	+0.2
	2.1nm,0.9s,baz=104,slow=5.3,SNR=12						
ZALV	**Zalesovo Beam**	**81.84**	**326**	P	P	07 38 59.2	-1.0
	0.6nm,0.4s,baz=98,slow=7.6,SNR=5.0						
AAK	**Ala-Archa**	**85.42**	**313**	P	P	07 39 18.7	-0.3
	0.9nm,0.3s,baz=133,slow=6.3,SNR=5.7						
MAW	**Mawson**	**85.50**	**203**	P	P	07 39 18.6	-0.1
	1.6nm,0.5s,baz=99,slow=9.3,SNR=8.2						
MAW				LR	LR	08 16 12.9	
	comp=Z,48nm,19.4s,baz=269,slow=35						
BVAR	**Borovoye Array**	**89.95**	**323**	P	P	07 39 39.4	-0.9
	1.9nm,0.7s,baz=101,slow=7.5,SNR=5.8						
TORD	**Torodi Ar. Bea**	**151.08**	**288**	PKPbc	PKPbc	07 46 34.3	-0.7
	4.0nm,0.8s,baz=28,slow=2.5,SNR=25						

*ISCJB **07** 07:50:27.9±0.7, 51.°40N±0.°04×16.°07E±0.°03, h0^{km}, Error ellipse: s-maj=5.6km s-min=2.9km az=14.8*
*IPEC **07** 07:50:28.5±0.2, 51.°48N×16.°15E, h4^{km}±1^{km}, ML2.1/3, Error ellipse: s-maj=1.9km s-min=0.7km az=38.0*
*WAR **07** 07:50:28.7, 51.°50N×16.°09E*
*CSEM **07** 07:50:29.0±0.5, 51.°41N×16.°07E, h2^{km}, ML3.2/7, Error ellipse: s-maj=7.8km s-min=4.1km az=8.0*
*PRU **07** 07:50:29.9, 51.°41N×16.°10E, h0^{km}*
ISC 07 07:50:29.7±1.1**, 51.°42N**±0.°05×**16.°03E**±0.°02**, h0**^{km}**, n29,** σ**0.^{s}88**/54**, 1D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.60**	**164**	*e*Pg	**Pg**	**07 50 41.1**	**-0.1**
KSP				*e*Sg	**Sg**	**07 50 49.7**	**+0.7**
KSP	**Ksiaz**	**0.60**	**164**	⇓*i*Pg	**Pg**	**07 50 41.2**	**0.0**
KSP				*e*Sg	**Sg**	**07 50 49.7**	**+0.7**
UPC	**Upice**	**0.92**	**181**	*e*PG	**Pg**	**07 50 46.9**	**-0.3**
UPC	**Upice**	**0.92**	**181**	Pg	**Pg**	**07 50 46.9**	**-0.3**
DPC	**Dobruska-Polom**	**1.09**	**170**	*e*PG	**Pg**	**07 50 50.0**	**-0.5**
DPC				*e*SG	**Sg**	**07 51 04.7**	**+0.1**
DPC	**Dobruska-Polom**	**1.09**	**170**	Pg	**Pg**	**07 50 50.0**	**-0.5**
DPC				Sg	**Sg**	**07 51 04.7**	**+0.1**
PVCC	**Panska Ves**	**1.29**	**226**	*e*PG	**Pg**	**07 50 54.2**	**-0.1**
PVCC				*e*SG	**Sb**	**07 51 12.2**	**+0.4**
	comp=Z,87nm,0.3s						
PVCC	**Panska Ves**	**1.29**	**226**	Pg	**Pg**	**07 50 54.2**	**-0.1**
PVCC				Sg	**Sb**	**07 51 12.2**	**+0.4**
	87nm,0.3s						
BRG	**Berggiesshubel**	**1.43**	**248**	PG	**Pn**	**07 50 56.7**	**-0.1**
BRG				SG	**Sn**	**07 51 16.6**	**+0.4**
	41nm,0.4s						
KRLC	**Kraliky**	**1.43**	**160**	*e*PG	**Pn**	**07 50 56.1**	**-0.8**
KRLC				*e*SG	**Sg**	**07 51 15.4**	**-0.2**
KRLC	**Kraliky**	**1.43**	**160**	Pg	**Pn**	**07 50 56.1**	**-0.8**
KRLC				Sg	**Sg**	**07 51 15.4**	**-0.2**
PRU	**Pruhonice**	**1.72**	**214**	*e*PN	**Pn**	**07 50 59.9**	**-0.9**
PRU				*e*PG	**Pb**	**07 51 01.5**	**-0.6**
PRU				*e*SG	**Sg**	**07 51 25.6**	**+0.7**
	comp=Z,14nm,0.3s						
PRU	**Pruhonice**	**1.72**	**214**	Pn	**Pn**	**07 50 59.9**	**-0.9**
CLL	**Collm**	**1.90**	**268**	*e*Pn	**Pn**	**07 51 02.0**	**-1.3**
CLL				*e*Pg	**Pg**	**07 51 06.0**	**-0.1**
CLL				*e*Sg	**Sg**	**07 51 31.0**	**+0.3**
	comp=Z,16nm,0.5s						
MORC	**Moravsky Berou**	**1.91**	**149**	*e*Pn	**Pn**	**07 51 01.9**	**-1.6**
	baz=333						
MORC				*e*Sg	**Sn**	**07 51 28.6**	**+0.4**
OKC	**Ostrava-Krasne**	**2.08**	**139**	*e*PG	**Pb**	**07 51 07.4**	**-0.9**
OKC				*e*SG	**Sn**	**07 51 33.3**	**+0.9**
	comp=Z,14nm,0.3s						
OKC	**Ostrava-Krasne**	**2.08**	**139**	Pg	**Pb**	**07 51 07.4**	**-0.9**
OKC				Sg	**Sn**	**07 51 33.3**	**+0.9**
	comp=Z,14nm,0.3s						
VRAC	**Vranov**	**2.15**	**170**	*e*Pn	**Pn**	**07 51 06.4**	**-0.3**
VRAC				*e*Sg	**Sb**	**07 51 36.9**	**+0.3**
	comp=Z,12nm,0.4s,baz=353						
KRUC	**Moravsky**	**2.38**	**174**	*e*Pn	**Pn**	**07 51 09.6**	**-0.3**
KRUC	**Moravsky**	**2.38**	**174**	*e*Pg	**Pb**	**07 51 12.9**	**-0.4**
KRUC				*e*Sg	**Sb**	**07 51 44.3**	**+1.2**
	comp=Z,6.7nm,0.3s,baz=356						
NKC	**Novy Kostel**	**2.56**	**244**	*e*PN	**Pn**	**07 51 12.5**	**0.0**
NKC				*e*PG	**Pg**	**07 51 17.9**	**-0.9**
NKC				*e*SG	**Sg**	**07 51 53.9**	**+1.9**
	comp=Z,23nm,0.3s						
NKC	**Novy Kostel**	**2.56**	**244**	Pn	**Pn**	**07 51 12.5**	**0.0**
OJC	**Ojcow**	**2.68**	**115**	*e*Pg	**Pg**	**07 51 20.6**	**-0.3**
OJC				*e*Sg	**Sg**	**07 51 55.6**	**0.0**
OJC	**Ojcow**	**2.68**	**115**	*e*Pg	**Pg**	**07 51 20.6**	**-0.3**
OJC				*e*Sg	**Sg**	**07 51 55.6**	**0.0**
KHC	**Kasperske Hory**	**2.78**	**215**	*e*PN	**Pn**	**07 51 15.0**	**-0.5**
KHC				*e*PG	**Pb**	**07 51 20.7**	**+0.5**
KHC				*e*SN	**Sn**	**07 51 49.0**	**-0.8**
KHC				*e*SG	**Sg**	**07 51 59.5**	**+0.5**
	comp=Z,5.2nm,0.4s						
KHC	**Kasperske Hory**	**2.78**	**215**	Pn	**Pn**	**07 51 15.0**	**-0.5**
STHS	**Stebnicka Huta**	**3.89**	**119**	*e*	**Pg**	**07 51 44.0**	**-0.2**
STHS	**Stebnicka Huta**	**3.89**	**119**	*e*SG	**Sg**	**07 52 37.6**	**+3.0**
STHS	**Stebnicka Huta**	**3.89**	**119**	*e*Sg	**Sg**	**07 52 37.6**	**+3.0**

*ISCJB **07** 08:01:13.7±0.6, 37.°88N±0.°03×29.°21E±0.°04, h0^{km}±6^{km}, Error ellipse: s-maj=5.8km s-min=4.0km az=21.1*
*DDA **07** 08:01:13.5, 37.°88N×29.°22E, h7^{km}, MD3.2*
*ISK **07** 08:01:13.6, 37.°88N×29.°19E, h4^{km}, MD2.9*
*CSEM **07** 08:01:13.8±0.1, 37.°87N×29.°21E, h2^{km}, MD2.9, Error ellipse: s-maj=2.5km s-min=2.0km az=116.0*
ISC 07 08:01:14.2±1.1**, 37.°89N**±0.°02×**29.°19E**±0.°03**, h6**^{km}±11^{km}**, n36,** σ**0.^{s}39**/48**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.18**	**223**	*e*PG	**Pg**	**08 01 17.6**	**-0.2**
DENT	**Denizli**	**0.18**	**223**	*e*Pg	**Pg**	**08 01 17.6**	**-0.2**
DNZL	**Cakiroluk**	**0.23**	**210**	*i* P	**Pg**	**08 01 18.2**	**-0.5**
DNZL				*i* S	**Sg**	**08 01 22.1**	**+0.4**
DNZL	**Cakiroluk**	**0.23**	**210**	*i* P	**Pg**	**08 01 18.2**	**-0.5**
DNZL				*i* S	**Sg**	**08 01 22.1**	**+0.4**
KHAL	**Karahalli**	**0.54**	**26**	*i* P	**Pg**	**08 01 23.8**	**-0.8**
KHAL				*i* S	**Sg**	**08 01 32.0**	**+0.4**
KHAL	**Karahalli**	**0.54**	**26**	*i* P	**Pg**	**08 01 23.8**	**-0.8**
KHAL				*i* S	**Sg**	**08 01 32.0**	**+0.4**
KULA	**Kula-Manisa**	**0.75**	**327**	*e*PG	**Pg**	**08 01 28.7**	**+0.1**
KULA				*e*SG	**Sb**	**08 01 39.9**	**-0.4**
KULA	**Kula-Manisa**	**0.75**	**327**	*e*Pg	**Pg**	**08 01 28.7**	**+0.1**
KULA				*e*Sg	**Sb**	**08 01 39.9**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.77**	**161**	*e*PG	**Pg**	**08 01 28.5**	**-0.4**
GLHS	**Glhisar (BURDU**	**0.77**	**161**	*e*Pg	**Pg**	**08 01 28.5**	**-0.4**
YER	**Yerkesik**	**1.04**	**224**	*e*PG	**Pg**	**08 01 34.3**	**+0.2**
YER	**Yerkesik**	**1.04**	**224**	*e*Pg	**Pg**	**08 01 34.3**	**+0.2**
ISP	**Isparta**	**1.06**	**93**	*e*PG	**Pg**	**08 01 33.7**	**-0.7**
ISP	**Isparta**	**1.06**	**93**	*e*Pg	**Pg**	**08 01 33.7**	**-0.7**
AYDN	**Tasoluk**	**1.06**	**258**	*i* P	**Pg**	**08 01 34.2**	**-0.3**
AYDN				*i* S	**Sg**	**08 01 48.4**	**+0.1**
AYDN	**Tasoluk**	**1.06**	**258**	*i* P	**Pg**	**08 01 34.2**	**-0.3**
AYDN				*i* S	**Sg**	**08 01 48.4**	**+0.1**
BCK	**Bucak**	**1.19**	**111**	*e*PN	**Pn**	**08 01 37.8**	**+0.3**
BCK	**Bucak**	**1.19**	**111**	*e*Pn	**Pn**	**08 01 37.8**	**+0.3**
DEMI	**Demirci**	**1.21**	**342**	*i* P	**Pg**	**08 01 37.2**	**-0.2**
DEMI				*i* S	**Sb**	**08 01 53.7**	**+0.1**
DEMI	**Demirci**	**1.21**	**342**	*i* P	**Pg**	**08 01 37.2**	**-0.2**
DEMI				*i* S	**Sb**	**08 01 53.7**	**+0.1**
GDZ	**Gediz**	**1.22**	**11**	*i* P	**Pg**	**08 01 37.2**	**-0.4**
GDZ				*i* S	**Sg**	**08 01 53.9**	**+0.4**
GDZ	**Gediz**	**1.22**	**11**	*i* P	**Pg**	**08 01 37.2**	**-0.4**
GDZ				*i* S	**Sg**	**08 01 53.9**	**+0.4**
FETY	**Fethiye**	**1.25**	**184**	*e*PN	**Pg**	**08 01 37.9**	**-0.3**
FETY	**Fethiye**	**1.25**	**184**	*e*Pn	**Pg**	**08 01 37.9**	**-0.3**
SHUT	**Suhut-Afyon**	**1.26**	**58**	*e*PN	**Pn**	**08 01 38.3**	**-0.2**
SHUT	**Suhut-Afyon**	**1.26**	**58**	*e*Pn	**Pn**	**08 01 38.3**	**-0.2**
MLSB	**Milas**	**1.27**	**243**	*e*PN	**Pn**	**08 01 38.0**	**-0.4**
MLSB	**Milas**	**1.27**	**243**	*e*Pn	**Pn**	**08 01 38.1**	**-0.4**
ELL	**Elmali**	**1.27**	**153**	*e*PN	**Pg**	**08 01 38.8**	**+0.2**
ELL	**Elmali**	**1.27**	**153**	*e*Pn	**Pg**	**08 01 38.8**	**+0.2**
ALT	**Altintas**	**1.37**	**31**	*e*PN	**Pg**	**08 01 41.0**	**+0.5**
ALT	**Altintas**	**1.37**	**31**	*e*Pn	**Pg**	**08 01 41.0**	**+0.5**
IZM	**Izmir**	**1.60**	**289**	*e*PN	**Pb**	**08 01 44.4**	**+0.2**
IZM	**Izmir**	**1.60**	**289**	*e*Pn	**Pb**	**08 01 44.4**	**+0.2**
DAT	**Datca**	**1.73**	**229**	*e*PN	**Pn**	**08 01 44.9**	**0.0**
DAT	**Datca**	**1.73**	**229**	*e*Pn	**Pn**	**08 01 44.9**	**0.0**

*CSEM **07** 08:01:19.2±0.1, 40.°69N×32.°73E, h2^{km}, ML3.1, Error ellipse: s-maj=3.2km s-min=2.5km az=119.0*
*ISK **07** 08:01:19.2, 40.°68N×32.°77E, h5^{km}, ML3.1*
*DDA **07** 08:01:20.5, 40.°69N×32.°90E, h7^{km}, MD3.3*
ISC 07 08:01:19.1±1.3**, 40.°70N**±0.°02×**32.°78E**±0.°03**, h1**^{km}±12^{km}**, n47,** σ**0.^{s}78**/56**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAFT	**Safranbolu**	**0.55**	**352**	*e*PG	**Pg**	**08 01 30.3**	**+0.7**
SAFT	**Safranbolu**	**0.55**	**352**	*e*Pg	**Pg**	**08 01 30.3**	**+0.7**
CANT	**Cankiri**	**0.64**	**98**	*e*PG	**Pb**	**08 01 32.3**	**-0.8**
CANT				*e*SG	**Sb**	**08 01 40.9**	**-1.7**
ILGA	**Ilgaz**	**0.79**	**63**	*i* P	**Pg**	**08 01 34.6**	**+0.3**
ILGA				*i* S	**Sb**	**08 01 46.0**	**-1.1**
ILGA	**Ilgaz**	**0.79**	**63**	*i* P	**Pg**	**08 01 34.6**	**+0.3**
ILGA				*i* S	**Sb**	**08 01 46.0**	**-1.1**
LOD	**Lodumlu**	**0.81**	**181**	*e*PG	**Pg**	**08 01 34.7**	**+0.2**
LOD	**Lodumlu**	**0.81**	**181**	*e*Pg	**Pg**	**08 01 34.7**	**+0.2**
ANTO	**Ankara**	**0.82**	**179**	*e*PG	**Pg**	**08 01 34.6**	**-0.3**
ANTO	**Ankara**	**0.82**	**179**	*e*Pg	**Pg**	**08 01 34.6**	**-0.3**
BALT	**Daday**	**0.95**	**28**	*i* P	**Pg**	**08 01 37.8**	**+0.4**
BALT				*i* S	**Sb**	**08 01 52.2**	**+0.5**
BALT	**Daday**	**0.95**	**28**	*i* P	**Pg**	**08 01 37.8**	**+0.4**
BALT				*i* S	**Sb**	**08 01 52.2**	**+0.5**
TOS	**Tosya**	**1.00**	**70**	*e*PG	**Pn**	**08 01 39.2**	**-1.1**
TOS	**Tosya**	**1.00**	**70**	*e*Pg	**Pn**	**08 01 39.2**	**-1.1**
BBAL	**Bala**	**1.18**	**167**	*i* P	**Pn**	**08 01 43.2**	**+0.4**
BBAL				*i* S	**Sn**	**08 02 00.8**	**+1.3**
BBAL	**Bala**	**1.18**	**167**	*i* P	**Pn**	**08 01 43.2**	**+0.4**
BBAL				*i* S	**Sn**	**08 02 00.8**	**+1.3**
KDZE	**Karadeniz Ereo**	**1.19**	**302**	*e*PN	**Pn**	**08 01 42.0**	**-0.8**
KDZE	**Karadeniz Ereo**	**1.19**	**302**	*e*Pn	**Pn**	**08 01 42.0**	**-0.8**
MDUB	**Mudurnu**	**1.23**	**260**	*e*PN	**Pn**	**08 01 42.9**	**-0.5**
MDUB	**Mudurnu**	**1.23**	**260**	*e*Pn	**Pn**	**08 01 42.9**	**-0.5**
AFSR	**Af¯ar-Bala (A**	**1.27**	**170**	*e*PN	**Pg**	**08 01 44.1**	**+0.8**
AFSR	**Af¯ar-Bala (A**	**1.27**	**170**	*e*Pn	**Pg**	**08 01 44.1**	**+0.8**
CORM	**Corum**	**1.50**	**110**	*e*PN	**Pg**	**08 01 47.8**	**0.0**
CORM	**Corum**	**1.50**	**110**	*e*Pn	**Pg**	**08 01 47.8**	**0.0**
CTKT	**Corum**	**1.53**	**92**	*i* P	**Pg**	**08 01 47.9**	**-0.4**
CTKT				*i* S	**Sg**	**08 02 08.8**	**+0.7**
CTKT	**Corum**	**1.53**	**92**	*i* P	**Pg**	**08 01 47.9**	**-0.4**
CTKT				*i* S	**Sg**	**08 02 08.8**	**+0.7**
BZK	**Bozkurt**	**1.56**	**36**	*e*PN	**Pb**	**08 01 48.7**	**0.0**
BZK	**Bozkurt**	**1.56**	**36**	*e*Pn	**Pb**	**08 01 48.7**	**0.0**
SVRH	**Sivrihisar-ESK**	**1.58**	**218**	*e*PN	**Pn**	**08 01 47.9**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.58**	**218**	*e*Pn	**Pn**	**08 01 47.9**	**-0.3**
CDAG	**Cicekdag**	**1.62**	**131**	*i* P	**Pb**	**08 01 48.7**	**-1.1**
CDAG				*i* S	**Sg**	**08 02 11.1**	**0.0**
CDAG	**Cicekdag**	**1.62**	**131**	*i* P	**Pb**	**08 01 48.7**	**-1.1**
CDAG				*i* S	**Sg**	**08 02 11.1**	**0.0**
KIZT	**Kizilcal**	**1.94**	**201**	*e*PN	**Pn**	**08 01 53.2**	**0.0**
KIZT	**Kizilcal**	**1.94**	**201**	*e*PN	**Pn**	**08 01 53.2**	**0.0**
KIZT	**Kizilcal**	**1.94**	**201**	*e*Pn	**Pn**	**08 01 53.2**	**0.0**
KIZT	**Kizilcal**	**1.94**	**201**	*e*Pn	**Pn**	**08 01 53.2**	**0.0**
DIKM	**Dikmen**	**2.10**	**62**	*e*PN	**Pb**	**08 01 56.5**	**-1.4**
DIKM	**Dikmen**	**2.10**	**62**	*e*Pn	**Pb**	**08 01 56.5**	**-1.4**
YOZ	**Yozgat**	**2.21**	**118**	*e*PN	**Pn**	**08 01 57.3**	**+0.3**
YOZ	**Yozgat**	**2.21**	**118**	*e*Pn	**Pn**	**08 01 57.3**	**+0.3**
KVT	**Kavak**	**2.50**	**80**	*e*PN	**Pn**	**08 02 01.6**	**+0.7**
KVT	**Kavak**	**2.50**	**80**	*e*Pn	**Pn**	**08 02 01.6**	**+0.7**
BNN	**Bunyan**	**2.99**	**127**	*e*PN	**Pn**	**08 02 08.6**	**+0.9**
BNN	**Bunyan**	**2.99**	**127**	*e*Pn	**Pn**	**08 02 08.6**	**+0.9**
SARI	**SarD1z-Kayseri**	**3.62**	**128**	*e*PN	**Pn**	**08 02 17.8**	**+1.4**
SARI	**SarD1z-Kayseri**	**3.62**	**128**	*e*Pn	**Pn**	**08 02 17.8**	**+1.4**
DARE	**Darende-Malaty**	**4.20**	**119**	*e*PN	Pn	08 02 26.7	+2.4
DARE	**Darende-Malaty**	**4.20**	**119**	*e*Pn	Pn	08 02 26.7	+2.4

IDC 07 08:14:49.0±6.1**, 2.°92S**×**104.°24E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.3**/22**, mbtmp3.4**/3**, Error ellipse: s-maj=348.3km s-min=29.0km az=52.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.90**	**122**	P	P	08 21 34.1	+0.1
	0.5nm,1.0s,baz=301,slow=9.5,SNR=2.9						
ASAR	**Alice Springs**	**35.33**	**128**	P	P	08 21 46.1	-0.2
	0.2nm,0.3s,baz=301,slow=8.0,SNR=3.2						
MKAR	**Makanchi Array**	**53.15**	**341**	P	P	08 24 08.6	-0.1
	0.5nm,0.7s,baz=157,slow=6.6,SNR=4.2						

IDC 07 08:19:38.3±1.9**, 5.°37S**×**151.°52E, h0**^{km}**, mb3.7**/5**, mb1 3.9**/6**, mb1mx3.6**/18**, mbtmp3.7**/6**, ML2.8**/1**, Error ellipse: s-maj=69.1km s-min=21.0km az=121.0, New Britain region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.89**	**227**	Pn	Pn	08 21 09.1	+2.2
	1.5nm,0.3s,baz=25,slow=4.7,SNR=3.7						
PMG				Sn	Sn	08 22 16.2	+1.0
	0.7nm,0.3s,baz=13,slow=14,SNR=3.2						
WRA	**Warramunga Arr**	**22.11**	**228**	P	P	08 24 35.1	-0.4
	0.5nm,0.5s,baz=54,slow=10,SNR=10.0						
ASAR	**Alice Springs**	**24.87**	**221**	P	P	08 25 02.2	-0.7
	1.1nm,0.8s,baz=56,slow=10.0,SNR=12						
FITZ	**Fitzroy Crossi**	**28.26**	**241**	P	P	08 25 33.7	+0.1
	1.6nm,0.7s,baz=72,slow=9.6,SNR=5.1						
SONM	**Songino Array**	**66.13**	**329**	P	P	08 30 26.7	-0.9
	0.7nm,0.5s,baz=142,slow=7.3,SNR=2.4						
ILAR	**Eielson Array**	**83.17**	**22**	P	P	08 32 06.7	+0.6
	0.4nm,0.7s,baz=238,slow=6.7,SNR=5.0						
TORD	**Torodi Ar. Bea**	**149.26**	**287**	PKPbc	PKPbc	08 39 30.4	+0.3
	0.2nm,0.4s,baz=83,slow=2.1,SNR=4.4						

*ISCJB **07** 08:23:04.5±1.0, 61.°0S±0.°2×27.°1W±0.°6, h10^{km}, mb3.7/3, Error ellipse: s-maj=51.5km s-min=9.0km az=148.0*
*IDC **07** 08:23:07.0±2.8, 60.°51S×27.°03W, h0^{km}, mb3.8/3, mb1 3.9/3, mb1mx3.7/15, mbtmp3.8/3, Error ellipse: s-maj=92.0km s-min=42.6km az=4.0*
ISC 07 08:23:06.9±0.9**, 60.°9S**±0.°2×**27.°0W**±0.°3**, h10**^{km}**, n9,** σ**1.^{s}12**/8**, mb3.8**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.36**	**150**	*e*Pn	Pn	08 26 10.3	+7.7
VNA1	**Neumayer--Stat**	**12.36**	**150**	*e*Sn	**Sn**	**08 28 20.8**	**+0.6**
SNAA	**Sanae**	**14.38**	**149**	*e*Pn	**P**	**08 26 36.6**	**-0.6**
SNAA	**Sanae**	**14.38**	**149**	*e*Sn	**Sn**	**08 29 09.0**	**-0.4**
CPUP	**Villa Florida**	**40.23**	**315**	P	**P**	**08 30 43.0**	**-0.5**
	0.4nm,0.4s,baz=126,slow=18,SNR=3.7						
LPAZ	**La Paz**	**53.36**	**308**	P	**P**	**08 32 26.4**	**-0.7**
	0.8nm,0.6s,baz=154,slow=2.8,SNR=6.1						
TORD	**Torodi Ar. Bea**	**77.28**	**29**	P	**P**	**08 35 00.9**	**-0.2**
	0.4nm,0.4s,baz=201,slow=6.1,SNR=11						
YKA	**Yellowknife Ar**	**139.74**	**314**	PKP	**PKPdf**	**08 42 35.1**	**+1.8**
	0.1nm,0.5s,baz=124,slow=1.8,SNR=3.1						
ILAR	**Eielson Array**	**153.20**	**304**	PKPbc	**PKPbc**	**08 43 04.4**	**+1.2**
	0.4nm,0.8s,baz=137,slow=2.4,SNR=7.0						

*ISCJB **07** 08:23:16.0±1.0, 15.°20N±0.°05×92.°86W±0.°05, h107^{km}±9^{km}, Error ellipse: s-maj=10.5km s-min=6.4km az=135.3*
*CASC **07** 08:23:16.8±1.6, 15.°39N×92.°77W, h20^{km}±173^{km}, MD4.1*
*MEX **07** 08:23:17.0±1.0, 15.°12N×92.°80W, h108^{km}±10^{km}, MD4.0*
ISC 07 08:23:16.5±1.5**, 15.°17N**±0.°06×**92.°89W**±0.°05**, h102**^{km}±12^{km}**, n10,** σ**1.^{s}22**/19**, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG		**0.62**	**329**	*e*P	**Pn**	**08 23 34.2**	**+0.7**
PCIG				*i* S	**Sn**	**08 23 47.6**	**+1.5**
THIG		**0.66**	**113**	*e*P	**Pn**	**08 23 32.4**	**-1.3**
THIG				*i* S	**Sn**	**08 23 45.0**	**-1.6**
CCIG	**Comitan**	**1.32**	**33**	*i* P	**Pn**	**08 23 41.4**	**+0.5**
CCIG				*i* S	**Sn**	**08 23 59.1**	**-0.2**
JAT	**Jato**	**1.48**	**125**	*e*P	**Pn**	**08 23 42.8**	**+0.2**
JAT				*e*S	**Sn**	**08 24 02.6**	**+0.2**
TGIG		**1.61**	**352**	*i* P	**Pn**	**08 23 44.9**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TGIG				i S	Sn	08 24 05.5	0.0
FUG	Fuego 3	2.11	110	eP	Pn	08 23 50.8	+0.1
FUG				eS	Sn	08 24 18.8	+1.9
MRL	Marmol	3.09	92	eP	Pn	08 24 03.2	-0.5
MRL				eS	Sn	08 24 39.3	-0.8
HUIG	Huatulco	3.16	281	i P	Pn	08 24 05.3	+0.9
HUIG				i S	Sn	08 24 39.1	-2.3
RBDL	Robledal	3.27	108	eP	Pn	08 24 07.8	+1.7
SCIG	Sabancuy	4.11	23	eP	Pn	08 24 16.8	-0.5
SCIG				i S	Sn	08 25 03.5	-0.9

*BEO **07** 08:37:33.9±1.1, 41°21N×22°55E, h0km, ML2.3/4*
*SKO **07** 08:37:33.6, 41°29N×22°70E, h15km, M1.6, ML2.2*
*THE **07** 08:37:34.2, 41°29N×22°69E, h0km±1km, ML2.7/4, Error ellipse: s-maj=1.7km s-min=0.4km az=15.0*
*CSEM **07** 08:37:34.2±0.1, 41°29N×22°69E, h2km, ML2.7/4, Error ellipse: s-maj=3.7km s-min=2.8km az=52.0*
ISC 07 08:37:34.4±0.9, 41°28N±0°03×22°69E±0°02, h5km±7km, n40, σ0s52/60, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.10	293	P	Pg	08 37 36.1	-0.3
VAY				S	Sg	08 37 37.8	+0.1
VAY	Valandovo	0.10	293	ePg	Pg	08 37 36.1	-0.3
VAY				eSg	Sg	08 37 37.8	+0.1
VAY	Valandovo	0.10	293	i Pg	Pg	08 37 37.2	+0.8
VAY				i Lg	Lg	08 37 37.8	
	comp=E,1μm,0.3s						
VAY				i Sg	Sg	08 37 38.0	+0.2
VAY				i Lg	Lg	08 37 38.0	
	comp=N,1μm,0.5s						
VAY	Valandovo	0.10	293	P	Pg	08 37 36.1	-0.3
VAY				S	Sg	08 37 37.8	+0.1
VAY				i Lg	Lg	08 37 38.5	
	comp=N,1μm,0.5s						
KNT	Kendrikon	0.20	128	P	Pg	08 37 38.5	+0.2
KNT				S	Sg	08 37 41.5	+0.6
KNT	Kendrikon	0.20	128	P	Pg	08 37 38.5	+0.2
KNT				S	Sg	08 37 41.5	+0.6
GRG	Griva	0.39	214	P	Pg	08 37 41.9	0.0
GRG				S	Sg	08 37 47.8	+0.7
GRG	Griva	0.39	214	P	Pg	08 37 41.9	0.0
GRG				S	Sg	08 37 47.8	+0.7
SOH	Sokhos	0.68	132	P	Pg	08 37 47.0	-0.5
SOH				S	Sg	08 37 57.2	+0.9
SOH	Sokhos	0.68	132	P	Pg	08 37 47.0	-0.5
SOH				S	Sg	08 37 57.2	+0.9
THE	Thessaloniki	0.68	162	P	Pg	08 37 47.3	-0.2
THE	Thessaloniki	0.68	162	P	Pg	08 37 47.3	-0.2
SRS	Serrai	0.70	103	P	Pg	08 37 47.5	-0.3
SRS	Serrai	0.70	103	P	Pg	08 37 47.5	-0.3
HORT	Hortiatis	0.75	155	P	Pg	08 37 48.6	-0.2
HORT				S	Sb	08 38 00.2	-0.4
HORT	Hortiatis	0.75	155	P	Pg	08 37 48.6	-0.2
HORT				S	Sb	08 38 00.2	-0.4
NVR	Nevrokopi	0.89	85	P	Pg	08 37 50.9	-0.5
NVR	Nevrokopi	0.89	85	P	Pg	08 37 50.9	-0.5
BIA	Bitola	1.06	256	i Pg	Pg	08 37 54.9	+0.1
BIA				i Sg	Sg	08 38 08.3	-0.2
BIA	Bitola	1.06	256	i Pg	Pg	08 37 54.8	+0.1
BIA				i Sg	Sg	08 38 08.3	-0.2
FNA	Florina	1.11	244	P	Pg	08 37 55.1	-0.6
FNA	Florina	1.11	244	P	Pg	08 37 55.1	-0.6
SKO	Skopje	1.16	307	i Pg	Pg	08 37 56.3	-0.3
SKO				i Sg	Sb	08 38 12.4	+0.1
SKO				i Lg	Lg	08 38 13.6	
	comp=E,17nm,0.5s						
SKO				i Lg	Lg	08 38 16.2	
	comp=N,42nm,0.3s						
SKO	Skopje	1.16	307	i Pg	Pg	08 37 56.8	+0.2
SKO				i Sg	Sb	08 38 12.8	+0.5
SKO				i Lg	Lg	08 38 16.6	
	comp=N,42nm,0.3s						
VTS	Vitosha	1.36	16	P	Pn	08 37 59.8	-0.4
VTS	Vitosha	1.36	16	ePg	Pn	08 38 00.3	+0.1
VTS	Vitosha	1.36	16	P	Pn	08 37 59.8	-0.4
VTS	Vitosha	1.36	16	ePg	Pn	08 38 00.3	+0.1
OUR	Ouranopolis	1.37	134	P	Pn	08 37 59.9	-0.2
OUR	Ouranopolis	1.37	134	P	Pn	08 37 59.9	-0.2
KAVA	Kavala	1.41	101	P	Pn	08 38 00.6	-0.1
KAVA	Kavala	1.41	101	P	Pn	08 38 00.6	-0.1
BARS	Barje	1.66	337	ePg	Pn	08 38 03.6	-0.6
BARS				eSn	Sn	08 38 26.3	+0.3
BARS	Barje	1.66	337	ePg	Pn	08 38 03.6	-0.6
BARS				eSn	Sn	08 38 26.3	+0.3
ZAPS	Zavoj	1.99	359	ePn	Pb	08 38 10.3	-0.8
ZAPS				eSn	Sb	08 38 36.7	+0.5
SELS	Selova	2.26	329	ePn	Pn	08 38 12.3	-0.1
SELS				eSn	Sn	08 38 42.1	+1.4
GRUS	Gruza	2.98	331	ePn	Pn	08 38 23.5	+1.2
GRUS	Gruza	2.98	331	ePn	Pn	08 38 23.5	+1.2
DIVS	Divibare	3.44	326	ePn	Pn	08 38 28.1	-0.7
DIVS	Divibare	3.44	326	ePn	Pn	08 38 28.1	-0.7

*IDC **07** 08:42:39.0±1.3, 2°64S×134°97E, h0km, mb4.0/4, mb1 4.2/6, mb1mx3.9/18, mbtmp4.0/6, ML3.6/2, Error ellipse: s-maj=57.7km s-min=22.6km az=86.0*
*ISCJB **07** 08:42:41.4±1.1, 2°89S±0°07×134°5E±0°1, h18km, mb3.9/3, Error ellipse: s-maj=19.6km s-min=10.7km az=176.5*
*AUST **07** 08:42:48.6, 2°97S×134°01E, h60km*
ISC 07 08:42:43.9±1.4, 2°94S±0°09×134°4E±0°1, h18km, n11, σ2s80/14, mb4.0/3, Irian Jaya region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	2.16	271	P	Pn	08 43 18.7	-0.3
	baz=1.8,SNR=60						
KDU	Kakadu	9.87	191	P	Pn	08 45 06.8	+1.9
	baz=9.8,SNR=8.5						
KDU				S	Sn	08 46 54.9	-0.5
	baz=9.8,SNR=3.4						
MTN	Manton Dam	10.36	198	P	Pn	08 45 13.8	+2.2
	baz=10,SNR=9.4						
MTN				S	Sn	08 47 09.6	+2.2
	baz=10,SNR=3.1						
KNRA	Kununurra	13.82	203	P	Pn	08 46 00.1	+1.1
	baz=14,SNR=6.4						
KNRA				S	Sn	08 48 29.1	-3.1
	baz=14,SNR=3.3						
WRA	Warramunga Arr	16.89	180	P	P	08 46 40.8	-0.7
	0.2nm,0.3s,baz=2.1,slow=12,SNR=10						
WRA				S	Sn	08 49 40.7	-6.3
	0.1nm,0.3s,baz=7.9,slow=23,SNR=4.1						
FITZ	Fitzroy Crossi	17.35	209	P	P	08 46 48.8	+2.3
	0.2nm,0.3s,baz=35,slow=11,SNR=5.6						
MTSU	Mount Surprise	17.95	148	P	P	08 46 56.3	+3.1
	baz=18,SNR=4.7						
ASAR	Alice Springs	20.61	181	P	Pn	08 47 24.4	-0.1
	7.3nm,0.6s,baz=6.1,slow=12,SNR=64						
ASAR				S	S	08 51 10.6	-1.5
	0.4nm,1.0s,baz=4.5,slow=25,SNR=2.7						
STKA	Stephens Creek	29.56	168	P	P	08 48 46.6	-1.1
	2.5nm,0.8s,baz=353,slow=8.1,SNR=3.9						
MKAR	Makanchi Array	67.41	324	P	P	08 53 36.8	-1.5
	0.9nm,0.7s,baz=112,slow=7.7,SNR=7.7						
ILAR	Eielson Array	87.83	25	P	P	08 55 28.1	-3.8
	0.4nm,0.8s,baz=253,slow=2.7,SNR=3.9						

*CASC **07** 08:48:12.7±2.4, 13°08N×91°39W, h8km±18km, MD4.0*
*ISCJB **07** 08:48:14.0±1.3, 13°21N±0°08×91°53W±0°07, h38km±11km, mb3.8/11, MS3.5/4, Error ellipse: s-maj=14.4km s-min=9.0km az=31.3*
*IDC **07** 08:48:20.6±4.2, 13°61N×91°08W, h71km±38km, mb3.5/11, mb1 3.8/14, mb1mx3.6/28, mbtmp3.6/14, ML3.6/3, MS3.5/5, Ms1 3.5/5, ms1mx3.1/24, Error ellipse: s-maj=32.8km s-min=14.9km az=54.0*
ISC 07 08:48:17.4±1.8, 13°26N±0°10×91°43W±0°08, h56km±15km, n32, σ2s00/39, mb3.8/11, MS3.4/4, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAT	Jato	1.07	349	eP	Pn	08 48 34.1	-2.2
JAT				eS	Sn	08 48 53.5	+3.2
FUG	Fuego 3	1.31	26	eP	Pn	08 48 37.2	-2.5
PCG	Pacaya	1.38	35	eP	Pn	08 48 38.7	-2.0
PCG				eS	Sn	08 49 02.2	+4.2
NBG	Las Nubes	1.69	38	eP	Pn	08 48 43.6	-1.2
NBG				eS	Sn	08 49 09.1	+3.6
SBLS	San Blas	1.85	72	eP	Pn	08 48 44.6	-2.3
SBLS				eS	Sn	08 49 08.9	-0.4
SNJE	San Jose	1.87	71	eP	Pn	08 48 45.3	-2.0
RBDL	Robledal	1.89	63	eP	Pn	08 48 45.7	-1.8
RBDL				eS	Sn	08 49 11.7	+1.3
BOQS	Boqueron	2.14	77	eP	Pn	08 48 49.2	-1.8
MTO2	Montecristo 2	2.31	60	eP	Pn	08 48 51.4	-1.8
MTO2				eS	Sn	08 49 21.1	+0.6
LFRS	El Faro	2.33	81	eP	Pn	08 48 52.3	-1.1
LBRS	Las Brisas	2.37	78	eP	Pn	08 48 53.0	-0.9
MRL	Marmol	2.46	43	eP	Pn	08 48 54.9	-0.4
MRL				eS	Sn	08 49 28.9	+4.6
SNVI	San Vicente	2.54	82	eP	Pn	08 48 55.4	-0.9
CNCH	Conchagua	3.50	89	eP	Pn	08 49 08.1	-1.4
TGUH	Tegucigalpa,Un	4.12	78	eP	Pn	08 49 16.2	-1.5
TEIG	Tepich	7.56	23	P	Pn	08 50 02.9	-2.0
	4.7nm,0.3s,baz=209,slow=10,SNR=22						
TEIG				S	Sn	08 51 21.7	-7.5
	baz=176,slow=19,SNR=1.9						
TEIG				LR	LR	08 53 08.4	
	comp=Z,281nm,21.9s,baz=54,slow=40						
ROSC	El Rosal	18.82	115	P	Pn	08 52 33.9	-0.2
	0.6nm,0.3s,baz=309,slow=6.8,SNR=2.7						
TXAR	Lajitas Array	19.62	327	P	Pn	08 52 42.9	-0.3
	0.1nm,0.3s,baz=155,slow=13,SNR=34						
TKL	Tuckaleechee C	23.35	16	P	P	08 53 19.2	-1.7
	2.8nm,0.7s,baz=174,slow=11,SNR=8.7						
TKL				LR	LR	09 03 20.0	
	comp=Z,135nm,19.2s,baz=296,slow=39						
ANMO	Albuquerque	25.52	330	P	P	08 53 41.9	+0.9
	0.9nm,0.8s,baz=160,slow=12,SNR=4.4						
PDAR	Pinedale Array	33.32	335	P	P	08 54 50.4	+0.2
	0.2nm,0.5s,baz=162,slow=7.3,SNR=2.3						
NVAR	Mina Array Bea	34.60	321	P	P	08 55 02.5	+1.2
	2.2nm,0.7s,baz=130,slow=7.7,SNR=19						
ULM	Lac du Bonnet	37.07	355	P	P	08 55 19.9	-2.1
	2.7nm,0.6s,baz=189,slow=9.7,SNR=2.5						
LPAZ	La Paz	37.31	141	P	P	08 55 26.8	+1.6
	0.6nm,0.7s,baz=263,slow=5.3,SNR=2.8						
YBH	Yreka Blue Hor	39.29	322	P	P	08 55 41.3	+0.3
	0.7nm,0.9s,baz=117,slow=4.5						
YBH				LR	LR	09 14 01.9	
	comp=Z,50nm,18.6s,baz=139,slow=39						
SIV	San Ignacio	41.78	133	P	P	08 56 03.1	+1.4
	0.9nm,0.7s,baz=318,slow=12,SNR=5.1						
SCHQ	Schefferville	45.73	20	P	P	08 56 30.4	-2.5
	3.3nm,0.9s,baz=230,slow=7.9,SNR=4.7						
SCHQ				LR	LR	09 16 33.0	
	comp=Z,148nm,18.2s,baz=315,slow=37						
CPUP	Villa Florida	51.46	140	LR	LR	09 18 47.3	
	comp=Z,26nm,18.9s,baz=334,slow=36						
YKA	Yellowknife Ar	51.87	347	P	P	08 57 19.0	-0.9
	1.0nm,0.6s,baz=148,slow=7.6,SNR=15						
YKA				PcP	PcP	08 58 33.4	+1.5
	0.7nm,0.7s,baz=154,slow=4.2,SNR=8.3						
ILAR	Eielson Array	63.74	337	P	P	08 58 43.4	+0.3
	1.1nm,0.8s,baz=126,slow=4.0,SNR=9.5						
WRA	Warramunga Arr	135.75	255	PKP	PKPdf	09 07 35.0	+2.4
	0.2nm,0.9s,baz=90,slow=2.6,SNR=2.5						
CMAR	Chiang Mai Arr	146.87	342	PKPbc	PKPbc	09 07 55.1	+0.7
	1.2nm,0.6s,baz=346,slow=4.6,SNR=5.9						

IDC 07 08:51:14.5±28.0, 23°61S×175°06W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/19, mbtmp4.1/4, Error ellipse: s-maj=557.0km s-min=164.5km az=94.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.02	248	P	P	08 58 42.6	-0.4
	1.4nm,0.7s,baz=102,slow=11,SNR=3.6						
ASAR	Alice Springs	46.54	259	P	P	08 59 44.0	-0.2
	0.7nm,0.3s,baz=95,slow=7.2,SNR=38						
WRA	Warramunga Arr	46.94	264	P	P	08 59 47.4	+0.1
	1.4nm,0.3s,baz=103,slow=8.2,SNR=72						
FITZ	Fitzroy Crossi	55.36	264	P	P	09 00 50.6	0.0
	1.6nm,0.6s,baz=104,slow=8.3,SNR=3.8						

*BGS **07** 09:00:02.1±2.0, 37°83N×22°12E, h10km, mb4.7*
*TIR **07** 09:00:03.7±3.0, 38°55N×22°30E, h0km±176km*
*ISCJB **07** 09:00:05.6±0.2, 38°34N±0°01×21°99E±0°01, h11km±1km, mb4.5/105, MS3.8/25, Error ellipse: s-maj=1.9km s-min=1.4km az=24.2*
*ATH **07** 09:00:05.6, 38°31N×22°02E, h13km, MD3.8/26, ML4.2*
*NEIC **07** 09:00:05.6, 38°31N×22°02E, h13km, mb4.7/63, ML4.4(THE), ML4.2(ATH), After ATH.*
NEIC Felt at Aigion and Patrai.
*CSEM **07** 09:00:06.1±0.1, 38°30N×22°02E, h5km, mb4.5/40, Ms3.2, Mw4.1, Error ellipse: s-maj=2.1km s-min=1.7km az=36.0*
*MOS **07** 09:00:06.8±1.0, 38°35N×21°97E, h23km, mb4.7/47, Error ellipse: s-maj=4.5km s-min=2.7km az=108.0*
*THE **07** 09:00:06.1, 38°31N×22°05E, h0km±1km, ML4.4/3, Error ellipse: s-maj=1.3km s-min=0.3km az=125.0*
*PDG **07** 09:00:06.0±0.3, 38°31N×22°05E, h11km, ML4.1/7, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
*SKO **07** 09:00:06.6, 38°33N×22°20E, h0km*
*PRU **07** 09:00:08.9, 38°46N×21°05E, h0km, M4.7*
*IDC **07** 09:00:09.7±2.2, 38°40N×22°07E, h31km±16km, mb4.2/27, mb1 4.2/39, mb1mx4.2/43, mbtmp4.1/39, ML3.7/11, MS3.6/23, Ms1 3.6/23, ms1mx3.5/39, Error ellipse: s-maj=11.8km s-min=10.1km az=165.0*
*BJI **07** 09:00:10.6, 38°76N×21°96E, h52km, mB4.9/12, mb4.8/23, Ms4.7/10, Ms7 4.5/9*
*PDA **07** 09:00:11.7, 38°40N×22°00E, h42km, mb4.7*
ISC 07 09:00:06.7±0.5, 38°34N±0°01×22°03E±0°01, h14km±3km, n937, σ1s45/985, mb4.6/105, MS3.8/26, 58C-26D, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAKA	Lakka	0.10	203	P	Pg	09 00 08.2	-1.6
LAKA				S	Sg	09 00 09.9	-2.1
LAKA	Lakka	0.10	203	ePG	Pg	09 00 08.2	-1.6
LAKA				eSG	Sg	09 00 10.0	-2.1
LAKA	Lakka	0.10	203	P	Pg	09 00 08.2	-1.6
LAKA				S	Sg	09 00 09.9	-2.1
LAKA	Lakka	0.10	203	ePg	Pg	09 00 08.2	-1.6
LAKA				S	Sg	09 00 09.8	-2.2
KALE	Kalithea	0.10	57	P	Pg	09 00 08.8	-1.1
KALE				S	Sg	09 00 10.2	-1.9
KALE	Kalithea	0.10	57	ePG	Pg	09 00 08.9	-1.0
KALE				eSG	Sg	09 00 11.4	-0.7
KALE	Kalithea	0.10	57	P	Pg	09 00 08.8	-1.1
KALE				S	Sg	09 00 10.2	-1.9
KALE	Kalithea	0.10	57	ePg	Pg	09 00 08.9	-1.0
KALE				S	Sg	09 00 10.2	-1.9
KALE				eSg	Sg	09 00 11.4	-0.8
PSA1	Psathopyrgos	0.11	265	ePG	Pg	09 00 08.7	-1.2
PSA1				eSG	Sg	09 00 10.5	-1.6
EFP	Efpalio	0.13	314	P	Pg	09 00 09.3	-0.9
EFP				S	Sg	09 00 12.3	-0.3
EFP	Efpalio	0.13	314	ePG	Pg	09 00 09.3	-0.9
EFP				eSG	Sg	09 00 12.2	-0.3
EFP	Efpalio	0.13	314	P	Pg	09 00 09.3	-0.9
EFP				S	Sg	09 00 12.3	-0.3
EFP	Efpalio	0.13	314	ePg	Pg	09 00 09.3	-0.9
EFP				S	Sg	09 00 11.5	-1.1
EFP				eSg	Sg	09 00 12.2	-0.4
UPR	University Cam	0.20	255	P	Pg	09 00 10.1	-1.0
UPR				S	Sg	09 00 13.0	-1.2
KLV	Kalavryta, Ach	0.31	162	ePG	Pg	09 00 11.8	-1.2
KLV				eSG	Sg	09 00 16.7	-0.6
KLV	Kalavryta, Ach	0.31	162	ePg	Pg	09 00 11.8	-1.2
KLV				eSg	Sg	09 00 16.7	-0.6
DSF	Desfina	0.40	79	P	Pg	09 00 13.3	-1.4
DSF				S	Sg	09 00 19.6	-0.6
DSF	Desfina	0.40	79	P	Pg	09 00 13.3	-1.4
DSF				S	Sg	09 00 19.6	-0.6
DSF	Desfina	0.40	79	P	Pg	09 00 13.4	-1.3
DSF				S	Sg	09 00 19.6	-0.6
GUR	Goura	0.47	148	P	Pg	09 00 14.3	-1.7
GUR				S	Sg	09 00 21.0	-1.3
GUR	Goura	0.47	148	ePB	Pg	09 00 14.4	-1.6
GUR				eSB	Sg	09 00 21.0	-1.3
GUR	Goura	0.47	148	ePb	Pg	09 00 14.4	-1.6
GUR				eSb	Sg	09 00 21.0	-1.3
RLS	Riolos of Patr	0.52	238	P	Pg	09 00 16.2	-0.7
RLS				S	Sb	09 00 24.3	-0.7
RLS	Riolos of Patr	0.52	238	ePB	Pg	09 00 16.0	-0.9
RLS	Riolos of Patr	0.52	238	P	Pg	09 00 16.2	-0.7
RLS				S	Sb	09 00 24.3	-0.7
RLS	Riolos of Patr	0.52	238	ePb	Pg	09 00 16.0	-0.9
RLS				S	Sg	09 00 23.1	-0.8
AXS	Araxos	0.53	255	P	Pg	09 00 16.4	-0.7
AXS				S	Sg	09 00 24.0	-0.2
AXS	Araxos	0.53	255	P	Pg	09 00 16.1	-1.0
AXS				S	Sg	09 00 24.0	-0.2
THAL	Thalero	0.58	121	P	Pg	09 00 17.1	-1.0
THAL	Thalero	0.58	121	P	Pg	09 00 17.1	-1.0
EVR	Evrytania	0.61	344	P	Pg	09 00 18.1	-0.5
EVR				S	Sb	09 00 27.6	0.0
EVR	Evrytania	0.61	344	ePB	Pg	09 00 17.9	-0.7
EVR	Evrytania	0.61	344	ePb	Pg	09 00 17.9	-0.7
EVR				S	Sb	09 00 27.6	0.0
AXAR	Agios Charalam	0.66	49	P	Pg	09 00 18.2	-1.2
AXAR	Agios Charalam	0.66	49	P	Pg	09 00 18.3	-1.2
AXAR				S	Sg	09 00 28.0	-0.2
MAKR	Makrakomi, Fth	0.68	7	P	Pg	09 00 19.1	-0.9
MAKR				S	Sb	09 00 29.3	-0.5
MAKR	Makrakomi, Fth	0.68	7	P	Pg	09 00 19.1	-0.9
MAKR				S	Sb	09 00 29.3	-0.5
AGG	Agios Georgios	0.73	19	P	Pg	09 00 19.9	-0.9
AGG				S	Sb	09 00 30.9	-0.1
AGG	Agios Georgios	0.73	19	ePB	Pg	09 00 19.3	-1.5
AGG				eSB	Sb	09 00 31.3	+0.3
AGG	Agios Georgios	0.73	19	P	Pg	09 00 19.9	-0.9
AGG				S	Sb	09 00 30.9	-0.1
AGG	Agios Georgios	0.73	19	P	Pg	09 00 19.9	-0.9
AGG				S	Sb	09 00 30.9	-0.1
AGG	Agios Georgios	0.73	19	ePb	Pg	09 00 19.3	-1.5
AGG				S	Sg	09 00 30.2	-0.2
AGG				eSb	Sb	09 00 31.3	+0.3
LTK	Loutraki	0.80	113	P	Pg	09 00 21.0	-1.2
LTK	Loutraki	0.80	113	ePB	Pg	09 00 21.3	-0.9
LTK	Loutraki	0.80	113	P	Pg	09 00 21.0	-1.2
LTK	Loutraki	0.80	113	ePb	Pg	09 00 21.3	-0.9
LTK				S	Sb	09 00 32.8	-0.4
LKR	Lokris	0.82	67	P	Pg	09 00 21.5	-1.2
LKR				S	Sb	09 00 34.1	+0.3
LKR	Lokris	0.82	67	ePB	Pg	09 00 21.7	-1.0
LKR	Lokris	0.82	67	ePb	Pg	09 00 21.7	-1.0
LKR				S	Sb	09 00 33.9	+0.1
AMT	Artemida-Makis	0.84	198	ePB	Pg	09 00 21.7	-1.2
AMT	Artemida-Makis	0.84	198	P	Pg	09 00 21.1	-1.8
AMT	Artemida-Makis	0.84	198	ePb	Pg	09 00 21.7	-1.2
AMT				S	Sb	09 00 34.8	+0.6
ATAL	Atalanti	0.86	65	P	Pg	09 00 22.2	-1.1
ATAL	Atalanti	0.86	65	P	Pg	09 00 22.2	-1.1
ATAL				S	Sb	09 00 34.9	+0.2
VIL2	Platees	0.98	97	P	Pg	09 00 24.3	-1.4
KFL	Anninata	1.00	257	P	Pg	09 00 24.5	-1.5
VLX	Vlachokerasia	1.00	164	P	Pg	09 00 24.2	-1.8
VLX				S	Sb	09 00 39.2	+0.2
VLX	Vlachokerasia	1.00	164	ePG	Pg	09 00 24.0	-2.0
VLX	Vlachokerasia	1.00	164	ePg	Pg	09 00 24.0	-2.0
VLX				S	Sb	09 00 39.2	+0.2
SMIA	Simia	1.07	59	P	Pb	09 00 26.0	-1.1
SMIA	Simia	1.07	59	P	Pb	09 00 26.0	-1.1
VLS	Valsamata	1.14	263	P	Pb	09 00 27.0	-1.2
VLS	Valsamata	1.14	263	ePG	Pb	09 00 26.7	-1.5
VLS	Valsamata	1.14	263	ePg	Pb	09 00 26.7	-1.5
VLS	Valsamata	1.14	263	P	Pb	09 00 27.0	-1.2
ITM	Ithomi	1.16	184	P	Pb	09 00 27.2	-1.3
ITM	Ithomi	1.16	184	ePG	Pb	09 00 26.7	-1.8
ITM	Ithomi	1.16	184	P	Pb	09 00 27.2	-1.3
ITM	Ithomi	1.16	184	ePg	Pb	09 00 26.7	-1.8
ITM				S	Sb	09 00 42.4	-0.9
LKD2	Lefkada island	1.17	293	P	Pb	09 00 28.0	-0.7
LKD2				S	Sn	09 00 45.8	+1.4
LKD2	Lefkada island	1.17	293	ePB	Pb	09 00 27.9	-0.7
LKD2	Lefkada island	1.17	293	ePb	Pb	09 00 27.9	-0.7
LKD2				S	Sn	09 00 45.8	+1.4
THL	Klokotos Trika	1.23	360	P	Pn	09 00 29.2	-0.2
THL	Klokotos Trika	1.23	360	ePB	Pn	09 00 29.3	-0.2
THL	Klokotos Trika	1.23	360	ePb	Pn	09 00 29.3	-0.2
DID	Didima	1.26	130	P	Pn	09 00 28.9	-1.1
DID	Didima	1.26	130	ePB	Pn	09 00 29.8	-0.2
DID	Didima	1.26	130	P	Pn	09 00 28.9	-1.1
DID	Didima	1.26	130	ePb	Pn	09 00 29.8	-0.2
DID				S	Sn	09 00 46.9	+0.1
DIDY	Didyma	1.27	132	P	Pn	09 00 29.0	-1.1
DIDY	Didyma	1.27	132	P	Pn	09 00 29.0	-1.1
MRKA	Markates	1.28	73	P	Pn	09 00 29.6	-0.6
MRKA	Markates	1.28	73	P	Pn	09 00 29.6	-0.6
NAIG	Nisos Aigina	1.29	116	ePB	Pb	09 00 30.4	-0.3
NAIG	Nisos Aigina	1.29	116	ePb	Pb	09 00 30.4	-0.3
NEO	Neokhori	1.35	44	P	Pn	09 00 30.8	-0.3
NEO	Neokhori	1.35	44	ePB	Pb	09 00 31.4	-0.3
NEO	Neokhori	1.35	44	P	Pn	09 00 30.8	-0.3
NEO	Neokhori	1.35	44	ePb	Pb	09 00 31.4	-0.3
XOR	Xorichti	1.37	41	P	Pn	09 00 31.2	-0.3
XOR	Xorichti	1.37	41	P	Pn	09 00 31.2	-0.3
ATH	Athens Observa	1.38	105	P	Pn	09 00 31.3	-0.2
ATH	Athens Observa	1.38	105	ePB	Pb	09 00 32.1	-0.1
ATH	Athens Observa	1.38	105	P	Pn	09 00 31.3	-0.2
ATH	Athens Observa	1.38	105	P	Pn	09 00 31.3	-0.2
ATH	Athens Observa	1.38	105	P	Pn	09 00 31.3	-0.2
ATH	Athens Observa	1.38	105	ePb	Pb	09 00 32.1	-0.1
SKIA	Skiathos	1.40	53	P	Pn	09 00 32.0	+0.2
ATHU	Athens Univers	1.43	104	P	Pn	09 00 32.4	+0.1
ATHU	Athens Univers	1.43	104	P	Pn	09 00 32.4	+0.1
PYL	PYLOS	1.46	189	ePG	Pn	09 00 32.0	-0.6
PYL	PYLOS	1.46	189	ePg	Pn	09 00 32.0	-0.6
PTL	Penteli	1.48	101	P	Pn	09 00 33.0	+0.1
PTL	Penteli	1.48	101	ePG	Pb	09 00 33.3	-0.6
PTL	Penteli	1.48	101	P	Pn	09 00 33.0	+0.1
PTL	Penteli	1.48	101	P	Pn	09 00 33.0	+0.1
PTL	Penteli	1.48	101	ePg	Pb	09 00 33.3	-0.6
DYR	Agios Nikonas	1.59	171	P	Pn	09 00 34.3	-0.2
DYR	Agios Nikonas	1.59	171	ePG	Pn	09 00 34.2	-0.2
DYR	Agios Nikonas	1.59	171	P	Pn	09 00 34.3	-0.2
DYR				S	Sb	09 00 55.1	-0.7
JAN	Janina	1.61	326	P	Pb	09 00 35.7	-0.5
JAN	Janina	1.61	326	ePG	Pg	09 00 37.1	-0.5
JAN	Janina	1.61	326	P	Pb	09 00 35.7	-0.5
JAN	Janina	1.61	326	P	Pb	09 00 35.7	-0.5
JAN	Janina	1.61	326	P	Pb	09 00 35.7	-0.5
JAN	Janina	1.61	326	ePg	Pg	09 00 37.1	-0.5
JAN				S	Sg	09 00 57.2	-1.3
AOS	Alonnisos	1.67	59	P	Pn	09 00 35.3	-0.2
AOS	Alonnisos	1.67	59	ePN	Pn	09 00 35.3	-0.2
AOS	Alonnisos	1.67	59	P	Pn	09 00 35.3	-0.2
AOS	Alonnisos	1.67	59	ePn	Pn	09 00 35.3	-0.2
VLI	Veliai	1.77	156	P	Pn	09 00 37.2	+0.4
VLI	Veliai	1.77	156	ePN	Pn	09 00 37.3	+0.4
VLI	Veliai	1.77	156	ePn	Pn	09 00 37.3	+0.4
LIT	Litokhoron	1.80	11	P	Pb	09 00 38.3	-1.2
LIT	Litokhoron	1.80	11	P	Pb	09 00 38.3	-1.2
LIT	Litokhoron	1.80	11	P	Pb	09 00 38.3	-1.2
LIT	Litokhoron	1.80	11	P	Pb	09 00 38.3	-1.2
MRMA	Marmari	1.87	98	P	Pn	09 00 38.6	+0.3
MRMA	Marmari	1.87	98	P	Pn	09 00 38.6	+0.3
KZN	Kozani	1.98	354	P	Pn	09 00 40.4	+0.5
KZN	Kozani	1.98	354	ePN	Pb	09 00 41.6	-1.0
KZN	Kozani	1.98	354	P	Pn	09 00 40.4	+0.5
KZN	Kozani	1.98	354	ePn	Pb	09 00 41.6	-1.0
KYTH	Kithira	2.20	158	ePN	Pb	09 00 44.6	-1.7
KYTH	Kithira	2.20	158	ePn	Pb	09 00 44.6	-1.7
SRN	Sarande	2.21	315	ePN	Pb	09 00 45.5	-0.9
SRN				i SN	Sg	09 01 15.3	-2.3
SRN	Sarande	2.21	315	ePn	Pb	09 00 45.5	-0.9
	SNR=4.0						
SRN				i Sn	Sg	09 01 15.3	-2.3
	SNR=4.0						
KEK	Kerkira	2.22	309	ePN	Pb	09 00 45.0	-1.5
KEK	Kerkira	2.22	309	ePn	Pb	09 00 45.0	-1.5
PLG	Polygyros	2.31	28	ePN	Pn	09 00 44.1	-0.3
PLG	Polygyros	2.31	28	ePn	Pn	09 00 44.1	-0.3
HORT	Hortiatis	2.41	20	P	Pn	09 00 46.6	+0.8
HORT	Hortiatis	2.41	20	P	Pn	09 00 46.6	+0.8
FNA	Florina	2.50	349	ePN	Pn	09 00 48.4	+1.4
FNA	Florina	2.50	349	ePn	Pn	09 00 48.4	+1.4
GRG	Griva	2.63	6	ePB	Pn	09 00 49.8	+1.0
GRG	Griva	2.63	6	ePb	Pn	09 00 49.8	+1.0
ANKY	Antikythira Is	2.67	157	ePN	Pn	09 00 50.4	+1.2
ANKY	Antikythira Is	2.67	157	ePn	Pn	09 00 50.4	+1.2

SOH	Sokhos	2.69	22	P	Pn	09 00 50.7	+1.1
SOH	Sokhos	2.69	22	ePN	Pn	09 00 50.5	+0.9
SOH	Sokhos	2.69	22	ePn	Pn	09 00 50.5	+0.9
BIA	Bitola	2.74	349	i Pn	Pn	09 00 52.1	+1.9
BIA	Bitola	2.74	349	i Pn	Pn	09 00 52.1	+1.9
VLO	Vlora	2.90	318	ePN	Pb	09 00 55.9	-2.2
VLO	Vlora	2.90	318	ePn	Pb	09 00 55.9	-2.2
	SNR=4.0						
LIA	Limnos Island	2.91	57	P	Pn	09 00 52.9	+0.4
LIA	Limnos Island	2.91	57	ePN	Pn	09 00 52.8	+0.3
LIA	Limnos Island	2.91	57	ePn	Pn	09 00 52.8	+0.3
VAY	Valandovo	3.01	8	i Pn	Pn	09 00 54.7	+0.7
VAY	Valandovo	3.01	8	i Pn	Pn	09 00 55.2	+1.2
APE	Apeiranthos	3.05	113	eP	Pn	09 00 56.2	+1.7
APE	Apeiranthos	3.05	113	ePN	Pn	09 00 55.3	+0.7
APE	Apeiranthos	3.05	113	⇓P	Pn	09 00 55.3	+0.7
APE	Apeiranthos	3.05	113	⇓iP	Pn	09 00 55.3	+0.7
APE	Apeiranthos	3.05	113	ePn	Pn	09 00 55.3	+0.7
CHOS	Chios island	3.17	88	P	Pn	09 00 57.1	+0.9
CHOS	Chios island	3.17	88	ePN	Pn	09 00 57.1	+0.9
CHOS	Chios island	3.17	88	ePn	Pn	09 00 57.1	+0.9
NVR	Nevrokopi	3.33	25	ePN	Pn	09 00 59.7	+1.4
NVR	Nevrokopi	3.33	25	ePn	Pn	09 00 59.7	+1.4
SANT	Santorini	3.36	125	ePB	Pn	09 01 01.5	+2.6
SANT	Santorini	3.36	125	ePn	Pn	09 01 01.5	+2.6
SANT				eSn	Sb	09 01 48.1	+1.2
SANT	Santorini	3.36	125	ePb	Pn	09 01 01.5	+2.6
VAM	Vamos	3.40	149	ePN	Pn	09 00 59.6	+0.3
VAM	Vamos	3.40	149	ePn	Pn	09 00 59.6	+0.3
PRK	Paraskevi	3.44	73	ePN	Pn	09 01 00.5	+0.7
PRK	Paraskevi	3.44	73	ePn	Pn	09 01 00.5	+0.7
TIR	Tirane	3.44	332	ePN	Pb	09 01 04.7	-2.7
TIR				i SN	Sb	09 01 47.7	-1.3
TIR	Tirane	3.44	332	eP	Pn	09 01 02.7	+2.8
TIR	Tirane	3.44	332	ePn	Pn	09 01 02.7	+2.8
TIR	Tirane	3.44	332	eP	Pn	09 01 02.7	+2.8
BOZC	Bozcaada	3.47	63	i P	Pn	09 01 00.7	+0.3
PHP	Peshkopia	3.56	340	ePN	Pb	09 01 06.1	-3.4
PHP				i SN	Sb	09 01 49.8	-2.8
PHP	Peshkopia	3.56	340	ePn	Pb	09 01 06.1	-3.4
	SNR=4.0						
PHP				i Sn	Sb	09 01 49.8	-2.8
	SNR=4.0						
URLA	Izmir	3.59	88	i P	Pn	09 01 03.3	+1.3
URLA	Izmir	3.59	88	i P	Pn	09 01 03.3	+1.3
EZN	Ezine	3.66	65	eP	Pn	09 01 04.2	+1.3
SKO	Skopje	3.66	353	i Pn	Pn	09 01 04.4	+1.5
SKO	Skopje	3.66	353	i Pn	Pn	09 01 01.8	-1.1
AYVA	Ayvalik	3.77	74	i P	Pn	09 01 05.8	+1.4
AYVA	Ayvalik	3.77	74	i P	Pn	09 01 05.8	+1.4
SMG	Samos	3.85	98	ePN	Pn	09 01 06.5	+1.0
SMG	Samos	3.85	98	ePn	Pn	09 01 06.5	+1.0
GVD	Gavdhos	3.86	154	ePN	Pn	09 01 06.1	+0.4
GVD	Gavdhos	3.86	154	ePn	Pn	09 01 08.9	+3.2
GVD	Gavdhos	3.86	154	ePn	Pn	09 01 06.1	+0.4
BLCB	Balcova	3.94	88	eP	Pn	09 01 09.4	+2.7
ENEZ	Enez	3.99	52	eP	Pn	09 01 06.6	-0.8
SIVA	Sivas	4.00	145	ePN	Pn	09 01 10.3	+2.8
SIVA	Sivas	4.00	145	ePn	Pn	09 01 10.3	+2.8
GELI	Tayfur-Gelibol	4.01	58	eP	Pn	09 01 08.2	+0.5
PUK	Puka	4.05	337	ePN	Pn	09 01 11.1	+2.8
PUK	Puka	4.05	337	ePn	Pn	09 01 11.1	+2.8
	SNR=4.0						
IZM	Izmir	4.12	88	eP	Pn	09 01 11.0	+1.9
ERIK	Erikli-Kesan	4.18	55	eP	Pn	09 01 09.4	-0.6
LPK	Lapseki	4.20	60	eP	Pn	09 01 11.3	+1.0
NPS	Neapolis	4.20	136	ePN	Pn	09 01 11.7	+1.3
NPS	Neapolis	4.20	136	ePn	Pn	09 01 11.7	+1.3
TIP	Timpagrande	4.21	283	ePn	Pn	09 01 11.9	+1.5
TIP				eSn	Sn	09 02 01.6	+2.2
TIP	Timpagrande	4.21	283	ePn	Pn	09 01 11.9	+1.5
TIP				eSn	Sn	09 02 01.6	+2.2
ULC	Ulcinj	4.21	330	ePn	Pn	09 01 12.2	+1.8
ULC				eSn	Sn	09 02 01.9	+2.5
ULC	Ulcinj	4.21	330	ePn	Pn	09 01 12.2	+1.8
ULC				eSn	Sn	09 02 01.9	+2.5
LAST	Lasithi	4.21	138	ePN	Pn	09 01 10.9	+0.4
LAST	Lasithi	4.21	138	ePn	Pn	09 01 10.9	+0.4
PLD	Plovdiv	4.29	28	ePn	Pn	09 01 14.2	+2.7
BCI	Bajram Curri	4.30	340	ePN	Pn	09 01 16.0	+4.3
BCI	Bajram Curri	4.30	340	ePn	Pn	09 01 16.0	+4.3
	SNR=4.0						
VTS	Vitosha	4.35	12	⇓P	Pn	09 01 14.2	+1.7
VTS	Vitosha	4.35	12	⇓iP	Pn	09 01 14.2	+1.7
VTS	Vitosha	4.35	12	P	Pn	09 01 14.2	+1.7
NIS1	Nisyros Isl.	4.45	111	ePN	Pn	09 01 16.6	+2.9
NIS1	Nisyros Isl.	4.45	111	ePn	Pn	09 01 16.6	+2.9
BARS	Barje	4.48	358	ePn	Pn	09 01 16.2	+2.0
PVY	Plav	4.54	340	⇓iPn	Pn	09 01 16.9	+1.8
PVY				eSn	Sn	09 02 09.8	+2.1
PVY	Plav	4.54	340	⇓iPn	Pn	09 01 16.9	+1.8
PVY				eSn	Sn	09 02 09.8	+2.1
KRBG	Karabiga-Canak	4.57	62	eP	Pn	09 01 16.1	+0.7
BALY	Balya	4.57	70	i P	Pn	09 01 17.2	+1.7
BALY	Balya	4.57	70	i P	Pn	09 01 17.2	+1.7
PDG	Podgorica	4.61	334	⇑iPn	Pn	09 01 17.0	+1.1
TTG	Podgorica	4.61	334	⇑iPn	Pn	09 01 17.0	+1.1
TTG				eSn	Sn	09 02 12.0	+2.8
RKY	Sarkoy-Tekirda	4.62	58	eP	Pn	09 01 16.1	-0.1
SART	Tekirdag	4.63	58	i P	Pn	09 01 16.5	+0.3
SART	Tekirdag	4.63	58	i P	Pn	09 01 16.5	+0.3
BUM	Brajici-Budva	4.63	330	⇑iPn	Pn	09 01 17.7	+1.4
BUM				eSn	Sn	09 02 11.9	+2.0
BUM	Brajici-Budva	4.63	330	⇑iPn	Pn	09 01 17.7	+1.4
BUM				eSn	Sn	09 02 11.9	+2.0
ZKR	Zakros	4.65	132	ePN	Pn	09 01 19.2	+2.7
ZKR	Zakros	4.65	132	ePn	Pn	09 01 19.2	+2.7
MLSB	Milas	4.67	101	eP	Pn	09 01 20.3	+3.5
AYDN	Tasoluk	4.67	96	i P	Pn	09 01 19.3	+2.5
AYDN	Tasoluk	4.67	96	i P	Pn	09 01 19.3	+2.5
DAT	Datca	4.69	108	eP	Pn	09 01 19.4	+2.2
GONE	Gonen-Balikesi	4.72	67	eP	Pn	09 01 19.9	+2.5
MFT	Murefte	4.74	57	eP	Pb	09 01 23.6	-6.0
BALB	Balikesir	4.74	72	eP	Pn	09 01 17.5	-0.3
BEY	Berane	4.81	341	⇓iPn	Pn	09 01 20.6	+1.8
BEY				eSn	Sn	09 02 16.7	+2.2
IVA	Berane	4.81	341	⇓iPn	Pn	09 01 20.6	+1.8
IVA				eSn	Sn	09 02 16.7	+2.2
CEL	Celeste	4.83	271	ePn	Pn	09 01 19.9	+0.9
CEL				eSn	Sn	09 02 17.4	+2.7
CEL	Celeste	4.83	271	ePn	Pn	09 01 19.9	+0.9
CEL				eSn	Sn	09 02 17.4	+2.7
BAI	Bari	4.84	307	ePn	Pn	09 01 20.3	+1.2
MRMT	Marmara Adasi	4.87	61	eP	Pn	09 01 19.4	-0.2
HCY	Herceg Novi	4.92	328	⇑iPn	Pn	09 01 21.1	+1.0
HCY				eSn	Sn	09 02 18.6	+1.8
HCY	Herceg Novi	4.92	328	⇑iPn	Pn	09 01 21.1	+1.0
HCY				eSn	Sn	09 02 18.6	+1.8
KARP	Karpathos	4.96	123	ePN	Pn	09 01 24.3	+3.4
KARP	Karpathos	4.96	123	ePn	Pn	09 01 24.3	+3.4
EDRB	Edirne	5.04	44	eP	Pn	09 01 20.3	-1.5
YER	Yerkesik	5.10	102	eP	Pn	09 01 26.0	+3.3
CUC	Castrocucco	5.10	291	ePn	Pn	09 01 25.5	+2.7
CUC	Castrocucco	5.10	291	ePn	Pn	09 01 25.5	+2.7
MANT	Manisa	5.13	86	i P	Pn	09 01 25.3	+2.0
MANT	Manisa	5.13	86	i P	Pn	09 01 25.3	+2.0
DURS	Dursunbey	5.18	74	i P	Pn	09 01 25.5	+1.6
DURS	Dursunbey	5.18	74	i P	Pn	09 01 25.5	+1.6
KULA	Kula-Manisa	5.21	86	eP	Pn	09 01 17.1	-7.2
KCTX	Karacabey (Bur	5.27	67	eP	Pn	09 01 25.6	+0.5
BRY	Bratogost	5.28	331	⇑iPn	Pn	09 01 26.8	+1.5
BRY				eSn	Sn	09 02 27.7	+1.7
BRY	Bratogost	5.28	331	⇑iPn	Pn	09 01 26.8	+1.5
DEMI	Demirci	5.28	80	i P	Pn	09 01 27.0	+1.8
DEMI	Demirci	5.28	80	i P	Pn	09 01 27.0	+1.8
UPM	Unac-Piva	5.41	335	⇑iPn	Pn	09 01 28.8	+1.7
UPM				eSn	Sn	09 02 31.3	+2.0
UPM	Unac-Piva	5.41	335	⇑iPn	Pn	09 01 28.8	+1.7
UPM				eSn	Sn	09 02 31.3	+2.0
TURN	Turunc	5.42	104	i P	Pn	09 01 26.2	-0.9
TURN	Turunc	5.42	104	i P	Pn	09 01 26.2	-0.9
DNZL	Cakiroluk	5.58	94	i P	Pn	09 01 32.5	+3.1
STON	Ston	5.60	325	ePn	Pn	09 01 29.4	-0.1
STON				Sn	Sn	09 02 34.4	+0.7
STON	Ston	5.60	325	ePn	Pn	09 01 29.4	-0.1
STON				Sn	Sn	09 02 34.4	+0.7
ARMT	Armutlu	5.74	65	eP	Pn	09 01 36.9	+5.5
CTYL	Yal??k??y-??at	5.75	55	eP	Pn	09 01 34.1	+2.6
MS1	Monte Sant'Ang	5.76	308	ePn	Pn	09 01 32.9	+1.1
CTKS	Kestanelik-??a	5.77	58	eP	Pn	09 01 38.8	+7.0
FETY	Fethiye	5.86	105	eP	Pn	09 01 38.8	+5.7
KHAL	Karahalli	5.87	87	i P	Pn	09 01 35.8	+2.5
KHAL	Karahalli	5.87	87	i P	Pn	09 01 35.8	+2.5
GDZ	Gediz	5.88	80	i P	Pn	09 01 36.8	+3.3
TVSB	Tavsanli	5.91	77	eP	Pn	09 01 34.6	+0.7
DIVS	Divibare	5.96	346	P	Pn	09 01 38.9	+4.3
BUY	Buyukada	6.03	63	eP	Pn	09 01 39.8	+4.4
GLHS	Glhisar (BURDU	6.04	99	eP	Pn	09 01 41.7	+6.0
GOLH	Golhisar	6.07	98	i P	Pn	09 01 40.2	+4.1
ISK	Istanbul-Kandi	6.07	61	eP	Pn	09 01 37.4	+1.4
ADVT	Abdulvahap	6.33	68	eP	Pn	09 01 43.6	+4.0
CAVI	Cavuskoy	6.34	70	eP	Pn	09 01 43.6	+3.8
ALT	Altintas	6.36	81	eP	Pn	09 01 33.2	-7.0
AKAS	Kas	6.39	107	i P	Pn	09 01 45.8	+5.2
LTBQ	Tobruq	6.45	166	i P	Pn	09 01 42.1	+0.8
	72nm,0.8s,SNR=24						
ELL	Elmali	6.46	102	eP	Pn	09 01 45.0	+3.5
WDD	Wield Dalam	6.48	250	Pn	Pn	09 01 42.6	+0.9
WDD				eSn	Sn	09 02 56.4	+0.9
WDD	Wield Dalam	6.48	250	Pn	Pn	09 01 42.6	+0.9
WDD				eSn	Sn	09 02 56.4	+0.9
SHUT	Suhut-Afyon	6.69	85	eP	Pn	09 01 45.9	+1.2
ISP	Isparta	6.72	92	eP	Pn	09 01 47.3	+2.3
ISP	Isparta	6.72	92	⇑P	Pn	09 01 47.8	+2.8
ISP	Isparta	6.72	92	ePn	Pn	09 01 47.8	+2.8
ISP	Isparta	6.72	92	⇑iP	Pn	09 01 47.8	+2.8
ISP	Isparta	6.72	92	P	Pn	09 01 47.8	+2.8
KORT	Korkueli	6.73	99	i P	Pn	09 01 50.3	+5.0
GULT	Gulveren	6.90	70	eP	Pn	09 01 50.7	+3.2
SEYT	Eskypehyr	6.98	77	i P	Pn	09 01 51.2	+2.6
SEYT	Eskypehyr	6.98	77	i P	Pn	09 01 51.2	+2.6
GZR	Gura Zlata	7.08	4	⇑P	Pn	09 01 52.7	+2.8
GZR	Gura Zlata	7.08	4	⇑iP	Pn	09 01 52.7	+2.8
GZR	Gura Zlata	7.08	4	P	Pn	09 01 52.7	+2.8
LOT	Lotru	7.22	10	⇑iP	Pn	09 01 54.1	+2.1
MTUR	Matau	7.25	17	⇑iP	Pn	09 01 52.1	-0.2
BZS	Buzias	7.28	358	⇑P	Pn	09 01 54.5	+1.9
BZS	Buzias	7.28	358	⇑iP	Pn	09 01 54.5	+1.9
BZS	Buzias	7.28	358	P	Pn	09 01 54.5	+1.9
ARR	Arges	7.29	15	⇑iP	Pn	09 01 54.0	+1.2
MDUB	Mudurnu	7.41	70	eP	Pn	09 01 58.6	+4.0
VOIR		7.45	17	⇓P	Pn	09 01 57.3	+2.3
VOIR		7.45	17	⇓iP	Pn	09 01 57.3	+2.3
VOIR		7.45	17	P	Pn	09 01 57.3	+2.3
SVRH	Sivrihisar-ESK	7.49	79	eP	Pn	09 02 05.4	+10
ISR	Istrita	7.57	25	⇑P	Pn	09 01 59.2	+2.5
ISR	Istrita	7.57	25	⇑iP	Pn	09 01 59.2	+2.5
ISR	Istrita	7.57	25	P	Pn	09 01 59.2	+2.5
AQU	L'Aquila	7.71	304	ePn	Pn	09 02 00.7	+2.1
AQU				eSn	Sn	09 03 28.5	+2.7
AQU	L'Aquila	7.71	304	⇓iP	Pn	09 02 00.5	+1.9
AQU	L'Aquila	7.71	304	eP	Pn	09 02 00.7	+2.1
AQU				eS	Sn	09 03 28.5	+2.7
MLR	Muntele Rosu	7.72	21	Pn	Pn	09 02 00.9	+2.1
MLR				Lg	Lg	09 04 20.1	
MLR	Muntele Rosu	7.72	21	⇑iP	Pn	09 02 01.8	+3.0
MLR	Muntele Rosu	7.72	21	Pn	Pn	09 02 00.9	+2.1
	0.2nm,0.3s,baz=208,slow=5.7,SNR=14						
MLR				Lg	Lg	09 04 20.1	
	0.1nm,0.3s,baz=278,slow=18,SNR=2.4						
MLR				LR	LR	09 05 09.6	
	comp=Z,196nm,21.8s,baz=190,slow=39						
MLR	Muntele Rosu	7.72	21	P	Pn	09 02 00.9	+2.1
	196nm,21.8s						
KIZT	Kizilcal	7.73	83	eP	Pn	09 02 03.2	+4.2
TIRR	Tirgusor	7.77	36	⇑P	Pn	09 02 01.0	+1.7
TIRR	Tirgusor	7.77	36	⇑iP	Pn	09 02 01.0	+1.7
TIRR	Tirgusor	7.77	36	P	Pn	09 02 01.0	+1.7
DOPR	Dopca	8.02	17	⇑iP	Pn	09 02 05.5	+2.7
LADK	Ladik-KONYA	8.13	88	eP	Pn	09 02 12.5	+8.0
NVLJ	Novalja	8.22	321	ePn	Pn	09 02 05.7	+0.2
NVLJ				Sn	Sn	09 03 34.0	-4.1
NVLJ	Novalja	8.22	321	ePn	Pn	09 02 05.7	+0.2
PLOR	Plostina	8.26	23	⇑P	Pn	09 02 07.9	+1.8
PLOR	Plostina	8.26	23	⇑iP	Pn	09 02 07.9	+1.8
PLOR	Plostina	8.26	23	P	Pn	09 02 07.9	+1.8
PKSM	Moragy	8.26	343	⇑P	Pn	09 02 07.1	+1.1
PKSM	Moragy	8.26	343	⇑iP	Pn	09 02 07.1	+1.1
PKSM	Moragy	8.26	343	⇑ePn	Pn	09 02 06.7	+0.7
PKSM	Moragy	8.26	343	P	Pn	09 02 07.1	+1.1
VRI	Vrincioaia	8.30	23	⇓P	Pn	09 02 09.3	+2.8
VRI	Vrincioaia	8.30	23	⇓iP	Pn	09 02 09.3	+2.8
VRI	Vrincioaia	8.30	23	P	Pn	09 02 09.3	+2.8
DRGR		8.47	3	⇑P	Pn	09 02 10.4	+1.5
DRGR		8.47	3	⇑iP	Pn	09 02 10.4	+1.5
DRGR		8.47	3	P	Pn	09 02 10.4	+1.5
LSRT	Sirt	8.48	213	i P	Pn	09 02 08.1	-1.0
	136nm,1.6s,SNR=23						
BEHE	Becsehely	9.01	336	⇑ePn	Pn	09 02 18.5	+2.2
BR131	Keskin Array S	9.14	78	ePn	Pn	09 02 21.4	+3.1
	4.4nm,0.6s						
BRTR	Keskin Array B	9.14	78	Pn	Pn	09 02 21.1	+2.7
BRTR				Lg	Lg	09 05 10.4	
BRTR	Keskin Array B	9.14	78	Pn	Pn	09 02 21.1	+2.7
	1.5nm,0.3s,baz=259,slow=13,SNR=33						
BRTR				Lg	Lg	09 05 10.4	
	0.1nm,0.3s,baz=268,slow=33,SNR=3.7						
BRTR				LR	LR	09 05 56.9	
	comp=Z,245nm,20.4s,baz=8.1,slow=38						
BRTR	Keskin Array B	9.14	78	Pn	Pn	09 02 21.0	+2.7
BUD	Budapest	9.40	347	⇑ePn	Pn	09 02 22.7	+1.0
BURAR	Bucovina Array	9.56	13	⇓iP	Pn	09 02 26.0	+2.0
BUR08	Bucovina Ar. S	9.59	13	ePn	Pn	09 02 26.4	+2.0
BUR08	Bucovina Ar. S	9.59	13	ePn	Pn	09 02 26.4	+2.0
CSS	Prodhromos	9.69	107	eP	Pn	09 02 26.9	+1.3
CSS	Prodhromos	9.69	107	ePn	Pn	09 02 28.9	+3.2
	13nm,0.8s						
CDAG	Cicekdag	9.70	79	i P	Pn	09 02 29.5	+3.6
PSZ	Piszkesteto	9.71	351	⇑P	Pn	09 02 27.6	+1.7
PSZ	Piszkesteto	9.71	351	ePn	Pn	09 02 28.7	+2.8
PSZ	Piszkesteto	9.71	351	⇑iP	Pn	09 02 27.6	+1.7
PSZ	Piszkesteto	9.71	351	⇑ePn	Pn	09 02 29.2	+3.3
PSZ	Piszkesteto	9.71	351	P	Pn	09 02 27.6	+1.7
PSZ	Piszkesteto	9.71	351	ePn	Pn	09 02 28.7	+2.8
VOJS	Vojsko	9.78	324	i Pn	Pn	09 02 27.0	+0.1
TRPA	Tarpa	9.80	2	ePn	Pn	09 02 31.0	+3.9
SOKA	Soboth	9.80	330	⇓iPn	Pn	09 02 27.4	+0.1
SOKA				⇓iSn	Sn	09 04 15.4	-1.8
SOKA	Soboth	9.80	330	Pn	Pn	09 02 27.4	+0.1
OBKA	Obir	9.86	328	⇑iPn	Pn	09 02 28.5	+0.4
OBKA				⇓iSn	Sn	09 04 16.4	-2.2
OBKA	Obir	9.86	328	Pn	Pn	09 02 28.5	+0.4
CORM	Corum	9.95	75	eP	Pn	09 02 29.6	+0.2
KIS	Kishinev	9.99	28	e	Pn	09 02 55.0	+25
KIS				eLg2		09 05 42.0	
KIS				eRg	Rg	09 06 17.0	
KIS				LRM	MLR	09 07 50.0	
	600nm,10.0s						
SOP	Sopron	10.16	339	ePn	Pn	09 02 29.9	-2.2
KECS	Kecovo	10.21	354	eP	Pn	09 02 33.3	+0.6
KECS	Kecovo	10.21	354	ePN	Pn	09 02 33.3	+0.6
KECS	Kecovo	10.21	354	eP	Pn	09 02 33.3	+0.6
UZH	Uzhgorod	10.29	1	eP	Pn	09 02 34.5	+0.6
UZH				eS	Sn	09 04 30.0	+1.0
UZH				MLR	MLR		
	comp=N,900nm,9.0s						
UZH				MLR	MLR		
	comp=E,400nm,9.0s						
UZH				MLR	MLR		
	comp=Z,500nm,9.0s						
UZH	Uzhgorod	10.29	1	eP	Pn	09 02 34.5	+0.6
UZH				eS	Sn	09 04 30.0	+1.0
VYHS	Vyhne	10.42	348	eP	Pn	09 02 36.9	+1.3
VYHS				e		09 04 27.1	
VYHS	Vyhne	10.42	348	ePN	Pn	09 02 36.9	+1.3
VYHS				eSN	Sn	09 04 27.1	-5.0
VYHS	Vyhne	10.42	348	eP	Pn	09 02 36.9	+1.3
KEST	Kesra	10.47	260	Pn	Pn	09 02 39.5	+3.1
KEST	Kesra	10.47	260	Pn	Pn	09 02 39.5	+3.1
	comp=Z,0.1nm,0.3s,baz=90,slow=6.1,SNR=3.3						
ZST	Bratislava	10.49	342	eP	Pn	09 02 37.3	+0.8
ZST	Bratislava	10.49	342	ePN	Pn	09 02 37.3	+0.8
ZST	Bratislava	10.49	342	eP	Pn	09 02 37.3	+0.8
LJFR	Jufra	10.56	211	i P	Pn	09 02 36.5	-1.1
	comp=Z,23nm,0.8s,SNR=22						
CRVS	Cervenica-Dubn	10.57	358	eP	Pn	09 02 40.9	+3.2
CRVS	Cervenica-Dubn	10.57	358	ePN	Pn	09 02 40.9	+3.2
CRVS	Cervenica-Dubn	10.57	358	eP	Pn	09 02 40.9	+3.2
KOLS	Kolonicke sedl	10.60	1	eP	Pn	09 02 43.0	+4.9
KOLS	Kolonicke sedl	10.60	1	ePN	Pn	09 02 43.0	+4.9
PGF	Pioggiola	10.78	297	eP	Pn	09 02 42.2	+1.5
	comp=Z,32nm,1.0s						
PGF	Pioggiola	10.78	297	eP	Pn	09 02 42.2	+1.5
PGF				pmax	pmax		
	comp=Z,32nm,1.0s						
PGF	Pioggiola	10.78	297	eP	Pn	09 02 42.2	+1.5
	comp=Z,32nm,1.0s						
PGF	Pioggiola	10.78	297	eP	Pn	09 02 42.2	+1.5
	comp=Z,16nm,1.0s						
KBA	Koelnbreinsper	10.82	327	⇓iPn	Pn	09 02 41.5	+0.2
KBA				⇑iSn	Sn	09 04 39.2	-3.0
KBA	Koelnbreinsper	10.82	327	Pn	Pn	09 02 41.5	+0.2
ABTA	Abfaltersbach	10.95	323	⇓iPn	Pn	09 02 43.0	+0.1
ABTA				⇑iSn	Sn	09 04 42.7	-2.4
ABTA	Abfaltersbach	10.95	323	Pn	Pn	09 02 43.0	+0.1
JAVC	Velka Javorina	10.98	345	ePn	Pn	09 02 44.7	+1.3
MOA	Molln	11.07	332	⇓iPn	Pn	09 02 44.7	+0.2
MOA				⇑iSn	Sn	09 04 45.9	-2.1
MOA	Molln	11.07	332	Pn	Pn	09 02 44.7	+0.2
STHS	Stebnicka Huta	11.09	357	eP	Pn	09 02 49.2	+4.3
STHS	Stebnicka Huta	11.09	357	ePN	Pn	09 02 49.2	+4.3
NIE	Niedzica	11.15	354	eP	Pn	09 02 50.7	+5.1
NIE	Niedzica	11.15	354	eP	Pn	09 02 50.7	+5.1
KRUC	Moravsky	11.47	341	ePn	Pn	09 02 50.8	+0.8
LVV	L'vov	11.57	6	eP	Pn	09 02 55.0	+3.6
LVV				eS	Sn	09 05 05.8	+5.5
LVV				MLR	MLR		
	comp=N,300nm,14.0s						
LVV				MLR	MLR		
	comp=Z,300nm,14.0s						
LVV				MLR	MLR		
	comp=E,100nm,13.0s						
VRAC	Vranov	11.65	342	Pn	Pn	09 02 53.1	+0.7
VRAC				Sn	Sn	09 05 05.4	+3.2
VRAC	Vranov	11.65	342	⇓iP	Pn	09 02 53.5	+1.1
VRAC	Vranov	11.65	342	Pn	Pn	09 02 53.1	+0.7
	comp=E,0.2nm,0.3s,baz=158,slow=13,SNR=10						
VRAC				Sn	Sn	09 05 05.4	+3.2
	comp=E,0.3nm,0.3s,baz=192,slow=15,SNR=2.3						
VRAC	Vranov	11.65	342	P	Pn	09 02 53.1	+0.7
VRAC				S	Sn	09 05 05.4	+3.2
WTTA	Wattenberg	11.73	323	⇓iPn	Pn	09 02 53.2	-0.5
WTTA	Wattenberg	11.73	323	Sn	Sn	09 05 01.9	-2.6
WTTA	Wattenberg	11.73	323	Pn	Pn	09 02 53.2	-0.5
WATA	Walderalm	11.81	323	⇓iPn	Pn	09 02 55.0	+0.2
WATA				⇑iSn	Sn	09 05 04.5	-2.0
WATA	Walderalm	11.81	323	Pn	Pn	09 02 55.0	+0.2
OKC	Ostrava-Krasne	11.83	348	AMS	AMS	09 08 00.0	
	comp=E,400nm,12.0s						
MORC	Moravsky Berou	11.88	346	eP	Pn	09 02 54.6	-1.1
MORC				pmax	pmax		
	comp=Z,12nm,1.4s						
MORC	Moravsky Berou	11.88	346	ePn	Pn	09 02 54.6	-1.1
	comp=Z,12nm,1.4s						
MORC	Moravsky Berou	11.88	346	⇑iP	Pn	09 02 58.2	+2.5
MORC	Moravsky Berou	11.88	346	eP	Pn	09 02 54.6	-1.1
	comp=Z,12nm,1.4s						
TREC	Trest	11.93	339	AMS	AMS	09 08 00.0	
	comp=Z,600nm,13.3s						
FUORN	Ofenpass-Fuorn	11.99	317	ePn	Pn	09 03 00.8	+3.4
FUORN				eSn	Sn	09 05 12.3	+1.3
MOTA	Moosalm	12.05	322	⇑iPn	Pn	09 02 58.5	+0.5
MOTA				⇑iSn	Sn	09 05 09.7	-2.5
MOTA	Moosalm	12.05	322	Pn	Pn	09 02 58.5	+0.5
MMAI	Mount Meron Ar	12.10	112	Pn	Pn	09 03 01.8	+3.1
MMAI				Sn	Sn	09 05 09.7	-3.8
MMAI	Mount Meron Ar	12.10	112	Pn	Pn	09 03 01.8	+3.1
	comp=Z,1.2nm,0.3s,baz=311,slow=14,SNR=10						
MMAI				Sn	Sn	09 05 09.7	-3.8
	comp=Z,3.5nm,0.3s,baz=290,slow=26,SNR=4.3						
GEC2	GERESS Array S	12.11	333	eP	Pn	09 03 01.4	+2.6
GEC2				pmax	pmax		
	comp=Z,2μm,1.0s						
GEC2	GERESS Array S	12.11	333	ePn	Pn	09 03 01.4	+2.6
	comp=Z,2μm,1.0s						
GEC2	GERESS Array S	12.11	333	eP	Pn	09 03 01.4	+2.6
	comp=Z,2μm,1.0s						
GERES	GERESS Array B	12.11	333	Pn	Pn	09 02 59.6	+0.9
GERES	GERESS Array B	12.11	333	Pn	Pn	09 02 59.6	+0.9
	comp=Z,0.2nm,0.3s,baz=163,slow=14,SNR=9.3						
GERES	GERESS Array B	12.11	333	P	Pn	09 02 59.7	+0.9
DAVOX	Davos/Dischmat	12.29	317	Pn	Pn	09 03 03.4	+1.9
DAVOX				Sn	Sn	09 05 15.3	-3.1
DAVOX	Davos/Dischmat	12.29	317	Pn	Pn	09 03 03.4	+1.9
	comp=Z,0.6nm,0.3s,baz=160,slow=12,SNR=7.5						
DAVOX				Sn	Sn	09 05 15.3	-3.1
	comp=Z,0.3nm,0.3s,baz=139,slow=20,SNR=3.0						
DAVOX	Davos/Dischmat	12.29	317	Pn	Pn	09 03 03.3	+1.9
SBF	Sospel	12.31	301	eP	Pn	09 03 02.6	+1.0
SBF	Sospel	12.31	301	eP	Pn	09 03 02.6	+1.0
SBF	Sospel	12.31	301	eP	Pn	09 03 02.6	+1.0
SBF	Sospel	12.31	301	eP	Pn	09 03 02.6	+1.0
KHC	Kasperske Hory	12.39	333	eP	Pn	09 03 03.4	+0.8
KHC				MLR	MLR		
	comp=Z,1μm,20.6s						
KHC	Kasperske Hory	12.39	333	eP	Pn	09 03 03.4	+0.8
KHC				ex	x	09 03 10.9	
KHC				ex	x	09 03 17.5	
KHC				AMS	AMS	09 08 10.0	
	comp=Z,1μm,20.6s						
KHC	Kasperske Hory	12.39	333	ePn	Pn	09 03 06.7	+4.1
KHC	Kasperske Hory	12.39	333	eP	Pn	09 03 03.4	+0.8
	comp=Z,1μm,20.6s						
TUE	Stuetta	12.40	315	ePn	Pn	09 03 04.6	+1.7
TUE				eSn	Sn	09 05 18.3	-2.6
TUE	Stuetta	12.40	315	ePn	Pn	09 03 04.6	+1.7
DPC	Dobruska-Polom	12.68	343	eP	Pn	09 03 09.4	+2.8
DPC	Dobruska-Polom	12.68	343	eP	Pn	09 03 09.4	+2.8
DPC	Dobruska-Polom	12.68	343	ePn	Pn	09 03 09.8	+3.2
DPC	Dobruska-Polom	12.68	343	eP	Pn	09 03 09.4	+2.8
DPC	Dobruska-Polom	12.68	343	ePn	Pn	09 03 09.8	+3.2
FRF	La Foret Royal	12.74	299	eP	Pn	09 03 08.2	+0.8
	comp=Z,21nm,0.9s						
FRF	La Foret Royal	12.74	299	eP	Pn	09 03 08.2	+0.8
FRF				pmax	pmax		
	comp=Z,21nm,0.9s						
FRF	La Foret Royal	12.74	299	eP	Pn	09 03 08.2	+0.8
	comp=Z,21nm,0.9s						
FRF	La Foret Royal	12.74	299	eP	Pn	09 03 08.2	+0.8
	comp=Z,10nm,0.9s						
LMR	La Mourre	12.77	298	eP	Pn	09 03 08.8	+1.1
	comp=Z,50nm,1.4s						
LMR	La Mourre	12.77	298	eP	Pn	09 03 08.8	+1.1
LMR				pmax	pmax		
	comp=Z,50nm,1.4s						
LMR	La Mourre	12.77	298	eP	Pn	09 03 08.8	+1.1
	comp=Z,50nm,1.4s						
LMR	La Mourre	12.77	298	eP	Pn	09 03 08.8	+1.1
	comp=Z,25nm,1.4s						
PRU	Pruhonice	12.82	338	eP	Pn	09 03 10.6	+2.2
PRU				MLR	MLR		
	comp=Z,600nm,10.2s						
PRU	Pruhonice	12.82	338	eP	Pn	09 03 10.6	+2.2
PRU				ex	x	09 03 17.4	
PRU				AMS	AMS	09 08 30.0	
	comp=Z,600nm,10.2s						
PRU	Pruhonice	12.82	338	eP	Pn	09 03 10.6	+2.2
	comp=Z,600nm,10.2s						
UPC	Upice	12.90	343	eP	Pn	09 03 11.0	+1.5
UPC	Upice	12.90	343	eP	Pn	09 03 11.0	+1.5
UPC				ex	x	09 03 13.6	
UPC	Upice	12.90	343	eP	Pn	09 03 11.0	+1.5
MBDF	Montbardon	13.09	304	eP	Pn	09 03 12.9	+0.7
	comp=Z,35nm,0.8s						
MBDF	Montbardon	13.09	304	eP	Pn	09 03 12.9	+0.7
MBDF				pmax	pmax		
	comp=Z,35nm,0.8s						
MBDF	Montbardon	13.09	304	eP	Pn	09 03 12.9	+0.7
	comp=Z,35nm,0.8s						
MBDF	Montbardon	13.09	304	eP	Pn	09 03 12.9	+0.7
	comp=Z,18nm,0.8s						
KSP	Ksiaz	13.15	344	eP	P	09 03 18.4	-4.6
ANN	Anapa	13.21	56	eP	Pn	09 03 13.4	-0.4
ANN				eS	Sn	09 05 40.4	0.0
ANN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ANN	Anapa	13.21	56	eP	Pn	09 03 13.4	-0.4
	comp=Z,8.0nm,0.7s						
ANN				eS	Sn	09 05 40.4	0.0
PVCC	Panska Ves	13.29	339	AMS	AMS	09 08 50.0	
	comp=Z,500nm,9.3s						
KIEV	Kiev	13.37	20	eP	Pn	09 03 18.2	+2.3
KIEV	Kiev	13.37	20	ePn	Pn	09 03 18.2	+2.3
KIEV	Kiev	13.37	20	eP	Pn	09 03 18.2	+2.3
AKASG	Malin Array Be	13.38	20	i P	Pn	09 03 17.3	+1.3

AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 13.38 20 Pn **Pn 09 03 16.9 +0.9**
AKASG Malin Array Be 13.38 20 Pn **Pn 09 03 16.9 +0.9**
comp=Z,0.4nm,0.3s,baz=209,slow=12,SNR=5.9
AKASG Malin Array Be 13.38 20 Pn **Pn 09 03 16.9 +0.9**
AKASG Malin Array Be 13.38 20 *i* P **Pn 09 03 17.3 +1.3**
comp=Z,3.0nm,0.8s
LPG La Plagne 13.43 307 *e*P **Pn 09 03 17.6 +0.6**
comp=Z,30nm,0.9s
LPG La Plagne 13.43 307 *e*P **Pn 09 03 17.6 +0.6**
LPG pmax pmax
comp=Z,30nm,0.9s
LPG La Plagne 13.43 307 *e*P **Pn 09 03 17.6 +0.6**
comp=Z,30nm,0.9s
LPG La Plagne 13.43 307 *e*P **Pn 09 03 17.6 +0.6**
comp=Z,15nm,0.9s
LPL La Plagne 13.45 307 *e*P **Pn 09 03 17.8 +0.6**
comp=Z,37nm,1.1s
LPL La Plagne 13.45 307 *e*P **Pn 09 03 17.8 +0.6**
LPL pmax pmax
comp=Z,37nm,1.1s
LPL La Plagne 13.45 307 *e*P **Pn 09 03 17.8 +0.6**
comp=Z,37nm,1.1s
LPL La Plagne 13.45 307 *e*P **Pn 09 03 17.8 +0.6**
comp=Z,18nm,1.1s
SENIN Lac Senin/Sane 13.51 311 *e*Pn Pn 09 03 22.0 +3.9
SENIN *e*Sn **Sn 09 05 47.5 -0.7**
ASF Jabal al Asfar 13.61 112 Pn **Pn 09 03 21.6 +2.2**
ASF Jabal al Asfar 13.61 112 Pn **Pn 09 03 21.6 +2.2**
comp=Z,0.2nm,0.3s,baz=225,slow=2.9,SNR=4.6
SPAK Spaichingen-Ko 13.71 320 *e*P **Pn 09 03 18.9 -1.8**
NKC Novy Kostel 13.72 333 AMS AMS 09 09 00.0
comp=Z,800nm,16.2s
ORIF Oris-en-Rattie 13.74 304 *e*P **Pn 09 03 21.7 +0.6**
comp=Z,26nm,0.9s
ORIF *e*R
comp=Z,321nm,17.2s
ORIF Oris-en-Rattie 13.74 304 *e*P **Pn 09 03 21.7 +0.6**
ORIF pmax pmax
comp=Z,27nm,0.9s
ORIF Oris-en-Rattie 13.74 304 *e*P **Pn 09 03 21.7 +0.6**
comp=Z,26nm,0.9s
ORIF Oris-en-Rattie 13.74 304 *e*P **Pn 09 03 21.7 +0.6**
comp=Z,13nm,0.9s
EIL Elat 13.76 125 Pn **Pn 09 03 21.8 +0.5**
EIL Sn **Sn 09 05 49.0 -5.0**
EIL Elat 13.76 125 Pn **Pn 09 03 21.8 +0.5**
comp=Z,1.0nm,0.3s,baz=348,slow=18,SNR=3.1
EIL Sn **Sn 09 05 49.0 -5.0**
comp=Z,1.2nm,0.3s,baz=41,slow=9.3,SNR=3.4
EIL Elat 13.76 125 Pn **Pn 09 03 21.8 +0.5**
BRG Berggiesshubel 13.78 338 *e*P **P 09 03 31.9 +1.8**
comp=Z,5.6nm,0.8s
BRG
comp=N,355nm,11.7s
BRG
comp=E,440nm,16.1s
BRG
comp=Z,509nm,24.5s
BRG Berggiesshubel 13.78 338 *e*P **P 09 03 31.9 +1.8**
BRG pmax pmax
comp=Z,6.0nm,0.8s
BRG MLR MLR
comp=N,355nm,11.7s
BRG MLR MLR
comp=E,440nm,16.1s
BRG MLR MLR
comp=Z,509nm,24.5s
FELD Feldberg im Sc 13.98 318 *e*P **Pn 09 03 25.4 +1.0**
FELD Feldberg im Sc 13.98 318 *e*P **Pn 09 03 25.4 +1.0**
BBS Basel-Blauen 14.00 315 *e*P **Pn 09 03 27.3 +2.7**
BBS Basel-Blauen 14.00 315 *e*P **Pn 09 03 27.3 +2.7**
BBS Basel-Blauen 14.00 315 *e*P **Pn 09 03 27.3 +2.7**
BFO Black Forest 14.09 320 *e*P **Pn 09 03 25.1 -0.7**
BFO Black Forest 14.09 320 *e*Pn **Pn 09 03 25.1 -0.7**
BFO Black Forest 14.09 320 *e*Pn **Pn 09 03 25.1 -0.7**
LOMF Lomont 14.32 314 *e*P **P 09 03 38.6 +2.5**
CABF La Chapelle 14.36 310 *e*P **Pn 09 03 29.0 -0.6**
comp=Z,75nm,1.2s
CABF La Chapelle 14.36 310 *e*P **Pn 09 03 29.0 -0.6**
CABF pmax pmax
comp=Z,75nm,1.2s
CABF La Chapelle 14.36 310 *e*P **Pn 09 03 29.0 -0.6**
comp=Z,75nm,1.2s
MOF Molkenrain 14.43 316 *e*P **Pn 09 03 32.1 +1.6**
MOF Molkenrain 14.43 316 *e*P **Pn 09 03 32.1 +1.6**
MOF Molkenrain 14.43 316 *e*P **Pn 09 03 32.1 +1.6**
CLL Collm 14.45 337 *e*P **P 09 03 38.0 +0.6**
CLL Collm 14.45 337 *e*PP **P 09 03 38.0 +0.6**
CLL *i* 09 03 39.7
comp=Z,21nm,1.0s
CLL *i* sPP 09 03 41.8
CLL *e* 09 05 56.0
CLL Lmax 09 09 00.0
CLL Collm 14.45 337 *e*P **P 09 03 38.0 +0.6**
VIVF Saint-Julien-l 14.52 302 *e*P **Pn 09 03 31.9 +0.2**
comp=Z,45nm,1.4s
VIVF Saint-Julien-l 14.52 302 *e*P **Pn 09 03 31.9 +0.2**
VIVF pmax pmax
comp=Z,45nm,1.4s
VIVF Saint-Julien-l 14.52 302 *e*P **Pn 09 03 31.9 +0.2**
comp=Z,45nm,1.4s
HINF Hinteralfeld 14.56 315 *e*P **Pn 09 03 31.6 -0.7**
comp=Z,26nm,0.8s
HINF Hinteralfeld 14.56 315 *e*P **Pn 09 03 31.6 -0.7**
HINF pmax pmax
comp=Z,26nm,0.8s
HINF Hinteralfeld 14.56 315 *e*P **Pn 09 03 31.6 -0.7**
comp=Z,26nm,0.8s
ECH Echery 14.63 317 *e*P **P 09 03 40.5 +0.9**
ECH pmax pmax
comp=Z,19nm,1.2s
ECH Echery 14.63 317 *e*P **P 09 03 40.5 +0.9**
comp=Z,20nm,1.2s
ECH Echery 14.63 317 *e*P **Pn 09 03 35.8 +2.6**
ECH Echery 14.63 317 *e*P **P 09 03 40.5 +0.9**
comp=Z,20nm,1.2s
CDF Champ du Feu 14.69 318 *e*P **Pn 09 03 33.3 -0.8**
comp=Z,27nm,1.1s
CDF Champ du Feu 14.69 318 *e*P **Pn 09 03 33.3 -0.8**
CDF pmax pmax
comp=Z,27nm,1.1s
CDF Champ du Feu 14.69 318 *e*P **Pn 09 03 33.3 -0.8**
comp=Z,27nm,1.1s
LANF Langenberg 14.78 321 *e*P **Pn 09 03 35.3 +0.1**
LANF Langenberg 14.78 321 *e*P **Pn 09 03 35.3 +0.1**
LANF Langenberg 14.78 321 *e*P **Pn 09 03 35.3 +0.1**
LASF Ste Croix 14.82 299 *e*P **Pn 09 03 35.8 0.0**
LASF Ste Croix 14.82 299 *e*P **Pn 09 03 35.8 0.0**
HAU Haudompre 14.95 315 *e*P **Pn 09 03 36.6 -0.9**
comp=Z,38nm,0.9s
HAU *e*R
comp=Z,147nm,17.8s
HAU Haudompre 14.95 315 *e*P **Pn 09 03 36.6 -0.9**
HAU pmax pmax
comp=Z,38nm,0.9s
HAU Haudompre 14.95 315 *e*P **Pn 09 03 36.6 -0.9**
comp=Z,38nm,0.9s
RUE Ruedersdorf 15.27 341 *e*P **P 09 03 47.2 +0.7**
comp=Z,56nm,1.3s
RUE Ruedersdorf 15.27 341 *e*P **P 09 03 47.2 +0.7**
comp=Z,56nm,1.3s
THEF They Montfort 15.28 315 *e*P **P 09 03 49.2 +2.5**
THEF They Montfort 15.28 315 *e*P **P 09 03 49.2 +2.5**
LBL Lubilhac 15.60 302 *e*P **P 09 03 54.0 +3.7**
PAGF Fort de Pagny 15.61 316 *e*P **Pn 09 03 47.2 +1.0**
comp=Z,6.9nm,0.8s
PAGF Fort de Pagny 15.61 316 *e*P **Pn 09 03 47.2 +1.0**
comp=Z,6.9nm,0.8s
SUW Suwalki 15.70 3 *e*P **P 09 03 50.0 -1.3**
SUW Suwalki 15.70 3 *e*P **P 09 03 49.8 -1.5**
comp=Z,72nm,0.6s
SUW Suwalki 15.70 3 *e*P **P 09 03 50.0 -1.3**
SUW Suwalki 15.70 3 *e*P **P 09 03 50.0 -1.3**
SMF Signal de Mont 15.75 308 *e*P **Pn 09 03 47.8 -0.3**
comp=Z,56nm,0.9s
SMF Signal de Mont 15.75 308 *e*P **Pn 09 03 47.8 -0.3**
SMF pmax pmax
comp=Z,56nm,0.9s
SMF Signal de Mont 15.75 308 *e*P **Pn 09 03 47.8 -0.3**
comp=Z,56nm,0.9s
SFTF Sexfontaines 15.79 314 *e*P **Pn 09 03 45.6 -3.0**
comp=Z,94nm,1.3s
SFTF Sexfontaines 15.79 314 *e*P **Pn 09 03 45.6 -3.0**
comp=Z,94nm,1.3s

MTLF Montolieu 15.80 295 *e*P **Pn 09 03 49.2 +0.5**
comp=Z,18nm,1.0s
MTLF Montolieu 15.80 295 *e*P **Pn 09 03 49.2 +0.5**
MTLF pmax pmax
comp=Z,18nm,1.0s
MTLF Montolieu 15.80 295 *e*P **Pn 09 03 49.2 +0.5**
comp=Z,18nm,1.0s
PYM Petit Puy Mans 15.93 304 *e*P **P 09 03 56.7 +2.6**
PYM Petit Puy Mans 15.93 304 *e*P **P 09 03 56.7 +2.6**
PYM Petit Puy Mans 15.93 304 *e*P **P 09 03 56.7 +2.6**
PYM Petit Puy Mans 15.93 304 *e*P **P 09 03 56.7 +2.6**
MEZF Maizieres J'vi 15.95 315 *e*P **Pn 09 03 49.7 -0.8**
comp=Z,86nm,1.1s
MEZF Maizieres J'vi 15.95 315 *e*P **Pn 09 03 49.7 -0.8**
comp=Z,86nm,1.1s
AGO Saint Agoulin 15.96 305 *e*P **P 09 03 56.5 +2.2**
AGO Saint Agoulin 15.96 305 *e*P **P 09 03 56.5 +2.2**
AGO Saint Agoulin 15.96 305 *e*P **P 09 03 56.5 +2.2**
LOR Lormes 16.02 310 *e*P **Pn 09 03 51.0 -0.5**
comp=Z,61nm,1.3s
LOR *e*R
comp=Z,180nm,17.5s
LOR Lormes 16.02 310 *e*P **Pn 09 03 51.0 -0.5**
comp=Z,61nm,1.3s
WLF Walferdange 16.05 320 P **P 09 03 53.8 -1.3**
comp=Z,15nm,1.3s
WLF Walferdange 16.05 320 *e*P **P 09 03 53.9 -1.3**
WLF pmax pmax
comp=Z,30nm,1.3s
WLF Walferdange 16.05 320 *e*P **P 09 03 53.9 -1.3**
comp=Z,30nm,1.3s
WLF Walferdange 16.05 320 *e*P **P 09 03 53.9 -1.3**
comp=Z,30nm,1.3s
SSF Saint Saulge 16.14 309 *e*P **Pn 09 03 52.1 -0.9**
comp=Z,148nm,1.1s
SSF Saint Saulge 16.14 309 *e*P **Pn 09 03 52.1 -0.9**
SSF pmax pmax
comp=Z,148nm,1.1s
SSF Saint Saulge 16.14 309 *e*P **Pn 09 03 52.1 -0.9**
comp=Z,148nm,1.1s
CAF Calviac 16.30 300 *e*P **Pn 09 03 54.2 -0.9**
comp=Z,51nm,1.5s
CAF Calviac 16.30 300 *e*P **Pn 09 03 54.2 -0.9**
CAF pmax pmax
comp=Z,51nm,1.5s
CAF Calviac 16.30 300 *e*P **Pn 09 03 54.2 -0.9**
comp=Z,51nm,1.5s
BGF Bois d'Agland 16.34 306 *e*P **Pn 09 03 54.3 -1.3**
comp=Z,103nm,1.0s
BGF Bois d'Agland 16.34 306 *e*P **Pn 09 03 54.3 -1.3**
BGF pmax pmax
comp=Z,103nm,1.0s
BGF Bois d'Agland 16.34 306 *e*P **Pn 09 03 54.3 -1.3**
comp=Z,103nm,1.0s
KIV Kislovodsk 16.53 64 *e*P **P 09 04 00.9 +0.2**
KIV *e*S **Sn 09 07 03.7 +2.3**
KIV pmax pmax
comp=Z,7.0nm,0.9s
KIV MLR MLR
comp=Z,45nm,13.0s
KIV Kislovodsk 16.53 64 *e*P **P 09 04 00.9 +0.2**
comp=Z,7.0nm,0.9s
KBZ Khabaz 16.63 64 P **P 09 04 00.6 -1.1**
KBZ MLR MLR
comp=Z,38nm,21.5s
KBZ Khabaz 16.63 64 Pn **P 09 04 00.6 -1.1**
KBZ Khabaz 16.63 64 Pn **P 09 04 00.6 -1.1**
comp=Z,0.1nm,0.3s,baz=289,slow=11,SNR=3.9
KBZ LR LR 09 11 03.4
comp=Z,38nm,21.5s,baz=109,slow=39
KBZ Khabaz 16.63 64 P **P 09 04 00.6 -1.1**
comp=Z,38nm,21.5s
MEM Membach 16.73 322 P **P 09 04 05.4 +2.7**
comp=Z,5.0nm,0.9s
RJF Les Rejaudoux 16.78 301 *e*P **Pn 09 04 01.2 0.0**
RJF *e*R
comp=Z,299nm,18.0s
RJF Les Rejaudoux 16.78 301 *e*P **Pn 09 04 01.2 0.0**
RJF Les Rejaudoux 16.78 301 *e*P **Pn 09 04 01.2 0.0**
BCLA Clavier 16.95 321 P **P 09 04 06.2 +1.0**
comp=Z,13nm,2.1s
GIVF Givet 17.00 319 *e*P **Pn 09 04 02.3 -1.6**
comp=Z,61nm,1.2s
GIVF Givet 17.00 319 *e*P **Pn 09 04 02.3 -1.6**
GIVF pmax pmax
comp=Z,61nm,1.2s
GIVF Givet 17.00 319 *e*P **Pn 09 04 02.3 -1.6**
comp=Z,61nm,1.2s
EPF Esparros 17.09 293 *e*P **Pn 09 04 05.2 0.0**
comp=Z,21nm,1.2s
EPF Esparros 17.09 293 *e*P **Pn 09 04 05.2 0.0**
EPF pmax pmax
comp=Z,21nm,1.2s
EPF Esparros 17.09 293 *e*P **Pn 09 04 05.2 0.0**
comp=Z,21nm,1.2s
DOU Dourbes 17.11 319 P **P 09 04 09.6 +2.7**
comp=Z,13nm,1.7s
LFF La Frestale 17.20 299 *e*P **Pn 09 04 06.4 -0.1**
comp=Z,119nm,1.6s
LFF La Frestale 17.20 299 *e*P **Pn 09 04 06.4 -0.1**
LFF pmax pmax
comp=Z,119nm,1.6s
LFF La Frestale 17.20 299 *e*P **Pn 09 04 06.4 -0.1**
comp=Z,119nm,1.6s
BAIF Baives 17.29 318 *e*P **Pn 09 04 05.9 -1.6**
comp=Z,32nm,0.8s
BAIF Baives 17.29 318 *e*P **Pn 09 04 05.9 -1.6**
BAIF pmax pmax
comp=Z,32nm,0.8s
BAIF Baives 17.29 318 *e*P **Pn 09 04 05.9 -1.6**
comp=Z,32nm,0.8s
GNI Garni 17.68 77 P **P 09 04 15.1 +1.5**
GNI Garni 17.68 77 P **P 09 04 15.1 +1.5**
comp=Z,1.2nm,0.3s,baz=195,slow=16,SNR=2.2
GNI LR LR 09 11 21.4
comp=Z,188nm,18.9s,baz=284,slow=38
GNI Garni 17.68 77 P **P 09 04 15.1 +1.5**
comp=Z,188nm,18.9s
ETSF Etsaut 17.73 292 *e*P **P 09 04 13.5 -0.5**
comp=Z,26nm,1.1s
ETSF Etsaut 17.73 292 *e*P **P 09 04 13.5 -0.5**
ETSF pmax pmax
comp=Z,26nm,1.1s
ETSF Etsaut 17.73 292 *e*P **P 09 04 13.5 -0.5**
comp=Z,26nm,1.1s
ETSF Etsaut 17.73 292 *e*P **P 09 04 13.5 -0.5**
comp=Z,13nm,1.1s
SJPF Ste Jean 18.24 293 *e*P **P 09 04 21.9 +2.4**
comp=Z,31nm,1.1s
SJPF Ste Jean 18.24 293 *e*P **P 09 04 21.9 +2.4**
SJPF pmax pmax
comp=Z,31nm,1.1s
SJPF Ste Jean 18.24 293 *e*P **P 09 04 21.9 +2.4**
comp=Z,31nm,1.1s
SJPF Ste Jean 18.24 293 *e*P **P 09 04 21.9 +2.4**
comp=Z,16nm,1.1s
MFF Saint Martin d 18.28 304 *e*P **Pn 09 04 19.5 -0.3**
comp=Z,141nm,1.4s
MFF Saint Martin d 18.28 304 *e*P **Pn 09 04 19.5 -0.3**
MFF pmax pmax
comp=Z,141nm,1.4s
MFF Saint Martin d 18.28 304 *e*P **Pn 09 04 19.5 -0.3**
comp=Z,141nm,1.4s
MFF Saint Martin d 18.28 304 *e*P **Pn 09 04 19.5 -0.3**
comp=Z,70nm,1.4s
BHD Baghdad 18.81 99 *e*P P 09 04 19.3 -6.5
BHD *e*S Sn 09 07 44.3 -12
LDF La Druitiere 19.00 310 *e*P **Pn 09 04 29.3 +0.7**
comp=Z,19nm,0.7s
LDF La Druitiere 19.00 310 *e*P **Pn 09 04 29.3 +0.7**
LDF pmax pmax
comp=Z,19nm,0.7s
LDF La Druitiere 19.00 310 *e*P **Pn 09 04 29.3 +0.7**
comp=Z,19nm,0.7s
LDF La Druitiere 19.00 310 *e*P **Pn 09 04 29.3 +0.7**
comp=Z,9.5nm,0.7s
FLN La Foliniere 19.29 310 *e*P **Pn 09 04 32.8 +0.8**
comp=Z,224nm,1.7s
FLN *e*R
comp=Z,167nm,18.2s
FLN La Foliniere 19.29 310 *e*P **Pn 09 04 32.8 +0.8**
FLN pmax pmax
comp=Z,224nm,1.7s
FLN La Foliniere 19.29 310 *e*P **Pn 09 04 32.8 +0.8**
comp=Z,224nm,1.7s
FLN La Foliniere 19.29 310 *e*P **Pn 09 04 32.8 +0.8**
comp=Z,112nm,1.7s

GRR Gorron 19.37 309 *e*P **P 09 04 31.8 -0.1**
comp=Z,49nm,1.0s
GRR Gorron 19.37 309 *e*P **P 09 04 31.8 -0.1**
GRR pmax pmax
comp=Z,49nm,1.0s
GRR Gorron 19.37 309 *e*P **P 09 04 31.8 -0.1**
comp=Z,49nm,1.0s
GRR Gorron 19.37 309 *e*P **P 09 04 31.8 -0.1**
comp=Z,25nm,1.0s
OBN Obninsk 19.45 26ĥ *e*P **Pn 09 04 34.7 +0.8**
OBN *e*S **Sn 09 08 11.6 -0.1**
OBN pmax pmax
comp=Z,8.0nm,0.7s
OBN MLR MLR
comp=Z,200nm,18.0s
OBN Obninsk 19.45 26 *e*P **Pn 09 04 34.7 +0.8**
comp=Z,200nm,18.0s
MUD Monsted U'grnd 20.05 339 *e*P Pn 09 04 41.9 +1.0
MUD pmax pmax
comp=Z,9.0nm,1.1s
MUD Monsted U'grnd 20.05 339 *i* P Pn 09 04 41.9 +1.0
comp=Z,9.1nm,1.1s
MUD Monsted U'grnd 20.05 339 *e*P Pn 09 04 41.9 +1.0
comp=Z,9.0nm,1.1s
ESDC Sonseca Array 20.23 282 P Pn 09 04 42.7 -0.6
ESDC Sonseca Array 20.23 282 P Pn 09 04 42.7 -0.6
comp=Z,10.0nm,0.8s,baz=77,slow=10,SNR=51
ESDC Sonseca Array 20.23 282 P Pn 09 04 42.7 -0.6
ESLA Sonseca Array 20.23 282 *e*P **P 09 04 42.0 +0.7**
comp=Z,4.9nm,0.9s
ESLA Sonseca Array 20.23 282 *e*P **P 09 04 42.0 +0.7**
comp=Z,4.9nm,0.9s
MOS Moscow 20.31 26 *e*P **P 09 04 39.7 -2.4**
MOS pmax pmax
comp=Z,48nm,0.9s
SGMF Saint Gilles 20.38 307 *e*P **P 09 04 43.2 +0.4**
comp=Z,61nm,1.1s
SGMF Saint Gilles 20.38 307 *e*P **P 09 04 43.2 +0.4**
SGMF pmax pmax
comp=Z,61nm,1.1s
SGMF Saint Gilles 20.38 307 *e*P **P 09 04 43.2 +0.4**
comp=Z,61nm,1.1s
SGMF Saint Gilles 20.38 307 *e*P **P 09 04 43.2 +0.4**
comp=Z,30nm,1.1s
PAB San Pablo 20.53 282 *e*P Pn 09 04 46.0 -1.0
PAB pmax pmax
comp=Z,38nm,1.1s
PAB San Pablo 20.53 282 *e*P Pn 09 04 46.0 -0.9
comp=Z,38nm,1.1s
PAB San Pablo 20.53 282 *e*P Pn 09 04 46.0 -1.0
comp=Z,38nm,1.1s
QUIF Quistinic 20.65 306 *e*P **P 09 04 46.2 +0.4**
comp=Z,47nm,1.0s
QUIF Quistinic 20.65 306 *e*P **P 09 04 46.2 +0.4**
QUIF pmax pmax
comp=Z,47nm,1.0s
QUIF Quistinic 20.65 306 *e*P **P 09 04 46.2 +0.4**
comp=Z,47nm,1.0s
QUIF Quistinic 20.65 306 *e*P **P 09 04 46.2 +0.4**
comp=Z,24nm,1.0s
ROSF Rostrenen 20.86 307 *e*P **P 09 04 48.8 +0.8**
comp=Z,56nm,0.9s
ROSF Rostrenen 20.86 307 *e*P **P 09 04 48.8 +0.8**
ROSF pmax pmax
comp=Z,56nm,0.9s
ROSF Rostrenen 20.86 307 *e*P **P 09 04 48.8 +0.8**
comp=Z,56nm,0.9s
ROSF Rostrenen 20.86 307 *e*P **P 09 04 48.8 +0.8**
comp=Z,38nm,0.9s
TAM Tamanrasset 20.97 227 *e*P Pn 09 04 54.7 +2.4
TAM pmax pmax
comp=Z,16nm,0.9s
TAM Tamanrasset 20.97 227 *e*P Pn 09 04 54.6 +2.4
comp=Z,16nm,0.9s
KBI1 Birley Grange 22.04 320 *e*P **P 09 05 01.1 +0.4**
KBI1 Birley Grange 22.04 320 P **P 09 05 01.1 +0.4**
KBI1 Birley Grange 22.04 320 *e*P **P 09 05 01.1 +0.4**
MCH1 Michaelchurch 22.17 316ĥ *e*P **P 09 05 02.8 +0.7**
MCH1 AMB AMB 09 05 05.3
comp=Z,59nm,1.4s
MCH1 Michaelchurch 22.17 316 P **P 09 05 02.8 +0.7**
MCH1 AMB AMB 09 05 05.3
comp=Z,59nm,1.4s
MCH1 Michaelchurch 22.17 316ĥ *e*P **P 09 05 02.8 +0.7**
PBRG Braganca 22.24 288 *e*P **P 09 05 03.9 +0.8**
comp=Z,24nm,1.6s
PBRG Braganca 22.24 288 *e*P **P 09 05 03.9 +0.8**
comp=Z,24nm,1.6s
MDT Midelt 22.32 264 P **P 09 05 04.6 +0.6**
MDT Midelt 22.32 264 P **P 09 05 04.6 +0.6**
comp=Z,5.0nm,0.9s,baz=85,slow=14,SNR=8.1
MDT LR LR 09 14 39.4
comp=Z,32nm,20.2s,baz=132,slow=39
MDT Midelt 22.32 264 P **P 09 05 04.6 +0.6**
HLM1 Long Mynd 22.36 317 *e*P **P 09 05 04.3 +0.1**
HLM1 AMB AMB 09 05 08.5
comp=Z,24nm,1.2s
HLM1 Long Mynd 22.36 317 P **P 09 05 04.3 +0.1**
HLM1 AMB AMB 09 05 08.5
comp=Z,24nm,1.2s
HLM1 Long Mynd 22.36 317 *e*P **P 09 05 04.3 +0.1**
HFS Hagfors 22.45 349 P **P 09 05 04.6 -0.5**
HFS Hagfors 22.45 349 P **P 09 05 04.6 -0.5**
comp=Z,6.9nm,0.7s,baz=156,slow=11,SNR=14
HFS LR LR 09 15 21.8
comp=Z,257nm,18.1s,baz=302,slow=41
HFS Hagfors 22.45 349 P **P 09 05 04.6 -0.5**
comp=Z,257nm,18.1s
MVO Moncorvo 22.47 286 *e*P **P 09 05 07.0 +1.4**
comp=Z,27nm,1.8s
MVO Moncorvo 22.47 286 *e*P **P 09 05 07.0 +1.4**
comp=Z,27nm,1.8s
MIB Mutribah 22.58 105 *e*P **P 09 05 07.3 +0.7**
MIB AMb AMB 09 05 10.7
comp=Z,42nm,0.6s
MIB Mutribah 22.58 105 *e*P **P 09 05 07.3 +0.7**
comp=Z,42nm,0.6s
FOEL Foel Wylfa 22.71 318ĥ *e*P **P 09 05 08.6 +0.6**
FOEL AMB AMB 09 05 08.9
comp=Z,48nm,1.1s
FOEL Foel Wylfa 22.71 318 P **P 09 05 08.6 +0.6**
FOEL AMB AMB 09 05 08.9
comp=Z,48nm,1.1s
FOEL Foel Wylfa 22.71 318ĥ *e*P **P 09 05 08.6 +0.6**
KONO Kongsberg 22.76 344 *e*P **P 09 05 08.1 -0.2**
KONO pmax pmax
comp=Z,53nm,1.3s
KONO Kongsberg 22.76 344 *e*P **P 09 05 08.1 -0.2**
comp=Z,53nm,1.3s
KONO Kongsberg 22.76 344 *e*P **P 09 05 08.1 -0.2**
comp=Z,53nm,1.3s
NAY Al-Naaiem 22.77 106 *e*P **P 09 05 08.8 0.0**
NAY AMb AMB 09 05 18.1
comp=Z,17nm,1.0s
NAY Al-Naaiem 22.77 106 *e*P **P 09 05 08.8 0.0**
comp=Z,17nm,1.0s
PBAR Barrancos 22.79 279 *e*P **P 09 05 09.2 +0.3**
comp=Z,24nm,1.5s
PBAR Barrancos 22.79 279 *e*P **P 09 05 09.2 +0.3**
comp=Z,24nm,1.5s
PMRV Marv??o 22.89 282 *e*P **P 09 05 09.9 0.0**
comp=Z,35nm,1.7s
PMRV Marv??o 22.89 282 *e*P **P 09 05 09.9 0.0**
comp=Z,35nm,1.7s
MTE Manteigas 22.91 284 *e*P **P 09 05 10.4 +0.2**
comp=Z,30nm,1.7s
MTE Manteigas 22.91 284 *e*P **P 09 05 10.4 +0.2**
comp=Z,30nm,1.7s
UMR Umm Al-Rimmam 22.98 105 *e*P **P 09 05 10.9 0.0**
UMR AMb AMB 09 05 16.2
comp=Z,35nm,0.6s
UMR Umm Al-Rimmam 22.98 105 *e*P **P 09 05 10.9 0.0**
comp=Z,35nm,0.6s
PESTR Estremoz 23.11 281 *e*P **P 09 05 11.4 -0.8**
comp=Z,28nm,2.0s
PESTR Estremoz 23.11 281 *e*P **P 09 05 11.4 -0.8**
comp=Z,28nm,2.0s
PVIS Viseu 23.15 285 *e*P **P 09 05 13.2 +0.5**
comp=Z,46nm,1.6s
PVIS Viseu 23.15 285 *e*P **P 09 05 13.2 +0.5**
comp=Z,46nm,1.6s
FINES FINESS Array B 23.27 5 P **P 09 05 12.9 -0.7**
FINES PcP **PcP 09 09 00.2 -0.4**
FINES FINESS Array B 23.27 5 P **P 09 05 12.9 -0.7**
comp=Z,2.9nm,0.6s,baz=186,slow=9.4,SNR=8.5
FINES PcP **PcP 09 09 00.2 -0.4**
comp=Z,2.1nm,0.8s,baz=162,slow=1.3,SNR=3.4

FINES LR LR 09 15 18.8
comp=Z,234nm,18.2s,baz=332,slow=39
FINES FINES Array B 23.27 5 P **P 09 05 12.9 -0.7**
comp=Z,3.0nm,0.6s
FIA1 FINESS Array S 23.27 5 *eP* **P 09 05 14.6 +1.0**
FIA1 FINESS Array S 23.27 5 *eP* **P 09 05 14.6 +1.0**
XAL Allendale 23.28 323 *eP* **P 09 05 13.5 -0.3**
XAL Allendale 23.28 323 P **P 09 05 13.5 -0.3**
XAL Allendale 23.28 323 *eP* **P 09 05 13.5 -0.3**
PBEJ Beja 23.46 279 *eP* **P 09 05 12.3 -3.4**
PVAQ Vaqueiros 23.46 277 *eP* **P 09 05 15.9 +0.2**
comp=Z,23nm,2.3s
PVAQ Vaqueiros 23.46 277 *eP* **P 09 05 15.9 +0.2**
comp=Z,23nm,2.3s
EVO Evora 23.49 280 *eP* **P 09 05 15.9 -0.1**
comp=Z,11nm,0.9s
EVO *eR*
comp=Z,73nm,19.5s
EVO Evora 23.49 280 *eP* **P 09 05 15.4 -0.6**
comp=Z,20nm,1.4s
EVO Evora 23.49 280 *eP* **P 09 05 15.4 -0.6**
comp=Z,20nm,1.4s
EVOP Sao Brissos 23.57 280 *eP* **P 09 05 15.9 -0.9**
EVOP pmax pmax
comp=Z,11nm,0.9s
EVOP Sao Brissos 23.57 280 *eP* **P 09 05 15.9 -0.9**
comp=Z,11nm,0.9s
EVOP Sao Brissos 23.57 280 *eP* **P 09 05 15.9 -0.9**
comp=Z,5.7nm,0.9s
PMTG Montargil 23.57 281 *eP* **P 09 05 16.4 -0.4**
comp=Z,23nm,1.5s
PMTG Montargil 23.57 281 *eP* **P 09 05 16.4 -0.4**
comp=Z,23nm,1.5s
NAO01 NORSAR Array S 23.59 346 *eP* **P 09 05 16.5 -0.3**
comp=Z,36nm,1.0s
NAO01 NORSAR Array S 23.59 346 *eP* **P 09 05 16.5 -0.3**
comp=Z,36nm,1.0s
PTOM Tomar 23.65 283 *eP* **P 09 05 18.2 +0.7**
comp=Z,30nm,1.2s
PTOM Tomar 23.65 283 *eP* **P 09 05 18.2 +0.7**
comp=Z,30nm,1.2s
PBDV Barranco-do-Ve 23.66 277 *eP* **P 09 05 21.3 +3.6**
comp=Z,30nm,1.9s
PCVE Castro Verde 23.66 278 *eP* **P 09 05 17.9 +0.2**
PCVE Castro Verde 23.66 278 *eP* **P 09 05 17.9 +0.2**
NB2 NORSAR Subarra 23.72 347 P **P 09 05 17.4 -0.6**
comp=Z,39nm,1.1s,baz=159,slow=9.3
NB2 NORSAR Subarra 23.72 347 P **P 09 05 17.4 -0.6**
baz=159,slow=9.3
NB2 NORSAR Subarra 23.72 347 P **P 09 05 17.4 -0.6**
comp=Z,39nm,1.1s,baz=159,slow=9.1,SNR=0.2
NOA NORSAR Array B 23.72 347 P **P 09 05 18.1 0.0**
NOA NORSAR Array B 23.72 347 P **P 09 05 18.1 0.0**
comp=Z,7.2nm,0.6s,baz=157,slow=8.6,SNR=37
NOA NORSAR Array B 23.72 347 P **P 09 05 18.1 0.0**
comp=Z,7.0nm,0.6s
ECK Cauldkaine Hil 23.90 323 *eP* **P 09 05 19.6 -0.2**
ECK Cauldkaine Hil 23.90 323 P **P 09 05 19.6 -0.2**
ECK Cauldkaine Hil 23.90 323 *eP* **P 09 05 19.6 -0.2**
KAF Kangasniemi 23.95 5 *ep* **P 09 05 21.4 +1.2**
comp=Z,1.2nm,0.4s
KAF Kangasniemi 23.95 5 *eP* **P 09 05 21.4 +1.2**
KAF pmax pmax
comp=Z,1.0nm,0.4s
KAF Kangasniemi 23.95 5 *eP* **P 09 05 21.4 +1.2**
comp=Z,1.0nm,0.4s
PNCL Nicolau / Gran 23.96 279 *eP* **P 09 05 21.5 +1.0**
comp=Z,38nm,1.5s
PNCL Nicolau / Gran 23.96 279 *eP* **P 09 05 21.5 +1.0**
comp=Z,38nm,1.5s
EKA Eskdalemuir Ar 24.00 323 P **P 09 05 21.3 +0.6**
EKA Eskdalemuir Ar 24.00 323 P **P 09 05 21.3 +0.6**
comp=Z,35nm,0.7s,baz=122,slow=11,SNR=81
EKA Eskdalemuir Ar 24.00 323 P **P 09 05 21.3 +0.6**
comp=Z,35nm,0.7s
ESK Eskdalemuir 24.01 323𝄇 *eP* **P 09 05 21.4 +0.5**
ESK AMB AMB 09 05 23.0
comp=Z,53nm,1.1s
ESK Eskdalemuir 24.01 323 P **P 09 05 21.4 +0.5**
ESK AMB AMB 09 05 23.0
comp=Z,53nm,1.1s
ESK Eskdalemuir 24.01 323 *eP* **P 09 05 21.6 +0.8**
ESK pmax pmax
comp=Z,42nm,0.8s
ESK Eskdalemuir 24.01 323 *eP* **P 09 05 21.6 +0.8**
comp=Z,42nm,0.8s
ESK Eskdalemuir 24.01 323 *eP* **P 09 05 21.6 +0.8**
comp=Z,42nm,0.8s
EDI Edinburgh 24.35 324 AMB AMB 09 05 25.3
comp=Z,44nm,2.2s
EDI Edinburgh 24.35 324 AMB AMB 09 05 25.3
comp=Z,44nm,2.2s
DRUM Mains of Drumt 24.64 327 *eP* **P 09 05 26.7 +0.1**
DRUM AMB AMB 09 05 30.4
comp=Z,24nm,1.6s
DRUM Mains of Drumt 24.64 327 P **P 09 05 26.7 +0.1**
DRUM AMB AMB 09 05 30.4
comp=Z,24nm,1.6s
DRUM Mains of Drumt 24.64 327 *eP* **P 09 05 26.7 +0.1**
RAYN Ar Rayn 24.87 120 *eP* **P 09 05 30.5 +1.5**
comp=Z,7.2nm,1.0s
RAYN Ar Rayn 24.87 120 *eP* **P 09 05 30.5 +1.5**
comp=Z,7.2nm,1.0s
EAB Aberfoyle 25.03 324 *eP* **P 09 05 30.4 +0.3**
EAB Aberfoyle 25.03 324 P **P 09 05 30.4 +0.3**
EAB Aberfoyle 25.03 324 *eP* **P 09 05 30.4 +0.3**
KLMR Klimovskoe 25.07 20 *eP* **P 09 05 29.9 -0.5**
KLMR pmax pmax
comp=Z,17nm,0.9s
KLMR Klimovskoe 25.07 20 *eP* **P 09 05 29.9 -0.5**
comp=Z,17nm,0.9s
MME1 Meikle Cairn 25.09 327𝄇 *eP* **P 09 05 31.3 +0.6**
MME1 Meikle Cairn 25.09 327 P **P 09 05 31.3 +0.6**
MME1 Meikle Cairn 25.09 327𝄇 *eP* **P 09 05 31.3 +0.6**
JOF Joensuu 25.25 10 *ep* **P 09 05 31.9 -0.2**
JOF Joensuu 25.25 10 *eP* **P 09 05 31.9 -0.2**
JOF Joensuu 25.25 10 *eP* **P 09 05 31.9 -0.2**
MCD Coleburn Disti 25.38 328 *eP* **P 09 05 33.4 +0.1**
MCD Coleburn Disti 25.38 328 P **P 09 05 33.4 +0.1**
MCD Coleburn Disti 25.38 328 *eP* **P 09 05 33.4 +0.1**
MDO Dochfour 25.77 326𝄇 *eP* **P 09 05 36.9 +0.1**
MDO Dochfour 25.77 326 P **P 09 05 36.9 +0.1**
MDO Dochfour 25.77 326𝄇 *eP* **P 09 05 36.9 +0.1**
AKTK Aktyubinsk 28.14 53 P **P 09 05 59.7 +1.5**
comp=Z,57nm,19.6s
AKTO Aktyubinsk 28.14 53 P **P 09 05 59.7 +1.5**
AKTO pmax pmax
comp=Z,1.0nm,0.4s
AKTO MLR MLR
comp=Z,57nm,19.6s
AKTO Aktyubinsk 28.14 53 P **P 09 05 59.7 +1.5**
AKTO Aktyubinsk 28.14 53 P **P 09 05 59.7 +1.5**
comp=Z,0.6nm,0.4s,baz=256,slow=12,SNR=3.1
AKTO LR LR 09 21 09.3
comp=Z,56nm,19.6s,baz=113,slow=45
AKTO Aktyubinsk 28.14 53 P **P 09 05 59.7 +1.5**
AB31 Akbulak array 29.17 56 P **P 09 06 07.6 +0.2**
AB31 Akbulak array 29.17 56 P **P 09 06 07.6 +0.2**
ABKAR Akbulak array 29.17 56 *eP* **P 09 06 08.8 +1.5**
comp=Z,0.9nm,0.6s
ABKAR Akbulak array 29.17 56 *eP* **P 09 06 08.9 +1.5**
comp=Z,0.9nm,0.6s
APA Apatity 29.97 9𝄇 *eP* P 09 06 20.0 +5.7
APA MLR MLR
comp=Z,500nm,16.0s
ARU Arti 30.16 41 *d iP* **P 09 06 16.3 +0.3**
ARU 09 07 14.1
ARU S **S 09 11 15.2 +0.7**
ARU pmax pmax
comp=Z,9.0nm,1.7s
ARU Arti 30.16 41 *i* P **P 09 06 16.3 +0.3**
comp=Z,9.0nm,1.7s
SOKR Solikamsk 30.62 35 *eP* **P 09 06 21.8 +1.7**
SOKR pmax pmax
comp=Z,10.0nm,1.0s
SOKR Solikamsk 30.62 35 *eP* **P 09 06 21.8 +1.7**
comp=Z,10.0nm,1.0s
TOA0 Torodi Ar. Sit 30.91 221 *eP* **P 09 06 24.1 +0.9**
TOA0 Torodi Ar. Sit 30.91 221 *eP* **P 09 06 24.0 +0.9**
TORD Torodi Ar. Bea 30.91 221 P **P 09 06 24.5 +1.4**
TORD Torodi Ar. Bea 30.91 221 P **P 09 06 24.5 +1.4**
comp=Z,9.2nm,0.6s,baz=30,slow=9.5,SNR=87
TORD LR LR 09 20 28.8
comp=Z,72nm,19.9s,baz=20,slow=39
TORD Torodi Ar. Bea 30.91 221 P **P 09 06 24.5 +1.4**

ARCES ARCESS Array B 31.32 2 P **P 09 06 25.8 -0.4**
ARCES PcP **PcP 09 09 19.6 -0.1**
ARCES ARCESS Array B 31.32 2 P **P 09 06 25.8 -0.4**
comp=Z,1.8nm,0.6s,baz=183,slow=11,SNR=12
ARCES PcP **PcP 09 09 19.6 -0.1**
comp=Z,0.7nm,0.6s,baz=179,slow=3.6,SNR=3.8
ARCES LR LR 09 19 59.0
comp=Z,203nm,19.1s,baz=197,slow=38
ARCES ARCESS Array B 31.32 2 P **P 09 06 25.8 -0.4**
comp=Z,2.0nm,0.6s
KEV Kevo 31.60 3 *ep* **P 09 06 29.0 +0.5**
KEV Kevo 31.60 3 *eP* **P 09 06 29.0 +0.5**
KEV Kevo 31.60 3 *eP* **P 09 06 29.0 +0.5**
BRVK Borovoye 36.05 50 *eP* **P 09 07 08.1 +0.6**
BRVK pmax pmax
comp=Z,4.0nm,0.9s
BRVK Borovoye 36.05 50 *eP* **P 09 07 08.1 +0.6**
comp=Z,3.8nm,0.9s
BRVK Borovoye 36.05 50 *eP* **P 09 07 08.1 +0.6**
comp=Z,3.6nm,0.9s
BVAR Borovoye Array 36.11 50 P **P 09 07 08.3 +0.3**
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR Borovoye Array 36.11 50 P **P 09 07 08.3 +0.3**
BVAR Borovoye Array 36.11 50 P **P 09 07 08.3 +0.3**
comp=Z,1.6nm,0.6s,baz=272,slow=7.5,SNR=9.6
BVAR Borovoye Array 36.11 50 P **P 09 07 08.3 +0.3**
comp=Z,2.0nm,0.6s
KK31 Karatay Array 36.65 67 *i* P **P 09 07 13.1 +0.4**
KK31 pmax pmax
comp=Z,6.0nm,0.6s
KK31 Karatay Array 36.65 67 *i* P **P 09 07 13.1 +0.4**
comp=Z,6.0nm,0.6s
KKAR Karatay Array 36.65 67 *eP* **P 09 07 13.2 +0.5**
KKAR pmax pmax
comp=Z,6.0nm,0.5s
KKAR Karatay Array 36.65 67 *eP* **P 09 07 13.2 +0.5**
comp=Z,5.6nm,0.5s
KKAR Karatay Array 36.65 67 *eP* **P 09 07 13.2 +0.5**
comp=Z,5.6nm,0.5s
EKS2 Erkin-Say 39.09 67 *eP* **P 09 07 34.8 +1.3**
EKS2 pmax pmax
comp=Z,12nm,0.8s
EKS2 Erkin-Say 39.09 67 *eP* **P 09 07 34.8 +1.3**
comp=Z,12nm,0.8s
EKS2 Erkin-Say 39.09 67 *eP* **P 09 07 34.8 +1.3**
comp=Z,12nm,0.8s
AAK Ala-Archa 39.61 67 *eP* **P 09 07 39.1 +1.2**
AAK pmax pmax
comp=Z,11nm,0.9s
AAK Ala-Archa 39.61 67 *eP* **P 09 07 39.1 +1.2**
comp=Z,10nm,0.9s
AAK Ala-Archa 39.61 67 *eP* **P 09 07 39.1 +1.2**
comp=Z,10nm,0.9s
FRU Bishkek 39.66 66 *eP* **P 09 07 39.0 +0.9**
FRU *e* 09 07 44.0
FRU pmax pmax
comp=Z,40nm,1.4s
FRU Bishkek 39.66 66 *eP* **P 09 07 39.0 +0.9**
comp=Z,40nm,1.4s
DBIC Dimbokro 39.82 225 *eP* **P 09 07 40.3 +0.6**
comp=Z,7.8nm,0.6s
DBIC Dimbokro 39.82 225 P **P 09 07 40.6 +1.0**
comp=Z,7.0nm,0.6s,baz=18,slow=9.2,SNR=12
DBIC LR LR 09 25 12.9
comp=Z,67nm,18.3s,baz=14,slow=38
DBIC Dimbokro 39.82 225 *eP* **P 09 07 40.3 +0.6**
comp=Z,7.8nm,0.6s
LIC Lamto 40.29 224 *eP* **P 09 07 44.3 +0.8**
comp=Z,21nm,0.6s
LIC Lamto 40.29 224 *eP* **P 09 07 44.3 +0.8**
comp=Z,21nm,0.6s
TKM2 Tokmak 2 40.34 66 *eP* **P 09 07 45.1 +1.0**
TKM2 pmax pmax
comp=Z,3.0nm,0.8s
TKM2 Tokmak 2 40.34 66 *eP* **P 09 07 45.1 +1.0**
comp=Z,3.4nm,0.8s
KURK Kurchatov 41.23 54 *ceP* **P 09 07 52.3 +1.3**
KURK pmax pmax
comp=Z,12nm,1.7s
KURK Kurchatov 41.23 54 *eP* **P 09 07 52.1 +1.1**
comp=Z,5.5nm,0.9s
KSH Kashi 41.45 71 *eP* **P 09 07 52.1 -1.0**
KSH *ep*P pP 09 08 04.2 +6.8
KSH *es*P sP 09 08 09.0 +10
KSH *ePP* **PnPn 09 09 31.4 -2.1**
KSH *ePcP* **PcP 09 09 51.3 +0.5**
KSH *eS* S 09 14 00.4 -7.6
KSH *es*S sS 09 14 22.2 +7.2
KSH pmax pmax
comp=Z,7.0nm,0.6s
KSH pmax pmax
comp=Z,160nm,3.5s
KSH LR LR
comp=N,530nm,10.0s
KSH LR LR
comp=E,380nm,9.0s
KSH LR LR
comp=Z,300nm,5.1s
KMBO Kilima Mbogo 41.70 157 LR LR 09 28 12.5
comp=Z,78nm,19.3s,baz=90,slow=40
NVS Novosibirsk 43.70 47𝄇 *iP* **P 09 08 10.8 -0.2**
NVS pmax pmax
comp=Z,21nm,1.5s
MK31 Makanchi Array 44.21 59 *i* P **P 09 08 15.2 0.0**
MK31 pmax pmax
comp=Z,11nm,0.6s
MK31 Makanchi Array 44.21 59 *eP* **P 09 08 15.2 0.0**
MKAR Makanchi Array 44.21 59 P **P 09 08 15.3 0.0**
MKAR pmax pmax
comp=Z,9.0nm,0.6s
MKAR pmax pmax
comp=N,1.0nm,0.8s
MKAR MLR MLR
comp=Z,57nm,21.1s
MKAR Makanchi Array 44.21 59 *eP* **P 09 08 15.6 +0.3**
MKAR ScP **ScP 09 13 50.7 -0.6**
MKAR Makanchi Array 44.21 59 P **P 09 08 15.2 0.0**
comp=Z,9.0nm,0.6s,baz=280,slow=6.6,SNR=74
MKAR ScP **ScP 09 13 50.7 -0.6**
comp=Z,1.2nm,0.8s,baz=270,slow=3.0,SNR=5.7
MKAR LR LR 09 28 28.0
comp=Z,57nm,21.1s,baz=180,slow=38
ZAA0 Zalesovo Array 44.70 48 *eP* **P 09 08 18.6 -0.4**
ZALV Zalesovo Beam 44.70 48 P **P 09 08 19.0 0.0**
ZALV pmax pmax
comp=Z,10.0nm,0.6s
ZALV MLR MLR
comp=Z,47nm,19.2s
ZALV Zalesovo Beam 44.70 48 P **P 09 08 19.0 0.0**
ZALV Zalesovo Beam 44.70 48 P **P 09 08 19.0 0.0**
comp=Z,10nm,0.6s,baz=276,slow=8.9,SNR=19
ZALV LR LR 09 28 11.6
comp=Z,46nm,19.2s,baz=239,slow=38
WMQ Urumqi 48.64 61 *eP* **P 09 08 50.9 +0.7**
WMQ pP pP 09 09 03.0 +8.5
WMQ sP sP 09 09 08.0 +12
WMQ *eS* **S 09 15 49.0 -2.9**
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,110nm,3.3s
WMQ LR LR
comp=N,200nm,30.2s
WMQ LR LR
comp=E,110nm,26.2s
WMQ LR LR
comp=Z,97nm,26.0s
DRLN Deer Lake 55.93 309 *eP* **P 09 09 45.4 +1.3**
comp=Z,26nm,0.9s
TLY Talaya 56.31 48 *eP* **P 09 09 48.9 +2.1**
TLY pmax pmax
comp=Z,12nm,1.6s
TLY MLR MLR
comp=Z,86nm,15.0s
ZAK Zakamensk 56.56 49 *eP* **P 09 09 48.8 +0.1**
ZAK pmax pmax
comp=Z,3.0nm,1.6s
GTA Gaotai 58.70 62 *eP* P 09 09 56.2 -7.8
GTA pP pP 09 10 08.6 +0.2
GTA sP sP 09 10 14.9 +4.8
GTA pmax pmax
comp=Z,3.0nm,0.8s
TIXI Tiksi 59.09 21 *ceP* **P 09 10 08.3 +2.3**
TIXI pmax pmax
comp=Z,3.0nm,1.2s

SCHQ Schefferville 59.15 318 *eP* **P 09 10 07.8 +1.1**
comp=Z,8.6nm,0.8s
SCHQ Schefferville 59.15 318 P **P 09 10 07.6 +0.9**
comp=Z,7.6nm,0.7s,baz=64,slow=5.8,SNR=14
SCHQ LR LR 09 36 22.2
comp=Z,50nm,18.0s,baz=307,slow=37
SONM Songino Array 59.44 51 P **P 09 10 08.0 -1.0**
SONM Songino Array 59.44 51 P **P 09 10 08.0 -1.0**
comp=Z,3.3nm,0.9s,baz=238,slow=8.5,SNR=5.0
ULN Ulaanbaatar 59.83 51 *eP* **P 09 10 11.9 +0.2**
comp=Z,3.9nm,0.9s
LZH Lanzhou 63.07 64 *eP* **P 09 10 35.6 +1.8**
LZH pP pP 09 10 46.5 +8.2
LZH sP sP 09 10 52.8 +13
LZH PP PP 09 12 58.0 +5.7
LZH *eS* **S 09 19 00.3 -4.0**
LZH sS sS 09 19 21.0 +9.4
LZH SS **SS 09 23 03.0 -6.6**
LZH pmax pmax
comp=Z,14nm,1.0s
LZH pmax pmax
comp=Z,68nm,4.5s
LZH LR LR
comp=N,760nm,14.9s
LZH LR LR
comp=E,630nm,15.6s
LZH LR LR
comp=Z,880nm,16.6s
CD2 Chengdu 65.61 69 *eP* **P 09 10 51.5 +1.1**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,30nm,4.6s
HHC Hu-ho-hao-te 65.97 56 *eP* **P 09 10 51.7 -0.9**
HHC pP pP 09 11 07.1 +10
HHC sP sP 09 11 11.4 +13
HHC PP **PP 09 13 21.2 +3.7**
HHC S **S 09 19 34.6 -5.2**
HHC sS sS 09 19 57.4 +10
HHC SS **SS 09 23 51.5 -2.9**
HHC pmax pmax
comp=Z,36nm,0.8s
HHC pmax pmax
comp=Z,74nm,5.1s
HHC LR LR
comp=N,160nm,14.3s
HHC LR LR
comp=E,190nm,13.3s
HHC LR LR
comp=Z,73nm,14.1s
BOSA Boshof 66.67 177 P **P 09 10 56.6 -0.4**
BOSA Boshof 66.67 177 P **P 09 10 56.6 -0.4**
comp=Z,3.0nm,0.6s,baz=348,slow=5.8,SNR=8.6
BOSA LR LR 09 43 20.0
comp=Z,113nm,18.5s,baz=346,slow=39
XAN Xi'an 67.69 64 P **P 09 11 04.8 +1.1**
KMI Kunming 67.92 75 P **P 09 11 06.6 +1.2**
KMI S **S 09 20 00.6 -3.5**
KMI pmax pmax
comp=Z,10.0nm,0.7s
ACCN Adirondack Com 68.54 309 *eP* **P 09 11 11.2 +2.5**
comp=Z,7.5nm,0.8s
CMAR Chiang Mai Arr 68.69 83 P **P 09 11 09.1 -1.0**
CMAR Chiang Mai Arr 68.69 83 P **P 09 11 09.1 -1.0**
comp=Z,1.5nm,0.7s,baz=301,slow=7.3,SNR=8.0
BJI Beijing 69.38 55 P **P 09 11 13.4 -0.6**
BJI pP pP 09 11 25.3 +6.8
BJI pmax pmax
comp=Z,10.0nm,0.5s
BJI pmax pmax
comp=Z,52nm,4.7s
BJI LR LR
comp=N,94nm,4.3s
BJI LR LR
comp=E,84nm,4.3s
GYA Guiyang 70.14 72 *eP* **P 09 11 20.8 +1.7**
GYA pP PcP 09 11 33.0 -8.1
GYA sP sP 09 11 39.4 +14
GYA PP **PP 09 13 57.2 +3.1**
GYA S **S 09 20 25.9 -4.3**
GYA SKS SKiKP 09 21 12.0 +7.4
GYA pmax pmax
comp=Z,10.0nm,1.0s
BILL Bilibino 70.59 13𝄇 *eP* **P 09 11 21.3 +0.3**
BILL *eS* **S 09 20 31.0 -2.9**
BILL pmax pmax
comp=Z,19nm,2.0s
BILL MLR MLR
comp=Z,100nm,19.0s
CN2 Changchun 72.91 47 *eP* **P 09 11 36.5 +1.2**
KLR Kul'dur 72.99 40 *eP* P 09 11 30.8 -4.9
ERPA Erie 73.09 310 *eP* **P 09 11 38.9 +2.5**
comp=Z,27nm,0.7s
YKA Yellowknife Ar 73.64 341 P **P 09 11 38.9 -0.4**
YKA Yellowknife Ar 73.64 341 P **P 09 11 38.9 -0.4**
comp=Z,1.5nm,0.6s,baz=32,slow=5.2,SNR=21
CBN Corbin 73.79 306 *eP* **P 09 11 42.9 +2.3**
comp=Z,10nm,0.4s
NJ2 Nanjing 75.71 60 *eP* **P 09 11 51.0 -0.8**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
EYMN Ely 75.75 321 *eP* **P 09 11 52.1 +0.3**
comp=Z,5.0nm,0.9s
ACSO Alum Creek Sta 76.03 310 *eP* **P 09 11 55.0 +1.5**
comp=Z,12nm,0.8s
ULM Lac du Bonnet 76.27 324 P **P 09 11 54.8 0.0**
ULM Lac du Bonnet 76.27 324 P **P 09 11 54.8 0.0**
comp=Z,3.3nm,0.6s,baz=31,slow=10,SNR=3.7
ULM LR LR 09 43 56.1
comp=Z,108nm,20.6s,baz=6.9,slow=34
USRK Ussuriysk Arra 76.35 44 P **P 09 11 54.5 -0.8**
comp=Z,2.8nm,0.8s,baz=287,slow=5.2,SNR=10
ILAR Eielson Array 76.86 355 P **P 09 11 56.5 -1.3**
ILAR Eielson Array 76.86 355 P **P 09 11 56.5 -1.3**
comp=Z,0.6nm,0.8s,baz=346,slow=4.2,SNR=6.6
ILAR LR LR 09 46 33.2
comp=Z,44nm,19.5s,baz=317,slow=36
AGMN Agassiz Nation 77.63 323 *eP* **P 09 12 03.0 +0.6**
comp=Z,1.6nm,0.3s
KSAR Wonju Array Be 78.29 51 P **P 09 12 06.0 -0.3**
KSRS Korea Array 78.31 51 P **P 09 12 06.0 -0.4**
comp=Z,2.0nm,0.6s,baz=312,slow=4.6,SNR=14
KSRS LR LR 09 51 39.9
comp=Z,35nm,18.2s,baz=334,slow=40
BLO Bloomington 78.81 311 *eP* **P 09 12 10.7 +1.6**
BLO pmax pmax
comp=Z,21nm,0.8s
BLO Bloomington 78.81 311 *eP* **P 09 12 10.7 +1.6**
comp=Z,21nm,0.8s
WCI Wyandotte Cave 79.28 310 *eP* **P 09 12 13.3 +1.5**
WCI pmax pmax
comp=Z,12nm,0.8s
WCI Wyandotte Cave 79.28 310 *eP* **P 09 12 13.3 +1.5**
comp=Z,12nm,0.8s
TKL Tuckaleechee C 79.39 307 P **P 09 12 13.3 +0.9**
TKL Tuckaleechee C 79.39 307 P **P 09 12 13.3 +0.9**
comp=Z,6.8nm,0.8s,baz=77,slow=6.2,SNR=10
YSS Yuzh-Sakhalins 79.94 37 *eP* **P 09 12 16.0 +0.9**
CPCT Cooper Cave 79.99 307 *eP* **P 09 12 17.6 +1.9**
SWET Sewanee 81.02 308 *eP* **P 09 12 22.4 +1.2**
comp=Z,6.4nm,0.9s
PETK Petropavlovsk- 81.16 25 LR LR 09 54 41.0
comp=Z,40nm,18.4s,baz=137,slow=40
ECSD EROS Data Cent 81.24 320 *eP* **P 09 12 23.6 +1.4**
comp=Z,5.0nm,0.8s
WVT Waverly 81.58 310 *eP* **P 09 12 24.9 +0.7**
WVT pmax pmax
comp=Z,2.0nm,0.6s
WVT Waverly 81.58 310 *eP* **P 09 12 24.9 +0.7**
comp=Z,1.9nm,0.6s
LRAL Lakeview Retre 83.12 307 *eP* **P 09 12 34.0 +1.7**
comp=Z,10nm,0.9s
EGMT Eagleton 83.91 330 *eP* **P 09 12 37.2 +1.1**
comp=Z,4.5nm,0.8s
WALA Waterton Lakes 84.64 333 *eP* **P 09 12 40.0 +0.1**
comp=Z,0.1nm,1.0s
BDFB Brasilia 84.66 245 P **P 09 12 42.1 +1.8**
BDFB Brasilia 84.66 245 P **P 09 12 42.1 +1.8**
comp=Z,2.0nm,0.7s,baz=107,slow=2.2,SNR=3.3
BDFB LR LR 09 52 51.7
comp=Z,63nm,18.2s,baz=46,slow=37
COCO West Island 85.88 109 *i* P **P 09 12 44.8 -1.5**
BOZ Bozeman (W) 86.59 329 *eP* **P 09 12 51.3 +1.6**
BOZ pmax pmax
comp=Z,1.0nm,1.1s
BOZ Bozeman (W) 86.59 329 *eP* **P 09 12 51.3 +1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,1.5nm,1.1s						
PDAR	**Pinedale Array**	**88.08**	**327**	P	**P**	**09 12 57.6**	**+0.6**
PDAR	**Pinedale Array**	**88.08**	**327**	P	**P**	**09 12 57.6**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=68,slow=5.2,SNR=7.3						
PDAR				LR	LR	09 52 15.0	
	comp=Z,89nm,20.6s,baz=192,slow=36						
BW06	**Boulder Array**	**88.08**	**327**	eP	**P**	**09 12 57.2**	**+0.1**
	comp=Z,1.2nm,0.6s						
ISCO	**Idaho Springs**	**88.64**	**322**	eP	**P**	**09 12 59.4**	**-0.4**
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ISCO	**Idaho Springs**	**88.64**	**322**	eP	**P**	**09 12 59.4**	**-0.4**
	comp=Z,2.7nm,0.9s						
WMOK	**Wichita Mounta**	**88.93**	**315**	eP	**P**	**09 13 02.5**	**+1.5**
WMOK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WMOK	**Wichita Mounta**	**88.93**	**315**	eP	**P**	**09 13 02.5**	**+1.5**
	comp=Z,5.4nm,0.8s						
HWUT	**Hardware Ranch**	**89.89**	**327**	eP	**P**	**09 13 06.3**	**+0.8**
	comp=Z,4.0nm,0.7s						
PV04	**Paradox Valley**	**91.31**	**324**	eP	**P**	**09 13 13.2**	**+1.0**
PV01	**Paradox Valley**	**91.36**	**323**	eP	**P**	**09 13 13.5**	**+1.0**
	comp=Z,257nm,1.0s						
PV10	**Paradox Valley**	**91.39**	**324**	eP	**P**	**09 13 14.1**	**+1.4**
	comp=Z,69nm,0.7s						
NVAR	**Mina Array Bea**	**95.34**	**330**	P	**P**	**09 13 31.8**	**+1.0**
NVAR	**Mina Array Bea**	**95.34**	**330**	P	**P**	**09 13 31.8**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=51,slow=7.1,SNR=3.3						
TXAR	**Lajitas Array**	**95.72**	**315**	P	**P**	**09 13 34.2**	**+1.7**
TXAR	**Lajitas Array**	**95.72**	**315**	P	**P**	**09 13 34.2**	**+1.7**
	comp=Z,0.7nm,0.8s,baz=68,slow=4.4,SNR=11						
TXAR				LR	LR	09 57 40.4	
	comp=Z,53nm,19.7s,baz=0.0,slow=36						
WRA	**Warramunga Arr**	**119.36**	**93**	PKP	**PKPdf**	**09 18 55.5**	**-0.5**
WRA	**Warramunga Arr**	**119.36**	**93**	PKP	**PKPdf**	**09 18 55.5**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=322,slow=2.1,SNR=5.0						
ASAR	**Alice Springs**	**121.01**	**97**	PKP	**PKPdf**	**09 18 58.8**	**-0.3**
ASAR	**Alice Springs**	**121.01**	**97**	PKP	**PKPdf**	**09 18 58.8**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=306,slow=1.5,SNR=6.9						
DZM	**Mont Dzumac**	**145.49**	**72**	PKPbc	**PKPab**	**09 19 45.4**	**+0.3**
DZM	**Mont Dzumac**	**145.49**	**72**	PKPbc	**PKPab**	**09 19 45.4**	**+0.3**
	comp=Z,7.4nm,0.9s,baz=249,slow=8.6,SNR=3.8						

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*ISCJB **07** 09:10:02.5±0.4, 38°.31N±0°.03×22°.02E±0°.03, h11km±3km, Error ellipse: s-maj=4.3km s-min=4.1km az=145.3*
*CSEM **07** 09:10:02.4±0.1, 38°.31N×22°.04E, h10km, MD2.7, Error ellipse: s-maj=2.6km s-min=2.1km az=108.0*
*ATH **07** 09:10:02.7, 38°.31N×22°.02E, h8km±1km, MD2.7/8*
*THE **07** 09:10:03.0, 38°.32N×22°.02E, h9km±1km, ML1.8/5, Error ellipse: s-maj=1.2km s-min=0.4km az=165.0*
ISC 07 09:10:02.3±0.9**, 38°.32N**±0°.02×**22°.01E**±0°.02**, h12**km±5km**, n34, σ0s.21**/54**, 3C, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.08**	**195**	P	**Pg**	**09 10 05.0**	**+0.1**
LAKA				S	**Sg**	**09 10 06.8**	**-0.1**
LAKA	**Lakka**	**0.08**	**195**	⇑iPG	**Pg**	**09 10 05.0**	**+0.1**
LAKA				eSG	**Sg**	**09 10 06.6**	**-0.3**
LAKA	**Lakka**	**0.08**	**195**	P	**Pg**	**09 10 05.0**	**+0.1**
LAKA				eSg	**Sg**	**09 10 06.6**	**-0.3**
PSA1	**Psathopyrgos**	**0.10**	**276**	ePG	**Pg**	**09 10 05.1**	**0.0**
PSA1				eSG	**Sg**	**09 10 06.9**	**-0.2**
KALE	**Kalithea**	**0.13**	**55**	P	**Pg**	**09 10 05.7**	**+0.1**
KALE				S	**Sg**	**09 10 08.1**	**+0.1**
KALE	**Kalithea**	**0.13**	**55**	⇑iPG	**Pg**	**09 10 05.6**	**0.0**
KALE				eSG	**Sg**	**09 10 07.7**	**-0.3**
KALE	**Kalithea**	**0.13**	**55**	⇑iPg	**Pg**	**09 10 05.6**	**0.0**
KALE				eSg	**Sg**	**09 10 07.7**	**-0.3**
EFP	**Efpalio**	**0.14**	**325**	P	**Pg**	**09 10 05.8**	**+0.1**
EFP				S	**Sg**	**09 10 08.3**	**+0.2**
EFP	**Efpalio**	**0.14**	**325**	ePG	**Pg**	**09 10 05.8**	**+0.1**
EFP				eSG	**Sg**	**09 10 08.4**	**+0.3**
EFP	**Efpalio**	**0.14**	**325**	P	**Pg**	**09 10 05.8**	**+0.1**
EFP				eSg	**Sg**	**09 10 08.4**	**+0.3**
KLV	**Kalavryta, Ach**	**0.29**	**157**	ePG	**Pg**	**09 10 08.5**	**+0.1**
KLV	**Kalavryta, Ach**	**0.29**	**157**	ePg	**Pg**	**09 10 08.5**	**+0.1**
DSF	**Desfina**	**0.42**	**77**	P	**Pg**	**09 10 10.7**	**0.0**
DSF				S	**Sg**	**09 10 16.9**	**+0.6**
DSF	**Desfina**	**0.42**	**77**	P	**Pg**	**09 10 10.7**	**0.0**
GUR	**Goura**	**0.46**	**145**	P	**Pg**	**09 10 11.5**	**0.0**
GUR				S	**Sb**	**09 10 18.9**	**-0.4**
GUR	**Goura**	**0.46**	**145**	ePB	**Pg**	**09 10 11.4**	**0.0**
GUR	**Goura**	**0.46**	**145**	P	**Pg**	**09 10 11.5**	**0.0**
RLS	**Riolos of Patr**	**0.50**	**239**	P	**Pb**	**09 10 12.8**	**-0.1**
RLS				S	**Sb**	**09 10 20.4**	**+0.3**
RLS	**Riolos of Patr**	**0.50**	**239**	ePB	**Pb**	**09 10 12.8**	**-0.1**
RLS	**Riolos of Patr**	**0.50**	**239**	P	**Pb**	**09 10 12.8**	**-0.1**
RLS				S	**Sb**	**09 10 20.4**	**+0.3**
AXS	**Araxos**	**0.51**	**257**	P	**Pb**	**09 10 13.0**	**-0.2**
AXS				S	**Sb**	**09 10 20.5**	**0.0**
AXS	**Araxos**	**0.51**	**257**	P	**Pb**	**09 10 13.0**	**-0.2**
AXS				S	**Sb**	**09 10 20.5**	**0.0**
EVR	**Evrytania**	**0.62**	**346**	P	**Pg**	**09 10 14.4**	**0.0**
EVR				S	**Sb**	**09 10 23.8**	**0.0**
EVR	**Evrytania**	**0.62**	**346**	P	**Pg**	**09 10 14.4**	**0.0**
EVR				S	**Sb**	**09 10 23.8**	**0.0**
MAKR	**Makrakomi, Fth**	**0.70**	**8**	P	**Pb**	**09 10 16.5**	**0.0**
MAKR	**Makrakomi, Fth**	**0.70**	**8**	P	**Pb**	**09 10 16.5**	**0.0**
AGG	**Agios Georgios**	**0.75**	**20**	P	**Pg**	**09 10 16.4**	**-0.4**
AGG				S	**Sb**	**09 10 27.7**	**+0.2**
AGG	**Agios Georgios**	**0.75**	**20**	P	**Pg**	**09 10 16.4**	**-0.4**
AGG				S	**Sb**	**09 10 27.7**	**+0.2**
LTK	**Loutraki**	**0.81**	**111**	ePB	**Pb**	**09 10 18.5**	**+0.1**
LTK	**Loutraki**	**0.81**	**111**	ePb	**Pb**	**09 10 18.5**	**+0.1**
AMT	**Artemida-Makis**	**0.82**	**197**	ePB	**Pb**	**09 10 18.5**	**+0.1**
AMT	**Artemida-Makis**	**0.82**	**197**	ePb	**Pb**	**09 10 18.5**	**+0.1**
ITM	**Ithomi**	**1.14**	**183**	ePG	**Pb**	**09 10 23.8**	**-0.1**
ITM	**Ithomi**	**1.14**	**183**	ePg	**Pb**	**09 10 23.8**	**-0.1**

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*ISK **07** 09:14:10.9, 37°.39N×28°.29E, h5km, MD2.3*
*CSEM **07** 09:14:13.8±0.3, 37°.23N×28°.20E, h10km, MD2.3, Error ellipse: s-maj=7.9km s-min=5.5km az=37.0*
*ISCJB **07** 09:14:14.0±1.3, 37°.26N±0°.04×28°.24E±0°.05, h4km±53km, Error ellipse: s-maj=8.0km s-min=5.5km az=41.7*
*DDA **07** 09:14:14.2, 37°.23N×28°.20E, h7km, MD2.8*
ISC 07 09:14:13.8±1.0**, 37°.23N**±0°.04×**28°.20E**±0°.03**, h12**km±8km**, n12, σ0s.50**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.11**	**145**	ePG	**Pg**	**09 14 16.5**	**-0.3**
YER	**Yerkesik**	**0.11**	**145**	ePg	**Pg**	**09 14 16.5**	**-0.3**
MLSB	**Milas**	**0.35**	**282**	ePG	**Pg**	**09 14 19.7**	**-1.0**
MLSB				eSG	**Sg**	**09 14 26.0**	**+0.6**
MLSB	**Milas**	**0.35**	**282**	ePg	**Pg**	**09 14 19.7**	**-1.0**
MLSB				eSg	**Sg**	**09 14 26.0**	**+0.6**
TURN	**Turunc**	**0.48**	**138**	iP	**Pg**	**09 14 22.6**	**-0.5**
TURN				iS	**Sb**	**09 14 31.0**	**-0.1**
TURN	**Turunc**	**0.48**	**138**	iP	**Pg**	**09 14 22.6**	**-0.5**
TURN				iS	**Sb**	**09 14 31.0**	**-0.1**
AYDN	**Tasoluk**	**0.50**	**330**	iP	**Pg**	**09 14 23.6**	**-0.1**
AYDN				iS	**Sb**	**09 14 31.8**	**-0.2**
AYDN	**Tasoluk**	**0.50**	**330**	iP	**Pg**	**09 14 23.6**	**-0.1**
AYDN				iS	**Sb**	**09 14 31.8**	**-0.2**
DAT	**Datca**	**0.70**	**225**	ePG	**Pb**	**09 14 28.3**	**+0.3**
DAT				eSG	**Sn**	**09 14 40.8**	**+0.3**
DAT	**Datca**	**0.70**	**225**	ePg	**Pb**	**09 14 28.3**	**+0.3**
DAT				eSg	**Sn**	**09 14 40.8**	**+0.3**
DNZL	**Cakiroluk**	**0.82**	**55**	iP	**Pb**	**09 14 30.1**	**0.0**
DNZL	**Cakiroluk**	**0.82**	**55**	iP	**Pb**	**09 14 30.0**	**0.0**

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*ISCJB **07** 09:14:35.8±0.3, 38°.32N±0°.02×22°.01E±0°.02, h9km±3km, Error ellipse: s-maj=3.2km s-min=2.8km az=20.0*
*ATH **07** 09:14:35.9, 38°.32N×22°.01E, h9km±1km, MD3.2/12*
*CSEM **07** 09:14:35.8±0.1, 38°.32N×22°.01E, h5km, ML2.4, Error ellipse: s-maj=2.5km s-min=2.1km az=103.0*
*THE **07** 09:14:36.3, 38°.32N×22°.02E, h5km±1km, ML2.7/5, Error ellipse: s-maj=1.1km s-min=0.4km az=288.0*
ISC 07 09:14:36.0±0.8**, 38°.32N**±0°.02×**22°.01E**±0°.02**, h9**km±5km**, n74, σ0s.49**/103**, 2C, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.08**	**199**	P	**Pg**	**09 14 38.2**	**0.0**
LAKA				S	**Sg**	**09 14 39.9**	**+0.2**
LAKA	**Lakka**	**0.08**	**199**	⇑iPG	**Pg**	**09 14 38.1**	**-0.1**
LAKA				eSG	**Sg**	**09 14 39.6**	**-0.1**
LAKA	**Lakka**	**0.08**	**199**	P	**Pg**	**09 14 38.2**	**0.0**
LAKA				eSg	**Sg**	**09 14 39.6**	**-0.1**
PSA1	**Psathopyrgos**	**0.10**	**275**	ePG	**Pg**	**09 14 38.3**	**-0.1**
PSA1				eSG	**Sg**	**09 14 40.1**	**0.0**
KALE	**Kalithea**	**0.13**	**54**	P	**Pg**	**09 14 39.1**	**+0.1**
KALE	**Kalithea**	**0.13**	**54**	⇑iPG	**Pg**	**09 14 39.0**	**+0.1**
KALE				eSG	**Sg**	**09 14 41.2**	**+0.3**
KALE	**Kalithea**	**0.13**	**54**	P	**Pg**	**09 14 39.0**	**+0.1**
KALE				S	**Sg**	**09 14 40.7**	**-0.2**
KALE				eSg	Sg	09 14 41.2	+0.2
EFP	**Efpalio**	**0.14**	**323**	P	**Pg**	**09 14 39.2**	**+0.2**
EFP				S	**Sg**	**09 14 41.6**	**+0.4**
EFP	**Efpalio**	**0.14**	**323**	ePG	**Pg**	**09 14 39.1**	**+0.1**
EFP				eSG	**Sg**	**09 14 41.7**	**+0.6**
EFP	**Efpalio**	**0.14**	**323**	P	**Pg**	**09 14 39.1**	**+0.1**
EFP				S	**Sg**	**09 14 41.5**	**+0.4**
UPR	**University Cam**	**0.18**	**260**	P	**Pg**	**09 14 39.9**	**+0.2**
UPR				S	**Sg**	**09 14 42.6**	**+0.3**
KLV	**Kalavryta, Ach**	**0.29**	**158**	ePG	**Pg**	**09 14 41.8**	**0.0**
KLV				eSG	**Sg**	**09 14 46.7**	**+0.9**
KLV	**Kalavryta, Ach**	**0.29**	**158**	ePg	**Pg**	**09 14 41.8**	**0.0**
KLV				eSg	**Sg**	**09 14 46.7**	**+0.9**
DSF	**Desfina**	**0.42**	**77**	P	**Pg**	**09 14 44.0**	**-0.1**
DSF				S	**Sg**	**09 14 50.5**	**+0.9**
DSF	**Desfina**	**0.42**	**77**	P	**Pg**	**09 14 43.8**	**-0.3**
DSF				S	**Sg**	**09 14 50.5**	**+0.9**
GUR	**Goura**	**0.46**	**145**	P	**Pg**	**09 14 44.8**	**-0.2**
GUR				S	**Sg**	**09 14 52.0**	**+0.9**
GUR	**Goura**	**0.46**	**145**	ePG	**Pg**	**09 14 44.8**	**-0.2**
GUR				eSB	**Sg**	**09 14 52.0**	**+0.9**
GUR	**Goura**	**0.46**	**145**	P	**Pg**	**09 14 44.8**	**-0.2**
GUR				S	**Sg**	**09 14 51.9**	**+0.9**
RLS	**Riolos of Patr**	**0.50**	**239**	P	**Pg**	**09 14 45.9**	**+0.2**
RLS				S	**Sg**	**09 14 53.2**	**+1.0**
RLS	**Riolos of Patr**	**0.50**	**239**	ePB	**Pg**	**09 14 45.9**	**+0.2**
RLS				eSB	**Sb**	**09 14 53.5**	**-0.9**
RLS	**Riolos of Patr**	**0.50**	**239**	P	**Pg**	**09 14 45.9**	**+0.2**
RLS				S	**Sg**	**09 14 53.1**	**+0.9**
AXS	**Araxos**	**0.51**	**257**	P	**Pg**	**09 14 46.0**	**+0.1**
AXS				S	**Sg**	**09 14 53.7**	**+1.0**
AXS	**Araxos**	**0.51**	**257**	P	**Pg**	**09 14 46.0**	**+0.1**
AXS				S	**Sg**	**09 14 52.9**	**+0.2**
EVR	**Evrytania**	**0.62**	**345**	P	**Pg**	**09 14 47.8**	**-0.2**
EVR				S	**Sb**	**09 14 57.4**	**-0.6**
EVR	**Evrytania**	**0.62**	**345**	ePB	**Pg**	**09 14 47.9**	**-0.1**
EVR	**Evrytania**	**0.62**	**345**	ePb	**Pg**	**09 14 47.9**	**-0.1**
EVR				S	**Sg**	**09 14 56.7**	**+0.5**
AXAR	**Agios Charalam**	**0.68**	**48**	P	**Pg**	**09 14 48.7**	**-0.4**
AXAR	**Agios Charalam**	**0.68**	**48**	P	**Pg**	**09 14 48.7**	**-0.4**
AXAR				S	**Sg**	**09 14 58.6**	**+0.6**
MAKR	**Makrakomi, Fth**	**0.70**	**8**	P	**Pg**	**09 14 49.5**	**0.0**
MAKR				S	**Sb**	**09 14 59.8**	**-0.5**
MAKR	**Makrakomi, Fth**	**0.70**	**8**	P	**Pg**	**09 14 49.5**	**0.0**
MAKR				S	**Sb**	**09 14 59.8**	**-0.5**
AGG	**Agios Georgios**	**0.75**	**19**	P	**Pg**	**09 14 49.9**	**-0.5**
AGG				S	**Sb**	**09 15 01.7**	**+0.1**
AGG	**Agios Georgios**	**0.75**	**19**	ePB	**Pg**	**09 14 49.7**	**-0.7**
AGG	**Agios Georgios**	**0.75**	**19**	P	**Pg**	**09 14 49.9**	**-0.5**
AGG				S	**Sg**	**09 15 00.6**	**+0.4**
LTK	**Loutraki**	**0.81**	**111**	P	**Pg**	**09 14 51.7**	**+0.2**
LTK	**Loutraki**	**0.81**	**111**	P	**Pg**	**09 14 51.7**	**+0.2**
AMT	**Artemida-Makis**	**0.82**	**197**	ePB	**Pg**	**09 14 51.8**	**+0.1**
AMT	**Artemida-Makis**	**0.82**	**197**	ePb	**Pg**	**09 14 51.8**	**+0.1**
LKR	**Lokris**	**0.84**	**66**	P	**Pg**	**09 14 51.6**	**-0.6**
LKR	**Lokris**	**0.84**	**66**	ePB	**Pg**	**09 14 52.0**	**-0.2**
LKR	**Lokris**	**0.84**	**66**	P	**Pg**	**09 14 51.6**	**-0.6**
LKR	**Lokris**	**0.84**	**66**	ePb	**Pg**	**09 14 52.0**	**-0.2**
ATAL	**Atalanti**	**0.88**	**64**	P	**Pg**	**09 14 52.2**	**-0.7**
ATAL	**Atalanti**	**0.88**	**64**	P	**Pg**	**09 14 52.2**	**-0.7**
VLX	**Vlachokerasia**	**0.99**	**163**	P	**Pg**	**09 14 54.3**	**-0.7**
VLX	**Vlachokerasia**	**0.99**	**163**	ePG	**Pg**	**09 14 54.2**	**-0.7**
VLX	**Vlachokerasia**	**0.99**	**163**	P	**Pg**	**09 14 54.3**	**-0.7**
ITM	**Ithomi**	**1.14**	**183**	P	**Pg**	**09 14 57.2**	**-0.6**
ITM	**Ithomi**	**1.14**	**183**	ePG	**Pg**	**09 14 57.2**	**-0.6**
ITM	**Ithomi**	**1.14**	**183**	P	**Pg**	**09 14 57.2**	**-0.6**
LKD2	**Lefkada island**	**1.16**	**294**	ePB	**Pg**	**09 14 57.8**	**-0.5**
LKD2	**Lefkada island**	**1.16**	**294**	ePb	**Pg**	**09 14 57.8**	**-0.5**
THL	**Klokotos Trika**	**1.25**	**0**	P	**Pg**	**09 14 59.5**	**-0.4**
THL	**Klokotos Trika**	**1.25**	**0**	ePB	**Pb**	**09 14 59.9**	**+0.2**
THL	**Klokotos Trika**	**1.25**	**0**	P	**Pg**	**09 14 59.5**	**-0.4**
THL	**Klokotos Trika**	**1.25**	**0**	ePb	**Pb**	**09 14 59.9**	**+0.2**
DID	**Didima**	**1.26**	**129**	P	**Pg**	**09 15 00.0**	**-0.2**
DID	**Didima**	**1.26**	**129**	ePB	**Pn**	**09 15 00.3**	**+0.4**
DID	**Didima**	**1.26**	**129**	P	**Pg**	**09 15 00.0**	**-0.2**
DID	**Didima**	**1.26**	**129**	ePb	**Pn**	**09 15 00.3**	**+0.4**
DIDY	**Didyma**	**1.27**	**131**	P	**Pg**	**09 15 00.2**	**-0.1**
DIDY	**Didyma**	**1.27**	**131**	P	**Pg**	**09 15 00.2**	**-0.1**
NAIG	**Nisos Aigina**	**1.29**	**115**	ePB	**Pg**	**09 15 01.2**	**+0.4**
PYL	**PYLOS**	**1.43**	**189**	ePG	**Pn**	**09 15 02.3**	**+0.1**
PYL	**PYLOS**	**1.43**	**189**	ePg	**Pn**	**09 15 02.3**	**+0.1**
DYR	**Agios Nikonas**	**1.57**	**171**	P	**Pn**	**09 15 04.1**	**0.0**
DYR	**Agios Nikonas**	**1.57**	**171**	ePG	**Pn**	**09 15 04.8**	**+0.7**
DYR	**Agios Nikonas**	**1.57**	**171**	P	**Pn**	**09 15 04.1**	**0.0**
DYR	**Agios Nikonas**	**1.57**	**171**	ePg	**Pn**	**09 15 04.8**	**+0.7**
AOS	**Alonnisos**	**1.69**	**59**	ePG	**Pb**	**09 15 07.1**	**-0.2**
VLI	**Veliai**	**1.76**	**155**	P	**Pn**	**09 15 06.8**	**+0.2**
VLI	**Veliai**	**1.76**	**155**	ePN	**Pn**	**09 15 07.8**	**+1.2**
KYTH	**Kithira**	**2.19**	**158**	P	**Pb**	**09 15 15.0**	**-0.8**
KYTH	**Kithira**	**2.19**	**158**	ePN	**Pb**	**09 15 15.2**	**-0.6**
KYTH	**Kithira**	**2.19**	**158**	P	**Pb**	**09 15 15.0**	**-0.8**

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*DDA **07** 09:15:56.6, 37°.88N×29°.22E, h5km, MD2.8*
*ISCJB **07** 09:15:57.3±0.5, 37°.89N±0°.02×29°.19E±0°.03, h2km±6km, Error ellipse: s-maj=4.4km s-min=3.4km az=4.5*
*CSEM **07** 09:15:57.3±0.1, 37°.88N×29°.18E, h8km, MD2.7, Error ellipse: s-maj=3.1km s-min=2.4km az=88.0*
*ISK **07** 09:15:57.0, 37°.88N×29°.17E, h6km, MD2.7*
ISC 07 09:15:57.5±1.1**, 37°.88N**±0°.02×**29°.21E**±0°.03**, h4**km±11km**, n34, σ0s.57**/55**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.19**	**227**	ePG	**Pg**	**09 16 01.1**	**-0.1**
DENT	**Denizli**	**0.19**	**227**	ePg	**Pg**	**09 16 01.1**	**-0.1**
DNZL	**Cakiroluk**	**0.23**	**214**	iP	**Pg**	**09 16 01.3**	**-0.7**
DNZL				iS	**Sg**	**09 16 05.2**	**+0.1**
DNZL	**Cakiroluk**	**0.23**	**214**	iP	**Pg**	**09 16 01.3**	**-0.7**
KHAL	**Karahalli**	**0.54**	**25**	iP	**Pg**	**09 16 07.2**	**-0.6**
KHAL				iS	**Sg**	**09 16 15.2**	**+0.4**
KHAL	**Karahalli**	**0.54**	**25**	iP	**Pg**	**09 16 07.2**	**-0.6**
KHAL				iS	**Sg**	**09 16 15.2**	**+0.4**
GOLH	**Golhisar**	**0.70**	**156**	iP	**Pg**	**09 16 10.0**	**-1.0**
GOLH				iS	**Sb**	**09 16 22.6**	**+0.1**
GOLH	**Golhisar**	**0.70**	**156**	iP	**Pg**	**09 16 10.0**	**-1.0**
GOLH				iS	**Sb**	**09 16 22.6**	**+0.1**
GLHS	**Glhisar (BURDU**	**0.76**	**162**	ePG	**Pg**	**09 16 12.1**	**0.0**
GLHS				eSG	**Sb**	**09 16 23.5**	**-0.6**
GLHS	**Glhisar (BURDU**	**0.76**	**162**	ePg	**Pg**	**09 16 12.1**	**0.0**
GLHS				eSg	**Sb**	**09 16 23.5**	**-0.6**
KULA	**Kula-Manisa**	**0.76**	**326**	ePG	**Pg**	**09 16 11.8**	**-0.3**
KULA				eSG	**Sg**	**09 16 22.6**	**+0.5**
KULA	**Kula-Manisa**	**0.76**	**326**	ePg	**Pg**	**09 16 11.9**	**-0.3**
KULA				eSg	**Sg**	**09 16 22.6**	**+0.5**
MANT	**Manisa**	**0.79**	**320**	iP	**Pg**	**09 16 12.2**	**-0.5**
MANT				iS	**Sb**	**09 16 25.7**	**+0.5**
MANT	**Manisa**	**0.79**	**320**	iP	**Pg**	**09 16 12.2**	**-0.5**
MANT				iS	**Sb**	**09 16 25.7**	**+0.5**
ISP	**Isparta**	**1.04**	**93**	ePG	**Pb**	**09 16 18.2**	**0.0**
ISP				eSG	**Sn**	**09 16 33.3**	**-0.8**
ISP	**Isparta**	**1.04**	**93**	ePg	**Pb**	**09 16 18.2**	**0.0**
ISP				eSg	**Sn**	**09 16 33.3**	**-0.8**
YER	**Yerkesik**	**1.05**	**225**	ePG	**Pg**	**09 16 16.8**	**-0.8**
YER				eSG	**Sb**	**09 16 32.2**	**-0.2**
YER	**Yerkesik**	**1.05**	**225**	ePg	**Pg**	**09 16 16.8**	**-0.8**
YER				eSg	**Sb**	**09 16 32.2**	**-0.2**
AYDN	**Tasoluk**	**1.08**	**259**	iP	**Pg**	**09 16 17.5**	**-0.6**
AYDN				iS	**Sg**	**09 16 32.0**	**-0.1**
AYDN	**Tasoluk**	**1.08**	**259**	iP	**Pg**	**09 16 17.5**	**-0.6**
AYDN				iS	**Sg**	**09 16 32.0**	**-0.1**
TURN	**Turunc**	**1.12**	**206**	iP	**Pn**	**09 16 21.6**	**+1.7**
TURN				iS	Sn	09 16 42.3	+6.5
TURN	**Turunc**	**1.12**	**206**	iP	**Pn**	**09 16 21.6**	**+1.7**
BCK	**Bucak**	**1.17**	**111**	ePN	**Pg**	**09 16 20.2**	**+0.2**
BCK	**Bucak**	**1.17**	**111**	ePn	**Pg**	**09 16 20.2**	**+0.2**
DEMI	**Demirci**	**1.22**	**342**	iP	**Pg**	**09 16 20.5**	**-0.4**
DEMI				iS	**Sg**	**09 16 36.9**	**+0.2**
DEMI	**Demirci**	**1.22**	**342**	iP	**Pg**	**09 16 20.5**	**-0.4**
DEMI				iS	**Sg**	**09 16 36.9**	**+0.2**
GDZ	**Gediz**	**1.22**	**10**	iP	**Pg**	**09 16 21.0**	**+0.1**
GDZ				iS	**Sg**	**09 16 36.9**	**+0.1**
GDZ	**Gediz**	**1.22**	**10**	iP	**Pg**	**09 16 21.0**	**+0.1**
GDZ				iS	**Sg**	**09 16 36.9**	**+0.1**
FETY	**Fethiye**	**1.25**	**185**	ePN	**Pg**	**09 16 21.0**	**-0.4**
FETY	**Fethiye**	**1.25**	**185**	ePn	**Pg**	**09 16 21.0**	**-0.4**
ALT	**Altintas**	**1.37**	**31**	ePN	**Pb**	**09 16 23.6**	**-0.1**
ALT	**Altintas**	**1.37**	**31**	ePn	**Pb**	**09 16 23.6**	**-0.1**
TVSB	**Tavsanli**	**1.58**	**7**	ePN	**Pn**	**09 16 26.1**	**-0.3**
TVSB	**Tavsanli**	**1.58**	**7**	ePn	**Pn**	**09 16 26.1**	**-0.3**

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*ISK **07** 09:27:12.3, 39°.00N×38°.90E, h27km, MD2.6*
*DDA **07** 09:27:12.7, 39°.04N×38°.91E, h7km, MD2.8*
*ISCJB **07** 09:27:13.1±0.7, 39°.04N±0°.04×38°.90E±0°.05, h10km, Error ellipse: s-maj=6.5km s-min=4.9km az=35.6*
*CSEM **07** 09:27:13.3±0.2, 39°.02N×38°.89E, h8km, MD2.6, Error ellipse: s-maj=5.7km s-min=4.4km az=110.0*
ISC 07 09:27:12.7±0.9**, 39°.01N**±0°.04×**38°.91E**±0°.04**, h10**km**, n12, σ0s.32**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.40**	**107**	ePG	**Pb**	**09 27 21.6**	**-0.3**
PTK				eSG	**Sb**	**09 27 28.3**	**+0.2**
PTK	**Pertek**	**0.40**	**107**	ePg	**Pb**	**09 27 21.6**	**-0.3**
PTK				eSg	**Sb**	**09 27 28.3**	**+0.2**
ILIC	**ilic-Erzincan**	**0.51**	**329**	ePG	**Pb**	**09 27 23.6**	**-0.3**
ILIC	**ilic-Erzincan**	**0.51**	**329**	ePg	**Pb**	**09 27 23.6**	**-0.3**
ELZG	**Elazig**	**0.52**	**173**	iP	**Pb**	**09 27 23.6**	**-0.3**
ELZG				iS	**Sb**	**09 27 31.5**	**0.0**
ELZG	**Elazig**	**0.52**	**173**	iP	**Pb**	**09 27 23.6**	**-0.3**
ELZG				iS	**Sb**	**09 27 31.5**	**0.0**
MYA	**Malataya**	**0.78**	**209**	ePG	**Pg**	**09 27 27.6**	**-0.1**
MYA				eSG	**Sb**	**09 27 38.6**	**-0.4**
MYA	**Malataya**	**0.78**	**209**	ePg	**Pg**	**09 27 27.6**	**-0.1**
MYA				eSg	**Sb**	**09 27 38.6**	**-0.4**
EZC	**Erzincan**	**0.82**	**25**	ePg	**Pb**	**09 27 28.9**	**-0.2**
ERZN	**Erzincan**	**0.86**	**47**	ePG	**Pg**	**09 27 28.9**	**-0.3**
AKCD	**Akcadag**	**1.05**	**228**	iP	**Pn**	**09 27 34.0**	**+0.4**
AKCD				iS	**Sn**	**09 27 48.7**	**+0.3**
AKCD	**Akcadag**	**1.05**	**228**	iP	**Pn**	**09 27 34.0**	**+0.4**
AKCD				iS	**Sn**	**09 27 48.7**	**+0.3**

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*NEIC **07** 09:27:28.9, 41°.05S×174°.56E, h42km, ML3.9(WEL), After WEL.*
NEIC Felt [IV] in the Wellington area. Also felt at Nelson and Picton.
WEL 07 09:27:28.8±0.1**, 41°.07S**×**174°.56E, h44**km±1km**, ML3.9**/17**, 6C-8D, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0, Cook Strait**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TCW	**Tory Channel**	**0.26**	**236**	⇓P*	Pn	09 27 36.3	-0.7
TCW				AML	AML	09 27 42.9	
TCW				AML	AML	09 27 43.0	
TCW	**Tory Channel**	**0.26**	**236**	P*	Pn	09 27 36.3	-0.7
SNZO	**South Karori**	**0.26**	**155**	P*	Pn	09 27 36.8	-0.2
SNZO				AML	AML	09 27 43.3	
SNZO				AML	AML	09 27 43.3	
SNZO				AML	AML	09 27 43.9	
SNZO				AML	AML	09 27 43.9	
SNZO	**South Karori**	**0.26**	**155**	P*	Pn	09 27 36.5	-0.5
WEL	**Wellington**	**0.27**	**144**	⇑P*	Pn	09 27 37.1	0.0
WEL				S*	Sn	09 27 43.5	+0.6
WEL	**Wellington**	**0.27**	**144**	P*	Pn	09 27 37.1	0.0
WEL				S*	Sn	09 27 43.5	+0.6
KIW	**Kapiti Island**	**0.34**	**52**	⇑P*	Pn	09 27 37.1	-0.7
KIW				S*	Sn	09 27 43.3	-0.8
KIW				AML	AML	09 27 43.5	
KIW	**Kapiti Island**	**0.34**	**52**	P*	Pn	09 27 37.2	-0.6
CAW	**Cannon Point**	**0.39**	**96**	⇑P*	Pn	09 27 38.3	-0.1
CAW				AML	AML	09 27 47.8	
CAW				AML	AML	09 27 47.8	
CAW	**Cannon Point**	**0.39**	**96**	P*	Pn	09 27 38.3	-0.1
BHW	**Baring Head**	**0.41**	**145**	⇑P*	Pn	09 27 38.8	+0.2
BHW				S*	Sn	09 27 46.5	+0.9
BHW				AML	AML	09 27 48.4	
BHW	**Baring Head**	**0.41**	**145**	P*	Pn	09 27 38.8	+0.2
OGWZ	**Otaki Gorge**	**0.53**	**62**	⇑P*	Pn	09 27 39.9	-0.2
OGWZ	**Otaki Gorge**	**0.53**	**62**	P*	Pn	09 27 39.9	-0.2
DUWZ	**D'Urville Isla**	**0.55**	**299**	P*	Pn	09 27 39.2	-1.2
DUWZ	**D'Urville Isla**	**0.55**	**299**	P*	Pn	09 27 39.2	-1.2
TUWZ	**Tuamarina**	**0.59**	**232**	⇓P*	Pn	09 27 40.3	-0.5
TUWZ				AML	AML	09 27 50.2	
TUWZ				AML	AML	09 27 51.0	
TUWZ	**Tuamarina**	**0.59**	**232**	P*	Pn	09 27 40.3	-0.5
MSWZ	**Moikau Station**	**0.63**	**124**	P*	Pn	09 27 41.5	+0.1
MSWZ				AML	AML	09 27 53.1	
MSWZ				AML	AML	09 27 53.4	
MSWZ	**Moikau Station**	**0.63**	**124**	P*	Pn	09 27 41.5	+0.1
MTW	**Mount Morrison**	**0.72**	**97**	⇓P*	Pn	09 27 42.4	-0.2
MTW				AML	AML	09 27 55.9	
MTW				AML	AML	09 27 57.4	
MTW	**Mount Morrison**	**0.72**	**97**	P*	Pn	09 27 42.4	-0.2
CMWZ	**Cape Campbell**	**0.72**	**201**	P*	Pn	09 27 43.8	+1.1
CMWZ				AML	AML	09 27 58.1	
CMWZ				AML	AML	09 27 60.0	
CMWZ	**Cape Campbell**	**0.72**	**201**	P*	Pn	09 27 43.9	+1.2
PLWZ	**Palliser**	**0.72**	**134**	P*	Pn	09 27 42.6	-0.2
PLWZ	**Palliser**	**0.72**	**134**	P*	Pn	09 27 42.6	-0.2
PAWZ	**Paruwai Farm**	**0.73**	**116**	P*	Pn	09 27 42.6	-0.1
PAWZ				AML	AML	09 27 55.5	
PAWZ				AML	AML	09 27 55.6	
PAWZ	**Paruwai Farm**	**0.73**	**116**	P*	Pn	09 27 42.6	-0.1
HOWZ	**Holdsworth Sta**	**0.74**	**77**	⇓P*	Pn	09 27 42.8	-0.2
HOWZ	**Holdsworth Sta**	**0.74**	**77**	P*	Pn	09 27 42.8	-0.2
BSWZ	**Blackbirch Sta**	**0.82**	**218**	⇓PN	Pn	09 27 44.1	+0.1
BSWZ				AML	AML	09 27 58.0	
BSWZ				AML	AML	09 28 05.1	
BSWZ	**Blackbirch Sta**	**0.82**	**218**	Pn	Pn	09 27 44.1	+0.1
MRZ	**Mangatainoka R**	**0.88**	**63**	PN	Pn	09 27 44.4	-0.3
MRZ				AML	AML	09 27 59.5	
MRZ				AML	AML	09 27 59.6	
MRZ	**Mangatainoka R**	**0.88**	**63**	Pn	Pn	09 27 44.1	-0.7
NNZ	**Nelson**	**0.90**	**260**	PN	Pn	09 27 44.2	-0.8
NNZ	**Nelson**	**0.90**	**260**	Pn	Pn	09 27 44.2	-0.8
TRWZ	**Traveller**	**0.91**	**111**	PN	Pn	09 27 45.0	-0.3
TRWZ				AML	AML	09 28 02.7	
TRWZ				AML	AML	09 28 04.3	
TRWZ	**Traveller**	**0.91**	**111**	Pn	Pn	09 27 45.0	-0.3
TMWZ	**Te Maipa**	**1.01**	**93**	PN	Pn	09 27 46.0	-0.6
TMWZ	**Te Maipa**	**1.01**	**93**	Pn	Pn	09 27 46.0	-0.6
TIWZ	**Tintock**	**1.05**	**74**	⇓PN	Pn	09 27 46.5	-0.6
TIWZ	**Tintock**	**1.05**	**74**	Pn	Pn	09 27 46.5	-0.6
POWZ	**Post Office Ro**	**1.14**	**54**	PN	Pn	09 27 47.6	-0.8
POWZ	**Post Office Ro**	**1.14**	**54**	Pn	Pn	09 27 47.6	-0.7
BFZ	**Birch Farm**	**1.34**	**74**	PN	Pn	09 27 49.9	-1.2
BFZ	**Birch Farm**	**1.34**	**74**	Pn	Pn	09 27 49.9	-1.2
WAZ	**Wanganui**	**1.35**	**14**	PN	Pn	09 27 51.7	+0.4
WAZ	**Wanganui**	**1.35**	**14**	Pn	Pn	09 27 51.8	+0.5
THZ	**Tophouse**	**1.42**	**240**	PN	Pn	09 27 51.8	-0.5
THZ	**Tophouse**	**1.42**	**240**	Pn	Pn	09 27 52.1	-0.2
DVHZ	**Dannevirke**	**1.45**	**58**	⇓PN	Pn	09 27 51.3	-1.3
DVHZ	**Dannevirke**	**1.45**	**58**	Pn	Pn	09 27 51.3	-1.3
TSZ	**Takapari Road**	**1.47**	**47**	PN	Pn	09 27 52.0	-0.9
TSZ				AML	AML	09 28 14.6	
TSZ				AML	AML	09 28 16.2	
TSZ	**Takapari Road**	**1.47**	**47**	Pn	Pn	09 27 52.0	-0.9
KHZ	**Kahutara**	**1.55**	**209**	PN	Pn	09 27 53.8	-0.1
KHZ				AML	AML	09 28 32.5	
KHZ	**Kahutara**	**1.55**	**209**	Pn	Pn	09 27 53.8	-0.1
QRZ	**Quartz Range**	**1.56**	**278**	PN	Pn	09 27 53.9	-0.1
QRZ	**Quartz Range**	**1.56**	**278**	Pn	Pn	09 27 53.8	-0.2
PNHZ	**Pukenui**	**1.70**	**48**	⇓PN	Pn	09 27 54.8	-1.3
PNHZ	**Pukenui**	**1.70**	**48**	Pn	Pn	09 27 54.9	-1.3
WPHZ	**Waipukurau**	**1.75**	**56**	PN	Pn	09 27 55.5	-1.3
WPHZ	**Waipukurau**	**1.75**	**56**	Pn	Pn	09 27 54.6	-2.2
PRHZ	**Porangahau**	**1.77**	**64**	PN	Pn	09 27 55.5	-1.5
PRHZ	**Porangahau**	**1.77**	**64**	Pn	Pn	09 27 55.7	-1.3
DFE	**Dawson Falls**	**1.78**	**349**	PN	Pn	09 27 57.8	+0.7
RAEZ	**Rainy Point**	**1.79**	**356**	PN	Pn	09 27 58.1	+0.9
NRZ	**Ngariki Road**	**1.80**	**344**	PN	Pn	09 27 57.7	+0.4
MTVZ	**Mangateitei**	**1.82**	**23**	PN	Pn	09 27 57.9	+0.1
NEZ	**North Egmont**	**1.83**	**349**	PN	Pn	09 27 58.2	+0.3
NWEZ	**Newall Road**	**1.87**	**343**	PN	Pn	09 27 58.7	+0.3

PKVZ	Pokaka	1.88	19	PN	Pn	09 27 59.0	+0.4
PKVZ	Pokaka	1.88	19	Pn	Pn	09 27 58.7	+0.1
MOVZ	Moawhango	1.90	29	PN	Pn	09 27 57.9	-0.9
MOVZ	Moawhango	1.90	29	Pn	Pn	09 27 57.9	-0.9
DREZ	Durham Road	1.90	352	PN	Pn	09 27 59.3	+0.6
DREZ	Durham Road	1.90	352	Pn	Pn	09 27 59.3	+0.6
WNVZ	Wahianoa	1.91	25	PN	Pn	09 27 58.8	-0.4
WNVZ	Wahianoa	1.91	25	Pn	Pn	09 27 59.0	-0.2
PKE	Pukeiti	1.92	347	PN	Pn	09 27 59.3	+0.2
TRVZ	Turoa	1.93	24	PN	Pn	09 27 59.2	-0.2
TRVZ	Turoa	1.93	24	Pn	Pn	09 27 59.2	-0.2
DRZ	Dome Shelter	1.95	24	PN	Pn	09 27 59.8	-0.1
DRZ	Dome Shelter	1.95	24	Pn	Pn	09 28 00.0	+0.1
BHHZ	Black Hill Sta	1.96	37	PN	Pn	09 27 58.8	-0.8
BHHZ	Black Hill Sta	1.96	37	Pn	Pn	09 27 58.9	-0.8
FWVZ	Far West T-bar	1.97	23	PN	Pn	09 27 59.6	-0.4
FWVZ	Far West T-bar	1.97	23	Pn	Pn	09 27 59.8	-0.2
TUVZ	Tukino	1.99	25	PN	Pn	09 27 60.0	-0.2
TUVZ	Tukino	1.99	25	Pn	Pn	09 27 60.0	-0.1
WPVZ	Whakapapa	2.01	22	PN	Pn	09 28 00.3	-0.1
WPVZ	Whakapapa	2.01	22	Pn	Pn	09 28 00.4	0.0
PXZ	Pawanui	2.04	60	PN	Pn	09 27 59.2	-1.5
PXZ				AML	AML	09 28 37.1	
PXZ				AML	AML	09 28 48.0	
PXZ	Pawanui	2.04	60	Pn	Pn	09 27 59.0	-1.6
NGZ	Ngauruhoe	2.05	23	PN	Pn	09 28 01.0	-0.1
NGZ	Ngauruhoe	2.05	23	Pn	Pn	09 28 01.0	-0.1
OTVZ	Oturere	2.08	24	PN	Pn	09 28 01.4	-0.1
OTVZ	Oturere	2.08	24	Pn	Pn	09 28 01.4	-0.1
WTVZ	West Tongariro	2.11	22	⇑PN	Pn	09 28 01.7	-0.1
WTVZ	West Tongariro	2.11	22	Pn	Pn	09 28 01.7	-0.1
KRVZ	Karewarewa	2.14	23	PN	Pn	09 28 01.8	-0.4
KRVZ	Karewarewa	2.14	23	Pn	Pn	09 28 01.9	-0.3
KAHZ	Kahuranaki	2.18	55	PN	Pn	09 28 00.9	-1.8
KAHZ	Kahuranaki	2.18	55	Pn	Pn	09 28 01.0	-1.7
KATZ	Kakaramea	2.27	23	PN	Pn	09 28 04.6	+0.6
KATZ	Kakaramea	2.27	23	Pn	Pn	09 28 04.6	+0.6
MCHZ	McNeill Hill	2.31	46	PN	Pn	09 28 03.1	-1.3
MCHZ	McNeill Hill	2.31	46	Pn	Pn	09 28 03.1	-1.3
BKZ	Black Stump Fm	2.41	39	PN	Pn	09 28 04.1	-1.8
BKZ				AML	AML	09 28 59.9	
BKZ				AML	AML	09 29 00.1	
BKZ	Black Stump Fm	2.41	39	Pn	Pn	09 28 04.0	-1.8
LTZ	Lake Taylor	2.42	224	PN	Pn	09 28 05.2	-0.7
LTZ	Lake Taylor	2.42	224	Pn	Pn	09 28 05.2	-0.7
WATZ	Wairara	2.53	21	PN	Pn	09 28 13.7	+6.3
HIZ	Hauiti	2.56	5	PN	Pn	09 28 08.2	+0.3
HIZ	Hauiti	2.56	5	Pn	Pn	09 28 08.4	+0.5
MQZ	McQueen's Vall	2.99	208	PN	Pn	09 28 11.3	-2.4
MQZ	McQueen's Vall	2.99	208	Pn	Pn	09 28 11.3	-2.3
TOZ	Tahuroa Road	3.42	13	PN	Pn	09 28 19.4	-0.1
TOZ	Tahuroa Road	3.42	13	Pn	Pn	09 28 19.6	+0.1
WVZ	Waitaha Valley	3.48	234	PN	Pn	09 28 19.3	-1.1
WVZ	Waitaha Valley	3.48	234	Pn	Pn	09 28 19.4	-1.0
MWZ	Matawai	3.56	41	PN	Pn	09 28 14.6	-7.1
MWZ	Matawai	3.56	41	Pn	Pn	09 28 18.4	-3.2
RPZ	Rata Peaks	3.70	223	PN	Pn	09 28 21.4	-2.1
MKAZ	Moumakai	3.98	7	PN	Pn	09 28 27.1	-0.2
MKAZ	Moumakai	3.98	7	Pn	Pn	09 28 27.1	-0.2
FOZ	Fox Glacier	4.39	234	PN	Pn	09 28 29.7	-3.1
FOZ	Fox Glacier	4.39	234	Pn	Pn	09 28 30.2	-2.7
LBZ	Lake Benmore	4.62	223	PN	Pn	09 28 34.9	-1.2
ODZ	Otahua Downs	4.90	215	PN	Pn	09 28 37.4	-2.5
ODZ	Otahua Downs	4.90	215	Pn	Pn	09 28 37.4	-2.5
JCZ	Jackson Bay	5.23	233	PN	Pn	09 28 42.6	-1.9
JCZ	Jackson Bay	5.23	233	Pn	Pn	09 28 42.6	-1.9
TUZ	Tuapeka	6.05	215	PN	Pn	09 28 54.4	-1.3
WHZ	Wether Hill Ro	6.81	223	PN	Pn	09 29 07.3	+1.2

*ISCJB **07** 09:43:07.6±0.6, 37.°88N±0.°03×29.°22E±0.°05, h1km±9km, Error ellipse: s-maj=7.2km s-min=4.3km az=2.6*
*DDA **07** 09:43:07.1, 37.°87N×29.°23E, h8km, MD2.7*
*CSEM **07** 09:43:07.4±0.2, 37.°87N×29.°26E, h2km, MD2.7, Error ellipse: s-maj=4.2km s-min=2.3km az=104.0*
*ISK **07** 09:43:07.8, 37.°88N×29.°18E, h10km, MD2.7*
ISC 07 09:43:07.7±1.1**, 37.°88N**±0.°02×**29.°24E**±0.°04**, h7**km±9km**, n18, σ0.s38**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	Denizli	0.20	233	*e*PG	Pg	09 43 12.0	+0.3
DENT	Denizli	0.20	233	*e*Pg	Pg	09 43 12.0	+0.3
DNZL	Cakiroluk	0.24	219	*i* P	Pg	09 43 11.8	-0.7
DNZL				*i* S	Sg	09 43 15.7	0.0
DNZL	Cakiroluk	0.24	219	*i* P	Pg	09 43 11.8	-0.7
DNZL				*i* S	Sg	09 43 15.7	0.0
KHAL	Karahalli	0.53	22	*i* P	Pg	09 43 17.7	-0.3
KHAL				*i* S	Sg	09 43 25.2	+0.2
KHAL	Karahalli	0.53	22	*i* P	Pg	09 43 17.7	-0.3
KHAL				*i* S	Sg	09 43 25.2	+0.2
GOLH	Golhisar	0.69	158	*i* P	Pg	09 43 20.6	-0.4
GOLH				*i* S	Sb	09 43 32.5	+0.6
GOLH	Golhisar	0.69	158	*i* P	Pg	09 43 20.6	-0.4
GOLH				*i* S	Sb	09 43 32.5	+0.6
KULA	Kula-Manisa	0.78	325	*e*PG	Pg	09 43 22.9	+0.1
KULA				*e*SG	Sg	09 43 33.5	+0.6
KULA	Kula-Manisa	0.78	325	*e*Pg	Pg	09 43 22.9	+0.1
KULA				*e*Sg	Sg	09 43 33.5	+0.6
MANT	Manisa	0.81	319	*i* P	Pg	09 43 22.9	-0.4
MANT				*i* S	Sb	09 43 35.1	-0.5
MANT	Manisa	0.81	319	*i* P	Pg	09 43 22.9	-0.4
MANT				*i* S	Sb	09 43 35.1	-0.5
YER	Yerkesik	1.06	226	*e*PG	Pg	09 43 27.8	-0.2
YER				*e*SG	Sb	09 43 42.5	0.0
YER	Yerkesik	1.06	226	*e*Pg	Pg	09 43 27.8	-0.2
YER				*e*Sg	Sb	09 43 42.5	0.0
GDZ	Gediz	1.23	9	*i* P	Pn	09 43 31.6	+0.2
GDZ				*i* S	Sn	09 43 48.1	-0.2
GDZ	Gediz	1.23	9	*i* P	Pn	09 43 31.6	+0.2
GDZ				*i* S	Sn	09 43 48.1	-0.2
TVSB	Tavsanli	1.58	6	*e*PN	Pn	09 43 36.3	+0.1
TVSB				*e*SN	Sb	09 43 57.5	0.0
TVSB	Tavsanli	1.58	6	*e*Pn	Pn	09 43 36.3	+0.1
TVSB				*e*Sn	Sb	09 43 57.6	0.0

*CSEM **07** 09:48:01.6±1.6, 41.°38N×22.°62E, h2km, MD2.7, Error ellipse: s-maj=41.1km s-min=20.1km az=150.0*
*ISCJB **07** 09:48:03.8±0.9, 41.°24N±0.°07×22.°74E±0.°07, h11km, Error ellipse: s-maj=9.7km s-min=7.1km az=18.8*
*SKO **07** 09:48:04.9, 41.°27N×22.°68E, h2km, M0.5, ML0.9*
*ATH **07** 09:48:06.2, 41.°15N×22.°73E, h18km, MD2.7/3*
ISC 07 09:48:05.0±1.3**, 41.°22N**±0.°06×**22.°67E**±0.°06**, h11**km**, n8, σ0.s67**/11**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.12	321	*i* Pg	Pg	09 48 06.9	-1.2
VAY				*i* Lg	Lg	09 48 09.1	
	comp=E,51nm,0.2s						
VAY				*i* Sg	Sg	09 48 09.1	-1.1
VAY				*i* Lg	Lg	09 48 09.2	
	comp=N,80nm,0.3s						
VAY	Valandovo	0.12	321	*i* Pg	Pg	09 48 01.3	-6.7
VAY				*i* Lg	Lg	09 48 01.7	
	comp=N,80nm,0.3s						
GRG	Griva	0.34	218	*e*PB	Pg	09 48 12.4	+0.6
GRG				*e*SB	Sb	09 48 18.2	-0.2
GRG	Griva	0.34	218	*e*Pb	Pg	09 48 12.4	+0.6
GRG				*e*Sb	Sb	09 48 18.2	-0.2
SOH	Sokhos	0.65	128	*e*PN	Pb	09 48 18.4	0.0
SOH				*e*SN	Sg	09 48 25.5	-0.7
SOH	Sokhos	0.65	128	*e*Pn	Pb	09 48 18.4	0.0
SOH				*e*Sn	Sg	09 48 25.5	-0.7
NVR	Nevrokopi	0.90	82	*e*PN	Pb	09 48 23.1	+0.4
NVR	Nevrokopi	0.90	82	*e*Pn	Pb	09 48 23.1	+0.4

*CSEM **07** 09:54:18.9±99.0, 42.°46N×21.°22E, h0km, ML1.4, After BEO*
BEO 07 09:54:18.9±1.3**, 42.°46N**×**21.°22E, h0**km**, ML1.4**/3**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARS	Barje	0.57	51	*e*Pg	Pg	09 54 29.0	-0.8
BARS				*e*Sg	Sg	09 54 36.2	-1.0
SELS	Selova	0.76	354	*e*Pg	Pg	09 54 31.2	-2.4
SELS				*e*Sg	Sg	09 54 42.7	-0.9
ZAPS	Zavoj	1.32	51	*e*Pg	Pg	09 54 43.3	-1.0
ZAPS				*e*Sg	Sg	09 55 01.0	-0.5
GRUS	Gruza	1.48	346	*e*Pg	Pn	09 54 45.5	-1.2
GRUS				*e*Sg	Sg	09 55 06.4	0.0

*DDA **07** 10:04:52.4, 38.°31N×38.°93E, h6km, MD2.8*
*ISK **07** 10:04:52.8, 38.°37N×38.°87E, h6km, MD2.7*
*ISCJB **07** 10:04:53.3±0.5, 38.°38N±0.°03×38.°86E±0.°04, h6km±6km, Error ellipse: s-maj=6.4km s-min=3.9km az=150.0*
*CSEM **07** 10:04:53.0±0.2, 38.°38N×38.°89E, h8km, MD2.8, Error ellipse: s-maj=4.8km s-min=4.0km az=143.0*
ISC 07 10:04:53.3±0.9**, 38.°37N**±0.°03×**38.°88E**±0.°02**, h10**km±7km**, n21, σ0.s70**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.15	32	*i* P	Pg	10 04 56.7	-0.2
ELZG				*i* S	Sg	10 04 59.7	+0.4
ELZG	Elazig	0.15	32	*i* P	Pg	10 04 56.7	-0.2
ELZG				*i* S	Sg	10 04 59.7	+0.4
MYA	Malataya	0.36	263	*e*PG	Pg	10 05 00.2	-0.4
MYA				*e*SG	Sg	10 05 05.7	+0.3
MYA	Malataya	0.36	263	*e*Pg	Pg	10 05 00.2	-0.4
MYA				*e*Sg	Sg	10 05 05.7	+0.3
PTK	Pertek	0.66	37	*e*PG	Pg	10 05 06.1	0.0
PTK				*e*SG	Sb	10 05 15.8	-0.5
PTK	Pertek	0.66	37	*e*Pg	Pg	10 05 06.1	0.0
PTK				*e*Sg	Sb	10 05 15.8	-0.5
AKCD	Akcadag	0.76	265	*i* P	Pg	10 05 07.4	-0.6
AKCD				*i* S	Sb	10 05 19.2	0.0
AKCD	Akcadag	0.76	265	*i* P	Pg	10 05 07.4	-0.6
AKCD				*i* S	Sb	10 05 19.2	0.0
URFA	Urfa	0.93	183	*e*PG	Pg	10 05 11.2	0.0
URFA				*e*SG	Sb	10 05 24.2	+0.3
URFA	Urfa	0.93	183	*e*Pg	Pg	10 05 11.2	0.0
URFA				*e*Sg	Sb	10 05 24.2	+0.3
ATAB	Bozova	1.01	208	*i* P	Pg	10 05 11.8	-1.0
ATAB				*i* S	Sn	10 05 27.9	0.0
ATAB	Bozova	1.01	208	*i* P	Pg	10 05 11.8	-1.0
ATAB				*i* S	Sn	10 05 27.9	0.0
DIYA	Diyarbakir	1.07	114	*i* P	Pb	10 05 12.9	-1.1
DIYA				*i* S	Sn	10 05 29.6	+0.1
DIYA	Diyarbakir	1.07	114	*i* P	Pb	10 05 12.9	-1.1
DIYA				*i* S	Sn	10 05 29.6	+0.1
ILIC	ilic-Erzincan	1.11	347	*e*PN	Pb	10 05 14.6	-0.1
ILIC	ilic-Erzincan	1.11	347	*e*Pn	Pb	10 05 14.6	-0.1
DARE	Darende-Malaty	1.12	281	*e*PN	Pb	10 05 14.3	-0.5
DARE	Darende-Malaty	1.12	281	*e*Pn	Pb	10 05 14.3	-0.5
GZT	Gaziantep	1.45	226	*i* P	Pn	10 05 19.1	-0.7
GZT				*i* S	Sg	10 05 42.5	+2.4
AYKD	Aykdinkavak	1.90	241	*i* P	Pn	10 05 26.1	+0.3
AYKD				*i* S	Sg	10 05 56.1	+1.8
BEST	Besiri	1.94	103	*i* P	Pn	10 05 27.1	+0.6
BEST				*i* S	Sb	10 05 53.6	+0.4

*ISCJB **07** 10:22:29.4±0.6, 39.°2N±0.°1×15.°4E±0.°1, h305km±7km, mb3.2/5, Error ellipse: s-maj=19.1km s-min=15.9km az=145.9*
*ROM **07** 10:22:29.5±0.4, 39.°19N×15.°32E, h302km±6km, Ml2.9/9, Error ellipse: s-maj=17.2km s-min=6.0km az=125.0*
*CSEM **07** 10:22:29.5, 39.°19N×15.°32E, h302km, After ROM*
*IDC **07** 10:22:39.7±3.9, 39.°76N×15.°00E, h385km±28km, mb2.8/6, mb1 2.7/11, mb1mx2.6/33, mbtmp2.6/11, Error ellipse: s-maj=49.0km s-min=22.7km az=176.0*
ISC 07 10:22:30.4±0.8**, 39.°3N**±0.°1×**15.°28E**±0.°10**, h295**km±9km**, n37, σ1.s19**/49**, mb3.3**/5**, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CARO	Carolei	0.73	90	Pg	Pn	10 23 09.4	+0.2
CARO				Sg	S	10 23 38.5	-1.5
CARO	Carolei	0.73	90	Pg	Pn	10 23 09.4	+0.2
CARO				Sg	S	10 23 38.5	-1.5
TDS	Terranova Siba	0.92	63	Pg	Pn	10 23 11.4	+1.6
	12nm,0.2s						
TDS	Terranova Siba	0.92	63	Pg	Pn	10 23 11.4	+1.6
	12nm,0.2s						
MILZ	Milazzo	0.98	182	Pg	Pn	10 23 10.6	+0.4
MILZ				Sg	S	10 23 41.6	-0.2
	106nm,1.1s						
MILZ	Milazzo	0.98	182	Pg	Pn	10 23 10.6	+0.4
MILZ				Sg	S	10 23 41.6	-0.2
	106nm,1.1s						
GRI	Girifalco	0.99	115	Pg	Pn	10 23 11.1	+0.8
GRI	Girifalco	0.99	115	Pg	Pn	10 23 11.1	+0.8
MSRU	Castanea	1.01	169	Pg	Pn	10 23 10.4	0.0
MSRU				Sg	S	10 23 41.5	-0.6
	96nm,0.8s						
MSRU	Castanea	1.01	169	Pg	Pn	10 23 10.4	0.0
MSRU				Sg	S	10 23 41.5	-0.6
	96nm,0.8s						
CEL	Celeste	1.10	154	Pg	Pn	10 23 11.0	+0.1
CEL				Sg	S	10 23 41.7	-1.4
	29nm,0.4s						
CEL	Celeste	1.10	154	Pg	Pn	10 23 11.0	+0.1
CEL				Sg	S	10 23 41.7	-1.4
	29nm,0.4s						
SERS	Sersale	1.12	101	Pg	Pn	10 23 11.7	+0.7
SERS				Sg	S	10 23 42.3	-0.9
	17nm,0.4s						
SERS	Sersale	1.12	101	Pg	Pn	10 23 11.7	+0.7
SERS				Sg	S	10 23 42.3	-0.9
	17nm,0.4s						
TIP	Timpagrande	1.16	93	Pg	Pn	10 23 12.0	+0.9
	70nm,1.6s						
TIP	Timpagrande	1.16	93	Pg	Pn	10 23 12.0	+0.9
	70nm,1.6s						
PLAC	Placanica	1.21	131	Pg	Pn	10 23 12.0	+0.5
	23nm,0.4s						
PLAC	Placanica	1.21	131	Pg	Pn	10 23 12.0	+0.5
	23nm,0.4s						
MMME	Mongiuffi-Meli	1.32	181	Pg	Pn	10 23 13.0	+0.9
MMME	Mongiuffi-Meli	1.32	181	Pg	Pn	10 23 13.0	+0.9
LADO	San Nicola del	1.32	88	Pg	Pn	10 23 12.7	+0.7
	52nm,0.7s						
LADO	San Nicola del	1.32	88	Pg	Pn	10 23 12.7	+0.7
	52nm,0.7s						
SOI	Samo	1.33	152	Pg	Pn	10 23 12.5	+0.4
SOI				Sg	S	10 23 44.3	-0.9
	18nm,0.5s						
SOI	Samo	1.33	152	Pg	Pn	10 23 12.5	+0.4
SOI				Sg	S	10 23 44.3	-0.9
	18nm,0.5s						
MPAZ	Palizzi	1.42	156	Pg	Pn	10 23 13.0	+0.3
MPAZ				Sg	S	10 23 44.9	-1.4
	54nm,0.4s						
MPAZ	Palizzi	1.42	156	Pg	Pn	10 23 13.0	+0.3
MPAZ				Sg	S	10 23 44.9	-1.4
	54nm,0.4s						
DAVOX	Davos/Dischmat	8.50	334	P	Pn	10 24 32.2	+2.1
	0.2nm,0.3s,baz=203,slow=15,SNR=2.5						
GERES	GERESS Array B	9.66	354	P	P	10 24 48.9	+0.4
	0.1nm,0.3s,baz=174,slow=10,SNR=4.0						
MLR	Muntele Rosu	10.05	48	P	P	10 24 56.0	+3.0
	0.1nm,0.3s,baz=157,slow=22,SNR=3.3						
ESDC	Sonseca Array	14.87	278	P	Pn	10 25 50.0	+2.5
	0.5nm,0.3s,baz=72,slow=11,SNR=6.5						
EKA	Eskdalemuir Ar	20.27	329	P	P	10 26 41.7	-2.4
	baz=135,slow=11,SNR=5.5						
HFS	Hagfors	20.93	358	P	P	10 26 48.4	-2.2
	0.6nm,0.5s,baz=185,slow=9.4,SNR=3.6						
FINES	FINESS Array B	23.20	13	P	P	10 27 10.8	-0.5
	0.6nm,0.3s,baz=189,slow=7.1,SNR=8.8						
ARCES	ARCESS Array B	30.83	7	P	P	10 28 17.1	-2.0
	0.6nm,0.8s,baz=179,slow=11,SNR=4.3						
SPITS	Spitsbergen Ar	39.04	0	P	P	10 29 25.8	-2.9
	0.7nm,0.5s,baz=168,slow=10.0,SNR=4.0						
MKAR	Makanchi Array	48.23	58	P	P	10 30 41.7	-0.2
	0.2nm,0.5s,baz=294,slow=7.3,SNR=3.0						
SCHQ	Schefferville	54.85	316	P	P	10 31 27.9	-2.5
	0.6nm,0.4s,baz=70,slow=9.8,SNR=4.6						

*CSEM **07** 10:46:14.6, 36.°82N×24.°31W, h5km, ML2.9, After PDA*
PDA 07 10:46:14.6±0.7**, 36.°82N**×**24.°31W, h5**km**, MD4.1, ML2.9, Error ellipse: s-maj=5.1km s-min=3.7km az=71.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.63	287	*e*P	Pg	10 46 25.0	-1.8
PSMN				*e*S	Sg	10 46 33.4	-1.6
PSMN				A	A	10 46 33.9	
	130nm,0.2s						
PSMN	Pico do Norte,	0.63	287	*e*P	Pg	10 46 25.0	-1.8
PSMN				*e*S	Sg	10 46 33.4	-1.6
PSMA	Santa Maria	0.68	285	*e*P	Pg	10 46 25.7	-1.9
PSMA				*e*S	Sg	10 46 34.1	-2.4
PSMA				A	A	10 46 36.3	
	187nm,0.1s						
BART	Pico Bartolome	1.17	325	*e*P	Pg	10 46 32.7	-4.5
BART				*e*S	Sg	10 46 46.2	-6.4
BART				A	A	10 46 49.1	
	84nm,0.1s						
BART	Pico Bartolome	1.17	325	*e*P	Pg	10 46 32.7	-4.5
BART				*e*S	Sg	10 46 46.2	-6.4
GRON	Grota Negra	1.36	314	*e*P	Pn	10 46 34.4	-5.9
GRON				*e*S	Sb	10 46 49.0	-9.3
GRON				A	A	10 46 51.7	
	36nm,0.1s						
PDA	Ponta Delgada	1.42	311	*e*S	Sb	10 46 52.4	-7.5
PDA				A	A	10 46 53.0	
	51nm,0.1s						
PDA	Ponta Delgada	1.42	311	*e*S	Sb	10 46 52.4	-7.5
PSET	Sete Cidades	1.50	312	*e*S	Sn	10 46 54.5	-7.8
PSET				A	A	10 46 58.0	
	42nm,0.2s						
PSET	Sete Cidades	1.50	312	*e*S	Sn	10 46 54.5	-7.8
PID	Ribeirinha	3.43	299	*e*P	Pn	10 47 03.9	-4.8
PID	Ribeirinha	3.43	299	*e*P	Pn	10 47 03.9	-4.8
PMAN	Manadas	3.50	302	*e*P	Pn	10 47 05.2	-4.4
PMAN				*e*S	Sn	10 47 42.9	-8.5
PMAN				A	A	10 47 45.1	
	14nm,0.2s						
PMAN	Manadas	3.50	302	*e*P	Pn	10 47 05.2	-4.4
PMAN				*e*S	Sn	10 47 42.9	-8.5
ROSA	Rosais	3.65	302	*e*P	Pn	10 47 07.3	-4.4
ROSA				*e*S	Sn	10 47 46.6	-8.5
ROSA				A	A	10 47 49.2	
	8.7nm,0.1s						
ROSA	Rosais	3.65	302	*e*P	Pn	10 47 07.3	-4.4
ROSA				*e*S	Sn	10 47 46.6	-8.5
PICO	Pico	3.67	298	*e*P	Pn	10 47 07.5	-4.6
PICO	Pico	3.67	298	*e*P	Pn	10 47 07.5	-4.6
PCAN	Candelaria	3.70	298	*e*P	Pn	10 47 08.1	-4.3
PCAN				*e*S	Sn	10 47 48.0	-8.4
PCAN				A	A	10 47 53.6	
	32nm,0.3s						
PCAN	Candelaria	3.70	298	*e*P	Pn	10 47 08.1	-4.3
PCAN				*e*S	Sn	10 47 48.0	-8.4

*IDC **07** 10:49:41.6±1.3, 1.°11N×97.°22E, h0km, mb4.0/11, mb1 4.1/12, mb1mx3.9/26, mbtmp4.0/12, MS3.6/1, Ms1 3.6/1, ms1mx2.5/39, Error ellipse: s-maj=43.1km s-min=17.2km az=57.0*
*ISCJB **07** 10:49:43.2±0.7, 1.°13N±0.°09×97.°2E±0.°1, h25km, mb4.0/13, MS3.6/1, Error ellipse: s-maj=16.4km s-min=11.5km az=150.9*
*NEIC **07** 10:49:46.8±0.5, 1.°16N×97.°24E, h35km, mb4.1/3, Error ellipse: s-maj=12.7km s-min=8.5km az=60.0*
ISC 07 10:49:45.5±0.9**, 1.°1N**±0.°1×**97.°2E**±0.°1**, h25**km**, n28, σ0.s68**/28**, mb4.1**/13**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPM	Ipoh	5.07	49	*e*Pn	Pn	10 51 00.8	+0.9
	34nm,0.6s						
KULM	Kulim	5.38	40	*e*Pn	Pn	10 51 04.5	+0.4
	64nm,0.9s						
CMAR	Chiang Mai Arr	17.30	6	P	Pn	10 53 43.9	-1.5
CMAR	Chiang Mai Arr	17.30	6	P	Pn	10 53 43.9	-1.5
	baz=195,slow=10.0,SNR=9.0						
WRA	Warramunga Arr	42.01	122	P	P	10 57 34.2	-1.0
WRA	Warramunga Arr	42.01	122	P	P	10 57 34.2	-1.0
	1.4nm,0.7s,baz=300,slow=9.1,SNR=13						
WRAB	Tennant Creek	42.02	122	*e*P	P	10 57 35.1	-0.1
	4.0nm,1.0s						
ASAR	Alice Springs	43.37	127	P	P	10 57 45.5	-0.6
ASAR	Alice Springs	43.37	127	P	P	10 57 45.5	-0.6
	0.6nm,0.8s,baz=302,slow=7.3,SNR=6.9						
KSAR	Wonju Array Be	45.87	34	P	P	10 58 05.9	0.0
KSRS	Korea Array	45.90	34	P	P	10 58 05.9	-0.2
	4.4nm,0.9s,baz=223,slow=9.1,SNR=19						
SONM	Songino Array	47.19	8	P	P	10 58 16.5	+0.3
SONM	Songino Array	47.19	8	P	P	10 58 16.5	+0.3
	1.7nm,0.6s,baz=179,slow=7.2,SNR=5.5						
SONM				LR	LR	11 21 00.9	
	comp=Z,63nm,20.2s,baz=290,slow=40						
MKAR	Makanchi Array	47.30	346	P	P	10 58 17.5	+0.6
MKAR	Makanchi Array	47.30	346	P	P	10 58 17.5	+0.6
	1.4nm,0.7s,baz=161,slow=7.7,SNR=12						
USRK	Ussuriysk Arra	52.83	31	P	P	10 58 59.0	+0.1
	2.6nm,0.8s,baz=239,slow=8.0,SNR=6.1						
STKA	Stephens Creek	53.33	132	*e*P	P	10 59 03.0	+0.2
	5.1nm,1.6s						
STKA	Stephens Creek	53.33	132	P	P	10 59 03.2	+0.4
	2.4nm,0.9s,baz=312,slow=6.3,SNR=2.4						
ZAA0	Zalesovo Array	53.61	351	*e*P	P	10 59 04.6	+0.1
ZALV	Zalesovo Beam	53.61	351	P	P	10 59 04.9	+0.4
ZALV	Zalesovo Beam	53.61	351	P	P	10 59 04.9	+0.4
	3.9nm,0.8s,baz=178,slow=5.8,SNR=17						
BVAR	Borovoye Array	56.30	341	P	P	10 59 23.5	-0.5
BVAR	Borovoye Array	56.30	341	P	P	10 59 23.5	-0.5
	0.5nm,0.5s,baz=125,slow=9.3,SNR=4.3						
ABKAR	Akbulak array	57.56	332	*e*P	P	10 59 32.4	-0.6
	1.2nm,0.6s						
KBZ	Khabaz	64.11	319	P	P	11 00 18.2	+0.6
KBZ	Khabaz	64.11	319	P	P	11 00 18.2	+0.6
	0.9nm,0.6s,baz=104,slow=4.2,SNR=2.9						
ARCES	ARCESS Array B	82.59	340	P	P	11 02 06.3	+0.3
ARCES	ARCESS Array B	82.59	340	P	P	11 02 06.3	+0.3
	0.5nm,0.8s,baz=98,slow=5.0,SNR=4.4						

*KRSC **07** 11:06:12.7±1.5, 48.°53N×158.°18E, h10km±10km, ML4.2*
*MOS **07** 11:06:12.9±2.5, 48.°52N×158.°16E, h33km, mb4.3/1, Error ellipse: s-maj=91.7km s-min=19.0km az=92.5*
ISC 07 11:06:15.0±4.2**, 48.°4N**±0.°2×**157.°9E**±0.°1**, h35**km**, n23, σ1.s40**/35**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.57	333	*e*P	Pn	11 06 53.6	-0.4
SKR				*e*S	Sn	11 07 23.3	-0.7
SKR	Severo-Kuril's	2.57	333	*e*PN	Pn	11 06 49.4	-4.6
SKR				*i* S	Sn	11 07 20.0	-4.0
SKR				pmax	pmax		
	comp=Z,50nm,0.4s						
SKR				smax	smax		
	comp=N,640nm,0.3s						
SKR				smax	smax		
	comp=E,370nm,0.3s						
SKR				smax	smax		
	comp=Z,80nm,0.4s						
PAU	Pauzhetka	3.15	347	P	Pn	11 07 02.6	+0.6
PAU				*e*S	Sn	11 07 38.9	+0.5
PAU	Pauzhetka	3.15	347	PN	Pn	11 07 02.6	+0.6
PAU				S	Sn	11 07 38.9	+0.5
MIPR	Malaya Ipel'ka	3.95	349	P	Pn	11 07 14.1	+1.1
MIPR				S	Sn	11 07 58.6	+0.5
ASAK	Asacha	3.99	360	*e*P	Pn	11 07 14.2	+0.6
ASAK				*e*S	Sn	11 07 59.7	+0.6
RUS	Russkaya	4.05	5	*e*P	Pn	11 07 14.6	+0.2
RUS				*e*S	Sn	11 07 59.8	-0.8
RUS	Russkaya	4.05	5	PN	Pn	11 07 14.6	+0.2
RUS				S	Sn	11 07 59.8	-0.8
MTVR	Mutnovka	4.09	2	*e*P	Pn	11 07 15.8	+0.7
MTVR				*e*S	Sn	11 08 01.4	-0.3
GRL	Gorelyy	4.16	1	P	Pn	11 07 17.1	+1.1
GRL				S	Sn	11 08 04.3	+1.0
APC	Apacha	4.56	354	*e*P	Pn	11 07 22.7	+1.4
PET	Petropavlovsk	4.65	5	P	Pn	11 07 23.6	+1.0
PET				*e*S	Sn	11 08 14.6	-0.7
PET	Petropavlovsk	4.65	5	*e*PN	Pn	11 07 23.4	+0.8
PET				*e*S	Sn	11 08 16.1	+0.8
PET				pmax	pmax		
	comp=Z,13nm,0.3s						
PET				smax	smax		
	comp=N,17nm,0.7s						
PET				smax	smax		
	comp=E,23nm,0.6s						
UGLR	Uglovaya	4.85	6	P	Pn	11 07 26.0	+0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NLC	**Nalytchevo**	**4.86**	**10**	S	**Sn**	**11 08 18.6**	**-1.8**
AVH	**Avacha**	**4.90**	**6**	P	**Pn**	**11 07 27.4**	**+1.3**
SMAR	**Somma**	**4.90**	**6**	P	**Pn**	**11 07 27.4**	**+1.2**
KOK	**Koryaka**	**4.92**	**5**	*e*P	**Pn**	**11 07 28.2**	**+1.8**
SDLR	**Sedlovina**	**4.92**	**7**	P	**Pn**	**11 07 27.5**	**+1.1**
KRER	**Koryakskii**	**4.94**	**6**	P	**Pn**	**11 07 29.0**	**+2.3**
GNL	**Ganaly**	**5.30**	**0**	*e*P	**Pn**	**11 07 33.6**	**+1.9**
MKZ	**Mys Kozlova**	**6.60**	**20**	P	**Pn**	**11 07 49.5**	**+0.1**
MKZ				*e*S	**Sn**	**11 08 59.7**	**-3.6**
MKZ	**Mys Kozlova**	**6.60**	**20**	PN	**Pn**	**11 07 49.5**	**+0.1**

*ISCJB **07** 11:09:02.9±0.7, 24°.61N±0°.05×122°.57E±0°.02, h84^{km}±7^{km}, Error ellipse: s-maj=8.6km s-min=3.3km az=177.3*
*JMA **07** 11:09:02.6±0.2, 24°.77N×122°.63E, h89^{km}, M1.7*
*TAP **07** 11:09:03.1, 24°.57N×122°.58E, h79^{km}±1^{km}, ML2.9, D*
ISC 07 11:09:02.8±1.7**, 24°.63N**±0°.07×**122°.57E**±0°.03**, h88**^{km}±12^{km}**, n28,** σ**0^{s}71**/51**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.43**	**112**	P	**Pn**	**11 09 17.0**	**+0.2**
YOJ				*e*S	**Sn**	**11 09 27.9**	**+0.6**
TWB1	**Santiao Chiao**	**0.65**	**306**	*e*P	**Pn**	**11 09 19.0**	**+0.3**
	baz=309						
TWC	**Suao**	**0.66**	**268**	P	**Pn**	**11 09 18.6**	**-0.1**
	baz=273						
TWC				S	**Sn**	**11 09 30.3**	**-0.3**
	baz=273						
ENA	**Nanau**	**0.78**	**255**	*e*P	**Pn**	**11 09 20.2**	**+0.3**
	baz=259						
ENA				*e*S	**Sn**	**11 09 33.0**	**+0.2**
	baz=259						
TWE	**Neicheng**	**0.83**	**277**	P	**Pn**	**11 09 20.8**	**+0.4**
	baz=280						
TWE				S	**Sn**	**11 09 33.0**	**-0.6**
	baz=280						
NWF	**Wu-fen Shan**	**0.84**	**302**	*e*P	**Pn**	**11 09 21.3**	**+0.6**
	baz=304						
NWF				*e*S	**Sn**	**11 09 32.8**	**-1.3**
	baz=304						
ENTT	**Nioudou**	**0.91**	**271**	P	**Pn**	**11 09 21.8**	**+0.4**
	baz=274						
ENTT				*e*S	**Sn**	**11 09 35.7**	**+0.3**
	baz=274						
TWD	**Chiawan**	**1.04**	**239**	*e*P	**Pn**	**11 09 23.1**	**+0.2**
	baz=241						
TWD				S	**Sn**	**11 09 37.3**	**-0.6**
	baz=241						
IRIF	**Iriomote-Funau**	**1.10**	**105**	P	**Pn**	**11 09 23.4**	**-0.1**
IRIF				*e*S	**Sn**	**11 09 38.8**	**-0.2**
NSK	**Sanguang**	**1.10**	**273**	P	**Pn**	**11 09 24.1**	**+0.5**
	baz=275						
NSK				S	**Sn**	**11 09 39.5**	**+0.2**
	baz=275						
NNS	**Nan Shan**	**1.11**	**260**	P	**Pn**	**11 09 23.8**	**+0.1**
	baz=262						
NNS				*e*S	**Sn**	**11 09 38.9**	**-0.6**
	baz=262						
TWS1	**Kuangyinshan**	**1.15**	**294**	*e*P	**Pn**	**11 09 23.6**	**-0.5**
	baz=296						
HATJ	**Hateruma jima**	**1.26**	**117**	*e*S	**Sn**	**11 09 42.8**	**+0.2**
WHF	**Hehuan Shan**	**1.28**	**248**	*e*P	**Pn**	**11 09 26.1**	**-0.1**
	baz=250						
WHF				S	**Sn**	**11 09 43.0**	**-0.7**
	baz=250						
ESL	**Shilin**	**1.32**	**232**	*e*P	**Pn**	**11 09 27.7**	**+1.5**
	baz=233						
ESL				*e*S	**Sn**	**11 09 42.5**	**-1.3**
	baz=233						
TWT	**Tachien**	**1.32**	**254**	*e*P	**Pn**	**11 09 26.7**	**+0.3**
	baz=256						
TWT				S	**Sn**	**11 09 44.5**	**+0.3**
	baz=256						
JKRS	**Kuro-shima**	**1.37**	**106**	P	**Pn**	**11 09 26.9**	**+0.1**
JKRS				*e*S	**Sn**	**11 09 45.0**	**+0.1**
NSTT	**Nanjuang**	**1.43**	**270**	*e*P	**Pn**	**11 09 27.8**	**+0.3**
	baz=272						
NSTT				*e*S	**Sn**	**11 09 46.4**	**+0.2**
	baz=272						
JIJ	**Ishigaki jima**	**1.46**	**100**	P	**Pn**	**11 09 28.0**	**+0.1**
JIJ				*e*S	**Sn**	**11 09 46.1**	**-0.8**
EHY	**Hungye**	**1.60**	**226**	*e*P	**Pn**	**11 09 29.9**	**+0.2**
	baz=227						
EHY				*e*S	**Sn**	**11 09 48.8**	**-1.3**
	baz=227						
SMLT	**Sun Moon Lake**	**1.69**	**244**	*e*P	**Pn**	**11 09 30.5**	**-0.6**
	baz=245						
TYC	**Yuchr**	**1.72**	**246**	*e*P	**Pn**	**11 09 30.9**	**-0.4**
	baz=246						
TYC				*e*S	**Sn**	**11 09 53.8**	**+0.8**
	baz=246						
TWF1	**Yuli**	**1.72**	**223**	*e*P	**Pn**	**11 09 29.9**	**-1.4**
	baz=223						
YUS	**Yu-Shan**	**1.86**	**233**	*e*P	**Pn**	**11 09 35.8**	**+2.1**
	baz=233						
YUS				*e*S	**Sn**	**11 09 55.9**	**-1.1**
	baz=233						
JTJ	**Tarama**	**1.94**	**89**	P	**Pn**	**11 09 34.3**	**+0.1**
JTJ				*e*S	**Sn**	**11 09 58.0**	**0.0**
ALS	**Alishan**	**1.96**	**236**	*e*P	**Pn**	**11 09 35.7**	**+1.0**
	baz=236						
ALS				*e*S	**Sn**	**11 09 58.6**	**-0.4**
	baz=236						
CHN5	**Tsauling**	**2.01**	**240**	*e*P	**Pn**	**11 09 35.8**	**+0.6**
	baz=240						
CHN5				*e*S	**Sn**	**11 10 00.2**	**+0.3**
	baz=240						
CHN4	**Tsaushan**	**2.21**	**235**	*e*P	**Pn**	**11 09 38.5**	**+0.8**
	baz=236						
CHN4				*e*S	**Sn**	**11 10 04.3**	**-0.1**
	baz=236						

*IDC **07** 11:16:17.6±6.0, 36°.24N×71°.24E, h65^{km}±54^{km}, mb3.5/8, mb1 3.5/13, mb1mx3.3/32, mbtmp3.5/13, ML3.6/5, Error ellipse: s-maj=39.6km s-min=26.3km az=27.0*
*ISCJB **07** 11:16:21.0±0.4, 36°.48N±0°.03×71°.38E±0°.09, h114^{km}, mb3.6/7, Error ellipse: s-maj=10.5km s-min=4.6km az=1.6*
*NNC **07** 11:16:27.4±4.7, 36°.95N×71°.05E, h134^{km}±54^{km}, mb3.4, mpv4.3, Error ellipse: s-maj=38.3km s-min=24.7km az=22.0*
ISC 07 11:16:21.8±0.7**, 36°.47N**±0°.05×**71°.48E**±0°.09**, h114**^{km}**, n33,** σ**1^{s}67**/38**, mb3.7**/7**, 8C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.66**	**172**	⇑P	**Pn**	**11 17 03.5**	**-0.2**
CEP				S	**Sn**	**11 17 37.0**	**+1.2**
CHCP	**Chirah Chowk**	**3.16**	**152**	P	**Pn**	**11 17 11.7**	**+1.5**
THW	**Thamme Wali**	**3.67**	**176**	⇑P	**Pn**	**11 17 16.3**	**-0.6**
SARP	**Sargodha**	**4.64**	**167**	P	**Pn**	**11 17 28.4**	**-1.5**
THN	**Thein Dam**	**5.33**	**138**	*e*PKP	**Pn**	**11 17 37.0**	**-2.2**
THN				*e*S	**Sn**	**11 18 36.3**	**-3.2**
AML	**Almayashu**	**5.91**	**16**	P	**Pn**	**11 17 47.9**	**+0.6**
	SNR=39						
KZA	**Kyzart**	**6.32**	**26**	P	**Pn**	**11 17 54.6**	**+1.7**
	SNR=9.5						
EKS2	**Erkin-Say**	**6.44**	**15**	P	**Pn**	**11 17 55.4**	**+1.2**
	SNR=5.5						
AAK	**Ala-Archa**	**6.58**	**20**	P	**Pn**	**11 17 57.8**	**+1.6**
	SNR=9.1						
AAK	**Ala-Archa**	**6.58**	**20**	P	**Pn**	**11 17 57.5**	**+1.3**
	3.5nm,0.3s,baz=179,slow=6.1,SNR=17						
AAK				S	**Sn**	**11 19 10.7**	**+0.8**
	0.9nm,0.3s,baz=345,slow=22,SNR=6.7						
KK31	**Karatay Array**	**6.67**	**354**	P	**Pn**	**11 17 56.7**	**-0.5**
	23nm,0.4s,baz=180,slow=12,SNR=268						
KK31				⇑S	**Sn**	**11 19 07.2**	**-4.5**
	6.9nm,0.5s,baz=179,slow=20,SNR=7.8						
CHMS	**Chumysh**	**6.99**	**20**	P	**Pn**	**11 18 02.6**	**+1.0**
	SNR=9.2						
USP	**Ospenovka**	**7.18**	**18**	P	**Pn**	**11 18 05.1**	**+1.0**
	SNR=7.6						
TKM2	**Tokmak 2**	**7.18**	**25**	⇓P	**Pn**	**11 18 05.1**	**+0.7**
	5.7nm,0.6s						
TKM2				⇓S	**Sn**	**11 19 23.8**	**-0.7**
	4.1nm,0.8s						
TKM2	**Tokmak 2**	**7.18**	**25**	P	**Pn**	**11 18 05.8**	**+1.4**
	SNR=10						
MKAR	**Makanchi Array**	**13.10**	**35**	P	**Pn**	**11 19 24.1**	**+0.6**
	0.1nm,0.3s,baz=218,slow=14,SNR=4.1						
KURBB	**Kurchatov Arra**	**15.03**	**18**	P	**P**	**11 19 51.5**	**+0.8**
	0.1nm,0.3s,baz=206,slow=10,SNR=4.7						
AB31	**Akbulak array**	**15.30**	**330**	⇑P	**Pn**	**11 19 48.5**	**-3.0**
	1.7nm,0.3s,baz=138,slow=13,SNR=96						
AB31				⇓Sn	Sn	11 22 29.3	-11
	1.2nm,0.5s,baz=151,slow=24,SNR=7.7						
VOSK	**Vostochnaya**	**16.26**	**359**	⇑P	**Pn**	**11 20 01.3**	**-2.0**
	2.0nm,0.9s						
BVA0	**Borovoye Array**	**16.57**	**358**	P	**P**	**11 20 08.6**	**+0.8**
	0.7nm,0.5s,baz=169,slow=12,SNR=6.8						
BVAR	**Borovoye Array**	**16.57**	**358**	P	**P**	**11 20 08.6**	**+0.8**
	0.3nm,0.3s,baz=172,slow=11,SNR=5.6						
BRVK	**Borovoye**	**16.61**	**357**	⇑P	**Pn**	**11 20 07.1**	**-0.6**
	1.5nm,0.6s						
AKTO	**Aktyubinsk**	**17.00**	**329**	⇑P	**Pn**	**11 20 11.0**	**-1.5**
	3.7nm,0.8s						
AKTO				⇑S	Sn	11 23 09.8	-12
	1.9nm,0.6s						
AKTO	**Aktyubinsk**	**17.00**	**329**	P	**Pn**	**11 20 11.4**	**-1.1**
	0.7nm,0.3s,baz=124,slow=14,SNR=10						
AKTO				S	Sn	11 23 09.9	-12
	0.1nm,0.3s,baz=66,slow=18,SNR=4.2						
ZALV	**Zalesovo Beam**	**19.79**	**24**	P	**Pn**	**11 20 44.4**	**-1.1**
	1.1nm,0.3s,baz=206,slow=9.9,SNR=3.5						
AKASG	**Malin Array Be**	**33.26**	**309**	P	**P**	**11 22 49.2**	**+1.1**
	0.6nm,0.4s,baz=81,slow=8.0,SNR=4.1						
FINES	**FINESS Array B**	**37.72**	**326**	P	**P**	**11 23 28.0**	**+1.9**
	2.2nm,1.0s,baz=108,slow=12,SNR=4.4						
ARCES	**ARCESS Array B**	**41.32**	**337**	P	**P**	**11 23 57.8**	**+2.0**
	2.8nm,1.0s,baz=108,slow=7.8,SNR=6.3						
HFS	**Hagfors**	**43.33**	**322**	P	**P**	**11 24 13.4**	**+1.2**
	1.0nm,0.6s,baz=114,slow=14,SNR=4.4						
NB2	**NORSAR Subarra**	**44.64**	**323**	P	**P**	**11 24 23.8**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	**44.64**	**323**	P	**P**	**11 24 23.8**	**+1.1**
	comp=Z,1.0nm,0.8s,baz=97,slow=7.9,SNR=4.3						
TORD	**Torodi Ar. Bea**	**66.10**	**269**	P	**P**	**11 26 55.3**	**-1.7**
	comp=Z,0.4nm,0.6s,baz=51,slow=6.1,SNR=5.9						
WRA	**Warramunga Arr**	**81.65**	**122**	P	**P**	**11 28 29.6**	**+2.1**
	comp=Z,0.1nm,0.4s,baz=326,slow=4.8,SNR=3.7						

*IDC **07** 11:29:20.4±1.1, 53°.84N×163°.29W, h0^{km}, mb3.9/19, mb1 4.0/22, mb1mx3.9/36, mbtmp3.9/22, ML3.5/3, MS3.1/2, Ms1 3.1/2, ms1mx2.4/48, Error ellipse: s-maj=27.0km s-min=13.5km az=173.0*
*ISCJB **07** 11:29:22.4±0.8, 53°.50N±0°.06×163°.09W±0°.05, h34^{km}±6^{km}, mb3.9/18, MS3.0/2, Error ellipse: s-maj=11.0km s-min=4.2km az=161.4*
*NEIC **07** 11:29:23.0, 53°.57N×163°.12W, h42^{km}, mb3.8/2, ML3.6(AEIC), After AEIC.*
ISC 07 11:29:23.5±2.0**, 53°.65N**±0°.08×**163°.13W**±0°.04**, h26**^{km}±13^{km}**, n76,** σ**1^{s}17**/81**, mb4.0**/18**, Unimak Island region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRPK	**Brown Peak**	**1.06**	**340**	P	**Pb**	**11 29 43.1**	**-0.2**
FALS	**False Pass**	**1.22**	**352**	P	**Pb**	**11 29 45.4**	**-0.6**
SSLW	**Shishaldin Wes**	**1.27**	**333**	P	**Pn**	**11 29 46.0**	**+0.3**
SSBA	**Shishaldin**	**1.27**	**333**	P	**Pn**	**11 29 45.9**	**+0.2**
SSBA				S	**Sb**	**11 30 04.3**	**+1.6**
DRIA	**Deer Island**	**1.41**	**21**	P	**Pn**	**11 29 47.5**	**-0.2**
DT1	**Dutton Round H**	**1.54**	**18**	P	**Pn**	**11 29 49.5**	**+0.2**
DTNA	**Dutton South F**	**1.59**	**18**	P	**Pn**	**11 29 50.3**	**+0.3**
AKSA	**Akutan Strait**	**1.60**	**289**	P	**Pn**	**11 29 49.5**	**-0.6**
AKSA				S	**Sn**	**11 30 09.8**	**-0.1**
DOL	**Dolgoi Island**	**1.67**	**26**	P	**Pn**	**11 29 51.3**	**+0.1**
AKLV	**Akutan Long Va**	**1.75**	**288**	P	**Pn**	**11 29 51.8**	**-0.4**
AKLV				S	**Sn**	**11 30 14.0**	**+0.2**
AKGG	**Akutan Green G**	**1.78**	**289**	P	**Pn**	**11 29 52.4**	**-0.3**
AKGG				S	**Sb**	**11 30 16.1**	**-1.3**
AKRB	**Akutan Reef Bi**	**1.81**	**287**	P	**Pn**	**11 29 52.8**	**-0.3**
PS4A	**Pavlof South-4**	**1.85**	**23**	P	**Pn**	**11 29 54.9**	**+1.2**
UNV	**Unalaska Valle**	**2.02**	**277**	P	**Pn**	**11 29 55.1**	**-0.7**
UNV				S	**Sn**	**11 30 18.9**	**-1.2**
MTBL	**Makushin Table**	**2.13**	**280**	P	**Pn**	**11 29 57.4**	**-0.1**
MREP	**Makushin Rep't**	**2.16**	**276**	P	**Pn**	**11 29 57.5**	**-0.4**
MSW	**Makushin Switc**	**2.19**	**278**	P	**Pn**	**11 29 57.6**	**-0.6**
MSW				S	**Sn**	**11 30 24.8**	**+0.3**
MCIR	**Makushin Cirqu**	**2.25**	**279**	P	**Pn**	**11 29 59.0**	**-0.2**
SDPT	**Sand Point**	**2.30**	**41**	P	**Pn**	**11 30 00.8**	**+1.1**
SDPT				S	**Sn**	**11 30 28.7**	**+1.5**
OKFG	**Magazine Ridge**	**2.87**	**267**	P	**Pn**	**11 30 07.2**	**-0.3**
OKSP	**Okmok Steeple**	**3.11**	**265**	P	**Pn**	**11 30 10.5**	**-0.6**
VNHG	**Veniaminof 1**	**3.44**	**40**	P	**Pn**	**11 30 17.5**	**+1.9**
CHGN	**Chignik**	**3.80**	**44**	*e*Pn	**Pn**	**11 30 20.8**	**+0.4**
KABR	**Katmai Barrier**	**6.42**	**42**	P	**Pn**	**11 30 56.5**	**+0.1**
KOFP	**Korovin Flat P**	**6.77**	**263**	P	**Pn**	**11 31 01.4**	**+0.1**
KDAK	**Kodiak Island**	**7.25**	**51**	Pn	**Pn**	**11 31 06.9**	**-0.8**
KDAK				Sn	**Sn**	**11 32 24.1**	**-5.0**
KDAK	**Kodiak Island**	**7.25**	**51**	Pn	**Pn**	**11 31 06.9**	**-0.8**
	0.8nm,0.3s,baz=222,slow=12,SNR=6.6						
KDAK				Sn	**Sn**	**11 32 24.1**	**-5.0**
	0.3nm,0.3s,baz=324,slow=19,SNR=3.7						
GSMY	**Great Sitkin M**	**8.00**	**264**	P	**Pn**	**11 31 18.6**	**+0.6**
GSCK	**Great Sitkin C**	**8.07**	**264**	P	**Pn**	**11 31 18.2**	**-0.8**
TRF	**Thorofare Moun**	**11.87**	**29**	*e*Pn	**Pn**	**11 32 10.2**	**-0.8**
	12nm,1.0s						
ILAR	**Eielson Array**	**13.85**	**30**	Pn	Pn	11 32 33.0	-5.0
ILAR	**Eielson Array**	**13.85**	**30**	Pn	Pn	11 32 33.0	-5.0
	0.1nm,0.3s,baz=224,slow=13,SNR=3.8						
FX1	**Attu Island--F**	**14.20**	**276**	Pn	**Pn**	**11 32 43.8**	**+1.1**
FX1	**Attu Island--F**	**14.20**	**276**	Pn	**Pn**	**11 32 43.8**	**+1.1**
	0.9nm,0.3s,baz=234,slow=8.7,SNR=12						
COLD	**Coldfoot**	**14.98**	**20**	*e*Pn	**Pn**	**11 32 54.4**	**+1.0**
	5.6nm,0.9s						
EGAK	**Eagle**	**15.73**	**36**	*e*P	**P**	**11 33 05.8**	**-1.0**
	4.2nm,0.7s						
INK	**Inuvik**	**20.23**	**32**	P	**P**	**11 33 55.1**	**-1.1**
INK	**Inuvik**	**20.23**	**32**	P	**P**	**11 33 55.1**	**-1.1**
	1.6nm,0.6s,baz=253,slow=15,SNR=9.3						
PETK	**Petropavlovsk-**	**23.18**	**285**	P	**P**	**11 34 26.4**	**-1.6**
PETK	**Petropavlovsk-**	**23.18**	**285**	P	**P**	**11 34 26.4**	**-1.6**
	1.8nm,0.5s,baz=88,slow=12,SNR=6.1						
YKA	**Yellowknife Ar**	**26.53**	**51**	P	**P**	**11 34 59.1**	**+0.5**
YKA	**Yellowknife Ar**	**26.53**	**51**	P	**P**	**11 34 59.1**	**+0.5**
	1.5nm,0.6s,baz=272,slow=7.6,SNR=12						
NEW	**Newport**	**29.06**	**82**	LR	LR	11 44 24.7	
	comp=Z,34nm,20.2s,baz=303,slow=31						
YBH	**Yreka Blue Hor**	**29.30**	**97**	LR	LR	11 44 19.9	
	comp=Z,43nm,18.4s,baz=51,slow=31						
NVAR	**Mina Array Bea**	**34.00**	**98**	P	**P**	**11 36 06.8**	**+1.5**
NVAR	**Mina Array Bea**	**34.00**	**98**	P	**P**	**11 36 06.8**	**+1.5**
	0.2nm,0.5s,baz=283,slow=5.5,SNR=2.7						
KSRS	**Korea Array**	**48.95**	**280**	P	**P**	**11 38 07.3**	**0.0**
	0.4nm,0.7s,baz=48,slow=7.4,SNR=4.7						
KSAR	**Wonju Array Be**	**48.98**	**280**	P	**P**	**11 38 07.3**	**-0.3**
TXAR	**Lajitas Array**	**49.02**	**95**	P	**P**	**11 38 09.3**	**+1.2**
TXAR	**Lajitas Array**	**49.02**	**95**	P	**P**	**11 38 09.3**	**+1.2**
	0.2nm,0.4s,baz=304,slow=5.1,SNR=8.2						
ARCES	**ARCESS Array B**	**56.96**	**356**	P	**P**	**11 39 04.2**	**-1.8**
ARCES	**ARCESS Array B**	**56.96**	**356**	P	**P**	**11 39 04.2**	**-1.8**
	2.9nm,1.0s,baz=7.8,slow=7.3,SNR=9.7						
BVAR	**Borovoye Array**	**64.75**	**328**	P	**P**	**11 39 59.5**	**+0.3**
BVAR	**Borovoye Array**	**64.75**	**328**	P	**P**	**11 39 59.5**	**+0.3**
	2.0nm,0.6s,baz=47,slow=6.3,SNR=14						
FINES	**FINESS Array B**	**65.02**	**355**	P	**P**	**11 40 00.2**	**-0.6**
FINES	**FINESS Array B**	**65.02**	**355**	P	**P**	**11 40 00.2**	**-0.6**
	0.7nm,0.5s,baz=30,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**65.56**	**317**	P	**P**	**11 40 03.9**	**-0.7**
MKAR	**Makanchi Array**	**65.56**	**317**	P	**P**	**11 40 03.9**	**-0.7**
	0.3nm,0.4s,baz=41,slow=7.3,SNR=6.9						
NOA	**NORSAR Array B**	**65.57**	**3**	P	**P**	**11 40 04.8**	**+0.4**
NOA	**NORSAR Array B**	**65.57**	**3**	P	**P**	**11 40 04.8**	**+0.4**
	1.3nm,1.0s,baz=359,slow=6.6,SNR=2.4						
HFS	**Hagfors**	**66.54**	**2**	P	**P**	**11 40 09.9**	**-0.7**
HFS	**Hagfors**	**66.54**	**2**	P	**P**	**11 40 09.9**	**-0.7**
	1.1nm,0.4s,baz=26,slow=3.8,SNR=12						
EKA	**Eskdalemuir Ar**	**70.13**	**12**	P	**P**	**11 40 33.8**	**+0.7**
EKA	**Eskdalemuir Ar**	**70.13**	**12**	P	**P**	**11 40 33.8**	**+0.7**
	1.1nm,0.5s,baz=347,slow=4.1,SNR=6.2						
AKTO	**Aktyubinsk**	**70.67**	**334**	P	**P**	**11 40 37.0**	**+0.5**
AKTO	**Aktyubinsk**	**70.67**	**334**	P	**P**	**11 40 37.0**	**+0.5**
	4.2nm,0.9s,baz=44,slow=6.9,SNR=14						
AKASG	**Malin Array Be**	**75.50**	**352**	P	**P**	**11 41 04.7**	**-0.4**
AKASG	**Malin Array Be**	**75.50**	**352**	P	**P**	**11 41 04.7**	**-0.4**
	1.5nm,0.6s,baz=354,slow=4.3,SNR=5.0						
GERES	**GERESS Array B**	**77.84**	**2**	P	**P**	**11 41 18.8**	**+0.3**
GERES	**GERESS Array B**	**77.84**	**2**	P	**P**	**11 41 18.8**	**+0.3**
	0.2nm,0.5s,baz=19,slow=4.5,SNR=5.9						
DAVOX	**Davos/Dischmat**	**79.77**	**5**	P	**P**	**11 41 30.5**	**+1.3**
DAVOX	**Davos/Dischmat**	**79.77**	**5**	P	**P**	**11 41 30.5**	**+1.3**
	2.2nm,0.8s,baz=351,slow=18,SNR=3.5						
KBZ	**Khabaz**	**80.47**	**341**	P	**P**	**11 41 32.6**	**-0.1**
KBZ	**Khabaz**	**80.47**	**341**	P	**P**	**11 41 32.6**	**-0.1**
	0.7nm,0.5s,baz=288,slow=9.6,SNR=2.7						
BRTR	**Keskin Array B**	**85.88**	**347**	P	**P**	**11 42 00.8**	**-0.2**
BRTR	**Keskin Array B**	**85.88**	**347**	P	**P**	**11 42 00.8**	**-0.2**
	0.9nm,0.8s,baz=38,slow=3.0,SNR=5.2						

*AUST **07** 11:32:28.8±2.7, 2°.48S×141°.50E, h0^{km}, Error ellipse: s-maj=1.4km s-min=0.8km az=26.0*
*IDC **07** 11:32:29.2±0.4, 2°.71S×141°.53E, h0^{km}, mb4.6/23, mb1 4.7/25, mb1mx4.7/28, mbtmp4.6/25, ML4.9/2, MS4.0/23, Ms1 4.0/23, ms1mx3.9/35, Error ellipse: s-maj=17.2km s-min=9.4km az=97.0*
*BJI **07** 11:32:32.4, 2°.77S×142°.01E, h53^{km}, mB5.0/27, mb4.9/41, Ms4.6/33, Ms7 4.3/33*
*GCMT **07** 11:32:32.8±0.2, 2°.66S×141°.48E, h15^{km}±1^{km}, MW4.9, Moment Tensor Solution. s28,c32; s60,c96; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.00±.17; $M_{\theta\theta}$2.81±.11; $M_{\phi\phi}$-0.81±.12; $M_{r\theta}$0.66±.19; $M_{\theta\phi}$-0.02±.06; $M_{\phi r}$0.97±.26; Best double couple: $M_0$2.80000×10^{16} NP1:ϕ_s117.00000°, δ44.00000°, λ-48.00000°. NP2:ϕ_s245.00000°, δ59.00000°, λ-123.00000°. Principal axes: T 2.9000, Plg8.0000°, Azm358.0000°; N -0.2900, Plg28.0000°, Azm264.0000°; P -2.6100, Plg61.0000°, Azm103.0000°; Data Used: II IU IC G CN.*
*NEIC **07** 11:32:34.8±0.2, 2°.66S×141°.46E, h35^{km}, mb4.9/40 Error ellipse: s-maj=8.8km s-min=5.3km az=81.0*
*MOS **07** 11:32:35.8±1.1, 2°.60S×141°.61E, h57^{km}, mb5.0/37, Error ellipse: s-maj=13.7km s-min=6.4km az=103.6*
*ISCJB **07** 11:32:35.4±0.7, 2°.64S±0°.03×141°.73E±0°.04, h54^{km}±6^{km}, mb4.8/93, MS4.1/38, Error ellipse: s-maj=6.3km s-min=4.5km az=162.1*
*DJA **07** 11:32:40.4±0.7, 3°S±5°×14°2E±°, h61^{km}±5^{km}, M4.9/44, mB5.4/17, mb5.1/44, MLv5.1/4, Mw(mB)4.8/17*
ISC 07 11:32:37.6±0.3**, 2°.73S**±0°.03×**141°.59E**±0°.05**, h60**^{km}±2^{km}**, h60**^{km}**:pP-P, n249,** σ**1^{s}71**/292**, mb4.8**/92**, MS4.1**/38**, 4C-5D, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**5.42**	**279**	P	**Pn**	**11 33 56.7**	**+0.9**
	319nm,0.6s,1.3nm						
BAKI	**Biak**	**5.69**	**285**	P	**Pn**	**11 34 02.0**	**+2.4**
	204nm,0.9s,2µm0.7nm						
MMPI	**Merauke**	**5.83**	**192**	P	**Pn**	**11 34 02.4**	**+1.0**
	1µm,1.1s,3.3nm						
RKPI	**Ransiki, Papua**	**7.51**	**279**	P	Pn	11 34 32.1	+7.6
PMG	**Port Moresby**	**8.64**	**140**	*e*Pn	**Pn**	**11 34 41.4**	**+1.5**
PMG	**Port Moresby**	**8.64**	**140**	P	**Pn**	**11 34 42.8**	**+2.8**
	41nm,1.0s,913nm0.2nm						
PMG	**Port Moresby**	**8.64**	**140**	Pn	**Pn**	**11 34 41.3**	**+1.3**
	1.8nm,0.3s,baz=317,slow=12,SNR=8.5						
FAKI	**Fak Fak**	**9.33**	**269**	P	Pn	11 34 54.1	+4.6
	49nm,1.2s						
FAKI	**Fak Fak**	**9.33**	**269**	P	**Pn**	**11 34 46.7**	**-2.9**
	baz=9.3,SNR=6.3						
SWI	**Sorong**	**10.49**	**280**	P	Pn	11 35 09.8	+4.5
	44nm,0.9s						
COEN	**Coen**	**11.27**	**172**	*e*Pn	**Pn**	**11 35 15.5**	**-0.4**
COEN	**Coen**	**11.27**	**172**	P	**Pn**	**11 35 16.9**	**+0.9**
	baz=12,SNR=9.1						
KDU	**Kakadu**	**13.39**	**222**	P	Pn	11 35 39.7	-5.2
	baz=14,SNR=36						
LBMI	**Labuha**	**14.24**	**278**	P	**P**	**11 36 03.3**	**+1.4**
MTN	**Manton Dam**	**14.43**	**225**	P	Pn	11 35 53.8	-4.9
	baz=15,SNR=18						
GAMI	**Galela, Maluku**	**14.53**	**288**	P	P	11 36 08.9	+3.8
TNTI	**Ternate**	**14.64**	**284**	P	**P**	**11 36 04.0**	**-2.4**
	169nm,1.2s,2µm						
MTSU	**Mount Surprise**	**15.54**	**170**	P	**P**	**11 36 15.4**	**-1.0**
	baz=16,SNR=20						
GUMO	**Guam**	**16.53**	**11**	*e*P	**Pn**	**11 36 25.2**	**-0.5**
	173nm,1.3s						
MNI	**Manado**	**17.25**	**284**	P	**Pn**	**11 36 34.3**	**-0.4**
	133nm,1.1s						
QIS	**Mount Isa**	**17.83**	**186**	P	**Pn**	**11 36 40.4**	**-1.2**
	baz=18,SNR=22						
CTA	**Charters Tower**	**17.84**	**166**	P	**Pn**	**11 36 44.0**	**+2.2**
CTA	**Charters Tower**	**17.84**	**166**	P	**Pn**	**11 36 44.0**	**+2.2**
	0.2nm,0.3s,baz=347,slow=13,SNR=12						
CTAO	**Charters Tower**	**17.84**	**166**	*e*P	**Pn**	**11 36 43.7**	**+1.8**
CTAO				pmax	pmax		
	comp=Z,55nm,1.6s						
CTAO	**Charters Tower**	**17.84**	**166**	*e*P	**Pn**	**11 36 43.7**	**+1.8**
	comp=Z,55nm,1.6s						
KMSI	**Cibinong**	**17.91**	**280**	P	**Pn**	**11 36 46.9**	**+4.2**
	comp=Z,324nm,0.8s						
KNRA	**Kununurra**	**18.04**	**224**	P	**P**	**11 36 41.8**	**-2.1**
	baz=18,SNR=33						
WRAB	**Tennant Creek**	**18.50**	**202**	*e*P	**P**	**11 36 46.5**	**-2.7**
WRAB				pmax	pmax		
	comp=Z,76nm,1.0s						
WRAB	**Tennant Creek**	**18.50**	**202**	*e*P	**P**	**11 36 46.5**	**-2.7**
	comp=Z,76nm,1.0s						
WRA	**Warramunga Arr**	**18.52**	**202**	P	**P**	**11 36 45.9**	**-3.4**
WRA				S	**Sn**	**11 40 15.3**	**-1.1**
WRA	**Warramunga Arr**	**18.52**	**202**	P	**P**	**11 36 45.9**	**-3.4**
	comp=Z,1.9nm,0.3s,baz=19,slow=12,SNR=64						
WRA				S	**Sn**	**11 40 15.3**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=18,slow=23,SNR=4.8						
WRA				LR	LR	11 43 57.4	
	comp=Z,552nm,19.8s,baz=40,slow=37						
LUWI	**Luwuk**	**18.89**	**275**	P	Pn	11 37 04.8	+10
LUWI	**Luwuk**	**18.89**	**275**	S	Sn	11 40 42.8	+17
	baz=19,SNR=4.2						
BBSI	**Bau Bau**	**19.17**	**261**	P	**Pn**	**11 37 02.1**	**+4.2**
	comp=Z,116nm,1.1s,comp=Z,2µm						
HNR	**Honiara**	**19.42**	**111**	*e*P	**P**	**11 36 58.0**	**-1.2**
	comp=Z,676nm,0.8s						
HNR	**Honiara**	**19.42**	**111**	P	**P**	**11 36 58.3**	**-0.9**
	comp=Z,22nm,0.3s,baz=233,slow=2.0,SNR=111						
MRSI	**Marisa**	**19.90**	**279**	P	**P**	**11 37 04.1**	**-0.4**
	comp=Z,95nm,1.1s						
SKSI	**Soroako, Sulaw**	**20.24**	**270**	P	Pn	11 37 09.3	-1.3
	comp=Z,73nm,1.2s,comp=Z,658nm						
BSSI	**Bau Bau, Buton**	**21.31**	**260**	P	**P**	**11 37 23.7**	**+4.1**
	comp=Z,231nm,1.1s,comp=Z,4µm						
BKSI	**Bulukumba**	**21.57**	**262**	P	P	11 37 28.2	+5.8
	comp=Z,42nm,1.2s,comp=Z,563nm						
TTSI	**Tana Toraja**	**21.75**	**269**	P	**P**	**11 37 28.6**	**+4.3**
	comp=Z,59nm,1.1s,comp=Z,1µm						
SPSI	**Sidrap Palu**	**21.82**	**266**	P	**P**	**11 37 27.9**	**+2.8**
	comp=Z,54nm,1.5s,comp=Z,641nm						
FITZ	**Fitzroy Crossi**	**21.86**	**225**	*e*P	**P**	**11 37 23.0**	**-2.5**
	comp=Z,39nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.86**	**225**	P	**P**	**11 37 22.5**	**-3.0**
	comp=Z,35nm,0.8s,baz=50,slow=12,SNR=24						
FITZ				S	**S**	**11 41 23.5**	**-0.5**
	comp=Z,9.6nm,0.9s,baz=173,slow=15,SNR=3.2						
FITZ				LR	LR	11 47 19.3	
	comp=Z,535nm,18.1s,baz=49,slow=41						
FITZ	**Fitzroy Crossi**	**21.86**	**225**	P	**P**	**11 37 22.9**	**-2.7**
	baz=22,SNR=44						
KAPI	**Kappang**	**21.91**	**263**	*e*P	**P**	**11 37 27.7**	**+1.7**
	comp=Z,56nm,1.2s						
KAPI	**Kappang**	**21.91**	**263**	P	P	11 37 33.3	+7.2
KAPI	**Kappang**	**21.91**	**263**	P	**P**	**11 37 24.9**	**-1.1**
	comp=Z,4.8nm,0.3s,baz=191,slow=16,SNR=3.8						
AS31	**Alice Springs**	**22.10**	**199**	*e*P	**P**	**11 37 26.1**	**-2.0**
ASAR	**Alice Springs**	**22.10**	**199**	P	**P**	**11 37 25.9**	**-2.3**
ASAR				S	**S**	**11 41 24.4**	**-4.1**
ASAR	**Alice Springs**	**22.10**	**199**	P	**P**	**11 37 25.9**	**-2.3**
	comp=Z,8.6nm,0.7s,baz=30,slow=9.2,SNR=55						
ASAR				S	**S**	**11 41 24.4**	**-4.1**
	comp=Z,1.4nm,0.8s,baz=21,slow=21,SNR=2.2						
ASAR				LR	LR	11 46 46.0	
	comp=Z,373nm,20.9s,baz=20,slow=39						
WSI	**Waingapu**	**22.25**	**251**	S	Sn	11 41 49.2	+3.0
	baz=22,SNR=6.8						
QLP	**Quilpie**	**23.85**	**174**	P	**P**	**11 37 45.0**	**-0.5**
	baz=24,SNR=64						
EIDS	**Eidsvold**	**24.29**	**159**	*e*P	**P**	**11 37 51.7**	**+2.2**
	comp=Z,189nm,1.0s						
EIDS	**Eidsvold**	**24.29**	**159**	P	**P**	**11 37 51.7**	**+2.2**
	baz=25,SNR=86						
MYLDM	**Lahad Datu**	**24.37**	**289**	P	**P**	**11 37 52.2**	**+1.8**
	comp=Z,54nm,1.3s,comp=Z,1µm						
RMQ	**Roma**	**24.60**	**164**	P	**P**	**11 37 53.9**	**+1.5**
	baz=25,SNR=111						
BBKI	**Banjar Baru**	**26.72**	**268**	P	P	11 38 16.7	+5.0
	comp=Z,55nm,1.2s						
KKM	**Kota Kinabalu**	**26.80**	**289**	*e*P	**P**	**11 38 11.6**	**-0.9**
	comp=Z,109nm,1.3s						
MBWA	**Marble Bar**	**28.08**	**228**	*e*P	**P**	**11 38 21.7**	**-2.1**

comp=Z,54nm,1.5s
CMSA Cobar Meteorol **28.91 173** P **P** **11 38 32.0 +0.9**
baz=29,SNR=64
STKA Stephens Creek **28.99 180** *e*P **P** **11 38 33.8 +2.1**
comp=Z,3.0nm,0.9s
STKA Stephens Creek **28.99 180** P **P** **11 38 32.8 +1.0**
comp=Z,12nm,0.8s,baz=358,slow=7.6,SNR=13
STKA LR LR 11 49 46.5
comp=Z,411nm,21.7s,baz=356,slow=36
STKA Stephens Creek **28.99 180** P **P** **11 38 33.8 +2.1**
baz=29,SNR=9.0
ARMA Armidale **29.13 162** *e*P **P** **11 38 34.5 +1.3**
comp=Z,23nm,1.1s
ARMA Armidale **29.13 162** P **P** **11 38 34.0 +0.8**
baz=30,SNR=6.4
SBUM Sibu **29.81 280** P **P** **11 38 41.5 +2.3**
comp=Z,11nm,0.9s
FORT Forrest **30.70 203** *e*P **P** **11 38 46.9 0.0**
comp=Z,87nm,0.9s
FORT Forrest **30.70 203** P **P** **11 38 49.2 +2.4**
baz=31,SNR=6.4
DZM Mont Dzumac **30.86 131** *e*S S 11 44 05.6 +17
DZM *e*LQ LQ 11 47 06.9
comp=Z,986nm,31.6s
DZM *e*LR LR 11 49 31.9
comp=Z,472nm,24.4s
DZM Mont Dzumac **30.86 131** *e*P **P** **11 38 46.2 -2.4**
KSM Kuching **31.55 277** *e*P **P** **11 38 53.5 -1.1**
comp=Z,12nm,1.1s
KSM Kuching **31.55 277** P **P** **11 38 54.3 -0.3**
comp=Z,10nm,1.2s
KSM Kuching **31.55 277** P **P** **11 38 54.3 -0.3**
baz=31,SNR=5.3
MEEK Meekatharra **32.41 221** P **P** **11 39 01.0 -1.1**
baz=33,SNR=4.8
TGJI Tegal **32.61 262** P P 11 39 08.5 +4.6
comp=Z,120nm,0.9s
CAN Canberra **33.15 169** *e*P **P** **11 39 08.7 +0.3**
CAN pmax pmax
comp=Z,56nm,1.1s
CAN Canberra **33.15 169** *e*P **P** **11 39 08.7 +0.3**
comp=Z,56nm,1.1s
CNB Canberra Magne **33.22 168** P **P** **11 39 10.3 +1.3**
baz=34,SNR=6.7
ARPS Mount Arapiles **33.88 180** P **P** **11 39 17.6 +3.0**
baz=34,SNR=9.9
KMBL Kambalda **34.02 211** P **P** **11 39 17.4 +1.5**
baz=34,SNR=5.8
CBJI Citeko **34.82 263** P P 11 39 29.5 +6.4
comp=Z,452nm,0.4s,comp=Z,25µm
TOO Toolangi **34.86 175** P **P** **11 39 25.8 +2.7**
baz=35,SNR=5.9
PPBI Pangkal Pinang **35.43 270** P P 11 39 33.7 +5.3
comp=Z,22nm,1.0s,comp=Z,1µm
MORW Morawa **35.73 220** P **P** **11 39 30.2 -0.5**
baz=36,SNR=13
KLBR Kellerberrin **36.45 215** P **P** **11 39 36.4 -0.5**
baz=37,SNR=7.1
JNU Nakatsue **37.07 345** P **P** **11 39 40.3 -1.8**
JNU Nakatsue **37.07 345** P **P** **11 39 40.3 -1.8**
comp=Z,4.8nm,0.8s,baz=161,slow=18,SNR=2.7
JNU LR LR 11 51 52.0
comp=Z,106nm,20.6s,baz=340,slow=31
KASI Kota Agung **37.10 264** P P 11 39 50.6 +8.0
comp=Z,64nm,1.0s
NWAO Narrogin (SRO) **37.73 215** *e*P **P** **11 39 49.7 +2.0**
comp=Z,28nm,1.1s
QIZ Qiongzhong **37.98 306** P **P** **11 39 50.0 0.0**
QIZ S **S** **11 45 39.8 +1.7**
QIZ sS **sS** **11 46 00.5 -3.1**
QIZ LR LR
comp=N,220nm,21.6s
QIZ LR LR
comp=Z,200nm,18.8s
MAJO Matsushiro **39.20 356** *e*P **P** **11 40 01.5 +1.6**
MAJO pmax pmax
comp=Z,10.0nm,0.8s
MAJO Matsushiro **39.20 356** *e*P **P** **11 40 01.5 +1.6**
comp=Z,10.0nm,0.8s
MAT Matsushiro **39.20 356** P **P** **11 40 00.6 +0.7**
MAT *e*S **S** **11 45 51.0 -5.0**
RGRI Rengat **39.31 273** P P 11 39 57.4 -3.9
comp=Z,446nm,0.4s,comp=Z,52µm
NJ2 Nanjing **40.77 330** *e*P **P** **11 40 13.7 +0.7**
NJ2 pP **pP** **11 40 26.7 -1.5**
NJ2 sP **sP** **11 40 32.3 -2.9**
NJ2 PP **PP** **11 41 48.6 +0.5**
NJ2 S **S** **11 46 23.0 +3.4**
NJ2 sS **sS** **11 46 47.0 +1.7**
NJ2 pmax pmax
comp=Z,130nm,4.3s
NJ2 LR LR
comp=N,310nm,23.4s
NJ2 LR LR
comp=E,600nm,20.4s
NJ2 LR LR
comp=Z,820nm,24.9s
IPM Ipoh **41.16 280** P P 11 40 20.0 +3.4
comp=Z,12nm,1.4s
PPI Padang Panjang **41.24 272** P **P** **11 40 15.8 -1.4**
comp=Z,35nm,0.9s,comp=Z,785nm
KULM Kulim **41.67 281** *e*P **P** **11 40 18.8 -1.9**
comp=Z,21nm,1.3s
KULM Kulim **41.67 281** P **P** **11 40 20.5 -0.2**
comp=Z,20nm,1.3s
KSAR Wonju Array Be **41.95 344** P **P** **11 40 21.7 -0.9**
KSAR PcP **PcP** **11 42 18.4 +1.3**
KSRS Korea Array **41.95 344** P **P** **11 40 21.7 -0.9**
comp=Z,1.4nm,0.8s,baz=166,slow=11,SNR=7.6
KSRS PcP **PcP** **11 42 18.4 +1.3**
comp=Z,0.8nm,0.7s,baz=159,slow=4.0,SNR=4.2
KSRS LR LR 11 53 52.1
comp=Z,198nm,21.6s,baz=161,slow=31
WHN Wuhan **42.08 324** *e*P **P** **11 40 25.2 +1.4**
WHN S **S** **11 46 44.4 +5.4**
WHN LR LR
comp=Z,430nm,20.2s
OUZ Omahuta **43.89 141** *e*P **P** **11 40 40.1 +1.8**
comp=Z,69nm,1.1s
KCSI Kotacane, Aceh **44.24 278** P **P** **11 40 40.8 -0.7**
comp=Z,18nm,1.2s,comp=Z,670nm
GYA Guiyang **44.51 313** *e*P **P** **11 40 43.5 -0.1**
GYA sP **sP** **11 41 05.2 -0.7**
GYA PP **PP** **11 42 29.8 +1.3**
GYA ScP **ScP** **11 46 13.2 -0.2**
GYA S **S** **11 47 15.0 0.0**
GYA sS **sS** **11 47 41.8 +0.9**
GYA SS SS 11 50 27.4 -9.1
GYA pmax pmax
comp=Z,10.0nm,0.7s
GYA pmax pmax
comp=Z,80nm,5.3s
GYA LR LR
comp=N,460nm,17.6s
GYA LR LR
comp=E,410nm,18.7s
GYA LR LR
comp=Z,450nm,17.1s
ASAJ Asahikawa **46.64 1** *e*P **P** **11 40 58.9 -1.2**
comp=Z,4.9nm,0.9s
ASAJ Asahikawa **46.64 1** P **P** **11 40 59.2 -0.8**
comp=Z,5.7nm,0.8s,baz=220,slow=6.8,SNR=4.5
ASAJ LR LR 12 01 46.3
comp=Z,108nm,18.4s,baz=184,slow=38
KMI Kunming **46.75 309** P **P** **11 41 02.1 +0.6**
KMI S **S** **11 47 49.0 +1.5**
KMI pmax pmax
comp=Z,10.0nm,0.9s
KMI LR LR
comp=Z,160nm,23.3s
CMAR Chiang Mai Arr **46.96 298** P **P** **11 41 01.7 -1.3**
CMAR PcP **PcP** **11 42 36.3 +1.5**
CMAR Chiang Mai Arr **46.96 298** P **P** **11 41 01.7 -1.3**
comp=Z,3.4nm,0.8s,baz=118,slow=6.2,SNR=6.3
CMAR PcP **PcP** **11 42 36.3 +1.5**
comp=Z,2.3nm,1.0s,baz=157,slow=3.3,SNR=4.8
CMAR LR LR 12 01 20.9
comp=Z,81nm,18.1s,baz=295,slow=37
SNY Shenyang **47.27 342** ⇓P **P** **11 41 04.1 -0.8**
SNY S **S** **11 47 59.3 +5.4**
SNY pmax pmax
comp=Z,8.0nm,0.5s
SNY LR LR
comp=N,140nm,18.0s
SNY LR LR
comp=E,89nm,14.4s
SNY LR LR
comp=Z,150nm,21.6s
USRK Ussuriysk Arra **47.50 351** P **P** **11 41 05.8 -0.9**
comp=Z,1.9nm,0.8s,baz=174,slow=7.7,SNR=6.9
USRK LR LR 11 57 43.4
comp=Z,224nm,21.4s,baz=343,slow=32
XAN Xi'an **47.79 323** P **P** **11 41 07.7 -1.5**
XAN pP **pP** **11 41 22.2 -2.5**
XAN sP **sP** **11 41 30.0 -1.6**
XAN PP **PP** **11 43 02.5 +1.0**
XAN S S 11 48 09.2 +7.5
XAN pmax pmax
comp=Z,9.0nm,4.2s
XAN LR LR
comp=N,80nm,19.9s
XAN LR LR
comp=E,40nm,19.4s
XAN LR LR
comp=Z,54nm,23.7s
URZ Urewera **47.99 142** LR LR 12 00 08.8
comp=Z,318nm,20.1s,baz=128,slow=34
KUR Kuril'sk **48.08 6** *i*P **P** **11 41 11.5 +0.4**
KUR *i*S **S** **11 48 05.5 +0.3**
MDJ Mudanjiang **48.34 349** P **P** **11 41 14.1 +0.9**
MDJ pP **pP** **11 41 27.6 -1.1**
MDJ sP **sP** **11 41 33.6 -2.0**
MDJ PP **PP** **11 43 07.1 +0.8**
MDJ S **S** **11 48 11.6 +2.5**
MDJ sS **sS** **11 48 36.5 +1.2**
MDJ pmax pmax
comp=Z,4.0nm,0.8s
MDJ pmax pmax
comp=Z,55nm,3.8s
MDJ LR LR
comp=N,120nm,15.9s
MDJ LR LR
comp=E,140nm,16.6s
MDJ LR LR
comp=Z,240nm,22.0s
RPZ Rata Peaks **48.46 152** *e*P **P** **11 41 13.5 -0.7**
comp=Z,66nm,1.1s
RPZ Rata Peaks **48.46 152** LR LR 11 59 18.6
comp=Z,277nm,20.9s,baz=340,slow=33
BJI Beijing **48.52 334** P **P** **11 41 14.6 -0.1**
BJI S **S** **11 48 13.1 +1.4**
BJI pmax pmax
comp=Z,12nm,0.9s
BJI pmax pmax
comp=Z,150nm,4.8s
BJI LR LR
comp=N,170nm,19.7s
BJI LR LR
comp=E,160nm,15.8s
BJI LR LR
comp=Z,170nm,27.8s
CN2 Changchun **48.54 344** *e*P **P** **11 41 14.0 -0.7**
CN2 *e*S **S** **11 48 15.2 +3.3**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,16.0s
CN2 LR LR
comp=E,200nm,16.0s
CN2 LR LR
comp=Z,200nm,17.0s
CD2 Chengdu **49.16 316** *e*P **P** **11 41 20.0 +0.1**
CD2 pP **pP** **11 41 35.4 0.0**
CD2 sP **sP** **11 41 42.0 -0.3**
CD2 PP **PP** **11 43 15.3 +1.2**
CD2 S **S** **11 48 20.9 -0.3**
CD2 sS **sS** **11 48 46.3 -1.2**
CD2 SS **SS** **11 51 48.6 -4.8**
CD2 pmax pmax
comp=Z,30nm,1.1s
CD2 pmax pmax
comp=Z,160nm,9.2s
CD2 LR LR
comp=E,320nm,13.2s
CD2 LR LR
comp=Z,290nm,14.3s
YSS Yuzh-Sakhalins **49.48 1** ⇑*i*P **P** **11 41 21.5 -0.4**
YSS *e* 11 41 39.4
HHC Hu-ho-hao-te **51.30 331** *e*P **P** **11 41 35.8 -0.1**
HHC pP **pP** **11 41 49.6 -2.0**
HHC sP **sP** **11 41 54.9 -3.5**
HHC PP **PP** **11 43 35.3 +1.8**
HHC S **S** **11 48 50.4 -0.3**
HHC sS **sS** **11 49 13.3 -3.9**
HHC SS **SS** **11 52 25.7 -1.5**
HHC pmax pmax
comp=Z,21nm,1.1s
HHC pmax pmax
comp=Z,130nm,6.4s
HHC LR LR
comp=N,350nm,13.7s
HHC LR LR
comp=E,280nm,13.9s
HHC LR LR
comp=Z,290nm,15.5s
HABR Khabarovsk **51.31 354** P **P** **11 41 33.7 -1.9**
HABR *e**PP **pP** **11 41 51.3 0.0**
HABR *e**SP **sP** **11 41 59.7 +1.6**
HABR *e* 11 42 47.2
HABR *e* 11 43 31.4
HABR PPP PPP 11 44 33.0
HABR *e*S **S** **11 48 48.9 -1.4**
HABR *e**SS **sS** **11 49 19.4 +2.7**
HABR *e* 11 51 16.7
HABR pmax pmax
comp=N,17nm,1.6s
HABR pmax pmax
comp=E,12nm,0.9s
HABR pmax pmax
comp=Z,23nm,2.1s
HABR MLR MLR
comp=Z,111nm,19.0s
LZH Lanzhou **52.26 321** *e*P **P** **11 41 44.1 +0.9**
LZH pP **pP** **11 41 58.7 -0.2**
LZH sP **sP** **11 42 03.9 -1.8**
LZH PP **PP** **11 43 42.4 +0.1**
LZH *e*S **S** **11 49 01.5 -2.7**
LZH sS **sS** **11 49 28.3 -2.4**
LZH SS **SS** **11 52 38.6 -4.1**
LZH pmax pmax
comp=Z,38nm,1.2s
LZH pmax pmax
comp=Z,120nm,4.3s
KLR Kul'dur **52.45 352** *e*P P 11 41 39.8 -4.3
GTA Gaotai **56.83 322** *e*P **P** **11 42 16.7 +0.5**
GTA pP **pP** **11 42 33.4 +1.3**
GTA sP **sP** **11 42 40.1 +1.2**
GTA S **S** **11 50 06.0 +0.6**
GTA sS **sS** **11 50 33.5 +1.3**
GTA SS **SS** **11 53 55.7 +1.2**
GTA pmax pmax
comp=Z,6.0nm,1.0s
GTA pmax pmax
comp=Z,62nm,7.6s
GTA LR LR
comp=N,90nm,14.5s
GTA LR LR
comp=E,89nm,12.8s
GTA LR LR
comp=Z,78nm,14.3s
PETK Petropavlovsk- **57.26 11** P **P** **11 42 18.2 -0.6**
PETK pmax pmax
comp=Z,5.0nm,0.9s
PETK Petropavlovsk- **57.26 11** P **P** **11 42 18.2 -0.6**
PETK Petropavlovsk- **57.26 11** P **P** **11 42 18.2 -0.6**
comp=Z,5.3nm,0.9s,baz=190,slow=7.5,SNR=10
PETK LR LR 12 02 30.7
comp=Z,111nm,21.0s,baz=207,slow=32
ULN Ulaanbaatar **58.73 333** *e*P **P** **11 42 29.2 -0.2**
ULN Ulaanbaatar **58.73 333** P **P** **11 42 30.1 +0.7**
comp=Z,6.0nm,1.1s
SONM Songino Array **59.00 333** LR LR 12 05 39.2
comp=Z,191nm,18.7s,baz=261,slow=34
YAK Yakutsk **65.22 354** *e*P **P** **11 43 10.9 -1.6**
YAK pmax pmax
comp=Z,11nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.2s
SEY Seymchan **66.00 5** *d i*P **P** **11 43 18.0 +0.5**
WMQ Urumqi **66.83 320** P **P** **11 43 23.9 +0.5**
WMQ pP **pP** **11 43 40.5 +0.9**
WMQ sP **sP** **11 43 48.0 +1.7**
WMQ PP **PP** **11 45 54.0 +2.7**
WMQ *e*S **S** **11 52 10.0 -1.6**
WMQ pmax pmax
comp=Z,16nm,1.4s
WMQ pmax pmax
comp=Z,190nm,4.6s
WMQ LR LR
comp=N,96nm,17.4s
WMQ LR LR
comp=E,130nm,22.0s
WMQ LR LR
comp=Z,110nm,20.6s
CASY Casey **67.08 193** *e*P **P** **11 43 24.1 -0.2**
comp=Z,15nm,1.1s
PPT Papeete **69.00 108** LR LR 12 08 47.3
comp=Z,211nm,20.9s,baz=323,slow=32
PPT2 Papeete2 **69.01 108** *e*LR LR 12 08 31.1
comp=Z,168nm,21.8s
MK31 Makanchi Array **71.58 321** *i*P **P** **11 43 52.6 0.0**
MK31 pmax pmax
comp=Z,13nm,0.9s
MK31 Makanchi Array **71.58 321** *e*P **P** **11 43 52.8 +0.2**
MKAR Makanchi Array **71.58 321** P **P** **11 43 52.8 +0.2**
MKAR pmax pmax
comp=Z,8.0nm,0.8s
MKAR Makanchi Array **71.58 321** P **P** **11 43 52.8 +0.2**
MKAR Makanchi Array **71.58 321** P **P** **11 43 52.8 +0.2**
comp=Z,7.5nm,0.8s,baz=115,slow=7.5,SNR=49
MKAR LR LR 12 13 30.8
comp=Z,54nm,20.3s,baz=176,slow=34
MIR Mirnyy **72.07 198** ⇑*i*P **P** **11 43 56.5 +1.4**
MIR pmax pmax
comp=Z,42nm,1.0s
BILL Bilibino **72.69 9** ⇑*e*P **P** **11 43 56.8 -1.9**
BILL *e* 11 46 39.9
BILL *e*S S 11 53 12.2 -7.0
BILL pmax pmax
comp=Z,4.0nm,1.2s
BILL MLR MLR
comp=Z,100nm,18.0s
KSH Kashi **73.20 313** *e*P **P** **11 44 04.5 +1.9**
KSH *e*pP **pP** **11 44 21.1 +2.1**
KSH *e*sP **sP** **11 44 28.1 +2.4**
KSH *e*S **S** **11 53 25.8 -0.6**
KSH *e*sS **sS** **11 53 56.1 +1.9**
KSH *e*SKS **SKSac** **11 54 00.7 -3.1**
KSH pmax pmax
comp=Z,30nm,1.1s
KSH LR LR
comp=N,140nm,4.4s
KSH LR LR
comp=E,190nm,4.8s
KSH LR LR
comp=Z,170nm,9.1s
ZAA0 Zalesovo Array **73.42 329** *e*P **P** **11 44 02.0 -1.4**
ZALV Zalesovo Beam **73.42 329** P **P** **11 44 02.0 -1.3**
ZALV pmax pmax
comp=Z,6.0nm,0.7s
ZALV Zalesovo Beam **73.42 329** P **P** **11 44 02.0 -1.3**
ZALV Zalesovo Beam **73.42 329** P **P** **11 44 02.0 -1.3**
comp=Z,5.5nm,0.7s,baz=106,slow=5.3,SNR=21
ZALV LR LR 12 15 03.7
comp=Z,87nm,19.6s,baz=62,slow=35
KZA Kyzart **74.53 315** P **P** **11 44 11.9 +1.3**
SNR=39
TKM2 Tokmak 2 **74.55 316** P **P** **11 44 10.1 -0.4**
TKM2 pmax pmax
comp=Z,10.0nm,0.9s
TKM2 Tokmak 2 **74.55 316** *e*P **P** **11 44 10.5 0.0**
comp=Z,7.1nm,0.7s
TKM2 Tokmak 2 **74.55 316** P **P** **11 44 10.7 +0.2**
SNR=12
NVS Novosibirsk **74.66 329** ⇓*i*P **P** **11 44 08.5 -2.0**
NVS pmax pmax
comp=Z,33nm,1.8s
NVS pmax pmax
comp=N,9.0nm,1.4s
NVS pmax pmax
comp=E,3.0nm,1.4s
TIXI Tiksi **74.71 356** *ce*P **P** **11 44 11.2 +0.7**
TIXI pmax pmax
comp=Z,8.0nm,2.5s
KBK Karagaybulak **74.92 315** P **P** **11 44 13.4 +0.8**
SNR=6.2
AAK Ala-Archa **75.23 315** *e*P **P** **11 44 14.9 +0.5**
AAK pmax pmax
comp=Z,17nm,1.4s
AAK Ala-Archa **75.23 315** *e*P **P** **11 44 14.9 +0.5**
comp=Z,17nm,1.4s
AAK Ala-Archa **75.23 315** P **P** **11 44 14.8 +0.4**
comp=Z,4.4nm,0.8s,baz=116,slow=5.5,SNR=8.6
KURK Kurchatov **75.40 324** *d i*P **P** **11 44 14.6 -0.3**
KURK pmax pmax
comp=Z,13nm,0.8s
KURK Kurchatov **75.40 324** *e*P **P** **11 44 14.5 -0.3**
comp=Z,11nm,0.8s
KURBB Kurchatov Arra **75.42 324** P **P** **11 44 14.5 -0.5**
comp=Z,5.9nm,0.8s,baz=112,slow=5.7,SNR=23
USP Ospenovka **75.42 316** P **P** **11 44 15.7 +0.4**
SNR=17
VNDA Vanda **75.52 176** *e*P **P** **11 44 14.5 -0.7**
comp=Z,4.1nm,0.7s
VNDA Vanda **75.52 176** P **P** **11 44 15.2 0.0**
comp=Z,3.7nm,0.7s,baz=326,slow=5.8,SNR=8.3
VNDA LR LR 12 13 39.7
comp=Z,219nm,21.5s,baz=350,slow=33
AML Almayashu **75.64 315** P **P** **11 44 17.9 +0.9**
SNR=16
EKS2 Erkin-Say **75.74 315** *e*P **P** **11 44 17.8 +0.6**
EKS2 pmax pmax
comp=Z,14nm,1.1s
EKS2 Erkin-Say **75.74 315** *e*P **P** **11 44 17.8 +0.6**
comp=Z,14nm,1.1s
EKS2 Erkin-Say **75.74 315** P **P** **11 44 18.0 +0.7**
SNR=9.6
SBA Scott Base **76.25 175** *e*P **P** **11 44 20.3 +1.0**
SBA pmax pmax
comp=Z,19nm,1.4s
SBA Scott Base **76.25 175** *e*P **P** **11 44 20.3 +1.0**
comp=Z,19nm,1.4s
KK31 Karatay Array **78.17 315** *i*P **P** **11 44 30.3 -0.5**
KK31 pmax pmax
comp=Z,8.0nm,0.8s
KKAR Karatay Array **78.17 315** *e*P **P** **11 44 30.4 -0.3**
KKAR pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array **78.17 315** *e*P **P** **11 44 30.4 -0.3**
comp=Z,3.8nm,0.7s
OHAK Old Harbor **79.11 30** *e*P **P** **11 44 35.7 +0.2**
comp=Z,16nm,0.9s
KDAK Kodiak Island **79.68 30** LR LR 12 15 13.2
comp=Z,148nm,20.1s,baz=284,slow=32
VOSK Vostochnaya **80.55 324** P **P** **11 44 43.0 -0.5**
VOSK pmax pmax
comp=Z,10.0nm,1.2s
BVA0 Borovoye Array **80.98 325** *i*P **P** **11 44 45.7 -0.1**
BVA0 pmax pmax
comp=Z,16nm,0.9s
BVAR Borovoye Array **80.98 325** P **P** **11 44 45.6 -0.2**
BVAR pmax pmax
comp=Z,11nm,0.7s
BVAR Borovoye Array **80.98 325** P **P** **11 44 45.6 -0.2**
BVAR Borovoye Array **80.98 325** P **P** **11 44 45.6 -0.2**
comp=Z,11nm,0.7s,baz=112,slow=6.4,SNR=37
BRVK Borovoye **81.05 325** *d i*P **P** **11 44 46.2 +0.1**
BRVK pmax pmax
comp=Z,8.0nm,0.6s
BRVK Borovoye **81.05 325** *e*P **P** **11 44 46.0 -0.1**
comp=Z,17nm,0.9s
ZRNK Zerenda **81.77 324** P **P** **11 44 49.5 -0.4**
ZRNK pmax pmax
comp=Z,11nm,1.0s
PMR Palmer **82.67 27** *e*P **P** **11 44 52.9 -1.5**
PMR pmax pmax
comp=Z,8.0nm,1.1s
PMR Palmer **82.67 27** *e*P **P** **11 44 52.9 -1.5**
comp=Z,8.3nm,1.1s
TRF Thorofare Moun **82.82 25** *e*P **P** **11 44 54.9 -0.5**
comp=Z,27nm,1.5s
SML Sawmill **83.11 27** *e*P **P** **11 44 56.1 -0.7**
SML pmax pmax
comp=Z,9.0nm,1.3s
SML Sawmill **83.11 27** *e*P **P** **11 44 56.1 -0.7**
comp=Z,9.4nm,1.3s

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MAW	Mawson	83.19	202	P	P	11 44 57.3	+0.3
MAW	Mawson	83.19	202	P	P	11 44 57.3	+0.3
	comp=Z,6.9nm,1.1s,baz=78,slow=7.9,SNR=6.7						
MAW				LR	LR	12 22 19.6	
	comp=Z,116nm,19.7s,baz=54,slow=36						
MCK	McKinley	83.48	25	eP	P	11 44 57.6	-1.1
MCK				pmax	pmax		
	comp=Z,49nm,1.6s						
MCK	McKinley	83.48	25	eP	P	11 44 57.6	-1.1
	comp=Z,49nm,1.6s						
DIV	Divide	84.07	28	eP	P	11 45 01.1	-0.7
	comp=Z,12nm,0.9s						
COLD	Coldfoot	84.21	21	eP	P	11 45 02.7	+0.4
	comp=Z,8.3nm,1.0s						
COLA	College	84.31	24	eP	P	11 45 01.7	-1.0
COLA				pmax	pmax		
	comp=Z,15nm,1.4s						
COLA	College	84.31	24	eP	P	11 45 01.7	-1.0
	comp=Z,15nm,1.4s						
ILAR	Eielson Array	84.67	24	P	P	11 45 02.9	-1.7
ILAR	Eielson Array	84.67	24	P	P	11 45 02.9	-1.7
	comp=Z,6.2nm,0.9s,baz=256,slow=5.1,SNR=51						
ILAR				LR	LR	12 17 33.7	
	comp=Z,95nm,21.0s,baz=256,slow=32						
AB31	Akbulak array	86.60	320	i P	P	11 45 13.1	-1.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ABKAR	Akbulak array	86.60	320	eP	P	11 45 13.1	-1.4
	comp=Z,8.1nm,1.0s						
EGAK	Eagle	87.03	25	eP	P	11 45 16.2	-0.1
	comp=Z,16nm,1.4s						
AKTO	Aktyubinsk	87.99	321	P	P	11 45 19.9	-1.3
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKTO	Aktyubinsk	87.99	321	P	P	11 45 19.9	-1.3
AKTO	Aktyubinsk	87.99	321	P	P	11 45 19.9	-1.3
	comp=Z,1.5nm,0.7s,baz=74,slow=7.4,SNR=4.3						
INK	Inuvik	90.62	22	P	P	11 45 32.5	-0.6
INK	Inuvik	90.62	22	P	P	11 45 32.5	-0.6
	comp=Z,5.7nm,1.0s,baz=278,slow=6.0,SNR=7.0						
INK				LR	LR	12 22 30.6	
	comp=Z,78nm,20.4s,baz=238,slow=33						
DLBC	Dease Lake	91.45	32	LR	LR	12 28 52.1	
	comp=Z,86nm,18.1s,baz=324,slow=37						
YBH	Yreka Blue Hor	96.06	49	eP	P	11 45 59.8	+0.9
	comp=Z,2.3nm,1.0s						
YBH	Yreka Blue Hor	96.06	49	P	P	11 45 59.6	+0.6
	comp=Z,2.6nm,1.0s,baz=173,slow=6.7,SNR=7.5						
BHD	Baghdad	97.52	303	eP	Pdif	11 46 09.0	+3.4
BHD				eSKS	SKSac	11 56 49.7	+11
BHD				eS	ScS	11 57 29.3	+3.1
KBZ	Khabaz	98.17	314	LR	LR	12 37 00.9	
	comp=Z,52nm,21.6s,baz=298,slow=40						
YKA	Yellowknife Ar	98.77	27	P	P	11 46 09.6	-0.9
YKA	Yellowknife Ar	98.77	27	P	P	11 46 09.6	-0.9
	comp=Z,1.3nm,0.7s,baz=282,slow=4.6,SNR=15						
WVOR	Wild Horse Val	99.05	48	eP	Pdif	11 46 12.8	+0.4
WVOR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WVOR	Wild Horse Val	99.05	48	eP	Pdif	11 46 12.8	+0.4
	comp=Z,8.3nm,1.1s						
NVAR	Mina Array Bea	99.61	52	P	Pdif	11 46 15.3	+0.1
NVAR	Mina Array Bea	99.61	52	P	Pdif	11 46 15.3	+0.1
	comp=Z,2.1nm,1.1s,baz=253,slow=5.7,SNR=8.6						
ARCES	ARCESS Array B	101.46	341	P	Pdif	11 46 22.3	-0.1
ARCES	ARCESS Array B	101.46	341	P	Pdif	11 46 22.3	-0.1
	comp=Z,1.9nm,0.7s,baz=39,slow=9.2,SNR=6.0						
STHS	Stebnicka Huta	111.43	323	eP	Pdif	11 47 07.3	+0.1
STHS	Stebnicka Huta	111.43	323	PDIF	Pdif	11 47 07.3	+0.1
GDL2	Guadalupe Moun	111.72	56	ePdif	Pdif	11 47 11.3	+2.2
TXAR	Lajitas Array	112.83	59	PKiKP	PKiKP	11 51 08.8	+0.2
TXAR	Lajitas Array	112.83	59	PKiKP	PKiKP	11 51 08.8	+0.2
	comp=Z,0.2nm,0.6s,baz=224,slow=3.8,SNR=3.6						
VYHS	Vyhne	113.25	322	eP	Pdif	11 47 20.2	+4.9
VYHS	Vyhne	113.25	322	PDIF	Pdif	11 47 20.2	+4.9
CFAA	Coronel Fontan	135.62	143	PKP	PKPdf	11 51 52.8	+0.8
CFAA	Coronel Fontan	135.62	143	PKP	PKPdf	11 51 52.7	+0.8
	comp=Z,0.1nm,0.7s,baz=226,slow=7.0,SNR=4.7						
TORD	Torodi Ar. Bea	139.02	287	PKP	PKPdf	11 51 56.6	-2.0
TORD	Torodi Ar. Bea	139.02	287	PKP	PKPdf	11 51 56.6	-2.0
	comp=Z,0.6nm,0.7s,baz=99,slow=1.7,SNR=3.6						
ROSC	El Rosal	144.10	86	ePKPdf	PKPbc	11 52 07.1	+0.8
ROSC	El Rosal	144.10	86	PKP	PKPbc	11 52 07.1	+0.7
	comp=Z,7.8nm,0.6s,baz=96,slow=18,SNR=9.4						
LPAZ	La Paz	145.07	124	PKPbc	PKPdf	11 52 10.6	+0.5
LPAZ				ePKPdf	PKPab	11 52 10.7	+1.1
LPAZ	La Paz	145.07	124	PKPbc	PKPdf	11 52 10.6	+0.5
	comp=Z,22nm,0.9s,baz=277,slow=1.0,SNR=63						
CPUP	Villa Florida	145.80	149	PKPbc	PKPbc	11 52 11.3	+0.4
CPUP	Villa Florida	145.80	149	PKPbc	PKPbc	11 52 11.3	+0.4
	comp=Z,0.8nm,0.3s,baz=197,slow=3.4,SNR=7.3						
DBIC	Dimbokro	146.34	278	ePKPdf	PKPbc	11 52 12.5	-0.4
DBIC				PKPbc	PKPbc	11 52 12.6	-0.2
DBIC	Dimbokro	146.34	278	PKPbc	PKPbc	11 52 12.6	-0.2
	comp=Z,11nm,0.6s,baz=26,slow=5.1,SNR=15						
CELP	Cerrillos	148.45	59	ePKPbc	PKPbc	11 52 17.6	-0.9
CDVI	St. Croix	150.14	58	ePKPbc	PKPbc	11 52 24.4	+1.7
SIV	San Ignacio	150.88	130	PKPbc	PKPbc	11 52 24.9	+0.3
SIV	San Ignacio	150.88	130	PKPbc	PKPbc	11 52 24.9	+0.3
	comp=Z,5.3nm,0.9s,baz=213,slow=1.4,SNR=16						
SAML	Samuel	152.72	115	ePKPbc	PKPbc	11 52 28.8	-0.1
BDFB	Brasilia	159.42	153	PKPab	PKPab	11 53 06.6	-1.7
BDFB	Brasilia	159.42	153	PKPab	PKPab	11 53 06.6	-1.7
	comp=Z,3.0nm,0.9s,baz=45,slow=1.4,SNR=3.3						

IDC 07 11:33:20.9±3.2, 10°.60N×62°.57W, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/26, mbtmp3.6/4, Error ellipse: s-maj=166.4km s-min=26.0km az=16.0
ISCJB 07 11:33:31.0±0.3, 10°.66N±0°.03×62°.47W±0°.03, h94km±5km, mb3.5/4, Error ellipse: s-maj=5.5km s-min=3.5km az=149.6
FUNV 07 11:33:32.6, 10°.70N×62°.35W, h81km, MW3.7
TRN 07 11:33:34.1, 10°.78N×62°.33W, h18km, MD3.7
ISC 07 11:33:31.6±0.8, 10°.65N±0°.04×62°.46W±0°.03, h87km±7km, n32, σ1s.18/51, mb3.6/4, 5C-3D, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.24	92	⇑iP	Pn	11 33 44.5	+0.2
GUIV				eS	Sn	11 33 52.7	-1.1
CRUV	Carupano	0.76	272	⇓iP	Pn	11 33 49.1	+0.6
CRUV				eS	Sn	11 34 01.6	+0.6
TRN	Trinidad (W)	1.04	90	⇑iP	Pn	11 33 52.3	+0.7
TRN				eS	Sn	11 34 05.2	-1.3
TPP	Pointe-a-Pierr	1.05	108	⇑iP	Pn	11 33 53.1	+1.4
TPP				eS	Sn	11 34 06.7	0.0
TBH	Brigand Hill	1.38	97	eP	Pn	11 33 56.7	+1.0
TBH				eS	Sn	11 34 15.1	+1.1
GRW	Mount Saint Ca	1.69	28	eP	Pn	11 34 00.1	+0.3
GRW				eS	Sn	11 34 19.4	-1.7
TPR	Prospect	1.74	72	eP	Pn	11 34 01.3	+1.0
TPR				eS	Sn	11 34 22.0	-0.1
GRHS	Sauteurs	1.76	27	eP	Pn	11 34 02.5	+2.0
GRHS				eS	Sn	11 34 22.6	+0.1
ORIV	Oritupano	1.83	211	eP	Pn	11 34 02.8	+1.3
ORIV				eS	Sn	11 34 25.9	+1.7
GRSS	Sisters	1.83	27	eP	Pn	11 34 03.7	+2.2
GRSS				eS	Sn	11 34 24.2	-0.1
TOSP	Speyside	2.00	71	eP	Pn	11 34 04.8	+1.1
TOSP				eS	Sn	11 34 27.5	-0.6
PCRV	Puerto La Cruz	2.19	258	⇑eP	Pn	11 34 07.5	+1.2
PCRV				eS	Sn	11 34 32.9	+0.1
RIOV	Rio Grande	2.65	166	eP	Pn	11 34 13.7	+1.3
RIOV				eS	Sn	11 34 42.3	-1.4
PRGV	PARIAGUAN	2.86	229	⇑eP	Pn	11 34 16.2	+1.0
SVB	Belmont	2.86	24	eP	Pn	11 34 16.4	+1.2
SVB				eS	Sn	11 34 48.4	-0.4
GURV	El Guri	2.94	192	eP	Pn	11 34 16.8	+0.4
CUPV	Cœpira	3.33	260	eP	Pn	11 34 23.1	+1.6
CUPV				eS	Sn	11 35 00.6	+0.5
MCLT	Moule a Chique	3.38	26	eP	Pn	11 34 24.7	+2.4
MCLT				eS	Sn	11 35 00.5	-1.0
BIRV	Birongo	3.75	268	eP	Pn	11 34 28.9	+1.7
BIRV				eS	Sn	11 35 10.5	+0.2
MERV	Las Mercedes	4.03	250	eP	Pn	11 34 31.5	+0.5
LUEV	Luepa	4.88	168	eP	Pn	11 34 42.4	-0.4
TURV	Turiamo	5.29	268	eP	Pn	11 34 49.0	+0.8
MAPV	Macapo	5.96	263	eP	Pn	11 34 57.4	+0.1
TEPV	Terepaima	6.66	265	eP	Pn	11 35 06.9	0.0
TEPV				eS	Sn	11 36 17.8	-3.6
CURV	Curarigua	7.41	266	⇓eP	Pn	11 35 17.4	+0.3
MONV	Montecano	7.48	281	eP	Pn	11 35 18.5	+0.5
SOCV	Socops	8.61	255	⇓iP	Pn	11 35 32.4	-1.1
SOCV				eS	Sn	11 37 02.4	-6.6
VIGV	El Vigia	8.96	259	eP	Pn	11 35 38.0	-0.2
TXAR	Lajitas Array	42.67	302	P	P	11 41 19.9	-0.1
	0.2nm,0.5s,baz=117,slow=11,SNR=7.9						
TXAR				PcP	PcP	11 43 10.5	-0.1
	0.4nm,0.8s,baz=134,slow=5.2,SNR=5.1						
ANMO	Albuquerque	46.71	308	P	P	11 41 51.9	-0.4
	0.5nm,0.7s,baz=89,slow=9.8,SNR=2.8						
PDAR	Pinedale Array	51.90	317	P	P	11 42 30.7	-1.0
	1.2nm,0.8s,baz=114,slow=11,SNR=7.5						
TORD	Torodi Ar. Bea	62.68	81	P	P	11 43 49.0	+1.1
	0.3nm,0.4s,baz=285,slow=6.5,SNR=14						

IDC 07 11:47:01.8±27.0, 16°.92S×176°.06W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/19, mbtmp4.0/4, Error ellipse: s-maj=535.2km s-min=152.3km az=85.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.06	241	P	P	11 54 47.8	+0.5
	1.6nm,0.8s,baz=100,slow=11,SNR=3.7						
WRA	Warramunga Arr	47.02	258	P	P	11 55 34.4	-0.9
	0.5nm,0.5s,baz=96,slow=7.6,SNR=15						
ASAR	Alice Springs	47.22	253	P	P	11 55 37.0	+0.2
	3.5nm,0.5s,baz=89,slow=8.0,SNR=71						
FITZ	Fitzroy Crossi	55.41	259	P	P	11 56 38.3	0.0
	1.5nm,0.8s,baz=50,slow=9.0,SNR=3.3						

IDC 07 11:59:26.5±3.2, 29°.99S×177°.30W, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.5/17, mbtmp3.5/2, Error ellipse: s-maj=66.2km s-min=26.6km az=73.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.91	323	Pn	Pn	11 59 47.5	+0.9
	359nm,0.3s,baz=80,slow=18,SNR=36						
RAO				Sn	Sn	11 59 59.4	-1.0
	468nm,0.3s,baz=73,slow=22,SNR=19						
ASAR	Alice Springs	43.74	266	P	P	12 07 34.4	+0.4
	0.2nm,0.5s,baz=109,slow=6.8,SNR=4.5						
WRA	Warramunga Arr	44.69	271	P	P	12 07 40.9	-0.7
	0.6nm,0.5s,baz=110,slow=8.1,SNR=16						
FINES	FINESS Array B	144.96	341	PKP	PKPab	12 19 03.6	-0.6
	1.2nm,0.6s,baz=69,slow=7.6,SNR=3.9						

IDC 07 12:04:36.9±4.7, 2°.71S×140°.25E, h0km, mb3.1/2, mb1 3.4/3, mb1mx3.3/16, mbtmp3.2/3, ML3.2/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/15, Error ellipse: s-maj=177.0km s-min=32.5km az=90.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	9.57	134	LR	LR	12 11 27.5	
	comp=Z,44nm,18.1s,baz=156,slow=43						
WRA	Warramunga Arr	18.08	198	P	P	12 08 50.6	+0.5
	0.1nm,0.3s,baz=18,slow=12,SNR=4.8						
ASAR	Alice Springs	21.72	196	P	P	12 09 29.1	-0.8
	0.4nm,0.7s,baz=27,slow=10,SNR=3.7						
MKAR	Makanchi Array	70.73	322	P	P	12 15 55.0	+0.1
	0.3nm,0.7s,baz=98,slow=6.1,SNR=2.6						

WEL 07 12:08:19.5±1.3, 36°.43S×177°.77E, h12km, ML3.7/4, Error ellipse: s-maj=10.4km s-min=9.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.22	159	P*	Pn	12 08 40.3	-2.0
MXZ				S*	Sb	12 08 53.7	-4.4
MXZ				AML	AML	12 09 45.9	
KUZ	Kuaotunu	1.68	258	PN	Pn	12 08 46.7	-2.0
PUZ	Puketiti	1.69	167	PN	Pn	12 08 49.1	+0.2
PUZ				AML	AML	12 09 14.0	
PUZ				AML	AML	12 09 16.0	
URZ	Urewera	1.91	196	P*	Pn	12 08 50.2	-1.6
URZ				S*	Sn	12 09 14.2	-1.6
URZ				AML	AML	12 09 15.6	
MWZ	Matawai	1.92	186	P*	Pn	12 08 50.5	-1.5
MWZ				AML	AML	12 09 22.7	
MWZ				AML	AML	12 09 37.7	
MKAZ	Moumakai	2.20	251	PN	Pn	12 08 54.8	-1.0
RVAZ	Riverhead Bore	2.59	261	PN	Pn	12 09 01.2	0.0
BKZ	Black Stump Fm	2.92	200	P*	Pn	12 09 06.9	+1.0
FWVZ	Far West T-bar	3.33	211	P*	Pn	12 09 14.4	+2.8

AUST 07 12:15:43.2, 5°.27S×147°.58E, h200km
ISCJB 07 12:15:46.4±0.6, 5°.36S±0°.06×147°.0E±0°.1, h195km, mb3.6/9, Error ellipse: s-maj=14.8km s-min=8.1km az=14.8
IDC 07 12:15:48.0±1.4, 5°.54S×147°.06E, h200km±15km, mb3.4/9, mb1 3.6/12, mb1mx3.5/19, mbtmp3.4/12, Error ellipse: s-maj=25.6km s-min=10.0km az=113.0
ISC 07 12:15:47.3±0.8, 5°.47S±0°.07×147°.1E±0°.1, h195km, n21, σ1s.36/24, mb3.5/8, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.91	179	P	Pn	12 16 48.8	+1.0
	9.5nm,0.3s,baz=360,slow=4.9,SNR=44						
PMG				S	Sn	12 17 33.8	-1.6
	18nm,0.3s,baz=0.2,slow=12,SNR=10						
COEN	Coen	9.27	204	P	Pn	12 17 59.9	+2.7
	baz=9.7,SNR=6.3						
MTSU	Mount Surprise	12.87	192	P	P	12 18 46.0	-1.0
	baz=13,SNR=7.0						
CTA	Charters Tower	14.55	183	P	P	12 19 05.4	-0.2
	0.2nm,0.3s,baz=11,slow=14,SNR=3.7						
KDU	Kakadu	16.11	243	P	Pn	12 19 23.9	+0.6
	baz=17,SNR=20						
MTN	Manton Dam	17.37	244	P	Pn	12 19 38.1	-0.2
	baz=18,SNR=15						
WRA	Warramunga Arr	18.99	220	P	P	12 19 55.1	+0.7
	0.6nm,0.3s,baz=38,slow=11,SNR=62						
WRA				S	S	12 23 17.2	-2.5
	0.1nm,0.3s,baz=38,slow=21,SNR=5.4						
WRA				PcP	PcP	12 24 10.8	-0.4
	0.1nm,0.3s,baz=29,slow=1.9,SNR=5.4						
KNRA	Kununurra	20.66	239	P	P	12 20 13.9	+1.7
	baz=21,SNR=27						
ASAR	Alice Springs	22.10	214	P	P	12 20 28.1	+1.0
	1.4nm,0.7s,baz=47,slow=8.4,SNR=27						
ASAR				S	S	12 24 16.3	-0.2
	1.0nm,0.9s,baz=32,slow=18,SNR=4.2						
FITZ	Fitzroy Crossi	24.43	237	P	P	12 20 48.6	+0.4
	12nm,0.5s,baz=52,slow=9.6,SNR=50						
FITZ	Fitzroy Crossi	24.43	237	P	P	12 20 48.4	+0.2
	baz=25,SNR=16						
LUWI	Luwuk	24.67	279	P	P	12 20 47.8	-2.7
	baz=25,SNR=3.4						
MEEK	Meekatharra	34.37	229	P	P	12 22 16.3	+0.4
	baz=35,SNR=9.9						
KSRS	Korea Array	46.30	339	P	P	12 23 54.5	+1.0
	0.6nm,0.4s,baz=158,slow=8.3,SNR=6.4						
PETK	Petropavlovsk-	59.05	7	P	P	12 25 28.2	+1.5
	0.7nm,0.6s,baz=163,slow=8.9,SNR=4.5						
VNDA	Vanda	72.43	177	P	P	12 26 52.2	+0.4
	0.9nm,1.0s,baz=7.8,slow=6.4,SNR=5.3						
MKAR	Makanchi Array	77.15	320	P	P	12 27 18.9	-0.6
	0.2nm,0.4s,baz=93,slow=7.7,SNR=3.5						
ZALV	Zalesovo Beam	78.62	328	P	P	12 27 26.2	-1.2
	0.4nm,0.4s,baz=95,slow=8.8,SNR=2.7						
ILAR	Eielson Array	84.96	23	P	P	12 27 59.2	-1.0
	0.8nm,0.7s,baz=257,slow=4.9,SNR=10						
NVAR	Mina Array Bea	96.97	52	P		12 28 58.8	
	0.4nm,0.8s,baz=235,slow=4.3,SNR=3.2						
TORD	Torodi Ar. Bea	145.05	285	PKPbc	PKPbc	12 35 00.8	-1.4
	0.7nm,0.5s,baz=75,slow=3.7,SNR=14						

JMA 07 12:25:38.6, 33°.31N×131°.38E, h7km±1km, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OIT2	Oita 2	0.07	118	P	Pg	12 25 40.3	-0.2
OIT2				S	Sg	12 25 41.7	-0.1

ISCJB 07 12:26:51.8±1.3, 23°.45N±0°.06×124°.15E±0°.06, h25km±8km, mb3.3/4, Error ellipse: s-maj=10.8km s-min=8.6km az=138.1
JMA 07 12:26:52.0±0.4, 23°.46N×124°.17E, h30km, M2.7
IDC 07 12:26:55.0±1.1, 22°.24N×121°.66E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/24, mbtmp3.3/4, Error ellipse: s-maj=55.7km s-min=23.8km az=73.0
ISC 07 12:26:53.2±2.1, 23°.54N±0°.09×124°.17E±0°.05, h24km±14km, n12, σ0s.76/18, mb3.4/4, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.61	327	P	Pb	12 27 05.1	-0.1
HATJ				eS	Sb	12 27 13.3	-0.1
JKRS	Kuro-shima	0.70	348	P	Pn	12 27 06.7	-0.9
JKRS				eS	Sn	12 27 18.8	+1.1
JIJ	Ishigaki jima	0.82	358	P	Pn	12 27 08.3	-0.8
JIJ				eS	Sn	12 27 19.6	-0.9
IRIF	Iriomote-Funau	0.88	333	P	Pn	12 27 09.5	-0.6
IRIF				eS	Sb	12 27 22.4	+1.2
JTJ	Tarama	1.20	24	P	Pn	12 27 14.1	-0.3
JTJ				eS	Sb	12 27 30.8	+0.6
YOJ	Yonaguni jima	1.40	311	P	Pn	12 27 17.0	-0.1
YOJ				eS	Sn	12 27 35.1	+0.3
JMJ	Miyako jima 2	1.63	39	eS	Sn	12 27 41.7	+1.1
JOGS	Gusukube	1.66	43	P	Pn	12 27 20.7	0.0
JOGS				eS	Sb	12 27 42.7	-0.8
MKAR	Makanchi Array	40.70	315	P	P	12 34 31.6	-0.2
	0.4nm,0.6s,baz=107,slow=8.0,SNR=3.4						
WRA	Warramunga Arr	44.35	166	P	P	12 35 01.2	-0.3
	0.4nm,0.6s,baz=345,slow=8.9,SNR=4.4						
ASAR	Alice Springs	47.87	168	P	P	12 35 30.0	+0.6
	0.3nm,0.6s,baz=342,slow=10,SNR=5.6						
ILAR	Eielson Array	68.52	27	P	P	12 38 12.8	+19
	0.1nm,0.6s,baz=267,slow=6.3,SNR=2.4						

ISCJB 07 12:42:25.9±0.5, 37°.87N±0°.02×29°.25E±0°.04, h5km±6km, Error ellipse: s-maj=5.8km s-min=4.0km az=13.8
DDA 07 12:42:25.4, 37°.87N×29°.22E, h6km, MD2.8
ISK 07 12:42:25.8, 37°.88N×29°.30E, h6km, MD2.8
CSEM 07 12:42:25.7±0.2, 37°.87N×29°.27E, h5km, MD2.8, Error ellipse: s-maj=4.2km s-min=3.1km az=107.0
ISC 07 12:42:25.9±1.0, 37°.87N±0°.02×29°.25E±0°.03, h9km±8km, n30, σ0s.54/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	Denizli	0.21	235	PG	Pg	12 42 31.2	+1.0
DENT	Denizli	0.21	235	i Pg	Pg	12 42 31.2	+1.0
DNZL	Cakiroluk	0.24	221	i P	Pg	12 42 30.2	-0.7
DNZL				i S	Sg	12 42 33.9	-0.4
DNZL	Cakiroluk	0.24	221	i P	Pg	12 42 30.2	-0.7
DNZL				i S	Sg	12 42 33.9	-0.4
KHAL	Karahalli	0.53	21	i P	Pg	12 42 36.0	-0.2
KHAL				i S	Sg	12 42 43.5	+0.2
KHAL	Karahalli	0.53	21	i P	Pg	12 42 36.0	-0.2
KHAL				i S	Sg	12 42 43.5	+0.2
GOLH	Golhisar	0.68	159	i P	Pg	12 42 39.1	0.0
GOLH				i S	Sn	12 42 51.8	-0.7
GOLH	Golhisar	0.68	159	i P	Pg	12 42 39.1	0.0
GLHS	Glhisar (BURDU	0.74	165	ePG	Pg	12 42 40.3	+0.1
GLHS				eSG	Sb	12 42 52.0	+0.7
GLHS	Glhisar (BURDU	0.74	165	ePg	Pg	12 42 40.3	+0.1
GLHS				eSg	Sb	12 42 52.0	+0.7
KULA	Kula-Manisa	0.79	324	ePG	Pb	12 42 41.8	0.0
KULA				eSG	Sb	12 42 53.4	+0.8
KULA	Kula-Manisa	0.79	324	ePg	Pb	12 42 41.8	0.0
KULA				eSg	Sb	12 42 53.4	+0.8
ISP	Isparta	1.01	93	ePG	Pg	12 42 44.7	-0.6
ISP	Isparta	1.01	93	ePg	Pg	12 42 44.7	-0.6
YER	Yerkesik	1.07	227	ePN	Pn	12 42 47.2	+0.2
YER	Yerkesik	1.07	227	ePn	Pn	12 42 47.2	+0.2
AYDN	Tasoluk	1.11	259	i P	Pg	12 42 46.4	-0.8
AYDN				i S	Sg	12 43 01.2	-0.3
AYDN	Tasoluk	1.11	259	i P	Pg	12 42 46.4	-0.8
AYDN				i S	Sg	12 43 01.2	-0.3
GDZ	Gediz	1.23	8	i P	Pb	12 42 49.5	+0.1
GDZ				i S	Sn	12 43 07.0	+1.0
GDZ	Gediz	1.23	8	i P	Pb	12 42 49.4	+0.1
GDZ				i S	Sn	12 43 07.0	+1.0
SHUT	Suhut-Afyon	1.23	56	ePN	Pn	12 42 49.1	-0.2
SHUT	Suhut-Afyon	1.23	56	ePn	Pn	12 42 49.1	-0.2
DEMI	Demirci	1.24	340	i P	Pn	12 42 49.4	0.0
DEMI				i S	Sb	12 43 04.8	-0.8
DEMI	Demirci	1.24	340	i P	Pn	12 42 49.4	0.0
DEMI				i S	Sb	12 43 04.8	-0.8
ALT	Altintas	1.36	30	ePN	Pn	12 42 51.2	+0.1
ALT	Altintas	1.36	30	ePn	Pn	12 42 51.2	+0.1
TVSB	Tavsanli	1.58	6	ePN	Pb	12 42 55.1	-0.2
TVSB	Tavsanli	1.58	6	ePn	Pb	12 42 55.1	-0.2
DAT	Datca	1.76	230	ePN	Pb	12 42 58.1	-0.2
DAT	Datca	1.76	230	ePn	Pb	12 42 58.1	-0.2

THR 07 12:43:32.9±0.3, 32°.82N×56°.38E, h14km±3km, ML3.5
ISCJB 07 12:43:33.2±0.4, 32°.84N±0°.04×56°.30E±0°.04, h10km, Error ellipse: s-maj=6.5km s-min=4.1km az=139.7
TEH 07 12:43:33.9, 32°.82N×56°.33E, h3km, ML3.5
CSEM 07 12:43:33.1±0.1, 32°.82N×56°.32E, h2km, ML3.5, Error ellipse: s-maj=4.6km s-min=3.0km az=143.0
ISC 07 12:43:31.3±1.0, 32°.86N±0°.04×56°.40E±0°.03, h10km, n44, σ1s.92/43, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TABS	Tabas	0.99	37	ePg	Pn	12 43 52.2	+0.8
TABS	Tabas	0.99	37	ePg	Pn	12 43 52.2	+0.8
IBAF	Bafgh	1.45	210	ePn	Pb	12 43 58.4	0.0
IBAF				eSg	Sb	12 44 16.7	-0.3
IBAF				e		12 44 20.4	
	comp=Z,20μm,0.2s						
IBAF	Bafgh	1.45	210	ePn	Pb	12 43 58.4	0.0
IBAF				eSg	Sb	12 44 16.7	-0.3
ICHK	Chekchek	1.79	251	eSg	Sg	12 44 28.4	-0.6
ICHK				ePn	Pb	12 44 04.4	0.0
ICHK				e		12 44 30.0	
	comp=Z,13μm,0.2s						
ITEG	Tejag	1.97	88	e		12 44 41.0	
	comp=Z,3μm,0.2s						
ITEG				ePn	Pb	12 44 08.7	+1.3
IMEH	Mehriz	2.11	227	eSn	Sb	12 44 35.7	-0.4
IMEH				ePn	Pb	12 44 09.2	-0.6
IMEH				e		12 44 41.5	
	comp=Z,5μm,0.3s						
ISAD	Sadrabad	2.48	249	ePn	Pb	12 44 14.1	-2.1
ISAD				eSg	Sg	12 44 49.2	-2.0
ISAD				e		12 44 51.0	
	comp=Z,7μm,0.1s						
ISAD	Sadrabad	2.48	249	ePn	Pb	12 44 14.1	-2.1
ISAD				eSg	Sg	12 44 49.2	-2.0
KRBR	Kerman	2.88	174	ePn	Pn	12 44 20.1	+2.6
KRBR				eSg	Sg	12 45 01.9	-2.0
KRBR				AML	AML	12 45 03.8	
	comp=N,256nm,0.6s						
KRBR				AML	AML	12 45 09.4	
	comp=E,235nm,0.6s						
KRBR	Kerman	2.88	174	ePn	Pn	12 44 20.1	+2.6
KRBR				eSg	Sg	12 45 01.9	-2.0
IDAH	Dahanechah	2.92	91	ePn	Pb	12 44 22.3	-1.3
IDAH				e		12 44 37.1	
	comp=Z,659nm,0.3s						
IDAH	Dahanechah	2.92	91	ePn	Pb	12 44 22.3	-1.3
NASN	Na'in	3.03	270	ePn	Pn	12 44 22.5	+2.9
NASN				AML	AML	12 45 05.7	
	comp=N,94nm,0.3s						
NASN				AML	AML	12 45 08.8	
	comp=E,94nm,0.5s						
NASN	Na'in	3.03	270	ePn	Pn	12 44 22.5	+2.9
SHRO	Shahrood	3.14	354	ePN5	Pn	12 44 24.9	+3.9
IANJ	Anjilo	3.32	322	ePn	Pn	12 44 25.8	+2.2
IANJ				e		12 45 21.6	
	comp=Z,596nm,0.2s						
IANJ	Anjilo	3.32	322	ePn	Pn	12 44 25.8	+2.2
SHRT	Shahrakht	3.35	75	ePN5	Pn	12 44 27.4	+3.6
IZEF	Zefreh	3.43	272	ePn	Pn	12 44 27.1	+2.0
IZEF				e		12 45 18.8	
	comp=Z,641nm,0.2s						
IZEF	Zefreh	3.43	272	ePn	Pn	12 44 27.1	+2.0
IGAR	Gharneh	3.71	264	e	Sg	12 45 28.7	-1.8
	comp=Z,730nm,0.2s						

ILAS	Lasjerd	3.81	312	ePn	Pn	12 44 32.9	+2.6
ILAS				e		12 45 53.2	
	comp=N,741nm,0.2s						
ILAS	Lasjerd	3.81	312	ePn	Pn	12 44 32.9	+2.6
ISHM	Shahmirzad	3.91	320	ePn	Pn	12 44 33.9	+2.2
ISHM				e		12 45 50.4	
	comp=Z,1µm,0.3s						
ISHM	Shahmirzad	3.91	320	ePn	Pn	12 44 33.9	+2.2
IMOG	Moghan	4.05	36	ePn	Pn	12 44 38.0	+4.4
IMOG				e		12 44 39.0	
	comp=Z,308nm,0.1s						
IMOG	Moghan	4.05	36	ePn	Pn	12 44 38.0	+4.4
IPAY	Payeh	4.17	30	ePn	Pn	12 44 39.3	+4.0
IPAY				e		12 44 40.8	
	comp=Z,426nm,0.1s						
IPAY	Payeh	4.17	30	ePn	Pn	12 44 39.3	+4.0
IAKL	Akhelmad	4.21	27	ePn	Pn	12 44 39.9	+4.1
IAKL				e		12 44 41.7	
	comp=Z,214nm,0.1s						
IKRD	Kardeh	4.28	23	ePn	Pb	12 44 45.7	-1.1
IVRN	Varamin	4.44	300	ePn	Pn	12 44 41.0	+2.3
IVRN				e		12 44 42.0	
	comp=Z,297nm,0.2s						
IVRN	Varamin	4.44	300	ePn	Pn	12 44 41.0	+2.3
ISRV	Sarvestan	4.47	220	ePn	Pn	12 44 41.1	+1.7
ISRV	Sarvestan	4.47	220	ePn	Pn	12 44 41.1	+1.7
IDMV	Damavand	4.53	308	ePn	Pn	12 44 42.6	+2.4
IDMV				e		12 44 44.1	
	comp=Z,320nm,0.1s						
IDMV	Damavand	4.53	308	ePn	Pn	12 44 42.6	+2.4
IMYA	Miami	4.63	40	ePn	Pn	12 44 45.4	+4.0
IMYA				e		12 46 17.8	
	comp=Z,178nm,0.4s						
IMYA	Miami	4.63	40	ePn	Pn	12 44 45.4	+4.0
IPIR	Pirpir	4.65	269	ePn	Pn	12 44 43.7	+1.9
IPIR				e		12 46 01.6	
	comp=N,343nm,0.2s						
IPIR	Pirpir	4.65	269	ePn	Pn	12 44 43.7	+1.9
IRAZ	Razeghan	5.94	297	ePn	Pn	12 45 01.3	+1.8
IRAZ				e		12 47 12.1	
	comp=Z,231nm,0.4s						
IRAZ	Razeghan	5.94	297	ePn	Pn	12 45 01.3	+1.8

*BJI **07** 12:46:26.8,21°.72S×178°.97W,h572^{km},mB5.2/28, mb5.5/56*
*MOS **07** 12:46:27.8±0.8,21°.87S×179°.58W,h565^{km},mb5.1/36, Error ellipse: s-maj=8.5km s-min=7.1km az=61.6*
*ISCJB **07** 12:46:28.7±0.4,22°.08S±0°.03×179°.58W±0°.02, h582^{km}±5^{km},mb5.2/213,Error ellipse: s-maj=4.5km s-min=2.9km az=151.0*
*AUST **07** 12:46:29.8,22°.10S×179°.21W,h600^{km}*
*NEIC **07** 12:46:30.3±0.1,22°.04S×179°.58W,h590^{km},mb5.1/135, MW5.5,Error ellipse: s-maj=5.0km s-min=3.3km az=144.0, Moment Tensor Solution. s11 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.59; $M_{\theta\theta}$0.23; $M_{\phi\phi}$0.36; $M_{r\theta}$-1.41; $M_{\theta\phi}$-0.18; $M_{\phi r}$-1.36; Best double couple: $M_0$2.00000×10^{17} NP1: ϕ_s204.00000°,δ6.00000°,λ-111.00000°. NP2:ϕ_s45.00000°, δ85.00000°,λ-88.00000°. Principal axes: T 1.7500, Plg39.0000°, Azm133.0000°; N 0.4800, Plg1.0000°, Azm224.0000°; P -2.2300, Plg50.0000°, Azm317.0000°;*
*DJA **07** 12:46:30.9±0.9,22°S±6°×18°0W±°,h594^{km}±12^{km},M5.3/23, mB5.7/15,mb5.6/23,Mw(mB)5.2/15,Mwp6.1/1*
*GCMT **07** 12:46:31.8±0.3,22°.05S×179°.39W,h607^{km}±2^{km},MW5.5, Moment Tensor Solution. s64,c87; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.67±.05; $M_{\theta\theta}$-0.48±.08; $M_{\phi\phi}$1.15±.08; $M_{r\theta}$-1.46±.08; $M_{\theta\phi}$-0.09±.07; $M_{\phi r}$-1.81±.08; Best double couple: $M_0$2.50000×10^{17} NP1:ϕ_s145.00000°,δ20.00000°, λ-158.00000°. NP2:ϕ_s35.00000°,δ83.00000°, λ-71.00000°. Principal axes: T 2.4500, Plg35.0000°, Azm109.0000°; N 0.1600, Plg19.0000°, Azm212.0000°; P -2.6100, Plg49.0000°, Azm325.0000°; Data Used: II IU IC G CN.*
*IDC **07** 12:46:31.1±0.4,21°.95S×179°.61W,h595^{km}±4^{km},mb4.7/36, mb1 4.7/38,mb1mx4.7/38,mbtmp4.7/38 Error ellipse: s-maj=7.1km s-min=6.1km az=5.0*
*BGS **07** 12:46:33.0±6.0,22°.04S×179°.58W,h590^{km},mb5.1(NEIC)*
ISC 07 12:46:29.6±0.2**,21°.96S**±0°.03×**179°.50W**±0°.03**, h586**^{km}±1^{km}**,h587**^{km}**:pP-P,n1596,**σ1§**39**/1924**,mb5.2**/213**, 77C-81D,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.79	331	P	P	12 48 02.4	+2.2
	28µm,0.5s						
MSVF	Nonsavu	4.79	331	eP	P	12 48 02.3	+2.1
MSVF	Nonsavu	4.79	331	ePn	P	12 48 02.3	+2.1
RAO	Raoul Island	7.40	169	ePn	P	12 48 21.6	-1.0
RAO	Raoul Island	7.40	169	P	P	12 48 22.5	-0.1
	535nm,0.3s,baz=292,slow=3.2,SNR=32						
RAO				S	S	12 49 52.5	-2.8
	488nm,0.3s,baz=74,slow=22,SNR=7.2						
NIUE	Niue	9.41	74	P	P	12 48 42.3	0.0
	baz=9.2,SNR=4.4						
NIUE				S	S	12 50 30.8	-0.5
	baz=9.2,SNR=4.9						
AFI	Afiamalu	10.86	44	ePn	P	12 48 54.3	-2.6
AFI				eSn	S	12 50 50.5	-7.4
AFI				ScP	ScP	12 56 37.5	+0.6
AFI	Afiamalu	10.86	44	P	P	12 48 54.5	-2.5
	12nm,0.3s,baz=40,slow=4.5,SNR=18						
AFI				S	S	12 50 50.4	-7.6
	6.4nm,0.3s,baz=45,slow=19,SNR=5.0						
AFI				ScP	ScP	12 56 37.5	+0.6
	3.6nm,0.3s,baz=247,slow=7.7,SNR=5.7						
DZM	Mont Dzumac	13.04	267	eP	P	12 49 19.6	+0.5
DZM	Mont Dzumac	13.04	267	ePn	P	12 49 23.7	+4.6
DZM				eSn	S	12 51 43.4	+5.0
	315nm,1.4s						
DZM	Mont Dzumac	13.04	267	P	P	12 49 19.5	+0.5
DZM				S	S	12 51 37.4	-1.1
DZM				ScP	ScP	12 56 42.9	+2.7
DZM				ScS	ScS	13 00 23.8	+6.5
DZM	Mont Dzumac	13.04	267	P	P	12 49 19.5	+0.5
	4.8nm,0.3s,baz=75,slow=19,SNR=55						
DZM				S	S	12 51 37.4	-1.1
	0.2nm,0.3s,baz=74,slow=18,SNR=1.7						
DZM				ScP	ScP	12 56 42.9	+2.7
	1.3nm,0.3s,baz=52,slow=15,SNR=24						
DZM				ScS	ScS	13 00 23.8	+6.5
	0.1nm,0.3s,baz=311,slow=21,SNR=5.6						
NFK	Norfolk Island	13.35	236	P	P	12 49 24.4	+2.4
	baz=14,SNR=4.7						
FUNA	Funafuti	13.41	354	ePn	P	12 49 22.2	-0.7
OUZ	Omahuta	14.54	203	ePn	P	12 49 35.4	+1.7
OUZ	Omahuta	14.54	203	PN	P	12 49 35.5	+1.8
OTAZ	Otara	15.71	197	PN	P	12 49 46.6	+1.9
PUZ	Puketiti	16.18	186	PN	P	12 49 47.5	-1.6
PUZ				SN	S	12 52 24.7	-6.9
URZ	Urewera	16.51	189	eP	P	12 49 49.0	-3.0
	109nm,0.7s						
URZ				S	S	12 52 29.0	-7.9
URZ				ScP	ScP	12 56 45.2	-0.8
URZ	Urewera	16.51	189	PN	P	12 49 48.8	-3.3
URZ				SN	S	12 52 29.1	-7.9
URZ	Urewera	16.51	189	P	P	12 49 48.9	-3.1
	18nm,0.3s,baz=5.0,slow=4.1,SNR=67						
URZ				S	S	12 52 29.0	-7.9
	15nm,0.3s,baz=352,slow=20,SNR=19						
URZ				ScP	ScP	12 56 45.2	-0.8
	3.1nm,0.3s,baz=47,slow=9.4,SNR=5.0						
MWZ	Matawai	16.52	188	PN	P	12 49 49.5	-2.7
MWZ				SN	S	12 52 31.1	-6.2
CNGZ	Carnagh Statio	16.59	186	PN	P	12 49 51.8	-1.0
RAHZ	Arahi	17.16	189	PN	P	12 49 56.6	-1.4
KNZ	Kokohu	17.18	187	ePN	P	12 49 55.5	-2.6
HIZ	Hauiti	17.20	195	PN	P	12 49 59.9	+1.5
NMHZ	Naumai	17.38	190	PN	P	12 49 58.8	-1.2
BKZ	Black Stump Fm	17.50	190	PN	P	12 49 58.2	-2.9
BKZ				SN	S	12 52 44.3	-8.8
OTVZ	Oturere	17.65	192	PN	P	12 50 01.0	-1.6
TUVZ	Tukino	17.75	192	PN	P	12 50 02.3	-1.2
FWVZ	Far West T-bar	17.76	193	PN	P	12 50 01.9	-1.8
WHVZ	Whangaehu Hut	17.77	193	PN	P	12 50 02.2	-1.6
TRVZ	Turoa	17.80	193	PN	P	12 50 02.4	-1.7
VRZ	Vera Road	17.81	195	PN	P	12 50 06.1	+2.2
WNVZ	Wahianoa	17.82	193	PN	P	12 50 03.1	-1.1
BHHZ	Black Hill Sta	17.88	191	PN	P	12 50 01.5	-3.2
BHHZ				SN	S	12 52 56.5	-3.0
RAEZ	Rainy Point	18.05	195	PN	P	12 50 09.3	+3.2
KAHZ	Kahuranaki	18.05	189	PN	P	12 50 04.9	-1.3
PKE	Pukeiti	18.07	197	PN	P	12 50 10.5	+4.2
NEZ	North Egmont	18.11	196	ePN	P	12 50 09.3	+2.6
DFE	Dawson Falls	18.16	196	PN	P	12 50 10.5	+3.3
PXZ	Pawanui	18.28	189	PN	P	12 50 06.9	-1.3
RAR	Rarotonga	18.36	91	eP	P	12 50 09.0	-0.1
	402nm,1.5s						
RAR	Rarotonga	18.36	91	P	P	12 50 09.7	+0.5
	3.9nm,0.3s,baz=218,slow=0.0,SNR=8.2						
BFZ	Birch Farm	19.01	190	PN	P	12 50 12.8	-2.1
MRZ	Mangatainoka R	19.11	192	PN	P	12 50 12.9	-2.8
OGWZ	Otaki Gorge	19.34	192	PN	P	12 50 15.6	-2.2
KIW	Kapiti Island	19.43	193	PN	P	12 50 16.1	-2.5
CAW	Cannon Point	19.64	192	PN	P	12 50 18.6	-1.9
WEL	Wellington	19.87	193	PN	P	12 50 21.6	-1.0
SNZO	South Karori	19.91	193	eP	P	12 50 21.0	-1.9
	122nm,0.6s						
SNZO				eS	S	12 53 26.4	-5.2
SNZO	South Karori	19.91	193	PN	P	12 50 21.7	-1.2
TCW	Tory Channel	19.91	194	PN	P	12 50 21.9	-1.0
QRZ	Quartz Range	19.99	198	PN	P	12 50 24.0	+0.3
PLWZ	Palliser	20.05	192	PN	P	12 50 22.4	-1.9
NNZ	Nelson	20.12	196	PN	P	12 50 23.7	-1.2
TUWZ	Tuamarina	20.19	194	PN	P	12 50 24.0	-1.4
THZ	Tophouse	20.76	196	PN	P	12 50 27.3	-3.4
KHZ	Kahutara	21.22	194	eP	P	12 50 33.4	-1.3
	100nm,0.6s						
KHZ				eS	S	12 53 48.2	-4.2
KHZ	Kahutara	21.22	194	PN	P	12 50 32.9	-1.8
LHI	Lord Howe Isla	21.35	239	P	P	12 50 38.8	+2.8
	baz=22,SNR=3.6						
LTZ	Lake Taylor	21.88	196	PN	P	12 50 38.8	-1.9
OXZ	Oxford	22.45	196	PN	P	12 50 43.8	-1.8
WVZ	Waitaha Valley	22.58	199	PN	P	12 50 45.4	-1.4
RPZ	Rata Peaks	23.07	198	eP	P	12 50 50.4	-0.9
	49nm,0.9s						
RPZ				ScP	ScP	12 57 01.3	-0.3
RPZ				ScS	ScS	13 00 46.6	-1.8
RPZ	Rata Peaks	23.07	198	P	P	12 50 50.9	-0.3
	26nm,0.5s,baz=333,slow=3.2,SNR=22						
RPZ				ScP	ScP	12 57 01.3	-0.3
	13nm,0.5s,baz=34,slow=3.9,SNR=6.2						
RPZ				ScS	ScS	13 00 46.6	-1.8
	24nm,1.0s,baz=36,slow=10,SNR=5.5						
HNR	Honiara	23.34	299	eP	P	12 50 53.9	-0.1
	253nm,1.0s						
HNR				S	S	12 54 24.6	-1.9
HNR	Honiara	23.34	299	P	P	12 50 53.3	-0.7
	91nm,0.6s,baz=215,slow=4.0,SNR=15						
HNR				S	S	12 54 24.6	-1.9
	67nm,1.0s,baz=49,slow=20,SNR=4.4						
FOZ	Fox Glacier	23.35	200	PN	P	12 50 52.0	-1.6
JCZ	Jackson Bay	24.11	201	PN	P	12 50 59.8	-0.7
TARA	Tarawa	24.32	341	eP	P	12 51 03.5	+0.8
	620nm,0.8s						
ODZ	Otahua Downs	24.41	197	eP	P	12 51 01.4	-1.7
	28nm,1.0s						
TUZ	Tuapeka	25.53	198	PN	P	12 51 12.6	-0.3
WHZ	Wether Hill Ro	25.99	200	PN	P	12 51 16.6	-0.3
EIDS	Eidsvold	27.14	257	eP	P	12 51 28.3	+1.0
	110nm,0.6s						
EIDS				eS	S	12 55 26.4	+0.7
EIDS	Eidsvold	27.14	257	P	P	12 51 28.3	+1.0
	baz=27,SNR=84						
EIDS				S	S	12 55 26.1	+0.4
	baz=27,SNR=7.8						
ARMA	Armidale	27.19	246	eP	P	12 51 30.0	+2.1
	147nm,0.8s						
ARMA				eScP	ScP	12 57 16.7	+2.9
ARMA	Armidale	27.19	246	P	P	12 51 30.0	+2.1
	baz=27,SNR=167						
ARMA				S	S	12 55 29.5	+2.8
	baz=27,SNR=16						
TBI	Tubuai	27.73	99	eP	P	12 51 33.6	+1.0
TBI				eLR	LR	12 58 13.1	
MGCD	Mangrove Creek	28.27	240	P	P	12 51 39.1	+2.0
	baz=28,SNR=92						
PAE	Paea	28.45	87	eP	P	12 51 39.2	+0.4
PPT2	Papeete2	28.46	87	eP	P	12 51 39.8	+0.7
PPT2				eLR	LR	12 58 22.0	
	1µm,26.2s						
PPT	Papeete	28.47	87	P	P	12 51 40.0	+0.9
PPT	Papeete	28.47	87	P	P	12 51 40.0	+0.9
	82nm,0.8s,baz=93,slow=13,SNR=4.4						
TIAR	Tiarei	28.69	87	eP	P	12 51 41.5	+0.6
	190nm,0.9s						
TVO	Taravao	28.72	87	eP	P	12 51 42.9	+1.6
RMQ	Roma	29.26	255	P	P	12 51 47.7	+1.9
	baz=30,SNR=78						
RMQ				S	S	12 55 53.0	-5.7
	baz=30,SNR=5.5						
MEH	Mehetia	29.80	88	eP	P	12 51 51.9	+1.3
CNB	Canberra Magne	30.26	237	P	P	12 51 56.2	+1.8
	baz=30,SNR=195						
CAN	Canberra	30.55	237	eP	P	12 51 58.0	+1.2
CAN				pmax	pmax		
	comp=Z,118nm,0.8s						
CAN	Canberra	30.55	237	eP	P	12 51 58.0	+1.2
	comp=Z,118nm,0.8s						
CAN				eScP	ScP	12 57 26.8	+2.3
MILA	Mila	30.98	234	P	P	12 52 02.0	+1.5
	baz=31,SNR=10						
CTA	Charters Tower	31.99	267	P	P	12 52 10.2	+1.0
CTA				PcP	PcP	12 54 41.8	+0.8
CTA				S	S	12 56 40.2	-0.4
CTA				ScP	ScP	12 57 31.4	+1.8
CTA	Charters Tower	31.99	267	P	P	12 52 10.2	+1.0
	comp=Z,230nm,0.6s,baz=94,slow=11,SNR=420						
CTA				PcP	PcP	12 54 41.8	+0.8
	comp=Z,31nm,0.6s,baz=111,slow=3.3,SNR=6.1						
CTA				S	S	12 56 40.2	-0.4
	comp=Z,6.6nm,1.0s,baz=264,slow=20,SNR=7.6						
CTA				ScP	ScP	12 57 31.4	+1.8
	comp=Z,51nm,0.8s,baz=106,slow=2.5,SNR=18						
CTAO	Charters Tower	31.99	267	eP	P	12 52 10.0	+0.8
CTAO				e		12 54 41.8	
CTAO				pmax	pmax		
	comp=Z,206nm,0.7s						
CTAO	Charters Tower	31.99	267	eP	P	12 52 10.0	+0.8
	comp=Z,206nm,0.7s						
CTAO				ePcP	PcP	12 54 41.8	+0.8
CTAO				eScP	ScP	12 57 31.8	+2.2
XMAS	Kiritimati	32.15	45	eP	P	12 52 10.9	+0.4
	comp=Z,110nm,0.9s						
CMSA	Cobar Meteorol	32.40	245	P	P	12 52 13.8	+1.2
	baz=33,SNR=398						
CMSA				S	S	12 56 47.5	+0.8
	baz=33,SNR=5.1						
QLP	Quilpie	33.31	255	P	P	12 52 21.0	+0.7
	baz=34,SNR=63						
TOO	Toolangi	33.92	235	P	P	12 52 26.5	+1.2
	baz=34,SNR=120						
MTSU	Mount Surprise	34.16	270	P	P	12 52 28.4	+0.9
	baz=34,SNR=327						
PMG	Port Moresby	34.35	286	eP	P	12 52 29.9	+0.8
	comp=Z,410nm,0.8s						
PMG				epP	pP	12 54 09.1	+3.1
PMG				ePcP	PcP	12 54 47.7	-0.2
PMG				PcP	PcP	12 54 48.1	+0.2
PMG				S	S	12 57 15.0	-1.4
PMG				ScP	ScP	12 57 39.6	+1.6
PMG				eScP	ScP	12 57 40.5	+2.5
PMG	Port Moresby	34.35	286	P	P	12 52 29.6	+0.5
	comp=Z,548nm,0.9s,comp=Z,4µm						
PMG	Port Moresby	34.35	286	P	P	12 52 29.9	+0.8
	comp=Z,417nm,0.8s,baz=82,slow=5.4,SNR=123						
PMG				PcP	PcP	12 54 48.1	+0.2
	comp=Z,38nm,0.9s,baz=124,slow=5.4,SNR=3.4						
PMG				S	S	12 57 15.0	-1.4
	comp=Z,6.9nm,0.8s,baz=87,slow=19,SNR=4.6						
PMG				ScP	ScP	12 57 39.6	+1.6
	comp=Z,62nm,1.0s,baz=37,slow=2.6,SNR=10.0						
TAU	Tasmania Unive	34.61	225	eP	P	12 52 31.6	+0.7
TAU				pmax	pmax		
	comp=Z,20nm,0.7s						
TAU	Tasmania Unive	34.61	225	eP	P	12 52 31.6	+0.7
	comp=Z,20nm,0.7s						
STKA	Stephens Creek	35.91	246	eP	P	12 52 43.1	+1.3
	comp=Z,29nm,0.8s						
STKA				S	S	12 57 38.2	-1.1
STKA				eScP	ScP	12 57 43.8	+0.3
STKA				ScP	ScP	12 57 44.6	+1.1
STKA				ScS	ScS	13 01 51.6	+0.5
STKA	Stephens Creek	35.91	246	P	P	12 52 43.1	+1.3
	comp=Z,147nm,0.7s,baz=92,slow=9.5,SNR=317						
STKA				S	S	12 57 38.2	-1.1
	comp=Z,14nm,1.2s,baz=198,slow=20,SNR=5.8						
STKA				ScP	ScP	12 57 44.6	+1.1
	comp=Z,35nm,0.8s,baz=5.8,slow=4.5,SNR=9.9						
STKA				ScS	ScS	13 01 51.6	+0.5
	comp=Z,1.6nm,0.8s,baz=197,slow=19,SNR=3.7						
STKA	Stephens Creek	35.91	246	P	P	12 52 43.1	+1.3
	baz=36,SNR=228						
STKA				S	S	12 57 39.9	+0.5
	baz=36,SNR=5.3						
COEN	Coen	36.31	276	eP	P	12 52 46.6	+1.2
	comp=Z,1µm,0.8s						
COEN				epP	pP	12 54 27.0	+3.5
COEN				ePcP	PcP	12 54 54.1	+0.3
COEN				eScP	S	12 57 48.0	+2.2
COEN	Coen	36.31	276	P	P	12 52 46.5	+1.2
	baz=37,SNR=157						
COEN				S	S	12 57 47.2	+1.4
	baz=37,SNR=6.2						
ARPS	Mount Arapiles	36.52	237	P	P	12 52 47.7	+0.9
	baz=37,SNR=20						
QIS	Mount Isa	38.06	264	P	P	12 52 59.7	+0.1
	baz=38,SNR=29						
BBOO	Buckleboo	40.66	245	eP	P	12 53 20.6	+0.4
	comp=Z,3µm,0.9s						
BBOO	Buckleboo	40.66	245	P	P	12 53 20.6	+0.4
	baz=41,SNR=127						
MMPI	Merauke	40.83	283	P	P	12 53 22.7	+0.9
	baz=41,SNR=7.1						
RKT	Rikitea	41.02	100	eP	P	12 53 22.5	-0.7
AS31	Alice Springs	42.84	258	eP	P	12 53 37.9	+0.3
AS31				ePcP	PcP	12 55 15.3	+0.3
AS31				eScP	ScP	12 58 13.1	+2.3
AS31				eS	S	12 59 18.9	-1.7
ASAR	Alice Springs	42.84	258	P	P	12 53 36.8	-0.8
ASAR				PcP	PcP	12 55 15.5	+0.5
ASAR				ScP	ScP	12 58 12.7	+1.8
ASAR				S	S	12 59 18.6	-2.0
ASAR				ScS	ScS	13 02 34.2	+1.1
ASAR	Alice Springs	42.84	258	P	P	12 53 36.8	-0.8
	comp=Z,319nm,0.8s,baz=101,slow=7.9,SNR=2205						
ASAR				PcP	PcP	12 55 15.5	+0.5
	comp=Z,28nm,0.6s,baz=116,slow=3.8,SNR=8.5						
ASAR				ScP	ScP	12 58 12.7	+1.8
	comp=Z,18nm,0.8s,baz=108,slow=3.9,SNR=8.9						
ASAR				S	S	12 59 18.6	-2.0
	comp=Z,37nm,0.9s,baz=95,slow=16,SNR=28						
ASAR				ScS	ScS	13 02 34.2	+1.1
	comp=Z,12nm,0.9s,baz=103,slow=7.7,SNR=12						
WRAB	Tennant Creek	43.03	264	eP	P	12 53 38.8	-0.2
WRAB				e		12 55 16.5	
WRAB				eS	S	12 59 21.1	-2.2
WRAB				pmax	pmax		
	comp=Z,281nm,0.9s						
WRAB	Tennant Creek	43.03	264	eP	P	12 53 38.8	-0.2
	comp=Z,281nm,0.9s						
WRAB				ePcP	PcP	12 55 16.5	+0.8
WRAB				eScP	ScP	12 58 13.8	+2.2
WRAB				eS	S	12 59 21.1	-2.2
WRAB	Tennant Creek	43.03	264	P	P	12 53 38.0	-1.0
	comp=Z,2µm,0.8s						
WRA	Warramunga Arr	43.04	264	P	P	12 53 38.2	-0.8
WRA				PcP	PcP	12 55 16.5	+0.8
WRA				ScP	ScP	12 58 12.9	+1.2
WRA				S	S	12 59 21.0	-2.4
WRA				PKiKP	PKiKP	13 02 15.8	-1.2
WRA				ScS	ScS	13 02 36.4	+2.0
WRA	Warramunga Arr	43.04	264	P	P	12 53 38.2	-0.8
	comp=Z,212nm,0.8s,baz=98,slow=7.0,SNR=574						
WRA				PcP	PcP	12 55 16.5	+0.8
	comp=Z,36nm,1.1s,baz=95,slow=4.2,SNR=8.6						
WRA				ScP	ScP	12 58 12.9	+1.2
	comp=Z,51nm,1.0s,baz=97,slow=4.2,SNR=27						
WRA				S	S	12 59 21.0	-2.4
	comp=Z,8.7nm,0.6s,baz=96,slow=14,SNR=11						
WRA				PKiKP	PKiKP	13 02 15.8	-1.2
	comp=Z,1.2nm,0.8s,baz=65,slow=0.7,SNR=4.6						
WRA				ScS	ScS	13 02 36.4	+2.0
	comp=Z,10nm,1.3s,baz=100,slow=8.2,SNR=5.2						
WAKE	Wake Island	43.17	341	eP	P	12 53 40.5	+0.6
	comp=Z,336nm,0.8s						
KDU	Kakadu	46.61	273	P	P	12 54 06.4	0.0
	baz=47,SNR=166						
KDU				S	S	13 00 11.1	-2.5
	baz=47,SNR=9.6						
FORT	Forrest	47.45	248	eP	P	12 54 12.5	+0.1
	comp=Z,436nm,0.7s						
FORT				eScP	ScP	12 58 31.5	+1.7
FORT				eS	S	13 00 22.6	-2.2
FORT	Forrest	47.45	248	P	P	12 54 12.6	+0.1
	baz=48,SNR=114						
FORT				S	S	13 00 17.8	-7.0
	baz=48,SNR=8.7						
POHA	Pohakuloa	47.62	31	eP	P	12 54 15.2	+1.1
	comp=Z,902nm,2.3s						
MTN	Manton Dam	47.80	272	P	P	12 54 15.0	-0.3
	baz=48,SNR=139						
MTN				S	S	13 00 27.7	-2.3
	baz=48,SNR=18						
KIP	Kipapa	47.94	27	ceP	P	12 54 17.6	+1.4
KIP				pmax	pmax		
	comp=Z,143nm,1.5s						
KIP	Kipapa	47.94	27	eP	P	12 54 16.4	+0.2
	comp=Z,143nm,1.1s						
KNRA	Kununurra	49.19	268	P	P	12 54 26.0	+0.4
	baz=49,SNR=176						
KNRA				S	S	13 00 47.1	-1.8
	baz=49,SNR=9.3						
GUMO	Guam	49.69	312	eP	P	12 54 30.2	+1.0
	comp=Z,465nm,1.1s						
MIDW	Midway	49.92	2	eP	P	12 54 30.7	+0.1
	comp=Z,78nm,0.6s						
FAKI	Fak Fak	50.50	285	P	P	12 54 35.1	-0.1
	baz=51,SNR=28						
FAKI				S	S	13 01 04.9	-1.8
	baz=51,SNR=4.8						
FITZ	Fitzroy Crossi	51.47	264	eP	P	12 54 42.6	+0.5
	comp=Z,203nm,1.0s						
FITZ	Fitzroy Crossi	51.47	264	P	P	12 54 42.7	+0.6
	comp=Z,88nm,0.6s,baz=112,slow=4.0,SNR=108						
FITZ	Fitzroy Crossi	51.47	264	P	P	12 54 42.8	+0.6
	baz=52,SNR=128						
FITZ				S	S	13 01 19.7	+0.1
	baz=52,SNR=15						
DRV	Dumont d'Urvil	51.52	199	R		13 07 00.0	
SWI	Sorong	52.30	287	P	P	12 54 48.7	+0.6
	baz=53,SNR=122						
SWI				S	S	13 01 31.3	+0.5
	baz=53,SNR=5.5						
KMBL	Kambalda	52.70	247	P	P	12 54 50.7	-0.1
	baz=53,SNR=22						
AAI	Ambon	53.83	282	P	P	12 54 59.2	+0.2
	baz=54,SNR=16						
AAI				S	S	13 01 50.7	-0.3
	baz=54,SNR=5.5						
MEEK	Meekatharra	56.13	252	P	P	12 55 14.5	-0.4
	baz=56,SNR=42						
KLBR	Kellerberrin	56.18	246	P	P	12 55 15.3	+0.2
	baz=56,SNR=80						
MBWA	Marble Bar	56.19	259	eP	P	12 55 15.4	+0.1
	comp=Z,330nm,0.7s						
MBWA				ePcP	PcP	12 56 04.5	0.0
SBA	Scott Base	56.34	183	eP	P	12 55 18.3	+2.9
SBA				pmax	pmax		
	comp=Z,108nm,1.0s						
SBA	Scott Base	56.34	183	eP	P	12 55 18.2	+2.9
	comp=Z,108nm,1.0s						
VNDA	Vanda	56.34	185	eP	P	12 55 17.2	+1.8
	comp=Z,37nm,0.8s						
VNDA				ScP	ScP	12 59 07.0	-0.6
VNDA	Vanda	56.34	185	P	P	12 55 17.4	+2.0
	comp=Z,31nm,0.7s,baz=354,slow=7.6,SNR=179						
VNDA				ScP	ScP	12 59 07.0	-0.6
	comp=Z,4.9nm,0.8s,baz=357,slow=5.9,SNR=3.3						
NWAO	Narrogin (SRO)	56.48	244	eP	P	12 55 17.2	+0.1
	comp=Z,95nm,1.0s						
NWAO	Narrogin (SRO)	56.48	244	P	P	12 55 17.4	+0.2
	comp=Z,87nm,0.9s,baz=120,slow=5.9,SNR=51						
RKGY	Rocky Gully	56.53	242	P	P	12 55 18.2	+0.8
	baz=57,SNR=24						
MORW	Morawa	57.99	249	P	P	12 55 27.6	+0.1
	baz=58,SNR=56						
WSI	Waingapu	58.88	272	P	P	12 55 34.6	+1.0
	baz=59,SNR=5.6						
LUWI	Luwuk	59.85	282	P	P	12 55 40.9	+0.8
	baz=60,SNR=24						

KAPI **Kappang** 61.04 277 *e*P P 12 55 47.2 -0.7
comp=Z,518nm,2.0s
KAPI **Kappang** 61.04 277 P P 12 55 47.5 -0.5
comp=Z,399nm,0.9s,SNR=7.2
KAPI **Kappang** 61.04 277 P P 12 55 47.3 -0.7
comp=Z,102nm,1.0s,comp=Z,2µm
KAPI **Kappang** 61.04 277 P P 12 55 47.1 -0.9
comp=Z,44nm,0.8s,baz=126,slow=2.9,SNR=15
DAV **Davao City (W)** 61.05 292 *e*P P 12 55 48.8 +0.8
comp=Z,359nm,0.7s
DAV **Davao City (W)** 61.05 292 P P 12 55 49.5 +1.5
comp=Z,583nm,0.9s
DAV **Davao City (W)** 61.05 292 P P 12 55 48.8 +0.8
comp=Z,382nm,0.7s,baz=12,slow=2.8,SNR=7.4
BUKP **Musuan** 61.90 292 *e*P P 12 55 54.3 +0.8
CASY **Casey** 62.05 205 *e*P P 12 55 53.7 +0.1
comp=Z,7.3nm,0.7s
CTBH **Cotabato--PC H** 62.28 291 ||*e*P P 12 55 56.5 +0.5
MSLP **Maasin** 63.20 294 *e*P P 12 56 02.2 +0.3
PAGZ **Pagadian** 63.33 291 *e*P P 12 56 03.7 +1.0
KHKI **Kahang-Kahang** 63.67 271 P P 12 56 04.2 -0.7
comp=Z,240nm,0.9s,comp=Z,2µm
DNP **Denpasar** 63.94 271 P P 12 56 07.4 +0.8
comp=Z,698nm,0.7s
IGBI **Denpasar** 63.95 271 P P 12 56 07.0 +0.3
comp=Z,185nm,1.0s,comp=Z,18µm
IPIL **Ipil** 64.00 291 *e*P P 12 56 07.6 +0.6
SRBI **Singaraja** 64.14 272 P P 12 56 07.7 -0.2
comp=Z,438nm,0.9s,comp=Z,4µm
JAGI **Jajag, Banyuwa** 64.99 271 P P 12 56 12.3 -1.0
comp=Z,434nm,1.0s,comp=Z,4µm
JAGI **Jajag, Banyuwa** 64.99 271 P P 12 56 12.5 -0.8
baz=65,SNR=28
GUIM **Jordan** 65.38 294 *e*P P 12 56 13.3 -2.3
KMMI **Kalianget** 65.66 272 P P 12 56 18.3 +0.9
RCP **Roxas** 65.71 295 ||*e*P P 12 56 17.9 +0.2
GMJI **Gumukmas** 65.72 271 P P 12 56 17.3 -0.5
comp=Z,297nm,0.9s,comp=Z,3µm
BLJI **Banyuglugur** 65.76 271 P P 12 56 18.1 +0.1
comp=Z,497nm,0.8s,comp=Z,4µm
MYLDM **Lahad Datu** 66.38 286 P P 12 56 24.5 +2.7
MYLDM **Lahad Datu** 66.38 286 P P 12 56 24.2 +2.3
comp=Z,95nm,0.9s,comp=Z,2µm
TSM **Tawau** 66.55 285 P P 12 56 24.2 +1.3
KRKI **Karangkates** 66.67 270 P P 12 56 24.5 +0.8
comp=Z,622nm,0.7s,comp=Z,16µm
JHJ **Hachijo jima 2** 67.15 324 P P 12 56 26.3 +0.1
comp=Z,257nm,0.6s,baz=195,slow=12,SNR=6.6
PWJI **Pagerwojo** 67.32 270 P P 12 56 27.6 -0.1
comp=Z,448nm,0.7s,comp=Z,3µm
SJI **Sawahan** 67.46 271 P P 12 56 28.9 +0.3
comp=Z,370nm,1.1s,comp=Z,3µm
SDKM **Sandakan** 67.75 286 P P 12 56 30.5 +0.2
PCJI **Pacitan** 67.85 270 P P 12 56 31.3 +0.4
comp=Z,1µm,0.6s,comp=Z,14µm
QSPA **South Pole Qui** 68.12 180 P P 12 56 33.0 +1.3
QSPA pP **pP** 12 58 32.6 +2.9
QSPA S **S** 13 04 47.0 +1.1
QSPA **South Pole Qui** 68.12 180 P P 12 56 33.0 +1.3
comp=Z,141nm,0.8s,baz=20,slow=1.2,SNR=120.1
QSPA pP **pP** 12 58 32.6 +2.9
comp=Z,51nm,1.0s,baz=39,slow=5.6,SNR=7.4
QSPA S **S** 13 04 46.9 +1.1
comp=Z,6.9nm,1.1s,baz=56,slow=24,SNR=16
TGY **Tagaytay City** 68.52 296 P P 12 56 35.8 +0.9
TGY **Tagaytay City** 68.52 296 P P 12 56 35.8 +0.9
comp=Z,108nm,0.4s,baz=179,slow=14,SNR=6.2
UGM **Wanagama** 68.55 270 *e*P P 12 56 35.4 +0.3
UGM **Wanagama** 68.55 270 P P 12 56 35.5 +0.3
comp=Z,492nm,0.8s
UGM **Wanagama** 68.55 270 P P 12 56 35.3 +0.1
baz=69,SNR=41
KDM **Kudat** 68.63 287 P P 12 56 37.5 +1.9
YOGI **Yogyakarta** 68.80 270 P P 12 56 37.3 +0.7
comp=Z,870nm,0.7s
KKM **Kota Kinabalu** 68.80 286 P P 12 56 37.5 +0.7
KKM **Kota Kinabalu** 68.80 286 P P 12 56 37.8 +1.0
baz=69,SNR=10
SMRI **Semarang** 68.93 271 P P 12 56 38.3 +0.9
comp=Z,398nm,0.8s,comp=Z,3µm
BJII **Banjamegara** 69.51 270 P P 12 56 41.7 +0.7
comp=Z,198nm,1.4s,comp=Z,1µmcomp=Z,36µm
CLJI **Cilicap** 70.02 270 P P 12 56 43.0 -0.9
comp=Z,306nm,0.9s,comp=Z,34µm
JOW **Kunigami** 70.05 311 *e*P P 12 56 44.5 +0.7
comp=Z,75nm,0.8s
TGJI **Tegal** 70.22 270 P P 12 56 44.8 -0.3
comp=Z,303nm,0.9s,comp=Z,3µmcomp=Z,74µm
BTM **Bintulu** 70.41 282 P P 12 56 47.3 +1.1
MAJO **Matsushiro** 70.57 325 *e*P P 12 56 47.1 +0.4
MAJO pmax pmax
comp=Z,95nm,0.8s
MAJO **Matsushiro** 70.57 325 *e*P P 12 56 47.1 +0.4
comp=Z,95nm,0.8s
MAT **Matsushiro** 70.57 325 P P 12 56 47.0 +0.3
MAT S **S** 13 05 13.6 -0.9
SBUM **Sibu** 70.89 281 P P 12 56 50.0 +1.0
SBUM **Sibu** 70.89 281 P P 12 56 49.4 +0.4
comp=Z,89nm,1.2s,comp=Z,1µm
CISI **Cisompet, Garu** 71.19 269 P P 12 56 50.0 -0.9
comp=Z,381nm,1.1s,comp=Z,3µm
CISI **Cisompet, Garu** 71.19 269 P P 12 56 50.2 -0.7
baz=71,SNR=16
LEM **Lembang** 71.63 270 P P 12 56 53.8 +0.2
comp=Z,780nm,1.0s,comp=Z,7µm
LEM **Lembang** 71.63 270 P P 12 56 54.2 +0.7
baz=72,SNR=22
XMI **Christmas Isla** 72.17 266 P P 12 56 57.4 +0.9
baz=72,SNR=3.3
XMIS **Christmas Isla** 72.19 266 *e*P P 12 56 57.1 +0.4
comp=Z,816nm,1.0s
XMIS **Christmas Isla** 72.19 266 P P 12 56 57.4 +0.8
baz=72,SNR=7.0
KSM **Kuching** 72.25 279 *e*P P 12 56 57.2 +0.3
KSM **Kuching** 72.25 279 P P 12 56 57.8 +0.8
KSM **Kuching** 72.25 279 P P 12 56 57.1 +0.2
comp=Z,367nm,0.9s,comp=Z,3µm
KSM **Kuching** 72.25 279 P P 12 56 57.6 +0.7
baz=73,SNR=234
JNU **Nakatsue** 72.39 318 *e*P P 12 56 58.3 +0.9
comp=Z,59nm,1.1s
JNU **Nakatsue** 72.39 318 P P 12 56 57.8 +0.4
comp=Z,70nm,0.9s,baz=82,slow=4.4,SNR=15
ERM **Erimo** 72.42 332 *e*P P 12 57 00.0 +2.8
ERM pmax pmax
comp=Z,68nm,0.8s
ERM **Erimo** 72.42 332 *e*P P 12 57 00.0 +2.8
comp=Z,68nm,0.8s
SKJI **Sukabumi** 72.55 269 P P 12 56 57.5 -1.2
comp=Z,341nm,1.0s,comp=Z,3µm
TWG **Pinlang** 73.01 304 *e*P P 12 56 59.8 -1.3
YULB **Yu-li** 73.15 304 *e*P P 12 57 00.7 -1.1
comp=Z,52nm,0.6s
KUR **Kuril'sk** 73.18 337 *d*|*P P 12 57 02.7 +1.2
KUR *i* *PP **pP** 12 58 59.3 -2.7
KUR *i* S **S** 13 05 38.1 -4.9
KUR pmax pmax
comp=Z,281nm,1.8s
KUR pmax pmax
comp=E,67nm,1.7s
KUR pmax pmax
comp=N,35nm,1.7s
SBJI **Serang** 73.26 270 P P 12 57 03.0 +0.3
NACB **Ninganchiao** 73.35 305 *e*P P 12 57 03.0 0.0
comp=N,264nm,0.8s
TPUB **Ta-pu** 73.61 304 *e*P P 12 57 03.9 -0.7
comp=N,377nm,0.8s
SSLB **Suanglung** 73.63 305 *e*P P 12 57 03.9 -0.7
comp=N,183nm,0.6s
YHNB **Yeheng** 73.79 306 *e*P P 12 57 05.5 -0.1
comp=N,208nm,0.9s
TATO **Taipei** 73.88 306 P P 12 57 06.9 +1.0
SNR=6.0
TATO **Taipei** 73.88 306 *e*P P 12 57 06.1 +0.2
comp=N,294nm,0.8s
ATKA **Atka Island** 73.98 3 *e*P P 12 57 05.8 -0.1
comp=N,312nm,0.9s
ASAJ **Asahikawa** 74.35 333 *e*P P 12 57 10.5 +2.3
comp=N,44nm,0.8s
ASAJ **Asahikawa** 74.35 333 P P 12 57 10.5 +2.3
comp=N,95nm,0.8s,baz=213,slow=7.5,SNR=80
FX1 **Attu Island--F** 74.79 355 *e*P P 12 57 10.2 -0.3
QZH **Quanzhou** 76.06 304 ||*P P 12 57 20.6 +2.5
QZH S **S** 13 06 17.0 +1.9
QZH pmax pmax
comp=Z,490nm,0.8s

UNV **Unalaska Valle** 76.32 8 *e*P P 12 57 18.8 -0.1
comp=Z,69nm,0.7s
YSS **Yuzh-Sakhalins** 76.58 334 ||*i*P P 12 57 22.7 +2.2
YSS *e* 12 59 26.0
YSS pmax pmax
comp=E,60nm,1.0s
YSS pmax pmax
comp=Z,120nm,1.0s
MNAI **Manna** 76.84 271 P P 12 57 23.4 +0.7
baz=77,SNR=6.1
PET **Petropavlovsk** 77.04 347 ||*i*P P 12 57 22.9 +0.1
PET *e**SP **sP** 13 00 25.1 +0.3
PET *e*S **S** 13 06 24.5 +0.2
PET pmax pmax
comp=Z,102nm,0.8s
PET pmax pmax
comp=Z,300nm,2.7s
PET pmax pmax
comp=Z,100nm,17.2s
KSRS **Korea Array** 77.07 320 P P 12 57 24.6 +1.3
comp=Z,28nm,0.9s,baz=139,slow=5.8,SNR=107
KSAR **Wonju Array Be** 77.08 320 P P 12 57 24.6 +1.2
PEA0B **Petropavlovsk-** 77.33 346 *e*P P 12 57 24.8 +0.4
PETK **Petropavlovsk-** 77.33 346 P P 12 57 25.0 +0.6
PETK **Petropavlovsk-** 77.33 346 P P 12 57 25.0 +0.6
PETK PKiKP **PKiKP** 13 02 56.9 -1.6
PETK **Petropavlovsk-** 77.33 346 P P 12 57 25.0 +0.6
comp=Z,209nm,0.9s,baz=141,slow=7.8,SNR=329
PETK PKiKP **PKiKP** 13 02 56.9 -1.6
comp=Z,1.4nm,0.7s,baz=156,slow=3.5,SNR=4.9
INCN **Inchon** 77.87 319 P P 12 57 29.2 +1.5
SNR=12
INCN **Inchon** 77.87 319 *e*P P 12 57 29.3 +1.5
comp=Z,136nm,1.1s
BTDF **Bukit Timah Da** 78.21 276 P P 12 57 30.8 +0.7
baz=78,SNR=8.0
BTDF P P 12 57 30.8 +0.7
baz=78,SNR=8.0
MYKOM **Kota Tinggi** 78.31 277 P P 12 57 31.4 +0.8
MYKOM **Kota Tinggi** 78.31 277 P P 12 57 31.4 +0.8
MYKOM **Kota Tinggi** 78.31 277 P P 12 57 31.1 +0.5
comp=Z,104nm,1.2s,comp=Z,1µm
SDPT **Sand Point** 78.69 11 *e*P P 12 57 31.8 +0.2
comp=Z,108nm,0.8s
KGM **Kluang** 78.88 277 P P 12 57 34.5 +0.9
KGM **Kluang** 78.88 277 P P 12 57 34.5 +0.9
USRK **Ussuriysk Arra** 79.39 327 P P 12 57 37.1 +1.5
comp=Z,89nm,1.0s,baz=129,slow=3.4,SNR=138
MAW **Mawson** 79.72 200 P P 12 57 37.9 +0.9
MAW pP **pP** 12 59 43.8 +3.6
MAW **Mawson** 79.72 200 P P 12 57 37.9 +0.9
comp=Z,5.9nm,0.6s,baz=132,slow=7.2,SNR=34
MAW pP **pP** 12 59 43.8 +3.6
comp=Z,12nm,1.0s,baz=107,slow=4.1,SNR=5.7
MAW **Mawson** 79.72 200 P P 12 57 37.8 +0.9
baz=80,SNR=20
NJ2 **Nanjing** 79.75 311 *e*P P 12 57 39.1 +1.4
NJ2 pP **pP** 12 59 38.6 -2.5
NJ2 sP **sP** 13 00 35.6 -4.9
NJ2 PP **PP** 13 00 51.5 +1.3
NJ2 S **SKSac** 13 06 58.0 -1.3
NJ2 sS **sS** 13 10 31.0 -2.1
NJ2 pmax pmax
comp=Z,140nm,0.9s
NJ2 pmax pmax
comp=Z,170nm,8.3s
CHGN **Chignik** 79.97 12 *e*P P 12 57 37.5 -0.7
PKM **Peak Mountain** 80.01 46 P P 12 57 40.7 +1.4
baz=80,SNR=8.1
SAO **San Andreas Ge** 80.04 44 *e*P P 12 57 41.0 +1.8
SAO pmax pmax
comp=Z,19nm,1.0s
SAO **San Andreas Ge** 80.04 44 *e*P P 12 57 41.0 +1.8
comp=Z,19nm,1.0s
PTRM **Twissleman Ran** 80.19 45 *e*P P 12 57 42.3 +2.2
QIZ **Qiongzhong** 80.19 295 P P 12 57 40.3 -0.1
QIZ pP **pP** 12 59 41.2 -2.6
QIZ sP **sP** 13 00 39.2 -4.1
QIZ S **SKSac** 13 07 02.2 -0.7
QIZ pmax pmax
comp=Z,30nm,1.0s
QIZ pmax pmax
comp=Z,180nm,6.4s
KTGM **Kuala Trenggan** 80.34 280 P P 12 57 42.7 +1.4
HOPS **Hopland** 80.38 41 *e*P P 12 57 42.5 +1.6
comp=Z,52nm,1.1s
KCPM **Cahto Peak** 80.50 40 *e*P P 12 57 43.5 +1.9
comp=Z,33nm,1.0s
PMSA **Palmer Station** 80.51 157 *e*P P 12 57 42.3 +1.1
comp=Z,67nm,1.1s
PMSA **Palmer Station** 80.51 157 P P 12 57 42.2 +1.1
comp=Z,61nm,0.6s,baz=227,slow=4.7,SNR=14
OSI **Osito Adit** 80.58 47 *e*P P 12 57 43.7 +1.6
comp=Z,6.3nm,0.6s
OSI **Osito Adit** 80.58 47 P P 12 57 43.8 +1.6
baz=81
DECC **Green Verdugo** 80.64 47 P P 12 57 43.9 +1.4
baz=81
PASC **Pasadena Art C** 80.70 47 *e*P P 12 57 43.6 +0.9
comp=Z,20nm,0.8s
109C **Camp Elliot, M** 80.73 49 P P 12 57 44.2 +1.4
baz=81
ARVC **Arvin** 80.80 46 P P 12 57 44.8 +1.6
baz=81,SNR=9.2
MWC **Mount Wilson** 80.81 47 *e*P P 12 57 44.5 +1.0
MWC pmax pmax
comp=Z,21nm,0.9s
MWC **Mount Wilson** 80.81 47 *e*P P 12 57 44.5 +1.0
comp=Z,20nm,0.9s
FRIM **Kepong** 80.91 277 P P 12 57 44.9 +0.7
MDJ **Mudanjiang** 80.92 326 P P 12 57 45.0 +1.5
MDJ pP **pP** 12 59 43.4 -4.0
MDJ sP sP 13 00 41.2 -5.5
MDJ PP **PP** 13 00 58.6 -0.9
MDJ S **S** 13 07 05.6 +0.9
MDJ ScS **ScS** 13 07 18.5 +0.3
MDJ pmax pmax
comp=Z,86nm,1.0s
MDJ pmax pmax
comp=Z,230nm,6.1s
BAR **Barrett** 80.92 49 *e*P P 12 57 45.3 +1.4
comp=Z,8.5nm,1.0s
HABR **Khabarovsk** 81.03 331 *e*P P 12 57 44.5 +0.5
HABR *e**PP **pP** 12 59 44.4 -3.5
HABR *e**SP **sP** 13 00 42.5 -4.7
HABR S **SKSac** 13 07 07.9 +0.7
HABR *e*SS **SS** 13 12 40.0 +1.6
HABR *e*SSS SSS 13 16 14.3
HABR pmax pmax
comp=E,57nm,1.5s
HABR pmax pmax
comp=N,29nm,1.0s
HABR pmax pmax
comp=Z,220nm,1.0s
HABR MLR MLR
comp=Z,53nm,18.0s
VES **Vestal, Richgr** 81.04 46 P P 12 57 45.5 +1.1
baz=81,SNR=9.8
MURC **Murrieta** 81.06 48 P P 12 57 45.7 +1.1
baz=81,SNR=8.5
BFSC **Mount Baldy Ra** 81.10 48 P P 12 57 46.1 +1.2
baz=81,SNR=14
KHMM **Horse Mountain** 81.16 39 *e*P P 12 57 47.5 +2.4
comp=Z,65nm,1.0s
MONP **Monument Peak** 81.21 49 P P 12 57 47.3 +1.7
baz=82,SNR=32
EDW2 **Edwards Air Fo** 81.23 47 P P 12 57 46.8 +1.4
baz=82,SNR=21
ISA **Isabella** 81.35 46 *e*P P 12 57 47.4 +1.4
ISA pmax pmax
comp=Z,27nm,0.8s
ISA **Isabella** 81.35 46 *e*P P 12 57 47.4 +1.4
comp=Z,27nm,0.8s
ISA **Isabella** 81.35 46 P P 12 57 47.5 +1.4
baz=82,SNR=24
KRMB **Red Mountain** 81.46 39 *e*P P 12 57 48.9 +2.3
comp=Z,50nm,1.2s
CMB **Columbia Colle** 81.47 43 *e*P P 12 57 47.9 +1.3
CMB pmax pmax
comp=Z,32nm,0.9s
CMB **Columbia Colle** 81.47 43 *e*P P 12 57 47.9 +1.3
comp=Z,32nm,0.9s
OHCM **Honcut** 81.56 42 *e*P P 12 57 48.4 +1.4
PFO **Pinyon Flat Ob** 81.58 49 *e*P P 12 57 48.6 +1.3
comp=Z,6.3nm,0.8s
PFO **Pinyon Flat Ob** 81.58 49 P P 12 57 48.8 +1.4
comp=Z,6.3nm,0.7s,baz=255,slow=3.1,SNR=14
PFO **Pinyon Flat Ob** 81.58 49 P P 12 57 48.9 +1.4
baz=82,SNR=6.3
BBRC **Big Bear Solar** 81.62 48 P P 12 57 49.2 +1.5
baz=82
SWSC **Sam W. Stewart** 81.68 50 P P 12 57 49.4 +1.6
baz=82
WDC **Whiskeytown Da** 81.68 40 *e*P P 12 57 49.3 +1.7
WDC pmax pmax
comp=Z,48nm,1.1s
WDC **Whiskeytown Da** 81.68 40 *e*P P 12 57 49.3 +1.7
comp=Z,48nm,1.1s
KBO **Bosley Butte** 81.72 38 *e*P P 12 57 49.8 +2.0
comp=Z,70nm,1.3s
LRMC **Laurel Mountai** 81.77 47 P P 12 57 49.3 +1.0
baz=82,SNR=18
DL2 **Dalian** 81.84 318 P P 12 57 48.3 -0.1
DL2 S **S** 13 07 10.6 -3.6
DL2 pmax pmax
comp=E,67nm,1.3s
DL2 pmax pmax
comp=Z,360nm,2.9s
OHAK **Old Harbor** 81.89 14 *e*P P 12 57 48.9 +0.7
comp=Z,37nm,0.7s
RRX **Edison Barstow** 81.90 47 P P 12 57 50.2 +1.3
baz=82
IPM **Ipoh** 81.94 278 *e*P P 12 57 50.0 +0.4
comp=Z,166nm,0.7s
IPM **Ipoh** 81.94 278 P P 12 57 50.5 +1.0
CWC **Cottonwood Cre** 82.05 46 P P 12 57 51.1 +1.4
baz=82,SNR=19
KEBM **Edson Butte** 82.08 38 *e*P P 12 57 52.2 +2.6
comp=Z,78nm,1.2s
BELC **Belle Mtn. Jos** 82.11 49 P P 12 57 51.6 +1.5
baz=82,SNR=26
WHN **Wuhan** 82.19 307 ||*i*P P 12 57 51.3 +0.9
WHN sP sP 13 00 47.9 -6.0
WHN pmax pmax
comp=Z,200nm,1.2s
WHN pmax pmax
comp=Z,540nm,5.7s
MPMC **Manual Prospec** 82.23 46 P P 12 57 52.0 +1.3
baz=82,SNR=39
MLAC **Mammoth Lakes** 82.23 44 P P 12 57 52.5 +1.8
baz=83
MTUM **Tungsten Hills** 82.25 45 *e*P P 12 57 52.2 +1.4
GSC **Goldstone** 82.27 47 *e*P P 12 57 52.0 +1.2
GSC pmax pmax
comp=Z,16nm,0.8s
GSC **Goldstone** 82.27 47 *e*P P 12 57 52.0 +1.2
comp=Z,16nm,0.8s
GSC **Goldstone** 82.27 47 P P 12 57 52.1 +1.2
baz=83,SNR=18
YBH **Yreka Blue Hor** 82.30 39 *e*P P 12 57 52.5 +1.7
comp=Z,35nm,0.8s
TIN **Tinemaha** 82.30 45 P P 12 57 52.7 +1.8
baz=83,SNR=10
BC3 **Big Chuckawall** 82.31 49 P P 12 57 52.5 +1.4
baz=83,SNR=9.9
HEC **Hector,Ludlow** 82.34 48 P P 12 57 52.3 +1.2
baz=83,SNR=18
SNY **Shenyang** 82.44 321 ||P P 12 57 52.2 +0.9
SNY pP **pP** 12 59 53.6 -2.1
SNY sP **sP** 13 00 49.9 -5.0
SNY pmax pmax
comp=Z,85nm,0.8s
KDAK **Kodiak Island** 82.56 14 *e*P P 12 57 52.0 +0.5
comp=Z,86nm,1.4s
KDAK **Kodiak Island** 82.56 14 P P 12 57 52.9 +1.4
comp=Z,217nm,1.2s,SNR=5.1
KDAK **Kodiak Island** 82.56 14 P P 12 57 52.4 +0.8
comp=Z,31nm,0.9s,baz=187,slow=2.5,SNR=9.8
BEKR **Beckworth** 82.58 42 *e*P P 12 57 53.3 +0.9
comp=Z,12nm,0.8s
KULM **Kulim** 82.60 279 *e*P P 12 57 53.5 +0.7
comp=Z,87nm,0.8s
KULM **Kulim** 82.60 279 P P 12 57 53.9 +1.1
CN2 **Changchun** 82.61 323 *e*P P 12 57 53.2 +1.0
CN2 pmax pmax
comp=Z,200nm,0.8s
CN2 pmax pmax
comp=Z,200nm,3.0s
WCN **Washoe City** 82.62 43 *e*P P 12 57 53.9 +1.3
WCN pmax pmax
comp=Z,33nm,0.9s
WCN **Washoe City** 82.62 43 *e*P P 12 57 53.9 +1.3
comp=Z,32nm,0.9s
HUMO **Hull Mountain** 82.70 38 *e*P P 12 57 55.0 +2.3
comp=Z,88nm,1.3s
GMRC **Granite Mounta** 82.77 48 P P 12 57 54.7 +1.3
baz=83,SNR=14
IRM **Iron Mountain** 82.79 49 P P 12 57 55.0 +1.6
baz=83,SNR=13
GRAC **Grapevine Rang** 82.84 46 P P 12 57 55.4 +1.9
baz=83,SNR=12
FURC **Furnace Creek,** 82.88 46 P P 12 57 54.8 +1.1
baz=83,SNR=20
TUQ **Turquoise Moun** 82.95 47 P P 12 57 55.8 +1.5
baz=83,SNR=9.6
SHOC **Shoshone** 82.96 47 P P 12 57 55.6 +1.4
baz=83,SNR=12
Y12C **Blythe** 83.01 50 P P 12 57 56.4 +2.0
baz=83,SNR=7.5
NVAR **Mina Array Bea** 83.04 44 P P 12 57 55.7 +0.9
NVAR pP **pP** 13 00 02.2 +2.8
NVAR PKKPbc **PKKPbc** 13 16 13.6 +0.5
NVAR P'P' 13 24 17.6
NVAR **Mina Array Bea** 83.04 44 P P 12 57 55.7 +0.9
comp=Z,21nm,0.8s,baz=224,slow=8.8,SNR=167
NVAR pP **pP** 13 00 02.2 +2.8
comp=Z,0.7nm,0.8s,baz=234,slow=7.7,SNR=1.8
NVAR PKKPbc **PKKPbc** 13 16 13.6 +0.5
comp=Z,0.8nm,0.8s,baz=69,slow=3.1,SNR=5.9
NVAR PKPPKP **P'P'df** 13 24 17.6 +1.3
comp=Z,0.7nm,0.9s,baz=72,slow=3.9,SNR=3.7
KLR **Kul'dur** 83.08 330 ||*i*P P 12 57 52.2 -2.2
KLR *e*S **SKSac** 13 07 16.0 -4.6
KLR pmax pmax
comp=E,50nm,1.6s
KLR pmax pmax
comp=Z,160nm,1.6s
NV11 **Mina Array Sit** 83.14 44 *e*P P 12 57 56.0 +0.8
214A **Organ Pipe Nat** 83.31 52 P P 12 57 57.8 +1.8
baz=84
MPOR **Mary's Peak** 83.55 37 P P 12 57 59.0 +1.9
PDMCI **Parker Dam,Lak** 83.57 49 P P 12 57 58.9 +1.7
baz=84,SNR=17
USHA **Ushuaia** 83.67 147 P P 12 57 58.6 +1.3
USHA **Ushuaia** 83.67 147 P P 12 57 58.6 +1.3
comp=Z,29nm,0.8s,baz=295,slow=5.2,SNR=15
COR **Corvallis** 83.74 37 *e*P P 12 58 01.3 +3.5
COR **Corvallis** 83.74 37 *e*P P 12 58 01.3 +3.5
Z14A **Wintersburg** 83.93 51 P P 12 58 01.2 +2.2
baz=84,SNR=9.9
IRO **Indian Ridge** 83.97 38 P P 12 58 01.5 +2.4
W13A **Hualapai Mount** 84.17 49 P P 12 58 01.9 +1.4
baz=84,SNR=22
FRIS **Frissel Point** 84.18 38 P P 12 58 02.7 +2.5
Y14A **Wickenburg** 84.19 50 P P 12 58 01.6 +1.3
baz=84,SNR=11
WIFE **Three Sisters-** 84.25 38 P P 12 58 02.2 +1.7
SSOR **Sweet Springs** 84.38 37 P P 12 58 02.3 +1.2
SSOR **Sweet Springs** 84.38 37 P P 12 58 02.3 +1.2
H04A **Detroit Lake** 84.43 37 P P 12 58 02.3 +1.1
R11A **Troy Canyon, C** 84.76 45 P P 12 58 04.1 +0.9
baz=85
BMN **Battle Mountai** 84.86 43 *e*P P 12 58 04.8 +1.2
BMN pmax pmax
comp=Z,13nm,0.7s
BMN **Battle Mountai** 84.86 43 *e*P P 12 58 04.8 +1.2
comp=Z,13nm,0.7s
RSO **Redoubt South** 84.96 13 *e*P P 12 58 03.3 -0.3
TUC **Tucson** 84.97 52 *e*P P 12 58 06.1 +1.9
TUC *e**PP **pP** 13 00 13.0 +3.4
TUC pmax pmax
comp=Z,84nm,0.9s
TUC **Tucson** 84.97 52 *e*P P 12 58 06.0 +1.9
comp=Z,84nm,0.9s
TUC *e*pP **pP** 13 00 13.0 +3.4
SVW2 **Sparrevohn** 84.99 11 *e*P P 12 58 03.2 -0.3
comp=Z,18nm,0.9s
SYO **Syowa Base** 85.00 193 ||*e*P P 12 58 01.2 -2.4
SYO **Syowa Base** 85.00 193 ||*e*X pP 13 00 05.5 -3.4
SYO **Syowa Base** 85.00 193 *e*SH **SKSac** 13 07 39.2 +6.9
WVOR **Wild Horse Val** 85.14 40 *e*P P 12 58 06.1 +1.3
WVOR pmax pmax

comp=Z,27nm,1.0s
WVOR Wild Horse Val 85.14 40 *e*P P 12 58 06.1 +1.3
comp=Z,27nm,1.0s
LVP Lakeview Peak 85.16 36 P P 12 58 06.4 +1.6
VIPM Ingram Point 85.20 38 P P 12 58 06.6 +1.4
VIPM Ingram Point 85.20 38 P P 12 58 06.6 +1.4
NLWA Neilton Lookou 85.22 34 *e*P P 12 58 06.8 +1.8
comp=Z,44nm,1.1s
SEW Seward 85.36 15 *e*P P 12 58 05.0 -0.2
comp=Z,66nm,1.0s
X16A Lo Mia Camp, P 85.55 50 P P 12 58 08.7 +1.6
baz=86
319A Douglas 85.63 54 P P 12 58 09.6 +2.1
baz=86,SNR=27
SPU Mount Spurr 85.76 13 *e*P P 12 58 06.6 -0.7
CCUT Cedar City 85.82 47 *e*P P 12 58 10.1 +1.7
comp=Z,11nm,0.8s
ARUT Antelope Range 85.89 47 *e*P P 12 58 10.0 +1.4
ARUT pmax pmax
comp=Z,9.0nm,0.9s
ARUT Antelope Range 85.89 47 *e*P P 12 58 10.0 +1.4
comp=Z,9.4nm,0.9s
LON Longmire 85.91 36 *e*P P 12 58 09.3 +1.0
LON pmax pmax
comp=Z,14nm,0.7s
LON Longmire 85.91 36 *e*P P 12 58 09.3 +1.0
comp=Z,14nm,0.7s
BJI Beijing 85.95 316 P P 12 58 09.8 +1.2
BJI pP **pP** 13 00 12.8 -1.6
BJI sP **sP** 13 01 09.9 -3.3
BJI sS **sS** 13 11 40.0 +1.7
BJI pmax pmax
comp=Z,110nm,0.7s
BJI pmax pmax
comp=Z,510nm,4.8s
U15A North Rim 85.97 48 P P 12 58 10.8 +1.6
baz=86,SNR=64
WPW White Pass 86.02 36 P P 12 58 10.3 +1.4
WUAZ Wupatki 86.15 49 *e*P P 12 58 11.0 +1.1
comp=Z,10nm,1.0s
WUAZ Wupatki 86.15 49 P P 12 58 11.6 +1.7
baz=86,SNR=8.2
GYA Guiyang 86.16 300⇑ *i*P P 12 58 11.0 +0.9
GYA pP **pP** 13 00 14.8 -1.2
GYA sP **sP** 13 01 11.5 -3.3
GYA PP **PP** 13 01 44.3 +2.2
GYA SKS **SKSac** 13 07 42.8 +1.7
GYA S **S** 13 07 57.5 +0.5
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.1s
320A Kipp Ranch, An 86.18 54 P P 12 58 12.3 +2.2
baz=86
PGC Sidney 86.24 33 *e*P P 12 58 11.1 +1.4
comp=Z,5.3nm,1.3s
ELK Elko 86.29 43 *e*P P 12 58 11.7 +1.2
comp=Z,12nm,0.9s
RMW Rattlesnake Mo 86.35 35 P P 12 58 11.8 +1.4
RMW Rattlesnake Mo 86.35 35 P P 12 58 11.8 +1.4
NAC Naches 86.44 36 P P 12 58 12.2 +1.5
220A Playas Peak, P 86.45 54 P P 12 58 13.1 +1.8
baz=87,SNR=17
SNAA Sanae 86.59 179 *e*P P 12 58 10.5 -0.7
SNAA Sanae 86.59 179 *e*S S 13 08 00.7 +1.3
SNAA Sanae 86.59 179 *e*P pP 13 00 19.3 +2.0
SNAA Sanae 86.59 179 *e*P P 12 58 10.6 -0.7
comp=Z,10nm,0.7s
SNAA pP **pP** 13 00 19.2 +2.0
SNAA *e*pP **pP** 13 00 19.6 +2.4
SNAA PKKPbc **PKKPbc** 13 16 01.7 -3.7
SNAA Sanae 86.59 179 P P 12 58 10.6 -0.7
comp=Z,2.9nm,0.5s,baz=210,slow=7.6,SNR=140
SNAA pP **pP** 13 00 19.2 +2.0
comp=Z,7.2nm,1.0s,baz=195,slow=5.2,SNR=9.9
SNAA PKKPbc **PKKPbc** 13 16 01.7 -3.7
comp=Z,0.8nm,0.8s,baz=58,slow=1.6,SNR=11
G08A Pilot Rock 86.62 38 P P 12 58 13.2 +1.5
TWW Teanaway 86.66 36 P P 12 58 13.7 +1.8
X18A Snowflake 86.67 51 P P 12 58 13.9 +1.5
baz=87,SNR=13
120A U Bar Ranch, L 86.68 53 P P 12 58 14.4 +2.0
baz=87,SNR=6.9
PMR Palmer 86.76 14 *e*P P 12 58 12.0 +0.2
PMR pmax pmax
comp=Z,142nm,1.2s
PMR Palmer 86.76 14 *e*P P 12 58 12.0 +0.2
comp=Z,142nm,1.2s
CMW Cultus Mountai 86.78 34 P P 12 58 14.1 +1.6
RAGM Ragged Mountai 86.80 17 *e*P P 12 58 12.8 +0.6
TBM Table Mountain 86.83 36 P P 12 58 14.1 +1.5
HAWA Hanford 86.94 37 *e*P P 12 58 14.8 +1.7
comp=Z,65nm,0.9s
Z20A Nine Sixteen R 86.98 53 P P 12 58 15.4 +1.6
baz=87,SNR=8.4
MVU Marysvale 87.09 46 *e*P P 12 58 15.7 +1.4
comp=Z,21nm,1.4s
MVU *e*pP **pP** 13 00 24.4 +3.7
SML Sawmill 87.13 14 *e*P P 12 58 13.9 +0.2
SML pmax pmax
comp=Z,7.0nm,0.8s
SML Sawmill 87.13 14 *e*P P 12 58 13.9 +0.2
comp=Z,7.5nm,0.8s
DIV Divide 87.15 16 *e*P P 12 58 14.2 +0.4
comp=Z,100nm,0.9s
MAIT Maitri 87.18 184 *e*P P 12 58 03.5 -10
TIY Taiyuan 87.22 313⇓ *e*P P 12 58 16.3 +1.6
TIY pmax pmax
comp=Z,120nm,0.6s
ETW Entiat 87.23 36 P P 12 58 15.9 +1.3
121A Cookes Peak, D 87.30 53 P P 12 58 17.2 +1.8
baz=88,SNR=7.8
BMO Blue Mountains 87.32 39 *e*P P 12 58 16.1 +1.0
comp=Z,20nm,0.8s
MFID Camas Ranch 87.39 41 *e*P P 12 58 16.9 +1.4
comp=Z,39nm,0.9s
MFID Camas Ranch 87.39 41 P P 12 58 17.0 +1.4
baz=88
VNA1 Neumayer--Stat 87.44 177 *e*P P 12 58 15.0 -0.1
VNA1 Neumayer--Stat 87.44 177 *e*P pP 13 00 24.0 +2.6
SEY Seymchan 87.48 348 *ce*P P 12 58 15.7 +0.5
WTV Waterville 87.49 36 P P 12 58 16.9 +1.2
Y20A Horse Springs, 87.51 52 P P 12 58 18.4 +2.0
baz=88,SNR=12
DUG Dugway 87.57 45 *e*P P 12 58 17.3 +0.9
DUG pmax pmax
comp=Z,6.0nm,1.0s
DUG Dugway 87.57 45 *e*P P 12 58 17.3 +0.9
comp=Z,5.6nm,1.0s
DUG Dugway 87.57 45 P P 12 58 17.3 +0.9
baz=88
WRAK Wrangell Islan 87.61 24 *e*P P 12 58 17.4 +1.5
comp=Z,67nm,1.1s
PNL Peninsula 87.70 19 *e*P P 12 58 17.3 +0.9
comp=Z,92nm,0.9s
X20A Quemado 87.73 51 P P 12 58 19.1 +1.7
baz=88,SNR=7.9
Z21A St. Cloud Mine 87.75 53 P P 12 58 18.9 +1.4
baz=88,SNR=16
XAN Xi'an 87.91 308 P P 12 58 19.6 +1.6
XAN pmax pmax
comp=Z,36nm,0.9s
XAN pmax pmax
comp=Z,60nm,5.6s
122A Conniff Cattle 87.96 54 P P 12 58 20.8 +2.4
baz=88,SNR=6.8
OD2 Odessa Site #2 87.99 36 P P 12 58 19.3 +1.3
Q16A Castle Valley 88.00 47 P P 12 58 20.1 +1.6
baz=88
W20A Ramah 88.00 51 P P 12 58 20.2 +1.5
baz=88,SNR=19
I12A Atlanta 88.03 41 P P 12 58 20.2 +1.7
baz=88
223A Chaparral, Ant 88.08 54 P P 12 58 20.2 +1.2
baz=88
Y21A Point of Rocks 88.08 52 P P 12 58 20.8 +1.8
baz=88,SNR=19
TRF Thorofare Moun 88.17 13 *e*P P 12 58 17.5 -1.1
comp=Z,190nm,0.8s
S18A Hurst Farm, Bl 88.19 48 P P 12 58 20.7 +1.2
baz=88
X21A Alamocita Cree 88.20 52 P P 12 58 21.3 +1.7
baz=88,SNR=12
Z22A Elephant Butte 88.25 53 P P 12 58 21.4 +1.7
baz=88,SNR=31
MPU Maple Canyon 88.25 45 *e*P P 12 58 21.4 +1.8
comp=Z,13nm,1.0s
HLID Hailey 88.34 41 *e*P P 12 58 21.3 +1.4
comp=Z,23nm,0.8s
HLID Hailey 88.34 41 P P 12 58 21.6 +1.6
baz=89
V20A Brimhall 88.35 50 P P 12 58 21.2 +1.0
baz=89
HVU Hansel Valley 88.42 43 *e*P P 12 58 21.7 +1.4
HVU pmax pmax
comp=Z,26nm,0.8s
HVU Hansel Valley 88.42 43 *e*P P 12 58 21.7 +1.4
comp=Z,26nm,0.8s
CTU Camp Tracy 88.52 45 *e*P P 12 58 22.0 +1.2
comp=Z,28nm,1.0s
SRU San Rafael 88.53 47 P P 12 58 22.3 +1.3
baz=89
324A Moseley Ranch, 88.54 55 P P 12 58 22.4 +1.2
baz=89,SNR=43
Y22A Socorro 88.56 52 P P 12 58 22.5 +1.3
baz=89,SNR=19
U20A Newcomb 88.58 50 P P 12 58 22.2 +1.0
baz=89
H12A Diamond D Ranc 88.60 40 P P 12 58 22.4 +1.3
baz=89
425A Indio Mountain 88.62 56 P P 12 58 23.2 +1.7
baz=89,SNR=17
G12A Big Creek, Yel 88.64 40 P P 12 58 22.3 +1.0
baz=89,SNR=24
LAZ Ladron 88.65 52 *e*P P 12 58 23.0 +1.3
comp=Z,4.2nm,0.9s
JLU Jordanelle 88.67 45 *e*P P 12 58 23.0 +1.3
comp=Z,11nm,0.9s
MCK McKinley 88.69 13 *e*P P 12 58 20.6 -0.3
MCK pmax pmax
comp=Z,74nm,0.9s
MCK McKinley 88.69 13 *e*P P 12 58 20.6 -0.3
comp=Z,74nm,0.9s
DAU Daniels Canyon 88.70 45 *e*P P 12 58 23.9 +2.0
DAU Daniels Canyon 88.70 45 *e*P P 12 58 23.9 +2.0
MNTX Cornudas Mount 88.73 55 *e*P P 12 58 22.9 +1.1
comp=Z,18nm,0.8s
626A Big Bend Ranch 88.74 57 P P 12 58 23.6 +1.6
baz=89,SNR=28
KMI Kunming 88.77 298 ⇓ P P 12 58 24.5 +2.0
KMI pP **pP** 13 00 28.5 -0.8
KMI sP **sP** 13 01 23.8 -4.0
KMI PP **PP** 13 02 03.3 +0.5
KMI SKS **SKSac** 13 07 57.1 +0.2
KMI S **S** 13 08 21.8 +0.4
KMI sS **sS** 13 12 02.8 -4.8
KMI SS **SS** 13 14 36.0 +3.9
KMI pmax pmax
comp=Z,66nm,1.4s
KMI pmax pmax
comp=Z,220nm,3.1s
224A Cornudas Mount 88.79 55 P P 12 58 23.9 +1.6
baz=89,SNR=29
Z23A Rita Site, Whi 88.80 53 P P 12 58 24.1 +1.8
baz=89,SNR=9.0
SKAG Skagway 88.83 21 *e*P P 12 58 22.8 +1.3
comp=Z,30nm,1.0s
325A Bean Ranch, Si 88.89 56 P P 12 58 23.9 +1.1
baz=89,SNR=23
BNM Barren Site 88.91 52 *e*P P 12 58 23.8 +0.9
comp=Z,8.5nm,0.9s
BNM *e*pP pP 13 00 36.5 +6.7
V21A Milan 88.94 51 P P 12 58 24.3 +1.3
baz=89
LPM Los Pinos Moun 88.98 52 *e*P P 12 58 24.5 +1.4
526A Mary Lane Ranc 89.00 57 P P 12 58 24.7 +1.4
baz=89
TXAR Lajitas Array 89.01 58 P P 12 58 24.8 +1.4
TXAR pP **pP** 13 00 33.3 +3.1
TXAR PKKPbc **PKKPbc** 13 15 58.5 +0.3
TXAR Lajitas Array 89.01 58 P P 12 58 24.8 +1.4
comp=Z,13nm,0.8s,baz=216,slow=5.9,SNR=148
TXAR pP **pP** 13 00 33.3 +3.1
comp=Z,1.7nm,1.0s,baz=185,slow=5.2,SNR=3.6
TXAR PKKPbc **PKKPbc** 13 15 58.5 +0.3
comp=Z,1.1nm,0.7s,baz=84,slow=3.2,SNR=15
F12A Elk City 89.03 39 P P 12 58 23.9 +0.9
baz=89,SNR=33
HWUT Hardware Ranch 89.10 44 *e*P P 12 58 24.1 +0.5
comp=Z,22nm,0.7s
I14A Mackay 89.12 41 P P 12 58 25.2 +1.6
baz=89,SNR=27
124A Stringfield Ra 89.12 54 P P 12 58 25.2 +1.3
baz=89,SNR=16
PV10 Paradox Valley 89.19 48 *e*P P 12 58 24.6 +0.5
comp=Z,104nm,0.8s
MENT Mentasta 89.20 16 *e*P P 12 58 24.2 +0.9
U21A Nageezi 89.22 50 P P 12 58 25.4 +1.1
baz=90,SNR=38
Y23A Lovelace Mesa, 89.23 53 P P 12 58 25.6 +1.3
baz=90,SNR=12
PLCA Paso Flores 89.28 134 *e*P P 12 58 25.4 +1.0
comp=Z,54nm,1.3s
PLCA Paso Flores 89.28 134 P P 12 58 25.7 +1.3
comp=Z,25nm,0.8s,baz=228,slow=5.0,SNR=44
PLCA pP **pP** 13 00 33.7 +2.4
comp=Z,6.3nm,1.2s,baz=297,slow=9.0,SNR=3.3
PLCA PKKPbc **PKKPbc** 13 15 57.8 -0.1
comp=Z,3.0nm,0.9s,baz=52,slow=3.0,SNR=4.2
627A Terlingua Ranc 89.28 58 P P 12 58 26.1 +1.5
baz=90,SNR=25
PV04 Paradox Valley 89.28 48 *e*P P 12 58 25.3 +0.8
CM31 Chiang Mai Arr 89.29 290 *e*P P 12 58 26.4 +1.7
comp=Z,129nm,0.9s
CMAR Chiang Mai Arr 89.29 290 P P 12 58 26.4 +1.7
CMAR PP **PP** 13 02 07.6 +0.9
CMAR PKKPbc **PKKPbc** 13 15 57.4 +0.3
CMAR Chiang Mai Arr 89.29 290 P P 12 58 26.4 +1.7
comp=Z,111nm,0.9s,baz=134,slow=3.2,SNR=321
CMAR PP **PP** 13 02 07.6 +0.9
comp=Z,4.7nm,0.7s,baz=125,slow=6.0,SNR=9.6
CMAR PKKPbc **PKKPbc** 13 15 57.4 +0.3
comp=Z,1.3nm,0.5s,baz=285,slow=4.6,SNR=6.5
426A McDonald Obser 89.31 57 P P 12 58 26.2 +1.4
baz=90,SNR=24
NEW Newport 89.37 36 *e*P P 12 58 25.1 +0.6
comp=Z,6.3nm,0.8s
NEW Newport 89.37 36 P P 12 58 25.2 +0.7
baz=90,SNR=5.9
HHC Hu-ho-hao-te 89.38 315 *i* P P 12 58 26.4 +1.7
HHC pP **pP** 13 00 36.0 +4.2
HHC sP **sP** 13 01 31.0 +0.8
HHC SKS **SKSac** 13 07 56.1 -3.3
HHC S **S** 13 08 24.0 -2.0
HHC pmax pmax
comp=Z,200nm,0.9s
HHC pmax pmax
comp=Z,310nm,5.3s
PV01 Paradox Valley 89.39 48 *e*P P 12 58 25.6 +0.6
comp=Z,700nm,0.9s
S20A Disappointment 89.39 49 P P 12 58 26.2 +1.1
baz=90,SNR=7.0
ANMO Albuquerque 89.40 52 *e*P P 12 58 25.9 +0.8
comp=Z,14nm,0.9s
527A Woodward Ranch 89.41 57 P P 12 58 26.4 +1.2
baz=90,SNR=14
CHTO Chiang Mai 89.43 290 *e*P P 12 58 27.2 +1.9
CHTO pmax pmax
comp=Z,138nm,0.8s
CHTO Chiang Mai 89.43 290 P P 12 58 27.6 +2.3
SNR=18
CHTO Chiang Mai 89.43 290 *e*P P 12 58 27.2 +1.9
comp=Z,138nm,0.8s
Z24A Sheeppen Canyo 89.47 54 P P 12 58 26.4 +0.9
baz=90,SNR=5.7
V22A San Miguel Ran 89.52 51 P P 12 58 26.2 +0.6
baz=90
R20A Redvale 89.55 48 P P 12 58 26.5 +0.8
baz=90
T21A Navajo Lake 89.58 50 P P 12 58 27.3 +1.4
baz=90
F13A Darby 89.59 39 P P 12 58 26.4 +0.8
baz=90,SNR=23
M17A Scullys Gap (B 89.62 44 P P 12 58 27.0 +1.0
baz=90,SNR=19
326A Caldwell Ranch 89.63 56 P P 12 58 27.2 +1.0
baz=90,SNR=5.9
D12A Red Ives Fores 89.68 38 ⇑ P P 12 58 26.8 +0.8
baz=90,SNR=13
Y24A Capitan 89.69 53 P P 12 58 27.6 +1.1
baz=90,SNR=41
628A Black Gap, Mar 89.69 58 P P 12 58 27.7 +1.3
baz=90,SNR=16
125A Gardner Draw, 89.71 55 P P 12 58 27.7 +1.2
baz=90,SNR=12
S21A Coal Bank Pass 89.71 49 P P 12 58 27.7 +1.1
baz=90,SNR=9.9
DOT Dot Lake 89.72 15 *e*P P 12 58 25.9 +0.2
comp=Z,46nm,0.9s
W23A Werner Place, 89.72 52 P P 12 58 27.6 +1.0
baz=90,SNR=6.7
GDL2 Guadalupe Moun 89.73 55 *e*P P 12 58 28.2 +1.6
226B Tecolote Peak, 89.82 55 P P 12 58 28.1 +1.2
baz=90,SNR=27
P19A Cripple Cowboy 89.83 47 P P 12 58 28.4 +1.4
baz=90,SNR=5.5
427A Hayter Ranch, 89.88 57 P P 12 58 28.9 +1.6
baz=90,SNR=54
COLA College 89.93 13 *e*P P 12 58 26.0 -0.5
COLA pmax pmax
comp=Z,94nm,1.1s
COLA College 89.93 13 *e*P P 12 58 25.9 -0.5
comp=Z,94nm,1.1s
DLBC Dease Lake 89.93 24 *e*P P 12 58 27.8 +0.9
Z25A Roswell 89.94 54 P P 12 58 29.1 +1.6
baz=90,SNR=8.2
MCMT McKenzie Canyo 89.96 41 *e*P P 12 58 28.9 +1.4
comp=Z,14nm,1.1s
V23A Ortiz Mt. (NFS 89.96 51 P P 12 58 29.5 +1.8
baz=90,SNR=9.4
C12B Naegeli Ranch, 89.97 37 P P 12 58 28.7 +1.4
baz=90
Q20A Ridgley Place, 89.97 48 P P 12 58 28.7 +1.0
baz=90,SNR=6.3
X24A Lazy VL Ranch, 89.98 53 P P 12 58 28.7 +0.9
baz=90
H15A Lima 89.98 41 P P 12 58 29.2 +1.7
baz=90,SNR=8.1
AHID Auburn Hatcher 89.99 43 *e*P P 12 58 29.9 +2.2
comp=Z,30nm,0.9s
E13A Victor 90.02 39 ⇑ P P 12 58 28.1 +0.5
baz=90,SNR=7.8
ILAR Eielson Array 90.04 13 P P 12 58 26.6 -0.5
ILAR PP **PP** 13 02 07.8 -3.8
ILAR Eielson Array 90.04 13 P P 12 58 26.6 -0.5
comp=Z,15nm,0.8s,baz=224,slow=5.3,SNR=118
ILAR PP **PP** 13 02 07.8 -3.8
comp=Z,1.4nm,0.9s,baz=229,slow=6.8,SNR=4.4
528A Cox Ranch, San 90.06 57 P P 12 58 29.3 +1.1
baz=90,SNR=6.2
O19A Miners Draw (B 90.06 46 P P 12 58 28.8 +0.8
baz=90,SNR=25
RRI2 Red Ridge 90.14 43 *e*P P 12 58 29.6 +1.1
comp=Z,30nm,0.7s
F14A Wisdom 90.17 40 P P 12 58 29.6 +1.2
baz=90
P20A De Beque 90.17 47 P P 12 58 29.8 +1.3
baz=90,SNR=5.7
126A Clayton Basin, 90.18 55 P P 12 58 29.8 +1.1
baz=90,SNR=5.4
R21A Cimarron 90.21 48 P P 12 58 30.4 +1.6
baz=90,SNR=7.3
U23A El Rito 90.22 51 P P 12 58 30.2 +1.3
baz=90,SNR=9.2
Y25A Mesa, Roswell 90.24 53 P P 12 58 29.8 +0.9
baz=90,SNR=16
BTO Baotou 90.28 314 *e*P P 12 58 29.6 +0.7
W24A Lazy 6 Ranch, 90.29 52 P P 12 58 30.1 +0.9
baz=91,SNR=11
I16A Newdale 90.31 42 P P 12 58 31.0 +1.9
baz=91,SNR=17
B12A Libby 90.33 37 P P 12 58 30.2 +1.3
baz=91,SNR=6.4
BILL Bilibino 90.34 355 ⇓ *i*P P 12 58 28.8 +0.4
BILL *e**PP **pP** 13 00 37.5 +1.9
BILL *i* 13 02 15.4
BILL pmax pmax
comp=Z,79nm,1.2s
DCID1 Drake Creek 90.36 42 *e*P P 12 58 31.1 +1.8
G15A Dillon 90.36 41 P P 12 58 30.6 +1.3
baz=91,SNR=13
MSO Missoula 90.37 39 *e*P P 12 58 29.3 +0.1
comp=Z,3.2nm,0.8s
428A Kincaid Ranch, 90.38 57 P P 12 58 31.1 +1.5
baz=91,SNR=12
DLMT Dillon 90.39 40 *e*P P 12 58 30.8 +1.4
comp=Z,8.2nm,0.8s
CD2 Chengdu 90.41 303 ⇓ *i*P P 12 58 31.2 +1.5
CD2 pP **pP** 13 00 36.4 -0.5
CD2 sP **sP** 13 01 32.3 -2.9
CD2 PP **PP** 13 02 19.3 +4.0
CD2 SKS **SKSac** 13 08 08.5 +2.9
CD2 S **ScS** 13 08 37.1 -0.4
CD2 sS **sS** 13 12 18.3 -4.5
CD2 SS **SS** 13 14 59.9 +5.0
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,170nm,8.2s
Q21A Lamborn Mesa, 90.41 48 P P 12 58 30.8 +1.1
baz=91
S22A 4UR Ranch, Cre 90.42 49 P P 12 58 31.1 +1.1
baz=91,SNR=16
BSMT Bassoo Peak 90.44 38 *e*P P 12 58 30.3 +0.7
REDW Red Top Meadow 90.45 43 *e*P P 12 58 30.8 +1.0
comp=Z,0.3nm,0.8s
TPAW Teton Pass 90.45 43 *e*P P 12 58 31.0 +1.1
comp=Z,13nm,0.8s
Z26A Caprock 90.49 54 P P 12 58 31.1 +1.0
baz=91,SNR=17
529A Stev Forest Ra 90.49 58 P P 12 58 30.8 +0.7
baz=91,SNR=16
SNOW Snow King Moun 90.56 43 *e*P P 12 58 31.8 +1.5
comp=Z,22nm,0.7s
328A Wristen Ranch, 90.56 56 P P 12 58 31.1 +0.8
baz=91,SNR=8.1
O20A White River Ci 90.57 47 P P 12 58 31.6 +1.1
baz=91,SNR=10
EFI East Falkland 90.61 148 *e*P P 12 58 31.1 +0.9
EFI East Falkland 90.61 148 *e*P P 12 58 31.1 +0.9
V24A Rampart Ranch, 90.62 52 P P 12 58 31.7 +1.0
baz=91,SNR=17
M19A Rock Springs 90.62 45 P P 12 58 31.6 +1.0
baz=91,SNR=11
IMW Indian Meadow 90.66 42 *e*P P 12 58 32.3 +1.5
comp=Z,16nm,0.9s
R22A Saguache, Gunn 90.70 49 P P 12 58 32.4 +1.2
baz=91,SNR=8.1
127A Arkansas Junct 90.70 55 P P 12 58 32.1 +1.0
baz=91,SNR=10.0
F15A Butte 90.70 40 P P 12 58 31.7 +0.8
baz=91,SNR=15
MOOW Moose Ponds 90.71 42 *e*P P 12 58 32.1 +1.1
comp=Z,4.2nm,0.8s
LRM Limekiln Ridge 90.72 40 *e*P P 12 58 32.1 +1.1
LOHW Long Hollow 90.73 43 *e*P P 12 58 32.0 +0.9
comp=Z,7.7nm,1.0s
D14A Greenough 90.76 39 ⇓ P P 12 58 31.2 +0.1
baz=91,SNR=13
L19A Farson 90.78 44 P P 12 58 32.5 +1.1
baz=91,SNR=32
G16A Moss Hill, Enn 90.80 41 P P 12 58 32.5 +1.1
baz=91,SNR=9.8
CHMT Chamberlain Mo 90.82 39 *e*P P 12 58 31.7 +0.3
P21A Newcastle 90.82 47 P P 12 58 32.9 +1.2
baz=91
QLMT Earthquake Lak 90.83 41 *e*P P 12 58 33.3 +1.8
SLMT Seeley Lake 90.85 39 *e*P P 12 58 31.6 +0.2
H16A Russell Place, 90.88 41 P P 12 58 33.4 +1.7
baz=91,SNR=7.2
Q22A Crested Butte, 90.88 48 P P 12 58 33.3 +1.3
baz=91,SNR=15
Y26A Elida 90.89 54 P P 12 58 32.8 +0.9
baz=91,SNR=13
N20A Spence Gulch, 90.89 46 P P 12 58 32.9 +1.0
baz=91,SNR=23
B13A Whitefish 90.90 37 ⇓ P P 12 58 31.8 +0.2
baz=91,SNR=5.9
E15A Deer Lodge 90.92 40 P P 12 58 32.4 +0.6
baz=91,SNR=7.7
429A Davenport Ranc 90.95 57 P P 12 58 33.1 +0.9
baz=91,SNR=47
BW06 Boulder Array 90.97 44 *e*P P 12 58 32.7 +0.4
comp=Z,14nm,1.0s
PDAR Pinedale Array 90.97 44 P P 12 58 32.8 +0.5
PDAR pP **pP** 13 00 41.6 +2.1
PDAR PP **PP** 13 02 17.2 -2.5
PDAR PKKPbc **PKKPbc** 13 15 52.9 -1.2
PDAR Pinedale Array 90.97 44 P P 12 58 32.8 +0.5
comp=Z,12nm,1.0s,baz=204,slow=3.3,SNR=54

PDAR pP **pP** 13 00 41.6 +2.1
comp=Z,0.8nm,1.0s,baz=225,slow=3.7,SNR=1.8
PDAR PP **PP** 13 02 17.2 -2.5
comp=Z,0.7nm,0.7s,baz=231,slow=5.7,SNR=3.7
PDAR PKKPbc **PKKPbc** 13 15 52.9 -1.2
comp=Z,0.8nm,0.7s,baz=88,slow=4.6,SNR=4.8

W25A X Bar L Ranch, 90.98 52 P **P** 12 58 33.1 +0.7
baz=91,SNR=16
SMCO Snowmass 90.98 48 *e*P **P** 12 58 33.1 +0.6
Z27A Tatum 91.08 54 P **P** 12 58 33.1 +0.3
baz=91,SNR=5.4
BOZ Bozeman (W) 91.12 41 *e*P **P** 12 58 33.6 +0.9
BOZ pmax pmax
comp=Z,9.0nm,0.9s
BOZ Bozeman (W) 91.12 41 *e*P **P** 12 58 33.6 +0.9
comp=Z,8.9nm,0.9s
BOZ *e*pP **pP** 13 00 43.0 +3.0
V25A Rancho No Teng 91.14 52 P **P** 12 58 33.8 +0.7
baz=91,SNR=14
X26A CR and CF Fran 91.17 53 P **P** 12 58 34.0 +0.8
baz=91
530A J-C Ranch, Com 91.19 58 P **P** 12 58 34.1 +0.8
baz=91,SNR=5.7
F16A Kennard Place, 91.19 40 P **P** 12 58 34.4 +1.4
baz=92,SNR=9.4
A13A Flathead Natio 91.23 37 P **P** 12 58 34.1 +1.0
baz=92
329A Wagon Wheel Ra 91.25 57 P **P** 12 58 34.6 +1.1
baz=92,SNR=9.4
M20A Sweetwater, Wa 91.25 45 P **P** 12 58 34.7 +1.1
baz=92,SNR=9.4
I18A Diamond G Ranc 91.27 43 P **P** 12 58 34.7 +1.1
baz=92
CLNS Chul'man 91.28 333 *e*P **P** 12 58 32.6 -0.5
CLNS *e**PP **pP** 13 00 40.1 -0.3
CLNS *e* 13 02 18.9
CLNS *e*PPP PPP 13 04 23.8
CLNS *e*S **SKSac** 13 08 08.2 -1.1
CLNS *e* 13 08 44.6
CLNS pmax pmax
comp=Z,24nm,1.1s
CLNS pmax pmax
comp=E,6.0nm,1.1s
CLNS pmax pmax
comp=N,12nm,1.1s
CLNS pmax pmax
comp=N,4.0nm,1.2s
CLNS pmax pmax
comp=Z,5.0nm,1.0s
CLNS pmax pmax
comp=E,4.0nm,1.0s
CLNS smax smax
comp=N,6.0nm,1.1s
CLNS smax smax
comp=E,12nm,1.1s

D15A Lincoln 91.31 39 P **P** 12 58 34.5 +1.0
baz=92,SNR=8.9
P22A Eagle 91.33 48 P **P** 12 58 34.9 +1.0
baz=92
R23A Moffat 91.33 49 P **P** 12 58 35.2 +1.2
baz=92,SNR=6.1
128A Castleberry Fa 91.34 55 P **P** 12 58 34.6 +0.7
baz=92,SNR=7.1
N21A Black Mountain 91.35 46 P **P** 12 58 35.4 +1.3
baz=92,SNR=22
Y27A Causey 91.37 54 P **P** 12 58 34.8 +0.7
baz=92,SNR=6.6
EGAK Eagle 91.37 15 *e*P **P** 12 58 33.6 +0.4
comp=E,39nm,0.9s
L20A Wamsutter 91.40 45 P **P** 12 58 35.6 +1.4
baz=92,SNR=16
631A Perdido Creek 91.49 59 P **P** 12 58 35.6 +1.0
baz=92,SNR=25
G17A Pierce Place, 91.50 41 P **P** 12 58 36.1 +1.6
baz=92
S24A Houchin Ranch, 91.52 50 P **P** 12 58 36.4 +1.4
baz=92,SNR=5.7
430A Baggett Ranch, 91.53 57 P **P** 12 58 35.6 +0.7
baz=92
J19A Crowheart 91.54 44 P **P** 12 58 35.7 +0.9
baz=92,SNR=5.9
U25A Circle Dot Ran 91.54 51 P **P** 12 58 35.8 +0.8
baz=92,SNR=11
HRY Holter Researc 91.55 40 *e*P **P** 12 58 35.9 +1.2
COLD Coldfoot 91.56 11 *e*P **P** 12 58 34.8 +0.7
comp=E,19nm,0.6s
B14A Marquette Ranc 91.57 38 P **P** 12 58 35.2 +0.5
baz=92,SNR=41
WALA Waterton Lakes 91.58 37 *e*P **P** 12 58 35.2 +0.4
comp=E,0.2nm,0.6s
WALA *e*pP pP 13 00 49.1 +7.1
C15A Salmond Ranch, 91.64 38 P **P** 12 58 35.5 +0.4
baz=92,SNR=13
Q23A Hartsel 91.65 49 P **P** 12 58 36.7 +1.1
baz=92
732A Laxson Ranch, 91.69 60 P **P** 12 58 36.5 +0.9
baz=92,SNR=7.4
MSTX Muleshoe 91.70 54 P **P** 12 58 36.5 +0.9
baz=92,SNR=6.1
K20A Yellowstone Ra 91.71 44 P **P** 12 58 36.0 +0.4
baz=92,SNR=8.4
V26A Tequesquite Ra 91.73 52 P **P** 12 58 36.8 +1.0
baz=92
O22A Kremmling 91.73 47 P **P** 12 58 36.6 +0.7
baz=92,SNR=13
A14A Double T Ranch 91.81 37 P **P** 12 58 36.5 +0.7
baz=92,SNR=18
129A Stewart Farms, 91.82 56 P **P** 12 58 36.9 +0.8
baz=92
531A Rocksprings 91.82 58 P **P** 12 58 37.5 +1.2
baz=92,SNR=11
330A Mertzon 91.84 57 P **P** 12 58 36.6 +0.4
baz=92
F17A Fitzpatrick Pl 91.84 41 P **P** 12 58 37.5 +1.5
baz=92,SNR=10.0
H18A Shoshone NF, C 91.84 42 P **P** 12 58 37.5 +1.3
baz=92
M21A Separation Pea 91.85 46 P **P** 12 58 37.1 +0.8
baz=92,SNR=18
R24A Sanders Place, 91.86 49 P **P** 12 58 36.5 +0.1
baz=92,SNR=6.9
P23A Jefferson 91.86 48 P **P** 12 58 37.9 +1.3
baz=92
T25A Trinidad 91.87 51 P **P** 12 58 37.3 +0.9
baz=92,SNR=6.6
D16A Dana Ranch, Ca 91.88 39 P **P** 12 58 37.2 +1.0
baz=92,SNR=15
W27A Bowe Ranch, En 91.95 53 P **P** 12 58 37.5 +0.8
baz=92
B15A Bradely Ranch, 91.95 38 P **P** 12 58 36.5 +0.1
baz=92,SNR=11
I19A Meeteetse 91.95 43 P **P** 12 58 37.7 +1.1
baz=92,SNR=5.3
E17A Martinsdale 92.00 40 P **P** 12 58 37.8 +1.0
baz=92
L21A Rawlins 92.02 45 P **P** 12 58 37.5 +0.5
baz=92,SNR=5.6
U26A Atchley Ranch, 92.02 51 P **P** 12 58 37.8 +0.6
baz=92,SNR=7.8
S25A Robets Cordova 92.08 50 P **P** 12 58 38.2 +0.8
baz=92,SNR=9.6
230A Sterling City 92.09 56 P **P** 12 58 38.0 +0.6
baz=92
N22A Wattenberg Ran 92.09 47 P **P** 12 58 38.6 +1.1
baz=92,SNR=7.5
Q24A Divide 92.15 49 P **P** 12 58 39.1 +1.2
baz=92
C16A Fuhringer Ranc 92.15 39 P **P** 12 58 38.1 +0.7
baz=92
632A Uvalde 92.16 59 P **P** 12 58 39.0 +1.3
baz=92,SNR=11
O23A Lake Granby, G 92.18 47 P **P** 12 58 39.1 +1.1
baz=92
A15A Johnson Ranch, 92.20 37 P **P** 12 58 38.1 +0.5
baz=92,SNR=13
J20A Shoshoni 92.20 44 P **P** 12 58 38.8 +1.0
baz=92
ISCO Idaho Springs 92.21 48 *e*P **P** 12 58 38.7 +0.6
ISCO pmax pmax
comp=Z,4.0nm,0.8s
ISCO Idaho Springs 92.21 48 *e*P **P** 12 58 38.7 +0.6
comp=Z,3.9nm,0.8s
ISCO Idaho Springs 92.21 48 P **P** 12 58 38.7 +0.6
baz=92,SNR=7.7
G18A Lazy EL Ranch, 92.22 42 P **P** 12 58 39.2 +1.4
baz=92
H19A Powell 92.26 42 P **P** 12 58 39.5 +1.5
baz=93,SNR=5.3

M22A Cedar Creek Ra 92.27 46 P **P** 12 58 39.3 +1.0
baz=93
RLMT Red Lodge 92.31 42 *e*P **P** 12 58 39.4 +1.1
comp=Z,6.2nm,0.9s
532A Rocksprings 92.31 59 P **P** 12 58 39.2 +0.7
baz=93,SNR=6.0
331A San Angelo 92.38 57 P **P** 12 58 39.1 +0.3
baz=93
GCMT Greycliff 92.39 41 *e*P **P** 12 58 39.9 +1.4
comp=Z,1.3nm,0.8s
R25A Fountain Ranch 92.40 50 P **P** 12 58 39.5 +0.7
baz=93,SNR=7.2
K21A Alcova 92.41 45 P **P** 12 58 39.5 +0.7
baz=93,SNR=5.6
F18A Big Timber 92.41 41 P **P** 12 58 40.0 +1.4
baz=93,SNR=5.7
D17A Six Diamond Ra 92.45 40 P **P** 12 58 40.0 +1.2
baz=93,SNR=22
I20A Worland 92.46 43 P **P** 12 58 39.8 +0.9
baz=93,SNR=13
T26A Comanche Natio 92.47 51 P **P** 12 58 39.6 +0.4
baz=93,SNR=5.1
N23A Red Feather La 92.47 47 P **P** 12 58 40.5 +1.2
baz=93,SNR=5.6
B16A M & M Farms, S 92.49 38 P **P** 12 58 39.1 +0.2
baz=93,SNR=15
JCT Junction City 92.54 58 *e*P **P** 12 58 39.3 -0.2
JCT pmax pmax
comp=Z,5.0nm,0.6s
JCT Junction City 92.54 58 *e*P **P** 12 58 39.3 -0.2
comp=Z,4.9nm,0.6s
JCT Junction City 92.54 58 P **P** 12 58 39.9 +0.5
baz=93
LZH Lanzhou 92.55 308 *e*P **P** 12 58 41.5 +1.9
LZH pP pP 13 00 41.7 -5.3
LZH PP **PP** 13 02 30.7 -1.2
LZH SKS **SKSac** 13 08 16.6 -0.9
LZH *e*S **ScS** 13 08 57.8 +2.4
LZH sS sS 13 12 35.6 -7.5
LZH SS **SS** 13 15 31.5 +6.2
LZH pmax pmax
comp=Z,65nm,1.0s
LZH pmax pmax
comp=Z,240nm,5.8s

J21A Lysite 92.61 44 P **P** 12 58 40.8 +1.1
baz=93,SNR=5.2
E18A Harlowton 92.62 40 P **P** 12 58 40.9 +1.3
baz=93
C17A Wharram Farm, 92.64 39 P **P** 12 58 40.5 +0.9
baz=93,SNR=27
Z30A Sanderson Ranc 92.65 55 P **P** 12 58 40.8 +0.9
baz=93
L22A Ellis Ranch, M 92.67 46 P **P** 12 58 41.4 +1.4
baz=93,SNR=13
432A Menard 92.70 58 P **P** 12 58 40.5 +0.2
baz=93,SNR=14
U27A Thompson Grove 92.70 52 P **P** 12 58 40.8 +0.6
baz=93
231A Bronte 92.72 57 P **P** 12 58 40.5 +0.2
baz=93,SNR=20
S26A Kim 92.75 50 P **P** 12 58 40.8 +0.4
baz=93,SNR=12
Q25A Bedland, Calha 92.76 49 P **P** 12 58 41.2 +0.7
baz=93
H20A Greybull 92.79 43 P **P** 12 58 40.9 +0.4
baz=93,SNR=9.6
A16A West Butte Ran 92.83 38 P **P** 12 58 41.5 +1.0
baz=93
F19A Roth Farm, Mol 92.86 41 P **P** 12 58 41.6 +1.0
baz=93,SNR=6.7
M23A Laramie 92.88 46 P **P** 12 58 41.5 +0.5
baz=93
K22A Casper 92.89 45 P **P** 12 58 42.1 +1.2
baz=93
I21A Big Trails, Te 92.93 44 P **P** 12 58 41.6 +0.5
baz=93,SNR=14
YAK Yakutsk 92.94 339 *e*P **P** 12 58 39.3 -1.2
YAK *e* 13 02 32.2
YAK *e*S **SKSac** 13 08 13.7 -4.3
YAK pmax pmax
comp=E,14nm,1.0s
YAK pmax pmax
comp=Z,95nm,0.9s
YAK pmax pmax
comp=N,13nm,1.0s
YAK pmax pmax
comp=Z,22nm,1.4s
YAK pmax pmax
comp=N,24nm,1.9s
YAK pmax pmax
comp=E,35nm,2.1s
YAK smax smax
comp=E,60nm,1.7s
YAK smax smax
comp=N,157nm,1.9s

332A Millersview 92.95 57 P **P** 12 58 41.8 +0.4
baz=93,SNR=17
B17A L&G Farms, Che 92.95 39 P **P** 12 58 41.8 +0.8
baz=93
PHWY Pilot Hill 92.99 47 *e*P **P** 12 58 42.0 +0.4
comp=N,2.7nm,0.5s
G20A Bridger 93.01 42 P **P** 12 58 42.7 +1.3
baz=93
R26A Arlington 93.06 50 P **P** 12 58 42.5 +0.7
baz=93,SNR=16
P25A Willow Gulch B 93.08 49 P **P** 12 58 42.8 +0.8
baz=93,SNR=6.3
S27A Las Animas 93.19 51 P **P** 12 58 42.9 +0.5
baz=94,SNR=6.6
L23A Garrett 93.19 46 P **P** 12 58 43.2 +0.7
baz=94,SNR=9.2
E19A Rath Farm, Rou 93.25 41 P **P** 12 58 43.9 +1.5
baz=94,SNR=7.7
J22A Midwest 93.27 44 P **P** 12 58 43.5 +0.9
baz=94
Q26A Hugo 93.28 49 P **P** 12 58 43.7 +0.9
baz=94,SNR=6.4
A17A Triple J Farms 93.33 38 P **P** 12 58 43.6 +0.9
baz=94,SNR=23
Z31A Sharp Cattle R 93.42 56 P **P** 12 58 44.1 +0.7
baz=94
EGMT Eagleton 93.43 39 *e*P **P** 12 58 44.2 +1.0
comp=N,6.4nm,0.8s
EGMT Eaton 93.43 39 P **P** 12 58 44.2 +1.0
baz=94
I22A 9 Mile Ranch, 93.48 44 P **P** 12 58 44.5 +0.9
baz=94,SNR=11
M24A Cheyenne 93.49 47 P **P** 12 58 44.9 +1.1
baz=94
R27A Eads 93.52 50 P **P** 12 58 44.4 +0.6
baz=94,SNR=8.8
D19A Cripps Ranch, 93.53 40 P **P** 12 58 44.7 +1.0
baz=94,SNR=5.2
B18A Beardsley Farm 93.59 39 P **P** 12 58 44.8 +0.9
baz=94,SNR=14
E20A Meyer Farm, Mu 93.67 41 P **P** 12 58 45.5 +1.3
baz=94,SNR=6.6
C19A Slack Wire Ran 93.70 40 P **P** 12 58 45.7 +1.3
baz=94,SNR=17
A18A Metzger Ranch, 93.81 38 P **P** 12 58 45.5 +0.6
baz=94,SNR=10
S28A Manter 93.87 51 P **P** 12 58 46.2 +0.7
baz=94
Z32A Haskell 93.92 56 P **P** 12 58 46.6 +0.9
baz=94,SNR=6.0
D20A Manuel Ranch, 93.94 40 P **P** 12 58 46.8 +1.3
baz=94,SNR=8.7
KSCO Kaye Shedlock' 93.94 50 P **P** 12 58 46.9 +1.0
baz=94
Y32A R-V Farms, Ver 94.23 55 P **P** 12 58 47.8 +0.7
baz=94
R28A Tribune 94.24 50 P **P** 12 58 48.2 +1.1
baz=94
C20A Veseth Ranch, 94.31 40 P **P** 12 58 48.6 +1.4
baz=95,SNR=8.2
E21A Keefer Ranch, 94.33 41 P **P** 12 58 48.7 +1.4
baz=95
A19A Klindworth Far 94.45 39 P **P** 12 58 48.8 +1.0
baz=95
Q28A Sharon Springs 94.53 50 P **P** 12 58 49.1 +0.6
baz=95
O27A Beecher Island 94.54 48 P **P** 12 58 49.2 +0.7
baz=95
D21A La Casta Ranch 94.62 41 P **P** 12 58 50.0 +1.4
baz=95
LCO Las Campanas 94.74 124 *e*P **P** 12 58 50.7 +0.8
comp=N,23nm,1.1s
R29A Marienthal 94.76 51 P **P** 12 58 50.1 +0.7
baz=95

G23A Biddle 94.77 43 P **P** 12 58 50.0 +0.7
baz=95
A20A Cobblestone Ra 94.91 39 P **P** 12 58 51.0 +1.1
baz=95
C21A Desert Coulee 94.91 40 P **P** 12 58 50.9 +1.0
baz=95
F23A Volborg 94.99 43 P **P** 12 58 51.3 +1.0
baz=95,SNR=6.4
J25A Sunshine Ranch 95.01 45 P **P** 12 58 51.2 +0.7
baz=95
Q29A Oakley 95.06 50 P **P** 12 58 51.8 +1.0
baz=95
H24A Dirks Ranch, A 95.11 44 P **P** 12 58 51.5 +0.6
baz=95
D22A Cohagen 95.15 41 P **P** 12 58 52.2 +1.2
baz=96
RSSD Black Hills 95.17 44 *e*P **P** 12 58 51.0 -0.3
RSSD pmax pmax
comp=Z,7.0nm,0.9s
RSSD Black Hills 95.17 44 *e*P **P** 12 58 51.0 -0.3
comp=Z,7.2nm,0.9s
B21A Ellsworth Farm 95.23 40 P **P** 12 58 52.7 +1.4
baz=96
R30A Dighton 95.32 51 P **P** 12 58 53.1 +1.1
baz=96
CFAA Coronel Fontan 95.36 127 P **P** 12 58 52.5 0.0
CFAA PP **PP** 13 02 49.5 -3.2
CFAA Coronel Fontan 95.36 127 P **P** 12 58 52.5 0.0
comp=Z,2.6nm,0.9s,baz=247,slow=4.6,SNR=44
CFAA PP **PP** 13 02 49.5 -3.2
comp=Z,0.5nm,0.9s,baz=253,slow=6.1,SNR=5.9

P29A Atwood 95.39 50 P **P** 12 58 53.4 +1.1
baz=96
E23A Ismay 95.40 42 P **P** 12 58 53.4 +1.3
baz=96
N28A Pribbeno Ranch 95.40 48 P **P** 12 58 53.4 +1.1
baz=96
A21A Bergtoll Ranch 95.54 39 P **P** 12 58 53.9 +1.2
baz=96
ULN Ulaanbaatar 95.55 320 P **P** 12 58 53.1 +0.2
SNR=9.8
ULN Ulaanbaatar 95.55 320 *e*P **P** 12 58 52.9 0.0
comp=Z,22nm,1.1s
O29A 4D Ranch, Culb 95.69 49 P **P** 12 58 54.5 +0.9
baz=96
B22A Reddig Ranch S 95.78 40 P **P** 12 58 55.3 +1.5
baz=96
P30A Selden 95.85 50 P **P** 12 58 55.6 +1.3
baz=96
SONM Songino Array 95.94 319 P **P** 12 58 54.3 -0.3
SONM PP PP 13 02 51.7 -5.8
SONM PKKPbc **PKKPbc** 13 15 40.3 -0.9
SONM Songino Array 95.94 319 P **P** 12 58 54.3 -0.3
comp=Z,2.5nm,0.8s,baz=133,slow=6.3,SNR=13
SONM PP PP 13 02 51.7 -5.8
comp=Z,1.6nm,0.8s,baz=115,slow=6.7,SNR=6.1
SONM PKKPbc **PKKPbc** 13 15 40.3 -0.9
comp=Z,0.8nm,0.6s,baz=224,slow=4.0,SNR=2.8

C23A Lambert 96.05 41 P **P** 12 58 56.4 +1.4
baz=96
A22A Carney Farms, 96.14 39 P **P** 12 58 56.8 +1.4
baz=96
C24A Savage 96.39 41 P **P** 12 58 57.8 +1.2
baz=97
B23A Brockton 96.45 40 P **P** 12 58 58.2 +1.5
baz=97
GTA Gaotai 96.82 310 *e*P **P** 12 58 59.1 +0.3
GTA pP pP 13 01 00.1 -6.5
GTA SKS **SKSac** 13 08 43.8 +4.0
GTA S **ScS** 13 09 31.6 +0.8
GTA SS **SS** 13 16 27.7 +2.8
GTA pmax pmax
comp=Z,21nm,1.4s
GTA pmax pmax
comp=Z,100nm,6.4s

A24A Westby 97.24 40 P **P** 12 59 01.6 +1.3
baz=98
ATAH Atahualpa 97.56 101 P **P** 12 59 06.0 +3.0
ATAH Atahualpa 97.56 101 P **P** 12 59 06.0 +3.0
comp=Z,2.7nm,0.6s,baz=132,slow=21,SNR=4.4

YKA Yellowknife Ar 98.42 25 P **P** 12 59 05.2 +0.1
YKA pP **pP** 13 01 17.0 +3.8
YKA PP PP 13 03 10.2 -5.5
YKA PKKPbc **PKKPbc** 13 15 31.8 -3.0
YKA Yellowknife Ar 98.42 25 P **P** 12 59 05.2 +0.1
comp=Z,2.5nm,0.7s,baz=243,slow=4.6,SNR=7.9
YKA pP **pP** 13 01 17.0 +3.8
comp=Z,0.7nm,0.9s,baz=248,slow=4.7,SNR=3.2
YKA PP PP 13 03 10.2 -5.5
comp=Z,1.7nm,1.0s,baz=240,slow=7.4,SNR=8.5
YKA PKKPbc **PKKPbc** 13 15 31.8 -3.0
comp=Z,0.3nm,0.4s,baz=38,slow=2.5,SNR=6.4

ZAK Zakamensk 98.87 321 *e*P Pdif 12 59 06.7 -0.9
ZAK pmax pmax
comp=Z,5.0nm,1.1s
TLY Talaya 99.18 322 *e*P **Pdif** 12 59 08.2 -0.6
TLY pmax pmax
comp=Z,4.0nm,1.7s
TIXI Tiksi 99.79 345 *ce*P **Pdif** 12 59 10.2 -0.8
TIXI pmax pmax
comp=Z,9.0nm,1.6s

TAPN Taplejung 102.13 295 *e*P **PKiKP** 13 03 41.4 -0.1
comp=Z,50nm,1.2s
ODAN Odare 102.25 294 *e*P **PKiKP** 13 03 41.7 +0.1
comp=Z,28nm,0.8s

LPAZ La Paz 102.78 113 Pdif **Pdif** 12 59 28.7 +2.2
LPAZ PP **PP** 13 03 49.1 -0.2
LPAZ PKKPbc **PKKPbc** 13 15 21.9 -0.2
LPAZ La Paz 102.78 113 Pdiff **Pdif** 12 59 28.7 +2.2
comp=Z,1.6nm,0.8s,baz=243,slow=3.0,SNR=7.1
LPAZ PP **PP** 13 03 49.1 -0.2
comp=Z,4.8nm,1.2s,baz=239,slow=5.0,SNR=6.3
LPAZ PKKPbc **PKKPbc** 13 15 21.9 -0.2
comp=Z,2.9nm,0.7s,baz=20,slow=3.7,SNR=13

RAMN Ramite 102.94 294 *e*P **PKiKP** 13 03 42.7 -0.2
comp=Z,27nm,0.7s
GUN Gumba 103.85 295 *e*P **PKiKP** 13 03 44.0 -0.7
PKI Pulchoki 104.14 294 *e*P **PKiKP** 13 03 44.1 -1.1
comp=Z,27nm,0.8s
KKN Kakani 104.32 294 *e*P **PKiKP** 13 03 44.6 -0.8
KOLN Koldanda 105.73 294 *e*P **PKiKP** 13 03 46.9 -1.1
DANN Dangsing 105.76 295 *e*P **PKiKP** 13 03 47.4 -0.7
PYUN Piuthan 106.34 294 *e*P **PKiKP** 13 03 47.8 -1.3
comp=Z,46nm,1.0s

ZAA0 Zalesovo Array 110.74 321 *e*PKPdf **PKiKP** 13 03 54.8 -1.4
ZAA0 *e*SKPdf **SKPdf** 13 06 36.0 -0.6
ZALV Zalesovo Beam 110.74 321 *i* PKiKP **PKiKP** 13 03 55.4 -0.9
ZALV 13 04 45.8
ZALV Zalesovo Beam 110.74 321 Pdif **Pdif** 12 59 59.4 -0.7
ZALV PKiKP **PKiKP** 13 03 55.4 -0.9
ZALV PP **PP** 13 04 45.8 +0.3
ZALV SKP 13 06 35.6
ZALV PKKPbc **PKKPbc** 13 14 55.1 -2.5
ZALV PKKPab **PKKPab** 13 15 06.5 -1.5
ZALV Zalesovo Beam 110.74 321 Pdiff **Pdif** 12 59 59.4 -0.7
comp=Z,0.6nm,0.5s,baz=131,slow=4.1,SNR=3.5
ZALV PKiKP **PKiKP** 13 03 55.4 -0.9
comp=Z,8.3nm,0.7s,baz=160,slow=0.7,SNR=35
ZALV PP **PP** 13 04 45.8 +0.3
comp=Z,4.2nm,0.8s,baz=72,slow=4.7,SNR=3.9
ZALV SKP 13 06 35.6
comp=Z,3.0nm,0.7s,baz=105,slow=1.5,SNR=5.2
ZALV PKKPbc **PKKPbc** 13 14 55.2 -2.5
comp=Z,0.3nm,0.3s,baz=282,slow=1.3,SNR=2.1
ZALV PKKPab **PKKPab** 13 15 06.5 -1.5
comp=Z,0.4nm,0.3s,baz=277,slow=2.5,SNR=3.5

MK31 Makanchi Array 111.17 313 *i* PKiKP **PKiKP** 13 03 56.4 -1.0
MK31 pmax pmax
comp=Z,4.0nm,0.5s
MK31 Makanchi Array 111.17 313 *e*Pdif **Pdif** 13 00 03.2 +0.9
MK31 *e*PKPdf **PKiKP** 13 03 56.5 -1.0
MK31 *e*SKPdf **SKPdf** 13 06 37.1 -0.7
MKAR Makanchi Array 111.17 313 *c i* PKiKP **PKiKP** 13 03 56.7 -0.7
MKAR pmax pmax
comp=Z,4.0nm,0.5s
MKAR Makanchi Array 111.17 313 Pdif **Pdif** 13 00 03.2 +0.9
MKAR PKiKP **PKiKP** 13 03 56.6 -0.7
MKAR PP **PP** 13 04 51.3 +2.4
MKAR SKP 13 06 36.7
MKAR PKKPbc **PKKPbc** 13 14 55.6 -0.6
MKAR PKKPab **PKKPab** 13 15 07.4 +1.1
MKAR SKKPbc SKKPbc 13 17 40.2 -5.9
MKAR Makanchi Array 111.17 313 Pdiff **Pdif** 13 00 03.2 +0.9
comp=Z,1.4nm,0.7s,baz=92,slow=6.4,SNR=12
MKAR PKiKP **PKiKP** 13 03 56.6 -0.7

	comp=Z,4.3nm,0.5s,baz=194,slow=0.9,SNR=45						
MKAR				PP	PP	13 04 51.3	+2.4
	comp=Z,2.5nm,0.8s,baz=97,slow=10,SNR=4.7						
MKAR				SKP		13 06 36.7	
	comp=Z,2.2nm,0.6s,baz=164,slow=1.0,SNR=7.8						
MKAR				PKKPbc	PKKPbc	13 14 55.6	-0.6
	comp=Z,3.4nm,0.8s,baz=271,slow=4.5,SNR=15						
MKAR				PKKPab	PKKPab	13 15 07.4	+1.1
	comp=Z,2.9nm,0.7s,baz=278,slow=4.9,SNR=13						
MKAR				SKKPbc	SKKPbc	13 17 40.2	-5.9
	comp=Z,0.8nm,0.6s,baz=280,slow=2.1,SNR=6.4						
NVS	Novosibirsk	111.79	322	ePKIKP	PKiKP	13 03 56.0	-2.2
NVS				i		13 09 43.8	
NVS				pmax	pmax		
	comp=Z,12nm,0.8s						
NVS				pmax	pmax		
	comp=N,2.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,21nm,1.7s						
NVS				pmax	pmax		
	comp=N,5.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.2s						
NVS				pmax	pmax		
	comp=N,12nm,1.5s						
NVS				pmax	pmax		
	comp=E,69nm,1.9s						
KURK	Kurchatov	114.11	317	ePKIKP	PKPdf	13 04 01.5	-1.3
KURK						13 14 54.0	
KURK						13 15 06.1	
KURK	Kurchatov	114.11	317	ePKPdf	PKPdf	13 04 01.5	-1.3
KURK				PP	PP	13 05 01.6	-7.6
KURK				eSKPdf	SKPdf	13 06 42.2	-1.0
KURK				SKP		13 06 42.6	
KURK				PKKPbc	PKKPbc	13 14 45.9	-0.6
KURK				PKKPab	PKKPab	13 14 54.0	+0.9
KURK				PKKP	PKKPdf	13 15 06.1	-1.7
KURK				SKKPbc	SKKPbc	13 17 32.8	-4.8
KURBB	Kurchatov Arra	114.16	317	PKP	PKPdf	13 04 01.9	-1.0
	comp=E,9.1nm,0.6s,baz=111,slow=1.7,SNR=86						
KURBB				PP	PP	13 05 01.6	-7.9
	comp=E,4.5nm,0.9s,baz=100,slow=5.9,SNR=9.5						
KURBB				SKP		13 06 42.6	
	comp=E,4.6nm,0.7s,baz=96,slow=1.8,SNR=9.3						
KURBB				PKKPbc	PKKPbc	13 14 45.9	-0.5
	comp=E,1.3nm,0.6s,baz=277,slow=4.0,SNR=11						
KURBB				PKKPab	PKKPab	13 14 54.0	+1.1
	comp=E,4.1nm,0.8s,baz=275,slow=5.1,SNR=21						
KURBB				PKKP	PKKPdf	13 15 06.1	-1.6
	comp=E,0.2nm,0.3s,baz=48,slow=1.4,SNR=3.1						
KURBB				SKKPbc	SKKPbc	13 17 32.8	-4.7
	comp=E,2.2nm,0.7s,baz=276,slow=3.8,SNR=17						
KSH	Kashi	114.57	305	ePKP	PKPdf	13 04 05.0	+0.8
KSH				eSKS	SKSdf	13 10 26.1	+4.7
KSH				eSKKS	SKKSac	13 11 07.4	-5.9
TKM2	Tokmak 2	115.32	308	ePKIKP	PKPdf	13 04 05.0	-0.7
TKM2	Tokmak 2	115.32	308	ePKPdf	PKPdf	13 04 05.0	-0.7
TKM2				eSKPdf	SKPdf	13 06 45.8	-0.4
TKM2	Tokmak 2	115.32	308	P	PKPdf	13 04 05.0	-0.7
	SNR=14						
KZA	Kyzart	115.47	307	P	PKPdf	13 04 06.2	-0.1
	SNR=12						
KBK	Karagaybulak	115.76	308	P	PKPdf	13 04 06.2	-0.3
	SNR=12						
CHMS	Chumysh	115.94	308	P	PKPdf	13 04 06.2	-0.5
	SNR=8.5						
AAK	Ala-Archa	116.09	308	ePKIKP	PKPdf	13 04 06.4	-0.7
AAK						13 05 23.7	
AAK	Ala-Archa	116.09	308	ePKPdf	PKPdf	13 04 06.4	-0.7
AAK				PKP	PKPdf	13 04 06.7	-0.5
AAK				PP	PP	13 05 23.7	+0.3
AAK				SKP		13 06 46.7	
AAK				PKKPbc	PKKPbc	13 14 39.1	-0.7
AAK	Ala-Archa	116.09	308	P	PKPdf	13 04 06.4	-0.7
	SNR=5.4						
AAK	Ala-Archa	116.09	308	PKP	PKPdf	13 04 06.7	-0.5
	comp=E,4.9nm,0.5s,baz=151,slow=4.4,SNR=13						
AAK				PP	PP	13 05 23.7	+0.3
	comp=E,1.4nm,0.4s,baz=122,slow=10,SNR=3.0						
AAK				SKP		13 06 46.7	
	comp=E,3.0nm,0.7s,baz=215,slow=6.6,SNR=2.8						
AAK				PKKPbc	PKKPbc	13 14 39.1	-0.7
	comp=E,5.0nm,0.6s,baz=242,slow=5.5,SNR=9.1						
USP	Ospenovka	116.16	309	P	PKPdf	13 04 06.5	-0.6
	SNR=16						
EKS2	Erkin-Say	116.62	308	ePKIKP	PKPdf	13 04 07.8	-0.3
EKS2	Erkin-Say	116.62	308	ePKPdf	PKPdf	13 04 07.8	-0.3
EKS2	Erkin-Say	116.62	308	P	PKPdf	13 04 08.0	-0.1
	SNR=7.5						
AML	Almayashu	116.62	307	P	PKPdf	13 04 08.3	-0.2
	SNR=23						
KK31	Karatay Array	119.05	308	i PKIKP	PKPdf	13 04 11.7	-0.9
KK31				pmax	pmax		
	comp=Z,14nm,0.6s						
KKAR	Karatay Array	119.05	308	ePKIKP	PKPdf	13 04 11.9	-0.7
KKAR	Karatay Array	119.05	308	ePKPdf	PKPdf	13 04 11.9	-0.7
KKAR				eSKPdf	SKiKP	13 06 53.1	-0.2
OPO	Ambohidratompo	119.11	232	PKP	PKPdf	13 04 14.3	+0.6
OPO	Ambohidratompo	119.11	232	PKP	PKPdf	13 04 14.3	+0.6
	comp=Z,4.7nm,0.7s,baz=28,slow=2.8,SNR=7.4						
BVA0	Borovoye Array	119.28	319	i PKIKP	PKPdf	13 04 11.8	-0.9
BVA0				pmax	pmax		
	comp=Z,22nm,0.8s						
BVAR	Borovoye Array	119.28	319	PKIKP	PKPdf	13 04 12.1	-0.6
BVAR						13 05 42.7	
BVAR	Borovoye Array	119.28	319	PKP	PKPdf	13 04 12.1	-0.6
BVAR				PP	PP	13 05 42.7	-1.8
BVAR				SKP		13 06 52.7	
BVAR				PKKPbc	PKKPbc	13 14 27.2	-1.5
BVAR	Borovoye Array	119.28	319	PKP	PKPdf	13 04 12.1	-0.6
	comp=Z,23nm,0.5s,baz=112,slow=2.6,SNR=113						
BVAR				PP	PP	13 05 42.7	-1.8
	comp=Z,7.6nm,1.0s,baz=101,slow=7.7,SNR=6.3						
BVAR				SKP		13 06 52.7	
	comp=Z,11nm,0.9s,baz=90,slow=3.0,SNR=7.6						
BVAR				PKKPbc	PKKPbc	13 14 27.2	-1.5
	comp=Z,1.4nm,0.6s,baz=300,slow=3.3,SNR=4.5						
BRVK	Borovoye	119.34	319	ePKIKP	PKPdf	13 04 12.1	-0.7
BRVK	Borovoye	119.34	319	ePKPdf	PKPdf	13 04 12.1	-0.7
BRVK				eSKPdf	SKPdf	13 06 53.0	-0.2
KBL	Kabul	119.35	298	ePKIKP	PKPdf	13 04 13.8	+0.1
KBL	Kabul	119.35	298	ePKPdf	PKPdf	13 04 13.8	+0.1
KBL				eSKPdf	SKiKP	13 06 54.7	+0.2
BDFB	Brasilia	119.53	124	PKP	PKPdf	13 04 13.8	-0.7
BDFB				PKKPbc	PKKPbc	13 14 26.9	-0.8
BDFB	Brasilia	119.53	124	PKP	PKPdf	13 04 13.8	-0.7
	comp=Z,1.9nm,0.5s,baz=196,slow=8.1,SNR=3.2						
BDFB				PKKPbc	PKKPbc	13 14 26.9	-0.8
	comp=Z,6.1nm,0.8s,baz=19,slow=4.3,SNR=5.9						
SCHQ	Schefferville	120.67	38	PKP	PKPdf	13 04 14.3	-1.0
SCHQ				PKKPbc	PKKPbc	13 14 22.7	-1.0
SCHQ	Schefferville	120.67	38	PKP	PKPdf	13 04 14.3	-1.0
	comp=Z,1.5nm,0.3s,baz=91,slow=0.6,SNR=7.8						
SCHQ				PKKPbc	PKKPbc	13 14 22.7	-1.0
	comp=Z,1.6nm,0.7s,baz=98,slow=5.9,SNR=3.5						
SUR	Sutherland	122.58	200	PKP	PKPdf	13 04 20.4	+0.3
SUR	Sutherland	122.58	200	PKP	PKPdf	13 04 20.4	+0.3
	comp=Z,13nm,0.9s,baz=162,slow=4.1,SNR=6.6						
KBS	Kingsbay	122.73	357	eP	PKPdf	13 04 17.3	-1.3
KBS	Kingsbay	122.73	357d	i PKIKP	PKPdf	13 04 18.5	-0.2
KBS				pmax	pmax		
	comp=Z,31nm,1.7s						
SPA0	Spitsbergen Ar	123.22	356	eP	PKPdf	13 04 19.4	-0.3
DAG	Danmarks Havn	124.31	5⇓	i PKIKP	PKPdf	13 04 20.2	-1.5
DAG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DAG	Danmarks Havn	124.31	5⇓	i P	PKPdf	13 04 20.2	-1.5
	comp=Z,12nm,0.9s						
BOSA	Boshof	124.34	206	PKP	PKPdf	13 04 23.3	-0.2
BOSA				PKKPbc	PKKPbc	13 14 09.6	-0.9
BOSA	Boshof	124.34	206	PKP	PKPdf	13 04 23.3	-0.2
	comp=Z,6.4nm,0.8s,baz=61,slow=3.6,SNR=7.2						
BOSA				PKKPbc	PKKPbc	13 14 09.6	-0.9
	comp=Z,6.8nm,1.0s,baz=279,slow=4.4,SNR=6.0						
SVE	Sverdlovsk	124.38	325	ePKIKP	PKPdf	13 04 22.5	+0.1
SVE				pmax	pmax		
	comp=Z,47nm,0.9s						
SFJD	Kangerlussuaq	124.81	22	i P	PKPdf	13 04 21.8	-1.1
	comp=Z,6.3nm,0.9s						
SUMG	Summit	124.89	13	ePKIKP	PKPdf	13 04 23.3	-0.2
SUMG	Summit	124.89	13	ePKPdf	PKPdf	13 04 23.3	-0.2
SUMG	Summit	124.89	13⇓	i P	PKPdf	13 04 23.2	-0.2
	comp=Z,19nm,0.9s						
ARU	Arti	125.59	325	i PKIKP	PKPdf	13 04 24.0	-0.7
ARU						13 06 22.8	
ARU						13 10 33.6	
SOKR	Solikamsk	125.60	329c	i PKIKP	PKPdf	13 04 24.6	+0.1
SOKR				pmax	pmax		
	comp=Z,50nm,0.7s						
AB31	Akbulak array	126.16	316	i PKIKP	PKPdf	13 04 25.4	-0.6
AB31				pmax	pmax		
	comp=Z,40nm,1.2s						
ABKAR	Akbulak array	126.16	316	ePKPdf	PKPdf	13 04 25.8	-0.3
SMDO	Samad	127.13	283	P	PKPdf	13 04 29.1	+0.3
	SNR=6.3						
AKTO	Aktyubinsk	127.20	317	PKIKP	PKPdf	13 04 27.6	-0.4
AKTO				pmax	pmax		
	comp=Z,25nm,0.8s						
AKTO	Aktyubinsk	127.20	317	SKKPbc	SKKPbc	13 16 48.9	-6.3
	comp=Z,1.8nm,0.8s,baz=194,slow=4.3,SNR=4.3						
LBTB	Lobatse	127.33	209	PKP	PKPdf	13 04 28.5	-0.7
LBTB				SKPbc	SKiKP	13 06 53.8	-17
LBTB	Lobatse	127.33	209	PKP	PKPdf	13 04 28.5	-0.7
	comp=Z,1.5nm,0.4s,baz=145,slow=5.5,SNR=4.8						
LBTB				SKPbc	SKiKP	13 06 53.8	-17
	comp=Z,5.0nm,0.8s,baz=100,slow=10,SNR=4.9						
BSY	Bisya	127.84	282	P	PKPdf	13 04 29.8	-0.2
	SNR=5.1						
KEV	Kevo	129.62	348	ep	PKPdf	13 04 31.8	-0.2
	comp=Z,9.7nm,0.6s						
KEV	Kevo	129.62	348	ep		13 07 00.4	
	comp=Z,57nm,1.1s						
KEV	Kevo	129.62	348	ePKIKP	PKPdf	13 04 31.3	-0.7
KEV				e		13 07 00.7	
KEV	Kevo	129.62	348	ePKPdf	PKPdf	13 04 31.3	-0.7
KEV				eSKPbc	SKPab	13 07 00.7	+0.6
SCO	Scoresbysund	129.68	10	i PKIKP	PKPdf	13 04 32.0	-0.1
SCO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SCO	Scoresbysund	129.68	10	i P	PKPdf	13 04 32.0	-0.1
	comp=Z,8.1nm,0.9s						
ARCES	ARCESS Array B	130.08	349	PKPpre	PKPpre	13 04 18.7	
ARCES				PKP	PKPdf	13 04 32.4	-0.6
ARCES				SKPbc	SKPbc	13 07 01.8	-0.1
ARCES				PKKP	PKKPdf	13 14 34.4	-3.0
ARCES				SKKPbc	SKKPbc	13 16 39.5	-6.7
ARCES	ARCESS Array B	130.08	349	PKhKP	PKPpre	13 04 18.7	
	comp=Z,2.5nm,0.7s,baz=79,slow=1.9,SNR=16						
ARCES				PKP	PKPdf	13 04 32.4	-0.6
	comp=Z,24nm,0.6s,baz=45,slow=1.4,SNR=62						
ARCES				SKPbc	SKPbc	13 07 01.7	-0.1
	comp=Z,58nm,0.9s,baz=15,slow=5.0,SNR=44						
ARCES				PKKP	PKKPdf	13 14 34.4	-3.0
	comp=Z,2.5nm,1.1s,baz=227,slow=3.2,SNR=8.0						
ARCES				SKKPbc	SKKPbc	13 16 39.5	-6.7
	comp=Z,1.3nm,0.9s,baz=193,slow=3.7,SNR=3.5						
ARE0	ARCESS Array S	130.08	349	eP	PKPdf	13 04 32.3	-0.6
ARE0	ARCESS Array S	130.08	349	ePKPdf	PKPdf	13 04 32.5	-0.4
ARE0				eSKPdf	SKPab	13 07 02.6	+0.5
KTK1	Kautokeino	130.94	349	eP	PKPdf	13 04 35.1	+0.6
KTK1				AMB	AMB	13 04 35.6	
	comp=Z,10nm,0.6s						
TRO	Tromso	131.04	352	eP	PKPdf	13 04 34.3	-0.3
TRO				e		13 07 05.0	
TMCR	Tamitsa	131.05	339	ePKIKP	PKPdf	13 04 35.3	+0.5
TMCR				pmax	pmax		
	comp=Z,16nm,0.7s						
KLMR	Klimovskoe	132.63	335	ePKHKP	PKPpre	13 04 30.4	
KLMR				e		13 04 38.1	
KLMR				i		13 07 08.0	
KLMR				pmax	pmax		
	comp=Z,19nm,1.3s						
JOF	Joensuu	134.06	341	ep	PKPdf	13 04 39.9	-0.6
JOF	Joensuu	134.06	341	ep	PP	13 07 16.3	-3.6
	comp=Z,36nm,0.8s						
JOF	Joensuu	134.06	341	ePKIKP	PKPdf	13 04 39.9	-0.6
LSZ	Lusaka	134.11	219	ePKPdf	PKPdf	13 04 42.3	+0.1
LSZ				PKP	PKPdf	13 04 42.7	+0.4
LSZ				SKPbc	SKPbc	13 07 18.1	+0.6
LSZ				eSKPbc	SKPab	13 07 18.3	-3.0
LSZ	Lusaka	134.11	219	PKP	PKPdf	13 04 42.7	+0.4
	comp=Z,3.7nm,0.4s,baz=66,slow=6.2,SNR=12						
LSZ				SKPbc	SKPbc	13 07 18.1	+0.6
	comp=Z,16nm,1.0s,baz=90,slow=1.0,SNR=14						
TSUM	Tsumeb	135.81	203	PKP	PKPdf	13 04 44.9	-0.5
TSUM				SKP		13 07 22.9	
TSUM	Tsumeb	135.81	203	PKP	PKPdf	13 04 44.9	-0.5
	comp=Z,5.4nm,0.9s,baz=166,slow=2.8,SNR=5.6						
TSUM				SKP		13 07 22.9	
	comp=Z,12nm,1.0s,baz=126,slow=4.5,SNR=7.7						
KAF	Kangasniemi	136.14	343	ep	PKPpre	13 04 33.4	
KAF	Kangasniemi	136.14	343	ep	PP	13 07 21.6	-11
	comp=Z,15nm,0.8s						
KAF	Kangasniemi	136.14	343	ePKHKP	PKPpre	13 04 33.4	
FIA1	FINESS Array S	136.75	342	ePKPpre	PKPpre	13 04 33.1	
FIA1				ePKPdf	PKPdf	13 04 45.2	-0.4
FIA1				eSKPbc	SKPbc	13 07 23.4	-0.4
FINES	FINESS Array B	136.75	342	PKPpre	PKPpre	13 04 33.3	
FINES				PKP	PKPdf	13 04 44.9	-0.6
FINES				SKP		13 07 24.1	
FINES	FINESS Array B	136.75	342	PKhKP	PKPpre	13 04 33.3	
	comp=Z,4.0nm,0.5s,baz=35,slow=4.5,SNR=16						
FINES				PKP	PKPdf	13 04 44.9	-0.6
	comp=Z,16nm,0.6s,baz=48,slow=3.0,SNR=17						
FINES				SKP		13 07 24.1	
	comp=Z,21nm,0.8s,baz=55,slow=10.0,SNR=14						
KBD	Kabd	137.05	290	eP	PKPpre	13 04 36.6	
OBN	Obninsk	137.34	330⇓	i PKIKP	PKPdf	13 04 44.9	-1.9
OBN				e		13 10 46.1	
OBN				eSS	SS	13 25 00.8	-0.9
OBN				pmax	pmax		
	comp=Z,82nm,1.6s						
MIB	Mutribah	137.38	291	eP	PKPpre	13 04 36.5	
MIB				AMb	AMB	13 04 40.9	
	comp=Z,31nm,0.6s						
KMBO	Kilima Mbogo	137.43	242	PKP	PKPdf	13 04 48.4	-0.3
KMBO				SKP		13 07 28.9	
KMBO	Kilima Mbogo	137.43	242	PKP	PKPdf	13 04 48.3	-0.3
	comp=Z,4.9nm,0.6s,baz=70,slow=1.7,SNR=11						
KMBO				SKP		13 07 28.9	
	comp=Z,26nm,1.0s,baz=41,slow=2.8,SNR=22						
NAY	Al-Naaiem	137.45	290	eP	PKPpre	13 04 36.8	
NAY				AMb	AMB	13 04 39.6	
	comp=Z,13nm,0.8s						
DGRG	David-gareji	137.71	308	P	SKPbc	13 07 28.8	+1.4
DUS	Dusheti	138.04	309	P	SKPbc	13 07 30.8	+2.5
TBLG	Delisi	138.10	309	P	SKPbc	13 07 29.4	+0.9
GUDG	Gudauri	138.11	310	P	SKPbc	13 07 29.4	+0.7
KZR	Kazreti	138.43	308	P	SKPbc	13 07 30.5	+1.1
GNI	Garni	138.47	306	ePKPdf	PKPdf	13 04 46.7	-2.9
IBDR	Badra	138.50	296	ePkP	PKPpre	13 04 37.1	
IBDR				eSkP	SKPbc	13 07 27.8	-2.0
IBDR				ePP	PP	13 07 45.7	-2.9
IBDR				ePks		13 08 11.8	
IBDR				eSKS	SKSdf	13 10 54.1	-11
ONI	Oni	138.80	310	P	SKPbc	13 07 31.7	+1.3
KBZ	Khabaz	138.86	312	PKHKP	PKPpre	13 04 43.3	
KBZ						13 04 49.9	
KBZ	Khabaz	138.86	312	PKPpre	PKPpre	13 04 43.3	
KBZ				PKP	PKPdf	13 04 49.9	-0.1
KBZ				SKP		13 07 30.2	
KBZ				SKKPbc	SKKPbc	13 16 10.3	-2.1
KBZ	Khabaz	138.86	312	PKhKP	PKPpre	13 04 43.3	
	comp=Z,3.0nm,0.7s,baz=152,slow=3.0,SNR=10						
KBZ				PKP	PKPdf	13 04 49.9	-0.1
	comp=Z,6.9nm,0.9s,baz=342,slow=3.2,SNR=9.9						
KBZ				SKP		13 07 30.2	
	comp=Z,6.5nm,0.7s,baz=190,slow=2.9,SNR=8.5						
KBZ				SKKPbc	SKKPbc	13 16 10.3	-2.1
	comp=Z,1.4nm,0.8s,baz=269,slow=3.7,SNR=4.0						
KIV	Kislovodsk	138.93	312	ePKHKP	PKPpre	13 04 45.7	
KIV				pmax	pmax		
	comp=Z,16nm,1.0s						
AKH	Akhalkalaki	139.09	308	P	SKPbc	13 07 32.7	+1.3
CHVG	Ch'k'valeri	139.73	311	P	SKPbc	13 07 30.8	-2.1
BHD	Baghdad	139.78	296	ePkP	PKPdf	13 04 45.3	-6.7
BHD				eSkP	SKPbc	13 07 30.0	-3.2
BHD				ePP	PP	13 07 55.3	-1.1
BHD				ePks		13 08 27.3	
BHD				eSKS	SKSdf	13 11 05.7	-1.7
BHD				eSkkS		13 13 46.0	
CUKT	Cukurca	139.90	302	eP	PKPdf	13 04 45.1	-7.2
NB2	NORSAR Subarra	140.24	352	PKP	PKPpre	13 04 45.1	
	comp=Z,6.2nm,0.6s,baz=10,slow=3.2						
NB2	NORSAR Subarra	140.24	352	PKP	PKPpre	13 04 45.1	
	baz=10,slow=3.2						
NOA	NORSAR Array B	140.24	352	PKPpre	PKPpre	13 04 45.4	
NOA				PKP	PKPdf	13 04 52.0	-0.1
NOA				SKPbc	SKPbc	13 07 33.1	-0.5
NOA				SKPab	SKPab	13 07 47.1	+0.3
NOA				SKKPbc	SKKPab	13 16 04.5	-3.6
NOA	NORSAR Array B	140.24	352	PKhKP	PKPpre	13 04 45.4	
	comp=Z,22nm,0.9s,baz=16,slow=4.6,SNR=71						
NOA				PKP	PKPdf	13 04 52.0	-0.1
	comp=Z,3.5nm,0.6s,baz=9.7,slow=3.2,SNR=13						
NOA				SKPbc	SKPbc	13 07 33.1	-0.5
	comp=Z,13nm,0.9s,baz=14,slow=4.4,SNR=11						
NOA				SKPab	SKPab	13 07 47.1	+0.3
	comp=Z,6.8nm,0.9s,baz=18,slow=3.2,SNR=4.2						
NOA				SKKPbc	SKKPab	13 16 04.5	-3.6
	comp=Z,2.3nm,0.9s,baz=194,slow=4.0,SNR=4.6						
NAO01	NORSAR Array S	140.47	352	ePKPpre	PKPpre	13 04 46.7	
NAO01				eSKPbc	SKPbc	13 07 34.6	+0.4
NC602	NORSAR Array S	140.49	351	eP	PKPpre	13 04 46.2	
SUE	Sulen	140.82	357	eP	PKPdf	13 04 48.6	-4.3
SUE				AMB	AMB	13 04 48.9	
	comp=Z,40nm,1.0s						
IZAR	Zarasai	141.21	337	eP	PKPdf	13 04 49.4	-4.5
IZAR				AMB	AMB	13 04 50.9	
	comp=Z,26nm,1.0s						
IDID	Didziasalis	141.35	336	eP	PKPdf	13 04 49.8	-4.3
IDID				AMB	AMB	13 04 51.0	
	comp=Z,14nm,1.0s						
ASK	Askoy	141.36	356	eP	PKPdf	13 04 49.7	-4.3
ASK				AMB	AMB	13 04 51.0	
	comp=Z,111nm,1.6s						
ISAL	Salakas	141.39	337	eP	PKPdf	13 04 50.0	-4.2
ISAL				AMB	AMB	13 04 51.5	
	comp=Z,25nm,1.1s						
RUND	Rundenannen	141.42	356	eP	PKPdf	13 04 49.4	-4.7
BNGL	BINGOL	141.44	305	i P	PKPdf	13 04 52.2	-2.9
BER	Bergen	141.45	356	eP	PKPdf	13 04 49.2	-4.9
BER				AMB	AMB	13 04 54.3	
	comp=Z,81nm,1.4s						
IIGN	Ignalina	141.52	337	eP	PKPdf	13 04 50.1	-4.3
IIGN				AMB	AMB	13 04 55.6	
	comp=Z,20nm,0.8s						
EGD	Espegrend	141.57	356	eP	PKPdf	13 04 49.5	-4.9
EGD				AMB	AMB	13 04 51.3	
	comp=Z,48nm,0.9s						
NACGM	Naroch	141.65	336	eP	PKPdf	13 04 47.0	-7.7
KONO	Kongsberg	141.79	353	eP	PKPdf	13 04 50.8	-4.0
KONO				AMB	AMB	13 04 52.0	
	comp=Z,67nm,0.9s						
KONO	Kongsberg	141.79	353	ePKHKP	PKPdf	13 04 50.3	-4.5
KONO	Kongsberg	141.79	353	ePKPdf	PKPdf	13 04 50.3	-4.5
KONO				eSKPbc	SKPbc	13 07 37.9	+0.4
ODD1	Odda	141.83	355	eP	PKPdf	13 04 49.4	-5.6
ODD1				AMB	AMB	13 04 52.2	
	comp=Z,27nm,1.0s						
ANN	Anapa	142.13	316	i PKHKP	PKPpre	13 04 45.7	
ANN				pmax	pmax		
	comp=Z,137nm,1.2s						
KBSD	Kabsdagh	142.35	303	eP	PKPdf	13 04 53.8	-2.8
KBSD	Kabsdagh	142.35	303	eP	PKPdf	13 04 53.6	-3.0
MZRK	Al-Mazaregh	142.49	301	eP	PKPdf	13 04 55.8	-1.0
PTK	Pertek	142.78	306	eP	PKPdf	13 04 56.3	-1.2
SFNV	Sufian	142.81	302	eP	PKPdf	13 04 55.8	-1.6
STAV	Stavanger	142.87	356	eP	PKPdf	13 04 55.0	-1.7
STAV				AMB	AMB	13 04 55.2	
	comp=Z,67nm,0.5s						
MBAR	Mbarara	142.95	237	PKP	PKPdf	13 04 56.3	-2.2
MBAR				SKPbc	SKPbc	13 07 40.8	-1.3
MBAR	Mbarara	142.95	237	PKP	PKPdf	13 04 56.3	-2.2
	comp=Z,107nm,0.7s,baz=124,slow=4.1,SNR=146						
MBAR				SKPbc	SKPbc	13 07 40.8	-1.3
	comp=Z,7.6nm,0.7s,baz=206,slow=24,SNR=4.4						
HOMB	Homborsund	143.26	353⇓	i P	PKPbc	13 04 55.8	-0.2
SNART	Snartemo	143.33	354	eP	PKPab	13 04 54.1	-1.8
SNART				AMB	AMB	13 04 55.9	
	comp=Z,170nm,1.2s						
MNKR	ALMNKUR	143.57	301	eP	PKPdf	13 04 58.5	-0.2
AKASG	Malin Array Be	143.57	329	PKIKP	PKPab	13 04 56.5	-0.6
AKASG	Malin Array Be	143.57	329	PKP	PKPab	13 04 56.5	-0.6
AKASG				SKPbc	SKPbc	13 07 42.2	+0.1
AKASG				SKKPbc	SKKPab	13 15 49.4	-3.7
AKASG	Malin Array Be	143.57	329	PKP	PKPab	13 04 56.5	-0.6
	comp=Z,118nm,0.6s,baz=42,slow=4.2,SNR=561						
AKASG				SKPbc	SKPbc	13 07 42.2	+0.1
	comp=Z,38nm,1.0s,baz=46,slow=2.2,SNR=22						
AKASG				SKKPbc	SKKPab	13 15 49.4	-3.7
	comp=Z,0.6nm,0.5s,baz=276,slow=1.4,SNR=4.9						
AK01	Malin Array Si	143.58	329	ePKPbc	PKPab	13 04 56.4	-0.7
AK01				eSKPbc	SKPbc	13 07 41.8	-0.3
KIEV	Kiev	143.58	329	ePKIKP	PKPab	13 04 56.3	-0.8
KIEV	Kiev	143.58	329	ePKPdf	PKPab	13 04 56.3	-0.8
KIEV				eSKPbc	SKPbc	13 07 41.5	-0.6
URFA	Urfa	143.59	304	eP	PKPbc	13 04 58.2	+0.5
AK02	Malin Array Si	143.61	329	ePKPdf	PKPab	13 04 56.5	-0.7
AK02				eSKPbc	SKPbc	13 07 42.2	0.0
MYA	Malataya	143.66	305	eP	PKPdf	13 04 59.6	+0.7
SUW	Suwalki	143.67	337⇓	i PKIKP	PKPab	13 04 57.4	+0.1
SUW	Suwalki	143.67	337	ePKPdf	PKPbc	13 04 57.2	-0.2
SUW				eSKPbc	SKPbc	13 07 42.3	+0.1
SUW	Suwalki	143.67	337	i PKPdf	PKPab	13 04 57.4	+0.1
KSRV	Kasrt alli	143.80	301	eP	PKPdf	13 04 59.3	+0.2
RSDY	Resadiye-TOKAT	143.85	309	eP	PKPdf	13 04 59.7	+0.6
MVH1	Achvaich	143.91	4	eP	PKPbc	13 04 57.2	-0.7
MVH1	Achvaich	143.91	4	P	PKPbc	13 04 57.2	-0.7
ATAB	Bozova	143.99	304	i P	PKPdf	13 04 60.0	+0.6
AKCD	Akcadag	144.05	305	i P	PKPdf	13 05 00.6	+0.9
SIM	Simferopol'	144.17	318d	i PKIKP	PKPab	13 04 59.8	+0.2
SIM				pmax	pmax		
	comp=Z,144nm,0.8s						
KAC	Achnashellach	144.25	5	eP	PKPbc	13 04 59.0	0.0
KAC	Achnashellach	144.25	5	P	PKPbc	13 04 59.0	0.0
JHLN	Al Jahlan	144.29	301	eP	PKPab	13 05 00.8	+0.4
DARE	Darende-Malaty	144.31	306	eP	PKPab	13 05 01.4	+1.0
MCD	Coleburn Disti	144.31	3	eP	PKPbc	13 04 58.6	-0.6
MCD	Coleburn Disti	144.31	3	P	PKPbc	13 04 58.6	-0.6
KPL	Plockton	144.37	6	eP	PKPdf	13 04 59.1	-0.2
KPL	Plockton	144.37	6	P	PKPdf	13 04 59.1	-0.2
MDO	Dochfour	144.38	5	eP	PKPdf	13 04 58.9	-0.5
MDO	Dochfour	144.38	5	P	PKPdf	13 04 58.9	-0.5
KSB	Sheil Bridge	144.52	6	eP	PKPdf	13 04 59.6	+0.1
KSB	Sheil Bridge	144.52	6	P	PKPdf	13 04 59.6	+0.1
KVT	Kavak	144.53	311	eP	PKPab	13 05 01.7	+0.6
SLMH	Al Salmeh	144.57	302	eP	PKPab	13 05 01.6	+0.1
MME1	Meikle Cairn	144.59	3	eP	PKPdf	13 04 58.9	-0.9
MME1	Meikle Cairn	144.59	3	P	PKPdf	13 04 58.9	-0.9
MUD	Monsted U'grnd	144.95	352⇓	i PKIKP	PKPbc	13 05 01.1	-0.1
MUD				pmax	pmax		
	comp=Z,110nm,0.9s						
MUD	Monsted U'grnd	144.95	352⇓	i P	PKPbc	13 05 01.1	-0.1
	comp=Z,112nm,0.9s						
DRUM	Mains of Drumt	145.02	3	eP	PKPbc	13 05 00.9	-0.5
DRUM	Mains of Drumt	145.02	3	P	PKPbc	13 05 00.9	-0.5
KMRS	Kahramanmaras	145.05	305	eP	PKPab	13 05 02.9	-0.4
AYKD	Aykdinkavak	145.14	304	i P	PKPbc	13 05 02.8	+0.3
SARI	SarD1z-Kayseri	145.15	306	eP	PKPab	13 05 03.6	-0.3
COP	Copenhagen	145.16	348⇓	i PKIKP	PKPbc	13 05 01.6	-0.2
COP				pmax	pmax		
	comp=Z,51nm,0.9s						
COP	Copenhagen	145.16	348⇓	i P	PKPbc	13 05 01.6	-0.2
	comp=Z,51nm,0.9s						
BSD	Bornholm Skovb	145.17	346⇓	i PKIKP	PKPbc	13 05 01.7	-0.1
BSD				pmax	pmax		
	comp=Z,210nm,0.9s						
BSD	Bornholm Skovb	145.17	346⇓	i P	PKPbc	13 05 01.7	-0.1
	comp=Z,206nm,0.9s						
BOYT	Boyabat	145.19	312	i P	PKPab	13 05 04.0	+0.2
BYBT	Boyabat	145.27	312	eP	PKPab	13 05 03.8	-0.1
ELO	Logie Almond	145.39	4	eP	PKPdf	13 05 01.4	+0.3
ELO	Logie Almond	145.39	4	P	PKPdf	13 05 01.4	+0.3
BNN	Bunyan	145.44	307	eP	PKPbc	13 05 04.0	+0.6
LLD	Lille Linde	145.54	348	i PKIKP	PKPbc	13 05 03.3	+0.4
LLD				pmax	pmax		
	comp=Z,130nm,0.8s						
LLD	Lille Linde	145.54	348	i P	PKPbc	13 05 03.3	+0.4
	comp=Z,133nm,0.8s						
CTKT	Corum	145.58	311	i P	PKPbc	13 05 03.2	-0.6
BZK	Bozkurt	145.59	313	eP	PKPab	13 05 04.3	-0.8
EAB	Aberfoyle	145.62	5	eP	PKPbc	13 05 02.6	-0.6
EAB	Aberfoyle	145.62	5	P	PKPbc	13 05 02.6	-0.6
ZALF	Zalf	145.69	297	eP	PKPab	13 05 05.8	-0.1
KFRA	Kufra	145.69	301	eP	PKPab	13 05 05.5	-0.4
COBT	Iskenderun	145.81	303	i P	PKPab	13 05 05.7	-0.8
CORM	Corum	145.86	310	eP	PKPab	13 05 05.7	-0.8
KOZT	Kozan	145.87	305	eP	PKPab	13 05 06.0	-0.5
WRDH	Warideh	145.94	301	eP	PKPbc	13 05 05.2	+0.4

TOS	Tosya	145.96	312	eP	PKPbc	13 05 04.6	-0.1
EDI	Edinburgh	145.97	4	eP	PKPdf	13 05 01.7	-0.4
EDI	Edinburgh	145.97	4	P	PKPdf	13 05 01.7	-0.4
PGBU	Glenifferbraes	145.99	5	eP	PKPbc	13 05 03.8	-0.4
PGBU	Glenifferbraes	145.99	5	P	PKPbc	13 05 03.8	-0.4
ESY	Stoneypath	146.00	3	eP	PKPbc	13 05 03.8	-0.5
ESY	Stoneypath	146.00	3	P	PKPbc	13 05 03.8	-0.5
EAU	Auchinoon	146.03	4	eP	PKPbc	13 05 04.4	+0.1
EAU	Auchinoon	146.03	4	P	PKPbc	13 05 04.4	+0.1
CEYT	Ceyhan	146.07	304	eP	PKPbc	13 05 06.0	+1.0
BIDA	Albida	146.12	300	eP	PKPab	13 05 06.7	-1.0
EBL	Broad Law	146.13	4	eP	PKPbc	13 05 04.5	-0.1
EBL	Broad Law	146.13	4	P	PKPbc	13 05 04.5	-0.1
KIS	Kishinev	146.14	324	i P	PKPbc	13 05 04.0	-0.9
KIS				XM		13 05 05.0	
	comp=Z,400nm,1.4s						
KIS	Kishinev	146.14	324	⇓iPKIKP	PKPbc	13 05 05.0	+0.1
KIS				pmax	pmax		
	comp=Z,360nm,1.4s						
KIS				pmax	pmax		
	comp=Z,540nm,6.0s						
HAWK	Haweek	146.16	300	eP	PKPab	13 05 06.7	-1.1
ASF	Jabal al Asfar	146.17	295	SKKPbc	SKKPbc	13 15 40.7	-1.9
	comp=Z,1.8nm,0.7s,baz=117,slow=4.5,SNR=4.6						
BALT	Daday	146.19	313	i P	PKPbc	13 05 06.5	+1.0
AVNT	Avonos	146.19	308	i P	PKPbc	13 05 06.0	+0.4
GKP	Gorka Klasztor	146.22	342	⇓iPKP2	PKPbc	13 05 05.2	+0.3
GKP	Gorka Klasztor	146.22	342	i PKPdf	PKPbc	13 05 05.2	+0.3
SALA	Sala	146.23	296	eP	PKPbc	13 05 06.7	+0.8
CDAG	Cicekdag	146.25	309	i P	PKPbc	13 05 05.6	0.0
BEL	Belsk	146.28	337	⇓iPKP2	PKPbc	13 05 05.8	+0.7
BEL	Belsk	146.28	337	i PKPdf	PKPbc	13 05 05.8	+0.7
TOTH	TOTAH	146.37	298	eP	PKPab	13 05 08.1	-0.6
CANT	Cankiri	146.41	311	eP	PKPbc	13 05 06.8	+0.9
QASN	Qassioun	146.46	298	eP	PKPab	13 05 07.8	-1.3
LVV	L'vov	146.57	332	⇑iPKIKP	PKPbc	13 05 05.8	-0.2
ESK	Eskdalemuir	146.57	4	eP	PKPdf	13 05 04.2	+1.0
ESK	Eskdalemuir	146.57	4	P	PKPdf	13 05 04.2	+1.0
ESK	Eskdalemuir	146.57	4	i PKIKP	PKPbc	13 05 05.9	+0.1
ESK	Eskdalemuir	146.57	4	ePKPbc	PKPbc	13 05 05.5	-0.3
HWQ	Hawqa	146.58	299	eP	PKPbc	13 05 06.9	+0.2
NIG	Nigde	146.60	307	eP	PKPbc	13 05 07.5	+0.7
ECK	Cauldkaine Hil	146.71	4	eP	PKPdf	13 05 04.3	+0.9
ECK	Cauldkaine Hil	146.71	4	P	PKPdf	13 05 04.3	+0.9
BR131	Keskin Array S	146.74	310	ePKPdf	PKPdf	13 05 03.9	-0.3
BR131				ePKPbc	PKPbc	13 05 06.7	-0.3
BR131				eSKPbc	SKPbc	13 07 49.8	-0.1
BRTR	Keskin Array B	146.74	310	PKP	PKPdf	13 05 03.4	-0.8
BRTR				PKPbc	PKPbc	13 05 06.8	-0.1
BRTR				SKPbc	SKPbc	13 07 49.0	-0.9
BRTR	Keskin Array B	146.74	310	PKP	PKPdf	13 05 03.4	-0.8
	comp=Z,53nm,0.7s,baz=128,slow=2.0,SNR=121						
BRTR				PKPbc	PKPbc	13 05 06.8	-0.1
	comp=Z,54nm,0.7s,baz=133,slow=4.2,SNR=166						
BRTR				SKPbc	SKPbc	13 07 49.0	-0.9
	comp=Z,5.3nm,0.8s,baz=130,slow=1.9,SNR=4.5						
BRBR	Barbar	146.75	298	eP	PKPbc	13 05 08.7	+1.4
SAFT	Safranbolu	146.79	313	eP	PKPbc	13 05 07.4	+0.6
RCY	Rachaya	146.83	298	eP	PKPbc	13 05 08.1	+0.6
TCHB	Talchebab	146.87	296	eP	PKPbc	13 05 08.6	+1.2
TCHB	Talchebab	146.87	296	eP	PKPbc	13 05 08.3	+0.9
BHL	Bhannes	146.90	299	eP	PKPbc	13 05 08.1	+0.6
GAL1	Galloway	146.91	6	eP	PKPbc	13 05 06.5	-0.1
GAL1	Galloway	146.91	6	P	PKPbc	13 05 06.5	-0.1
XAL	Allendale	147.08	3	eP	PKPbc	13 05 07.0	-0.2
XAL	Allendale	147.08	3	P	PKPbc	13 05 07.0	-0.2
BBAL	Bala	147.18	310	i P	PKPbc	13 05 09.5	+1.4
BSEG	Bad Segeberg	147.21	349	ePKPbc	PKPbc	13 05 08.1	+0.6
BSEG	Bad Segeberg	147.21	349	ePKP2	PKPbc	13 05 08.1	+0.6
TLCR		147.22	322	⇑PKP2	PKPbc	13 05 08.3	+0.5
TLCR		147.22	322	⇑iP	PKPbc	13 05 08.3	+0.5
AFSR	Af¯ar-Bala (A	147.25	310	eP	PKPbc	13 05 07.8	-0.4
PRAR	RASCA	147.26	327	⇓iP	PKPbc	13 05 08.4	+0.5
KWP	Kalwaria Pacla	147.28	333	PKP2	PKPab	13 05 10.7	-1.0
KWP	Kalwaria Pacla	147.28	333	ePKPbc	PKPbc	13 05 08.3	+0.4
KWP	Kalwaria Pacla	147.28	333	⇑iP	PKPab	13 05 10.7	-1.0
KWP	Kalwaria Pacla	147.28	333	i PKPdf	PKPbc	13 05 08.4	+0.5
KWP				e		13 05 12.7	
ANTO	Ankara	147.28	310	eP	PKPbc	13 05 08.6	+0.3
ANTO	Ankara	147.28	310	ePKIKP	PKPdf	13 05 06.2	+1.2
ANTO	Ankara	147.28	310	P	PKPdf	13 05 05.0	0.0
	SNR=56						
ANTO	Ankara	147.28	310	ePKPdf	PKPdf	13 05 06.2	+1.2
ANTO				ePKPbc	PKPbc	13 05 08.6	+0.3
LOD	Lodumlu	147.29	311	eP	PKPbc	13 05 09.0	+0.6
KESW	Keswick, Cumbr	147.30	4	eP	PKPbc	13 05 07.1	-0.7
KESW	Keswick, Cumbr	147.30	4	P	PKPbc	13 05 07.1	-0.7
SULT	Sultanhani-AKS	147.38	307	eP	PKPbc	13 05 08.6	-0.1
GMM	Mts of Mourne	147.40	7	eP	PKPbc	13 05 07.7	-0.3
GMM	Mts of Mourne	147.40	7	P	PKPbc	13 05 07.7	-0.3
BUR08	Bucovina Ar. S	147.59	328	ePKPdf	PKPbc	13 05 07.2	-1.6
BUR08				ePKPbc	PKiKP	13 05 09.3	-1.1
BURAR	Bucovina Array	147.60	328	⇓iP	PKPbc	13 05 10.5	+1.6
TESR	Tescani	147.61	325	⇓iP	PKPbc	13 05 09.0	+0.2
EREN	Erenkoy	147.70	302	eP	PKPbc	13 05 10.1	+0.7
PETR	Petresti	147.79	324	⇑iP	PKPbc	13 05 11.2	+1.9
RUE	Ruedersdorf	147.86	345	ePKPbc	PKPbc	13 05 09.8	+0.6
RUE	Ruedersdorf	147.86	345	ePKPbc	PKPbc	13 05 09.4	+0.3
TIRR	Tirgusor	147.88	321	ePKHKP	PKPbc	13 05 09.5	0.0
TIRR	Tirgusor	147.88	321	ePKPbc	PKPbc	13 05 09.5	0.0
TIRR	Tirgusor	147.88	321	⇑iP	PKPbc	13 05 10.0	+0.5
PHNC	Paralimni	147.95	301	P	PKPbc	13 05 11.0	+1.0
	comp=Z,2.4nm,0.9s						
OJC	Ojcow	147.97	336	i PKP2	PKPbc	13 05 09.9	+0.3
OJC	Ojcow	147.97	336	ePKPdf	PKPdf	13 05 05.4	-0.3
OJC				i PKiKP	PKPbc	13 05 09.9	+0.3
VRI	Vrincioaia	147.98	324	⇓PKP2	PKPbc	13 05 10.0	+0.2
VRI	Vrincioaia	147.98	324	⇓iP	PKPbc	13 05 10.0	+0.2
KOLS	Kolonicke sedl	147.99	333	ePKHKP	PKPbc	13 05 06.2	-3.5
KOLS	Kolonicke sedl	147.99	333	ePKP	PKPbc	13 05 06.2	-3.5
KOLS				e		13 05 10.7	
HARR	Harsova	148.03	322	⇑PKP2	PKPbc	13 05 10.6	+0.7
HARR	Harsova	148.03	322	⇑iP	PKPbc	13 05 10.6	+0.7
PLOR	Plostina	148.03	324	⇑PKP2	PKPbc	13 05 10.2	+0.2
PLOR	Plostina	148.03	324	⇑iP	PKPbc	13 05 10.2	+0.2
STHS	Stebnicka Huta	148.05	334	ePKP2	PKPbc	13 05 11.1	+1.2
STHS	Stebnicka Huta	148.05	334	ePKP	PKPbc	13 05 11.0	+1.2
MDUB	Mudurnu	148.14	312	eP	PKPbc	13 05 10.7	+0.2
MANR	Mangalia	148.14	320	⇑iP	PKPbc	13 05 11.2	+1.0
GRER		148.15	323	⇑iP	PKPab	13 05 18.9	+3.5
CVD	Cernavoda	148.19	321	⇓PKP2	PKPbc	13 05 11.4	+1.1
CVD	Cernavoda	148.19	321	⇓iP	PKPbc	13 05 11.4	+1.1
UZH	Uzhgorod	148.21	332	⇑iPKHKP	PKPbc	13 05 09.9	-0.3
UZH				i		13 05 14.9	
LADK	Ladik-KONYA	148.23	308	eP	PKPbc	13 05 10.5	-0.3
LFK	Lefkose	148.27	302	eP	PKPbc	13 05 11.5	+0.6
KONT	Konya--Tatoy	148.32	307	eP	PKPdf	13 05 03.4	-3.2
SVRH	Sivrihisar-ESK	148.35	310	eP	PKPbc	13 05 11.1	0.0
CRVS	Cervenica-Dubn	148.36	333	ePKIKP	PKPdf	13 05 04.7	-1.6
CRVS	Cervenica-Dubn	148.36	333	ePKP	PKPdf	13 05 04.6	-1.7
CRVS				e		13 05 09.4	
BMR	Baia Mare	148.38	330	⇑PKP2	PKPbc	13 05 11.5	+0.7
BMR	Baia Mare	148.38	330	⇑iP	PKPbc	13 05 11.4	+0.7
WME	Myndd Eilian	148.40	5	eP	PKPbc	13 05 10.0	-0.6
WME	Myndd Eilian	148.40	5	P	PKPbc	13 05 10.0	-0.6
AMRR	Amara	148.41	322	⇓PKP2	PKPbc	13 05 11.6	+0.7
AMRR	Amara	148.41	322	⇓iP	PKPbc	13 05 11.6	+0.7
NIE	Niedzica	148.42	335	i PKP2	PKPbc	13 05 12.2	+1.4
NIE	Niedzica	148.42	335	ePKPdf	PKPdf	13 05 07.2	+0.7
NIE				i PKiKP	PKPbc	13 05 12.2	+1.4
PSN	Preselentsi	148.46	320	i P	PKPbc	13 05 11.7	+0.7
TRPA	Tarpa	148.48	331	⇓iP	PKPbc	13 05 11.3	+0.4
TRPA	Tarpa	148.48	331	⇓e	PKPbc	13 05 11.1	+0.2
WLF1	Llynfaes	148.50	6	eP	PKPbc	13 05 10.4	-0.4
WLF1	Llynfaes	148.50	6	P	PKPbc	13 05 10.4	-0.4
CSS	Prodhromos	148.51	302	P	PKPbc	13 05 11.4	-0.1
	comp=Z,1.1nm,0.4s						
CSS	Prodhromos	148.51	302	eP	PKPbc	13 05 11.4	-0.1
CSS	Prodhromos	148.51	302	ePKPdf	PKPdf	13 05 06.6	-0.5
CSS				ePKPbc	PKPbc	13 05 11.3	-0.1
CSS				ePKPab	PKPab	13 05 17.8	+0.5
YRC	Rhoscolyn	148.52	6	eP	PKPbc	13 05 10.2	-0.6
YRC	Rhoscolyn	148.52	6	P	PKPbc	13 05 10.2	-0.6
MAMC	Mammari	148.55	302	P	PKPbc	13 05 11.8	+0.3
ISR	Istrita	148.55	323	⇑PKP2	PKPbc	13 05 12.0	+0.7
ISR	Istrita	148.55	323	⇑iP	PKPbc	13 05 12.0	+0.7
WPM1	Penmaenmawr	148.57	5	eP	PKPbc	13 05 10.5	-0.5
WPM1	Penmaenmawr	148.57	5	P	PKPbc	13 05 10.5	-0.5
GULT	Gulveren	148.62	313	eP	PKPbc	13 05 12.0	+0.3
DOPR	Dopca	148.62	326	⇑iP	PKPbc	13 05 12.5	+1.1
NRDL	Niedersach Rie	148.63	349	ePKPbc	PKPbc	13 05 11.6	+0.6
KSP	Ksiaz	148.63	341	ePKP2	PKPab	13 05 18.0	+0.8
KSP	Ksiaz	148.63	341	i PKPdfd	PKPbc	13 05 11.9	+0.7
KSP				ePKPab	PKPab	13 05 18.0	+0.8
MLR	Muntele Rosu	148.64	325	⇑iP	PKPbc	13 05 11.8	+0.2
RAC	Raciborz	148.66	338	ePKP2	PKPbc	13 05 12.3	+1.0
KBI1	Birley Grange	148.72	2	eP	PKPbc	13 05 11.1	-0.3
KBI1	Birley Grange	148.72	2	P	PKPbc	13 05 11.1	-0.3
YRE	Yr Eifl	148.80	6	eP	PKPbc	13 05 10.7	-0.9
YRE	Yr Eifl	148.80	6	P	PKPbc	13 05 10.7	-0.9
LEF	Lefka	148.82	302	eP	PKPbc	13 05 12.4	+0.2
SECR		148.86	324	⇑iP	PKPbc	13 05 12.6	+0.6
SILT	Sile	148.87	315	eP	PKPbc	13 05 12.5	+0.4
OKC	Ostrava-Krasne	148.88	338	i PKHKP	PKPbc	13 05 12.5	+0.6
OKC				e		13 05 19.4	
OKC	Ostrava-Krasne	148.88	338	⇑iPKP	PKPbc	13 05 12.5	+0.6
OKC				ePKPAB	PKPab	13 05 19.4	+1.1
OKC				epPKP	pPKPdf	13 07 34.7	+11
VAL	Valentia	148.93	13	⇓iP	PKPbc	13 05 12.7	+0.8
FOEL	Foel Wylfa	148.99	4	eP	PKPbc	13 05 11.8	-0.3
FOEL	Foel Wylfa	148.99	4	P	PKPbc	13 05 11.8	-0.3
UPC	Upice	149.01	341	ePKIKP	PKPdf	13 05 07.6	+0.3
UPC				e		13 05 19.2	
UPC	Upice	149.01	341	ePKPDF	PKPdf	13 05 07.6	+0.3
UPC				⇑iPKP	PKiKP	13 05 12.9	-0.2
UPC				ePKPAB	PKPab	13 05 19.2	+0.4
UPC				epPKP	pPKPdf	13 07 34.5	+11
CJR	Cluj-Napoca	149.02	328	⇓iP	PKPbc	13 05 13.1	+0.7
MDB	Medias	149.03	327	⇑PKP2	PKPbc	13 05 13.7	+1.3
MDB	Medias	149.03	327	⇑iP	PKPbc	13 05 13.7	+1.3
ALFC	Alevga	149.04	302	P	PKPbc	13 05 12.3	-0.5
	comp=Z,4.0nm,0.6s						
BOLV	Bolvadin	149.05	310	i P	PKPbc	13 05 13.2	+0.3
DPC	Dobruska-Polom	149.05	340	ePKHKP	PKPdf	13 05 07.9	+0.4
DPC				e		13 05 20.4	
DPC	Dobruska-Polom	149.05	340	ePKPDF	PKPdf	13 05 07.9	+0.4
DPC				⇑iPKP	PKiKP	13 05 13.2	0.0
DPC				ePKPAB	PKPab	13 05 20.4	+1.4
DPC				epPKP	pPKPdf	13 07 34.8	+11
KECS	Kecovo	149.09	334	ePKHKP	PKPbc	13 05 13.5	+1.1
KECS				e		13 05 19.8	
KECS	Kecovo	149.09	334	ePKP	PKPbc	13 05 13.5	+1.1
KECS				e		13 05 19.8	
CLL	Collm	149.12	345	⇓ePKHKP	PKPdf	13 05 08.0	+0.6
CLL				i		13 05 19.7	
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL				pmax	pmax		
	comp=Z,281nm,0.8s						
CLL	Collm	149.12	345	ePKPdf	PKPdf	13 05 08.0	+0.6
CLL				⇓iPKPbc	PKiKP	13 05 12.8	-0.4
	comp=Z,281nm,1.0s						
CLL				⇑iPKPab	PKPab	13 05 19.7	+0.5
	comp=Z,103nm,0.8s						
CLL				e		13 07 35.0	
CLL				eSKPbc		13 07 55.0	
CLL				esPKPbc	sPKPbc	13 08 30.0	+6.4
CLL				ePP	PP	13 08 47.0	-2.7
CLL				ePPS	PPS	13 23 00.0	
KRLC	Kraliky	149.14	339	ePKHKP	PKPbc	13 05 13.3	+0.7
KRLC				e		13 05 20.6	
KRLC	Kraliky	149.14	339	⇑ePKP	PKPbc	13 05 13.3	+0.7
KRLC				ePKPAB	PKPab	13 05 20.6	+1.2
KRLC				epPKP	pPKPdf	13 07 36.0	+12
MORC	Moravsky Berou	149.14	338	ePKIKP	PKPdf	13 05 07.5	-0.1
MORC				e		13 05 19.4	
MORC	Moravsky Berou	149.14	338	ePKPdf	PKPdf	13 05 07.5	-0.1
MORC				ePKPbc	PKPbc	13 05 12.7	+0.2
MORC				ePKPab	PKPab	13 05 19.4	-0.1
MORC	Moravsky Berou	149.14	338	⇑iP	PKPbc	13 05 13.4	+0.8
ADVT	Abdulvahap	149.15	313	eP	PKPbc	13 05 12.9	+0.1
VOIR		149.15	325	⇑PKHKP	PKPbc	13 05 12.9	+0.1
VOIR		149.15	325	⇑iP	PKPbc	13 05 12.9	+0.1
CAVI	Cavuskoy	149.19	313	eP	PKPbc	13 05 13.2	+0.3
IBBN	Ibbenburen	149.19	351	ePKPbc	PKPbc	13 05 13.0	+0.5
CLZ	Clausthal	149.20	348	ePKPbc	PKPbc	13 05 13.3	+0.7
CLZ	Clausthal	149.20	348	ePKHKP	PKPbc	13 05 13.3	+0.7
PRD	Provadia	149.20	320	i P	PKPbc	13 05 13.5	+0.7
BRG	Berggiesshubel	149.28	343	ePKP	PKPdf	13 05 08.1	+0.4
	comp=Z,24nm,1.5s						
BRG				i		13 05 13.2	
	comp=Z,207nm,0.9s						
BRG				i		13 05 20.4	
	comp=Z,107nm,0.8s						
BRG				epPKP	pPKPdf	13 07 35.8	+12
	comp=Z,27nm,1.2s						
BRG				PP	PP	13 08 26.0	-25
BRG				SS	SS	13 27 19.0	+2.6
BRG	Berggiesshubel	149.28	343	ePKPbc	PKPbc	13 05 13.4	+0.6
BRG	Berggiesshubel	149.28	343	ePKIKP	PKPdf	13 05 08.1	+0.4
BRG				i		13 05 20.4	
BRG				SS	SS	13 27 19.0	+2.6
BRG				pmax	pmax		
	comp=Z,24nm,1.5s						
BRG				pmax	pmax		
	comp=Z,27nm,1.2s						
AKMC	Akamas	149.29	302	P	PKPbc	13 05 12.6	-0.8
PPCY	Paphos	149.31	302	P	PKPbc	13 05 12.8	-0.6
CIOR	Ciorogarla	149.34	323	⇓iP	PKPbc	13 05 13.3	+0.2
BUY	Buyukada	149.36	315	i P	PKPbc	13 05 13.2	-0.1
DRGR		149.39	329	⇑PKHKP	PKPbc	13 05 13.7	+0.4
DRGR		149.39	329	⇑iP	PKPbc	13 05 13.7	+0.4
FBE	Freiberg	149.39	344	ePKPbc	PKPbc	13 05 14.0	+1.0
SHUT	Suhut-Afyon	149.41	310	eP	PKPbc	13 05 14.2	+0.6
ARR	Arges	149.42	325	⇓iP	PKPbc	13 05 15.3	+1.9
PVCC	Panska Ves	149.42	342	i PKHKP	PKPbc	13 05 14.0	+0.9
PVCC	Panska Ves	149.42	342	⇑iPKP	PKPbc	13 05 14.0	+0.9
NEUB	Neuenburg	149.51	346	ePKPbc	PKPbc	13 05 13.9	+0.6
GEMT	Gemlik	149.52	314	eP	PKPbc	13 05 13.7	0.0
GOLR		149.59	324	⇑iP	PKPbc	13 05 14.6	+0.9
WTSB	Winterswijk	149.65	352	ePKPdf	PKPdf	13 05 07.8	-0.4
	comp=Z,26nm,0.8s						
WTSB				ePKPcd		13 05 13.9	
	comp=Z,273nm,0.7s						
WTSB				ePKPab	PKPab	13 05 21.4	+0.1
	comp=Z,215nm,1.5s						
ARMT	Armutlu	149.67	314	eP	PKPbc	13 05 14.0	-0.1
ISP	Isparta	149.72	308	ePKIKP	PKPdf	13 05 08.9	-0.1
ISP				e		13 05 21.9	
ISP	Isparta	149.72	308	ePKPdf	PKPdf	13 05 08.9	-0.1
ISP				ePKPbc	PKPbc	13 05 13.7	-0.7
ISP				ePKPab	PKPab	13 05 21.9	-0.4
ISP	Isparta	149.72	308	⇑iP	PKPbc	13 05 14.0	-0.4
VYHS	Vyhne	149.74	335	ePKIKP	PKPdf	13 05 08.3	-0.2
VYHS				e		13 05 23.0	
VYHS	Vyhne	149.74	335	ePKP	PKPdf	13 05 08.3	-0.2
VYHS				e		13 05 14.5	
VYHS				e		13 05 23.0	
SLVT	Silivri	149.77	316	eP	PKPbc	13 05 14.7	+0.4
PSZ	Piszkesteto	149.78	334	ePKIKP	PKPdf	13 05 08.3	-0.4
PSZ	Piszkesteto	149.78	334	ePKPdf	PKPdf	13 05 08.3	-0.4
PSZ				ePKPbc	PKPbc	13 05 14.4	+0.2
PSZ	Piszkesteto	149.78	334	⇑iP	PKPbc	13 05 14.6	+0.4
PSZ	Piszkesteto	149.78	334	⇓e	PKPbc	13 05 14.3	+0.1
HUMR	Humele	149.78	324	⇓iP	PKPbc	13 05 14.1	-0.1
TVSB	Tavsanli	149.79	312	eP	PKPbc	13 05 14.9	+0.4
LOT	Lotru	149.81	326	⇑iP	PKPbc	13 05 14.2	-0.2
VRAC	Vranov	149.87	339	⇓iP	PKPbc	13 05 14.9	+0.6
PRA	Prague	149.87	342	⇑PKP	PKPbc	13 05 15.0	+0.8
PRA				ex	x	13 05 18.0	
PRA				PKPAB	PKPab	13 05 23.0	+0.7
PRA				pPKP	pPKPdf	13 07 33.0	+8.0
MCH1	Michaelchurch	149.89	4	eP	PKPbc	13 05 13.8	-0.3
MCH1	Michaelchurch	149.89	4	P	PKPbc	13 05 13.8	-0.3
PRU	Pruhonice	149.91	342	ePKIKP	PKPdf	13 05 09.0	+0.3
PRU				e		13 05 23.0	
PRU	Pruhonice	149.91	342	ePKPDF	PKPdf	13 05 09.0	+0.3
PRU				⇑iPKP	PKiKP	13 05 14.8	-0.1
PRU				ePKPAB	PKPab	13 05 23.0	+0.5
PRU				epPKP	pPKPdf	13 07 33.7	+8.6
DEV	Deva	149.95	328	⇑iP	PKPbc	13 05 15.1	+0.6
SSW	Stow on the Wo	149.99	3	eP	PKPbc	13 05 14.4	0.0
SSW	Stow on the Wo	149.99	3	P	PKPbc	13 05 14.4	0.0
SZH	Strazhica	150.03	321	i P	PKPbc	13 05 14.9	+0.1
MOX	Moxa	150.07	346	ePKPbc	PKPbc	13 05 15.1	+0.4
TANN	Tannenbergstha	150.08	345	ePKPbc	PKPbc	13 05 15.3	+0.5
WERD	Werda	150.09	345	ePKPbc	PKPbc	13 05 15.2	+0.4
PLN	Plauen	150.09	345	ePKPbc	PKPbc	13 05 15.2	+0.5
BUG	Bochum--Univer	150.10	351	ePKPbc	PKPbc	13 05 14.9	+0.2
JMB	Yambol	150.12	319	i P	PKPbc	13 05 15.8	+0.8
ZIMR		150.12	322	⇑PKIKP	PKPbc	13 05 15.4	+0.4
ZIMR		150.12	322	⇑iP	PKPbc	13 05 15.4	+0.4
KCTX	Karacabey (Bur	150.16	314	eP	PKPbc	13 05 15.3	0.0
GUNZ	Gunzen	150.16	345	ePKPbc	PKPbc	13 05 15.6	+0.7
WERN	Wernitzgruen	150.22	345	ePKPbc	PKPbc	13 05 15.8	+0.7
TREC	Trest	150.24	340	i PKIKP	PKPbc	13 05 15.6	+0.5
TREC	Trest	150.24	340	⇑iPKP	PKPbc	13 05 15.6	+0.5
UBBA	Unterbreizbach	150.25	348	ePKPbc	PKPbc	13 05 15.5	+0.6
SMOL	Smolenice	150.25	337	ePKIKP	PKPbc	13 05 16.3	+1.1
SMOL	Smolenice	150.25	337	ePKP	PKPbc	13 05 16.3	+1.1
SMOL				e		13 05 25.7	
NKC	Novy Kostel	150.25	344	i PKIKP	PKPbc	13 05 15.7	+0.6
NKC				e		13 05 24.8	
NKC	Novy Kostel	150.25	344	⇑iPKP	PKPbc	13 05 15.7	+0.6
NKC				ePKPAB	PKPab	13 05 24.8	+0.8
SKP1	Kophill	150.27	2	eP	PKPbc	13 05 14.6	-0.5
SKP1	Kophill	150.27	2	P	PKPbc	13 05 14.6	-0.5
GZR	Gura Zlata	150.35	327	⇓PKIKP	PKPbc	13 05 15.5	-0.1
GZR	Gura Zlata	150.35	327	⇓iP	PKPbc	13 05 15.5	-0.1
PVL	Pavlikeni	150.41	322	i P	PKPbc	13 05 16.4	+0.7
SWN1	Swindon	150.44	3	eP	PKPbc	13 05 15.3	-0.2
SWN1	Swindon	150.44	3	P	PKPbc	13 05 15.3	-0.2
BUD	Budapest	150.48	334	⇓e	PKPbc	13 05 15.8	+0.1
MRMT	Marmara Adasi	150.49	315	eP	PKPbc	13 05 15.8	-0.2
MANZ	Manzenberg	150.56	345	ePKPbc	PKPbc	13 05 16.4	+0.5
ZST	Bratislava	150.63	337	ePKIKP	PKPbc	13 05 15.7	-0.3
ZST				e		13 05 25.8	
ZST	Bratislava	150.63	337	ePKP	PKPbc	13 05 15.7	-0.3
ZST				e		13 05 25.8	
WOL	Wolverton	150.67	2	eP	PKPbc	13 05 15.8	-0.2
WOL	Wolverton	150.67	2	P	PKPbc	13 05 15.8	-0.2
RKY	Sarkoy-Tekirda	150.72	316	eP	PKPbc	13 05 16.3	-0.2
ROTZ	Rotzenmuhle	150.74	344	ePKPbc	PKPbc	13 05 16.6	+0.3
HEX	Exmoor	150.75	6	eP	PKPbc	13 05 15.7	-0.5
HEX	Exmoor	150.75	6	P	PKPbc	13 05 15.7	-0.5
BZS	Buzias	150.76	329	⇓PKIKP	PKPbc	13 05 16.5	+0.1
BZS	Buzias	150.76	329	⇓iP	PKPbc	13 05 16.5	+0.1
BZS	Buzias	150.76	329	eP	PKPdf	13 05 09.5	-0.7
PKS7	Kunszentmiklos	150.78	333	⇓e	PKPbc	13 05 16.5	+0.1
KRBG	Karabiga-Canak	150.79	315	eP	PKPbc	13 05 16.6	0.0
PKSG		150.81	335	⇓e	PKPbc	13 05 16.4	-0.1
DENT	Denizli	150.82	309	eP	PKPbc	13 05 17.0	+0.1
ELSH	Elham, Standar	150.86	359	eP	PKPbc	13 05 16.7	+0.3
ELSH	Elham, Standar	150.86	359	P	PKPbc	13 05 16.7	+0.3
CSKK	Csˆ‡kako	150.89	335	⇓e	PKPbc	13 05 16.5	-0.2
BALY	Balya	150.91	314	i P	PKPbc	13 05 16.7	-0.3
HGN	Heimansgroeve	150.94	353	ePKPdf	PKPdf	13 05 10.1	-0.2
	comp=Z,8.2nm,1.1s						
HGN				ePKPcd		13 05 16.8	
	comp=Z,64nm,0.8s						
HGN				ePKPab	PKPab	13 05 27.0	+0.3
	comp=Z,97nm,1.0s						
KHC	Kasperske Hory	150.96	342	ePKIKP	PKPdf	13 05 10.5	+0.1
KHC				e		13 05 28.2	
KHC	Kasperske Hory	150.96	342	ePKPDF	PKPdf	13 05 10.5	+0.1
KHC				⇑iPKP	PKiKP	13 05 17.4	+0.2
KHC				ePKPAB	PKPab	13 05 28.2	+1.2
KHC				epPKP	pPKPdf	13 07 35.0	+8.2
KHC				ex	x	13 07 43.5	
KHC	Kasperske Hory	150.96	342	ePKPdf	PKPdf	13 05 10.7	+0.2
KHC				ePKPbc	PKiKP	13 05 17.1	-0.1
KHC				ePKPab	PKPab	13 05 27.6	+0.6
DIM	Dimitrovgrad	150.99	319	i P	PKPbc	13 05 17.3	+0.2
AKAS	Kas	151.00	306	i P	PKPbc	13 05 17.2	-0.2
KSL	Kastellorizon	151.04	306	eP	PKPbc	13 05 17.5	+0.1
GRF	Grafenberg Arr	151.05	346	ePKPbc	PKPbc	13 05 17.3	+0.3
GRF	Grafenberg Arr	151.05	346	ePKIKP	PKPbc	13 05 17.3	+0.3
GRFO	Grafenberg	151.05	346	ePKIKP	PKPbc	13 05 17.4	+0.4
GRFO				e		13 05 28.1	
GRFO	Grafenberg	151.05	346	ePKPbc	PKPbc	13 05 17.4	+0.4
GRFO				ePKPab	PKPab	13 05 28.1	+0.7
PKST	Tˆ's	151.06	335	⇓e	PKPbc	13 05 16.8	-0.3
MEM	Membach	151.08	353	PKP	PKPdf	13 05 10.6	+0.1
MEM				PKPbc	PKiKP	13 05 17.1	-0.2
MEM				PKPab	PKPab	13 05 27.5	+0.1
TNS	Taunus Mts	151.10	349	ePKPbc	PKPbc	13 05 17.5	+0.4
TNS	Taunus Mts	151.10	349	ePKIKP	PKPbc	13 05 17.5	+0.4
WET	Wettzell	151.14	343	ePKPbc	PKPbc	13 05 17.4	+0.2
WET	Wettzell	151.14	343	ePKIKP	PKPbc	13 05 17.4	+0.2
HMNX	Herstmonceux	151.14	0	eP	PKPbc	13 05 16.6	-0.5
HMNX	Herstmonceux	151.14	0	P	PKPbc	13 05 16.6	-0.5
ERIK	Erikli-Kesan	151.16	316	eP	PKPbc	13 05 17.3	-0.1
GEC2	GERESS Array S	151.18	342	ePKPbc	PKPbc	13 05 17.6	+0.2
GEC2	GERESS Array S	151.18	342	ePKIKP	PKPbc	13 05 17.6	+0.2
GERES	GERESS Array B	151.18	342	PKP	PKPdf	13 05 10.8	0.0
GERES				PKPbc	PKPbc	13 05 17.2	-0.2
GERES				PKPab	PKPab	13 05 28.3	+0.3
GERES				pPKPab	pPKPab	13 07 38.9	+1.4
GERES	GERESS Array B	151.18	342	PKP	PKPdf	13 05 10.8	0.0
	comp=Z,3.5nm,0.8s,baz=90,slow=1.3,SNR=18						
GERES				PKPbc	PKPbc	13 05 17.3	-0.2
	comp=Z,29nm,0.6s,baz=23,slow=1.9,SNR=117						
GERES				PKPab	PKPab	13 05 28.3	+0.3
	comp=Z,13nm,0.7s,baz=36,slow=3.7,SNR=10						
GERES				pPKPab	pPKPab	13 07 38.9	+1.4
	comp=Z,2.9nm,0.9s,baz=45,slow=12,SNR=3.3						
AKHS	Akhisar	151.19	312	i P	PKPbc	13 05 17.6	0.0
PKS2	Kecel	151.19	333	⇓e	PKPbc	13 05 17.8	+0.5
MPEP	Malo Peshtene	151.22	323	i P	PKPbc	13 05 17.9	+0.3
SOP	Sopron	151.26	337	⇓e	PKPbc	13 05 17.9	+0.4
KDZ	Kurdzhali	151.29	319	i P	PKPbc	13 05 17.6	-0.2
CONA	Conrad Observa	151.30	338	⇑iPKPdf	PKPdf	13 05 10.9	-0.2
	comp=Z,15nm,1.6s						
CONA				i PKiKP	PKiKP	13 05 18.1	+0.1
	comp=Z,78nm,0.8s,SNR=34						
CONA				⇓iPKPab	PKPab	13 05 29.7	+1.1
	comp=Z,48nm,0.8s						
ALN	Alexandroupoli	151.33	317	eP	PKPbc	13 05 17.0	-0.8
BCLA	Clavier	151.34	354	PKP	PKPdf	13 05 11.3	+0.4
BCLA				PKPbc	PKPbc	13 05 17.4	-0.1
BCLA				PKPab	PKPab	13 05 28.6	+0.1
PLD	Plovdiv	151.46	320	eP	PKPdf	13 05 08.6	-2.7
PGB	Panagyurishte	151.50	322	i P	PKPbc	13 05 18.0	-0.3
PKS9	Tamasi	151.51	334	⇓e	PKPbc	13 05 17.8	-0.3
ABH	Alteburg	151.58	350	PKP	PKPdf	13 05 11.3	0.0
TOD	Tromm	151.63	349	PKIKP	PKPdf	13 05 11.3	-0.1
TOD	Tromm	151.63	349	PKP	PKPdf	13 05 11.3	-0.1
PKSM	Moragy	151.66	333	⇑PKIKP	PKPbc	13 05 18.7	+0.3
PKSM	Moragy	151.66	333	⇑iP	PKPbc	13 05 18.6	+0.2
PKSM	Moragy	151.66	333	⇓e	PKPbc	13 05 18.3	-0.1
PKSM	Moragy	151.66	333	eP	PKPdf	13 05 11.5	0.0
AYDN	Tasoluk	151.69	310	i P	PKPbc	13 05 19.2	+0.4
RZN	Rozhen	151.70	320	i P	PKPbc	13 05 18.6	-0.3
GIVF	Givet	151.71	354	ePKIKP	PKPdf	13 05 11.3	-0.2
GIVF	Givet	151.71	354	ePKIKP	PKPdf	13 05 11.3	-0.2
GIVF	Givet	151.71	354	ePKPdf	PKPdf	13 05 11.3	-0.2
DOU	Dourbes	151.73	354	PKP	PKPdf	13 05 11.9	+0.5
DOU				PKPbc	PKPbc	13 05 18.2	-0.2
DOU				PKPab	PKPab	13 05 30.3	+0.1
AYVA	Ayvalik	151.75	314	i P	PKPbc	13 05 18.4	-0.4
BAIF	Baives	151.80	355	ePKIKP	PKPdf	13 05 11.5	-0.1
BAIF	Baives	151.80	355	ePKIKP	PKPdf	13 05 11.5	-0.1
BAIF	Baives	151.80	355	ePKPdf	PKPdf	13 05 11.5	-0.1
RUP	Ruppelstein	151.83	351	PKIKP	PKPdf	13 05 12.2	+0.5
RUP	Ruppelstein	151.83	351	PKP	PKPdf	13 05 12.2	+0.5
BOLS	Boljevac	151.87	326	eP	PKPdf	13 05 11.1	-0.8
MOA	Molln	151.90	340	⇑iPKPdf	PKPdf	13 05 11.6	-0.3
	comp=Z,7.0nm,1.1s						
MOA				i PKPbc	PKPbc	13 05 18.9	0.0
	comp=Z,20nm,0.6s,SNR=8.0						
MOA				⇑iPKPab	PKPab	13 05 31.2	+0.2
	comp=Z,53nm,1.0s						
FGSL	Fruska Gora	151.96	330	eP	PKPdf	13 05 13.7	+1.7
WLF	Walferdange	151.99	352	PKP	PKPdf	13 05 13.2	+1.3
WLF				PKPbc	PKiKP	13 05 19.4	+0.2
WLF				PKPab	PKPab	13 05 31.1	-0.2
WLF	Walferdange	151.99	352	ePKIKP	PKPdf	13 05 12.4	+0.5
WLF				e		13 05 31.6	
WLF	Walferdange	151.99	352	ePKPdf	PKPdf	13 05 12.4	+0.5
WLF				ePKPbc	PKiKP	13 05 19.9	+0.7
WLF				ePKPab	PKPab	13 05 31.6	+0.3
VTS	Vitosha	152.01	323	⇑PKIKP	PKPbc	13 05 19.8	+0.3
VTS	Vitosha	152.01	323	i P	PKPbc	13 05 19.9	+0.4
VTS	Vitosha	152.01	323	⇑iP	PKPbc	13 05 19.8	+0.3
VTS	Vitosha	152.01	323	eP	PKPdf	13 05 12.6	+0.2
PRK	Paraskevi	152.06	314	P	PKPbc	13 05 19.4	-0.1
ARG	Arkhangelos	152.11	307	P	PKPbc	13 05 20.2	+0.5
ARG	Arkhangelos	152.11	307	eP	PKPbc	13 05 19.9	+0.2
BEHE	Becsehely	152.20	335	⇓e	PKPbc	13 05 19.7	+0.1
DAT	Datca	152.31	308	eP	PKPbc	13 05 19.7	-0.6
MMB	Musomiste	152.35	320	i P	PKPbc	13 05 19.7	-0.5
SIGR	SIGRI	152.35	314	P	PKPbc	13 05 20.6	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STU	**Stuttgart**	**152.36**	**348**	*e*PKPbc	**PKPbc**	**13 05 20.2**	**+0.3**
STU	**Stuttgart**	**152.36**	**348**	*e*PKIKP	**PKPdf**	**13 05 12.3**	**-0.2**
STU				*e*		13 05 32.8	
STU	**Stuttgart**	**152.36**	**348**	*e*PKPdf	**PKPdf**	**13 05 12.3**	**-0.2**
STU				*e*PKPbc	**PKiKP**	**13 05 20.3**	**+0.3**
STU				*e*PKPab	**PKPab**	**13 05 32.8**	**-0.1**
LANF	**Langenberg**	**152.41**	**350**	PKIKP	**PKPdf**	**13 05 13.1**	**+0.5**
LANF	**Langenberg**	**152.41**	**350**	PKP	**PKPdf**	**13 05 13.1**	**+0.5**
LANF	**Langenberg**	**152.41**	**350**	PKP	**PKPdf**	**13 05 13.1**	**+0.5**
NVR	**Nevrokopi**	**152.41**	**320**	P	**PKPbc**	**13 05 19.9**	**-0.4**
KOGS	**Kog**	**152.42**	**336**	*i* PKPbc	**PKPbc**	**13 05 19.7**	**-0.4**
RJOB	**Jochberg**	**152.44**	**342**	*e*PKPbc	**PKPbc**	**13 05 19.9**	**-0.3**
FUR	**Furstenfeldbru**	**152.46**	**344**	*e*PKPbc	**PKPbc**	**13 05 20.3**	**+0.1**
FUR	**Furstenfeldbru**	**152.46**	**344**	*e*PKIKP	**PKPbc**	**13 05 20.3**	**+0.1**
GRUS	**Gruza**	**152.46**	**327**	*e*P	**PKPdf**	**13 05 12.3**	**-0.5**
KKB	**Krupnik**	**152.55**	**322**	*i* P	**PKPbc**	**13 05 20.3**	**-0.3**
CHOS	**Chios island**	**152.63**	**312**	*e*P	**PKPbc**	**13 05 20.8**	**-0.1**
BARS	**Barje**	**152.64**	**324**	*e*P	**PKPdf**	**13 05 12.7**	**-0.4**
DIVS	**Divibare**	**152.66**	**328**	*e*P	**PKPdf**	**13 05 13.0**	**-0.2**
PERS	**Pernice**	**152.67**	**338**	*i* PKPbc	**PKPbc**	**13 05 20.2**	**-0.5**
PERS				*e*		13 07 41.6	
KBA	**Koelnbreinsper**	**152.87**	**341**	⇑*i*PKPdf	**PKPdf**	**13 05 12.7**	**-0.8**
KBA				⇓*i*PKPbc	**PKPbc**	**13 05 20.6**	**-0.7**
	comp=Z,34nm,1.1s						
KBA				⇓*i*PKPab	**PKPab**	**13 05 35.7**	**+0.3**
	comp=Z,42nm,0.6s						
BFO	**Black Forest**	**152.95**	**348**	*e*PKPbc	**PKPbc**	**13 05 21.2**	**0.0**
BFO	**Black Forest**	**152.95**	**348**	*e*PKIKP	**PKPdf**	**13 05 12.9**	**-0.5**
BFO				*e*		13 05 21.2	
BFO				*e*		13 05 35.2	
BFO	**Black Forest**	**152.95**	**348**	*e*PKPdf	**PKPdf**	**13 05 12.9**	**-0.5**
BFO				*e*PKPbc	**PKPbc**	**13 05 21.2**	**0.0**
BFO				*e*PKPab	**PKPab**	**13 05 35.2**	**-0.3**
CDF	**Champ du Feu**	**153.05**	**350**	*e*PKIKP	**PKPdf**	**13 05 12.9**	**-0.7**
CDF	**Champ du Feu**	**153.05**	**350**	*e*PKIKP	**PKPdf**	**13 05 12.9**	**-0.7**
CDF	**Champ du Feu**	**153.05**	**350**	*e*PKPdf	**PKPdf**	**13 05 12.9**	**-0.7**
KARP	**Karpathos**	**153.09**	**306**	*e*P	**PKPbc**	**13 05 21.9**	**-0.1**
BBLS	**Lazići**	**153.12**	**329**	*e*P	**PKPdf**	**13 05 13.8**	**0.0**
PAGF	**Fort de Pagny**	**153.13**	**352**	*e*PKIKP	**PKPdf**	**13 05 13.6**	**0.0**
PAGF	**Fort de Pagny**	**153.13**	**352**	*e*PKPdf	**PKPdf**	**13 05 13.6**	**0.0**
WATA	**Walderalm**	**153.15**	**343**	⇓*i*PKPdf	**PKPdf**	**13 05 13.3**	**-0.5**
	comp=Z,13nm,1.0s						
WATA				⇓*i*PKPbc	**PKPbc**	**13 05 21.5**	**-0.3**
	comp=Z,14nm,0.5s						
WATA				⇓*i*PKPab	**PKPab**	**13 05 36.9**	**+0.4**
	comp=Z,34nm,0.7s						
MYKA	**Terra Mystica**	**153.17**	**340**	⇑*i*PKPdf	**PKPdf**	**13 05 13.0**	**-0.8**
	comp=Z,12nm,1.1s						
MYKA				⇑*i*PKPbc	**PKPbc**	**13 05 20.8**	**-1.0**
	comp=Z,17nm,0.5s						
MYKA				⇓*i*PKPab	**PKPab**	**13 05 36.5**	**-0.1**
	comp=Z,39nm,0.6s						
VAY	**Valandovo**	**153.19**	**321**	*e*PKP	**PKPbc**	**13 05 21.1**	**-0.8**
WTTA	**Wattenberg**	**153.20**	**343**	⇑*i*PKPdf	**PKPdf**	**13 05 14.0**	**0.0**
	comp=Z,15nm,0.9s						
WTTA				⇓*i*PKPbc	**PKiKP**	**13 05 22.1**	**0.0**
	comp=Z,31nm,0.5s						
WTTA				⇑*i*PKPab	**PKPab**	**13 05 37.5**	**+0.7**
	comp=Z,68nm,0.7s						
RETA	**Reutte**	**153.22**	**344**	⇑*i*PKPdf	**PKPdf**	**13 05 13.6**	**-0.3**
	comp=Z,5.7nm,0.9s						
RETA				⇓*i*PKPbc	**PKPbc**	**13 05 21.7**	**-0.2**
	comp=Z,23nm,1.2s						
RETA				⇑*i*PKPab	**PKPab**	**13 05 36.9**	**+0.2**
	comp=Z,76nm,1.1s						
CRES	**Cresnjev**	**153.24**	**336**	*e*PKPdf	**PKPdf**	**13 05 13.4**	**-0.5**
CRES				*i* PKPbc	**PKiKP**	**13 05 21.9**	**0.0**
FLN	**La Foliniere**	**153.24**	**1**	*e*PKIKP	**PKPdf**	**13 05 13.1**	**-0.6**
	comp=Z,129nm,1.3s						
FLN	**La Foliniere**	**153.24**	**1**	*e*PKIKP	**PKPdf**	**13 05 13.1**	**-0.6**
FLN	**La Foliniere**	**153.24**	**1**	*e*PKPdf	**PKPdf**	**13 05 13.1**	**-0.6**
PLG	**Polygyros**	**153.25**	**319**	P	**PKPbc**	**13 05 23.7**	**+1.6**
ECH	**Echery**	**153.26**	**350**	PKIKP	**PKPdf**	**13 05 13.3**	**-0.5**
ECH				*e*		13 05 21.8	
ECH				*e*		13 05 36.2	
ECH	**Echery**	**153.26**	**350**	PKP	**PKPdf**	**13 05 13.3**	**-0.5**
ECH				*e*PKPbc	**PKPbc**	**13 05 21.8**	**-0.1**
ECH				*e*PKPab	**PKPab**	**13 05 36.2**	**-0.6**
ECH	**Echery**	**153.26**	**350**	PKP	**PKPdf**	**13 05 13.3**	**-0.5**
MEZF	**Maizieres J'vi**	**153.26**	**353**	*e*PKIKP	**PKPdf**	**13 05 13.9**	**+0.1**
	comp=Z,29nm,1.0s						
MEZF	**Maizieres J'vi**	**153.26**	**353**	*e*PKPdf	**PKPdf**	**13 05 13.9**	**+0.1**
MOTA	**Moosalm**	**153.26**	**344**	⇓*i*PKPdf	**PKPdf**	**13 05 13.3**	**-0.7**
	comp=Z,16nm,1.0s						
MOTA				⇓*i*PKPbc	**PKPbc**	**13 05 21.7**	**-0.4**
	comp=Z,26nm,1.0s						
MOTA				⇑*i*PKPab	**PKPab**	**13 05 37.4**	**+0.4**
	comp=Z,60nm,1.0s						
LJU	**Ljubljana**	**153.39**	**338**	*i* PKPdf	**PKPdf**	**13 05 14.3**	**+0.2**
LJU				*e*PKPbc	**PKPbc**	**13 05 22.1**	**-0.1**
LJU				*i* PKPab	**PKPab**	**13 05 37.5**	**+0.1**
LJU				*e*		13 07 41.8	
LJU	**Ljubljana**	**153.39**	**338**	*e*P	**PKPdf**	**13 05 14.2**	**+0.2**
SKO	**Skopje**	**153.41**	**323**	*e*PKP	**PKPdf**	**13 05 14.8**	**+0.6**
SKO				*e*PKP	**PKiKP**	**13 05 23.1**	**+0.6**
LDF	**La Druitiere**	**153.42**	**1**	*e*PKIKP	**PKPdf**	**13 05 13.3**	**-0.7**
	comp=Z,16nm,0.8s						
LDF	**La Druitiere**	**153.42**	**1**	*e*PKIKP	**PKPdf**	**13 05 13.3**	**-0.7**
LDF	**La Druitiere**	**153.42**	**1**	*e*PKPdf	**PKPdf**	**13 05 13.3**	**-0.7**
ABTA	**Abfaltersbach**	**153.42**	**341**	⇑*i*PKPdf	**PKPdf**	**13 05 13.5**	**-0.7**
	comp=Z,27nm,1.0s						
ABTA				⇓*i*PKPbc	**PKPbc**	**13 05 21.8**	**-0.5**
	comp=Z,31nm,0.6s						
ABTA				⇑*i*PKPab	**PKPab**	**13 05 37.6**	**0.0**
	comp=Z,59nm,0.7s,SNR=7.3						
THEF	**They Montfort**	**153.42**	**352**	PKIKP	**PKPdf**	**13 05 13.9**	**-0.1**
THEF	**They Montfort**	**153.42**	**352**	PKP	**PKPdf**	**13 05 13.9**	**-0.1**
THEF	**They Montfort**	**153.42**	**352**	PKP	**PKPdf**	**13 05 13.9**	**-0.1**
FELD	**Feldberg im Sc**	**153.44**	**349**	PKP	**PKPdf**	**13 05 14.1**	**-0.1**
ROSF	**Rostrenen**	**153.50**	**6**	*e*PKIKP	**PKPdf**	**13 05 13.3**	**-0.8**
ROSF	**Rostrenen**	**153.50**	**6**	*e*PKIKP	**PKPdf**	**13 05 13.3**	**-0.8**
ROSF	**Rostrenen**	**153.50**	**6**	*e*PKPdf	**PKPdf**	**13 05 13.3**	**-0.8**
SFTF	**Sexfontaines**	**153.56**	**353**	*e*PKIKP	**PKPdf**	**13 05 14.1**	**-0.1**
	comp=Z,49nm,1.2s						
SFTF	**Sexfontaines**	**153.56**	**353**	*e*PKPdf	**PKPdf**	**13 05 14.1**	**-0.1**
BOJS	**Bojanci**	**153.59**	**336**	*i* PKPdf	**PKPdf**	**13 05 14.2**	**-0.2**
BOJS				*i* PKPbc	**PKiKP**	**13 05 22.9**	**+0.2**
BOJS				*i* PKPab	**PKPab**	**13 05 38.6**	**+0.3**
HAU	**Haudompre**	**153.59**	**351**	*e*PKIKP	**PKPdf**	**13 05 13.9**	**-0.4**
	comp=Z,22nm,1.0s						
HAU	**Haudompre**	**153.59**	**351**	*e*PKIKP	**PKPdf**	**13 05 13.9**	**-0.4**
HAU	**Haudompre**	**153.59**	**351**	*e*PKPdf	**PKPdf**	**13 05 13.9**	**-0.4**
DAVA	**Damuels**	**153.62**	**346**	⇓*i*PKPdf	**PKPdf**	**13 05 14.1**	**-0.4**
	comp=Z,12nm,0.8s						
DAVA				⇑*i*PKiKP	**PKiKP**	**13 05 23.1**	**+0.2**
	comp=Z,20nm,0.7s						
DAVA				⇑*i*PKPab	**PKPab**	**13 05 39.1**	**+0.6**
	comp=Z,61nm,0.9s						
VOY	**Vojsko**	**153.62**	**339**	*e*PKPdf	**PKPdf**	**13 05 14.9**	**+0.4**
VOY				*e*PKPbc	**PKPbc**	**13 05 22.3**	**-0.5**
VOY				*e*		13 05 38.0	
MOF	**Molkenrain**	**153.62**	**350**	PKIKP	**PKPdf**	**13 05 14.1**	**-0.3**
MOF	**Molkenrain**	**153.62**	**350**	PKP	**PKPdf**	**13 05 14.1**	**-0.3**
MOF	**Molkenrain**	**153.62**	**350**	PKP	**PKPdf**	**13 05 14.1**	**-0.3**
APE	**Apeiranthos**	**153.63**	**310**	⇓PKP2	**PKPab**	**13 05 38.2**	**-0.6**
APE	**Apeiranthos**	**153.63**	**310**	⇓*i*P	**PKPab**	**13 05 38.2**	**-0.6**
FETA	**Feichten**	**153.66**	**344**	⇑*i*PKPdf	**PKPdf**	**13 05 14.6**	**0.0**
	comp=Z,30nm,1.0s,SNR=8.6						
FETA				⇑*i*PKiKP	**PKiKP**	**13 05 23.3**	**+0.3**
	comp=Z,27nm,1.0s						
FETA				⇑*i*PKPab	**PKPab**	**13 05 39.6**	**+0.9**
	comp=Z,54nm,1.2s						
AOS	**Alonnisos**	**153.67**	**316**	*e*P	**PKPbc**	**13 05 21.9**	**-1.1**
HINF	**Hinteralfeld**	**153.70**	**350**	*e*PKIKP	**PKPdf**	**13 05 13.9**	**-0.6**
	comp=Z,48nm,1.4s						
HINF	**Hinteralfeld**	**153.70**	**350**	*e*PKIKP	**PKPdf**	**13 05 13.9**	**-0.6**
HINF	**Hinteralfeld**	**153.70**	**350**	*e*PKPdf	**PKPdf**	**13 05 13.9**	**-0.6**
ZKR	**Zakros**	**153.97**	**306**	*e*P	**PKPbc**	**13 05 24.3**	**+0.5**
LOMF	**Lomont**	**154.16**	**350**	PKIKP	**PKPdf**	**13 05 15.4**	**+0.2**
LOMF	**Lomont**	**154.16**	**350**	PKP	**PKPdf**	**13 05 15.4**	**+0.2**
LOMF	**Lomont**	**154.16**	**350**	PKP	**PKPdf**	**13 05 15.4**	**+0.2**
FNA	**Florina**	**154.23**	**322**	*e*P	**PKPbc**	**13 05 23.6**	**-0.6**
PDG	**Podgorica**	**154.25**	**327**	*e*P	**PKPbc**	**13 05 23.8**	**-0.3**
PTL	**Penteli**	**154.29**	**314**	P	**PKPbc**	**13 05 24.4**	**0.0**
NPS	**Neapolis**	**154.36**	**307**	*e*P	**PKPbc**	**13 05 25.0**	**+0.4**
XRY	**Khrisi**	**154.46**	**306**	*e*P	**PKPbc**	**13 05 24.9**	**+0.1**
ATAL	**Atalanti**	**154.49**	**316**	P	**PKPbc**	**13 05 24.1**	**-0.7**
LAST	**Lasithi**	**154.50**	**307**	*e*P	**PKPbc**	**13 05 24.8**	**-0.2**
TUE	**Stuetta**	**154.51**	**346**	*e*PKPdf	**PKPdf**	**13 05 15.7**	**-0.2**
TUE				*e*PKPbc	**PKPbc**	**13 05 25.4**	**+0.6**
TUE				*e*PKPab	**PKPab**	**13 05 42.8**	**+0.4**
LKR	**Lokris**	**154.53**	**316**	*e*P	**PKPbc**	**13 05 24.2**	**-0.6**
LOR	**Lormes**	**154.60**	**355**	*e*PKIKP	**PKPdf**	**13 05 15.4**	**-0.3**
	comp=Z,21nm,0.9s						
LOR	**Lormes**	**154.60**	**355**	*e*PKPdf	**PKPdf**	**13 05 15.4**	**-0.3**
THL	**Klokotos Trika**	**154.62**	**319**	P	**PKPbc**	**13 05 23.7**	**-1.3**
THL	**Klokotos Trika**	**154.62**	**319**	*e*P	**PKPbc**	**13 05 22.5**	**-2.5**
HYF	**Humbligny**	**154.69**	**357**	*e*PKIKP	**PKPdf**	**13 05 15.8**	**0.0**
HYF	**Humbligny**	**154.69**	**357**	*e*PKPdf	**PKPdf**	**13 05 15.8**	**0.0**
AGG	**Agios Georgios**	**154.74**	**317**	*e*P	**PKPbc**	**13 05 24.1**	**-1.3**
SSF	**Saint Saulge**	**154.84**	**355**	*e*PKIKP	**PKPdf**	**13 05 15.7**	**-0.3**
SSF	**Saint Saulge**	**154.84**	**355**	*e*PKIKP	**PKPdf**	**13 05 15.7**	**-0.3**
SSF	**Saint Saulge**	**154.84**	**355**	*e*PKPdf	**PKPdf**	**13 05 15.7**	**-0.3**
CABF	**La Chapelle**	**154.99**	**351**	*e*PKIKP	**PKPdf**	**13 05 16.3**	**0.0**
	comp=Z,50nm,1.1s						
CABF	**La Chapelle**	**154.99**	**351**	*e*PKIKP	**PKPdf**	**13 05 16.3**	**0.0**
CABF	**La Chapelle**	**154.99**	**351**	*e*PKPdf	**PKPdf**	**13 05 16.3**	**0.0**
DID	**Didima**	**155.00**	**313**	*e*P	**PKPbc**	**13 05 24.7**	**-1.2**
EVR	**Evrytania**	**155.13**	**318**	*e*P	PKPdf	13 05 26.4	+10
SMF	**Signal de Mont**	**155.22**	**355**	*e*PKIKP	**PKPdf**	**13 05 16.0**	**-0.6**
	comp=Z,19nm,1.0s						
SMF	**Signal de Mont**	**155.22**	**355**	*e*PKIKP	**PKPdf**	**13 05 16.0**	**-0.6**
SMF	**Signal de Mont**	**155.22**	**355**	*e*PKPdf	**PKPdf**	**13 05 16.0**	**-0.6**
KALE	**Kalithea**	**155.23**	**316**	*e*P	PKPdf	13 05 26.4	+10
VAM	**Vamos**	**155.34**	**308**	P	PKPdf	13 05 27.3	+10
GUR	**Goura**	**155.36**	**315**	*e*P	PKPdf	13 05 26.2	+9.1
EFP	**Efpalio**	**155.36**	**317**	*e*P	PKPdf	13 05 28.0	+11
BGF	**Bois d'Agland**	**155.38**	**356**	*e*PKIKP	**PKPdf**	**13 05 16.5**	**-0.3**
	comp=Z,22nm,0.8s						
BGF	**Bois d'Agland**	**155.38**	**356**	*e*PKIKP	**PKPdf**	**13 05 16.5**	**-0.3**
BGF	**Bois d'Agland**	**155.38**	**356**	*e*PKPdf	**PKPdf**	**13 05 16.5**	**-0.3**
MFF	**Saint Martin d**	**155.41**	**1**	*e*PKIKP	**PKPdf**	**13 05 16.3**	**-0.5**
	comp=Z,43nm,1.1s						
MFF	**Saint Martin d**	**155.41**	**1**	*e*PKIKP	**PKPdf**	**13 05 16.3**	**-0.5**
MFF	**Saint Martin d**	**155.41**	**1**	*e*PKPdf	**PKPdf**	**13 05 16.3**	**-0.5**
LAKA	**Lakka**	**155.42**	**316**	*e*P	PKPdf	13 05 28.0	+11
KLV	**Kalavryta, Ach**	**155.42**	**316**	*e*P	PKPdf	13 05 27.7	+11
VLI	**Veliai**	**155.61**	**312**	*e*P	PKPdf	13 05 27.2	+10
TCF	**Toulx Ste Croi**	**155.69**	**357**	*e*PKIKP	**PKPdf**	**13 05 16.8**	**-0.4**
	comp=Z,36nm,0.9s						
TCF	**Toulx Ste Croi**	**155.69**	**357**	*e*PKIKP	**PKPdf**	**13 05 16.8**	**-0.4**
TCF	**Toulx Ste Croi**	**155.69**	**357**	*e*PKPdf	**PKPdf**	**13 05 16.8**	**-0.4**
KYTH	**Kithira**	**155.76**	**311**	*e*P	PKPdf	13 05 27.7	+10
ANKY	**Antikythira Is**	**155.78**	**310**	*e*P	PKPdf	13 05 27.2	+10
KEK	**Kerkira**	**155.84**	**321**	P	**PKPdf**	**13 05 16.6**	**-1.0**
RLS	**Riolos of Patr**	**155.86**	**316**	P	PKPdf	13 05 30.6	+13
AGO	**Saint Agoulin**	**155.87**	**356**	PKP	**PKPdf**	**13 05 17.7**	**+0.3**
AGO	**Saint Agoulin**	**155.87**	**356**	PKP	**PKPdf**	**13 05 17.7**	**+0.3**
LKD2	**Lefkada island**	**155.92**	**319**	*e*P	PKPdf	13 05 27.6	+10
LPL	**La Plagne**	**155.95**	**349**	*e*PKIKP	**PKPdf**	**13 05 17.7**	**-0.1**
	comp=Z,25nm,1.3s						
LPL	**La Plagne**	**155.95**	**349**	*e*PKIKP	**PKPdf**	**13 05 17.7**	**-0.1**
LPL	**La Plagne**	**155.95**	**349**	*e*PKPdf	**PKPdf**	**13 05 17.7**	**-0.1**
LPG	**La Plagne**	**155.97**	**349**	*e*PKIKP	**PKPdf**	**13 05 17.8**	**-0.1**
	comp=Z,47nm,1.6s						
LPG	**La Plagne**	**155.97**	**349**	*e*PKIKP	**PKPdf**	**13 05 17.8**	**-0.1**
LPG	**La Plagne**	**155.97**	**349**	*e*PKPdf	**PKPdf**	**13 05 17.8**	**-0.1**
DYR	**Agios Nikonas**	**156.00**	**313**	*e*P	PKPdf	13 05 27.7	+10
ITM	**Ithomi**	**156.05**	**314**	P	PKPdf	13 05 28.4	+10
ITM	**Ithomi**	**156.05**	**314**	*e*P	PKPdf	13 05 29.0	+11
PYM	**Petit Puy Mans**	**156.18**	**356**	PKIKP	**PKPdf**	**13 05 17.5**	**-0.4**
PYM	**Petit Puy Mans**	**156.18**	**356**	PKP	**PKPdf**	**13 05 17.5**	**-0.4**
PYM	**Petit Puy Mans**	**156.18**	**356**	PKP	**PKPdf**	**13 05 17.5**	**-0.4**
PYL	**PYLOS**	**156.33**	**314**	*e*P	PKPdf	13 05 27.9	+10
BNI	**Bardonecchia**	**156.41**	**349**	*e*PKIKP	**PKPdf**	**13 05 18.5**	**+0.2**
BNI	**Bardonecchia**	**156.41**	**349**	*e*PKPdf	**PKPdf**	**13 05 18.5**	**+0.2**
BNI				*e*PKPab	**PKPab**	**13 05 51.4**	**+0.8**
LBL	**Lubilhac**	**156.67**	**355**	PKIKP	**PKPdf**	**13 05 18.7**	**+0.1**
LBL	**Lubilhac**	**156.67**	**355**	PKP	**PKPdf**	**13 05 18.7**	**+0.1**
LBL	**Lubilhac**	**156.67**	**355**	PKP	**PKPdf**	**13 05 18.7**	**+0.1**
ORIF	**Oris-en-Rattie**	**156.67**	**350**	*e*PKIKP	**PKPdf**	**13 05 18.3**	**-0.3**
	comp=Z,19nm,1.0s						
ORIF	**Oris-en-Rattie**	**156.67**	**350**	*e*PKIKP	**PKPdf**	**13 05 18.3**	**-0.3**
ORIF	**Oris-en-Rattie**	**156.67**	**350**	*e*PKPdf	**PKPdf**	**13 05 18.3**	**-0.3**
RJF	**Les Rejaudoux**	**156.70**	**358**	*e*PKIKP	**PKPdf**	**13 05 18.2**	**-0.3**
	comp=Z,78nm,1.4s						
RJF	**Les Rejaudoux**	**156.70**	**358**	*e*PKIKP	**PKPdf**	**13 05 18.2**	**-0.3**
RJF	**Les Rejaudoux**	**156.70**	**358**	*e*PKPdf	**PKPdf**	**13 05 18.2**	**-0.3**
MBDF	**Montbardon**	**156.71**	**349**	*e*PKIKP	**PKPdf**	**13 05 18.4**	**-0.3**
MBDF	**Montbardon**	**156.71**	**349**	*e*PKIKP	**PKPdf**	**13 05 18.4**	**-0.3**
MBDF	**Montbardon**	**156.71**	**349**	*e*PKPdf	**PKPdf**	**13 05 18.4**	**-0.3**
VIVF	**Saint-Julien-l**	**156.90**	**352**	*e*PKIKP	**PKPdf**	**13 05 18.6**	**-0.2**
	comp=Z,57nm,1.6s						
VIVF	**Saint-Julien-l**	**156.90**	**352**	*e*PKIKP	**PKPdf**	**13 05 18.6**	**-0.2**
VIVF	**Saint-Julien-l**	**156.90**	**352**	*e*PKPdf	**PKPdf**	**13 05 18.6**	**-0.2**
CAF	**Calviac**	**157.05**	**357**	*e*PKIKP	**PKPdf**	**13 05 18.9**	**-0.1**
	comp=Z,15nm,1.0s						
CAF	**Calviac**	**157.05**	**357**	*e*PKIKP	**PKPdf**	**13 05 18.9**	**-0.1**
CAF	**Calviac**	**157.05**	**357**	*e*PKPdf	**PKPdf**	**13 05 18.9**	**-0.1**
LFF	**La Frestale**	**157.07**	**360**	*e*PKIKP	**PKPdf**	**13 05 18.4**	**-0.6**
	comp=Z,80nm,1.3s						
LFF	**La Frestale**	**157.07**	**360**	*e*PKIKP	**PKPdf**	**13 05 18.4**	**-0.6**
LFF	**La Frestale**	**157.07**	**360**	*e*PKPdf	**PKPdf**	**13 05 18.4**	**-0.6**
SMRF	**Simiane la Rot**	**157.64**	**350**	*e*PKIKP	**PKPdf**	**13 05 19.9**	**+0.1**
	comp=Z,27nm,1.1s						
SMRF	**Simiane la Rot**	**157.64**	**350**	*e*PKPdf	**PKPdf**	**13 05 19.9**	**+0.1**
LASF	**Ste Croix**	**157.76**	**354**	*e*PKIKP	**PKPdf**	**13 05 19.9**	**0.0**
	comp=Z,55nm,1.3s						
LASF	**Ste Croix**	**157.76**	**354**	*e*PKPdf	**PKPdf**	**13 05 19.9**	**0.0**
FRF	**La Foret Royal**	**157.86**	**348**	*e*PKIKP	**PKPdf**	**13 05 19.3**	**-0.7**
	comp=Z,35nm,1.1s						
FRF	**La Foret Royal**	**157.86**	**348**	*e*PKIKP	**PKPdf**	**13 05 19.3**	**-0.7**
FRF	**La Foret Royal**	**157.86**	**348**	*e*PKPdf	**PKPdf**	**13 05 19.3**	**-0.7**
LMR	**La Mourre**	**158.10**	**348**	*e*PKIKP	**PKPdf**	**13 05 19.6**	**-0.7**
LMR	**La Mourre**	**158.10**	**348**	*e*PKIKP	**PKPdf**	**13 05 19.6**	**-0.7**
LMR	**La Mourre**	**158.10**	**348**	*e*PKPdf	**PKPdf**	**13 05 19.6**	**-0.7**
PGF	**Pioggiola**	**158.27**	**343**	*e*PKIKP	**PKPdf**	**13 05 19.8**	**-0.8**
PGF	**Pioggiola**	**158.27**	**343**	*e*PKIKP	**PKPdf**	**13 05 19.8**	**-0.8**
PGF	**Pioggiola**	**158.27**	**343**	*e*PKPdf	**PKPdf**	**13 05 19.8**	**-0.8**
MTLF	**Montolieu**	**158.63**	**357**	*e*PKIKP	**PKPdf**	**13 05 20.6**	**-0.3**
	comp=Z,36nm,1.2s						
MTLF	**Montolieu**	**158.63**	**357**	*e*PKIKP	**PKPdf**	**13 05 20.6**	**-0.3**
MTLF	**Montolieu**	**158.63**	**357**	*e*PKPdf	**PKPdf**	**13 05 20.6**	**-0.3**
PGAV	**Gavieira, Arco**	**158.73**	**18**	*e*PKPdf	**PKPdf**	**13 05 21.7**	**+0.5**
SJPF	**Ste Jean**	**158.85**	**4**	*e*PKIKP	**PKPdf**	**13 05 21.3**	**+0.1**
	comp=Z,41nm,1.3s						
SJPF	**Ste Jean**	**158.85**	**4**	*e*PKIKP	**PKPdf**	**13 05 21.3**	**+0.1**
SJPF	**Ste Jean**	**158.85**	**4**	*e*PKPdf	**PKPdf**	**13 05 21.3**	**+0.1**
EPF	**Esparros**	**158.98**	**0**	*e*PKIKP	**PKPdf**	**13 05 21.4**	**0.0**
	comp=Z,76nm,1.5s						
EPF	**Esparros**	**158.98**	**0**	*e*PKIKP	**PKPdf**	**13 05 21.4**	**0.0**
EPF	**Esparros**	**158.98**	**0**	*e*PKPdf	**PKPdf**	**13 05 21.4**	**0.0**
ETSF	**Etsaut**	**159.10**	**2**	*e*PKIKP	**PKPdf**	**13 05 21.6**	**0.0**
	comp=Z,23nm,1.1s						
ETSF	**Etsaut**	**159.10**	**2**	*e*PKIKP	**PKPdf**	**13 05 21.6**	**0.0**
ETSF	**Etsaut**	**159.10**	**2**	*e*PKPdf	**PKPdf**	**13 05 21.6**	**0.0**
PBRG	**Braganca**	**159.29**	**15**	*e*PKPab	**PKPab**	**13 06 03.3**	**+0.2**
POLO	**Lamas de Olo**	**159.41**	**18**	*e*PKPab	**PKPab**	**13 06 04.5**	**+0.8**
PVRL	**Vila Real**	**159.53**	**18**	*e*PKPdf	**PKPdf**	**13 05 22.1**	**0.0**
PVRL	**Vila Real**	**159.53**	**18**	*e*PKPab	**PKPab**	**13 06 05.4**	**+1.3**
MVO	**Moncorvo**	**159.82**	**17**	*e*PKPdf	**PKPdf**	**13 05 23.1**	**+0.7**
MVO	**Moncorvo**	**159.82**	**17**	*e*PKPab	**PKPab**	**13 06 06.2**	**+0.8**
PVIS	**Viseu**	**159.99**	**19**	*e*PKPdf	**PKPdf**	**13 05 22.9**	**+0.3**
PVIS	**Viseu**	**159.99**	**19**	*e*PKPab	**PKPab**	**13 06 06.7**	**+0.5**
MTE	**Manteigas**	**160.38**	**19**	*e*PKPdf	**PKPdf**	**13 05 24.0**	**+0.9**
MTE	**Manteigas**	**160.38**	**19**	*e*PKPab	**PKPab**	**13 06 08.3**	**+0.4**
PTOM	**Tomar**	**160.82**	**21**	*e*PKPdf	**PKPdf**	**13 05 24.5**	**+1.1**
PTOM	**Tomar**	**160.82**	**21**	*e*PKPab	**PKPab**	**13 06 10.2**	**+0.4**
PCBR	**Castelo Branco**	**160.92**	**19**	*e*PKPdf	**PKPdf**	**13 05 24.5**	**+1.0**
PCBR	**Castelo Branco**	**160.92**	**19**	*e*PKPab	**PKPab**	**13 06 10.4**	**+0.2**
PMAFR	**Mafra**	**161.09**	**24**	*e*PKPab	**PKPab**	**13 06 11.6**	**+0.6**
PMRV	**Marv??o**	**161.32**	**19**	*e*PKPdf	**PKPdf**	**13 05 24.5**	**+0.5**
PMRV	**Marv??o**	**161.32**	**19**	*e*PKPab	**PKPab**	**13 06 11.9**	**-0.1**
PMTG	**Montargil**	**161.38**	**22**	*e*PKPdf	**PKPdf**	**13 05 24.6**	**+0.6**
PMTG	**Montargil**	**161.38**	**22**	*e*PKPab	**PKPab**	**13 06 11.9**	**-0.3**
PESTR	**Estremoz**	**161.77**	**21**	*e*PKPdf	**PKPdf**	**13 05 24.9**	**+0.4**
PESTR	**Estremoz**	**161.77**	**21**	*e*PKPab	**PKPab**	**13 06 14.0**	**0.0**
EVOP	**Sao Brissos**	**161.90**	**22**	*e*PKIKP	**PKPdf**	**13 05 24.1**	**-0.5**
EVOP	**Sao Brissos**	**161.90**	**22**	*e*PKPdf	**PKPdf**	**13 05 24.1**	**-0.5**
ESDC	**Sonseca Array**	**161.93**	**11**	PKP	**PKPdf**	**13 05 24.5**	**-0.2**
ESDC				PKPab	**PKPab**	**13 06 14.9**	**+0.2**
ESDC				PP	**PP**	**13 09 59.2**	**-0.5**
ESDC	**Sonseca Array**	**161.93**	**11**	PKP	**PKPdf**	**13 05 24.5**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=335,slow=3.3,SNR=10						
ESDC				PKPab	**PKPab**	**13 06 14.9**	**+0.2**
	comp=Z,13nm,0.9s,baz=348,slow=4.3,SNR=42						
ESDC				PP	**PP**	**13 09 59.3**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=355,slow=3.9,SNR=5.6						
EVO	**Evora**	**161.93**	**22**	*e*PKIKP	**PKPdf**	**13 05 24.1**	**-0.5**
	comp=Z,51nm,1.1s						
EVO	**Evora**	**161.93**	**22**	*e*PKPdf	**PKPdf**	**13 05 25.1**	**+0.5**
EVO	**Evora**	**161.93**	**22**	*e*PKPab	**PKPab**	**13 06 15.2**	**+0.5**
PNCL	**Nicolau / Gran**	**162.12**	**24**	*e*PKPdf	**PKPdf**	**13 05 25.8**	**+1.0**
PNCL	**Nicolau / Gran**	**162.12**	**24**	*e*PKPab	**PKPab**	**13 06 15.7**	**+0.2**
PBEJ	**Beja**	**162.44**	**22**	*e*PKPdf	**PKPdf**	**13 05 26.4**	**+1.2**
PBEJ	**Beja**	**162.44**	**22**	*e*PKPab	**PKPab**	**13 06 17.4**	**+0.5**
MESJ	**Messejana**	**162.47**	**23**	*e*P	**PKPdf**	**13 05 25.5**	**+0.3**
MESJ	**Messejana**	**162.47**	**23**	*e*P	**PKPdf**	**13 05 25.5**	**+0.3**
PTEO	**Sao Teotonio**	**162.54**	**25**	*e*PKPdf	**PKPdf**	**13 05 26.3**	**+1.1**
PTEO	**Sao Teotonio**	**162.54**	**25**	*e*PKPab	**PKPab**	**13 06 18.1**	**+0.7**
PBAR	**Barrancos**	**162.58**	**20**	*e*PKPdf	**PKPdf**	**13 05 26.1**	**+0.8**
PBAR	**Barrancos**	**162.58**	**20**	*e*PKPab	**PKPab**	**13 06 17.9**	**+0.4**
PCVE	**Castro Verde**	**162.72**	**23**	*e*PKPdf	**PKPdf**	**13 05 26.6**	**+1.2**
PCVE	**Castro Verde**	**162.72**	**23**	*e*PKPab	**PKPab**	**13 06 18.7**	**+0.5**
MORF	**Marmelete**	**162.77**	**25**	*e*PKPdf	**PKPdf**	**13 05 26.9**	**+1.3**
MORF	**Marmelete**	**162.77**	**25**	*e*PKPab	**PKPab**	**13 06 19.0**	**+0.5**
PFVI	**Vila Bisbo**	**162.85**	**26**	*e*PKPdf	**PKPdf**	**13 05 25.8**	**+0.2**
PFVI	**Vila Bisbo**	**162.85**	**26**	*e*PKPab	**PKPab**	**13 06 19.6**	**+0.8**
PVAQ	**Vaqueiros**	**163.04**	**23**	*e*PKPdf	**PKPdf**	**13 05 26.7**	**+1.0**
PVAQ	**Vaqueiros**	**163.04**	**23**	*e*PKPab	**PKPab**	**13 06 20.4**	**+0.8**
PBDV	**Barranco-do-Ve**	**163.11**	**24**	*e*PKPdf	**PKPdf**	**13 05 27.3**	**+1.4**
PBDV	**Barranco-do-Ve**	**163.11**	**24**	*e*PKPab	**PKPab**	**13 06 20.6**	**+0.7**
LIC	**Lamto**	**163.47**	**160**	*e*PKIKP	**PKPdf**	**13 05 25.7**	**-1.1**
	comp=Z,29nm,1.0s						
LIC	**Lamto**	**163.47**	**160**	*e*PKPdf	**PKPdf**	**13 05 25.7**	**-1.1**
DBIC	**Dimbokro**	**163.94**	**160**	PKP	**PKPdf**	**13 05 26.8**	**-0.4**
DBIC				PKPab	**PKPab**	**13 06 24.8**	**+0.7**
DBIC	**Dimbokro**	**163.94**	**160**	PKP	**PKPdf**	**13 05 26.8**	**-0.4**
	comp=Z,6.6nm,0.7s,baz=117,slow=2.6,SNR=9.1						
DBIC				PKPab	**PKPab**	**13 06 24.8**	**+0.7**
	comp=Z,19nm,0.7s,baz=173,slow=6.4,SNR=20						
KEST	**Kesra**	**164.25**	**333**	PKPab	**PKPab**	**13 06 26.0**	**+0.9**
KEST	**Kesra**	**164.25**	**333**	PKPab	**PKPab**	**13 06 26.0**	**+0.9**
	comp=Z,13nm,0.9s,baz=300,slow=2.1,SNR=12						
TORD	**Torodi Ar. Bea**	**171.17**	**188**	PKP	**PKPdf**	**13 05 31.3**	**-0.9**
TORD				PKPab	**PKPab**	**13 06 55.9**	**0.0**
TORD				pPKPab	**pPKPab**	**13 09 07.1**	**+3.1**
TORD				PP	**PP**	**13 10 45.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**171.17**	**188**	PKP	**PKPdf**	**13 05 31.3**	**-0.9**
	comp=Z,8.0nm,0.8s,baz=319,slow=0.9,SNR=40						
TORD				PKPab	**PKPab**	**13 06 55.9**	**0.0**
	comp=Z,7.0nm,0.7s,baz=181,slow=3.7,SNR=21						
TORD				pPKPab	**pPKPab**	**13 09 07.1**	**+3.1**
	comp=Z,1.9nm,0.9s,baz=154,slow=3.9,SNR=3.5						
TORD				PP	**PP**	**13 10 45.9**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=189,slow=5.5,SNR=4.5						
TAM	**Tamanrasset**	**175.28**	**281**	*e*PKIKP	**PKPdf**	**13 05 34.4**	**+0.6**
TAM				*e*		13 07 15.7	
TAM	**Tamanrasset**	**175.28**	**281**	*e*PKPdf	**PKPdf**	**13 05 34.4**	**+0.6**
TAM				*e*PKPab	**PKPab**	**13 07 15.7**	**+0.9**

MEX 07 12:52:58.3±0.6**, 15.°63N×96.°46W, h35**km±25km**, MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.37**	**68**	*i* P	Pb	12 53 05.3	-1.8
HUIG				*i* S	Sn	12 53 11.4	-1.7
PNIG	**Pinotepa**	**1.77**	**296**	*i* P	Pn	12 53 25.3	-1.3
PNIG				*i* S	Sn	12 53 45.6	-2.3
UTMO	**Huajuapan**	**2.54**	**330**	*i* P	Pn	12 53 36.2	-1.2
UTMO				*e*S	Sn	12 54 04.5	-2.7
PCIG		**3.13**	**88**	*i* P	Pn	12 53 28.7	-16
PCIG				*i* S	Sn	12 54 04.0	-17

NDI 07 13:23:17.3±2.4**, 33.°73N×73.°22E, h10**km**, ML3.5, 2C, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMU	**Jammu**	**1.74**	**125**	*e*PKP	Pn	13 23 47.0	-0.5
JMU				*e*4	Sn	13 24 04.0	-5.7
SDNR	**Sundarnagar**	**3.87**	**124**	*e*PKP	Pn	13 24 18.0	+1.1
SDNR				*e*S	Sn	13 25 00.0	-2.5
SMLA	**Simla**	**4.23**	**127**	*e*x	Pn	13 24 18.3	-3.5
SMLA				*e*S	Sn	13 25 10.0	-1.2
SMLA				AML	AML	13 25 14.1	
	comp=E,174nm,0.3s						
SMLA				AML	AML	13 25 16.1	
	comp=N,111nm,0.3s						
KHET	**Khetri**	**6.06**	**158**	*e*x	Pn	13 24 51.5	+4.4
KHET				*e*S	Sn	13 25 51.8	-4.7
KHET				AML	AML	13 26 42.8	
	comp=N,42nm,0.1s						
KHET				AML	AML	13 26 43.0	
	comp=E,28nm,0.0s						
AYAN	**Aya Nagar**	**6.21**	**146**	*e*S	Sn	13 25 53.8	-6.3
KALG	**Kalgarh**	**6.33**	**130**	*e*S	Sn	13 25 57.7	-5.2
AGRA	**Agra**	**7.66**	**147**	*e*S	Sn	13 26 31.4	-4.3
AGRA				AML	AML	13 27 31.2	
	comp=N,66nm,0.4s						
AGRA				AML	AML	13 27 31.2	
	comp=E,76nm,0.1s						
KK31	**Karatay Array**	**9.60**	**348**	⇑Pn	Pn	13 25 39.1	+3.6
	comp=E,0.1nm,0.3s,baz=155,slow=13,SNR=6.9						
KK31				⇑Sn	Sn	13 27 21.5	-1.8
	comp=E,0.4nm,0.3s,baz=149,slow=22,SNR=5.3						

IDC 07 13:24:28.0±1.2**, 27.°75N×96.°11E, h0**km**, mb3.6**/6**, mb1 3.7**/7**, mb1mx3.4**/29**, mbtmp3.5**/7**, Error ellipse: s-maj=124.7km s-min=16.6km az=61.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.61**	**164**	Pn	Pn	13 26 48.0	+0.4
	baz=344,slow=9.7,SNR=3.1						
MKAR	**Makanchi Array**	**21.90**	**334**	P	P	13 29 23.3	+0.6
	1.0nm,0.6s,baz=146,slow=8.9,SNR=12						
KURBB	**Kurchatov Arra**	**26.46**	**334**	P	P	13 30 05.8	-0.9
	0.5nm,0.7s,baz=145,slow=10,SNR=8.4						
ZALV	**Zalesovo Beam**	**27.46**	**345**	P	P	13 30 15.9	+0.3
	0.3nm,0.3s,baz=152,slow=9.4,SNR=2.9						
BVAR	**Borovoye Array**	**31.63**	**330**	P	P	13 30 52.7	0.0
	0.7nm,0.7s,baz=132,slow=8.7,SNR=4.3						
WRA	**Warramunga Arr**	**60.13**	**138**	P	P	13 34 37.4	-0.2
	0.5nm,0.4s,baz=322,slow=8.2,SNR=12						
ASAR	**Alice Springs**	**62.79**	**141**	P	P	13 34 55.5	0.0
	0.5nm,0.8s,baz=324,slow=6.5,SNR=6.6						

IDC 07 13:25:28.7±10.0**, 17.°23S×178.°65W, h468**km±116km**, mb2.8**/5**, mb1 3.2**/5**, mb1mx3.0**/18**, mbtmp2.8**/5**, Error ellipse: s-maj=119.4km s-min=33.5km az=156.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**44.53**	**259**	P	P	13 32 57.5	-0.4
	0.2nm,0.5s,baz=97,slow=6.9,SNR=2.9						
ASAR	**Alice Springs**	**44.76**	**254**	P	P	13 32 59.6	0.0
	1.3nm,0.6s,baz=90,slow=7.8,SNR=29						
NVAR	**Mina Array Bea**	**79.09**	**44**	P	P	13 36 43.8	-0.2
	0.4nm,0.6s,baz=225,slow=5.0,SNR=4.1						
ILAR	**Eielson Array**	**85.28**	**13**	P	P	13 37 14.6	-0.1
	0.3nm,0.4s,baz=214,slow=6.4,SNR=4.9						
TXAR	**Lajitas Array**	**85.83**	**58**	P	P	13 37 18.5	+0.2
	0.3nm,0.7s,baz=234,slow=5.4,SNR=5.9						
BRTR	**Keskin Array B**	**144.14**	**315**	PKP	PKPbc	13 44 09.6	-0.6
	1.2nm,0.8s,baz=90,slow=5.8,SNR=5.8						
GERES	**GERESS Array B**	**146.90**	**345**	PKPbc	PKPbc	13 44 17.6	-0.3
	0.1nm,0.3s,baz=36,slow=3.7,SNR=5.0						

MEX 07 13:32:56.4±0.3**, 15.°47N×96.°45W, h15**km±9km**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.44**	**48**	*i* P	Pg	13 33 04.1	-1.2
HUIG				*i* S	Sg	13 33 10.1	-1.2
PNIG	**Pinotepa**	**1.86**	**300**	*i* P	Pn	13 33 24.6	-3.2
PNIG				*i* S	Sn	13 33 46.1	-4.9
UTMO	**Huajuapan**	**2.68**	**331**	*i* P	Pn	13 33 36.2	-3.2
UTMO				*e*S	Sn	13 34 07.4	-4.3
PCIG		**3.12**	**85**	*i* P	Pn	13 33 42.2	-2.9
PCIG				*i* S	Sn	13 34 18.1	-4.0
YAIG	**Yautepec**	**4.20**	**324**	*i* P	Pn	13 33 57.1	-3.0
YAIG				*i* S	Sn	13 34 46.4	-2.7

DJA 07 13:34:11.0±0.5**, 6°S**±12°×**10°5E**±°**, h10**km**, M3.5**/7**, MLv3.5**/7**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBJI	**Serang**	**0.73**	**88**	P	Pg	13 34 24.5	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.09**	**305**	P	Pb	13 34 30.4	-1.6
SKJI	**Sukabumi**	**1.43**	**127**	P	Pn	13 34 36.6	-0.4
CBJI	**Citeko**	**1.47**	**101**	P	Pg	13 34 40.8	+1.6
LWLI	**Liwa**	**1.75**	**310**	P	Pb	13 34 42.8	-0.5
LEM	**Lembang**	**2.30**	**107**	P	Pn	13 34 50.8	+1.5
TGJI	**Tegal**	**3.77**	**101**	P	Pn	13 35 08.8	-0.4

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*AUST **07** 13:36:58.9±5.3, 2°.47S×141°.26E, h0km, Error ellipse: s-maj=2.0km s-min=1.0km az=8.0*
*IDC **07** 13:36:59.4±0.5, 2°.79S×141°.46E, h0km, mb4.3/19, mb1 4.5/22, mb1mx4.5/24, mbtmp4.4/22, ML4.5/1, MS3.7/16, Ms1 3.7/16, ms1mx3.5/28, Error ellipse: s-maj=17.1km s-min=8.4km az=98.0*
*ISCJB **07** 13:37:02.5±0.4, 2°.62S±0°.04×141°.57E±0°.06, h29km, mb4.3/25, MS3.7/15, Error ellipse: s-maj=8.5km s-min=5.8km az=171.6*
*BJI **07** 13:37:07.5, 2°.60S×141°.40E, h40km, mB5.0/4, mb4.6/7, Ms4.7/2, Ms7 4.5/2*
*DJA **07** 13:37:09.1±0.6, 3°S±6°×14°1E±°, h10km, M4.6/16, mB5.3/2, mb4.7/16, MLv4.6/3, Mw(mB)4.8/2*
ISC 07 13:37:04.0±0.5**, 2°.68S**±0°.06×**141°.48E**±0°.06**, h29km, n64, σ1s.58**/50**, mb4.4**/24**, MS3.8**/15**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAY	**Jayapura**	**0.79**	**282**	P	**Pb**	**13 37 18.4**	**-0.8**
WAMI	**Wamena**	**3.01**	**246**	P	**Pn**	**13 37 52.1**	**+2.4**
SRPI	**Serui, Papua**	**5.29**	**279**	P	Pn	13 38 25.5	+4.3
	162nm,0.9s,0.6nm						
PMG	**Port Moresby**	**8.75**	**140**	P	Pn	13 39 17.1	+8.5
	48nm,1.3s						
PMG	**Port Moresby**	**8.75**	**140**	Pn	**Pn**	**13 39 07.1**	**-1.6**
	0.6nm,0.3s,baz=307,slow=11,SNR=3.3						
SWI	**Sorong**	**10.37**	**280**	S	**Sn**	**13 41 22.8**	**-3.4**
	baz=10,SNR=33						
COEN	**Coen**	**11.33**	**172**	P	**Pn**	**13 39 46.3**	**+2.3**
	baz=12,SNR=7.6						
KDU	**Kakadu**	**13.35**	**221**	P	**Pn**	**13 40 10.3**	**-1.4**
	baz=13,SNR=27						
MTN	**Manton Dam**	**14.38**	**225**	P	**Pn**	**13 40 25.5**	**-0.3**
	baz=14,SNR=8.4						
MTSU	**Mount Surprise**	**15.61**	**170**	P	**P**	**13 40 46.0**	**-0.1**
	baz=16,SNR=11						
QIS	**Mount Isa**	**17.86**	**186**	P	**P**	**13 41 11.0**	**0.0**
	baz=18,SNR=12						
CTA	**Charters Tower**	**17.92**	**165**	Pn	**P**	**13 41 11.7**	**0.0**
	0.3nm,0.3s,baz=353,slow=13,SNR=4.8						
KNRA	**Kununurra**	**17.99**	**223**	P	**Pn**	**13 41 10.4**	**-1.6**
	baz=18,SNR=30						
WRA	**Warramunga Arr**	**18.52**	**202**	P	**P**	**13 41 16.7**	**-1.6**
	1.5nm,0.3s,baz=15,slow=11,SNR=40						
WRA				S	**Sn**	**13 44 42.9**	**-1.9**
	0.1nm,0.3s,baz=17,slow=23,SNR=4.4						
DAV	**Davao City (W)**	**18.59**	**301**	LR	LR	13 48 47.1	
	comp=Z,153nm,18.1s,baz=324,slow=38						
BBSI	**Bau Bau**	**19.06**	**261**	P	Pn	13 41 32.8	+7.6
	63nm,1.0s,755nm						
HNR	**Honiara**	**19.54**	**111**	P	**P**	**13 41 28.1**	**-1.4**
	9.0nm,0.3s,baz=244,slow=8.7,SNR=48						
MRSI	**Marisa**	**19.78**	**279**	P	Pn	13 41 52.4	+19
	23nm,1.2s						
BSSI	**Bau Bau, Buton**	**21.20**	**260**	P	P	13 41 54.0	+6.5
	140nm,0.9s						
BKSI	**Bulukumba**	**21.46**	**262**	P	P	13 42 09.0	+19
	23nm,1.2s						
TTSI	**Tana Toraja**	**21.63**	**269**	P	P	13 41 59.9	+7.7
	29nm,1.2s,3μm						
SPSI	**Sidrap Palu**	**21.71**	**266**	P	P	13 42 02.2	+9.2
	24nm,1.1s						
FITZ	**Fitzroy Crossi**	**21.82**	**224**	P	**P**	**13 41 53.0**	**-1.1**
	7.6nm,0.6s,baz=43,slow=13,SNR=13						
FITZ				LR	LR	13 50 33.6	
	comp=Z,95nm,19.9s,baz=49,slow=38						
FITZ	**Fitzroy Crossi**	**21.82**	**224**	P	**P**	**13 41 53.6**	**-0.5**
	baz=22,SNR=17						
ASAR	**Alice Springs**	**22.11**	**199**	P	**P**	**13 41 57.1**	**-0.2**
	3.7nm,0.7s,baz=29,slow=9.9,SNR=42						
ASAR				S	**S**	**13 45 58.1**	**-1.5**
	0.5nm,0.8s,baz=14,slow=23,SNR=2.7						
ASAR				LR	LR	13 50 14.9	
	comp=Z,155nm,20.7s,baz=18,slow=36						
QLP	**Quilpie**	**23.91**	**174**	P	**P**	**13 42 16.8**	**+1.3**
	baz=24,SNR=16						
EIDS	**Eidsvold**	**24.38**	**159**	P	**P**	**13 42 22.2**	**+2.4**
	baz=25,SNR=24						
RMQ	**Roma**	**24.68**	**164**	P	**P**	**13 42 24.9**	**+2.3**
	baz=25,SNR=37						
CMSA	**Cobar Meteorol**	**28.98**	**173**	P	**P**	**13 43 02.8**	**+1.7**
	baz=29,SNR=13						
STKA	**Stephens Creek**	**29.04**	**180**	P	**P**	**13 43 01.0**	**-0.7**
	4.0nm,0.7s,baz=360,slow=9.7,SNR=11						
STKA				LR	LR	13 55 16.0	
	comp=Z,234nm,18.1s,baz=20,slow=38						
STKA	**Stephens Creek**	**29.04**	**180**	P	P	13 43 05.7	+4.0
	baz=29,SNR=6.5						
DZM	**Mont Dzumac**	**30.98**	**130**	P	**P**	**13 43 18.6**	**-0.5**
	16nm,0.9s,baz=281,slow=10,SNR=9.4						
LHI	**Lord Howe Isla**	**33.13**	**152**	S	S	13 49 28.6	+33
	baz=34,SNR=4.7						
CISI	**Cisompet, Garu**	**33.86**	**260**	P	P	13 43 37.8	-6.7
	baz=34,SNR=3.9						
TOO	**Toolangi**	**34.92**	**174**	P	P	13 43 57.8	+4.5
	baz=35,SNR=4.1						
MORW	**Morawa**	**35.69**	**220**	P	**P**	**13 44 00.3**	**+0.3**
	baz=36,SNR=3.2						
JNU	**Nakatsue**	**36.99**	**345**	LR	LR	13 56 41.3	
	comp=Z,37nm,19.2s,baz=193,slow=32						
QIZ	**Qiongzhong**	**37.86**	**306**	P	**P**	**13 44 18.1**	**-0.5**
QIZ				S	**S**	**13 50 08.2**	**-0.1**
KSRS	**Korea Array**	**41.87**	**344**	P	**P**	**13 44 52.5**	**+0.9**
	0.6nm,0.8s,baz=159,slow=7.7,SNR=3.4						
KSRS				LR	LR	14 00 29.7	
	comp=Z,52nm,18.0s,baz=333,slow=34						
WHN	**Wuhan**	**41.97**	**324**	*e*P	P	13 45 02.3	+10
CMAR	**Chiang Mai Arr**	**46.84**	**298**	P	**P**	**13 45 32.9**	**+1.2**
	0.7nm,0.7s,baz=115,slow=5.8,SNR=3.7						
CMAR				LR	LR	14 04 07.6	
	comp=Z,32nm,19.2s,baz=15,slow=35						
USRK	**Ussuriysk Arra**	**47.44**	**351**	P	**P**	**13 45 35.6**	**-0.3**
	0.8nm,0.6s,baz=172,slow=40,SNR=3.6						
USRK				LR	LR	14 02 02.7	
	comp=Z,85nm,20.5s,baz=165,slow=32						
LZH	**Lanzhou**	**52.15**	**321**	*e*P	P	13 46 20.5	+8.3
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
PETK	**Petropavlovsk-**	**57.23**	**12**	P	**P**	**13 46 47.9**	**-0.7**
	comp=Z,2.7nm,0.9s,baz=178,slow=4.3,SNR=5.2						
PETK				LR	LR	14 06 50.7	
	comp=Z,36nm,21.3s,baz=348,slow=31						
SONM	**Songino Array**	**58.91**	**333**	P	**P**	**13 47 00.8**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=152,slow=6.4,SNR=2.4						
SONM				LR	LR	14 14 08.7	
	comp=Z,77nm,19.6s,baz=260,slow=38						
MKAR	**Makanchi Array**	**71.47**	**322**	P	**P**	**13 48 23.1**	**+1.1**
	comp=Z,2.7nm,0.7s,baz=106,slow=6.4,SNR=26						
KSH	**Kashi**	**73.08**	**313**	P	**P**	**13 48 35.1**	**+3.2**
KSH				pmax	pmax		
	comp=Z,95nm,3.1s						
ZALV	**Zalesovo Beam**	**73.32**	**329**	P	**P**	**13 48 33.0**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=110,slow=7.8,SNR=5.8						
ZALV				LR	LR	14 21 35.0	
	comp=Z,53nm,18.9s,baz=72,slow=36						
AAK	**Ala-Archa**	**75.11**	**315**	P	**P**	**13 48 44.4**	**+0.7**
	comp=Z,1.4nm,0.3s,baz=148,slow=7.1,SNR=3.6						
KURBB	**Kurchatov Arra**	**75.31**	**324**	P	**P**	**13 48 45.3**	**+0.8**
	comp=Z,3.6nm,1.0s,baz=113,slow=5.1,SNR=25						
VNDA	**Vanda**	**75.58**	**176**	P	**P**	**13 48 45.8**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=328,slow=7.2,SNR=12						
VNDA				LR	LR	14 21 50.7	
	comp=Z,72nm,20.9s,baz=353,slow=36						
MAW	**Mawson**	**83.19**	**202**	P	**P**	**13 49 27.1**	**-0.1**
	comp=Z,3.2nm,0.9s,baz=56,slow=7.3,SNR=3.7						
MAW				LR	LR	14 25 24.0	
	comp=Z,59nm,19.0s,baz=204,slow=35						
ILAR	**Eielson Array**	**84.67**	**24**	P	**P**	**13 49 33.9**	**-0.9**
	comp=Z,3.4nm,0.9s,baz=260,slow=4.8,SNR=31						
ILAR				LR	LR	14 26 57.2	
	comp=Z,40nm,19.3s,baz=357,slow=35						
QSPA	**South Pole Qui**	**87.27**	**180**	P	**P**	**13 49 47.9**	**+0.1**
	comp=Z,13nm,1.1s,baz=344,slow=3.1,SNR=37						
QSPA				LR	LR	14 28 08.0	
	comp=Z,190nm,18.9s,baz=31,slow=35						
AKTO	**Aktyubinsk**	**87.88**	**321**	LR	LR	14 28 59.9	
	comp=Z,41nm,18.1s,baz=178,slow=36						
INK	**Inuvik**	**90.62**	**22**	P	**P**	**13 50 02.0**	**-1.3**
	comp=Z,2.4nm,1.0s,baz=280,slow=5.7,SNR=4.1						
YKA	**Yellowknife Ar**	**98.78**	**27**	P	**P**	**13 50 39.3**	**-1.4**
	comp=Z,0.8nm,0.8s,baz=285,slow=4.7,SNR=7.3						
NVAR	**Mina Array Bea**	**99.67**	**52**	P	**Pdif**	**13 50 46.5**	**+0.9**
	comp=Z,0.1nm,0.4s,baz=273,slow=5.3,SNR=3.6						
STHS	**Stebnicka Huta**	**111.33**	**323**	PDIF	**Pdif**	**13 51 43.0**	**+6.1**
ROSC	**El Rosal**	**144.21**	**85**	PKP	**PKPab**	**13 56 36.6**	**0.0**
	comp=Z,6.5nm,0.4s,baz=94,slow=20,SNR=4.3						
LPAZ	**La Paz**	**145.20**	**124**	PKPbc	**PKPdf**	**13 56 41.3**	**+0.6**
	comp=Z,12nm,1.0s,baz=270,slow=2.0,SNR=10						
CPUP	**Villa Florida**	**145.91**	**149**	PKPbc	**PKPbc**	**13 56 41.6**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=213,slow=4.5,SNR=2.8						
DBIC	**Dimbokro**	**146.22**	**278**	PKPbc	**PKPab**	**13 56 43.4**	**-0.1**
	comp=Z,3.1nm,0.6s,baz=63,slow=2.7,SNR=5.7						
SIV	**San Ignacio**	**151.00**	**130**	PKPbc	**PKPbc**	**13 56 55.2**	**0.0**
	comp=Z,2.2nm,0.9s,baz=264,slow=1.9,SNR=7.7						

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*GUC **07** 13:54:14.5±0.8, 42°.85S×72°.72W, h22km±8km, ML3.6*
*ISCJB **07** 13:54:17.2±0.5, 42°.78S±0°.03×72°.38W±0°.08, h10km, mb4.1/12, MS3.4/3, Error ellipse: s-maj=8.7km s-min=4.5km az=166.3*
*IDC **07** 13:54:17.1±0.8, 42°.75S×72°.36W, h0km, mb4.0/11, mb1 4.2/12, mb1mx4.2/20, mbtmp4.0/12, ML4.4/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/28, Error ellipse: s-maj=30.5km s-min=15.1km az=107.0*
*NEIC **07** 13:54:17.2±1.3, 42°.78S×72°.47W, h2km±7km, mb4.3/6, Error ellipse: s-maj=13.9km s-min=7.7km az=74.0*
ISC 07 13:54:18.4±0.6**, 42°.78S**±0°.04×**72°.45W**±0°.07**, h10km, n42, σ1s.04**/49**, mb4.1**/12**, MS3.2**/3**, 2C, Southern Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUNY	**Huinay**	**0.40**	**4**	⇑*i*P	**Pg**	**13 54 24.8**	**-1.3**
HUNY				*i* S	**Sg**	**13 54 32.3**	**+0.9**
HUNY	**Huinay**	**0.40**	**4**	⇑*i*P	**Pg**	**13 54 24.8**	**-1.3**
HUNY				*i* S	**Sg**	**13 54 32.3**	**+0.9**
HUNY				AML	AML	13 54 40.8	
	comp=E,4μm,0.6s						
FUTA	**Futaleufœ**	**0.60**	**133**	*e*P	**Pg**	**13 54 28.8**	**-1.3**
FUTA				*i* S	**Sg**	**13 54 38.5**	**+0.5**
FUTA	**Futaleufœ**	**0.60**	**133**	*e*P	**Pg**	**13 54 28.8**	**-1.3**
FUTA				*i* S	**Sg**	**13 54 38.5**	**+0.5**
FUTA				AML	AML	13 54 40.6	
	comp=N,2μm,0.4s						
PMCH	**Puerto Montt**	**1.33**	**345**	*e*P	**Pn**	**13 54 42.3**	**-0.6**
PMCH				*i* S	**Sb**	**13 55 01.0**	**+0.7**
PMCH	**Puerto Montt**	**1.33**	**345**	*e*P	**Pn**	**13 54 42.3**	**-0.6**
PMCH				*i* S	**Sb**	**13 55 01.0**	**+0.7**
PMCH				AML	AML	13 55 07.4	
	comp=E,2μm,0.3s						
PLCA	**Paso Flores**	**2.49**	**35**	*e*Pn	**Pn**	**13 55 00.6**	**+1.6**
PLCA				*e*Sg	**Sg**	**13 55 39.0**	**+0.8**
PLCA	**Paso Flores**	**2.49**	**35**	Pn	**Pn**	**13 55 00.2**	**+1.3**
	comp=E,19nm,0.3s,baz=209,slow=15,SNR=173						
PLCA				Pg	**Pb**	**13 55 03.2**	**0.0**
	comp=E,19nm,0.3s,baz=221,slow=17,SNR=165						
PLCA				Lg	Lg	13 55 39.1	
	comp=E,69nm,0.3s,baz=126,slow=19,SNR=24						
PLCA				LR	LR	13 56 13.2	
	comp=E,484nm,21.9s,baz=151,slow=48						
COYC	**Coyhaique**	**2.81**	**175**	AML	AML	13 55 45.8	
	comp=E,179nm,0.2s						
TRQA	**Tornquist**	**9.27**	**63**	Pn	**Pn**	**13 56 33.1**	**+1.1**
LVC	**Limon Verde**	**20.32**	**9**	*e*P	**P**	**13 58 56.5**	**+1.6**
	comp=E,5.3nm,0.8s						
CPUP	**Villa Florida**	**20.54**	**42**	P	**P**	**13 58 56.1**	**-0.8**
CPUP	**Villa Florida**	**20.54**	**42**	P	**P**	**13 58 56.1**	**-0.8**
	comp=E,0.9nm,0.3s,baz=221,slow=11,SNR=4.2						
CPUP				LR	LR	14 07 36.0	
	comp=E,111nm,20.8s,baz=174,slow=39						
LPAZ	**La Paz**	**26.66**	**9**	*e*P	**P**	**13 59 59.9**	**+1.9**
	comp=E,1.4nm,0.8s						
LPAZ	**La Paz**	**26.66**	**9**	P	**P**	**13 59 58.0**	**0.0**
	comp=E,1.2nm,0.7s,baz=184,slow=8.0,SNR=5.0						
SIV	**San Ignacio**	**28.42**	**23**	P	**P**	**14 00 11.8**	**-1.4**
SIV	**San Ignacio**	**28.42**	**23**	P	**P**	**14 00 11.8**	**-1.4**
	comp=E,1.5nm,0.8s,baz=223,slow=7.7,SNR=6.3						
SIV				LR	LR	14 11 58.5	
	comp=E,47nm,20.2s,slow=37						
BDFB	**Brasilia**	**34.20**	**45**	P	**P**	**14 01 02.9**	**-1.3**
BDFB	**Brasilia**	**34.20**	**45**	P	**P**	**14 01 02.9**	**-1.3**
	comp=E,1.3nm,0.4s,baz=166,slow=8.8,SNR=3.4						
BDFB				LR	LR	14 16 17.8	
	comp=E,192nm,18.5s,baz=329,slow=39						
SNAA	**Sanae**	**43.69**	**155**	P	**P**	**14 02 22.7**	**-0.3**
	comp=E,8.9nm,1.4s						
SNAA	**Sanae**	**43.69**	**155**	P	**P**	**14 02 22.5**	**-0.5**
	comp=E,1.7nm,1.2s,baz=264,slow=7.9,SNR=5.1						
QSPA	**South Pole Qui**	**47.47**	**180**	*e*P	**P**	**14 02 52.9**	**-0.2**
	comp=E,6.4nm,1.0s						
QSPA	**South Pole Qui**	**47.47**	**180**	P	**P**	**14 02 53.3**	**+0.2**
	comp=E,5.5nm,1.0s,baz=144,slow=7.3,SNR=11						
VNDA	**Vanda**	**55.46**	**192**	P	**P**	**14 03 54.7**	**+2.2**
VNDA	**Vanda**	**55.46**	**192**	P	**P**	**14 03 54.7**	**+2.2**
	comp=E,3.8nm,1.3s,baz=121,slow=9.0,SNR=4.8						
TXAR	**Lajitas Array**	**77.29**	**332**	P	**P**	**14 06 13.6**	**+0.7**
TXAR	**Lajitas Array**	**77.29**	**332**	P	**P**	**14 06 13.6**	**+0.7**
	comp=E,0.7nm,0.9s,baz=126,slow=6.1,SNR=9.0						
DBIC	**Dimbokro**	**78.42**	**70**	P	**P**	**14 06 20.1**	**+0.6**
DBIC	**Dimbokro**	**78.42**	**70**	P	**P**	**14 06 20.1**	**+0.6**
	comp=E,3.9nm,1.0s,baz=230,slow=7.9,SNR=3.1						
WMOK	**Wichita Mounta**	**80.81**	**338**	*e*P	**P**	**14 06 31.7**	**-0.3**
	comp=E,1.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**87.53**	**70**	P	**P**	**14 07 06.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**87.53**	**70**	P	**P**	**14 07 06.4**	**-0.2**
	comp=E,0.5nm,0.9s,baz=242,slow=3.1,SNR=2.4						
ECSD	**EROS Data Cent**	**88.81**	**343**	*e*P	**P**	**14 07 11.1**	**-0.9**
	comp=E,5.0nm,0.8s						
PDAR	**Pinedale Array**	**91.45**	**334**	P	**P**	**14 07 24.9**	**+0.2**
PDAR	**Pinedale Array**	**91.45**	**334**	P	**P**	**14 07 24.9**	**+0.2**
	comp=E,0.8nm,0.7s,baz=156,slow=5.4,SNR=5.0						
ILAR	**Eielson Array**	**121.78**	**331**	PKP	**PKPdf**	**14 13 11.0**	**-0.4**
ILAR	**Eielson Array**	**121.78**	**331**	PKP	**PKPdf**	**14 13 11.0**	**-0.4**
	comp=E,0.5nm,0.8s,baz=147,slow=1.4,SNR=8.6						
ABKAR	**Akbulak array**	**146.77**	**62**	*e*PKP	**PKPdf**	**14 13 59.5**	**+1.4**
ZALV	**Zalesovo Beam**	**161.30**	**45**	PKP	**PKPdf**	**14 14 19.5**	**+1.2**
ZALV	**Zalesovo Beam**	**161.30**	**45**	PKP	**PKPdf**	**14 14 19.5**	**+1.2**
	comp=E,0.6nm,0.7s,baz=262,slow=3.9,SNR=4.1						
MKAR	**Makanchi Array**	**161.65**	**69**	PKPab	**PKPab**	**14 15 03.3**	**-0.9**
MKAR	**Makanchi Array**	**161.65**	**69**	PKPab	**PKPab**	**14 15 03.3**	**-0.9**
	comp=E,0.6nm,0.8s,baz=278,slow=4.1,SNR=5.4						

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*IDC **07** 14:11:35.2±1.1, 29°.57S×179°.15W, h331km±10km, mb3.7/10, mb1 3.8/12, mb1mx3.7/21, mbtmp3.8/12, Error ellipse: s-maj=16.6km s-min=13.9km az=133.0*
*AUST **07** 14:11:38.9, 30°.02S×178°.44W, h450km*
ISC 07 14:11:38.3±1.0**, 30°.22S**±0°.08×**179°.1W**±0°.1**, h350km, n104, σ1s.50**/83**, mb3.9**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.40**	**47**	P	Pn	14 12 19.8	-6.2
	542nm,0.3s,baz=95,slow=5.1,SNR=41						
RAO				S	S	14 12 45.9	-18
	369nm,0.3s,baz=101,slow=22,SNR=6.1						
MXZ	**Matakaoa Point**	**7.64**	**196**	*e*PN	**Pn**	**14 13 26.7**	**-1.4**
PUZ	**Puketiti**	**8.14**	**195**	PN	**Pn**	**14 13 33.0**	**-1.0**
PUZ				SN	**S**	**14 15 09.7**	**+1.3**
CNGZ	**Carnagh Statio**	**8.54**	**194**	PN	**Pn**	**14 13 38.2**	**-0.6**
MWZ	**Matawai**	**8.57**	**198**	PN	**Pn**	**14 13 37.5**	**-1.7**
MWZ				SN	**S**	**14 15 19.9**	**+2.1**
URZ	**Urewera**	**8.62**	**200**	PN	**Pn**	**14 13 38.2**	**-1.4**
URZ	**Urewera**	**8.62**	**200**	P	**Pn**	**14 13 41.6**	**+2.0**
	13nm,0.3s,baz=263,slow=3.1,SNR=59						
URZ				S	**S**	**14 15 20.6**	**+1.9**
	54nm,0.3s,baz=315,slow=20,SNR=17						
TARZ	**Mount Tarawera**	**8.79**	**203**	PN	**P**	**14 13 45.8**	**+1.5**
RRRZ	**Republican Roa**	**8.88**	**203**	PN	**Pn**	**14 13 44.6**	**+1.8**
PRGZ	**Paritu Road**	**9.04**	**195**	PN	**Pn**	**14 13 45.6**	**+0.9**
PRRZ	**Plateau Road**	**9.06**	**203**	PN	**Pn**	**14 13 46.3**	**+1.3**
ALRZ	**Allen Road**	**9.14**	**203**	PN	**Pn**	**14 13 47.8**	**+1.9**
KNZ	**Kokohu**	**9.18**	**196**	PN	**P**	**14 13 49.1**	**+0.6**
RAHZ	**Arahi**	**9.23**	**199**	PN	**Pn**	**14 13 45.9**	**-1.1**
MHGZ	**Mahia Peninsul**	**9.25**	**195**	PN	**P**	**14 13 51.0**	**+1.7**
NMHZ	**Naumai**	**9.48**	**200**	PN	**Pn**	**14 13 48.3**	**-1.7**
BKZ	**Black Stump Fm**	**9.64**	**201**	PN	**Pn**	**14 13 49.9**	**-2.0**
HIZ	**Hauiti**	**9.67**	**209**	PN	**Pn**	**14 13 53.5**	**+1.3**
MCHZ	**McNeill Hill**	**9.83**	**199**	PN	**Pn**	**14 13 54.9**	**+0.7**
KRVZ	**Karewarewa**	**9.86**	**205**	PN	**P**	**14 13 56.5**	**+0.3**
OTVZ	**Oturere**	**9.91**	**204**	PN	**Pn**	**14 13 55.3**	**0.0**
NGZ	**Ngauruhoe**	**9.95**	**205**	PN	**Pn**	**14 13 57.3**	**+1.6**
WPVZ	**Whakapapa**	**9.99**	**205**	PN	**P**	**14 13 58.3**	**+0.6**
TUVZ	**Tukino**	**10.01**	**204**	PN	**Pn**	**14 13 57.7**	**+1.2**
FWVZ	**Far West T-bar**	**10.03**	**205**	PN	**Pn**	**14 13 54.8**	**-2.0**
WHVZ	**Whangaehu Hut**	**10.04**	**204**	PN	**Pn**	**14 13 55.0**	**-1.9**
DRZ	**Dome Shelter**	**10.05**	**204**	PN	**Pn**	**14 13 58.5**	**+1.4**
BHHZ	**Black Hill Sta**	**10.07**	**202**	PN	**Pn**	**14 13 55.9**	**-1.1**
TRVZ	**Turoa**	**10.07**	**204**	PN	**Pn**	**14 13 56.7**	**-0.6**
WNVZ	**Wahianoa**	**10.08**	**204**	PN	**Pn**	**14 13 55.6**	**-1.7**
MOVZ	**Moawhango**	**10.10**	**203**	PN	**Pn**	**14 13 58.3**	**+0.9**
KAHZ	**Kahuranaki**	**10.11**	**198**	PN	Pn	14 13 53.9	-3.6
PKVZ	**Pokaka**	**10.14**	**205**	PN	**Pn**	**14 13 58.1**	**+0.2**
PXZ	**Pawanui**	**10.34**	**198**	PN	**Pn**	**14 13 59.3**	**-0.9**
PNHZ	**Pukenui**	**10.41**	**200**	PN	Pn	14 13 58.7	-2.5
WPHZ	**Waipukurau**	**10.48**	**199**	PN	**Pn**	**14 14 02.5**	**+0.6**
RAEZ	**Rainy Point**	**10.51**	**209**	PN	P	14 14 06.7	+3.3
PRHZ	**Porangahau**	**10.62**	**198**	PN	**Pn**	**14 14 01.4**	**-2.1**
TSZ	**Takapari Road**	**10.62**	**201**	PN	**Pn**	**14 14 02.9**	**-0.7**
WAZ	**Wanganui**	**10.68**	**205**	PN	**Pn**	**14 14 04.5**	**+0.2**
DVHZ	**Dannevirke**	**10.78**	**200**	PN	**Pn**	**14 14 04.2**	**-1.2**
ANWZ	**Angora Road**	**10.84**	**198**	PN	**Pn**	**14 14 06.2**	**0.0**
POWZ	**Post Office Ro**	**10.98**	**201**	PN	**Pn**	**14 14 08.7**	**+0.8**
POWZ				SN	**S**	**14 16 10.1**	**-0.8**
PRWZ	**Pori Road**	**11.07**	**200**	PN	**Pn**	**14 14 08.8**	**-0.1**
BFZ	**Birch Farm**	**11.11**	**199**	PN	**Pn**	**14 14 07.0**	**-2.4**
MRZ	**Mangatainoka R**	**11.29**	**201**	PN	Pn	14 14 07.7	-3.8
TIWZ	**Tintock**	**11.30**	**200**	PN	**Pn**	**14 14 10.8**	**-0.9**
NFK	**Norfolk Island**	**11.34**	**273**	P	**Pn**	**14 14 14.4**	**+2.1**
	baz=12,SNR=3.4						
HOWZ	**Holdsworth Sta**	**11.53**	**201**	PN	**Pn**	**14 14 13.0**	**-1.4**
OGWZ	**Otaki Gorge**	**11.56**	**202**	PN	**Pn**	**14 14 12.6**	**-2.1**
TMWZ	**Te Maipa**	**11.61**	**199**	PN	**Pn**	**14 14 15.2**	**-0.1**
TMWZ				SN	**S**	**14 16 24.6**	**-0.1**
KIW	**Kapiti Island**	**11.69**	**203**	PN	Pn	14 14 13.5	-2.7
KIW				SN	**S**	**14 16 23.5**	**-2.9**
MTW	**Mount Morrison**	**11.77**	**200**	PN	**Pn**	**14 14 17.0**	**-0.1**
CAW	**Cannon Point**	**11.86**	**202**	PN	**Pn**	**14 14 16.1**	**-2.2**
CAW				SN	**S**	**14 16 28.7**	**-1.4**
TRWZ	**Traveller**	**11.93**	**199**	PN	**P**	**14 14 19.4**	**+0.3**
DUWZ	**D'Urville Isla**	**11.99**	**206**	PN	**P**	**14 14 19.0**	**-0.8**
PAWZ	**Paruwai Farm**	**11.99**	**200**	PN	**P**	**14 14 19.7**	**0.0**
MSWZ	**Moikau Station**	**12.08**	**201**	PN	**P**	**14 14 20.6**	**-0.1**
WEL	**Wellington**	**12.11**	**203**	PN	**P**	**14 14 20.2**	**-0.8**
SNZO	**South Karori**	**12.16**	**203**	PN	**P**	**14 14 19.4**	**-2.1**
PLWZ	**Palliser**	**12.22**	**200**	PN	**P**	**14 14 20.8**	**-1.5**
TCW	**Tory Channel**	**12.22**	**204**	PN	**P**	**14 14 21.4**	**-0.8**
TUWZ	**Tuamarina**	**12.53**	**205**	PN	P	14 14 22.6	-3.0
NNZ	**Nelson**	**12.56**	**207**	PN	P	14 14 23.4	-2.5
QRZ	**Quartz Range**	**12.59**	**210**	PN	P	14 14 23.8	-2.5
BSWZ	**Blackbirch Sta**	**12.80**	**204**	PN	**P**	**14 14 28.6**	**-0.1**
THZ	**Tophouse**	**13.21**	**207**	PN	P	14 14 30.9	-2.4
KHZ	**Kahutara**	**13.54**	**204**	PN	P	14 14 34.2	-2.6
LTZ	**Lake Taylor**	**14.32**	**207**	PN	**P**	**14 14 44.7**	**-0.7**
OXZ	**Oxford**	**14.88**	**206**	PN	**P**	**14 14 50.3**	**-1.2**
MQZ	**McQueen's Vall**	**14.98**	**204**	PN	**P**	**14 14 53.8**	**+1.2**
WVZ	**Waitaha Valley**	**15.19**	**210**	PN	**P**	**14 14 55.5**	**+0.6**
DZM	**Mont Dzumac**	**15.30**	**299**	*e*P	**P**	**14 14 55.0**	**-1.4**
DZM	**Mont Dzumac**	**15.30**	**299**	P	P	14 14 53.7	-2.7
	4.1nm,0.3s,baz=107,slow=17,SNR=66						
RPZ	**Rata Peaks**	**15.59**	**207**	P	**P**	**14 15 00.5**	**+1.3**
	0.8nm,0.3s,baz=12,slow=9.3,SNR=5.1						
RPZ				S	**S**	**14 17 46.5**	**+0.7**
	4.5nm,0.3s,baz=347,slow=18,SNR=13						
AFI	**Afiamalu**	**17.58**	**24**	P	P	14 15 12.3	-8.7
	11nm,0.3s,baz=218,slow=12,SNR=13						
AFI				S	S	14 18 08.6	-17
	2.8nm,0.3s,baz=54,slow=19,SNR=5.2						
LHI	**Lord Howe Isla**	**18.80**	**260**	P	P	14 15 23.3	-10
	baz=19,SNR=3.5						
HNR	**Honiara**	**28.47**	**312**	P	P	14 16 56.1	-6.4
	17nm,0.7s,baz=187,slow=6.6,SNR=3.8						
CTA	**Charters Tower**	**32.83**	**280**	P	P	14 17 38.9	-1.7
	4.3nm,0.7s,baz=109,slow=8.1,SNR=9.9						
STKA	**Stephens Creek**	**33.60**	**257**	P	**P**	**14 17 46.7**	**-0.3**
	1.6nm,0.5s,baz=101,slow=10,SNR=7.5						
STKA	**Stephens Creek**	**33.60**	**257**	P	**P**	**14 17 47.0**	**0.0**
	baz=34,SNR=6.9						
MTSU	**Mount Surprise**	**35.33**	**281**	P	P	14 18 00.2	-1.6
	baz=36,SNR=6.1						
ASAR	**Alice Springs**	**42.17**	**267**	P	P	14 18 55.8	-2.3
	1.1nm,0.5s,baz=108,slow=7.2,SNR=44						
ASAR				S	**S**	**14 24 49.2**	**-2.3**
	0.8nm,1.0s,baz=104,slow=14,SNR=5.0						
WRA	**Warramunga Arr**	**43.14**	**273**	P	P	14 19 03.2	-2.6
	4.5nm,0.4s,baz=112,slow=6.4,SNR=140						
WRA				S	S	14 25 00.1	-5.5
	1.1nm,0.7s,baz=108,slow=14,SNR=6.7						
KNRA	**Kununurra**	**49.75**	**275**	P	P	14 19 54.7	-2.0
	baz=50,SNR=5.5						
QSPA	**South Pole Qui**	**59.89**	**180**	P	P	14 21 11.9	+3.8
	1.1nm,0.6s,baz=45,slow=5.7,SNR=13						
MAW	**Mawson**	**72.14**	**201**	P	P	14 22 13.1	-12
	baz=72,SNR=55						
KSRS	**Korea Array**	**83.60**	**320**	P	P	14 23 25.2	-2.7
	1.2nm,0.8s,baz=136,slow=5.7,SNR=7.2						
PETK	**Petropavlovsk-**	**85.40**	**346**	P	P	14 23 32.7	-3.9
	5.3nm,0.6s,baz=152,slow=7.2,SNR=9.1						
USRK	**Ussuriysk Arra**	**86.48**	**327**	P	P	14 23 38.8	-3.2
	3.6nm,0.7s,baz=107,slow=3.5,SNR=6.9						
NVAR	**Mina Array Bea**	**88.75**	**43**	P	P	14 23 50.4	-2.8
	0.5nm,0.8s,baz=227,slow=4.8,SNR=4.9						
MKAR	**Makanchi Array**	**116.93**	**310**	PKP	**PKPdf**	**14 29 38.3**	**-3.2**
	0.4nm,0.4s,baz=257,slow=0.7,SNR=9.7						
BVAR	**Borovoye Array**	**125.61**	**316**	PKP	**PKPdf**	**14 29 55.1**	**-2.9**
	baz=0.0,slow=0.0						
AKTO	**Aktyubinsk**	**133.28**	**312**	PKP	**PKPdf**	**14 30 11.0**	**-1.6**
	1.0nm,0.6s,baz=92,slow=8.0,SNR=4.3						
ARCES	**ARCESS Array B**	**138.21**	**347**	PKP	**PKPdf**	**14 30 19.9**	**-1.3**
	1.0nm,0.5s,baz=88,slow=0.4,SNR=7.9						
JOF	**Joensuu**	**141.90**	**338**	*e*p	PKPdf	14 30 21.1	-6.9
KAF	**Kangasniemi**	**144.06**	**340**	*e*p	PKPab	14 30 26.6	-3.9
	2.0nm,0.5s						
FINES	**FINESS Array B**	**144.64**	**339**	PKP	PKPbc	14 30 28.7	-3.9
	13nm,0.3s,baz=60,slow=3.9,SNR=115						
NB2	**NORSAR Subarra**	**148.42**	**350**	PKP	**PKPdf**	**14 30 39.9**	**+0.6**
	comp=Z,4.6nm,0.7s,baz=15,slow=2.7						
NOA	**NORSAR Array B**	**148.42**	**350**	PKPbc	**PKPdf**	**14 30 40.0**	**+0.7**
	comp=Z,4.6nm,0.7s,baz=16,slow=4.2,SNR=23						
AKASG	**Malin Array Be**	**150.58**	**322**	PKPbc	**PKPdf**	**14 30 46.0**	**+3.0**
	comp=Z,3.5nm,0.4s,baz=47,slow=3.0,SNR=13						
BRTR	**Keskin Array B**	**151.68**	**298**	PKPbc	**PKPdf**	**14 30 49.5**	**+4.2**
	comp=Z,1.0nm,0.4s,baz=136,slow=4.1,SNR=8.0						
GERES	**GERESS Array B**	**158.99**	**336**	PKPab	PKPab	14 31 29.3	-3.8
	comp=Z,0.7nm,0.7s,baz=32,slow=3.8,SNR=6.1						
TORD	**Torodi Ar. Bea**	**163.00**	**183**	PKPab	**PKPab**	**14 31 51.9**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=163,slow=4.0,SNR=4.4						

IDC 07 14:12:08.7±1.1**, 23°.97N**×**46°.38W, h0km, mb3.7**/7**, mb1 4.0**/7**, mb1mx3.7**/27**, mbtmp3.7**/7**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.8**/28**, Error ellipse: s-maj=29.6km s-min=26.4km az=146.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBTS	**Babate**	**29.60**	**103**	LR	LR	14 26 36.6	
	comp=Z,46nm,21.1s,baz=194,slow=29						
DBIC	**Dimbokro**	**43.38**	**106**	LR	LR	14 35 43.4	
	comp=Z,40nm,19.5s,baz=332,slow=33						
LPAZ	**La Paz**	**45.30**	**210**	P	P	14 20 29.4	+0.1
	1.8nm,0.9s,baz=28,slow=6.5,SNR=6.9						
TORD	**Torodi Ar. Bea**	**46.63**	**94**	P	P	14 20 38.5	-0.7
	1.9nm,0.8s,baz=294,slow=9.4,SNR=10						
GERES	**GERESS Array B**	**52.80**	**46**	P	P	14 21 25.2	-0.7
	0.5nm,0.8s,baz=272,slow=6.8,SNR=3.6						
NOA	**NORSAR Array B**	**53.74**	**31**	P	P	14 21 33.2	+0.7
	1.3nm,1.0s,baz=255,slow=7.1,SNR=2.9						
YKA	**Yellowknife Ar**	**58.98**	**330**	P	P	14 22 09.3	-0.5
	0.4nm,0.7s,baz=98,slow=7.5,SNR=4.8						
BRTR	**Keskin Array B**	**67.70**	**55**	P	P	14 23 08.8	+0.6
	1.0nm,0.9s,baz=276,slow=5.5,SNR=5.1						
ILAR	**Eielson Array**	**72.93**	**334**	P	P	14 23 39.5	-0.1
	0.4nm,0.8s,baz=73,slow=4.1,SNR=5.7						

NNC 07 14:17:29.8±5.1**, 37°.32N**×**70°.42E, h0km, mb3.8, mpv3.6, 3C-2D, Error ellipse: s-maj=47.5km s-min=39.4km az=100.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**5.78**	**1**	Pn	Pn	14 19 00.3	+3.5
	1.4nm,0.3s,baz=196,slow=15,SNR=43						
KK31				⇑Sn	Sn	14 20 10.3	+6.5
	4.1nm,0.7s,baz=187,slow=23,SNR=9.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TKM2	**Tokmak 2**	**6.86**	**34**	⇓Pn	Pn	14 19 10.8	-1.1
	4.5nm,0.6s						
TKM2				⇓Sn	Sn	14 20 31.1	+0.2
	1.7nm,0.7s						
AB31	**Akbulak array**	**14.14**	**331**	⇑Pn	Pn	14 20 50.5	-0.8
	0.2nm,0.3s,baz=153,slow=11,SNR=8.5						
AKTO	**Aktyubinsk**	**15.84**	**330**	⇑Pn	Pn	14 21 09.5	-4.6
	2.9nm,1.2s						

IDC 07 14:31:20.0±0.9**,24°.00N×46°.36W,h0km,mb3.9**/8**, mb1 4.1**/8**,mb1mx3.7**/27**,mbtmp3.9**/8**,MS3.4**/3**,Ms1 3.4**/3**, ms1mx2.8**/31**,Error ellipse: s-maj=28.5km s-min=22.2km az=123.0,Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**38.88**	**56**	LR	LR	14 51 24.0	
	comp=Z,26nm,21.9s,baz=225,slow=31						
LPAZ	**La Paz**	**45.34**	**210**	P	P	14 39 40.8	-0.1
	2.1nm,0.9s,baz=50,slow=8.4,SNR=7.1						
TORD	**Torodi Ar. Bea**	**46.61**	**94**	P	P	14 39 49.7	-0.6
	2.5nm,0.9s,baz=296,slow=8.1,SNR=9.5						
TORD				LR	LR	14 57 37.9	
	comp=Z,35nm,20.7s,baz=180,slow=34						
GERES	**GERESS Array B**	**52.76**	**46**	P	P	14 40 36.9	+0.1
	0.3nm,0.6s,baz=243,slow=8.5,SNR=4.1						
NOA	**NORSAR Array B**	**53.70**	**31**	P	P	14 40 43.5	0.0
	1.2nm,0.9s,baz=254,slow=7.5,SNR=3.4						
YKA	**Yellowknife Ar**	**58.96**	**330**	P	P	14 41 20.8	-0.2
	0.2nm,0.5s,baz=98,slow=7.6,SNR=6.1						
BRTR	**Keskin Array B**	**67.67**	**55**	P	P	14 42 19.7	+0.4
	1.3nm,0.9s,baz=274,slow=5.2,SNR=8.0						
PLCA	**Paso Flores**	**68.22**	**200**	P	P	14 42 22.6	+0.2
	1.9nm,0.8s,baz=11,slow=10,SNR=4.0						
ILAR	**Eielson Array**	**72.91**	**334**	P	P	14 42 50.6	-0.1
	1.1nm,0.8s,baz=75,slow=4.9,SNR=9.2						
KDAK	**Kodiak Island**	**78.19**	**328**	LR	LR	15 13 50.0	
	comp=Z,53nm,20.4s,baz=284,slow=33						

IDC 07 14:40:49.3±1.6**,2°.04S×127°.92E,h0km,mb3.6**/3**, mb1 3.5**/4**,mb1mx3.4**/20**,mbtmp3.4**/4**,ML3.2**/1**,Error ellipse: s-maj=137.1km s-min=23.3km az=69.0,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.86**	**161**	P	P	14 45 10.6	-0.6
	0.1nm,0.3s,baz=339,slow=12,SNR=5.2						
ASAR	**Alice Springs**	**22.26**	**165**	P	P	14 45 49.2	+1.1
	0.6nm,0.4s,baz=351,slow=12,SNR=14						
MKAR	**Makanchi Array**	**62.97**	**327**	P	P	14 51 18.8	+0.8
	0.3nm,0.5s,baz=115,slow=7.7,SNR=4.5						
ZALV	**Zalesovo Beam**	**66.25**	**334**	P	P	14 51 37.8	-1.4
	0.6nm,0.5s,baz=126,slow=7.3,SNR=3.9						

*ISK **07** 14:41:06.8,34°.92N×27°.76E,h30km,MD3.8*
*CSEM **07** 14:41:08.3±0.4,35°.19N×27°.87E,h2km,MD3.4,Error ellipse: s-maj=11.0km s-min=6.2km az=170.0*
*ATH **07** 14:41:09.8,35°.27N×27°.79E,h20km±2km,MD3.4/5*
ISC 07 14:41:07.8±1.4**,35°.22N**±0°.04×**27°.85E**±0°.03**,h3**km±12km**, n36,**σ0s.**72**/51**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.66**	**301**	*e*PN	**Pb**	**14 41 21.2**	**-0.8**
KARP				*e*SN	**Sg**	**14 41 29.7**	**+0.8**
KARP	**Karpathos**	**0.66**	**301**	*e*Pn	**Pb**	**14 41 21.2**	**-0.8**
KARP				*e*Sn	**Sg**	**14 41 29.7**	**+0.8**
ARG	**Arkhangelos**	**1.02**	**12**	*e*PN	**Pb**	**14 41 28.5**	**+0.3**
ARG				*e*SN	**Sb**	**14 41 42.7**	**+0.6**
ARG	**Arkhangelos**	**1.02**	**12**	*e*Pn	**Pb**	**14 41 28.5**	**+0.3**
ZKR	**Zakros**	**1.34**	**266**	*e*PN	**Pb**	**14 41 34.2**	**+0.5**
ZKR	**Zakros**	**1.34**	**266**	*e*Pn	**Pb**	**14 41 34.2**	**+0.5**
NIS1	**Nisyros Isl.**	**1.49**	**339**	*e*PN	**Pg**	**14 41 36.2**	**-0.2**
NIS1	**Nisyros Isl.**	**1.49**	**339**	*e*Pn	**Pg**	**14 41 36.2**	**-0.2**
DAT	**Datca**	**1.53**	**352**	*e*PN	**Pg**	**14 41 36.8**	**-0.3**
DAT				*e*SN	**Sg**	**14 41 57.6**	**+0.7**
DAT	**Datca**	**1.53**	**352**	*e*Pn	**Pg**	**14 41 36.8**	**-0.3**
DAT				*e*Sn	**Sg**	**14 41 57.6**	**+0.7**
FETY	**Fethiye**	**1.73**	**35**	*e*PN	**Pn**	**14 41 38.9**	**0.0**
FETY	**Fethiye**	**1.73**	**35**	*e*Pn	**Pn**	**14 41 38.9**	**0.0**
AKAS	**Kas**	**1.75**	**54**	*i* P	**Pb**	**14 41 40.4**	**-0.3**
AKAS				*i* S	**Sg**	**14 42 05.4**	**+1.4**
AKAS	**Kas**	**1.75**	**54**	*i* P	**Pb**	**14 41 40.4**	**-0.3**
AKAS				*i* S	**Sg**	**14 42 05.4**	**+1.4**
TURN	**Turunc**	**1.76**	**20**	*i* P	**Pn**	**14 41 38.5**	**-0.8**
TURN				*i* S	**Sn**	**14 42 02.7**	**+0.5**
TURN	**Turunc**	**1.76**	**20**	*i* P	**Pn**	**14 41 38.5**	**-0.8**
TURN				*i* S	**Sn**	**14 42 02.7**	**+0.5**
NPS	**Neapolis**	**1.84**	**272**	*e*PN	**Pg**	**14 41 42.7**	**-0.3**
NPS	**Neapolis**	**1.84**	**272**	*e*Pn	**Pg**	**14 41 42.7**	**-0.3**
LAST	**Lasithi**	**1.95**	**269**	*e*PN	**Pb**	**14 41 43.6**	**-0.4**
LAST	**Lasithi**	**1.95**	**269**	*e*Pn	**Pb**	**14 41 43.6**	**-0.4**
YER	**Yerkesik**	**1.95**	**10**	*e*PN	**Pb**	**14 41 43.7**	**-0.3**
YER				*e*SN	**Sg**	**14 42 10.1**	**-0.3**
YER	**Yerkesik**	**1.95**	**10**	*e*Pn	**Pb**	**14 41 43.7**	**-0.3**
YER				*e*Sn	**Sg**	**14 42 10.1**	**-0.3**
MLSB	**Milas**	**2.08**	**358**	*e*PN	**Pb**	**14 41 45.3**	**-0.9**
MLSB	**Milas**	**2.08**	**358**	*e*Pn	**Pb**	**14 41 45.3**	**-0.9**
AYDN	**Tasoluk**	**2.44**	**0**	*i* P	**Pn**	**14 41 49.2**	**+0.5**
AYDN	**Tasoluk**	**2.44**	**0**	*i* P	**Pn**	**14 41 49.2**	**+0.5**
GOLH	**Golhisar**	**2.44**	**34**	*i* P	**Pb**	**14 41 51.1**	**-1.4**
GOLH				*i* S	**Sb**	**14 42 22.5**	**-0.6**
GOLH	**Golhisar**	**2.44**	**34**	*i* P	**Pb**	**14 41 51.1**	**-1.4**
GOLH				*i* S	**Sb**	**14 42 22.5**	**-0.6**
APE	**Apeiranthos**	**2.64**	**315**	*e*PN	**Pn**	**14 41 50.8**	**-0.6**
APE	**Apeiranthos**	**2.64**	**315**	*e*Pn	**Pn**	**14 41 50.8**	**-0.6**
DENT	**Denizli**	**2.71**	**20**	*e*PN	**Pn**	**14 41 53.5**	**+1.2**
DENT	**Denizli**	**2.71**	**20**	*e*Pn	**Pn**	**14 41 53.5**	**+1.2**
GAZI	**Gazipasa**	**3.77**	**73**	*i* P	**Pn**	**14 42 07.5**	**+0.6**
GAZI				*i* S	**Sn**	**14 42 52.3**	**+0.5**
GAZI	**Gazipasa**	**3.77**	**73**	*i* P	**Pn**	**14 42 07.5**	**+0.6**
GAZI				*i* S	**Sn**	**14 42 52.3**	**+0.5**
CSS	**Prodhromos**	**4.50**	**92**	*e*PN	**Pn**	**14 42 15.9**	**-1.0**
CSS	**Prodhromos**	**4.50**	**92**	*e*Pn	**Pn**	**14 42 15.9**	**-1.0**

*ISK **07** 14:50:22.7,37°.19N×28°.13E,h5km,MD1.9*
*ISCJB **07** 14:50:23.3±0.8,37°.17N±0°.05×28°.14E±0°.05,h7km±9km, Error ellipse: s-maj=9.7km s-min=5.5km az=37.2*
*CSEM **07** 14:50:23.5±0.2,37°.19N×28°.15E,h8km,MD2.6,Error ellipse: s-maj=4.8km s-min=3.4km az=34.0*
*DDA **07** 14:50:23.5,37°.21N×28°.14E,h7km,MD2.6*
ISC 07 14:50:23.6±1.1**,37°.18N**±0°.03×**28°.17E**±0°.03**,h10**km±7km**, n14,**σ0s.**38**/22**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**117**	*e*PG	**Pg**	**14 50 26.0**	**-0.3**
YER				*e*SG	**Sg**	**14 50 28.4**	**+0.3**
YER	**Yerkesik**	**0.10**	**117**	*e*Pg	**Pg**	**14 50 26.0**	**-0.3**
YER				*e*Sg	**Sg**	**14 50 28.4**	**+0.3**
MLSB	**Milas**	**0.33**	**290**	*e*PG	**Pg**	**14 50 29.9**	**-0.4**
MLSB	**Milas**	**0.33**	**290**	*e*Pg	**Pg**	**14 50 29.9**	**-0.4**
TURN	**Turunc**	**0.46**	**131**	*i* P	**Pg**	**14 50 32.1**	**-0.6**
TURN				*i* S	**Sg**	**14 50 39.1**	**+0.3**
TURN	**Turunc**	**0.46**	**131**	*i* P	**Pg**	**14 50 32.1**	**-0.6**
TURN				*i* S	**Sg**	**14 50 39.1**	**+0.3**
AYDN	**Tasoluk**	**0.53**	**334**	*i* P	**Pg**	**14 50 33.5**	**-0.5**
AYDN				*i* S	**Sg**	**14 50 41.3**	**+0.3**
AYDN	**Tasoluk**	**0.53**	**334**	*i* P	**Pg**	**14 50 33.5**	**-0.5**
AYDN				*i* S	**Sg**	**14 50 41.3**	**+0.3**
DAT	**Datca**	**0.65**	**227**	*e*PG	**Pg**	**14 50 36.4**	**+0.1**
DAT	**Datca**	**0.65**	**227**	*e*Pg	**Pg**	**14 50 36.4**	**+0.1**
DNZL	**Cakiroluk**	**0.86**	**54**	*i* P	**Pg**	**14 50 40.3**	**0.0**
DNZL				*i* S	**Sb**	**14 50 53.0**	**+0.4**
DNZL	**Cakiroluk**	**0.86**	**54**	*i* P	**Pg**	**14 50 40.3**	**0.0**
DNZL				*i* S	**Sb**	**14 50 53.0**	**+0.4**
FETY	**Fethiye**	**0.91**	**126**	*e*PG	**Pn**	**14 50 42.3**	**-0.3**
FETY	**Fethiye**	**0.91**	**126**	*e*Pg	**Pn**	**14 50 42.3**	**-0.3**

*ISCJB **07** 14:51:59.5±0.5,37°.87N±0°.03×29°.25E±0°.04,h9km±5km, Error ellipse: s-maj=5.7km s-min=4.3km az=9.9*
*ISK **07** 14:51:59.0,37°.86N×29°.25E,h11km,MD2.9*
*DDA **07** 14:51:59.4,37°.88N×29°.23E,h7km,MD2.9*
*CSEM **07** 14:51:59.3±0.1,37°.87N×29°.25E,h10km,MD2.9,Error ellipse: s-maj=2.6km s-min=2.1km az=108.0*
ISC 07 14:51:59.3±0.9**,37°.87N**±0°.02×**29°.25E**±0°.03**,h13**km±7km**, n30,**σ0s.**34**/44**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.21**	**237**	PG	**Pg**	**14 52 03.7**	**-0.2**
DENT	**Denizli**	**0.21**	**237**	*i* Pg	**Pg**	**14 52 03.7**	**-0.2**
DNZL	**Cakiroluk**	**0.24**	**223**	*i* P	**Pg**	**14 52 04.3**	**-0.2**
DNZL				*i* S	**Sg**	**14 52 08.2**	**+0.1**
DNZL	**Cakiroluk**	**0.24**	**223**	*i* P	**Pg**	**14 52 04.3**	**-0.2**
DNZL				*i* S	**Sg**	**14 52 08.2**	**+0.1**
KHAL	**Karahalli**	**0.54**	**21**	*i* P	**Pg**	**14 52 09.6**	**-0.3**
KHAL				*i* S	**Sb**	**14 52 18.3**	**-0.1**
KHAL	**Karahalli**	**0.54**	**21**	*i* P	**Pg**	**14 52 09.6**	**-0.3**
KHAL				*i* S	**Sb**	**14 52 18.3**	**-0.1**
GOLH	**Golhisar**	**0.68**	**159**	*i* P	**Pb**	**14 52 12.9**	**-0.2**
GOLH				*i* S	**Sn**	**14 52 24.6**	**-0.6**
GOLH	**Golhisar**	**0.68**	**159**	*i* P	**Pb**	**14 52 12.9**	**-0.2**
GOLH				*i* S	**Sn**	**14 52 24.6**	**-0.6**
KULA	**Kula-Manisa**	**0.80**	**324**	*e*PG	**Pb**	**14 52 14.9**	**-0.2**
KULA				*e*SG	**Sb**	**14 52 26.8**	**+0.9**
KULA	**Kula-Manisa**	**0.80**	**324**	*e*Pg	**Pb**	**14 52 14.9**	**-0.2**
KULA				*e*Sg	**Sb**	**14 52 26.8**	**+0.9**
MANT	**Manisa**	**0.83**	**319**	*i* P	**Pg**	**14 52 15.0**	**-0.4**
MANT				*i* S	**Sg**	**14 52 26.4**	**+0.1**
MANT	**Manisa**	**0.83**	**319**	*i* P	**Pg**	**14 52 15.0**	**-0.4**
MANT				*i* S	**Sg**	**14 52 26.4**	**+0.1**
ISP	**Isparta**	**1.01**	**92**	*e*PG	**Pb**	**14 52 18.9**	**+0.2**
ISP	**Isparta**	**1.01**	**92**	*e*Pg	**Pb**	**14 52 18.9**	**+0.2**
YER	**Yerkesik**	**1.06**	**227**	*e*PG	**Pg**	**14 52 19.6**	**-0.1**
YER	**Yerkesik**	**1.06**	**227**	*e*Pg	**Pg**	**14 52 19.7**	**-0.1**
AYDN	**Tasoluk**	**1.11**	**260**	*i* P	**Pn**	**14 52 21.0**	**+0.4**
AYDN				*i* S	**Sn**	**14 52 35.5**	**-0.3**
AYDN	**Tasoluk**	**1.11**	**260**	*i* P	**Pn**	**14 52 21.0**	**+0.4**
AYDN				*i* S	**Sn**	**14 52 35.5**	**-0.3**
SHUT	**Suhut-Afyon**	**1.23**	**56**	*e*PN	**Pb**	**14 52 22.8**	**+0.2**
SHUT	**Suhut-Afyon**	**1.23**	**56**	*e*Pn	**Pb**	**14 52 22.8**	**+0.2**
FETY	**Fethiye**	**1.24**	**186**	*e*PN	**Pg**	**14 52 23.1**	**0.0**
FETY	**Fethiye**	**1.24**	**186**	*e*Pn	**Pg**	**14 52 23.1**	**0.0**
DEMI	**Demirci**	**1.25**	**340**	*i* P	**Pg**	**14 52 23.1**	**-0.2**
DEMI				*i* S	**Sb**	**14 52 38.8**	**0.0**
DEMI	**Demirci**	**1.25**	**340**	*i* P	**Pg**	**14 52 23.1**	**-0.2**
DEMI				*i* S	**Sb**	**14 52 38.8**	**0.0**
MLSB	**Milas**	**1.30**	**245**	*e*PN	**Pn**	**14 52 23.3**	**0.0**
MLSB	**Milas**	**1.30**	**245**	*e*Pn	**Pn**	**14 52 23.3**	**0.0**
ALT	**Altintas**	**1.36**	**29**	*e*PN	**Pn**	**14 52 24.4**	**+0.2**
ALT	**Altintas**	**1.36**	**29**	*e*Pn	**Pn**	**14 52 24.4**	**+0.2**
TVSB	**Tavsanli**	**1.59**	**6**	*e*PN	**Pn**	**14 52 27.8**	**+0.5**
TVSB	**Tavsanli**	**1.59**	**6**	*e*Pn	**Pn**	**14 52 27.8**	**+0.5**

*ISCJB **07** 14:57:26.0±0.5,80°.19N±0°.06×2°.9W±0°.3,h10km,mb3.5/10, MS2.7/1,Error ellipse: s-maj=8.9km s-min=6.6km az=172.2*
*CSEM **07** 14:57:26.2±0.4,80°.45N×2°.64W,h20km,ML3.4,Error ellipse: s-maj=14.6km s-min=3.7km az=173.0*
*IDC **07** 14:57:26.9±0.8,80°.30N×2°.96W,h0km,mb3.5/12, mb1 3.7/15,mb1mx3.6/32,mbtmp3.6/15,ML3.0/2,MS3.0/3, Ms1 3.0/3,ms1mx2.5/32,Error ellipse: s-maj=25.6km s-min=13.1km az=35.0*
*BER **07** 14:57:28.4,80°.58N×1°.28W,h15km,MD2.9,ML2.6, ML3.4(NAO)*
*NAO **07** 14:57:33.2±8.0,80°.92N×1°.44E,h39km±75km,ML3.4*
ISC 07 14:57:27.5±0.7**,80°.24N**±0°.08×**2°.13W**±0°.04**,h10**km**,n37,** σ**2s.38**/35**,mb3.5**/10**,North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.87**	**110**	Pn	**Pn**	**14 58 12.5**	**-0.8**
KBS				Sn	**Sn**	**14 58 43.6**	**-4.3**
KBS	**Kingsbay**	**2.87**	**110**	Pn	**Pn**	**14 58 12.5**	**-0.8**
KBS				Sn	**Sn**	**14 58 43.6**	**-4.3**
KBS				AML	AML	14 58 45.0	
	comp=Z,48nm,0.4s						
KBS	**Kingsbay**	**2.87**	**110**	Pn	**Pn**	**14 58 12.5**	**-0.8**
KBS				Sn	**Sn**	**14 58 43.6**	**-4.3**
	comp=Z,48nm,0.4s,SNR=55						
SPA0	**Spitsbergen Ar**	**4.03**	**111**	Pn	**Pn**	**14 58 29.4**	**+0.2**
	baz=324,slow=7.9						
SPA0				Sn	**Sn**	**14 59 12.6**	**-3.9**
	baz=325,slow=37						
SPA0	**Spitsbergen Ar**	**4.03**	**111**	Pn	**Pn**	**14 58 29.4**	**+0.2**
	baz=324,slow=7.9						
SPA0				Sn	**Sn**	**14 59 12.6**	**-3.9**
	baz=325,slow=37						
SPA0	**Spitsbergen Ar**	**4.03**	**111**	Pn	**Pn**	**14 58 29.4**	**+0.2**
	baz=324,slow=7.8,SNR=902						
SPA0				Sn	**Sn**	**14 59 12.6**	**-3.9**
	baz=325,slow=28,SNR=55						
SPITS	**Spitsbergen Ar**	**4.03**	**111**	Pn	**Pn**	**14 58 29.4**	**+0.2**
	baz=320,slow=8.8,SNR=502						
SPITS				Sn	**Sn**	**14 59 12.2**	**-4.2**
	baz=321,slow=6.5,SNR=2.2						
SPITS				LR	LR	15 00 01.0	
	comp=Z,193nm,18.2s,baz=300,slow=37						
DAG	**Danmarks Havn**	**4.78**	**232**	*i* P	**Pn**	**14 58 38.6**	**-0.9**
DAG				*i* S	**Sn**	**14 59 30.5**	**-4.3**
JNW	**Jan Mayen West**	**9.39**	**193**	*e*Pn	**Pn**	**14 59 45.5**	**+2.9**
JMIC	**Jan Mayen**	**9.43**	**193**	Pn	**Pn**	**14 59 44.2**	**+1.0**
	comp=Z,10nm,0.3s,baz=38,slow=2.6,SNR=14						
JMI	**Jan Mayen**	**9.50**	**193**	*e*Pn	Pn	14 59 49.0	+4.9
SCO	**Scoresbysund**	**10.90**	**217**	*i* P	Pn	15 00 09.2	+6.0
SCO				*i* S	**Sn**	**15 02 04.7**	**-0.3**
SUMG	**Summit**	**11.20**	**247**	*i* P	**Pn**	**15 00 05.2**	**-2.4**
SUMG				*e*S	Sn	15 02 06.4	-6.4
SUMG	**Summit**	**11.20**	**247**	*i* P	**Pn**	**15 00 05.3**	**-2.4**
	SNR=46						
ARA0	**ARCESS Array S**	**12.70**	**132**	Pn	**Pn**	**15 00 28.3**	**+0.4**
	baz=320,slow=12						
ARA0	**ARCESS Array S**	**12.70**	**132**	Pn	**Pn**	**15 00 28.3**	**+0.4**
	baz=320,slow=12						
ARA0	**ARCESS Array S**	**12.70**	**132**	Pn	**Pn**	**15 00 28.3**	**+0.4**
	baz=320,slow=11,SNR=4.0						
ARCES	**ARCESS Array B**	**12.70**	**132**	Pn	**Pn**	**15 00 29.6**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=337,slow=11,SNR=2.8						
SFJD	**Kangerlussuaq**	**18.11**	**251**	LR	LR	15 08 43.2	
	comp=Z,55nm,20.8s,baz=148,slow=38						
NB2	**NORSAR Subarra**	**19.69**	**161**	P	Pn	15 02 04.2	+6.4
NB2	**NORSAR Subarra**	**19.69**	**161**	P	Pn	15 02 04.6	+6.7
	comp=Z,11nm,2.0s,baz=356,slow=11						
NB2	**NORSAR Subarra**	**19.69**	**161**	Pn	Pn	15 02 04.2	+6.4
NOA	**NORSAR Array B**	**19.69**	**161**	P	**P**	**15 01 57.6**	**+1.1**
	comp=Z,0.0nm,0.3s,baz=351,slow=8.5,SNR=2.6						
FIA0	**FINESS Array S**	**20.55**	**140**	P	Pn	15 02 09.3	+1.4
	baz=355,slow=12						
FIA0	**FINESS Array S**	**20.55**	**140**	P	Pn	15 02 09.3	+1.4
	baz=355,slow=12						
FINES	**FINESS Array B**	**20.55**	**140**	P	Pn	15 02 07.5	-0.4
	comp=Z,2.2nm,0.9s,baz=324,slow=19,SNR=3.0						
FINES				LR	LR	15 09 31.7	
	comp=Z,29nm,18.3s,baz=296,slow=35						
HFS	**Hagfors**	**20.74**	**157**	P	Pn	15 02 09.7	-0.5
	comp=Z,4.7nm,0.9s,baz=358,slow=4.7,SNR=5.6						
FRB	**Frobisher Bay**	**24.09**	**267**	P	**P**	**15 02 42.9**	**+0.2**
	comp=Z,4.9nm,0.8s,baz=28,slow=11,SNR=8.3						
GERES	**GERESS Array B**	**31.99**	**160**	P	**P**	**15 03 56.5**	**+3.1**
	comp=Z,0.3nm,0.6s,baz=12,slow=10,SNR=3.0						
SCHQ	**Schefferville**	**32.24**	**259**	P	**P**	**15 03 55.7**	**+0.3**
	comp=Z,3.5nm,1.1s,baz=211,slow=13,SNR=4.0						
YKA	**Yellowknife Ar**	**32.60**	**307**	P	**P**	**15 03 58.3**	**-0.3**
	comp=Z,0.5nm,0.8s,baz=14,slow=9.0,SNR=3.7						
ILAR	**Eielson Array**	**33.84**	**334**	P	**P**	**15 04 10.0**	**+0.6**
	comp=Z,0.2nm,0.8s,baz=7.8,slow=7.3,SNR=2.7						
BRTR	**Keskin Array B**	**42.78**	**138**	P	P	15 05 28.6	+3.6
	comp=Z,0.2nm,0.6s,baz=25,slow=8.3,SNR=2.2						
MKAR	**Makanchi Array**	**43.34**	**85**	P	**P**	**15 05 31.6**	**+2.4**
	comp=Z,0.6nm,0.8s,baz=349,slow=6.6,SNR=5.8						
NVAR	**Mina Array Bea**	**56.58**	**302**	P	**P**	**15 07 08.4**	**-1.6**
	comp=Z,0.1nm,0.5s,baz=359,slow=6.3,SNR=2.6						
TXAR	**Lajitas Array**	**63.23**	**287**	P	**P**	**15 07 55.5**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=21,slow=5.2,SNR=11						
TORD	**Torodi Ar. Bea**	**67.14**	**176**	P	**P**	**15 08 21.3**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=0.5,slow=6.0,SNR=3.4						

*IDC **07** 15:05:20.5±0.7,18°.24S×168°.12E,h0km,mb4.4/15, mb1 4.6/17,mb1mx4.5/23,mbtmp4.5/17,ML4.7/2,MS4.2/19, Ms1 4.2/19,ms1mx4.0/38,Error ellipse: s-maj=21.7km s-min=15.9km az=130.0*
*BJI **07** 15:05:22.8,18°.69S×168°.53E,h59km,mB5.0/20,mb4.8/30, Ms4.7/19,Ms7 4.4/21*
*NEIC **07** 15:05:22.8±4.5,18°.16S×168°.04E,h14km±27km,mb4.9/16, Error ellipse: s-maj=10.3km s-min=8.9km az=53.0*
*ISCJB **07** 15:05:24.2±1.4,18°.24S±0°.06×167°.90E±0°.06,h33km±13km, mb4.7/35,MS4.2/24,Error ellipse: s-maj=10.8km s-min=9.3km az=168.3*
*GCMT **07** 15:05:29.0±0.3,18°.17S×167°.83E,h29km,MW5.1, Moment Tensor Solution. s43,c50; s65,c91; Moment tensor: Scale 10^{16}Nm; M_{rr}3.91±.18; $M_{\theta\theta}$0.34±.14; $M_{\phi\phi}$-4.25±.15; $M_{r\theta}$0.74±.26; $M_{\theta\phi}$1.28±.10; $M_{\phi r}$-2.22±.20; Best double couple: $M_0$4.90000×10^{16} NP1:ϕ_s348.00000°, δ31.00000°,λ94.00000°. NP2:ϕ_s163.00000°,δ59.00000°, λ88.00000°. Principal axes: T 4.5200, Plg75.0000°, Azm66.0000°; N 0.6700, Plg2.0000°, Azm165.0000°; P -5.1800, Plg14.0000°, Azm255.0000°; Data Used: II IU G CN IC.*
ISC 07 15:05:27.2±0.4**,18°.28S**±0°.05×**167°.89E**±0°.07**,h48**km±2km**, h50**km**:pP-P,n108,**σ**1s.71**/126**,mb4.8**/35**,MS4.2**/26**,3C-2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.96**	**194**	*e*S	**Sn**	**15 07 07.1**	**-3.6**
DZM	**Mont Dzumac**	**4.00**	**200**	*e*Pn	**Pn**	**15 06 26.9**	**+0.8**
	170nm,0.8s						
DZM				*e*Sn	**Sn**	**15 07 09.4**	**-2.4**
	583nm,1.0s						
DZM	**Mont Dzumac**	**4.00**	**200**	*e*Pn	**Pn**	**15 06 23.9**	**-2.3**
DZM				Sn	**Sn**	**15 07 08.4**	**-3.4**
DZM	**Mont Dzumac**	**4.00**	**200**	Pn	**Pn**	**15 06 23.8**	**-2.3**
	15nm,0.3s,baz=49,slow=18,SNR=582						
DZM				Sn	**Sn**	**15 07 08.4**	**-3.4**
	74nm,0.3s,baz=137,slow=22,SNR=13						
DZM				LR	LR	15 07 16.5	
	comp=Z,561nm,20.3s,baz=14,slow=28						
NOUC	**Port Laguerre**	**4.08**	**201**	*e*P	**Pn**	**15 06 25.7**	**-1.3**
NOUC				*e*S	**Sn**	**15 07 10.8**	**-2.7**
MSVF	**Nonsavu**	**9.68**	**88**	P	Pn	15 07 46.2	+2.2
HNR	**Honiara**	**11.70**	**318**	*e*P	Pn	15 08 08.8	-2.7
HNR				Sn	**Sn**	**15 10 17.8**	**-2.9**
HNR	**Honiara**	**11.70**	**318**	Pn	**Pn**	**15 08 11.0**	**-0.5**
	14nm,0.3s,baz=176,slow=8.8,SNR=14						
HNR				Sn	**Sn**	**15 10 17.8**	**-2.9**
	4.9nm,0.3s,baz=43,slow=18,SNR=3.6						
HNR				LR	LR	15 12 15.1	
	comp=Z,1μm,19.3s,baz=158,slow=35						
RAO	**Raoul Island**	**16.95**	**133**	LR	LR	15 14 36.7	
	comp=Z,873nm,19.8s,baz=295,slow=33						
EIDS	**Eidsvold**	**17.11**	**243**	*e*Pn	**Pn**	**15 09 24.1**	**+1.0**
	61nm,1.5s						
OUZ	**Omahuta**	**17.62**	**164**	*e*P	**P**	**15 09 30.1**	**+0.5**
	247nm,1.9s						
ARMA	**Armidale**	**19.09**	**228**	P	**Pn**	**15 09 48.3**	**+1.1**
	42nm,1.4s						
AFI	**Afiamalu**	**20.01**	**80**	LR	LR	15 15 54.7	
	comp=Z,831nm,18.5s,baz=229,slow=32						
CTA	**Charters Tower**	**20.51**	**261**	P	Pn	15 10 04.2	+0.1
CTA	**Charters Tower**	**20.51**	**261**	P	Pn	15 10 04.2	+0.1
	20nm,1.0s,baz=80,slow=14,SNR=18						
CTA				LR	LR	15 16 56.4	
	comp=Z,988nm,21.6s,baz=15,slow=34						
CTAO	**Charters Tower**	**20.51**	**261**	*e*P	**P**	**15 10 03.2**	**+1.8**
	109nm,1.6s						
URZ	**Urewera**	**21.47**	**160**	P	**P**	**15 10 11.7**	**+0.1**
URZ	**Urewera**	**21.47**	**160**	P	**P**	**15 10 11.7**	**+0.1**
	17nm,0.9s,baz=308,slow=10,SNR=6.3						
URZ				LR	LR	15 17 24.9	
	comp=Z,977nm,19.7s,baz=348,slow=34						
PMG	**Port Moresby**	**21.96**	**291**	LR	LR	15 17 33.2	
	comp=Z,764nm,18.6s,baz=246,slow=33						
CAN	**Canberra**	**23.85**	**221**	*e*P	**P**	**15 10 38.9**	**+2.8**
	84nm,1.3s						
COEN	**Coen**	**24.12**	**277**	*e*P	**P**	**15 10 37.4**	**-1.4**
	267nm,1.5s						
STKA	**Stephens Creek**	**27.30**	**235**	*e*P	**P**	**15 11 08.5**	**+1.1**
	3.5nm,0.9s						
STKA	**Stephens Creek**	**27.30**	**235**	P	**P**	**15 11 09.5**	**+2.1**
	12nm,1.0s,baz=48,slow=9.2,SNR=8.4						
STKA				LR	LR	15 20 44.4	
	comp=Z,503nm,20.1s,baz=40,slow=34						
RAR	**Rarotonga**	**30.55**	**101**	LR	LR	15 20 16.9	
	comp=Z,421nm,18.6s,baz=45,slow=30						
WRA	**Warramunga Arr**	**31.71**	**262**	P	**P**	**15 11 46.5**	**-0.1**
WRA				PcP	**PcP**	**15 14 38.4**	**+0.8**
WRA	**Warramunga Arr**	**31.71**	**262**	P	**P**	**15 11 46.5**	**-0.1**
	1.2nm,0.5s,baz=82,slow=6.0,SNR=42						
WRA				PcP	**PcP**	**15 14 38.4**	**+0.8**
	0.5nm,0.8s,baz=89,slow=2.9,SNR=5.5						
WRA				LR	LR	15 23 45.2	
	comp=Z,530nm,20.7s,baz=85,slow=35						
AS31	**Alice Springs**	**32.13**	**254**	*e*P	**P**	**15 11 50.6**	**+0.3**
ASAR	**Alice Springs**	**32.13**	**254**	P	**P**	**15 11 51.0**	**+0.7**
ASAR	**Alice Springs**	**32.13**	**254**	P	**P**	**15 11 51.0**	**+0.7**
	6.3nm,0.5s,baz=82,slow=8.4,SNR=260						
ASAR				LR	LR	15 24 45.8	
	comp=Z,968nm,19.1s,baz=88,slow=36						
FITZ	**Fitzroy Crossi**	**40.07**	**263**	*e*P	**P**	**15 12 59.5**	**+1.4**
	78nm,1.5s						
FITZ	**Fitzroy Crossi**	**40.07**	**263**	P	**P**	**15 12 59.3**	**+1.2**
	9.8nm,0.7s,baz=113,slow=7.8,SNR=24						
TBI	**Tubuai**	**40.08**	**105**	*e*LR	LR	15 24 36.4	
	364nm,23.8s						
PPT2	**Papeete2**	**40.41**	**96**	*e*S	S	15 19 15.3	+9.0
	192nm,24.8s						
PPT2				*e*LR	LR	15 24 43.2	
	690nm,23.8s						
PPT	**Papeete**	**40.41**	**96**	LR	LR	15 26 24.5	
	comp=Z,306nm,21.3s,baz=294,slow=31						
RKT	**Rikitea**	**53.39**	**106**	*e*LR	LR	15 30 43.4	
	244nm,23.2s						
SBA	**Scott Base**	**59.60**	**180**	*e*P	**P**	**15 15 27.3**	**+1.7**
	24nm,1.7s						
KSM	**Kuching**	**59.92**	**283**	*e*P	**P**	**15 15 28.0**	**-0.8**
ASAJ	**Asahikawa**	**66.27**	**340**	P	**P**	**15 16 10.4**	**+0.2**
ASAJ	**Asahikawa**	**66.27**	**340**	P	**P**	**15 16 10.4**	**+0.2**
	3.4nm,0.6s,baz=207,slow=9.0,SNR=8.3						
KSRS	**Korea Array**	**67.00**	**326**	P	**P**	**15 16 16.6**	**+1.5**
	0.5nm,0.6s,baz=124,slow=7.3,SNR=3.7						
KSRS				LR	LR	15 43 47.0	
	comp=Z,118nm,20.5s,baz=115,slow=34						
KSAR	**Wonju Array Be**	**67.01**	**326**	P	**P**	**15 16 16.6**	**+1.4**
QIZ	**Qiongzhong**	**68.00**	**300**	P	**P**	**15 16 21.7**	**-0.1**
QIZ				S	S	15 25 24.5	+6.7
QIZ				LR	LR		
	comp=Z,97nm,17.8s						
NJ2	**Nanjing**	**68.64**	**316**	*e*P	**P**	**15 16 25.7**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	**Ussuriysk Arra**	**70.31**	**333**	P	**P**	**15 16 36.5**	**+0.9**
	comp=Z,7.7nm,1.0s,baz=133,slow=3.8,SNR=12						
USRK				LR	LR	15 43 32.0	
	comp=Z,52nm,18.9s,baz=116,slow=33						
WHN	**Wuhan**	**70.76**	**313**	⇓P	P	15 16 43.1	+4.5
FX1	**Attu Island--F**	**71.02**	**3**	*e*P	**P**	**15 16 39.2**	**-0.5**
PETK	**Petropavlovsk-**	**71.64**	**354**	P	**P**	**15 16 43.6**	**+0.2**
PETK	**Petropavlovsk-**	**71.64**	**354**	P	**P**	**15 16 43.6**	**+0.2**
	comp=Z,11nm,0.9s,baz=142,slow=7.5,SNR=15						
PETK				LR	LR	15 44 06.3	
	comp=Z,62nm,20.3s,baz=193,slow=32						
MDJ	**Mudanjiang**	**71.68**	**332**	P	**P**	**15 16 45.2**	**+1.3**
MDJ				pP	**pP**	**15 16 57.2**	**-0.5**
MDJ				sP	**sP**	**15 17 01.9**	**-1.3**
MDJ				PcP	**PcP**	**15 17 04.1**	**+1.3**
MDJ				PP	**PP**	**15 19 23.7**	**-0.1**
MDJ				S	**S**	**15 26 04.0**	**+4.0**
MDJ				ScS	**ScS**	**15 26 45.6**	**+0.4**
MDJ				pmax	pmax		
	comp=Z,16nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,52nm,3.8s						
MDJ				LR	LR		
	comp=N,66nm,24.3s						
MDJ				LR	LR		
	comp=E,70nm,29.6s						
MDJ				LR	LR		
	comp=Z,67nm,22.2s						
CN2	**Changchun**	**72.99**	**329**	*e*P	**P**	**15 16 53.1**	**+1.4**
CN2				*e*S	**S**	**15 26 10.9**	**-4.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,17.0s						
CN2				LR	LR		
	comp=E,200nm,17.0s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CN2				LR	LR		
	comp=Z,200nm,16.0s						
GYA	Guiyang	74.23	305	P	P	15 16 58.7	-0.8
GYA				pP	PcP	15 17 16.2	+1.9
GYA				sP	sP	15 17 23.6	+4.7
GYA				PP	PP	15 19 47.5	+1.5
GYA				S	SKiKP	15 26 27.0	+3.9
GYA				SKS	SKSac	15 26 56.3	-7.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,5.4s						
GYA				LR	LR		
	comp=N,490nm,18.9s						
GYA				LR	LR		
	comp=E,300nm,20.0s						
GYA				LR	LR		
	comp=Z,410nm,18.5s						
BJI	Beijing	75.40	321	P	P	15 17 06.4	+0.6
BJI				pmax	pmax		
	comp=Z,12nm,0.5s						
BJI				pmax	pmax		
	comp=Z,140nm,7.8s						
BJI				LR	LR		
	comp=N,91nm,15.1s						
BJI				LR	LR		
	comp=E,110nm,14.9s						
BJI				LR	LR		
	comp=Z,61nm,21.6s						
KMI	Kunming	76.69	302	P	P	15 17 15.0	+1.2
KMI				S	S	15 26 55.3	-2.2
KMI				pmax	pmax		
	comp=Z,5.0nm,1.5s						
KMI				LR	LR		
	comp=Z,63nm,21.5s						
CMAR	Chiang Mai Arr	76.95	295	P	P	15 17 17.6	+2.5
CMAR	Chiang Mai Arr	76.95	295	P	P	15 17 17.6	+2.5
	comp=Z,2.7nm,0.7s,baz=132,slow=4.4,SNR=14						
CD2	Chengdu	78.64	308	eP	P	15 17 23.5	-0.9
CD2				pP	pP	15 17 40.2	+1.8
CD2				sP	sP	15 17 46.9	+3.1
CD2				PP	PP	15 20 24.2	+1.1
CD2				S	S	15 27 14.7	-3.3
CD2				sS	ScS	15 27 49.3	+7.3
CD2				pmax	pmax		
	comp=Z,20nm,0.6s						
CD2				pmax	pmax		
	comp=Z,100nm,4.8s						
CD2				LR	LR		
	comp=N,190nm,16.2s						
CD2				LR	LR		
	comp=Z,140nm,21.4s						
HHC	Hu-ho-hao-te	78.67	320	eP	P	15 17 21.3	-3.1
HHC				pP	pP	15 17 39.9	+1.5
HHC				sP	sP	15 17 46.5	+2.7
HHC				PP	PP	15 20 23.8	+0.6
HHC				S	S	15 27 14.1	-3.9
HHC				pmax	pmax		
	comp=Z,39nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,5.0s						
HHC				LR	LR		
	comp=N,120nm,16.4s						
HHC				LR	LR		
	comp=E,180nm,15.4s						
HHC				LR	LR		
	comp=Z,190nm,14.3s						
MAW	Mawson	78.83	202	LR	LR	15 48 45.2	
	comp=Z,174nm,19.3s,baz=108,slow=33						
LZH	Lanzhou	81.14	313	eP	P	15 17 40.0	+2.1
LZH				pP	pP	15 17 51.5	-0.5
LZH				sP	sP	15 17 56.6	-0.8
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
ULN	Ulaanbaatar	85.34	324	eP	P	15 18 00.3	+1.0
	comp=Z,8.5nm,1.1s						
SYO	Syowa Base	85.48	196	⇑eX	pP	15 18 10.4	-3.3
GTA	Gaotai	85.55	314	eP	P	15 18 02.6	+2.1
GTA				pP	pP	15 18 19.9	+5.3
GTA				sP	sP	15 18 26.1	+6.1
GTA				SKS	SKSac	15 28 21.7	-0.3
GTA				S	S	15 28 32.8	+4.0
GTA				sS	sS	15 29 00.8	+8.3
GTA				SS	SS	15 34 14.9	+9.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,57nm,6.9s						
GTA				LR	LR		
	comp=N,82nm,15.2s						
GTA				LR	LR		
	comp=E,72nm,14.7s						
GTA				LR	LR		
	comp=Z,92nm,14.3s						
SONM	Songino Array	85.69	324	P	P	15 18 02.2	+1.2
SONM	Songino Array	85.69	324	P	P	15 18 02.2	+1.2
	comp=Z,3.5nm,1.0s,baz=132,slow=2.2,SNR=8.6						
SONM				LR	LR	15 54 30.6	
	comp=Z,95nm,21.0s,baz=83,slow=34						
KCPM	Cahto Peak	85.98	46	eP	P	15 18 02.1	-0.5
KHMM	Horse Mountain	86.44	45	eP	P	15 18 04.0	-0.8
	comp=Z,11nm,1.2s						
CMB	Columbia Colle	87.48	49	eP	P	15 18 08.9	-0.9
	comp=Z,6.5nm,0.8s						
HUMO	Hull Mountain	87.75	44	eP	P	15 18 10.5	-0.5
	comp=Z,28nm,2.3s						
ISA	Isabella	87.88	51	eP	P	15 18 11.6	-0.3
	comp=Z,3.4nm,0.8s						
BEKR	Beckworth	88.29	47	eP	P	15 18 13.1	-0.7
	comp=Z,1.1nm,0.6s						
NVAR	Mina Array Bea	89.14	49	P	P	15 18 17.7	-0.2
NVAR				PKKPbc	PKKPbc	15 35 59.5	+3.0
NVAR	Mina Array Bea	89.14	49	P	P	15 18 17.7	-0.2
	comp=Z,2.0nm,0.7s,baz=228,slow=8.6,SNR=20						
NVAR				PKKPbc	PKKPbc	15 35 59.5	+3.0
	comp=Z,0.2nm,0.5s,baz=64,slow=3.4,SNR=3.6						
NV11	Mina Array Sit	89.24	49	eP	P	15 18 17.6	-0.8
ILAR	Eielson Array	89.71	18	P	P	15 18 17.6	-2.1
ILAR	Eielson Array	89.71	18	P	P	15 18 17.6	-2.1
	comp=Z,1.1nm,0.6s,baz=242,slow=4.9,SNR=17						
ILAR				LR	LR	15 55 19.7	
	comp=Z,160nm,19.2s,baz=154,slow=34						
SNAA	Sanae	90.05	183	eP	P	15 18 21.5	0.0
SNAA	Sanae	90.05	183	eP	P	15 18 21.7	+0.2
	comp=Z,18nm,1.1s						
DLBC	Dease Lake	91.79	28	LR	LR	15 51 58.4	
	comp=Z,153nm,19.9s,baz=147,slow=30						
WMQ	Urumqi	95.63	314	eP	P	15 18 44.7	-2.9
WMQ				pP	pP	15 19 02.0	+0.1
WMQ				sP	sP	15 19 09.0	+1.8
WMQ				SKS	SKSac	15 29 15.0	-4.8
WMQ				eS	SKKSac	15 29 53.0	+9.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,98nm,4.8s						
WMQ				LR	LR		
	comp=N,120nm,23.6s						
WMQ				LR	LR		
	comp=E,120nm,23.6s						
WMQ				LR	LR		
	comp=Z,160nm,23.7s						
TXAR	Lajitas Array	97.44	62	P	P	15 18 55.4	-0.9
TXAR	Lajitas Array	97.44	62	P	P	15 18 55.4	-0.9
	comp=Z,0.2nm,0.7s,baz=239,slow=3.1,SNR=3.8						
MKAR	Makanchi Array	100.17	316	P	Pdif	15 19 08.9	+1.0
MKAR				PKKPbc	PKKPbc	15 35 24.4	-2.6
MKAR	Makanchi Array	100.17	316	P	Pdif	15 19 08.9	+1.0
	comp=Z,0.3nm,0.7s,baz=82,slow=6.1,SNR=3.4						
MKAR				PKKPbc	PKKPbc	15 35 24.4	-2.6
	comp=Z,0.5nm,0.5s,baz=268,slow=3.5,SNR=8.5						
YKA	Yellowknife Ar	100.41	27	P	Pdif	15 19 08.2	-0.4
YKA	Yellowknife Ar	100.41	27	P	Pdif	15 19 08.2	-0.4
	comp=Z,0.4nm,0.6s,baz=253,slow=4.7,SNR=3.9						
ARCES	ARCESS Array B	123.82	345	PKP	PKPdf	15 24 19.5	+0.4
ARCES	ARCESS Array B	123.82	345	PKP	PKPdf	15 24 19.5	+0.4
	comp=Z,1.4nm,0.7s,baz=80,slow=1.4,SNR=13						
KOLS	Kolonicke sedl	138.72	326	ePKP	PKPdf	15 24 48.0	+0.1
KECS	Kecovo	139.94	326	ePKP	PKPdf	15 24 50.6	+0.5
VYHS	Vyhne	140.79	327	ePKP	PKPdf	15 24 51.8	+0.1
EKA	Eskdalemuir Ar	142.39	352	PKP	PKPdf	15 24 54.2	0.0
EKA	Eskdalemuir Ar	142.39	352	PKP	PKPdf	15 24 54.2	0.0
	comp=Z,0.8nm,0.6s,baz=14,slow=3.2,SNR=3.6						
GERES	GERESS Array B	143.05	331	PKPpre	PKPpre	15 24 53.3	
GERES	GERESS Array B	143.05	331	PKhKP	PKPpre	15 24 53.3	
	comp=Z,0.5nm,0.7s,baz=35,slow=4.9,SNR=4.2						
MEM	Membach	144.66	340	PKP	PKPbc	15 24 58.0	+0.7
MEM				APKP	pPKPdf	15 25 11.7	-1.4
STU	Stuttgart	145.03	335	ePKPdf	PKPbc	15 24 58.9	+0.4
BCLA	Clavier	145.05	340	PKP	PKPdf	15 24 59.1	0.0
BCLA				APKP	pPKPdf	15 25 12.7	-1.1
ABTA	Abfaltersbach	145.12	330	⇓iPKPdf	PKPbc	15 24 58.7	-0.3
	comp=Z,16nm,0.8s,SNR=11						
MOTA	Moosalm	145.33	332	i PKPdf	PKPbc	15 25 00.1	+0.4
	comp=Z,12nm,0.8s,SNR=11						
WLF	Walferdange	145.42	339	PKP	PKPab	15 25 01.4	+1.4
WLF				E		15 25 07.4	
WLF				APKP	pPKPdf	15 25 11.8	-2.7
WLF	Walferdange	145.42	339	ePKP	PKPab	15 25 00.8	+0.9
DOU	Dourbes	145.55	341	PKP	PKPab	15 25 01.0	+0.6
DOU				APKP	pPKPdf	15 25 14.3	-0.4
BFO	Black Forest	145.73	336	ePKP	PKPbc	15 25 01.3	+0.5
FETA	Feichten	145.74	332	⇑iPKPab	PKPab	15 25 01.9	+0.4
	comp=Z,16nm,0.9s,SNR=12						
DAVA	Damuels	145.91	333	⇑iPKPab	PKPbc	15 25 02.2	+0.6
	comp=Z,20nm,1.4s						
TUE	Stuetta	146.78	333	ePKPbc	PKPbc	15 25 04.4	+0.2
TORD	Torodi Ar. Bea	165.76	251	PKP	PKPdf	15 25 28.1	+0.5
TORD				PKPab	PKPab	15 26 28.1	+1.1
TORD	Torodi Ar. Bea	165.76	251	PKP	PKPdf	15 25 28.1	+0.5
	comp=Z,0.5nm,0.9s,baz=143,slow=1.0,SNR=2.6						
TORD				PKPab	PKPab	15 26 28.1	+1.1
	comp=Z,0.5nm,0.7s,baz=89,slow=4.0,SNR=2.6						

IDC 07 15:31:37.3±3.8**, 2°.69S**×**140°.28E, h0**km**, mb3.0**/2**, mb1 3.3**/3**, mb1mx3.2**/17**, mbtmp3.1**/3**, ML3.2**/1**, Error ellipse: s-maj=139.1km s-min=29.6km az=88.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.10	198	P	Pn	15 35 50.4	0.0
	0.1nm,0.3s,baz=20,slow=12,SNR=4.7						
ASAR	Alice Springs	21.74	196	P	P	15 36 29.7	-0.9
	0.3nm,0.8s,baz=29,slow=12,SNR=3.8						
MKAR	Makanchi Array	70.73	322	P	P	15 42 55.8	+0.4
	0.1nm,0.4s,baz=100,slow=7.9,SNR=3.9						

IDC 07 15:32:27.4±2.7**, 20°.60S**×**69°.67W, h0**km**, mb3.7**/2**, mb1 3.7**/4**, mb1mx3.5**/19**, mbtmp3.5**/4**, ML3.2**/2**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.3**/37**, Error ellipse: s-maj=62.6km s-min=52.1km az=172.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	4.53	19	Pn	Pn	15 33 39.1	+0.9
	0.4nm,0.3s,baz=164,slow=6.3,SNR=13						
SIV	San Ignacio	9.36	62	Pn	Pn	15 34 41.6	-2.2
	0.3nm,0.3s,baz=264,slow=8.7,SNR=5.2						
ATAH	Atahualpa	15.83	327	LR	LR	15 42 02.7	
	comp=Z,41nm,19.2s,baz=192,slow=36						
TORD	Torodi Ar. Bea	77.72	71	P	P	15 44 27.5	+0.8
	0.2nm,0.5s,baz=254,slow=5.2,SNR=4.7						
YKA	Yellowknife Ar	90.11	341	P	P	15 45 28.1	-0.8
	0.3nm,0.6s,baz=133,slow=4.1,SNR=3.9						

*IDC **07** 15:46:29.3±0.5, 12°.74N×88°.23W, h0km, mb4.5/25, mb1 4.7/25, mb1mx4.5/32, mbtmp4.5/25, MS4.2/22, Ms1 4.2/22, ms1mx4.1/35, Error ellipse: s-maj=23.5km s-min=10.2km az=59.0*

*ISCJB **07** 15:46:32.9±0.2, 12°.54N±0°.03×88°.64W±0°.04, h33km, mb4.6/100, MS4.2/24, Error ellipse: s-maj=6.5km s-min=2.3km az=137.2*

*CASC **07** 15:46:33.8±2.1, 12°.50N×88°.75W, h38km±999km, MD4.4, ML4.8, mb4.6(NEIC)*

*NEIC **07** 15:46:39.6±0.8, 12°.66N×88°.40W, h83km±7km, mb4.6/76, MD4.7(SNET), Error ellipse: s-maj=6.7km s-min=3.4km az=52.0*

NEIC Felt [II] at San Salvador. Felt at La Esperanza, Honduras.

*BJI **07** 15:46:40.5, 12°.60N×88°.40W, h82km, mB5.1/5, Ms5.1/4, Ms7 4.7/4*

ISC 07 15:46:34.6±0.3**, 12°.57N**±0°.05×**88°.63W**±0°.05**, h35**km**, n538, σ1§33**/578**, mb4.7**/100**, MS4.2**/24**, 16C-15D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	San Miguel	0.92	22	eP	Pn	15 46 52.0	+0.6
CNCH	Conchagua	1.05	48	eP	Pn	15 46 53.7	+0.7
SNVI	San Vicente	1.05	349	eP	Pn	15 46 53.0	-0.1
SNVI				eS	Sn	15 47 07.5	+0.9
LFRS	El Faro	1.13	338	eP	Pn	15 46 53.2	-0.8
LBRS	Las Brisas	1.23	341	eP	Pn	15 46 55.2	-0.2
SNET	Serv Nac Est T	1.25	332	eP	Pn	15 46 55.1	-0.7
SNET				eS	Sn	15 47 11.1	-0.3
SNET				AML	AML	15 47 18.6	
	comp=Z,16μm,0.3s						
CAHU	Cacacuatique	1.26	19	eP	Pn	15 46 57.2	+1.2
CAHU				⇓eS	Sn	15 47 16.1	+4.3
BOQS	Boqueron	1.32	331	eP	Pn	15 46 56.2	-0.6
SBLS	San Blas	1.59	323	eP	Pn	15 46 59.8	-0.7
SNJE	San Jose	1.60	324	eP	Pn	15 47 00.2	-0.5
RBDL	Robledal	1.84	326	eP	Pn	15 47 04.2	+0.2
MTO2	Montecristo 2	1.95	339	eP	Pn	15 47 06.0	+0.5
MTO2				eS	Sn	15 47 30.2	+1.2
TGUH	Tegucigalpa,Un	1.98	42	ePn	Pn	15 47 07.7	+2.0
GBS2	Las Lilas	3.56	119	i P	Pn	15 47 27.8	+0.3
NY14	Universidad de	3.59	122	i P	Pn	15 47 28.5	+0.7
LAPC	Finca la Perla	3.61	119	i P	Pn	15 47 28.4	+0.2
LIM1	Limonal	3.80	119	i P	Pn	15 47 31.4	+0.7
VCR	Vista de Mar	3.81	129	eP	Pn	15 47 30.5	-0.6
MESS	Mesas	3.83	118	i P	Pn	15 47 31.7	+0.5
CUI	Cuipilapa	3.89	119	i P	Pn	15 47 32.7	+0.6
CUI				i S	Sn	15 48 14.8	-1.8
PTEN	Parque Tenorio	4.02	117	i P	Pn	15 47 33.5	-0.3
AMAS	Alto Masis	4.06	118	i P	Pn	15 47 35.2	+0.7
JCR	Jicaral	4.39	128	eP	Pn	15 47 39.1	+0.2
FORC	Fortuna	4.41	118	eP	Pn	15 47 37.8	-1.4
CGA2	Cerro Gallo 2	4.81	121	eP	Pn	15 47 46.2	+1.4
SJS	Escuela Geolog	5.20	120	eP	Pn	15 47 52.2	+2.1
QCR	Quepos	5.38	125	eP	Pn	15 47 53.5	+0.9
URSC	Urasca	5.48	119	eP	Pn	15 47 55.2	+1.1
BUS	Buena Vista	5.64	122	eP	Pn	15 47 58.7	+2.2
BUS				eS	Sn	15 49 01.3	+0.9
ACR	Cerro Adams	6.63	125	eP	Pn	15 48 11.5	+1.7
BRU2	Volcan	6.94	122	eP	Pn	15 48 15.4	+1.3
BRU2				eS	Sn	15 49 25.1	-6.8
TBS2		6.97	122	eP	Pn	15 48 14.6	+0.2
TBS2				eS	Sn	15 49 30.0	-2.6
BRU	Baru	7.04	121	eP	Pn	15 48 17.8	+2.1
TEIG	Tepich	7.62	3	ePn	Pn	15 48 26.4	+3.2
TEIG	Tepich	7.62	3	Pn	Pn	15 48 26.5	+3.3
	comp=Z,4.6nm,0.3s,baz=206,slow=1.6,SNR=20						
TEIG				LR	LR	15 51 52.4	
	comp=Z,2μm,19.5s,baz=342,slow=43						
BCIP	Isla Barro Col	9.28	111	eP	Pn	15 48 46.9	+1.0
	comp=Z,48nm,0.7s						
MTDJ	Mount Denham	12.09	61	eP	Pn	15 49 27.7	+3.2
	comp=Z,88nm,0.7s						
GTBY	Guantanamo Bay	14.89	59	eP	P	15 50 06.7	-1.3
	comp=Z,59nm,0.8s						
OTAV	Otavalo	15.88	140	eP	Pn	15 50 17.2	+1.1
	comp=Z,33nm,1.0s						
ROSC	El Rosal	16.07	117	eP	P	15 50 20.6	-0.9
ROSC	El Rosal	16.07	117	Pn	P	15 50 21.0	-0.5
	comp=Z,1.2nm,0.3s,baz=86,slow=18,SNR=4.9						
732A	Laxson Ranch,	19.24	328	P	P	15 50 57.2	+1.2
	baz=19,SNR=19						
VBMS	Vicksburg	19.63	355	P	Pn	15 51 02.2	+0.4
	comp=Z,83nm,0.9s						
632A	Uvalde	19.79	330	P	P	15 51 02.6	+0.7
	baz=20,SNR=47						
631A	Perdido Creek	20.10	328	P	P	15 51 06.0	+0.6
	baz=20,SNR=6.5						
532A	Rocksprings	20.36	331	P	P	15 51 09.1	+0.8
	baz=20,SNR=78						
LRAL	Lakeview Retre	20.43	4	eP	Pn	15 51 10.8	-0.3
	comp=Z,16nm,0.8s						
JCT	Junction City	20.60	332	eP	P	15 51 11.4	+0.5
	comp=Z,53nm,0.9s						
JCT				eScP	ScP	15 59 00.2	+5.2
JCT	Junction City	20.60	332	P	P	15 51 11.5	+0.5
	baz=21,SNR=23						
531A	Rocksprings	20.70	330	P	P	15 51 12.4	+0.5
	baz=21,SNR=23						
432A	Menard	20.93	332	P	P	15 51 15.5	+1.0
	baz=21,SNR=24						
530A	J-C Ranch, Com	21.09	328	P	P	15 51 17.8	+1.6
	baz=21,SNR=33						
431A	Sonora	21.15	330	P	P	15 51 17.6	+0.8
	baz=21,SNR=67						
GOGA	Godfrey	21.27	12	eP	P	15 51 16.3	-1.7
	comp=Z,29nm,1.0s						
332A	Millersview	21.34	333	⇑P	P	15 51 19.2	+0.4
	baz=21,SNR=27						
628A	Black Gap, Mar	21.42	324	P	P	15 51 21.4	+1.7
	baz=22,SNR=54						
529A	Stev Forest Ra	21.53	326	P	P	15 51 21.3	+0.3
	baz=22,SNR=22						
430A	Baggett Ranch,	21.55	329	P	P	15 51 21.7	+0.6
	baz=22,SNR=38						
331A	San Angelo	21.59	332	P	P	15 51 21.6	+0.1
	baz=22,SNR=38						
627A	Terlingua Ranc	21.68	323	P	P	15 51 24.4	+1.8
	baz=22,SNR=72						
232A	Coleman	21.73	334	P	P	15 51 22.9	-0.2
	baz=22,SNR=36						
429A	Davenport Ranc	21.75	328	P	P	15 51 23.6	+0.3
	baz=22,SNR=40						
TXAR	Lajitas Array	21.76	322	P	P	15 51 24.9	+1.5
TXAR				PcP	PcP	15 55 24.6	+1.4
TXAR				ScP	ScP	15 59 02.9	+5.0
TXAR	Lajitas Array	21.76	322	P	P	15 51 24.9	+1.5
	comp=Z,13nm,0.6s,baz=144,slow=11,SNR=144						
TXAR				PcP	PcP	15 55 24.6	+1.4
	comp=Z,1.5nm,0.7s,baz=138,slow=4.2,SNR=4.5						
TXAR				ScP	ScP	15 59 02.9	+5.0
	comp=Z,0.8nm,0.8s,baz=153,slow=4.6,SNR=7.8						
TXAR				LR	LR	16 02 02.6	
	comp=Z,258nm,19.2s,baz=345,slow=43						
CELP	Cerrillos	21.95	73	eP	P	15 51 25.0	-0.4
330A	Mertzon	22.02	330	P	P	15 51 25.6	-0.7
	baz=22,SNR=38						
ATAH	Atahualpa	22.06	152	P	P	15 51 28.5	+1.4
ATAH	Atahualpa	22.06	152	P	P	15 51 28.5	+1.4
	comp=Z,74nm,1.2s,baz=336,slow=6.9,SNR=30						
ATAH				LR	LR	15 59 03.6	
	comp=Z,935nm,19.2s,baz=313,slow=34						
231A	Bronte	22.07	333	P	P	15 51 26.2	-0.4
	baz=22,SNR=19						
626A	Big Bend Ranch	22.20	322	P	P	15 51 29.3	+1.1
	baz=22,SNR=35						
428A	Kincaid Ranch,	22.25	326	P	P	15 51 29.2	+0.5
	baz=22,SNR=14						
PLAL	Pickwick Lake	22.32	1	eP	P	15 51 29.7	+0.5
	comp=Z,13nm,1.0s						
527A	Woodward Ranch	22.33	324	P	P	15 51 30.1	+0.5
	baz=22,SNR=17						
SJG	San Juan	22.36	73	eP	P	15 51 29.0	-0.9
	comp=Z,16nm,0.8s						
UALR	University of	22.36	352	eP	P	15 51 30.8	+1.1
	comp=Z,33nm,0.8s						
ABTX	Abilene, Hawle	22.37	335	P	P	15 51 29.8	-0.1
	baz=22,SNR=14						
230A	Sterling City	22.39	331	P	P	15 51 28.8	-1.3
	baz=22,SNR=12						
329A	Wagon Wheel Ra	22.49	329	P	P	15 51 30.7	-0.5
	baz=23,SNR=34						
526A	Mary Lane Ranc	22.54	323	P	P	15 51 32.1	+0.2
	baz=23,SNR=21						
HUMP	Col San Antoni	22.64	73	eP	P	15 51 29.8	-3.1
	comp=Z,22nm,0.8s						
SWET	Sewanee	22.68	6	eP	P	15 51 33.3	+0.2
	comp=Z,21nm,1.0s						
131A	Roby	22.73	334	P	P	15 51 33.4	-0.3
	baz=23						
427A	Hayter Ranch,	22.74	325	P	P	15 51 33.4	-0.5
	baz=23,SNR=11						
229A	Bryant Ranch,	22.79	330	⇓P	P	15 51 33.9	-0.5
	baz=23,SNR=11						
328A	Wristen Ranch,	22.83	327	P	P	15 51 34.5	-0.3
	baz=23,SNR=92						
PTP	Ponta Puerca	22.88	73	eP	x	15 48 16.4	
PTP				eS	x	15 49 32.8	
Z32A	Haskell	22.90	336	P	P	15 51 35.0	-0.5
	baz=23,SNR=34						
MTP	Monte Pirata	22.91	73	eP	P	15 51 34.8	-1.0
	comp=Z,30nm,0.6s						
130A	Snyder	22.92	332	P	P	15 51 34.6	-1.1
	baz=23,SNR=28						
426A	McDonald Obser	22.96	324	P	P	15 51 36.2	0.0
	baz=23,SNR=23						
HBAR	Harrisburg	22.96	356	eP	P	15 51 36.5	+0.5
CPCT	Cooper Cave	23.08	9	eP	P	15 51 37.1	-0.1
Z31A	Sharp Cattle R	23.18	335	P	P	15 51 37.8	-0.5
	baz=23,SNR=40						
228A	UT Block 9, Go	23.30	329	P	P	15 51 38.6	-1.0
	baz=23,SNR=16						
129A	Stewart Farms,	23.36	331	P	P	15 51 39.6	-0.6
	baz=24,SNR=23						
TKL	Tuckaleechee C	23.40	10	eP	P	15 51 41.1	+0.7
TKL	Tuckaleechee C	23.40	10	P	P	15 51 40.9	+0.4
	comp=Z,20nm,0.8s,baz=188,slow=11,SNR=34						
TKL				LR	LR	16 02 08.4	
	comp=Z,354nm,18.2s,baz=115,slow=40						
326A	Caldwell Ranch	23.41	325	P	P	15 51 40.2	-0.5
	baz=24,SNR=15						
KMSC	Kings Mountain	23.42	15	P	P	15 51 41.6	+1.0
	baz=23,SNR=6.1						
WVT	Waverly	23.47	2	eP	P	15 51 40.3	-0.7
	comp=Z,5.5nm,0.6s						
Y32A	R-V Farms, Ver	23.50	337	P	P	15 51 41.5	0.0
	baz=24,SNR=13						
STVI	Saint Thomas	23.52	73	eP	P	15 51 40.2	-1.6
	comp=Z,91nm,0.6s						
Z30A	Sanderson Ranc	23.57	333	P	P	15 51 41.0	-1.2
	baz=24,SNR=39						
227A	Bennet, Jal	23.58	327	P	P	15 51 42.2	-0.1
	baz=24,SNR=18						
425A	Indio Mountain	23.60	323	P	P	15 51 43.3	+0.7
	baz=24						
128A	Castleberry Fa	23.66	330	P	P	15 51 42.5	-0.6
	baz=24,SNR=38						
Y31A	Rekieta Farm,	23.79	335	P	P	15 51 43.8	-0.4
	baz=24,SNR=48						
Z29A	Hungry Hill Ra	23.81	332	P	P	15 51 43.6	-0.9
	baz=24,SNR=27						
WMOK	Wichita Mounta	23.91	339	eP	P	15 51 44.4	-1.0
	comp=Z,17nm,0.6s						
Y30A	Stafford Cattl	23.98	334	⇓P	P	15 51 46.5	+0.5
	baz=24,SNR=22						
325A	Bean Ranch, Si	24.02	324	P	P	15 51 46.8	+0.3
	baz=24,SNR=5.3						
226B	Tecolote Peak,	24.10	326	⇑P	P	15 51 47.5	+0.3
	baz=24,SNR=28						
TUL1	Tulsa	24.12	346	P	P	15 51 47.2	0.0
	baz=24,SNR=8.7						
127A	Arkansas Junct	24.14	328	⇑P	P	15 51 47.5	0.0
	baz=24,SNR=17						
Z28A	Tucker Farm, M	24.15	331	P	P	15 51 47.2	-0.5
	baz=24,SNR=18						
X31A	McDonald Ranch	24.26	337	P	P	15 51 48.8	+0.2
	baz=24,SNR=14						
Y29A	Porterfield Fa	24.30	333	P	P	15 51 48.8	-0.2
	baz=24,SNR=26						
GDL2	Guadalupe Moun	24.30	326	eP	P	15 51 49.9	+0.8
TZTN	Tazewell	24.30	10	eP	P	15 51 48.8	-0.1
	comp=Z,14nm,0.9s						
324A	Moseley Ranch,	24.37	323	P	P	15 51 49.8	+0.1
	baz=24,SNR=10						
X30A	Coker Ranch, T	24.46	335	P	P	15 51 51.0	+0.6
	baz=24,SNR=7.1						
126A	Clayton Basin,	24.46	327	P	P	15 51 50.4	-0.1
	baz=25,SNR=8.1						
225A	Deer Hill, Car	24.48	325	P	P	15 51 51.7	+0.8
	baz=25						
MNTX	Cornudas Mount	24.50	324	eP	P	15 51 50.6	-0.2
	comp=Z,7.6nm,0.8s						
Z27A	Tatum	24.57	330	P	P	15 51 50.8	-0.8
	baz=25,SNR=36						
Y28A	McKinney Farm,	24.60	332	P	P	15 51 51.9	+0.1
	baz=25,SNR=6.1						
W31A	Holland Ranch,	24.74	337	P	P	15 51 53.6	+0.7
	baz=25,SNR=12						
X29A	Tulia	24.81	334	P	P	15 51 53.7	+0.1
	baz=25,SNR=32						
125A	Gardner Draw,	24.81	326	P	P	15 51 53.4	-0.3
	baz=25,SNR=23						
224A	Cornudas Mount	24.85	324	P	P	15 51 54.2	+0.1
	baz=25,SNR=14						
MSTX	Muleshoe	24.89	331	P	P	15 51 54.1	-0.3
	baz=25,SNR=45						

Z26A **Caprock** 24.93 328 P P 15 51 54.9 +0.2
baz=25,SNR=17
Y27A **Causey** 25.01 330 P P 15 51 55.1 -0.4
baz=25,SNR=51
SIUC **Southern Illin** 25.05 359 P P 15 51 55.2 -0.3
comp=Z,46nm,1.1s
X28A **Dimmitt** 25.09 333 P P 15 51 56.4 +0.2
baz=25,SNR=16
AMTX **Amarillo** 25.17 334 eP P 15 51 56.5 -0.4
comp=Z,36nm,0.5s
V31A **Spring Creek L** 25.22 338 P P 15 51 58.3 +1.0
baz=25,SNR=16
124A **Stringfield Ra** 25.28 325 ⇓P P 15 51 59.8 +1.7
baz=25,SNR=21
USIN **University of** 25.30 2 eP P 15 51 57.1 -0.8
comp=Z,18nm,0.8s
Z25A **Roswell** 25.32 327 P P 15 51 59.0 +0.8
baz=25,SNR=24
W29A **Amraillo** 25.36 334 P P 15 51 59.0 +0.4
baz=26,SNR=12
Y26A **Elida** 25.36 329 P P 15 52 00.1 +1.3
baz=26,SNR=7.1
X27A **F and S Farms,** 25.60 332 P P 15 52 01.2 +0.4
baz=26,SNR=8.3
BLA **Blacksburg** 25.62 15 eP P 15 51 56.7 -4.2
comp=Z,42nm,0.9s
WCI **Wyandotte Cave** 25.64 4 eP P 15 52 00.2 -0.8
comp=Z,14nm,0.6s
Z24A **Sheeppen Canyo** 25.70 326 P P 15 52 02.8 +0.9
baz=26,SNR=14
W28A **Vega** 25.71 334 ⇑P P 15 52 03.1 +1.2
baz=26,SNR=5.3
U31A **Nine Bar Ranch** 25.76 339 P P 15 52 02.7 +0.5
baz=26
Y25A **Mesa, Roswell** 25.80 328 P P 15 52 03.7 +0.9
baz=26,SNR=42
X26A **CR and CF Fran** 25.86 330 P P 15 52 03.6 +0.3
baz=26,SNR=11
W27A **Bowe Ranch, En** 25.93 332 P P 15 52 04.1 +0.2
baz=26,SNR=25
V29A **Stinnett** 25.95 336 P P 15 52 04.5 +0.5
baz=26
OLIL **Olney** 26.06 1 P P 15 52 03.7 -1.1
Z23A **Rita Site, Whi** 26.13 325 ⇑P P 15 52 07.7 +2.0
baz=26,SNR=5.7
V28A **Channing** 26.14 334 P P 15 52 06.2 +0.5
baz=26,SNR=35
320A **Kipp Ranch, An** 26.17 319 P P 15 52 07.6 +1.5
baz=26
U30A **WK&E Inc. Balk** 26.19 338 P P 15 52 06.7 +0.6
baz=26
Y24A **Capitan** 26.20 327 P P 15 52 07.4 +1.1
baz=26,SNR=26
X25A **Clemmons Ranch** 26.26 329 P P 15 52 08.3 +1.4
baz=26,SNR=8.7
W26A **Owens Ranch, T** 26.28 331 ⇑P P 15 52 07.9 +0.9
baz=26,SNR=7.6
T31A **Randall Ranch,** 26.36 340 P P 15 52 07.9 +0.3
baz=26,SNR=5.4
121A **Cookes Peak, D** 26.52 322 P P 15 52 10.8 +1.6
baz=27,SNR=13
Y23A **Lovelace Mesa,** 26.53 326 ⇓P P 15 52 10.8 +1.4
baz=27,SNR=21
220A **Playas Peak, P** 26.55 320 ⇓P P 15 52 11.0 +1.5
baz=27,SNR=9.4
T30A **Plains** 26.61 338 P P 15 52 10.6 +0.7
baz=27,SNR=6.2
U28A **Mallet** 26.68 335 P P 15 52 10.5 -0.1
baz=27,SNR=8.2
W25A **X Bar L Ranch,** 26.72 330 P P 15 52 11.8 +0.8
baz=27,SNR=31
JSRW **J. Sargeant Re** 26.80 19 P P 15 52 11.5 0.0
V26A **Tequesquite Ra** 26.87 332 P P 15 52 13.2 +0.8
baz=27,SNR=34
U27A **Thompson Grove** 26.96 334 P P 15 52 13.4 +0.3
baz=27,SNR=28
BNM **Barren Site** 27.01 326 eP P 15 52 14.5 +0.8
comp=Z,5.1nm,0.6s
Y22A **Socorro** 27.04 325 P P 15 52 15.3 +1.3
baz=27,SNR=10
120A **U Bar Ranch, L** 27.05 321 ⇓P P 15 52 15.4 +1.4
baz=27,SNR=5.1
NNA **Nana** 27.06 154 eP P 15 52 14.0 -0.1
NNA **Nana** 27.06 154 P P 15 52 13.6 -0.5
comp=Z,12nm,0.9s,baz=310,slow=6.4,SNR=4.8
NNA LR LR 16 01 01.2
comp=Z,324nm,20.4s,baz=315,slow=32
S30A **Montezuma** 27.11 339 P P 15 52 14.6 +0.2
baz=27
W24A **Lazy 6 Ranch,** 27.18 329 P P 15 52 16.4 +1.2
baz=27,SNR=11
T28A **Walsh** 27.27 336 P P 15 52 15.6 -0.3
baz=27
V25A **Rancho No Teng** 27.29 331 P P 15 52 17.3 +1.1
baz=27,SNR=26
S29A **Ulysses** 27.33 338 P P 15 52 17.1 +0.7
baz=27,SNR=8.4
U26A **Atchley Ranch,** 27.34 333 P P 15 52 17.5 +0.8
baz=27,SNR=12
KSU1 **Kansas State U** 27.36 346 eP P 15 52 16.2 -0.3
R31A **Burdett** 27.39 341 P P 15 52 17.4 +0.5
baz=28,SNR=9.2
Z20A **Nine Sixteen R** 27.41 322 P P 15 52 19.0 +1.8
baz=28
CBN **Corbin** 27.43 20 P P 15 52 17.5 +0.4
LAZ **Ladron** 27.48 325 eP P 15 52 19.5 +1.5
comp=Z,5.1nm,1.2s
Y21A **Point of Rocks** 27.50 324 P P 15 52 20.0 +1.9
baz=28,SNR=9.6
ANMO **Albuquerque** 27.52 327 eP P 15 52 18.4 +0.2
comp=Z,20nm,1.8s
ANMO PcP PcP 15 55 37.4 +1.5
ANMO **Albuquerque** 27.52 327 P P 15 52 19.6 +1.4
comp=Z,2.4nm,0.5s,baz=125,slow=9.4,SNR=13
ANMO PcP PcP 15 55 37.4 +1.5
comp=Z,2.3nm,0.8s,baz=111,slow=5.3,SNR=3.6
ANMO LR LR 16 04 59.5
comp=Z,211nm,19.2s,baz=208,slow=40
V24A **Rampart Ranch,** 27.52 330 P P 15 52 19.5 +1.2
baz=28,SNR=9.5
W23A **Werner Place,** 27.52 328 ⇓P P 15 52 20.2 +1.9
baz=28,SNR=8.1
S28A **Manter** 27.60 337 P P 15 52 18.7 -0.1
baz=28,SNR=17
R30A **Dighton** 27.63 340 P P 15 52 19.5 +0.4
baz=28,SNR=13
U25A **Circle Dot Ran** 27.65 332 P P 15 52 20.4 +1.0
baz=28
SFIN **Scholer Farm** 27.73 3 P P 15 52 18.9 -1.0
baz=28
Y20A **Horse Springs,** 27.83 323 ⇑P P 15 52 22.4 +1.3
baz=28,SNR=6.7
X21A **Alamocita Cree** 27.88 325 P P 15 52 23.0 +1.5
baz=28,SNR=7.6
ACSO **Alum Creek Sta** 28.00 9 eP P 15 52 21.8 -0.5
comp=Z,13nm,0.6s
Q31A **Ellis** 28.01 342 P P 15 52 22.9 +0.5
baz=28,SNR=11
R29A **Marienthal** 28.05 339 P P 15 52 23.4 +0.6
baz=28
R28A **Tribune** 28.22 338 P P 15 52 24.6 +0.2
baz=28,SNR=16
Q30A **Quinter** 28.24 341 P P 15 52 25.1 +0.6
baz=28,SNR=12
S26A **Kim** 28.26 335 P P 15 52 25.4 +0.7
baz=28,SNR=9.9
T25A **Trinidad** 28.26 333 P P 15 52 26.4 +1.5
baz=28,SNR=20
TUC **Tucson** 28.27 318 eP P 15 52 26.6 +1.8
comp=Z,171nm,1.7s
Q29A **Oakley** 28.41 339 P P 15 52 26.1 0.0
baz=28
U23A **El Rito** 28.45 329 P P 15 52 27.9 +1.3
baz=29,SNR=30
P31A **Stockton** 28.48 342 P P 15 52 27.1 +0.6
baz=29
V22A **San Miguel Ran** 28.50 328 ⇑P P 15 52 29.0 +2.0
baz=29,SNR=7.2
SDMD **Soldier's Deli** 28.70 19 eP P 15 52 29.8 +1.3
comp=Z,13nm,0.8s
S25A **Robets Cordova** 28.70 333 P P 15 52 29.9 +1.1
baz=29,SNR=14
P30A **Selden** 28.77 341 P P 15 52 29.9 +0.8
baz=29,SNR=11
R26A **Arlington** 28.82 335 P P 15 52 30.5 +0.7
baz=29,SNR=7.9
Q28A **Sharon Springs** 28.87 338 P P 15 52 30.7 +0.6
baz=29,SNR=7.3

S24A **Houchin Ranch,** 29.03 332 P P 15 52 33.6 +1.8
baz=29,SNR=6.2
P29A **Atwood** 29.04 340 P P 15 52 32.1 +0.5
baz=29,SNR=9.4
R25A **Fountain Ranch** 29.04 334 P P 15 52 32.9 +1.1
baz=29,SNR=13
KSCO **Kaye Shedlock'** 29.11 337 P P 15 52 33.2 +0.9
baz=29,SNR=6.6
V20A **Brimhall** 29.24 326 P P 15 52 34.6 +1.0
baz=29
U21A **Nageezi** 29.28 327 ⇑P P 15 52 36.4 +2.5
baz=29,SNR=6.5
O30A **MW Ranch, Wils** 29.29 342 P P 15 52 34.6 +0.9
baz=29
P28A **Saint Francis** 29.29 339 P P 15 52 34.8 +0.9
baz=29
Q26A **Hugo** 29.39 336 P P 15 52 35.4 +0.6
baz=30,SNR=11
O29A **4D Ranch, Culb** 29.47 341 P P 15 52 36.1 +0.7
baz=30
R24A **Sanders Place,** 29.47 333 P P 15 52 37.7 +2.1
baz=30,SNR=8.2
P27A **Ficken Ranch,** 29.57 338 P P 15 52 37.3 +0.9
baz=30
Q25A **Bedland, Calha** 29.67 335 P P 15 52 38.4 +1.0
baz=30,SNR=7.0
R23A **Moffat** 29.76 332 P P 15 52 39.8 +1.5
baz=30,SNR=18
O28A **Krutsinger Ran** 29.79 339 P P 15 52 38.9 +0.7
baz=30
N30A **Hueftle Ranch,** 29.87 342 P P 15 52 39.6 +0.7
baz=30
P26A **Davis Ranch, A** 29.87 337 P P 15 52 40.0 +0.9
baz=30
S22A **4UR Ranch, Cre** 29.88 330 ⇑P P 15 52 40.6 +1.3
baz=30,SNR=14
BGNE **Belgrade** 29.91 346 P P 15 52 39.5 +0.3
baz=30,SNR=8.8
X16A **Lo Mia Camp, P** 30.04 320 P P 15 52 42.5 +1.9
baz=30
O27A **Beecher Island** 30.10 339 ⇓P P 15 52 41.8 +0.8
baz=30,SNR=9.0
Q24A **Divide** 30.10 334 P P 15 52 43.0 +1.8
baz=30
P25A **Willow Gulch B** 30.15 336 P P 15 52 43.3 +1.8
baz=30,SNR=5.8
N28A **Pribbeno Ranch** 30.22 340 P P 15 52 42.8 +0.8
baz=30
R22A **Saguache, Gunn** 30.23 331 P P 15 52 44.2 +1.8
baz=30
JFWS **Jewell Farm** 30.27 358 eP P 15 52 42.2 -0.2
comp=Z,13nm,0.6s
S21A **Coal Bank Pass** 30.29 329 P P 15 52 43.8 +0.8
baz=30
O26A **Horse Wrangler** 30.45 337 P P 15 52 44.7 +0.5
baz=30
M30A **Dale-Ortello V** 30.48 343 P P 15 52 44.6 +0.3
baz=31,SNR=6.0
M29A **Burnside Ranch** 30.64 342 P P 15 52 45.9 +0.1
baz=31,SNR=7.3
N27A **Anderson Farm,** 30.66 339 P P 15 52 47.2 +1.2
baz=31
WUAZ **Wupatki** 30.73 322 eP P 15 52 48.2 +1.5
comp=Z,4.4nm,0.8s
WUAZ **Wupatki** 30.73 322 P P 15 52 48.2 +1.5
baz=31
Q22A **Crested Butte,** 30.80 331 P P 15 52 48.4 +0.9
baz=31
ISCO **Idaho Springs** 30.99 334 eP P 15 52 49.6 +0.5
comp=Z,9.4nm,1.0s
ISCO **Idaho Springs** 30.99 334 P P 15 52 50.1 +1.0
baz=31,SNR=12
O24A **Longmont** 31.04 335 P P 15 52 50.4 +1.0
baz=31
SMCO **Snowmass** 31.09 332 eP P 15 52 51.6 +1.4
comp=Z,13nm,1.0s
P22A **Eagle** 31.33 332 P P 15 52 53.5 +1.5
baz=31
PV04 **Paradox Valley** 31.41 329 eP P 15 52 52.0 -0.8
S18A **Hurst Farm, Bl** 31.46 326 ⇑P P 15 52 54.8 +1.5
baz=32,SNR=8.4
BINY **Binghamton** 31.50 18 P P 15 52 53.8 +0.5
P21A **Newcastle** 31.59 332 P P 15 52 55.4 +1.1
baz=32,SNR=8.9
O22A **Kremmling** 31.69 333 ⇓P P 15 52 56.2 +0.9
baz=32,SNR=10
PDMCI **Parker Dam,Lak** 31.70 317 P P 15 52 56.4 +1.3
baz=32
K29A **Lazy Trails An** 31.74 344 P P 15 52 56.4 +0.9
baz=32,SNR=9.9
L26A **Underwood Farm** 31.94 339 P P 15 52 58.2 +0.9
baz=32
K28A **Ten Mile Ranch** 32.00 342 P P 15 52 58.9 +1.1
baz=32
W13A **Hualapai Mount** 32.02 319 P P 15 52 59.6 +1.4
baz=32
N23A **Red Feather La** 32.04 335 P P 15 52 59.4 +1.0
baz=32
SWSC **Sam W. Stewart** 32.06 314 P P 15 53 00.1 +1.8
baz=32
M24A **Cheynne** 32.08 337 P P 15 52 59.7 +1.1
baz=32
BC3 **Big Chuckawall** 32.22 315 P P 15 53 01.6 +1.9
baz=32,SNR=8.7
IRM **Iron Mountain** 32.30 316 P P 15 53 02.0 +1.6
baz=32
L25A **Engebretsen Ra** 32.36 338 P P 15 53 01.8 +0.8
baz=32,SNR=5.6
M23A **Laramie** 32.43 336 P P 15 53 02.9 +1.1
baz=32,SNR=8.9
O20A **White River Ci** 32.44 331 P P 15 53 02.9 +1.2
baz=32,SNR=11
MONP **Monument Peak** 32.48 313 P P 15 53 03.4 +1.2
baz=33
N21A **Black Mountain** 32.61 333 P P 15 53 05.0 +1.7
baz=33,SNR=14
J28A **Allard Ranch,** 32.61 343 P P 15 53 03.9 +0.9
baz=33,SNR=12
K25A **Mack Ranch, Ha** 32.72 339 P P 15 53 05.0 +0.9
baz=33
SPMN **St. Paul** 32.74 355 P P 15 53 03.1 -0.9
baz=33,SNR=17
SRU **San Rafael** 32.79 328 P P 15 53 05.8 +1.0
baz=33
PFO **Pinyon Flat Ob** 32.89 314 P P 15 53 06.6 +0.9
PFO PcP PcP 15 55 51.3 +1.5
PFO **Pinyon Flat Ob** 32.89 314 P P 15 53 06.6 +0.9
comp=Z,4.4nm,0.9s,baz=99,slow=6.9,SNR=4.1
PFO PcP PcP 15 55 51.3 +1.5
comp=Z,2.3nm,0.8s,baz=202,slow=4.5,SNR=4.0
PFO LR LR 16 09 13.3
comp=Z,497nm,18.2s,baz=183,slow=41
PFO **Pinyon Flat Ob** 32.89 314 P P 15 53 07.1 +1.4
baz=33
BRSD **Miller** 32.97 346 P P 15 53 05.7 -0.4
baz=33
L23A **Garrett** 32.97 336 P P 15 53 07.4 +0.9
baz=33,SNR=17
Q16A **Castle Valley** 32.99 327 P P 15 53 08.7 +2.1
baz=33
GMRC **Granite Mounta** 33.00 317 P P 15 53 08.1 +1.5
baz=33
N20A **Spence Gulch,** 33.01 332 P P 15 53 08.9 +2.2
baz=33,SNR=20
SADO **Sadowa** 33.10 12 P P 15 53 05.3 -1.9
SADO **Sadowa** 33.10 12 P P 15 53 05.3 -1.9
comp=Z,6.3nm,0.6s,baz=219,slow=8.8,SNR=10
SADO LR LR 16 08 06.8
comp=Z,521nm,18.3s,baz=7.0,slow=40
SAML **Samuel** 33.11 129 eP P 15 53 06.0 -1.7
comp=Z,26nm,0.9s
M21A **Separation Pea** 33.23 334 P P 15 53 10.0 +1.3
baz=33,SNR=15
MVU **Marysvale** 33.27 325 eP P 15 53 10.1 +1.0
comp=Z,3.4nm,1.0s
CCUT **Cedar City** 33.27 323 eP P 15 53 10.8 +1.6
CCUT eScP ScP 15 59 39.5 +6.6
J25A **Sunshine Ranch** 33.39 340 P P 15 53 10.9 +1.0
baz=34
COWI **Conover** 33.42 359 eP P 15 53 08.0 -2.0
comp=Z,13nm,0.8s
K23A **Bowen Ranch, D** 33.49 337 P P 15 53 11.7 +0.8
baz=34,SNR=7.2
L21A **Rawlins** 33.53 334 P P 15 53 12.1 +0.8
baz=34,SNR=22
K22A **Casper** 33.75 336 P P 15 53 13.9 +0.7
baz=34,SNR=12
L20A **Wamsutter** 33.98 333 P P 15 53 16.4 +1.2
baz=34

K21A **Alcova** 34.03 335 P P 15 53 17.0 +1.3
baz=34
MPU **Maple Canyon** 34.03 328 eP P 15 53 17.5 +1.8
comp=Z,9.9nm,0.8s
GSC **Goldstone** 34.07 316 eP P 15 53 17.6 +1.7
comp=Z,4.1nm,1.0s
GSC ePcP PcP 15 55 54.9 +1.9
BFSC **Mount Baldy Ra** 34.07 314 P P 15 53 17.6 +1.6
baz=34
I24A **Kuemmerle Ranc** 34.08 339 P P 15 53 16.8 +0.8
baz=34,SNR=7.5
RSSD **Black Hills** 34.11 340 eP P 15 53 17.1 +0.8
comp=Z,12nm,0.6s
LONY **Lake Ozonia** 34.13 18 P P 15 53 15.1 -1.1
DAU **Daniels Canyon** 34.13 328 eP P 15 53 19.6 +3.0
MWC **Mount Wilson** 34.34 314 eP P 15 53 19.7 +1.3
comp=Z,12nm,1.1s
J22A **Midwest** 34.38 337 P P 15 53 19.2 +0.7
baz=34,SNR=18
EDW2 **Edwards Air Fo** 34.64 315 P P 15 53 22.0 +1.2
baz=35
LRMC **Laurel Mountai** 34.76 316 P P 15 53 22.9 +0.9
baz=35
I22A **9 Mile Ranch,** 34.79 337 P P 15 53 22.7 +0.6
baz=35,SNR=17
DUG **Dugway** 34.79 327 eP P 15 53 23.8 +1.7
comp=Z,21nm,1.8s
H24A **Dirks Ranch, A** 34.84 340 P P 15 53 23.1 +0.7
baz=35,SNR=30
K19A **Absolon Red Bu** 34.86 334 P P 15 53 24.4 +1.6
baz=35,SNR=6.0
MPMC **Manual Prospec** 34.96 317 P P 15 53 24.9 +1.2
baz=35
I21A **Big Trails, Te** 35.03 336 P P 15 53 24.8 +0.6
baz=35,SNR=14
LPAZ **La Paz** 35.12 144 eP P 15 53 25.4 -0.3
comp=Z,9.8nm,0.8s
LPAZ **La Paz** 35.12 144 P P 15 53 25.4 -0.3
comp=Z,7.1nm,0.7s,baz=332,slow=7.3,SNR=35
LPAZ LR LR 16 07 23.6
comp=Z,454nm,21.5s,baz=309,slow=36
R11A **Troy Canyon, C** 35.13 322 P P 15 53 26.4 +1.3
baz=35
BW06 **Boulder Array** 35.13 333 eP P 15 53 26.1 +1.0
comp=Z,4.2nm,0.8s
PDAR **Pinedale Array** 35.13 333 P P 15 53 25.6 +0.4
PDAR PcP PcP 15 55 56.4 +0.2
PDAR ScP ScP 15 59 42.5 +3.2
PDAR **Pinedale Array** 35.13 333 P P 15 53 25.6 +0.4
comp=Z,1.2nm,0.6s,baz=129,slow=8.6,SNR=8.7
PDAR PcP PcP 15 55 56.4 +0.2
comp=Z,1.5nm,0.6s,baz=139,slow=5.0,SNR=5.5
PDAR ScP ScP 15 59 42.5 +3.2
comp=Z,0.6nm,0.7s,baz=90,slow=5.9,SNR=4.9
HWUT **Hardware Ranch** 35.18 330 P P 15 53 25.3 -0.3
comp=Z,16nm,1.2s
J19A **Crowheart** 35.31 334 P P 15 53 28.0 +1.4
baz=35,SNR=12
G24A **Alzada** 35.31 341 P P 15 53 27.5 +1.0
baz=35,SNR=5.1
H22A **Clearmont** 35.34 338 ⇑P P 15 53 27.6 +0.9
baz=35,SNR=5.3
EYMN **Ely** 35.35 357 eP P 15 53 24.9 -1.8
comp=Z,11nm,0.6s
ISA **Isabella** 35.40 316 eP P 15 53 28.7 +1.3
comp=Z,5.2nm,1.2s
ISA eScP ScP 15 59 46.2 +6.0
ISA **Isabella** 35.40 316 P P 15 53 28.9 +1.5
baz=36
GRAC **Grapevine Rang** 35.42 318 P P 15 53 28.9 +1.4
baz=36
I20A **Worland** 35.48 335 P P 15 53 28.8 +0.7
baz=36,SNR=23
G23A **Biddle** 35.52 339 P P 15 53 28.9 +0.6
baz=36,SNR=9.5
H21A **Big Horn, Sher** 35.62 337 P P 15 53 29.6 +0.4
baz=36,SNR=12
F24A **Ekalaka** 35.78 341 P P 15 53 31.2 +0.7
baz=36,SNR=14
G22A **Birney** 35.85 339 P P 15 53 31.4 +0.2
baz=36,SNR=6.6
H20A **Greybull** 35.88 336 P P 15 53 31.8 +0.4
baz=36
I19A **Meeteetse** 35.91 335 ⇑P P 15 53 33.0 +1.2
baz=36,SNR=11
VES **Vestal, Richgr** 35.91 315 P P 15 53 33.2 +1.6
baz=36
HVU **Hansel Valley** 35.91 329 P P 15 53 32.2 +0.4
comp=Z,5.1nm,0.8s
PKM **Peak Mountain** 35.93 314 P P 15 53 33.0 +0.9
baz=36
F23A **Volborg** 35.98 340 P P 15 53 32.7 +0.5
baz=36,SNR=16
I18A **Diamond G Ranc** 35.99 334 P P 15 53 33.1 +0.6
baz=36
AGMN **Agassiz Nation** 36.12 352 eP P 15 53 32.1 -1.2
comp=Z,28nm,0.8s
G21A **Lodge Grass** 36.19 338 P P 15 53 34.2 +0.2
baz=36,SNR=9.3
SNOW **Snow King Moun** 36.22 332 eP P 15 53 35.2 +0.7
comp=Z,65nm,1.4s
LOHW **Long Hollow** 36.27 333 eP P 15 53 35.1 +0.3
comp=Z,6.9nm,0.8s
RCTC **Rector, Farmer** 36.27 316 P P 15 53 35.6 +0.8
baz=36
F22A **Rosebud** 36.33 339 P P 15 53 35.4 +0.3
baz=36,SNR=7.9
TPAW **Teton Pass** 36.33 332 eP P 15 53 35.9 +0.4
comp=Z,50nm,1.6s
MDND **Maddock** 36.35 348 P P 15 53 35.1 -0.1
baz=36,SNR=12
E24A **Baker** 36.38 342 P P 15 53 36.4 +0.8
baz=36,SNR=10
RRI2 **Red Ridge** 36.39 332 eP P 15 53 36.4 +0.4
comp=Z,8.9nm,0.7s
MOOW **Moose Ponds** 36.44 333 eP P 15 53 36.4 +0.1
comp=Z,5.2nm,0.7s
ELK **Elko** 36.50 325 eP P 15 53 38.7 +1.8
ELK PcP PcP 15 56 01.6 +1.3
ELK ePcP PcP 15 56 02.1 +1.9
ELK eScP ScP 15 59 50.1 +5.7
ELK **Elko** 36.50 325 P P 15 53 37.8 +0.8
comp=Z,2.3nm,0.8s,baz=130,slow=3.8,SNR=8.5
ELK PcP PcP 15 56 01.6 +1.3
comp=Z,2.5nm,0.7s,baz=104,slow=3.4,SNR=6.0
ELK LR LR 16 12 16.7
comp=Z,450nm,18.4s,baz=140,slow=42
G20A **Bridger** 36.57 337 P P 15 53 37.2 -0.1
baz=37,SNR=11
PTRM **Twissleman Ran** 36.59 314 eP P 15 53 40.0 +2.4
PTRM eScP ScP 15 59 44.2 -0.4
E23A **Ismay** 36.63 341 P P 15 53 37.9 +0.1
baz=37,SNR=21
IMW **Indian Meadow** 36.64 333 eP P 15 53 38.2 0.0
comp=Z,7.0nm,0.6s
IMW ePcP PcP 15 56 01.9 +1.2
F21A **Absaloka Mine,** 36.67 338 P P 15 53 38.4 +0.2
baz=37
H18A **Shoshone NF, C** 36.71 335 P P 15 53 38.9 +0.3
baz=37,SNR=17
NV11 **Mina Array Sit** 36.77 320 eP P 15 53 40.7 +1.6
E22A **Miles City** 36.79 340 P P 15 53 39.5 +0.4
baz=37
NVAR **Mina Array Bea** 36.86 320 P P 15 53 41.8 +1.8
NVAR PcP PcP 15 56 02.5 +1.1
NVAR ScP ScP 15 59 49.8 +4.0
NVAR **Mina Array Bea** 36.86 320 P P 15 53 41.8 +1.8
comp=Z,3.0nm,0.6s,baz=132,slow=7.0,SNR=34
NVAR PcP PcP 15 56 02.5 +1.1
comp=Z,1.0nm,0.5s,baz=122,slow=3.3,SNR=10
NVAR ScP ScP 15 59 49.8 +4.0
comp=Z,1.3nm,0.7s,baz=133,slow=4.2,SNR=11
NVAR LR LR 16 10 47.9
comp=Z,478nm,20.3s,baz=230,slow=40
D24A **Glendive** 36.88 342 P P 15 53 40.5 +0.7
baz=37,SNR=18
F20A **Billings** 37.03 337 P P 15 53 42.1 +0.9
baz=37,SNR=8.8
G18A **Lazy EL Ranch,** 37.19 335 ⇑P P 15 53 42.8 +0.2
baz=37,SNR=12
D23A **Lindsay** 37.20 341 P P 15 53 43.3 +0.7
baz=37
E21A **Keefer Ranch,** 37.27 339 P P 15 53 43.7 +0.5
baz=37,SNR=7.6
C24A **Savage** 37.28 342 P P 15 53 43.9 +0.7
baz=37,SNR=9.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
F19A	Roth Farm, Mol	37.38	336	P	P	15 53 44.5	+0.2
	baz=38,SNR=16						
H16A	Russell Place,	37.41	333	P	P	15 53 45.5	+0.9
	baz=38						
D22A	Cohagen	37.49	340	P	P	15 53 45.8	+0.7
	baz=38,SNR=20						
GCMT	Greycliff	37.62	336	P	P	15 53 46.4	+0.2
	comp=Z,5.4nm,0.6s						
E20A	Meyer Farm, Mu	37.62	338	P	P	15 53 46.6	+0.5
	baz=38,SNR=32						
G17A	Pierce Place,	37.68	334	P	P	15 53 46.9	+0.2
	baz=38						
D21A	La Casta Ranch	37.70	339	P	P	15 53 47.8	+1.0
	baz=38,SNR=6.3						
F18A	Big Timber	37.73	336	P	P	15 53 47.6	+0.5
	baz=38,SNR=15						
C23A	Lambert	37.75	342	P	P	15 53 47.5	+0.3
	baz=38						
E19A	Rath Farm, Rou	37.83	337	P	P	15 53 48.6	+0.6
	baz=38,SNR=9.2						
I14A	Mackay	37.84	330	⇓P	P	15 53 49.3	+1.1
	baz=38,SNR=11						
C22A	Vida	37.92	341	P	P	15 53 49.6	+0.9
	baz=38,SNR=12						
CMB	Columbia Colle	37.98	318	*e*P	P	15 53 49.9	+0.6
	comp=Z,3.0nm,1.0s						
ULM	Lac du Bonnet	38.04	352	*e*P	P	15 53 48.1	-1.4
	comp=Z,15nm,0.7s						
ULM	Lac du Bonnet	38.04	352	P	P	15 53 48.1	-1.4
	comp=Z,15nm,0.6s,baz=168,slow=8.4,SNR=18						
ULM				LR	LR	16 11 16.0	
	comp=Z,311nm,20.6s,baz=171,slow=39						
HLID	Hailey	38.04	329	*e*P	P	15 53 49.7	-0.2
	comp=Z,4.3nm,1.0s						
HLID				*e*PcP	PcP	15 56 06.5	+1.7
HLID				*e*ScP	ScP	15 59 54.2	+4.1
HLID	Hailey	38.04	329	P	P	15 53 50.4	+0.5
	baz=38						
DGMT	Dagmar	38.06	343	*e*P	P	15 53 50.0	+0.2
	comp=Z,71nm,0.6s						
DGMT	Dagmar	38.06	343	P	P	15 53 50.3	+0.5
	baz=38,SNR=32						
G16A	Moss Hill, Enn	38.07	333	P	P	15 53 51.0	+0.9
	baz=38						
F17A	Fitzpatrick Pl	38.12	335	P	P	15 53 51.5	+1.1
	baz=38,SNR=17						
D20A	Manuel Ranch,	38.12	338	P	P	15 53 51.3	+1.0
	baz=38,SNR=31						
MCMT	McKenzie Canyo	38.23	332	*e*P	P	15 53 52.9	+1.3
	comp=Z,6.2nm,0.7s						
B23A	Brockton	38.29	342	P	P	15 53 52.4	+0.7
	baz=38,SNR=18						
BOZ	Bozeman (W)	38.32	334	*e*P	P	15 53 52.2	+0.1
	comp=Z,4.8nm,0.6s						
G15A	Dillon	38.32	333	P	P	15 53 53.4	+1.1
	baz=38,SNR=9.7						
E18A	Harlowton	38.35	336	⇓P	P	15 53 53.0	+0.5
	baz=38,SNR=9.1						
C21A	Desert Coulee	38.39	340	P	P	15 53 53.4	+0.8
	baz=38,SNR=6.7						
A24A	Westby	38.42	344	P	P	15 53 53.4	+0.6
	baz=38,SNR=14						
F16A	Kennard Place,	38.43	334	⇓P	P	15 53 53.6	+0.6
	baz=38,SNR=8.4						
B22A	Reddig Ranch S	38.45	341	P	P	15 53 53.6	+0.5
	baz=38,SNR=12						
D19A	Cripps Ranch,	38.45	338	P	P	15 53 53.9	+0.7
	baz=38,SNR=22						
DLMT	Dillon	38.52	333	*e*P	P	15 53 53.9	0.0
	comp=Z,6.1nm,0.8s						
I12A	Atlanta	38.57	329	P	P	15 53 54.5	+0.1
	baz=39						
C20A	Veseth Ranch,	38.60	339	P	P	15 53 55.1	+0.8
	baz=39,SNR=16						
E17A	Martinsdale	38.65	335	P	P	15 53 55.5	+0.6
	baz=39,SNR=9.6						
MFID	Camas Ranch	38.66	328	*e*P	P	15 53 55.9	+0.9
	comp=Z,3.0nm,0.7s						
MFID				*e*PcP	PcP	15 56 07.7	+1.0
MFID	Camas Ranch	38.66	328	P	P	15 53 56.0	+0.9
	baz=39						
LRM	Limekiln Ridge	38.81	333	*e*P	P	15 53 56.8	+0.3
F15A	Butte	38.85	333	P	P	15 53 57.9	+1.2
	baz=39,SNR=6.3						
B21A	Ellsworth Farm	38.88	340	P	P	15 53 58.0	+1.3
	baz=39						
H12A	Diamond D Ranc	38.98	330	P	P	15 53 58.0	+0.3
	baz=39						
BEKR	Beckworth	38.99	320	*e*P	P	15 53 59.0	+1.0
	comp=Z,1.5nm,0.8s						
C19A	Slack Wire Ran	38.99	338	P	P	15 53 58.3	+0.6
	baz=39,SNR=33						
A22A	Carney Farms,	39.03	342	P	P	15 53 58.6	+0.6
	baz=39,SNR=17						
E16A	East Helena	39.04	335	P	P	15 53 58.9	+0.7
	baz=39						
D17A	Six Diamond Ra	39.14	336	P	P	15 53 59.6	+0.6
	baz=39						
A21A	Bergtoll Ranch	39.35	341	P	P	15 54 01.6	+1.0
	baz=39,SNR=9.7						
E15A	Deer Lodge	39.37	334	⇑P	P	15 54 01.5	+0.5
	baz=40,SNR=11						
D16A	Dana Ranch, Ca	39.39	335	P	P	15 54 01.7	+0.6
	baz=40,SNR=13						
EGMT	Eagleton	39.50	338	P	P	15 54 02.6	+0.7
	baz=40,SNR=20						
WVOR	Wild Horse Val	39.53	324	*e*P	P	15 54 02.4	0.0
	comp=Z,5.6nm,0.8s						
C17A	Wharram Farm,	39.56	336	P	P	15 54 03.0	+0.5
	baz=40,SNR=16						
B19A	Brinkman Farms	39.56	339	P	P	15 54 03.3	+0.8
	baz=40,SNR=8.5						
A20A	Cobblestone Ra	39.58	340	P	P	15 54 03.2	+0.7
	baz=40,SNR=12						
G12A	Big Creek, Yel	39.63	330	P	P	15 54 03.4	+0.3
	baz=40						
F13A	Darby	39.64	332	P	P	15 54 03.4	+0.2
	baz=40						
E14A	Clinton	39.73	333	P	P	15 54 05.1	+1.1
	baz=40						
D15A	Lincoln	39.80	334	⇓P	P	15 54 04.6	+0.1
	baz=40,SNR=11						
B18A	Beardsley Farm	39.81	338	P	P	15 54 05.2	+0.7
	baz=40,SNR=17						
A19A	Klindworth Far	39.90	339	P	P	15 54 05.6	+0.4
	baz=40,SNR=13						
LVC	Limon Verde	39.95	151	*e*P	P	15 54 06.8	+0.6
	comp=Z,32nm,1.1s						
CHMT	Chamberlain Mo	40.01	334	*e*P	P	15 54 06.8	+0.5
F12A	Elk City	40.05	331	P	P	15 54 06.8	+0.2
	baz=40,SNR=14						
E13A	Victor	40.07	332	P	P	15 54 06.5	-0.2
	baz=40,SNR=11						
C16A	Fuhringer Ranc	40.08	336	P	P	15 54 06.9	+0.1
	baz=40						
B17A	L&G Farms, Che	40.11	337	P	P	15 54 07.2	+0.1
	baz=40,SNR=8.1						
MSO	Missoula	40.25	333	*e*P	P	15 54 08.0	-0.2
	comp=Z,2.3nm,0.6s						
D14A	Greenough	40.25	334	P	P	15 54 08.2	-0.1
	baz=40,SNR=7.1						
A18A	Metzger Ranch,	40.28	338	P	P	15 54 08.6	+0.2
	baz=40,SNR=21						
SLMT	Seeley Lake	40.37	334	*e*P	P	15 54 10.2	+0.9
C15A	Salmond Ranch,	40.41	335	⇓P	P	15 54 09.7	+0.1
	baz=40,SNR=11						
A17A	Triple J Farms	40.61	338	P	P	15 54 11.4	+0.2
	baz=41,SNR=34						
D13A	Huson	40.68	333	⇑P	P	15 54 11.8	0.0
	baz=41,SNR=6.1						
B15A	Bradely Ranch,	40.82	336	P	P	15 54 13.1	+0.2
	baz=41,SNR=7.7						
A16A	West Butte Ran	40.95	337	P	P	15 54 14.5	+0.4
	baz=41						
D12A	Red Ives Fores	41.05	332	P	P	15 54 15.0	+0.1
	baz=41						
BSMT	Bassoo Peak	41.40	333	*e*P	P	15 54 17.6	-0.2
A15A	Johnson Ranch,	41.42	336	P	P	15 54 18.1	+0.3
	baz=42,SNR=24						
YBH	Yreka Blue Hor	41.52	321	P	P	15 54 18.5	-0.3
YBH				PcP	PcP	15 56 16.1	+0.2
YBH	Yreka Blue Hor	41.52	321	P	P	15 54 18.5	-0.3
	comp=Z,0.8nm,0.5s,baz=82,slow=3.0,SNR=6.5						
YBH				PcP	PcP	15 56 16.1	+0.2
	comp=Z,1.0nm,0.6s,baz=28,slow=5.0,SNR=3.8						
YBH				LR	LR	16 13 04.9	
	comp=Z,445nm,20.3s,baz=144,slow=38						
B13A	Whitefish	41.66	334	P	P	15 54 20.8	+1.0
	baz=42						
A14A	Double T Ranch	41.69	335	P	P	15 54 20.6	+0.4
	baz=42,SNR=23						
KHMM	Horse Mountain	41.69	319	*e*P	P	15 54 21.6	+1.3
	comp=Z,10nm,1.3s						
KHMM				*e*PcP	PcP	15 56 19.1	+2.6
WALA	Waterton Lakes	41.96	335	*e*P	P	15 54 23.9	+1.7
	comp=Z,0.1nm,0.7s						
C11A	Tepee Creek (N	42.05	332	P	P	15 54 23.9	+1.0
	baz=42						
KRMB	Red Mountain	42.16	320	*e*P	P	15 54 26.8	+2.8
	comp=Z,16nm,1.9s						
NEW	Newport	42.76	332	PcP	PcP	15 56 19.6	-0.2
NEW	Newport	42.76	332	PcP	PcP	15 56 19.6	-0.2
	comp=Z,2.5nm,0.6s,baz=112,slow=6.2,SNR=5.7						
NEW				LR	LR	16 17 45.7	
	comp=Z,247nm,18.0s,baz=146,slow=44						
FFC	Flin Flon	43.35	349	*e*P	P	15 54 32.7	-0.5
	comp=Z,13nm,0.7s						
LCO	Las Campanas	44.82	158	*e*P	P	15 54 45.5	-0.2
	comp=Z,31nm,1.2s						
SCHQ	Schefferville	45.50	18	*e*P	P	15 54 48.7	-1.8
SCHQ	Schefferville	45.50	18	P	P	15 54 48.2	-2.3
	comp=Z,12nm,0.9s,baz=207,slow=6.3,SNR=13						
BDFB	Brasilia	49.00	124	P	P	15 55 16.6	-1.8
BDFB	Brasilia	49.00	124	P	P	15 55 16.6	-1.8
	comp=Z,16nm,0.9s,baz=290,slow=9.1,SNR=18						
BDFB				LR	LR	16 18 04.6	
	comp=Z,368nm,19.9s,baz=310,slow=39						
CPUP	Villa Florida	49.21	142	P	P	15 55 18.4	-1.3
CPUP	Villa Florida	49.21	142	P	P	15 55 18.4	-1.3
	comp=Z,9.0nm,0.6s,baz=319,slow=8.4,SNR=30						
CPUP				LR	LR	16 17 21.9	
	comp=Z,318nm,18.8s,baz=305,slow=38						
FRB	Frobisher Bay	53.02	11	P	P	15 55 45.6	-2.1
FRB	Frobisher Bay	53.02	11	P	P	15 55 45.6	-2.1
	comp=Z,5.7nm,0.5s,baz=219,slow=8.0,SNR=18						
YKA	Yellowknife Ar	53.20	345	P	P	15 55 48.2	-0.9
YKA				PcP	PcP	15 56 56.0	-0.8
YKA				ScP	ScP	16 00 55.0	+3.2
YKA	Yellowknife Ar	53.20	345	P	P	15 55 48.2	-0.9
	comp=Z,12nm,0.6s,baz=140,slow=7.7,SNR=81						
YKA				PcP	PcP	15 56 55.9	-0.8
	comp=Z,2.6nm,0.6s,baz=148,slow=4.0,SNR=8.1						
YKA				ScP	ScP	16 00 55.0	+3.2
	comp=Z,0.8nm,0.7s,baz=139,slow=3.6,SNR=5.6						
YKW3	Yellowknife Ar	53.26	345	*e*P	P	15 55 48.5	-1.0
	comp=Z,0.4nm,0.8s						
DLBC	Dease Lake	55.31	335	*e*P	P	15 56 04.9	+0.2
DLBC	Dease Lake	55.31	335	P	P	15 56 05.1	+0.4
	comp=Z,6.3nm,0.7s,baz=129,slow=7.6,SNR=10						
PLCA	Paso Flores	55.62	163	*e*P	P	15 56 06.4	-0.7
	comp=Z,26nm,1.2s						
PLCA	Paso Flores	55.62	163	P	P	15 56 07.0	-0.1
	comp=Z,17nm,1.1s,baz=333,slow=9.3,SNR=18						
PLCA				LR	LR	16 14 28.1	
	comp=Z,190nm,19.4s,baz=2.3,slow=30						
TRQA	Tornquist	56.22	155	*e*P	P	15 56 10.3	-1.1
	comp=Z,73nm,1.1s						
RKT	Rikitea	57.58	232	*e*T	T	16 58 14.0	
	comp=Z,7.5nm,0.3s						
RES	Resolute Bay	62.20	358	P	P	15 56 50.6	-1.6
RES	Resolute Bay	62.20	358	P	P	15 56 50.6	-1.6
	comp=Z,7.9nm,0.6s,baz=199,slow=12,SNR=4.3						
INK	Inuvik	62.75	343	P	P	15 56 55.4	-0.5
INK	Inuvik	62.75	343	P	P	15 56 55.4	-0.5
	comp=Z,7.1nm,0.6s,baz=123,slow=7.5,SNR=21						
EGAK	Eagle	63.26	338	*e*P	P	15 56 58.2	-1.3
	comp=Z,4.1nm,0.9s						
DOT	Dot Lake	63.85	336	*e*P	P	15 57 02.7	-0.7
	comp=Z,5.7nm,0.8s						
ILAR	Eielson Array	65.45	336	P	P	15 57 12.8	-1.0
ILAR				PP	PP	15 59 35.7	-2.2
ILAR	Eielson Array	65.45	336	P	P	15 57 12.8	-1.0
	comp=Z,3.3nm,0.7s,baz=162,slow=4.5,SNR=25						
ILAR				PP	PP	15 59 35.7	-2.2
	comp=Z,1.0nm,1.0s,baz=107,slow=6.4,SNR=3.8						
ILAR				LR	LR	16 28 33.0	
	comp=Z,201nm,18.7s,baz=112,slow=39						
MCK	McKinley	65.86	335	P	P	15 57 16.2	-0.3
	comp=Z,6.7nm,1.0s						
COLA	College	65.87	336	*e*P	P	15 57 15.3	-1.1
	comp=Z,1.8nm,0.6s						
TRF	Thorofare Moun	66.33	334	*e*P	P	15 57 18.2	-1.5
	comp=Z,12nm,1.2s						
SUMG	Summit	66.76	15	*e*P	P	15 57 18.9	-3.7
	comp=Z,6.3nm,0.9s						
PPT	Papeete	67.20	245	LR	LR	16 19 35.4	
	comp=Z,422nm,18.8s,baz=148,slow=29						
COLD	Coldfoot	67.66	338	*e*P	P	15 57 28.1	+0.3
	comp=Z,8.4nm,1.0s						
ESDC	Sonseca Array	78.02	52	P	P	15 58 28.8	-1.2
ESDC	Sonseca Array	78.02	52	P	P	15 58 28.8	-1.2
	comp=Z,0.5nm,0.5s,baz=283,slow=4.8,SNR=5.1						
SPITS	Spitsbergen Ar	80.82	12	P	P	15 58 43.2	-1.2
SPITS	Spitsbergen Ar	80.82	12	P	P	15 58 43.2	-1.2
	comp=Z,2.1nm,0.8s,baz=269,slow=3.3,SNR=4.1						
DBIC	Dimbokro	82.52	85	P	P	15 58 53.5	-1.1
DBIC	Dimbokro	82.52	85	P	P	15 58 53.5	-1.1
	comp=Z,1.7nm,0.6s,baz=281,slow=5.2,SNR=3.6						
NOA	NORSAR Array B	83.82	29	LR	LR	16 32 13.0	
	comp=Z,77nm,21.7s,baz=15,slow=33						
FX1	Attu Island--F	84.98	323	LR	LR	16 39 47.9	
	comp=Z,36nm,19.4s,baz=93,slow=38						
ARCES	ARCESS Array B	86.44	19	P	P	15 59 15.9	+2.6
ARCES	ARCESS Array B	86.44	19	P	P	15 59 15.9	+2.6
	comp=Z,0.7nm,0.4s,baz=283,slow=4.3,SNR=7.1						
TORD	Torodi Ar. Bea	87.51	77	P	P	15 59 17.6	-1.9
TORD	Torodi Ar. Bea	87.51	77	P	P	15 59 17.6	-1.9
	comp=Z,0.6nm,0.6s,baz=296,slow=5.1,SNR=14						
FINES	FINESS Array B	90.37	26	LR	LR	16 42 39.7	
	comp=Z,80nm,19.9s,baz=327,slow=37						
ZALV	Zalesovo Beam	113.51	4	PKiKP	PKiKP	16 05 08.0	-1.0
ZALV	Zalesovo Beam	113.51	4	PKiKP	PKiKP	16 05 08.0	-1.0
	comp=Z,1.6nm,0.5s,baz=276,slow=1.7,SNR=11						
CN2	Changchun	115.87	333	*e*PKP	PKPdf	16 05 16.5	+2.6
KURK	Kurchatov	116.00	9	PKP	PKPdf	16 05 13.4	-0.6
KURBB	Kurchatov Arra	116.08	9	PKP	PKPdf	16 05 13.4	-0.7
	comp=Z,0.8nm,0.6s,baz=357,slow=1.7,SNR=21						
BOSA	Boshof	116.78	116	PKP	PKPdf	16 05 16.4	+0.2
BOSA	Boshof	116.78	116	PKP	PKPdf	16 05 16.4	+0.2
	comp=Z,4.0nm,0.9s,baz=174,slow=3.0,SNR=4.5						
KSRS	Korea Array	119.55	327	PKP	PKPdf	16 05 21.3	+0.2
	comp=Z,1.3nm,0.9s,baz=22,slow=1.8,SNR=7.9						
KSAR	Wonju Array Be	119.58	327	PKP	PKPdf	16 05 21.3	+0.1
MKAR	Makanchi Array	120.35	7	PKP	PKPdf	16 05 20.9	-1.6
MKAR	Makanchi Array	120.35	7	PKP	PKPdf	16 05 20.9	-1.6
	comp=Z,0.5nm,0.4s,baz=305,slow=2.6,SNR=13						
MAW	Mawson	121.91	168	PKP	PKPdf	16 05 24.4	-0.3
MAW	Mawson	121.91	168	PKP	PKPdf	16 05 24.4	-0.3
	comp=Z,2.8nm,0.7s,baz=174,slow=3.4,SNR=6.8						
BJI	Beijing	122.81	337	PKP	PKPdf	16 05 26.3	-1.0
BJI				SS	SS	16 23 50.0	+5.7
BJI				LR	LR		
	comp=N,130nm,18.8s						
BJI				LR	LR		
	comp=E,61nm,18.8s						
BJI				LR	LR		
	comp=Z,120nm,20.6s						
HHC	Hu-ho-hao-te	123.66	342	*e*PKP	PKPdf	16 05 26.0	-3.1
HHC				PKS	PKSdf	16 09 01.4	-4.5
HHC				SKS	SKSdf	16 12 30.9	-7.8
HHC				SKKS	SKKSac	16 13 56.2	-12
HHC				SS	SS	16 23 52.3	-2.8
HHC				AMB	AMB		
	comp=Z,150nm,7.8s						
HHC				LR	LR		
	comp=N,140nm,18.4s						
HHC				LR	LR		
	comp=E,140nm,18.4s						
HHC				LR	LR		
	comp=Z,190nm,19.2s						
WMQ	Urumqi	123.78	3	*e*PKP	PKPdf	16 05 31.0	+1.8
WMQ				LR	LR		
	comp=N,240nm,21.5s						
WMQ				LR	LR		
	comp=E,190nm,26.4s						
WMQ				LR	LR		
	comp=Z,240nm,21.5s						
GTA	Gaotai	127.69	352	*e*PKP	PKPdf	16 05 37.4	+0.5
LZH	Lanzhou	130.19	347	*e*PKP	PKPdf	16 05 42.6	+0.8
XAN	Xi'an	130.73	341	PKP	PKPdf	16 05 42.6	-0.1
WHN	Wuhan	131.77	333	PKPbc	PKPdf	16 05 52.3	+7.6
CD2	Chengdu	135.16	345	*e*PKP	PKPdf	16 05 51.2	0.0
WRAB	Tennant Creek	138.18	254	*e*PKPdf	PKPdf	16 05 57.4	+0.5
WRA	Warramunga Arr	138.19	254	PKPpre	PKPpre	16 05 47.0	
WRA				PKP	PKPdf	16 05 57.3	+0.3
WRA	Warramunga Arr	138.19	254	PKhKP	PKPpre	16 05 47.0	
	comp=Z,0.7nm,0.8s,baz=91,slow=3.0,SNR=7.3						
WRA				PKP	PKPdf	16 05 57.3	+0.3
	comp=Z,5.1nm,0.7s,baz=89,slow=2.3,SNR=34						
ASAR	Alice Springs	138.24	249	PKPpre	PKPpre	16 05 47.5	
ASAR				PKP	PKPdf	16 05 57.2	+0.2
ASAR				SKPab	SKPab	16 09 40.3	+3.0
ASAR	Alice Springs	138.24	249	PKhKP	PKPpre	16 05 47.5	
	comp=Z,0.7nm,0.6s,baz=101,slow=2.8,SNR=9.7						
ASAR				PKP	PKPdf	16 05 57.2	+0.2
	comp=Z,3.8nm,1.0s,baz=122,slow=2.3,SNR=16						
ASAR				SKPab	SKPab	16 09 40.3	+3.0
	comp=Z,0.6nm,0.7s,baz=101,slow=2.2,SNR=6.2						
GYA	Guiyang	138.45	339	*e*Pdif	Pdif	16 03 05.8	-2.2
GYA				PKP	PKPdf	16 05 57.0	-0.5
GYA				PP	PP	16 08 49.4	+3.4
GYA				AMB	AMB		
	comp=Z,90nm,7.8s						
KMI	Kunming	140.93	344	PKP	PKPdf	16 06 02.0	-0.2
KMI				PP	PP	16 09 05.2	+3.9
KMI				AMB	AMB		
	comp=Z,57nm,5.1s						
FITZ	Fitzroy Crossi	146.53	256	*e*PKPbc	PKPdf	16 06 13.2	+1.5
HYB	Hyderabad	147.63	23	*i* PKP	PKPdf	16 06 13.5	-0.2
CM31	Chiang Mai Arr	148.28	346	*e*PKPbc	PKPbc	16 06 17.8	-0.3
CMAR	Chiang Mai Arr	148.28	346	PKPbc	PKPdf	16 06 15.9	+1.2
CMAR	Chiang Mai Arr	148.28	346	PKPbc	PKPdf	16 06 15.9	+1.2
	comp=Z,9.2nm,0.6s,baz=327,slow=2.8,SNR=37						

IDC ***07*** *15:51:10.3±7.3, 35°.96N×71°.61E, h80km±67km, mb3.5/7, mb1 3.5/11, mb1mx3.3/32, mbtmp3.5/11, ML3.6/4, MS4.0/2, Ms1 4.0/2, ms1mx2.5/34, Error ellipse: s-maj=56.6km s-min=36.2km az=137.0*

ISCJB ***07*** *15:51:16.1±0.4, 36°.46N±0°.03×71°.45E±0°.07, h114km, mb3.7/6, Error ellipse: s-maj=7.9km s-min=3.8km az=165.8*

NNC ***07*** *15:51:26.5±4.4, 37°.11N×71°.21E, h187km±36km, mb3.2, mpv4.4, Error ellipse: s-maj=38.6km s-min=23.6km az=24.0*

ISC 07 15:51:17.5±0.7**, 36°.48N**±0°.05×**71°.52E**±0°.09**, h114km, n53, σ1s.63**/51**, mb3.8**/6**, 11C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	2.66	173	⇑P	Pn	15 52 00.7	+1.3
CEP				S	Sn	15 52 33.0	+1.5
CHCP	Chirah Chowk	3.15	153	P	Pn	15 52 08.5	+2.8
THW	Thamme Wali	3.68	177	⇑P	Pn	15 52 13.3	+0.6
SARP	Sargodha	4.64	168	P	Pn	15 52 26.0	+0.4
AML	Almayashu	5.89	16	P	Pn	15 52 44.7	+1.9
	SNR=136						
UCH	Uchtor	6.19	21	P	Sn	15 53 57.0	+0.4
	SNR=22						
KZA	Kyzart	6.30	26	P	Pn	15 52 50.3	+2.0
	SNR=58						
EKS2	Erkin-Say	6.42	15	P	Pn	15 52 51.6	+2.0
	SNR=12						
AAK	Ala-Archa	6.56	20	P	Pn	15 52 54.2	+2.5
	SNR=24						
AAK	Ala-Archa	6.56	20	P	Pn	15 52 54.1	+2.5
	9.5nm,0.3s,baz=166,slow=6.3,SNR=40						
AAK				S	Sn	15 54 06.4	+1.3
	3.3nm,0.3s,baz=116,slow=22,SNR=15						
KK31	Karatay Array	6.67	354	⇑P	Pn	15 52 53.4	+0.5
	25nm,0.3s,baz=179,slow=13,SNR=1303						
KK31				⇓S	Sn	15 54 03.5	-3.8
	18nm,0.6s,baz=176,slow=21,SNR=6.2						
KBK	Karagaybulak	6.72	22	P	Pn	15 52 57.0	+3.3
	SNR=7.5						
ULHL	Ulahol	6.82	31	P	Pn	15 52 57.4	+2.2
	SNR=21						
CHMS	Chumysh	6.97	20	P	Pn	15 52 59.0	+1.9
	SNR=19						
SMLA	Simla	7.11	137	*i* P	Pn	15 53 00.0	+1.1
SMLA				*e*S	Sn	15 54 14.8	-3.3
SMLA				AML	AML	15 54 19.5	
	comp=N,908nm,0.3s						
SMLA				AML	AML	15 54 20.6	
	comp=E,976nm,0.2s						
USP	Ospenovka	7.16	18	P	Pn	15 53 01.5	+1.9
	SNR=15						
TKM2	Tokmak 2	7.16	25	⇓P	Pn	15 53 01.4	+1.6
	comp=E,3.9nm,0.3s						
TKM2				⇑S	Sn	15 54 20.3	+0.6
	comp=E,11nm,0.8s						
TKM2	Tokmak 2	7.16	25	P	Pn	15 53 02.0	+2.3
	SNR=7.8						
KHET	Khetri	9.13	155	*e*S	Sn	15 54 59.6	-7.7
KHET				AML	AML	15 55 05.6	
	comp=E,60nm,0.1s						
KHET				AML	AML	15 55 05.7	
	comp=N,74nm,0.2s						
KALG	Kalgarh	9.23	137	*e*S	Sn	15 55 02.5	-7.0
AYAN	Aya Nagar	9.27	148	*e*S	Sn	15 55 03.3	-7.3
AGRA	Agra	10.71	148	*e*S	Sn	15 55 35.4	-10
AGRA				AML	AML	15 55 44.0	
	comp=E,65nm,0.4s						
AGRA				AML	AML	15 55 44.2	
	comp=N,56nm,0.6s						
MKAR	Makanchi Array	13.07	35	P	Pn	15 54 19.1	+0.4
	comp=N,0.1nm,0.3s,baz=220,slow=13,SNR=5.1						
DANN	Dangsing	13.12	125	*e*P	Pn	15 54 18.1	-1.8
	comp=N,30nm,0.6s						
KOLN	Koldanda	13.41	127	*e*P	Pn	15 54 22.3	-1.2
	comp=N,15nm,0.4s						
DMN	Daman	14.51	124	*e*P	Pn	15 54 36.9	-0.8
	comp=N,16nm,0.4s						
KKN	Kakani	14.51	123	*e*P	Pn	15 54 35.9	-1.7
	comp=N,30nm,0.5s						
PKIN	Phulchoki	14.72	123	*e*P	Pn	15 54 40.2	-0.2
	comp=N,17nm,0.4s						
PKI	Pulchoki	14.74	123	*e*P	Pn	15 54 39.6	-1.0
	comp=N,20nm,0.4s						
GUN	Gumba	14.84	121	*e*P	Pn	15 54 40.6	-1.4
	comp=N,14nm,0.4s						
KUR16	Kurchatov Arra	15.01	17	⇑P	Pn	15 54 41.4	-2.2
	comp=N,1.2nm,1.2s						
KURBB	Kurchatov Arra	15.02	17	P	Pn	15 54 42.2	-1.4
	comp=N,0.0nm,0.3s,baz=209,slow=10,SNR=5.3						
KURK	Kurchatov	15.12	18	⇑P	Pn	15 54 42.5	-2.5
	comp=N,2.4nm,0.9s						
AB31	Akbulak array	15.31	330	⇑P	Pn	15 54 45.5	-1.8
	comp=N,2.3nm,0.3s,baz=140,slow=14,SNR=146						
AB31				⇑S	Sn	15 57 24.9	-12
	comp=N,1.2nm,0.5s,baz=151,slow=24,SNR=4.7						
RAMN	Ramite	15.95	122	*e*P	Pn	15 54 54.9	-0.8
	comp=N,11nm,0.3s						
VOSK	Vostochnaya	16.25	359	⇑P	Pn	15 54 56.7	-2.3
	comp=N,2.9nm,1.0s						
TAPN	Taplejung	16.46	119	*e*P	Pn	15 55 01.7	-0.4
	comp=N,16nm,0.7s						
ODAN	Odare	16.55	121	*e*P	Pn	15 55 02.7	-0.3
	comp=N,18nm,0.6s						
BVA0	Borovoye Array	16.57	358	P	Pn	15 55 02.7	-0.1
	comp=N,3.4nm,1.1s,baz=172,slow=13,SNR=15						
BVAR	Borovoye Array	16.57	358	P	Pn	15 55 02.2	-0.7
	comp=N,0.6nm,0.3s,baz=172,slow=12,SNR=13						
ZRNK	Zerenda	16.57	355	⇓P	Pn	15 55 01.1	-1.8
	comp=N,1.7nm,0.6s						
BRVK	Borovoye	16.61	357	⇓P	Pn	15 55 02.8	-0.5
	comp=N,9.6nm,1.3s						
AKTO	Aktyubinsk	17.01	329	⇑P	Pn	15 55 07.5	-0.8
	comp=N,8.8nm,0.8s						
AKTO				⇑S	Sn	15 58 03.4	-14
	comp=N,4.7nm,1.2s						
AKTO	Aktyubinsk	17.01	329	P	Pn	15 55 08.1	-0.2
	comp=N,1.0nm,0.3s,baz=144,slow=10,SNR=30						
ZALV	Zalesovo Beam	19.77	24	P	P	15 55 39.5	+1.1
	comp=N,2.1nm,0.3s,baz=217,slow=11,SNR=12						
BRTR	Keskin Array B	29.84	288	P	P	15 57 13.9	-0.2
	comp=N,0.3nm,0.4s,baz=96,slow=8.9,SNR=3.3						
FINES	FINESS Array B	37.74	326	P	P	15 58 21.4	-0.5
	comp=N,1.8nm,0.9s,baz=117,slow=11,SNR=5.2						
ARCES	ARCESS Array B	41.33	337	P	P	15 58 52.1	+0.5
	comp=N,0.7nm,0.4s,baz=113,slow=8.4,SNR=18						
HFS	Hagfors	43.35	322	P	P	15 59 07.9	-0.1
	comp=N,1.1nm,0.4s,baz=93,slow=12,SNR=15						
NB2	NORSAR Subarra	44.65	323	P	P	15 59 17.6	-0.9
	comp=Z,0.9nm,0.5s,baz=100,slow=7.9						
NOA	NORSAR Array B	44.65	323	P	P	15 59 17.8	-0.7
	comp=Z,0.9nm,0.6s,baz=100,slow=7.7,SNR=5.9						
ESDC	Sonseca Array	57.84	298	LR	LR	16 30 03.4	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,125nm,20.8s,baz=295,slow=40						
TORD	Torodi Ar. Bea	66.14	269	P	P	16 01 49.3	-3.7
	comp=Z,0.4nm,0.4s,baz=52,slow=6.0,SNR=13						
TORD				LR	LR	16 33 35.4	
	comp=Z,111nm,20.5s,baz=95,slow=38						

ISCJB ***07*** *15:56:11.2±0.5, 24°.47N±0°.03×122°.29E±0°.02, h61km±7km, Error ellipse: s-maj=5.1km s-min=2.8km az=164.7*
JMA ***07*** *15:56:11.4±0.2, 24°.71N×122°.34E, h68km, M2.1*
TAP ***07*** *15:56:11.0, 24°.49N×122°.24E, h69km, ML3.1, C*
ISC 07 15:56:11.9±1.3**, 24°.47N**±0°.04×**122°.28E**±0°.02**, h57**km±11km**, n42, σ0s.95**/76**, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWC	Suao	0.42	290	P	Pn	15 56 22.6	-0.1
	baz=288						
TWC				S	Sn	15 56 30.8	+0.2
	baz=288						
ENA	Nanau	0.49	266	P	Pn	15 56 23.6	+0.1
	baz=258						
ENA				S	Sn	15 56 32.9	+1.0
	baz=258						
ILA	Ilan	0.57	302	eP	Pn	15 56 24.3	-0.1
	baz=304						
ILA				eS	Sn	15 56 34.2	+0.8
	baz=304						
TWB1	Santiao Chiao	0.60	334	eP	Pn	15 56 24.2	-0.6
	baz=330						
TWB1				eS	Sn	15 56 33.5	-0.6
	baz=330						
TWE	Neicheng	0.61	295	P	Pn	15 56 24.9	0.0
	baz=294						
TWE				eS	Sn	15 56 34.7	+0.4
	baz=294						
YOJ	Yonaguni jima	0.67	90	P	Pn	15 56 25.7	+0.2
YOJ				eS	Sn	15 56 36.2	+0.7
ENTT	Nioudou	0.67	285	i P	Pn	15 56 25.9	+0.2
	baz=288						
ENTT				S	Sn	15 56 36.4	+0.7
	baz=288						
TWD	Chiawan	0.73	239	P	Pn	15 56 25.9	-0.4
	baz=229						
TWD				eS	Sn	15 56 36.7	-0.2
	baz=229						
NWF	Wu-fen Shan	0.75	323	P	Pn	15 56 26.2	-0.6
	baz=317						
NWF				S	Sn	15 56 36.7	-0.8
	baz=317						
HWA	Hwalien	0.79	232	eP	Pn	15 56 26.8	-0.2
	baz=221						
HWA				eS	Sn	15 56 38.4	+0.3
	baz=221						
NNS	Nan Shan	0.83	268	eP	Pn	15 56 27.3	-0.4
	baz=259						
NNS				eS	Sn	15 56 39.3	0.0
	baz=259						
NSK	Sanguang	0.86	284	P	Pn	15 56 28.1	-0.1
	baz=283						
NSK				S	Sn	15 56 40.0	-0.1
	baz=283						
WHF	Hehuan Shan	0.98	251	P	Pn	15 56 29.7	-0.3
	baz=248						
WHF				S	Sn	15 56 42.7	-0.5
	baz=248						
TWS1	Kuangyinshan	1.01	309	P	Pn	15 56 29.2	-0.7
	baz=316						
TWS1				eS	Sn	15 56 42.8	-0.5
	baz=316						
ESL	Shilin	1.01	230	eP	Pn	15 56 29.0	-1.0
	baz=237						
ESL				eS	Sn	15 56 43.0	-0.3
	baz=237						
TWY	Chenhua	1.02	323	eP	Pn	15 56 29.1	-0.9
	baz=323						
TWY				eS	Sn	15 56 43.7	+0.3
	baz=323						
TWT	Tachien	1.03	258	eP	Pn	15 56 30.6	+0.2
	baz=252						
TWT				S	Sn	15 56 44.2	+0.2
	baz=252						
PCYT	Pengchaiyu	1.17	351	eP	Pn	15 56 31.5	-0.7
	baz=345						
NSTT	Nanjuang	1.18	278	eP	Pn	15 56 32.0	-0.2
	baz=277						
NSTT				eS	Sn	15 56 47.5	+0.2
	baz=277						
EHY	Hungye	1.30	223	eP	Pn	15 56 32.4	-1.4
	baz=212						
EHY				eS	Sn	15 56 49.2	-1.0
	baz=212						
IRIF	Iriomote-Funau	1.33	95	P	Pn	15 56 33.8	-0.4
IRIF				eS	Sn	15 56 50.8	-0.1
TWQ1	Liyutan	1.38	265	eP	Pn	15 56 36.1	+1.2
	baz=264						
NSY	Sanyi	1.39	268	eP	Pn	15 56 33.8	-1.2
	baz=267						
SMLT	Sun Moon Lake	1.39	246	eP	Pn	15 56 35.2	+0.1
	baz=238						
SMLT				eS	Sn	15 56 53.8	+1.3
	baz=238						
TYC	Yuchr	1.42	247	eP	Pn	15 56 35.6	+0.3
	baz=239						
TYC				eS	Sn	15 56 52.9	0.0
	baz=239						
TWF1	Yuli	1.43	219	eP	Pn	15 56 34.1	-1.5
	baz=225						
TWF1				eS	Sn	15 56 51.7	-1.6
	baz=225						
HATJ	Hateruma jima	1.45	106	P	Pn	15 56 36.5	+0.7
HATJ				eS	Sn	15 56 55.2	+1.4
YUS	Yu-Shan	1.56	232	eP	Pn	15 56 37.3	-0.5
	baz=229						
JKRS	Kuro-shima	1.59	98	P	Pn	15 56 37.9	+0.1
JKRS				eS	Sn	15 56 57.6	+0.3
CHKT	Chengkung	1.60	212	eP	Pn	15 56 36.9	-0.9
	baz=201						
CHKT				eS	Sn	15 56 55.0	-2.4
	baz=201						
ALS	Alishan	1.65	235	eP	Pn	15 56 39.3	+0.5
	baz=226						
ALS				eS	Sn	15 57 00.1	+1.0
	baz=226						
CHN5	Tsauling	1.70	240	eP	Pn	15 56 39.7	+0.3
	baz=229						
CHN5				eS	Sn	15 57 02.2	+2.1
	baz=229						
JIJ	Ishigaki jima	1.70	93	P	Pn	15 56 38.7	-0.5
JIJ				eS	Sn	15 56 59.3	-0.6
ELDTW	Lidau	1.72	223	eP	Pn	15 56 38.5	-1.1
	baz=216						
ELDTW				eS	Sn	15 56 58.4	-2.1
	baz=216						
CHN4	Tsaushan	1.90	235	eP	Pn	15 56 41.6	-0.4
	baz=233						
CHN4				eS	Sn	15 57 07.6	+2.8
	baz=233						
WTP	Ta-pu	1.95	232	eP	Pn	15 56 42.5	-0.2
	baz=230						
WTP				eS	Sn	15 57 08.6	+2.5
	baz=230						
TWG	Pinlang	1.98	214	eP	Pn	15 56 41.5	-1.5
	baz=212						
TWK	Hsinying	2.03	234	eP	Pn	15 56 44.7	+0.9
	baz=232						
CHN1	Nanshi	2.05	232	eP	Pn	15 56 44.6	+0.6
	baz=230						
CHN1				eS	Sn	15 57 10.5	+2.0
	baz=230						
JTJ	Tarama	2.21	85	P	Pn	15 56 46.5	+0.3
JTJ				eS	Sn	15 57 12.0	-0.4
EAST	Anshuo	2.46	213	eP	Pn	15 56 49.9	+0.3
	baz=205						
JOGS	Gusukube	2.86	83	eS	Sn	15 57 28.9	+0.6

ISCJB ***07*** *16:05:48.1±0.6, 37°.86N±0°.03×29°.24E±0°.05, h6km±7km, Error ellipse: s-maj=7.4km s-min=4.8km az=17.3*
ISK ***07*** *16:05:48.2, 37°.85N×29°.22E, h9km, MD2.9*
DDA ***07*** *16:05:48.1, 37°.87N×29°.21E, h7km, MD3.0*
CSEM ***07*** *16:05:48.3±0.1, 37°.85N×29°.23E, h8km, MD2.9, Error ellipse: s-maj=4.1km s-min=3.2km az=107.0*
ISC 07 16:05:48.2±0.9**, 37°.86N**±0°.03×**29°.23E**±0°.03**, h12**km±9km**, n30, σ0s.38**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.19	236	PG	Pg	16 05 52.9	+0.4
DENT	Denizli	0.19	236	i Pg	Pg	16 05 52.9	+0.4
DNZL	Cakiroluk	0.23	221	i P	Pg	16 05 52.8	-0.3
DNZL				i S	Sg	16 05 56.5	0.0
DNZL	Cakiroluk	0.23	221	i P	Pg	16 05 52.8	-0.3
DNZL				i S	Sg	16 05 56.5	0.0
KHAL	Karahalli	0.55	22	i P	Pg	16 05 58.3	-0.7
KHAL				i S	Sg	16 06 05.7	-0.6
KHAL	Karahalli	0.55	22	i P	Pg	16 05 58.3	-0.7
KHAL				i S	Sg	16 06 05.7	-0.6
GLHS	Glhisar (BURDU	0.73	163	ePG	Pb	16 06 02.7	-0.3
GLHS	Glhisar (BURDU	0.73	163	ePg	Pb	16 06 02.7	-0.3
KULA	Kula-Manisa	0.79	326	ePG	Pb	16 06 04.2	+0.1
KULA				eSG	Sb	16 06 15.1	+0.3
KULA	Kula-Manisa	0.79	326	ePg	Pb	16 06 04.2	+0.1
KULA				eSg	Sb	16 06 15.1	+0.3
MANT	Manisa	0.82	320	i P	Pg	16 06 03.6	-0.6
MANT	Manisa	0.82	320	i P	Pg	16 06 03.6	-0.6
ISP	Isparta	1.02	92	ePG	Pn	16 06 08.6	+0.1
ISP	Isparta	1.02	92	ePg	Pn	16 06 08.6	+0.1
YER	Yerkesik	1.05	227	ePG	Pb	16 06 08.1	-0.2
YER	Yerkesik	1.05	227	ePg	Pb	16 06 08.1	-0.2
BCK	Bucak	1.15	110	ePN	Pn	16 06 10.3	+0.1
BCK	Bucak	1.15	110	ePn	Pn	16 06 10.3	+0.1
FETY	Fethiye	1.23	186	ePN	Pb	16 06 11.3	-0.1
FETY	Fethiye	1.23	186	ePn	Pb	16 06 11.3	-0.1
GDZ	Gediz	1.24	9	i P	Pg	16 06 12.4	+0.2
GDZ	Gediz	1.24	9	i P	Pg	16 06 12.4	+0.2
SHUT	Suhut-Afyon	1.25	56	ePN	Pg	16 06 12.4	+0.1
SHUT	Suhut-Afyon	1.25	56	ePn	Pg	16 06 12.4	+0.1
ALT	Altintas	1.38	30	ePN	Pb	16 06 14.5	+0.5
ALT	Altintas	1.38	30	ePn	Pb	16 06 14.5	+0.5
TVSB	Tavsanli	1.60	6	ePN	Pb	16 06 17.9	+0.2
TVSB	Tavsanli	1.60	6	ePn	Pb	16 06 17.9	+0.2
DAT	Datca	1.74	230	ePN	Pn	16 06 18.5	+0.2
DAT	Datca	1.74	230	ePn	Pn	16 06 18.5	+0.2

ISCJB ***07*** *16:06:49.8±0.3, 23°.78N±0°.02×121°.63E±0°.02, h30km±2km, Error ellipse: s-maj=3.7km s-min=2.5km az=135.6*
TAP ***07*** *16:06:49.9, 23°.80N×121°.59E, h38km, ML2.8, C*
JMA ***07*** *16:06:51.1±0.3, 23°.89N×121°.67E, h80km, M2.0*
ISC 07 16:06:50.3±0.9**, 23°.79N**±0°.03×**121°.60E**±0°.03**, h33**km±5km**, n36, σ0s.73**/42**, 3D, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESF	Shoufeng Towns	0.12	313	eP	Pb	16 06 55.8	-0.3
	baz=303						
ESL	Shilin	0.15	278	P	Pn	16 06 56.5	0.0
	baz=274						
ESL				eS	Sb	16 07 00.8	+0.1
	baz=274						
HWA	Hwalien	0.18	1	eP	Pb	16 06 57.3	+0.6
	baz=12						
HWA				eS	Sb	16 07 02.4	+1.3
	baz=12						
TWD	Chiawan	0.29	359	P	Pb	16 06 57.8	-0.1
	baz=354						
TWD				S	Sn	16 07 03.4	-0.1
	baz=354						
EHY	Hungye	0.38	222	eP	Pb	16 06 58.6	-0.6
	baz=219						
EHY				eS	Sb	16 07 04.1	-1.1
	baz=219						
WHF	Hehuan Shan	0.47	319⇓	iP	Pb	16 07 00.2	-0.5
	baz=313						
WHF				S	Sb	16 07 07.3	-0.6
	baz=313						
TWF1	Yuli	0.52	213	eP	Pb	16 07 00.3	-0.9
	baz=219						
TWF1				eS	Sb	16 07 07.5	-1.2
	baz=219						
TWT	Tachien	0.60	320	P	Pb	16 07 02.5	-0.2
	baz=315						
TWT				eS	Sb	16 07 10.7	-0.5
	baz=315						
ENA	Nanau	0.65	11⇓	iP	Pn	16 07 02.3	-1.0
	baz=1.0						
ENA				eS	Sb	16 07 11.7	-0.4
	baz=1.0						
SMLT	Sun Moon Lake	0.65	278	P	Pn	16 07 02.8	-0.5
	baz=279						
SMLT				eS	Sb	16 07 12.1	-0.2
	baz=279						
YUS	Yu-Shan	0.67	243	P	Pn	16 07 03.3	-0.6
	baz=236						
YUS				S	Sb	16 07 12.4	-0.8
	baz=236						
NNS	Nan Shan	0.68	342	P	Pn	16 07 03.0	-0.8
	baz=349						
NNS				eS	Sb	16 07 12.1	-1.1
	baz=349						
TYC	Yuchr	0.69	279	eP	Pn	16 07 03.1	-0.7
	baz=283						
TYC				S	Sb	16 07 13.3	+0.1
	baz=283						
CHKT	Chengkung	0.72	197	P	Pn	16 07 03.8	-0.5
	baz=186						
CHKT				S	Sn	16 07 14.2	-0.1
	baz=186						
ALS	Alishan	0.78	249	eP	Pn	16 07 05.5	+0.1
	baz=248						
ALS				S	Sn	16 07 15.8	-0.4
	baz=248						
ELDTW	Lidau	0.80	222	eP	Pn	16 07 04.7	-0.8
	baz=216						
ELDTW				eS	Sn	16 07 14.7	-1.7
	baz=216						
ENTT	Nioudou	0.84	358	P	Pn	16 07 05.1	-0.9
	baz=357						
ENTT				eS	Sn	16 07 17.1	-0.3
	baz=357						
TWC	Suao	0.84	16	eP	Pn	16 07 05.2	-0.8
	baz=4.0						
TWC				eS	Sn	16 07 17.8	+0.5
	baz=4.0						
CHN5	Tsauling	0.87	257	P	Pn	16 07 06.4	0.0
	baz=257						
CHN5				eS	Sn	16 07 18.5	+0.6
	baz=257						
NSK	Sanguang	0.91	346⇓	iP	Pn	16 07 06.6	-0.3
	baz=353						
NSK				S	Sn	16 07 18.1	-0.8
	baz=353						
TWE	Neicheng	0.93	4	eP	Pn	16 07 06.4	-0.7
	baz=3.0						
TWE				eS	Sn	16 07 18.7	-0.6
	baz=3.0						
TWQ1	Liyutan	0.94	306	eP	Pn	16 07 07.6	+0.3
	baz=306						
TWQ1				eS	Sn	16 07 20.1	+0.5
	baz=306						
WGK	Gukeng	0.96	264	eP	Pn	16 07 07.2	-0.3
	baz=263						
WGK				eS	Sn	16 07 20.6	+0.6
	baz=263						
NSTT	Nanjuang	1.00	327	eP	Pn	16 07 08.3	+0.2
	baz=326						
NSTT				S	Sn	16 07 21.4	+0.3
	baz=326						
CHN4	Tsaushan	1.02	245	eP	Pn	16 07 09.3	+0.8
	baz=245						
CHN4				eS	Sn	16 07 23.2	+1.5
	baz=245						
WTP	Ta-pu	1.06	239	eP	Pn	16 07 09.4	+0.5
	baz=239						
WTP				eS	Sn	16 07 23.7	+1.2
	baz=239						
TWG	Pinlang	1.08	207	eP	Pn	16 07 07.6	-1.6
	baz=196						
TWK	Hsinying	1.15	243	eP	Pn	16 07 10.6	+0.4
	baz=243						
TWK				eS	Sn	16 07 25.9	+1.1
	baz=243						
CHN1	Nanshi	1.16	239	eP	Pn	16 07 11.0	+0.7
	baz=239						
CHN1				eS	Sn	16 07 26.2	+1.3
	baz=239						
YOJ	Yonaguni jima	1.45	62	P	Pn	16 07 14.8	+0.5
YOJ				eS	Sn	16 07 32.3	+0.1
EAST	Anshuo	1.56	206	eP	Pn	16 07 16.7	+0.8
	baz=201						
IRIF	Iriomote-Funau	2.02	74	P	Pn	16 07 22.7	+0.6
IRIF				eS	Sn	16 07 46.5	+0.2
HATJ	Hateruma jima	2.04	82	P	Pn	16 07 22.7	+0.4
JKRS	Kuro-shima	2.25	78	P	Pn	16 07 26.2	+1.0
JKRS				eS	Sn	16 07 52.5	+0.6
JIJ	Ishigaki jima	2.39	76	P	Pn	16 07 27.3	0.0
JIJ				eS	Sn	16 07 54.8	-0.7
JTJ	Tarama	2.96	73	P	Pn	16 07 35.3	+0.3
JTJ				eS	Sn	16 08 09.4	+0.1

MAN 07 16:07:57, 13°.45N×120°.13E, h39km, mb4.3, ML3.1, MS2.9, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	1.01	50⇑	iP	Pn	16 08 14.8	-0.1
SJMP	San Jose	1.38	136	eP	Pn	16 08 21.1	+1.4
SJMP				eS	Sn	16 08 37.2	+0.5
ENPP	El Nido	2.34	197	eP	Pn	16 08 34.8	+1.9
BALP	Baler	2.67	31	eP	Pn	16 08 39.2	+1.7

IDC 07 16:09:20.6±3.8**, 24°.07S×179°.20E, h525**km±29km**, mb3.2**/6**, mb1 3.3**/7**, mb1mx3.0**/19**, mbtmp3.2**/7**, Error ellipse: s-maj=55.4km s-min=18.4km az=49.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.91	277	eP	P	16 12 00.6	+2.3
DZM	Mont Dzumac	11.91	277	P	P	16 12 01.9	+3.5
	1.0nm,0.3s,baz=93,slow=18,SNR=18						
URZ	Urewera	14.26	187	P	P	16 12 23.1	+0.6
	1.0nm,0.3s,baz=37,slow=20,SNR=8.8						
URZ				S	S	16 14 47.2	-5.4
	0.6nm,0.3s,baz=228,slow=22,SNR=13						
HNR	Honiara	23.44	305	P	P	16 13 49.4	+0.3
	21nm,0.6s,baz=196,slow=7.4,SNR=5.0						
STKA	Stephens Creek	33.98	248	P	P	16 15 20.8	+0.3
	1.0nm,0.4s,baz=94,slow=9.5,SNR=4.6						
ASAR	Alice Springs	41.28	261	P	P	16 16 20.1	-0.3
	0.9nm,0.6s,baz=94,slow=7.1,SNR=32						
WRA	Warramunga Arr	41.66	267	P	P	16 16 22.8	-0.5
	0.5nm,0.3s,baz=98,slow=8.3,SNR=14						
WRA				ScP	ScP	16 21 08.6	+0.4
	0.8nm,0.8s,baz=99,slow=4.2,SNR=5.6						
VNDA	Vanda	54.16	185	P	P	16 17 56.0	+0.2
	0.6nm,0.4s,baz=11,slow=8.9,SNR=12						
MAW	Mawson	77.34	201	P	P	16 20 20.3	-0.3
	2.2nm,0.5s,baz=146,slow=8.7,SNR=9.7						
TORD	Torodi Ar. Bea	168.88	193	PKPab	PKPab	16 29 41.6	-0.9
	0.8nm,0.5s,baz=164,slow=3.4,SNR=9.4						

ISCJB ***07*** *16:17:25.9±0.6, 16°.38N±0°.05×86°.71W±0°.09, h10km, mb4.0/16, Error ellipse: s-maj=12.6km s-min=6.8km az=17.5*
IDC ***07*** *16:17:25.6±1.1, 16°.64N×86°.25W, h0km, mb3.8/8, mb1 4.2/9, mb1mx3.8/25, mbtmp3.9/9, ML4.9/1, Error ellipse: s-maj=76.1km s-min=17.0km az=58.0*
NEIC ***07*** *16:17:27.5±0.6, 16°.39N×86°.64W, h10km, mb4.2/15, Error ellipse: s-maj=17.4km s-min=8.4km az=79.0*
NEIC Felt at Jose Santos Guardiola and La Ceiba.
CASC ***07*** *16:17:52.0±3.2, 15°.35N×88°.32W, h121km±40km, MD4.2, mb4.2(NEIC)*
ISC 07 16:17:27.6±0.7**, 16°.43N**±0°.04×**86°.7W**±0°.1**, h10**km**, n44, σ1s.21**/43**, mb4.0**/16**, North of Honduras**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	2.43	193	ePn	Pn	16 18 06.8	-0.6
CAHU	Cacacuatique	3.03	209	eP	Pb	16 18 21.9	+0.1
MRL	Marmol	3.19	245	eP	Pn	16 18 16.0	-2.1
MRL				eS	Sn	16 18 40.3	-16
CNCH	Conchagua	3.33	200	eP	Pb	16 18 27.0	+0.1
NBG	Las Nubes	3.97	243	eP	Pn	16 18 27.7	-1.2
NBG				eS	Sn	16 18 54.0	-22
TEIG	Tepich	4.06	338	ePn	Pn	16 18 28.4	-1.5
TEIG				Pg	Pb	16 18 38.6	-0.7
TEIG				eSn	Sn	16 19 11.8	-5.8
TEIG				Sn	Sb	16 19 11.9	-17
TEIG	Tepich	4.06	338	Pn	Pn	16 18 28.8	-1.1
	82nm,0.3s,baz=337,slow=2.3,SNR=334						
TEIG				Pg	Pb	16 18 38.6	-0.7
	197nm,0.3s,baz=119,slow=1.8,SNR=41						
TEIG				Sn	Sn	16 19 12.0	-5.6
	138nm,0.3s,baz=253,slow=20,SNR=28						
FUG	Fuego 3	4.46	244	eP	Pn	16 18 34.5	-1.1
JAT	Jato	5.21	247	eP	Pn	16 18 45.6	-0.1
JAT				eS	Sn	16 19 23.0	-23
LRAL	Lakeview Retre	16.53	359	eP	Pn	16 21 19.5	-0.2
	5.4nm,0.3s						
JCT	Junction City	18.42	322	eP	Pn	16 21 44.9	+1.7
	9.5nm,0.5s						
SWET	Sewanee	18.72	2	eP	Pn	16 21 50.2	+3.3
	3.8nm,0.3s						
CPCT	Cooper Cave	19.04	5	eP	Pn	16 21 55.3	+4.7
MIAR	Mount Ida	19.07	342	eP	Pn	16 21 51.4	+0.5
	3.4nm,0.8s						
WVT	Waverly	19.64	357	P	Pn	16 22 00.6	+2.7
	5.5nm,0.8s						
TXAR	Lajitas Array	20.20	312	P	P	16 22 03.3	+0.5
TXAR	Lajitas Array	20.20	312	P	P	16 22 03.3	+0.5
	5.6nm,0.8s,baz=128,slow=11,SNR=50						
TZTN	Tazewell	20.23	7	P	Pn	16 22 05.2	+0.3
	9.2nm,1.2s						
WMOK	Wichita Mounta	21.21	332	eP	P	16 21 59.5	-14
SIUC	Southern Illin	21.32	354	P	P	16 22 15.5	+0.8
	13nm,0.7s						
SIUC				e		16 22 24.8	
USIN	University of	21.47	358	P	P	16 22 16.0	-0.2
	24nm,0.7s						
WCI	Wyandotte Cave	21.72	1	eP	P	16 22 20.1	+1.1
	19nm,0.8s						
WCI				e		16 22 28.3	
AMTX	Amarillo	22.75	327	eP	P	16 22 28.6	-1.6
	14nm,0.7s						
MNTX	Cornudas Mount	22.80	315	eP	P	16 22 30.9	+0.3
	6.0nm,1.2s						
ANMO	Albuquerque	25.55	320	P	P	16 22 58.3	+1.4
ANMO	Albuquerque	25.55	320	P	P	16 22 58.3	+1.4
	1.3nm,0.7s,baz=140,slow=14,SNR=3.7						
TUC	Tucson	26.95	310	P	P	16 23 11.4	+1.9
	4.8nm,0.9s						
TUC				e		16 23 23.5	
PDAR	Pinedale Array	32.72	328	P	P	16 24 00.4	-0.3
PDAR	Pinedale Array	32.72	328	P	P	16 24 00.4	-0.3
	0.7nm,0.9s,baz=146,slow=9.8,SNR=3.5						
TPAW	Teton Pass	33.95	328	eP	P	16 24 11.5	0.0
	3.2nm,0.8s						
RRI2	Red Ridge	34.04	327	eP	P	16 24 12.9	+0.6
	7.1nm,1.2s						
NVAR	Mina Array Bea	35.32	315	P	P	16 24 24.6	+1.3
NVAR	Mina Array Bea	35.32	315	P	P	16 24 24.6	+1.3
	0.7nm,0.8s,baz=122,slow=8.7,SNR=8.9						
MCMT	McKenzie Canyo	35.86	328	eP	P	16 24 28.8	+0.9
	1.4nm,0.8s						
SIV	San Ignacio	40.95	141	P	P	16 25 08.9	-1.8
SIV	San Ignacio	40.95	141	P	P	16 25 08.9	-1.8
	1.5nm,0.7s,baz=339,slow=9.6,SNR=5.9						
YKA	Yellowknife Ar	50.00	344	P	P	16 26 21.2	-0.6
YKA	Yellowknife Ar	50.00	344	P	P	16 26 21.2	-0.6
	0.3nm,0.5s,baz=136,slow=7.3,SNR=4.9						
PLCA	Paso Flores	58.82	166	P	P	16 27 26.8	+0.4
PLCA	Paso Flores	58.82	166	P	P	16 27 26.8	+0.4
	0.6nm,0.3s,baz=0.0,slow=12,SNR=3.6						
ILAR	Eielson Array	62.71	335	P	P	16 27 52.1	-0.4
ILAR	Eielson Array	62.71	335	P	P	16 27 52.1	-0.4
	0.4nm,0.7s,baz=106,slow=6.1,SNR=4.5						
ASAR	Alice Springs	141.29	253	PKP	PKPdf	16 36 59.3	-0.2
ASAR	Alice Springs	141.29	253	PKP	PKPdf	16 36 59.3	-0.2
	0.4nm,0.8s,baz=110,slow=3.6,SNR=2.8						

ISCJB ***07*** *16:25:15.0±0.5, 37°.87N±0°.03×29°.23E±0°.04, h11km±5km, Error ellipse: s-maj=5.7km s-min=4.4km az=6.3*
ISK ***07*** *16:25:14.9, 37°.83N×29°.11E, h27km, MD2.9*
CSEM ***07*** *16:25:14.7±0.2, 37°.85N×29°.22E, h12km, MD2.9, Error ellipse: s-maj=5.2km s-min=4.1km az=96.0*
DDA ***07*** *16:25:15.1, 37°.87N×29°.22E, h6km, MD2.8*
ISC 07 16:25:14.8±0.9**, 37°.85N**±0°.02×**29°.20E**±0°.03**, h16**km±7km**, n35, σ0s.61**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.17**	**234**	PG	**Pb**	**16 25 20.2**	**+0.6**
DENT	**Denizli**	**0.17**	**234**	*i* Pg	**Pb**	**16 25 20.2**	**+0.6**
DNZL	**Cakiroluk**	**0.20**	**218**	*i* P	**Pg**	**16 25 19.8**	**0.0**
DNZL				*i* S	**Sg**	**16 25 23.5**	**+0.4**
DNZL	**Cakiroluk**	**0.20**	**218**	*i* P	**Pg**	**16 25 19.8**	**0.0**
DNZL				*i* S	**Sg**	**16 25 23.5**	**+0.4**
KHAL	**Karahalli**	**0.57**	**24**	*i* P	**Pg**	**16 25 25.6**	**-0.5**
KHAL				*i* S	**Sg**	**16 25 32.8**	**-0.9**
KHAL	**Karahalli**	**0.57**	**24**	*i* P	**Pg**	**16 25 25.6**	**-0.5**
KHAL				*i* S	**Sg**	**16 25 32.8**	**-0.9**
GOLH	**Golhisar**	**0.68**	**155**	*i* P	**Pg**	**16 25 28.5**	**+0.4**
GOLH				*i* S	**Sn**	**16 25 39.8**	**-0.3**
GOLH	**Golhisar**	**0.68**	**155**	*i* P	**Pg**	**16 25 28.5**	**+0.4**
GOLH				*i* S	**Sn**	**16 25 39.8**	**-0.3**
GLHS	**Glhisar (BURDU**	**0.73**	**161**	*e*PG	**Pb**	**16 25 29.9**	**+0.6**
GLHS	**Glhisar (BURDU**	**0.73**	**161**	*e*Pg	**Pb**	**16 25 29.9**	**+0.6**
KULA	**Kula-Manisa**	**0.79**	**327**	*e*PG	**Pg**	**16 25 30.4**	**+0.2**
KULA				*e*SG	**Sg**	**16 25 40.8**	**+0.1**
KULA	**Kula-Manisa**	**0.79**	**327**	*e*Pg	**Pg**	**16 25 30.4**	**+0.2**
KULA				*e*Sg	**Sg**	**16 25 40.8**	**+0.1**
MANT	**Manisa**	**0.82**	**322**	*i* P	**Pg**	**16 25 30.7**	**-0.1**
MANT	**Manisa**	**0.82**	**322**	*i* P	**Pg**	**16 25 30.7**	**-0.1**
YER	**Yerkesik**	**1.02**	**226**	*e*PG	**Pb**	**16 25 32.8**	**-1.4**
YER	**Yerkesik**	**1.02**	**226**	*e*Pg	**Pb**	**16 25 32.8**	**-1.4**
ISP	**Isparta**	**1.04**	**91**	*e*PN	**Pb**	**16 25 34.8**	**+0.2**
ISP	**Isparta**	**1.04**	**91**	*e*Pn	**Pb**	**16 25 34.8**	**+0.2**
AYDN	**Tasoluk**	**1.07**	**260**	*i* P	**Pn**	**16 25 35.8**	**+0.6**
AYDN				*i* S	**Sn**	**16 25 50.6**	**+0.9**
AYDN	**Tasoluk**	**1.07**	**260**	*i* P	**Pn**	**16 25 35.8**	**+0.6**
AYDN				*i* S	**Sn**	**16 25 50.6**	**+0.9**
BCK	**Bucak**	**1.17**	**109**	*e*PN	**Pn**	**16 25 36.5**	**-0.1**
BCK	**Bucak**	**1.17**	**109**	*e*Pn	**Pn**	**16 25 36.5**	**-0.1**
FETY	**Fethiye**	**1.22**	**185**	*e*PN	**Pn**	**16 25 36.5**	**-0.7**
FETY	**Fethiye**	**1.22**	**185**	*e*Pn	**Pn**	**16 25 36.5**	**-0.7**
DEMI	**Demirci**	**1.25**	**342**	*e*P	**Pg**	**16 25 38.8**	**-0.2**
DEMI	**Demirci**	**1.25**	**342**	*e*P	**Pg**	**16 25 38.8**	**-0.2**
GDZ	**Gediz**	**1.25**	**10**	*i* P	**Pg**	**16 25 39.3**	**+0.2**
GDZ	**Gediz**	**1.25**	**10**	*i* P	**Pg**	**16 25 39.3**	**+0.2**
MLSB	**Milas**	**1.26**	**244**	*e*PN	**Pn**	**16 25 36.2**	**-1.6**
SHUT	**Suhut-Afyon**	**1.27**	**56**	*e*PN	**Pb**	**16 25 38.6**	**+0.1**
SHUT	**Suhut-Afyon**	**1.27**	**56**	*e*Pn	**Pb**	**16 25 38.6**	**+0.1**
ALT	**Altintas**	**1.40**	**30**	*e*PN	**Pn**	**16 25 39.9**	**+0.1**
ALT	**Altintas**	**1.40**	**30**	*e*Pn	**Pn**	**16 25 39.9**	**+0.1**
TVSB	**Tavsanli**	**1.61**	**7**	*e*PN	**Pn**	**16 25 43.1**	**+0.4**
TVSB	**Tavsanli**	**1.61**	**7**	*e*Pn	**Pn**	**16 25 43.1**	**+0.4**

JMA 07 16:25:57.9, 35°.05N×132°.22E, h12km, M0.9, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGT	**Gotsu**	**0.10**	**103**	P	Pg	16 26 00.6	-0.1
JGT				S	Sg	16 26 02.5	-0.2
JHT	**Toyohira**	**0.42**	**157**	P	Pg	16 26 06.1	-0.2
JHIK	**Hikimi**	**0.57**	**205**	P	Pg	16 26 08.7	-0.4
JHIK				S	Sg	16 26 16.4	-0.3
JHS	**Saijyo**	**0.74**	**94**	P	Pg	16 26 11.9	-0.4
JHM	**Kurahashi**	**0.94**	**164**	P	Pg	16 26 15.7	-0.4
JHM				S	Sg	16 26 28.0	-0.4

*ISCJB **07** 16:26:05.8±0.2, 43°.77N±0°.04×130°.70E±0°.05, h572km±2km, mb3.8/26, Error ellipse: s-maj=6.9km s-min=4.3km az=147.6*
*BJI **07** 16:26:05.0, 43°.75N×130°.85E, h578km, mB4.6/12, mb4.6/23*
*IDC **07** 16:26:05.8±0.5, 43°.75N×130°.64E, h565km±6km, mb3.2/21, mb1 3.4/25, mb1mx3.4/30, mbtmp3.3/25, Error ellipse: s-maj=11.9km s-min=8.3km az=116.0*
*MOS **07** 16:26:05.0±1.0, 43°.78N×130°.72E, h574km, mb3.8/13, Error ellipse: s-maj=16.0km s-min=10.3km az=84.2*
*SKHL **07** 16:26:05.5±0.4, 43°.78N×130°.77E, h566km±21km, mb5.0/9*
ISC 07 16:26:06.5±0.4, **43°.77N**±0°.05×**130°.74E**±0°.05, **h575**km±4km, **n222**, σ**1s.03**/248, **mb3.8**/26, **15C-21D, Priamurye-Northeastern China border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USRK	**Ussuriysk Arra**	**1.00**	**64**	P	**P**	**16 27 14.6**	**-0.5**
	35nm,0.3s,baz=281,slow=1.7,SNR=442						
USRK				S	**S**	**16 28 08.7**	**-2.6**
	baz=14,slow=3.7,SNR=1.4						
VLA	**Vladivostok**	**1.06**	**127**	*i* P	**P**	**16 27 14.9**	**-0.5**
VLA				*i* S	**S**	**16 28 10.2**	**-1.3**
VLA	**Vladivostok**	**1.06**	**127**	*i* P	**P**	**16 27 14.9**	**-0.5**
VLA				*i* S	**S**	**16 28 10.2**	**-1.3**
MDJ	**Mudanjiang**	**1.18**	**316**	P	**P**	**16 27 15.4**	**-0.1**
MDJ				S	**S**	**16 28 11.9**	**-0.2**
MDJ				smax	smax		
	comp=N,56nm,1.1s						
MDJ				smax	smax		
	comp=E,140nm,0.9s						
CN2	**Changchun**	**3.83**	**272**	*e*P	**P**	**16 27 27.9**	**-1.0**
CN2				*e*S	**S**	**16 28 34.7**	**-1.5**
CN2				smax	smax		
	comp=N,100nm,1.2s						
CN2				smax	smax		
	comp=E,100nm,1.2s						
TEY	**Ternei**	**4.39**	**71**	⇓*i*P	**P**	**16 27 33.2**	**+0.3**
TEY				AMB	AMB	16 27 33.9	
	comp=E,60nm,0.9s						
TEY				*e*S	**S**	**16 28 43.2**	**-0.4**
KLR	**Kul'dur**	**5.51**	**7**	⇑*i*P	**P**	**16 27 38.8**	**-3.0**
KLR				*e*S	**S**	**16 28 56.8**	**-3.3**
KLR				pmax	pmax		
	comp=N,36nm,0.9s						
KLR				pmax	pmax		
	comp=E,64nm,0.9s						
KLR				pmax	pmax		
	comp=Z,260nm,0.9s						
KLR	**Kul'dur**	**5.51**	**7**	⇑*i*P	**P**	**16 27 41.8**	**0.0**
KLR				AMB	AMB	16 27 42.2	
	comp=Z,36nm,0.9s						
KLR				AMB	AMB	16 27 42.2	
	comp=Z,64nm,0.9s						
KLR				AMB	AMB	16 27 42.2	
	comp=Z,260nm,0.9s						
KLR				*e*S	**S**	**16 28 59.8**	**-0.3**
HABR	**Khabarovsk**	**5.58**	**31**	*i* P	**P**	**16 27 42.7**	**+0.3**
HABR	**Khabarovsk**	**5.58**	**31**	⇑*i*P	**P**	**16 27 42.7**	**+0.3**
SNY	**Shenyang**	**5.61**	**252**	⇑P	**P**	**16 27 43.1**	**+0.2**
SNY				S	**S**	**16 29 02.1**	**+0.3**
SNY				smax	smax		
	comp=N,61nm,1.3s						
SNY				smax	smax		
	comp=E,21nm,1.0s						
KSRS	**Korea Array**	**6.66**	**200**	P	**P**	**16 27 52.3**	**-0.1**
KSRS	**Korea Array**	**6.66**	**200**	P	**P**	**16 27 52.3**	**-0.1**
	comp=E,7.6nm,0.3s,baz=18,slow=8.8,SNR=497						
KSRS				S	**S**	**16 29 19.9**	**+1.0**
	baz=14,slow=17,SNR=6.5						
GRNR	**Gornyy**	**8.00**	**27**	⇓*i*P	**P**	**16 28 04.6**	**-0.1**
GRNR				AMB	AMB	16 28 06.0	
	comp=E,230nm,1.0s						
ASAJ	**Asahikawa**	**8.57**	**84**	P	**P**	**16 28 08.7**	**-1.7**
	comp=E,1.3nm,0.3s,baz=258,slow=8.8,SNR=24						
JKA	**Kamikawa-asahi**	**8.57**	**84**	P	**P**	**16 28 08.7**	**-1.7**
YSS	**Yuzh-Sakhalins**	**9.04**	**65**	*e*P	**P**	**16 28 14.8**	**-0.2**
YSS				*e*		16 29 58.0	
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
YSS	**Yuzh-Sakhalins**	**9.04**	**65**	*e*P	**P**	**16 28 14.8**	**-0.2**
YSS				AMB	AMB	16 28 15.7	
	comp=Z,20nm,0.8s						
YSS				*e*S	**S**	**16 29 58.0**	**-2.6**
MJAR	**Matsushiro Arr**	**9.21**	**139**	P	**P**	**16 28 14.8**	**-2.1**
MJAR	**Matsushiro Arr**	**9.21**	**139**	P	**P**	**16 28 14.8**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=321,slow=9.5,SNR=17						
EKMR	**Ekimchan**	**9.42**	**8**	⇓*i*P	**P**	**16 28 17.5**	**-1.2**
EKMR				AMB	AMB	16 28 18.2	
	comp=Z,54nm,0.5s						
UGL	**Uglegorsk**	**9.45**	**52**	*e*P	**P**	**16 28 18.0**	**-1.0**
UGL				AMB	AMB	16 28 19.9	
	comp=Z,60nm,0.8s						
ZEA	**Zeya**	**10.24**	**348**	*e*P	**P**	**16 28 26.8**	**-0.1**
ZEA				AMB	AMB	16 28 27.8	
	comp=Z,100nm,0.7s						
ZEA				*e*S	**S**	**16 30 20.0**	**-2.3**
JNU	**Nakatsue**	**10.63**	**179**	P	**P**	**16 28 30.5**	**-0.8**
	comp=Z,2.7nm,0.3s,baz=16,slow=4.6,SNR=49						
TYV	**Tymovskoe**	**10.76**	**45**	⇑*i*P	**P**	**16 28 32.8**	**+0.7**
TYV				AMB	AMB	16 28 33.8	
	comp=Z,9.0nm,0.8s						
TYV				AMB	AMB	16 28 33.8	
	comp=Z,31nm,0.8s						
KROS	**Kirovskiy**	**10.95**	**348**	⇓*i*P	**P**	**16 28 32.6**	**-1.5**
KROS				AMB	AMB	16 28 33.2	
	comp=Z,26nm,0.6s						
KROS				AMB	AMB	16 28 33.2	
	comp=Z,10.0nm,0.6s						
KROS				AMB	AMB	16 28 33.2	
	comp=Z,36nm,0.6s						
BMKR	**Bomnak**	**11.02**	**354**	*i* P	**P**	**16 28 32.8**	**-2.0**
BMKR				AMB	AMB	16 28 33.6	
	comp=Z,35nm,0.6s						
NKL	**Nikolayevsk**	**11.46**	**32**	⇓*i*P	P	16 28 36.0	-3.3
NKL				AMB	AMB	16 28 36.7	
	comp=Z,20nm,0.9s						
NKL				AMB	AMB	16 28 36.7	
	comp=Z,34nm,0.9s						
BJI	**Beijing**	**11.47**	**256**	P	**P**	**16 28 39.5**	**-0.1**
BJI				S	**S**	**16 30 44.8**	**-0.8**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC	**Hu-ho-hao-te**	**14.48**	**265**	*e*P	**P**	**16 29 09.0**	**-1.4**
HHC				sP	**sPn**	**16 31 15.6**	**+5.9**
HHC				S	S	16 31 34.7	-6.6
HHC				PcS	PcS	16 37 11.4	-4.8
HHC				pmax	pmax		
	comp=Z,36nm,0.8s						
HHC				pmax	pmax		
	comp=Z,100nm,5.0s						
NJ2	**Nanjing**	**14.97**	**223**	*e*P	**P**	**16 29 14.3**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ULN	**Ulaanbaatar**	**16.99**	**292**	P	**P**	**16 29 34.1**	**+0.2**
YAK	**Yakutsk**	**18.31**	**358**	*d i*P	**P**	**16 29 45.0**	**-0.5**
YAK				*e*S	**S**	**16 32 42.9**	**-0.5**
YAK				pmax	pmax		
	comp=Z,35nm,0.9s						
YAK				pmax	pmax		
	comp=N,23nm,1.2s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				smax	smax		
	comp=E,33nm,1.2s						
YAK				smax	smax		
	comp=N,47nm,1.4s						
YAK	**Yakutsk**	**18.31**	**358**	*i* P	**P**	**16 29 45.0**	**-0.5**
WHN	**Wuhan**	**18.52**	**230**	⇓P	**P**	**16 29 47.8**	**-0.2**
XAN	**Xi'an**	**19.51**	**248**	P	**P**	**16 29 56.8**	**-0.2**
XAN				pmax	pmax		
	comp=Z,13nm,6.5s						
ZAK	**Zakamensk**	**19.76**	**299**	*e*P	**P**	**16 29 59.6**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.3s						
ZAK	**Zakamensk**	**19.76**	**299**	*e*P	**P**	**16 29 59.6**	**+0.5**
PETK	**Petropavlovsk-**	**20.07**	**53**	P	**P**	**16 30 02.0**	**+0.3**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
PETK	**Petropavlovsk-**	**20.07**	**53**	P	**P**	**16 30 02.0**	**+0.3**
	comp=Z,0.7nm,0.7s,baz=238,slow=8.3,SNR=3.1						
LZH	**Lanzhou**	**21.94**	**259**	*e*P	**P**	**16 30 20.2**	**+1.3**
LZH				pmax	pmax		
	comp=Z,17nm,0.8s						
CD2	**Chengdu**	**24.87**	**248**	*e*P	**P**	**16 30 43.9**	**-0.9**
CD2				sP	**sP**	**16 33 21.7**	**+1.1**
CD2				PcP	**PcP**	**16 34 01.9**	**+1.5**
CD2				S	**S**	**16 34 27.9**	**-0.3**
CD2				ScS	**ScS**	**16 40 33.9**	**-0.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,100nm,4.2s						
GYA	**Guiyang**	**26.05**	**236**	P	**P**	**16 30 54.8**	**-0.5**
GYA				sP	**sP**	**16 33 33.2**	**0.0**
GYA				PcP	**PcP**	**16 34 04.2**	**+0.9**
GYA				S	**S**	**16 34 45.6**	**-1.2**
GYA				ScP	**ScP**	**16 36 49.8**	**+1.0**
GYA				PcS	**PcS**	**16 37 43.0**	**-2.2**
GYA				ScS	**ScS**	**16 40 39.5**	**-0.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMI	**Kunming**	**29.43**	**240**	P	**P**	**16 31 25.6**	**+0.6**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
WMQ	**Urumqi**	**30.81**	**285**	*e*P	**P**	**16 31 36.4**	**0.0**
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,5.0s						
ZALV	**Zalesovo Beam**	**31.36**	**305**	PcP	**PcP**	**16 34 15.9**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=61,slow=2.3,SNR=7.9						
ZALV				ScP	**ScP**	**16 37 04.0**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=109,slow=3.2,SNR=6.1						
MKAR	**Makanchi Array**	**33.80**	**292**	P	**P**	**16 32 01.6**	**+0.1**
MKAR						16 34 22.9	
MKAR	**Makanchi Array**	**33.80**	**292**	P	**P**	**16 32 01.6**	**+0.1**
MKAR	**Makanchi Array**	**33.80**	**292**	P	**P**	**16 32 01.6**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=91,slow=11,SNR=7.5						
MKAR				PcP	**PcP**	**16 34 22.9**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=69,slow=3.2,SNR=8.8						
CMAR	**Chiang Mai Arr**	**36.74**	**237**	P	**P**	**16 32 26.2**	**0.0**
CMAR	**Chiang Mai Arr**	**36.74**	**237**	P	**P**	**16 32 26.1**	**0.0**
	comp=Z,1.1nm,0.5s,baz=31,slow=7.8,SNR=6.7						
KDAK	**Kodiak Island**	**47.82**	**45**	P	**P**	**16 33 52.6**	**+0.4**
KDAK	**Kodiak Island**	**47.82**	**45**	P	**P**	**16 33 52.6**	**+0.4**
	comp=Z,6.0nm,0.7s,baz=357,slow=3.6,SNR=7.7						
ILAR	**Eielson Array**	**48.40**	**35**	P	**P**	**16 33 56.9**	**+0.4**
ILAR	**Eielson Array**	**48.40**	**35**	P	**P**	**16 33 56.9**	**+0.4**
	comp=Z,3.2nm,0.6s,baz=284,slow=6.8,SNR=35						
ILAR				pP	**pP**	**16 35 42.8**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=293,slow=8.0,SNR=6.0						
ILAR				S	**S**	**16 40 17.1**	**+2.3**
	comp=Z,0.1nm,0.5s,baz=284,slow=15,SNR=4.1						
INK	**Inuvik**	**52.20**	**28**	P	**P**	**16 34 25.2**	**+1.2**
INK	**Inuvik**	**52.20**	**28**	P	**P**	**16 34 25.2**	**+1.2**
	comp=Z,2.8nm,0.9s,baz=317,slow=1.4,SNR=5.4						
ARCES	**ARCESS Array B**	**54.67**	**335**	P	**P**	**16 34 41.3**	**-0.2**
ARCES	**ARCESS Array B**	**54.67**	**335**	P	**P**	**16 34 41.3**	**-0.2**
	comp=Z,1.2nm,0.9s,baz=64,slow=11,SNR=4.6						
ARCES				PcP	**PcP**	**16 35 35.3**	**0.0**
	comp=Z,1.8nm,0.9s,baz=57,slow=4.5,SNR=5.9						
JOF	**Joensuu**	**56.04**	**327**	*e*p	P	16 34 55.6	+4.5
JOF	**Joensuu**	**56.04**	**327**	*e*P	P	16 34 55.6	+4.5
KAF	**Kangasniemi**	**58.43**	**328**	*e*p	**PcP**	**16 35 49.2**	**-1.0**
	comp=Z,1.1nm,0.3s						
FINES	**FINESS Array B**	**58.91**	**327**	P	**P**	**16 35 10.2**	**-0.3**
	comp=Z,0.5nm,0.4s,baz=48,slow=2.8,SNR=5.4						
FINES				PcP	**PcP**	**16 35 51.4**	**-0.8**
	comp=Z,2.2nm,0.4s,baz=55,slow=4.3,SNR=13						
YKA	**Yellowknife Ar**	**61.95**	**29**	P	**P**	**16 35 31.1**	**+0.5**
YKA	**Yellowknife Ar**	**61.95**	**29**	P	**P**	**16 35 31.1**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=312,slow=6.1,SNR=17						
WRA	**Warramunga Arr**	**63.48**	**176**	P	**P**	**16 35 40.6**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=354,slow=6.9,SNR=17						
WRA				PcP	**PcP**	**16 36 11.1**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=353,slow=4.8,SNR=16						
AKASG	**Malin Array Be**	**63.89**	**316**	P	**P**	**16 35 41.6**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**63.89**	**316**	P	**P**	**16 35 41.6**	**-1.6**
	comp=Z,0.7nm,0.3s,baz=44,slow=7.7,SNR=6.1						
NB2	**NORSAR Subarra**	**64.63**	**332**	P	**P**	**16 35 47.3**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=44,slow=6.5						
NOA	**NORSAR Array B**	**64.63**	**332**	P	**P**	**16 35 47.1**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=42,slow=6.1,SNR=6.1						
ASAR	**Alice Springs**	**67.16**	**177**	P	**P**	**16 36 04.0**	**+0.1**
ASAR	**Alice Springs**	**67.16**	**177**	P	**P**	**16 36 04.0**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=357,slow=6.6,SNR=11						
BRTR	**Keskin Array B**	**68.30**	**305**	pP	pP	16 38 06.0	-1.1
	comp=Z,0.5nm,0.8s,baz=116,slow=2.9,SNR=2.9						
NEW	**Newport**	**70.71**	**41**	P	**P**	**16 36 26.3**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=309,slow=6.9,SNR=3.7						
NEW	**Newport**	**70.71**	**41**	P	**P**	**16 36 25.9**	**+0.9**
	baz=71						
NEW	**Newport**	**70.71**	**41**	P	**P**	**16 36 25.9**	**+0.9**
	baz=71						
C11A	**Tepee Creek (N**	**71.42**	**41**	P	**P**	**16 36 29.9**	**+0.7**
	baz=71						
C11A	**Tepee Creek (N**	**71.42**	**41**	P	**P**	**16 36 29.9**	**+0.7**
	baz=71						
B13A	**Whitefish**	**71.87**	**40**	P	**P**	**16 36 32.9**	**+1.1**
	baz=72						
B13A	**Whitefish**	**71.87**	**40**	P	**P**	**16 36 32.9**	**+1.1**
	baz=72						
A14A	**Double T Ranch**	**71.92**	**39**	⇓P	**P**	**16 36 32.7**	**+0.6**
	baz=72,SNR=7.6						
A14A	**Double T Ranch**	**71.92**	**39**	⇓P	**P**	**16 36 32.7**	**+0.6**
	baz=72,SNR=7.6						
A15A	**Johnson Ranch,**	**72.22**	**38**	⇑P	**P**	**16 36 34.4**	**+0.6**
	baz=72,SNR=5.3						
A15A	**Johnson Ranch,**	**72.22**	**38**	⇑P	**P**	**16 36 34.4**	**+0.6**
	baz=72,SNR=5.3						
C13A	**Hot Springs**	**72.33**	**40**	P	**P**	**16 36 35.4**	**+1.0**
	baz=72						
C13A	**Hot Springs**	**72.33**	**40**	P	**P**	**16 36 35.4**	**+1.0**
	baz=72						
YBH	**Yreka Blue Hor**	**72.38**	**49**	P	**P**	**16 36 34.6**	**-0.3**
YBH	**Yreka Blue Hor**	**72.38**	**49**	P	**P**	**16 36 34.6**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=8.1,slow=7.1,SNR=3.7						
D12A	**Red Ives Fores**	**72.41**	**41**	P	**P**	**16 36 35.8**	**+0.8**
	baz=72						
D12A	**Red Ives Fores**	**72.41**	**41**	P	**P**	**16 36 35.8**	**+0.8**
	baz=72						
B14A	**Marquette Ranc**	**72.43**	**39**	⇓P	**P**	**16 36 35.8**	**+0.7**
	baz=72,SNR=7.3						
B14A	**Marquette Ranc**	**72.43**	**39**	⇓P	**P**	**16 36 35.8**	**+0.7**
	baz=72,SNR=7.3						
GERES	**GERESS Array B**	**72.54**	**322**	P	**P**	**16 36 35.8**	**+0.1**
GERES	**GERESS Array B**	**72.54**	**322**	P	**P**	**16 36 35.8**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=43,slow=6.2,SNR=4.5						
C14A	**Swan Lake**	**72.64**	**40**	P	**P**	**16 36 37.2**	**+0.9**
	baz=72						
C14A	**Swan Lake**	**72.64**	**40**	P	**P**	**16 36 37.2**	**+0.9**
	baz=72						
A16A	**West Butte Ran**	**72.75**	**38**	⇓P	**P**	**16 36 37.1**	**+0.2**
	baz=73,SNR=7.8						
A16A	**West Butte Ran**	**72.75**	**38**	⇓P	**P**	**16 36 37.1**	**+0.2**
	baz=73,SNR=7.8						
B15A	**Bradely Ranch,**	**72.79**	**39**	P	**P**	**16 36 37.5**	**+0.4**
	baz=73,SNR=12						
B15A	**Bradely Ranch,**	**72.79**	**39**	P	**P**	**16 36 37.5**	**+0.4**
	baz=73,SNR=12						
D13A	**Huson**	**72.80**	**40**	P	**P**	**16 36 38.1**	**+0.9**
	baz=73						
D13A	**Huson**	**72.80**	**40**	P	**P**	**16 36 38.1**	**+0.9**
	baz=73						
B16A	**M & M Farms, S**	**73.10**	**38**	P	**P**	**16 36 39.7**	**+0.8**
	baz=73						
B16A	**M & M Farms, S**	**73.10**	**38**	P	**P**	**16 36 39.7**	**+0.8**
	baz=73						
A17A	**Triple J Farms**	**73.15**	**37**	⇑P	**P**	**16 36 39.8**	**+0.7**
	baz=73,SNR=6.0						
A17A	**Triple J Farms**	**73.15**	**37**	⇑P	**P**	**16 36 39.8**	**+0.7**
	baz=73,SNR=6.0						
C15A	**Salmond Ranch,**	**73.16**	**39**	⇓P	**P**	**16 36 40.2**	**+0.8**
	baz=73,SNR=17						
C15A	**Salmond Ranch,**	**73.16**	**39**	⇓P	**P**	**16 36 40.2**	**+0.8**
	baz=73,SNR=17						
MSO	**Missoula**	**73.24**	**40**	P	**P**	**16 36 41.3**	**+1.6**
	baz=73						
MSO	**Missoula**	**73.24**	**40**	P	**P**	**16 36 41.3**	**+1.6**
	baz=73						
DZM	**Mont Dzumac**	**73.25**	**146**	*e*LR	LR	16 37 27.0	
	comp=Z,115nm,22.2s						
D14A	**Greenough**	**73.26**	**40**	⇑P	**P**	**16 36 41.0**	**+1.1**
	baz=73,SNR=12						
D14A	**Greenough**	**73.26**	**40**	⇑P	**P**	**16 36 41.0**	**+1.1**
	baz=73,SNR=12						
F12A	**Elk City**	**73.39**	**42**	P	**P**	**16 36 41.5**	**+0.8**
	baz=73						
F12A	**Elk City**	**73.39**	**42**	P	**P**	**16 36 41.5**	**+0.8**
	baz=73						
E13A	**Victor**	**73.40**	**41**	P	**P**	**16 36 41.9**	**+1.2**
	baz=73						
E13A	**Victor**	**73.40**	**41**	P	**P**	**16 36 41.9**	**+1.2**
	baz=73						
C16A	**Fuhringer Ranc**	**73.53**	**39**	P	**P**	**16 36 41.9**	**+0.5**
	baz=73						
C16A	**Fuhringer Ranc**	**73.53**	**39**	P	**P**	**16 36 41.9**	**+0.5**
	baz=73						
A18A	**Metzger Ranch,**	**73.54**	**37**	P	**P**	**16 36 41.8**	**+0.4**
	baz=73						
A18A	**Metzger Ranch,**	**73.54**	**37**	P	**P**	**16 36 41.8**	**+0.4**
	baz=73						
B17A	**L&G Farms, Che**	**73.59**	**38**	P	**P**	**16 36 42.7**	**+1.0**
	baz=73						
B17A	**L&G Farms, Che**	**73.59**	**38**	P	**P**	**16 36 42.7**	**+1.0**
	baz=73						
D15A	**Lincoln**	**73.74**	**40**	P	**P**	**16 36 43.7**	**+1.0**
	baz=74						
D15A	**Lincoln**	**73.74**	**40**	P	**P**	**16 36 43.7**	**+1.0**
	baz=74						
E14A	**Clinton**	**73.75**	**40**	P	**P**	**16 36 43.3**	**+0.6**
	baz=74						
E14A	**Clinton**	**73.75**	**40**	P	**P**	**16 36 43.3**	**+0.6**
	baz=74						
G12A	**Big Creek, Yel**	**73.81**	**42**	P	**P**	**16 36 43.6**	**+0.5**
	baz=74						
G12A	**Big Creek, Yel**	**73.81**	**42**	P	**P**	**16 36 43.6**	**+0.5**
	baz=74						
B18A	**Beardsley Farm**	**73.97**	**37**	⇑P	**P**	**16 36 44.4**	**+0.7**
	baz=74,SNR=5.3						
B18A	**Beardsley Farm**	**73.97**	**37**	⇑P	**P**	**16 36 44.4**	**+0.7**
	baz=74,SNR=5.3						
A19A	**Klindworth Far**	**74.01**	**36**	P	**P**	**16 36 44.7**	**+0.7**
	baz=74						
A19A	**Klindworth Far**	**74.01**	**36**	P	**P**	**16 36 44.7**	**+0.7**
	baz=74						
C17A	**Wharram Farm,**	**74.10**	**38**	P	**P**	**16 36 45.2**	**+0.6**
	baz=74						
C17A	**Wharram Farm,**	**74.10**	**38**	P	**P**	**16 36 45.2**	**+0.6**
	baz=74						
E15A	**Deer Lodge**	**74.14**	**40**	⇓P	**P**	**16 36 45.5**	**+0.6**
	baz=74,SNR=5.3						
E15A	**Deer Lodge**	**74.14**	**40**	⇓P	**P**	**16 36 45.5**	**+0.6**
	baz=74,SNR=5.3						
D16A	**Dana Ranch, Ca**	**74.20**	**39**	⇓P	**P**	**16 36 46.0**	**+0.8**
	baz=74,SNR=6.3						
D16A	**Dana Ranch, Ca**	**74.20**	**39**	⇓P	**P**	**16 36 46.0**	**+0.8**
	baz=74,SNR=6.3						
F14A	**Wisdom**	**74.25**	**41**	P	**P**	**16 36 46.3**	**+0.7**
	baz=74						
F14A	**Wisdom**	**74.25**	**41**	P	**P**	**16 36 46.3**	**+0.7**
	baz=74						
EGMT	**Eagleton**	**74.25**	**37**	⇓P	**P**	**16 36 45.7**	**+0.2**
	baz=74,SNR=5.4						
EGMT	**Eagleton**	**74.25**	**37**	⇓P	**P**	**16 36 45.7**	**+0.2**
	baz=74,SNR=5.4						
H12A	**Diamond D Ranc**	**74.46**	**43**	P	**P**	**16 36 48.0**	**+1.2**
	baz=74,SNR=7.4						
H12A	**Diamond D Ranc**	**74.46**	**43**	P	**P**	**16 36 48.0**	**+1.2**
	baz=74,SNR=7.4						
D17A	**Six Diamond Ra**	**74.50**	**38**	P	**P**	**16 36 47.6**	**+0.7**
	baz=74						
D17A	**Six Diamond Ra**	**74.50**	**38**	P	**P**	**16 36 47.6**	**+0.7**
	baz=74						
F15A	**Butte**	**74.65**	**40**	P	**P**	**16 36 48.8**	**+1.0**
	baz=74,SNR=6.7						
F15A	**Butte**	**74.65**	**40**	P	**P**	**16 36 48.8**	**+1.0**
	baz=74,SNR=6.7						
B20A	**Solberg Farm,**	**74.69**	**36**	P	**P**	**16 36 49.4**	**+1.6**
	baz=74						
B20A	**Solberg Farm,**	**74.69**	**36**	P	**P**	**16 36 49.4**	**+1.6**
	baz=74						
A21A	**Bergtoll Ranch**	**74.73**	**35**	P	**P**	**16 36 48.9**	**+0.9**
	baz=75						
A21A	**Bergtoll Ranch**	**74.73**	**35**	P	**P**	**16 36 48.9**	**+0.9**
	baz=75						
C19A	**Slack Wire Ran**	**74.78**	**37**	P	**P**	**16 36 49.5**	**+1.1**
	baz=75						
C19A	**Slack Wire Ran**	**74.78**	**37**	P	**P**	**16 36 49.5**	**+1.1**
	baz=75						
MFID	**Camas Ranch**	**74.81**	**44**	P	**P**	**16 36 49.9**	**+1.3**
	baz=75,SNR=6.6						
MFID	**Camas Ranch**	**74.81**	**44**	P	**P**	**16 36 49.9**	**+1.3**
	baz=75,SNR=6.6						
I12A	**Atlanta**	**74.88**	**43**	P	**P**	**16 36 50.4**	**+1.3**
	baz=75						
I12A	**Atlanta**	**74.88**	**43**	P	**P**	**16 36 50.4**	**+1.3**
	baz=75						
E17A	**Martinsdale**	**74.94**	**39**	P	**P**	**16 36 50.7**	**+1.3**
	baz=75,SNR=5.7						
E17A	**Martinsdale**	**74.94**	**39**	P	**P**	**16 36 50.7**	**+1.3**
	baz=75,SNR=5.7						
F16A	**Kennard Place,**	**75.09**	**40**	P	**P**	**16 36 50.8**	**+0.6**
	baz=75,SNR=5.4						
F16A	**Kennard Place,**	**75.09**	**40**	P	**P**	**16 36 50.8**	**+0.6**
	baz=75,SNR=5.4						
B21A	**Ellsworth Farm**	**75.13**	**36**	P	**P**	**16 36 51.1**	**+0.9**
	baz=75						
B21A	**Ellsworth Farm**	**75.13**	**36**	P	**P**	**16 36 51.1**	**+0.9**

	baz=75							
A22A	**Carney Farms,** baz=75	**75.15**	**35**	P		**P**	**16 36 51.0**	**+0.6**
A22A	**Carney Farms,** baz=75	**75.15**	**35**	P		**P**	**16 36 51.0**	**+0.6**
G15A	**Dillon** baz=75,SNR=16	**75.15**	**41**	P		**P**	**16 36 50.7**	**+0.1**
G15A	**Dillon** baz=75,SNR=16	**75.15**	**41**	P		**P**	**16 36 50.7**	**+0.1**
C20A	**Veseth Ranch,** baz=75	**75.25**	**37**	P		**P**	**16 36 52.0**	**+1.0**
C20A	**Veseth Ranch,** baz=75	**75.25**	**37**	P		**P**	**16 36 52.0**	**+1.0**
E18A	**Harlowton** baz=75	**75.29**	**38**	P		**P**	**16 36 52.1**	**+0.8**
E18A	**Harlowton** baz=75	**75.29**	**38**	P		**P**	**16 36 52.1**	**+0.8**
D19A	**Cripps Ranch,** baz=75,SNR=6.2	**75.29**	**37**	P		**P**	**16 36 51.6**	**+0.4**
D19A	**Cripps Ranch,** baz=75,SNR=6.2	**75.29**	**37**	P		**P**	**16 36 51.6**	**+0.4**
HLID	**Hailey** baz=75,SNR=6.7	**75.40**	**43**	⇑P		**P**	**16 36 51.9**	**-0.1**
HLID	**Hailey** baz=75,SNR=6.7	**75.40**	**43**	⇑P		**P**	**16 36 51.9**	**-0.1**
B22A	**Reddig Ranch S** baz=76	**75.65**	**35**	P		**P**	**16 36 54.2**	**+1.0**
B22A	**Reddig Ranch S** baz=76	**75.65**	**35**	P		**P**	**16 36 54.2**	**+1.0**
D20A	**Manuel Ranch,** baz=76	**75.68**	**37**	P		**P**	**16 36 54.5**	**+1.2**
D20A	**Manuel Ranch,** baz=76	**75.68**	**37**	P		**P**	**16 36 54.5**	**+1.2**
E19A	**Rath Farm, Rou** baz=76	**75.87**	**38**	P		**P**	**16 36 55.8**	**+1.4**
E19A	**Rath Farm, Rou** baz=76	**75.87**	**38**	P		**P**	**16 36 55.8**	**+1.4**
F18A	**Big Timber** baz=76	**75.88**	**39**	P		**P**	**16 36 55.7**	**+1.2**
F18A	**Big Timber** baz=76	**75.88**	**39**	P		**P**	**16 36 55.7**	**+1.2**
STKA	**Stephens Creek** comp=Z,2.5nm,0.7s,baz=350,slow=6.1,SNR=4.7	**75.93**	**170**	P		**P**	**16 36 54.2**	**-0.5**
B23A	**Brockton** baz=76	**75.94**	**35**	P		**P**	**16 36 55.4**	**+0.7**
B23A	**Brockton** baz=76	**75.94**	**35**	P		**P**	**16 36 55.4**	**+0.7**
A24A	**Westby** baz=76	**75.98**	**34**	P		**P**	**16 36 55.7**	**+0.7**
A24A	**Westby** baz=76	**75.98**	**34**	P		**P**	**16 36 55.7**	**+0.7**
H16A	**Russell Place,** baz=76	**76.08**	**40**	P		**P**	**16 36 56.8**	**+0.9**
H16A	**Russell Place,** baz=76	**76.08**	**40**	P		**P**	**16 36 56.8**	**+0.9**
E20A	**Meyer Farm, Mu** baz=76	**76.13**	**38**	P		**P**	**16 36 56.8**	**+0.9**
E20A	**Meyer Farm, Mu** baz=76	**76.13**	**38**	P		**P**	**16 36 56.8**	**+0.9**
C22A	**Vida** baz=76	**76.13**	**35**	P		**P**	**16 36 56.3**	**+0.5**
C22A	**Vida** baz=76	**76.13**	**35**	P		**P**	**16 36 56.3**	**+0.5**
C23A	**Lambert** baz=76	**76.38**	**35**	P		**P**	**16 36 58.2**	**+1.0**
C23A	**Lambert** baz=76	**76.38**	**35**	P		**P**	**16 36 58.2**	**+1.0**
D22A	**Cohagen** baz=76	**76.47**	**36**	P		**P**	**16 36 58.4**	**+0.6**
D22A	**Cohagen** baz=76	**76.47**	**36**	P		**P**	**16 36 58.4**	**+0.6**
NVAR	**Mina Array Bea** comp=Z,6.7nm,0.8s,baz=296,slow=5.5,SNR=54	**77.11**	**49**	P		**P**	**16 37 03.1**	**+1.6**
H20A	**Greybull** baz=78	**77.75**	**39**	P		**P**	**16 37 05.5**	**+0.8**
H20A	**Greybull** baz=78	**77.75**	**39**	P		**P**	**16 37 05.5**	**+0.8**
F23A	**Volborg** baz=78	**77.93**	**37**	P		**P**	**16 37 06.2**	**+0.6**
F23A	**Volborg** baz=78	**77.93**	**37**	P		**P**	**16 37 06.2**	**+0.6**
ULM	**Lac du Bonnet** comp=Z,1.8nm,0.3s,baz=316,slow=4.5,SNR=3.7	**77.94**	**28**	P		**P**	**16 37 05.4**	**-0.1**
I20A	**Worland** baz=78	**78.10**	**39**	P		**P**	**16 37 07.7**	**+1.0**
I20A	**Worland** baz=78	**78.10**	**39**	P		**P**	**16 37 07.7**	**+1.0**
F24A	**Ekalaka** baz=78	**78.24**	**36**	P		**P**	**16 37 08.1**	**+0.8**
F24A	**Ekalaka** baz=78	**78.24**	**36**	P		**P**	**16 37 08.1**	**+0.8**
PDAR	**Pinedale Array** comp=Z,4.1nm,0.8s,baz=329,slow=1.7,SNR=22	**78.35**	**41**	P		**P**	**16 37 08.9**	**+0.7**
I21A	**Big Trails, Te** baz=78	**78.59**	**39**	P		**P**	**16 37 10.1**	**+0.8**
I21A	**Big Trails, Te** baz=78	**78.59**	**39**	P		**P**	**16 37 10.1**	**+0.8**
R11A	**Troy Canyon, C** baz=78	**78.63**	**47**	P		**P**	**16 37 10.8**	**+1.2**
R11A	**Troy Canyon, C** baz=78	**78.63**	**47**	P		**P**	**16 37 10.8**	**+1.2**
SCHQ	**Schefferville** comp=Z,4.2nm,1.0s,baz=314,slow=12,SNR=3.9	**80.64**	**10**	P		**P**	**16 37 19.9**	**+0.3**
TXAR	**Lajitas Array** comp=Z,1.6nm,0.9s,baz=288,slow=3.0,SNR=18	**91.85**	**45**	P		**P**	**16 38 16.1**	**+2.0**
VNDA	**Vanda** comp=Z,0.5nm,0.6s,baz=302,slow=3.0,SNR=4.5	**122.54**	**172**	PKP		**PKPdf**	**16 43 55.2**	**-0.4**
SNAA	**Sanae**	**144.28**	**203**	*e*PKP		PKPbc	16 44 35.4	-0.8
VNA1	**Neumayer--Stat**	**146.32**	**203**	*e*PKP		**PKPbc**	**16 44 41.8**	**-0.2**
LPAZ	**La Paz** comp=Z,3.5nm,0.7s,baz=359,slow=1.7,SNR=15	**148.27**	**36**	PKPbc		**PKPbc**	**16 44 49.3**	**-0.1**
BDFB	**Brasilia** comp=Z,3.2nm,0.7s,baz=72,slow=3.2,SNR=4.6	**151.94**	**357**	PKPbc		**PKPbc**	**16 44 57.2**	**-0.2**

IDC 07 16:51:03.9±50.0, 16°57'S×178°30'W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/19, mbtmp4.0/3, Error ellipse: s-maj=913.9km s-min=153.9km az=77.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 1.0nm,0.5s,baz=107,slow=14,SNR=6.2	**39.38**	**240**	P	P	16 58 35.4	0.0
WRA	**Warramunga Arr** 0.6nm,0.5s,baz=91,slow=8.3,SNR=17	**44.99**	**258**	P	P	16 59 21.4	-0.1
ASAR	**Alice Springs** 2.8nm,0.6s,baz=88,slow=8.5,SNR=76	**45.27**	**253**	P	P	16 59 23.4	-0.2

IDC 07 17:07:53.6±0.9, 2°58S×141°54E, h0km, mb3.7/5, mb1 4.0/7, mb1mx3.8/19, mbtmp4.0/7, ML4.0/2, Error ellipse: s-maj=34.2km s-min=21.2km az=82.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=20,slow=12,SNR=13	**18.64**	**202**	P	P	17 12 12.3	-0.8
HNR	**Honiara** 3.2nm,0.3s,baz=203,slow=2.1,SNR=11	**19.52**	**111**	P	P	17 12 22.5	-0.2
ASAR	**Alice Springs** 0.9nm,0.8s,baz=32,slow=8.9,SNR=9.3	**22.23**	**199**	P	P	17 12 50.9	-1.2
STKA	**Stephens Creek** 1.2nm,0.6s,baz=315,slow=4.3,SNR=3.1	**29.14**	**180**	P	P	17 13 57.5	+1.1
MKAR	**Makanchi Array** 1.1nm,0.8s,baz=110,slow=7.5,SNR=8.4	**71.43**	**321**	P	P	17 19 16.4	+0.5
ZALV	**Zalesovo Beam** 0.4nm,0.4s,baz=120,slow=5.8,SNR=3.2	**73.26**	**329**	P	P	17 19 26.7	+0.1
ILAR	**Eielson Array** 0.5nm,0.8s,baz=247,slow=4.7,SNR=4.4	**84.55**	**24**	P	P	17 20 27.0	-1.4
LPAZ	**La Paz** 0.7nm,0.6s,baz=312,slow=2.5,SNR=4.8	**145.20**	**124**	PKPbc	PKPdf	17 27 35.0	-0.1

*AUST **07** 17:11:58.2, 1°.93S×141°.51E, h0km*
*IDC **07** 17:12:03.8±0.6, 2°.75S×141°.48E, h0km, mb4.1/10, mb1 4.4/12, mb1mx4.2/20, mbtmp4.3/12, ML4.3/2, MS3.3/6, Ms1 3.3/6, ms1mx3.1/26, Error ellipse: s-maj=25.4km s-min=10.6km az=104.0*
*ISCJB **07** 17:12:06.5±0.5, 2°.59S±0°.06×141°.42E±0°.09, h29km, mb4.0/10, MS3.2/4, Error ellipse: s-maj=13.5km s-min=7.8km az=13.0*
ISC 07 17:12:08.4±0.6, 2°.63S±0°.07×141°.4E±0°.1, h29km, n29, σ1§40/28, mb4.2/10, MS3.2/4, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby** 0.9nm,0.3s,baz=192,slow=1.3,SNR=7.4	**8.83**	**140**	Pn	**Pn**	**17 14 16.5**	**+2.2**
PMG	comp=Z,295nm,18.6s,baz=334,slow=41			LR	LR	17 17 58.9	
KDU	**Kakadu** baz=14,SNR=17	**13.35**	**221**	P	**Pn**	**17 15 16.3**	**+0.2**
MTN	**Manton Dam** baz=15,SNR=11	**14.37**	**225**	P	**Pn**	**17 15 30.5**	**+0.4**
MTSU	**Mount Surprise** baz=16,SNR=6.1	**15.67**	**170**	P	**P**	**17 15 50.9**	**-0.4**
QIS	**Mount Isa** baz=19,SNR=5.4	**17.91**	**186**	P	**Pn**	**17 16 15.0**	**-0.5**
KNRA	**Kununurra** baz=19,SNR=5.0	**17.99**	**223**	P	**P**	**17 16 19.7**	**+2.9**
KNRA	baz=19,SNR=3.8			S	S	17 19 51.6	+10
DAV	**Davao City (W)** comp=Z,54nm,20.9s,baz=192,slow=36	**18.51**	**301**	LR	LR	17 23 06.5	
WRA	**Warramunga Arr** 0.5nm,0.3s,baz=13,slow=11,SNR=21	**18.55**	**201**	P	**P**	**17 16 22.4**	**-0.7**
WRA	0.0nm,0.3s,baz=38,slow=23,SNR=3.3			S	**Sn**	**17 19 47.8**	**-2.2**
HNR	**Honiara** 6.0nm,0.3s,baz=215,slow=2.0,SNR=24	**19.62**	**111**	P	**P**	**17 16 32.7**	**-2.1**
FITZ	**Fitzroy Crossi** 8.2nm,0.7s,baz=50,slow=13,SNR=12	**21.81**	**224**	P	**P**	**17 16 57.6**	**-0.9**
FITZ	comp=Z,86nm,18.1s,baz=55,slow=36			LR	LR	17 25 11.9	
FITZ	**Fitzroy Crossi** baz=22,SNR=7.2	**21.81**	**224**	P	**P**	**17 16 57.6**	**-0.9**
ASAR	**Alice Springs** 2.4nm,0.7s,baz=29,slow=10.0,SNR=21	**22.14**	**199**	P	**P**	**17 17 00.9**	**-1.1**
ASAR	comp=Z,119nm,20.5s,baz=19,slow=38			LR	LR	17 26 07.3	
QLP	**Quilpie** baz=25,SNR=5.2	**23.97**	**174**	P	**P**	**17 17 20.6**	**+0.1**
EIDS	**Eidsvold** baz=25,SNR=7.2	**24.45**	**158**	P	**P**	**17 17 27.8**	**+2.8**
RMQ	**Roma** baz=26,SNR=23	**24.75**	**164**	P	**P**	**17 17 27.8**	**+0.1**
CMSA	**Cobar Meteorol** baz=30,SNR=9.5	**29.04**	**172**	P	**P**	**17 18 07.5**	**+1.3**
STKA	**Stephens Creek** 2.1nm,0.7s,baz=347,slow=6.9,SNR=5.1	**29.10**	**180**	P	**P**	**17 18 05.0**	**-1.7**
STKA	comp=Z,62nm,21.6s,baz=200,slow=35			LR	LR	17 28 55.0	
MJAR	**Matsushiro Arr** 0.3nm,0.4s,baz=179,slow=9.3,SNR=4.1	**39.08**	**356**	P	**P**	**17 19 34.1**	**+1.0**
KSRS	**Korea Array** comp=Z,39nm,20.5s,baz=38,slow=31	**41.80**	**344**	LR	LR	17 34 02.2	
PETK	**Petropavlovsk-** 1.4nm,0.6s,baz=134,slow=6.4,SNR=6.0	**57.20**	**12**	P	**P**	**17 21 51.5**	**-1.2**
MKAR	**Makanchi Array** 2.9nm,0.7s,baz=106,slow=7.8,SNR=28	**71.39**	**322**	P	**P**	**17 23 27.8**	**+1.9**
ZALV	**Zalesovo Beam** 2.4nm,0.8s,baz=108,slow=6.9,SNR=10	**73.24**	**329**	P	**P**	**17 23 37.0**	**+0.3**
VNDA	**Vanda** 1.5nm,0.8s,baz=344,slow=7.3,SNR=6.2	**75.64**	**176**	P	**P**	**17 23 50.1**	**-0.2**
ILAR	**Eielson Array** 2.1nm,0.8s,baz=258,slow=5.0,SNR=17	**84.65**	**24**	P	**P**	**17 24 37.9**	**-1.3**
YKA	**Yellowknife Ar** 0.5nm,0.5s,baz=284,slow=5.2,SNR=4.7	**98.76**	**27**	P	**P**	**17 25 44.2**	**-0.9**
TORD	**Torodi Ar. Bea** 0.3nm,0.6s,baz=76,slow=0.6,SNR=2.7	**138.82**	**287**	PKP	**PKPdf**	**17 31 33.9**	**+0.9**
LPAZ	**La Paz** 7.4nm,0.9s,baz=243,slow=1.2,SNR=27	**145.28**	**124**	PKPbc	**PKPdf**	**17 31 45.7**	**+0.4**
CPUP	**Villa Florida** 2.4nm,0.8s,baz=206,slow=9.9,SNR=3.3	**145.99**	**149**	PKPbc	**PKPbc**	**17 31 45.9**	**-0.3**
DBIC	**Dimbokro** 3.5nm,0.7s,baz=163,slow=3.6,SNR=6.2	**146.15**	**278**	PKPbc	**PKPbc**	**17 31 47.0**	**-0.1**

*JMA **07** 17:17:49.3±0.2, 23°.62N×121°.38E, h53km, M3.1*
*ISCJB **07** 17:17:50.5±0.2, 23°.73N±0°.01×121°.48E±0°.02, h21km±2km, Error ellipse: s-maj=2.8km s-min=1.8km az=43.0*
*TAP **07** 17:17:50.1, 23°.75N×121°.40E, h23km, ML3.7, B*
ISC 07 17:17:50.6±0.9, 23°.75N±0°.02×121°.44E±0°.02, h19km±2km, n72, σ0§70/124, 8C-12D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESL	**Shilin** baz=31	**0.06**	**352**	⇑*i*P	**Pg**	**17 17 54.3**	**+0.1**
ESL	baz=31			*i* S	**Sg**	**17 17 56.9**	**+0.2**
TEGC	**Jichi Village** baz=107	**0.10**	**115**	P	**Pg**	**17 17 55.3**	**+0.8**
TEGC	baz=107			*e*S	**Sg**	**17 17 59.1**	**+2.0**
ESF	**Shoufeng Towns** baz=39	**0.13**	**26**	*e*P	**Pg**	**17 17 55.1**	**+0.2**
ESF	baz=39			S	**Sg**	**17 17 58.3**	**+0.6**
EHY	**Hungye** baz=190	**0.27**	**204**	⇑P	**Pg**	**17 17 56.0**	**-0.8**
EHY	baz=190			S	**Sb**	**17 18 00.5**	**-0.3**
HWA	**Hwalien** baz=36	**0.27**	**33**	⇓P	**Pg**	**17 17 57.1**	**+0.3**
HWA	baz=36			*e*S	**Sb**	**17 18 01.9**	**+1.1**
TWD	**Chiawan** baz=29	**0.36**	**23**	⇓*i*P	**Pg**	**17 17 57.9**	**-0.4**
TWD	baz=29			*e*S	**Sg**	**17 18 03.1**	**-0.4**
TWF1	**Yuli** baz=192	**0.42**	**199**	*e*P	**Pg**	**17 17 58.0**	**-1.4**
TWF1	baz=192			*e*S	**Sg**	**17 18 04.9**	**-0.3**
WHF	**Hehuan Shan** baz=343	**0.42**	**338**	⇓*i*P	**Pg**	**17 17 59.2**	**-0.5**
WHF	baz=343			*e*S	**Sg**	**17 18 04.6**	**-1.2**
SMLT	**Sun Moon Lake** baz=290	**0.51**	**285**	⇓*i*P	**Pg**	**17 18 00.2**	**-0.9**
SMLT	baz=290			*i* S	**Sg**	**17 18 06.6**	**-1.5**
YUS	**Yu-Shan** baz=238	**0.52**	**240**	⇓*i*P	**Pg**	**17 18 00.9**	**-0.4**
YUS	baz=238			S	**Sg**	**17 18 07.5**	**-1.0**
TWT	**Tachien** baz=331	**0.56**	**334**	⇑*i*P	**Pb**	**17 18 01.6**	**-0.2**
TWT	baz=331			S	**Sb**	**17 18 08.2**	**-1.2**
TYC	**Yuchr** baz=290	**0.56**	**286**	P	**Pb**	**17 18 00.7**	**-1.0**
TYC	baz=290			S	**Sb**	**17 18 08.0**	**-1.2**
ALS	**Alishan** baz=254	**0.63**	**248**	⇓*i*P	**Pb**	**17 18 02.8**	**-0.4**
CHKT	**Chengkung** baz=169	**0.65**	**186**	*e*P	**Pb**	**17 18 02.7**	**-0.6**
ELDTW	**Lidau** baz=202	**0.68**	**215**	P	**Pb**	**17 18 02.6**	**-1.3**
NNS	**Nan Shan** baz=7.0	**0.69**	**355**	⇓*i*P	**Pb**	**17 18 03.8**	**-0.3**
NNS	baz=7.0			S	**Sb**	**17 18 12.9**	**-0.3**
WNT	**Mingjian** baz=282	**0.71**	**281**	P	**Pb**	**17 18 04.6**	**+0.3**
WNT	baz=282			S	**Sg**	**17 18 14.4**	**+0.4**
CHN5	**Tsauling** baz=249	**0.72**	**258**	P	**Pb**	**17 18 04.3**	**-0.2**
CHN5	baz=249			S	**Sg**	**17 18 14.8**	**+0.4**
ENA	**Nanau** baz=27	**0.73**	**22**	⇓*i*P	**Pb**	**17 18 03.5**	**-1.1**
TCU	**Taichung** baz=301	**0.81**	**300**	⇑*i*P	**Pb**	**17 18 06.3**	**+0.3**
TCU	baz=301			*e*S	**Sg**	**17 18 17.5**	**+0.4**
WGK	**Gukeng** baz=266	**0.81**	**266**	P	**Pb**	**17 18 06.2**	**+0.1**
WGK	baz=266			*i* S	**Sg**	**17 18 17.5**	**+0.2**
TWQ1	**Liyutan** baz=324	**0.85**	**314**	P	**Pb**	**17 18 07.1**	**+0.3**
TWQ1	baz=324			*e*S	**Sb**	**17 18 18.8**	**+0.9**
CHN4	**Tsaushan** baz=233	**0.88**	**243**	⇓*i*P	**Pb**	**17 18 07.2**	**0.0**
CHN4	baz=233			S	**Sg**	**17 18 19.4**	**0.0**
ENTT	**Nioudou** baz=18	**0.89**	**7**	*e*P	**Pb**	**17 18 06.4**	**-1.1**
ENTT	baz=18			*e*S	**Sb**	**17 18 18.7**	**-0.3**
NSY	**Sanyi** baz=319	**0.91**	**317**	⇑*i*P	**Pb**	**17 18 08.5**	**+0.7**
NSY	baz=319			*e*S	**Sg**	**17 18 21.2**	**+0.7**
WTP	**Ta-pu** baz=235	**0.91**	**237**	⇓P	**Pb**	**17 18 07.7**	**-0.2**
WTP	baz=235			*e*S	**Sb**	**17 18 20.1**	**+0.5**
CHN2	**Minshiung** baz=256	**0.91**	**256**	*e*P	**Pb**	**17 18 08.5**	**+0.7**
CHN2	baz=256			*e*S	**Sg**	**17 18 20.4**	**-0.1**
NSK	**Sanguang** baz=358	**0.93**	**355**	*e*P	**Pb**	**17 18 07.6**	**-0.5**
NSK	baz=358			S	**Sb**	**17 18 19.4**	**-0.6**
TWC	**Suao** baz=26	**0.93**	**23**	*e*P	**Pb**	**17 18 06.7**	**-1.5**
TWC	baz=26			*e*S	**Sg**	**17 18 21.4**	**+0.2**
NSTT	**Nanjuang** baz=346	**0.96**	**335**	⇑P	**Pb**	**17 18 08.9**	**+0.2**
NSTT	baz=346			S	**Sb**	**17 18 20.8**	**-0.3**
CHY	**Chiayi** baz=255	**0.97**	**255**	*e*P	**Pb**	**17 18 08.0**	**-0.7**
CHY	baz=255			*e*S	**Sb**	**17 18 21.6**	**+0.4**
TWG	**Pinlang** baz=185	**0.99**	**200**	⇓*i*P	**Pb**	**17 18 08.6**	**-0.5**
TWG	baz=185			*e*S	**Sb**	**17 18 22.3**	**+0.6**
TWE	**Neicheng** baz=26	**0.99**	**12**	*e*P	**Pb**	**17 18 07.6**	**-1.5**
TWE	baz=26			*e*S	**Sb**	**17 18 22.2**	**+0.5**
TWK	**Hsinying** baz=240	**1.00**	**241**	*e*P	**Pb**	**17 18 09.2**	**-0.2**
TWK	baz=240			S	**Sb**	**17 18 22.9**	**+0.8**
CHN1	**Nanshi** baz=235	**1.01**	**236**	⇓P	**Pb**	**17 18 09.5**	**0.0**
CHN1	baz=235			S	**Sb**	**17 18 22.9**	**+0.4**
TTN	**Taitung** baz=180	**1.03**	**195**	*e*P	**Pb**	**17 18 09.6**	**-0.2**
ILA	**Ilan** baz=21	**1.05**	**15**	*e*P	**Pb**	**17 18 10.6**	**+0.4**
WTCT	**Ta-ch'eng** baz=266	**1.07**	**276**	P	**Pb**	**17 18 09.8**	**-0.7**
WTCT	baz=266			S	**Sb**	**17 18 24.8**	**+0.7**
WSF	**Szhu** baz=265	**1.12**	**265**	*e*P	**Pn**	**17 18 11.1**	**-0.2**
WSF	baz=265			*e*S	**Sb**	**17 18 25.4**	**-0.2**
HSN	**Hsinchu** baz=327	**1.13**	**338**	*e*P	**Pn**	**17 18 11.9**	**+0.5**
HSN	baz=327			*e*S	**Sg**	**17 18 27.9**	**+0.4**
CHN3	**Shinhua** baz=234	**1.20**	**236**	*e*P	**Pb**	**17 18 13.5**	**+0.8**
CHN3	baz=234			*e*S	**Sg**	**17 18 31.0**	**+1.5**
CHN8	**Yiju** baz=250	**1.20**	**251**	*e*P	**Pn**	**17 18 12.4**	**+0.1**
CHN8	baz=250			*e*S	**Sn**	**17 18 28.7**	**+0.6**
ECL	**Taimali** baz=182	**1.23**	**201**	*e*P	**Pn**	**17 18 12.5**	**-0.3**
NCU	**National Centr** baz=352	**1.24**	**349**	*e*P	**Pb**	**17 18 13.7**	**+0.3**
NCU	baz=352			S	**Sg**	**17 18 30.9**	**+0.1**
SCLT	**Jiali** baz=242	**1.28**	**244**	*e*P	**Pn**	**17 18 13.7**	**+0.2**
SCLT	baz=242			*e*S	**Sb**	**17 18 31.5**	**+1.3**
TAP	**Taipei** baz=17	**1.28**	**3**	P	**Pb**	**17 18 15.0**	**+0.9**
TAP	baz=17			*e*S	**Sg**	**17 18 32.4**	**+0.1**
TAP1	**Taipei** baz=17	**1.28**	**3**	*e*P	**Pb**	**17 18 15.2**	**+1.0**
TAP1	baz=17			*e*S	**Sg**	**17 18 32.0**	**-0.4**
TWM1	**Shoushan** baz=234	**1.32**	**226**	*e*P	**Pg**	**17 18 15.8**	**-0.2**
TAI1	**Yung-k'ang** baz=231	**1.32**	**238**	*e*P	**Pn**	**17 18 14.7**	**+0.7**
SGLT	**Jiouru** baz=204	**1.34**	**221**	*e*P	**Pg**	**17 18 16.3**	**-0.4**
TWS1	**Kuangyinshan** baz=12	**1.34**	**359**	⇑P	**Pn**	**17 18 14.4**	**0.0**
TWS1	baz=12			*e*S	**Sg**	**17 18 34.8**	**+0.5**
TWB1	**Santiao Chiao** baz=28	**1.35**	**22**	*e*P	**Pn**	**17 18 14.0**	**-0.4**
NWF	**Wu-fen Shan** baz=27	**1.35**	**13**	*e*P	**Pn**	**17 18 14.2**	**-0.3**
NWF	baz=27			*e*S	**Sb**	**17 18 33.2**	**+0.9**
EAST	**Anshuo** baz=184	**1.47**	**202**	*e*P	**Pn**	**17 18 15.5**	**-0.6**
TAW	**Tawu** baz=182	**1.48**	**200**	*e*P	**Pn**	**17 18 17.0**	**+0.9**
TWY	**Chenhua** baz=30	**1.53**	**5**	*e*P	**Pb**	**17 18 18.5**	**+0.2**
SCZT	**Fangliau** baz=206	**1.57**	**209**	*e*P	**Pb**	**17 18 18.9**	**0.0**
SCZT	baz=206			*e*S	**Sb**	**17 18 39.5**	**+1.1**
YOJ	**Yonaguni jima** baz=68	**1.60**	**63**	⇑P	**Pn**	**17 18 17.3**	**-0.6**
YOJ	**Yonaguni jima**	**1.60**	**63**	P	**Pn**	**17 18 17.3**	**-0.6**
YOJ				*e*S	**Sn**	**17 18 38.1**	**+0.2**
LAY	**Lan-yu** baz=168	**1.71**	**177**	*e*P	**Pn**	**17 18 18.2**	**-1.2**
WDGT	**Dungji** baz=253	**1.71**	**254**	*e*P	**Pn**	**17 18 18.5**	**-0.8**
WDGT	baz=253			*e*S	**Sn**	**17 18 40.6**	**0.0**
PNG	**Penghu** baz=247	**1.74**	**264**	*e*P	**Pn**	**17 18 18.8**	**-1.0**
PNG	baz=247			*e*S	**Sn**	**17 18 41.6**	**+0.2**
TWK1	**Hengchun** baz=182	**1.89**	**198**	*e*P	**Pn**	**17 18 22.9**	**+1.0**
IRIF	**Iriomote-Funau**	**2.17**	**74**	P	**Pn**	**17 18 25.4**	**-0.3**
IRIF				*e*S	**Sn**	**17 18 52.1**	**0.0**
HATJ	**Hateruma jima**	**2.18**	**81**	P	**Pn**	**17 18 25.0**	**-0.9**
HATJ				*e*S	**Sn**	**17 18 51.8**	**-0.6**
JKRS	**Kuro-shima**	**2.40**	**78**	P	**Pn**	**17 18 28.5**	**-0.3**
JKRS				*e*S	**Sn**	**17 18 57.8**	**+0.2**
JIJ	**Ishigaki jima**	**2.54**	**76**	P	**Pn**	**17 18 30.1**	**-0.7**
JIJ				*e*S	**Sn**	**17 19 00.3**	**-1.0**
KNM	**Kinmen** baz=268	**2.83**	**284**	*e*P	**Pn**	**17 18 35.4**	**+0.7**
JTJ	**Tarama**	**3.11**	**73**	P	**Pn**	**17 18 38.1**	**-0.5**
JTJ				*e*S	**Sn**	**17 19 16.0**	**+0.9**
JMJ	**Miyako jima 2**	**3.67**	**72**	*e*S	**Sn**	**17 19 29.7**	**+0.6**
JOGS	**Gusukube**	**3.75**	**74**	P	**Pn**	**17 18 48.0**	**+0.5**
JOGS				*e*S	**Sn**	**17 19 31.8**	**+0.6**
JKE	**Kume jima 2**	**5.48**	**61**	P	**Pn**	**17 19 10.8**	**-0.5**

*ISCJB **07** 17:21:20.6±0.6, 37°.91N±0°.03×29°.23E±0°.04, h10km±9km, Error ellipse: s-maj=6.8km s-min=4.8km az=42.9*
*DDA **07** 17:21:20, 37°.88N×29°.24E, h9km, MD2.7*
*ISK **07** 17:21:20.0, 37°.94N×29°.24E, h2km, MD2.7*
*CSEM **07** 17:21:20.6±0.3, 37°.91N×29°.21E, h2km, MD2.7, Error ellipse: s-maj=6.3km s-min=5.3km az=148.0*
ISC 07 17:21:20.7±1.0, 37°.90N±0°.04×29°.22E±0°.03, h15km±9km, n14, σ0§97/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.21**	**224**	*e*PG	**Pg**	**17 21 26.0**	**+0.5**
DENT				*e*SG	**Sg**	**17 21 30.5**	**+1.8**
DENT	**Denizli**	**0.21**	**224**	*e*Pg	**Pg**	**17 21 26.0**	**+0.5**
DENT				*e*Sg	**Sg**	**17 21 30.5**	**+1.8**
DNZL	**Cakiroluk**	**0.25**	**212**	*i* P	**Pg**	**17 21 24.8**	**-1.5**
DNZL				*i* S	**Sg**	**17 21 28.6**	**-1.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DNZL	Cakiroluk	0.25	212	iP	Pg	17 21 24.8	-1.5
DNZL				iS	Sg	17 21 28.6	-1.5
KHAL	Karahalli	0.51	25	iP	Pg	17 21 30.4	-0.5
KHAL				iS	Sb	17 21 38.3	-0.5
KHAL	Karahalli	0.51	25	iP	Pg	17 21 30.4	-0.5
KHAL				iS	Sb	17 21 38.3	-0.5
KULA	Kula-Manisa	0.75	325	ePG	Pg	17 21 35.0	-0.3
KULA				eSG	Sb	17 21 46.1	+0.5
KULA	Kula-Manisa	0.75	325	ePg	Pg	17 21 35.0	-0.3
KULA				eSg	Sb	17 21 46.1	+0.5
MANT	Manisa	0.78	319	eP	Pg	17 21 35.0	-1.0
MANT	Manisa	0.78	319	eP	Pg	17 21 35.0	-1.0
ISP	Isparta	1.04	94	ePG	Pg	17 21 40.6	-0.1
ISP				eSG	Sn	17 21 55.7	+0.6
ISP	Isparta	1.04	94	ePg	Pg	17 21 40.7	-0.1
ISP				eSg	Sn	17 21 55.7	+0.6
AYDN	Tasoluk	1.09	258	iP	Pg	17 21 41.3	-0.3
AYDN				iS	Sg	17 21 56.1	+0.2
AYDN	Tasoluk	1.09	258	iP	Pg	17 21 41.3	-0.3
AYDN				iS	Sg	17 21 56.1	+0.2

*IDC **07** 17:24:51.3±0.7, 15°12S×171°00E, h0km, mb4.6/16, mb1 4.8/18, mb1mx4.7/24, mbtmp4.7/18, ML4.4/2, MS4.1/24, Ms1 4.2/24, ms1mx4.1/27, Error ellipse: s-maj=19.4km s-min=15.6km az=123.0*

*ISCJB **07** 17:24:54.7±0.3, 15°16S±0°05×170°91E±0°05, h33km, mb4.8/40, MS4.3/29, Error ellipse: s-maj=7.6km s-min=7.1km az=28.8*

*NEIC **07** 17:24:57.4±0.9, 15°19S×170°90E, h44km±9km, mb5.1/18, Error ellipse: s-maj=7.9km s-min=6.3km az=174.0*

NEIC Felt at Port-Vila.

*GCMT **07** 17:24:58.4±0.2, 15°03S×170°88E, h23km±1km, MW5.1, Moment Tensor Solution. s50,c78; s85,c143; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.53±.15; $M_{\theta\theta}$2.67±.13; $M_{\phi\phi}$-2.14±.13; $M_{r\theta}$-0.13±.20; $M_{\theta\phi}$5.11±.12; $M_{\phi r}$-0.71±.20; Best double couple: $M_0$5.70000×10^{16} NP1:ϕ_s283.00000°, δ83.00000°, λ-1.00000°. NP2:ϕ_s13.00000°, δ89.00000°, λ-173.00000°. Principal axes: T 5.9500, Plg4.0000°, Azm147.0000°; N -0.5100, Plg82.0000°, Azm22.0000°; P -5.4400, Plg6.0000°, Azm238.0000°; Data Used: II IU IC CN G.*

*AUST **07** 17:24:59.3, 15°00S×171°03E, h60km*

*BJI **07** 17:25:01.8, 14°60S×170°08E, h47km, mB5.0/22, mb4.8/30, Ms4.6/20, Ms7 4.4/22*

*DJA **07** 17:25:14.4±5.4, 15°S±13°×17°0E±2°1, h162km±43km, M4.7/12, mB5.3/3, mb4.7/12, Mw(mB)4.7/3*

ISC 07 17:24:57.2±0.4**, 15°14S**±0°06×**170°88E**±0°07**, h35km, n114, σ1s76**/132**, mb5.0**/39**, MS4.2**/31**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	7.34	112	Pn	Pn	17 26 43.7	+1.7
	429nm,0.8s,SNR=6.7						
MSVF	Nonsavu	7.34	112	ePn	Pn	17 26 42.4	+0.3
DZM	Mont Dzumac	8.07	211	ePn	Pn	17 26 51.6	-0.4
	156nm,1.4s						
DZM				eLR	LR	17 28 59.3	
	2μm,25.6s						
DZM	Mont Dzumac	8.07	211	eP	Pn	17 26 50.3	-1.7
DZM	Mont Dzumac	8.07	211	ePn	Pn	17 26 51.2	-0.8
	38nm,0.6s						
DZM	Mont Dzumac	8.07	211	Pn	Pn	17 26 52.1	+0.1
	5.1nm,0.3s,baz=60,slow=18,SNR=61						
DZM				LR	LR	17 28 42.3	
	comp=Z,291nm,21.1s,baz=37,slow=28						
NOUC	Port Laguerre	8.17	211	eP	Pn	17 26 53.1	-0.2
HNR	Honiara	12.10	297	ePn	Pn	17 27 47.9	+0.7
HNR	Honiara	12.10	297	Pn	Pn	17 27 48.5	+1.4
	2.0nm,0.3s,baz=217,slow=2.4,SNR=11						
HNR				LR	LR	17 31 36.8	
	comp=Z,1μm,21.0s,baz=130,slow=33						
AFI	Afiamalu	16.84	88	ePn	Pn	17 28 49.7	-0.7
	753nm,2.9s						
AFI	Afiamalu	16.84	88	LR	LR	17 33 35.3	
	comp=Z,779nm,18.3s,baz=244,slow=31						
RAO	Raoul Island	17.44	145	LR	LR	17 34 01.5	
	comp=Z,2μm,21.9s,baz=220,slow=32						
OUZ	Omahuta	20.14	174	eP	P	17 29 26.3	-2.0
	67nm,1.2s						
EIDS	Eidsvold	21.15	238	eP	P	17 29 38.6	-0.8
	70nm,1.0s						
EIDS	Eidsvold	21.15	238	P	P	17 29 41.0	+1.7
	baz=21,SNR=8.5						
ARMA	Armidale	23.31	226	eP	P	17 30 00.8	-1.5
	90nm,1.3s						
ARMA	Armidale	23.31	226	P	P	17 30 04.1	+1.8
	baz=24,SNR=7.3						
RMQ	Roma	23.52	238	P	P	17 30 05.5	+1.3
	baz=24,SNR=62						
URZ	Urewera	23.68	168	eP	P	17 30 04.8	-0.7
	58nm,0.9s						
URZ	Urewera	23.68	168	P	P	17 30 04.8	-0.7
	37nm,0.8s,baz=5.6,slow=4.6,SNR=14						
URZ				LR	LR	17 37 11.1	
	comp=Z,613nm,20.3s,baz=158,slow=31						
PMG	Port Moresby	23.86	281	eP	P	17 30 07.5	0.0
	103nm,1.1s						
PMG	Port Moresby	23.86	281	P	P	17 30 08.4	+0.9
	84nm,1.2s,992nm						
PMG	Port Moresby	23.86	281	P	P	17 30 08.2	+0.6
	68nm,1.0s,baz=74,slow=6.6,SNR=18						
PMG				LR	LR	17 37 54.2	
	comp=Z,908nm,18.2s,baz=62,slow=33						
CTA	Charters Tower	23.97	255	P	P	17 30 09.3	+0.8
CTA	Charters Tower	23.97	255	P	P	17 30 09.3	+0.8
	49nm,0.7s,baz=82,slow=12,SNR=88						
CTAO	Charters Tower	23.97	255	eP	P	17 30 08.8	+0.3
	62nm,0.8s						
MGCD	Mangrove Creek	25.39	221	P	P	17 30 24.0	+2.7
	baz=26,SNR=4.7						
MTSU	Mount Surprise	25.62	260	P	P	17 30 24.3	+0.7
	baz=26,SNR=69						
COEN	Coen	26.84	269	P	P	17 30 34.2	-0.4
	68nm,0.8s						
COEN	Coen	26.84	269	P	P	17 30 37.3	+2.7
	baz=27,SNR=6.3						
QLP	Quilpie	27.32	241	P	P	17 30 39.7	+0.9
	baz=28,SNR=16						
CMSA	Cobar Meteorol	28.20	230	P	P	17 30 47.3	+0.7
	baz=28,SNR=7.5						
RPZ	Rata Peaks	28.48	180	LR	LR	17 38 50.4	
	comp=Z,435nm,20.8s,baz=345,slow=29						
RAR	Rarotonga	28.50	107	LR	LR	17 40 03.9	
	comp=Z,457nm,19.2s,baz=315,slow=32						
QIS	Mount Isa	30.22	255	P	P	17 31 04.9	+0.2
	baz=30,SNR=8.1						
STKA	Stephens Creek	31.46	233	eP	P	17 31 15.9	+0.4
	6.0nm,1.1s						
STKA	Stephens Creek	31.46	233	P	P	17 31 16.1	+0.6
	16nm,0.9s,baz=58,slow=8.1,SNR=13						
STKA				LR	LR	17 42 55.7	
	comp=Z,375nm,19.6s,baz=48,slow=34						
STKA	Stephens Creek	31.46	233	P	P	17 31 16.4	+0.9
	baz=32,SNR=9.2						
WRAB	Tennant Creek	35.11	257	eP	P	17 31 46.2	-1.3
	29nm,1.0s						
WRAB	Tennant Creek	35.11	257	P	P	17 31 46.0	-1.5
	140nm,1.0s,SNR=8.7						
WRA	Warramunga Arr	35.12	257	P	P	17 31 46.1	-1.5
WRA	Warramunga Arr	35.12	257	P	P	17 31 46.1	-1.5
	18nm,0.9s,baz=86,slow=8.8,SNR=87						
WRA				LR	LR	17 44 46.9	
	comp=Z,676nm,21.4s,baz=85,slow=34						
AS31	Alice Springs	35.81	251	eP	P	17 31 52.3	-1.2
ASAR	Alice Springs	35.81	250	P	P	17 31 52.8	-0.8
ASAR	Alice Springs	35.81	250	P	P	17 31 52.8	-0.8
	26nm,0.8s,baz=75,slow=9.3,SNR=236						
ASAR				LR	LR	17 45 12.2	
	comp=Z,778nm,21.1s,baz=81,slow=34						
BBOO	Buckleboo	36.14	235	P	P	17 31 56.8	+0.6
	baz=36,SNR=9.9						
PPT2	Papeete2	37.97	99	eLR	LR	17 40 52.3	
	2μm,29.2s						
PPT	Papeete	37.97	99	LR	LR	17 44 08.0	
	comp=Z,262nm,18.9s,baz=269,slow=30						
TBI	Tubuai	38.22	109	eLR	LR	17 43 08.0	
	596nm,26.0s						
KNRA	Kununurra	40.56	263	P	P	17 32 32.7	-0.8
	baz=41,SNR=21						
SWI	Sorong	41.61	286	P	P	17 32 42.4	+0.1
	baz=42,SNR=6.9						
FITZ	Fitzroy Crossi	43.37	260	P	P	17 32 56.5	0.0
FITZ	Fitzroy Crossi	43.37	260	P	P	17 32 56.5	0.0
	26nm,0.8s,baz=94,slow=7.7,SNR=46						
FITZ				LR	LR	17 50 48.8	
	comp=Z,934nm,18.0s,baz=88,slow=36						
FITZ	Fitzroy Crossi	43.37	260	P	P	17 32 56.6	+0.1
	baz=44,SNR=24						
MEEK	Meekatharra	49.85	248	P	P	17 33 46.7	-0.6
	baz=50,SNR=15						
RKT	Rikitea	51.53	108	eLR	LR	17 49 02.5	
	394nm,36.5s						
MJAR	Matsushiro Arr	59.95	330	P	P	17 34 59.3	-0.7
MJAR	Matsushiro Arr	59.95	330	P	P	17 34 59.3	-0.7
	11nm,0.8s,baz=161,slow=7.4,SNR=23						
MJAR				LR	LR	17 56 11.2	
	comp=Z,176nm,19.4s,baz=65,slow=31						
MAJO	Matsushiro	59.95	330	eP	P	17 34 58.8	-1.3
	30nm,1.0s						
MAT	Matsushiro	59.95	330	P	P	17 34 59.4	-0.6
MAT				S	S	17 43 04.0	-6.0
SBUM	Sibu	60.61	282	P	P	17 35 05.5	+0.5
SBUM	Sibu	60.61	282	P	P	17 35 05.5	+0.5
	11nm,1.0s						
KSM	Kuching	62.12	280	eP	P	17 35 14.4	-0.8
	13nm,1.0s						
KSM	Kuching	62.12	280	P	P	17 35 15.2	0.0
KSM	Kuching	62.12	280	P	P	17 35 15.2	0.0
	13nm,1.1s						
KSM	Kuching	62.12	280	P	P	17 35 15.4	+0.2
	baz=62,SNR=6.9						
CISI	Cisompet, Garu	62.12	269	P	P	17 35 14.5	-0.8
	baz=62,SNR=3.5						
LEM	Lembang	62.48	270	P	P	17 35 18.8	+0.9
	baz=63,SNR=5.2						
VNDA	Vanda	62.56	182	eP	P	17 35 16.7	-0.4
	23nm,2.1s						
VNDA	Vanda	62.56	182	P	P	17 35 16.8	-0.4
	1.3nm,0.7s,baz=353,slow=6.2,SNR=6.6						
SBA	Scott Base	62.76	181	eP	P	17 35 17.2	-1.2
	19nm,1.1s						
ASAJ	Asahikawa	64.38	338	eP	P	17 35 28.4	-1.1
	65nm,2.2s						
KSRS	Korea Array	66.09	324	P	P	17 35 40.5	-0.3
	1.0nm,0.8s,baz=135,slow=6.8,SNR=7.4						
KSRS				LR	LR	18 00 03.7	
	comp=Z,69nm,20.9s,baz=144,slow=32						
KSAR	Wonju Array Be	66.11	324	P	P	17 35 40.5	-0.4
SSE	Sheshan	66.27	314	P	P	17 35 40.8	-1.2
SSE				S	S	17 44 23.5	-5.6
SSE				sS	sS	17 44 46.8	-0.1
SSE				pmax	pmax		
	comp=Z,36nm,0.7s						
SSE				pmax	pmax		
	comp=Z,49nm,4.0s						
SSE				LR	LR		
	comp=N,120nm,25.2s						
SSE				LR	LR		
	comp=E,130nm,25.2s						
SSE				LR	LR		
	comp=Z,200nm,24.7s						
NJ2	Nanjing	68.44	314	eP	P	17 35 55.6	-0.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	Ussuriysk Arra	68.88	331	P	P	17 36 01.9	+3.6
	comp=Z,1.6nm,0.7s,baz=158,slow=7.6,SNR=6.7						
USRK				LR	LR	18 03 16.0	
	comp=Z,112nm,18.8s,baz=313,slow=33						
PETK	Petropavlovsk-	68.92	352	P	P	17 35 59.0	+0.8
PETK	Petropavlovsk-	68.92	352	P	P	17 35 59.0	+0.8
	comp=Z,2.7nm,0.8s,baz=146,slow=8.6,SNR=7.5						
PETK				LR	LR	17 59 23.7	
	comp=Z,133nm,20.8s,baz=154,slow=30						
KGM	Kluang	68.94	278	P	P	17 35 59.9	+0.6
QIZ	Qiongzhong	69.01	298	P	P	17 35 58.7	-0.9
QIZ				S	S	17 44 59.3	-3.2
QIZ				LR	LR		
	comp=N,120nm,18.1s						
QIZ				LR	LR		
	comp=Z,160nm,26.4s						
MDJ	Mudanjiang	70.34	330	P	P	17 36 07.9	+0.7
MDJ				pP	pP	17 36 19.8	+1.7
MDJ				sP	sP	17 36 24.6	+2.5
MDJ				PP	PP	17 38 40.7	-2.8
MDJ				S	S	17 45 19.1	+2.0
MDJ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,84nm,4.6s						
MDJ				LR	LR		
	comp=N,99nm,15.0s						
MDJ				LR	LR		
	comp=E,78nm,26.8s						
MDJ				LR	LR		
	comp=Z,130nm,20.1s						
WHN	Wuhan	70.84	310	P	P	17 36 11.0	+0.4
CN2	Changchun	71.84	327	eP	P	17 36 18.9	+2.5
CN2				eS	S	17 45 34.8	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,100nm,20.0s						
CN2				LR	LR		
	comp=E,100nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,22.0s						
IPM	Ipoh	71.85	280	eP	P	17 36 16.4	-0.7
	comp=Z,24nm,0.9s						
IPM	Ipoh	71.85	280	P	P	17 36 17.4	+0.3
BJI	Beijing	74.81	320	P	P	17 36 34.2	+0.2
BJI				PP	PP	17 39 22.1	+0.3
BJI				S	S	17 46 09.5	+1.1
BJI				LR	LR		
	comp=N,130nm,20.2s						
BJI				LR	LR		
	comp=E,140nm,20.2s						
BJI				LR	LR		
	comp=Z,130nm,25.4s						
GYA	Guiyang	74.84	303	P	P	17 36 34.5	-0.1
GYA				pP	PcP	17 36 48.5	0.0
GYA				sP	sP	17 36 53.2	+3.6
GYA				PP	PP	17 39 24.3	+1.8
GYA				S	S	17 46 07.0	-2.5
GYA				SKS	SKSac	17 46 33.8	-7.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=N,590nm,18.5s						
GYA				LR	LR		
	comp=E,500nm,19.4s						
GYA				LR	LR		
	comp=Z,510nm,18.9s						
KMI	Kunming	77.51	300	P	P	17 36 49.8	-0.1
KMI				pP	pP	17 37 03.8	+2.9
KMI				sP	sP	17 37 09.1	+4.2
KMI				S	S	17 46 35.5	-3.6
KMI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,140nm,5.6s						
KMI				LR	LR		
	comp=N,150nm,16.6s						
KMI				LR	LR		
	comp=E,87nm,13.2s						
KMI				LR	LR		
	comp=Z,150nm,16.6s						
HHC	Hu-ho-hao-te	78.19	318	eP	P	17 36 52.4	-0.9
HHC				pP	pP	17 37 10.1	+5.9
HHC				S	S	17 46 44.5	-1.1
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,4.3s						
HHC				LR	LR		
	comp=N,170nm,17.4s						
HHC				LR	LR		
	comp=E,250nm,16.6s						
HHC				LR	LR		
	comp=Z,400nm,18.4s						
CM31	Chiang Mai Arr	78.32	293	eP	P	17 36 52.1	-2.2
	comp=Z,5.8nm,0.8s						
CMAR	Chiang Mai Arr	78.32	293	P	P	17 36 55.6	+1.3
CMAR	Chiang Mai Arr	78.32	293	P	P	17 36 55.6	+1.3
	comp=Z,8.3nm,0.9s,baz=116,slow=3.9,SNR=30						
CMAR				LR	LR	18 10 35.2	
	comp=Z,58nm,18.4s,baz=289,slow=35						
CHTO	Chiang Mai	78.44	293	eP	P	17 36 54.2	-0.7
	comp=Z,11nm,1.0s						
CHTO	Chiang Mai	78.44	293	P	P	17 36 55.9	+0.9
CD2	Chengdu	79.05	306	eP	P	17 36 57.7	-0.4
CD2				pP	pP	17 37 12.3	+3.2
CD2				sP	sP	17 37 17.7	+4.5
CD2				PP	PP	17 40 00.1	+2.3
CD2				S	S	17 46 53.2	-1.9
CD2				SKS	SKSac	17 47 05.2	-6.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2				pmax	pmax		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,150nm,17.8s						
CD2				LR	LR		
	comp=Z,140nm,20.2s						
LZH	Lanzhou	81.20	311	eP	P	17 37 13.1	+3.3
LZH				pP	pP	17 37 26.6	+5.8
LZH				sP	sP	17 37 31.2	+6.4
LZH				pmax	pmax		
	comp=Z,13nm,1.5s						
NVAR	Mina Array Bea	84.92	48	P	P	17 37 28.3	-0.7
NVAR	Mina Array Bea	84.92	48	P	P	17 37 28.3	-0.7
	comp=Z,0.2nm,0.3s,baz=225,slow=9.8,SNR=3.2						
NVAR				LR	LR	18 06 44.1	
	comp=Z,162nm,20.4s,baz=150,slow=30						
SONM	Songino Array	84.93	322	LR	LR	18 14 57.6	
	comp=Z,59nm,18.2s,baz=83,slow=35						
GTA	Gaotai	85.49	313	eP	P	17 37 32.2	+0.4
GTA				pP	pP	17 37 45.6	+2.7
GTA				sP	sP	17 37 51.0	+4.1
GTA				S	S	17 48 00.3	-0.7
GTA				sS	sS	17 48 22.6	+3.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,100nm,4.7s						
GTA				LR	LR		
	comp=N,86nm,18.5s						
GTA				LR	LR		
	comp=E,120nm,19.7s						
GTA				LR	LR		
	comp=Z,180nm,22.3s						
ILAR	Eielson Array	85.88	17	P	P	17 37 31.2	-1.7
ILAR	Eielson Array	85.88	17	P	P	17 37 31.2	-1.7
	comp=Z,1.5nm,0.8s,baz=224,slow=5.6,SNR=5.9						
ILAR				LR	LR	18 11 12.5	
	comp=Z,73nm,18.7s,baz=319,slow=32						
SNAA	Sanae	93.29	182	eP	P	17 38 06.3	-1.8
TXAR	Lajitas Array	93.42	61	P	P	17 38 09.2	-0.2
TXAR	Lajitas Array	93.42	61	P	P	17 38 09.2	-0.2
	comp=Z,0.5nm,0.8s,baz=206,slow=6.0,SNR=2.8						
TXAR				LR	LR	18 15 16.2	
	comp=Z,78nm,18.6s,baz=290,slow=32						
WMQ	Urumqi	95.52	314	eP	P	17 38 18.4	-0.3
WMQ				pP	pP	17 38 32.0	+2.1
WMQ				sP	sP	17 38 37.0	+3.1
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,96nm,3.7s						
WMQ				LR	LR		
	comp=Z,210nm,26.0s						
ZALV	Zalesovo Beam	99.80	323	LR	LR	18 21 33.9	
	comp=Z,66nm,18.8s,baz=70,slow=34						
MKAR	Makanchi Array	99.92	316	P	Pdif	17 38 37.5	-0.9
MKAR	Makanchi Array	99.92	316	P	Pdif	17 38 37.5	-0.9
	comp=Z,1.0nm,0.8s,baz=110,slow=6.6,SNR=9.0						
MKAR				LR	LR	18 21 04.9	
	comp=Z,56nm,20.5s,baz=101,slow=34						
ESDC	Sonseca Array	155.15	351	PKPab	PKPab	17 45 09.6	-2.0
ESDC	Sonseca Array	155.15	351	PKPab	PKPab	17 45 09.6	-2.0
	comp=Z,0.4nm,0.6s,baz=23,slow=2.8,SNR=2.6						
TORD	Torodi Ar. Bea	169.33	261	PKPab	PKPab	17 46 14.4	0.0
TORD	Torodi Ar. Bea	169.33	261	PKPab	PKPab	17 46 14.4	0.0
	comp=Z,2.1nm,1.0s,baz=114,slow=3.2,SNR=7.4						

*IDC **07** 17:48:38.1±0.4, 36°51S×20°29W, h0km, mb4.5/18, mb1 4.6/18, mb1mx4.6/23, mbtmp4.5/18, MS4.1/12, Ms1 4.1/12, ms1mx3.9/23, Error ellipse: s-maj=14.4km s-min=13.7km az=161.0*

*MOS **07** 17:48:38.4±1.0, 36°71S×19°99W, h10km, mb5.4/42, Error ellipse: s-maj=17.2km s-min=7.1km az=74.7*

*ISCJB **07** 17:48:38.7±0.3, 36°60S±0°06×20°27W±0°08, h10km, mb5.0/83, MS4.1/17, Error ellipse: s-maj=9.8km s-min=7.8km az=27.5*

*NEIC **07** 17:48:39.2±0.3, 36°70S×20°07W, h10km, mb5.2/52, Error ellipse: s-maj=10.0km s-min=8.2km az=129.0*

*SZGRF **07** 17:48:42.7, 36°18S×20°70W, h31km, mb5.4, Southern Mid-Atlantic Ridge*

*BJI **07** 17:48:44.1, 36°50S×20°20W, h26km, mB5.4/1, Ms5.5/1, Ms7 5.3/1*

ISC 07 17:48:39.5±0.3**, 36°52S**±0°08×**20°14W**±0°08**, h10km, n289, σ1s44**/288**, mb5.1**/83**, MS4.1**/17**, 12C-8D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDFB	Brasilia	32.35	303	P	P	17 55 07.8	-1.5
BDFB	Brasilia	32.35	303	P	P	17 55 07.8	-1.5
	5.7nm,0.8s,baz=118,slow=7.8,SNR=7.4						
BDFB				LR	LR	18 06 04.9	
	comp=Z,587nm,19.4s,baz=351,slow=32						
TRQA	Tornquist	33.12	254	eP	P	17 55 14.8	-1.1
	467nm,2.5s						
CPUP	Villa Florida	33.14	277	P	P	17 55 17.9	+1.9
CPUP	Villa Florida	33.14	277	P	P	17 55 17.9	+1.9
	5.1nm,0.8s,baz=90,slow=8.4,SNR=11						
CPUP				LR	LR	18 06 38.7	
	comp=Z,341nm,20.3s,baz=105,slow=33						
SUR	Sutherland	33.84	95	P	P	17 55 24.9	+2.5
SUR	Sutherland	33.84	95	P	P	17 55 24.1	+1.7
	194nm,0.8s,SNR=5.4						
SUR	Sutherland	33.84	95	P	P	17 55 24.9	+2.5
	23nm,0.8s,baz=251,slow=9.3,SNR=13						
SUR				LR	LR	18 05 33.0	
	comp=Z,312nm,19.7s,baz=184,slow=30						
VNA1	Neumayer--Stat	34.78	173	eP	P	17 55 31.9	+2.2
SNAA	Sanae	36.35	171	eP	P	17 55 43.7	+0.3
SNAA	Sanae	36.35	171	eP	P	17 55 42.2	-1.2
	6.4nm,1.0s						
SNAA	Sanae	36.35	171	P	P	17 55 43.9	+0.5
	1.4nm,0.8s,baz=342,slow=7.4,SNR=20						
SNAA				LR	LR	18 05 03.5	
	comp=Z,17nm,21.9s,baz=14,slow=27						
TSUM	Tsumeb	37.26	73	eP	P	17 55 50.0	-1.8
	35nm,0.8s						
BOSA	Boshof	38.77	92	eP	P	17 56 02.6	-1.8
	62nm,1.6s						
BOSA	Boshof	38.77	92	P	P	17 56 05.3	+0.9
	8.8nm,0.9s,baz=248,slow=6.2,SNR=6.4						
BOSA				LR	LR	18 09 03.4	
	comp=Z,275nm,18.7s,baz=152,slow=32						
PLCA	Paso Flores	39.17	248	P	P	17 56 08.2	+0.6
PLCA	Paso Flores	39.17	248	P	P	17 56 08.2	+0.6
	5.3nm,0.8s,baz=149,slow=3.6,SNR=4.1						
CFAA	Coronel Fontan	39.82	263	P	P	17 56 11.7	-1.4
CFAA	Coronel Fontan	39.82	263	P	P	17 56 11.7	-1.4
	0.7nm,0.5s,baz=123,slow=6.5,SNR=12						
LBTB	Lobatse	40.60	87	eP	P	17 56 17.4	-2.3
	69nm,2.1s						
LBTB	Lobatse	40.60	87	P	P	17 56 20.6	+0.9
	5.6nm,0.7s,baz=262,slow=9.4,SNR=8.0						
SIV	San Ignacio	41.62	288	P	P	17 56 28.9	+0.8
SIV	San Ignacio	41.62	288	P	P	17 56 28.9	+0.8
	9.3nm,1.1s,baz=133,slow=10,SNR=16						
LIC	Lamto	44.82	22	eP	P	17 56 55.8	+2.0
	14nm,0.8s						
LIC				eR			
	174nm,19.8s						
LIC	Lamto	44.82	22	eP	P	17 56 55.8	+2.0
	14nm,0.8s						
DBIC	Dimbokro	45.29	22	P	P	17 56 57.1	-0.4
DBIC	Dimbokro	45.29	22	P	P	17 56 57.1	-0.4
	4.9nm,0.8s,baz=173,slow=11,SNR=3.3						
DBIC				LR	LR	18 11 21.4	
	comp=Z,126nm,19.4s,baz=18,slow=30						
SYO	Syowa Base	45.65	154	⇑iX		17 56 59.0	
LPAZ	La Paz	46.93	282	eP	P	17 57 11.4	+0.2
	15nm,1.3s						

LPAZ La Paz 46.93 282 P **P** **17 57 09.5 -1.8**
5.4nm,1.0s,baz=116,slow=7.0,SNR=7.4
LPAZ LR LR 18 16 04.8
comp=Z,133nm,19.1s,baz=78,slow=35
SAML Samuel 47.68 294 *eP* **P** **17 57 15.2 -1.2**
7.5nm,0.9s
LSZ Lusaka 47.78 77 *eP* **P** **17 57 15.8 -1.5**
37nm,1.9s
TOA0 Torodi Ar. Sit 53.52 27 *eP* **P** **17 57 59.4 -1.0**
TORD Torodi Ar. Bea 53.52 27 P **P** **17 58 00.8 +0.3**
TORD Torodi Ar. Bea 53.52 27 P **P** **17 58 00.8 +0.3**
5.3nm,0.9s,baz=199,slow=7.3,SNR=18
TORD LR LR 18 16 47.7
comp=Z,136nm,18.0s,baz=205,slow=32
QSPA South Pole Qui 53.73 180 P **P** **17 58 02.8 +1.2**
QSPA South Pole Qui 53.73 180 P **P** **17 58 02.8 +1.2**
23nm,0.9s,baz=206,slow=2.9,SNR=96
MAW Mawson 54.21 152 P **P** **17 58 05.6 +0.8**
MAW Mawson 54.21 152 P **P** **17 58 05.6 +0.8**
11nm,1.0s,baz=269,slow=7.7,SNR=15
MAW LR LR 18 17 02.2
comp=Z,162nm,18.2s,baz=246,slow=31
TAM Tamanrasset 63.78 26 *eP* **P** **17 59 11.7 -0.2**
TAM pmax pmax
comp=Z,10.0nm,1.2s
TAM Tamanrasset 63.78 26 *eP* **P** **17 59 11.7 -0.2**
comp=Z,9.7nm,1.2s
ROSC El Rosal 65.17 297 LR LR 18 25 39.8
comp=Z,211nm,19.9s,baz=5.8,slow=34
MIR Mirnyy 65.40 156⇑*iP* **P** **17 59 23.5 +1.6**
MIR *i* 17 59 29.0
MIR pmax pmax
comp=Z,56nm,1.5s
SBA Scott Base 65.82 182 *eP* **P** **17 59 23.1 -1.3**
SBA pmax pmax
comp=Z,20nm,0.9s
SBA Scott Base 65.82 182 *eP* **P** **17 59 23.1 -1.3**
comp=Z,20nm,0.9s
VNDA Vanda 66.22 180 *eP* **P** **17 59 25.7 -1.3**
comp=Z,22nm,1.5s
VNDA Vanda 66.22 180 P **P** **17 59 27.4 +0.3**
comp=Z,6.3nm,1.1s,baz=202,slow=5.5,SNR=16
VNDA LR LR 18 25 57.7
comp=Z,71nm,21.1s,baz=164,slow=34
MORF Marmelete 74.22 10 *eP* **P** **18 00 18.2 +1.8**
comp=Z,31nm,1.3s
PVAQ Vaqueiros 74.45 10 *eP* **P** **18 00 19.9 +2.2**
comp=Z,23nm,1.3s
PBAR Barrancos 75.30 11 *eP* **P** **18 00 24.4 +1.8**
comp=Z,23nm,1.6s
EVOP Sao Brissos 75.50 10 *eP* **P** **18 00 25.1 +1.4**
EVOP pmax pmax
comp=Z,13nm,0.9s
EVOP Sao Brissos 75.50 10 *eP* **P** **18 00 25.1 +1.4**
comp=Z,12nm,0.9s
EVO Evora 75.52 10 *eP* **P** **18 00 25.1 +1.3**
comp=Z,12nm,0.9s
EVO *eR*
comp=Z,104nm,21.5s
PESTR Estremoz 75.90 10 *eP* **P** **18 00 27.9 +1.8**
comp=Z,23nm,2.6s
PMRV Marv??o 76.48 10 *eP* **P** **18 00 30.7 +1.4**
comp=Z,27nm,1.8s
KEST Kesra 76.94 24 *eP* **P** **18 00 32.0 -0.1**
KEST Kesra 76.94 24 P **P** **18 00 33.9 +1.8**
comp=Z,6.4nm,0.9s,baz=194,slow=1.1,SNR=13
ESDC Sonseca Array 77.27 13 P **P** **18 00 35.1 +1.3**
ESDC Sonseca Array 77.27 13 P **P** **18 00 35.1 +1.3**
comp=Z,4.8nm,0.9s,baz=182,slow=5.9,SNR=24
ESLA Sonseca Array 77.27 13 *eP* **P** **18 00 33.6 -0.3**
comp=Z,2.6nm,1.1s
PBRG Braganca 78.91 10 *eP* **P** **18 00 44.5 +1.6**
comp=Z,27nm,1.6s
ETSF Etsaut 81.03 14 *eP* **P** **18 00 55.9 +1.5**
comp=Z,17nm,0.9s
ETSF Etsaut 81.03 14 *eP* **P** **18 00 55.9 +1.5**
ETSF pmax pmax
comp=Z,17nm,0.9s
ETSF Etsaut 81.03 14 *eP* **P** **18 00 55.9 +1.5**
comp=Z,17nm,0.9s
SJPF Ste Jean 81.11 14 *eP* **P** **18 00 56.3 +1.6**
comp=Z,70nm,1.5s
SJPF Ste Jean 81.11 14 *eP* **P** **18 00 56.3 +1.6**
SJPF pmax pmax
comp=Z,70nm,1.5s
SJPF Ste Jean 81.11 14 *eP* **P** **18 00 56.3 +1.6**
comp=Z,70nm,1.5s
EPF Esparros 81.34 15 *eP* **P** **18 00 57.4 +1.4**
comp=Z,24nm,1.1s
EPF Esparros 81.34 15 *eP* **P** **18 00 57.4 +1.4**
EPF pmax pmax
comp=Z,24nm,1.1s
EPF Esparros 81.34 15 *eP* **P** **18 00 57.4 +1.4**
comp=Z,24nm,1.1s
MTLF Montolieu 82.05 16 *eP* **P** **18 01 00.2 +0.6**
comp=Z,18nm,1.0s
MTLF Montolieu 82.05 16 *eP* **P** **18 01 00.2 +0.6**
MTLF pmax pmax
comp=Z,18nm,1.0s
MTLF Montolieu 82.05 16 *eP* **P** **18 01 00.2 +0.6**
comp=Z,18nm,1.0s
TIP Timpagrande 82.65 28 *eP* **P** **18 01 01.2 -1.8**
comp=Z,24nm,0.7s
PGF Pioggiola 83.06 21 *eP* **P** **18 01 06.7 +1.6**
PGF Pioggiola 83.06 21 *eP* **P** **18 01 06.7 +1.6**
PGF Pioggiola 83.06 21 *eP* **P** **18 01 06.7 +1.6**
LMR La Mourre 83.10 19 *eP* **P** **18 01 06.9 +1.8**
LMR La Mourre 83.10 19 *eP* **P** **18 01 06.9 +1.8**
LMR La Mourre 83.10 19 *eP* **P** **18 01 06.9 +1.8**
LASF Ste Croix 83.12 17 *eP* **P** **18 01 06.5 +1.2**
comp=Z,23nm,0.9s
LASF Ste Croix 83.12 17 *eP* **P** **18 01 06.5 +1.2**
comp=Z,23nm,0.9s
LFF La Frestale 83.25 15 *eP* **P** **18 01 07.0 +1.1**
LFF La Frestale 83.25 15 *eP* **P** **18 01 07.0 +1.1**
LFF La Frestale 83.25 15 *eP* **P** **18 01 07.0 +1.1**
FRF La Foret Royal 83.34 19 *eP* **P** **18 01 08.1 +1.7**
comp=Z,32nm,1.1s
FRF La Foret Royal 83.34 19 *eP* **P** **18 01 08.1 +1.7**
FRF pmax pmax
comp=Z,32nm,1.1s
FRF La Foret Royal 83.34 19 *eP* **P** **18 01 08.1 +1.7**
comp=Z,32nm,1.1s
SMRF Simiane la Rot 83.45 18 *eP* **P** **18 01 08.6 +1.6**
comp=Z,35nm,1.2s
SMRF Simiane la Rot 83.45 18 *eP* **P** **18 01 08.6 +1.6**
comp=Z,35nm,1.2s
CAF Calviac 83.52 16 *eP* **P** **18 01 08.4 +1.1**
comp=Z,22nm,1.2s
CAF Calviac 83.52 16 *eP* **P** **18 01 08.4 +1.1**
CAF pmax pmax
comp=Z,22nm,1.2s
CAF Calviac 83.52 16 *eP* **P** **18 01 08.4 +1.1**
comp=Z,22nm,1.2s
RJF Les Rejaudoux 83.77 15 *eP* **P** **18 01 09.6 +1.1**
RJF *eR*
comp=Z,141nm,21.8s
RJF Les Rejaudoux 83.77 15 *eP* **P** **18 01 09.6 +1.1**
RJF Les Rejaudoux 83.77 15 *eP* **P** **18 01 09.6 +1.1**
SBF Sospel 83.84 20 *eP* **P** **18 01 11.0 +2.0**
comp=Z,54nm,0.9s
SBF Sospel 83.84 20 *eP* **P** **18 01 11.0 +2.0**
SBF pmax pmax
comp=Z,54nm,0.9s
SBF Sospel 83.84 20 *eP* **P** **18 01 11.0 +2.0**
comp=Z,54nm,0.9s
VIVF Saint-Julien-l 84.06 17 *eP* **P** **18 01 11.3 +1.3**
comp=Z,21nm,0.9s
VIVF Saint-Julien-l 84.06 17 *eP* **P** **18 01 11.3 +1.3**
VIVF pmax pmax
comp=Z,21nm,0.9s
VIVF Saint-Julien-l 84.06 17 *eP* **P** **18 01 11.3 +1.3**
comp=Z,21nm,0.9s
ORIF Oris-en-Rattie 84.41 18 *eP* **P** **18 01 13.6 +1.7**
comp=Z,15nm,0.7s
ORIF *eR*
comp=Z,60nm,20.0s
ORIF Oris-en-Rattie 84.41 18 *eP* **P** **18 01 13.6 +1.7**
ORIF pmax pmax
comp=Z,15nm,0.7s
ORIF Oris-en-Rattie 84.41 18 *eP* **P** **18 01 13.6 +1.7**
comp=Z,15nm,0.7s
MBDF Montbardon 84.46 19 *eP* **P** **18 01 13.8 +1.5**
comp=Z,19nm,0.9s
MBDF Montbardon 84.46 19 *eP* **P** **18 01 13.8 +1.5**
MBDF pmax pmax
comp=Z,19nm,0.9s
MBDF Montbardon 84.46 19 *eP* **P** **18 01 13.8 +1.5**
comp=Z,19nm,0.9s
MFF Saint Martin d 84.67 14 *eP* **P** **18 01 14.4 +1.3**
comp=Z,35nm,1.1s
MFF Saint Martin d 84.67 14 *eP* **P** **18 01 14.4 +1.3**
MFF pmax pmax
comp=Z,35nm,1.1s
MFF Saint Martin d 84.67 14 *eP* **P** **18 01 14.4 +1.3**
comp=Z,35nm,1.1s
TCF Toulx Ste Croi 84.85 15 *eP* **P** **18 01 15.4 +1.4**
comp=Z,17nm,1.1s
TCF Toulx Ste Croi 84.85 15 *eP* **P** **18 01 15.4 +1.4**
TCF pmax pmax
comp=Z,17nm,1.1s
TCF Toulx Ste Croi 84.85 15 *eP* **P** **18 01 15.4 +1.4**
comp=Z,17nm,1.1s
LPG La Plagne 85.17 19 *eP* **P** **18 01 17.6 +1.6**
comp=Z,24nm,1.0s
LPG La Plagne 85.17 19 *eP* **P** **18 01 17.6 +1.6**
LPG pmax pmax
comp=Z,24nm,1.0s
LPG La Plagne 85.17 19 *eP* **P** **18 01 17.6 +1.6**
comp=Z,24nm,1.0s
LPL La Plagne 85.19 19 *eP* **P** **18 01 17.5 +1.5**
comp=Z,30nm,1.0s
LPL La Plagne 85.19 19 *eP* **P** **18 01 17.5 +1.5**
LPL pmax pmax
comp=Z,30nm,1.0s
LPL La Plagne 85.19 19 *eP* **P** **18 01 17.5 +1.5**
comp=Z,30nm,1.0s
BGF Bois d'Agland 85.24 16 *eP* **P** **18 01 17.0 +1.0**
BGF Bois d'Agland 85.24 16 *eP* **P** **18 01 17.0 +1.0**
BGF Bois d'Agland 85.24 16 *eP* **P** **18 01 17.0 +1.0**
QUIF Quistinic 85.42 11 *eP* **P** **18 01 17.5 +0.8**
comp=Z,30nm,0.8s
QUIF Quistinic 85.42 11 *eP* **P** **18 01 17.5 +0.8**
QUIF pmax pmax
comp=Z,30nm,0.8s
QUIF Quistinic 85.42 11 *eP* **P** **18 01 17.5 +0.8**
comp=Z,30nm,0.8s
SMF Signal de Mont 85.55 16 *eP* **P** **18 01 18.7 +1.2**
comp=Z,17nm,0.9s
SMF Signal de Mont 85.55 16 *eP* **P** **18 01 18.7 +1.2**
SMF pmax pmax
comp=Z,17nm,0.9s
SMF Signal de Mont 85.55 16 *eP* **P** **18 01 18.7 +1.2**
comp=Z,17nm,0.9s
ROSF Rostrenen 85.81 11 *eP* **P** **18 01 18.9 +0.2**
comp=Z,143nm,1.5s
ROSF Rostrenen 85.81 11 *eP* **P** **18 01 18.9 +0.2**
ROSF pmax pmax
comp=Z,143nm,1.5s
ROSF Rostrenen 85.81 11 *eP* **P** **18 01 18.9 +0.2**
comp=Z,143nm,1.5s
SGMF Saint Gilles 85.84 12 *eP* **P** **18 01 19.3 +0.4**
comp=Z,131nm,1.6s
SGMF Saint Gilles 85.84 12 *eP* **P** **18 01 19.3 +0.4**
SGMF pmax pmax
comp=Z,131nm,1.6s
SGMF Saint Gilles 85.84 12 *eP* **P** **18 01 19.3 +0.4**
comp=Z,131nm,1.6s
SSF Saint Saulge 85.87 16 *eP* **P** **18 01 20.2 +1.2**
comp=Z,13nm,0.9s
SSF Saint Saulge 85.87 16 *eP* **P** **18 01 20.2 +1.2**
SSF pmax pmax
comp=Z,13nm,0.9s
SSF Saint Saulge 85.87 16 *eP* **P** **18 01 20.2 +1.2**
comp=Z,13nm,0.9s
RAYN Ar Rayn 86.00 57 P **P** **18 01 22.0 +1.7**
comp=Z,43nn,1.1s,SNR=6.3
RAYN Ar Rayn 86.00 57 *eP* **P** **18 01 17.2 -3.1**
comp=Z,9.4nm,1.1s
CABF La Chapelle 86.05 18 *eP* **P** **18 01 20.9 +0.8**
comp=Z,24nm,1.0s
CABF La Chapelle 86.05 18 *eP* **P** **18 01 20.9 +0.8**
CABF pmax pmax
comp=Z,24nm,1.0s
CABF La Chapelle 86.05 18 *eP* **P** **18 01 20.9 +0.8**
comp=Z,24nm,1.0s
LOR Lormes 86.14 16 *eP* **P** **18 01 20.7 +0.3**
comp=Z,13nm,1.1s
LOR *eR*
comp=Z,172nm,23.0s
LOR Lormes 86.14 16 *eP* **P** **18 01 20.7 +0.3**
comp=Z,13nm,1.1s
GRR Gorron 86.26 13 *eP* **P** **18 01 21.5 +0.6**
GRR Gorron 86.26 13 *eP* **P** **18 01 21.5 +0.6**
GRR Gorron 86.26 13 *eP* **P** **18 01 21.5 +0.6**
LDF La Druitiere 86.59 13 *eP* **P** **18 01 23.4 +0.8**
LDF La Druitiere 86.59 13 *eP* **P** **18 01 23.4 +0.8**
LDF La Druitiere 86.59 13 *eP* **P** **18 01 23.4 +0.8**
FLN La Foliniere 86.69 13 *eP* **P** **18 01 23.8 +0.8**
comp=Z,45nm,1.0s
FLN *eR*
comp=Z,67nm,22.2s
FLN La Foliniere 86.69 13 *eP* **P** **18 01 23.8 +0.8**
FLN pmax pmax
comp=Z,45nm,1.0s
FLN La Foliniere 86.69 13 *eP* **P** **18 01 23.8 +0.8**
comp=Z,45nm,1.0s
FUORN Ofen-pass-Fuorn 87.16 20 *eP* **P** **18 01 23.7 -2.0**
comp=Z,11nm,0.7s
SFTF Sexfontaines 87.29 17 *eP* **P** **18 01 27.2 +1.2**
comp=Z,29nm,1.0s
SFTF Sexfontaines 87.29 17 *eP* **P** **18 01 27.2 +1.2**
comp=Z,29nm,1.0s
HINF Hinteralfeld 87.36 18 *eP* **P** **18 01 27.0 +0.6**
HINF Hinteralfeld 87.36 18 *eP* **P** **18 01 27.0 +0.6**
HINF Hinteralfeld 87.36 18 *eP* **P** **18 01 27.0 +0.6**
HAU Haudompre 87.41 17 *eP* **P** **18 01 27.6 +1.0**
HAU *eR*
comp=Z,70nm,22.0s
HAU Haudompre 87.41 17 *eP* **P** **18 01 27.6 +1.0**
HAU Haudompre 87.41 17 *eP* **P** **18 01 27.6 +1.0**
MEZF Maizieres J'vi 87.57 16 *eP* **P** **18 01 28.7 +1.4**
comp=Z,32nm,0.8s
MEZF Maizieres J'vi 87.57 16 *eP* **P** **18 01 28.7 +1.4**
comp=Z,32nm,0.8s
PAGF Fort de Pagny 87.78 17 *eP* **P** **18 01 29.9 +1.6**
comp=Z,9.8nm,0.9s
PAGF Fort de Pagny 87.78 17 *eP* **P** **18 01 29.9 +1.6**
comp=Z,9.8nm,0.9s
CDF Champ du Feu 88.02 18 *eP* **P** **18 01 30.9 +1.3**
comp=Z,11nm,1.0s
CDF Champ du Feu 88.02 18 *eP* **P** **18 01 30.9 +1.3**
CDF pmax pmax
comp=Z,11nm,1.0s
CDF Champ du Feu 88.02 18 *eP* **P** **18 01 30.9 +1.3**
comp=Z,11nm,1.0s
VTS Vitosha 88.11 30⇓*P* **P** **18 01 32.4 +2.2**
VTS Vitosha 88.11 30⇓*iP* **P** **18 01 32.3 +2.1**
BFO Black Forest 88.21 19 *eP* **P** **18 01 30.4 0.0**
BFO pmax pmax
comp=Z,8.0nm,0.8s
BFO Black Forest 88.21 19 *eP* **P** **18 01 30.4 0.0**
comp=Z,7.5nm,0.8s
BAIF Baives 88.85 15 *eP* **P** **18 01 34.7 +1.4**
comp=Z,31nm,1.0s
BAIF Baives 88.85 15 *eP* **P** **18 01 34.7 +1.4**
BAIF pmax pmax
comp=Z,31nm,1.0s
BAIF Baives 88.85 15 *eP* **P** **18 01 34.7 +1.4**
comp=Z,31nm,1.0s
WLF Walferdange 88.92 17 P **P** **18 01 35.8 +2.1**
GIVF Givet 89.03 16 *eP* **P** **18 01 35.5 +1.3**
comp=Z,44nm,1.1s
GIVF Givet 89.03 16 *eP* **P** **18 01 35.5 +1.3**
GIVF pmax pmax
comp=Z,45nm,1.1s
GIVF Givet 89.03 16 *eP* **P** **18 01 35.5 +1.3**
comp=Z,44nm,1.1s
BCLA Clavier 89.43 16 P **P** **18 01 38.2 +2.1**
GEC2 GERESS Array S 90.16 22 *eP* **P** **18 01 38.6 -1.1**
GEC2 GERESS Array S 90.16 22 *eP* **P** **18 01 38.6 -1.1**
GERES GERESS Array B 90.16 22 P **P** **18 01 41.1 +1.4**
GERES GERESS Array B 90.16 22 P **P** **18 01 41.1 +1.4**
comp=Z,4.5nm,0.8s,baz=195,slow=4.1,SNR=41
GRFO Grafenberg 90.22 20 *eP* **P** **18 01 40.3 +0.5**
GRFO pmax pmax
comp=Z,16nm,1.0s
GRFO Grafenberg 90.22 20 *eP* **P** **18 01 40.3 +0.5**
comp=Z,16nm,1.0s
GRF Grafenberg Arr 90.22 20 *eP* **P** **18 01 41.3 +1.5**
comp=Z,18nm,0.8s
GRF *ePcP* **PcP** **18 01 44.9 +3.9**
GRF *eP* pP 18 01 50.3 +7.1
GRF *esP* sP 18 01 54.1 +10
GRF Grafenberg Arr 90.22 20 *eP* **P** **18 01 41.3 +1.5**
GRF *e* 18 01 44.9
GRF *e**PP pP 18 01 50.3 +7.1
GRF pmax pmax
comp=Z,18nm,0.8s
GZR Gura Zlata 90.27 29⇓*P* **P** **18 01 41.7 +1.5**
GZR Gura Zlata 90.27 29⇓*iP* **P** **18 01 41.7 +1.5**
KHC Kasperske Hory 90.38 21 *eP* **P** **18 01 41.7 +1.1**
KHC *e* 18 01 46.3
KHC MLR MLR
comp=Z,100nm,21.2s
KHC Kasperske Hory 90.38 21 *eP* **P** **18 01 41.7 +1.1**
KHC *epP* **pP** **18 01 46.3 +2.3**
KHC *ex* x 18 01 50.5
KHC AMS AMS 18 40 00.0
comp=Z,100nm,21.2s
KHC Kasperske Hory 90.38 21 *eP* **P** **18 01 40.1 -0.6**
comp=Z,12nm,1.1s
BR131 Keskin Array S 90.58 38 *eP* **P** **18 01 40.4 -1.5**
comp=Z,7.1nm,1.0s
BRTR Keskin Array B 90.58 38 P **P** **18 01 43.5 +1.5**
BRTR Keskin Array B 90.58 38 P **P** **18 01 43.5 +1.5**
comp=Z,6.3nm,1.1s,baz=193,slow=5.1,SNR=25
ZST Bratislava 90.65 24 *eP* **P** **18 01 42.8 +1.0**
ZST pmax pmax
comp=Z,8.0nm,0.9s
ZST Bratislava 90.65 24 *eP* **P** **18 01 42.8 +1.0**
LOT Lotru 90.70 29⇑*iP* **P** **18 01 43.8 +1.5**
ARR Arges 90.98 30⇓*iP* **P** **18 01 45.0 +1.5**
NKC Novy Kostel 91.05 20 *eP* **P** **18 01 45.6 +1.9**
NKC *e* 18 01 49.5
NKC Novy Kostel 91.05 20 *eP* **P** **18 01 45.6 +1.9**
NKC *epP* **pP** **18 01 49.5 +2.5**
TREC Trest 91.10 22 *eP* **P** **18 01 45.7 +1.8**
TREC *e* 18 01 49.8
TREC MLR MLR
comp=Z,200nm,24.3s
TREC Trest 91.10 22 *eP* **P** **18 01 45.7 +1.8**
TREC *epP* **pP** **18 01 49.8 +2.5**
TREC *ex* x 18 01 55.0
TREC AMS AMS 18 41 20.0
comp=Z,200nm,24.3s
VOIR 91.20 30⇑*P* **P** **18 01 45.8 +1.2**
VOIR 91.20 30⇑*iP* **P** **18 01 45.8 +1.2**
PSZ Piszkesteto 91.35 26 *eP* **P** **18 01 43.4 -1.8**
PSZ pmax pmax
comp=Z,15nm,1.2s
PSZ Piszkesteto 91.35 26 *eP* **P** **18 01 43.4 -1.8**
comp=Z,15nm,1.2s
PSZ Piszkesteto 91.35 26⇑*iP* **P** **18 01 47.1 +1.9**
DRGR 91.42 28⇑*P* **P** **18 01 47.1 +1.6**
DRGR 91.42 28⇑*iP* **P** **18 01 47.1 +1.6**
PRU Pruhonice 91.43 22 *eP* **P** **18 01 47.3 +1.9**
PRU *e* 18 01 51.4
PRU MLR MLR
comp=Z,100nm,20.9s
PRU Pruhonice 91.43 22 *eP* **P** **18 01 47.3 +1.9**
PRU *epP* **pP** **18 01 51.4 +2.7**
PRU *ex* x 18 01 56.4
PRU AMS AMS 18 41 30.0
comp=Z,100nm,20.9s
PRA Prague 91.47 21 P **P** **18 01 48.0 +2.4**
PRA pP **pP** **18 01 52.0 +3.1**
PRA *ex* x 18 01 56.0
VYHS Vyhne 91.48 25 *eP* **P** **18 01 47.3 +1.6**
VYHS pmax pmax
comp=Z,6.0nm,1.2s
VYHS Vyhne 91.48 25 *eP* **P** **18 01 47.3 +1.6**
MLR Muntele Rosu 91.61 30⇓*iP* **P** **18 01 48.0 +1.5**
PVCC Panska Ves 91.92 21 *eP* P 18 01 39.7 -8.0
PVCC Panska Ves 91.92 21 *eP* P 18 01 39.7 -8.0
KECS Kecovo 92.04 26 *eP* **P** **18 01 50.1 +1.8**
KECS pmax pmax
comp=Z,3.0nm,0.9s
KECS Kecovo 92.04 26 *eP* **P** **18 01 50.0 +1.8**
BRG Berggiesshubel 92.05 21 *eP* P 18 01 54.7 +6.5
comp=Z,2.9nm,0.8s
BRG Berggiesshubel 92.05 21 *eP* P 18 01 54.7 +6.5
comp=Z,2.9nm,0.8s
BRG Berggiesshubel 92.05 21 *eP* P 18 01 54.7 +6.5
BRG pmax pmax
comp=Z,3.0nm,0.8s
MORC Moravsky Berou 92.17 23 *eP* **P** **18 01 47.5 -1.4**
MORC pmax pmax
comp=Z,7.0nm,0.9s
MORC Moravsky Berou 92.17 23 *eP* **P** **18 01 47.5 -1.4**
comp=Z,6.5nm,0.9s
MORC Moravsky Berou 92.17 23⇓*iP* **P** **18 01 50.8 +1.9**
CLL Collm 92.17 20 *eP* P 18 01 52.0 +3.2
CLL *i* 18 02 00.8
CLL pmax pmax
comp=Z,103nm,1.3s
PLOR Plostina 92.19 31⇑*P* **P** **18 01 50.1 +0.9**
PLOR Plostina 92.19 31⇑*iP* **P** **18 01 50.0 +0.9**
VRI Vrincioaia 92.24 31⇑*P* **P** **18 01 49.8 +0.5**
VRI Vrincioaia 92.24 31⇑*iP* **P** **18 01 49.8 +0.5**
DPC Dobruska-Polom 92.29 22 *eP* **P** **18 01 51.0 +1.6**
DPC *e* 18 01 55.6
DPC Dobruska-Polom 92.29 22 *eP* **P** **18 01 51.0 +1.6**
DPC *epP* **pP** **18 01 55.6 +2.8**
DPC *ex* x 18 01 59.5
UPC Upice 92.33 22 *eP* **P** **18 01 50.7 +1.1**
UPC Upice 92.33 22 *eP* **P** **18 01 50.7 +1.1**
OKC Ostrava-Krasne 92.42 24 AMS AMS 18 42 00.0
comp=Z,100nm,21.9s
CRVS Cervenica-Dubn 92.73 26 *eP* **P** **18 01 51.1 -0.4**
CRVS pmax pmax
comp=Z,5.0nm,1.1s
CRVS Cervenica-Dubn 92.73 26 *eP* **P** **18 01 51.1 -0.4**
UZH Uzhgorod 92.80 27 *eP* **P** **18 01 52.2 +0.4**
UZH *e* 18 01 58.0
TKL Tuckaleechee C 93.01 313 LR LR 18 40 05.0
comp=Z,108nm,18.9s,baz=65,slow=33
KOLS Kolonicke sedl 93.05 26 *eP* **P** **18 01 55.0 +2.0**
KOLS pmax pmax
comp=Z,6.0nm,1.7s
KOLS Kolonicke sedl 93.05 26 *eP* **P** **18 01 55.0 +2.0**
BUR08 Bucovina Ar. S 93.07 29 *eP* **P** **18 01 53.3 +0.1**
STHS Stebnicka Huta 93.09 26 *eP* **P** **18 01 55.8 +2.6**
STHS pmax pmax
comp=Z,3.0nm,1.6s
STHS Stebnicka Huta 93.09 26 *eP* **P** **18 01 55.8 +2.6**
AKASG Malin Array Be 97.10 29 LR LR 18 42 42.6
comp=Z,71nm,21.6s,baz=230,slow=33
TXAR Lajitas Array 102.09 297 PKKP PKKPdf 18 18 59.2 +14
comp=Z,0.5nm,0.8s,baz=225,slow=3.2,SNR=5.2
ISCO Idaho Springs 109.19 306 *eP* **Pdif** **18 03 06.6 +0.6**
ISCO Idaho Springs 109.19 306 *ePdif* **Pdif** **18 03 06.6 +0.6**
ASAR Alice Springs 115.32 154 PKP **PKPdf** **18 07 20.6 -1.3**
ASAR PKKPbc **PKKPbc** **18 17 54.1 -1.2**
ASAR Alice Springs 115.32 154 PKP **PKPdf** **18 07 20.6 -1.3**
comp=Z,1.1nm,0.9s,baz=185,slow=1.6,SNR=9.0
ASAR PKKPbc **PKKPbc** **18 17 54.1 -1.2**
comp=Z,0.2nm,0.6s,baz=77,slow=1.7,SNR=4.5
NVAR Mina Array Bea 117.17 299 PKKPab PKKPab 18 17 51.3 -0.3
NVAR Mina Array Bea 117.17 299 PKKPab PKKPab 18 17 51.3 -0.3
comp=Z,0.3nm,0.4s,baz=297,slow=4.0,SNR=4.6
WRA Warramunga Arr 118.88 152 PKP **PKPdf** **18 07 27.2 -1.5**
WRA Warramunga Arr 118.88 152 PKP **PKPdf** **18 07 27.2 -1.5**
comp=Z,1.2nm,0.7s,baz=225,slow=1.7,SNR=9.4
KURK Kurchatov 122.37 48 *ePKIKP* **PKPdf** **18 07 32.7 -1.6**
KURK Kurchatov 122.37 48 *ePKPdf* **PKPdf** **18 07 32.7 -1.6**
MKAR Makanchi Array 123.34 53 PKIKP **PKPdf** **18 07 35.8 -0.6**
MKAR Makanchi Array 123.34 53 PKP **PKPdf** **18 07 35.8 -0.6**
MKAR PP PP 18 09 03.6 -14
MKAR Makanchi Array 123.34 53 PKP **PKPdf** **18 07 35.8 -0.6**
comp=Z,2.0nm,0.9s,baz=242,slow=2.3,SNR=12
MKAR PP PP 18 09 03.6 -14
comp=Z,0.4nm,0.9s,baz=251,slow=4.4,SNR=2.8
YKA Yellowknife Ar 123.63 326 PKP **PKPdf** **18 07 34.5 -1.9**
YKA Yellowknife Ar 123.63 326 PKP **PKPdf** **18 07 34.5 -1.9**
comp=Z,1.8nm,0.9s,baz=100,slow=1.9,SNR=11
CMAR Chiang Mai Arr 123.93 91 PKP **PKPdf** **18 07 38.1 -0.2**
CMAR Chiang Mai Arr 123.93 91 PKP **PKPdf** **18 07 38.1 -0.2**
comp=Z,1.4nm,0.7s,baz=245,slow=3.3,SNR=8.8
NVS Novosibirsk 126.24 44 *i* PKIKP **PKPdf** **18 07 39.4 -2.2**
ZALV Zalesovo Beam 126.93 46 PKIKP **PKPdf** **18 07 41.7 -1.3**
ZALV Zalesovo Beam 126.93 46 PKP **PKPdf** **18 07 41.7 -1.3**
ZALV Zalesovo Beam 126.93 46 PKP **PKPdf** **18 07 41.7 -1.3**
comp=Z,1.7nm,0.7s,baz=268,slow=3.9,SNR=9.3
ZAK Zakamensk 137.66 53 *ePKIKP* **PKPdf** **18 08 00.3 -3.2**
ZAK pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,2.0nm,1.0s						
ILAR	Eielson Array	137.89	329	PKP	PKPdf	18 08 02.3	-1.0
ILAR	Eielson Array	137.89	329	PKhKP	PKPpre	18 07 56.0	
	comp=Z,0.6nm,1.0s,baz=194,slow=0.9,SNR=4.2						
ILAR				PKP	PKPdf	18 08 02.3	-1.0
	comp=Z,1.9nm,0.8s,baz=345,slow=1.2,SNR=17						
COLD	Coldfoot	138.38	333	ePKPdf	PKPdf	18 08 03.6	-0.6
SONM	Songino Array	139.55	57	PKP	PKPdf	18 08 06.8	-0.2
SONM	Songino Array	139.55	57	PKhKP	PKPpre	18 07 59.8	
	comp=Z,2.2nm,0.8s,baz=236,slow=5.0,SNR=3.7						
SONM				PKP	PKPdf	18 08 06.8	-0.2
	comp=Z,3.1nm,0.7s,baz=250,slow=3.0,SNR=5.6						
TRF	Thorofare Moun	139.70	328	ePKPdf	PKPdf	18 08 05.7	-1.3
TIXI	Tiksi	141.33	15	i PKIKP	PKPdf	18 08 10.0	+0.6
SSLB	Suanglung	144.28	100	ePKPdf	PKPab	18 08 13.7	-0.4
YULB	Yu-li	144.35	101	ePKPdf	PKPab	18 08 13.6	-0.7
BJI	Beijing	145.78	71	PKPbc	PKPbc	18 08 18.5	-0.2
CHGN	Chignik	145.80	319	ePKPdf	PKPdf	18 08 17.6	-0.1
BILL	Bilibino	148.22	355	⇓i PKIKP	PKPdf	18 08 20.9	-0.5
BILL				eSS	SS	18 31 04.4	+4.7
BILL				pmax	pmax		
	comp=Z,49nm,1.4s						
BILL	Bilibino	148.22	355	ePKPdf	PKPdf	18 08 20.9	-0.5
YAK	Yakutsk	148.30	27	ePKIKP	PKPdf	18 08 23.3	+1.6
YAK				pmax	pmax		
	comp=Z,34nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
KSAR	Wonju Array Be	154.50	78	PKP	PKPdf	18 08 31.6	-0.3
KSAR				PKPbc	PKPbc	18 08 39.2	-1.1
KSAR				PKPab	PKPab	18 08 54.7	-0.1
KSRS	Korea Array	154.53	78	PKP	PKPdf	18 08 31.6	-0.4
	comp=N,0.5nm,0.9s,baz=263,slow=3.9,SNR=5.4						
KSRS				PKPbc	PKPbc	18 08 39.2	-1.1
	comp=N,1.4nm,0.8s,baz=276,slow=2.0,SNR=8.5						
KSRS				PKPab	PKPab	18 08 54.7	-0.3
	comp=N,1.9nm,0.9s,baz=266,slow=4.2,SNR=7.4						
KLR	Kul'dur	155.96	49	ePKP2	PKPab	18 08 57.1	-3.6

KRSC 07 18:10:50.3±2.4, 53°.41N×171°.18E, h10km±10km, ML4.0, Near Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BKI	Bering	3.54	303	eP	Pn	18 11 47.5	+2.2
BKI				eS	Sn	18 12 29.1	+2.0
MKZ	Mys Kozlova	5.69	285	eP	Pn	18 12 18.0	+3.2
MKZ				eS	Sn	18 13 21.4	+1.3
ZLN	Zelenaya	6.55	298	P	Pn	18 12 29.1	+2.3
BZGR	Bezymyannyi-Gr	6.59	297	P	Pn	18 12 31.0	+3.7
BZMR	Bezymyannaya	6.70	296	P	Pn	18 12 32.1	+3.3
BZWR	Bezymyannyi-We	6.70	297	P	Pn	18 12 32.4	+3.5
SPN	Mys Shipunski	6.70	272	eP	Pn	18 12 31.9	+3.2
SPN				S	Sn	18 13 45.9	+0.8
TUMR	Tumrok	6.72	291	P	Pn	18 12 32.4	+3.3
KMNR	Kamenistaya	6.78	295	P	Pn	18 12 32.3	+2.4
KPT	Kopyto	6.85	296	P	Pn	18 12 34.3	+3.5
NLC	Nalytchevo	7.10	273	P	Pn	18 12 37.9	+3.8
NLC				S	Sn	18 13 55.7	+0.9
SDLR	Sedlovina	7.37	274	eP	Pn	18 12 41.7	+3.8
UGLR	Uglovaya	7.41	273	P	Pn	18 12 42.0	+3.5
KRER	Koryakskii	7.44	274	P	Pn	18 12 42.3	+3.2
AVH	Avacha	7.45	274	P	Pn	18 12 42.7	+3.6
ESO	Esso	7.66	294	P	Pn	18 12 46.0	+4.1
RUS	Russkaya	7.72	268	eP	Pn	18 12 46.8	+4.2
MTVR	Mutnovka	7.91	268	S	Sn	18 14 15.2	+0.2
ASAK	Asacha	8.10	268	P	Pn	18 12 52.3	+4.3

MEX 07 18:15:35.0±0.4, 16°.50N×98°.35W, h5km±7km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.24	115	i P	Pg	18 15 39.1	-0.7
PNIG				eS	Sg	18 15 43.7	+0.7
UTMO	Huajuapan	1.43	22	eP	Pn	18 15 57.9	-4.0
UTMO				eS	Sb	18 16 16.1	-5.0
MEIG	Mezcala	1.87	320	i P	Pn	18 16 04.1	-3.7
MEIG				i S	Sn	18 16 26.9	-4.9
CAIG	El Cayaco	1.91	287	i P	Pn	18 16 04.7	-3.6
CAIG				i S	Sn	18 16 28.6	-4.2
PLIG	Platanillo	2.18	330	i P	Pn	18 16 09.5	-2.6
PLIG				i S	Sn	18 16 35.7	-3.9
HUIG	Huatulco	2.28	108	i P	Pn	18 16 10.2	-3.1
HUIG				i S	Sn	18 16 37.3	-4.4
YAIG	Yautepec	2.45	344	i P	Pn	18 16 12.7	-3.2
YAIG				i S	Sn	18 16 42.2	-4.2
ARIG	Puente Sto Nin	2.60	313	i P	Pn	18 16 14.8	-3.0
ARIG				eS	Sn	18 16 45.8	-4.0
PCIG		5.00	98	i P	Pn	18 16 47.7	-3.1

*ISCJB **07** 18:30:14.9±0.4, 43°.71N±0°.03×105°.32W±0°.04, h0km, mb4.1/2, MS3.2/1, Error ellipse: s-maj=4.4km s-min=3.5km az=22.2*
*NEIC **07** 18:30:15.2±0.6, 44°.10N×105°.82W, h0km, ML3.4, Error ellipse: s-maj=10.6km s-min=7.7km az=130.0, Suspected Mining explosion.*
NEIC 35 km [20 miles] SW of Gillette.
*IDC **07** 18:30:15.6±0.9, 44°.08N×105°.87W, h0km, mb4.0/2, mb1 3.8/7, mb1mx3.5/31, mbtmp3.5/7, ML3.2/5, MS3.1/3, Ms1 3.1/3, ms1mx2.5/54, Error ellipse: s-maj=25.9km s-min=9.7km az=140.0*
ISC 07 18:30:14.5±0.6, 43°.71N±0°.02×105°.36W±0°.02, h0km, n95, σ1s.22/76, 38C-28D, Wyoming

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I23A	Meade Ranch, G	0.26	343	⇓P	Pg	18 30 21.9	+2.4
	baz=0.3						
I23A	Meade Ranch, G	0.26	343	P	Pg	18 30 07.3	-12
	baz=0.3,SNR=68						
I23A	Meade Ranch, G	0.26	343	⇓P	Pg	18 30 21.9	+2.4
	baz=0.3						
J23A	Dilts Ranch, B	0.34	205	⇑P	Pb	18 30 22.9	-0.7
	baz=0.4						
J23A	Dilts Ranch, B	0.34	205	P	Pg	18 30 08.3	-13
	baz=0.3,SNR=66						
J23A	Dilts Ranch, B	0.34	205	⇑P	Pb	18 30 22.9	-0.7
	baz=0.4						
I24A	Kuemmerle Ranc	0.55	74	⇓P	Pg	18 30 26.0	+1.0
	baz=0.5						
I24A	Kuemmerle Ranc	0.55	74	P	Pg	18 30 11.5	-14
	baz=0.5,SNR=61						
I24A	Kuemmerle Ranc	0.55	74	⇓P	Pg	18 30 26.0	+1.0
	baz=0.5						
J24A	Dixon Ranch, L	0.63	127	⇑P	Pg	18 30 12.6	-14
	baz=0.6						
I22A	9 Mile Ranch,	0.84	283	⇑P	Pb	18 30 32.2	+0.2
	baz=0.9						
I22A				⇑S	Sb	18 30 43.6	-0.2
	baz=0.9						
I22A	9 Mile Ranch,	0.84	283	⇑P	Pg	18 30 17.4	-13
	baz=0.9,SNR=10						
I22A	9 Mile Ranch,	0.84	283	⇑P	Pb	18 30 32.2	+0.2
	baz=0.9						
I22A				⇑S	Sb	18 30 43.6	-0.2
	baz=0.9						
H23A	Clabaugh Cattl	0.85	358	⇓P	Pb	18 30 31.9	-0.3
	baz=0.9						
H23A	Clabaugh Cattl	0.85	358	⇓P	Pg	18 30 17.3	-14
	baz=0.9,SNR=6.8						
H23A	Clabaugh Cattl	0.85	358	⇓P	Pb	18 30 31.9	-0.3
	baz=0.9						
J22A	Midwest	0.87	250	⇑P	Pb	18 30 32.5	-0.1
	baz=0.9						
J22A	Midwest	0.87	250	⇑P	Pg	18 30 17.8	-14
	baz=0.9,SNR=38						
J22A	Midwest	0.87	250	⇑P	Pb	18 30 32.5	-0.1
	baz=0.9						
K23A	Bowen Ranch, D	0.98	192	⇓P	Pb	18 30 34.4	0.0
	baz=1.0						
K23A	Bowen Ranch, D	0.98	192	⇓P	Pb	18 30 34.4	0.0
	baz=1.0						
K24A	Anderson Ranch	1.07	158	⇑P	Pg	18 30 35.9	+1.0
	baz=1.1						
K24A	Anderson Ranch	1.07	158	P	Pg	18 30 20.9	-14
	baz=1.0,SNR=34						
K24A	Anderson Ranch	1.07	158	⇑P	Pg	18 30 35.9	+1.0
	baz=1.1						
H22A	Clearmont	1.14	321	⇓P	Pn	18 30 37.7	-0.1
	baz=1.2						
H22A	Clearmont	1.14	321	P	Pg	18 30 23.2	-13
	baz=1.2,SNR=44						
H22A	Clearmont	1.14	321	⇓P	Pn	18 30 37.7	-0.1
	baz=1.2						
J25A	Sunshine Ranch	1.18	105	⇓P	Pg	18 30 37.2	+0.2
	baz=1.1						
J25A	Sunshine Ranch	1.18	105	⇑P	Pg	18 30 22.7	-15
	baz=1.1						
J25A	Sunshine Ranch	1.18	105	⇓P	Pg	18 30 37.2	+0.2
	baz=1.1						
H24A	Dirks Ranch, A	1.18	29	⇑P	Pg	18 30 37.4	+0.1
	baz=1.2						
H24A				⇑S	Sb	18 30 54.1	+0.2
	baz=1.2						
H24A	Dirks Ranch, A	1.18	29	P	Pg	18 30 22.8	-15
	baz=1.2,SNR=90						
H24A	Dirks Ranch, A	1.18	29	⇑P	Pg	18 30 37.4	+0.1
	baz=1.2						
H24A				⇑S	Sb	18 30 54.1	+0.2
	baz=1.2						
K22A	Casper	1.36	219	⇑P	Pb	18 30 41.1	+0.1
	baz=1.4						
K22A	Casper	1.36	219	⇑Pb	Pg	18 30 26.4	-15
	baz=1.4,SNR=54						
K22A	Casper	1.36	219	⇑P	Pb	18 30 41.1	+0.1
	baz=1.4						
I21A	Big Trails, Te	1.41	275	⇑P	Pb	18 30 41.9	+0.2
	baz=1.4						
I21A	Big Trails, Te	1.41	275	⇓Pb	Pg	18 30 27.1	-15
	baz=1.4						
I21A	Big Trails, Te	1.41	275	⇑P	Pb	18 30 41.9	+0.2
	baz=1.4						
G23A	Biddle	1.49	359	⇑P	Pb	18 30 43.3	+0.2
	baz=1.5						
G23A	Biddle	1.49	359	Pb	Pn	18 30 28.6	-14
	baz=1.5,SNR=51						
G23A	Biddle	1.49	359	⇑P	Pb	18 30 43.3	+0.2
	baz=1.5						
H21A	Big Horn, Sher	1.52	308	⇓Pb	Pg	18 30 44.5	+0.8
	baz=1.5						
H21A	Big Horn, Sher	1.52	308	⇑Pb	Pn	18 30 29.7	-13
	baz=1.6,SNR=7.8						
H21A	Big Horn, Sher	1.52	308	⇓Pb	Pg	18 30 44.5	+0.8
	baz=1.5						
K25A	Mack Ranch, Ha	1.55	135	⇓Pb	Pb	18 30 44.5	+0.4
	baz=1.5						
K25A	Mack Ranch, Ha	1.55	135	⇓Pb	Pb	18 30 44.5	+0.4
	baz=1.5						
J21A	Lysite	1.56	257	⇑Pn	Pg	18 30 44.3	-0.2
	baz=1.6						
J21A	Lysite	1.56	257	⇑Pb	Pn	18 30 29.7	-14
	baz=1.6,SNR=9.2						
J21A	Lysite	1.56	257	⇑Pn	Pg	18 30 44.3	-0.2
	baz=1.6						
L23A	Garrett	1.62	189	⇑Pn	Pn	18 30 44.9	+0.4
	baz=1.6						
L23A				⇓Sb	Sg	18 31 08.6	+2.1
	baz=1.6						
L23A	Garrett	1.62	189	⇑Pb	Pn	18 30 30.5	-14
	baz=1.6,SNR=52						
L23A	Garrett	1.62	189	⇑Pn	Pn	18 30 44.9	+0.4
	baz=1.6						
L23A				⇓Sb	Sg	18 31 08.6	+2.1
	baz=1.6						
G22A	Birney	1.65	336	⇓Pb	Pg	18 30 46.5	+0.4
	baz=1.7						
G22A	Birney	1.65	336	⇓Pb	Pn	18 30 31.9	-13
	baz=1.7,SNR=24						
G22A	Birney	1.65	336	⇓Pb	Pg	18 30 46.5	+0.4
	baz=1.7						
L24A	Wheatland	1.70	169	⇓Pb	Pb	18 30 46.5	-0.2
	baz=1.7						
L24A	Wheatland	1.70	169	⇓Pb	Pb	18 30 46.5	-0.2
	baz=1.7						
G24A	Alzada	1.75	22	⇑Pb	Pb	18 30 47.6	+0.1
	baz=1.7						
G24A	Alzada	1.75	22	⇑Pb	Pb	18 30 47.6	+0.1
	baz=1.7						
K21A	Alcova	1.76	233	⇓Pb	Pg	18 30 48.0	-0.2
	baz=1.8						
K21A				⇑Sb	Sg	18 31 12.2	+1.2
	baz=1.8						
K21A	Alcova	1.76	233	⇓Pb	Pg	18 30 48.0	-0.2
	baz=1.8						
K21A				⇑Sb	Sg	18 31 12.2	+1.2
	baz=1.8						
F23A	Volborg	2.01	359	⇑Pb	Pn	18 30 36.5	-13
	baz=2.0,SNR=31						
G21A	Lodge Grass	2.01	319	⇓Pb	Pn	18 30 37.1	-13
	baz=2.0,SNR=9.3						
I20A	Worland	2.02	278	⇑Pb	Pn	18 30 37.7	-12
	baz=2.0,SNR=39						
PDAR	Pinedale Array	3.21	254	Pn	Pn	18 31 08.8	+2.3
PDAR	Pinedale Array	3.21	254	Pn	Pn	18 31 08.8	+2.3
	3.9nm,0.3s,baz=69,slow=16,SNR=30						
PDAR				Lg	Lg	18 31 53.1	
	6.6nm,0.3s,baz=58,slow=26,SNR=4.0						
OGNE	Ogallala	3.70	137	eP	Pb	18 31 20.5	-0.3
LOHW	Long Hollow	3.81	270	eP	Pn	18 31 10.4	-4.3
MOOW	Moose Ponds	3.91	272	eP	Pn	18 31 12.9	-3.1
ISCO	Idaho Springs	3.92	183	eP	Pb	18 31 21.9	-2.7
SNOW	Snow King Moun	3.93	268	eP	Pn	18 31 12.5	-3.8
SMCO	Snowmass	4.69	196	eP	Pn	18 31 26.9	-0.1
DGMT	Dagmar	4.83	9	eP	Pn	18 31 24.8	-3.6
DAU	Daniels Canyon	5.49	235	eP	Pn	18 31 40.5	+2.6
	15nm,0.5s						
JLU	Jordanelle	5.49	238	eP	Pn	18 31 37.7	-0.1
	8.8nm,0.5s						
PV04	Paradox Valley	5.95	208	eP	Pn	18 31 46.7	+2.6
DUG	Dugway	6.58	240	eP	Pn	18 31 50.8	-1.8
MVU	Marysvale	7.34	227	eP	Pn	18 32 03.0	-0.1
	5.7nm,0.4s						
ELK	Elko	7.91	251	Pn	Pn	18 32 09.3	-1.6
ELK	Elko	7.91	251	Pn	Pn	18 32 09.3	-1.6
	0.1nm,0.3s,baz=52,slow=17,SNR=2.7						
CCUT	Cedar City	8.65	227	ePn	Pn	18 32 20.1	-1.1
	1.8nm,0.5s						
ULM	Lac du Bonnet	9.20	41	Pn	Pn	18 32 26.2	-2.2
ULM				Lg	Lg	18 35 01.9	
ULM	Lac du Bonnet	9.20	41	Pn	Pn	18 32 26.2	-2.2
	1.0nm,0.3s,baz=221,slow=12,SNR=4.0						
ULM				Lg	Lg	18 35 01.9	
	0.4nm,0.3s,baz=322,slow=19,SNR=2.4						
ULM				LR	LR	18 36 06.4	
	comp=Z,107nm,19.1s,baz=13,slow=38						
NEW	Newport	9.37	303	Lg	Lg	18 34 58.0	
	0.1nm,0.3s,baz=6.5,slow=7.3,SNR=4.1						
WUAZ	Wupatki	9.41	212	eP	Pn	18 32 34.5	+3.1
	7.1nm,0.4s						
NVAR	Mina Array Bea	11.10	246	Pn	Pn	18 32 57.4	+2.7
	0.1nm,0.3s,baz=58,slow=12,SNR=4.1						
YBH	Yreka Blue Hor	12.92	267	LR	LR	18 38 38.2	
	comp=Z,68nm,18.8s,baz=153,slow=40						
TXAR	Lajitas Array	14.41	174	Pn	P	18 33 47.7	+0.6
TXAR	Lajitas Array	14.41	174	Pn	P	18 33 47.7	+0.6
	0.1nm,0.3s,baz=352,slow=13,SNR=3.7						
RES	Resolute Bay	31.42	5	LR	LR	18 50 15.6	
	comp=Z,51nm,18.8s,baz=231,slow=39						
ARCES	ARCESS Array B	61.46	18	P	P	18 40 32.0	-0.3
ARCES	ARCESS Array B	61.46	18	P	P	18 40 32.0	-0.3
	0.9nm,0.6s,baz=327,slow=8.7,SNR=11						
ZALV	Zalesovo Beam	82.33	354	P	P	18 42 37.3	-0.4
ZALV	Zalesovo Beam	82.33	354	P	P	18 42 37.3	-0.4
	0.6nm,0.5s,baz=13,slow=5.5,SNR=4.1						

IDC 07 18:33:36.7±1.9, 5°.72S×130°.97E, h0km, mb3.8/2, mb1 3.8/4, mb1mx3.5/19, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=127.7km s-min=27.2km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.51	167	Pn	Pn	18 37 02.5	-1.0
	0.4nm,0.3s,baz=350,slow=13,SNR=28						
WRA				Sn	Sn	18 39 33.6	-12
	0.9nm,0.3s,baz=344,slow=23,SNR=5.6						
ASAR	Alice Springs	18.07	171	P	P	18 37 50.9	+1.0
	0.3nm,0.3s,baz=354,slow=10,SNR=41						
ASAR				S	Sn	18 40 59.8	-12
	0.2nm,0.3s,baz=0.6,slow=28,SNR=6.0						
STKA	Stephens Creek	27.86	160	P	P	18 39 27.6	-0.6
	1.0nm,0.4s,baz=344,slow=8.6,SNR=7.2						
KURBB	Kurchatov Arra	71.94	328	P	P	18 45 02.0	+0.1
	0.2nm,0.5s,baz=129,slow=5.2,SNR=4.3						

*IDC **07** 18:41:45.5±1.3, 6°.29N×126°.29E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/26, mbtmp3.6/6, Error ellipse: s-maj=115.7km s-min=18.4km az=70.0*
*ISCJB **07** 18:41:58.9±0.9, 6°.2N±0°.1×126°.7E±0°.1, h127km, mb3.5/6, Error ellipse: s-maj=24.7km s-min=8.4km az=141.1*
*MAN **07** 18:42:02, 5°.96N×126°.11E, h141km, mb4.8, ML3.7, MS3.7*
ISC 07 18:42:00.7±0.9, 6°.2N±0°.1×126°.6E±0°.2, h127km, n13, σ1s.42/16, mb3.6/6, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	Mati	0.84	339	eP	Pn	18 42 26.2	+4.2
MATI				eS	Sn	18 42 36.2	-1.8
DMPH	Davao City--Mi	1.40	312	⇑eP	Pn	18 42 30.0	+2.6
DMPH				i S	Sn	18 42 50.2	+2.4
KCP	Kidapawan	1.69	300	⇑eP	Pn	18 42 31.4	+0.5
KCP				i S	Sn	18 42 53.4	-0.5
BUKP	Musuan	2.27	319	eP	Pn	18 42 39.9	+1.9
CGP	Cagayan de Oro	2.94	321	eP	Pn	18 42 54.2	+7.7
PAGZ	Pagadian	3.58	298	eP	Pn	18 42 54.0	-0.8
FITZ	Fitzroy Crossi	24.12	182	P	P	18 47 04.4	-0.4
	2.8nm,1.1s,baz=21,slow=8.6,SNR=3.1						
WRA	Warramunga Arr	27.04	164	P	P	18 47 32.3	+1.0
	0.1nm,0.5s,baz=341,slow=10.0,SNR=3.6						
ASAR	Alice Springs	30.49	167	P	P	18 48 03.0	+1.1
	0.2nm,0.3s,baz=341,slow=7.4,SNR=12						
ASAR				PcP	PcP	18 50 58.4	+0.1
	0.2nm,0.5s,baz=348,slow=2.9,SNR=5.4						
MKAR	Makanchi Array	55.49	324	P	P	18 51 21.4	-1.0
	0.4nm,0.7s,baz=116,slow=7.5,SNR=4.7						
MKAR				PcP	PcP	18 52 20.1	-1.0
	0.2nm,0.5s,baz=127,slow=3.4,SNR=4.1						
KURBB	Kurchatov Arra	59.63	327	P	P	18 51 50.4	-0.9
	0.4nm,0.5s,baz=132,slow=6.4,SNR=7.6						
ARCES	ARCESS Array B	88.13	340	P	P	18 54 36.4	-0.5
	2.4nm,1.0s,baz=69,slow=6.6,SNR=4.6						
TORD	Torodi Ar. Bea	121.98	290	PKP	PKPdf	19 00 40.9	-0.3
	0.1nm,0.3s,baz=50,slow=1.7,SNR=5.5						

IDC 07 18:47:15.0±12.0, 0°.05N×98°.58E, h0km, mb3.8/3, mb1 3.8/4, mb1mx3.4/26, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=365.6km s-min=120.8km az=113.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	18.30	1	P	Pn	18 51 30.2	-0.3
	0.1nm,0.3s,baz=192,slow=11,SNR=4.8						
MKAR	Makanchi Array	48.69	345	P	P	18 56 01.1	-0.1
	0.6nm,0.4s,baz=161,slow=9.0,SNR=24						
KURBB	Kurchatov Arra	53.20	344	P	P	18 56 34.9	-0.1
	0.4nm,0.5s,baz=161,slow=6.4,SNR=8.6						
ZALV	Zalesovo Beam	54.91	350	P	P	18 56 47.3	-0.1
	1.2nm,0.6s,baz=174,slow=7.1,SNR=6.5						

IDC 07 19:00:21.5±1.6, 16°.16S×176°.58E, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.8/18, mbtmp3.8/5, MS3.5/7, Ms1 3.5/7, ms1mx3.0/26, Error ellipse: s-maj=159.4km s-min=25.2km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	11.24	237	LR	LR	19 06 23.9	
	comp=Z,54nm,21.1s,baz=35,slow=32						
PMG	Port Moresby	29.44	280	LR	LR	19 14 53.9	
	comp=Z,33nm,19.6s,baz=84,slow=30						
PPT	Papeete	32.40	97	LR	LR	19 16 48.8	
	comp=Z,207nm,20.3s,baz=180,slow=30						
STKA	Stephens Creek	35.39	237	P	P	19 07 20.1	+0.9
	3.6nm,1.0s,baz=82,slow=10,SNR=3.4						
WRA	Warramunga Arr	40.26	258	P	P	19 08 00.1	-0.5
	1.4nm,0.9s,baz=92,slow=8.6,SNR=4.4						
ASAR	Alice Springs	40.69	252	P	P	19 08 03.5	-0.6
	2.2nm,0.9s,baz=82,slow=9.0,SNR=13						
FITZ	Fitzroy Crossi	48.59	260	LR	LR	19 25 42.2	
	comp=Z,46nm,20.6s,baz=91,slow=31						
VNDA	Vanda	61.83	184	LR	LR	19 34 34.4	
	comp=Z,52nm,19.6s,baz=18,slow=33						
NVAR	Mina Array Bea	81.58	46	P	P	19 12 43.1	+1.4
	0.1nm,0.3s,baz=206,slow=16,SNR=2.2						
CMAR	Chiang Mai Arr	83.78	291	LR	LR	19 46 07.7	
	comp=Z,21nm,18.3s,baz=45,slow=33						
MAW	Mawson	83.84	201	LR	LR	19 45 17.7	
	comp=Z,51nm,19.6s,baz=100,slow=32						
TXAR	Lajitas Array	89.17	59	P	P	19 13 18.1	-1.6
	0.6nm,1.0s,baz=232,slow=4.4,SNR=4.8						
GERES	GERESS Array B	144.52	340	PKP	PKPdf	19 20 00.6	+0.5
	0.2nm,0.6s,baz=28,slow=4.4,SNR=2.5						

IDC 07 19:00:44.3±0.6, 11°.56N×141°.81E, h0km, mb4.1/17, mb1 4.2/17, mb1mx4.1/26, mbtmp4.1/17, MS3.7/3, Ms1 3.7/3, ms1mx2.9/34, Error ellipse: s-maj=26.5km s-min=13.6km az=82.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	21.50	165	P	P	19 05 35.1	+0.2
	5.8nm,0.5s,baz=285,slow=6.3,SNR=6.3						
JNU	Nakatsue	23.68	337	P	P	19 05 57.9	+0.1
	3.2nm,0.7s,baz=132,slow=5.0,SNR=3.9						
MJAR	Matsushiro Arr	25.08	353	P	P	19 06 10.5	-0.1
	0.7nm,0.6s,baz=171,slow=10,SNR=5.1						
KSRS	Korea Array	28.64	337	P	P	19 06 43.0	+0.5
	0.5nm,0.6s,baz=165,slow=9.7,SNR=3.9						
WRA	Warramunga Arr	32.16	193	P	P	19 07 13.2	-0.7
	3.3nm,0.7s,baz=13,slow=9.7,SNR=33						
USRK	Ussuriysk Arra	33.60	347	P	P	19 07 27.5	+1.3
	4.0nm,0.7s,baz=179,slow=9.4,SNR=12						
ASAR	Alice Springs	35.86	192	P	P	19 07 45.9	-0.1
	1.8nm,0.6s,baz=18,slow=12,SNR=48						
ASAR				LR	LR	19 22 35.6	
	comp=Z,67nm,18.7s,baz=314,slow=37						
CMAR	Chiang Mai Arr	41.88	285	P	P	19 08 37.2	+0.5
	0.6nm,0.6s,baz=86,slow=7.1,SNR=8.4						
STKA	Stephens Creek	43.19	180	P	P	19 08 47.3	+0.2
	2.6nm,1.0s,baz=7.1,slow=8.1,SNR=3.6						
SONM	Songino Array	46.74	328	P	P	19 09 16.6	+1.2
	1.5nm,0.7s,baz=134,slow=8.3,SNR=3.4						
NWAO	Narrogin (SRO)	50.08	207	LR	LR	19 30 32.6	
	comp=Z,94nm,19.5s,baz=43,slow=36						
URZ	Urewera	59.55	148	LR	LR	19 32 42.9	
	comp=Z,93nm,18.8s,baz=252,slow=32						
MKAR	Makanchi Array	60.90	317	P	P	19 10 59.0	0.0
	1.6nm,0.9s,baz=98,slow=8.7,SNR=11						
ZALV	Zalesovo Beam	61.56	326	P	P	19 11 01.5	-1.7
	1.1nm,0.6s,baz=112,slow=6.7,SNR=7.8						
ILAR	Eielson Array	71.67	25	P	P	19 12 06.7	-1.0
	0.9nm,0.5s,baz=246,slow=6.2,SNR=8.4						
YKA	Yellowknife Ar	86.02	27	P	P	19 13 26.6	+0.1
	0.7nm,0.5s,baz=291,slow=5.2,SNR=5.6						
ARCES	ARCESS Array B	88.07	342	P	P	19 13 35.7	-0.6
	1.0nm,0.9s,baz=58,slow=7.6,SNR=3.5						
NVAR	Mina Array Bea	90.51	51	P	P	19 13 48.8	0.0
	1.1nm,0.6s,baz=272,slow=5.1,SNR=13						
FINES	FINESS Array B	91.70	334	P	P	19 13 52.1	-1.4
	1.9nm,0.8s,baz=62,slow=3.3,SNR=3.1						
LPAZ	La Paz	150.59	103	PKPbc	PKPbc	19 20 41.0	+1.0
	2.6nm,0.6s,baz=271,slow=3.4,SNR=16						

*IDC **07** 19:07:33.2±0.7, 11°.13N×125°.98E, h0km, mb4.0/15, mb1 4.1/15, mb1mx4.0/25, mbtmp4.0/15, MS3.4/4, Ms1 3.4/4, ms1mx3.0/33, Error ellipse: s-maj=37.5km s-min=13.0km az=74.0*
*NEIC **07** 19:07:34.3±0.5, 11°.18N×125°.89E, h10km, mb4.6/5, Error ellipse: s-maj=21.0km s-min=8.4km az=71.0*
*MAN **07** 19:07:34, 11°.30N×126°.49E, h26km, mb5.2, ML4.1, MS4.3*
*ISCJB **07** 19:07:36.3±0.4, 11°.35N±0°.04×126°.25E±0°.06, h33km, mb4.1/20, MS3.6/2, Error ellipse: s-maj=8.1km s-min=5.8km az=2.0*
ISC 07 19:07:37.9±0.6, 11°.28N±0°.05×126°.11E±0°.07, h33km, n64, σ1s.39/58, mb4.0/20, 4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PLP	Palo	1.11	264	i P	Pn	19 07 57.8	+0.6
PLP				i S	Sn	19 08 10.2	-1.2
OCLP	Ormoc	1.49	261	eP	Pb	19 08 05.6	+0.6
MSLP	Maasin	1.68	227	eP	Pb	19 08 07.0	-1.1
CNP	Catarman	1.87	311	eP	Pn	19 08 08.7	+1.1
LLP	Lapu-Lapu	2.31	246	⇓eP	Pn	19 08 16.3	+2.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LLP				eS	Sb	19 08 47.9	+0.8
BUTP	Butuan	2.35	192	eP	Pn	19 08 10.5	-3.7
TBP	Tagbilaran	2.72	235	eP	Pn	19 08 22.3	+3.1
CGP	Cagayan de Oro	3.14	206	eP	Pn	19 08 26.4	+1.4
RCP	Roxas	3.31	275	⇓eP	Pn	19 08 31.0	+3.5
SNPH	Sibulan	3.42	236	⇓iP	Pn	19 08 17.8	-11
BUKP	Musuan	3.54	197	eP	Pn	19 08 30.4	-0.2
DCPH	Dipolog City	3.82	226	eP	Pn	19 08 36.0	+1.6
DAV	Davao City (W)	4.22	187	LR	LR	19 10 26.3	
	comp=Z,194nm,20.0s,baz=354,slow=43						
PAGZ	Pagadian	4.34	218	eP	Pn	19 08 44.2	+2.6
CTBH	Cotabato--PC H	4.43	205	⇓iP	Pn	19 08 48.9	+5.9
KAPI	Kappang	17.38	202	LR	LR	19 18 33.1	
	comp=Z,80nm,18.1s,baz=85,slow=38						
MTN	Manton Dam	24.48	168	P	P	19 12 56.5	+2.2
	baz=18,SNR=4.7						
KDU	Kakadu	24.64	165	P	P	19 12 55.8	+0.2
	baz=18,SNR=9.1						
KULM	Kulim	25.87	259	eP	P	19 13 05.3	-1.7
	13nm,1.1s						
KSAR	Wonju Array Be	26.10	3	P	P	19 13 09.1	+0.4
KSRS	Korea Array	26.11	3	P	P	19 13 09.1	+0.3
	2.0nm,1.0s,baz=185,slow=10,SNR=9.3						
KNRA	Kununurra	26.91	174	P	P	19 13 17.3	+1.1
	baz=20,SNR=6.5						
CMAR	Chiang Mai Arr	27.18	288	P	P	19 13 17.1	-1.6
CMAR	Chiang Mai Arr	27.18	288	P	P	19 13 17.1	-1.6
	1.9nm,1.0s,baz=119,slow=12,SNR=6.0						
MJAR	Matsushiro Arr	27.42	22	LR	LR	19 24 09.2	
	comp=Z,94nm,18.2s,baz=230,slow=36						
FITZ	Fitzroy Crossi	29.20	181	P	P	19 13 35.0	-1.6
FITZ	Fitzroy Crossi	29.20	181	P	P	19 13 35.0	-1.6
	0.9nm,0.5s,baz=0.0,slow=6.1,SNR=3.4						
FITZ	Fitzroy Crossi	29.20	181	P	P	19 13 39.0	+2.4
	baz=22,SNR=3.5						
WRA	Warramunga Arr	32.07	165	P	P	19 14 00.9	-1.1
WRA	Warramunga Arr	32.07	165	P	P	19 14 00.9	-1.1
	0.8nm,0.6s,baz=346,slow=9.3,SNR=11						
USRK	Ussuriysk Arra	33.19	8	P	P	19 14 12.9	+1.4
	0.9nm,0.6s,baz=184,slow=5.9,SNR=3.1						
QIS	Mount Isa	34.31	157	P	P	19 14 23.7	+2.1
	baz=28,SNR=6.8						
ASAR	Alice Springs	35.56	168	P	P	19 14 31.0	-1.3
ASAR	Alice Springs	35.56	168	P	P	19 14 31.0	-1.3
	0.5nm,0.4s,baz=349,slow=6.7,SNR=26						
MEEK	Meekatharra	38.39	191	P	P	19 14 55.9	-0.4
	baz=32,SNR=4.2						
ULN	Ulaanbaatar	39.82	340	eP	P	19 15 08.1	-0.1
	2.5nm,1.0s						
SONM	Songino Array	40.02	339	P	P	19 15 10.4	+0.6
SONM	Songino Array	40.02	339	P	P	19 15 10.4	+0.6
	1.4nm,0.8s,baz=130,slow=5.8,SNR=2.6						
MORW	Morawa	41.27	193	P	P	19 15 20.9	+0.6
	baz=35,SNR=3.8						
KMBL	Kambalda	42.60	185	P	P	19 15 31.9	+0.9
	baz=36,SNR=5.1						
STKA	Stephens Creek	45.41	161	P	P	19 15 53.0	-0.6
STKA	Stephens Creek	45.41	161	P	P	19 15 53.0	-0.6
	3.6nm,0.8s,baz=338,slow=10,SNR=7.7						
STKA	Stephens Creek	45.41	161	P	P	19 15 57.0	+3.5
	baz=39,SNR=4.7						
MK31	Makanchi Array	51.13	322	eP	P	19 16 36.0	-1.6
MKAR	Makanchi Array	51.13	322	eP	P	19 16 36.2	-1.4
MKAR	Makanchi Array	51.13	322	P	P	19 16 39.3	+1.6
	2.6nm,0.8s,baz=115,slow=8.5,SNR=24						
ZAA0	Zalesovo Array	53.67	331	eP	P	19 16 55.6	-0.6
ZALV	Zalesovo Beam	53.67	331	P	P	19 16 57.5	+1.2
ZALV	Zalesovo Beam	53.67	331	P	P	19 16 57.5	+1.2
	2.4nm,0.9s,baz=115,slow=6.5,SNR=9.0						
KURK	Kurchatov	55.15	325	eP	P	19 17 05.6	-1.5
	16nm,1.1s						
KKAR	Karatay Array	57.43	314	eP	P	19 17 21.4	-2.2
BRVK	Borovoye	60.82	325	eP	P	19 17 46.1	-0.7
	9.1nm,1.2s						
ABKAR	Akbulak array	66.01	319	eP	P	19 18 20.5	-0.7
ARCES	ARCESS Array B	83.19	340	P	P	19 20 02.4	+1.9
ARCES	ARCESS Array B	83.19	340	P	P	19 20 02.4	+1.9
	5.0nm,1.1s,baz=93,slow=6.3,SNR=3.9						
BRTR	Keskin Array B	84.77	309	P	P	19 20 09.7	+0.3
BRTR	Keskin Array B	84.77	309	P	P	19 20 09.7	+0.3
	0.4nm,0.7s,baz=116,slow=6.6,SNR=3.4						
FINES	FINESS Array B	84.93	332	P	P	19 20 10.7	+1.2
FINES	FINESS Array B	84.93	332	P	P	19 20 10.7	+1.2
	1.0nm,0.6s,baz=268,slow=4.2,SNR=3.3						
AKASG	Malin Array Be	85.68	321	P	P	19 20 13.3	-0.2
AKASG	Malin Array Be	85.68	321	P	P	19 20 13.3	-0.2
	0.8nm,0.6s,baz=68,slow=4.7,SNR=7.1						
AKASG				LR	LR	20 03 48.9	
	comp=Z,31nm,18.0s,baz=265,slow=39						
KIEV	Kiev	85.69	321	eP	P	19 20 12.0	-1.5
	5.3nm,1.1s						
VNDA	Vanda	90.95	173	P	P	19 20 38.8	+0.9
VNDA	Vanda	90.95	173	P	P	19 20 38.8	+0.9
	0.6nm,0.8s,baz=309,slow=4.8,SNR=4.2						

GUC 07 19:11:26.9±0.9, 33°.12S×70°.31W, h11km±2km, MD3.7, ML2.2, 2C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PEL	Peldehue	0.32	265	⇓iP	Pg	19 11 33.9	+0.5
PEL				iS	Sg	19 11 38.8	+1.0
PEL				AML	AML	19 11 47.1	
	comp=E,388nm,0.7s						
CLCH	Cerro Calan	0.34	214	⇑iP	Pg	19 11 34.3	+0.5
CLCH				iS	Sb	19 11 39.7	-0.8
CLCH				AML	AML	19 11 41.5	
	comp=E,1µm,0.6s						
CLCH				AML	AML	19 11 42.1	
	comp=E,1µm,0.7s						
CLCH				AML	AML	19 11 46.3	
	comp=N,564nm,0.8s						
ROCH	El Roble	0.61	284	⇑iP	Pg	19 11 39.4	+0.3
ROCH				iS	Sb	19 11 48.6	0.0
ROCH				AML	AML	19 11 49.8	
	comp=N,178nm,0.5s						
LMEL	Las Melosas	0.73	173	⇓iP	Pg	19 11 40.8	-0.6
LMEL				iS	Sg	19 11 51.1	-0.1
LMEL				AML	AML	19 11 52.3	
	comp=N,96nm,0.2s						
CACH	El Canelo	1.03	194	⇓iP	Pb	19 11 46.6	-0.2
CACH				iS	Sb	19 12 00.8	+0.3
LNV	Longovilo	1.24	227	eP	Pn	19 11 48.5	-1.7
LNV				eS	Sb	19 12 05.9	-0.5

*ISCJB **07** 19:21:34.2±0.2, 42°.32N±0°.02×13°.44E±0°.02, h9km±2km, mb3.5/4, Error ellipse: s-maj=3.1km s-min=2.4km az=142.4*

*ROM **07** 19:21:34.4±0.1, 42°.34N×13°.48E, h11km, Ml3.6/30, Error ellipse: s-maj=1.0km s-min=0.7km az=51.0*

*CSEM **07** 19:21:34.7±0.1, 42°.33N×13°.45E, h2km, ML3.9/11, Error ellipse: s-maj=2.6km s-min=2.0km az=55.0*

*IDC **07** 19:21:35.4±1.2, 42°.53N×13°.32E, h0km, mb3.5/5, mb1 3.7/8, mb1mx3.5/29, mbtmp3.5/8, ML3.0/3, MS2.7/2, Ms1 2.7/2, ms1mx2.2/29, Error ellipse: s-maj=20.2km s-min=14.0km az=95.0*

*LDG **07** 19:21:37.6±0.2, 42°.30N×13°.31E, h2km, Ml3.2/7, Error ellipse: s-maj=11.0km s-min=5.1km az=44.0*

ISC 07 19:21:35.6±0.7, 42°.34N±0°.02×13°.46E±0°.02, h8km±4km, n137, σ1s.54/165, mb3.5/4, 10C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.04	294	Pg	Pg	19 21 36.6	-0.7
AQU				Sg	Sg	19 21 38.1	-0.5
	29µm,0.3s						
AQU	L'Aquila	0.04	294	Pg	Pg	19 21 36.6	-0.7
AQU				Sg	Sg	19 21 38.1	-0.5
	29µm,0.3s						
FAGN	Fagnano	0.12	126	Pg	Pg	19 21 37.7	-0.6
FAGN				Sg	Sg	19 21 40.0	-0.2
FAGN	Fagnano	0.12	126	Pg	Pg	19 21 37.7	-0.6
FAGN				Sg	Sg	19 21 40.0	-0.2
CAMP	Campotosto	0.20	350	Pg	Pg	19 21 39.1	-0.7
CAMP				Sg	Sg	19 21 42.8	+0.2
	13µm,1.0s						
CAMP	Campotosto	0.20	350	Pg	Pg	19 21 39.1	-0.7
CAMP				Sg	Sg	19 21 42.8	+0.2
	13µm,1.0s						
FIAM	Fiamignano	0.26	255	Pg	Pg	19 21 40.6	-0.2
FIAM				Sg	Sg	19 21 45.3	+1.0
	8µm,0.5s						
FIAM	Fiamignano	0.26	255	Pg	Pg	19 21 40.6	-0.2
FIAM				Sg	Sg	19 21 45.3	+1.0
	8µm,0.5s						
VCEL	Villa Celiera	0.29	78	Pg	Pg	19 21 40.6	-0.8
VCEL				Sg	Sg	19 21 44.7	-0.6
	18µm,0.6s						
VCEL	Villa Celiera	0.29	78	Pg	Pg	19 21 40.6	-0.8
VCEL				Sg	Sg	19 21 44.7	-0.6
	18µm,0.6s						
TERO	Teramo	0.31	21	Pg	Pg	19 21 40.7	-1.0
TERO				Sg	Sg	19 21 45.2	-0.6
	9µm,0.6s						
TERO	Teramo	0.31	21	Pg	Pg	19 21 40.7	-1.0
TERO				Sg	Sg	19 21 45.2	-0.6
	9µm,0.6s						
PTQR	Pietraquaria	0.32	187	Pg	Pg	19 21 41.4	-0.5
PTQR	Pietraquaria	0.32	187	Pg	Pg	19 21 41.4	-0.5
LNSS	Leonessa	0.41	311	Pg	Pg	19 21 42.9	-0.7
	8µm,1.2s						
LNSS	Leonessa	0.41	311	Pg	Pg	19 21 42.9	-0.7
	8µm,1.2s						
INTR	Introdacqua	0.47	134	Pg	Pg	19 21 43.8	-0.8
INTR				Sg	Sg	19 21 50.7	0.0
	6µm,0.6s						
INTR	Introdacqua	0.47	134	Pg	Pg	19 21 43.8	-0.8
INTR				Sg	Sg	19 21 50.7	0.0
	6µm,0.6s						
VVLD	Villa Vallelon	0.48	165	Pg	Pg	19 21 44.1	-0.8
VVLD				Sg	Sg	19 21 50.3	-0.9
	4µm,0.6s						
VVLD	Villa Vallelon	0.48	165	Pg	Pg	19 21 44.1	-0.8
VVLD				Sg	Sg	19 21 50.3	-0.9
	4µm,0.6s						
CERT	Cerreto	0.52	222	Pg	Pg	19 21 44.9	-0.8
	11µm,1.0s						
CERT	Cerreto	0.52	222	Pg	Pg	19 21 44.9	-0.8
	11µm,1.0s						
GUAR	Guarcino	0.55	191	Pg	Pg	19 21 45.3	-0.9
	3µm,0.5s						
GUAR	Guarcino	0.55	191	Pg	Pg	19 21 45.3	-0.9
	3µm,0.5s						
NRCA	Norcia	0.56	333	Pg	Pg	19 21 45.2	-1.2
NRCA				Sg	Sg	19 21 53.9	+0.2
	2µm,0.2s						
NRCA	Norcia	0.56	333	Pg	Pg	19 21 45.2	-1.2
NRCA				Sg	Sg	19 21 53.9	+0.2
	2µm,0.2s						
MNS	Montasola	0.58	275	Pg	Pg	19 21 45.8	-0.9
	3µm,1.3s						
MNS	Montasola	0.58	275	Pg	Pg	19 21 45.8	-0.9
	3µm,1.3s						
TRTR	Tortoreto Alta	0.58	36	Pg	Pg	19 21 46.8	0.0
	9µm,0.7s						
TRTR	Tortoreto Alta	0.58	36	Pg	Pg	19 21 46.8	0.0
	9µm,0.7s						
MTCE	Montecelio	0.62	240	Pg	Pg	19 21 46.6	-0.9
	2µm,0.7s						
MTCE	Montecelio	0.62	240	Pg	Pg	19 21 46.6	-0.9
	2µm,0.7s						
OFFI	Offida	0.62	16	Pg	Pg	19 21 46.8	-0.8
	11µm,0.7s						
OFFI	Offida	0.62	16	Pg	Pg	19 21 46.8	-0.8
	11µm,0.7s						
POFI	Posta Fibreno	0.65	163	Pg	Pg	19 21 46.7	-1.4
POFI	Posta Fibreno	0.65	163	Pg	Pg	19 21 46.7	-1.4
CAFR	Castel Frentan	0.67	99	Pg	Pg	19 21 47.9	-0.6
	6µm,0.4s						
CAFR	Castel Frentan	0.67	99	Pg	Pg	19 21 47.9	-0.6
	6µm,0.4s						
SDI	San Donato	0.68	157	Pg	Pg	19 21 47.3	-1.4
SDI	San Donato	0.68	157	Pg	Pg	19 21 47.3	-1.4
CESX	Cesi	0.70	293	Pg	Pg	19 21 47.8	-1.3
	2µm,1.3s						
CESX	Cesi	0.70	293	Pg	Pg	19 21 47.8	-1.3
	2µm,1.3s						
FDMO	Fiordimonte	0.75	339	Pg	Pg	19 21 48.4	-1.6
FDMO				Sg	Sg	19 21 59.8	0.0
	1µm,0.7s						
FDMO	Fiordimonte	0.75	339	Pg	Pg	19 21 48.4	-1.6
FDMO				Sg	Sg	19 21 59.8	0.0
	1µm,0.7s						
RMP	Rome, Mte Porz	0.77	227	Pg	Pg	19 21 48.7	-1.6
RMP	Rome, Mte Porz	0.77	227	Pg	Pg	19 21 48.7	-1.6
CESI	CESI - Serrava	0.78	329	Pg	Pg	19 21 49.2	-1.4
	358nm,0.6s						
CESI	CESI - Serrava	0.78	329	Pg	Pg	19 21 49.2	-1.4
	358nm,0.6s						
GIUL	Giuliano Di Ro	0.79	191	Pg	Pg	19 21 49.4	-1.4
	2µm,0.6s						
GIUL	Giuliano Di Ro	0.79	191	Pg	Pg	19 21 49.4	-1.4
	2µm,0.6s						
RDP	Rocca di Papa	0.80	224	Pg	Pg	19 21 49.8	-1.1
RDP	Rocca di Papa	0.80	224	Pg	Pg	19 21 49.8	-1.1
GUMA	Gualdo di Mace	0.81	26	Pg	Pg	19 21 48.8	-2.3
	4µm,0.5s						
GUMA	Gualdo di Mace	0.81	26	Pg	Pg	19 21 48.8	-2.3
	4µm,0.5s						
RNI2	Rionero Sannit	0.82	140	Pg	Pg	19 21 50.2	-1.1
	3µm,0.7s						
RNI2	Rionero Sannit	0.82	140	Pg	Pg	19 21 50.2	-1.1
	3µm,0.7s						
CERA	Filignano	0.85	150	Pg	Pg	19 21 50.0	-1.9
	2µm,0.5s						
CERA	Filignano	0.85	150	Pg	Pg	19 21 50.0	-1.9
	2µm,0.5s						
MIDA	Miranda	0.91	139	Pg	Pg	19 21 51.2	-1.9
MIDA				Sg	Sg	19 22 03.3	-1.7
	2µm,0.9s						
MIDA	Miranda	0.91	139	Pg	Pg	19 21 51.2	-1.9
MIDA				Sg	Sg	19 22 03.3	-1.7
	2µm,0.9s						
TRIV	Trivento	0.99	125	Pg	Pg	19 21 53.5	-1.2
	1µm,0.8s						
TRIV	Trivento	0.99	125	Pg	Pg	19 21 53.5	-1.2
	1µm,0.8s						
CING	Cingoli	1.06	350	Pg	Pg	19 21 54.1	-1.8
	544nm,0.6s						
CING	Cingoli	1.06	350	Pg	Pg	19 21 54.1	-1.8
	544nm,0.6s						
VAGA	Valle Agricola	1.09	147	Pg	Pg	19 21 54.4	-2.1
	971nm,0.5s						
VAGA	Valle Agricola	1.09	147	Pg	Pg	19 21 54.4	-2.1
	971nm,0.5s						
MGAB	Montegabbione	1.15	301	Pg	Pb	19 21 56.2	-1.4
	593nm,0.6s						
MGAB	Montegabbione	1.15	301	Pg	Pb	19 21 56.2	-1.4
	593nm,0.6s						
MURB	Monte Urbino	1.15	324	Pg	Pb	19 21 56.0	-1.8
	1µm,0.4s						
MURB	Monte Urbino	1.15	324	Pg	Pb	19 21 56.0	-1.8
	1µm,0.4s						
BSSO	Busso	1.16	133	Pg	Pb	19 21 56.3	-1.6
	1µm,1.2s						
BSSO	Busso	1.16	133	Pg	Pb	19 21 56.3	-1.6
	1µm,1.2s						
SGG	Gregorio Mates	1.17	144	Pg	Pb	19 21 56.1	-2.0
SGG	Gregorio Mates	1.17	144	Pg	Pb	19 21 56.1	-2.0
ARVD	Arcevia	1.22	342	Pg	Pn	19 21 56.8	-2.1
ARVD	Arcevia	1.22	342	Pg	Pn	19 21 56.8	-2.1
MS1	Monte Sant'Ang	1.96	108	ePn	Pb	19 22 11.2	-0.3
NVLJ	Novalja	2.45	24	ePn	Pn	19 22 15.4	-0.4
NVLJ				Sn	Sn	19 22 45.5	-0.5
NVLJ	Novalja	2.45	24	ePn	Pn	19 22 15.4	-0.4
NVLJ				Sn	Sn	19 22 45.4	-0.5
MAIM	Mastiano	2.68	307	P	Pn	19 22 18.7	-0.3
STON	Ston	3.18	79	i Pn	Pn	19 22 25.6	-0.2
STON				Sn	Sn	19 23 03.7	-0.1
STON	Ston	3.18	79	i Pn	Pn	19 22 25.5	-0.2
STON				Sn	Sn	19 23 03.7	-0.1
PGF	Pioggiola	3.31	275	ePn	Pn	19 22 28.1	+0.4
PGF				eSn	Sn	19 23 03.7	-3.5
	11nm,0.6s						
PGF	Pioggiola	3.31	275	ePn	Pn	19 22 28.1	+0.4
PGF				eSn	Sn	19 23 03.7	-3.5
	5.7nm,0.6s						
VOY	Vojsko	3.71	5	ePn	Pn	19 22 33.5	+0.3
VOY				e		19 22 38.3	
VOY				e		19 22 49.6	
VOY				eSn	Sg	19 23 44.0	+9.4
VOY	Vojsko	3.71	5	ePn	Pn	19 22 33.5	+0.3
ABTA	Abfaltersbach	4.46	352	⇑iPn	Pn	19 22 44.0	+0.5
	SNR=24						
ABTA	Abfaltersbach	4.46	352	Pn	Pn	19 22 44.0	+0.5
	SNR=24						
BBLS	Lazići	4.62	69	ePn	Pn	19 22 48.6	+3.0
SBF	Sospel	4.67	291	ePn	Pn	19 22 46.3	0.0
SBF				eSn	Sn	19 23 43.1	+2.5
	20nm,0.7s						
SBF	Sospel	4.67	291	ePn	Pn	19 22 46.3	0.0
SBF				eSn	Sn	19 23 43.1	+2.5
	10nm,0.7s						
KBA	Koelnbreinsper	4.74	359	⇓iPn	Pn	19 22 50.2	+2.8
KBA	Koelnbreinsper	4.74	359	Pn	Pn	19 22 50.2	+2.8
FETA	Feichten	5.07	338	⇑iPn	Pn	19 22 53.2	+1.2
	SNR=7.5						
FETA	Feichten	5.07	338	Pn	Pn	19 22 53.2	+1.2
	SNR=7.5						
DIVS	Divibare	5.09	68	ePn	Pn	19 22 54.8	+2.6
DAVOX	Davos/Dischmat	5.12	331	Pn	Pn	19 22 53.9	+1.2
	1.6nm,0.3s,baz=154,slow=17,SNR=19						
DAVOX				Sn	Sn	19 23 53.2	+1.1
	1.0nm,0.3s,baz=162,slow=20,SNR=2.3						
FRF	La Foret Royal	5.14	286	ePn	Pn	19 22 52.2	-0.6
FRF	La Foret Royal	5.14	286	ePn	Pn	19 22 52.2	-0.6
LMR	La Mourre	5.21	283	ePn	Pn	19 22 53.3	-0.3
LMR	La Mourre	5.21	283	ePn	Pn	19 22 53.3	-0.3
MOTA	Moosalm	5.28	342	⇑iPn	Pn	19 22 56.2	+1.4
	SNR=8.5						
MOTA	Moosalm	5.28	342	Pn	Pn	19 22 56.2	+1.4
	SNR=8.5						
MBDF	Montbardon	5.42	298	eSn	Sn	19 23 54.6	-4.6
	4.3nm,0.5s						
RETA	Reutte	5.49	341	⇑iPn	Pn	19 22 59.9	+2.2
	SNR=11						
RETA	Reutte	5.49	341	Pn	Pn	19 22 59.9	+2.2
	SNR=11						
GRUS	Gruza	5.54	71	ePn	Pn	19 22 58.1	-0.1
SELS	Selova	5.71	79	ePn	Pn	19 23 01.3	+0.7
LPG	La Plagne	5.78	305	eP	Pn	19 23 06.4	+4.6
LPG				eSn	Sn	19 24 03.9	-4.6
	3.2nm,0.5s						
ORIF	Oris-en-Rattie	6.07	298	eP	Pn	19 23 09.7	+4.0
GERES	GERESS Array B	6.51	1	Pn	Pn	19 23 09.7	-2.0
	0.2nm,0.3s,baz=178,slow=12,SNR=19						
GERES				Sn	Sn	19 24 24.1	-2.1
	1.0nm,0.3s,baz=180,slow=23,SNR=8.4						
BZS	Buzias	6.74	58	⇑iP	Pn	19 23 15.7	+1.0
BZS	Buzias	6.74	58	⇑iP	Pn	19 23 15.7	+1.0
CABF	La Chapelle	6.78	312	ePn	Pn	19 23 15.4	0.0
CABF	La Chapelle	6.78	312	ePn	Pn	19 23 15.4	0.0
KHC	Kasperske Hory	6.80	1	ePN	Pn	19 23 14.8	-0.7
KHC				ex	x	19 23 21.5	
KHC				eSN	Sn	19 24 30.3	-2.8
KHC				ex	x	19 24 40.5	
HINF	Hinteralfeld	7.20	322	ePn	Pn	19 23 20.3	-0.8
HINF				eSn	Sn	19 24 38.5	-4.5
	6.6nm,0.5s						
HINF	Hinteralfeld	7.20	322	ePn	Pn	19 23 20.3	-0.8
VRAC	Vranov	7.31	16	LR	LR	19 26 22.4	
	comp=Z,49nm,19.6s,baz=77,slow=40						
KEST	Kesra	7.33	207	Pn	Pn	19 23 27.1	+4.2
	0.4nm,0.3s,baz=11,slow=5.2,SNR=9.8						
CDF	Champ du Feu	7.47	327	ePn	Pn	19 23 24.0	-0.8
CDF				eSn	Sn	19 24 46.4	-3.3
	4.3nm,0.5s						
CDF	Champ du Feu	7.47	327	ePn	Pn	19 23 24.0	-0.8
HAU	Haudompre	7.57	321	ePn	Pn	19 23 25.7	-0.5
HAU				eSn	Sn	19 24 47.3	-4.8
	11nm,0.5s						
HAU	Haudompre	7.57	321	ePn	Pn	19 23 25.7	-0.5
MORC	Moravsky Berou	7.96	19	⇓iP	Pn	19 23 35.7	+4.1
LOT	Lotru	8.07	64	⇑iP	Pn	19 23 37.0	+3.9
BRG	Berggiesshubel	8.55	2	SG	Sg	19 26 25.1	+15
	3.5nm,1.1s						
ARR	Arges	8.63	66	⇑iP	Pn	19 23 43.4	+2.7
VOIR		8.93	66	⇑iP	Pn	19 23 48.9	+4.1
MLR	Muntele Rosu	9.55	66	⇑iP	Pn	19 23 56.0	+2.6
MLR	Muntele Rosu	9.55	66	Pn	Pn	19 23 55.3	+2.0
	0.0nm,0.3s,baz=215,slow=12,SNR=9.5						
HFS	Hagfors	17.82	0	LR	LR	19 33 42.9	
	comp=Z,28nm,19.0s,baz=310,slow=41						
FINES	FINESS Array B	20.59	17	P	P	19 26 13.8	-0.9
	1.0nm,0.7s,baz=195,slow=10,SNR=2.8						
KBZ	Khabaz	21.52	76	P	P	19 26 28.1	+3.3
	1.5nm,0.8s,baz=299,slow=10.0,SNR=4.4						
TORD	Torodi Ar. Bea	30.82	203	P	P	19 27 53.9	+1.9
	0.4nm,0.6s,baz=13,slow=9.1,SNR=5.4						
MKAR	Makanchi Array	47.82	60	P	P	19 30 14.0	+0.6
	0.4nm,0.6s,baz=290,slow=7.6,SNR=3.5						
YKA	Yellowknife Ar	67.54	337	P	P	19 32 32.0	+0.2
	0.3nm,0.7s,baz=37,slow=6.2,SNR=2.9						

IDC 07 19:29:52.6±1.4, 10°.88S×166°.00E, h48km±9km, mb3.7/5, mb1 4.0/6, mb1mx3.6/20, mbtmp3.9/6, ML4.8/1, MS3.4/3, Ms1 3.4/3, ms1mx3.0/27, Error ellipse: s-maj=31.8km s-min=20.4km az=161.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	6.13	283	P	Pn	19 31 22.1	+1.5
	25nm,0.3s,baz=140,slow=4.0,SNR=26						
HNR				S	Sn	19 32 29.8	+0.4
	2.8nm,0.3s,baz=18,slow=20,SNR=1.8						
DZM	Mont Dzumac	11.14	178	P	Pn	19 32 33.7	+4.4
	1.7nm,0.3s,baz=302,slow=15,SNR=24						
DZM				S	Sn	19 34 32.7	+0.2
	0.3nm,0.3s,baz=307,slow=20,SNR=5.1						
STKA	Stephens Creek	30.73	223	LR	LR	19 46 54.8	
	comp=Z,61nm,18.8s,baz=26,slow=33						
WRA	Warramunga Arr	31.77	250	P	P	19 36 12.9	+0.3
	1.2nm,0.8s,baz=82,slow=9.0,SNR=8.8						
WRA				pP	pP	19 36 25.0	-0.2
	1.2nm,0.7s,baz=81,slow=8.9,SNR=6.6						
ASAR	Alice Springs	33.09	243	P	P	19 36 23.3	-0.8
	1.8nm,1.2s,baz=75,slow=9.0,SNR=4.8						
ASAR				pP	pP	19 36 36.8	0.0
	1.2nm,0.8s,baz=75,slow=9.4,SNR=8.6						
ASAR				LR	LR	19 49 06.8	
	comp=Z,47nm,18.4s,baz=270,slow=35						
FITZ	Fitzroy Crossi	39.66	255	P	P	19 37 20.5	+0.3
	baz=91,slow=7.2						
SONM	Songino Array	78.68	324	P	P	19 41 48.9	-0.9
	1.1nm,0.6s,baz=131,slow=6.5,SNR=3.1						
ILAR	Eielson Array	83.28	18	P	P	19 42 14.4	+0.7
	0.6nm,0.5s,baz=237,slow=5.3,SNR=13						
MKAR	Makanchi Array	93.57	317	P	P	19 43 03.7	+0.1
	0.6nm,0.6s,baz=99,slow=7.4,SNR=3.6						
MKAR				pP	pP	19 43 17.6	-0.3
	0.3nm,0.3s,baz=97,slow=3.7,SNR=2.5						
TXAR	Lajitas Array	95.53	61	LR	LR	20 15 36.7	
	comp=Z,33nm,20.9s,baz=355,slow=29						
ARCES	ARCESS Array B	116.24	346	PKP	PKPdf	19 48 29.6	-0.5
	1.1nm,0.7s,baz=77,slow=2.0,SNR=14						

*NEIC **07** 19:49:09.2, 19°.19N×64°.85W, h45km, MD3.5(RSPR), After RSPR.*

RSPR 07 19:49:09.2, 19°.19N×64°.85W, h45km±10km, MD3.5/9, 29C-6D, Virgin Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TBVI	Tortola	0.80	164	⇓eP	Pn	19 49 22.9	-1.3
TBVI				eS	Sn	19 49 34.1	-0.9
TBVI	Tortola	0.80	164	⇓eP	Pn	19 49 22.9	-1.3
TBVI				eS	Sn	19 49 34.8	-0.1
TBVI	Tortola	0.80	164	⇓eP	Pn	19 49 22.9	-1.3
TBVI				eS	Sn	19 49 34.1	-0.9
STVI	Saint Thomas	0.84	187	⇑eP	Pn	19 49 23.8	-0.9
STVI	Saint Thomas	0.84	187	⇑eP	Pn	19 49 23.8	-0.9
STVI				eS	Sn	19 49 35.1	-0.8
STVI	Saint Thomas	0.84	187	⇑eP	Pn	19 49 23.8	-0.9
STVI				eS	Sn	19 49 35.1	-0.8
MTP	Monte Pirata	1.28	212	⇓eP	Pn	19 49 29.9	-0.8
MTP	Monte Pirata	1.28	212	⇓eP	Pn	19 49 29.9	-0.8
MTP				eS	Sn	19 49 45.5	-1.1
MTP	Monte Pirata	1.28	212	⇓eP	Pn	19 49 29.9	-0.8
MTP				eS	Sn	19 49 45.5	-1.1
CBYP	Canovanas	1.32	227	⇑eP	Pn	19 49 30.1	-1.3
CBYP	Canovanas	1.32	227	⇑eP	Pn	19 49 30.1	-1.3
CBYP	Canovanas	1.32	227	⇑eP	Pn	19 49 30.1	-1.3
HUMP	Col San Antoni	1.41	223	⇑eP	Pn	19 49 31.6	-0.9
HUMP	Col San Antoni	1.41	223	⇑eP	Pn	19 49 31.6	-0.9
HUMP				eS	Sn	19 49 48.7	-1.2
HUMP	Col San Antoni	1.41	223	⇑eP	Pn	19 49 31.6	-0.9
HUMP				eS	Sn	19 49 48.7	-1.2
CPD	Cerro la Pandu	1.53	222	⇑eP	Pn	19 49 33.3	-0.9
CPD	Cerro la Pandu	1.53	222	⇑eP	Pn	19 49 33.3	-0.9
CPD	Cerro la Pandu	1.53	222	⇑eP	Pn	19 49 33.3	-0.9
SJG	San Juan	1.64	229	⇑eP	Pn	19 49 34.4	-1.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	1.64	229	⇑eP	Pn	19 49 34.5	-1.1
SJG				eS	Sn	19 49 54.6	-0.8
SJG	San Juan	1.64	229	⇑eP	Pn	19 49 34.4	-1.2
SJG	San Juan	1.64	229	⇑eP	Pn	19 49 34.5	-1.1
SJG				eS	Sn	19 49 54.5	-0.9
SJG				eS		19 49 54.6	
SJG	San Juan	1.64	229	⇑eP	Pn	19 49 34.5	-1.1
SJG				eS	Sn	19 49 54.5	-0.9
SJG				eS		19 49 54.6	
CELP	Cerrillos	1.98	236	⇑eP	Pn	19 49 39.7	-0.7
CELP	Cerrillos	1.98	236	⇑eP	Pn	19 49 39.7	-0.7
CELP	Cerrillos	1.98	236	⇑eP	Pn	19 49 39.7	-0.7
AOPR	Arecibo Observ	1.99	245	⇑eP	Pn	19 49 39.7	-0.8
AOPR	Arecibo Observ	1.99	245	⇑eP	Pn	19 49 39.7	-0.8
AOPR	Arecibo Observ	1.99	245	⇑eP	Pn	19 49 39.7	-0.8
OBIP	Obispado Ponce	2.02	236	⇑eP	Pn	19 49 39.9	-1.0
OBIP	Obispado Ponce	2.02	236	⇑eP	Pn	19 49 39.9	-1.0
OBIP				eS	Sn	19 50 03.7	-1.3
OBIP	Obispado Ponce	2.02	236	⇑eP	Pn	19 49 39.9	-1.0
OBIP				eS	Sn	19 50 03.7	-1.3
LSP	Las Mesas	2.35	245	ePn	Pn	19 49 45.0	-0.4
CRPR	Cabo Rojo, PR	2.45	242	⇑eP	Pn	19 49 46.1	-0.6
CRPR	Cabo Rojo, PR	2.45	242	⇑eP	Pn	19 49 46.1	-0.6
CRPR				eS	Sn	19 50 14.7	-0.7
CRPR	Cabo Rojo, PR	2.45	242	⇑eP	Pn	19 49 46.1	-0.6
CRPR				eS	Sn	19 50 14.7	-0.7

KRSC 07 19:49:59.6±0.6**, 54°.61N**×**159°.54E, h183**km±26km**, ML3.6, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KII	Karymskiy	0.58	185	eP	Pn	19 50 26.5	+1.3
TUMR	Tumrok	0.76	27	i P	Pn	19 50 27.9	+1.8
TUMR				eS	Sn	19 50 48.6	+1.9
KMNR	Kamenistaya	1.22	19	eP	Pn	19 50 30.5	+1.1
KMNR				eS	Sn	19 50 52.9	+0.3
MKZ	Mys Kozlova	1.28	92	P	Pn	19 50 30.9	+1.2
MKZ				eS	Sn	19 50 53.7	+0.7
GNL	Ganaly	1.31	226	i P	Pn	19 50 30.8	+0.5
GNL				eS	Sn	19 50 53.5	-0.4
KRER	Koryakskii	1.39	200	P	Pn	19 50 32.9	+1.8
SDLR	Sedlovina	1.39	196	P	Pn	19 50 32.2	+1.2
SDLR				eS	Sn	19 50 56.1	+0.9
ESO	Esso	1.40	340	i P	Pn	19 50 30.8	-0.1
ESO				eS	Sn	19 50 54.1	-1.2
KPT	Kopyto	1.41	16	eP	Pn	19 50 31.8	+0.7
KPT				S	Sn	19 50 55.4	-0.2
SMAR	Somma	1.42	198	i P	Pn	19 50 32.8	+1.5
SMAR				eS	Sn	19 50 56.8	+1.0
KIRR	Kirishev	1.42	18	eP	Pn	19 50 32.2	+1.0
KIRR				eS	Sn	19 50 56.0	+0.1
KOK	Koryaka	1.43	202	i P	Pn	19 50 32.7	+1.5
KOK				eS	Sn	19 50 56.8	+1.1
AVH	Avacha	1.43	200	eP	Pn	19 50 33.0	+1.7
AVH				eS	Sn	19 50 57.3	+1.6
BZMR	Bezymyannaya	1.44	22	eP	Pn	19 50 32.0	+0.7
BZMR				eS	Sn	19 50 55.2	-0.9
NLC	Nalytchevo	1.45	185	i P	Pn	19 50 32.0	+0.7
NLC				eS	Sn	19 50 55.7	0.0
BZWR	Bezymyannyi-We	1.46	22	eP	Pn	19 50 33.0	+1.4
KOZ	Kozyrevsk	1.46	7	P	Pn	19 50 32.5	+1.1
KOZ				eS	Sn	19 50 55.9	-0.4
UGLR	Uglovaya	1.47	197	P	Pn	19 50 33.3	+1.7
UGLR				S	Sn	19 50 57.9	+1.5
BZGR	Bezymyannyi-Gr	1.49	26	eP	Pn	19 50 32.6	+0.8
SPN	Mys Shipunski	1.54	169	i P	Pn	19 50 32.6	+0.4
SPN				i S	Sn	19 50 56.7	-0.7
ZLN	Zelenaya	1.58	27	eP	Pn	19 50 34.5	+1.8
CIRR	Tsirk	1.66	24	eP	Pn	19 50 35.3	+1.8
CIRR				eS	Sn	19 51 01.3	+1.4
PET	Petropavlovsk	1.67	199	S	Sn	19 51 00.5	+0.8
KRSR	Krestovskiy	1.71	20	eP	Pn	19 50 35.3	+1.4
KRSR				eS	Sn	19 51 01.2	+0.5
SRDR	Sredinnyy	1.71	3	i P	Pn	19 50 34.5	+0.6
SRDR				eS	Sn	19 51 00.0	-0.7
KLY	Klyuchi	1.82	20	eP	Pn	19 50 37.3	+2.4
KLY				eS	Sn	19 51 04.7	+2.3
BDR	Baidarnaya	2.18	25	eP	Pn	19 50 40.8	+2.0
BDR				eS	Sn	19 51 10.8	+1.3
APC	Apacha	2.20	221	eP	Pn	19 50 39.8	+0.8
SRKR	Sorokina	2.25	24	P	Pn	19 50 41.4	+1.8
SRKR				S	Sn	19 51 11.6	+0.8
SMKR	Semkarok	2.26	28	eP	Pn	19 50 41.0	+1.3
SMKR				S	Sn	19 51 11.4	+0.3
RUS	Russkaya	2.27	196	eP	Pn	19 50 39.8	0.0
RUS				S	Sn	19 51 09.1	-1.8
MTVR	Mutnovka	2.28	201	eP	Pn	19 50 41.8	+1.7
MTVR				eS	Sn	19 51 12.6	+1.0
ASAK	Asacha	2.44	204	eP	Pn	19 50 42.9	+1.1
ASAK				eS	Sn	19 51 14.4	-0.2
KBG	Krutoberegovo	2.44	46	eP	Pn	19 50 42.7	+1.0
KBG				eS	Sn	19 51 14.1	-0.4
BKI	Bering	3.76	78	eP	Pn	19 50 59.0	+1.4
BKI				eS	Sn	19 51 41.7	-1.4

*DDA **07** 20:05:49.8, 39°.29N×27°.96E, h7km, MD3.0*
*ISK **07** 20:05:49.6, 39°.29N×27°.85E, h2km, MD3.2*
*ISCJB **07** 20:05:50.3±0.5, 39°.29N±0°.02×27°.92E±0°.03, h0km±5km, Error ellipse: s-maj=4.0km s-min=3.2km az=157.9*
*CSEM **07** 20:05:50.6±0.1, 39°.29N×27°.89E, h2km, MD3.2, Error ellipse: s-maj=3.5km s-min=2.9km az=71.0*
ISC 07 20:05:50.6±1.0**, 39°.28N**±0°.02×**27°.90E**±0°.02**, h6**km±10km**, n71,** σ**0s.77**/91**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	Balikesir	0.36	357	PG	Pg	20 05 57.6	0.0
BALB				eSG	Sg	20 06 03.3	+1.0
BALB	Balikesir	0.36	357	i Pg	Pg	20 05 57.6	0.0
BALB				eSg	Sg	20 06 03.3	+1.0
AKHS	Akhisar	0.41	190	i P	Pg	20 05 58.3	-0.2
AKHS				i S	Sb	20 06 05.5	-1.3
AKHS	Akhisar	0.41	190	i P	Pg	20 05 58.3	-0.2
AKHS				i S	Sb	20 06 05.5	-1.3
BALY	Balya	0.51	334	i P	Pg	20 06 00.2	-0.2
BALY				i S	Sg	20 06 08.2	+1.2
BALY	Balya	0.51	334	i P	Pg	20 06 00.2	-0.2
BALY				i S	Sg	20 06 08.2	+1.2
DURS	Dursunbey	0.55	54	i P	Pg	20 05 60.0	-1.1
DURS				i S	Sg	20 06 08.3	+0.1
DURS	Dursunbey	0.55	54	i P	Pg	20 06 00.0	-1.1
DURS				i S	Sg	20 06 08.3	+0.1
DST	Dursunbey	0.64	60	PG	Pb	20 06 04.0	-0.3
DST	Dursunbey	0.64	60	i Pg	Pb	20 06 04.0	-0.3
DEMI	Demirci	0.68	110	i P	Pg	20 06 02.7	-0.9
DEMI				i S	Sg	20 06 12.5	+0.1
DEMI	Demirci	0.68	110	i P	Pg	20 06 02.7	-0.9
DEMI				i S	Sg	20 06 12.5	+0.1
GONE	Gonen-Balikesi	0.78	348	ePG	Pg	20 06 05.2	-0.5
GONE				eSG	Sg	20 06 16.2	+0.4
GONE	Gonen-Balikesi	0.78	348	ePg	Pg	20 06 05.2	-0.5
GONE				eSg	Sg	20 06 16.2	+0.4
AYVA	Ayvalik	0.94	272	i P	Pn	20 06 09.8	-0.6
AYVA				i S	Sn	20 06 24.9	+0.7
AYVA	Ayvalik	0.94	272	i P	Pn	20 06 09.8	-0.6
AYVA				i S	Sn	20 06 24.9	+0.7
KULA	Kula-Manisa	0.97	142	ePG	Pg	20 06 08.7	-0.5
KULA	Kula-Manisa	0.97	142	ePg	Pg	20 06 08.7	-0.5
IZM	Izmir	1.01	210	ePG	Pg	20 06 09.8	-0.3
IZM	Izmir	1.01	210	ePg	Pg	20 06 09.8	-0.3
KCTX	Karacabey (Bur	1.04	19	ePG	Pg	20 06 09.9	-0.7
KCTX	Karacabey (Bur	1.04	19	ePg	Pg	20 06 09.9	-0.7
BLCB	Balcova	1.12	217	ePN	Pg	20 06 11.6	-0.5
BLCB	Balcova	1.12	217	ePn	Pg	20 06 11.6	-0.5
KRBG	Karabiga-Canak	1.20	337	ePN	Pg	20 06 13.2	-0.5
KRBG	Karabiga-Canak	1.20	337	ePn	Pg	20 06 13.2	-0.5
TVSB	Tavsanli	1.22	82	ePN	Pg	20 06 14.0	0.0
TVSB	Tavsanli	1.22	82	ePn	Pg	20 06 14.0	0.0
GDZ	Gediz	1.24	98	i P	Pg	20 06 13.2	-1.2
GDZ				i S	Sg	20 06 30.0	-0.5
GDZ	Gediz	1.24	98	i P	Pg	20 06 13.2	-1.2
GDZ				i S	Sg	20 06 30.0	-0.5
MDNY	Mudanya-Bursa	1.32	35	ePN	Pg	20 06 16.9	+0.9
MDNY	Mudanya-Bursa	1.32	35	ePn	Pg	20 06 16.9	+0.9
MRMT	Marmara Adasi	1.34	350	ePN	Pn	20 06 16.1	+0.1
MRMT	Marmara Adasi	1.34	350	ePn	Pn	20 06 16.1	+0.1
LPK	Lapseki	1.40	321	ePN	Pn	20 06 16.4	-0.3
LPK	Lapseki	1.40	321	ePn	Pn	20 06 16.4	-0.3
ARMT	Armutlu	1.48	30	ePN	Pn	20 06 17.9	+0.1
ARMT	Armutlu	1.48	30	ePn	Pn	20 06 17.9	+0.1
RKY	Sarkoy-Tekirda	1.51	339	ePN	Pn	20 06 18.5	+0.2
RKY	Sarkoy-Tekirda	1.51	339	ePn	Pn	20 06 18.5	+0.2
SART	Tekirdag	1.51	339	i P	Pn	20 06 17.8	-0.5
SART				i S	Sn	20 06 38.3	-0.1
SART	Tekirdag	1.51	339	i P	Pn	20 06 17.8	-0.5
SART				i S	Sn	20 06 38.3	-0.1
BOZC	Bozcaada	1.54	292	i P	Pn	20 06 18.2	-0.4
GELI	Tayfur-Gelibol	1.57	316	ePN	Pn	20 06 18.8	-0.2
GELI	Tayfur-Gelibol	1.57	316	ePn	Pn	20 06 18.8	-0.2
AYDN	Tasoluk	1.62	181	i P	Pb	20 06 20.7	-0.3
AYDN				i S	Sg	20 06 43.7	+1.1
AYDN	Tasoluk	1.62	181	i P	Pb	20 06 20.7	-0.3
AYDN				i S	Sg	20 06 43.7	+1.1
YLV	Yalova	1.71	41	ePN	Pb	20 06 22.5	0.0
YLV	Yalova	1.71	41	ePn	Pb	20 06 22.5	0.0
ALT	Altintas	1.73	97	ePN	Pn	20 06 21.9	+0.5
ALT	Altintas	1.73	97	ePn	Pn	20 06 21.9	+0.5
ERIK	Erikli-Kesan	1.75	323	ePN	Pn	20 06 21.9	+0.4
ERIK	Erikli-Kesan	1.75	323	ePn	Pn	20 06 21.9	+0.4
CAVI	Cavuskoy	1.75	58	ePN	Pb	20 06 23.0	-0.3
CAVI	Cavuskoy	1.75	58	ePn	Pb	20 06 23.0	-0.3
ADVT	Abdulvahap	1.82	50	ePN	Pb	20 06 23.5	-0.9
ADVT	Abdulvahap	1.82	50	ePn	Pb	20 06 23.5	-0.9
MLSB	Milas	1.99	183	ePN	Pn	20 06 25.9	+1.1
MLSB	Milas	1.99	183	ePn	Pn	20 06 25.9	+1.1
YER	Yerkesik	2.17	172	ePN	Pn	20 06 28.3	+1.0
YER	Yerkesik	2.17	172	ePn	Pn	20 06 28.3	+1.0
SHUT	Suhut-Afyon	2.19	109	ePN	Pn	20 06 28.5	+0.8
SHUT	Suhut-Afyon	2.19	109	ePn	Pn	20 06 28.5	+0.8
ESKT	Eskisehir	2.30	83	ePN	Pn	20 06 30.4	+1.2
ESKT	Eskisehir	2.30	83	ePn	Pn	20 06 30.4	+1.2
GULT	Gulveren	2.31	59	ePN	Pn	20 06 30.4	+1.0
GULT	Gulveren	2.31	59	ePn	Pn	20 06 30.4	+1.0
SVRH	Sivrihisar-ESK	2.81	86	ePN	Pn	20 06 37.8	+1.6
SVRH	Sivrihisar-ESK	2.81	86	ePn	Pn	20 06 37.8	+1.6
KIZT	Kizilcal	3.12	96	ePN	Pn	20 06 42.3	+1.8
KIZT	Kizilcal	3.12	96	ePn	Pn	20 06 42.3	+1.8

*AUST **07** 20:06:12.8, 47°.44S×165°.66E, h0km*
*ISCJB **07** 20:06:16.4±0.9, 46°.8S±0°.1×165°.57E±0°.06, h15km, mb3.4/2, Error ellipse: s-maj=16.9km s-min=6.0km az=0.0*
*WEL **07** 20:06:16.3±0.7, 47°.03S×165°.27E, h33km, ML4.3/9, Error ellipse: s-maj=6.6km s-min=4.5km az=90.0*
*IDC **07** 20:06:16.6±1.8, 46°.44S×165°.66E, h0km, mb3.4/2, mb1 3.7/3, mb1mx3.5/15, mbtmp3.6/3, ML4.0/1, Error ellipse: s-maj=63.7km s-min=28.6km az=171.0*
ISC 07 20:06:17.8±0.9**, 46°.85S**±0°.10×**165°.69E**±0°.06**, h15**km**, n25,** σ**1s.29**/29**, 1D, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ	The Paps	1.58	90	PN	Pn	20 06 45.3	0.0
APZ				SN	Sb	20 07 06.6	0.0
DCZ	Deep Cove	1.71	37	PN	Pn	20 06 45.9	-1.1
DCZ				AML	AML	20 07 24.6	
DCZ				AML	AML	20 07 32.2	
DCZ				AML	AML	20 07 32.3	
WHZ	Wether Hill Ro	1.83	59	PN	Pn	20 06 48.7	-0.1
WHZ				AML	AML	20 07 25.9	
WHZ				AML	AML	20 07 29.4	
MLZ	Mavora Lakes	2.29	50	PN	Pn	20 06 55.4	+0.3
MLZ				AML	AML	20 07 41.3	
MLZ				AML	AML	20 07 43.3	
SYZ	Scrubby Hill	2.40	84	PN	Pn	20 06 57.6	+1.1
MSZ	Milford Sound	2.68	37	PN	Pn	20 07 00.6	+0.1
MSZ				AML	AML	20 07 53.3	
MSZ				AML	AML	20 07 54.7	
MSZ				AML	AML	20 07 55.4	
TUZ	Tuapeka	2.87	73	PN	Pn	20 07 03.5	+0.5
TUZ				SN	Sn	20 07 39.4	+2.1
TUZ				AML	AML	20 07 40.4	
EAZ	Earnscleugh	3.00	59	PN	Pn	20 07 05.1	+0.4
EAZ				AML	AML	20 07 53.8	
EAZ				AML	AML	20 08 00.9	
WKZ	Wanaka	3.08	50	PN	Pn	20 07 07.5	+1.5
WKZ				AML	AML	20 08 10.6	
WKZ				AML	AML	20 08 10.8	
JCZ	Jackson Bay	3.52	39	PN	Pn	20 07 13.0	+0.9
JCZ				AML	AML	20 08 21.1	
JCZ				AML	AML	20 08 21.6	
ODZ	Otahua Downs	3.90	64	⇓PN	Pn	20 07 16.0	-1.1
LBZ	Lake Benmore	4.00	54	PN	Pn	20 07 17.7	-0.9
LBZ				AML	AML	20 08 36.9	
LBZ				AML	AML	20 08 46.1	
FOZ	Fox Glacier	4.33	42	PN	Pn	20 07 24.5	+1.4
RPZ	Rata Peaks	4.92	52	Pn	Pn	20 07 28.5	-2.7
	7.4nm,0.3s,baz=264,slow=4.7,SNR=14						
RPZ				Sn	Sn	20 08 25.2	-2.5
	10nm,0.3s,baz=10,slow=19,SNR=7.7						
WVZ	Waitaha Valley	5.20	45	PN	Pn	20 07 34.9	-0.2
LTZ	Lake Taylor	6.20	51	PN	Pn	20 07 47.4	-1.4
MOO	Moorlands	13.88	282	P	Pn	20 09 33.7	-0.2
	baz=14,SNR=3.4						
LHI	Lord Howe Isla	16.14	339	P	P	20 10 09.8	+2.6
	baz=17,SNR=3.2						
LHI				S	S	20 13 17.5	+1.7
	baz=17,SNR=3.7						
TOO	Toolangi	17.56	295	P	Pn	20 10 22.1	+0.1
	baz=18,SNR=6.0						
ASAR	Alice Springs	34.39	301	P	P	20 13 03.5	-0.9
	0.3nm,0.4s,baz=138,slow=9.2,SNR=8.7						
WRA	Warramunga Arr	37.06	306	P	P	20 13 26.2	-1.1
	0.3nm,0.7s,baz=137,slow=8.1,SNR=3.3						
TORD	Torodi Ar. Bea	143.81	207	PKhKP	PKPpre	20 25 44.9	
	0.6nm,1.1s,baz=103,slow=2.1,SNR=2.5						
TORD				PKP	PKiKP	20 25 55.3	-0.8
	0.5nm,1.0s,baz=168,slow=7.4,SNR=3.1						
BRTR	Keskin Array B	144.83	276	PKhKP	PKPpre	20 25 47.4	
	0.2nm,0.5s,baz=29,slow=3.3,SNR=2.8						
BRTR				PKP	PKPdf	20 25 53.2	-0.6
	0.2nm,0.4s,baz=123,slow=5.3,SNR=4.5						
ARCES	ARCESS Array B	150.02	333	PKPbc	PKPbc	20 26 06.8	+0.5
	0.7nm,0.5s,baz=99,slow=2.9,SNR=14						
FINES	FINESS Array B	152.75	317	PKPbc	PKPbc	20 26 13.1	+0.3
	1.1nm,0.7s,baz=104,slow=5.9,SNR=2.9						

IDC 07 20:28:34.1±2.1**, 1°.65S**×**148°.67E, h0**km**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.5**/18**, mbtmp3.7**/3**, Error ellipse: s-maj=294.9km s-min=28.3km az=120.0, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.95	217	P	P	20 33 40.0	-0.3
	2.0nm,0.8s,baz=39,slow=10,SNR=14						
ASAR	Alice Springs	26.15	212	P	P	20 34 10.5	+0.1
	0.7nm,0.4s,baz=45,slow=8.1,SNR=40						
ILAR	Eielson Array	80.85	23	P	P	20 40 49.8	+0.1
	0.3nm,0.8s,baz=242,slow=5.0,SNR=4.5						

*ISCJB **07** 20:29:23.1±0.3, 23°.38N±0°.02×121°.63E±0°.02, h30km±2km, Error ellipse: s-maj=3.2km s-min=2.4km az=140.6*
*TAP **07** 20:29:23.6, 23°.40N×121°.54E, h34km, ML3.4, C*
*JMA **07** 20:29:24.4±0.3, 23°.44N×121°.67E, h88km, M2.4*
ISC 07 20:29:23.6±0.9**, 23°.39N**±0°.02×**121°.57E**±0°.02**, h32**km±7km**, n55,** σ**0s.79**/99**, 4C-6D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWF1	Yuli	0.26	263	⇓iP	Pb	20 29 30.9	+0.1
	baz=271						
TWF1				eS	Sn	20 29 35.9	-0.2
	baz=271						
EHY	Hungye	0.26	297	⇓iP	Pb	20 29 30.7	-0.1
	baz=297						
EHY				S	Sn	20 29 35.4	-0.8
	baz=297						
TEGC	Jichi Village	0.32	354	eP	Pb	20 29 31.6	0.0
	baz=5.0						
TEGC				eS	Sn	20 29 39.0	+1.3
	baz=5.0						
CHKT	Chengkung	0.34	214	⇑iP	Pb	20 29 32.0	+0.1
	baz=201						
CHKT				S	Sn	20 29 38.1	-0.1
	baz=201						
ESL	Shilin	0.45	343	P	Pb	20 29 32.7	-0.7
	baz=339						
ESL				eS	Sb	20 29 39.8	-0.2
	baz=339						
ELDTW	Lidau	0.55	249	P	Pn	20 29 34.1	-1.2
	baz=240						
ELDTW				eS	Sb	20 29 41.4	-1.5
	baz=240						
YUS	Yu-Shan	0.58	280	⇓iP	Pn	20 29 35.7	-0.4
	baz=287						
YUS				S	Sb	20 29 43.6	-0.6
	baz=287						
HWA	Hwalien	0.59	3	eP	Pb	20 29 35.7	+0.1
	baz=16						
HWA				eS	Sn	20 29 44.2	-0.1
	baz=16						
TWD	Chiawan	0.69	2	i P	Pn	20 29 36.6	-0.7
	baz=352						
TWD				S	Sn	20 29 46.1	-0.8
	baz=352						
ALS	Alishan	0.72	280	⇓iP	Pn	20 29 37.9	+0.1
	baz=279						
ALS				eS	Sn	20 29 47.6	-0.3
	baz=279						
TWG	Pinlang	0.73	220	eP	Pn	20 29 36.3	-1.4
	baz=217						
TWG				eS	Sn	20 29 45.4	-2.3
	baz=217						
TTN	Taitung	0.74	212	eP	Pn	20 29 37.6	-0.3
	baz=219						
SMLT	Sun Moon Lake	0.79	309	⇓iP	Pn	20 29 38.5	-0.3
	baz=314						
SMLT				eS	Sn	20 29 49.0	-0.5
	baz=314						
WHF	Hehuan Shan	0.81	340	P	Pn	20 29 38.2	-1.0
	baz=342						
WHF				eS	Sn	20 29 49.3	-1.1
	baz=342						
TYC	Yuchr	0.84	308	⇓iP	Pn	20 29 39.2	0.0
	baz=317						
TYC				S	Sn	20 29 50.7	+0.3
	baz=317						
CHN5	Tsauling	0.85	285	P	Pn	20 29 39.9	+0.4
	baz=284						
CHN5				S	Sb	20 29 51.6	+0.4
	baz=284						
WTP	Ta-pu	0.89	261	⇑iP	Pn	20 29 40.4	+0.4
	baz=260						
WTP				S	Sb	20 29 52.9	+0.5
	baz=260						
CHN4	Tsaushan	0.90	268	⇑iP	Pb	20 29 40.8	0.0
	baz=262						
CHN4				S	Sb	20 29 53.4	+0.8
	baz=262						
TWT	Tachien	0.94	337	P	Pn	20 29 40.9	+0.1
	baz=338						
TWT				S	Sn	20 29 52.0	-1.2
	baz=338						
WNT	Mingjian	0.95	301	P	Pb	20 29 41.5	-0.2
	baz=302						
WNT				S	Sb	20 29 54.3	+0.3
	baz=302						
ECL	Taimali	0.97	216	eP	Pn	20 29 39.6	-1.5
	baz=215						
WGK	Gukeng	0.98	288	P	Pn	20 29 41.6	+0.5
	baz=288						
WGK				S	Sb	20 29 54.7	+0.1
	baz=288						
CHN1	Nanshi	0.98	259	⇑iP	Pb	20 29 42.1	-0.1
	baz=258						
CHN1				eS	Sb	20 29 55.7	+0.8
	baz=258						
TWK	Hsinying	1.01	263	eP	Pn	20 29 42.1	+0.5
	baz=263						
TWK				S	Sb	20 29 55.9	+0.3
	baz=263						
CHN2	Minshiung	1.02	278	eP	Pn	20 29 42.3	+0.6
	baz=289						
CHN2				eS	Sb	20 29 57.0	+1.1
	baz=289						
ENA	Nanau	1.05	8	eP	Pn	20 29 41.8	-0.4
	baz=357						
ENA				eS	Sn	20 29 54.9	-0.8
	baz=357						
CHY	Chiayi	1.06	276	eP	Pn	20 29 42.7	+0.4
	baz=276						
NNS	Nan Shan	1.07	350	eP	Pn	20 29 42.4	-0.1
	baz=1.0						
NNS				eS	Sn	20 29 55.2	-1.1
	baz=1.0						
TCU	Taichung	1.12	313	eP	Pn	20 29 43.7	+0.6
	baz=313						
TCU				eS	Sb	20 29 58.8	+0.1
	baz=313						
CHN3	Shinhua	1.15	255	eP	Pb	20 29 44.9	-0.2
	baz=266						
CHN3				eS	Sb	20 30 02.5	+2.8
	baz=266						
TAW	Tawu	1.20	212	eP	Pn	20 29 44.9	+0.7
	baz=212						
TWM1	Shoushan	1.20	242	eP	Pb	20 29 46.0	+0.2
	baz=242						
TWM1				eS	Sb	20 30 03.5	+2.5
	baz=242						
EAST	Anshuo	1.20	214	eP	Pn	20 29 43.3	-1.0
	baz=214						
TWQ1	Liyutan	1.21	323	eP	Pb	20 29 45.5	-0.4
	baz=324						
TWQ1				eS	Sb	20 30 01.3	0.0
	baz=324						
TWC	Suao	1.24	12	eP	Pn	20 29 45.0	+0.2
	baz=23						
TWC				eS	Sn	20 30 00.6	+0.1
	baz=23						
ENTT	Nioudou	1.25	360	eP	Pn	20 29 44.8	-0.1
	baz=1.0						
ENTT				eS	Sn	20 30 00.5	-0.2
	baz=1.0						
CHN8	Yiju	1.25	268	P	Pn	20 29 45.6	+0.7
	baz=268						
CHN8				S	Sn	20 30 02.1	+1.4
	baz=268						
NSY	Sanyi	1.27	324	eP	Pb	20 29 46.3	-0.7
	baz=325						
NSY				eS	Sb	20 30 03.1	+0.1
	baz=325						
WTCT	Ta-ch'eng	1.28	292	eP	Pn	20 29 45.8	+0.6
	baz=292						
WTCT				eS	Sb	20 30 02.8	-0.5
	baz=292						
NSK	Sanguang	1.30	351	eP	Pn	20 29 45.6	0.0
	baz=353						
NSK				eS	Sn	20 30 01.3	-0.7
	baz=353						
TWE	Neicheng	1.33	4	eP	Pn	20 29 46.0	0.0
	baz=6.0						
SCZT	Fangliau	1.34	221	eP	Pn	20 29 46.8	+0.7
	baz=211						
SCZT				eS	Sb	20 30 05.8	+0.9
	baz=211						
LAY	Lan-yu	1.34	181	eP	Pn	20 29 45.8	-0.4
	baz=171						
LAY				eS	Sn	20 30 01.5	-1.4
	baz=171						
NSTT	Nanjuang	1.35	337	eP	Pn	20 29 46.6	+0.3
	baz=338						
NSTT				eS	Sn	20 30 03.3	+0.3
	baz=338						
TWK1	Hengchun	1.60	206	eP	Pn	20 29 50.3	+0.6
	baz=195						
NWF	Wu-fen Shan	1.69	6	eP	Pn	20 29 52.1	+1.1
	baz=8.0						
YOJ	Yonaguni jima	1.70	51	P	Pn	20 29 51.6	+0.6
YOJ				eS	Sn	20 30 12.3	+0.7
WDGT	Dungji	1.76	266	eP	Pn	20 29 51.6	-0.3
	baz=267						
PNG	Penghu	1.86	276	P	Pn	20 29 53.1	-0.2
	baz=276						
HATJ	Hateruma jima	2.15	71	P	Pn	20 29 57.6	+0.3
HATJ				eS	Sn	20 30 22.6	-0.3
IRIF	Iriomote-Funau	2.19	64	P	Pn	20 29 58.3	+0.5
IRIF				eS	Sn	20 30 23.9	+0.1
JKRS	Kuro-shima	2.39	69	P	Pn	20 30 01.3	+0.8
JKRS				eS	Sn	20 30 28.9	+0.2
JIJ	Ishigaki jima	2.54	67	P	Pn	20 30 02.9	+0.2
JIJ				eS	Sn	20 30 31.5	-1.1
JTJ	Tarama	3.12	66	P	Pn	20 30 10.9	+0.3
JTJ				eS	Sn	20 30 46.5	-0.3
JOGS	Gusukube	3.76	68	eS	Sn	20 31 01.4	-1.2

IDC 07 20:41:18.1±1.8**, 8°.77S×125°.51E, h0km, mb3.4**/1**, mb1 3.6**/4**, mb1mx3.4**/20**, mbtmp3.4**/4**, ML3.1**/3**, Error ellipse: s-maj=99.5km s-min=27.1km az=67.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.27**	**179**	Pn	Pn	20 43 33.6	+0.4
	0.2nm,0.3s,baz=346,slow=9.1,SNR=9.3						
FITZ				Sn	Sn	20 45 10.5	-7.8
	0.1nm,0.3s,baz=286,slow=15,SNR=2.4						
WRA	**Warramunga Arr**	**14.01**	**143**	Pn	Pn	20 44 36.8	-1.3
	0.1nm,0.3s,baz=316,slow=13,SNR=11						
WRA				Sn	Sn	20 47 09.4	-5.0
	0.1nm,0.3s,baz=321,slow=24,SNR=4.8						
ASAR	**Alice Springs**	**16.85**	**152**	Pn	Pn	20 45 16.1	+0.5
	0.0nm,0.3s,baz=320,slow=11,SNR=4.3						
MKAR	**Makanchi Array**	**67.36**	**329**	P	P	20 52 15.1	0.0
	0.3nm,0.7s,baz=119,slow=7.9,SNR=2.7						

WEL 07 20:53:30.9±0.6**, 37°.03S×177°.00E, h220km**±6km**, ML4.3**/19**, 8C-5D, Error ellipse: s-maj=6.4km s-min=4.2km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	**Manawahe**	**0.99**	**195**	PN	Pn	20 54 02.9	+0.3
MXZ	**Matakaoa Point**	**1.17**	**118**	PN	Pn	20 54 03.8	0.0
MXZ				AML	AML	20 54 29.7	
MXZ				AML	AML	20 54 30.6	
MXZ				AML	AML	20 54 30.6	
URZ	**Urewera**	**1.23**	**176**	PN	Pn	20 54 03.8	-0.4
URZ				SN	S	20 54 30.1	-0.2
URZ				AML	AML	20 54 31.7	
TARZ	**Mount Tarawera**	**1.27**	**198**	⇑PN	Pn	20 54 05.3	+0.7
RRRZ	**Republican Roa**	**1.37**	**196**	PN	Pn	20 54 05.3	0.0
MWZ	**Matawai**	**1.37**	**163**	PN	Pn	20 54 05.1	-0.2
MWZ				AML	AML	20 54 43.0	
MWZ				AML	AML	20 54 43.0	
MWZ				AML	AML	20 54 44.2	
TOZ	**Tahuroa Road**	**1.39**	**239**	PN	Pn	20 54 05.4	0.0
PUZ	**Puketiti**	**1.44**	**137**	⇑PN	Pn	20 54 06.1	+0.3
PUZ				AML	AML	20 54 33.0	
PUZ				AML	AML	20 54 36.8	
PRRZ	**Plateau Road**	**1.55**	**198**	PN	Pn	20 54 06.8	+0.1
ALRZ	**Allen Road**	**1.62**	**199**	PN	Pn	20 54 07.3	0.0
CNGZ	**Carnagh Statio**	**1.74**	**147**	PN	Pn	20 54 09.1	+0.8
RAHZ	**Arahi**	**1.89**	**178**	PN	Pn	20 54 09.8	0.0
PRGZ	**Paritu Road**	**2.02**	**160**	PN	Pn	20 54 11.3	+0.3
KNZ	**Kokohu**	**2.06**	**165**	⇓PN	Pn	20 54 11.1	-0.2
KNZ				SN	S	20 54 42.1	-0.8
NMHZ	**Naumai**	**2.07**	**184**	PN	Pn	20 54 11.7	+0.1
RATZ	**Rangitukua**	**2.08**	**208**	PN	Pn	20 54 11.4	-0.3
BKZ	**Black Stump Fm**	**2.17**	**191**	⇓PN	Pn	20 54 11.6	-1.0
BKZ				AML	AML	20 54 45.4	
BKZ				AML	AML	20 54 47.5	
MHGZ	**Mahia Peninsul**	**2.24**	**162**	PN	Pn	20 54 13.0	-0.2
HIZ	**Hauiti**	**2.26**	**228**	⇑PN	Pn	20 54 13.5	+0.1
KRVZ	**Karewarewa**	**2.33**	**207**	PN	Pn	20 54 13.8	-0.5
WTVZ	**West Tongariro**	**2.37**	**208**	PN	Pn	20 54 14.2	-0.5
OTVZ	**Oturere**	**2.38**	**206**	PN	Pn	20 54 14.5	-0.4
NGZ	**Ngauruhoe**	**2.41**	**207**	PN	Pn	20 54 14.6	-0.6
MCHZ	**McNeill Hill**	**2.42**	**186**	PN	Pn	20 54 15.0	-0.2
WPVZ	**Whakapapa**	**2.46**	**207**	PN	Pn	20 54 15.2	-0.5
TUVZ	**Tukino**	**2.48**	**205**	PN	Pn	20 54 15.2	-0.7
FWVZ	**Far West T-bar**	**2.50**	**207**	PN	Pn	20 54 15.3	-1.0
DRZ	**Dome Shelter**	**2.52**	**206**	PN	Pn	20 54 15.9	-0.6
WNVZ	**Wahianoa**	**2.55**	**205**	⇓PN	Pn	20 54 15.8	-0.9
BHHZ	**Black Hill Sta**	**2.57**	**196**	⇓PN	Pn	20 54 15.5	-1.3
MOVZ	**Moawhango**	**2.57**	**202**	PN	Pn	20 54 15.4	-1.4
PKVZ	**Pokaka**	**2.61**	**210**	PN	Pn	20 54 16.5	-0.7
CKHZ	**Cape Kidnapper**	**2.63**	**179**	PN	Pn	20 54 16.8	-0.5
MTVZ	**Mangateitei**	**2.65**	**207**	⇑PN	Pn	20 54 16.9	-0.7
VRZ	**Vera Road**	**2.74**	**220**	PN	Pn	20 54 18.7	+0.1
KAHZ	**Kahuranaki**	**2.77**	**182**	⇓PN	Pn	20 54 18.1	-0.8
PNHZ	**Pukenui**	**2.95**	**192**	PN	Pn	20 54 19.4	-1.6
PXZ	**Pawanui**	**3.00**	**182**	PN	Pn	20 54 20.1	-1.4
PXZ				AML	AML	20 55 00.4	
PXZ				AML	AML	20 55 02.3	
PXZ				AML	AML	20 55 06.0	
PXZ				AML	AML	20 55 06.1	
RAEZ	**Rainy Point**	**3.05**	**222**	PN	Pn	20 54 22.9	+0.8
WPHZ	**Waipukurau**	**3.06**	**188**	PN	Pn	20 54 20.7	-1.5
TSZ	**Takapari Road**	**3.14**	**195**	PN	Pn	20 54 21.3	-1.8
TSZ				AML	AML	20 55 03.6	
TSZ				AML	AML	20 55 05.2	
WAZ	**Wanganui**	**3.15**	**210**	PN	Pn	20 54 22.0	-1.2
NEZ	**North Egmont**	**3.21**	**225**	PN	Pn	20 54 24.7	+0.7
PKE	**Pukeiti**	**3.22**	**227**	PN	Pn	20 54 24.6	+0.6
DFE	**Dawson Falls**	**3.24**	**224**	PN	Pn	20 54 24.9	+0.5
PRHZ	**Porangahau**	**3.25**	**185**	PN	Pn	20 54 22.9	-1.4
DVHZ	**Dannevirke**	**3.33**	**191**	PN	Pn	20 54 23.2	-2.1
NRZ	**Ngariki Road**	**3.34**	**225**	PN	Pn	20 54 23.9	-1.5
POWZ	**Post Office Ro**	**3.50**	**196**	⇑PN	Pn	20 54 25.2	-2.0
BFZ	**Birch Farm**	**3.70**	**189**	PN	Pn	20 54 27.3	-2.3
MRZ	**Mangatainoka R**	**3.79**	**197**	PN	Pn	20 54 28.1	-2.7
MRZ				AML	AML	20 55 15.6	
MRZ				AML	AML	20 55 16.6	
TIWZ	**Tintock**	**3.84**	**193**	⇑PN	Pn	20 54 29.1	-2.4
HOWZ	**Holdsworth Sta**	**4.04**	**196**	PN	Pn	20 54 30.8	-2.9
OGWZ	**Otaki Gorge**	**4.05**	**200**	PN	Pn	20 54 31.1	-2.8
KIW	**Kapiti Island**	**4.16**	**202**	PN	Pn	20 54 32.0	-3.3
KIW				AML	AML	20 55 24.3	
KIW				AML	AML	20 55 24.7	
TMWZ	**Te Maipa**	**4.17**	**192**	PN	Pn	20 54 32.4	-2.9
MTW	**Mount Morrison**	**4.29**	**195**	⇑PN	Pn	20 54 33.5	-3.3
MTW				AML	AML	20 55 26.3	
MTW				AML	AML	20 55 26.4	
CAW	**Cannon Point**	**4.34**	**200**	PN	Pn	20 54 34.1	-3.4
CAW				AML	AML	20 55 27.0	
CAW				AML	AML	20 55 28.0	
DUWZ	**D'Urville Isla**	**4.47**	**212**	PN	Pn	20 54 36.0	-3.1
TRWZ	**Traveller**	**4.48**	**193**	PN	Pn	20 54 36.6	-2.6
TRWZ				AML	AML	20 55 31.5	
TRWZ				AML	AML	20 55 31.6	
PAWZ	**Paruwai Farm**	**4.52**	**195**	PN	Pn	20 54 36.3	-3.4
PAWZ				AML	AML	20 55 31.6	
PAWZ				AML	AML	20 55 31.6	
MSWZ	**Moikau Station**	**4.59**	**197**	PN	Pn	20 54 36.8	-3.7
MSWZ				AML	AML	20 55 32.7	
MSWZ				AML	AML	20 55 32.8	
WEL	**Wellington**	**4.59**	**202**	PN	Pn	20 54 37.0	-3.5
SNZO	**South Karori**	**4.63**	**202**	PN	Pn	20 54 37.4	-3.7
SNZO				AML	AML	20 55 34.1	
SNZO				AML	AML	20 55 35.1	
BHW	**Baring Head**	**4.68**	**200**	PN	Pn	20 54 38.0	-3.6
BHW				AML	AML	20 54 38.7	
TCW	**Tory Channel**	**4.69**	**206**	PN	Pn	20 54 38.4	-3.3
TCW				AML	AML	20 55 36.7	
TCW				AML	AML	20 55 39.9	
PLWZ	**Palliser**	**4.74**	**196**	PN	Pn	20 54 38.7	-3.7
TUWZ	**Tuamarina**	**5.00**	**207**	PN	Pn	20 54 41.9	-3.7
TUWZ				AML	AML	20 55 41.9	
TUWZ				AML	AML	20 55 44.5	
NNZ	**Nelson**	**5.04**	**213**	PN	Pn	20 54 42.0	-4.2
QRZ	**Quartz Range**	**5.15**	**221**	PN	Pn	20 54 43.9	-3.7
BSWZ	**Blackbirch Sta**	**5.27**	**206**	PN	Pn	20 54 45.8	-3.2
THZ	**Tophouse**	**5.70**	**213**	PN	Pn	20 54 50.6	-3.9
KHZ	**Kahutara**	**6.01**	**205**	⇑PN	Pn	20 54 54.6	-3.7
KHZ				AML	AML	20 56 04.6	
LTZ	**Lake Taylor**	**6.80**	**211**	PN	Pn	20 55 04.0	-4.6
MQZ	**McQueen's Vall**	**7.45**	**205**	PN	Pn	20 55 11.7	-5.2
WVZ	**Waitaha Valley**	**7.72**	**217**	PN	Pn	20 55 15.7	-4.6
RPZ	**Rata Peaks**	**8.07**	**212**	PN	Pn	20 55 20.7	-4.3
FOZ	**Fox Glacier**	**8.59**	**218**	PN	Pn	20 55 25.6	-6.0
LBZ	**Lake Benmore**	**8.99**	**213**	PN	Pn	20 55 32.0	-4.7
ODZ	**Otahua Downs**	**9.34**	**209**	PN	Pn	20 55 37.0	-4.1
JCZ	**Jackson Bay**	**9.43**	**219**	PN	Pn	20 55 36.7	-5.7
TUZ	**Tuapeka**	**10.49**	**209**	PN	Pn	20 55 52.3	-3.6
WHZ	**Wether Hill Ro**	**11.16**	**215**	PN	Pn	20 55 59.2	-5.2

IDC 07 20:59:21.6±3.7**, 30°.42S×177°.66W, h0km, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/18**, mbtmp4.0**/3**, Error ellipse: s-maj=82.1km s-min=31.6km az=118.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.19**	**349**	Pn	Pn	20 59 45.5	0.0
	48nm,0.3s,baz=231,slow=19,SNR=2.9						
RAO				Sn	Sg	20 59 57.2	-2.6
	118nm,0.3s,baz=83,slow=21,SNR=5.1						
URZ	**Urewera**	**8.93**	**208**	Sn	Sn	21 03 13.8	+0.6
	0.8nm,0.3s,baz=35,slow=16,SNR=3.3						
STKA	**Stephens Creek**	**34.76**	**257**	P	P	21 06 12.7	-1.1
	5.2nm,1.1s,baz=117,slow=14,SNR=3.1						
ASAR	**Alice Springs**	**43.40**	**267**	P	P	21 07 26.1	-0.1
	0.4nm,0.5s,baz=102,slow=7.6,SNR=6.9						
WRA	**Warramunga Arr**	**44.39**	**272**	P	P	21 07 34.6	+0.4
	0.9nm,0.3s,baz=110,slow=8.1,SNR=32						
FINES	**FINESS Array B**	**145.26**	**340**	PKPbc	PKPbc	21 18 59.4	-0.9
	1.4nm,0.6s,baz=44,slow=6.2,SNR=5.4						

*SKO **07** 21:01:09.6, 40°.25N×25°.90E, h0km*
*SOF **07** 21:01:10.5, 40°.38N×25°.67E, h1km, MD3.5*
*ATH **07** 21:01:11.9, 40°.39N×25°.77E, h27km±1km, MD3.3/7*
*DDA **07** 21:01:11.5, 40°.42N×25°.73E, h26km, MD3.5*
*ISCJB **07** 21:01:11.7±0.6, 40°.39N±0°.02×25°.73E±0°.03, h8km±5km, Error ellipse: s-maj=4.1km s-min=3.3km az=139.8*
*CSEM **07** 21:01:12.1±0.1, 40°.39N×25°.76E, h2km, MD3.3, Error ellipse: s-maj=3.1km s-min=2.6km az=48.0*
*ISK **07** 21:01:12.3, 40°.39N×25°.81E, h9km, ML3.5*
ISC 07 21:01:13.0±0.9**, 40°.39N**±0°.02×**25°.77E**±0°.02**, h13**km±9km**, n146, σ0°.95**/158**, 14C-6D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.20**	**294**	*e*PB	**Pg**	**21 01 17.2**	**-0.2**
SMTH	**Samothraki Isl**	**0.20**	**294**	*e*Pb	**Pg**	**21 01 17.2**	**-0.2**
ENEZ	**Enez**	**0.46**	**40**	PG	**Pg**	**21 01 21.4**	**-0.6**
ENEZ				*e*SG	**Sg**	**21 01 28.2**	**+0.1**
ENEZ	**Enez**	**0.46**	**40**	*i* Pg	**Pg**	**21 01 21.4**	**-0.6**
ENEZ				*e*Sg	**Sg**	**21 01 28.2**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.54**	**89**	PG	**Pg**	**21 01 22.8**	**-0.8**
GELI				*e*SG	**Sg**	**21 01 30.4**	**-0.4**
GELI	**Tayfur-Gelibol**	**0.54**	**89**	*i* Pg	**Pg**	**21 01 22.8**	**-0.8**
GELI				*e*Sg	**Sg**	**21 01 30.4**	**-0.4**
ALN	**Alexandroupoli**	**0.55**	**23**	*e*PN	**Pg**	**21 01 23.2**	**-0.6**
ALN				*e*SN	**Sg**	**21 01 31.0**	**-0.1**
ALN	**Alexandroupoli**	**0.55**	**23**	*e*Pn	**Pg**	**21 01 23.2**	**-0.6**
ALN				*e*Sn	**Sg**	**21 01 31.0**	**-0.1**
BOZC	**Bozcaada**	**0.59**	**158**	*i* P	**Pg**	**21 01 24.2**	**-0.3**
ERIK	**Erikli-Kesan**	**0.64**	**64**	PG	**Pg**	**21 01 24.4**	**-1.0**
ERIK				*e*SG	**Sg**	**21 01 33.5**	**-0.3**
ERIK	**Erikli-Kesan**	**0.64**	**64**	*i* Pg	**Pg**	**21 01 24.4**	**-1.0**
ERIK				*e*Sg	**Sg**	**21 01 33.5**	**-0.3**
LIA	**Limnos Island**	**0.66**	**222**	*e*PN	**Pg**	**21 01 25.7**	**-0.2**
LIA				*e*SN	**Sb**	**21 01 34.9**	**-0.6**
LIA	**Limnos Island**	**0.66**	**222**	*e*Pn	**Pg**	**21 01 25.7**	**-0.2**
LIA				*e*Sn	**Sb**	**21 01 34.9**	**-0.6**
EZN	**Ezine**	**0.71**	**143**	*e*PG	**Pg**	**21 01 26.3**	**-0.5**
LPK	**Lapseki**	**0.76**	**91**	*e*PG	**Pg**	**21 01 26.7**	**-1.1**
LPK				*e*SG	**Sg**	**21 01 36.8**	**-0.9**
LPK	**Lapseki**	**0.76**	**91**	*e*Pg	**Pg**	**21 01 26.7**	**-1.1**
LPK				*e*Sg	**Sg**	**21 01 36.8**	**-0.9**
RDO	**Rodhopi**	**0.78**	**347**	*e*PN	**Pg**	**21 01 27.2**	**-0.8**
RDO				*e*SN	**Sb**	**21 01 38.8**	**0.0**
RDO	**Rodhopi**	**0.78**	**347**	*e*Pn	**Pg**	**21 01 27.2**	**-0.8**
RDO				*e*Sn	**Sb**	**21 01 38.8**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.12**	**74**	*e*PN	**Pg**	**21 01 33.3**	**-1.2**
RKY	**Sarkoy-Tekirda**	**1.12**	**74**	*e*Pn	**Pg**	**21 01 33.3**	**-1.2**
SART	**Tekirdag**	**1.12**	**74**	*i* P	**Pg**	**21 01 32.7**	**-1.9**
SART	**Tekirdag**	**1.12**	**74**	*i* P	**Pg**	**21 01 32.7**	**-1.9**
KRBG	**Karabiga-Canak**	**1.17**	**89**	*e*PN	**Pg**	**21 01 33.8**	**-1.7**
MFT	**Murefte**	**1.22**	**71**	*e*PN	**Pg**	**21 01 35.3**	**-1.2**
MFT	**Murefte**	**1.22**	**71**	*e*Pn	**Pg**	**21 01 35.3**	**-1.2**
KDZ	**Kurdzhali**	**1.29**	**348**	*i* P	**Pg**	**21 01 36.3**	**-1.4**
KDZ	**Kurdzhali**	**1.29**	**348**	*i* P	**Pg**	**21 01 36.3**	**-1.4**
AYVA	**Ayvalik**	**1.29**	**146**	*i* P	**Pn**	**21 01 36.6**	**-0.1**
AYVA	**Ayvalik**	**1.29**	**146**	*i* P	**Pn**	**21 01 36.6**	**-0.1**
MRMT	**Marmara Adasi**	**1.41**	**81**	*e*PN	**Pn**	**21 01 37.8**	**-0.7**
TKR	**Tekirdag**	**1.47**	**65**	*e*PN	**Pn**	**21 01 39.7**	**+0.5**
GONE	**Gonen-Balikesi**	**1.51**	**103**	*e*PN	**Pn**	**21 01 40.2**	**+0.5**
GONE	**Gonen-Balikesi**	**1.51**	**103**	*e*Pn	**Pn**	**21 01 40.2**	**+0.5**
RZN	**Rozhen**	**1.52**	**329**	*i* P	**Pn**	**21 01 39.7**	**-0.4**
RZN	**Rozhen**	**1.52**	**329**	*i* P	**Pn**	**21 01 39.7**	**-0.4**
BALY	**Balya**	**1.56**	**114**	*i* P	**Pn**	**21 01 40.8**	**+0.3**
BALY	**Balya**	**1.56**	**114**	*i* P	**Pn**	**21 01 40.8**	**+0.3**
EDRB	**Edirne**	**1.63**	**27**	*e*PN	**Pn**	**21 01 41.5**	**+0.1**
EDRB	**Edirne**	**1.63**	**27**	*e*Pn	**Pn**	**21 01 41.5**	**+0.1**
BNT	**Bandirma**	**1.65**	**90**	*e*PN	**Pn**	**21 01 41.8**	**+0.2**
BNT	**Bandirma**	**1.65**	**90**	*e*Pn	**Pn**	**21 01 41.8**	**+0.2**
DIM	**Dimitrovgrad**	**1.67**	**354**	*i* P	**Pn**	**21 01 42.6**	**+0.7**
DIM	**Dimitrovgrad**	**1.67**	**354**	*i* P	**Pn**	**21 01 42.6**	**+0.7**
NVR	**Nevrokopi**	**1.73**	**304**	*e*PN	**Pn**	**21 01 42.4**	**-0.4**
NVR	**Nevrokopi**	**1.73**	**304**	*e*Pn	**Pn**	**21 01 42.4**	**-0.4**
PLG	**Polygyros**	**1.77**	**270**	*e*PN	**Pn**	**21 01 42.3**	**-1.1**
PLG	**Polygyros**	**1.77**	**270**	*e*Pn	**Pn**	**21 01 42.3**	**-1.1**
BALB	**Balikesir**	**1.79**	**114**	*e*PN	**Pn**	**21 01 43.4**	**-0.1**
BALB	**Balikesir**	**1.79**	**114**	*e*Pn	**Pn**	**21 01 43.4**	**-0.1**
SOH	**Sokhos**	**1.89**	**284**	*e*PB	**Pn**	**21 01 44.2**	**-0.7**
PLD	**Plovdiv**	**1.89**	**335**	*i* P	**Pg**	**21 01 47.7**	**-1.6**
PLD	**Plovdiv**	**1.89**	**335**	*i* P	**Pg**	**21 01 47.7**	**-1.6**
MMB	**Musomiste**	**1.95**	**308**	*i* P	**Pn**	**21 01 45.2**	**-0.7**
KCTX	**Karacabey (Bur**	**1.98**	**93**	*e*PN	**Pn**	**21 01 46.6**	**+0.3**
KCTX	**Karacabey (Bur**	**1.98**	**93**	*e*Pn	**Pn**	**21 01 46.6**	**+0.3**
CHOS	**Chios island**	**2.01**	**173**	*e*PN	**Pn**	**21 01 46.3**	**-0.4**
CHOS	**Chios island**	**2.01**	**173**	*e*Pn	**Pn**	**21 01 46.3**	**-0.4**
SLVT	**Silivri**	**2.04**	**65**	*e*PN	**Pn**	**21 01 46.6**	**-0.4**
ELBA	**Catalca**	**2.16**	**69**	*e*P	**Pn**	**21 01 47.9**	**-0.8**
JMB	**Yambol**	**2.16**	**16**	*i* P	**Pn**	**21 01 50.2**	**+1.5**
JMB	**Yambol**	**2.16**	**16**	*i* P	**Pn**	**21 01 50.2**	**+1.5**
AKHS	**Akhisar**	**2.19**	**133**	*e*P	**Pn**	**21 01 49.4**	**+0.3**
AKHS	**Akhisar**	**2.19**	**133**	*e*P	**Pn**	**21 01 49.4**	**+0.3**
CTYL	**Yal??k??y-??at**	**2.20**	**60**	*e*PN	**Pn**	**21 01 49.5**	**+0.3**
DURS	**Dursunbey**	**2.23**	**110**	*e*P	**Pn**	**21 01 49.8**	**+0.1**
DURS	**Dursunbey**	**2.23**	**110**	*e*P	**Pn**	**21 01 49.8**	**+0.1**
BLCB	**Balcova**	**2.23**	**153**	*e*PN	**Pn**	**21 01 50.2**	**+0.5**
BLCB	**Balcova**	**2.23**	**153**	*e*Pn	**Pn**	**21 01 50.2**	**+0.5**
CTKS	**Kestanelik-??a**	**2.25**	**67**	*e*PN	**Pn**	**21 01 49.5**	**-0.3**
IZM	**Izmir**	**2.30**	**149**	*e*PN	**Pn**	**21 01 51.2**	**+0.5**
IZM	**Izmir**	**2.30**	**149**	*e*Pn	**Pn**	**21 01 51.2**	**+0.5**
DST	**Dursunbey**	**2.33**	**109**	*e*PN	**Pn**	**21 01 51.7**	**+0.6**
DST	**Dursunbey**	**2.33**	**109**	*e*Pn	**Pn**	**21 01 51.7**	**+0.6**
ARMT	**Armutlu**	**2.37**	**85**	*e*PN	**Pn**	**21 01 51.6**	**0.0**
ARMT	**Armutlu**	**2.37**	**85**	*e*Pn	**Pn**	**21 01 51.6**	**0.0**
MDNY	**Mudanya-Bursa**	**2.38**	**90**	*e*PN	**Pn**	**21 01 52.6**	**+1.0**
MDNY	**Mudanya-Bursa**	**2.38**	**90**	*e*Pn	**Pn**	**21 01 52.7**	**+1.0**
BGKT	**Bogazkoy**	**2.42**	**70**	*e*PN	**Pn**	**21 01 51.9**	**-0.3**
KKB	**Krupnik**	**2.51**	**307**	*i* P	**Pn**	**21 01 53.3**	**-0.1**
KKB	**Krupnik**	**2.51**	**307**	*i* P	**Pn**	**21 01 53.3**	**-0.1**
ISK	**Istanbul-Kandi**	**2.59**	**74**	*e*PN	**Pn**	**21 01 55.1**	**+0.5**
ISK	**Istanbul-Kandi**	**2.59**	**74**	*e*Pn	**Pn**	**21 01 55.1**	**+0.5**
BUY	**Buyukada**	**2.59**	**79**	*e*PN	**Pn**	**21 01 55.6**	**+1.0**
BUY	**Buyukada**	**2.59**	**79**	*e*Pn	**Pn**	**21 01 55.6**	**+1.0**
VAY	**Valandovo**	**2.59**	**292**	*e*Pn	**Pn**	**21 01 56.3**	**+1.6**
VAY	**Valandovo**	**2.59**	**292**	*e*Pn	**Pn**	**21 01 56.7**	**+2.1**
GRG	**Griva**	**2.62**	**284**	*e*PN	**Pn**	**21 01 55.2**	**+0.2**
GRG	**Griva**	**2.62**	**284**	*e*Pn	**Pn**	**21 01 55.2**	**+0.2**
KLYT	**Kilyos**	**2.63**	**70**	*e*PN	**Pn**	**21 01 55.3**	**+0.2**
KLYT	**Kilyos**	**2.63**	**70**	*e*Pn	**Pn**	**21 01 55.3**	**+0.2**
DEMI	**Demirci**	**2.64**	**120**	*e*P	**Pn**	**21 01 56.3**	**+0.9**
DEMI	**Demirci**	**2.64**	**120**	*e*P	**Pn**	**21 01 56.3**	**+0.9**
SMG	**Samos**	**2.81**	**162**	*e*PN	**Pn**	**21 01 57.3**	**-0.3**
SMG	**Samos**	**2.81**	**162**	*e*Pn	**Pn**	**21 01 57.3**	**-0.3**
IZI	**Iznik**	**2.83**	**90**	*e*PN	**Pn**	**21 01 58.2**	**+0.2**
IZI	**Iznik**	**2.83**	**90**	*e*Pn	**Pn**	**21 01 58.2**	**+0.2**
SZH	**Strazhica**	**2.88**	**2**	*i* P	**Pn**	**21 01 59.0**	**+0.5**
SZH	**Strazhica**	**2.88**	**2**	*i* P	**Pn**	**21 01 59.0**	**+0.5**
VTS	**Vitosha**	**2.92**	**320**	*i* P	**Pn**	**21 01 59.7**	**+0.4**
VTS	**Vitosha**	**2.92**	**320**	⇑*i*P	**Pg**	**21 02 06.9**	**-2.1**
KULA	**Kula-Manisa**	**2.92**	**129**	*e*PN	**Pn**	**21 01 59.7**	**+0.5**
KULA	**Kula-Manisa**	**2.92**	**129**	*e*Pn	**Pn**	**21 01 59.7**	**+0.5**
TVSB	**Tavsanli**	**2.99**	**107**	*e*PN	**Pn**	**21 02 00.9**	**+0.7**
TVSB	**Tavsanli**	**2.99**	**107**	*e*Pn	**Pn**	**21 02 00.9**	**+0.7**
SILT	**Sile**	**3.04**	**74**	*e*PN	**Pn**	**21 02 01.1**	**+0.3**
SILT	**Sile**	**3.04**	**74**	*e*Pn	**Pn**	**21 02 01.1**	**+0.3**
GDZ	**Gediz**	**3.15**	**113**	*i* P	**Pn**	**21 02 03.3**	**+1.0**
GDZ	**Gediz**	**3.15**	**113**	*i* P	**Pn**	**21 02 03.3**	**+1.0**
AYDN	**Tasoluk**	**3.18**	**148**	*i* P	**Pn**	**21 02 03.0**	**+0.2**
AYDN	**Tasoluk**	**3.18**	**148**	*i* P	**Pn**	**21 02 03.0**	**+0.2**
ZIMR		**3.28**	**355**	⇑*i*P	**Pg**	**21 02 14.8**	**-1.0**
APE	**Apeiranthos**	**3.32**	**183**	*e*PN	**Pn**	**21 02 06.4**	**+1.7**
APE	**Apeiranthos**	**3.32**	**183**	⇑*i*P	**Pn**	**21 02 03.9**	**-0.8**
APE	**Apeiranthos**	**3.32**	**183**	⇑*i*P	**Pn**	**21 02 03.9**	**-0.8**
APE	**Apeiranthos**	**3.32**	**183**	*e*Pn	**Pn**	**21 02 06.4**	**+1.7**
MPEP	**Malo Peshtene**	**3.33**	**334**	*i* P	**Pn**	**21 02 05.0**	**+0.3**
YER	**Yerkesik**	**3.80**	**148**	*e*PN	**Pn**	**21 02 12.1**	**+0.8**
YER	**Yerkesik**	**3.80**	**148**	*e*Pn	**Pn**	**21 02 12.1**	**+0.8**
SHUT	**Suhut-Afyon**	**4.13**	**115**	*e*PN	**Pn**	**21 02 17.4**	**+1.5**
SHUT	**Suhut-Afyon**	**4.13**	**115**	*e*Pn	**Pn**	**21 02 17.4**	**+1.5**
HUMR	**Humele**	**4.18**	**352**	⇑*i*P	**Pg**	**21 02 31.4**	**-1.6**
TIRR	**Tirgusor**	**4.51**	**25**	⇓*i*P	**Pn**	**21 02 21.5**	**+0.5**
TIRR	**Tirgusor**	**4.51**	**25**	⇓*i*P	**Pn**	**21 02 21.5**	**+0.5**
SVRH	**Sivrihisar-ESK**	**4.53**	**100**	*e*PN	**Pn**	**21 02 23.0**	**+1.7**
SVRH	**Sivrihisar-ESK**	**4.53**	**100**	*e*Pn	**Pn**	**21 02 23.0**	**+1.7**
ELL	**Elmali**	**4.88**	**137**	*e*PN	**Pn**	**21 02 27.4**	**+1.3**
ELL	**Elmali**	**4.88**	**137**	*e*Pn	**Pn**	**21 02 27.4**	**+1.3**
KIZT	**Kizilcal**	**4.96**	**106**	*e*PN	**Pn**	**21 02 28.6**	**+1.4**
KIZT	**Kizilcal**	**4.96**	**106**	*e*Pn	**Pn**	**21 02 28.6**	**+1.4**
ARR	**Arges**	**5.04**	**351**	⇓*i*P	**Pb**	**21 02 42.3**	**+1.2**
VOIR		**5.07**	**354**	⇓*i*P	Pn	21 02 32.9	+4.1
CFR	**Carcaliu**	**5.09**	**19**	⇑*i*P	**Pn**	**21 02 29.5**	**+0.6**
CFR	**Carcaliu**	**5.09**	**19**	⇑*i*P	**Pn**	**21 02 29.5**	**+0.6**
MLR	**Muntele Rosu**	**5.10**	**1**	⇑*i*P	**Pn**	**21 02 31.2**	**+2.0**
MLR	**Muntele Rosu**	**5.10**	**1**	⇑*i*P	**Pn**	**21 02 31.2**	**+2.0**
GRUS	**Gruza**	**5.13**	**315**	*e*Pn	**Pn**	**21 02 27.2**	**-2.3**
AKAS	**Kas**	**5.13**	**143**	*e*P	**Pn**	**21 02 31.0**	**+1.3**
AKAS	**Kas**	**5.13**	**143**	*e*P	**Pn**	**21 02 31.0**	**+1.3**
LOT	**Lotru**	**5.26**	**344**	⇓*i*P	**Pn**	**21 02 31.2**	**-0.2**
LOT	**Lotru**	**5.26**	**344**	⇓*i*P	**Pn**	**21 02 31.2**	**-0.2**
PLOR	**Plostina**	**5.50**	**6**	⇑*i*P	Pn	21 02 38.1	+3.5
VRI	**Vrincioaia**	**5.52**	**7**	⇑*i*P	**Pn**	**21 02 38.0**	**+3.2**
DIVS	**Divibare**	**5.66**	**313**	*e*Pn	**Pn**	**21 02 36.6**	**-0.3**
BZS	**Buzias**	**6.04**	**331**	⇑*i*P	**Pn**	**21 02 41.4**	**-0.6**
TESR	**Tescani**	**6.15**	**6**	⇑*i*P	**Pn**	**21 02 45.5**	**+2.0**
TESR	**Tescani**	**6.15**	**6**	⇑*i*P	**Pn**	**21 02 45.5**	**+2.0**

IDC 07 21:16:35.8±1.0**, 60°.47S×44°.49W, h0km, mb3.9**/4**, mb1 3.9**/5**, mb1mx3.7**/18**, mbtmp3.8**/5**, ML3.1**/1**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx3.0**/26**, Error ellipse: s-maj=42.0km s-min=22.4km az=60.0, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**19.75**	**142**	P	Pn	21 21 07.6	-0.7
	0.1nm,0.3s,baz=290,slow=9.4,SNR=9.3						
SNAA				LR	LR	21 27 05.7	
	comp=Z,24nm,19.7s,baz=196,slow=32						
PLCA	**Paso Flores**	**25.47**	**309**	P	P	21 22 05.1	-0.2
	1.3nm,0.9s,baz=181,slow=12,SNR=2.1						
QSPA	**South Pole Qui**	**29.77**	**180**	P	P	21 22 43.8	+0.1
	0.5nm,0.6s,baz=194,slow=2.3,SNR=5.6						
SIV	**San Ignacio**	**46.02**	**338**	P	P	21 25 01.3	+0.5
	1.4nm,0.4s,baz=196,slow=7.1,SNR=5.5						
TORD	**Torodi Ar. Bea**	**82.08**	**45**	P	P	21 28 58.0	+0.3
	1.5nm,0.9s,baz=192,slow=6.5,SNR=8.3						
PPT	**Papeete**	**82.09**	**248**	LR	LR	21 56 25.2	
	comp=Z,162nm,21.2s,baz=171,slow=29						
ILAR	**Eielson Array**	**146.14**	**311**	PKPbc	PKPdf	21 36 15.2	+0.1
	0.8nm,0.8s,baz=147,slow=2.6,SNR=7.3						
MKAR	**Makanchi Array**	**146.61**	**90**	PKPbc	PKPdf	21 36 16.4	-0.2
	1.3nm,0.5s,baz=235,slow=2.9,SNR=24						

*ISCJB **07** 21:24:22.2±0.6, 37°.90N±0°.03×29°.23E±0°.03, h2km±6km, Error ellipse: s-maj=5.1km s-min=4.3km az=149.7*
*ISK **07** 21:24:22.1, 37°.88N×29°.23E, h7km, MD3.0*
*DDA **07** 21:24:22.2, 37°.87N×29°.22E, h10km, ML3.3*
*CSEM **07** 21:24:22.2±0.1, 37°.88N×29°.24E, h2km, MD3.0, Error ellipse: s-maj=2.5km s-min=2.4km az=91.0*
ISC 07 21:24:23.1±1.0**, 37°.88N**±0°.02×**29°.23E**±0°.02**, h7**km±11km**, n52, σ1°.02**/65**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.20**	**231**	PG	**Pg**	**21 24 26.6**	**-0.4**
DENT	**Denizli**	**0.20**	**231**	*i* Pg	**Pg**	**21 24 26.6**	**-0.4**
DNZL	**Cakiroluk**	**0.24**	**217**	*i* P	**Pg**	**21 24 27.2**	**-0.6**
DNZL				*i* S	**Sg**	**21 24 31.0**	**+0.1**
DNZL	**Cakiroluk**	**0.24**	**217**	*i* P	**Pg**	**21 24 27.2**	**-0.6**
DNZL				*i* S	**Sg**	**21 24 31.0**	**+0.1**
KHAL	**Karahalli**	**0.53**	**23**	*i* P	**Pg**	**21 24 32.4**	**-1.0**
KHAL	**Karahalli**	**0.53**	**23**	*i* P	**Pg**	**21 24 32.4**	**-1.0**
GOLH	**Golhisar**	**0.69**	**157**	*i* P	**Pg**	**21 24 35.9**	**-0.5**
GOLH	**Golhisar**	**0.69**	**157**	*i* P	**Pg**	**21 24 35.9**	**-0.5**
GLHS	**Glhisar (BURDU**	**0.75**	**163**	*e*PG	**Pg**	**21 24 36.7**	**-0.8**
GLHS				*e*SG	**Sg**	**21 24 48.3**	**+1.0**
GLHS	**Glhisar (BURDU**	**0.75**	**163**	*e*Pg	**Pg**	**21 24 36.7**	**-0.8**
GLHS				*e*Sg	**Sg**	**21 24 48.3**	**+1.0**
MANT	**Manisa**	**0.81**	**320**	*i* P	**Pg**	**21 24 38.0**	**-0.6**
MANT	**Manisa**	**0.81**	**320**	*i* P	**Pg**	**21 24 38.0**	**-0.6**
ISP	**Isparta**	**1.03**	**93**	*e*PG	**Pg**	**21 24 42.3**	**-0.5**
ISP				*e*SG	**Sb**	**21 24 57.2**	**+0.2**
ISP	**Isparta**	**1.03**	**93**	*e*Pg	**Pg**	**21 24 42.3**	**-0.5**
ISP				*e*Sg	**Sb**	**21 24 57.2**	**+0.2**
YER	**Yerkesik**	**1.05**	**226**	*e*PG	**Pg**	**21 24 42.8**	**-0.5**
YER				*e*SG	**Sb**	**21 24 58.1**	**+0.4**
YER	**Yerkesik**	**1.05**	**226**	*e*Pg	**Pg**	**21 24 42.8**	**-0.5**
YER				*e*Sg	**Sb**	**21 24 58.1**	**+0.4**
AYDN	**Tasoluk**	**1.09**	**259**	*i* P	**Pg**	**21 24 43.1**	**-0.8**
AYDN				*i* S	**Sg**	**21 24 57.9**	**-0.2**
AYDN	**Tasoluk**	**1.09**	**259**	*i* P	**Pg**	**21 24 43.1**	**-0.8**
AYDN				*i* S	**Sg**	**21 24 57.9**	**-0.2**
TURN	**Turunc**	**1.12**	**206**	*i* P	**Pn**	**21 24 47.6**	**+2.5**
TURN	**Turunc**	**1.12**	**206**	*i* P	**Pn**	**21 24 47.6**	**+2.5**
BCK	**Bucak**	**1.16**	**111**	*e*PN	**Pg**	**21 24 44.6**	**-0.7**
BCK	**Bucak**	**1.16**	**111**	*e*Pn	**Pg**	**21 24 44.6**	**-0.7**
GDZ	**Gediz**	**1.23**	**9**	*i* P	**Pb**	**21 24 45.7**	**-1.0**
GDZ	**Gediz**	**1.23**	**9**	*i* P	**Pb**	**21 24 45.7**	**-1.0**
DEMI	**Demirci**	**1.23**	**341**	*i* P	**Pb**	**21 24 46.1**	**-0.6**
DEMI	**Demirci**	**1.23**	**341**	*i* P	**Pb**	**21 24 46.1**	**-0.6**
FETY	**Fethiye**	**1.25**	**185**	*e*PN	**Pn**	**21 24 46.4**	**-0.6**
FETY	**Fethiye**	**1.25**	**185**	*e*Pn	**Pn**	**21 24 46.4**	**-0.6**
ELL	**Elmali**	**1.25**	**154**	*e*PN	**Pn**	**21 24 45.9**	**-1.2**
ELL	**Elmali**	**1.25**	**154**	*e*Pn	**Pn**	**21 24 45.9**	**-1.2**
MLSB	**Milas**	**1.29**	**244**	*e*PN	**Pn**	**21 24 47.0**	**-0.6**
MLSB	**Milas**	**1.29**	**244**	*e*Pn	**Pn**	**21 24 47.0**	**-0.6**
AKHS	**Akhisar**	**1.49**	**312**	*i* P	**Pn**	**21 24 50.2**	**-0.1**
AKHS				*i* S	**Sg**	**21 25 13.2**	**+2.1**
AKHS	**Akhisar**	**1.49**	**312**	*i* P	**Pn**	**21 24 50.2**	**-0.1**
AKHS				*i* S	**Sg**	**21 25 13.2**	**+2.1**
BOLV	**Bolvadin**	**1.60**	**58**	*i* P	**Pb**	**21 24 52.4**	**-0.6**
BOLV				*i* S	**Sg**	**21 25 18.8**	**+4.4**
BOLV	**Bolvadin**	**1.60**	**58**	*i* P	**Pb**	**21 24 52.4**	**-0.6**
IZM	**Izmir**	**1.63**	**289**	*e*PN	**Pn**	**21 24 52.0**	**-0.3**
IZM	**Izmir**	**1.63**	**289**	*e*Pn	**Pn**	**21 24 52.0**	**-0.3**
AKAS	**Kas**	**1.67**	**169**	*i* P	**Pg**	**21 24 55.1**	**0.0**
AKAS	**Kas**	**1.67**	**169**	*i* P	**Pg**	**21 24 55.1**	**0.0**
DAT	**Datca**	**1.74**	**229**	*e*PN	**Pn**	**21 24 54.1**	**+0.2**
DAT	**Datca**	**1.74**	**229**	*e*Pn	**Pn**	**21 24 54.1**	**+0.2**
BLCB	**Balcova**	**1.79**	**287**	*e*PN	**Pn**	**21 24 54.6**	**+0.1**
BLCB	**Balcova**	**1.79**	**287**	*e*Pn	**Pn**	**21 24 54.6**	**+0.1**
DURS	**Dursunbey**	**1.82**	**341**	*i* P	**Pn**	**21 24 54.2**	**-0.7**
DURS	**Dursunbey**	**1.82**	**341**	*i* P	**Pn**	**21 24 54.2**	**-0.7**
BALY	**Balya**	**2.24**	**326**	*e*P	**Pn**	**21 25 00.2**	**-0.5**
BALY	**Balya**	**2.24**	**326**	*e*P	**Pn**	**21 25 00.2**	**-0.5**
ULDT	**Uludag**	**2.26**	**358**	*i* P	**Pb**	**21 25 04.9**	**+0.5**
ULDT	**Uludag**	**2.26**	**358**	*i* P	**Pb**	**21 25 04.9**	**+0.5**
KONT	**Konya--Tatoy**	**2.48**	**87**	*e*PN	**Pn**	**21 25 03.3**	**-0.7**
KONT	**Konya--Tatoy**	**2.48**	**87**	*e*Pn	**Pn**	**21 25 03.3**	**-0.7**

*MOS **07** 21:26:38.6±1.3, 16°.09N×92°.55W, h96km, mb5.3/48, Error ellipse: s-maj=7.1km s-min=4.4km az=108.6*
*SZGRF **07** 21:26:44.9, 15°.71N×93°.15W, h157km, mb4.8, Near coast of Chiapas, Mexico*
*IDC **07** 21:26:45.9±0.5, 16°.27N×92°.71W, h142km±3km, mb4.8/26, mb1 4.9/26, mb1mx4.9/27, mbtmp4.8/26, MS4.1/16, Ms1 4.1/16, ms1mx3.9/34, Error ellipse: s-maj=13.1km s-min=6.9km az=58.0*
*ISCJB **07** 21:26:46.9±0.2, 16°.19N±0°.02×92°.90W±0°.02, h165km±2km, mb5.2/193, Error ellipse: s-maj=4.7km s-min=2.5km az=43.7*
*NEIC **07** 21:26:47.7, 16°.13N×93°.31W, h140km, mb5.4/156, MW5.4, MD5.0(MEX), Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M_{rr}0.57; $M_{\theta\theta}$-0.26; $M_{\phi\phi}$-0.31; $M_{r\theta}$-0.55; $M_{\theta\phi}$0.06; $M_{\phi r}$-1.18; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s7.00000°, δ9.00000°, λ73.00000°. NP2:ϕ_s203.00000°, δ81.00000°, λ93.00000°. Principal axes: T 1.5200, Plg53.0000°, Azm116.0000°; N -0.3100, Plg2.0000°, Azm23.0000°; P -1.2100, Plg36.0000°, Azm291.0000°; After MEX.*

NEIC Felt [IV] at San Cristobal de las Casas and Tuxtla Gutierrez. Also felt at Comitan, La Concordia, San Fernando, Tacotalpa and Villahermosa. Felt at Fraijanes and Guatemala, Guatemala and at San Salvador, El Salvador.

*MEX **07** 21:26:47.3±0.6, 16.13N×93.31W, h143km±5km, MD5.0*

*BJI **07** 21:26:48.0, 16.10N×92.80W, h163km, mB5.1/11*

*GCMT **07** 21:26:49.6±0.1, 16.23N×93.19W, h151km, MW5.4, Moment Tensor Solution. s84,c151; s27,c27; Moment tensor: Scale 10^{17}Nm; M_{rr}0.33±.02; $M_{\theta\theta}$-0.36±.03; $M_{\phi\phi}$0.03±.03; $M_{r\theta}$-0.58±.02; $M_{\theta\phi}$-0.26±.03; $M_{\phi r}$-1.63±.02; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s89.00000°, δ11.00000°, λ157.00000°. NP2:ϕ_s202.00000°, δ86.00000°, λ79.00000°. Principal axes: T 1.8500, Plg48.0000°, Azm100.0000°; N -0.1400, Plg11.0000°, Azm202.0000°; P -1.7100, Plg40.0000°, Azm301.0000°; Data Used: II IU IC G CN. Surface waves: sta=104, comp=200, per= 50.*

*CASC **07** 21:27:03.3±2.9, 15.74N×91.98W, h32km±207km, MD5.1, ML4.1, mb5.4(NEIC)*

ISC 07 21:26:46.5±0.2**, 16.15N**±0.03×**92.96W**±0.03**, h149**km±1km**, h148**km**:pP-P, n1123,** σ1.47/1262**, mb5.3**/193**, 21C-24D, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.51	209	i P	Pn	21 27 06.4	-1.4
PCIG				eS	Sn	21 27 20.8	-3.0
PCIG		0.51	209	i P	Pn	21 27 06.4	-1.4
PCIG				eS	Sn	21 27 20.8	-3.0
TGIG		0.65	346	i P	Pn	21 27 08.1	-0.6
TGIG				eS	Sn	21 27 23.3	-2.2
TGIG		0.65	346	i P	Pn	21 27 08.1	-0.6
TGIG				eS	Sn	21 27 23.3	-2.2
SCX	San Cristobal	0.66	28	i P	Pn	21 27 10.1	+1.5
SCX				eS	Sn	21 27 25.4	-0.1
SCX	San Cristobal	0.66	28	i P	Pn	21 27 10.1	+1.5
SCX				i S	Sn	21 27 26.6	+1.1
CCIG	Comitan	0.80	80	i P	Pn	21 27 11.0	+1.2
CCIG				eS	Sn	21 27 29.6	+2.0
CCIG	Comitan	0.80	80	i P	Pn	21 27 11.0	+1.2
CCIG				eS	Sn	21 27 29.6	+2.0
THIG		1.40	151	i P	Pn	21 27 15.9	+0.9
THIG				eS	Sn	21 27 38.1	+1.3
THIG		1.40	151	i P	Pn	21 27 15.9	+0.9
THIG				eS	Sn	21 27 38.1	+1.3
JAT	Jato	2.22	145	eP	Pn	21 27 26.7	+2.4
TUIG	Tuzandepetl	2.34	324	i P	Pn	21 27 23.0	-2.6
TUIG				i S	Sn	21 27 49.9	-5.9
TUIG	Tuzandepetl	2.34	324	i P	Pn	21 27 23.0	-2.6
TUIG				i S	Sn	21 27 49.9	-5.9
FUG	Fuego 3	2.65	129	eP	Pn	21 27 31.8	+2.1
PCG	Pacaya	2.86	127	eP	Pn	21 27 35.0	+2.6
NBG	Las Nubes	2.96	121	eP	Pn	21 27 36.1	+2.5
HUIG	Huatulco	3.05	263	i P	Pn	21 27 29.1	-5.3
HUIG				i S	Sn	21 28 01.9	-10
HUIG	Huatulco	3.05	263	i P	Pn	21 27 29.1	-5.3
HUIG				i S	Sn	21 28 01.9	-10
IXG	Ixpaco	3.12	129	eP	Pn	21 27 38.3	+2.8
MRL	Marmol	3.33	108	eP	Pn	21 27 40.5	+2.3
OXX	Oaxaca	3.72	285	eS	Sn	21 28 17.7	-10
RBDL	Robledal	3.75	122	⇓eP	Pn	21 27 45.6	+1.9
MTO2	Montecristo 2	3.88	116	⇓eP	Pn	21 27 47.0	+1.5
MTO2				eS	Sn	21 28 21.5	-10
SNJE	San Jose	3.96	125	eP	Pn	21 27 48.5	+2.0
SBLS	San Blas	3.96	125	⇓eP	Pn	21 27 48.5	+2.1
SBLS				eS	Sn	21 28 24.2	-8.8
BOQS	Boqueron	4.29	123	⇑eP	Pn	21 27 53.1	+2.2
SNET	Serv Nac Est T	4.36	124	AML	AML	21 27 56.1	
	comp=Z,916nm,0.8s						
LBRS	Las Brisas	4.48	122	eP	Pn	21 27 55.4	+2.2
LFRS	El Faro	4.53	123	⇓eP	Pn	21 27 56.0	+2.1
SNVI	San Vicente	4.72	122	eP	Pn	21 27 59.1	+2.7
TPIG	Tehuac#an	4.77	299	i P	Pn	21 27 54.8	-2.3
TPIG				eS	Sn	21 28 44.1	-7.9
TPIG	Tehuac#an	4.77	299	eP	Pn	21 27 53.1	-3.9
TPIG				eS	Sn	21 28 44.1	-7.9
UTMO	Huajuapan	4.93	291	eP	Pn	21 27 56.7	-2.5
UTMO				eS	Sn	21 28 46.5	-9.3
UTMO	Huajuapan	4.93	291	eP	Pn	21 27 55.8	-3.3
UTMO				eS	Sn	21 28 46.5	-9.3
PNIG	Pinotepa	4.97	274	i P	Pn	21 27 55.5	-4.0
PNIG				eS	Sn	21 28 47.3	-9.2
PNIG	Pinotepa	4.97	274	i P	Pn	21 27 55.5	-4.0
PNIG				eS	Sn	21 28 47.3	-9.2
CAHU	Cacacuatique	5.16	117	eP	Pn	21 28 05.0	+2.6
VSM	San Miguel	5.28	120	eP	Pn	21 28 06.7	+2.7
CNCH	Conchagua	5.72	119	eP	Pn	21 28 12.4	+2.7
TGUH	Tegucigalpa,Un	5.87	110	⇓iPn	Pn	21 28 14.1	+2.6
TGUH				eSn	Sn	21 29 07.3	-11
TEIG	Tepich	6.02	47	⇑iPn	Pn	21 28 14.4	+0.9
TEIG				S	Sn	21 29 20.3	-1.3
TEIG				eSn	Sn	21 29 22.6	+1.0
TEIG	Tepich	6.02	47	P	Pn	21 28 14.3	+0.8
	comp=Z,126nm,0.3s,baz=249,slow=5.4,SNR=439						
TEIG				S	Sn	21 29 20.3	-1.3
	comp=Z,100nm,0.3s,baz=353,slow=6.3,SNR=3.1						
PPM	Popocatepetl	6.13	299	i P	Pn	21 28 12.2	-3.3
PPM				eS	Sn	21 29 17.0	-7.9
PPM	Popocatepetl	6.13	299	i P	Pn	21 28 12.2	-3.3
PPM				eS	Sn	21 29 17.0	-7.9
PPM	Popocatepetl	6.13	299	i P	Pn	21 28 12.2	-3.3
PPM				eS	Sn	21 29 17.0	-7.9
ACX	Acapulco	6.65	277	i P	Pn	21 28 19.5	-2.5
ACX	Acapulco	6.65	277	i P	Pn	21 28 19.5	-2.5
UNM	Universidad Na	6.71	299	i P	Pn	21 28 20.7	-2.4
UNM	Universidad Na	6.71	299	i P	Pn	21 28 20.7	-2.4
UNM				eS	Sn	21 29 29.4	-9.3
UNM	Universidad Na	6.71	299	i P	Pn	21 28 18.6	-4.4
UNM				i S	Sn	21 29 30.7	-7.9
CAIG	El Cayaco	7.06	278	i P	Pn	21 28 24.6	-2.8
CAIG				i S	Sn	21 29 37.4	-9.1
CAIG	El Cayaco	7.06	278	i P	Pn	21 28 23.5	-3.9
CAIG				i S	Sn	21 29 37.4	-9.1
ARIG	Puente Sto Nin	7.37	288	i P	Pn	21 28 27.3	-4.3
ARIG				eS	Sn	21 29 45.5	-8.5
VCR	Vista de Mar	9.31	129	⇑eP	Pn	21 28 59.2	+1.6
FORC	Fortuna	9.85	124	⇓eP	Pn	21 29 06.4	+1.8
JCR	Jicaral	9.88	128	⇑eP	Pn	21 29 06.6	+1.5
CGA2	Cerro Gallo 2	10.28	125	eP	Pn	21 29 12.1	+1.7
CGA2				eS	Sn	21 30 59.6	-4.7
SJS	Escuela Geolog	10.65	124	eP	Pn	21 29 17.7	+2.4
QCR	Quepos	10.87	127	⇑eP	Pn	21 29 19.5	+1.3
URSC	Urasca	10.93	124	⇓eP	Pn	21 29 20.9	+1.9
BUS	Buena Vista	11.11	125	eP	Pn	21 29 22.8	+1.1
ACR	Cerro Adams	12.12	127	⇑eP	Pn	21 29 36.6	+2.1
ACR				eS	Sn	21 31 46.0	-2.6
KVTX	Kingsville	12.23	339	ePn	Pn	21 29 36.3	+0.5
KVTX				eSn	Sn	21 31 44.0	-7.0
732A	Laxson Ranch,	14.09	334	P	Pn	21 29 59.2	-0.5
	baz=14,SNR=306						
BCIP	Isla Barro Col	14.56	117	ePn	Pn	21 30 05.9	+0.3
	comp=Z,165nm,0.9s						
MBJ	Montego Bay	14.60	79	⇑iP	P	21 30 11.9	+3.4
632A	Uvalde	14.70	336	P	Pn	21 30 06.7	-0.7
	baz=15,SNR=233						
MCJ	Malvern	14.71	81	i P	P	21 30 12.8	+2.9
MTDJ	Mount Denham	14.89	80	ePn	Pn	21 30 10.1	+0.3
MTDJ				eScP	ScP	21 38 31.9	+2.1
631A	Perdido Creek	14.95	333	P	Pn	21 30 08.9	-1.4
	baz=15,SNR=384						
PCJ	Portland Cotta	15.21	82	i P	P	21 30 15.9	+0.7
532A	Rocksprings	15.30	337	P	Pn	21 30 14.4	-0.4
	baz=15,SNR=334						
STH	Stony Hill	15.56	81	i P	P	21 30 19.8	+0.6
JCT	Junction City	15.58	337	⇓eP	Pn	21 30 17.9	-0.3
JCT				e		21 33 05.9	
JCT				pmax	pmax		
	comp=Z,338nm,0.9s						
JCT	Junction City	15.58	337	⇓ePn	Pn	21 30 17.9	-0.3
	comp=Z,338nm,0.9s						
JCT				eSn	Sn	21 33 05.9	-5.7
JCT	Junction City	15.58	337	P	Pn	21 30 18.7	+0.5
	baz=16,SNR=112						
531A	Rocksprings	15.59	335	P	Pn	21 30 18.0	-0.4
	baz=16,SNR=223						
HOJ	Hope	15.61	81	i P	P	21 30 19.8	+0.1
GWJ	Greenwich	15.64	81	⇑iP	P	21 30 22.1	+2.0
BRAL	Brewton	15.75	19	⇑ePn	P	21 30 24.5	+3.5
	comp=Z,520nm,1.2s						
BRAL				eSn	Sn	21 33 14.1	-1.5
530A	J-C Ranch, Com	15.91	333	P	Pn	21 30 22.0	-0.3
	baz=16,SNR=444						
432A	Menard	15.94	338	P	P	21 30 23.4	+0.2
	baz=16,SNR=93						
431A	Sonora	16.07	336	P	Pn	21 30 24.6	+0.3
	baz=16,SNR=126						
628A	Black Gap, Mar	16.11	327	P	P	21 30 26.4	+1.2
	baz=16,SNR=1000						
VBMS	Vicksburg	16.15	7	ePn	P	21 30 26.1	+0.5
	comp=Z,368nm,0.9s						
VBMS				eS	Sn	21 33 24.7	-0.5
WHTX	Lake Whitney	16.29	346	P	P	21 30 28.6	+1.4
	baz=16,SNR=26						
529A	Stev Forest Ra	16.30	330	P	Pn	21 30 27.4	+0.4
	baz=16,SNR=602						
627A	Terlingua Ranc	16.35	326	P	P	21 30 29.2	+1.3
	baz=16,SNR=1000						
332A	Millersview	16.38	339	P	P	21 30 28.8	+0.7
	baz=16,SNR=180						
TXAR	Lajitas Array	16.41	325	P	P	21 30 29.7	+1.1
TXAR				ScP	ScP	21 38 34.2	+1.6
TXAR				e		22 05 38.0	
TXAR	Lajitas Array	16.41	325	P	P	21 30 29.7	+1.1
	comp=Z,7.3nm,0.3s,baz=152,slow=11,SNR=708						
TXAR				ScP	ScP	21 38 34.2	+1.6
	comp=Z,0.1nm,0.3s,baz=147,slow=2.5,SNR=9.4						
TXAR				P3KPbc		22 05 38.0	
	comp=Z,0.0nm,0.3s,baz=293,slow=4.0,SNR=14						
430A	Baggett Ranch,	16.42	334	P	P	21 30 29.3	+0.7
	baz=16,SNR=300						
331A	San Angelo	16.56	337	P	Pn	21 30 31.3	+1.1
	baz=16,SNR=173						
429A	Davenport Ranc	16.57	332	P	Pn	21 30 31.9	+1.6
	baz=16,SNR=1000						
528A	Cox Ranch, San	16.61	329	P	Pn	21 30 31.8	+1.0
	baz=16,SNR=63						
232A	Coleman	16.81	340	P	Pn	21 30 33.8	+0.6
	baz=17,SNR=79						
626A	Big Bend Ranch	16.84	324	P	Pn	21 30 35.6	+1.9
	baz=17,SNR=1000						
PAYG	Puerto Ayora	16.92	171	eP	Pn	21 30 36.0	+1.3
	comp=Z,158nm,1.2s						
PAYG				ePcP	PcP	21 35 13.1	+0.4
330A	Mertzon	16.94	335	P	Pn	21 30 35.8	+1.1
	baz=17,SNR=329						
527A	Woodward Ranch	17.01	327	P	Pn	21 30 37.5	+1.7
	baz=17,SNR=554						
428A	Kincaid Ranch,	17.02	330	P	Pn	21 30 37.1	+1.3
	baz=17,SNR=186						
231A	Bronte	17.08	338	P	Pn	21 30 36.8	+0.3
	baz=17,SNR=122						
RFTA	Plano	17.13	349	eP	Pn	21 30 36.9	0.0
RFTA				eS	S	21 33 42.9	-4.3
526A	Mary Lane Ranc	17.20	326	⇑P	Pn	21 30 39.7	+1.6
	baz=17,SNR=801						
230A	Sterling City	17.34	336	P	Pn	21 30 40.3	+0.8
	baz=17,SNR=309						
329A	Wagon Wheel Ra	17.34	333	P	Pn	21 30 40.2	+0.6
	baz=17,SNR=78						
TIGA	Tifton	17.46	28	P	Pn	21 30 42.5	+1.6
	baz=18,SNR=64						
427A	Hayter Ranch,	17.47	329	P	Pn	21 30 41.7	+0.4
	baz=17,SNR=370						
ABTX	Abilene, Hawle	17.49	341	P	Pn	21 30 41.6	+0.3
	baz=18,SNR=92						
328A	Wristen Ranch,	17.62	331	P	Pn	21 30 43.8	+0.7
	baz=18,SNR=659						
426A	McDonald Obser	17.65	327	P	Pn	21 30 44.4	+0.9
	baz=18,SNR=805						
LRAL	Lakeview Retre	17.66	17	eP	Pn	21 30 43.9	+0.5
	comp=Z,102nm,0.9s						
LRAL				eS	S	21 33 58.0	0.0
229A	Bryant Ranch,	17.69	335	P	Pn	21 30 43.8	+0.1
	baz=18,SNR=83						
131A	Roby	17.78	339	P	Pn	21 30 45.1	+0.3
	baz=18,SNR=83						
130A	Snyder	17.91	338	P	Pn	21 30 46.3	-0.1
	baz=18,SNR=119						
327A	Balmorhea Ranc	17.94	329	P	Pn	21 30 46.7	0.0
	baz=18						
Z32A	Haskell	18.07	342	P	Pn	21 30 48.1	-0.2
	baz=18,SNR=130						
326A	Caldwell Ranch	18.14	328	P	Pn	21 30 49.3	+0.2
	baz=18,SNR=900						
228A	UT Block 9, Go	18.15	333	P	Pn	21 30 48.9	-0.4
	baz=18,SNR=216						
425A	Indio Mountain	18.25	325	P	Pn	21 30 50.3	-0.2
	baz=18,SNR=595						
Z31A	Sharp Cattle R	18.29	341	P	Pn	21 30 50.2	-0.6
	baz=18,SNR=180						
129A	Stewart Farms,	18.29	335	P	Pn	21 30 50.7	-0.2
	baz=18,SNR=182						
227A	Bennet, Jal	18.38	331	P	Pn	21 30 52.3	+0.3
	baz=18,SNR=276						
128A	Castleberry Fa	18.54	334	P	P	21 30 53.0	+1.2
	baz=18,SNR=608						
UALR	University of	18.56	2	eP	Pn	21 30 53.0	-0.9
	comp=Z,1µm,1.4s						
UALR				e		21 31 35.6	
UALR				eS	S	21 34 13.8	-2.0
OXF	Oxford	18.56	9	eP	P	21 30 52.1	+0.1
OXF				eS	S	21 34 13.0	-2.8
OXF				pmax	pmax		
	comp=Z,372nm,1.1s						
OXF	Oxford	18.56	9	eP	P	21 30 52.1	+0.1
	comp=Z,372nm,1.1s						
OXF				eS	S	21 34 13.0	-2.8
Z30A	Sanderson Ranc	18.59	338	P	P	21 30 52.8	+0.3
	baz=18,SNR=479						
325A	Bean Ranch, Si	18.70	326	P	P	21 30 54.7	+1.0
	baz=19,SNR=123						
Y32A	R-V Farms, Ver	18.71	343	P	P	21 30 54.8	+1.1
	baz=19,SNR=156						
Z29A	Hungry Hill Ra	18.78	337	P	P	21 30 55.6	+1.1
	baz=19,SNR=294						
226B	Tecolote Peak,	18.85	329	P	Pn	21 30 57.2	-0.3
	baz=19,SNR=1000						
CLNB	Carlsbad	18.86	330	⇓iP	Pn	21 30 57.2	-0.4
	comp=Z,129nm,0.7s						
Y31A	Rekieta Farm,	18.92	341	P	P	21 30 57.2	+1.3
	baz=19,SNR=753						
127A	Arkansas Junct	18.96	332	P	P	21 30 57.5	+0.9
	baz=19,SNR=187						
324A	Moseley Ranch,	19.03	325	P	P	21 30 58.2	+1.0
	baz=19,SNR=343						
GDL2	Guadalupe Moun	19.04	329	eP	P	21 30 59.0	+1.6
	comp=Z,308nm,0.7s						
Y30A	Stafford Cattl	19.05	339	P	P	21 30 58.4	+1.0
	baz=19,SNR=94						
Z28A	Tucker Farm, M	19.07	335	P	P	21 30 58.5	+0.9
	baz=19,SNR=68						
MET	Memphis--Engin	19.09	8	eP	P	21 30 57.7	0.0
MNTX	Cornudas Mount	19.17	326	⇓iP	P	21 30 59.1	+0.5
	comp=Z,229nm,1.0s						
MNTX				eS	S	21 34 31.3	+3.2
225A	Deer Hill, Car	19.20	328	P	P	21 31 00.5	+1.3
	baz=19						
WMOK	Wichita Mounta	19.23	345	eP	P	21 30 59.3	-0.1
WMOK				eS	S	21 34 30.0	+0.7
WMOK				pmax	pmax		
	comp=Z,165nm,1.0s						
WMOK	Wichita Mounta	19.23	345	eP	P	21 30 59.2	-0.1
	comp=Z,165nm,1.0s						
WMOK				eS	S	21 34 30.0	+0.7
126A	Clayton Basin,	19.24	331	P	P	21 31 00.8	+1.2
	baz=19,SNR=552						
PLAL	Pickwick Lake	19.26	12	eP	P	21 30 59.9	+0.3
	comp=Z,88nm,1.0s						
Y29A	Porterfield Fa	19.30	338	P	P	21 31 00.9	+0.8
	baz=19,SNR=216						
HBAR	Harrisburg	19.44	6	eP	P	21 31 01.8	+0.3
Z27A	Tatum	19.44	333	P	P	21 31 02.3	+0.6
	baz=19,SNR=709						
X31A	McDonald Ranch	19.45	342	P	P	21 31 02.8	+1.1
	baz=19,SNR=108						
224A	Cornudas Mount	19.54	326	P	P	21 31 03.9	+1.1
	baz=19,SNR=358						
125A	Gardner Draw,	19.56	329	P	P	21 31 04.3	+1.3
	baz=20,SNR=754						
X30A	Coker Ranch, T	19.56	340	P	P	21 31 04.2	+1.3
	baz=20,SNR=441						
Y28A	McKinney Farm,	19.57	336	P	P	21 31 03.9	+0.9
	baz=20,SNR=115						
Z26A	Caprock	19.75	332	P	P	21 31 05.7	+0.7
	baz=20,SNR=200						
MSTX	Muleshoe	19.82	335	P	P	21 31 06.1	+0.3
	baz=20,SNR=378						
X29A	Tulia	19.84	338	P	P	21 31 06.7	+0.8
	baz=20,SNR=255						
TUL1	Tulsa	19.84	353	P	P	21 31 06.7	+0.9
	baz=20,SNR=68						
Y27A	Causey	19.91	334	P	P	21 31 06.9	+0.2
	baz=20,SNR=137						
GNAR	Gosnell	19.91	7	eP	P	21 31 06.5	-0.1
	comp=Z,4µm,1.1s						
W31A	Holland Ranch,	19.96	343	P	P	21 31 07.4	+0.2
	baz=20,SNR=62						
223A	Chaparral, Ant	19.98	325	P	P	21 31 08.6	+1.1
	baz=20,SNR=35						
124A	Stringfield Ra	19.99	328	P	P	21 31 09.6	+1.8
	baz=20,SNR=884						
SWET	Sewanee	20.00	17	eP	P	21 31 08.3	+0.6
	comp=Z,82nm,1.1s						
SWET				eS	S	21 34 43.9	-0.6
X28A	Dimmitt	20.09	337	P	P	21 31 09.0	+0.3
	baz=20,SNR=102						
Z25A	Roswell	20.09	330	P	P	21 31 09.5	+0.8
	baz=20,SNR=186						
W30A	Crocket Farms	20.14	342	P	P	21 31 10.3	+1.1
	baz=20,SNR=15						
Y26A	Elida	20.23	333	P	P	21 31 10.8	+0.7
	baz=20,SNR=98						
AMTX	Amarillo	20.23	339	eP	P	21 31 10.5	+0.4
	comp=Z,1µm,0.7s						
AMTX				S	S	21 34 50.7	+1.6
GLAT	Glass	20.31	9	eP	P	21 31 11.0	+0.2
123A	Bell Site, Whi	20.37	326	P	P	21 31 13.2	+1.6
	baz=20,SNR=38						
WVT	Waverly	20.42	12	eP	P	21 31 11.6	-0.4
WVT				eS	S	21 34 50.2	-2.4
WVT				pmax	pmax		
	comp=Z,76nm,1.0s						
WVT	Waverly	20.42	12	eP	P	21 31 11.6	-0.4
	comp=Z,76nm,1.0s						
WVT				eS	S	21 34 50.1	-2.4
222A	Williams Famil	20.43	324	P	P	21 31 13.6	+1.2
	baz=20,SNR=28						
W29A	Amraillo	20.43	339	P	P	21 31 13.1	+0.8
	baz=20,SNR=182						
UTMT	University of	20.44	10	eP	P	21 31 12.7	+0.4
	comp=Z,359nm,1.2s						
UTMT				eS	S	21 34 51.9	-1.2
Z24A	Sheeppen Canyo	20.45	329	P	P	21 31 14.2	+1.6
	baz=20,SNR=459						
NHSC	New Hope	20.46	32	eP	Pn	21 31 14.7	-1.6
	comp=Z,399nm,1.1s						
NHSC				PcP	PcP	21 35 19.2	+0.8
V31A	Spring Creek L	20.49	344	P	P	21 31 13.4	+0.5
	baz=20,SNR=134						
X27A	F and S Farms,	20.55	336	P	P	21 31 13.9	+0.4
	baz=20,SNR=242						
Y25A	Mesa, Roswell	20.61	331	P	P	21 31 15.6	+1.3
	baz=20,SNR=670						
PARMO	Parma	20.63	7	eP	P	21 31 14.3	0.0
CPCT	Cooper Cave	20.65	20	eP	P	21 31 15.2	+0.7
CPCT				ePcP	PcP	21 35 19.0	+0.3
V30A	Spur Ranch, Mi	20.72	342	P	P	21 31 16.4	+1.1
	baz=21,SNR=15						
320A	Kipp Ranch, An	20.74	320	P	P	21 31 17.9	+2.2
	baz=21						
W28A	Vega	20.75	338	P	P	21 31 16.3	+0.6
	baz=21,SNR=51						
221A	Mesquite Ranch	20.75	322	P	P	21 31 18.1	+2.3
	baz=21						
X26A	CR and CF Fran	20.75	334	P	P	21 31 16.2	+0.4
	baz=21,SNR=122						
122A	Conniff Cattle	20.82	325	P	P	21 31 18.1	+1.6
	baz=21,SNR=27						
Z23A	Rita Site, Whi	20.84	327	P	P	21 31 18.6	+1.9
	baz=21,SNR=369						
SDDR	Presa de Saban	20.85	79	eP	Pn	21 31 19.2	-2.1
	comp=Z,437nm,1.0s						
W27A	Bowe Ranch, En	20.90	336	P	P	21 31 17.5	+0.2
	baz=21,SNR=196						
Y24A	Capitan	20.97	330	P	P	21 31 19.7	+1.6
	baz=21,SNR=657						
U31A	Nine Bar Ranch	21.05	344	P	P	21 31 20.7	+1.9
	baz=21,SNR=33						
V29A	Stinnett	21.08	340	P	P	21 31 19.6	+0.4
	baz=21,SNR=40						
TKL	Tuckaleechee C	21.09	21	eP	P	21 31 19.7	+0.4
TKL	Tuckaleechee C	21.09	21	P	P	21 31 18.6	-0.6
	comp=Z,27nm,0.8s,baz=188,slow=12,SNR=41						
X25A	Clemmons Ranch	21.10	332	P	P	21 31 20.5	+0.9
	baz=21,SNR=221						
220A	Playas Peak, P	21.13	321	P	P	21 31 21.7	+1.8
	baz=21,SNR=320						
121A	Cookes Peak, D	21.14	323	P	P	21 31 22.0	+2.0
	baz=21,SNR=433						
W26A	Owens Ranch, T	21.20	335	P	P	21 31 20.8	+0.2
	baz=21,SNR=54						
V28A	Channing	21.20	339	P	P	21 31 21.2	+0.6
	baz=21,SNR=243						
Z22A	Elephant Butte	21.22	326	P	P	21 31 22.1	+1.3
	baz=21,SNR=158						
319A	Douglas	21.24	318	P	P	21 31 22.6	+1.6
	baz=21,SNR=175						
Y23A	Lovelace Mesa,	21.28	329	P	P	21 31 23.1	+1.6
	baz=21,SNR=848						
OTAV	Otavalo	21.33	136	eP	P	21 31 24.7	+2.3
	comp=Z,715nm,1.1s						
OTAV				ePcP	PcP	21 35 22.4	+1.4
U30A	WK&E Inc. Balk	21.42	343	P	P	21 31 23.2	+0.3
	baz=21,SNR=75						
V27A	Dan Oppiter Fa	21.43	338	P	P	21 31 23.9	+0.9
	baz=21						
ROSC	El Rosal	21.46	120	eP	P	21 31 25.0	+1.2
ROSC				ePcP	PcP	21 35 21.7	+0.5
ROSC	El Rosal	21.46	120	P	P	21 31 23.2	-0.6
	comp=Z,88nm,0.6s,baz=2.3,slow=1.4,SNR=54						
X24A	Lazy VL Ranch,	21.49	331	P	P	21 31 25.0	+1.2
	baz=21,SNR=41						
U29A	Oasis Ranch, S	21.53	341	P	P	21 31 24.9	+0.9
	baz=22,SNR=40						
KMSC	Kings Mountain	21.59	27	P	P	21 31 25.4	+0.8
	baz=22,SNR=17						
W25A	X Bar L Ranch,	21.60	334	P	P	21 31 25.8	+1.0
	baz=22,SNR=262						
120A	U Bar Ranch, L	21.64	322	P	P	21 31 27.2	+1.8
	baz=22,SNR=316						
Z21A	St. Cloud Mine	21.64	325	P	P	21 31 26.9	+1.4
	baz=22,SNR=129						
T31A	Randall Ranch,	21.70	345	P	P	21 31 25.2	-0.6
	baz=22,SNR=67						
SIUC	Southern Illin	21.74	8	eP	P	21 31 26.0	0.0
	comp=Z,471nm,1.3s						
SIUC				eS	S	21 35 15.5	-1.3
SIUC				ePcP	PcP	21 35 21.5	+0.8
BNM	Barren Site	21.74	328	eP	P	21 31 27.8	+1.3
BNM				ePcP	PcP	21 35 21.6	+0.4
Y22A	Socorro	21.75	327	P	P	21 31 27.9	+1.4
	baz=22,SNR=390						
U28A	Mallet	21.77	339	P	P	21 31 26.6	0.0
	baz=22,SNR=63						
V26A	Tequesquite Ra	21.82	336	P	P	21 31 27.7	+0.5
	baz=22,SNR=76						
Y22D	IRIS PASSCAL I	21.83	327	P	P	21 31 29.2	+1.9
	baz=22,SNR=16						
X23A	Hourglass Bar	21.86	330	P	P	21 31 28.7	+1.1
	baz=22,SNR=17						
LPM	Los Pinos Moun	21.87	328	eP	P	21 31 28.5	+0.8
T30A	Plains	21.88	344	P	P	21 31 27.8	+0.2
	baz=22,SNR=48						
TZTN	Tazewell	21.97	21	⇑eP	P	21 31 28.6	0.0
	comp=Z,60nm,0.8s						
TZTN				ePcP	PcP	21 35 21.6	+0.3
TZTN				eScP	ScP	21 38 46.5	+1.7
W24A	Lazy 6 Ranch,	22.01	332	P	P	21 31 30.3	+1.1
	baz=22,SNR=178						
U27A	Thompson Grove	22.02	338	P	P	21 31 29.7	+0.6
	baz=22,SNR=143						
Z20A	Nine Sixteen R	22.02	323	P	P	21 31 30.9	+1.6
	baz=22,SNR=152						
Y21A	Point of Rocks	22.18	326	P	P	21 31 32.7	+1.8
	baz=22,SNR=171						
T29A	Hugoton	22.19	342	P	P	21 31 30.9	+0.1
	baz=22,SNR=38						
V25A	Rancho No Teng	22.20	334	P	P	21 31 31.9	+0.8
	baz=22,SNR=146						
LAZ	Ladron	22.20	328	eP	P	21 31 32.6	+1.5
X22A	Bernardo	22.21	328	P	P	21 31 33.3	+2.1
	baz=22,SNR=91						
USIN	University of	22.23	11	eP	P	21 31 30.9	-0.2

comp=Z,233nm,1.3s
ANMO Albuquerque 22.29 330 P P 21 31 32.8 +0.9
comp=Z,288nm,0.7s
ANMO *e*pP **pP 21 31 57.2 -1.8**
ANMO Albuquerque 22.29 330 P P 21 31 32.8 +0.9
comp=Z,96nm,0.7s,baz=145,slow=12,SNR=304
W23A Werner Place, 22.31 331 P P 21 31 33.4 +1.2
baz=22,SNR=72
U26A Atchley Ranch, 22.33 337 P P 21 31 33.1 +0.8
baz=22,SNR=89
V24A Rampart Ranch, 22.38 333 P P 21 31 34.3 +1.5
baz=22,SNR=75
T28A Walsh 22.41 341 P P 21 31 32.8 -0.2
baz=22,SNR=15
S30A Montezuma 22.41 344 P P 21 31 32.9 0.0
baz=22,SNR=78
Y20A Horse Springs, 22.48 325 P P 21 31 35.7 +1.8
baz=22,SNR=332
SLM Saint Louis 22.53 6 *e*P **P 21 31 33.6 -0.4**
SLM pmax pmax
comp=Z,144nm,0.7s
SLM Saint Louis 22.53 6 *e*P **P 21 31 33.6 -0.4**
comp=Z,144nm,0.7s
T27A Campo 22.56 339 P P 21 31 34.8 +0.4
baz=22,SNR=30
X21A Alamocita Cree 22.57 327 P P 21 31 36.6 +2.0
baz=22,SNR=254
S29A Ulysses 22.57 343 P P 21 31 34.9 +0.5
baz=23,SNR=247
W22A Albuquerque 22.59 329 P P 21 31 36.4 +1.6
baz=22,SNR=37
U25A Circle Dot Ran 22.59 335 P P 21 31 35.9 +1.1
baz=22,SNR=308
WCI Wyandotte Cave 22.77 14 *e*P **P 21 31 35.1 -1.1**
WCI *e* 21 35 21.8
WCI pmax pmax
comp=Z,146nm,1.0s
WCI Wyandotte Cave 22.77 14 *e*P **P 21 31 35.1 -1.1**
comp=Z,146nm,1.0s
WCI *e*PcP **PcP 21 35 21.8 -1.1**
WCI *e*ScP **ScP 21 38 47.2 +0.3**
S28A Manter 22.77 341 P P 21 31 36.1 -0.2
baz=23,SNR=45
R31A Burdett 22.80 347 P P 21 31 36.6 +0.1
baz=23,SNR=32
V23A Ortiz Mt. (NFS 22.81 331 P P 21 31 38.8 +2.0
baz=23,SNR=156
TUC Tucson 22.81 318 ⇓*i*P **P 21 31 37.8 +1.0**
TUC pmax pmax
comp=Z,3μm,1.1s
TUC Tucson 22.81 318 ⇓*i*P **P 21 31 37.8 +1.0**
comp=Z,3μm,1.1s
TUC *e*ScP **ScP 21 38 49.1 +1.8**
OLIL Olney 22.90 10 *e*P **P 21 31 37.2 -0.2**
comp=Z,150nm,1.0s
OLIL *e*ScP **ScP 21 38 47.8 +0.6**
U24A Moreno Valley 22.96 334 P P 21 31 40.7 +2.4
baz=23,SNR=75
T26A Comanche Natio 22.96 338 P P 21 31 38.9 +0.6
baz=23
R30A Dighton 22.97 345 P P 21 31 38.8 +0.6
baz=23,SNR=158
W21A San Fidel 23.02 328 P P 21 31 40.5 +1.7
baz=23,SNR=62
X20A Quemado 23.02 326 P P 21 31 41.2 +2.3
baz=23,SNR=126
KSU1 Kansas State U 23.09 353 *e*P **P 21 31 38.5 -0.7**
KSU1 *e*PcP **PcP 21 35 22.9 -0.7**
KSU1 *e*ScP **ScP 21 38 48.7 +1.0**
S27A Las Animas 23.18 340 P P 21 31 41.0 +0.9
baz=23,SNR=7.6
T25A Trinidad 23.24 336 P P 21 31 42.7 +1.9
baz=23,SNR=215
V22A San Miguel Ran 23.29 330 P P 21 31 43.0 +1.7
baz=23,SNR=123
U23A El Rito 23.29 332 P P 21 31 43.1 +1.7
baz=23,SNR=312
S26A Kim 23.32 339 P P 21 31 42.2 +0.8
baz=23,SNR=173
R29A Marienthal 23.33 344 P P 21 31 42.2 +0.8
baz=23,SNR=36
R28A Tribune 23.44 342 P P 21 31 42.5 0.0
baz=23,SNR=30
Q31A Ellis 23.46 347 P P 21 31 42.7 +0.1
baz=24,SNR=53
W20A Ramah 23.47 327 P P 21 31 45.1 +2.2
baz=23,SNR=120
V21A Milan 23.55 329 P P 21 31 45.7 +2.0
baz=24,SNR=66
Q30A Quinter 23.62 346 P P 21 31 44.4 +0.3
baz=24,SNR=105
BLO Bloomington 23.62 13 *e*P **P 21 31 43.4 -0.6**
BLO *e* 21 35 24.2
BLO pmax pmax
comp=Z,847nm,2.1s
BLO Bloomington 23.62 13 *e*P **P 21 31 43.4 -0.6**
comp=Z,847nm,2.1s
BLO *e*PcP **PcP 21 35 24.2 -0.4**
BLO *e*ScP **ScP 21 38 49.9 +0.7**
U22A Llaves 23.64 331 P P 21 31 46.7 +2.2
baz=24
R27A Eads 23.69 340 P P 21 31 45.0 +0.1
baz=24,SNR=71
S25A Robets Cordova 23.70 337 P P 21 31 46.4 +1.4
baz=24,SNR=324
Q29A Oakley 23.72 344 P P 21 31 45.3 +0.2
baz=24,SNR=145
BLA Blacksburg 23.74 26 *e*P **P 21 31 45.6 +0.4**
BLA pmax pmax
comp=Z,80nm,0.9s
BLA Blacksburg 23.74 26 *e*P **P 21 31 45.6 +0.4**
comp=Z,80nm,0.9s
T23A Casias Ranch, 23.82 333 P P 21 31 47.9 +1.7
baz=24,SNR=71
X18A Snowflake 23.83 323 P P 21 31 48.1 +1.9
baz=24,SNR=186
R26A Arlington 23.92 339 P P 21 31 48.2 +1.2
baz=24,SNR=32
P31A Stockton 23.95 348 P P 21 31 47.2 +0.1
baz=24,SNR=38
VWCC Virginia Weste 23.95 26 *e*P **P 21 31 47.2 +0.1**
V20A Brimhall 23.96 328 P P 21 31 49.4 +1.9
baz=24,SNR=93
S24A Houchin Ranch, 23.99 336 P P 21 31 49.5 +1.8
baz=24,SNR=47
U21A Nageezi 24.06 330 P P 21 31 50.3 +2.0
baz=24,SNR=156
R25A Fountain Ranch 24.08 338 P P 21 31 50.0 +1.7
baz=24
Q28A Sharon Springs 24.12 343 P P 21 31 49.1 +0.4
baz=24,SNR=79
W18A Petrified Fore 24.13 325 P P 21 31 51.0 +2.0
baz=24,SNR=19
P30A Selden 24.16 346 P P 21 31 49.5 +0.5
baz=24,SNR=147
T22A Edith 24.18 332 P P 21 31 51.3 +1.9
baz=24,SNR=181
KSCO Kaye Shedlock' 24.30 341 P P 21 31 51.4 +1.0
baz=24,SNR=12
S23A Nye Farm, Mont 24.37 334 P P 21 31 53.3 +2.2
baz=24,SNR=34
P29A Atwood 24.38 345 P P 21 31 51.5 +0.4
baz=24,SNR=87
U20A Newcomb 24.44 328 P P 21 31 53.5 +1.8
baz=24,SNR=89
T21A Navajo Lake 24.45 331 P P 21 31 54.1 +2.2
baz=24,SNR=114
R24A Sanders Place, 24.46 336 P P 21 31 53.5 +1.6
baz=24,SNR=142
Q26A Hugo 24.51 340 P P 21 31 54.0 +1.7
baz=24,SNR=43
HDIL Hopedale 24.53 7 *e*P **P 21 31 51.8 -0.5**
comp=Z,1μm,2.3s
HDIL *e*PcP **PcP 21 35 27.0 +0.4**
HDIL *e*ScP **ScP 21 38 52.0 +0.4**
P28A Saint Francis 24.57 343 P P 21 31 53.4 +0.6
baz=25
X16A Lo Mia Camp, P 24.63 321 P P 21 31 55.2 +1.8
baz=24,SNR=192
R23A Moffat 24.71 335 P P 21 31 55.8 +1.5
baz=25,SNR=189
O30A MW Ranch, Wils 24.73 347 P P 21 31 54.6 +0.5
baz=25,SNR=20
Q25A Bedland, Calha 24.75 339 P P 21 31 55.5 +1.0
baz=25,SNR=25
MPR Mayaguez 24.75 81 *e*P **P 21 31 59.2 +4.7**
comp=Z,186nm,1.1s
S22A 4UR Ranch, Cre 24.75 333 P P 21 31 56.4 +1.7
baz=25,SNR=143
CRPR Cabo Rojo, PR 24.78 82 *e*P **P 21 31 53.9 -0.8**
comp=Z,76nm,1.0s
AGPR Aguadilla, PR 24.78 81 *e*P **P 21 31 56.4 +1.6**
comp=Z,1μm,1.3s
P27A Ficken Ranch, 24.79 342 P P 21 31 55.7 +0.9
baz=25,SNR=31
LSP Las Mesas 24.80 82 *e*P **P 21 31 53.8 -1.2**
O29A 4D Ranch, Culb 24.85 346 P P 21 31 55.9 +0.6
baz=25,SNR=18
Z14A Wintersburg 24.89 317 P P 21 31 57.2 +1.6
baz=25,SNR=55
P26A Davis Ranch, A 25.03 341 P P 21 31 58.0 +1.0
baz=25,SNR=72
LRS Lares 25.03 81 *e*P **P 21 31 56.6 -0.5**
O28A Krutsinger Ran 25.09 344 P P 21 31 58.2 +0.7
baz=25,SNR=22
S21A Coal Bank Pass 25.11 331 P P 21 31 59.3 +1.3
baz=25,SNR=134
Q24A Divide 25.12 337 P P 21 31 59.1 +1.1
baz=25,SNR=20
AOPR Arecibo Observ 25.12 81 *e*P **P 21 31 58.8 +0.9**
comp=Z,255nm,1.4s
R22A Saguache, Gunn 25.13 334 P P 21 31 59.9 +1.8
baz=25,SNR=43
OBIP Obispado Ponce 25.25 82 *e*P **P 21 31 58.1 -0.9**
comp=Z,82nm,0.9s
P25A Willow Gulch B 25.25 339 P P 21 32 00.4 +1.3
baz=25
JSRW J. Sargeant Re 25.26 29 *e*P **P 21 31 58.6 -0.2**
CELP Cerrillos 25.28 82 *e*P **P 21 31 59.7 +0.4**
Y14A Wickenburg 25.29 318 P P 21 32 00.7 +1.4
baz=25,SNR=51
URVA University of 25.32 30 *e*P **P 21 32 01.2 +1.7**
Q23A Hartsel 25.33 336 P P 21 32 01.3 +1.4
baz=25
O27A Beecher Island 25.35 343 P P 21 32 00.9 +1.1
baz=25,SNR=6.0
WUAZ Wupatki 25.35 323 P P 21 32 01.7 +1.8
baz=25,SNR=158
N29A Votaw Ranch, W 25.47 346 P P 21 32 01.6 +0.8
baz=26,SNR=14
P24A Kohler Place, 25.51 338 P P 21 32 02.6 +1.2
baz=26,SNR=7.3
S20A Disappointment 25.52 331 P P 21 32 03.4 +1.8
baz=25,SNR=123
ACSO Alum Creek Sta 25.52 18 *e*P **P 21 32 00.4 -0.8**
comp=Z,101nm,1.0s
N28A Pribbeno Ranch 25.56 345 P P 21 32 02.4 +0.7
baz=26,SNR=11
BGNE Belgrade 25.57 351 P P 21 32 01.9 +0.2
baz=26,SNR=8.0
R21A Cimarron 25.59 333 P P 21 32 03.8 +1.6
baz=26,SNR=11
SJG San Juan 25.69 82 *e*P **P 21 32 02.1 -0.9**
comp=Z,76nm,0.6s
Q22A Crested Butte, 25.73 334 P P 21 32 04.6 +1.2
baz=26,SNR=56
P23A Jefferson 25.73 337 P P 21 32 05.3 +1.7
baz=26
O25A Wiggins 25.78 340 P P 21 32 05.9 +2.1
baz=26
R20A Redvale 25.81 331 P P 21 32 06.2 +2.0
baz=26,SNR=101
PV01 Paradox Valley 25.86 331 *e*P **P 21 32 06.3 +1.7**
CPD Cerro la Pandu 25.91 82 *e*P **P 21 32 02.7 -2.3**
CPD *e* 21 35 31.0
CPD pmax pmax
comp=Z,73nm,0.6s
CPD Cerro la Pandu 25.91 82 *e*P **P 21 32 02.7 -2.3**
comp=Z,73nm,0.6s
CPD *e*PcP **PcP 21 35 31.0 +0.8**
OGNE Ogallala 25.93 344 *e*P **P 21 32 05.5 +0.5**
comp=Z,744nm,1.5s
OGNE *e* **pP 21 32 36.6 +0.5**
OGNE Ogallala 25.93 344 P P 21 32 05.5 +0.5
baz=26,SNR=24
N27A Anderson Farm, 25.94 343 P P 21 32 06.0 +0.9
baz=26,SNR=27
CBYP Canovanas 25.97 81 *e*P **P 21 32 04.6 -1.0**
comp=Z,76nm,0.6s
HUMP Col San Antoni 25.98 82 *e*P **P 21 32 05.3 -0.2**
Q21A Lamborn Mesa, 25.98 333 P P 21 32 07.1 +1.4
baz=26,SNR=45
SMCO Snowmass 26.02 335 *e*P **P 21 32 07.3 +1.1**
comp=Z,223nm,1.2s
ISCO Idaho Springs 26.02 337 *e*P **P 21 32 07.0 +0.8**
ISCO pmax pmax
comp=Z,97nm,0.9s
ISCO Idaho Springs 26.02 337 *e*P **P 21 32 07.0 +0.8**
comp=Z,97nm,0.9s
ISCO Idaho Springs 26.02 337 P P 21 32 07.1 +0.9
baz=26,SNR=66
O24A Longmont 26.11 339 P P 21 32 08.2 +1.5
baz=26,SNR=10
N26A Koester Ranch, 26.15 342 P P 21 32 08.5 +1.4
baz=26,SNR=8.7
Y12C Blythe 26.16 316 P P 21 32 08.5 +1.4
baz=26,SNR=65
M28A Bar X Bar Ranc 26.19 346 P P 21 32 08.2 +0.8
baz=26,SNR=7.0
S18A Hurst Farm, Bl 26.20 328 P P 21 32 09.1 +1.4
baz=26,SNR=189
PV04 Paradox Valley 26.22 331 *e*P **P 21 32 09.4 +1.6**
PV04 *e*pP **pP 21 32 39.2 +0.3**
PV04 *e*ScP **ScP 21 38 57.4 +0.6**
PDMCI Parker Dam,Lak 26.25 317 P P 21 32 09.5 +1.7
baz=26,SNR=43
MTP Monte Pirata 26.26 82 *e*P **P 21 32 07.5 -0.6**
comp=Z,168nm,0.8s
P22A Eagle 26.29 335 P P 21 32 09.5 +1.1
baz=26,SNR=35
Q20A Ridgley Place, 26.40 332 P P 21 32 10.6 +1.2
baz=26,SNR=33
O23A Lake Granby, G 26.49 337 P P 21 32 11.4 +1.1
baz=26,SNR=9.6
P21A Newcastle 26.51 334 P P 21 32 12.3 +1.9
baz=26,SNR=28
U15A North Rim 26.52 323 P P 21 32 12.5 +1.9
baz=26,SNR=101
SWSC Sam W. Stewart 26.57 313 P P 21 32 12.4 +1.6
baz=26,SNR=79
W13A Hualapai Mount 26.59 319 P P 21 32 12.8 +1.7
baz=26,SNR=71
L29A Masberg Ranch 26.62 347 P P 21 32 11.7 +0.5
baz=27
DVTC Desert V Tower 26.63 312 P P 21 32 13.2 +1.8
baz=26,SNR=75
N24A Carr 26.68 340 P P 21 32 13.3 +1.5
baz=27,SNR=5.8
O22A Kremmling 26.69 336 P P 21 32 12.8 +0.6
baz=27,SNR=72
BC3 Big Chuckawall 26.73 315 P P 21 32 14.1 +1.7
baz=26,SNR=441
JFWS Jewell Farm 26.78 4 *e*P **P 21 32 12.3 -0.2**
JFWS pmax pmax
comp=Z,152nm,0.9s
JFWS Jewell Farm 26.78 4 *e*P **P 21 32 12.3 -0.2**
comp=Z,152nm,0.9s
IRM Iron Mountain 26.82 316 P P 21 32 14.7 +1.6
baz=27,SNR=134
STVI Saint Thomas 26.83 81 *e*P **P 21 32 12.5 -0.7**
comp=Z,170nm,1.1s
NEE2 Needles Airpor 26.84 318 P P 21 32 15.1 +1.9
baz=27,SNR=6.1
P20A De Beque 26.89 333 P P 21 32 15.1 +1.3
baz=27,SNR=19
M25A Palm-Egli Farm 26.96 341 P P 21 32 15.6 +1.3
baz=27,SNR=8.3
MONP Monument Peak 26.98 312 P P 21 32 16.2 +1.5
baz=27,SNR=46
CDVI St. Croix 27.01 83 *e*P **P 21 32 13.9 -0.9**
comp=Z,170nm,0.8s
BAR Barrett 27.05 312 *e*P **P 21 32 16.4 +1.2**
comp=Z,97nm,1.3s
O21A Pagoda 27.10 335 P P 21 32 17.8 +2.1
baz=27,SNR=18
N23A Red Feather La 27.10 338 P P 21 32 16.7 +0.9
baz=27,SNR=16
N22A Wattenberg Ran 27.21 337 P P 21 32 18.2 +1.5
baz=27,SNR=24
M24A Cheyenne 27.23 340 P P 21 32 18.0 +1.2
baz=27,SNR=20
P19A Cripple Cowboy 27.26 332 P P 21 32 17.9 +0.7
baz=27,SNR=44
ATAH Atahualpa 27.26 147 P P 21 32 20.8 +3.3
ATAH PcP **PcP 21 35 34.7 +0.9**
ATAH ScP **ScP 21 39 02.1 +1.6**
ATAH Atahualpa 27.26 147 P P 21 32 20.8 +3.3
comp=Z,125nm,0.8s,baz=338,slow=5.7,SNR=83
ATAH PcP **PcP 21 35 34.7 +0.9**
comp=Z,22nm,1.0s,baz=18,slow=3.4,SNR=4.1
ATAH ScP **ScP 21 39 02.1 +1.6**
comp=Z,11nm,0.8s,baz=311,slow=1.7,SNR=6.9
ATAH LR LR 21 40 54.1
comp=Z,504nm,20.5s,baz=311,slow=31
K29A Lazy Trails An 27.26 348 P P 21 32 17.4 +0.4
baz=27,SNR=11
PHWY Pilot Hill 27.29 339 *e*P **P 21 32 18.6 +1.1**
comp=Z,38nm,0.8s
PHWY *e* **pP 21 32 48.8 +0.1**
PHWY *e*pP **pwP 21 32 49.7 +1.0**
BELC Belle Mtn. Jos 27.30 315 P P 21 32 19.1 +1.6
baz=27,SNR=100
O20A White River Ci 27.35 334 P P 21 32 19.4 +1.5
baz=27,SNR=44
PFO Pinyon Flat Ob 27.40 314 P P 21 32 19.0 +0.7
comp=Z,561nm,1.2s,SNR=57
PFO Pinyon Flat Ob 27.40 314 *e*P **P 21 32 20.0 +1.7**
PFO ScP **ScP 21 39 00.3 0.0**
PFO *e*ScP **ScP 21 39 01.4 +1.0**
PFO Pinyon Flat Ob 27.40 314 P P 21 32 19.9 +1.7
comp=Z,78nm,1.0s,baz=120,slow=7.3,SNR=98
PFO ScP **ScP 21 39 00.3 0.0**
comp=Z,4.3nm,0.9s,baz=92,slow=2.9,SNR=7.1
PFO LR LR 21 44 22.3
comp=Z,939nm,18.5s,baz=139,slow=38
PFO Pinyon Flat Ob 27.40 314 P P 21 32 20.1 +1.7
baz=27,SNR=76
K28A Ten Mile Ranch 27.44 346 P P 21 32 19.0 +0.5
baz=28
109C Camp Elliot, M 27.47 312 P P 21 32 20.3 +1.5
baz=27,SNR=15
GMRC Granite Mounta 27.53 317 P P 21 32 21.3 +1.8
baz=27,SNR=128
M23A Laramie 27.53 339 P P 21 32 20.9 +1.3
baz=28
SRU San Rafael 27.57 330 P P 21 32 21.2 +1.4
baz=28,SNR=124
N21A Black Mountain 27.58 336 P P 21 32 21.9 +1.9
baz=28,SNR=45
L25A Engebretsen Ra 27.59 342 P P 21 32 21.0 +1.0
baz=28,SNR=26
K27A Fluecklinger Fa 27.63 345 P P 21 32 20.5 +0.2
baz=28,SNR=8.0
ECSD EROS Data Cent 27.67 354 *e*P **P 21 32 19.6 -0.9**
comp=Z,67nm,0.7s
SSPA Standing Stone 27.68 25 *e*P **P 21 32 20.3 -0.3**
comp=Z,38nm,1.5s
Q16A Castle Valley 27.74 328 P P 21 32 23.1 +1.7
baz=28,SNR=174
L24A Wheatland 27.79 341 P P 21 32 23.1 +1.4
baz=28,SNR=6.2
M22A Cedar Creek Ra 27.79 338 P P 21 32 23.7 +1.8
baz=28,SNR=13
MVL Millersville 27.82 28 *e*P **P 21 32 22.4 +0.5**
comp=Z,19nm,0.8s
O19A Miners Draw (B 27.86 333 P P 21 32 23.5 +1.0
baz=28,SNR=25
CCUT Cedar City 27.91 324 ⇓*i*P **P 21 32 24.8 +1.8**
comp=Z,110nm,1.0s
CCUT *e*PcP **PcP 21 35 35.6 +0.8**
CCUT *e*ScP **ScP 21 39 03.4 +1.4**
MURC Murrieta 27.91 313 P P 21 32 24.5 +1.7
baz=28,SNR=38
N20A Spence Gulch, 27.95 335 P P 21 32 24.8 +1.5
baz=28,SNR=119
MVU Marysvale 27.96 327 *e*P **P 21 32 25.1 +1.7**
comp=Z,557nm,2.3s
MVU *e*ScP **ScP 21 39 04.0 +1.9**
K25A Mack Ranch, Ha 27.98 343 P P 21 32 24.7 +1.3
baz=28,SNR=6.6
HEC Hector,Ludlow 28.01 316 P P 21 32 25.3 +1.6
baz=28,SNR=41
J28A Allard Ranch, 28.09 347 P P 21 32 24.7 +0.4
baz=28,SNR=34
TUQ Turquoise Moun 28.10 317 P P 21 32 26.2 +1.7
baz=28,SNR=112
L23A Garrett 28.10 340 P P 21 32 25.4 +0.9
baz=28,SNR=66
ARUT Antelope Range 28.12 324 *e*P **P 21 32 26.6 +1.8**
ARUT *e* 21 32 56.4
ARUT *e* 21 39 03.9
ARUT pmax pmax
comp=Z,197nm,0.9s
ARUT Antelope Range 28.12 324 *e*P **P 21 32 26.6 +1.8**
comp=Z,197nm,0.9s
ARUT *e* **pP 21 32 56.4 +0.2**
ARUT *e*ScP **ScP 21 39 03.9 +1.4**
ERPA Erie 28.18 21 *e*P **P 21 32 25.4 +0.3**
comp=Z,110nm,1.8s
M21A Separation Pea 28.25 337 P P 21 32 27.6 +1.7
baz=28,SNR=19
L22A Ellis Ranch, M 28.28 339 P P 21 32 27.6 +1.5
baz=28,SNR=8.8
SHPR Sheep Range 28.28 320 *e*P **P 21 32 27.9 +1.7**
K24A Anderson Ranch 28.36 341 P P 21 32 28.0 +1.2
baz=28
M20A Sweetwater, Wa 28.47 336 P P 21 32 29.0 +1.1
baz=28,SNR=35
L21A Rawlins 28.56 337 P P 21 32 29.6 +1.0
baz=28,SNR=64
SCI San Clemente I 28.56 311 P P 21 32 30.0 +1.5
baz=28,SNR=7.7
BFSC Mount Baldy Ra 28.58 314 P P 21 32 30.3 +1.4
baz=28,SNR=26
GSC Goldstone 28.60 316 *e*P **P 21 32 30.5 +1.6**
GSC *e* 21 39 04.2
GSC pmax pmax
comp=Z,207nm,1.7s
GSC Goldstone 28.60 316 *e*P **P 21 32 30.5 +1.6**
comp=Z,207nm,1.7s
GSC *e*ScP **ScP 21 39 04.2 +0.2**
GSC Goldstone 28.60 316 P P 21 32 30.6 +1.6
baz=28,SNR=39
SHOC Shoshone 28.61 318 P P 21 32 30.5 +1.5
baz=28,SNR=21
K23A Bowen Ranch, D 28.65 340 P P 21 32 30.2 +0.9
baz=29,SNR=50
BRSD Miller 28.66 351 P P 21 32 29.1 -0.1
baz=29,SNR=7.0
CIS Catalina Islan 28.67 311 P P 21 32 31.2 +1.7
baz=28,SNR=8.8
J25A Sunshine Ranch 28.68 343 P P 21 32 30.3 +0.7
baz=29
LUPA Lehigh Univers 28.75 29 *e*P **P 21 32 31.1 +1.0**
comp=Z,41nm,1.6s
MPU Maple Canyon 28.81 329 ⇓*i*P **P 21 32 32.2 +1.4**
comp=Z,226nm,0.8s
MPU *e*ScP **ScP 21 39 05.0 +0.4**
MWC Mount Wilson 28.85 313 *e*P **P 21 32 32.8 +1.5**
MWC pmax pmax
comp=Z,286nm,1.5s
MWC Mount Wilson 28.85 313 *e*P **P 21 32 32.8 +1.5**
comp=Z,286nm,1.5s
K22A Casper 28.86 339 P P 21 32 31.9 +0.7
baz=29,SNR=48
M19A Rock Springs 28.88 334 P P 21 32 32.0 +0.6
baz=29,SNR=9.1
PASC Pasadena Art C 28.91 313 *e*P **P 21 32 32.6 +1.0**
comp=Z,240nm,1.5s
PASC *e* **pP 21 33 03.2 +0.2**
DAU Daniels Canyon 28.93 330 *e*P **P 21 32 33.9 +1.8**
DAU Daniels Canyon 28.93 330 *e*P **P 21 32 33.9 +1.8**
DAU *e*ScP **ScP 21 39 05.0 -0.1**
L20A Wamsutter 28.97 336 P P 21 32 33.0 +0.8
baz=29,SNR=27
SPMN St. Paul 28.99 0 P P 21 32 31.5 -0.6
baz=29,SNR=49
DECC Green Verdugo 29.05 313 P P 21 32 35.3 +2.4
baz=29,SNR=8.6
K21A Alcova 29.10 338 P P 21 32 34.2 +0.8
baz=29
EDW2 Edwards Air Fo 29.16 314 P P 21 32 35.3 +1.4
baz=29,SNR=29
JLU Jordanelle 29.17 330 ⇓*i*P **P 21 32 35.2 +1.1**
comp=Z,58nm,0.8s
JLU S **S 21 37 19.1 +3.4**
JLU *e*ScP **ScP 21 39 06.3 +0.4**
J23A Dilts Ranch, B 29.21 341 P P 21 32 35.8 +1.5
baz=29,SNR=7.7
LRMC Laurel Mountai 29.29 316 P P 21 32 36.8 +1.7
baz=29,SNR=26

FURC **Furnace Creek,** 29.33 318 P P 21 32 37.2 +1.9
baz=29,SNR=67
I24A **Kuemmerle Ranc** 29.35 343 P P 21 32 36.6 +1.1
baz=29,SNR=17
CTU **Camp Tracy** 29.39 330 *e*P P 21 32 38.0 +2.1
comp=Z,181nm,0.9s
RSSD **Black Hills** 29.42 344 *e*P P 21 32 36.9 +0.6
RSSD pmax pmax
comp=Z,53nm,0.7s
RSSD **Black Hills** 29.42 344 *e*P P 21 32 36.9 +0.6
comp=Z,53nm,0.7s
L19A **Farson** 29.45 335 P P 21 32 37.2 +0.7
baz=29,SNR=21
MPMC **Manual Prospec** 29.49 317 P P 21 32 38.5 +1.6
baz=29,SNR=115
M17A **Scullys Gap (B** 29.50 332 P P 21 32 37.9 +0.9
baz=29,SNR=43
J22A **Midwest** 29.52 340 P P 21 32 37.7 +0.7
baz=30,SNR=53
K20A **Yellowstone Ra** 29.52 337 P P 21 32 37.6 +0.5
baz=30,SNR=33
OSI **Osito Adit** 29.52 313 *e*P P 21 32 38.6 +1.5
comp=Z,159nm,1.3s
OSI **Osito Adit** 29.52 313 P P 21 32 38.8 +1.7
baz=29,SNR=8.5
DUG **Dugway** 29.53 328 *e*ScP ScP 21 39 06.8 -0.1
DUG **Dugway** 29.53 328 P P 21 32 39.1 +1.9
baz=29,SNR=96
L18A **Fontenelle, Gr** 29.59 334 P P 21 32 38.6 +0.9
baz=30,SNR=13
I23A **Meade Ranch, G** 29.69 342 P P 21 32 39.7 +1.2
baz=30,SNR=6.2
R11A **Troy Canyon, C** 29.74 322 P P 21 32 41.1 +2.0
baz=30,SNR=119
BINY **Binghamton** 29.78 26 *e*P P 21 32 38.6 -0.6
comp=Z,29nm,0.9s
BINY *e*PcP PcP 21 35 39.3 +0.1
BINY *e*ScP ScP 21 39 08.1 +0.7
J21A **Lysite** 29.79 338 P P 21 32 41.1 +1.6
baz=30
ANWB **Willy Bob** 29.85 83 *e*P P 21 32 39.0 -1.0
comp=Z,127nm,0.6s
BSC **Santa Cruz Isl** 29.85 311 P P 21 32 41.7 +1.8
baz=30,SNR=7.3
K19A **Absolon Red Bu** 29.86 336 P P 21 32 40.4 +0.2
baz=30,SNR=57
ARVC **Arvin** 29.87 314 P P 21 32 42.0 +1.9
baz=30,SNR=24
ISA **Isabella** 29.92 315 *e*P P 21 32 42.5 +1.9
ISA pmax pmax
comp=Z,121nm,1.3s
ISA **Isabella** 29.92 315 *e*P P 21 32 42.5 +1.9
comp=Z,121nm,1.3s
ISA **Isabella** 29.92 315 P P 21 32 42.6 +1.9
baz=30,SNR=28
I22A **9 Mile Ranch,** 29.95 340 P P 21 32 41.6 +0.8
baz=30,SNR=68
GRAC **Grapevine Rang** 29.98 319 P P 21 32 43.3 +2.2
baz=30,SNR=89
HWUT **Hardware Ranch** 30.02 331 ⇓*i*P P 21 32 42.5 +1.0
comp=Z,191nm,1.1s
HWUT *e*pP pP 21 33 13.2 +0.2
HWUT *e*PcP PcP 21 35 40.3 +0.3
HWUT *e*ScP ScP 21 39 08.5 0.0
J20A **Shoshoni** 30.02 338 P P 21 32 42.8 +1.3
baz=30,SNR=21
HMG **Houelmont** 30.03 86 *e*P P 21 32 41.0 -0.8
COWI **Conover** 30.03 5 *e*P P 21 32 40.4 -1.0
comp=Z,179nm,2.0s
PHG **Guadaloupe-2** 30.08 86 *e*P P 21 32 41.4 -0.8
BW06 **Boulder Array** 30.09 335 *e*P P 21 32 42.1 -0.1
comp=Z,39nm,1.0s
PDAR **Pinedale Array** 30.09 335 P P 21 32 42.5 +0.2
PDAR pP pP 21 33 12.0 -1.7
PDAR PcP PcP 21 35 39.9 -0.4
PDAR ScP ScP 21 39 09.0 +0.2
PDAR *e* 22 04 35.8
PDAR **Pinedale Array** 30.09 335 P P 21 32 42.5 +0.2
comp=Z,31nm,0.9s,baz=133,slow=10,SNR=130
PDAR pP pP 21 33 12.0 -1.7
comp=Z,24nm,0.9s,baz=123,slow=11,SNR=5.1
PDAR PcP PcP 21 35 39.9 -0.4
comp=Z,4.8nm,0.6s,baz=141,slow=5.8,SNR=3.7
PDAR ScP ScP 21 39 09.0 +0.2
comp=Z,7.7nm,1.0s,baz=145,slow=5.4,SNR=10
PDAR LR LR 21 48 11.7
comp=Z,152nm,18.9s,baz=160,slow=43
PDAR P3KPbc 22 04 35.8
comp=Z,2.2nm,1.0s,baz=17,slow=1.5,SNR=11
BCG **Bois Riant Cap** 30.10 86 *e*P P 21 32 42.7 +0.4
CWC **Cottonwood Cre** 30.10 317 P P 21 32 43.3 +1.0
baz=30,SNR=6.0
DOG **Dongo Capester** 30.10 86 *e*P P 21 32 42.5 +0.1
H24A **Dirks Ranch, A** 30.14 343 P P 21 32 43.1 +0.7
baz=30,SNR=135
I21A **Big Trails, Te** 30.14 339 P P 21 32 43.1 +0.6
baz=30,SNR=33
H23A **Clabaugh Cattl** 30.21 342 P P 21 32 43.6 +0.5
baz=30,SNR=8.1
BBSR **BB Station** 30.28 53 *e*P P 21 32 43.5 -0.2
BBSR *e*pP pP 21 33 17.9 +2.7
J19A **Crowheart** 30.31 336 P P 21 32 44.5 +0.5
baz=30,SNR=63
MGG **Marie-Galante** 30.40 86 *e*P P 21 32 44.0 -0.9
VES **Vestal, Richgr** 30.43 315 P P 21 32 47.2 +2.2
baz=30,SNR=154
PKM **Peak Mountain** 30.44 313 P P 21 32 46.4 +1.1
baz=30,SNR=38
H22A **Clearmont** 30.53 341 P P 21 32 46.6 +0.7
baz=30,SNR=46
TIN **Tinemaha** 30.56 318 P P 21 32 47.9 +1.7
baz=30,SNR=5.5
I20A **Worland** 30.56 338 P P 21 32 47.4 +1.2
baz=30,SNR=142
GRGR **Grenville** 30.60 93 *e*P P 21 32 46.7 -0.1
comp=Z,365nm,0.8s
DEG **La Desirade** 30.61 85 *e*P P 21 32 45.4 -1.5
G24A **Alzada** 30.64 344 P P 21 32 47.6 +0.8
baz=31,SNR=21
FDF **Fort de France** 30.68 88 ⇑*i*P P 21 32 46.2 -1.3
FDF **Fort de France** 30.68 88 *e*P P 21 32 46.4 -1.1
FDF **Fort de France** 30.68 88 *e*P P 21 32 46.4 -1.1
FDF *e**PP pP 21 33 17.7 -1.3
FDF pmax pmax
comp=Z,348nm,0.8s
FDF **Fort de France** 30.68 88 *e*P P 21 32 46.4 -1.1
comp=Z,348nm,0.8s
FDF *e*pP pP 21 33 17.7 -1.3
HVU **Hansel Valley** 30.72 330 *e*P P 21 32 49.2 +1.6
HVU pmax pmax
comp=Z,231nm,0.9s
HVU **Hansel Valley** 30.72 330 *e*P P 21 32 49.2 +1.6
comp=Z,231nm,0.9s
SMMC **Simmler** 30.78 313 P P 21 32 50.3 +2.1
baz=31,SNR=19
H21A **Big Horn, Sher** 30.78 340 P P 21 32 48.6 +0.4
baz=31,SNR=59
G23A **Biddle** 30.80 343 P P 21 32 48.6 +0.5
baz=31,SNR=58
RCTC **Rector, Farmer** 30.80 316 P P 21 32 50.4 +2.2
baz=31,SNR=82
SADO **Sadowa** 30.82 19 P P 21 32 46.8 -1.5
SADO ScP ScP 21 39 11.7 +0.9
SADO **Sadowa** 30.82 19 P P 21 32 46.8 -1.5
comp=Z,8.3nm,0.5s,baz=208,slow=9.0,SNR=21
SADO ScP ScP 21 39 11.7 +0.9
comp=Z,21nm,1.0s,baz=242,slow=3.5,SNR=10
SADO LR LR 21 46 28.8
comp=Z,298nm,18.4s,baz=9.1,slow=39
I19A **Meeteetse** 30.95 337 P P 21 32 50.8 +1.1
baz=31
I18A **Diamond G Ranc** 30.98 336 P P 21 32 51.0 +1.0
baz=31,SNR=39
H20A **Greybull** 30.98 339 P P 21 32 50.6 +0.7
baz=31
G22A **Birney** 31.08 342 P P 21 32 50.8 +0.1
baz=31,SNR=96
REDW **Red Top Meadow** 31.12 334 *e*P P 21 32 52.5 +1.3
comp=Z,5.5nm,0.9s
F24A **Ekalaka** 31.13 344 P P 21 32 51.6 +0.5
baz=31,SNR=39
SNOW **Snow King Moun** 31.16 335 *e*P P 21 32 53.0 +1.4
comp=Z,669nm,0.7s
SNOW *e*pP pP 21 33 24.1 +0.9
ELK **Elko** 31.20 326 *e*P P 21 32 54.0 +2.0
comp=Z,59nm,0.8s
TRY **Troy** 31.22 28 *e*P P 21 32 52.6 +0.8

LOHW **Long Hollow** 31.22 335 *e*P P 21 32 53.3 +1.2
comp=Z,159nm,0.8s
TPAW **Teton Pass** 31.26 334 *e*P P 21 32 53.7 +1.1
comp=Z,186nm,0.8s
TPAW *e*pP pP 21 33 23.8 -0.4
F23A **Volborg** 31.27 343 P P 21 32 52.7 +0.3
baz=31,SNR=76
RRI2 **Red Ridge** 31.30 334 *e*P P 21 32 54.0 +1.1
comp=Z,170nm,0.7s
RRI2 *e*pP pP 21 33 24.7 +0.2
NV11 **Mina Array Sit** 31.34 320 ⇓*i*P P 21 32 55.0 +1.9
NV11 *e*pP pP 21 33 25.9 +1.1
NV11 *e*PcP PcP 21 35 44.4 +0.9
G21A **Lodge Grass** 31.37 340 P P 21 32 53.5 +0.3
baz=31,SNR=57
MOOW **Moose Ponds** 31.39 335 *e*P P 21 32 54.5 +0.9
comp=Z,130nm,0.8s
NVAR **Mina Array Bea** 31.43 320 P P 21 32 55.5 +1.4
NVAR pP pP 21 33 26.1 +0.4
NVAR PcP PcP 21 35 45.1 +1.2
NVAR ScP ScP 21 39 13.7 +0.4
NVAR *e* 22 04 31.8
NVAR **Mina Array Bea** 31.43 320 P P 21 32 55.5 +1.4
comp=Z,133nm,0.7s,baz=134,slow=8.3,SNR=920
NVAR pP pP 21 33 26.1 +0.4
comp=Z,38nm,0.9s,baz=142,slow=9.4,SNR=3.2
NVAR PcP PcP 21 35 45.1 +1.2
comp=Z,7.1nm,0.7s,baz=134,slow=2.7,SNR=5.8
NVAR ScP ScP 21 39 13.7 +0.4
comp=Z,9.2nm,0.7s,baz=124,slow=4.0,SNR=27
NVAR P3KPbc 22 04 31.8
comp=Z,3.4nm,0.9s,baz=292,slow=5.3,SNR=15
DCID1 **Drake Creek** 31.45 334 *e*P P 21 32 55.6 +1.6
comp=Z,240nm,0.8s
DCID1 *e*pP pP 21 33 26.5 +0.9
I17A **Pilgrim Ck.** 31.46 335 P P 21 32 56.0 +1.8
baz=31,SNR=22
H19A **Powell** 31.49 338 P P 21 32 55.2 +0.8
baz=32,SNR=60
IMW **Indian Meadow** 31.59 335 *e*pP pP 21 33 26.1 -1.0
G20A **Bridger** 31.70 339 P P 21 32 56.2 0.0
baz=32,SNR=69
EYMN **Ely** 31.73 2 *e*P P 21 32 55.2 -1.1
EYMN *e*pP pP 21 33 28.0 0.0
H18A **Shoshone NF, C** 31.75 337 P P 21 32 57.5 +0.8
baz=32,SNR=251
E24A **Baker** 31.76 345 P P 21 32 57.3 +0.7
baz=32,SNR=72
I16A **Newdale** 31.80 334 P P 21 32 58.4 +1.3
baz=32,SNR=72
H17A **Grant Village** 31.86 336 P P 21 32 59.1 +1.4
baz=32,SNR=36
F21A **Absaloka Mine,** 31.88 341 P P 21 32 57.7 +0.1
baz=32,SNR=22
E23A **Ismay** 31.96 344 P P 21 32 58.6 +0.3
baz=32,SNR=33
NCB **Newcomb** 31.97 26 *e*P P 21 32 58.0 -0.4
comp=Z,29nm,0.6s
RLMT **Red Lodge** 31.98 338 *e*P P 21 32 59.2 +0.4
comp=Z,70nm,0.8s
RLMT *e*pP pP 21 33 30.2 -0.2
RLMT *e*sP sP 21 33 46.1 -1.4
RLMT *e*ScP ScP 21 39 14.6 -0.4
YFT **Old Faithful** 32.01 335 *e*P P 21 33 01.1 +2.1
comp=Z,155nm,1.0s
YFT *e*pP pP 21 33 31.9 +1.2
YFT *e*PP PP 21 34 14.8 +0.5
YFT *e*PcP PcP 21 35 45.9 +0.5
YFT *e*ScP ScP 21 39 17.1 +2.0
BMN **Battle Mountai** 32.07 324 *e*P P 21 33 01.5 +1.9
BMN pmax pmax
comp=Z,147nm,1.1s
BMN **Battle Mountai** 32.07 324 *e*P P 21 33 01.5 +1.9
comp=Z,147nm,1.1s
MDND **Maddock** 32.08 352 P P 21 32 59.3 0.0
baz=32,SNR=37
E22A **Miles City** 32.09 343 P P 21 32 59.5 +0.1
baz=32
AGMN **Agassiz Nation** 32.15 356 *e*P P 21 32 58.7 -1.3
comp=Z,84nm,1.2s
NNA **Nana** 32.18 149 *e*P P 21 33 02.0 +1.4
comp=Z,93nm,0.9s
NNA *e*PcP PcP 21 35 45.8 -0.2
NNA **Nana** 32.18 149 P P 21 33 02.0 +1.4
comp=Z,621nm,0.9s,SNR=9.8
F20A **Billings** 32.19 340 P P 21 33 00.9 +0.5
baz=32,SNR=28
YMR **Madison River** 32.24 336 *e*P P 21 33 02.9 +1.9
comp=Z,240nm,0.9s
YMR *e*pP pP 21 33 33.5 +0.7
G18A **Lazy EL Ranch,** 32.26 338 P P 21 33 01.6 +0.6
baz=32,SNR=110
D24A **Glendive** 32.29 345 P P 21 33 02.1 +0.9
baz=32,SNR=82
LONY **Lake Ozonia** 32.35 25 *e*P P 21 33 01.5 -0.2
comp=Z,25nm,0.8s
H16A **Russell Place,** 32.38 335 P P 21 33 03.7 +1.4
baz=32,SNR=41
MDV **Middlebury** 32.44 27 *e*P P 21 33 02.0 -0.5
F19A **Roth Farm, Mol** 32.50 339 P P 21 33 03.6 +0.5
baz=32,SNR=122
E21A **Keefer Ranch,** 32.51 342 P P 21 33 03.6 +0.5
baz=32,SNR=51
CMB **Columbia Colle** 32.52 317 *e*P P 21 33 04.6 +1.2
CMB *e**PP pP 21 33 35.4 +0.3
CMB pmax pmax
comp=Z,102nm,1.0s
CMB **Columbia Colle** 32.52 317 *e*P P 21 33 04.6 +1.2
comp=Z,102nm,1.0s
CMB *e*pP pP 21 33 35.4 +0.3
SAO **San Andreas Ge** 32.54 315 *e*P P 21 33 04.5 +1.0
SAO *e**PP pP 21 33 36.8 +1.6
SAO pmax pmax
comp=Z,182nm,1.6s
SAO **San Andreas Ge** 32.54 315 *e*P P 21 33 04.5 +1.0
comp=Z,182nm,1.6s
SAO *e*pP pP 21 33 36.8 +1.6
D23A **Lindsay** 32.56 344 P P 21 33 04.3 +0.7
baz=33,SNR=93
QLMT **Earthquake Lak** 32.56 335 *e*P P 21 33 05.6 +1.8
QLMT *e*pP pP 21 33 38.0 +2.5
I14A **Mackay** 32.70 332 P P 21 33 06.9 +1.9
baz=33,SNR=143
C24A **Savage** 32.70 346 P P 21 33 05.6 +0.8
baz=33,SNR=126
G17A **Pierce Place,** 32.70 336 P P 21 33 06.9 +2.0
baz=33,SNR=29
GCMT **Greycliff** 32.70 338 *e*P P 21 33 05.4 +0.5
GCMT *e*pP pP 21 33 35.0 -1.6
D22A **Cohagen** 32.80 343 P P 21 33 06.5 +0.9
baz=33,SNR=296
E20A **Meyer Farm, Mu** 32.80 341 P P 21 33 06.4 +0.7
baz=33,SNR=129
F18A **Big Timber** 32.81 338 P P 21 33 06.5 +0.6
baz=33,SNR=169
HLID **Hailey** 32.86 331 *e*P P 21 33 07.7 +1.4
comp=Z,102nm,0.9s
HLID **Hailey** 32.86 331 P P 21 33 07.8 +1.4
baz=33,SNR=242
WCN **Washoe City** 32.86 320 *e*P P 21 33 08.5 +2.0
WCN pmax pmax
comp=Z,83nm,1.1s
WCN **Washoe City** 32.86 320 *e*P P 21 33 08.5 +2.0
comp=Z,82nm,1.1s
FRNY **Flat Rock** 32.94 26 *e*P P 21 33 06.4 -0.4
comp=Z,12nm,0.8s
D21A **La Casta Ranch** 32.95 342 P P 21 33 08.2 +1.2
baz=33,SNR=14
E19A **Rath Farm, Rou** 32.98 340 P P 21 33 07.8 +0.5
baz=33,SNR=118
G16A **Moss Hill, Enn** 33.04 335 P P 21 33 09.6 +1.7
baz=33,SNR=120
C23A **Lambert** 33.14 345 P P 21 33 09.3 +0.8
baz=33,SNR=50
MCMT **McKenzie Canyo** 33.15 334 *e*P P 21 33 11.1 +2.2
F17A **Fitzpatrick Pl** 33.16 337 P P 21 33 10.4 +1.4
baz=33,SNR=178
C22A **Vida** 33.27 344 P P 21 33 10.6 +0.9
baz=33,SNR=99
G15A **Dillon** 33.27 334 P P 21 33 11.7 +1.8
baz=33,SNR=220
BOZ **Bozeman (W)** 33.31 336 *e*P P 21 33 10.9 +0.6
BOZ *e**PP pP 21 33 41.8 -0.3
BOZ *e* 21 34 29.8
BOZ *e* 21 35 46.7
BOZ pmax pmax
comp=Z,40nm,0.8s
BOZ **Bozeman (W)** 33.31 336 *e*P P 21 33 10.9 +0.6
comp=Z,40nm,0.8s
BOZ *e*pP pP 21 33 41.8 -0.3
BOZ *e*PP PP 21 34 29.8 +1.2
BOZ *e*PcP PcP 21 35 46.7 -2.1
D20A **Manuel Ranch,** 33.32 341 P P 21 33 11.0 +0.8
baz=33,SNR=164
I12A **Atlanta** 33.37 330 P P 21 33 12.6 +1.7
baz=33
F16A **Kennard Place,** 33.43 336 P P 21 33 12.4 +1.2
baz=33,SNR=44
MFID **Camas Ranch** 33.43 329 *e*P P 21 33 12.4 +1.1
comp=Z,81nm,0.8s
MFID **Camas Ranch** 33.43 329 P P 21 33 12.5 +1.2
baz=33,SNR=81
E18A **Harlowton** 33.45 339 P P 21 33 12.1 +0.7
baz=33,SNR=112
DLMT **Dillon** 33.47 335 *e*P P 21 33 13.3 +1.7
comp=Z,236nm,1.1s
DLMT *e*pP pP 21 33 44.8 +1.3
DGMT **Dagmar** 33.53 346 *e*pP pP 21 33 44.3 +0.5
DGMT *e*ScP ScP 21 39 21.5 +1.5
DGMT **Dagmar** 33.53 346 P P 21 33 12.4 +0.4
baz=34,SNR=24
BEKR **Beckworth** 33.57 320 *e*P P 21 33 14.7 +2.0
comp=Z,77nm,1.0s
BEKR *e*pP pP 21 33 45.5 +1.1
SAC **San Andreas** 33.62 315 *e*P P 21 33 15.0 +2.1
SAC **San Andreas** 33.62 315 *e*P P 21 33 15.0 +2.1
D19A **Cripps Ranch,** 33.63 340 P P 21 33 13.6 +0.7
baz=34,SNR=191
C21A **Desert Coulee** 33.67 343 P P 21 33 14.2 +0.9
baz=34,SNR=38
E17A **Martinsdale** 33.70 337 P P 21 33 14.3 +0.6
baz=34
B23A **Brockton** 33.71 346 P P 21 33 14.4 +0.9
baz=34,SNR=53
G14A **Jackson** 33.74 334 P P 21 33 15.6 +1.5
baz=34,SNR=21
LRM **Limekiln Ridge** 33.79 335 *e*P P 21 33 15.6 +1.2
LRM *e*pP pP 21 33 45.7 -0.6
B22A **Reddig Ranch S** 33.81 344 P P 21 33 15.2 +0.8
baz=34,SNR=9.0
H12A **Diamond D Ranc** 33.82 331 P P 21 33 16.4 +1.7
baz=34,SNR=207
F15A **Butte** 33.82 335 P P 21 33 16.0 +1.3
baz=34,SNR=208
C20A **Veseth Ranch,** 33.84 342 P P 21 33 15.4 +0.8
baz=34,SNR=58
A24A **Westby** 33.91 347 P P 21 33 15.9 +0.6
baz=34,SNR=45
D18A **Linhart Farms,** 33.96 339 P P 21 33 16.9 +1.2
baz=34,SNR=7.1
E16A **East Helena** 34.07 337 P P 21 33 17.7 +0.9
baz=34,SNR=54
ULM **Lac du Bonnet** 34.10 357 *e*P P 21 33 15.2 -1.5
comp=Z,38nm,1.1s
ULM PcP PcP 21 35 50.0 -0.8
ULM ScP ScP 21 39 21.8 -0.1
ULM **Lac du Bonnet** 34.10 357 P P 21 33 15.3 -1.5
comp=Z,13nm,0.6s,baz=179,slow=9.9,SNR=14
ULM PcP PcP 21 35 50.0 -0.8
comp=Z,33nm,0.8s,baz=167,slow=3.5,SNR=7.3
ULM ScP ScP 21 39 21.8 -0.1
comp=Z,20nm,1.0s,baz=217,slow=4.0,SNR=6.6
ULM LR LR 21 48 54.3
comp=Z,167nm,19.2s,baz=250,slow=39
A23A **Redstone** 34.14 346 P P 21 33 18.2 +1.0
baz=34,SNR=27
F14A **Wisdom** 34.16 334 P P 21 33 18.7 +1.1
baz=34,SNR=40
C19A **Slack Wire Ran** 34.18 341 P P 21 33 18.5 +0.9
baz=34,SNR=114
B21A **Ellsworth Farm** 34.20 343 P P 21 33 18.8 +1.0
baz=34,SNR=8.8
WVOR **Wild Horse Val** 34.20 325 *e*pP pP 21 33 52.6 +2.7
D17A **Six Diamond Ra** 34.23 338 P P 21 33 19.0 +0.8
baz=34,SNR=194
MCCM **Marconi Confer** 34.23 316 *e*P P 21 33 20.2 +2.1
comp=Z,229nm,1.4s
E15A **Deer Lodge** 34.35 336 P P 21 33 20.0 +0.8
baz=34,SNR=86
A22A **Carney Farms,** 34.42 345 P P 21 33 20.6 +0.8
baz=34,SNR=53
D16A **Dana Ranch, Ca** 34.44 337 P P 21 33 20.8 +0.8
baz=34,SNR=48
G12A **Big Creek, Yel** 34.48 332 P P 21 33 21.6 +1.3
baz=34
B20A **Solberg Farm,** 34.49 342 P P 21 33 21.0 +0.7
baz=34,SNR=75
F13A **Darby** 34.55 333 P P 21 33 21.6 +0.7
baz=34,SNR=124
EGMT **Eagleton** 34.66 340 *e*P P 21 33 22.5 +0.6
comp=Z,150nm,0.8s
EGMT **Eagleton** 34.66 340 P P 21 33 22.6 +0.8
baz=35,SNR=118
C17A **Wharram Farm,** 34.67 339 P P 21 33 22.6 +0.7
baz=35,SNR=163
A21A **Bergtoll Ranch** 34.69 344 P P 21 33 23.0 +1.1
baz=35
J08A **Circle Bar Ran** 34.74 327 P P 21 33 24.2 +1.6
B19A **Brinkman Farms** 34.79 341 P P 21 33 23.6 +0.8
baz=35,SNR=163
HOPS **Hopland** 34.81 317 *e*P P 21 33 25.1 +2.0
comp=Z,124nm,1.4s
D15A **Lincoln** 34.81 336 P P 21 33 23.9 +0.7
baz=35,SNR=71
A20A **Cobblestone Ra** 34.86 343 P P 21 33 24.4 +0.9
baz=35,SNR=29
F12A **Elk City** 34.92 332 P P 21 33 25.2 +1.1
baz=35,SNR=573
B18A **Beardsley Farm** 35.00 340 P P 21 33 25.4 +0.7
baz=35,SNR=70
CHMT **Chamberlain Mo** 35.00 336 *e*P P 21 33 25.2 +0.4
CHMT *e*pP pP 21 33 56.7 -0.1
E13A **Victor** 35.00 334 P P 21 33 25.6 +0.8
baz=35,SNR=177
A19A **Klindworth Far** 35.15 342 P P 21 33 26.7 +0.8
baz=35,SNR=28
C16A **Fuhringer Ranc** 35.16 338 P P 21 33 27.1 +1.0
baz=35
BMO **Blue Mountains** 35.21 329 *e*P P 21 33 26.5 0.0
comp=Z,99nm,1.0s
BMO *e*PP PnPn 21 34 50.2 +0.4
MSO **Missoula** 35.21 335 *e*P P 21 33 27.1 +0.6
comp=Z,68nm,1.1s
MSO **Missoula** 35.21 335 P P 21 33 27.2 +0.6
baz=35,SNR=86
D14A **Greenough** 35.23 335 P P 21 33 27.2 +0.4
baz=35,SNR=58
B17A **L&G Farms, Che** 35.25 339 P P 21 33 27.1 +0.3
baz=35,SNR=43
WDC **Whiskeytown Da** 35.34 319 *e*P P 21 33 26.6 -1.0
WDC pmax pmax
comp=Z,41nm,0.9s
WDC **Whiskeytown Da** 35.34 319 *e*P P 21 33 26.6 -1.0
comp=Z,41nm,0.9s
SLMT **Seeley Lake** 35.36 336 *e*P P 21 33 28.0 +0.1
SLMT *e*pP pP 21 33 58.6 -1.3
C15A **Salmond Ranch,** 35.46 337 P P 21 33 29.4 +0.7
baz=35,SNR=96
A18A **Metzger Ranch,** 35.48 341 P P 21 33 29.2 +0.5
baz=36,SNR=91
KCPM **Cahto Peak** 35.51 317 *e*P P 21 33 31.4 +2.2
comp=Z,74nm,1.0s
KIPM **Iron Peak** 35.51 318 *e*P P 21 33 31.1 +1.8
D13A **Huson** 35.63 335 P P 21 33 30.7 +0.6
baz=36,SNR=134
B16A **M & M Farms, S** 35.66 338 P P 21 33 30.6 +0.3
baz=36,SNR=28
A17A **Triple J Farms** 35.78 340 P P 21 33 31.8 +0.5
baz=36,SNR=36
SWMT **Swartz Lake** 35.78 335 *e*P P 21 33 31.7 +0.3
B15A **Bradely Ranch,** 35.89 338 P P 21 33 32.6 +0.3
baz=36,SNR=46
C14A **Swan Lake** 35.89 336 P P 21 33 32.8 +0.5
baz=36,SNR=33
D12A **Red Ives Fores** 35.98 334 P P 21 33 33.3 +0.2
baz=36
F10A **Beach Ranch, E** 35.99 331 P P 21 33 33.8 +0.6
YBMT **Yellow Bay** 36.07 336 *e*P P 21 33 34.4 +0.5
A16A **West Butte Ran** 36.08 339 P P 21 33 34.4 +0.5
baz=36
JTMT **Jette** 36.08 335 *e*P P 21 33 34.5 +0.5
YBH **Yreka Blue Hor** 36.12 321 *e*P P 21 33 33.8 -0.5
YBH ScP ScP 21 39 30.3 +0.7

YBH Yreka Blue Hor 36.12 321 P P 21 33 33.7 -0.6
comp=Z,26nm,0.8s,baz=116,slow=3.4,SNR=150
YBH ScP ScP 21 39 30.3 +0.7
comp=Z,6.9nm,1.1s,baz=145,slow=3.2,SNR=7.0
C13A Hot Springs 36.15 335 P P 21 33 35.0 +0.5
baz=36,SNR=60
B14A Marquette Ranc 36.19 337 P P 21 33 35.5 +0.6
baz=36,SNR=55
KHMM Horse Mountain 36.26 319 eP P 21 33 36.4 +0.7
comp=Z,197nm,0.8s
BLMT Blacktail Moun 36.33 336 eP P 21 33 36.8 +0.6
BLMT epP pP 21 34 08.3 0.0
BSMT Bassoo Peak 36.37 335 eP P 21 33 37.0 +0.4
A15A Johnson Ranch, 36.51 338 P P 21 33 37.9 +0.3
baz=36,SNR=124
C12B Naegeli Ranch, 36.54 334 P P 21 33 38.5 +0.7
baz=36,SNR=26
B13A Whitefish 36.66 336 P P 21 33 39.7 +0.9
baz=37,SNR=71
KRMB Red Mountain 36.73 320 eP P 21 33 40.2 +0.6
comp=Z,99nm,1.6s
A14A Double T Ranch 36.75 337 P P 21 33 40.4 +0.7
baz=37,SNR=140
HUMO Hull Mountain 36.78 322 eP P 21 33 39.2 -0.6
comp=Z,15nm,0.8s
GMO Grizzlie Mount 36.80 326 P P 21 33 40.8 +0.7
C11A Tepee Creek (N 36.97 334 P P 21 33 42.3 +0.8
baz=37
WALA Waterton Lakes 37.01 337 eP P 21 33 42.5 +0.6
A13A Flathead Natio 37.09 336 P P 21 33 43.5 +0.9
baz=37
B12A Libby 37.19 335 P P 21 33 44.5 +1.2
baz=37,SNR=14
KBO Bosley Butte 37.32 321 eP P 21 33 46.5 +2.0
comp=Z,356nm,1.1s
HAWA Hanford 37.40 329 eP P 21 33 45.0 0.0
comp=Z,47nm,0.8s
WRD Warden 37.51 330 P P 21 33 47.6 +1.7
A12A Yaak River Ran 37.58 335 P P 21 33 47.8 +1.2
baz=38,SNR=7.2
H04A Detroit Lake 37.63 325 P P 21 33 47.6 +0.7
NEW Newport 37.67 333 eP P 21 33 47.3 0.0
comp=Z,197nm,2.0s
NEW Newport 37.67 333 P P 21 33 47.4 0.0
comp=Z,22nm,0.7s,baz=143,slow=8.2,SNR=41
NEW LR LR 21 51 36.0
comp=Z,213nm,20.1s,baz=127,slow=40
NEW Newport 37.67 333 P P 21 33 47.5 +0.1
baz=38,SNR=37
KEBM Edson Butte 37.76 321 eP P 21 33 50.1 +1.9
comp=Z,590nm,1.0s
C09A Chrisman Ranch 37.83 332 P P 21 33 49.3 +0.7
TRW Toppenish Ridg 37.83 328 P P 21 33 49.8 +1.1
VLL Laurance Lake 37.86 327 P P 21 33 51.2 +2.1
SSOR Sweet Springs 37.89 325 P P 21 33 49.7 +0.4
SSOR Sweet Springs 37.89 325 P P 21 33 49.7 +0.4
RNO Roman Nose 38.02 323 P P 21 33 51.7 +1.3
COR Corvallis 38.19 324 eP P 21 33 54.1 +2.5
COR pmax pmax
comp=Z,319nm,1.2s
COR Corvallis 38.19 324 eP P 21 33 54.1 +2.5
comp=Z,319nm,1.2s
EBG Ellensburg 38.27 329 P P 21 33 54.0 +1.6
NAC Naches 38.28 329 P P 21 33 53.9 +1.4
TBM Table Mountain 38.47 329 P P 21 33 55.4 +1.4
SAML Samuel 38.61 128 eP P 21 33 53.1 -2.5
comp=Z,126nm,0.7s
SAML ePcP PcP 21 36 05.0 +0.1
SAML eScP ScP 21 39 40.2 +1.0
LON Longmire 38.78 328 eP P 21 33 57.6 +0.9
LON pmax pmax
comp=Z,99nm,0.8s
LON Longmire 38.78 328 eP P 21 33 57.6 +0.9
comp=Z,99nm,0.8s
FFC Flin Flon 39.13 352 eP P 21 33 58.8 -0.5
FFC pmax pmax
comp=Z,489nm,2.9s
FFC Flin Flon 39.13 352 eP P 21 33 58.8 -0.5
comp=Z,488nm,2.9s
FFC Flin Flon 39.13 352 P P 21 33 59.7 +0.4
comp=Z,106nm,0.8s,SNR=15
CMW Cultus Mountai 40.08 330 P P 21 34 07.4 0.0
NLWA Neilton Lookou 40.27 327 eP P 21 34 10.3 +1.4
comp=Z,231nm,1.3s
LPAZ La Paz 40.48 142 eP P 21 34 12.6 +0.9
comp=Z,191nm,0.7s
LPAZ PcP PcP 21 36 12.3 +0.7
LPAZ ScP ScP 21 39 49.0 +1.7
LPAZ La Paz 40.48 142 P P 21 34 12.5 +0.9
comp=Z,176nm,0.6s,baz=331,slow=6.0,SNR=575
LPAZ PcP PcP 21 36 12.3 +0.7
comp=Z,38nm,1.0s,baz=347,slow=7.7,SNR=6.6
LPAZ ScP ScP 21 39 49.0 +1.7
comp=Z,9.0nm,0.9s,baz=36,slow=4.7,SNR=4.5
PGC Sidney 40.88 329 eP P 21 34 14.8 +1.0
SCHQ Schefferville 43.56 22 P P 21 34 34.5 -1.0
SCHQ ScP ScP 21 39 58.5 +0.3
SCHQ Schefferville 43.56 22 P P 21 34 34.5 -1.0
comp=Z,7.5nm,0.7s,baz=206,slow=7.2,SNR=14
SCHQ ScP ScP 21 39 58.5 +0.3
comp=Z,19nm,1.0s,baz=211,slow=3.0,SNR=8.9
SCHQ LR LR 21 53 21.0
comp=Z,225nm,21.4s,baz=111,slow=37
SIV San Ignacio 44.84 134 P P 21 34 45.8 -0.4
SIV PcP PcP 21 36 26.0 +0.5
SIV ScP ScP 21 40 06.5 +2.5
SIV San Ignacio 44.84 134 P P 21 34 45.8 -0.4
comp=Z,199nm,0.6s,baz=313,slow=7.9,SNR=688
SIV PcP PcP 21 36 26.0 +0.5
comp=Z,52nm,0.8s,baz=236,slow=3.9,SNR=7.2
SIV ScP ScP 21 40 06.5 +2.5
comp=Z,30nm,1.0s,baz=297,slow=3.7,SNR=15
LVC Limon Verde 45.15 148 eP P 21 34 50.6 +1.8
comp=Z,145nm,0.9s
YKA Yellowknife Ar 48.73 347 P P 21 35 15.3 -0.4
YKA pP pP 21 35 47.9 -1.6
YKA PcP PcP 21 36 38.1 -0.4
YKA ScP ScP 21 40 20.1 +0.5
YKA P'P' 22 05 59.8
YKA Yellowknife Ar 48.73 347 P P 21 35 15.3 -0.4
comp=Z,29nm,0.7s,baz=148,slow=7.4,SNR=180
YKA pP pP 21 35 47.8 -1.6
comp=Z,11nm,0.8s,baz=150,slow=7.4,SNR=3.2
YKA PcP PcP 21 36 38.1 -0.4
comp=Z,4.1nm,0.6s,baz=154,slow=4.2,SNR=7.0
YKA ScP ScP 21 40 20.0 +0.5
comp=Z,3.5nm,0.8s,baz=146,slow=4.2,SNR=10
YKA PKPPKP P'P'df 22 05 59.7 -18
comp=Z,0.4nm,0.6s,baz=353,slow=2.9,SNR=5.9
YKW3 Yellowknife Ar 48.80 347 eP P 21 35 15.7 -0.6
comp=Z,0.7nm,0.8s
YKW3 epP pP 21 35 48.3 -1.6
YKW3 eScP ScP 21 40 20.3 +0.5
LCO Las Campanas 49.78 154 eP P 21 35 25.0 +0.5
comp=Z,195nm,0.9s
CRAG Craig 49.80 331 eP P 21 35 26.0 +2.0
comp=Z,96nm,1.0s
WRAK Wrangell Islan 50.02 333 eP P 21 35 27.4 +1.8
comp=Z,50nm,1.3s
DLBC Dease Lake 50.33 336 eP P 21 35 30.2 +2.2
DLBC Dease Lake 50.33 336 P P 21 35 28.8 +0.8
comp=Z,70nm,1.0s,baz=141,slow=5.5,SNR=57
FRB Frobisher Bay 50.45 14 P P 21 35 27.9 -0.8
FRB ScP ScP 21 40 27.8 +0.9
FRB Frobisher Bay 50.45 14 P P 21 35 27.9 -0.8
comp=Z,42nm,0.4s,baz=219,slow=8.6,SNR=146
FRB ScP ScP 21 40 27.8 +0.9
comp=Z,6.1nm,0.9s,baz=223,slow=4.2,SNR=4.1
CMCH Combarbala 51.57 156 i/iP P 21 35 38.5 +0.9
CMCH Combarbala 51.57 156 i/iP P 21 35 38.5 +0.9
IHA Instituto Hidr 52.97 158 i/iP P 21 35 49.3 +1.5
IHA Instituto Hidr 52.97 158 i/iP P 21 35 49.3 +1.5
SKAG Skagway 53.11 335 eP P 21 35 50.3 +1.7
comp=Z,80nm,1.6s
CLCH Cerro Calan 53.72 157 i/iP P 21 35 54.7 +1.4
LMEL Las Melosas 54.24 157 i/iP P 21 35 58.9 +1.6
LMEL Las Melosas 54.24 157 i/iP P 21 35 58.9 +1.6
BDFB Brasilia 54.46 123 P P 21 35 58.2 -0.9
BDFB Brasilia 54.46 123 P P 21 35 58.2 -0.9
comp=Z,142nm,0.6s,baz=289,slow=8.6,SNR=206
CPUP Villa Florida 54.62 140 eP P 21 35 59.2 -0.7
CPUP PcP PcP 21 37 02.1 +1.1
CPUP Villa Florida 54.62 140 P P 21 35 59.1 -0.7
comp=Z,217nm,0.7s,baz=316,slow=7.8,SNR=563
CPUP PcP PcP 21 37 02.1 +1.1
comp=Z,45nm,0.7s,baz=303,slow=4.6,SNR=7.6

PNL Peninsula 54.95 333 eP P 21 36 03.5 +1.6
comp=Z,96nm,1.1s
CCHI Chillan 56.05 160 i/iP P 21 36 11.7 +1.7
CCHI Chillan 56.05 160 i/iP P 21 36 11.7 +1.7
INK Inuvik 58.13 343 P P 21 36 23.8 -0.3
INK pP pP 21 36 58.0 -1.0
INK ScP ScP 21 41 01.2 +0.8
INK Inuvik 58.13 343 P P 21 36 23.8 -0.3
comp=Z,14nm,0.5s,baz=124,slow=6.6,SNR=3.1
INK pP pP 21 36 58.0 -1.0
comp=Z,27nm,1.0s,baz=133,slow=7.8,SNR=5.3
INK ScP ScP 21 41 01.2 +0.8
comp=Z,3.5nm,1.0s,baz=127,slow=11,SNR=3.4
EGAK Eagle 58.38 338 eP P 21 36 25.2 -0.8
comp=Z,22nm,1.1s
EGAK epP pP 21 36 58.7 -2.1
EGAK eScP ScP 21 41 02.0 +0.3
DIV Divide 58.43 333 eP P 21 36 27.9 +1.4
RES Resolute Bay 58.55 359 P P 21 36 26.6 -0.4
RES Resolute Bay 58.55 359 P P 21 36 26.6 -0.4
comp=Z,6.6nm,0.5s,baz=193,slow=9.9,SNR=8.4
DOT Dot Lake 58.89 336 eP P 21 36 30.5 +0.9
PAX Paxson 59.13 335 eP P 21 36 32.0 +0.7
PAX Paxson 59.13 335 eP P 21 36 32.0 +0.7
POHA Pohakuloa 59.35 284 eP P 21 36 33.7 0.0
SPB Sao Paulo 59.49 131 eP P 21 36 33.0 -1.3
comp=Z,118nm,0.9s
SPB ePcP PcP 21 37 22.1 +1.8
SEW Seward 59.67 331 eP P 21 36 35.6 +0.7
SML Sawmill 59.83 333 eP P 21 36 36.8 +0.7
SML Sawmill 59.83 333 eP P 21 36 36.8 +0.7
PMR Palmer 60.09 333 eP P 21 36 38.4 +0.7
PMR Palmer 60.09 333 eP P 21 36 38.4 +0.7
PLCA Paso Flores 60.30 161 eP P 21 36 40.6 +1.0
PLCA Paso Flores 60.30 161 P P 21 36 40.5 +1.0
comp=Z,100nm,0.9s,baz=332,slow=8.1,SNR=176
PLCA LR LR 21 58 40.9
comp=Z,157nm,18.4s,baz=94,slow=32
KDAK Kodiak Island 60.41 328 eP P 21 36 40.8 +0.8
comp=Z,21nm,0.7s
KDAK Kodiak Island 60.41 328 P P 21 36 41.6 +1.6
comp=Z,307nm,0.7s,SNR=9.6
ILAR Eielson Array 60.51 337 P P 21 36 40.9 +0.2
ILAR pP pP 21 37 14.1 -1.6
ILAR ScP ScP 21 41 12.0 +0.9
ILAR P'P' 22 05 53.3
ILAR Eielson Array 60.51 337 P P 21 36 40.9 +0.2
comp=Z,68nm,1.1s,baz=126,slow=5.1,SNR=149
ILAR pP pP 21 37 14.1 -1.6
comp=Z,9.9nm,1.0s,baz=164,slow=6.8,SNR=2.9
ILAR ScP ScP 21 41 12.0 +0.9
comp=Z,2.5nm,1.0s,baz=167,slow=3.1,SNR=5.7
ILAR PKPPKP P'P'df 22 05 53.3 -7.8
comp=Z,2.3nm,0.9s,baz=312,slow=3.5,SNR=19
ILAR LR LR 22 07 51.9
comp=Z,129nm,19.0s,baz=112,slow=41
RCBR Riachuelo 60.53 106 eP P 21 36 40.8 -0.8
RCBR Riachuelo 60.53 106 P P 21 36 40.4 -1.2
comp=Z,127nm,0.8s,baz=277,slow=6.8,SNR=86
OHAK Old Harbor 60.61 327 eP P 21 36 42.4 +1.1
MCK McKinley 60.87 335 eP P 21 36 43.8 +0.7
MCK McKinley 60.87 335 eP P 21 36 43.8 +0.7
COLA College 60.93 336 eP P 21 36 43.4 0.0
COLA College 60.93 336 eP P 21 36 43.4 0.0
SPU Mount Spurr 61.25 332 eP P 21 36 46.2 +0.5
TRQA Tornquist 61.27 152 eP P 21 36 46.2 +0.2
TRF Thorofare Moun 61.31 334 eP P 21 36 46.2 0.0
RSO Redoubt South 61.34 331 eP P 21 36 47.1 +0.6
KIP Kipapa 61.44 286 eP P 21 36 48.0 +0.4
KIP pmax pmax
comp=Z,96nm,1.2s
COLD Coldfoot 62.80 338 eP P 21 36 57.2 +1.3
SVW2 Sparrevohn 62.85 331 eP P 21 36 56.4 0.0
CHGN Chignik 63.13 325 eP P 21 36 58.4 +0.2
SUMG Summit 64.43 16 i P P 21 37 06.0 -1.0
SUMG pmax pmax
comp=Z,5.0nm,0.8s
SUMG Summit 64.43 16 eP P 21 37 06.0 -1.0
SUMG Summit 64.43 16 i P P 21 37 06.0 -1.0
comp=Z,5.1nm,0.8s
PPT2 Papeete2 65.08 241 eP P 21 37 12.4 +0.8
comp=Z,154nm,28.5s
PPT2 eS S 21 45 38.7 -4.0
comp=Z,78nm,23.0s
PPT2 eLR LR 21 54 55.4
comp=Z,257nm,27.5s
FALS False Pass 65.71 323 eP P 21 37 15.3 +0.3
UNV Unalaska Valle 67.42 322 eP P 21 37 26.4 +0.5
TBI Tubuai 67.75 236 eS S 21 46 06.7 -7.9
TBI eLR LR 21 55 59.2
GAMB Gambell 70.67 333 eP P 21 37 47.1 +1.3
PFVI Vila Bisbo 75.84 55 eP P 21 38 16.6 -0.1
comp=Z,56nm,1.4s
MORF Marmelete 75.95 55 eP P 21 38 16.8 -0.5
comp=Z,40nm,1.8s
MORF Marmelete 75.95 55 eP P 21 38 16.3 -1.0
PMTG Montargil 75.99 53 eP P 21 38 16.8 -0.6
comp=Z,19nm,1.4s
EVOP Sao Brissos 76.16 54 eP P 21 38 15.6 -2.8
EVOP pmax pmax
comp=Z,23nm,0.9s
EVOP Sao Brissos 76.16 54 eP P 21 38 15.6 -2.8
comp=Z,22nm,0.9s
EVOP epP pP 21 38 56.7 +1.7
MESJ Messejana 76.20 54 eP P 21 38 17.9 -0.8
MESJ AMb AMB 21 38 23.5
comp=Z,29nm,1.8s
MESJ Messejana 76.20 54 eP P 21 38 17.9 -0.8
comp=Z,29nm,1.8s
MESJ Messejana 76.20 54 eP P 21 38 17.8 -0.8
EVO Evora 76.24 54 eP P 21 38 15.6 -3.3
comp=Z,22nm,0.9s
EVO epP pP 21 38 56.7 +1.2
EVO eR
comp=Z,113nm,19.0s
PCVE Castro Verde 76.37 54 eP P 21 38 20.1 +0.4
comp=Z,15nm,1.7s
PBEJ Beja 76.44 54 eP P 21 38 19.7 -0.3
comp=Z,14nm,1.9s
PMRV Marv??o 76.57 53 eP P 21 38 19.5 -1.2
comp=Z,26nm,1.7s
PBRG Braganca 76.65 50 eP P 21 38 18.8 -2.4
PVAQ Vaqueiros 76.67 55 eP P 21 38 20.7 -0.6
comp=Z,11nm,2.0s
ESK Eskdalemuir 76.75 36 i P P 21 38 21.8 +0.4
PBAR Barrancos 77.06 54 eP P 21 38 21.7 -1.8
comp=Z,13nm,2.1s
ESDC Sonseca Array 79.12 52 P P 21 38 32.8 -2.2
ESDC Sonseca Array 79.12 52 P P 21 38 32.8 -2.2
comp=Z,3.3nm,0.7s,baz=286,slow=5.9,SNR=14
BILL Bilibino 79.13 338 i/iP P 21 38 35.0 +0.7
BILL i *P pP 21 39 09.3 -1.9
BILL i 21 41 35.8
BILL i S S 21 48 21.0 -0.3
BILL pmax pmax
comp=Z,13nm,0.5s
GRR Gorron 79.48 43 eP P 21 38 33.6 -3.0
comp=Z,63nm,1.1s
GRR epP pP 21 39 13.7 +0.2
GRR Gorron 79.48 43 eP P 21 38 33.6 -3.0
GRR e*PP pP 21 39 13.7 +0.2
GRR pmax pmax
comp=Z,63nm,1.1s
GRR Gorron 79.48 43 eP P 21 38 33.6 -3.0
comp=Z,63nm,1.1s
GRR epP pP 21 39 13.7 +0.2
FX1 Attu Island--F 79.60 322 eP P 21 38 36.9 -0.3
FX1 epP pP 21 39 14.8 +0.8
FLN La Foliniere 79.65 42 eP P 21 38 33.9 -3.6
comp=Z,29nm,0.8s
FLN epP pP 21 39 14.6 +0.2
FLN eR
comp=Z,203nm,21.5s
FLN La Foliniere 79.65 42 eP P 21 38 33.9 -3.6
FLN e*PP pP 21 39 14.6 +0.2
FLN pmax pmax
comp=Z,29nm,0.8s
FLN La Foliniere 79.65 42 eP P 21 38 33.9 -3.6
comp=Z,29nm,0.8s
FLN epP pP 21 39 14.6 +0.2
LDF La Druitiere 79.92 42 eP P 21 38 36.6 -2.3
comp=Z,17nm,0.7s
LDF pmax pmax

LDF La Druitiere 79.92 42 eP P 21 38 36.6 -2.3
comp=Z,17nm,0.7s
MFF Saint Martin d 80.35 44 eP P 21 38 37.9 -3.4
MFF Saint Martin d 80.35 44 eP P 21 38 37.9 -3.4
MFF Saint Martin d 80.35 44 eP P 21 38 37.9 -3.4
SJPF Ste Jean 80.39 48 eP P 21 38 38.3 -3.4
comp=Z,13nm,0.8s
SJPF Ste Jean 80.39 48 eP P 21 38 38.3 -3.4
SJPF pmax pmax
comp=Z,13nm,0.8s
SJPF Ste Jean 80.39 48 eP P 21 38 38.3 -3.4
comp=Z,13nm,0.8s
ETSF Etsaut 80.92 48 eP P 21 38 41.7 -2.8
comp=Z,9.4nm,0.6s
ETSF epP pP 21 39 21.7 +0.2
ETSF Etsaut 80.92 48 eP P 21 38 41.7 -2.8
ETSF e*PP pP 21 39 21.7 +0.2
ETSF pmax pmax
comp=Z,9.0nm,0.6s
ETSF Etsaut 80.92 48 eP P 21 38 41.7 -2.8
comp=Z,9.4nm,0.6s
ETSF epP pP 21 39 21.7 +0.2
LFF La Frestale 81.34 46 eP P 21 38 43.4 -3.2
comp=Z,16nm,0.6s
LFF La Frestale 81.34 46 eP P 21 38 43.4 -3.2
LFF pmax pmax
comp=Z,16nm,0.6s
LFF La Frestale 81.34 46 eP P 21 38 43.4 -3.2
comp=Z,16nm,0.6s
EPF Esparros 81.53 48 eP P 21 38 44.5 -3.2
EPF Esparros 81.53 48 eP P 21 38 44.5 -3.2
EPF Esparros 81.53 48 eP P 21 38 44.5 -3.2
RJF Les Rejaudoux 81.79 45 eP P 21 38 45.5 -3.5
comp=Z,9.7nm,0.6s
RJF epP pP 21 39 25.8 -0.2
RJF eR
comp=Z,186nm,21.8s
RJF Les Rejaudoux 81.79 45 eP P 21 38 45.5 -3.5
RJF e*PP pP 21 39 25.8 -0.2
RJF pmax pmax
comp=Z,10.0nm,0.6s
RJF Les Rejaudoux 81.79 45 eP P 21 38 45.5 -3.5
comp=Z,9.7nm,0.6s
RJF epP pP 21 39 25.8 -0.2
TCF Toulx Ste Croi 82.01 44 eP P 21 38 46.6 -3.5
comp=Z,11nm,0.6s
TCF epP pP 21 39 26.9 -0.3
TCF Toulx Ste Croi 82.01 44 eP P 21 38 46.6 -3.5
TCF e*PP pP 21 39 26.9 -0.3
TCF pmax pmax
comp=Z,11nm,0.6s
TCF Toulx Ste Croi 82.01 44 eP P 21 38 46.6 -3.5
comp=Z,11nm,0.6s
TCF epP pP 21 39 26.9 -0.3
HYF Humbligny 82.04 43 eP P 21 38 47.2 -3.0
HYF Humbligny 82.04 43 eP P 21 38 47.2 -3.0
CAF Calviac 82.26 46 eP P 21 38 48.0 -3.5
comp=Z,8.8nm,0.8s
CAF Calviac 82.26 46 eP P 21 38 48.0 -3.5
CAF pmax pmax
comp=Z,9.0nm,0.8s
CAF Calviac 82.26 46 eP P 21 38 48.0 -3.5
comp=Z,8.8nm,0.8s
BAIF Baives 82.30 40 eP P 21 38 47.7 -3.8
BAIF Baives 82.30 40 eP P 21 38 47.7 -3.8
BAIF Baives 82.30 40 eP P 21 38 47.7 -3.8
BGF Bois d'Agland 82.36 44 eP P 21 38 48.6 -3.3
comp=Z,23nm,0.6s
BGF epP pP 21 39 28.8 -0.2
BGF Bois d'Agland 82.36 44 eP P 21 38 48.6 -3.3
BGF e*PP pP 21 39 28.8 -0.2
BGF pmax pmax
comp=Z,23nm,0.6s
BGF Bois d'Agland 82.36 44 eP P 21 38 48.6 -3.3
comp=Z,23nm,0.6s
BGF epP pP 21 39 28.8 -0.2
SSF Saint Saulge 82.66 43 eP P 21 38 50.0 -3.5
comp=Z,17nm,0.8s
SSF epP pP 21 39 30.2 -0.4
SSF Saint Saulge 82.66 43 eP P 21 38 50.0 -3.5
SSF e*PP pP 21 39 30.2 -0.4
SSF pmax pmax
comp=Z,17nm,0.8s
SSF Saint Saulge 82.66 43 eP P 21 38 50.0 -3.5
comp=Z,17nm,0.8s
SSF epP pP 21 39 30.2 -0.4
GIVF Givet 82.67 40 eP P 21 38 50.4 -3.0
GIVF Givet 82.67 40 eP P 21 38 50.4 -3.0
GIVF Givet 82.67 40 eP P 21 38 50.4 -3.0
NB2 NORSAR Subarra 82.71 28 P P 21 38 52.9 -0.6
comp=Z,0.5nm,0.6s,baz=295,slow=5.3
NOA NORSAR Array B 82.71 28 P P 21 38 52.1 -1.4
NOA NORSAR Array B 82.71 28 P P 21 38 52.1 -1.4
comp=Z,4.4nm,0.9s,baz=291,slow=5.2,SNR=20
NOA LR LR 22 12 35.2
comp=Z,56nm,21.9s,baz=280,slow=33
MTLF Montolieu 82.78 47 eP P 21 38 50.8 -3.4
comp=Z,11nm,0.6s
MTLF epP pP 21 39 31.2 -0.1
MTLF Montolieu 82.78 47 eP P 21 38 50.8 -3.4
MTLF e*PP pP 21 39 31.2 -0.1
MTLF pmax pmax
comp=Z,11nm,0.6s
MTLF Montolieu 82.78 47 eP P 21 38 50.8 -3.4
comp=Z,11nm,0.6s
MTLF epP pP 21 39 31.2 -0.1
LOR Lormes 82.84 43 eP P 21 38 52.2 -2.2
comp=Z,17nm,0.9s
LOR epP pP 21 39 32.5 +1.0
LOR eR
comp=Z,132nm,22.8s
LOR Lormes 82.84 43 eP P 21 38 52.2 -2.2
comp=Z,17nm,0.9s
LOR epP pP 21 39 32.5 +1.0
SMF Signal de Mont 83.00 44 eP P 21 38 51.5 -3.7
comp=Z,11nm,0.7s
SMF epP pP 21 39 31.8 -0.6
SMF Signal de Mont 83.00 44 eP P 21 38 51.5 -3.7
SMF e*PP pP 21 39 31.8 -0.6
SMF pmax pmax
comp=Z,11nm,0.7s
SMF Signal de Mont 83.00 44 eP P 21 38 51.5 -3.7
comp=Z,11nm,0.7s
SMF epP pP 21 39 31.8 -0.6
MEZF Maizieres J'vi 83.26 42 eP P 21 38 53.6 -2.9
comp=Z,16nm,0.6s
MEZF epP pP 21 39 33.9 +0.2
MEZF Maizieres J'vi 83.26 42 eP P 21 38 53.6 -2.9
comp=Z,16nm,0.6s
MEZF epP pP 21 39 33.9 +0.2
SFTF Sexfontaines 83.34 42 eP P 21 38 54.8 -2.1
comp=Z,16nm,0.7s
SFTF epP pP 21 39 35.2 +1.1
SFTF Sexfontaines 83.34 42 eP P 21 38 54.8 -2.1
comp=Z,16nm,0.7s
SFTF epP pP 21 39 35.2 +1.1
PAGF Fort de Pagny 83.68 41 eP P 21 38 55.8 -2.9
PAGF Fort de Pagny 83.68 41 eP P 21 38 55.8 -2.9
LASF Ste Croix 83.72 46 eP P 21 38 55.6 -3.4
LASF Ste Croix 83.72 46 eP P 21 38 55.6 -3.4
THEF They Montfort 83.94 42 eP P 21 39 03.7 +3.7
VIVF Saint-Julien-l 84.06 45 eP P 21 38 58.5 -2.2
comp=Z,9.9nm,0.7s
VIVF Saint-Julien-l 84.06 45 eP P 21 38 58.5 -2.2
VIVF pmax pmax
comp=Z,10.0nm,0.7s
VIVF Saint-Julien-l 84.06 45 eP P 21 38 58.5 -2.2
comp=Z,9.9nm,0.7s
HAU Haudompre 84.24 42 eP P 21 38 58.4 -3.1
comp=Z,12nm,0.5s
HAU epP pP 21 39 38.8 0.0
HAU eR
comp=Z,135nm,21.5s
HAU Haudompre 84.24 42 eP P 21 38 58.4 -3.1
HAU e*PP pP 21 39 38.8 0.0
HAU pmax pmax
comp=Z,12nm,0.5s
HAU Haudompre 84.24 42 eP P 21 38 58.4 -3.1
comp=Z,12nm,0.5s
HAU epP pP 21 39 38.8 0.0
ARCES ARCESS Array B 84.40 18 P P 21 39 01.4 -0.5
ARCES PKKPbc PKKPbc 21 57 12.7 -2.5
ARCES ARCESS Array B 84.40 18 P P 21 39 01.4 -0.5
comp=Z,6.5nm,0.8s,baz=283,slow=4.1,SNR=38

ARCES PKKPbc **PKKPbc** **21 57 12.7 -2.5**
comp=Z,0.5nm,0.5s,baz=122,slow=1.3,SNR=12
ARCES LR LR 22 16 00.2
comp=Z,88nm,21.6s,baz=180,slow=35
ARE0 ARCESS Array S 84.40 18 *e*P **P** **21 39 02.0 +0.1**
ARE0 *e*pP **pP** **21 39 38.9 -0.2**
ARE0 *e*sP **sP** **21 39 54.1 -0.8**
CABF La Chapelle 84.49 43 *e*P **P** **21 39 00.0 -2.9**
CABF La Chapelle 84.49 43 *e*P **P** **21 39 00.0 -2.9**
CABF La Chapelle 84.49 43 *e*P **P** **21 39 00.0 -2.9**
HINF Hinteralfeld 84.62 42 *e*P P 21 39 00.1 -3.4
comp=Z,7.1nm,0.7s
HINF *e*pP pP 21 39 40.6 -0.2
HINF Hinteralfeld 84.62 42 *e*P P 21 39 00.1 -3.4
HINF *e**PP pP 21 39 40.6 -0.2
HINF pmax pmax
comp=Z,7.0nm,0.7s
HINF Hinteralfeld 84.62 42 *e*P P 21 39 00.1 -3.4
comp=Z,7.1nm,0.7s
HINF *e*pP pP 21 39 40.6 -0.2
ECH Echery 84.69 41 *e*P **P** **21 39 04.0 +0.2**
ECH pmax pmax
comp=Z,7.0nm,0.9s
ECH Echery 84.69 41 *e*P **P** **21 39 04.0 +0.2**
comp=Z,7.0nm,0.9s
CDF Champ du Feu 84.70 41 *e*P P 21 39 00.8 -3.2
comp=Z,12nm,0.8s
CDF Champ du Feu 84.70 41 *e*P P 21 39 00.8 -3.2
CDF pmax pmax
comp=Z,12nm,0.8s
CDF Champ du Feu 84.70 41 *e*P P 21 39 00.8 -3.2
comp=Z,12nm,0.8s
KEV Kevo 84.72 18 *e*p **P** **21 39 03.3 -0.1**
KEV Kevo 84.72 18 *e*P **P** **21 39 03.3 -0.1**
MOF Molkenrain 84.79 42 *e*P **P** **21 39 02.2 -2.2**
LANF Langenberg 84.86 41 *e*P **P** **21 39 03.3 -1.3**
ORIF Oris-en-Rattie 84.86 45 *e*P P 21 39 01.6 -3.2
ORIF *e*R
comp=Z,50nm,21.8s
ORIF Oris-en-Rattie 84.86 45 *e*P P 21 39 01.6 -3.2
ORIF Oris-en-Rattie 84.86 45 *e*P P 21 39 01.6 -3.2
SMRF Simiane la Rot 84.94 46 *e*P P 21 39 01.6 -3.6
comp=Z,34nm,1.1s
SMRF Simiane la Rot 84.94 46 *e*P P 21 39 01.6 -3.6
comp=Z,34nm,1.1s
LPL La Plagne 85.25 44 *e*P P 21 39 03.6 -3.3
comp=Z,8.2nm,0.7s
LPL La Plagne 85.25 44 *e*P P 21 39 03.6 -3.3
LPL pmax pmax
comp=Z,8.0nm,0.7s
LPL La Plagne 85.25 44 *e*P P 21 39 03.6 -3.3
comp=Z,8.2nm,0.7s
LPG La Plagne 85.27 44 *e*P P 21 39 03.6 -3.5
LPG La Plagne 85.27 44 *e*P P 21 39 03.6 -3.5
LPG La Plagne 85.27 44 *e*P P 21 39 03.6 -3.5
MBDF Montbardon 85.52 45 *e*P **P** **21 39 05.4 -2.8**
comp=Z,26nm,0.7s
MBDF Montbardon 85.52 45 *e*P **P** **21 39 05.4 -2.8**
MBDF pmax pmax
comp=Z,26nm,0.7s
MBDF Montbardon 85.52 45 *e*P **P** **21 39 05.4 -2.8**
comp=Z,26nm,0.7s
LMR La Mourre 85.78 46 *e*P P 21 39 06.2 -3.1
comp=Z,20nm,0.7s
LMR *e*pP pP 21 39 46.7 +0.1
LMR La Mourre 85.78 46 *e*P P 21 39 06.2 -3.1
LMR *e**PP pP 21 39 46.7 +0.1
LMR pmax pmax
comp=Z,20nm,0.7s
LMR La Mourre 85.78 46 *e*P P 21 39 06.2 -3.1
comp=Z,20nm,0.7s
LMR *e*pP pP 21 39 46.7 +0.1
FRF La Foret Royal 85.80 46 *e*P P 21 39 06.3 -3.1
comp=Z,18nm,0.7s
FRF La Foret Royal 85.80 46 *e*P P 21 39 06.3 -3.1
FRF pmax pmax
comp=Z,19nm,0.7s
FRF La Foret Royal 85.80 46 *e*P P 21 39 06.3 -3.1
comp=Z,18nm,0.7s
SBF Sospel 86.25 45 *e*P P 21 39 08.1 -3.6
SBF Sospel 86.25 45 *e*P P 21 39 08.1 -3.6
SBF Sospel 86.25 45 *e*P P 21 39 08.1 -3.6
LIC Lamto 86.32 85⇑ *i*P **P** **21 39 10.2 -2.3**
comp=Z,25nm,0.8s,baz=282
LIC Lamto 86.32 85⇑ *i*P **P** **21 39 10.2 -2.3**
comp=Z,25nm,0.8s
DBIC Dimbokro 86.36 84 P **P** **21 39 10.4 -2.3**
DBIC PP **PP** **21 42 31.9 -4.1**
DBIC Dimbokro 86.36 84 P **P** **21 39 10.4 -2.3**
comp=Z,3.3nm,0.4s,baz=271,slow=5.7,SNR=13
DBIC PP **PP** **21 42 31.9 -4.1**
comp=Z,8.1nm,1.0s,baz=271,slow=9.1,SNR=3.7
DBIC LR LR 22 15 10.5
comp=Z,103nm,18.1s,baz=258,slow=34
SEY Seymchan 86.42 335*c i*P **P** **21 39 12.0 0.0**
TUE Stuetta 86.67 43 P **P** **21 39 14.4 +0.6**
comp=Z,3.9nm,0.6s
GRF Grafenberg Arr 86.72 39 *e*P **P** **21 39 13.0 -0.8**
comp=Z,11nm,1.4s
GRF *e*pP **pP** **21 39 51.9 +0.7**
GRF Grafenberg Arr 86.72 39 *e*P **P** **21 39 13.0 -0.8**
GRF *e**PP **pP** **21 39 51.9 +0.7**
GRF pmax pmax
comp=Z,11nm,1.4s
CLL Collm 87.18 37 *e*P **P** **21 39 15.0 -0.9**
CLL *i* *PP **pP** **21 39 54.5 +1.1**
CLL *e* 21 49 24.0
CLL *e*S **S** **21 49 44.0 +1.0**
CLL pmax pmax
comp=Z,6.0nm,1.3s
CLL Collm 87.18 37 *e*P **P** **21 39 15.0 -0.9**
comp=Z,8.0nm,1.3s
CLL *i* pP **pP** **21 39 54.5 +1.1**
CLL *i* sP **sP** **21 40 08.1 -0.9**
comp=Z,20nm,1.5s
CLL *e*sPcP 21 40 12.0
CLL *i* 21 40 31.6
CLL *e*SKSac **SKSac** **21 49 29.0 -0.4**
CLL *e*S **S** **21 49 44.0 +1.0**
CLL *e*sSKSac **sSKSac** **21 50 39.0 +1.6**
CLL *e*SS SS 21 55 36.0 +6.6
CLL *e*sSS 21 56 30.0
CLL *e*SSSS 22 02 12.0
NKC Novy Kostel 87.26 38 *e*P **P** **21 39 15.9 -0.5**
NKC Novy Kostel 87.26 38 *e*P **P** **21 39 15.9 -0.5**
NKC *ex* x 21 39 31.6
PGF Pioggiola 87.76 46 *e*P P 21 39 15.8 -3.3
PGF Pioggiola 87.76 46 *e*P P 21 39 15.8 -3.3
PGF Pioggiola 87.76 46 *e*P P 21 39 15.8 -3.3
PET Petropavlovsk 87.87 325 *e*P **P** **21 39 19.5 +0.4**
PET *e**PP **pP** **21 39 57.8 +1.1**
PET *e* 21 49 32.3
PET *e*S **S** **21 49 44.9 -4.6**
PET pmax pmax
comp=Z,18nm,1.4s
PET pmax pmax
comp=Z,100nm,12.5s
PET MLR MLR
comp=Z,100nm,21.0s
BRG Berggiesshubel 87.89 37 *e*P pP 21 39 57.6 +0.7
comp=Z,14nm,1.7s
TIXI Tiksi 87.97 348*c i*P **P** **21 39 18.6 -0.7**
TIXI pmax pmax
comp=Z,19nm,1.2s
KHC Kasperske Hory 88.36 39 *e*P **P** **21 39 20.2 -1.4**
KHC *e* 21 49 55.1
KHC MLR MLR
comp=Z,100nm,13.9s
KHC Kasperske Hory 88.36 39 *e*P **P** **21 39 22.0 +0.4**
KHC *ex* x 21 39 33.3
KHC *e*S **S** **21 49 55.1 +0.7**
KHC *ex* x 21 50 49.3
KHC AMS AMS 22 20 50.0
comp=Z,100nm,13.9s
KHC Kasperske Hory 88.36 39 *e*P **P** **21 39 19.9 -1.8**
comp=Z,2.2nm,0.8s
PETK Petropavlovsk- 88.36 325 P **P** **21 39 21.9 +0.4**
PETK Petropavlovsk- 88.36 325 P **P** **21 39 21.9 +0.4**
PETK Petropavlovsk- 88.36 325 P **P** **21 39 21.9 +0.4**
comp=Z,4.0nm,0.8s,baz=93,slow=8.6,SNR=9.0
GERES GERESS Array B 88.54 39 P **P** **21 39 20.5 -2.1**
GERES pP **pP** **21 39 58.0 -2.2**
GERES GERESS Array B 88.54 39 P **P** **21 39 20.5 -2.1**
comp=Z,0.9nm,0.8s,baz=269,slow=6.7,SNR=7.2
GERES pP **pP** **21 39 58.0 -2.2**
comp=Z,1.0nm,0.8s,baz=242,slow=5.3,SNR=2.3
GERES LR LR 22 18 15.6
comp=Z,84nm,19.4s,baz=102,slow=35
PRU Pruhonice 88.59 38 *e*P P 21 39 12.1 -11
PRU *e* 21 49 54.5
PRU MLR MLR
comp=Z,100nm,28.9s
PRU Pruhonice 88.59 38 *e*S **S** **21 49 54.5 -2.0**
PRU *ex* x 21 50 50.7
PRU AMS AMS 22 16 50.0
comp=Z,100nm,28.9s
FINES FINESS Array B 88.95 25 P **P** **21 39 21.6 -2.5**
FINES FINESS Array B 88.95 25 P **P** **21 39 21.6 -2.5**
comp=Z,2.3nm,0.7s,baz=160,slow=6.1,SNR=5.0
FINES LR LR 22 18 53.4
comp=Z,78nm,19.8s,baz=84,slow=35
TREC Trest 89.44 38 *e*S **S** **21 49 59.4 -5.0**
TREC *ex* x 21 50 53.6
TREC AMS AMS 22 21 00.0
comp=Z,100nm,17.3s
DPC Dobruska-Polom 89.49 37 *e*P **P** **21 39 25.7 -1.2**
DPC *e* 21 50 03.5
DPC Dobruska-Polom 89.49 37 *e*P **P** **21 39 25.7 -1.2**
DPC *e*S **S** **21 50 03.5 -1.4**
DPC *ex* x 21 50 59.9
KEST Kesra 90.34 53 P **P** **21 39 29.3 -1.9**
KEST Kesra 90.34 53 P **P** **21 39 29.3 -1.9**
comp=Z,0.8nm,0.6s,baz=187,slow=3.1,SNR=5.8
OKC Ostrava-Krasne 90.77 37 *e*S **S** **21 50 16.1 -0.5**
OKC *ex* x 21 51 11.1
TORD Torodi Ar. Bea 90.78 76 P P 21 39 30.6 -3.0
TORD PP **PP** **21 43 15.3 +4.1**
TORD PKKPbc **PKKPbc** **21 56 58.8 +0.8**
TORD Torodi Ar. Bea 90.78 76 P P 21 39 30.6 -3.0
comp=Z,1.1nm,0.7s,baz=290,slow=4.8,SNR=16
TORD PP **PP** **21 43 15.3 +4.1**
comp=Z,2.2nm,1.1s,baz=267,slow=6.9,SNR=4.1
TORD PKKPbc **PKKPbc** **21 56 58.8 +0.8**
comp=Z,0.5nm,0.8s,baz=113,slow=1.6,SNR=6.5
TORD LR LR 22 14 26.1
comp=Z,170nm,20.5s,baz=270,slow=32
ZST Bratislava 90.87 39 *e*P **P** **21 39 31.9 -1.4**
ZST Bratislava 90.87 39 *e*P **P** **21 39 31.9 -1.4**
TAM Tamanrasset 91.40 66 *e*P **P** **21 39 34.5 -2.0**
TAM *e**PP **pP** **21 40 15.3 +1.1**
TAM pmax pmax
comp=Z,4.0nm,1.1s
TAM Tamanrasset 91.40 66 *e*P **P** **21 39 34.5 -2.0**
comp=Z,4.1nm,1.1s
TAM *e*pP **pP** **21 40 15.3 +1.1**
VYHS Vyhne 91.78 38 *e*P **P** **21 39 36.8 -0.7**
VYHS pmax pmax
comp=Z,3.0nm,1.3s
VYHS Vyhne 91.78 38 *e*P **P** **21 39 36.8 -0.7**
VYHS *e*pP **pP** **21 40 16.5 +1.3**
STHS Stebnicka Huta 92.75 37 *e*P **P** **21 39 42.2 +0.2**
STHS pmax pmax
comp=Z,1.0nm,1.1s
STHS Stebnicka Huta 92.75 37 *e*P **P** **21 39 42.2 +0.2**
CRVS Cervenica-Dubn 93.12 37 *e*P **P** **21 39 41.1 -2.7**
CRVS pmax pmax
comp=Z,3.0nm,1.4s
CRVS Cervenica-Dubn 93.12 37 *e*P **P** **21 39 41.1 -2.7**
KOLS Kolonicke sedl 93.58 37 *e*pP pP 21 40 25.0 +1.4
AKASG Malin Array Be 96.44 33 PKKPbc PKKPbc 21 56 42.2 -2.2
AKASG Malin Array Be 96.44 33 PKKPbc PKKPbc 21 56 42.2 -2.2
comp=Z,0.9nm,0.6s,baz=105,slow=2.7,SNR=5.4
AKASG LR LR 22 20 20.7
comp=Z,101nm,21.5s,baz=295,slow=33
OBN Obninsk 97.19 27‖ *i*P **P** **21 40 00.9 -1.2**
OBN *e**PP **pP** **21 40 38.4 -1.5**
OBN *e* 21 43 59.6
OBN *e*S **SKSac** **21 50 24.1 -1.1**
OBN *i* SS **SS** **21 57 57.7 +5.5**
OBN pmax pmax
comp=Z,13nm,2.5s
YSS Yuzh-Sakhalins 99.76 325 *e*P **Pdif** **21 40 13.1 -0.7**
YSS pmax pmax
comp=Z,4.0nm,0.5s
VSR Storozhevoye 100.99 28 *e*P **Pdif** **21 40 26.6 +7.5**
VSR pmax pmax
comp=N,5.0nm,0.5s
VSR pmax pmax
comp=E,4.0nm,0.5s
VSR pmax pmax
comp=Z,8.0nm,0.5s
VNA1 Neumayer--Stat 103.36 160 *e*PP PP 21 45 08.4 +22
ANN Anapa 104.44 34 *e*P **Pdif** **21 40 25.2 -9.4**
ANN pmax pmax
comp=Z,23nm,0.8s
SNAA Sanae 105.24 161 *e*P **Pdif** **21 40 37.7 +0.1**
SNAA Sanae 105.24 161 *e*PP PP 21 44 59.3 -1.3
BRTR Keskin Array B 105.42 40 PKiKP **PKiKP** **21 44 50.9 -1.4**
BRTR PKKPbc **PKKPbc** **21 56 17.1 -1.5**
BRTR Keskin Array B 105.42 40 PKiKP **PKiKP** **21 44 50.9 -1.4**
comp=Z,0.8nm,0.8s,baz=177,slow=2.5,SNR=5.9
BRTR PKKPbc **PKKPbc** **21 56 17.1 -1.5**
comp=Z,1.0nm,0.9s,baz=148,slow=7.3,SNR=6.0
DZM Mont Dzumac 105.50 251 *e*LR LR 22 16 00.2
comp=Z,85nm,22.6s
QSPA South Pole Qui 106.08 180 Pdif **Pdif** **21 40 46.1 +4.7**
QSPA South Pole Qui 106.08 180 Pdiff **Pdif** **21 40 46.1 +4.7**
comp=Z,4.7nm,1.0s,baz=142,slow=2.3,SNR=10
USRK Ussuriysk Arra 107.29 328 PKKPab PKKPab 21 56 27.0 -2.1
comp=Z,1.7nm,0.6s,baz=224,slow=5.0,SNR=5.2
MAT Matsushiro 108.75 319 PKP **PKKPbc** **21 56 07.3 -0.8**
MJAR Matsushiro Arr 108.75 319 PKKPbc PKKPbc 21 56 07.7 -0.4
MJAR PKKPab **PKKPdf** **21 56 20.8 -1.1**
MJAR Matsushiro Arr 108.75 319 PKKPbc PKKPbc 21 56 07.7 -0.4
comp=Z,7.5nm,0.8s,baz=219,slow=2.4,SNR=30
MJAR PKKPab **PKKPdf** **21 56 20.8 -1.1**
comp=Z,8.5nm,0.8s,baz=222,slow=4.8,SNR=18
VNDA Vanda 108.94 193 PKiKP **PKiKP** **21 44 58.5 +1.0**
VNDA Vanda 108.94 193 PKiKP **PKiKP** **21 44 58.5 +1.0**
comp=Z,1.1nm,0.7s,baz=342,slow=1.0,SNR=9.0
AKTO Aktyubinsk 108.96 19 PKKPbc PKKPbc 21 56 05.2 -2.7
AKTO Aktyubinsk 108.96 19 PKKPbc PKKPbc 21 56 05.2 -2.7
comp=Z,1.2nm,0.6s,baz=275,slow=13,SNR=6.1
BVAR Borovoye Array 109.63 11 PKKPab PKKPab 21 56 15.1 -3.8
BVAR Borovoye Array 109.63 11 PKKPab PKKPab 21 56 15.1 -3.8
comp=Z,0.8nm,0.9s,baz=190,slow=6.8,SNR=3.8
ZAA0 Zalesovo Array 110.16 1 *e*PKiKP **PKiKP** **21 44 59.4 -1.2**
ZALV Zalesovo Beam 110.16 1 PKiKP **PKiKP** **21 44 59.6 -0.9**
ZALV Zalesovo Beam 110.16 1 PKiKP **PKiKP** **21 44 59.6 -0.9**
comp=Z,3.5nm,0.5s,baz=282,slow=2.0,SNR=17
ABKAR Akbulak array 110.59 19 *e*PKiKP **PKiKP** **21 45 01.6 +0.1**
CN2 Changchun 110.77 331 *e*PKP **PKiKP** **21 45 00.1 -1.9**
ZAK Zakamensk 112.23 349 *e*PKIKP **PKiKP** **21 45 00.7 -4.1**
ZAK pmax pmax
comp=Z,1.0nm,1.3s
KURK Kurchatov 113.02 6 PKKPbc PKKPbc 21 55 52.2 -2.6
KURK PKKPab PKKPbc 21 56 00.1 +5.3
KURBB Kurchatov Arra 113.10 6 PKKPbc PKKPbc 21 55 52.2 -2.3
comp=Z,1.0nm,0.6s,baz=184,slow=2.7,SNR=15
KURBB PKKPab **PKKPab** **21 56 00.1 -3.4**
comp=Z,2.0nm,0.8s,baz=190,slow=4.0,SNR=14
SONM Songino Array 114.00 346 PKiKP **PKiKP** **21 45 07.7 -0.6**
SONM PKKPbc **PKKPbc** **21 55 49.3 -2.3**
SONM Songino Array 114.00 346 PKiKP **PKiKP** **21 45 07.7 -0.6**
comp=Z,2.6nm,0.8s,baz=75,slow=0.8,SNR=7.8
SONM PKKPbc **PKKPbc** **21 55 49.3 -2.3**
comp=Z,3.4nm,0.8s,baz=200,slow=3.7,SNR=11
KSRS Korea Array 114.26 325 PKP PKPdf 21 45 08.0 -0.9
comp=Z,3.0nm,0.7s,baz=2.8,slow=1.5,SNR=21
KSRS PKKPbc **PKKPbc** **21 55 50.0 -0.1**
comp=Z,2.3nm,0.8s,baz=222,slow=3.7,SNR=12
KSAR Wonju Array Be 114.29 325 PKP PKPdf 21 45 08.0 -0.9
KSAR PKKPbc **PKKPbc** **21 55 50.0 0.0**
MK31 Makanchi Array 117.21 4 *e*PKIKP **PKPdf** **21 45 13.1 -1.2**
MK31 Makanchi Array 117.21 4 *e*PKPdf **PKPdf** **21 45 13.1 -1.2**
MKAR Makanchi Array 117.21 4 PKIKP **PKPdf** **21 45 12.4 -1.9**
MKAR Makanchi Array 117.21 4 PKP **PKPdf** **21 45 12.4 -1.9**
MKAR PKKPbc PKKPbc 21 55 30.9 -9.5
MKAR Makanchi Array 117.21 4 PKP **PKPdf** **21 45 12.4 -1.9**
comp=Z,5.5nm,0.6s,baz=4.2,slow=2.0,SNR=55
MKAR PKKPbc PKKPbc 21 55 30.9 -9.5
comp=Z,0.6nm,0.8s,baz=178,slow=3.6,SNR=4.4
BJI Beijing 117.86 335 Pdif **Pdif** **21 41 34.0 -0.4**
BJI SKS **SKSdf** **21 52 14.6 +0.5**
BJI SS **SS** **22 02 32.7 +1.4**
HHC Hu-ho-hao-te 118.89 339 *e*PKP **PKPdf** **21 45 15.6 -2.2**
HHC sPKP 21 46 14.9
HHC PP **PP** **21 46 40.0 +2.5**
HHC PKS **PKSdf** **21 48 52.6 -2.0**
HHC SKS **SKSdf** **21 52 10.0 -6.3**
HHC SKKS **SKKSac** **21 53 17.8 -6.5**
HHC SS **SS** **22 02 42.5 -2.2**
HHC AMB AMB
comp=Z,81nm,6.3s
KKAR Karatay Array 119.12 14 *e*PKIKP **PKPdf** **21 45 17.3 -0.8**
KKAR Karatay Array 119.12 14 *e*PKPdf **PKPdf** **21 45 17.3 -0.8**
USP Ospenovka 119.77 11 P **PKPdf** **21 45 20.0 +0.6**
SNR=16
CHMS Chumysh 120.07 10 P **PKPdf** **21 45 20.0 +0.1**
SNR=8.8
EKS2 Erkin-Say 120.22 11 *e*PKIKP **PKPdf** **21 45 20.3 -0.1**
EKS2 Erkin-Say 120.22 11 *e*PKPdf **PKPdf** **21 45 20.2 -0.1**
EKS2 Erkin-Say 120.22 11 P **PKPdf** **21 45 21.1 +0.7**
SNR=13
TKM2 Tokmak 2 120.29 10 *e*PKIKP **PKPdf** **21 45 20.6 0.0**
TKM2 Tokmak 2 120.29 10 *e*PKPdf **PKPdf** **21 45 20.6 0.0**
TKM2 Tokmak 2 120.29 10 P **PKPdf** **21 45 20.9 +0.3**
SNR=9.4
WMQ Urumqi 120.32 359 PKP **PKPdf** **21 45 19.8 -0.7**
AAK Ala-Archa 120.38 11 *e*PKIKP **PKPdf** **21 45 20.8 0.0**
AAK Ala-Archa 120.38 11 *e*PKPdf **PKPdf** **21 45 20.8 0.0**
AAK Ala-Archa 120.38 11 P **PKPdf** **21 45 21.3 +0.5**
SNR=5.3
MIB Mutribah 120.40 40 *e*P **PKPdf** **21 45 19.8 -1.1**
MIB AMb AMB 21 45 21.2
comp=Z,11nm,0.8s
MIB Mutribah 120.40 40 *e*P **SKPdf** **21 48 43.5 +0.9**
MIB AMb AMB 21 48 44.6
comp=Z,16nm,0.9s
KBK Karagaybulak 120.44 10 P **PKPdf** **21 45 21.4 +0.5**
SNR=8.4
AML Almayashu 120.72 12 P **PKPdf** **21 45 22.3 +0.6**
SNR=16
NAY Al-Naaiem 120.72 41 *e*P **PKPdf** **21 45 20.6 -1.0**
NAY AMb AMB 21 45 23.7
comp=Z,7.9nm,1.1s
NAY Al-Naaiem 120.72 41 *e*P **SKPdf** **21 48 44.3 +1.0**
NAY AMb AMB 21 48 45.6
comp=Z,8.1nm,1.6s
KZA Kyzart 121.05 10 P **PKPdf** **21 45 23.2 +0.9**
SNR=7.8
RDF Al-Radifah 121.14 41 *e*P **PKPdf** **21 45 21.3 -1.0**
RDF AMb AMB 21 45 22.0
comp=Z,21nm,1.1s
RDF Al-Radifah 121.14 41 *e*P **SKPdf** **21 48 43.8 -0.2**
BOSA Boshof 122.09 114 PKP **PKPdf** **21 45 23.8 -0.5**
BOSA *e*PKPdf **PKiKP** **21 45 23.9 -0.5**
BOSA Boshof 122.09 114 PKP **PKPdf** **21 45 23.8 -0.5**
comp=Z,69nm,0.8s,baz=279,slow=2.0,SNR=85
LBTB Lobatse 122.21 110 *e*P **PKPdf** **21 45 24.4 -0.2**
GTA Gaotai 123.46 348 *e*PKP **PKPdf** **21 45 26.4 -0.3**
GTA sPKP 21 46 24.6
GTA PP **PP** **21 47 13.0 +4.6**
GTA PKS **PKSdf** **21 49 00.6 -2.9**
GTA SKS **SKSdf** **21 52 19.9 -5.2**
GTA SKKS SKKSac 21 53 45.9 -8.1
GTA SS **SS** **22 03 39.9 -2.7**
GTA AMB AMB
comp=Z,26nm,6.9s
GTA LR LR
comp=N,37nm,9.5s
GTA LR LR
comp=E,82nm,8.1s
GTA LR LR
comp=Z,56nm,11.2s
LSZ Lusaka 123.52 98 *e*PKPdf **PKPdf** **21 45 27.0 -0.3**
KSH Kashi 123.67 10 *e*PKP **PKPdf** **21 45 28.1 +1.0**
KSH *es*PKP 21 46 27.1
KSH *e*SKS **SKSdf** **21 52 22.1 -3.4**
KSH AMB AMB
comp=Z,150nm,4.0s
KSH LR LR
comp=N,560nm,8.2s
KSH LR LR
comp=E,310nm,5.7s
KSH LR LR
comp=Z,260nm,4.4s
LZH Lanzhou 125.67 343 *e*PKP **PKPdf** **21 45 31.7 +0.6**
LZH sPKP 21 46 33.5
XAN Xi'an 125.91 338 PKP **PKPdf** **21 45 30.7 -0.7**
MAW Mawson 126.25 169 PKP **PKPdf** **21 45 31.0 +0.2**
MAW Mawson 126.25 169 PKP **PKPdf** **21 45 31.0 +0.2**
comp=Z,21nm,0.8s,baz=203,slow=2.6,SNR=21
WHN Wuhan 126.65 330 PKP **PKPdf** **21 45 32.6 -0.2**
KBL Kabul 126.77 19 *e*PKIKP **PKPdf** **21 45 33.5 +0.2**
KBL Kabul 126.77 19 *e*PKPdf **PKPdf** **21 45 33.5 +0.2**
CASY Casey 127.54 192 *e*PKPdf **PKPdf** **21 45 33.7 +0.3**
STKA Stephens Creek 128.27 242 PKP **PKPdf** **21 45 35.2 -0.6**
STKA *e*PKPdf **PKiKP** **21 45 36.2 -0.2**
STKA SKPbc SKiKP 21 48 42.5 -16
STKA Stephens Creek 128.27 242 PKP **PKPdf** **21 45 35.2 -0.6**
comp=Z,8.8nm,0.7s,baz=118,slow=3.5,SNR=13
STKA SKPbc SKiKP 21 48 42.5 -16
comp=Z,5.4nm,1.1s,baz=342,slow=13,SNR=3.3
KMBO Kilima Mbogo 128.74 78 PKP **PKPdf** **21 45 36.8 -0.8**
KMBO SKPbc SKiKP 21 48 45.0 -15
KMBO Kilima Mbogo 128.74 78 PKP **PKPdf** **21 45 36.8 -0.8**
comp=Z,1.2nm,0.5s,baz=234,slow=22,SNR=5.4
KMBO SKPbc SKiKP 21 48 45.0 -15
comp=Z,9.4nm,0.9s,baz=328,slow=3.1,SNR=17
CD2 Chengdu 130.53 341 *e*PKP **PKPdf** **21 45 39.8 -0.5**
CD2 sPKP 21 46 34.7
CD2 PP **PP** **21 47 58.1 +3.1**
CD2 PKS **PKSdf** **21 49 14.8 -2.2**
CD2 SKS **SKSdf** **21 52 34.8 -3.5**
CD2 SKKS **SKKSac** **21 54 34.6 -4.0**
CD2 SS **SS** **22 05 10.3 -0.3**
CD2 AMB AMB
comp=Z,100nm,5.8s
SMLA Simla 132.05 11 *ex* **SKPbc** **21 48 55.4 -0.2**
DDI Dehra Dun 133.00 11 *ex* PP 21 48 22.5 +12
GYA Guiyang 133.55 335 *e*Pdif **Pdif** **21 42 42.8 -1.9**
GYA PKP **PKPdf** **21 45 44.6 -1.6**
GYA sPKP 21 46 45.0
GYA PP **PP** **21 48 17.5 +2.8**
GYA AMB AMB
comp=Z,150nm,7.7s
WRAB Tennant Creek 134.97 258 *e*PKIKP **PKPdf** **21 45 48.3 -0.5**
WRAB Tennant Creek 134.97 258 *e*PKPdf **PKPdf** **21 45 48.3 -0.5**
WRAB *e*SKPbc **SKPbc** **21 49 06.0 +0.3**
WRA Warramunga Arr 134.98 258 PKPpre PKPpre 21 45 37.5
WRA PKP **PKPdf** **21 45 48.5 -0.4**
WRA pPKP pPKPdf 21 46 26.6 -1.6
WRA SKPbc **SKPbc** **21 49 06.5 +0.7**
WRA Warramunga Arr 134.98 258 PKhKP PKPpre 21 45 37.5
comp=Z,1.0nm,0.6s,baz=89,slow=3.6,SNR=11
WRA PKP **PKPdf** **21 45 48.5 -0.4**
comp=Z,4.5nm,0.6s,baz=85,slow=2.9,SNR=34
WRA pPKP pPKPdf 21 46 26.6 -1.6
comp=Z,3.1nm,1.1s,baz=96,slow=1.8,SNR=2.0
WRA SKPbc **SKPbc** **21 49 06.5 +0.7**
comp=Z,15nm,1.0s,baz=80,slow=2.9,SNR=23
ASAR Alice Springs 135.46 253 PKPpre PKPpre 21 45 41.3
ASAR PKP **PKPdf** **21 45 49.7 0.0**
ASAR pPKP pPKPdf 21 46 27.6 -1.6
ASAR SKPbc **SKPbc** **21 49 07.5 +0.2**
ASAR Alice Springs 135.46 253 PKhKP PKPpre 21 45 41.3
comp=Z,1.9nm,0.6s,baz=104,slow=4.0,SNR=26
ASAR PKP **PKPdf** **21 45 49.7 0.0**
comp=Z,2.9nm,0.8s,baz=96,slow=2.5,SNR=12
ASAR pPKP pPKPdf 21 46 27.6 -1.6
comp=Z,1.4nm,0.8s,baz=111,slow=1.6,SNR=1.4
ASAR SKPbc **SKPbc** **21 49 07.5 +0.2**
comp=Z,6.2nm,0.9s,baz=100,slow=3.3,SNR=13
DANN Dangsing 135.65 4 *e*P **PKPdf** **21 45 50.3 0.0**
comp=Z,122nm,0.7s
DANN Dangsing 135.65 4 *e*P **SKPbc** **21 49 08.9 +0.8**
comp=Z,154nm,0.9s
PYUN Piuthan 135.84 5 *e*P **SKPbc** **21 49 10.0 +1.4**
comp=Z,108nm,1.0s
GUN Gumba 136.19 1 *e*P **PKPdf** **21 45 51.1 -0.3**
comp=Z,46nm,0.7s
GUN Gumba 136.19 1 *e*P **SKPbc** **21 49 10.6 +0.8**
comp=Z,185nm,0.9s
KMI Kunming 136.22 339 PKP **PKPdf** **21 45 50.7 -0.7**
KMI sPKP 21 46 45.2
KMI PP **PP** **21 48 34.5 +3.0**
KMI SKKS 21 55 09.6
KMI SS **SS** **22 06 19.3 -0.5**
KMI AMB AMB
comp=Z,92nm,3.6s
KMI LR LR

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=N,84nm,22.9s						
KMI				LR	LR		
	comp=E,72nm,18.6s						
KMI				LR	LR		
	comp=Z,110nm,35.2s						
KOLN	Koldanda	136.22	4	eP	PKPdf	21 45 50.1	-1.2
	comp=Z,22nm,0.6s						
KOLN	Koldanda	136.22	4	eP	SKPbc	21 49 10.0	+0.3
	comp=Z,37nm,1.0s						
KKN	Kakani	136.29	2	eP	PKPdf	21 45 50.5	-0.9
	comp=Z,43nm,0.7s						
KKN	Kakani	136.29	2	eP	SKPbc	21 49 11.1	+1.1
	comp=Z,181nm,1.6s						
DMN	Daman	136.46	2	eP	PKPdf	21 45 51.3	-0.5
	comp=Z,50nm,0.8s						
DMN	Daman	136.46	2	eP	SKPbc	21 49 11.5	+1.0
PKIN	Phulchoki	136.51	2	eP	PKPdf	21 45 52.3	+0.4
	comp=Z,18nm,0.7s						
PKIN	Phulchoki	136.51	2	eP	SKPbc	21 49 12.6	+1.9
	comp=Z,21nm,0.8s						
PKI	Pulchoki	136.51	2	eP	PKPdf	21 45 51.1	-0.9
	comp=Z,24nm,0.5s						
PKI	Pulchoki	136.51	2	eP	SKPbc	21 49 10.8	0.0
	comp=Z,33nm,0.8s						
TAPN	Taplejung	136.76	359	eP	PKPdf	21 45 53.3	+0.9
	comp=Z,26nm,0.6s						
TAPN	Taplejung	136.76	359	eP	SKPbc	21 49 11.4	-0.1
	comp=Z,72nm,0.8s						
RAMN	Ramite	137.16	1	eP	PKPdf	21 45 52.4	-0.7
	comp=Z,52nm,0.8s						
RAMN	Ramite	137.16	1	eP	SKPbc	21 49 11.9	-0.7
	comp=Z,83nm,1.4s						
ODAN	Odare	137.25	360	eP	PKPdf	21 45 52.6	-0.7
	comp=Z,19nm,0.7s						
ODAN	Odare	137.25	360	eP	SKPbc	21 49 12.3	-0.6
	comp=Z,75nm,1.4s						
QIZ	Qiongzhong	138.46	326	PKP	PKPdf	21 45 53.5	-1.9
QIZ				PP	PP	21 48 46.2	+0.5
QIZ				SS	SS	22 06 49.2	+2.5
QIZ				LR	LR		
	comp=Z,100nm,45.0s						
FITZ	Fitzroy Crossi	143.10	261	PKP	PKPbc	21 46 01.3	+0.4
FITZ				SKPbc	SKiKP	21 49 29.5	+0.2
FITZ	Fitzroy Crossi	143.10	261	PKP	PKPbc	21 46 01.3	+0.4
	comp=Z,12nm,0.8s,baz=152,slow=4.3,SNR=15						
FITZ				SKPbc	SKiKP	21 49 29.5	+0.2
	comp=Z,6.7nm,0.9s,baz=121,slow=2.4,SNR=5.3						
CHTO	Chiang Mai	143.34	341	ePKHKP	PKPpre	21 45 58.7	
CHTO	Chiang Mai	143.34	341	ePKPpre	PKPpre	21 45 58.7	
CHTO				ePKPdf	PKPdf	21 46 06.0	+1.9
CM31	Chiang Mai Arr	143.67	341	ePKPdf	PKPab	21 46 01.7	+0.1
CMAR	Chiang Mai Arr	143.67	341	PKP	PKPab	21 46 02.1	+0.5
CMAR				SKPbc	SKiKP	21 49 30.9	+0.3
CMAR	Chiang Mai Arr	143.67	341	PKP	PKPab	21 46 02.1	+0.5
	comp=Z,5.3nm,0.6s,baz=326,slow=3.3,SNR=31						
CMAR				SKPbc	SKiKP	21 49 30.9	+0.3
	comp=Z,4.3nm,0.8s,baz=342,slow=3.0,SNR=9.5						
HYB	Hyderabad	145.62	14	i PKP	PKPdf	21 46 06.5	-1.7
	comp=Z,80nm,1.0s						
HYB				epPKP	pPKPdf	21 46 43.5	-4.1
KAPI	Kappang	146.05	285	PKPbc	PKPdf	21 46 08.7	-0.3
KAPI				pPKPbc	pPKPbc	21 46 47.2	-1.7
KAPI	Kappang	146.05	285	PKPbc	PKPdf	21 46 08.7	-0.3
	comp=Z,6.5nm,0.6s,baz=191,slow=8.4,SNR=4.5						
KAPI				pPKPbc	pPKPbc	21 46 47.2	-1.7
	comp=Z,71nm,1.1s,baz=113,slow=2.1,SNR=9.1						
NWAO	Narrogin (SRO)	148.01	233	ePKPdf	PKPdf	21 46 12.3	+0.6
NWAO				PKPbc	PKPdf	21 46 13.7	+2.0
NWAO				epPKPdf	pPKPdf	21 46 50.4	-0.8
NWAO				pPKPbc	pPKPbc	21 46 52.0	-2.1
NWAO	Narrogin (SRO)	148.01	233	PKPbc	PKPdf	21 46 13.7	+2.0
	comp=Z,22nm,0.9s,baz=130,slow=4.7,SNR=10						
NWAO				pPKPbc	pPKPbc	21 46 52.0	-2.1
	comp=Z,22nm,1.1s,baz=191,slow=3.0,SNR=3.8						
KSM	Kuching	151.11	305	ePKPdf	PKPdf	21 46 17.6	+0.4
KSM				ePKPbc	PKPbc	21 46 23.2	+0.1
KSM				ePKPab	PKPab	21 46 31.3	+0.1
KSM				epPKPdf	pPKPdf	21 47 00.6	+3.9
KULM	Kulim	154.80	327	ePKPdf	PKPdf	21 46 22.9	+0.3

KRSC 07 21:35:39.5±1.4, 50°.43N×157°.06E, h23km±22km, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.65	293	i P	Pb	21 35 51.1	-1.1
SKR				i S	Sb	21 35 59.8	-1.1
MIPR	Malaya Ipel'ka	1.86	354	eP	Pn	21 36 10.8	+0.9
ASAK	Asacha	2.02	15	eP	Pn	21 36 14.0	+1.7
MTVR	Mutnovka	2.17	18	P	Pn	21 36 15.2	+0.8
MTVR				S	Sn	21 36 41.2	+0.4
RUS	Russkaya	2.20	24	eP	Pn	21 36 15.1	+0.5
RUS				eS	Sn	21 36 41.1	0.0
UGLR	Uglovaya	2.99	21	P	Pn	21 36 28.6	+3.0
AVH	Avacha	3.02	19	P	Pn	21 36 29.0	+3.0
KOK	Koryaka	3.03	18	P	Pn	21 36 29.0	+2.9
SMAR	Somma	3.04	20	P	Pn	21 36 27.9	+1.5
KRER	Koryakskii	3.06	19	P	Pn	21 36 29.5	+2.8
SPN	Mys Shipunski	3.25	33	P	Pn	21 36 30.2	+1.3
SPN				S	Sn	21 37 07.5	+0.7
GNL	Ganaly	3.31	9	P	Pn	21 36 33.2	+3.1
MKZ	Mys Kozlova	5.02	33	P	Pn	21 36 53.3	0.0

ISK 07 21:50:17.1, 37°.92N×29°.24E, h5km, MD3.0
CSEM 07 21:50:18.8±0.1, 37°.85N×29°.25E, h8km, MD3.0, Error ellipse: s-maj=3.2km s-min=2.8km az=82.0
ISCJB 07 21:50:19.1±0.5, 37°.86N±0°.02×29°.24E±0°.04, h7km±5km, Error ellipse: s-maj=5.3km s-min=3.9km az=19.4
DDA 07 21:50:19.1, 37°.87N×29°.23E, h8km, MD3.0
ISC 07 21:50:19.5±0.9, 37°.86N±0°.02×29°.22E±0°.02, h11km±7km, n48, σ0s.75/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	Denizli	0.18	234	ePG	Pg	21 50 23.4	-0.1
DENT	Denizli	0.18	234	ePg	Pg	21 50 23.4	-0.1
DNZL	Cakiroluk	0.22	219	i P	Pg	21 50 24.2	0.0
DNZL				i S	Sg	21 50 27.7	+0.3
DNZL	Cakiroluk	0.22	219	i P	Pg	21 50 24.2	0.0
DNZL				i S	Sg	21 50 27.7	+0.3
KHAL	Karahalli	0.55	23	i P	Pg	21 50 29.4	-0.9
KHAL				i S	Sg	21 50 37.4	-0.2
KHAL	Karahalli	0.55	23	i P	Pg	21 50 29.4	-0.9
KHAL				i S	Sg	21 50 37.4	-0.2
GOLH	Golhisar	0.68	156	i P	Pg	21 50 32.1	-0.6
GOLH	Golhisar	0.68	156	i P	Pg	21 50 32.1	-0.6
GLHS	Glhisar (BURDU	0.74	163	ePG	Pg	21 50 33.4	-0.4
GLHS				eSG	Sb	21 50 45.3	+0.8
GLHS	Glhisar (BURDU	0.74	163	ePg	Pg	21 50 33.4	-0.4
MANT	Manisa	0.82	320	i P	Pg	21 50 34.8	-0.5
MANT	Manisa	0.82	320	i P	Pg	21 50 34.8	-0.5
ISP	Isparta	1.03	92	ePG	Pg	21 50 38.2	-1.1
ISP	Isparta	1.03	92	ePg	Pg	21 50 38.2	-1.1
YER	Yerkesik	1.04	226	ePN	Pg	21 50 38.5	-1.0
YER				eSN	Sn	21 50 55.2	+0.5
YER	Yerkesik	1.04	226	ePn	Pg	21 50 38.5	-1.0
YER				eSn	Sn	21 50 55.2	+0.5
AYDN	Tasoluk	1.08	260	i P	Pg	21 50 39.8	-0.5
AYDN				i S	Sb	21 50 54.8	+0.4
AYDN	Tasoluk	1.08	260	i P	Pg	21 50 39.8	-0.5
AYDN				i S	Sb	21 50 54.8	+0.4
BCK	Bucak	1.16	110	ePN	Pg	21 50 40.8	-0.9
BCK	Bucak	1.16	110	ePn	Pg	21 50 40.8	-0.9
FETY	Fethiye	1.23	185	ePN	Pn	21 50 42.7	+0.1
FETY	Fethiye	1.23	185	ePn	Pn	21 50 42.7	+0.1
ELL	Elmali	1.24	154	ePN	Pn	21 50 42.4	-0.5
ELL	Elmali	1.24	154	ePn	Pn	21 50 42.4	-0.5
GDZ	Gediz	1.24	9	i P	Pb	21 50 42.5	-0.5
GDZ				i S	Sn	21 50 59.8	0.0
GDZ	Gediz	1.24	9	i P	Pb	21 50 42.5	-0.5
GDZ				i S	Sn	21 50 59.8	0.0
DEMI	Demirci	1.24	342	i P	Pg	21 50 43.1	-0.3
DEMI				i S	Sb	21 50 58.4	-0.7
DEMI	Demirci	1.24	342	i P	Pg	21 50 43.1	-0.3
DEMI				i S	Sb	21 50 58.4	-0.7
MLSB	Milas	1.28	244	ePN	Pn	21 50 43.0	-0.4
MLSB	Milas	1.28	244	ePn	Pn	21 50 43.0	-0.4
AKHS	Akhisar	1.50	313	i P	Pg	21 50 47.7	-0.6
AKHS	Akhisar	1.50	313	i P	Pg	21 50 47.7	-0.6
BOLV	Bolvadin	1.61	57	i P	Pg	21 50 50.9	+0.6
BOLV				i S	Sg	21 51 14.7	+3.5
BOLV	Bolvadin	1.61	57	i P	Pg	21 50 50.9	+0.6
IZM	Izmir	1.63	290	ePN	Pn	21 50 47.6	-0.6
IZM				eSN	Sb	21 51 10.8	+0.5
IZM	Izmir	1.63	290	ePn	Pn	21 50 47.6	-0.6
IZM				eSn	Sb	21 51 10.8	+0.5
AKAS	Kas	1.65	169	i P	Pg	21 50 51.2	0.0
AKAS	Kas	1.65	169	i P	Pg	21 50 51.2	0.0
DAT	Datca	1.73	230	ePN	Pn	21 50 49.6	0.0
DAT	Datca	1.73	230	ePn	Pn	21 50 49.6	0.0
BLCB	Balcova	1.80	288	ePN	Pn	21 50 49.6	-0.8
BLCB	Balcova	1.80	288	ePn	Pn	21 50 49.6	-0.8
DURS	Dursunbey	1.83	342	i P	Pg	21 50 55.1	+0.5
DURS	Dursunbey	1.83	342	i P	Pg	21 50 55.1	+0.5
BALY	Balya	2.25	327	eP	Pn	21 50 57.9	+1.1
BALY	Balya	2.25	327	eP	Pn	21 50 57.9	+1.1
KONT	Konya--Tatoy	2.48	87	ePN	Pn	21 50 59.4	-0.5
KONT	Konya--Tatoy	2.48	87	ePn	Pn	21 50 59.4	-0.5

IDC 07 21:52:55.4±2.1, 32°.15N×49°.39E, h0km, mb3.6/6, mb1 3.6/6, mb1mx3.4/27, mbtmp3.6/6, Error ellipse: s-maj=47.1km s-min=25.7km az=155.0
KISR 07 21:52:58.6±0.3, 31°.81N×49°.25E, h34km±177km, ML3.0
CSEM 07 21:52:58.2±0.2, 32°.06N×49°.49E, h2km, ML3.3, Error ellipse: s-maj=7.7km s-min=3.0km az=119.0
ISCJB 07 21:53:00.8±0.5, 32°.11N±0°.06×49°.4E±0°.1, h58km±9km, mb3.5/6, Error ellipse: s-maj=17.7km s-min=5.2km az=28.8
ISC 07 21:53:02.6±1.1, 32°.05N±0°.06×49°.47E±0°.09, h66km±14km, n24, σ0s.84/32, mb3.5/6, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	0.57	276	ePg	Pn	21 53 09.9	-5.9
KHMZ	Khomeyn	1.74	13	ePg	Pn	21 53 30.1	-0.7
KHMZ				eSg	Sn	21 53 53.7	+1.6
ASAO	Ashtian	2.54	10	ePn	Pn	21 53 41.3	-0.4
GHVR	GHOM	2.87	32	ePn	Pn	21 53 45.0	-1.0
MIB	Mutribah	2.89	220	eP	Pn	21 53 45.4	-0.8
MIB	Mutribah	2.89	220	eP	Pn	21 53 45.4	-0.8
UMR	Umm Al-Rimmam	2.91	212	eP	Pn	21 53 45.6	-0.9
UMR				eS	Sn	21 54 20.9	+0.6
UMR				AML	AML	21 54 22.9	
	comp=Z,112nm,0.3s						
UMR	Umm Al-Rimmam	2.91	212	eP	Pn	21 53 45.6	-0.9
UMR				eS	Sn	21 54 20.9	+0.6
NASN	Na'in	2.92	74	ePn	Pn	21 53 45.8	-1.1
KBD	Kabd	3.25	209	eP	Pn	21 53 50.5	-0.6
KBD				eS	Sn	21 54 29.6	+1.0
KBD				AML	AML	21 54 30.8	
	comp=Z,51nm,0.3s						
KBD	Kabd	3.25	209	eP	Pn	21 53 50.5	-0.6
KBD				eS	Sn	21 54 29.6	+1.0
NAY	Al-Naaiem	3.39	215	eP	Pn	21 53 52.4	-0.6
NAY				eS	Sn	21 54 32.9	+0.9
NAY				AML	AML	21 54 33.2	
	comp=Z,23nm,0.4s						
NAY	Al-Naaiem	3.39	215	eP	Pn	21 53 52.4	-0.6
NAY				eS	Sn	21 54 32.9	+0.9
RDF	Al-Radifah	3.53	209	eP	Pn	21 53 54.6	-0.3
RDF				eS	Sn	21 54 36.3	+0.9
RDF	Al-Radifah	3.53	209	eP	Pn	21 53 54.6	-0.3
RDF				eS	Sn	21 54 36.3	+0.9
THKV	Tehran--Karaj	4.03	16	ePn	Pn	21 54 01.8	-0.2
BRTR	Keskin Array B	14.94	305	Pn	P	21 56 33.0	-1.1
	comp=Z,0.2nm,0.3s,baz=125,slow=12,SNR=16						
AKASG	Malin Array Be	23.91	327	P	P	21 58 09.2	-0.8
	comp=Z,0.4nm,0.4s,baz=133,slow=8.7,SNR=4.8						
BVAR	Borovoye Array	25.84	30	P	P	21 58 28.2	+0.6
	comp=Z,0.3nm,0.5s,baz=204,slow=6.3,SNR=3.3						
MKAR	Makanchi Array	29.07	50	P	P	21 58 57.2	+0.6
	comp=Z,0.3nm,0.6s,baz=251,slow=9.0,SNR=3.8						
FINES	FINESS Array B	33.11	340	P	P	21 59 32.2	+0.3
	comp=Z,0.7nm,0.7s,baz=150,slow=8.1,SNR=5.3						
NB2	NORSAR Subarra	38.20	331	P	P	22 00 15.0	-0.6
	comp=Z,0.8nm,0.5s,baz=122,slow=8.6						
NOA	NORSAR Array B	38.20	331	P	P	22 00 15.2	-0.4
	comp=Z,0.6nm,0.5s,baz=122,slow=8.3,SNR=5.6						
TORD	Torodi Ar. Bea	47.53	258	P	P	22 01 32.3	+0.8
	comp=Z,1.1nm,0.8s,baz=56,slow=8.9,SNR=9.5						

ISK 07 21:59:27.9, 37°.91N×29°.20E, h15km, MD2.6
ISCJB 07 21:59:28.5±0.6, 37°.89N±0°.03×29°.22E±0°.05, h12km±6km, Error ellipse: s-maj=7.7km s-min=5.2km az=29.6
DDA 07 21:59:28.5, 37°.88N×29°.23E, h8km, ML2.8
CSEM 07 21:59:28.5±0.2, 37°.88N×29°.21E, h12km, MD2.6, Error ellipse: s-maj=5.2km s-min=4.0km az=129.0
ISC 07 21:59:28.7±1.0, 37°.88N±0°.03×29°.22E±0°.03, h9km±9km, n24, σ0s.69/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	Denizli	0.20	230	ePG	Pg	21 59 32.8	0.0
DENT	Denizli	0.20	230	ePg	Pg	21 59 32.8	0.0
DNZL	Cakiroluk	0.23	217	i P	Pg	21 59 33.4	-0.2
DNZL				i S	Sg	21 59 37.2	+0.4
DNZL	Cakiroluk	0.23	217	i P	Pg	21 59 33.4	-0.2
DNZL				i S	Sg	21 59 37.2	+0.4
KHAL	Karahalli	0.54	23	i P	Pg	21 59 38.8	-0.4
KHAL				i S	Sg	21 59 46.5	+0.3
KHAL	Karahalli	0.54	23	i P	Pg	21 59 38.8	-0.4
KHAL				i S	Sg	21 59 46.5	+0.3
GLHS	Glhisar (BURDU	0.75	163	ePG	Pg	21 59 43.4	+0.1
GLHS				eSG	Sb	21 59 55.3	+0.8
GLHS	Glhisar (BURDU	0.75	163	ePg	Pg	21 59 43.4	+0.1
GLHS				eSg	Sb	21 59 55.3	+0.8
ISP	Isparta	1.03	93	ePG	Pg	21 59 49.1	+0.6
ISP	Isparta	1.03	93	ePg	Pg	21 59 49.2	+0.6
YER	Yerkesik	1.05	225	ePG	Pb	21 59 48.9	-0.2
YER				eSG	Sb	22 00 04.4	+1.4
YER	Yerkesik	1.05	225	ePg	Pb	21 59 48.9	-0.2
YER				eSg	Sb	22 00 04.4	+1.4
AYDN	Tasoluk	1.09	259	i P	Pb	21 59 49.6	-0.1
AYDN	Tasoluk	1.09	259	i P	Pb	21 59 49.6	-0.1
BCK	Bucak	1.16	111	ePN	Pb	21 59 50.2	-0.8
BCK	Bucak	1.16	111	ePn	Pb	21 59 50.2	-0.8
DEMI	Demirci	1.23	341	i P	Pn	21 59 52.2	+0.1
DEMI	Demirci	1.23	341	i P	Pn	21 59 52.2	+0.1
FETY	Fethiye	1.25	185	ePN	Pn	21 59 51.8	-0.5
FETY	Fethiye	1.25	185	ePn	Pn	21 59 51.8	-0.5
ELL	Elmali	1.25	154	ePN	Pn	21 59 51.8	-0.7
ELL	Elmali	1.25	154	ePn	Pn	21 59 51.8	-0.7
MLSB	Milas	1.29	244	ePN	Pn	21 59 51.5	-1.4
MLSB	Milas	1.29	244	ePn	Pn	21 59 51.5	-1.4

IDC 07 22:05:15.3±2.6, 21°.74S×170°.06E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.6/18, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=98.6km s-min=37.0km az=159.0
ISC 07 22:05:18.3±2.0, 21°.9S±0°.6×170°.2E±0°.2, h25km, n7, σ0s.64/9, mb3.6/3, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.45	266	eP	Pn	22 06 10.0	-0.6
DZM				eS	Sn	22 06 50.9	+0.2
DZM	Mont Dzumac	3.45	266	Pn	Pn	22 06 10.6	+0.1
	5.7nm,0.3s,baz=111,slow=20,SNR=104						
DZM				Sn	Sn	22 06 51.5	+0.8
	8.4nm,0.3s,baz=146,slow=23,SNR=8.2						
NOUC	Port Laguerre	3.58	265	eS	Sn	22 06 53.6	-0.2
STKA	Stephens Creek	27.29	243	P	P	22 11 01.6	+0.7
	1.4nm,0.7s,baz=56,slow=11,SNR=2.9						
ASAR	Alice Springs	33.42	260	P	P	22 11 54.5	-0.8
	0.2nm,0.6s,baz=92,slow=9.3,SNR=5.4						
WRA	Warramunga Arr	33.47	267	P	P	22 11 55.4	-0.3
	0.3nm,0.4s,baz=98,slow=8.5,SNR=15						
GERES	GERESS Array B	147.18	331	PKPbc	PKPbc	22 24 59.8	+0.5
	0.7nm,0.6s,baz=47,slow=4.3,SNR=7.9						

GUC 07 22:09:45.1±0.8, 33°.14S×70°.29W, h15km±2km, MD3.5, ML2.4, 4C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEL	Peldehue	0.33	268	⇓i P	Pg	22 09 51.9	-0.1
PEL				i S	Sg	22 09 57.0	+0.3
PEL				AML	AML	22 10 03.5	
	comp=N,588nm,0.5s						
CLCH	Cerro Calan	0.33	218	⇑i P	Pg	22 09 52.1	+0.1
CLCH				i S	Sb	22 09 57.5	-0.6
CLCH				AML	AML	22 09 59.3	
	comp=E,1μm,0.4s						
CLCH				AML	AML	22 09 59.9	
	comp=E,2μm,0.3s						
PCH	Pirque	0.52	201	⇓i P	Pg	22 09 55.3	-0.3
PCH				i S	Sb	22 10 03.5	0.0
ROCH	El Roble	0.62	285	⇑i P	Pg	22 09 57.4	-0.3
ROCH				i S	Sb	22 10 06.7	-0.2
ROCH				AML	AML	22 10 09.4	
	comp=E,346nm,0.4s						
LMEL	Las Melosas	0.71	174	⇑i P	Pg	22 09 58.4	-0.9
LMEL				i S	Sg	22 10 08.5	-0.5
LMEL				AML	AML	22 10 12.9	
	comp=N,206nm,0.2s						
CHCH	Chadas Angostu	0.85	201	eP	Pb	22 10 01.0	-0.7
CHCH				eS	Sb	22 10 12.5	-0.5
CACH	El Canelo	1.01	195	⇑i P	Pb	22 10 04.3	-0.3
CACH				i S	Sg	22 10 18.5	+0.2
CHNG	Los Chungos	1.61	320	AML	AML	22 10 39.3	
	comp=E,121nm,0.6s						
CHNG				AML	AML	22 10 41.4	
	comp=N,71nm,0.4s						

IDC 07 22:24:30.2±1.3, 12°.97N×51°.28E, h0km, mb3.7/10, mb1 3.9/10, mb1mx3.7/27, mbtmp3.7/10, MS3.5/5, Ms1 3.5/5, ms1mx3.0/31, Error ellipse: s-maj=33.1km s-min=21.5km az=1.0
ISCJB 07 22:24:32.1±1.0, 13°.3N±0°.1×51°.04E±0°.05, h12km, mb3.7/10, MS3.5/4, Error ellipse: s-maj=20.2km s-min=7.1km az=179.4
DHMR 07 22:24:37.2±1.8, 13°.45N×50°.66E, h3km±416km, ML3.1
ISC 07 22:24:33.8±1.2, 13°.3N±0°.2×51°.07E±0°.09, h12km, n18, σ1s.20/17, mb3.7/10, MS3.5/4, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUKL	Al Mukalla	2.30	301	i P	Pn	22 25 11.3	-0.3
MUKL				i S	Sn	22 25 37.1	-2.7
MUKL				AML	AML	22 25 38.8	
	comp=E,197nm,0.9s						
BDHA	Al Bayda'	5.39	278	e	Pn	22 25 55.2	+0.8
	baz=110,slow=18						
BDHA				i P	Pn	22 25 55.2	+0.8
BDHA				AML	AML	22 25 55.6	
	comp=E,96nm,0.3s						
BDHA				i S	Sn	22 26 56.2	-0.4
LBOS		5.69	276	i P	Pn	22 25 59.0	+0.5
LBOS				i S	Sn	22 27 03.3	-0.7
KMBO	Kilima Mbogo	19.83	225	LR	LR	22 37 23.4	
	comp=E,106nm,19.2s,baz=68,slow=39						
GNI	Garni	27.32	349	LR	LR	22 43 31.7	
	comp=E,136nm,19.5s,baz=103,slow=41						
BRTR	Keskin Array B	30.48	333	P	P	22 30 49.0	+2.2
	comp=E,0.3nm,0.7s,baz=162,slow=15,SNR=3.3						
KBZ	Khabaz	31.13	348	LR	LR	22 45 36.3	
	comp=E,115nm,20.1s,baz=220,slow=40						
MKAR	Makanchi Array	42.43	32	P	P	22 32 28.8	+0.3
	comp=E,0.4nm,0.5s,baz=221,slow=9.0,SNR=8.5						
BVAR	Borovoye Array	42.51	17	P	P	22 32 29.8	+0.8
	comp=E,0.6nm,0.6s,baz=193,slow=6.1,SNR=4.9						
KURBB	Kurchatov Arra	43.41	25	P	P	22 32 36.7	+0.4
	comp=E,0.2nm,0.2s,baz=222,slow=7.4,SNR=4.5						
CMAR	Chiang Mai Arr	46.23	77	P	P	22 32 54.6	-4.6
	comp=E,0.9nm,0.3s,baz=278,slow=9.0,SNR=3.3						
TORD	Torodi Ar. Bea	48.00	276	P	P	22 33 12.9	-0.3
	comp=E,2.0nm,0.7s,baz=89,slow=8.0,SNR=16						
ZALV	Zalesovo Beam	48.48	26	P	P	22 33 15.4	-0.9
	comp=E,0.3nm,0.4s,baz=243,slow=6.5,SNR=4.4						
ESDC	Sonseca Array	54.84	309	P	P	22 34 04.9	+0.8
	comp=E,1.2nm,0.6s,baz=97,slow=6.2,SNR=9.1						
NB2	NORSAR Subarra	55.71	338	P	P	22 34 10.0	0.0
	comp=Z,1.1nm,0.8s,baz=124,slow=7.4						
NOA	NORSAR Array B	55.71	338	P	P	22 34 09.4	-0.6
	comp=Z,1.0nm,0.9s,baz=121,slow=7.3,SNR=3.7						
NOA				LR	LR	23 01 58.8	
	comp=Z,20nm,18.9s,baz=120,slow=40						
ARCES	ARCESS Array B	58.48	350	LR	LR	23 02 42.6	
	comp=Z,40nm,20.6s,baz=349,slow=39						
WRA	Warramunga Arr	88.29	111	P	P	22 37 24.2	-1.7
	comp=Z,0.3nm,0.8s,baz=296,slow=4.0,SNR=2.9						

ISCJB 07 22:26:53.6±0.5, 39°.14N±0°.02×20°.85E±0°.03, h10km±4km, Error ellipse: s-maj=3.8km s-min=2.7km az=172.9
TIR 07 22:26:53.5±4.0, 39°.47N×20°.95E, h0km±19km
ATH 07 22:26:53.3, 39°.14N×20°.90E, h15km±1km, MD3.6/17, ML2.8
CSEM 07 22:26:53.5±0.2, 39°.12N×20°.84E, h10km, ML3.0, Error ellipse: s-maj=5.5km s-min=3.7km az=71.0
ISC 07 22:26:53.5±1.0, 39°.13N±0°.02×20°.86E±0°.02, h10km±9km, n97, σ1s.31/121, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	Lefkada island	0.37	205	ePB	Pg	22 27 01.2	+0.3
LKD2				eSB	Sb	22 27 07.9	-0.2
LKD2	Lefkada island	0.37	205	P	Pg	22 27 01.3	+0.3
LKD2				S	Sg	22 27 07.1	+1.2
JAN	Janina	0.53	359	ePN	Pg	22 27 03.6	-0.2
JAN	Janina	0.53	359	P	Pg	22 27 03.3	-0.5
JAN	Janina	0.53	359	ePn	Pg	22 27 03.6	-0.2
JAN				S	Sg	22 27 11.4	+0.6
IGT	Igoumenitsa	0.57	315	P	Pg	22 27 04.1	-0.6
IGT				S	Sg	22 27 12.4	+0.1
EVR	Evrytania	0.77	106	ePN	Pg	22 27 08.0	-0.4
EVR				eSN	Sg	22 27 17.5	-0.9
EVR	Evrytania	0.77	106	P	Pg	22 27 07.8	-0.6
EVR				S	Sb	22 27 19.4	-0.2
VLS	Valsamata	0.97	193	ePB	Pg	22 27 11.0	-1.2
VLS				eSN	Sb	22 27 26.5	+1.1
VLS	Valsamata	0.97	193	ePb	Pg	22 27 11.0	-1.2
VLS				S	Sb	22 27 25.8	+0.4
VLS				eSn	Sb	22 27 26.5	+1.1
THL	Klokotos Trika	0.99	64	ePN	Pg	22 27 11.7	-1.0
THL				eSN	Sg	22 27 25.2	-0.4
THL	Klokotos Trika	0.99	64	P	Pg	22 27 11.2	-1.5
THL	Klokotos Trika	0.99	64	ePn	Pg	22 27 11.7	-1.0
THL				eSn	Sg	22 27 25.2	-0.4
MAKR	Makrakomi, Fth	1.00	96	P	Pg	22 27 12.2	-0.5
MAKR				S	Sb	22 27 26.7	+0.6
SRN	Sarande	1.00	319	ePG	Pg	22 27 12.5	-0.3
SRN				i SG	Sn	22 27 29.0	+1.1
KEK	Kerkira	1.01	306	ePB	Pg	22 27 12.1	-0.8
KEK				eSN	Sb	22 27 27.5	+1.1
KEK	Kerkira	1.01	306	P	Pg	22 27 11.8	-1.1
KEK				eSn	Sb	22 27 27.5	+1.1
KFL	Anninata	1.02	183	P	Pg	22 27 12.0	-1.1
KFL				S	Sb	22 27 27.5	+0.8
EFP	Efpalio	1.08	130	ePN	Pg	22 27 13.5	-0.7
EFP	Efpalio	1.08	130	ePn	Pg	22 27 13.5	-0.7
EFP				S	Sn	22 27 30.6	+1.0
PSA1	Psathopyrgos	1.13	135	ePN	Pn	22 27 15.9	+0.5
AGG	Agios Georgios	1.15	95	ePN	Pg	22 27 14.9	-0.7
AGG	Agios Georgios	1.15	95	ePn	Pg	22 27 14.9	-0.7
AGG				S	Sb	22 27 31.1	+0.6
RLS	Riolos of Patr	1.17	156	ePB	Pg	22 27 14.7	-1.3
RLS	Riolos of Patr	1.17	156	P	Pg	22 27 14.5	-1.5
RLS				S	Sn	22 27 32.2	+0.3
KALE	Kalithea	1.24	126	ePN	Pg	22 27 16.6	-0.8
KALE	Kalithea	1.24	126	ePn	Pg	22 27 16.6	-0.8
KALE	Kalithea	1.24	126	P	Pg	22 27 16.9	-0.5
KALE				S	Sn	22 27 34.7	+0.9
LAKA	Lakka	1.25	135	ePN	Pb	22 27 16.4	-0.7
LAKA	Lakka	1.25	135	P	Pb	22 27 16.4	-0.7
LAKA				S	Sn	22 27 35.6	+1.7
KZN	Kozani	1.37	31	ePN	Pn	22 27 18.3	-0.5
KZN	Kozani	1.37	31	ePn	Pn	22 27 18.3	-0.5
KLV	Kalavryta, Ach	1.48	137	ePN	Pn	22 27 20.3	0.0
KLV	Kalavryta, Ach	1.48	137	ePn	Pn	22 27 20.3	0.0
DSF	Desfina	1.49	118	P	Pn	22 27 20.4	0.0
KBN	Korca	1.50	358	ePG	Pg	22 27 24.1	+1.9
KBN				i SG	Sg	22 27 44.3	+2.7
KBN	Korca	1.50	358	ePg	Pg	22 27 24.1	+1.9
	SNR=9.0						
GUR	Goura	1.66	135	ePN	Pn	22 27 23.5	+0.7
GUR	Goura	1.66	135	ePn	Pn	22 27 23.5	+0.7
FNA	Florina	1.70	13	ePN	Pb	22 27 24.3	-0.6
FNA	Florina	1.70	13	ePn	Pb	22 27 24.3	-0.6

AMT	Artemida-Makis	1.73	157	ePN	Pg	22 27 25.9	-0.7
AMT	Artemida-Makis	1.73	157	ePn	Pg	22 27 25.9	-0.7
LKR	Lokris	1.74	105	ePN	Pb	22 27 25.1	-0.4
LKR	Lokris	1.74	105	ePn	Pb	22 27 25.1	-0.4
NEO	Neokhori	1.84	84	ePN	Pn	22 27 26.1	+0.8
NEO	Neokhori	1.84	84	ePn	Pn	22 27 26.1	+0.8
BIA	Bitola	1.92	11	ePn	Pb	22 27 28.2	-0.6
BIA	Bitola	1.92	11	ePn	Pb	22 27 28.1	-0.6
LTK	Loutraki	1.98	123	ePN	Pb	22 27 28.8	-1.0
LTK	Loutraki	1.98	123	ePn	Pb	22 27 28.8	-1.0
ITM	Ithomi	2.12	156	ePN	Pb	22 27 31.2	-0.8
ITM	Ithomi	2.12	156	ePn	Pb	22 27 31.2	-0.8
VLX	Vlachokerasia	2.12	145	ePN	Pb	22 27 31.8	-0.4
VLX	Vlachokerasia	2.12	145	ePn	Pb	22 27 31.8	-0.4
GRG	Griva	2.18	32	ePN	Pn	22 27 30.7	+0.9
GRG	Griva	2.18	32	ePn	Pn	22 27 30.7	+0.9
PYL	PYLOS	2.33	162	ePB	Pn	22 27 32.8	+0.8
AOS	Alonnisos	2.35	88	ePN	Pn	22 27 32.9	+0.7
AOS	Alonnisos	2.35	88	ePn	Pn	22 27 32.9	+0.7
PLG	Polygyros	2.35	57	ePN	Pn	22 27 32.8	+0.6
PLG	Polygyros	2.35	57	ePn	Pn	22 27 32.8	+0.6
DID	Didima	2.47	130	ePB	Pn	22 27 34.7	+0.8
DID	Didima	2.47	130	ePb	Pn	22 27 34.7	+0.8
NAIG	Nisos Aigina	2.48	123	ePN	Pn	22 27 35.2	+1.3
NAIG	Nisos Aigina	2.48	123	ePn	Pn	22 27 35.2	+1.3
ATH	Athens Observa	2.52	116	ePB	Pn	22 27 36.1	+1.6
ATH	Athens Observa	2.52	116	ePb	Pn	22 27 36.1	+1.6
VAY	Valandovo	2.55	30	ePn	Pn	22 27 33.6	-1.3
VAY	Valandovo	2.55	30	ePn	Pn	22 27 34.1	-0.9
SOH	Sokhos	2.56	48	ePN	Pn	22 27 36.8	+1.7
SOH	Sokhos	2.56	48	ePn	Pn	22 27 36.8	+1.7
PHP	Peshkopia	2.57	353	ePN	Pb	22 27 38.3	-1.5
PHP	Peshkopia	2.57	353	ePn	Pb	22 27 38.3	-1.5
	SNR=4.0						
PTL	Penteli	2.59	114	ePB	Pn	22 27 36.8	+1.3
PTL	Penteli	2.59	114	ePb	Pn	22 27 36.8	+1.3
DYR	Agios Nikonas	2.63	153	ePB	Pn	22 27 38.2	+2.1
DYR	Agios Nikonas	2.63	153	ePb	Pn	22 27 38.2	+2.1
VLI	Veliai	2.91	145	ePN	Pn	22 27 41.3	+1.4
VLI	Veliai	2.91	145	ePn	Pn	22 27 41.3	+1.4
PUK	Puka	3.00	346	ePN	Pn	22 27 43.9	+2.6
PUK	Puka	3.00	346	ePn	Pn	22 27 43.9	+2.6
	SNR=4.0						
NVR	Nevrokopi	3.19	45	ePN	Pn	22 27 45.0	+1.2
NVR	Nevrokopi	3.19	45	ePn	Pn	22 27 45.0	+1.2
BCI	Bajram Curri	3.29	350	ePN	Pn	22 27 47.9	+2.7
BCI	Bajram Curri	3.29	350	ePn	Pn	22 27 47.9	+2.7
	SNR=4.0						
KYTH	Kithira	3.33	148	ePB	Pn	22 27 48.4	+2.8
KYTH	Kithira	3.33	148	ePb	Pn	22 27 48.4	+2.8
LIA	Limnos Island	3.43	76	ePN	Pn	22 27 47.9	+0.9
LIA	Limnos Island	3.43	76	ePn	Pn	22 27 47.9	+0.9
BARS	Barje	3.75	11	ePn	Pn	22 27 53.9	+2.4
VTS	Vitosha	3.89	26	ePn	Pn	22 27 55.5	+2.0
STON	Ston	4.44	328	ePn	Pn	22 27 59.7	-1.2
STON				Sn	Sn	22 28 48.9	-3.7
STON	Ston	4.44	328	ePn	Pn	22 27 59.6	-1.2
DIVS	Divibare	5.01	353	ePn	Pn	22 28 08.4	-0.4
NVLJ	Novalja	7.03	322	ePn	Pn	22 28 35.5	-1.0
NVLJ				Sn	Sn	22 29 51.9	-4.6
NVLJ	Novalja	7.03	322	ePn	Pn	22 28 35.5	-1.0

WEL 07 22:31:55.9±0.5, 36°.45S×177°.73E, h5km, ML3.7/4, Error ellipse: s-maj=3.4km s-min=3.4km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.21	158	S*	Sg	22 32 30.1	-4.6
MXZ				AML	AML	22 32 34.0	
PUZ	Puketiti	1.68	166	PN	Pn	22 32 25.4	-0.5
PUZ				AML	AML	22 32 50.7	
PUZ				AML	AML	22 32 54.9	
URZ	Urewera	1.87	195	P*	Pn	22 32 26.4	-2.2
URZ				S*	Sn	22 32 49.4	-3.3
URZ				AML	AML	22 32 56.0	
MWZ	Matawai	1.89	185	P*	Pn	22 32 26.7	-2.2
MWZ				S*	Sn	22 32 50.4	-2.8
MWZ				AML	AML	22 32 56.0	
MKAZ	Moumakai	2.16	251	PN	Pn	22 32 31.8	-0.7
TOZ	Tahuroa Road	2.19	234	P*	Pn	22 32 31.8	-1.2
HIZ	Hauiti	3.08	227	PN	Pn	22 32 44.5	-0.7

*ISK **07** 23:22:29.2, 37°.84N×29°.22E, h3km, MD3.0*
*DDA **07** 23:22:29.7, 37°.87N×29°.20E, h1km, MD3.1*
*CSEM **07** 23:22:29.8±0.2, 37°.84N×29°.23E, h2km, MD3.0, Error ellipse: s-maj=3.9km s-min=3.4km az=84.0*
ISC 07 23:22:30.8±1.0, 37°.87N±0°.02×29°.21E±0°.02, h8km±10km, n58, σ1§24/75, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.18	230	ePG	Pg	23 22 34.0	-0.5
DENT	Denizli	0.18	230	ePg	Pg	23 22 34.0	-0.5
DNZL	Cakiroluk	0.22	215	i P	Pg	23 22 34.7	-0.5
DNZL				i S	Sg	23 22 38.4	+0.1
DNZL	Cakiroluk	0.22	215	i P	Pg	23 22 34.7	-0.5
DNZL				i S	Sg	23 22 38.4	+0.1
KHAL	Karahalli	0.55	24	i P	Pg	23 22 40.0	-1.4
KHAL	Karahalli	0.55	24	i P	Pg	23 22 40.0	-1.4
GOLH	Golhisar	0.69	156	i P	Pg	23 22 43.0	-1.1
GOLH				i S	Sb	23 22 54.6	-0.3
GOLH	Golhisar	0.69	156	i P	Pg	23 22 43.0	-1.1
GOLH				i S	Sb	23 22 54.6	-0.3
GLHS	Glhisar (BURDU	0.75	162	ePG	Pg	23 22 43.7	-1.5
GLHS				eSG	Sb	23 22 54.7	-1.9
GLHS	Glhisar (BURDU	0.75	162	ePg	Pg	23 22 43.7	-1.5
GLHS				eSg	Sb	23 22 54.7	-1.9
KULA	Kula-Manisa	0.77	326	ePG	Pg	23 22 45.9	+0.2
KULA				eSG	Sg	23 22 56.9	+1.1
KULA	Kula-Manisa	0.77	326	ePg	Pg	23 22 45.9	+0.2
KULA				eSg	Sg	23 22 56.9	+1.1
MANT	Manisa	0.80	321	i P	Pg	23 22 45.5	-0.8
MANT	Manisa	0.80	321	i P	Pg	23 22 45.5	-0.8
YER	Yerkesik	1.04	225	ePG	Pg	23 22 49.5	-1.2
YER	Yerkesik	1.04	225	ePg	Pg	23 22 49.5	-1.2
ISP	Isparta	1.04	92	ePG	Pg	23 22 49.0	-1.8
ISP	Isparta	1.04	92	ePg	Pg	23 22 49.0	-1.8
AYDN	Tasoluk	1.07	259	i P	Pg	23 22 50.4	-1.0
AYDN				i S	Sb	23 23 05.5	-0.3
AYDN	Tasoluk	1.07	259	i P	Pg	23 22 50.4	-1.0
AYDN				i S	Sb	23 23 05.5	-0.3
TURN	Turunc	1.10	206	i P	Pn	23 22 55.2	+2.6
TURN	Turunc	1.10	206	i P	Pn	23 22 55.2	+2.6
BCK	Bucak	1.17	110	ePN	Pg	23 22 51.9	-1.3
BCK	Bucak	1.17	110	ePn	Pg	23 22 51.9	-1.3
DEMI	Demirci	1.23	342	i P	Pg	23 22 53.8	-0.6
DEMI				i S	Sg	23 23 08.8	-1.6
DEMI	Demirci	1.23	342	i P	Pg	23 22 53.8	-0.6
DEMI				i S	Sg	23 23 08.8	-1.6
GDZ	Gediz	1.24	10	i P	Pg	23 22 53.2	-1.3
GDZ				i S	Sg	23 23 11.0	+0.4
GDZ	Gediz	1.24	10	i P	Pg	23 22 53.2	-1.3
GDZ				i S	Sg	23 23 11.0	+0.4
SHUT	Suhut-Afyon	1.26	57	ePN	Pg	23 22 54.1	-0.8
SHUT	Suhut-Afyon	1.26	57	ePn	Pg	23 22 54.2	-0.8
MLSB	Milas	1.27	244	ePN	Pg	23 22 53.3	-1.9
MLSB	Milas	1.27	244	ePn	Pg	23 22 53.3	-1.9
ALT	Altintas	1.38	31	ePN	Pg	23 22 57.2	-0.1
ALT	Altintas	1.38	31	ePn	Pg	23 22 57.2	-0.1
AKHS	Akhisar	1.49	313	i P	Pn	23 22 58.3	+0.4
AKHS				i S	Sg	23 23 20.9	+2.3
AKHS	Akhisar	1.49	313	i P	Pn	23 22 58.3	+0.4
AKHS				i S	Sg	23 23 20.9	+2.3
TVSB	Tavsanli	1.59	7	ePN	Pn	23 22 59.4	0.0
TVSB	Tavsanli	1.59	7	ePn	Pn	23 22 59.4	0.0
BOLV	Bolvadin	1.61	58	i P	Pg	23 23 01.4	-0.3
BOLV				i S	Sg	23 23 27.3	+4.6
BOLV	Bolvadin	1.61	58	i P	Pg	23 23 01.4	-0.3
IZM	Izmir	1.62	290	ePN	Pn	23 23 00.2	+0.5
IZM	Izmir	1.62	290	ePn	Pn	23 23 00.2	+0.5
AKAS	Kas	1.66	169	i P	Pg	23 23 02.5	-0.2
AKAS	Kas	1.66	169	i P	Pg	23 23 02.5	-0.2
BLCB	Balcova	1.78	287	ePN	Pn	23 23 01.3	-0.6
BLCB	Balcova	1.78	287	ePn	Pn	23 23 01.3	-0.6
DST	Dursunbey	1.79	345	ePN	Pn	23 23 03.0	+0.9
DST	Dursunbey	1.79	345	ePn	Pn	23 23 03.0	+0.9
BALB	Balikesir	2.05	330	ePN	Pn	23 23 06.2	+0.6
BALB	Balikesir	2.05	330	ePn	Pn	23 23 06.2	+0.6
BALY	Balya	2.24	327	i P	Pn	23 23 08.6	+0.3
BALY	Balya	2.24	327	i P	Pn	23 23 08.6	+0.3
ULDT	Uludag	2.27	359	i P	Pg	23 23 13.3	-1.0
ULDT	Uludag	2.27	359	i P	Pg	23 23 13.3	-1.0
GONE	Gonen-Balikesi	2.48	332	ePN	Pn	23 23 11.5	+0.1
GONE	Gonen-Balikesi	2.48	332	ePn	Pn	23 23 11.5	+0.1
KCTX	Karacabey (Bur	2.48	345	ePN	Pn	23 23 12.3	+0.8
KCTX	Karacabey (Bur	2.48	345	ePn	Pn	23 23 12.4	+0.8

*IDC **07** 23:24:33.9±0.4, 58°.95N×136°.88W, h0km, mb4.8/31, mb1 4.9/37, mb1mx4.9/38, mbtmp4.7/37, ML4.3/6, MS4.2/31, Ms1 4.3/31, ms1mx4.1/40, Error ellipse: s-maj=10.2km s-min=6.8km az=20.0*
*ISCJB **07** 23:24:34.7±0.6, 58°.91N±0°.02×136°.76W±0°.03, h15km±3km, mb5.0/289, MS4.4/54, Error ellipse: s-maj=3.3km s-min=1.8km az=37.4*
*MOS **07** 23:24:34.7±0.9, 58°.92N×136°.83W, h17km, mb5.3/111, MS4.4/12, Error ellipse: s-maj=8.3km s-min=3.3km az=96.1*
*NEIC **07** 23:24:35.2, 58°.77N×136°.66W, h4km, mb5.1/182, ML5.1(AEIC), MW4.8(USGS), MW4.9(PGC), After AEIC.*
NEIC Felt [III] at Douglas, Gustavus and Haines; [II] at Juneau and Skagway. Also felt at Elfin Cove, Hoonah and Yakutat. Felt [II] at Whitehorse, Yukon Territory, Canada. Also felt at Haines Junction.
*PGC **07** 23:24:36.9±2.8, 58°.81N×136°.56W, h15km, ML5.3/4, Mw4.9*
PGC 83km Wsw of Haines, Ak Southeastern Alaska Felt (I) at Whitehorse.
*BJI **07** 23:24:39.4, 59°.51N×137°.18W, h32km, mB5.1/30, mb5.3/54, Ms5.1/36, Ms7 4.8/34*
*GCMT **07** 23:24:40.2±0.2, 58°.81N×136°.81W, h21km, MW5.0, Moment Tensor Solution. s53,c71; s76,c112; Moment tensor: Scale 10^{16}Nm; M_{rr}3.39±.14; $M_{\theta\theta}$0.63±.10; $M_{\phi\phi}$-4.01±.11; $M_{r\theta}$1.10±.22; $M_{\theta\phi}$0.24±.08; $M_{\phi r}$1.05±.17; Best double couple: $M_0$4.00000×10^{16} NP1:ϕ_s158.00000°, δ41.00000°, λ60.00000°. NP2:ϕ_s15.00000°, δ55.00000°, λ113.00000°. Principal axes: T 3.9200, Plg70.0000°, Azm337.0000°; N 0.2500, Plg19.0000°, Azm182.0000°; P -4.1600, Plg8.0000°, Azm89.0000°; Data Used: II IU IC G CN.*
*SZGRF **07** 23:24:41.0, 59°.49N×137°.36W, h16km, mb5.3, MS4.5, Southeastern Alaska, United States*
ISC 07 23:24:35.2±0.5, 58°.78N±0°.03×136°.78W±0°.03, h11km±3km, h11km:pP-P, n1086, σ1§11/1162, mb5.1/304, MS4.3/54, 124C-63D, Southeastern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKAG	Skagway	1.02	47	P	Pg	23 24 52.7	-2.0
SKAG				S	Sg	23 25 05.9	-2.0
BESE	Bessie Mountai	1.02	100	P	Pg	23 24 52.9	-2.0
BESE				S	Sg	23 25 06.2	-2.0
PNL	Peninsula	1.62	305	P	Pn	23 25 03.2	-0.4
PNL				S	Sn	23 25 24.3	-0.1
YKU2	Yakutat	1.66	298	P	Pn	23 25 04.6	+0.4
SIT	Sitka	1.89	155	P	Pn	23 25 05.9	-1.4
SIT				S	Sn	23 25 29.8	-1.3
SIT	Sitka	1.89	155	P	Pn	23 25 05.9	-1.4
SIT				S	Sn	23 25 29.8	-1.3
HYT	Haines Junctio	2.09	350	P	Pn	23 25 09.8	-0.3
HYT	Haines Junctio	2.09	350	⇑Pn	Pn	23 25 10.1	-0.1
HYT				⇑Sg	Sb	23 25 39.4	+0.3
WHY	Whitehorse	2.12	26	P	Pn	23 25 10.3	-0.3
WHY				S	Sn	23 25 37.1	+0.1
WHY	Whitehorse	2.12	26	⇑Pn	Pn	23 25 10.5	-0.2
WHY				⇑Sg	Sb	23 25 40.1	+0.1
SAMH	Samovar Hills	2.45	305	P	Pn	23 25 15.5	+0.3
GRNC	Granite Creek	3.19	310	P	Pn	23 25 25.5	0.0
BARK	Barkley Ridge	3.33	302	P	Pn	23 25 27.1	-0.1
WRAK	Wrangell Islan	3.36	133	P	Pn	23 25 26.7	-0.8
BARN	Barnard Glacie	3.36	315	P	Pn	23 25 27.4	-0.3
KULT	Kultieth River	3.37	299	P	Pn	23 25 27.7	0.0
KIAG	Kiagna River	3.54	310	P	Pn	23 25 30.2	0.0
DLBC	Dease Lake	3.55	93	P	Pn	23 25 29.3	-0.9
DLBC				Sn	Sn	23 26 10.9	-1.3
DLBC				Lg	Lg	23 26 24.9	
DLBC	Dease Lake	3.55	93	⇓Pn	Pn	23 25 29.3	-0.9
DLBC				⇓Pg	Pb	23 25 37.9	-0.1
DLBC				⇓Sg	Sb	23 26 23.4	+2.3
DLBC	Dease Lake	3.55	93	Pn	Pn	23 25 29.3	-0.9
	41nm,0.3s,baz=262,slow=8.4,SNR=225						
DLBC				Pg	Pb	23 25 37.7	-0.2
	314nm,0.3s,baz=272,slow=15,SNR=136						
DLBC				Sn	Sn	23 26 10.9	-1.3
	323nm,0.3s,baz=134,slow=18,SNR=6.7						
DLBC				Lg	Lg	23 26 24.9	
	589nm,0.3s,baz=227,slow=23,SNR=8.1						
BGLC	Bering Glacier	3.58	295	P	Pn	23 25 31.4	+0.9
BALM	Baldy	3.60	311	P	Pn	23 25 31.7	+0.7
BALM	Baldy	3.60	311	P	Pn	23 25 31.7	+0.7
GRIN	Grindle Hills	3.66	297	P	Pn	23 25 32.6	+1.0
KHIT	Khitrov Hills	3.69	300	P	Pn	23 25 32.2	+0.1
PTPK	Patty Peak	3.74	313	P	Pn	23 25 33.5	+0.5
CRAG	Craig	3.87	147	P	Pn	23 25 34.4	0.0
BERG	Berg Lake	3.88	298	P	Pn	23 25 35.3	+0.7
NICHA	Nichawak Mount	3.94	295	P	Pn	23 25 36.0	+0.4
MCARA	McCarthy VSAT	4.08	313	P	Pn	23 25 38.1	+0.8
VRDI	Verde Repeater	4.16	309	P	Pn	23 25 38.5	-0.2
RAGM	Ragged Mountai	4.33	295	ePn	Pn	23 25 41.0	+0.1
EYAK	Cordova Ski Ar	4.88	295	P	Pn	23 25 49.6	+1.2
BCA3	Beaver Creek A	4.95	333	P	Pn	23 25 48.7	-0.7
MID	Middleton Isla	4.97	282	P	Pn	23 25 49.9	+0.3
MID	Middleton Isla	4.97	282	P	Pn	23 25 49.9	+0.3
DIV	Divide	5.10	301	P	Pn	23 25 52.3	+0.8
NDB	Naden	5.28	155	⇓Pn	Pn	23 25 53.9	-0.1
NDB				Sg	Sg	23 27 22.5	-2.1
NDB	Naden	5.28	155	⇓Pn	Pn	23 25 53.9	-0.1
NDB				⇓Sg	Sg	23 27 22.5	-2.1
VLZ	Valdez	5.35	300	P	Pn	23 25 55.6	+0.8
MENT	Mentasta	5.38	324	ePn	Pn	23 25 55.6	+0.3
DAWY	Dawson	5.45	348	P	Pn	23 25 56.9	+0.6
DAWY	Dawson	5.45	348	⇑Pn	Pn	23 25 57.1	+0.7
DAWY				⇓Sn	Sn	23 26 58.7	-0.3
DAWY				⇓Sg	Sg	23 27 24.9	-5.1
HARP	HAARP	5.50	315	P	Pn	23 25 58.6	+1.7
RUBB	Prince Rupert	5.74	138	⇑Pn	Pn	23 25 59.0	-1.1
RUBB				Sg	Sg	23 27 36.9	-2.2
RUBB	Prince Rupert	5.74	138	⇑Pn	Pn	23 25 59.0	-1.1
RUBB				⇑Sg	Sg	23 27 36.9	-2.2
PAX	Paxson	5.97	318	eP	Pn	23 26 01.4	-2.1
PAX	Paxson	5.97	318	ePn	Pn	23 26 01.4	-2.1
DOT	Dot Lake	6.02	327	ePn	Pn	23 26 03.3	-0.7
DIB	Dawson Inlet,	6.08	155	⇓Pn	Pn	23 26 04.8	-0.1
DIB	Dawson Inlet,	6.08	155	⇓Pn	Pn	23 26 04.8	-0.1
MOBC	Moresby Island	6.26	152	⇑Pn	Pn	23 26 07.5	+0.1
MOBC				Sg	Sg	23 27 51.7	-4.1
MOBC	Moresby Island	6.26	152	⇑Pn	Pn	23 26 07.5	+0.1
MOBC				⇓Sg	Sg	23 27 51.7	-4.1
SCRK	Sand Creek	6.26	330	P	Pn	23 26 07.3	-0.1
BNAB	Bonilla	6.31	144	⇓Pn	Pn	23 26 07.5	-0.4
RIDG	Independ'e Rid	6.32	325	P	Pn	23 26 07.6	-0.5
EGAK	Eagle	6.37	343	ePn	Pn	23 26 09.6	+0.8
SML	Sawmill	6.50	303	eP	Pn	23 26 11.7	+1.1
SML				e		23 27 25.8	
SML	Sawmill	6.50	303	ePn	Pn	23 26 11.7	+1.1
SML				eSn	Sn	23 27 25.8	+1.1
SEW	Seward	6.60	287	ePn	Pn	23 26 11.5	-0.4
SEW				eSn	Sn	23 27 24.9	-2.1
PMR	Palmer	6.77	300	eP	Pn	23 26 15.8	+1.5
PMR				e		23 27 29.3	
PMR	Palmer	6.77	300	ePn	Pn	23 26 15.8	+1.5
PMR				eSn	Sn	23 27 29.2	-2.1
BNB	Barry Inlet	6.83	153	⇑Pn	Pn	23 26 15.2	-0.1
BNB				⇓Sg	Sg	23 28 07.7	-6.5
FNBB	Fort Nelson	7.15	83	⇑Pn	Pn	23 26 19.1	-0.4
FNBB				⇑Pg	Pg	23 26 45.4	-6.5
FNBB				⇓Sg	Sg	23 28 15.9	-8.5
BRLK	Bradley Lake	7.30	284	P	Pn	23 26 22.4	+0.9
SUA	Susitna One	7.47	297	P	Pn	23 26 24.9	+0.8
MCK	McKinley	7.68	315	eP	Pn	23 26 28.6	+1.8
MCK	McKinley	7.68	315	ePn	Pn	23 26 28.6	+1.8
IL1	Eielson Array	7.68	326	P	Pn	23 26 25.8	-1.0
ILAR	Eielson Array	7.68	326	Pn	Pn	23 26 23.9	-3.0
ILAR				Lg	Lg	23 28 33.5	
ILAR	Eielson Array	7.68	326	Pn	Pn	23 26 23.9	-3.0
	1.4nm,0.3s,baz=144,slow=13,SNR=87						
ILAR				Lg	Lg	23 28 33.5	
	5.8nm,0.3s,baz=130,slow=28,SNR=4.1						
ILAR				LR	LR	23 29 49.7	
	comp=Z,2μm,18.5s,baz=143,slow=42						
CCB	Clear Creek Bu	7.87	323	P	Pn	23 26 29.9	+0.5
STLK	Strandline Lak	7.99	296	P	Pn	23 26 31.9	+0.8
SPU	Mount Spurr	8.03	294	P	Pn	23 26 31.3	-0.3
TRF	Thorofare Moun	8.04	311	P	Pn	23 26 32.8	+0.9
COLA	College	8.04	324	eP	Pn	23 26 29.7	-2.1
COLA	College	8.04	324	ePn	Pn	23 26 29.6	-2.1
CKL	Chakachamna La	8.17	294	P	Pn	23 26 33.5	0.0
MDM	Murphy Dome	8.22	324	P	Pn	23 26 33.2	-1.0
DFR	Drift River	8.25	290	P	Pn	23 26 35.0	+0.4
RSO	Redoubt South	8.27	289	ePn	Pn	23 26 34.9	-0.2
RSO				eSn	Sn	23 28 08.9	+0.4
RDWB	Redoubt West	8.32	289	P	Pn	23 26 34.8	-0.8
KDAK	Kodiak Island	8.39	270	P	Pn	23 26 36.0	-0.5
KDAK				Sn	Sn	23 28 08.1	-2.9
KDAK	Kodiak Island	8.39	270	Pn	Pn	23 26 36.3	-0.2
	885nm,0.6s,SNR=23						
KDAK	Kodiak Island	8.39	270	Pn	Pn	23 26 34.8	-1.7
	7.9nm,0.3s,baz=64,slow=7.7,SNR=26						
KDAK				Sn	Sn	23 28 08.1	-2.9
	5.7nm,0.3s,baz=280,slow=23,SNR=7.3						
KDAK				LR	LR	23 29 54.8	
	comp=Z,3μm,19.3s,baz=59,slow=38						
OHAK	Old Harbor	8.90	267	ePn	Pn	23 26 43.0	-0.5
INK	Inuvik	9.68	7	Pn	Pn	23 26 53.9	-0.2
INK				Lg	Lg	23 29 34.6	
INK	Inuvik	9.68	7	Pn	Pn	23 26 53.9	-0.2
	3.2nm,0.3s,baz=192,slow=13,SNR=28						
INK				Lg	Lg	23 29 34.6	
	4.0nm,0.3s,baz=178,slow=6.6,SNR=5.1						
INK				LR	LR	23 30 29.4	
	comp=Z,661nm,20.7s,baz=201,slow=37						
SVW2	Sparrevohn	9.71	292	ePn	Pn	23 26 54.1	-0.5
COLD	Coldfoot	10.42	330	ePn	Pn	23 27 04.7	+0.4
YKA	Yellowknife Ar	11.48	62	Pn	Pn	23 27 16.8	-2.0
YKA				Sn	Sn	23 29 19.6	-7.3
YKA				Lg	Lg	23 30 31.0	
YKA	Yellowknife Ar	11.48	62	Pn	Pn	23 27 16.7	-2.0
	4.6nm,0.3s,baz=263,slow=13,SNR=165						
YKA				Sn	Sn	23 29 19.5	-7.3
	2.7nm,0.3s,baz=253,slow=22,SNR=6.2						
YKA				Lg	Lg	23 30 31.0	
	1.1nm,0.3s,baz=131,slow=12,SNR=4.5						
YKW3	Yellowknife Ar	11.49	61	⇑Pn	Pn	23 27 17.1	-1.8
CHGN	Chignik	11.87	267	ePn	Pn	23 27 24.7	+0.6
PGC	Sidney	12.82	136	ePn	Pn	23 27 42.5	+5.4
OBC	Olympics--Boni	13.13	139	P	P	23 27 49.0	-2.7
MBW	Mount Baker	13.29	132	P	P	23 27 50.6	-3.0
SDPT	Sand Point	13.31	265	ePn	Pn	23 27 48.6	+4.8
BLN	Blyn Mountain	13.54	137	P	P	23 27 53.9	-2.3
NLWA	Neilton Lookou	13.76	140	ePn	Pn	23 27 52.9	+2.9
GSM	Grass Mountain	14.64	136	P	P	23 28 08.5	0.0
GSM	Grass Mountain	14.64	136	P	P	23 28 08.5	0.0
WTV	Waterville	14.93	131	P	P	23 28 12.0	+0.3
LON	Longmire	15.02	137	eP	P	23 28 11.4	-1.3
LON				pmax	pmax		
	comp=Z,33nm,1.0s						
LON	Longmire	15.02	137	ePn	P	23 28 11.4	-1.3
	comp=Z,33nm,1.0s						
FALS	False Pass	15.05	266	ePn	Pn	23 28 07.0	-0.5
NEW	Newport	15.66	124	ePn	P	23 28 19.7	0.0
	comp=Z,51nm,1.1s						
NEW				Lg	Lg	23 32 51.4	
NEW	Newport	15.66	124	Pn	Pn	23 28 17.1	+1.5
	comp=Z,0.2nm,0.3s,baz=327,slow=12,SNR=26						
NEW				Lg	Lg	23 32 51.4	
	comp=Z,0.1nm,0.3s,baz=156,slow=6.4,SNR=9.2						
NEW				LR	LR	23 35 12.5	
	comp=Z,1μm,18.4s,baz=322,slow=40						
NEW	Newport	15.66	124	P	Pn	23 28 17.0	+1.4
	baz=16,SNR=29						
TNA	Tin City	15.91	308	ePn	Pn	23 28 19.0	+0.4
	comp=Z,129nm,1.2s						
HAWA	Hanford	16.17	133	ePn	P	23 28 24.8	-0.6
	comp=Z,16nm,0.9s						
C11A	Tepee Creek (N	16.36	123	P	P	23 28 27.0	-0.5
	baz=16						
A13A	Flathead Natio	16.39	117	P	P	23 28 26.9	-0.9
	baz=16						
COR	Corvallis	16.43	144	eP	P	23 28 31.1	+2.8
COR				pmax	pmax		
	comp=Z,227nm,1.7s						
COR	Corvallis	16.43	144	eP	P	23 28 31.1	+2.8
	comp=Z,227nm,1.7s						
WALA	Waterton Lakes	16.53	116	ePn	P	23 28 29.5	0.0
	comp=Z,5.8nm,3.0s						
B13A	Whitefish	16.77	119	⇑P	P	23 28 31.1	-0.9
	baz=17,SNR=22						
C12B	Naegeli Ranch,	16.81	122	P	P	23 28 32.9	+0.4
	baz=17,SNR=5.5						
A14A	Double T Ranch	16.82	115	⇓P	P	23 28 32.8	+0.1
	baz=17,SNR=59						
BSMT	Bassoo Peak	17.01	120	ePn	P	23 28 35.4	+0.6
UNV	Unalaska Valle	17.12	266	ePn	Pn	23 28 35.7	+1.5
	comp=Z,119nm,0.9s						
A15A	Johnson Ranch,	17.14	114	⇓P	P	23 28 36.5	+0.3
	baz=17,SNR=57						
C13A	Hot Springs	17.23	120	P	P	23 28 37.2	+0.1
	baz=17						
JTMT	Jette	17.31	120	ePn	P	23 28 38.5	+0.4
B14A	Marquette Ranc	17.33	117	⇑P	P	23 28 38.4	+0.2
	baz=17,SNR=52						
YBMT	Yellow Bay	17.35	119	ePn	P	23 28 39.1	+0.6
	comp=Z,50nm,1.6s						
GAMB	Gambell	17.35	301	ePn	Pn	23 28 38.0	+1.2
	comp=Z,324nm,1.6s						
D12A	Red Ives Fores	17.36	123	P	P	23 28 39.3	+0.7
	baz=17						
C14A	Swan Lake	17.54	119	P	P	23 28 41.2	+0.6
	baz=17						
SWMT	Swartz Lake	17.62	120	ePn	P	23 28 42.9	+1.4
B15A	Bradely Ranch,	17.69	116	⇑P	P	23 28 42.1	-0.2
	baz=18,SNR=21						
A16A	West Butte Ran	17.71	113	P	P	23 28 42.6	+0.1
	baz=18						
KEBM	Edson Butte	17.71	149	ePn	P	23 28 44.9	+2.5
D13A	Huson	17.72	122	P	P	23 28 43.5	+0.9
	baz=18,SNR=26						
B16A	M & M Farms, S	18.03	114	P	P	23 28 47.0	+1.0
	baz=18						
SLMT	Seeley Lake	18.04	120	ePn	P	23 28 47.5	+1.2
C15A	Salmond Ranch,	18.06	117	P	P	23 28 47.5	+1.2
	baz=18,SNR=34						
A17A	Triple J Farms	18.14	111	P	Pn	23 28 47.1	+0.2
	baz=18,SNR=95						
MSO	Missoula	18.16	121	ePn	P	23 28 49.1	+1.7
	comp=Z,66nm,1.2s						
MSO	Missoula	18.16	121	P	P	23 28 49.3	+1.9
	baz=18,SNR=30						
D14A	Greenough	18.16	120	P	P	23 28 48.5	+1.1
	baz=18,SNR=60						
BMO	Blue Mountains	18.32	131	eP	P	23 28 50.7	+1.5
	comp=Z,28nm,1.3s						
HUMO	Hull Mountain	18.34	146	eP	P	23 28 52.1	+2.8
	comp=Z,32nm,1.3s						
HUMO				ePcP	PcP	23 33 21.2	+0.9
E13A	Victor	18.34	122	P	P	23 28 49.7	+0.2
	baz=18,SNR=23						
KBO	Bosley Butte	18.35	149	eP	P	23 28 52.0	+2.4
	comp=Z,74nm,1.2s						
CHMT	Chamberlain Mo	18.40	120	eP	P	23 28 51.9	+1.7
F12A	Elk City	18.42	126	⇓P	P	23 28 51.7	+1.4
	baz=18,SNR=21						
C16A	Fuhringer Ranc	18.44	116	P	P	23 28 51.1	+0.5
	baz=18						
B17A	L&G Farms, Che	18.54	113	P	Pn	23 28 54.1	+2.3
	baz=18,SNR=54						
A18A	Metzger Ranch,	18.57	110	P	P	23 28 52.0	+0.1
	baz=18,SNR=44						
D15A	Lincoln	18.64	118	P	Pn	23 28 54.4	+1.4
	baz=18,SNR=28						
E14A	Clinton	18.67	121	P	Pn	23 28 55.1	+1.7
	baz=19						
F13A	Darby	18.79	124	P	Pn	23 28 55.6	+0.7
	baz=19,SNR=20						
G12A	Big Creek, Yel	18.89	127	P	Pn	23 28 58.1	+2.0
	baz=19,SNR=18						
B18A	Beardsley Farm	18.96	111	P	Pn	23 28 57.1	+0.2
	baz=19,SNR=29						
C17A	Wharram Farm,	19.03	114	P	P	23 28 57.3	+0.3

baz=19,SNR=18
E15A **Deer Lodge** 19.05 120 ⇑P Pn 23 28 58.2 +0.2
baz=19,SNR=86
KRMB **Red Mountain** 19.08 149 eP Pn 23 29 00.7 +2.3
comp=Z,222nm,2.5s
D16A **Dana Ranch, Ca** 19.09 117 ⇓P Pn 23 28 59.4 +0.8
baz=19,SNR=50
A19A **Klindworth Far** 19.11 109 P P 23 28 58.0 +0.2
baz=19,SNR=43
F14A **Wisdom** 19.19 122 P Pn 23 29 02.2 +2.4
baz=19,SNR=20
HRY **Holter Researc** 19.20 118 eP Pn 23 29 00.6 +0.8
YBH **Yreka Blue Hor** 19.22 146 eP Pn 23 29 01.7 +1.7
comp=Z,34nm,1.1s
YBH **Yreka Blue Hor** 19.22 146 P Pn 23 29 01.8 +1.7
comp=Z,0.1nm,0.3s,baz=335,slow=4.8,SNR=17
YBH LR LR 23 35 31.7
comp=Z,1μm,18.2s,baz=334,slow=34
EGMT **Eagleton** 19.23 112 eP Pn 23 29 00.1 -0.1
comp=Z,219nm,1.0s
EGMT **Eagleton** 19.23 112 P Pn 23 29 00.1 -0.1
baz=19,SNR=45
B19A **Brinkman Farms** 19.33 110 P Pn 23 29 01.8 +0.5
baz=19,SNR=18
FFC **Flin Flon** 19.36 87 eP P 23 29 00.1 -0.4
FFC pmax pmax
comp=Z,81nm,0.9s
FFC **Flin Flon** 19.36 87 eP P 23 29 00.1 -0.4
comp=Z,81nm,0.9s
E16A **East Helena** 19.40 118 ⇓P Pn 23 29 02.6 +0.3
baz=19,SNR=23
D17A **Six Diamond Ra** 19.41 115 P Pn 23 29 02.8 +0.5
baz=19,SNR=39
A20A **Cobblestone Ra** 19.55 108 ⇑P Pn 23 29 03.4 -0.5
baz=19,SNR=16
F15A **Butte** 19.56 121 ⇑P Pn 23 29 06.1 +1.9
baz=19,SNR=81
H12A **Diamond D Ranc** 19.56 127 P Pn 23 29 04.0 -0.2
baz=19,SNR=6.9
LRM **Limekiln Ridge** 19.59 121 ePn Pn 23 29 06.4 +1.8
KHMM **Horse Mountain** 19.73 150 eP Pn 23 29 08.0 +1.8
comp=Z,96nm,1.3s
C19A **Slack Wire Ran** 19.77 112 P Pn 23 29 06.2 -0.4
baz=20,SNR=69
D18A **Linhart Farms,** 19.79 114 ⇓P Pn 23 29 07.4 +0.5
baz=20,SNR=8.8
E17A **Martinsdale** 19.83 117 P Pn 23 29 07.1 -0.3
baz=20
DLMT **Dillon** 19.88 122 ePn Pn 23 29 09.7 +1.7
comp=Z,91nm,1.2s
WVOR **Wild Horse Val** 19.89 137 eP Pn 23 29 08.6 +0.5
WVOR pmax pmax
comp=Z,32nm,1.0s
WVOR **Wild Horse Val** 19.89 137 eP Pn 23 29 08.6 +0.5
comp=Z,32nm,1.0s
A21A **Bergtoll Ranch** 19.97 106 P Pn 23 29 08.5 -0.4
baz=20
F16A **Kennard Place,** 19.99 120 ⇓P Pn 23 29 09.0 -0.2
baz=20,SNR=27
I12A **Atlanta** 20.07 129 P Pn 23 29 09.9 -0.4
baz=20
G15A **Dillon** 20.08 122 P P 23 29 09.7 +1.1
baz=20,SNR=18
BOZ **Bozeman (W)** 20.09 120 eP Pn 23 29 10.3 -0.2
BOZ pmax pmax
comp=Z,136nm,1.3s
BOZ **Bozeman (W)** 20.09 120 eP Pn 23 29 10.3 -0.2
comp=Z,136nm,1.3s
MFID **Camas Ranch** 20.10 131 eP Pn 23 29 10.4 -0.2
comp=Z,56nm,1.3s
MFID **Camas Ranch** 20.10 131 ⇓P Pn 23 29 10.3 -0.3
baz=20,SNR=6.5
MCMT **McKenzie Canyo** 20.19 123 eP Pn 23 29 12.1 +0.3
comp=Z,21nm,1.0s
E18A **Harlowton** 20.20 115 P Pn 23 29 11.0 -0.7
baz=20,SNR=34
D19A **Cripps Ranch,** 20.26 113 P Pn 23 29 11.9 -0.4
baz=20,SNR=38
C20A **Veseth Ranch,** 20.30 110 ⇑P Pn 23 29 11.9 -0.9
baz=20,SNR=25
B21A **Ellsworth Farm** 20.30 108 P P 23 29 11.7 +1.0
baz=20,SNR=41
WDC **Whiskeytown Da** 20.33 147 eP Pn 23 29 13.7 +0.6
WDC pmax pmax
comp=Z,70nm,1.1s
WDC **Whiskeytown Da** 20.33 147 eP Pn 23 29 13.7 +0.6
comp=Z,70nm,1.1s
G16A **Moss Hill, Enn** 20.34 121 P P 23 29 12.5 +1.1
baz=20,SNR=19
F17A **Fitzpatrick Pl** 20.34 118 P Pn 23 29 12.9 -0.6
baz=20,SNR=21
A22A **Carney Farms,** 20.48 105 P Pn 23 29 14.0 -0.9
baz=20,SNR=32
HLID **Hailey** 20.55 128 eP Pn 23 29 15.1 -0.8
comp=Z,38nm,1.0s
HLID **Hailey** 20.55 128 P Pn 23 29 15.2 -0.8
baz=20,SNR=30
I14A **Mackay** 20.65 126 P Pn 23 29 16.2 -0.9
baz=20,SNR=37
C21A **Desert Coulee** 20.66 109 P Pn 23 29 16.1 -0.9
baz=20,SNR=15
D20A **Manuel Ranch,** 20.67 112 P P 23 29 16.1 +1.2
baz=20,SNR=60
G17A **Pierce Place,** 20.75 119 ⇑P Pn 23 29 18.0 -0.2
baz=21,SNR=14
F18A **Big Timber** 20.78 116 P P 23 29 17.1 +1.1
baz=21,SNR=32
KIPM **Iron Peak** 20.80 150 eP Pn 23 29 19.0 +0.2
comp=Z,90nm,1.4s
E19A **Rath Farm, Rou** 20.81 114 P P 23 29 17.4 +1.1
baz=21,SNR=42
QLMT **Earthquake Lak** 20.81 121 eP Pn 23 29 18.1 -0.9
GCMT **Greycliff** 20.89 117 eP Pn 23 29 18.8 -1.0
comp=Z,143nm,1.5s
KCPM **Cahto Peak** 20.89 150 eP Pn 23 29 19.4 -0.4
comp=Z,135nm,1.9s
B22A **Reddig Ranch S** 20.89 107 P Pn 23 29 19.0 -0.8
baz=21,SNR=24
H16A **Russell Place,** 20.99 121 ⇓P Pn 23 29 20.7 -0.4
baz=21,SNR=14
E20A **Meyer Farm, Mu** 21.09 113 P P 23 29 20.4 +1.0
baz=21,SNR=28
YMR **Madison River** 21.15 121 eP P 23 29 22.2 +2.0
comp=Z,179nm,1.2s
F19A **Roth Farm, Mol** 21.18 115 P P 23 29 21.6 +1.2
baz=21,SNR=27
D21A **La Casta Ranch** 21.24 110 P P 23 29 22.6 +1.6
baz=21,SNR=23
B23A **Brockton** 21.29 105 P P 23 29 22.9 +1.4
baz=21,SNR=68
G18A **Lazy EL Ranch,** 21.29 117 ⇑P P 23 29 24.2 +2.5
baz=21,SNR=7.0
C22A **Vida** 21.32 108 P P 23 29 22.9 +1.1
baz=21,SNR=20
YFT **Old Faithful** 21.38 121 eP P 23 29 27.4 +4.7
comp=Z,46nm,0.9s
A24A **Westby** 21.49 103 P P 23 29 25.6 +2.0
baz=21,SNR=62
H17A **Grant Village** 21.54 120 P P 23 29 26.6 +2.2
baz=21
I16A **Newdale** 21.54 123 P P 23 29 26.3 +2.0
baz=21,SNR=18
E21A **Keefer Ranch,** 21.57 112 P P 23 29 26.0 +1.5
baz=21,SNR=14
RLMT **Red Lodge** 21.57 117 eP P 23 29 26.0 +1.3
comp=Z,48nm,0.9s
D22A **Cohagen** 21.58 109 P P 23 29 25.7 +1.1
baz=21,SNR=32
F20A **Billings** 21.59 114 P P 23 29 26.8 +2.0
baz=22
C23A **Lambert** 21.63 107 ⇑P P 23 29 26.1 +1.0
baz=22,SNR=19
BEKR **Beckworth** 21.63 144 eP P 23 29 27.4 +2.0
comp=Z,30nm,1.4s
HOPS **Hopland** 21.67 150 eP P 23 29 26.4 +0.9
comp=Z,64nm,1.2s
DGMT **Dagmar** 21.68 104 eP P 23 29 27.0 +1.3
comp=Z,396nm,1.6s
DGMT **Dagmar** 21.68 104 ⇑P P 23 29 27.3 +1.6
baz=22,SNR=7.9
H18A **Shoshone NF, C** 21.73 119 P P 23 29 27.5 +1.1
baz=22,SNR=12
IMW **Indian Meadow** 21.76 122 eP P 23 29 30.0 +3.1
comp=Z,83nm,1.0s
OHCM **Honcut** 21.79 147 eP P 23 29 28.1 +1.4
DCID1 **Drake Creek** 21.90 123 eP P 23 29 30.2 +2.0
comp=Z,114nm,1.0s
ATKA **Atka Island** 21.96 269 eP P 23 29 28.7 +0.1
comp=Z,86nm,0.9s
MOOW **Moose Ponds** 21.97 122 eP P 23 29 30.3 +1.3
comp=Z,238nm,2.1s
G20A **Bridger** 21.99 116 P P 23 29 30.3 +1.2
baz=22,SNR=20
RRI2 **Red Ridge** 22.04 123 eP P 23 29 31.7 +1.9
comp=Z,58nm,1.0s
D23A **Lindsay** 22.05 108 P P 23 29 30.9 +1.3
baz=22,SNR=20
H19A **Powell** 22.05 118 P P 23 29 31.2 +1.5
baz=22
TPAW **Teton Pass** 22.08 122 eP P 23 29 32.2 +1.9
comp=Z,68nm,1.0s
LOHW **Long Hollow** 22.14 122 eP P 23 29 33.0 +2.2
comp=Z,57nm,1.3s
BMN **Battle Mountai** 22.16 137 eP P 23 29 32.6 +1.6
BMN pmax pmax
comp=Z,18nm,1.0s
BMN **Battle Mountai** 22.16 137 eP P 23 29 32.6 +1.6
comp=Z,18nm,1.0s
RES **Resolute Bay** 22.18 28 P P 23 29 29.1 -1.7
RES Lg Lg 23 36 08.3
RES **Resolute Bay** 22.18 28 P P 23 29 29.1 -1.7
comp=Z,44nm,0.9s,baz=243,slow=7.6,SNR=9.1
RES Lg Lg 23 36 08.3
comp=Z,15nm,1.0s,baz=337,slow=22,SNR=5.0
RES LR LR 23 39 02.8
comp=Z,540nm,19.0s,baz=67,slow=39
SNOW **Snow King Moun** 22.19 122 eP P 23 29 33.6 +2.2
comp=Z,34nm,1.0s
C24A **Savage** 22.19 106 P P 23 29 32.8 +1.7
baz=22,SNR=49
E22A **Miles City** 22.19 110 P P 23 29 32.7 +1.5
baz=22
REDW **Red Top Meadow** 22.23 123 eP P 23 29 33.6 +1.8
comp=Z,1.2nm,1.3s
WCN **Washoe City** 22.34 143 eP P 23 29 34.3 +1.4
WCN pmax pmax
comp=Z,44nm,1.4s
WCN **Washoe City** 22.34 143 eP P 23 29 34.2 +1.4
comp=Z,44nm,1.4s
I18A **Diamond G Ranc** 22.42 120 P P 23 29 35.4 +1.5
baz=22
E23A **Ismay** 22.47 109 P P 23 29 34.6 +0.5
baz=22,SNR=26
D24A **Glendive** 22.52 107 P P 23 29 36.5 +1.8
baz=22,SNR=34
I19A **Meeteetse** 22.53 119 ⇑P P 23 29 36.4 +1.4
baz=22,SNR=14
AHID **Auburn Hatcher** 22.60 124 eP P 23 29 37.7 +2.0
comp=Z,31nm,1.2s
ELK **Elko** 22.61 133 eP P 23 29 37.2 +1.3
comp=Z,18nm,1.1s
H20A **Greybull** 22.64 116 P P 23 29 37.3 +1.2
baz=22
HVU **Hansel Valley** 22.70 128 eP P 23 29 38.5 +1.7
HVU pmax pmax
comp=Z,25nm,1.0s
HVU **Hansel Valley** 22.70 128 eP P 23 29 38.5 +1.7
comp=Z,25nm,1.0s
G22A **Birney** 22.91 113 P P 23 29 39.2 +0.4
baz=23,SNR=7.7
E24A **Baker** 22.92 108 P P 23 29 40.0 +1.2
baz=23
F23A **Volborg** 22.97 111 ⇑P P 23 29 40.7 +1.3
baz=23,SNR=27
H21A **Big Horn, Sher** 22.99 115 P P 23 29 40.7 +1.0
baz=23,SNR=8.5
I20A **Worland** 23.00 118 P P 23 29 41.0 +1.3
baz=23,SNR=6.0
J19A **Crowheart** 23.11 120 P P 23 29 41.7 +0.7
baz=23
BW06 **Boulder Array** 23.27 122 eP P 23 29 43.7 +0.9
comp=Z,122nm,1.9s
BW06 eSn Sn 23 34 13.5 +0.5
PDAR **Pinedale Array** 23.27 122 P P 23 29 43.6 +0.9
PDAR **Pinedale Array** 23.27 122 P P 23 29 43.6 +0.9
comp=Z,4.7nm,1.0s,baz=308,slow=7.3,SNR=14
CMB **Columbia Colle** 23.31 146 eP P 23 29 44.0 +1.0
CMB pmax pmax
comp=Z,68nm,1.8s
CMB **Columbia Colle** 23.31 146 eP P 23 29 44.0 +1.0
comp=Z,68nm,1.8s
H22A **Clearmont** 23.34 114 P P 23 29 43.9 +0.7
baz=23
HWUT **Hardware Ranch** 23.35 126 eP P 23 29 44.7 +1.2
comp=Z,21nm,1.1s
F24A **Ekalaka** 23.35 109 P P 23 29 44.1 +0.8
baz=23,SNR=41
J20A **Shoshoni** 23.48 118 ⇓P P 23 29 45.8 +1.1
baz=23,SNR=6.1
I21A **Big Trails, Te** 23.49 117 P P 23 29 45.3 +0.4
baz=23,SNR=19
K19A **Absolon Red Bu** 23.55 120 P P 23 29 46.5 +1.1
baz=23,SNR=7.9
NVAR **Mina Array Bea** 23.59 142 P P 23 29 47.8 +1.9
NVAR **Mina Array Bea** 23.59 142 P P 23 29 47.8 +1.9
comp=Z,5.7nm,0.7s,baz=323,slow=8.1,SNR=48
NV11 **Mina Array Sit** 23.64 141 eP P 23 29 48.0 +1.7
I22A **9 Mile Ranch,** 23.81 115 P P 23 29 48.8 +0.9
baz=24,SNR=11
DUG **Dugway** 24.03 130 eP P 23 29 52.4 +2.4
DUG pmax pmax
comp=Z,22nm,1.1s
DUG **Dugway** 24.03 130 eP P 23 29 52.4 +2.4
comp=Z,22nm,1.1s
DUG **Dugway** 24.03 130 ⇑P P 23 29 51.8 +1.8
baz=24,SNR=14
H24A **Dirks Ranch, A** 24.09 111 P P 23 29 51.0 +0.4
baz=24,SNR=20
J22A **Midwest** 24.18 116 ⇓P P 23 29 52.0 +0.6
baz=24,SNR=28
SAO **San Andreas Ge** 24.20 149 eP P 23 29 53.3 +1.8
SAO pmax pmax
comp=Z,15nm,0.9s
SAO **San Andreas Ge** 24.20 149 eP P 23 29 53.3 +1.8
comp=Z,15nm,0.9s
JLU **Jordanelle** 24.23 127 eP P 23 29 53.2 +1.2
comp=Z,16nm,1.2s
K21A **Alcova** 24.42 118 P P 23 29 54.1 +0.4
baz=24
L20A **Wamsutter** 24.42 121 P P 23 29 54.2 +0.4
baz=24
MDND **Maddock** 24.43 100 P P 23 29 54.6 +1.1
baz=24
DAU **Daniels Canyon** 24.47 127 eP P 23 29 56.2 +1.9
DAU pmax pmax
comp=Z,19nm,1.1s
DAU **Daniels Canyon** 24.47 127 eP P 23 29 56.2 +1.9
comp=Z,19nm,1.1s
MTUM **Tungsten Hills** 24.49 143 eP P 23 29 56.3 +1.9
R11A **Troy Canyon, C** 24.59 137 P P 23 29 56.4 +1.2
baz=24,SNR=41
MPU **Maple Canyon** 24.65 129 eP P 23 29 57.2 +1.4
comp=Z,10nm,1.0s
K22A **Casper** 24.74 117 ⇓P P 23 29 57.9 +1.3
baz=25,SNR=11
RSSD **Black Hills** 24.80 112 eP P 23 29 57.7 +0.5
RSSD pmax pmax
comp=Z,74nm,1.1s
RSSD **Black Hills** 24.80 112 eP P 23 29 57.7 +0.5
comp=Z,74nm,1.1s
ULM **Lac du Bonnet** 24.88 92 eP P 23 29 58.1 +0.6
comp=Z,35nm,1.0s
ULM **Lac du Bonnet** 24.88 92 P P 23 29 58.0 +0.6
comp=Z,8.2nm,0.8s,baz=306,slow=10,SNR=6.8
ULM LR LR 23 40 25.3
comp=Z,1μm,19.0s,baz=348,slow=38
L21A **Rawlins** 24.89 120 P P 23 29 58.7 +0.7
baz=25
M20A **Sweetwater, Wa** 24.91 121 P P 23 29 59.1 +1.0
baz=25
K23A **Bowen Ranch, D** 25.08 116 ⇓P P 23 29 59.7 +0.1
baz=25,SNR=7.7
M21A **Separation Pea** 25.18 120 P P 23 30 01.3 +0.7
baz=25
RCTC **Rector, Farmer** 25.25 145 P P 23 30 02.3 +1.4
baz=25
N20A **Spence Gulch,** 25.40 122 P P 23 30 03.7 +1.0
baz=25,SNR=19
J25A **Sunshine Ranch** 25.46 113 P P 23 30 03.5 +0.5
baz=25
O19A **Miners Draw (B** 25.47 124 P P 23 30 04.1 +1.0
baz=25
CWC **Cottonwood Cre** 25.48 143 P P 23 30 05.0 +1.7
baz=25
L23A **Garrett** 25.54 117 P P 23 30 04.4 +0.5
baz=25
PTRM **Twissleman Ran** 25.58 147 eP P 23 30 06.5 +2.4
MVU **Marysvale** 25.72 131 eP P 23 30 07.3 +1.8
comp=Z,18nm,1.1s
VES **Vestal, Richgr** 25.73 145 P P 23 30 06.7 +1.3
baz=26
Q16A **Castle Valley** 25.77 129 P P 23 30 07.1 +1.1
baz=26,SNR=10
N21A **Black Mountain** 25.79 121 P P 23 30 07.0 +0.8
baz=26,SNR=13
FURC **Furnace Creek,** 25.85 141 P P 23 30 08.1 +1.7
baz=26
ARUT **Antelope Range** 25.87 134 eP P 23 30 08.0 +1.2
ARUT pmax pmax
comp=Z,21nm,1.0s
ARUT **Antelope Range** 25.87 134 eP P 23 30 08.0 +1.2
comp=Z,21nm,1.0s
SRU **San Rafael** 25.87 128 P P 23 30 07.8 +0.9
baz=26
O20A **White River Ci** 25.98 123 P P 23 30 08.4 +0.5
baz=26
MPMC **Manual Prospec** 26.02 142 P P 23 30 10.2 +2.0
baz=26,SNR=8.9
AGMN **Agassiz Nation** 26.07 96 eP P 23 30 08.8 +0.5
comp=Z,33nm,1.0s
ISA **Isabella** 26.08 144 eP P 23 30 08.9 +0.3
ISA pmax pmax
comp=Z,19nm,1.0s
ISA **Isabella** 26.08 144 eP P 23 30 08.9 +0.3
comp=Z,19nm,1.0s
ISA **Isabella** 26.08 144 P P 23 30 09.2 +0.6
baz=26
P19A **Cripple Cowboy** 26.08 125 P P 23 30 09.7 +0.9
baz=26
CCUT **Cedar City** 26.11 134 eP P 23 30 10.6 +1.6
comp=Z,11nm,1.1s
BILL **Bilibino** 26.13 314 ⇑iP P 23 30 09.1 +0.4
BILL **Bilibino** 26.13 314 eP P 23 30 09.1 +0.4
comp=Z,88nm,1.5s
O21A **Pagoda** 26.26 122 P P 23 30 11.6 +1.2
baz=26
K26A **Motz Farm, Whi** 26.28 113 ⇓P P 23 30 10.8 +0.4
baz=26,SNR=5.5
PHWY **Pilot Hill** 26.29 118 eP P 23 30 14.6 +3.8
comp=Z,125nm,1.4s
N23A **Red Feather La** 26.39 119 P P 23 30 14.5 +2.8
baz=26,SNR=9.0
PKM **Peak Mountain** 26.40 147 P P 23 30 13.9 +2.2
baz=26
P20A **De Beque** 26.45 124 P P 23 30 12.6 +0.6
baz=26
M24A **Cheyenne** 26.45 117 P P 23 30 12.6 +0.5
baz=26
LRMC **Laurel Mountai** 26.49 143 P P 23 30 14.1 +1.7
baz=26,SNR=7.8
J28A **Allard Ranch,** 26.68 109 P P 23 30 15.1 +1.1
baz=26,SNR=9.7
O22A **Kremmling** 26.71 121 ⇓P P 23 30 15.1 +0.6
baz=27,SNR=12
K27A **Flueckinger Fa** 26.73 112 ⇑P P 23 30 15.2 +0.7
baz=27,SNR=5.1
P21A **Newcastle** 26.83 123 P P 23 30 16.8 +1.2
baz=27,SNR=11
GSC **Goldstone** 26.93 142 eP P 23 30 18.4 +2.1
GSC pmax pmax
comp=Z,21nm,1.0s
GSC **Goldstone** 26.93 142 eP P 23 30 18.4 +2.1
comp=Z,22nm,1.0s
GSC **Goldstone** 26.93 142 P P 23 30 18.5 +2.1
baz=27,SNR=7.2
O23A **Lake Granby, G** 26.95 120 P P 23 30 17.7 +1.0
baz=27,SNR=9.0
TUQ **Turquoise Moun** 27.10 140 ⇓P P 23 30 18.1 +0.2
baz=27,SNR=12
PV04 **Paradox Valley** 27.15 126 eP P 23 30 17.8 -0.6
S18A **Hurst Farm, Bl** 27.30 129 P P 23 30 20.3 +0.5
baz=27
Q21A **Lamborn Mesa,** 27.35 124 P P 23 30 20.9 +0.7
baz=27
ISCO **Idaho Springs** 27.42 120 eP P 23 30 24.6 +3.6
ISCO pmax pmax
comp=Z,30nm,1.3s
ISCO **Idaho Springs** 27.42 120 eP P 23 30 24.6 +3.6
comp=Z,30nm,1.3s
ISCO **Idaho Springs** 27.42 120 ⇑P P 23 30 21.6 +0.6
baz=27,SNR=16
U15A **North Rim** 27.50 134 P P 23 30 22.3 +0.7
baz=27
PV01 **Paradox Valley** 27.51 126 eP P 23 30 22.5 +0.8
comp=Z,2μm,1.1s
MWC **Mount Wilson** 27.54 145 eP P 23 30 24.0 +2.1
MWC pmax pmax
comp=Z,25nm,1.2s
MWC **Mount Wilson** 27.54 145 eP P 23 30 24.0 +2.1
comp=Z,25nm,1.2s
R20A **Redvale** 27.55 126 P P 23 30 22.4 +0.4
baz=27,SNR=6.9
K29A **Lazy Trails An** 27.63 109 P P 23 30 23.5 +1.0
baz=28
BFSC **Mount Baldy Ra** 27.65 144 P P 23 30 24.2 +1.4
baz=28
P23A **Jefferson** 27.67 121 P P 23 30 24.2 +1.0
baz=28
R21A **Cimarron** 27.75 124 P P 23 30 25.0 +1.1
baz=28
W13A **Hualapai Mount** 28.10 137 P P 23 30 28.1 +1.1
baz=28
FX1 **Attu Island--F** 28.15 280 eP P 23 30 26.9 -0.1
FX1 **Attu Island--F** 28.15 280 P P 23 30 26.8 -0.3
comp=Z,9.3nm,0.7s,baz=70,slow=15,SNR=4.7
FX1 LR LR 23 42 32.3
comp=Z,324nm,18.4s,baz=283,slow=38
OGNE **Ogallala** 28.18 114 eP P 23 30 29.3 +1.9
comp=Z,127nm,1.4s
R22A **Saguache, Gunn** 28.21 124 P P 23 30 29.0 +1.0
baz=28
S21A **Coal Bank Pass** 28.24 126 P P 23 30 29.1 +0.9
baz=28
BELC **Belle Mtn. Jos** 28.39 142 P P 23 30 30.8 +1.3
baz=28
IRM **Iron Mountain** 28.52 140 P P 23 30 32.2 +1.7
baz=28
EYMN **Ely** 28.56 92 eP P 23 30 31.6 +0.8
comp=Z,34nm,1.1s
S22A **4UR Ranch, Cre** 28.58 124 P P 23 30 31.9 +0.6
baz=28
PFO **Pinyon Flat Ob** 28.60 143 P P 23 30 33.7 +2.3
PFO **Pinyon Flat Ob** 28.60 143 P P 23 30 33.7 +2.3
comp=Z,5.3nm,0.9s,baz=341,slow=5.1,SNR=6.1
PFO LR LR 23 43 34.5
comp=Z,382nm,19.2s,baz=329,slow=40
R23A **Moffat** 28.65 122 P P 23 30 33.0 +1.1
baz=28
WUAZ **Wupatki** 28.65 133 eP P 23 30 32.7 +0.9
comp=Z,17nm,1.1s
WUAZ **Wupatki** 28.65 133 P P 23 30 33.1 +1.4
baz=29,SNR=6.1
P26A **Davis Ranch, A** 28.65 117 P P 23 30 33.1 +1.3
baz=28
ECSD **EROS Data Cent** 28.77 104 eP P 23 30 32.6 0.0
comp=Z,33nm,1.1s
Y14A **Wickenburg** 29.46 137 P P 23 30 40.0 +1.1
baz=29
X16A **Lo Mia Camp, P** 29.60 134 P P 23 30 41.8 +1.5
baz=30,SNR=9.6
S25A **Robets Cordova** 29.70 121 P P 23 30 42.0 +0.9
baz=30
BGNE **Belgrade** 29.71 109 P P 23 30 41.5 +0.5
baz=30
Z14A **Wintersburg** 30.00 137 P P 23 30 45.6 +2.1
baz=30
U23A **El Rito** 30.05 125 P P 23 30 45.5 +1.2
baz=30
X18A **Snowflake** 30.07 132 P P 23 30 45.7 +1.3
baz=30
W20A **Ramah** 30.12 129 P P 23 30 46.1 +1.2
baz=30
P30A **Selden** 30.12 113 P P 23 30 45.4 +0.7
baz=30,SNR=5.3
S26A **Kim** 30.17 120 P P 23 30 46.0 +0.8
baz=30
Q29A **Oakley** 30.29 115 P P 23 30 47.0 +0.8
baz=30
W21A **San Fidel** 30.48 128 P P 23 30 49.2 +1.2
baz=30
T26A **Comanche Natio** 30.48 120 P P 23 30 49.1 +1.1
baz=30
Q30A **Quinter** 30.58 114 P P 23 30 49.3 +0.5
baz=30

U25A **Circle Dot Ran** 30.76 122 P P 23 30 51.7 +1.2
baz=31
COWI **Conover** 30.99 93 eP P 23 30 52.5 +0.3
comp=Z,60nm,1.6s
X21A **Alamocita Cree** 31.00 129 P P 23 30 53.8 +1.1
baz=31,SNR=9.5
U26A **Atchley Ranch,** 31.06 122 P P 23 30 53.9 +0.8
baz=31
ANMO **Albuquerque** 31.11 127 eP P 23 30 55.1 +1.4
comp=Z,29nm,1.8s
ANMO ePcP PcP 23 33 49.5 +0.9
Y20A **Horse Springs,** 31.23 130 P P 23 30 56.2 +1.5
baz=31
LAZ **Ladron** 31.30 128 eP P 23 30 56.9 +1.6
comp=Z,15nm,1.4s
Y21A **Point of Rocks** 31.43 129 P P 23 30 58.7 +2.2
baz=31,SNR=6.4
V26A **Tequesquite Ra** 31.54 122 P P 23 30 58.9 +1.5
baz=31,SNR=9.9
LENM **Lemitar** 31.57 128 eP P 23 30 58.0 +0.4
comp=Z,15nm,1.1s
TUC **Tucson** 31.73 135 eP P 23 31 00.5 +1.6
TUC pmax pmax
comp=Z,119nm,1.2s
TUC **Tucson** 31.73 135 eP P 23 31 00.5 +1.6
comp=Z,119nm,1.2s
BNM **Barren Site** 31.73 128 eP P 23 31 00.1 +1.0
comp=Z,20nm,1.3s
BNM ePcP PcP 23 33 50.0 -0.3
Y22A **Socorro** 31.78 128 P P 23 31 01.1 +1.7
baz=32,SNR=7.1
Z20A **Nine Sixteen R** 31.85 131 P P 23 31 02.0 +2.0
baz=32,SNR=7.0
Z21A **St. Cloud Mine** 32.04 130 P P 23 31 03.2 +1.4
baz=32,SNR=5.7
Y23A **Lovelace Mesa,** 32.16 127 P P 23 31 03.9 +1.1
baz=32,SNR=6.8
KSU1 **Kansas State U** 32.23 110 eP P 23 31 03.7 +0.6
comp=Z,77nm,0.7s
Y24A **Capitan** 32.42 126 P P 23 31 06.1 +1.0
baz=32,SNR=6.8
X26A **CR and CF Fran** 32.58 123 P P 23 31 08.2 +1.8
baz=32
JFWS **Jewell Farm** 32.61 98 eP P 23 31 06.0 -0.4
JFWS pmax pmax
comp=Z,27nm,1.1s
JFWS **Jewell Farm** 32.61 98 eP P 23 31 06.0 -0.4
comp=Z,27nm,1.1s
121A **Cookes Peak, D** 32.68 131 P P 23 31 09.2 +1.9
baz=33,SNR=9.4
Y25A **Mesa, Roswell** 32.74 125 P P 23 31 09.4 +1.6
baz=33,SNR=15
220A **Playas Peak, P** 32.94 132 P P 23 31 11.6 +1.9
baz=33,SNR=18
Z24A **Sheeppen Canyo** 32.96 127 P P 23 31 10.5 +0.6
baz=33,SNR=7.6
319A **Douglas** 33.13 134 P P 23 31 12.9 +1.7
baz=33
SEY **Seymchan** 33.15 308 eP P 23 31 10.3 -0.6
AMTX **Amarillo** 33.24 120 eP P 23 31 12.8 +0.6
comp=Z,30nm,1.2s
Z25A **Roswell** 33.28 126 P P 23 31 14.1 +1.5
baz=33,SNR=10
X28A **Dimmitt** 33.32 121 P P 23 31 13.8 +0.9
baz=33
V31A **Spring Creek L** 33.34 117 P P 23 31 13.8 +0.8
baz=33
Y27A **Causey** 33.43 123 P P 23 31 15.6 +1.8
baz=33,SNR=8.6
320A **Kipp Ranch, An** 33.45 133 P P 23 31 15.3 +1.2
baz=33
124A **Stringfield Ra** 33.47 127 P P 23 31 16.1 +1.8
baz=33,SNR=6.7
MSTX **Muleshoe** 33.53 123 P P 23 31 16.1 +1.4
baz=33
Z26A **Caprock** 33.60 125 P P 23 31 16.3 +1.0
baz=34
X29A **Tulia** 33.60 121 P P 23 31 16.5 +1.2
baz=34
125A **Gardner Draw,** 33.84 126 P P 23 31 19.1 +1.6
baz=34,SNR=13
Z27A **Tatum** 33.89 124 P P 23 31 18.9 +1.0
baz=34,SNR=21
X30A **Coker Ranch, T** 33.97 120 P P 23 31 19.5 +1.0
baz=34
224A **Cornudas Mount** 33.99 128 P P 23 31 20.4 +1.7
baz=34,SNR=7.4
X31A **McDonald Ranch** 34.22 119 P P 23 31 21.7 +1.1
baz=34
225A **Deer Hill, Car** 34.25 127 P P 23 31 22.3 +1.2
baz=34
GDL2 **Guadalupe Moun** 34.36 126 eP P 23 31 22.6 +0.7
MNTX **Cornudas Mount** 34.38 128 eP P 23 31 23.1 +1.1
comp=Z,19nm,1.4s
MNTX ePcP PcP 23 33 58.0 +0.5
127A **Arkansas Junct** 34.38 125 P P 23 31 22.5 +0.4
baz=34
Y30A **Stafford Cattl** 34.44 120 P P 23 31 23.3 +0.8
baz=34
226B **Tecolote Peak,** 34.55 126 P P 23 31 24.5 +1.0
baz=34,SNR=12
324A **Moseley Ranch,** 34.56 128 P P 23 31 24.3 +0.6
baz=34,SNR=8.5
Z29A **Hungry Hill Ra** 34.60 122 P P 23 31 24.1 +0.1
baz=34,SNR=9.9
WMOK **Wichita Mounta** 34.69 117 eP P 23 31 24.7 +0.1
WMOK pmax pmax
comp=Z,15nm,0.8s
WMOK **Wichita Mounta** 34.69 117 eP P 23 31 24.7 +0.1
comp=Z,15nm,0.8s
128A **Castleberry Fa** 34.80 124 P P 23 31 26.4 +0.7
baz=35,SNR=8.3
HDIL **Hopedale** 34.81 100 eP P 23 31 26.6 +1.0
comp=Z,49nm,1.2s
325A **Bean Ranch, Si** 34.83 128 P P 23 31 26.9 +0.9
baz=35,SNR=5.7
Z30A **Sanderson Ranc** 34.83 121 P P 23 31 26.3 +0.3
baz=35
TUL1 **Tulsa** 35.15 112 P P 23 31 29.2 +0.6
baz=35,SNR=11
228A **UT Block 9, Go** 35.19 124 P P 23 31 30.3 +1.3
baz=35,SNR=6.8
Z31A **Sharp Cattle R** 35.25 120 P P 23 31 30.1 +0.6
baz=35
425A **Indio Mountain** 35.34 128 P P 23 31 32.2 +1.9
baz=35,SNR=24
PET **Petropavlovsk** 35.37 290 eP P 23 31 28.9 -1.4
PET e 23 32 48.5
PET eS S 23 37 01.1 -3.2
PET pmax pmax
comp=Z,100nm,12.0s
PET MLR MLR
comp=Z,400nm,20.0s
PET MLR MLR
comp=Z,300nm,14.0s
Z32A **Haskell** 35.56 119 P P 23 31 32.6 +0.4
baz=35
229A **Bryant Ranch,** 35.65 123 P P 23 31 33.6 +0.6
baz=36
PETK **Petropavlovsk-** 35.79 290 P P 23 31 33.6 -0.3
PETK 23 34 00.3
PETK **Petropavlovsk-** 35.79 290 P P 23 31 33.6 -0.3
PETK PcP PcP 23 34 00.2 -1.0
PETK **Petropavlovsk-** 35.79 290 P P 23 31 33.6 -0.3
comp=Z,4.8nm,0.6s,baz=83,slow=11,SNR=13
PETK PcP PcP 23 34 00.2 -1.0
comp=Z,5.3nm,1.0s,baz=90,slow=7.4,SNR=3.7
PETK LR LR 23 47 35.7
comp=Z,293nm,18.1s,baz=321,slow=39
426A **McDonald Obser** 35.83 127 P P 23 31 36.0 +1.3
baz=36,SNR=11
427A **Hayter Ranch,** 35.94 126 P P 23 31 35.8 +0.3
baz=36,SNR=6.8
329A **Wagon Wheel Ra** 35.99 124 P P 23 31 36.9 +1.0
baz=36,SNR=11
230A **Sterling City** 36.03 123 P P 23 31 36.9 +0.7
baz=36,SNR=9.4
SFIN **Scholer Farm** 36.07 98 ⇓P P 23 31 36.7 +0.2
baz=36,SNR=5.6
231A **Bronte** 36.34 121 P P 23 31 39.3 +0.4
baz=36
526A **Mary Lane Ranc** 36.34 128 P P 23 31 40.8 +1.8
baz=36,SNR=15
428A **Kincaid Ranch,** 36.35 125 P P 23 31 39.5 +0.5
baz=36
330A **Mertzon** 36.41 123 P P 23 31 40.0 +0.5
baz=36,SNR=15
527A **Woodward Ranch** 36.46 127 P P 23 31 41.0 +0.9
baz=36,SNR=6.4
232A **Coleman** 36.68 121 P P 23 31 42.4 +0.6
baz=37,SNR=12
626A **Big Bend Ranch** 36.77 128 P P 23 31 44.2 +1.6
baz=37,SNR=18
429A **Davenport Ranc** 36.77 125 P P 23 31 43.0 +0.4
baz=37,SNR=8.7
OLIL **Olney** 36.78 101 eP P 23 31 42.9 +0.3
comp=Z,54nm,1.0s
331A **San Angelo** 36.82 122 P P 23 31 43.2 +0.2
baz=37
SCHQ **Schefferville** 36.91 65 eP P 23 31 43.9 +0.4
comp=Z,29nm,1.0s
SCHQ **Schefferville** 36.91 65 P P 23 31 44.3 +0.8
comp=Z,18nm,0.9s,baz=296,slow=9.0,SNR=7.5
SCHQ LR LR 23 47 08.5
comp=Z,872nm,19.1s,baz=311,slow=37
430A **Baggett Ranch,** 36.92 124 P P 23 31 44.5 +0.7
baz=37,SNR=11
SIUC **Southern Illin** 36.99 103 eP P 23 31 44.0 -0.2
comp=Z,123nm,1.8s
SFJD **Kangerlussuaq** 37.00 41 eP P 23 31 45.0 +0.9
comp=Z,75nm,1.5s
SFJD **Kangerlussuaq** 37.00 41⇑iP P 23 31 45.0 +0.9
comp=Z,10.0nm,0.6s
529A **Stev Forest Ra** 37.07 125 P P 23 31 46.1 +1.0
baz=37
TIXI **Tiksi** 37.14 328ciP P 23 31 44.8 -0.4
TIXI pmax pmax
comp=Z,9.0nm,0.8s
TXAR **Lajitas Array** 37.15 128 P P 23 31 47.5 +1.6
TXAR PcP PcP 23 34 05.8 -0.1
TXAR **Lajitas Array** 37.15 128 P P 23 31 47.5 +1.6
comp=Z,2.4nm,0.8s,baz=335,slow=5.5,SNR=27
TXAR PcP PcP 23 34 05.8 -0.1
comp=Z,2.1nm,0.9s,baz=306,slow=2.8,SNR=3.9
TXAR LR LR 23 48 11.3
comp=Z,426nm,19.6s,baz=20,slow=38
627A **Terlingua Ranc** 37.16 127 P P 23 31 47.0 +1.1
baz=37,SNR=15
BLO **Bloomington** 37.26 99 eP P 23 31 46.5 -0.1
BLO pmax pmax
comp=Z,40nm,1.0s
BLO **Bloomington** 37.26 99 eP P 23 31 46.5 -0.1
comp=Z,40nm,1.0s
431A **Sonora** 37.28 123 P P 23 31 47.5 +0.6
baz=37,SNR=20
628A **Black Gap, Mar** 37.34 127 P P 23 31 48.6 +1.2
baz=37,SNR=15
530A **J-C Ranch, Com** 37.42 124 P P 23 31 48.6 +0.5
baz=37,SNR=9.6
USIN **University of** 37.59 102 eP P 23 31 49.5 +0.2
comp=Z,59nm,0.7s
SUMG **Summit** 37.70 29⇑iP P 23 31 50.9 +0.5
SUMG pmax pmax
comp=Z,20nm,1.1s
SUMG **Summit** 37.70 29 eP P 23 31 51.0 +0.6
SUMG **Summit** 37.70 29⇑iP P 23 31 50.9 +0.5
comp=Z,20nm,1.1s
UALR **University of** 37.74 110 eP P 23 31 49.4 -1.3
comp=Z,19nm,0.9s
531A **Rocksprings** 37.75 123 P P 23 31 51.5 +0.6
baz=38,SNR=11
JCT **Junction City** 37.81 122 eP P 23 31 52.0 +0.6
JCT pmax pmax
comp=Z,88nm,2.1s
JCT **Junction City** 37.81 122 eP P 23 31 52.0 +0.6
comp=Z,88nm,2.1s
532A **Rocksprings** 38.06 123 P P 23 31 54.3 +0.8
baz=38,SNR=28
WCI **Wyandotte Cave** 38.09 100 eP P 23 31 53.0 -0.7
WCI pmax pmax
comp=Z,28nm,1.2s
WCI **Wyandotte Cave** 38.09 100 eP P 23 31 53.0 -0.7
comp=Z,28nm,1.2s
ACSO **Alum Creek Sta** 38.31 95 eP P 23 31 55.8 +0.4
comp=Z,44nm,1.0s
631A **Perdido Creek** 38.39 124 P P 23 31 56.8 +0.5
baz=38,SNR=8.1
ERPA **Erie** 38.50 90 eP P 23 31 58.2 +1.2
comp=Z,41nm,0.7s
632A **Uvalde** 38.65 123 P P 23 31 59.0 +0.6
baz=38,SNR=11
ALLY **Alegheny Colle** 38.75 91 eP P 23 31 59.7 +0.5
comp=Z,35nm,0.7s
WVT **Waverly** 38.92 104 eP P 23 31 59.9 -0.7
WVT e 23 34 11.2
WVT pmax pmax
comp=Z,13nm,0.8s
WVT **Waverly** 38.92 104 eP P 23 31 59.9 -0.7
comp=Z,13nm,0.8s
WVT ePcP PcP 23 34 11.2 +0.1
732A **Laxson Ranch,** 39.24 124 P P 23 32 03.9 +0.6
baz=39
DAG **Danmarks Havn** 39.28 19⇑iP P 23 32 02.7 -0.4
DAG pmax pmax
comp=Z,23nm,1.0s
DAG **Danmarks Havn** 39.28 19⇑iP P 23 32 02.7 -0.4
comp=Z,23nm,1.0s
OXF **Oxford** 39.40 107 eP P 23 32 04.5 -0.1
OXF pmax pmax
comp=Z,73nm,0.8s
OXF **Oxford** 39.40 107 eP P 23 32 04.5 -0.1
comp=Z,73nm,0.8s
LONY **Lake Ozonia** 39.55 83 eP P 23 32 06.3 +0.4
comp=Z,30nm,1.4s
PLAL **Pickwick Lake** 39.69 105 eP P 23 32 07.2 +0.1
comp=Z,33nm,1.2s
FRNY **Flat Rock** 39.92 82 eP P 23 32 07.8 -1.0
comp=Z,19nm,1.0s
NCB **Newcomb** 40.19 83 eP P 23 32 11.0 -0.1
comp=Z,70nm,1.4s
BINY **Binghamton** 40.52 87 eP P 23 32 14.6 +0.6
comp=Z,31nm,0.8s
SWET **Senaee** 40.59 103 eP P 23 32 14.4 -0.2
comp=Z,38nm,1.2s
SSPA **Standing Stone** 40.66 90 eP P 23 32 15.6 +0.5
comp=Z,47nm,1.1s
SSPA ePcP PcP 23 34 19.2 +2.6
MDV **Middlebury** 40.71 82 eP P 23 32 15.6 +0.2
TZTN **Tazewell** 40.78 99 eP P 23 32 16.6 +0.5
comp=Z,34nm,1.1s
ACCN **Adirondack Com** 40.89 83 eP P 23 32 17.6 +0.7
comp=Z,242nm,2.5s
CPCT **Cooper Cave** 41.13 101 eP P 23 32 18.1 -0.9
LBNH **Lisbon** 41.19 81 eP P 23 32 19.8 +0.4
LBNH pmax pmax
comp=Z,50nm,1.4s
LBNH **Lisbon** 41.19 81 eP P 23 32 19.8 +0.4
comp=Z,50nm,1.4s
KBS **Kingsbay** 41.29 9 eP P 23 32 20.8 +1.0
KBS pmax pmax
comp=Z,37nm,0.9s
KBS **Kingsbay** 41.29 9 eP P 23 32 20.8 +1.0
comp=Z,37nm,0.9s
TRY **Troy** 41.35 84 eP P 23 32 20.4 -0.3
comp=Z,11nm,0.9s
HNH **Hanover** 41.38 82 eP P 23 32 21.8 +0.9
PQI **Presque Isle** 41.51 76 eP P 23 32 21.4 -0.5
comp=Z,52nm,0.9s
LRAL **Lakeview Retre** 41.78 106 eP P 23 32 23.8 -0.6
comp=Z,118nm,2.1s
LRAL ePP PP 23 34 02.4 +1.6
BLA **Blacksburg** 41.89 95 eP P 23 32 25.3 0.0
BLA pmax pmax
comp=Z,26nm,1.0s
BLA **Blacksburg** 41.89 95 eP P 23 32 25.3 0.0
comp=Z,26nm,1.0s
MVL **Millersville** 41.93 89 eP P 23 32 26.9 +1.4
comp=Z,25nm,1.0s
YAK **Yakutsk** 42.47 316 eP P 23 32 29.0 -0.6
YAK pmax pmax
comp=Z,17nm,0.9s
YAK MLR MLR
comp=E,307nm,12.0s
YAK MLR MLR
comp=Z,475nm,14.0s
YLE **Yale** 42.74 85 eP P 23 32 32.8 +0.7
comp=Z,83nm,0.9s
JSRW **J. Sargeant Re** 42.85 93 eP P 23 32 33.4 +0.5
KMSC **Kings Mountain** 43.01 98 P P 23 32 34.6 +0.3
baz=43
EMMW **East Machias** 43.14 77 eP P 23 32 35.9 +0.6
comp=Z,35nm,0.8s
GOGA **Godfrey** 43.27 102 eP P 23 32 34.9 -1.5
GOGA pmax pmax
comp=Z,39nm,1.6s
GOGA **Godfrey** 43.27 102 eP P 23 32 34.9 -1.5
comp=Z,39nm,1.6s
BRAL **Brewton** 43.38 108 eP P 23 32 37.4 0.0
comp=Z,84nm,1.2s
YSS **Yuzh-Sakhalins** 47.08 293oeP P 23 33 08.3 +1.8
YSS e 23 33 13.0
YSS pmax pmax
comp=Z,60nm,1.0s
YSS MLR MLR
comp=Z,500nm,14.0s
YSS MLR MLR
comp=N,500nm,16.0s
CLNS **Chul'man** 47.80 313 eP P 23 33 13.1 +1.0
CLNS e*PP pP 23 33 22.1 +6.5
CLNS e 23 34 49.2
CLNS e 23 43 06.9
CLNS pmax pmax
comp=Z,29nm,0.9s
CLNS pmax pmax
comp=N,21nm,0.8s
CLNS pmax pmax
comp=E,19nm,0.9s
CLNS pmax pmax
comp=Z,3.0nm,0.3s
CLNS MLR MLR
comp=N,340nm,15.0s
CLNS MLR MLR
comp=Z,393nm,14.0s
CLNS MLR MLR
comp=E,280nm,15.0s
ASAJ **Asahikawa** 49.21 290 eP P 23 33 24.6 +1.6
ASAJ **Asahikawa** 49.21 290 P P 23 33 22.4 -0.6
comp=E,28nm,1.1s,baz=11,slow=3.0,SNR=11
ASAJ LR LR 23 55 47.9
comp=E,260nm,18.0s,baz=183,slow=38
HABR **Khabarovsk** 49.59 299 eP P 23 33 24.1 -1.8
HABR e*PP pP 23 33 33.9 +4.6
HABR e 23 34 45.5
HABR pmax pmax
comp=N,37nm,2.0s
HABR pmax pmax
comp=E,97nm,3.5s
HABR pmax pmax
comp=Z,110nm,2.0s
HABR MLR MLR
comp=Z,254nm,20.0s
ERM **Erimo** 50.49 288 eP P 23 33 33.5 +0.7
ERM pmax pmax
comp=Z,12nm,0.8s
ERM **Erimo** 50.49 288 eP P 23 33 32.7 -0.1
KLR **Kul'dur** 50.52 302 iP P 23 33 30.0 -2.9
KLR pmax pmax
comp=E,40nm,1.6s
KLR pmax pmax
comp=Z,130nm,1.6s
KLR MLR MLR
comp=N,500nm,13.0s
KLR MLR MLR
comp=Z,2μm,13.0s
KEV **Kevo** 51.24 7 ep P 23 33 36.5 -1.5
comp=Z,20nm,0.8s
KEV **Kevo** 51.24 7 eP P 23 33 36.5 -1.5
KEV pmax pmax
comp=Z,20nm,0.8s
KEV **Kevo** 51.24 7 eP P 23 33 36.4 -1.5
ARCES **ARCESS Array B** 51.35 8 P P 23 33 37.7 -1.2
ARCES PcP PcP 23 34 52.9 -0.5
ARCES **ARCESS Array B** 51.35 8 P P 23 33 37.7 -1.2
comp=Z,18nm,0.8s,baz=354,slow=9.8,SNR=30
ARCES PcP PcP 23 34 52.9 -0.5
comp=Z,10nm,0.9s,baz=350,slow=4.9,SNR=6.6
ARCES LR LR 23 55 40.7
comp=Z,112nm,21.9s,baz=349,slow=36
ARE0 **ARCESS Array S** 51.35 8 eP P 23 33 37.6 -1.4
ARE0 ePcP PcP 23 34 52.5 -1.0
TEIG **Tepich** 51.87 117 eP P 23 33 43.9 +0.6
comp=Z,34nm,1.0s
APA **Apatity** 53.75 5⇑eP P 23 33 55.6 -1.1
APA i 23 34 00.0
APA pmax pmax
comp=Z,12nm,0.8s
USRK **Ussuriysk Arra** 54.20 298 P P 23 34 00.1 -0.1
comp=Z,8.6nm,1.0s,baz=42,slow=5.9,SNR=25
USRK LR LR 00 00 52.2
comp=Z,425nm,18.1s,baz=32,slow=40
MDJ **Mudanjiang** 54.97 299 P P 23 34 06.5 +0.6
MDJ pP pP 23 34 15.8 +6.4
MDJ sP sP 23 34 19.0 +8.2
MDJ PcP PcP 23 35 08.5 +1.0
MDJ PP PP 23 36 08.9 +0.4
MDJ S S 23 41 41.2 -6.2
MDJ sS sS 23 42 01.1 +7.9
MDJ ScS ScS 23 43 53.5 -1.2
MDJ pmax pmax
comp=Z,14nm,0.9s
MDJ pmax pmax
comp=Z,84nm,5.2s
MDJ LR LR
comp=N,170nm,18.8s
MDJ LR LR
comp=E,170nm,22.5s
MDJ LR LR
comp=Z,180nm,12.8s
MJAR **Matsushiro Arr** 57.14 287 P P 23 34 21.8 +0.2
MJAR PcP PcP 23 35 16.3 +0.1
MJAR **Matsushiro Arr** 57.14 287 P P 23 34 21.8 +0.2
comp=Z,10nm,0.9s,baz=14,slow=6.9,SNR=28
MJAR PcP PcP 23 35 16.3 +0.1
comp=Z,3.9nm,0.7s,baz=16,slow=3.7,SNR=5.2
MAJO **Matsushiro** 57.15 287 eP P 23 34 23.0 +1.4
MAJO **Matsushiro** 57.15 287 eP P 23 34 23.0 +1.4
MAT **Matsushiro** 57.15 287 P P 23 34 22.3 +0.7
MAT S S 23 42 13.6 -2.9
TMCR **Tamitsa** 57.32 3 eP P 23 34 20.8 -1.5
TMCR pmax pmax
comp=Z,23nm,0.9s
CN2 **Changchun** 57.47 302 eP P 23 34 24.0 +0.3
CN2 epP pP 23 34 33.9 +6.6
CN2 esP sP 23 34 38.0 +9.4
CN2 eS S 23 42 16.8 -3.7
CN2 pmax pmax
comp=Z,50nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,25.0s
CN2 LR LR
comp=E,200nm,25.0s
CN2 LR LR
comp=Z,200nm,23.0s
NB2 **NORSAR Subarra** 57.95 18 P P 23 34 26.1 -0.8
comp=Z,7.9nm,0.8s,baz=344,slow=7.4
NOA **NORSAR Array B** 57.95 18 P P 23 34 26.1 -0.8
NOA **NORSAR Array B** 57.95 18 P P 23 34 26.1 -0.8
comp=Z,12nm,0.9s,baz=344,slow=7.0,SNR=40
NOA LR LR 00 00 19.9
comp=Z,202nm,18.8s,baz=340,slow=37
NAO01 **NORSAR Array S** 58.08 18 eP P 23 34 26.9 -0.9
comp=Z,15nm,0.8s
JOF **Joensuu** 58.29 6 ep P 23 34 27.6 -1.6
comp=Z,19nm,0.8s
JOF **Joensuu** 58.29 6 eP P 23 34 27.6 -1.6
JOF pmax pmax
comp=Z,19nm,0.8s
KAF **Kangasniemi** 58.73 9 ep P 23 34 31.5 -0.8
comp=Z,13nm,1.0s
KAF **Kangasniemi** 58.73 9 eP P 23 34 31.5 -0.8
KAF pmax pmax
comp=Z,13nm,1.0s
KONO **Kongsberg** 59.00 19 eP P 23 34 33.1 -1.1
KONO pmax pmax
comp=Z,29nm,1.1s
KONO **Kongsberg** 59.00 19 eP P 23 34 33.1 -1.1
comp=Z,29nm,1.1s
FIA1 **FINESS Array S** 59.38 9 eP P 23 34 35.0 -1.7
FINES **FINESS Array B** 59.38 9 P P 23 34 35.5 -1.2
FINES **FINESS Array B** 59.38 9 P P 23 34 35.5 -1.2
comp=Z,11nm,0.8s,baz=14,slow=11,SNR=16
FINES LR LR 00 01 53.3
comp=Z,230nm,18.3s,baz=145,slow=38
TLY **Talaya** 59.48 321 eP P 23 34 38.0 +0.3
TLY pmax pmax
comp=Z,14nm,1.3s
TLY MLR MLR
comp=Z,388nm,14.0s
ESK **Eskdalemuir** 60.32 28 iP P 23 34 43.8 +0.5

MOY Mondy 60.34 323 *eP* **P 23 34 44.4 +0.7**
KLMR Klimovskoe 60.67 2*c i*P **P 23 34 44.5 -1.1**
KLMR pmax pmax
comp=Z,69nm,1.5s
KLMR MLR MLR
comp=Z,192nm,16.0s
ZAK Zakamensk 60.71 320⇑ *i*P **P 23 34 46.2 0.0**
ZAK *e* 23 35 28.0
ZAK pmax pmax
comp=Z,3.0nm,1.1s
SDDR Presa de Saban 61.28 101 *eP* **P 23 34 50.9 +0.5**
KSRS Korea Array 61.40 296 P **P 23 34 52.5 +1.6**
comp=Z,25nm,0.8s,baz=31,slow=6.3,SNR=91
KSRS LR LR 00 03 23.9
comp=Z,175nm,18.9s,baz=29,slow=38
KSAR Wonju Array Be 61.43 296 P **P 23 34 52.5 +1.3**
SOKR Solikamsk 61.49 352*c i*P **P 23 34 50.5 -0.6**
SOKR pmax pmax
comp=Z,30nm,1.4s
ULN Ulaanbaatar 61.55 317 *eP* **P 23 34 52.5 +0.5**
comp=Z,12nm,0.8s
SONM Songino Array 61.81 317 P **P 23 34 55.0 +1.3**
SONM Songino Array 61.81 317 P **P 23 34 55.0 +1.3**
comp=Z,4.3nm,0.9s,baz=32,slow=8.7,SNR=8.8
SONM LR LR 00 04 05.0
comp=Z,497nm,18.7s,baz=252,slow=38
MUD Monsted U'grnd 61.94 21 *i* P **P 23 34 54.4 +0.1**
MUD pmax pmax
comp=Z,11nm,1.0s
MUD Monsted U'grnd 61.94 21 *i* P **P 23 34 54.4 +0.1**
comp=Z,11nm,1.0s
NVS Novosibirsk 62.26 335 *eP* P 23 34 51.9 -4.5
NVS pmax pmax
comp=N,5.0nm,1.0s
NVS pmax pmax
comp=Z,9.0nm,1.0s
NVS pmax pmax
comp=E,2.0nm,0.7s
ZAA0 Zalesovo Array 62.73 334 *eP* **P 23 34 58.0 -1.6**
ZALV Zalesovo Beam 62.73 334 P **P 23 34 58.3 -1.3**
ZALV Zalesovo Beam 62.73 334 P **P 23 34 58.3 -1.3**
ZALV Zalesovo Beam 62.73 334 P **P 23 34 58.3 -1.3**
comp=E,5.7nm,0.7s,baz=16,slow=6.6,SNR=27
ZALV LR LR 00 04 56.1
comp=E,184nm,20.0s,baz=72,slow=39
JNU Nakatsue 63.49 290 *eP* **P 23 35 05.5 +0.5**
comp=E,14nm,1.1s
JNU Nakatsue 63.49 290 P **P 23 35 05.8 +0.7**
comp=E,25nm,0.9s,baz=53,slow=4.9,SNR=12
SVE Sverdlovsk 63.91 349⇓ *eP* **P 23 35 06.7 -0.7**
SVE pmax pmax
comp=Z,18nm,1.3s
ARU Arti 64.49 351*c i*P **P 23 35 09.9 -1.3**
ARU 23 35 44.2
ARU PPP PPP 23 39 01.0
ARU S **S** **23 43 46.2 -3.4**
ARU SS SS 23 47 51.9 -6.7
ARU SSS SSS 23 50 49.2
ARU pmax pmax
comp=Z,26nm,1.7s
ARU Arti 64.49 351 P **P 23 35 09.8 -1.4**
comp=Z,76nm,0.7s,SNR=7.7
BSEG Bad Segeberg 64.55 21 *eP* **P 23 35 11.9 +0.3**
comp=Z,50nm,1.3s
BSEG *ep*P **pP** **23 35 16.4 +1.3**
BSEG Bad Segeberg 64.55 21 *eP* **P 23 35 11.9 +0.3**
BSEG *e**PP **pP** **23 35 16.4 +1.3**
BSEG pmax pmax
comp=Z,50nm,1.3s
BJI Beijing 64.55 306 P **P 23 35 12.1 +0.3**
BJI pmax pmax
comp=Z,19nm,2.2s
BJI pmax pmax
comp=Z,210nm,7.0s
BJI LR LR
comp=N,120nm,29.3s
BJI LR LR
comp=E,96nm,34.2s
IZAR Zarasai 65.02 10 *eP* **P 23 35 14.3 -0.3**
IZAR AMB AMB 23 35 19.5
comp=Z,18nm,1.1s
ISAL Salakas 65.18 11 *eP* **P 23 35 15.3 -0.4**
ISAL AMB AMB 23 35 20.7
comp=Z,25nm,1.1s
IIGN Ignalina 65.41 11 *eP* **P 23 35 16.9 -0.3**
IIGN AMB AMB 23 35 22.1
comp=Z,20nm,1.3s
IDID Didziasalis 65.49 10 *eP* **P 23 35 17.3 -0.4**
IDID AMB AMB 23 35 17.9
comp=Z,14nm,1.0s
IBBN Ibbenburen 65.59 23 *eP* **P 23 35 18.7 +0.3**
comp=Z,29nm,1.2s
IBBN *ep*P **pP** **23 35 23.2 +1.2**
MOS Moscow 65.75 3 *eP* P 23 35 14.7 -4.6
MOS *e* 23 35 19.4
MOS pmax pmax
comp=Z,72nm,1.3s
HHC Hu-ho-hao-te 65.77 309 *eP* **P 23 35 18.5 -1.4**
HHC pP pP 23 35 29.5 +6.0
HHC sP sP 23 35 34.5 +10
HHC PP **PP** **23 37 47.1 +3.0**
HHC S S 23 44 01.8 -4.3
HHC SS **SS** **23 48 17.7 -1.9**
HHC pmax pmax
comp=Z,64nm,0.6s
HHC pmax pmax
comp=Z,230nm,4.3s
HHC LR LR
comp=N,750nm,15.3s
HHC LR LR
comp=E,990nm,15.5s
HHC LR LR
comp=Z,370nm,17.7s
NRDL Niedersach Rie 65.88 21 *eP* **P 23 35 20.2 0.0**
comp=Z,24nm,1.1s
NRDL *ep*P **pP** **23 35 24.7 +0.9**
NACGM Naroch 65.91 10 *e* P 23 35 17.0 -3.4
BUG Bochum--Univer 66.31 24 *eP* **P 23 35 22.8 -0.2**
comp=Z,33nm,1.3s
BUG *ep*P **pP** **23 35 27.4 +0.8**
OBN Obninsk 66.34 4⇑ *eP* **P 23 35 22.4 -0.7**
OBN *i* S **S** **23 44 12.4 +0.3**
OBN pmax pmax
comp=Z,95nm,1.2s
OBN MLR MLR
comp=Z,200nm,16.0s
OBN Obninsk 66.34 4 P **P 23 35 22.2 -0.9**
comp=Z,562nm,0.8s,SNR=11
GKP Gorka Klasztor 66.35 17 *eP* **P 23 35 23.2 0.0**
GKP Gorka Klasztor 66.35 17 *eP* **P 23 35 23.2 0.0**
BRVK Borovoye 66.39 343 *eP* **P 23 35 22.7 -0.8**
BRVK pmax pmax
comp=Z,14nm,0.9s
BRVK Borovoye 66.39 343 *eP* **P 23 35 22.6 -0.8**
comp=Z,14nm,0.9s
MNK Minsk 66.40 10 *eP* P 23 35 21.0 -2.6
MNK pmax pmax
comp=Z,100nm,1.3s
BVAR Borovoye Array 66.40 342 LR LR 00 06 52.8
comp=Z,157nm,20.8s,baz=31,slow=38
MICGM Minsk 66.40 10 *eP* P 23 35 21.0 -2.6
SUW Suwalki 66.41 13 *eP* **P 23 35 22.7 -0.9**
SUW Suwalki 66.41 13 *eP* **P 23 35 22.7 -0.9**
SUW Suwalki 66.41 13 *eP* **P 23 35 22.7 -0.9**
CLZ Clausthal 66.55 22 *eP* **P 23 35 25.0 +0.3**
comp=Z,34nm,1.1s
CLZ *ep*P **pP** **23 35 29.6 +1.4**
CLZ Clausthal 66.55 22 *eP* **P 23 35 25.0 +0.3**
CLZ *e**PP **pP** **23 35 29.6 +1.4**
CLZ pmax pmax
comp=Z,34nm,1.1s
RUE Ruedersdorf 66.56 19 *eP* **P 23 35 24.6 0.0**
comp=Z,35nm,1.1s
RUE *ep*P **pP** **23 35 29.1 +0.9**
RUE Ruedersdorf 66.56 19 *eP* **P 23 35 24.0 -0.6**
comp=Z,8.7nm,0.8s
BEBN Eben Emael 66.58 25 P **P 23 35 24.8 0.0**
BTO Baotou 66.60 310 *eP* **P 23 35 24.1 -1.1**
ROSF Rostrenen 66.64 32 *eP* **P 23 35 25.1 -0.1**
ROSF Rostrenen 66.64 32 *eP* **P 23 35 25.1 -0.1**
ROSF Rostrenen 66.64 32 *eP* **P 23 35 25.1 -0.1**
HGN Heimansgroeve 66.66 25 *eP* **P 23 35 25.2 -0.1**
comp=Z,27nm,1.1s
MEM Membach 66.82 25 P **P 23 35 26.4 0.0**
comp=Z,19nm,1.5s
MEM E 23 35 30.6
BCLA Clavier 66.85 25 P **P 23 35 26.5 0.0**
SGMF Saint Gilles 66.91 31⇑ *i*P **P 23 35 26.8 -0.1**
comp=Z,72nm,1.2s
SGMF Saint Gilles 66.91 31⇑ *i*P **P 23 35 26.8 -0.1**
SGMF pmax pmax
comp=Z,72nm,1.2s
SGMF Saint Gilles 66.91 31 *i*P **P 23 35 26.8 -0.1**
comp=Z,72nm,1.2s
BAIF Baives 66.94 26⇑ *i*P **P 23 35 27.1 0.0**
comp=Z,29nm,1.0s
BAIF Baives 66.94 26⇑ *i*P **P 23 35 27.1 0.0**
BAIF pmax pmax
comp=Z,29nm,1.0s
BAIF Baives 66.94 26⇑ *i*P **P 23 35 27.1 0.0**
comp=Z,29nm,1.0s
DOU Dourbes 66.99 26 P **P 23 35 27.6 +0.2**
FLN La Foliniere 67.00 30 *eP* **P 23 35 27.0 -0.5**
comp=Z,49nm,1.2s
FLN *eR*
comp=Z,314nm,18.8s
FLN La Foliniere 67.00 30 *eP* **P 23 35 27.0 -0.5**
FLN pmax pmax
comp=Z,49nm,1.2s
FLN La Foliniere 67.00 30 *eP* **P 23 35 27.0 -0.5**
comp=Z,49nm,1.2s
GIVF Givet 67.04 26⇑ *i*P **P 23 35 27.7 0.0**
comp=Z,47nm,1.1s
GIVF Givet 67.04 26⇑ *i*P **P 23 35 27.7 0.0**
GIVF pmax pmax
comp=Z,47nm,1.1s
GIVF Givet 67.04 26⇑ *i*P **P 23 35 27.7 0.0**
comp=Z,47nm,1.1s
QUIF Quistinic 67.05 32 *eP* **P 23 35 27.8 0.0**
QUIF Quistinic 67.05 32 *eP* **P 23 35 27.8 0.0**
QUIF Quistinic 67.05 32 *eP* **P 23 35 27.8 0.0**
KURK Kurchatov 67.11 336*c i*P **P 23 35 26.8 -1.4**
KURK pmax pmax
comp=Z,23nm,1.7s
KURK Kurchatov 67.11 336 *eP* **P 23 35 26.6 -1.5**
comp=Z,15nm,1.1s
KURK Kurchatov 67.11 336 P **P 23 35 27.9 -0.3**
comp=Z,57nm,0.8s,SNR=9.5
GRR Gorron 67.24 30 *eP* **P 23 35 28.9 -0.1**
comp=Z,14nm,0.8s
GRR Gorron 67.24 30 *eP* **P 23 35 28.9 -0.1**
GRR pmax pmax
comp=Z,14nm,0.8s
GRR Gorron 67.24 30 *eP* **P 23 35 28.9 -0.1**
comp=Z,14nm,0.8s
LDF La Druitiere 67.24 30⇑ *i*P **P 23 35 28.8 -0.3**
comp=Z,80nm,1.5s
LDF La Druitiere 67.24 30⇑ *i*P **P 23 35 28.8 -0.3**
LDF pmax pmax
comp=Z,80nm,1.5s
LDF La Druitiere 67.24 30⇑ *i*P **P 23 35 28.8 -0.3**
comp=Z,80nm,1.5s
NEUB Neuenburg 67.42 21 *eP* **P 23 35 30.3 +0.2**
comp=Z,41nm,1.1s
NEUB *ep*P **pP** **23 35 34.6 +0.9**
UBBA Unterbreizbach 67.45 22 *eP* **P 23 35 30.4 +0.2**
comp=Z,27nm,1.6s
UBBA *ep*P **pP** **23 35 34.9 +1.1**
CLL Collm 67.55 20 *eP* **P 23 35 30.5 -0.4**
comp=Z,15nm,1.0s
CLL *ep*P **pP** **23 35 35.0 +0.5**
CLL Collm 67.55 20⇑ *i*P **P 23 35 30.5 -0.4**
CLL *i* 23 35 34.5
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL MLR MLR
comp=Z,200nm,18.1s
CLL Collm 67.55 20⇑ *i*P **P 23 35 30.5 -0.4**
comp=Z,15nm,1.0s
CLL *i* pP **pP** **23 35 34.5 0.0**
CLL *i* sP **sP** **23 35 36.8 +0.9**
CLL *e*PKPPKPdP'P'df 00 03 55.0 -6.5
comp=Z,7.0nm,1.1s
CLL Lm MLR 00 06 00.0
comp=Z,200nm,18.1s
TNS Taunus Mts 67.71 23 *eP* **P 23 35 32.0 0.0**
comp=Z,19nm,1.5s
TNS *ep*P **pP** **23 35 36.5 +0.9**
TNS Taunus Mts 67.71 23 *eP* **P 23 35 32.0 0.0**
TNS *e**PP **pP** **23 35 36.5 +0.9**
TNS pmax pmax
comp=Z,19nm,1.5s
WLF Walferdange 67.74 25 *eP* **P 23 35 32.6 +0.4**
comp=Z,16nm,1.3s
WLF *ep*P **pP** **23 35 37.2 +1.4**
MOX Moxa 67.93 21 *eP* **P 23 35 33.3 -0.1**
comp=Z,24nm,1.1s
MOX *ep*P **pP** **23 35 37.9 +0.9**
MOX Moxa 67.93 21 *eP* **P 23 35 33.3 -0.1**
MOX *e**PP **pP** **23 35 37.9 +0.9**
MOX pmax pmax
comp=Z,24nm,1.1s
FBE Freiberg 67.98 20 *eP* **P 23 35 33.8 +0.1**
comp=Z,26nm,1.2s
FBE *ep*P **pP** **23 35 38.2 +0.9**
BRG Berggiesshubel 68.13 20 *i*P **P 23 35 34.3 -0.3**
comp=Z,22nm,1.1s
BRG *i* 23 35 38.2
comp=Z,26nm,1.1s
BRG *e* 23 35 40.5
comp=Z,17nm,1.1s
BRG Berggiesshubel 68.13 20 *eP* **P 23 35 34.5 -0.1**
comp=Z,22nm,1.1s
BRG *ep*P **pP** **23 35 39.0 +0.8**
BRG Berggiesshubel 68.13 20 *i*P **P 23 35 34.3 -0.3**
BRG *i* 23 35 38.2
BRG *e* 23 35 40.5
BRG pmax pmax
comp=Z,22nm,1.1s
PLN Plauen 68.18 21 *eP* **P 23 35 34.8 -0.2**
comp=Z,81nm,1.1s
PLN *ep*P **pP** **23 35 39.3 +0.7**
BEL Belsk 68.24 15 *eP* **P 23 35 35.4 +0.1**
BEL Belsk 68.24 15 *eP* **P 23 35 35.3 0.0**
WERD Werda 68.25 21 *eP* **P 23 35 35.3 -0.1**
comp=Z,11nm,1.1s
WERD *ep*P **pP** **23 35 39.8 +0.8**
TANN Tannenbergstha 68.31 21 *eP* **P 23 35 35.7 -0.1**
comp=Z,11nm,1.0s
TANN *ep*P **pP** **23 35 40.2 +0.8**
GUNZ Gunzen 68.33 21 *eP* **P 23 35 36.0 +0.1**
comp=Z,13nm,1.1s
GUNZ *ep*P **pP** **23 35 40.3 +0.8**
WERN Wernitzgruen 68.41 21 *eP* **P 23 35 36.4 -0.1**
comp=Z,16nm,1.2s
WERN *ep*P **pP** **23 35 41.1 +1.0**
NKC Novy Kostel 68.48 21 *i*P **P 23 35 36.8 0.0**
NKC *e**PP **pP** **23 35 41.2 +0.8**
NKC Novy Kostel 68.48 21 *i*P **P 23 35 36.8 0.0**
NKC *ep*P **pP** **23 35 41.2 +0.8**
KSP Ksiaz 68.55 18⇑ *eP* **P 23 35 37.0 -0.3**
KSP *e**PP **pP** **23 35 41.6 +0.7**
PVCC Panska Ves 68.57 19 *i*P **P 23 35 37.9 +0.5**
PVCC *e**PP **pP** **23 35 41.9 +0.9**
PVCC Panska Ves 68.57 19 *i*P **P 23 35 37.9 +0.5**
PVCC *ep*P **pP** **23 35 41.9 +0.9**
MEZF Maizieres J'vi 68.59 26 *eP* **P 23 35 37.5 0.0**
comp=Z,15nm,0.8s
MEZF Maizieres J'vi 68.59 26 *eP* **P 23 35 37.5 0.0**
comp=Z,15nm,0.8s
MANZ Manzenberg 68.65 21 *eP* **P 23 35 37.5 -0.4**
comp=Z,15nm,1.3s
MANZ *ep*P **pP** **23 35 42.2 +0.7**
PAGF Fort de Pagny 68.69 26⇑ *i*P **P 23 35 38.4 +0.2**
comp=Z,10.0nm,1.0s
PAGF Fort de Pagny 68.69 26⇑ *i*P **P 23 35 38.4 +0.2**
comp=Z,10.0nm,1.0s
GRF Grafenberg Arr 68.77 22 *eP* **P 23 35 38.9 +0.3**
comp=Z,33nm,1.3s
GRF *ep*P **pP** **23 35 43.1 +0.9**
GRF Grafenberg Arr 68.77 22 *eL* L 00 06 18.1
comp=Z,271nm,19.7s
GRF Grafenberg Arr 68.77 22 *eP* **P 23 35 38.9 +0.3**
GRF *e**PP **pP** **23 35 43.1 +0.9**
GRF pmax pmax
comp=Z,33nm,1.3s
GRF MLR MLR
comp=Z,300nm,19.7s
UPC Upice 68.83 18 *i*P **P 23 35 39.3 +0.3**
UPC *e**PP **pP** **23 35 43.3 +0.7**
UPC Upice 68.83 18 *i*P **P 23 35 39.3 +0.3**
UPC *ep*P **pP** **23 35 43.3 +0.7**
SFTF Sexfontaines 68.87 26 *eP* **P 23 35 39.0 -0.3**
comp=Z,22nm,0.9s
SFTF Sexfontaines 68.87 26 *eP* **P 23 35 39.0 -0.3**
comp=Z,22nm,0.9s
ROTZ Rotzenmuhle 68.88 21 *eP* **P 23 35 39.5 +0.2**
comp=Z,11nm,1.2s
ROTZ *ep*P **pP** **23 35 44.0 +1.1**
PRA Prague 68.99 19 P **P 23 35 40.0 0.0**
DPC Dobruska-Polom 69.03 18 *i*P **P 23 35 40.6 +0.3**
DPC *e**PP **pP** **23 35 44.9 +1.0**
DPC Dobruska-Polom 69.03 18 *i*P **P 23 35 40.6 +0.3**
DPC *ep*P **pP** **23 35 44.9 +1.0**
MFF Saint Martin d 69.08 30⇑ *i*P **P 23 35 40.6 0.0**
comp=Z,100nm,1.4s
MFF Saint Martin d 69.08 30⇑ *i*P **P 23 35 40.6 0.0**
MFF pmax pmax
comp=Z,100nm,1.4s
MFF Saint Martin d 69.08 30⇑ *i*P **P 23 35 40.6 0.0**
comp=Z,100nm,1.4s
PRU Pruhonice 69.09 19 *i*P **P 23 35 40.4 -0.2**
PRU *e**PP **pP** **23 35 44.9 +0.7**
PRU Pruhonice 69.09 19 *i*P **P 23 35 40.4 -0.2**
PRU *ep*P **pP** **23 35 44.9 +0.7**
PRU AMS AMS 00 10 40.0
comp=Z,200nm,16.2s
HYF Humbligny 69.17 28⇑ *i*P **P 23 35 41.3 +0.1**
HYF Humbligny 69.17 28⇑ *i*P **P 23 35 41.3 +0.1**
CDF Champ du Feu 69.17 25⇑ *i*P **P 23 35 41.4 +0.1**
comp=Z,26nm,1.0s
CDF Champ du Feu 69.17 25⇑ *i*P **P 23 35 41.4 +0.1**
CDF pmax pmax
comp=Z,26nm,1.0s
CDF Champ du Feu 69.17 25⇑ *i*P **P 23 35 41.4 +0.1**
comp=Z,26nm,1.0s
STU Stuttgart 69.24 23 *eP* **P 23 35 41.6 0.0**
comp=Z,25nm,1.5s
STU *ep*P **pP** **23 35 46.2 +1.0**
ECH Echery 69.33 25 *eP* **P 23 35 41.6 -0.6**
ECH pmax pmax
comp=Z,16nm,1.0s
ECH Echery 69.33 25 *eP* **P 23 35 41.6 -0.6**
comp=Z,16nm,1.0s
HAU Haudompre 69.35 26⇑ *i*P **P 23 35 42.2 -0.1**
comp=Z,26nm,1.0s
HAU *eR*
comp=Z,319nm,18.2s
HAU Haudompre 69.35 26⇑ *i*P **P 23 35 42.2 -0.1**
HAU pmax pmax
comp=Z,27nm,1.0s
HAU Haudompre 69.35 26⇑ *i*P **P 23 35 42.2 -0.1**
comp=Z,26nm,1.0s
KRLC Kraliky 69.38 18 *i*P **P 23 35 42.5 0.0**
KRLC *e**PP **pP** **23 35 46.7 +0.6**
KRLC Kraliky 69.38 18 *i*P **P 23 35 42.5 0.0**
KRLC *ep*P **pP** **23 35 46.7 +0.6**
LOR Lormes 69.47 27⇑ *i*P **P 23 35 42.9 -0.1**
comp=Z,38nm,1.0s
LOR *eR*
comp=Z,494nm,19.5s
LOR Lormes 69.47 27⇑ *i*P **P 23 35 42.9 -0.1**
comp=Z,38nm,1.0s
BFO Black Forest 69.48 24 *eP* **P 23 35 43.1 0.0**
comp=Z,19nm,1.4s
BFO *ep*P **pP** **23 35 47.6 +0.9**
BFO Black Forest 69.48 24 *eP* **P 23 35 43.1 0.0**
BFO *e**PP **pP** **23 35 47.6 +0.9**
BFO pmax pmax
comp=Z,19nm,1.4s
BFO Black Forest 69.48 24 *eP* **P 23 35 43.0 -0.1**
comp=Z,19nm,1.1s
BFO Black Forest 69.48 24 P **P 23 35 43.2 +0.1**
comp=Z,82nm,1.0s,SNR=5.7
SSF Saint Saulge 69.57 28⇑ *i*P **P 23 35 43.6 -0.1**
comp=Z,64nm,1.0s
SSF Saint Saulge 69.57 28⇑ *i*P **P 23 35 43.6 -0.1**
SSF pmax pmax
comp=Z,64nm,1.0s
SSF Saint Saulge 69.57 28⇑ *i*P **P 23 35 43.6 -0.1**
comp=Z,64nm,1.0s
WET Wettzell 69.60 21 *eP* **P 23 35 44.0 +0.1**
comp=Z,17nm,1.2s
WET *ep*P **pP** **23 35 48.6 +1.1**
WET Wettzell 69.60 21 *eP* **P 23 35 44.0 +0.1**
WET *e**PP **pP** **23 35 48.6 +1.1**
WET pmax pmax
comp=Z,17nm,1.2s
HINF Hinteralfeld 69.64 25⇑ *i*P **P 23 35 43.9 -0.2**
comp=Z,33nm,1.2s
HINF Hinteralfeld 69.64 25⇑ *i*P **P 23 35 43.9 -0.2**
HINF pmax pmax
comp=Z,33nm,1.3s
HINF Hinteralfeld 69.64 25⇑ *i*P **P 23 35 43.9 -0.2**
comp=Z,33nm,1.3s
OJC Ojcow 69.69 16 *eP* **P 23 35 44.1 -0.3**
OJC Ojcow 69.69 16 *eP* **P 23 35 44.1 -0.3**
OJC Ojcow 69.69 16 *i*P **P 23 35 44.0 -0.3**
KHC Kasperske Hory 69.74 20 *i*P **P 23 35 45.1 +0.4**
KHC *e**PP **pP** **23 35 49.5 +1.2**
KHC Kasperske Hory 69.74 20 *i*P **P 23 35 45.1 +0.4**
KHC *ep*P **pP** **23 35 49.5 +1.2**
KHC AMS AMS 00 09 50.0
comp=Z,200nm,16.0s
KHC Kasperske Hory 69.74 20 *eP* **P 23 35 44.9 +0.1**
comp=Z,33nm,1.4s
MORC Moravsky Berou 69.78 17 *eP* **P 23 35 43.8 -1.2**
MORC pmax pmax
comp=Z,8.0nm,0.9s
MORC Moravsky Berou 69.78 17 *eP* **P 23 35 43.8 -1.2**
comp=Z,8.1nm,0.9s
MORC Moravsky Berou 69.78 17⇓ *i*P **P 23 35 44.9 -0.1**
OKC Ostrava-Krasne 69.82 17 *i*P **P 23 35 45.1 0.0**
OKC *e**PP **pP** **23 35 49.5 +0.8**
OKC Ostrava-Krasne 69.82 17 *i*P **P 23 35 45.1 0.0**
OKC *ep*P **pP** **23 35 49.5 +0.8**
OKC AMS AMS 00 08 00.0
comp=Z,200nm,20.1s
BGF Bois d'Agland 69.88 28⇑ *i*P **P 23 35 45.2 -0.4**
comp=Z,51nm,0.9s
BGF Bois d'Agland 69.88 28⇑ *i*P **P 23 35 45.2 -0.4**
BGF pmax pmax
comp=Z,51nm,0.9s
BGF Bois d'Agland 69.88 28⇑ *i*P **P 23 35 45.2 -0.4**
comp=Z,51nm,0.9s
TREC Trest 69.92 19 *i*P **P 23 35 45.8 0.0**
TREC *e**PP **pP** **23 35 50.3 +0.9**
TREC Trest 69.92 19 *i*P **P 23 35 45.8 0.0**
TREC *ep*P **pP** **23 35 50.3 +0.9**
TREC AMS AMS 00 10 30.0
comp=Z,100nm,15.0s
JOW Kunigami 69.93 289 *eP* **P 23 35 46.8 +0.7**
comp=Z,11nm,0.9s
TCF Toulx Ste Croi 69.97 29⇑ *i*P **P 23 35 45.9 -0.3**
comp=Z,59nm,1.1s
TCF Toulx Ste Croi 69.97 29⇑ *i*P **P 23 35 45.9 -0.3**
TCF pmax pmax
comp=Z,59nm,1.1s
TCF Toulx Ste Croi 69.97 29⇑ *i*P **P 23 35 45.9 -0.3**
comp=Z,59nm,1.1s
MK31 Makanchi Array 69.98 333 *eP* **P 23 35 44.7 -1.5**
MK31 Makanchi Array 69.98 333 *eP* **P 23 35 44.7 -1.5**
MKAR Makanchi Array 69.98 333*ceP* **P 23 35 45.0 -1.2**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR Makanchi Array 69.98 333 P P 23 35 44.2 -2.0
MKAR Makanchi Array 69.98 333 P P 23 35 44.2 -2.0
comp=Z,2.2nm,0.6s,baz=42,slow=6.2,SNR=31
MKAR LR LR 00 09 08.4
comp=Z,162nm,19.0s,baz=12,slow=38
GEC2 GERESS Array S 70.04 20 *eP* **P 23 35 46.6 0.0**
comp=Z,13nm,1.1s
GEC2 *ep*P **pP** **23 35 51.2 +1.0**
GEC2 GERESS Array S 70.04 20 *eP* **P 23 35 46.6 0.0**
GEC2 *e**PP **pP** **23 35 51.2 +1.0**
GEC2 pmax pmax
comp=Z,13nm,1.1s
GERES GERESS Array B 70.04 20 P **P 23 35 46.1 -0.5**
GERES GERESS Array B 70.04 20 P **P 23 35 46.1 -0.5**
comp=Z,5.1nm,0.9s,baz=346,slow=4.5,SNR=36
GERES LR LR 00 07 35.3
comp=Z,174nm,19.0s,baz=102,slow=37
SMF Signal de Mont 70.05 28⇑ *i*P **P 23 35 46.2 -0.4**
comp=Z,46nm,1.2s
SMF Signal de Mont 70.05 28⇑ *i*P **P 23 35 46.2 -0.4**

SMF pmax pmax
comp=Z,46nm,1.2s
SMF Signal de Mont 70.05 28⇑ *i*P **P 23 35 46.2 -0.4**
comp=Z,46nm,1.2s
NJ2 Nanjing 70.06 299 *e*P **P 23 35 47.8 +0.9**
NJ2 pP pP 23 35 56.7 +6.2
NJ2 sP sP 23 36 00.3 +8.5
NJ2 PP **PP 23 38 21.6 +0.2**
NJ2 S **S 23 44 55.0 -2.3**
NJ2 sS sS 23 45 12.0 +8.8
NJ2 pmax pmax
comp=Z,70nm,1.0s
NJ2 pmax pmax
comp=Z,120nm,6.7s
NJ2 LR LR
comp=N,70nm,18.2s
NJ2 LR LR
comp=E,30nm,20.8s
NJ2 LR LR
comp=Z,90nm,24.6s
VRAC Vranov 70.09 18⇓ *i*P **P 23 35 47.2 +0.4**
SDV Santo Domingo 70.17 106 *e*P **P 23 35 48.7 +0.7**
FUR Furstenfeldbru 70.24 22 *e*P **P 23 35 47.7 -0.1**
comp=Z,25nm,1.0s
FUR *e*pP **pP 23 35 52.4 +1.0**
FUR Furstenfeldbru 70.24 22 *e*P **P 23 35 47.7 -0.1**
FUR *e**PP **pP 23 35 52.4 +1.0**
FUR pmax pmax
comp=Z,25nm,1.0s
AKASG Malin Array Be 70.28 9 P **P 23 35 47.0 -1.0**
AKASG Malin Array Be 70.28 9 P **P 23 35 47.0 -1.0**
AKASG Malin Array Be 70.28 9 P **P 23 35 47.0 -1.0**
comp=Z,27nm,0.6s,baz=353,slow=6.1,SNR=87
AKASG LR LR 00 09 05.7
comp=Z,232nm,18.8s,baz=335,slow=38
KIEV Kiev 70.29 9 *e*P **P 23 35 47.1 -0.9**
KIEV Kiev 70.29 9 *e*P **P 23 35 47.1 -0.9**
AK01 Malin Array Si 70.29 9 *e*P **P 23 35 46.9 -1.1**
VSR Storozhevoye 70.32 3 *e*P **P 23 35 46.9 -1.2**
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,4.0nm,0.7s
VSR pmax pmax
comp=Z,10.0nm,0.7s
AK02 Malin Array Si 70.33 9 *e*P **P 23 35 46.8 -1.4**
AKTO Aktyubinsk 70.48 350 *i*P **P 23 35 47.9 -1.3**
AKTO pmax pmax
comp=Z,14nm,1.1s
AKTO Aktyubinsk 70.48 350 LR LR 00 12 50.8
comp=Z,85nm,18.2s,baz=131,slow=41
VRHR Novokhopersk 70.48 1 *e*P **P 23 35 47.7 -1.4**
VRHR pmax pmax
comp=N,20nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,20nm,0.7s
NIE Niedzica 70.54 16⇑ *i*P **P 23 35 50.2 +0.6**
NIE Niedzica 70.54 16 *i*P **P 23 35 50.2 +0.6**
VORD Divnogorie 70.57 3 *e*P **P 23 35 48.3 -1.4**
VORD pmax pmax
comp=Z,30nm,1.5s
VORD pmax pmax
comp=N,30nm,1.1s
VORD pmax pmax
comp=E,5.0nm,0.6s
CABF La Chapelle 70.61 26⇑ *i*P **P 23 35 50.3 +0.2**
comp=E,50nm,1.0s
CABF La Chapelle 70.61 26⇑ *i*P **P 23 35 50.3 +0.2**
CABF pmax pmax
comp=Z,50nm,1.0s
CABF La Chapelle 70.61 26⇑ *i*P **P 23 35 50.3 +0.2**
comp=Z,50nm,1.0s
LVV L'vov 70.63 13 *e*P **P 23 35 49.6 -0.5**
KWP Kalwaria Pacla 70.65 14 *e*P **P 23 35 50.3 0.0**
KWP Kalwaria Pacla 70.65 14 *e*P **P 23 35 50.2 0.0**
STHS Stebnicka Huta 70.67 15 *e*P **P 23 35 50.9 +0.5**
STHS pmax pmax
comp=Z,14nm,1.0s
STHS Stebnicka Huta 70.67 15 *e*P **P 23 35 50.9 +0.5**
RJF Les Rejaudoux 70.71 30⇑ *i*P **P 23 35 50.2 -0.5**
comp=Z,31nm,1.1s
RJF *e*R
comp=Z,405nm,19.0s
RJF Les Rejaudoux 70.71 30⇑ *i*P **P 23 35 50.2 -0.5**
RJF pmax pmax
comp=Z,31nm,1.1s
RJF Les Rejaudoux 70.71 30⇑ *i*P **P 23 35 50.2 -0.5**
comp=Z,31nm,1.1s
DAVA Damuels 70.79 23⇓ *i*pP **P 23 35 51.4 0.0**
comp=Z,10nm,1.1s
LFF La Frestale 70.85 31⇑ *i*P **P 23 35 51.6 +0.1**
comp=Z,43nm,1.0s
LFF La Frestale 70.85 31⇑ *i*P **P 23 35 51.6 +0.1**
LFF pmax pmax
comp=Z,43nm,1.0s
LFF La Frestale 70.85 31⇑ *i*P **P 23 35 51.6 +0.1**
comp=Z,43nm,1.0s
PGAV Gavieira, Arco 70.93 38 *e*LR LR 00 01 27.6
comp=Z,262nm,18.0s
RJOB Jochberg 70.94 21 *e*P **P 23 35 52.0 -0.1**
comp=Z,10.0nm,1.0s
RJOB *e*pP **pP 23 35 56.5 +0.8**
SMOL Smolenice 70.99 18 *e*P **P 23 35 52.6 +0.3**
SMOL *e* 23 35 57.3
SMOL Smolenice 70.99 18 *e*P **P 23 35 52.6 +0.3**
SMOL *e*pP **pP 23 35 57.3 +1.3**
WATA Walderalm 71.09 22⇑ *i*P **P 23 35 53.1 0.0**
comp=Z,16nm,1.0s,SNR=8.4
MOA Molln 71.10 20⇑ *i*P **P 23 35 52.6 -0.4**
comp=Z,10nm,1.0s
SENIN Lac Senin/Sane 71.12 25 *e*P **P 23 35 53.8 +0.4**
WTTA Wattenberg 71.17 22 *i*pP **P 23 35 53.9 +0.3**
comp=Z,41nm,1.2s,SNR=13
CAF Calviac 71.21 30⇑ *i*P **P 23 35 53.5 -0.2**
comp=Z,44nm,1.1s
CAF Calviac 71.21 30⇑ *i*P **P 23 35 53.5 -0.2**
CAF pmax pmax
comp=Z,44nm,1.1s
CAF Calviac 71.21 30⇑ *i*P **P 23 35 53.5 -0.2**
comp=Z,44nm,1.1s
CRVS Cervenica-Dubn 71.21 15 *e*P **P 23 35 51.5 -2.1**
CRVS pmax pmax
comp=Z,18nm,1.4s
CRVS Cervenica-Dubn 71.21 15 *e*P **P 23 35 51.5 -2.1**
FETA Feichten 71.22 23⇑ *i*pP **P 23 35 54.2 +0.2**
comp=Z,15nm,1.2s,SNR=6.7
VYHS Vyhne 71.23 17 *e*P **P 23 35 53.6 -0.2**
VYHS pmax pmax
comp=Z,9.0nm,1.1s
VYHS Vyhne 71.23 17 *e*P **P 23 35 53.6 -0.2**
VYHS *e*pP **pP 23 35 58.1 +0.7**
ZST Bratislava 71.25 18 *e*P **P 23 35 53.1 -0.8**
ZST pmax pmax
comp=Z,17nm,1.2s
ZST Bratislava 71.25 18 *e*P **P 23 35 53.1 -0.8**
ZST *e*pP **pP 23 35 57.8 +0.3**
KOLS Kolonicke sedl 71.28 14 *e*P **P 23 35 54.2 +0.1**
KOLS pmax pmax
comp=Z,22nm,1.2s
KOLS Kolonicke sedl 71.28 14 *e*P **P 23 35 54.2 +0.1**
CONA Conrad Observa 71.30 19 *i*pP **P 23 35 54.6 +0.3**
comp=Z,28nm,1.3s,SNR=22
WMQ Urumqi 71.34 328 *e*P **P 23 35 54.4 -0.2**
WMQ pP pP 23 36 05.0 +6.8
WMQ sP sP 23 36 10.0 +10
WMQ PcP **PcP 23 36 17.0 +2.7**
WMQ *e*S S 23 45 08.0 -4.1
WMQ ScS SKSac 23 45 48.0 -9.4
WMQ pmax pmax
comp=Z,10.0nm,1.2s
WMQ pmax pmax
comp=Z,140nm,4.8s
WMQ LR LR
comp=N,380nm,18.9s
WMQ LR LR
comp=E,400nm,21.0s
WMQ LR LR
comp=Z,350nm,19.0s
AB31 Akbulak array 71.46 349 *ce*P **P 23 35 54.4 -0.7**
AB31 pmax pmax
comp=Z,15nm,0.8s
ABKAR Akbulak array 71.46 349 *e*P **P 23 35 54.4 -0.8**
comp=Z,18nm,1.0s

TUE Stuetta 71.46 24 *e*P **P 23 35 54.7 -0.7**
comp=Z,17nm,1.0s
KECS Kecovo 71.48 16 *e*P **P 23 35 55.2 -0.1**
KECS pmax pmax
comp=Z,9.0nm,0.9s
KECS Kecovo 71.48 16 *e*P **P 23 35 55.2 -0.1**
KECS *e*pP **pP 23 35 59.8 +0.9**
GTA Gaotai 71.48 317 *e*P **P 23 35 55.8 +0.2**
GTA pP pP 23 36 06.2 +7.0
GTA sP sP 23 36 10.4 +10
GTA pmax pmax
comp=Z,10.0nm,1.2s
GTA pmax pmax
comp=Z,130nm,7.1s
GTA LR LR
comp=N,470nm,15.2s
GTA LR LR
comp=E,200nm,14.5s
GTA LR LR
comp=Z,660nm,15.2s
FUORN Ofenpass-Fuorn 71.51 23 *e*P **P 23 35 56.6 +0.8**
UZH Uzhgorod 71.58 14⇓ *i*P **P 23 35 55.4 -0.5**
UZH *i* 23 35 58.6
UZH *i* 23 36 04.4
SOP Sopron 71.66 19⇑ *e*P **P 23 35 56.8 +0.5**
KBA Koelnbreinsper 71.67 21⇑ *i*pP **P 23 35 57.1 +0.4**
comp=Z,29nm,1.0s,SNR=10
LPL La Plagne 71.79 26⇑ *i*P **P 23 35 58.2 +0.7**
comp=Z,26nm,1.0s
LPL La Plagne 71.79 26⇑ *i*P **P 23 35 58.2 +0.7**
LPL pmax pmax
comp=Z,26nm,1.0s
LPL La Plagne 71.79 26⇑ *i*P **P 23 35 58.2 +0.7**
comp=Z,26nm,1.0s
LPG La Plagne 71.81 26⇑ *i*P **P 23 35 58.4 +0.7**
comp=Z,39nm,1.3s
LPG La Plagne 71.81 26⇑ *i*P **P 23 35 58.4 +0.7**
LPG pmax pmax
comp=Z,39nm,1.3s
LPG La Plagne 71.81 26⇑ *i*P **P 23 35 58.4 +0.7**
comp=Z,39nm,1.3s
ROSC El Rosal 71.83 112 *e*P **P 23 35 59.1 +0.9**
ROSC El Rosal 71.83 112 P **P 23 35 59.2 +0.9**
comp=Z,7.6nm,0.6s,baz=81,slow=22,SNR=8.9
ARSA Arzberg 71.90 19 *i*pP **P 23 35 58.2 +0.4**
comp=Z,16nm,1.0s,SNR=12
VIVF Saint-Julien-l 71.92 28 *e*P **P 23 35 58.1 0.0**
comp=Z,31nm,1.1s
VIVF Saint-Julien-l 71.92 28 *e*P **P 23 35 58.1 0.0**
VIVF pmax pmax
comp=Z,31nm,1.1s
VIVF Saint-Julien-l 71.92 28 *e*P **P 23 35 58.1 0.0**
comp=Z,31nm,1.1s
PSZ Piszkesteto 71.95 16 *e*P **P 23 35 58.0 -0.2**
PSZ pmax pmax
comp=Z,32nm,1.1s
PSZ Piszkesteto 71.95 16 *e*P **P 23 35 58.0 -0.2**
comp=Z,32nm,1.1s
PSZ Piszkesteto 71.95 16⇓ *i*P **P 23 35 59.0 +0.8**
PSZ Piszkesteto 71.95 16⇑ *e*P **P 23 35 58.7 +0.5**
SJPF Ste Jean 72.00 33 *e*P **P 23 35 58.4 -0.1**
SJPF Ste Jean 72.00 33 *e*P **P 23 35 58.4 -0.1**
SJPF Ste Jean 72.00 33 *e*P **P 23 35 58.4 -0.1**
MVO Moncorvo 72.05 38 *e*LR LR 00 00 58.7
comp=Z,219nm,18.0s
TRPA Tarpa 72.11 14⇑ *e*P **P 23 35 59.1 +0.1**
ORIF Oris-en-Rattie 72.16 27 *e*P **P 23 35 59.6 +0.1**
comp=Z,8.8nm,0.8s
ORIF *e*R
comp=Z,375nm,18.8s
ORIF Oris-en-Rattie 72.16 27 *e*P **P 23 35 59.6 +0.1**
ORIF pmax pmax
comp=Z,9.0nm,0.8s
ORIF Oris-en-Rattie 72.16 27 *e*P **P 23 35 59.6 +0.1**
comp=Z,8.8nm,0.8s
MYKA Terra Mystica 72.16 21⇑ *i*P **P 23 35 58.9 -0.6**
comp=Z,14nm,1.1s
PKSG 72.24 17⇑ *e*P **P 23 36 00.1 +0.3**
CSKK Cs˙‡kako 72.24 18⇑ *e*P **P 23 36 00.5 +0.6**
SOKA Soboth 72.37 20⇑ *i*P **P 23 36 00.7 -0.1**
comp=Z,24nm,1.3s
ETSF Etsaut 72.39 32⇑ *i*P **P 23 36 01.6 +0.7**
comp=Z,48nm,1.0s
ETSF Etsaut 72.39 32⇑ *i*P **P 23 36 01.6 +0.7**
ETSF pmax pmax
comp=Z,48nm,1.0s
ETSF Etsaut 72.39 32⇑ *i*P **P 23 36 01.6 +0.7**
comp=Z,48nm,1.0s
PERS Pernice 72.42 20 *e*P **P 23 36 00.9 -0.1**
OBKA Obir 72.44 20⇓ *i*P **P 23 36 01.1 -0.1**
comp=Z,41nm,0.9s,SNR=16
LASF Ste Croix 72.46 29 *e*P **P 23 36 00.7 -0.5**
comp=Z,31nm,1.4s
LASF Ste Croix 72.46 29 *e*P **P 23 36 00.7 -0.5**
comp=Z,31nm,1.4s
EPF Esparros 72.51 32 *e*P **P 23 36 01.2 -0.4**
EPF Esparros 72.51 32 *e*P **P 23 36 01.2 -0.4**
EPF Esparros 72.51 32 *e*P **P 23 36 01.2 -0.4**
MBDF Montbardon 72.55 26 *e*P **P 23 36 02.6 +0.7**
comp=Z,73nm,1.4s
MBDF Montbardon 72.55 26 *e*P **P 23 36 02.6 +0.7**
MBDF pmax pmax
comp=Z,73nm,1.4s
MBDF Montbardon 72.55 26 *e*P **P 23 36 02.6 +0.7**
comp=Z,73nm,1.4s
MTE Manteigas 72.58 38 *e*P P 23 36 08.3 +6.2
comp=Z,43nm,2.4s
MTE *e*LR LR 00 02 06.5
comp=Z,188nm,18.0s
GROS Grobnik 72.66 20 *i*P **P 23 36 02.2 -0.3**
XAN Xi'an 72.69 308 P **P 23 36 02.4 -0.4**
XAN pmax pmax
comp=Z,6.0nm,1.2s
XAN pmax pmax
comp=Z,23nm,3.9s
PKS7 Kunszentmiklos 72.69 17⇓ *e*P **P 23 36 03.4 +0.9**
MTLF Montolieu 72.73 30⇑ *i*P **P 23 36 02.7 -0.1**
comp=Z,20nm,1.0s
MTLF Montolieu 72.73 30⇑ *i*P **P 23 36 02.7 -0.1**
MTLF pmax pmax
comp=Z,20nm,1.0s
MTLF Montolieu 72.73 30⇑ *i*P **P 23 36 02.7 -0.1**
comp=Z,20nm,1.0s
KOGS Kog 72.80 19 *e*P **P 23 36 03.1 -0.1**
CRNS Crni Vrh 72.81 21 *e*P **P 23 36 02.5 -0.8**
BUR08 Bucovina Ar. S 72.91 13 *e*P **P 23 36 03.8 -0.2**
LZH Lanzhou 72.93 312 *e*P **P 23 36 05.5 +1.2**
LZH pP PcP 23 36 16.1 -5.2
LZH sP sP 23 36 20.3 +11
LZH PcP pP 23 36 22.1 +14
LZH PP PP 23 38 51.2 +5.2
LZH *e*S S 23 45 25.2 -5.5
LZH sS **SKiKP 23 45 41.6 +4.8**
LZH ScS SKSac 23 46 04.2 -5.5
LZH SS SS 23 50 00.3 -10
LZH pmax pmax
comp=Z,57nm,1.0s
LZH pmax pmax
comp=Z,200nm,5.5s
LZH LR LR
comp=N,2μm,17.2s
LZH LR LR
comp=E,1μm,14.1s
LZH LR LR
comp=Z,2μm,17.8s
SMRF Simiane la Rot 72.97 27⇑ *i*P **P 23 36 05.1 +0.8**
comp=Z,56nm,1.2s
SMRF Simiane la Rot 72.97 27⇑ *i*P **P 23 36 05.1 +0.8**
comp=Z,56nm,1.2s
PKS9 Tamasi 73.00 18⇑ *e*P P 23 36 00.2 -4.2
PCBR Castelo Branco 73.10 39 *e*P **P 23 36 04.8 -0.3**
PKS2 Kecel 73.24 17⇓ *e*P **P 23 36 06.5 +0.7**
WHN Wuhan 73.36 302⇑ *i*P **P 23 36 07.2 +0.4**
WHN pmax pmax
comp=Z,54nm,0.6s
PKSM Moragy 73.42 18⇑ *e*P **P 23 36 06.4 -0.5**
DRGR 73.44 15⇓ *i*P **P 23 36 07.1 0.0**
DRGR 73.44 15⇓ *i*P **P 23 36 07.1 0.0**
SBF Sospel 73.52 26 *e*P **P 23 36 08.6 +1.0**
SBF Sospel 73.52 26 *e*P **P 23 36 08.6 +1.0**
SBF Sospel 73.52 26 *e*P **P 23 36 08.6 +1.0**
FRF La Foret Royal 73.62 27 *e*P **P 23 36 08.1 0.0**
comp=Z,60nm,1.3s
FRF La Foret Royal 73.62 27 *e*P **P 23 36 08.1 0.0**
FRF pmax pmax
comp=Z,60nm,1.3s
FRF La Foret Royal 73.62 27 *e*P **P 23 36 08.1 0.0**
comp=Z,60nm,1.3s
LMR La Mourre 73.80 27 *e*P **P 23 36 09.3 +0.2**
comp=Z,42nm,1.0s
LMR La Mourre 73.80 27 *e*P **P 23 36 09.3 +0.2**
LMR pmax pmax
comp=Z,42nm,1.0s
LMR La Mourre 73.80 27 *e*P **P 23 36 09.3 +0.2**
comp=Z,42nm,1.0s
OTAV Otavalo 73.92 118 *e*P **P 23 36 11.7 +0.9**
comp=Z,13nm,1.3s
KIS Kishinev 73.92 10⇑ *i*P **P 23 36 08.0 -1.8**
KIS XM 23 36 09.0
comp=Z,100nm,1.4s
KIS Kishinev 73.92 10⇑ *i*P **P 23 36 08.0 -1.8**
KIS *e* 23 36 12.0
KIS *e* 23 36 29.0
KIS pmax pmax
comp=Z,140nm,1.4s
PMOR Pomariorio Ree 74.08 191 *e*T T 00 56 27.3
comp=Z,74nm,0.3s
EVOP Sao Brissos 74.08 40 *e*P **P 23 36 09.7 -1.2**
EVOP pmax pmax
comp=Z,64nm,1.4s
EVOP Sao Brissos 74.08 40 *e*P **P 23 36 09.7 -1.2**
comp=Z,64nm,1.4s
EVO Evora 74.11 39 *e*P **P 23 36 09.7 -1.4**
comp=Z,64nm,1.4s
EVO *e*R
comp=Z,300nm,17.2s
EVO Evora 74.11 39 *e*P **P 23 36 10.3 -0.8**
comp=Z,20nm,1.9s
TESR Tescani 74.19 12⇓ *i*P **P 23 36 10.9 -0.5**
PNCL Nicolau / Gran 74.32 40 *e*P **P 23 36 10.2 -2.1**
comp=Z,31nm,1.6s
ESDC Sonseca Array 74.36 36 P **P 23 36 12.3 -0.3**
ESDC Sonseca Array 74.36 36 P **P 23 36 12.3 -0.3**
comp=Z,9.7nm,0.8s,baz=331,slow=5.6,SNR=33
ESLA Sonseca Array 74.36 36 *e*P **P 23 36 12.5 -0.1**
comp=Z,6.4nm,1.1s
BZS Buzias 74.45 16⇓ P **P 23 36 12.9 0.0**
BZS Buzias 74.45 16⇓ *i*P **P 23 36 12.9 0.0**
GZR Gura Zlata 74.83 15⇓ P **P 23 36 15.3 +0.1**
GZR Gura Zlata 74.83 15⇓ *i*P **P 23 36 15.3 +0.1**
VRI Vrincioaia 74.83 12⇓ P **P 23 36 15.3 +0.1**
VRI Vrincioaia 74.83 12⇓ *i*P **P 23 36 15.3 +0.1**
PLOR Plostina 74.84 12⇓ P **P 23 36 15.6 +0.4**
PLOR Plostina 74.84 12⇓ *i*P **P 23 36 15.6 +0.4**
LOT Lotru 74.90 14⇓ *i*P **P 23 36 15.1 -0.6**
MORF Marmelete 75.01 40 *e*P **P 23 36 16.6 +0.2**
comp=Z,63nm,1.5s
USP Ospenovka 75.06 337 P **P 23 36 16.3 -0.3**
SNR=19
VOIR 75.07 13⇓ P **P 23 36 16.6 -0.1**
VOIR 75.07 13⇓ *i*P **P 23 36 16.5 -0.1**
ARR Arges 75.09 13⇓ *i*P **P 23 36 17.0 +0.3**
MLR Muntele Rosu 75.12 12⇑ *i*P **P 23 36 18.1 +1.1**
PGF Pioggiola 75.12 25 *e*P **P 23 36 18.0 +1.0**
PGF Pioggiola 75.12 25 *e*P **P 23 36 18.0 +1.0**
PGF Pioggiola 75.12 25 *e*P **P 23 36 18.0 +1.0**
TKM2 Tokmak 2 75.17 336 *e*P **P 23 36 16.9 -0.5**
TKM2 pmax pmax
comp=Z,28nm,1.3s
TKM2 Tokmak 2 75.17 336 *e*P **P 23 36 16.9 -0.5**
comp=Z,28nm,1.3s
TKM2 Tokmak 2 75.17 336 P **P 23 36 17.4 0.0**
SNR=14
PVAQ Vaqueiros 75.23 40 *e*P **P 23 36 17.8 +0.2**
comp=Z,43nm,1.5s
PVAQ *e*LQ LQ 23 59 00.5
PVAQ *e*LR LR 00 02 19.5
comp=Z,326nm,18.0s
CHMS Chumysh 75.27 337 P **P 23 36 17.8 +0.1**
SNR=9.2
KBK Karagaybulak 75.56 336 P **P 23 36 19.7 +0.1**
SNR=15
CFR Carcaliu 75.66 11⇓ P **P 23 36 19.6 -0.3**
CFR Carcaliu 75.66 11⇓ *i*P **P 23 36 19.5 -0.3**
AAK Ala-Archa 75.67 337 *e*P **P 23 36 20.0 -0.2**
AAK pmax pmax
comp=Z,20nm,1.1s
AAK Ala-Archa 75.67 337 *e*P **P 23 36 20.0 -0.2**
comp=Z,20nm,1.1s
AAK Ala-Archa 75.67 337 P **P 23 36 20.6 +0.4**
SNR=6.9
EKS2 Erkin-Say 75.79 337 *e*P **P 23 36 20.5 -0.4**
EKS2 pmax pmax
comp=Z,16nm,0.8s
EKS2 Erkin-Say 75.79 337 *e*P **P 23 36 20.5 -0.4**
comp=Z,16nm,0.8s
EKS2 Erkin-Say 75.79 337 P **P 23 36 21.1 +0.2**
SNR=18
HUMR Humele 75.96 13⇓ *i*P **P 23 36 20.9 -0.7**
KKAR Karatay Array 75.99 340 *e*P **P 23 36 20.7 -1.1**
KKAR pmax pmax
comp=Z,19nm,1.3s
KKAR Karatay Array 75.99 340 *e*P **P 23 36 20.7 -1.1**
comp=Z,19nm,1.3s
KZA Kyzart 76.05 336 P **P 23 36 22.8 +0.1**
SNR=7.0
SSLB Suanglung 76.06 293 *e*P **P 23 36 22.2 -0.3**
comp=Z,13nm,0.8s
AML Almayashu 76.32 337 P **P 23 36 24.6 +0.4**
SNR=14
SIM Simferopol' 76.36 7 *d*iP **P 23 36 24.1 +0.2**
SIM pmax pmax
comp=Z,18nm,0.9s
SIM MLR MLR
comp=Z,300nm,17.9s
TPUB Ta-pu 76.62 293 *e*P **P 23 36 26.0 +0.3**
ANN Anapa 76.68 4 *e*P P 23 36 21.6 -4.0
ANN *e* 23 36 37.1
ANN *e* 23 39 16.9
ANN *e*S S 23 46 02.5 -9.3
ANN pmax pmax
comp=Z,48nm,1.4s
PPT2 Papeete2 76.81 193 *e*LR LR 00 00 09.4
comp=Z,206nm,23.2s
PPT2 *e*T T 00 59 54.2
comp=Z,7.0nm,0.3s
TVO Taravao 76.97 192 *e*T T 01 00 07.4
comp=Z,37nm,0.3s
CD2 Chengdu 77.52 310 *e*P **P 23 36 30.5 -0.2**
CD2 pP **PcP 23 36 41.9 +0.9**
CD2 sP sP 23 36 46.4 +11
CD2 PP **PP 23 39 26.1 +1.2**
CD2 S S 23 46 15.8 -5.8
CD2 sS sS 23 46 34.9 +7.3
CD2 ScS **SKSac 23 46 41.5 -2.3**
CD2 SS **SS 23 51 16.6 -3.0**
CD2 pmax pmax
comp=Z,30nm,0.9s
CD2 pmax pmax
comp=Z,140nm,8.2s
CD2 LR LR
comp=N,380nm,20.2s
CD2 LR LR
comp=E,390nm,21.4s
CD2 LR LR
comp=Z,440nm,14.2s
KIV Kislovodsk 77.63 0 *e*P **P 23 36 30.6 -0.6**
KIV pmax pmax
comp=Z,16nm,1.0s
KIV MLR MLR
comp=Z,88nm,19.0s
KIV Kislovodsk 77.63 0 P **P 23 36 30.1 -1.1**
comp=Z,93nm,1.0s,SNR=5.2
VTS Vitosha 77.64 15 P P 23 36 35.9 +4.6
VTS Vitosha 77.64 15⇓ P **P 23 36 30.7 -0.6**
VTS Vitosha 77.64 15⇓ *i*P **P 23 36 30.6 -0.7**
KBZ Khabaz 77.86 0 P **P 23 36 32.2 -0.1**
KBZ Khabaz 77.86 0 P **P 23 36 32.2 -0.1**
KBZ Khabaz 77.86 0 P **P 23 36 32.2 -0.1**
comp=Z,8.1nm,0.8s,baz=336,slow=2.2,SNR=19
KBZ LR LR 00 17 58.9
comp=Z,113nm,20.4s,baz=16,slow=41
SOC Sochi 77.96 3 *i*P P 23 36 37.1 +4.2
KSH Kashi 78.34 335 P **P 23 36 37.6 +2.3**
KSH *e*PcP **PcP 23 36 46.6 +2.0**
KSH *e*pP pP 23 36 47.6 +8.7
KSH *e*sP sP 23 36 51.8 +12
KSH *e*PP PP 23 39 36.7 +5.2
KSH *e*S **S 23 46 28.0 -2.4**
KSH *e*SKS SKSac 23 46 43.7 -6.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
KSH				eSS	SKKSac	23 46 46.9	-3.8
KSH				pmax	pmax		
	comp=Z,21nm,0.8s						
KSH				LR	LR		
	comp=N,490nm,7.6s						
KSH				LR	LR		
	comp=E,330nm,7.4s						
KSH				LR	LR		
	comp=Z,260nm,6.2s						
MAK	Makhachkala	78.56	357	eP	P	23 36 34.9	-1.3
MAK				i		23 36 43.4	
MAK				e		23 39 33.6	
MAK				pmax	pmax		
	comp=Z,67nm,1.9s						
NVR	Nevrokopi	78.94	15	P	P	23 36 38.2	-0.2
GUDG	Gudauri	79.12	359	P	P	23 36 41.2	+1.6
FNA	Florina	79.15	17	P	P	23 36 40.0	+0.4
SOH	Sokhos	79.39	15	P	P	23 36 41.6	+0.7
ALN	Alexandroupoli	79.66	13	P	P	23 36 42.8	+0.5
TBLG	Delisi	79.85	359	P	P	23 36 42.6	-0.7
TBLG	Delisi	79.85	359	P	P	23 36 42.6	-0.7
PLG	Polygyros	79.85	15	P	P	23 36 42.6	-0.8
TIP	Timpagrande	79.94	21	P	P	23 36 43.6	-0.4
TIP	Timpagrande	79.94	21	eP	P	23 36 42.9	-1.1
	comp=Z,44nm,1.1s						
KEK	Kerkira	79.95	18	P	P	23 36 44.1	+0.2
LIT	Litokhoron	79.98	16	P	P	23 36 48.4	+4.3
DGRG	David-gareji	80.12	358	P	P	23 36 44.8	0.0
JAN	Janina	80.17	17	P	P	23 36 45.5	+0.4
GYA	Guiyang	80.24	306	P	P	23 36 46.0	+0.2
GYA				pP	PcP	23 36 57.9	+4.9
GYA				sP	sP	23 37 01.8	+11
GYA				PP	PP	23 39 49.5	+1.8
GYA				S	S	23 46 45.2	-5.7
GYA				SKS	SKSac	23 46 55.0	-8.4
GYA				SS	SS	23 51 57.9	-2.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.1s						
GYA				LR	LR		
	comp=N,570nm,18.7s						
GYA				LR	LR		
	comp=E,510nm,19.3s						
GYA				LR	LR		
	comp=Z,540nm,18.2s						
THL	Klokotos Trika	80.44	16	P	P	23 36 45.7	-0.8
ATAH	Atahualpa	80.47	121	LR	LR	00 13 04.5	
	comp=Z,186nm,21.7s,baz=216,slow=36						
LIA	Limnos Island	80.54	14	P	P	23 36 46.6	-0.4
NEO	Neokhori	80.86	16	P	P	23 36 47.9	-0.9
MAKR	Makrakomi, Fth	81.00	16	P	P	23 36 50.3	+0.7
EVR	Evrytania	81.04	17	P	P	23 36 49.9	0.0
SMIA	Simia	81.28	16	P	P	23 36 51.4	+0.3
SIGR	SIGRI	81.30	14	P	P	23 36 51.3	+0.2
PRK	Paraskevi	81.32	13	P	P	23 36 50.2	-1.0
ANTO	Ankara	81.33	8	eP	P	23 36 50.3	-1.1
ANTO				pmax	pmax		
	comp=Z,28nm,1.0s						
ANTO	Ankara	81.33	8	eP	P	23 36 50.3	-1.1
	comp=Z,28nm,1.0s						
ATAL	Atalanti	81.44	16	P	P	23 36 50.8	-1.1
BR131	Keskin Array S	81.53	7	eP	P	23 36 51.9	-0.6
	comp=Z,11nm,1.0s						
BRTR	Keskin Array B	81.53	7	P	P	23 36 52.1	-0.5
BRTR				PKKPbc	PKKPbc	23 55 23.8	+1.1
BRTR	Keskin Array B	81.53	7	P	P	23 36 52.1	-0.5
	comp=Z,9.0nm,0.9s,baz=4.4,slow=3.4,SNR=56						
BRTR				PKKPbc	PKKPbc	23 55 23.8	+1.1
	comp=Z,0.9nm,0.7s,baz=162,slow=4.2,SNR=9.3						
BRTR				LR	LR	00 15 54.0	
	comp=Z,77nm,20.0s,baz=185,slow=38						
RKT	Rikitea	81.60	178	eT	T	01 06 01.4	
	comp=Z,2.5nm,0.3s						
KEST	Kesra	81.70	27	eP	P	23 36 52.9	-0.5
KEST	Kesra	81.70	27	P	P	23 36 54.0	+0.7
	comp=Z,5.4nm,1.0s,baz=284,slow=5.2,SNR=8.8						
KEST				LR	LR	00 13 47.4	
	comp=Z,99nm,18.6s,baz=305,slow=36						
THAL	Thalero	82.03	16	P	P	23 36 54.0	-1.0
GUR	Goura	82.08	17	P	P	23 36 48.5	-6.9
PTL	Penteli	82.19	15	P	P	23 36 55.6	-0.3
ATH	Athens Observa	82.25	15	P	P	23 36 55.0	-1.1
TBI	Tubuai	82.49	192	eLR	LR	00 02 53.8	
	comp=Z,132nm,22.2s						
TBI				eT	T	01 07 03.1	
	comp=Z,30nm,0.3s						
DID	Didima	82.64	16	P	P	23 36 57.4	-0.8
ITM	Ithomi	82.76	17	P	P	23 36 58.0	-0.9
ABKT	Ailbek	82.85	348	P	P	23 36 59.5	+0.1
	comp=Z,100nm,1.0s,SNR=9.7						
KMI	Kunming	83.06	308	P	P	23 37 00.3	-0.5
KMI				pP	PcP	23 37 12.7	+7.2
KMI				sP	sP	23 37 17.0	+11
KMI				PP	PP	23 40 11.5	+0.4
KMI				S	S	23 47 13.8	-6.4
KMI				sS	SKKSac	23 47 32.5	+5.6
KMI				SS	SS	23 52 40.3	-2.6
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KMI				pmax	pmax		
	comp=Z,110nm,5.6s						
KMI				LR	LR		
	comp=N,310nm,13.9s						
KMI				LR	LR		
	comp=E,280nm,19.5s						
KMI				LR	LR		
	comp=Z,310nm,14.4s						
ISP	Isparta	83.18	10	eP	P	23 36 59.7	-1.4
ISP				pmax	pmax		
	comp=Z,37nm,1.1s						
ISP	Isparta	83.18	10	eP	P	23 36 59.7	-1.4
	comp=Z,37nm,1.1s						
ISP	Isparta	83.18	10⇓	iP	P	23 37 00.6	-0.5
LSA	Lhasa	83.28	319	P	P	23 37 03.7	+1.5
LSA				pmax	pmax		
	comp=Z,30nm,1.0s						
VLI	Veliai	83.37	16	P	P	23 37 01.6	-0.4
ARG	Arkhangelos	84.53	12	P	P	23 37 06.2	-1.7
KBL	Kabul	84.57	339	eP	P	23 37 06.4	-2.0
KBL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBL	Kabul	84.57	339	eP	P	23 37 06.4	-2.0
	comp=Z,4.2nm,0.6s						
HNR	Honiara	84.71	242	eP	P	23 37 09.3	+0.4
HNR	Honiara	84.71	242	P	P	23 37 09.5	+0.6
	comp=Z,38nm,0.3s,baz=206,slow=13,SNR=3.8						
VAM	Vamos	84.83	16	P	P	23 37 08.9	-0.6
NPS	Neapolis	85.17	14	P	P	23 37 09.2	-2.0
DHRM	DHARAMSHALA	85.21	332	ePKP	P	23 37 10.9	-0.8
DHRM				AMB	AMB	23 37 16.3	
	comp=Z,13nm,0.5s						
SIVA	Sivas	85.30	15	P	P	23 37 12.3	+0.5
SMLA	Simla	86.07	331	ePKP	P	23 37 15.4	-0.3
SMLA				AMB	AMB	23 37 19.5	
	comp=Z,24nm,0.9s						
CSS	Prodhromos	86.25	8	P	P	23 37 17.2	+0.7
CSS	Prodhromos	86.25	8	eP	P	23 37 15.3	-1.2
	comp=Z,49nm,1.4s						
TAPN	Taplejung	86.59	321	eP	P	23 37 18.6	-0.1
	comp=Z,65nm,0.8s						
DDI	Dehra Dun	86.61	330	ePKP	P	23 37 18.5	0.0
GUN	Gumba	86.65	323	eP	P	23 37 19.1	+0.1
	comp=Z,109nm,1.0s						
SHL	Shillong	86.81	317	ePKP	P	23 37 19.4	-0.2
SHL				AMB	AMB	23 37 19.6	
	comp=Z,20nm,1.0s						
DANN	Dangsing	86.89	325	eP	P	23 37 19.6	-0.5
	comp=Z,86nm,0.8s						
KKN	Kakani	86.95	324	eP	P	23 37 20.4	+0.1
	comp=Z,66nm,0.7s						
PKI	Pulchoki	87.11	323	eP	P	23 37 20.9	-0.4
ODAN	Odare	87.14	321	eP	P	23 37 21.1	-0.2
	comp=Z,66nm,0.9s						
DMN	Daman	87.17	324	eP	P	23 37 21.4	-0.1
	comp=Z,125nm,1.2s						
RAMN	Ramite	87.32	322	eP	P	23 37 21.7	-0.5
	comp=Z,45nm,0.8s						
PYUN	Piuthan	87.35	326	eP	P	23 37 21.7	-0.6
	comp=Z,102nm,1.0s						
KOLN	Koldanda	87.48	325	eP	P	23 37 22.4	-0.5
	comp=Z,35nm,0.7s						
SAML	Samuel	89.23	109	eP	P	23 37 30.1	-0.8
	comp=Z,30nm,0.9s						
CHTO	Chiang Mai	90.24	308	eP	P	23 37 35.8	0.0
CHTO				pmax	pmax		
	comp=Z,13nm,0.9s						
CHTO	Chiang Mai	90.24	308	eP	P	23 37 35.8	0.0
	comp=Z,13nm,0.9s						
BOK	Bokaro	90.48	322	ePKP	P	23 37 34.9	-2.0
BOK				AMB	AMB	23 37 38.7	
	comp=Z,17nm,2.3s						
CM31	Chiang Mai Arr	90.56	308	eP	P	23 37 38.1	+0.8
	comp=Z,18nm,0.7s						
CMAR	Chiang Mai Arr	90.56	308	P	P	23 37 38.0	+0.7
CMAR	Chiang Mai Arr	90.56	308	P	P	23 37 38.0	+0.7
	comp=Z,25nm,0.9s,baz=2.7,slow=5.3,SNR=102						
CMAR				LR	LR	00 22 40.4	
	comp=Z,123nm,18.4s,baz=205,slow=39						
TAM	Tamanrasset	92.96	34	eP	P	23 37 48.0	-0.5
TAM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TAM	Tamanrasset	92.96	34	eP	P	23 37 48.0	-0.5
	comp=Z,5.2nm,1.0s						
DZM	Mont Dzumac	93.10	231	eLR	LR	00 09 17.7	
	comp=Z,132nm,22.9s						
DZM	Mont Dzumac	93.10	231	P	P	23 37 49.7	+0.8
DZM	Mont Dzumac	93.10	231	P	P	23 37 49.7	+0.8
	comp=Z,9.5nm,1.0s,baz=82,slow=12,SNR=4.3						
LPAZ	La Paz	93.20	116	P	P	23 37 51.1	+1.1
LPAZ	La Paz	93.20	116	P	P	23 37 51.1	+1.1
	comp=Z,2.1nm,0.9s,baz=230,slow=3.2,SNR=4.4						
LPAZ				LR	LR	00 23 42.6	
	comp=Z,117nm,18.1s,baz=338,slow=38						
RAYN	Ar Rayn	97.99	358	P	P	23 38 11.0	-0.3
	comp=Z,33nm,0.9s,SNR=5.5						
PBA	Port Blair	99.20	311	ePKP	Pdif	23 38 16.0	-0.7
PBA				AMB	AMB	23 38 18.1	
	comp=Z,122nm,1.6s						
TRD	Trivandrum	107.64	325	ePKP	Pdif	23 38 55.1	+0.8
TRD				AMB	AMB	23 39 01.4	
	comp=Z,63nm,2.8s						
ASAR	Alice Springs	109.57	257	PKiKP	PKiKP	23 43 04.2	-1.3
ASAR	Alice Springs	109.57	257	PKiKP	PKiKP	23 43 04.2	-1.3
	comp=Z,1.6nm,0.9s,baz=74,slow=1.3,SNR=13						
KMBO	Kilima Mbogo	122.32	7	PKP	PKPdf	23 43 30.0	-0.5
KMBO				ePKPdf	PKiKP	23 43 30.5	-0.2
KMBO	Kilima Mbogo	122.32	7	PKP	PKPdf	23 43 30.0	-0.5
	comp=Z,3.7nm,0.7s,baz=236,slow=22,SNR=10						
VNDA	Vanda	141.16	198	PKPpre	PKPpre	23 43 55.4	
VNDA				PKP	PKPdf	23 44 02.8	-0.9
VNDA				ePKPdf	PKiKP	23 44 03.5	-2.8
VNDA	Vanda	141.16	198	PKhKP	PKPpre	23 43 55.4	
	comp=Z,1.2nm,0.9s,baz=357,slow=3.8,SNR=7.5						
VNDA				PKP	PKPdf	23 44 02.8	-0.9
	comp=Z,2.5nm,0.9s,baz=158,slow=0.6,SNR=8.3						
LBTB	Lobatse	144.04	28	ePKPdf	PKPab	23 44 07.7	-0.2
BOSA	Boshof	147.39	30	ePKPbc	PKPdf	23 44 18.0	+1.8
BOSA	Boshof	147.39	30	PKPbc	PKPdf	23 44 17.1	+0.9
	comp=Z,17nm,1.0s,baz=338,slow=0.7,SNR=9.6						
QSPA	South Pole Qui	148.59	180	ePKPdf	PKPdf	23 44 18.6	+1.8
QSPA				PKPbc	PKPbc	23 44 20.9	+0.4
QSPA				ePKPbc	PKiKP	23 44 21.1	-0.9
QSPA	South Pole Qui	148.59	180	PKPbc	PKPbc	23 44 20.9	+0.4
	comp=Z,67nm,0.9s,baz=90,slow=0.6,SNR=196						
CASY	Casey	149.53	227	ePKPdf	PKPdf	23 44 19.9	+1.7
CASY				ePKPbc	PKPbc	23 44 22.5	-0.3
SNAA	Sanae	157.54	143	ePKPdf	PKPdf	23 44 28.6	-1.0
SNAA	Sanae	157.54	143	ePKPab	PKPab	23 45 01.9	+0.1

*ISCJB **07** 23:32:34.5±1.1, 38°.29N±0°.04×26°.56E±0°.06, h4km±5km, Error ellipse: s-maj=9.2km s-min=4.8km az=140.4*
*DDA **07** 23:32:34.4, 38°.36N×26°.57E, h8km, MD3.1*
*ISK **07** 23:32:34.6, 38°.25N×26°.61E, h10km, MD3.2*
*CSEM **07** 23:32:34.4±0.6, 38°.26N×26°.57E, h0km±2km, MD3.1, Error ellipse: s-maj=9.8km s-min=5.2km az=48.0*
ISC 07 23:32:33.9±1.6**, 38°.27N**±0°.04×**26°.53E**±0°.06**, h3**km±10km**, n55, σ0s.92**/69**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URLA	Izmir	0.10	33	i P	Pg	23 32 35.9	-0.1
URLA				i S	Sg	23 32 37.3	-0.1
URLA	Izmir	0.10	33	i P	Pg	23 32 35.9	-0.1
URLA				i S	Sg	23 32 37.3	-0.1
BLCB	Balcova	0.42	75	ePG	Pg	23 32 42.3	+0.3
BLCB				eSG	Sg	23 32 47.9	+0.4
BLCB	Balcova	0.42	75	ePg	Pg	23 32 42.3	+0.3
BLCB				eSg	Sg	23 32 47.9	+0.4
IZM	Izmir	0.59	78	ePG	Pg	23 32 45.7	+0.4
IZM				eSG	Sg	23 32 53.6	+0.6
IZM	Izmir	0.59	78	ePg	Pg	23 32 45.7	+0.4
IZM				eSg	Sg	23 32 53.6	+0.6
AKHS	Akhisar	1.18	59	i P	Pg	23 32 55.7	-0.8
AKHS				i S	Sg	23 33 11.5	-0.3
AKHS	Akhisar	1.18	59	i P	Pg	23 32 55.7	-0.8
AKHS				i S	Sg	23 33 11.5	-0.3
AYDN	Tasoluk	1.23	119	i P	Pb	23 32 57.9	0.0
AYDN				i S	Sn	23 33 15.6	+0.3
AYDN	Tasoluk	1.23	119	i P	Pb	23 32 57.9	0.0
MLSB	Milas	1.39	134	ePN	Pn	23 32 59.8	-0.5
MLSB				eSN	Sg	23 33 18.4	-0.2
MLSB	Milas	1.39	134	ePn	Pn	23 32 59.8	-0.5
MLSB				eSn	Sg	23 33 18.4	-0.2
EZN	Ezine	1.56	354	ePN	Pn	23 33 03.0	+0.5
EZN	Ezine	1.56	354	ePn	Pn	23 33 03.0	+0.5
BOZC	Bozcaada	1.61	347	i P	Pn	23 33 01.2	-2.1
BOZC				i S	Sb	23 33 25.2	+0.2
MANT	Manisa	1.61	82	i P	Pg	23 33 05.6	+0.8
MANT	Manisa	1.61	82	i P	Pg	23 33 05.6	+0.8
BALY	Balya	1.69	30	eP	Pn	23 33 03.6	-0.9
BALY				i S	Sn	23 33 26.1	-0.6
BALY	Balya	1.69	30	eP	Pn	23 33 03.6	-0.9
BALY				i S	Sn	23 33 26.1	-0.6
KULA	Kula-Manisa	1.69	81	ePN	Pn	23 33 04.0	-0.4
KULA	Kula-Manisa	1.69	81	ePn	Pn	23 33 04.1	-0.4
BALB	Balikesir	1.73	37	ePN	Pn	23 33 04.6	-0.3
BALB	Balikesir	1.73	37	ePn	Pn	23 33 04.6	-0.3
GONE	Gonen-Balikesi	1.99	27	ePN	Pn	23 33 09.0	+0.6
GONE	Gonen-Balikesi	1.99	27	ePn	Pn	23 33 09.0	+0.6
DURS	Dursunbey	2.02	48	i P	Pn	23 33 07.7	-1.2
DURS	Dursunbey	2.02	48	i P	Pn	23 33 07.7	-1.2
LPK	Lapseki	2.10	5	ePN	Pn	23 33 11.2	+1.1
LPK	Lapseki	2.10	5	ePn	Pn	23 33 11.2	+1.1
DST	Dursunbey	2.10	50	ePN	Pn	23 33 10.4	+0.3
DST	Dursunbey	2.10	50	ePn	Pn	23 33 10.4	+0.3
GELI	Tayfur-Gelibol	2.12	359	ePN	Pb	23 33 12.0	-1.0
GELI	Tayfur-Gelibol	2.12	359	ePn	Pb	23 33 12.0	-1.0
KRBG	Karabiga-Canak	2.20	16	ePN	Pn	23 33 11.8	+0.4
KRBG	Karabiga-Canak	2.20	16	ePn	Pn	23 33 11.8	+0.4
ERIK	Erikli-Kesan	2.39	360	ePN	Pn	23 33 15.3	+1.3
ERIK	Erikli-Kesan	2.39	360	ePn	Pn	23 33 15.3	+1.3
KCTX	Karacabey (Bur	2.44	35	ePN	Pn	23 33 15.7	+0.9
KCTX	Karacabey (Bur	2.44	35	ePn	Pn	23 33 15.7	+0.9
RKY	Sarkoy-Tekirda	2.46	12	ePN	Pn	23 33 15.5	+0.4
RKY	Sarkoy-Tekirda	2.46	12	ePn	Pn	23 33 15.5	+0.4
MRMT	Marmara Adasi	2.47	19	ePN	Pn	23 33 16.0	+0.8
MRMT	Marmara Adasi	2.47	19	ePn	Pn	23 33 16.0	+0.8
ENEZ	Enez	2.48	353	ePN	Pn	23 33 17.1	+1.9
ENEZ	Enez	2.48	353	ePn	Pn	23 33 17.1	+1.9
TVSB	Tavsanli	2.58	62	ePN	Pn	23 33 16.5	-0.1
TVSB	Tavsanli	2.58	62	ePn	Pn	23 33 16.5	-0.1
MFT	Murefte	2.58	13	ePN	Pn	23 33 18.7	+2.0
MFT	Murefte	2.58	13	ePn	Pn	23 33 18.7	+2.0
MDNY	Mudanya-Bursa	2.78	40	ePN	Pn	23 33 20.3	+0.9
MDNY	Mudanya-Bursa	2.78	40	ePn	Pn	23 33 20.3	+0.9
ARMT	Armutlu	2.92	38	ePN	Pn	23 33 22.6	+1.4
ARMT	Armutlu	2.92	38	ePn	Pn	23 33 22.7	+1.4
CTKS	Kestanelik-??a	3.33	27	ePN	Pn	23 33 28.5	+1.6
CTKS	Kestanelik-??a	3.33	27	ePn	Pn	23 33 28.5	+1.6

*CSEM **07** 23:41:44.9±0.1, 41°.30N×22°.68E, h15km, MD2.8, Error ellipse: s-maj=3.3km s-min=2.4km az=2.0*
*SKO **07** 23:41:45.2, 41°.30N×22°.68E, h11km, M0.7, ML1.2*
*ATH **07** 23:41:46.2, 41°.24N×22°.68E, h15km±5km, MD2.8/3*
ISC 07 23:41:44.8±1.0**, 41°.27N**±0°.08×**22°.66E**±0°.05**, h13**km±10km**, n10, σ0s.18**/16**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.08	305	i Pg	Pg	23 41 47.5	-0.1
VAY				i Sg	Sg	23 41 49.3	-0.4
VAY				i Lg	Lg	23 41 49.3	
	comp=E,155nm,0.3s						
VAY				i Lg	Lg	23 41 49.5	
	comp=N,164nm,0.2s						
VAY	Valandovo	0.08	305	i Pg	Pg	23 41 48.0	+0.4
VAY				i Sg	Sg	23 41 49.7	+0.1
VAY				i Lg	Lg	23 41 49.9	
	comp=N,164nm,0.2s						
GRG	Griva	0.37	212	ePB	Pb	23 41 53.4	+0.1
GRG				eSB	Sb	23 41 58.8	-0.2
GRG	Griva	0.37	212	ePb	Pb	23 41 53.4	+0.1
GRG				eSb	Sb	23 41 58.8	-0.2
SOH	Sokhos	0.69	131	ePB	Pb	23 41 58.7	0.0
SOH				eSN	Sb	23 42 08.2	0.0
SOH	Sokhos	0.69	131	ePb	Pb	23 41 58.7	0.0
SOH				eSn	Sb	23 42 08.2	0.0
NVR	Nevrokopi	0.91	85	ePN	Pn	23 42 03.3	0.0
NVR	Nevrokopi	0.91	85	ePn	Pn	23 42 03.3	0.0
PLG	Polygyros	1.08	146	ePN	Pg	23 42 05.7	+0.1
PLG	Polygyros	1.08	146	ePn	Pg	23 42 05.7	+0.1

IDC 07 23:52:08.1±2.1**, 6°.36S×129°.65E, h0km, mb3.5**/1**, mb1 3.7**/4**, mb1mx3.5**/20**, mbtmp3.5**/4**, ML3.5**/2**, Error ellipse: s-maj=93.6km s-min=27.3km az=76.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.31	198	Pn	Pn	23 55 05.5	+0.7
	0.4nm,0.3s,baz=29,slow=12,SNR=18						
FITZ				Sn	Sn	23 57 09.3	-14
	0.3nm,0.3s,baz=75,slow=20,SNR=4.7						
WRA	Warramunga Arr	14.25	162	Pn	Pn	23 55 31.3	-0.1
	0.2nm,0.3s,baz=343,slow=13,SNR=3.9						
WRA				Sn	Sn	23 57 57.9	-12
	0.5nm,0.3s,baz=330,slow=23,SNR=5.0						
ASAR	Alice Springs	17.69	167	P	Pn	23 56 15.6	-0.5
	0.1nm,0.3s,baz=340,slow=9.5,SNR=8.5						
MKAR	Makanchi Array	67.50	327	P	P	00 03 06.1	0.0
	0.2nm,0.3s,baz=125,slow=6.8,SNR=9.8						

*SKO **07** 23:52:28.2, 41°.24N×22°.72E, h15km, M1.3, ML1.5*
*ATH **07** 23:52:29.2, 41°.27N×22°.71E, h3km±2km, MD2.9/4*
*CSEM **07** 23:52:29.3±0.1, 41°.26N×22°.72E, h2km, ML1.6, Error ellipse: s-maj=2.0km s-min=1.6km az=55.0*
*BEO **07** 23:52:31.7±1.0, 41°.34N×22°.61E, h0km, ML1.6/4*
ISC 07 23:52:28.1±0.9**, 41°.24N**±0°.03×**22°.70E**±0°.04**, h12**km±7km**, n16, σ0s.93**/31**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.13	309	ePg	Pg	23 52 31.4	0.0
VAY				eSg	Sg	23 52 33.4	-0.3
VAY	Valandovo	0.13	309	i Pg	Pg	23 52 31.4	0.0
VAY				eSg	Sg	23 52 33.3	-0.4
VAY				i Lg	Lg	23 52 33.5	
	comp=E,164nm,0.2s						
VAY				eLg	Lg	23 52 33.6	
	comp=N,364nm,0.2s						
VAY	Valandovo	0.13	309	i Pg	Pg	23 52 31.8	+0.5
VAY				eSg	Sg	23 52 33.4	-0.3
VAY				eLg	Lg	23 52 34.0	
	comp=N,364nm,0.2s						
GRG	Griva	0.36	219	ePG	Pb	23 52 36.9	+0.4
GRG				eSG	Sb	23 52 42.5	+0.3
GRG	Griva	0.36	219	ePg	Pb	23 52 36.9	+0.4
GRG				eSg	Sb	23 52 42.5	+0.3
SOH	Sokhos	0.65	130	ePG	Pb	23 52 41.6	+0.3
SOH				eSG	Sn	23 52 51.1	-2.2
SOH	Sokhos	0.65	130	ePg	Pb	23 52 41.6	+0.3
SOH				eSg	Sn	23 52 51.1	-2.2
NVR	Nevrokopi	0.88	82	ePG	Pn	23 52 45.8	-0.6
NVR				eSG	Sn	23 52 57.8	-1.3
NVR	Nevrokopi	0.88	82	ePg	Pn	23 52 45.8	-0.6
NVR				eSg	Sn	23 52 57.8	-1.3
PLG	Polygyros	1.03	147	ePG	Pg	23 52 49.0	+1.0
PLG				eSG	Sn	23 53 03.3	+0.5
PLG	Polygyros	1.03	147	ePg	Pg	23 52 49.0	+1.0
PLG				eSg	Sn	23 53 03.3	+0.5
VTS	Vitosha	1.40	15	ePg	Pg	23 52 56.0	+0.9
VTS				eSg	Sg	23 53 13.3	0.0
VTS	Vitosha	1.40	15	ePg	Pg	23 52 56.0	+0.9
VTS				eSg	Sg	23 53 13.3	0.0
BARS	Barje	1.71	338	ePn	Pb	23 53 00.1	+0.6
BARS				eSn	Sg	23 53 22.1	-1.0
BARS	Barje	1.71	338	ePn	Pb	23 53 00.1	+0.6
BARS				eSn	Sg	23 53 22.1	-1.0
ZAPS	Zavoj	2.03	359	eSn	Sb	23 53 31.6	+1.3

IDC 07 23:57:02.8±1.5**, 23°.86S×67°.00W, h193**km±19km**, mb3.3**/1**, mb1 3.4**/6**, mb1mx3.2**/20**, mbtmp3.3**/6**, Error ellipse: s-maj=30.6km s-min=14.2km az=92.0, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	7.60	352	P	Pn	23 58 53.0	+1.3
	1.8nm,0.3s,baz=169,slow=6.2,SNR=53						
LPAZ				S	Sn	00 00 16.6	-1.5
	0.1nm,0.3s,baz=262,slow=5.5,SNR=1.8						
CFAA	Coronel Fontan	7.80	188	P	Pn	23 58 54.8	+1.4
	0.3nm,0.3s,baz=10,slow=13,SNR=97						
CFAA				S	Sn	00 00 19.3	-2.0
	0.2nm,0.3s,baz=123,slow=23,SNR=6.2						
CPUP	Villa Florida	9.11	108	P	Pn	23 59 10.6	+0.1
	0.2nm,0.3s,baz=258,slow=19,SNR=4.5						
SIV	San Ignacio	9.61	37	P	Pn	23 59 16.0	-1.1
	0.8nm,0.3s,baz=191,slow=5.2,SNR=16						
BDFB	Brasilia	19.64	69	P	P	00 01 17.6	+0.6
	0.8nm,0.3s,baz=245,slow=11,SNR=12						
TORD	Torodi Ar. Bea	76.52	69	P	P	00 08 31.9	-0.1
	0.4nm,0.4s,baz=260,slow=5.8,SNR=21						

CASC 08 00:10:24.2±1.0**, 13°.09N×90°.02W, h29**km±3km**, MD3.5, 1C, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBLS	San Blas	0.84	28	eP	Pn	00 10 39.8	-0.6
SBLS				eS	Sn	00 10 52.6	+0.7
SNJE	San Jose	0.87	28	eP	Pn	00 10 40.2	-0.6
BOQS	Boqueron	0.96	48	eP	Pn	00 10 42.3	+0.2
BOQS				eS	Sb	00 10 55.6	+0.4
RBDL	Robledal	1.06	18	eP	Pn	00 10 43.4	0.0
LFRS	El Faro	1.07	60⇑	eP	Pn	00 10 43.5	+0.1
LFRS				eS	Sb	00 10 57.9	-0.1
IXG	Ixpaco	1.15	339	eP	Pn	00 10 44.1	-0.5
IXG				eS	Sb	00 11 00.9	+0.4
SNVI	San Vicente	1.26	66	eP	Pn	00 10 46.3	+0.2
MTO2	Montecristo 2	1.45	26	eP	Pn	00 10 49.5	+0.7
FUG	Fuego 3	1.56	329	eP	Pn	00 10 50.5	+0.2
FUG				eS	Sn	00 11 10.0	+0.2

*CSEM **08** 00:26:25.4, 39°.36N×44°.08E, h20km, MD2.7, After ISK*
ISK 08 00:26:25.4, 39°.36N×44°.08E, h20km, MD2.7, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CLDR	Caldiran	0.25	210	ePG	Pb	00 26 31.3	-0.3
CLDR				eSG	Sb	00 26 36.3	+0.5
CLDR	Caldiran	0.25	210	ePg	Pb	00 26 31.3	-0.3
CLDR				eSg	Sb	00 26 36.3	+0.5
AGRB	Hanur-Agry	0.87	285	ePG	Pb	00 26 42.1	0.0
AGRB				eSG	Sn	00 26 55.6	+0.5
AGRB	Hanur-Agry	0.87	285	ePg	Pb	00 26 42.1	0.0
AGRB				eSg	Sn	00 26 55.6	+0.6
VANB	Van	0.93	215	ePG	Pn	00 26 44.0	+0.5
VANB	Van	0.93	215	ePg	Pn	00 26 44.0	+0.5
GNI	Garni	0.94	33	ePG	Pn	00 26 43.9	+0.1
GNI				eSG	Sn	00 26 58.1	+1.3
GNI	Garni	0.94	33	ePg	Pn	00 26 43.9	+0.1
GNI				eSg	Sn	00 26 58.1	+1.3

IDC 08 00:34:23.4±2.3**, 6°.37N×126°.25E, h0km, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.4**/25**, mbtmp3.5**/4**, Error ellipse: s-maj=142.8km s-min=26.3km az=68.0, Mindanao**

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

FITZ	Fitzroy Crossi	24.32	181	P	P	00 39 42.9	0.0
	1.8nm,1.0s,baz=5.5,slow=12,SNR=4.3						
WRA	Warramunga Arr	27.33	163	P	P	00 40 10.1	-0.1
	0.4nm,0.7s,baz=344,slow=10,SNR=3.6						
ASAR	Alice Springs	30.77	166	P	P	00 40 40.9	+0.1
	0.4nm,0.4s,baz=344,slow=7.2,SNR=7.8						
MKAR	Makanchi Array	55.13	324	P	P	00 43 57.5	-0.1
	0.2nm,0.4s,baz=116,slow=8.5,SNR=5.1						

IDC 08 00:56:17.9±59.0**, 17.°70S×176.°83E, h0**km**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/18**, mbtmp3.9**/3**, Error ellipse: s-maj=1041.0km s-min=143.6km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	34.80	239	P	P	01 03 11.4	+0.9
	1.5nm,0.7s,baz=73,slow=9.0,SNR=4.4						
WRA	Warramunga Arr	40.21	260	P	P	01 03 56.2	-0.4
	0.6nm,0.8s,baz=96,slow=7.9,SNR=3.8						
ASAR	Alice Springs	40.49	254	P	P	01 03 58.2	-0.6
	3.2nm,0.7s,baz=88,slow=7.9,SNR=27						

KRSC 08 01:10:12.6±0.7**, 50.°82N×157.°60E, h40**km±40km**, ML3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	0.82	323	P	Pn	01 10 28.3	+0.7
PAU				S	Sn	01 10 39.3	+0.8
SKR	Severo-Kuril's	0.95	262	P	Pn	01 10 28.6	-0.8
SKR				S	Sn	01 10 40.1	-1.7
MIPR	Malaya Ipel'ka	1.55	341	P	Pn	01 10 38.5	+0.8
MIPR				S	Sn	01 10 56.9	+0.3
ASAK	Asacha	1.58	7	P	Pn	01 10 39.7	+1.5
ASAK				S	Sn	01 10 59.2	+1.8
MTVR	Mutnovka	1.71	12	P	Pn	01 10 41.7	+1.7
MTVR				S	Sn	01 11 02.7	+2.0
RUS	Russkaya	1.71	19	P	Pn	01 10 41.2	+1.3
RUS				S	Sn	01 11 02.0	+1.5
GRL	Gorelyy	1.76	9	P	Pn	01 10 42.4	+1.7
GRL				S	Sn	01 11 03.8	+1.8
APC	Apacha	2.13	353	P	Pn	01 10 46.8	+1.2
APC				S	Sn	01 11 11.7	+1.0
PET	Petropavlovsk	2.30	16	S	Sn	01 11 17.0	+2.0
UGLR	Uglovaya	2.51	17	P	Pn	01 10 53.8	+2.8
UGLR				S	Sn	01 11 23.7	+3.2
AVH	Avacha	2.55	16	P	Pn	01 10 54.2	+2.7
AVH				S	Sn	01 11 25.3	+4.0
KOK	Koryaka	2.56	14	P	Pn	01 10 54.7	+3.0
KOK				S	Sn	01 11 25.3	+3.7
SMAR	Somma	2.56	16	P	Pn	01 10 55.2	+3.4
SMAR				S	Sn	01 11 26.6	+4.7
SDLR	Sedlovina	2.59	17	P	Pn	01 10 54.2	+2.1
SDLR				S	Sn	01 11 24.4	+2.0
KRER	Koryakskii	2.59	15	P	Pn	01 10 54.9	+2.7
NLC	Nalytchevo	2.59	24	P	Pn	01 10 52.7	+0.8
NLC				S	Sn	01 11 22.3	+0.2
SPN	Mys Shipunski	2.73	32	P	Pn	01 10 56.1	+2.2
SPN				S	Sn	01 11 27.6	+2.0
GNL	Ganaly	2.89	4	P	Pn	01 10 57.9	+1.7
GNL				S	Sn	01 11 30.8	+1.0
MKZ	Mys Kozlova	4.51	32	P	Pn	01 11 20.0	+1.8
MKZ				S	Sn	01 12 09.2	-0.1

*ISK **08** 01:15:00.6, 39.°40N×26.°46E, h5km, MD3.0*
*ISCJB **08** 01:15:01.0±1.0, 39.°40N±0.°04×26.°42E±0.°09, h11km±5km, Error ellipse: s-maj=12.7km s-min=5.2km az=152.9*
*DDA **08** 01:15:01.6, 39.°39N×26.°41E, h7km, MD2.7*
*CSEM **08** 01:15:01.0±0.3, 39.°38N×26.°43E, h10km, MD3.0, Error ellipse: s-maj=9.5km s-min=4.0km az=67.0*
ISC 08 01:15:01.1±1.3**, 39.°39N**±0.°04×**26.°40E**±0.°06**, h13**km±8km**, n26, σ0.s49**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	Ayvalik	0.24	109	*i* P	Pg	01 15 06.4	+0.1
AYVA				*i* S	Sg	01 15 09.8	+0.1
AYVA	Ayvalik	0.24	109	*i* P	Pg	01 15 06.4	+0.1
AYVA				*i* S	Sg	01 15 09.8	+0.1
EZN	Ezine	0.44	353	*e*PG	Pg	01 15 09.8	-0.1
EZN				*e*SG	Sg	01 15 15.6	-0.2
EZN	Ezine	0.44	353	*e*Pg	Pg	01 15 09.8	-0.1
EZN				*e*Sg	Sg	01 15 15.6	-0.2
GELI	Tayfur-Gelibol	1.01	3	*e*PG	Pb	01 15 20.1	-0.4
GELI				*e*SG	Sg	01 15 34.3	+0.5
GELI	Tayfur-Gelibol	1.01	3	*e*Pg	Pb	01 15 20.1	-0.4
GELI				*e*Sg	Sg	01 15 34.3	+0.5
LPK	Lapseki	1.02	16	*e*PG	Pb	01 15 20.3	-0.4
LPK	Lapseki	1.02	16	*e*Pg	Pb	01 15 20.3	-0.4
BLCB	Balcova	1.12	153	*e*PN	Pb	01 15 21.9	-0.4
BLCB				*e*SN	Sn	01 15 37.9	+0.1
BLCB	Balcova	1.12	153	*e*Pn	Pb	01 15 21.9	-0.4
BLCB				*e*Sn	Sn	01 15 37.9	+0.1
BALB	Balikesir	1.17	77	*e*PN	Pb	01 15 22.5	-0.8
BALB				*e*SN	Sb	01 15 38.3	-0.1
BALB	Balikesir	1.17	77	*e*Pn	Pb	01 15 22.5	-0.8
BALB				*e*Sn	Sb	01 15 38.3	-0.1
GONE	Gonen-Balikesi	1.19	56	*e*PN	Pn	01 15 23.1	-0.4
GONE	Gonen-Balikesi	1.19	56	*e*Pn	Pn	01 15 23.1	-0.4
KRBG	Karabiga-Canak	1.22	34	*e*PN	Pn	01 15 23.6	-0.3
KRBG	Karabiga-Canak	1.22	34	*e*Pn	Pn	01 15 23.6	-0.3
ERIK	Erikli-Kesan	1.28	4	*e*PN	Pb	01 15 25.3	+0.2
ERIK	Erikli-Kesan	1.28	4	*e*Pn	Pb	01 15 25.3	+0.2
ENEZ	Enez	1.36	352	*e*PN	Pg	01 15 27.1	-0.2
ENEZ	Enez	1.36	352	*e*Pn	Pg	01 15 27.1	-0.2
RKY	Sarkoy-Tekirda	1.43	25	*e*PN	Pn	01 15 27.1	+0.2
RKY	Sarkoy-Tekirda	1.43	25	*e*Pn	Pn	01 15 27.1	+0.2
KCTX	Karacabey (Bur	1.75	59	*e*PN	Pn	01 15 31.8	+0.7
KCTX	Karacabey (Bur	1.75	59	*e*Pn	Pn	01 15 31.8	+0.7
ARMT	Armutlu	2.23	57	*e*PN	Pn	01 15 39.1	+1.3
ARMT	Armutlu	2.23	57	*e*Pn	Pn	01 15 39.1	+1.3

*ISK **08** 01:20:07.7, 37.°92N×29.°21E, h6km, MD2.8*
*ISCJB **08** 01:20:08.0±0.6, 37.°90N±0.°03×29.°24E±0.°04, h3km±6km, Error ellipse: s-maj=6.1km s-min=4.9km az=23.9*
*CSEM **08** 01:20:08.2±0.1, 37.°89N×29.°22E, h8km, MD2.8, Error ellipse: s-maj=2.6km s-min=2.2km az=125.0*
*DDA **08** 01:20:08.3, 37.°87N×29.°21E, h10km, MD2.9*
ISC 08 01:20:08.1±0.9**, 37.°89N**±0.°03×**29.°21E**±0.°03**, h14**km±7km**, n28, σ0.s34**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.19	226	*e*PG	Pg	01 20 12.6	0.0
DENT				*e*SG	Sb	01 20 16.4	-0.6
DENT	Denizli	0.19	226	*e*Pg	Pg	01 20 12.6	0.0
DENT				*e*Sg	Sb	01 20 16.4	-0.6
DNZL	Cakiroluk	0.23	213	*i* P	Pg	01 20 13.2	-0.1
DNZL				*i* S	Sg	01 20 16.9	+0.1
DNZL	Cakiroluk	0.23	213	*i* P	Pg	01 20 13.2	-0.1
DNZL				*i* S	Sg	01 20 16.9	+0.1
KHAL	Karahalli	0.53	25	*i* P	Pb	01 20 18.9	-0.5
KHAL	Karahalli	0.53	25	*i* P	Pb	01 20 18.9	-0.5
KULA	Kula-Manisa	0.76	326	*e*PG	Pg	01 20 22.2	-0.7
KULA				*e*SG	Sg	01 20 33.2	+0.2
KULA	Kula-Manisa	0.76	326	*e*Pg	Pg	01 20 22.2	-0.7
KULA				*e*Sg	Sg	01 20 33.2	+0.2
MANT	Manisa	0.79	320	*i* P	Pb	01 20 24.0	+0.2
MANT	Manisa	0.79	320	*i* P	Pb	01 20 24.0	+0.2
ISP	Isparta	1.04	93	*e*PG	Pn	01 20 28.6	+0.1
ISP	Isparta	1.04	93	*e*Pg	Pn	01 20 28.6	+0.1
YER	Yerkesik	1.05	225	*e*PG	Pn	01 20 28.4	-0.1
YER	Yerkesik	1.05	225	*e*Pg	Pn	01 20 28.4	-0.1
AYDN	Tasoluk	1.08	258	*i* P	Pn	01 20 29.3	+0.4
AYDN				*i* S	Sn	01 20 43.9	+0.2
AYDN	Tasoluk	1.08	258	*i* P	Pn	01 20 29.3	+0.4
AYDN				*i* S	Sn	01 20 43.9	+0.2
BCK	Bucak	1.18	111	*e*PN	Pg	01 20 30.7	-0.1
BCK	Bucak	1.18	111	*e*Pn	Pg	01 20 30.7	-0.1
DEMI	Demirci	1.22	342	*i* P	Pg	01 20 31.8	+0.2
DEMI				*i* S	Sg	01 20 47.6	+0.1
DEMI	Demirci	1.22	342	*i* P	Pg	01 20 31.8	+0.2
DEMI				*i* S	Sg	01 20 47.6	+0.1
SHUT	Suhut-Afyon	1.25	57	*e*PN	Pb	01 20 31.4	-0.2
SHUT	Suhut-Afyon	1.25	57	*e*Pn	Pb	01 20 31.4	-0.2
ELL	Elmali	1.27	154	*e*PN	Pg	01 20 32.8	+0.3
ELL	Elmali	1.27	154	*e*Pn	Pg	01 20 32.8	+0.3
ALT	Altintas	1.37	31	*e*PN	Pb	01 20 33.7	+0.2
ALT				*e*SN	Sg	01 20 52.2	0.0
ALT	Altintas	1.37	31	*e*Pn	Pb	01 20 33.7	+0.2
ALT				*e*Sn	Sg	01 20 52.2	0.0
TVSB	Tavsanli	1.57	7	*e*PN	Pn	01 20 36.3	+0.5
TVSB	Tavsanli	1.57	7	*e*Pn	Pn	01 20 36.3	+0.5

*IDC **08** 01:23:24.5±1.4, 23.°50S×179.°82W, h505km±13km, mb3.7/14, mb1 3.9/16, mb1mx3.8/23, mbtmp3.7/16, Error ellipse: s-maj=13.7km s-min=13.2km az=17.0*
*ISCJB **08** 01:23:26.2±0.3, 23.°64S±0.°05×179.°99E±0.°06, h532km, mb4.5/45, Error ellipse: s-maj=7.7km s-min=5.6km az=136.9*
*NEIC **08** 01:23:26.8±0.9, 23.°60S×179.°94W, h533km±11km, mb4.5/27, Error ellipse: s-maj=9.1km s-min=7.4km az=123.0*
*BJI **08** 01:23:26.2, 23.°55S×179.°82W, h532km, mB4.9/5, mb4.6/13*
*AUST **08** 01:23:30.0±60.0, 23.°53S×179.°79W, h587km±4km, Error ellipse: s-maj=14.4km s-min=3.4km az=262.0*
ISC 08 01:23:26.9±0.4**, 23.°71S**±0.°06×**179.°95W**±0.°07**, h532**km**, n97, σ1.s56**/127**, mb4.5**/45**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	10.41	66	S	S	01 27 46.4	+0.7
	baz=10,SNR=4.8						
AFI	Afiamalu	12.44	40	*e*P	P	01 26 03.5	-6.8
	22nm,0.6s						
AFI	Afiamalu	12.44	40	P	P	01 26 03.4	-6.8
	baz=241,slow=13,SNR=6.0						
AFI				S	S	01 28 11.2	-13
	baz=218,slow=20						
DZM	Mont Dzumac	12.65	275	P	P	01 26 10.6	-1.7
	0.2nm,0.3s,baz=90,slow=20,SNR=4.2						
OUZ	Omahuta	12.77	205	*e*P	P	01 26 15.2	+1.9
URZ	Urewera	14.72	189	*e*P	P	01 26 33.0	-0.6
	21nm,0.5s						
URZ	Urewera	14.72	189	P	P	01 26 32.9	-0.6
	5.0nm,0.3s,baz=354,slow=5.3,SNR=17						
URZ				S	S	01 29 04.3	-3.3
	baz=330,slow=20						
FUNA	Funafuti	15.12	357	*e*P	P	01 26 36.1	-2.0
	529nm,2.3s						
KHZ	Kahutara	19.43	195	*e*P	P	01 27 18.7	+0.2
	484nm,2.6s						
RPZ	Rata Peaks	21.29	198	*e*P	P	01 27 36.8	+1.5
	176nm,1.9s						
RPZ	Rata Peaks	21.29	198	P	P	01 27 36.8	+1.5
	5.2nm,0.4s,baz=16,slow=17,SNR=5.1						
WHZ	Wether Hill Ro	24.21	201	*e*P	P	01 28 02.7	+1.3
	74nm,1.4s						
ARMA	Armidale	26.14	249	*e*P	P	01 28 20.1	+1.3
	79nm,2.1s						
ARMA	Armidale	26.14	249	P	P	01 28 20.6	+1.8
	baz=26,SNR=6.4						
EIDS	Eidsvold	26.39	260	*e*P	P	01 28 21.6	+0.7
EIDS	Eidsvold	26.39	260	P	P	01 28 21.7	+0.7
	baz=26,SNR=16						
MGCD	Mangrove Creek	27.08	243	P	P	01 28 28.9	+2.0
	baz=27,SNR=5.3						
RMQ	Roma	28.44	258	P	P	01 28 40.8	+1.8
	baz=29,SNR=13						
CMSA	Cobar Meteorol	31.33	248	P	P	01 29 04.8	+0.9
	baz=32,SNR=11						
CTA	Charters Tower	31.52	270	P	P	01 29 06.5	+0.9
	baz=94,slow=11,SNR=134						
CTAO	Charters Tower	31.52	270	*e*P	P	01 29 06.4	+0.7
	79nm,0.5s						
QLP	Quilpie	32.49	257	P	P	01 29 14.5	+0.7
	baz=33,SNR=6.6						
MTSU	Mount Surprise	33.78	273	P	P	01 29 25.4	+0.6
	baz=34,SNR=41						
PMG	Port Moresby	34.48	289	*e*P	P	01 29 30.1	-0.6
	28nm,0.6s						
PMG	Port Moresby	34.48	289	P	P	01 29 30.7	+0.1
	42nm,0.7s,baz=128,slow=9.2,SNR=15						
STKA	Stephens Creek	34.84	248	P	P	01 29 34.6	+1.0
	7.0nm,0.5s,baz=104,slow=9.7,SNR=21						
STKA	Stephens Creek	34.84	248	P	P	01 29 34.3	+0.8
	baz=35,SNR=16						
COEN	Coen	36.13	279	*e*P	P	01 29 44.5	0.0
	62nm,0.9s						
COEN	Coen	36.13	279	P	P	01 29 44.8	+0.3
	baz=36,SNR=16						
BBOO	Buckleboo	39.56	247	*e*P	P	01 30 12.2	0.0
	2µm,1.8s						
BBOO	Buckleboo	39.56	247	P	P	01 30 12.1	-0.2
	baz=40,SNR=11						
AS31	Alice Springs	42.11	260	*e*P	P	01 30 32.7	0.0
ASAR	Alice Springs	42.11	260	P	P	01 30 32.8	+0.1
	24nm,0.7s,baz=101,slow=7.2,SNR=218						
ASAR				ScP	ScP	01 35 18.5	+3.5
	3.1nm,0.8s,baz=107,slow=4.3,SNR=14						
ASAR				S	S	01 36 14.0	0.0
	baz=102,slow=17						
WRA	Warramunga Arr	42.47	266	P	P	01 30 35.0	-0.4
	24nm,0.4s,baz=92,slow=8.5,SNR=212						
WRA				ScP	ScP	01 35 20.1	+3.8
	2.4nm,0.9s,baz=95,slow=4.3,SNR=6.8						
WRA				S	S	01 36 15.1	-4.0
	baz=105,slow=14						
KDU	Kakadu	46.32	275	P	P	01 31 04.5	-0.7
	baz=46,SNR=30						
FORT	Forrest	46.42	249	*e*P	P	01 31 05.0	-0.8
	70nm,0.6s						
FORT	Forrest	46.42	249	P	P	01 31 05.5	-0.4
	baz=47,SNR=26						
MTN	Manton Dam	47.49	274	P	P	01 31 13.2	-0.9
	baz=48,SNR=6.4						
KNRA	Kununurra	48.74	270	P	P	01 31 23.3	-0.1
	baz=49,SNR=11						
FAKI	Fak Fak	50.57	287	P	P	01 31 36.3	-0.6
	baz=51,SNR=4.7						
FITZ	Fitzroy Crossi	50.89	265	*e*P	P	01 31 39.6	+0.5
	26nm,1.1s						
FITZ	Fitzroy Crossi	50.89	265	P	P	01 31 39.5	+0.3
	11nm,0.6s,baz=110,slow=7.8,SNR=50						
FITZ	Fitzroy Crossi	50.89	265	P	P	01 31 39.2	+0.1
	baz=51,SNR=13						
VNDA	Vanda	54.58	185	*e*P	P	01 32 05.7	+1.2
	37nm,2.5s						
VNDA	Vanda	54.58	185	P	P	01 32 05.7	+1.2
	baz=340,slow=6.1,SNR=5.0						
KLBR	Kellerberrin	55.11	247	P	P	01 32 08.8	-0.2
	baz=55,SNR=12						
MEEK	Meekatharra	55.21	253	P	P	01 32 09.1	-0.8
	baz=55,SNR=8.8						
NWAO	Narrogin (SRO)	55.36	245	*e*P	P	01 32 10.8	+0.1
	12nm,0.9s						
MBWA	Marble Bar	55.45	260	*e*P	P	01 32 10.8	-0.8
	7.7nm,0.5s						
MORW	Morawa	56.99	250	P	P	01 32 21.9	-0.2
	baz=57,SNR=6.3						
CASY	Casey	60.30	206	*e*P	P	01 32 43.6	-0.1
	1.8nm,0.5s						
QSPA	South Pole Qui	66.38	180	*e*P	P	01 33 23.9	+1.2
	5.9nm,1.1s						
QSPA	South Pole Qui	66.38	180	P	P	01 33 24.0	+1.2
	2.6nm,0.7s,baz=353,slow=5.2,SNR=17						
UGM	Wanagama	68.15	271	*e*P	P	01 33 33.5	-1.0
	527nm,2.0s						
JOW	Kunigami	70.90	312	*e*P	P	01 33 50.6	+0.1
	4.7nm,0.9s						
KSM	Kuching	72.12	280	*e*P	P	01 33 57.6	-0.4
MAW	Mawson	77.95	200	P	P	01 34 30.9	+1.3
	1.9nm,0.5s,baz=140,slow=5.1,SNR=6.7						
KSRS	Korea Array	78.13	320	P	P	01 34 30.5	-0.5
	0.8nm,0.5s,baz=134,slow=5.7,SNR=4.9						
MDJ	Mudanjiang	82.13	326	P	P	01 34 53.4	+1.6
MDJ				sP	sP	01 37 42.1	+1.2
MDJ				S	SKKSac	01 44 29.5	+3.4
MDJ				SS	SS	01 50 02.0	+3.7
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,66nm,5.7s						
ISA	Isabella	82.85	46	*e*P	P	01 34 55.3	-0.5
	comp=Z,3.9nm,0.8s						
CMB	Columbia Colle	83.03	43	*e*P	P	01 34 55.9	-0.7
	comp=Z,4.3nm,0.8s						
CN2	Changchun	83.76	324	*e*P	P	01 35 00.4	+0.4
YBH	Yreka Blue Hor	83.91	39	*e*P	P	01 35 00.6	-0.3
	comp=Z,7.9nm,1.5s						
HUMO	Hull Mountain	84.32	38	*e*P	P	01 35 03.3	+0.5
	comp=Z,22nm,1.9s						
NVAR	Mina Array Bea	84.58	44	P	P	01 35 04.0	-0.4
	comp=Z,0.8nm,0.6s,baz=222,slow=8.8,SNR=7.1						
SNAA	Sanae	84.86	179	*e*P	P	01 35 04.5	-0.6
	comp=Z,1.5nm,1.2s						
TUC	Tucson	86.36	52	*e*P	P	01 35 13.3	+0.3
	comp=Z,20nm,0.9s						
GYA	Guiyang	86.69	301	P	P	01 35 14.8	+0.1
GYA				pP	pP	01 37 11.2	0.0
GYA				sP	sP	01 38 01.4	-3.7
GYA				PP	PP	01 38 48.9	+1.8
GYA				SKS	SKSac	01 44 50.3	-0.7
GYA				S	S	01 45 07.0	-0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI	Beijing	86.92	316	P	P	01 35 15.0	-0.3
BJI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CCUT	Cedar City	87.31	47	*e*P	P	01 35 17.9	+0.4
	comp=Z,43nm,2.6s						
MFID	Camas Ranch	88.98	41	*e*P	P	01 35 24.5	-0.6
	comp=Z,2.1nm,0.8s						
KMI	Kunming	89.22	298	P	P	01 35 28.7	+2.0
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CMAR	Chiang Mai Arr	89.50	290	P	P	01 35 29.0	+1.1
	comp=Z,1.6nm,0.5s,baz=138,slow=2.2,SNR=9.5						
HLID	Hailey	89.92	41	*e*P	P	01 35 29.4	0.0
	comp=Z,1.5nm,0.8s						
TRF	Thorofare Moun	89.96	13	*e*P	P	01 35 26.3	-2.8
	comp=Z,41nm,2.5s						
TXAR	Lajitas Array	90.29	58	P	P	01 35 31.2	-0.2
	comp=Z,1.8nm,0.7s,baz=214,slow=6.7,SNR=27						
HHC	Hu-ho-hao-te	90.32	315	*e*P	P	01 35 31.8	+0.5
HHC				pP	pP	01 37 29.6	+0.9
HHC				sP	sP	01 38 20.8	-1.4
HHC				PP	PP	01 39 20.2	+4.9
HHC				SKS	SKSac	01 45 16.4	+4.8
HHC				S	S	01 45 40.5	+0.1
HHC				sS	sS	01 49 05.9	-4.4
HHC				pmax	pmax		
	comp=Z,49nm,0.7s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
ANMO	Albuquerque	90.80	52	*e*P	P	01 35 33.1	-0.7
	comp=Z,2.4nm,1.2s						
CD2	Chengdu	91.01	303	*e*P	P	01 35 35.2	+0.6
CD2				pP	pP	01 37 31.2	-0.9
CD2				sP	sP	01 38 22.8	-2.9
CD2				PP	PP	01 39 23.7	+2.8
CD2				SKS	SKSac	01 45 17.0	+1.2
CD2				S	S	01 45 47.0	0.0
CD2				sS	sS	01 49 12.8	-4.4
CD2				SS	SS	01 52 10.7	+3.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,30nm,6.2s						
ILAR	Eielson Array	91.83	14	P	P	01 35 36.0	-1.6
	comp=Z,0.2nm,0.5s,baz=217,slow=7.0,SNR=3.4						
SMCO	Snowmass	92.46	48	*e*P	P	01 35 40.9	-0.7
	comp=Z,18nm,2.3s						
PDAR	Pinedale Array	92.52	44	P	P	01 35 40.8	-0.7
	comp=Z,1.0nm,0.8s,baz=217,slow=3.7,SNR=7.1						
LZH	Lanzhou	93.29	308	*e*P	P	01 35 45.5	+0.4
LZH				pP	pP	01 37 44.2	+1.4
LZH				sP	sP	01 38 37.5	+1.2
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
MKAR	Makanchi Array	112.06	313	PKiKP	PKiKP	01 41 00.4	-1.3
	comp=Z,0.2nm,0.5s,baz=130,slow=1.3,SNR=3.4						
ARCES	ARCESS Array B	131.71	348	PKP	PKPdf	01 41 37.6	-1.0
	comp=Z,1.9nm,0.9s,baz=54,slow=3.1,SNR=7.8						
ARCES				SKPbc	SKPab	01 44 15.4	-0.6
	comp=Z,1.8nm,0.9s,baz=31,slow=5.7,SNR=4.4						
FINES	FINESS Array B	138.28	342	SKPbc	SKPbc	01 44 35.5	+0.1
	comp=Z,2.2nm,0.6s,baz=12,slow=9.8,SNR=5.3						
NB2	NORSAR Subarra	141.90	351	PKP	SKPbc	01 44 45.1	+0.1
	comp=Z,0.1nm,0.6s,baz=31,slow=2.9						
NOA	NORSAR Array B	141.90	351	SKPbc	SKPbc	01 44 45.5	+0.5
	comp=Z,0.6nm,0.7s,baz=12,slow=4.5,SNR=4.7						
AKASG	Malin Array Be	144.84	327	PKP	PKPdf	01 42 02.3	-0.7
	comp=Z,1.7nm,0.4s,baz=47,slow=4.4,SNR=14						
AKASG				SKPbc	SKiKP	01 44 53.0	+0.3
	comp=Z,1.4nm,0.7s,baz=53,slow=3.2,SNR=5.6						
BR131	Keskin Array S	147.50	307	*e*PKPbc	PKPbc	01 42 10.8	-0.8
BRTR	Keskin Array B	147.50	307	PKPbc	PKPbc	01 42 10.8	-0.8
	comp=Z,2.4nm,0.6s,baz=142,slow=4.4,SNR=8.4						
BRTR				PKPab	PKPab	01 42 15.3	-0.1
	comp=Z,2.5nm,0.6s,baz=97,slow=3.8,SNR=18						
CSS	Prodhromos	149.03	299	*e*PKPbc	PKPbc	01 42 14.6	-0.8
CSS				*e*PKPab	PKPab	01 42 21.7	-0.1
KOLS	Kolonicke sedl	149.33	331	*e*PKP	PKPbc	01 42 16.1	+0.5
STHS	Stebnicka Huta	149.42	332	*e*PKP	PKPbc	01 42 15.9	+0.1
KECS	Kecovo	150.45	332	*e*PKP	PKPbc	01 42 17.2	-1.0
VYHS	Vyhne	151.13	334	*e*PKP	PKPbc	01 42 18.6	-1.2
TORD	Torodi Ar. Bea	169.38	189	PKPab	PKPab	01 43 50.5	+0.3
	comp=Z,0.2nm,0.5s,baz=169,slow=4.4,SNR=6.9						

TAP 08 02:16:13.7, 24.°58N×121.°68E, h50km**, ML3.5, 5C, B, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENTT	Nioudou	0.12	300	⇑*i*P	Pn	02 16 22.2	+0.6
	baz=300						
ENTT				S	Sn	02 16 27.8	+0.6
	baz=300						
TWE	Neicheng	0.14	356	⇑*i*P	Pn	02 16 22.3	+0.6
	baz=353						
TWE				*e*S	Sn	02 16 28.3	+0.9
	baz=353						
TWC	Suao	0.16	80	⇑*i*P	Pn	02 16 22.3	+0.5
	baz=88						
TWC				S	Sn	02 16 28.1	+0.6
	baz=88						
ENA	Nanau	0.16	159	*i* P	Pn	02 16 22.1	+0.2
	baz=158						
ENA				*e*S	Sn	02 16 27.8	+0.2
	baz=158						
ILA	Ilan	0.19	19	P	Pn	02 16 22.7	+0.7
	baz=15						
ILA				*e*S	Sn	02 16 29.2	+1.3
	baz=15						
NSK	Sanguang	0.30	288	⇑*i*P	Pn	02 16 23.4	+0.4
	baz=288						
NSK				*i* S	Sn	02 16 29.8	+0.2
	baz=288						
NNS	Nan Shan	0.31	243	⇑*i*P	Pn	02 16 23.9	+0.8
	baz=247						
NNS				*i* S	Sn	02 16 30.5	+0.7
	baz=247						
TAP1	Taipei	0.48	343	*e*P	Pn	02 16 24.8	+0.1
	baz=341						
TAP1				S	Sn	02 16 32.5	0.0
	baz=341						
TAP	Taipei	0.48	341	P	Pn	02 16 24.8	+0.1
	baz=341						
TAP				S	Sn	02 16 32.8	+0.1
	baz=341						
NWF	Wu-fen Shan	0.50	11	*i* P	Pn	02 16 25.3	+0.3
NWF				S	Sn	02 16 33.0	-0.1
TWD	Chiawan	0.51	188	P	Pn	02 16 24.6	-0.4
	baz=193						
TWD				*e*S	Sn	02 16 32.4	-0.7
	baz=193						
TWB1	Santiao Chiao	0.51	34	P	Pn	02 16 25.5	+0.4
	baz=26						
TWB1				S	Sn	02 16 33.6	+0.3
	baz=26						
TWT	Tachien	0.56	234	*i* P	Pn	02 16 27.3	+1.4
	baz=231						
TWT				S	Sn	02 16 35.8	+1.1
	baz=231						
TWS1	Kuangyinshan	0.57	336	*i* P	Pn	02 16 26.1	+0.3
	baz=335						
TWS1				S	Sn	02 16 35.2	+0.7
	baz=335						
WHF	Hehuan Shan	0.57	221	*i* P	Pn	02 16 26.8	+0.3
	baz=216						
WHF				S	Sn	02 16 36.0	+0.4
	baz=216						
NCU	National Centr	0.59	311	P	Pn	02 16 26.5	+0.4
	baz=310						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NCU				S	Sn	02 16 35.9	+0.9
	baz=310						
HWA	Hwalien	0.61	186	eP	Pn	02 16 26.1	-0.2
	baz=196						
NSTT	Nanjuang	0.62	275	P	Pn	02 16 26.9	+0.6
	baz=286						
NSTT				S	Sn	02 16 36.6	+1.0
	baz=286						
HSN	Hsinchu	0.68	289	eP	Pn	02 16 26.2	-1.0
	baz=301						
HSN				S	Sn	02 16 37.2	+0.3
	baz=301						
TWY	Chenhua	0.69	354	P	Pn	02 16 27.7	+0.3
	baz=353						
TWY				S	Sn	02 16 37.4	+0.1
	baz=353						
ESL	Shilin	0.80	196	eP	Pn	02 16 28.0	-0.8
	baz=188						
NSY	Sanyi	0.85	259	eP	Pn	02 16 32.0	+2.5
	baz=259						
NSY				eS	Sn	02 16 42.1	+1.1
	baz=259						
TWQ1	Liyutan	0.86	254	eP	Pn	02 16 31.8	+2.2
	baz=255						
TWQ1				eS	Sn	02 16 43.1	+2.0
	baz=255						
SMLT	Sun Moon Lake	0.99	226	P	Pn	02 16 33.0	+1.5
	baz=219						
SMLT				eS	Sn	02 16 46.4	+1.8
	baz=219						
TYC	Yuchr	1.01	228	P	Pn	02 16 33.4	+1.9
	baz=221						
TYC				eS	Sn	02 16 46.5	+1.9
	baz=221						
PCYT	Pengchaiyu	1.10	19	P	Pn	02 16 33.0	+0.2
	baz=16						
PCYT				eS	Sn	02 16 47.1	+0.1
	baz=16						
EHY	Hungye	1.12	197	eP	Pn	02 16 33.3	+0.2
	baz=189						
TWF1	Yuli	1.27	196	eP	Pn	02 16 35.1	0.0
	baz=197						
YUS	Yu-Shan	1.27	212	eP	Pn	02 16 36.6	+0.8
	baz=203						
YUS				eS	Sn	02 16 53.1	+0.9
	baz=203						
ALS	Alishan	1.33	217	eP	Pn	02 16 38.0	+1.7
	baz=226						
ALS				eS	Sn	02 16 56.0	+2.8
	baz=226						
CHN5	Tsauling	1.34	223	eP	Pn	02 16 38.1	+1.9
	baz=235						
CHN5				eS	Sn	02 16 55.9	+2.9
	baz=235						
CHKT	Chengkung	1.50	191	eP	Pn	02 16 38.8	+0.5
	baz=192						
CHKT				eS	Sn	02 16 56.4	-0.3
	baz=192						
ELDTW	Lidau	1.51	204	eP	Pn	02 16 38.8	+0.3
	baz=196						
CHN2	Minshiung	1.52	227	eP	Pn	02 16 40.3	+1.9
	baz=238						
CHY	Chiayi	1.57	227	eP	Pn	02 16 40.4	+1.2
	baz=238						
CHN4	Tsaushan	1.58	219	eP	Pn	02 16 41.6	+2.3
	baz=220						
CHN4				eS	Sn	02 17 02.3	+3.7
	baz=220						
WTP	Ta-pu	1.65	216	eP	Pn	02 16 42.9	+2.6
	baz=217						
WTP				eS	Sn	02 17 03.1	+2.7
	baz=217						
TWK	Hsinying	1.70	220	eP	Pn	02 16 43.2	+2.2
	baz=221						
TWK				eS	Sn	02 17 05.6	+3.8
	baz=221						
CHN1	Nanshi	1.74	217	eP	Pn	02 16 43.5	+2.0
	baz=219						
CHN1				eS	Sn	02 17 04.9	+2.2
	baz=219						
TWG	Pinlang	1.84	198	eP	Pn	02 16 43.6	+0.8
	baz=189						
WDGT	Dungji	2.27	235	eP	Pn	02 16 49.7	+1.0
	baz=235						
EAST	Anshuo	2.32	199	eP	Pn	02 16 50.6	+1.1
	baz=192						
EAST				eS	Sn	02 17 17.8	+1.0
	baz=192						
SCZT	Fangliau	2.40	204	eP	Pn	02 16 52.6	+2.1
	baz=206						

*NNC **08** 02:18:50.9±22.0, 37˚17N×70˚82E, h131km±420km, mb2.9, mpv3.6, Error ellipse: s-maj=221.3km s-min=125.9km az=172.0*

ISC 08 02:18:46.2±3.8**, 36˚8N**±0˚2×**71˚0E**±0˚1**, h88km, n8, σ1ş72**/10**, 2C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AML	Almayashu	5.70	20	P	Pn	02 20 10.2	+1.6
	SNR=20						
KZA	Kyzart	6.19	31	P	Pn	02 20 16.1	+0.8
	SNR=8.4						
KK31	Karatay Array	6.29	357	⇑P	Pn	02 20 18.0	+1.6
	2.1nm,0.2s,baz=182,slow=13,SNR=132						
KK31				⇑S	Sn	02 21 27.2	+0.4
	1.8nm,0.3s,baz=184,slow=24,SNR=5.7						
AAK	Ala-Archa	6.40	24	P	Pn	02 20 19.6	+1.7
	SNR=7.3						
CHMS	Chumysh	6.81	24	P	Pn	02 20 24.9	+1.5
	SNR=6.2						
USP	Ospenovka	6.97	21	P	Pn	02 20 27.2	+1.5
	SNR=6.3						
TKM2	Tokmak 2	7.04	29	⇓P	Pn	02 20 27.6	+0.9
	1.6nm,0.5s						
TKM2				⇓S	Sn	02 21 43.3	-2.0
	1.0nm,0.7s						
AB31	Akbulak array	14.82	331	⇓P	Pn	02 22 09.3	-1.6
	0.4nm,0.5s,baz=3.5,slow=27,SNR=15						

MAN 08 02:22:34, 12˚44N×123˚75E, h19km, mb3.8, ML2.5, MS2.1, 1D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMPH	Masbate	0.15	237	eP	Pg	02 22 39.0	+0.6
MMPH				eS	Sg	02 22 43.0	+1.7
CNP	Catarman	0.89	85	eP	Pg	02 22 51.3	-0.2
CNP				eS	Sg	02 23 03.3	0.0
RCP	Roxas	1.32	229	⇓eP	Pb	02 22 58.1	0.0
RCP				eS	Sb	02 23 14.9	+0.3
GUIM	Jordan	2.13	212	eP	Pn	02 23 10.0	+1.4
GUIM				eS	Sn	02 23 36.1	+1.5

*ISCJB **08** 02:56:20.2±0.7, 55˚88S±0˚09×27˚8W±0˚3, h121km, mb4.3/9, Error ellipse: s-maj=27.6km s-min=12.6km az=173.0*

*IDC **08** 02:56:24.8±2.5, 55˚93S×27˚93W, h150km±21km, mb4.0/7, mb1 4.1/8, mb1mx3.8/18, mbtmp4.0/8, Error ellipse: s-maj=26.3km s-min=14.8km az=81.0*

*NEIC **08** 02:56:24.4±3.5, 55˚92S×27˚90W, h147km±31km, mb4.4/3, Error ellipse: s-maj=19.0km s-min=11.5km az=85.0*

ISC 08 02:56:21.1±0.5**, 55˚87S**±0˚10×**28˚1W**±0˚2**, h121km, n35, σ1ş40**/45**, mb4.3**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	17.17	157	eP	Pn	03 00 13.4	+0.3
VNA1	Neumayer--Stat	17.17	157	e	Pn	03 00 16.1	+3.0
SNAA	Sanae	19.13	156	eP	P	03 00 33.7	-0.6
SNAA	Sanae	19.13	156	e	Pn	03 00 37.9	+1.5
SNAA	Sanae	19.13	156	eP	P	03 00 33.8	-0.6
	25nm,0.8s						
SNAA	Sanae	19.13	156	P	P	03 00 34.0	-0.3
	1.4nm,0.3s,baz=309,slow=12,SNR=291						
QSPA	South Pole Qui	34.39	180	P	P	03 02 57.0	+0.8
QSPA				PcP	PcP	03 05 28.3	-0.6
QSPA	South Pole Qui	34.39	180	P	P	03 02 57.0	+0.8
	11nm,0.6s,baz=203,slow=3.2,SNR=107						
QSPA				PcP	PcP	03 05 28.3	-0.6
	0.6nm,0.3s,baz=180,slow=4.0,SNR=6.7						
MAW	Mawson	40.61	144	P	P	03 03 48.1	-0.2
MAW	Mawson	40.61	144	P	P	03 03 48.1	-0.2
	2.4nm,0.6s,baz=221,slow=9.9,SNR=12						
SBA	Scott Base	46.23	184	eP	P	03 04 34.3	+1.1
	5.3nm,0.8s						
VNDA	Vanda	46.73	183	P	P	03 04 37.8	+0.7
VNDA	Vanda	46.73	183	P	P	03 04 37.8	+0.7
	7.1nm,0.7s,baz=185,slow=6.5,SNR=56						
LPAZ	La Paz	49.84	306	P	P	03 05 03.9	+1.5
LPAZ				ScP	ScP	03 10 04.4	-0.9
LPAZ	La Paz	49.84	306	P	P	03 05 03.9	+1.5
	0.9nm,0.5s,baz=156,slow=6.8,SNR=8.4						
LPAZ				ScP	ScP	03 10 04.4	-0.9
	0.4nm,0.7s,baz=158,slow=3.8,SNR=2.8						
CASY	Casey	54.26	161	eP	P	03 05 33.8	+0.1
	5.6nm,0.8s						
DBIC	Dimbokro	65.22	26	P	P	03 06 49.8	+0.5
DBIC	Dimbokro	65.22	26	P	P	03 06 49.8	+0.5
	2.6nm,0.8s,baz=181,slow=7.4,SNR=3.8						
TOA0	Torodi Ar. Sit	73.16	30	eP	P	03 07 39.1	+0.9
TORD	Torodi Ar. Bea	73.16	30	P	P	03 07 39.3	+1.0
TORD	Torodi Ar. Bea	73.16	30	P	P	03 07 39.3	+1.0
	2.1nm,0.5s,baz=199,slow=6.4,SNR=121						
ASAR	Alice Springs	99.32	163	P	Pdif	03 09 48.8	-0.6
ASAR				PP	PP	03 13 49.9	-2.9
ASAR	Alice Springs	99.32	163	P	Pdif	03 09 48.8	-0.6
	0.7nm,0.7s,baz=174,slow=4.9,SNR=6.6						
ASAR				PP	PP	03 13 49.9	-2.9
	0.4nm,0.8s,baz=192,slow=4.2,SNR=4.1						
FINES	FINESS Array B	124.47	28	PKP	PKPdf	03 15 04.4	+0.1
FINES	FINESS Array B	124.47	28	PKP	PKPdf	03 15 04.4	+0.1
	1.5nm,0.8s,baz=149,slow=0.8,SNR=2.7						
ARCES	ARCESS Array B	130.97	22	PKP	PKPdf	03 15 16.3	-0.2
ARCES	ARCESS Array B	130.97	22	PKP	PKPdf	03 15 16.3	-0.2
	0.9nm,0.7s,baz=197,slow=2.8,SNR=4.8						
YKA	Yellowknife Ar	135.68	318	PKP	PKPdf	03 15 25.4	-0.1
YKA				SKPbc	SKPbc	03 18 41.4	-4.2
YKA	Yellowknife Ar	135.68	318	PKP	PKPdf	03 15 25.4	-0.1
	0.2nm,0.3s,baz=135,slow=2.0,SNR=9.5						
YKA				SKPbc	SKPbc	03 18 41.3	-4.2
	0.2nm,0.7s,baz=133,slow=2.8,SNR=4.1						
ZALV	Zalesovo Beam	142.76	64	PKP	PKPdf	03 15 39.6	+0.9
ZALV	Zalesovo Beam	142.76	64	PKP	PKPdf	03 15 39.6	+0.9
	0.4nm,0.4s,baz=228,slow=5.6,SNR=3.9						
ILAR	Eielson Array	149.60	312	PKPbc	PKPbc	03 15 54.8	+0.1
ILAR				PKPab	PKPab	03 16 00.2	-0.1
ILAR	Eielson Array	149.60	312	PKPbc	PKPbc	03 15 54.8	+0.1
	1.8nm,0.8s,baz=102,slow=1.1,SNR=27						
ILAR				PKPab	PKPab	03 16 00.2	-0.1
	0.6nm,0.7s,baz=118,slow=1.9,SNR=6.9						
SONM	Songino Array	151.25	87	PKPbc	PKPbc	03 15 58.4	-0.9
SONM	Songino Array	151.25	87	PKPbc	PKPbc	03 15 58.4	-0.9
	1.0nm,0.8s,baz=219,slow=3.8,SNR=4.4						

IDC 08 03:00:09.5±0.7**, 22˚14S×175˚26W, h0km, mb3.8**/8**, mb1 4.1**/9**, mb1mx4.0**/21**, mbtmp3.9**/9**, ML2.2**/1**, Error ellipse: s-maj=31.8km s-min=20.2km az=125.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.83	23	Pn	Pn	03 02 17.0	-1.6
	1.7nm,0.3s,baz=121,slow=5.9,SNR=2.7						
AFI				Sn	Sn	03 03 47.9	-11
	2.1nm,0.3s,baz=60,slow=20,SNR=3.2						
ASAR	Alice Springs	46.65	258	P	P	03 08 39.9	-0.3
	0.6nm,0.8s,baz=95,slow=6.8,SNR=4.5						
WRA	Warramunga Arr	46.92	263	P	P	03 08 41.9	-0.4
	0.4nm,0.6s,baz=94,slow=8.5,SNR=13						
VNDA	Vanda	56.53	186	P	P	03 09 53.7	+0.5
	1.1nm,0.8s,baz=353,slow=6.6,SNR=6.3						
QSPA	South Pole Qui	67.94	180	P	P	03 11 09.5	-0.6
	3.8nm,0.8s,baz=34,slow=2.0,SNR=11						
NVAR	Mina Array Bea	80.49	42	P	P	03 12 23.7	-0.1
	0.8nm,0.8s,baz=220,slow=8.3,SNR=6.1						
TXAR	Lajitas Array	85.81	56	P	P	03 12 51.3	0.0
	1.0nm,1.0s,baz=201,slow=6.7,SNR=7.5						
PDAR	Pinedale Array	88.42	42	P	P	03 13 04.2	+0.3
	0.2nm,0.3s,baz=236,slow=6.0,SNR=3.6						
ILAR	Eielson Array	89.36	12	P	P	03 13 07.8	+0.3
	0.5nm,1.1s,baz=204,slow=5.6,SNR=3.6						
AKASG	Malin Array Be	145.66	332	PKPbc	PKPdf	03 19 49.2	-0.5
	0.3nm,0.4s,baz=43,slow=4.0,SNR=3.7						
BRTR	Keskin Array B	149.83	312	PKPbc	PKPbc	03 20 02.3	+0.3
	0.6nm,0.9s,baz=90,slow=2.9,SNR=3.7						

*NIED **08** 03:07:00, 46˚20N×152˚20E, h5km, Mw3.9 Best double couple: M0 8.00000×10^14 NP1:φs45.00000°, δ54.00000°, λ64.00000°. NP2:φs264.00000°, δ43.00000°, λ121.00000°.*

*ISCJB **08** 03:07:37.7±0.7, 45˚59N±0˚10×152˚33E±0˚10, h55km, mb3.4/8, MS3.1/1, Error ellipse: s-maj=16.2km s-min=4.4km az=146.7*

*MOS **08** 03:07:37.9±2.0, 46˚18N×152˚16E, h39km, mb3.9/2, Error ellipse: s-maj=23.3km s-min=13.5km az=135.1*

*JMA **08** 03:07:37.0±0.7, 46˚24N×152˚22E, h30km, M4.3*

*IDC **08** 03:07:42.2±3.2, 46˚28N×152˚13E, h58km±28km, mb3.2/9, mb1 3.4/11, mb1mx3.3/27, mbtmp3.2/11, ML3.4/2, MS3.1/1, Ms1 3.1/1, ms1mx2.2/14, Error ellipse: s-maj=40.3km s-min=18.5km az=163.0*

ISC 08 03:07:38.4±0.9**, 45˚5N**±0˚1×**152˚47E**±0˚09**, h55km, n34, σ1ş80**/44**, mb3.4**/8**, 1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	3.25	268	i PN	Pn	03 08 28.0	+1.2
KUR				i S	Sn	03 09 02.9	-1.4
KUR				pmax	pmax		
	comp=N,26nm,0.2s						
KUR				pmax	pmax		
	comp=Z,51nm,0.4s						
KUR				pmax	pmax		
	comp=E,12nm,0.2s						
KUR				smax	smax		
	comp=E,77nm,0.5s						
KUR				smax	smax		
	comp=N,204nm,0.5s						
YUK	Yuzh-Kuril'sk	4.92	255	d iPN	Pn	03 08 49.7	0.0
YUK				S	Sn	03 09 48.9	+3.7
YUK				pmax	pmax		
	comp=Z,81nm,0.3s						
YUK				pmax	pmax		
	comp=E,25nm,0.3s						
YUK				pmax	pmax		
	comp=N,34nm,0.3s						
YUK				smax	smax		
	comp=N,123nm,0.9s						
YUK				smax	smax		
	comp=E,100nm,0.9s						
NEM2	Nemuro 2	5.25	249	P	Pn	03 08 54.7	+0.4
NEM2				eS	Sn	03 09 51.9	-1.6
JRA	Rausu	5.45	256	P	Pn	03 08 59.0	+2.0
JRA				eS	Sn	03 10 01.9	+3.5
JNK	Nakash	5.85	254	P	Pn	03 09 04.0	+1.5
JNK				eS	Sn	03 10 08.5	+0.4
JAK	Akkeshi	6.10	249	P	Pn	03 09 06.2	+0.3
JAK				eS	Sn	03 10 13.0	-1.4
JTKR	Abashiri--Toko	6.28	259	P	Pn	03 09 09.9	+1.6
JAR	Ashorobuto	6.60	254	P	Pn	03 09 14.4	+1.7
JAR				eS	Sn	03 10 28.5	+2.0
JMP	Maruseppu	6.65	261	P	Pn	03 09 15.8	+2.4
JMP				eS	Sn	03 10 31.0	+3.2
JOB	Onbets	6.71	251	P	Pn	03 09 15.6	+1.3
JOB				eS	Sn	03 10 28.9	-0.4
JKK2	Kamakawa 2	7.11	261	P	Pn	03 09 21.7	+2.0
ASAJ	Asahikawa	7.15	263	P	Pn	03 09 23.1	+2.8
ASAJ	Asahikawa	7.15	263	P	Pn	03 09 22.2	+1.9
	comp=E,1.0nm,0.3s,baz=90,slow=7.4,SNR=12						
JCH	Churui	7.15	250	P	Pn	03 09 20.9	+0.6
JCH				eS	Sn	03 10 37.5	-2.6
ERM	Erimo	7.57	246	ePN	Pn	03 09 28.1	+2.1
JEM	Erimo	7.57	246	P	Pn	03 09 28.6	+2.6
JEM				eS	Sn	03 10 49.5	-0.9
JNBK	Urakawa-nobuka	7.71	249	P	Pn	03 09 28.3	+0.4
JNBK				eS	Sn	03 10 53.7	0.0
PETK	Petropavlovsk-	8.38	22	PN	Pn	03 09 32.5	-4.5
PETK				S	Sn	03 11 10.9	+0.8
PETK	Petropavlovsk-	8.38	22	P	Pn	03 09 32.5	-4.5
	comp=E,0.3nm,0.3s,baz=179,slow=13,SNR=4.0						
PETK				S	Sn	03 11 10.9	+0.8
	baz=143,slow=20,SNR=2.2						
JNB	Noboribetsu	8.77	254	P	Pn	03 09 43.4	+1.0
JKB	Kayabe	9.02	251	P	Pn	03 09 46.2	+0.3
JKB				eS	Sn	03 11 20.4	-5.6
JANG	Nango	9.51	242	eS	Sn	03 11 32.6	-5.3
JSR	Shiriuchi	9.60	250	P	Pn	03 09 54.4	+0.6
KSRS	Korea Array	20.01	255	P	Pn	03 12 11.1	+2.6
	comp=E,1.4nm,0.5s,baz=65,slow=10,SNR=6.1						
ILAR	Eielson Array	37.84	38	P	P	03 14 48.2	-1.1
	comp=E,0.1nm,0.7s,baz=264,slow=8.1,SNR=2.7						
ZALV	Zalesovo Beam	43.01	307	LR	LR	03 34 19.5	
	comp=E,24nm,19.9s,baz=268,slow=38						
MKAR	Makanchi Array	47.14	298	P	P	03 16 03.9	-1.1
MKAR	Makanchi Array	47.14	298	P	P	03 16 03.9	-1.1
	comp=E,0.3nm,0.6s,baz=60,slow=8.5,SNR=2.8						
ARCES	ARCESS Array B	58.92	341	P	P	03 17 29.6	-1.6
	comp=E,1.2nm,0.8s,baz=28,slow=6.2,SNR=3.8						
NVAR	Mina Array Bea	63.44	61	P	P	03 18 05.2	+2.6
	comp=E,0.3nm,0.5s,baz=295,slow=8.6,SNR=2.5						
NOA	NORSAR Array B	69.30	341	P	P	03 18 36.4	-3.0
	comp=E,0.3nm,0.5s,baz=30,slow=6.3,SNR=4.5						
TXAR	Lajitas Array	78.52	60	P	P	03 19 36.1	+2.2
	comp=E,0.1nm,0.4s,baz=287,slow=4.1,SNR=6.6						
TXAR				pP	pP	03 19 49.8	+0.4
	comp=E,0.2nm,0.7s,baz=307,slow=3.7,SNR=2.8						
BRTR	Keskin Array B	79.02	317	P	P	03 19 36.0	-0.5
	comp=E,0.2nm,0.5s,baz=56,slow=5.7,SNR=4.3						
GERES	GERESS Array B	79.41	334	P	P	03 19 37.5	-0.9
	comp=E,0.3nm,0.5s,baz=73,slow=6.6,SNR=3.1						

IDC 08 03:14:41.0±1.7**, 3˚90S×142˚01E, h0km, mb3.4**/3**, mb1 3.9**/5**, mb1mx3.6**/19**, mbtmp3.7**/5**, ML3.5**/2**, Error ellipse: s-maj=46.6km s-min=28.3km az=119.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.49	137	Pn	Pn	03 16 32.5	+0.9
	1.3nm,0.3s,baz=331,slow=9.3,SNR=3.5						
PMG				Sn	Sn	03 17 42.9	-14
	1.0nm,0.3s,baz=180,slow=23,SNR=6.6						
WRA	Warramunga Arr	17.61	205	P	Pn	03 18 47.5	-0.5
	0.3nm,0.3s,baz=23,slow=12,SNR=18						
WRA				S	Sn	03 21 51.5	-14
	0.1nm,0.3s,baz=29,slow=22,SNR=3.7						
ASAR	Alice Springs	21.16	201	P	P	03 19 26.7	-1.1
	1.1nm,0.8s,baz=30,slow=12,SNR=9.7						
ASAR				S	S	03 23 08.4	-16
	0.3nm,0.7s,baz=20,slow=25,SNR=4.2						
FITZ	Fitzroy Crossi	21.35	227	P	P	03 19 31.2	+1.2
	3.2nm,0.7s,baz=40,slow=9.5,SNR=4.7						
ILAR	Eielson Array	85.56	24	P	P	03 27 20.6	-0.2
	0.2nm,0.6s,baz=248,slow=4.3,SNR=5.5						

*BJI **08** 03:31:40.1, 23˚28S×174˚24W, h4km, mB5.4/24, mb5.4/34, Ms5.0/22, Ms7 4.6/24*

*AUST **08** 03:31:45.2, 22˚64S×174˚27W, h35km*

*DJA **08** 03:31:46.6±4.4, 22˚S±14˚×17˚5W±˚, h27km±38km, M5.5/10, mB5.8/2, mb5.4/10, MLv5.6/1, Mw(mB)5.3/2*

*ISCJB **08** 03:31:47.3±0.2, 22˚92S±0˚04×175˚04W±0˚04, h30km, mb5.0/99, MS4.3/27, Error ellipse: s-maj=7.2km s-min=4.3km az=137.7*

*MOS **08** 03:31:48.4±1.2, 22˚79S×175˚06W, h34km, mb5.2/24, Error ellipse: s-maj=12.2km s-min=10.0km az=58.5*

*NEIC **08** 03:31:49.6±1.4, 22˚91S×174˚96W, h37km±12km, mb5.0/64, Error ellipse: s-maj=7.7km s-min=5.4km az=156.0*

*IDC **08** 03:31:51.4±0.6, 22˚88S×175˚07W, h48km±5km, mb4.7/27, mb1 4.8/28, mb1mx4.8/28, mbtmp4.7/28, MS4.1/16, Ms1 4.1/16, ms1mx3.9/31, Error ellipse: s-maj=13.4km s-min=11.0km az=130.0*

ISC 08 03:31:48.9±0.3**, 22˚92S**±0˚05×**175˚01W**±0˚06**, h30km, h30km:pP-P, n633, σ1ş26**/658**, mb5.1**/97**, MS4.4**/27**, 147C-162D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NIUE	Niue	6.10	52	P	Pn	03 33 07.7	-9.3
	baz=5.4,SNR=40						
NIUE				S	Sn	03 34 06.3	-20
	baz=5.4,SNR=5.1						
RAO	Raoul Island	6.82	202	ePn	Pn	03 33 26.3	-0.6
RAO				eS	Sn	03 34 43.2	-0.4
RAO	Raoul Island	6.82	202	P	Pn	03 33 26.5	-0.4
	112nm,0.3s,baz=276,slow=21,SNR=7.6						
RAO				S	Sn	03 34 40.9	-2.7
	253nm,0.3s,baz=83,slow=24,SNR=9.3						
MSVF	Nonsavu	8.30	307	Pn	Pn	03 33 52.0	+4.6
	1µm,0.6s,SNR=75						
AFI	Afiamalu	9.47	19	ePn	Pn	03 33 55.7	-7.7
AFI				S	Sn	03 35 30.0	-19
AFI				eS	Sn	03 35 35.8	-13
AFI	Afiamalu	9.47	19	P	Pn	03 33 55.8	-7.7
	14nm,0.3s,baz=231,slow=19,SNR=12						
AFI				S	Sn	03 35 30.0	-19
	10.0nm,0.3s,baz=53,slow=20,SNR=2.3						
AFI				LR	LR	03 37 10.6	
	comp=Z,925nm,20.3s,baz=182,slow=34						
RAR	Rarotonga	14.23	86	ePn	Pn	03 34 58.5	-10
	130nm,0.9s						
RAR				S	Sn	03 37 18.9	-27
RAR	Rarotonga	14.23	86	P	Pn	03 34 58.0	-10
	14nm,0.3s,baz=41,slow=0.0,SNR=14						
RAR				S	Sn	03 37 18.8	-27
	5.0nm,0.3s,baz=222,slow=0.0,SNR=2.6						
FUNA	Funafuti	15.36	338	ePn	Pn	03 35 22.5	-1.1
URZ	Urewera	16.71	202	ePn	P	03 35 42.1	-0.8
	22nm,0.7s						
URZ				S	Sn	03 38 30.9	-15
URZ				eS	S	03 38 33.5	-22
URZ	Urewera	16.71	202	P	P	03 35 42.0	-0.8
	2.1nm,0.3s,baz=14,slow=4.5,SNR=12						
URZ				S	Sn	03 38 30.9	-15
	2.2nm,0.3s,baz=319,slow=22,SNR=9.5						
DZM	Mont Dzumac	17.16	269	P	P	03 35 50.6	+2.6
DZM	Mont Dzumac	17.16	269	P	P	03 35 50.6	+2.6
	2.4nm,0.3s,baz=82,slow=19,SNR=38						
SNZO	South Karori	20.27	203	eP	Pn	03 36 23.8	-0.2
	39nm,0.8s						
SNZO				eS	S	03 39 49.6	-18
RPZ	Rata Peaks	23.72	206	eP	P	03 36 57.9	-0.4
	9.6nm,0.6s						
RPZ				S	S	03 41 04.3	-7.2
RPZ	Rata Peaks	23.72	206	P	P	03 36 58.7	+0.4
	14nm,0.8s,baz=300,slow=16,SNR=4.3						
RPZ				S	S	03 41 04.3	-7.2
	17nm,0.9s,baz=27,slow=4.5,SNR=2.6						
PPT	Papeete	24.44	82	P	P	03 37 01.5	-3.6
PPT	Papeete	24.44	82	P	P	03 37 01.5	-3.6
	49nm,0.9s,baz=44,slow=17,SNR=3.6						
PPT				LR	LR	03 44 24.0	
	comp=Z,787nm,19.8s,baz=273,slow=31						
ARMA	Armidale	30.65	249	eP	P	03 38 01.3	+0.5
	14nm,0.9s						
ARMA	Armidale	30.65	249	P	P	03 38 01.7	+0.8
	baz=31,SNR=7.8						
EIDS	Eidsvold	30.99	259	eP	P	03 38 03.3	-0.5
	46nm,1.3s						
EIDS	Eidsvold	30.99	259	P	P	03 38 04.2	+0.4
	baz=32,SNR=12						
MGCD	Mangrove Creek	31.48	243	P	P	03 38 09.2	+1.1
	baz=32,SNR=7.6						
RMQ	Roma	33.03	256	P	P	03 38 23.2	+1.5
	baz=34,SNR=37						
CNB	Canberra Magne	33.30	240	P	P	03 38 27.4	+3.3
	baz=34,SNR=8.1						
MILA	Mila	33.87	237	P	P	03 38 30.0	+1.0
	baz=35,SNR=5.4						
CMSA	Cobar Meteorol	35.83	248	P	P	03 38 45.8	0.0
	baz=36,SNR=15						
CTA	Charters Tower	36.08	267	P	P	03 38 48.1	-0.1
CTA	Charters Tower	36.08	267	P	P	03 38 48.1	-0.1
	74nm,0.5s,baz=94,slow=11,SNR=122						
CTAO	Charters Tower	36.08	267	eP	P	03 38 48.1	-0.1
CTAO				pmax	pmax		
	comp=Z,81nm,0.6s						
CTAO	Charters Tower	36.08	267	eP	P	03 38 48.1	-0.1
	comp=Z,81nm,0.6s						
TOO	Toolangi	36.83	237	P	P	03 38 55.6	+1.2
	baz=38,SNR=5.1						
QLP	Quilpie	37.08	256	P	P	03 38 57.2	+0.6
	baz=38,SNR=13						
MTSU	Mount Surprise	38.30	269	P	P	03 39 07.2	+0.1
	baz=39,SNR=36						
PMG	Port Moresby	38.61	284	eP	P	03 39 09.0	-0.6
	comp=Z,135nm,0.9s						
PMG	Port Moresby	38.61	284	P	P	03 39 09.2	-0.4

comp=Z,160nm,1.0s,comp=Z,1µm
PMG Port Moresby 38.61 284 P **P** **03 39 08.9 -0.7**
comp=Z,116nm,0.9s,baz=112,slow=4.7,SNR=30
PMG LR LR 03 52 52.6
comp=Z,195nm,18.0s,baz=121,slow=33
STKA Stephens Creek 39.33 247 *e*P **P** **03 39 15.2 -0.3**
comp=Z,38nm,2.8s
STKA Stephens Creek 39.33 247 P **P** **03 39 15.1 -0.4**
comp=Z,8.2nm,0.5s,baz=90,slow=9.5,SNR=20
STKA LR LR 03 54 24.6
comp=Z,330nm,19.3s,baz=292,slow=34
STKA Stephens Creek 39.33 247 P **P** **03 39 15.5 0.0**
baz=40,SNR=19
QIS Mount Isa 42.09 264 P **P** **03 39 37.6 -0.9**
baz=43,SNR=5.4
BBOO Buckleboo 44.03 246 P **P** **03 39 53.1 -0.9**
baz=45,SNR=11
AS31 Alice Springs 46.72 259 *e*P **P** **03 40 14.9 -0.6**
ASAR Alice Springs 46.72 259 P **P** **03 40 14.6 -0.9**
ASAR S **S** **03 47 01.4 -2.1**
ASAR Alice Springs 46.72 259 P **P** **03 40 14.6 -0.9**
comp=Z,56nm,0.9s,baz=88,slow=6.0,SNR=183
ASAR S **S** **03 47 01.4 -2.1**
comp=Z,1.1nm,0.7s,baz=97,slow=15,SNR=6.3
ASAR LR LR 03 59 21.4
comp=Z,340nm,18.6s,baz=107,slow=35
WRAB Tennant Creek 47.05 264 P **P** **03 40 16.5 -1.6**
comp=Z,284nm,1.0s,SNR=21
WRA Warramunga Arr 47.06 264 P **P** **03 40 16.8 -1.4**
WRA S **S** **03 47 03.5 -4.9**
WRA Warramunga Arr 47.06 264 P **P** **03 40 16.8 -1.4**
comp=Z,23nm,0.8s,baz=99,slow=7.7,SNR=93
WRA S **S** **03 47 03.5 -4.9**
comp=Z,2.8nm,1.0s,baz=98,slow=13,SNR=7.9
KDU Kakadu 50.80 272 P **P** **03 40 45.7 -1.1**
baz=52,SNR=14
FORT Forrest 50.94 248 *e*P **P** **03 40 46.9 -0.8**
FORT Forrest 50.94 248 P **P** **03 40 46.8 -1.0**
baz=52,SNR=26
MTN Manton Dam 51.98 271 P **P** **03 40 54.1 -1.6**
baz=53,SNR=5.4
GUMO Guam 53.48 309 *e*P **P** **03 41 06.5 -0.2**
FITZ Fitzroy Crossi 55.48 263 P **P** **03 41 20.6 -0.7**
FITZ Fitzroy Crossi 55.48 263 P **P** **03 41 20.6 -0.7**
comp=Z,12nm,0.6s,baz=98,slow=5.1,SNR=43
SBA Scott Base 55.67 185 *e*P **P** **03 41 24.4 +2.6**
SBA *e* 03 42 22.9
SBA Scott Base 55.67 185 *e*P **P** **03 41 24.4 +2.6**
SBA *e*PcP **PcP** **03 42 22.9 +2.0**
VNDA Vanda 55.78 186 *e*P **P** **03 41 24.0 +1.4**
comp=Z,9.3nm,0.8s
VNDA *e*PcP **PcP** **03 42 23.0 +1.7**
VNDA Vanda 55.78 186 P **P** **03 41 24.6 +2.1**
comp=Z,9.1nm,0.9s,baz=8.4,slow=7.2,SNR=39
VNDA PcP **PcP** **03 42 23.0 +1.7**
comp=Z,5.3nm,0.8s,baz=354,slow=4.6,SNR=5.7
VNDA LR LR 04 00 39.1
comp=Z,104nm,18.8s,baz=21,slow=31
KLBR Kellerberrin 59.58 246 P **P** **03 41 50.0 0.0**
baz=60,SNR=20
MEEK Meekatharra 59.77 252 P **P** **03 41 50.9 -0.6**
baz=60,SNR=16
NWAO Narrogin (SRO) 59.80 244 *e*P **P** **03 41 51.8 +0.3**
comp=Z,3.3nm,0.6s
NWAO Narrogin (SRO) 59.80 244 P **P** **03 41 51.5 0.0**
comp=Z,4.5nm,0.6s,baz=114,slow=13,SNR=5.2
MBWA Marble Bar 60.05 258 *e*P **P** **03 41 52.7 -0.7**
comp=Z,22nm,0.8s
MORW Morawa 61.50 248 P **P** **03 42 03.4 +0.2**
baz=62,SNR=40
CASY Casey 62.99 206 *e*P **P** **03 42 11.4 -1.0**
comp=Z,18nm,0.9s
QSPA South Pole Qui 67.16 180 *e*P **P** **03 42 40.3 +0.5**
comp=Z,34nm,1.0s
QSPA South Pole Qui 67.16 180 P **P** **03 42 40.5 +0.7**
comp=Z,26nm,1.0s,baz=45,slow=2.5,SNR=54
QSPA LR LR 04 06 20.8
comp=Z,214nm,18.8s,baz=36,slow=31
MJAR Matsushiro Ar 73.81 322 P **P** **03 43 20.0 -0.5**
MJAR Matsushiro Ar 73.81 322 P **P** **03 43 20.0 -0.5**
comp=Z,11nm,0.6s,baz=160,slow=6.1,SNR=45
MJAR LR LR 04 08 31.2
comp=Z,65nm,21.6s,baz=240,slow=30
MAJO Matsushiro 73.81 322 *e*P **P** **03 43 20.0 -0.5**
MAJO pmax pmax
comp=Z,15nm,0.6s
MAJO Matsushiro 73.81 322 *e*P **P** **03 43 20.0 -0.5**
comp=Z,15nm,0.6s
MAT Matsushiro 73.81 322 P **P** **03 43 20.3 -0.2**
MAT *e*S **SKiKP** **03 52 47.0 -0.8**
JOW Kunigami 73.84 309 *e*P **P** **03 43 21.0 +0.1**
comp=Z,7.0nm,0.9s
YUK Yuzh-Kuril'sk 75.66 332 *e*P **PcP** **03 43 44.5 +0.8**
YUK *e* 03 46 17.4
YUK *e*PPP PPP 03 48 05.3
YUK S **SKSac** **03 53 40.0 +1.1**
YUK *e*SS SS 03 57 54.7 -8.0
KUR Kuril'sk 75.79 334 *e*P **P** **03 43 31.0 -0.8**
KUR *e*S **S** **03 53 10.3 -1.4**
KUR pmax pmax
comp=Z,105nm,1.7s
KUR pmax pmax
comp=N,46nm,1.7s
KUR pmax pmax
comp=E,43nm,1.7s
KUR MLR MLR
comp=N,449nm,23.0s
KUR MLR MLR
comp=E,494nm,23.0s
KUR MLR MLR
comp=Z,271nm,23.0s
JNU Nakatsue 75.94 316 P **P** **03 43 32.8 -0.2**
JNU Nakatsue 75.94 316 P **P** **03 43 32.8 -0.2**
comp=Z,21nm,1.2s,baz=116,slow=7.5,SNR=5.3
FX1 Attu Island--F 76.18 353 *e*P **P** **03 43 32.9 -0.9**
KSM Kuching 76.49 277 *e*P **P** **03 43 36.7 +0.2**
comp=Z,7.9nm,0.6s
ASAJ Asahikawa 77.19 330 *e*P **P** **03 43 40.8 +1.1**
comp=Z,9.4nm,0.8s
ASAJ Asahikawa 77.19 330 P **P** **03 43 41.0 +1.4**
comp=Z,12nm,0.6s,baz=217,slow=8.1,SNR=26
ASAJ LR LR 04 14 23.4
comp=Z,198nm,19.4s,baz=173,slow=33
TPUB Ta-pu 77.61 302 *e*P **P** **03 43 41.3 -1.3**
comp=Z,43nm,0.8s
SSLB Suanglung 77.61 303 *e*P **P** **03 43 41.2 -1.5**
comp=Z,16nm,1.0s
YHNB Yeheng 77.76 303 *e*P **P** **03 43 42.9 -0.6**
comp=Z,23nm,0.9s
OSI Osito Adit 78.29 44 ⇑P **P** **03 43 45.7 -0.5**
baz=78
ARVC Arvin 78.53 44 ⇓P **P** **03 43 47.0 -0.4**
baz=79
MURC Murrieta 78.66 46 ⇓P **P** **03 43 47.7 -0.5**
baz=79
BFSC Mount Baldy Ra 78.75 45 ⇓P **P** **03 43 48.1 -0.7**
baz=79
MONP Monument Peak 78.76 47 ⇓P **P** **03 43 48.5 -0.5**
baz=79
KIPM Iron Peak 78.77 38 *e*P **P** **03 43 45.6 -3.1**
comp=Z,16nm,1.4s
VES Vestal, Richgr 78.82 43 ⇑P **P** **03 43 48.4 -0.6**
baz=79,SNR=7.8
DVTC Desert V Tower 78.84 47 ⇑P **P** **03 43 48.6 -0.7**
baz=79
EDW2 Edwards Air Fo 78.92 45 ⇓P **P** **03 43 49.2 -0.5**
baz=79,SNR=11
ISA Isabella 79.10 44 *e*P **P** **03 43 50.0 -0.6**
ISA pmax pmax
comp=Z,21nm,1.4s
ISA Isabella 79.10 44 *e*P **P** **03 43 50.0 -0.6**
comp=Z,21nm,1.4s
ISA Isabella 79.10 44 ⇓P **P** **03 43 50.4 -0.2**
baz=79,SNR=7.3
PFO Pinyon Flat Ob 79.17 46 P **P** **03 43 50.8 -0.4**
PFO Pinyon Flat Ob 79.17 46 P **P** **03 43 50.8 -0.4**
comp=Z,6.6nm,1.0s,baz=256,slow=4.0,SNR=6.5
PFO Pinyon Flat Ob 79.17 46 ⇑P **P** **03 43 50.5 -0.6**
baz=79
YSS Yuzh-Sakhalins 79.31 332 *e*P **P** **03 43 53.5 +2.1**
YSS *e* 03 44 08.0
YSS pmax pmax
comp=Z,30nm,1.0s
PEA0B Petropavlovsk- 79.34 344 *e*P **P** **03 43 50.9 -0.5**
PETK Petropavlovsk- 79.34 344 P **P** **03 43 51.5 +0.1**
PETK Petropavlovsk- 79.34 344 P **P** **03 43 51.5 +0.1**
PETK Petropavlovsk- 79.34 344 P **P** **03 43 51.5 +0.1**
comp=Z,20nm,1.0s,baz=132,slow=8.5,SNR=18
PETK LR LR 04 12 03.2
comp=Z,86nm,20.6s,baz=166,slow=30
KHMM Horse Mountain 79.35 37 *e*P **P** **03 43 52.2 +0.2**
comp=Z,12nm,0.9s
CMB Columbia Colle 79.41 41 *e*P **P** **03 43 51.5 -0.7**
CMB pmax pmax
comp=Z,13nm,0.9s
CMB Columbia Colle 79.41 41 *e*P **P** **03 43 51.5 -0.7**
comp=Z,13nm,0.9s
LRMC Laurel Mountai 79.48 44 ⇓P **P** **03 43 52.3 -0.5**
baz=80,SNR=5.2
RRX Edison Barstow 79.57 45 ⇑P **P** **03 43 52.5 -0.6**
baz=80
KRMB Red Mountain 79.69 36 *e*P **P** **03 43 54.1 +0.3**
comp=Z,10nm,1.1s
BELC Belle Mtn. Jos 79.70 46 ⇑P **P** **03 43 53.7 -0.4**
baz=80,SNR=9.2
WDC Whiskeytown Da 79.82 38 *e*P **P** **03 43 53.6 -0.7**
WDC pmax pmax
comp=Z,26nm,1.2s
WDC Whiskeytown Da 79.82 38 *e*P **P** **03 43 53.6 -0.7**
comp=Z,26nm,1.2s
CWC Cottonwood Cre 79.83 43 ⇓P **P** **03 43 54.2 -0.5**
baz=80
BC3 Big Chuckawall 79.86 47 ⇑P **P** **03 43 54.6 -0.3**
baz=80,SNR=6.8
GSC Goldstone 79.95 45 *e*P **P** **03 43 54.8 -0.5**
GSC *e* 03 44 10.2
GSC pmax pmax
comp=Z,4.0nm,0.8s
GSC Goldstone 79.95 45 *e*P **P** **03 43 54.8 -0.5**
comp=Z,4.3nm,0.8s
GSC *e* 03 44 10.2
GSC Goldstone 79.95 45 ⇓P **P** **03 43 54.9 -0.4**
baz=80,SNR=6.2
MPMC Manual Prospec 79.97 44 ⇓P **P** **03 43 55.2 -0.4**
baz=80,SNR=5.3
HEC Hector,Ludlow 79.98 46 ⇑P **P** **03 43 54.7 -0.7**
baz=80,SNR=14
MLAC Mammoth Lakes 80.10 42 ⇑P **P** **03 43 56.1 -0.2**
baz=80
MAW Mawson 80.22 199 P **P** **03 43 57.6 +1.4**
MAW Mawson 80.22 199 P **P** **03 43 57.6 +1.4**
comp=Z,35nm,0.8s,baz=129,slow=6.7,SNR=62
MAW LR LR 04 20 32.9
comp=Z,156nm,18.8s,baz=314,slow=36
MAW Mawson 80.22 199 P **P** **03 43 57.8 +1.7**
baz=80,SNR=44
IRM Iron Mountain 80.36 47 ⇓P **P** **03 43 57.2 -0.3**
baz=80,SNR=7.6
GMRC Granite Mounta 80.39 46 ⇑P **P** **03 43 57.2 -0.5**
baz=81,SNR=6.6
YBH Yreka Blue Hor 80.49 37 *e*P **P** **03 43 57.5 -0.6**
comp=Z,10.0nm,0.8s
YBH Yreka Blue Hor 80.49 37 P **P** **03 43 58.4 +0.3**
comp=Z,7.0nm,0.8s,baz=194,slow=0.8,SNR=28
113A Mohawk Valley, 80.50 48 ⇓P **P** **03 43 57.7 -0.5**
baz=81
KSRS Korea Array 80.54 317 P **P** **03 43 59.0 +0.7**
comp=Z,8.3nm,0.9s,baz=138,slow=6.1,SNR=27
KSRS LR LR 04 13 30.4
comp=Z,102nm,21.9s,baz=302,slow=31
Y12C Blythe 80.55 47 ⇑P **P** **03 43 58.0 -0.4**
baz=81
KSAR Wonju Array Be 80.55 317 P **P** **03 43 59.0 +0.6**
WCN Washoe City 80.60 40 *e*P **P** **03 43 58.7 -0.1**
WCN pmax pmax
comp=Z,14nm,1.0s
WCN Washoe City 80.60 40 *e*P **P** **03 43 58.7 -0.1**
comp=Z,14nm,1.0s
BEKR Beckworth 80.61 40 *e*P **P** **03 43 58.6 -0.2**
comp=Z,11nm,1.5s
TUQ Turquoise Moun 80.61 45 ⇑P **P** **03 43 58.4 -0.5**
baz=81
GRAC Grapevine Rang 80.62 43 ⇑P **P** **03 43 58.8 0.0**
baz=81,SNR=6.0
FURC Furnace Creek, 80.62 44 ⇑P **P** **03 43 58.4 -0.3**
baz=81
SHOC Shoshone 80.65 45 ⇑P **P** **03 43 58.6 -0.4**
baz=81
LTIM Timbered Crate 80.81 38 P **P** **03 44 00.0 +0.2**
NVAR Mina Array Bea 80.92 42 P **P** **03 44 00.4 -0.3**
NVAR pP pP 03 44 15.2 +5.0
NVAR Mina Array Bea 80.92 42 P **P** **03 44 00.4 -0.3**
comp=Z,10nm,0.8s,baz=223,slow=9.1,SNR=64
NVAR pP pP 03 44 15.2 +5.0
comp=Z,11nm,0.8s,baz=223,slow=8.2,SNR=12
HUMO Hull Mountain 80.95 36 *e*P **P** **03 44 00.6 +0.2**
comp=Z,12nm,1.0s
HUMO *e* 03 44 15.6
NV11 Mina Array Sit 81.02 42 *e*P **P** **03 44 00.6 -0.5**
NV11 *e* 03 44 16.4
NEE2 Needles Airpor 81.08 46 ⇑P **P** **03 44 01.0 -0.2**
baz=81
PDMCI Parker Dam,Lak 81.12 47 ⇓P **P** **03 44 01.1 -0.4**
baz=81
Z14A Wintersburg 81.40 48 ⇓P **P** **03 44 03.0 -0.1**
baz=82
Y14A Wickenburg 81.69 48 ⇓P **P** **03 44 04.1 -0.5**
baz=82,SNR=7.5
W13A Hualapai Mount 81.76 47 ⇓P **P** **03 44 04.9 -0.3**
baz=82
TUC Tucson 82.33 50 *e*P **P** **03 44 06.8 -1.2**
TUC *e* 03 44 23.8
TUC pmax pmax
comp=Z,11nm,1.1s
TUC Tucson 82.33 50 *e*P **P** **03 44 06.8 -1.2**
comp=Z,11nm,1.1s
TUC *e* 03 44 23.8
USRK Ussuriysk Arra 82.53 325 P **P** **03 44 10.4 +1.8**
comp=Z,29nm,0.9s,baz=139,slow=3.5,SNR=56
KDAK Kodiak Island 82.56 12 P P 03 44 13.2 +4.8
KDAK Kodiak Island 82.56 12 P P 03 44 13.2 +4.8
comp=Z,12nm,0.9s,baz=300,slow=8.8,SNR=4.1
R11A Troy Canyon, C 82.56 43 ⇓P **P** **03 44 08.7 -0.5**
baz=83
BMN Battle Mountai 82.82 41 *e*P **P** **03 44 10.5 0.0**
BMN *e* 03 44 26.4
BMN pmax pmax
comp=Z,15nm,1.4s
BMN Battle Mountai 82.82 41 *e*P **P** **03 44 10.5 0.0**
comp=Z,16nm,1.4s
BMN *e* 03 44 26.4
319A Douglas 82.91 52 ⇓P **P** **03 44 11.0 -0.1**
baz=83
X16A Lo Mia Camp, P 83.03 48 ⇓P **P** **03 44 11.7 -0.1**
baz=83,SNR=13
WVOR Wild Horse Val 83.25 38 *e*P **P** **03 44 12.1 -0.5**
WVOR *e* 03 44 27.9
WVOR pmax pmax
comp=Z,16nm,1.1s
WVOR Wild Horse Val 83.25 38 *e*P **P** **03 44 12.1 -0.5**
comp=Z,16nm,1.1s
WVOR *e* 03 44 27.9
320A Kipp Ranch, An 83.43 52 ⇓P **P** **03 44 14.0 +0.1**
baz=84
VIPM Ingram Point 83.48 36 P **P** **03 44 13.7 -0.1**
VIPM Ingram Point 83.48 36 P **P** **03 44 13.7 -0.1**
CCUT Cedar City 83.52 45 *e*P **P** **03 44 14.2 -0.1**
comp=Z,22nm,1.2s
CCUT *e* 03 44 29.8
NJ2 Nanjing 83.55 309 *e*P **P** **03 44 15.5 +1.3**
NJ2 pP **PcP** **03 44 19.4 +0.9**
NJ2 sP sP 03 44 21.4 -5.9
NJ2 S **S** **03 54 32.0 -2.4**
NJ2 pmax pmax
comp=Z,50nm,1.4s
NJ2 pmax pmax
comp=Z,120nm,4.5s
NJ2 LR LR
comp=N,250nm,22.1s
NJ2 LR LR
comp=E,180nm,15.1s
NJ2 LR LR
comp=Z,140nm,19.5s
LVP Lakeview Peak 83.58 34 P **P** **03 44 14.3 +0.1**
U15A North Rim 83.58 46 ⇑P **P** **03 44 14.9 +0.2**
baz=84,SNR=27
CROR Criterion Ridg 83.60 35 P **P** **03 44 13.7 -0.6**
WUAZ Wupatki 83.69 47 ⇓P **P** **03 44 15.2 +0.1**
baz=84
220A Playas Peak, P 83.73 52 ⇑P **P** **03 44 15.4 0.0**
baz=84,SNR=13
NLWA Neilton Lookou 83.75 32 *e*P **P** **03 44 14.2 -0.7**
comp=Z,48nm,1.6s
VTHM Trough 83.95 35 P **P** **03 44 16.2 +0.1**
120A U Bar Ranch, L 83.99 51 ⇓P **P** **03 44 16.7 0.0**
baz=84,SNR=5.7
MDJ Mudanjiang 84.09 324 P **P** **03 44 17.9 +1.2**
MDJ sP sP 03 44 22.8 -7.0
MDJ PP **PP** **03 47 32.2 +0.8**
MDJ S **SKKSac** **03 54 41.4 -1.6**
MDJ pmax pmax
comp=Z,32nm,1.1s
MDJ pmax pmax
comp=Z,51nm,5.8s
MDJ LR LR
comp=Z,52nm,26.4s
X18A Snowflake 84.12 49 ⇑P **P** **03 44 17.4 0.0**
baz=84
ELK Elko 84.21 41 *e*P **P** **03 44 16.9 -0.9**
comp=Z,10nm,1.2s
Z20A Nine Sixteen R 84.32 51 ⇓P **P** **03 44 18.6 +0.2**
baz=84,SNR=13
221A Mesquite Ranch 84.33 52 ⇑P **P** **03 44 18.5 +0.1**
baz=84
LON Longmire 84.34 34 *e*P **P** **03 44 17.4 -0.6**
LON pmax pmax
comp=Z,6.0nm,0.9s
LON Longmire 84.34 34 *e*P **P** **03 44 17.4 -0.6**
comp=Z,6.5nm,0.9s
QIZ Qiongzhong 84.37 293 P **P** **03 44 18.9 +0.2**
QIZ PP **PP** **03 47 34.5 +0.4**
QIZ S **S** **03 54 46.2 +3.1**
QIZ pmax pmax
comp=Z,67nm,5.5s
QIZ LR LR
comp=N,170nm,21.2s
QIZ LR LR
comp=Z,120nm,16.3s
W18A Petrified Fore 84.59 48 ⇑P **P** **03 44 19.6 -0.1**
baz=85
121A Cookes Peak, D 84.60 51 ⇑P **P** **03 44 19.7 -0.1**
baz=85
MVU Marysvale 84.81 44 *e*P **P** **03 44 21.2 +0.4**
comp=Z,23nm,1.2s
MVU *e* 03 44 36.9
222A Williams Famil 84.87 52 ⇑P **P** **03 44 20.9 -0.3**
baz=85
Y20A Horse Springs, 84.89 50 ⇓P **P** **03 44 21.6 +0.3**
baz=85,SNR=17
SYO Syowa Base 84.96 192⇑*e*P **P** **03 44 19.6 -1.2**
SYO Syowa Base 84.96 192⇑*e*X pP 03 44 33.4 +3.0
Z21A St. Cloud Mine 85.08 51 ⇑P **P** **03 44 22.6 +0.3**
baz=85,SNR=10
X20A Quemado 85.14 49 ⇓P **P** **03 44 22.7 +0.2**
baz=85,SNR=12
223A Chaparral, Ant 85.31 53 ⇓P **P** **03 44 23.2 -0.1**
baz=85
DUG Dugway 85.39 43 ⇑P **P** **03 44 23.3 -0.2**
baz=86
Y21A Point of Rocks 85.44 50 ⇓P **P** **03 44 24.4 +0.3**
baz=86,SNR=5.7
W20A Ramah 85.45 49 ⇑P **P** **03 44 24.3 +0.3**
baz=86,SNR=23
MFID Camas Ranch 85.47 39 *e*P **P** **03 44 23.6 -0.3**
comp=Z,27nm,0.6s
MFID Camas Ranch 85.47 39 ⇑P **P** **03 44 23.4 -0.5**
baz=86
SNAA Sanae 85.50 178 *e*P **P** **03 44 23.3 -0.3**
SNAA Sanae 85.50 178 *es*P sP 03 44 39.9 +3.2
SNAA Sanae 85.50 178 *e*P **P** **03 44 23.3 -0.3**
comp=Z,32nm,1.0s
SNAA *e* 03 44 39.8
BMO Blue Mountains 85.52 37 *e*P **P** **03 44 23.4 -0.6**
comp=Z,3.9nm,0.9s
Z22A Elephant Butte 85.56 51 ⇑P **P** **03 44 24.6 0.0**
baz=86,SNR=15
X21A Alamocita Cree 85.59 50 ⇓P **P** **03 44 25.0 +0.1**
baz=86,SNR=13
PLCA Paso Flores 85.60 132 P **P** **03 44 24.4 -0.3**
PLCA Paso Flores 85.60 132 P **P** **03 44 24.4 -0.3**
comp=Z,2.9nm,1.0s,baz=218,slow=6.8,SNR=7.9
PLCA LR LR 04 14 40.7
comp=Z,179nm,20.1s,baz=224,slow=30
Q16A Castle Valley 85.71 45 ⇓P **P** **03 44 25.4 +0.2**
baz=86
324A Moseley Ranch, 85.72 53 ⇓P **P** **03 44 24.7 -0.8**
baz=86
425A Indio Mountain 85.77 54 ⇑P **P** **03 44 25.2 -0.5**
baz=86,SNR=7.4
S18A Hurst Farm, BI 85.81 46 ⇑P **P** **03 44 25.6 -0.3**
baz=86
626A Big Bend Ranch 85.81 56 ⇑P **P** **03 44 25.3 -0.6**
baz=86,SNR=22
V20A Brimhall 85.83 48 ⇑P **P** **03 44 25.6 -0.3**
baz=86,SNR=5.1
Y22A Socorro 85.91 51 ⇓P **P** **03 44 26.1 -0.2**
baz=86,SNR=7.8
CN2 Changchun 85.91 321 *e*P **P** **03 44 26.8 +1.0**
CN2 *es*P sP 03 44 31.5 -7.4
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 pmax pmax
comp=Z,200nm,3.0s
MNTX Cornudas Mount 85.93 53 *e*P **P** **03 44 25.4 -0.8**
comp=Z,12nm,1.0s
MNTX *e* 03 44 41.5
224A Cornudas Mount 86.01 53 ⇓P **P** **03 44 26.5 -0.4**
baz=86,SNR=8.0
LAZ Ladron 86.03 50 *e*P **P** **03 44 27.1 +0.2**
comp=Z,9.7nm,1.2s
LAZ *e* 03 44 43.1
KLR Kul'dur 86.03 328 *e*P **P** **03 44 23.8 -2.5**
W21A San Fidel 86.04 49 ⇑P **P** **03 44 26.9 -0.1**
baz=86
TXAR Lajitas Array 86.06 56 P **P** **03 44 26.4 -0.6**
TXAR pP pP 03 44 42.1 +5.4
TXAR Lajitas Array 86.06 56 P **P** **03 44 26.4 -0.6**
comp=Z,8.4nm,0.9s,baz=210,slow=7.2,SNR=78
TXAR pP pP 03 44 42.1 +5.4
comp=Z,15nm,1.0s,baz=215,slow=6.1,SNR=19
TXAR LR LR 04 19 24.5
comp=Z,102nm,18.3s,baz=210,slow=33
325A Bean Ranch, Si 86.07 54 ⇓P **P** **03 44 26.3 -0.9**
baz=86,SNR=13
526A Mary Lane Ranc 86.09 55 ⇑P **P** **03 44 26.6 -0.7**
baz=86,SNR=15
Z23A Rita Site, Whi 86.09 52 ⇑P **P** **03 44 26.9 -0.3**
baz=86
U20A Newcomb 86.09 48 ⇑P **P** **03 44 26.8 -0.3**
baz=86
WHN Wuhan 86.11 305 ⇓P **P** **03 44 28.4 +1.3**
WHN pP **pP** **03 44 36.4 -0.3**
X22A Bernardo 86.17 50 ⇑P **P** **03 44 28.0 +0.4**
baz=86
IPM Ipoh 86.18 276 *e*P **P** **03 44 29.2 +1.3**
comp=Z,35nm,0.7s
VNA1 Neumayer--Stat 86.22 176 *e*P **P** **03 44 27.2 +0.2**
VNA1 Neumayer--Stat 86.22 176 *es*P sP 03 44 35.7 -4.4
SRU San Rafael 86.24 45 ⇑P **P** **03 44 27.4 -0.4**
baz=86,SNR=13
BNM Barren Site 86.26 51 *e*P **P** **03 44 28.0 -0.2**
comp=Z,7.8nm,1.0s
627A Terlingua Ranc 86.33 56 ⇓P **P** **03 44 27.8 -0.6**
baz=86,SNR=22
LPM Los Pinos Moun 86.34 50 *e*P **P** **03 44 27.9 -0.5**
comp=Z,2.1nm,0.5s
LPM *e* 03 44 44.3
124A Stringfield Ra 86.37 52 ⇑P **P** **03 44 28.4 -0.4**
baz=86,SNR=11
HLID Hailey 86.38 39 *e*P **P** **03 44 28.4 0.0**
comp=Z,7.3nm,1.4s
HLID Hailey 86.38 39 ⇓P **P** **03 44 28.0 -0.4**
baz=87
V21A Milan 86.40 49 ⇑P **P** **03 44 28.5 -0.3**
baz=86
426A McDonald Obser 86.43 55 ⇓P **P** **03 44 28.3 -0.7**
baz=86,SNR=13
527A Woodward Ranch 86.49 55 ⇓P **P** **03 44 28.2 -1.0**
baz=87,SNR=13
DAU Daniels Canyon 86.49 43 *e*P **P** **03 44 29.2 0.0**
DAU pmax pmax
comp=Z,10.0nm,1.2s
DAU Daniels Canyon 86.49 43 *e*P **P** **03 44 29.2 0.0**
comp=Z,9.5nm,1.2s
Y23A Lovelace Mesa, 86.56 51 ⇓P **P** **03 44 29.1 -0.4**
baz=87,SNR=8.1
U21A Nageezi 86.71 48 ⇑P **P** **03 44 30.2 -0.2**
baz=87,SNR=20
H12A Diamond D Ranc 86.72 38 ⇑P **P** **03 44 29.3 -0.8**
baz=87
628A Black Gap, Mar 86.73 56 ⇓P **P** **03 44 29.7 -0.6**

baz=87,SNR=16
Z24A **Sheeppen Canyo** 86.75 52 ⇓P P 03 44 30.0 -0.5
baz=87,SNR=8.4
PMR **Palmer** 86.76 12 *eP* P 03 44 30.0 +0.4
PMR pmax pmax
comp=Z,19nm,1.3s
PMR **Palmer** 86.76 12 *eP* P 03 44 30.0 +0.4
comp=Z,19nm,1.3s
326A **Caldwell Ranch** 86.78 54 ⇑P P 03 44 29.5 -1.1
baz=87,SNR=5.4
ANMO **Albuquerque** 86.79 50 *eP* P 03 44 30.3 -0.4
comp=Z,19nm,1.1s
ANMO *e* 03 44 46.2
X23A **Hourglass Bar** 86.79 50 ⇑P P 03 44 30.3 -0.4
baz=87
G12A **Big Creek, Yel** 86.80 38 ⇓P P 03 44 29.9 -0.5
baz=87
PV10 **Paradox Valley** 86.81 46 *eP* P 03 44 29.9 -0.9
comp=Z,33nm,0.7s
KULM **Kulim** 86.84 277 *eP* P 03 44 32.5 +1.4
GDL2 **Guadalupe Moun** 86.93 53 *eP* P 03 44 31.1 -0.2
comp=Z,5.4nm,0.8s
GDL2 *e* 03 44 46.8
125A **Gardner Draw,** 86.94 53 ⇓P P 03 44 30.7 -0.7
baz=87,SNR=7.9
V22A **San Miguel Ran** 86.97 49 ⇑P P 03 44 31.1 -0.5
baz=87
S20A **Disappointment** 86.97 47 ⇑P P 03 44 31.1 -0.5
baz=87
427A **Hayter Ranch,** 86.99 55 ⇓P P 03 44 31.2 -0.4
baz=87,SNR=34
PV01 **Paradox Valley** 87.00 46 *eP* P 03 44 30.8 -0.9
comp=Z,554nm,1.1s
Y24A **Capitan** 87.00 51 ⇑P P 03 44 31.5 -0.3
baz=87,SNR=22
226B **Tecolote Peak,** 87.01 53 ⇓P P 03 44 31.1 -0.6
baz=87,SNR=15
T21A **Navajo Lake** 87.09 48 ⇑P P 03 44 31.5 -0.6
baz=87
W23A **Werner Place,** 87.11 50 ⇑P P 03 44 31.8 -0.5
baz=87
528A **Cox Ranch, San** 87.12 56 ⇑P P 03 44 31.6 -0.7
baz=87,SNR=13
R20A **Redvale** 87.15 46 ⇑P P 03 44 31.7 -0.6
baz=87
I14A **Mackay** 87.16 40 ⇓P P 03 44 32.0 -0.3
baz=87
Z25A **Roswell** 87.20 52 ⇓P P 03 44 32.4 -0.2
baz=87,SNR=11
F12A **Elk City** 87.22 37 ⇓P P 03 44 31.6 -0.8
baz=87
U22A **Llaves** 87.24 49 ⇓P P 03 44 32.3 -0.6
baz=87
S21A **Coal Bank Pass** 87.27 47 ⇓P P 03 44 32.5 -0.6
baz=87
126A **Clayton Basin,** 87.40 53 ⇓P P 03 44 32.7 -0.9
baz=88
M17A **Scullys Gap (B** 87.45 43 ⇓P P 03 44 32.9 -0.8
baz=88
428A **Kincaid Ranch,** 87.47 55 ⇑P P 03 44 33.4 -0.5
baz=88,SNR=7.5
P19A **Cripple Cowboy** 87.53 45 ⇓P P 03 44 33.5 -0.6
baz=88
Y25A **Mesa, Roswell** 87.53 52 ⇑P P 03 44 33.5 -0.7
baz=88,SNR=11
T22A **Edith** 87.54 48 ⇓P P 03 44 33.5 -0.8
baz=88
529A **Stev Forest Ra** 87.54 56 ⇑P P 03 44 33.2 -1.1
baz=88,SNR=9.0
Q20A **Ridgley Place,** 87.61 46 ⇑P P 03 44 33.7 -0.9
baz=88
W24A **Lazy 6 Ranch,** 87.66 50 ⇓P P 03 44 34.1 -0.8
baz=88,SNR=5.9
U23A **El Rito** 87.68 49 ⇓P P 03 44 33.9 -1.1
baz=88
Z26A **Caprock** 87.73 52 ⇓P P 03 44 34.3 -0.9
baz=88,SNR=9.8
NEW **Newport** 87.75 35 ⇑P P 03 44 34.2 -0.6
baz=88
F13A **Darby** 87.75 38 ⇑P P 03 44 34.3 -0.7
baz=88
O19A **Miners Draw (B** 87.79 44 ⇑P P 03 44 34.2 -1.1
baz=88,SNR=5.2
R21A **Cimarron** 87.80 47 ⇓P P 03 44 34.9 -0.6
baz=88,SNR=6.6
P20A **De Beque** 87.84 45 ⇓P P 03 44 34.7 -0.9
baz=88
X25A **Clemmons Ranch** 87.85 51 ⇓P P 03 44 35.0 -0.7
baz=88
127A **Arkansas Junct** 87.90 53 ⇑P P 03 44 35.3 -0.7
baz=88
C11A **Tepee Creek (N** 87.94 35 ⇑P P 03 44 35.2 -0.6
baz=88
D12A **Red Ives Fores** 87.95 36 ⇑P P 03 44 35.4 -0.4
baz=88
S22A **4UR Ranch, Cre** 87.96 47 ⇓P P 03 44 35.9 -0.5
baz=88,SNR=7.4
V24A **Rampart Ranch,** 88.02 50 ⇑P P 03 44 35.9 -0.7
baz=88
429A **Davenport Ranc** 88.02 56 ⇓P P 03 44 35.5 -1.1
baz=88,SNR=31
228A **UT Block 9, Go** 88.20 54 ⇓P P 03 44 36.7 -0.7
baz=88
530A **J-C Ranch, Com** 88.23 56 ⇑P P 03 44 36.4 -1.1
baz=88,SNR=7.2
TRF **Thorofare Moun** 88.26 11 *eP* P 03 44 35.7 -1.3
comp=Z,12nm,0.8s
R22A **Saguache, Gunn** 88.26 47 ⇓P P 03 44 37.3 -0.5
baz=88
O20A **White River Ci** 88.27 45 ⇑P P 03 44 37.0 -0.7
baz=88
I16A **Newdale** 88.30 40 ⇑P P 03 44 37.2 -0.4
baz=88
Z27A **Tatum** 88.31 53 ⇑P P 03 44 36.2 -1.7
baz=88
SKAG **Skagway** 88.32 19 *eP* P 03 44 37.3 +0.2
comp=Z,8.0nm,1.0s
W25A **X Bar L Ranch,** 88.34 51 ⇑P P 03 44 37.0 -1.0
baz=88,SNR=10
329A **Wagon Wheel Ra** 88.36 55 ⇓P P 03 44 37.1 -1.0
baz=88,SNR=6.0
TPAW **Teton Pass** 88.40 41 *eP* P 03 44 37.6 -0.6
comp=Z,4.7nm,1.0s
M19A **Rock Springs** 88.42 43 ⇓P P 03 44 37.5 -0.9
baz=89
G15A **Dillon** 88.44 39 ⇓P P 03 44 37.7 -0.6
baz=89
D13A **Huson** 88.46 37 ⇑P P 03 44 37.6 -0.7
baz=89
P21A **Newcastle** 88.47 46 ⇑P P 03 44 37.5 -1.1
baz=89
631A **Perdido Creek** 88.48 57 ⇓P P 03 44 37.5 -1.1
baz=89,SNR=13
X26A **CR and CF Fran** 88.48 51 ⇑P P 03 44 38.2 -0.5
baz=89
Q22A **Crested Butte,** 88.49 46 ⇑P P 03 44 38.1 -0.8
baz=89,SNR=7.0
128A **Castleberry Fa** 88.52 54 ⇑P P 03 44 37.9 -0.9
baz=89,SNR=5.3
V25A **Rancho No Teng** 88.53 50 ⇓P P 03 44 37.9 -1.1
baz=89
MSO **Missoula** 88.59 37 ⇑P P 03 44 37.8 -1.0
baz=89
430A **Baggett Ranch,** 88.60 56 ⇓P P 03 44 38.0 -1.3
baz=89
SMCO **Snowmass** 88.61 46 *eP* P 03 44 38.7 -0.8
comp=Z,8.8nm,1.0s
L19A **Farson** 88.62 43 ⇓P P 03 44 38.4 -0.8
baz=89
Y27A **Causey** 88.62 52 ⇑P P 03 44 38.2 -1.2
baz=89
N20A **Spence Gulch,** 88.63 44 ⇓P P 03 44 38.6 -0.8
baz=89,SNR=10
732A **Laxson Ranch,** 88.64 58 ⇑P P 03 44 38.3 -1.1
baz=89
229A **Bryant Ranch,** 88.72 54 ⇓P P 03 44 38.4 -1.4
baz=89
MCK **McKinley** 88.76 11 *eP* P 03 44 38.6 -0.5
MCK pmax pmax
comp=Z,17nm,1.0s
MCK **McKinley** 88.76 11 *eP* P 03 44 38.6 -0.5
comp=Z,17nm,1.0s
531A **Rocksprings** 88.84 57 ⇑P P 03 44 39.5 -0.9
baz=89,SNR=11
BW06 **Boulder Array** 88.85 42 *eP* P 03 44 39.4 -1.0
comp=Z,2.7nm,1.1s
PDAR **Pinedale Array** 88.85 42 P P 03 44 39.4 -1.0
PDAR pP pP 03 44 54.9 +4.8
comp=Z,2.4nm,0.9s,baz=222,slow=4.0,SNR=14
PDAR pP pP 03 44 54.9 +4.8
comp=Z,2.8nm,0.9s,baz=177,slow=3.0,SNR=6.9
R23A **Moffat** 88.87 47 ⇓P P 03 44 39.9 -0.8
baz=89
Z28A **Tucker Farm, M** 88.91 53 ⇓P P 03 44 39.9 -0.8
baz=89
330A **Mertzon** 88.93 55 ⇑P P 03 44 40.0 -0.8
baz=89
MSTX **Muleshoe** 88.95 52 ⇑P P 03 44 40.0 -0.9
baz=89
U25A **Circle Dot Ran** 88.96 50 ⇓P P 03 44 39.9 -1.1
baz=89
P22A **Eagle** 88.96 46 ⇑P P 03 44 40.1 -0.9
baz=89
D14A **Greenough** 88.98 37 ⇓P P 03 44 39.8 -1.0
baz=89
129A **Stewart Farms,** 88.98 54 ⇓P P 03 44 40.1 -1.0
baz=89
S24A **Houchin Ranch,** 89.01 48 ⇑P P 03 44 40.7 -0.7
baz=89
CHMT **Chamberlain Mo** 89.02 37 *eP* P 03 44 40.1 -1.0
comp=Z,7.3nm,1.5s
M20A **Sweetwater, Wa** 89.03 44 ⇓P P 03 44 40.7 -0.6
baz=89
X27A **F and S Farms,** 89.04 52 ⇓P P 03 44 40.6 -0.7
baz=89
N21A **Black Mountain** 89.07 45 ⇓P P 03 44 40.7 -0.8
baz=89,SNR=5.8
E15A **Deer Lodge** 89.08 38 ⇓P P 03 44 40.7 -0.6
baz=89
V26A **Tequesquite Ra** 89.10 50 ⇓P P 03 44 41.0 -0.6
baz=89
632A **Uvalde** 89.13 57 ⇑P P 03 44 41.1 -0.7
baz=89,SNR=9.5
L20A **Wamsutter** 89.20 43 ⇓P P 03 44 41.4 -0.7
baz=89
B13A **Whitefish** 89.22 35 ⇓P P 03 44 40.8 -1.0
baz=89
C14A **Swan Lake** 89.25 36 ⇓P P 03 44 40.9 -1.0
baz=89
W27A **Bowe Ranch, En** 89.26 51 ⇑P P 03 44 41.1 -1.3
baz=89
T25A **Trinidad** 89.32 49 ⇓P P 03 44 41.6 -1.1
baz=90
532A **Rocksprings** 89.32 57 ⇑P P 03 44 41.7 -1.0
baz=89,SNR=9.1
K19A **Absolon Red Bu** 89.33 42 ⇓P P 03 44 41.4 -1.1
baz=90
R24A **Sanders Place,** 89.38 48 ⇑P P 03 44 41.9 -1.0
baz=90
O22A **Kremmling** 89.39 45 ⇓P P 03 44 42.1 -1.0
baz=89,SNR=6.3
U26A **Atchley Ranch,** 89.42 50 ⇑P P 03 44 42.0 -1.2
baz=90
J19A **Crowheart** 89.43 42 ⇑P P 03 44 42.0 -1.0
baz=90
P23A **Jefferson** 89.46 46 ⇓P P 03 44 42.3 -1.2
baz=90
D15A **Lincoln** 89.50 37 ⇓P P 03 44 42.5 -0.7
baz=90
G17A **Pierce Place,** 89.55 39 ⇑P P 03 44 42.6 -0.9
baz=90
K20A **Yellowstone Ra** 89.55 43 ⇓P P 03 44 42.7 -0.9
baz=90
JCT **Junction City** 89.56 57 ⇓P P 03 44 42.6 -1.1
baz=90
BJI **Beijing** 89.56 314 P P 03 44 45.0 +1.6
BJI S S 03 55 35.4 +3.1
BJI pmax pmax
comp=Z,16nm,0.7s
BJI pmax pmax
comp=Z,98nm,4.2s
BJI LR LR
comp=N,100nm,24.2s
BJI LR LR
comp=E,92nm,19.4s
BJI LR LR
comp=Z,56nm,29.2s
S25A **Robets Cordova** 89.56 48 ⇓P P 03 44 42.5 -1.2
baz=90
A13A **Flaread Natio** 89.58 35 ⇑P P 03 44 42.9 -0.6
baz=90
M21A **Separation Pea** 89.61 44 ⇑P P 03 44 43.0 -1.0
baz=90
X28A **Dimmitt** 89.63 52 ⇓P P 03 44 43.2 -0.9
baz=90
DOT **Dot Lake** 89.64 13 *eP* P 03 44 43.6 +0.3
comp=Z,18nm,1.0s
Y29A **Porterfield Fa** 89.70 53 ⇑P P 03 44 43.4 -1.0
baz=90
Q24A **Divide** 89.72 47 ⇓P P 03 44 43.8 -0.9
baz=90
N22A **Wattenberg Ran** 89.78 45 ⇓P P 03 44 43.9 -1.0
baz=90
L21A **Rawlins** 89.80 44 ⇑P P 03 44 43.7 -1.1
baz=90
231A **Bronte** 89.83 55 ⇑P P 03 44 43.6 -1.4
baz=90
B14A **Maquette Ranc** 89.85 36 ⇓P P 03 44 43.7 -1.1
baz=90,SNR=9.5
C15A **Salmond Ranch,** 89.88 37 ⇓P P 03 44 44.1 -0.9
baz=90
I19A **Meeteetse** 89.89 41 ⇑P P 03 44 44.1 -1.0
baz=90
R25A **Fountain Ranch** 89.90 48 ⇓P P 03 44 44.2 -1.1
baz=90
T26A **Comanche Natio** 89.91 49 ⇓P P 03 44 44.4 -1.1
baz=90
F17A **Fitzpatrick Pl** 89.92 39 ⇓P P 03 44 44.7 -0.5
baz=90
WALA **Waterton Lakes** 89.92 35 *eP* P 03 44 44.6 -0.5
comp=Z,0.3nm,1.1s
X29A **Tulia** 89.96 52 ⇓P P 03 44 44.6 -1.0
baz=90
COLA **College** 90.00 11 *eP* P 03 44 44.6 -0.2
COLA pmax pmax
comp=Z,15nm,1.0s
COLA **College** 90.00 11 *eP* P 03 44 44.6 -0.2
comp=Z,15nm,1.0s
332A **Millersview** 90.01 56 ⇓P P 03 44 44.9 -1.0
baz=90
D16A **Dana Ranch, Ca** 90.04 38 ⇑P P 03 44 45.1 -0.6
baz=90,SNR=5.2
ILAR **Eielson Array** 90.08 12 P P 03 44 45.0 -0.3
ILAR pP pP 03 44 59.5 +4.6
ILAR **Eielson Array** 90.08 12 P P 03 44 45.0 -0.3
comp=Z,3.1nm,0.9s,baz=220,slow=5.6,SNR=33
ILAR pP pP 03 44 59.5 +4.6
comp=Z,7.3nm,1.0s,baz=208,slow=2.6,SNR=12
ILAR LR LR 04 25 01.3
comp=Z,53nm,18.8s,baz=188,slow=35
U27A **Thompson Grove** 90.08 50 ⇓P P 03 44 45.2 -1.0
baz=90
A14A **Double T Ranch** 90.13 35 ⇓P P 03 44 45.2 -0.8
baz=90,SNR=10.0
N23A **Red Feather La** 90.17 45 ⇑P P 03 44 45.4 -1.2
baz=90
S26A **Kim** 90.21 49 ⇓P P 03 44 45.5 -1.3
baz=90
B15A **Bradely Ranch,** 90.21 36 ⇓P P 03 44 45.8 -0.6
baz=90
K21A **Alcova** 90.22 43 ⇓P P 03 44 45.7 -1.1
baz=90
H19A **Powell** 90.23 41 ⇑P P 03 44 46.4 -0.3
baz=90
G18A **Lazy EL Ranch,** 90.24 40 ⇓P P 03 44 46.1 -0.7
baz=90
GYA **Guiyang** 90.25 299 P P 03 44 46.8 -0.4
GYA pP pP 03 44 58.6 +1.8
GYA PP PP 03 48 22.9 +1.4
GYA SKS SKSac 03 55 13.2 -3.4
GYA S S 03 55 35.4 -4.2
GYA sS sS 03 55 53.9 -1.7
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.7s
GYA LR LR
comp=N,550nm,20.7s
GYA LR LR
comp=E,520nm,21.3s
GYA LR LR
comp=Z,560nm,20.2s
232A **Coleman** 90.31 55 ⇓P P 03 44 45.9 -1.3
baz=90
I20A **Worland** 90.37 42 ⇑P P 03 44 46.5 -0.8
baz=90
C16A **Fuhringer Ranc** 90.37 37 ⇑P P 03 44 46.2 -1.0
baz=90,SNR=7.0
L22A **Ellis Ranch, M** 90.43 44 ⇓P P 03 44 47.0 -0.8
baz=91
GCMT **Greycliff** 90.44 39 *eP* P 03 44 48.0 +0.3
F18A **Big Timber** 90.47 39 ⇑P P 03 44 47.2 -0.5
baz=91
J21A **Lysite** 90.47 42 ⇑P P 03 44 47.5 -0.4
baz=91
U28A **Mallet** 90.49 50 ⇑P P 03 44 47.5 -0.6
baz=91
A15A **Johnson Ranch,** 90.50 36 ⇑P P 03 44 46.8 -1.0
baz=91,SNR=8.4
R26A **Arlington** 90.55 48 ⇑P P 03 44 47.3 -1.1
baz=91
Z31A **Sharp Cattle R** 90.59 54 ⇓P P 03 44 47.4 -1.1
baz=91
D17A **Six Diamond Ra** 90.60 38 ⇓P P 03 44 47.9 -0.4
baz=91,SNR=8.2
ABTX **Abilene, Hawle** 90.65 55 ⇑P P 03 44 47.9 -0.9
baz=91
P25A **Willow Gulch B** 90.65 47 ⇓P P 03 44 47.9 -0.9
baz=91
K22A **Casper** 90.69 43 ⇑P P 03 44 48.0 -0.9
baz=91
E18A **Harlowton** 90.72 39 ⇑P P 03 44 48.7 -0.2
baz=91,SNR=6.8
H20A **Greybull** 90.73 41 ⇓P P 03 44 48.3 -0.7
baz=91
B16A **M & M Farms, S** 90.74 37 ⇓P P 03 44 48.1 -0.8
baz=91
V29A **Stinnett** 90.75 51 ⇑P P 03 44 48.0 -1.3
baz=91
Y31A **Rekieta Farm,** 90.79 53 ⇑P P 03 44 48.5 -0.9
baz=91
Q26A **Hugo** 90.81 48 ⇑P P 03 44 48.4 -1.1
baz=91
I21A **Big Trails, Te** 90.81 42 ⇓P P 03 44 48.4 -1.0
baz=91
C17A **Wharram Farm,** 90.82 38 ⇑P P 03 44 48.6 -0.7
baz=91,SNR=13
N24A **Carr** 90.83 46 ⇓P P 03 44 48.6 -1.0
baz=91
F19A **Roth Farm, Mol** 90.89 40 ⇑P P 03 44 48.8 -0.9
baz=91
T28A **Walsh** 90.92 50 ⇑P P 03 44 49.3 -0.8
baz=91
L23A **Garrett** 90.94 44 ⇓P P 03 44 49.2 -0.9
baz=91
O25A **Wiggins** 90.98 46 ⇑P P 03 44 49.6 -0.6
baz=91
G20A **Bridger** 90.99 41 ⇓P P 03 44 49.3 -0.8
baz=91
R27A **Eads** 90.99 49 ⇓P P 03 44 49.5 -0.8
baz=91
Z32A **Haskell** 91.08 54 ⇑P P 03 44 49.9 -0.8
baz=91
A16A **West Butte Ran** 91.10 36 ⇑P P 03 44 49.9 -0.7
baz=91
P26A **Davis Ranch, A** 91.23 47 ⇓P P 03 44 51.0 -0.5
baz=91
EGAK **Eagle** 91.25 14 *eP* P 03 44 51.0 +0.2
comp=Z,13nm,1.0s
X31A **McDonald Ranch** 91.30 53 ⇓P P 03 44 50.8 -0.9
baz=91
E19A **Rath Farm, Rou** 91.31 39 ⇓P P 03 44 51.2 -0.4
baz=92
F20A **Billings** 91.34 40 ⇑P P 03 44 51.4 -0.4
baz=92
I22A **9 Mile Ranch,** 91.35 42 ⇓P P 03 44 51.3 -0.6
baz=92
Y32A **R-V Farms, Ver** 91.42 54 ⇓P P 03 44 51.7 -0.6
baz=92
W31A **Holland Ranch,** 91.58 52 ⇑P P 03 44 52.4 -0.6
baz=92
A17A **Triple J Farms** 91.59 36 ⇓P P 03 44 52.1 -0.6
baz=92,SNR=8.0
EGMT **Eagleton** 91.61 38 ⇑P P 03 44 52.5 -0.4
baz=92
D19A **Cripps Ranch,** 91.64 39 ⇑P P 03 44 52.8 -0.2
baz=92
R28A **Tribune** 91.70 49 ⇑P P 03 44 53.2 -0.4
baz=92
E20A **Meyer Farm, Mu** 91.72 39 ⇑P P 03 44 52.8 -0.6
baz=92
BILL **Bilibino** 91.74 353 *eP* P 03 44 54.9 +2.0
BILL *i* 03 45 09.4
BILL *e* 03 48 30.6
BILL pmax pmax
comp=Z,20nm,1.0s
B18A **Beardsley Farm** 91.80 37 ⇓P P 03 44 53.0 -0.7
baz=92
XAN **Xi'an** 91.80 306 P P 03 44 55.9 +1.8
XAN pmax pmax
comp=Z,6.0nm,0.8s
C19A **Slack Wire Ran** 91.85 38 ⇓P P 03 44 53.9 -0.1
baz=92,SNR=11
V31A **Spring Creek L** 91.92 52 ⇑P P 03 44 54.2 -0.4
baz=92
D20A **Manuel Ranch,** 92.03 39 ⇓P P 03 44 54.6 -0.2
baz=92,SNR=6.7
A18A **Metzger Ranch,** 92.04 37 ⇓P P 03 44 54.1 -0.7
baz=92,SNR=5.8
O27A **Beecher Island** 92.12 47 ⇑P P 03 44 54.8 -0.7
baz=92
B19A **Brinkman Farms** 92.29 38 ⇓P P 03 44 55.7 -0.3
baz=92,SNR=7.7
C20A **Veseth Ranch,** 92.43 38 ⇓P P 03 44 56.2 -0.5
baz=93
Q29A **Oakley** 92.54 49 ⇓P P 03 44 56.8 -0.6
baz=93
A19A **Klindworth Far** 92.66 37 ⇓P P 03 44 57.3 -0.4
baz=93
G23A **Biddle** 92.69 42 ⇓P P 03 44 57.4 -0.6
baz=93
R30A **Dighton** 92.75 49 ⇑P P 03 44 57.6 -0.8
baz=93
B20A **Solberg Farm,** 92.81 38 ⇑P P 03 44 58.0 -0.4
baz=93,SNR=5.8
KMI **Kunming** 92.91 296 P P 03 45 01.3 +1.6
KMI S S 03 56 03.3 -0.7
KMI pmax pmax
comp=Z,15nm,0.8s
KMI LR LR
comp=N,160nm,15.9s
KMI LR LR
comp=E,140nm,11.0s
KMI LR LR
comp=Z,120nm,10.2s
F23A **Volborg** 92.94 41 ⇑P P 03 44 58.8 -0.3
baz=93
E22A **Miles City** 92.97 40 ⇑P P 03 44 58.8 -0.4
baz=93
H24A **Dirks Ranch, A** 92.98 42 ⇑P P 03 44 58.8 -0.5
baz=93
RSSD **Black Hills** 93.00 43 *eP* P 03 44 58.8 -0.8
RSSD pmax pmax
comp=Z,12nm,1.3s
RSSD **Black Hills** 93.00 43 *eP* P 03 44 58.8 -0.8
comp=Z,12nm,1.3s
C21A **Desert Coulee** 93.01 39 ⇑P P 03 44 58.9 -0.5
baz=93
HHC **Hu-ho-hao-te** 93.03 313 *eP* P 03 44 59.4 -0.3
HHC pP pP 03 45 10.0 +0.6
HHC sP sP 03 45 14.2 +1.4
HHC PP PP 03 48 45.2 +2.0
HHC **Hu-ho-hao-te** 93.03 313 SKS SKSac 03 55 28.6 -3.1
HHC **Hu-ho-hao-te** 93.03 313 S S 03 55 59.8 -4.3
HHC **Hu-ho-hao-te** 93.03 313 sS S 03 56 18.0 +14
HHC **Hu-ho-hao-te** 93.03 313 SS SS 04 02 18.9 -0.6
HHC pmax pmax
comp=Z,42nm,0.7s
HHC pmax pmax
comp=Z,240nm,5.2s
HHC LR LR
comp=N,260nm,17.8s
HHC LR LR
comp=E,400nm,17.8s
HHC LR LR
comp=Z,250nm,16.7s
HHC **Hu-ho-hao-te** 93.03 313 *eP* P 03 45 00.0 +0.3
HHC sP sP 03 45 07.0 -5.8
HHC PP PP 03 48 45.4 +2.2
HHC SKS SKSac 03 55 31.2 -0.5
HHC S S 03 56 03.4 -0.7
HHC pmax pmax

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,33nm,0.6s						
HHC				pmax	pmax		
	comp=Z,240nm,4.5s						
HHC				LR	LR		
	comp=N,230nm,17.8s						
HHC				LR	LR		
	comp=E,580nm,19.0s						
HHC				LR	LR		
	comp=Z,180nm,19.0s						
Q30A	Quinter	93.10	49	⇑P	P	03 44 59.5	-0.5
	baz=93						
D22A	Cohagen	93.20	40	⇓P	P	03 45 00.1	-0.2
	baz=93,SNR=5.5						
R31A	Burdett	93.28	50	⇑P	P	03 45 00.0	-0.8
	baz=93						
E23A	Ismay	93.39	40	⇓P	P	03 45 00.6	-0.6
	baz=94						
CMAR	Chiang Mai Arr	93.53	288	P	P	03 45 04.8	+2.4
CMAR	Chiang Mai Arr	93.53	288	P	P	03 45 04.8	+2.4
	comp=Z,4.5nm,0.8s,baz=132,slow=3.2,SNR=9.0						
CMAR				LR	LR	04 24 35.6	
	comp=Z,69nm,18.0s,baz=281,slow=34						
F24A	Ekalaka	93.59	41	⇑P	P	03 45 01.8	-0.3
	baz=94						
D23A	Lindsay	93.78	40	⇓P	P	03 45 02.8	-0.2
	baz=94						
C23A	Lambert	94.11	39	⇑P	P	03 45 04.3	-0.1
	baz=94						
D24A	Glendive	94.28	40	⇓P	P	03 45 05.0	-0.3
	baz=94						
A22A	Carney Farms,	94.29	38	⇓P	P	03 45 04.9	-0.4
	baz=94						
CD2	Chengdu	94.42	302	eP	P	03 45 07.0	+0.7
CD2				pP	pP	03 45 12.0	-4.0
CD2				sP	sP	03 45 14.0	-5.4
CD2				PP	PP	03 48 57.2	+2.9
CD2				SKS	SKSac	03 55 40.2	+0.6
CD2				S	S	03 56 16.0	-0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,100nm,6.8s						
CD2				LR	LR		
	comp=N,180nm,18.8s						
CD2				LR	LR		
	comp=Z,160nm,15.8s						
C24A	Savage	94.42	40	⇓P	P	03 45 05.3	-0.6
	baz=95						
J28A	Allard Ranch,	94.45	45	⇓P	P	03 45 05.7	-0.5
	baz=95						
B23A	Brockton	94.55	39	⇓P	P	03 45 06.4	0.0
	baz=95						
K29A	Lazy Trails An	94.75	45	⇓P	P	03 45 07.1	-0.4
	baz=95						
TUL1	Tulsa	94.94	53	⇓P	P	03 45 07.8	-0.7
	baz=95						
A24A	Westby	95.35	39	⇓P	P	03 45 09.6	-0.5
	baz=96						
LZH	Lanzhou	96.44	306	eP	P	03 45 17.0	+1.5
LZH				sP	sP	03 45 24.5	-4.1
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				LR	LR		
	comp=N,150nm,10.6s						
LZH				LR	LR		
	comp=E,130nm,9.7s						
LZH				LR	LR		
	comp=Z,190nm,12.2s						
YKA	Yellowknife Ar	97.56	24	P	P	03 45 19.1	-0.7
YKA	Yellowknife Ar	97.56	24	P	P	03 45 19.0	-0.7
	comp=Z,1.1nm,0.8s,baz=236,slow=4.5,SNR=24						
LPAZ	La Paz	98.58	112	P	Pdif	03 45 27.5	+1.2
LPAZ	La Paz	98.58	112	P	Pdif	03 45 27.5	+1.3
	comp=Z,0.6nm,0.7s,baz=222,slow=0.8,SNR=4.5						
SONM	Songino Array	99.40	318	P	Pdif	03 45 29.7	+1.2
SONM	Songino Array	99.40	318	P	Pdif	03 45 29.7	+1.2
	comp=Z,0.5nm,0.6s,baz=145,slow=5.3,SNR=2.2						
GTA	Gaotai	100.65	308	eP	Pdif	03 45 35.4	+1.1
GTA				pP	pP	03 45 40.2	-3.8
GTA				sP	sP	03 45 42.5	-5.0
GTA				PP	PP	03 49 45.5	+3.5
GTA				SKS	SKSac	03 56 12.9	+1.6
GTA				S	Sdif	03 57 08.2	-1.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.8s						
GTA				pmax	pmax		
	comp=Z,65nm,6.6s						
GTA				LR	LR		
	comp=N,91nm,21.9s						
GTA				LR	LR		
	comp=E,190nm,22.3s						
GTA				LR	LR		
	comp=Z,140nm,19.5s						
WMQ	Urumqi	110.60	310	ePKP	PKiKP	03 50 16.0	-2.6
WMQ				LR	LR		
	comp=Z,180nm,24.0s						
ZALV	Zalesovo Beam	114.11	320	PP	PP	03 51 22.6	+2.5
ZALV	Zalesovo Beam	114.11	320	PP	PP	03 51 22.6	+2.5
	comp=Z,0.6nm,0.3s,baz=106,slow=5.3,SNR=4.0						
MK31	Makanchi Array	114.87	312	ePKIKP	PKPdf	03 50 26.7	+0.1
MK31	Makanchi Array	114.87	312	ePKPdf	PKPdf	03 50 26.7	+0.1
MKAR	Makanchi Array	114.87	312	PKIKP	PKPdf	03 50 26.0	-0.6
MKAR	Makanchi Array	114.87	312	PKP	PKPdf	03 50 25.9	-0.7
MKAR	Makanchi Array	114.87	312	PKP	PKPdf	03 50 25.9	-0.7
	comp=Z,0.6nm,0.7s,baz=112,slow=0.3,SNR=7.0						
KURK	Kurchatov	117.65	316	ePKIKP	PKPdf	03 50 32.7	+0.9
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BOSA	Boshof	125.16	202	PKP	PKPdf	03 50 47.5	+0.3
BOSA	Boshof	125.16	202	PKP	PKPdf	03 50 47.5	+0.3
	comp=Z,4.1nm,1.1s,baz=153,slow=2.3,SNR=2.6						
ARCES	ARCESS Array B	131.78	350	PKP	PKPdf	03 50 58.5	+0.2
ARCES	ARCESS Array B	131.78	350	PKP	PKPdf	03 50 58.5	+0.2
	comp=Z,1.9nm,0.6s,baz=48,slow=1.8,SNR=8.9						
FINES	FINESS Array B	138.85	345	PKP	PKPdf	03 51 12.8	+1.1
FINES	FINESS Array B	138.85	345	PKP	PKPdf	03 51 12.8	+1.1
	comp=Z,1.5nm,0.7s,baz=28,slow=6.3,SNR=3.0						
NB2	NORSAR Subarra	141.66	355	PKP	PKPdf	03 51 12.3	-4.6
	comp=Z,4.8nm,1.2s,baz=18,slow=2.5						
NOA	NORSAR Array B	141.66	355	PKP	PKPdf	03 51 14.6	-2.3
NOA	NORSAR Array B	141.66	355	PKP	PKPdf	03 51 14.6	-2.3
	comp=Z,1.1nm,0.9s,baz=49,slow=5.4,SNR=3.7						
KBZ	Khabaz	142.57	313	PKIKP	PKPdf	03 51 19.1	+0.2
KBZ	Khabaz	142.57	313	PKP	PKPdf	03 51 19.1	+0.2
KBZ	Khabaz	142.57	313	PKP	PKPdf	03 51 19.1	+0.2
	comp=Z,1.8nm,0.6s,baz=170,slow=2.6,SNR=5.0						
DAGI	Agillar	144.16	309	i P	PKPbc	03 51 20.9	+0.7
DBAD	Bademkaya	144.34	309	i P	PKPdf	03 51 21.5	-0.9
ANN	Anapa	145.68	317	ePKIKP	PKPdf	03 51 22.2	-2.1
ANN				pmax	pmax		
	comp=Z,47nm,0.9s						
SUW	Suwalki	146.05	341	ePKP2	PKPab	03 51 25.7	-0.4
SUW	Suwalki	146.05	341	ePKPbc	PKPbc	03 51 25.6	0.0
SUW	Suwalki	146.05	341	ePKP	PKPab	03 51 25.7	-0.4
KBSD	Kabsdagh	146.36	303	eP	PKPdf	03 51 18.3	-7.5
MUD	Monsted U'grnd	146.37	356	ePKP2	PKPab	03 51 29.9	+2.7
MUD				pmax	pmax		
	comp=Z,12nm,0.8s						
MUD	Monsted U'grnd	146.37	356	i P	PKPab	03 51 29.9	+2.7
	comp=Z,12nm,0.8s						
KELT	Kelkit	146.38	309	i P	PKPab	03 51 28.5	+0.3
AKASG	Malin Array Be	146.46	332	PKP2	PKPbc	03 51 26.4	-0.4
AKASG	Malin Array Be	146.46	332	PKPbc	PKPbc	03 51 26.4	-0.4
AKASG	Malin Array Be	146.46	332	PKPbc	PKPbc	03 51 26.4	-0.4
	comp=Z,3.9nm,0.4s,baz=39,slow=4.0,SNR=22						
AK01	Malin Array Si	146.47	332	ePKPbc	PKPbc	03 51 26.5	-0.4
KIEV	Kiev	146.47	332	ePKP2	PKPbc	03 51 26.6	-0.3
KIEV	Kiev	146.47	332	ePKPbc	PKPbc	03 51 26.6	-0.3
AK02	Malin Array Si	146.50	332	ePKPbc	PKPdf	03 51 25.8	+0.3
SFNV	Sufian	146.84	302	eP	PKPdf	03 51 26.3	-0.4
ELZG	Elazig	147.12	306	i P	PKPab	03 51 32.5	+1.4
ATAB	Bozova	147.96	305	i P	PKPab	03 51 35.4	+1.2
JHLN	Al Jahlan	148.34	301	eP	PKPbc	03 51 31.8	-0.8
GZT	Gaziantep	148.54	305	i P	PKPab	03 51 35.2	-1.5
SLMH	Al Salmeh	148.60	302	eP	PKPdf	03 51 28.8	-0.7
BEL	Belsk	148.66	341	ePKP2	PKPab	03 51 36.3	-0.2
BEL	Belsk	148.66	341	ePKP	PKPab	03 51 36.3	-0.2
AYKD	Aykdinkavak	149.10	305	i P	PKPab	03 51 37.7	-1.1
LVV	L'vov	149.27	336	ePKP2	PKPbc	03 51 34.6	+0.2
CTKT	Corum	149.33	312	i P	PKPab	03 51 38.8	-1.1
COBT	Iskenderun	149.80	304	i P	PKPab	03 51 39.8	-2.1
BALT	Daday	149.85	315	i P	PKPbc	03 51 39.0	+2.6
KWP	Kalwaria Pacla	149.91	337	ePKP2	PKPbc	03 51 36.8	+0.7
KWP	Kalwaria Pacla	149.91	337	ePKPbc	PKPbc	03 51 36.5	+0.5
KWP	Kalwaria Pacla	149.91	337	ePKP	PKPbc	03 51 36.7	+0.7
AVNT	Avonos	150.05	309	i P	PKPbc	03 51 37.3	+0.3
YAYL	Yayladag	150.06	303	i P	PKPbc	03 51 37.2	+0.2
YURE	YUREGIR	150.18	305	i P	PKPab	03 51 40.8	-2.5
BIDA	Albida	150.18	301	eP	PKPbc	03 51 39.2	+1.9
HAWK	Haweek	150.24	300	eP	PKPbc	03 51 36.1	-1.3
SALA	Sala	150.37	296	eP	PKPdf	03 51 33.6	+1.0
OJC	Ojcow	150.38	341	i PKIKP	PKPbc	03 51 39.8	+2.6
OJC	Ojcow	150.38	341	ePKiKP	PKPbc	03 51 39.8	+2.6
BUR08	Bucovina Ar. S	150.50	332	ePKPbc	PKPbc	03 51 39.6	+1.9
BURAR	Bucovina Array	150.51	332	⇓iP	PKPbc	03 51 39.0	+1.3
BR131	Keskin Array S	150.52	311	ePKPbc	PKPbc	03 51 37.9	-0.1
BRTR	Keskin Array B	150.52	311	PKPbc	PKPbc	03 51 37.9	-0.1
BRTR	Keskin Array B	150.52	311	PKPbc	PKPbc	03 51 37.9	-0.1
	comp=Z,3.1nm,0.7s,baz=144,slow=4.2,SNR=14						
STHS	Stebnicka Huta	150.61	338	ePKP	PKPab	03 51 41.0	-3.6
STHS				e		03 51 48.5	
KOLS	Kolonicke sedl	150.65	336	ePKIKP	PKPbc	03 51 38.7	+0.8
KOLS	Kolonicke sedl	150.65	336	ePKP	PKPbc	03 51 38.7	+0.8
GULE	Gulek	150.67	306	i P	PKPbc	03 51 39.5	+1.0
TESR	Tescani	150.67	329	⇑iP	PKPbc	03 51 36.7	-1.3
KSP	Ksiaz	150.77	345	ePKP	PKPbc	03 51 39.1	+1.0
CFR	Carcaliu	150.85	325	⇑PKIKP	PKPbc	03 51 40.1	+1.7
CFR	Carcaliu	150.85	325	⇑iP	PKPbc	03 51 40.1	+1.7
BRBR	Barbar	150.87	298	eP	PKPbc	03 51 41.3	+2.2
UZH	Uzhgorod	150.89	336	i PKIKP	PKPbc	03 51 35.6	-2.8
UZH				e		03 51 45.8	
NIE	Niedzica	150.92	339	ePKiKP	PKPab	03 51 42.7	-3.2
CRVS	Cervenica-Dubn	150.97	337	ePKIKP	PKPbc	03 51 39.6	+1.0
CRVS				e		03 51 47.7	
CRVS	Cervenica-Dubn	150.97	337	ePKP	PKPbc	03 51 39.6	+1.0
CRVS				e		03 51 47.7	
CLL	Collm	150.99	350	i PKIKP	PKPbc	03 51 38.6	+0.1
CLL				i		03 51 44.2	
CLL				i		03 51 55.1	
CLL				pmax	pmax		
	comp=Z,15nm,1.0s						
CLL	Collm	150.99	350	i PKPbc	PKPbc	03 51 38.6	+0.1
	comp=Z,12nm,1.0s						
CLL				i (PKPab)	PKPab	03 51 44.2	-1.8
CLL				i pPKPbc	pPKPbc	03 51 47.8	-0.6
CLL				i pPKPab	pPKPab	03 51 55.1	-0.6
	comp=Z,25nm,1.0s						
CLL				LmV		04 55 00.0	
	comp=Z,100nm,20.9s						
TCHB	Talchebab	151.01	296	eP	PKPdf	03 51 30.1	-3.3
ANTO	Ankara	151.03	312	ePKIKP	PKPbc	03 51 40.8	+1.7
ANTO	Ankara	151.03	312	ePKPbc	PKPbc	03 51 40.8	+1.7
VRI	Vrincioaia	151.10	328	⇑iP	PKPbc	03 51 42.5	+3.5
UPC	Upice	151.15	345	ePKP	PKPbc	03 51 41.9	+2.9
OKC	Ostrava-Krasne	151.21	342	ePKIKP	PKPbc	03 51 39.9	+0.8
OKC				e		03 51 45.4	
OKC	Ostrava-Krasne	151.21	342	⇑ePKP	PKPbc	03 51 39.9	+0.8
OKC				ePKPAB	PKPab	03 51 45.4	-1.6
TRPA	Tarpa	151.21	335	⇓iP	PKPbc	03 51 42.0	+2.9
DPC	Dobruska-Polom	151.22	345	ePKIKP	PKPbc	03 51 39.6	+0.4
DPC	Dobruska-Polom	151.22	345	⇑ePKP	PKPbc	03 51 39.6	+0.4
BRG	Berggiesshubel	151.24	348	ePKP	PKPbc	03 51 39.5	+0.3
	comp=Z,4.4nm,0.8s						
BRG				e		03 51 41.6	
	comp=Z,9.1nm,1.0s						
BRG	Berggiesshubel	151.24	348	ePKIKP	PKPbc	03 51 39.5	+0.3
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MORC	Moravsky Berou	151.43	343	⇓PKIKP	PKPdf	03 51 34.4	+0.8
MORC	Moravsky Berou	151.43	343	ePKPbc	PKPbc	03 51 38.9	-0.8
MORC	Moravsky Berou	151.43	343	⇓iP	PKPdf	03 51 34.4	+0.8
PVCC	Panska Ves	151.44	347	ePKIKP	PKPbc	03 51 39.9	+0.3
PVCC	Panska Ves	151.44	347	⇑ePKP	PKPbc	03 51 39.9	+0.3
KECS	Kecovo	151.67	338	ePKP	PKPbc	03 51 42.8	+2.6
KECS				e		03 51 52.8	
ISR	Istrita	151.71	327	⇓PKIKP	PKPbc	03 51 41.5	+1.0
ISR	Istrita	151.71	327	⇓iP	PKPbc	03 51 41.5	+1.0
PRU	Pruhonice	151.96	347	ePKIKP	PKPbc	03 51 40.3	-0.5
PRU				e		03 51 47.1	
PRU	Pruhonice	151.96	347	⇑ePKP	PKPbc	03 51 40.3	-0.5
PRU				ePKPAB	PKPab	03 51 47.1	-3.0
KDHN	Kadinhani	152.11	310	i P	PKPbc	03 51 41.4	-0.3
VRAC	Vranov	152.12	344	⇑iP	PKPbc	03 51 44.7	+3.5
VYHS	Vyhne	152.20	340	ePKIKP	PKPbc	03 51 41.9	+0.4
VYHS				e		03 51 55.0	
VYHS	Vyhne	152.20	340	ePKP	PKPbc	03 51 41.9	+0.4
VYHS				e		03 51 55.0	
VOIR		152.22	329	⇓PKIKP	PKPbc	03 51 42.9	+1.2
VOIR		152.22	329	⇓iP	PKPbc	03 51 42.9	+1.2
DRGR		152.22	333	⇓PKIKP	PKPdf	03 51 37.5	+2.6
DRGR		152.22	333	⇓iP	PKPdf	03 51 37.5	+2.6
PSZ	Piszkesteto	152.36	338	⇑iP	PKPbc	03 51 45.3	+3.4
TREC	Trest	152.40	345	ePKIKP	PKPbc	03 51 41.5	-0.4
TREC	Trest	152.40	345	⇑ePKP	PKPbc	03 51 41.5	-0.4
ARR	Arges	152.47	329	⇓iP	PKPbc	03 51 39.8	-2.4
CSS	Prodhromos	152.54	302	ePKPbc	PKPbc	03 51 42.7	0.0
KHC	Kasperske Hory	152.97	348	⇑ePKP	PKPbc	03 51 43.0	-0.2
KHC				ePKPAB	PKPab	03 51 49.8	-4.6
KHC	Kasperske Hory	152.97	348	ePKPbc	PKPbc	03 51 43.8	+0.6
ZST	Bratislava	152.99	342	ePKP2	PKPab	03 51 57.7	+3.2
ZST	Bratislava	152.99	342	ePKP	PKPab	03 51 57.7	+3.2
GERES	GERESS Array B	153.22	347	PKP	PKPdf	03 51 36.7	+0.4
GERES				PKPbc	PKPbc	03 51 42.5	-1.3
GERES	GERESS Array B	153.22	347	PKP	PKPdf	03 51 36.7	+0.4
	comp=Z,0.1nm,0.4s,baz=90,slow=1.3,SNR=3.2						
GERES				PKPbc	PKPbc	03 51 42.5	-1.3
	comp=Z,1.3nm,0.9s,baz=64,slow=3.1,SNR=5.8						
AKAS	Kas	154.90	307	i P	PKPbc	03 51 55.3	+7.4
SOKA	Soboth	154.95	344	⇓isPKiKP	sPKiKP	03 52 03.6	+2.7
	comp=Z,11nm,1.2s						
VTS	Vitosha	155.21	327	⇓PKIKP	PKPdf	03 51 47.2	+7.8
VTS	Vitosha	155.21	327	⇓iP	PKPdf	03 51 47.2	+7.8
BOZC	Bozcaada	155.44	318	i P	PKPab	03 52 04.5	-0.7
VISS	Visnje	155.81	343	i PKPdf	PKPab	03 51 59.3	-7.2
JAVS	Javornik	155.92	344	i PKPdf	PKPab	03 51 57.0	-10
JAVS				i		03 52 08.2	
BOJS	Bojanci	155.97	342	i PKPdf	PKPab	03 52 00.1	-7.1
BOJS				i		03 52 08.4	
DBIC	Dimbokro	161.26	148	PKPab	PKPab	03 52 30.2	-0.7
DBIC	Dimbokro	161.26	148	PKPab	PKPab	03 52 30.2	-0.7
	comp=Z,3.9nm,1.0s,baz=208,slow=10,SNR=3.5						
ESDC	Sonseca Array	161.65	22	PKPab	PKPab	03 52 32.1	0.0
ESDC	Sonseca Array	161.65	22	PKPab	PKPab	03 52 32.1	0.0
	comp=Z,0.6nm,0.6s,baz=323,slow=4.1,SNR=3.7						
KEST	Kesra	166.68	344	PKPab	PKPab	03 52 56.7	+2.4
KEST	Kesra	166.68	344	PKPab	PKPab	03 52 56.7	+2.4
	comp=Z,1.1nm,0.6s,baz=300,slow=3.6,SNR=6.5						
TORD	Torodi Ar. Bea	169.79	162	PKP	PKPdf	03 51 53.1	-1.3
TORD				pPKP	pPKPdf	03 52 08.1	+3.7
TORD				PKPab	PKPab	03 53 07.7	-0.7
TORD				PP	PP	03 57 00.1	+3.1
TORD	Torodi Ar. Bea	169.79	162	PKP	PKPdf	03 51 53.1	-1.3
	comp=Z,0.9nm,1.0s,baz=0.0,slow=1.5,SNR=3.6						
TORD				pPKP	pPKPdf	03 52 08.1	+3.7
	comp=Z,1.6nm,0.9s,baz=353,slow=1.1,SNR=6.9						
TORD				PKPab	PKPab	03 53 07.7	-0.7
	comp=Z,4.0nm,0.8s,baz=195,slow=4.2,SNR=15						
TORD				PP	PP	03 57 00.1	+3.1
	comp=Z,2.2nm,1.0s,baz=183,slow=4.2,SNR=5.7						

IDC 08 03:49:10.5±0.8, 42°.93S×72°.22W, h0km, mb3.8/9, mb1 4.1/10, mb1mx4.0/20, mbtmp3.8/10, ML4.0/1, MS3.4/4, Ms1 3.4/4, ms1mx3.0/29, Error ellipse: s-maj=29.7km s-min=13.8km az=110.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.53	30	Pn	Pn	03 49 54.3	+1.3
	8.0nm,0.3s,baz=210,slow=15,SNR=72						
PLCA				Pg	Pb	03 49 56.9	-0.1
	11nm,0.3s,baz=223,slow=17,SNR=110						
PLCA				Lg	Lg	03 50 31.3	
	33nm,0.3s,baz=99,slow=9.9,SNR=17						
PLCA				LR	LR	03 51 06.1	
	comp=Z,519nm,20.9s,baz=271,slow=46						
CFAA	Coronel Fontan	11.74	17	Pn	Pn	03 51 58.8	-0.6
	0.0nm,0.3s,baz=210,slow=14,SNR=4.0						
CFAA				Sn	Sn	03 53 59.5	-12
	0.0nm,0.3s,baz=148,slow=19,SNR=12						
CFAA				Lg	Lg	03 55 27.4	
	0.0nm,0.3s,baz=324,slow=8.7,SNR=2.2						
CPUP	Villa Florida	20.55	41	P	Pn	03 53 51.8	-1.0
	1.2nm,0.6s,baz=198,slow=7.9,SNR=6.2						
CPUP				LR	LR	04 02 29.2	
	comp=Z,145nm,18.2s,baz=39,slow=39						
LPAZ	La Paz	26.79	9	P	P	03 54 53.8	+0.8
	1.1nm,0.7s,baz=182,slow=6.2,SNR=7.0						
SIV	San Ignacio	28.50	23	P	P	03 55 05.7	-1.9
	1.3nm,0.8s,baz=240,slow=8.4,SNR=6.7						
SIV				LR	LR	04 09 19.0	
	comp=Z,30nm,18.4s,slow=42						
BDFB	Brasilia	34.19	45	LR	LR	04 11 12.1	
	comp=Z,193nm,19.6s,baz=149,slow=39						
SNAA	Sanae	43.48	155	P	P	03 57 14.5	-0.6
	2.2nm,1.3s,baz=303,slow=6.4,SNR=3.5						
QSPA	South Pole Qui	47.32	180	P	P	03 57 46.3	+0.6
	3.1nm,0.9s,baz=175,slow=5.0,SNR=7.5						
TXAR	Lajitas Array	77.51	332	P	P	04 01 07.7	-0.3
	0.5nm,0.8s,baz=155,slow=8.5,SNR=7.5						
TORD	Torodi Ar. Bea	87.43	70	P	P	04 01 58.8	-1.2
	0.4nm,0.8s,baz=263,slow=2.3,SNR=2.5						
NVAR	Mina Array Bea	91.15	326	P	P	04 02 17.6	+0.5
	0.4nm,0.6s,baz=186,slow=3.6,SNR=3.1						
PDAR	Pinedale Array	91.67	333	P	P	04 02 18.8	-0.7
	0.9nm,0.8s,baz=153,slow=7.5,SNR=6.8						
ILAR	Eielson Array	122.00	331	PKP	PKPdf	04 08 05.8	+0.1
	0.3nm,0.8s,baz=177,slow=1.7,SNR=4.7						
BRTR	Keskin Array B	125.93	66	PKP	PKPdf	04 08 13.4	-0.8
	0.4nm,0.5s,baz=169,slow=2.5,SNR=3.7						
AKTO	Aktyubinsk	145.61	60	PKPbc	PKPbc	04 08 50.4	+0.1
	1.8nm,0.8s,baz=254,slow=3.4,SNR=6.0						
KURBB	Kurchatov Arra	158.65	59	PKP	PKPdf	04 09 09.8	+0.4
	0.1nm,0.3s,baz=280,slow=2.2,SNR=4.0						
MKAR	Makanchi Array	161.56	69	PKPab	PKPab	04 09 57.1	-0.5
	0.5nm,0.8s,baz=268,slow=2.5,SNR=5.5						

*ISCJB **08** 03:55:05.9±0.4, 26°.50N±0°.06×126°.36E±0°.06, h113km±5km, mb3.5/7, Error ellipse: s-maj=13.3km s-min=3.8km az=140.2*
*JMA **08** 03:55:07.6±0.2, 26°.51N×126°.36E, h105km±2km, M3.2*
*IDC **08** 03:55:08.5±3.5, 26°.50N×126°.22E, h119km±33km, mb3.3/7, mb1 3.4/9, mb1mx3.3/28, mbtmp3.3/9, Error ellipse: s-maj=32.9km s-min=16.6km az=67.0*
ISC 08 03:55:07.4±0.7, 26°.40N±0°.06×126°.45E±0°.05, h118km±6km, n24, σ1s.52/42, mb3.4/7, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKE	Kume jima 2	0.31	104	P	Pn	03 55 23.5	-0.6
JKE				S	Sn	03 55 35.1	-1.6
JAGN	Aguni-jima	0.73	75	P	Pn	03 55 26.3	-0.5
JAGN				S	Sn	03 55 39.9	-1.5
JJT2	Tamagusuku 2	1.19	102	P	Pn	03 55 32.2	+1.0
JJT2				eS	Sn	03 55 50.1	+0.8
JIH	Iheya	1.49	65	P	Pn	03 55 34.8	+0.2
JIH				S	Sn	03 55 54.3	-1.0
JOW	Kunigami	1.69	75	P	Pn	03 55 37.0	+0.1
JOW				eS	Sn	03 55 58.6	-0.8
JOGS	Gusukube	1.89	210	P	Pn	03 55 39.8	+0.4
JOGS				S	Sn	03 56 04.1	+0.3
JMJ	Miyako jima 2	1.90	214	P	Pn	03 55 39.8	+0.3
JMJ				eS	Sn	03 56 03.5	-0.5
JTJ	Tarama	2.36	222	P	Pn	03 55 45.2	-0.1
JTJ				S	Sn	03 56 12.6	-1.8
JTK	Tokunoshima	2.62	58	P	Pn	03 55 48.6	0.0
JTK				eS	Sn	03 56 18.8	-1.5
JIJ	Ishigaki jima	2.91	226	P	Pn	03 55 51.6	-0.9
JIJ				eS	Sn	03 56 23.9	-3.3
JAMN	Amaminishikomi	3.04	52	P	Pn	03 55 53.5	-0.6
JAMN				eS	Sn	03 56 28.2	-1.9
IRIF	Iriomote-Funau	3.21	231	P	Pn	03 55 55.7	-0.7
IRIF				eS	Sn	03 56 31.8	-2.4
JAM	Amami Oshima	3.44	54	P	Pn	03 55 58.8	-0.6
JAM				eS	Sn	03 56 37.7	-2.0
JZK	Kikaishima	3.66	58	eS	Sn	03 56 44.8	-0.1
JMZ	Minamidaito 2	4.33	97	P	Pn	03 56 09.7	-1.5
JMZ				eS	Sn	03 56 55.3	-5.5
JNU	Nakatsue	7.72	29	P	Pn	03 56 57.6	+0.6
	0.6nm,0.3s,baz=260,slow=2.7,SNR=4.8						
KSRS	Korea Array	11.09	6	P	Pn	03 57 44.0	+1.5
	0.3nm,0.3s,baz=181,slow=13,SNR=6.3						
SONM	Songino Array	26.56	329	P	P	04 00 33.7	-0.7
	0.7nm,0.4s,baz=144,slow=12,SNR=4.5						
MKAR	Makanchi Array	40.23	312	P	P	04 02 31.4	-1.0
	0.8nm,0.5s,baz=98,slow=11,SNR=18						
MKAR				PcP	PcP	04 04 34.5	+0.4
	0.4nm,0.4s,baz=90,slow=2.9,SNR=8.3						
KURBB	Kurchatov Arra	43.63	317	P	P	04 02 58.8	-1.2
	0.3nm,0.4s,baz=106,slow=9.1,SNR=3.9						
KURBB				pP	pP	04 03 27.5	+0.5
	0.4nm,0.7s,baz=106,slow=8.2,SNR=3.0						
KURBB				PcP	PcP	04 04 45.5	+0.3
	0.2nm,0.3s,baz=105,slow=3.3,SNR=4.8						
WRA	Warramunga Arr	46.70	170	P	P	04 03 25.8	+1.3
	0.4nm,0.7s,baz=350,slow=8.8,SNR=6.1						
WRA				pP	pP	04 03 51.9	+0.1
	0.4nm,0.8s,baz=352,slow=9.4,SNR=3.0						
ASAR	Alice Springs	50.29	171	P	P	04 03 54.4	+2.4
	0.2nm,0.4s,baz=359,slow=14,SNR=4.0						
BRTR	Keskin Array B	75.67	307	P	P	04 06 39.6	-0.3
	0.3nm,0.6s,baz=75,slow=6.6,SNR=3.7						
YKA	Yellowknife Ar	79.03	24	P	P	04 06 58.9	+0.8
	0.8nm,0.7s,baz=304,slow=5.5,SNR=12						

*ISCJB **08** 04:12:25.5±0.5, 18°.66N±0°.06×119°.92E±0°.10, h24km, mb3.8/13, MS3.1/1, Error ellipse: s-maj=14.6km s-min=6.6km az=151.3*
*MAN **08** 04:12:25, 18°.66N×119°.90E, h15km, mb4.5, ML3.4, MS3.3*
*IDC **08** 04:12:28.9±0.9, 18°.53N×120°.11E, h42km±8km, mb3.7/13, mb1 3.9/13, mb1mx3.7/26, mbtmp3.8/13, MS3.2/1, Ms1 3.2/1, ms1mx2.7/55, Error ellipse: s-maj=23.5km s-min=13.2km az=77.0*
ISC 08 04:12:27.4±0.6, 18°.56N±0°.07×120°.1E±0°.1, h24km, n25, σ1s.82/26, mb3.8/13, 4C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.53	116	⇑iP	Pn	04 12 39.7	+0.3
SIPP	Brgy, Tapao	0.71	153	⇑iP	Pn	04 12 42.2	+0.2
ABRA	Dolores	1.07	148	eP	Pb	04 12 47.6	+0.4
APYP	Conner	1.27	123	eP	Pb	04 12 50.9	+0.2
CVP	Callao Caves	1.83	118	⇑iP	Pb	04 12 60.0	-0.2
BCPH	Baguio City Da	2.21	169	⇑iP	Pn	04 13 03.5	+0.7
CAUP	Cauayan	2.28	135	eP	Pb	04 13 07.5	-0.4
SCZP	Santa Cruz	2.78	184	eP	Pn	04 13 06.1	-4.3
BALP	Baler	3.13	153	eP	Pn	04 13 18.4	+3.2
KSRS	Korea Array	20.03	18	P	P	04 16 58.6	+0.1
	5.3nm,0.8s,baz=197,slow=11,SNR=20						
JHJ	Hachijo jima 2	22.82	47	LR	LR	04 26 20.3	
	comp=Z,62nm,18.9s,baz=78,slow=36						
KAPI	Kappang	23.43	181	P	P	04 17 35.0	+0.1
	2.6nm,0.3s,baz=48,slow=14,SNR=3.8						
MJAR	Matsushiro Arr	23.97	38	P	P	04 17 39.3	-0.8
	0.7nm,0.4s,baz=222,slow=8.2,SNR=3.1						
MJAR				pP	pP	04 17 51.4	+4.2
	1.2nm,0.7s,baz=241,slow=13,SNR=2.0						
WRA	Warramunga Arr	40.73	159	P	P	04 20 04.0	-2.5
	3.3nm,0.8s,baz=339,slow=9.3,SNR=25						
MKAR	Makanchi Array	41.87	321	P	P	04 20 14.0	-1.7
	0.1nm,0.3s,baz=123,slow=5.3,SNR=3.0						
MKAR				pP	pP	04 20 26.3	+3.3
	1.6nm,0.8s,baz=118,slow=8.6,SNR=13						
ASAR	Alice Springs	44.07	162	P	P	04 20 33.1	-0.6
	4.8nm,0.5s,baz=339,slow=6.7,SNR=63						
ZALV	Zalesovo Beam	44.53	331	P	P	04 20 37.5	+0.4
	0.3nm,0.4s,baz=142,slow=13,SNR=2.5						
PETK	Petropavlovsk-	45.11	31	P	P	04 20 41.9	+0.2
	0.9nm,0.6s,baz=216,slow=7.1,SNR=3.4						
KURBB	Kurchatov Arra	45.91	324	P	P	04 20 48.7	+0.7
	0.4nm,0.5s,baz=123,slow=8.0,SNR=5.1						
KURBB				pP	pP	04 20 59.4	+4.0
	2.4nm,0.7s,baz=124,slow=7.7,SNR=13						
STKA	Stephens Creek	54.21	157	P	P	04 21 51.1	-0.1
	3.7nm,0.7s,baz=349,slow=14,SNR=6.0						
ARCES	ARCESS Array B	74.38	339	P	P	04 24 01.9	-0.9
	0.6nm,0.7s,baz=73,slow=9.4,SNR=3.8						
ILAR	Eielson Array	74.65	26	P	P	04 24 03.2	-1.4
	0.2nm,0.5s,baz=285,slow=5.2,SNR=6.2						
NOA	NORSAR Array B	82.72	332	P	P	04 24 46.8	-2.3
	0.4nm,0.6s,baz=65,slow=5.0,SNR=2.9						
YKA	Yellowknife Ar	88.52	22	P	P	04 25 16.8	-0.9
	1.5nm,0.9s,baz=314,slow=4.3,SNR=12						
TXAR	Lajitas Array	116.34	42	PKP	PKPdf	04 31 10.0	+0.2
	0.1nm,0.4s,baz=313,slow=3.3,SNR=3.0						

IDC 08 04:25:35.4±0.8, 52°.78S×117°.88W, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.8/18, mbtmp3.8/7, MS3.7/6, Ms1 3.7/6,

ms1mx3.4/30,**Error ellipse: s-maj=35.0km s-min=21.4km az=155.0,Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**29.39**	**135**	LR	LR	04 39 32.5	
	comp=Z,68nm,18.8s,baz=348,slow=28						
PLCA	**Paso Flores**	**33.98**	**89**	LR	LR	04 43 06.2	
	comp=Z,66nm,22.0s,baz=163,slow=31						
QSPA	**South Pole Qui**	**37.42**	**180**	P	P	04 32 50.3	+0.4
	1.9nm,0.8s,baz=121,slow=2.8,SNR=5.6						
PPT	**Papeete**	**43.00**	**313**	LR	LR	04 46 15.7	
	comp=Z,795nm,19.3s,baz=284,slow=29						
SNAA	**Sanae**	**47.77**	**157**	P	P	04 34 13.2	-0.5
	0.6nm,0.8s,baz=255,slow=6.7,SNR=6.1						
SNAA				LR	LR	04 50 57.1	
	comp=Z,36nm,21.9s,baz=253,slow=32						
CPUP	**Villa Florida**	**51.79**	**84**	P	P	04 34 44.0	-0.7
	0.6nm,0.5s,baz=217,slow=10,SNR=2.8						
CPUP				LR	LR	04 54 14.4	
	comp=Z,147nm,18.1s,baz=40,slow=33						
LPAZ	**La Paz**	**53.24**	**66**	P	P	04 34 57.3	+0.9
	1.0nm,0.9s,baz=216,slow=0.8,SNR=2.8						
SIV	**San Ignacio**	**57.49**	**73**	P	P	04 35 26.3	0.0
	1.8nm,1.0s,baz=229,slow=9.0,SNR=4.8						
SIV				LR	LR	04 55 09.4	
	comp=Z,59nm,21.5s,slow=31						
ASAR	**Alice Springs**	**81.78**	**242**	P	P	04 37 58.1	+2.0
	0.4nm,0.6s,baz=134,slow=5.3,SNR=3.7						
WRA	**Warramunga Arr**	**84.56**	**244**	P	P	04 38 09.7	-0.8
	0.4nm,0.8s,baz=142,slow=4.5,SNR=3.3						
GERES	**GERESS Array B**	**149.62**	**78**	PKPbc	PKPbc	04 45 25.9	-0.1
	0.5nm,0.7s,baz=212,slow=3.5,SNR=4.5						
SONM	**Songino Array**	**151.65**	**278**	PKPbc	PKPbc	04 45 29.9	-1.0
	0.7nm,0.5s,baz=134,slow=4.2,SNR=2.7						
BRTR	**Keskin Array B**	**156.56**	**112**	PKPab	PKPab	04 45 59.3	-1.5
	0.3nm,0.7s,baz=194,slow=4.0,SNR=2.4						
MKAR	**Makanchi Array**	**165.69**	**253**	PKPab	PKPab	04 46 39.0	-1.4
	0.3nm,0.8s,baz=130,slow=2.3,SNR=2.9						

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*MOS **08** 04:33:17.4±0.8, 22°.13S×179°.59W, h597km, mb5.2/44, Error ellipse: s-maj=8.6km s-min=7.4km az=64.2*

*ISCJB **08** 04:33:17.1±0.4, 22°.29S±0°.03×179°.58W±0°.03, h599km±5km, mb5.2/202, Error ellipse: s-maj=4.4km s-min=3.3km az=150.0*

*AUST **08** 04:33:17.5±0.0, 22°.12S×179°.40W, h589km, Error ellipse: s-maj=0.9km s-min=0.8km az=310.0*

*IDC **08** 04:33:17.4±0.6, 22°.15S×179°.51W, h589km±5km, mb4.6/40, mb1 4.7/42, mb1mx4.7/42, mbtmp4.6/42, Error ellipse: s-maj=7.8km s-min=7.0km az=152.0*

*DJA **08** 04:33:18.8±0.5, 22°S±5°×17°9W±°, h604km±8km, M5.3/55, mb5.6/55, mB5.7/31, Mw(mB)5.2/31*

*BJI **08** 04:33:18.7, 21°.75S×179°.36W, h608km, mB5.0/31, mb5.2/48*

*NEIC **08** 04:33:19.1±0.1, 22°.23S×179°.61W, mb5.2/137, MW5.5, Error ellipse: s-maj=4.9km s-min=3.4km az=146.0, Moment Tensor Solution. s14 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.56; $M_{\theta\theta}$0.59; $M_{\phi\phi}$-0.03; $M_{r\theta}$-0.67; $M_{\theta\phi}$-1.02; $M_{\phi r}$-1.86; Best double couple: $M_0$2.30000×10^{17} NP1:ϕ_s359.00000°,δ83.00000°,λ-59.00000°. NP2: ϕ_s100.00000°,δ32.00000°,λ-166.00000°. Principal axes: T 1.7200, Plg30.0000°, Azm63.0000°; N 0.8800, Plg30.0000°, Azm174.0000°; P -2.6100, Plg43.0000°, Azm298.0000°;*

*GCMT **08** 04:33:21.8±0.2, 22°.20S×179°.43W, h608km±1km, MW5.5, Moment Tensor Solution. s83,c131; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.27±.04; $M_{\theta\theta}$-0.15±.06; $M_{\phi\phi}$0.42±.06; $M_{r\theta}$-0.07±.06; $M_{\theta\phi}$-0.58±.05; $M_{\phi r}$-2.14±.05; Best double couple: $M_0$2.30000×10^{17} NP1:ϕ_s107.00000°,δ16.00000°, λ-165.00000°. NP2:ϕ_s2.00000°,δ86.00000°,λ-75.00000°. Principal axes: T 2.3100, Plg39.0000°, Azm78.0000°; N -0.1200, Plg15.0000°, Azm181.0000°; P -2.1900, Plg47.0000°, Azm288.0000°; Data Used: II IU IC G CN.*

*BGS **08** 04:33:22.2±5.4, 22°.23S×179°.61W, h612km, mb5.2(NEIC)*

ISC 08 04:33:18.7±0.2,**22°.24S**±0°.03×**179°.48W**±0°.03, **h608**km±2km,**h608**km**:pP-P,n1556,**σ**1§34**/1870,**mb5.2**/201, **267C-266D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**5.05**	**332**	P	**P**	**04 34 51.0**	**-1.7**
	7μm,0.7s						
MSVF	**Nonsavu**	**5.05**	**332**	*e*P	**P**	**04 34 51.8**	**-0.9**
MSVF				*e*S	**S**	**04 36 08.3**	**-0.9**
MSVF	**Nonsavu**	**5.05**	**332**	*e*P	**P**	**04 34 51.8**	**-0.9**
MSVF				*e*S	**S**	**04 36 08.3**	**-0.9**
RAO	**Raoul Island**	**7.12**	**169**	*e*P	**P**	**04 35 08.3**	**-1.7**
RAO				S	**S**	**04 36 37.8**	**-3.5**
RAO	**Raoul Island**	**7.12**	**169**	P	**P**	**04 35 08.5**	**-1.5**
	312nm,0.3s,baz=221,slow=1.8,SNR=14						
RAO				S	**S**	**04 36 37.7**	**-3.5**
	116nm,0.3s,baz=90,slow=20,SNR=3.0						
NIUE	**Niue**	**9.48**	**72**	P	**P**	**04 35 31.2**	**-1.4**
	baz=9.4,SNR=19						
NIUE				S	**S**	**04 37 21.7**	**-0.6**
	baz=9.4,SNR=14						
AFI	**Afiamalu**	**11.05**	**43**	*e*P	P	04 35 43.7	-4.5
	338nm,0.9s						
AFI				*e*S	S	04 37 41.3	-10
AFI	**Afiamalu**	**11.05**	**43**	P	P	04 35 43.3	-4.9
	14nm,0.3s,baz=34,slow=4.4,SNR=30						
AFI				S	S	04 37 41.8	-9.1
	42nm,0.3s,baz=97,slow=23,SNR=9.3						
DZM	**Mont Dzumac**	**13.05**	**268**	*e*P	**P**	**04 36 06.7**	**-1.3**
DZM				*e*Sn	**S**	**04 38 31.9**	**+4.8**
	244nm,1.2s						
DZM				*e*S	S	04 38 32.7	+5.6
	166nm,1.2s						
DZM	**Mont Dzumac**	**13.05**	**268**	*e*P	**P**	**04 36 06.1**	**-1.9**
DZM	**Mont Dzumac**	**13.05**	**268**	*e*P	**P**	**04 36 06.7**	**-1.3**
	250nm,0.6s						
DZM				*e*ScP	**ScP**	**04 43 28.8**	**+3.6**
DZM	**Mont Dzumac**	**13.05**	**268**	P	**P**	**04 36 06.9**	**-1.1**
	16nm,0.3s,baz=82,slow=17,SNR=32						
DZM				S	**S**	**04 38 25.9**	**-1.1**
	baz=90,slow=20,SNR=1.6						
DZM				ScP	**ScP**	**04 43 29.5**	**+4.2**
	1.4nm,0.3s,baz=35,slow=20,SNR=19						
NOUC	**Port Laguerre**	**13.18**	**268**	*e*P	**P**	**04 36 07.5**	**-1.7**
NFK	**Norfolk Island**	**13.21**	**237**	P	**P**	**04 36 10.8**	**+1.3**
	baz=13,SNR=9.6						
FUNA	**Funafuti**	**13.69**	**354**	*e*P	**P**	**04 36 12.5**	**-2.0**
	73nm,0.5s						
OUZ	**Omahuta**	**14.29**	**204**	*e*P	**P**	**04 36 21.2**	**+1.4**
	125nm,0.5s						
MXZ	**Matakaoa Point**	**15.39**	**187**	PN	**P**	**04 36 28.2**	**-1.8**
MKAZ	**Moumakai**	**15.53**	**196**	PN	**P**	**04 36 32.7**	**+1.6**
PUZ	**Puketiti**	**15.90**	**187**	PN	**P**	**04 36 32.8**	**-1.8**
PUZ				*e*SN	**S**	**04 39 08.5**	**-5.8**
URZ	**Urewera**	**16.24**	**190**	*e*P	**P**	**04 36 35.3**	**-2.4**
	169nm,0.7s						
URZ				S	**S**	**04 39 12.9**	**-6.7**
URZ				*e*S	S	04 39 13.2	-6.5
URZ				ScP	**ScP**	**04 43 30.7**	**+0.2**
URZ				ScS	**ScS**	**04 47 07.5**	**-2.5**
URZ	**Urewera**	**16.24**	**190**	P	**P**	**04 36 35.2**	**-2.4**
	32nm,0.3s,baz=316,slow=2.3,SNR=77						
URZ				S	**S**	**04 39 12.9**	**-6.7**
	12nm,0.3s,baz=62,slow=21,SNR=12						
URZ				ScP	**ScP**	**04 43 30.7**	**+0.2**
	0.5nm,0.3s,baz=310,slow=6.9,SNR=3.1						
URZ				ScS	**ScS**	**04 47 07.5**	**-2.5**
	1.1nm,0.3s,baz=194,slow=21,SNR=12						
CNGZ	**Carnagh Statio**	**16.32**	**186**	PN	**P**	**04 36 37.7**	**-0.6**
RAHZ	**Arahi**	**16.89**	**189**	PN	**P**	**04 36 41.7**	**-1.9**
KNZ	**Kokohu**	**16.91**	**188**	PN	**P**	**04 36 43.6**	**-0.1**
HIZ	**Hauiti**	**16.94**	**195**	PN	**P**	**04 36 46.5**	**+2.4**
RATZ	**Rangitukua**	**17.07**	**193**	PN	**P**	**04 36 44.1**	**-1.2**
NMHZ	**Naumai**	**17.11**	**190**	PN	**P**	**04 36 44.0**	**-1.7**
BKZ	**Black Stump Fm**	**17.23**	**191**	PN	**P**	**04 36 44.6**	**-2.1**
TUVZ	**Tukino**	**17.48**	**193**	PN	**P**	**04 36 47.9**	**-1.2**
FWVZ	**Far West T-bar**	**17.49**	**193**	⇓PN	**P**	**04 36 47.3**	**-2.1**
FWVZ				SN	**S**	**04 39 37.0**	**-3.4**
WHVZ	**Whangaehu Hut**	**17.51**	**193**	PN	**P**	**04 36 48.0**	**-1.5**
WNVZ	**Wahianoa**	**17.55**	**193**	PN	**P**	**04 36 48.7**	**-1.2**
MOVZ	**Moawhango**	**17.59**	**192**	PN	**P**	**04 36 48.5**	**-1.6**
BHHZ	**Black Hill Sta**	**17.61**	**191**	PN	**P**	**04 36 48.1**	**-2.2**
BHHZ				SN	**S**	**04 39 36.4**	**-5.8**
KAHZ	**Kahuranaki**	**17.78**	**189**	PN	**P**	**04 36 50.6**	**-1.1**
PNHZ	**Pukenui**	**18.00**	**191**	PN	**P**	**04 36 51.8**	**-2.0**
PXZ	**Pawanui**	**18.01**	**189**	PN	**P**	**04 36 53.2**	**-0.6**
WAZ	**Wanganui**	**18.09**	**194**	PN	**P**	**04 36 54.0**	**-0.6**
RAR	**Rarotonga**	**18.34**	**91**	*e*P	**P**	**04 36 56.6**	**-0.4**
	1μm,2.2s						
RAR	**Rarotonga**	**18.34**	**91**	P	**P**	**04 36 56.4**	**-0.6**
	15nm,0.3s,baz=220,slow=0.0,SNR=7.9						
DVHZ	**Dannevirke**	**18.38**	**191**	PN	**P**	**04 36 56.3**	**-0.9**
ANWZ	**Angora Road**	**18.49**	**190**	PN	**P**	**04 36 55.8**	**-2.4**
BFZ	**Birch Farm**	**18.74**	**190**	PN	**P**	**04 36 59.6**	**-0.9**
MRZ	**Mangatainoka R**	**18.84**	**192**	PN	**P**	**04 36 59.3**	**-2.1**
OGWZ	**Otaki Gorge**	**19.07**	**193**	PN	**P**	**04 37 01.8**	**-1.6**
HOWZ	**Holdsworth Sta**	**19.08**	**192**	PN	**P**	**04 37 02.1**	**-1.5**
KIW	**Kapiti Island**	**19.17**	**193**	PN	**P**	**04 37 03.1**	**-1.2**
DUWZ	**D'Urville Isla**	**19.34**	**195**	PN	**P**	**04 37 05.5**	**-0.4**
MTW	**Mount Morrison**	**19.34**	**192**	PN	**P**	**04 37 04.1**	**-1.7**
CAW	**Cannon Point**	**19.37**	**193**	PN	**P**	**04 37 04.6**	**-1.6**
PAWZ	**Paruwai Farm**	**19.57**	**192**	PN	**P**	**04 37 06.8**	**-1.1**
SNZO	**South Karori**	**19.64**	**193**	*e*P	**P**	**04 37 07.5**	**-1.1**
	163nm,1.4s						
SNZO	**South Karori**	**19.64**	**193**	PN	**P**	**04 37 07.2**	**-1.3**
TCW	**Tory Channel**	**19.64**	**194**	PN	**P**	**04 37 07.3**	**-1.2**
TUWZ	**Tuamarina**	**19.93**	**195**	PN	**P**	**04 37 09.7**	**-1.5**
KHZ	**Kahutara**	**20.96**	**195**	*e*P	**P**	**04 37 18.7**	**-1.7**
	103nm,1.2s						
LHI	**Lord Howe Isla**	**21.23**	**240**	P	**P**	**04 37 25.0**	**+2.0**
	baz=21,SNR=4.5						
RPZ	**Rata Peaks**	**22.82**	**198**	*e*P	**P**	**04 37 37.3**	**+0.3**
	373nm,2.3s						
RPZ	**Rata Peaks**	**22.82**	**198**	P	**P**	**04 37 36.8**	**-0.2**
	16nm,0.5s,baz=356,slow=3.9,SNR=12						
HNR	**Honiara**	**23.50**	**300**	*e*P	**P**	**04 37 42.6**	**-0.8**
	202nm,0.8s						
TARA	**Tarawa**	**24.59**	**341**	*e*P	**P**	**04 37 52.5**	**-0.6**
	91nm,0.4s						
WHZ	**Wether Hill Ro**	**25.73**	**201**	*e*P	**P**	**04 38 03.5**	**+0.8**
	147nm,0.7s						
ARMA	**Armidale**	**27.09**	**246**	*e*P	**P**	**04 38 16.6**	**+1.6**
	191nm,0.8s						
ARMA				*e*ScP	**ScP**	**04 44 03.1**	**+4.5**
ARMA	**Armidale**	**27.09**	**246**	P	**P**	**04 38 16.5**	**+1.5**
	baz=27,SNR=383						
EIDS	**Eidsvold**	**27.09**	**258**	*e*P	**P**	**04 38 15.2**	**+0.3**
	163nm,0.8s						
EIDS				*e*S	**S**	**04 42 12.7**	**+0.7**
EIDS	**Eidsvold**	**27.09**	**258**	P	**P**	**04 38 15.3**	**+0.3**
	baz=27,SNR=107						
EIDS				S	**S**	**04 42 12.3**	**+0.3**
	baz=27,SNR=12						
TBI	**Tubuai**	**27.67**	**98**	*e*LR	LR	04 45 08.6	
	550nm,32.0s						
MGCD	**Mangrove Creek**	**28.15**	**241**	P	**P**	**04 38 25.6**	**+1.6**
	baz=28,SNR=74						
PAE	**Paea**	**28.44**	**86**	*e*P	**P**	**04 38 26.5**	**-0.2**
PPT2	**Papeete2**	**28.46**	**86**	*e*LR	LR	04 45 19.9	
	2μm,27.2s						
PPT	**Papeete**	**28.47**	**86**	P	**P**	**04 38 27.1**	**+0.1**
PPT				ScP	**ScP**	**04 44 06.5**	**+3.5**
PPT	**Papeete**	**28.47**	**86**	P	**P**	**04 38 27.1**	**+0.1**
	123nm,0.6s,baz=64,slow=2.4,SNR=26						
PPT				ScP	**ScP**	**04 44 06.5**	**+3.5**
	40nm,0.9s,baz=58,slow=7.7,SNR=4.0						
TVO	**Taravao**	**28.72**	**87**	*e*P	**P**	**04 38 29.3**	**+0.1**
	206nm,0.7s						
RMQ	**Roma**	**29.20**	**255**	P	**P**	**04 38 34.5**	**+1.3**
	baz=29,SNR=87						
RMQ				S	**S**	**04 42 47.8**	**+3.1**
	baz=29,SNR=8.2						
CNB	**Canberra Magne**	**30.13**	**237**	P	**P**	**04 38 42.2**	**+1.1**
	baz=30,SNR=129						
CAN	**Canberra**	**30.41**	**238**	*e*P	**P**	**04 38 44.7**	**+1.2**
CAN				pmax	pmax		
	comp=Z,109nm,0.8s						
CAN	**Canberra**	**30.41**	**238**	*e*P	**P**	**04 38 44.7**	**+1.2**
	comp=Z,109nm,0.8s						
YNG	**Young**	**30.61**	**240**	P	**P**	**04 38 46.8**	**+1.5**
	baz=31,SNR=24						
PMOR	**Pomariorio Ree**	**30.74**	**82**	*e*P	**P**	**04 38 46.6**	**+0.2**
MILA	**Mila**	**30.84**	**234**	P	**P**	**04 38 48.7**	**+1.6**
	baz=31,SNR=6.3						
CTA	**Charters Tower**	**31.99**	**267**	P	**P**	**04 38 57.3**	**+0.2**
CTA				PcP	**PcP**	**04 41 28.3**	**+0.3**
CTA				S	**S**	**04 43 26.0**	**-1.5**
CTA				ScP	**ScP**	**04 44 18.4**	**+3.6**
CTA	**Charters Tower**	**31.99**	**267**	P	**P**	**04 38 57.3**	**+0.2**
	comp=Z,205nm,0.4s,baz=94,slow=11,SNR=389						
CTA				PcP	**PcP**	**04 41 28.3**	**+0.3**
	comp=Z,22nm,0.5s,baz=100,slow=2.5,SNR=4.6						
CTA				S	**S**	**04 43 26.0**	**-1.5**
	comp=Z,9.7nm,0.9s,baz=242,slow=18,SNR=3.1						
CTA				ScP	**ScP**	**04 44 18.4**	**+3.6**
	comp=Z,34nm,0.9s,baz=137,slow=1.1,SNR=11						
CTAO	**Charters Tower**	**31.99**	**267**	*e*P	**P**	**04 38 57.3**	**+0.2**
CTAO				*e*		04 41 28.7	
CTAO				pmax	pmax		
	comp=Z,258nm,0.5s						
CTAO	**Charters Tower**	**31.99**	**267**	*e*P	**P**	**04 38 57.3**	**+0.2**
	comp=Z,258nm,0.5s						
CTAO				*e*PcP	**PcP**	**04 41 28.7**	**+0.7**
CTAO				*e*ScP	**ScP**	**04 44 18.1**	**+3.4**
CMSA	**Cobar Meteorol**	**32.31**	**246**	P	**P**	**04 39 00.3**	**+0.7**
	baz=32,SNR=160						
XMAS	**Kiritimati**	**32.33**	**45**	*e*P	**P**	**04 38 59.8**	**-0.2**
	comp=Z,417nm,0.7s						
RABL	**Rabaul**	**32.81**	**299**	P	**P**	**04 39 03.7**	**-0.3**
	baz=33,SNR=7.1						
QLP	**Quilpie**	**33.26**	**255**	P	**P**	**04 39 08.0**	**+0.4**
	baz=33,SNR=233						
TOO	**Toolangi**	**33.77**	**235**	P	**P**	**04 39 12.7**	**+0.8**
	baz=34,SNR=29						
MTSU	**Mount Surprise**	**34.18**	**270**	P	**P**	**04 39 15.7**	**+0.2**
	baz=34,SNR=126						
MTSU				S	S	04 44 26.9	+26
	baz=34,SNR=4.8						
MOO	**Moorlands**	**34.31**	**226**	P	**P**	**04 39 17.3**	**+1.1**
	baz=34,SNR=7.9						
TAU	**Tasmania Unive**	**34.43**	**225**	*e*P	**P**	**04 39 17.6**	**+0.4**
TAU				pmax	pmax		
	comp=Z,36nm,0.6s						
TAU	**Tasmania Unive**	**34.43**	**225**	*e*P	**P**	**04 39 17.6**	**+0.4**
	comp=Z,36nm,0.6s						
TAU	**Tasmania Unive**	**34.43**	**225**	P	**P**	**04 39 18.0**	**+0.8**
	comp=Z,430nm,0.6s,SNR=14						
PMG	**Port Moresby**	**34.45**	**286**	*e*P	**P**	**04 39 17.6**	**-0.1**
	comp=Z,564nm,0.9s						
PMG				ScP	**ScP**	**04 44 26.9**	**+3.4**
PMG				*e*ScP	**ScP**	**04 44 27.3**	**+3.8**
PMG	**Port Moresby**	**34.45**	**286**	P	**P**	**04 39 17.7**	**-0.1**
	comp=Z,693nm,0.9s,comp=Z,5μm						
PMG	**Port Moresby**	**34.45**	**286**	P	**P**	**04 39 17.7**	**-0.1**
	comp=Z,492nm,0.8s,baz=96,slow=5.4,SNR=116						
PMG				ScP	**ScP**	**04 44 26.9**	**+3.4**
	comp=Z,30nm,0.9s,baz=46,slow=3.5,SNR=7.1						
STKA	**Stephens Creek**	**35.81**	**246**	*e*P	**P**	**04 39 29.5**	**+0.7**
	comp=Z,35nm,1.1s						
STKA				*e*PcP	**PcP**	**04 41 40.0**	**+1.0**
STKA				*e*ScP	**ScP**	**04 44 32.3**	**+4.0**
STKA				PKiKP	**PKiKP**	**04 48 55.3**	**-2.0**
STKA	**Stephens Creek**	**35.81**	**246**	P	**P**	**04 39 29.1**	**+0.3**
	comp=Z,104nm,0.8s,baz=91,slow=9.3,SNR=132						
STKA				PcP	**PcP**	**04 41 39.8**	**+0.8**
	comp=Z,14nm,0.5s,baz=95,slow=6.1,SNR=3.2						
STKA				ScP	**ScP**	**04 44 32.0**	**+3.7**
	comp=Z,44nm,1.0s,baz=69,slow=2.3,SNR=9.4						
STKA				PKiKP	**PKiKP**	**04 48 55.3**	**-2.0**
	comp=Z,6.2nm,1.1s,baz=79,slow=5.2,SNR=3.2						
STKA	**Stephens Creek**	**35.81**	**246**	P	**P**	**04 39 29.6**	**+0.7**
	baz=36,SNR=61						
STKA				S	**ScP**	**04 44 32.3**	**+4.0**
	baz=36,SNR=5.9						
COEN	**Coen**	**36.37**	**277**	P	**P**	**04 39 34.0**	**+0.4**
	baz=36,SNR=84						
QIS	**Mount Isa**	**38.06**	**265**	P	**P**	**04 39 46.7**	**-0.5**
	baz=38,SNR=39						
QIS				S	S	04 44 40.9	-17
	baz=38,SNR=14						
BBOO	**Buckleboo**	**40.56**	**245**	*e*P	**P**	**04 40 07.0**	**-0.1**
	comp=Z,2μm,0.8s						
BBOO	**Buckleboo**	**40.56**	**245**	P	**P**	**04 40 06.8**	**-0.3**
	baz=41,SNR=88						
AS31	**Alice Springs**	**42.81**	**259**	*e*P	**P**	**04 40 24.6**	**-0.3**
AS31				*e*S	**S**	**04 46 04.4**	**-2.2**
ASAR	**Alice Springs**	**42.81**	**259**	P	**P**	**04 40 24.7**	**-0.2**
ASAR				PcP	**PcP**	**04 42 01.9**	**0.0**
ASAR				ScP	**ScP**	**04 44 59.5**	**+3.7**
ASAR				S	**S**	**04 46 04.5**	**-2.1**
ASAR				ScS	**ScS**	**04 49 20.8**	**+2.6**
ASAR				*e*		05 09 26.2	
ASAR	**Alice Springs**	**42.81**	**259**	P	**P**	**04 40 24.7**	**-0.2**
	comp=Z,258nm,0.6s,baz=101,slow=7.6,SNR=1588						
ASAR				PcP	**PcP**	**04 42 01.9**	**0.0**
	comp=Z,31nm,0.5s,baz=108,slow=3.7,SNR=7.5						
ASAR				ScP	**ScP**	**04 44 59.5**	**+3.7**
	comp=Z,9.7nm,0.8s,baz=118,slow=3.9,SNR=8.9						
ASAR				S	**S**	**04 46 04.5**	**-2.1**
	comp=Z,17nm,0.7s,baz=95,slow=18,SNR=18						
ASAR				ScS	**ScS**	**04 49 20.8**	**+2.6**
	comp=Z,7.0nm,0.8s,baz=97,slow=7.6,SNR=9.5						
ASAR				P3KPbc		05 09 26.2	
	comp=Z,0.3nm,0.6s,baz=276,slow=4.2,SNR=5.9						
WRAB	**Tennant Creek**	**43.02**	**264**	*e*P	**P**	**04 40 25.9**	**-0.7**
WRAB				*e*S	**S**	**04 46 06.0**	**-3.6**
WRAB				pmax	pmax		
	comp=Z,452nm,0.8s						
WRAB	**Tennant Creek**	**43.02**	**264**	*e*P	**P**	**04 40 25.9**	**-0.7**
	comp=Z,452nm,0.8s						
WRAB				*e*ScP	**ScP**	**04 45 00.5**	**+3.8**
WRAB				*e*S	**S**	**04 46 06.0**	**-3.6**
WRAB	**Tennant Creek**	**43.02**	**264**	P	**P**	**04 40 25.0**	**-1.6**
	comp=Z,3μm,0.4s						
WRA	**Warramunga Arr**	**43.03**	**264**	P	**P**	**04 40 25.9**	**-0.8**
WRA				ScP	**ScP**	**04 45 00.3**	**+3.6**
WRA				S	**S**	**04 46 06.3**	**-3.5**
WRA				PKiKP	**PKiKP**	**04 49 02.3**	**-1.5**
WRA				*e*		05 09 25.1	
WRA	**Warramunga Arr**	**43.03**	**264**	P	**P**	**04 40 25.9**	**-0.8**
	comp=Z,188nm,0.3s,baz=93,slow=8.6,SNR=1733						
WRA				ScP	**ScP**	**04 45 00.3**	**+3.6**
	comp=Z,50nm,1.0s,baz=100,slow=4.2,SNR=29						
WRA				S	**S**	**04 46 06.3**	**-3.5**
	comp=Z,20nm,0.8s,baz=105,slow=12,SNR=9.7						
WRA				PKiKP	**PKiKP**	**04 49 02.3**	**-1.5**
	comp=Z,1.4nm,0.5s,baz=79,slow=0.6,SNR=6.7						
WRA				P3KPbc		05 09 25.1	
	comp=Z,0.8nm,0.6s,baz=297,slow=3.0,SNR=9.4						
JAY	**Jayapura**	**43.34**	**291**	P	**P**	**04 40 28.9**	**-0.2**
	comp=Z,440nm,0.8s						
WAKE	**Wake Island**	**43.44**	**341**	*e*P	**P**	**04 40 29.2**	**-0.4**
	comp=Z,171nm,0.8s						
KDU	**Kakadu**	**46.65**	**273**	P	**P**	**04 40 53.5**	**-0.7**
	baz=47,SNR=326						
KDU				S	**S**	**04 46 58.5**	**-2.0**
	baz=47,SNR=3.1						
FORT	**Forrest**	**47.36**	**248**	*e*P	**P**	**04 40 59.0**	**-0.4**
	comp=Z,328nm,0.7s						
FORT				*e*ScP	**ScP**	**04 45 16.6**	**+2.0**
FORT				*e*S	**S**	**04 47 07.5**	**-2.5**
FORT	**Forrest**	**47.36**	**248**	P	**P**	**04 40 59.0**	**-0.4**
	baz=47,SNR=112						
FORT				S	**S**	**04 47 09.3**	**-0.6**
	baz=47,SNR=6.6						
SRPI	**Serui, Papua**	**47.54**	**289**	P	**P**	**04 41 01.4**	**+0.5**
	comp=Z,608nm,0.7s						
PUH	**Pauahi**	**47.67**	**32**	*e*P	**P**	**04 41 02.7**	**+0.8**
MTN	**Manton Dam**	**47.84**	**273**	P	**P**	**04 41 02.2**	**-0.9**
	baz=48,SNR=124						
MTN				S	**S**	**04 47 14.3**	**-2.5**
	baz=48,SNR=7.3						
POHA	**Pohakuloa**	**47.85**	**31**	*e*P	**P**	**04 41 04.2**	**+0.8**
	comp=Z,87nm,0.8s						
BAKI	**Biak**	**47.98**	**290**	P	**P**	**04 41 04.3**	**+0.1**
	comp=Z,563nm,0.8s,comp=Z,5μm						
KIP	**Kipapa**	**48.18**	**27**	*e*P	**P**	**04 41 06.2**	**+0.7**
KIP				pmax	pmax		
	comp=Z,74nm,0.9s						
KIP	**Kipapa**	**48.18**	**27**	*e*P	**P**	**04 41 06.2**	**+0.7**
	comp=Z,74nm,0.9s						
KNRA	**Kununurra**	**49.20**	**268**	P	**P**	**04 41 12.9**	**-0.3**
	baz=49,SNR=154						
KNRA				S	**S**	**04 47 34.2**	**-1.2**
	baz=49,SNR=7.5						
RKPI	**Ransiki, Papua**	**49.52**	**288**	P	**P**	**04 41 15.9**	**+0.3**
	comp=Z,364nm,0.7s,comp=Z,38μm						
GUMO	**Guam**	**49.90**	**312**	*e*P	**P**	**04 41 17.7**	**-0.5**
	comp=Z,267nm,0.9s						
MIDW	**Midway**	**50.20**	**2**	*e*P	**P**	**04 41 18.4**	**-1.8**
	comp=Z,38nm,0.6s						
FAKI	**Fak Fak**	**50.59**	**285**	P	**P**	**04 41 22.7**	**-0.7**
	comp=Z,238nm,0.9s,comp=Z,2μm						
FAKI	**Fak Fak**	**50.59**	**285**	P	**P**	**04 41 22.5**	**-0.9**
	baz=51,SNR=38						
FITZ	**Fitzroy Crossi**	**51.46**	**264**	P	**P**	**04 41 29.4**	**-0.1**
FITZ				ScP	**ScP**	**04 45 36.0**	**+3.6**
FITZ				S	**S**	**04 48 04.2**	**-1.6**
FITZ	**Fitzroy Crossi**	**51.46**	**264**	P	**P**	**04 41 29.4**	**-0.1**
	comp=Z,80nm,0.6s,baz=118,slow=3.9,SNR=283						
FITZ				ScP	**ScP**	**04 45 36.0**	**+3.6**
	comp=Z,9.1nm,0.7s,baz=20,slow=21,SNR=4.7						
FITZ				S	**S**	**04 48 04.2**	**-1.6**
	comp=Z,5.3nm,0.8s,baz=258,slow=20,SNR=6.4						
KMBL	**Kambalda**	**52.60**	**247**	P	**P**	**04 41 37.2**	**-0.4**
	baz=53,SNR=23						
MSAI	**Masohi**	**53.39**	**283**	P	**P**	**04 41 43.0**	**-0.4**
	comp=Z,78nm,0.6s,comp=Z,2μm						
AAI	**Ambon**	**53.91**	**282**	P	**P**	**04 41 46.9**	**-0.1**
	comp=Z,361nm,0.7s,comp=Z,5μm						
AAI	**Ambon**	**53.91**	**282**	P	**P**	**04 41 46.6**	**-0.4**
	baz=54,SNR=7.7						
LBMI	**Labuha**	**55.85**	**285**	P	**P**	**04 42 00.7**	**+0.2**
	comp=Z,415nm,0.8s,comp=Z,3μm						
MEEK	**Meekatharra**	**56.06**	**252**	P	**P**	**04 42 00.8**	**-1.0**
	baz=56,SNR=71						
VNDA	**Vanda**	**56.07**	**185**	*e*P	**P**	**04 42 02.9**	**+2.0**
	comp=Z,9.8nm,0.8s						
VNDA				*e*PcP	**PcP**	**04 42 51.1**	**+1.1**
VNDA				*e*ScP	**ScP**	**04 45 53.7**	**+2.2**
VNDA				S	**S**	**04 49 09.1**	**+4.8**
VNDA	**Vanda**	**56.07**	**185**	P	**P**	**04 42 02.7**	**+1.7**
	comp=Z,8.0nm,0.4s,baz=358,slow=7.3,SNR=83						
VNDA				PcP	**PcP**	**04 42 50.9**	**+0.9**
	comp=Z,7.6nm,0.6s,baz=340,slow=3.1,SNR=8.2						
VNDA				ScP	**ScP**	**04 45 53.4**	**+1.9**
	comp=Z,1.5nm,0.5s,baz=336,slow=5.6,SNR=3.6						
VNDA				S	**S**	**04 49 09.1**	**+4.8**
	comp=Z,0.8nm,0.9s,baz=303,slow=23,SNR=3.3						
KLBR	**Kellerberrin**	**56.09**	**246**	P	**P**	**04 42 01.7**	**-0.2**
	baz=56,SNR=138						
MBWA	**Marble Bar**	**56.15**	**259**	*e*P	**P**	**04 42 02.1**	**-0.4**
	comp=Z,265nm,0.5s						
NWAO	**Narrogin (SRO)**	**56.37**	**244**	*e*P	**P**	**04 42 03.5**	**-0.4**
	comp=Z,59nm,0.8s						
NWAO				pP	**pP**	**04 43 56.1**	**-2.4**
NWAO	**Narrogin (SRO)**	**56.37**	**244**	P	**P**	**04 42 03.7**	**-0.1**
	comp=Z,73nm,0.7s,baz=117,slow=6.6,SNR=96						
NWAO				pP	**pP**	**04 43 56.1**	**-2.4**
	comp=Z,18nm,0.9s,baz=60,slow=3.6,SNR=2.3						
RKGY	**Rocky Gully**	**56.42**	**242**	P	**P**	**04 42 04.5**	**+0.3**
	baz=56,SNR=23						
TNTI	**Ternate**	**56.60**	**287**	P	**P**	**04 42 05.2**	**-0.5**
	comp=Z,462nm,1.1s,comp=Z,5μm						
GAMI	**Galela, Maluku**	**56.72**	**288**	P	**P**	**04 42 05.4**	**-1.1**
	comp=Z,294nm,0.9s						
MMRI	**Maumere**	**57.47**	**274**	P	**P**	**04 42 11.0**	**-0.6**
	comp=Z,276nm,0.9s,comp=Z,4μm						
MORW	**Morawa**	**57.91**	**249**	P	**P**	**04 42 14.0**	**-0.3**
	baz=58,SNR=103						
BASI	**Baing, Sumba**	**58.46**	**271**	P	**P**	**04 42 19.4**	**+1.1**
	comp=Z,412nm,0.8s,comp=Z,5μm						
MNI	**Manado**	**59.15**	**286**	P	**P**	**04 42 25.1**	**+2.2**
	comp=Z,264nm,0.8s						
LUWI	**Luwuk**	**59.93**	**282**	P	**P**	**04 42 28.3**	**+0.3**
	comp=Z,259nm,0.9s,comp=Z,3μm						
LUWI	**Luwuk**	**59.93**	**282**	P	**P**	**04 42 28.3**	**+0.3**
	baz=60,SNR=10						
KAPI	**Kappang**	**61.09**	**277**	*e*P	**P**	**04 42 34.1**	**-1.6**
	comp=Z,42nm,0.8s						
KAPI	**Kappang**	**61.09**	**277**	P	**P**	**04 42 34.3**	**-1.4**
	comp=Z,323nm,0.7s,SNR=8.7						
KAPI	**Kappang**	**61.09**	**277**	P	**P**	**04 42 34.7**	**-1.0**
	comp=Z,78nm,0.8s,comp=Z,1μm						
KAPI	**Kappang**	**61.09**	**277**	P	**P**	**04 42 34.1**	**-1.6**
	comp=Z,34nm,0.8s,baz=147,slow=6.9,SNR=24						
DAV	**Davao City (W)**	**61.17**	**292**	P	**P**	**04 42 35.8**	**-0.4**
DAV	**Davao City (W)**	**61.17**	**292**	P	**P**	**04 42 35.8**	**-0.4**
	comp=Z,274nm,0.7s,baz=54,slow=17,SNR=8.6						
MRSI	**Marisa**	**61.33**	**283**	P	**P**	**04 42 36.3**	**-0.9**
	comp=Z,84nm,0.7s,comp=Z,942nm						
CASY	**Casey**	**61.81**	**206**	*e*P	**P**	**04 42 39.5**	**+0.1**
	comp=Z,49nm,1.1s						
CTBH	**Cotabato--PC H**	**62.40**	**291**	⇑*i*P	**P**	**04 42 44.2**	**+0.1**
JAGI	**Jajag, Banyuwa**	**65.01**	**271**	P	**P**	**04 42 59.6**	**-1.2**
	baz=65,SNR=18						
RCP	**Roxas**	**65.85**	**295**	⇓*e*P	**P**	**04 43 05.3**	**-0.5**
BBKI	**Banjar Baru**	**66.21**	**276**	P	**P**	**04 43 09.2**	**+1.0**

comp=Z,194nm,0.7s
MYLDM **Lahad Datu** 66.48 286 P P 04 43 12.7 +2.9
TSM **Tawau** 66.64 285 P P 04 43 11.5 +0.7
TSM **Tawau** 66.64 285 P P 04 43 11.7 +0.9
JHJ **Hachijo jima 2** 67.39 324 P P 04 43 14.6 -0.3
comp=Z,118nm,0.5s,baz=180,slow=12,SNR=7.0
QSPA **South Pole Qui** 67.84 180 *e*P P 04 43 18.6 +1.3
QSPA pP **pP** 04 45 19.6 +0.9
QSPA S **S** 04 51 31.7 +3.2
QSPA **South Pole Qui** 67.84 180 pP **pP** 04 45 19.5 +0.9
comp=Z,12nm,0.9s,baz=36,slow=1.3,SNR=2.6
QSPA S **S** 04 51 31.7 +3.2
comp=Z,3.5nm,1.0s,baz=351,slow=22,SNR=16
SDKM **Sandakan** 67.84 286 P P 04 43 18.9 +0.7
UGM **Wanagama** 68.57 270 *e*P P 04 43 22.3 -0.3
comp=Z,292nm,0.6s
UGM **Wanagama** 68.57 270 P P 04 43 22.3 -0.3
baz=69,SNR=32
KDM **Kudat** 68.73 287 P P 04 43 25.0 +1.5
MIR **Mirnyy** 68.84 205 ⇓ *i*P P 04 43 25.0 +1.8
MIR pmax pmax
comp=Z,94nm,1.5s
KKM **Kota Kinabalu** 68.89 286 *e*P P 04 43 24.5 -0.2
comp=Z,121nm,0.6s
KKM **Kota Kinabalu** 68.89 286 P P 04 43 24.9 +0.3
KKM **Kota Kinabalu** 68.89 286 P P 04 43 24.4 -0.2
comp=Z,192nm,0.7s,comp=Z,2µm
KKM **Kota Kinabalu** 68.89 286 P P 04 43 24.6 0.0
baz=69,SNR=26
SMRI **Semarang** 68.95 271 P P 04 43 25.4 +0.5
baz=69,SNR=5.0
JOW **Kunigami** 70.25 311 *e*P P 04 43 32.7 +0.5
comp=Z,51nm,0.8s
BTM **Bintulu** 70.49 282 P P 04 43 34.5 +0.5
MJAR **Matsushiro Arr** 70.81 325 P P 04 43 34.9 -0.5
MJAR **Matsushiro Arr** 70.81 325 P P 04 43 34.9 -0.5
comp=Z,45nm,0.7s,baz=160,slow=5.8,SNR=107
MAJO **Matsushiro** 70.81 325 *e*P P 04 43 34.7 -0.7
MAJO pmax pmax
comp=Z,59nm,0.8s
MAJO **Matsushiro** 70.81 325 *e*P P 04 43 34.7 -0.7
comp=Z,59nm,0.8s
MAT **Matsushiro** 70.81 325 P P 04 43 35.0 -0.4
MAT S **S** 04 52 03.6 +0.6
SBUM **Sibu** 70.96 281 P P 04 43 37.4 +0.6
SBUM **Sibu** 70.96 281 P P 04 43 36.8 +0.1
comp=Z,48nm,1.1s,comp=Z,766nm
LEM **Lembang** 71.65 270 P P 04 43 41.3 +0.4
baz=72,SNR=16
XMI **Christmas Isla** 72.17 266 P P 04 43 44.1 +0.4
baz=72,SNR=4.4
XMIS **Christmas Isla** 72.19 266 P P 04 43 44.0 +0.1
baz=72,SNR=8.3
KSM **Kuching** 72.31 279 *e*P P 04 43 44.6 +0.1
comp=Z,171nm,0.6s
KSM **Kuching** 72.31 279 P P 04 43 44.7 +0.1
KSM **Kuching** 72.31 279 P P 04 43 44.2 -0.3
comp=Z,282nm,0.7s,comp=Z,2µm
KSM **Kuching** 72.31 279 P P 04 43 44.7 +0.1
baz=72,SNR=63
JNU **Nakatsue** 72.61 318 *e*P P 04 43 45.2 -0.7
comp=Z,18nm,0.9s
JNU **Nakatsue** 72.61 318 P P 04 43 45.6 -0.3
comp=Z,34nm,0.8s,baz=94,slow=4.9,SNR=27
ERM **Erimo** 72.67 332 *e*P P 04 43 47.6 +1.7
ERM **Erimo** 72.67 332 *e*P P 04 43 47.1 +1.2
TWG **Pinlang** 73.18 304 *e*P P 04 43 47.4 -1.9
comp=Z,424nm,0.7s
YULB **Yu-li** 73.32 305 *e*P P 04 43 48.6 -1.5
comp=Z,40nm,0.7s
KUR **Kuril'sk** 73.44 337 *i* P P 04 43 45.8 -4.4
KUR *e* 04 46 46.8
KUR *i* S **S** 04 52 34.6 +2.9
KUR pmax pmax
comp=E,4.0nm,0.2s
KUR pmax pmax
comp=N,44nm,0.9s
KUR pmax pmax
comp=Z,63nm,0.9s
NACB **Ninganchiao** 73.53 305 *e*P P 04 43 50.3 -0.9
comp=Z,132nm,0.7s
TPUB **Ta-pu** 73.78 304 *e*P P 04 43 51.1 -1.7
comp=Z,236nm,0.7s
SSLB **Suanglung** 73.80 305 *e*P P 04 43 51.3 -1.6
comp=Z,126nm,0.8s
YHNB **Yeheng** 73.97 306 *e*P P 04 43 53.3 -0.5
comp=Z,121nm,0.8s
TATO **Taipei** 74.06 306 *e*P P 04 43 53.4 -0.8
comp=Z,197nm,0.8s
ATKA **Atka Island** 74.26 3 *e*P P 04 43 54.1 -0.5
comp=Z,107nm,0.9s
ASAJ **Asahikawa** 74.61 333 P P 04 43 58.2 +1.3
ASAJ **Asahikawa** 74.61 333 P P 04 43 58.2 +1.3
comp=Z,70nm,0.8s,baz=213,slow=8.6,SNR=71
FX1 **Attu Island--F** 75.07 355 *e*P P 04 43 58.3 -1.0
FX1 **Attu Island--F** 75.07 355 P P 04 43 58.2 -1.0
comp=Z,39nm,0.6s,baz=191,slow=2.4,SNR=30
QZH **Quanzhou** 76.23 304 ⇓ *i*P P 04 44 07.8 +1.5
QZH pmax pmax
comp=Z,200nm,0.7s
YSS **Yuzh-Sakhalins** 76.84 334 K *i*P P 04 44 10.3 +1.2
YSS *e*S S 04 53 12.0 +3.8
YSS pmax pmax
comp=Z,50nm,0.9s
YSS pmax pmax
comp=Z,500nm,6.0s
MNAI **Manna** 76.86 271 P P 04 44 10.5 +0.5
baz=77,SNR=5.5
KSRS **Korea Array** 77.29 320 P P 04 44 12.2 +0.5
comp=Z,16nm,0.7s,baz=133,slow=5.8,SNR=56
KSAR **Wonju Array Be** 77.31 320 P P 04 44 12.2 +0.4
PET **Petropavlovsk** 77.32 347 *e*P P 04 44 11.0 -0.5
PET *e*S S 04 53 08.8 -4.1
PET pmax pmax
comp=Z,200nm,8.8s
PET pmax pmax
comp=Z,70nm,0.8s
PEA0B **Petropavlovsk-** 77.61 346 *e*P P 04 44 13.1 0.0
PETK **Petropavlovsk-** 77.61 346 P P 04 44 12.9 -0.2
PETK **Petropavlovsk-** 77.61 346 P P 04 44 12.9 -0.2
PETK **Petropavlovsk-** 77.61 346 P P 04 44 12.9 -0.2
comp=Z,78nm,0.7s,baz=143,slow=8.2,SNR=150
INCN **Inchon** 78.09 319 *e*P P 04 44 16.6 +0.5
comp=Z,50nm,0.7s
MYKOM **Kota Tinggi** 78.36 277 P P 04 44 18.4 +0.4
MYKOM **Kota Tinggi** 78.36 277 P P 04 44 18.4 +0.4
comp=Z,73nm,0.9s
KGM **Kluang** 78.94 277 P P 04 44 21.5 +0.4
MAW **Mawson** 79.47 200 P P 04 44 23.7 +0.8
MAW **Mawson** 79.47 200 P P 04 44 23.7 +0.8
comp=Z,19nm,0.5s,baz=130,slow=6.4,SNR=94
MAW **Mawson** 79.47 200 P P 04 44 23.7 +0.8
baz=79,SNR=129
USRK **Ussuriysk Arra** 79.64 327 P P 04 44 24.8 +0.7
comp=Z,35nm,0.8s,baz=128,slow=3.4,SNR=65
BSC **Santa Cruz Isl** 79.79 47 ⇑P P 04 44 26.5 +1.4
baz=80
NJ2 **Nanjing** 79.94 311 *e*P P 04 44 26.6 +0.7
NJ2 pP **pP** 04 46 33.0 -0.1
NJ2 sP **sP** 04 47 38.0 +3.5
NJ2 S **SKSac** 04 53 44.0 -2.0
NJ2 pmax pmax
comp=Z,60nm,0.8s
NJ2 pmax pmax
comp=Z,200nm,5.2s
SCI **San Clemente I** 79.95 48 ⇓P P 04 44 27.0 +1.1
baz=80
SBC **Santa Barbara** 79.99 46 ⇑P P 04 44 26.5 +0.4
baz=80
PKM **Peak Mountain** 80.19 46 ⇑P P 04 44 29.1 +1.7
baz=80,SNR=16
SAO **San Andreas Ge** 80.23 44 *e*P P 04 44 28.4 +1.0
SAO pmax pmax
comp=Z,111nm,1.4s
SAO **San Andreas Ge** 80.23 44 *e*P P 04 44 28.4 +1.0
comp=Z,111nm,1.4s
BLG **Laguna Peak** 80.24 47 ⇓P P 04 44 28.3 +0.8
baz=80
PMSA **Palmer Station** 80.24 157 *e*P P 04 44 27.9 +0.9
comp=Z,44nm,0.7s
PMSA **Palmer Station** 80.24 157 P P 04 44 28.4 +1.5
comp=Z,53nm,0.8s,baz=232,slow=3.0,SNR=8.8
CIS **Catalina Islan** 80.29 48 ⇓P P 04 44 28.7 +1.0
baz=81
SMMC **Simmler** 80.31 46 ⇑P P 04 44 29.4 +1.6
baz=81,SNR=5.8
QIZ **Qiongzhong** 80.33 295 P P 04 44 28.7 +0.5
QIZ pP **pP** 04 46 36.4 +0.9
QIZ sP **sP** 04 47 37.9 +0.9
QIZ PP **PP** 04 47 42.8 -0.1
QIZ S **S** 04 53 45.9 +0.5
QIZ pmax pmax
comp=Z,14nm,0.7s
QIZ pmax pmax
comp=Z,130nm,8.5s
PTRM **Twissleman Ran** 80.37 45 *e*P P 04 44 30.3 +2.1
KTGM **Kuala Trenggan** 80.40 280 P P 04 44 29.9 +1.2
FMP **Fort Macarthur** 80.54 48 ⇓P P 04 44 30.2 +1.2
baz=81
HOPS **Hopland** 80.58 41 *e*P P 04 44 30.5 +1.4
comp=Z,96nm,1.1s
KCPM **Cahto Peak** 80.70 40 *e*P P 04 44 31.5 +1.6
comp=Z,75nm,1.2s
OSI **Osito Adit** 80.76 47 *e*P P 04 44 31.4 +1.2
comp=Z,53nm,1.1s
OSI **Osito Adit** 80.76 47 ⇑P P 04 44 31.4 +1.2
baz=81,SNR=7.9
DECC **Green Verdugo** 80.82 47 ⇑P P 04 44 31.4 +0.9
baz=81
KIPM **Iron Peak** 80.84 40 *e*P P 04 44 32.2 +1.6
comp=Z,167nm,1.1s
109C **Camp Elliot, M** 80.90 49 ⇑P P 04 44 31.8 +0.9
baz=81,SNR=8.5
ARVC **Arvin** 80.98 46 ⇓P P 04 44 32.5 +1.2
baz=81,SNR=12
MWC **Mount Wilson** 80.99 47 *e*P P 04 44 32.4 +0.9
MWC pmax pmax
comp=Z,60nm,1.1s
MWC **Mount Wilson** 80.99 47 *e*P P 04 44 32.4 +0.9
comp=Z,60nm,1.1s
MDJ **Mudanjiang** 81.16 326 P P 04 44 32.8 +0.8
MDJ pP **pP** 04 46 39.8 +0.2
MDJ PP **PP** 04 47 46.4 -2.8
MDJ S **S** 04 53 54.0 +1.2
MDJ SS **SS** 04 59 28.0 +0.9
MDJ pmax pmax
comp=Z,61nm,0.8s
MDJ pmax pmax
comp=Z,180nm,6.2s
MDJ **Mudanjiang** 81.16 326 *e*P P 04 44 32.8 +0.8
comp=Z,45nm,0.8s
VES **Vestal, Richgr** 81.22 46 ⇓P P 04 44 33.2 +0.8
baz=82,SNR=20
MURC **Murrieta** 81.23 48 ⇓P P 04 44 33.6 +1.0
baz=82,SNR=16
BFSC **Mount Baldy Ra** 81.27 48 ⇓P P 04 44 33.8 +0.9
baz=82,SNR=14
HABR **Khabarovsk** 81.29 331 *e*P P 04 44 32.0 -0.4
HABR *e**PP **pP** 04 46 38.9 -1.3
HABR 04 47 48.5
HABR *i* 04 49 50.5
HABR *e*S **S** 04 53 52.8 -1.0
HABR SS **SS** 04 59 26.1 -2.7
HABR *e*SSS SSS 05 03 02.0
HABR pmax pmax
comp=E,40nm,1.7s
HABR pmax pmax
comp=N,13nm,0.9s
HABR pmax pmax
comp=Z,87nm,1.1s
HABR MLR MLR
comp=Z,61nm,18.0s
KHMM **Horse Mountain** 81.36 39 *e*P P 04 44 35.0 +1.7
comp=Z,98nm,0.9s
MONP **Monument Peak** 81.38 49 ⇑P P 04 44 34.8 +1.1
baz=82,SNR=39
RCTC **Rector, Farmer** 81.39 45 ⇑P P 04 44 33.9 +0.6
baz=82,SNR=5.5
EDW2 **Edwards Air Fo** 81.41 47 ⇓P P 04 44 34.6 +1.0
baz=82,SNR=42
DVTC **Desert V Tower** 81.48 50 ⇑P P 04 44 35.4 +1.4
baz=82,SNR=11
ISA **Isabella** 81.53 46 *e*P P 04 44 35.4 +1.2
ISA pmax pmax
comp=Z,81nm,1.0s
ISA **Isabella** 81.53 46 *e*P P 04 44 35.4 +1.3
comp=Z,82nm,1.0s
ISA *e* **pP** 04 46 47.0 +5.0
ISA **Isabella** 81.53 46 ⇓P P 04 44 35.3 +1.2
baz=82,SNR=41
CMB **Columbia Colle** 81.66 43 *e*P P 04 44 35.4 +0.6
CMB pmax pmax
comp=Z,66nm,0.8s
CMB **Columbia Colle** 81.66 43 *e*P P 04 44 35.4 +0.6
comp=Z,66nm,0.8s
KRMB **Red Mountain** 81.67 39 *e*P P 04 44 36.4 +1.6
comp=Z,84nm,1.2s
PFO **Pinyon Flat Ob** 81.75 49 P P 04 44 37.0 +1.6
comp=Z,141nm,1.3s,SNR=9.9
PFO **Pinyon Flat Ob** 81.75 49 *e*P P 04 44 36.6 +1.3
comp=Z,47nm,1.4s
PFO **Pinyon Flat Ob** 81.75 49 P P 04 44 36.5 +1.1
comp=Z,12nm,0.7s,baz=267,slow=3.0,SNR=17
PFO **Pinyon Flat Ob** 81.75 49 ⇑P P 04 44 36.5 +1.1
baz=82,SNR=12
OHCM **Honcut** 81.76 42 *e*P P 04 44 36.2 +1.1
BBRC **Big Bear Solar** 81.79 48 ⇓P P 04 44 36.9 +1.1
baz=82
SWSC **Sam W. Stewart** 81.85 50 ⇑P P 04 44 37.1 +1.3
baz=82,SNR=22
WDC **Whiskeytown Da** 81.88 40 *e*P P 04 44 37.1 +1.4
WDC pmax pmax
comp=Z,119nm,1.3s
WDC **Whiskeytown Da** 81.88 40 *e*P P 04 44 37.1 +1.4
comp=Z,119nm,1.3s
KBO **Bosley Butte** 81.92 38 *e*P P 04 44 38.0 +2.0
comp=Z,126nm,1.3s
LRMC **Laurel Mountai** 81.95 47 ⇑P P 04 44 37.5 +1.2
baz=82,SNR=7.2
IPM **Ipoh** 82.00 278 *e*P P 04 44 37.1 +0.2
comp=Z,137nm,0.7s
IPM **Ipoh** 82.00 278 P P 04 44 37.4 +0.4
IPM **Ipoh** 82.00 278 P P 04 44 37.0 0.0
comp=Z,211nm,0.8s,comp=Z,2µm
RRX **Edison Barstow** 82.08 47 ⇓P P 04 44 37.9 +1.1
baz=82
OHAK **Old Harbor** 82.15 14 *e*P P 04 44 36.3 -0.3
CWC **Cottonwood Cre** 82.23 46 ⇓P P 04 44 38.9 +1.1
baz=82,SNR=16
BELC **Belle Mtn. Jos** 82.28 49 ⇓P P 04 44 39.5 +1.4
baz=83,SNR=39
KEBM **Edson Butte** 82.29 37 *e*P P 04 44 39.3 +1.5
comp=Z,154nm,1.2s
WHN **Wuhan** 82.38 307 P P 04 44 39.2 +0.8
WHN S S 04 53 59.0 -6.5
MPMC **Manual Prospec** 82.41 46 ⇓P P 04 44 39.8 +1.0
baz=83,SNR=67
MLAC **Mammoth Lakes** 82.42 44 ⇑P P 04 44 39.9 +1.1
baz=83,SNR=6.5
MTUM **Tungsten Hills** 82.44 45 *e*P P 04 44 40.2 +1.3
GSC **Goldstone** 82.44 47 *e*P P 04 44 39.9 +1.1
GSC pmax pmax
comp=Z,57nm,1.0s
GSC **Goldstone** 82.44 47 *e*P P 04 44 39.9 +1.1
comp=Z,57nm,1.0s
GSC **Goldstone** 82.44 47 ⇑P P 04 44 39.9 +1.1
baz=83,SNR=43
BC3 **Big Chuckawall** 82.47 49 ⇑P P 04 44 40.6 +1.5
baz=83,SNR=30
TIN **Tinemaha** 82.48 45 ⇓P P 04 44 40.3 +1.3
baz=83,SNR=16
YBH **Yreka Blue Hor** 82.50 39 *e*P P 04 44 40.2 +1.2
comp=Z,78nm,1.1s
YBH **Yreka Blue Hor** 82.50 39 P P 04 44 40.4 +1.5
comp=Z,46nm,0.9s,baz=150,slow=0.8,SNR=128
HEC **Hector,Ludlow** 82.51 48 ⇑P P 04 44 40.2 +1.1
baz=83,SNR=51
KULM **Kulim** 82.66 279 *e*P P 04 44 40.6 +0.4
comp=Z,62nm,0.8s
KULM **Kulim** 82.66 279 P P 04 44 41.1 +0.8
KULM **Kulim** 82.66 279 P P 04 44 40.5 +0.2
comp=Z,96nm,1.0s,comp=Z,1µm
SNY **Shenyang** 82.66 321 ⇑P P 04 44 39.9 +0.3
SNY pmax pmax
comp=Z,47nm,0.7s
LBCM **Butte Creek Ri** 82.75 41 P P 04 44 41.3 +1.0
BEKR **Beckworth** 82.77 42 *e*P P 04 44 41.4 +0.9
comp=Z,23nm,0.8s
WCN **Washoe City** 82.81 42 *e*P P 04 44 41.8 +1.1
WCN pmax pmax
comp=Z,62nm,1.0s
WCN **Washoe City** 82.81 42 *e*P P 04 44 41.8 +1.1
comp=Z,62nm,1.0s
KDAK **Kodiak Island** 82.82 14 *e*P P 04 44 39.3 -0.6
comp=Z,72nm,1.4s
KDAK **Kodiak Island** 82.82 14 P P 04 44 40.0 +0.1
comp=Z,214nm,1.4s,SNR=7.3
KDAK **Kodiak Island** 82.82 14 P P 04 44 40.1 +0.1
comp=Z,13nm,0.7s,baz=129,slow=4.5,SNR=15
CN2 **Changchun** 82.85 323 ⇓ *i*P P 04 44 40.8 +0.3
CN2 *e*pP **pP** 04 46 50.2 +1.3
CN2 *e*S **S** 04 54 10.6 +1.0
CN2 pmax pmax
comp=Z,70nm,0.8s
CN2 pmax pmax
comp=Z,200nm,7.0s
HUMO **Hull Mountain** 82.90 38 *e*P P 04 44 42.5 +1.6
comp=Z,132nm,1.3s
GMRC **Granite Mounta** 82.94 48 ⇓P P 04 44 42.5 +1.2
baz=83,SNR=38
IRM **Iron Mountain** 82.96 49 ⇑P P 04 44 42.9 +1.6
baz=83,SNR=44
GRAC **Grapevine Rang** 83.02 45 ⇓P P 04 44 43.0 +1.4
baz=83,SNR=46
FURC **Furnace Creek,** 83.06 46 ⇑P P 04 44 42.7 +1.1
baz=83,SNR=34
TUQ **Turquoise Moun** 83.12 47 ⇓P P 04 44 43.4 +1.2
baz=83,SNR=39
SHOC **Shoshone** 83.13 47 ⇓P P 04 44 43.2 +1.1
baz=83,SNR=12
Y12C **Blythe** 83.18 49 ⇓P P 04 44 43.9 +1.5
baz=84,SNR=37
113A **Mohawk Valley,** 83.20 51 ⇑P P 04 44 44.1 +1.6
baz=84,SNR=19
NVAR **Mina Array Bea** 83.22 44 P P 04 44 43.8 +1.0
NVAR pP **pP** 04 46 53.6 +2.2
NVAR PKKPbc **PKKPbc** 05 03 00.3 +0.8
NVAR **Mina Array Bea** 83.22 44 P P 04 44 43.8 +1.0
comp=Z,48nm,0.9s,baz=223,slow=8.0,SNR=191
NVAR pP **pP** 04 46 53.6 +2.2
comp=Z,3.1nm,0.8s,baz=227,slow=8.4,SNR=6.4
NVAR PKKPbc **PKKPbc** 05 03 00.3 +0.8
comp=Z,0.7nm,0.6s,baz=66,slow=2.9,SNR=7.3
NV11 **Mina Array Sit** 83.32 44 *e*P P 04 44 44.1 +0.9
KLR **Kul'dur** 83.33 330 *e*P P 04 44 40.0 -2.8
USHA **Ushuaia** 83.43 147 P P 04 44 44.5 +1.2
USHA PKKPbc **PKKPbc** 05 02 57.7 -1.1
USHA **Ushuaia** 83.43 147 P P 04 44 44.5 +1.2
comp=Z,14nm,0.8s,baz=37,slow=3.3,SNR=7.8
USHA PKKPbc **PKKPbc** 05 02 57.7 -1.1
comp=Z,14nm,1.1s,baz=188,slow=24,SNR=3.3
NEE2 **Needles Airpor** 83.66 49 ⇓P P 04 44 46.1 +1.4
baz=84,SNR=5.8
PDMCI **Parker Dam,Lak** 83.74 49 ⇑P P 04 44 46.7 +1.5
baz=84,SNR=29
MPOR **Mary's Peak** 83.77 37 P P 04 44 46.9 +1.7
COR **Corvallis** 83.95 37 *e*P P 04 44 48.6 +2.7
COR pmax pmax
comp=Z,43nm,1.0s
COR **Corvallis** 83.95 37 *e*P P 04 44 48.6 +2.7
comp=Z,43nm,1.0s
Z14A **Wintersburg** 84.10 51 ⇓P P 04 44 48.7 +1.7
baz=84,SNR=26
BROR **Big Rock Looko** 84.23 37 P P 04 44 48.4 +1.1
W13A **Hualapai Mount** 84.34 49 ⇑P P 04 44 49.6 +1.2
baz=85,SNR=50
Y14A **Wickenburg** 84.35 50 ⇑P P 04 44 49.5 +1.2
baz=85,SNR=44
SYO **Syowa Base** 84.73 193 ⇑ *e*P P 04 44 47.8 -1.6
SYO **Syowa Base** 84.73 193 ⇓ *e*PcP **PcP** 04 44 51.4 -0.2
R11A **Troy Canyon, C** 84.94 45 ⇓P P 04 44 51.6 +0.5
baz=85
BMN **Battle Mountai** 85.06 43 *e*P P 04 44 52.8 +1.1
BMN pmax pmax
comp=Z,34nm,1.0s
BMN **Battle Mountai** 85.06 43 *e*P P 04 44 52.8 +1.1
comp=Z,34nm,1.0s
TUC **Tucson** 85.13 52 *e*P P 04 44 53.9 +1.8
TUC pmax pmax
comp=Z,317nm,1.0s
TUC **Tucson** 85.13 52 *e*P P 04 44 53.9 +1.8
comp=Z,317nm,1.0s
RSO **Redoubt South** 85.22 13 *e*P P 04 44 51.1 -0.9
SVW2 **Sparrevohn** 85.26 11 *e*P P 04 44 51.7 -0.2
comp=Z,7.9nm,0.7s
F04A **Amboy** 85.29 36 P P 04 44 53.5 +1.1
WVOR **Wild Horse Val** 85.34 40 *e*P P 04 44 53.7 +0.8
WVOR pmax pmax
comp=Z,32nm,0.9s
WVOR **Wild Horse Val** 85.34 40 *e*P P 04 44 53.7 +0.8
comp=Z,32nm,0.9s
VIPM **Ingram Point** 85.41 38 P P 04 44 54.2 +0.9
VIPM **Ingram Point** 85.41 38 P P 04 44 54.2 +0.9
NLWA **Neilton Lookou** 85.44 34 *e*P P 04 44 54.3 +1.1
comp=Z,70nm,1.3s
OOW **Octopus West** 85.50 34 P P 04 44 55.3 +1.9
SEW **Seward** 85.63 15 *e*P P 04 44 53.4 -0.2
comp=Z,43nm,1.1s
X16A **Lo Mia Camp, P** 85.71 50 ⇑P P 04 44 56.7 +1.8
baz=86
319A **Douglas** 85.78 54 ⇓P P 04 44 57.2 +1.9
baz=86,SNR=103
ENH **Enshi** 85.89 305 *e*P P 04 44 56.1 +0.4
comp=Z,67nm,0.7s
GAMB **Gambell** 85.94 3 *e*P P 04 44 55.5 +0.4
comp=Z,19nm,0.9s
CCUT **Cedar City** 86.00 47 *e*P P 04 44 57.6 +1.3
comp=Z,32nm,1.0s
CCUT *e*pP **pP** 04 47 07.8 +1.8
CCUT *e*PP **PP** 04 48 28.9 +0.5
SPU **Mount Spurr** 86.02 13 *e*P P 04 44 54.4 -1.2
ARUT **Antelope Range** 86.07 47 *e*P P 04 44 57.8 +1.3
ARUT pmax pmax
comp=Z,25nm,1.1s
ARUT **Antelope Range** 86.07 47 *e*P P 04 44 57.8 +1.3
comp=Z,25nm,1.1s
LON **Longmire** 86.13 36 *e*P P 04 44 56.9 +0.5
LON pmax pmax
comp=Z,20nm,1.0s
LON **Longmire** 86.13 36 *e*P P 04 44 56.9 +0.5
comp=Z,20nm,1.0s
U15A **North Rim** 86.14 48 ⇓P P 04 44 58.6 +1.5
baz=86
BJT **Baijiatuan** 86.16 316 *e*P P 04 44 57.1 +0.4
comp=Z,73nm,0.7s
BJI **Beijing** 86.17 316 P P 04 44 57.1 +0.4
BJI sP **sP** 04 48 09.5 +2.2
BJI S **S** 04 54 43.8 +2.1
BJI pmax pmax
comp=Z,100nm,0.7s
BJI pmax pmax
comp=Z,290nm,4.5s
WPW **White Pass** 86.24 36 P P 04 44 58.1 +1.1
SNAA **Sanae** 86.31 179 *e*P P 04 44 56.5 -0.5
SNAA **Sanae** 86.31 179 *e*pP pP 04 47 09.4 +2.6
SNAA **Sanae** 86.31 179 *e*P P 04 44 56.6 -0.5
SNAA *e*pP **pP** 04 47 07.8 +1.0
SNAA PKKPbc **PKKPbc** 05 02 49.4 -3.5
SNAA **Sanae** 86.31 179 P P 04 44 56.2 -0.9
comp=Z,3.5nm,0.6s,baz=211,slow=8.0,SNR=71
SNAA pP **pP** 04 47 06.9 +0.2
comp=Z,3.1nm,1.0s,baz=207,slow=3.5,SNR=5.2
SNAA PKKPbc **PKKPbc** 05 02 49.4 -3.5
comp=Z,0.4nm,0.6s,baz=8.6,slow=4.0,SNR=9.9
WUAZ **Wupatki** 86.31 49 *e*P P 04 44 59.2 +1.5
comp=Z,50nm,1.2s
WUAZ **Wupatki** 86.31 49 ⇓P P 04 44 59.2 +1.5
baz=87
GYA **Guiyang** 86.32 300 P P 04 44 58.0 +0.1
GYA pP **pP** 04 47 11.6 +3.8
GYA sP **sP** 04 48 12.4 +3.8
GYA PP **PP** 04 48 35.0 +4.0
GYA SKS **SKSac** 04 54 25.7 -1.6
GYA S **S** 04 54 42.0 -2.0
GYA sS **sS** 04 58 36.9 +1.5
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,5.3s
320A **Kipp Ranch, An** 86.33 54 ⇓P P 04 45 00.2 +2.3
baz=87
PGC **Sidney** 86.46 33 *e*P P 04 44 58.9 +1.0
comp=Z,4.9nm,1.0s
ELK **Elko** 86.48 43 *e*P P 04 44 59.3 +0.8
comp=Z,18nm,1.0s
ELK PP **PP** 04 48 31.6 -0.6
ELK **Elko** 86.48 43 P P 04 44 59.2 +0.7
comp=Z,16nm,0.9s,baz=247,slow=5.1

ELK pP **pP** 04 47 09.6 +1.1
comp=Z,2.3nm,0.9s,baz=269,slow=5.4,SNR=3.5
ELK PP **PP** 04 48 31.6 -0.6
comp=Z,1.8nm,1.0s,baz=186,slow=9.4,SNR=3.8
TRW **Toppenish Ridg** 86.54 37 P **P** 04 44 59.7 +1.3
220A **Playas Peak, P** 86.60 54 ⇑P **P** 04 45 01.2 +2.0
baz=87,SNR=62
120A **U Bar Ranch, L** 86.83 53 ⇓P **P** 04 45 02.1 +1.9
baz=87,SNR=20
X18A **Snowflake** 86.83 51 ⇓P **P** 04 45 01.8 +1.5
baz=87,SNR=28
MAIT **Maitri** 86.91 184 *e*P P 04 44 49.6 -10
PMR **Palmer** 87.02 14 *e*P **P** 04 44 59.8 -0.4
PMR pmax pmax
comp=Z,106nm,1.3s
PMR **Palmer** 87.02 14 *e*P **P** 04 44 59.8 -0.4
comp=Z,106nm,1.3s
RAGM **Ragged Mountai** 87.06 16 *e*P **P** 04 45 00.9 +0.4
comp=Z,81nm,1.2s
Z20A **Nine Sixteen R** 87.13 53 ⇑P **P** 04 45 03.6 +2.0
baz=87,SNR=37
HAWA **Hanford** 87.16 37 *e*P **P** 04 45 02.4 +1.2
comp=Z,98nm,1.0s
HAWA *e*pP **pP** 04 47 13.1 +1.7
VNA1 **Neumayer--Stat** 87.16 177 *e*P **P** 04 45 01.0 +0.1
VNA1 **Neumayer--Stat** 87.16 177 *e*pP pP 04 47 14.4 +3.4
221A **Mesquite Ranch** 87.21 54 ⇓P **P** 04 45 04.0 +2.0
baz=88
MVU **Marysvale** 87.27 46 *e*P **P** 04 45 03.9 +1.6
comp=Z,68nm,1.6s
W18A **Petrified Fore** 87.28 50 ⇓P **P** 04 45 03.4 +1.1
baz=88,SNR=5.9
SML **Sawmill** 87.39 14 *e*P **P** 04 45 01.5 -0.5
SML pmax pmax
comp=Z,18nm,1.5s
SML **Sawmill** 87.39 14 *e*P **P** 04 45 01.5 -0.5
comp=Z,18nm,1.5s
DIV **Divide** 87.42 16 *e*P **P** 04 45 02.1 -0.1
comp=Z,63nm,1.0s
TIY **Taiyuan** 87.42 313 *e*P **P** 04 45 04.5 +1.7
TIY SKS **SKSac** 04 54 36.1 +2.8
TIY pmax pmax
comp=Z,88nm,0.7s
ETW **Entiat** 87.45 36 P **P** 04 45 03.5 +0.8
121A **Cookes Peak, D** 87.45 53 ⇑P **P** 04 45 05.0 +1.8
baz=88,SNR=36
BMO **Blue Mountains** 87.52 39 *e*P **P** 04 45 03.6 +0.5
BMO *e**PP **pP** 04 47 14.6 +1.1
BMO pmax pmax
comp=Z,41nm,1.1s
BMO **Blue Mountains** 87.52 39 *e*P **P** 04 45 03.6 +0.5
comp=Z,41nm,1.1s
BMO *e*pP **pP** 04 47 14.6 +1.1
MFID **Camas Ranch** 87.59 41 *e*P **P** 04 45 04.4 +0.9
comp=Z,73nm,1.0s
MFID *e*pP **pP** 04 47 15.9 +2.0
MFID **Camas Ranch** 87.59 41 ⇑P **P** 04 45 04.7 +1.2
baz=88,SNR=87
Y20A **Horse Springs,** 87.67 52 ⇑P **P** 04 45 06.2 +1.9
baz=88,SNR=47
DUG **Dugway** 87.75 45 *e*P **P** 04 45 05.0 +0.7
DUG pmax pmax
comp=Z,30nm,1.4s
DUG **Dugway** 87.75 45 *e*P **P** 04 45 05.0 +0.7
comp=Z,30nm,1.4s
DUG **Dugway** 87.75 45 ⇑P **P** 04 45 05.2 +0.9
baz=88,SNR=16
SEY **Seymchan** 87.76 348 *d i*P **P** 04 45 03.6 0.0
222A **Williams Famil** 87.76 54 ⇑P **P** 04 45 06.3 +1.7
baz=88
X20A **Quemado** 87.89 51 ⇓P **P** 04 45 07.0 +1.8
baz=88,SNR=26
Z21A **St. Cloud Mine** 87.90 53 ⇓P **P** 04 45 07.3 +2.0
baz=88,SNR=69
PNL **Peninsula** 87.96 19 *e*P **P** 04 45 05.4 +0.7
comp=Z,106nm,1.1s
XAN **Xi'an** 88.10 308 P **P** 04 45 06.8 +0.8
XAN pP **pP** 04 47 16.8 +0.3
XAN pmax pmax
comp=Z,23nm,0.7s
XAN pmax pmax
comp=Z,39nm,6.8s
122A **Conniff Cattle** 88.11 54 ⇓P **P** 04 45 08.3 +2.1
baz=88,SNR=5.9
W20A **Ramah** 88.16 51 ⇓P **P** 04 45 08.1 +1.6
baz=88,SNR=32
Q16A **Castle Valley** 88.18 46 ⇓P **P** 04 45 08.0 +1.6
baz=88,SNR=50
OD2 **Odessa Site #2** 88.20 36 P **P** 04 45 07.0 +0.9
223A **Chaparral, Ant** 88.22 54 ⇑P **P** 04 45 08.5 +1.8
baz=88,SNR=13
Y21A **Point of Rocks** 88.23 52 ⇓P **P** 04 45 08.8 +1.9
baz=88,SNR=58
X21A **Alamocita Cree** 88.36 52 ⇑P **P** 04 45 09.1 +1.6
baz=89,SNR=51
S18A **Hurst Farm, Bl** 88.36 48 ⇑P **P** 04 45 08.3 +0.9
baz=89,SNR=14
Z22A **Elephant Butte** 88.40 53 ⇓P **P** 04 45 09.2 +1.6
baz=89,SNR=107
MPU **Maple Canyon** 88.43 45 *e*P **P** 04 45 08.9 +1.3
comp=Z,54nm,1.1s
MPU *e*pP **pP** 04 47 21.0 +2.7
TRF **Thorofare Moun** 88.43 13 *e*P **P** 04 45 05.3 -1.7
comp=Z,74nm,0.8s
V20A **Brimhall** 88.51 50 ⇓P **P** 04 45 09.0 +0.9
baz=89,SNR=7.3
HLID **Hailey** 88.53 41 *e*P **P** 04 45 09.1 +1.1
comp=Z,37nm,0.8s
HLID *e*pP **pP** 04 47 21.4 +2.8
HLID **Hailey** 88.53 41 ⇑P **P** 04 45 09.3 +1.4
baz=89,SNR=74
HVU **Hansel Valley** 88.61 43 *e*P **P** 04 45 09.3 +1.0
HVU pmax pmax
comp=Z,70nm,1.0s
HVU **Hansel Valley** 88.61 43 *e*P **P** 04 45 09.3 +1.0
comp=Z,70nm,1.0s
123A **Bell Site, Whi** 88.63 54 ⇓P **P** 04 45 10.3 +1.7
baz=89
324A **Moseley Ranch,** 88.68 55 ⇓P **P** 04 45 10.2 +1.3
baz=89,SNR=103
CTU **Camp Tracy** 88.70 45 *e*P **P** 04 45 10.8 +2.0
comp=Z,58nm,1.0s
SRU **San Rafael** 88.71 47 ⇑P **P** 04 45 10.0 +1.1
baz=89,SNR=70
Y22A **Socorro** 88.72 52 ⇓P **P** 04 45 10.4 +1.3
baz=89,SNR=51
U20A **Newcomb** 88.75 50 ⇑P **P** 04 45 10.0 +0.8
baz=89,SNR=6.7
425A **Indio Mountain** 88.76 56 ⇑P **P** 04 45 10.8 +1.5
baz=89,SNR=79
W21A **San Fidel** 88.77 51 ⇓P **P** 04 45 10.7 +1.4
baz=89
H12A **Diamond D Ranc** 88.80 40 ⇓P **P** 04 45 10.1 +0.9
baz=89,SNR=60
LAZ **Ladron** 88.81 52 *e*P **P** 04 45 10.6 +1.1
comp=Z,19nm,1.1s
Y22D **IRIS PASSCAL I** 88.81 52 ⇑P **P** 04 45 10.9 +1.5
baz=89,SNR=5.6
G12A **Big Creek, Yel** 88.84 40 ⇑P **P** 04 45 10.2 +0.8
baz=89
JLU **Jordanelle** 88.85 45 *e*P **P** 04 45 10.6 +1.0
comp=Z,59nm,1.3s
MNTX **Cornudas Mount** 88.87 55 *e*P **P** 04 45 10.7 +1.1
comp=Z,46nm,0.8s
MNTX *e*pP **pP** 04 47 21.5 +1.2
626A **Big Bend Ranch** 88.88 57 ⇑P **P** 04 45 11.3 +1.5
baz=89,SNR=73
DAU **Daniels Canyon** 88.88 45 *e*P **P** 04 45 10.8 +1.0
DAU **Daniels Canyon** 88.88 45 *e*P **P** 04 45 10.8 +1.0
KMI **Kunming** 88.92 298 P **P** 04 45 11.7 +1.5
KMI pP **pP** 04 47 23.9 +2.9
KMI sP **sP** 04 48 19.6 -1.9
KMI S **S** 04 55 07.1 -1.2
KMI pmax pmax
comp=Z,25nm,0.7s
KMI pmax pmax
comp=Z,190nm,3.7s
224A **Cornudas Mount** 88.94 55 ⇓P **P** 04 45 11.5 +1.4
baz=89,SNR=71
Z23A **Rita Site, Whi** 88.95 53 ⇑P **P** 04 45 11.4 +1.4
baz=89,SNR=15
X22A **Bernardo** 88.95 52 ⇓P **P** 04 45 11.7 +1.7
baz=89,SNR=11
MCK **McKinley** 88.96 13 *e*P **P** 04 45 08.4 -0.9
MCK pmax pmax
comp=Z,44nm,1.0s
MCK **McKinley** 88.96 13 *e*P **P** 04 45 08.4 -0.9
comp=Z,44nm,1.0s
325A **Bean Ranch, Si** 89.04 56 ⇑P **P** 04 45 11.6 +1.0
baz=89,SNR=60
BNM **Barren Site** 89.06 52 *e*P **P** 04 45 11.8 +1.1
comp=Z,28nm,1.0s
BNM *e*pP **pP** 04 47 23.1 +1.6
PLCA **Paso Flores** 89.07 134 *e*P **P** 04 45 12.2 +1.6
comp=Z,27nm,0.9s
PLCA **Paso Flores** 89.07 134 P **P** 04 45 12.3 +1.8
comp=Z,20nm,0.8s,baz=232,slow=4.5,SNR=52
SKAG **Skagway** 89.08 21 *e*P **P** 04 45 10.6 +0.8
comp=Z,31nm,1.2s
V21A **Milan** 89.11 51 ⇓P **P** 04 45 11.9 +1.0
baz=89
526A **Mary Lane Ranc** 89.13 57 ⇓P **P** 04 45 12.4 +1.4
baz=89,SNR=70
LPM **Los Pinos Moun** 89.14 52 *e*P **P** 04 45 12.3 +1.3
TXAR **Lajitas Array** 89.14 58 P **P** 04 45 12.5 +1.5
TXAR pP **pP** 04 47 21.6 -0.2
TXAR PP **PP** 04 48 57.9 +4.7
TXAR PKKPbc **PKKPbc** 05 02 45.8 +1.0
TXAR **Lajitas Array** 89.14 58 P **P** 04 45 12.5 +1.5
comp=Z,34nm,0.9s,baz=216,slow=5.4,SNR=284
TXAR pP **pP** 04 47 21.6 -0.2
comp=Z,0.9nm,0.9s,baz=228,slow=54,SNR=5.5
TXAR PP **PP** 04 48 57.9 +4.7
comp=Z,1.2nm,0.8s,baz=218,slow=9.7,SNR=3.5
TXAR PKKPbc **PKKPbc** 05 02 45.8 +1.0
comp=Z,1.3nm,0.5s,baz=86,slow=2.9,SNR=24
F12A **Elk City** 89.23 39 ⇑P **P** 04 45 11.8 +0.7
baz=90,SNR=62
124A **Stringfield Ra** 89.27 54 ⇑P **P** 04 45 13.1 +1.4
baz=90,SNR=49
HWUT **Hardware Ranch** 89.29 44 *e*P **P** 04 45 12.1 +0.5
comp=Z,50nm,1.0s
HIA **Hailar** 89.31 325 *e*P **P** 04 45 11.2 -0.1
comp=Z,6.7nm,0.4s
W22A **Albuquerque** 89.32 52 ⇓P **P** 04 45 13.1 +1.3
baz=90,SNR=8.4
I14A **Mackay** 89.32 41 ⇓P **P** 04 45 13.0 +1.4
baz=90,SNR=82
PV10 **Paradox Valley** 89.36 48 *e*P **P** 04 45 12.3 +0.3
comp=Z,378nm,0.9s
Y23A **Lovelace Mesa,** 89.38 53 ⇑P **P** 04 45 13.2 +1.0
baz=90,SNR=45
U21A **Nageezi** 89.39 50 ⇑P **P** 04 45 13.3 +1.1
baz=90,SNR=96
CM31 **Chiang Mai Arr** 89.41 290 *e*P **P** 04 45 14.2 +1.8
comp=Z,49nm,0.8s
CMAR **Chiang Mai Arr** 89.41 290 P **P** 04 45 14.1 +1.8
CMAR PP **PP** 04 48 54.8 -0.5
CMAR PKKPbc **PKKPbc** 05 02 44.0 +0.4
CMAR **Chiang Mai Arr** 89.41 290 P **P** 04 45 14.1 +1.8
comp=Z,67nm,0.8s,baz=136,slow=3.4,SNR=174
CMAR PP **PP** 04 48 54.8 -0.5
comp=Z,4.8nm,0.7s,baz=129,slow=6.1,SNR=8.8
CMAR PKKPbc **PKKPbc** 05 02 44.0 +0.4
comp=Z,1.6nm,0.4s,baz=272,slow=3.8,SNR=5.9
627A **Terlingua Ranc** 89.41 58 ⇓P **P** 04 45 13.8 +1.5
baz=90,SNR=75
426A **McDonald Obser** 89.45 57 ⇓P **P** 04 45 13.9 +1.3
baz=90,SNR=61
PV04 **Paradox Valley** 89.46 48 *e*P **P** 04 45 13.2 +0.9
527A **Woodward Ranch** 89.54 57 ⇑P **P** 04 45 14.0 +1.1
baz=90,SNR=61
CHTO **Chiang Mai** 89.55 290 *e*P **P** 04 45 14.4 +1.4
CHTO *e* 04 48 57.0
CHTO pmax pmax
comp=Z,97nm,0.8s
CHTO **Chiang Mai** 89.55 290 *e*P **P** 04 45 14.4 +1.4
comp=Z,97nm,0.8s
CHTO *e*PP **PP** 04 48 57.0 +0.6
CHTO **Chiang Mai** 89.55 290 P **P** 04 45 14.2 +1.2
comp=Z,146nm,0.8s,comp=Z,1µm
ANMO **Albuquerque** 89.56 52 *e*P **P** 04 45 13.5 +0.6
comp=Z,56nm,1.2s
ANMO *e*pP **pP** 04 47 26.0 +2.2
ANMO **Albuquerque** 89.56 52 P **P** 04 45 13.9 +0.9
comp=Z,32nm,0.9s,baz=228,slow=4.5,SNR=100
ANMO pP **pP** 04 47 26.2 +2.3
comp=Z,3.1nm,1.1s,baz=244,slow=3.4,SNR=3.8
S20A **Disappointment** 89.56 49 ⇑P **P** 04 45 13.6 +0.7
baz=90,SNR=19
PV01 **Paradox Valley** 89.56 48 *e*P **P** 04 45 13.4 +0.5
comp=Z,2µm,1.0s
NEW **Newport** 89.58 36 *e*P **P** 04 45 12.8 +0.3
comp=Z,83nm,2.5s
NEW pP **pP** 04 47 26.9 +3.4
NEW **Newport** 89.58 36 P **P** 04 45 12.5 0.0
comp=Z,3.9nm,0.6s,baz=253,slow=2.7,SNR=10
NEW pP **pP** 04 47 26.9 +3.4
comp=Z,1.8nm,0.8s,baz=63,slow=7.1,SNR=2.5
NEW **Newport** 89.58 36 ⇑P **P** 04 45 12.8 +0.3
baz=90,SNR=6.8
X23A **Hourglass Bar** 89.58 52 ⇓P **P** 04 45 13.9 +0.9
baz=90
HHC **Hu-ho-hao-te** 89.59 315 *e*P **P** 04 45 13.5 +0.7
HHC pP **pP** 04 47 28.1 +4.3
HHC sP **sP** 04 48 25.2 +1.0
HHC PP **PP** 04 48 59.7 +3.3
HHC SKS **SKSac** 04 54 47.0 +1.1
HHC S **S** 04 55 12.5 -0.9
HHC sS **sS** 04 59 04.2 -3.0
HHC SS **SS** 05 01 32.6 +3.1
HHC pmax pmax
comp=Z,96nm,0.8s
HHC pmax pmax
comp=Z,380nm,5.4s
Z24A **Sheppen Canyo** 89.62 54 ⇑P **P** 04 45 14.3 +1.0
baz=90,SNR=35
V22A **San Miguel Ran** 89.68 51 ⇓P **P** 04 45 14.2 +0.7
baz=90,SNR=12
R20A **Redvale** 89.72 48 ⇓P **P** 04 45 14.2 +0.6
baz=90,SNR=12
T21A **Navajo Lake** 89.74 50 ⇓P **P** 04 45 14.8 +1.0
baz=90
326A **Caldwell Ranch** 89.77 56 ⇓P **P** 04 45 14.5 +0.6
baz=90,SNR=20
F13A **Darby** 89.79 39 ⇓P **P** 04 45 14.1 +0.4
baz=90,SNR=31
M17A **Scullys Gap (B** 89.80 44 ⇓P **P** 04 45 14.6 +0.6
baz=90,SNR=39
C11A **Tepee Creek (N** 89.82 37 ⇓P **P** 04 45 14.4 +0.7
baz=90,SNR=31
628A **Black Gap, Mar** 89.82 58 ⇑P **P** 04 45 15.3 +1.2
baz=90,SNR=55
Y24A **Capitan** 89.84 53 ⇓P **P** 04 45 15.4 +1.1
baz=90,SNR=106
125A **Gardner Draw,** 89.85 54 ⇓P **P** 04 45 15.2 +1.0
baz=90,SNR=40
S21A **Coal Bank Pass** 89.88 49 ⇑P **P** 04 45 15.2 +0.7
baz=90,SNR=28
W23A **Werner Place,** 89.88 52 ⇑P **P** 04 45 15.2 +0.7
baz=90,SNR=13
D12A **Red Ives Fores** 89.89 38 ⇓P **P** 04 45 14.3 +0.3
baz=90
U22A **Llaves** 89.93 50 ⇑P **P** 04 45 15.7 +1.0
baz=90
226B **Tecolote Peak,** 89.97 55 ⇓P **P** 04 45 15.9 +1.1
baz=90,SNR=77
DOT **Dot Lake** 89.98 15 *e*P **P** 04 45 13.7 -0.3
comp=Z,26nm,1.0s
P19A **Cripple Cowboy** 90.01 47 ⇑P **P** 04 45 15.7 +0.8
baz=90,SNR=32
427A **Hayter Ranch,** 90.01 57 ⇓P **P** 04 45 16.4 +1.4
baz=90,SNR=145
G14A **Jackson** 90.01 40 ⇑P **P** 04 45 15.8 +0.9
baz=90
Z25A **Roswell** 90.08 54 ⇑P **P** 04 45 16.7 +1.3
baz=90,SNR=41
V23A **Ortiz Mt. (NFS** 90.12 51 ⇑P **P** 04 45 17.1 +1.5
baz=90,SNR=28
X24A **Lazy VL Ranch,** 90.13 53 ⇓P **P** 04 45 15.9 +0.3
baz=90,SNR=8.3
Q20A **Ridgley Place,** 90.15 48 ⇑P **P** 04 45 16.2 +0.7
baz=90,SNR=32
MCMT **McKenzie Canyo** 90.16 41 *e*P **P** 04 45 16.5 +0.9
comp=Z,16nm,1.0s
327A **Balmorhea Ranc** 90.17 56 ⇑P **P** 04 45 16.6 +0.9
baz=90
AHID **Auburn Hatcher** 90.18 43 *e*P **P** 04 45 16.4 +0.8
comp=Z,40nm,0.8s
DLBC **Dease Lake** 90.18 24 *e*P **P** 04 45 15.7 +0.6
DLBC PP **PP** 04 48 59.7 -0.9
DLBC **Dease Lake** 90.18 24 P **P** 04 45 15.6 +0.5
comp=Z,9.8nm,0.9s,baz=223,slow=6.5,SNR=10
DLBC PP **PP** 04 48 59.7 -0.9
comp=Z,2.4nm,0.6s,baz=206,slow=0.7,SNR=3.5
C12B **Naegeli Ranch,** 90.18 37 ⇓P **P** 04 45 15.8 +0.4
baz=90
528A **Cox Ranch, San** 90.19 57 ⇓P **P** 04 45 17.1 +1.2
baz=90
COLA **College** 90.19 13 *e*P **P** 04 45 14.1 -0.7
COLA pmax pmax
comp=Z,17nm,0.9s
COLA **College** 90.19 13 *e*P **P** 04 45 14.1 -0.7
comp=Z,17nm,0.9s
T22A **Edith** 90.20 50 ⇓P **P** 04 45 16.4 +0.5
baz=90,SNR=13
E13A **Victor** 90.23 39 ⇑P **P** 04 45 15.5 -0.1
baz=90,SNR=8.0
O19A **Miners Draw (B** 90.24 46 ⇓P **P** 04 45 16.8 +0.9
baz=90,SNR=47
ILAR **Eielson Array** 90.31 13 P **P** 04 45 14.3 -1.1
ILAR pP **pP** 04 47 26.0 -0.6
ILAR PKiKP **PKiKP** 04 50 04.9 -1.1
ILAR PKKPbc **PKKPdf** 05 02 40.2 +0.8
ILAR **Eielson Array** 90.31 13 P **P** 04 45 14.3 -1.1
comp=Z,7.0nm,0.8s,baz=223,slow=5.4,SNR=60
ILAR pP **pP** 04 47 26.0 -0.6
comp=Z,1.2nm,0.9s,baz=225,slow=4.5,SNR=3.1
ILAR PKiKP **PKiKP** 04 50 04.9 -1.1
comp=Z,0.5nm,0.7s,baz=302,slow=2.5,SNR=5.1
ILAR PKKPbc **PKKPdf** 05 02 40.2 +0.8
comp=Z,0.4nm,0.4s,baz=335,slow=2.3,SNR=10.0
126A **Clayton Basin,** 90.33 55 ⇓P **P** 04 45 17.1 +0.7
baz=91,SNR=13
RRI2 **Red Ridge** 90.34 43 *e*P **P** 04 45 17.4 +0.9
comp=Z,103nm,1.3s
P20A **De Beque** 90.34 47 ⇑P **P** 04 45 17.2 +0.8
baz=91,SNR=40
F14A **Wisdom** 90.37 40 ⇓P **P** 04 45 16.9 +0.5
baz=91,SNR=7.2
R21A **Cimarron** 90.38 48 ⇑P **P** 04 45 17.7 +1.0
baz=91,SNR=24
U23A **El Rito** 90.39 51 ⇑P **P** 04 45 17.7 +0.9
baz=91,SNR=27
Y25A **Mesa, Roswell** 90.39 53 ⇓P **P** 04 45 17.3 +0.6
baz=91,SNR=35
D13A **Huson** 90.42 38 ⇑P **P** 04 45 17.1 +0.7
baz=91
L18A **Fontenelle, Gr** 90.44 44 ⇑P **P** 04 45 17.4 +0.5
baz=91,SNR=7.3
W24A **Lazy 6 Ranch,** 90.44 52 ⇑P **P** 04 45 17.5 +0.5
baz=91,SNR=40
I16A **Newdale** 90.50 42 ⇑P **P** 04 45 18.4 +1.4
baz=91,SNR=31
428A **Kincaid Ranch,** 90.52 57 ⇑P **P** 04 45 18.6 +1.3
baz=91,SNR=21
B12A **Libby** 90.54 37 ⇓P **P** 04 45 17.5 +0.6
baz=91,SNR=5.4
DCID1 **Drake Creek** 90.55 42 *e*P **P** 04 45 18.3 +1.0
comp=Z,28nm,0.9s
G15A **Dillon** 90.56 41 ⇑P **P** 04 45 18.2 +0.9
baz=91,SNR=36
CD2 **Chengdu** 90.58 303 P **P** 04 45 18.2 +0.7
CD2 pP **pP** 04 47 31.2 +2.5
CD2 sP **sP** 04 48 31.8 +2.8
CD2 PP **PP** 04 49 07.1 +2.9
CD2 SKS **SKSac** 04 54 51.0 -0.8
CD2 S **S** 04 55 20.8 -1.7
CD2 sS **sS** 04 59 16.8 -0.1
CD2 SS **SS** 05 01 45.8 +2.0
CD2 pmax pmax
comp=Z,30nm,0.7s
CD2 pmax pmax
comp=Z,140nm,8.2s
MSO **Missoula** 90.58 39 *e*P **P** 04 45 16.9 -0.3
MSO *e*pP **pP** 04 47 30.3 +1.9
MSO **Missoula** 90.58 39 ⇓P **P** 04 45 17.2 0.0
baz=91
Q21A **Lamborn Mesa,** 90.58 48 ⇑P **P** 04 45 18.3 +0.7
baz=91,SNR=13
S22A **4UR Ranch, Cre** 90.59 49 ⇑P **P** 04 45 18.7 +1.0
baz=91,SNR=55
DLMT **Dillon** 90.59 40 *e*P **P** 04 45 18.2 +0.8
comp=Z,19nm,1.0s
227A **Bennet, Jal** 90.60 56 ⇓P **P** 04 45 18.5 +0.8
baz=91
E14A **Clinton** 90.62 39 ⇓P **P** 04 45 17.9 +0.4
baz=91
529A **Stev Forest Ra** 90.62 58 ⇑P **P** 04 45 18.4 +0.6
baz=91,SNR=33
BILL **Bilibino** 90.62 355 ⇓ *i*P **P** 04 45 16.8 0.0
BILL *i* *PP **pP** 04 47 28.0 0.0
BILL *i* 04 49 07.4
BILL pmax pmax
comp=Z,205nm,1.0s
Z26A **Caprock** 90.63 54 ⇑P **P** 04 45 18.5 +0.6
baz=91,SNR=47
REDW **Red Top Meadow** 90.64 43 *e*P **P** 04 45 18.4 +0.6
comp=Z,0.7nm,1.0s
TPAW **Teton Pass** 90.64 43 *e*P **P** 04 45 18.7 +0.9
comp=Z,29nm,1.0s
BSMT **Bassoo Peak** 90.65 38 *e*P **P** 04 45 17.6 -0.1
C13A **Hot Springs** 90.68 38 ⇓P **P** 04 45 17.6 0.0
baz=91,SNR=6.2
X25A **Clemmons Ranch** 90.68 53 ⇑P **P** 04 45 18.5 +0.4
baz=91,SNR=9.5
328A **Wristen Ranch,** 90.70 56 ⇓P **P** 04 45 18.8 +0.7
baz=91,SNR=15
O20A **White River Ci** 90.75 47 ⇓P **P** 04 45 18.9 +0.6
baz=91,SNR=30
SNOW **Snow King Moun** 90.75 43 *e*P **P** 04 45 19.3 +1.0
comp=Z,53nm,1.0s
A12A **Yaak River Ran** 90.76 36 ⇑P **P** 04 45 18.6 +0.6
baz=91
V24A **Rampart Ranch,** 90.77 52 ⇑P **P** 04 45 19.4 +0.8
baz=91,SNR=42
M19A **Rock Springs** 90.80 45 ⇑P **P** 04 45 19.1 +0.5
baz=91,SNR=7.3
T23A **Casias Ranch,** 90.82 50 ⇓P **P** 04 45 19.6 +0.8
baz=91,SNR=13
127A **Arkansas Junct** 90.84 55 ⇓P **P** 04 45 19.5 +0.7
baz=91,SNR=28
IMW **Indian Meadow** 90.85 42 *e*P **P** 04 45 20.0 +1.2
R22A **Saguache, Gunn** 90.87 49 ⇑P **P** 04 45 20.1 +1.0
baz=91,SNR=28
MOOW **Moose Ponds** 90.90 42 *e*P **P** 04 45 19.7 +0.7
comp=Z,18nm,1.4s
MOOW *e*pP **pP** 04 47 32.9 +2.8
F15A **Butte** 90.91 40 ⇓P **P** 04 45 19.6 +0.7
baz=91,SNR=16
SWMT **Swartz Lake** 90.91 38 *e*P **P** 04 45 18.3 -0.5
LOHW **Long Hollow** 90.92 43 *e*P **P** 04 45 19.9 +0.8
comp=Z,33nm,1.4s
LOHW *e*pP pP 04 47 36.7 +6.5
LRM **Limekiln Ridge** 90.92 40 *e*P **P** 04 45 19.3 +0.2
D14A **Greenough** 90.97 39 ⇑P **P** 04 45 18.9 -0.2
baz=91,SNR=15
L19A **Farson** 90.97 44 ⇑P **P** 04 45 19.9 +0.6
baz=91,SNR=30
P21A **Newcastle** 91.00 47 ⇓P **P** 04 45 20.1 +0.6
baz=91,SNR=11
G16A **Moss Hill, Enn** 91.00 41 ⇑P **P** 04 45 20.1 +0.8
baz=91,SNR=18
CHMT **Chamberlain Mo** 91.02 39 *e*P **P** 04 45 19.5 +0.1
CHMT *e*pP **pP** 04 47 32.1 +1.4
QLMT **Earthquake Lak** 91.03 41 *e*P **P** 04 45 20.9 +1.4
Y26A **Elida** 91.04 54 ⇑P **P** 04 45 20.2 +0.5
baz=91,SNR=5.1
Q22A **Crested Butte,** 91.06 48 ⇓P **P** 04 45 20.7 +0.8
baz=91,SNR=30
SLMT **Seeley Lake** 91.06 38 *e*P **P** 04 45 19.0 -0.6
SLMT *e*PP **PP** 04 49 05.9 -1.8
N20A **Spence Gulch,** 91.07 46 ⇑P **P** 04 45 20.8 +1.0
baz=91,SNR=49
H16A **Russell Place,** 91.07 41 ⇓P **P** 04 45 21.1 +1.4
baz=91,SNR=15
U24A **Moreno Valley** 91.08 51 ⇓P **P** 04 45 20.7 +0.7
baz=91
429A **Davenport Ranc** 91.09 57 ⇑P **P** 04 45 20.5 +0.6
baz=91,SNR=90
I17A **Pilgrim Ck.** 91.09 42 ⇓P **P** 04 45 21.4 +1.6
baz=91
B13A **Whitefish** 91.11 37 ⇑P **P** 04 45 19.6 0.0
baz=91,SNR=6.5
E15A **Deer Lodge** 91.12 40 ⇑P **P** 04 45 20.1 +0.3
baz=91,SNR=8.1
W25A **X Bar L Ranch,** 91.14 52 ⇓P **P** 04 45 20.6 +0.4
baz=91,SNR=39
S23A **Nye Farm, Mont** 91.15 50 ⇓P **P** 04 45 21.2 +0.8
baz=91
SMCO **Snowmass** 91.16 48 *e*P **P** 04 45 21.1 +0.6

BW06	**Boulder Array**	**91.16**	**44**	eP	**P**	**04 45 20.3**	**+0.1**
	comp=Z,40nm,1.2s						
PDAR	**Pinedale Array**	**91.16**	**44**	P	**P**	**04 45 20.4**	**+0.2**
PDAR				PP	**PP**	**04 49 06.2**	**-2.5**
PDAR				PKKPbc	**PKKPbc**	**05 02 39.4**	**-1.1**
PDAR	**Pinedale Array**	**91.16**	**44**	P	**P**	**04 45 20.4**	**+0.2**
	comp=Z,17nm,0.9s,baz=207,slow=3.0,SNR=95						
PDAR				PP	**PP**	**04 49 06.2**	**-2.5**
	comp=Z,1.1nm,0.9s,baz=233,slow=9.1,SNR=4.2						
PDAR				PKKPbc	**PKKPbc**	**05 02 39.4**	**-1.1**
	comp=Z,0.8nm,0.5s,baz=60,slow=4.0,SNR=7.6						
228A	**UT Block 9, Go**	**91.19**	**56**	⇑P	**P**	**04 45 21.0**	**+0.6**
	baz=91,SNR=9.1						
C14A	**Swan Lake**	**91.19**	**38**	⇓P	**P**	**04 45 19.9**	**-0.1**
	baz=92						
YMR	**Madison River**	**91.23**	**42**	eP	**P**	**04 45 21.9**	**+1.4**
	comp=Z,8.1nm,0.6s						
Z27A	**Tatum**	**91.23**	**54**	⇑P	**P**	**04 45 20.8**	**+0.2**
	baz=92,SNR=17						
V25A	**Rancho No Teng**	**91.30**	**52**	⇓P	**P**	**04 45 21.6**	**+0.6**
	baz=92,SNR=39						
O21A	**Pagoda**	**91.31**	**47**	⇑P	**P**	**04 45 21.4**	**+0.4**
	baz=92						
530A	**J-C Ranch, Com**	**91.32**	**58**	⇑P	**P**	**04 45 21.8**	**+0.8**
	baz=92,SNR=20						
BOZ	**Bozeman (W)**	**91.32**	**41**	eP	**P**	**04 45 21.4**	**+0.6**
BOZ				e*PP	**pP**	**04 47 31.7**	**-0.3**
BOZ				e		04 49 08.6	
BOZ				pmax	pmax		
	comp=Z,14nm,1.0s						
BOZ	**Bozeman (W)**	**91.32**	**41**	eP	**P**	**04 45 21.4**	**+0.6**
	comp=Z,14nm,1.0s						
BOZ				epP	**pP**	**04 47 31.7**	**-0.3**
BOZ				ePP	**PP**	**04 49 08.6**	**-1.3**
X26A	**CR and CF Fran**	**91.32**	**53**	⇑P	**P**	**04 45 21.3**	**+0.3**
	baz=92,SNR=6.3						
H17A	**Grant Village**	**91.33**	**42**	⇑P	**P**	**04 45 23.1**	**+2.1**
	baz=92,SNR=7.8						
329A	**Wagon Wheel Ra**	**91.39**	**57**	⇑P	**P**	**04 45 21.9**	**+0.7**
	baz=92,SNR=21						
F16A	**Kennard Place,**	**91.39**	**40**	⇓P	**P**	**04 45 22.1**	**+1.0**
	baz=92,SNR=8.4						
M20A	**Sweetwater, Wa**	**91.44**	**45**	⇑P	**P**	**04 45 22.3**	**+0.8**
	baz=92,SNR=15						
A13A	**Flathead Natio**	**91.45**	**37**	⇓P	**P**	**04 45 21.7**	**+0.5**
	baz=92						
I18A	**Diamond G Ranc**	**91.46**	**43**	⇓P	**P**	**04 45 22.2**	**+0.7**
	baz=92						
128A	**Castleberry Fa**	**91.48**	**55**	⇑P	**P**	**04 45 22.4**	**+0.7**
	baz=92,SNR=16						
R23A	**Moffat**	**91.50**	**49**	⇓P	**P**	**04 45 22.7**	**+0.7**
	baz=92,SNR=23						
P22A	**Eagle**	**91.50**	**48**	⇓P	**P**	**04 45 22.5**	**+0.6**
	baz=92,SNR=11						
Y27A	**Causey**	**91.51**	**54**	⇑P	**P**	**04 45 22.3**	**+0.4**
	baz=92,SNR=25						
D15A	**Lincoln**	**91.52**	**39**	⇓P	**P**	**04 45 22.1**	**+0.4**
	baz=92,SNR=12						
N21A	**Black Mountain**	**91.53**	**46**	⇓P	**P**	**04 45 22.9**	**+0.9**
	baz=92,SNR=39						
L20A	**Wamsutter**	**91.58**	**45**	⇑P	**P**	**04 45 23.4**	**+1.2**
	baz=92,SNR=21						
W26A	**Owens Ranch, T**	**91.59**	**53**	⇑P	**P**	**04 45 22.6**	**+0.3**
	baz=92,SNR=12						
631A	**Perdido Creek**	**91.62**	**59**	⇑P	**P**	**04 45 23.2**	**+0.9**
	baz=92,SNR=100						
K19A	**Absolon Red Bu**	**91.65**	**44**	⇑P	**P**	**04 45 22.6**	**+0.2**
	baz=92,SNR=12						
430A	**Baggett Ranch,**	**91.67**	**57**	⇓P	**P**	**04 45 22.9**	**+0.3**
	baz=92,SNR=11						
S24A	**Houchin Ranch,**	**91.68**	**50**	⇑P	**P**	**04 45 23.9**	**+1.0**
	baz=92,SNR=26						
G17A	**Pierce Place,**	**91.70**	**41**	⇑P	**P**	**04 45 23.7**	**+1.2**
	baz=92						
U25A	**Circle Dot Ran**	**91.70**	**51**	⇑P	**P**	**04 45 23.1**	**+0.3**
	baz=92,SNR=33						
229A	**Bryant Ranch,**	**91.72**	**56**	⇓P	**P**	**04 45 23.3**	**+0.5**
	baz=92,SNR=5.8						
J19A	**Crowheart**	**91.73**	**44**	⇑P	**P**	**04 45 23.1**	**+0.4**
	baz=92,SNR=20						
E16A	**East Helena**	**91.75**	**40**	⇓P	**P**	**04 45 23.1**	**+0.4**
	baz=92						
HRY	**Holter Researc**	**91.75**	**40**	eP	**P**	**04 45 23.4**	**+0.7**
B14A	**Marquette Ranc**	**91.78**	**38**	⇓P	**P**	**04 45 22.8**	**0.0**
	baz=92,SNR=48						
WALA	**Waterton Lakes**	**91.79**	**37**	eP	**P**	**04 45 22.7**	**-0.1**
	comp=Z,0.6nm,1.1s						
732A	**Laxson Ranch,**	**91.82**	**60**	⇑P	**P**	**04 45 24.0**	**+0.7**
	baz=92,SNR=30						
COLD	**Coldfoot**	**91.83**	**11**	eP	**P**	**04 45 22.6**	**+0.2**
	comp=Z,8.2nm,0.6s						
Z28A	**Tucker Farm, M**	**91.84**	**55**	⇑P	**P**	**04 45 23.5**	**+0.2**
	baz=92,SNR=6.8						
MSTX	**Muleshoe**	**91.84**	**54**	⇑P	**P**	**04 45 23.9**	**+0.5**
	baz=92,SNR=15						
C15A	**Salmond Ranch,**	**91.85**	**38**	⇑P	**P**	**04 45 23.1**	**0.0**
	baz=92,SNR=12						
V26A	**Tequesquite Ra**	**91.89**	**52**	⇑P	**P**	**04 45 23.7**	**+0.1**
	baz=92,SNR=18						
K20A	**Yellowstone Ra**	**91.89**	**44**	⇑P	**P**	**04 45 23.6**	**+0.1**
	baz=92,SNR=14						
X27A	**F and S Farms,**	**91.89**	**53**	⇓P	**P**	**04 45 24.2**	**+0.6**
	baz=92,SNR=13						
O22A	**Kremmling**	**91.91**	**47**	⇑P	**P**	**04 45 24.4**	**+0.6**
	baz=92,SNR=20						
531A	**Rocksprings**	**91.95**	**58**	⇓P	**P**	**04 45 24.9**	**+1.0**
	baz=92,SNR=47						
129A	**Stewart Farms,**	**91.96**	**56**	⇑P	**P**	**04 45 24.6**	**+0.7**
	baz=92,SNR=11						
330A	**Mertzon**	**91.97**	**57**	⇑P	**P**	**04 45 24.1**	**+0.1**
	baz=92,SNR=12						
A14A	**Double T Ranch**	**92.02**	**37**	⇑P	**P**	**04 45 24.2**	**+0.4**
	baz=92,SNR=24						
R24A	**Sanders Place,**	**92.02**	**49**	⇑P	**P**	**04 45 25.1**	**+0.9**
	baz=92,SNR=22						
T25A	**Trinidad**	**92.03**	**51**	⇓P	**P**	**04 45 24.7**	**+0.4**
	baz=92,SNR=16						
P23A	**Jefferson**	**92.03**	**48**	⇑P	**P**	**04 45 25.4**	**+1.0**
	baz=92						
M21A	**Separation Pea**	**92.03**	**46**	⇑P	**P**	**04 45 24.8**	**+0.5**
	baz=92,SNR=34						
H18A	**Shoshone NF, C**	**92.04**	**42**	⇑P	**P**	**04 45 25.1**	**+0.9**
	baz=92						
F17A	**Fitzpatrick Pl**	**92.04**	**41**	⇑P	**P**	**04 45 25.3**	**+1.3**
	baz=92,SNR=18						
D16A	**Dana Ranch, Ca**	**92.08**	**39**	⇑P	**P**	**04 45 24.7**	**+0.5**
	baz=92,SNR=21						
W27A	**Bowe Ranch, En**	**92.10**	**53**	⇑P	**P**	**04 45 24.6**	**0.0**
	baz=92,SNR=11						
431A	**Sonora**	**92.12**	**58**	⇑P	**P**	**04 45 25.0**	**+0.3**
	baz=92,SNR=7.0						
I19A	**Meeteetse**	**92.14**	**43**	⇓P	**P**	**04 45 25.3**	**+0.6**
	baz=92,SNR=9.5						
B15A	**Bradely Ranch,**	**92.16**	**38**	⇓P	**P**	**04 45 24.1**	**-0.4**
	baz=92,SNR=14						
U26A	**Atchley Ranch,**	**92.18**	**51**	⇓P	**P**	**04 45 25.2**	**+0.2**
	baz=92,SNR=19						
L21A	**Rawlins**	**92.20**	**45**	⇑P	**P**	**04 45 25.2**	**+0.2**
	baz=92,SNR=14						
E17A	**Martinsdale**	**92.20**	**40**	⇑P	**P**	**04 45 25.5**	**+0.7**
	baz=92						
Y28A	**McKinney Farm,**	**92.21**	**54**	⇑P	**P**	**04 45 25.4**	**+0.3**
	baz=92,SNR=5.3						
230A	**Sterling City**	**92.22**	**56**	⇓P	**P**	**04 45 25.4**	**+0.3**
	baz=92,SNR=8.2						
S25A	**Robets Cordova**	**92.24**	**50**	⇑P	**P**	**04 45 25.8**	**+0.6**
	baz=92,SNR=42						
N22A	**Wattenberg Ran**	**92.27**	**47**	⇓P	**P**	**04 45 26.2**	**+0.9**
	baz=92,SNR=24						
632A	**Uvalde**	**92.28**	**59**	⇓P	**P**	**04 45 26.4**	**+1.1**
	baz=92,SNR=62						
Q24A	**Divide**	**92.32**	**49**	⇓P	**P**	**04 45 26.3**	**+0.6**
	baz=93,SNR=14						
Z29A	**Hungry Hill Ra**	**92.35**	**55**	⇓P	**P**	**04 45 25.7**	**0.0**
	baz=93,SNR=10.0						
O23A	**Lake Granby, G**	**92.36**	**47**	⇓P	**P**	**04 45 26.7**	**+0.8**
	baz=93,SNR=11						
C16A	**Fuhringer Ranc**	**92.36**	**39**	⇑P	**P**	**04 45 25.6**	**+0.2**
	baz=93,SNR=18						
ISCO	**Idaho Springs**	**92.38**	**48**	eP	**P**	**04 45 26.4**	**+0.4**
ISCO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ISCO	**Idaho Springs**	**92.38**	**48**	eP	**P**	**04 45 26.4**	**+0.4**
	comp=Z,5.3nm,0.7s						
ISCO	**Idaho Springs**	**92.38**	**48**	⇑P	**P**	**04 45 26.6**	**+0.6**
	baz=93,SNR=11						
J20A	**Shoshoni**	**92.39**	**44**	⇑P	**P**	**04 45 26.5**	**+0.7**
	baz=93,SNR=14						
A15A	**Johnson Ranch,**	**92.41**	**37**	⇑P	**P**	**04 45 25.7**	**+0.1**
	baz=93,SNR=22						
G18A	**Lazy EL Ranch,**	**92.41**	**42**	⇓P	**P**	**04 45 26.4**	**+0.6**
	baz=93,SNR=10						
532A	**Rocksprings**	**92.44**	**59**	⇑P	**P**	**04 45 26.7**	**+0.5**
	baz=93,SNR=40						
M22A	**Cedar Creek Ra**	**92.45**	**46**	⇓P	**P**	**04 45 26.4**	**+0.2**
	baz=93,SNR=9.7						
H19A	**Powell**	**92.45**	**42**	⇓P	**P**	**04 45 27.0**	**+1.0**
	baz=93,SNR=8.6						
RLMT	**Red Lodge**	**92.50**	**42**	eP	**P**	**04 45 26.6**	**+0.3**
	comp=Z,11nm,1.0s						
RLMT				epP	**pP**	**04 47 40.0**	**+2.4**
RLMT				ePP	**PP**	**04 49 18.3**	**-0.7**
X28A	**Dimmitt**	**92.51**	**54**	⇑P	**P**	**04 45 26.6**	**+0.1**
	baz=93,SNR=8.1						
331A	**San Angelo**	**92.52**	**57**	⇓P	**P**	**04 45 26.7**	**+0.2**
	baz=93						
R25A	**Fountain Ranch**	**92.56**	**50**	⇑P	**P**	**04 45 26.8**	**+0.1**
	baz=93,SNR=26						
V27A	**Dan Oppiter Fa**	**92.56**	**52**	⇑P	**P**	**04 45 26.9**	**+0.2**
	baz=93,SNR=6.2						
GCMT	**Greycliff**	**92.58**	**41**	eP	**P**	**04 45 26.7**	**+0.1**
	comp=Z,11nm,1.3s						
GCMT				epP	**pP**	**04 47 38.7**	**+0.8**
GCMT				ePP	**PP**	**04 49 20.0**	**+0.5**
K21A	**Alcova**	**92.59**	**45**	⇑P	**P**	**04 45 27.1**	**+0.3**
	baz=93						
F18A	**Big Timber**	**92.61**	**41**	⇑P	**P**	**04 45 27.4**	**+0.8**
	baz=93,SNR=7.4						
Y29A	**Porterfield Fa**	**92.62**	**55**	⇑P	**P**	**04 45 27.5**	**+0.5**
	baz=93,SNR=24						
T26A	**Comanche Natio**	**92.63**	**51**	⇑P	**P**	**04 45 27.1**	**+0.1**
	baz=93,SNR=10						
130A	**Snyder**	**92.63**	**56**	⇓P	**P**	**04 45 27.4**	**+0.4**
	baz=93						
I20A	**Worland**	**92.65**	**43**	⇑P	**P**	**04 45 27.3**	**+0.5**
	baz=93,SNR=18						
D17A	**Six Diamond Ra**	**92.65**	**40**	⇑P	**P**	**04 45 27.6**	**+0.8**
	baz=93,SNR=27						
N23A	**Red Feather La**	**92.65**	**47**	⇑P	**P**	**04 45 27.8**	**+0.6**
	baz=93,SNR=13						
JCT	**Junction City**	**92.67**	**58**	eP	**P**	**04 45 27.6**	**+0.4**
JCT				pmax	pmax		
	comp=Z,14nm,0.8s						
JCT	**Junction City**	**92.67**	**58**	eP	**P**	**04 45 27.6**	**+0.4**
	comp=Z,14nm,0.8s						
JCT	**Junction City**	**92.67**	**58**	⇑P	**P**	**04 45 27.3**	**+0.2**
	baz=93,SNR=10						
B16A	**M & M Farms, S**	**92.70**	**38**	⇑P	**P**	**04 45 26.5**	**-0.4**
	baz=93,SNR=11						
P24A	**Kohler Place,**	**92.74**	**48**	⇓P	**P**	**04 45 28.1**	**+0.6**
	baz=93						
LZH	**Lanzhou**	**92.74**	**308**	⇓P	**P**	**04 45 28.5**	**+1.0**
LZH				pP	**pP**	**04 47 39.0**	**+0.1**
LZH				sP	**sP**	**04 48 38.8**	**-0.3**
LZH				SKS	**SKSac**	**04 55 04.0**	**+0.2**
LZH				S	**ScS**	**04 55 43.0**	**+0.6**
LZH				sS	**sS**	**04 59 36.5**	**-0.8**
LZH				pmax	pmax		
	comp=Z,65nm,1.0s						
LZH				pmax	pmax		
	comp=Z,180nm,4.0s						
Z30A	**Sanderson Ranc**	**92.80**	**55**	⇓P	**P**	**04 45 27.7**	**0.0**
	baz=93,SNR=7.9						
J21A	**Lysite**	**92.80**	**44**	⇑P	**P**	**04 45 28.3**	**+0.7**
	baz=93,SNR=15						
W28A	**Vega**	**92.82**	**53**	⇑P	**P**	**04 45 27.9**	**+0.1**
	baz=93						
E18A	**Harlowton**	**92.82**	**40**	⇑P	**P**	**04 45 28.5**	**+1.0**
	baz=93,SNR=17						
432A	**Menard**	**92.83**	**58**	⇓P	**P**	**04 45 28.2**	**+0.2**
	baz=93,SNR=35						
C17A	**Wharram Farm,**	**92.85**	**39**	⇓P	**P**	**04 45 27.8**	**+0.2**
	baz=93,SNR=35						
L22A	**Ellis Ranch, M**	**92.85**	**46**	⇑P	**P**	**04 45 28.9**	**+1.0**
	baz=93,SNR=13						
X29A	**Tulia**	**92.85**	**54**	⇓P	**P**	**04 45 28.0**	**+0.1**
	baz=93,SNR=7.3						
U27A	**Thompson Grove**	**92.86**	**52**	⇑P	**P**	**04 45 27.9**	**-0.1**
	baz=93,SNR=12						
231A	**Bronte**	**92.86**	**57**	⇑P	**P**	**04 45 27.9**	**-0.1**
	baz=93,SNR=38						
O24A	**Longmont**	**92.89**	**48**	⇑P	**P**	**04 45 29.1**	**+1.0**
	baz=93,SNR=5.6						
S26A	**Kim**	**92.91**	**50**	⇓P	**P**	**04 45 28.4**	**+0.2**
	baz=93,SNR=34						
Q25A	**Bedland, Calha**	**92.93**	**49**	⇑P	**P**	**04 45 28.3**	**-0.1**
	baz=93,SNR=7.1						
H20A	**Greybull**	**92.98**	**43**	⇓P	**P**	**04 45 28.4**	**0.0**
	baz=93,SNR=18						
V28A	**Channing**	**93.01**	**53**	⇓P	**P**	**04 45 28.9**	**+0.2**
	baz=93,SNR=5.9						
A16A	**West Butte Ran**	**93.03**	**38**	⇑P	**P**	**04 45 28.9**	**+0.4**
	baz=93,SNR=29						
AMTX	**Amarillo**	**93.05**	**54**	eP	**P**	**04 45 29.0**	**+0.1**
	comp=Z,14nm,1.0s						
F19A	**Roth Farm, Mol**	**93.06**	**41**	⇓P	**P**	**04 45 29.0**	**+0.3**
	baz=93,SNR=14						
M23A	**Laramie**	**93.06**	**46**	⇓P	**P**	**04 45 29.4**	**+0.5**
	baz=93						
K22A	**Casper**	**93.07**	**45**	⇓P	**P**	**04 45 29.3**	**+0.4**
	baz=93,SNR=9.4						
332A	**Millersview**	**93.08**	**57**	⇓P	**P**	**04 45 29.4**	**+0.3**
	baz=93,SNR=31						
131A	**Roby**	**93.11**	**56**	⇓P	**P**	**04 45 29.4**	**+0.2**
	baz=93,SNR=5.9						
I21A	**Big Trails, Te**	**93.12**	**44**	⇓P	**P**	**04 45 29.0**	**0.0**
	baz=93,SNR=21						
B17A	**L&G Farms, Che**	**93.16**	**39**	⇓P	**P**	**04 45 29.2**	**+0.2**
	baz=93,SNR=11						
W29A	**Amraillo**	**93.17**	**53**	⇓P	**P**	**04 45 29.7**	**+0.2**
	baz=93,SNR=5.6						
D18A	**Linhart Farms,**	**93.19**	**40**	⇑P	**P**	**04 45 30.3**	**+1.1**
	baz=94,SNR=5.7						
G20A	**Bridger**	**93.20**	**42**	⇑P	**P**	**04 45 29.7**	**+0.3**
	baz=94						
T27A	**Campo**	**93.21**	**51**	⇓P	**P**	**04 45 29.8**	**+0.2**
	baz=94,SNR=11						
YAK	**Yakutsk**	**93.21**	**339**	eP	**P**	**04 45 27.3**	**-1.5**
YAK				eS	**SKSac**	**04 55 01.0**	**-3.7**
YAK				e		04 55 43.7	
YAK				eSS	SS	05 02 33.7	+14
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,47nm,0.7s						
YAK				smax	smax		
	comp=N,99nm,2.7s						
YAK				smax	smax		
	comp=E,45nm,2.2s						
Y30A	**Stafford Cattl**	**93.22**	**55**	⇓P	**P**	**04 45 29.9**	**+0.2**
	baz=94						
R26A	**Arlington**	**93.22**	**50**	⇓P	**P**	**04 45 29.9**	**+0.3**
	baz=94,SNR=60						
P25A	**Willow Gulch B**	**93.25**	**49**	⇓P	**P**	**04 45 30.6**	**+0.8**
	baz=94,SNR=22						
U28A	**Mallet**	**93.28**	**52**	⇑P	**P**	**04 45 30.1**	**+0.2**
	baz=94						
N24A	**Carr**	**93.34**	**47**	⇑P	**P**	**04 45 31.1**	**+0.9**
	baz=94,SNR=9.0						
S27A	**Las Animas**	**93.35**	**51**	⇓P	**P**	**04 45 30.5**	**+0.2**
	baz=94						
232A	**Coleman**	**93.36**	**57**	⇓P	**P**	**04 45 30.6**	**+0.3**
	baz=94,SNR=8.0						
L23A	**Garrett**	**93.37**	**46**	⇓P	**P**	**04 45 30.9**	**+0.5**
	baz=94,SNR=17						
Q26A	**Hugo**	**93.44**	**49**	⇓P	**P**	**04 45 31.2**	**+0.5**
	baz=94,SNR=5.3						
E19A	**Rath Farm, Rou**	**93.44**	**41**	⇓P	**P**	**04 45 31.0**	**+0.6**
	baz=94,SNR=12						
X30A	**Coker Ranch, T**	**93.47**	**54**	⇓P	**P**	**04 45 30.9**	**+0.1**
	baz=94						
F20A	**Billings**	**93.52**	**42**	⇑P	**P**	**04 45 31.3**	**+0.6**
	baz=94						
A17A	**Triple J Farms**	**93.54**	**38**	⇑P	**P**	**04 45 31.2**	**+0.4**
	baz=94,SNR=29						
O25A	**Wiggins**	**93.55**	**48**	⇑P	**P**	**04 45 31.5**	**+0.4**
	baz=94						
Z31A	**Sharp Cattle R**	**93.56**	**56**	⇑P	**P**	**04 45 31.3**	**+0.2**
	baz=94,SNR=14						
V29A	**Stinnett**	**93.58**	**53**	⇑P	**P**	**04 45 31.6**	**+0.3**
	baz=94						
EGMT	**Eagleton**	**93.63**	**39**	eP	**P**	**04 45 31.5**	**+0.3**
	comp=E,8.4nm,0.9s						
EGMT	**Eagleton**	**93.63**	**39**	⇑P	**P**	**04 45 31.6**	**+0.3**
	baz=94						
H21A	**Big Horn, Sher**	**93.66**	**43**	⇑P	**P**	**04 45 32.0**	**+0.6**
	baz=94						
ABTX	**Abilene, Hawle**	**93.66**	**56**	⇑P	**P**	**04 45 32.1**	**+0.4**
	baz=94						
M24A	**Cheyenne**	**93.66**	**47**	⇑P	**P**	**04 45 32.4**	**+0.7**
	baz=94						
I22A	**9 Mile Ranch,**	**93.67**	**44**	⇓P	**P**	**04 45 32.1**	**+0.6**
	baz=94						
T28A	**Walsh**	**93.67**	**51**	⇑P	**P**	**04 45 31.6**	**0.0**
	baz=94,SNR=12						
R27A	**Eads**	**93.68**	**50**	⇑P	**P**	**04 45 32.0**	**+0.3**
	baz=94,SNR=22						
K23A	**Bowen Ranch, D**	**93.71**	**45**	⇓P	**P**	**04 45 32.1**	**+0.3**
	baz=94						
D19A	**Cripps Ranch,**	**93.73**	**40**	⇑P	**P**	**04 45 32.4**	**+0.8**
	baz=94,SNR=13						
Y31A	**Rekieta Farm,**	**93.73**	**55**	⇑P	**P**	**04 45 32.3**	**+0.3**
	baz=94						
B18A	**Beardsley Farm**	**93.80**	**39**	⇑P	**P**	**04 45 32.3**	**+0.4**
	baz=94,SNR=8.9						
G21A	**Lodge Grass**	**93.83**	**42**	⇑P	**P**	**04 45 32.5**	**+0.3**
	baz=94						
P26A	**Davis Ranch, A**	**93.84**	**49**	⇓P	**P**	**04 45 32.9**	**+0.5**
	baz=94,SNR=8.9						
L24A	**Wheatland**	**93.85**	**46**	⇓P	**P**	**04 45 33.2**	**+0.8**
	baz=94,SNR=7.7						
E20A	**Meyer Farm, Mu**	**93.86**	**41**	⇑P	**P**	**04 45 33.3**	**+1.0**
	baz=94,SNR=7.0						
C19A	**Slack Wire Ran**	**93.90**	**40**	⇑P	**P**	**04 45 33.4**	**+0.9**
	baz=94,SNR=23						
U29A	**Oasis Ranch, S**	**94.01**	**52**	⇑P	**P**	**04 45 33.2**	**0.0**
	baz=94						
A18A	**Metzger Ranch,**	**94.02**	**38**	⇓P	**P**	**04 45 33.2**	**+0.3**
	baz=94,SNR=15						
S28A	**Manter**	**94.03**	**51**	⇑P	**P**	**04 45 33.5**	**+0.2**
	baz=94,SNR=11						
J23A	**Dilts Ranch, B**	**94.05**	**45**	⇑P	**P**	**04 45 33.7**	**+0.4**
	baz=94						
Z32A	**Haskell**	**94.06**	**56**	⇓P	**P**	**04 45 33.8**	**+0.4**
	baz=94,SNR=23						
H22A	**Clearmont**	**94.08**	**43**	⇑P	**P**	**04 45 33.9**	**+0.5**
	baz=94,SNR=6.6						
KSCO	**Kaye Shedlock'**	**94.11**	**50**	⇓P	**P**	**04 45 34.2**	**+0.5**
	baz=94,SNR=14						
D20A	**Manuel Ranch,**	**94.14**	**40**	⇓P	**P**	**04 45 34.4**	**+0.9**
	baz=94,SNR=12						
O26A	**Horse Wrangler**	**94.16**	**48**	⇓P	**P**	**04 45 34.6**	**+0.8**
	baz=94						
F21A	**Absaloka Mine,**	**94.16**	**42**	⇓P	**P**	**04 45 34.5**	**+0.9**
	baz=94						
M25A	**Palm-Egli Farm**	**94.17**	**47**	⇓P	**P**	**04 45 34.6**	**+0.7**
	baz=94						
X31A	**McDonald Ranch**	**94.22**	**54**	⇑P	**P**	**04 45 34.4**	**+0.2**
	baz=94						
K24A	**Anderson Ranch**	**94.23**	**45**	⇑P	**P**	**04 45 34.8**	**+0.7**
	baz=94						
T29A	**Hugoton**	**94.28**	**52**	⇓P	**P**	**04 45 34.6**	**+0.2**
	baz=94						
B19A	**Brinkman Farms**	**94.31**	**39**	⇑P	**P**	**04 45 34.6**	**+0.4**
	baz=95,SNR=10						
Y32A	**R-V Farms, Ver**	**94.37**	**55**	⇓P	**P**	**04 45 35.0**	**+0.2**
	baz=95,SNR=9.0						
P27A	**Ficken Ranch,**	**94.38**	**49**	⇑P	**P**	**04 45 35.1**	**+0.3**
	baz=95,SNR=10						
G22A	**Birney**	**94.40**	**43**	⇓P	**P**	**04 45 35.2**	**+0.4**
	baz=95						
R28A	**Tribune**	**94.41**	**50**	⇑P	**P**	**04 45 35.2**	**+0.2**
	baz=95,SNR=31						
W31A	**Holland Ranch,**	**94.47**	**54**	⇑P	**P**	**04 45 35.3**	**0.0**
	baz=95,SNR=5.8						
N26A	**Koester Ranch,**	**94.47**	**48**	⇓P	**P**	**04 45 35.8**	**+0.5**
	baz=95						
U30A	**WK&E Inc. Balk**	**94.50**	**52**	⇓P	**P**	**04 45 35.8**	**+0.4**
	baz=95						
C20A	**Veseth Ranch,**	**94.51**	**40**	⇑P	**P**	**04 45 35.9**	**+0.7**
	baz=95,SNR=21						
E21A	**Keefer Ranch,**	**94.52**	**41**	⇓P	**P**	**04 45 35.8**	**+0.5**
	baz=95,SNR=9.2						
L25A	**Engebretsen Ra**	**94.54**	**46**	⇑P	**P**	**04 45 36.5**	**+1.0**
	baz=95						
LCO	**Las Campanas**	**94.57**	**124**	eP	**P**	**04 45 37.5**	**+1.2**
	comp=E,4.0nm,0.6s						
S29A	**Ulysses**	**94.60**	**51**	⇑P	**P**	**04 45 36.2**	**+0.4**
	baz=95						
A19A	**Klindworth Far**	**94.66**	**39**	⇑P	**P**	**04 45 36.2**	**+0.4**
	baz=95,SNR=8.7						
Q28A	**Sharon Springs**	**94.69**	**50**	⇓P	**P**	**04 45 36.9**	**+0.6**
	baz=95,SNR=6.0						
O27A	**Beecher Island**	**94.71**	**48**	⇑P	**P**	**04 45 37.0**	**+0.6**
	baz=95,SNR=7.6						
V31A	**Spring Creek L**	**94.78**	**53**	⇑P	**P**	**04 45 37.6**	**+0.9**
	baz=95						
M26A	**McRoberts Ranc**	**94.80**	**47**	⇓P	**P**	**04 45 37.4**	**+0.6**
	baz=95						
K25A	**Mack Ranch, Ha**	**94.81**	**46**	⇑P	**P**	**04 45 37.7**	**+1.0**
	baz=95						
D21A	**La Casta Ranch**	**94.82**	**41**	⇑P	**P**	**04 45 37.5**	**+1.0**
	baz=95						
B20A	**Solberg Farm,**	**94.85**	**39**	⇓P	**P**	**04 45 37.2**	**+0.5**
	baz=95,SNR=9.3						
R29A	**Marienthal**	**94.92**	**51**	⇓P	**P**	**04 45 37.7**	**+0.4**
	baz=95,SNR=16						
N27A	**Anderson Farm,**	**94.93**	**48**	⇑P	**P**	**04 45 37.7**	**+0.4**
	baz=95						
G23A	**Biddle**	**94.96**	**43**	⇓P	**P**	**04 45 37.6**	**+0.3**
	baz=95,SNR=6.0						
U31A	**Nine Bar Ranch**	**95.02**	**53**	⇓P	**P**	**04 45 38.3**	**+0.6**
	baz=95						
S30A	**Montezuma**	**95.08**	**51**	⇑P	**P**	**04 45 38.5**	**+0.4**
	baz=95						
C21A	**Desert Coulee**	**95.11**	**40**	⇓P	**P**	**04 45 38.3**	**+0.5**
	baz=95,SNR=7.0						
E22A	**Miles City**	**95.17**	**42**	⇑P	**P**	**04 45 39.0**	**+0.8**
	baz=95						
CFAA	**Coronel Fontan**	**95.17**	**127**	PKKPbc	PKKPbc	05 02 28.9	-0.7
CFAA	**Coronel Fontan**	**95.17**	**127**	PKKPbc	PKKPbc	05 02 28.9	-0.7
	comp=E,0.1nm,0.4s,baz=15,slow=5.5,SNR=5.6						
O28A	**Krutsinger Ran**	**95.18**	**49**	⇓P	**P**	**04 45 39.0**	**+0.6**
	baz=95,SNR=9.6						
F23A	**Volborg**	**95.18**	**43**	⇑P	**P**	**04 45 38.8**	**+0.5**
	baz=96,SNR=13						
Q29A	**Oakley**	**95.23**	**50**	⇓P	**P**	**04 45 39.0**	**+0.4**
	baz=96,SNR=9.6						
H24A	**Dirks Ranch, A**	**95.29**	**44**	⇓P	**P**	**04 45 38.8**	**0.0**
	baz=96,SNR=15						
K26A	**Motz Farm, Whi**	**95.31**	**46**	⇑P	**P**	**04 45 39.7**	**+0.8**
	baz=96						
OGNE	**Ogallala**	**95.34**	**48**	⇓P	**P**	**04 45 39.4**	**+0.3**
	baz=96						
D22A	**Cohagen**	**95.35**	**41**	⇑P	**P**	**04 45 40.0**	**+1.1**
	baz=96,SNR=7.3						
RSSD	**Black Hills**	**95.35**	**44**	eP	**P**	**04 45 39.3**	**0.0**
RSSD				e*PP	**pP**	**04 47 50.4**	**-0.5**
RSSD	**Black Hills**	**95.35**	**44**	eP	**P**	**04 45 39.3**	**0.0**
RSSD				epP	**pP**	**04 47 50.4**	**-0.5**
B21A	**Ellsworth Farm**	**95.43**	**40**	⇑P	**P**	**04 45 39.8**	**+0.6**
	baz=96,SNR=5.6						
T31A	**Randall Ranch,**	**95.44**	**52**	⇓P	**P**	**04 45 40.5**	**+0.9**
	baz=96						
R30A	**Dighton**	**95.48**	**51**	⇑P	**P**	**04 45 40.4**	**+0.6**
	baz=96,SNR=5.6						
P29A	**Atwood**	**95.55**	**50**	⇑P	**P**	**04 45 40.5**	**+0.4**
	baz=96,SNR=9.1						
N28A	**Pribbeno Ranch**	**95.57**	**48**	⇑P	**P**	**04 45 40.6**	**+0.5**
	baz=96,SNR=6.8						
E23A	**Ismay**	**95.59**	**42**	⇑P	**P**	**04 45 41.1**	**+1.0**
	baz=96						
L27A	**T5 Ranch, Ells**	**95.62**	**47**	⇓P	**P**	**04 45 41.0**	**+0.6**
	baz=96						
ULN	**Ulaanbaatar**	**95.78**	**320**	eP	**P**	**04 45 40.7**	**-0.3**
	comp=E,3.1nm,0.6s						
ULN	**Ulaanbaatar**	**95.78**	**320**	P	**P**	**04 45 40.9**	**-0.1**
C22A	**Vida**	**95.80**	**41**	⇓P	**P**	**04 45 41.7**	**+0.8**
	baz=96						
F24A	**Ekalaka**	**95.84**	**43**	⇑Pdiff	**P**	**04 45 41.9**	**+0.6**
	baz=96						
K27A	**Flueckinger Fa**	**95.94**	**46**	⇓Pdiff	**P**	**04 45 42.5**	**+0.7**
	baz=96						
D23A	**Lindsay**	**95.95**	**41**	⇑Pdiff	**P**	**04 45 42.6**	**+0.9**
	baz=96						
B22A	**Reddig Ranch S**	**95.98**	**40**	⇑Pdiff	**P**	**04 45 42.6**	**+0.8**
	baz=96						
P30A	**Selden**	**96.01**	**50**	⇓Pdiff	**P**	**04 45 43.0**	**+0.8**
	baz=96						
R31A	**Burdett**	**96.02**	**51**	⇓Pdiff	**P**	**04 45 42.6**	**+0.4**
	baz=96						
TRQA	**Tornquist**	**96.12**	**135**	eP	**P**	**04 45 43.9**	**+1.1**

comp=E,31nm,1.6s
SONM Songino Array 96.16 319 P **P** 04 45 42.2 -0.5
SONM PP **PP** 04 49 42.4 -4.4
SONM PKKPbc **PKKPbc** 05 02 26.5 -1.0
SONM Songino Array 96.16 319 P **P** 04 45 42.2 -0.5
comp=E,1.5nm,0.5s,baz=127,slow=6.9,SNR=7.9
SONM PP **PP** 04 49 42.4 -4.4
comp=E,2.2nm,0.9s,baz=104,slow=6.3,SNR=4.7
SONM PKKPbc **PKKPbc** 05 02 26.5 -1.0
comp=E,1.5nm,0.7s,baz=284,slow=2.2,SNR=6.9
E24A Baker 96.24 42 ⇓Pdiff **P** 04 45 43.8 +0.8
baz=96
C23A Lambert 96.25 41 ⇓Pdiff **P** 04 45 44.2 +1.2
baz=96
N29A Votaw Ranch, W 96.26 49 ⇓Pdiff **P** 04 45 44.2 +1.0
baz=96
INK Inuvik 96.31 16 P **P** 04 45 41.9 -0.7
INK PKKPbc **PKKPbc** 05 02 26.6 -1.0
INK Inuvik 96.31 16 P **P** 04 45 41.9 -0.7
comp=E,3.6nm,0.6s,baz=237,slow=3.9,SNR=10.0
INK PKKPbc **PKKPbc** 05 02 26.6 -1.0
comp=E,1.4nm,1.0s,baz=102,slow=5.1,SNR=3.3
A22A Carney Farms, 96.34 39 ⇑Pdiff **P** 04 45 44.2 +0.8
baz=97
O30A MW Ranch, Wils 96.40 49 ⇑Pdiff **P** 04 45 44.4 +0.5
baz=97
Q31A Ellis 96.40 51 ⇑Pdiff **P** 04 45 44.4 +0.5
baz=97
D24A Glendive 96.47 42 ⇓Pdiff **P** 04 45 45.1 +1.1
baz=97
M29A Burnside Ranch 96.47 48 ⇓Pdiff **P** 04 45 45.1 +0.9
baz=97
C24A Savage 96.59 41 ⇑Pdiff **P** 04 45 45.6 +1.1
baz=97
N30A Hueftle Ranch, 96.61 49 ⇑Pdiff **P** 04 45 45.6 +0.8
baz=97
P31A Stockton 96.62 50 ⇑Pdiff **P** 04 45 45.5 +0.7
baz=97
B23A Brockton 96.65 40 ⇓Pdiff **P** 04 45 45.6 +0.8
baz=97
J28A Allard Ranch, 96.90 46 ⇓Pdiff **P** 04 45 46.8 +0.7
baz=97
A23A Redstone 96.94 40 ⇑Pdiff **P** 04 45 46.9 +0.8
baz=97
GTA Gaotai 97.01 310 P **P** 04 45 47.0 +0.3
GTA pP **pP** 04 47 58.8 +0.3
GTA sP **sP** 04 48 57.0 -1.7
GTA PP **PP** 04 49 56.3 +2.9
GTA SKS **SKSac** 04 55 26.5 +0.6
GTA S **S** 04 56 15.3 -2.5
GTA sS sS 05 00 10.1 -5.4
GTA SS **SS** 05 03 15.0 +1.0
GTA pmax pmax
comp=E,7.0nm,1.2s
GTA pmax pmax
comp=E,96nm,5.7s
M30A Dale-Ortello V 97.07 48 ⇑Pdiff **P** 04 45 47.4 +0.6
baz=97
K29A Lazy Trails An 97.25 47 ⇓Pdiff **P** 04 45 48.5 +0.9
baz=98
A24A Westby 97.44 40 ⇑Pdiff **P** 04 45 48.8 +0.5
baz=98
BGNE Belgrade 98.21 49 ⇑Pdiff **P** 04 45 52.6 +0.7
baz=98
YKA Yellowknife Ar 98.66 25 P Pdif 04 45 53.1 -0.2
YKA pP pP 04 48 06.3 +1.0
YKA PP **PP** 04 50 01.9 -3.1
YKA PKiKP **PKiKP** 04 50 20.2 -0.4
YKA PKKPbc **PKKPbc** 05 02 17.6 -3.5
YKA Yellowknife Ar 98.66 25 P Pdif 04 45 53.1 -0.2
comp=Z,0.9nm,0.5s,baz=242,slow=4.4,SNR=25
YKA pP pP 04 48 06.3 +1.0
comp=Z,0.5nm,0.8s,baz=245,slow=4.2,SNR=3.2
YKA PP **PP** 04 50 01.9 -3.1
comp=Z,1.2nm,0.8s,baz=241,slow=7.5,SNR=7.8
YKA PKiKP **PKiKP** 04 50 20.2 -0.4
comp=Z,0.4nm,0.5s,baz=248,slow=1.0,SNR=5.7
YKA PKKPbc **PKKPbc** 05 02 17.5 -3.5
comp=Z,0.9nm,0.4s,baz=40,slow=2.4,SNR=21
ZAK Zakamensk 99.09 321 *eP* **Pdif** 04 45 53.0 -2.7
ZAK *e* 04 50 03.5
ZAK pmax pmax
comp=Z,2.0nm,1.0s
TLY Talaya 99.41 322 *i* P **Pdif** 04 45 56.2 -0.7
TLY pmax pmax
comp=Z,3.0nm,0.8s
MDND Maddock 99.69 42 ⇓Pdiff **Pdif** 04 45 59.2 +0.9
baz=100
TIXI Tiksi 100.07 345 *eP* **Pdif** 04 45 58.4 -0.9
TIXI pmax pmax
comp=Z,2.0nm,1.0s
TAPN Taplejung 102.26 295 *eP* **Pdif** 04 46 11.2 +0.6
comp=Z,12nm,0.9s
ODAN Odare 102.38 294 *eP* **Pdif** 04 46 11.5 +0.5
comp=Z,21nm,0.8s
ODAN Odare 102.38 294 *eP* **PKiKP** 04 50 28.5 -0.2
comp=Z,29nm,0.7s
LPAZ La Paz 102.65 114 P **Pdif** 04 46 15.9 +3.0
LPAZ PP **PP** 04 50 35.6 -0.3
LPAZ PKKPbc **PKKPbc** 05 02 09.1 -0.3
LPAZ La Paz 102.65 114 P **Pdif** 04 46 15.9 +3.0
comp=Z,1.5nm,0.8s,baz=259,slow=2.6,SNR=6.1
LPAZ PP **PP** 04 50 35.6 -0.3
comp=Z,2.9nm,1.1s,baz=228,slow=8.6,SNR=7.9
LPAZ PKKPbc **PKKPbc** 05 02 09.1 -0.3
comp=Z,1.9nm,0.6s,baz=338,slow=1.3,SNR=5.5
ULM Lac du Bonnet 102.84 41 PP PP 04 50 32.5 -3.8
ULM Lac du Bonnet 102.84 41 PP PP 04 50 32.5 -3.8
comp=Z,5.2nm,1.0s,baz=246,slow=5.1,SNR=4.3
RAMN Ramite 103.08 294 *eP* **Pdif** 04 46 15.3 +1.2
comp=Z,12nm,1.0s
RAMN Ramite 103.08 294 *eP* **PKiKP** 04 50 29.2 -0.8
comp=Z,24nm,0.7s
GUN Gumba 103.98 295 *eP* **PKiKP** 04 50 30.8 -1.0
comp=Z,13nm,0.5s
PKI Pulchoki 104.27 294 *eP* **PKiKP** 04 50 31.0 -1.3
comp=Z,25nm,0.8s
PKIN Phulchoki 104.29 294 *eP* **Pdif** 04 46 21.2 +1.7
comp=Z,11nm,0.7s
PKIN Phulchoki 104.29 294 *eP* **PKiKP** 04 50 31.3 -1.0
comp=Z,15nm,0.6s
KKN Kakani 104.45 294 *eP* **Pdif** 04 46 22.3 +2.1
comp=Z,24nm,0.8s
KKN Kakani 104.45 294 *eP* **PKiKP** 04 50 31.7 -0.8
comp=Z,7.6nm,0.3s
DMN Daman 104.54 294 *eP* **PKiKP** 04 50 31.6 -1.1
comp=Z,17nm,0.8s
ROSC El Rosal 105.83 91 PKKPbc PKKPbc 05 01 58.9 -0.5
ROSC El Rosal 105.83 91 PKKPbc PKKPbc 05 01 58.9 -0.5
comp=Z,4.6nm,0.6s,baz=96,slow=14,SNR=4.5
KOLN Koldanda 105.86 294 *eP* **Pdif** 04 46 29.6 +3.2
comp=Z,13nm,0.6s
KOLN Koldanda 105.86 294 *eP* **PKiKP** 04 50 33.4 -1.7
comp=Z,7.8nm,0.5s
DANN Dangsing 105.90 294 *eP* **Pdif** 04 46 29.5 +2.8
comp=Z,14nm,0.8s
DANN Dangsing 105.90 294 *eP* **PKiKP** 04 50 33.6 -1.7
comp=Z,17nm,0.5s
PYUN Piuthan 106.48 294 *eP* **PKiKP** 04 50 35.1 -1.1
SIV San Ignacio 108.72 117 PP PP 04 51 20.0 +1.0
SIV PKKPbc **PKKPbc** 05 01 50.1 -0.4
SIV San Ignacio 108.72 117 PP PP 04 51 20.0 +1.0
comp=Z,1.7nm,0.8s,baz=255,slow=8.3,SNR=4.7
SIV PKKPbc **PKKPbc** 05 01 50.1 -0.4
comp=Z,2.2nm,0.6s,baz=95,slow=5.4,SNR=9.6
KMSC Kings Mountain 108.85 59 ⇓Pdiff 04 50 39.4
baz=109
ZALV Zalesovo Beam 110.97 321 P **Pdif** 04 46 48.6 +0.4
ZALV *i* 04 50 42.1
ZALV Zalesovo Beam 110.97 321 Pdif **Pdif** 04 46 48.6 +0.4
ZALV PKiKP **PKiKP** 04 50 42.1 -1.5
ZALV SKP 04 53 22.8
ZALV Zalesovo Beam 110.97 321 Pdiff **Pdif** 04 46 48.6 +0.4
comp=Z,0.4nm,0.4s,baz=116,slow=6.6,SNR=3.1
ZALV PKiKP **PKiKP** 04 50 42.1 -1.5
comp=Z,12nm,0.7s,baz=158,slow=0.8,SNR=39
ZALV SKP 04 53 22.8
comp=Z,2.8nm,0.6s,baz=166,slow=0.6,SNR=5.4
MK31 Makanchi Array 111.38 313 *i* PKiKP **PKiKP** 04 50 43.4 -1.3
MK31 pmax pmax
comp=Z,5.0nm,0.5s
MK31 Makanchi Array 111.38 313 *eP*KPdf **PKiKP** 04 50 43.7 -0.9
MKAR Makanchi Array 111.38 313*c i*PKiKP **PKiKP** 04 50 43.5 -1.2
MKAR pmax pmax
comp=Z,7.0nm,0.5s
MKAR Makanchi Array 111.38 313 Pdif **Pdif** 04 46 51.9 +1.6
MKAR PKiKP **PKiKP** 04 50 43.5 -1.2
MKAR PP **PP** 04 51 40.3 +2.5
MKAR SKP 04 53 23.9
MKAR PKKPbc **PKKPbc** 05 01 41.9 -0.5
MKAR PKKPab **PKKPab** 05 01 53.7 +1.2
MKAR SKKPbc SKKPbc 05 04 27.3 -3.3
MKAR Makanchi Array 111.38 313 Pdiff **Pdif** 04 46 51.9 +1.6
comp=Z,1.0nm,0.6s,baz=99,slow=5.6,SNR=9.4
MKAR PKiKP **PKiKP** 04 50 43.5 -1.2
comp=Z,6.8nm,0.5s,baz=214,slow=1.3,SNR=72
MKAR PP **PP** 04 51 40.3 +2.5
comp=Z,2.6nm,0.8s,baz=105,slow=8.0,SNR=3.6
MKAR SKP 04 53 23.9
comp=Z,1.9nm,0.6s,baz=95,slow=1.3,SNR=4.3
MKAR PKKPbc **PKKPbc** 05 01 41.9 -0.5
comp=Z,2.9nm,0.7s,baz=281,slow=3.8,SNR=20
MKAR PKKPab **PKKPab** 05 01 53.7 +1.2
comp=Z,2.8nm,0.8s,baz=280,slow=4.0,SNR=11
MKAR SKKPbc SKKPbc 05 04 27.3 -3.3
comp=Z,0.7nm,0.6s,baz=271,slow=3.2,SNR=5.4
NVS Novosibirsk 112.02 322 *eP*KiKP **PKiKP** 04 50 43.3 -2.2
NVS *e* 04 56 30.1
NVS pmax pmax
comp=Z,6.0nm,0.6s
NVS pmax pmax
comp=N,1.0nm,0.3s
NVS pmax pmax
comp=E,3.0nm,0.6s
NVS pmax pmax
comp=Z,2.0nm,0.6s
NVS pmax pmax
comp=N,1.0nm,0.4s
NVS pmax pmax
comp=E,2.0nm,0.6s
NVS pmax pmax
comp=N,1.0nm,0.4s
NVS pmax pmax
comp=E,11nm,0.7s
SADO Sadowa 112.49 49 PKiKP **PKiKP** 04 50 45.2 -1.6
SADO SKP 04 53 27.1
SADO PKKPbc **PKKPbc** 05 01 38.2 -0.5
SADO PKKPab **PKKPab** 05 01 48.0 +0.4
SADO Sadowa 112.49 49 PKiKP **PKiKP** 04 50 45.2 -1.6
comp=E,3.4nm,0.9s,baz=324,slow=4.9,SNR=4.6
SADO SKP 04 53 27.1
comp=E,2.4nm,0.8s,baz=295,slow=3.6,SNR=3.2
SADO PKKPbc **PKKPbc** 05 01 38.2 -0.5
comp=E,2.5nm,0.5s,baz=110,slow=3.6,SNR=8.5
SADO PKKPab **PKKPab** 05 01 48.0 +0.4
comp=E,2.6nm,0.6s,baz=82,slow=4.6,SNR=5.1
KURK Kurchatov 114.33 317*d i*PKiKP PKPdf 04 50 48.9 -1.2
KURK pmax pmax
comp=Z,11nm,0.8s
KURK Kurchatov 114.33 317 Pdif **Pdif** 04 47 10.0 +6.8
KURK *e*PKPdf PKPdf 04 50 48.7 -1.4
KURK PKiKP **PKiKP** 04 50 48.9 -1.2
KURK PP PP 04 51 46.6 -12
KURK SKP 04 53 29.9
KURK PKKPbc **PKKPbc** 05 01 31.9 -0.9
KURK PKKPab **PKKPab** 05 01 40.3 +1.1
KURK SKKPbc SKKPbc 05 04 19.1 -2.9
KURBB Kurchatov Arra 114.37 317 Pdiff **Pdif** 04 47 10.0 +6.6
comp=Z,0.3nm,0.7s,baz=93,slow=3.5,SNR=4.6
KURBB PKiKP PKPdf 04 50 48.9 -1.3
comp=Z,9.0nm,0.6s,baz=110,slow=1.8,SNR=70
KURBB PP PP 04 51 46.6 -12
comp=Z,2.7nm,0.8s,baz=97,slow=6.3,SNR=7.2
KURBB SKP 04 53 29.9
comp=Z,2.5nm,0.7s,baz=92,slow=1.9,SNR=7.6
KURBB PKKPbc **PKKPbc** 05 01 31.9 -0.7
comp=Z,1.3nm,0.8s,baz=276,slow=4.1,SNR=7.4
KURBB PKKPab **PKKPab** 05 01 40.3 +1.3
comp=Z,3.3nm,0.8s,baz=276,slow=5.0,SNR=8.9
KURBB SKKPbc SKKPbc 05 04 19.1 -2.8
comp=Z,1.8nm,0.8s,baz=277,slow=3.8,SNR=10.0
ULHL Ulahol 114.94 307 P PKPdf 04 50 51.5 -0.4
SNR=5.9
TKM2 Tokmak 2 115.51 308 *e*PKiKP **PKPdf** 04 50 52.0 -0.9
TKM2 Tokmak 2 115.51 308 *e*PKPdf **PKPdf** 04 50 52.0 -0.9
TKM2 Tokmak 2 115.51 308 P **PKPdf** 04 50 52.1 -0.9
SNR=16
KZA Kyzart 115.65 307 P **PKPdf** 04 50 53.4 -0.1
SNR=10.0
KBK Karagaybulak 115.95 308 P **PKPdf** 04 50 53.1 -0.6
SNR=6.2
CHMS Chumysh 116.13 308 P **PKPdf** 04 50 53.2 -0.8
SNR=8.5
AAK Ala-Archa 116.28 308*c i*PKiKP **PKPdf** 04 50 53.8 -0.6
AAK Ala-Archa 116.28 308 P **PKPdf** 04 50 53.8 -0.6
SNR=5.4
USP Ospenovka 116.35 308 P **PKPdf** 04 50 53.6 -0.8
SNR=15
EKS2 Erkin-Say 116.81 308 *e*PKiKP **PKPdf** 04 50 54.8 -0.5
EKS2 Erkin-Say 116.81 308 *e*PKPdf **PKPdf** 04 50 54.8 -0.5
EKS2 Erkin-Say 116.81 308 P **PKPdf** 04 50 54.9 -0.4
SNR=7.3
AML Almayashu 116.81 307 P **PKPdf** 04 50 55.4 -0.3
SNR=25
VOSK Vostochnaya 119.16 319 PKiKP **PKPdf** 04 50 58.0 -1.4
VOSK pmax pmax
comp=Z,14nm,0.5s
KK31 Karatay Array 119.24 308 *i* PKiKP **PKPdf** 04 50 58.8 -1.1
KK31 pmax pmax
comp=Z,12nm,0.6s
KKAR Karatay Array 119.24 308 *e*PKiKP **PKPdf** 04 50 59.1 -0.8
KKAR Karatay Array 119.24 308 *e*PKPdf **PKPdf** 04 50 59.1 -0.8
BDFB Brasilia 119.36 124 PKP **PKPdf** 04 51 00.3 -0.8
BDFB SKP 04 53 38.8
BDFB PKKPbc **PKKPbc** 05 01 15.8 +0.4
BDFB Brasilia 119.36 124 PKP **PKPdf** 04 51 00.3 -0.8
comp=Z,3.3nm,0.4s,baz=175,slow=5.3,SNR=9.3
BDFB SKP 04 53 38.8
comp=Z,3.6nm,0.8s,baz=342,slow=9.9,SNR=4.1
BDFB PKKPbc **PKKPbc** 05 01 15.8 +0.4
comp=Z,3.9nm,0.7s,baz=148,slow=6.3,SNR=11
BVA0 Borovoye Array 119.51 319 *i* PKiKP **PKPdf** 04 50 59.1 -0.9
BVA0 pmax pmax
comp=Z,12nm,0.4s
BVAR Borovoye Array 119.51 319 PKiKP **PKPdf** 04 50 59.3 -0.8
BVAR 04 52 31.9
BVAR Borovoye Array 119.51 319 PKP **PKPdf** 04 50 59.3 -0.8
BVAR PP **PP** 04 52 31.9 -1.6
BVAR SKP 04 53 40.3
BVAR PKKPbc **PKKPbc** 05 01 14.4 -0.5
BVAR Borovoye Array 119.51 319 PKP **PKPdf** 04 50 59.3 -0.8
comp=Z,23nm,0.4s,baz=114,slow=2.6,SNR=94
BVAR PP **PP** 04 52 31.9 -1.6
comp=Z,4.8nm,0.8s,baz=91,slow=5.9,SNR=6.5
BVAR SKP 04 53 40.3
comp=Z,4.2nm,0.7s,baz=11,slow=0.8,SNR=5.7
BVAR PKKPbc **PKKPbc** 05 01 14.4 -0.5
comp=Z,1.2nm,0.7s,baz=261,slow=5.9,SNR=4.2
BRVK Borovoye 119.57 319*c i*PKiKP **PKPdf** 04 50 59.2 -0.9
BRVK pmax pmax
comp=Z,14nm,0.7s
BRVK Borovoye 119.57 319 *e*PKPdf **PKPdf** 04 50 58.9 -1.3
ZRNK Zerenda 120.35 319 PKiKP **PKPdf** 04 51 00.5 -1.1
ZRNK pmax pmax
comp=Z,22nm,0.6s
SCHQ Schefferville 120.88 38 PKP **PKPdf** 04 51 01.5 -1.2
SCHQ PKKPbc **PKKPbc** 05 01 09.0 -0.9
SCHQ Schefferville 120.88 38 PKP **PKPdf** 04 51 01.5 -1.2
comp=Z,8.0nm,0.9s,baz=289,slow=4.8,SNR=10
SCHQ PKKPbc **PKKPbc** 05 01 09.0 -0.9
comp=Z,1.2nm,0.5s,baz=39,slow=9.6,SNR=7.5
KBS Kingsbay 123.01 357*d i*PKiKP **PKPdf** 04 51 05.7 -0.4
KBS pmax pmax
comp=Z,10.0nm,1.0s
SPITS Spitsbergen Ar 123.50 356 PKKPbc PKKPbc 05 00 58.8 -1.7
SPITS Spitsbergen Ar 123.50 356 PKKPbc PKKPbc 05 00 58.8 -1.7
comp=Z,3.1nm,0.6s,baz=161,slow=7.8,SNR=18
BOSA Boshof 124.10 206 PKP **PKPdf** 04 51 10.0 +0.1
BOSA PKKPbc **PKKPbc** 05 00 56.4 -2.1
BOSA Boshof 124.10 206 PKP **PKPdf** 04 51 10.0 +0.1
comp=Z,6.2nm,0.6s,baz=140,slow=2.7,SNR=19
BOSA PKKPbc **PKKPbc** 05 00 56.4 -2.1
comp=Z,2.7nm,0.5s,baz=172,slow=3.4,SNR=4.8
DAG Danmarks Havn 124.59 5 *i* PKiKP **PKPdf** 04 51 07.6 -1.5
DAG pmax pmax
comp=Z,7.0nm,0.8s
DAG Danmarks Havn 124.59 5 *i* P **PKPdf** 04 51 07.6 -1.5
comp=Z,8.7nm,0.8s
SVE Sverdlovsk 124.62 325 *e*PKiKP **PKPdf** 04 51 09.6 -0.1
SVE pmax pmax
comp=Z,28nm,0.6s
SFJD Kangerlussuaq 125.06 22 PKP **PKPdf** 04 51 08.9 -1.3
SFJD Kangerlussuaq 125.06 22 *i* P **PKPdf** 04 51 08.9 -1.3
comp=Z,4.7nm,0.7s
SFJD Kangerlussuaq 125.06 22 PKP **PKPdf** 04 51 08.9 -1.3
comp=Z,6.8nm,0.4s,baz=305,slow=2.6,SNR=8.6
SUMG Summit 125.15 13 ⇓*i*PKiKP **PKPdf** 04 51 10.5 -0.3
SUMG pmax pmax
comp=Z,14nm,0.9s
SUMG Summit 125.15 13 *e*PKPdf **PKPdf** 04 51 10.4 -0.5
SUMG Summit 125.15 13 ⇓*i*P **PKPdf** 04 51 10.5 -0.3
comp=Z,14nm,0.9s
ARU Arti 125.83 324 *i* PKiKP **PKPdf** 04 51 11.7 -0.3
ARU 04 53 11.8
ARU 04 57 18.2
SOKR Solikamsk 125.85 329*c i*PKiKP **PKPdf** 04 51 11.6 -0.3
SOKR pmax pmax
comp=Z,30nm,0.8s
AB31 Akbulak array 126.38 316 *i* PKiKP **PKPdf** 04 51 12.7 -0.6
AB31 pmax pmax
comp=Z,4.0nm,0.6s
ABKAR Akbulak array 126.38 316 *e*PKPdf **PKPdf** 04 51 13.0 -0.3
AKTO Aktyubinsk 127.42 317 PKiKP **PKPdf** 04 51 14.9 -0.4
AKTO Aktyubinsk 127.42 317 PKP **PKPdf** 04 51 14.9 -0.4
AKTO SKPbc SKiKP 04 53 39.8 -15
AKTO SKP 04 53 56.5
AKTO Aktyubinsk 127.42 317 PKP **PKPdf** 04 51 14.9 -0.4
comp=Z,15nm,0.6s,baz=91,slow=4.4,SNR=49
AKTO SKPbc SKiKP 04 53 39.8 -15
comp=Z,1.8nm,0.5s,baz=103,slow=6.6,SNR=4.4
AKTO SKP 04 53 56.5
comp=Z,3.8nm,0.7s,baz=356,slow=1.2,SNR=4.4
LVZ Lovozero 129.68 344 *i* PKiKP **PKPdf** 04 51 18.8 -0.3
KEV Kevo 129.90 348 *e*pkp PKPpre 04 51 06.2
KEV Kevo 129.90 348 *e*PKiKP **PKPdf** 04 51 18.6 -0.8
KEV Kevo 129.90 348 *e*PKPdf **PKPdf** 04 51 18.6 -0.8
SCO Scoresbysund 129.95 10 *i* PKiKP **PKPdf** 04 51 19.3 -0.2
SCO pmax pmax
comp=Z,5.0nm,1.0s
SCO Scoresbysund 129.95 10 *i* P **PKPdf** 04 51 19.3 -0.2
comp=Z,5.4nm,1.0s
APA Apatity 130.25 344⇓*e*PKiKP **PKPdf** 04 51 20.6 +0.5
APA *i* 04 53 49.0
APA pmax pmax
comp=Z,9.0nm,0.6s
ARCES ARCESS Array B 130.36 349 PKPpre PKPpre 04 51 07.7
ARCES PKP **PKPdf** 04 51 19.5 -0.8
ARCES SKPbc **SKPab** 04 53 49.1 +0.7
ARCES PKKP **PKKPdf** 05 01 20.7 -3.0
ARCES SKKPbc **SKKPbc** 05 03 26.2 -4.0
ARCES ARCESS Array B 130.36 349 PKhKP PKPpre 04 51 07.7
comp=Z,0.8nm,0.5s,baz=67,slow=1.1,SNR=5.3
ARCES PKP **PKPdf** 04 51 19.5 -0.8
comp=Z,27nm,0.7s,baz=0.0,slow=1.9,SNR=51
ARCES SKPbc **SKPab** 04 53 49.1 +0.7
comp=Z,16nm,0.7s,baz=28,slow=5.5,SNR=22
ARCES PKKP **PKKPdf** 05 01 20.7 -3.0
comp=Z,0.5nm,0.3s,baz=208,slow=3.1,SNR=16
ARCES SKKPbc **SKKPbc** 05 03 26.2 -4.0
comp=Z,1.3nm,0.6s,baz=149,slow=2.8,SNR=7.2
ARE0 ARCESS Array S 130.36 349 *e*PKPdf **PKPdf** 04 51 19.0 -1.3
KTK1 Kautokeino 131.22 349 *e*P **PKPdf** 04 51 21.8 -0.1
KTK1 AMB AMB 04 51 22.6
comp=Z,6.2nm,0.5s
TMCR Tamitsa 131.32 339 *e*PKiKP **PKPdf** 04 51 19.2 -3.0
TMCR pmax pmax
comp=Z,14nm,0.4s
KLMR Klimovskoe 132.89 335 *e*PKiKP PKPdf 04 51 17.8 -7.5
KLMR *e* 04 53 57.0
KLMR pmax pmax
comp=Z,8.0nm,0.7s
LSZ Lusaka 133.90 218 *e*PKPdf **PKPdf** 04 51 29.7 +0.9
JOF Joensuu 134.33 341 *e*pkp PKPpre 04 51 13.4
JOF Joensuu 134.33 341 *e*PKHKP PKPpre 04 51 13.4
RCBR Riachuelo 134.73 124 PKP **PKPdf** 04 51 30.7 +0.5
RCBR SKPbc **SKPbc** 04 54 03.8 -0.6
RCBR Riachuelo 134.73 124 PKP **PKPdf** 04 51 30.7 +0.5
comp=Z,6.1nm,0.8s,baz=252,slow=15,SNR=5.8
RCBR SKPbc **SKPbc** 04 54 03.8 -0.6
comp=Z,13nm,0.8s,baz=243,slow=4.1,SNR=5.7
TSUM Tsumeb 135.57 203 PKPpre PKPpre 04 51 20.6
TSUM PKP **PKPdf** 04 51 30.8 -1.0
TSUM SKPbc **SKPbc** 04 54 08.8 +1.7
TSUM Tsumeb 135.57 203 PKhKP PKPpre 04 51 20.6
baz=101,slow=5.4
TSUM PKP **PKPdf** 04 51 30.8 -1.0
comp=Z,7.1nm,0.7s,baz=150,slow=5.6
TSUM SKPbc **SKPbc** 04 54 08.8 +1.7
comp=Z,14nm,1.0s,baz=135,slow=4.8,SNR=8.6
KAF Kangasniemi 136.41 343 *e*pkp PKPpre 04 51 17.7
KAF Kangasniemi 136.41 343 *e*PKHKP PKPpre 04 51 17.7
FIA1 FINESS Array S 137.02 342 *e*PKPdf **PKPdf** 04 51 31.8 -1.2
FINES FINESS Array B 137.02 342 PKPpre PKPpre 04 51 20.7
FINES PKP **PKPdf** 04 51 32.0 -1.0
FINES SKPbc **SKPbc** 04 54 10.9 +1.2
FINES FINESS Array B 137.02 342 PKhKP PKPpre 04 51 20.7
comp=Z,4.9nm,0.6s,baz=55,slow=7.2,SNR=11
FINES PKP **PKPdf** 04 51 32.0 -1.0
comp=Z,9.7nm,0.5s,baz=64,slow=3.6,SNR=14
FINES SKPbc **SKPbc** 04 54 10.9 +1.2
comp=Z,13nm,0.6s,baz=45,slow=5.9,SNR=12
VRHR Novokhopersk 137.08 323 *e*PKiKP **PKPdf** 04 51 32.6 -0.8
VRHR pmax pmax
comp=Z,40nm,0.6s
VRHR pmax pmax
comp=N,10.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.5s
KMBO Kilima Mbogo 137.31 242 PKPpre PKPpre 04 51 25.6
KMBO PKP **PKiKP** 04 51 36.6 -0.8
KMBO SKPbc **SKPbc** 04 54 14.3 +1.8
KMBO Kilima Mbogo 137.31 242 PKhKP PKPpre 04 51 25.6
comp=E,2.4nm,0.6s,baz=186,slow=9.7,SNR=7.9
KMBO PKP **PKiKP** 04 51 36.6 -0.8
comp=E,5.4nm,0.6s,baz=63,slow=5.6,SNR=12
KMBO SKPbc **SKPbc** 04 54 14.3 +1.8
comp=E,16nm,0.9s,baz=51,slow=2.5,SNR=17
MIB Mutribah 137.49 290 *eP* PKPpre 04 51 23.5
MIB AMb AMB 04 51 30.7
comp=Z,30nm,0.6s
NAY Al-Naaiem 137.56 289 *eP* PKPpre 04 51 23.8
NAY AMb AMB 04 51 37.2
comp=Z,18nm,0.6s
OBN Obninsk 137.59 330 ⇓*i*PKiKP **PKPdf** 04 51 35.4 +1.2
OBN *e* 04 54 34.7
OBN *i* SS SS 05 11 47.2 -3.4
OBN pmax pmax
comp=Z,17nm,0.9s
VSR Storozhevoye 138.39 324 *e*PKiKP **PKPdf** 04 51 35.5 -0.3
VSR pmax pmax
comp=Z,9.0nm,0.5s
VSR pmax pmax
comp=N,5.0nm,0.3s
VSR pmax pmax
comp=E,4.0nm,0.4s
VORD Divnogorie 138.44 323 *e*PKiKP **PKPdf** 04 51 36.4 +0.5
VORD pmax pmax
comp=Z,10.0nm,0.5s
VORD pmax pmax
comp=N,9.0nm,0.9s
VORD pmax pmax
comp=E,10.0nm,1.1s
GNI Garni 138.65 306 PKP **PKPdf** 04 51 36.3 -0.6
GNI *e*PKPdf **PKiKP** 04 51 36.7 -2.5
GNI Garni 138.65 306 PKP **PKPdf** 04 51 36.3 -0.6
comp=E,6.4nm,0.4s,baz=356,slow=21,SNR=5.0
KBZ Khabaz 139.06 312 PKHKP PKPpre 04 51 30.0
KBZ 04 51 38.0
KBZ Khabaz 139.06 312 PKPpre PKPpre 04 51 30.0
KBZ PKP **PKPdf** 04 51 38.0 +0.8
KBZ SKPbc **SKPbc** 04 54 17.4 +1.4
KBZ SKPab **SKPab** 04 54 28.4 +1.1
KBZ Khabaz 139.06 312 PKhKP PKPpre 04 51 30.0
comp=E,2.7nm,0.8s,baz=136,slow=3.6,SNR=7.2
KBZ PKP **PKPdf** 04 51 38.0 +0.8
comp=E,3.7nm,0.7s,baz=181,slow=4.1,SNR=4.1
KBZ SKPbc **SKPbc** 04 54 17.4 +1.4
comp=E,2.3nm,0.6s,baz=127,slow=4.1,SNR=6.0
KBZ SKPab **SKPab** 04 54 28.4 +1.1
comp=E,2.9nm,0.9s,baz=261,slow=6.3,SNR=5.6
KIV Kislovodsk 139.13 312 *e*PKiKP **PKPdf** 04 51 39.6 +2.1
KIV pmax pmax
comp=Z,7.0nm,0.7s
GEVA Gevas 140.30 304 *i* P PKPdf 04 51 33.5 -6.4
DAGI Agillar 140.51 308 *i* P **PKPdf** 04 51 35.1 -5.0
NB2 NORSAR Subarra 140.51 352 PKP PKPpre 04 51 32.7

comp=Z,2.9nm,0.4s,baz=10,slow=3.2
NB2 NORSAR Subarra 140.51 352 PKP PKPpre 04 51 32.7
baz=10,slow=3.2
NOA NORSAR Array B 140.51 352 PKPpre PKPpre 04 51 32.7
NOA PKP PKPdf 04 51 40.8 +1.3
NOA SKPbc SKiKP 04 54 20.5 -0.9
NOA SKPab SKPab 04 54 34.8 +1.5
NOA NORSAR Array B 140.51 352 PKhKP PKPpre 04 51 32.7
comp=Z,4.0nm,0.5s,baz=353,slow=2.2,SNR=48
NOA PKP PKPdf 04 51 40.8 +1.3
comp=Z,5.2nm,0.5s,baz=14,slow=4.1,SNR=15
NOA SKPbc SKiKP 04 54 20.5 -0.9
comp=Z,11nm,0.8s,baz=14,slow=4.2,SNR=14
NOA SKPab SKPab 04 54 34.8 +1.5
comp=Z,3.0nm,0.8s,baz=16,slow=3.2,SNR=3.6
DDEM Demirkent 140.68 308 *i* P PKPdf 04 51 35.0 -5.4
DBAD Bademkaya 140.69 308 *i* P PKPdf 04 51 35.1 -5.3
NAO01 NORSAR Array S 140.75 352 *e*PKPdf PKPdf 04 51 34.3 -5.5
HFS Hagfors 141.01 350 PKPpre PKPpre 04 51 34.2
HFS SKPbc SKiKP 04 54 21.6 -0.8
HFS SKKPbc SKKPab 05 02 47.0 -2.6
HFS Hagfors 141.01 350 PKhKP PKPpre 04 51 34.2
comp=Z,30nm,0.5s,baz=64,slow=3.4,SNR=314
HFS SKPbc SKiKP 04 54 21.6 -0.8
comp=Z,17nm,0.8s,baz=284,slow=0.6,SNR=12
HFS SKKPbc SKKPab 05 02 47.0 -2.6
comp=Z,2.0nm,0.8s,baz=253,slow=1.5,SNR=5.9
SUE Sulen 141.10 357 *e*P PKPdf 04 51 35.9 -4.5
SUE AMB AMB 04 51 36.2
comp=Z,22nm,0.7s
SOC Sochi 141.29 313 *i* P Pdif 04 48 59.1 -4.2
SOC *i* 04 51 42.3
SOC *e* 04 54 51.7
SOC *e*PPP PPP 04 58 08.5
SOC pmax pmax
comp=Z,20nm,0.5s
IZAR Zarasai 141.47 337 *e*P PKPdf 04 51 36.9 -4.3
IZAR AMB AMB 04 51 38.2
comp=Z,16nm,0.8s
IDID Didziasalis 141.62 336 *e*P PKPdf 04 51 37.2 -4.3
IDID AMB AMB 04 51 38.5
comp=Z,16nm,0.8s
BNGL BINGOL 141.62 305 *i* P PKPdf 04 51 39.3 -3.0
ASK Askoy 141.64 356 *e*P PKPdf 04 51 36.9 -4.4
ISAL Salakas 141.65 337 *e*P PKPdf 04 51 37.5 -4.1
ISAL AMB AMB 04 51 39.6
comp=Z,14nm,0.9s
RUND Rundenannen 141.70 356 *e*P PKPdf 04 51 36.4 -5.2
RUND AMB AMB 04 51 38.0
comp=Z,49nm,0.8s
BER Bergen 141.73 356 *e*P PKPdf 04 51 36.5 -5.0
BER AMB AMB 04 51 37.4
comp=Z,18nm,0.7s
IIGN Ignalina 141.78 336 *e*P PKPdf 04 51 37.9 -3.9
IIGN AMB AMB 04 51 39.1
comp=Z,19nm,0.7s
KOPT Kop Dagi 141.84 307 *i* P PKPdf 04 51 40.2 -2.6
EGD Espegrend 141.85 356 *e*P PKPdf 04 51 36.9 -4.8
EGD AMB AMB 04 51 40.6
comp=Z,39nm,1.9s
NACGM Naroch 141.91 336 *e* PKPdf 04 51 35.0 -7.0
KONO Kongsberg 142.07 353 *e*P PKPdf 04 51 38.1 -4.1
KONO AMB AMB 04 51 39.7
comp=Z,34nm,0.9s
KONO Kongsberg 142.07 353 *e*PKHKP PKPdf 04 51 38.0 -4.1
KONO Kongsberg 142.07 353 *e*PKPdf PKPdf 04 51 38.0 -4.1
ODD1 Odda 142.11 355 *e*P PKPdf 04 51 36.5 -5.8
ODD1 AMB AMB 04 51 38.2
comp=Z,16nm,0.7s
MARD Mardin 142.27 303 *i* P PKPdf 04 51 40.5 -2.9
ANN Anapa 142.34 316 *i* PKHKP PKPpre 04 51 39.3
ANN pmax pmax
comp=Z,67nm,0.9s
KBSD Kabsdagh 142.51 302 *e*P PKPdf 04 51 41.2 -2.5
BLS5 Blasjo 142.61 355 *e*P PKPdf 04 51 39.3 -3.9
BLS5 AMB AMB 04 51 40.7
comp=Z,13nm,0.8s
KELT Kelkit 142.72 308 *i* P PKPdf 04 51 42.5 -1.7
SFNV Sufian 142.97 301 *e*P PKPdf 04 51 42.8 -1.8
STAV Stavanger 143.15 356 *e*P PKPab 04 51 42.3 +0.1
STAV AMB AMB 04 51 42.6
comp=Z,44nm,0.6s
GRSN GIRESUNGRSN 143.20 309 *i* P PKPab 04 51 42.4 -0.6
ELZG Elazig 143.37 305 *i* P PKPdf 04 51 45.0 -0.4
SUSE Susehri 143.47 308 *i* P PKPbc 04 51 44.5 +0.1
HOMB Homborsund 143.54 353 *e*P PKPab 04 51 43.4 -0.3
HOMB AMB AMB 04 51 44.9
comp=Z,210nm,0.8s
SNART Snartemo 143.61 354 *e*P PKPbc 04 51 41.6 -2.4
SNART AMB AMB 04 51 42.2
comp=Z,92nm,0.8s
MNKR ALMNKUR 143.73 301 *e*P PKPab 04 51 45.5 +0.2
AKASG Malin Array Be 143.82 329 PKIKP PKPbc 04 51 43.8 -1.1
AKASG Malin Array Be 143.82 329 PKP PKPbc 04 51 43.8 -1.0
AKASG SKPbc SKiKP 04 54 28.6 +0.1
AKASG Malin Array Be 143.82 329 PKP PKPbc 04 51 43.8 -1.0
comp=Z,76nm,0.5s,baz=44,slow=4.3,SNR=299
AKASG SKPbc SKiKP 04 54 28.6 +0.1
comp=Z,15nm,0.8s,baz=46,slow=2.4,SNR=21
AK01 Malin Array Si 143.83 329 *e*PKPdf PKPbc 04 51 43.9 -1.0
KIEV Kiev 143.83 329 *e*PKIKP PKPbc 04 51 43.9 -1.0
KIEV Kiev 143.83 329 *e*PKPdf PKPbc 04 51 43.9 -1.0
AK02 Malin Array Si 143.86 329 *e*PKPdf PKPbc 04 51 44.1 -0.9
SUW Suwalki 143.94 337⇓*i*PKIKP PKPbc 04 51 44.8 -0.3
SUW Suwalki 143.94 337 *e*PKPdf PKPbc 04 51 44.8 -0.3
SUW Suwalki 143.94 337 *i* PKPdf PKPbc 04 51 44.8 -0.3
KSRV Kasrt alli 143.96 301 *e*P PKPdf 04 51 46.4 +0.2
ATAB Bozova 144.16 304 *i* P PKPab 04 51 47.3 +0.5
MVH1 Achvaich 144.19 4 *e*P PKPbc 04 51 44.7 -1.1
MVH1 Achvaich 144.19 4 P PKPbc 04 51 44.7 -1.1
AKCD Akcadag 144.23 305 *i* P PKPab 04 51 47.3 +0.1
SIM Simferopol' 144.39 318*d i*PKIKP PKPbc 04 51 47.0 +0.2
SIM pmax pmax
comp=Z,148nm,0.8s
JHLN Al Jahlan 144.45 301 *e*P PKPab 04 51 47.8 -0.2
KAC Achnashellach 144.52 5 *e*P PKPdf 04 51 46.1 -0.4
KAC Achnashellach 144.52 5 P PKPdf 04 51 46.1 -0.4
MCD Coleburn Disti 144.59 4 *e*P PKPdf 04 51 45.8 -0.8
MCD Coleburn Disti 144.59 4 P PKPdf 04 51 45.8 -0.8
KPL Plockton 144.65 6 *e*P PKPdf 04 51 46.1 -0.5
KPL Plockton 144.65 6 P PKPdf 04 51 46.1 -0.5
MDO Dochfour 144.66 5 *e*P PKPdf 04 51 45.9 -0.8
MDO Dochfour 144.66 5 P PKPdf 04 51 45.9 -0.8
SLMH Al Salmeh 144.74 302 *e*P PKPbc 04 51 48.6 +0.3
GZT Gaziantep 144.75 304 *i* P PKPab 04 51 48.9 -0.4
KSB Sheil Bridge 144.80 6 *e*P PKPdf 04 51 46.9 -0.1
KSB Sheil Bridge 144.80 6 P PKPdf 04 51 46.9 -0.1
MUD Monsted U'grnd 145.23 352⇓*i*PKIKP PKPbc 04 51 48.6 -0.3
MUD pmax pmax
comp=Z,56nm,0.9s
MUD Monsted U'grnd 145.23 352⇓*i*P PKPbc 04 51 48.6 -0.3
comp=Z,56nm,0.9s
PINB Pinarbasi 145.26 306 *i* P PKPdf 04 51 48.7 -0.1
KUZU Kuzuini 145.28 303 *i* P PKPbc 04 51 50.1 +0.3
DRUM Mains of Drumt 145.29 3 *e*P PKPdf 04 51 48.1 +0.3
DRUM Mains of Drumt 145.29 3 P PKPdf 04 51 48.1 +0.3
BOYT Boyabat 145.39 312 *i* P PKPab 04 51 51.0 -0.6
COP Copenhagen 145.44 348⇓*i*PKIKP PKPbc 04 51 49.3 -0.2
COP pmax pmax
comp=Z,40nm,0.8s
COP Copenhagen 145.44 348⇓*i*P PKPbc 04 51 49.3 -0.2
comp=Z,40nm,0.8s
BSD Bornholm Skovb 145.44 345⇓*i*PKIKP PKPbc 04 51 49.1 -0.5
BSD pmax pmax
comp=Z,86nm,0.8s
BSD Bornholm Skovb 145.44 345⇓*i*P PKPbc 04 51 49.1 -0.5
comp=Z,86nm,0.8s
CTKT Corum 145.78 310 *i* P PKPbc 04 51 51.8 +0.5
LLD Lille Linde 145.81 348 *i* PKIKP PKPdf 04 51 49.0 +0.3
LLD pmax pmax
comp=Z,76nm,0.8s
LLD Lille Linde 145.81 348 *i* P PKPdf 04 51 49.0 +0.3
comp=Z,76nm,0.8s
ZALF Zalf 145.84 296 *e*P PKPbc 04 51 52.0 +0.5
EAB Aberfoyle 145.90 5 *e*P PKPbc 04 51 49.9 -0.9
EAB Aberfoyle 145.90 5 P PKPbc 04 51 49.9 -0.9
COBT Iskenderun 145.98 303 *i* P PKPbc 04 51 52.6 +0.6
WRDH Warideh 146.10 301 *e*P PKPbc 04 51 52.3 +0.2
EDI Edinburgh 146.25 4 *e*P PKPdf 04 51 48.7 -0.8
EDI Edinburgh 146.25 4 P PKPdf 04 51 48.7 -0.8
PGBU Glenifferbraes 146.26 5 *e*P PKPbc 04 51 51.2 -0.7
PGBU Glenifferbraes 146.26 5 P PKPbc 04 51 51.2 -0.7
BIDA Albida 146.28 300 *e*P PKPbc 04 51 53.6 +0.9

ESY Stoneypath 146.28 3 *e*P PKPbc 04 51 50.8 -1.1
ESY Stoneypath 146.28 3 P PKPbc 04 51 50.8 -1.1
EAU Auchinoon 146.31 4 *e*P PKPbc 04 51 51.1 -0.9
EAU Auchinoon 146.31 4 P PKPbc 04 51 51.1 -0.9
ASF Jabal al Asfar 146.31 295 PKPbc PKPbc 04 51 53.1 +0.2
ASF Jabal al Asfar 146.31 295 PKPbc PKPbc 04 51 53.1 +0.2
comp=Z,49nm,0.7s,baz=342,slow=1.7,SNR=88
HAWK Haweek 146.31 299 *e*P PKPbc 04 51 53.6 +0.7
ILGA Ilgaz 146.36 312 *i* P PKPbc 04 51 53.5 +0.5
FKH Fakeheh 146.37 299 *e*P PKPbc 04 51 53.6 +0.6
SALA Sala 146.37 296 *e*P PKPbc 04 51 53.6 +0.4
AVNT Avonos 146.38 307 *i* P PKPdf 04 51 50.1 -0.4
YURE YUREGIR 146.38 304 *i* P PKPbc 04 51 53.5 +0.7
BALT Daday 146.39 313 *i* P PKPbc 04 51 53.2 +0.3
EBL Broad Law 146.40 4 *e*P PKPbc 04 51 51.6 -0.7
EBL Broad Law 146.40 4 P PKPbc 04 51 51.6 -0.7
CDAG Cicekdag 146.44 309 *i* P PKPbc 04 51 52.6 -0.5
GKP Gorka Klasztor 146.49 342⇓*i*PKP2 PKPbc 04 51 52.5 -0.1
GKP Gorka Klasztor 146.49 342 *i* PKPdf PKPbc 04 51 52.5 -0.1
BEL Belsk 146.55 337⇓*i*PKP2 PKPbc 04 51 53.1 +0.3
BEL Belsk 146.55 337 *i* PKPdf PKPbc 04 51 53.1 +0.3
HWQ Hawqa 146.74 299 *e*P PKPbc 04 51 54.1 0.0
LVV L'vov 146.82 332⇑*i*PKIKP PKPbc 04 51 53.2 -0.4
LVV *e* 04 51 56.6
EKA Eskdalemuir Ar 146.84 4 PKPbc PKPbc 04 51 52.4 -1.1
EKA Eskdalemuir Ar 146.84 4 PKPbc PKPbc 04 51 52.4 -1.1
comp=Z,9.5nm,0.4s,baz=357,slow=2.6,SNR=118
ESK Eskdalemuir 146.85 4 *e*P PKPbc 04 51 52.6 -0.8
ESK Eskdalemuir 146.85 4 P PKPbc 04 51 52.6 -0.8
ESK Eskdalemuir 146.85 4 *e*PKIKP PKPbc 04 51 52.7 -0.8
ESK Eskdalemuir 146.85 4 *e*PKPbc PKPbc 04 51 52.7 -0.8
BRBR Barbar 146.90 297 *e*P PKPbc 04 51 55.9 +1.3
GULE Gulek 146.91 305 *i* P PKPbc 04 51 54.8 +0.3
BR131 Keskin Array S 146.93 309 *e*PKPbc PKPbc 04 51 53.9 -0.5
BRTR Keskin Array B 146.93 309 PKP PKPdf 04 51 50.8 -0.5
BRTR PKPbc PKPbc 04 51 54.0 -0.5
BRTR Keskin Array B 146.93 309 PKP PKPdf 04 51 50.8 -0.5
comp=Z,38nm,0.6s,baz=94,slow=2.0,SNR=184
BRTR PKPbc PKPbc 04 51 54.0 -0.5
comp=Z,39nm,0.6s,baz=139,slow=4.4,SNR=176
ECK Cauldkaine Hil 146.99 4 *e*P PKPbc 04 51 52.7 -1.2
ECK Cauldkaine Hil 146.99 4 P PKPbc 04 51 52.7 -1.2
TCHB Talchebab 147.01 296 *e*P PKPbc 04 51 55.2 +0.6
BHL Bhannes 147.05 298 *e*P PKPbc 04 51 55.1 +0.2
GAL1 Galloway 147.18 6 *e*P PKPbc 04 51 53.7 -0.6
GAL1 Galloway 147.18 6 P PKPbc 04 51 53.7 -0.6
GCD Castle Douglas 147.25 5 *e*P PKPbc 04 51 54.0 -0.6
GCD Castle Douglas 147.25 5 P PKPbc 04 51 54.0 -0.6
XAL Allendale 147.36 3 *e*P PKPbc 04 51 54.1 -0.8
XAL Allendale 147.36 3 P PKPbc 04 51 54.1 -0.8
BBAL Bala 147.37 309 *i* P PKPbc 04 51 56.0 +0.4
MMAI Mount Meron Ar 147.42 297 PKPbc PKPbc 04 51 56.5 +0.7
MMAI pPKPbc pPKPbc 04 54 11.9 -2.0
MMAI Mount Meron Ar 147.42 297 PKPbc PKPbc 04 51 56.5 +0.7
comp=Z,52nm,0.4s,baz=67,slow=4.6,SNR=124
MMAI pPKPbc pPKPbc 04 54 11.9 -2.0
comp=Z,0.9nm,0.3s,baz=106,slow=24,SNR=1.5
TLCR 147.46 321 ⇑PKP2 PKPbc 04 51 55.5 +0.1
TLCR 147.46 321⇑*i*P PKPbc 04 51 55.5 +0.1
ANTO Ankara 147.48 310 *e*PKIKP PKPdf 04 51 51.7 -0.4
ANTO *e* 04 52 00.3
ANTO Ankara 147.48 310 *e*PKPdf PKPdf 04 51 51.7 -0.4
ANTO *e*PKPbc PKPbc 04 51 55.8 0.0
ANTO *e*PKPab PKPab 04 52 00.3 +0.3
BSEG Bad Segeberg 147.49 349 *e*PKPbc PKPbc 04 51 55.4 +0.3
BSEG *e*PKPab PKPab 04 51 59.6 +0.2
BSEG Bad Segeberg 147.49 349 *e*PKP2 PKPbc 04 51 55.4 +0.3
PRAR RASCA 147.51 327⇑*i*P PKPbc 04 51 55.4 -0.1
KWP Kalwaria Pacla 147.53 333⇓*i*PKP2 PKPbc 04 51 55.7 +0.2
KWP Kalwaria Pacla 147.53 333 *e*PKPbc PKPbc 04 51 55.6 +0.2
KWP Kalwaria Pacla 147.53 333 *i* PKPdfd PKPbc 04 51 55.6 +0.1
KWP *e*PKPab PKPab 04 52 00.1 +0.3
KESW Keswick, Cumbr 147.58 4 *e*P PKPbc 04 51 55.0 -0.4
KESW Keswick, Cumbr 147.58 4 P PKPbc 04 51 55.0 -0.4
HLG Helgoland 147.62 352 *e*PKPbc PKPbc 04 51 55.7 +0.2
GMM Mts of Mourne 147.67 7 *e*P PKPbc 04 51 55.1 -0.5
GMM Mts of Mourne 147.67 7 P PKPbc 04 51 55.1 -0.5
BUR08 Bucovina Ar. S 147.83 328 *e*PKPbc PKPbc 04 51 56.9 +0.5
BURAR Bucovina Array 147.84 328⇑*i*P PKPbc 04 51 57.5 +1.1
TESR Tescani 147.85 325⇓*i*P PKPbc 04 51 56.2 -0.2
CFR Carcaliu 147.85 322⇓*i*P PKPbc 04 51 56.3 -0.1
PHNC Paralimni 148.11 301 P PKPbc 04 51 58.3 +0.9
comp=Z,0.9nm,1.1s
TIRR Tirgusor 148.11 321 *e*PKP2 PKPbc 04 51 56.9 -0.1
TIRR Tirgusor 148.11 321 *e*PKPbc PKPbc 04 51 56.9 -0.1
TIRR Tirgusor 148.11 321⇓*i*P PKPbc 04 51 56.9 -0.1
RUE Ruedersdorf 148.13 345 *e*PKPbc PKPbc 04 51 57.1 +0.3
RUE Ruedersdorf 148.13 345 *e*PKPbc PKPbc 04 51 57.1 +0.3
VRI Vrincioaia 148.22 324⇓*i*P PKPbc 04 51 57.0 -0.3
OJC Ojcow 148.23 336 *i* PKP2 PKPbc 04 51 57.2 0.0
OJC Ojcow 148.23 336 *i* PKPbc PKPbc 04 51 57.2 0.0
OJC *e*PKPab PKPab 04 52 02.2 -0.4
KOLS Kolonicke sedl 148.25 332 *e*PKP PKPdf 04 51 53.3 +0.3
KOLS *e* 04 51 57.8
EIL Elat 148.26 291 PKPbc PKPbc 04 51 58.3 +0.4
EIL Elat 148.26 291 PKPbc PKPbc 04 51 58.3 +0.4
comp=Z,62nm,0.6s,baz=356,slow=1.7,SNR=50
PLOR Plostina 148.27 324⇓*i*P PKPbc 04 51 57.1 -0.4
STHS Stebnicka Huta 148.31 334 *e*PKP2 PKPbc 04 51 58.1 +0.7
STHS Stebnicka Huta 148.31 334 *e*PKP PKPbc 04 51 58.1 +0.7
MANR Mangalia 148.37 320⇓*i*P PKPbc 04 51 58.2 +0.5
UZH Uzhgorod 148.47 332⇓*i*PKP2 PKPbc 04 51 58.4 +0.6
KDHN Kadinhani 148.48 308 *i* P PKPdf 04 51 52.8 -1.0
ERMK Ermenek 148.52 304 *i* P PKPbc 04 51 58.5 -0.1
DLF Lyons Farm 148.53 8⇓*i*P PKPbc 04 51 57.2 -0.6
CRVS Cervenica-Dubn 148.62 333 *e*PKIKP PKPdf 04 51 51.5 -2.1
CRVS Cervenica-Dubn 148.62 333 *e*PKP PKPdf 04 51 51.5 -2.1
CRVS *e* 04 51 56.6
WME Myndd Eilian 148.67 6 *e*P PKPbc 04 51 57.6 -0.5
WME Myndd Eilian 148.67 6 P PKPbc 04 51 57.6 -0.5
CSS Prodhromos 148.68 301 P PKPbc 04 51 58.5 -0.3
comp=Z,1.2nm,0.5s
CSS Prodhromos 148.68 301 *e*PKPbc PKPbc 04 51 58.2 -0.6
NIE Niedzica 148.68 335 *i* PKP2 PKPbc 04 51 59.4 +1.0
NIE Niedzica 148.68 335 *i* PKPbc PKPbc 04 51 59.4 +1.0
NIE *e*PKPab PKPab 04 52 03.8 -0.8
PSN Preselentsi 148.69 320 P PKPbc 04 51 58.8 +0.3
MAMC Mammari 148.71 302 P PKPbc 04 51 58.8 -0.1
TRPA Tarpa 148.74 331⇓*i*P PKPbc 04 51 58.4 -0.1
TRPA Tarpa 148.74 331⇓*e* PKPbc 04 51 58.4 -0.1
WLF1 Llynfaes 148.77 6 *e*P PKPbc 04 51 56.9 -1.5
WLF1 Llynfaes 148.77 6 P PKPbc 04 51 56.9 -1.5
ISR Istrita 148.78 323⇑*i*P PKPbc 04 51 59.0 +0.2
YRC Rhoscolyn 148.79 6 *e*P PKPbc 04 51 56.8 -1.6
YRC Rhoscolyn 148.79 6 P PKPbc 04 51 56.8 -1.6
WPM1 Penmaenmawr 148.84 5 *e*P PKPbc 04 51 58.0 -0.6
WPM1 Penmaenmawr 148.84 5 P PKPbc 04 51 58.0 -0.6
DOPR Dopca 148.87 325⇑*i*P PKPbc 04 51 59.7 +0.8
MLR Muntele Rosu 148.88 324 PKP PKPdf 04 51 53.8 -0.5
MLR Muntele Rosu 148.88 324⇓*i*P PKPbc 04 51 58.5 -0.6
MLR Muntele Rosu 148.88 324 PKP PKPdf 04 51 53.8 -0.5
comp=Z,3.4nm,0.8s,baz=34,slow=4.0,SNR=6.5
KSP Ksiaz 148.90 341 *i* PKPdf PKPbc 04 51 59.3 +0.5
NRDL Niedersach Rie 148.91 349 *e*PKPbc PKPbc 04 51 58.7 +0.1
YLL Llanberis 148.94 5 *e*P PKPbc 04 51 57.9 -0.9
YLL Llanberis 148.94 5 P PKPbc 04 51 57.9 -0.9
SEYT Eskypehyr 148.99 311 *i* P PKPbc 04 51 59.3 -0.3
KBI1 Birley Grange 148.99 2 *e*P PKPbc 04 51 58.5 -0.4
KBI1 Birley Grange 148.99 2 P PKPbc 04 51 58.5 -0.4
YRE Yr Eifl 149.07 6 *e*P PKPbc 04 51 58.0 -1.1
YRE Yr Eifl 149.07 6 P PKPbc 04 51 58.0 -1.1
SECR 149.10 323⇑*i*P PKPbc 04 51 59.7 +0.2
GAZI Gazipasa 149.11 304 *i* P PKPbc 04 51 58.7 -1.1
STNC Stoke 149.12 3 *e*P PKPbc 04 51 59.1 -0.2
STNC Stoke 149.12 3 P PKPbc 04 51 59.1 -0.2
OKC Ostrava-Krasne 149.15 338⇑*i*PKP PKPbc 04 51 59.7 +0.3
VAL Valentia 149.20 13 *e*P PKPdf 04 51 54.4 0.0
ALFC Alevga 149.20 302 P PKPbc 04 51 59.4 -0.7
comp=Z,5.8nm,0.6s
BOLV Bolvadin 149.25 309 *i* P PKPbc 04 51 60.0 -0.2
UPC Upice 149.28 341⇑*i*PKP PKPbc 04 52 00.1 +0.4
DPC Dobruska-Polom 149.32 340⇑*i*PKP PKPbc 04 52 00.5 +0.6
DPC *e*pPKP pPKPdf 04 54 22.7 +7.3
KECS Kecovo 149.35 334 *e*PKP PKPbc 04 52 00.6 +0.6
KECS *e* 04 52 07.6
VOIR 149.39 325⇓*i*P PKPbc 04 52 00.0 -0.3
CLL Collm 149.40 345⇓*e*PKHKP PKPdf 04 51 55.0 +0.2
CLL *i* 04 52 07.2
CLL pmax pmax
comp=Z,12nm,0.7s

CLL pmax pmax
comp=Z,200nm,0.7s
CLL Collm 149.40 345 *e*PKPdf PKPdf 04 51 55.0 +0.2
CLL ⇓*i*PKPbc PKPbc 04 52 00.1 +0.1
comp=Z,200nm,0.7s
CLL ⇑*i*PKPab PKPab 04 52 07.2 -0.2
comp=Z,69nm,0.7s
CLL *e*pPKPbc pPKPbc 04 54 19.0 +0.1
MORC Moravsky Berou 149.41 338 ⇓PKHKP PKPbc 04 52 00.3 +0.2
MORC Moravsky Berou 149.41 338 *e*PKPbc PKPbc 04 52 00.0 -0.1
MORC Moravsky Berou 149.41 338⇓*i*P PKPbc 04 52 00.3 +0.2
KRLC Kraliky 149.41 339⇑*i*PKP PKPbc 04 52 00.6 +0.5
PRD Provadia 149.43 319 P PKPbc 04 52 00.8 +0.5
AKMC Akamas 149.45 302 P PKPbc 04 51 59.6 -1.1
IBBN Ibbenburen 149.47 351 *e*PKPbc PKPbc 04 52 00.3 +0.2
IBBN *e*PKPab PKPab 04 52 07.6 0.0
PPCY Paphos 149.48 301 P PKPbc 04 51 59.7 -1.0
CLZ Clausthal 149.48 348 *e*PKPbc PKPbc 04 52 00.5 +0.3
MTUR Matau 149.52 325⇑*i*P PKPbc 04 52 00.6 0.0
BRG Berggiesshubel 149.55 343 *e*PKP PKPdf 04 51 55.1 +0.1
comp=Z,13nm,1.4s
BRG *i* 04 52 00.6
comp=Z,150nm,0.7s
BRG *i* 04 52 08.1
comp=Z,50nm,0.7s
BRG *e*pPKP pPKPdf 04 54 21.1 +5.4
comp=Z,12nm,1.1s
BRG Berggiesshubel 149.55 343 *e*PKPbc PKPbc 04 52 00.7 +0.3
BRG Berggiesshubel 149.55 343 *e*PKIKP PKPdf 04 51 55.1 +0.1
BRG *i* 04 52 08.1
BRG pmax pmax
comp=Z,13nm,1.4s
BRG pmax pmax
comp=Z,12nm,1.1s
BUY Buyukada 149.57 314 *i* P PKPbc 04 52 00.2 -0.5
DRGR 149.64 329⇓*i*P PKPbc 04 52 00.6 -0.2
ARR Arges 149.66 325⇓*i*P PKPbc 04 52 01.4 +0.5
FBE Freiberg 149.66 344 *e*PKPbc PKPbc 04 52 01.2 +0.6
PVCC Panska Ves 149.69 342⇑*i*PKP PKPbc 04 52 01.3 +0.6
PVCC *e*PKPAB PKPab 04 52 09.3 +0.7
PVCC *e*pPKP pPKPdf 04 54 26.6 +11
NEUB Neuenburg 149.78 346 *e*PKPbc PKPbc 04 52 01.1 +0.2
ELBA Catalca 149.88 315 *i* P PKPbc 04 52 01.2 -0.3
ULDT Uludag 149.90 313 *i* P PKPbc 04 52 01.5 -0.3
ISP Isparta 149.90 308 *e*PKPbc PKPbc 04 52 00.5 -1.2
ISP Isparta 149.90 308⇑*i*P PKPbc 04 52 01.0 -0.8
WTSB Winterswijk 149.93 352 *e*PKPdf PKPdf 04 51 55.1 -0.5
comp=Z,28nm,1.1s
WTSB *e*PKPdc 04 52 00.9
comp=Z,175nm,0.6s
VYHS Vyhne 150.00 335 *e*PKIKP PKPdf 04 51 55.7 -0.1
VYHS *e* 04 52 10.7
VYHS Vyhne 150.00 335 *e*PKP PKPdf 04 51 55.7 -0.1
VYHS *e* 04 52 01.6
VYHS *e* 04 52 10.6
HUMR Humele 150.02 324⇓*i*P PKPbc 04 52 01.6 -0.1
PSZ Piszkesteto 150.04 333 *e*PKIKP PKPdf 04 51 55.2 -0.8
PSZ Piszkesteto 150.04 333 *e*PKPdf PKPdf 04 51 55.2 -0.8
PSZ *e*PKPbc PKPbc 04 52 01.5 -0.2
PSZ Piszkesteto 150.04 333⇓*i*P PKPbc 04 52 01.6 -0.2
PSZ Piszkesteto 150.04 333⇓*e* PKPbc 04 52 01.5 -0.2
LOT Lotru 150.06 326⇑*i*P PKPbc 04 52 01.4 -0.5
GDZ Gediz 150.13 311 *i* P PKPbc 04 52 01.9 -0.4
VRAC Vranov 150.13 339 PKPbc PKPbc 04 52 02.0 +0.2
VRAC PKPab PKPab 04 52 08.8 -1.8
VRAC Vranov 150.13 339⇓*i*P PKPbc 04 52 02.1 +0.3
VRAC Vranov 150.13 339 PKPbc PKPbc 04 52 02.0 +0.2
comp=Z,19nm,0.5s,baz=51,slow=2.9,SNR=21
VRAC PKPab PKPab 04 52 08.8 -1.8
comp=Z,23nm,0.7s,baz=22,slow=3.3,SNR=11
PRA Prague 150.14 342 ⇑PKP PKPbc 04 52 02.0 +0.3
PRA *e*x x 04 52 06.0
PRA PKPAB PKPab 04 52 11.0 +0.5
MCH1 Michaelchurch 150.17 4 *e*P PKPbc 04 52 00.8 -1.0
MCH1 Michaelchurch 150.17 4 P PKPbc 04 52 00.8 -1.0
PRU Pruhonice 150.18 342 *e*PKIKP PKPdf 04 51 55.9 -0.1
PRU *e* 04 52 10.8
PRU Pruhonice 150.18 342 *e*PKPDF PKPdf 04 51 55.9 -0.1
PRU ⇑*i*PKP PKPbc 04 52 02.0 +0.1
PRU *e*PKPAB PKPab 04 52 10.8 +0.1
PRU *e*pPKP pPKPdf 04 54 23.9 +7.1
DEV Deva 150.19 328 ⇓PKIKP PKPbc 04 52 02.1 +0.1
DEV Deva 150.19 328⇓*i*P PKPbc 04 52 02.1 +0.1
SZH Strazhica 150.26 321 P PKPbc 04 52 02.0 -0.3
SSW Stow on the Wo 150.27 3 *e*P PKPbc 04 52 01.7 -0.3
SSW Stow on the Wo 150.27 3 P PKPbc 04 52 01.7 -0.3
KORT Korkueli 150.34 306 *i* P PKPbc 04 52 02.2 -0.6
JMB Yambol 150.34 319 P PKPbc 04 52 03.0 +0.5
MOX Moxa 150.34 346 *e*PKPbc PKPbc 04 52 02.3 +0.1
MOX *e*PKPab PKPab 04 52 11.4 0.0
MOX Moxa 150.34 346 *e*PKIKP PKPbc 04 52 02.3 +0.1
MOX *e* 04 52 11.4
TANN Tannenbergstha 150.36 344 *e*PKPbc PKPbc 04 52 02.5 +0.2
WERD Werda 150.36 345 *e*PKPbc PKPbc 04 52 02.5 +0.2
PLN Plauen 150.37 345 *e*PKPbc PKPbc 04 52 02.5 +0.2
BUG Bochum--Univer 150.38 351 *e*PKPbc PKPbc 04 52 02.2 0.0
KHAL Karahalli 150.43 310 *i* P PKPbc 04 52 02.7 -0.3
GUNZ Gunzen 150.44 345 *e*PKPbc PKPbc 04 52 02.8 +0.3
GUNZ *e*PKPab PKPab 04 52 12.2 +0.4
WERN Wernitzgruen 150.50 344 *e*PKPbc PKPbc 04 52 02.9 +0.3
WERN *e*PKPab PKPab 04 52 12.5 +0.4
TREC Trest 150.51 340 *i* PKIKP PKPbc 04 52 02.7 0.0
TREC Trest 150.51 340⇑*i*PKP PKPbc 04 52 02.7 0.0
TREC *e*pPKP pPKPdf 04 54 24.0 +6.7
SMOL Smolenice 150.51 337 *e*PKIKP PKPbc 04 52 03.5 +0.8
SMOL *e* 04 52 13.0
SMOL Smolenice 150.51 337 *e*PKP PKPbc 04 52 03.5 +0.8
SMOL *e* 04 52 13.0
UBBA Unterbreizbach 150.52 348 *e*PKPbc PKPbc 04 52 02.7 +0.2
NKC Novy Kostel 150.53 344 *i* PKIKP PKPbc 04 52 03.0 +0.3
NKC *e* 04 52 12.2
NKC Novy Kostel 150.53 344⇑*i*PKP PKPbc 04 52 03.0 +0.3
NKC *e*PKPAB PKPab 04 52 12.2 0.0
NKC *e*pPKP pPKPdf 04 54 24.9 +7.6
SKP1 Kophill 150.55 2 *e*P PKPbc 04 52 01.5 -1.1
SKP1 Kophill 150.55 2 P PKPbc 04 52 01.5 -1.1
DURS Dursunbey 150.60 312 *i* P PKPbc 04 52 02.6 -0.6
GZR Gura Zlata 150.60 327 ⇓PKIKP PKPbc 04 52 02.7 -0.4
GZR Gura Zlata 150.60 327⇓*i*P PKPbc 04 52 02.7 -0.4
DEMI Demirci 150.69 311 *i* P PKPbc 04 52 03.3 -0.2
SWN1 Swindon 150.72 3 *e*P PKPbc 04 52 02.0 -1.0
SWN1 Swindon 150.72 3 P PKPbc 04 52 02.0 -1.0
BUD Budapest 150.74 334⇓*e* PKPbc 04 52 03.1 -0.1
GOLH Golhisar 150.83 307 *i* P PKPbc 04 52 03.5 -0.4
MANZ Manzenberg 150.84 345 *e*PKPbc PKPbc 04 52 03.6 +0.2
MANZ *e*PKPab PKiKP 04 52 04.9 +1.1
ZST Bratislava 150.90 337 *e*PKIKP PKPbc 04 52 02.9 -0.7
ZST *e* 04 52 13.6
ZST Bratislava 150.90 337 *e*PKP PKPbc 04 52 02.9 -0.7
ZST *e* 04 52 13.6
SART Tekirdag 150.93 315 *i* P PKPbc 04 52 03.3 -0.7
WOL Wolverton 150.95 2 *e*P PKPbc 04 52 02.9 -0.6
WOL Wolverton 150.95 2 P PKPbc 04 52 02.9 -0.6
BZS Buzias 151.01 329 ⇓PKIKP PKPbc 04 52 03.8 -0.1
BZS Buzias 151.01 329⇓*i*P PKPbc 04 52 03.8 -0.1
ROTZ Rotzenmuhle 151.02 344 *e*PKPbc PKPbc 04 52 04.0 +0.2
ROTZ *e*PKPab PKPab 04 52 14.8 +0.6
HEX Exmoor 151.03 6 *e*P PKPbc 04 52 03.0 -0.7
HEX Exmoor 151.03 6 P PKPbc 04 52 03.0 -0.7
DNZL Cakiroluk 151.03 309 *i* P PKPbc 04 52 04.9 +0.5
PKS7 Kunszentmiklos 151.03 333⇑*e* PKPbc 04 52 03.9 0.0
MANT Manisa 151.04 310 *i* P PKPbc 04 52 04.4 -0.1
PKSG 151.07 334⇑*e* PKPbc 04 52 03.8 -0.2
BALY Balya 151.11 313 *i* P PKPbc 04 52 03.6 -0.8
ELSH Elham, Standar 151.14 359 *e*P PKPbc 04 52 03.8 -0.1
ELSH Elham, Standar 151.14 359 P PKPbc 04 52 03.8 -0.1
CSKK Csˆ‡kako 151.15 335⇓*e* PKPbc 04 52 03.8 -0.4
AKAS Kas 151.17 305 *i* P PKPbc 04 52 03.8 -1.0
BEBN Eben Emael 151.21 353 PKPbc PKPbc 04 52 04.1 -0.1
BEBN PKPab PKPab 04 52 14.6 -0.3
PKS6 Bocsa 151.21 332⇓*e* PKPbc 04 52 04.4 +0.1
HGN Heimansgroeve 151.21 353 *e*PKPdf PKPdf 04 51 57.8 +0.2
comp=Z,8.8nm,1.1s
HGN *e*PKPdc 04 52 03.8
comp=Z,25nm,0.7s
HGN *e*PKPab PKPab 04 52 14.5 -0.5
comp=Z,35nm,0.8s
KHC Kasperske Hory 151.23 342 *e*PKIKP PKPdf 04 51 57.7 0.0
KHC *e* 04 52 15.6
KHC Kasperske Hory 151.23 342 *e*PKPDF PKPdf 04 51 57.7 0.0
KHC ⇑*i*PKP PKiKP 04 52 04.5 -0.1

KHC				ePKPAB	PKPab	04 52 15.6	+0.4
KHC				ex	x	04 52 44.5	
KHC				ex	x	04 53 27.5	
KHC				epPKP	pPKPdf	04 54 20.7	+2.2
KHC				ex	x	04 54 27.0	
KHC	Kasperske Hory	151.23	342	ePKPdf	PKPdf	04 51 57.4	-0.3
KHC				ePKPbc	PKiKP	04 52 04.5	-0.1
KHC				ePKPab	PKPab	04 52 15.7	+0.4
PKST	T^'s	151.32	335	⇓e	PKPbc	04 52 03.9	-0.7
GRF	Grafenberg Arr	151.33	345	ePKPbc	PKPbc	04 52 04.6	+0.1
GRF				ePKPab	PKPab	04 52 16.0	+0.4
GRF	Grafenberg Arr	151.33	345	ePKIKP	PKPbc	04 52 04.6	+0.1
GRF				e		04 52 16.0	
GRFO	Grafenberg	151.33	345	ePKIKP	PKPbc	04 52 04.6	+0.1
GRFO				e		04 52 15.8	
GRFO	Grafenberg	151.33	345	ePKPbc	PKPbc	04 52 04.6	+0.1
GRFO				ePKPab	PKPab	04 52 15.8	+0.2
MEM	Membach	151.36	353	PKPbc	PKPbc	04 52 04.4	-0.1
TNS	Taunus Mts	151.38	349	ePKPbc	PKPbc	04 52 04.7	0.0
TNS	Taunus Mts	151.38	349	ePKIKP	PKPbc	04 52 04.7	0.0
AKHS	Akhisar	151.39	312	i P	PKPbc	04 52 04.5	-0.5
WET	Wettzell	151.41	343	ePKPbc	PKPbc	04 52 04.7	0.0
WET				ePKPab	PKPab	04 52 16.6	+0.6
WET	Wettzell	151.41	343	ePKIKP	PKPbc	04 52 04.7	0.0
WET				e		04 52 16.6	
PKS2	Kecel	151.45	332	⇑e	PKPbc	04 52 05.2	+0.4
GEC2	GERESS Array S	151.45	342	ePKPbc	PKPbc	04 52 04.8	-0.1
GEC2	GERESS Array S	151.45	342	ePKIKP	PKPbc	04 52 04.8	-0.1
GERES	GERESS Array B	151.45	342	PKP	PKPdf	04 51 58.2	+0.1
GERES				PKPbc	PKPbc	04 52 04.6	-0.3
GERES				PKPab	PKPab	04 52 16.1	-0.1
GERES				pPKPbc	pPKPbc	04 54 23.3	-1.0
GERES	GERESS Array B	151.45	342	PKP	PKPdf	04 51 58.2	+0.1
	comp=Z,2.9nm,0.8s,baz=18,slow=3.5,SNR=15						
GERES				PKPbc	PKPbc	04 52 04.6	-0.3
	comp=Z,19nm,0.6s,baz=221,slow=1.2,SNR=71						
GERES				PKPab	PKPab	04 52 16.1	-0.1
	comp=Z,8.7nm,0.6s,baz=15,slow=4.1,SNR=10						
GERES				pPKPbc	pPKPbc	04 54 23.3	-1.0
	comp=Z,4.5nm,1.0s,baz=48,slow=2.0,SNR=3.5						
MPEP	Malo Peshtene	151.46	323	P	PKPbc	04 52 04.8	-0.2
KDZ	Kurdzhali	151.52	319	P	PKPbc	04 52 04.9	-0.3
SOP	Sopron	151.53	337	⇓e	PKPbc	04 52 05.2	+0.2
ALN	Alexandroupoli	151.55	317	eP	PKPbc	04 52 04.0	-1.2
CONA	Conrad Observa	151.57	338	⇑iPKPdf	PKPdf	04 51 58.0	-0.3
	comp=Z,2.9nm,0.8s						
CONA				i PKiKP	PKPbc	04 52 05.2	0.0
	comp=Z,44nm,0.7s,SNR=20						
CONA				⇑iPKPab	PKPab	04 52 17.4	+0.7
	comp=Z,27nm,0.7s						
BCLA	Clavier	151.62	354	PKPbc	PKPbc	04 52 04.8	-0.3
BCLA				PKPab	PKPab	04 52 16.0	-0.8
BCLA				APKP	pPKPdf	04 54 26.8	+7.8
DYA	Yadsworthy	151.64	6	eP	PKPbc	04 52 04.3	-0.8
DYA	Yadsworthy	151.64	6	P	PKPbc	04 52 04.3	-0.8
TURN	Turunc	151.68	307	i P	PKPbc	04 52 06.3	+0.6
PKS9	Tamasi	151.77	334	⇓e	PKPbc	04 52 05.0	-0.5
AYDN	Tasoluk	151.88	309	i P	PKPbc	04 52 06.5	+0.3
PKSM	Moragy	151.91	333	⇓PKIKP	PKPbc	04 52 05.5	-0.3
PKSM	Moragy	151.91	333	⇓iP	PKPbc	04 52 05.5	-0.3
PKSM	Moragy	151.91	333	⇓e	PKPbc	04 52 05.6	-0.3
RZN	Rozhen	151.92	319	P	PKPbc	04 52 05.7	-0.6
DOU	Dourbes	152.01	354	PKPbc	PKPbc	04 52 06.0	0.0
DOU				PKPab	PKPab	04 52 18.0	-0.4
BAIF	Baives	152.08	355	ePKIKP	PKPdf	04 51 58.2	-0.7
BAIF	Baives	152.08	355	ePKIKP	PKPdf	04 51 58.2	-0.7
BAIF	Baives	152.08	355	ePKPdf	PKPdf	04 51 58.2	-0.7
BOZC	Bozcaada	152.10	315	i P	PKPbc	04 52 05.5	-1.0
SMTH	Samothraki Isl	152.11	316	eP	PKPbc	04 52 05.6	-0.9
MOA	Molln	152.17	340	⇑iPKPdf	PKPdf	04 51 58.4	-0.8
	comp=Z,1.7nm,0.6s						
MOA				i PKPbc	PKPbc	04 52 06.1	-0.4
	comp=Z,12nm,0.6s,SNR=7.5						
MOA				⇑iPKPab	PKPab	04 52 19.9	+0.7
	comp=Z,20nm,0.9s						
VTS	Vitosha	152.25	322	⇑PKIKP	PKPbc	04 52 06.2	-0.8
VTS	Vitosha	152.25	322	P	PKPbc	04 52 06.6	-0.4
VTS	Vitosha	152.25	322	⇑iP	PKPbc	04 52 06.2	-0.8
WLF	Walferdange	152.27	352	PKPbc	PKPbc	04 52 06.8	+0.3
WLF				PKPab	PKPab	04 52 19.6	+0.1
WLF				APKP	pPKPdf	04 54 30.0	+10
WLF	Walferdange	152.27	352	ePKPbc	PKPbc	04 52 07.0	+0.5
WLF	Walferdange	152.27	352	ePKIKP	PKPbc	04 52 07.1	+0.5
WLF	Walferdange	152.27	352	ePKPbc	PKPbc	04 52 07.1	+0.5
ARG	Arkhangelos	152.29	306	eP	PKPbc	04 52 06.5	-0.5
GCAM	G?zelcaml?	152.33	310	i P	PKPbc	04 52 06.6	-0.5
BEHE	Becsehely	152.46	335	⇓e	PKPbc	04 52 07.0	-0.1
URLA	Izmir	152.47	312	i P	PKPbc	04 52 07.0	-0.4
MMB	Musomiste	152.57	320	P	PKPbc	04 52 07.1	-0.5
SMG	Samos	152.61	310	eP	PKPbc	04 52 06.9	-0.8
STU	Stuttgart	152.63	347	ePKPbc	PKPbc	04 52 07.5	+0.1
STU				ePKPab	PKPab	04 52 21.0	-0.1
LIA	Limnos Island	152.64	316	eP	PKPbc	04 52 06.3	-1.4
LANF	Langenberg	152.69	350	PKP	PKPbc	04 52 07.6	+0.1
RJOB	Jochberg	152.71	342	ePKPab	PKPab	04 52 22.4	+0.8
FUR	Furstenfeldbru	152.73	344	ePKPbc	PKPbc	04 52 07.5	-0.2
FUR				ePKPab	PKPab	04 52 22.1	+0.5
FUR	Furstenfeldbru	152.73	344	ePKIKP	PKPbc	04 52 07.5	-0.2
FUR				e		04 52 22.1	
KKB	Krupnik	152.78	321	P	PKPbc	04 52 07.7	-0.3
CHOS	Chios island	152.84	312	eP	PKPbc	04 52 07.3	-1.0
SOKA	Soboth	152.93	338	⇑iPKPdf	PKPdf	04 51 57.8	-2.5
	comp=Z,4.7nm,1.2s						
SOKA				⇓iPKPbc	PKPbc	04 52 07.5	-0.7
	comp=Z,14nm,0.8s						
SOKA				⇑iPKPab	PKPab	04 52 22.5	-0.1
	comp=Z,14nm,0.8s						
PERS	Pernice	152.94	338	i PKPdf	PKPdf	04 51 59.5	-0.8
PERS				i PKPbc	PKPbc	04 52 07.2	-1.0
PERS				i PKPab	PKPab	04 52 22.3	-0.3
KBA	Koelnbreinsper	153.14	340	⇑iPKPdf	PKPdf	04 51 59.8	-1.0
	comp=Z,4.1nm,1.1s						
KBA				⇓iPKPbc	PKPbc	04 52 07.5	-1.3
	comp=Z,9.4nm,0.5s						
BFO	Black Forest	153.22	348	ePKPbc	PKPbc	04 52 08.4	-0.3
BFO				ePKPab	PKPab	04 52 23.5	-0.2
BFO	Black Forest	153.22	348	ePKIKP	PKPdf	04 51 59.8	-0.8
BFO				e		04 52 08.4	
BFO	Black Forest	153.22	348	ePKPdf	PKPdf	04 51 59.8	-0.8
BFO				ePKPbc	PKPbc	04 52 08.4	-0.3
SOH	Sokhos	153.26	319	eP	PKPbc	04 52 07.3	-1.8
KARP	Karpathos	153.27	306	eP	PKPbc	04 52 08.7	-0.5
CDF	Champ du Feu	153.33	350	ePKIKP	PKPdf	04 52 00.4	-0.5
CDF	Champ du Feu	153.33	350	ePKIKP	PKPdf	04 52 00.4	-0.5
CDF	Champ du Feu	153.33	350	ePKPdf	PKPdf	04 52 00.4	-0.5
PAGF	Fort de Pagny	153.41	352	ePKIKP	PKPdf	04 52 00.1	-0.8
PAGF	Fort de Pagny	153.41	352	ePKPdf	PKPdf	04 52 00.1	-0.8
MYKA	Terra Mystica	153.44	340	⇑iPKPdf	PKPdf	04 52 00.0	-1.1
	comp=Z,4.8nm,0.7s						
MYKA				⇓iPKPbc	PKPbc	04 52 08.2	-1.1
	comp=Z,14nm,0.5s						
MYKA				⇓iPKPab	PKPab	04 52 23.8	-0.9
	comp=Z,19nm,0.6s						
WTTA	Wattenberg	153.47	343	⇑iPKPdf	PKPdf	04 52 00.6	-0.6
	comp=Z,9.4nm,0.8s						
WTTA				⇓iPKiKP	PKPbc	04 52 09.2	-0.2
	comp=Z,25nm,0.5s						
WTTA				⇑iPKPab	PKPab	04 52 25.5	+0.5
	comp=Z,37nm,0.5s						
PLG	Polygyros	153.47	318	eP	PKPbc	04 52 07.9	-1.6
FLN	La Foliniere	153.52	1	ePKIKP	PKPdf	04 51 59.8	-1.2
	comp=Z,31nm,0.8s						
FLN	La Foliniere	153.52	1	ePKIKP	PKPdf	04 51 59.8	-1.2
FLN	La Foliniere	153.52	1	ePKPdf	PKPdf	04 51 59.8	-1.2
ECH	Echery	153.54	350	PKP	PKPbc	04 52 11.1	+1.7
ABTA	Abfaltersbach	153.69	341	⇑iPKPdf	PKPdf	04 52 00.4	-1.0
	comp=Z,8.0nm,0.7s						
ABTA				⇑iPKPbc	PKPbc	04 52 09.2	-0.6
	comp=Z,21nm,0.6s						
ABTA				⇑iPKPab	PKPab	04 52 25.1	-0.7
	comp=Z,29nm,0.6s						
LDF	La Druitiere	153.69	1	ePKIKP	PKPdf	04 52 00.0	-1.2
	comp=Z,8.5nm,0.7s						
LDF	La Druitiere	153.69	1	ePKIKP	PKPdf	04 52 00.0	-1.2
LDF	La Druitiere	153.69	1	ePKPdf	PKPdf	04 52 00.0	-1.2
THEF	They Montfort	153.70	352	PKP	PKPbc	04 52 10.0	+0.3
VISS	Visnje	153.75	337	i PKPdf	PKPdf	04 52 00.5	-1.0
VISS				i PKPbc	PKPbc	04 52 09.4	-0.4
VISS				i PKPab	PKPab	04 52 25.2	-0.8
VISS				i pPKPbc	pPKPbc	04 54 32.9	+3.3
APE	Apeiranthos	153.82	310	eP	PKPbc	04 52 08.7	-1.7
APE	Apeiranthos	153.82	310	⇓PKIKP	PKPbc	04 52 08.5	-1.9
APE	Apeiranthos	153.82	310	⇓iP	PKPbc	04 52 08.4	-1.9
SFTF	Sexfontaines	153.84	353	ePKIKP	PKPdf	04 52 00.9	-0.6
SFTF	Sexfontaines	153.84	353	ePKPdf	PKPdf	04 52 00.9	-0.6
BOJS	Bojanci	153.85	336	i PKPdf	PKPdf	04 52 01.0	-0.6
BOJS				i PKPbc	PKiKP	04 52 10.1	0.0
BOJS				ePKPab	PKPab	04 52 27.4	+0.9
BOJS				i pPKPbc	pPKPbc	04 54 32.3	+2.6
GRR	Gorron	153.88	2	ePKIKP	PKPdf	04 52 00.3	-1.2
	comp=Z,18nm,0.9s						
GRR	Gorron	153.88	2	ePKIKP	PKPdf	04 52 00.3	-1.2
GRR	Gorron	153.88	2	ePKPdf	PKPdf	04 52 00.3	-1.2
AOS	Alonnisos	153.88	316	eP	PKPbc	04 52 08.6	-1.8
VOY	Vojsko	153.88	339	ePKPdf	PKPdf	04 52 00.4	-1.3
VOY				ePKPbc	PKPbc	04 52 09.3	-1.0
VOY				ePKPab	PKPab	04 52 25.8	-0.9
DAVA	Damuels	153.89	345	⇑iPKPdf	PKPdf	04 52 00.8	-1.0
	comp=Z,5.2nm,0.7s						
DAVA				⇓iPKPbc	PKPbc	04 52 09.7	-0.6
	comp=Z,7.1nm,0.8s						
DAVA				⇓iPKPab	PKPab	04 52 26.6	-0.1
	comp=Z,41nm,0.8s						
MOF	Molkenrain	153.90	350	PKP	PKPbc	04 52 07.4	-2.8
FETA	Feichten	153.93	344	⇑iPKPdf	PKPdf	04 52 01.5	-0.3
	comp=Z,20nm,0.8s,SNR=8.2						
FETA				⇑iPKPab	PKPab	04 52 27.1	+0.2
	comp=Z,22nm,1.1s						
JAVS	Javornik	153.95	338	i PKPdf	PKPdf	04 52 01.1	-0.7
JAVS				i PKPbc	PKPbc	04 52 09.6	-0.8
JAVS				i PKPab	PKPab	04 52 26.0	-1.0
HINF	Hinteralfeld	153.98	350	ePKIKP	PKPdf	04 52 00.5	-1.2
HINF	Hinteralfeld	153.98	350	ePKIKP	PKPdf	04 52 00.5	-1.2
HINF	Hinteralfeld	153.98	350	ePKPdf	PKPdf	04 52 00.5	-1.2
SANT	Santorini	154.19	309	ePKPbc	PKPbc	04 52 09.5	-1.7
SANT				ePKPab	PKPab	04 52 27.1	-1.3
DAVOX	Davos/Dischmat	154.37	345	PKP	PKPdf	04 52 02.2	-0.3
DAVOX				PKPbc	PKiKP	04 52 11.3	-0.1
DAVOX				PKPab	PKPab	04 52 29.2	+0.4
DAVOX	Davos/Dischmat	154.37	345	PKP	PKPdf	04 52 02.2	-0.3
	comp=Z,8.7nm,0.8s,baz=315,slow=0.3,SNR=16						
DAVOX				PKPbc	PKiKP	04 52 11.3	-0.1
	comp=Z,21nm,0.7s,baz=249,slow=1.7,SNR=21						
DAVOX				PKPab	PKPab	04 52 29.2	+0.4
	comp=Z,28nm,0.6s,baz=28,slow=4.0,SNR=14						
LOMF	Lomont	154.43	350	PKP	PKPbc	04 52 08.1	-3.3
FNA	Florina	154.46	321	eP	PKPdf	04 52 02.7	+0.1
NPS	Neapolis	154.54	306	eP	PKPbc	04 52 12.2	+0.3
LAST	Lasithi	154.69	306	eP	PKPbc	04 52 11.7	-0.6
TUE	Stuetta	154.78	346	ePKPdf	PKPdf	04 52 02.5	-0.6
LOR	Lormes	154.88	355	ePKIKP	PKPdf	04 52 02.0	-1.0
	comp=Z,19nm,0.9s						
LOR	Lormes	154.88	355	ePKPdf	PKPdf	04 52 02.0	-1.0
AGG	Agios Georgios	154.96	317	eP	PKPbc	04 52 11.3	-1.4
HYF	Humbligny	154.97	357	ePKIKP	PKPdf	04 52 02.4	-0.7
HYF	Humbligny	154.97	357	ePKPdf	PKPdf	04 52 02.4	-0.7
SSF	Saint Saulge	155.12	355	ePKIKP	PKPdf	04 52 02.4	-0.8
	comp=Z,27nm,1.0s						
SSF	Saint Saulge	155.12	355	ePKIKP	PKPdf	04 52 02.4	-0.8
SSF	Saint Saulge	155.12	355	ePKPdf	PKPdf	04 52 02.4	-0.8
CABF	La Chapelle	155.27	351	ePKIKP	PKPdf	04 52 03.1	-0.5
	comp=Z,19nm,0.7s						
CABF	La Chapelle	155.27	351	ePKIKP	PKPdf	04 52 03.1	-0.5
CABF	La Chapelle	155.27	351	ePKPdf	PKPdf	04 52 03.1	-0.5
EVR	Evrytania	155.35	317	eP	PKPdf	04 52 12.4	+8.4
SMF	Signal de Mont	155.50	354	ePKIKP	PKPdf	04 52 02.6	-1.2
	comp=Z,14nm,1.0s						
SMF	Signal de Mont	155.50	354	ePKIKP	PKPdf	04 52 02.6	-1.2
SMF	Signal de Mont	155.50	354	ePKPdf	PKPdf	04 52 02.6	-1.2
VAM	Vamos	155.53	308	eP	PKPab	04 52 34.3	+0.2
GUR	Goura	155.57	315	eP	PKPdf	04 52 13.4	+9.1
BGF	Bois d'Agland	155.66	356	ePKIKP	PKPdf	04 52 03.2	-0.8
	comp=Z,15nm,0.8s						
BGF	Bois d'Agland	155.66	356	ePKIKP	PKPdf	04 52 03.2	-0.8
BGF	Bois d'Agland	155.66	356	ePKPdf	PKPdf	04 52 03.2	-0.8
MFF	Saint Martin d	155.69	1	ePKIKP	PKPdf	04 52 02.9	-1.1
	comp=Z,74nm,1.3s						
MFF	Saint Martin d	155.69	1	ePKIKP	PKPdf	04 52 02.9	-1.1
MFF	Saint Martin d	155.69	1	ePKPdf	PKPdf	04 52 02.9	-1.1
TCF	Toulx Ste Croi	155.97	357	ePKIKP	PKPdf	04 52 03.4	-1.0
	comp=Z,23nm,0.8s						
TCF	Toulx Ste Croi	155.97	357	ePKIKP	PKPdf	04 52 03.4	-1.0
TCF	Toulx Ste Croi	155.97	357	ePKPdf	PKPdf	04 52 03.4	-1.0
LKD2	Lefkada island	156.15	318	eP	PKPdf	04 52 14.1	+9.2
AGO	Saint Agoulin	156.15	356	PKP	PKPdf	04 52 03.6	-1.1
DYR	Agios Nikonas	156.21	312	eP	PKPdf	04 52 14.6	+10
LPL	La Plagne	156.23	349	ePKIKP	PKPdf	04 52 04.3	-0.8
LPL	La Plagne	156.23	349	ePKIKP	PKPdf	04 52 04.3	-0.8
LPL	La Plagne	156.23	349	ePKPdf	PKPdf	04 52 04.3	-0.8
LPG	La Plagne	156.24	349	ePKIKP	PKPdf	04 52 04.4	-0.8
LPG	La Plagne	156.24	349	ePKIKP	PKPdf	04 52 04.4	-0.8
LPG	La Plagne	156.24	349	ePKPdf	PKPdf	04 52 04.4	-0.8
PYM	Petit Puy Mans	156.46	356	PKIKP	PKPdf	04 52 04.4	-0.7
PYM	Petit Puy Mans	156.46	356	PKP	PKPdf	04 52 04.4	-0.7
ORIF	Oris-en-Rattie	156.95	350	ePKIKP	PKPdf	04 52 05.6	-0.2
	comp=Z,16nm,0.9s						
ORIF	Oris-en-Rattie	156.95	350	ePKIKP	PKPdf	04 52 05.6	-0.2
ORIF	Oris-en-Rattie	156.95	350	ePKPdf	PKPdf	04 52 05.6	-0.2
LBL	Lubilhac	156.95	355	PKIKP	PKPdf	04 52 06.3	+0.5
LBL	Lubilhac	156.95	355	PKP	PKPdf	04 52 06.3	+0.5
RJF	Les Rejaudoux	156.98	358	ePKIKP	PKPdf	04 52 04.7	-1.0
	comp=Z,12nm,0.9s						
RJF	Les Rejaudoux	156.98	358	ePKIKP	PKPdf	04 52 04.7	-1.0
RJF	Les Rejaudoux	156.98	358	ePKPdf	PKPdf	04 52 04.7	-1.0
MBDF	Montbardon	156.99	349	ePKIKP	PKPdf	04 52 06.0	+0.1
MBDF	Montbardon	156.99	349	ePKIKP	PKPdf	04 52 06.0	+0.1
MBDF	Montbardon	156.99	349	ePKPdf	PKPdf	04 52 06.0	+0.1
VIVF	Saint-Julien-l	157.18	352	ePKIKP	PKPdf	04 52 05.4	-0.6
	comp=Z,14nm,1.1s						
VIVF	Saint-Julien-l	157.18	352	ePKIKP	PKPdf	04 52 05.4	-0.6
VIVF	Saint-Julien-l	157.18	352	ePKPdf	PKPdf	04 52 05.4	-0.6
CAF	Calviac	157.33	357	ePKIKP	PKPdf	04 52 05.4	-0.8
	comp=Z,20nm,1.1s						
CAF	Calviac	157.33	357	ePKIKP	PKPdf	04 52 05.4	-0.8
CAF	Calviac	157.33	357	ePKPdf	PKPdf	04 52 05.4	-0.8
LFF	La Frestale	157.35	360	ePKIKP	PKPdf	04 52 05.2	-1.0
LFF	La Frestale	157.35	360	ePKIKP	PKPdf	04 52 05.2	-1.0
LFF	La Frestale	157.35	360	ePKPdf	PKPdf	04 52 05.2	-1.0
SBF	Sospel	157.69	347	ePKIKP	PKPdf	04 52 06.0	-0.7
SBF	Sospel	157.69	347	ePKIKP	PKPdf	04 52 06.0	-0.7
SBF	Sospel	157.69	347	ePKPdf	PKPdf	04 52 06.0	-0.7
SMRF	Simiane la Rot	157.92	350	ePKIKP	PKPdf	04 52 06.5	-0.5
SMRF	Simiane la Rot	157.92	350	ePKPdf	PKPdf	04 52 06.5	-0.5
LASF	Ste Croix	158.04	354	ePKIKP	PKPdf	04 52 06.4	-0.7
	comp=Z,11nm,0.8s						
LASF	Ste Croix	158.04	354	ePKPdf	PKPdf	04 52 06.4	-0.7
FRF	La Foret Royal	158.13	348	ePKIKP	PKPdf	04 52 06.8	-0.4
FRF	La Foret Royal	158.13	348	ePKIKP	PKPdf	04 52 06.8	-0.4
FRF	La Foret Royal	158.13	348	ePKPdf	PKPdf	04 52 06.8	-0.4
MTLF	Montolieu	158.91	357	ePKIKP	PKPdf	04 52 07.2	-0.9
	comp=Z,20nm,1.1s						
MTLF	Montolieu	158.91	357	ePKIKP	PKPdf	04 52 07.2	-0.9
MTLF	Montolieu	158.91	357	ePKPdf	PKPdf	04 52 07.2	-0.9
EPF	Esparros	159.26	0	ePKIKP	PKPdf	04 52 07.9	-0.7
	comp=Z,26nm,1.1s						
EPF	Esparros	159.26	0	ePKIKP	PKPdf	04 52 07.9	-0.7
EPF	Esparros	159.26	0	ePKPdf	PKPdf	04 52 07.9	-0.7
ETSF	Etsaut	159.38	2	ePKIKP	PKPdf	04 52 08.2	-0.5
	comp=Z,7.7nm,0.7s						
ETSF	Etsaut	159.38	2	ePKIKP	PKPdf	04 52 08.2	-0.5
ETSF	Etsaut	159.38	2	ePKPdf	PKPdf	04 52 08.2	-0.5
PBRG	Braganca	159.56	16	ePKPab	PKPab	04 52 51.3	0.0
MVO	Moncorvo	160.08	17	ePKPdf	PKPdf	04 52 09.9	+0.3
MVO	Moncorvo	160.08	17	ePKPab	PKPab	04 52 54.0	+0.3
PVIS	Viseu	160.25	19	ePKPdf	PKPdf	04 52 08.9	-0.8
MTE	Manteigas	160.64	19	ePKPdf	PKPdf	04 52 10.9	+0.7
PTOM	Tomar	161.07	22	ePKPab	PKPab	04 52 57.5	-0.5
PCBR	Castelo Branco	161.18	19	ePKPdf	PKPdf	04 52 11.3	+0.6
PMAR	Madeira	161.36	52	ePKPdf	PKPdf	04 52 06.9	-4.4
PMAR	Madeira	161.36	52	ePKPab	PKPab	04 53 00.9	+1.1
PMRV	Marv??o	161.58	20	ePKPdf	PKPdf	04 52 10.9	-0.2
PMTG	Montargil	161.63	22	ePKPdf	PKPdf	04 52 12.2	+1.0
PMTG	Montargil	161.63	22	ePKPab	PKPab	04 52 59.9	-0.5
PESTR	Estremoz	162.03	21	ePKPdf	PKPdf	04 52 12.0	+0.4
PESTR	Estremoz	162.03	21	ePKPab	PKPab	04 53 01.5	-0.7
EVOP	Sao Brissos	162.15	23	ePKIKP	PKPdf	04 52 11.5	-0.2
EVOP	Sao Brissos	162.15	23	ePKPdf	PKPdf	04 52 11.5	-0.2
BBTS	Babate	162.16	112	PKPab	PKPab	04 53 05.0	+1.5
BBTS	Babate	162.16	112	PKPab	PKPab	04 53 05.0	+1.5
	comp=Z,38nm,0.9s,baz=165,slow=2.3,SNR=5.5						
EVO	Evora	162.18	22	ePKIKP	PKPdf	04 52 11.5	-0.2
	comp=Z,66nm,1.3s						
EVO	Evora	162.18	22	ePKPdf	PKPdf	04 52 12.7	+1.0
EVO	Evora	162.18	22	ePKPab	PKPab	04 53 02.4	-0.5
ESDC	Sonseca Array	162.20	11	PKPab	PKPab	04 53 02.8	-0.2
ESDC	Sonseca Array	162.20	11	PKPab	PKPab	04 53 02.8	-0.2
	comp=Z,8.8nm,0.9s,baz=346,slow=4.3,SNR=18						
PNCL	Nicolau / Gran	162.37	24	ePKPdf	PKPdf	04 52 12.9	+1.0
PNCL	Nicolau / Gran	162.37	24	ePKPab	PKPab	04 53 03.1	-0.6
PBEJ	Beja	162.69	23	ePKPdf	PKPdf	04 52 13.5	+1.3
PBEJ	Beja	162.69	23	ePKPab	PKPab	04 53 05.0	-0.1
PTEO	Sao Teotonio	162.78	26	ePKPdf	PKPdf	04 52 11.8	-0.5
PBAR	Barrancos	162.83	21	ePKPdf	PKPdf	04 52 12.5	+0.1
PBAR	Barrancos	162.83	21	ePKPab	PKPab	04 53 05.9	+0.2
PCVE	Castro Verde	162.97	24	ePKPdf	PKPdf	04 52 13.3	+0.8
PCVE	Castro Verde	162.97	24	ePKPab	PKPab	04 53 06.4	0.0
MORF	Marmelete	163.02	26	ePKPdf	PKPdf	04 52 14.0	+1.3
PFVI	Vila Bisbo	163.09	27	ePKPdf	PKPdf	04 52 14.2	+1.5
PFVI	Vila Bisbo	163.09	27	ePKPab	PKPab	04 53 06.9	0.0
LIC	Lamto	163.20	161	ePKIKP	PKPdf	04 52 12.6	-0.8
	comp=Z,23nm,0.7s						
LIC	Lamto	163.20	161	ePKPdf	PKPdf	04 52 12.6	-0.8
PVAQ	Vaqueiros	163.29	23	ePKPdf	PKPdf	04 52 14.1	+1.3
PVAQ	Vaqueiros	163.29	23	ePKPab	PKPab	04 53 07.6	-0.2
PBDV	Barranco-do-Ve	163.35	24	ePKPdf	PKPdf	04 52 14.0	+1.1
DBIC	Dimbokro	163.68	161	ePKPdf	PKPdf	04 52 13.4	-0.5
DBIC				ePKPab	PKPab	04 53 10.8	+0.9
DBIC	Dimbokro	163.68	161	PKP	PKPdf	04 52 13.3	-0.5
	comp=Z,13nm,0.6s,baz=129,slow=1.3,SNR=25						
DBIC				PKPab	PKPab	04 53 10.8	+0.9
	comp=Z,19nm,0.8s,baz=183,slow=4.1,SNR=10						
KEST	Kesra	164.51	332	PKP	PKPdf	04 52 12.9	-1.1
KEST				PKPab	PKPab	04 53 13.3	0.0
KEST	Kesra	164.51	332	PKP	PKPdf	04 52 12.9	-1.1
	comp=Z,1.1nm,0.7s,baz=148,slow=6.5,SNR=5.3						
KEST				PKPab	PKPab	04 53 13.3	0.0
	comp=Z,4.8nm,0.9s,baz=321,slow=1.8,SNR=11						
MDT	Midelt	168.52	22	PKP	PKPdf	04 52 17.4	+0.1
MDT				PKPab	PKPab	04 53 31.8	+0.6
MDT	Midelt	168.52	22	PKP	PKPdf	04 52 17.4	+0.1
	comp=Z,8.2nm,1.0s,baz=108,slow=0.7						
MDT				PKPab	PKPab	04 53 31.8	+0.6
	comp=Z,17nm,1.1s,baz=355,slow=4.8,SNR=12						
TOA0	Torodi Ar. Sit	170.89	187	ePKPdf	PKPdf	04 52 17.9	-1.0
TOA0				ePKPab	PKPab	04 53 41.8	+0.1
TORD	Torodi Ar. Bea	170.89	187	PKP	PKPdf	04 52 17.9	-1.1
TORD				PKPab	PKPab	04 53 41.9	+0.1
TORD				pPKPab	pPKPab	04 55 51.3	-2.6
TORD				PP	PP	04 57 31.6	-0.4
TORD	Torodi Ar. Bea	170.89	187	PKP	PKPdf	04 52 17.9	-1.1
	comp=Z,9.9nm,0.8s,baz=330,slow=0.7,SNR=56						
TORD				PKPab	PKPab	04 53 41.9	+0.1
	comp=Z,9.6nm,0.8s,baz=178,slow=4.0,SNR=21						
TORD				pPKPab	pPKPab	04 55 51.3	-2.6
	comp=Z,1.0nm,0.9s,baz=246,slow=3.2,SNR=2.1						
TORD				PP	PP	04 57 31.6	-0.4
	comp=Z,2.5nm,0.9s,baz=163,slow=5.3,SNR=5.4						
TAM	Tamanrasset	175.34	278	ePKIKP	PKPdf	04 52 21.3	+0.6
TAM	Tamanrasset	175.34	278	ePKPdf	PKPdf	04 52 21.3	+0.6
TAM				ePKPab	PKPab	04 54 03.1	+1.0

*AUST **08** 04:49:08.9, 1°.00N×129°.50E, h0km*
*IDC **08** 04:49:10.3±0.6, 0°.95N×128°.92E, h0km, mb4.1/14, mb1 4.2/16, mb1mx4.1/26, mbtmp4.1/16, ML3.7/2, MS3.4/1, Ms1 3.4/1, ms1mx2.8/35, Error ellipse: s-maj=30.4km s-min=12.4km az=82.0*
*ISCJB **08** 04:49:12.2±0.4, 0°.92N±0°.04×129°.02E±0°.05, h27km, mb4.2/16, Error ellipse: s-maj=7.8km s-min=6.0km az=166.9*
*DJA **08** 04:49:12.7±0.8, 1°N±7°×12°9E±°, h10km, M4.7/8, mb5.1/5, mB5.1/4, MLv4.6/8, Mw(mB)4.5/4*
*NEIC **08** 04:49:15.4±0.3, 0°.91N×128°.93E, h35km, mb4.5/2, Error ellipse: s-maj=13.4km s-min=6.2km az=84.0*
ISC 08 04:49:14.2±0.5**, 0°.90N**±0°.06×**128°.95E**±0°.08**, h27km, n65, σ1§11**/60**, mb4.2**/16**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	1.48	309	P	Pb	04 49 40.7	-0.4
TNTI	Ternate	1.58	265	P	Pn	04 49 41.1	+0.6
LBMI	Labuha	2.10	223	P	Pn	04 49 47.5	-0.2
MSAI	Masohi	4.22	180	P	Pn	04 50 18.2	+1.4
KMSI	Cibinong	4.97	266	P	Pn	04 50 29.4	+2.2
	500nm,0.7s,6µm1.6nm						
FAKI	Fak Fak	5.03	139	P	Pn	04 50 27.5	-0.5
FAKI	Fak Fak	5.03	139	P	Pn	04 50 27.5	-0.5
	baz=4.8,SNR=24						
MRSI	Marisa	7.02	267	P	Pn	04 50 59.7	+4.4
	55nm,0.8s,772nm0.2nm						
SKSI	Soroako, Sulaw	8.34	246	P	Pn	04 51 14.1	+0.6
	59nm,0.7s,618nm0.2nm						
TTSI	Tana Toraja	9.93	247	P	Pn	04 51 37.0	+1.8
	57nm,0.8s						
SPSI	Sidrap Palu	10.37	242	P	Pn	04 51 43.2	+2.0
KAPI	Kappang	10.90	237	Pn	Pn	04 51 48.7	+0.1
KAPI	Kappang	10.90	237	Pn	Pn	04 51 48.7	+0.1
	2.5nm,0.3s,baz=79,slow=5.2,SNR=15						
MTN	Manton Dam	13.83	171	P	Pn	04 52 26.5	-2.1
	baz=14,SNR=6.1						
KDU	Kakadu	13.95	166	P	Pn	04 52 25.3	-4.9
	baz=14,SNR=5.7						
FITZ	Fitzroy Crossi	19.16	190	P	P	04 53 35.9	+0.2
FITZ	Fitzroy Crossi	19.16	190	P	P	04 53 35.9	+0.2
	0.1nm,0.3s,baz=344,slow=7.4,SNR=2.5						
FITZ				LR	LR	05 00 15.1	
	comp=Z,109nm,18.8s,baz=358,slow=35						
FITZ	Fitzroy Crossi	19.16	190	P	P	04 53 33.2	-2.5
	baz=20,SNR=4.0						
BJII	Banjamegara	20.86	247	P	Pn	04 54 02.0	+5.0
WRAB	Tennant Creek	21.37	166	eP	P	04 53 59.7	-0.1
	14nm,0.8s						
WRA	Warramunga Arr	21.38	166	P	P	04 53 59.4	-0.4
WRA				S	S	04 57 45.8	-10
WRA	Warramunga Arr	21.38	166	P	P	04 53 59.4	-0.4
	12nm,0.8s,baz=343,slow=11,SNR=44						
WRA				S	S	04 57 45.8	-10
	0.9nm,0.9s,baz=351,slow=22,SNR=3.2						
TPI	Tanjungpandan	21.59	260	P	P	04 53 58.8	-3.4
QIS	Mount Isa	23.75	155	P	P	04 54 25.1	+0.7
	baz=24,SNR=13						
AS31	Alice Springs	24.89	169	eP	P	04 54 35.2	+0.1
ASAR	Alice Springs	24.89	169	P	P	04 54 35.1	+0.1
ASAR	Alice Springs	24.89	169	P	P	04 54 35.1	+0.1
	12nm,0.7s,baz=355,slow=14,SNR=89						
MEEK	Meekatharra	29.14	199	P	P	04 55 21.7	+8.5
	baz=30,SNR=3.4						
BBOO	Buckleboo	34.20	169	S	S	05 01 47.9	+25
	baz=34,SNR=7.6						
STKA	Stephens Creek	34.73	161	eP	P	04 56 02.4	+0.1
STKA	Stephens Creek	34.73	161	P	P	04 56 02.4	+0.1
	4.3nm,0.5s,baz=346,slow=8.9,SNR=15						
STKA	Stephens Creek	34.73	161	P	P	04 56 02.5	+0.2
	baz=35,SNR=10						
STKA				S	S	05 01 13.1	-18
	baz=35,SNR=14						
KSAR	Wonju Array Be	36.37	359	P	P	04 56 16.3	+0.2
KSRS	Korea Array	36.38	359	P	P	04 56 16.3	+0.1
	0.6nm,0.4s,baz=175,slow=9.6,SNR=4.0						
MJAR	Matsushiro Arr	36.49	13	P	P	04 56 16.0	-1.2
MJAR	Matsushiro Arr	36.49	13	P	P	04 56 16.0	-1.2
	2.0nm,0.6s,baz=184,slow=9.5,SNR=8.1						
YNG	Young	39.49	154	S	S	05 02 47.1	+3.8
	baz=40,SNR=7.3						
USRK	Ussuriysk Arra	43.20	3	P	P	04 57 12.6	-0.2
	1.2nm,0.6s,baz=147,slow=11,SNR=4.2						
TAPN	Taplejung	47.47	307	eP	P	04 57 46.7	-0.7
	45nm,1.4s						
ODAN	Odare	47.51	307	eP	P	04 57 46.6	-1.1
	13nm,0.7s						
RAMN	Ramite	48.19	306	eP	P	04 57 52.9	0.0
	16nm,0.6s						
GUN	Gumba	49.17	307	eP	P	04 58 00.5	-0.1
	14nm,0.6s						
SONM	Songino Array	50.67	340	P	P	04 58 11.3	-0.2
SONM	Songino Array	50.67	340	P	P	04 58 11.3	-0.2
	0.7nm,0.6s,baz=145,slow=3.5,SNR=3.4						
KOLN	Koldanda	50.95	306	eP	P	04 58 14.7	+0.7
	18nm,0.5s						
DANN	Dangsing	51.06	306	eP	P	04 58 15.0	+0.2
	20nm,0.6s						
PETK	Petropavlovsk-	57.25	20	P	P	04 58 59.9	+0.7
PETK	Petropavlovsk-	57.25	20	P	P	04 58 59.9	+0.7
	1.3nm,0.7s,baz=190,slow=7.3,SNR=2.3						
MK31	Makanchi Array	61.12	325	eP	P	04 59 26.3	+0.2
MKAR	Makanchi Array	61.12	325	P	P	04 59 25.9	-0.3
MKAR	Makanchi Array	61.12	325	P	P	04 59 25.9	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	1.8nm,0.5s,baz=116,slow=8.0,SNR=24						
ZALV	Zalesovo Beam	64.10	333	P	P	04 59 45.9	+0.1
ZALV	Zalesovo Beam	64.10	333	P	P	04 59 45.9	+0.1
	0.3nm,0.3s,baz=108,slow=4.7,SNR=2.3						
KURBB	Kurchatov Arra	65.30	327	P	P	04 59 53.5	-0.3
	2.4nm,0.5s,baz=127,slow=6.1,SNR=17						
KURK	Kurchatov	65.30	327	eP	P	04 59 53.7	0.0
	4.0nm,0.8s						
BVAR	Borovoye Array	70.88	327	P	P	05 00 28.2	-0.5
BVAR	Borovoye Array	70.88	327	P	P	05 00 28.2	-0.5
	0.5nm,0.5s,baz=106,slow=4.7,SNR=2.7						
ILAR	Eielson Array	86.69	25	P	P	05 01 55.6	+0.2
ILAR	Eielson Array	86.69	25	P	P	05 01 55.6	+0.2
	0.2nm,0.5s,baz=276,slow=5.3,SNR=3.8						
QSPA	South Pole Qui	90.83	180	P	P	05 02 17.2	+2.2
QSPA	South Pole Qui	90.83	180	P	P	05 02 17.2	+2.2
	1.7nm,1.0s,baz=273,slow=1.9,SNR=2.8						
TORD	Torodi Ar. Bea	125.88	287	PKP	PKPdf	05 08 14.7	0.0
TORD	Torodi Ar. Bea	125.88	287	PKP	PKPdf	05 08 14.7	0.0
	0.3nm,0.8s,baz=95,slow=3.3,SNR=2.8						
CFAA	Coronel Fontan	145.41	154	PKPbc	PKPab	05 08 50.9	+0.3
CFAA	Coronel Fontan	145.41	154	PKPbc	PKPab	05 08 50.9	+0.3
	0.1nm,0.3s,baz=333,slow=2.3,SNR=2.7						

IDC 08 04:55:17.1±2.0, 45.69S×35.31E, h0km, mb3.9/2, mb1 3.9/4, mb1mx3.6/21, mbtmp4.0/4, ML4.1/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/36, Error ellipse: s-maj=235.1km s-min=24.4km az=60.0, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	17.38	315	P	Pn	04 59 20.4	-0.8
	0.6nm,0.3s,baz=136,slow=16,SNR=7.2						
BOSA	Boshof	18.80	332	P	P	04 59 36.8	-1.5
	0.5nm,0.3s,baz=162,slow=14,SNR=8.4						
LBTB	Lobatse	22.06	336	P	P	05 00 17.2	+3.6
	1.5nm,0.8s,baz=176,slow=14,SNR=3.2						
LBTB				LR	LR	05 07 01.3	
	comp=Z,92nm,18.4s,baz=18,slow=32						
MAW	Mawson	26.25	156	P	P	05 00 53.2	-0.3
	2.4nm,0.9s,baz=322,slow=12,SNR=5.7						
TORD	Torodi Ar. Bea	65.95	324	P	P	05 06 05.8	+0.7
	0.6nm,0.6s,baz=161,slow=7.0,SNR=9.5						

*GEN **08** 05:11:00.5, 43.45N×10.64E, h10km, ML2.5*
*ROM **08** 05:11:01.3±0.2, 43.50N×10.55E, h10km±2km, Ml2.4/11, Error ellipse: s-maj=2.7km s-min=1.8km az=65.0*
*LDG **08** 05:11:01.6±0.1, 43.48N×10.60E, h5km, Ml2.7/7, Error ellipse: s-maj=3.9km s-min=3.1km az=8.0*
*ISCJB **08** 05:11:01.2±0.4, 43.48N±0.02×10.52E±0.04, h19km±5km, Error ellipse: s-maj=4.7km s-min=3.6km az=149.5*
*CSEM **08** 05:11:01.0±0.1, 43.48N×10.56E, h15km, ML2.8/9, Error ellipse: s-maj=1.6km s-min=1.4km az=30.0*
*VIE **08** 05:11:07.7±0.9, 43.76N×10.18E, h10km, mb2.4/3, ML2.6/3, Error ellipse: s-maj=11.0km s-min=5.7km az=110.0 86 km W of Florence*

ISC 08 05:11:01.1±0.7, 43.48N±0.02×10.53E±0.02, h13km±4km, n81, σ0s68/101, 2C-2D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PII	Pisa	0.24	359	Pg	Pg	05 11 06.3	0.0
PII				Sg	Sg	05 11 09.9	+0.1
PII	Pisa	0.24	359	Pg	Pg	05 11 06.3	0.0
PII				Sg	Sg	05 11 09.9	+0.1
MAIM	Mastiano	0.43	356	Pg	Pg	05 11 09.7	-0.1
MAIM				Sg	Sg	05 11 15.5	-0.1
	219nm,0.4s						
MAIM	Mastiano	0.43	356	Pg	Pg	05 11 09.7	-0.1
MAIM				S	Sg	05 11 15.7	+0.1
CRMI	Carmignano	0.45	46	Pg	Pg	05 11 09.9	-0.1
CRMI				Sg	Sg	05 11 16.0	0.0
CRMI	Carmignano	0.45	46	Pg	Pg	05 11 09.9	-0.1
CRMI				Sg	Sg	05 11 16.0	0.0
GRFL	Gerfalco	0.47	135	Pg	Pg	05 11 10.4	0.0
	117nm,0.4s						
GRFL	Gerfalco	0.47	135	Pg	Pg	05 11 10.4	0.0
	117nm,0.4s						
GROG	Isola di Gorgo	0.47	264	Pg	Pg	05 11 11.0	+0.7
	176nm,0.9s						
GROG	Isola di Gorgo	0.47	264	Pg	Pg	05 11 11.0	+0.7
	176nm,0.9s						
CSNT	Castellina Chi	0.56	91	Pg	Pg	05 11 11.3	-0.7
CSNT				Sg	Sg	05 11 18.4	-1.0
	99nm,0.4s						
CSNT	Castellina Chi	0.56	91	Pg	Pg	05 11 11.3	-0.7
CSNT				Sg	Sg	05 11 18.4	-1.0
	99nm,0.4s						
BDI	Bagni Di Lucca	0.58	5	Pg	Pg	05 11 12.3	-0.3
	439nm,1.0s						
BDI	Bagni Di Lucca	0.58	5	Pg	Pg	05 11 12.3	-0.3
	439nm,1.0s						
VLC	Villacollemand	0.69	351	Pg	Pb	05 11 14.9	-0.1
VLC				Sg	Sg	05 11 23.8	+0.2
	246nm,0.9s						
VLC	Villacollemand	0.69	351	Pg	Pb	05 11 14.9	-0.1
VLC				Sg	Sg	05 11 23.8	+0.2
	246nm,0.9s						
PZZT	Monte Pizzetto	0.69	20	Pg	Pg	05 11 14.2	-0.5
PZZT				Sg	Sg	05 11 23.5	-0.4
	290nm,0.4s						
PZZT	Monte Pizzetto	0.69	20	Pg	Pg	05 11 14.2	-0.5
PZZT				Sg	Sg	05 11 23.5	-0.4
	290nm,0.4s						
VINC	Vinca	0.71	338	P	Pg	05 11 14.8	-0.2
VINC				S	Sg	05 11 24.1	-0.4
CASP	Castiglione de	0.73	160	Pg	Pb	05 11 15.7	0.0
	271nm,0.4s						
CASP	Castiglione de	0.73	160	Pg	Pb	05 11 15.7	0.0
	271nm,0.4s						
FNVD	Fontana Vidola	0.81	32	Pg	Pg	05 11 16.5	-0.4
	446nm,0.7s						
FNVD	Fontana Vidola	0.81	32	Pg	Pg	05 11 16.5	-0.4
	446nm,0.7s						
SEI	Scarperia	0.83	46	Pg	Pg	05 11 16.8	-0.4
	226nm,0.3s						
SEI	Scarperia	0.83	46	Pg	Pg	05 11 16.8	-0.4
	226nm,0.3s						
GSCL	Gusciola	0.87	3	Pg	Pb	05 11 18.2	+0.1
	1.0nm,0.4s						
GSCL	Gusciola	0.87	3	Pg	Pb	05 11 18.2	+0.1
	1.0nm,0.4s						
VMG	Vicchio	0.88	56	Pg	Pb	05 11 18.2	0.0
	25nm,0.2s						
VMG	Vicchio	0.88	56	Pg	Pb	05 11 18.2	0.0
	25nm,0.2s						
VALM	Valbona	0.89	347	P	Pg	05 11 18.2	-0.2
VALM				S	Sg	05 11 29.7	-0.4
ZCCA	Zocca	0.93	20	Pg	Pn	05 11 19.5	-0.4
ZCCA	Zocca	0.93	20	Pg	Pn	05 11 19.5	-0.4
ARCI	Arcidosso	0.94	132	Pg	Pb	05 11 19.1	-0.1
	69nm,0.5s						
ARCI	Arcidosso	0.94	132	Pg	Pb	05 11 19.1	-0.1
	69nm,0.5s						
ERBM	Eremo	0.94	355	Pg	Pg	05 11 19.8	+0.4
	245nm,1.1s						
ERBM	Eremo	0.94	355	Pg	Pg	05 11 19.8	+0.4
	245nm,1.1s						
ASQU	Asqua	0.97	70	Pg	Pb	05 11 19.4	-0.4
ASQU	Asqua	0.97	70	Pg	Pb	05 11 19.4	-0.4
CODM	Codolo	1.03	332	P	Pb	05 11 20.5	-0.4
CODM				S	Sb	05 11 34.2	-0.1
CRE	Caprese Michel	1.04	82	Pg	Pb	05 11 20.7	-0.4
CRE	Caprese Michel	1.04	82	Pg	Pb	05 11 20.7	-0.4
SFI	Santa Sofia	1.05	66	Pg	Pb	05 11 20.8	-0.3
	192nm,1.0s						
SFI	Santa Sofia	1.05	66	Pg	Pb	05 11 20.8	-0.3
	192nm,1.0s						
CAFI	Castiglion Fio	1.06	98	Pg	Pb	05 11 20.8	-0.5
CAFI	Castiglion Fio	1.06	98	Pg	Pb	05 11 20.8	-0.5
MAON	Monte Argentar	1.14	157	Pg	Pb	05 11 22.6	0.0
MAON	Monte Argentar	1.14	157	Pg	Pb	05 11 22.6	0.0
PARC	Parchiule	1.25	82	Pg	Pb	05 11 24.7	+0.1
PARC	Parchiule	1.25	82	Pg	Pb	05 11 24.7	+0.1
PGF	Pioggiola	1.46	231	ePn	Pn	05 11 27.1	-0.1
PGF				eSn	Sn	05 11 45.6	-0.6
	9.9nm,0.3s						
PGF	Pioggiola	1.46	231	ePn	Pn	05 11 27.1	-0.1
PGF				eSn	Sn	05 11 45.6	-0.6
	4.9nm,0.3s						
SBF	Sospel	2.28	281	ePn	Pn	05 11 38.9	+0.5
SBF				eSn	Sn	05 12 06.4	+0.1
	6.9nm,0.3s						
SBF	Sospel	2.28	281	ePn	Pn	05 11 38.9	+0.5
SBF				eSn	Sn	05 12 06.4	+0.1
	3.5nm,0.3s						
FRF	La Foret Royal	2.83	273	ePn	Pn	05 11 45.5	-0.4
FRF				eSn	Sn	05 12 19.0	-0.8
	5.2nm,0.3s						
FRF	La Foret Royal	2.83	273	ePn	Pn	05 11 45.5	-0.4
FRF				eSn	Sn	05 12 19.0	-0.8
	2.6nm,0.3s						
LMR	La Mourre	2.93	269	ePn	Pn	05 11 46.6	-0.8
LMR	La Mourre	2.93	269	ePn	Pn	05 11 46.6	-0.8
LPG	La Plagne	3.37	308	eP	Pn	05 11 57.1	+3.4
LPG	La Plagne	3.37	308	eP	Pn	05 11 57.1	+3.4
LPL	La Plagne	3.39	308	eP	Pn	05 11 57.3	+3.4
LPL	La Plagne	3.39	308	eP	Pn	05 11 57.3	+3.4
FETA	Feichten	3.54	2	⇑iPn	Pn	05 11 59.7	+3.8
FETA				⇓iSn	Sn	05 12 39.0	+1.3
FETA	Feichten	3.54	2	Pn	Pn	05 11 59.7	+3.8
FETA				Sn	Sn	05 12 39.0	+1.3
SMRF	Simiane la Rot	3.62	280	ePn	Pn	05 11 58.1	+1.2
SMRF	Simiane la Rot	3.62	280	ePn	Pn	05 11 58.1	+1.2
ORIF	Oris-en-Rattie	3.64	295	eP	Pn	05 12 00.4	+3.2
ORIF				eSn	Sn	05 12 39.2	-0.8
	4.1nm,0.5s						
ORIF	Oris-en-Rattie	3.64	295	eP	Pn	05 12 00.4	+3.2
ORIF				eSn	Sn	05 12 39.2	-0.8
	2.0nm,0.5s						
DAVA	Damuels	3.83	353	⇓iPn	Pn	05 12 03.2	+3.3
DAVA				⇑iSn	Sn	05 12 46.0	+1.1
DAVA	Damuels	3.83	353	Pn	Pn	05 12 03.2	+3.3
DAVA				Sn	Sn	05 12 46.0	+1.1
CABF	La Chapelle	4.44	316	ePn	Pn	05 12 08.1	-0.1
CABF	La Chapelle	4.44	316	ePn	Pn	05 12 08.1	-0.1
LASF	Ste Croix	4.87	279	ePn	Pn	05 12 13.8	-0.2
LASF	Ste Croix	4.87	279	ePn	Pn	05 12 13.8	-0.2
HINF	Hinteralfeld	5.04	331	eSn	Sn	05 13 12.8	-1.7
	3.7nm,0.5s						
HINF	Hinteralfeld	5.04	331	eSn	Sn	05 13 12.8	-1.7
	1.9nm,0.5s						
HAU	Haudompre	5.39	329	ePn	Pn	05 12 21.0	-0.1
HAU				eSn	Sn	05 13 21.2	-1.8
	6.5nm,0.5s						
HAU	Haudompre	5.39	329	ePn	Pn	05 12 21.0	-0.1
HAU				eSn	Sn	05 13 21.2	-1.8
	3.2nm,0.5s						
CDF	Champ du Feu	5.43	336	ePn	Pn	05 12 21.8	+0.1
CDF				eSn	Sn	05 13 20.8	-3.3
	2.8nm,0.3s						
CDF	Champ du Feu	5.43	336	ePn	Pn	05 12 21.8	+0.1
CAF	Calviac	6.25	286	ePn	Pn	05 12 33.3	+0.3
CAF	Calviac	6.25	286	ePn	Pn	05 12 33.3	+0.3

*CASC **08** 05:12:54.9±6.0, 17.71N×87.02W, h0km±144km, MD4.9, ML5.6, mb5.5(NEIC)*
*IDC **08** 05:13:13.6±0.4, 16.00N×86.77W, h0km, mb5.1/25, mb1 5.2/28, mb1mx5.2/29, mbtmp5.1/28, ML3.9/1, MS4.9/33, Ms1 4.9/33, ms1mx4.9/36, Error ellipse: s-maj=18.9km s-min=9.8km az=61.0*
*ISCJB **08** 05:13:14.6±1.0, 15.85N±0.02×86.91W±0.02, h15km±6km, mb5.4/310, MS4.9/192, Error ellipse: s-maj=3.7km s-min=2.8km az=18.8*
*NEIC **08** 05:13:14.7±0.2, 15.79N×86.87W, h10km, mb5.5/226, MS4.9/128, MW5.4, Error ellipse: s-maj=4.2km s-min=2.7km az=204.0*
NEIC Felt [V] at La Ceiba; [IV] at Arizona, El Chimbo, El Progreso, La Lima, Mateo, Puerto Cortes, San Pedro Sula, Tela and Utila; [III] at Agalteca, Cerro Grande, Germania, Las Tapias, Roatan, Sandy Bay, Santa Lucia, Santa Rosa de Copan, Siguatepeque and Tegucigalpa; [II] at Comayagua, Guaimaca and Valle de Angeles. Felt [II] at Belize City and Dangriga, Belize and at Guatemala, Guatemala. Felt in most of Honduras, in central Belize and eastern Guatemala and in the San Salvador area, El Salvador.
*MOS **08** 05:13:15.0±1.1, 15.97N×86.84W, h18km, mb5.7/108, MS4.9/53, Error ellipse: s-maj=6.0km s-min=4.0km az=86.5*
*BJI **08** 05:13:15.6, 15.90N×86.90W, h10km, mB5.7/24, Ms5.5/31, Ms7 5.1/33*
*BGS **08** 05:13:16.5±2.3, 16.48N×86.82W, h10km, mb5.2, MS4.9*
*GCMT **08** 05:13:19.2±0.1, 15.99N×86.99W, h12km, MW5.4, Moment Tensor Solution. s93,c160; s27,c29; Moment tensor: Scale 10^{17}Nm; Mrr-1.48±.02; Mθθ1.17±.02; Mφφ0.32±.02; Mrθ0.09±.05; Mθφ0.81±.02; Mφr-0.39±.05; Best double couple: M0 1.60000×10^{17} NP1:φs254.00000°, δ45.00000°, λ-68.00000°. NP2:φs44.00000°, δ49.00000°, λ-110.00000°. Principal axes: T 1.6600, Plg2.0000°, Azm148.0000°; N -0.0700, Plg15.0000°, Azm58.0000°; P -1.5900, Plg75.0000°, Azm247.0000°; Data Used: II IU IC G CN. Surface waves: sta=105, comp=203, per= 50.*
*SZGRF **08** 05:13:24.0, 16.58N×85.46W, h22km, mb5.4, MS4.8, North of Honduras*
*NEIC **08** 05:13:30.7±0.0, 16.04N×86.36W, h10km, Moment Tensor Solution. s138 Moment tensor: Scale 10^{17}Nm; Mrr-0.99; Mθθ1.16; Mφφ-0.17; Mrθ-1.26; Mθφ0.63; Mφr-0.22; Best double couple: M0 1.80000×10^{17} NP1:φs79.00000°, δ69.00000°, λ-79.00000°. NP2:φs232.00000°, δ23.00000°, λ-114.00000°. Principal axes: T 1.9500, Plg23.0000°, Azm160.0000°; N -0.3800, Plg9.0000°, Azm255.0000°; P -1.5800, Plg64.0000°, Azm6.0000°;*

ISC 08 05:13:15.8±0.5, 15.85N±0.03×86.97W±0.03, h17km±2km, h16km:pP-P, n1334, σ1s30/1417, mb5.5/310, MS4.9/192, 233C-256D, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	Tegucigalpa,Un	1.81	189	ePn	Pn	05 13 46.5	+0.3
TGUH				eSn	Sb	05 14 11.8	+0.9
CAHU	Cacacuatique	2.39	210	eP	Pn	05 13 54.3	-0.2
VSM	San Miguel	2.72	208	eP	Pn	05 13 57.3	-1.8
MTO2	Montecristo 2	2.73	238	eP	Pn	05 13 58.2	-0.9
MRL	Marmol	2.74	254	eP	Pn	05 13 58.9	-0.4
LBRS	Las Brisas	2.91	224	eP	Pn	05 14 01.0	-0.4
LFRS	El Faro	3.00	223	eP	Pn	05 14 02.5	-0.3
SNET	Serv Nac Est T	3.07	226	eP	Pn	05 14 03.4	-0.3
SNET				eS	Sb	05 14 50.0	+2.7
SNET				AML	AML	05 15 04.8	
	comp=Z,23μm,0.6s						
BOQS	Boqueron	3.07	227	eP	Pn	05 14 03.5	-0.3
RBDL	Robledal	3.14	237	eP	Pn	05 14 03.7	-1.1
SNJE	San Jose	3.22	233	eP	Pn	05 14 05.0	-0.9
SBLS	San Blas	3.25	232	eP	Pn	05 14 05.7	-0.7
NBG	Las Nubes	3.50	249	eP	Pn	05 14 10.0	+0.3
NBG				eS	Sg	05 15 10.5	+2.2
GCG	Guatemala City	3.66	250	eP	Pn	05 14 12.5	+0.5
GCG				eS	Sg	05 15 14.0	+0.4
PCG	Pacaya	3.80	248	eP	Pn	05 14 15.3	+1.3
PCG				eS	Sg	05 15 18.1	0.0
FUG	Fuego 3	3.99	250	eP	Pn	05 14 16.7	+0.2
TEIG	Tepich	4.53	344	ePn	Pn	05 14 22.2	-1.4
TEIG				eSn	Sn	05 15 13.8	-2.1
TEIG	Tepich	4.53	344	Pn	Pn	05 14 22.2	-1.4
	comp=Z,603nm,0.3s,baz=170,slow=1.6,SNR=718						
TEIG				Sn	Sn	05 15 13.1	-2.9
	comp=Z,1μm,0.3s,baz=246,slow=24,SNR=24						
TEIG				LR	LR	05 16 15.0	
	comp=Z,41μm,18.4s,baz=156,slow=41						
JAT	Jato	4.76	252	eP	Pn	05 14 27.6	+0.7
CCIG	Comitan	4.99	276	P	Pn	05 14 30.1	-0.1
CCIG				S	Sg	05 15 49.9	-6.2
SCIG	Sabancuy	5.08	308	P	Pn	05 14 35.3	+4.0
SCIG				S	Sg	05 15 55.3	-3.8
THIG		5.20	260	P	Pn	05 14 34.1	+1.3
THIG				S	Sb	05 15 47.6	-0.9
FORC	Fortuna	5.80	157	eP	Pn	05 14 42.2	+1.0
VCR	Vista de Mar	5.84	167	eP	Pn	05 14 46.7	+4.9
VCR				eS	Sg	05 16 19.3	-4.0
TGIG		5.98	280	P	Pn	05 14 43.2	-0.5
TGIG				S	Sb	05 16 14.5	+3.3
PCIG		6.02	269	P	Pn	05 14 43.7	-0.5
PCIG				S	Sb	05 16 11.1	-1.1
JCR	Jicaral	6.23	163	eP	Pn	05 14 53.0	+5.8
JCR				eS	Sb	05 16 27.0	+8.6
CGA2	Cerro Gallo 2	6.29	157	eP	Pn	05 14 52.2	+4.2
CGA2				eS	Sb	05 16 27.3	+7.2
SJS	Escuela Geolog	6.53	154	eP	Pn	05 14 58.9	+7.6
SJS				eS	Sg	05 16 38.1	-7.2
URSC	Urasca	6.74	152	eP	Pn	05 15 01.0	+6.7
QCR	Quepos	6.95	156	eP	Pn	05 15 01.4	+4.4
BUS	Buena Vista	7.00	153	eP	Pn	05 15 04.5	+6.5
ACR	Cerro Adams	8.06	152	eP	Pn	05 15 21.6	+9.4
ACR				eS	Sb	05 17 17.8	+6.8
HUIG	Huatulco	8.80	271	P	Pn	05 15 21.1	-1.3
MCJ	Malvern	9.12	76	i P	Pn	05 15 28.8	+1.9
MTDJ	Mount Denham	9.33	74	ePn	Pn	05 15 30.4	+0.7
MTDJ				eSn	Sn	05 17 16.4	+2.0
PCJ	Portland Cotta	9.58	77	i P	Pn	05 15 34.2	+1.1
BBJ	Bamboo Saint A	9.61	73	i P	Pn	05 15 37.4	+3.8
BCIP	Isla Barro Col	9.62	133	ePn	Pn	05 15 31.3	-2.3
STH	Stony Hill	9.97	76	i P	Pn	05 15 39.9	+1.5
HOJ	Hope	10.01	76	i P	Pn	05 15 40.7	+1.7
UTMO	Huajuapan	10.56	282	P	Pn	05 15 46.9	+0.2
UTMO				S	Sn	05 18 10.7	+26
GTBY	Guantanamo Bay	11.99	68	ePn	Pn	05 16 08.0	+1.9
	comp=Z,260nm,1.3s						
BRAL	Brewton	15.09	360	ePn	Pn	05 16 49.1	+0.7
	comp=Z,252nm,0.8s						
SDDR	Presa de Saban	15.28	76	ePn	Pn	05 16 50.2	-0.8
	comp=Z,76nm,0.8s						
KVTX	Kingsville	15.43	321	ePn	Pn	05 16 51.2	-1.7
	comp=Z,291nm,0.9s						
KVTX				eSn	Sn	05 19 42.4	-1.2
TIGA	Tifton	15.82	11	⇓P	Pn	05 16 55.1	-2.8
	baz=16,SNR=14						
ROSC	El Rosal	16.54	130	eP	P	05 17 09.8	-0.3
ROSC	El Rosal	16.54	130	Pn	Pn	05 17 08.3	+0.8
	comp=Z,0.7nm,0.3s,baz=69,slow=7.6,SNR=38						
ROSC				LR	LR	05 23 60.0	
	comp=Z,7μm,18.2s,baz=354,slow=39						
VBMS	Vicksburg	16.61	349	eP	P	05 17 10.5	+0.1
	comp=Z,437nm,0.7s						
LRAL	Lakeview Retre	17.11	360	ePn	Pn	05 17 14.1	-0.2
	comp=Z,2.0nm,0.2s						
LRAL				eSn	Sn	05 20 14.7	-10
SDV	Santo Domingo	17.38	112	ePn	Pn	05 17 15.8	-2.2
	comp=Z,460nm,1.6s						
732A	Laxson Ranch,	17.56	319	⇓P	Pn	05 17 15.9	-4.0
	baz=18,SNR=148						
OTAV	Otavalo	17.64	151	eP	Pn	05 17 22.0	+0.5
	comp=Z,648nm,2.4s						
GOGA	Godfrey	17.77	10	eP	Pn	05 17 20.3	-2.2
GOGA				pmax	pmax		
	comp=Z,283nm,1.0s						
GOGA	Godfrey	17.77	10	ePn	Pn	05 17 20.3	-2.2
	comp=Z,283nm,1.0s						
632A	Uvalde	18.00	321	⇓P	Pn	05 17 21.7	-3.6
	baz=18,SNR=219						
NHSC	New Hope	18.25	18	eP	P	05 17 28.6	+0.1
	comp=Z,271nm,0.8s						
NHSC				eS	S	05 20 54.7	-2.1
631A	Perdido Creek	18.41	319	⇓P	P	05 17 26.9	-3.5
	baz=19,SNR=232						
532A	Rocksprings	18.52	322	⇓P	P	05 17 29.4	-2.1
	baz=19,SNR=221						
WHTX	Lake Whitney	18.69	331	⇑P	P	05 17 32.1	-1.3
	baz=19,SNR=169						
OXF	Oxford	18.71	354	eP	P	05 17 33.0	-0.6
OXF				e		05 20 51.5	
OXF				pmax	pmax		
	comp=Z,373nm,0.9s						
OXF	Oxford	18.71	354	ePn	P	05 17 33.0	-0.6
	comp=Z,373nm,0.9s						
OXF				eSn	Sn	05 20 51.5	-11
JCT	Junction City	18.72	323	⇑P	P	05 17 31.7	-2.1
	baz=19,SNR=40						
531A	Rocksprings	18.93	321	⇓P	P	05 17 34.7	-1.3
	baz=19,SNR=172						
432A	Menard	19.01	324	⇓P	P	05 17 36.0	-1.0
	baz=19,SNR=169						
PLAL	Pickwick Lake	19.08	357	ePn	Pn	05 17 38.3	-0.2
	comp=Z,146nm,0.9s						
AGPR	Aguadilla, PR	19.15	79	eP	Pn	05 17 39.5	0.0
	comp=Z,322nm,1.1s						
LSP	Las Mesas	19.15	80	eP	P	05 17 36.6	-2.0
RFTA	Plano	19.22	334	ePn	Pn	05 17 41.3	+1.1
SWET	Sewanee	19.31	3	ePn	Pn	05 17 40.9	-0.4
	comp=Z,196nm,0.8s						
431A	Sonora	19.34	322	⇓P	P	05 17 39.4	-1.2
	baz=20,SNR=243						
332A	Millersview	19.36	325	⇑P	P	05 17 40.2	-0.6
	baz=20,SNR=223						
MET	Memphis--Engin	19.38	353	eP	P	05 17 40.2	-0.6
	comp=Z,336nm,0.8s						
LRS	Lares	19.39	80	eP	P	05 17 37.7	-3.5
530A	J-C Ranch, Com	19.40	320	⇓P	P	05 17 40.5	-0.7
	baz=20,SNR=227						
UALR	University of	19.45	347	ePn	Pn	05 17 43.2	+0.2
	comp=Z,336nm,0.9s						
AOPR	Arecibo Observ	19.48	80	ePn	Pn	05 17 46.1	+2.7
	comp=Z,245nm,1.8s						
MIAR	Mount Ida	19.54	344	eP	Pn	05 17 43.8	-0.2
MIAR				pmax	pmax		
	comp=Z,639nm,1.0s						
MIAR	Mount Ida	19.54	344	eP	Pn	05 17 43.8	-0.2
	comp=Z,639nm,1.0s						
OBIP	Obispado Ponce	19.60	81	eP	P	05 17 42.0	-1.5
	comp=Z,60nm,1.0s						
CELP	Cerrillos	19.63	81	eP	Pn	05 17 45.0	-0.2
CPCT	Cooper Cave	19.64	6	eP	Pn	05 17 44.7	-0.5
331A	San Angelo	19.69	324	⇑P	P	05 17 45.2	+0.8
	baz=20,SNR=153						
232A	Coleman	19.70	326	⇑P	P	05 17 45.2	+0.6
	baz=20,SNR=285						
430A	Baggett Ranch,	19.79	321	⇑P	Pn	05 17 46.5	-0.5
	baz=20,SNR=158						
KMSC	Kings Mountain	19.86	14	⇓P	P	05 17 46.5	+0.3
	baz=20,SNR=49						
TKL	Tuckaleechee C	19.93	8	P	P	05 17 46.2	-0.8
TKL				S	S	05 21 21.2	-10
TKL	Tuckaleechee C	19.93	8	P	P	05 17 46.2	-0.8
	comp=Z,0.3nm,0.3s,baz=182,slow=13,SNR=22						
TKL				S	S	05 21 21.2	-10
	comp=Z,3.6nm,0.3s,baz=34,slow=13,SNR=5.1						
TKL				LR	LR	05 24 59.1	
	comp=Z,2μm,20.7s,baz=189,slow=36						
529A	Stev Forest Ra	19.94	318	⇑P	P	05 17 47.7	+0.5
	baz=20,SNR=331						
628A	Black Gap, Mar	19.97	316	⇓P	Pn	05 17 48.6	-0.6
	baz=20,SNR=534						
SJG	San Juan	20.04	81	eP	Pn	05 17 49.8	-0.2
	comp=Z,344nm,2.0s						
429A	Davenport Ranc	20.08	320	⇓P	P	05 17 49.2	+0.5
	baz=20,SNR=492						
231A	Bronte	20.10	325	⇑P	P	05 17 49.7	+0.8
	baz=20,SNR=443						
330A	Mertzon	20.20	323	⇓P	P	05 17 50.5	+0.6
	baz=20,SNR=312						
GNAR	Gosnell	20.22	353	ePn	Pn	05 17 51.8	-0.2
	comp=Z,3μm,0.9s						
ABTX	Abilene, Hawle	20.28	328	⇑P	Pn	05 17 51.9	-0.9
	baz=20,SNR=136						
627A	Terlingua Ranc	20.29	315	⇓P	Pn	05 17 52.7	-0.4
	baz=20,SNR=708						
HUMP	Col San Antoni	20.32	81	ePn	Pn	05 17 53.3	-0.1
	comp=Z,329nm,2.0s						
CBYP	Canovanas	20.32	80	eP	Pn	05 17 52.9	-0.6
	comp=Z,70nm,1.2s						
528A	Cox Ranch, San	20.34	317	⇑P	P	05 17 52.4	+0.9
	baz=20,SNR=171						
TXAR	Lajitas Array	20.41	314	P	Pn	05 17 53.9	-0.5
TXAR				S	S	05 21 36.0	-4.4
TXAR	Lajitas Array	20.41	314	P	Pn	05 17 53.9	-0.5
	comp=Z,385nm,0.9s,baz=129,slow=12,SNR=715						
TXAR				S	S	05 21 36.0	-4.4
	comp=Z,7.6nm,0.6s,baz=124,slow=12,SNR=5.7						
TXAR				LR	LR	05 26 56.1	
	comp=Z,3μm,20.6s,baz=295,slow=40						
UTMT	University of	20.48	356	eP	P	05 17 53.8	+0.9
	comp=Z,713nm,1.0s						
230A	Sterling City	20.51	324	⇓P	P	05 17 54.0	+0.6
	baz=21,SNR=225						
MTP	Monte Pirata	20.60	81	eP	Pn	05 17 56.5	-0.2
	comp=Z,308nm,1.6s						
PVMO	Portageville	20.62	354	eP	Pn	05 17 56.7	-0.1
	comp=Z,341nm,1.1s						
428A	Kincaid Ranch,	20.64	319	⇑P	P	05 17 55.9	+1.1
	baz=21,SNR=123						
131A	Roby	20.71	326	⇓P	P	05 17 56.0	+0.5
	baz=21,SNR=70						
329A	Wagon Wheel Ra	20.73	321	⇓P	P	05 17 56.1	+0.4

baz=21,SNR=199
Z32A Haskell 20.74 329 ⇑P Pn 05 17 57.3 -0.9
baz=21,SNR=539
TZTN Tazewell 20.84 8 eP P 05 17 57.8 +1.0
comp=Z,479nm,1.5s
626A Big Bend Ranch 20.86 314 ⇑P P 05 17 58.2 +1.0
baz=21,SNR=1000
527A Woodward Ranch 20.87 316 ⇑P P 05 17 58.5 +1.2
baz=21
CNNC Cliffs of the 20.95 21 eP P 05 17 58.5 +0.5
comp=Z,546nm,1.9s
CNNC LR LR
comp=Z,3µm,20.0s
130A Snyder 20.96 325 ⇓P P 05 17 58.7 +0.5
baz=21,SNR=114
229A Bryant Ranch, 20.97 323 ⇑P P 05 17 58.6 +0.3
baz=21,SNR=89
Z31A Sharp Cattle R 21.08 328 ⇓P P 05 18 00.2 +0.7
baz=21,SNR=452
526A Mary Lane Ranc 21.14 315 ⇓P P 05 18 01.6 +1.3
baz=21,SNR=417
328A Wristen Ranch, 21.17 320 ⇓P P 05 18 01.1 +0.7
baz=21,SNR=400
STVI Saint Thomas 21.18 80 eP P 05 18 02.4 +1.7
comp=Z,69nm,0.9s
427A Hayter Ranch, 21.19 318 ⇓P P 05 18 01.3 +0.6
baz=21,SNR=135
Y32A R-V Farms, Ver 21.29 330 ⇑P P 05 18 02.3 +0.6
baz=21,SNR=214
TUL1 Tulsa 21.48 340 ⇑P P 05 18 03.9 +0.3
baz=22,SNR=63
426A McDonald Obser 21.48 316 ⇓P P 05 18 04.8 +0.8
baz=22,SNR=356
129A Stewart Farms, 21.49 324 ⇑P P 05 18 03.7 -0.2
baz=22,SNR=126
228A UT Block 9, Go 21.55 322 ⇓P P 05 18 04.1 -0.4
baz=22,SNR=89
Z30A Sanderson Ranc 21.57 326 ⇓P P 05 18 04.5 -0.3
baz=22,SNR=185
327A Balmorhea Ranc 21.59 319 ⇓P P 05 18 05.7 +0.7
baz=22
WMOK Wichita Mounta 21.59 333 eP P 05 18 05.3 +0.3
WMOK pmax pmax
comp=Z,44nm,0.5s
WMOK MLR MLR
comp=Z,2µm,22.0s
WMOK Wichita Mounta 21.59 333 eP P 05 18 05.3 +0.3
comp=Z,44nm,0.5s
WMOK LR LR
comp=Z,2µm,22.0s
Y31A Rekieta Farm, 21.65 329 ⇑P P 05 18 06.4 +0.7
baz=22,SNR=376
128A Castleberry Fa 21.84 323 ⇓P P 05 18 08.3 +0.6
baz=22,SNR=167
326A Caldwell Ranch 21.86 318 ⇑P P 05 18 08.8 +0.8
baz=22,SNR=394
Z29A Hungry Hill Ra 21.87 325 ⇑P P 05 18 07.5 -0.5
baz=22,SNR=70
SIUC Southern Illin 21.87 355 eP P 05 18 08.8 +1.0
comp=Z,360nm,0.8s
227A Bennet, Jal 21.90 320 ⇓P P 05 18 08.7 +0.4
baz=22,SNR=96
Y30A Stafford Cattl 21.91 328 ⇑P P 05 18 08.8 +0.3
baz=22,SNR=52
BLA Blacksburg 22.05 14 eP P 05 18 10.5 +0.6
BLA pmax pmax
comp=Z,35nm,1.0s
BLA MLR MLR
comp=Z,2µm,19.0s
BLA Blacksburg 22.05 14 eP P 05 18 10.4 +0.6
comp=Z,35nm,1.0s
BLA LR LR
comp=Z,2µm,19.0s
X31A McDonald Ranch 22.06 330 ⇓P P 05 18 10.7 +0.7
baz=22,SNR=319
425A Indio Mountain 22.20 315 ⇑P P 05 18 12.0 +0.4
baz=22,SNR=91
Z28A Tucker Farm, M 22.27 324 ⇓P P 05 18 12.4 +0.1
baz=22,SNR=100
WCI Wyandotte Cave 22.30 1 eP P 05 18 12.5 0.0
WCI pmax pmax
comp=Z,368nm,0.9s
WCI Wyandotte Cave 22.30 1 eP P 05 18 12.5 0.0
comp=Z,368nm,0.9s
Y29A Porterfield Fa 22.30 326 ⇓P P 05 18 13.1 +0.4
baz=22,SNR=108
X30A Coker Ranch, T 22.34 329 ⇑P P 05 18 12.8 -0.3
baz=22,SNR=182
127A Arkansas Junct 22.40 321 ⇑P P 05 18 13.7 0.0
baz=22,SNR=108
CLNB Carlsbad 22.43 320 eP P 05 18 14.9 +0.9
comp=Z,104nm,1.3s
226B Tecolote Peak, 22.49 319 ⇓P P 05 18 15.6 +0.9
baz=23
W31A Holland Ranch, 22.49 331 ⇓P P 05 18 14.7 +0.1
baz=23,SNR=67
325A Bean Ranch, Si 22.55 316 ⇓P P 05 18 15.0 -0.5
baz=23,SNR=239
Y28A McKinney Farm, 22.65 325 ⇓P P 05 18 16.2 -0.2
baz=23,SNR=109
GDL2 Guadalupe Moun 22.69 319 eP P 05 18 17.8 +1.0
Z27A Tatum 22.76 323 ⇑P P 05 18 17.3 -0.3
baz=23,SNR=191
X29A Tulia 22.77 327 ⇓P P 05 18 17.0 -0.7
baz=23,SNR=111
126A Clayton Basin, 22.78 320 ⇑P P 05 18 17.3 -0.5
baz=23,SNR=95
W30A Crocket Farms 22.79 330 ⇓P P 05 18 18.3 +0.5
baz=23,SNR=42
OLIL Olney 22.82 358 eP P 05 18 18.4 +0.4
comp=Z,547nm,1.0s
SLM Saint Louis 22.88 353 eP P 05 18 19.2 +0.6
SLM pmax pmax
comp=Z,259nm,0.9s
SLM Saint Louis 22.88 353 eP P 05 18 19.2 +0.6
comp=Z,259nm,0.9s
V31A Spring Creek L 22.93 332 ⇓P P 05 18 19.4 +0.1
baz=23,SNR=114
324A Moseley Ranch, 22.94 316 ⇑P P 05 18 19.2 -0.3
baz=23,SNR=286
MSTX Muleshoe 22.99 325 ⇓P P 05 18 19.6 -0.4
baz=23,SNR=129
MNTX Cornudas Mount 23.03 317 eP P 05 18 20.1 -0.1
comp=Z,20nm,0.7s
MNTX LR LR
comp=Z,3µm,22.0s
X28A Dimmitt 23.09 326 ⇑P P 05 18 20.5 -0.5
baz=23,SNR=100
AMTX Amarillo 23.10 328 eP P 05 18 20.6 -0.4
comp=Z,364nm,0.9s
AMTX LR LR
comp=Z,2µm,20.0s
Y27A Causey 23.14 324 ⇓P P 05 18 20.9 -0.7
baz=23,SNR=271
125A Gardner Draw, 23.18 319 ⇑P P 05 18 21.4 -0.6
baz=23,SNR=218
Z26A Caprock 23.19 321 ⇑P P 05 18 21.4 -0.5
baz=23,SNR=71
JSRW J. Sargeant Re 23.20 19 eP P 05 18 23.0 +1.1
BLO Bloomington 23.24 1 eP P 05 18 22.7 +0.4
BLO pmax pmax
comp=Z,222nm,0.8s
BLO Bloomington 23.24 1 eP P 05 18 22.7 +0.4
comp=Z,222nm,0.8s
W29A Amraillo 23.27 328 ⇑P P 05 18 22.6 -0.2
baz=23,SNR=18
V30A Spur Ranch, Mi 23.31 331 ⇑P P 05 18 23.2 0.0
baz=24,SNR=12
224A Cornudas Mount 23.36 317 ⇑P P 05 18 23.8 0.0
baz=24,SNR=261
224A ⇑S S 05 22 39.5 +3.3
baz=24
U31A Nine Bar Ranch 23.44 333 ⇓P P 05 18 24.5 +0.2
baz=24,SNR=85
Y26A Elida 23.55 323 ⇓P P 05 18 25.1 -0.6
baz=24,SNR=49
Z25A Roswell 23.64 320 ⇑P P 05 18 26.4 0.0
baz=24,SNR=227
W28A Vega 23.66 328 ⇑P P 05 18 26.7 +0.1
baz=24,SNR=21
X27A F and S Farms, 23.67 325 ⇓P P 05 18 26.8 0.0
baz=24,SNR=65
124A Stringfield Ra 23.71 318 ⇓P P 05 18 27.3 -0.1
baz=24,SNR=330
V29A Stinnett 23.80 330 ⇓P P 05 18 28.2 +0.2
baz=24,SNR=22
CBN Corbin 23.82 19 eP P 05 18 29.1 +1.0
comp=Z,155nm,1.0s
CBN LR LR
comp=Z,3µm,20.0s
223A Chaparral, Ant 23.92 316 ⇓P P 05 18 28.9 -0.2
baz=24,SNR=17
U30A WK&E Inc. Balk 23.93 332 ⇑P P 05 18 29.7 +0.5
baz=24,SNR=225
W27A Bowe Ranch, En 23.96 326 ⇓P P 05 18 29.8 +0.2
baz=24,SNR=68
T31A Randall Ranch, 23.98 334 ⇑P P 05 18 29.1 -0.5
baz=24,SNR=183
X26A CR and CF Fran 24.00 324 ⇓P P 05 18 30.1 +0.2
baz=24,SNR=73
V28A Channing 24.05 328 ⇓P P 05 18 30.3 -0.1
baz=24,SNR=51
Y25A Mesa, Roswell 24.07 322 ⇓P P 05 18 30.8 +0.3
baz=24,SNR=181
Z24A Sheeppen Canyo 24.07 320 ⇑P P 05 18 31.5 +0.8
baz=24,SNR=158
U29A Oasis Ranch, S 24.15 331 ⇓P P 05 18 31.8 +0.6
baz=24,SNR=31
ANWB Willy Bob 24.18 82 PFAKE 05 18 40.0 +8.4
ANWB LR LR
comp=Z,4µm,20.0s
123A Bell Site, Whi 24.20 317 ⇓P P 05 18 32.8 +1.0
baz=24,SNR=42
T30A Plains 24.30 333 ⇓P P 05 18 33.0 +0.3
baz=24,SNR=58
S31A Mullinville 24.35 335 ⇓P P 05 18 33.1 +0.1
baz=24,SNR=21
ATAH Atahualpa 24.36 159 P P 05 18 36.4 +2.6
ATAH Atahualpa 24.36 159 P P 05 18 36.4 +2.6
comp=Z,40nm,0.9s,baz=9.7,slow=6.0,SNR=15
ATAH LR LR 05 27 34.4
comp=Z,9µm,19.7s,baz=288,slow=35
W26A Owens Ranch, T 24.37 325 ⇓P P 05 18 33.5 +0.1
baz=24,SNR=14
V27A Dan Oppiter Fa 24.37 327 ⇑P P 05 18 33.4 0.0
baz=24,SNR=42
222A Williams Famil 24.43 315 ⇓P P 05 18 34.2 +0.3
baz=25,SNR=8.2
SFIN Scholer Farm 24.44 360 ⇓P P 05 18 33.1 -0.7
baz=25,SNR=48
X25A Clemmons Ranch 24.47 323 ⇑P P 05 18 34.7 +0.4
baz=25,SNR=101
Y24A Capitan 24.52 321 ⇑P P 05 18 35.9 +1.1
baz=25,SNR=529
ACSO Alum Creek Sta 24.54 7 eP P 05 18 35.4 +0.7
comp=Z,294nm,1.0s
ACSO LR LR
comp=Z,2µm,19.0s
U28A Mallet 24.55 329 ⇓P P 05 18 34.9 -0.1
baz=25,SNR=18
Z23A Rita Site, Whi 24.58 318 ⇑P P 05 18 36.7 +1.5
baz=25,SNR=124
KSU1 Kansas State U 24.66 342 eP P 05 18 35.5 -0.2
comp=Z,235nm,0.8s
KSU1 LR LR
comp=Z,3µm,21.0s
122A Conniff Cattle 24.72 316 ⇓P P 05 18 38.0 +1.4
baz=25,SNR=44
T29A Hugoton 24.73 332 ⇓P P 05 18 37.2 +0.6
baz=25,SNR=142
S30A Montezuma 24.77 334 ⇓P P 05 18 37.2 +0.4
baz=25,SNR=118
GRGR Grenville 24.83 95 eP P 05 18 36.1 -1.4
comp=Z,399nm,1.1s
GRGR LR LR
comp=Z,2µm,21.0s
221A Mesquite Ranch 24.84 314 ⇑P P 05 18 39.0 +1.4
baz=25
W25A X Bar L Ranch, 24.85 324 ⇓P P 05 18 38.5 +0.8
baz=25,SNR=168
U27A Thompson Grove 24.88 328 ⇓P P 05 18 38.2 +0.2
baz=25,SNR=42
Y23A Lovelace Mesa, 24.90 320 ⇓P P 05 18 39.8 +1.6
baz=25,SNR=214
V26A Tequesquite Ra 24.90 326 ⇑P P 05 18 38.7 +0.5
baz=25,SNR=299
FDF Fort de France 24.92 89 eP P 05 18 40.0 +1.6
comp=Z,144nm,1.1s
FDF LR LR
comp=Z,5µm,20.0s
R31A Burdett 24.94 336 ⇓P P 05 18 37.9 -0.5
baz=25,SNR=76
X24A Lazy VL Ranch, 24.95 322 ⇑P P 05 18 39.4 +0.7
baz=25
320A Kipp Ranch, An 24.99 312 ⇑P P 05 18 40.5 +1.5
baz=25
S29A Ulysses 25.04 333 ⇓P P 05 18 39.8 +0.5
baz=25,SNR=78
Z22A Elephant Butte 25.04 317 ⇓P P 05 18 40.6 +1.1
baz=25,SNR=321
T28A Walsh 25.09 330 ⇑P P 05 18 39.1 -0.6
baz=25,SNR=84
SDMD Soldier's Deli 25.09 19 eP P 05 18 40.8 +1.2
comp=Z,121nm,1.1s
121A Cookes Peak, D 25.15 315 ⇑P P 05 18 41.7 +1.2
baz=25,SNR=204
R30A Dighton 25.24 335 ⇑P P 05 18 41.5 +0.4
baz=25,SNR=158
220A Playas Peak, P 25.30 313 ⇓P P 05 18 42.9 +1.1
baz=25,SNR=178
T27A Campo 25.33 329 ⇑P P 05 18 42.0 0.0
baz=26,SNR=50
U26A Atchley Ranch, 25.33 327 ⇑P P 05 18 42.6 +0.5
baz=26,SNR=107
S28A Manter 25.36 331 ⇓P P 05 18 42.1 -0.1
baz=26,SNR=84
W24A Lazy 6 Ranch, 25.39 323 ⇑P P 05 18 44.4 +1.8
baz=26,SNR=209
V25A Rancho No Teng 25.39 325 ⇑P P 05 18 43.9 +1.2
baz=26,SNR=108
BNM Barren Site 25.40 319 eP P 05 18 44.7 +1.9
comp=Z,295nm,0.4s
X23A Hourglass Bar 25.42 321 ⇑P P 05 18 43.9 +1.0
baz=26
Y22A Socorro 25.48 319 ⇑P P 05 18 44.9 +1.5
baz=26,SNR=161
LPM Los Pinos Moun 25.51 320 eP P 05 18 45.6 +1.8
Q31A Ellis 25.52 337 ⇓P P 05 18 44.1 +0.5
baz=26,SNR=31
Y22D IRIS PASSCAL I 25.54 319 ⇓P P 05 18 45.3 +1.3
baz=26
Z21A St. Cloud Mine 25.54 317 ⇑P P 05 18 45.8 +1.7
baz=26,SNR=248
319A Douglas 25.55 311 ⇑P P 05 18 45.3 +1.2
baz=26,SNR=115
V24A Rampart Ranch, 25.67 324 ⇓P P 05 18 46.4 +1.2
baz=26,SNR=121
U25A Circle Dot Ran 25.69 326 ⇑P P 05 18 46.8 +1.4
baz=26,SNR=107
R29A Marienthal 25.72 334 ⇓P P 05 18 46.2 +0.7
baz=26,SNR=120
120A U Bar Ranch, L 25.74 314 ⇓P P 05 18 47.4 +1.5
baz=26,SNR=212
MVL Millersville 25.78 19 eP P 05 18 47.3 +1.4
comp=Z,138nm,1.4s
W23A Warner Place, 25.79 322 ⇑P P 05 18 47.4 +1.1
baz=26,SNR=69
Q30A Quinter 25.81 336 ⇓P P 05 18 47.0 +0.8
baz=26,SNR=41
ANMO Albuquerque 25.83 321 eP P 05 18 47.2 +0.6
comp=Z,85nm,1.1s
ANMO Albuquerque 25.83 321 P P 05 18 48.5 +1.9
comp=Z,22nm,0.9s,baz=141,slow=11,SNR=69
ANMO LR LR 05 33 03.3
comp=Z,3µm,18.0s,baz=131,slow=46
T26A Comanche Natio 25.85 328 ⇑P P 05 18 46.9 0.0
baz=26,SNR=45
X22A Bernardo 25.87 320 ⇑P P 05 18 48.8 +1.8
baz=26,SNR=12
LAZ Ladron 25.89 319 eP P 05 18 47.8 +0.6
comp=Z,855nm,0.3s
S27A Las Animas 25.91 330 ⇑P P 05 18 47.1 -0.2
baz=26,SNR=24
SSPA Standing Stone 25.93 16 eP P 05 18 48.0 +0.8
comp=Z,67nm,1.0s
R28A Tribune 25.94 333 ⇓P P 05 18 47.4 -0.1
baz=26,SNR=208
P31A Stockton 25.96 338 ⇓P P 05 18 48.1 +0.5
baz=26,SNR=36
Y21A Point of Rocks 25.98 318 ⇓P P 05 18 50.1 +2.0
baz=26,SNR=298
Z20A Nine Sixteen R 26.04 315 ⇓P P 05 18 50.1 +1.6
baz=26,SNR=156
Q29A Oakley 26.04 335 ⇓P P 05 18 49.0 +0.6
baz=26,SNR=90
BBSR BB Station 26.06 47 eP P 05 18 47.6 -0.9
comp=Z,127nm,1.3s
BBSR LR LR
comp=Z,907nm,20.0s
S26A Kim 26.14 329 ⇓P P 05 18 50.1 +0.7
baz=26,SNR=180
W22A Albuquerque 26.16 321 ⇑P P 05 18 50.8 +1.1
baz=26,SNR=30
U24A Moreno Valley 26.17 325 ⇓P P 05 18 51.4 +1.6
baz=26,SNR=52
V23A Ortiz Mt. (NFS 26.21 323 ⇓P P 05 18 51.9 +1.8
baz=26,SNR=35
T25A Trinidad 26.24 327 ⇓P P 05 18 52.0 +1.5
baz=26,SNR=137
P30A Selden 26.31 336 ⇓P P 05 18 50.6 -0.2
baz=26,SNR=26
X21A Alamocita Cree 26.32 319 ⇑P P 05 18 52.7 +1.5
baz=26,SNR=109
R27A Eads 26.34 331 ⇓P P 05 18 51.8 +0.6
baz=26,SNR=66
Y20A Horse Springs, 26.37 317 ⇑P P 05 18 53.0 +1.3
baz=26,SNR=175
ALLY Alegheny Colle 26.38 12 eP P 05 18 52.1 +0.8
comp=Z,109nm,1.0s
AAM Ann Arbor 26.51 6 eP P 05 18 53.0 +0.5
AAM pmax pmax
comp=Z,115nm,1.1s
AAM MLR MLR
comp=Z,1µm,19.0s
AAM Ann Arbor 26.51 6 eP P 05 18 53.0 +0.5
comp=Z,115nm,1.1s
AAM LR LR
comp=Z,1µm,19.0s
Q28A Sharon Springs 26.55 333 ⇑P P 05 18 53.2 +0.2
baz=27,SNR=65
U23A El Rito 26.62 324 ⇓P P 05 18 55.7 +1.8
baz=27,SNR=79
P29A Atwood 26.63 335 ⇑P P 05 18 54.6 +0.9
baz=27,SNR=47
S25A Robets Cordova 26.65 328 ⇑P P 05 18 55.8 +1.7
baz=27,SNR=55
R26A Arlington 26.66 330 ⇑P P 05 18 54.2 +0.1
baz=27,SNR=66
BBGH Gun Hill 26.66 92 PFAKE 05 19 00.0 +5.8
BBGH LR LR
comp=Z,5µm,21.0s
W21A San Fidel 26.67 320 ⇓P P 05 18 55.6 +1.3
baz=27,SNR=13
V22A San Miguel Ran 26.75 322 ⇓P P 05 18 56.3 +1.3
baz=27,SNR=48
O30A MW Ranch, Wils 26.79 337 ⇓P P 05 18 55.6 +0.5
baz=27,SNR=16
X20A Quemado 26.84 318 ⇑P P 05 18 57.7 +1.8
baz=27,SNR=190
KSCO Kaye Shedlock' 26.85 332 ⇓P P 05 18 56.9 +1.1
baz=27,SNR=51
ERPA Erie 26.86 12 eP P 05 18 56.5 +0.8
comp=Z,143nm,1.0s
ERPA LR LR
comp=Z,2µm,19.0s
R25A Fountain Ranch 26.95 329 ⇓P P 05 18 57.9 +1.2
baz=27,SNR=106
BRNJ Basking Ridge 26.99 21 eP P 05 18 59.9 +3.1
comp=Z,13µm,0.8s
O29A 4D Ranch, Culb 27.02 336 ⇑P P 05 18 57.7 +0.4
baz=27,SNR=6.8
U22A Llaves 27.04 323 ⇓P P 05 18 59.1 +1.4
baz=27
S24A Houchin Ranch, 27.04 327 ⇑P P 05 18 59.6 +1.9
baz=27,SNR=62
T23A Casias Ranch, 27.04 325 ⇓P P 05 18 59.3 +1.6
baz=27,SNR=40
V21A Milan 27.12 321 ⇓P P 05 18 59.7 +1.4
baz=27,SNR=15
JFWS Jewell Farm 27.12 355 eP P 05 18 57.4 -0.6
JFWS pmax pmax
comp=Z,133nm,0.9s
JFWS MLR MLR
comp=Z,983nm,21.0s
JFWS Jewell Farm 27.12 355 eP P 05 18 57.4 -0.6
comp=Z,133nm,0.9s
JFWS LR LR
comp=Z,983nm,21.0s
TUC Tucson 27.13 311 eP P 05 18 59.3 +1.0
TUC pmax pmax
comp=Z,455nm,1.3s
TUC MLR MLR
comp=Z,3µm,21.0s
TUC Tucson 27.13 311 eP P 05 18 59.2 +1.0
comp=Z,455nm,1.3s
TUC LR LR
comp=Z,3µm,21.0s
Q26A Hugo 27.19 331 ⇑P P 05 19 00.1 +1.2
baz=27,SNR=163
W20A Ramah 27.21 319 ⇑P P 05 19 00.7 +1.5
baz=27,SNR=50
BGNE Belgrade 27.24 341 ⇓P P 05 18 58.6 -0.6
baz=27
P27A Ficken Ranch, 27.28 333 ⇓P P 05 19 00.6 +1.0
baz=27,SNR=75
CPNY Central Park 27.30 22 eP P 05 19 02.4 +2.8
comp=Z,41nm,0.9s
N30A Hueftle Ranch, 27.35 338 ⇑P P 05 19 00.3 +0.1
baz=28
O28A Krutsinger Ran 27.41 335 ⇑P P 05 19 02.3 +1.5
baz=28,SNR=38
R24A Sanders Place, 27.43 328 ⇓P P 05 19 03.1 +2.0
baz=28,SNR=44
S23A Nye Farm, Mont 27.51 326 ⇑P P 05 19 03.0 +1.2
baz=28,SNR=6.4
T22A Edith 27.51 324 ⇑P P 05 19 03.6 +1.8
baz=28,SNR=24
Q25A Bedland, Calha 27.53 330 ⇓P P 05 19 02.8 +0.8
baz=28,SNR=14
U21A Nageezi 27.55 322 ⇑P P 05 19 02.8 +0.6
baz=28,SNR=16
N29A Votaw Ranch, W 27.56 337 ⇓P P 05 19 02.3 +0.3
baz=28
V20A Brimhall 27.62 320 ⇑P P 05 19 03.8 +1.0
baz=28,SNR=23
P26A Davis Ranch, A 27.62 332 ⇑P P 05 19 03.8 +1.1
baz=28,SNR=32
O27A Beecher Island 27.76 334 ⇑P P 05 19 04.4 +0.5
baz=28,SNR=30
R23A Moffat 27.77 327 ⇓P P 05 19 05.1 +0.8
baz=28,SNR=58
X18A Snowflake 27.79 316 ⇑P P 05 19 05.8 +1.5
baz=28,SNR=32
N28A Pribbeno Ranch 27.80 336 ⇑P P 05 19 04.8 +0.6
baz=28,SNR=22
T21A Navajo Lake 27.86 323 ⇓P P 05 19 05.3 +0.4
baz=28,SNR=12
BINY Binghamton 27.91 18 eP P 05 19 06.1 +1.0
comp=Z,85nm,1.0s
BINY LR LR
comp=Z,3µm,19.0s
M30A Dale-Ortello V 27.92 339 ⇓P P 05 19 05.3 0.0
baz=28
P25A Willow Gulch B 27.96 331 ⇑P P 05 19 06.2 +0.4
baz=28,SNR=96
S22A 4UR Ranch, Cre 27.99 325 ⇓P P 05 19 07.9 +1.7
baz=28,SNR=100
W18A Petrified Fore 28.00 317 ⇑P P 05 19 07.6 +1.4
baz=28,SNR=25
Q24A Divide 28.01 329 ⇓P P 05 19 07.2 +0.8
baz=28,SNR=21
U20A Newcomb 28.03 321 ⇓P P 05 19 06.5 +0.1
baz=28,SNR=33
M29A Burnside Ranch 28.13 338 ⇑P P 05 19 06.9 -0.2
baz=28
O26A Horse Wrangler 28.16 333 ⇓P P 05 19 07.2 -0.3
baz=28
OGNE Ogallala 28.21 335 eP P 05 19 09.6 +1.7
comp=Z,263nm,1.2s
OGNE LR LR
comp=Z,2µm,20.0s
OGNE Ogallala 28.21 335 ⇓P P 05 19 08.5 +0.6
baz=28,SNR=21
R22A Saguache, Gunn 28.30 326 ⇑P P 05 19 10.8 +1.9
baz=28,SNR=42
N27A Anderson Farm, 28.30 335 ⇓P P 05 19 09.6 +0.8
baz=28,SNR=32
Q23A Hartsel 28.31 328 ⇑P P 05 19 09.9 +0.8
baz=28
P24A Kohler Place, 28.32 330 ⇑P P 05 19 09.4 +0.3
baz=28,SNR=6.1
M28A Bar X Bar Ranc 28.34 337 ⇑P P 05 19 09.8 +0.7
baz=28
O25A Wiggins 28.42 332 ⇓P P 05 19 10.6 +0.8

baz=29,SNR=10
S21A Coal Bank Pass 28.47 324 ⇓P P 05 19 12.0 +1.5
baz=29,SNR=29
N26A Koester Ranch, 28.61 334 ⇓P P 05 19 12.3 +0.8
baz=29,SNR=14
X16A Lo Mia Camp, P 28.73 315 ⇓P P 05 19 14.4 +1.7
baz=29,SNR=44
R21A Cimarron 28.83 325 ⇑P P 05 19 14.3 +0.7
baz=29
Q22A Crested Butte, 28.84 326 ⇓P P 05 19 14.9 +1.1
baz=29,SNR=27
M27A Reverse DX Ran 28.85 336 ⇓P P 05 19 14.1 +0.6
baz=29
O24A Longmont 28.87 330 ⇑P P 05 19 14.6 +0.7
baz=29,SNR=15
ISCO Idaho Springs 28.88 329 eP P 05 19 15.0 +0.8
ISCO pmax pmax
comp=Z,91nm,1.1s
ISCO MLR MLR
comp=Z,2µm,19.0s
ISCO Idaho Springs 28.88 329 eP P 05 19 15.0 +0.8
comp=Z,91nm,1.1s
ISCO LR LR
comp=Z,2µm,19.0s
ISCO Idaho Springs 28.88 329 ⇑P P 05 19 15.2 +1.0
baz=29,SNR=97
S20A Disappointment 28.91 323 ⇓P P 05 19 15.3 +0.9
baz=29,SNR=18
N25A Grover 28.97 333 ⇓P P 05 19 16.3 +1.5
baz=29
ECSD EROS Data Cent 28.98 345 eP P 05 19 13.0 -1.6
comp=Z,87nm,0.8s
ECSD LR LR
comp=Z,2µm,21.0s
M26A McRoberts Ranc 29.10 335 ⇑P P 05 19 15.9 0.0
baz=29
SMCO Snowmass 29.11 327 eP P 05 19 17.3 +1.0
comp=Z,39nm,1.0s
TRY Troy 29.12 20 eP P 05 19 17.4 +1.6
comp=Z,172nm,1.2s
K29A Lazy Trails An 29.16 340 ⇓P P 05 19 16.8 +0.5
baz=29,SNR=12
R20A Redvale 29.17 324 ⇓P P 05 19 18.4 +1.8
baz=29,SNR=18
Q21A Lamborn Mesa, 29.18 326 ⇓P P 05 19 17.9 +1.2
baz=29,SNR=17
BRYW Bryant College 29.18 24 eP P 05 19 17.2 +0.8
comp=Z,40nm,0.9s
QUA2 Belchertown 29.18 23 eP P 05 19 13.5 -2.9
comp=Z,65nm,1.2s
Z14A Wintersburg 29.23 311 ⇓P P 05 19 18.0 +1.0
baz=29,SNR=12
PV01 Paradox Valley 29.24 324 eP P 05 19 18.3 +1.0
comp=Z,4.6nm,0.2s
L27A T5 Ranch, Ells 29.29 336 ⇓P P 05 19 17.9 +0.4
baz=30,SNR=8.1
P22A Eagle 29.30 328 ⇓P P 05 19 18.7 +0.9
baz=30,SNR=48
WUAZ Wupatki 29.31 316 eP P 05 19 19.4 +1.6
comp=Z,135nm,1.2s
WUAZ LR LR
comp=Z,1µm,21.0s
WUAZ Wupatki 29.31 316 ⇑P P 05 19 19.4 +1.6
baz=30,SNR=38
N24A Carr 29.34 332 ⇓P P 05 19 19.2 +1.2
baz=30,SNR=53
O23A Lake Granby, G 29.35 330 ⇑P P 05 19 19.6 +1.3
baz=30,SNR=34
NNA Nana 29.42 160 P P 05 19 21.5 +2.7
NNA Nana 29.42 160 P P 05 19 21.5 +2.7
comp=Z,15nm,0.8s,baz=317,slow=12,SNR=6.7
NNA LR LR 05 30 59.3
comp=Z,1µm,18.3s,baz=107,slow=36
M25A Palm-Egli Farm 29.46 333 ⇑P P 05 19 19.9 +0.8
baz=30
113A Mohawk Valley, 29.54 310 ⇑P P 05 19 19.8 +0.1
baz=30,SNR=14
L26A Underwood Farm 29.55 335 ⇓P P 05 19 20.9 +1.0
baz=30
Y14A Wickenburg 29.57 312 ⇑P P 05 19 20.8 +0.8
baz=30,SNR=19
SADO Sadowa 29.58 11 P P 05 19 19.8 0.0
SADO Sadowa 29.58 11 P P 05 19 19.8 0.0
comp=Z,62nm,0.8s,baz=219,slow=8.3,SNR=59
SADO LR LR 05 31 42.2
comp=Z,2µm,19.2s,baz=80,slow=38
P21A Newcastle 29.61 327 ⇑P P 05 19 21.7 +1.2
baz=30,SNR=26
PV04 Paradox Valley 29.61 324 eP P 05 19 22.5 +2.0
O22A Kremmling 29.62 329 ⇓P P 05 19 21.4 +0.7
baz=30,SNR=51
Q20A Ridgley Place, 29.66 325 ⇓P P 05 19 21.3 +0.4
baz=30,SNR=9.0
WES Weston 29.66 24 eP P 05 19 22.2 +1.6
WES pmax pmax
comp=Z,108nm,1.3s
WES Weston 29.66 24 eP P 05 19 22.2 +1.6
comp=Z,108nm,1.3s
HRV Adam Dziewonsk 29.68 23 eP P 05 19 21.5 +0.7
HRV pmax pmax
comp=Z,20nm,1.0s
HRV Adam Dziewonsk 29.68 23 eP P 05 19 21.5 +0.7
comp=Z,20nm,1.0s
SPMN St. Paul 29.69 352 ⇓P P 05 19 19.5 -1.4
baz=30,SNR=29
ACCN Adirondack Com 29.70 20 eP P 05 19 21.8 +0.8
comp=Z,45nm,0.9s
S18A Hurst Farm, Bl 29.78 321 ⇓P P 05 19 23.2 +1.1
baz=30,SNR=34
K27A Flueckinger Fa 29.79 337 ⇓P P 05 19 22.0 +0.1
baz=30,SNR=13
M24A Cheyenne 29.83 332 ⇑P P 05 19 22.6 +0.2
baz=30,SNR=48
N23A Red Feather La 29.89 330 ⇑P P 05 19 23.6 +0.6
baz=30,SNR=49
PHWY Pilot Hill 29.98 331 eP P 05 19 24.9 +1.0
comp=Z,332nm,2.3s
L25A Engebretsen Ra 30.02 334 ⇑P P 05 19 24.3 +0.3
baz=30,SNR=16
NCB Newcomb 30.05 19 eP P 05 19 24.5 +0.4
comp=Z,57nm,1.3s
NCB LR LR
comp=Z,2µm,19.0s
J28A Allard Ranch, 30.06 339 ⇓P P 05 19 24.9 +0.6
baz=30,SNR=29
N22A Wattenberg Ran 30.07 330 ⇑P P 05 19 25.6 +1.0
baz=30,SNR=29
P20A De Beque 30.10 326 ⇓P P 05 19 26.0 +1.2
baz=30
O21A Pagoda 30.13 328 ⇑P P 05 19 26.0 +0.9
baz=30,SNR=17
K26A Motz Farm, Whi 30.15 336 ⇓P P 05 19 25.4 +0.2
baz=30
M23A Laramie 30.23 331 ⇑P P 05 19 27.0 +1.0
baz=30,SNR=29
BRSD Miller 30.26 343 ⇓P P 05 19 25.1 -0.8
baz=30,SNR=11
L24A Wheatland 30.34 333 ⇑P P 05 19 28.2 +1.4
baz=30,SNR=24
K25A Mack Ranch, Ha 30.36 335 ⇓P P 05 19 28.1 +1.1
baz=30,SNR=11
MDV Middlebury 30.41 20 eP P 05 19 28.7 +1.5
U15A North Rim 30.45 317 ⇓P P 05 19 29.8 +1.7
baz=31,SNR=53
HNH Hanover 30.45 21 eP P 05 19 29.1 +1.5
FFD Franklin Falls 30.47 22 eP P 05 19 29.3 +1.5
comp=Z,143nm,1.1s
O20A White River Ci 30.47 327 ⇓P P 05 19 29.4 +1.2
baz=31,SNR=30
P19A Cripple Cowboy 30.51 325 ⇓P P 05 19 29.4 +0.9
baz=31,SNR=12
LONY Lake Ozonia 30.53 18 eP P 05 19 28.8 +0.4
comp=Z,113nm,0.9s
LONY LR LR
comp=Z,2µm,20.0s
N21A Black Mountain 30.56 328 ⇑P P 05 19 30.5 +1.5
baz=31,SNR=37
PDMCI Parker Dam,Lak 30.56 312 ⇑P P 05 19 29.8 +1.1
baz=31,SNR=18
Y12C Blythe 30.57 311 ⇑P P 05 19 30.0 +1.2
baz=31,SNR=15
M22A Cedar Creek Ra 30.59 330 ⇓P P 05 19 30.2 +0.9
baz=31,SNR=11
L23A Garrett 30.74 332 ⇑P P 05 19 31.4 +1.0
baz=31,SNR=71
W13A Hualapai Mount 30.79 314 ⇑P P 05 19 32.3 +1.3
baz=31,SNR=30
MSNY Massena 30.80 17 eP P 05 19 31.6 +1.0
comp=Z,454nm,1.0s
K24A Anderson Ranch 30.84 334 ⇑P P 05 19 32.2 +0.9
baz=31
N20A Spence Gulch, 30.99 328 ⇓P P 05 19 33.6 +0.9
baz=31,SNR=65
L22A Ellis Ranch, M 31.01 331 ⇓P P 05 19 34.3 +1.4
baz=31,SNR=54
FRNY Flat Rock 31.03 19 eP P 05 19 33.3 +0.6
comp=Z,61nm,1.0s
SRU San Rafael 31.03 323 ⇓P P 05 19 33.6 +0.5
baz=31,SNR=31
LBNH Lisbon 31.04 21 eP P 05 19 33.7 +0.9
LBNH pmax pmax
comp=Z,54nm,0.9s
LBNH MLR MLR
comp=Z,2µm,19.0s
LBNH Lisbon 31.04 21 eP P 05 19 33.7 +0.9
comp=Z,54nm,0.9s
LBNH LR LR
comp=Z,2µm,19.0s
O19A Miners Draw (B 31.06 326 ⇓P P 05 19 34.2 +0.9
baz=31,SNR=17
M21A Separation Pea 31.12 330 ⇓P P 05 19 34.8 +0.9
baz=31,SNR=51
NEE2 Needles Airpor 31.14 312 ⇓P P 05 19 34.4 +0.6
baz=31
SWSC Sam W. Stewart 31.14 308 ⇓P P 05 19 34.3 +0.5
baz=31,SNR=18
BC3 Big Chuckawall 31.21 310 ⇓P P 05 19 35.4 +0.8
baz=31,SNR=36
K23A Bowen Ranch, D 31.22 333 ⇓P P 05 19 34.5 0.0
baz=31,SNR=38
IRM Iron Mountain 31.22 311 ⇓P P 05 19 36.0 +1.4
baz=31,SNR=30
DVTC Desert V Tower 31.25 308 ⇓P P 05 19 36.5 +1.6
baz=31
J24A Dixon Ranch, L 31.28 335 ⇓P P 05 19 35.7 +0.7
baz=31
Q16A Castle Valley 31.28 322 ⇑P P 05 19 35.8 +0.5
baz=31,SNR=17
L21A Rawlins 31.40 330 ⇑P P 05 19 36.6 +0.3
baz=32,SNR=63
M20A Sweetwater, Wa 31.44 329 ⇑P P 05 19 37.7 +1.1
baz=32,SNR=18
K22A Casper 31.53 332 ⇓P P 05 19 38.0 +0.6
baz=32,SNR=50
MONP Monument Peak 31.59 308 ⇓P P 05 19 38.3 +0.2
baz=32,SNR=17
MVU Marysvale 31.65 320 eP P 05 19 39.7 +1.1
comp=Z,472nm,2.4s
MVU LR LR
comp=Z,2µm,22.0s
RSSD Black Hills 31.69 336 eP P 05 19 41.1 +2.3
RSSD pmax pmax
comp=Z,29nm,1.0s
RSSD Black Hills 31.69 336 eP P 05 19 41.1 +2.3
comp=Z,29nm,1.0s
BAR Barrett 31.69 307 eP P 05 19 40.4 +1.6
comp=Z,28nm,1.0s
I24A Kuemmerle Ranc 31.70 335 ⇑P P 05 19 39.8 +1.0
baz=32
J23A Dilts Ranch, B 31.71 334 ⇓P P 05 19 39.0 +0.1
baz=32
BELC Bell Mtn. Jos 31.77 310 ⇑P P 05 19 40.6 +1.1
baz=32,SNR=42
CCUT Cedar City 31.80 318 eP P 05 19 42.0 +2.2
comp=Z,36nm,0.9s
K21A Alcova 31.86 331 ⇑P P 05 19 40.3 0.0
baz=32
GMRC Granite Mounta 31.89 312 ⇑P P 05 19 41.3 +0.7
baz=32,SNR=29
L20A Wamsutter 31.90 329 ⇓P P 05 19 41.2 +0.4
baz=30,SNR=39
PFO Pinyon Flat Ob 31.93 309 P P 05 19 42.7 +1.7
comp=Z,374nm,1.0s,SNR=14
PFO Pinyon Flat Ob 31.93 309 eP P 05 19 41.3 +0.3
comp=Z,72nm,1.0s
PFO Pinyon Flat Ob 31.93 309 P P 05 19 43.2 +2.2
comp=Z,55nm,1.0s,baz=106,slow=6.9,SNR=51
PFO LR LR 05 34 10.1
comp=Z,3µm,18.0s,baz=145,slow=39
PFO Pinyon Flat Ob 31.93 309 ⇑P P 05 19 41.6 +0.7
baz=32,SNR=46
M19A Rock Springs 31.95 328 ⇑P P 05 19 41.4 +0.3
baz=32
ARUT Antelope Range 31.98 318 eP P 05 19 43.1 +1.6
ARUT pmax pmax
comp=Z,54nm,0.8s
ARUT Antelope Range 31.98 318 eP P 05 19 43.1 +1.6
comp=Z,54nm,0.8s
109C Camp Elliot, M 32.11 307 ⇑P P 05 19 43.0 +0.6
baz=32,SNR=9.0
I23A Meade Ranch, G 32.12 334 ⇓P P 05 19 43.3 +0.8
baz=32
EYMN Ely 32.22 354 eP P 05 19 41.8 -1.4
comp=Z,73nm,1.1s
EYMN LR LR
comp=Z,822nm,19.0s
MPU Maple Canyon 32.27 323 eP P 05 19 46.0 +2.0
comp=Z,51nm,1.0s
DAU Daniels Canyon 32.32 324 eP P 05 19 46.6 +2.1
DAU Daniels Canyon 32.32 324 eP P 05 19 46.6 +2.1
K20A Yellowstone Ra 32.39 330 ⇓P P 05 19 45.0 0.0
baz=32,SNR=60
HEC Hector,Ludlow 32.40 311 ⇑P P 05 19 46.4 +1.4
baz=32,SNR=32
TUQ Turquoise Moun 32.40 312 ⇓P P 05 19 46.8 +1.8
baz=32,SNR=21
H24A Dirks Ranch, A 32.41 336 ⇓P P 05 19 44.8 -0.3
baz=33,SNR=20
L19A Farson 32.48 328 ⇑P P 05 19 46.7 +0.9
baz=33,SNR=34
MURC Murrieta 32.48 309 ⇑P P 05 19 46.9 +1.1
baz=33,SNR=24
J21A Lysite 32.50 332 ⇑P P 05 19 46.9 +1.0
baz=33,SNR=143
I22A 9 Mile Ranch, 32.50 333 ⇓P P 05 19 46.0 +0.1
baz=33
JLU Jordanelle 32.55 324 eP P 05 19 47.4 +1.0
comp=Z,97nm,2.0s
BBRC Big Bear Solar 32.57 310 ⇑P P 05 19 47.8 +1.1
baz=33,SNR=12
H23A Clabaugh Cattl 32.59 335 ⇑P P 05 19 47.6 +1.0
baz=33
L18A Fontenelle, Gr 32.70 327 ⇑P P 05 19 48.4 +0.7
baz=33,SNR=8.2
M17A Scullys Gap (B 32.72 326 ⇑P P 05 19 48.1 +0.2
baz=33,SNR=34
K19A Absolon Red Bu 32.76 330 ⇓P P 05 19 48.4 +0.1
baz=33,SNR=37
CTU Camp Tracy 32.78 324 eP P 05 19 50.7 +2.2
comp=Z,79nm,1.5s
I21A Big Trails, Te 32.79 332 ⇑P P 05 19 48.7 +0.2
baz=33,SNR=79
J20A Shoshoni 32.80 331 ⇓P P 05 19 49.3 +0.9
baz=33,SNR=27
G24A Alzada 32.85 337 ⇑P P 05 19 48.4 -0.4
baz=33,SNR=6.9
SHOC Shonone 32.88 313 ⇑P P 05 19 49.7 +0.6
baz=33,SNR=8.1
RRX Edison Barstow 32.91 311 ⇑P P 05 19 50.9 +1.5
baz=33
GSC Goldstone 32.96 312 eP P 05 19 51.7 +1.7
GSC Goldstone 32.96 312 eP P 05 19 51.7 +1.7
GSC Goldstone 32.96 312 ⇓P P 05 19 51.4 +1.5
baz=33,SNR=15
H22A Clearmont 33.01 334 ⇓P P 05 19 50.8 +0.5
baz=33,SNR=30
BW06 Boulder Array 33.07 329 eP P 05 19 51.3 +0.3
comp=Z,115nm,1.4s
BW06 LR LR
comp=Z,2µm,19.0s
PDAR Pinedale Array 33.07 329 P P 05 19 51.5 +0.5
PDAR PcP PcP 05 22 34.0 -0.3
PDAR Pinedale Array 33.07 329 P P 05 19 51.5 +0.5
comp=Z,18nm,0.8s,baz=128,slow=9.0,SNR=108
PDAR PcP PcP 05 22 34.0 -0.3
comp=Z,3.9nm,0.7s,baz=148,slow=5.3,SNR=3.0
PDAR LR LR 05 37 14.5
comp=Z,2µm,18.7s,baz=304,slow=44
DUG Dugway 33.07 322 eP P 05 19 51.8 +0.9
DUG pmax pmax
comp=Z,32nm,0.9s
DUG MLR MLR
comp=Z,2µm,20.0s
DUG Dugway 33.07 322 eP P 05 19 51.8 +0.9
comp=Z,32nm,0.9s
DUG LR LR
comp=Z,2µm,20.0s
DUG Dugway 33.07 322 ⇑P P 05 19 51.9 +1.0
baz=33,SNR=43
BFSC Mount Baldy Ra 33.10 309 ⇑P P 05 19 51.2 0.0
baz=33,SNR=16
G23A Biddle 33.12 336 ⇓P P 05 19 51.1 -0.1
baz=33,SNR=25
AGMN Agassiz Nation 33.18 349 eP P 05 19 50.5 -1.1
comp=Z,142nm,1.0s
AGMN LR LR
comp=Z,1µm,20.0s
J19A Crowheart 33.19 330 ⇓P P 05 19 52.3 +0.3
baz=33,SNR=49
SCI San Clemente I 33.26 307 ⇑P P 05 19 54.1 +1.6
baz=33
I20A Worland 33.28 332 ⇑P P 05 19 53.5 +0.9
baz=33,SNR=103
HWUT Hardware Ranch 33.30 325 eP P 05 19 53.3 +0.4
comp=Z,80nm,1.3s
HWUT LR LR
comp=Z,2µm,19.0s
F24A Ekalaka 33.30 338 ⇓P P 05 19 53.0 +0.2
baz=34,SNR=18
CIS Catalina Islan 33.32 307 ⇑P P 05 19 54.5 +1.5
baz=33,SNR=5.5
H21A Big Horn, Sher 33.33 334 ⇓P P 05 19 53.8 +0.7
baz=34,SNR=38
FMP Fort Macarthur 33.36 308 ⇑P P 05 19 53.6 +0.3
baz=34
MWC Mount Wilson 33.40 309 eP P 05 19 55.3 +1.4
MWC Mount Wilson 33.40 309 eP P 05 19 55.3 +1.4
PASC Pasadena Art C 33.47 309 eP P 05 19 56.2 +1.9
comp=Z,137nm,1.5s
G22A Birney 33.49 335 ⇓P P 05 19 54.6 +0.2
baz=34,SNR=36
F23A Volborg 33.56 336 ⇓P P 05 19 55.7 +0.7
baz=34,SNR=32
FURC Furnace Creek, 33.57 313 ⇓P P 05 19 57.4 +2.3
baz=34,SNR=44
MDND Maddock 33.57 345 ⇓P P 05 19 54.6 -0.4
baz=34,SNR=14
DECC Green Verdugo 33.61 309 ⇓P P 05 19 57.4 +1.8
baz=34,SNR=6.0
EDW2 Edwards Air Fo 33.63 310 ⇑P P 05 19 56.9 +1.2
baz=34,SNR=25
H20A Greybull 33.64 332 ⇓P P 05 19 56.2 +0.4
baz=34,SNR=132
LRMC Laurel Mountai 33.68 311 ⇑P P 05 19 57.2 +0.9
baz=34,SNR=17
R11A Troy Canyon, C 33.70 317 ⇑P P 05 19 57.7 +1.3
baz=34,SNR=101
I19A Meeteetse 33.75 331 ⇑P P 05 19 58.5 +1.7
baz=34,SNR=70
MPMC Manual Prospec 33.81 312 ⇑P P 05 19 58.8 +1.3
baz=34,SNR=49
AHID Auburn Hatcher 33.86 327 eP P 05 19 58.7 +1.0
comp=Z,225nm,1.5s
AHID LR LR
comp=Z,3µm,20.0s
E24A Baker 33.86 338 ⇓P P 05 19 58.2 +0.6
baz=34,SNR=11
G21A Lodge Grass 33.88 334 ⇑P P 05 19 57.2 -0.7
baz=34
I18A Diamond G Ranc 33.89 330 ⇑P P 05 19 59.4 +1.3
baz=34,SNR=24
OSI Osito Adit 34.06 309 eP P 05 20 01.2 +1.8
comp=Z,76nm,1.0s
OSI Osito Adit 34.06 309 ⇓P P 05 20 00.1 +0.7
baz=34,SNR=6.3
HVU Hansel Valley 34.08 324 eP P 05 20 01.5 +1.8
HVU pmax pmax
comp=Z,190nm,1.7s
HVU Hansel Valley 34.08 324 eP P 05 20 01.5 +1.8
comp=Z,190nm,1.7s
SAML Samuel 34.09 135 eP P 05 19 58.3 -1.5
comp=Z,38nm,1.0s
SAML LR LR
comp=Z,3µm,19.0s
BLG Laguna Peak 34.10 308 ⇑P P 05 20 01.3 +1.5
baz=34,SNR=5.5
REDW Red Top Meadow 34.15 328 eP P 05 20 02.0 +1.6
comp=Z,7.8nm,1.3s
E23A Ismay 34.17 337 ⇓P P 05 20 00.7 +0.4
baz=34,SNR=19
SNOW Snow King Moun 34.18 328 eP P 05 20 01.7 +1.1
comp=Z,375nm,1.1s
GRAC Grapevine Rang 34.19 314 ⇓P P 05 20 02.7 +2.1
baz=34,SNR=11
LOHW Long Hollow 34.21 329 eP P 05 20 01.7 +0.8
comp=Z,295nm,1.4s
H19A Powell 34.23 332 ⇑P P 05 20 02.0 +1.1
baz=34,SNR=35
TPAW Teton Pass 34.30 328 eP P 05 20 02.7 +1.0
comp=Z,515nm,1.4s
G20A Bridger 34.31 333 ⇑P P 05 20 01.4 -0.2
baz=34,SNR=117
F21A Absaloka Mine, 34.33 335 ⇑P P 05 20 01.4 -0.3
baz=34
ISA Isabella 34.34 311 eP P 05 20 03.7 +1.8
ISA pmax pmax
comp=Z,179nm,1.9s
ISA Isabella 34.34 311 eP P 05 20 03.7 +1.8
comp=Z,179nm,1.9s
ISA Isabella 34.34 311 ⇓P P 05 20 03.3 +1.4
baz=34,SNR=28
D24A Glendive 34.34 339 ⇑P P 05 20 01.7 0.0
baz=34,SNR=19
ARVC Arvin 34.36 310 ⇓P P 05 20 02.9 +0.9
baz=34,SNR=24
E22A Miles City 34.37 337 ⇓P P 05 20 02.2 +0.2
baz=34,SNR=30
MOOW Moose Ponds 34.38 329 eP P 05 20 03.1 +0.8
comp=Z,481nm,1.7s
RRI2 Red Ridge 34.38 328 eP P 05 20 03.4 +1.0
comp=Z,527nm,1.4s
CWC Cottonwood Cre 34.41 312 ⇑P P 05 20 04.0 +1.4
baz=34,SNR=6.2
I17A Pilgrim Ck. 34.42 329 ⇓P P 05 20 04.2 +1.5
baz=35,SNR=64
DCID1 Drake Creek 34.49 328 eP P 05 20 04.8 +1.6
comp=Z,142nm,1.0s
H18A Shoshone NF, C 34.55 331 ⇑P P 05 20 04.8 +1.0
baz=35,SNR=41
PQI Presque Isle 34.55 23 eP P 05 20 04.4 +0.9
comp=Z,82nm,1.0s
IMW Indian Meadow 34.58 329 eP P 05 20 05.1 +0.9
comp=Z,317nm,1.5s
TPH Tonopah 34.63 316 PFAKE 05 20 20.0 +15
TPH LR LR
comp=Z,3µm,22.0s
RLMT Red Lodge 34.70 332 eP P 05 20 05.3 +0.2
comp=Z,160nm,1.3s
RLMT LR LR
comp=Z,2µm,20.0s
D23A Lindsay 34.71 338 ⇑P P 05 20 05.3 +0.4
baz=35,SNR=36
SBC Santa Barbara 34.73 308 ⇓P P 05 20 06.1 +0.9
baz=35
C24A Savage 34.74 339 ⇑P P 05 20 05.3 +0.1
baz=35,SNR=27
F20A Billings 34.74 334 ⇑P P 05 20 05.2 0.0
baz=35,SNR=30
H17A Grant Village 34.77 330 ⇑P P 05 20 07.3 +1.6
baz=35,SNR=49
LKWY Lake 34.81 330 eP P 05 20 07.8 +1.7
LKWY pmax pmax
comp=Z,132nm,1.0s
LKWY MLR MLR
comp=Z,3µm,22.0s
LKWY Lake 34.81 330 eP P 05 20 07.8 +1.7
comp=Z,132nm,1.0s
LKWY LR LR
comp=Z,3µm,22.0s
TIN Tinemaha 34.81 313 ⇓P P 05 20 07.6 +1.6
baz=35,SNR=7.4
I16A Newdale 34.84 328 ⇓P P 05 20 07.5 +1.2
baz=35,SNR=44
VES Vestal, Richgr 34.86 311 ⇓P P 05 20 07.8 +1.5
baz=35,SNR=52
ELK Elko 34.87 321 eP P 05 20 08.5 +1.9
comp=Z,75nm,1.1s
E21A Keefer Ranch, 34.89 335 ⇓P P 05 20 07.5 +1.0
baz=35,SNR=26
YFT Old Faithful 34.94 330 eP P 05 20 09.7 +2.5
comp=Z,150nm,1.1s
G18A Lazy EL Ranch, 34.99 332 ⇑P P 05 20 07.6 +0.2
baz=35,SNR=84
PKM Peak Mountain 35.00 309 ⇓P P 05 20 09.4 +1.7

baz=35,SNR=28
D22A Cohagen 35.05 337 ⇓P **P** **05 20 07.9 +0.1**
baz=35,SNR=27
ULM Lac du Bonnet 35.06 350 P **P** **05 20 06.0 -1.8**
ULM Lac du Bonnet 35.06 350 P **P** **05 20 06.0 -1.8**
comp=Z,126nm,1.0s,baz=170,slow=8.7,SNR=67
ULM LR LR 05 34 50.4
comp=Z,1μm,19.2s,baz=157,slow=37
F19A Roth Farm, Mol 35.12 333 ⇓P **P** **05 20 09.0 +0.4**
baz=35,SNR=117
YMR Madison River 35.16 330 *e*P **P** **05 20 10.7 +1.6**
comp=Z,173nm,1.1s
RCTC Rector, Farmer 35.18 312 ⇑P **P** **05 20 11.1 +2.0**
baz=35,SNR=28
MTUM Tungsten Hills 35.19 314 *e*P **P** **05 20 11.6 +2.2**
C23A Lambert 35.23 339 ⇓P **P** **05 20 10.2 +0.7**
baz=35,SNR=35
D21A La Casta Ranch 35.29 336 ⇓P **P** **05 20 10.9 +1.0**
baz=35
E20A Meyer Farm, Mu 35.29 334 ⇓P **P** **05 20 10.8 +0.8**
baz=35,SNR=132
SMMC Simmler 35.30 310 ⇓P **P** **05 20 11.9 +1.7**
baz=35,SNR=15
H16A Russell Place, 35.32 330 ⇑P **P** **05 20 11.9 +1.5**
baz=36,SNR=26
GCMT Greycliff 35.40 332 *e*P **P** **05 20 11.1 +0.1**
comp=Z,49nm,0.8s
C22A Vida 35.44 338 ⇓P **P** **05 20 11.7 +0.6**
baz=36,SNR=48
NV11 Mina Array Sit 35.45 315 *e*P **P** **05 20 13.3 +1.8**
DGMT Dagmar 35.48 340 *e*P **P** **05 20 10.8 -0.7**
comp=Z,58nm,0.8s
DGMT LR LR
comp=Z,2μm,22.0s
DGMT Dagmar 35.48 340 ⇓P **P** **05 20 10.8 -0.7**
baz=36,SNR=15
QLMT Earthquake Lak 35.50 330 *e*P **P** **05 20 14.3 +2.3**
F18A Big Timber 35.51 332 ⇓P **P** **05 20 12.9 +1.0**
baz=36,SNR=137
MLAC Mammoth Lakes 35.51 314 ⇑P **P** **05 20 13.8 +1.6**
baz=36,SNR=5.7
E19A Rath Farm, Rou 35.53 334 ⇑P **P** **05 20 12.8 +0.8**
baz=36,SNR=65
G17A Pierce Place, 35.53 331 ⇓P **P** **05 20 13.3 +1.1**
baz=36
NVAR Mina Array Bea 35.55 315 P **P** **05 20 14.4 +1.9**
NVAR PcP **PcP** **05 22 41.9 +0.4**
NVAR Mina Array Bea 35.55 315 P **P** **05 20 14.4 +1.9**
comp=Z,86nm,1.0s,baz=123,slow=5.6,SNR=181
NVAR PcP **PcP** **05 22 41.9 +0.4**
comp=Z,9.6nm,0.7s,baz=150,slow=2.8,SNR=6.4
NVAR LR LR 05 38 05.6
comp=Z,5μm,18.0s,baz=78,slow=42
PTRM Twissleman Ran 35.60 310 *e*P **P** **05 20 15.5 +2.7**
B23A Brockton 35.73 339 ⇑P **P** **05 20 13.8 +0.1**
baz=36,SNR=38
D20A Manuel Ranch, 35.76 335 ⇓P **P** **05 20 15.0 +1.0**
baz=36,SNR=55
A24A Westby 35.81 341 ⇓P **P** **05 20 14.3 0.0**
baz=36,SNR=24
I14A Mackay 35.90 327 ⇓P **P** **05 20 17.0 +1.6**
baz=36,SNR=78
BMN Battle Mountai 35.91 319 *e*P **P** **05 20 17.5 +2.0**
BMN pmax pmax
comp=Z,283nm,1.4s
BMN MLR MLR
comp=Z,4μm,22.0s
BMN Battle Mountai 35.91 319 *e*P **P** **05 20 17.4 +2.0**
comp=Z,283nm,1.4s
BMN LR LR
comp=Z,4μm,22.0s
F17A Fitzpatrick Pl 35.93 331 ⇓P **P** **05 20 16.7 +1.1**
baz=36,SNR=72
B22A Reddig Ranch S 35.95 338 ⇓P **P** **05 20 15.9 +0.4**
baz=36,SNR=12
C21A Desert Coulee 35.95 337 ⇓P **P** **05 20 16.0 +0.4**
baz=36,SNR=19
G16A Moss Hill, Enn 35.98 330 ⇓P **P** **05 20 17.7 +1.7**
baz=36,SNR=94
E18A Harlowton 36.10 333 ⇓P **P** **05 20 17.8 +0.8**
baz=36,SNR=70
A23A Redstone 36.12 340 ⇑P **P** **05 20 17.8 +0.7**
baz=36
D19A Cripps Ranch, 36.13 334 ⇑P **P** **05 20 17.6 +0.4**
baz=36,SNR=54
HLID Hailey 36.17 325 *e*P **P** **05 20 19.0 +1.3**
comp=Z,510nm,2.6s
HLID LR LR
comp=Z,2μm,21.0s
HLID Hailey 36.17 325 ⇑P **P** **05 20 18.6 +0.9**
baz=36,SNR=65
BOZ Bozeman (W) 36.20 330 *e*P **P** **05 20 18.6 +0.7**
BOZ pmax pmax
comp=Z,119nm,1.1s
BOZ MLR MLR
comp=Z,1μm,19.0s
BOZ Bozeman (W) 36.20 330 *e*P **P** **05 20 18.6 +0.7**
comp=Z,119nm,1.1s
BOZ LR LR
comp=Z,1μm,19.0s
MCMT McKenzie Canyo 36.21 328 *e*P **P** **05 20 19.8 +1.7**
comp=Z,224nm,1.3s
C20A Veseth Ranch, 36.21 336 ⇑P **P** **05 20 18.4 +0.5**
baz=36,SNR=38
G15A Dillon 36.27 329 ⇑P **P** **05 20 19.8 +1.3**
baz=36,SNR=128
F16A Kennard Place, 36.30 330 ⇑P **P** **05 20 19.6 +0.9**
baz=36,SNR=79
B21A Ellsworth Farm 36.42 337 ⇓P **P** **05 20 19.7 +0.1**
baz=37,SNR=12
E17A Martinsdale 36.44 332 ⇑P **P** **05 20 20.6 +0.6**
baz=37
DLMT Dillon 36.46 329 *e*P **P** **05 20 21.4 +1.3**
comp=Z,231nm,1.1s
A22A Carney Farms, 36.50 339 ⇑P **P** **05 20 21.2 +0.8**
baz=37,SNR=38
D18A Linhart Farms, 36.54 334 ⇓P **P** **05 20 21.8 +1.0**
baz=37,SNR=28
C19A Slack Wire Ran 36.65 335 ⇑P **P** **05 20 22.5 +0.9**
baz=37,SNR=33
LRM Limekiln Ridge 36.72 330 *e*P **P** **05 20 23.5 +1.1**
F15A Butte 36.75 330 ⇑P **P** **05 20 24.0 +1.3**
baz=37,SNR=222
CMB Columbia Colle 36.79 313 *e*P **P** **05 20 24.2 +1.3**
CMB pmax pmax
comp=Z,80nm,1.5s
CMB Columbia Colle 36.79 313 *e*P **P** **05 20 24.2 +1.3**
comp=Z,80nm,1.5s
G14A Jackson 36.81 328 ⇓P **P** **05 20 24.7 +1.6**
baz=37,SNR=14
B20A Solberg Farm, 36.81 336 ⇑P **P** **05 20 23.4 +0.5**
baz=37,SNR=12
MFID Camas Ranch 36.86 324 *e*P **P** **05 20 24.9 +1.4**
comp=Z,47nm,1.1s
MFID Camas Ranch 36.86 324 ⇓P **P** **05 20 24.3 +0.8**
baz=37,SNR=20
E16A East Helena 36.87 331 ⇓P **P** **05 20 24.2 +0.6**
baz=37,SNR=31
D17A Six Diamond Ra 36.89 333 ⇓P **P** **05 20 24.6 +0.8**
baz=37,SNR=57
LPAZ La Paz 36.95 149 *e*P **P** **05 20 27.4 +2.3**
LPAZ La Paz 36.95 149 P **P** **05 20 26.6 +1.6**
comp=Z,6.7nm,0.9s,baz=337,slow=9.2,SNR=12
LPAZ LR LR 05 37 29.2
comp=Z,2μm,21.0s,baz=311,slow=39
WCN Washoe City 36.96 316 *e*P **P** **05 20 25.6 +1.0**
WCN pmax pmax
comp=Z,51nm,1.2s
WCN Washoe City 36.96 316 *e*P **P** **05 20 25.6 +1.0**
comp=Z,51nm,1.2s
SAO San Andreas Ge 36.98 311 *e*P **P** **05 20 26.2 +1.7**
SAO pmax pmax
comp=Z,107nm,1.6s
SAO San Andreas Ge 36.98 311 *e*P **P** **05 20 26.2 +1.7**
comp=Z,107nm,1.6s
H12A Diamond D Ranc 37.06 326 ⇑P **P** **05 20 26.1 +0.8**
baz=37,SNR=140
HRY Holter Researc 37.08 331 *e*P **P** **05 20 26.5 +1.1**
A20A Cobblestone Ra 37.14 337 ⇓P **P** **05 20 26.5 +0.8**
baz=37,SNR=19
F14A Wisdom 37.16 329 ⇓P **P** **05 20 26.6 +0.5**
baz=37,SNR=49
EGMT Eagleton 37.17 335 *e*P **P** **05 20 26.6 +0.6**
comp=Z,52nm,0.9s
EGMT LR LR
comp=Z,2μm,20.0s
EGMT Eagleton 37.17 335 ⇓P **P** **05 20 26.3 +0.3**
baz=37,SNR=23

B19A Brinkman Farms 37.19 336 ⇑P **P** **05 20 27.1 +1.0**
baz=37,SNR=31
D16A Dana Ranch, Ca 37.19 332 ⇑P **P** **05 20 26.4 +0.2**
baz=37,SNR=118
E15A Deer Lodge 37.25 330 ⇑P **P** **05 20 27.5 +0.7**
baz=37,SNR=188
C17A Wharram Farm, 37.29 333 ⇑P **P** **05 20 27.7 +0.6**
baz=37,SNR=82
B18A Beardsley Farm 37.47 335 ⇑P **P** **05 20 29.8 +1.2**
baz=38,SNR=30
A19A Klindworth Far 37.49 336 ⇓P **P** **05 20 29.8 +1.1**
baz=38,SNR=24
F13A Darby 37.63 328 ⇑P **P** **05 20 30.3 +0.2**
baz=38,SNR=82
D15A Lincoln 37.64 331 ⇑P **P** **05 20 31.0 +0.9**
baz=38,SNR=91
BEKR Beckworth 37.65 316 *e*P **P** **05 20 31.7 +1.3**
comp=Z,34nm,0.9s
E14A Clinton 37.65 330 ⇑P **P** **05 20 30.6 +0.4**
baz=38
G12A Big Creek, Yel 37.70 327 ⇑P **P** **05 20 31.1 +0.5**
baz=38
B17A L&G Farms, Che 37.82 334 ⇓P **P** **05 20 31.8 +0.3**
baz=38,SNR=16
C16A Fuhringer Ranc 37.85 333 ⇓P **P** **05 20 32.7 +0.8**
baz=38,SNR=34
CHMT Chamberlain Mo 37.89 330 *e*P **P** **05 20 32.8 +0.5**
A18A Metzger Ranch, 37.92 335 ⇑P **P** **05 20 33.1 +0.8**
baz=38,SNR=42
WVOR Wild Horse Val 37.92 321 P **P** **05 20 33.5 +1.0**
WVOR MLR MLR
comp=Z,2μm,20.0s
WVOR Wild Horse Val 37.92 321 P **P** **05 20 33.5 +1.0**
WVOR LR LR
comp=Z,2μm,20.0s
E13A Victor 38.01 329 ⇑P **P** **05 20 33.5 +0.3**
baz=38,SNR=104
F12A Elk City 38.08 327 ⇑P **P** **05 20 34.2 +0.4**
baz=38,SNR=247
D14A Greenough 38.13 330 ⇑P **P** **05 20 34.7 +0.4**
baz=38,SNR=60
OHCM Honcut 38.15 315 *e*P **P** **05 20 35.9 +1.5**
MSO Missoula 38.16 330 *e*P **P** **05 20 35.0 +0.6**
comp=Z,154nm,1.5s
MSO LR LR
comp=Z,1μm,20.0s
C15A Salmond Ranch, 38.22 332 ⇑P **P** **05 20 35.6 +0.6**
baz=38,SNR=124
SLMT Seeley Lake 38.24 331 *e*P **P** **05 20 35.7 +0.5**
A17A Triple J Farms 38.28 335 ⇓P **P** **05 20 35.9 +0.4**
baz=38,SNR=25
B16A M & M Farms, S 38.30 333 ⇓P **P** **05 20 35.2 -0.4**
baz=38,SNR=7.2
J08A Circle Bar Ran 38.35 322 P **P** **05 20 37.0 +0.9**
BMO Blue Mountains 38.59 325 *e*P **P** **05 20 38.2 0.0**
comp=Z,115nm,1.3s
BMO LR LR
comp=Z,2μm,21.0s
B15A Bradely Ranch, 38.60 332 ⇓P **P** **05 20 38.8 +0.7**
baz=39,SNR=73
D13A Huson 38.60 330 ⇓P **P** **05 20 38.8 +0.6**
baz=39,SNR=101
A16A West Butte Ran 38.66 334 ⇑P **P** **05 20 39.3 +0.6**
baz=39,SNR=29
SWMT Swartz Lake 38.67 330 *e*P **P** **05 20 39.3 +0.5**
C14A Swan Lake 38.74 331 ⇓P **P** **05 20 39.8 +0.5**
baz=39
YBMT Yellow Bay 38.93 331 *e*P **P** **05 20 42.3 +1.3**
comp=Z,23nm,1.0s
B14A Marquette Ranc 38.95 332 ⇓P **P** **05 20 41.6 +0.4**
baz=39,SNR=59
JTMT Jette 38.98 331 *e*P **P** **05 20 41.2 -0.2**
D12A Red Ives Fores 39.01 329 ⇑P **P** **05 20 42.0 +0.4**
baz=39
C13A Hot Springs 39.07 330 ⇑P **P** **05 20 42.2 +0.2**
baz=39,SNR=35
HOPS Hopland 39.10 313 *e*P **P** **05 20 45.1 +2.8**
comp=Z,98nm,1.6s
A15A Johnson Ranch, 39.17 333 ⇓P **P** **05 20 43.1 +0.2**
baz=39,SNR=62
BLMT Blacktail Moun 39.20 331 *e*P **P** **05 20 44.8 +1.5**
BSMT Bassoo Peak 39.29 330 *e*P **P** **05 20 44.9 +0.8**
WDC Whiskeytown Da 39.45 316 *e*P **P** **05 20 43.9 -1.4**
WDC pmax pmax
comp=Z,36nm,1.4s
WDC Whiskeytown Da 39.45 316 *e*P **P** **05 20 43.9 -1.4**
comp=Z,36nm,1.4s
A14A Double T Ranch 39.47 332 ⇓P **P** **05 20 45.9 +0.4**
baz=40,SNR=148
B13A Whitefish 39.51 331 ⇓P **P** **05 20 46.4 +0.7**
baz=40,SNR=50
C12B Naegeli Ranch, 39.52 330 ⇓P **P** **05 20 46.6 +0.8**
baz=40,SNR=19
KIPM Iron Peak 39.74 314 *e*P **P** **05 20 49.8 +1.9**
comp=Z,291nm,1.5s
WALA Warton Lakes 39.75 332 *e*P **P** **05 20 48.2 +0.4**
comp=Z,2.0nm,0.9s
KCPM Cahto Peak 39.76 314 *e*P **P** **05 20 50.2 +2.3**
comp=Z,151nm,1.4s
A13A Flathead Natio 39.89 332 ⇓P **P** **05 20 49.4 +0.5**
baz=40
C11A Tepee Creek (N 40.00 329 ⇑P **P** **05 20 50.4 +0.6**
baz=40,SNR=143
B12A Libby 40.11 330 ⇓P **P** **05 20 51.5 +0.8**
baz=40,SNR=18
YBH Yreka Blue Hor 40.12 317 *e*P **P** **05 20 49.9 -1.0**
comp=Z,22nm,0.9s
KHMM Horse Mountain 40.39 316 *e*P **P** **05 20 54.0 +0.7**
A12A Yaak River Ran 40.46 331 ⇓P **P** **05 20 54.4 +0.8**
baz=41,SNR=6.6
FFC Flin Flon 40.51 347 *e*P **P** **05 20 52.6 -1.2**
FFC pmax pmax
comp=Z,27nm,0.9s
FFC MLR MLR
comp=Z,1μm,20.0s
FFC Flin Flon 40.51 347 *e*P **P** **05 20 52.6 -1.2**
comp=Z,27nm,0.9s
FFC LR LR
comp=Z,1μm,20.0s
SIV San Ignacio 40.67 140 LR LR 05 39 05.2
comp=Z,4μm,18.0s,slow=38
BBOR Butler Butte 40.68 319 P **P** **05 20 55.4 -0.2**
HUMO Hull Mountain 40.71 318 *e*P **P** **05 20 55.1 -0.7**
comp=Z,22nm,0.9s
NEW Newport 40.71 329 *e*P **P** **05 20 55.0 -0.6**
comp=Z,156nm,1.5s
NEW LR LR
comp=Z,1μm,19.0s
NEW Newport 40.71 329 ⇓P **P** **05 20 55.5 -0.2**
baz=41,SNR=40
HAWA Hanford 40.77 325 *e*P **P** **05 20 57.1 +1.0**
comp=Z,217nm,1.8s
HAWA LR LR
comp=Z,2μm,19.0s
KRMB Red Mountain 40.81 316 *e*P **P** **05 20 57.9 +1.2**
comp=Z,47nm,1.4s
SNIWA Snively Ranch 40.88 325 P **P** **05 20 58.8 +1.7**
OD2 Odessa Site #2 40.95 327 P **P** **05 20 58.4 +0.8**
BROR Big Rock Looko 41.25 321 P **P** **05 21 00.7 +0.6**
TRW Toppenish Ridg 41.27 324 P **P** **05 21 01.6 +1.3**
MXC Moxie City 41.30 325 P **P** **05 21 01.8 +1.3**
H04A Detroit Lake 41.31 321 P **P** **05 21 01.2 +0.6**
KBO Bosley Butte 41.34 317 *e*P **P** **05 21 02.3 +1.3**
comp=Z,225nm,1.4s
EBG Ellensburg 41.65 325 P **P** **05 21 04.9 +1.5**
KEBM Edson Butte 41.73 318 *e*P **P** **05 21 05.8 +1.7**
WTV Waterville 41.80 327 P **P** **05 21 05.7 +1.0**
SCHQ Schefferville 41.91 17 P **P** **05 21 03.9 -1.5**
SCHQ *e*P **P** **05 21 04.6 -0.8**
SCHQ PcP **PcP** **05 23 00.8 0.0**
SCHQ Schefferville 41.91 17 P **P** **05 21 03.9 -1.5**
comp=Z,25nm,0.9s,baz=206,slow=6.0,SNR=24
SCHQ PcP **PcP** **05 23 00.8 0.0**
comp=Z,13nm,0.7s,baz=128,slow=0.9,SNR=5.5
SCHQ LR LR 05 39 12.2
comp=Z,2μm,18.5s,baz=107,slow=37
COR Corvallis 41.94 321 *e*P **P** **05 21 08.1 +2.4**
COR pmax pmax
comp=Z,136nm,1.3s
COR Corvallis 41.94 321 *e*P **P** **05 21 08.1 +2.4**
comp=Z,136nm,1.3s
LVC Limon Verde 42.12 155 *e*P **P** **05 21 05.2 -2.5**
comp=Z,40nm,0.9s
LVC LR LR
comp=Z,2μm,20.0s
LON Longmire 42.25 324 *e*P **P** **05 21 09.0 +0.7**
LON pmax pmax

comp=Z,115nm,1.0s
LON Longmire 42.25 324 *e*P **P** **05 21 09.0 +0.7**
comp=Z,115nm,1.0s
RPW Rockport 43.09 326 P **P** **05 21 15.5 +0.4**
CMW Cultus Mountai 43.40 326 P **P** **05 21 17.6 0.0**
HDW Hoodsport 43.46 325 P **P** **05 21 18.4 +0.2**
NLWA Neilton Lookou 43.77 324 *e*P **P** **05 21 21.7 +1.0**
comp=Z,283nm,1.4s
NLWA LR LR
comp=Z,3μm,21.0s
PGC Sidney 44.25 326 *e*P **P** **05 21 25.0 +0.7**
comp=Z,7.5nm,0.8s
LCO Las Campanas 47.29 160 *e*P **P** **05 21 49.4 +0.6**
comp=Z,71nm,1.1s
LCO LR LR
comp=Z,818nm,19.0s
BDFB Brasilia 49.58 127 P **P** **05 22 05.8 -0.8**
BDFB Brasilia 49.58 127 P **P** **05 22 05.8 -0.8**
comp=Z,2.8nm,1.0s,baz=162,slow=20,SNR=3.3
BDFB LR LR 05 44 16.3
comp=Z,3μm,19.0s,baz=305,slow=38
YKA Yellowknife Ar 50.49 344 P **P** **05 22 11.8 -0.9**
YKA PcP **PcP** **05 23 28.4 -2.2**
YKA Yellowknife Ar 50.49 344 P **P** **05 22 11.8 -0.9**
comp=Z,73nm,0.9s,baz=139,slow=7.7,SNR=370
YKA PcP **PcP** **05 23 28.4 -2.2**
comp=Z,6.3nm,0.7s,baz=144,slow=3.5,SNR=9.2
YKW3 Yellowknife Ar 50.54 344 *e*P **P** **05 22 12.3 -0.8**
comp=Z,1.6nm,0.9s
CPUP Villa Florida 50.88 145 P **P** **05 22 16.4 +0.3**
CPUP Villa Florida 50.88 145 P **P** **05 22 16.4 +0.3**
comp=Z,4.7nm,0.8s,baz=304,slow=6.7,SNR=10
CPUP LR LR 05 46 17.1
comp=Z,2μm,18.1s,baz=311,slow=39
CRAG Craig 52.93 329 *e*P **P** **05 22 33.5 +2.4**
comp=Z,23nm,0.8s
WRAK Wrangell Islan 53.03 330 PFAKE 05 22 40.0 +8.2
WRAK LR LR
comp=Z,1μm,19.0s
DLBC Dease Lake 53.08 333 *e*P **P** **05 22 33.2 +0.9**
RCBR Riachuelo 54.94 109 *e*P **P** **05 22 47.4 +0.9**
comp=Z,39nm,1.2s
RCBR Riachuelo 54.94 109 LR LR 05 46 32.9
comp=Z,1μm,21.3s,baz=295,slow=36
SPB Sao Paulo 55.04 135 PFAKE 05 23 00.0 +13
SPB LR LR
comp=Z,3μm,19.0s
SKAG Skagway 55.95 333 *e*P **P** **05 22 53.9 +1.0**
comp=Z,32nm,1.3s
SFJD Kangerlussuaq 56.34 16 ⇓*i*P **P** **05 22 55.1 -0.5**
comp=Z,9.2nm,1.1s
SFJD *i*S **S** **05 30 48.5 +3.5**
SFJD *i* 05 32 47.0
SFJD
comp=Z,1μm,16.0s
SFJD Kangerlussuaq 56.34 16 LR LR 05 45 25.8
comp=Z,763nm,20.6s,baz=218,slow=34
PNL Peninsula 57.88 332 *e*P **P** **05 23 07.7 +1.0**
comp=Z,30nm,1.1s
CMLA Cha da Macela 57.98 55 PFAKE 05 23 20.0 +12
CMLA LR LR
comp=Z,692nm,21.0s
PSMA Santa Maria 58.24 56 *e*P **P** **05 23 11.5 +1.9**
comp=Z,125nm,1.8s
BART Pico Bartolome 58.27 55 *e*P **P** **05 23 07.4 -2.5**
comp=Z,138nm,1.2s
PSMN Pico do Norte, 58.30 56 *e*P **P** **05 23 07.4 -2.6**
comp=Z,29nm,1.1s
PLCA Paso Flores 58.32 165 *e*P **P** **05 23 09.8 -0.3**
comp=Z,46nm,1.4s
PLCA P P **05 23 10.1 +0.1**
PLCA Paso Flores 58.32 165 P **P** **05 23 10.1 +0.1**
comp=Z,27nm,1.1s,baz=340,slow=7.9,SNR=9.0
TRQA Tornquist 58.53 157 PFAKE 05 23 20.0 +8.5
TRQA LR LR
comp=Z,1μm,21.0s
INK Inuvik 60.13 342 LR LR 05 53 51.4
comp=Z,833nm,18.8s,baz=143,slow=41
SACV Santiago Islan 60.87 81 PFAKE 05 23 40.0 +12
SACV LR LR
comp=Z,722nm,21.0s
EGAK Eagle 60.89 337 *e*P **P** **05 23 27.4 +0.1**
comp=Z,39nm,1.4s
EGAK LR LR
comp=Z,2μm,19.0s
DIV Divide 61.36 332 *e*P **P** **05 23 32.4 +1.7**
comp=Z,105nm,1.5s
DOT Dot Lake 61.56 335 *e*P **P** **05 23 32.1 +0.1**
comp=Z,68nm,0.8s
PAX Paxson 61.89 334 *e*P **P** **05 23 31.6 -2.7**
PAX pmax pmax
comp=Z,47nm,1.1s
PAX Paxson 61.89 334 *e*P **P** **05 23 31.6 -2.7**
comp=Z,47nm,1.1s
SML Sawmill 62.75 332 *e*P **P** **05 23 40.3 +0.3**
SML pmax pmax
comp=Z,9.0nm,1.0s
SML Sawmill 62.75 332 *e*P **P** **05 23 40.2 +0.3**
comp=Z,8.8nm,1.0s
SEW Seward 62.76 330 *e*P **P** **05 23 41.0 +0.9**
comp=Z,45nm,1.3s
PMR Palmer 63.05 332 *e*P **P** **05 23 41.7 -0.2**
PMR pmax pmax
comp=Z,14nm,0.7s
PMR Palmer 63.05 332 *e*P **P** **05 23 41.7 -0.2**
comp=Z,14nm,0.7s
ILAR Eielson Array 63.13 335 P **P** **05 23 41.9 -0.5**
ILAR Eielson Array 63.13 335 P **P** **05 23 41.9 -0.5**
comp=Z,24nm,0.8s,baz=128,slow=4.6,SNR=131
ILAR LR LR 05 55 50.2
comp=Z,702nm,18.5s,baz=126,slow=40
SUMG Summit 63.20 15 *i*P **P** **05 23 42.3 -1.0**
SUMG pmax pmax
comp=Z,52nm,0.9s
SUMG MLR MLR
comp=Z,1μm,18.0s
SUMG Summit 63.20 15 *e*P **P** **05 23 41.9 -1.4**
comp=Z,82nm,1.1s
SUMG Summit 63.20 15 *i*P **P** **05 23 42.3 -1.0**
comp=Z,52nm,0.9s
SUMG
comp=Z,1μm,18.0s
COLA College 63.55 335 *e*P **P** **05 23 44.7 -0.5**
COLA pmax pmax
comp=Z,30nm,0.9s
COLA MLR MLR
comp=Z,1μm,21.0s
COLA College 63.55 335 *e*P **P** **05 23 44.7 -0.5**
comp=Z,30nm,0.9s
COLA LR LR
comp=Z,1μm,21.0s
MCK McKinley 63.62 334 *e*P **P** **05 23 45.6 -0.1**
MCK pmax pmax
comp=Z,59nm,1.2s
MCK McKinley 63.62 334 *e*P **P** **05 23 45.6 -0.1**
comp=Z,59nm,1.2s
KDAK Kodiak Island 63.77 327 *e*P **P** **05 23 46.7 0.0**
comp=Z,43nm,0.9s
KDAK P P **05 23 47.1 +0.4**
KDAK Kodiak Island 63.77 327 P **P** **05 23 47.1 +0.4**
comp=Z,34nm,0.8s,baz=97,slow=3.7,SNR=20
KDAK LR LR 05 52 42.7
comp=Z,1μm,19.3s,baz=132,slow=37
OHAK Old Harbor 64.02 326 *e*P **P** **05 23 48.6 +0.2**
comp=Z,53nm,1.0s
TRF Thorofare Moun 64.11 333 *e*P **P** **05 23 46.6 -2.6**
comp=Z,132nm,1.2s
RSO Redoubt South 64.45 330 *e*P **P** **05 23 51.8 +0.4**
comp=Z,102nm,0.8s
PMOZ Porto Moniz, M 64.75 61 *e*P P 05 24 00.1 +6.3
COLD Coldfoot 65.25 337 *e*P **P** **05 23 56.5 +0.2**
comp=Z,52nm,1.1s
BORG Borgarnes 65.45 25 *e*P **P** **05 23 58.3 +0.7**
comp=Z,58nm,1.0s
BORG LR LR
comp=Z,481nm,19.0s
SCO Scoresbysund 66.91 19 *i*P **P** **05 24 05.9 -1.0**
SCO pmax pmax
comp=Z,13nm,0.8s
SCO MLR MLR
comp=Z,810nm,17.0s
SCO Scoresbysund 66.91 19 *i*P **P** **05 24 05.9 -1.0**
comp=Z,13nm,0.8s
SCO
comp=Z,800nm,17.0s
SDPT Sand Point 67.74 324 *e*P **P** **05 24 14.0 +1.6**
comp=Z,702nm,1.6s

FALS False Pass 69.40 323 *e*P P 05 24 22.7 0.0
comp=Z,313nm,0.7s
DAG Danmarks Havn 69.75 13 *i* P P 05 24 23.2 -1.4
DAG pmax pmax
comp=Z,23nm,0.9s
DAG MLR MLR
comp=Z,2μm,19.0s
DAG Danmarks Havn 69.75 13 *i* P P 05 24 23.2 -1.4
comp=Z,27nm,0.9s
DAG *i* 05 28 48.1
DAG
comp=Z,2μm,19.0s
PPT Papeete 70.06 244 LR LR 05 50 02.2
comp=Z,749nm,18.3s,baz=62,slow=31
LIS Lisbon 70.86 54 *e*P P 05 24 32.7 +0.7
LIS AMb AMB 05 24 37.6
comp=Z,168nm,2.0s
LIS *e*S S 05 33 48.3 +1.5
LIS Lisbon 70.86 54 *e*P P 05 24 32.7 +0.7
comp=Z,168nm,2.0s
LIS *e*S S 05 33 48.3 +1.5
LIS Lisbon 70.86 54 *e*P P 05 24 32.7 +0.7
LIS *e*S S 05 33 48.2 +1.5
UNV Unalaska Valle 71.20 322 *e*P P 05 24 33.8 0.0
comp=Z,315nm,1.1s
PTOM Tomar 71.34 53 *e*P P 05 24 31.5 -3.5
MORF Marmelete 71.39 55 *e*P P 05 24 36.7 +1.3
comp=Z,98nm,1.5s
MORF Marmelete 71.39 55 *e*P P 05 24 35.9 +0.5
MORF *e*S S 05 33 54.6 +1.5
PMTG Montargil 71.54 54 *e*P P 05 24 36.9 +0.7
comp=Z,103nm,1.4s
PVIS Viseu 71.64 52 *e*P P 05 24 36.4 -0.4
comp=Z,63nm,1.1s
EVOP Sao Brissos 71.67 54 *e*P P 05 24 37.1 +0.1
EVOP pmax pmax
comp=Z,133nm,1.3s
EVOP Sao Brissos 71.67 54 *e*P P 05 24 37.1 +0.1
comp=Z,133nm,1.3s
DLF Lyons Farm 71.75 39⇑ *i* P PcP 05 24 59.3 +3.2
EVO Evora 71.76 54 *e*P P 05 24 37.1 -0.4
comp=Z,133nm,1.3s
EVO *e*R
comp=Z,950nm,20.8s
EVO Evora 71.76 54 *e*P P 05 24 37.8 +0.3
comp=Z,61nm,1.7s
EFI East Falkland 71.80 162 *e*P P 05 24 36.7 -0.6
EFI pmax pmax
comp=Z,45nm,1.2s
EFI East Falkland 71.80 162 PFAKE 05 24 50.0 +13
EFI LR LR
comp=Z,1μm,22.0s
PCVE Castro Verde 71.83 55 *e*P P 05 24 39.0 +1.0
comp=Z,48nm,1.8s
PBEJ Beja 71.93 55 *e*P P 05 24 38.9 +0.3
comp=Z,48nm,1.6s
MTE Manteigas 71.93 52 *e*P P 05 24 39.1 +0.5
comp=Z,161nm,1.5s
MTE *i* SKS SKiKP 05 34 11.3 -4.6
MTE *e*LQ LQ 05 42 26.5
MTE *e*LR LR 05 48 00.6
comp=Z,606nm,20.2s
MTE Manteigas 71.93 52 *e*P P 05 24 39.4 +0.7
comp=Z,93nm,1.3s
MTE LR LR
comp=Z,916nm,19.0s
TNA Tin City 71.96 334 *e*P P 05 24 40.3 +2.1
comp=Z,95nm,1.5s
PBDV Barranco-do-Ve 71.96 55 *e*P P 05 24 40.1 +1.3
comp=Z,74nm,1.7s
PCBR Castelo Branco 72.04 53 *e*P P 05 24 39.4 +0.2
comp=Z,104nm,1.6s
PESTR Estremoz 72.05 54 *e*P P 05 24 39.4 +0.1
comp=Z,98nm,1.6s
PVAQ Vaqueiros 72.11 55 *e*P P 05 24 40.7 +1.0
comp=Z,74nm,1.5s
PVAQ *i* SKS SKiKP 05 34 10.6 -5.5
PVAQ *e*LQ LQ 05 43 37.1
PVAQ *e*LR LR 05 47 17.8
comp=Z,980nm,23.6s
PMRV Marv??o 72.15 53 *e*P P 05 24 39.8 -0.1
comp=Z,74nm,1.3s
PMRV *e*SKS SKSac 05 34 50.1 +6.3
PMRV *e*LR LR 05 48 20.3
comp=Z,606nm,16.8s
MVO Moncorvo 72.25 51 *e*P P 05 24 40.7 +0.2
comp=Z,80nm,1.4s
MVO *e*SKS 05 35 39.5
MVO *e*LR LR 05 47 57.3
comp=Z,392nm,20.2s
KSB Sheil Bridge 72.26 34 *e*P P 05 24 38.5 -1.6
KSB Sheil Bridge 72.26 34 P P 05 24 38.5 -1.6
KAC Achnashellach 72.32 34⇑ *e*P P 05 24 39.1 -1.4
KAC Achnashellach 72.32 34 P P 05 24 39.1 -1.4
PBRG Braganca 72.40 51 *e*P P 05 24 42.4 +1.0
comp=Z,109nm,1.7s
PBAR Barrancos 72.56 54 *e*P P 05 24 42.7 +0.4
comp=Z,87nm,1.7s
EAB Aberfoyle 72.90 35⇑ *e*P P 05 24 42.4 -1.6
EAB Aberfoyle 72.90 35 P P 05 24 42.4 -1.6
RTC Rabat Centre 73.24 59 PFAKE 05 25 00.0 +14
RTC LR LR
comp=Z,645nm,20.0s
MCD Coleburn Disti 73.41 34 *e*P P 05 24 44.5 -2.5
MCD Coleburn Disti 73.41 34 P P 05 24 44.5 -2.5
ESK Eskdalemuir 73.59 36 *e*P P 05 24 46.5 -1.6
ESK AMB AMB 05 24 53.7
comp=Z,40nm,1.5s
ESK AMS AMS 05 57 09.5
comp=Z,476nm,15.3s
ESK Eskdalemuir 73.59 36 P P 05 24 46.5 -1.6
ESK AMB AMB 05 24 53.7
comp=Z,40nm,1.5s
ESK AMS AMS 05 57 09.5
comp=Z,476nm,15.3s
ESK Eskdalemuir 73.59 36 *e*P P 05 24 47.2 -0.9
ESK pmax pmax
comp=Z,30nm,0.9s
ESK MLR MLR
comp=Z,475nm,19.0s
ESK Eskdalemuir 73.59 36 *e*P P 05 24 47.2 -0.9
comp=Z,30nm,0.9s
ESK LR LR
comp=Z,475nm,19.0s
GAMB Gambell 73.60 333 *e*P P 05 24 48.9 +1.0
comp=Z,30nm,1.0s
ECK Cauldkaine Hil 73.65 36⇑ *e*P P 05 24 47.8 -0.6
ECK Cauldkaine Hil 73.65 36 P P 05 24 47.8 -0.6
KESW Keswick, Cumbr 73.70 37 AMS AMS 06 07 42.8
comp=Z,448nm,15.2s
FOEL Foel Wylfa 73.78 39 *e*P P 05 24 47.6 -1.7
FOEL AMB AMB 05 24 54.5
comp=Z,31nm,1.8s
FOEL AMS AMS 06 02 59.9
comp=Z,430nm,15.6s
FOEL Foel Wylfa 73.78 39 P P 05 24 47.6 -1.7
FOEL AMB AMB 05 24 54.5
comp=Z,31nm,1.8s
FOEL AMS AMS 06 02 59.9
comp=Z,430nm,15.6s
DRUM Mains of Drumt 73.88 35 *e*P P 05 24 47.4 -2.3
DRUM AMB AMB 05 24 50.2
comp=Z,65nm,1.3s
DRUM Mains of Drumt 73.88 35 P P 05 24 47.4 -2.3
DRUM AMB AMB 05 24 50.2
comp=Z,65nm,1.3s
ESY Stoneypath 73.88 36 *e*P P 05 24 49.4 -0.4
ESY Stoneypath 73.88 36 P P 05 24 49.4 -0.4
MCH1 Michaelchurch 73.99 40 *e*P P 05 24 49.1 -1.4
MCH1 AMB AMB 05 24 51.5
comp=Z,37nm,1.4s
MCH1 AMS AMS 05 59 00.2
comp=Z,571nm,19.0s
MCH1 Michaelchurch 73.99 40 P P 05 24 49.1 -1.4
MCH1 AMB AMB 05 24 51.5
comp=Z,37nm,1.4s
MCH1 AMS AMS 05 59 00.2
comp=Z,571nm,19.0s
HLM1 Long Mynd 74.01 39 *e*P P 05 24 48.4 -2.3
HLM1 AMB AMB 05 24 51.8
comp=Z,35nm,1.1s
HLM1 Long Mynd 74.01 39 P P 05 24 48.4 -2.3
HLM1 AMB AMB 05 24 51.8
comp=Z,35nm,1.1s
ROSF Rostrenen 74.17 44 *e*P P 05 24 50.3 -1.4
comp=Z,123nm,1.4s
ROSF Rostrenen 74.17 44 *e*P P 05 24 50.3 -1.4
ROSF pmax pmax
comp=Z,123nm,1.4s
ROSF Rostrenen 74.17 44 *e*P P 05 24 50.3 -1.4
comp=Z,123nm,1.4s
XAL Allendale 74.20 37 *e*P P 05 24 51.0 -0.7
XAL Allendale 74.20 37 P P 05 24 51.0 -0.7
QUIF Quistinic 74.29 44 *e*P P 05 24 51.1 -1.2
comp=Z,98nm,1.0s
QUIF Quistinic 74.29 44 *e*P P 05 24 51.1 -1.2
QUIF pmax pmax
comp=Z,98nm,1.0s
QUIF Quistinic 74.29 44 *e*P P 05 24 51.1 -1.2
comp=Z,98nm,1.0s
PAB San Pablo 74.47 53 *e*P P 05 24 55.5 +1.8
PAB pmax pmax
comp=Z,84nm,1.4s
PAB MLR MLR
comp=Z,885nm,20.0s
PAB San Pablo 74.47 53 *e*P P 05 24 55.5 +1.8
comp=Z,84nm,1.4s
PAB LR LR
comp=Z,885nm,20.0s
SGMF Saint Gilles 74.66 44 *e*P P 05 24 52.8 -1.7
comp=Z,224nm,1.8s
SGMF Saint Gilles 74.66 44 *e*P P 05 24 52.8 -1.7
SGMF pmax pmax
comp=Z,225nm,1.8s
SGMF Saint Gilles 74.66 44 *e*P P 05 24 52.8 -1.7
comp=Z,224nm,1.8s
ESDC Sonseca Array 74.75 53 P P 05 24 55.6 +0.4
ESDC Sonseca Array 74.75 53 P P 05 24 55.6 +0.4
comp=Z,16nm,0.8s,baz=289,slow=5.6,SNR=41
ESDC LR LR 05 53 51.7
comp=Z,535nm,20.6s,baz=315,slow=33
ESLA Sonseca Array 74.75 53 *e*P P 05 24 55.5 +0.3
comp=Z,4.8nm,0.8s
GRR Gorron 75.77 43 *e*P P 05 24 59.5 -1.3
comp=Z,117nm,1.1s
GRR Gorron 75.77 43 *e*P P 05 24 59.5 -1.3
GRR pmax pmax
comp=Z,117nm,1.1s
GRR Gorron 75.77 43 *e*P P 05 24 59.5 -1.3
comp=Z,117nm,1.1s
FLN La Foliniere 75.96 43 *e*P P 05 25 00.7 -1.3
comp=Z,61nm,0.9s
FLN *e*R
comp=Z,649nm,21.0s
FLN La Foliniere 75.96 43 *e*P P 05 25 00.7 -1.3
FLN pmax pmax
comp=Z,61nm,0.9s
FLN La Foliniere 75.96 43 *e*P P 05 25 00.7 -1.3
comp=Z,61nm,0.9s
LDF La Druitiere 76.22 43 *e*P P 05 25 02.1 -1.4
comp=Z,129nm,1.2s
LDF La Druitiere 76.22 43 *e*P P 05 25 02.1 -1.4
LDF pmax pmax
comp=Z,129nm,1.2s
LDF La Druitiere 76.22 43 *e*P P 05 25 02.1 -1.4
comp=Z,129nm,1.2s
KBS Kingsbay 76.26 11 *e*P P 05 25 04.6 +1.5
KBS AMB AMB 05 25 06.8
comp=Z,76nm,1.1s
KBS *e*S S 05 34 47.9 +1.3
KBS AMS AMS 05 58 07.7
comp=Z,593nm,19.9s
KBS Kingsbay 76.26 11 *e*P P 05 25 04.1 +1.0
KBS pmax pmax
comp=Z,50nm,1.0s
KBS MLR MLR
comp=Z,703nm,20.0s
KBS Kingsbay 76.26 11 *e*P P 05 25 04.1 +1.0
comp=Z,50nm,1.0s
KBS LR LR
comp=Z,703nm,20.0s
SJPF Ste Jean 76.28 49 *e*P P 05 25 03.6 -0.3
comp=Z,144nm,1.2s
SJPF Ste Jean 76.28 49 *e*P P 05 25 03.6 -0.3
SJPF pmax pmax
comp=Z,144nm,1.2s
SJPF Ste Jean 76.28 49 *e*P P 05 25 03.6 -0.3
comp=Z,144nm,1.2s
MFF Saint Martin d 76.50 45 *e*P P 05 25 03.7 -1.4
comp=Z,31nm,0.9s
MFF Saint Martin d 76.50 45 *e*P P 05 25 03.7 -1.4
MFF pmax pmax
comp=Z,31nm,0.9s
MFF Saint Martin d 76.50 45 *e*P P 05 25 03.7 -1.4
comp=Z,31nm,0.9s
ETSF Etsaut 76.80 49 *e*P P 05 25 06.5 -0.4
comp=Z,174nm,1.5s
ETSF Etsaut 76.80 49 *e*P P 05 25 06.5 -0.4
ETSF pmax pmax
comp=Z,174nm,1.5s
ETSF Etsaut 76.80 49 *e*P P 05 25 06.5 -0.4
comp=Z,174nm,1.5s
SUE Sulen 77.11 30 *e*P P 05 25 09.7 +1.5
SUE *e*S S 05 34 57.5 +1.2
SUE *e*SS SS 05 39 54.5 +1.3
VIEF Viey 77.22 49 *e*P P 05 25 09.7 +0.4
VIEF Viey 77.22 49 *e*P P 05 25 09.7 +0.4
LABF Labassere 77.23 49 *e*P P 05 25 10.6 +1.3
LABF Labassere 77.23 49 *e*P P 05 25 10.6 +1.3
SPA0 Spitsbergen Ar 77.30 12 *e*P P 05 25 09.7 +0.7
SPA0 *e*S S 05 34 58.3 +0.2
LFF La Frestale 77.38 47 *e*P P 05 25 08.9 -1.2
comp=Z,223nm,1.5s
LFF La Frestale 77.38 47 *e*P P 05 25 08.9 -1.2
LFF pmax pmax
comp=Z,223nm,1.5s
LFF La Frestale 77.38 47 *e*P P 05 25 08.9 -1.2
comp=Z,223nm,1.5s
EPF Esparros 77.43 49 *e*P P 05 25 09.7 -0.7
comp=Z,123nm,1.4s
EPF Esparros 77.43 49 *e*P P 05 25 09.7 -0.7
EPF pmax pmax
comp=Z,123nm,1.4s
EPF Esparros 77.43 49 *e*P P 05 25 09.7 -0.7
comp=Z,123nm,1.4s
RESF Ens 77.46 49 *e*P P 05 25 11.6 +0.9
RESF Ens 77.46 49 *e*P P 05 25 11.6 +0.9
BER Bergen 77.50 31 *e*P P 05 25 10.5 +0.1
BER *e*S S 05 35 01.9 +1.3
BER *e*SS SS 05 40 03.8 +4.5
RJF Les Rejaudoux 77.86 46 *e*P P 05 25 11.4 -1.4
comp=Z,108nm,1.4s
RJF *e*R
comp=Z,490nm,19.0s
RJF Les Rejaudoux 77.86 46 *e*P P 05 25 11.4 -1.4
RJF pmax pmax
comp=Z,108nm,1.4s
RJF Les Rejaudoux 77.86 46 *e*P P 05 25 11.4 -1.4
comp=Z,108nm,1.4s
MLS Moulis 77.98 49 *e*P P 05 25 13.2 -0.3
MLS Moulis 77.98 49 *e*P P 05 25 13.2 -0.3
TCF Toulx Ste Croi 78.16 45 *e*P P 05 25 12.7 -1.7
comp=Z,124nm,1.5s
TCF Toulx Ste Croi 78.16 45 *e*P P 05 25 12.7 -1.7
TCF pmax pmax
comp=Z,124nm,1.5s
TCF Toulx Ste Croi 78.16 45 *e*P P 05 25 12.7 -1.7
comp=Z,124nm,1.5s
ODD1 Odda 78.23 31 *e*P P 05 25 12.8 -1.7
ODD1 AMB AMB 05 25 21.5
comp=Z,60nm,2.4s
HYF Humbligny 78.27 44 *e*P P 05 25 13.6 -1.4
HYF Humbligny 78.27 44 *e*P P 05 25 13.6 -1.4
CAF Calviac 78.31 46 *e*P P 05 25 14.0 -1.3
comp=Z,65nm,1.2s
CAF Calviac 78.31 46 *e*P P 05 25 14.0 -1.3
CAF pmax pmax
comp=Z,65nm,1.2s
CAF Calviac 78.31 46 *e*P P 05 25 14.0 -1.3
comp=Z,65nm,1.2s
BGF Bois d'Agland 78.55 45 *e*P P 05 25 14.8 -1.7
comp=Z,85nm,1.3s
BGF Bois d'Agland 78.55 45 *e*P P 05 25 14.8 -1.7
BGF pmax pmax
comp=Z,85nm,1.3s
BGF Bois d'Agland 78.55 45 *e*P P 05 25 14.8 -1.7
comp=Z,85nm,1.3s
MTLF Montolieu 78.72 48 *e*P P 05 25 16.4 -1.2
comp=Z,170nm,1.6s
MTLF Montolieu 78.72 48 *e*P P 05 25 16.4 -1.2
MTLF pmax pmax
comp=Z,170nm,1.6s
VALF Valcebollere 78.76 49 *e*P P 05 25 17.8 -0.2
VALF Valcebollere 78.76 49 *e*P P 05 25 17.8 -0.2
CARF Carcanieres 78.76 49 *e*P P 05 25 18.9 +1.0
CARF Carcanieres 78.76 49 *e*P P 05 25 18.9 +1.0
BAIF Baives 78.77 41 *e*P P 05 25 16.0 -1.6
comp=Z,132nm,1.7s
BAIF Baives 78.77 41 *e*P P 05 25 16.0 -1.6
BAIF pmax pmax
comp=Z,132nm,1.7s
BAIF Baives 78.77 41 *e*P P 05 25 16.0 -1.6
comp=Z,132nm,1.7s
PYM Petit Puy Mans 78.81 46 *e*P P 05 25 18.4 +0.3
PYM Petit Puy Mans 78.81 46 *e*P P 05 25 18.4 +0.3
PYM Petit Puy Mans 78.81 46 *e*P P 05 25 18.4 +0.3
SSF Saint Saulge 78.89 44 *e*P P 05 25 16.4 -2.0
comp=Z,28nm,0.9s
SSF Saint Saulge 78.89 44 *e*P P 05 25 16.4 -2.0
SSF pmax pmax
comp=Z,28nm,0.9s
SSF Saint Saulge 78.89 44 *e*P P 05 25 16.4 -2.0
comp=Z,28nm,0.9s
DOU Dourbes 79.00 41 P P 05 25 18.0 -0.9
comp=Z,18nm,1.6s
DOU AP pP 05 25 22.9 -1.5
DOU XP sP 05 25 25.3 -1.1
LBL Lubilhac 79.08 46 *e*P P 05 25 20.1 +0.5
LBL Lubilhac 79.08 46 *e*P P 05 25 20.1 +0.5
LBL Lubilhac 79.08 46 *e*P P 05 25 20.1 +0.5
LOR Lormes 79.09 44 *e*P P 05 25 17.6 -1.9
comp=Z,106nm,1.4s
LOR *e*R
comp=Z,711nm,19.2s
LOR Lormes 79.09 44 *e*P P 05 25 17.6 -1.9
comp=Z,106nm,1.4s
GIVF Givet 79.15 41 *e*P P 05 25 18.2 -1.5
comp=Z,95nm,1.3s
GIVF Givet 79.15 41 *e*P P 05 25 18.2 -1.5
GIVF pmax pmax
comp=Z,95nm,1.3s
GIVF Givet 79.15 41 *e*P P 05 25 18.2 -1.5
comp=Z,95nm,1.3s
SMF Signal de Mont 79.20 45 *e*P P 05 25 18.0 -2.1
comp=Z,49nm,1.3s
SMF Signal de Mont 79.20 45 *e*P P 05 25 18.0 -2.1
SMF pmax pmax
comp=Z,49nm,1.3s
SMF Signal de Mont 79.20 45 *e*P P 05 25 18.0 -2.1
comp=Z,49nm,1.3s
BCLA Clavier 79.38 41 P P 05 25 19.9 -1.1
comp=Z,32nm,1.7s
BEBN Eben Emael 79.54 40 P P 05 25 22.6 +0.8
comp=Z,9.5nm,1.6s
MEZF Maizieres J'vi 79.62 43 *e*P P 05 25 20.9 -1.5
comp=Z,258nm,1.6s
MEZF Maizieres J'vi 79.62 43 *e*P P 05 25 20.9 -1.5
comp=Z,258nm,1.6s
SFTF Sexfontaines 79.68 43 *e*P P 05 25 20.9 -1.8
comp=Z,43nm,1.0s
SFTF Sexfontaines 79.68 43 *e*P P 05 25 20.9 -1.8
comp=Z,43nm,1.0s
HGN Heimansgroeve 79.70 40 *e*P P 05 25 22.0 -0.7
comp=Z,31nm,0.9s
HGN *ee* 05 25 28.9
HGN *e*S S 05 35 23.2 -1.4
LASF Ste Croix 79.74 47 *e*P P 05 25 22.4 -0.7
comp=Z,112nm,1.5s
LASF Ste Croix 79.74 47 *e*P P 05 25 22.4 -0.7
comp=Z,112nm,1.5s
KONO Kongsberg 79.75 31 *e*P P 05 25 24.3 +1.5
KONO AMB AMB 05 25 33.9
comp=Z,64nm,1.2s
KONO *e*S S 05 35 24.7 0.0
KONO *e*SS SS 05 40 37.8 +4.8
KONO AMS AMS 06 02 50.1
comp=Z,374nm,21.3s
KONO Kongsberg 79.75 31 *e*P P 05 25 22.9 +0.1
KONO pmax pmax
comp=Z,52nm,1.4s
KONO MLR MLR
comp=Z,476nm,20.0s
KONO Kongsberg 79.75 31 *e*P P 05 25 22.9 +0.1
comp=Z,52nm,1.4s
KONO LR LR
comp=Z,476nm,20.0s
MEM Membach 79.78 40 P P 05 25 22.4 -0.8
comp=Z,19nm,1.3s
SSB Saint Sauveur 79.96 46 *e*P P 05 25 23.3 -1.1
SSB pmax pmax
comp=Z,42nm,1.6s
SSB MLR MLR
comp=Z,395nm,19.0s
SSB Saint Sauveur 79.96 46 *e*P P 05 25 23.3 -1.1
comp=Z,42nm,1.6s
SSB LR LR
comp=Z,395nm,19.0s
WTSB Winterswijk 79.97 39 *e*P P 05 25 23.8 -0.4
comp=Z,97nm,1.3s
WTSB *ee* 05 25 30.6
PAGF Fort de Pagny 80.05 42 *e*P P 05 25 23.2 -1.5
comp=Z,23nm,1.1s
PAGF Fort de Pagny 80.05 42 *e*P P 05 25 23.2 -1.5
comp=Z,23nm,1.1s
WLF Walferdange 80.08 41 PFAKE 05 25 40.0 +15
WLF LR LR
comp=Z,524nm,19.0s
NAO01 NORSAR Array S 80.08 30 *e*P P 05 25 24.9 +0.2
comp=Z,31nm,0.9s
AMKA Amchitka 80.08 321 *e*P P 05 25 25.4 +0.7
comp=Z,158nm,0.9s
VIVF Saint-Julien-l 80.14 46 *e*P P 05 25 24.6 -0.7
comp=Z,82nm,1.1s
VIVF Saint-Julien-l 80.14 46 *e*P P 05 25 24.6 -0.7
VIVF pmax pmax
comp=Z,82nm,1.1s
VIVF Saint-Julien-l 80.14 46 *e*P P 05 25 24.6 -0.7
comp=Z,82nm,1.1s
NB2 NORSAR Subarra 80.19 29 P P 05 25 25.1 -0.2
comp=Z,45nm,1.0s,baz=284,slow=5.6
NB2 NORSAR Subarra 80.19 29 P P 05 25 25.1 -0.2
baz=284,slow=5.6
NOA NORSAR Array B 80.19 29 P P 05 25 25.1 -0.2
NOA NORSAR Array B 80.19 29 P P 05 25 25.1 -0.2
comp=Z,16nm,0.8s,baz=284,slow=5.5,SNR=58
NOA LR LR 06 01 09.2
comp=Z,253nm,19.9s,baz=285,slow=36
THEF They Montfort 80.29 43 *e*P P 05 25 24.9 -1.1
MUD Monsted U'grnd 80.29 34 *i* P P 05 25 25.6 -0.2
MUD *i* 05 28 29.9
MUD *i* S S 05 35 32.0 +1.5
MUD pmax pmax
comp=Z,23nm,0.9s
MUD MLR MLR
comp=Z,530nm,16.0s
MUD Monsted U'grnd 80.29 34 *i* P P 05 25 25.6 -0.2
comp=Z,23nm,0.9s
MUD *i* 05 28 29.9
MUD *i* S S 05 35 32.0 +1.5
MUD
comp=Z,520nm,16.0s
NC602 NORSAR Array S 80.42 30 *e*P P 05 25 27.8 +1.4
NC602 *e*S S 05 35 34.4 +2.6
HAU Haudompre 80.58 43 *e*P P 05 25 25.9 -1.7
comp=Z,36nm,0.8s
HAU *e*R
comp=Z,832nm,20.0s
HAU Haudompre 80.58 43 *e*P P 05 25 25.9 -1.7
HAU pmax pmax
comp=Z,36nm,0.8s
HAU Haudompre 80.58 43 *e*P P 05 25 25.9 -1.7
comp=Z,36nm,0.8s
LIC Lamto 80.59 86 *e*P P 05 25 28.2 -0.1
comp=Z,83nm,1.1s,baz=272
LIC *e*R
comp=Z,679nm,21.0s
LIC Lamto 80.59 86 *e*P P 05 25 28.2 -0.1
comp=Z,83nm,1.1s
DBIC Dimbokro 80.65 86 *e*P P 05 25 28.6 +0.1
comp=Z,45nm,1.1s
DBIC Dimbokro 80.65 86 P P 05 25 28.2 -0.3
comp=Z,12nm,0.7s,baz=255,slow=4.7,SNR=6.6
DBIC LR LR 05 56 00.7
comp=Z,486nm,20.5s,baz=258,slow=32
TRO Tromso 80.68 20 *e*P P 05 25 28.2 +0.6
TRO AMB AMB 05 25 32.1

TRO eS S 05 35 34.5 +0.3
TRO AMS AMS 06 02 23.4
comp=Z,330nm,14.1s
CABF La Chapelle 80.72 44 eP P 05 25 27.0 -1.5
comp=Z,62nm,1.2s
CABF La Chapelle 80.72 44 eP P 05 25 27.0 -1.5
CABF pmax pmax
comp=Z,62nm,1.2s
CABF La Chapelle 80.72 44 eP P 05 25 27.0 -1.5
comp=Z,62nm,1.2s
HINF Hinteralfeld 80.95 43 eP P 05 25 27.6 -2.0
HINF Hinteralfeld 80.95 43 eP P 05 25 27.6 -2.0
HINF Hinteralfeld 80.95 43 eP P 05 25 27.6 -2.0
ORIF Oris-en-Rattie 80.97 46 eP P 05 25 28.9 -0.9
comp=Z,32nm,1.0s
ORIF eR
comp=Z,386nm,17.5s
ORIF Oris-en-Rattie 80.97 46 eP P 05 25 28.9 -0.9
ORIF pmax pmax
comp=Z,32nm,1.0s
ORIF Oris-en-Rattie 80.97 46 eP P 05 25 28.9 -0.9
comp=Z,32nm,1.0s
SMRF Simiane la Rot 80.97 47 eP P 05 25 29.2 -0.6
comp=Z,116nm,1.7s
SMRF Simiane la Rot 80.97 47 eP P 05 25 29.2 -0.6
comp=Z,116nm,1.7s
LOMF Lomont 81.04 43 eP P 05 25 29.7 -0.5
LOMF Lomont 81.04 43 eP P 05 25 29.7 -0.5
LOMF Lomont 81.04 43 eP P 05 25 29.7 -0.5
ECH Echery 81.06 42 eP P 05 25 29.2 -0.9
ECH pmax pmax
comp=Z,56nm,1.4s
ECH MLR MLR
comp=Z,518nm,20.0s
ECH Echery 81.06 42 eP P 05 25 29.2 -0.9
comp=Z,56nm,1.4s
ECH LR LR
comp=Z,518nm,20.0s
ECH Echery 81.06 42 eP P 05 25 28.3 -1.8
CDF Champ du Feu 81.09 42 eP P 05 25 28.6 -1.8
comp=Z,89nm,1.4s
CDF Champ du Feu 81.09 42 eP P 05 25 28.6 -1.8
CDF pmax pmax
comp=Z,89nm,1.4s
CDF Champ du Feu 81.09 42 eP P 05 25 28.6 -1.8
comp=Z,89nm,1.4s
MOF Molkenrain 81.12 43 eP P 05 25 29.5 -1.1
MOF Molkenrain 81.12 43 eP P 05 25 29.5 -1.1
MOF Molkenrain 81.12 43 eP P 05 25 29.5 -1.1
LANF Langenberg 81.29 42 eP P 05 25 30.5 -0.9
TNS Taunus Mts 81.39 40 eP P 05 25 31.4 -0.5
comp=Z,36nm,1.2s
TNS epP PcP 05 25 37.9 -0.1
TNS Taunus Mts 81.39 40 eP P 05 25 31.4 -0.5
TNS e*PP PcP 05 25 37.9 -0.1
TNS pmax pmax
comp=Z,36nm,1.2s
LPL La Plagne 81.41 45 eP P 05 25 31.3 -1.0
comp=Z,143nm,1.7s
LPL La Plagne 81.41 45 eP P 05 25 31.3 -1.0
LPL pmax pmax
comp=Z,143nm,1.7s
LPL La Plagne 81.41 45 eP P 05 25 31.3 -1.0
comp=Z,143nm,1.7s
LPG La Plagne 81.43 45 eP P 05 25 31.8 -0.7
comp=Z,73nm,1.3s
LPG La Plagne 81.43 45 eP P 05 25 31.8 -0.7
LPG pmax pmax
comp=Z,73nm,1.3s
LPG La Plagne 81.43 45 eP P 05 25 31.8 -0.7
comp=Z,73nm,1.3s
BNI Bardonecchia 81.48 46 eP P 05 25 31.8 -0.8
BNI pmax pmax
comp=Z,18nm,1.2s
BNI MLR MLR
comp=Z,486nm,20.0s
BNI Bardonecchia 81.48 46 eP P 05 25 31.8 -0.8
comp=Z,18nm,1.2s
BNI LR LR
comp=Z,486nm,20.0s
BILL Bilibino 81.54 339 d iP P 05 25 31.9 -0.4
BILL i 05 25 37.1
BILL e 05 28 37.5
BILL iS S 05 35 42.3 -0.9
BILL iSS SS 05 41 01.6 +2.2
BILL pmax pmax
comp=Z,60nm,1.2s
BILL Bilibino 81.54 339 eP P 05 25 32.3 0.0
comp=Z,48nm,0.9s
BILL LR LR
comp=Z,537nm,20.0s
BSEG Bad Segeberg 81.56 36 eP P 05 25 32.6 0.0
comp=Z,94nm,1.3s
BSEG epP PcP 05 25 39.1 +0.6
BSEG Bad Segeberg 81.56 36 eP P 05 25 32.6 0.0
BSEG e*PP PcP 05 25 39.1 +0.6
BSEG pmax pmax
comp=Z,94nm,1.3s
MBDF Montbardon 81.63 46 eP P 05 25 32.3 -1.1
comp=Z,12nm,0.7s
MBDF Montbardon 81.63 46 eP P 05 25 32.3 -1.1
MBDF pmax pmax
comp=Z,12nm,0.7s
MBDF Montbardon 81.63 46 eP P 05 25 32.3 -1.1
comp=Z,12nm,0.7s
LMR La Mourre 81.78 47 eP P 05 25 32.7 -1.3
comp=Z,54nm,1.3s
LMR La Mourre 81.78 47 eP P 05 25 32.7 -1.3
LMR pmax pmax
comp=Z,54nm,1.3s
LMR La Mourre 81.78 47 eP P 05 25 32.7 -1.3
comp=Z,54nm,1.3s
BFO Black Forest 81.79 42 eP P 05 25 33.0 -1.0
comp=Z,19nm,1.3s
BFO epP pP 05 25 39.4 -0.1
BFO Black Forest 81.79 42 eP P 05 25 33.0 -1.0
BFO e*PP pP 05 25 39.4 -0.1
BFO pmax pmax
comp=Z,19nm,1.3s
BFO Black Forest 81.79 42 eP P 05 25 33.3 -0.8
comp=Z,33nm,1.4s
BFO LR LR
comp=Z,755nm,20.0s
NRDL Niedersach Rie 81.82 38 eP P 05 25 33.9 0.0
comp=Z,45nm,1.1s
NRDL epP PcP 05 25 40.4 +0.8
FRF La Foret Royal 81.82 47 eP P 05 25 33.1 -1.1
comp=Z,164nm,1.5s
FRF La Foret Royal 81.82 47 eP P 05 25 33.1 -1.1
FRF pmax pmax
comp=Z,164nm,1.5s
FRF La Foret Royal 81.82 47 eP P 05 25 33.1 -1.1
comp=Z,164nm,1.5s
CALN Calern 81.94 47 eP P 05 25 36.3 +1.2
CALN Calern 81.94 47 eP P 05 25 36.3 +1.2
CLZ Clausthal 82.15 38 eP P 05 25 35.8 -0.1
comp=Z,46nm,1.0s
CLZ epP pP 05 25 42.3 +0.9
CLZ Clausthal 82.15 38 eP P 05 25 35.8 -0.1
CLZ e*PP pP 05 25 42.3 +0.9
CLZ pmax pmax
comp=Z,46nm,1.0s
UBBA Unterbreizbach 82.20 39 eP P 05 25 36.0 +0.1
comp=Z,57nm,1.9s
UBBA epP pP 05 25 42.5 +1.0
SBF Sospel 82.30 47 eP P 05 25 34.8 -2.1
comp=Z,103nm,1.2s
SBF Sospel 82.30 47 eP P 05 25 34.8 -2.1
SBF pmax pmax
comp=Z,103nm,1.2s
SBF Sospel 82.30 47 eP P 05 25 34.8 -2.1
comp=Z,103nm,1.2s
KTK1 Kautokeino 82.33 20 eP P 05 25 36.6 +0.2
KTK1 AMB AMB 05 25 40.6
comp=Z,390nm,2.2s
KTK1 eS S 05 35 53.5 +2.1
ARCES ARCESS Array B 82.84 19 P P 05 25 38.3 -0.8
ARCES ARCESS Array B 82.84 19 P P 05 25 38.3 -0.8
comp=Z,7.6nm,0.7s,baz=297,slow=5.3,SNR=29
ARCES LR LR 06 05 53.2
comp=Z,368nm,18.0s,baz=302,slow=38
ARE0 ARCESS Array S 82.84 19 eP P 05 25 39.9 +0.8
ARE0 eS S 05 35 57.6 +1.1
ARE0 ARCESS Array S 82.84 19 eP P 05 25 39.5 +0.4
TUE Stuetta 82.94 44 eP P 05 25 39.8 -0.5
comp=Z,48nm,1.4s
TUE LR LR
comp=Z,526nm,19.0s
DAVA Damuels 83.07 43 ⇓ iP P 05 25 39.3 -1.6
comp=Z,44nm,1.6s
NEUB Neuenburg 83.17 39 eP P 05 25 40.8 -0.3
comp=Z,39nm,1.1s
KEV Kevo 83.20 19 ep P 05 25 40.8 -0.1
comp=Z,13nm,0.7s
KEV Kevo 83.20 19 eP P 05 25 41.0 +0.1
KEV pmax pmax
comp=Z,47nm,1.3s
KEV MLR MLR
comp=Z,377nm,19.0s
KEV Kevo 83.20 19 eP P 05 25 41.0 +0.1
comp=Z,47nm,1.3s
KEV LR LR
comp=Z,377nm,19.0s
MOX Moxa 83.23 39 eP P 05 25 41.1 -0.4
comp=Z,26nm,1.1s
MOX epP pP 05 25 47.6 +0.6
MOX Moxa 83.23 39 eP P 05 25 41.1 -0.4
MOX e*PP pP 05 25 47.6 +0.6
MOX pmax pmax
comp=Z,26nm,1.1s
GRFO Grafenberg 83.26 40 eP P 05 25 41.9 +0.3
GRFO pmax pmax
comp=Z,25nm,1.5s
GRFO Grafenberg 83.26 40 eP P 05 25 41.9 +0.3
comp=Z,24nm,1.5s
GRF Grafenberg Arr 83.26 40 eP P 05 25 41.5 -0.2
comp=Z,38nm,1.3s
GRF epP pP 05 25 48.0 +0.8
GRF eL L 06 01 49.5
comp=Z,460nm,19.5s
GRF Grafenberg Arr 83.26 40 eP P 05 25 41.5 -0.2
GRF e*PP pP 05 25 48.0 +0.8
GRF pmax pmax
comp=Z,38nm,1.3s
GRF MLR MLR
comp=Z,500nm,19.5s
FX1 Attu Island--F 83.34 323 eP P 05 25 41.7 -0.2
FX1 Attu Island--F 83.34 323 LR LR 05 59 54.0
comp=Z,207nm,21.8s,baz=274,slow=34
RETA Reutte 83.59 43 ⇑ iP P 05 25 43.0 -0.4
comp=Z,47nm,1.3s,SNR=11
PLN Plauen 83.61 39 eP P 05 25 43.2 -0.2
comp=Z,126nm,1.0s
PLN epP pP 05 25 49.7 +0.7
WERD Werda 83.71 39 eP P 05 25 43.7 -0.3
comp=Z,28nm,1.1s
WERD epP pP 05 25 50.2 +0.7
MANZ Manzenberg 83.72 40 eP P 05 25 43.9 -0.2
comp=Z,17nm,1.1s
MANZ epP pP 05 25 50.4 +0.8
GUNZ Gunzen 83.75 39 eP P 05 25 44.0 -0.2
comp=Z,28nm,1.1s
GUNZ epP pP 05 25 50.5 +0.8
BSD Bornholm Skovb 83.78 34 i P P 05 25 42.7 -1.5
BSD i 05 28 59.2
BSD MLR MLR
comp=Z,460nm,20.0s
BSD Bornholm Skovb 83.78 34 i P P 05 25 42.7 -1.5
BSD i 05 28 59.2
BSD
comp=Z,450nm,20.0s
WERN Wernitzgruen 83.80 40 eP P 05 25 44.4 0.0
comp=Z,37nm,1.1s
WERN epP pP 05 25 50.9 +0.9
TANN Tannenbergstha 83.81 39 eP P 05 25 44.4 -0.1
comp=Z,35nm,1.1s
TANN epP pP 05 25 50.9 +0.8
ROTZ Rotzenmuhle 83.85 40 eP P 05 25 44.9 +0.2
comp=Z,36nm,1.4s
ROTZ epP pP 05 25 51.3 +1.1
NKC Novy Kostel 83.86 40 ⇑ iP P 05 25 44.6 -0.1
NKC MLR MLR
comp=Z,500nm,16.7s
NKC Novy Kostel 83.86 40 ⇑ iP P 05 25 44.6 -0.1
NKC AMS AMS 06 11 40.0
comp=Z,500nm,16.7s
CLL Collm 83.88 38 eP P 05 25 44.4 -0.3
comp=Z,34nm,1.0s
CLL epP pP 05 25 50.9 +0.6
CLL Collm 83.88 38 ⇑ iP P 05 25 44.5 -0.3
CLL i 05 25 50.9
CLL eS S 05 36 04.0 -3.6
CLL pmax pmax
comp=Z,69nm,1.0s
CLL MLR MLR
comp=Z,500nm,18.6s
CLL Collm 83.88 38 ⇑ iP P 05 25 44.5 -0.3
comp=Z,16nm,0.8s
CLL i Pmax 05 25 46.0
comp=Z,34nm,1.0s
CLL iSP P 05 25 50.9 +0.6
CLL ePP PP 05 29 06.0 +8.2
CLL eS SKSac 05 36 06.0 -1.2
CLL eSP SPn 05 36 55.0 -3.2
CLL e(SS) 05 41 06.0
CLL eSSSS 05 47 48.0
CLL LmH 06 01 00.0
comp=N,300nm,21.7s
CLL LmH 06 01 00.0
comp=E,300nm,20.9s
CLL LmV 06 11 00.0
comp=Z,500nm,18.6s
FBE Freiberg 84.20 39 eP P 05 25 46.6 +0.2
comp=Z,116nm,1.9s
FBE epP pP 05 25 53.1 +1.1
VLC Villacollemand 84.27 46 PFAKE 05 26 00.0 +13
VLC LR LR
comp=Z,249nm,20.0s
WET Wettzell 84.45 41 eP P 05 25 47.9 +0.1
comp=Z,58nm,1.3s
WET epP pP 05 25 54.4 +1.1
WET Wettzell 84.45 41 eP P 05 25 47.9 +0.1
WET e*PP pP 05 25 54.4 +1.1
WET pmax pmax
comp=Z,58nm,1.3s
BRG Berggiesshubel 84.57 39 eP P 05 25 48.2 -0.1
comp=Z,309nm,1.1s
BRG i 05 25 54.6
comp=Z,65nm,1.6s
BRG S S 05 36 14.0 -0.6
BRG
comp=N,154nm,21.0s
BRG
comp=E,368nm,17.7s
BRG
comp=Z,551nm,16.0s
BRG Berggiesshubel 84.57 39 eP P 05 25 48.3 -0.1
comp=Z,148nm,2.2s
BRG epP pP 05 25 54.7 +0.9
BRG Berggiesshubel 84.57 39 eP P 05 25 48.2 -0.1
BRG i 05 25 54.6
BRG S S 05 36 14.0 -0.6
BRG pmax pmax
comp=Z,27nm,1.1s
BRG pmax pmax
comp=Z,309nm,1.6s
BRG MLR MLR
comp=N,65µm,21.0s
BRG MLR MLR
comp=E,154nm,17.7s
BRG MLR MLR
comp=Z,368nm,16.0s
RJOB Jochberg 84.83 42 eP P 05 25 49.5 -0.3
comp=Z,62nm,1.7s
RJOB epP pP 05 25 56.0 +0.7
KHC Kasperske Hory 84.90 40 ⇑ iP P 05 25 50.0 0.0
KHC e 05 25 55.0
KHC e 05 36 13.2
KHC MLR MLR
comp=Z,600nm,18.3s
KHC Kasperske Hory 84.90 40 ⇑ iP P 05 25 50.0 0.0
KHC epP pP 05 25 55.0 -0.6
KHC eSKS S 05 36 13.2 -4.8
KHC AMS AMS 06 04 50.0
comp=Z,600nm,18.3s
KHC Kasperske Hory 84.90 40 eP P 05 25 50.0 0.0
comp=Z,57nm,1.4s
ABTA Abfaltersbach 84.95 43 i P P 05 25 50.0 -0.4
comp=Z,59nm,1.3s,SNR=14
PVCC Panska Ves 85.06 39 i P P 05 25 52.0 +1.2
PVCC e 05 25 57.8
PVCC MLR MLR
comp=Z,500nm,17.8s
PVCC Panska Ves 85.06 39 ⇑ iP P 05 25 52.0 +1.2
PVCC epP pP 05 25 57.8 +1.5
PVCC AMS AMS 06 11 20.0
comp=Z,500nm,17.8s
GEC2 GERESS Array S 85.06 41 eP P 05 25 50.8 -0.2
comp=Z,53nm,1.2s
GEC2 epP pP 05 25 57.3 +0.8
GEC2 GERESS Array S 85.06 41 eP P 05 25 50.8 -0.2
GEC2 e*PP pP 05 25 57.3 +0.8
GEC2 pmax pmax
comp=Z,53nm,1.2s
GERES GERESS Array B 85.06 41 P P 05 25 50.6 -0.3
GERES GERESS Array B 85.06 41 P P 05 25 50.6 -0.3
comp=Z,15nm,0.9s,baz=298,slow=2.9,SNR=45
GERES LR LR 06 02 04.0
comp=Z,502nm,19.6s,baz=97,slow=34
PRA Prague 85.13 39 ⇑ P P 05 25 53.0 +1.9
PRA pP pP 05 25 58.0 +1.4
PRU Pruhonice 85.22 39 ⇑ iP P 05 25 51.4 -0.2
PRU e 05 25 56.8
PRU e 05 36 19.4
PRU MLR MLR
comp=Z,700nm,20.4s
PRU Pruhonice 85.22 39 ⇑ iP P 05 25 51.4 -0.2
PRU epP pP 05 25 56.8 -0.3
PRU eS S 05 36 19.4 -1.7
PRU AMS AMS 06 02 20.0
comp=Z,700nm,20.4s
TOA0 Torodi Ar. Sit 85.22 78 eP P 05 25 49.7 -2.6
TORD Torodi Ar. Bea 85.22 78 P P 05 25 50.8 -1.5
TORD PKKPbc PKKPbc 05 43 59.8 +2.3
TORD Torodi Ar. Bea 85.22 78 P P 05 25 50.8 -1.5
comp=Z,9.4nm,1.1s,baz=296,slow=5.0,SNR=35
TORD PKKPbc PKKPbc 05 43 59.8 +2.3
comp=Z,0.7nm,0.8s,baz=70,slow=1.4,SNR=3.6
TORD LR LR 06 00 17.9
comp=Z,863nm,20.5s,baz=265,slow=33
KBA Koelnbreinsper 85.39 42 ⇑ iP P 05 25 52.2 -0.6
comp=Z,74nm,1.4s,SNR=16
GKP Gorka Klasztor 85.69 36 eP P 05 25 54.1 +0.3
GKP Gorka Klasztor 85.69 36 eP P 05 25 54.1 +0.3
MYKA Terra Mystica 85.72 43 ⇓ iP P 05 25 52.0 -2.3
comp=Z,36nm,0.9s
MOA Molln 85.74 41 ⇑ iP P 05 25 53.9 -0.4
comp=Z,37nm,1.3s,SNR=7.8
KEST Kesra 85.89 54 P P 05 25 55.5 +0.2
KEST Kesra 85.89 54 P P 05 25 55.5 +0.2
comp=Z,11nm,0.9s,baz=258,slow=3.6,SNR=25
UPC Upice 85.94 39 i P P 05 25 54.9 -0.2
UPC e 05 26 01.3
UPC Upice 85.94 39 ⇑ iP P 05 25 54.9 -0.2
UPC epP pP 05 26 01.3 +0.6
KSP Ksiaz 85.99 38 eP P 05 25 55.6 +0.2
KSP e 05 36 19.0
KSP MLR MLR
comp=Z,1µm,19.2s
KSP Ksiaz 85.99 38 eP P 05 25 56.6 +1.2
TREC Trest 86.03 40 i P P 05 25 55.4 -0.3
TREC e 05 26 02.2
TREC MLR MLR
comp=Z,500nm,14.9s
TREC Trest 86.03 40 ⇑ iP P 05 25 55.4 -0.3
TREC epP pP 05 26 02.2 +1.0
TREC AMS AMS 06 06 00.0
comp=Z,500nm,14.9s
VOY Vojsko 86.08 43 eP P 05 25 55.3 -0.8
VOY e 05 25 57.0
VOY e 05 26 20.1
VOY e 05 26 31.6
DPC Dobruska-Polom 86.18 39 i P P 05 25 56.4 0.0
DPC e 05 26 02.0
DPC e 05 36 22.4
DPC Dobruska-Polom 86.18 39 i P P 05 25 56.4 0.0
DPC epP pP 05 26 02.0 +0.1
DPC eSKS S 05 36 22.4 -8.2
DPC AMS AMS 06 03 00.0
TAM Tamanrasset 86.22 68 eP P 05 25 57.8 +0.5
TAM pmax pmax
comp=Z,8.0nm,1.2s
TAM MLR MLR
comp=Z,671nm,20.0s
TAM Tamanrasset 86.22 68 eP P 05 25 57.8 +0.5
comp=Z,8.3nm,1.2s
TAM LR LR
comp=Z,671nm,20.0s
JAVS Javornik 86.24 43 eP P 05 25 56.4 -0.5
JAVS eS S 05 36 24.7 -6.8
APA Apatity 86.34 19 ⇑ iP P 05 25 58.7 +2.0
APA i S S 05 36 30.0 -1.4
APA ePS PnS 05 37 32.0 +2.0
APA eSS SS 05 42 10.0 -0.1
APA pmax pmax
comp=Z,18nm,1.0s
APA pmax pmax
comp=Z,500nm,7.0s
OBKA Obir 86.36 43 i P P 05 25 57.3 -0.1
comp=Z,70nm,1.2s,SNR=8.8
KAF Kangasniemi 86.52 26 ep P 05 25 57.9 +0.2
comp=Z,0.5nm,0.2s,baz=293,slow=4.6
KAF Kangasniemi 86.52 26 eP P 05 25 57.9 +0.2
KAF pmax pmax
comp=Z,1.0nm,0.2s
LVZ Lovozero 86.54 19 eP P 05 25 58.9 +1.1
LVZ pmax pmax
comp=Z,75nm,2.3s
SOKA Soboth 86.61 42 ⇑ iP P 05 25 57.9 -0.7
PERS Pernice 86.68 42 i P P 05 25 58.4 -0.6
PERS eS S 05 36 33.8 -2.0
VRAC Vranov 86.70 40 ⇓ iP P 05 25 59.2 +0.2
CONA Conrad Observa 86.72 41 i P P 05 25 58.8 -0.4
comp=Z,36nm,1.0s,SNR=20
FINES FINESS Array B 86.73 26 P P 05 25 58.5 -0.3
FINES FINESS Array B 86.73 26 P P 05 25 58.5 -0.3
comp=Z,18nm,0.8s,baz=7.4,slow=4.4,SNR=20
FINES LR LR 06 05 24.0
comp=Z,455nm,19.1s,baz=44,slow=36
FIA1 FINESS Array S 86.73 26 eP P 05 25 59.3 +0.5
ARSA Arzberg 86.74 42 ⇓ iP P 05 25 58.2 -1.0
comp=Z,29nm,1.0s,SNR=9.3
VISS Visnje 86.78 43 i P P 05 25 59.5 +0.1
VISS eS S 05 36 38.9 +2.3
AQU L'Aquila 86.92 47 PFAKE 05 26 10.0 +10
AQU LR LR
comp=Z,979nm,20.0s
MORC Moravsky Berou 87.11 39 eP P 05 26 00.6 -0.4
MORC pmax pmax
comp=Z,42nm,1.4s
MORC Moravsky Berou 87.11 39 eP P 05 26 00.6 -0.4
comp=Z,42nm,1.4s
MORC Moravsky Berou 87.11 39 ⇓ iP P 05 26 01.2 +0.2
BOJS Bojanci 87.15 43 i P P 05 26 00.6 -0.6
BOJS eS S 05 36 44.0 +3.8
SOP Sopron 87.25 41 ⇓ eP P 05 26 00.9 -0.7
ZST Bratislava 87.41 41 eP P 05 26 01.9 -0.5
ZST pmax pmax
comp=Z,42nm,1.1s
ZST Bratislava 87.41 41 eP P 05 26 01.9 -0.5
ZST Bratislava 87.41 41 eS S 05 36 43.4 +0.9
OKC Ostrava-Krasne 87.46 39 i P P 05 26 02.3 -0.3
OKC e 05 26 07.9
OKC e 05 36 37.3
OKC MLR MLR
comp=Z,500nm,18.2s
OKC Ostrava-Krasne 87.46 39 ⇑ iP P 05 26 02.3 -0.3
OKC epP pP 05 26 07.9 -0.2
OKC eSKS S 05 36 37.3 -5.6
OKC AMS AMS 06 04 00.0
comp=Z,500nm,18.2s
BEHE Becsehely 87.81 42 ⇓ eP P 05 26 04.1 -0.3
JOF Joensuu 88.13 24 ep P 05 26 04.9 -0.6
comp=Z,3.4nm,0.7s
JOF Joensuu 88.13 24 eP P 05 26 04.9 -0.6
JOF pmax pmax
comp=Z,3.0nm,0.7s
BEL Belsk 88.24 36 eP P 05 26 07.7 +1.4
BEL Belsk 88.24 36 eP P 05 26 07.6 +1.3
OJC Ojcow 88.30 38 eP P 05 26 07.0 +0.4
OJC Ojcow 88.30 38 eP P 05 26 07.0 +0.4
PKST T⁺⁺s 88.34 41 ⇑ eP P 05 26 06.6 -0.3
VYHS Vyhne 88.38 40 eP P 05 26 07.6 +0.6
VYHS e 05 26 14.3
VYHS eS S 05 36 53.4 +1.6

VYHS pmax pmax
comp=Z,18nm,1.4s
VYHS Vyhne 88.38 40 *e*P **P 05 26 07.6 +0.6**
VYHS *e*pP **pP 05 26 14.3 +1.7**
PKSG 88.51 41⇓ *e*P **P 05 26 08.1 +0.4**
PKS9 Tamasi 88.74 42⇓ *e*P **P 05 26 08.9 +0.1**
BUD Budapest 88.88 41⇓ *e*P **P 05 26 10.8 +1.4**
NIE Niedzica 88.92 39 *e*P **P 05 26 10.4 +0.8**
NIE Niedzica 88.92 39 *e*P **P 05 26 10.4 +0.8**
SEY Seymchan 89.03 337 *c i*P **P 05 26 09.7 -0.1**
PKSM Morągy 89.11 42⇓ *e*P **P 05 26 09.8 -0.7**
PSZ Piszkesteto 89.25 40 *e*P **P 05 26 12.0 +0.8**
PSZ pmax pmax
comp=Z,76nm,1.5s
PSZ MLR MLR
comp=Z,517nm,19.0s
PSZ Piszkesteto 89.25 40 *e*P **P 05 26 12.0 +0.8**
comp=Z,76nm,1.5s
PSZ LR LR
comp=Z,517nm,19.0s
PSZ Piszkesteto 89.25 40⇓ *i*P **P 05 26 11.5 +0.3**
PSZ Piszkesteto 89.25 40⇓ *e*P **P 05 26 12.8 +1.6**
KECS Kecovo 89.39 39 *e*P **P 05 26 12.0 +0.2**
KECS *e* 05 26 18.8
KECS pmax pmax
comp=Z,6.0nm,1.0s
KECS Kecovo 89.39 39 *e*P **P 05 26 12.0 +0.2**
KECS *e*pP **pP 05 26 18.8 +1.4**
TIXI Tiksi 89.41 349 *e*P **P 05 26 10.6 -0.8**
TIXI pmax pmax
comp=Z,34nm,0.8s
CUC Castrocucco 89.42 49 *e*P **P 05 26 10.6 -1.6**
comp=Z,19nm,0.8s
CUC LR LR
comp=Z,472nm,19.0s
STHS Stebnicka Huta 89.48 38 *e*P **P 05 26 13.5 +1.3**
STHS pmax pmax
comp=Z,7.0nm,1.0s
STHS Stebnicka Huta 89.48 38 *e*P **P 05 26 13.5 +1.3**
CRVS Cervenica-Dubn 89.82 39 *e*P **P 05 26 12.3 -1.5**
CRVS pmax pmax
comp=Z,27nm,1.5s
CRVS Cervenica-Dubn 89.82 39 *e*P **P 05 26 12.3 -1.5**
CRVS Cervenica-Dubn 89.82 39 *e*S **S 05 37 03.7 -1.6**
WDD Wield Dalam 89.85 53 PFAKE 05 26 30.0 +16
WDD LR LR
comp=Z,358nm,21.0s
TMCR Tamitsa 89.88 21 *e*P **P 05 26 12.7 -1.0**
TMCR pmax pmax
comp=Z,33nm,1.4s
CEL Celeste 90.07 50 PFAKE 05 26 30.0 +15
CEL LR LR
comp=Z,284nm,20.0s
KWP Kalwaria Pacla 90.26 38 *e*P **P 05 26 16.9 +1.1**
KWP pmax pmax
comp=Z,57nm,1.4s
KWP MLR MLR
comp=Z,377nm,19.0s
KWP Kalwaria Pacla 90.26 38 *e*P **P 05 26 16.9 +1.1**
comp=Z,57nm,1.4s
KWP LR LR
comp=Z,377nm,19.0s
KWP Kalwaria Pacla 90.26 38⇓ *i*P **P 05 26 16.7 +0.9**
KWP Kalwaria Pacla 90.26 38 *e*P **P 05 26 17.1 +1.3**
KOLS Kolonicke sedl 90.29 39 *e*P **P 05 26 17.7 +1.7**
KOLS *e* 05 26 23.3
KOLS *e*S **S 05 37 10.4 +0.7**
KOLS pmax pmax
comp=Z,28nm,1.4s
KOLS Kolonicke sedl 90.29 39 *e*P **P 05 26 17.7 +1.7**
KOLS *e*pP **pP 05 26 23.3 +1.7**
TIP Timpagrande 90.39 49 PFAKE 05 26 30.0 +13
TIP LR LR
comp=Z,451nm,21.0s
UZH Uzhgorod 90.43 39 *e*P **P 05 26 16.2 -0.4**
UZH *e* 05 26 22.4
UZH *i*S **S 05 37 07.8 -3.1**
TRPA Tarpa 90.79 39⇑ *i*P **P 05 26 18.4 +0.1**
TRPA Tarpa 90.79 39⇓ *e*P **P 05 26 19.5 +1.2**
BZS Buzias 91.26 42 ⇑P **P 05 26 20.3 -0.2**
BZS Buzias 91.26 42⇑ *i*P **P 05 26 20.3 -0.2**
PET Petropavlovsk 91.36 327 *e*P **P 05 26 19.2 -1.6**
PET *e* 05 30 00.2
PET *e*S S 05 37 10.9 -8.3
PET *e*PS **PS 05 38 27.0 -2.4**
PET pmax pmax
comp=Z,300nm,7.3s
PET pmax pmax
comp=Z,200nm,11.2s
PET MLR MLR
comp=Z,500nm,20.0s
DRGR 91.46 40 ⇑P **P 05 26 21.5 -0.1**
DRGR 91.46 40⇑ *i*P **P 05 26 21.5 -0.1**
TIR Tirane 91.79 46 PFAKE 05 26 30.0 +6.9
TIR LR LR
comp=Z,408nm,19.0s
PEA0B Petropavlovsk- 91.82 327 *e*P **P 05 26 23.4 +0.4**
PETK Petropavlovsk- 91.82 327 P **P 05 26 22.3 -0.7**
PETK Petropavlovsk- 91.82 327 P **P 05 26 22.2 -0.7**
PETK Petropavlovsk- 91.82 327 P **P 05 26 22.2 -0.7**
comp=Z,20nm,1.0s,baz=87,slow=9.1,SNR=30
PETK LR LR 06 10 37.5
comp=Z,222nm,21.7s,baz=262,slow=38
GZR Gura Zlata 92.09 42 ⇓P **P 05 26 24.5 0.0**
GZR Gura Zlata 92.09 42⇓ *i*P **P 05 26 24.5 0.0**
KLMR Klimovskoe 92.49 23 *e*P **P 05 26 24.8 -1.1**
KLMR *e* 05 30 06.7
KLMR pmax pmax
comp=Z,39nm,1.4s
BUR08 Bucovina Ar. S 92.61 39 *e*P **P 05 26 26.8 -0.1**
BURAR Bucovina Array 92.64 39⇓ *i*P **P 05 26 27.2 +0.2**
ARR Arges 93.28 41⇓ *i*P **P 05 26 30.1 +0.1**
KIEV Kiev 93.47 35 *e*P **P 05 26 29.4 -1.2**
KIEV pmax pmax
comp=Z,4.0nm,0.9s
KIEV MLR MLR
comp=Z,312nm,20.0s
KIEV Kiev 93.47 35 *e*P **P 05 26 29.4 -1.2**
comp=Z,4.2nm,0.9s
KIEV LR LR
comp=Z,312nm,20.0s
AK01 Malin Array Si 93.48 35 *e*P **P 05 26 29.2 -1.5**
AKASG Malin Array Be 93.48 35 *i*P **P 05 26 30.0 -0.7**
AKASG pmax pmax
comp=Z,3.0nm,0.8s
AKASG Malin Array Be 93.48 35 P **P 05 26 29.3 -1.4**
AKASG PP **PP 05 30 18.9 +4.3**
AKASG Malin Array Be 93.48 35 P **P 05 26 29.3 -1.4**
comp=Z,3.0nm,0.8s,baz=308,slow=3.3,SNR=12
AKASG PP **PP 05 30 18.9 +4.3**
comp=Z,0.8nm,0.5s,baz=335,slow=4.2,SNR=5.6
AKASG LR LR 06 11 52.1
comp=Z,290nm,19.5s,baz=280,slow=38
AK02 Malin Array Si 93.49 35 *e*P **P 05 26 29.6 -1.2**
VOIR 93.51 41 ⇑P **P 05 26 30.5 -0.6**
VOIR 93.51 41⇑ *i*P **P 05 26 30.5 -0.6**
VTS Vitosha 93.56 44⇑ *i*P **P 05 26 29.2 -2.3**
TESR Tescani 94.01 39⇓ *i*P **P 05 26 33.3 0.0**
MLR Muntele Rosu 94.05 41⇓ *i*P **P 05 26 33.9 +0.3**
VRI Vrincioaia 94.36 40⇓ *i*P **P 05 26 35.0 +0.1**
OBN Obninsk 94.78 29 *e*P **P 05 26 36.7 +0.2**
OBN *i* 05 26 42.1
OBN *i* 05 30 28.2
OBN *i*S **S 05 37 47.3 -2.1**
OBN *i*PS **PS 05 39 08.8 +1.7**
OBN *i*SS **SS 05 44 14.2 +1.8**
OBN pmax pmax
comp=Z,26nm,1.1s
OBN MLR MLR
comp=Z,400nm,17.0s
MOS Moscow 94.89 28 *e*P P 05 26 33.6 -3.4
MOS pmax pmax
comp=Z,73nm,0.9s
KIS Kishinev 95.09 38 *e*P **P 05 26 37.0 -1.1**
KIS *e*L L 06 01 12.0
KIS LRM MLR 06 09 40.0
comp=Z,300nm,20.0s
KIS Kishinev 95.09 38 *e*P **P 05 26 37.0 -1.1**
KIS *e* 05 26 43.0
KIS MLR MLR
comp=N,200nm,20.0s
KIS MLR MLR
comp=E,200nm,20.0s
KIS MLR MLR
comp=Z,300nm,20.0s
KIS MLR MLR
comp=Z,300nm,20.0s
TIRR Tirgusor 96.08 41 ⇑P **P 05 26 42.0 -0.7**
TIRR Tirgusor 96.08 41⇑ *i*P **P 05 26 42.0 -0.7**
YAK Yakutsk 97.16 344 *e*P **P 05 26 47.0 -0.2**
YAK pmax pmax
comp=Z,10.0nm,0.6s
SANT Santorini 97.82 49 PFAKE 05 27 00.0 +9.1
SANT LR LR
comp=Z,236nm,21.0s
TARA Tarawa 99.35 274 PFAKE 05 27 10.0 +12
TARA LR LR
comp=Z,2μm,20.0s
WAKE Wake Island 99.63 293 PFAKE 05 27 10.0 +11
WAKE LR LR
comp=Z,650nm,19.0s
ISP Isparta 100.72 46 PFAKE 05 27 10.0 +6.1
ISP LR LR
comp=Z,346nm,20.0s
ANTO Ankara 101.21 43 PFAKE 05 27 20.0 +14
ANTO LR LR
comp=Z,333nm,21.0s
ANN Anapa 101.33 37 *i*P **Pdif 05 27 03.5 -2.7**
ANN *e* 05 31 10.4
ANN *e* 05 37 40.5
ANN *e*PS **PS 05 40 13.8 -4.7**
ANN *e*SS SS 05 45 43.0 -2.0
ANN pmax pmax
comp=Z,24nm,1.4s
KUR Kuril'sk 101.52 324 *e*P **Pdif 05 27 07.0 0.0**
KUR *i* 05 31 16.8
KUR *i*PPP PPP 05 33 29.0
KUR *i*S **SKSac 05 37 45.5 -0.4**
KUR *i*SS SS 05 46 06.2 +19
KUR MLR MLR
comp=E,595nm,21.0s
KUR MLR MLR
comp=Z,496nm,21.0s
BRTR Keskin Array B 101.84 43 P **Pdif 05 27 08.2 -0.6**
BRTR Keskin Array B 101.84 43 P **Pdif 05 27 08.2 -0.6**
comp=Z,1.2nm,1.1s,baz=32,slow=5.8,SNR=3.5
CSS Prodhromos 104.12 47 PFAKE 05 27 30.0 +11
CSS LR LR
comp=Z,176nm,21.0s
QSPA South Pole Qui 105.79 180 PFAKE 05 31 50.0
QSPA LR LR
comp=Z,426nm,22.0s
ERM Erimo 106.19 323 PFAKE 05 31 50.0
ERM LR LR
comp=Z,755nm,22.0s
GNI Garni 108.45 37 PFAKE 05 32 00.0
GNI LR LR
comp=Z,233nm,19.0s
TSUM Tsumeb 108.50 105 PFAKE 05 32 00.0
TSUM LR LR
comp=Z,596nm,20.0s
BRVK Borovoye 108.62 14 PFAKE 05 32 00.0
BRVK LR LR
comp=Z,621nm,21.0s
BVAR Borovoye Array 108.68 14 P **Pdif 05 27 42.5 +3.7**
BVAR Borovoye Array 108.68 14 Pdif **Pdif 05 27 42.5 +3.7**
BVAR Borovoye Array 108.68 14 Pdiff **Pdif 05 27 42.5 +3.7**
comp=Z,0.4nm,0.4s,baz=236,slow=41,SNR=3.4
ZALV Zalesovo Beam 110.13 5 PKiKP **PKiKP 05 31 46.8 +0.2**
ZALV 05 32 19.1
ZALV Zalesovo Beam 110.13 5 PKiKP **PKiKP 05 31 46.8 +0.2**
ZALV PP **PP 05 32 19.1 -0.2**
ZALV Zalesovo Beam 110.13 5 PKiKP **PKiKP 05 31 46.8 +0.2**
comp=Z,0.8nm,0.4s,baz=222,slow=1.9,SNR=2.9
ZALV PP **PP 05 32 19.1 -0.2**
comp=Z,3.5nm,0.9s,baz=347,slow=6.1,SNR=6.6
HIA Hailar 110.98 342 PFAKE 05 32 00.0
HIA LR LR
comp=Z,533nm,20.0s
MDJ Mudanjiang 111.23 333 Pdif **Pdif 05 27 49.8 -0.5**
MDJ SS SS 05 47 57.5 -1.8
MDJ AMB AMB
comp=Z,170nm,10.3s
MDJ LR LR
comp=N,250nm,39.2s
MDJ LR LR
comp=E,160nm,39.2s
MDJ LR LR
comp=Z,500nm,30.9s
MDJ Mudanjiang 111.23 333 PFAKE 05 32 00.0
MDJ LR LR
comp=Z,316nm,19.0s
KURK Kurchatov 112.53 10 P **Pdif 05 27 56.2 +0.3**
KURK *i* 05 31 51.6
KURK MLR MLR
comp=Z,371nm,19.0s
KURK Kurchatov 112.53 10 Pdif **Pdif 05 27 56.2 +0.3**
KURK PKiKP **PKiKP 05 31 51.6 +0.3**
KURK PKKPbc **PKKPbc 05 42 39.9 -2.1**
KURK LR LR
comp=Z,371nm,19.0s
KURBB Kurchatov Arra 112.60 10 Pdiff **Pdif 05 27 56.2 -0.1**
comp=Z,0.1nm,0.3s,baz=25,slow=0.3,SNR=3.4
KURBB PKiKP **PKiKP 05 31 51.6 +0.1**
comp=Z,1.7nm,0.8s,baz=340,slow=1.8,SNR=8.5
KURBB PKKPbc **PKKPbc 05 42 39.9 -1.9**
comp=Z,0.8nm,0.8s,baz=176,slow=2.9,SNR=7.6
MAJO Matsushiro 112.67 322 PFAKE 05 32 00.0
MAJO LR LR
comp=Z,580nm,21.0s
MJAR Matsushiro Arr 112.67 322 PP PP 05 32 39.8 +1.4
MJAR Matsushiro Arr 112.67 322 PP PP 05 32 39.8 +1.4
comp=Z,0.5nm,0.3s,baz=23,slow=4.2,SNR=4.4
SUR Sutherland 113.16 119 PFAKE 05 32 00.0
SUR LR LR
comp=Z,789nm,20.0s
ZAK Zakamensk 113.44 353 *e*PKIKP PKiKP 05 31 45.6 -7.6
ZAK pmax pmax
comp=Z,2.0nm,1.2s
CN2 Changchun 113.65 335 *e*PKP **PKiKP 05 31 49.3 -4.3**
CN2 *e*PP **PP 05 32 46.6 +1.8**
CN2 AMB AMB
comp=Z,200nm,8.0s
CN2 LR LR
comp=N,300nm,21.0s
CN2 LR LR
comp=E,500nm,21.0s
CN2 LR LR
comp=Z,400nm,22.0s
HNR Honiara 114.62 267 PFAKE 05 32 10.0 +14
HNR LR LR
comp=Z,681nm,22.0s
ULN Ulaanbaatar 115.35 350 PFAKE 05 32 10.0 +13
ULN LR LR
comp=Z,397nm,19.0s
SONM Songino Array 115.49 350 PKP **PKPdf 05 31 56.3 -0.9**
SONM PP **PP 05 32 58.6 +0.9**
SONM Songino Array 115.49 350 PKP **PKPdf 05 31 56.3 -0.9**
comp=Z,2.4nm,0.8s,baz=0.6,slow=0.8,SNR=7.6
SONM PP **PP 05 32 58.6 +0.9**
comp=Z,7.9nm,0.9s,baz=358,slow=6.8,SNR=13
BOSA Boshof 116.70 114 PKP **PKPdf 05 31 59.6 -0.4**
BOSA Boshof 116.70 114 PKP **PKPdf 05 31 59.6 -0.4**
comp=Z,4.1nm,0.8s,baz=83,slow=1.9,SNR=6.8
MBAR Mbarara 116.76 83 PFAKE 05 32 10.0 +9.4
MBAR LR LR
comp=Z,276nm,21.0s
MKAR Makanchi Array 116.90 8 PKIKP **PKPdf 05 31 58.8 -1.1**
MKAR Makanchi Array 116.90 8 PKP **PKPdf 05 31 58.8 -1.1**
MKAR PKKPbc **PKKPbc 05 42 25.2 -1.8**
MKAR Makanchi Array 116.90 8 PKP **PKPdf 05 31 58.8 -1.1**
comp=Z,1.1nm,0.8s,baz=18,slow=1.9,SNR=6.7
MKAR PKKPbc **PKKPbc 05 42 25.2 -1.8**
comp=Z,0.6nm,0.7s,baz=138,slow=4.2,SNR=6.3
KSRS Korea Array 117.64 329 PKP **PKPdf 05 32 00.7 -0.8**
comp=Z,3.3nm,0.9s,baz=2.0,slow=1.3,SNR=12
KSAR Wonju Array Be 117.67 329 PKP **PKPdf 05 32 00.7 -0.9**
LSZ Lusaka 117.77 99 PFAKE 05 32 10.0 +7.6
LSZ LR LR
comp=Z,462nm,19.0s
INCN Inchon 118.25 330 PFAKE 05 32 10.0 +7.3
INCN LR LR
comp=Z,292nm,21.0s
EKS2 Erkin-Say 119.14 16 *e*PKIKP **PKPdf 05 32 06.3 +1.9**
EKS2 Erkin-Say 119.14 16 *e*PKPdf **PKPdf 05 32 06.3 +1.9**
AAK Ala-Archa 119.36 16 PFAKE 05 32 20.0 +15
AAK LR LR
comp=Z,441nm,21.0s
TKM2 Tokmak 2 119.36 15 *e*PKIKP **PKPdf 05 32 04.6 -0.4**
TKM2 MLR MLR
comp=Z,468nm,20.0s
TKM2 Tokmak 2 119.36 15 *e*PKPdf **PKPdf 05 32 04.6 -0.4**
TKM2 LR LR
comp=Z,468nm,20.0s
BJI Beijing 120.37 340 PKP **PKPdf 05 32 05.6 -1.1**
BJI SS SS 05 50 07.2 +8.7
BJI AMB AMB
comp=Z,180nm,8.3s
BJI LR LR
comp=N,470nm,26.9s
BJI LR LR
comp=E,340nm,33.4s
BJI LR LR
comp=Z,800nm,31.2s
BJT Baijiatuau 120.39 340 PFAKE 05 32 20.0 +13
BJT LR LR
comp=Z,344nm,19.0s
WMQ Urumqi 120.42 4 *e*PKP **PKPdf 05 32 04.5 -2.3**
WMQ *e*PP **PP 05 33 35.0 +3.2**
WMQ PKS **PKSdf 05 35 40.0 -3.5**
WMQ SKKS 05 40 24.0
WMQ SS **SKKSdf 05 49 58.0 +0.4**
WMQ AMB AMB
comp=Z,210nm,9.0s
WMQ LR LR
comp=N,1μm,19.0s
WMQ LR LR
comp=E,700nm,19.3s
WMQ LR LR
comp=Z,920nm,27.6s
DRV Dumont d'Urvil 120.70 200 PP PP 05 33 25.0 -9.1
DRV SKKS 05 42 45.0
DRV SS **SKKSdf 05 49 55.0 -4.4**
HHC Hu-ho-hao-te 121.03 344 *e*PKP **PKPdf 05 32 04.8 -3.3**
HHC sPKP 05 32 10.2
HHC PP **PP 05 33 37.1 +0.9**
HHC PKS PKSdf 05 35 39.5 -5.4
HHC AMB AMB
comp=Z,350nm,9.0s
HHC LR LR
comp=N,550nm,22.0s
HHC LR LR
comp=E,1μm,22.7s
HHC LR LR
comp=Z,850nm,23.0s
KSH Kashi 122.67 16 *e*PKP **PKPdf 05 32 13.0 +1.7**
KSH *e*PP **PP 05 33 51.6 +4.3**
KSH *e*SKS **SKSdf 05 39 19.7 -3.3**
KSH AMB AMB
comp=Z,740nm,7.4s
KSH LR LR
comp=N,740nm,9.3s
KSH LR LR
comp=E,430nm,8.4s
KSH LR LR
comp=Z,340nm,5.9s
KMBO Kilima Mbogo 123.12 81 PFAKE 05 32 20.0 +7.0
KMBO LR LR
comp=Z,434nm,19.0s
GTA Gaotai 124.67 354 ⇑PKP **PKPdf 05 32 15.1 -0.1**
GTA PP **PP 05 34 05.3 +4.6**
GTA SKS **SKSdf 05 39 25.5 -1.2**
GTA SKKS **SKKSac 05 40 57.7 -2.5**
GTA SS **SS 05 50 54.6 +1.5**
GTA AMB AMB
comp=Z,190nm,7.6s
GTA LR LR
comp=N,360nm,21.4s
GTA LR LR
comp=E,400nm,21.4s
GTA LR LR
comp=Z,460nm,20.9s
MAW Mawson 124.72 166 PKP **PKPdf 05 32 14.3 +0.2**
MAW Mawson 124.72 166 PKP **PKPdf 05 32 14.3 +0.2**
comp=Z,6.5nm,0.9s,baz=261,slow=1.9,SNR=13
NJ2 Nanjing 126.32 333 *e*PKP **PKPdf 05 32 18.6 +0.3**
NJ2 sPKP 05 32 25.0
NJ2 PP **PP 05 34 14.0 +2.0**
NJ2 PKS **PKSdf 05 35 55.0 0.0**
NJ2 SKS **SKSdf 05 39 32.0 +2.2**
NJ2 SS **SS 05 51 14.0 -0.4**
NJ2 AMB AMB
comp=Z,360nm,9.4s
NJ2 LR LR
comp=N,510nm,22.4s
NJ2 LR LR
comp=E,340nm,27.8s
NJ2 LR LR
comp=Z,510nm,26.0s
PMG Port Moresby 126.91 270 PFAKE 05 32 30.0 +10
PMG LR LR
comp=Z,621nm,20.0s
LZH Lanzhou 127.34 349 *e*PKP **PKPdf 05 32 20.0 -0.4**
LZH LR LR
comp=N,440nm,15.4s
LZH LR LR
comp=E,640nm,19.1s
LZH LR LR
comp=Z,750nm,20.2s
XAN Xi'an 128.13 343 PKP **PKPdf 05 32 21.1 -0.7**
XAN PKS **PKSdf 05 35 57.4 -1.1**
XAN LR LR
comp=N,350nm,22.8s
XAN LR LR
comp=E,140nm,20.1s
XAN LR LR
comp=Z,150nm,21.7s
CASY Casey 128.28 189 *e*PKPdf **PKPdf 05 32 21.2 +0.3**
CASY LR LR
comp=Z,405nm,20.0s
CTAO Charters Tower 129.37 257 *e*PKIKP **PKPdf 05 32 25.3 +0.9**
CTAO MLR MLR
comp=Z,668nm,20.0s
CTAO Charters Tower 129.37 257 *e*PKPdf **PKPdf 05 32 25.3 +0.9**
CTAO LR LR
comp=Z,668nm,20.0s
WHN Wuhan 129.52 336 PKP **PKPdf 05 32 25.6 +1.1**
WHN PP **PP 05 34 34.7 +1.8**
WHN LR LR
comp=Z,650nm,23.0s
TATO Taipei 130.84 325 PFAKE 05 32 40.0 +13
TATO LR LR
comp=Z,340nm,20.0s
YHNB Yeheng 131.15 325 PFAKE 05 32 40.0 +12
YHNB LR LR
comp=Z,310nm,21.0s
ENH Enshi 131.48 341 *e*PKPdf **PKPdf 05 32 28.8 +0.5**
ENH LR LR
comp=Z,345nm,20.0s
COEN Coen 131.60 265 *e*PKPdf **PKPdf 05 32 29.9 +1.2**
CD2 Chengdu 132.38 347 *e*PKP **PKPdf 05 32 29.8 -0.2**
CD2 PP **PP 05 34 53.2 +1.9**
CD2 SKS **SKSdf 05 39 38.5 -2.6**
CD2 SKKS **SKKSac 05 41 45.2 -3.4**
CD2 SS **SS 05 52 29.5 +0.9**
CD2 AMB AMB
comp=Z,230nm,8.2s
CD2 LR LR
comp=N,460nm,21.4s
CD2 LR LR
comp=E,570nm,19.0s
CD2 LR LR
comp=Z,420nm,22.6s
STKA Stephens Creek 133.20 241 PKP **PKPdf 05 32 30.4 -0.9**
STKA *e*PKPdf **PKiKP 05 32 32.1 -0.5**
STKA Stephens Creek 133.20 241 PKP **PKPdf 05 32 30.4 -0.9**
comp=Z,14nm,0.7s,baz=110,slow=0.8,SNR=21
LSA Lhasa 134.68 2 *e*PKIKP **PKPdf 05 32 36.0 +1.1**
LSA MLR MLR
comp=Z,409nm,21.0s
LSA Lhasa 134.68 2 *e*PKPdf **PKPdf 05 32 36.0 +1.1**
LSA LR LR
comp=Z,409nm,21.0s
DANN Dangsing 135.15 12 *e*P **PKPdf 05 32 35.5 -0.1**
comp=Z,78nm,0.8s
KOLN Koldanda 135.69 12 *e*P **PKPdf 05 32 36.0 -0.5**
comp=Z,27nm,1.1s
GYA Guiyang 135.91 342 Pdif **Pdif 05 29 38.7 -1.9**
GYA PKP **PKPdf 05 32 35.9 -0.9**
GYA PP **PP 05 35 18.0 +4.1**
GYA PKS **PKSdf 05 36 11.4 -2.0**
GYA SKKS 05 42 07.5
GYA SS **SS 05 53 12.3 +0.7**
GYA AMB AMB

	comp=Z,130nm,7.6s						
GYA				LR	LR		
	comp=N,250nm,21.7s						
GYA				LR	LR		
	comp=E,120nm,22.3s						
GYA				LR	LR		
	comp=Z,260nm,20.8s						
GUN	**Gumba**	**135.95**	**9**	*e*P	**PKPdf**	**05 32 36.5**	**-0.6**
	comp=Z,46nm,0.8s						
KKN	**Kakani**	**135.97**	**10**	*e*P	**PKPdf**	**05 32 36.1**	**-0.9**
	comp=Z,24nm,0.7s						
DMN	**Daman**	**136.12**	**10**	*e*P	**PKPdf**	**05 32 36.8**	**-0.5**
	comp=Z,27nm,0.9s						
PKIN	**Phulchoki**	**136.20**	**10**	*e*P	**PKPdf**	**05 32 36.5**	**-1.0**
	comp=Z,29nm,1.1s						
PKI	**Pulchoki**	**136.21**	**10**	*e*P	**PKPdf**	**05 32 36.8**	**-0.8**
	comp=Z,40nm,1.0s						
ABPO	**Ambohimpanom**	**136.28**	**101**	PFAKE		05 32 50.0	+12
ABPO				LR	LR		
	comp=Z,673nm,19.0s						
TAPN	**Taplejung**	**136.75**	**7**	*e*P	**PKPdf**	**05 32 37.5**	**-1.1**
	comp=Z,50nm,1.3s						
RAMN	**Ramite**	**137.00**	**8**	*e*P	**PKPdf**	**05 32 38.2**	**-0.8**
	comp=Z,59nm,0.9s						
ODAN	**Odare**	**137.19**	**7**	*e*P	**PKPdf**	**05 32 37.4**	**-1.9**
	comp=Z,18nm,0.8s						
KMI	**Kunming**	**138.19**	**347**	PKP	**PKPdf**	**05 32 41.4**	**+0.2**
KMI				sPKP		05 32 45.5	
KMI				PP	**PP**	**05 35 30.4**	**+2.2**
KMI				SKKS		05 42 21.3	
KMI				SS	**SS**	**05 53 39.2**	**+0.4**
KMI				LR	LR		
	comp=N,250nm,17.8s						
KMI				LR	LR		
	comp=E,410nm,19.3s						
KMI				LR	LR		
	comp=Z,310nm,20.7s						
SHL	**Shillong**	**138.82**	**2**	*e*PKP	**PKPdf**	**05 32 41.0**	**-1.3**
SHL				*e*S	**SKPbc**	**05 36 17.0**	**+0.4**
DAV	**Davao City (W)**	**140.54**	**303**	PFAKE		05 33 00.0	+15
DAV				LR	LR		
	comp=Z,562nm,20.0s						
WRAB	**Tennant Creek**	**140.54**	**258**	*e*PKIKP	**PKPdf**	**05 32 46.2**	**+0.9**
WRAB				MLR	MLR		
	comp=Z,570nm,21.0s						
WRAB	**Tennant Creek**	**140.54**	**258**	*e*PKPdf	**PKPdf**	**05 32 46.2**	**+0.9**
WRAB				LR	LR		
	comp=Z,570nm,21.0s						
WRA	**Warramunga Arr**	**140.55**	**258**	PKPpre	PKPpre	05 32 38.7	
WRA				PKP	**PKPdf**	**05 32 46.0**	**+0.7**
WRA	**Warramunga Arr**	**140.55**	**258**	PKhKP	PKPpre	05 32 38.7	
	comp=Z,5.3nm,0.9s,baz=84,slow=3.9,SNR=28						
WRA				PKP	**PKPdf**	**05 32 46.0**	**+0.7**
	comp=Z,30nm,0.9s,baz=83,slow=1.6,SNR=48						
AS31	**Alice Springs**	**140.86**	**252**	*e*PKPdf	**PKPdf**	**05 32 45.4**	**-0.4**
ASAR	**Alice Springs**	**140.86**	**252**	PKPpre	PKPpre	05 32 38.4	
ASAR				PKP	**PKPdf**	**05 32 46.7**	**+0.9**
ASAR	**Alice Springs**	**140.86**	**252**	PKhKP	PKPpre	05 32 38.4	
	comp=Z,5.2nm,0.6s,baz=99,slow=2.9,SNR=16						
ASAR				PKP	**PKPdf**	**05 32 46.7**	**+0.9**
	comp=Z,23nm,0.9s,baz=101,slow=2.3,SNR=41						
MSEY	**Mahe Island**	**141.49**	**77**	PFAKE		05 33 00.0	+13
MSEY				LR	LR		
	comp=Z,337nm,20.0s						
QIZ	**Qiongzhong**	**141.59**	**334**	PKP	**PKPdf**	**05 32 43.3**	**-3.9**
QIZ				PP	**PP**	**05 35 49.1**	**-0.1**
QIZ				SS	SS	05 54 19.4	+0.5
QIZ				AMB	AMB		
	comp=Z,420nm,7.2s						
QIZ				LR	LR		
	comp=N,260nm,23.4s						
QIZ				LR	LR		
	comp=Z,300nm,23.4s						
QIZ	**Qiongzhong**	**141.59**	**334**	PFAKE		05 33 00.0	+13
QIZ				LR	LR		
	comp=Z,284nm,20.0s						
HYB	**Hyderabad**	**143.99**	**24**	*i* PKP	PKPab	05 32 48.5	-0.3
FORT	**Forrest**	**144.74**	**239**	*e*PKPdf	PKPbc	05 32 51.3	0.0
CHTO	**Chiang Mai**	**145.07**	**350**	*e*PKIKP	**PKPbc**	**05 32 51.6**	**-1.1**
CHTO				MLR	MLR		
	comp=Z,314nm,20.0s						
CHTO	**Chiang Mai**	**145.07**	**350**	*e*PKPbc	**PKPbc**	**05 32 51.6**	**-1.1**
CHTO				LR	LR		
	comp=Z,314nm,20.0s						
CM31	**Chiang Mai Arr**	**145.42**	**350**	*e*PKPbc	**PKPbc**	**05 32 53.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**145.42**	**350**	PKP	**PKPbc**	**05 32 52.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**145.42**	**350**	PKP	**PKPbc**	**05 32 52.8**	**-1.0**
	comp=Z,42nm,0.7s,baz=334,slow=3.3,SNR=97						
KKM	**Kota Kinabalu**	**148.38**	**312**	*e*PKPbc	**PKPbc**	**05 33 03.8**	**+1.2**
KKM				LR	LR		
	comp=Z,345nm,22.0s						
KAPI	**Kappang**	**151.64**	**289**	*e*PKPdf	**PKPdf**	**05 33 04.6**	**+0.5**
KAPI				*e*PKPbc	**PKPbc**	**05 33 10.4**	**0.0**
KAPI				*e*PKPab	**PKPab**	**05 33 19.8**	**+0.8**
KAPI				LR	LR		
	comp=Z,216nm,22.0s						
NWAO	**Narrogin (SRO)**	**152.27**	**228**	*e*PKPdf	**PKPdf**	**05 33 04.7**	**+0.1**
NWAO				*e*PKPbc	**PKPbc**	**05 33 11.0**	**-0.3**
NWAO				*e*PKPab	**PKPab**	**05 33 22.2**	**+1.1**
NWAO				LR	LR		
	comp=Z,220nm,21.0s						
MBWA	**Marble Bar**	**154.16**	**254**	PFAKE		05 33 20.0	+4.2
MBWA				LR	LR		
	comp=Z,394nm,22.0s						
KSM	**Kuching**	**155.76**	**314**	*e*PKPab	**PKPab**	**05 33 37.2**	**+0.8**
KSM				LR	LR		
	comp=Z,218nm,21.0s						
KULM	**Kulim**	**157.68**	**340**	PFAKE		05 33 20.0	+7.5
KULM				LR	LR		
	comp=Z,298nm,19.0s						
IPM	**Ipoh**	**158.31**	**338**	*e*PKPdf	**PKPdf**	**05 33 13.0**	**-0.3**

*IDC **08** 05:24:36.6±1.1, 16°.35N×86°.58W, h0km, mb3.9/5, mb1 4.3/7, mb1mx3.9/24, mbtmp4.0/7, ML2.3/1, MS3.9/1, Ms1 3.9/1, ms1mx3.4/24, Error ellipse: s-maj=68.8km s-min=20.5km az=62.0*
*ISCJB **08** 05:24:37.7±2.5, 16°.04N±0°.04×87°.03W±0°.09, h20km±20km, mb4.2/11, Error ellipse: s-maj=13.9km s-min=6.2km az=3.0*
*NEIC **08** 05:24:37.7±0.6, 15°.94N×87°.10W, h10km, mb4.2/9, Error ellipse: s-maj=23.7km s-min=10.2km az=71.0*
*CASC **08** 05:24:40.1±2.7, 15°.94N×87°.08W, h15km, MD4.1, ML3.7, mb4.2(NEIC)*
ISC 08 05:24:39.5±0.7**, 16°.03N**±0°.04×**87°.0W**±0°.1**, h21**km±6km**, n41, σ1s21**/40**, mb4.2**/11**, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**1.98**	**187**	*e*Pn	Pn	05 25 07.6	-4.1
TGUH				*e*Sn	**Sn**	**05 25 32.6**	**-3.3**
CAHU	**Cacacuatique**	**2.52**	**207**	*e*P	**Pn**	**05 25 19.0**	**-0.5**
CAHU				*e*S	**Sn**	**05 25 49.5**	**-0.2**
MRL	**Marmol**	**2.75**	**250**	*e*P	Pn	05 25 19.2	-3.4
MRL				*e*S	**Sb**	**05 26 01.4**	**0.0**
MTO2	**Montecristo 2**	**2.78**	**235**	*e*P	**Pn**	**05 25 23.7**	**+0.6**
CNCH	**Conchagua**	**2.85**	**196**	*e*P	**Pn**	**05 25 23.4**	**-0.5**
LBRS	**Las Brisas**	**3.00**	**221**	*e*P	**Pn**	**05 25 25.6**	**-0.4**
LFRS	**El Faro**	**3.10**	**220**	*e*P	**Pn**	**05 25 27.3**	**0.0**
SNET	**Serv Nac Est T**	**3.16**	**223**	AML	AML	05 26 22.2	
	comp=Z,385nm,0.7s						
RBDL	**Robledal**	**3.21**	**234**	*e*P	**Pn**	**05 25 30.1**	**+1.2**
NBG	**Las Nubes**	**3.52**	**246**	*e*P	**Pn**	**05 25 30.8**	**-2.4**
NBG				*e*S	**Sb**	**05 26 24.5**	**+0.8**
TEIG	**Tepich**	**4.34**	**344**	Pn	**Pn**	**05 25 43.4**	**-0.9**
TEIG				Sn	**Sn**	**05 26 34.1**	**-0.2**
TEIG	**Tepich**	**4.34**	**344**	Pn	**Pn**	**05 25 43.4**	**-0.9**
	comp=Z,23nm,0.3s,baz=8.8,slow=2.4,SNR=35						
TEIG				Sn	**Sn**	**05 26 34.2**	**-0.2**
	comp=Z,60nm,0.3s,baz=69,slow=24,SNR=19						
TEIG				LR	LR	05 27 23.5	
	comp=Z,1μm,20.9s,baz=24,slow=40						
ROSC	**El Rosal**	**16.69**	**130**	Pn	**Pn**	**05 28 32.5**	**-0.1**
ROSC	**El Rosal**	**16.69**	**130**	Pn	**Pn**	**05 28 32.5**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=84,slow=21,SNR=5.4						
MIAR	**Mount Ida**	**19.36**	**343**	*e*P	**P**	**05 29 03.3**	**-0.5**
	comp=Z,12nm,1.0s						
CPCT	**Cooper Cave**	**19.47**	**6**	P	**Pn**	**05 29 07.1**	**+0.8**
CPCT				*e*		05 29 14.3	
TXAR	**Lajitas Array**	**20.25**	**314**	P	Pn	05 29 15.1	-0.6
TXAR	**Lajitas Array**	**20.25**	**314**	P	Pn	05 29 15.1	-0.6
	comp=Z,7.3nm,0.9s,baz=128,slow=11,SNR=13						
SIUC	**Southern Illin**	**21.69**	**355**	*e*P	**P**	**05 29 29.5**	**+0.5**
	comp=Z,9.5nm,0.8s						
USIN	**University of**	**21.86**	**359**	*e*P	**P**	**05 29 31.8**	**+0.9**
	comp=Z,33nm,0.9s						
MNTX	**Cornudas Mount**	**22.87**	**316**	*e*P	**P**	**05 29 41.5**	**-0.2**
	comp=Z,13nm,1.5s						
NVAR	**Mina Array Bea**	**35.38**	**315**	P	**P**	**05 31 34.8**	**+0.6**
NVAR	**Mina Array Bea**	**35.38**	**315**	P	**P**	**05 31 34.8**	**+0.6**
	comp=Z,1.3nm,0.8s,baz=121,slow=7.9,SNR=9.3						
MCMT	**McKenzie Canyo**	**36.03**	**328**	*e*P	**P**	**05 31 41.2**	**+1.6**
	comp=Z,4.9nm,1.3s						
DLMT	**Dillon**	**36.28**	**329**	*e*P	**P**	**05 31 42.4**	**+0.8**
	comp=Z,5.8nm,1.0s						
WVOR	**Wild Horse Val**	**37.75**	**321**	*e*P	**P**	**05 31 54.2**	**+0.1**
	comp=Z,3.9nm,1.0s						
YKA	**Yellowknife Ar**	**50.30**	**344**	P	**P**	**05 33 33.3**	**-1.0**
YKA	**Yellowknife Ar**	**50.30**	**344**	P	**P**	**05 33 33.3**	**-1.0**
	comp=Z,1.9nm,0.8s,baz=138,slow=7.7,SNR=20						
PLCA	**Paso Flores**	**58.51**	**165**	*e*P	**P**	**05 34 36.0**	**+1.7**
	comp=Z,2.3nm,0.9s						
PLCA	**Paso Flores**	**58.51**	**165**	P	**P**	**05 34 36.5**	**+2.2**
	comp=Z,1.7nm,1.1s,baz=200,slow=9.1,SNR=2.8						
ILAR	**Eielson Array**	**62.95**	**335**	P	**P**	**05 35 03.2**	**-1.0**
ILAR	**Eielson Array**	**62.95**	**335**	P	**P**	**05 35 03.2**	**-1.0**
	comp=Z,0.7nm,0.8s,baz=103,slow=5.8,SNR=9.0						
COLD	**Coldfoot**	**65.06**	**337**	*e*P	**P**	**05 35 17.6**	**-0.4**
	comp=Z,0.4nm,0.4s						
STKA	**Stephens Creek**	**133.24**	**241**	PKP	**PKPdf**	**05 43 56.3**	**+1.9**
STKA	**Stephens Creek**	**133.24**	**241**	PKP	**PKPdf**	**05 43 56.3**	**+1.9**
	comp=Z,2.7nm,0.8s,baz=292,slow=2.2,SNR=3.9						
WRA	**Warramunga Arr**	**140.54**	**258**	PKPpre	PKPpre	05 44 03.5	
WRA				PKP	**PKiKP**	**05 44 10.1**	**-0.6**
WRA	**Warramunga Arr**	**140.54**	**258**	PKhKP	PKPpre	05 44 03.5	
	comp=Z,1.5nm,0.9s,baz=80,slow=1.9,SNR=8.0						
WRA				PKP	**PKiKP**	**05 44 10.1**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=90,slow=2.8,SNR=9.0						
ASAR	**Alice Springs**	**140.87**	**252**	PKPpre	PKPpre	05 44 05.5	
ASAR	**Alice Springs**	**140.87**	**252**	PKhKP	PKPpre	05 44 05.5	
	comp=Z,0.7nm,0.8s,baz=101,slow=3.9,SNR=4.8						
CMAR	**Chiang Mai Arr**	**145.23**	**350**	PKP	**PKPbc**	**05 44 14.4**	**-1.7**
CMAR	**Chiang Mai Arr**	**145.23**	**350**	PKP	**PKPbc**	**05 44 14.4**	**-1.7**
	comp=Z,0.9nm,0.4s,baz=344,slow=2.8,SNR=5.8						

*ISCJB **08** 05:25:23.9±1.2, 39°.08N±0°.09×73°.3E±0°.1, h10km, mb3.6/3, Error ellipse: s-maj=13.9km s-min=12.0km az=141.1*
*IDC **08** 05:25:24.1±1.2, 39°.05N×73°.47E, h0km, mb3.7/3, mb1 3.8/4, mb1mx3.4/28, mbtmp3.7/4, ML3.0/2, Error ellipse: s-maj=33.4km s-min=20.7km az=136.0*
ISC 08 05:25:25.5±1.3**, 39°.2N**±0°.1×**73°.3E**±0°.1**, h10**km**, n17, σ1s80**/16**, mb3.7**/3**, 3C-2D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.99**	**6**	P	**Pn**	**05 26 10.9**	**-2.5**
	SNR=104						
UCH	**Uchtor**	**3.20**	**16**	P	**Pn**	**05 26 16.8**	**+0.4**
	SNR=15						
KZA	**Kyzart**	**3.28**	**26**	P	**Pn**	**05 26 16.4**	**-0.9**
	SNR=97						
EKS2	**Erkin-Say**	**3.52**	**6**	P	**Pn**	**05 26 22.7**	**+2.3**
	SNR=10						
AAK	**Ala-Archa**	**3.59**	**14**	P	**Pn**	**05 26 23.5**	**+2.1**
	SNR=6.6						
KBK	**Karagaybulak**	**3.71**	**19**	P	**Pn**	**05 26 24.6**	**+1.5**
	SNR=7.0						
ULHL	**Ulahol**	**3.81**	**35**	P	**Pn**	**05 26 25.9**	**+1.3**
	SNR=21						
CHMS	**Chumysh**	**3.99**	**16**	P	Pn	05 26 30.4	+3.6
	SNR=5.8						
TKM2	**Tokmak 2**	**4.14**	**24**	⇑Pn	Pn	05 26 25.5	-3.5
	5.9nm,0.5s						
TKM2				⇑Lg	Lg	05 27 24.0	
	9.2nm,0.5s						
TKM2	**Tokmak 2**	**4.14**	**24**	P	**Pn**	**05 26 26.6**	**-2.4**
	SNR=11						
USP	**Ospenovka**	**4.21**	**12**	P	Pn	05 26 34.2	+4.5
	SNR=5.4						
KK31	**Karatay Array**	**4.47**	**333**	Pn	**Pn**	**05 26 33.6**	**+0.3**
	1.2nm,0.3s,baz=136,slow=14,SNR=28						
KK31				⇑Pg	**Pb**	**05 26 42.7**	**-1.4**
	1.7nm,0.3s,baz=139,slow=17,SNR=6.7						
KK31				⇓Sn	**Sn**	**05 27 26.7**	**+1.4**
	3.4nm,0.3s,baz=140,slow=25,SNR=3.9						
KK31				⇓Lg	Lg	05 27 42.2	
	4.6nm,0.3s,baz=135,slow=31,SNR=4.4						
MKAR	**Makanchi Array**	**10.08**	**38**	Pn	**Pn**	**05 27 52.5**	**+2.2**
	0.1nm,0.3s,baz=211,slow=11,SNR=3.0						
MKAR				Lg	Lg	05 30 43.1	
	0.3nm,0.3s,baz=209,slow=26,SNR=7.6						
ZALV	**Zalesovo Beam**	**16.75**	**24**	Pn	**Pn**	**05 29 19.9**	**-0.2**
	0.2nm,0.3s,baz=213,slow=13,SNR=2.8						
ARCES	**ARCESS Array B**	**39.43**	**336**	P	**P**	**05 32 54.8**	**-0.5**
	1.4nm,0.8s,baz=106,slow=8.9,SNR=5.5						
TORD	**Torodi Ar. Bea**	**67.59**	**269**	P	**P**	**05 36 24.7**	**+2.1**
	0.5nm,0.5s,baz=47,slow=5.2,SNR=12						
WRA	**Warramunga Arr**	**81.90**	**124**	P	**P**	**05 37 44.0**	**-1.4**
	0.3nm,0.7s,baz=336,slow=5.5,SNR=3.5						

IDC 08 05:42:38.3±2.3**, 6°.20S**×**129°.98E, h0**km**, mb3.8**/1**, mb1 3.5**/4**, mb1mx3.4**/20**, mbtmp3.4**/4**, ML3.1**/3**, Error ellipse: s-maj=98.1km s-min=28.3km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.57**	**199**	Pn	Pn	05 45 40.6	+2.1
	0.1nm,0.3s,baz=271,slow=15,SNR=8.8						
FITZ				Sn	Sn	05 47 45.1	-14
	0.1nm,0.3s,baz=313,slow=18,SNR=4.7						
WRA	**Warramunga Arr**	**14.31**	**163**	Pn	Pn	05 46 01.9	-0.4
	0.1nm,0.3s,baz=342,slow=13,SNR=5.9						
WRA				Sn	Sn	05 48 28.1	-14
	0.3nm,0.3s,baz=353,slow=24,SNR=12						
ASAR	**Alice Springs**	**17.77**	**168**	P	Pn	05 46 46.1	-1.3
	0.1nm,0.3s,baz=343,slow=8.7,SNR=9.1						
MKAR	**Makanchi Array**	**67.55**	**327**	P	P	05 53 36.6	0.0
	0.4nm,0.4s,baz=121,slow=7.5,SNR=6.1						

*DDA **08** 05:48:17.5, 37°.88N×29°.23E, h7km, MD2.5*
*ISK **08** 05:48:17.6, 37°.92N×29°.16E, h24km, MD2.6*
*CSEM **08** 05:48:18.2±0.4, 37°.87N×29°.21E, h2km, MD2.5, Error ellipse: s-maj=9.5km s-min=4.6km az=116.0*
ISC 08 05:48:18.2±1.0**, 37°.88N**±0°.04×**29°.21E**±0°.05**, h18**km±6km**, n16, σ1s04**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.18**	**228**	*e*PG	**Pg**	**05 48 23.4**	**+0.4**
DENT				*e*SG	**Sg**	**05 48 27.7**	**+1.5**
DENT	**Denizli**	**0.18**	**228**	*e*Pg	**Pg**	**05 48 23.4**	**+0.4**
DENT				*e*Sg	**Sg**	**05 48 27.7**	**+1.5**
DNZL	**Cakiroluk**	**0.23**	**214**	*i* P	**Pg**	**05 48 22.3**	**-1.4**
DNZL				*i* S	**Sg**	**05 48 26.2**	**-1.2**
DNZL	**Cakiroluk**	**0.23**	**214**	*i* P	**Pg**	**05 48 22.3**	**-1.4**
DNZL				*i* S	**Sg**	**05 48 26.2**	**-1.2**
KHAL	**Karahalli**	**0.54**	**25**	*i* P	**Pb**	**05 48 29.5**	**+0.2**
KHAL				*i* S	**Sb**	**05 48 35.9**	**-0.9**
KHAL	**Karahalli**	**0.54**	**25**	*i* P	**Pb**	**05 48 29.5**	**+0.2**
KHAL				*i* S	**Sb**	**05 48 35.9**	**-0.9**
KULA	**Kula-Manisa**	**0.77**	**326**	*e*PG	**Pg**	**05 48 32.3**	**-1.0**
KULA				*e*SG	**Sg**	**05 48 42.8**	**-0.7**
KULA	**Kula-Manisa**	**0.77**	**326**	*e*Pg	**Pg**	**05 48 32.3**	**-1.0**
KULA				*e*Sg	**Sg**	**05 48 42.8**	**-0.7**
MANT	**Manisa**	**0.80**	**320**	*i* P	**Pn**	**05 48 34.5**	**-0.3**
MANT				*i* S	**Sb**	**05 48 44.8**	**+0.5**
MANT	**Manisa**	**0.80**	**320**	*i* P	**Pn**	**05 48 34.5**	**-0.3**
MANT				*i* S	**Sb**	**05 48 44.8**	**+0.5**
YER	**Yerkesik**	**1.04**	**225**	*e*PG	**Pg**	**05 48 37.2**	**-1.3**
YER	**Yerkesik**	**1.04**	**225**	*e*Pg	**Pg**	**05 48 37.2**	**-1.3**
AYDN	**Tasoluk**	**1.07**	**259**	*i* P	**Pn**	**05 48 38.7**	**+0.2**
AYDN				*i* S	**Sn**	**05 48 54.1**	**+1.2**
AYDN	**Tasoluk**	**1.07**	**259**	*i* P	**Pn**	**05 48 38.7**	**+0.2**
AYDN				*i* S	**Sn**	**05 48 54.1**	**+1.2**
GDZ	**Gediz**	**1.23**	**10**	*i* P	**Pn**	**05 48 42.2**	**+1.5**
GDZ				*i* S	**Sn**	**05 48 57.4**	**+0.5**
GDZ	**Gediz**	**1.23**	**10**	*i* P	**Pn**	**05 48 42.2**	**+1.5**
GDZ				*i* S	**Sn**	**05 48 57.4**	**+0.5**

*MAN **08** 06:01:21, 8°.75N×127°.15E, h12km, mb4.9, ML3.8, MS3.8*
*IDC **08** 06:01:23.5±0.7, 9°.16N×126°.55E, h0km, mb3.9/14, mb1 4.1/15, mb1mx3.9/29, mbtmp3.9/15, ML4.2/1, MS3.2/1, Ms1 3.2/1, ms1mx2.9/31, Error ellipse: s-maj=29.4km s-min=13.7km az=82.0*
ISC 08 06:01:21.7±3.0**, 8°.71N**±0°.06×**127°.06E**±0°.08**, h10**km±19km**, n30, σ1s49**/30**, mb4.0**/14**, 2C-3D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.44**	**280**	*e*P	**Pn**	**06 01 47.5**	**-0.3**
BUTP				*e*S	**Sn**	**06 02 06.3**	**-0.5**
MATI	**Mati**	**1.92**	**204**	*e*P	**Pn**	**06 01 54.9**	**+0.3**
BUKP	**Musuan**	**2.14**	**247**	*e*P	**Pn**	**06 01 59.3**	**+1.8**
DAV	**Davao City (W)**	**2.19**	**222**	Pn	**Pb**	**06 02 00.8**	**-0.6**
	62nm,0.3s,baz=295,slow=14,SNR=7.8						
DAV				Sn	**Sg**	**06 02 32.5**	**+0.4**
	130nm,0.3s,baz=52,slow=15,SNR=10						
DAV				LR	LR	06 02 46.7	
	comp=Z,492nm,19.0s,baz=44,slow=36						
CGP	**Cagayan de Oro**	**2.35**	**264**	*e*P	**Pn**	**06 02 00.8**	**+0.5**
CGP				*e*S	**Sn**	**06 02 29.9**	**+0.7**
MSLP	**Maasin**	**2.59**	**303**	*e*P	**Pn**	**06 02 05.3**	**+1.7**
CTBH	**Cotabato--PC H**	**3.15**	**242**	⇓*i*P	**Pn**	**06 02 12.6**	**+1.1**
PLP	**Palo**	**3.18**	**320**	⇓*e*P	**Pn**	**06 02 11.4**	**-0.4**
PLP				*e*S	**Sn**	**06 02 52.2**	**+2.3**
TBP	**Tagbilaran**	**3.30**	**287**	*i* P	**Pn**	**06 02 15.7**	**+2.2**
LLP	**Lapu-Lapu**	**3.44**	**298**	⇓*i*P	Pn	06 02 18.7	+3.4
LLP				*e*S	**Sb**	**06 03 03.1**	**-1.5**
DCPH	**Dipolog City**	**3.66**	**268**	⇑*e*P	**Pn**	**06 02 20.4**	**+1.9**
DCPH				*e*S	Sn	06 02 53.8	-8.0
PAGZ	**Pagadian**	**3.73**	**257**	*e*P	**Pn**	**06 02 22.3**	**+2.9**
CNP	**Catarman**	**4.45**	**328**	*e*P	**Pn**	**06 02 30.7**	**+1.5**
GUIM	**Jordan**	**4.80**	**294**	*e*P	**Pn**	**06 02 34.9**	**+0.9**
RCP	**Roxas**	**5.10**	**304**	⇑*e*P	**Pn**	**06 02 40.0**	**+1.8**
FITZ	**Fitzroy Crossi**	**26.68**	**183**	P	P	06 07 08.5	+7.4
	2.2nm,0.6s,baz=33,slow=5.5,SNR=4.1						
CMAR	**Chiang Mai Arr**	**28.95**	**292**	P	**P**	**06 07 20.4**	**-1.2**
	1.1nm,0.3s,baz=96,slow=7.4,SNR=3.9						
WRA	**Warramunga Arr**	**29.36**	**166**	P	P	06 07 34.0	+8.8
	0.7nm,0.6s,baz=348,slow=10,SNR=9.0						
ASAR	**Alice Springs**	**32.87**	**168**	P	P	06 08 04.5	+8.5
	0.6nm,0.5s,baz=350,slow=7.0,SNR=4.0						
USRK	**Ussuriysk Arra**	**35.62**	**6**	P	**P**	**06 08 20.9**	**+1.4**
	3.2nm,0.8s,baz=168,slow=5.5,SNR=7.6						
SONM	**Songino Array**	**42.74**	**339**	P	**P**	**06 09 18.6**	**-0.7**
	0.4nm,0.4s,baz=168,slow=7.6,SNR=3.8						
MKAR	**Makanchi Array**	**53.73**	**323**	P	**P**	**06 10 43.0**	**-1.1**
	2.8nm,0.7s,baz=118,slow=8.3,SNR=31						
ZALV	**Zalesovo Beam**	**56.36**	**331**	P	**P**	**06 11 00.9**	**-2.0**
	0.6nm,0.3s,baz=122,slow=7.3,SNR=5.7						
KURBB	**Kurchatov Arra**	**57.79**	**326**	P	**P**	**06 11 11.9**	**-1.2**
	1.6nm,0.6s,baz=123,slow=6.9,SNR=19						
BVAR	**Borovoye Array**	**63.38**	**326**	P	**P**	**06 11 50.1**	**-1.1**
	1.0nm,0.8s,baz=128,slow=9.6,SNR=5.4						
AKTO	**Aktyubinsk**	**70.01**	**321**	P	**P**	**06 12 32.2**	**-1.4**
	0.6nm,0.5s,baz=124,slow=7.5,SNR=4.9						
ILAR	**Eielson Array**	**80.50**	**26**	P	P	06 13 35.6	+1.8
	0.2nm,0.7s,baz=252,slow=6.1,SNR=4.3						
ARCES	**ARCESS Array B**	**85.91**	**340**	P	**P**	**06 14 01.6**	**-0.1**
	1.1nm,0.7s,baz=78,slow=6.3,SNR=4.2						
YKA	**Yellowknife Ar**	**94.86**	**24**	P	**P**	**06 14 44.8**	**+1.1**
	0.1nm,0.5s,baz=299,slow=4.6,SNR=4.3						
TORD	**Torodi Ar. Bea**	**121.55**	**291**	PKP	**PKPdf**	**06 20 18.4**	**+1.8**
	0.2nm,0.4s,baz=73,slow=2.7,SNR=7.0						

*IDC **08** 06:14:08.8±2.8, 9°.69S×108°.32E, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.7/22, mbtmp3.9/7, ML3.4/1, Error ellipse: s-maj=131.3km s-min=18.4km az=51.0*
*ISCJB **08** 06:14:10.9±0.5, 9°.67S±0°.05×108°.47E±0°.04, h27km, mb3.8/6, Error ellipse: s-maj=7.5km s-min=5.2km az=154.2*
*DJA **08** 06:14:11.1±0.5, 10°S±4°×10°9E±°, h15km, M4.3/15, mb4.5/4, mB5.9/1, MLv4.2/15, Mw(mB)5.5/1*
*AUST **08** 06:14:12.0, 9°.87S×108°.34E, h100km*
ISC 08 06:14:12.1±0.7**, 9°.69S**±0°.07×**108°.39E**±0°.05**, h27**km**, n31, σ1s76**/32**, mb3.9**/6**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLJI	**Cilicap**	**2.06**	**18**	P	**Pn**	**06 14 44.8**	**-0.1**
CLJI				S	**Sn**	**06 15 08.7**	**-1.0**
CISI	**Cisompet, Garu**	**2.20**	**345**	P	**Pn**	**06 14 46.8**	**-0.1**
CISI	**Cisompet, Garu**	**2.20**	**345**	P	**Pn**	**06 14 46.9**	**0.0**
	baz=2.4,SNR=10						
KPJI	**Karang Pucung**	**2.40**	**13**	P	**Pn**	**06 14 48.9**	**-0.8**
YOGI	**Yogyakarta**	**2.65**	**45**	P	**Pn**	**06 14 52.1**	**-1.0**
UGM	**Wanagama**	**2.75**	**50**	P	**Pn**	**06 14 53.6**	**-0.9**
UGM				S	**Sn**	**06 15 22.7**	**-4.2**
UGM	**Wanagama**	**2.75**	**50**	P	**Pn**	**06 14 54.0**	**-0.5**
	baz=2.9,SNR=14						
XMI	**Christmas Isla**	**2.76**	**254**	P	**Pn**	**06 14 55.1**	**+0.4**
	baz=2.7,SNR=3.6						
XMI				S	**Sb**	**06 15 29.4**	**-4.8**
	baz=2.7,SNR=3.4						
XMIS	**Christmas Isla**	**2.81**	**254**	P	**Pn**	**06 14 55.1**	**-0.1**
	baz=2.7,SNR=7.2						
XMIS				S	**Sn**	**06 15 25.3**	**-2.9**
	baz=2.7,SNR=5.8						
TGJI	**Tegal**	**2.90**	**15**	P	**Pn**	**06 14 55.9**	**-0.6**
LEM	**Lembang**	**2.95**	**345**	P	**Pn**	**06 14 59.0**	**+1.7**
LEM	**Lembang**	**2.95**	**345**	P	Pn	06 14 59.8	+2.4
	baz=3.1,SNR=4.4						
PCJI	**Pacitan**	**3.13**	**62**	P	**Pn**	**06 14 58.5**	**-1.2**
SMRI	**Semarang**	**3.32**	**38**	P	**Pn**	**06 15 01.1**	**-1.2**
PWJI	**Pagerwojo**	**3.76**	**64**	P	**Pn**	**06 15 07.5**	**-0.9**
SJI	**Sawahan**	**3.87**	**60**	P	**Pn**	**06 15 07.9**	**-2.0**
GMJI	**Gumukmas**	**5.19**	**75**	P	**Pn**	**06 15 28.5**	**+0.5**
	36nm,2.0s,0.2nm						
BLJI	**Banyuglugur**	**5.50**	**70**	P	**Pn**	**06 15 30.6**	**-1.7**
	61nm,0.7s,11μm0.7nm						
JAGI	**Jajag, Banyuwa**	**5.82**	**78**	P	**Pn**	**06 15 34.4**	**-2.3**
	42nm,1.1s,0.3nm						
JAGI	**Jajag, Banyuwa**	**5.82**	**78**	P	**Pn**	**06 15 38.3**	**+1.6**
	baz=5.9,SNR=4.5						
SRBI	**Singaraja**	**6.93**	**77**	P	**Pn**	**06 15 51.0**	**-0.9**
WSI	**Waingapu**	**11.74**	**91**	S	Sn	06 19 21.4	+13
	baz=12,SNR=3.8						
FITZ	**Fitzroy Crossi**	**18.70**	**118**	P	**Pn**	**06 18 30.2**	**+1.1**
	0.1nm,0.3s,baz=221,slow=7.2,SNR=4.1						
MEEK	**Meekatharra**	**19.43**	**151**	S	S	06 22 01.9	-13
	baz=19,SNR=3.5						
WRA	**Warramunga Arr**	**27.04**	**115**	P	**P**	**06 19 52.5**	**0.0**
	0.6nm,0.7s,baz=286,slow=12,SNR=5.2						
ASAR	**Alice Springs**	**28.05**	**123**	P	**P**	**06 20 03.1**	**+1.7**
	0.2nm,0.4s,baz=298,slow=8.4,SNR=3.9						
STKA	**Stephens Creek**	**37.84**	**131**	P	**P**	**06 21 27.6**	**+0.9**
	3.5nm,0.8s,baz=292,slow=11,SNR=3.9						
SONM	**Songino Array**	**57.30**	**358**	P	**P**	**06 23 58.9**	**+1.4**
	0.9nm,0.7s,baz=139,slow=9.0,SNR=4.0						
MKAR	**Makanchi Array**	**60.87**	**340**	P	**P**	**06 24 23.1**	**+0.8**
	2.1nm,0.5s,baz=144,slow=8.0,SNR=35						
ZALV	**Zalesovo Beam**	**66.47**	**345**	P	**P**	**06 24 58.4**	**-0.6**
	0.4nm,0.4s,baz=93,slow=7.4,SNR=3.8						
TXAR	**Lajitas Array**	**144.21**	**52**	PKP	**PKPdf**	**06 33 48.8**	**+2.5**
	0.2nm,0.6s,baz=230,slow=3.1,SNR=4.0						

*ISK **08** 06:28:25.6, 37°.30N×28°.28E, h8km, MD2.5*
*DDA **08** 06:28:26.8, 37°.24N×28°.21E, h7km, MD2.7*
*CSEM **08** 06:28:26.4±0.2, 37°.26N×28°.27E, h15km, MD2.5, Error ellipse: s-maj=5.8km s-min=3.6km az=55.0*
ISC 08 06:28:26.0±1.1**, 37°.28N**±0°.05×**28°.30E**±0°.05**, h12**km±8km**, n12, σ0s19**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.15**	**185**	*e*PG	**Pg**	**06 28 29.5**	**-0.1**
YER				*e*SG	**Sg**	**06 28 32.2**	**+0.1**
YER	**Yerkesik**	**0.15**	**185**	*e*Pg	**Pg**	**06 28 29.5**	**-0.1**
YER				*e*Sg	**Sg**	**06 28 32.2**	**+0.1**
MLSB	**Milas**	**0.42**	**272**	*e*PG	**Pg**	**06 28 34.0**	**-0.3**
MLSB				*e*SG	**Sg**	**06 28 39.9**	**+0.1**
MLSB	**Milas**	**0.42**	**272**	*e*Pg	**Pg**	**06 28 34.0**	**-0.3**
MLSB				*e*Sg	**Sg**	**06 28 39.9**	**+0.1**
TURN	**Turunc**	**0.48**	**149**	*i* P	**Pb**	**06 28 36.3**	**0.0**
TURN				*i* S	**Sb**	**06 28 42.9**	**-0.3**
TURN	**Turunc**	**0.48**	**149**	*i* P	**Pb**	**06 28 36.3**	**0.0**
TURN				*i* S	**Sb**	**06 28 42.9**	**-0.3**
AYDN	**Tasoluk**	**0.50**	**319**	*i* P	**Pb**	**06 28 36.7**	**-0.1**
AYDN				*i* S	**Sb**	**06 28 44.1**	**0.0**
AYDN	**Tasoluk**	**0.50**	**319**	*i* P	**Pb**	**06 28 36.7**	**-0.1**
AYDN				*i* S	**Sb**	**06 28 44.1**	**0.0**

DAT	**Datca**	**0.80**	**226**	*e*PG	**Pb**	**06 28 42.0**	**+0.1**
DAT	**Datca**	**0.80**	**226**	*e*Pg	**Pb**	**06 28 42.0**	**+0.1**
KULA	**Kula-Manisa**	**1.26**	**13**	*e*PN	**Pn**	**06 28 49.8**	**+0.3**
KULA	**Kula-Manisa**	**1.26**	**13**	*e*Pn	**Pn**	**06 28 49.8**	**+0.3**

*ISCJB **08** 06:35:00.5±0.6, 37°.91N±0°.03×29°.21E±0°.05, h9km±5km, Error ellipse: s-maj=7.1km s-min=4.0km az=17.6*
*DDA **08** 06:35:00.2, 37°.89N×29°.19E, h7km, MD2.7*
*CSEM **08** 06:35:00.2±0.3, 37°.90N×29°.23E, h15km, MD2.5, Error ellipse: s-maj=7.0km s-min=3.9km az=107.0*
*ISK **08** 06:35:00.4, 37°.93N×29°.18E, h20km, MD2.5*
ISC 08 06:35:00.4±1.0, **37°.91N**±0°.03×**29°.22E**±0°.04, **h17**km±7km, **n17**, σ**0.82**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.21**	**225**	*e*PG	**Pg**	**06 35 05.9**	**+0.5**
DENT				*e*SG	**Sg**	**06 35 10.2**	**+1.4**
DENT	**Denizli**	**0.21**	**225**	*e*Pg	**Pg**	**06 35 05.9**	**+0.5**
DENT				*e*Sg	**Sg**	**06 35 10.2**	**+1.4**
DNZL	**Cakiroluk**	**0.26**	**213**	*i* P	**Pg**	**06 35 04.9**	**-1.3**
DNZL				*i* S	**Sg**	**06 35 08.8**	**-1.4**
DNZL	**Cakiroluk**	**0.26**	**213**	*i* P	**Pg**	**06 35 04.9**	**-1.3**
DNZL				*i* S	**Sg**	**06 35 08.8**	**-1.4**
KHAL	**Karahalli**	**0.51**	**24**	*i* P	**Pg**	**06 35 10.5**	**-0.1**
KHAL				*i* S	**Sg**	**06 35 17.9**	**+0.4**
KHAL	**Karahalli**	**0.51**	**24**	*i* P	**Pg**	**06 35 10.5**	**-0.1**
KHAL				*i* S	**Sg**	**06 35 17.9**	**+0.4**
GOLH	**Golhisar**	**0.72**	**158**	*i* P	Pg	06 35 08.5	-6.0
GOLH				*i* S	**Sb**	**06 35 25.5**	**+1.2**
KULA	**Kula-Manisa**	**0.75**	**324**	*e*PG	**Pg**	**06 35 15.0**	**-0.1**
KULA				*e*SG	**Sb**	**06 35 25.4**	**+0.3**
KULA	**Kula-Manisa**	**0.75**	**324**	*e*Pg	**Pg**	**06 35 15.0**	**-0.1**
KULA				*e*Sg	**Sb**	**06 35 25.4**	**+0.3**
MANT	**Manisa**	**0.78**	**318**	*i* P	**Pg**	**06 35 15.7**	**0.0**
MANT				*i* S	**Sb**	**06 35 26.6**	**+0.4**
MANT	**Manisa**	**0.78**	**318**	*i* P	**Pg**	**06 35 15.7**	**0.0**
MANT				*i* S	**Sb**	**06 35 26.6**	**+0.4**
YER	**Yerkesik**	**1.07**	**224**	*e*PG	**Pb**	**06 35 20.8**	**+0.2**
YER				*e*SG	**Sn**	**06 35 35.4**	**0.0**
YER	**Yerkesik**	**1.07**	**224**	*e*Pg	**Pb**	**06 35 20.8**	**+0.2**
YER				*e*Sg	**Sn**	**06 35 35.4**	**0.0**
AYDN	**Tasoluk**	**1.09**	**257**	*i* P	**Pb**	**06 35 21.1**	**+0.2**
AYDN				*i* S	**Sb**	**06 35 34.9**	**-0.1**
AYDN	**Tasoluk**	**1.09**	**257**	*i* P	**Pb**	**06 35 21.1**	**+0.2**
AYDN				*i* S	**Sb**	**06 35 34.9**	**-0.1**
GDZ	**Gediz**	**1.20**	**10**	*i* P	**Pb**	**06 35 22.9**	**+0.2**
GDZ				*i* S	**Sg**	**06 35 37.6**	**-1.6**
GDZ	**Gediz**	**1.20**	**10**	*i* P	**Pb**	**06 35 22.9**	**+0.2**
GDZ				*i* S	**Sg**	**06 35 37.6**	**-1.6**

IDC 08 06:35:51.7±2.1, **3°.25N**×**125°.05E**, **h0**km, **mb3.2**/3, **mb1 3.4**/3, **mb1mx3.3**/22, **mbtmp3.2**/3, **Error ellipse: s-maj=202.0km s-min=27.6km az=64.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.79**	**159**	P	P	06 41 16.7	+1.2
	0.4nm,0.6s,baz=338,slow=10,SNR=7.1						
ASAR	**Alice Springs**	**28.11**	**163**	P	P	06 41 44.3	-1.2
	0.2nm,0.6s,baz=347,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**57.01**	**326**	P	P	06 45 39.2	-0.1
	0.1nm,0.4s,baz=123,slow=5.3,SNR=4.2						

IDC 08 06:56:35.8±5.0, **5°.52S**×**149°.45E**, **h95**km±47km, **mb3.4**/4, **mb1 3.6**/5, **mb1mx3.3**/19, **mbtmp3.4**/5, **Error ellipse: s-maj=87.5km s-min=31.3km az=131.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.48**	**210**	P	Pn	06 57 42.8	+1.4
	2.9nm,0.3s,baz=41,slow=9.3,SNR=14						
PMG				S	Sn	06 58 32.2	-0.2
	18nm,0.3s,baz=6.5,slow=21,SNR=12						
WRA	**Warramunga Arr**	**20.53**	**224**	P	P	07 01 07.2	+0.5
	1.4nm,0.4s,baz=49,slow=10,SNR=28						
ASAR	**Alice Springs**	**23.45**	**218**	P	P	07 01 37.1	+0.2
	0.5nm,0.3s,baz=53,slow=9.0,SNR=17						
FITZ	**Fitzroy Crossi**	**26.40**	**240**	P	P	07 02 03.6	0.0
	1.1nm,0.3s,baz=64,slow=12,SNR=13						
ILAR	**Eielson Array**	**84.09**	**23**	P	P	07 08 55.2	-0.5
	0.2nm,0.5s,baz=227,slow=4.7,SNR=4.2						

*IDC **08** 07:14:47.9±1.6, 8°.52S×127°.58E, h0km, mb3.8/2, mb1 4.1/5, mb1mx3.8/20, mbtmp3.9/5, ML4.2/3, Error ellipse: s-maj=83.9km s-min=24.1km az=67.0*
*AUST **08** 07:15:13.1, 10°.48S×128°.06E, h0km*
ISC 08 07:14:53.8±1.4, **8°.72S**±0°.10×**127°.51E**±0°.10, **h35**km, **n13**, σ**2.52**/15, **Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.42**	**139**	P	**Pn**	**07 16 14.2**	**+2.0**
	baz=3.8,SNR=73						
MTN				S	**Sn**	**07 17 14.7**	**+1.3**
	baz=3.8,SNR=4.5						
KDU	**Kakadu**	**6.27**	**129**	P	**Pn**	**07 16 25.5**	**+1.8**
	baz=4.8,SNR=14						
KNRA	**Kununurra**	**7.02**	**170**	P	**Pn**	**07 16 36.0**	**+1.9**
	baz=5.2,SNR=25						
WSI	**Waingapu**	**7.18**	**262**	S	Sn	07 18 27.6	+31
	baz=7.7,SNR=11						
FITZ	**Fitzroy Crossi**	**9.50**	**191**	Pn	**Pn**	**07 17 09.3**	**+1.2**
	2.0nm,0.3s,baz=13,slow=16,SNR=60						
FITZ				Sn	**Sn**	**07 18 51.5**	**-2.2**
	3.0nm,0.3s,baz=313,slow=20,SNR=8.5						
FITZ	**Fitzroy Crossi**	**9.50**	**191**	P	**Pn**	**07 17 09.3**	**+1.2**
	baz=8.0,SNR=33						
FITZ				S	**Sn**	**07 18 55.6**	**+1.9**
	baz=8.0,SNR=4.5						
WRA	**Warramunga Arr**	**12.96**	**150**	Pn	**Pn**	**07 17 53.6**	**-2.0**
	1.4nm,0.3s,baz=328,slow=13,SNR=64						
WRA				Sn	Sn	07 20 12.1	-6.5
	1.6nm,0.3s,baz=334,slow=21,SNR=10.0						
ASAR	**Alice Springs**	**16.07**	**158**	Pn	**Pn**	**07 18 35.7**	**-1.5**
	0.4nm,0.3s,baz=330,slow=9.4,SNR=24						
ASAR				Sn	**Sn**	**07 21 29.2**	**-5.1**
	0.4nm,0.3s,baz=328,slow=17,SNR=5.7						
COEN	**Coen**	**16.21**	**110**	P	**Pn**	**07 18 36.8**	**-2.2**
	baz=15,SNR=4.8						
MEEK	**Meekatharra**	**19.71**	**204**	P	Pn	07 19 28.2	+6.2
	baz=18,SNR=3.5						
QLP	**Quilpie**	**23.81**	**140**	P	**P**	**07 20 06.8**	**+3.2**
	baz=22,SNR=4.8						
STKA	**Stephens Creek**	**26.50**	**152**	P	**P**	**07 20 29.4**	**+1.4**
	1.3nm,0.6s,baz=324,slow=8.7,SNR=4.4						
MKAR	**Makanchi Array**	**68.35**	**328**	P	**P**	**07 25 50.2**	**-1.4**
	0.2nm,0.5s,baz=134,slow=7.7,SNR=3.0						

*ISK **08** 07:17:46.7, 37°.29N×28°.21E, h4km, MD2.7*
*ISCJB **08** 07:17:47.6±0.4, 37°.26N±0°.03×28°.21E±0°.03, h0km, Error ellipse: s-maj=4.3km s-min=3.1km az=137.0*
*DDA **08** 07:17:47.5, 37°.24N×28°.16E, h7km, MD2.6*
*CSEM **08** 07:17:47.8±0.2, 37°.24N×28°.20E, h1km, MD2.7, Error ellipse: s-maj=5.6km s-min=3.6km az=45.0*
ISC 08 07:17:47.6±0.8, **37°.28N**±0°.02×**28°.22E**±0°.02, **h0**km, **n24**, σ**0.84**/41, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.15**	**160**	*e*PG	**Pg**	**07 17 50.5**	**0.0**
YER				*e*SG	**Sg**	**07 17 53.7**	**+1.2**
YER	**Yerkesik**	**0.15**	**160**	*e*Pg	**Pg**	**07 17 50.5**	**0.0**
YER				*e*Sg	**Sg**	**07 17 53.7**	**+1.2**
MLSB	**Milas**	**0.35**	**273**	*e*PG	**Pg**	**07 17 54.4**	**0.0**
MLSB				*e*SG	**Sg**	**07 17 59.4**	**+0.4**
MLSB	**Milas**	**0.35**	**273**	*e*Pg	**Pg**	**07 17 54.4**	**0.0**
MLSB				*e*Sg	**Sg**	**07 17 59.4**	**+0.4**
AYDN	**Tasoluk**	**0.47**	**325**	*i* P	**Pb**	**07 17 58.0**	**-0.8**
AYDN				*i* S	**Sb**	**07 18 05.5**	**-0.9**
AYDN	**Tasoluk**	**0.47**	**325**	*i* P	**Pb**	**07 17 58.0**	**-0.8**
AYDN				*i* S	**Sb**	**07 18 05.5**	**-0.9**
TURN	**Turunc**	**0.51**	**142**	*i* P	**Pg**	**07 17 56.5**	**-0.8**
TURN				*i* S	**Sg**	**07 18 02.6**	**-1.3**
TURN	**Turunc**	**0.51**	**142**	*i* P	**Pg**	**07 17 56.5**	**-0.8**
TURN				*i* S	**Sg**	**07 18 02.6**	**-1.3**
DAT	**Datca**	**0.75**	**223**	*e*PG	**Pg**	**07 18 01.5**	**-0.5**
DAT				*e*SG	**Sb**	**07 18 13.3**	**-1.1**
DAT	**Datca**	**0.75**	**223**	*e*Pg	**Pg**	**07 18 01.5**	**-0.5**
DNZL	**Cakiroluk**	**0.78**	**58**	*i* P	**Pg**	**07 18 01.3**	**-1.2**
DNZL				*i* S	**Sb**	**07 18 16.7**	**+1.3**
DNZL	**Cakiroluk**	**0.78**	**58**	*i* P	**Pg**	**07 18 01.3**	**-1.2**
DNZL				*i* S	**Sb**	**07 18 16.7**	**+1.3**
GCAM	**G?zelcaml?**	**0.89**	**299**	*i* P	**Pg**	**07 18 05.1**	**+0.4**
GCAM				*i* S	**Sg**	**07 18 16.0**	**-0.3**
GCAM	**G?zelcaml?**	**0.89**	**299**	*i* P	**Pg**	**07 18 05.1**	**+0.4**
GCAM				*i* S	**Sg**	**07 18 16.0**	**-0.3**
FETY	**Fethiye**	**0.94**	**132**	*e*PG	**Pg**	**07 18 06.0**	**+0.3**
FETY	**Fethiye**	**0.94**	**132**	*e*Pg	**Pg**	**07 18 06.0**	**+0.3**
MANT	**Manisa**	**1.24**	**12**	*i* P	**Pn**	**07 18 12.9**	**+0.4**
MANT				*i* S	**Sg**	**07 18 28.1**	**+0.5**
MANT	**Manisa**	**1.24**	**12**	*i* P	**Pn**	**07 18 12.9**	**+0.4**
MANT				*i* S	**Sg**	**07 18 28.1**	**+0.5**
KULA	**Kula-Manisa**	**1.28**	**16**	*e*PN	**Pg**	**07 18 11.9**	**-0.3**
KULA	**Kula-Manisa**	**1.28**	**16**	*e*Pn	**Pg**	**07 18 11.9**	**-0.3**
ELL	**Elmali**	**1.45**	**111**	*e*PN	**Pn**	**07 18 14.9**	**-0.3**
ELL	**Elmali**	**1.45**	**111**	*e*Pn	**Pn**	**07 18 14.9**	**-0.3**
AKAS	**Kas**	**1.52**	**133**	*i* P	**Pn**	**07 18 16.2**	**-0.1**
AKAS				*i* S	**Sn**	**07 18 38.5**	**+1.6**
AKAS	**Kas**	**1.52**	**133**	*i* P	**Pn**	**07 18 16.2**	**-0.1**
AKAS				*i* S	**Sn**	**07 18 38.5**	**+1.6**

IDC 08 07:20:26.4±1.2, **16°.17N**×**86°.54W**, **h0**km, **mb3.5**/6, **mb1 3.9**/7, **mb1mx3.7**/23, **mbtmp3.6**/7, **ML4.2**/1, **Error ellipse: s-maj=51.4km s-min=21.6km az=56.0, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**4.36**	**338**	Pn	Pn	07 21 33.3	-0.6
	12nm,0.3s,baz=310,slow=0.3,SNR=300						
TEIG				Sn	Sn	07 22 25.5	+0.1
	20nm,0.3s,baz=250,slow=21,SNR=18						
TXAR	**Lajitas Array**	**20.48**	**313**	P	P	07 25 06.8	+0.7
	1.6nm,0.6s,baz=130,slow=11,SNR=27						
NVAR	**Mina Array Bea**	**35.61**	**315**	P	P	07 27 26.2	-0.1
	0.2nm,0.6s,baz=106,slow=6.7,SNR=2.4						
YKA	**Yellowknife Ar**	**50.29**	**344**	P	P	07 29 24.5	0.0
	0.5nm,0.7s,baz=140,slow=7.7,SNR=8.1						
PLCA	**Paso Flores**	**58.53**	**166**	P	P	07 30 24.6	-0.1
	1.6nm,1.0s,baz=71,slow=3.4,SNR=2.9						
ILAR	**Eielson Array**	**63.01**	**335**	P	P	07 30 54.8	-0.2
	0.3nm,0.7s,baz=126,slow=3.7,SNR=4.0						
TORD	**Torodi Ar. Bea**	**84.76**	**78**	P	P	07 33 03.5	+0.2
	0.5nm,1.0s,baz=270,slow=4.9,SNR=2.4						
WRA	**Warramunga Arr**	**141.02**	**258**	PKP	PKPdf	07 39 58.4	-1.2
	0.2nm,0.4s,baz=91,slow=2.2,SNR=4.2						
ASAR	**Alice Springs**	**141.35**	**252**	PKP	PKPdf	07 39 58.2	-1.9
	0.3nm,0.6s,baz=113,slow=1.9,SNR=4.3						

MEX 08 07:33:32.5±1.2, **15°.08N**×**93°.58W**, **h31**km±17km, **MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.71**	**29**	*i* P	Pn	07 33 43.3	-3.1
PCIG				*i* S	Sb	07 33 54.1	-1.9
THIG		**1.28**	**97**	*i* P	Pn	07 33 53.0	-1.3
THIG				*e*S	Sn	07 34 07.5	-3.0
TGIG		**1.75**	**15**	*i* P	Pn	07 33 59.1	-1.7
TGIG				*e*S	Sn	07 34 19.7	-2.4
CCIG	**Comitan**	**1.83**	**49**	*i* P	Pn	07 34 01.0	-1.1
CCIG				*i* S	Sn	07 34 21.0	-3.5
HUIG	**Huatulco**	**2.53**	**286**	*i* P	Pn	07 34 10.0	-1.5

*ISCJB **08** 07:35:40.5±1.0, 39°.13N±0°.05×27°.52E±0°.05, h0km, Error ellipse: s-maj=8.0km s-min=5.1km az=150.3*
*DDA **08** 07:35:40.9, 39°.08N×27°.56E, h7km, MD2.7*
*CSEM **08** 07:35:40.9, 39°.08N×27°.56E, h7km, MD2.7, After DDA*
ISC 08 07:35:41.0±1.4, **39°.11N**±0°.05×**27°.53E**±0°.04, **h0**km, **n10**, σ**0.57**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.32**	**136**	*i* P	**Pg**	**07 35 46.1**	**-1.0**
AKHS				*i* S	**Sg**	**07 35 52.0**	**+0.7**
AKHS	**Akhisar**	**0.32**	**136**	*i* P	**Pg**	**07 35 46.1**	**-1.0**
AKHS				*i* S	**Sg**	**07 35 52.0**	**+0.7**
DURS	**Dursunbey**	**0.88**	**56**	*i* P	**Pg**	**07 35 57.8**	**-0.1**
DURS				*i* S	**Sb**	**07 36 11.1**	**-0.5**
DURS	**Dursunbey**	**0.88**	**56**	*i* P	**Pg**	**07 35 57.8**	**-0.1**
DURS				*i* S	**Sb**	**07 36 11.1**	**-0.5**
DEMI	**Demirci**	**0.93**	**94**	*i* P	**Pg**	**07 35 58.6**	**-0.1**
DEMI				*i* S	**Sg**	**07 36 10.9**	**+0.1**
DEMI	**Demirci**	**0.93**	**94**	*i* P	**Pg**	**07 35 58.6**	**-0.1**
DEMI				*i* S	**Sg**	**07 36 10.9**	**+0.1**
MANT	**Manisa**	**1.01**	**127**	*i* P	**Pg**	**07 36 00.1**	**-0.3**
MANT				*i* S	**Sb**	**07 36 15.9**	**+0.4**
MANT	**Manisa**	**1.01**	**127**	*i* P	**Pg**	**07 36 00.1**	**-0.3**
MANT				*i* S	**Sb**	**07 36 15.9**	**+0.4**
URLA	**Izmir**	**1.05**	**225**	*i* P	**Pg**	**07 36 00.4**	**-0.6**
URLA				*i* S	**Sb**	**07 36 16.8**	**+0.6**
URLA	**Izmir**	**1.05**	**225**	*i* P	**Pg**	**07 36 00.4**	**-0.6**
URLA				*i* S	**Sb**	**07 36 16.8**	**+0.6**

IDC 08 07:46:06.0±2.1, **16°.87N**×**95°.79E**, **h0**km, **mb3.7**/3, **mb1 3.6**/4, **mb1mx3.3**/28, **mbtmp3.5**/4, **Error ellipse: s-maj=31.9km s-min=19.5km az=5.0, Near south coast of Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**3.39**	**62**	Pn	Pn	07 47 01.6	+1.3
	baz=248,slow=15,SNR=4.3						
CMAR				Pg	Pb	07 47 08.3	+1.3
	2.5nm,0.3s,baz=245,slow=19,SNR=24						
CMAR				Lg	Lg	07 47 52.6	
	1.5nm,0.3s,baz=244,slow=32,SNR=8.5						
MKAR	**Makanchi Array**	**31.87**	**342**	P	P	07 52 32.8	0.0
	0.2nm,0.4s,baz=160,slow=9.3,SNR=8.0						
KURBB	**Kurchatov Arra**	**36.41**	**341**	P	P	07 53 11.3	-0.8
	0.3nm,0.4s,baz=151,slow=8.3,SNR=3.6						
ARCES	**ARCESS Array B**	**67.44**	**339**	P	P	07 57 03.6	+0.4
	0.4nm,0.6s,baz=86,slow=6.6,SNR=3.7						

IDC 08 07:52:40.5±19.0, **18°.24S**×**178°.24W**, **h506**km±232km, **mb3.3**/8, **mb1 3.6**/8, **mb1mx3.3**/20, **mbtmp3.3**/8, **Error ellipse: s-maj=71.1km s-min=50.6km az=113.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**34.67**	**280**	P	P	07 58 47.7	+0.1
	24nm,0.9s,baz=111,slow=2.6,SNR=4.9						
STKA	**Stephens Creek**	**38.61**	**242**	P	P	07 59 20.3	+0.4
	4.9nm,0.8s,baz=93,slow=12,SNR=6.8						
WRA	**Warramunga Arr**	**44.73**	**260**	P	P	08 00 07.9	-0.7
	2.6nm,0.6s,baz=95,slow=7.2,SNR=42						
ASAR	**Alice Springs**	**44.86**	**255**	P	P	08 00 09.4	-0.1
	14nm,0.6s,baz=88,slow=8.5,SNR=223						
NVAR	**Mina Array Bea**	**79.55**	**44**	P	P	08 03 54.6	-0.4
	0.4nm,0.8s,baz=231,slow=9.1,SNR=6.6						
TXAR	**Lajitas Array**	**86.03**	**58**	P	P	08 04 28.4	+0.8
	0.7nm,0.7s,baz=218,slow=5.9,SNR=9.5						
ILAR	**Eielson Array**	**86.17**	**13**	P	P	08 04 28.6	+1.3
	0.1nm,0.5s,baz=191,slow=8.3,SNR=4.4						
PDAR	**Pinedale Array**	**87.48**	**43**	P	P	08 04 32.9	-1.4
	0.4nm,0.5s,baz=222,slow=1.2,SNR=3.5						

*IDC **08** 07:54:00.0±1.3, 40°.46N×124°.44W, h0km, mb3.6/5, mb1 3.8/10, mb1mx3.6/33, mbtmp3.6/10, ML3.4/5, MS2.7/3, Ms1 2.7/3, ms1mx2.4/37, Error ellipse: s-maj=17.6km s-min=12.9km az=64.0*
*ISCJB **08** 07:54:02.2±1.1, 40°.40N±0°.02×124°.50W±0°.07, h31km±7km, mb3.6/5, Error ellipse: s-maj=9.2km s-min=3.8km az=168.9*
*NEIC **08** 07:54:03.6, 40°.38N×124°.41W, h18km, mb3.9/2, MW3.9(BRK), After NCEDC.*
NEIC Felt [III] at Ferndale and Loleta and [II] at Eureka, Fortuna, Rio Dell and Scotia. Also felt at Arcata, Bayside, Carlotta, Hydesville, McKinleyville, Myers Flat, Petrolia, Redcrest, Redway and Whitethorn.
ISC 08 07:54:03.6±1.5, **40°.41N**±0°.03×**124°.44W**±0°.07, **h21**km±4km, **n173**, σ**1.32**/174, **mb4.0**/5, **53C-58D, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KHMM	**Horse Mountain**	**0.72**	**49**	*e*Pg	**Pb**	**07 54 16.7**	**-0.7**
KHMM				*e*Sg	**Sb**	**07 54 27.6**	**+0.6**
KIPM	**Iron Peak**	**0.95**	**129**	*e*Pg	**Pb**	**07 54 19.9**	**-1.4**
KIPM				*e*Sg	**Sn**	**07 54 35.3**	**+0.5**
KCPM	**Cahto Peak**	**0.98**	**137**	*e*Pg	**Pb**	**07 54 20.0**	**-1.8**
KCPM				*e*Sg	**Sb**	**07 54 33.9**	**-0.4**
KRMB	**Red Mountain**	**1.19**	**20**	*e*Pn	**Pn**	**07 54 23.2**	**-1.9**
KRMB				*e*Sn	**Sb**	**07 54 38.0**	**-2.5**
WDC	**Whiskeytown Da**	**1.46**	**83**	*e*Pn	**Pn**	**07 54 26.9**	**-1.8**
HOPS	**Hopland**	**1.76**	**143**	*e*Pn	**Pn**	**07 54 30.7**	**-2.2**
KBO	**Bosley Butte**	**1.81**	**5**	*e*Pn	**Pn**	**07 54 31.3**	**-2.3**
KBO				*e*Sn	**Sn**	**07 54 53.0**	**-3.1**
YBH	**Yreka Blue Hor**	**1.86**	**44**	Pn	**Pn**	**07 54 32.9**	**-1.4**
YBH				Sn	**Sn**	**07 54 55.6**	**-1.7**
YBH	**Yreka Blue Hor**	**1.86**	**44**	Pn	**Pn**	**07 54 32.9**	**-1.4**
	75nm,0.3s,baz=255,slow=11,SNR=1762						
YBH				Sn	**Sn**	**07 54 55.7**	**-1.7**
	38nm,0.3s,baz=79,slow=13,SNR=6.6						
KEBM	**Edson Butte**	**2.47**	**2**	*e*Pn	**Pn**	**07 54 43.6**	**+1.0**
HUMO	**Hull Mountain**	**2.47**	**26**	*e*Pn	**Pn**	**07 54 41.2**	**-1.3**
HUMO				*e*Sn	**Sn**	**07 55 11.5**	**-0.6**
BEKR	**Beckworth**	**3.18**	**98**	*e*Pn	**Pn**	**07 54 51.5**	**-1.0**
BEKR				*e*Sn	**Sn**	**07 55 31.8**	**+2.0**
SAC	**San Andreas**	**3.23**	**150**	*e*Pn	**Pn**	**07 54 52.4**	**-0.6**
SAC				*e*Sn	**Sn**	**07 55 28.5**	**-2.4**
WCN	**Washoe City**	**3.77**	**105**	*e*Pn	**Pn**	**07 54 59.8**	**-0.9**
WCN				*e*Sn	**Sn**	**07 55 40.3**	**-4.3**
CMB	**Columbia Colle**	**3.94**	**126**	*e*Pn	**Pn**	**07 55 02.2**	**-0.7**
CMB				*e*Sn	**Sn**	**07 55 49.0**	**+0.4**
COR	**Corvallis**	**4.26**	**11**	*e*Pn	**Pn**	**07 55 07.8**	**+0.6**
COR				*e*Sn	**Sn**	**07 56 00.1**	**+3.8**
SAO	**San Andreas Ge**	**4.33**	**146**	*e*Pn	**Pn**	**07 55 06.3**	**-1.8**
SAO				*e*Sn	**Sn**	**07 55 59.0**	**+1.1**
WVOR	**Wild Horse Val**	**4.81**	**63**	*e*Pn	**Pn**	**07 55 13.1**	**-1.8**
NVAR	**Mina Array Bea**	**5.15**	**111**	Pn	**Pn**	**07 55 19.4**	**-0.3**
NVAR	**Mina Array Bea**	**5.15**	**111**	Pn	**Pn**	**07 55 19.4**	**-0.3**
	1.1nm,0.3s,baz=288,slow=14,SNR=52						
NV11	**Mina Array Sit**	**5.25**	**110**	*e*Pn	**Pn**	**07 55 21.1**	**0.0**
BMN	**Battle Mountai**	**5.51**	**87**	*e*Pn	**Pn**	**07 55 24.4**	**-0.1**
VES	**Vestal, Richgr**	**6.21**	**135**	⇓P	**Pn**	**07 55 34.0**	**0.0**
	baz=6.2						
PKM	**Peak Mountain**	**6.61**	**145**	⇓P	**Pn**	**07 55 40.0**	**+0.3**
	baz=6.6						
LON	**Longmire**	**6.62**	**16**	Pn	**Pn**	**07 55 38.5**	**-1.2**
	4.7nm,0.8s						
ISA	**Isabella**	**6.68**	**133**	*e*Pn	**Pn**	**07 55 41.5**	**+1.0**
	4.1nm,0.5s						
ISA				*e*Sn	**Sn**	**07 56 52.2**	**-3.8**
ISA	**Isabella**	**6.68**	**133**	⇓P	**Pn**	**07 55 41.2**	**+0.7**
	baz=6.6,SNR=8.8						
BMO	**Blue Mountains**	**6.89**	**47**	*e*Pn	**Pn**	**07 55 44.8**	**+1.4**
	3.8nm,0.8s						
ARVC	**Arvin**	**6.89**	**138**	⇓P	**Pn**	**07 55 43.5**	**+0.1**
	baz=6.8,SNR=5.3						
ELK	**Elko**	**7.02**	**84**	Pn	**Pn**	**07 55 46.7**	**+1.4**
ELK	**Elko**	**7.02**	**84**	Pn	**Pn**	**07 55 46.7**	**+1.4**
	0.2nm,0.3s,baz=274,slow=13,SNR=13						
ELK				LR	LR	07 57 58.4	
	comp=Z,46nm,19.8s,baz=287,slow=34						
MFID	**Camas Ranch**	**7.09**	**62**	*e*Pn	**Pn**	**07 55 45.8**	**-0.5**
	24nm,1.5s						
MFID	**Camas Ranch**	**7.09**	**62**	⇓P	**Pn**	**07 55 45.4**	**-0.8**
	baz=7.2						
FURC	**Furnace Creek,**	**7.13**	**121**	⇑P	**Pn**	**07 55 45.9**	**-0.7**
	baz=7.1						
R11A	**Troy Canyon, C**	**7.16**	**104**	⇑P	**Pn**	**07 55 46.9**	**-0.4**
	baz=7.2						
OSI	**Osito Adit**	**7.35**	**140**	*e*Pn	**Pn**	**07 55 51.8**	**+2.1**
	11nm,0.4s						
EDW2	**Edwards Air Fo**	**7.52**	**135**	⇓P	**Pn**	**07 55 52.8**	**+0.7**
	baz=7.5						
HLID	**Hailey**	**8.11**	**64**	*e*Pn	**Pn**	**07 56 02.2**	**+2.0**
	5.2nm,0.9s						
HLID	**Hailey**	**8.11**	**64**	⇑P	**Pn**	**07 56 01.7**	**+1.5**
	baz=8.2,SNR=12						
BFSC	**Mount Baldy Ra**	**8.19**	**137**	⇑P	**Pn**	**07 56 01.3**	**0.0**
	baz=8.1						
G12A	**Big Creek, Yel**	**8.20**	**52**	⇓P	**Pn**	**07 56 02.5**	**+1.1**
	baz=8.3						
H12A	**Diamond D Ranc**	**8.21**	**57**	⇑P	**Pn**	**07 56 01.7**	**+0.2**
	baz=8.3,SNR=7.0						
F12A	**Elk City**	**8.59**	**48**	⇓P	**Pn**	**07 56 06.7**	**-0.1**
	baz=8.7						
I14A	**Mackay**	**8.89**	**63**	⇑P	**Pn**	**07 56 12.1**	**+1.2**
	baz=9.0,SNR=8.8						
DUG	**Dugway**	**8.89**	**88**	*e*Pn	**Pn**	**07 56 12.1**	**+1.2**
	11nm,0.9s						
DUG	**Dugway**	**8.89**	**88**	⇓P	**Pn**	**07 56 12.1**	**+1.2**
	baz=9.0,SNR=15						
F13A	**Darby**	**9.14**	**51**	⇓P	**Pn**	**07 56 15.5**	**+1.1**
	baz=9.3						
BELC	**Belle Mtn. Jos**	**9.28**	**131**	⇓P	**Pn**	**07 56 17.8**	**+1.5**
	baz=9.2						
PFO	**Pinyon Flat Ob**	**9.31**	**134**	Pn	**Pn**	**07 56 16.7**	**0.0**
PFO	**Pinyon Flat Ob**	**9.31**	**134**	Pn	**Pn**	**07 56 16.7**	**0.0**
	0.4nm,0.3s,baz=310,slow=10,SNR=4.1						
D12A	**Red Ives Fores**	**9.35**	**42**	⇓P	**Pn**	**07 56 18.2**	**+1.1**
	baz=9.5						
NEW	**Newport**	**9.44**	**31**	LR	LR	08 00 11.8	
	comp=Z,74nm,20.7s,baz=231,slow=40						
C11A	**Tepee Creek (N**	**9.48**	**36**	⇑P	**Pn**	**07 56 19.6**	**+0.7**
	baz=9.6						
E13A	**Victor**	**9.59**	**48**	⇑P	**Pn**	**07 56 21.6**	**+1.2**
	baz=9.7						
MCMT	**McKenzie Canyo**	**9.62**	**59**	*e*Pn	**Pn**	**07 56 20.5**	**-0.5**
	0.9nm,0.8s						
MVU	**Marysvale**	**9.65**	**97**	*e*Pn	**Pn**	**07 56 22.6**	**+1.2**
	2.3nm,0.8s						
C12B	**Naegeli Ranch,**	**9.74**	**38**	⇑P	**Pn**	**07 56 23.4**	**+0.9**
	baz=9.9						
HWUT	**Hardware Ranch**	**9.81**	**79**	*e*Pn	**Pn**	**07 56 25.8**	**+2.2**
	5.8nm,0.9s						
D13A	**Huson**	**9.84**	**44**	⇑P	**Pn**	**07 56 25.4**	**+1.6**
	baz=10.0						
MONP	**Monument Peak**	**9.89**	**137**	⇓P	**Pn**	**07 56 24.9**	**+0.2**
	baz=9.8						
MSO	**Missoula**	**9.96**	**46**	*e*Pn	**Pn**	**07 56 27.4**	**+2.0**
	2.8nm,0.8s						
MSO	**Missoula**	**9.96**	**46**	⇓P	**Pn**	**07 56 26.7**	**+1.3**
	baz=10,SNR=8.3						
G15A	**Dillon**	**9.99**	**58**	⇓P	**Pn**	**07 56 26.7**	**+0.7**
	baz=10,SNR=5.5						
DLMT	**Dillon**	**10.00**	**56**	*e*Pn	**Pn**	**07 56 28.2**	**+2.0**
	6.2nm,1.0s						
RRI2	**Red Ridge**	**10.22**	**69**	*e*Pn	Pn	07 56 32.7	+3.5
	2.8nm,0.9s						
F15A	**Butte**	**10.28**	**54**	⇓P	**Pn**	**07 56 30.5**	**+0.5**
	baz=10						
U15A	**North Rim**	**10.33**	**109**	⇑P	**Pn**	**07 56 31.1**	**+0.3**
	baz=10						
D14A	**Greenough**	**10.35**	**46**	⇓P	**Pn**	**07 56 32.3**	**+1.5**
	baz=10,SNR=8.8						
G16A	**Moss Hill, Enn**	**10.46**	**58**	⇑P	**Pn**	**07 56 33.5**	**+1.1**
	baz=11						
E15A	**Deer Lodge**	**10.48**	**51**	⇓P	**Pn**	**07 56 33.1**	**+0.4**
	baz=11						
TPAW	**Teton Pass**	**10.51**	**69**	*e*Pn	**Pn**	**07 56 31.9**	**-1.3**
	3.0nm,1.0s						
IMW	**Indian Meadow**	**10.62**	**66**	*e*Pn	**Pn**	**07 56 34.2**	**-0.4**
	3.3nm,1.0s						
C14A	**Swan Lake**	**10.64**	**43**	⇑P	**Pn**	**07 56 36.4**	**+1.6**
	baz=11						
BOZ	**Bozeman (W)**	**10.74**	**57**	*e*Pn	**Pn**	**07 56 36.6**	**+0.4**
SRU	**San Rafael**	**10.80**	**92**	⇓P	**Pn**	**07 56 39.0**	**+2.0**
	baz=11,SNR=6.1						
D15A	**Lincoln**	**10.88**	**48**	⇓P	**Pn**	**07 56 38.7**	**+0.6**
	baz=11						
E16A	**East Helena**	**11.11**	**52**	⇑P	**Pn**	**07 56 42.4**	**+1.2**
	baz=11						
C15A	**Salmond Ranch,**	**11.25**	**45**	⇓P	**Pn**	**07 56 44.8**	**+1.6**
	baz=11,SNR=23						
PDAR	**Pinedale Array**	**11.40**	**73**	Pn	Pn	07 56 49.0	+3.7
PDAR	**Pinedale Array**	**11.40**	**73**	Pn	Pn	07 56 49.0	+3.7
	0.1nm,0.3s,baz=254,slow=14,SNR=7.1						
D16A	**Dana Ranch, Ca**	**11.43**	**50**	⇑P	**Pn**	**07 56 46.6**	**+0.9**
	baz=12						
F17A	**Fitzpatrick Pl**	**11.47**	**57**	⇓P	**Pn**	**07 56 47.5**	**+1.3**
	baz=12						
113A	**Mohawk Valley,**	**11.47**	**128**	⇓P	**Pn**	**07 56 47.3**	**+1.2**
	baz=11						
S18A	**Hurst Farm, Bl**	**11.56**	**99**	⇑P	**Pn**	**07 56 48.2**	**+0.6**
	baz=12						

E17A	Martinsdale	11.58	54	⇑P	Pn	07 56 48.5	+0.8
	baz=12						
B15A	Bradely Ranch,	11.60	43	⇓P	Pn	07 56 48.9	+0.9
	baz=12						
A14A	Double T Ranch	11.60	39	⇓P	Pn	07 56 48.7	+0.7
	baz=12						
C16A	Fuhringer Ranc	11.74	47	⇑P	Pn	07 56 51.0	+1.2
	baz=12,SNR=6.8						
J19A	Crowheart	11.83	71	⇓P	Pn	07 56 51.5	+0.3
	baz=12						
A15A	Johnson Ranch,	11.94	40	⇓P	Pn	07 56 53.2	+0.6
	baz=12						
D17A	Six Diamond Ra	12.01	51	⇓P	Pn	07 56 54.5	+1.0
	baz=12						
B16A	M & M Farms, S	12.11	44	⇑P	Pn	07 56 55.6	+0.7
	baz=12						
E18A	Harlowton	12.21	55	⇑P	Pn	07 56 56.5	+0.2
	baz=12						
N20A	Spence Gulch,	12.31	83	⇑P	Pn	07 56 58.8	+1.0
	baz=12						
A16A	West Butte Ran	12.50	43	⇑P	Pn	07 57 00.6	+0.4
	baz=13						
PV01	Paradox Valley	12.51	95	*e*Pn	Pn	07 57 02.9	+2.4
	159nm,0.8s						
Q20A	Ridgley Place,	12.53	91	⇑P	Pn	07 57 01.7	+0.9
	baz=13,SNR=7.1						
R20A	Redvale	12.64	95	⇓P	Pn	07 57 04.1	+1.8
	baz=13,SNR=6.6						
S20A	Disappointment	12.76	96	⇑P	Pn	07 57 03.0	-0.9
	baz=13						
G20A	Bridger	12.85	63	⇑P	Pn	07 57 05.1	+0.1
	baz=13,SNR=6.8						
E19A	Rath Farm, Rou	12.88	57	⇓P	Pn	07 57 05.6	+0.2
	baz=13						
L21A	Rawlins	12.96	78	⇓P	Pn	07 57 06.3	-0.3
	baz=13						
J21A	Lysite	13.01	71	⇑P	Pn	07 57 08.0	+0.7
	baz=13						
P21A	Newcastle	13.07	88	⇑P	Pn	07 57 07.9	-0.3
	baz=13						
D19A	Cripps Ranch,	13.11	54	⇓P	Pn	07 57 08.9	+0.4
	baz=13						
I21A	Big Trails, Te	13.18	69	⇑P	Pn	07 57 10.0	+0.4
	baz=13						
R21A	Cimarron	13.23	93	⇓P	Pn	07 57 09.8	-0.5
	baz=13						
S21A	Coal Bank Pass	13.23	97	⇓P	Pn	07 57 10.7	+0.2
	baz=13						
C19A	Slack Wire Ran	13.26	51	⇑P	Pn	07 57 10.5	-0.1
	baz=13						
E20A	Meyer Farm, Mu	13.32	57	⇑P	Pn	07 57 11.2	-0.1
	baz=13						
A18A	Metzger Ranch,	13.41	46	⇑P	Pn	07 57 11.9	-0.7
	baz=14						
K22A	Casper	13.61	75	⇓P	Pn	07 57 14.0	-1.5
	baz=14						
O22A	Kremmling	13.67	85	⇑P	Pn	07 57 16.6	+0.2
	baz=14						
I22A	9 Mile Ranch,	13.77	69	⇓P	Pn	07 57 15.0	-2.6
	baz=14						
S22A	4UR Ranch, Cre	13.94	95	⇓P	Pn	07 57 21.8	+1.7
	baz=14						
X20A	Quemado	13.94	110	⇑P	Pn	07 57 22.8	+2.6
	baz=14						
N23A	Red Feather La	14.06	82	⇓P	Pn	07 57 20.8	-0.9
	baz=14						
L23A	Garrett	14.21	77	⇑P	Pn	07 57 22.4	-1.3
	baz=14						
D21A	La Casta Ranch	14.25	56	⇓P	Pn	07 57 23.2	-0.9
	baz=14,SNR=7.6						
X21A	Alamocita Cree	14.51	109	⇑P	Pn	07 57 27.3	-0.5
	baz=14						
D22A	Cohagen	14.80	57	⇑P	Pn	07 57 30.7	-0.8
	baz=15,SNR=11						
S24A	Houchin Ranch,	15.20	94	⇑P	Pn	07 57 37.4	+0.2
	baz=15						
ANMO	Albuquerque	15.24	105	Pn	Pn	07 57 37.0	-0.6
ANMO	Albuquerque	15.24	105	Pn	Pn	07 57 37.0	-0.6
	0.1nm,0.3s,baz=315,slow=15,SNR=3.2						
H24A	Dirks Ranch, A	15.28	67	⇓P	Pn	07 57 34.6	-3.4
	baz=15						
C23A	Lambert	15.66	55	⇓P	Pn	07 57 41.5	-1.4
	baz=16,SNR=7.5						
A22A	Carney Farms,	15.69	51	⇑P	Pn	07 57 42.9	-0.5
	baz=16						
S25A	Robets Cordova	15.79	94	⇓P	Pn	07 57 43.9	-0.9
	baz=16						
V24A	Rampart Ranch,	15.80	101	⇓P	Pn	07 57 46.0	+1.0
	baz=16						
D24A	Glendive	15.98	59	⇑P	Pn	07 57 45.4	-1.7
	baz=16						
B23A	Brockton	16.03	53	⇑P	Pn	07 57 45.2	-2.5
	baz=16,SNR=7.5						
C24A	Savage	16.05	57	⇓P	Pn	07 57 46.3	-1.7
	baz=16						
O26A	Horse Wrangler	16.12	84	⇓P	Pn	07 57 48.5	-0.4
	baz=16						
P26A	Davis Ranch, A	16.19	86	⇑P	Pn	07 57 51.0	+1.1
	baz=16						
R26A	Arlington	16.38	91	⇑P	Pn	07 57 53.3	+1.1
	baz=16						
Y24A	Capitan	16.46	107	⇓P	Pn	07 57 54.2	+0.8
	baz=16						
P27A	Ficken Ranch,	16.78	86	⇓P	Pn	07 57 56.9	-0.4
	baz=17						
KSCO	Kaye Shedlock’	16.84	88	⇑P	Pn	07 57 57.3	-0.8
	baz=17						
J28A	Allard Ranch,	17.52	72	⇑P	Pn	07 58 04.7	-1.9
	baz=18						
R28A	Tribune	17.62	89	⇑P	Pn	07 58 07.7	-0.1
	baz=18						
S28A	Manter	17.74	92	⇑P	Pn	07 58 08.9	-0.4
	baz=18						
Q29A	Oakley	18.13	87	⇓P	Pn	07 58 13.1	-0.9
	baz=18,SNR=7.7						
DLBC	Dease Lake	18.40	351	LR	LR	08 05 30.7	
	comp=Z,20nm,20.3s,baz=332,slow=38						
626A	Big Bend Ranch	19.81	117	⇓P	P	07 58 33.5	+0.7
	baz=20						
428A	Kincaid Ranch,	20.12	112	⇓P	Pn	07 58 39.8	+1.7
	baz=20						
329A	Wagon Wheel Ra	20.20	109	⇓P	Pn	07 58 39.9	+0.9
	baz=20						
TXAR	Lajitas Array	20.26	117	P	P	07 58 38.5	+0.7
TXAR	Lajitas Array	20.26	117	P	P	07 58 38.5	+0.7
	1.5nm,0.9s,baz=301,slow=10,SNR=13						
528A	Cox Ranch, San	20.37	113	⇓P	Pn	07 58 42.2	+1.1
	baz=20						
627A	Terlingua Ranc	20.38	116	⇓P	Pn	07 58 42.0	+0.8
	baz=20						
628A	Black Gap, Mar	20.70	115	⇓P	Pn	07 58 44.3	-0.6
	baz=21						
FFC	Flin Flon	20.73	39	*e*P	P	07 58 41.5	-1.0
	3.7nm,0.8s						
429A	Davenport Ranc	20.74	111	⇓P	Pn	07 58 46.5	+1.2
	baz=21						
529A	Stev Forest Ra	20.79	113	⇑P	Pn	07 58 46.8	+0.8
	baz=21						
330A	Mertzon	20.83	108	⇑P	Pn	07 58 45.2	-1.2
	baz=21						
430A	Baggett Ranch,	21.12	110	⇓P	P	07 58 48.4	+1.4
	baz=21						
Z32A	Haskell	21.16	102	⇑P	P	07 58 47.8	+0.5
	baz=21						
530A	J-C Ranch, Com	21.40	111	⇓P	P	07 58 50.7	+0.7
	baz=21						
431A	Sonora	21.63	109	⇑P	P	07 58 54.6	+2.1
	baz=22						
AGMN	Agassiz Nation	21.82	59	*e*P	P	07 58 54.5	+0.2
	4.7nm,0.8s						
332A	Millersview	21.89	107	⇑P	P	07 58 53.9	-1.3
	baz=22						
531A	Rocksprings	21.96	110	⇑P	P	07 58 57.8	+1.8
	baz=22						
631A	Perdido Creek	22.37	112	⇓P	P	07 59 00.6	+0.3
	baz=22						
632A	Uvalde	22.88	111	⇑P	P	07 59 07.5	+1.8
	baz=23						
YKA	Yellowknife Ar	22.90	12	P	P	07 59 05.9	+0.3
YKA	Yellowknife Ar	22.90	12	P	P	07 59 05.9	+0.3
	0.7nm,0.6s,baz=199,slow=11,SNR=11						
ILAR	Eielson Array	27.64	339	P	P	07 59 47.1	-2.3
ILAR	Eielson Array	27.64	339	P	P	07 59 47.1	-2.3
	0.2nm,0.8s,baz=128,slow=5.9,SNR=4.7						
NB2	NORSAR Subarra	72.65	21	P	P	08 05 29.5	+0.2
	comp=Z,2.1nm,0.8s,baz=326,slow=5.9						
NOA	NORSAR Array B	72.65	21	P	P	08 05 29.7	+0.4
NOA	NORSAR Array B	72.65	21	P	P	08 05 29.7	+0.4
	comp=Z,1.1nm,0.7s,baz=326,slow=6.0,SNR=3.9						
KURK	Kurchatov	87.03	346	P	P	08 06 47.5	+0.2
KURBB	Kurchatov Arra	87.14	346	P	P	08 06 47.5	-0.3
	comp=Z,0.5nm,0.5s,baz=14,slow=4.9,SNR=6.5						

IDC 08 08:01:01.2±0.7**,41.°76S×79.°74E,h0**km**,mb4.1**/11**, mb1 4.2**/11**,mb1mx4.0**/21**,mbtmp4.1**/11**,MS3.7**/14**, Ms1 3.7**/14**,ms1mx3.4**/39**,Error ellipse: s-maj=27.3km s-min=17.5km az=105.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAW	Mawson	27.47	194	P	P	08 06 48.3	-0.2
	2.7nm,1.1s,baz=40,slow=16,SNR=2.9						
MAW				LR	LR	08 15 08.3	
	comp=Z,158nm,21.2s,baz=16,slow=31						
BOSA	Boshof	45.71	269	LR	LR	08 24 45.3	
	comp=Z,105nm,18.1s,baz=282,slow=31						
SUR	Sutherland	47.13	261	LR	LR	08 26 39.2	
	comp=Z,62nm,19.2s,baz=222,slow=33						
VNDA	Vanda	47.93	163	P	P	08 09 41.0	+0.2
	0.6nm,0.8s,baz=231,slow=9.9,SNR=4.1						
VNDA				LR	LR	08 28 24.9	
	comp=Z,208nm,20.5s,baz=273,slow=34						
ASAR	Alice Springs	48.21	86	P	P	08 09 43.9	+0.2
	2.9nm,0.9s,baz=229,slow=7.2,SNR=18						
QSPA	South Pole Qui	48.40	180	P	P	08 09 44.6	-0.1
	13nm,1.0s,baz=294,slow=5.1,SNR=22						
QSPA				LR	LR	08 28 06.9	
	comp=Z,288nm,20.0s,baz=126,slow=34						
SNAA	Sanae	48.70	205	P	P	08 09 46.9	+0.1
	0.9nm,1.0s,baz=131,slow=4.7,SNR=4.2						
SNAA				LR	LR	08 25 43.0	
	comp=Z,20nm,20.6s,baz=14,slow=30						
STKA	Stephens Creek	49.54	100	P	P	08 09 54.1	+0.4
	3.9nm,1.0s,baz=282,slow=11,SNR=4.3						
WRA	Warramunga Arr	50.75	82	P	P	08 10 02.5	-0.6
	4.3nm,1.0s,baz=231,slow=7.3,SNR=14						
TSUM	Tsumeb	56.83	273	LR	LR	08 32 17.0	
	comp=Z,77nm,18.6s,baz=143,slow=33						
CMAR	Chiang Mai Arr	62.50	21	P	P	08 11 26.9	+0.5
	2.6nm,0.8s,baz=213,slow=7.2,SNR=8.2						
CMAR				LR	LR	08 34 19.7	
	comp=Z,63nm,19.7s,baz=49,slow=32						
DZM	Mont Dzumac	73.28	105	LR	LR	08 40 11.4	
	comp=Z,59nm,20.8s,baz=232,slow=32						
JNU	Nakatsue	88.11	41	LR	LR	08 52 10.6	
	comp=Z,23nm,19.8s,baz=104,slow=35						
MKAR	Makanchi Array	88.20	2	P	P	08 13 52.8	-0.8
	0.3nm,0.7s,baz=214,slow=4.9,SNR=2.2						
MKAR				LR	LR	08 49 59.9	
	comp=Z,38nm,20.4s,baz=353,slow=33						
TORD	Torodi Ar. Bea	89.94	288	LR	LR	08 52 13.8	
	comp=Z,57nm,19.0s,baz=145,slow=34						
KSRS	Korea Array	90.28	36	P	P	08 14 04.0	+0.5
	0.7nm,0.6s,baz=208,slow=7.2,SNR=4.2						
DBIC	Dimbokro	90.38	279	LR	LR	08 50 49.1	
	comp=Z,38nm,18.2s,baz=322,slow=33						
BRTR	Keskin Array B	91.28	326	P	P	08 14 09.8	+1.5
	0.6nm,0.6s,baz=160,slow=3.9,SNR=3.7						
KURBB	Kurchatov Arra	92.01	359	P	P	08 14 11.2	0.0
	0.8nm,0.7s,baz=192,slow=4.3,SNR=8.0						
SONM	Songino Array	92.29	18	LR	LR	08 56 19.3	
	comp=Z,37nm,19.7s,baz=245,slow=36						
ILAR	Eielson Array	145.06	33	PKP	PKPbc	08 20 37.2	-1.6
	1.2nm,0.8s,baz=289,slow=3.8,SNR=11						
INK	Inuvik	148.06	23	PKPbc	PKPdf	08 20 45.3	+1.1
	3.2nm,0.9s,baz=48,slow=1.0,SNR=6.6						

*CSEM **08** 08:04:54.0,42.°39N×13.°40E,h9km,MD1.8/6,After ROM*
ROM 08 08:04:54.0±0.2**,42.°39N×13.°40E,h9**km±2km**,Md1.8**/6**, Ml1.1**/2**,Error ellipse: s-maj=2.9km s-min=2.2km az=58.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	L’Aquila	0.03	173	Pg	Pg	08 04 55.9	+0.1
AQU				Sg	Sg	08 04 56.7	-0.5
	1µm,0.2s						
AQU	L’Aquila	0.03	173	Pg	Pg	08 04 55.9	+0.1
AQU				Sg	Sg	08 04 56.7	-0.5
	1µm,0.2s						
CAMP	Campotosto	0.15	3	Pg	Pg	08 04 58.2	+0.7
CAMP				Sg	Sg	08 05 01.1	+1.2
	31nm,0.2s						
CAMP	Campotosto	0.15	3	Pg	Pg	08 04 58.2	+0.7
CAMP				Sg	Sg	08 05 01.1	+1.2
	31nm,0.2s						
FAGN	Fagnano	0.18	131	Pg	Pg	08 04 59.3	+1.3
FAGN				Sg	Sg	08 05 01.9	+1.2
FAGN	Fagnano	0.18	131	Pg	Pg	08 04 59.3	+1.3
FAGN				Sg	Sg	08 05 01.9	+1.2
TERO	Teramo	0.28	33	Pg	Pg	08 05 00.3	+0.5
TERO				Sg	Sg	08 05 04.7	+1.0
	26nm,0.5s						
TERO	Teramo	0.28	33	Pg	Pg	08 05 00.3	+0.5
TERO				Sg	Sg	08 05 04.7	+1.0
	26nm,0.5s						

BUC 08 08:06:59.8±0.6**,45.°31N×25.°13E,h2**km**,MD2.1**/2**,6C-3D, Error ellipse: s-maj=9.1km s-min=4.1km az=127.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTUR	Matau	0.10	210	⇑*i*P	Pg	08 07 02.0	+0.2
MTUR	Matau	0.10	210	⇑*i*P	Pg	08 07 02.0	+0.2
VOIR		0.14	336	⇑*i*P	Pg	08 07 02.8	+0.1
VOIR				S	Sg	08 07 05.8	+1.1
VOIR		0.14	336	⇑*i*P	Pg	08 07 02.8	+0.1
VOIR				*i* S	Sg	08 07 05.8	+1.1
ARR	Arges	0.36	280	⇓*i*P	Pg	08 07 06.6	-0.2
ARR				S	Sg	08 07 10.6	-0.9
MLR	Muntele Rosu	0.60	72	⇓*i*P	Pg	08 07 12.3	+0.8
MLR	Muntele Rosu	0.60	72	⇓*i*P	Pg	08 07 12.3	+0.8
MLR				*i* S	Sg	08 07 20.6	+1.1
DOPR	Dopca	0.68	15	⇑*i*P	Pg	08 07 13.5	+0.5
DOPR	Dopca	0.68	15	⇑*i*P	Pg	08 07 13.5	+0.5
DOPR				*i* S	Sg	08 07 22.9	+1.0

IDC 08 08:24:23.8±0.9**,55.°80S×27.°44W,h0**km**,mb3.9**/4**, mb1 4.0**/5**,mb1mx3.9**/17**,mbtmp3.9**/5**,ML3.9**/1**,Error ellipse: s-maj=38.0km s-min=23.7km az=66.0,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	19.03	156	P	Pn	08 28 48.3	+0.7
	0.4nm,0.3s,baz=319,slow=12,SNR=82						
CPUP	Villa Florida	36.54	311	P	P	08 31 31.2	+0.3
	0.1nm,0.3s,baz=145,slow=16,SNR=3.2						
VNDA	Vanda	46.81	183	P	P	08 32 54.6	+0.1
	0.9nm,0.6s,baz=202,slow=3.8,SNR=5.3						
LPAZ	La Paz	50.12	305	P	P	08 33 22.1	+0.6
	0.9nm,0.5s,baz=147,slow=2.6,SNR=8.9						
TORD	Torodi Ar. Bea	72.91	30	P	P	08 35 55.4	+0.8
	1.4nm,0.6s,baz=202,slow=6.6,SNR=22						
ILAR	Eielson Array	149.84	312	PKPbc	PKPbc	08 44 12.2	-2.0
	1.4nm,0.7s,baz=124,slow=3.3,SNR=17						
SONM	Songino Array	150.85	86	PKPbc	PKPbc	08 44 15.5	-1.8
	0.9nm,0.5s,baz=215,slow=4.3,SNR=3.8						

IDC 08 08:25:44.5±0.8**,48.°93S×121.°25E,h0**km**,mb4.0**/9**, mb1 4.2**/9**,mb1mx4.1**/16**,mbtmp4.0**/9**,MS3.5**/11**, Ms1 3.5**/11**,ms1mx3.2**/29**,Error ellipse: s-maj=42.0km s-min=16.1km az=107.0,Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	16.27	348	LR	LR	08 34 16.6	
	comp=Z,233nm,20.5s,baz=176,slow=32						
STKA	Stephens Creek	22.91	49	P	P	08 30 50.6	+0.7
	2.7nm,0.9s,baz=249,slow=14,SNR=3.3						
STKA				LR	LR	08 38 03.6	
	comp=Z,139nm,19.6s,baz=204,slow=32						
ASAR	Alice Springs	27.12	26	P	P	08 31 29.6	+0.3
	2.5nm,0.9s,baz=197,slow=9.1,SNR=12						
ASAR				LR	LR	08 40 55.2	
	comp=Z,191nm,20.2s,baz=167,slow=34						
WRA	Warramunga Arr	30.78	25	P	P	08 32 00.8	-0.9
	2.0nm,1.1s,baz=197,slow=11,SNR=3.3						
FITZ	Fitzroy Crossi	30.96	8	LR	LR	08 43 02.6	
	comp=Z,72nm,19.9s,baz=256,slow=34						
VNDA	Vanda	32.58	165	P	P	08 32 17.6	+0.7
	0.8nm,0.8s,baz=318,slow=8.2,SNR=4.5						
VNDA				LR	LR	08 44 30.6	
	comp=Z,125nm,19.7s,baz=348,slow=35						
MAW	Mawson	34.22	215	P	P	08 32 31.2	-0.1
	3.7nm,1.0s,baz=65,slow=16,SNR=4.0						
MAW				LR	LR	08 44 37.8	
	comp=Z,49nm,19.7s,baz=188,slow=33						
RPZ	Rata Peaks	34.28	100	LR	LR	08 43 00.3	
	comp=Z,123nm,20.6s,baz=342,slow=30						
QSPA	South Pole Qui	41.19	180	P	P	08 33 30.8	+0.3
	4.2nm,1.0s,baz=344,slow=4.0,SNR=8.8						
QSPA				LR	LR	08 50 04.7	
	comp=Z,100nm,19.2s,baz=176,slow=35						
HNR	Honiara	50.94	53	LR	LR	08 54 48.5	
	comp=Z,58nm,19.2s,baz=112,slow=34						
SNAA	Sanae	53.40	199	P	P	08 35 04.6	-0.8
	1.5nm,1.1s,baz=115,slow=8.3,SNR=6.0						
SNAA				LR	LR	08 56 39.8	
	comp=Z,46nm,19.2s,baz=122,slow=35						
CMAR	Chiang Mai Arr	69.97	337	P	P	08 36 58.5	+0.9
	1.2nm,0.6s,baz=189,slow=6.3,SNR=5.9						
JHJ	Hachijo jima 2	83.34	16	LR	LR	09 12 02.7	
	comp=Z,3.6nm,20.3s,baz=75,slow=33						
MJAR	Matsushiro Arr	86.43	14	P	P	08 38 28.0	-0.4
	0.3nm,0.4s,baz=201,slow=6.7,SNR=4.1						
PDAR	Pinedale Array	144.63	80	PKP	PKPab	08 45 20.6	-0.8
	1.4nm,1.1s,baz=184,slow=3.9,SNR=6.4						
YKA	Yellowknife Ar	146.89	45	PKPbc	PKPdf	08 45 26.5	+0.9
	1.1nm,0.9s,baz=267,slow=2.3,SNR=11						

IDC 08 08:26:40.6±2.2**,6.°47S×130.°77E,h0**km**,mb3.5**/1**, mb1 4.1**/4**,mb1mx3.7**/19**,mbtmp3.9**/4**,ML4.1**/3**,Error ellipse: s-maj=86.0km s-min=28.3km az=78.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.60	203	Pn	Pn	08 29 42.7	+1.4
	1.0nm,0.3s,baz=28,slow=12,SNR=46						
FITZ				Sn	Sn	08 31 53.6	-8.8
	1.1nm,0.3s,baz=161,slow=16,SNR=4.5						
WRA	Warramunga Arr	13.83	166	Pn	Pn	08 29 56.8	-1.4
	0.7nm,0.3s,baz=347,slow=14,SNR=55						
WRA				Sn	Sn	08 32 20.6	-12
	1.2nm,0.3s,baz=347,slow=24,SNR=10						
ASAR	Alice Springs	17.36	170	P	Pn	08 30 44.6	0.0
	0.6nm,0.3s,baz=355,slow=13,SNR=25						
ASAR				S	Sn	08 33 47.4	-11
	0.3nm,0.3s,baz=356,slow=27,SNR=6.9						
MKAR	Makanchi Array	68.21	326	P	P	08 37 43.1	0.0
	0.2nm,0.3s,baz=114,slow=6.9,SNR=6.9						

IDC 08 08:32:22.0±1.6**,8.°15S×130.°96E,h0**km**,mb4.1**/2**, mb1 4.0**/5**,mb1mx3.7**/19**,mbtmp3.9**/5**,ML3.7**/3**,Error ellipse: s-maj=67.6km s-min=22.0km az=78.0,Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.17	207	Pn	Pn	08 35 01.7	-1.4
	0.5nm,0.3s,baz=28,slow=12,SNR=7.4						
FITZ				Sn	Sn	08 36 58.9	-10
	1.5nm,0.3s,baz=130,slow=20,SNR=8.0						
WRA	Warramunga Arr	12.18	165	Pn	Pn	08 35 18.4	+1.5
	0.5nm,0.3s,baz=350,slow=13,SNR=5.4						
WRA				Sn	Sn	08 37 32.5	-1.0
	1.6nm,0.3s,baz=341,slow=22,SNR=9.5						
ASAR	Alice Springs	15.69	170	Pn	Pn	08 36 05.5	+0.9
	0.4nm,0.3s,baz=344,slow=9.2,SNR=7.9						
ASAR				Sn	Sn	08 39 00.1	+0.8
	0.3nm,0.3s,baz=356,slow=25,SNR=5.1						
MKAR	Makanchi Array	69.70	327	P	P	08 43 34.0	+0.3
	1.7nm,0.5s,baz=127,slow=7.5,SNR=27						
ZALV	Zalesovo Beam	73.03	334	P	P	08 43 53.1	-0.5
	0.5nm,0.4s,baz=116,slow=6.6,SNR=4.2						

*ISK **08** 08:42:17.6,37.°31N×28.°25E,h5km,MD2.5*
*ISCJB **08** 08:42:18.8±0.9,37.°24N±0.°06×28.°26E±0.°06,h13km±6km, Error ellipse: s-maj=10.9km s-min=6.2km az=37.1*
*CSEM **08** 08:42:18.7±0.3,37.°24N×28.°28E,h15km,MD2.5,Error ellipse: s-maj=7.6km s-min=4.9km az=45.0*
*DDA **08** 08:42:19.4,37.°19N×28.°13E,h7km,MD2.5*
ISC 08 08:42:18.6±1.1**,37.°28N**±0.°05×**28.°27E**±0.°04**,h11**km±10km**, n10,σ0.s46**/20**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.15	176	*e*PG	Pg	08 42 22.0	-0.1
YER				*e*SG	Sg	08 42 24.5	0.0
YER	Yerkesik	0.15	176	*e*Pg	Pg	08 42 22.0	-0.1
YER				*e*Sg	Sg	08 42 24.5	0.0
TURN	Turunc	0.49	147	*i* P	Pg	08 42 27.4	-0.8
TURN				*i* S	Sg	08 42 34.8	+0.2
TURN	Turunc	0.49	147	*i* P	Pg	08 42 27.4	-0.8
TURN				*i* S	Sg	08 42 34.8	+0.2
AYDN	Tasoluk	0.49	321	*i* P	Pb	08 42 29.6	+0.2
AYDN				*i* S	Sb	08 42 37.0	+0.4
AYDN	Tasoluk	0.49	321	*i* P	Pb	08 42 29.6	+0.2
AYDN				*i* S	Sb	08 42 37.0	+0.4
DAT	Datca	0.78	225	*e*PG	Pg	08 42 33.8	0.0
DAT				*e*SG	Sb	08 42 45.3	+0.2
DAT	Datca	0.78	225	*e*Pg	Pg	08 42 33.8	0.0
DAT				*e*Sg	Sb	08 42 45.3	+0.2
BODT	Bodrum	0.80	254	*e*PG	Pg	08 42 33.2	-0.9
BODT				*e*SG	Sg	08 42 44.4	-0.1
BODT	Bodrum	0.80	254	*e*Pg	Pg	08 42 33.2	-0.9
BODT				*e*Sg	Sg	08 42 44.4	-0.1

*IDC **08** 08:42:32.2±0.8,60.°46S×26.°57W,h0km,mb4.1/8, mb1 4.2/9,mb1mx4.0/19,mbtmp4.1/9,ML4.1/1,MS3.5/4, Ms1 3.5/4,ms1mx3.1/19,Error ellipse: s-maj=33.4km s-min=17.3km az=50.0*
*ISCJB **08** 08:42:33.4±0.7,60.°5S±0.°1×26.°5W±0.°4,h20km,mb4.0/8, MS3.5/4,Error ellipse: s-maj=31.9km s-min=10.4km az=142.4*
ISC 08 08:42:35.3±0.8**,60.°4S**±0.°2×**26.°5W**±0.°2**,h20**km**,n16, σ0.s94**/14**,mb4.1**/8**,MS3.5**/4**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.67	152	*e*Pn	Pn	08 45 34.9	+0.9
SNAA	Sanae	14.67	150	*e*Pn	Pn	08 46 00.8	-0.5
SNAA	Sanae	14.67	150	*e*Sn	Sn	08 48 34.2	-8.8
SNAA	Sanae	14.67	150	Pn	Pn	08 46 00.9	-0.5
	0.7nm,0.3s,baz=317,slow=14,SNR=74						
QSPA	South Pole Qui	29.82	180	P	P	08 48 41.8	+1.2
	0.8nm,0.8s,baz=182,slow=4.4,SNR=3.1						
PLCA	Paso Flores	33.35	286	P	P	08 49 11.8	+0.1
	1.2nm,0.7s,baz=128,slow=11,SNR=4.3						
PLCA				LR	LR	09 00 24.7	
	comp=Z,85nm,20.3s,baz=355,slow=32						
MAW	Mawson	36.48	140	P	P	08 49 36.6	-1.8
	2.7nm,0.7s,baz=301,slow=15,SNR=8.1						
MAW				LR	LR	09 02 45.8	
	comp=Z,70nm,19.0s,baz=82,slow=33						
CFAA	Coronel Fontan	39.76	297	P	P	08 50 05.9	-0.5
	0.9nm,0.7s,baz=159,slow=6.7,SNR=40						
CPUP	Villa Florida	40.06	314	P	P	08 50 08.6	-0.3
	1.1nm,0.3s,baz=142,slow=6.5,SNR=14						
CPUP				LR	LR	09 05 24.8	
	comp=Z,62nm,18.8s,baz=58,slow=34						
SIV	San Ignacio	50.90	315	P	P	08 51 34.2	-0.7
	1.6nm,0.5s,baz=193,slow=8.3,SNR=19						
LPAZ	La Paz	53.26	307	P	P	08 51 53.6	+0.5
	1.8nm,0.5s,baz=88,slow=9.7,SNR=19						
KMBO	Kilima Mbogo	76.33	67	LR	LR	09 24 43.9	
	comp=Z,28nm,19.6s,baz=96,slow=33						
TORD	Torodi Ar. Bea	76.72	28	P	P	08 54 26.2	+1.4
	2.9nm,0.5s,baz=199,slow=6.3,SNR=71						
YKA	Yellowknife Ar	139.59	314	PKP	PKPdf	09 01 59.8	+0.2
	0.3nm,0.6s,baz=128,slow=1.9,SNR=4.7						
INK	Inuvik	149.32	316	PKPbc	PKPbc	09 02 20.0	-0.7
	1.4nm,0.9s,baz=150,slow=0.8,SNR=3.3						
ILAR	Eielson Array	153.13	305	PKPbc	PKPbc	09 02 29.9	+0.1
	0.5nm,0.8s,baz=151,slow=2.1,SNR=6.6						

*ISCJB **08** 09:36:16.8±0.7, 6°.21S±0°.10×127°.9E±0°.1, h450km, mb3.5/5, Error ellipse: s-maj=21.1km s-min=10.8km az=155.0*
*IDC **08** 09:36:16.1±2.7, 6°.25S×127°.89E, h425km±34km, mb3.2/5, mb1 3.5/8, mb1mx3.3/20, mbtmp3.4/8, Error ellipse: s-maj=34.7km s-min=11.0km az=72.0*
*AUST **08** 09:36:29.2, 7°.49S×128°.54E, h450km*
ISC 08 09:36:17.7±0.8, 6°.27S±0°.09×127°.9E±0°.1, h450km, n20, σ1s.76/18, mb3.4/5, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MTN	Manton Dam	7.26	154	P	P	09 38 02.3	-2.9
	baz=5.9,SNR=35						
KDU	Kakadu	7.79	145	P	P	09 38 08.6	-2.4
	baz=6.5,SNR=53						
WSI	Waingapu	8.29	245	S	S	09 40 10.4	+17
	baz=8.4,SNR=5.3						
KNRA	Kununurra	9.39	175	P	P	09 38 26.2	-2.0
	baz=8.2,SNR=9.5						
FITZ	Fitzroy Crossi	11.98	191	P	P	09 38 53.8	-2.6
	0.2nm,0.3s,baz=43,slow=9.8,SNR=8.9						
FITZ	Fitzroy Crossi	11.98	191	P	P	09 38 54.2	-2.1
	baz=11,SNR=4.2						
WRA	Warramunga Arr	14.95	156	P	P	09 39 27.4	-1.0
	3.8nm,0.3s,baz=333,slow=11,SNR=270						
COEN	Coen	16.83	118	P	P	09 39 48.4	+0.1
	baz=16,SNR=30						
QIS	Mount Isa	18.16	143	P	P	09 40 02.1	-0.1
	baz=17,SNR=33						
ASAR	Alice Springs	18.23	162	P	P	09 40 02.4	-0.4
	5.4nm,0.3s,baz=346,slow=12,SNR=408						
ASAR				S	S	09 43 08.5	+1.3
	0.1nm,0.3s,baz=342,slow=20,SNR=9.0						
MTSU	Mount Surprise	19.86	128	P	P	09 40 19.9	+1.8
	baz=19,SNR=4.9						
CISI	Cisompet, Garu	20.02	265	P	P	09 40 34.8	+15
	baz=20,SNR=3.4						
MEEK	Meekatharra	22.12	203	P	P	09 40 39.7	+1.2
	baz=21,SNR=8.0						
STKA	Stephens Creek	28.50	155	P	P	09 41 36.4	+1.4
	1.6nm,0.3s,baz=342,slow=11,SNR=17						
STKA	Stephens Creek	28.50	155	P	P	09 41 36.5	+1.4
	baz=27,SNR=13						
CMAR	Chiang Mai Arr	37.70	311	P	P	09 42 53.8	+0.2
	1.1nm,0.7s,baz=132,slow=7.2,SNR=4.6						
MJAR	Matsushiro Arr	43.66	12	P	P	09 43 39.3	-1.8
	0.4nm,0.4s,baz=188,slow=9.6,SNR=4.6						
PETK	Petropavlovsk-	64.29	19	P	P	09 46 09.0	+1.5
	1.6nm,0.6s,baz=180,slow=4.4,SNR=5.1						
MKAR	Makanchi Array	66.50	328	P	P	09 46 21.6	0.0
	0.4nm,0.4s,baz=109,slow=8.6,SNR=7.8						
KMBO	Kilima Mbogo	90.56	269	P	P	09 48 35.8	+4.0
	baz=91,SNR=3.8						

*ISCJB **08** 09:38:48.0±1.2, 53°.3S±0°.2×117°.1W±0°.4, h10km, mb3.9/6, MS4.2/16, Error ellipse: s-maj=41.2km s-min=17.3km az=26.2*
*IDC **08** 09:38:48.8±0.9, 53°.28S×117°.13W, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.8/17, mbtmp3.7/6, MS4.2/16, Ms1 4.2/16, ms1mx4.1/23, Error ellipse: s-maj=32.1km s-min=22.1km az=117.0*
*NEIC **08** 09:38:50.1±0.6, 53°.38S×116°.87W, h10km, mb4.5/3, Error ellipse: s-maj=24.1km s-min=15.3km az=119.0*
*GCMT **08** 09:38:57.8±0.2, 53°.18S×117°.97W, h15km±1km, MW5.1, Moment Tensor Solution. s54,c78; s87,c146; Moment tensor: Scale 10^16Nm; Mrr-0.57±.15; Mθθ-3.11±.15; Mφφ3.68±.14; Mrθ-0.88±.43; Mθφ-4.60±.13; Mφr-1.02±.41; Best double couple: M0 5.90000×10^16 NP1:φs109.00000°, δ77.00000°, λ-173.00000°. NP2:φs17.00000°, δ84.00000°, λ-13.00000°. Principal axes: T 6.0400, Plg5.0000°, Azm64.0000°; N -0.3000, Plg76.0000°, Azm172.0000°; P -5.7400, Plg14.0000°, Azm333.0000°; Data Used: II IU IC G CN.*
ISC 08 09:38:50.1±0.8, 53°.3S±0°.1×117°.0W±0°.2, h10km, n35, σ1s.09/21, mb3.9/6, MS4.3/16, Southern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USHA	Ushuaia	28.08	113	LR	LR	09 51 37.7	
	comp=Z,135nm,20.3s,baz=358,slow=27						
PMSA	Palmer Station	28.62	134	LR	LR	09 53 04.6	
	comp=Z,572nm,21.7s,baz=95,slow=30						
PLCA	Paso Flores	33.47	87	LR	LR	09 56 23.3	
	comp=Z,318nm,21.4s,baz=217,slow=31						
VNDA	Vanda	36.77	201	P	P	09 45 55.9	-1.2
VNDA	Vanda	36.77	201	P	P	09 45 55.9	-1.2
	1.1nm,0.9s,baz=119,slow=4.3,SNR=2.9						
QSPA	South Pole Qui	36.87	180	eP	P	09 45 58.5	+0.2
	6.2nm,1.0s						
QSPA	South Pole Qui	36.87	180	P	P	09 45 58.1	-0.2
	2.1nm,0.9s,baz=155,slow=3.5,SNR=5.3						
SNAA	Sanae	47.05	157	eP	P	09 47 19.8	-1.4
	6.4nm,1.1s						
SNAA	Sanae	47.05	157	P	P	09 47 23.9	+2.6
	0.4nm,0.6s,baz=228,slow=4.8,SNR=10						
CPUP	Villa Florida	51.33	83	P	P	09 47 55.2	+0.8
CPUP	Villa Florida	51.33	83	P	P	09 47 55.2	+0.8
	0.2nm,0.4s,baz=229,slow=19,SNR=2.4						
LPAZ	La Paz	52.99	65	eP	P	09 48 06.8	-0.8
	9.0nm,1.4s						
LPAZ	La Paz	52.99	65	P	P	09 48 07.5	-0.1
	3.3nm,1.2s,baz=215,slow=17,SNR=4.7						
LPAZ				LR	LR	10 05 56.7	
	comp=Z,246nm,18.3s,baz=273,slow=31						
MAW	Mawson	59.39	180	LR	LR	10 12 57.8	
	comp=Z,168nm,18.9s,baz=172,slow=34						
BDFB	Brasilia	65.06	83	LR	LR	10 15 28.8	
	comp=Z,340nm,18.4s,baz=330,slow=34						
ROSC	El Rosal	68.15	47	eP	P	09 49 49.5	-1.3
ROSC	El Rosal	68.15	47	LR	LR	10 14 46.8	
	comp=Z,165nm,21.1s,baz=222,slow=32						
STKA	Stephens Creek	71.36	242	LR	LR	10 14 10.9	
	comp=Z,264nm,21.7s,baz=204,slow=30						
HNR	Honiara	78.36	270	LR	LR	10 17 42.2	
	comp=Z,67nm,20.6s,baz=106,slow=30						
ASAR	Alice Springs	81.98	241	LR	LR	10 21 49.7	
	comp=Z,240nm,20.1s,baz=146,slow=32						
TXAR	Lajitas Array	83.13	12	P	P	09 51 16.2	+0.4
TXAR	Lajitas Array	83.13	12	P	P	09 51 16.2	+0.4
	0.6nm,1.2s,baz=189,slow=2.4,SNR=3.7						
TXAR				LR	LR	10 20 25.7	
	comp=Z,47nm,21.2s,baz=185,slow=30						
FITZ	Fitzroy Crossi	90.86	238	LR	LR	10 27 55.2	
	comp=Z,112nm,19.3s,baz=149,slow=32						
NVAR	Mina Array Bea	91.39	359	LR	LR	10 25 16.6	
	comp=Z,189nm,19.4s,baz=142,slow=30						
BOSA	Boshof	92.05	147	LR	LR	10 26 06.3	
	comp=Z,162nm,20.0s,baz=182,slow=31						
YBH	Yreka Blue Hor	94.81	356	LR	LR	10 27 59.7	
	comp=Z,118nm,18.3s,baz=175,slow=31						
PDAR	Pinedale Array	95.93	6	LR	LR	10 28 14.1	
	comp=Z,87nm,21.2s,baz=14,slow=31						
ILAR	Eielson Array	120.00	346	PKP	PKPdf	09 57 38.5	-0.8
ILAR	Eielson Array	120.00	346	PKP	PKPdf	09 57 38.5	-0.8
	0.2nm,0.9s,baz=145,slow=3.3,SNR=2.9						
SONM	Songino Array	152.24	276	PKPbc	PKPbc	09 58 46.2	+1.0
SONM	Songino Array	152.24	276	PKPbc	PKPbc	09 58 46.2	+1.0
	1.7nm,0.7s,baz=152,slow=4.4,SNR=3.9						
BRTR	Keskin Array B	155.85	112	PKPab	PKPab	09 59 10.8	+0.1
BRTR	Keskin Array B	155.85	112	PKPab	PKPab	09 59 10.8	+0.1
	0.2nm,0.3s,baz=191,slow=2.3,SNR=3.1						
MKAR	Makanchi Array	166.01	250	PKPab	PKPab	09 59 55.8	+1.0
MKAR	Makanchi Array	166.01	250	PKPab	PKPab	09 59 55.8	+1.0
	1.7nm,0.8s,baz=114,slow=5.9,SNR=7.8						

IDC 08 09:47:00.5±3.2, 7°.10S×129°.17E, h105km±30km, mb3.7/12, mb1 3.9/15, mb1mx3.8/22, mbtmp3.8/15, MS2.6/1, Ms1 2.6/1, ms1mx2.2/34, Error ellipse: s-maj=26.5km s-min=12.6km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPI	Kappang	9.59	282	LR	LR	09 53 03.2	
	comp=Z,33nm,18.6s,baz=168,slow=38						
FITZ	Fitzroy Crossi	11.46	197	P	Pn	09 49 41.8	+0.9
	1.1nm,0.3s,baz=43,slow=12,SNR=39						
FITZ				S	Sn	09 51 40.4	-6.6
	5.1nm,0.3s,baz=262,slow=23,SNR=9.4						
WRA	Warramunga Arr	13.71	159	P	Pn	09 50 09.2	-1.4
	2.5nm,0.3s,baz=337,slow=13,SNR=92						
WRA				S	Sn	09 52 31.8	-10
	4.1nm,0.3s,baz=332,slow=23,SNR=8.7						
ASAR	Alice Springs	17.08	165	P	P	09 50 54.0	+0.9
	1.7nm,0.3s,baz=343,slow=9.7,SNR=210						
ASAR				S	Sn	09 53 50.4	-13
	0.7nm,0.3s,baz=330,slow=14,SNR=4.3						
CTA	Charters Tower	21.00	130	P	P	09 51 36.6	+0.9
	1.0nm,0.3s,baz=297,slow=6.8,SNR=2.7						
STKA	Stephens Creek	27.24	156	P	P	09 52 34.0	-0.7
	4.4nm,0.9s,baz=288,slow=5.2,SNR=5.0						
CMAR	Chiang Mai Arr	39.17	311	P	P	09 54 17.3	-1.1
	0.9nm,0.3s,baz=18,slow=9.2,SNR=4.2						
MJAR	Matsushiro Arr	44.24	10	P	P	09 54 58.6	-0.8
	2.8nm,0.8s,baz=186,slow=9.2,SNR=6.4						
KSRS	Korea Array	44.34	359	P	P	09 54 59.9	-0.3
	0.7nm,0.5s,baz=176,slow=9.1,SNR=4.7						
USRK	Ussuriysk Arra	51.13	3	P	P	09 55 53.0	+0.6
	1.8nm,0.7s,baz=144,slow=6.8,SNR=4.8						
PETK	Petropavlovsk-	64.68	19	P	P	09 57 26.6	-0.5
	2.0nm,0.6s,baz=188,slow=7.2,SNR=6.7						
MKAR	Makanchi Array	67.86	327	P	P	09 57 48.2	+0.6
	1.0nm,0.5s,baz=125,slow=8.0,SNR=17						
MKAR				pP	PcP	09 58 13.1	-0.3
	0.8nm,0.5s,baz=119,slow=4.9,SNR=6.5						
ZALV	Zalesovo Beam	71.31	334	P	P	09 58 08.2	-0.4
	1.4nm,0.5s,baz=123,slow=6.3,SNR=5.2						
KURBB	Kurchatov Arra	72.17	329	P	P	09 58 14.1	+0.3
	0.9nm,0.5s,baz=128,slow=4.9,SNR=12						
VNDA	Vanda	72.44	173	P	P	09 58 14.1	-0.9
	0.7nm,0.6s,baz=310,slow=5.5,SNR=5.7						
MAW	Mawson	74.55	201	P	P	09 58 27.5	+0.1
	1.3nm,0.7s,baz=27,slow=4.5,SNR=3.4						
TXAR	Lajitas Array	125.69	59	PKP	PKPdf	10 05 50.6	+0.1
	0.1nm,0.4s,baz=226,slow=2.7,SNR=3.7						
TORD	Torodi Ar. Bea	128.02	281	PKP	PKPdf	10 05 55.2	0.0
	0.6nm,0.6s,baz=93,slow=1.2,SNR=6.3						
CPUP	Villa Florida	146.17	169	PKPbc	PKPdf	10 06 28.6	+0.5
	0.3nm,0.4s,baz=107,slow=4.9,SNR=3.3						
LPAZ	La Paz	151.13	144	PKPbc	PKPbc	10 06 43.2	0.0
	1.3nm,0.3s,baz=75,slow=3.8,SNR=19						

*IDC **08** 10:23:20.3±2.4, 11°.82N×125°.60E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.6/4, Error ellipse: s-maj=222.3km s-min=22.6km az=65.0*
*ISCJB **08** 10:23:23.6±1.0, 11°.84N±0°.07×125°.81E±0°.08, h36km, mb3.7/4, Error ellipse: s-maj=12.1km s-min=9.7km az=150.8*
*MAN **08** 10:23:26, 11°.89N×125°.37E, h1km, mb4.8, ML3.7, MS3.8*
ISC 08 10:23:25.5±1.2, 11°.88N±0°.07×125°.7E±0°.1, h36km, n11, σ1s.35/14, mb3.7/4, 2D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.40	225	eP	Pn	10 23 33.8	-0.7
PLP	Palo	1.02	226	⇓eP	Pn	10 23 41.8	-1.5
PLP				eS	Sn	10 23 54.8	-1.6
CNP	Catarman	1.21	301	eP	Pn	10 23 44.6	-1.2
CNP				eS	Sn	10 24 02.7	+1.7
MSLP	Maasin	1.94	206	eP	Pn	10 23 58.4	+2.6
RCP	Roxas	2.93	264	⇓eP	Pn	10 24 10.4	+0.7
GUIM	Jordan	3.32	248	eP	Pn	10 24 15.5	+0.5
OTRP	Odiongan	3.65	278	eP	Pn	10 24 20.4	+0.9
WRA	Warramunga Arr	32.74	165	P	P	10 29 54.2	-0.9
	0.3nm,1.0s,baz=343,slow=9.2,SNR=3.2						
ASAR	Alice Springs	36.23	167	P	P	10 30 25.9	+0.6
	0.2nm,0.5s,baz=349,slow=7.5,SNR=8.9						
ASAR				PcP	PcP	10 32 50.0	-0.2
	0.4nm,0.8s,baz=340,slow=3.0,SNR=4.3						
MKAR	Makanchi Array	50.43	322	P	P	10 32 20.3	+0.8
	1.3nm,0.7s,baz=117,slow=8.6,SNR=15						
AKASG	Malin Array Be	84.98	321	P	P	10 35 56.3	-0.8
	1.0nm,0.4s,baz=68,slow=5.3,SNR=4.6						

IDC 08 10:27:22.9±2.5, 4°.50N×123°.39E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/24, mbtmp3.3/3, Error ellipse: s-maj=348.1km s-min=25.6km az=63.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.57	156	P	P	10 33 02.8	-0.1
	0.3nm,0.3s,baz=336,slow=9.6,SNR=7.9						
ASAR	Alice Springs	29.82	160	P	P	10 33 31.9	0.0
	0.1nm,0.3s,baz=333,slow=8.2,SNR=5.8						
MKAR	Makanchi Array	55.05	327	P	P	10 36 56.4	-0.1
	0.1nm,0.3s,baz=132,slow=8.8,SNR=3.0						

*ISCJB **08** 10:52:08.5±0.5, 6°.81N±0°.06×72°.99W±0°.06, h168km±6km, mb3.9/10, Error ellipse: s-maj=13.2km s-min=6.7km az=44.8*
*IDC **08** 10:52:09.6±2.0, 6°.74N×73°.07W, h164km±17km, mb3.7/10, mb1 4.0/13, mb1mx3.7/26, mbtmp3.8/13, Error ellipse: s-maj=30.8km s-min=14.9km az=77.0*
*FUNV **08** 10:52:18.3, 7°.14N×72°.55W, h134km, MW4.1*
ISC 08 10:52:08.9±0.7, 6°.86N±0°.07×72°.88W±0°.08, h157km±7km, n36, σ1s.92/40, mb3.9/10, 10C-3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	1.14	29	⇑iP	Pn	10 52 38.6	+2.8
CAPV				eS	Sn	10 52 54.5	-2.1
SOCV	Socops	2.45	55	⇓iP	Pn	10 52 52.7	+2.8
SOCV				eS	Sn	10 53 17.8	-3.7
ROSC	El Rosal	2.46	216	P	Pn	10 52 49.7	-0.6
	486nm,0.3s,baz=293,slow=19,SNR=375						
ROSC				S	Sn	10 53 19.4	-2.9
	612nm,0.3s,baz=142,slow=1.5,SNR=8.3						
VIGV	El Vigia	2.47	37	⇑iP	Pn	10 52 53.1	+3.0
VIGV				eS	Sn	10 53 17.4	-4.5
ELOV	Elorza	3.38	87	⇓iP	Pn	10 53 04.7	+3.3
QARV	Quebrada Arrib	4.06	35	eP	Pn	10 53 12.8	+2.6
CURV	Curarigua	4.26	43	⇑iP	Pn	10 53 15.2	+2.4
CURV				eS	Sn	10 53 55.6	-7.0
DABV	Dabajuro	4.60	29	⇑iP	Pn	10 53 19.5	+2.3
TEPV	Terepaima	4.78	50	⇑iP	Pn	10 53 22.1	+2.5
BAUV	El Baul	5.22	66	⇓iP	Pn	10 53 26.5	+1.2
MAPV	Macapo	5.28	56	⇑iP	Pn	10 53 28.5	+2.4
JACV	Jacura	5.80	43	eP	Pn	10 53 35.5	+2.4
MONV	Montecano	5.82	29	⇑eP	Pn	10 53 34.4	+1.1
TURV	Turiamo	6.13	54	⇑eP	Pn	10 53 38.8	+1.4
MERV	Las Mercedes	6.94	70	eP	Pn	10 53 49.3	+1.1
BIRV	Birongo	7.46	61	eP	Pn	10 53 56.3	+1.2
CUPV	Cœpira	7.70	65	⇑eP	Pn	10 53 59.7	+1.3
ORCV	Isla La Orchil	8.23	53	eP	Pn	10 54 05.5	+0.1
PRGV	PARIAGUAN	8.38	76	⇑eP	Pn	10 54 08.8	+1.5
PCRV	Puerto La Cruz	8.79	67	eP	Pn	10 54 13.8	+0.9
ATAH	Atahualpa	14.95	202	P	Pn	10 55 31.9	-1.0
	0.3nm,0.3s,baz=101,slow=16,SNR=2.3						
TEIG	Tepich	19.98	313	P	P	10 56 28.4	-0.8
	4.7nm,0.3s,baz=334,slow=1.4,SNR=20						
LPAZ	La Paz	23.48	168	P	P	10 57 05.4	+0.2
	0.9nm,0.6s,baz=335,slow=6.1,SNR=4.1						
LPAZ				pP	pP	10 57 37.4	+2.0
	2.8nm,0.8s,baz=345,slow=12,SNR=6.4						
SIV	San Ignacio	25.54	153	pP	pP	10 57 57.6	+1.6
	1.4nm,0.7s,baz=332,slow=12,SNR=5.3						
TXAR	Lajitas Array	36.61	311	P	P	10 59 00.1	-0.2
	2.6nm,0.6s,baz=125,slow=9.0,SNR=58						
ULM	Lac du Bonnet	47.33	340	P	P	11 00 26.4	-0.3
	3.3nm,0.4s,baz=148,slow=7.3,SNR=3.4						
SCHQ	Schefferville	48.08	5	P	P	11 00 34.1	+1.8
	7.9nm,0.6s,baz=194,slow=6.1,SNR=28						
PDAR	Pinedale Array	48.18	324	P	P	11 00 33.6	-0.1
	1.5nm,0.6s,baz=125,slow=9.3,SNR=12						
NVAR	Mina Array Bea	51.62	314	P	P	11 00 60.0	+0.3
	1.0nm,0.7s,baz=125,slow=6.8,SNR=13						
NVAR				PcP	PcP	11 02 12.2	+0.9
	0.4nm,0.4s,baz=135,slow=5.5,SNR=3.8						
YKA	Yellowknife Ar	63.31	340	P	P	11 02 20.8	+0.1
	2.2nm,0.5s,baz=131,slow=6.7,SNR=32						
INK	Inuvik	73.07	340	P	P	11 03 21.9	+0.5
	1.0nm,0.5s,baz=111,slow=6.3,SNR=7.9						
ILAR	Eielson Array	77.03	335	P	P	11 03 44.3	+0.1
	0.2nm,0.3s,baz=108,slow=4.5,SNR=4.3						
ARCES	ARCESS Array B	86.55	20	P	P	11 04 33.6	-0.3
	1.6nm,0.9s,baz=358,slow=2.8,SNR=3.9						
MKAR	Makanchi Array	122.20	20	PKP	PKPdf	11 10 44.5	-0.8
	0.3nm,0.3s,baz=288,slow=3.3,SNR=5.1						
ASAR	Alice Springs	149.33	234	PKPbc	PKPbc	11 11 38.7	-1.3
	1.6nm,0.6s,baz=119,slow=3.4,SNR=11						
WRA	Warramunga Arr	150.56	241	PKPbc	PKPbc	11 11 41.9	-1.1
	1.8nm,0.4s,baz=105,slow=3.0,SNR=79						

*NIED **08** 10:57:00, 46°.00N×152°.20E, h41km, Mw4.4 Best double couple: M0 4.82000×10^15 NP1:φs126.00000°, δ67.00000°, λ-28.00000°. NP2:φs228.00000°, δ65.00000°, λ-154.00000°.*
*JMA **08** 10:57:16.6±0.6, 45°.97N×152°.25E, h30km, M4.8*
*ISCJB **08** 10:57:17.6±0.3, 45°.98N±0°.05×151°.87E±0°.05, h48km, mb4.5/64, MS3.6/9, Error ellipse: s-maj=7.7km s-min=2.6km az=147.1*
*IDC **08** 10:57:18.4±2.9, 46°.07N×151°.85E, h39km±25km, mb4.0/20, mb1 4.2/25, mb1mx4.1/32, mbtmp4.0/25, ML3.7/5, MS3.4/16, Ms1 3.4/16, ms1mx3.2/43, Error ellipse: s-maj=15.9km s-min=11.5km az=149.0*
*MOS **08** 10:57:19.5±1.1, 45°.97N×151°.80E, h68km, mb4.6/34, Error ellipse: s-maj=8.3km s-min=6.4km az=93.9*
*NEIC **08** 10:57:19.9±0.7, 46°.07N×151°.81E, h52km±6km, mb4.6/27, Error ellipse: s-maj=9.3km s-min=4.9km az=152.0*
*BJI **08** 10:57:19.2, 45°.72N×152°.09E, h79km, mB4.6/8, mb4.4/12, Ms4.0/3, Ms7 4.0/4*
ISC 08 10:57:18.5±0.4, 45°.89N±0°.07×151°.96E±0°.06, h48km, n486, σ1s.23/481, mb4.5/73, MS3.8/9, 143C-123D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.95	259	i PN	Pn	10 58 04.9	+2.1
KUR				i S	Sn	10 58 40.2	+3.3
KUR				pmax	pmax		
	comp=Z,85nm,0.4s						
KUR				pmax	pmax		
	comp=Z,193nm,0.4s						
KUR				pmax	pmax		
	comp=E,43nm,0.4s						
KUR				smax	smax		
	comp=E,340nm,0.5s						
KUR				smax	smax		
	comp=N,725nm,0.5s						
KUR				MLR	MLR		
	comp=Z,590nm,14.0s						
YUK	Yuzh-Kuril'sk	4.71	249	d iPN	Pn	10 58 29.8	+2.9
YUK				i S	Sn	10 59 23.4	+3.2
YUK				pmax	pmax		
	comp=E,132nm,0.4s						
YUK				pmax	pmax		
	comp=Z,226nm,0.4s						
YUK				pmax	pmax		
	comp=N,81nm,0.4s						
YUK				smax	smax		
	comp=E,207nm,0.6s						
YUK				smax	smax		
	comp=N,389nm,0.6s						
NEM2	Nemuro 2	5.10	243	P	Pn	10 58 33.2	+0.8
NEM2				eS	Sn	10 59 29.4	-0.5
JRA	Rausu	5.23	251	P	Pn	10 58 37.6	+3.5
JRA				eS	Sn	10 59 40.1	+7.0
SKR	Severo-Kuril's	5.54	29	ePN	Pn	10 58 34.0	-4.4
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				MLR	MLR		
	comp=Z,800nm,12.0s						
SKR				MLR	MLR		
	comp=E,800nm,4.0s						
JNK	Nakash	5.65	249	P	Pn	10 58 42.1	+2.3
JNK				eS	Sn	10 59 46.9	+3.6
JAK	Akkeshi	5.95	244	P	Pn	10 58 44.8	+0.8
JAK				eS	Sn	10 59 50.3	-0.4
JTKR	Abashiri--Toko	6.03	254	P	Pn	10 58 47.6	+2.6
JMP	Maruseppu	6.38	256	P	Pn	10 58 53.6	+3.6
JAR	Ashorobuto	6.39	249	P	Pn	10 58 52.6	+2.5
JAR				eS	Sn	11 00 04.5	+2.8
YSS	Yuzh-Sakhalins	6.45	283	⇑iPN	Pn	10 58 54.5	+3.7
YSS				eS	Sn	11 00 03.0	-0.1
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
YSS				MLR	MLR		
	comp=Z,500nm,16.0s						
JOB	Onbets	6.54	246	P	Pn	10 58 53.5	+1.4
JOB				eS	Sn	11 00 06.5	+1.2
JSE	Soyaes	6.66	265	P	Pn	10 58 58.6	+4.9
JKK2	Kamakawa 2	6.84	256	P	Pn	10 59 00.3	+4.0
ASAJ	Asahikawa	6.87	258	Pn	Pn	10 58 58.7	+2.1
ASAJ	Asahikawa	6.87	258	P	Pn	10 59 00.3	+3.7
ASAJ	Asahikawa	6.87	258	Pn	Pn	10 58 58.7	+2.1
	comp=Z,5.6nm,0.3s,baz=68,slow=20,SNR=5.7						
ASAJ				LR	LR	11 01 37.2	
	comp=Z,387nm,19.2s,baz=78,slow=38						
JCH	Churui	6.98	245	P	Pn	10 58 59.0	+0.8
JCH				eS	Sn	11 00 14.5	-1.7
JWK2	Keihoku	7.08	269	P	Pn	10 59 05.8	+6.3
JFR	Furan	7.22	251	P	Pn	10 59 04.3	+2.8
JSS	Shosan	7.30	262	P	Pn	10 59 09.0	+6.5
JAB	Ashibetsu	7.33	255	P	Pn	10 59 06.8	+3.8
ERM	Erimo	7.43	242	ePN	Pn	10 59 06.8	+2.5
ERM	Erimo	7.43	242	ePn	Pn	10 59 06.8	+2.5
ERM				eSn	Sn	11 00 25.7	-1.6
JEM	Erimo	7.43	242	P	Pn	10 59 06.4	+2.0
JNBK	Urakawa-nobuka	7.54	245	P	Pn	10 59 06.3	+0.5
JNBK				eS	Sn	11 00 27.4	-2.6
JBT2	Biratori 2	7.55	249	P	Pn	10 59 07.1	+1.2
JEW	Eniwo	8.12	252	P	Pn	10 59 16.6	+2.8
PEA0B	Petropavlovsk-	8.13	25	ePn	Pn	10 59 15.7	+1.8
PETK	Petropavlovsk-	8.13	25	PN	Pn	10 59 12.7	-1.2
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,112nm,20.4s						
PETK	Petropavlovsk-	8.13	25	Pn	Pn	10 59 12.7	-1.2
PETK	Petropavlovsk-	8.13	25	Pn	Pn	10 59 12.7	-1.2
	comp=Z,0.5nm,0.3s,baz=181,slow=13,SNR=9.7						
PETK				LR	LR	11 02 16.6	
	comp=Z,112nm,20.4s,baz=213,slow=37						
PET	Petropavlovsk	8.37	29	ePN	Pn	10 59 20.8	+3.8
JNB	Noboribetsu	8.56	250	P	Pn	10 59 22.1	+2.4
JSK	Shakotan	8.57	257	P	Pn	10 59 23.7	+3.8
JKB	Kayabe	8.84	247	P	Pn	10 59 24.2	+0.6
JKB				eS	Sn	11 00 58.0	-3.8
JSH	Shimam	9.14	253	P	Pn	10 59 30.3	+2.6
JYM2	Yakumo 2	9.16	250	P	Pn	10 59 28.8	+0.8
JANG	Nango	9.41	238	P	Pn	10 59 29.5	-1.9
JANG				eS	Sn	11 01 09.4	-6.4
JSR	Shiriuchi	9.42	247	P	Pn	10 59 32.2	+0.6
JTM	Tenmabayashi	9.43	241	P	Pn	10 59 31.4	-0.2
JTM				eS	Sn	11 01 11.1	-5.1
JTH	Tanohata	9.49	235	P	Pn	10 59 30.4	-2.1
JTH				eS	Sn	11 01 10.6	-7.2
JOSM	Okushiri--Mats	9.77	252	P	Pn	10 59 36.8	+0.5
OFUJ	Ofunato	10.19	232	P	Pn	10 59 40.4	-1.7
JRG	Rokugo	10.56	236	P	Pn	10 59 46.4	-0.8
JRG				eS	Sn	11 01 40.0	-4.0
JIO	Ouri	10.82	230	P	Pn	10 59 48.9	-1.7
JIO				eS	Sn	11 01 43.6	-6.6
JYA	Atsumi	11.63	236	P	Pn	11 00 00.9	-0.9
HABR	Khabarovsk	11.79	289	PN	Pn	11 00 03.4	-0.5
HABR				pmax	pmax		
	comp=N,20nm,3.4s						
HABR				pmax	pmax		
	comp=E,14nm,1.7s						
HABR				pmax	pmax		
	comp=Z,27nm,2.3s						
HABR				MLR	MLR		
	comp=Z,207nm,17.0s						
MJAR	Matsushiro Arr	13.92	233	Pn	Pn	11 00 32.0	-1.1
MJAR	Matsushiro Arr	13.92	233	Pn	Pn	11 00 32.0	-1.1
	comp=Z,0.5nm,0.3s,baz=30,slow=14,SNR=22						
MJAR				LR	LR	11 06 50.5	
	comp=Z,120nm,18.8s,baz=45,slow=41						
MAJO	Matsushiro	13.92	233	eP	Pn	11 00 32.4	-0.7
MAJO	Matsushiro	13.92	233	ePn	Pn	11 00 32.4	-0.7
KLR	Kul'dur	14.04	291	eP	Pn	11 00 33.1	-1.5
USRK	Ussuriysk Arra	14.22	270	Pn	Pn	11 00 37.2	+0.2
	comp=Z,0.7nm,0.3s,baz=67,slow=13,SNR=12						
USRK				LR	LR	11 06 21.8	
	comp=Z,163nm,18.6s,baz=134,slow=38						
FX1	Attu Island--F	15.45	55	Pn	Pn	11 00 51.4	-1.7
FX1	Attu Island--F	15.45	55	Pn	Pn	11 00 51.4	-1.7
	comp=Z,1.4nm,0.3s,baz=125,slow=21,SNR=6.7						
FX1				LR	LR	11 06 14.5	
	comp=Z,21nm,19.9s,baz=124,slow=35						
JHJ	Hachijo jima 2	15.81	220	LR	LR	11 06 53.3	
	comp=Z,52nm,21.4s,baz=347,slow=36						
CN2	Changchun	18.89	273	eP	Pn	11 01 35.2	-0.6

CN2 pmax pmax
comp=Z,10.0nm,1.0s
KSRS Korea Array 19.78 253 P **Pn** 11 01 46.1 -0.2
comp=Z,0.5nm,0.3s,baz=55,slow=11,SNR=23
KSRS LR LR 11 08 25.4
comp=Z,90nm,21.9s,baz=251,slow=34
KSAR Wonju Array Be 19.81 253 P **Pn** 11 01 46.1 -0.6
CLNS Chul'man 20.00 313 *e*P Pn 11 01 56.1 +7.2
CLNS *e* 11 05 23.4
CLNS pmax pmax
comp=Z,10.0nm,1.3s
CLNS pmax pmax
comp=E,3.0nm,1.1s
CLNS pmax pmax
comp=N,5.0nm,1.2s
CLNS pmax pmax
comp=Z,10.0nm,1.3s
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS pmax pmax
comp=N,7.0nm,0.9s
CLNS smax smax
comp=N,27nm,11.2s
CLNS smax smax
comp=E,32nm,6.1s
CLNS MLR MLR
comp=Z,148nm,17.0s
CLNS MLR MLR
comp=N,102nm,14.0s
CLNS MLR MLR
comp=E,141nm,16.0s
JNU Nakatsue 20.59 239 LR LR 11 09 23.3
comp=E,95nm,19.9s,baz=44,slow=35
YAK Yakutsk 20.64 330 *e*P Pn 11 01 56.4 0.0
YAK *e* 11 02 12.3
YAK pmax pmax
comp=Z,20nm,1.0s
YAK pmax pmax
comp=N,8.0nm,1.1s
BILL Bilibino 23.41 14 *e*P **P** **11 02 23.1 +0.2**
BILL *i* 11 02 52.9
BILL *e* 11 06 02.7
BILL pmax pmax
comp=Z,4.0nm,0.9s
TLY Talaya 31.87 298 *i* P **P** **11 03 38.4 -0.5**
TLY pmax pmax
comp=Z,3.0nm,0.9s
LZH Lanzhou 37.12 272 *e*P P 11 04 35.0 +10
LZH pP pP 11 04 41.0 +3.8
LZH sP sP 11 04 43.2 +0.3
LZH pmax pmax
comp=Z,18nm,1.2s
SML Sawmill 37.15 43 *e*P **P** **11 04 24.3 0.0**
SML pmax pmax
comp=Z,3.0nm,0.7s
SML Sawmill 37.15 43 *e*P **P** **11 04 24.3 0.0**
comp=Z,2.6nm,0.7s
COLA College 37.31 38 *e*P **P** **11 04 25.3 -0.3**
COLA pmax pmax
comp=Z,3.0nm,0.8s
COLA College 37.31 38 *e*P **P** **11 04 25.3 -0.3**
comp=Z,2.8nm,0.8s
ILAR Eielson Array 37.72 38 P **P** **11 04 28.4 -0.7**
ILAR Eielson Array 37.72 38 P **P** **11 04 28.4 -0.7**
comp=Z,0.6nm,0.7s,baz=257,slow=7.9,SNR=9.1
ILAR LR LR 11 18 11.9
comp=Z,36nm,20.9s,baz=305,slow=33
EGAK Eagle 40.17 38 *e*P **P** **11 04 49.1 -0.5**
comp=Z,3.4nm,0.9s
ZALV Zalesovo Beam 42.47 306 P **P** **11 05 08.5 0.0**
ZALV 11 07 01.3
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV pmax pmax
comp=Z,3.0nm,0.8s
ZALV Zalesovo Beam 42.47 306 P **P** **11 05 08.5 0.0**
ZALV PcP **PcP** **11 07 01.3 +0.7**
ZALV Zalesovo Beam 42.47 306 P **P** **11 05 08.5 0.0**
comp=Z,0.6nm,0.5s,baz=81,slow=8.9,SNR=3.0
ZALV PcP **PcP** **11 07 01.3 +0.7**
comp=Z,2.9nm,0.8s,baz=46,slow=4.3,SNR=9.8
INK Inuvik 42.81 32 P **P** **11 05 11.1 +0.1**
INK Inuvik 42.81 32 P **P** **11 05 11.1 +0.1**
comp=Z,2.9nm,0.8s,baz=280,slow=8.6,SNR=9.3
QIZ Qiongzhong 43.77 247 P P 11 05 16.2 -3.2
QIZ S S 11 11 39.9 -6.7
QIZ LR LR
comp=Z,120nm,7.7s
MK31 Makanchi Array 46.63 298 *e*P **P** **11 05 40.3 -1.6**
MK31 Makanchi Array 46.63 298 *e*P **P** **11 05 40.3 -1.6**
MKAR Makanchi Array 46.63 298 P **P** **11 05 40.6 -1.3**
MKAR 11 07 15.6
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR pmax pmax
comp=Z,3.0nm,0.7s
MKAR Makanchi Array 46.63 298 P **P** **11 05 40.6 -1.3**
MKAR PcP **PcP** **11 07 15.6 +0.5**
MKAR Makanchi Array 46.63 298 P **P** **11 05 40.6 -1.3**
comp=Z,1.8nm,0.8s,baz=67,slow=6.5,SNR=16
MKAR PcP **PcP** **11 07 15.6 +0.5**
comp=Z,2.5nm,0.7s,baz=64,slow=5.5,SNR=8.8
KURK Kurchatov 47.18 304 P **P** **11 05 44.7 -1.3**
KURK 11 07 17.1
KURK pmax pmax
comp=Z,1.0nm,0.5s
KURK Kurchatov 47.18 304 P **P** **11 05 44.6 -1.3**
KURK PcP **PcP** **11 07 17.1 +0.2**
KURBB Kurchatov Arra 47.27 304 P **P** **11 05 44.7 -2.0**
comp=Z,1.2nm,0.5s,baz=71,slow=8.7,SNR=2.3
KURBB PcP **PcP** **11 07 17.1 -0.1**
comp=Z,0.4nm,0.4s,baz=76,slow=3.5,SNR=4.7
LSA Lhasa 49.52 273 *e*P P 11 05 58.3 -6.6
BVAR Borovoye Array 50.79 310 LR LR 11 29 32.7
comp=Z,82nm,19.1s,baz=76,slow=38
BRVK Borovoye 50.83 310 *i* P **P** **11 06 12.6 -1.3**
CHTO Chiang Mai 51.14 256 *e*P **P** **11 06 18.8 +2.1**
CHTO pmax pmax
comp=Z,7.0nm,0.9s
CHTO Chiang Mai 51.14 256 *e*P **P** **11 06 18.8 +2.1**
comp=Z,7.0nm,0.9s
CMAR Chiang Mai Arr 51.39 256 P **P** **11 06 19.6 +1.1**
CMAR Chiang Mai Arr 51.39 256 P **P** **11 06 19.6 +1.1**
comp=Z,2.8nm,0.7s,baz=37,slow=7.4,SNR=16
CMAR LR LR 11 31 16.1
comp=Z,37nm,18.0s,baz=210,slow=40
YKA Yellowknife Ar 52.09 36 P **P** **11 06 23.2 0.0**
YKA Yellowknife Ar 52.09 36 P **P** **11 06 23.2 0.0**
comp=Z,2.4nm,0.7s,baz=299,slow=7.1,SNR=21
TAPN Taplejung 53.35 273 *e*P **P** **11 06 34.7 +1.4**
ODAN Odare 53.87 273 *e*P **P** **11 06 38.4 +1.3**
comp=Z,9.7nm,0.6s
EKS2 Erkin-Say 53.93 297 *e*P **P** **11 06 37.1 -0.2**
EKS2 pmax pmax
comp=Z,3.0nm,0.6s
EKS2 Erkin-Say 53.93 297 *e*P **P** **11 06 37.0 -0.2**
comp=Z,3.3nm,0.6s
KSH Kashi 54.24 292 *e*P P 11 06 44.1 +4.6
KSH pmax pmax
comp=Z,9.0nm,0.5s
GUN Gumba 54.28 275 *e*P **P** **11 06 41.3 +1.1**
comp=Z,22nm,0.7s
RAMN Ramite 54.37 273 *e*P **P** **11 06 41.2 +0.4**
comp=Z,28nm,0.8s
KKN Kakani 54.77 275 *e*P **P** **11 06 45.2 +1.6**
comp=Z,10nm,0.5s
PKI Pulchoki 54.81 275 *e*P **P** **11 06 45.1 +1.0**
comp=Z,9.3nm,0.5s
PKIN Phulchoki 54.82 275 *e*P **P** **11 06 45.1 +1.1**
comp=Z,7.6nm,0.5s
DMN Daman 55.00 275 *e*P **P** **11 06 46.4 +1.1**
comp=Z,15nm,0.7s
DANN Dangsing 55.48 277 *e*P **P** **11 06 49.7 +0.9**
comp=Z,47nm,0.7s
KOLN Koldanda 55.95 276 *e*P **P** **11 06 52.7 +0.6**
comp=Z,30nm,0.8s
ABKAR Akbulak array 58.36 310 *e*P **P** **11 07 07.1 -1.5**
AKTO Aktyubinsk 58.70 312 LR LR 11 34 44.2
comp=Z,136nm,18.4s,baz=103,slow=38
C11A Tepee Creek (N 59.06 52 ⇑P **P** **11 07 14.4 +0.9**
baz=59
B13A Whitefish 59.72 50 ⇓P **P** **11 07 19.5 +1.4**
baz=59
A14A Double T Ranch 59.92 49 ⇓P **P** **11 07 20.5 +1.0**
baz=60
C13A Hot Springs 60.07 51 ⇑P **P** **11 07 21.3 +0.8**
baz=60
A15A Johnson Ranch, 60.28 49 ⇓P **P** **11 07 22.4 +0.5**
baz=60
B14A Marquette Ranc 60.36 50 ⇓P **P** **11 07 23.9 +1.4**
baz=60
D13A Huson 60.48 52 ⇓P **P** **11 07 24.7 +1.4**
baz=60
B15A Bradely Ranch, 60.77 50 ⇓P **P** **11 07 26.1 +0.8**
baz=60
F12A Elk City 60.84 53 ⇑P **P** **11 07 27.1 +1.2**
baz=61
SLMT Seeley Lake 60.92 51 *e*P **P** **11 07 27.5 +1.1**
MSO Missoula 60.92 52 ⇑P **P** **11 07 27.3 +0.9**
baz=61
D14A Greenough 61.01 51 ⇑P **P** **11 07 27.8 +0.8**
baz=61,SNR=9.9
E13A Victor 61.02 52 ⇓P **P** **11 07 27.7 +0.7**
baz=61
C15A Salmond Ranch, 61.07 50 ⇓P **P** **11 07 28.9 +1.5**
baz=61,SNR=7.9
G12A Big Creek, Yel 61.18 54 ⇓P **P** **11 07 28.9 +0.7**
baz=61
F13A Darby 61.34 53 ⇓P **P** **11 07 30.2 +1.0**
baz=61
A17A Triple J Farms 61.37 48 ⇑P **P** **11 07 30.0 +0.7**
baz=61
C16A Fuhringer Ranc 61.52 50 ⇑P **P** **11 07 31.2 +0.8**
baz=61
D15A Lincoln 61.57 51 ⇑P **P** **11 07 31.5 +0.7**
baz=61
SUMG Summit 61.61 4 *e*P **P** **11 07 30.7 -0.3**
SUMG pmax pmax
comp=Z,11nm,0.8s
SUMG Summit 61.61 4 *e*P **P** **11 07 30.7 -0.3**
comp=Z,11nm,0.8s
B17A L&G Farms, Che 61.72 49 ⇑P **P** **11 07 32.4 +0.8**
baz=61
JOF Joensuu 61.75 333 *e*p **P** **11 07 29.9 -1.6**
comp=Z,1.5nm,0.5s
JOF Joensuu 61.75 333 *e*P **P** **11 07 29.9 -1.6**
JOF pmax pmax
comp=Z,2.0nm,0.5s
H12A Diamond D Ranc 61.80 54 ⇓P **P** **11 07 33.1 +0.7**
baz=62
E15A Deer Lodge 61.88 51 ⇓P **P** **11 07 33.7 +0.8**
baz=62,SNR=6.1
FFC Flin Flon 61.91 39 *c**e*P **P** **11 07 33.8 +1.0**
MFID Camas Ranch 61.94 56 ⇑P **P** **11 07 33.9 +0.6**
baz=62
D16A Dana Ranch, Ca 62.10 50 ⇑P **P** **11 07 35.6 +1.2**
baz=62,SNR=6.9
C17A Wharram Farm, 62.14 49 ⇓P **P** **11 07 35.4 +0.9**
baz=62
HRY Holter Researc 62.14 51 P **P** **11 07 36.1 +1.4**
B18A Beardsley Farm 62.19 48 ⇑P **P** **11 07 35.6 +0.8**
baz=62
F15A Butte 62.32 52 ⇓P **P** **11 07 37.0 +1.1**
baz=62,SNR=5.8
E16A East Helena 62.34 51 ⇓P **P** **11 07 37.0 +1.1**
baz=62
LRM Limekiln Ridge 62.36 52 *e*P **P** **11 07 37.5 +1.3**
A19A Klindworth Far 62.39 47 ⇓P **P** **11 07 37.4 +1.3**
baz=62
EGMT Eagleton 62.43 49 ⇑P **P** **11 07 37.9 +1.4**
baz=62
D17A Six Diamond Ra 62.48 50 ⇓P **P** **11 07 37.9 +1.0**
baz=62
B19A Brinkman Farms 62.58 48 ⇓P **P** **11 07 38.2 +0.8**
baz=62
HLID Hailey 62.66 55 ⇑P **P** **11 07 39.4 +1.2**
baz=62
G15A Dillon 62.74 52 ⇓P **P** **11 07 39.8 +1.1**
baz=62
E17A Martinsdale 62.82 50 ⇓P **P** **11 07 40.4 +1.2**
baz=62,SNR=5.0
F16A Kennard Place, 62.83 51 ⇑P **P** **11 07 40.5 +1.2**
baz=63
I14A Mackay 62.98 54 ⇓P **P** **11 07 42.0 +1.7**
baz=63
C19A Slack Wire Ran 62.98 48 ⇑P **P** **11 07 41.5 +1.3**
baz=63
B20A Solberg Farm, 63.07 47 ⇑P **P** **11 07 42.1 +1.4**
baz=63
G16A Moss Hill, Enn 63.08 52 ⇓P **P** **11 07 42.1 +1.1**
baz=63,SNR=9.4
E18A Harlowton 63.27 50 ⇑P **P** **11 07 43.9 +1.8**
baz=63
F17A Fitzpatrick Pl 63.28 51 ⇓P **P** **11 07 43.3 +1.1**
baz=63
C20A Veseth Ranch, 63.54 48 ⇓P **P** **11 07 45.2 +1.4**
baz=63
NVAR Mina Array Bea 63.55 61 P **P** **11 07 45.6 +1.4**
NVAR Mina Array Bea 63.55 61 P **P** **11 07 45.6 +1.4**
comp=Z,2.2nm,0.7s,baz=288,slow=7.2,SNR=28
G17A Pierce Place, 63.61 51 ⇑P **P** **11 07 46.1 +1.7**
baz=63
H16A Russell Place, 63.72 52 ⇓P **P** **11 07 46.6 +1.3**
baz=64
A22A Carney Farms, 63.78 46 ⇓P **P** **11 07 46.5 +1.2**
baz=64
F18A Big Timber 63.79 50 ⇓P **P** **11 07 47.0 +1.4**
baz=64
D20A Manuel Ranch, 63.87 49 ⇑P **P** **11 07 47.2 +1.2**
baz=64
E19A Rath Farm, Rou 63.93 49 ⇑P **P** **11 07 47.6 +1.1**
baz=64
C21A Desert Coulee 63.94 47 ⇓P **P** **11 07 48.0 +1.6**
baz=64
F19A Roth Farm, Mol 64.24 50 ⇑P **P** **11 07 50.1 +1.6**
baz=64
IMW Indian Meadow 64.41 53 *e*P **P** **11 07 52.4 +2.5**
comp=Z,2.3nm,1.0s
FINES FINESS Array B 64.47 334 P **P** **11 07 47.9 -1.7**
FINES FINESS Array B 64.47 334 P **P** **11 07 47.9 -1.7**
comp=Z,3.3nm,0.7s,baz=49,slow=13,SNR=6.9
D21A La Casta Ranch 64.48 48 ⇑P **P** **11 07 51.6 +1.6**
baz=64
RRI2 Red Ridge 64.54 53 *e*P **P** **11 07 52.5 +1.8**
comp=Z,7.2nm,0.8s
B23A Brockton 64.59 46 ⇑P **P** **11 07 52.2 +1.6**
baz=64
H18A Shoshone NF, C 64.61 51 ⇑P **P** **11 07 52.4 +1.4**
baz=64
MOOW Moose Ponds 64.61 53 *e*P **P** **11 07 53.1 +2.0**
comp=Z,26nm,2.8s
TPAW Teton Pass 64.66 53 *e*P **P** **11 07 53.6 +2.1**
comp=Z,5.5nm,0.8s
A24A Westby 64.78 45 ⇑P **P** **11 07 52.8 +0.9**
baz=64
SNOW Snow King Moun 64.79 53 *e*P **P** **11 07 54.2 +1.9**
comp=Z,2.9nm,0.8s
D22A Cohagen 64.85 48 ⇓P **P** **11 07 53.4 +1.1**
baz=64
G20A Bridger 65.04 50 ⇑P **P** **11 07 54.7 +0.9**
baz=65
ISA Isabella 65.19 64 ⇓P **P** **11 07 55.7 +0.9**
baz=65
R11A Troy Canyon, C 65.25 60 ⇑P **P** **11 07 57.0 +1.7**
baz=65
D23A Lindsay 65.33 47 ⇓P **P** **11 07 56.9 +1.4**
baz=65
I19A Meeteetse 65.39 52 ⇓P **P** **11 07 57.4 +1.3**
baz=65
MPMC Manual Prospec 65.55 63 ⇑P **P** **11 07 58.6 +1.3**
baz=65
OBN Obninsk 65.56 325 *e*P **P** **11 07 54.6 -2.1**
OBN pmax pmax
comp=Z,4.0nm,1.0s
FURC Furnace Creek, 65.68 62 ⇓P **P** **11 07 59.6 +1.8**
baz=66
DUG Dugway 65.72 57 *e*P **P** **11 07 59.1 +0.9**
DUG pmax pmax
comp=Z,5.0nm,1.0s
DUG Dugway 65.72 57 *e*P **P** **11 07 59.1 +0.9**
comp=Z,4.8nm,1.0s
DUG Dugway 65.72 57 ⇓P **P** **11 07 59.6 +1.3**
baz=66
E23A Ismay 65.73 48 ⇓P **P** **11 07 59.6 +1.5**
baz=65
D24A Glendive 65.82 47 ⇓P **P** **11 08 00.2 +1.5**
baz=66
J19A Crowheart 65.86 52 ⇓P **P** **11 08 00.5 +1.3**
baz=66
PDAR Pinedale Array 65.90 53 P **P** **11 08 00.2 +0.7**
PDAR Pinedale Array 65.90 53 P **P** **11 08 00.2 +0.7**
comp=Z,2.6nm,0.8s,baz=282,slow=1.6,SNR=21
I20A Worland 65.92 51 ⇓P **P** **11 08 01.0 +1.6**
baz=66
EDW2 Edwards Air Fo 65.99 64 ⇓P **P** **11 08 01.4 +1.5**
baz=66
M17A Scullys Gap (B 66.12 55 ⇓P **P** **11 08 01.8 +0.9**
baz=66
F23A Volborg 66.19 48 ⇑P **P** **11 08 02.2 +1.0**
baz=66
E24A Baker 66.20 47 ⇓P **P** **11 08 02.8 +1.6**
baz=66
K19A Absolon Red Bu 66.26 53 ⇓P **P** **11 08 02.5 +0.7**
baz=66
J20A Shoshoni 66.33 52 ⇑P **P** **11 08 03.1 +0.9**
baz=66
SHOC Shoshone 66.40 62 ⇑P **P** **11 08 04.2 +1.7**
baz=66
L19A Farson 66.45 53 ⇓P **P** **11 08 04.2 +1.2**
baz=66
I21A Big Trails, Te 66.46 51 ⇓P **P** **11 08 04.2 +1.2**
baz=66,SNR=6.0
GSC Goldstone 66.46 63 ⇓P **P** **11 08 04.0 +1.0**
baz=66
K20A Yellowstone Ra 66.65 52 ⇑P **P** **11 08 04.8 +0.6**
baz=66
CIS Catalina Islan 66.68 66 ⇑P **P** **11 08 06.2 +1.8**
baz=66
J21A Lysite 66.69 51 ⇓P **P** **11 08 05.5 +1.1**
baz=66
I22A 9 Mile Ranch, 66.84 50 ⇑P **P** **11 08 06.7 +1.4**
baz=67
TUQ Turquoise Moun 66.92 63 ⇓P **P** **11 08 07.5 +1.5**
baz=67
BBRC Big Bear Solar 67.06 64 ⇑P **P** **11 08 08.3 +1.3**
baz=67
CCUT Cedar City 67.11 59 *e*P **P** **11 08 08.6 +1.3**
comp=Z,2.9nm,1.1s
K21A Alcova 67.27 52 ⇑P **P** **11 08 09.2 +1.0**
baz=67
H24A Dirks Ranch, A 67.30 49 ⇓P **P** **11 08 09.2 +1.0**
baz=67
WRA Warramunga Arr 67.44 198 P **P** **11 08 10.1 +1.0**
WRA Warramunga Arr 67.44 198 P **P** **11 08 10.1 +1.0**
comp=Z,1.4nm,0.9s,baz=16,slow=6.8,SNR=10
M20A Sweetwater, Wa 67.51 53 ⇑P **P** **11 08 11.5 +1.7**
baz=67
GMRC Granite Mounta 67.51 63 ⇓P **P** **11 08 11.0 +1.2**
baz=67
L21A Rawlins 67.65 52 ⇓P **P** **11 08 11.3 +0.7**
baz=67
K22A Casper 67.66 51 ⇑P **P** **11 08 11.5 +0.9**
baz=67
SRU San Rafael 67.76 56 ⇑P **P** **11 08 12.2 +0.9**
baz=68,SNR=7.4
O19A Miners Draw (B 67.78 55 ⇓P **P** **11 08 12.3 +0.9**
baz=68
BELC Belle Mtn. Jos 67.81 64 ⇑P **P** **11 08 12.8 +1.1**
baz=68
M21A Separation Pea 67.89 53 ⇑P **P** **11 08 13.0 +0.8**
baz=68
N20A Spence Gulch, 67.91 54 ⇓P **P** **11 08 13.2 +0.9**
baz=68,SNR=5.4
L22A Ellis Ranch, M 68.12 52 ⇑P **P** **11 08 15.1 +1.5**
baz=68
IRM Iron Mountain 68.24 63 ⇑P **P** **11 08 15.6 +1.4**
baz=68
MONP Monument Peak 68.28 65 ⇑P **P** **11 08 15.5 +0.8**
baz=68
P19A Cripple Cowboy 68.30 55 ⇓P **P** **11 08 15.9 +1.1**
baz=68
N21A Black Mountain 68.38 53 ⇓P **P** **11 08 16.6 +1.3**
baz=68
BC3 Big Chuckawall 68.38 64 ⇑P **P** **11 08 16.1 +0.9**
baz=68
O20A White River Ci 68.39 54 ⇑P **P** **11 08 16.0 +0.8**
baz=68
M22A Cedar Creek Ra 68.46 52 ⇓P **P** **11 08 17.2 +1.5**
baz=68
U15A North Rim 68.49 60 ⇓P **P** **11 08 17.3 +1.3**
baz=68,SNR=5.6
PDMCI Parker Dam,Lak 68.77 62 ⇓P **P** **11 08 18.9 +1.4**
baz=69
NB2 NORSAR Subarra 68.78 341 P **P** **11 08 15.8 -1.3**
comp=Z,7.0nm,1.0s,baz=26,slow=6.5
NOA NORSAR Array B 68.78 341 P **P** **11 08 16.3 -0.9**
NOA NORSAR Array B 68.78 341 P **P** **11 08 16.3 -0.9**
comp=Z,2.7nm,0.7s,baz=28,slow=6.3,SNR=15
NOA LR LR 11 39 55.3
comp=Z,25nm,20.9s,baz=40,slow=37
Y12C Blythe 68.90 63 ⇓P **P** **11 08 19.8 +1.5**
baz=69
N22A Wattenberg Ran 68.94 53 ⇑P **P** **11 08 20.1 +1.3**
baz=69
S18A Hurst Farm, Bl 69.02 57 ⇑P **P** **11 08 20.1 +0.9**
baz=68,SNR=5.2
Q20A Ridgley Place, 69.15 55 ⇑P **P** **11 08 21.2 +1.2**
baz=69
N23A Red Feather La 69.16 52 ⇑P **P** **11 08 21.4 +1.2**
baz=69
PV04 Paradox Valley 69.18 56 *e*P **P** **11 08 21.4 +1.2**
P21A Newcastle 69.25 54 ⇓P **P** **11 08 21.9 +1.3**
baz=69
O22A Kremmling 69.33 53 ⇓P **P** **11 08 22.2 +0.9**
baz=69
M24A Cheyenne 69.39 51 ⇑P **P** **11 08 22.8 +1.4**
baz=69
BORG Borgarnes 69.58 357 P **P** **11 08 22.4 +0.5**
BORG Borgarnes 69.58 357 P **P** **11 08 22.4 +0.5**
comp=Z,9.4nm,1.0s,baz=39,slow=4.6,SNR=3.7
P22A Eagle 69.59 54 ⇓P **P** **11 08 23.8 +1.0**
baz=69
R20A Redvale 69.62 56 ⇑P **P** **11 08 23.8 +0.8**
baz=69
O23A Lake Granby, G 69.64 53 ⇑P **P** **11 08 24.4 +1.2**
baz=69
Q21A Lamborn Mesa, 69.65 55 ⇓P **P** **11 08 24.5 +1.4**
baz=69
WUAZ Wupatki 69.65 60 ⇓P **P** **11 08 24.5 +1.4**
baz=69
Y14A Wickenburg 69.72 62 ⇑P **P** **11 08 25.1 +1.7**
baz=70
SMCO Snowmass 69.76 54 *e*P **P** **11 08 24.9 +0.9**
comp=Z,3.2nm,0.8s
N24A Carr 69.80 52 ⇑P **P** **11 08 25.6 +1.7**
baz=70
J28A Allard Ranch, 69.94 48 ⇓P **P** **11 08 26.2 +1.6**
baz=70
R21A Cimarron 69.98 55 ⇑P **P** **11 08 26.7 +1.5**
baz=70
Q22A Crested Butte, 70.01 55 ⇓P **P** **11 08 26.9 +1.5**
baz=70
ISCO Idaho Springs 70.10 53 *e*P **P** **11 08 27.0 +1.1**
ISCO pmax pmax
comp=Z,3.0nm,0.8s
ISCO Idaho Springs 70.10 53 *e*P **P** **11 08 27.0 +1.1**
comp=Z,3.0nm,0.8s
ISCO Idaho Springs 70.10 53 ⇓P **P** **11 08 27.3 +1.3**
baz=70
O24A Longmont 70.17 53 ⇓P **P** **11 08 27.9 +1.7**
baz=70
S21A Coal Bank Pass 70.32 56 ⇑P **P** **11 08 28.4 +1.0**
baz=70
X16A Lo Mia Camp, P 70.35 61 ⇑P **P** **11 08 28.8 +1.3**
baz=70,SNR=6.8
R22A Saguache, Gunn 70.53 55 ⇑P **P** **11 08 30.1 +1.5**
baz=70,SNR=5.1
S22A 4UR Ranch, Cre 70.82 55 ⇑P **P** **11 08 31.9 +1.5**
baz=71
KBZ Khabaz 70.88 314 P **P** **11 08 30.8 +0.6**
KBZ pmax pmax
comp=Z,4.0nm,0.6s
KBZ MLR MLR
comp=Z,72nm,18.5s
KBZ Khabaz 70.88 314 P **P** **11 08 30.8 +0.6**
KBZ Khabaz 70.88 314 P **P** **11 08 30.8 +0.6**
comp=Z,4.3nm,0.6s,baz=77,slow=2.8,SNR=13
KBZ LR LR 11 44 35.6
comp=Z,72nm,18.5s,baz=295,slow=40
O26A Horse Wrangler 71.06 52 ⇑P **P** **11 08 32.5 +0.9**
baz=71
R23A Moffat 71.09 54 ⇓P **P** **11 08 33.3 +1.3**
baz=71
N27A Anderson Farm, 71.09 51 ⇓P **P** **11 08 32.8 +1.1**
baz=71
P25A Willow Gulch B 71.10 53 ⇓P **P** **11 08 33.1 +1.2**
baz=71
ASAR Alice Springs 71.14 197 P **P** **11 08 34.3 +2.4**
ASAR Alice Springs 71.14 197 P **P** **11 08 34.3 +2.4**
comp=Z,0.6nm,0.6s,baz=13,slow=6.1,SNR=16
T22A Edith 71.28 56 ⇑P **P** **11 08 34.5 +1.4**
baz=71

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
R24A	**Sanders Place,**	**71.47**	**54**	⇑P	**P**	**11 08 35.7**	**+1.5**
	baz=71						
AKASG	**Malin Array Be**	**71.81**	**326**	P	**P**	**11 08 35.0**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG	**Malin Array Be**	**71.81**	**326**	P	**P**	**11 08 35.0**	**-0.8**
AKASG	**Malin Array Be**	**71.81**	**326**	P	**P**	**11 08 35.0**	**-0.8**
	comp=Z,2.1nm,0.4s,baz=36,slow=6.2,SNR=12						
S24A	**Houchin Ranch,**	**71.82**	**55**	⇑P	**P**	**11 08 37.4**	**+1.0**
	baz=72						
KIEV	**Kiev**	**71.82**	**326**	eP	**P**	**11 08 34.6**	**-1.2**
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIEV	**Kiev**	**71.82**	**326**	eP	**P**	**11 08 34.6**	**-1.2**
	comp=Z,5.1nm,0.8s						
V22A	**San Miguel Ran**	**72.04**	**57**	⇑P	**P**	**11 08 39.1**	**+1.4**
	baz=72						
X20A	**Quemado**	**72.04**	**59**	⇑P	**P**	**11 08 39.2**	**+1.5**
	baz=72						
ECSD	**EROS Data Cent**	**72.06**	**45**	eP	**P**	**11 08 37.2**	**-0.2**
	comp=Z,5.0nm,0.9s						
U23A	**El Rito**	**72.17**	**56**	⇑P	**P**	**11 08 39.8**	**+1.4**
	baz=72,SNR=8.3						
S25A	**Robets Cordova**	**72.24**	**54**	⇑P	**P**	**11 08 40.2**	**+1.4**
	baz=72						
R26A	**Arlington**	**72.35**	**53**	⇓P	**P**	**11 08 39.9**	**+0.5**
	baz=72						
GNI	**Garni**	**72.47**	**310**	LR	LR	11 43 58.8	
	comp=Z,57nm,18.8s,baz=94,slow=39						
X21A	**Alamocita Cree**	**72.53**	**58**	⇑P	**P**	**11 08 42.1**	**+1.4**
	baz=72						
Y20A	**Horse Springs,**	**72.55**	**59**	⇓P	**P**	**11 08 42.2**	**+1.4**
	baz=72						
V23A	**Ortiz Mt. (NFS**	**72.58**	**57**	⇓P	**P**	**11 08 42.6**	**+1.8**
	baz=72						
T25A	**Trinidad**	**72.62**	**54**	⇑P	**P**	**11 08 41.9**	**+0.7**
	baz=72						
R27A	**Eads**	**72.72**	**53**	⇑P	**P**	**11 08 42.2**	**+0.6**
	baz=72						
Y21A	**Point of Rocks**	**72.90**	**59**	⇓P	**P**	**11 08 44.3**	**+1.4**
	baz=73						
T26A	**Comanche Natio**	**73.06**	**54**	⇑P	**P**	**11 08 44.1**	**+0.4**
	baz=73						
V24A	**Rampart Ranch,**	**73.12**	**56**	⇓P	**P**	**11 08 45.8**	**+1.6**
	baz=73						
U25A	**Circle Dot Ran**	**73.14**	**55**	⇓P	**P**	**11 08 45.3**	**+1.1**
	baz=73						
P30A	**Selden**	**73.22**	**50**	⇓P	**P**	**11 08 45.2**	**+0.8**
	baz=73						
R28A	**Tribune**	**73.23**	**52**	⇓P	**P**	**11 08 45.0**	**+0.5**
	baz=73						
Q29A	**Oakley**	**73.29**	**51**	⇑P	**P**	**11 08 45.4**	**+0.5**
	baz=73						
120A	**U Bar Ranch, L**	**73.34**	**60**	⇓P	**P**	**11 08 46.8**	**+1.4**
	baz=73						
X23A	**Hourglass Bar**	**73.39**	**57**	⇑P	**P**	**11 08 46.7**	**+1.0**
	baz=73						
Z21A	**St. Cloud Mine**	**73.39**	**59**	⇑P	**P**	**11 08 47.4**	**+1.6**
	baz=73						
W24A	**Lazy 6 Ranch,**	**73.40**	**56**	⇓P	**P**	**11 08 47.3**	**+1.6**
	baz=73						
V25A	**Rancho No Teng**	**73.42**	**56**	⇓P	**P**	**11 08 47.3**	**+1.4**
	baz=73						
U26A	**Atchley Ranch,**	**73.53**	**55**	⇑P	**P**	**11 08 47.2**	**+0.7**
	baz=73						
R29A	**Marienthal**	**73.54**	**52**	⇑P	**P**	**11 08 46.9**	**+0.5**
	baz=73						
Q30A	**Quinter**	**73.64**	**51**	⇑P	**P**	**11 08 47.5**	**+0.6**
	baz=73						
P31A	**Stockton**	**73.70**	**50**	⇓P	**P**	**11 08 47.2**	**0.0**
	baz=73						
S28A	**Manter**	**73.72**	**53**	⇓P	**P**	**11 08 48.1**	**+0.6**
	baz=73						
319A	**Douglas**	**73.75**	**62**	⇓P	**P**	**11 08 49.2**	**+1.4**
	baz=74,SNR=5.9						
220A	**Playas Peak, P**	**73.85**	**61**	⇓P	**P**	**11 08 49.7**	**+1.3**
	baz=74						
Z22A	**Elephant Butte**	**73.85**	**59**	⇑P	**P**	**11 08 49.6**	**+1.2**
	baz=74						
121A	**Cookes Peak, D**	**73.86**	**60**	⇓P	**P**	**11 08 50.2**	**+1.8**
	baz=74						
Y23A	**Lovelace Mesa,**	**73.92**	**58**	⇓P	**P**	**11 08 50.3**	**+1.5**
	baz=74						
V26A	**Tequesquite Ra**	**73.93**	**55**	⇑P	**P**	**11 08 50.1**	**+1.3**
	baz=74						
T28A	**Walsh**	**73.93**	**53**	⇓P	**P**	**11 08 49.5**	**+0.7**
	baz=74						
W25A	**X Bar L Ranch,**	**73.95**	**56**	⇑P	**P**	**11 08 50.6**	**+1.7**
	baz=74						
U27A	**Thompson Grove**	**74.03**	**54**	⇑P	**P**	**11 08 50.0**	**+0.7**
	baz=74						
R30A	**Dighton**	**74.11**	**51**	⇑P	**P**	**11 08 50.3**	**+0.6**
	baz=74						
S29A	**Ulysses**	**74.13**	**52**	⇑P	**P**	**11 08 50.5**	**+0.7**
	baz=74						
320A	**Kipp Ranch, An**	**74.24**	**61**	⇑P	**P**	**11 08 51.8**	**+1.1**
	baz=74						
Y24A	**Capitan**	**74.29**	**57**	⇑P	**P**	**11 08 52.0**	**+1.1**
	baz=74						
V27A	**Dan Oppiter Fa**	**74.50**	**55**	⇓P	**P**	**11 08 53.3**	**+1.3**
	baz=74						
Y25A	**Mesa, Roswell**	**74.73**	**57**	⇓P	**P**	**11 08 54.6**	**+1.2**
	baz=74						
X26A	**CR and CF Fran**	**74.80**	**56**	⇑P	**P**	**11 08 55.3**	**+1.5**
	baz=74						
KWP	**Kalwaria Pacla**	**75.15**	**329**	⇓P	**P**	**11 08 55.8**	**+0.4**
KWP	**Kalwaria Pacla**	**75.15**	**329**	⇓iP	**P**	**11 08 55.8**	**+0.4**
224A	**Cornudas Mount**	**75.54**	**59**	⇓P	**P**	**11 08 59.0**	**+0.8**
	baz=75						
Z26A	**Caprock**	**75.61**	**57**	⇑P	**P**	**11 08 59.6**	**+1.1**
	baz=75						
125A	**Gardner Draw,**	**75.64**	**58**	⇑P	**P**	**11 08 60.0**	**+1.3**
	baz=75						
Y27A	**Causey**	**75.65**	**56**	⇓P	**P**	**11 09 00.1**	**+1.4**
	baz=75						
MSTX	**Muleshoe**	**75.81**	**56**	⇑P	**P**	**11 09 01.0**	**+1.4**
	baz=76						
STHS	**Stebnicka Huta**	**75.85**	**329**	eP	**P**	**11 09 00.2**	**+0.7**
STHS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
STHS	**Stebnicka Huta**	**75.85**	**329**	eP	**P**	**11 09 00.2**	**+0.7**
BURAR	**Bucovina Array**	**75.86**	**326**	⇑iP	**P**	**11 08 59.6**	**-0.1**
KOLS	**Kolonicke sedl**	**75.89**	**328**	eP	**P**	**11 08 59.5**	**-0.2**
KOLS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KOLS	**Kolonicke sedl**	**75.89**	**328**	eP	**P**	**11 08 59.5**	**-0.2**
324A	**Moseley Ranch,**	**76.02**	**59**	⇑P	**P**	**11 09 01.9**	**+1.0**
	baz=76						
Z27A	**Tatum**	**76.02**	**57**	⇑P	**P**	**11 09 02.0**	**+1.2**
	baz=76						
X29A	**Tulia**	**76.08**	**55**	⇓P	**P**	**11 09 02.6**	**+1.4**
	baz=76						
V31A	**Spring Creek L**	**76.17**	**53**	⇑P	**P**	**11 09 02.7**	**+1.2**
	baz=76						
TESR	**Tescani**	**76.19**	**325**	⇓iP	**P**	**11 09 01.4**	**0.0**
CRVS	**Cervenica-Dubn**	**76.21**	**329**	eP	**P**	**11 08 59.4**	**-2.1**
CRVS				pmax	pmax		
	comp=Z,6.0nm,0.2s						
CRVS	**Cervenica-Dubn**	**76.21**	**329**	eP	**P**	**11 08 59.4**	**-2.1**
226B	**Tecolote Peak,**	**76.35**	**58**	⇓P	**P**	**11 09 03.9**	**+1.3**
	baz=76						
Z28A	**Tucker Farm, M**	**76.52**	**56**	⇑P	**P**	**11 09 04.6**	**+1.0**
	baz=76						
W31A	**Holland Ranch,**	**76.54**	**53**	⇓P	**P**	**11 09 04.9**	**+1.3**
	baz=76						
VRI	**Vrincioaia**	**76.68**	**324**	⇓P	**P**	**11 09 03.8**	**-0.4**
VRI	**Vrincioaia**	**76.68**	**324**	⇓iP	**P**	**11 09 03.8**	**-0.4**
UPC	**Upice**	**76.69**	**333**	eP	**P**	**11 09 03.9**	**-0.3**
UPC	**Upice**	**76.69**	**333**	eP	**P**	**11 09 03.9**	**-0.3**
DPC	**Dobruska-Polom**	**76.73**	**333**	eP	**P**	**11 09 04.8**	**+0.4**
DPC	**Dobruska-Polom**	**76.73**	**333**	eP	**P**	**11 09 04.8**	**+0.4**
425A	**Indio Mountain**	**76.78**	**59**	⇓P	**P**	**11 09 06.5**	**+1.3**
	baz=77						
MORC	**Moravsky Berou**	**76.82**	**332**	eP	**P**	**11 09 04.3**	**-0.7**
MORC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MORC	**Moravsky Berou**	**76.82**	**332**	eP	**P**	**11 09 04.3**	**-0.7**
	comp=Z,7.7nm,1.0s						
MORC	**Moravsky Berou**	**76.82**	**332**	⇑iP	**P**	**11 09 05.1**	**+0.1**
KECS	**Kecovo**	**76.91**	**329**	eP	**P**	**11 09 04.4**	**-1.0**
KECS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KECS	**Kecovo**	**76.91**	**329**	eP	**P**	**11 09 04.4**	**-1.0**
CLL	**Collm**	**76.91**	**335**	i P	**P**	**11 09 04.9**	**-0.5**
CLL				pmax	pmax		
	comp=Z,34nm,0.9s						
CLL	**Collm**	**76.91**	**335**	i P	**P**	**11 09 04.9**	**-0.5**
	comp=Z,8.0nm,0.9s						
X31A	**McDonald Ranch**	**76.92**	**54**	⇑P	**P**	**11 09 07.2**	**+1.3**
	baz=77						
Z29A	**Hungry Hill Ra**	**76.94**	**56**	⇑P	**P**	**11 09 07.0**	**+1.1**
	baz=77						
128A	**Castleberry Fa**	**76.95**	**57**	⇓P	**P**	**11 09 07.2**	**+1.2**
	baz=77						
326A	**Caldwell Ranch**	**77.00**	**58**	⇑P	**P**	**11 09 07.6**	**+1.2**
	baz=77						
Z30A	**Sanderson Ranc**	**77.25**	**55**	⇓P	**P**	**11 09 08.3**	**+0.6**
	baz=77						
129A	**Stewart Farms,**	**77.30**	**56**	⇑P	**P**	**11 09 08.7**	**+0.7**
	baz=77						
MLR	**Muntele Rosu**	**77.30**	**324**	⇓iP	**P**	**11 09 07.6**	**-0.3**
VYHS	**Vyhne**	**77.48**	**330**	eP	**P**	**11 09 08.9**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VYHS	**Vyhne**	**77.48**	**330**	eP	**P**	**11 09 08.9**	**+0.2**
DRGR		**77.51**	**327**	⇑P	**P**	**11 09 08.6**	**-0.3**
DRGR		**77.51**	**327**	⇑iP	**P**	**11 09 08.6**	**-0.3**
VRAC	**Vranov**	**77.54**	**332**	⇓iP	**P**	**11 09 09.4**	**+0.4**
328A	**Wristen Ranch,**	**77.65**	**58**	⇑P	**P**	**11 09 10.6**	**+0.7**
	baz=77						
427A	**Hayter Ranch,**	**77.68**	**58**	⇓P	**P**	**11 09 11.2**	**+1.0**
	baz=78						
Y32A	**R-V Farms, Ver**	**77.69**	**54**	⇓P	**P**	**11 09 10.9**	**+0.9**
	baz=77						
VOIR		**77.71**	**325**	⇓P	**P**	**11 09 10.2**	**+0.1**
VOIR		**77.71**	**325**	⇓iP	**P**	**11 09 10.2**	**+0.1**
Z31A	**Sharp Cattle R**	**77.79**	**55**	⇓P	**P**	**11 09 11.1**	**+0.4**
	baz=78						
229A	**Bryant Ranch,**	**77.81**	**57**	⇑P	**P**	**11 09 12.0**	**+1.1**
	baz=78						
SULR		**77.84**	**324**	⇓iP	**P**	**11 09 12.0**	**+1.3**
526A	**Mary Lane Ranc**	**77.84**	**59**	⇑P	**P**	**11 09 12.4**	**+1.2**
	baz=78						
ARR	**Arges**	**77.93**	**325**	⇑iP	**P**	**11 09 11.3**	**0.0**
STKA	**Stephens Creek**	**77.97**	**189**	P	**P**	**11 09 12.1**	**+0.7**
STKA	**Stephens Creek**	**77.97**	**189**	P	**P**	**11 09 12.1**	**+0.7**
	comp=Z,2.4nm,0.9s,baz=116,slow=16,SNR=2.9						
329A	**Wagon Wheel Ra**	**78.06**	**57**	⇑P	**P**	**11 09 13.4**	**+1.2**
	baz=78						
527A	**Woodward Ranch**	**78.06**	**59**	⇓P	**P**	**11 09 13.3**	**+0.9**
	baz=78						
626A	**Big Bend Ranch**	**78.18**	**60**	⇓P	**P**	**11 09 13.7**	**+0.7**
	baz=78						
Z32A	**Haskell**	**78.18**	**54**	⇓P	**P**	**11 09 13.4**	**+0.6**
	baz=78						
428A	**Kincaid Ranch,**	**78.20**	**58**	⇓P	**P**	**11 09 14.0**	**+0.9**
	baz=78						
LOT	**Lotru**	**78.21**	**326**	⇑iP	P	11 09 07.3	-5.6
ZST	**Bratislava**	**78.33**	**331**	eP	**P**	**11 09 11.2**	**-2.2**
ZST				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZST	**Bratislava**	**78.33**	**331**	eP	**P**	**11 09 11.2**	**-2.2**
MIB	**Mutribah**	**78.42**	**301**	eP	**P**	**11 09 14.1**	**-0.1**
MIB				AMb	AMB	11 09 15.5	
	comp=Z,30nm,0.8s						
BRTR	**Keskin Array B**	**78.46**	**316**	P	**P**	**11 09 14.8**	**+0.4**
BRTR	**Keskin Array B**	**78.46**	**316**	P	**P**	**11 09 14.8**	**+0.4**
	comp=Z,4.0nm,0.8s,baz=66,slow=4.2,SNR=22						
330A	**Mertzon**	**78.59**	**57**	⇑P	**P**	**11 09 15.3**	**+0.1**
	baz=78						
TXAR	**Lajitas Array**	**78.62**	**60**	P	**P**	**11 09 16.2**	**+0.8**
TXAR	**Lajitas Array**	**78.62**	**60**	P	**P**	**11 09 16.2**	**+0.8**
	comp=Z,1.8nm,0.7s,baz=301,slow=4.2,SNR=34						
KHC	**Kasperske Hory**	**78.66**	**334**	eP	**P**	**11 09 14.9**	**-0.3**
KHC	**Kasperske Hory**	**78.66**	**334**	eP	**P**	**11 09 15.3**	**+0.1**
KHC	**Kasperske Hory**	**78.66**	**334**	eP	**P**	**11 09 14.9**	**-0.3**
627A	**Terlingua Ranc**	**78.70**	**59**	⇑P	**P**	**11 09 16.5**	**+0.6**
	baz=78						
231A	**Bronte**	**78.70**	**56**	⇑P	**P**	**11 09 16.4**	**+0.6**
	baz=78						
429A	**Davenport Ranc**	**78.74**	**58**	⇑P	**P**	**11 09 16.3**	**+0.3**
	baz=78						
GERES	**GERESS Array B**	**78.87**	**333**	P	**P**	**11 09 16.2**	**-0.2**
GERES	**GERESS Array B**	**78.87**	**333**	P	**P**	**11 09 16.2**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=35,slow=4.9,SNR=21						
NAY	**Al-Naaiem**	**78.88**	**301**	eP	**P**	**11 09 16.6**	**-0.1**
NAY				AMb	AMB	11 09 18.0	
	comp=Z,14nm,1.0s						
BZS	**Buzias**	**78.91**	**327**	⇑P	**P**	**11 09 16.5**	**-0.1**
BZS	**Buzias**	**78.91**	**327**	⇑iP	**P**	**11 09 16.5**	**-0.1**
529A	**Stev Forest Ra**	**78.91**	**58**	⇑P	**P**	**11 09 17.6**	**+0.7**
	baz=79						
RDF	**Al-Radifah**	**78.93**	**300**	eP	**P**	**11 09 17.4**	**+0.4**
RDF				AMb	AMB	11 09 18.2	
	comp=Z,25nm,1.2s						
430A	**Baggett Ranch,**	**79.01**	**57**	⇑P	**P**	**11 09 18.4**	**+0.9**
	baz=79						
331A	**San Angelo**	**79.10**	**56**	⇓P	**P**	**11 09 18.5**	**+0.5**
	baz=79						
530A	**J-C Ranch, Com**	**79.41**	**58**	⇓P	**P**	**11 09 20.8**	**+1.1**
	baz=79						
332A	**Millersview**	**79.44**	**56**	⇑P	**P**	**11 09 20.9**	**+1.1**
	baz=79						
431A	**Sonora**	**79.45**	**57**	⇓P	**P**	**11 09 20.5**	**+0.6**
	baz=79						
432A	**Menard**	**79.78**	**56**	⇑P	**P**	**11 09 22.3**	**+0.6**
	baz=80						
531A	**Rocksprings**	**79.87**	**57**	⇓P	**P**	**11 09 23.0**	**+0.8**
	baz=80						
532A	**Rocksprings**	**80.27**	**57**	⇑P	**P**	**11 09 25.2**	**+0.9**
	baz=80						
631A	**Perdido Creek**	**80.40**	**58**	⇓P	**P**	**11 09 26.2**	**+1.2**
	baz=80						
632A	**Uvalde**	**80.80**	**57**	⇑P	**P**	**11 09 28.3**	**+1.2**
	baz=81						
VTS	**Vitosha**	**80.81**	**324**	⇑P	**P**	**11 09 26.1**	**-1.0**
VTS	**Vitosha**	**80.81**	**324**	⇑iP	**P**	**11 09 26.1**	**-1.0**
CDF	**Champ du Feu**	**81.14**	**337**	⇑iP	**P**	**11 09 28.4**	**-0.3**
	comp=Z,22nm,0.9s						
CDF	**Champ du Feu**	**81.14**	**337**	⇑iP	**P**	**11 09 28.4**	**-0.3**
CDF				pmax	pmax		
	comp=Z,22nm,0.9s						
CDF	**Champ du Feu**	**81.14**	**337**	⇑iP	**P**	**11 09 28.4**	**-0.3**
	comp=Z,22nm,0.9s						
732A	**Laxson Ranch,**	**81.26**	**58**	⇑P	**P**	**11 09 30.7**	**+1.2**
	baz=81						
PAGF	**Fort de Pagny**	**81.43**	**338**	⇑iP	**P**	**11 09 30.2**	**+0.1**
	comp=Z,9.2nm,0.8s						
PAGF	**Fort de Pagny**	**81.43**	**338**	⇑iP	**P**	**11 09 30.2**	**+0.1**
	comp=Z,9.2nm,0.8s						
ISP	**Isparta**	**81.46**	**317**	⇓P	**P**	**11 09 28.6**	**-2.0**
ISP	**Isparta**	**81.46**	**317**	⇓iP	**P**	**11 09 28.6**	**-2.0**
MEZF	**Maizieres J'vi**	**81.65**	**338**	⇑iP	**P**	**11 09 31.3**	**0.0**
	comp=Z,17nm,0.8s						
MEZF	**Maizieres J'vi**	**81.65**	**338**	⇑iP	**P**	**11 09 31.3**	**0.0**
	comp=Z,17nm,0.8s						
HAU	**Haudompre**	**81.77**	**337**	⇑iP	**P**	**11 09 31.5**	**-0.4**
HAU				eR			
	comp=Z,55nm,22.2s						
HAU	**Haudompre**	**81.77**	**337**	⇑iP	**P**	**11 09 31.5**	**-0.4**
HAU	**Haudompre**	**81.77**	**337**	⇑iP	**P**	**11 09 31.5**	**-0.4**
HINF	**Hinteralfeld**	**81.80**	**337**	eP	**P**	**11 09 31.4**	**-0.8**
HINF	**Hinteralfeld**	**81.80**	**337**	eP	**P**	**11 09 31.4**	**-0.8**
HINF	**Hinteralfeld**	**81.80**	**337**	eP	**P**	**11 09 31.4**	**-0.8**
SFTF	**Sexfontaines**	**81.93**	**338**	⇑iP	**P**	**11 09 32.5**	**-0.3**
	comp=Z,44nm,0.9s						
SFTF	**Sexfontaines**	**81.93**	**338**	⇑iP	**P**	**11 09 32.5**	**-0.3**
	comp=Z,44nm,0.9s						
MMAI	**Mount Meron Ar**	**82.78**	**311**	LR	LR	11 51 26.4	
	comp=Z,62nm,19.8s,baz=115,slow=39						
LDF	**La Druitiere**	**82.79**	**342**	eP	**P**	**11 09 36.9**	**-0.4**
	comp=Z,7.6nm,0.7s						
LDF	**La Druitiere**	**82.79**	**342**	eP	**P**	**11 09 36.9**	**-0.4**
LDF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LDF	**La Druitiere**	**82.79**	**342**	eP	**P**	**11 09 36.9**	**-0.4**
	comp=Z,7.6nm,0.7s						
LOR	**Lormes**	**83.10**	**339**	⇑iP	**P**	**11 09 38.6**	**-0.3**
	comp=Z,19nm,0.9s						
LOR				eR			
	comp=Z,55nm,22.8s						
LOR	**Lormes**	**83.10**	**339**	⇑iP	**P**	**11 09 38.6**	**-0.3**
	comp=Z,19nm,0.9s						
GRR	**Gorron**	**83.15**	**342**	eP	**P**	**11 09 38.8**	**-0.3**
GRR	**Gorron**	**83.15**	**342**	eP	**P**	**11 09 38.8**	**-0.3**
GRR	**Gorron**	**83.15**	**342**	eP	**P**	**11 09 38.8**	**-0.3**
SSF	**Saint Saulge**	**83.38**	**339**	eP	**P**	**11 09 40.1**	**-0.2**
	comp=Z,13nm,0.8s						
SSF	**Saint Saulge**	**83.38**	**339**	eP	**P**	**11 09 40.1**	**-0.2**
SSF				pmax	pmax		
	comp=Z,13nm,0.8s						
SSF	**Saint Saulge**	**83.38**	**339**	eP	**P**	**11 09 40.1**	**-0.2**
	comp=Z,13nm,0.8s						
SMF	**Signal de Mont**	**83.68**	**339**	⇑iP	**P**	**11 09 41.8**	**-0.1**
	comp=Z,34nm,1.0s						
SMF	**Signal de Mont**	**83.68**	**339**	⇑iP	**P**	**11 09 41.8**	**-0.1**
SMF				pmax	pmax		
	comp=Z,34nm,1.0s						
SMF	**Signal de Mont**	**83.68**	**339**	⇑iP	**P**	**11 09 41.8**	**-0.1**
	comp=Z,34nm,1.0s						
LPL	**La Plagne**	**83.94**	**336**	eP	**P**	**11 09 43.9**	**+0.4**
	comp=Z,11nm,0.8s						
LPL	**La Plagne**	**83.94**	**336**	eP	**P**	**11 09 43.9**	**+0.4**
LPL				pmax	pmax		
	comp=Z,11nm,0.8s						
LPL	**La Plagne**	**83.94**	**336**	eP	**P**	**11 09 43.9**	**+0.4**
	comp=Z,11nm,0.8s						
TCF	**Toulx Ste Croi**	**84.42**	**339**	eP	**P**	**11 09 45.2**	**-0.5**
TCF	**Toulx Ste Croi**	**84.42**	**339**	eP	**P**	**11 09 45.2**	**-0.5**
TCF	**Toulx Ste Croi**	**84.42**	**339**	eP	**P**	**11 09 45.2**	**-0.5**
MBDF	**Montbardon**	**84.66**	**336**	eP	**P**	**11 09 46.8**	**-0.3**
MBDF	**Montbardon**	**84.66**	**336**	eP	**P**	**11 09 46.8**	**-0.3**
MBDF	**Montbardon**	**84.66**	**336**	eP	**P**	**11 09 46.8**	**-0.3**
VIVF	**Saint-Julien-l**	**85.12**	**337**	eP	**P**	**11 09 49.6**	**+0.4**
VIVF	**Saint-Julien-l**	**85.12**	**337**	eP	**P**	**11 09 49.6**	**+0.4**
VIVF	**Saint-Julien-l**	**85.12**	**337**	eP	**P**	**11 09 49.6**	**+0.4**
CAF	**Calviac**	**85.73**	**339**	eP	**P**	**11 09 52.8**	**+0.5**
CAF	**Calviac**	**85.73**	**339**	eP	**P**	**11 09 52.8**	**+0.5**
CAF	**Calviac**	**85.73**	**339**	eP	**P**	**11 09 52.8**	**+0.5**
PLCA	**Paso Flores**	**148.92**	**96**	PKPbc	**PKPbc**	**11 17 00.2**	**-0.4**
PLCA	**Paso Flores**	**148.92**	**96**	PKPbc	**PKPbc**	**11 17 00.2**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=229,slow=5.1,SNR=4.5						
CPUP	**Villa Florida**	**149.59**	**60**	PKPbc	**PKPbc**	**11 17 02.1**	**-0.5**
CPUP	**Villa Florida**	**149.59**	**60**	PKPbc	**PKPbc**	**11 17 02.1**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=288,slow=12,SNR=4.4						

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*IDC **08** 11:01:38.6±0.6, 34.°88S×108.°30W, h0km, mb4.4/19, mb1 4.6/19, mb1mx4.5/24, mbtmp4.4/19, MS4.1/19, Ms1 4.1/19, ms1mx4.0/23, Error ellipse: s-maj=17.2km s-min=16.0km az=60.0*

*ISCJB **08** 11:01:39.5±0.4, 34.°94S±0.°07×108.°06W±0.°09, h10km, mb4.6/48, MS4.2/24, Error ellipse: s-maj=12.1km s-min=8.6km az=145.7*

*NEIC **08** 11:01:40.9±0.4, 34.°95S×108.°12W, h10km, mb4.8/30, Error ellipse: s-maj=12.2km s-min=9.1km az=55.0*

*BJI **08** 11:01:41.2, 34.°80S×107.°90W, h10km, mB5.0/8, Ms5.1/4, Ms7 4.7/8*

*GCMT **08** 11:01:44.0±0.2, 35.°04S×108.°15W, h16km±1km, MW5.0, Moment Tensor Solution. s45,c49; s82,c128; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.05±.13; $M_{\theta\theta}$-0.52±.12; $M_{\phi\phi}$1.57±.11; $M_{r\theta}$-0.59±.32; $M_{\theta\phi}$-3.44±.09; $M_{\phi r}$-1.70±.34; Best double couple: $M_0$4.10000×10^{16} NP1:ϕ_s101.00000°, δ61.00000°, λ-167.00000°. NP2:ϕ_s5.00000°, δ78.00000°, λ-29.00000°. Principal axes: T 4.3200, Plg11.0000°, Azm56.0000°; N -0.4400, Plg59.0000°, Azm165.0000°; P -3.8800, Plg29.0000°, Azm319.0000°; Data Used: II IU IC G CN.*

ISC 08 11:01:40.5±0.4**, 34.°88S**±0.°09×**108.°14W**±0.°08**, h10**km**, n115, σ1.s70**/112**, mb4.7**/48**, MS4.2**/24**, 1C, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**30.11**	**112**	eP	**P**	**11 07 51.3**	**+1.0**
PLCA	**Paso Flores**	**30.11**	**112**	P	**P**	**11 07 50.9**	**+0.6**
	15nm,1.0s,baz=272,slow=9.0,SNR=25						
PLCA				LR	LR	11 16 58.2	
	comp=Z,129nm,19.9s,baz=275,slow=30						
LCO	**Las Campanas**	**32.18**	**90**	eP	**P**	**11 08 09.5**	**+0.6**
	13nm,1.0s						
CFAA	**Coronel Fontan**	**33.38**	**96**	P	**P**	**11 08 19.2**	**0.0**
CFAA	**Coronel Fontan**	**33.38**	**96**	P	**P**	**11 08 19.2**	**0.0**
	1.4nm,0.9s,baz=258,slow=9.0,SNR=18						
USHA	**Ushuaia**	**33.88**	**138**	LR	LR	11 18 43.0	
	comp=Z,866nm,18.5s,baz=256,slow=30						
LVC	**Limon Verde**	**36.28**	**81**	eP	**P**	**11 08 46.5**	**+1.9**
	28nm,1.1s						
NNA	**Nana**	**36.40**	**59**	P	**P**	**11 08 45.2**	**-0.1**
NNA	**Nana**	**36.40**	**59**	P	**P**	**11 08 45.2**	**-0.1**
	7.0nm,0.5s,baz=223,slow=10,SNR=5.1						
TRQA	**Tornquist**	**36.97**	**109**	eP	**P**	**11 08 50.6**	**+0.6**
	159nm,1.6s						
ATAH	**Atahualpa**	**38.87**	**52**	P	**P**	**11 09 08.2**	**+1.6**
ATAH	**Atahualpa**	**38.87**	**52**	P	**P**	**11 09 08.2**	**+1.6**
	7.7nm,0.7s,baz=183,slow=2.9,SNR=6.9						
LPAZ	**La Paz**	**40.23**	**73**	P	**P**	**11 09 19.6**	**+1.4**
LPAZ	**La Paz**	**40.23**	**73**	P	**P**	**11 09 19.6**	**+1.4**
	13nm,0.9s,baz=244,slow=4.4,SNR=38						
LPAZ				LR	LR	11 22 05.0	
	comp=Z,223nm,19.8s,baz=245,slow=30						
PPT	**Papeete**	**40.64**	**284**	LR	LR	11 20 46.4	
	comp=Z,168nm,19.5s,baz=138,slow=28						
CPUP	**Villa Florida**	**44.17**	**93**	P	**P**	**11 09 49.2**	**-0.3**
CPUP	**Villa Florida**	**44.17**	**93**	P	**P**	**11 09 49.2**	**-0.3**
	5.0nm,0.8s,baz=236,slow=8.7,SNR=13						
CPUP				LR	LR	11 25 01.5	
	comp=Z,251nm,18.8s,baz=236,slow=32						
SIV	**San Ignacio**	**46.02**	**78**	P	**P**	**11 10 04.8**	**+0.4**
SIV	**San Ignacio**	**46.02**	**78**	P	**P**	**11 10 04.8**	**+0.4**
	9.3nm,1.1s,baz=249,slow=10,SNR=14						
SAML	**Samuel**	**48.49**	**69**	eP	**P**	**11 10 23.2**	**-0.5**
	43nm,1.8s						
ROSC	**El Rosal**	**50.74**	**46**	P	**P**	**11 10 42.9**	**+1.6**
ROSC	**El Rosal**	**50.74**	**46**	P	**P**	**11 10 42.9**	**+1.6**
	14nm,0.6s,baz=91,slow=16,SNR=12						
ROSC				LR	LR	11 28 08.7	
	comp=Z,310nm,21.4s,baz=208,slow=31						
SBA	**Scott Base**	**55.17**	**195**	eP	**P**	**11 11 14.2**	**+1.6**
	128nm,2.9s						
QSPA	**South Pole Qui**	**55.33**	**180**	P	**P**	**11 11 14.1**	**-0.1**
QSPA	**South Pole Qui**	**55.33**	**180**	P	**P**	**11 11 14.1**	**-0.1**
	1.6nm,0.8s,baz=111,slow=11,SNR=7.7						
SDV	**Santo Domingo**	**56.14**	**46**	eP	**P**	**11 11 19.4**	**-1.3**
	13nm,1.1s						
VNDA	**Vanda**	**56.25**	**195**	P	**P**	**11 11 21.2**	**+0.7**
VNDA	**Vanda**	**56.25**	**195**	P	**P**	**11 11 21.2**	**+0.7**
	1.6nm,0.7s,baz=87,slow=5.8,SNR=4.8						
VNDA				LR	LR	11 30 48.2	
	comp=Z,108nm,19.6s,baz=102,slow=31						
BDFB	**Brasilia**	**56.84**	**86**	P	**P**	**11 11 25.7**	**+0.1**
BDFB	**Brasilia**	**56.84**	**86**	P	**P**	**11 11 25.7**	**+0.1**
	9.4nm,1.1s,baz=213,slow=9.0,SNR=5.2						
BDFB				LR	LR	11 33 47.6	
	comp=Z,252nm,18.3s,baz=154,slow=34						
SNAA	**Sanae**	**61.88**	**160**	eP	**P**	**11 11 58.8**	**-0.9**
SNAA	**Sanae**	**61.88**	**160**	epP	**P**	**11 12 00.5**	**+0.8**
SNAA	**Sanae**	**61.88**	**160**	esP	sP	11 12 02.5	-1.6
SNAA	**Sanae**	**61.88**	**160**	ePcP	**PcP**	**11 12 40.3**	**-0.1**
SNAA	**Sanae**	**61.88**	**160**	eP	**P**	**11 11 59.1**	**-0.5**
TXAR	**Lajitas Array**	**64.00**	**4**	P	**P**	**11 12 14.4**	**+0.2**
TXAR	**Lajitas Array**	**64.00**	**4**	P	**P**	**11 12 14.5**	**+0.2**
	0.7nm,0.7s,baz=185,slow=9.0,SNR=8.6						
TXAR				LR	LR	11 35 19.7	
	comp=Z,68nm,19.9s,baz=180,slow=32						
TUC	**Tucson**	**66.88**	**358**	eP	**P**	**11 12 34.1**	**+1.4**
	12nm,1.0s						
GSC	**Goldstone**	**70.28**	**352**	eP	**P**	**11 12 55.2**	**+1.2**
	8.0nm,1.3s						
LRAL	**Lakeview Retre**	**70.41**	**19**	eP	**P**	**11 12 55.1**	**+0.5**
	2.8nm,0.6s						
ISA	**Isabella**	**70.84**	**351**	eP	**P**	**11 12 59.3**	**+2.0**
	22nm,1.8s						
PLAL	**Pickwick Lake**	**71.98**	**17**	eP	**P**	**11 13 03.3**	**-0.9**
	18nm,1.6s						
CCUT	**Cedar City**	**72.22**	**356**	eP	**P**	**11 13 07.6**	**+1.7**
	4.6nm,1.1s						
SWET	**Sewanee**	**72.75**	**19**	eP	**P**	**11 13 08.2**	**-0.7**
	53nm,1.9s						
PV04	**Paradox Valley**	**72.91**	**359**	eP	P	11 13 14.2	+4.4
CMB	**Columbia Colle**	**73.43**	**350**	eP	P	11 13 16.1	+3.4
	8.2nm,1.4s						
NV11	**Mina Array Sit**	**73.53**	**352**	eP	**P**	**11 13 14.4**	**+1.0**
NVAR	**Mina Array Bea**	**73.54**	**352**	P	**P**	**11 13 14.1**	**+0.5**
NVAR	**Mina Array Bea**	**73.54**	**352**	P	**P**	**11 13 14.1**	**+0.5**
	3.7nm,1.0s,baz=189,slow=6.7,SNR=18						
SMCO	**Snowmass**	**73.69**	**1**	eP	P	11 13 20.4	+5.7
SYO	**Syowa Base**	**73.71**	**168**	⇑epP	pP	11 13 17.5	+0.1
TKL	**Tuckaleechee C**	**73.77**	**20**	P	**P**	**11 13 14.1**	**-0.6**
TKL	**Tuckaleechee C**	**73.77**	**20**	P	**P**	**11 13 14.1**	**-0.6**
	2.3nm,0.8s,baz=192,slow=14,SNR=2.4						
TKL				LR	LR	11 40 44.9	
	comp=Z,121nm,19.0s,baz=119,slow=32						
WCN	**Washoe City**	**74.59**	**351**	eP	**P**	**11 13 20.5**	**+0.8**
	4.1nm,1.1s						

DAU	Daniels Canyon	74.97	358	eP	P	11 13 23.6	+1.6
WDC	Whiskeytown Da	76.25	349	eP	P	11 13 29.3	+0.4
	6.3nm,1.1s						
KHMM	Horse Mountain	76.73	348	eP	P	11 13 33.5	+1.6
	18nm,1.1s						
BW06	Boulder Array	77.28	359	eP	P	11 13 34.8	-0.3
	4.4nm,1.0s						
PDAR	Pinedale Array	77.28	359	P	P	11 13 34.6	-0.4
PDAR	Pinedale Array	77.28	359	P	P	11 13 34.6	-0.4
	2.3nm,0.8s,baz=162,slow=6.2,SNR=16						
PDAR				LR	LR	11 44 13.1	
	comp=Z,58nm,20.1s,baz=32,slow=33						
YBH	Yreka Blue Hor	77.40	349	LR	LR	11 38 56.5	
	comp=Z,50nm,20.4s,baz=180,slow=29						
WVOR	Wild Horse Val	77.54	352	eP	P	11 13 38.3	+1.9
	6.5nm,1.2s						
MAW	Mawson	77.61	176	P	P	11 13 36.9	+0.5
MAW	Mawson	77.61	176	P	P	11 13 36.9	+0.5
	2.3nm,0.7s,baz=254,slow=9.3,SNR=4.0						
MAW				LR	LR	11 49 11.1	
	comp=Z,78nm,18.3s,baz=14,slow=37						
TPAW	Teton Pass	78.04	358	eP	P	11 13 40.3	+1.0
LOHW	Long Hollow	78.15	358	eP	P	11 13 46.4	+6.5
	5.7nm,1.2s						
HLID	Hailey	78.28	355	eP	P	11 13 41.2	+0.7
	10nm,1.1s						
HUMO	Hull Mountain	78.29	349	eP	P	11 13 41.5	+1.1
IMW	Indian Meadow	78.44	358	eP	P	11 13 42.6	+1.1
	23nm,2.0s						
RSSD	Black Hills	78.71	3	eP	P	11 13 44.1	+1.2
	2.1nm,0.6s						
ECSD	EROS Data Cent	78.94	8	eP	P	11 13 44.0	0.0
	41nm,2.2s						
MCMT	McKenzie Canyo	79.45	357	eP	P	11 13 48.0	+1.0
	1.7nm,1.0s						
DLMT	Dillon	79.97	357	eP	P	11 13 57.6	+7.9
CHMT	Chamberlain Mo	81.55	356	eP	P	11 14 00.8	+2.6
SLMT	Seeley Lake	81.89	356	eP	P	11 14 02.4	+2.5
SWMT	Swartz Lake	82.18	356	eP	P	11 14 04.4	+3.0
NLWA	Neilton Lookou	83.10	349	eP	P	11 14 07.2	+1.1
	18nm,1.3s						
NEW	Newport	83.16	354	eP	P	11 14 06.8	+0.5
	23nm,1.6s						
NEW	Newport	83.16	354	P	P	11 14 07.0	+0.6
	4.4nm,1.0s,baz=165,slow=5.0,SNR=7.5						
NEW				LR	LR	11 45 33.0	
	comp=Z,60nm,19.6s,baz=189,slow=32						
PGC	Sidney	84.27	350	eP	P	11 14 14.5	+2.6
	1.2nm,0.9s						
LONY	Lake Ozonia	84.79	23	eP	P	11 14 21.0	+6.3
	6.9nm,1.0s						
ULM	Lac du Bonnet	85.45	8	eP	P	11 14 20.4	+2.5
ULM	Lac du Bonnet	85.45	8	P	P	11 14 16.3	-1.6
	2.9nm,0.6s,baz=181,slow=6.3,SNR=3.1						
STKA	Stephens Creek	86.74	233	LR	LR	11 47 01.5	
	comp=Z,210nm,18.8s,baz=205,slow=31						
FFC	Flin Flon	89.40	4	eP	P	11 14 38.6	+1.9
	5.4nm,1.0s						
DLBC	Dease Lake	94.75	349	LR	LR	11 49 42.0	
	comp=Z,66nm,19.0s,baz=6.3,slow=30						
SCHQ	Schefferville	96.14	23	LR	LR	11 54 04.3	
	comp=Z,83nm,20.0s,baz=341,slow=33						
YKA	Yellowknife Ar	97.17	357	P	P	11 15 11.4	-1.0
YKA	Yellowknife Ar	97.17	357	P	P	11 15 11.4	-1.0
	0.5nm,0.7s,baz=170,slow=4.0,SNR=6.7						
ASAR	Alice Springs	97.25	235	LR	LR	11 58 02.0	
	comp=Z,209nm,18.0s,baz=170,slow=35						
KDAK	Kodiak Island	99.57	338	LR	LR	11 50 15.4	
	comp=Z,94nm,20.7s,baz=105,slow=29						
MDJ	Mudanjiang	135.39	301	PKP	PKPdf	11 21 01.9	+1.6
MDJ				PP	PP	11 23 39.9	+2.4
MDJ				SS	SS	11 41 38.2	+4.4
MDJ				AMB	AMB		
	comp=Z,69nm,9.2s						
MDJ				LR	LR		
	comp=E,29nm,24.5s						
MDJ				LR	LR		
	comp=Z,29nm,20.4s						
GERES	GERESS Array B	135.55	53	PKP	PKPdf	11 20 59.4	-1.3
GERES	GERESS Array B	135.55	53	PKP	PKPdf	11 20 59.4	-1.3
	comp=Z,0.3nm,0.3s,baz=269,slow=5.5,SNR=4.1						
CN2	Changchun	138.24	299	ePKP	PKPdf	11 21 04.4	-1.2
BJI	Beijing	144.72	292	PKP	PKPab	11 21 14.7	-1.5
BJI				LR	LR		
	comp=Z,50nm,26.8s						
AKASG	Malin Array Be	145.48	49	PKP	PKPdf	11 21 16.6	-1.7
AKASG	Malin Array Be	145.48	49	PKP	PKPdf	11 21 16.6	-1.7
	comp=Z,5.2nm,0.8s,baz=281,slow=3.4,SNR=24						
HHC	Hu-ho-hao-te	148.29	293	ePKPbc	PKPdf	11 21 21.5	-2.0
HHC				sPKP		11 21 26.8	
HHC				PKS	PP	11 24 56.1	-0.1
HHC				SKS	SKSdf	11 28 25.4	-6.6
HHC				SKKS	SKKSac	11 31 44.1	-3.3
HHC				SS	SS	11 44 01.8	-2.4
HHC				AMB	AMB		
	comp=Z,230nm,8.3s						
HHC				LR	LR		
	comp=N,210nm,19.0s						
HHC				LR	LR		
	comp=E,260nm,20.2s						
HHC				LR	LR		
	comp=Z,250nm,21.4s						
GYA	Guiyang	149.03	264	ePKPbc	PKPdf	11 21 26.0	+0.8
GYA				PKPab	PKPab	11 21 36.9	+3.4
GYA				PKS	PP	11 25 01.6	+0.9
GYA				PP	PP	11 25 05.4	+4.7
GYA				AMB	AMB		
	comp=Z,90nm,7.9s						
BRTR	Keskin Array B	149.38	69	PKPbc	PKPbc	11 21 28.9	-0.9
BRTR	Keskin Array B	149.38	69	PKPbc	PKPbc	11 21 28.9	-0.9
	comp=Z,4.7nm,1.1s,baz=208,slow=4.2,SNR=15						
XAN	Xi'an	149.54	279	PKPbc	PKPbc	11 21 29.0	-1.2
CMAR	Chiang Mai Arr	150.92	243	PKPbc	PKPbc	11 21 32.6	-1.3
CMAR	Chiang Mai Arr	150.92	243	PKPbc	PKPbc	11 21 32.6	-1.3
	comp=Z,1.6nm,0.7s,baz=198,slow=1.1,SNR=8.3						
SONM	Songino Array	151.28	307	PKPbc	PKPbc	11 21 32.2	-1.8
SONM	Songino Array	151.28	307	PKPbc	PKPbc	11 21 32.2	-1.8
	comp=Z,2.4nm,0.7s,baz=112,slow=1.6,SNR=8.0						
KMI	Kunming	151.64	258	PKPbc	PKPdf	11 21 30.6	+1.2
KMI				PP	PP	11 25 20.5	+4.7
KMI				AMB	AMB		
	comp=Z,52nm,4.4s						
KMI				LR	LR		
	comp=Z,76nm,20.3s						
CD2	Chengdu	152.98	271	ePKPbc	PKPdf	11 21 32.0	+1.0
CD2				PP	PP	11 25 28.5	+5.1
CD2				SKS	SKSdf	11 28 36.2	-2.1
CD2				SKKS	SKKSac	11 32 15.4	+1.8
CD2				SS	SS	11 44 59.2	+2.5
CD2				AMB	AMB		
	comp=Z,60nm,10.2s						
CD2				LR	LR		
	comp=N,100nm,22.4s						
CD2				LR	LR		
	comp=Z,120nm,23.2s						
LZH	Lanzhou	153.98	282	ePKPbc	PKPdf	11 21 28.5	-4.0
LZH				pPKP	pPKPdf	11 21 33.0	-2.9
LZH				sPKP		11 21 35.5	
ZALV	Zalesovo Beam	158.87	338	PKPab	PKPab	11 22 13.2	-0.8
ZALV	Zalesovo Beam	158.87	338	PKPab	PKPab	11 22 13.2	-0.8
	comp=Z,1.1nm,0.6s,baz=16,slow=4.9,SNR=5.9						
WMQ	Urumqi	164.86	311	ePKP	PKPdf	11 21 43.0	-1.6
WMQ				LR	LR		
	comp=Z,110nm,23.4s						
MKAR	Makanchi Array	165.73	330	PKPab	PKPab	11 22 42.5	-1.9
MKAR	Makanchi Array	165.73	330	PKPab	PKPab	11 22 42.5	-1.9
	comp=Z,0.8nm,0.8s,baz=26,slow=3.1,SNR=6.0						

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*ISCJB **08** 11:22:28.9±0.4, 24°.26N±0°.03×122°.20E±0°.02, h48km±9km, Error ellipse: s-maj=5.9km s-min=2.9km az=163.4*
*TAP **08** 11:22:28.9, 24°.27N×122°.17E, h44km±1km, ML2.9, D*
*JMA **08** 11:22:28.9±0.1, 24°.59N×122°.25E, h69km, M1.9*
ISC 08 11:22:29.0±1.1, **24°.25N**±0°.03×**122°.20E**±0°.02, **h31**km±12km, **n31**, σ**0s.56**/59, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENA	Nanau	0.45	293	P	Pn	11 22 39.5	+0.2
	baz=292						
ENA				S	Sn	11 22 47.5	+1.1
	baz=292						
TWC	Suao	0.48	318	P	Pn	11 22 39.6	-0.1
	baz=319						
TWC				S	Sn	11 22 46.9	-0.1
	baz=319						
TWD	Chiawan	0.58	253	P	Pb	11 22 40.7	0.0
	baz=250						
TWD				S	Sn	11 22 49.7	+0.3
	baz=250						
TWE	Neicheng	0.67	314	P	Pb	11 22 42.0	-0.3
	baz=315						
TWE				S	Sn	11 22 51.9	+0.1
	baz=315						
ENTT	Nioudou	0.69	304	iP	Pn	11 22 42.4	-0.2
	baz=303						
ENTT				S	Sn	11 22 52.3	0.0
	baz=303						
YOJ	Yonaguni jima	0.77	74	P	Pn	11 22 43.8	+0.1
YOJ				S	Sn	11 22 54.9	+0.7
NNS	Nan Shan	0.78	284	eP	Pn	11 22 43.5	-0.4
	baz=283						
NNS				S	Sb	11 22 54.0	-0.4
	baz=283						
ESL	Shilin	0.83	238	eP	Pn	11 22 43.8	-0.6
	baz=235						
ESL				eS	Sb	11 22 56.2	+0.6
	baz=235						
WHF	Hehuan Shan	0.86	263	eS	Sn	11 22 56.6	-0.5
	baz=261						
NSK	Sanguang	0.87	299	P	Pn	11 22 44.7	-0.5
	baz=298						
NSK				eS	Sn	11 22 55.8	-1.1
	baz=298						
NWF	Wu-fen Shan	0.90	335	eP	Pb	11 22 46.9	+0.7
	baz=336						
NWF				eS	Sn	11 22 56.4	-1.1
	baz=336						
TWT	Tachien	0.93	270	eP	Pn	11 22 46.3	+0.2
	baz=268						
TWT				eS	Sn	11 22 58.6	0.0
	baz=268						
EHY	Hungye	1.09	227	eP	Pn	11 22 47.2	-1.0
	baz=225						
EHY				eS	Sn	11 23 01.6	-0.7
	baz=225						
NSTT	Nanjuang	1.16	289	eP	Pn	11 22 49.0	0.0
	baz=288						
NSTT				eS	Sn	11 23 04.0	+0.2
	baz=288						
TWF1	Yuli	1.22	223	eP	Pn	11 22 48.9	-1.0
	baz=220						
TWF1				eS	Sn	11 23 05.4	0.0
	baz=220						
SMLT	Sun Moon Lake	1.24	253	eP	Pn	11 22 50.8	+0.5
	baz=251						
SMLT				eS	Sn	11 23 06.4	+0.3
	baz=251						
TYC	Yuchr	1.27	254	eP	Pn	11 22 50.9	+0.3
	baz=253						
TYC				eS	Sn	11 23 07.2	+0.6
	baz=253						
TWQ1	Liyutan	1.30	274	eP	Pn	11 22 51.0	-0.1
	baz=273						
TWQ1				eS	Sn	11 23 07.9	+0.5
	baz=273						
NSY	Sanyi	1.32	277	eP	Pn	11 22 51.0	-0.3
	baz=276						
NSY				eS	Sn	11 23 07.4	-0.4
	baz=276						
YUS	Yu-Shan	1.37	237	eP	Pn	11 22 52.6	+0.2
	baz=234						
YUS				eS	Sn	11 23 09.3	-0.5
	baz=234						
IRIF	Iriomote-Funau	1.40	86	P	Pn	11 22 52.4	+0.1
IRIF				eS	Sn	11 23 09.7	0.0
ALS	Alishan	1.48	240	eP	Pn	11 22 54.5	+0.9
	baz=238						
ALS				eS	Sn	11 23 12.6	+0.6
	baz=238						
HATJ	Hateruma jima	1.48	97	eS	Sb	11 23 13.6	-0.7
ELDTW	Lidau	1.52	226	eP	Pn	11 22 53.8	-0.3
	baz=224						
ELDTW				eS	Sn	11 23 12.0	-0.8
	baz=224						
CHN5	Tsauling	1.54	245	eP	Pn	11 22 54.0	-0.3
	baz=243						
CHN5				eS	Sn	11 23 14.0	+0.7
	baz=243						
JKRS	Kuro-shima	1.65	90	P	Pn	11 22 56.1	+0.3
JKRS				eS	Sn	11 23 16.8	+0.8
CHN4	Tsaushan	1.72	239	eP	Pn	11 22 57.6	+0.8
	baz=237						
CHN4				eS	Sn	11 23 17.1	-0.7
	baz=237						
WTP	Ta-pu	1.77	236	eP	Pn	11 22 58.3	+0.8
	baz=234						
WTP				eS	Sn	11 23 19.0	+0.2
	baz=234						
JIJ	Ishigaki jima	1.78	86	P	Pn	11 22 57.7	+0.2
JIJ				eS	Sn	11 23 18.1	-1.0
CHN1	Nanshi	1.86	236	eP	Pn	11 22 59.3	+0.5
	baz=234						
CHN1				eS	Sn	11 23 21.6	+0.3
	baz=234						
JTJ	Tarama	2.31	80	eS	Sn	11 23 31.8	-0.5

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*ISCJB **08** 11:24:30.6±1.1, 51°.51N±0°.05×16°.07E±0°.05, h0km, Error ellipse: s-maj=7.6km s-min=3.7km az=14.1*
*WAR **08** 11:24:32.6, 51°.55N×16°.14E*
*CSEM **08** 11:24:32.4±0.5, 51°.50N×16°.06E, h1km, ML3.3/5, Error ellipse: s-maj=8.3km s-min=4.0km az=5.0*
*PRU **08** 11:24:34.2, 51°.44N×16°.07E, h0km*
ISC 08 11:24:33.1±1.3, **51°.47N**±0°.06×**16°.04E**±0°.03, **h0**km, **n21**, σ**0s.54**/37, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.65	166	ePg	Pg	11 24 45.8	+0.3
KSP				eSg	Sg	11 24 54.8	+0.9
KSP	Ksiaz	0.65	166	ePg	Pg	11 24 45.9	+0.4
KSP				eSg	Sg	11 24 54.8	+0.9
UPC	Upice	0.96	181	ePG	Pb	11 24 52.2	-0.5
UPC	Upice	0.96	181	Pg	Pb	11 24 52.2	-0.5
DPC	Dobruska-Polom	1.14	171	ePG	Pg	11 24 54.9	0.0
DPC				eSG	Sg	11 25 09.2	-0.4
DPC	Dobruska-Polom	1.14	171	Pg	Pg	11 24 54.9	0.0
DPC				Sg	Sg	11 25 09.2	-0.4
PVCC	Panska Ves	1.32	225	ePG	Pn	11 24 59.3	+0.4
PVCC				eSG	Sn	11 25 17.3	+0.1
	comp=Z,89nm,0.2s						
PVCC	Panska Ves	1.32	225	Pg	Pn	11 24 59.3	+0.4
PVCC				Sg	Sn	11 25 17.3	+0.1
	89nm,0.2s						
KRLC	Kraliky	1.47	161	ePG	Pn	11 25 01.1	+0.1
KRLC				eSG	Sg	11 25 20.5	+0.1
KRLC	Kraliky	1.47	161	Pg	Pn	11 25 01.1	+0.1
KRLC				Sg	Sg	11 25 20.5	+0.1
PRU	Pruhonice	1.76	213	ePG	Pg	11 25 06.8	-0.1
PRU				eSG	Sg	11 25 29.9	+0.1
	comp=Z,25nm,0.5s						
PRU	Pruhonice	1.76	213	Pg	Pg	11 25 06.8	-0.1
PRU				Sg	Sg	11 25 29.9	+0.1
	25nm,0.5s						
CLL	Collm	1.91	266	ePg	Pb	11 25 09.0	+0.2
CLL				e		11 25 13.0	
CLL				eSg	Sg	11 25 35.0	+0.5
	comp=Z,12nm,0.4s						
OKC	Ostrava-Krasne	2.11	140	eSG	Sb	11 25 39.4	+0.3
	comp=Z,17nm,0.6s						
OKC	Ostrava-Krasne	2.11	140	Sg	Sb	11 25 39.4	+0.3
	comp=Z,17nm,0.6s						
NKC	Novy Kostel	2.59	243	ePG	Pg	11 25 21.9	-0.9
NKC				eSG	Sg	11 25 57.3	+0.9
	comp=Z,27nm,0.3s						
NKC	Novy Kostel	2.59	243	Pg	Pg	11 25 21.9	-0.9
NKC				Sg	Sg	11 25 57.3	+0.9
	comp=Z,27nm,0.3s						
OJC	Ojcow	2.69	116	ePg	Pg	11 25 24.1	-0.6
OJC				eSg	Sg	11 25 59.7	+0.2
OJC	Ojcow	2.69	116	ePg	Pg	11 25 24.1	-0.6
KHC	Kasperske Hory	2.83	215	ePG	Pg	11 25 26.9	-0.3
KHC				eSG	Sg	11 26 02.8	-1.0
	comp=Z,6.5nm,0.4s						
KHC	Kasperske Hory	2.83	215	Pg	Pg	11 25 26.9	-0.3
KHC				Sg	Sg	11 26 02.8	-1.0
	comp=Z,6.5nm,0.4s						

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*IDC **08** 11:35:34.7±1.6, 32°.59N×135°.73E, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.3/28, mbtmp3.4/4, ML2.7/2, MS3.6/3, Ms1 3.6/3, ms1mx2.9/28, Error ellipse: s-maj=95.9km s-min=26.1km az=96.0*
*ISCJB **08** 11:35:59.5±0.8, 34°.2N±0°.1×136°.8E±0°.1, h364km±7km, mb3.0/2, Error ellipse: s-maj=18.6km s-min=13.6km az=5.4*
*JMA **08** 11:36:00.6±0.4, 34°.27N×136°.75E, h363km±4km, M2.3*
ISC 08 11:36:00.5±1.1, **34°.2N**±0°.1×**136°.79E**±0°.09, **h360**km±9km, **n14**, σ**0s.89**/15, **Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKN2	Miekihoku	0.43	276	P	Pn	11 36 46.0	+0.4
JKN2				eS	S	11 37 21.0	-0.9
TK02	Tokai 2	0.84	107	P	Pn	11 36 47.7	+1.3
JGM	Miyama	1.50	358	P	Pn	11 36 50.1	+0.6
JGM				S	S	11 37 28.7	-0.4
JWT	Wachi	1.58	314	P	Pn	11 36 50.1	+0.2
JWT				S	S	11 37 28.4	-1.3
JKG	Kaga	2.11	350	P	Pn	11 36 53.5	+0.2
JRY	Ryogami san	2.51	43	P	Pn	11 36 57.2	+0.8
JRY				S	S	11 37 42.6	+1.2
MJAR	Matsushiro Arr	2.61	26	Pn	Pn	11 36 43.4	-14
	0.4nm,0.3s,baz=263,slow=7.2,SNR=4.7						
BSO1	Boso 1	3.49	81	P	Pn	11 37 03.3	-1.1
BSO1				eS	S	11 37 55.3	-0.8
USRK	Ussuriysk Arra	10.66	341	Pn	P	11 38 26.4	-0.2
	0.5nm,0.3s,baz=154,slow=10.0,SNR=6.7						
WRA	Warramunga Arr	53.89	183	P	P	11 44 48.1	+0.2
	0.4nm,0.3s,baz=0.4,slow=7.6,SNR=27						
ASAR	Alice Springs	57.61	183	P	P	11 45 14.4	+0.3
	0.2nm,0.5s,baz=3.7,slow=7.3,SNR=9.2						
SPITS	Spitsbergen Ar	62.56	348	LR	LR	12 14 29.9	
	comp=Z,69nm,21.5s,baz=250,slow=36						
ARCES	ARCESS Array B	65.30	339	LR	LR	12 21 10.2	
	comp=Z,30nm,18.1s,baz=298,slow=41						
BRTR	Keskin Array B	77.84	310	LR	LR	12 23 28.7	
	comp=Z,33nm,21.8s,baz=36,slow=37						

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*SKO **08** 11:53:35.8, 41°.32N×22°.76E, h14km, M1.2, ML1.3*
*CSEM **08** 11:53:36.6±0.2, 41°.26N×22°.79E, h6km±1km, MD2.8, Error ellipse: s-maj=3.6km s-min=3.2km az=56.0*
*BEO **08** 11:53:38.7±1.7, 41°.26N×22°.83E, h0km, ML1.6/2*
*ATH **08** 11:53:38.0, 41°.20N×22°.79E, h5km, MD2.8/5*
ISC 08 11:53:37.3±1.0, **41°.23N**±0°.03×**22°.78E**±0°.03, **h7**km±10km, **n17**, σ**0s.76**/27, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.18	299	ePg	Pg	11 53 39.6	-1.4
VAY				i Sg	Sg	11 53 42.1	-1.3
VAY				eLg	Lg	11 53 42.2	
	comp=N,153nm,0.2s						
VAY				eLg	Lg	11 53 42.3	
	comp=E,135nm,0.2s						
VAY	Valandovo	0.18	299	ePg	Pg	11 53 40.0	-1.0
VAY				i Sg	Sg	11 53 42.6	-0.8
VAY				eLg	Lg	11 53 42.7	
	comp=E,135nm,0.2s						
GRG	Griva	0.40	226	ePG	Pg	11 53 45.1	+0.1
GRG				eSB	Sg	11 53 50.6	+0.3
GRG	Griva	0.40	226	ePg	Pg	11 53 45.1	+0.1
GRG				eSb	Sg	11 53 50.6	+0.3
SOH	Sokhos	0.60	133	ePB	Pg	11 53 49.1	+0.2
SOH				eSB	Sg	11 53 57.5	+0.8
SOH	Sokhos	0.60	133	ePb	Pg	11 53 49.1	+0.2
SOH				eSb	Sg	11 53 57.5	+0.8
NVR	Nevrokopi	0.82	82	ePB	Pb	11 53 53.9	-0.2
NVR				eSB	Sb	11 54 05.2	-0.2
NVR	Nevrokopi	0.82	82	ePb	Pb	11 53 53.9	-0.2
NVR				eSb	Sb	11 54 05.2	-0.2
PLG	Polygyros	1.00	149	ePN	Pb	11 53 56.7	-0.3
PLG				eSB	Sb	11 54 09.4	-1.0
PLG	Polygyros	1.00	149	ePn	Pb	11 53 56.7	-0.3
PLG				eSb	Sb	11 54 09.4	-1.0
FNA	Florina	1.15	247	ePB	Pn	11 54 00.0	0.0
FNA				eSB	Sb	11 54 16.4	+1.6
FNA	Florina	1.15	247	ePb	Pn	11 54 00.0	0.0
VTS	Vitosha	1.39	13	eSg	Sn	11 54 21.1	-1.1
VTS	Vitosha	1.39	13	eSg	Sn	11 54 21.1	-1.1
BARS	Barje	1.74	336	ePg	Pn	11 54 09.1	+1.1
BARS	Barje	1.74	336	ePg	Pn	11 54 09.1	+1.1
ZAPS	Zavoj	2.04	357	ePg	Pb	11 54 15.0	+0.2
ZAPS				eSg	Sg	11 54 43.3	+0.4

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*CSEM **08** 12:00:52.5, 39°.13N×27°.55E, h7km, MD2.6, After DDA*
DDA 08 12:00:52.5, 39°.13N×27°.55E, h7km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALY	Balya	0.61	5	i P	Pg	12 01 04.5	0.0
BALY				i S	Sg	12 01 13.5	+1.0
BALY	Balya	0.61	5	i P	Pg	12 01 04.5	0.0
BALY				i S	Sg	12 01 13.5	+1.0
DURS	Dursunbey	0.86	56	i P	Pg	12 01 08.9	-0.3
DURS				i S	Sb	12 01 21.6	0.0
DURS	Dursunbey	0.86	56	i P	Pg	12 01 08.9	-0.2
DURS				i S	Sb	12 01 21.6	0.0
DEMI	Demirci	0.91	95	i P	Pb	12 01 11.2	+0.4
DEMI	Demirci	0.91	95	i P	Pb	12 01 11.2	+0.5
BOZC	Bozcaada	1.36	302	i P	Pb	12 01 18.5	+0.2
SART	Tekirdag	1.58	350	i P	Pn	12 01 21.1	0.0
SART	Tekirdag	1.58	350	i P	Pn	12 01 21.1	0.0

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*IDC **08** 12:10:26.6±0.7, 17°.03S×73°.18W, h0km, mb4.0/9, mb1 4.1/12, mb1mx4.0/22, mbtmp4.0/12, ML4.2/3, MS3.9/14, Ms1 3.9/14, ms1mx3.6/36, Error ellipse: s-maj=25.5km s-min=16.5km az=47.0*
*ISCJB **08** 12:10:28.4±0.6, 17°.14S±0°.06×73°.36W±0°.08, h26km, mb4.0/10, MS4.0/10, Error ellipse: s-maj=12.3km s-min=8.4km az=153.3*
*NEIC **08** 12:10:28.6±2.8, 17°.06S×73°.22W, h14km±17km, mb4.4/2, Error ellipse: s-maj=9.6km s-min=7.0km az=79.0*
ISC 08 12:10:30.1±0.5, **17°.12S**±0°.07×**73°.37W**±0°.07, **h26**km, **n54**, σ**1s.36**/47, **mb4.1**/10, **MS4.0**/10, **1C**, **Off coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARE	Arequipa	1.92	70⇑	iP	Pn	12 11 00.1	-1.2
ARE				i S	Sb	12 11 29.5	+1.4
LPAZ	La Paz	5.09	81	Pn	Pn	12 11 47.2	+1.9
LPAZ	La Paz	5.09	81	Pn	Pn	12 11 47.2	+1.9
	2.5nm,0.3s,baz=254,slow=10.0,SNR=50						
LPAZ				LR	LR	12 13 22.8	
	comp=Z,435nm,19.6s,baz=256,slow=36						
NNA	Nana	6.11	326	Pn	Pn	12 11 59.3	+0.5
NNA				Sn	Sn	12 13 04.8	-3.1
NNA	Nana	6.11	326	Pn	Pn	12 11 59.3	+0.5
	1.0nm,0.3s,baz=138,slow=12,SNR=2.7						
NNA				Sn	Sn	12 13 04.8	-3.1
	16nm,0.3s,baz=256,slow=14,SNR=3.6						
NNA				LR	LR	12 14 30.4	
	comp=Z,983nm,18.8s,baz=268,slow=40						
LVC	Limon Verde	6.89	143	ePn	Pn	12 12 08.6	-1.1
	38nm,0.6s						
LVC				eSn	Sn	12 13 24.3	-3.2
SIV	San Ignacio	11.85	86	Pn	Pn	12 13 15.5	-2.0
SIV	San Ignacio	11.85	86	Pn	Pn	12 13 15.5	-2.0
	1.1nm,0.3s,baz=274,slow=12,SNR=16						
SIV				LR	LR	12 17 59.5	
	comp=Z,324nm,18.4s,slow=39						
LCO	Las Campanas	12.09	169	ePn	Pn	12 13 20.7	-0.3
SAML	Samuel	12.82	52	ePn	Pn	12 13 27.2	-3.6
	9.1nm,0.7s						
CFAA	Coronel Fontan	15.16	163	Pn	Pn	12 14 03.2	+0.7
CFAA	Coronel Fontan	15.16	163	Pn	Pn	12 14 03.2	+0.7
	0.0nm,0.3s,baz=333,slow=11,SNR=2.6						
CPUP	Villa Florida	17.48	124	P	Pn	12 14 32.1	-0.1
CPUP	Villa Florida	17.48	124	P	Pn	12 14 32.1	-0.1
	0.6nm,0.3s,baz=290,slow=12,SNR=5.5						
CPUP				LR	LR	12 22 29.6	
	comp=Z,458nm,18.4s,baz=286,slow=42						
TRQA	Tornquist	23.14	157	eP	P	12 15 34.0	-0.4
	8.2nm,0.8s						
PLCA	Paso Flores	23.66	175	eP	P	12 15 40.5	+1.0
	19nm,1.5s						
PLCA	Paso Flores	23.66	175	P	P	12 15 41.1	+1.6
	1.9nm,0.7s,baz=0.3,slow=9.7,SNR=4.7						

BDFB	**Brasilia**	**24.37**	**90**	P	**P**	**12 15 45.8**	**-0.7**
BDFB	**Brasilia**	**24.37**	**90**	P	**P**	**12 15 45.8**	**-0.7**
	6.3nm,0.7s,baz=271,slow=9.7,SNR=7.3						
TXAR	**Lajitas Array**	**54.66**	**327**	P	**P**	**12 19 56.8**	**-0.3**
TXAR	**Lajitas Array**	**54.66**	**327**	P	**P**	**12 19 56.8**	**-0.3**
	0.2nm,0.6s,baz=142,slow=8.0,SNR=3.4						
SNAA	**Sanae**	**67.77**	**161**	P	**P**	**12 21 25.6**	**+0.3**
SNAA	**Sanae**	**67.77**	**161**	P	**P**	**12 21 25.6**	**+0.3**
	0.7nm,0.6s,baz=258,slow=8.4,SNR=14						
PDAR	**Pinedale Array**	**68.26**	**332**	LR	LR	12 50 52.7	
	comp=Z,56nm,18.8s,baz=16,slow=36						
NVAR	**Mina Array Bea**	**69.47**	**324**	P	**P**	**12 21 38.2**	**+1.7**
NVAR	**Mina Array Bea**	**69.47**	**324**	P	**P**	**12 21 38.3**	**+1.7**
	0.1nm,0.5s,baz=135,slow=9.0,SNR=2.4						
ULM	**Lac du Bonnet**	**69.95**	**345**	LR	LR	12 53 32.8	
	comp=Z,68nm,19.3s,baz=342,slow=37						
DBIC	**Dimbokro**	**71.69**	**77**	P	**P**	**12 21 48.9**	**-1.5**
DBIC	**Dimbokro**	**71.69**	**77**	P	**P**	**12 21 48.9**	**-1.5**
	8.2nm,0.6s,baz=234,slow=5.5,SNR=14						
PPT2	**Papeete2**	**72.22**	**257**	*e*LR	LR	12 43 40.8	
	62nm,22.2s						
YBH	**Yreka Blue Hor**	**74.19**	**324**	LR	LR	12 51 17.5	
	comp=Z,79nm,20.4s,baz=159,slow=33						
NEW	**Newport**	**75.88**	**332**	LR	LR	12 57 18.6	
	comp=Z,72nm,19.8s,baz=129,slow=37						
TOA0	**Torodi Ar. Sit**	**79.98**	**73**	*e*P	**P**	**12 22 36.5**	**-1.2**
TORD	**Torodi Ar. Bea**	**79.98**	**73**	P	**P**	**12 22 36.5**	**-1.1**
TORD	**Torodi Ar. Bea**	**79.98**	**73**	P	**P**	**12 22 36.5**	**-1.1**
	7.1nm,0.6s,baz=255,slow=5.1,SNR=34						
TORD				LR	LR	12 55 27.4	
	comp=Z,94nm,19.6s,baz=175,slow=34						
YKA	**Yellowknife Ar**	**85.71**	**342**	P	**P**	**12 23 06.6**	**+0.3**
YKA	**Yellowknife Ar**	**85.71**	**342**	P	**P**	**12 23 06.6**	**+0.3**
	1.0nm,0.7s,baz=135,slow=4.9,SNR=9.7						
ESDC	**Sonseca Array**	**85.78**	**46**	P	**P**	**12 23 08.7**	**+1.4**
ESDC	**Sonseca Array**	**85.78**	**46**	P	**P**	**12 23 08.7**	**+1.4**
	0.3nm,0.3s,baz=248,slow=6.8,SNR=3.5						
ESDC				LR	LR	13 00 18.6	
	comp=Z,82nm,18.0s,baz=165,slow=35						
BOSA	**Boshof**	**89.24**	**120**	LR	LR	13 01 36.8	
	comp=Z,112nm,18.8s,baz=343,slow=34						
RES	**Resolute Bay**	**92.61**	**354**	LR	LR	13 05 08.3	
	comp=Z,56nm,21.3s,baz=52,slow=36						
KEST	**Kesra**	**94.10**	**54**	LR	LR	13 02 54.2	
	comp=Z,29nm,20.4s,baz=305,slow=34						
INK	**Inuvik**	**95.43**	**341**	LR	LR	13 09 09.7	
	comp=Z,78nm,20.4s,baz=73,slow=37						
DZM	**Mont Dzumac**	**109.68**	**238**	*e*LR	LR	13 00 55.5	
WRA	**Warramunga Arr**	**134.21**	**218**	PKP	**PKPdf**	**12 29 47.0**	**+0.6**
WRA	**Warramunga Arr**	**134.21**	**218**	PKP	**PKPdf**	**12 29 47.0**	**+0.6**
	0.3nm,0.6s,baz=143,slow=1.8,SNR=4.5						
ZALV	**Zalesovo Beam**	**139.53**	**20**	PKP	**PKPdf**	**12 29 56.2**	**+1.1**
ZALV	**Zalesovo Beam**	**139.53**	**20**	PKP	**PKPdf**	**12 29 56.2**	**+1.1**
	0.6nm,0.3s,baz=291,slow=4.5,SNR=2.9						
MJAR	**Matsushiro Arr**	**146.04**	**311**	PKPbc	**PKPbc**	**12 30 09.1**	**+1.0**
MJAR	**Matsushiro Arr**	**146.04**	**311**	PKPbc	**PKPbc**	**12 30 09.1**	**+1.0**
	1.0nm,0.7s,baz=90,slow=3.1,SNR=4.1						
SONM	**Songino Array**	**149.36**	**0**	PKPbc	**PKPbc**	**12 30 18.0**	**+1.1**
SONM	**Songino Array**	**149.36**	**0**	PKPbc	**PKPbc**	**12 30 18.0**	**+1.1**
	1.5nm,0.6s,baz=339,slow=1.7,SNR=8.1						
KSRS	**Korea Array**	**152.40**	**321**	PKPbc	**PKPbc**	**12 30 24.4**	**+0.3**
	0.3nm,0.4s,baz=98,slow=1.8,SNR=4.3						
KSAR	**Wonju Array Be**	**152.43**	**321**	PKPbc	**PKPbc**	**12 30 24.4**	**+0.2**

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*BJI **08** 12:10:38.0, 20°.10S×66°.40E, h10km, mB5.0/3, mb4.6/7*
*IDC **08** 12:10:39.6±0.4, 20°.09S×66°.55E, h0km, mb4.4/23, mb1 4.5/23, mb1mx4.4/31, mbtmp4.3/23, MS3.8/18, Ms1 3.8/18, ms1mx3.5/39, Error ellipse: s-maj=15.2km s-min=13.8km az=82.0*
*ISCJB **08** 12:10:40.3±0.3, 20°.07S±0°.07×66°.56E±0°.08, h16km, mb4.4/30, MS3.9/17, Error ellipse: s-maj=11.0km s-min=9.6km az=154.8*
*NEIC **08** 12:10:41.0±0.2, 20°.09S×66°.53E, h10km, mb4.7/5, Error ellipse: s-maj=10.1km s-min=8.4km az=89.0*
ISC 08 12:10:42.1±0.4**, 20°.09S**±0°.09×**66°.5E**±0°.1**, h16**km**, n103, σ0s.74**/112**, mb4.6**/30**, MS3.9**/17**, 3C-6D, Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**18.30**	**271**	LR	LR	12 20 24.7	
	comp=Z,237nm,18.6s,baz=250,slow=32						
LBTB	**Lobatse**	**38.00**	**255**	P	**P**	**12 18 00.3**	**+0.5**
LBTB	**Lobatse**	**38.00**	**255**	P	**P**	**12 18 00.3**	**+0.5**
	2.8nm,0.7s,baz=71,slow=15,SNR=3.8						
BOSA	**Boshof**	**38.38**	**249**	P	**P**	**12 18 03.4**	**+0.4**
BOSA	**Boshof**	**38.38**	**249**	P	**P**	**12 18 03.4**	**+0.4**
	1.9nm,0.7s,baz=101,slow=10,SNR=3.1						
BOSA				LR	LR	12 30 09.1	
	comp=Z,130nm,20.9s,baz=164,slow=30						
MAW	**Mawson**	**47.56**	**182**	P	**P**	**12 19 16.7**	**+0.1**
MAW	**Mawson**	**47.56**	**182**	P	**P**	**12 19 16.7**	**+0.1**
	4.2nm,0.7s,baz=337,slow=8.5,SNR=7.5						
MAW				LR	LR	12 33 48.0	
	comp=Z,160nm,19.1s,baz=160,slow=29						
CMAR	**Chiang Mai Arr**	**49.79**	**42**	P	**P**	**12 19 34.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**49.79**	**42**	P	**P**	**12 19 34.8**	**+0.4**
	3.9nm,0.8s,baz=235,slow=8.4,SNR=16						
CMAR				LR	LR	12 37 11.2	
	comp=Z,138nm,19.0s,baz=270,slow=32						
RDF	**Al-Radifah**	**52.05**	**339**	*e*P	**P**	**12 19 50.6**	**-0.5**
RDF				AMb	AMB	12 19 52.4	
	comp=Z,25nm,1.1s						
NAY	**Al-Naaiem**	**52.45**	**339**	*e*P	**P**	**12 19 53.6**	**-0.6**
NAY				AMb	AMB	12 19 54.9	
	comp=Z,12nm,0.9s						
MIB	**Mutribah**	**52.93**	**339**	*e*P	**P**	**12 19 57.1**	**-0.5**
MIB				AMb	AMB	12 19 58.6	
	comp=Z,26nm,1.0s						
FITZ	**Fitzroy Crossi**	**55.66**	**99**	P	**P**	**12 20 17.8**	**-0.1**
FITZ	**Fitzroy Crossi**	**55.66**	**99**	P	**P**	**12 20 17.8**	**-0.1**
	comp=Z,4.4nm,0.9s,baz=198,slow=4.1,SNR=6.3						
QIZ	**Qiongzhong**	**57.58**	**50**	P	**P**	**12 20 30.0**	**-1.4**
QIZ				S	**S**	**12 28 30.1**	**+1.0**
ASAR	**Alice Springs**	**62.13**	**107**	P	**P**	**12 21 02.1**	**-0.8**
ASAR	**Alice Springs**	**62.13**	**107**	P	**P**	**12 21 02.1**	**-0.8**
	comp=Z,4.3nm,0.8s,baz=263,slow=6.3,SNR=36						
ASAR				LR	LR	12 44 21.6	
	comp=Z,68nm,18.4s,baz=125,slow=33						
EKS2	**Erkin-Say**	**62.79**	**6**	*e*P	**P**	**12 21 07.0**	**+0.2**
	comp=Z,8.6nm,1.2s						
TKM2	**Tokmak 2**	**63.25**	**7**	*e*P	**P**	**12 21 10.2**	**+0.2**
	comp=Z,3.8nm,0.6s						
WRA	**Warramunga Arr**	**63.29**	**103**	P	**P**	**12 21 10.3**	**-0.4**
WRA	**Warramunga Arr**	**63.29**	**103**	P	**P**	**12 21 10.3**	**-0.4**
	comp=Z,7.2nm,0.9s,baz=259,slow=6.0,SNR=25						
DAV	**Davao City (W)**	**64.04**	**71**	LR	LR	12 46 34.2	
	comp=Z,39nm,19.7s,baz=166,slow=34						
SNAA	**Sanae**	**64.61**	**199**	*e*P	**P**	**12 21 18.9**	**+0.4**
SNAA	**Sanae**	**64.61**	**199**	*e*P	**P**	**12 21 18.0**	**-0.5**
	comp=Z,3.0nm,0.8s						
SNAA	**Sanae**	**64.61**	**199**	P	**P**	**12 21 19.0**	**+0.4**
	comp=Z,0.9nm,0.9s,baz=69,slow=4.5,SNR=7.6						
GTA	**Gaotai**	**66.88**	**28**	*e*P	**P**	**12 21 34.7**	**+1.1**
GTA				pP	**pP**	**12 21 38.7**	**-0.1**
GTA				sP	**sP**	**12 21 40.8**	**+0.1**
GTA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRTR	**Keskin Array B**	**66.95**	**333**	P	**P**	**12 21 34.9**	**+0.8**
BRTR	**Keskin Array B**	**66.95**	**333**	P	**P**	**12 21 34.9**	**+0.8**
	comp=Z,4.5nm,0.8s,baz=151,slow=7.9,SNR=21						
BRTR				LR	LR	12 46 35.4	
	comp=Z,34nm,20.7s,baz=25,slow=32						
BR131	**Keskin Array S**	**66.95**	**333**	*e*P	**P**	**12 21 34.0**	**0.0**
	comp=Z,2.7nm,0.8s						
KBZ	**Khabaz**	**67.10**	**342**	P	**P**	**12 21 35.6**	**+0.9**
KBZ	**Khabaz**	**67.10**	**342**	P	**P**	**12 21 35.6**	**+0.9**
	comp=Z,4.3nm,0.8s,baz=178,slow=6.7,SNR=7.6						
KBZ				LR	LR	12 50 31.8	
	comp=Z,36nm,21.7s,baz=31,slow=36						
MK31	**Makanchi Array**	**68.08**	**12**	*e*P	**P**	**12 21 40.5**	**-0.4**
MKAR	**Makanchi Array**	**68.08**	**12**	P	**P**	**12 21 40.7**	**-0.2**
MKAR				PcP	**PcP**	**12 22 07.0**	**+0.2**
MKAR	**Makanchi Array**	**68.08**	**12**	P	**P**	**12 21 40.7**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=199,slow=6.4,SNR=18						
MKAR				PcP	**PcP**	**12 22 07.0**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=195,slow=3.8,SNR=3.8						
MKAR				LR	LR	12 47 06.3	
	comp=Z,60nm,21.5s,baz=175,slow=32						
ABKAR	**Akbulak array**	**69.28**	**355**	*e*P	**P**	**12 21 48.0**	**-0.2**
	comp=Z,4.3nm,0.6s						
QSPA	**South Pole Qui**	**70.02**	**180**	P	**P**	**12 21 53.2**	**+0.3**
QSPA	**South Pole Qui**	**70.02**	**180**	P	**P**	**12 21 53.2**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=263,slow=5.3,SNR=3.9						
KURBB	**Kurchatov Arra**	**71.19**	**8**	P	**P**	**12 21 59.5**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=204,slow=6.7,SNR=9.5						
KURK	**Kurchatov**	**71.30**	**8**	P	**P**	**12 21 59.5**	**-1.1**
VNDA	**Vanda**	**71.69**	**167**	P	**P**	**12 22 02.5**	**-0.3**
VNDA	**Vanda**	**71.69**	**167**	P	**P**	**12 22 02.5**	**-0.3**
	comp=Z,2.7nm,1.2s,baz=294,slow=6.2,SNR=3.6						
VNDA				LR	LR	12 49 05.4	
	comp=Z,81nm,21.5s,baz=155,slow=32						
TORD	**Torodi Ar. Bea**	**71.79**	**292**	P	**P**	**12 22 04.0**	**-0.4**
TORD	**Torodi Ar. Bea**	**71.79**	**292**	P	**P**	**12 22 04.0**	**-0.4**
	comp=Z,2.2nm,1.0s,baz=116,slow=6.1,SNR=8.5						
TIRR	**Tirgusor**	**73.06**	**332**⇓	*i*P	**P**	**12 22 11.7**	**+0.4**
CFR	**Carcaliu**	**73.75**	**333**⇓	*i*P	**P**	**12 22 14.6**	**-0.7**
CTA	**Charters Tower**	**74.11**	**106**	P	**P**	**12 22 18.5**	**+0.3**
CTA	**Charters Tower**	**74.11**	**106**	P	**P**	**12 22 18.5**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=264,slow=9.9,SNR=3.5						
VRI	**Vrincioaia**	**74.90**	**332**⇓	*i*P	**P**	**12 22 23.4**	**+1.3**
PLOR	**Plostina**	**74.92**	**332**⇑	*i*P	**P**	**12 22 23.5**	**+1.3**
MLR	**Muntele Rosu**	**74.95**	**332**⇑	*i*P	**P**	**12 22 23.8**	**+1.3**
VOIR		**75.31**	**331**⇑	*i*P	**P**	**12 22 25.2**	**+0.7**
ZAA0	**Zalesovo Array**	**75.40**	**11**	*e*P	**P**	**12 22 24.2**	**-0.5**
ZALV	**Zalesovo Beam**	**75.40**	**11**	P	**P**	**12 22 24.4**	**-0.3**
ZALV	**Zalesovo Beam**	**75.40**	**11**	P	**P**	**12 22 24.4**	**-0.3**
	comp=Z,4.5nm,0.7s,baz=205,slow=5.7,SNR=23						
ZALV				LR	LR	12 54 35.5	
	comp=Z,48nm,21.7s,baz=159,slow=35						
ARR	**Arges**	**75.45**	**331**⇓	*i*P	**P**	**12 22 25.6**	**+0.3**
SONM	**Songino Array**	**76.49**	**26**	P	**P**	**12 22 32.0**	**+0.8**
SONM	**Songino Array**	**76.49**	**26**	P	**P**	**12 22 32.0**	**+0.8**
	comp=Z,3.0nm,0.8s,baz=216,slow=6.0,SNR=13						
BURAR	**Bucovina Array**	**76.92**	**333**⇓	*i*P	**P**	**12 22 34.7**	**+1.1**
DRGR		**77.40**	**331**⇓	*i*P	**P**	**12 22 37.2**	**+0.8**
AK02	**Malin Array Si**	**77.73**	**337**	*e*P	**P**	**12 22 37.7**	**-0.2**
AK01	**Malin Array Si**	**77.75**	**337**	*e*P	**P**	**12 22 37.9**	**-0.2**
AKASG	**Malin Array Be**	**77.76**	**337**	P	**P**	**12 22 38.3**	**+0.2**
AKASG	**Malin Array Be**	**77.76**	**337**	P	**P**	**12 22 38.3**	**+0.2**
	comp=Z,7.8nm,0.8s,baz=141,slow=4.7,SNR=13						
KOLS	**Kolonicke sedl**	**79.20**	**332**	*e*P	**P**	**12 22 47.2**	**+1.0**
CRVS	**Cervenica-Dubn**	**79.53**	**332**	*e*P	**P**	**12 22 46.8**	**-1.2**
KECS	**Kecovo**	**79.67**	**331**	*e*P	**P**	**12 22 47.9**	**-0.8**
STHS	**Stebnicka Huta**	**80.01**	**332**	*e*P	**P**	**12 22 51.5**	**+0.9**
VYHS	**Vyhne**	**80.44**	**330**	*e*P	**P**	**12 22 53.4**	**+0.5**
JNU	**Nakatsue**	**81.05**	**50**	LR	LR	12 54 41.1	
	comp=Z,97nm,19.3s,baz=234,slow=33						
ZST	**Bratislava**	**81.06**	**329**	*e*P	**P**	**12 22 55.7**	**-0.5**
KSAR	**Wonju Array Be**	**81.27**	**45**	P	**P**	**12 22 57.8**	**+0.2**
KSRS	**Korea Array**	**81.31**	**45**	P	**P**	**12 22 57.8**	**0.0**
	comp=Z,2.0nm,0.8s,baz=240,slow=5.6,SNR=9.7						
KSRS				LR	LR	12 58 02.1	
	comp=Z,67nm,19.9s,baz=353,slow=35						
GERES	**GERESS Array B**	**83.17**	**328**	P	**P**	**12 23 07.0**	**-0.4**
GERES	**GERESS Array B**	**83.17**	**328**	P	**P**	**12 23 07.0**	**-0.4**
	comp=Z,0.2nm,0.2s,baz=152,slow=5.9,SNR=5.1						
PMSA	**Palmer Station**	**87.33**	**199**	LR	LR	12 58 32.0	
	comp=Z,153nm,18.2s,baz=161,slow=33						
JHJ	**Hachijo jima 2**	**87.63**	**54**	LR	LR	13 00 10.5	
	comp=Z,37nm,20.6s,baz=78,slow=34						
MAT	**Matsushiro**	**87.98**	**50**	P	**P**	**12 23 31.8**	**+0.3**
MJAR	**Matsushiro Arr**	**87.98**	**50**	P	**P**	**12 23 32.0**	**+0.5**
MJAR	**Matsushiro Arr**	**87.98**	**50**	P	**P**	**12 23 32.0**	**+0.5**
	comp=Z,4.4nm,0.8s,baz=229,slow=5.0,SNR=19						
MJAR				LR	LR	12 58 26.0	
	comp=Z,57nm,19.7s,baz=65,slow=33						
ARCES	**ARCESS Array B**	**94.02**	**347**	P	**P**	**12 23 58.8**	**-0.1**
ARCES	**ARCESS Array B**	**94.02**	**347**	P	**P**	**12 23 58.8**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=156,slow=6.6,SNR=10						
ARCES				LR	LR	13 07 47.0	
	comp=Z,39nm,20.4s,baz=107,slow=36						
ASAJ	**Asahikawa**	**94.25**	**45**	LR	LR	13 04 40.0	
	comp=Z,36nm,21.8s,baz=180,slow=34						
ILAR	**Eielson Array**	**130.15**	**18**	PKP	**PKPdf**	**12 29 50.8**	**-0.1**
ILAR	**Eielson Array**	**130.15**	**18**	PKP	**PKPdf**	**12 29 50.8**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=322,slow=3.9,SNR=6.0						
YKA	**Yellowknife Ar**	**137.62**	**1**	PKP	**PKPdf**	**12 30 04.9**	**0.0**
YKA	**Yellowknife Ar**	**137.62**	**1**	PKP	**PKPdf**	**12 30 04.9**	**0.0**
	comp=Z,0.8nm,0.7s,baz=345,slow=2.3,SNR=9.1						
FFC	**Flin Flon**	**144.33**	**349**	*e*PKPdf	**PKPab**	**12 30 14.4**	**-0.8**
BLA	**Blacksburg**	**146.56**	**308**	*e*PKPdf	**PKPbc**	**12 30 23.0**	**-0.1**
ULM	**Lac du Bonnet**	**146.81**	**339**	PKPbc	**PKPdf**	**12 30 22.1**	**+0.5**
ULM	**Lac du Bonnet**	**146.81**	**339**	PKPbc	**PKPdf**	**12 30 22.1**	**+0.5**
	comp=Z,9.2nm,0.7s,baz=37,slow=3.8,SNR=6.8						
AGMN	**Agassiz Nation**	**148.46**	**337**	*e*PKPdf	**PKPdf**	**12 30 23.3**	**-1.1**
NLWA	**Neilton Lookou**	**151.48**	**15**	*e*PKPdf	**PKPdf**	**12 30 30.2**	**+0.9**
NLWA				*e*PKPbc	**PKiKP**	**12 30 36.1**	**+0.3**
EGMT	**Eagleton**	**151.97**	**355**	*e*PKPdf	**PKPdf**	**12 30 29.7**	**-0.4**
EGMT				*e*PKPbc	**PKPbc**	**12 30 36.4**	**-0.2**
EGMT				*e*PKPab	**PKPab**	**12 30 42.6**	**-3.1**
ECSD	**EROS Data Cent**	**152.52**	**333**	*e*PKPdf	**PKPdf**	**12 30 31.6**	**+0.7**
ECSD				*e*PKPbc	**PKPbc**	**12 30 36.4**	**-1.5**
SWMT	**Swartz Lake**	**152.64**	**1**	*e*PKPdf	**PKPdf**	**12 30 31.0**	**-0.1**
SWMT				*e*PKPbc	**PKPbc**	**12 30 37.5**	**-0.7**
SLMT	**Seeley Lake**	**152.91**	**0**	*e*PKPdf	**PKPdf**	**12 30 28.7**	**-2.9**
MSO	**Missoula**	**153.32**	**1**	*e*PKPdf	**PKPdf**	**12 30 32.7**	**+0.6**
MSO				*e*PKPbc	**PKPbc**	**12 30 38.9**	**-0.8**
PDAR	**Pinedale Array**	**157.15**	**353**	PKP	**PKPdf**	**12 30 36.5**	**-1.1**
PDAR	**Pinedale Array**	**157.15**	**353**	PKP	**PKPdf**	**12 30 36.5**	**-1.1**
	comp=Z,0.4nm,0.3s,baz=264,slow=1.5,SNR=5.0						
NVAR	**Mina Array Bea**	**161.25**	**12**	PKP	**PKPdf**	**12 30 42.7**	**+0.2**
NVAR				PKPab	**PKPab**	**12 31 26.4**	**+0.4**
NVAR	**Mina Array Bea**	**161.25**	**12**	PKP	**PKPdf**	**12 30 42.7**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=0.0,slow=0.3,SNR=4.8						
NVAR				PKPab	**PKPab**	**12 31 26.4**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=360,slow=3.4,SNR=4.9						
TXAR	**Lajitas Array**	**167.18**	**318**	PKP	**PKPdf**	**12 30 48.6**	**+0.7**
TXAR				PKPab	**PKPab**	**12 31 53.1**	**+0.8**
TXAR	**Lajitas Array**	**167.18**	**318**	PKP	**PKPdf**	**12 30 48.6**	**+0.7**
	comp=Z,1.1nm,1.0s,baz=106,slow=1.8,SNR=8.4						
TXAR				PKPab	**PKPab**	**12 31 53.1**	**+0.8**
	comp=Z,2.2nm,0.9s,baz=74,slow=3.8,SNR=17						

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*THE **08** 12:18:28.7, 39°.30N×26°.41E, h22km, ML2.1/3, Error ellipse: s-maj=1.7km s-min=0.5km az=15.0*
*DDA **08** 12:18:29.9, 39°.20N×26°.44E, h7km, MD2.7*
*CSEM **08** 12:18:29.7±0.2, 39°.21N×26°.39E, h10km, ML2.1/3, Error ellipse: s-maj=7.0km s-min=5.1km az=131.0*
*ISCJB **08** 12:18:30.2±0.6, 39°.19N±0°.04×26°.41E±0°.05, h6km±7km, Error ellipse: s-maj=7.6km s-min=4.9km az=144.7*
ISC 08 12:18:30.1±0.9**, 39°.18N**±0°.03×**26°.42E**±0°.03**, h13**km±6km**, n15, σ0s.66**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRK	**Paraskevi**	**0.13**	**301**	P	**Pg**	**12 18 33.2**	**-0.2**
PRK				S	**Sg**	**12 18 36.5**	**+0.7**
PRK	**Paraskevi**	**0.13**	**301**	P	**Pg**	**12 18 33.2**	**-0.2**
PRK				S	**Sg**	**12 18 36.5**	**+0.7**
AYVA	**Ayvalik**	**0.25**	**59**	*i* P	**Pg**	**12 18 34.8**	**-0.6**
AYVA				*i* S	**Sg**	**12 18 38.7**	**-0.2**
AYVA	**Ayvalik**	**0.25**	**59**	*i* P	**Pg**	**12 18 34.8**	**-0.6**
AYVA				*i* S	**Sg**	**12 18 38.7**	**-0.2**
SIGR	**SIGRI**	**0.44**	**274**	P	**Pg**	**12 18 37.5**	**-1.3**
SIGR				S	**Sg**	**12 18 44.6**	**0.0**
SIGR	**SIGRI**	**0.44**	**274**	P	**Pg**	**12 18 37.5**	**-1.3**
SIGR				S	**Sg**	**12 18 44.6**	**0.0**
BOZC	**Bozcaada**	**0.72**	**337**	*i* P	**Pg**	**12 18 43.9**	**-0.1**
BOZC				*i* S	**Sb**	**12 18 54.6**	**+0.3**
URLA	**Izmir**	**0.83**	**170**	*i* P	**Pg**	**12 18 45.7**	**-0.5**
URLA				*i* S	**Sn**	**12 18 59.7**	**-0.1**
URLA	**Izmir**	**0.83**	**170**	*i* P	**Pg**	**12 18 45.7**	**-0.5**
URLA				*i* S	**Sn**	**12 18 59.7**	**-0.1**
CHOS	**Chios island**	**0.84**	**200**	P	**Pg**	**12 18 45.9**	**-0.5**
CHOS				S	**Sb**	**12 18 59.1**	**+1.2**
CHOS	**Chios island**	**0.84**	**200**	P	**Pg**	**12 18 45.9**	**-0.5**
CHOS				S	**Sb**	**12 18 59.1**	**+1.2**
BALY	**Balya**	**1.09**	**59**	*i* P	**Pb**	**12 18 50.3**	**-0.6**
BALY				*i* S	**Sn**	**12 19 06.8**	**+0.7**
BALY	**Balya**	**1.09**	**59**	*i* P	**Pb**	**12 18 50.3**	**-0.6**
BALY				*i* S	**Sn**	**12 19 06.8**	**+0.7**
SART	**Tekirdag**	**1.62**	**21**	*i* P	**Pn**	**12 18 58.6**	**+0.1**
SART	**Tekirdag**	**1.62**	**21**	*i* P	**Pn**	**12 18 58.6**	**+0.1**

CASC 08 12:35:23.3±2.7**, 16°.73N**×**88°.13W, h0**km±248km**, MD4.1, Belize**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**2.23**	**222**	*e*P	Pn	12 36 00.3	-1.5
MRL				*e*S	Sb	12 36 33.6	+0.5
MTO2	**Montecristo 2**	**2.60**	**207**	*e*P	Pn	12 36 06.5	-0.5
MTO2				*e*S	Sn	12 36 39.2	-0.3
RBDL	**Robledal**	**3.00**	**210**	*e*P	Pn	12 36 11.8	-0.6
NBG	**Las Nubes**	**3.01**	**225**	*e*P	Pn	12 36 12.5	-0.2
NBG				*e*S	Sg	12 37 03.2	+2.3
LBRS	**Las Brisas**	**3.10**	**197**	*e*P	Pn	12 36 14.3	+0.7
BOQS	**Boqueron**	**3.18**	**201**	*e*P	Pn	12 36 15.6	+0.8
SNJE	**San Jose**	**3.18**	**207**	*e*P	Pn	12 36 15.2	+0.3
SBLS	**San Blas**	**3.21**	**207**	*e*P	Pn	12 36 16.1	+0.7
LFRS	**El Faro**	**3.22**	**196**	*e*P	Pn	12 36 16.3	+1.0

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*AUST **08** 12:39:19.2±11.0, 2°.53N×133°.93E, h47km±1km, Error ellipse: s-maj=6.2km s-min=1.4km az=248.0*
*IDC **08** 12:40:01.2±2.5, 0°.67S×131°.49E, h0km, mb3.6/2, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, ML3.6/2, Error ellipse: s-maj=125.6km s-min=24.2km az=76.0*
ISC 08 12:40:08.7±1.2**, 1°.04S**±0°.09×**130°.9E**±0°.2**, h35**km**, n11, σ1s.63**/10**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SWI	**Sorong**	**0.37**	**62**	P	**Pn**	**12 40 18.3**	**+0.7**
	baz=4.3,SNR=381						
FAKI	**Fak Fak**	**2.28**	**145**	P	**Pn**	**12 40 42.5**	**-1.5**
	baz=5.7,SNR=186						
AAI	**Ambon**	**3.79**	**226**	P	Pn	12 41 22.1	+17
	baz=8.5,SNR=4.0						
KDU	**Kakadu**	**11.67**	**173**	P	**Pn**	**12 42 52.9**	**+0.1**
	baz=15,SNR=36						
MTN	**Manton Dam**	**11.73**	**179**	P	**Pn**	**12 42 55.0**	**+1.4**
	baz=16,SNR=36						
KNRA	**Kununurra**	**14.70**	**188**	P	**Pn**	**12 43 35.5**	**+1.3**
	baz=19,SNR=15						
FITZ	**Fitzroy Crossi**	**17.73**	**197**	P	**P**	**12 44 15.6**	**+2.0**
	0.1nm,0.3s,baz=40,slow=16,SNR=4.4						
FITZ				S	**Sn**	**12 47 29.3**	**-0.4**
	0.1nm,0.3s,baz=127,slow=22,SNR=2.8						
FITZ	**Fitzroy Crossi**	**17.73**	**197**	P	P	12 44 21.9	+8.3
	baz=22,SNR=4.2						
WRA	**Warramunga Arr**	**19.08**	**170**	P	**P**	**12 44 27.1**	**-1.4**
	0.3nm,0.3s,baz=353,slow=11,SNR=18						
WRA				S	Sn	12 47 52.5	-10
	0.1nm,0.3s,baz=359,slow=23,SNR=3.2						
ASAR	**Alice Springs**	**22.67**	**173**	P	**P**	**12 45 08.7**	**+1.4**
	2.4nm,0.7s,baz=356,slow=10,SNR=38						
MKAR	**Makanchi Array**	**63.85**	**325**	P	**P**	**12 50 35.7**	**-2.1**
	0.3nm,0.5s,baz=123,slow=7.1,SNR=3.1						

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*NIED **08** 12:41:00, 46°.20N×153°.20E, h8km, Mw4.0 Best double couple: $M_0$9.99000×10^14 NP1:ϕ_s230.00000°, δ56.00000°, λ105.00000°. NP2:ϕ_s24.00000°, δ37.00000°, λ69.00000°.*
*JMA **08** 12:41:33.9±0.9, 46°.18N×153°.21E, h30km, M4.2*
*IDC **08** 12:41:33.3±0.9, 46°.11N×153°.03E, h0km, mb3.6/10, mb1 3.8/14, mb1mx3.7/30, mbtmp3.7/14, ML3.4/4, MS2.9/3, Ms1 2.9/3, ms1mx2.2/55, Error ellipse: s-maj=28.2km s-min=16.1km az=151.0*
*ISCJB **08** 12:41:36.7±0.7, 45°.1N±0°.1×153°.20E±0°.09, h79km, mb3.5/9, Error ellipse: s-maj=16.5km s-min=5.2km az=152.9*
*MOS **08** 12:41:36.5±1.1, 46°.33N×152°.89E, h36km, mb4.1/2, Error ellipse: s-maj=22.6km s-min=11.5km az=54.3*
ISC 08 12:41:35.8±1.1**, 45°.1N**±0°.1×**153°.44E**±0°.09**, h79**km**, n47, σ1s.61**/52**, mb3.6**/9**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.94**	**274**	*i* PN	**Pn**	**12 42 33.6**	**-0.3**
KUR				*i* S	**Sn**	**12 43 18.0**	**-0.9**
KUR				pmax	pmax		
	comp=N,69nm,0.3s						
KUR				pmax	pmax		
	comp=E,22nm,0.3s						
KUR				pmax	pmax		
	comp=Z,177nm,0.3s						
KUR				smax	smax		
	comp=N,73nm,0.6s						
KUR				smax	smax		
	comp=E,55nm,0.6s						
KUR				MLR	MLR		
	comp=N,196nm,14.0s						
KUR				MLR	MLR		
	comp=E,144nm,14.0s						
KUR				MLR	MLR		
	comp=Z,107nm,14.0s						
YUK	**Yuzh-Kuril'sk**	**5.51**	**262**	*i* PN	**Pn**	**12 42 56.7**	**+1.4**
YUK				*i* S	**Sn**	**12 44 00.6**	**+3.3**
YUK				pmax	pmax		
	comp=N,17nm,0.4s						
YUK				pmax	pmax		
	comp=E,31nm,0.4s						
YUK				pmax	pmax		
	comp=Z,60nm,0.3s						
YUK				smax	smax		
	comp=N,27nm,0.8s						
YUK				smax	smax		
	comp=E,57nm,0.8s						
NEM2	**Nemuro 2**	**5.79**	**255**	P	**Pn**	**12 43 00.0**	**+0.9**
NEM2				*e*S	**Sn**	**12 44 03.9**	**-0.1**
SKR	**Severo-Kuril's**	**5.88**	**17**	*e*PN	Pn	12 42 47.0	-13
JRA	**Rausu**	**6.05**	**262**	P	**Pn**	**12 43 04.5**	**+1.8**
JNK	**Nakash**	**6.43**	**260**	P	**Pn**	**12 43 09.3**	**+1.5**
JNK				*e*S	**Sn**	**12 44 19.1**	**-0.6**
JAK	**Akkeshi**	**6.64**	**255**	P	**Pn**	**12 43 11.7**	**+1.1**
JAK				*e*S	**Sn**	**12 44 23.4**	**-1.3**
JTKR	**Abashiri--Toko**	**6.90**	**264**	P	**Pn**	**12 43 15.3**	**+1.1**
JAR	**Ashorobuto**	**7.17**	**259**	P	**Pn**	**12 43 19.7**	**+1.7**
JAR				*e*S	**Sn**	**12 44 38.3**	**+0.4**
JOB	**Onbets**	**7.26**	**256**	P	**Pn**	**12 43 20.5**	**+1.4**
JOB				*e*S	**Sn**	**12 44 40.4**	**+0.4**
JMP	**Maruseppu**	**7.28**	**265**	P	**Pn**	**12 43 20.7**	**+1.2**
JCH	**Churui**	**7.69**	**255**	P	**Pn**	**12 43 26.4**	**+1.4**
JCH				*e*S	**Sn**	**12 44 50.5**	**0.0**
JSE	**Soyaes**	**7.69**	**273**	P	**Pn**	**12 43 25.9**	**+0.9**
JKK2	**Kamakawa 2**	**7.74**	**265**	P	**Pn**	**12 43 27.2**	**+1.5**
ASAJ	**Asahikawa**	**7.80**	**267**	P	**Pn**	**12 43 28.0**	**+1.5**
ASAJ	**Asahikawa**	**7.80**	**267**	Pn	**Pn**	**12 43 27.6**	**+1.2**
	comp=E,1.3nm,0.3s,baz=80,slow=11,SNR=12						
ASAJ				Sn	Sn	12 45 09.2	+16
	baz=191,slow=29,SNR=1.4						
ASAJ				LR	LR	12 46 17.4	
	comp=E,77nm,18.5s,baz=5.6,slow=37						
JFR	**Furan**	**8.03**	**260**	P	**Pn**	**12 43 32.6**	**+2.9**
JEM	**Erimo**	**8.07**	**251**	P	**Pn**	**12 43 33.1**	**+2.9**
JEM				*e*S	**Sn**	**12 45 01.0**	**+1.2**
JNBK	**Urakawa-nobuka**	**8.23**	**254**	P	**Pn**	**12 43 33.4**	**+0.9**
JNBK				*e*S	**Sn**	**12 45 01.6**	**-2.2**
JBT2	**Biratori 2**	**8.32**	**258**	P	**Pn**	**12 43 35.0**	**+1.4**
PETK	**Petropavlovsk-**	**8.50**	**18**	PN	Pn	12 43 25.9	-10
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**8.50**	**18**	Pn	Pn	12 43 25.9	-10
	comp=Z,0.6nm,0.3s,baz=184,slow=15,SNR=14						
JNB	**Noboribetsu**	**9.34**	**258**	P	**Pn**	**12 43 48.7**	**+1.1**
JNB				*e*S	**Sn**	**12 45 30.2**	**-0.7**
JSK	**Shakotan**	**9.47**	**264**	P	Pn	12 43 52.6	+3.4
JKB	**Kayabe**	**9.56**	**255**	P	**Pn**	**12 43 51.3**	**+0.7**
JKB				*e*S	**Sn**	**12 45 32.9**	**-3.4**
JYM2	**Yakumo 2**	**9.93**	**257**	P	**Pn**	**12 43 56.6**	**+1.0**
JANG	**Nango**	**9.95**	**246**	P	**Pn**	**12 43 56.5**	**+0.6**
JANG				*e*S	**Sn**	**12 45 42.2**	**-3.6**
JTH	**Tanohata**	**9.97**	**243**	*e*S	**Sn**	**12 45 44.3**	**-1.9**
JTM	**Tenmabayashi**	**10.03**	**249**	P	**Pn**	**12 43 58.2**	**+1.2**
JTM				*e*S	**Sn**	**12 45 44.9**	**-2.9**
JSR	**Shiriuchi**	**10.13**	**254**	P	**Pn**	**12 43 59.1**	**+0.8**
JOSM	**Okushiri--Mats**	**10.56**	**258**	P	**Pn**	**12 44 04.8**	**+0.6**
JRG	**Rokugo**	**11.06**	**244**	P	**Pn**	**12 44 12.7**	**+1.7**
JRG				*e*S	**Sn**	**12 46 11.9**	**-0.9**
JIO	**Ouri**	**11.19**	**238**	*e*S	**Sn**	**12 46 15.6**	**-0.4**
FX1	**Attu Island--F**	**15.09**	**52**	Pn	**Pn**	**12 45 01.9**	**-2.5**
	comp=Z,0.4nm,0.3s,baz=213,slow=17,SNR=2.6						
FX1				LR	LR	12 49 02.0	
	comp=Z,32nm,20.9s,baz=281,slow=30						
USRK	**Ussuriysk Arra**	**15.28**	**274**	Pn	**Pn**	**12 45 06.3**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=77,slow=13,SNR=4.2						
KSRS	**Korea Array**	**20.58**	**257**	P	Pn	12 46 15.0	+3.9
	comp=Z,0.6nm,0.4s,baz=54,slow=10,SNR=5.4						
ILAR	**Eielson Array**	**37.72**	**37**	P	**P**	**12 48 45.8**	**+2.4**
	comp=Z,0.3nm,0.7s,baz=258,slow=7.1,SNR=3.4						
INK	**Inuvik**	**42.94**	**31**	P	**P**	**12 49 27.3**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=242,slow=12,SNR=4.3						
ZALV	**Zalesovo Beam**	**43.78**	**307**	LR	LR	13 08 19.5	
	comp=Z,33nm,20.4s,baz=68,slow=37						
MKAR	**Makanchi Array**	**47.92**	**299**	P	**P**	**12 50 05.8**	**-0.3**

MKAR	Makanchi Array	47.92	299	P	P	12 50 05.8	-0.3
	comp=Z,0.4nm,0.7s,baz=64,slow=9.6,SNR=3.9						
ARCES	ARCESS Array B	59.50	341	P	P	12 51 29.0	-1.1
	comp=Z,1.1nm,0.8s,baz=45,slow=7.0,SNR=4.8						
NVAR	Mina Array Bea	63.01	62	P	P	12 52 01.1	+6.5
	comp=Z,0.7nm,0.8s,baz=312,slow=7.4,SNR=6.5						
NOA	NORSAR Array B	69.87	341	P	P	12 52 38.0	+0.2
	comp=Z,0.4nm,0.5s,baz=28,slow=6.5,SNR=4.6						
ASAR	Alice Springs	70.71	199	P	P	12 52 55.5	+12
	comp=Z,0.2nm,0.5s,baz=13,slow=6.1,SNR=8.1						
TXAR	Lajitas Array	78.12	60	P	P	12 53 32.7	+6.3
	comp=Z,0.3nm,0.5s,baz=286,slow=6.2,SNR=5.3						
BRTR	Keskin Array B	79.76	317	P	P	12 53 39.7	+4.4
	comp=Z,0.4nm,0.5s,baz=66,slow=3.5,SNR=3.5						

IDC 08 12:52:42.0±4.6, 15°.99N×86°.08W, h0km, mb3.3/3, mb1 3.8/4, mb1mx3.5/23, mbtmp3.5/4, ML4.0/1, Error ellipse: s-maj=114.9km s-min=65.3km az=56.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	Tepich	4.70	334	Pn	Pn	12 53 54.9	+0.6
	6.6nm,0.3s,baz=360,slow=1.2,SNR=38						
TEIG				Sn	Sn	12 54 49.7	+0.1
	5.0nm,0.3s,baz=91,slow=21,SNR=8.5						
TXAR	Lajitas Array	20.94	312	P	P	12 57 26.7	+0.1
	0.7nm,0.8s,baz=145,slow=11,SNR=7.0						
PDAR	Pinedale Array	33.40	328	P	P	12 59 22.4	-0.2
	0.2nm,0.3s,baz=112,slow=7.1,SNR=2.0						
YKA	Yellowknife Ar	50.59	343	P	P	13 01 42.1	-0.2
	0.5nm,1.0s,baz=134,slow=8.6,SNR=4.5						

IDC 08 12:54:21.8±58.0, 16°.03S×174°.42W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/19, mbtmp3.8/3, Error ellipse: s-maj=1102.0km s-min=172.9km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.88	240	P	P	13 02 22.8	+0.7
	3.5nm,1.0s,baz=80,slow=11,SNR=2.9						
WRA	Warramunga Arr	48.75	257	P	P	13 03 08.0	-0.8
	0.5nm,1.1s,baz=98,slow=7.3,SNR=8.8						
ASAR	Alice Springs	48.99	252	P	P	13 03 10.3	-0.3
	1.1nm,0.5s,baz=89,slow=7.8,SNR=38						

ISCJB 08 13:54:51.7±0.3, 2°.32N±0°.04×128°.45E±0°.05, h150km, mb4.1/18, Error ellipse: s-maj=7.5km s-min=5.0km az=160.3
BJI 08 13:54:53.1, 2°.20N×128°.20E, h165km, mB4.5/3, mb4.1/6
IDC 08 13:54:54.1±3.6, 2°.21N×128°.29E, h164km±35km, mb3.8/16, mb1 4.0/16, mb1mx3.8/24, mbtmp3.8/16, Error ellipse: s-maj=25.4km s-min=9.3km az=80.0
DJA 08 13:54:56.6±1.3, 2°N±13°×12°8E±°, h117km±10km, M4.6/8, mb4.6/4, mB4.8/4, MLv4.7/8, Mw(mB)4.1/4
AUST 08 13:54:59.1±0.7, 1°.96N×128°.30E, h207km, Error ellipse: s-maj=1.8km s-min=0.9km az=21.0
MAN 08 13:55:33, 4°.68N×126°.42E, h104km, mb4.6, ML3.5, MS3.5
ISC 08 13:54:53.1±0.5, 2°.27N±0°.05×128°.28E±0°.07, h150km, n61, σ1s47/58, mb4.1/18, 1C, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAMI	Galela, Maluku	0.65	229	P	Pn	13 55 16.9	+1.6
TNTI	Ternate	1.74	212	P	Pn	13 55 27.3	+2.0
LBMI	Labuha	2.99	195	P	Pn	13 55 42.2	+1.8
MNI	Manado	3.54	257	P	Pn	13 55 50.7	+3.3
SWI	Sorong	4.30	136	P	Pn	13 56 00.1	+2.8
SWI	Sorong	4.30	136	P	Pn	13 56 00.3	+2.9
	baz=4.1,SNR=14						
KMSI	Cibinong	4.62	249	P	Pn	13 56 04.4	+2.9
MATI	Mati	5.07	337	eP	Pn	13 56 09.5	+2.0
MSAI	Masohi	5.61	173	P	Pn	13 56 19.1	+4.4
	16nm,1.1s,747nm						
CTBH	Cotabato--PC H	6.36	321	⇑iP	Pn	13 56 24.2	-0.4
LUWI	Luwuk	6.42	239	P	Pn	13 56 29.7	+4.3
	44nm,0.7s,1μm						
LUWI	Luwuk	6.42	239	P	Pn	13 56 27.7	+2.3
	baz=6.3,SNR=7.7						
LUWI				S	Sn	13 57 37.5	-0.2
	baz=6.3,SNR=3.5						
BUKP	Musuan	6.43	330	eP	Pn	13 56 27.1	+1.4
BUKP				eS	Sn	13 56 55.4	-43
FAKI	Fak Fak	6.50	142	P	Pn	13 56 29.9	+3.4
	194nm,0.9s,2μm0.6nm						
FAKI	Fak Fak	6.50	142	P	Pn	13 56 29.5	+3.0
	baz=6.3,SNR=69						
MRSI	Marisa	6.59	254	P	Pn	13 56 29.0	+1.3
PAGZ	Pagadian	7.39	319	eP	Pn	13 56 38.4	0.0
MTN	Manton Dam	15.27	169	P	P	13 58 22.1	-0.4
	baz=15,SNR=14						
KDU	Kakadu	15.43	164	P	P	13 58 24.5	+0.4
	baz=15,SNR=43						
JAGI	Jajag, Banyuwa	17.67	233	P	Pn	13 58 51.8	+1.6
	baz=18,SNR=5.2						
KNRA	Kununurra	17.83	178	P	P	13 58 51.1	+0.5
	baz=18,SNR=25						
KSM	Kuching	17.98	268	P	Pn	13 58 54.3	+0.4
	baz=18,SNR=6.5						
FITZ	Fitzroy Crossi	20.41	187	P	P	13 59 17.2	-1.3
	3.7nm,0.4s,baz=8.6,slow=8.3,SNR=95						
FITZ	Fitzroy Crossi	20.41	187	P	P	13 59 17.3	-1.3
	baz=20,SNR=28						
COEN	Coen	21.86	138	P	P	13 59 33.3	-0.7
	baz=22,SNR=7.0						
CISI	Cisompet, Garu	22.63	244	P	P	13 59 42.4	+0.6
	baz=22,SNR=3.2						
WRA	Warramunga Arr	22.86	165	P	P	13 59 42.8	-0.9
	7.2nm,0.3s,baz=346,slow=11,SNR=384						
WRA				PcP	PcP	14 03 29.0	-0.8
	0.6nm,0.8s,baz=1.0,slow=25,SNR=2.9						
QIS	Mount Isa	25.25	154	P	P	14 00 05.4	-0.1
	baz=25,SNR=9.1						
MTSU	Mount Surprise	25.70	143	P	P	14 00 10.1	+0.6
	baz=26,SNR=6.0						
MNAI	Manna	26.15	255	P	P	14 00 23.9	+10
	baz=26,SNR=3.5						
ASAR	Alice Springs	26.35	168	P	P	14 00 14.5	-0.9
	4.6nm,0.4s,baz=349,slow=7.8,SNR=187						
ASAR				PcP	PcP	14 03 36.6	-0.9
	2.2nm,0.4s,baz=354,slow=2.0,SNR=16						
MEEK	Meekatharra	30.21	197	P	P	14 00 47.9	-1.8
	baz=30,SNR=6.1						
JNU	Nakatsue	30.79	4	P	P	14 00 54.3	-0.4
	2.3nm,0.4s,baz=186,slow=20,SNR=6.5						
LHMI	Lhok Sumawe	31.40	276	S	S	14 05 54.0	-3.1
	baz=32,SNR=4.8						
QLP	Quilpie	32.55	153	P	P	14 01 01.9	-8.2
	baz=32,SNR=5.0						
CMAR	Chiang Mai Arr	32.95	301	P	P	14 01 14.8	+1.1
	0.8nm,0.6s,baz=115,slow=6.7,SNR=5.1						
MORW	Morawa	33.29	200	P	P	14 01 14.7	-1.8
	baz=33,SNR=3.9						
KSRS	Korea Array	35.02	359	P	P	14 01 31.2	0.0
	2.1nm,0.6s,baz=176,slow=9.3,SNR=12						
EIDS	Eidsvold	35.25	143	P	P	14 01 32.7	-0.8
	baz=35,SNR=3.5						
MJAR	Matsushiro Arr	35.32	14	P	P	14 01 32.2	-1.7
	1.1nm,0.5s,baz=179,slow=9.0,SNR=5.5						
BBOO	Buckleboo	35.65	169	P	P	14 01 36.2	-0.6
	baz=36,SNR=23						
STKA	Stephens Creek	36.23	161	P	P	14 01 41.3	-0.4
	14nm,0.3s,baz=341,slow=7.6,SNR=160						
STKA	Stephens Creek	36.23	161	P	P	14 01 41.4	-0.4
	baz=36,SNR=106						
XAN	Xi'an	36.42	332	P	P	14 01 43.2	-0.2
XAN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,19nm,6.7s						
CMSA	Cobar Meteorol	37.47	155	P	P	14 01 53.9	+1.7
	baz=37,SNR=6.9						
ARMA	Armidale	39.40	147	P	P	14 02 08.6	+0.1
	baz=39,SNR=21						
LZH	Lanzhou	40.55	329	eP	P	14 02 19.2	+1.2
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
ARPS	Mount Arapiles	40.83	163	P	P	14 02 20.4	+0.3
	baz=41,SNR=14						
USRK	Ussuriysk Arra	41.89	4	P	P	14 02 30.0	+1.5
	comp=Z,0.8nm,0.5s,baz=218,slow=8.3,SNR=4.8						
TOO	Toolangi	42.73	160	P	P	14 02 36.5	+1.0
	baz=43,SNR=3.9						
LHI	Lord Howe Isla	44.54	141	S	S	14 08 45.8	-29
	baz=44,SNR=3.7						
GTA	Gaotai	45.15	329	eP	P	14 02 55.7	+0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONM	Songino Array	49.18	341	P	P	14 03 26.0	0.0
	comp=Z,2.3nm,0.6s,baz=150,slow=11,SNR=8.5						
PETK	Petropavlovsk-	56.22	21	P	P	14 04 17.8	+0.3
	comp=Z,0.8nm,0.6s,baz=208,slow=3.1,SNR=4.6						
MKAR	Makanchi Array	59.64	325	P	P	14 04 41.3	-0.2
	comp=Z,2.8nm,0.4s,baz=115,slow=8.0,SNR=55						
MKAR				pP	pP	14 05 20.3	+3.5
	comp=Z,0.9nm,0.4s,baz=117,slow=8.0,SNR=3.5						
URZ	Urewera	60.42	137	P	P	14 04 47.2	+0.4
	comp=Z,22nm,1.2s,baz=219,slow=22,SNR=3.5						
VNDA	Vanda	81.79	173	P	P	14 06 52.6	-2.2
	comp=Z,1.4nm,0.5s,baz=318,slow=7.0,SNR=14						
ILAR	Eielson Array	85.75	25	P	P	14 07 14.5	-0.6
	comp=Z,0.1nm,0.4s,baz=239,slow=5.1,SNR=6.6						
ARCES	ARCESS Array B	92.35	340	P	P	14 07 44.5	-1.7
	comp=Z,1.7nm,0.8s,baz=92,slow=6.1,SNR=9.5						
TXAR	Lajitas Array	121.24	54	PKP	PKPdf	14 13 29.1	0.0
	comp=Z,0.3nm,0.6s,baz=329,slow=2.5,SNR=4.2						
TORD	Torodi Ar. Bea	124.84	288	PKP	PKPdf	14 13 35.0	-1.3
	comp=Z,0.4nm,0.3s,baz=75,slow=1.6,SNR=19						

MAN 08 14:00:44, 9°.83N×122°.32E, h1km, mb4.5, ML3.4, MS3.3, 2C-1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.83	18	eP	Pg	14 01 00.4	+0.4
GUIM				eS	Sb	14 01 12.3	-0.7
TBP	Tagbilaran	1.52	95	eP	Pn	14 01 12.6	+0.2
DCPH	Dipolog City	1.60	141	⇑eP	Pn	14 01 12.4	-1.1
DCPH				eS	Sn	14 01 33.9	-1.0
LLP	Lapu-Lapu	1.69	73	eP	Pg	14 01 16.3	-0.1
LLP				eS	Sb	14 01 37.8	+0.1
RCP	Roxas	1.77	14	⇑eP	Pb	14 01 16.8	-0.5
RCP				eS	Sn	14 01 38.6	-0.3
PAGZ	Pagadian	2.23	152	eP	Pn	14 01 23.4	+1.2
MSLP	Maasin	2.52	83	eP	Pn	14 01 26.9	+0.8
CTBH	Cotabato--PC H	3.22	144	⇓iP	Pn	14 01 37.4	+1.7

WEL 08 14:15:29.9±0.4, 38°.71S×175°.41E, h203km±3km, ML3.5/11, 8C, Error ellipse: s-maj=4.2km s-min=3.6km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FWVZ	Far West T-bar	0.56	168	⇑PN	Pn	14 15 57.8	-0.1
FWVZ				SN	S	14 16 18.5	-1.3
TUVZ	Tukino	0.59	161	PN	Pn	14 15 58.0	+0.1
TRVZ	Turoa	0.60	169	PN	Pn	14 15 58.0	-0.1
WNVZ	Wahianoa	0.64	167	PN	Pn	14 15 58.1	0.0
WNVZ				SN	S	14 16 20.6	+0.4
MTVZ	Mangateitei	0.68	176	PN	Pn	14 15 58.1	-0.1
MOVZ	Moawhango	0.75	159	PN	Pn	14 15 58.2	-0.3
MOVZ				SN	S	14 16 19.7	-1.2
BHHZ	Black Hill Sta	0.93	147	⇑PN	Pn	14 15 59.4	-0.2
BHHZ				SN	S	14 16 21.8	-0.9
BKZ	Black Stump Fm	0.96	119	⇑PN	Pn	14 15 59.9	+0.1
BKZ				SN	S	14 16 23.0	+0.1
WAZ	Wanganui	1.10	197	⇑PN	Pn	14 16 00.1	-0.5
NMHZ	Naumai	1.16	110	PN	Pn	14 16 00.6	-0.6
MCHZ	McNeill Hill	1.24	127	PN	Pn	14 16 02.7	+0.9
PNHZ	Pukenui	1.35	153	PN	Pn	14 16 02.6	-0.1
URZ	Urewera	1.41	72	PN	Pn	14 16 02.7	-0.4
TSZ	Takapari Road	1.42	163	PN	Pn	14 16 02.8	-0.3
WPHZ	Waipukurau	1.57	150	PN	Pn	14 16 04.5	0.0
WPHZ				SN	S	14 16 31.2	0.0
KAHZ	Kahuranaki	1.57	134	⇑PN	Pn	14 16 05.1	+0.5
DVHZ	Dannevirke	1.69	160	PN	Pn	14 16 04.9	-0.7
MWZ	Matawai	1.71	78	PN	Pn	14 16 05.7	-0.1
POWZ	Post Office Ro	1.71	171	PN	Pn	14 16 04.8	-0.9
MRZ	Mangatainoka R	1.96	176	⇑PN	Pn	14 16 06.7	-1.4
MRZ				AML	AML	14 16 37.6	
BFZ	Birch Farm	2.07	162	PN	Pn	14 16 08.2	-1.2
TIWZ	Tintock	2.10	170	PN	Pn	14 16 08.3	-1.3
OGWZ	Otaki Gorge	2.11	185	⇑PN	Pn	14 16 08.2	-1.5
KIW	Kapiti Island	2.18	190	PN	Pn	14 16 08.4	-2.2
HOWZ	Holdsworth Sta	2.19	178	PN	Pn	14 16 08.7	-1.9
DUWZ	D'Urville Isla	2.38	208	PN	Pn	14 16 09.9	-2.8
CAW	Cannon Point	2.41	186	PN	Pn	14 16 10.9	-2.1
CAW				AML	AML	14 16 45.4	
CAW				AML	AML	14 16 45.4	
MTW	Mount Morrison	2.45	178	PN	Pn	14 16 11.4	-2.0
WEL	Wellington	2.62	191	PN	Pn	14 16 12.7	-2.6
TCW	Tory Channel	2.65	199	PN	Pn	14 16 13.0	-2.5
TCW				AML	AML	14 16 48.9	
TUWZ	Tuamarina	2.94	202	PN	Pn	14 16 15.9	-3.0
NNZ	Nelson	2.95	211	PN	Pn	14 16 15.4	-3.7
THZ	Tophouse	3.60	211	PN	Pn	14 16 23.4	-3.6
KHZ	Kahutara	3.97	200	⇑PN	Pn	14 16 28.0	-3.3

IDC 08 14:35:09.4±7.4, 6°.52S×146°.78E, h100km±73km, mb2.9/2, mb1 3.1/4, mb1mx2.9/19, mbtmp2.9/4, ML2.9/2, Error ellipse: s-maj=78.1km s-min=53.1km az=127.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.89	173	P	Pn	14 35 53.8	0.0
	3.0nm,0.3s,baz=301,slow=20,SNR=13						
PMG				S	Sn	14 36 28.5	+0.6
	8.9nm,0.3s,baz=265,slow=23,SNR=27						
WRA	Warramunga Arr	18.00	221	P	P	14 39 12.4	-0.1
	0.1nm,0.3s,baz=37,slow=11,SNR=6.7						
ASAR	Alice Springs	21.07	215	P	P	14 39 45.8	0.0
	0.3nm,0.3s,baz=51,slow=8.4,SNR=16						
FITZ	Fitzroy Crossi	23.61	239	P	P	14 40 11.2	-0.4
	0.7nm,0.3s,baz=134,slow=18,SNR=6.7						
TORD	Torodi Ar. Bea	145.00	284	PKPbc	PKPbc	14 54 35.2	-0.4
	0.5nm,0.6s,baz=71,slow=3.7,SNR=5.1						

ISCJB 08 14:39:55.7±0.5, 59°.83N±0°.03×22°.29E±0°.05, h0km, Error ellipse: s-maj=4.8km s-min=3.9km az=12.2
HEL 08 14:39:57.3±0.2, 59°.80N×22°.29E, h0km, ML1.6, ML1.2(UPP), Explosion
CSEM 08 14:39:57.0±0.5, 59°.80N×22°.29E, h2km, ML1.6, Error ellipse: s-maj=11.0km s-min=8.5km az=24.0, Mining explosion.
IDC 08 14:39:57.5±1.8, 59°.89N×22°.35E, h0km, mb1 2.8/4, mb1mx2.7/29, mbtmp2.7/4, ML2.4/4, Error ellipse: s-maj=27.4km s-min=6.7km az=158.0
UPP 08 14:39:59.3, 59°.89N×22°.56E, h0km, ML1.2, Suspected Mining explosion.
ISC 08 14:39:55.9±0.8, 59°.82N±0°.03×22°.31E±0°.03, h0km, n38, σ1s59/60, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEF	Metsahovi	1.12	68	eP	Pg	14 40 17.2	-0.1
MEF				eS	Sg	14 40 32.5	+0.7
MEF				MSG		14 40 32.5	
	comp=Z,4.5nm,0.4s						
AAL	Aland	1.22	288	eP	Pg	14 40 18.6	-0.6
AAL				eSB	Sg	14 40 35.6	+0.7
AAL	Aland	1.22	288	P	Pg	14 40 18.5	-0.6
AAL				Sb	Sg	14 40 35.6	+0.7
RAF	Rauma	1.23	348	eP	Pg	14 40 19.2	-0.3
RAF				eS	Sg	14 40 36.2	+0.7
RAF				MSG		14 40 36.2	
	comp=Z,2.5nm,0.2s						
RAF				eRG	Rg	14 40 40.6	
MTSE	Matsula	1.35	145	eP	Pg	14 40 21.4	-0.4
MTSE				eSB	Sb	14 40 39.3	-0.6
MTSE	Matsula	1.35	145	P	Pg	14 40 21.3	-0.4
MTSE				Sb	Sb	14 40 39.3	-0.6
PVF	Pernaja	1.92	66	eP	Pn	14 40 31.0	+1.3
PVF				eSG	Sb	14 40 56.9	+0.8
PVF				MSG		14 40 56.9	
	comp=Z,1.6nm,0.1s						
PVF	Pernaja	1.92	66	P	Pn	14 40 31.0	+1.3
PVF				Sg	Sb	14 40 56.9	+0.8
	comp=Z,1.6nm,0.1s						
FIA0	FINESS Array S	2.47	47	eP	Pn	14 40 39.6	+2.3
	baz=234						
FIA0				eSB	Sb	14 41 12.1	+0.1
FIA0				MSG		14 41 12.1	
	comp=Z,5.5nm,0.3s						
FIA0	FINESS Array S	2.47	47	P	Pn	14 40 39.6	+2.3
FIA0				Sb	Sb	14 41 12.1	+0.1
	comp=Z,5.5nm,0.3s						
FINES	FINESS Array B	2.47	47	Pn	Pn	14 40 39.6	+2.3
	comp=Z,1.1nm,0.3s,baz=229,slow=11,SNR=26						
FINES				Lg	Lg	14 41 12.2	
	comp=Z,2.8nm,0.3s,baz=252,slow=19,SNR=22						
KEF	Keuruu	2.66	27	ePB	Pb	14 40 43.2	-1.2
KEF				eSB	Sb	14 41 17.8	+0.2
KEF				MSG		14 41 17.8	
	comp=Z,3.0nm,0.2s						
KEF	Keuruu	2.66	27	Pb	Pb	14 40 43.2	-1.2
KEF				Sb	Sb	14 41 17.7	+0.2
	comp=Z,3.0nm,0.2s						
VJF	Virojoki	2.72	72	eP	Pn	14 40 42.3	+1.6
VJF				eS	Sb	14 41 17.3	-1.8
VJF				MSG		14 41 17.3	
	comp=Z,0.9nm,0.4s						
VJF	Virojoki	2.72	72	P	Pn	14 40 42.3	+1.6
VJF				S	Sb	14 41 17.3	-1.8
	comp=Z,0.9nm,0.4s						
KAF	Kangasniemi	3.01	39	eP	Pb	14 40 48.1	-2.2
KAF				eSB	Sb	14 41 26.6	-1.0
KAF				MSG		14 41 26.6	
	comp=Z,5.0nm,0.2s						
KAF	Kangasniemi	3.01	39	P	Pb	14 40 48.1	-2.2
KAF				Sb	Sb	14 41 26.6	-1.0
	comp=Z,5.0nm,0.2s						
VAF	Ylistaro	3.24	3	ePB	Pb	14 40 52.2	-1.9
	baz=174						
VAF				eSG	Sg	14 41 39.1	-0.6
VAF				MSG		14 41 39.1	
	comp=Z,1.3nm,0.4s						
VAF	Ylistaro	3.24	3	Pb	Pb	14 40 52.2	-1.9
SUF	Sumiainen	3.45	31	eP	Pn	14 40 53.8	+3.0
SUF				eSB	Sb	14 41 40.6	+0.5
SUF				MSG		14 41 40.6	
	comp=Z,2.1nm,0.4s						
SUF	Sumiainen	3.45	31	P	Pn	14 40 53.7	+3.0
UMAU	Umeaa	4.15	350	eP	Pn	14 41 03.3	+2.9
UMAU				eS	Sn	14 41 51.2	+1.7
UMAU	Umeaa	4.15	350	P	Pn	14 41 03.2	+2.9
UMAU				S	Sn	14 41 51.2	+1.7
HFS	Hagfors	4.34	278	Pn	Pn	14 41 04.6	+1.6
	comp=Z,0.1nm,0.3s,baz=112,slow=12,SNR=12						
HFS				Pg	Pb	14 41 12.7	-0.3
	comp=Z,0.4nm,0.3s,baz=95,slow=16,SNR=10						
HFS				Lg	Lg	14 42 12.9	
	comp=Z,0.7nm,0.3s,baz=86,slow=31,SNR=8.2						
BREU	Bredtraesk	4.45	338	eP	Pn	14 41 07.2	+2.7
BREU	Bredtraesk	4.45	338	P	Pn	14 41 07.2	+2.7
BURU	Burvik	4.80	355	eP	Pn	14 41 11.2	+1.9
BURU	Burvik	4.80	355	P	Pn	14 41 11.2	+1.9
LILU	Lilltraesk	5.60	349	eP	Pn	14 41 21.9	+1.5
LILU	Lilltraesk	5.60	349	P	Pn	14 41 21.8	+1.5
NOA	NORSAR Array B	5.63	287	Pn	Pn	14 41 18.7	-2.0
	comp=Z,0.2nm,0.3s,baz=98,slow=14,SNR=5.3						
SJUU	Sjulsmark	5.72	357	eP	Pn	14 41 23.0	+1.1
SJUU	Sjulsmark	5.72	357	P	Pn	14 41 23.0	+1.1
ERTU	Ertsjaerv	6.76	360	eP	Pn	14 41 36.7	+0.5
ERTU				eS	Sn	14 42 51.1	-2.6
ERTU	Ertsjaerv	6.76	360	P	Pn	14 41 36.7	+0.5
PAJU	Pajala	7.24	3	eP	Pn	14 41 43.5	+0.7
PAJU	Pajala	7.24	3	P	Pn	14 41 43.5	+0.7
ARCES	ARCESS Array B	9.85	7	Pn	Pn	14 42 18.1	-0.4
	comp=Z,0.1nm,0.3s,baz=191,slow=14,SNR=5.5						
ARCES				Lg	Lg	14 45 05.2	
	baz=180,slow=30,SNR=2.7						

ISCJB 08 14:49:35.6±0.8, 20°.84S±0°.05×177°.12W±0°.04, h286km±8km, mb4.7/81, Error ellipse: s-maj=8.4km s-min=4.9km az=150.3
AUST 08 14:49:35.8±0.0, 20°.74S×176°.80W, h288km, Error ellipse: s-maj=1.2km s-min=1.1km az=268.0
BJI 08 14:49:37.4, 21°.06S×176°.26W, h342km, mB4.6/21, mb4.8/36
DJA 08 14:49:38.2±1.2, 21°S±10°×17°7W±1°2, h291km±19km, M6.0/12, mB5.5/2, mb5.2/12, MLv6.4/1, Mw(mB)5.0/2
NEIC 08 14:49:39.8±0.2, 20°.86S×177°.14W, mb4.9/49, Error ellipse: s-maj=8.4km s-min=5.8km az=151.0
IDC 08 14:49:39.0±1.4, 20°.83S×177°.19W, h307km±13km, mb4.2/22, mb1 4.4/24, mb1mx4.4/24, mbtmp4.2/24, Error ellipse: s-maj=10.7km s-min=8.2km az=125.0
BGS 08 14:49:41.1±6.1, 20°.86S×177°.14W, h318km, mb4.9(NEIC)
ISC 08 14:49:41.5±0.4, 20°.99S±0°.05×177°.03W±0°.05, h336km±2km, h337km:pP-P, n445, σ1s47/521, mb4.8/81, 74C-81D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	5.66	304	eP	Pn	14 51 07.0	-1.2
	348nm,0.8s						
NIUE	Niue	6.94	75	P	Pn	14 51 19.1	-3.8
	baz=6.7,SNR=9.4						
NIUE				S	S	14 52 35.4	-10
	baz=6.7,SNR=32						
RAO	Raoul Island	8.27	185	P	Pn	14 51 32.4	-6.2
RAO				S	S	14 53 08.9	-5.0
RAO	Raoul Island	8.27	185	P	Pn	14 51 32.3	-6.2
	96nm,0.3s,baz=118,slow=23,SNR=3.3						
RAO				S	S	14 53 08.9	-5.0
	69nm,0.3s,baz=73,slow=22,SNR=3.8						
AFI	Afiamalu	8.64	36	eP	Pn	14 51 35.4	-7.9
	120nm,0.4s						
AFI				eS	S	14 53 02.5	-20
AFI				S	S	14 53 02.7	-20
AFI	Afiamalu	8.64	36	P	Pn	14 51 35.6	-7.7
	33nm,0.3s,baz=184,slow=5.4,SNR=34						
AFI				S	S	14 53 02.7	-20
	56nm,0.3s,baz=43,slow=22,SNR=7.8						
BAYA	Yate Dam	15.01	263	eP	Pn	14 52 58.9	0.0
DZM	Mont Dzumac	15.42	263	eLR	LR	14 55 43.9	
	273nm,23.8s						
DZM	Mont Dzumac	15.42	263	P	Pn	14 53 03.3	-0.5
DZM				S	S	14 55 50.3	+2.9
DZM	Mont Dzumac	15.42	263	P	Pn	14 53 03.3	-0.5
	7.8nm,0.3s,baz=80,slow=17,SNR=103						
DZM				S	S	14 55 50.3	+2.9
	baz=224,slow=17,SNR=3.4						
NOUC	Port Laguerre	15.55	263	eP	Pn	14 53 04.2	-1.0
RAR	Rarotonga	16.11	94	P	P	14 53 09.8	+1.0
RAR	Rarotonga	16.11	94	P	P	14 53 09.8	+1.0
	4.5nm,0.3s,baz=52,slow=0.0,SNR=8.0						
URZ	Urewera	17.94	195	eP	P	14 53 27.6	-0.8
	18nm,0.4s						
URZ				S	S	14 56 40.5	+3.9
URZ	Urewera	17.94	195	P	P	14 53 27.9	-0.5
	4.4nm,0.3s,baz=72,slow=3.0,SNR=15						
URZ				S	S	14 56 40.5	+3.9
	0.9nm,0.3s,baz=17,slow=22,SNR=6.1						
TARA	Tarawa	24.29	335	eP	P	14 54 27.8	-1.8
	234nm,1.1s						
RPZ	Rata Peaks	24.75	201	eP	P	14 54 32.7	-0.7
RPZ	Rata Peaks	24.75	201	P	P	14 54 32.4	-1.0
	20nm,1.0s,baz=227,slow=20,SNR=5.7						
HNR	Honiara	24.97	294	eP	P	14 54 36.3	+0.6
	72nm,0.8s						
HNR	Honiara	24.97	294	P	P	14 54 36.4	+0.6
	93nm,0.7s,baz=188,slow=2.0,SNR=10						
TBI	Tubuai	25.62	100	eP	P	14 54 40.9	-0.6
	228nm,1.1s						
TBI				eLR	LR	15 00 19.9	
	267nm,28.0s						
PAE	Paea	26.10	87	eP	P	14 54 46.2	+0.4
	17nm,1.0s						
PPT2	Papeete2	26.12	87	eP	P	14 54 46.7	+0.7
	99nm,1.1s						
PPT2				eLR	LR	15 00 29.2	
	230nm,29.0s						
PPT	Papeete	26.12	87	P	P	14 54 47.1	+1.1
PPT	Papeete	26.12	87	P	P	14 54 47.1	+1.1
	86nm,0.9s,baz=38,slow=3.5,SNR=7.4						
TVO	Taravao	26.38	88	eP	P	14 54 50.0	+1.6
EIDS	Eidsvold	29.60	255	eP	P	14 55 16.5	-0.2
	36nm,0.9s						
EIDS	Eidsvold	29.60	255	P	P	14 55 16.6	0.0
	baz=30,SNR=19						

ARMA	**Armidale**	**29.68**	**245**	eP	**P**	**14 55 18.6**	**+1.2**
	26nm,0.7s						
ARMA	**Armidale**	**29.68**	**245**	P	**P**	**14 55 18.6**	**+1.2**
	baz=30,SNR=32						
MGCD	**Mangrove Creek**	**30.74**	**240**	P	**P**	**14 55 27.9**	**+1.3**
	baz=31,SNR=34						
RMQ	**Roma**	**31.73**	**253**	P	**P**	**14 55 36.2**	**+1.0**
	baz=32,SNR=41						
CNB	**Canberra Magne**	**32.71**	**237**	P	**P**	**14 55 44.6**	**+0.9**
	baz=33,SNR=41						
CAN	**Canberra**	**33.00**	**237**	eP	**P**	**14 55 46.8**	**+0.6**
	21nm,0.8s						
MILA	**Mila**	**33.41**	**234**	P	**P**	**14 55 50.2**	**+0.6**
	baz=34,SNR=11						
RABL	**Rabaul**	**34.28**	**295**	P	**P**	**14 55 57.1**	**-0.2**
	baz=34,SNR=14						
CTAO	**Charters Tower**	**34.35**	**265**	eP	**P**	**14 55 57.7**	**-0.2**
	40nm,0.6s						
CMSA	**Cobar Meteorol**	**34.89**	**245**	P	**P**	**14 56 02.5**	**+0.2**
	baz=35,SNR=97						
QLP	**Quilpie**	**35.78**	**253**	P	**P**	**14 56 09.7**	**-0.2**
	baz=36,SNR=123						
PMG	**Port Moresby**	**36.34**	**283**	eP	**P**	**14 56 14.3**	**-0.4**
	185nm,0.8s						
PMG	**Port Moresby**	**36.34**	**283**	P	**P**	**14 56 14.1**	**-0.6**
	258nm,0.9s,2µm						
PMG	**Port Moresby**	**36.34**	**283**	P	**P**	**14 56 14.1**	**-0.6**
	258nm,0.9s,2µm						
TOO	**Toolangi**	**36.35**	**235**	P	**P**	**14 56 14.9**	**+0.3**
	baz=37,SNR=21						
MTSU	**Mount Surprise**	**36.48**	**268**	P	**P**	**14 56 15.8**	**-0.1**
	baz=37,SNR=377						
STKA	**Stephens Creek**	**38.40**	**245**	eP	**P**	**14 56 31.9**	**+0.3**
	13nm,0.9s						
STKA				PcP	**PcP**	**14 58 38.1**	**+0.7**
STKA	**Stephens Creek**	**38.40**	**245**	P	**P**	**14 56 31.9**	**+0.3**
	28nm,0.5s,baz=90,slow=9.7,SNR=89						
STKA				PcP	**PcP**	**14 58 38.1**	**+0.7**
	4.8nm,0.4s,baz=122,slow=6.7,SNR=3.6						
STKA	**Stephens Creek**	**38.40**	**245**	P	**P**	**14 56 32.0**	**+0.4**
	baz=39,SNR=37						
COEN	**Coen**	**38.52**	**274**	eP	**P**	**14 56 32.9**	**+0.1**
	625nm,0.7s						
COEN				epP	**pP**	**14 57 40.3**	**+1.6**
COEN	**Coen**	**38.52**	**274**	P	**P**	**14 56 33.0**	**+0.1**
	baz=39,SNR=122						
QIS	**Mount Isa**	**40.46**	**263**	P	**P**	**14 56 47.6**	**-1.1**
	baz=41,SNR=13						
BBOO	**Buckleboo**	**43.15**	**244**	P	**P**	**14 57 09.6**	**-0.5**
	baz=43,SNR=21						
AS31	**Alice Springs**	**45.29**	**257**	eP	**P**	**14 57 26.5**	**-0.6**
ASAR	**Alice Springs**	**45.29**	**257**	P	**P**	**14 57 26.4**	**-0.7**
ASAR				PcP	**PcP**	**14 59 00.3**	**-0.3**
ASAR				S	**S**	**15 03 45.6**	**+3.8**
ASAR				PKiKP	**PKiKP**	**15 05 56.1**	**-1.3**
ASAR	**Alice Springs**	**45.29**	**257**	P	**P**	**14 57 26.4**	**-0.7**
	50nm,0.6s,baz=92,slow=8.2,SNR=1219						
ASAR				PcP	**PcP**	**14 59 00.3**	**-0.3**
	7.1nm,0.5s,baz=107,slow=3.6,SNR=8.4						
ASAR				S	**S**	**15 03 45.6**	**+3.8**
	0.7nm,0.8s,baz=86,slow=14,SNR=4.3						
ASAR				PKiKP	**PKiKP**	**15 05 56.1**	**-1.3**
	0.2nm,0.4s,baz=107,slow=1.5,SNR=5.1						
WRAB	**Tennant Creek**	**45.43**	**262**	eP	**P**	**14 57 26.8**	**-1.4**
	39nm,0.8s						
WRA	**Warramunga Arr**	**45.43**	**262**	P	**P**	**14 57 26.2**	**-2.0**
WRA				PcP	**PcP**	**14 59 00.9**	**-0.2**
WRA				S	**S**	**15 03 42.8**	**-1.1**
WRA				PKiKP	**PKiKP**	**15 05 56.3**	**-1.3**
WRA	**Warramunga Arr**	**45.43**	**262**	P	**P**	**14 57 26.2**	**-2.0**
	29nm,0.6s,baz=94,slow=5.3,SNR=413						
WRA				PcP	**PcP**	**14 59 00.9**	**-0.2**
	3.6nm,0.5s,baz=99,slow=3.2,SNR=4.3						
WRA				S	**S**	**15 03 42.8**	**-1.1**
	1.2nm,0.8s,baz=93,slow=14,SNR=3.4						
WRA				PKiKP	**PKiKP**	**15 05 56.3**	**-1.3**
	0.2nm,0.4s,baz=80,slow=0.7,SNR=5.6						
KDU	**Kakadu**	**48.87**	**271**	P	**P**	**14 57 53.5**	**-1.0**
	baz=49,SNR=39						
FORT	**Forrest**	**49.94**	**247**	eP	**P**	**14 58 01.4**	**-0.9**
	59nm,0.8s						
FORT	**Forrest**	**49.94**	**247**	P	**P**	**14 58 01.5**	**-0.9**
	baz=50,SNR=10						
MTN	**Manton Dam**	**50.08**	**271**	P	**P**	**14 58 02.5**	**-1.0**
	baz=50,SNR=20						
KNRA	**Kununurra**	**51.53**	**266**	P	**P**	**14 58 13.6**	**-0.7**
	baz=52,SNR=30						
FAKI	**Fak Fak**	**52.49**	**283**	P	**P**	**14 58 20.9**	**-0.5**
	baz=53,SNR=17						
FITZ	**Fitzroy Crossi**	**53.86**	**262**	eP	**P**	**14 58 30.8**	**-0.5**
	29nm,1.1s						
FITZ	**Fitzroy Crossi**	**53.86**	**262**	P	**P**	**14 58 30.8**	**-0.5**
	6.0nm,0.4s,baz=107,slow=4.6,SNR=25						
FITZ	**Fitzroy Crossi**	**53.86**	**262**	P	**P**	**14 58 31.0**	**-0.3**
	baz=54,SNR=14						
SWI	**Sorong**	**54.25**	**285**	P	**P**	**14 58 33.6**	**-0.5**
	baz=54,SNR=54						
KMBL	**Kambalda**	**55.19**	**246**	P	**P**	**14 58 39.6**	**-0.9**
	baz=55,SNR=4.5						
AAI	**Ambon**	**55.90**	**280**	P	**P**	**14 58 45.3**	**-0.5**
	baz=56,SNR=5.8						
VNDA	**Vanda**	**57.51**	**185**	P	P	14 58 58.9	+2.9
VNDA	**Vanda**	**57.51**	**185**	P	P	14 58 58.9	+2.9
	1.5nm,0.8s,baz=0.9,slow=8.6,SNR=5.5						
MEEK	**Meekatharra**	**58.62**	**251**	P	**P**	**14 59 03.3**	**-1.2**
	baz=59,SNR=8.5						
MBWA	**Marble Bar**	**58.63**	**257**	eP	**P**	**14 59 03.5**	**-1.2**
	40nm,0.7s						
KLBR	**Kellerberrin**	**58.67**	**245**	P	**P**	**14 59 04.2**	**-0.6**
	baz=59,SNR=16						
RKGY	**Rocky Gully**	**59.01**	**242**	P	**P**	**14 59 07.3**	**+0.3**
	baz=59,SNR=5.1						
MORW	**Morawa**	**60.48**	**248**	P	**P**	**14 59 16.3**	**-0.7**
	baz=61,SNR=9.6						
LUWI	**Luwuk**	**61.92**	**280**	P	**P**	**14 59 27.2**	**+0.4**
	baz=62,SNR=3.0						
CASY	**Casey**	**63.91**	**205**	eP	**P**	**14 59 40.0**	**+1.0**
	43nm,0.8s						
CTBH	**Cotabato--PC H**	**64.10**	**289**	⇑eP	**P**	**14 59 40.9**	**-0.1**
JAGI	**Jajag, Banyuwa**	**67.29**	**269**	P	**P**	**14 59 59.7**	**-1.6**
	baz=68,SNR=5.4						
JHJ	**Hachijo jima 2**	**67.78**	**322**	P	**P**	**15 00 03.1**	**-0.7**
	98nm,0.3s,baz=79,slow=22,SNR=12						
MYLDM	**Lahad Datu**	**68.34**	**285**	P	**P**	**15 00 10.4**	**+2.6**
TSM	**Tawau**	**68.54**	**284**	P	**P**	**15 00 10.2**	**+1.2**
SDKM	**Sandakan**	**69.71**	**285**	P	**P**	**15 00 16.5**	**+0.4**
KKM	**Kota Kinabalu**	**70.76**	**285**	P	**P**	**15 00 22.9**	**+0.3**
	baz=71,SNR=6.7						
UGM	**Wanagama**	**70.86**	**269**	P	**P**	**15 00 22.5**	**-0.6**
	baz=71,SNR=5.5						
MJAR	**Matsushiro Arr**	**71.14**	**323**	P	**P**	**15 00 23.0**	**-1.3**
MJAR	**Matsushiro Arr**	**71.14**	**323**	P	**P**	**15 00 23.0**	**-1.3**
	10nm,0.6s,baz=154,slow=6.0,SNR=51						
MAJO	**Matsushiro**	**71.14**	**323**	eP	**P**	**15 00 23.1**	**-1.2**
	10nm,0.6s						
MAT	**Matsushiro**	**71.14**	**323**	P	**P**	**15 00 23.1**	**-1.2**
SBUM	**Sibu**	**72.98**	**279**	P	**P**	**15 00 36.4**	**+0.8**
SBUM	**Sibu**	**72.98**	**279**	P	**P**	**15 00 36.2**	**+0.6**
	12nm,1.2s						
JNU	**Nakatsue**	**73.25**	**316**	P	**P**	**15 00 36.0**	**-0.7**
JNU	**Nakatsue**	**73.25**	**316**	P	**P**	**15 00 36.0**	**-0.7**
	2.3nm,0.4s,baz=34,slow=19,SNR=6.2						
KSM	**Kuching**	**74.38**	**278**	eP	**P**	**15 00 43.5**	**-0.2**
	17nm,0.8s						
KSM	**Kuching**	**74.38**	**278**	P	**P**	**15 00 44.0**	**+0.3**
KSM	**Kuching**	**74.38**	**278**	P	**P**	**15 00 43.6**	**0.0**
	34nm,1.0s						
KSM	**Kuching**	**74.38**	**278**	P	**P**	**15 00 43.8**	**+0.1**
	baz=75,SNR=13						
YULB	**Yu-li**	**74.53**	**303**	eP	**P**	**15 00 42.6**	**-1.7**
	9.4nm,0.6s						
ASAJ	**Asahikawa**	**74.59**	**331**	eP	**P**	**15 00 44.5**	**+0.4**
	14nm,0.8s						
ASAJ	**Asahikawa**	**74.59**	**331**	P	**P**	**15 00 44.7**	**+0.5**
	30nm,0.8s,baz=210,slow=2.3,SNR=57						
SSLB	**Suanglung**	**75.00**	**303**	eP	**P**	**15 00 45.2**	**-1.7**
	23nm,0.4s						
TPUB	**Ta-pu**	**75.00**	**303**	eP	**P**	**15 00 45.1**	**-1.9**
	51nm,0.8s						
YHNB	**Yeheng**	**75.13**	**304**	eP	**P**	**15 00 46.7**	**-1.0**
	30nm,0.9s						
PETK	**Petropavlovsk-**	**76.98**	**345**	P	**P**	**15 00 56.2**	**-1.1**
PETK	**Petropavlovsk-**	**76.98**	**345**	P	**P**	**15 00 56.2**	**-1.1**
	9.9nm,0.7s,baz=142,slow=9.2,SNR=20						
KSRS	**Korea Array**	**77.86**	**318**	P	**P**	**15 01 01.7**	**-0.8**
	2.7nm,0.6s,baz=137,slow=6.4,SNR=15						
KSAR	**Wonju Array Be**	**77.87**	**318**	P	**P**	**15 01 01.7**	**-0.9**

MURC	**Murrieta**	**78.71**	**47**	⇓P	**P**	**15 01 08.9**	**+1.5**
	baz=79						
BFSC	**Mount Baldy Ra**	**78.76**	**47**	⇓P	**P**	**15 01 09.0**	**+1.3**
	baz=79						
MONP	**Monument Peak**	**78.85**	**48**	⇑P	**P**	**15 01 09.9**	**+1.6**
	baz=79						
EDW2	**Edwards Air Fo**	**78.90**	**46**	⇓P	**P**	**15 01 09.8**	**+1.5**
	baz=79,SNR=8.2						
ISA	**Isabella**	**79.03**	**45**	eP	**P**	**15 01 10.2**	**+1.1**
	8.7nm,1.0s						
ISA	**Isabella**	**79.03**	**45**	⇑P	**P**	**15 01 10.8**	**+1.8**
	baz=79						
PFO	**Pinyon Flat Ob**	**79.23**	**48**	⇓P	**P**	**15 01 11.7**	**+1.4**
	baz=79						
SWSC	**Sam W. Stewart**	**79.31**	**49**	⇓P	**P**	**15 01 12.2**	**+1.7**
	baz=80						
LRMC	**Laurel Mountai**	**79.44**	**46**	⇓P	**P**	**15 01 12.8**	**+1.5**
	baz=80						
CWC	**Cottonwood Cre**	**79.74**	**45**	⇑P	**P**	**15 01 14.5**	**+1.5**
	baz=80						
BELC	**Belle Mtn. Jos**	**79.76**	**48**	⇑P	**P**	**15 01 14.6**	**+1.5**
	baz=80,SNR=6.3						
USRK	**Ussuriysk Arra**	**79.88**	**325**	P	**P**	**15 01 13.9**	**+0.6**
	18nm,0.8s,baz=148,slow=3.2,SNR=14						
MPMC	**Manual Prospec**	**79.91**	**45**	⇓P	**P**	**15 01 15.3**	**+1.3**
	baz=80						
GSC	**Goldstone**	**79.94**	**46**	⇑P	**P**	**15 01 15.3**	**+1.4**
	baz=80						
BC3	**Big Chuckawall**	**79.95**	**48**	⇓P	**P**	**15 01 15.5**	**+1.4**
	baz=80						
HEC	**Hector,Ludlow**	**79.99**	**47**	⇑P	**P**	**15 01 15.6**	**+1.4**
	baz=80						
YBH	**Yreka Blue Hor**	**80.11**	**38**	eP	**P**	**15 01 16.4**	**+1.7**
	3.6nm,0.8s						
GMRC	**Granite Mounta**	**80.42**	**47**	⇑P	**P**	**15 01 17.9**	**+1.3**
	baz=81						
IRM	**Iron Mountain**	**80.43**	**48**	⇓P	**P**	**15 01 18.3**	**+1.8**
	baz=81,SNR=6.0						
GRAC	**Grapevine Rang**	**80.53**	**44**	⇓P	**P**	**15 01 18.6**	**+1.6**
	baz=81						
TUQ	**Turquoise Moun**	**80.61**	**46**	⇑P	**P**	**15 01 19.0**	**+1.4**
	baz=81						
Y12C	**Blythe**	**80.65**	**49**	⇑P	**P**	**15 01 19.2**	**+1.5**
	baz=81						
113A	**Mohawk Valley,**	**80.66**	**50**	⇑P	**P**	**15 01 19.0**	**+1.3**
	baz=81						
NVAR	**Mina Array Bea**	**80.76**	**43**	P	**P**	**15 01 19.6**	**+1.3**
NVAR				pP	**pP**	**15 02 33.6**	**-2.3**
NVAR	**Mina Array Bea**	**80.76**	**43**	P	**P**	**15 01 19.6**	**+1.3**
	1.2nm,0.6s,baz=224,slow=7.3,SNR=15						
NVAR				pP	**pP**	**15 02 33.6**	**-2.3**
	1.7nm,1.0s,baz=223,slow=8.0,SNR=3.0						
NJ2	**Nanjing**	**80.89**	**309**	eP	**P**	**15 01 19.4**	**+0.5**
NJ2				pP	**pP**	**15 02 36.0**	**-0.4**
NJ2				sP	**sP**	**15 03 14.0**	**+2.2**
NJ2				S	**S**	**15 10 58.0**	**-0.9**
NJ2				ScS	**ScS**	**15 11 18.0**	**+3.1**
NJ2				pmax	pmax		
	comp=Z,60nm,1.5s						
NJ2				pmax	pmax		
	comp=Z,80nm,8.0s						
NJ2				LR	LR		
	comp=N,160nm,19.8s						
NJ2				LR	LR		
	comp=E,410nm,18.2s						
NJ2				LR	LR		
	comp=Z,170nm,22.6s						
KGM	**Kluang**	**81.07**	**276**	P	**P**	**15 01 21.1**	**+0.9**
PDMCI	**Parker Dam,Lak**	**81.21**	**48**	⇑P	**P**	**15 01 22.3**	**+1.7**
	baz=81						
MAW	**Mawson**	**81.41**	**200**	eP	**P**	**15 01 22.4**	**+1.3**
	comp=Z,1.5nm,0.7s						
MAW	**Mawson**	**81.41**	**200**	P	**P**	**15 01 22.7**	**+1.7**
	comp=Z,8.5nm,0.5s,baz=128,slow=5.4,SNR=29						
MAW	**Mawson**	**81.41**	**200**	P	**P**	**15 01 22.7**	**+1.7**
	baz=82,SNR=16						
MDJ	**Mudanjiang**	**81.44**	**325**	P	**P**	**15 01 21.8**	**+0.3**
MDJ				pP	**pP**	**15 02 39.1**	**0.0**
MDJ				S	**S**	**15 11 07.9**	**+3.9**
MDJ				pmax	pmax		
	comp=Z,23nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,78nm,6.3s						
MDJ				LR	LR		
	comp=N,140nm,18.8s						
MDJ				LR	LR		
	comp=E,130nm,17.8s						
MDJ				LR	LR		
	comp=Z,20nm,24.7s						
MDJ	**Mudanjiang**	**81.44**	**325**	eP	**P**	**15 01 21.4**	**0.0**
	comp=Z,21nm,1.0s						
Z14A	**Wintersburg**	**81.55**	**50**	⇓P	**P**	**15 01 24.5**	**+2.1**
	baz=82						
Y14A	**Wickenburg**	**81.81**	**49**	⇓P	**P**	**15 01 25.5**	**+1.7**
	baz=82,SNR=5.9						
W13A	**Hualapai Mount**	**81.82**	**48**	⇑P	**P**	**15 01 25.3**	**+1.3**
	baz=82						
R11A	**Troy Canyon, C**	**82.46**	**44**	⇑P	**P**	**15 01 28.4**	**+1.2**
	baz=83						
TUC	**Tucson**	**82.57**	**51**	eP	**P**	**15 01 29.0**	**+1.3**
	comp=Z,11nm,1.3s						
WVOR	**Wild Horse Val**	**82.92**	**39**	P	**P**	**15 01 30.5**	**+1.1**
	comp=Z,6.0nm,1.1s						
X16A	**Lo Mia Camp, P**	**83.17**	**49**	⇓P	**P**	**15 01 32.9**	**+2.0**
	baz=83,SNR=6.4						
319A	**Douglas**	**83.21**	**53**	⇓P	**P**	**15 01 32.9**	**+1.8**
	baz=83						
CN2	**Changchun**	**83.24**	**322**	eP	**P**	**15 01 30.4**	**-0.4**
CN2				epP	**pP**	**15 02 51.5**	**+2.7**
CN2				eS	**S**	**15 11 20.1**	**-2.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WHN	**Wuhan**	**83.47**	**306**	P	**P**	**15 01 31.0**	**-1.2**
U15A	**North Rim**	**83.62**	**47**	⇑P	**P**	**15 01 35.3**	**+2.0**
	baz=84						
320A	**Kipp Ranch, An**	**83.76**	**53**	⇓P	**P**	**15 01 36.1**	**+2.2**
	baz=84						
WUAZ	**Wupatki**	**83.78**	**48**	⇑P	**P**	**15 01 35.7**	**+1.8**
	baz=84						
SEW	**Seward**	**83.87**	**13**	eP	**P**	**15 01 32.9**	**-0.6**
220A	**Playas Peak, P**	**84.03**	**53**	⇓P	**P**	**15 01 37.4**	**+2.2**
	baz=84,SNR=8.2						
IPM	**Ipoh**	**84.09**	**277**	eP	**P**	**15 01 35.2**	**-0.6**
	comp=Z,21nm,0.6s						
IPM	**Ipoh**	**84.09**	**277**	P	**P**	**15 01 36.0**	**+0.2**
IPM	**Ipoh**	**84.09**	**277**	P	**P**	**15 01 36.3**	**+0.5**
	comp=Z,34nm,0.7s						
120A	**U Bar Ranch, L**	**84.27**	**52**	⇓P	**P**	**15 01 38.2**	**+1.8**
	baz=84						
Z20A	**Nine Sixteen R**	**84.57**	**52**	⇓P	**P**	**15 01 40.1**	**+2.2**
	baz=85,SNR=6.2						
GAMB	**Gambell**	**84.59**	**2**	eP	**P**	**15 01 37.0**	**0.0**
	comp=Z,5.6nm,0.5s						
W18A	**Petrified Fore**	**84.73**	**49**	⇑P	**P**	**15 01 40.8**	**+2.1**
	baz=85						
KULM	**Kulim**	**84.74**	**278**	eP	**P**	**15 01 39.2**	**+0.3**
	comp=Z,12nm,0.6s						
KULM	**Kulim**	**84.74**	**278**	P	**P**	**15 01 39.6**	**+0.6**
KULM	**Kulim**	**84.74**	**278**	P	**P**	**15 01 40.1**	**+1.1**
121A	**Cookes Peak, D**	**84.89**	**52**	⇑P	**P**	**15 01 41.3**	**+1.8**
	baz=85						
Y20A	**Horse Springs,**	**85.11**	**51**	⇓P	**P**	**15 01 42.7**	**+2.0**
	baz=85						
PMR	**Palmer**	**85.28**	**13**	eP	**P**	**15 01 39.7**	**-0.8**
	comp=Z,6.9nm,0.3s						
DIV	**Divide**	**85.62**	**15**	eP	**P**	**15 01 41.6**	**-0.7**
	comp=Z,9.4nm,0.8s						
SML	**Sawmill**	**85.65**	**13**	eP	**P**	**15 01 41.8**	**-0.6**
	comp=Z,1.4nm,0.7s						
Y21A	**Point of Rocks**	**85.67**	**51**	⇑P	**P**	**15 01 45.6**	**+2.2**
	baz=86						
Z22A	**Elephant Butte**	**85.84**	**52**	⇓P	**P**	**15 01 46.1**	**+2.0**
	baz=86						
PNL	**Peninsula**	**86.06**	**18**	eP	**P**	**15 01 44.4**	**0.0**
	comp=Z,25nm,0.8s						
324A	**Moseley Ranch,**	**86.10**	**54**	⇓P	**P**	**15 01 46.9**	**+1.5**
	baz=86,SNR=6.5						
HLID	**Hailey**	**86.11**	**40**	⇓P	**P**	**15 01 47.0**	**+1.8**
	baz=86						
Y22A	**Socorro**	**86.16**	**52**	⇓P	**P**	**15 01 47.2**	**+1.5**
	baz=86						
425A	**Indio Mountain**	**86.18**	**55**	⇓P	**P**	**15 01 47.7**	**+1.8**
	baz=86,SNR=9.5						
SRU	**San Rafael**	**86.21**	**46**	⇑P	**P**	**15 01 47.4**	**+1.6**
	baz=86						
626A	**Big Bend Ranch**	**86.29**	**57**	⇑P	**P**	**15 01 48.1**	**+1.8**
	baz=86,SNR=11						

MNTX	**Cornudas Mount**	**86.30**	**54**	eP	**P**	**15 01 47.7**	**+1.4**
	comp=Z,6.7nm,1.2s						
224A	**Cornudas Mount**	**86.36**	**54**	⇑P	**P**	**15 01 48.6**	**+1.8**
	baz=86,SNR=6.8						
H12A	**Diamond D Ranc**	**86.39**	**39**	⇓P	**P**	**15 01 48.1**	**+1.5**
	baz=87						
SYO	**Syowa Base**	**86.45**	**192**	⇓eP	**P**	**15 01 45.6**	**-0.7**
SYO	**Syowa Base**	**86.45**	**192**	⇓ePcP	**PcP**	**15 01 49.6**	**+1.4**
325A	**Bean Ranch, Si**	**86.46**	**55**	⇓P	**P**	**15 01 48.6**	**+1.4**
	baz=87,SNR=6.5						
526A	**Mary Lane Ranc**	**86.55**	**56**	⇓P	**P**	**15 01 49.2**	**+1.6**
	baz=87,SNR=6.3						
TXAR	**Lajitas Array**	**86.56**	**57**	P	**P**	**15 01 49.7**	**+2.1**
TXAR				pP	**pP**	**15 03 04.8**	**-1.5**
TXAR	**Lajitas Array**	**86.56**	**57**	P	**P**	**15 01 49.7**	**+2.1**
	comp=Z,6.5nm,0.9s,baz=218,slow=7.0,SNR=29						
TXAR				pP	**pP**	**15 03 04.8**	**-1.5**
	comp=Z,2.4nm,1.1s,baz=212,slow=4.4,SNR=3.6						
TRF	**Thorofare Moun**	**86.74**	**12**	eP	**P**	**15 01 45.9**	**-1.9**
	comp=Z,18nm,0.8s						
Y23A	**Lovelace Mesa,**	**86.82**	**52**	⇑P	**P**	**15 01 50.4**	**+1.4**
	baz=87						
627A	**Terlingua Ranc**	**86.83**	**57**	⇑P	**P**	**15 01 50.4**	**+1.5**
	baz=87						
F12A	**Elk City**	**86.84**	**38**	⇓P	**P**	**15 01 50.4**	**+1.8**
	baz=87						
U21A	**Nageezi**	**86.85**	**49**	⇑P	**P**	**15 01 50.4**	**+1.4**
	baz=87						
426A	**McDonald Obser**	**86.87**	**56**	⇓P	**P**	**15 01 50.7**	**+1.4**
	baz=87,SNR=5.6						
BJI	**Beijing**	**86.88**	**315**	P	**P**	**15 01 48.4**	**-0.3**
BJI				pmax	pmax		
	comp=Z,18nm,0.9s						
527A	**Woodward Ranch**	**86.96**	**56**	⇑P	**P**	**15 01 50.9**	**+1.3**
	baz=87,SNR=5.4						
ENH	**Enshi**	**87.06**	**304**	eP	**P**	**15 01 50.1**	**+0.1**
	comp=Z,56nm,1.1s						
SKAG	**Skagway**	**87.13**	**20**	eP	**P**	**15 01 50.5**	**+1.0**
	comp=Z,22nm,1.3s						
326A	**Caldwell Ranch**	**87.19**	**55**	⇑P	**P**	**15 01 51.9**	**+1.3**
	baz=87						
628A	**Black Gap, Mar**	**87.23**	**57**	⇑P	**P**	**15 01 51.5**	**+0.7**
	baz=87						
MCK	**McKinley**	**87.25**	**12**	eP	**P**	**15 01 49.1**	**-0.9**
	comp=Z,15nm,0.7s						
Y24A	**Capitan**	**87.28**	**52**	⇑P	**P**	**15 01 52.4**	**+1.4**
	baz=87						
125A	**Gardner Draw,**	**87.28**	**54**	⇓P	**P**	**15 01 52.2**	**+1.1**
	baz=87						
PAX	**Paxson**	**87.31**	**14**	eP	**P**	**15 01 49.4**	**-0.9**
	comp=Z,3.8nm,0.9s						
S21A	**Coal Bank Pass**	**87.35**	**48**	⇓P	**P**	**15 01 52.6**	**+1.1**
	baz=88						
226B	**Tecolote Peak,**	**87.39**	**54**	⇓P	**P**	**15 01 52.9**	**+1.4**
	baz=88,SNR=6.6						
427A	**Hayter Ranch,**	**87.43**	**56**	⇑P	**P**	**15 01 53.5**	**+1.7**
	baz=88,SNR=18						
C11A	**Tepee Creek (N**	**87.47**	**36**	⇓P	**P**	**15 01 53.0**	**+1.5**
	baz=88						
SNAA	**Sanae**	**87.50**	**178**	eP	**P**	**15 01 52.2**	**+0.9**
Z25A	**Roswell**	**87.52**	**53**	⇓P	**P**	**15 01 53.9**	**+1.8**
	baz=88						
528A	**Cox Ranch, San**	**87.61**	**57**	⇑P	**P**	**15 01 53.9**	**+1.3**
	baz=88						
MENT	**Mentasta**	**87.68**	**15**	eP	**P**	**15 01 52.0**	**0.0**
GYA	**Guiyang**	**87.68**	**299**	P	**P**	**15 01 52.5**	**-0.5**
GYA				pP	**pP**	**15 03 12.8**	**+0.9**
GYA				sP	**sP**	**15 03 49.0**	**+2.0**
GYA				PP	**PP**	**15 05 25.4**	**+1.2**
GYA				SKS	**SKSac**	**15 11 44.2**	**-4.5**
GYA				S	**SKKSac**	**15 12 01.9**	**+2.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,5.4s						
MCMT	**McKenzie Canyo**	**87.74**	**40**	eP	**P**	**15 01 56.1**	**+3.0**
	comp=Z,0.9nm,0.6s						
W24A	**Lazy 6 Ranch,**	**87.89**	**51**	⇓P	**P**	**15 01 54.4**	**+0.5**
	baz=88						
428A	**Kincaid Ranch,**	**87.93**	**56**	⇓P	**P**	**15 01 55.3**	**+1.2**
	baz=88						
529A	**Stev Forest Ra**	**88.03**	**57**	⇓P	**P**	**15 01 55.3**	**+0.7**
	baz=88						
D13A	**Huson**	**88.05**	**37**	⇓P	**P**	**15 01 55.1**	**+0.9**
	baz=88						
Z26A	**Caprock**	**88.06**	**53**	⇑P	**P**	**15 01 55.7**	**+1.0**
	baz=88						
328A	**Wristen Ranch,**	**88.12**	**55**	⇑P	**P**	**15 01 56.1**	**+1.1**
	baz=88						
DLBC	**Dease Lake**	**88.15**	**23**	eP	**P**	**15 01 55.0**	**+0.6**
DLMT	**Dillon**	**88.18**	**40**	eP	**P**	**15 01 56.2**	**+1.2**
	comp=Z,5.9nm,1.1s						
DOT	**Dot Lake**	**88.21**	**14**	eP	**P**	**15 01 54.1**	**-0.4**
	comp=Z,13nm,1.2s						
PLCA	**Paso Flores**	**88.28**	**133**	P	**P**	**15 01 57.5**	**+1.8**
PLCA	**Paso Flores**	**88.28**	**133**	P	**P**	**15 01 57.5**	**+1.8**
	comp=Z,1.3nm,0.6s,baz=249,slow=5.7,SNR=3.6						
COLA	**College**	**88.49**	**12**	eP	**P**	**15 01 54.8**	**-0.9**
	comp=Z,16nm,0.6s						
429A	**Davenport Ranc**	**88.50**	**56**	⇓P	**P**	**15 01 58.0**	**+1.2**
	baz=89						
N20A	**Spence Gulch,**	**88.58**	**45**	⇑P	**P**	**15 01 57.9**	**+0.9**
	baz=89						
G16A	**Moss Hill, Enn**	**88.58**	**40**	⇓P	**P**	**15 01 58.4**	**+1.5**
	baz=89						
W25A	**X Bar L Ranch,**	**88.58**	**51**	⇓P	**P**	**15 01 58.1**	**+1.0**
	baz=89						
D14A	**Greenough**	**88.58**	**38**	⇓P	**P**	**15 01 58.1**	**+1.3**
	baz=89						
ILAR	**Eielson Array**	**88.59**	**12**	P	**P**	**15 01 55.2**	**-1.0**
ILAR				PP	**PP**	**15 05 28.8**	**-1.7**
ILAR	**Eielson Array**	**88.59**	**12**	P	**P**	**15 01 55.2**	**-1.0**
	comp=Z,4.4nm,0.6s,baz=222,slow=5.7,SNR=44						
ILAR				PP	**PP**	**15 05 28.8**	**-1.7**
	comp=Z,2.4nm,1.0s,baz=226,slow=7.7,SNR=7.7						
H16A	**Russell Place,**	**88.64**	**41**	⇓P	**P**	**15 01 58.8**	**+1.6**
	baz=89						
Z27A	**Tatum**	**88.66**	**54**	⇓P	**P**	**15 01 58.3**	**+0.8**
	baz=89						
PDAR	**Pinedale Array**	**88.70**	**43**	P	**P**	**15 01 58.9**	**+1.3**
PDAR				PKKPbc	**PKKPbc**	**15 19 35.9**	**-2.2**
PDAR	**Pinedale Array**	**88.70**	**43**	P	**P**	**15 01 58.9**	**+1.3**
	comp=Z,1.2nm,0.8s,baz=225,slow=3.4,SNR=7.5						
PDAR				PKKPbc	**PKKPbc**	**15 19 35.9**	**-2.2**
	comp=Z,0.5nm,0.8s,baz=29,slow=3.4,SNR=3.9						
530A	**J-C Ranch, Com**	**88.73**	**57**	⇓P	**P**	**15 01 58.4**	**+0.6**
	baz=89						
V25A	**Rancho No Teng**	**88.75**	**51**	⇓P	**P**	**15 01 58.9**	**+1.0**
	baz=89						
329A	**Wagon Wheel Ra**	**88.80**	**56**	⇓P	**P**	**15 01 59.1**	**+0.9**
	baz=89						
128A	**Castleberry Fa**	**88.91**	**54**	⇓P	**P**	**15 01 59.6**	**+1.0**
	baz=89						
BOZ	**Bozeman (W)**	**88.91**	**40**	eP	**P**	**15 02 00.4**	**+2.1**
	comp=Z,6.2nm,1.2s						
Y27A	**Causey**	**88.94**	**53**	⇑P	**P**	**15 01 59.6**	**+0.8**
	baz=89						
631A	**Perdido Creek**	**89.03**	**58**	⇑P	**P**	**15 01 59.8**	**+0.6**
	baz=89						
XAN	**Xi'an**	**89.15**	**307**	P	**P**	**15 02 00.3**	**+0.6**
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,10.0nm,5.6s						
MSTX	**Muleshoe**	**89.28**	**53**	⇓P	**P**	**15 02 01.3**	**+1.0**
	baz=89						
V26A	**Tequesquite Ra**	**89.33**	**51**	⇑P	**P**	**15 02 01.0**	**+0.4**
	baz=90						
E16A	**East Helena**	**89.35**	**39**	⇑P	**P**	**15 02 02.0**	**+1.6**
	baz=90						
531A	**Rocksprings**	**89.36**	**57**	⇑P	**P**	**15 02 02.1**	**+1.4**
	baz=90						
O22A	**Kremmling**	**89.40**	**46**	⇓P	**P**	**15 02 02.1**	**+1.0**
	baz=90						
B14A	**Marquette Ranc**	**89.41**	**37**	⇑P	**P**	**15 02 01.8**	**+1.2**
	baz=90						
K20A	**Yellowstone Ra**	**89.42**	**43**	⇑P	**P**	**15 02 02.1**	**+1.2**
	baz=90						
T25A	**Trinidad**	**89.48**	**50**	⇓P	**P**	**15 02 02.1**	**+0.7**
	baz=90						
W27A	**Bowe Ranch, En**	**89.54**	**52**	⇓P	**P**	**15 02 02.3**	**+0.7**
	baz=90						
F17A	**Fitzpatrick Pl**	**89.62**	**40**	⇑P	**P**	**15 02 03.5**	**+1.8**
	baz=90						
U26A	**Atchley Ranch,**	**89.63**	**51**	⇑P	**P**	**15 02 02.4**	**+0.3**
	baz=90						
A14A	**Double T Ranch**	**89.67**	**36**	⇓P	**P**	**15 02 03.0**	**+1.2**

	baz=90						
D16A	Dana Ranch, Ca	89.68	38	⇓P	P	15 02 03.5	+1.6
	baz=90						
I19A	Meeteetse	89.69	42	⇑P	P	15 02 03.5	+1.4
	baz=90						
632A	Uvalde	89.69	58	⇑P	P	15 02 03.0	+0.7
	baz=90						
S25A	Robets Cordova	89.70	49	⇓P	P	15 02 03.2	+0.9
	baz=90						
EGAK	Eagle	89.84	15	eP	P	15 02 01.8	-0.3
	comp=Z,17nm,0.8s						
532A	Rocksprings	89.85	58	⇓P	P	15 02 04.4	+1.4
	baz=90						
A15A	Johnson Ranch,	90.05	36	⇓P	P	15 02 04.6	+1.1
	baz=90						
F18A	Big Timber	90.19	40	⇓P	P	15 02 05.5	+1.2
	baz=90						
COLD	Coldfoot	90.19	10	eP	P	15 02 03.4	-0.3
	comp=Z,11nm,1.1s						
Z30A	Sanderson Ranc	90.22	54	⇓P	P	15 02 05.4	+0.7
	baz=90						
432A	Menard	90.25	57	⇓P	P	15 02 05.9	+1.1
	baz=90						
D17A	Six Diamond Ra	90.25	39	⇑P	P	15 02 06.0	+1.4
	baz=90						
231A	Bronte	90.28	56	⇓P	P	15 02 05.4	+0.5
	baz=90						
HHC	Hu-ho-hao-te	90.34	314	eP	P	15 02 08.0	+2.9
HHC				pP	pP	15 03 17.6	-6.8
HHC				sP	sP	15 03 48.9	-10
HHC				PP	PP	15 05 50.2	+5.2
HHC	Hu-ho-hao-te	90.34	314	SKS	SKSac	15 12 10.3	+6.7
HHC	Hu-ho-hao-te	90.34	314	S	S	15 12 36.1	+5.9
HHC	Hu-ho-hao-te	90.34	314	sS	sS	15 14 39.0	-12
HHC	Hu-ho-hao-te	90.34	314	SS	SS	15 18 48.7	+8.8
HHC				pmax	pmax		
	comp=Z,32nm,0.6s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
HHC	Hu-ho-hao-te	90.34	314	eP	P	15 02 03.2	-1.9
HHC				pP	pP	15 03 27.5	+3.1
HHC				sP	sP	15 04 05.5	+6.2
HHC				PP	PP	15 05 45.1	+0.1
HHC				SKS	SKSac	15 11 58.6	-5.0
HHC				S	SKKSac	15 12 24.1	+5.2
HHC				sS	sS	15 14 50.0	-0.8
HHC				pmax	pmax		
	comp=Z,42nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,4.4s						
S26A	Kim	90.37	50	⇓P	P	15 02 06.3	+0.9
	baz=90						
KMI	Kunming	90.38	297	⇑P	P	15 02 07.1	+1.3
KMI				sP	sP	15 04 01.8	+1.8
KMI				S	S	15 12 27.3	-4.1
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
KMI				pmax	pmax		
	comp=Z,46nm,5.5s						
KMI				LR	LR		
	comp=Z,19nm,18.1s						
E18A	Harlowton	90.40	39	⇓P	P	15 02 07.2	+1.9
	baz=91						
C17A	Wharram Farm,	90.45	38	⇑P	P	15 02 07.4	+2.0
	baz=91						
332A	Millersview	90.50	57	⇓P	P	15 02 06.6	+0.6
	baz=91						
Y30A	Stafford Cattl	90.64	54	⇓P	P	15 02 07.7	+1.0
	baz=91						
I21A	Big Trails, Te	90.65	43	⇓P	P	15 02 08.1	+1.5
	baz=91						
232A	Coleman	90.78	56	⇓P	P	15 02 08.1	+0.8
	baz=91						
ABTX	Abilene, Hawle	91.08	55	⇓P	P	15 02 09.2	+0.5
	baz=91						
CM31	Chiang Mai Arr	91.13	289	eP	P	15 02 09.9	+0.7
	comp=Z,20nm,1.0s						
CMAR	Chiang Mai Arr	91.13	289	P	P	15 02 10.0	+0.8
CMAR				PP	PP	15 05 48.5	-3.0
CMAR	Chiang Mai Arr	91.13	289	P	P	15 02 10.0	+0.8
	comp=Z,11nm,0.8s,baz=118,slow=2.9,SNR=52						
CMAR				PP	PP	15 05 48.5	-3.0
	comp=Z,1.0nm,1.0s,baz=142,slow=5.2,SNR=4.0						
M24A	Cheyenne	91.16	46	⇓P	P	15 02 09.1	+0.1
	baz=91						
A17A	Triple J Farms	91.17	37	⇑P	P	15 02 09.4	+0.7
	baz=91						
E20A	Meyer Farm, Mu	91.44	40	⇑P	P	15 02 11.8	+1.7
	baz=92						
Z32A	Haskell	91.49	55	⇑P	P	15 02 11.4	+0.9
	baz=92						
CD2	Chengdu	91.82	302	eP	P	15 02 12.1	0.0
CD2				pP	pP	15 03 33.2	+1.8
CD2				sP	sP	15 04 08.0	+1.7
CD2				PP	PP	15 05 58.2	+1.5
CD2				SKS	SKSac	15 12 10.5	-1.8
CD2				S	S	15 12 40.1	-3.6
CD2				sS	sS	15 15 03.2	-1.6
CD2				SS	SS	15 19 00.8	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
W31A	Holland Ranch,	91.90	53	⇓P	P	15 02 13.0	+0.6
	baz=92						
H24A	Dirks Ranch, A	92.83	43	⇓P	P	15 02 17.9	+1.4
	baz=93						
LZH	Lanzhou	93.79	307	eP	P	15 02 24.0	+2.8
LZH				pP	pP	15 03 45.2	+4.6
LZH				pmax	pmax		
	comp=Z,27nm,1.6s						
YKA	Yellowknife Ar	96.58	24	P	P	15 02 32.8	-0.2
YKA	Yellowknife Ar	96.58	24	P	P	15 02 32.8	-0.2
	comp=Z,0.9nm,0.6s,baz=239,slow=4.0,SNR=8.8						
SONM	Songino Array	96.72	319	P	P	15 02 33.5	-0.7
SONM				PP	PP	15 06 28.7	-5.6
SONM	Songino Array	96.72	319	P	P	15 02 33.5	-0.7
	comp=Z,0.3nm,0.6s,baz=148,slow=8.5,SNR=2.6						
SONM				PP	PP	15 06 28.7	-5.6
	comp=Z,1.6nm,0.9s,baz=130,slow=6.5,SNR=5.5						
GTA	Gaotai	97.98	309	eP	Pdif	15 02 41.0	+0.9
GTA				pP	pP	15 04 03.6	+3.9
GTA				sP	sP	15 04 40.0	+5.5
GTA				PP	PP	15 06 48.1	+3.9
GTA				pmax	pmax		
	comp=Z,2.0nm,1.4s						
ZAA0	Zalesovo Array	111.44	321	ePKiKP	PKiKP	15 07 33.9	-1.7
ZALV	Zalesovo Beam	111.44	321	PKiKP	PKiKP	15 07 34.1	-1.5
ZALV	Zalesovo Beam	111.44	321	PKiKP	PKiKP	15 07 34.1	-1.5
	comp=Z,2.5nm,0.6s,baz=179,slow=1.5,SNR=15						
MK31	Makanchi Array	112.19	313	ePKiKP	PKiKP	15 07 36.0	-1.3
MKAR	Makanchi Array	112.19	313	Pdif	Pdif	15 03 43.8	+0.8
MKAR				PKiKP	PKiKP	15 07 36.0	-1.4
MKAR				PP	PP	15 08 26.5	-1.6
MKAR				PKKPbc	PKKPbc	15 18 29.7	-0.8
MKAR	Makanchi Array	112.19	313	Pdiff	Pdif	15 03 43.8	+0.8
	comp=Z,0.3nm,0.6s,baz=100,slow=6.3,SNR=4.9						
MKAR				PKiKP	PKiKP	15 07 36.0	-1.4
	comp=Z,2.2nm,0.5s,baz=211,slow=0.5,SNR=33						
MKAR				PP	PP	15 08 26.5	-1.6
	comp=Z,0.7nm,0.8s,baz=98,slow=7.5,SNR=3.9						
MKAR				PKKPbc	PKKPbc	15 18 29.7	-0.8
	comp=Z,0.2nm,0.6s,baz=273,slow=2.4,SNR=3.6						
KURK	Kurchatov	114.97	317	PKP	PKPdf	15 07 41.2	-1.3
KURK				PP	PP	15 08 43.6	-3.9
KURBB	Kurchatov Arra	115.02	317	PKP	PKPdf	15 07 41.2	-1.4
	comp=Z,2.9nm,0.6s,baz=100,slow=1.6,SNR=37						
KURBB				PP	PP	15 08 43.6	-4.3
	comp=Z,0.8nm,0.8s,baz=101,slow=6.1,SNR=4.5						
BVAR	Borovoye Array	120.04	320	PKP	PKPdf	15 07 51.3	-0.9
BVAR	Borovoye Array	120.04	320	PKP	PKPdf	15 07 51.3	-0.9
	comp=Z,8.3nm,0.5s,baz=128,slow=1.5,SNR=29						
KKAR	Karatay Array	120.26	308	ePKPdf	PKPdf	15 07 51.9	-1.0
DAG	Danmarks Havn	123.13	6	i P	PKPdf	15 07 56.0	-1.5
BOSA	Boshof	126.20	204	PKP	PKPdf	15 08 06.1	+1.1
BOSA	Boshof	126.20	204	PKP	PKPdf	15 08 06.1	+1.1
	comp=Z,1.9nm,0.4s,baz=165,slow=3.6,SNR=7.1						
ABKAR	Akbulak array	127.06	316	ePKPdf	PKPdf	15 08 05.3	-0.4
KEV	Kevo	129.12	349	epkp	PKPdf	15 08 08.5	-0.5
ARCES	ARCESS Array B	129.56	350	PKP	PKPdf	15 08 09.4	-0.6
ARCES				SKPbc	SKPbc	15 11 04.4	+4.8
ARCES	ARCESS Array B	129.56	350	PKP	PKPdf	15 08 09.4	-0.6
	comp=Z,2.8nm,0.4s,baz=9.1,slow=1.1,SNR=62						
ARCES				SKPbc	SKPbc	15 11 04.4	+4.8
	comp=Z,2.9nm,1.0s,baz=1.9,slow=7.3,SNR=4.3						
JOF	Joensuu	133.87	342	epkp	PKPdf	15 08 18.0	-0.2
KAF	Kangasniemi	135.87	344	epkp	PKPdf	15 08 22.3	+0.3
FINES	FINESS Array B	136.49	344	PKPpre	PKPpre	15 08 14.3	
FINES				PKP	PKPdf	15 08 23.1	0.0
FINES				SKPbc	SKPbc	15 11 26.1	+2.8
FINES	FINESS Array B	136.49	344	PKhKP	PKPpre	15 08 14.3	
	comp=Z,1.2nm,0.4s,baz=20,slow=6.1,SNR=5.5						
FINES				PKP	PKPdf	15 08 23.1	0.0
	comp=Z,1.8nm,0.5s,baz=66,slow=2.3,SNR=5.4						
FINES				SKPbc	SKPbc	15 11 26.1	+2.8
	comp=Z,1.7nm,0.6s,baz=69,slow=4.6,SNR=3.8						
NB2	NORSAR Subarra	139.57	354	PKP	PKPpre	15 08 19.1	
	comp=Z,0.8nm,0.5s,baz=17,slow=2.6						
NOA	NORSAR Array B	139.57	354	PKPpre	PKPpre	15 08 19.3	
NOA				PKP	PKPdf	15 08 28.9	+0.1
NOA				SKPbc	SKiKP	15 11 34.6	-0.2
NOA	NORSAR Array B	139.57	354	PKhKP	PKPpre	15 08 19.3	
	comp=Z,0.8nm,0.5s,baz=16,slow=4.6,SNR=7.7						
NOA				PKP	PKPdf	15 08 28.9	+0.1
	comp=Z,1.3nm,0.6s,baz=13,slow=4.0,SNR=4.8						
NOA				SKPbc	SKiKP	15 11 34.6	-0.2
	comp=Z,0.6nm,0.5s,baz=12,slow=4.5,SNR=3.6						
KBZ	Khabaz	139.89	314	PKP	PKPdf	15 08 31.3	+1.4
KBZ	Khabaz	139.89	314	PKP	PKPdf	15 08 31.3	+1.4
	comp=Z,0.6nm,0.4s,baz=58,slow=4.9,SNR=4.3						
IBDR	Badra	140.14	297	ePkP	PKPdf	15 08 18.7	-12
IBDR				ePP	PP	15 11 31.1	-1.4
IBDR				eSKS	SKSdf	15 14 56.0	-13
BHD	Baghdad	141.41	297	ePkP	PKPdf	15 08 29.0	-4.0
BHD				ePP	PP	15 11 36.5	-3.6
BHD				eSKS	SKSdf	15 15 01.0	-10
AKASG	Malin Array Be	143.88	332	PKP	PKPab	15 08 33.8	-1.2
AKASG	Malin Array Be	143.88	332	PKP	PKPab	15 08 33.8	-1.2
	comp=Z,13nm,0.5s,baz=42,slow=4.2,SNR=51						
AKASG				SKPbc	SKiKP	15 11 46.1	+2.1
	comp=Z,0.3nm,0.4s,baz=40,slow=3.3,SNR=4.3						
AK01	Malin Array Si	143.89	331	ePKPpre	PKPpre	15 08 33.6	
KIEV	Kiev	143.89	332	ePKPpre	PKPpre	15 08 33.6	
AK02	Malin Array Si	143.92	331	ePKP	PKPab	15 08 33.8	-1.3
ELO	Logie Almond	144.22	6	eP	PKPab	15 08 35.2	-0.9
ELO	Logie Almond	144.22	6	P	PKPab	15 08 35.2	-0.9
MUD	Monsted U'grnd	144.28	354	i P	PKPab	15 08 35.8	-0.5
	comp=Z,16nm,0.8s						
EAB	Aberfoyle	144.43	7	eP	PKPab	15 08 36.2	-0.7
EAB	Aberfoyle	144.43	7	P	PKPab	15 08 36.2	-0.7
ESY	Stoneypath	144.87	5	eP	PKPdf	15 08 37.5	-0.9
ESY	Stoneypath	144.87	5	P	PKPdf	15 08 37.5	-0.9
ESK	Eskdalemuir	145.41	6	eP	PKPdf	15 08 39.0	-0.3
ESK	Eskdalemuir	145.41	6	P	PKPdf	15 08 39.0	-0.3
ECK	Cauldkaine Hil	145.55	6	eP	PKPdf	15 08 39.5	0.0
ECK	Cauldkaine Hil	145.55	6	P	PKPdf	15 08 39.5	0.0
BSEG	Bad Segeberg	146.63	352	ePKPbc	PKPbc	15 08 43.5	-0.1
KWP	Kalwaria Pacla	147.40	336	⇓iP	PKPbc	15 08 45.5	-0.4
KWP	Kalwaria Pacla	147.40	336	ePKP	PKPbc	15 08 45.5	-0.4
RUE	Ruedersdorf	147.47	348	ePKPbc	PKPbc	15 08 45.8	-0.1
FOEL	Foel Wylfa	147.80	7	eP	PKPbc	15 08 46.0	-0.8
FOEL	Foel Wylfa	147.80	7	P	PKPbc	15 08 46.0	-0.8
TLCR		147.83	325	⇑iP	PKPbc	15 08 46.8	-0.3
BR131	Keskin Array S	147.84	312	ePKPbc	PKPbc	15 08 46.6	-0.9
BRTR	Keskin Array B	147.84	312	PKPbc	PKPbc	15 08 46.8	-0.7
BRTR	Keskin Array B	147.84	312	PKPbc	PKPbc	15 08 46.8	-0.7
	comp=Z,7.1nm,0.6s,baz=114,slow=3.4,SNR=31						
BUR08	Bucovina Ar. S	147.91	331	ePKPbc	PKPbc	15 08 47.5	+0.1
BURAR	Bucovina Array	147.93	331	⇓iP	PKPdf	15 08 41.1	-2.8
OJC	Ojcow	147.94	339	ePKP	PKPbc	15 08 46.9	-0.3
TESR	Tescani	148.06	328	⇑iP	PKPbc	15 08 47.3	-0.4
NRDL	Niedersach Rie	148.07	352	ePKPbc	PKPbc	15 08 47.2	-0.2
STHS	Stebnicka Huta	148.12	337	ePKP	PKPbc	15 08 48.0	+0.2
KOLS	Kolonicke sedl	148.13	336	ePKP	PKPbc	15 08 48.0	+0.2
HLM1	Long Mynd	148.20	7	eP	PKPbc	15 08 47.4	-0.5
HLM1	Long Mynd	148.20	7	P	PKPbc	15 08 47.4	-0.5
ANTO	Ankara	148.35	313	ePKPbc	PKPbc	15 08 47.4	-1.4
KSP	Ksiaz	148.42	344	ePKP	PKPbc	15 08 48.6	+0.2
NIE	Niedzica	148.45	338	ePKP	PKPbc	15 08 49.2	+0.6
CRVS	Cervenica-Dubn	148.47	336	ePKP	PKPdf	15 08 46.7	+2.1
VRI	Vrincioaia	148.47	327	⇑iP	PKPbc	15 08 48.0	-0.7
PLOR	Plostina	148.52	327	⇑iP	PKPbc	15 08 48.5	-0.4
IBBN	Ibbenburen	148.52	354	ePKPbc	PKPbc	15 08 48.7	+0.1
CLZ	Clausthal	148.67	351	ePKPbc	PKPbc	15 08 49.4	+0.3
TRPA	Tarpa	148.68	334	⇑iP	PKPbc	15 08 48.8	-0.3
MCH1	Michaelchurch	148.70	7	eP	PKPdf	15 08 47.1	+2.2
MCH1	Michaelchurch	148.70	7	P	PKPdf	15 08 47.1	+2.2
CLL	Collm	148.74	348	ePKPbc	PKPbc	15 08 49.2	0.0
OKC	Ostrava-Krasne	148.79	341	⇑iPKP	PKPbc	15 08 49.2	-0.2
OKC				ePKPAB	PKPab	15 08 53.7	-0.7
UPC	Upice	148.80	344	⇑iPKP	PKPbc	15 08 49.3	-0.1
UPC				ePKPAB	PKPab	15 08 54.3	-0.1
DPC	Dobruska-Polom	148.86	343	⇑iPKP	PKPbc	15 08 50.0	+0.4
DPC				ePKPAB	PKPab	15 08 54.9	+0.2
BRG	Berggiesshubel	148.95	346	ePKP	PKPdf	15 08 45.7	+0.3
	comp=Z,5.6nm,1.2s						
BRG				i		15 08 49.7	
	comp=Z,28nm,0.5s						
BRG				epPKP	pPKPdf	15 10 08.7	-0.5
	comp=Z,1.7nm,0.5s						
BRG	Berggiesshubel	148.95	346	ePKPbc	PKPbc	15 08 49.9	+0.1
MORC	Moravsky Berou	149.03	342	ePKPbc	PKPbc	15 08 49.0	-1.0
MORC	Moravsky Berou	149.03	342	⇑iP	PKPbc	15 08 50.3	+0.2
FBE	Freiberg	149.03	347	ePKPbc	PKPbc	15 08 50.5	+0.6
NEUB	Neuenburg	149.06	349	ePKPbc	PKPbc	15 08 50.2	+0.2
MLR	Muntele Rosu	149.12	328	⇑iP	PKPbc	15 08 51.3	+0.8
PVCC	Panska Ves	149.13	346	⇑iPKP	PKPbc	15 08 50.3	+0.1
PVCC				ePKPAB	PKPab	15 08 55.7	0.0
KECS	Kecovo	149.18	337	ePKP	PKPbc	15 08 50.6	+0.2
BUG	Bochum--Univer	149.42	355	ePKPbc	PKPbc	15 08 50.8	0.0
HEX	Exmoor	149.51	8	eP	PKPbc	15 08 50.8	-0.4
HEX	Exmoor	149.51	8	P	PKPbc	15 08 50.8	-0.4
VOIR		149.60	328	⇑iP	PKPbc	15 08 51.1	-0.5
MOX	Moxa	149.63	349	ePKPbc	PKPbc	15 08 51.6	+0.2
PRU	Pruhonice	149.64	345	⇑iPKP	PKPbc	15 08 51.6	+0.1
DRGR		149.66	333	⇑iP	PKPbc	15 08 50.5	-1.2
PLN	Plauen	149.68	348	ePKPbc	PKPbc	15 08 51.8	+0.2
WERD	Werda	149.69	348	ePKPbc	PKPbc	15 08 51.8	+0.2
TANN	Tannenbergstha	149.69	348	ePKPbc	PKPbc	15 08 51.8	+0.1
UBBA	Unterbreizbach	149.72	351	ePKPbc	PKPbc	15 08 51.7	+0.2
VRAC	Vranov	149.73	342	⇓iP	PKPbc	15 08 51.9	+0.2
VYHS	Vyhne	149.75	339	ePKP	PKPbc	15 08 51.9	+0.1
GUNZ	Gunzen	149.77	348	ePKPbc	PKPbc	15 08 52.2	+0.4
WERN	Wernitzgruen	149.83	348	ePKPbc	PKPbc	15 08 52.3	+0.3
PSZ	Piszkesteto	149.87	337	PKPbc	PKPbc	15 08 50.9	-1.3
PSZ	Piszkesteto	149.87	337	⇓iP	PKPbc	15 08 51.7	-0.5
NKC	Novy Kostel	149.87	348	⇑iPKP	PKPbc	15 08 52.3	+0.3
EIL	Elat	149.91	293	PKPbc	PKPbc	15 08 52.5	-0.2
EIL	Elat	149.91	293	PKPbc	PKPbc	15 08 52.5	-0.2
	comp=Z,12nm,0.8s,baz=171,slow=2.3,SNR=12						
CSS	Prodhromos	149.93	304	ePKPbc	PKPbc	15 08 51.8	-0.9
TREC	Trest	150.04	343	⇑iPKP	PKPbc	15 08 52.4	-0.1
DYA	Yadsworthy	150.11	9	eP	PKPbc	15 08 51.5	-1.1
DYA	Yadsworthy	150.11	9	P	PKPbc	15 08 51.5	-1.1
MANZ	Manzenberg	150.17	348	ePKPbc	PKPbc	15 08 53.0	+0.2
MEM	Membach	150.34	356	PKPbc	PKPbc	15 08 53.2	+0.1
ROTZ	Rotzenmuhle	150.36	348	ePKPbc	PKPbc	15 08 53.4	+0.2
TNS	Taunus Mts	150.51	353	ePKPbc	PKPbc	15 08 53.7	+0.1
ZST	Bratislava	150.57	341	ePKP	PKPbc	15 08 53.5	-0.2
BCLA	Clavier	150.57	357	PKPbc	PKPbc	15 08 53.2	-0.5
KHC	Kasperske Hory	150.67	346	ePKPDF	PKPdf	15 08 48.7	+0.5
KHC				⇑iPKP	PKPbc	15 08 54.1	+0.1
KHC				ePKPAB	PKPab	15 09 01.2	-1.0
KHC	Kasperske Hory	150.67	346	ePKPdf	PKPdf	15 08 48.0	-0.1
KHC				ePKPbc	PKPbc	15 08 54.0	+0.1
GEC2	GERESS Array S	150.91	345	ePKPbc	PKPbc	15 08 54.5	-0.1
GERES	GERESS Array B	150.91	345	PKPbc	PKPbc	15 08 54.0	-0.6
GERES				PKPab	PKPab	15 09 04.2	+1.0
GERES	GERESS Array B	150.91	345	PKPbc	PKPbc	15 08 54.0	-0.6
	comp=Z,5.7nm,0.7s,baz=93,slow=2.7,SNR=6.5						
GERES				PKPab	PKPab	15 09 04.2	+1.0
	comp=Z,1.3nm,0.6s,baz=231,slow=0.9,SNR=5.3						
DOU	Dourbes	150.93	358	PKPbc	PKPbc	15 08 54.6	+0.2
BZS	Buzias	151.06	332	⇑iP	PKPbc	15 08 54.4	-0.5
CONA	Conrad Observa	151.18	342	⇑iPKiKP	PKPbc	15 08 55.3	0.0
	comp=Z,12nm,0.7s						
WLF	Walferdange	151.28	356	PKPbc	PKPbc	15 08 55.9	+0.6
WLF	Walferdange	151.28	356	ePKPbc	PKPbc	15 08 55.9	+0.6
PKSM	Moragy	151.76	337	⇓iP	PKPbc	15 08 55.9	-0.6
VTS	Vitosha	152.57	326	⇓iP	PKPbc	15 08 58.2	-0.4
WTTA	Wattenberg	152.86	347	⇓iPKPbc	PKPbc	15 08 58.8	-0.4
	comp=Z,5.5nm,0.4s						
MYKA	Terra Mystica	152.98	344	⇑iPKPbc	PKPbc	15 08 58.2	-1.1
	comp=Z,5.5nm,0.6s						
MYKA				⇑iPKPab	PKPab	15 09 10.7	-1.3
	comp=Z,5.8nm,0.6s						
ABTA	Abfaltersbach	153.16	345	⇑iPKPdf	PKPdf	15 08 51.4	-0.6
	comp=Z,7.3nm,1.0s						
ABTA				⇓iPKPbc	PKPbc	15 08 58.8	-0.9
	comp=Z,7.9nm,0.5s						
ABTA				⇑iPKPab	PKPab	15 09 11.2	-1.6
	comp=Z,6.5nm,0.6s						
VISS	Visnje	153.40	341	i PKPdf	PKPdf	15 08 52.2	0.0
VISS				i PKPbc	PKPbc	15 08 59.5	-0.6
VISS				i		15 09 09.1	
BOJS	Bojanci	153.54	340	i PKPdf	PKPdf	15 08 52.5	+0.1
BOJS				ePKPbc	PKPbc	15 09 00.2	-0.2
BOJS				i		15 09 13.5	
DAVOX	Davos/Dischmat	153.66	349	PKPbc	PKPbc	15 09 00.7	-0.3
DAVOX				PKPab	PKPab	15 09 14.5	-0.6
DAVOX	Davos/Dischmat	153.66	349	PKPbc	PKPbc	15 09 00.7	-0.3
	comp=Z,8.9nm,0.4s,baz=213,slow=6.7,SNR=11						
DAVOX				PKPab	PKPab	15 09 14.5	-0.6
	comp=Z,2.9nm,0.5s,baz=350,slow=4.5,SNR=3.5						
ESDC	Sonseca Array	160.45	16	PKPab	PKPab	15 09 44.5	+0.1
ESDC	Sonseca Array	160.45	16	PKPab	PKPab	15 09 44.5	+0.1
	comp=Z,0.2nm,0.3s,baz=324,slow=3.7,SNR=4.2						
KEST	Kesra	164.28	341	PKPab	PKPab	15 10 01.1	-0.3
KEST	Kesra	164.28	341	PKPab	PKPab	15 10 01.1	-0.3
	comp=Z,0.7nm,0.5s,baz=48,slow=8.5,SNR=3.8						
TORD	Torodi Ar. Bea	172.11	171	PKP	PKPdf	15 09 10.6	-0.5
TORD				PKPab	PKPab	15 10 37.5	+1.3
TORD	Torodi Ar. Bea	172.11	171	PKP	PKPdf	15 09 10.6	-0.5
	comp=Z,3.5nm,0.8s,baz=351,slow=0.9,SNR=18						
TORD				PKPab	PKPab	15 10 37.5	+1.3
	comp=Z,0.8nm,0.6s,baz=151,slow=3.1,SNR=6.0						

*IDC **08** 14:51:29.8±0.9, 6°.37N×124°.95E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/27, mbtmp3.8/5, MS3.5/1, Ms1 3.5/1, ms1mx2.2/46, Error ellipse: s-maj=21.7km s-min=11.0km az=128.0*

*ISCJB **08** 14:51:32.4±0.9, 6°.85N±0°.10×126°.35E±0°.09, h51km±5km, mb3.7/5, MS3.3/1, Error ellipse: s-maj=20.6km s-min=9.9km az=42.6*

*MAN **08** 14:51:33, 6°.79N×126°.23E, h34km, mb4.5, ML3.4, MS3.2*

ISC 08 14:51:33.4±1.1, **6°.8N**±0°.1×**126°.31E**±0°.10, **h43**km±8km, **n16**, σ**0s.90**/18, **mb3.8**/5, **1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.14	341	eP	Pn	14 51 40.7	0.0
MATI				eS	Sn	14 51 45.4	-0.3
DAV	Davao City (W)	0.77	290	Pg	Pn	14 51 48.4	+0.6
	342nm,0.3s,baz=164,slow=2.1,SNR=24						
DAV				Lg	Lg	14 52 00.1	
	694nm,0.3s,baz=264,slow=23,SNR=70						
DMPH	Davao City--Mi	0.84	289	⇓eP	Pn	14 51 49.0	+0.2
DMPH				eS	Sn	14 52 00.9	+0.9
BUKP	Musuan	1.63	311	eP	Pn	14 52 00.1	+0.4
BUKP				eS	Sn	14 52 19.3	-0.2
CTBH	Cotabato--PC H	2.08	281	⇑iP	Pn	14 52 05.0	-0.9
BUTP	Butuan	2.25	343	eP	Pn	14 52 12.3	+4.1
CGP	Cagayan de Oro	2.29	316	eP	Pn	14 52 08.8	+0.2
CGP				i S	Sn	14 52 35.1	-0.5
PAGZ	Pagadian	3.08	290	eP	Pn	14 52 19.6	+0.1
IPIL	Ipil	3.83	285	eP	Pn	14 52 29.9	0.0
FITZ	Fitzroy Crossi	24.76	182	P	P	14 56 50.2	-0.9
	1.0nm,0.3s,baz=15,slow=9.2,SNR=8.8						
PMG	Port Moresby	26.29	128	LR	LR	15 07 15.8	
	comp=Z,89nm,20.0s,baz=278,slow=35						
WRA	Warramunga Arr	27.73	164	P	P	14 57 20.2	+2.1
	0.7nm,0.5s,baz=339,slow=10,SNR=25						
MKAR	Makanchi Array	54.81	324	P	P	15 00 58.7	-0.5
	0.6nm,0.5s,baz=121,slow=8.4,SNR=11						
KURBB	Kurchatov Arra	58.94	327	P	P	15 01 28.4	+0.1
	0.4nm,0.5s,baz=124,slow=6.6,SNR=8.5						
BVAR	Borovoye Array	64.53	326	P	P	15 02 06.7	+0.8
	0.4nm,0.5s,baz=140,slow=4.7,SNR=2.6						
TORD	Torodi Ar. Bea	121.52	290	PKP	PKPdf	15 10 21.7	-1.6
	0.2nm,0.6s,baz=90,slow=1.4,SNR=3.1						

IDC 08 14:57:29.2±2.7, **19°.31N**×**145°.04E, h462**km±31km, **mb3.0**/12, **mb1 3.2**/12, **mb1mx3.0**/27, **mbtmp3.0**/12, **Error ellipse: s-maj=22.8km s-min=13.9km az=81.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSRS	Korea Array	23.46	324	P	P	15 02 00.3	-0.9
	0.8nm,0.7s,baz=145,slow=8.5,SNR=2.8						
WRA	Warramunga Arr	40.39	196	P	P	15 04 25.6	-0.5
	0.4nm,0.5s,baz=15,slow=8.7,SNR=4.0						
SONM	Songino Array	42.28	321	P	P	15 04 41.2	+0.2
	1.4nm,0.6s,baz=137,slow=8.9,SNR=7.5						
ASAR	Alice Springs	44.07	195	P	P	15 04 55.2	0.0
	0.2nm,0.5s,baz=11,slow=6.7,SNR=3.2						
ZALV	Zalesovo Beam	57.16	322	P	P	15 06 30.1	-0.6
	0.7nm,0.2s,baz=98,slow=7.8,SNR=3.9						
MKAR	Makanchi Array	57.60	314	P	P	15 06 34.1	+0.2
	0.9nm,0.6s,baz=95,slow=7.8,SNR=11						
MKAR				PcP	PcP	15 07 21.0	-0.1
	0.4nm,0.5s,baz=90,slow=5.2,SNR=4.2						
KURBB	Kurchatov Arra	60.46	318	P	P	15 06 53.2	+0.1
	2.6nm,0.6s,baz=96,slow=7.0,SNR=35						
KURBB				ScP	ScP	15 10 47.3	-1.4
	0.2nm,0.3s,baz=95,slow=1.7,SNR=4.2						
ILAR	Eielson Array	63.38	26	P	P	15 07 12.1	+0.1
	0.4nm,0.6s,baz=270,slow=5.1,SNR=3.5						
BVAR	Borovoye Array	65.61	320	P	P	15 07 26.9	+0.5
	4.6nm,0.6s,baz=91,slow=7.4,SNR=29						
YKA	Yellowknife Ar	77.74	28	P	P	15 08 36.2	-1.0
	0.3nm,0.5s,baz=302,slow=5.8,SNR=5.1						
NVAR	Mina Array Bea	83.25	52	P	P	15 09 08.1	+1.2
	0.4nm,0.5s,baz=273,slow=5.8,SNR=5.2						
FINES	FINESS Array B	86.08	335	P	P	15 09 19.2	-0.7
	0.6nm,0.4s,baz=46,slow=4.0,SNR=1.7						

*ISCJB **08** 15:19:54.9±0.5, 39°.15N±0°.05×123°.33E±0°.05, h10km, mb3.6/7, Error ellipse: s-maj=7.4km s-min=4.9km az=160.4*

*IDC **08** 15:19:55.5±1.1, 39°.02N×123°.31E, h0km, mb3.6/7, mb1 3.8/11, mb1mx3.6/31, mbtmp3.7/11, ML3.5/4, MS2.8/1, Ms1 2.8/1, ms1mx1.7/50, Error ellipse: s-maj=29.5km s-min=13.8km az=24.0*

*BJI **08** 15:19:57.1, 39°.15N×123°.28E, h8km, mB4.4/6, mb4.2/10, ML4.5/15, Ms3.9/6, Ms7 3.7/5*

ISC 08 15:19:58.2±0.7, **38°.99N**±0°.06×**123°.34E**±0°.05, **h10**km, **n23**, σ**2s.79**/37, **mb3.8**/7, **1C, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DL2	Dalian	1.34	267	Pg	Pn	15 20 20.9	-2.0
DL2				Sg	Sb	15 20 38.0	-2.5
DL2				smax	smax		
	comp=N,7μm,0.6s						
DL2				smax	smax		
	comp=E,6μm,0.6s						
SNY	Shenyang	2.84	4	⇑Pn	Pn	15 20 40.1	-3.5
SNY				Pg	Pb	15 20 46.1	-2.9
SNY				Sg	Sn	15 21 20.5	+2.6
SNY				smax	smax		
	comp=N,4μm,0.4s						
SNY				smax	smax		
	comp=E,3μm,0.5s						
KSRS	Korea Array	3.92	112	Pn	Pn	15 20 57.2	-1.2
	comp=E,12nm,0.3s,baz=295,slow=14,SNR=152						
KSRS				Lg	Lg	15 21 58.1	
	comp=E,109nm,0.3s,baz=296,slow=30,SNR=28						
CN2	Changchun	5.06	18	ePn	Pn	15 21 09.6	-4.5
CN2				ePg	Pb	15 21 27.7	+0.8
CN2				eSn	Sn	15 22 02.0	-11
CN2				eSg	Sb	15 22 30.4	+2.7
CN2				smax	smax		
	comp=N,100nm,0.6s						
CN2				smax	smax		
	comp=E,100nm,0.6s						
TIA	Tai'an	5.66	243	Pn	Pn	15 21 21.4	-0.9
TIA				Pg	Pb	15 21 39.9	+2.9
TIA				Sg	Sg	15 22 54.0	-5.9
TIA				smax	smax		
	comp=N,110nm,0.8s						
TIA				smax	smax		
	comp=E,60nm,0.7s						
MDJ	Mudanjiang	7.31	38	Pg	Pb	15 22 04.7	-0.4
MDJ				smax	smax		
	comp=N,200nm,1.2s						
MDJ				smax	smax		
	comp=E,200nm,0.9s						
NJ2	Nanjing	7.83	209	eP	Pn	15 21 52.3	+0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NJ2				S	Sn	15 23 20.4	-0.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				smax	smax		
	comp=N,80nm,0.6s						
NJ2				smax	smax		
	comp=E,80nm,0.6s						
NJ2				LR	LR		
	comp=N,100nm,7.1s						
NJ2				LR	LR		
	comp=E,340nm,5.0s						
NJ2				LR	LR		
	comp=Z,180nm,8.8s						
USRK	Ussuriysk Arra	8.32	48	Pn	Pn	15 21 58.0	-0.8
	comp=Z,1.4nm,0.3s,baz=238,slow=13,SNR=17						
USRK				Lg	Lg	15 24 16.1	
	comp=Z,2.7nm,0.3s,baz=231,slow=36,SNR=7.8						
JNU	Nakatsue	8.46	132	Pn	Pn	15 22 01.3	+0.5
	comp=Z,1.4nm,0.3s,baz=243,slow=9.0,SNR=15						
JNU				Lg	Lg	15 24 23.7	
	comp=Z,1.4nm,0.3s,baz=108,slow=19,SNR=5.1						
HHC	Hu-ho-hao-te	9.24	285	eP	Pn	15 22 11.7	+0.2
HHC				pP		15 22 15.0	
HHC				sP		15 22 17.9	
HHC				S	Sn	15 23 57.1	+1.5
HHC				pmax	pmax		
	comp=Z,27nm,0.8s						
HHC				pmax	pmax		
	comp=Z,200nm,6.2s						
HHC				LR	LR		
	comp=N,950nm,5.9s						
HHC				LR	LR		
	comp=E,370nm,6.1s						
HHC				LR	LR		
	comp=Z,250nm,6.4s						
MJAR	Matsushiro Arr	12.02	97	LR	LR	15 26 42.4	
	comp=Z,38nm,18.8s,baz=255,slow=34						
SONM	Songino Array	15.13	311	Pn	Pn	15 23 29.5	-2.5
	comp=Z,0.0nm,0.3s,baz=119,slow=12,SNR=3.0						
LZH	Lanzhou	15.73	265	eP	P	15 23 43.0	-1.0
LZH				pP	pP	15 23 48.3	+1.4
LZH				sP	sP	15 23 50.0	+1.8
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
CD2	Chengdu	17.94	249	eP	Pn	15 24 08.4	+0.6
CD2				pP	pP	15 24 12.0	+0.8
CD2				sP	sP	15 24 15.2	+2.7
CD2				PP	PnPn	15 24 23.6	+5.0
CD2				S	Sn	15 27 26.7	-1.2
CD2				sS	S	15 27 31.8	-2.5
CD2				SS	SnSn	15 27 49.8	+8.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,80nm,4.2s						
CD2				LR	LR		
	comp=N,160nm,9.4s						
CD2				LR	LR		
	comp=Z,140nm,7.2s						
GTA	Gaotai	18.23	279	eP	Pn	15 24 08.7	-2.7
GTA				pP	P	15 24 12.4	+0.8
GTA				sP	sP	15 24 15.8	0.0
GTA				S	Sn	15 27 28.8	-6.2
GTA				sS	S	15 27 34.5	-5.8
GTA				SS	SnSn	15 27 55.2	+6.7
GTA				pmax	pmax		
	comp=Z,62nm,6.2s						
GTA				LR	LR		
	comp=N,160nm,15.2s						
GTA				LR	LR		
	comp=E,68nm,14.7s						
GTA				LR	LR		
	comp=Z,100nm,14.7s						
MKAR	Makanchi Array	30.78	298	P	P	15 26 11.7	-2.2
	comp=Z,0.4nm,0.6s,baz=93,slow=10,SNR=7.2						
KURBB	Kurchatov Arra	33.36	305	P	P	15 26 34.0	-2.3
	comp=Z,0.4nm,0.4s,baz=90,slow=9.2,SNR=9.8						
BVAR	Borovoye Array	38.46	309	P	P	15 27 17.0	-3.1
	comp=Z,0.5nm,0.6s,baz=95,slow=12,SNR=4.2						
ARCES	ARCESS Array B	56.69	335	P	P	15 29 41.2	-0.1
	comp=Z,1.6nm,1.0s,baz=72,slow=9.9,SNR=3.3						
NB2	NORSAR Subarra	66.14	330	P	P	15 30 41.6	-3.8
	comp=Z,0.5nm,0.6s,baz=48,slow=6.2						
NOA	NORSAR Array B	66.14	330	P	P	15 30 43.6	-1.8
	comp=Z,0.3nm,0.5s,baz=49,slow=6.2,SNR=3.6						
BRTR	Keskin Array B	66.30	303	P	P	15 30 46.5	-0.4
	comp=Z,0.6nm,0.6s,baz=77,slow=6.4,SNR=4.1						
YKA	Yellowknife Ar	68.72	25	P	P	15 31 01.2	-0.4
	comp=Z,0.4nm,0.6s,baz=311,slow=6.5,SNR=3.5						

IDC 08 15:22:20.3±19.0**, 39°.21S×78°.46E, h0km, mb3.7**/3, **mb1 3.9**/3, **mb1mx3.6**/21, **mbtmp3.7**/3, **MS3.6**/7, **Ms1 3.6**/7, **ms1mx3.2**/38, **Error ellipse: s-maj=654.1km s-min=52.6km az=32.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	Mawson	29.73	192	LR	LR	15 38 03.7	
	comp=Z,54nm,21.8s,baz=136,slow=32						
FITZ	Fitzroy Crossi	45.84	77	LR	LR	15 46 48.8	
	comp=Z,76nm,20.4s,baz=201,slow=32						
LBTB	Lobatse	46.34	271	LR	LR	15 45 48.4	
	comp=Z,105nm,20.2s,baz=301,slow=30						
ASAR	Alice Springs	49.06	89	P	P	15 31 09.3	0.0
	0.7nm,0.9s,baz=239,slow=6.4,SNR=4.3						
ASAR				LR	LR	15 51 10.5	
	comp=Z,67nm,18.8s,baz=42,slow=35						
KAPI	Kappang	50.49	58	LR	LR	15 48 17.6	
	comp=Z,43nm,21.9s,baz=122,slow=31						
VNDA	Vanda	50.66	164	LR	LR	15 50 29.2	
	comp=Z,84nm,20.5s,baz=285,slow=33						
STKA	Stephens Creek	50.98	102	LR	LR	15 48 42.8	
	comp=Z,96nm,19.2s,baz=24,slow=31						
WRA	Warramunga Arr	51.44	85	P	P	15 31 27.2	-0.2
	1.1nm,0.9s,baz=234,slow=7.5,SNR=5.6						
MKAR	Makanchi Array	85.69	3	P	P	15 35 00.5	0.0
	0.4nm,0.9s,baz=179,slow=5.8,SNR=3.5						

*IDC **08** 15:23:11.9±1.4, 9°.66S×152°.49E, h0km, mb3.9/11, mb1 4.0/12, mb1mx3.9/19, mbtmp3.9/12, ML2.3/1, MS3.3/4, Ms1 3.3/4, ms1mx2.8/24, Error ellipse: s-maj=41.2km s-min=19.7km az=115.0*
*ISCJB **08** 15:23:13.5±0.7, 9°.56S±0°.07×152°.67E±0°.09, h22km, mb3.9/10, MS3.3/4, Error ellipse: s-maj=13.3km s-min=9.2km az=18.6*
*AUST **08** 15:23:17.7±10.0, 9°.43S×152°.89E, h70km±1km, Error ellipse: s-maj=3.0km s-min=1.9km az=305.0*
ISC 08 15:23:15.5±0.8**, 9°.57S**±0°.09×**152°.7E**±0°.1**, h22km, n19,** σ**1s.76**/19, **mb4.0**/10, **MS3.2**/4, **D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	5.37	355	P	Pn	15 24 33.9	-0.5
	baz=5.3,SNR=5.7						
PMG	Port Moresby	5.42	271	Pn	Pn	15 24 34.0	-1.1
	0.7nm,0.3s,baz=108,slow=9.6,SNR=3.3						
PMG				Sn	Sn	15 25 40.2	+3.4
	1.1nm,0.3s,baz=283,slow=14,SNR=3.1						
EIDS	Eidsvold	15.78	185	P	Pn	15 26 56.3	-0.1
	baz=16,SNR=3.2						
QIS	Mount Isa	16.66	228	P	P	15 27 08.9	-1.1
	baz=17,SNR=5.5						
RMQ	Roma	17.22	192	P	P	15 27 19.8	+3.6
	baz=18,SNR=5.2						
QLP	Quilpie	18.70	204	P	Pn	15 27 34.1	+1.2
	baz=19,SNR=5.5						
WRA	Warramunga Arr	20.47	238	P	P	15 27 49.1	-2.8
	2.4nm,0.8s,baz=61,slow=10,SNR=14						
ASAR	Alice Springs	22.74	230	P	P	15 28 13.8	-2.6
	1.0nm,0.7s,baz=57,slow=10.0,SNR=19						
ASAR				LR	LR	15 35 54.9	
	comp=Z,66nm,19.8s,baz=282,slow=34						
STKA	Stephens Creek	24.45	203	P	P	15 28 31.6	-1.2
	2.4nm,0.6s,baz=24,slow=9.2,SNR=7.2						
STKA				LR	LR	15 37 53.0	
	comp=Z,75nm,18.6s,baz=26,slow=36						
KSRS	Korea Array	52.20	335	P	P	15 32 24.9	+0.2
	1.0nm,0.7s,baz=146,slow=8.8,SNR=4.8						
CMAR	Chiang Mai Arr	59.86	298	P	P	15 33 19.2	-0.8
	1.4nm,0.6s,baz=126,slow=5.9,SNR=8.1						
PETK	Petropavlovsk-	62.58	3	P	P	15 33 39.2	+1.5
	1.8nm,0.8s,baz=163,slow=5.3,SNR=4.7						
PETK				LR	LR	15 55 41.9	
	comp=Z,16nm,20.1s,baz=229,slow=31						
SONM	Songino Array	70.28	329	P	P	15 34 26.9	-0.4
	1.8nm,0.8s,baz=142,slow=5.6,SNR=11						
MKAR	Makanchi Array	83.82	319	P	P	15 35 43.4	0.0
	1.9nm,0.8s,baz=105,slow=6.2,SNR=18						
ZALV	Zalesovo Beam	85.03	327	P	P	15 35 48.4	-0.9
	0.7nm,0.6s,baz=106,slow=5.6,SNR=4.5						
ILAR	Eielson Array	86.61	22	P	P	15 35 57.7	+0.8
	0.6nm,0.9s,baz=251,slow=5.6,SNR=4.5						
KURBB	Kurchatov Arra	87.45	322	P	P	15 36 00.2	-1.0
	0.5nm,1.0s,baz=94,slow=3.3,SNR=4.1						
SNAA	Sanae	97.31	188	LR	LR	16 18 55.4	
	comp=Z,22nm,20.8s,baz=20,slow=34						
TORD	Torodi Ar. Bea	151.31	280	PKPbc	PKPbc	15 43 08.3	-0.1
	1.2nm,1.1s,baz=52,slow=3.3,SNR=3.7						

IDC 08 15:32:58.6±0.8**, 13°.93N×56°.93E, h0km, mb3.9**/20, **mb1 4.0**/20, **mb1mx3.9**/33, **mbtmp3.9**/20, **MS3.5**/22, **Ms1 3.5**/22, **ms1mx3.3**/48, **Error ellipse: s-maj=19.4km s-min=16.2km az=29.0, Socotra region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	Kilima Mbogo	24.57	234	LR	LR	15 48 08.8	
	comp=Z,155nm,21.0s,baz=94,slow=37						
EIL	Elat	25.65	311	LR	LR	15 49 06.4	
	comp=Z,117nm,20.1s,baz=285,slow=38						
ASF	Jabal al Asfar	25.79	318	P	P	15 38 32.5	+1.0
	1.7nm,0.4s,baz=50,slow=5.6,SNR=3.3						
ASF				LR	LR	15 49 19.3	
	comp=Z,83nm,18.1s,baz=237,slow=38						
GNI	Garni	28.22	340	LR	LR	15 50 22.0	
	comp=Z,52nm,21.8s,baz=282,slow=37						
MBAR	Mbarara	29.69	243	LR	LR	15 51 55.8	
	comp=Z,122nm,20.1s,baz=90,slow=38						
KBZ	Khabaz	32.04	341	LR	LR	15 54 25.5	
	comp=Z,52nm,19.8s,baz=40,slow=40						
AAK	Ala-Archa	32.37	25	LR	LR	15 53 38.6	
	comp=Z,120nm,19.3s,baz=150,slow=38						
BRTR	Keskin Array B	32.85	326	P	P	15 39 34.9	+0.6
	0.6nm,0.6s,baz=145,slow=10,SNR=6.2						
OPO	Ambohidratompo	33.69	197	LR	LR	15 49 59.7	
	comp=Z,275nm,21.0s,baz=350,slow=30						
AKTO	Aktyubinsk	36.41	1	P	P	15 40 04.7	-0.1
	0.3nm,0.3s,baz=202,slow=8.1,SNR=4.1						
MKAR	Makanchi Array	39.05	28	P	P	15 40 27.5	+0.3
	1.5nm,0.7s,baz=213,slow=8.1,SNR=21						
MKAR				LR	LR	15 57 58.1	
	comp=Z,52nm,19.1s,baz=226,slow=38						
BVAR	Borovoye Array	40.44	13	P	P	15 40 39.5	+0.8
	0.3nm,0.4s,baz=188,slow=2.9,SNR=2.7						
CMAR	Chiang Mai Arr	40.53	78	P	P	15 40 40.9	+0.9
	1.2nm,0.8s,baz=270,slow=9.1,SNR=6.8						
KURBB	Kurchatov Arra	40.58	21	P	P	15 40 40.4	+0.6
	0.9nm,1.0s,baz=218,slow=8.4,SNR=8.9						
AKASG	Malin Array Be	43.01	334	P	P	15 40 59.5	-0.1
	0.7nm,0.4s,baz=129,slow=7.4,SNR=5.2						
ZALV	Zalesovo Beam	45.55	23	P	P	15 41 20.1	+0.1
	1.8nm,0.8s,baz=224,slow=8.1,SNR=7.9						
ZALV				LR	LR	16 02 21.9	
	comp=Z,30nm,20.4s,baz=249,slow=39						
LBTB	Lobatse	49.32	218	P	P	15 41 51.4	+1.5
	7.2nm,1.2s,baz=40,slow=7.9,SNR=2.3						
GERES	GERESS Array B	49.69	324	LR	LR	16 05 19.1	
	comp=Z,27nm,21.7s,baz=194,slow=39						
BOSA	Boshof	52.23	216	LR	LR	16 04 11.9	
	comp=Z,117nm,18.1s,baz=347,slow=36						
FINES	FINESS Array B	52.39	342	P	P	15 42 12.5	+0.1
	1.2nm,0.6s,baz=133,slow=6.1,SNR=4.4						
FINES				LR	LR	16 06 47.4	
	comp=Z,40nm,20.9s,baz=182,slow=39						
SONM	Songino Array	52.99	40	P	P	15 42 17.6	+0.3
	0.7nm,0.8s,baz=229,slow=5.5,SNR=4.9						
SONM				LR	LR	16 07 46.6	
	comp=Z,48nm,19.9s,baz=263,slow=39						
TORD	Torodi Ar. Bea	53.60	276	P	P	15 42 21.9	-0.2
	2.7nm,1.0s,baz=85,slow=7.4,SNR=13						
NOA	NORSAR Array B	57.39	336	P	P	15 42 47.1	-1.5
	0.6nm,0.8s,baz=120,slow=7.4,SNR=3.6						
NOA				LR	LR	16 12 24.4	
	comp=Z,22nm,18.7s,baz=190,slow=41						
MDT	Midelt	58.76	300	LR	LR	16 10 20.0	
	comp=Z,67nm,20.4s,baz=344,slow=38						
ESDC	Sonseca Array	58.89	308	P	P	15 42 59.0	-0.7
	0.2nm,0.3s,baz=67,slow=8.2,SNR=4.3						
ARCES	ARCESS Array B	58.98	348	P	P	15 42 57.7	-1.9
	1.2nm,0.8s,baz=129,slow=1.7,SNR=3.8						
ARCES				LR	LR	16 11 23.2	
	comp=Z,45nm,20.6s,baz=130,slow=39						
DBIC	Dimbokro	61.08	270	LR	LR	16 10 34.2	
	comp=Z,33nm,20.0s,baz=325,slow=37						
KSRS	Korea Array	66.64	55	P	P	15 43 49.8	-1.5
	1.1nm,0.8s,baz=271,slow=6.3,SNR=5.9						
KSRS				LR	LR	16 14 48.5	
	comp=Z,36nm,18.9s,baz=255,slow=38						
SPITS	Spitsbergen Ar	67.28	352	LR	LR	16 16 08.7	
	comp=Z,34nm,21.1s,baz=155,slow=38						
JMIC	Jan Mayen	69.00	341	LR	LR	16 15 45.3	
	comp=Z,28nm,18.9s,baz=71,slow=37						
FITZ	Fitzroy Crossi	74.85	113	P	P	15 44 42.0	+0.4
	2.0nm,0.8s,baz=358,slow=6.4,SNR=2.9						
MJAR	Matsushiro Arr	74.91	56	LR	LR	16 22 54.3	
	comp=Z,48nm,18.6s,baz=255,slow=40						
WRA	Warramunga Arr	83.22	112	P	P	15 45 27.1	-0.4
	1.5nm,0.7s,baz=299,slow=4.2,SNR=13						
ASAR	Alice Springs	83.96	116	P	P	15 45 30.5	-0.8
	0.8nm,0.8s,baz=294,slow=4.9,SNR=9.6						

IDC 08 15:45:29.4±2.0**, 3°.78N×126°.97E, h0km, mb3.4**/3, **mb1 3.6**/3, **mb1mx3.3**/23, **mbtmp3.4**/3, **MS3.0**/1, **Ms1 3.0**/1, **ms1mx2.4**/15, **Error ellipse: s-maj=156.4km s-min=25.6km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	24.01	123	LR	LR	15 58 53.0	
	comp=Z,37nm,20.7s,baz=20,slow=34						
WRA	Warramunga Arr	24.66	163	P	P	15 50 50.4	-1.7
	1.1nm,0.7s,baz=343,slow=11,SNR=11						
ASAR	Alice Springs	28.11	166	P	P	15 51 25.1	+1.9
	0.1nm,0.4s,baz=342,slow=10.0,SNR=6.6						
MKAR	Makanchi Array	57.65	325	P	P	15 55 21.5	-0.1
	0.1nm,0.5s,baz=126,slow=8.3,SNR=3.1						

WEL 08 15:51:56.9±0.6**, 37°.92S×176°.16E, h155km**±6km**, ML3.5**/12, **Error ellipse: s-maj=7.9km s-min=6.3km az=90.0, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	0.83	114	PN	Pn	15 52 20.9	+0.1
URZ				SN	Sn	15 52 38.6	-0.4
MWZ	Matawai	1.16	111	PN	Pn	15 52 23.8	+0.3
MWZ				SN	Sn	15 52 43.4	-0.6
BKZ	Black Stump Fm	1.27	168	PN	Pn	15 52 24.2	-0.4
BKZ				SN	Sn	15 52 44.4	-1.6
NMHZ	Naumai	1.28	157	PN	Pn	15 52 25.4	+0.6
NMHZ				SN	Sn	15 52 46.8	+0.6
FWVZ	Far West T-bar	1.41	199	PN	Pn	15 52 26.4	+0.2
FWVZ				SN	Sn	15 52 48.6	-0.2
TRVZ	Turoa	1.46	199	PN	Pn	15 52 26.8	+0.1
WNVZ	Wahianoa	1.47	197	PN	Pn	15 52 26.8	0.0
MTVZ	Mangateitei	1.56	200	PN	Pn	15 52 27.6	0.0
BHHZ	Black Hill Sta	1.57	183	PN	Pn	15 52 26.9	-0.7
MCHZ	McNeill Hill	1.58	165	PN	Pn	15 52 27.7	0.0
MCHZ				SN	Sn	15 52 50.4	-0.9
KAHZ	Kahuranaki	1.95	163	PN	Pn	15 52 31.0	-0.8
PNHZ	Pukenui	1.99	179	PN	Pn	15 52 31.1	-1.2
TSZ	Takapari Road	2.14	184	PN	Pn	15 52 32.6	-1.4
WPHZ	Waipukurau	2.15	174	PN	Pn	15 52 32.6	-1.5
BFZ	Birch Farm	2.76	179	PN	Pn	15 52 39.1	-2.4
MRZ	Mangatainoka R	2.77	189	PN	Pn	15 52 39.1	-2.6
TIWZ	Tintock	2.86	184	PN	Pn	15 52 40.1	-2.6
OGWZ	Otaki Gorge	2.99	194	PN	Pn	15 52 41.8	-2.6
HOWZ	Holdsworth Sta	3.01	189	PN	Pn	15 52 41.7	-3.0
KIW	Kapiti Island	3.09	198	PN	Pn	15 52 42.8	-2.8
CAW	Cannon Point	3.29	194	PN	Pn	15 52 45.0	-3.1
WEL	Wellington	3.53	197	PN	Pn	15 52 47.8	-3.3
MSWZ	Moikau Station	3.56	191	PN	Pn	15 52 47.8	-3.7
SNZO	South Karori	3.56	198	PN	Pn	15 52 48.1	-3.5
TCW	Tory Channel	3.59	203	PN	Pn	15 52 48.8	-3.2
TUWZ	Tuamarina	3.90	205	PN	Pn	15 52 52.4	-3.5
NNZ	Nelson	3.93	212	ePN	Pn	15 52 52.7	-3.6
QRZ	Quartz Range	4.04	223	SN	Sn	15 53 40.9	-4.2
THZ	Tophouse	4.58	212	PN	Pn	15 53 02.7	-2.3
KHZ	Kahutara	4.92	203	PN	Pn	15 53 05.1	-4.1

*MOS **08** 15:54:21.1±1.6, 36°.83N×71°.49E, h91km, mb4.1/12, Error ellipse: s-maj=17.5km s-min=7.8km az=84.4*
*ISCJB **08** 15:54:22.6±0.4, 36°.93N±0°.02×71°.59E±0°.06, h106km, mb4.0/17, Error ellipse: s-maj=7.0km s-min=2.8km az=164.4*
*IDC **08** 15:54:24.1±1.1, 36°.94N×71°.55E, h109km±8km, mb3.6/10, mb1 3.8/15, mb1mx3.5/32, mbtmp3.7/15, MS3.0/1, Ms1 3.0/1, ms1mx2.0/48, Error ellipse: s-maj=16.1km s-min=15.9km az=63.0*
*NNC **08** 15:54:26.7±2.6, 37°.21N×71°.29E, h146km±26km, mb3.5, mpv4.5, Error ellipse: s-maj=22.0km s-min=13.6km az=8.0*
*BJI **08** 15:54:36.4, 37°.50N×71°.30E, h250km, mB4.4/2, mb4.2/3*
ISC 08 15:54:24.1±0.5**, 36°.92N**±0°.04×**71°.52E**±0°.07**, h106km, n80,** σ**2s.06**/90, **mb4.0**/17, **9C-11D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.11	174	⇑P	Pn	15 55 14.2	+2.6
CEP				S	Sn	15 55 49.0	+0.9
CHCP	Chirah Chowk	3.56	156	⇑P	Pn	15 55 21.3	+3.9
THW	Thamme Wali	4.12	177	P	Pn	15 55 27.0	+2.0
KSH	Kashi	4.36	52	Pn	Pn	15 55 26.3	-2.0
KSH				Sn	Sn	15 56 07.7	-11
KSH				smax	smax		
	comp=N,880nm,0.7s						
KSH				smax	smax		
	comp=E,530nm,0.4s						
JMU	Jammu	5.04	145	eS	Sn	15 56 33.5	-0.8
SARP	Sargodha	5.08	169	P	Pn	15 55 39.2	+1.3
AML	Almayashu	5.47	17	P	Pn	15 55 43.7	+0.2
	SNR=140						
THN	Thein Dam	5.66	141	ePKP	Pn	15 55 46.0	+0.3
THN				eS	Sn	15 56 46.4	-3.0
DLH	Dalhousie	5.70	139	ePKP	Pn	15 55 49.0	+2.4
DLH				eS	Sn	15 56 51.0	+0.1
UCH	Uchtor	5.78	23	P	Sn	15 56 51.5	-1.5
	SNR=11						
KZA	Kyzart	5.90	28	P	Pn	15 55 50.0	+0.6
	SNR=30						
EKS2	Erkin-Say	5.99	16	P	Pn	15 55 50.7	+0.4
	SNR=61						
DHRM	DHARAMSHALA	6.11	138	ePKP	Pn	15 55 54.6	+2.5
DHRM				eS	Sn	15 56 59.9	-0.8
DHRM				AML	AML	15 57 03.9	
	comp=N,2µm,0.3s						
DHRM				AML	AML	15 57 05.6	
	comp=E,2µm,0.2s						
AAK	Ala-Archa	6.15	21	PN	Pn	15 55 52.7	+0.2
AAK				pmax	pmax		
	comp=Z,16nm,0.3s						
AAK	Ala-Archa	6.15	21	P	Pn	15 55 53.4	+0.9
	SNR=55						
AAK	Ala-Archa	6.15	21	P	Pn	15 55 52.7	+0.2
	comp=Z,16nm,0.3s,baz=162,slow=6.2,SNR=67						
AAK				S	Sn	15 56 59.8	-1.6
	comp=Z,7.3nm,0.3s,baz=310,slow=19,SNR=14						
KK31	Karatay Array	6.22	353	⇓P	Pn	15 55 52.3	-1.0
	comp=Z,33nm,0.3s,baz=169,slow=12,SNR=5.8						
KK31				⇓S	Sn	15 56 59.4	-3.6
	comp=Z,19nm,0.3s,baz=181,slow=24,SNR=7.0						
KBK	Karagaybulak	6.31	24	P	Pn	15 55 56.7	+2.1
	SNR=14						
FRU	Bishkek	6.37	21	ePN	Pn	15 55 55.0	-0.3
FRU				pmax	pmax		
	comp=Z,45nm,1.8s						
ULHL	Ulahol	6.45	33	P	Pn	15 55 58.0	+1.4
	SNR=27						
CHMS	Chumysh	6.56	21	P	Pn	15 55 58.5	+0.6
	SNR=50						
USP	Ospenovka	6.74	19	P	Pn	15 56 00.2	-0.2
	SNR=33						
TKM2	Tokmak 2	6.76	26	⇑P	Pn	15 56 01.4	+0.6
	comp=Z,8.5nm,0.5s						
TKM2				⇑S	Sn	15 57 16.5	+0.1
	comp=Z,14nm,0.7s						
TKM2	Tokmak 2	6.76	26	P	Pn	15 56 01.4	+0.6
	SNR=32						
SDNR	Sundarnagar	7.05	139	ePKP	Pn	15 56 05.0	+0.4
SDNR				eS	Sn	15 57 20.0	-3.2
SMLA	Simla	7.44	139	i P	Pn	15 56 10.6	+0.6
SMLA				i P	Pn	15 56 10.6	+0.6
SMLA				i P		15 56 10.7	
SMLA				i S	Sn	15 57 29.0	-3.7
SMLA				AML	AML	15 57 38.6	
	comp=E,377nm,0.2s						
SMLA				AML	AML	15 57 39.7	
	comp=N,384nm,0.3s						
DDI	Dehra Dun	8.55	138	eS	Sn	15 57 55.1	-4.6
NDI	New Delhi	9.51	148	e4		15 56 27.0	
NDI				e4		15 58 15.0	
MK31	Makanchi Array	12.71	36	⇓P	Pn	15 57 20.6	-0.2
	comp=N,1.9nm,0.5s,baz=227,slow=16,SNR=21						
MKAR	Makanchi Array	12.71	36	P	Pn	15 57 19.1	-1.7
MKAR	Makanchi Array	12.71	36	P	Pn	15 57 19.1	-1.7
	comp=N,0.2nm,0.3s,baz=224,slow=14,SNR=31						
PYUN	Piuthan	13.07	129	eP	Pn	15 57 24.1	-1.8
	comp=N,33nm,0.3s						
DANN	Dangsing	13.39	126	eP	Pn	15 57 28.4	-1.7
	comp=N,26nm,0.3s						
KOLN	Koldanda	13.69	128	eP	Pn	15 57 32.1	-1.8
	comp=N,17nm,0.3s						
BHPL	Bhopal	14.56	158	ePKP	Pn	15 57 42.2	-2.7
BHPL				eS	Sn	16 00 13.7	-12
KURBB	Kurchatov Arra	14.59	18	P	Pn	15 57 42.0	-3.1
	comp=N,0.1nm,0.3s,baz=214,slow=12,SNR=8.8						
KUR14	Kurchatov Arra	14.60	18	⇑P	Pn	15 57 42.3	-2.9
	comp=N,1.2nm,0.6s						
KURK	Kurchatov	14.70	18	⇓P	Pn	15 57 43.5	-3.0
	comp=N,3.5nm,0.7s						
KURK	Kurchatov	14.70	18	⇓iP	P	15 57 52.8	+3.0
KKN	Kakani	14.76	124	eP	Pn	15 57 45.7	-2.0
	comp=N,22nm,0.5s						
DMN	Daman	14.77	125	eP	Pn	15 57 45.7	-2.1
	comp=N,11nm,0.3s						
AB31	Akbulak array	14.92	329	⇓P	Pn	15 57 45.2	-4.1
	comp=N,4.1nm,0.5s,baz=137,slow=13,SNR=129						
PKIN	Phulchoki	14.98	125	eP	Pn	15 57 49.0	-1.5
	comp=N,17nm,0.4s						
PKI	Pulchoki	14.99	124	eP	Pn	15 57 49.1	-1.6
	comp=N,20nm,0.4s						
GUN	Gumba	15.08	122	eP	Pn	15 57 49.7	-2.2
	comp=N,82nm,0.7s						
JBP	Jabalpur	15.54	150	⇑ix	x	15 58 21.9	
JBP				eS	Sn	16 00 43.6	-5.5
VOSK	Vostochnaya	15.80	359	⇑P	Pn	15 57 56.9	-3.5
	comp=N,4.4nm,0.8s						
BVA0	Borovoye Array	16.12	358	⇑P	Pn	15 58 02.0	-2.3
	comp=N,2.1nm,0.6s,baz=159,slow=12,SNR=4.6						
BVAR	Borovoye Array	16.12	358	P	Pn	15 58 02.2	-2.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BVAR	Borovoye Array	16.12	358	P	Pn	15 58 02.2	-2.1
	comp=Z,0.8nm,0.3s,baz=167,slow=13,SNR=13						
ZRNK	Zerenda	16.12	355	⇑P	Pn	15 58 03.3	-1.0
	comp=Z,3.0nm,0.5s						
BRVK	Borovoye	16.16	357	i P	P	15 58 07.6	+1.6
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
RAMN	Ramite	16.19	124	eP	Pn	15 58 04.8	-0.9
	comp=Z,51nm,0.6s						
AKTO	Aktyubinsk	16.63	329	⇓P	Pn	15 58 08.1	-2.5
	comp=Z,4.2nm,0.7s						
AKTO	Aktyubinsk	16.63	329	P	Pn	15 58 08.9	-1.7
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	Aktyubinsk	16.63	329	P	Pn	15 58 08.9	-1.7
	comp=Z,1.0nm,0.3s,baz=136,slow=13,SNR=18						
TAPN	Taplejung	16.69	120	eP	Pn	15 58 11.3	-0.5
	comp=Z,18nm,0.4s						
ODAN	Odare	16.78	122	eP	Pn	15 58 12.4	-0.5
	comp=Z,43nm,0.6s						
ZALV	Zalesovo Beam	19.36	24	P	P	15 58 39.8	-1.3
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZALV	Zalesovo Beam	19.36	24	P	P	15 58 39.8	-1.3
	comp=Z,1.6nm,0.3s,baz=218,slow=11,SNR=20						
NVS	Novosibirsk	19.64	20	eP	P	15 58 45.1	+1.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NVS				pmax	pmax		
	comp=N,3.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.8s						
ARU	Arti	21.37	340	d iP	P	15 59 06.4	+3.7
ARU						15 59 33.2	
ARU				S	S	16 02 44.9	-8.8
ARU				SS	SnSn	16 03 18.7	-7.8
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GTA	Gaotai	22.35	75	P	P	15 59 16.4	+3.0
GTA				pmax	pmax		
	comp=Z,12nm,0.9s						
KIV	Kislovodsk	22.96	297	eP	P	15 59 19.6	+0.2
KIV				eS	S	16 03 08.4	-13
KIV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KIV				MLR	MLR		
	comp=Z,8.0nm,15.0s						
KRAR	Krasnoyarsk	23.93	30	⇓eP	P	15 59 30.1	+2.1
KRAR				pmax	pmax		
	comp=Z,16nm,0.7s						
SONM	Songino Array	27.75	56	P	P	16 00 03.1	+0.4
	comp=Z,0.6nm,0.5s,baz=253,slow=9.9,SNR=4.2						
EIL	Elat	31.27	267	LR	LR	16 13 30.1	
	comp=Z,28nm,20.6s,baz=283,slow=37						
FINES	FINESS Array B	37.37	326	P	P	16 01 26.4	+0.3
	comp=Z,1.0nm,0.3s,baz=98,slow=9.8,SNR=9.0						
ARCES	ARCESS Array B	40.91	337	P	P	16 01 56.0	+0.5
	comp=Z,0.7nm,0.4s,baz=108,slow=8.6,SNR=8.1						
HFS	Hagfors	42.99	322	P	P	16 02 12.8	+0.3
	comp=Z,1.2nm,0.4s,baz=86,slow=9.8,SNR=11						
HFS				pP	pP	16 02 37.6	+0.6
	comp=Z,1.2nm,0.4s,baz=94,slow=8.0,SNR=2.7						
YAK	Yakutsk	43.38	36	eP	P	16 02 16.9	+1.3
YAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NB2	NORSAR Subarra	44.29	323	P	P	16 02 22.7	-0.3
	comp=Z,0.6nm,0.5s,baz=96,slow=7.9						
NOA	NORSAR Array B	44.29	323	P	P	16 02 22.7	-0.3
	comp=Z,0.6nm,0.5s,baz=98,slow=8.4,SNR=5.9						
NOA				pP	pP	16 02 48.1	+0.5
	comp=Z,0.9nm,0.6s,baz=95,slow=8.0,SNR=4.0						
TIXI	Tiksi	45.23	22	⇓eP	P	16 02 31.1	+1.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.5s						
ERM	Erimo	54.06	61	⇓eP	P	16 03 40.2	+2.7
ERM				pmax	pmax		
	comp=Z,47nm,1.7s						
TORD	Torodi Ar. Bea	66.14	269	P	P	16 04 59.1	-1.3
	comp=Z,0.6nm,0.3s,baz=53,slow=6.5,SNR=12						
ILAR	Eielson Array	74.26	16	P	P	16 05 49.1	0.0
	comp=Z,0.3nm,0.7s,baz=287,slow=4.8,SNR=4.3						
YKA	Yellowknife Ar	80.80	3	P	P	16 06 25.9	+0.4
	comp=Z,0.7nm,0.4s,baz=349,slow=5.4,SNR=11						
YKA				pP	pP	16 06 53.5	+0.7
	comp=Z,0.6nm,0.6s,baz=349,slow=5.3,SNR=3.4						
WRA	Warramunga Arr	81.86	122	P	P	16 06 31.4	-0.3
	comp=Z,0.8nm,0.3s,baz=324,slow=4.8,SNR=22						
ASAR	Alice Springs	84.16	125	P	P	16 06 43.1	-0.5
	comp=Z,1.2nm,0.6s,baz=314,slow=4.7,SNR=30						

*IPEC **08** 15:59:33.3±0.3, 51°.60N×16°.18E, h0^{km}, ML2.6/4, Error ellipse: s-maj=2.0km s-min=1.6km az=34.0*
*ISCJB **08** 15:59:33.3±0.5, 51°.44N±0°.02×16°.07E±0°.03, h0^{km}, Error ellipse: s-maj=3.6km s-min=2.1km az=17.0*
*PRU **08** 15:59:34.0, 51°.53N×16°.19E, h0^{km}*
*CSEM **08** 15:59:34.0±0.2, 51°.51N×16°.11E, h2^{km}, ML3.5/12, Error ellipse: s-maj=3.3km s-min=2.1km az=19.0*
*BGR **08** 15:59:35.3±0.3, 51°.50N×16°.10E, h1^{km}, ML3.0/16, Error ellipse: s-maj=4.4km s-min=2.2km az=13.0*
*WAR **08** 15:59:35.4, 51°.50N×16°.09E*
*VIE **08** 15:59:37.3±0.4, 51°.22N×16°.16E, h0^{km}, mb2.5/6, ML2.9/6, Error ellipse: s-maj=2.9km s-min=2.7km az=101.0 61 km WNW of Wroclaw Suspected Mining induced.*
ISC 08 15:59:33.0±0.8**, 51°.54N**±0°.03×**16°.17E**±0°.02**, h0**^{km}**, n84, σ1.s20**/154**, 3C-5D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	174	ePg	Pb	15 59 48.0	-0.2
KSP				eSg	Sb	15 59 57.3	-1.1
KSP	Ksiaz	0.71	174	ePg	Pg	15 59 47.8	+1.3
KSP				eSg	Sb	15 59 57.2	-1.1
KSP	Ksiaz	0.71	174	e	Pn	16 00 00.0	+10
KSP	Ksiaz	0.71	174	Pg	Pb	15 59 48.0	-0.2
KSP				Sg	Sb	15 59 57.3	-1.1
UPC	Upice	1.04	186	ePG	Pb	15 59 54.1	+0.2
UPC	Upice	1.04	186	Pg	Pb	15 59 54.1	+0.2
DPC	Dobruska-Polom	1.20	175	ePG	Pb	15 59 56.8	+0.2
DPC				eSG	Sg	16 00 12.0	+0.5
DPC	Dobruska-Polom	1.20	175	Pg	Pb	15 59 56.8	+0.2
DPC				Sg	Sg	16 00 12.0	+0.5
PVCC	Panska Ves	1.44	226	ePG	Pn	16 00 00.2	-0.1
PVCC				eSG	Sg	16 00 19.6	+0.5
	comp=Z,227nm,0.6s						
PVCC	Panska Ves	1.44	226	Pg	Pn	16 00 00.2	-0.1
PVCC				Sg	Sg	16 00 19.6	+0.5
	227nm,0.6s						
KRLC	Kraliky	1.52	165	ePG	Pb	16 00 02.6	+0.5
KRLC				eSG	Sn	16 00 22.1	+0.1
KRLC	Kraliky	1.52	165	Pg	Pb	16 00 02.6	+0.5
KRLC				Sg	Sn	16 00 22.1	+0.1
BRG	Berggiesshubel	1.56	245	PN	Pn	16 00 02.1	+0.2
BRG				PG	Pn	16 00 02.9	+1.0
BRG				SG	Sn	16 00 22.9	+0.2
	118nm,0.4s						
BRG	Berggiesshubel	1.56	245	ePg	Pn	16 00 02.9	+1.0
BRG				eSg	Sn	16 00 23.0	+0.2
BRG	Berggiesshubel	1.56	245	Pg	Pn	16 00 02.9	+1.0
BRG				Sg	Sn	16 00 23.0	+0.2
PRU	Pruhonice	1.87	214	ePN	Pn	16 00 06.4	+0.2
PRU				ePG	Pb	16 00 07.7	-0.3
PRU				eSG	Sb	16 00 31.9	0.0
	comp=Z,44nm,0.3s						
PRU	Pruhonice	1.87	214	Pn	Pn	16 00 06.4	+0.2
FBE	Freiberg	1.88	252	ePg	Pb	16 00 09.0	+0.9
FBE				eSg	Sb	16 00 33.1	+1.0
FBE	Freiberg	1.88	252	Pg	Pb	16 00 09.0	+0.9
FBE				Sg	Sb	16 00 33.1	+1.0
MORC	Moravsky Berou	1.97	153	ePn	Pn	16 00 07.9	+0.2
MORC				eSg	Sg	16 00 36.2	-0.1
MORC	Moravsky Berou	1.97	153	ePn	Pn	16 00 08.2	+0.5
	baz=335						
MORC				Sg	Sg	16 00 36.2	-0.1
CLL	Collm	2.00	264	ePn	Pn	16 00 07.6	-0.4
CLL				ePg	Pg	16 00 11.8	+0.5
CLL				eSg	Sb	16 00 36.9	+1.3
CLL	Collm	2.00	264	i Pn	Pn	16 00 07.5	-0.4
CLL				ePg	Pg	16 00 12.0	+0.7
CLL				e		16 00 15.0	
CLL				i Sg	Sg	16 00 37.5	+0.3
	comp=Z,43nm,0.5s						
CLL	Collm	2.00	264	Pn	Pn	16 00 07.6	-0.4
OKC	Ostrava-Krasne	2.12	143	ePg	Pg	16 00 14.6	+1.0
OKC				eSg	Sg	16 00 42.1	+1.1
OKC	Ostrava-Krasne	2.12	143	Pg	Pg	16 00 14.6	+1.0
OKC				Sg	Sg	16 00 41.6	+0.6
	comp=Z,72nm,0.7s						
VRAC	Vranov	2.25	173	ePn	Pn	16 00 13.1	+1.6
	baz=354						
VRAC				eSg	Sg	16 00 45.3	-0.1
	comp=Z,33nm,0.6s,baz=354						
TREC	Trest	2.29	191	ePN	Pn	16 00 13.7	+1.6
TREC				ePG	Pg	16 00 16.7	-0.2
TREC	Trest	2.29	191	Pn	Pn	16 00 13.7	+1.6
TREC	Trest	2.29	191	Pg	Pg	16 00 16.7	-0.2
KRUC	Moravsky	2.49	177	ePn	Pn	16 00 16.3	+1.6
	baz=357						
KRUC				eSg	Sg	16 00 52.8	-0.1
	comp=Z,18nm,0.5s,baz=357						
TANN	Tannenbergstha	2.60	246	ePn	Pn	16 00 16.7	+0.3
TANN				eSg	Sg	16 00 56.0	-0.6
TANN	Tannenbergstha	2.60	246	Pn	Pn	16 00 16.7	+0.3
TANN				Sg	Sg	16 00 56.0	-0.6
OJC	Ojcow	2.65	119	ePn	Pn	16 00 17.9	+0.9
OJC				ePg	Pg	16 00 24.8	+1.1
OJC				eSg	Sg	16 01 00.5	+2.4
OJC	Ojcow	2.65	119	ePg	Pg	16 00 25.0	+1.2
OJC				eSg	Sg	16 01 00.4	+2.3
OJC	Ojcow	2.65	119	Pn	Pn	16 00 17.9	+0.9
WERD	Werda	2.68	247	ePn	Pn	16 00 17.6	+0.2
WERD				ePg	Pg	16 00 24.5	+0.3
WERD				eSg	Sb	16 00 57.7	+2.5
WERD	Werda	2.68	247	Pn	Pn	16 00 17.6	+0.2
NKC	Novy Kostel	2.70	242	ePN	Pn	16 00 18.4	+0.7
NKC				ePG	Pg	16 00 24.4	-0.3
NKC				eSG	Sg	16 00 59.3	-0.4
	comp=Z,97nm,0.4s						
NKC	Novy Kostel	2.70	242	Pn	Pn	16 00 18.4	+0.7
NKC	Novy Kostel	2.70	242	Pg	Pg	16 00 24.4	-0.3
NKC				Sg	Sg	16 00 59.3	-0.4
	comp=Z,97nm,0.4s						
JAVC	Velka Javorina	2.85	160	eSg	Sg	16 01 06.3	+1.6
	comp=Z,32nm,0.8s						
KHC	Kasperske Hory	2.93	216	ePN	Pn	16 00 21.1	+0.2
KHC				ePG	Pb	16 00 27.0	+0.9
KHC				eSN	Sn	16 00 56.5	-0.3
KHC				eSG	Sg	16 01 06.3	-0.8
	comp=Z,19nm,0.6s						
KHC	Kasperske Hory	2.93	216	Pn	Pn	16 00 21.1	+0.2
MOX	Moxa	3.01	254	ePn	Pn	16 00 22.4	+0.5
MOX				ePg	Pg	16 00 30.2	-0.5
MOX				eSg	Sg	16 01 10.2	+0.5
MOX	Moxa	3.01	254	Pn	Pn	16 00 22.4	+0.5
MANZ	Manzenberg	3.02	240	ePn	Pn	16 00 22.5	+0.5
MANZ				ePg	Pg	16 00 31.2	+0.5
MANZ				eSg	Sg	16 01 08.6	-1.2
MANZ	Manzenberg	3.02	240	Pn	Pn	16 00 22.5	+0.5
ROTZ	Rotzenmuhle	3.09	236	ePn	Pn	16 00 23.8	+0.8
ROTZ				ePg	Pg	16 00 33.2	+1.0
ROTZ				eSg	Sb	16 01 09.5	+2.6
ROTZ	Rotzenmuhle	3.09	236	Pn	Pn	16 00 23.8	+0.8
GEC2	GERESS Array S	3.13	211	ePn	Pn	16 00 25.0	+1.3
GEC2				ePg	Pg	16 00 33.1	+0.1
GEC2				eSg	Sg	16 01 12.6	-1.0
GEC2	GERESS Array S	3.13	211	Pn	Pn	16 00 25.0	+1.3
SMOL	Smolenice	3.14	165	ePG	Pg	16 00 36.5	+3.4
SMOL				eSG	Sg	16 01 14.4	+0.6
SMOL	Smolenice	3.14	165	ePg	Pg	16 00 36.5	+3.4
SMOL				eSg	Sg	16 01 14.4	+0.6
WET	Wettzell	3.20	223	ePn	Pn	16 00 25.2	+0.7
WET				eSg	Sg	16 01 14.0	-1.7
WET	Wettzell	3.20	223	Pn	Pn	16 00 25.2	+0.7
WET				Sg	Sg	16 01 14.0	-1.7
ZST	Bratislava	3.41	169	ePG	Pg	16 00 39.6	+1.4
ZST				eSG	Sg	16 01 21.1	-1.2
ZST	Bratislava	3.41	169	ePg	Pg	16 00 39.6	+1.4
ZST				eSg	Sg	16 01 21.1	-1.2
VYHS	Vyhne	3.50	150	ePN	Pn	16 00 28.6	-0.1
VYHS				eSN	Sn	16 01 01.9	-8.9
VYHS	Vyhne	3.50	150	ePn	Pn	16 00 28.6	-0.1
CLZ	Clausthal	3.62	277	ePn	Pn	16 00 31.4	+1.1
CLZ				ePg	Pg	16 00 41.9	-0.4
CLZ				eSg	Sg	16 01 28.0	-1.3
CLZ	Clausthal	3.62	277	Pn	Pn	16 00 31.4	+1.1
CLZ	Clausthal	3.62	277	Pg	Pg	16 00 41.9	-0.4
CLZ				Sg	Sg	16 01 28.0	-1.3
CONA	Conrad Observa	3.63	183	⇑iPn	Pn	16 00 30.2	-0.3
CONA				⇓iSg	Sg	16 01 26.7	-2.7
	comp=Z,52nm,0.8s						
CONA	Conrad Observa	3.63	183	Pn	Pn	16 00 30.2	-0.3
CONA				Sg	Sg	16 01 26.7	-2.7
	comp=Z,52nm,0.8s						
BSD	Bornholm Skovb	3.66	349	i P	Pn	16 00 30.7	0.0
BSD				eS	Sn	16 01 11.2	-3.3
BSD	Bornholm Skovb	3.66	349	i P	Pn	16 00 30.7	0.0
GRA1	Grafenberg Arr	3.66	241	Pn	Pn	16 00 31.6	+0.8
GRA1	Grafenberg Arr	3.66	241	Pg	Pg	16 00 44.0	+1.0
GRA1				Sg	Sg	16 01 30.2	-0.2
GRF	Grafenberg Arr	3.66	241	ePn	Pn	16 00 31.6	+0.8
GRF				ePg	Pg	16 00 44.0	+1.0
GRF				eSg	Sg	16 01 30.2	-0.2
STHS	Stebnicka Huta	3.88	121	ePN	Pn	16 00 35.4	+1.6
STHS				eSN	Sn	16 01 13.6	-6.4
STHS	Stebnicka Huta	3.88	121	ePn	Pn	16 00 35.4	+1.6
MOA	Molln	3.90	199	⇓iPn	Pn	16 00 35.2	+1.0
MOA				⇑iSg	Sg	16 01 36.8	-1.4
	comp=Z,27nm,0.6s						
MOA	Molln	3.90	199	Pn	Pn	16 00 35.2	+1.0
MOA				Sg	Sg	16 01 36.8	-1.4
	comp=Z,27nm,0.6s						
KECS	Kecovo	4.14	136	ePN	Pn	16 00 37.5	+0.1
KECS				eSN	Sn	16 01 22.3	-4.1
KECS	Kecovo	4.14	136	ePn	Pn	16 00 37.5	+0.1
KECS				eSn	Sn	16 01 22.3	-4.1
CRVS	Cervenica-Dubn	4.30	126	ePN	Pn	16 00 38.1	-1.6
CRVS	Cervenica-Dubn	4.30	126	ePn	Pn	16 00 38.1	-1.6
ARSA	Arzberg	4.32	186	⇑iPn	Pn	16 00 40.1	+0.2
ARSA				⇓iSg	Sg	16 01 49.1	-2.6
	comp=Z,15nm,0.6s						
ARSA	Arzberg	4.32	186	Pn	Pn	16 00 40.1	+0.2
ARSA				Sg	Sg	16 01 49.1	-2.6
	comp=Z,15nm,0.6s						
KOLS	Kolonicke sedl	4.71	121	ePN	Pn	16 00 45.4	+0.2
KOLS				eSN	Sn	16 01 35.4	-5.1
KOLS	Kolonicke sedl	4.71	121	ePn	Pn	16 00 45.4	+0.2
KBA	Koelnbreinsper	4.84	204	⇓iPn	Pn	16 00 47.0	-0.2
KBA				⇓iSg	Sg	16 02 07.3	-1.0
	comp=Z,7.4nm,0.6s						
KBA	Koelnbreinsper	4.84	204	Pn	Pn	16 00 47.0	-0.2
KBA				Sg	Sg	16 02 07.3	-1.0
	comp=Z,7.4nm,0.6s						

*ISK **08** 16:13:34.1, 40°.11N×39°.49E, h5^{km}, MD2.8*
*CSEM **08** 16:13:34.8±0.2, 40°.10N×39°.43E, h2^{km}, MD2.8, Error ellipse: s-maj=6.0km s-min=3.4km az=123.0*
ISC 08 16:13:35.0±1.0**, 40°.11N**±0°.02×**39°.47E**±0°.03**, h5**^{km}±12^{km}**, n31, σ0.s75**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KELT	Kelkit	0.17	285	i P	Pg	16 13 38.3	-0.2
KELT				i S	Sg	16 13 41.4	+0.6
KELT	Kelkit	0.17	285	i P	Pg	16 13 38.3	-0.2
KELT				i S	Sg	16 13 41.4	+0.6
GUMT	Gumushane	0.35	1	ePG	Pg	16 13 41.9	-0.1
GUMT				eSG	Sg	16 13 46.8	+0.1
GUMT	Gumushane	0.35	1	ePg	Pg	16 13 41.9	-0.1
GUMT				eSg	Sg	16 13 46.8	+0.1
EZC	Erzincan	0.36	194	ePG	Pg	16 13 41.7	-0.4
EZC	Erzincan	0.36	194	ePg	Pg	16 13 41.7	-0.4
ERZN	Erzincan	0.55	159	ePG	Pg	16 13 44.9	-0.8
ERZN				eSG	Sg	16 13 53.2	+0.3
BAYT	Ayd˜–ntepe-Bay	0.59	60	ePG	Pg	16 13 45.7	-0.7
BAYT				eSG	Sg	16 13 54.2	+0.1
BAYT	Ayd˜–ntepe-Bay	0.59	60	ePg	Pg	16 13 45.7	-0.7
BAYT				eSg	Sg	16 13 54.2	+0.1
MACK	Trabzon	0.87	15	i P	Pg	16 13 51.4	-0.3
MACK	Trabzon	0.87	15	i P	Pg	16 13 51.4	-0.3
ILIC	ilic-Erzincan	0.95	227	ePG	Pg	16 13 53.2	-0.1
ILIC	ilic-Erzincan	0.95	227	ePg	Pg	16 13 53.2	-0.1
ESPY	Espiye-Giresun	0.99	325	ePG	Pg	16 13 53.4	-0.6
ESPY	Espiye-Giresun	0.99	325	ePg	Pg	16 13 53.4	-0.6
KEMA	Kemaliye	1.12	222	i P	Pg	16 13 55.3	-1.3
KEMA				i S	Sg	16 14 11.3	+0.1
KEMA	Kemaliye	1.12	222	i P	Pg	16 13 55.3	-1.3
KEMA				i S	Sg	16 14 11.3	+0.1
PTK	Pertek	1.21	183	ePN	Pg	16 13 58.1	-0.2
PTK	Pertek	1.21	183	ePn	Pg	16 13 58.1	-0.2
EZM	Erzurum	1.47	97	ePN	Pn	16 14 01.9	-0.4
PZAR	Pazar-Rize	1.53	45	ePN	Pn	16 14 02.8	-0.1
PZAR	Pazar-Rize	1.53	45	ePn	Pn	16 14 02.8	-0.1
ELZG	Elazig	1.65	193	i P	Pb	16 14 05.3	-0.7
ELZG				i S	Sg	16 14 30.0	+2.0
ELZG	Elazig	1.65	193	i P	Pb	16 14 05.3	-0.7
ELZG				i S	Sg	16 14 30.0	+2.0
DDEM	Demirkent	1.91	65	i P	Pb	16 14 10.1	-0.3
DDEM				i S	Sg	16 14 38.5	+2.1
DDEM	Demirkent	1.91	65	i P	Pb	16 14 10.1	-0.3
DBAD	Bademkaya	1.93	61	i P	Pb	16 14 10.2	-0.4
DBAD				i S	Sb	16 14 35.9	+0.9
DBAD	Bademkaya	1.93	61	i P	Pb	16 14 10.2	-0.4
DBAD				i S	Sb	16 14 35.9	+0.9
DAGI	Agillar	2.10	62	i P	Pb	16 14 13.6	0.0
DAGI				i S	Sg	16 14 41.6	-0.9
BCA	Borcka	2.11	50	ePN	Pn	16 14 11.2	+0.2
BCA	Borcka	2.11	50	ePn	Pn	16 14 11.2	+0.2

*IDC **08** 16:17:44.6±1.2, 34°.55N×24°.90E, h0^{km}, mb3.8/6, mb1 3.9/14, mb1mx3.7/34, mbtmp3.7/14, ML3.6/8, MS3.0/8, Ms1 3.0/8, ms1mx2.7/41, Error ellipse: s-maj=21.9km s-min=18.8km az=177.0*
*HLW **08** 16:17:45.2, 34°.83N×24°.96E, h9^{km}±14^{km}, Md3.6, Ml3.4*
*ISCJB **08** 16:17:46.0±0.7, 34°.72N±0°.03×24°.75E±0°.03, h14^{km}±4^{km}, mb3.7/8, MS3.1/6, Error ellipse: s-maj=4.4km s-min=3.7km az=4.7*
*CSEM **08** 16:17:46.0±0.2, 34°.69N×24°.66E, h10^{km}, Ms2.6, Error ellipse: s-maj=4.6km s-min=3.8km az=21.0*
*ATH **08** 16:17:47.5, 34°.86N×24°.71E, h22^{km}±2^{km}, MD3.4/9*
*THE **08** 16:17:48.0, 34°.87N×24°.67E, h1^{km}±1^{km}, ML3.6/5, Error ellipse: s-maj=2.0km s-min=0.6km az=177.0*
ISC 08 16:17:46.0±1.2**, 34°.72N**±0°.03×**24°.70E**±0°.02**, h5**^{km}±8^{km}**, n130, σ1.s23**/147**, mb3.9**/8**, MS3.1**/6**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIVA	Sivas	0.31	17	P	Pg	16 17 52.3	+0.2
SIVA				S	Sg	16 17 55.3	-0.8
SIVA	Sivas	0.31	17	ePB	Pg	16 17 52.8	+0.7
SIVA				eSB	Sg	16 17 56.5	+0.4
SIVA	Sivas	0.31	17	P	Pg	16 17 52.3	+0.2
SIVA	Sivas	0.31	17	ePb	Pg	16 17 52.8	+0.7
SIVA				S	Sg	16 17 55.3	-0.8
GVD	Gavdhos	0.52	283	P	Pg	16 17 57.2	+1.2
GVD				S	Sb	16 18 05.5	+0.2
GVD	Gavdhos	0.52	283	ePN	Pg	16 17 57.2	+1.2
GVD				eSN	Sb	16 18 06.1	+0.8
GVD	Gavdhos	0.52	283	P	Pg	16 17 57.2	+1.2
GVD				S	Sb	16 18 05.5	+0.2
GVD				eSn	Sb	16 18 06.1	+0.8
LAST	Lasithi	0.78	55	P	Pg	16 18 01.2	+0.2
LAST				S	Sb	16 18 12.9	0.0
LAST	Lasithi	0.78	55	ePN	Pg	16 18 00.9	-0.1
LAST				eSN	Sg	16 18 11.5	+0.4
LAST	Lasithi	0.78	55	P	Pg	16 18 01.2	+0.2
LAST				S	Sb	16 18 12.9	0.0
VAM	Vamos	0.80	329	P	Pg	16 18 00.7	-0.6
VAM				S	Sg	16 18 10.7	-1.0
VAM	Vamos	0.80	329	ePN	Pg	16 18 00.8	-0.6
VAM				eSN	Sg	16 18 11.3	-0.4
VAM	Vamos	0.80	329	P	Pg	16 18 00.7	-0.6
VAM				S	Sg	16 18 10.7	-1.0
NPS	Neapolis	0.92	54	P	Pg	16 18 03.9	+0.1
NPS				S	Sn	16 18 18.4	-0.9
NPS	Neapolis	0.92	54	ePN	Pg	16 18 03.8	0.0
NPS				eSN	Sg	16 18 15.2	-0.6
NPS	Neapolis	0.92	54	P	Pg	16 18 03.9	+0.1
NPS				S	Sn	16 18 18.4	-0.9
ZKR	Zakros	1.31	72	P	Pg	16 18 11.3	+0.2
ZKR				S	Sn	16 18 30.4	+1.6
ZKR	Zakros	1.31	72	ePN	Pg	16 18 11.3	+0.2
ZKR				eSN	Sn	16 18 28.7	-0.1
ZKR	Zakros	1.31	72	P	Pg	16 18 11.3	+0.2
ZKR				eSn	Sn	16 18 28.7	-0.1
THR6	Thira Island,	1.73	19	P	Pn	16 18 16.4	-0.3
THR6	Thira Island,	1.73	19	P	Pn	16 18 16.4	-0.3
SANT	Santorini	1.76	20	P	Pn	16 18 16.6	-0.6
SANT				S	Sn	16 18 39.4	-0.5
SANT	Santorini	1.76	20	P	Pn	16 18 16.6	-0.6
SANT				S	Sn	16 18 39.4	-0.5
THR1	Thera Island	1.76	20	P	Pn	16 18 16.6	-0.5
THR1	Thera Island	1.76	20	P	Pn	16 18 16.6	-0.5
THR2	Thira island,	1.82	19	P	Pn	16 18 17.6	-0.4
THR2	Thira island,	1.82	19	P	Pn	16 18 17.6	-0.4
KYTH	Kithira	2.06	319	P	Pn	16 18 21.8	+0.5
KYTH	Kithira	2.06	319	P	Pn	16 18 21.8	+0.5
KARP	Karpathos	2.18	67	P	Pn	16 18 24.0	+1.1
KARP	Karpathos	2.18	67	ePN	Pb	16 18 25.4	-0.6
KARP	Karpathos	2.18	67	P	Pn	16 18 24.0	+1.1
KARP	Karpathos	2.18	67	ePn	Pb	16 18 25.4	-0.6
APE	Apeiranthos	2.44	16	P	Pn	16 18 26.4	-0.1
APE				S	Sn	16 18 55.8	-0.9
APE	Apeiranthos	2.44	16	ePB	Pn	16 18 26.9	+0.4
APE	Apeiranthos	2.44	16	P	Pn	16 18 26.4	-0.1
APE	Apeiranthos	2.44	16	ePb	Pn	16 18 26.9	+0.4
APE				S	Sn	16 18 55.8	-0.9
VLI	Veliai	2.45	325	P	Pn	16 18 26.7	0.0
VLI				S	Sn	16 18 54.9	-2.1
VLI	Veliai	2.45	325	P	Pn	16 18 26.7	0.0
VLI				S	Sn	16 18 54.9	-2.1
DYR	Agios Nikonas	2.80	317	P	Pn	16 18 31.3	-0.2
DYR				S	Sn	16 19 04.4	-1.2
DYR	Agios Nikonas	2.80	317	P	Pn	16 18 31.3	-0.2
DYR				S	Sn	16 19 04.4	-1.2
DID	Didima	3.02	337	P	Pn	16 18 34.6	+0.1
DID	Didima	3.02	337	P	Pn	16 18 34.6	+0.1
ARG	Arkhangelos	3.17	61	P	Pn	16 18 37.6	+1.1
ARG	Arkhangelos	3.17	61	ePN	Pn	16 18 38.6	+2.1
ARG	Arkhangelos	3.17	61	P	Pn	16 18 37.6	+1.1
ARG	Arkhangelos	3.17	61	ePn	Pn	16 18 38.6	+2.1
PYL	PYLOS	3.24	313	P	Pn	16 18 37.2	-0.2
PYL	PYLOS	3.24	313	P	Pn	16 18 37.2	-0.2
VLX	Vlachokerasia	3.24	325	P	Pn	16 18 37.3	-0.3
VLX	Vlachokerasia	3.24	325	P	Pn	16 18 37.3	-0.3
SLUM		3.25	172	P	Pn	16 18 36.9	-0.7
SLUM				S	Sn	16 19 14.5	-2.2
ITM	Ithomi	3.33	318	P	Pn	16 18 39.0	+0.3
ITM	Ithomi	3.33	318	P	Pn	16 18 39.0	+0.3
PTL	Penteli	3.39	349	P	Pn	16 18 39.1	-0.4
PTL	Penteli	3.39	349	P	Pn	16 18 39.1	-0.4
GUR	Goura	3.73	330	P	Pn	16 18 44.1	-0.2
GUR				S	Sn	16 19 27.4	-1.2
GUR	Goura	3.73	330	P	Pn	16 18 44.1	-0.2
GUR				S	Sn	16 19 27.4	-1.2
CHOS	Chios island	3.82	16	P	Pn	16 18 45.4	-0.1
CHOS				S	Sn	16 19 30.3	-0.5
CHOS	Chios island	3.82	16	ePN	Pn	16 18 46.2	+0.7
CHOS	Chios island	3.82	16	P	Pn	16 18 45.4	-0.1
CHOS	Chios island	3.82	16	ePn	Pn	16 18 46.2	+0.7
CHOS				S	Sn	16 19 30.3	-0.5
DSF	Desfina	4.08	335	P	Pn	16 18 49.2	+0.2
DSF	Desfina	4.08	335	P	Pn	16 18 49.2	+0.2
LAKA	Lakka	4.14	329	P	Pn	16 18 50.8	+0.9
LAKA	Lakka	4.14	329	P	Pn	16 18 50.8	+0.9
HMAT	Matruh	4.14	150	AMP		16 19 00.0	
	comp=E,50μm,0.8s,logA/T=4.8,baz=153						
ATAL	Atalanti	4.18	342	P	Pn	16 18 49.3	-1.2
ATAL	Atalanti	4.18	342	P	Pn	16 18 49.3	-1.2
EFP	Efpalio	4.33	330	P	Pn	16 18 53.2	+0.8
EFP	Efpalio	4.33	330	P	Pn	16 18 53.2	+0.8
AXAR	Agios Charalam	4.36	339	P	Pn	16 18 52.0	-0.8
AXAR	Agios Charalam	4.36	339	P	Pn	16 18 52.0	-0.8
AOS	Alonnisos	4.49	352	P	Pn	16 18 54.1	-0.5
AOS	Alonnisos	4.49	352	P	Pn	16 18 54.1	-0.5
AGG	Agios Georgios	4.69	337	P	Pn	16 18 57.6	+0.1
AGG	Agios Georgios	4.69	337	P	Pn	16 18 57.6	+0.1
EVR	Evrytania	4.79	332	P	Pn	16 18 58.1	-0.7
EVR	Evrytania	4.79	332	P	Pn	16 18 58.1	-0.7
SWA2		5.50	173	P	Pn	16 19 08.6	+0.1
	baz=175						
SWA2		5.50	173	P	Pn	16 19 08.6	+0.1
AMAG	Maghara	8.24	117	P	Pn	16 19 44.0	-2.4
	baz=118						
AMAG	Maghara	8.24	117	P	Pn	16 19 43.9	-2.4
RSH		8.47	114	P	Pn	16 19 46.5	-2.9
	baz=115						
BRTR	Keskin Array B	8.70	52	Pn	Pn	16 19 52.9	+0.2
	comp=E,0.1nm,0.3s,baz=240,slow=14,SNR=2.8						
BRTR				Sn	Sn	16 21 22.7	-8.5
	comp=E,0.1nm,0.3s,baz=238,slow=19,SNR=2.8						
MMAI	Mount Meron Ar	9.06	98	Pn	Pn	16 19 54.8	-2.7
	comp=E,0.9nm,0.3s,baz=282,slow=14,SNR=3.7						
MMAI				Sn	Sn	16 21 33.0	-7.0
	comp=E,1.2nm,0.3s,baz=284,slow=20,SNR=2.6						
EIL	Elat	10.04	117	Pn	Pn	16 20 06.6	-4.3
	comp=E,1.1nm,0.3s,baz=318,slow=16,SNR=5.5						
EIL				Sn	Sn	16 21 54.9	-9.0
	comp=E,0.7nm,0.3s,baz=54,slow=19,SNR=3.3						
MLR	Muntele Rosu	10.80	5	Pn	Pn	16 20 24.4	+3.1
	comp=E,0.0nm,0.3s,baz=189,slow=13,SNR=3.3						
KEST	Kesra	12.60	279	LR	LR	16 25 14.9	
	comp=E,22nm,20.9s,baz=325,slow=35						
PGF	Pioggiola	14.53	307	eP	P	16 21 17.8	-1.3
	comp=E,47nm,1.3s						
PGF	Pioggiola	14.53	307	eP	P	16 21 17.8	-1.3
	comp=E,24nm,1.3s						
VRAC	Vranov	15.76	340	Pn	P	16 21 32.4	-0.1

	comp=E,0.1nm,0.3s,baz=147,slow=18,SNR=3.3						
SBF	Sospel	16.16	310	eP	P	16 21 37.3	+0.2
SBF	Sospel	16.16	310	eP	P	16 21 37.3	+0.2
GERES	GERESS Array B	16.30	333	Pn	P	16 21 38.2	-0.4
	comp=E,0.1nm,0.3s,baz=147,slow=13,SNR=8.8						
AKASG	Malin Array Be	16.31	10	Pn	Pn	16 21 35.8	+0.2
	comp=E,1.1nm,0.3s,baz=200,slow=11,SNR=9.4						
FRF	La Foret Royal	16.53	308	eP	P	16 21 43.4	+2.3
KBZ	Khabaz	16.70	52	Pn	P	16 21 42.9	-0.1
	comp=E,0.1nm,0.3s,baz=242,slow=11,SNR=12						
GNI	Garni	16.80	65	LR	LR	16 29 37.7	
	comp=E,44nm,20.3s,baz=264,slow=43						
SMRF	Simiane la Rot	17.41	308	eP	P	16 21 52.9	+2.0
	comp=E,82nm,1.6s						
CABF	La Chapelle	18.40	316	eP	P	16 22 07.4	+5.6
HINF	Hinteralfeld	18.68	320	eP	Pn	16 22 08.8	+3.6
	comp=E,9.6nm,0.8s						
CDF	Champ du Feu	18.83	322	eP	Pn	16 22 11.1	+4.0
	comp=E,8.4nm,1.0s						
HAU	Haudompre	19.06	320	eP	Pn	16 22 13.7	+3.9
HAU				eR			
	comp=E,58nm,20.5s						
PAGF	Fort de Pagny	19.73	320	eP	Pn	16 22 20.7	+2.9
	comp=E,3.5nm,0.8s						
MIB	Mutribah	19.75	98	eP	P	16 22 15.5	-1.2
MIB				AMb	AMB	16 22 18.8	
	comp=Z,12nm,0.6s						
MIB	Mutribah	19.75	98	eP	P	16 22 15.5	-1.2
	comp=Z,12nm,0.6s						
NAY	Al-Naaiem	19.87	100	eP	P	16 22 17.1	-0.9
NAY				AMb	AMB	16 22 20.4	
	comp=Z,6.7nm,1.1s						
NAY	Al-Naaiem	19.87	100	eP	P	16 22 17.1	-0.9
	comp=Z,6.7nm,1.1s						
CAF	Calviac	20.09	307	eP	Pn	16 22 25.4	+3.2
	comp=Z,46nm,1.4s						
SSF	Saint Saulge	20.14	314	eP	Pn	16 22 25.6	+2.9
	comp=Z,7.5nm,0.8s						
UMR	Umm Al-Rimmam	20.15	98	eP	P	16 22 19.5	-1.5
UMR				AMb	AMB	16 22 20.9	
	comp=Z,22nm,0.7s						
UMR	Umm Al-Rimmam	20.15	98	eP	P	16 22 19.5	-1.5
	comp=Z,22nm,0.7s						
RJF	Les Rejaudoux	20.59	308	eP	Pn	16 22 31.0	+3.0
	comp=Z,15nm,0.8s						
RJF				eR			
	comp=Z,64nm,20.5s						
LFF	La Frestale	20.97	306	eP	Pn	16 22 33.7	+1.3
ETSF	Etsaut	21.25	300	eP	P	16 22 39.7	+6.7
	comp=Z,24nm,1.1s						
BAIF	Baives	21.43	322	eP	P	16 22 38.5	+3.7
	comp=Z,10nm,0.7s						
MFF	Saint Martin d	22.17	310	eP	P	16 22 46.3	+3.6
ESDC	Sonseca Array	23.31	291	P	P	16 22 55.7	+0.8
	comp=Z,2.7nm,0.7s,baz=81,slow=9.4,SNR=4.3						
FLN	La Foliniere	23.31	315	eP	P	16 22 57.5	+2.8
FLN				eR			
	comp=Z,50nm,19.2s						
SGMF	Saint Gilles	24.33	312	eP	P	16 23 07.1	+2.6
MDT	Midelt	24.41	274	LR	LR	16 35 36.8	
	comp=Z,53nm,21.0s,baz=109,slow=44						
HFS	Hagfors	26.42	348	P	P	16 23 24.3	+1.0
	comp=Z,0.8nm,0.6s,baz=156,slow=11,SNR=3.1						
NOA	NORSAR Array B	27.73	346	P	P	16 23 36.5	+1.4
	comp=Z,0.3nm,0.5s,baz=319,slow=9.0,SNR=2.7						
NOA				LR	LR	16 35 54.0	
	comp=Z,19nm,20.4s,baz=155,slow=39						
TORD	Torodi Ar. Bea	29.92	230	P	P	16 23 55.2	+0.2
	comp=Z,1.0nm,0.6s,baz=33,slow=9.0,SNR=6.7						
TORD				LR	LR	16 38 34.2	
	comp=Z,54nm,19.9s,baz=20,slow=42						
ARCES	ARCESS Array B	34.87	0	LR	LR	16 38 14.6	
	comp=Z,39nm,21.3s,baz=185,slow=35						
MKAR	Makanchi Array	44.33	56	P	P	16 25 55.1	-1.9
	comp=Z,0.6nm,0.5s,baz=272,slow=7.6,SNR=10						
ZALV	Zalesovo Beam	45.58	46	P	P	16 26 06.0	-0.7
	comp=Z,1.1nm,0.5s,baz=263,slow=8.7,SNR=4.3						
KSRS	Korea Array	78.85	52	LR	LR	17 09 26.6	
	comp=Z,12nm,19.2s,baz=220,slow=39						
TGY	Tagaytay City	87.11	75	LR	LR	17 12 13.9	
	comp=Z,14nm,20.6s,baz=137,slow=38						

AUST 08 16:28:56.1±2.9, 1°.85N×120°.19E, h132km±1km, Error ellipse: s-maj=3.2km s-min=1.3km az=1.0
ISCJB 08 16:29:36.5±0.3, 0°.23S±0°.03×122°.87E±0°.03, h100km, mb3.9/10, Error ellipse: s-maj=4.9km s-min=4.3km az=30.5
IDC 08 16:29:36.3±2.0, 0°.21S×122°.84E, h90km±18km, mb3.6/10, mb1 3.7/11, mb1mx3.5/24, mbtmp3.6/11, MS2.9/1, Ms1 3.1/1, ms1mx2.2/26, Error ellipse: s-maj=22.7km s-min=12.1km az=87.0
DJA 08 16:29:38.8±0.3, 0°S±3°×12°3E±°, h52km±10km, M4.8/14, mb4.9/7, mB5.2/5, MLv4.9/14, Mw(mB)4.5/5
ISC 08 16:29:37.6±0.5, 0°.22S±0°.05×122°.85E±0°.06, h100km, n48, σ1.07/50, mb3.9/10, 1D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.82	185	P	Pn	16 29 54.7	-1.6
LUWI	Luwuk	0.82	185	P	Pn	16 29 54.0	-2.3
	baz=3.9,SNR=1000						
MRSI	Marisa	1.14	307	P	Pn	16 29 58.8	-0.8
KMSI	Cibinong	1.38	55	P	Pn	16 30 01.7	-0.7
MNI	Manado	2.58	50	P	Pn	16 30 17.6	-0.3
MNI				S	Px	16 30 18.7	
SKSI	Soroako, Sulaw	2.75	213	P	Pn	16 30 19.6	-0.6
SKSI				S	Sn	16 30 51.7	-1.1
TTSI	Tana Toraja	4.13	227	P	Pn	16 30 39.2	+0.6
TTSI				S	Px	16 30 39.3	
TNTI	Ternate	4.62	78	P	Pn	16 30 45.9	+0.6
LBMI	Labuha	4.67	95	P	Pn	16 30 47.1	+1.2
LBMI				S	Sn	16 31 39.1	+0.1
SPSI	Sidrap Palu	4.83	220	P	Pn	16 30 48.1	0.0
SPSI				S	Sn	16 31 43.0	+0.1
BBSI	Bau Bau	5.24	183	P	Pn	16 30 54.8	+1.1
	84nm,0.7s,3μm1.3nm						
SMKI	Samarinda	5.64	268	P	Pn	16 31 02.6	+3.5
KAPI	Kappang	5.68	213	P	Pn	16 30 59.6	0.0
	120nm,0.6s,3μm0.7nm						
KAPI	Kappang	5.68	213	P	Pn	16 30 59.1	-0.6
	52nm,0.3s,baz=27,slow=18,SNR=75						
KAPI				S	Sn	16 32 00.1	-3.5
	14nm,0.3s,baz=217,slow=20,SNR=14						
BKSI	Bulukumba	5.76	208	P	Pn	16 31 01.2	+0.5
	42nm,1.0s,1μm0.4nm						
AAI	Ambon	6.36	123	P	Pn	16 31 09.9	+1.1
	198nm,0.9s,2μm0.7nm						
AAI	Ambon	6.36	123	P	Pn	16 31 09.5	+0.7
	baz=9.7,SNR=12						
MSAI	Masohi	6.83	117	P	Pn	16 31 15.6	+0.4
	27nm,0.7s						
MYLDM	Lahad Datu	6.90	321	P	Pn	16 31 19.1	+2.9
CTBH	Cotabato--PC H	7.52	11	⇓iP	Pn	16 31 24.8	+0.2
IPIL	Ipil	7.96	358	eP	Pn	16 31 31.5	+0.9
PAGZ	Pagadian	8.03	4	eP	Pn	16 31 32.5	+0.9
BUKP	Musuan	8.34	15	eP	Pn	16 31 38.0	+2.1
BUKP				eS	Px	16 32 01.2	
SWI	Sorong	8.44	94	P	Pn	16 31 37.9	+0.8
	baz=11,SNR=9.0						
KKM	Kota Kinabalu	9.08	313	P	Pn	16 31 48.7	+2.6
	baz=15,SNR=4.5						
FAKI	Fak Fak	9.77	106	P	Pn	16 31 51.3	-4.0
FAKI	Fak Fak	9.77	106	P	Pn	16 31 52.5	-2.8
	baz=13,SNR=8.2						
KNRA	Kununurra	16.43	159	P	Pn	16 33 15.1	-7.3
	baz=20,SNR=5.0						
FITZ	Fitzroy Crossi	17.98	171	P	Pn	16 33 41.2	0.0
	0.1nm,0.3s,baz=13,slow=11,SNR=2.8						
WRA	Warramunga Arr	22.61	151	P	P	16 34 30.1	-0.1
	1.8nm,0.6s,baz=333,slow=10,SNR=6.9						
WRA				ScP	ScP	16 41 47.8	-1.0
	0.3nm,0.6s,baz=332,slow=2.4,SNR=6.5						
ASAR	Alice Springs	25.66	156	P	P	16 34 58.8	+0.4
	0.7nm,0.5s,baz=334,slow=9.4,SNR=4.8						
ASAR				PcP	PcP	16 38 26.2	-0.4
	0.6nm,0.3s,baz=345,slow=2.1,SNR=5.6						
ASAR				ScP	ScP	16 41 56.8	-0.3
	0.3nm,0.6s,baz=335,slow=2.8,SNR=4.9						
CMAR	Chiang Mai Arr	29.94	310	P	P	16 35 37.6	+1.1
	1.2nm,0.7s,baz=131,slow=6.5,SNR=9.0						
CMAR				LR	LR	16 46 23.9	
	comp=Z,22nm,19.0s,baz=205,slow=34						
STKA	Stephens Creek	36.14	152	P	P	16 36 30.8	+0.5
	2.7nm,1.0s,baz=337,slow=9.5,SNR=3.6						
MJAR	Matsushiro Arr	39.26	20	P	P	16 36 54.5	-2.0
	1.8nm,0.6s,baz=190,slow=9.4,SNR=12						
ODAN	Odare	43.45	311	eP	P	16 37 32.4	+1.1
TAPN	Taplejung	43.48	312	eP	P	16 37 32.1	+0.6
	4.8nm,0.4s						
RAMN	Ramite	44.10	311	eP	P	16 37 38.1	+1.6
	10nm,0.5s						
USRK	Ussuriysk Arra	44.97	9	P	P	16 37 42.0	-0.7
	1.9nm,0.5s,baz=199,slow=6.4,SNR=5.3						
GUN	Gumba	45.15	311	eP	P	16 37 45.4	+0.5
	11nm,0.3s						
PKI	Pulchoki	45.32	311	eP	P	16 37 46.6	+0.3
	3.4nm,0.3s						
PKIN	Phulchoki	45.34	311	eP	P	16 37 46.6	+0.3
	3.2nm,0.3s						
KKN	Kakani	45.53	311	eP	P	16 37 48.0	+0.2
	4.4nm,0.4s						
KOLN	Koldanda	46.81	310	eP	P	16 37 58.1	+0.3
	5.3nm,0.3s						
DANN	Dangsing	46.97	311	eP	P	16 37 59.8	+0.6
	12nm,0.3s						
ASAJ	Asahikawa	47.52	19	P	P	16 38 01.6	-1.2
	0.7nm,0.3s,baz=234,slow=8.7,SNR=6.2						
SONM	Songino Array	49.95	346	P	P	16 38 21.3	-0.2
	0.7nm,0.6s,baz=152,slow=6.5,SNR=4.4						
MKAR	Makanchi Array	58.72	328	P	P	16 39 24.7	-0.3
	0.4nm,0.4s,baz=122,slow=8.2,SNR=11						
MKAR				pP	pP	16 39 49.0	-0.5
	0.7nm,0.6s,baz=132,slow=7.6,SNR=6.1						
PETK	Petropavlovsk-	60.54	23	P	P	16 39 37.2	-0.2
	1.4nm,0.8s,baz=212,slow=4.7,SNR=4.4						

MAN 08 16:37:22, 9°.13N×121°.91E, h32km, mb4.5, ML3.3, MS3.2, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	1.33	81	eS	Pn	16 37 47.2	+2.8
IPIL	Ipil	1.48	154	eP	Pn	16 37 46.5	0.0
GUIM	Jordan	1.63	24	eP	Pn	16 37 48.0	-0.6
CUYO	Cuyo Island	1.93	333	eP	Pn	16 37 53.5	+0.9
PAGZ	Pagadian	1.93	131	eP	Pn	16 37 53.9	+1.2

MOS 08 16:38:13.9±1.6, 47°.51N×153°.26E, h33km, mb4.0/2, Error ellipse: s-maj=49.7km s-min=16.6km az=58.6
IDC 08 16:38:18.8±3.7, 47°.53N×153°.12E, h64km±32km, mb3.4/2, mb1 3.6/5, mb1mx3.1/28, mbtmp3.5/5, ML3.5/3, Error ellipse: s-maj=83.0km s-min=26.0km az=139.0
ISC 08 16:38:11.6±1.7, 47°.1N±0°.2×153°.6E±0°.2, h31km, n17, σ2.77/17, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.95	24	ePN	Pn	16 39 08.0	-2.0
SKR				eS	Sn	16 39 52.0	-3.2
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
SKR				smax	smax		
	comp=N,80nm,0.5s						
SKR				smax	smax		
	comp=E,60nm,0.5s						
KUR	Kuril'sk	4.38	247	d iPN	Pn	16 39 18.5	+2.5
KUR				pmax	pmax		
	comp=Z,14nm,0.5s						
KUR				pmax	pmax		
	comp=N,7.0nm,0.3s						
KUR				pmax	pmax		
	comp=E,7.0nm,0.3s						
PETK	Petropavlovsk-	6.56	22	PN	Pn	16 39 49.0	+3.1
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	6.56	22	P	Pn	16 39 49.0	+3.1
	comp=Z,1.3nm,0.3s,baz=183,slow=15,SNR=38						
JNK	Nakash	7.16	244	P	Pn	16 39 56.0	+1.9
JTKR	Abashiri--Toko	7.47	249	P	Pn	16 40 01.4	+3.0
JAK	Akkeshi	7.51	240	P	Pn	16 39 58.7	-0.2
JAK				eS	Sn	16 41 18.4	-4.5
JMP	Maruseppu	7.80	250	P	Pn	16 40 06.9	+3.9
JAR	Ashorobuto	7.90	245	P	Pn	16 40 07.3	+3.0
JAR				eS	Sn	16 41 35.5	+3.0
ASAJ	Asahikawa	8.25	253	P	Pn	16 40 13.8	+4.6
	comp=Z,0.5nm,0.3s,baz=68,slow=13,SNR=6.9						
JKK2	Kamakawa 2	8.26	251	P	Pn	16 40 12.8	+3.6
JCH	Churui	8.53	242	P	Pn	16 40 13.2	+0.3
JCH				eS	Sn	16 41 44.3	-3.7
JNBK	Urakawa-nobuka	9.09	242	P	Pn	16 40 21.1	+0.5
JNBK				eS	Sn	16 41 58.7	-3.0
JANG	Nango	11.01	237	P	Pn	16 40 44.3	-2.6
JANG				eS	Sn	16 42 40.7	-8.2
MJAR	Matsushiro Arr	15.55	233	P	P	16 41 54.0	+1.5
	comp=Z,0.2nm,0.3s,baz=34,slow=9.4,SNR=6.0						
YKA	Yellowknife Ar	50.45	37	P	P	16 47 08.0	+2.2
	comp=Z,0.5nm,0.7s,baz=304,slow=7.2,SNR=4.3						
FINES	FINESS Array B	63.84	335	P	P	16 48 40.6	+0.1
	comp=Z,0.5nm,0.4s,baz=56,slow=7.4,SNR=5.3						

IDC 08 16:42:31.7±1.0, 2°.70S×141°.55E, h0km, mb3.6/4, mb1 4.0/6, mb1mx3.7/20, mbtmp4.0/6, ML4.2/2, Error ellipse: s-maj=31.4km s-min=23.6km az=107.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.53	202	P	P	16 46 49.1	-0.9
	0.3nm,0.3s,baz=20,slow=12,SNR=19						
HNR	Honiara	19.47	111	P	P	16 47 00.2	-0.1
	4.7nm,0.3s,baz=245,slow=2.2,SNR=12						
FITZ	Fitzroy Crossi	21.86	224	P	P	16 47 25.3	-0.9
	1.3nm,0.7s,baz=42,slow=14,SNR=7.1						
ASAR	Alice Springs	22.12	199	P	P	16 47 29.4	+0.3
	1.0nm,0.6s,baz=29,slow=11,SNR=20						
MKAR	Makanchi Array	71.53	321	P	P	16 53 55.1	+0.5
	0.9nm,0.7s,baz=124,slow=7.8,SNR=10						
ILAR	Eielson Array	84.65	24	P	P	16 55 05.6	-1.4
	0.6nm,0.5s,baz=258,slow=3.7,SNR=4.3						
LPAZ	La Paz	145.12	124	PKPbc	PKPdf	17 02 12.8	-0.2
	0.9nm,0.7s,baz=270,slow=2.0,SNR=4.6						
DBIC	Dimbokro	146.30	278	PKPbc	PKPbc	17 02 15.1	-0.4
	2.8nm,0.9s,baz=101,slow=5.2,SNR=3.7						

KRSC 08 16:43:03.5±0.6, 49°.93N×157°.14E, h10km±10km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.00	319	eP	Pn	16 43 23.3	-0.3
SKR				eS	Sn	16 43 38.2	+0.5
PAU	Pauzhetka	1.55	352	eP	Pb	16 43 32.0	-0.3
PAU				eS	Sg	16 43 53.2	-0.3
MIPR	Malaya Ipel'ka	2.36	354	eP	Pn	16 43 41.0	-1.3
ASAK	Asacha	2.50	11	eP	Pn	16 43 46.1	+1.7
ASAK				S	Sn	16 44 16.5	+1.5
MTVR	Mutnovka	2.64	14	eP	Pn	16 43 48.4	+2.1
MTVR				eS	Sb	16 44 21.1	-2.5
RUS	Russkaya	2.65	18	eP	Pn	16 43 47.8	+1.5
RUS				eS	Sn	16 44 20.5	+2.1
PET	Petropavlovsk	3.24	16	P	Pn	16 43 56.4	+2.1
PET				S	Sn	16 44 34.6	+1.7
UGLR	Uglovaya	3.45	17	eP	Pn	16 43 59.2	+1.8
AVH	Avacha	3.48	16	P	Pn	16 43 58.8	+0.9
KOK	Koryaka	3.49	15	eP	Pn	16 44 00.0	+2.0
KRER	Koryakskii	3.52	16	P	Pn	16 44 00.2	+1.6
NLC	Nalytchevo	3.52	22	S	Sn	16 44 39.2	-0.8
SDLR	Sedlovina	3.52	17	eP	Pn	16 43 59.9	+1.4
SPN	Mys Shipunski	3.65	28	eP	Pn	16 44 02.2	+2.2
SPN				eS	Sn	16 44 43.8	+0.8
GNL	Ganaly	3.80	7	eP	Pn	16 44 03.0	+0.7
MKZ	Mys Kozlova	5.42	30	P	Pn	16 44 24.6	+0.3

WEL 08 17:04:39.8±1.6, 36°.50S×177°.55E, h5km, ML3.7/6, Error ellipse: s-maj=11.3km s-min=7.8km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	1.23	150	P*	Pg	17 04 59.8	-3.5
MXZ				S*	Sg	17 05 14.5	-4.8
MXZ				AML	AML	17 06 14.2	
KUZ	Kuaotunu	1.49	260	SN	Sn	17 05 25.4	-1.6
PUZ	Puketiti	1.67	160	PN	Pn	17 05 09.2	-0.6
PUZ				SN	Sb	17 05 33.0	+0.4
PUZ				AML	AML	17 05 42.4	
URZ	Urewera	1.79	191	P*	Pn	17 05 10.1	-1.2
URZ				S*	Sn	17 05 30.1	-4.5
URZ				AML	AML	17 05 46.9	
MWZ	Matawai	1.83	180	P*	Pn	17 05 10.4	-1.6
MWZ				AML	AML	17 05 41.6	
MWZ				AML	AML	17 05 55.5	
BKZ	Black Stump Fm	2.79	197	P*	Pn	17 05 24.6	-0.7
QRZ	Quartz Range	5.84	221	AML	AML	17 14 17.1	
QRZ				AML	AML	17 15 28.5	

IDC 08 17:13:01.2±4.2, 30°.72S×138°.31E, h0km, mb1 3.1/3, mb1mx3.0/16, mbtmp2.8/3, ML2.6/3, Error ellipse: s-maj=92.8km s-min=19.7km az=44.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.04	113	Pn	Pn	17 13 49.8	-0.8
	0.1nm,0.3s,baz=288,slow=16,SNR=10						
STKA				Pg	Pb	17 13 57.1	+0.9
	1.1nm,0.3s,baz=276,slow=12,SNR=23						
STKA				Sn	Sn	17 14 24.9	-2.8
	0.5nm,0.3s,baz=296,slow=11,SNR=3.2						
ASAR	Alice Springs	8.04	330	Pn	Pn	17 15 00.5	+1.1
	0.1nm,0.3s,baz=152,slow=13,SNR=6.3						
ASAR				Sn	Sn	17 16 30.8	-0.4
	0.1nm,0.3s,baz=153,slow=22,SNR=7.4						
WRA	Warramunga Arr	11.31	341	Pn	Pn	17 15 44.4	+0.2
	0.1nm,0.3s,baz=160,slow=12,SNR=6.4						
WRA				Sn	Sn	17 17 50.7	-0.7
	0.0nm,0.3s,baz=163,slow=24,SNR=1.8						

KNET 08 17:25:50.5±0.6, 41°.66N×73°.94E, h13km±3km, ml2.7, Error ellipse: s-maj=3.9km s-min=2.6km az=47.0
NNC 08 17:25:53.3±4.3, 41°.67N×73°.97E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=45.5km s-min=13.9km az=166.0
ISC 08 17:25:49.3±2.1, 41°.60N±0°.09×73°.91E±0°.04, h12km±11km, n16, σ0.76/25, 13C-15D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	0.56	343	P	Pg	17 26 00.3	0.0
	97nm,0.2s,SNR=106						
AML				⇑S	Sg	17 26 08.2	+0.4
	402nm,0.3s						
UCH	Uchtor	0.78	35	⇓P	Pb	17 26 05.0	-0.1
	13nm,0.2s,SNR=14						
UCH				⇓S	Sb	17 26 16.2	+0.4
	352nm,0.3s						
EKS2	Erkin-Say	1.07	355	⇓P	Pb	17 26 09.7	-0.2
	13nm,0.2s,SNR=17						
EKS2				⇓S	Sn	17 26 24.0	-1.2
	29nm,0.2s						
KZA	Kyzart	1.11	64	⇑P	Pb	17 26 10.7	-0.1
	27nm,0.3s,SNR=53						
KZA				⇓S	Sn	17 26 26.3	-0.3
	138nm,0.5s						
AAK	Ala-Archa	1.12	23	⇓P	Pn	17 26 11.3	+0.1
	12nm,0.2s,SNR=13						
AAK				⇑S	Sn	17 26 26.7	+0.1
	92nm,0.2s						
KBK	Karagaybulak	1.31	36	⇑P	Pg	17 26 14.6	0.0
	11nm,0.1s,SNR=19						
KBK				⇓S	Sg	17 26 33.0	+1.3
	265nm,0.3s						
CHMS	Chumysh	1.54	24	⇓P	Pg	17 26 18.5	-0.3
	38nm,0.3s,SNR=11						
CHMS				⇑S	Sg	17 26 39.2	+0.5
	146nm,0.5s						
USP	Ospenovka	1.73	15	⇓P	Pg	17 26 21.9	-0.6
	20nm,0.2s,SNR=55						
USP				⇑S	Sg	17 26 44.8	-0.1
	49nm,0.2s						
TKM2	Tokmak 2	1.82	43	⇑P	Pg	17 26 23.7	-0.6
	13nm,0.4s						
TKM2				⇑S	Sg	17 26 47.0	-1.0
	36nm,0.5s						
TKM2	Tokmak 2	1.82	43	⇑P	Pg	17 26 23.7	-0.6
	22nm,0.2s,SNR=43						
ULHL	Ulahol	1.86	69	⇑P	Pb	17 26 23.9	+0.5
	12nm,0.3s,SNR=22						
ULHL				⇓S	Sg	17 26 48.8	-0.3
	36nm,0.4s						
KNDC	Almaty	2.79	53	⇓Pn	Pb	17 26 40.6	+1.5
KNDC				⇓Sn	Sg	17 27 17.5	-1.3
KK31	Karatay Array	2.93	302	⇑Pn	Pb	17 26 41.2	-0.4
	5.5nm,0.3s,baz=126,slow=16,SNR=7.6						
KK31				⇓Sn	Sb	17 27 18.7	+1.2
	11nm,0.3s,baz=125,slow=29,SNR=10						
MK31	Makanchi Array	7.95	46	⇑Pn	Pn	17 27 50.8	+6.0
	0.9nm,0.7s,baz=227,slow=13,SNR=6.8						
MK31				⇓Lg	Lg	17 30 02.3	
	3.6nm,0.8s,baz=235,slow=27,SNR=4.2						
KUR14	Kurchatov Arra	9.59	18	⇓Lg	Lg	17 30 52.8	
	1.8nm,0.8s						
KURK	Kurchatov	9.69	18	⇑Lg	Lg	17 30 55.6	
	6.8nm,1.0s						

IDC 08 17:37:35.5±1.1, 60°.75S×51°.85W, h0km, mb4.3/4, mb1 4.4/4, mb1mx4.0/16, mbtmp4.2/4, MS3.2/3, Ms1 3.3/3, ms1mx3.1/18, Error ellipse: s-maj=50.7km s-min=34.2km az=66.0, Scotia Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	23.11	322	P	P	17 42 42.9	-0.1
	3.1nm,0.9s,baz=148,slow=7.6,SNR=9.0						
PLCA				LR	LR	17 52 34.4	
	comp=Z,52nm,18.0s,baz=167,slow=39						
CPUP	Villa Florida	34.61	351	LR	LR	17 59 20.1	
	comp=Z,36nm,18.8s,baz=351,slow=38						
LPAZ	La Paz	45.93	338	LR	LR	18 06 25.1	
	comp=Z,40nm,21.4s,baz=106,slow=38						
TORD	Torodi Ar. Bea	84.99	52	P	P	17 50 12.9	+0.4
	1.2nm,0.7s,baz=202,slow=6.1,SNR=11						
ASAR	Alice Springs	95.76	185	P	P	17 51 03.5	0.0
	0.6nm,0.6s,baz=165,slow=3.8,SNR=10						
WRA	Warramunga Arr	99.44	186	P	Pdif	17 51 20.0	0.0
	0.7nm,0.6s,baz=177,slow=4.0,SNR=15						
ARCES	ARCESS Array B	141.04	33	PKhKP	PKPpre	17 56 57.9	
	1.6nm,1.0s,baz=212,slow=3.2,SNR=3.3						
MKAR	Makanchi Array	150.22	97	PKPbc	PKPbc	17 57 26.1	-1.2
	0.4nm,0.6s,baz=231,slow=1.4,SNR=6.2						

IDC 08 17:49:48.8±6.1, 31°.48S×179°.47W, h136km±48km, mb3.9/5, mb1 4.0/7, mb1mx3.7/21, mbtmp3.9/7, MS4.0/1, Ms1 4.0/1, ms1mx2.4/34, Error ellipse: s-maj=43.2km s-min=20.9km az=43.0
AUST 08 17:50:11.4, 30°.36S×176°.37E, h60km
ISC 08 17:49:50.4±1.0, 31°.53S±0°.08×179°.6W±0°.2, h150km, n37, σ1.38/35, mb4.3/5, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.67	32	LR	LR	17 51 05.7	
	comp=Z,3μm,18.9s,baz=163,slow=30						
MXZ	Matakaoa Point	6.28	196	PN	Pn	17 51 23.7	+3.0
MXZ				SN	Sn	17 52 31.4	0.0
PUZ	Puketiti	6.78	195	PN	Pn	17 51 29.2	+1.9
PUZ				SN	Sn	17 52 42.8	-0.7
CNGZ	Carnagh Statio	7.18	194	PN	Pn	17 51 36.8	+4.0
MWZ	Matawai	7.21	199	PN	Pn	17 51 34.7	+1.6
MWZ				SN	Sn	17 52 51.5	-2.2
URZ	Urewera	7.26	201	PN	Pn	17 51 36.2	+2.4
URZ				SN	Sn	17 52 53.1	-1.8
URZ	Urewera	7.26	201	P	Pn	17 51 34.8	+1.0
	0.9nm,0.3s,baz=288,slow=3.2,SNR=8.2						
URZ				S	Sn	17 52 52.7	-2.2
	7.7nm,0.3s,baz=316,slow=22,SNR=11						
RAHZ	Arahi	7.87	200	PN	Pn	17 51 44.2	+2.2
NMHZ	Naumai	8.12	200	PN	Pn	17 51 46.4	+1.1
BKZ	Black Stump Fm	8.28	202	PN	Pn	17 51 48.6	+1.1
FWVZ	Far West T-bar	8.69	206	PN	Pn	17 51 55.4	+2.3
TRVZ	Turoa	8.73	206	PN	Pn	17 51 56.0	+2.4
TSZ	Takapari Road	9.26	202	PN	Pn	17 52 01.2	+0.7
HOWZ	Holdsworth Sta	10.17	202	PN	Pn	17 52 12.8	+0.3
OGWZ	Otaki Gorge	10.21	203	PN	Pn	17 52 13.1	+0.1
RPZ	Rata Peaks	14.25	209	P	Pn	17 53 03.7	-1.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	0.6nm,0.3s,baz=84,slow=2.6,SNR=3.5						
RPZ				S	Sn	17 55 29.0	-14
	1.0nm,0.3s,baz=106,slow=23,SNR=6.4						
DZM	Mont Dzumac	15.64	304	P	P	17 53 29.5	+5.6
	0.8nm,0.3s,baz=136,slow=12,SNR=12						
MCQ	Macquarie Isla	27.61	207	P	P	17 55 48.9	+25
	baz=27,SNR=3.1						
STKA	Stephens Creek	32.94	259	P	P	17 56 11.8	+1.1
	2.3nm,0.8s,baz=98,slow=7.1,SNR=5.3						
MTSU	Mount Surprise	35.23	284	P	P	17 56 32.9	+2.3
	baz=32,SNR=5.5						
ASAR	Alice Springs	41.74	269	P	P	17 57 25.3	+0.4
	4.3nm,0.4s,baz=107,slow=7.4,SNR=184						
WRA	Warramunga Arr	42.83	274	P	P	17 57 34.0	+0.3
	7.2nm,0.6s,baz=112,slow=7.9,SNR=96						
KDU	Kakadu	47.82	282	P	P	17 58 13.2	+0.1
	baz=44,SNR=3.3						
MTN	Manton Dam	48.87	281	P	P	17 58 21.2	+0.2
	baz=45,SNR=4.6						
KNRA	Kununurra	49.48	276	P	P	17 58 26.3	+0.6
	baz=46,SNR=7.6						
FITZ	Fitzroy Crossi	51.04	272	P	P	17 58 37.8	+0.4
	0.6nm,0.3s,baz=127,slow=7.2,SNR=9.0						
FITZ	Fitzroy Crossi	51.04	272	P	P	17 58 37.5	+0.1
	baz=48,SNR=5.2						
QSPA	South Pole Qui	58.59	180	P	P	17 59 32.4	+1.2
	2.9nm,0.8s,baz=39,slow=2.6,SNR=20						
LHMI	Lhok Sumawe	87.19	278	P	P	18 02 33.1	+13
	baz=84,SNR=4.0						
ARCES	ARCESS Array B	139.39	347	PKP	PKPdf	18 09 00.1	+1.3
	0.8nm,0.8s,baz=2.7,slow=2.6,SNR=6.8						
KBZ	Khabaz	144.61	302	PKP	PKPdf	18 09 08.1	-0.8
	1.7nm,0.9s,baz=69,slow=4.9,SNR=4.1						
KAF	Kangasniemi	145.14	339	ep	PKPab	18 09 08.1	-1.2
FINES	FINESS Array B	145.72	338	PKPbc	PKPab	18 09 10.4	-1.0
	3.1nm,0.5s,baz=57,slow=7.0,SNR=18						
NB2	NORSAR Subarra	149.64	350	PKP	PKPbc	18 09 20.7	-0.8
	comp=Z,0.6nm,0.4s,baz=18,slow=2.6						
NOA	NORSAR Array B	149.64	350	PKPbc	PKPbc	18 09 21.0	-0.5
	comp=Z,0.7nm,0.4s,baz=15,slow=4.1,SNR=8.3						
BRTR	Keskin Array B	151.93	296	PKPbc	PKPbc	18 09 26.1	-1.6
	comp=Z,0.7nm,0.5s,baz=135,slow=5.1,SNR=5.3						
TORD	Torodi Ar. Bea	161.67	184	PKPab	PKPab	18 10 18.4	-1.2
	comp=Z,0.1nm,0.4s,baz=183,slow=4.5,SNR=4.1						

ISCJB 08 17:52:44.9±0.3, 41°.32N±0°.02×22°.68E±0°.02, h5km±3km, Error ellipse: s-maj=3.1km s-min=2.7km az=145.6
SKO 08 17:52:45.0, 41°.31N×22°.69E, h15km, M1.7, ML2.2
SOF 08 17:52:45.5, 41°.31N×22°.70E, h1km, MD2.6
CSEM 08 17:52:45.5±0.1, 41°.30N×22°.67E, h5km, ML2.5, Error ellipse: s-maj=3.0km s-min=2.5km az=74.0
ATH 08 17:52:45.8, 41°.27N×22°.70E, h17km±1km, MD3.0/11
BEO 08 17:52:46.7±0.7, 41°.31N×22°.59E, ML2.5/6
THE 08 17:52:46.0, 41°.29N×22°.71E, h3km±1km, ML2.5/10, Error ellipse: s-maj=1.2km s-min=0.4km az=205.0
ISC 08 17:52:46.0±0.8, 41°.30N±0°.02×22°.68E±0°.02, h8km±5km, n76, σ0s.55/118, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	286	P	Pg	17 52 47.6	-0.6
VAY				S	Sg	17 52 49.8	+0.1
VAY	Valandovo	0.09	286	ePg	Pg	17 52 48.5	+0.3
VAY				eSg	Sg	17 52 49.6	-0.1
VAY	Valandovo	0.09	286	i Pg	Pg	17 52 47.7	-0.4
VAY				i Sg	Sg	17 52 49.6	-0.1
VAY				eLg	Lg	17 52 49.7	
	comp=E,2μm,0.4s						
VAY				eLg	Lg	17 52 49.8	
	comp=N,888nm,0.3s						
VAY	Valandovo	0.09	286	P	Pg	17 52 47.6	-0.6
VAY	Valandovo	0.09	286	i Pg	Pg	17 52 48.2	0.0
VAY				eSg	Sg	17 52 49.6	-0.1
VAY				eLg	Lg	17 52 50.2	
	comp=N,888nm,0.3s						
KNT	Kendrikon	0.21	129	P	Pg	17 52 49.9	-0.4
KNT				S	Sg	17 52 53.1	-0.1
KNT	Kendrikon	0.21	129	P	Pg	17 52 49.9	-0.4
KNT				S	Sg	17 52 53.1	-0.1
GRG	Griva	0.40	212	P	Pg	17 52 53.7	-0.1
GRG				S	Sg	17 52 59.6	+0.5
GRG	Griva	0.40	212	ePB	Pg	17 52 53.8	-0.1
GRG				eSB	Sg	17 52 59.3	+0.2
GRG	Griva	0.40	212	P	Pg	17 52 53.7	-0.1
GRG				eSb	Sg	17 52 59.3	+0.2
KKB	Krupnik	0.64	28	P	Pg	17 52 58.1	-0.4
KKB	Krupnik	0.64	28	P	Pg	17 52 58.1	-0.4
SOH	Sokhos	0.70	133	P	Pg	17 52 58.9	-0.6
SOH				S	Sg	17 53 08.1	-0.4
SOH	Sokhos	0.70	133	ePN	Pg	17 52 58.9	-0.6
SOH				eSN	Sg	17 53 07.7	-0.8
SOH	Sokhos	0.70	133	ePn	Pg	17 52 58.9	-0.6
SOH				eSn	Sg	17 53 07.7	-0.8
SOH				S	Sg	17 53 08.1	-0.4
THE	Thessaloniki	0.70	162	P	Pg	17 52 58.9	-0.6
THE				S	Sg	17 53 08.3	-0.3
THE	Thessaloniki	0.70	162	P	Pg	17 52 58.9	-0.6
THE				S	Sg	17 53 08.3	-0.3
SRS	Serrai	0.71	104	P	Pg	17 52 59.0	-0.7
SRS				S	Sg	17 53 08.8	-0.2
SRS	Serrai	0.71	104	P	Pg	17 52 59.0	-0.7
SRS				S	Sg	17 53 08.8	-0.2
HORT	Hortiatis	0.77	155	P	Pg	17 53 00.3	-0.5
HORT				S	Sg	17 53 11.1	+0.3
HORT	Hortiatis	0.77	155	P	Pg	17 53 00.3	-0.5
HORT				S	Sg	17 53 11.1	+0.3
MMB	Musomiste	0.84	69	i Pg	Pg	17 53 01.8	-0.4
MMB	Musomiste	0.84	69	i Pg	Pg	17 53 01.8	-0.4
NVR	Nevrokopi	0.89	86	P	Pg	17 53 02.6	-0.6
NVR				S	Sg	17 53 14.7	-0.1
NVR	Nevrokopi	0.89	86	ePN	Pg	17 53 02.6	-0.6
NVR				eSN	Sg	17 53 14.7	-0.1
NVR	Nevrokopi	0.89	86	P	Pg	17 53 02.6	-0.6
NVR				eSn	Sg	17 53 14.7	-0.1
PLG	Polygyros	1.09	148	P	Pg	17 53 06.1	-0.9
PLG				S	Sb	17 53 21.9	+0.3
PLG	Polygyros	1.09	148	ePN	Pg	17 53 05.7	-1.3
PLG				eSN	Sg	17 53 20.1	-1.0
PLG	Polygyros	1.09	148	ePn	Pg	17 53 05.7	-1.3
PLG	Polygyros	1.09	148	P	Pg	17 53 06.1	-0.9
PLG				eSn	Sg	17 53 20.1	-1.0
PLG				S	Sb	17 53 21.9	+0.3
FNA	Florina	1.11	243	P	Pg	17 53 06.7	-0.7
FNA				S	Sb	17 53 22.9	+0.7
FNA	Florina	1.11	243	ePN	Pg	17 53 06.7	-0.7
FNA	Florina	1.11	243	P	Pg	17 53 06.7	-0.7
FNA				S	Sb	17 53 22.9	+0.7
SKO	Skopje	1.15	306	ePg	Pg	17 53 06.9	-1.1
SKO				eSg	Sg	17 53 22.7	-0.3
SKO				eLg	Lg	17 53 25.2	
	comp=E,30nm,0.6s						
SKO				eLg	Lg	17 53 25.2	
	comp=N,57nm,0.4s						
SKO	Skopje	1.15	306	eSg	Sg	17 53 23.1	+0.1
SKO				eLg	Lg	17 53 25.7	
	comp=N,57nm,0.4s						
KZN	Kozani	1.21	215	P	Pb	17 53 09.2	0.0
KZN	Kozani	1.21	215	ePN	Pg	17 53 09.1	-0.1
KZN	Kozani	1.21	215	ePn	Pg	17 53 09.1	-0.1
VTS	Vitosha	1.35	17	P	Pn	17 53 11.3	-0.1
VTS				S	Sn	17 53 29.9	+0.3
VTS	Vitosha	1.35	17	P	Pg	17 53 11.7	-0.2
VTS	Vitosha	1.35	17	ePg	Pg	17 53 11.8	-0.2
VTS	Vitosha	1.35	17	P	Pn	17 53 11.3	-0.1
VTS	Vitosha	1.35	17	ePg	Pg	17 53 11.8	-0.2
VTS				S	Sn	17 53 29.9	+0.3
KAVA	Kavala	1.42	102	P	Pn	17 53 11.9	-0.2
KAVA				S	Sn	17 53 31.3	+0.3
KAVA	Kavala	1.42	102	P	Pn	17 53 11.9	-0.2
KAVA				S	Sn	17 53 31.3	+0.3
RZN	Rozhen	1.58	75	P	Pg	17 53 16.3	0.0
RZN	Rozhen	1.58	75	P	Pg	17 53 16.3	0.0
BARS	Barje	1.65	337	ePg	Pn	17 53 15.2	-0.1
BARS				eSg	Sb	17 53 37.9	+0.2
BARS	Barje	1.65	337	ePg	Pn	17 53 15.2	-0.1
BARS				eSg	Sb	17 53 37.9	+0.2
PGB	Panagyurishte	1.67	41	P	Pg	17 53 17.4	-0.7
PGB	Panagyurishte	1.67	41	P	Pg	17 53 17.4	-0.7
PLD	Plovdiv	1.72	61	ePg	Pg	17 53 19.1	+0.2
PLD				eSg	Sg	17 53 42.0	+0.8
PLD	Plovdiv	1.72	61	ePg	Pg	17 53 19.1	+0.2
PLD				eSg	Sg	17 53 42.0	+0.8
XOR	Xorichti	1.97	168	P	Pn	17 53 19.0	-0.7
XOR	Xorichti	1.97	168	P	Pn	17 53 19.0	-0.7
ZAPS	Zavoj	1.98	359	ePg	Pb	17 53 22.6	+0.3
ZAPS				eSg	Sg	17 53 48.6	-0.9
RDO	Rodhopi	2.16	93	P	Pn	17 53 22.3	0.0
RDO				S	Sn	17 53 49.9	+0.6
RDO	Rodhopi	2.16	93	ePB	Pn	17 53 22.4	+0.1
RDO	Rodhopi	2.16	93	P	Pn	17 53 22.3	0.0
RDO				S	Sn	17 53 49.9	+0.6
MPEP	Malo Peshtene	2.20	21	P	Pg	17 53 27.5	-0.7
AGG	Agios Georgios	2.29	187	ePN	Pn	17 53 24.6	+0.5
AGG	Agios Georgios	2.29	187	ePn	Pn	17 53 24.6	+0.5
AOS	Alonnisos	2.31	156	ePB	Pn	17 53 24.1	-0.4
AOS	Alonnisos	2.31	156	ePb	Pn	17 53 24.1	-0.4
LIA	Limnos Island	2.36	125	ePN	Pn	17 53 26.1	+1.0
LIA	Limnos Island	2.36	125	ePn	Pn	17 53 26.1	+1.0
ALN	Alexandroupoli	2.58	98	P	Pn	17 53 28.3	+0.3
ALN				S	Sn	17 54 00.0	+0.5
ALN	Alexandroupoli	2.58	98	ePB	Pn	17 53 29.1	+1.1
ALN	Alexandroupoli	2.58	98	P	Pn	17 53 28.3	+0.3
ALN	Alexandroupoli	2.58	98	ePb	Pn	17 53 29.1	+1.1
ALN				S	Sn	17 54 00.0	+0.5
GRUS	Gruza	2.97	331	ePn	Pn	17 53 33.0	-0.5
GRUS	Gruza	2.97	331	ePn	Pn	17 53 33.0	-0.5
DIVS	Divibare	3.43	326	ePn	Pn	17 53 39.7	-0.2
DIVS	Divibare	3.43	326	ePn	Pn	17 53 39.7	-0.2
BZS	Buzias	4.39	350	ePn	Pn	17 53 51.8	-1.1
BZS	Buzias	4.39	350	ePn	Pn	17 53 51.8	-1.1

IDC 08 18:05:11.7±2.2, 6°.26S×130°.61E, h0km, mb3.3/1, mb1 3.4/4, mb1mx3.2/19, mbtmp3.2/4, ML2.9/3, Error ellipse: s-maj=73.4km s-min=29.4km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.73	202	Pn	Pn	18 08 13.7	-0.4
	0.0nm,0.3s,baz=21,slow=8.6,SNR=2.7						
FITZ				Sn	Sn	18 10 20.0	-17
	0.1nm,0.3s,baz=156,slow=18,SNR=3.0						
WRA	Warramunga Arr	14.07	165	Pn	Pn	18 08 33.9	+1.4
	0.1nm,0.3s,baz=346,slow=12,SNR=6.6						
WRA				Sn	Sn	18 11 05.6	-4.0
	0.1nm,0.3s,baz=340,slow=23,SNR=5.5						
ASAR	Alice Springs	17.59	170	P	Pn	18 09 17.8	-0.7
	0.1nm,0.3s,baz=346,slow=9.7,SNR=5.0						
MKAR	Makanchi Array	67.94	326	P	P	18 16 12.5	0.0
	0.2nm,0.4s,baz=123,slow=5.3,SNR=5.0						

ATH 08 18:12:13.6, 41°.32N×22°.53E, h5km, MD2.9/3
ISCJB 08 18:12:14.9±0.4, 41°.33N±0°.02×22°.69E±0°.04, h2km±5km, Error ellipse: s-maj=5.0km s-min=3.1km az=161.0
THE 08 18:12:15.8, 41°.31N×22°.70E, h2km±2km, ML2.0/7, Error ellipse: s-maj=2.1km s-min=0.6km az=177.0
CSEM 08 18:12:15.2±0.1, 41°.32N×22°.69E, h5km, ML1.9, Error ellipse: s-maj=3.1km s-min=2.2km az=66.0
SKO 08 18:12:15.2, 41°.31N×22°.69E, h10km, M1.4, ML1.8
BEO 08 18:12:16.2±1.2, 41°.29N×22°.62E, h6km±5km, ML1.9
ISC 08 18:12:15.2±0.9, 41°.30N±0°.02×22°.68E±0°.03, h9km±6km, n33, σ0s.43/63, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	281	P	Pg	18 12 17.4	-0.1
VAY				S	Sg	18 12 19.2	+0.1
VAY	Valandovo	0.09	281	ePg	Pg	18 12 17.7	+0.2
VAY				eSg	Sg	18 12 19.4	+0.2
VAY	Valandovo	0.09	281	ePg	Pg	18 12 17.4	-0.1
VAY				i Sg	Sg	18 12 19.3	+0.1
VAY				eLg	Lg	18 12 19.4	
	comp=E,654nm,0.3s						
VAY				eLg	Lg	18 12 19.5	
	comp=N,567nm,0.2s						
VAY	Valandovo	0.09	281	P	Pg	18 12 17.4	-0.1
VAY	Valandovo	0.09	281	ePg	Pg	18 12 17.7	+0.2
VAY				S	Sg	18 12 19.2	+0.1
VAY				eLg	Lg	18 12 19.9	
	comp=N,567nm,0.2s						
KNT	Kendrikon	0.21	131	P	Pg	18 12 19.9	+0.3
KNT				S	Sg	18 12 22.9	+0.3
KNT	Kendrikon	0.21	131	P	Pg	18 12 19.9	+0.3
KNT				S	Sg	18 12 22.9	+0.3
GRG	Griva	0.41	212	P	Pg	18 12 23.4	+0.2
GRG				S	Sg	18 12 29.2	+0.6
GRG	Griva	0.41	212	P	Pg	18 12 23.4	+0.2
GRG				S	Sg	18 12 29.2	+0.6
SOH	Sokhos	0.70	133	P	Pg	18 12 28.8	+0.1
SOH				S	Sb	18 12 38.7	-0.6
SOH	Sokhos	0.70	133	ePB	Pg	18 12 28.8	+0.1
SOH				eSB	Sb	18 12 39.2	-0.1
SOH	Sokhos	0.70	133	P	Pg	18 12 28.8	+0.1
SOH				S	Sb	18 12 38.7	-0.6
SOH				eSb	Sb	18 12 39.2	-0.1
THE	Thessaloniki	0.70	162	P	Pg	18 12 28.7	-0.1
THE				S	Sb	18 12 39.1	-0.3
THE	Thessaloniki	0.70	162	P	Pg	18 12 28.7	-0.1
THE				S	Sb	18 12 39.1	-0.3
SRS	Serrai	0.71	105	P	Pg	18 12 28.7	-0.2
SRS				S	Sb	18 12 39.2	-0.4
SRS	Serrai	0.71	105	P	Pg	18 12 28.7	-0.2
SRS				S	Sb	18 12 39.2	-0.4
HORT	Hortiatis	0.77	156	P	Pg	18 12 30.1	0.0
HORT				S	Sb	18 12 41.1	-0.4
HORT	Hortiatis	0.77	156	P	Pg	18 12 30.1	0.0
HORT				S	Sb	18 12 41.1	-0.4
NVR	Nevrokopi	0.89	87	P	Pg	18 12 32.2	-0.1
NVR				S	Sb	18 12 44.5	-0.3
NVR	Nevrokopi	0.89	87	ePG	Pg	18 12 32.2	-0.1
NVR				eSB	Sn	18 12 46.6	-0.3
NVR	Nevrokopi	0.89	87	P	Pg	18 12 32.2	-0.1
NVR				S	Sb	18 12 44.5	-0.3
NVR				eSb	Sn	18 12 46.6	-0.3
PLG	Polygyros	1.09	148	ePG	Pg	18 12 35.7	-0.5
PLG				eSB	Sb	18 12 51.1	+0.4
PLG	Polygyros	1.09	148	ePg	Pg	18 12 35.7	-0.5
PLG				eSb	Sb	18 12 51.1	+0.4
VTS	Vitosha	1.34	17	P	Pg	18 12 41.3	+0.3
VTS				S	Sg	18 12 59.5	+1.0
VTS	Vitosha	1.34	17	ePg	Pg	18 12 41.3	+0.3
VTS				eSg	Sg	18 12 59.7	+1.2
VTS	Vitosha	1.34	17	P	Pg	18 12 41.3	+0.3
VTS				eSg	Sg	18 12 59.7	+1.2
OUR	Ouranopolis	1.38	134	P	Pg	18 12 41.7	0.0
OUR	Ouranopolis	1.38	134	P	Pg	18 12 41.7	0.0
NEST	Nestorio	1.53	235	P	Pb	18 12 44.0	+0.3
NEST	Nestorio	1.53	235	P	Pb	18 12 44.0	+0.3
BARS	Barje	1.64	337	ePg	Pb	18 12 45.2	-0.5
BARS				eSg	Sg	18 13 08.0	-0.1
BARS	Barje	1.64	337	ePg	Pb	18 12 45.2	-0.5
BARS				eSg	Sg	18 13 08.0	-0.1
ZAPS	Zavoj	1.97	359	ePg	Pg	18 12 52.6	-0.3
ZAPS				eSg	Sg	18 13 19.7	+1.2

IDC 08 18:12:28.1±1.7, 9°.49S×125°.18E, h0km, mb3.3/1, mb1 3.7/4, mb1mx3.5/20, mbtmp3.5/4, ML3.6/3, MS2.5/1, Ms1 2.5/1, ms1mx1.6/15, Error ellipse: s-maj=101.5km s-min=26.7km az=66.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	8.57	177	Pn	Pn	18 14 33.8	+0.2
	1.0nm,0.3s,baz=354,slow=10,SNR=35						
FITZ				Sn	Sn	18 16 02.8	-8.3
	0.3nm,0.3s,baz=51,slow=18,SNR=3.5						
FITZ				LR	LR	18 17 43.4	
	comp=Z,28nm,19.3s,baz=115,slow=37						
WRA	Warramunga Arr	13.65	141	Pn	Pn	18 15 43.2	+0.1
	0.3nm,0.3s,baz=321,slow=14,SNR=16						
WRA				Sn	Sn	18 18 06.9	-8.8
	0.2nm,0.3s,baz=320,slow=21,SNR=4.2						
ASAR	Alice Springs	16.38	150	Pn	Pn	18 16 19.2	-0.4
	0.2nm,0.3s,baz=320,slow=11,SNR=20						
ASAR				Sn	Sn	18 19 12.8	-10
	0.1nm,0.3s,baz=310,slow=20,SNR=4.1						
MKAR	Makanchi Array	67.81	330	P	P	18 23 28.1	0.0
	0.1nm,0.4s,baz=130,slow=7.2,SNR=4.2						

IDC 08 18:13:56.0±0.9, 25°.75N×56°.34E, h0km, mb3.8/11, mb1 3.9/11, mb1mx3.7/31, mbtmp3.8/11, MS3.5/1, Ms1 3.5/1, ms1mx2.3/33, Error ellipse: s-maj=22.9km s-min=21.4km az=34.0
THR 08 18:13:57.6±0.5, 25°.83N×56°.36E, h16km±4km, ML3.7
ISCJB 08 18:13:57.9±0.7, 25°.92N±0°.03×56°.43E±0°.06, h13km±4km, mb3.7/13, MS3.4/1, Error ellipse: s-maj=8.6km s-min=4.4km az=4.0
OMAN 08 18:13:57.4±1.1, 25°.95N×56°.53E, h5km, Error ellipse: s-maj=2.3km s-min=0.7km az=17.0
NEIC 08 18:13:57.9±0.8, 25°.76N×56°.44E, h10km, mb3.9/3, ML3.7(THR), MN3.8(TEH), Error ellipse: s-maj=14.6km s-min=11.6km az=6.0
NEIC Felt at Al Fujayrah and Ra's al Khaymah, United Arab Emirates.
CSEM 08 18:13:58.6±0.2, 25°.88N×56°.35E, h10km, ML3.9/5, Error ellipse: s-maj=6.9km s-min=4.5km az=88.0
TEH 08 18:14:02.1, 26°.11N×56°.19E, h28km, ML3.9
ISC 08 18:13:58.7±1.0, 25°.88N±0°.03×56°.39E±0°.07, h11km±5km, n103, σ1s.13/111, mb3.8/13, 2C-2D, Eastern Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BANOM	Banah	0.09	301	⇓P	Pg	18 14 01.4	0.0
BANOM				⇓S	Sg	18 14 03.3	-0.1
BANOM	Banah	0.09	301	P	Pg	18 14 01.4	0.0
	SNR=1000						
BANOM				S	Sg	18 14 03.3	-0.1
HATD	Hatta, Dubai	1.07	193	P	Pg	18 14 19.2	-0.1
NAZ	Nazwa, Dubai	1.10	217	P	Pn	18 14 20.3	+0.3
NAZ				S	Sn	18 14 38.3	+3.1
FAQ	Al Faqa, Dubai	1.34	213	P	Pb	18 14 23.4	-0.3
BNDS	Bandar-Abbas	1.53	353	ePg	Pb	18 14 26.6	-0.6
BNDS				eSg	Sg	18 14 47.5	-0.4
BNDS				AML	AML	18 14 53.2	
	comp=E,900nm,0.5s						
BNDS				AML	AML	18 14 55.8	
	comp=N,1μm,0.6s						
BNDS	Bandar-Abbas	1.53	353	ePn	Pn	18 14 26.0	-0.1
BNDS				eSg	Sg	18 14 47.0	-1.0
BNDS	Bandar-Abbas	1.53	353	ePn	Pn	18 14 26.0	-0.1
BNDS	Bandar-Abbas	1.53	353	ePg	Pb	18 14 26.6	-0.6
BNDS				eSg	Sg	18 14 47.5	-0.4
ASUD	Al Ashush, Dub	1.57	218	P	Pg	18 14 28.9	+0.1
	SNR=550						
ASUD	Al Ashush, Dub	1.57	218	P	Pb	18 14 27.8	+0.1
IBND	Bandar-abas	1.57	5	ePn	Pb	18 14 27.9	+0.1
IBND				eSg	Sg	18 14 48.9	-0.4
IBND				e		18 14 57.1	
	comp=Z,18μm,0.2s						
IBND	Bandar-abas	1.57	5	ePn	Pb	18 14 27.9	+0.1
IBND				eSg	Sg	18 14 48.9	-0.4
ARQ	Araqi	2.53	177	P	Pn	18 14 41.0	+1.3
	SNR=9.7						
ARQ	Araqi	2.53	177	P	Pn	18 14 41.0	+1.3
	SNR=9.7						
SMDO	Samad	3.19	151	⇑P	Pn	18 14 48.8	0.0
	SNR=17						
SMDO	Samad	3.19	151	P	Pn	18 14 48.8	0.0
	SNR=17						
GHIR	Ghir-Karzin	3.87	309	ePn	Pn	18 14 58.7	+0.5
GHIR				AML	AML	18 15 58.4	
	comp=N,91nm,0.7s						
GHIR				AML	AML	18 16 22.2	
	comp=E,82nm,0.5s						
GHIR	Ghir-Karzin	3.87	309	ePn	Pn	18 14 58.0	-0.2
GHIR	Ghir-Karzin	3.87	309	ePn	Pn	18 14 58.0	-0.2
WBK	Wadi Bani Khal	4.02	144	⇑P	Pn	18 14 59.5	-0.7
	SNR=15						
WBK	Wadi Bani Khal	4.02	144	P	Pn	18 14 59.5	-0.7
	SNR=15						
KRBR	Kerman	4.10	5	ePn	Pn	18 15 03.1	+1.4
KRBR				Sn	Sn	18 15 50.3	+0.6
KRBR	Kerman	4.10	5	ePn	Pn	18 15 03.0	+1.4
KRBR				Sn	Sn	18 15 50.0	+0.2
KRBR	Kerman	4.10	5	ePn	Pn	18 15 03.0	+1.4
KRBR				Sn	Sn	18 15 50.0	+0.2
ISRV	Sarvestan	4.54	321	ePn	Pn	18 15 09.0	+1.4
ISRV				e		18 16 10.9	
	comp=Z,730nm,0.1s						
ISRV	Sarvestan	4.54	321	ePn	Pn	18 15 09.0	+1.4
ZHSF	Zahedan	5.38	45	ePn	Pn	18 15 20.1	+1.1
ZHSF	Zahedan	5.38	45	ePn	Pn	18 15 20.0	+1.0
ZHSF	Zahedan	5.38	45	ePn	Pn	18 15 20.0	+1.0
IMEH	Mehriz	5.71	345	ePn	Pn	18 15 24.5	+0.9
IMEH				e		18 16 34.9	
	comp=Z,365nm,0.3s						
IMEH	Mehriz	5.71	345	ePn	Pn	18 15 24.5	+0.9
IBAF	Bafgh	5.74	353	ePn	Pn	18 15 25.0	+1.1
IBAF				e		18 16 39.9	
	comp=Z,208nm,0.2s						
IBAF	Bafgh	5.74	353	ePn	Pn	18 15 25.0	+1.1
ISAD	Sadrabad	6.46	339	ePn	Pn	18 15 36.0	+2.0
ISAD				e		18 16 57.5	
	comp=Z,480nm,0.2s						
ISAD	Sadrabad	6.46	339	ePn	Pn	18 15 36.0	+2.0
IKOO	Kooshah	6.91	19	ePn	Pn	18 15 42.2	+2.0
IKOO	Kooshah	6.91	19	ePn	Pn	18 15 42.2	+2.0
IGAR	Gharneh	7.53	331	ePn	Pn	18 15 49.3	+0.7
IGAR				e		18 15 56.4	
	comp=Z,593nm,0.1s						
IZEF	Zefreh	7.84	334	ePn	Pn	18 15 52.9	0.0
IZEF				e		18 16 04.5	
	comp=Z,174nm,0.2s						
IZEF	Zefreh	7.84	334	ePn	Pn	18 15 52.9	0.0
IPIR	Pirpir	8.31	326	ePn	Pn	18 15 59.5	+0.2
IPIR				e		18 16 05.7	
	comp=Z,484nm,0.2s						
IPIR	Pirpir	8.31	326	ePn	Pn	18 15 59.5	+0.2
KBD	Kabd	8.39	295	eP	Pn	18 15 58.2	-2.0
KBD	Kabd	8.39	295	eP	Pn	18 15 58.2	-2.0
RDF	Al-Radifah	8.42	293	eP	Pn	18 15 59.1	-1.5
RDF				AML	AML	18 17 30.7	
	comp=Z,26nm,0.5s						
RDF	Al-Radifah	8.42	293	eP	Pn	18 15 59.1	-1.5
IKLH	Kolahrood	8.52	332	ePn	Pn	18 16 03.0	+0.8
IKLH	Kolahrood	8.52	332	ePn	Pn	18 16 03.0	+0.8
NAY	Al-Naaiem	8.78	295	eP	Pn	18 16 03.8	-1.8
NAY				AML	AML	18 17 39.9	
	comp=Z,13nm,0.4s						
NAY	Al-Naaiem	8.78	295	eP	Pn	18 16 03.8	-1.8
MIB	Mutribah	8.91	298	eP	Pn	18 16 06.0	-1.4
MIB				AML	AML	18 17 43.4	
	comp=Z,19nm,0.4s						
MIB	Mutribah	8.91	298	eP	Pn	18 16 06.0	-1.4
IGHG	Ghaleghazi	11.96	317	ePn	Pn	18 16 47.7	-1.6
IGHG	Ghaleghazi	11.96	317	ePn	Pn	18 16 47.7	-1.6
IDHR	Dehrash	12.32	318	ePn	Pn	18 16 53.9	-0.3
IDHR				e		18 17 00.4	
	comp=Z,544nm,0.1s						
IDHR	Dehrash	12.32	318	ePn	Pn	18 16 53.9	-0.3
GNI	Garni	17.24	329	P	P	18 18 04.4	+3.3
GNI	Garni	17.24	329	P	P	18 18 04.4	+3.3
	comp=Z,0.4nm,0.3s,baz=61,slow=6.1,SNR=7.9						
MMAI	Mount Meron Ar	19.59	296	P	Pn	18 18 29.7	+1.4
MMAI	Mount Meron Ar	19.59	296	P	Pn	18 18 29.7	+1.4
	comp=Z,0.6nm,0.3s,baz=95,slow=14,SNR=5.2						
KBZ	Khabaz	20.93	332	P	Pn	18 18 44.9	+1.2
KBZ	Khabaz	20.93	332	P	Pn	18 18 44.9	+1.2
	comp=Z,5.3nm,0.8s,baz=136,slow=7.4,SNR=16						
EKS2	Erkin-Say	21.99	36	eP	P	18 18 53.3	+0.4
	comp=Z,8.0nm,1.0s						
EKS2	Erkin-Say	21.99	36	eP	P	18 18 53.3	+0.4
	comp=Z,8.0nm,1.0s						
BR131	Keskin Array S	23.50	312	eP	P	18 19 09.8	+1.1
	comp=Z,1.8nm,0.7s						
BR131	Keskin Array S	23.50	312	eP	P	18 19 09.8	+1.1
	comp=Z,1.8nm,0.7s						
BRTR	Keskin Array B	23.50	312	P	P	18 19 08.9	+0.2
BRTR	Keskin Array B	23.50	312	P	P	18 19 08.9	+0.2
	comp=Z,1.7nm,0.6s,baz=135,slow=12,SNR=12						
BRTR	Keskin Array B	23.50	312	P	P	18 19 08.9	+0.2
ABKAR	Akbulak array	23.50	6	eP	P	18 19 07.4	-1.0
	comp=Z,1.8nm,0.6s						
ABKAR	Akbulak array	23.50	6	eP	P	18 19 07.4	-1.0
	comp=Z,1.8nm,0.6s						
AKTO	Aktyubinsk	24.55	3	P	P	18 19 17.8	-0.5
AKTO	Aktyubinsk	24.55	3	P	P	18 19 17.8	-0.5
	comp=Z,2.7nm,0.7s,baz=182,slow=12,SNR=17						
AKTO	Aktyubinsk	24.55	3	P	P	18 19 17.8	-0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BVAR	Borovoye Array	29.08	17	P	P	18 19 58.5	-0.5
BVAR	Borovoye Array comp=Z,0.6nm,0.5s,baz=189,slow=7.5,SNR=5.1	29.08	17	P	P	18 19 58.5	-0.5
BVAR	Borovoye Array	29.08	17	P	P	18 19 58.5	-0.5
MKAR	Makanchi Array	29.29	38	P	P	18 20 02.2	+1.3
MKAR	Makanchi Array comp=Z,0.6nm,0.6s,baz=226,slow=8.1,SNR=11	29.29	38	P	P	18 20 02.2	+1.3
MKAR	Makanchi Array	29.29	38	P	P	18 20 02.2	+1.3
KURBB	Kurchatov Arra comp=Z,0.1nm,0.3s,baz=230,slow=7.9,SNR=3.2	29.99	29	P	P	18 20 07.1	+0.1
KURK	Kurchatov	30.10	29	P	P	18 20 07.1	-0.9
KURK	Kurchatov	30.10	29	P	P	18 20 07.1	-0.9
KMBO	Kilima Mbogo comp=Z,80nm,20.3s,baz=95,slow=37	32.60	217	LR	LR	18 34 03.1	
ZALV	Zalesovo Beam	35.08	29	P	P	18 20 51.2	-0.3
ZALV	Zalesovo Beam comp=Z,0.7nm,0.5s,baz=234,slow=9.9,SNR=5.3	35.08	29	P	P	18 20 51.2	-0.3
ZALV	Zalesovo Beam	35.08	29	P	P	18 20 51.2	-0.3
NOA	NORSAR Array B	46.51	332	P	P	18 22 26.0	+0.2
NOA	NORSAR Array B comp=Z,0.1nm,0.4s,baz=124,slow=7.5,SNR=3.1	46.51	332	P	P	18 22 26.0	+0.2
NOA	NORSAR Array B	46.51	332	P	P	18 22 26.0	+0.2
TORD	Torodi Ar. Bea	52.75	267	P	P	18 23 12.2	-1.8
TORD	Torodi Ar. Bea comp=Z,0.8nm,0.4s,baz=64,slow=7.5,SNR=22	52.75	267	P	P	18 23 12.2	-1.8
TORD	Torodi Ar. Bea	52.75	267	P	P	18 23 12.2	-1.8
FITZ	Fitzroy Crossi	80.24	116	P	P	18 26 08.8	-1.0
FITZ	Fitzroy Crossi comp=Z,1.2nm,0.7s,baz=207,slow=4.5,SNR=3.7	80.24	116	P	P	18 26 08.8	-1.0
FITZ	Fitzroy Crossi	80.24	116	P	P	18 26 08.8	-1.0
WRA	Warramunga Arr	88.30	113	P	P	18 26 50.1	-0.6
WRA	Warramunga Arr comp=Z,1.0nm,0.8s,baz=310,slow=4.2,SNR=7.4	88.30	113	P	P	18 26 50.1	-0.6
WRA	Warramunga Arr	88.30	113	P	P	18 26 50.1	-0.6
ASAR	Alice Springs	89.70	116	P	P	18 26 56.2	-1.0
ASAR	Alice Springs comp=Z,0.6nm,0.8s,baz=287,slow=4.8,SNR=6.9	89.70	116	P	P	18 26 56.2	-1.0
ASAR	Alice Springs	89.70	116	P	P	18 26 56.2	-1.0

IDC 08 18:14:19.0±9.8, 19.07N×145.16E, h269km±80km, mb3.2/7, mb1 3.4/8, mb1mx3.1/28, mbtmp3.2/8, MS2.2/1, Ms1 2.2/1, ms1mx2.1/14, Error ellipse: s-maj=61.5km s-min=24.6km az=166.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	Matsushiro Arr 0.1nm,0.3s,baz=161,slow=9.5,SNR=13	18.45	342	P	P	18 18 14.6	-0.8
MAT	Matsushiro	18.45	342	P	P	18 18 14.8	-0.6
TGY	Tagaytay City comp=Z,5.6nm,18.4s,baz=29,slow=34	23.72	262	LR	LR	18 27 40.5	
CMAR	Chiang Mai Arr 0.5nm,0.7s,baz=81,slow=6.6,SNR=5.1	43.67	277	P	P	18 21 58.0	0.0
ZALV	Zalesovo Beam 0.5nm,0.4s,baz=93,slow=6.2,SNR=5.1	57.41	322	P	P	18 23 39.7	0.0
ZALV	 0.5nm,0.5s,baz=90,slow=5.8,SNR=2.4			PcP	PcP	18 24 28.8	-1.5
MKAR	Makanchi Array 0.5nm,0.7s,baz=91,slow=8.5,SNR=7.1	57.84	314	P	P	18 23 42.8	-0.1
KURBB	Kurchatov Arra 1.3nm,0.6s,baz=96,slow=7.4,SNR=26	60.70	318	P	P	18 24 02.1	-0.2
ILAR	Eielson Array 0.6nm,0.7s,baz=250,slow=5.5,SNR=5.9	63.54	26	P	P	18 24 21.1	+0.3
BVAR	Borovoye Array 1.9nm,0.5s,baz=90,slow=7.4,SNR=14	65.87	320	P	P	18 24 36.7	+0.7
NVAR	Mina Array Bea 0.8nm,0.7s,baz=264,slow=6.4,SNR=7.9	83.31	52	P	P	18 26 16.5	0.0

*IDC **08** 18:33:56.7±14.0, 13.34N×90.68W, h0km, mb3.9/2, mb1 4.0/3, mb1mx3.6/22, mbtmp3.7/3, Error ellipse: s-maj=275.9km s-min=55.0km az=0.0*
*CASC **08** 18:34:01.7±1.4, 13.25N×91.24W, h18km±8km, MD3.7*
ISC 08 18:33:57.4±2.8, 13.02N±0.09×91.09W±0.09, h16km±16km, n18, σ1.08/24, 2D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	Ixpaco	1.30	28	eP	Pg	18 34 23.4	+0.7
IXG				eS	Sg	18 34 39.4	-0.3
JAT	Jato	1.40	338	⇓eP	Pn	18 34 22.4	+0.1
FUG	Fuego 3	1.44	10	⇓iP	Pb	18 34 24.1	0.0
PCG	Pacaya	1.45	19	eP	Pg	18 34 24.8	-0.5
SBLS	San Blas	1.65	60	eP	Pg	18 34 29.9	+0.8
SBLS				eS	Sg	18 34 52.2	+1.7
SNJE	San Jose	1.67	59	eP	Pg	18 34 30.3	+0.6
NBG	Las Nubes	1.72	25	eP	Pg	18 34 29.9	-0.7
NBG				eS	Sb	18 34 51.2	+0.9
RBDL	Robledal	1.75	51	eP	Pg	18 34 31.0	0.0
BOQS	Boqueron	1.90	68	eP	Pg	18 34 34.5	+0.6
BOQS				eS	Sg	18 34 60.0	+1.3
LFRS	El Faro	2.06	73	eP	Pg	18 34 36.8	-0.3
LFRS				eS	Sg	18 35 04.2	+0.3
LBRS	Las Brisas	2.12	70	eP	Pg	18 34 37.6	-0.5
SNVI	San Vicente	2.27	75	eP	Pg	18 34 39.9	-1.2
SNVI				eS	Sg	18 35 09.3	-1.2
MRL	Marmol	2.45	34	eP	Pb	18 34 41.0	-0.1
MRL				eS	Sg	18 35 14.0	-2.2
VSM	San Miguel	2.77	81	eP	Pb	18 34 47.5	+0.8
CNCH	Conchagua	3.18	85	eP	Pb	18 34 52.5	-1.2
TXAR	Lajitas Array 0.1nm,0.3s,baz=143,slow=12,SNR=6.3	20.00	326	P	Pn	18 38 30.7	-0.6
NVAR	Mina Array Bea 0.7nm,0.7s,baz=130,slow=8.4,SNR=5.1	34.99	321	P	P	18 40 51.0	+1.6
SCHQ	Schefferville 1.4nm,0.6s,baz=233,slow=10,SNR=6.1	45.84	19	P	P	18 42 16.9	-1.7

TAP 08 18:43:56.3, 23.88N×121.56E, h9km, ML3.3, 5C-5D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESF	Shoufeng Towns baz=257	0.05	255	⇓iP	Pg	18 43 58.4	+0.2
ESF	 baz=257			S	Sg	18 44 00.1	+0.5
HWA	Hwalien baz=25	0.10	25	P	Pg	18 43 59.5	+0.7
HWA	 baz=25			S	Sg	18 44 02.2	+1.5
ESL	Shilin baz=238	0.13	239	⇑iP	Pg	18 43 59.5	+0.1
ESL	 baz=238			S	Sg	18 44 01.6	+0.1
TEGC	Jichi Village baz=184	0.17	185	eP	Pg	18 44 00.8	+0.8
TEGC	 baz=184			eS	Sg	18 44 04.5	+1.9
TWD	Chiawan baz=3.0	0.20	10	⇓iP	Pg	18 44 00.9	+0.5
TWD	 baz=3.0			i S	Sg	18 44 04.2	+0.9
WHF	Hehuan Shan baz=314	0.37	314	⇑iP	Pg	18 44 04.3	+0.1
WHF	 baz=314			S	Sg	18 44 09.7	+0.1
EHY	Hungye baz=219	0.43	210	eP	Pg	18 44 04.7	-0.1
EHY	 baz=219			eS	Sg	18 44 11.4	+0.8
TWT	Tachien baz=304	0.51	317	eP	Pb	18 44 07.2	-0.4
TWT	 baz=304			eS	Sb	18 44 14.5	-0.8
ENA	Nanau baz=4.0	0.57	17	eP	Pg	18 44 07.6	+0.3
NNS	Nan Shan baz=342	0.58	343	⇑iP	Pg	18 44 08.2	+0.5
NNS	 baz=342			eS	Sg	18 44 16.0	+0.5
TWF1	Yuli baz=216	0.58	204	eP	Pg	18 44 07.5	-0.1
TWF1	 baz=216			eS	Sg	18 44 16.1	+0.8
SMLT	Sun Moon Lake baz=271	0.60	270	P	Pb	18 44 08.8	-0.3
SMLT	 baz=271			eS	Sb	18 44 17.1	-0.8
TYC	Yuchr baz=282	0.64	272	P	Pb	18 44 09.4	-0.3
TYC	 baz=282			eS	Sg	18 44 17.4	+0.2
YUS	Yu-Shan baz=245	0.68	235	⇓iP	Pg	18 44 10.5	+0.4
ENTT	Nioudou baz=359	0.75	1	⇑P	Pb	18 44 11.4	-0.2
TWC	Suao baz=10.0	0.77	20	eP	Pb	18 44 11.9	0.0
ALS	Alishan baz=253	0.78	242	⇓iP	Pb	18 44 12.4	-0.1
WNT	Mingjian baz=271	0.80	270	eP	Pn	18 44 13.5	-0.2
CHKT	Chengkung baz=194	0.80	193	eP	Pg	18 44 11.6	-0.1
NSK	Sanguang baz=346	0.81	347	⇑P	Pb	18 44 12.7	+0.1
TWE	Neicheng baz=5.0	0.84	7	P	Pb	18 44 13.0	0.0
TWE	 baz=5.0			eS	Sb	18 44 24.5	+0.1
TCU	Taichung baz=289	0.85	288	eP	Pn	18 44 14.7	+0.3
ELDTW	Lidau baz=217	0.85	216	eP	Pg	18 44 12.0	-0.9
TWQ1	Liyutan baz=303	0.85	303	eP	Pn	18 44 14.7	+0.2
CHN5	Tsauling baz=252	0.86	251	P	Pb	18 44 13.9	+0.5
NSY	Sanyi baz=306	0.90	306	eP	Pn	18 44 15.7	+0.6
NSTT	Nanjuang baz=325	0.90	326	eP	Pn	18 44 14.7	-0.4
WGK	Gukeng baz=261	0.93	258	eP	Pn	18 44 15.7	+0.2
WGK	 baz=261			eS	Sn	18 44 29.7	+0.7
CHN4	Tsaushan baz=256	1.03	239	⇓eP	Pn	18 44 17.0	+0.1
CHN2	Minshiung baz=253	1.05	251	eP	Pn	18 44 18.1	+0.9
HSN	Hsinchu baz=331	1.06	330	eP	Pn	18 44 18.6	+1.3
WTP	Ta-pu baz=236	1.07	234	eP	Pb	18 44 17.2	+0.1
CHY	Chiayi baz=252	1.11	250	eP	Pn	18 44 18.1	+0.2
NCU	National Centr baz=350	1.13	343	eP	Pn	18 44 20.0	+1.7
TWG	Pinlang baz=192	1.15	203	eP	Pb	18 44 18.0	-0.3
TAP1	Taipei baz=355	1.15	358	eP	Pn	18 44 18.9	+0.4
TWK	Hsinying baz=242	1.16	238	eP	Pn	18 44 19.4	+0.7
TWK	 baz=242			eS	Sn	18 44 35.6	+0.9
WTCT	Ta-ch'eng baz=271	1.17	269	eP	Pn	18 44 19.1	+0.3
CHN1	Nanshi baz=248	1.17	234	eP	Pg	18 44 19.1	+0.2
TTN	Taitung baz=201	1.19	199	eP	Pb	18 44 18.0	-0.9
NWF	Wu-fen Shan baz=7.0	1.20	10	eP	Pg	18 44 20.3	+0.8
TWS1	Kuangyinshan baz=1.0	1.22	354	eP	Pg	18 44 20.6	+0.9
CHN3	Shinhua baz=247	1.36	234	eP	Pg	18 44 23.0	+0.6
TWY	Chenhua baz=360	1.39	2	eP	Pb	18 44 22.6	+0.3
ECL	Taimali baz=191	1.40	204	eP	Pn	18 44 21.4	-0.6
SSD	Sandimen baz=212	1.42	217	eP	Pb	18 44 22.7	-0.2
YOJ	Yonaguni jima baz=64	1.45	66	eP	Pn	18 44 21.5	-1.0
TWM1	Shoushan baz=228	1.48	225	eP	Pg	18 44 25.2	+0.3
EAST	Anshuo baz=194	1.63	204	eP	Pb	18 44 26.3	-0.2
SCZT	Fangliau baz=213	1.73	210	eP	Pb	18 44 28.1	-0.1
PNG	Penghu baz=263	1.86	261	eP	Pn	18 44 28.8	+0.5

TAP 08 18:44:05.5, 23.88N×121.56E, h10km, ML3.9, 1C-1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESF	Shoufeng Towns baz=262	0.04	260	⇓iP	Pg	18 44 07.7	+0.2
ESF	 baz=262			i S	Sg	18 44 09.3	+0.5
HWA	Hwalien baz=18	0.11	25	eP	Pg	18 44 08.8	+0.5
HWA	 baz=18			eS	Sg	18 44 11.2	+1.2
ESL	Shilin baz=239	0.13	240	⇑iP	Pg	18 44 08.7	+0.2
ESL	 baz=239			i S	Sg	18 44 10.8	+0.2
TEGC	Jichi Village baz=184	0.17	185	P	Pg	18 44 10.0	+0.8
TEGC	 baz=184			S	Sg	18 44 13.7	+2.0
TWD	Chiawan baz=4.0	0.20	11	i P	Pg	18 44 10.4	+0.6
TWD	 baz=4.0			S	Sg	18 44 13.4	+0.7
WHF	Hehuan Shan baz=315	0.38	315	P	Pg	18 44 13.5	-0.1
WHF	 baz=315			eS	Sg	18 44 19.1	+0.2
EHY	Hungye baz=211	0.43	210	P	Pg	18 44 14.3	+0.4
TWT	Tachien baz=305	0.51	317	eP	Pg	18 44 15.7	0.0
TWT	 baz=305			eS	Sb	18 44 23.8	-0.8
ENA	Nanau baz=5.0	0.57	17	eP	Pg	18 44 16.6	0.0
ENA	 baz=5.0			eS	Sb	18 44 25.9	-0.1
TWF1	Yuli baz=216	0.57	204	eP	Pg	18 44 17.0	+0.2
TWF1	 baz=216			eS	Sb	18 44 25.4	-0.6
NNS	Nan Shan baz=342	0.58	343	eP	Pg	18 44 17.1	0.0
NNS	 baz=342			eS	Sg	18 44 25.3	+0.4
SMLT	Sun Moon Lake baz=271	0.60	271	eP	Pb	18 44 18.0	-0.3
SMLT	 baz=271			eS	Sb	18 44 26.5	-0.5
TYC	Yuchr baz=283	0.64	272	eP	Pb	18 44 18.5	-0.3
TYC	 baz=283			eS	Sb	18 44 27.4	-0.4
YUS	Yu-Shan baz=237	0.68	235	eP	Pb	18 44 20.0	-0.1
YUS	 baz=237			eS	Sb	18 44 29.3	-0.7
ENTT	Nioudou baz=359	0.76	1	eP	Pg	18 44 20.5	+0.3
ENTT	 baz=359			eS	Sb	18 44 31.4	0.0
TWC	Suao baz=10.0	0.78	20	eP	Pg	18 44 20.8	+0.2
TWC	 baz=10.0			eS	Sb	18 44 32.0	+0.3
ALS	Alishan baz=244	0.78	242	eP	Pb	18 44 21.6	0.0
ALS	 baz=244			eS	Sb	18 44 32.0	-0.5
CHKT	Chengkung baz=185	0.80	193	eP	Pg	18 44 21.2	+0.3
CHKT	 baz=185			eS	Sb	18 44 33.1	+0.7
WNT	Mingjian baz=271	0.80	270	eP	Pn	18 44 22.7	-0.2
WNT	 baz=271			eS	Sn	18 44 34.1	-0.8
NSK	Sanguang baz=336	0.81	347	P	Pb	18 44 21.9	-0.1
NSK	 baz=336			S	Sb	18 44 32.7	-0.4
TWE	Neicheng baz=5.0	0.84	7	eP	Pb	18 44 22.3	0.0
TWE	 baz=5.0			eS	Sb	18 44 34.6	+0.8
ELDTW	Lidau baz=209	0.85	216	eP	Pg	18 44 21.8	-0.2
ELDTW	 baz=209			eS	Sb	18 44 33.8	-0.3
TCU	Taichung baz=289	0.85	289	eP	Pn	18 44 24.0	+0.4
CHN5	Tsauling baz=242	0.85	251	eP	Pn	18 44 23.2	-0.6
CHN5	 baz=242			eS	Sn	18 44 36.8	+0.3
TWQ1	Liyutan baz=303	0.85	303	eP	Pn	18 44 23.8	0.0
TWQ1	 baz=303			eS	Sb	18 44 34.9	+0.7
ILA	Ilan baz=8.0	0.90	11	eP	Pb	18 44 23.3	0.0
ILA	 baz=8.0			eS	Sb	18 44 36.2	+0.8
NSY	Sanyi baz=306	0.90	307	eP	Pn	18 44 24.9	+0.5
NSY	 baz=306			eS	Sn	18 44 36.6	-0.9
NSTT	Nanjuang baz=325	0.90	326	eP	Pn	18 44 24.2	-0.2
NSTT	 baz=325			eS	Sb	18 44 36.3	+0.8
WGK	Gukeng baz=261	0.93	258	eP	Pn	18 44 24.8	+0.1
WGK	 baz=261			eS	Sn	18 44 39.4	+1.2
CHN4	Tsaushan baz=235	1.03	239	eP	Pn	18 44 26.5	+0.4
CHN4	 baz=235			eS	Sn	18 44 41.1	+0.5
CHN2	Minshiung baz=254	1.05	251	eP	Pn	18 44 27.5	+1.1
CHN2	 baz=254			eS	Sn	18 44 42.5	+1.4
HSN	Hsinchu baz=339	1.06	330	eP	Pn	18 44 27.8	+1.2
HSN	 baz=339			eS	Sn	18 44 42.5	+1.0
WTP	Ta-pu baz=244	1.07	234	eP	Pn	18 44 27.4	+0.7
WTP	 baz=244			eS	Sn	18 44 42.3	+0.5
CHY	Chiayi baz=253	1.10	250	eP	Pn	18 44 27.7	+0.6
CHY	 baz=253			eS	Sn	18 44 43.0	+0.5
NCU	National Centr baz=349	1.14	343	eP	Pn	18 44 29.0	+1.4
NCU	 baz=349			eS	Sn	18 44 44.8	+1.5
TWG	Pinlang baz=214	1.14	203	eP	Pb	18 44 27.1	-0.4
TWG	 baz=214			eS	Sn	18 44 43.4	0.0
TWK	Hsinying baz=242	1.15	238	eP	Pn	18 44 28.7	+0.8
TWK	 baz=242			eS	Sn	18 44 44.6	+0.8
TAP1	Taipei baz=354	1.16	359	eP	Pn	18 44 28.3	+0.5
TAP1	 baz=354			eS	Sn	18 44 43.3	-0.4
TAP	Taipei baz=354	1.16	358	eP	Pn	18 44 28.6	+0.8
TAP	 baz=354			eS	Sn	18 44 44.2	+0.4
WTCT	Ta-ch'eng baz=271	1.17	270	eP	Pn	18 44 28.6	+0.6
WTCT	 baz=271			eS	Sn	18 44 45.2	+1.2
CHN1	Nanshi baz=239	1.17	234	eP	Pg	18 44 28.9	+0.9
CHN1	 baz=239			eS	Sn	18 44 44.6	+0.5
TTN	Taitung baz=205	1.18	199	eP	Pg	18 44 28.3	+0.1
TTN	 baz=205			eS	Sn	18 44 44.5	+0.2
NWF	Wu-fen Shan baz=5.0	1.20	10	eP	Pg	18 44 29.8	+0.9
NWF	 baz=5.0			eS	Sn	18 44 46.2	+1.0
TWS1	Kuangyinshan baz=350	1.22	354	eP	Pg	18 44 30.0	+1.0
TWS1	 baz=350			eS	Sn	18 44 47.1	+1.7
WSF	Szhu baz=262	1.25	259	eP	Pg	18 44 30.8	+1.3
WSF	 baz=262			eS	Sn	18 44 47.8	+1.9
CHN8	Yiju baz=252	1.34	247	eP	Pg	18 44 31.2	-0.2
CHN8	 baz=252			eS	Sg	18 44 50.4	+1.6
CHN3	Shinhua baz=238	1.35	234	eP	Pg	18 44 32.5	+1.0
ECL	Taimali baz=191	1.39	204	eP	Pn	18 44 30.9	-0.1
TWY	Chenhua baz=347	1.39	2	eP	Pn	18 44 31.0	-0.1
TWY	 baz=347			eS	Sg	18 44 50.8	+0.4
SCLT	Jiali baz=247	1.43	241	eP	Pg	18 44 33.3	+0.3
SCLT	 baz=247			eS	Sg	18 44 53.3	+1.6
YOJ	Yonaguni jima baz=64	1.45	66	eP	Pn	18 44 30.5	-1.4
TWM1	Shoushan baz=228	1.48	225	eP	Pg	18 44 33.6	-0.4
SGLT	Jiouru baz=211	1.51	221	eP	Pg	18 44 36.7	+2.2
EAST	Anshuo baz=194	1.62	204	eP	Pb	18 44 35.5	-0.2
SCZT	Fangliau baz=213	1.73	210	eP	Pb	18 44 37.2	-0.2
PCYT	Pengchaiyu baz=13	1.81	15	eP	Pn	18 44 37.7	+0.9
LAY	Lan-yu baz=166	1.83	180	eP	Pn	18 44 34.2	-3.0
WDGT	Dungji baz=255	1.84	251	eP	Pn	18 44 37.7	+0.4
WDGT	 baz=255			eS	Sb	18 45 01.8	-0.8
PNG	Penghu baz=264	1.86	261	eP	Pn	18 44 38.6	+1.1
PNG	 baz=264			eS	Sb	18 45 03.4	+0.4
TWK1	Hengchun baz=189	2.05	200	eP	Pb	18 44 42.0	-0.8

IDC 08 19:24:53.0±0.9, 42.81S×72.48W, h0km, mb4.0/6, mb1 4.2/7, mb1mx4.0/19, mbtmp4.0/7, ML4.2/1, MS3.5/4, Ms1 3.4/4, ms1mx3.0/33, Error ellipse: s-maj=36.8km s-min=15.6km az=119.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores 12nm,0.3s,baz=212,slow=14,SNR=54	2.53	35	Pn	Pn	19 25 36.7	+1.3
PLCA	 14nm,0.3s,baz=201,slow=14,SNR=77			Pg	Pb	19 25 39.8	+0.4
PLCA	 74nm,0.3s,baz=293,slow=22,SNR=30			Lg	Lg	19 26 14.6	
PLCA	 comp=Z,482nm,20.4s,baz=170,slow=46			LR	LR	19 26 48.7	
CPUP	Villa Florida comp=Z,53nm,21.2s,baz=36,slow=40	20.58	42	LR	LR	19 38 37.1	
PMSA	Palmer Station comp=Z,165nm,18.6s,baz=235,slow=38	22.52	171	LR	LR	19 39 08.7	
LPAZ	La Paz 0.5nm,0.5s,baz=140,slow=7.9,SNR=1.9	26.70	9	P	P	19 30 33.8	-0.9
SIV	San Ignacio 1.2nm,0.5s,baz=213,slow=11,SNR=6.3	28.46	24	P	P	19 30 48.3	-1.4
BDFB	Brasilia comp=Z,173nm,18.2s,baz=160,slow=39	34.23	45	LR	LR	19 46 54.5	
QSPA	South Pole Qui 3.1nm,0.9s,baz=149,slow=7.1,SNR=5.9	47.44	180	P	P	19 33 29.7	+0.6
TXAR	Lajitas Array 0.6nm,0.7s,baz=146,slow=9.1,SNR=5.3	77.31	332	P	P	19 36 50.8	+1.5
TORD	Torodi Ar. Bea 0.6nm,0.9s,baz=204,slow=3.2,SNR=3.0	87.56	70	P	P	19 37 42.5	-0.6
PDAR	Pinedale Array	91.48	334	P	P	19 38 00.1	-1.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	0.8nm,0.7s,baz=126,slow=7.7,SNR=5.6						
GERES	GERESS Array B	118.42	49	PKP	PKPdf	19 43 41.5	-0.4
	0.2nm,0.6s,baz=235,slow=3.5,SNR=3.7						
ILAR	Eielson Array	121.81	331	PKP	PKPdf	19 43 48.1	+0.3
	0.6nm,0.8s,baz=151,slow=1.8,SNR=5.1						
MKAR	Makanchi Array	161.69	69	PKPab	PKPab	19 45 39.8	-0.9
	0.7nm,0.9s,baz=256,slow=3.8,SNR=6.9						

MEX 08 19:34:24.5±0.8**, 17.23N×100.35W, h14**km±6km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.20	156	*e*P	Pg	19 34 27.9	-1.2
CAIG				*i* S	Sg	19 34 32.5	+0.2
ACX	Acapulco	0.59	127	*i* P	Pg	19 34 34.1	-2.2
ACX				*e*S	Sg	19 34 41.0	-3.2
MEIG	Mezcala	0.98	45	*i* P	Pb	19 34 40.1	-3.3
MEIG				*i* S	Sb	19 34 51.8	-4.5
ARIG	Puente Sto Nin	1.04	0	*i* P	Pb	19 34 41.2	-3.1
ARIG				*e*S	Sb	19 34 53.5	-4.4
ZIIG	Zihuatanejo	1.12	289	*i* P	Pb	19 34 42.6	-3.1
ZIIG				*i* S	Sb	19 34 55.2	-5.1
PLIG	Platanillo	1.41	35	*i* P	Pn	19 34 45.9	-3.9
PLIG				*e*S	Sn	19 35 03.3	-5.0

IDC 08 19:42:20.6±1.6**, 6.61S×117.15E, h0**km**, mb3.1**/3**, mb1 3.4**/4**, mb1mx3.3**/23**, mbtmp3.3**/4**, ML3.5**/1**, Error ellipse: s-maj=36.3km s-min=25.4km az=51.0, Bali Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KAPI	Kappang	3.03	59	Pn	Pn	19 43 09.2	-0.8
	5.9nm,0.3s,baz=269,slow=8.0,SNR=15						
KAPI				Sn	Sn	19 43 49.1	+2.1
	22nm,0.3s,baz=289,slow=21,SNR=11						
WRA	Warramunga Arr	21.31	130	P	P	19 47 10.6	+1.3
	0.7nm,0.8s,baz=306,slow=12,SNR=5.0						
ASAR	Alice Springs	23.39	138	P	P	19 47 30.4	-0.9
	0.3nm,0.6s,baz=312,slow=8.8,SNR=3.5						
MKAR	Makanchi Array	61.51	333	P	P	19 52 39.4	+0.1
	0.1nm,0.6s,baz=131,slow=8.4,SNR=2.5						

*ISCJB **08** 19:59:42.8±0.6, 42.27N±0.03×18.67E±0.03, h4km±3km, Error ellipse: s-maj=5.2km s-min=3.3km az=32.2*
*CSEM **08** 19:59:43.1±0.4, 42.26N×18.69E, h2km, ML2.7/10, Error ellipse: s-maj=6.9km s-min=4.1km az=31.0*
*PDG **08** 19:59:43.3±0.2, 42.28N×18.70E, h5km, MD2.7/4, ML2.7/10, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*
*BEO **08** 19:59:45.7±0.6, 42.43N×18.73E, h0km, ML2.6/6*
ISC 08 19:59:43.9±1.1**, 42.32N**±0.02×**18.72E**±0.02**, h3**km±9km**, n45,** σ1s**18**/86**, 10C-10D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUM	Brajici-Budva	0.13	99⇓	*i*Pg	Pg	19 59 46.0	-0.4
BUM				*e*Sg	Sg	19 59 48.6	+0.5
BUM	Brajici-Budva	0.13	99⇓	*i*Pg	Pg	19 59 46.0	-0.4
BUM				*e*Sg	Sg	19 59 48.6	+0.5
HCY	Herceg Novi	0.21	307⇓	*i*Pg	Pg	19 59 47.5	-0.5
HCY				*e*Sg	Sg	19 59 51.2	+0.4
HCY	Herceg Novi	0.21	307⇓	*i*Pg	Pg	19 59 47.5	-0.5
HCY				*e*Sg	Sg	19 59 51.2	+0.4
PDG	Podgorica	0.41	74⇑	*i*Pg	Pg	19 59 50.9	-0.9
PDG				*e*Sg	Sg	19 59 58.3	+1.2
TTG	Podgorica	0.41	74⇑	*i*Pg	Pg	19 59 50.9	-0.9
TTG				*e*Sg	Sg	19 59 58.3	+1.2
ULC	Ulcinj	0.53	132⇑	*i*Pg	Pg	19 59 52.8	-1.2
ULC				*e*Sg	Sg	20 00 01.0	+0.2
ULC	Ulcinj	0.53	132⇑	*i*Pg	Pg	19 59 52.8	-1.2
ULC				*e*Sg	Sg	20 00 01.0	+0.2
NKY	Niksic	0.53	22⇑	*i*Pg	Pg	19 59 53.3	-0.8
NKY				*e*Sg	Sg	20 00 03.1	+2.1
NKY	Niksic	0.53	22⇑	*i*Pg	Pg	19 59 53.3	-0.8
NKY				*e*Sg	Sg	20 00 03.1	+2.1
BRY	Bratogost	0.60	347⇑	*i*Pg	Pg	19 59 55.1	-0.3
BRY				*e*Sg	Sg	20 00 04.7	+1.5
BRY	Bratogost	0.60	347⇑	*i*Pg	Pg	19 59 55.1	-0.3
BRY				*e*Sg	Sg	20 00 04.7	+1.5
UPM	Unac-Piva	0.89	9⇓	*i*Pg	Pg	20 00 00.3	-0.8
UPM				*e*Sg	Sb	20 00 15.3	+0.7
UPM	Unac-Piva	0.89	9⇓	*i*Pg	Pg	20 00 00.3	-0.8
UPM				*e*Sg	Sb	20 00 15.3	+0.7
PUK	Puka	0.91	107	*e*PN	Pg	20 00 00.9	-0.5
PUK				*i* SN	Sn	20 00 17.3	-0.1
PUK	Puka	0.91	107	*e*Pn	Pg	20 00 00.9	-0.5
PUK				*i* Sn	Sn	20 00 17.3	-0.1
STON	Ston	0.94	306	*e*Pg	Pg	20 00 00.5	-1.4
STON				Sg	Sb	20 00 14.7	-0.9
STON	Ston	0.94	306	*e*Pg	Pg	20 00 00.4	-1.4
STON				Sg	Sb	20 00 14.7	-0.9
PVY	Plav	0.95	73⇓	*i*Pg	Pg	20 00 01.7	-0.5
PVY				*e*Sg	Sn	20 00 17.4	-1.1
PVY	Plav	0.95	73⇓	*i*Pg	Pg	20 00 01.7	-0.5
PVY				*e*Sg	Sn	20 00 17.4	-1.1
BCI	Bajram Curri	1.00	87	*e*PN	Pg	20 00 01.8	-1.2
BCI				*i* SN	Sn	20 00 18.4	-1.0
BCI	Bajram Curri	1.00	87	*e*Pn	Pg	20 00 01.8	-1.2
BCI				*i* Sn	Sn	20 00 18.4	-1.0
BEY	Berane	1.02	57⇑	*i*Pg	Pg	20 00 02.9	-0.7
BEY				*e*Sg	Sn	20 00 19.6	-0.6
IVA	Berane	1.02	57⇑	*i*Pg	Pg	20 00 02.9	-0.7
IVA				*e*Sg	Sn	20 00 19.6	-0.6
PLE	Pljevlja	1.12	26⇓	*i*Pg	Pg	20 00 05.1	-0.3
PLE				*e*Sg	Sn	20 00 23.2	+0.5
PLE	Pljevlja	1.12	26⇓	*i*Pg	Pg	20 00 05.1	-0.3
PLE				*e*Sg	Sn	20 00 23.2	+0.5
TIR	Tirane	1.29	138	*e*Pg	Pb	20 00 09.9	+1.1
TIR				*e*Sg	Sn	20 00 29.9	+3.2
TIR	Tirane	1.29	138	*e*Pg	Pb	20 00 09.9	+1.1
SJES	Sjenica	1.32	44	*e*Pn	Pg	20 00 10.0	+0.9
SJES				*e*Sn	Sn	20 00 28.0	+0.6
SJES	Sjenica	1.32	44	*e*Pn	Pg	20 00 10.0	+0.9
SJES				*e*Sn	Sn	20 00 28.0	+0.6
PHP	Peshkopia	1.43	116	*e*PN	Pn	20 00 09.7	-1.1
PHP				*i* SN	Sg	20 00 34.2	+4.4
PHP	Peshkopia	1.43	116	*e*Pn	Pn	20 00 09.7	-1.1
BBLS	Lazići	1.62	18	*e*Pn	Pb	20 00 14.2	-0.4
BBLS				*e*Sn	Sn	20 00 34.5	-0.5
BBLS	Lazići	1.62	18	*e*Pn	Pb	20 00 14.2	-0.4
BBLS				*e*Sn	Sn	20 00 34.5	-0.5
SELS	Selova	1.98	62	*e*Pn	Pb	20 00 19.4	-1.2
SELS				*e*Sn	Sb	20 00 44.7	-1.0
SELS	Selova	1.98	62	*e*Pn	Pb	20 00 19.4	-1.2
SELS				*e*Sn	Sb	20 00 44.7	-1.0
DIVS	Divibare	2.00	27	*e*Pn	Pb	20 00 20.0	-1.1
DIVS	Divibare	2.00	27	*e*Pn	Pb	20 00 20.0	-1.1
GRUS	Gruza	2.14	42	*e*Pn	Pb	20 00 21.8	-1.5
GRUS				*e*Sn	Sn	20 00 46.8	-0.8
GRUS	Gruza	2.14	42	*e*Pn	Pb	20 00 21.8	-1.5
GRUS				*e*Sn	Sn	20 00 46.8	-0.8
BARS	Barje	2.34	77	*e*Pn	Pb	20 00 24.7	-2.0
BARS				*e*Sn	Sb	20 00 54.0	-1.9
ZAPS	Zavoj	3.03	70	*e*Pn	Pn	20 00 34.8	+2.0
ZAPS				*e*Sn	Sn	20 01 10.8	+1.2
ZAPS	Zavoj	3.03	70	*e*Pn	Pn	20 00 34.8	+2.0
ZAPS				*e*Sn	Sn	20 01 10.8	+1.2
NVLJ	Novalja	3.59	310	*e*Pn	Pn	20 00 40.9	+0.5
NVLJ				Sn	Sn	20 01 24.2	+0.9
NVLJ	Novalja	3.59	310	*e*Pn	Pn	20 00 40.9	+0.5
NVLJ				Sn	Sn	20 01 24.2	+0.9

*NOU **08** 20:13:05.2±1.9, 17.11S×167.03E, h30km, MD3.7, ML4.0*
*IDC **08** 20:13:06.9±1.2, 17.59S×167.63E, h0km, mb3.9/8, mb1 4.1/10, mb1mx3.9/22, mbtmp4.0/10, ML4.2/2, MS3.4/6, Ms1 3.4/6, ms1mx3.1/34, Error ellipse: s-maj=33.8km s-min=22.5km az=129.0*
*ISCJB **08** 20:13:08.4±1.0, 17.67S±0.04×167.5E±0.2, h19km, mb3.9/7, MS3.5/4, Error ellipse: s-maj=22.6km s-min=6.5km az=0.8*
ISC 08 20:13:09.9±1.1**, 17.64S**±0.07×**167.5E**±0.2**, h19**km**, n17,** σ1s**26**/16**, mb4.0**/7**, MS3.5**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.53	193	*e*P	Pn	20 14 16.6	-0.9
DZM				*e*S	Sn	20 15 08.0	-1.8
DZM				AMP		20 15 26.4	
	comp=Z,540nm,3.5s						
DZM	Mont Dzumac	4.53	193	Pn	Pn	20 14 18.3	+0.7
	comp=Z,3.8nm,0.3s,baz=39,slow=20,SNR=32						
DZM				LR	LR	20 15 07.4	
	comp=Z,122nm,20.5s,baz=20,slow=26						
DZM				Sn	Sn	20 15 08.2	-1.6
	comp=Z,12nm,0.3s,baz=127,slow=23,SNR=12						
BAYA	Yate Dam	4.53	188	*e*S	Sn	20 15 11.2	+1.4
NOUC	Port Laguerre	4.59	194	*e*S	Sn	20 15 10.9	-0.2
MVNO	Noumea	4.72	192	*e*S	Sn	20 15 13.6	-0.7
HNR	Honiara	10.99	317	Pn	Pn	20 15 44.8	-1.4
	comp=Z,4.8nm,0.3s,baz=202,slow=11,SNR=3.8						
HNR				LR	LR	20 19 27.1	
	comp=Z,119nm,20.1s,baz=125,slow=34						
CTA	Charters Tower	20.27	260	P	Pn	20 17 46.0	-0.6
	comp=Z,4.7nm,0.8s,baz=80,slow=17,SNR=4.3						
PMG	Port Moresby	21.41	290	LR	LR	20 25 19.5	
	comp=Z,170nm,18.8s,baz=105,slow=34						
URZ	Urewera	22.19	160	LR	LR	20 24 58.4	
	comp=Z,125nm,21.1s,baz=253,slow=32						
STKA	Stephens Creek	27.39	234	P	P	20 18 54.9	+0.6
	comp=Z,7.5nm,1.0s,baz=48,slow=15,SNR=5.1						
STKA				LR	LR	20 29 44.8	
	comp=Z,113nm,18.5s,baz=200,slow=36						
WRA	Warramunga Arr	31.47	260	P	P	20 19 30.8	+0.1
	comp=Z,1.4nm,0.9s,baz=88,slow=8.7,SNR=7.2						
ASAR	Alice Springs	31.98	253	P	P	20 19 35.5	+0.4
	comp=Z,3.1nm,0.7s,baz=78,slow=8.9,SNR=43						
ASAR				LR	LR	20 33 12.3	
	comp=Z,107nm,18.4s,baz=160,slow=38						
MJAR	Matsushiro Arr	60.59	333	P	P	20 23 18.4	-1.0
	comp=Z,0.3nm,0.3s,baz=168,slow=7.6,SNR=4.6						
CMAR	Chiang Mai Arr	76.36	295	P	P	20 25 00.4	+2.0
	comp=Z,1.0nm,0.8s,baz=133,slow=5.2,SNR=7.8						
SONM	Songino Array	84.97	324	P	P	20 25 45.7	+1.6
	comp=Z,0.6nm,0.6s,baz=141,slow=5.2,SNR=3.6						
NVAR	Mina Array Bea	88.98	49	P	P	20 26 03.1	-0.8
	comp=Z,0.2nm,0.5s,baz=218,slow=6.9,SNR=2.9						
ARCES	ARCESS Array B	123.11	345	PKP	PKPdf	20 32 04.2	-0.4
	comp=Z,1.0nm,0.5s,baz=115,slow=2.0,SNR=13						

*MOS **08** 20:20:03.7±0.8, 8.56S×71.56W, h519km, mb5.2/85, Error ellipse: s-maj=7.2km s-min=5.0km az=83.1*
*ISCJB **08** 20:20:04.1±0.4, 8.63S±0.03×71.59W±0.03, h525km±5km, mb4.9/289, Error ellipse: s-maj=5.9km s-min=3.7km az=41.9*
*BJI **08** 20:20:05.9, 8.60S×71.40W, h538km, mB5.1/19*
*IDC **08** 20:20:05.8±0.3, 8.75S×71.61W, h538km±3km, mb4.5/39, mb1 4.6/44, mb1mx4.6/45, mbtmp4.5/44, Error ellipse: s-maj=7.8km s-min=5.1km az=66.0*
*NEIC **08** 20:20:05.7±0.1, 8.69S×71.51W, mb5.1/192, MW5.4, Error ellipse: s-maj=3.7km s-min=2.6km az=51.0, Moment Tensor Solution. s21 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.52; $M_{\theta\theta}$-0.36; $M_{\phi\phi}$1.88; $M_{r\theta}$-0.43; $M_{\theta\phi}$-0.37; $M_{\phi r}$0.16; Best double couple: $M_0$1.80000×10^{17} NP1:ϕ_s8.00000°, δ44.00000°, λ-64.00000°. NP2:ϕ_s154.00000°, δ51.00000°, λ-113.00000°. Principal axes: T 1.9600, Plg3.0000°, Azm260.0000°; N -0.2900, Plg17.0000°, Azm168.0000°; P -1.6600, Plg71.0000°, Azm1.0000°;*
*GCMT **08** 20:20:09.4±0.2, 8.67S×71.47W, h552km±1km, MW5.4, Moment Tensor Solution. s85,c127; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.32±.03; $M_{\theta\theta}$-0.20±.05; $M_{\phi\phi}$1.51±.06; $M_{r\theta}$-0.51±.05; $M_{\theta\phi}$-0.27±.05; $M_{\phi r}$0.34±.05; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s10.00000°, δ40.00000°, λ-60.00000°. NP2:ϕ_s153.00000°, δ56.00000°, λ-113.00000°. Principal axes: T 1.6100, Plg8.0000°, Azm259.0000°; N -0.0800, Plg19.0000°, Azm166.0000°; P -1.5300, Plg69.0000°, Azm12.0000°; Data Used: II IU IC G CN.*
*SZGRF **08** 20:20:18.0, 7.30S×69.34W, h546km, mb5.2, Western Brazil*
ISC 08 20:20:05.6±0.2**, 8.81S**±0.03×**71.63W**±0.05**, h542**km±2km**, h542**km**:pP-P, n1210,** σ1s**03**/1475**, mb5.0**/289**, 206C-367D, Western Brazil**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NNA	Nana	6.02	238	P	P	20 21 45.0	+0.9
	9μm,0.5s						
NNA	Nana	6.02	238	*e*P	P	20 21 44.8	+0.7
NNA				S	S	20 23 03.8	-0.8
NNA				*e*S	S	20 23 04.8	+0.1
NNA	Nana	6.02	238	P	P	20 21 45.0	+0.9
	103nm,0.3s,baz=38,slow=8.2,SNR=254						
NNA				S	S	20 23 03.8	-0.8
	64nm,0.3s,baz=251,slow=17,SNR=16						
ATAH	Atahualpa	6.91	283	P	P	20 21 54.5	+1.6
ATAH				S	S	20 23 11.3	-9.3
ATAH	Atahualpa	6.91	283	P	P	20 21 54.5	+1.6
	42nm,0.3s,baz=110,slow=7.7,SNR=267						
ATAH				S	S	20 23 11.3	-9.3
	14nm,0.3s,baz=55,slow=16,SNR=2.1						
ARE	Arequipa	7.60	179	*e*P	P	20 22 01.0	+1.5
ARE				*i* S	S	20 23 32.4	-0.3
ARE	Arequipa	7.60	179	*e*P	P	20 22 01.0	+1.5
ARE				*i* S	S	20 23 32.4	-0.3
LPAZ	La Paz	8.17	156	*e*P	P	20 22 05.7	+0.2
LPAZ				S	S	20 23 40.9	-2.9
LPAZ	La Paz	8.17	156	P	P	20 22 06.5	+1.0
	19nm,0.3s,baz=333,slow=7.8,SNR=173						
LPAZ				S	S	20 23 40.9	-2.9
	baz=0.0,slow=20,SNR=2.9						
SAML	Samuel	8.34	92	*e*P	P	20 22 06.8	+0.2
	1.8nm,0.5s						
OTAV	Otavalo	11.27	323	*e*P	P	20 22 37.4	+0.2
SIV	San Ignacio	12.53	126	P	P	20 22 50.4	+0.7
SIV				S	S	20 25 04.6	-0.2
SIV	San Ignacio	12.53	126	P	P	20 22 50.4	+0.7
	63nm,0.3s,baz=310,slow=9.5,SNR=401						
SIV				S	S	20 25 04.6	-0.2
	baz=244,slow=22,SNR=3.5						
ROSC	El Rosal	13.85	349	*e*P	P	20 23 03.6	-0.2
ROSC	El Rosal	13.85	349	P	P	20 23 04.3	+0.5
	6.3nm,0.3s,baz=108,slow=16,SNR=5.4						
LVC	Limon Verde	13.97	170	*e*Pn	P	20 23 04.2	-0.6
	63nm,0.4s						
BCIP	Isla Barro Col	19.64	335	*e*P	P	20 24 00.0	+1.0
	81nm,0.6s						
LCO	Las Campanas	20.11	178	*e*P	P	20 24 03.2	-0.1
	75nm,0.6s						
CPUP	Villa Florida	22.08	144	P	P	20 24 20.8	0.0
CPUP				PcP	PcP	20 27 58.0	+0.9
CPUP				ScP	ScP	20 30 43.6	+0.1
CPUP	Villa Florida	22.08	144	P	P	20 24 20.8	0.0
	10nm,0.3s,baz=303,slow=7.7,SNR=55						
CPUP				PcP	PcP	20 27 58.0	+0.9
	4.8nm,0.4s,baz=318,slow=2.8,SNR=5.1						
CPUP				ScP	ScP	20 30 43.6	+0.1
	3.9nm,0.6s,baz=332,slow=2.2,SNR=5.1						
CFAA	Coronel Fontan	22.90	173	P	P	20 24 28.9	+0.8
CFAA				PcP	PcP	20 27 59.3	+0.5
CFAA				ScP	ScP	20 30 45.9	+0.2
CFAA	Coronel Fontan	22.90	173	P	P	20 24 28.9	+0.8
	4.5nm,0.5s,baz=349,slow=10,SNR=100						
CFAA				PcP	PcP	20 27 59.3	+0.5
	1.5nm,0.5s,baz=265,slow=3.6,SNR=5.7						
CFAA				ScP	ScP	20 30 45.9	+0.2
	0.7nm,0.7s,baz=333,slow=2.2,SNR=4.7						
BDFB	Brasilia	24.04	109	P	P	20 24 39.6	+1.0
BDFB	Brasilia	24.04	109	P	P	20 24 39.6	+1.0
	18nm,0.4s,baz=275,slow=9.8,SNR=32						
CRPR	Cabo Rojo, PR	27.02	9	*e*P	P	20 25 04.2	-0.5
	114nm,0.5s						
OBIP	Obispado Ponce	27.14	11	*e*P	P	20 25 03.9	-1.9
	108nm,1.2s						
CELP	Cerrillos	27.18	11	*e*P	P	20 25 05.3	-0.8
LSP	Las Mesas	27.19	9	*e*P	P	20 25 03.1	-3.1
MPR	Mayaguez	27.22	9	*e*P	P	20 25 06.1	-0.3
	116nm,0.9s						
SJG	San Juan	27.29	11	*e*P	P	20 25 05.8	-1.3
	74nm,1.1s						
LRS	Lares	27.34	10	*e*P	P	20 25 06.6	-1.0
LRS				*e*PcP	PcP	20 28 09.3	+0.2
HUMP	Col San Antoni	27.38	12	*e*P	P	20 25 05.1	-2.8
	38nm,0.8s						
MTP	Monte Pirata	27.40	13	*e*P	P	20 25 06.9	-1.2
	28nm,0.6s						
AOPR	Arecibo Observ	27.41	10	*e*P	P	20 25 07.1	-1.0
	131nm,0.6s						
AGPR	Aguadilla, PR	27.47	9	*e*P	P	20 25 08.1	-0.6
MTDJ	Mount Denham	27.49	348	*e*P	P	20 25 08.8	-0.1
	68nm,1.0s						
CBYP	Canovanas	27.51	12	*e*P	P	20 25 08.2	-0.9
	116nm,0.9s						
SDDR	Presa de Saban	27.62	1	*e*P	P	20 25 09.7	-0.3
	22nm,0.8s						
STVI	Saint Thomas	27.78	14	*e*P	P	20 25 09.7	-1.7
	30nm,0.6s						
ANWB	Willy Bob	28.05	20	*e*P	P	20 25 11.6	-2.1
	296nm,0.6s						
TRQA	Tornquist	30.39	165	*e*P	P	20 25 33.8	0.0
	115nm,0.6s						
TRQA				*e*PcP	PcP	20 28 17.6	+0.9
TRQA				*e*ScP	ScP	20 31 09.1	+1.0
PLCA	Paso Flores	31.80	178	*e*P	P	20 25 45.8	-0.1
	56nm,0.7s						
PLCA				PcP	PcP	20 28 21.8	+1.2
PLCA				S	S	20 30 17.9	-0.2
PLCA				ScP	ScP	20 31 14.2	+1.3
PLCA	Paso Flores	31.80	178	P	P	20 25 46.9	+0.9
	57nm,0.6s,baz=352,slow=9.3,SNR=194						
PLCA				PcP	PcP	20 28 21.8	+1.2
	14nm,0.5s,baz=352,slow=4.1,SNR=11						
PLCA				S	S	20 30 17.9	-0.2
	3.4nm,0.9s,baz=154,slow=16,SNR=2.5						
PLCA				ScP	ScP	20 31 14.2	+1.3
	11nm,0.6s,baz=357,slow=4.7,SNR=7.4						
TEIG	Tepich	33.19	331	*e*P	P	20 25 57.1	-0.7
	58nm,0.6s						
TEIG				PcP	PcP	20 28 25.0	+0.3
TEIG				S	S	20 30 37.5	-2.0
TEIG				ScP	ScP	20 31 18.9	+1.0
TEIG	Tepich	33.19	331	P	P	20 25 57.9	0.0
	61nm,0.5s,baz=169,slow=2.7,SNR=95						
TEIG				PcP	PcP	20 28 25.0	+0.3
	31nm,0.7s,baz=226,slow=5.7,SNR=6.7						
TEIG				S	S	20 30 37.5	-2.0
	8.0nm,0.8s,baz=280,slow=20,SNR=8.1						
TEIG				ScP	ScP	20 31 18.9	+1.0
	22nm,0.6s,baz=192,slow=6.2,SNR=8.6						
RCBR	Riachuelo	35.55	88	*e*P	P	20 26 17.9	+0.1
	39nm,0.8s						
RCBR	Riachuelo	35.55	88	P	P	20 26 18.7	+0.9
	34nm,0.7s,baz=254,slow=9.5,SNR=24						
BBSR	BB Station	41.48	9	*e*P	P	20 27 04.8	-0.7
	30nm,0.8s						
TIGA	Tifton	41.63	345	⇑P	P	20 27 07.2	+0.4
	baz=42						
NHSC	New Hope	42.48	349	*e*P	P	20 27 13.3	0.0
	78nm,0.6s						
GOGA	Godfrey	43.48	346	*e*P	P	20 27 20.0	-1.1
GOGA				pmax	pmax		
	comp=Z,60nm,0.5s						
GOGA	Godfrey	43.48	346	*e*P	P	20 27 20.0	-1.1
	comp=Z,60nm,0.5s						
LRAL	Lakeview Retre	44.12	341	*e*P	P	20 27 24.9	-1.2
	comp=Z,28nm,0.6s						
LRAL				*e*PcP	PcP	20 28 58.5	-0.8
EFI	East Falkland	44.16	168⇓	*e*P	P	20 27 26.7	+0.6
EFI				pmax	pmax		
	comp=Z,134nm,0.7s						
KMSC	Kings Mountain	44.67	349	⇓P	P	20 27 30.2	-0.2
	baz=45						
CPCT	Cooper Cave	45.68	345	*e*P	P	20 27 37.2	-0.8
CPCT				*e*PcP	PcP	20 29 04.4	-0.4
TKL	Tuckaleechee C	45.69	346	P	P	20 27 37.3	-0.9
TKL				S	S	20 33 44.3	+2.5
TKL	Tuckaleechee C	45.69	346	P	P	20 27 37.3	-0.9
	comp=Z,26nm,0.6s,baz=159,slow=9.8,SNR=48						
TKL				S	S	20 33 44.3	+2.5
	comp=Z,3.8nm,0.4s,baz=242,slow=23,SNR=8.1						
USHA	Ushuaia	45.97	177	P	P	20 27 41.7	+1.8
USHA	Ushuaia	45.97	177	P	P	20 27 41.7	+1.8
	comp=Z,59nm,0.7s,baz=346,slow=6.1,SNR=39						
OXF	Oxford	46.27	340	*e*P	P	20 27 40.6	-1.9
OXF				pmax	pmax		
	comp=Z,49nm,0.6s						
OXF	Oxford	46.27	340	*e*P	P	20 27 40.6	-1.9
	comp=Z,49nm,0.6s						
732A	Laxson Ranch,	46.28	325	⇑P	P	20 27 43.3	+0.5
	baz=46						
732A				⇓S	S	20 33 50.5	+0.3
	baz=46						
VWCC	Virginia Weste	46.48	351	*e*P	P	20 27 44.1	-0.1
BLA	Blacksburg	46.52	350	*e*P	P	20 27 44.1	-0.4
BLA				pmax	pmax		
	comp=Z,140nm,1.2s						
BLA	Blacksburg	46.52	350	*e*P	P	20 27 44.1	-0.4
	comp=Z,140nm,1.2s						
632A	Uvalde	46.77	326	⇓P	P	20 27 47.3	+0.8
	baz=47,SNR=33						
631A	Perdido Creek	47.14	325	⇑P	P	20 27 49.3	0.0
	baz=47,SNR=61						
532A	Rocksprings	47.31	326	⇓P	P	20 27 51.0	+0.4
	baz=48,SNR=6.7						
WHTX	Lake Whitney	47.49	330	⇓P	P	20 27 52.4	+0.6
	baz=48						
JCT	Junction City	47.52	326	⇓P	P	20 27 52.3	+0.2
	baz=48						
UALR	University of	47.58	337	*e*P	P	20 27 51.4	-1.1
	comp=Z,96nm,1.0s						
531A	Rocksprings	47.69	326	⇓P	P	20 27 53.8	+0.4
	baz=48						
432A	Menard	47.82	327	⇑P	P	20 27 54.6	+0.2
	baz=48,SNR=9.3						
431A	Sonora	48.12	326	⇓P	P	20 27 56.9	+0.2
	baz=48,SNR=13						
530A	J-C Ranch, Com	48.13	325	⇑P	P	20 27 57.0	+0.3
	baz=48,SNR=41						
332A	Millersview	48.19	327	⇓P	P	20 27 57.4	+0.3
	baz=48,SNR=22						
SDMD	Soldier's Deli	48.22	355	*e*P	P	20 27 56.7	-0.4
	comp=Z,16nm,1.0s						
SDMD				*e*PcP	PcP	20 29 14.2	+0.3
331A	San Angelo	48.50	327	⇓P	P	20 27 59.6	+0.1
	baz=49,SNR=16						
232A	Coleman	48.53	328	⇓P	P	20 28 00.2	+0.5
	baz=49						
628A	Black Gap, Mar	48.54	323	⇓P	P	20 28 00.7	+0.9
	baz=49,SNR=63						
430A	Baggett Ranch,	48.55	325	⇑P	P	20 28 00.1	+0.3
	baz=49,SNR=22						
529A	Stev Forest Ra	48.62	324	⇑P	P	20 28 00.9	+0.5
	baz=49,SNR=103						
WCI	Wyandotte Cave	48.76	345	*e*P	P	20 27 59.4	-1.8
WCI				pmax	pmax		
	comp=Z,59nm,0.5s						
WCI	Wyandotte Cave	48.76	345	*e*P	P	20 27 59.4	-1.8
	comp=Z,59nm,0.5s						
MVL	Millersville	48.76	355	*e*P	P	20 28 00.9	-0.3
	comp=Z,25nm,0.9s						
MVL				*e*PcP	PcP	20 29 15.5	-0.3
429A	Davenport Ranc	48.80	325	⇑P	P	20 28 02.0	+0.3
	baz=49,SNR=38						
627A	Terlingua Ranc	48.82	322	⇓P	P	20 28 02.6	+0.7
	baz=49,SNR=115						
USIN	University of	48.89	343	*e*P	P	20 28 00.6	-1.5
	comp=Z,144nm,0.7s						
USIN				*e*PcP	PcP	20 29 16.3	-0.1
USIN				*e*ScP	ScP	20 32 14.1	-5.7
TXAR	Lajitas Array	48.90	322	P	P	20 28 02.8	+0.2
TXAR				PcP	PcP	20 29 17.3	+0.6
TXAR				ScP	ScP	20 32 21.3	+1.1
TXAR				S	S	20 34 26.9	+0.3
TXAR	Lajitas Array	48.90	322	P	P	20 28 02.8	+0.2
	comp=Z,14nm,0.6s,baz=141,slow=9.0,SNR=189						
TXAR				PcP	PcP	20 29 17.3	+0.6
	comp=Z,5.8nm,0.6s,baz=148,slow=6.8,SNR=7.6						
TXAR				ScP	ScP	20 32 21.3	+1.1
	comp=Z,1.2nm,0.7s,baz=143,slow=6.8,SNR=4.0						
TXAR				S	S	20 34 26.9	+0.3
	comp=Z,1.0nm,1.0s,baz=148,slow=5.3,SNR=4.4						
231A	Bronte	48.93	327	⇑P	P	20 28 02.7	+0.1
	baz=49,SNR=14						
528A	Cox Ranch, San	48.98	324	⇑P	P	20 28 03.3	+0.2
	baz=49,SNR=50						
330A	Mertzon	48.99	326	⇑P	P	20 28 03.0	-0.1
	baz=49,SNR=5.6						
ABTX	Abilene, Hawle	49.11	328	⇑P	P	20 28 04.3	+0.4
	baz=49,SNR=13						
SIUC	Southern Illin	49.12	342	*e*PcP	PcP	20 29 17.4	+0.2
230A	Sterling City	49.32	326	⇑P	P	20 28 05.5	0.0
	baz=50,SNR=11						
428A	Kincaid Ranch,	49.33	324	⇑P	P	20 28 06.2	+0.6
	baz=50,SNR=27						
626A	Big Bend Ranch	49.34	322	⇓P	P	20 28 06.3	+0.5

baz=50,SNR=95
527A Woodward Ranch 49.45 323 ⇑P P 20 28 06.9 +0.2
baz=50,SNR=47
329A Wagon Wheel Ra 49.50 325 ⇓P P 20 28 07.0 +0.1
baz=50,SNR=22
131A Roby 49.54 328 ⇓P P 20 28 07.5 +0.4
baz=50,SNR=22
SSPA Standing Stone 49.54 354 eP P 20 28 06.7 -0.2
comp=Z,19nm,0.8s
SSPA ePcP PcP 20 29 17.5 -1.2
Z32A Haskell 49.56 329 ⇑P P 20 28 07.5 +0.3
baz=50
526A Mary Lane Ranc 49.68 322 ⇑P P 20 28 08.7 +0.4
baz=50,SNR=61
BLO Bloomington 49.71 345 eP P 20 28 06.1 -2.0
BLO e 20 29 14.4
BLO pmax pmax
comp=Z,119nm,0.5s
BLO Bloomington 49.71 345 eP P 20 28 06.1 -2.0
comp=Z,118nm,0.5s
BLO ePcP PcP 20 29 14.4 -4.9
OLIL Olney 49.73 343 eP P 20 28 06.6 -1.7
comp=Z,56nm,0.5s
OLIL ePcP PcP 20 29 19.7 +0.3
229A Bryant Ranch, 49.76 326 ⇓P P 20 28 08.6 -0.2
baz=50,SNR=12
130A Snyder 49.78 327 ⇓P P 20 28 09.2 +0.3
baz=50,SNR=14
427A Hayter Ranch, 49.84 324 ⇓P P 20 28 09.6 +0.2
baz=50,SNR=40
328A Wristen Ranch, 49.89 325 ⇑P P 20 28 09.9 +0.1
baz=50,SNR=41
Z31A Sharp Cattle R 49.91 328 ⇓P P 20 28 10.2 +0.4
baz=50,SNR=21
ACSO Alum Creek Sta 49.92 349 eP P 20 28 08.1 -1.5
comp=Z,74nm,1.1s
TUL1 Tulsa 49.97 334 ⇓P P 20 28 09.9 -0.3
baz=50,SNR=22
426A McDonald Obser 50.08 323 ⇓P P 20 28 11.6 +0.3
baz=50,SNR=104
Y32A R-V Farms, Ver 50.10 330 ⇓P P 20 28 11.7 +0.6
baz=50,SNR=60
327A Balmorhea Ranc 50.27 324 ⇑P P 20 28 13.2 +0.6
baz=50
SLM Saint Louis 50.29 341 eP P 20 28 11.1 -1.3
SLM pmax pmax
comp=Z,103nm,0.5s
SLM Saint Louis 50.29 341 eP P 20 28 11.1 -1.3
comp=Z,103nm,0.5s
129A Stewart Farms, 50.30 326 ⇓P P 20 28 12.9 +0.2
baz=50,SNR=14
228A UT Block 9, Go 50.31 325 ⇓P P 20 28 12.5 -0.3
baz=50,SNR=19
WMOK Wichita Mounta 50.37 331 eP P 20 28 12.3 -0.8
WMOK pmax pmax
comp=Z,38nm,0.7s
WMOK Wichita Mounta 50.37 331 eP P 20 28 12.3 -0.8
comp=Z,38nm,0.7s
Z30A Sanderson Ranc 50.40 328 ⇑P P 20 28 13.8 +0.3
baz=51,SNR=59
Y31A Rekieta Farm, 50.48 329 ⇑P P 20 28 14.5 +0.5
baz=51,SNR=16
BRYW Bryant College 50.48 0 eP P 20 28 12.0 -1.8
comp=Z,205nm,1.2s
326A Caldwell Ranch 50.52 324 ⇑P P 20 28 14.7 +0.3
baz=51,SNR=85
227A Bennet, Jal 50.63 325 ⇓P P 20 28 15.7 +0.5
baz=51,SNR=30
128A Castleberry Fa 50.63 326 ⇓P P 20 28 15.1 0.0
baz=51,SNR=27
Z29A Hungry Hill Ra 50.69 327 ⇑P P 20 28 15.2 -0.4
baz=51,SNR=7.6
425A Indio Mountain 50.74 322 ⇓P P 20 28 16.1 +0.1
baz=51,SNR=78
Y30A Stafford Cattl 50.74 328 ⇓P P 20 28 16.0 +0.1
baz=51,SNR=18
X31A McDonald Ranch 50.87 330 ⇑P P 20 28 17.0 +0.2
baz=51,SNR=26
BINY Binghamton 50.92 356 eP P 20 28 16.5 -0.5
comp=Z,73nm,0.8s
HRV Adam Dziewonsk 51.07 0 eP P 20 28 16.9 -1.1
HRV pmax pmax
comp=Z,55nm,1.2s
HRV Adam Dziewonsk 51.07 0 eP P 20 28 16.9 -1.1
comp=Z,55nm,1.2s
Z28A Tucker Farm, M 51.08 327 ⇓P P 20 28 18.2 -0.2
baz=51
Y29A Porterfield Fa 51.13 328 ⇓P P 20 28 18.6 -0.2
baz=51,SNR=15
325A Bean Ranch, Si 51.14 323 ⇓P P 20 28 19.1 0.0
baz=51,SNR=71
127A Arkansas Junct 51.16 325 ⇓P P 20 28 18.9 -0.1
baz=51,SNR=9.6
X30A Coker Ranch, T 51.17 329 ⇑P P 20 28 19.3 +0.2
baz=51,SNR=17
226B Tecolote Peak, 51.18 324 ⇑P P 20 28 20.2 +1.1
baz=51,SNR=84
ERPA Erie 51.26 352 eP P 20 28 18.8 -0.6
comp=Z,156nm,0.8s
W31A Holland Ranch, 51.29 330 ⇑P P 20 28 19.6 -0.3
baz=51,SNR=8.6
TRY Troy 51.33 358 eP P 20 28 19.5 -0.3
comp=Z,105nm,1.3s
GDL2 Guadalupe Moun 51.38 324 eP P 20 28 21.6 +0.9
GDL2 ePcP PcP 20 29 26.6 +0.6
Y28A McKinney Farm, 51.48 327 ⇓P P 20 28 20.8 -0.5
baz=52,SNR=5.8
324A Moseley Ranch, 51.50 323 ⇓P P 20 28 21.1 -0.5
baz=52,SNR=66
126A Clayton Basin, 51.51 325 ⇑P P 20 28 22.0 +0.4
baz=52,SNR=28
Z27A Tatum 51.56 326 ⇑P P 20 28 21.7 -0.2
baz=52,SNR=38
X29A Tulia 51.60 328 ⇑P P 20 28 22.0 -0.1
baz=52,SNR=13
W30A Crocket Farms 51.60 330 ⇑P P 20 28 22.3 +0.1
baz=52
MNTX Cornudas Mount 51.62 323 eP P 20 28 21.5 -0.8
comp=Z,25nm,0.9s
MNTX ePcP PcP 20 29 26.4 -0.3
V31A Spring Creek L 51.71 331 ⇑P P 20 28 23.5 +0.6
baz=52,SNR=18
HDIL Hopedale 51.76 343 eP P 20 28 20.6 -2.5
comp=Z,53nm,0.5s
HDIL ePcP PcP 20 29 27.1 0.0
MSTX Muleshoe 51.81 327 ⇓P P 20 28 23.5 -0.2
baz=52,SNR=20
125A Gardner Draw, 51.89 324 ⇓P P 20 28 24.2 -0.1
baz=52,SNR=26
X28A Dimmitt 51.92 328 ⇑P P 20 28 24.1 -0.4
baz=52
AMTX Amarillo 51.93 328 eP P 20 28 23.4 -1.2
comp=Z,20nm,0.4s
Z26A Caprock 51.95 325 ⇑P P 20 28 24.9 +0.1
baz=52,SNR=69
Y27A Causey 51.95 326 ⇓P P 20 28 24.5 -0.2
baz=52,SNR=26
224A Cornudas Mount 51.98 323 ⇓P P 20 28 24.8 -0.1
baz=52,SNR=62
ACCN Adirondack Com 51.98 358 eP P 20 28 23.2 -1.4
comp=Z,20nm,1.0s
ACCN ePcP PcP 20 29 28.0 +0.2
FFD Franklin Falls 52.03 360 eP P 20 28 24.3 -0.6
comp=Z,12nm,0.5s
AAM Ann Arbor 52.05 349 eP P 20 28 23.9 -1.2
AAM e 20 29 28.3
AAM pmax pmax
comp=Z,111nm,1.5s
AAM Ann Arbor 52.05 349 eP P 20 28 23.9 -1.2
comp=Z,111nm,1.5s
AAM ePcP PcP 20 29 28.2 +0.2
W29A Amraillo 52.10 329 ⇑P P 20 28 25.5 -0.2
baz=52,SNR=14
V30A Spur Ranch, Mi 52.12 330 ⇓P P 20 28 26.3 +0.4
baz=52
U31A Nine Bar Ranch 52.20 331 ⇑P P 20 28 26.6 +0.2
baz=52,SNR=8.6
HNH Hanover 52.27 359 eP P 20 28 26.2 -0.5
Y26A Elida 52.35 326 ⇑P P 20 28 27.2 -0.4
baz=52,SNR=19
Z25A Roswell 52.37 325 ⇓P P 20 28 27.9 +0.1
baz=52,SNR=90
124A Stringfield Ra 52.38 324 ⇑P P 20 28 28.1 +0.1
baz=52,SNR=39
223A Chaparral, Ant 52.47 322 ⇑P P 20 28 28.4 -0.1
baz=53
W28A Vega 52.49 328 ⇓P P 20 28 28.5 -0.1
baz=53,SNR=12
X27A F and S Farms, 52.49 327 ⇓P P 20 28 28.6 0.0
baz=53,SNR=18
MDV Middlebury 52.58 359 eP P 20 28 27.7 -1.2
NCB Newcomb 52.59 358 eP P 20 28 27.7 -1.3
comp=Z,23nm,1.1s
V29A Stinnett 52.62 329 ⇓P P 20 28 29.5 +0.1
baz=53
T31A Randall Ranch, 52.70 332 ⇑P P 20 28 30.3 +0.4
baz=53,SNR=22
U30A WK&E Inc. Balk 52.71 331 ⇓P P 20 28 30.3 +0.3
baz=53,SNR=6.9
Z24A Sheeppen Canyo 52.78 324 ⇑P P 20 28 30.9 +0.1
baz=53,SNR=52
W27A Bowe Ranch, En 52.79 328 ⇑P P 20 28 30.5 -0.2
baz=53,SNR=15
LBNH Lisbon 52.80 360 eP P 20 28 30.2 -0.3
LBNH pmax pmax
comp=Z,31nm,1.1s
LBNH Lisbon 52.80 360 eP P 20 28 30.2 -0.3
comp=Z,31nm,1.1s
X26A CR and CF Fran 52.81 327 ⇓P P 20 28 30.8 -0.1
baz=53,SNR=40
123A Bell Site, Whi 52.81 323 ⇓P P 20 28 31.1 +0.2
baz=53,SNR=5.7
Y25A Mesa, Roswell 52.83 325 ⇓P P 20 28 30.7 -0.3
baz=53,SNR=30
V28A Channing 52.88 329 ⇑P P 20 28 31.3 0.0
baz=53
222A Williams Famil 52.95 322 ⇓P P 20 28 32.4 +0.5
baz=53,SNR=35
U29A Oasis Ranch, S 52.95 330 ⇓P P 20 28 32.2 +0.4
baz=53,SNR=5.5
KSU1 Kansas State U 53.02 336 eP P 20 28 31.2 -1.0
comp=Z,140nm,0.8s
S31A Mullinville 53.03 332 ⇓P P 20 28 32.9 +0.5
baz=53
T30A Plains 53.07 331 ⇑P P 20 28 33.0 +0.5
baz=53
W26A Owens Ranch, T 53.19 327 ⇓P P 20 28 33.6 0.0
baz=53
V27A Dan Oppiter Fa 53.20 328 ⇓P P 20 28 33.8 +0.2
baz=53,SNR=12
Z23A Rita Site, Whi 53.24 324 ⇓P P 20 28 34.5 +0.5
baz=53,SNR=25
LONY Lake Ozonia 53.25 357 eP P 20 28 32.5 -1.2
comp=Z,34nm,1.1s
Y24A Capitan 53.26 325 ⇑P P 20 28 33.8 -0.3
baz=53,SNR=42
X25A Clemmons Ranch 53.26 326 ⇑P P 20 28 33.8 -0.3
baz=53,SNR=27
221A Mesquite Ranch 53.30 321 ⇑P P 20 28 35.2 +0.8
baz=53
122A Conniff Cattle 53.30 322 ⇓P P 20 28 35.2 +0.8
baz=53,SNR=9.9
320A Kipp Ranch, An 53.31 320 ⇑P P 20 28 35.2 +0.6
baz=54,SNR=16
U28A Mallet 53.37 329 ⇓P P 20 28 34.6 -0.2
baz=54
EMMW East Machias 53.41 4 eP P 20 28 34.1 -0.6
comp=Z,42nm,1.0s
FRNY Flat Rock 53.43 358 eP P 20 28 33.4 -1.5
comp=Z,27nm,0.9s
S30A Montezuma 53.51 332 ⇑P P 20 28 36.1 +0.4
baz=54
T29A Hugoton 53.52 331 ⇓P P 20 28 36.4 +0.6
baz=54
R31A Burdett 53.60 333 ⇓P P 20 28 36.4 +0.1
baz=54
Y23A Lovelace Mesa, 53.61 324 ⇑P P 20 28 36.8 +0.2
baz=54
MSNY Massena 53.64 357 eP P 20 28 35.8 -0.6
comp=Z,204nm,0.7s
121A Cookes Peak, D 53.66 322 ⇑P P 20 28 37.9 +0.8
baz=54,SNR=35
W25A X Bar L Ranch, 53.66 327 ⇓P P 20 28 36.9 0.0
baz=54
Z22A Elephant Butte 53.67 323 ⇑P P 20 28 37.7 +0.6
baz=54,SNR=9.1
220A Playas Peak, P 53.69 321 ⇑P P 20 28 37.9 +0.7
baz=54,SNR=134
U27A Thompson Grove 53.71 329 ⇓P P 20 28 37.3 +0.1
baz=54,SNR=17
X24A Lazy Vi Ranch, 53.72 325 ⇓P P 20 28 37.6 +0.1
baz=54,SNR=178
V26A Tequesquite Ra 53.73 328 ⇓P P 20 28 37.7 +0.2
baz=54,SNR=105
SADO Sadowa 53.76 353 P P 20 28 36.2 -1.0
SADO PcP PcP 20 29 34.8 +0.2
SADO Sadowa 53.76 353 P P 20 28 36.2 -1.0
comp=Z,26nm,0.4s,baz=190,slow=6.6,SNR=30
SADO PcP PcP 20 29 34.8 +0.2
comp=Z,6.6nm,0.6s,baz=243,slow=4.7,SNR=3.3
S29A Ulysses 53.80 331 ⇓P P 20 28 38.3 +0.5
baz=54
319A Douglas 53.81 320 ⇓P P 20 28 38.8 +0.7
baz=54,SNR=14
T28A Walsh 53.89 330 ⇑P P 20 28 38.3 -0.2
baz=54
R30A Dighton 53.94 332 ⇑P P 20 28 39.1 +0.4
baz=54
BNM Barren Site 54.10 324 eP P 20 28 40.4 +0.2
comp=Z,54nm,1.2s
BNM ePcP PcP 20 29 37.1 +0.7
Z21A St. Cloud Mine 54.13 323 ⇓P P 20 28 41.3 +0.9
baz=54
Q31A Ellis 54.13 333 ⇑P P 20 28 40.0 0.0
baz=54
Y22A Socorro 54.15 324 ⇓P P 20 28 40.7 +0.2
baz=54
T27A Campo 54.15 329 ⇓P P 20 28 40.4 0.0
baz=54
S28A Manter 54.16 330 ⇑P P 20 28 40.6 +0.2
baz=54
X23A Hourglass Bar 54.16 325 ⇑P P 20 28 40.8 +0.3
baz=54
U26A Atchley Ranch, 54.16 328 ⇓P P 20 28 40.8 +0.3
baz=54,SNR=35
W24A Lazy 6 Ranch, 54.18 326 ⇑P P 20 28 40.6 -0.1
baz=54,SNR=39
120A U Bar Ranch, L 54.19 321 ⇓P P 20 28 41.4 +0.7
baz=54,SNR=28
V25A Rancho No Teng 54.21 327 ⇓P P 20 28 41.2 +0.4
baz=54,SNR=56
JFWS Jewell Farm 54.21 343 eP P 20 28 38.8 -1.7
JFWS pmax pmax
comp=Z,83nm,0.6s
JFWS Jewell Farm 54.21 343 eP P 20 28 38.8 -1.7
comp=Z,83nm,0.6s
SCIA State Center 54.22 340 eP P 20 28 39.2 -1.4
comp=Z,200nm,0.4s
Y22D IRIS PASSCAL I 54.22 324 ⇓P P 20 28 42.0 +1.1
baz=54
LPM Los Pinos Moun 54.22 324 eP P 20 28 41.3 +0.4
LENM Lemitar 54.31 324 eP P 20 28 42.3 +0.7
LENM ePcP PcP 20 29 38.5 +1.2
R29A Marienthal 54.45 332 ⇓P P 20 28 42.7 +0.3
baz=55
Q30A Quinter 54.48 333 ⇑P P 20 28 43.0 +0.5
baz=55,SNR=41
V24A Rampart Ranch, 54.48 326 ⇓P P 20 28 43.1 +0.3
baz=55
U25A Circle Dot Ran 54.52 328 ⇑P P 20 28 43.2 +0.2
baz=55
P31A Stockton 54.55 334 ⇓P P 20 28 42.9 -0.1
baz=55
Z20A Nine Sixteen R 54.55 322 ⇓P P 20 28 44.1 +0.9
baz=55
W23A Werner Place, 54.55 325 ⇑P P 20 28 43.5 +0.2
baz=55,SNR=17
ANMO Albuquerque 54.57 325 eP P 20 28 43.1 -0.3
comp=Z,16nm,0.7s
ANMO ePcP PcP 20 29 38.5 +0.2
ANMO PcP PcP 20 29 38.9 +0.6
ANMO Albuquerque 54.57 325 P P 20 28 43.8 +0.3
comp=Z,19nm,0.8s,baz=128,slow=7.5,SNR=44
ANMO PcP PcP 20 29 38.9 +0.6
comp=Z,5.2nm,0.6s,baz=113,slow=9.1,SNR=5.0
X22A Bernardo 54.58 324 ⇓P P 20 28 44.7 +1.2
baz=55
LAZ Ladron 54.58 324 eP P 20 28 44.0 +0.5
comp=Z,20nm,0.9s
Y21A Point of Rocks 54.62 323 ⇓P P 20 28 44.9 +1.1
baz=55
T26A Comanche Natio 54.68 329 ⇑P P 20 28 44.4 +0.3
baz=55
R28A Tribune 54.71 331 ⇓P P 20 28 44.2 +0.1
baz=55
S27A Las Animas 54.72 330 ⇑P P 20 28 44.3 -0.1
baz=55
Q29A Oakley 54.75 332 ⇓P P 20 28 44.6 +0.2
baz=55
W22A Albuquerque 54.90 325 ⇓P P 20 28 46.5 +0.8
baz=55
S26A Kim 54.96 329 ⇓P P 20 28 46.8 +0.7
baz=55
Y20A Horse Springs, 54.97 323 ⇓P P 20 28 47.2 +0.9
baz=55
X21A Alamocita Cree 54.99 323 ⇓P P 20 28 47.4 +1.0
baz=55
U24A Moreno Valley 54.99 327 ⇓P P 20 28 47.3 +0.8
baz=55
V23A Ortiz Mt. (NFS 55.00 326 ⇑P P 20 28 47.2 +0.8
baz=55
T25A Trinidad 55.08 328 ⇑P P 20 28 47.5 +0.6
baz=55
R27A Eads 55.14 330 ⇑P P 20 28 47.2 0.0
baz=55
Q28A Sharon Springs 55.29 332 ⇑P P 20 28 48.5 +0.3
baz=55
P29A Atwood 55.30 333 ⇓P P 20 28 48.8 +0.5
baz=56
PQI Presque Isle 55.33 3 eP P 20 28 47.7 -0.4
comp=Z,81nm,1.1s
W21A San Fidel 55.38 324 ⇓P P 20 28 49.9 +0.8
baz=56
O30A MW Ranch, Wils 55.38 334 ⇓P P 20 28 48.9 +0.1
baz=56
TUC Tucson 55.39 319 eP P 20 28 49.2 +0.2
TUC e 20 29 41.0
TUC pmax pmax
comp=Z,74nm,0.7s
TUC Tucson 55.39 319 eP P 20 28 49.2 +0.2
comp=Z,74nm,0.7s
TUC ePcP PcP 20 29 41.0 -0.3
U23A El Rito 55.43 326 ⇓P P 20 28 50.2 +0.7
baz=56
R26A Arlington 55.47 330 ⇓P P 20 28 49.8 +0.3
baz=56
X20A Quemado 55.48 323 ⇑P P 20 28 50.6 +0.8
baz=56
S25A Robets Cordova 55.48 329 ⇓P P 20 28 50.3 +0.6
baz=56
V22A San Miguel Ran 55.53 325 ⇓P P 20 28 50.9 +0.8
baz=56
BGNE Belgrade 55.60 336 ⇓P P 20 28 49.8 -0.5
baz=56
KSCO Kaye Shedlock' 55.63 331 ⇑P P 20 28 50.9 +0.3
baz=56
P28A Saint Francis 55.66 332 ⇑P P 20 28 51.2 +0.4
baz=56
O29A 4D Ranch, Culb 55.67 333 ⇑P P 20 28 51.2 +0.4
baz=56
R25A Fountain Ranch 55.78 329 ⇑P P 20 28 51.9 +0.2
baz=56
U22A Llaves 55.83 326 ⇑P P 20 28 53.1 +0.9
baz=56
V21A Milan 55.86 325 ⇑P P 20 28 53.4 +1.0
baz=56
T23A Casias Ranch, 55.86 327 ⇑P P 20 28 53.1 +0.6
baz=56
S24A Houchin Ranch, 55.87 328 ⇓P P 20 28 53.3 +0.7
baz=56
W20A Ramah 55.88 324 ⇑P P 20 28 53.2 +0.6
baz=56
N30A Hueftle Ranch, 55.91 334 ⇓P P 20 28 52.6 +0.1
baz=56
Q26A Hugo 55.99 330 ⇑P P 20 28 53.7 +0.5
baz=56
P27A Ficken Ranch, 56.03 331 ⇑P P 20 28 53.9 +0.5
baz=56
O28A Krutsinger Ran 56.11 332 ⇓P P 20 28 54.3 +0.4
baz=56
PMSA Palmer Station 56.13 176 eP P 20 28 54.1 +0.7
comp=Z,32nm,0.6s
PMSA PcP PcP 20 29 45.1 +1.6
PMSA Palmer Station 56.13 176 P P 20 28 54.0 +0.7
comp=Z,48nm,0.6s,baz=359,slow=4.5,SNR=23
PMSA PcP PcP 20 29 45.1 +1.6
comp=Z,31nm,0.8s,baz=7.4,slow=6.3,SNR=5.7
N29A Votaw Ranch, W 56.16 334 ⇓P P 20 28 54.6 +0.4
baz=56
R24A Sanders Place, 56.26 329 ⇑P P 20 28 55.8 +0.7
baz=56
U21A Nageezi 56.32 325 ⇓P P 20 28 56.3 +0.7
baz=56
T22A Edith 56.32 326 ⇓P P 20 28 56.3 +0.7
baz=56
V20A Brimhall 56.33 324 ⇑P P 20 28 56.2 +0.6
baz=56
S23A Nye Farm, Mont 56.34 327 ⇑P P 20 28 56.7 +1.0
baz=56
Q25A Bedland, Calha 56.34 330 ⇑P P 20 28 56.0 +0.3
baz=56
P26A Davis Ranch, A 56.40 331 ⇑P P 20 28 56.4 +0.4
baz=57
M30A Dale-Ortello V 56.42 335 ⇑P P 20 28 55.7 -0.2
baz=57
N28A Pribbeno Ranch 56.45 333 ⇑P P 20 28 56.6 +0.3
baz=57
O27A Beecher Island 56.49 332 ⇓P P 20 28 57.2 +0.7
baz=57
R23A Moffat 56.61 328 ⇑P P 20 28 58.3 +0.7
baz=57
W18A Petrified Fore 56.61 323 ⇑P P 20 28 58.2 +0.7
baz=57
T21A Navajo Lake 56.65 326 ⇓P P 20 28 58.6 +0.8
baz=57
M29A Burnside Ranch 56.69 334 ⇓P P 20 28 58.0 +0.1
baz=57
P25A Willow Gulch B 56.77 330 ⇑P P 20 28 59.4 +0.9
baz=57
U20A Newcomb 56.77 325 ⇓P P 20 28 59.1 +0.5
baz=57
S22A 4UR Ranch, Cre 56.81 327 ⇑P P 20 28 59.7 +0.7
baz=57
Q24A Divide 56.84 329 ⇑P P 20 28 59.7 +0.5
baz=57
OGNE Ogallala 56.88 333 eP P 20 28 59.3 +0.1
comp=Z,145nm,0.7s
OGNE ePcP PcP 20 29 47.8 +0.7
OGNE Ogallala 56.88 333 ⇓P P 20 28 59.7 +0.5
baz=57
O26A Horse Wrangler 56.92 331 ⇓P P 20 29 00.2 +0.6
baz=57
M28A Bar X Bar Ranc 56.95 334 ⇓P P 20 29 00.3 +0.6
baz=57
N27A Anderson Farm, 57.00 332 ⇑P P 20 29 00.3 +0.2
baz=57
SPMN St. Paul 57.07 342 ⇑P P 20 28 59.0 -1.3
baz=57
R22A Saguache, Gunn 57.13 327 ⇑P P 20 29 02.0 +0.8
baz=57
P24A Kohler Place, 57.13 330 ⇑P P 20 29 02.0 +0.9
baz=57
Q23A Hartsel 57.14 329 ⇓P P 20 29 01.9 +0.6
baz=57
X16A Lo Mia Camp, P 57.18 321 ⇑P P 20 29 02.4 +0.9
baz=57
O25A Wiggins 57.21 331 ⇑P P 20 29 02.3 +0.8
baz=57
S21A Coal Bank Pass 57.27 326 ⇓P P 20 29 02.7 +0.5
baz=57
N26A Koester Ranch, 57.34 332 ⇓P P 20 29 03.1 +0.7
baz=58
Z14A Wintersburg 57.46 319 ⇓P P 20 29 04.0 +0.9
baz=58
M27A Reverse DX Ran 57.51 333 ⇓P P 20 29 03.9 +0.4
baz=58
K29A Lazy Trails An 57.62 335 ⇓P P 20 29 04.3 +0.1
baz=58
113A Mohawk Valley, 57.63 318 ⇓P P 20 29 04.9 +0.6
baz=58
R21A Cimarron 57.65 327 ⇑P P 20 29 05.5 +0.8
baz=58
Q22A Crested Butte, 57.67 328 ⇓P P 20 29 05.3 +0.4
baz=58
O24A Longmont 57.68 330 ⇓P P 20 29 05.5 +0.8
baz=58
ISCO Idaho Springs 57.70 329 ⇓P P 20 29 05.9 +0.8
baz=58
S20A Disappointment 57.71 326 ⇓P P 20 29 06.0 +0.9
baz=58
N25A Grover 57.73 331 ⇓P P 20 29 06.1 +1.0
baz=58
M26A McRoberts Ranc 57.80 332 ⇑P P 20 29 06.4 +0.8
baz=58

Y14A Wickenburg 57.86 320 ⇓P P 20 29 06.8 +0.8
baz=58
WUAZ Wupatki 57.87 322 eP P 20 29 06.7 +0.6
comp=Z,53nm,0.8s
WUAZ Wupatki 57.87 322 ⇓P P 20 29 07.2 +1.1
baz=58
L27A T5 Ranch, Ells 57.92 333 ⇑P P 20 29 06.8 +0.5
baz=58
R20A Redvale 57.98 326 ⇓P P 20 29 07.7 +0.8
baz=58
Q21A Lamborn Mesa, 58.01 327 ⇑P P 20 29 07.8 +0.7
baz=58
PV01 Paradox Valley 58.04 326 eP P 20 29 08.0 +0.7
comp=Z,212nm,0.6s
N24A Carr 58.13 331 ⇓P P 20 29 08.9 +1.1
baz=58
P22A Eagle 58.14 328 ⇑P P 20 29 08.6 +0.7
baz=58
O23A Lake Granby, G 58.17 329 ⇑P P 20 29 08.8 +0.6
baz=58
M25A Palm-Egli Farm 58.20 332 ⇑P P 20 29 09.0 +0.7
baz=58
K27A Flueckinger Fa 58.39 334 ⇑P P 20 29 09.9 +0.5
baz=58
P21A Newcastle 58.44 328 ⇓P P 20 29 11.1 +1.1
baz=59
O22A Kremmling 58.45 329 ⇓P P 20 29 10.4 +0.2
baz=59
BRSD Miller 58.49 337 ⇓P P 20 29 09.3 -0.6
baz=59
S18A Hurst Farm, Bl 58.53 325 ⇑P P 20 29 11.2 +0.5
baz=59
J28A Allard Ranch, 58.55 335 ⇓P P 20 29 10.9 +0.5
baz=59
M24A Cheyenne 58.59 331 ⇑P P 20 29 11.9 +1.0
baz=59
N23A Red Feather La 58.70 330 ⇓P P 20 29 12.2 +0.5
baz=59
L25A Engebretsen Ra 58.73 332 ⇓P P 20 29 12.8 +1.0
baz=59
Y12C Blythe 58.73 318 ⇓P P 20 29 12.6 +0.9
baz=59
PHWY Pilot Hill 58.77 331 eP P 20 29 12.7 +0.4
comp=Z,35nm,1.1s
K26A Motz Farm, Whi 58.80 333 ⇓P P 20 29 12.9 +0.7
baz=59
PDMCI Parker Dam,Lak 58.82 319 ⇓P P 20 29 13.2 +0.9
baz=59
N22A Wattenberg Ran 58.88 330 ⇑P P 20 29 13.5 +0.5
baz=59
P20A De Beque 58.92 327 ⇓P P 20 29 13.7 +0.5
baz=59
O21A Pagoda 58.96 328 ⇑P P 20 29 14.4 +0.9
baz=59
M23A Laramie 59.02 331 ⇓P P 20 29 14.6 +0.7
baz=59
U15A North Rim 59.03 322 ⇓P P 20 29 15.1 +1.0
baz=59
K25A Mack Ranch, Ha 59.04 333 ⇑P P 20 29 14.6 +0.8
baz=59
SWSC Sam W. Stewart 59.09 317 ⇑P P 20 29 15.0 +0.8
baz=59
L24A Wheatland 59.09 332 ⇑P P 20 29 14.7 +0.5
baz=59
DVTC Desert V Tower 59.13 316 ⇓P P 20 29 15.6 +1.0
baz=59
W13A Hualapai Mount 59.16 320 ⇓P P 20 29 15.9 +1.0
baz=59
EYMN Ely 59.19 345 eP P 20 29 13.2 -1.4
comp=Z,153nm,0.4s
BC3 Big Chuckawall 59.29 318 ⇑P P 20 29 16.4 +0.8
baz=59
O20A White River Ci 59.31 328 ⇑P P 20 29 16.4 +0.7
baz=60
P19A Cripple Cowboy 59.34 327 ⇓P P 20 29 16.7 +0.7
baz=60
N21A Black Mountain 59.39 329 ⇓P P 20 29 17.2 +0.8
baz=60
IRM Iron Mountain 59.39 318 ⇓P P 20 29 17.0 +0.8
baz=60
M22A Cedar Creek Ra 59.41 330 ⇑P P 20 29 17.2 +0.8
baz=60
NEE2 Needles Airpor 59.42 319 ⇓P P 20 29 17.3 +0.9
baz=60
MONP Monument Peak 59.48 317 ⇓P P 20 29 18.1 +1.0
baz=60
L23A Garrett 59.51 331 ⇑P P 20 29 17.6 +0.5
baz=60
BAR Barrett 59.53 316 eP P 20 29 18.0 +0.8
comp=Z,19nm,0.9s
K24A Anderson Ranch 59.56 332 ⇑P P 20 29 18.2 +0.9
baz=60
L22A Ellis Ranch, M 59.80 331 ⇓P P 20 29 19.8 +0.7
baz=60
SRU San Rafael 59.81 326 ⇓P P 20 29 19.7 +0.5
baz=60
N20A Spence Gulch, 59.83 328 ⇓P P 20 29 20.1 +0.8
baz=60
BELC Belle Mtn. Jos 59.85 318 ⇑P P 20 29 20.5 +1.1
baz=60
O19A Miners Draw (B 59.89 327 ⇑P P 20 29 20.2 +0.6
baz=60
PFO Pinyon Flat Ob 59.93 317 P P 20 29 21.9 +2.0
comp=Z,88nm,0.6s,SNR=6.1
PFO Pinyon Flat Ob 59.93 317 eP P 20 29 20.9 +1.0
comp=Z,12nm,0.8s
PFO PcP PcP 20 29 59.8 +0.3
PFO Pinyon Flat Ob 59.93 317 P P 20 29 20.9 +0.9
comp=Z,8.7nm,0.7s,baz=107,slow=6.7,SNR=12
PFO PcP PcP 20 29 59.8 +0.3
comp=Z,13nm,1.0s,baz=150,slow=4.8,SNR=6.2
PFO Pinyon Flat Ob 59.93 317 ⇑P P 20 29 20.8 +0.9
baz=60
LDFC Landfair 59.93 319 eP P 20 29 21.3 +1.4
comp=Z,30nm,0.7s
M21A Separation Pea 59.94 330 ⇓P P 20 29 20.6 +0.6
baz=60
109C Camp Elliot, M 59.95 316 ⇓P P 20 29 20.7 +0.8
baz=60
K23A Bowen Ranch, D 59.96 332 ⇑P P 20 29 20.7 +0.6
baz=60
J24A Dixon Ranch, L 59.97 333 ⇓P P 20 29 20.9 +0.9
baz=60
Q16A Castle Valley 60.05 325 ⇑P P 20 29 21.4 +0.7
baz=60
GMRC Granite Mounta 60.10 319 ⇑P P 20 29 22.2 +1.1
baz=60
L21A Rawlins 60.21 330 ⇑P P 20 29 21.9 +0.1
baz=60
M20A Sweetwater, Wa 60.27 329 ⇑P P 20 29 22.6 +0.4
baz=60
RSSD Black Hills 60.31 334 eP P 20 29 22.8 +0.5
RSSD pmax pmax
comp=Z,54nm,0.4s
RSSD Black Hills 60.31 334 eP P 20 29 22.8 +0.5
comp=Z,54nm,0.4s
K22A Casper 60.31 331 ⇑P P 20 29 22.8 +0.5
baz=60
MVU Marysvale 60.36 324 eP P 20 29 24.0 +1.1
comp=Z,48nm,0.9s
MVU ePcP PcP 20 30 02.0 +0.7
I24A Kuemmerle Ranc 60.36 333 ⇓P P 20 29 23.3 +0.7
baz=60
CCUT Cedar City 60.41 323 eP P 20 29 24.5 +1.3
comp=Z,26nm,0.9s
CCUT ePcP PcP 20 30 02.3 +0.8
MURC Murrieta 60.42 317 ⇓P P 20 29 24.0 +0.9
baz=61
J23A Dilts Ranch, B 60.43 332 ⇓P P 20 29 23.9 +0.8
baz=61
HEC Hector,Ludlow 60.57 318 ⇓P P 20 29 25.4 +1.3
baz=61
ARUT Antelope Range 60.61 323 eP P 20 29 25.5 +1.1
ARUT pmax pmax
comp=Z,47nm,1.0s
ARUT Antelope Range 60.61 323 eP P 20 29 25.5 +1.1
comp=Z,47nm,1.0s
BBRC Big Bear Solar 60.62 318 ⇑P P 20 29 25.4 +0.7
baz=61
TUQ Turquoise Moun 60.67 319 ⇑P P 20 29 25.7 +0.8
baz=61
L20A Wamsutter 60.73 329 ⇑P P 20 29 25.6 +0.5
baz=61
AGMN Agassiz Nation 60.76 342 eP P 20 29 23.8 -1.2
comp=Z,86nm,0.8s
M19A Rock Springs 60.78 328 ⇓P P 20 29 25.4 -0.1
baz=61
I23A Meade Ranch, G 60.82 333 ⇓P P 20 29 26.0 +0.4
baz=61
J22A Midwest 60.87 332 ⇑P P 20 29 26.3 +0.3
baz=61
H24A Dirks Ranch, A 61.03 334 ⇑P P 20 29 27.1 +0.1
baz=61
RRX Edison Barstow 61.04 318 ⇑P P 20 29 28.5 +1.4
baz=61
MPU Maple Canyon 61.06 326 eP P 20 29 28.2 +0.8
comp=Z,54nm,1.1s
BFSC Mount Baldy Ra 61.11 317 ⇑P P 20 29 28.5 +0.8
baz=61
DAU Daniels Canyon 61.12 326 eP P 20 29 28.8 +0.9
DAU e 20 30 05.0
DAU Daniels Canyon 61.12 326 eP P 20 29 28.8 +0.9
DAU ePcP PcP 20 30 05.0 +0.6
CIS Catalina Islan 61.13 316 ⇓P P 20 29 29.0 +1.2
baz=61
GSC Goldstone 61.17 319 eP P 20 29 28.6 +0.6
GSC pmax pmax
comp=Z,36nm,0.9s
GSC Goldstone 61.17 319 eP P 20 29 28.6 +0.6
comp=Z,36nm,0.9s
GSC Goldstone 61.17 319 ⇓P P 20 29 29.3 +1.3
baz=61
SHOC Shoshone 61.19 319 ⇓P P 20 29 29.0 +0.9
baz=61
K20A Yellowstone Ra 61.21 330 ⇓P P 20 29 28.4 +0.1
baz=61
I22A 9 Mile Ranch, 61.24 332 ⇑P P 20 29 28.8 +0.4
baz=61
H23A Clabaugh Cattl 61.26 333 ⇑P P 20 29 28.8 +0.3
baz=61
J21A Lysite 61.28 331 ⇑P P 20 29 29.3 +0.5
baz=61
L19A Farson 61.31 329 ⇑P P 20 29 29.4 +0.4
baz=62
JLU Jordanelle 61.36 326 eP P 20 29 30.3 +0.9
comp=Z,209nm,1.8s
JLU ePcP PcP 20 30 05.9 +0.6
MWC Mount Wilson 61.37 317 eP P 20 29 30.4 +0.9
MWC pmax pmax
comp=Z,28nm,0.8s
MWC Mount Wilson 61.37 317 eP P 20 29 30.4 +0.9
comp=Z,28nm,0.8s
PASC Pasadena Art C 61.42 317 eP P 20 29 30.9 +1.3
comp=Z,86nm,1.3s
G24A Alzada 61.43 334 ⇑P P 20 29 30.0 +0.4
baz=62
L18A Fontenelle, Gr 61.54 328 ⇓P P 20 29 30.8 +0.4
baz=62
M17A Scullys Gap (B 61.55 327 ⇓P P 20 29 30.6 0.0
baz=62
I21A Big Trails, Te 61.56 331 ⇑P P 20 29 30.8 +0.3
baz=62
DECC Green Verdugo 61.57 317 ⇑P P 20 29 31.8 +1.2
baz=62
K19A Absolon Red Bu 61.58 330 ⇓P P 20 29 30.7 0.0
baz=62
J20A Shoshoni 61.59 330 ⇓P P 20 29 31.3 +0.6
baz=62
MDND Maddock 61.61 339 ⇓P P 20 29 31.1 +0.5
baz=62
EDW2 Edwards Air Fo 61.70 317 ⇑P P 20 29 32.3 +0.8
baz=62
H22A Clearmont 61.72 332 ⇓P P 20 29 31.7 +0.3
baz=62
G23A Biddle 61.76 334 ⇓P P 20 29 32.1 +0.4
baz=62
DUG Dugway 61.84 325 eP P 20 29 33.3 +0.9
DUG pmax pmax
comp=Z,43nm,0.8s
DUG Dugway 61.84 325 eP P 20 29 33.3 +0.9
comp=Z,43nm,0.8s
DUG Dugway 61.84 325 ⇑P P 20 29 33.5 +1.1
baz=62
LRMC Laurel Mountai 61.85 318 ⇑P P 20 29 33.6 +1.1
baz=62
F24A Ekalaka 61.85 335 ⇓P P 20 29 32.8 +0.5
baz=62
PDAR Pinedale Array 61.90 329 P P 20 29 33.0 +0.1
PDAR PcP PcP 20 30 07.2 -0.3
PDAR Pinedale Array 61.90 329 P P 20 29 33.0 +0.1
comp=Z,18nm,0.5s,baz=122,slow=8.6,SNR=175
PDAR PcP PcP 20 30 07.2 -0.3
comp=Z,12nm,0.5s,baz=149,slow=5.9,SNR=8.5
BW06 Boulder Array 61.90 329 eP P 20 29 32.3 -0.6
comp=Z,17nm,0.5s
FURC Furnace Creek, 61.91 320 ⇑P P 20 29 33.9 +1.2
baz=62
BLG Laguna Peak 61.99 316 ⇑P P 20 29 34.2 +0.8
baz=62
J19A Crowheart 62.01 330 ⇓P P 20 29 33.7 +0.2
baz=62
H21A Big Horn, Sher 62.06 332 ⇓P P 20 29 33.6 -0.1
baz=62
I20A Worland 62.06 331 ⇓P P 20 29 34.2 +0.4
baz=62
MPMC Manual Prospec 62.07 319 ⇓P P 20 29 34.7 +0.7
baz=62
HWUT Hardware Ranch 62.12 327 eP P 20 29 34.2 0.0
comp=Z,48nm,0.7s
F23A Volborg 62.17 334 ⇓P P 20 29 34.7 +0.3
baz=62
G22A Birney 62.17 333 ⇑P P 20 29 34.5 +0.1
baz=62
R11A Troy Canyon, C 62.27 322 ⇓P P 20 29 36.5 +1.2
baz=62
E24A Baker 62.37 335 ⇓P P 20 29 36.3 +0.8
baz=62
H20A Greybull 62.40 331 ⇑P P 20 29 36.0 +0.1
baz=62
ARVC Arvin 62.41 317 ⇑P P 20 29 37.1 +1.1
baz=62
ISA Isabella 62.48 318 eP P 20 29 37.7 +1.1
ISA pmax pmax
comp=Z,35nm,0.8s
ISA Isabella 62.48 318 eP P 20 29 37.7 +1.1
comp=Z,35nm,0.8s
ISA Isabella 62.48 318 ⇑P P 20 29 37.6 +1.1
baz=63
ULM Lac du Bonnet 62.50 343 P P 20 29 35.1 -1.1
ULM Lac du Bonnet 62.50 343 P P 20 29 35.1 -1.1
comp=Z,210nm,0.7s,baz=154,slow=6.1,SNR=115
I19A Meeteetse 62.54 330 ⇑P P 20 29 37.2 +0.2
baz=63
GRAC Grapevine Rang 62.55 320 ⇑P P 20 29 38.1 +1.2
baz=63
G21A Lodge Grass 62.59 332 ⇓P P 20 29 37.3 +0.2
baz=63
CWC Cottonwood Cre 62.67 319 ⇓P P 20 29 39.2 +1.3
baz=63
AHID Auburn Hatcher 62.69 328 eP P 20 29 37.8 -0.1
comp=Z,24nm,0.8s
I18A Diamond G Ranc 62.70 330 ⇓P P 20 29 38.5 +0.5
baz=63
E23A Ismay 62.74 334 ⇓P P 20 29 38.4 +0.4
baz=63
D24A Glendive 62.82 335 ⇓P P 20 29 39.5 +1.0
baz=63
HVU Hansel Valley 62.90 326 eP P 20 29 39.3 +0.1
HVU pmax pmax
comp=Z,79nm,1.4s
HVU Hansel Valley 62.90 326 eP P 20 29 39.3 +0.1
comp=Z,79nm,1.4s
PKM Peak Mountain 62.94 317 ⇑P P 20 29 40.8 +1.1
baz=63
E22A Miles City 62.97 334 ⇑P P 20 29 39.5 +0.1
baz=63
REDW Red Top Meadow 62.98 329 eP P 20 29 40.0 +0.1
comp=Z,0.6nm,1.1s
VES Vestal, Richgr 62.99 318 ⇓P P 20 29 40.7 +1.0
baz=63
SNOW Snow King Moun 63.01 329 eP P 20 29 40.5 +0.5
F21A Absaloka Mine, 63.01 333 ⇑P P 20 29 40.0 +0.2
baz=63
H19A Powell 63.01 331 ⇑P P 20 29 40.0 +0.2
baz=63
LOHW Long Hollow 63.04 329 eP P 20 29 40.1 0.0
comp=Z,29nm,0.8s
G20A Bridger 63.05 332 ⇓P P 20 29 40.1 0.0
baz=63
TPAW Teton Pass 63.12 329 eP P 20 29 41.2 +0.4
comp=Z,24nm,0.8s
TIN Tinemaha 63.13 319 ⇑P P 20 29 42.3 +1.5
baz=63
C24A Savage 63.19 336 ⇑P P 20 29 41.7 +0.9
baz=63
MOOW Moose Ponds 63.20 329 eP P 20 29 41.3 0.0
comp=Z,13nm,0.6s
RRI2 Red Ridge 63.21 329 eP P 20 29 42.0 +0.7
comp=Z,91nm,0.8s
I17A Pilgrim Ck. 63.24 329 ⇑P P 20 29 42.5 +1.0
baz=63
SMMC Simmler 63.30 317 ⇑P P 20 29 43.1 +1.4
baz=63
DCID1 Drake Creek 63.32 329 eP P 20 29 43.0 +1.1
comp=Z,61nm,0.9s
H18A Shoshone NF, C 63.34 331 ⇓P P 20 29 42.2 +0.1
baz=64
RCTC Rector, Farmer 63.36 318 ⇓P P 20 29 42.4 +0.4
baz=64
IMW Indian Meadow 63.41 329 eP P 20 29 43.2 +0.5
comp=Z,42nm,0.8s
IMW ePcP PcP 20 30 14.0 +0.3
F20A Billings 63.46 332 ⇓P P 20 29 43.1 +0.4
baz=64
RLMT Red Lodge 63.48 331 eP P 20 29 43.1 +0.2
comp=Z,23nm,0.7s
MTUM Tungsten Hills 63.53 319 eP P 20 29 44.4 +1.0
SCHQ Schefferville 63.53 3 P P 20 29 41.9 -0.9
SCHQ PcP PcP 20 30 13.2 -0.4
SCHQ Schefferville 63.53 3 P P 20 29 41.9 -0.9
comp=Z,10nm,0.5s,baz=179,slow=4.6,SNR=27
SCHQ PcP PcP 20 30 13.2 -0.4
comp=Z,7.1nm,0.4s,baz=162,slow=5.4,SNR=5.4
E21A Keefer Ranch, 63.54 333 ⇓P P 20 29 43.8 +0.7
baz=64
ELK Elko 63.59 324 eP P 20 29 44.3 +0.5
comp=Z,14nm,1.0s
ELK ePcP PcP 20 30 14.1 -0.4
D22A Cohagen 63.62 334 ⇓P P 20 29 44.9 +1.3
baz=64
I16A Newdale 63.67 329 ⇑P P 20 29 44.9 +0.7
baz=64
C23A Lambert 63.72 335 ⇑P P 20 29 45.1 +0.9
baz=64
G18A Lazy EL Ranch, 63.76 331 ⇓P P 20 29 45.4 +0.7
baz=64
DGMT Dagmar 63.85 336 eP P 20 29 45.9 +0.9
comp=Z,112nm,0.6s
DGMT Dagmar 63.85 336 ⇓P P 20 29 45.9 +0.9
baz=64
MLAC Mammoth Lakes 63.86 320 ⇑P P 20 29 46.7 +1.1
baz=64
F19A Roth Farm, Mol 63.87 332 ⇑P P 20 29 45.8 +0.5
baz=64
D21A La Casta Ranch 63.91 334 ⇓P P 20 29 46.6 +1.1
baz=64
C22A Vida 63.96 335 ⇑P P 20 29 46.7 +0.9
baz=64
YMR Madison River 63.97 330 eP P 20 29 47.4 +1.3
comp=Z,82nm,0.8s
E20A Meyer Farm, Mu 63.98 333 ⇑P P 20 29 46.9 +1.0
baz=64
NVAR Mina Array Bea 64.00 321 P P 20 29 47.4 +0.9
NVAR PcP PcP 20 30 16.7 +0.5
NVAR P'P' 20 58 30.6
NVAR Mina Array Bea 64.00 321 P P 20 29 47.4 +0.9
comp=Z,6.5nm,0.5s,baz=169,slow=7.7,SNR=11
NVAR PcP PcP 20 30 16.7 +0.5
comp=Z,13nm,0.7s,baz=140,slow=4.9,SNR=13
NVAR PKPPKP P'P'df 20 58 30.6 +0.2
comp=Z,1.2nm,0.9s,baz=298,slow=3.8,SNR=3.8
H16A Russell Place, 64.14 330 ⇓P P 20 29 48.4 +1.2
baz=64
A24A Westby 64.14 337 ⇑P P 20 29 48.1 +1.2
baz=64
GCMT Greycliff 64.16 331 eP P 20 29 47.5 +0.3
comp=Z,54nm,0.7s
E19A Rath Farm, Rou 64.25 332 ⇑P P 20 29 48.4 +0.7
baz=64
F18A Big Timber 64.27 331 ⇑P P 20 29 48.6 +0.8
baz=64
QLMT Earthquake Lak 64.32 330 eP P 20 29 49.7 +1.4
G17A Pierce Place, 64.33 330 ⇑P P 20 29 49.6 +1.3
baz=64
D20A Manuel Ranch, 64.43 333 ⇓P P 20 29 49.3 +0.6
baz=65
B22A Reddig Ranch S 64.44 335 ⇓P P 20 29 49.7 +0.8
baz=65
A23A Redstone 64.52 336 ⇓P P 20 29 50.2 +1.0
baz=65
C21A Desert Coulee 64.54 334 ⇓P P 20 29 50.2 +0.8
baz=65
BMN Battle Mountai 64.56 323 eP P 20 29 50.5 +0.6
BMN pmax pmax
comp=Z,16nm,0.5s
BMN Battle Mountai 64.56 323 eP P 20 29 50.5 +0.6
comp=Z,16nm,0.5s
F17A Fitzpatrick Pl 64.72 331 ⇑P P 20 29 51.6 +0.8
baz=65
I14A Mackay 64.73 328 ⇓P P 20 29 52.2 +1.2
baz=65
G16A Moss Hill, Enn 64.79 330 ⇑P P 20 29 51.9 +0.7
baz=65
D19A Cripps Ranch, 64.82 333 ⇓P P 20 29 51.9 +0.6
baz=65
C20A Veseth Ranch, 64.84 334 ⇑P P 20 29 51.7 +0.3
baz=65
E18A Harlowton 64.85 332 ⇓P P 20 29 52.4 +0.9
baz=65
A22A Carney Farms, 64.96 336 ⇑P P 20 29 52.8 +0.8
baz=65
B21A Ellsworth Farm 64.97 335 ⇑P P 20 29 53.1 +1.0
baz=65
HLID Hailey 64.99 327 eP P 20 29 53.6 +1.0
comp=Z,72nm,1.4s
HLID Hailey 64.99 327 ⇑P P 20 29 53.5 +1.0
baz=65
BOZ Bozeman (W) 65.00 330 eP P 20 29 52.7 +0.1
BOZ pmax pmax
comp=Z,31nm,1.0s
BOZ Bozeman (W) 65.00 330 eP P 20 29 52.7 +0.1
comp=Z,31nm,1.0s
MCMT McKenzie Canyo 65.04 329 eP P 20 29 53.9 +1.0
comp=Z,16nm,0.8s
SAO San Andreas Ge 65.08 317 eP P 20 29 54.4 +1.4
SAO pmax pmax
comp=Z,26nm,1.3s
SAO San Andreas Ge 65.08 317 eP P 20 29 54.4 +1.4
comp=Z,26nm,1.3s
G15A Dillon 65.09 329 ⇑P P 20 29 53.7 +0.6
baz=65
CMB Columbia Colle 65.10 319 eP P 20 29 53.9 +0.7
CMB pmax pmax
comp=Z,16nm,1.0s
CMB Columbia Colle 65.10 319 eP P 20 29 53.9 +0.7
comp=Z,16nm,1.0s
F16A Kennard Place, 65.10 330 ⇑P P 20 29 53.8 +0.7
baz=65
E17A Martinsdale 65.22 331 ⇑P P 20 29 54.6 +0.7
baz=65
D18A Linhart Farms, 65.26 332 ⇑P P 20 29 54.8 +0.8
baz=65
DLMT Dillon 65.28 329 eP P 20 29 54.3 0.0
comp=Z,16nm,0.9s
C19A Slack Wire Ran 65.32 333 ⇓P P 20 29 55.0 +0.6
baz=66
B20A Solberg Farm, 65.40 334 ⇑P P 20 29 55.5 +0.7
baz=66
WCN Washoe City 65.43 321 eP P 20 29 56.5 +1.1
WCN pmax pmax
comp=Z,37nm,1.0s
WCN Washoe City 65.43 321 eP P 20 29 56.5 +1.1
comp=Z,36nm,1.0s
LRM Limekiln Ridge 65.53 330 eP P 20 29 56.5 +0.5
F15A Butte 65.57 330 ⇓P P 20 29 56.6 +0.5
baz=66
D17A Six Diamond Ra 65.64 332 ⇓P P 20 29 57.0 +0.5
baz=66
G14A Jackson 65.64 329 ⇓P P 20 29 57.2 +0.6
baz=66
E16A East Helena 65.66 331 ⇑P P 20 29 57.4 +0.8
baz=66
MFID Camas Ranch 65.67 326 eP P 20 29 58.0 +1.3
comp=Z,131nm,1.0s
MFID epP pP 20 31 48.2 +1.6
MFID Camas Ranch 65.67 326 ⇑P P 20 29 58.0 +1.3
baz=66
A20A Cobblestone Ra 65.70 335 ⇑P P 20 29 57.3 +0.5
baz=66
B19A Brinkman Farms 65.82 334 ⇑P P 20 29 58.2 +0.7
baz=66
EGMT Eagleton 65.85 333 eP P 20 29 57.9 +0.2
comp=Z,97nm,0.8s
EGMT Eagleton 65.85 333 ⇑P P 20 29 58.2 +0.5

baz=66
H12A **Diamond D Ranc** 65.89 328 ⇑P P 20 29 59.0 +0.8
baz=66
D16A **Dana Ranch, Ca** 65.95 331 ⇓P P 20 29 59.3 +0.9
baz=66
F14A **Wisdom** 65.98 329 ⇓P P 20 29 59.7 +1.0
baz=66
C17A **Wharram Farm,** 66.02 332 ⇑P P 20 29 59.2 +0.4
baz=66
E15A **Deer Lodge** 66.05 330 ⇓P P 20 29 59.7 +0.6
baz=66
A19A **Klindworth Far** 66.09 334 ⇑P P 20 29 59.8 +0.7
baz=66
BEKR **Beckworth** 66.14 321 eP P 20 30 00.5 +0.7
comp=Z,12nm,0.8s
B18A **Beardsley Farm** 66.14 333 ⇓P P 20 30 00.2 +0.8
baz=66
D15A **Lincoln** 66.43 331 ⇑P P 20 30 02.3 +0.9
baz=67
F13A **Darby** 66.46 329 ⇓P P 20 30 02.3 +0.7
baz=67
B17A **L&G Farms, Che** 66.52 333 ⇓P P 20 30 02.1 +0.2
baz=67
OHCM **Honcut** 66.54 320 eP P 20 30 03.2 +1.2
A18A **Metzger Ranch,** 66.56 334 ⇓P P 20 30 02.3 +0.2
baz=67
C16A **Fuhringer Ranc** 66.60 332 ⇓P P 20 30 02.9 +0.5
baz=67
WVOR **Wild Horse Val** 66.64 324 eP P 20 30 02.8 0.0
WVOR pmax pmax
comp=Z,42nm,1.3s
WVOR **Wild Horse Val** 66.64 324 eP P 20 30 02.8 0.0
comp=Z,42nm,1.3s
CHMT **Chamberlain Mo** 66.69 330 eP P 20 30 03.7 +0.5
E13A **Victor** 66.83 329 ⇓P P 20 30 04.8 +1.0
baz=67
F12A **Elk City** 66.91 328 ⇑P P 20 30 04.9 +0.5
baz=67
D14A **Greenough** 66.94 330 ⇓P P 20 30 05.2 +0.7
baz=67
A17A **Triple J Farms** 66.96 333 ⇓P P 20 30 05.0 +0.5
baz=67
MSO **Missoula** 66.97 330 eP P 20 30 05.8 +1.0
MSO epP pP 20 31 57.4 +2.2
comp=Z,44nm,1.1s
MSO **Missoula** 66.97 330 ⇑P P 20 30 05.7 +1.0
baz=67
C15A **Salmond Ranch,** 66.99 331 ⇓P P 20 30 05.9 +1.0
baz=67
B16A **M & M Farms, S** 67.03 332 ⇓P P 20 30 05.2 +0.2
baz=67
SLMT **Seeley Lake** 67.04 330 eP P 20 30 05.9 +0.7
LBCM **Butte Creek Ri** 67.32 321 P P 20 30 07.7 +0.7
B15A **Bradely Ranch,** 67.35 332 ⇑P P 20 30 07.2 +0.2
baz=68
BMO **Blue Mountains** 67.41 327 eP P 20 30 07.3 -0.1
comp=Z,29nm,1.2s
D13A **Huson** 67.42 330 ⇓P P 20 30 08.2 +0.8
baz=68
SWMT **Swartz Lake** 67.47 330 eP P 20 30 08.6 +0.8
B14A **Marquette Ranc** 67.72 331 ⇑P P 20 30 09.6 +0.3
baz=68
YBMT **Yellow Bay** 67.73 331 eP P 20 30 10.1 +0.7
comp=Z,23nm,0.6s
JTMT **Jette** 67.78 330 eP P 20 30 10.5 +0.8
JTMT epP pP 20 32 03.0 +2.4
D12A **Red Ives Fores** 67.83 329 ⇑P P 20 30 10.6 +0.6
baz=68
C13A **Hot Springs** 67.87 330 ⇓P P 20 30 11.1 +0.9
baz=68
A15A **Johnson Ranch,** 67.91 332 ⇑P P 20 30 10.3 0.0
baz=68
WDC **Whiskeytown Da** 67.92 320 eP P 20 30 09.2 -1.3
WDC pmax pmax
comp=Z,22nm,0.6s
WDC **Whiskeytown Da** 67.92 320 eP P 20 30 09.2 -1.3
comp=Z,22nm,0.6s
BLMT **Blacktail Moun** 68.00 331 eP P 20 30 11.8 +0.7
BLMT epP pP 20 32 03.7 +1.6
LIC **Lamto** 68.05 80⇓iP P 20 30 11.8 0.0
comp=Z,23nm,0.3s,baz=257
LIC **Lamto** 68.05 80⇓iP P 20 30 11.8 0.0
comp=Z,23nm,0.3s
KCPM **Cahto Peak** 68.09 319 eP P 20 30 12.9 +1.2
comp=Z,46nm,1.3s
KIPM **Iron Peak** 68.09 319 eP P 20 30 13.1 +1.3
comp=Z,29nm,0.7s
BSMT **Bassoo Peak** 68.10 330 eP P 20 32 12.4 +0.7
BSMT epP pP 20 32 04.4 +1.7
A14A **Double T Ranch** 68.22 332 ⇓P P 20 30 12.5 +0.2
baz=68
FFC **Flin Flon** 68.24 342 eP P 20 30 11.8 -0.3
FFC pmax pmax
comp=Z,49nm,0.6s
FFC **Flin Flon** 68.24 342 eP P 20 30 11.8 -0.3
comp=Z,48nm,0.6s
B13A **Whitefish** 68.30 331 ⇓P P 20 30 13.4 +0.6
baz=68
DBIC **Dimbokro** 68.30 79 eP P 20 30 13.8 +0.4
comp=Z,43nm,0.6s
DBIC pP pP 20 32 03.5 -1.0
DBIC epP pP 20 32 06.3 +1.8
DBIC **Dimbokro** 68.30 79 P P 20 30 13.7 +0.3
comp=Z,32nm,0.4s,baz=241,slow=5.2,SNR=171
DBIC pP pP 20 32 03.5 -1.0
comp=Z,22nm,1.1s,baz=242,slow=5.8,SNR=4.2
C12B **Naegeli Ranch,** 68.34 330 ⇑P P 20 30 14.0 +1.0
baz=68
HOG **Hogback Mounta** 68.35 322 P P 20 30 14.4 +1.1
WALA **Waterton Lakes** 68.51 332 eP P 20 30 14.2 +0.1
comp=Z,1.8nm,0.8s
YBH **Yreka Blue Hor** 68.67 321 eP P 20 30 14.5 -0.7
YBH **Yreka Blue Hor** 68.67 321 P P 20 30 14.7 -0.4
comp=Z,18nm,0.7s,baz=110,slow=2.9,SNR=62
KHMM **Horse Mountain** 68.83 320 eP P 20 30 17.6 +1.4
comp=Z,56nm,0.9s
B12A **Libby** 68.91 330 ⇑P P 20 30 17.3 +0.9
baz=69
VIPM **Ingram Point** 69.04 325 P P 20 30 19.0 +1.6
VIPM **Ingram Point** 69.04 325 P P 20 30 19.0 +1.6
A12A **Yaak River Rach** 69.26 331 ⇓P P 20 30 19.6 +1.1
baz=69
HUMO **Hull Mountain** 69.31 322 eP P 20 30 18.7 -0.2
comp=Z,11nm,0.9s
WIFE **Three Sisters-** 69.47 324 P P 20 30 21.3 +1.3
HUOR **Husband** 69.52 324 P P 20 30 23.8 +3.4
NEW **Newport** 69.53 329 eP P 20 30 20.2 +0.1
comp=Z,26nm,1.2s
NEW pP pP 20 32 11.9 +0.1
NEW **Newport** 69.53 329 P P 20 30 20.6 +0.4
comp=Z,11nm,0.9s,baz=127,slow=7.3,SNR=16
NEW pP pP 20 32 11.9 +0.1
comp=Z,3.4nm,0.7s,baz=128,slow=6.1,SNR=2.2
NEW **Newport** 69.53 329 ⇓P P 20 30 20.5 +0.4
baz=70
KBO **Bosley Butte** 69.88 321 eP P 20 30 23.7 +1.3
comp=Z,73nm,1.2s
BROR **Big Rock Looko** 69.96 324 P P 20 30 23.4 +0.7
H04A **Detroit Lake** 70.05 324 P P 20 30 23.9 +0.7
KEBM **Edson Butte** 70.31 322 eP P 20 30 26.4 +1.6
comp=Z,65nm,1.1s
WTV **Waterville** 70.63 328 P P 20 30 27.6 +0.9
COR **Corvallis** 70.64 324 eP P 20 30 29.2 +2.5
COR **Corvallis** 70.64 324 eP P 20 30 29.2 +2.5
TBM **Table Mountain** 70.65 327 P P 20 30 28.2 +1.4
MPOR **Mary's Peak** 70.74 323 P P 20 30 29.1 +1.6
ETW **Entiat** 70.77 327 P P 20 30 28.8 +1.2
MBW **Mount Baker** 72.33 328 P P 20 30 36.9 +0.2
NLWA **Neilton Lookou** 72.57 326 eP P 20 30 39.7 +1.7
comp=Z,62nm,1.0s
OBC **Olympics--Boni** 73.06 326 P P 20 30 42.6 +1.9
PGC **Sidney** 73.07 327 eP P 20 30 42.1 +1.4
PFVI **Vila Bisbo** 74.36 48 eP P 20 30 50.0 +1.7
comp=Z,120nm,1.5s
MORF **Marmelete** 74.56 47 eP P 20 30 51.2 +1.7
comp=Z,90nm,1.0s
PTEO **Sao Teotonio** 74.60 47 eP P 20 30 51.4 +1.7
comp=Z,104nm,1.6s
PMAFR **Mafra** 74.79 46 eP P 20 30 53.5 +2.8
PMAFR eS S 20 39 48.8 +4.9
PNCL **Nicolau / Gran** 74.98 47 eP P 20 30 53.2 +1.4
comp=Z,49nm,0.9s
PNCL eS S 20 39 50.2 +4.3
PBDV **Barranco-do-Ve** 75.06 48 eP P 20 30 54.3 +2.0
comp=Z,66nm,1.5s
PBDV eS S 20 39 50.1 +3.2

SNAA **Sanae** 75.08 162 eP P 20 30 52.5 +0.7
SNAA **Sanae** 75.08 162 eP P 20 30 52.4 +0.7
SNAA pP pP 20 32 45.0 -0.7
SNAA **Sanae** 75.08 162 P P 20 30 52.6 +0.7
comp=Z,17nm,0.5s,baz=281,slow=6.3,SNR=512
SNAA pP pP 20 32 45.0 -0.7
comp=Z,3.3nm,0.9s,baz=282,slow=4.5,SNR=3.1
PCVE **Castro Verde** 75.14 47 eP P 20 30 54.4 +1.7
comp=Z,70nm,0.9s
PCVE eS S 20 39 45.9 -1.8
PVAQ **Vaqueiros** 75.28 48 eP P 20 30 54.9 +1.4
comp=Z,48nm,2.2s
PVAQ eS S 20 39 53.1 +3.9
PBEJ **Beja** 75.42 47 eP P 20 30 55.0 +0.7
comp=Z,31nm,1.6s
EVOP **Sao Brissos** 75.44 46⇓iP P 20 30 55.3 +1.0
EVOP pmax pmax
comp=Z,47nm,0.6s
EVOP **Sao Brissos** 75.44 46⇓iP P 20 30 55.3 +1.0
comp=Z,47nm,0.6s
TBI **Tubuai** 75.44 248 eS SKiKP 20 39 21.6 +1.7
TBI eLR LR 20 55 35.5
comp=Z,174nm,29.0s
EVO **Evora** 75.52 47⇓iP P 20 30 55.3 +0.5
comp=Z,47nm,0.7s
EVO eR
comp=Z,88nm,19.8s
EVO **Evora** 75.52 47 eP P 20 30 56.0 +1.2
comp=Z,51nm,1.2s
PMTG **Montargil** 75.58 46 eP P 20 30 56.1 +1.0
comp=Z,53nm,1.5s
PTOM **Tomar** 75.68 45 eP P 20 30 56.6 +0.9
comp=Z,65nm,1.3s
MDT **Midelt** 75.94 53 P P 20 30 58.9 +1.5
MDT pP pP 20 32 50.2 -1.5
MDT **Midelt** 75.94 53 P P 20 30 58.9 +1.5
comp=Z,22nm,0.7s,baz=261,slow=4.9,SNR=50
MDT pP pP 20 32 50.2 -1.5
comp=Z,1.9nm,0.9s,baz=48,slow=4.7,SNR=1.5
PESTR **Estremoz** 75.95 46 eP P 20 30 58.3 +1.1
comp=Z,66nm,1.9s
PPT2 **Papeete2** 75.97 254 eS SKiKP 20 39 25.1 +4.1
PPT2 eLR LR 20 55 16.1
comp=Z,237nm,25.8s
TOA0 **Torodi Ar. Sit** 76.00 74 eP P 20 30 57.6 -0.4
TORD **Torodi Ar. Bea** 76.00 74 P P 20 30 57.9 -0.1
TORD pP pP 20 32 52.9 +0.7
TORD S S 20 39 56.0 -1.8
TORD **Torodi Ar. Bea** 76.00 74 P P 20 30 57.9 -0.1
comp=Z,40nm,0.7s,baz=261,slow=5.3,SNR=510
TORD pP pP 20 32 52.9 +0.7
comp=Z,20nm,0.8s,baz=265,slow=4.6,SNR=15
TORD S S 20 39 56.0 -1.8
comp=Z,2.0nm,0.8s,baz=253,slow=13,SNR=9.0
PBAR **Barrancos** 76.08 47 eP P 20 30 59.1 +1.2
comp=Z,40nm,1.7s
PBAR eS S 20 39 56.0 -1.8
PTO **Porto** 76.18 44 eP P 20 30 59.3 +0.9
comp=Z,145nm,1.6s
PMRV **Marv??o** 76.32 46 eP P 20 30 59.8 +0.6
comp=Z,38nm,1.5s
PCBR **Castelo Branco** 76.43 45 eP P 20 31 00.6 +0.8
comp=Z,51nm,1.9s
PVIS **Viseu** 76.49 45 eP P 20 31 00.9 +0.7
comp=Z,68nm,0.7s
MTE **Manteigas** 76.61 45 eP P 20 31 01.4 +0.6
comp=Z,65nm,1.9s
POLO **Lamas de Olo** 76.83 44 eP P 20 31 02.7 +0.6
PVRL **Vila Real** 76.84 44 eP P 20 31 02.9 +0.8
comp=Z,80nm,1.8s
SFJD **Kangerlussuaq** 77.13 8⇓iP P 20 31 01.7 -1.3
comp=Z,9.6nm,0.9s
MVO **Moncorvo** 77.27 44 eP P 20 31 05.3 +0.8
comp=Z,53nm,0.8s
PBRG **Braganca** 77.73 44 eP P 20 31 07.7 +0.8
comp=Z,56nm,1.8s
YKA **Yellowknife Ar** 78.41 341 P P 20 31 09.9 -0.1
YKA S S 20 40 17.8 -3.6
YKA **Yellowknife Ar** 78.41 341 P P 20 31 09.9 -0.1
comp=Z,67nm,0.6s,baz=136,slow=6.0,SNR=423
YKA S S 20 40 17.7 -3.6
comp=Z,1.2nm,0.9s,baz=115,slow=11,SNR=5.2
YKW3 **Yellowknife Ar** 78.46 341 eP P 20 31 09.8 -0.5
comp=Z,1.7nm,0.8s
PAB **San Pablo** 78.54 47 eP P 20 31 12.4 +1.1
PAB pmax pmax
comp=Z,21nm,1.0s
PAB **San Pablo** 78.54 47 eP P 20 31 12.4 +1.1
comp=Z,22nm,1.0s
ESDC **Sonseca Array** 78.86 47 P P 20 31 14.1 +1.1
ESDC pP pP 20 33 09.5 +1.0
ESDC **Sonseca Array** 78.86 47 P P 20 31 14.1 +1.1
comp=Z,3.7nm,0.4s,baz=263,slow=5.0,SNR=25
ESDC pP pP 20 33 09.5 +1.0
comp=Z,1.5nm,0.7s,baz=265,slow=6.5,SNR=3.0
ESLA **Sonseca Array** 78.86 47 eP P 20 31 14.0 +1.0
comp=Z,1.6nm,0.6s
MAIT **Maitri** 79.54 160 eP P 20 31 07.3 -8.6
VAL **Valentia** 80.01 33⇑iP P 20 31 19.2 +0.6
QSPA **South Pole Qui** 81.30 180 PKKPbc PKKPbc 20 49 54.1 -5.3
comp=Z,1.5nm,0.4s,baz=218,slow=0.5,SNR=21
ETRT **Tiaret** 81.41 52 P P 20 31 28.3 +1.8
EANR **'Ain N'Sour** 81.42 52 P P 20 31 28.4 +1.9
ECHA **Ech Chlef** 81.69 51 P P 20 31 29.5 +1.8
TAM **Tamanrasset** 81.71 65 eP P 20 31 29.3 +0.9
TAM pmax pmax
comp=Z,58nm,0.6s
TAM **Tamanrasset** 81.71 65 eP P 20 31 29.2 +0.9
comp=Z,58nm,0.6s
CRAG **Craig** 81.75 330 eP P 20 31 28.0 +0.4
comp=Z,40nm,1.2s
DLBC **Dease Lake** 81.78 333 P P 20 31 28.9 +1.0
DLBC pP pP 20 33 25.5 +1.2
DLBC **Dease Lake** 81.78 333 P P 20 31 28.9 +1.0
comp=Z,53nm,0.7s,baz=119,slow=3.1,SNR=86
DLBC pP pP 20 33 25.5 +1.2
comp=Z,6.4nm,0.9s,baz=164,slow=7.5,SNR=3.3
WRAK **Wrangell Islan** 81.83 331 eP P 20 31 28.4 +0.4
comp=Z,28nm,0.8s
EBNR **Beni Rached** 81.85 51 P P 20 31 28.2 -0.5
SJPF **Ste Jean** 82.00 44⇓iP P 20 31 30.1 +0.9
comp=Z,112nm,1.1s
SJPF epP pP 20 33 26.3 +0.5
SJPF **Ste Jean** 82.00 44⇓iP P 20 31 30.1 +0.9
SJPF e*PP pP 20 33 26.3 +0.5
SJPF pmax pmax
comp=Z,112nm,1.1s
SJPF **Ste Jean** 82.00 44⇓iP P 20 31 30.1 +0.9
comp=Z,112nm,1.1s
SJPF epP pP 20 33 26.3 +0.5
OSSF **Osses** 82.03 44 eP P 20 31 29.7 +0.4
OSSF **Osses** 82.03 44 eP P 20 31 29.7 +0.4
BST **Brest** 82.04 39 eP P 20 31 29.1 -0.1
BST **Brest** 82.04 39 eP P 20 31 29.1 -0.1
BORG **Borgarnes** 82.34 19 P P 20 31 31.9 +1.5
BORG **Borgarnes** 82.34 19 P P 20 31 31.9 +1.5
comp=Z,50nm,0.8s,baz=190,slow=2.9,SNR=23
ETSF **Etsaut** 82.39 45⇓iP P 20 31 31.9 +0.6
comp=Z,19nm,0.7s
ETSF **Etsaut** 82.39 45⇓iP P 20 31 31.9 +0.6
ETSF pmax pmax
comp=Z,19nm,0.7s
ETSF **Etsaut** 82.39 45⇓iP P 20 31 31.9 +0.6
comp=Z,19nm,0.7s
QUIF **Quistinic** 82.44 39⇓iP P 20 31 31.4 +0.1
comp=Z,107nm,1.0s
QUIF **Quistinic** 82.44 39⇓iP P 20 31 31.4 +0.1
QUIF pmax pmax
comp=Z,107nm,1.0s
QUIF **Quistinic** 82.44 39⇓iP P 20 31 31.4 +0.1
comp=Z,107nm,1.0s
ROSF **Rostrenen** 82.54 39⇓iP P 20 31 31.9 +0.1
comp=Z,53nm,0.7s
ROSF **Rostrenen** 82.54 39⇓iP P 20 31 31.9 +0.1
ROSF pmax pmax
comp=Z,53nm,0.7s
ROSF **Rostrenen** 82.54 39⇓iP P 20 31 31.9 +0.1
comp=Z,53nm,0.7s
REYF **Montagne du Re** 82.56 44 eP P 20 31 32.6 +0.4
REYF **Montagne du Re** 82.56 44 eP P 20 31 32.6 +0.4
EMHD **Djebel Mahouad** 82.93 52 P P 20 31 36.0 +1.8
SGMF **Saint Gilles** 82.95 39⇓iP P 20 31 34.8 +1.0
comp=Z,88nm,1.0s
SGMF **Saint Gilles** 82.95 39⇓iP P 20 31 34.8 +1.0
SGMF pmax pmax
comp=Z,88nm,1.0s

SGMF **Saint Gilles** 82.95 39⇓iP P 20 31 34.8 +1.0
comp=Z,88nm,1.0s
RESF **Ens** 82.98 45 eP P 20 31 34.8 +0.5
RESF **Ens** 82.98 45 eP P 20 31 34.8 +0.5
EPF **Esparros** 83.06 45⇓iP P 20 31 34.9 +0.3
comp=Z,20nm,0.6s
EPF epP pP 20 33 33.3 +1.7
EPF **Esparros** 83.06 45⇓iP P 20 31 34.9 +0.3
EPF e*PP pP 20 33 33.3 +1.7
EPF pmax pmax
comp=Z,20nm,0.6s
EPF **Esparros** 83.06 45⇓iP P 20 31 34.9 +0.3
comp=Z,20nm,0.6s
EPF epP pP 20 33 33.3 +1.7
ADJB **Djebel Djouab** 83.30 52 P P 20 31 37.3 +1.3
MELF **Melles** 83.30 45 eP P 20 31 36.5 +0.7
MELF **Melles** 83.30 45 eP P 20 31 36.5 +0.7
MLS **Moulis** 83.56 45 eP P 20 31 37.2 +0.1
MLS **Moulis** 83.56 45 eP P 20 31 37.2 +0.1
MFF **Saint Martin d** 83.90 41⇓iP P 20 31 38.4 -0.2
comp=Z,29nm,0.5s
MFF epP pP 20 33 36.1 +0.2
MFF **Saint Martin d** 83.90 41⇓iP P 20 31 38.4 -0.2
MFF e*PP pP 20 33 36.1 +0.2
MFF pmax pmax
comp=Z,29nm,0.5s
MFF **Saint Martin d** 83.90 41⇓iP P 20 31 38.4 -0.2
comp=Z,29nm,0.5s
MFF epP pP 20 33 36.1 +0.2
LFF **La Frestale** 83.94 43⇓iP P 20 31 38.6 -0.3
comp=Z,41nm,0.6s
LFF **La Frestale** 83.94 43⇓iP P 20 31 38.6 -0.3
LFF pmax pmax
comp=Z,41nm,0.6s
LFF **La Frestale** 83.94 43⇓iP P 20 31 38.6 -0.3
comp=Z,41nm,0.6s
SUMG **Summit** 84.03 10 eP P 20 31 39.2 0.0
SUMG e*PP pP 20 33 34.0 -2.5
SUMG pmax pmax
comp=Z,121nm,1.0s
SUMG **Summit** 84.03 10 eP P 20 31 39.2 0.0
comp=Z,121nm,1.0s
SUMG epP pP 20 33 34.0 -2.5
SUMG **Summit** 84.03 10⇓iP P 20 31 39.1 -0.1
comp=Z,82nm,0.9s
GRR **Gorron** 84.06 39⇓iP P 20 31 38.9 -0.4
comp=Z,42nm,0.5s
GRR **Gorron** 84.06 39⇓iP P 20 31 38.9 -0.4
GRR pmax pmax
comp=Z,42nm,0.5s
GRR **Gorron** 84.06 39⇓iP P 20 31 38.9 -0.4
comp=Z,42nm,0.5s
FLN **La Foliniere** 84.42 39⇓iP P 20 31 40.9 -0.2
comp=Z,50nm,0.6s
FLN eR
comp=Z,60nm,23.0s
FLN **La Foliniere** 84.42 39⇓iP P 20 31 40.9 -0.2
FLN pmax pmax
comp=Z,51nm,0.6s
FLN **La Foliniere** 84.42 39⇓iP P 20 31 40.9 -0.2
comp=Z,50nm,0.6s
MTLF **Montolieu** 84.46 45⇓iP P 20 31 41.0 -0.5
comp=Z,18nm,0.7s
MTLF **Montolieu** 84.46 45⇓iP P 20 31 41.0 -0.5
MTLF pmax pmax
comp=Z,18nm,0.7s
MTLF **Montolieu** 84.46 45⇓iP P 20 31 41.0 -0.5
comp=Z,18nm,0.7s
FILF **Fillols** 84.47 46 eP P 20 31 41.4 -0.2
FILF **Fillols** 84.47 46 eP P 20 31 41.4 -0.2
RJF **Les Rejaudoux** 84.58 43⇓iP P 20 31 41.4 -0.6
comp=Z,43nm,1.0s
RJF eR
comp=Z,54nm,21.2s
RJF **Les Rejaudoux** 84.58 43⇓iP P 20 31 41.4 -0.6
RJF pmax pmax
comp=Z,43nm,1.0s
RJF **Les Rejaudoux** 84.58 43⇓iP P 20 31 41.4 -0.6
comp=Z,43nm,1.0s
LDF **La Druitiere** 84.59 39⇓iP P 20 31 41.5 -0.5
comp=Z,66nm,0.7s
LDF epP pP 20 33 39.3 -0.2
LDF **La Druitiere** 84.59 39⇓iP P 20 31 41.5 -0.5
LDF e*PP pP 20 33 39.3 -0.2
LDF pmax pmax
comp=Z,66nm,0.7s
LDF **La Druitiere** 84.59 39⇓iP P 20 31 41.5 -0.5
comp=Z,66nm,0.7s
LDF epP pP 20 33 39.3 -0.2
SKAG **Skagway** 84.68 333 eP P 20 31 43.0 +0.9
comp=Z,28nm,1.1s
CAF **Calviac** 84.83 43⇓iP P 20 31 42.8 -0.5
comp=Z,34nm,0.7s
CAF epP pP 20 33 41.4 +0.5
CAF **Calviac** 84.83 43⇓iP P 20 31 42.8 -0.5
CAF e*PP pP 20 33 41.4 +0.5
CAF pmax pmax
comp=Z,34nm,0.7s
CAF **Calviac** 84.83 43⇓iP P 20 31 42.8 -0.5
comp=Z,34nm,0.7s
CAF epP pP 20 33 41.4 +0.5
TCF **Toulx Ste Croi** 85.35 42⇓iP P 20 31 45.0 -0.7
comp=Z,22nm,0.6s
TCF epP pP 20 33 43.1 -0.4
TCF **Toulx Ste Croi** 85.35 42⇓iP P 20 31 45.0 -0.7
TCF e*PP pP 20 33 43.1 -0.4
TCF pmax pmax
comp=Z,22nm,0.6s
TCF **Toulx Ste Croi** 85.35 42⇓iP P 20 31 45.0 -0.7
comp=Z,22nm,0.6s
TCF epP pP 20 33 43.1 -0.4
PYM **Petit Puy Mans** 85.72 43 eP P 20 31 47.5 -0.1
PYM **Petit Puy Mans** 85.72 43 eP P 20 31 47.5 -0.1
PYM **Petit Puy Mans** 85.72 43 eP P 20 31 47.5 -0.1
LBL **Lubilhac** 85.72 43 eP P 20 31 47.6 0.0
LBL **Lubilhac** 85.72 43 eP P 20 31 47.6 0.0
LBL **Lubilhac** 85.72 43 eP P 20 31 47.6 0.0
LASF **Ste Croix** 85.81 44⇓iP P 20 31 47.9 -0.1
comp=Z,14nm,0.6s
LASF **Ste Croix** 85.81 44⇓iP P 20 31 47.9 -0.1
comp=Z,14nm,0.6s
BGF **Bois d'Agland** 85.85 42⇓iP P 20 31 47.5 -0.6
comp=Z,76nm,0.8s
BGF epP pP 20 33 46.2 +0.1
BGF **Bois d'Agland** 85.85 42⇓iP P 20 31 47.5 -0.6
BGF e*PP pP 20 33 46.2 +0.1
BGF pmax pmax
comp=Z,76nm,0.8s
BGF **Bois d'Agland** 85.85 42⇓iP P 20 31 47.5 -0.6
comp=Z,76nm,0.8s
BGF epP pP 20 33 46.2 +0.1
AGO **Saint Agoulin** 85.89 42 eP P 20 31 47.8 -0.5
AGO **Saint Agoulin** 85.89 42 eP P 20 31 47.8 -0.5
SCO **Scoresbysund** 85.89 15⇓iP P 20 31 48.1 +0.3
SCO pmax pmax
comp=Z,22nm,0.7s
SCO **Scoresbysund** 85.89 15⇓iP P 20 31 48.1 +0.3
comp=Z,22nm,0.7s
HYF **Humbligny** 85.92 41⇓iP P 20 31 48.1 -0.4
HYF **Humbligny** 85.92 41⇓iP P 20 31 48.1 -0.4
TSUM **Tsumeb** 86.41 109 eP P 20 31 51.7 +0.1
comp=Z,30nm,0.8s
TSUM epP pP 20 33 50.6 +0.9
SSF **Saint Saulge** 86.43 41⇓iP P 20 31 49.7 -1.1
comp=Z,46nm,1.0s
SSF epP pP 20 33 47.9 -1.1
SSF **Saint Saulge** 86.43 41⇓iP P 20 31 49.7 -1.1
SSF e*PP pP 20 33 47.9 -1.1
SSF pmax pmax
comp=Z,46nm,1.0s
SSF **Saint Saulge** 86.43 41⇓iP P 20 31 49.7 -1.1
comp=Z,46nm,1.0s
SSF epP pP 20 33 47.9 -1.1
SMF **Signal de Mont** 86.53 42⇓iP P 20 31 50.7 -0.6
comp=Z,79nm,1.0s
SMF epP pP 20 33 48.9 -0.7
SMF **Signal de Mont** 86.53 42⇓iP P 20 31 50.7 -0.6
SMF e*PP pP 20 33 48.9 -0.7
SMF pmax pmax
comp=Z,79nm,1.0s
SMF **Signal de Mont** 86.53 42⇓iP P 20 31 50.7 -0.6
comp=Z,79nm,1.0s
SMF epP pP 20 33 48.9 -0.7
VIVF **Saint-Julien-l** 86.59 44⇓iP P 20 31 51.6 -0.1
comp=Z,41nm,0.9s

VIVF Saint-Julien-I 86.59 44 ⇓ iP P 20 31 51.6 -0.1
VIVF pmax pmax
comp=Z,41nm,0.9s
VIVF Saint-Julien-I 86.59 44 ⇓ iP P 20 31 51.6 -0.1
comp=Z,41nm,0.9s
SSB Saint Sauveur 86.61 43 eP P 20 31 51.3 -0.5
SSB pmax pmax
comp=Z,28nm,1.3s
SSB Saint Sauveur 86.61 43 eP P 20 31 51.3 -0.5
comp=Z,28nm,1.3s
PNL Peninsula 86.64 332 eP P 20 31 52.4 +0.8
comp=Z,73nm,0.9s
LOR Lormes 86.72 41 ⇓ iP P 20 31 51.2 -1.0
comp=Z,36nm,0.8s
LOR epP **pP 20 33 47.5 -3.0**
LOR eR
comp=Z,63nm,20.2s
LOR Lormes 86.72 41 ⇓ iP P 20 31 51.2 -1.0
comp=Z,36nm,0.8s
LOR epP **pP 20 33 47.5 -3.0**
SMRF Simiane la Rot 86.98 45 ⇓ iP P 20 31 53.7 +0.1
comp=Z,55nm,1.1s
SMRF Simiane la Rot 86.98 45 ⇓ iP P 20 31 53.7 +0.1
comp=Z,55nm,1.1s
SUR Sutherland 87.39 122 eP P 20 31 56.7 +0.7
comp=Z,254nm,2.3s
ORIF Oris-en-Rattie 87.43 44 ⇓ iP P 20 31 56.0 +0.3
comp=Z,96nm,0.8s
ORIF eR
comp=Z,92nm,22.5s
ORIF Oris-en-Rattie 87.43 44 ⇓ iP P 20 31 56.0 +0.3
ORIF pmax pmax
comp=Z,96nm,0.8s
ORIF Oris-en-Rattie 87.43 44 ⇓ iP P 20 31 56.0 +0.3
comp=Z,96nm,0.8s
LMR La Mourre 87.47 46 ⇓ iP P 20 31 55.4 -0.4
comp=Z,73nm,1.0s
LMR La Mourre 87.47 46 ⇓ iP P 20 31 55.4 -0.4
LMR pmax pmax
comp=Z,73nm,1.0s
LMR La Mourre 87.47 46 ⇓ iP P 20 31 55.4 -0.4
comp=Z,73nm,1.0s
FRF La Foret Royal 87.62 45 ⇓ iP P 20 31 56.2 -0.3
comp=Z,60nm,0.8s
FRF La Foret Royal 87.62 45 ⇓ iP P 20 31 56.2 -0.3
FRF pmax pmax
comp=Z,60nm,0.8s
FRF La Foret Royal 87.62 45 ⇓ iP P 20 31 56.2 -0.3
comp=Z,60nm,0.8s
BAIF Baives 87.73 39 ⇓ iP P 20 31 56.3 -0.6
comp=Z,38nm,0.8s
BAIF Baives 87.73 39 ⇓ iP P 20 31 56.3 -0.6
BAIF pmax pmax
comp=Z,39nm,0.8s
BAIF Baives 87.73 39 ⇓ iP P 20 31 56.3 -0.6
comp=Z,38nm,0.8s
SFTF Sexfontaines 87.74 41 ⇓ iP P 20 31 56.3 -0.7
comp=Z,118nm,0.9s
SFTF Sexfontaines 87.74 41 ⇓ iP P 20 31 56.3 -0.7
comp=Z,118nm,0.9s
SBA Scott Base 87.77 190 eP P 20 31 58.5 +1.9
SBA e*PP **pP 20 33 57.5 +2.3**
SBA pmax pmax
comp=Z,28nm,1.0s
SBA Scott Base 87.77 190 eP P 20 31 58.5 +1.9
comp=Z,28nm,1.0s
SBA epP **pP 20 33 57.5 +2.3**
MEZF Maizieres J'vi 87.83 40 ⇓ iP P 20 31 56.9 -0.5
comp=Z,39nm,0.6s
MEZF Maizieres J'vi 87.83 40 ⇓ iP P 20 31 56.9 -0.5
comp=Z,39nm,0.6s
CALN Calern 87.84 45 eP P 20 31 57.5 -0.2
CALN Calern 87.84 45 eP P 20 31 57.5 -0.2
CALN Calern 87.84 45 eP P 20 31 57.5 -0.2
KEST Kesra 87.84 54 P P 20 31 57.9 +0.1
KEST pP **pP 20 33 57.2 +0.7**
KEST Kesra 87.84 54 P P 20 31 57.9 +0.1
comp=Z,8.2nm,0.9s,baz=209,slow=0.6,SNR=16
KEST pP **pP 20 33 57.2 +0.7**
comp=Z,3.9nm,0.8s,baz=273,slow=6.6,SNR=7.7
DOU Dourbes 87.98 39 P P 20 31 57.9 -0.2
comp=Z,27nm,1.2s
MBDF Montbardon 88.00 44 ⇓ iP P 20 31 58.3 -0.2
comp=Z,38nm,1.1s
MBDF Montbardon 88.00 44 ⇓ iP P 20 31 58.3 -0.2
MBDF pmax pmax
comp=Z,38nm,1.1s
MBDF Montbardon 88.00 44 ⇓ iP P 20 31 58.3 -0.2
comp=Z,38nm,1.1s
CABF La Chapelle 88.01 42 ⇓ iP P 20 31 57.8 -0.6
comp=Z,48nm,1.0s
CABF La Chapelle 88.01 42 ⇓ iP P 20 31 57.8 -0.6
CABF pmax pmax
comp=Z,48nm,1.0s
CABF La Chapelle 88.01 42 ⇓ iP P 20 31 57.8 -0.6
comp=Z,48nm,1.0s
BNI Bardonecchia 88.01 44 eP P 20 31 58.1 -0.4
BNI pmax pmax
comp=Z,60nm,2.1s
BNI Bardonecchia 88.01 44 eP P 20 31 58.1 -0.4
comp=Z,60nm,2.1s
GIVF Givet 88.13 39 ⇓ iP P 20 31 58.4 -0.3
comp=Z,149nm,0.7s
GIVF Givet 88.13 39 ⇓ iP P 20 31 58.4 -0.3
GIVF pmax pmax
comp=Z,149nm,0.7s
GIVF Givet 88.13 39 ⇓ iP P 20 31 58.4 -0.3
comp=Z,149nm,0.7s
TOUF Mont Tournerai 88.15 45 eP P 20 31 59.0 -0.3
TOUF Mont Tournerai 88.15 45 eP P 20 31 59.0 -0.3
TOUF Mont Tournerai 88.15 45 eP P 20 31 59.0 -0.3
LPL La Plagne 88.17 44 ⇓ iP P 20 31 59.5 +0.2
comp=Z,77nm,0.9s
LPL epP **pP 20 33 58.0 -0.1**
LPL La Plagne 88.17 44 ⇓ iP P 20 31 59.5 +0.2
LPL e*PP **pP 20 33 58.0 -0.1**
LPL pmax pmax
comp=Z,77nm,0.9s
LPL La Plagne 88.17 44 ⇓ iP P 20 31 59.5 +0.2
comp=Z,77nm,0.9s
LPL epP **pP 20 33 58.0 -0.1**
REVF Revere 88.17 45 eP P 20 31 58.8 -0.4
REVF Revere 88.17 45 eP P 20 31 58.8 -0.4
REVF Revere 88.17 45 eP P 20 31 58.8 -0.4
LPG La Plagne 88.17 44 ⇓ iP P 20 31 59.8 +0.4
comp=Z,50nm,0.7s
LPG La Plagne 88.17 44 ⇓ iP P 20 31 59.8 +0.4
LPG pmax pmax
comp=Z,51nm,0.7s
LPG La Plagne 88.17 44 ⇓ iP P 20 31 59.8 +0.4
comp=Z,50nm,0.7s
INK Inuvik 88.18 341 P P 20 31 59.0 +0.5
INK Inuvik 88.18 341 P P 20 31 59.0 +0.5
comp=Z,73nm,0.6s,baz=99,slow=4.5,SNR=370
SBF Sospel 88.25 45 ⇓ iP P 20 31 59.1 -0.4
comp=Z,50nm,0.8s
SBF Sospel 88.25 45 ⇓ iP P 20 31 59.1 -0.4
SBF pmax pmax
comp=Z,50nm,0.8s
SBF Sospel 88.25 45 ⇓ iP P 20 31 59.1 -0.4
comp=Z,50nm,0.8s
AUTN L'Aution 88.28 45 eP P 20 32 00.3 +0.4
PAGF Fort de Pagny 88.28 40 ⇓ iP P 20 31 59.1 -0.4
comp=Z,16nm,0.8s
PAGF Fort de Pagny 88.28 40 ⇓ iP P 20 31 59.1 -0.4
comp=Z,16nm,0.8s
THEF They Montfort 88.36 41 eP P 20 31 59.4 -0.5
THEF They Montfort 88.36 41 eP P 20 31 59.4 -0.5
THEF They Montfort 88.36 41 eP P 20 31 59.4 -0.5
SAOF Saorge 88.36 45 eP P 20 31 59.9 -0.1
SAOF Saorge 88.36 45 eP P 20 31 59.9 -0.1
SAOF Saorge 88.36 45 eP P 20 31 59.9 -0.1
BCLA Clavier 88.51 39 P P 20 31 60.0 -0.5
comp=Z,10.0nm,1.1s
HAU Haudompre 88.54 41 ⇓ iP P 20 31 59.9 -0.8
comp=Z,29nm,1.0s
HAU eR
comp=Z,61nm,17.5s
HAU Haudompre 88.54 41 ⇓ iP P 20 31 59.9 -0.8
HAU pmax pmax
comp=Z,29nm,1.0s
HAU Haudompre 88.54 41 ⇓ iP P 20 31 59.9 -0.8
comp=Z,29nm,1.0s
LOMF Lomont 88.69 42 eP P 20 32 00.9 -0.6
LOMF Lomont 88.69 42 eP P 20 32 00.9 -0.6
LOMF Lomont 88.69 42 eP P 20 32 00.9 -0.6

VNDA Vanda 88.82 190 eP P 20 32 03.0 +1.5
comp=Z,20nm,0.8s
VNDA pP **pP 20 34 00.9 +0.5**
VNDA PKKP **PKKPdf 20 49 35.9 +1.8**
VNDA Vanda 88.82 190 P P 20 32 03.3 +1.8
comp=Z,17nm,0.7s,baz=126,slow=4.1,SNR=100
VNDA pP **pP 20 34 00.9 +0.5**
comp=Z,6.2nm,1.0s,baz=132,slow=3.7,SNR=5.8
VNDA PKKP **PKKPdf 20 49 35.9 +1.8**
comp=Z,0.4nm,0.4s,baz=284,slow=4.2,SNR=3.8
HINF Hinteralfeld 88.82 41 ⇓ iP P 20 32 01.2 -0.9
comp=Z,18nm,0.8s
HINF Hinteralfeld 88.82 41 ⇓ iP P 20 32 01.2 -0.9
HINF pmax pmax
comp=Z,18nm,0.8s
HINF Hinteralfeld 88.82 41 ⇓ iP P 20 32 01.2 -0.9
comp=Z,18nm,0.8s
WLF Walferdange 88.84 39 P P 20 32 01.8 -0.3
comp=Z,34nm,1.0s
WLF Walferdange 88.84 39 eP P 20 32 02.1 0.0
comp=Z,58nm,0.9s
WLF epP **pP 20 34 00.6 -0.4**
WLF Walferdange 88.84 39 eP P 20 32 01.7 -0.3
WLF pmax pmax
comp=Z,56nm,0.9s
WLF Walferdange 88.84 39 eP P 20 32 01.7 -0.3
comp=Z,56nm,0.9s
MEM Membach 88.99 38 P P 20 32 02.7 -0.1
MOF Molkenrain 89.01 41 eP P 20 32 02.0 -1.0
MOF Molkenrain 89.01 41 eP P 20 32 02.0 -1.0
MOF Molkenrain 89.01 41 eP P 20 32 02.0 -1.0
PGF Pioggiola 89.06 47 eP P 20 32 04.2 +0.8
PGF Pioggiola 89.06 47 eP P 20 32 04.2 +0.8
PGF Pioggiola 89.06 47 eP P 20 32 04.2 +0.8
ECH Echery 89.12 41 eP P 20 32 03.2 -0.2
ECH pmax pmax
comp=Z,37nm,1.0s
ECH Echery 89.12 41 eP P 20 32 03.2 -0.2
comp=Z,37nm,1.0s
ECH Echery 89.12 41 eP P 20 32 02.7 -0.7
BBS Basel-Blauen 89.16 42 eP P 20 32 03.1 -0.6
BBS Basel-Blauen 89.16 42 eP P 20 32 03.1 -0.6
CDF Champ du Feu 89.24 41 ⇓ iP P 20 32 03.4 -0.7
comp=Z,60nm,0.9s
CDF epP **pP 20 34 01.9 -1.2**
CDF Champ du Feu 89.24 41 ⇓ iP P 20 32 03.4 -0.7
CDF e*PP **pP 20 34 01.9 -1.2**
CDF pmax pmax
comp=Z,60nm,0.9s
CDF Champ du Feu 89.24 41 ⇓ iP P 20 32 03.4 -0.7
comp=Z,60nm,0.9s
CDF epP **pP 20 34 01.9 -1.2**
SYO Syowa Base 89.25 160 ⇓ eP P 20 32 02.8 -0.8
RAGM Ragged Mountai 89.37 332 eP P 20 32 05.3 +0.9
EGAK Eagle 89.40 336 eP P 20 32 04.3 0.0
comp=Z,47nm,1.0s
RUP Ruppelstein 89.42 40 eP P 20 32 04.8 0.0
RUP Ruppelstein 89.42 40 eP P 20 32 04.8 0.0
FELD Feldberg im Sc 89.59 41 eP P 20 32 04.8 -1.0
LANF Langenberg 89.72 40 eP P 20 32 05.9 -0.3
LANF Langenberg 89.72 40 eP P 20 32 05.9 -0.3
LANF Langenberg 89.72 40 eP P 20 32 05.9 -0.3
BFO Black Forest 89.90 41 eP P 20 32 06.3 -0.7
comp=Z,12nm,1.1s
BFO Black Forest 89.90 41 eP P 20 32 06.4 -0.7
BFO pmax pmax
comp=Z,58nm,2.0s
BFO Black Forest 89.90 41 eP P 20 32 06.4 -0.7
comp=Z,58nm,2.0s
BUG Bochum--Univer 89.97 38 eP P 20 32 07.0 -0.2
comp=Z,33nm,1.3s
KTD Kalmit 89.97 40 eP P 20 32 07.0 -0.4
KTD Kalmit 89.97 40 eP P 20 32 07.0 -0.4
DIV Divide 90.12 332 eP P 20 32 07.8 0.0
SPAK Spaichingen-Ko 90.15 41 eP P 20 32 07.9 -0.4
TUE Stuetta 90.16 43 eP P 20 32 08.7 +0.2
comp=Z,7.7nm,0.8s
DOT Dot Lake 90.18 335 eP P 20 32 08.2 +0.2
comp=Z,41nm,0.8s
TNS Taunus Mts 90.41 39 eP P 20 32 09.3 -0.1
comp=Z,16nm,1.0s
TNS Taunus Mts 90.41 39 eP P 20 32 09.3 -0.1
TNS pmax pmax
comp=Z,16nm,1.0s
PAX Paxson 90.56 334 eP P 20 32 09.8 -0.1
PAX pmax pmax
comp=Z,14nm,0.7s
PAX Paxson 90.56 334 eP P 20 32 09.8 -0.1
comp=Z,14nm,0.7s
STU Stuttgart 90.56 41 eP P 20 32 09.7 -0.4
comp=Z,26nm,0.9s
DAVOX Davos/Dischmat 90.59 43 P P 20 32 10.9 +0.4
DAVOX pP **pP 20 34 09.5 -0.3**
DAVOX Davos/Dischmat 90.59 43 P P 20 32 10.9 +0.4
comp=Z,9.1nm,0.7s,baz=249,slow=4.9,SNR=13
DAVOX pP **pP 20 34 09.5 -0.3**
comp=Z,7.1nm,0.8s,baz=285,slow=4.5,SNR=5.8
DAG Danmarks Havn 90.63 11 ⇓ iP P 20 32 09.3 -0.5
DAG pmax pmax
comp=Z,20nm,0.9s
DAG Danmarks Havn 90.63 11 ⇓ iP P 20 32 09.3 -0.5
comp=Z,24nm,0.9s
DAVA Damuels 90.69 42 ⇓ iP P 20 32 10.9 0.0
comp=Z,17nm,1.0s,SNR=5.4
FUORN Ofenpass-Fuorn 90.81 43 eP P 20 32 11.0 -0.6
comp=Z,12nm,1.0s
FETA Feichten 91.21 43 ⇓ iP P 20 32 13.0 -0.3
comp=Z,12nm,1.3s
ALE Alert 91.31 1 P P 20 32 12.0 -0.8
comp=Z,107nm,0.6s,SNR=5.5
RETA Reutte 91.32 42 i P P 20 32 13.5 -0.2
comp=Z,24nm,1.5s,SNR=7.3
SML Sawmill 91.49 332 eP P 20 32 14.1 0.0
SML Sawmill 91.49 332 eP P 20 32 14.1 0.0
MOTA Moosalm 91.52 42 ⇓ iP P 20 32 14.4 -0.3
comp=Z,9.0nm,0.7s,SNR=9.5
SEW Seward 91.56 331 eP P 20 32 13.2 -1.2
ILAR Eielson Array 91.71 336 P P 20 32 14.8 -0.2
ILAR pP **pP 20 34 11.8 -2.6**
ILAR PKKP **PKKPdf 20 49 29.9 -0.4**
ILAR Eielson Array 91.71 336 P P 20 32 14.8 -0.2
comp=Z,11nm,0.8s,baz=140,slow=3.6,SNR=55
ILAR pP **pP 20 34 11.8 -2.6**
comp=Z,0.9nm,0.6s,baz=166,slow=6.5,SNR=2.6
ILAR PKKP **PKKPdf 20 49 29.9 -0.4**
comp=Z,0.7nm,0.4s,baz=286,slow=3.8,SNR=7.0
FUR Furstenfeldbru 91.79 42 eP P 20 32 15.8 0.0
comp=Z,26nm,0.9s
FUR Furstenfeldbru 91.79 42 eP P 20 32 15.8 0.0
FUR pmax pmax
comp=Z,26nm,0.9s
PMR Palmer 91.80 332 eP P 20 32 15.3 -0.1
PMR Palmer 91.80 332 eP P 20 32 15.3 -0.1
BOSA Boshof 91.81 119 P P 20 32 16.1 -0.4
BOSA pP **pP 20 34 14.0 -1.9**
BOSA PKKPbc **PKKPbc 20 49 31.4 -0.8**
BOSA Boshof 91.81 119 P P 20 32 16.1 -0.4
comp=Z,7.6nm,0.6s,baz=241,slow=3.3,SNR=26
BOSA pP **pP 20 34 14.0 -1.9**
comp=Z,2.6nm,0.6s,baz=275,slow=7.5,SNR=2.8
BOSA PKKPbc **PKKPbc 20 49 31.4 -0.8**
comp=Z,3.5nm,0.6s,baz=123,slow=1.7,SNR=11
WATA Walderalm 91.83 43 ⇓ iP P 20 32 15.7 -0.4
comp=Z,11nm,0.8s
WTTA Wattenberg 91.86 43 ⇓ iP P 20 32 16.2 -0.1
comp=Z,41nm,1.6s,SNR=11
GRF Grafenberg Arr 92.05 40 eP P 20 32 16.9 0.0
comp=Z,26nm,1.5s
GRF epP **pP 20 34 16.6 +0.2**
GRF Grafenberg Arr 92.05 40 eP P 20 32 16.9 0.0
GRF e*PP **pP 20 34 16.6 +0.2**
GRF pmax pmax
comp=Z,26nm,1.5s
COLA College 92.13 335 eP P 20 32 16.9 0.0
COLA pmax pmax
comp=Z,73nm,0.7s
COLA College 92.13 335 eP P 20 32 16.9 0.0
comp=Z,73nm,0.7s
MUD Monsted U'grnd 92.23 33 ⇓ iP P 20 32 17.6 +0.1
MUD pmax pmax
comp=Z,13nm,0.9s
MUD Monsted U'grnd 92.23 33 ⇓ iP P 20 32 17.6 +0.1
comp=Z,13nm,0.9s
MCK McKinley 92.28 334 eP P 20 32 17.7 0.0
MCK McKinley 92.28 334 eP P 20 32 17.7 0.0

ABTA Abfaltersbach 92.36 43 ⇓ iP P 20 32 18.4 -0.1
comp=Z,25nm,1.1s,SNR=12
KDAK Kodiak Island 92.60 328 P P 20 32 19.1 -0.1
KDAK Kodiak Island 92.60 328 P P 20 32 19.1 -0.1
comp=Z,20nm,0.6s,baz=122,slow=4.8,SNR=19
MANZ Manzenberg 92.67 40 eP P 20 32 20.1 +0.3
comp=Z,11nm,1.0s
MANZ epP **pP 20 34 19.9 +0.6**
ROTZ Rotzenmuhle 92.69 40 eP P 20 32 20.3 +0.4
comp=Z,16nm,1.0s
ROTZ epP **pP 20 34 19.8 +0.5**
RJOB Jochberg 92.72 42 eP P 20 32 20.0 -0.1
comp=Z,24nm,1.2s
TRF Thorofare Moun 92.79 334 eP P 20 32 19.4 -0.8
LBTB Lobatse 92.79 116 eP P 20 32 20.9 -0.2
PLN Plauen 92.79 39 eP P 20 32 20.4 +0.1
comp=Z,145nm,2.0s
OHAK Old Harbor 92.85 327 eP P 20 32 20.4 +0.1
WERD Werda 92.88 40 eP P 20 32 20.8 +0.1
comp=Z,7.0nm,1.1s
WERD epP **pP 20 34 20.8 +0.6**
WERN Wernitzgruen 92.90 40 eP P 20 32 21.1 +0.3
comp=Z,7.0nm,1.0s
NKC Novy Kostel 92.93 40 eP P 20 32 20.6 -0.4
NKC Novy Kostel 92.93 40 ⇓ eP P 20 32 20.6 -0.4
TANN Tannenbergstha 92.97 40 eP P 20 32 21.1 -0.1
comp=Z,12nm,1.2s
TANN epP **pP 20 34 21.0 +0.3**
KBA Koelnbreinsper 92.97 43 ⇓ iP P 20 32 21.1 -0.4
comp=Z,12nm,1.4s,SNR=7.6
WET Wettzell 93.02 41 eP P 20 32 21.2 -0.2
comp=Z,12nm,1.1s
WET epP **pP 20 34 21.1 +0.2**
WET Wettzell 93.02 41 eP P 20 32 21.2 -0.2
WET e*PP **pP 20 34 21.1 +0.2**
WET pmax pmax
comp=Z,12nm,1.1s
SPU Mount Spurr 93.07 331 eP P 20 32 20.9 -0.5
MYKA Terra Mystica 93.10 43 ⇓ iP P 20 32 21.6 -0.3
comp=Z,8.5nm,0.5s
RSO Redoubt South 93.25 331 eP P 20 32 22.2 -0.2
CLL Collm 93.46 39 eP P 20 32 23.2 -0.1
comp=Z,12nm,1.5s
CLL epP **pP 20 34 23.1 +0.3**
CLL Collm 93.46 39 eP P 20 32 23.0 -0.3
CLL pmax pmax
comp=Z,14nm,1.5s
KHC Kasperske Hory 93.47 41 eP P 20 32 23.5 0.0
KHC pmax pmax
comp=Z,9.0nm,1.2s
KHC Kasperske Hory 93.47 41 ⇓ iP P 20 32 23.2 -0.3
KHC epP **pP 20 34 22.9 -0.1**
KHC Kasperske Hory 93.47 41 eP P 20 32 23.5 0.0
comp=Z,9.4nm,1.2s
GEC2 GERESS Array S 93.50 41 eP P 20 32 23.4 -0.3
comp=Z,12nm,1.1s
GEC2 GERESS Array S 93.50 41 eP P 20 32 23.4 -0.3
GEC2 pmax pmax
comp=Z,12nm,1.1s
GERES GERESS Array B 93.50 41 P P 20 32 23.4 -0.3
GERES pP **pP 20 34 21.6 -1.7**
GERES PKKPbc **PKKPdf 20 49 27.2 +0.5**
GERES P'P' 20 57 29.9
GERES GERESS Array B 93.50 41 P P 20 32 23.4 -0.3
comp=Z,6.5nm,0.7s,baz=252,slow=3.5,SNR=64
GERES pP **pP 20 34 21.6 -1.7**
comp=Z,1.9nm,0.8s,baz=253,slow=4.1,SNR=8.6
GERES PKKPbc **PKKPdf 20 49 27.2 +0.5**
comp=Z,1.1nm,0.6s,baz=90,slow=1.9,SNR=13
GERES PKPPKP P'P'df 20 57 29.9 -7.7
comp=Z,0.3nm,0.6s,baz=240,slow=4.5,SNR=3.6
FBE Freiberg 93.62 39 eP P 20 32 24.4 +0.4
comp=Z,10.0nm,1.0s
FBE epP **pP 20 34 24.6 +1.0**
CUC Castrocucco 93.64 50 eP P 20 32 24.0 -0.5
comp=Z,8.4nm,0.9s
CUC epP **pP 20 34 23.4 -0.6**
COLD Coldfoot 93.67 338 eP P 20 32 24.8 +0.8
comp=Z,28nm,0.8s
OBKA Obir 93.70 44 ⇓ iP P 20 32 24.5 -0.2
comp=Z,7.0nm,0.7s
MOA Molln 93.72 42 i P P 20 32 24.4 -0.2
comp=Z,19nm,0.7s,SNR=22
BRG Berggiesshubel 93.98 39 eP P 20 32 25.8 +0.1
comp=Z,12nm,1.1s
BRG epP **pP 20 34 25.1 -0.2**
comp=Z,19nm,1.8s
BRG esP sP 20 35 13.1 -6.5
comp=Z,2.1nm,1.0s
BRG ePKPPKP **P'P'df 20 57 37.6 +1.3**
comp=Z,9.6nm,1.6s
BRG Berggiesshubel 93.98 39 eP P 20 32 25.9 +0.1
comp=Z,12nm,1.1s
BRG epP **pP 20 34 25.7 +0.5**
BRG Berggiesshubel 93.98 39 eP P 20 32 25.8 +0.1
BRG e*PP **pP 20 34 25.1 -0.2**
BRG e*SP sP 20 35 13.1 -6.5
BRG pmax pmax
comp=Z,118nm,1.1s
BRG pmax pmax
comp=Z,12nm,1.8s
BRG pmax pmax
comp=N,19nm,1.0s
NAO01 NORSAR Array S 93.99 29 eP P 20 32 25.9 +0.4
comp=N,9.7nm,1.1s
SOKA Soboth 94.06 44 ⇓ iP P 20 32 25.6 -0.6
comp=N,4.9nm,0.9s
PRA Prague 94.17 40 ⇓ P P 20 32 28.0 +1.4
NB2 NORSAR Subarra 94.19 29 P P 20 32 26.7 +0.3
comp=Z,6.3nm,0.8s,baz=259,slow=4.6
NB2 NORSAR Subarra 94.19 29 P pP 20 34 24.3 -1.7
comp=Z,0.5nm,0.7s,baz=260,slow=4.8
NB2 NORSAR Subarra 94.19 29 P P 20 32 26.7 +0.3
baz=259,slow=4.6
NOA NORSAR Array B 94.19 29 P P 20 32 26.8 +0.3
NOA pP **pP 20 34 24.6 -1.4**
NOA PKKPbc **PKKPdf 20 49 24.7 -1.0**
NOA P'P' 20 57 34.6
NOA NORSAR Array B 94.19 29 P P 20 32 26.8 +0.3
comp=Z,4.3nm,0.8s,baz=258,slow=4.4,SNR=28
NOA pP **pP 20 34 24.6 -1.4**
comp=Z,1.0nm,0.8s,baz=258,slow=4.5,SNR=4.3
NOA PKKPbc **PKKPdf 20 49 24.7 -1.0**
comp=Z,1.2nm,0.5s,baz=257,slow=2.9,SNR=12
NOA PKPPKP **P'P'df 20 57 34.6 -0.7**
comp=Z,0.6nm,0.8s,baz=322,slow=2.2,SNR=3.3
PRU Pruhonice 94.22 40 eP P 20 32 26.7 -0.1
PRU Pruhonice 94.22 40 ⇓ eP P 20 32 26.7 -0.1
TIP Timpagrande 94.25 51 eP P 20 32 25.9 -1.4
comp=Z,11nm,1.1s
PVCC Panska Ves 94.32 40 eP P 20 32 27.7 +0.4
PVCC Panska Ves 94.32 40 ⇓ eP P 20 32 27.7 +0.4
ARSA Arzberg 94.47 43 ⇓ iP P 20 32 27.7 -0.4
comp=Z,8.2nm,0.9s
TREC Trest 94.73 41 ⇓ iP P 20 32 29.5 +0.3
TREC e*PP **pP 20 34 28.2 -0.6**
TREC Trest 94.73 41 ⇓ iP P 20 32 29.5 +0.3
TREC epP **pP 20 34 28.2 -0.6**
CONA Conrad Observa 94.79 42 ⇓ iPcP P 20 32 29.5 0.0
comp=Z,14nm,0.8s
UPC Upice 95.23 40 ⇓ iP P 20 32 31.9 +0.5
UPC e*PP **pP 20 34 31.1 +0.1**
UPC Upice 95.23 40 ⇓ iP P 20 32 31.9 +0.5
UPC epP **pP 20 34 31.1 +0.1**
HFS Hagfors 95.25 30 P P 20 32 31.0 -0.2
HFS Hagfors 95.25 30 P P 20 32 31.0 -0.2
comp=Z,4.0nm,0.9s,baz=242,slow=3.2,SNR=9.3
DPC Dobruska-Polom 95.41 40 eP P 20 32 32.9 +0.6
DPC e*PP **pP 20 34 31.8 -0.1**
DPC Dobruska-Polom 95.41 40 eP P 20 32 32.9 +0.6
DPC epP **pP 20 34 31.8 -0.1**
KSP Ksiaz 95.45 40 eP P 20 32 32.9 +0.5
VRAC Vranov 95.45 41 P P 20 32 32.6 +0.2
VRAC Vranov 95.45 41 ⇑ iP P 20 32 33.2 +0.8
VRAC Vranov 95.45 41 P P 20 32 32.6 +0.2
comp=Z,11nm,0.9s,baz=257,slow=6.1,SNR=12
ZST Bratislava 95.65 42 eP P 20 32 32.3 -1.0
ZST pmax pmax
comp=Z,16nm,1.2s
ZST Bratislava 95.65 42 eP P 20 32 32.3 -1.0
ZST epP **pP 20 34 31.6 -1.4**
SMOL Smolenice 95.90 42 eP P 20 32 35.4 +0.9
SMOL Smolenice 95.90 42 eP P 20 32 35.4 +0.9
MORC Moravsky Berou 96.12 41 eP P 20 32 35.8 +0.3
MORC e*PP **pP 20 34 34.1 -1.1**

MORC pmax pmax
comp=Z,24nm,1.2s
MORC Moravsky Berou 96.12 41 *e*P **P 20 32 35.8 +0.3**
comp=Z,24nm,1.2s
MORC *e*pP **pP 20 34 34.1 -1.1**
MORC Moravsky Berou 96.12 41⇑ *i*P **P 20 32 34.3 -1.2**
PKSM Moragy 96.47 44⇑P **P 20 32 37.7 +0.6**
PKSM Moragy 96.47 44⇑ *i*P **P 20 32 37.7 +0.6**
OKC Ostrava-Krasne 96.52 41 *e*P **P 20 32 38.1 +0.9**
OKC *e**PP **pP 20 34 37.3 +0.3**
OKC Ostrava-Krasne 96.52 41⇓ *e*P **P 20 32 38.1 +0.9**
OKC *e*pP **pP 20 34 37.3 +0.3**
VYHS Vyhne 96.83 42 *e*P **P 20 32 39.0 +0.3**
VYHS pmax pmax
comp=Z,8.0nm,0.9s
VYHS Vyhne 96.83 42 PDIF **P 20 32 39.0 +0.3**
VYHS *e*pP **pP 20 34 37.0 -1.5**
LSZ Lusaka 97.05 107 *e*P **P 20 32 41.9 +1.4**
comp=Z,4.2nm,0.7s
MAW Mawson 97.17 164 P Pdif 20 32 40.6 +0.9
MAW PKKPbc **PKKPdf 20 49 15.4 -3.8**
MAW Mawson 97.17 164 P Pdif 20 32 40.6 +0.9
comp=Z,2.6nm,0.4s,baz=223,slow=8.8,SNR=8.6
MAW PKKPbc **PKKPdf 20 49 15.4 -3.8**
comp=Z,2.0nm,0.5s,baz=74,slow=4.3,SNR=10
OJC Ojcow 97.61 40 *e*P **P 20 32 42.9 +0.8**
OJC pmax pmax
comp=Z,8.0nm,1.0s
OJC Ojcow 97.61 40 *e*P **P 20 32 42.9 +0.8**
comp=Z,7.9nm,1.0s
KECS Kecovo 97.92 42 *e*P Pdif 20 32 43.3 -0.2
KECS pmax pmax
comp=Z,3.0nm,1.0s
KECS Kecovo 97.92 42 PDIF Pdif 20 32 43.3 -0.2
KECS *e*pP pP 20 34 43.2 -0.3
SPITS Spitsbergen Ar 98.15 12 P **P 20 32 44.2 +0.3**
SPITS PKKPbc **PKKPbc 20 49 14.0 -3.0**
SPITS Spitsbergen Ar 98.15 12 P **P 20 32 44.2 +0.3**
comp=Z,3.4nm,0.9s,baz=186,slow=3.0,SNR=6.4
SPITS PKKPbc **PKKPbc 20 49 14.0 -3.0**
comp=Z,2.6nm,0.4s,baz=106,slow=6.2,SNR=22
STHS Stebnicka Huta 98.49 41 *e*P **P 20 32 46.1 0.0**
STHS pmax pmax
comp=Z,2.0nm,1.2s
STHS Stebnicka Huta 98.49 41 PDIF **P 20 32 46.1 0.0**
BZS Buzias 98.49 45⇑P Pdif 20 32 40.4 -5.7
BZS Buzias 98.49 45⇑ *i*P Pdif 20 32 40.4 -5.7
CRVS Cervenica-Dubn 98.60 42 *e*P Pdif 20 32 46.1 -0.4
CRVS pmax pmax
comp=Z,10.0nm,1.8s
CRVS Cervenica-Dubn 98.60 42 PDIF Pdif 20 32 46.1 -0.4
CRVS *e*pP pP 20 34 44.9 -1.6
KOLS Kolonicke sedl 99.13 42 *e*P **Pdif 20 32 50.0 +1.1**
KOLS pmax pmax
comp=Z,1.0nm,0.9s
KOLS Kolonicke sedl 99.13 42 PDIF **Pdif 20 32 50.0 +1.1**
ARCES ARCESS Array B 100.70 21 P **Pdif 20 32 55.1 -0.3**
ARCES PKKPbc **PKKPbc 20 49 07.0 -2.7**
ARCES ARCESS Array B 100.70 21 P **Pdif 20 32 55.1 -0.3**
comp=Z,2.6nm,0.7s,baz=317,slow=5.1,SNR=9.1
ARCES PKKPbc **PKKPbc 20 49 07.0 -2.7**
comp=Z,2.8nm,0.6s,baz=146,slow=1.7,SNR=14
BUR08 Bucovina Ar. S 101.04 43 *e*P **Pdif 20 32 58.5 +0.9**
BURAR Bucovina Array 101.06 43⇑ *i*P **Pdif 20 32 53.3 -4.3**
FINES FINESS Array B 101.37 29 PKKPbc PKKPbc 20 49 04.8 -2.8
comp=Z,3.4nm,0.5s,baz=102,slow=4.7,SNR=19
MLR Muntele Rosu 101.52 45 P **Pdif 20 32 59.3 -0.4**
MLR PKKPbc **PKKPbc 20 49 05.9 -0.8**
MLR Muntele Rosu 101.52 45⇓ *i*P **Pdif 20 32 50.8 -9.0**
MLR Muntele Rosu 101.52 45 P **Pdif 20 32 59.3 -0.4**
comp=Z,0.4nm,0.5s,baz=150,slow=22,SNR=5.0
MLR PKKPbc **PKKPbc 20 49 05.9 -0.8**
comp=Z,0.2nm,0.4s,baz=112,slow=11,SNR=3.6
AKASG Malin Array Be 103.64 40 PKiKP **PKiKP 20 37 23.0 -0.8**
AKASG PKKPbc **PKKPbc 20 48 58.8 -1.8**
AKASG Malin Array Be 103.64 40 PKiKP **PKiKP 20 37 23.0 -0.8**
comp=Z,0.5nm,0.4s,baz=254,slow=3.6,SNR=5.0
AKASG PKKPbc **PKKPbc 20 48 58.8 -1.8**
comp=Z,1.2nm,0.5s,baz=82,slow=3.2,SNR=9.3
BRTR Keskin Array B 107.31 51 PKiKP **PKiKP 20 37 30.4 -0.7**
BRTR PKKPbc **PKKPbc 20 48 48.8 -0.6**
BRTR PKKP **PKKPab 20 49 03.5 -1.6**
BRTR Keskin Array B 107.31 51 PKiKP **PKiKP 20 37 30.4 -0.7**
comp=Z,1.2nm,0.7s,baz=184,slow=2.2,SNR=7.4
BRTR PKKPbc **PKKPbc 20 48 48.8 -0.6**
comp=Z,0.5nm,0.6s,baz=144,slow=5.6,SNR=3.8
BRTR PKKP **PKKPab 20 49 03.5 -1.6**
comp=Z,0.8nm,0.6s,baz=106,slow=5.0,SNR=5.8
MMAI Mount Meron Ar 109.01 58 PKiKP **PKiKP 20 37 34.8 +0.4**
MMAI Mount Meron Ar 109.01 58 PKiKP **PKiKP 20 37 34.8 +0.4**
comp=Z,1.5nm,0.5s,baz=277,slow=2.1,SNR=5.2
KIV Kislovodsk 113.53 46 *i* PKIKP **PKiKP 20 37 43.0 +0.3**
KIV *e* 20 38 44.5
KIV *e*PPP PPP 20 41 15.7
KIV *e*PS **PKKPbc 20 48 29.3 -0.3**
KIV *e*SS SS 20 53 53.2 +2.3
KIV pmax pmax
comp=Z,4.0nm,1.1s
KBZ Khabaz 113.72 46 PKIKP **PKiKP 20 37 43.3 +0.4**
KBZ Khabaz 113.72 46 PKiKP **PKiKP 20 37 43.3 +0.4**
KBZ SKP 20 40 27.6
KBZ Khabaz 113.72 46 PKiKP **PKiKP 20 37 43.3 +0.4**
comp=Z,8.0nm,0.7s,baz=221,slow=3.2,SNR=27
KBZ SKP 20 40 27.6
comp=Z,0.7nm,0.5s,baz=28,slow=2.7,SNR=3.9
DZM Mont Dzumac 115.34 241 PKP **PKPdf 20 37 48.1 +1.3**
DZM Mont Dzumac 115.34 241 PKP **PKPdf 20 37 48.1 +1.3**
comp=Z,4.7nm,0.7s,baz=116,slow=4.9,SNR=8.1
GNI Garni 115.73 50 PKP **PKPdf 20 37 47.7 +0.6**
GNI Garni 115.73 50 PKP **PKPdf 20 37 47.7 +0.6**
comp=Z,8.4nm,0.6s,baz=290,slow=2.2,SNR=12
TIXI Tiksi 115.95 353 *i* PKIKP **PKPdf 20 37 46.8 +0.4**
TIXI pmax pmax
comp=Z,2.0nm,0.7s
ARU Arti 118.74 29 *i* PKIKP **PKPdf 20 37 52.3 +0.1**
ARU 20 39 17.0
ARU 20 43 58.6
ARU SP SP 20 48 09.3 -3.3
NAY Al-Naaiem 119.41 61 *e*P **PKPdf 20 37 54.1 -0.2**
NAY AMb AMB 20 37 55.1
comp=Z,12nm,0.9s
MIB Mutribah 119.42 61 *e*P **PKPdf 20 37 54.3 -0.1**
MIB AMb AMB 20 37 55.5
comp=Z,48nm,0.8s
SVE Sverdlovsk 119.51 28 *e*PKIKP **PKPdf 20 37 53.6 -0.1**
SVE pmax pmax
comp=Z,15nm,1.6s
RDF Al-Radifah 119.71 62 *e*P **PKPdf 20 37 54.8 -0.1**
RDF AMb AMB 20 37 55.6
comp=Z,27nm,0.6s
UMR Umm Al-Rimmam 119.78 61 *e*P **PKPdf 20 37 55.2 +0.2**
UMR AMb AMB 20 37 55.9
comp=Z,76nm,0.5s
PETK Petropavlovsk- 120.65 328 PKIKP **PKPdf 20 37 56.3 +0.3**
PETK Petropavlovsk- 120.65 328 PKP **PKPdf 20 37 56.3 +0.3**
PETK PKKPbc **PKKPab 20 48 05.7 -0.1**
PETK Petropavlovsk- 120.65 328 PKP **PKPdf 20 37 56.3 +0.3**
comp=Z,9.8nm,0.8s,baz=104,slow=6.3,SNR=12
PETK PKKPbc **PKKPab 20 48 05.7 -0.1**
comp=Z,1.4nm,0.7s,baz=289,slow=4.5,SNR=3.8
AKTO Aktyubinsk 121.35 35 PKIKP **PKPdf 20 37 57.8 +0.4**
AKTO Aktyubinsk 121.35 35 PKP **PKPdf 20 37 57.8 +0.4**
AKTO SKP 20 40 42.2
AKTO PKKPbc **PKKPbc 20 48 01.4 -0.8**
AKTO Aktyubinsk 121.35 35 PKP **PKPdf 20 37 57.8 +0.4**
comp=Z,13nm,0.7s,baz=6.0,slow=0.7,SNR=59
AKTO SKP 20 40 42.2
comp=Z,1.8nm,0.6s,baz=190,slow=1.9,SNR=4.6
AKTO PKKPbc **PKKPbc 20 48 01.4 -0.8**
comp=Z,4.5nm,0.7s,baz=112,slow=3.6,SNR=24
ABKAR Akbulak array 123.00 36 *e*PKPdf **PKPdf 20 38 01.0 +0.4**
YAK Yakutsk 124.64 348 *e*PKIKP **PKPdf 20 38 02.9 -0.4**
YAK pmax pmax
comp=Z,31nm,0.6s
BRVK Borovoye 126.22 27 *i* PKIKP **PKPdf 20 38 07.7 +1.1**
BRVK pmax pmax
comp=Z,16nm,1.2s
BRVK Borovoye 126.22 27 *e*PKPdf **PKPdf 20 38 07.0 +0.3**
BVAR Borovoye Array 126.29 27 PKIKP **PKPdf 20 38 07.4 +0.6**
BVAR 20 40 13.3
BVAR Borovoye Array 126.29 27 PKP **PKPdf 20 38 07.4 +0.6**
BVAR pPKP **pPKPdf 20 40 13.3 -0.5**
BVAR PKKP **PKKPdf 20 48 23.6 -1.7**
comp=Z,0.8nm,0.6s,baz=113,slow=3.7,SNR=3.6
STKA Stephens Creek 128.57 217 *e*PKPdf **PKPdf 20 38 12.3 +0.4**
STKA PKP **PKPdf 20 38 12.5 +0.6**
STKA Stephens Creek 128.57 217 PKP **PKPdf 20 38 12.5 +0.6**
comp=Z,31nm,0.6s,baz=77,slow=2.0,SNR=70
NVS Novosibirsk 129.92 19 *e*PKIKP **PKPdf 20 38 12.7 -0.9**
NVS pmax pmax
comp=N,3.0nm,0.7s
NVS pmax pmax
comp=E,7.0nm,0.7s
NVS pmax pmax
comp=Z,26nm,0.7s
ZAA0 Zalesovo Array 131.17 18 *e*PKPdf **PKPdf 20 38 16.0 0.0**
ZALV Zalesovo Beam 131.17 18 PKHKP PKPpre 20 38 07.4
ZALV 20 38 16.8
ZALV 20 40 50.4
ZALV Zalesovo Beam 131.17 18 PKPpre PKPpre 20 38 07.3
ZALV PKP **PKiKP 20 38 16.8 -0.3**
ZALV *e*PKP *e*PKPdf 20 40 22.6 -0.5
ZALV SKPbc **SKPbc 20 40 50.4 -0.2**
ZALV Zalesovo Beam 131.17 18 PKHKP PKPpre 20 38 07.3
comp=Z,1.6nm,0.5s,baz=304,slow=3.4,SNR=9.2
ZALV PKP **PKiKP 20 38 16.8 -0.3**
comp=Z,17nm,0.4s,baz=298,slow=1.9,SNR=101
ZALV *e*PKP *e*PKPdf 20 40 22.6 -0.5
comp=Z,13nm,0.8s,baz=303,slow=2.5,SNR=10
ZALV SKPbc **SKPbc 20 40 50.4 -0.2**
comp=Z,26nm,0.4s,baz=328,slow=4.1,SNR=58
KRAR Krasnoyarsk 131.36 12 *i* PKIKP **PKPdf 20 38 18.3 +2.0**
KURK Kurchatov 131.53 25 PKIKP **PKPdf 20 38 17.5 +0.7**
KURK 20 40 52.2
KURK 20 51 07.7
KURK Kurchatov 131.53 25 PKP **PKPdf 20 38 17.5 +0.7**
KURK *e*PKP **pPKPdf 20 40 22.9 -0.9**
KURK SKPbc **SKPbc 20 40 52.2 +0.3**
KURK SKKP 20 51 07.7
KURBB Kurchatov Arra 131.56 25 PKP **PKPdf 20 38 17.5 +0.6**
comp=Z,12nm,0.4s,baz=312,slow=2.6,SNR=43
KURBB *e*PKP **pPKPdf 20 40 22.9 -1.0**
comp=Z,3.6nm,0.7s,baz=309,slow=2.6,SNR=5.3
KURBB SKPbc **SKPbc 20 40 52.2 +0.2**
comp=Z,3.7nm,0.6s,baz=314,slow=3.4,SNR=9.9
KURBB SKKP 20 51 07.7
comp=Z,1.1nm,0.7s,baz=135,slow=3.8,SNR=4.2
YSS Yuzh-Sakhalins 132.04 329⇓ *e*PKIKP **PKPdf 20 38 19.0 +1.1**
YSS *e* 20 40 55.5
KKAR Karatay Array 132.46 38 *e*PKIKP **PKPdf 20 38 19.1 +0.2**
KKAR Karatay Array 132.46 38 *e*PKPdf **PKPdf 20 38 19.1 +0.2**
CTA Charters Tower 132.94 232 SKPbc **SKPbc 20 40 57.5 -0.2**
comp=Z,5.4nm,0.8s,baz=123,slow=6.0,SNR=6.0
ASAJ Asahikawa 133.96 326 PKP **PKPdf 20 38 22.9 +1.3**
ASAJ SKPbc **SKPbc 20 41 00.1 -0.2**
ASAJ Asahikawa 133.96 326 PKP **PKPdf 20 38 22.9 +1.3**
comp=Z,23nm,0.7s,baz=287,slow=3.7,SNR=27
ASAJ SKPbc **SKPbc 20 41 00.1 -0.2**
comp=Z,9.3nm,0.8s,baz=6.6,slow=6.4,SNR=9.2
HABR Khabarovsk 134.53 335 *e*PKIKP **PKPdf 20 38 22.4 -0.1**
HABR *e* 20 41 02.1
HABR *e* 20 44 45.4
HABR *e*SS SS 20 58 14.4 +3.8
HABR *e*SSS SSS 21 03 23.2
HABR pmax pmax
comp=N,2.0nm,0.6s
HABR pmax pmax
comp=E,4.0nm,0.6s
HABR pmax pmax
comp=Z,19nm,1.8s
HABR MLR MLR
comp=Z,89nm,24.0s
EKS2 Erkin-Say 134.66 36 *e*PKIKP **PKPdf 20 38 24.3 +1.1**
EKS2 Erkin-Say 134.66 36 *e*PKPdf **PKPdf 20 38 24.3 +1.1**
ERM Erimo 134.94 323 *i* PKIKP **PKPdf 20 38 26.5 +3.0**
ERM pmax pmax
comp=Z,56nm,1.7s
FRU Bishkek 135.04 35 *e*PKIKP **PKPdf 20 38 24.0 +0.3**
AAK Ala-Archa 135.09 36 *e*PKIKP **PKPdf 20 38 25.0 +1.0**
AAK Ala-Archa 135.09 36 *e*PKPdf **PKPdf 20 38 25.0 +1.0**
KLR Kul'dur 135.21 338 *e*PKIKP **PKPdf 20 38 19.7 -4.1**
TKM2 Tokmak 2 135.54 35 *e*PKIKP **PKPdf 20 38 25.4 +0.5**
TKM2 Tokmak 2 135.54 35 *e*PKPdf **PKPdf 20 38 25.4 +0.5**
KBL Kabul 135.81 49 *e*PKIKP **PKPdf 20 38 25.3 -0.4**
KBL Kabul 135.81 49 *e*PKPdf **PKPdf 20 38 25.2 -0.4**
MK31 Makanchi Array 136.09 26 *e*PKHKP PKPpre 20 38 13.3
MK31 *e* 20 38 25.5
MK31 Makanchi Array 136.09 26 *e*PKPpre PKPpre 20 38 13.3
MK31 *e*PKPdf **PKPdf 20 38 25.5 -0.1**
MKAR Makanchi Array 136.09 26 PKHKP PKPpre 20 38 15.4
MKAR Makanchi Array 136.09 26 PKPpre PKPpre 20 38 15.3
MKAR pPKP pPKPdf 20 40 30.8 -1.9
MKAR SKPbc **SKPbc 20 41 05.5 -1.4**
MKAR SKKPbc **SKKPbc 20 50 04.2 -3.5**
MKAR Makanchi Array 136.09 26 PKHKP PKPpre 20 38 15.3
comp=Z,1.2nm,0.6s,baz=308,slow=3.9,SNR=12
MKAR pPKP pPKPdf 20 40 30.8 -1.9
comp=Z,3.2nm,0.8s,baz=338,slow=1.9,SNR=6.6
MKAR SKPbc **SKPbc 20 41 05.5 -1.4**
comp=Z,4.0nm,0.6s,baz=325,slow=3.6,SNR=12
MKAR SKKPbc **SKKPbc 20 50 04.2 -3.5**
comp=Z,0.9nm,0.9s,baz=133,slow=5.1,SNR=4.5
IRK Irkutsk 136.57 4 *e*PKIKP **PKPdf 20 38 24.8 -1.4**
IRK pmax pmax
comp=Z,21nm,1.1s
MOY Mondy 136.85 7 *e*PKIKP **PKPdf 20 38 28.2 +1.3**
PMG Port Moresby 137.35 246 PKP **PKPdf 20 38 30.8 +2.1**
PMG Port Moresby 137.35 246 PKP **PKPdf 20 38 30.8 +2.1**
comp=Z,12nm,0.8s,baz=131,slow=2.6,SNR=4.9
NWAO Narrogin (SRO) 137.64 191 PKPpre PKPpre 20 38 25.0
NWAO Narrogin (SRO) 137.64 191 PKhKP PKPpre 20 38 25.0
baz=110,slow=3.2
KSH Kashi 137.90 38 *e*PKP **PKPdf 20 38 24.1 -5.1**
KSH *es*PKP 20 41 22.1
KSH *e*SKS **SKSdf 20 44 45.2 -3.7**
KSH AMB AMB
comp=Z,410nm,5.4s
ZAK Zakamensk 138.35 5 *e*PKHKP PKPpre 20 38 20.8
ZAK *e* 20 38 29.9
ZAK pmax pmax
comp=Z,7.0nm,1.2s
HIA Hailar 138.57 349 *e*PKPdf **PKPdf 20 38 30.3 +0.2**
COEN Coen 138.72 237 *e*PKPpre PKPpre 20 38 23.5
AS31 Alice Springs 139.20 217 *e*PKPpre PKPpre 20 38 22.5
ASAR Alice Springs 139.20 217 PKPpre PKPpre 20 38 22.6
ASAR PKP **PKPdf 20 38 32.5 +0.5**
ASAR pPKP pPKPdf 20 40 39.3 +0.2
ASAR SKPbc **SKPbc 20 41 16.1 -0.4**
ASAR PKKP **PKKPdf 20 47 58.5 -1.3**
ASAR SKKPbc **SKKPbc 20 49 53.8 -0.6**
ASAR Alice Springs 139.20 217 PKhKP PKPpre 20 38 22.6
comp=Z,12nm,0.5s,baz=137,slow=3.7,SNR=95
ASAR PKP **PKPdf 20 38 32.5 +0.5**
comp=Z,19nm,0.5s,baz=136,slow=2.0,SNR=28
ASAR pPKP pPKPdf 20 40 39.3 +0.2
comp=Z,1.4nm,0.6s,baz=126,slow=3.1,SNR=2.7
ASAR SKPbc **SKPbc 20 41 16.1 -0.4**
comp=Z,4.3nm,0.6s,baz=134,slow=3.6,SNR=10
ASAR PKKP **PKKPdf 20 47 58.5 -1.3**
comp=Z,0.2nm,0.3s,baz=328,slow=1.4,SNR=4.8
ASAR SKKPbc **SKKPbc 20 49 53.8 -0.6**
comp=Z,0.6nm,0.4s,baz=326,slow=3.7,SNR=11
USRK Ussuriysk Arra 139.21 334 PKhKP PKPpre 20 38 23.4
comp=Z,2.7nm,0.5s,baz=4.3,slow=2.5,SNR=13
USRK PKP **PKPdf 20 38 32.2 +1.0**
comp=Z,14nm,0.6s,baz=0.3,slow=0.9,SNR=20
USRK pPKP pPKPdf 20 40 38.0 -0.4
comp=Z,1.5nm,0.6s,baz=218,slow=2.2,SNR=2.5
USRK SKPbc **SKPbc 20 41 15.1 -0.7**
comp=Z,3.5nm,0.8s,baz=336,slow=3.6,SNR=5.6
MDJ Mudanjiang 139.87 336 PKP **PKPdf 20 38 33.0 +0.5**
MDJ PP **PP 20 41 36.7 +1.6**
MDJ PKS **PKSdf 20 42 08.3 0.0**
MDJ AMB AMB
comp=Z,60nm,8.0s
WMQ Urumqi 140.74 24 *e*PKP **PKPdf 20 38 34.9 +0.7**
WMQ PP **PP 20 41 43.0 +2.5**
WMQ PKS **PKSdf 20 42 10.0 -0.1**
WMQ AMB AMB
comp=Z,100nm,6.0s
ULN Ulaanbaatar 141.07 1 *e*PKPpre PKPpre 20 38 29.6
SONM Songino Array 141.08 2 PKPpre PKPpre 20 38 29.7
SONM pPKP pPKPdf 20 40 41.3 -0.6
SONM SKPbc **SKPbc 20 41 20.9 +0.2**
SONM SKKPbc **SKKPbc 20 49 46.6 -2.2**
SONM Songino Array 141.08 2 PKhKP PKPpre 20 38 29.7
comp=Z,5.0nm,0.5s,baz=322,slow=3.1,SNR=35
SONM pPKP pPKPdf 20 40 41.3 -0.6
comp=Z,2.3nm,0.7s,baz=354,slow=2.7,SNR=3.7
SONM SKPbc **SKPbc 20 41 20.9 +0.2**
comp=Z,4.0nm,0.5s,baz=325,slow=2.0,SNR=13
SONM SKKPbc **SKKPbc 20 49 46.6 -2.2**
comp=Z,1.3nm,0.7s,baz=195,slow=2.8,SNR=8.2
MJAR Matsushiro Arr 141.32 320 PKPpre PKPpre 20 38 29.9
MJAR PKP **PKPdf 20 38 36.1 +0.7**
MJAR SKKPbc SKKPbc 20 49 46.7 -0.4
MJAR Matsushiro Arr 141.32 320 PKhKP PKPpre 20 38 29.9
comp=Z,10nm,0.7s,baz=95,slow=2.2,SNR=37
MJAR PKP **PKPdf 20 38 36.1 +0.7**
comp=Z,11nm,0.5s,baz=78,slow=1.1,SNR=21
MJAR SKKPbc SKKPbc 20 49 46.7 -0.4
comp=Z,0.7nm,0.7s,baz=239,slow=4.3,SNR=4.1
MAJO Matsushiro 141.32 320 *e*PKHKP PKPpre 20 38 29.8
MAJO Matsushiro 141.32 320 *e*PKPpre PKPpre 20 38 29.8
WRA Warramunga Arr 141.66 222 PKPpre PKPpre 20 38 31.9
WRA PKP **PKiKP 20 38 39.5 +0.1**
WRA pPKP pPKPdf 20 40 42.3 -1.3
WRA SKP 20 41 22.6
WRA PKKP **PKKPdf 20 47 52.5 -2.6**
WRA SKKPbc SKKPbc 20 49 43.0 -1.6
WRA Warramunga Arr 141.66 222 PKhKP PKPpre 20 38 31.9
comp=Z,9.0nm,0.5s,baz=144,slow=2.2,SNR=415
WRA PKP **PKiKP 20 38 39.5 +0.1**
comp=Z,31nm,0.4s,baz=138,slow=1.7,SNR=49
WRA pPKP pPKPdf 20 40 42.3 -1.3
comp=Z,3.1nm,0.7s,baz=147,slow=2.1,SNR=3.3
WRA SKP 20 41 22.6
comp=Z,8.4nm,0.7s,baz=134,slow=2.2,SNR=7.2
WRA PKKP **PKKPdf 20 47 52.5 -2.6**
comp=Z,0.8nm,1.1s,baz=328,slow=1.9,SNR=9.8
WRA SKKPbc SKKPbc 20 49 43.0 -1.6
comp=Z,1.3nm,0.9s,baz=333,slow=4.0,SNR=8.8
WRAB Tennant Creek 141.66 222 *e*PKHKP PKPpre 20 38 32.3
WRAB Tennant Creek 141.66 222 *e*PKPpre PKPpre 20 38 32.3
CN2 Changchun 142.10 340 *e*PKPdf PKPbc **20 38 33.0 -3.5**
GUMO Guam 143.91 281 *e*PKPdf PKPbc 20 38 39.4 -0.3
POO Poona 145.15 70⇓ *i* x **PKPdf 20 38 40.0 -2.6**
comp=Z,90nm,1.0s
KAD Karad 145.69 72 *i* x **PKPab 20 38 45.2 -1.5**
KSRS Korea Array 146.45 331 PKPbc **PKPdf 20 38 44.9 +0.7**
comp=Z,117nm,0.8s,baz=41,slow=2.9,SNR=136
KSRS pPKPbc pPKPbc 20 40 50.4 -1.1
comp=Z,3.0nm,0.5s,baz=33,slow=3.4,SNR=4.9
KSAR Wonju Array Be 146.47 331 PKPbc **PKPdf 20 38 44.9 +0.7**
KSAR pPKPbc pPKPbc 20 40 50.4 -1.2
INCN Inchon 147.02 333 *e*PKPbc **PKPdf 20 38 45.7 +0.5**
HHC Hu-ho-hao-te 147.97 355 *e*PKPbc **PKPdf 20 38 47.9 +1.1**
HHC pPKP **pPKPdf 20 40 55.5 +1.3**
HHC sPKP 20 41 47.8
HHC PKS **PP 20 42 22.3 -0.4**
HHC PP PP 20 42 28.3 +5.6
HHC SKS **SKSdf 20 45 02.8 -1.4**
HHC SKKS **SKKSac 20 48 21.5 +0.6**
HHC SS **SS 21 00 47.9 +3.6**
JNU Nakatsue 148.11 323 PKPbc **PKPbc 20 38 51.1 0.0**
JNU pPKPbc **pPKPbc 20 40 55.8 -0.9**
JNU Nakatsue 148.11 323 PKPbc **PKPbc 20 38 51.1 0.0**
comp=Z,66nm,0.8s,baz=28,slow=5.0,SNR=48
JNU pPKPbc **pPKPbc 20 40 55.8 -0.9**
comp=Z,14nm,1.0s,baz=61,slow=7.4,SNR=5.2
BJI Beijing 148.13 349 PKPbc **PKPdf 20 38 47.7 +0.8**
BJT Baijiatuan 148.16 349 *e*PKPdf **PKPdf 20 38 47.8 +0.9**
BJT *e*PKPbc **PKPbc 20 38 51.0 +0.1**
MBWA Marble Bar 148.19 200 *e*PKPdf **PKPdf 20 38 47.8 +0.3**
MBWA *e*PKPbc **PKPbc 20 38 51.6 0.0**
FITZ Fitzroy Crossi 148.28 212 PKP **PKPdf 20 38 48.5 +0.8**
FITZ PKPbc **PKPbc 20 38 52.5 +0.6**
FITZ pPKPbc **pPKPbc 20 40 55.4 -2.1**
FITZ Fitzroy Crossi 148.28 212 PKP **PKPdf 20 38 48.5 +0.8**
comp=Z,80nm,0.5s,baz=177,slow=3.0,SNR=62
FITZ PKPbc **PKPbc 20 38 52.5 +0.6**
comp=Z,80nm,0.5s,baz=210,slow=2.2,SNR=253
FITZ pPKPbc **pPKPbc 20 40 55.4 -2.1**
comp=Z,13nm,0.7s,baz=257,slow=2.0,SNR=3.5
BTO Baotou 148.31 358 *e*PKPbc **PKPdf 20 38 47.6 +0.3**
GTA Gaotai 148.58 13⇓ PKPbc **PKPdf 20 38 48.7 +0.9**
GTA PKPab **PKPab 20 39 00.1 +2.3**
GTA pPKP **pPKPdf 20 40 56.3 +1.0**
GTA sPKP 20 41 48.6
GTA PKS **PKSdf 20 42 22.4 -0.5**
GTA PP **PP 20 42 30.3 +4.0**
GTA SKS **SKSdf 20 45 04.0 -1.1**
GTA SKKS **SKKSac 20 48 23.7 -0.8**
GTA SS **SS 21 00 52.9 +1.5**
GTA AMB AMB
comp=Z,48nm,5.2s
PYUN Piuthan 149.33 48 *e*P **PKPdf 20 38 49.9 +0.4**
comp=Z,843nm,0.9s
DANN Dangsing 149.75 47 *e*P **PKPdf 20 38 50.9 +0.7**
comp=Z,391nm,0.8s
HYB Hyderabad 149.76 71 *i* PKP **PKPdf 20 38 49.5 -0.6**
HYB *e* 20 39 02.0
HYB *ep*PKP **pPKPdf 20 41 02.0 +4.4**
KOLN Koldanda 149.97 48 *e*P **PKPdf 20 38 50.4 0.0**
comp=Z,124nm,0.8s
DMN Daman 151.15 47 *e*P **PKPdf 20 38 52.5 +0.2**
comp=Z,145nm,0.6s
KKN Kakani 151.17 46 *e*P **PKPdf 20 38 52.4 +0.1**
comp=Z,188nm,0.6s
PKIN Phulchoki 151.38 46 *e*P **PKPdf 20 38 52.4 -0.3**
comp=Z,85nm,0.6s
PKI Pulchoki 151.39 46 *e*P **PKPdf 20 38 52.6 -0.2**
comp=Z,102nm,0.7s
GUN Gumba 151.52 45 *e*P **PKPdf 20 38 53.2 +0.2**
comp=Z,286nm,0.8s
LZH Lanzhou 152.54 8 *e*PKPbc **PKPdf 20 38 55.0 +1.0**
LZH PKPab **PKPab 20 39 14.0 -0.4**
LZH sPKP 20 41 54.1
RAMN Ramite 152.61 46 *e*P **PKPdf 20 38 54.8 +0.3**
comp=Z,245nm,0.7s
TAPN Taplejung 153.14 44 *e*P **PKPdf 20 38 55.5 +0.2**
comp=Z,65nm,0.5s
ODAN Odare 153.22 45 *e*P **PKPdf 20 38 55.5 +0.1**
comp=Z,96nm,0.8s
LSA Lhasa 153.69 36 *e*PKIKP **PKPdf 20 38 57.0 +0.7**
LSA Lhasa 153.69 36 *e*PKPdf **PKPdf 20 38 57.0 +0.7**
LSA *e*PKPbc **PKiKP 20 39 05.5 +1.0**
XAN Xi'an 154.89 359 PKPbc **PKPdf 20 38 57.4 +0.2**
CD2 Chengdu 157.60 10 *e*PKP **PKPdf 20 38 58.2 -2.6**
CD2 PKPab **PKPab 20 39 35.2 -1.0**
CD2 pPKP **pPKPdf 20 41 06.4 -2.3**
CD2 sPKP 20 41 57.5
CD2 PP **PP 20 43 16.4 +0.4**
CD2 SKKS 20 49 11.2
CD2 SS **SS 21 02 26.5 -1.9**
CD2 AMB AMB
comp=Z,90nm,10.2s
ENH Enshi 158.63 357 *e*PKPdf **PKPdf 20 39 02.0 0.0**
SSLB Suanglung 160.85 323 *e*PKPdf **PKPdf 20 39 05.2 +0.6**
KAPI Kappang 162.19 220 PKPab **PKPab 20 39 56.9 +0.2**
KAPI Kappang 162.19 220 PKPab **PKPab 20 39 56.9 +0.2**
comp=Z,13nm,0.7s,baz=60,slow=2.8,SNR=7.3
GYA Guiyang 162.38 5 PKP **PKPdf 20 39 04.1 -2.2**
GYA PKPab **PKPab 20 39 57.0 -0.2**
GYA pPKP **pPKPdf 20 41 15.3 +0.9**
GYA sPKP 20 42 06.0
GYA PKS **PKSdf 20 42 36.5 -3.1**
GYA PP **PP 20 43 42.9 +1.1**
GYA AMB AMB
comp=Z,130nm,8.0s
KMI Kunming 162.91 18 PKP **PKPdf 20 39 03.7 -3.3**
KMI pPKP **pPKPdf 20 41 13.5 -1.6**
KMI sPKP 20 42 04.5
KMI PP **PP 20 43 46.4 +1.4**
KMI SKKS 20 49 39.5
KMI SS **SS 21 03 22.9 -1.2**
KMI AMB AMB
comp=Z,100nm,5.4s
CHTO Chiang Mai 166.49 42 *e*PKIKP **PKPdf 20 39 09.8 -0.1**
CHTO Chiang Mai 166.49 42 *e*PKPdf **PKPdf 20 39 09.8 -0.1**
CM31 Chiang Mai Arr 166.74 43 *e*PKPdf **PKPdf 20 39 09.4 -0.6**
CMAR Chiang Mai Arr 166.74 43 PKP **PKPdf 20 39 10.4 +0.4**
CMAR PKPab **PKPab 20 40 16.6 -0.2**
CMAR pPKP **pPKPdf 20 41 16.3 -2.1**
CMAR Chiang Mai Arr 166.74 43 PKP **PKPdf 20 39 10.4 +0.4**
comp=Z,13nm,0.8s,baz=280,slow=1.7,SNR=90

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR				PKPab	PKPab	20 40 16.6	-0.2
	comp=Z,4.7nm,0.8s,baz=318,slow=6.1,SNR=9.3						
CMAR				pPKP	pPKPdf	20 41 16.3	-2.1
	comp=Z,2.2nm,0.9s,baz=330,slow=2.7,SNR=4.2						
IPM	Ipoh	171.53	120	ePKPdf	PKPdf	20 39 11.9	-1.3
KSM	Kuching	172.46	195	ePKPdf	PKPdf	20 39 13.4	-0.2

ISCJB **08** *20:43:31.2±0.5, 39°.27N±0°.02×27°.96E±0°.03, h2km±5km, Error ellipse: s-maj=4.3km s-min=3.2km az=169.9*
ISK **08** *20:43:31.2, 39°.30N×27°.96E, h5km, MD2.8*
DDA **08** *20:43:31.0, 39°.29N×27°.96E, h7km, MD2.8*
CSEM **08** *20:43:31.6±0.1, 39°.28N×27°.97E, h8km, MD2.8, Error ellipse: s-maj=2.5km s-min=1.9km az=84.0*
ISC 08 20:43:31.5±1.0**, 39°.28N**±0°.02×**27°.96E**±0°.02**, h10**km±8km**, n44,** σ**0ˢ49**/64**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.36	350	ePG	Pg	20 43 38.7	-0.1
BALB				eSG	Sg	20 43 43.8	+0.2
BALB	Balikesir	0.36	350	ePg	Pg	20 43 38.7	-0.1
BALB				eSg	Sg	20 43 43.8	+0.2
AKHS	Akhisar	0.42	196	i P	Pg	20 43 39.4	-0.4
AKHS				i S	Sg	20 43 46.4	+1.1
AKHS	Akhisar	0.42	196	i P	Pg	20 43 39.4	-0.4
AKHS				i S	Sg	20 43 46.4	+1.1
DURS	Dursunbey	0.51	51	i P	Pg	20 43 40.7	-0.8
DURS				i S	Sb	20 43 49.2	-1.0
DURS	Dursunbey	0.51	51	i P	Pg	20 43 40.7	-0.8
DURS				i S	Sb	20 43 49.2	-1.0
BALY	Balya	0.53	330	i P	Pg	20 43 41.1	-0.8
BALY				i S	Sg	20 43 49.0	+0.1
BALY	Balya	0.53	330	i P	Pg	20 43 41.1	-0.8
BALY				i S	Sg	20 43 49.0	+0.1
DEMI	Demirci	0.63	112	i P	Pg	20 43 43.7	-0.1
DEMI				i S	Sg	20 43 52.7	+0.5
DEMI	Demirci	0.63	112	i P	Pg	20 43 43.7	-0.1
DEMI				i S	Sg	20 43 52.7	+0.5
GONE	Gonen-Balikesi	0.79	345	ePG	Pg	20 43 46.6	-0.3
GONE				eSG	Sg	20 43 57.5	+0.3
GONE	Gonen-Balikesi	0.79	345	ePg	Pg	20 43 46.6	-0.3
GONE				eSg	Sg	20 43 57.6	+0.3
MANT	Manisa	0.92	149	i P	Pg	20 43 49.1	-0.1
MANT				i S	Sg	20 44 00.9	-0.3
MANT	Manisa	0.92	149	i P	Pg	20 43 49.1	-0.1
MANT				i S	Sg	20 44 00.9	-0.3
KULA	Kula-Manisa	0.94	144	ePG	Pg	20 43 49.7	0.0
KULA	Kula-Manisa	0.94	144	ePg	Pg	20 43 49.7	0.0
AYVA	Ayvalik	0.99	272	i P	Pg	20 43 50.7	+0.2
AYVA				i S	Sn	20 44 05.1	-0.2
AYVA	Ayvalik	0.99	272	i P	Pg	20 43 50.7	+0.2
AYVA				i S	Sn	20 44 05.1	-0.2
KCTX	Karacabey (Bur	1.03	17	ePG	Pg	20 43 50.8	-0.6
KCTX	Karacabey (Bur	1.03	17	ePg	Pg	20 43 50.8	-0.6
IZM	Izmir	1.04	212	ePG	Pn	20 43 52.0	-0.1
IZM	Izmir	1.04	212	ePg	Pn	20 43 52.0	-0.1
BLCB	Balcova	1.15	219	ePN	Pn	20 43 53.6	+0.1
BLCB	Balcova	1.15	219	ePn	Pn	20 43 53.7	+0.1
TVSB	Tavsanli	1.18	81	ePN	Pg	20 43 54.3	+0.1
TVSB	Tavsanli	1.18	81	ePn	Pg	20 43 54.3	+0.1
KRBG	Karabiga-Canak	1.22	336	ePN	Pg	20 43 55.0	0.0
KRBG	Karabiga-Canak	1.22	336	ePn	Pg	20 43 55.0	0.0
ULDT	Uludag	1.25	46	i P	Pb	20 43 55.4	+0.1
ULDT				i S	Sn	20 44 13.2	+1.0
ULDT	Uludag	1.25	46	i P	Pb	20 43 55.4	+0.1
ULDT				i S	Sn	20 44 13.2	+1.0
MRMT	Marmara Adasi	1.35	348	ePN	Pg	20 43 57.3	-0.2
MRMT	Marmara Adasi	1.35	348	ePn	Pg	20 43 57.3	-0.2
ARMT	Armutlu	1.46	28	ePN	Pb	20 43 58.8	0.0
ARMT	Armutlu	1.46	28	ePn	Pb	20 43 58.8	0.0
RKY	Sarkoy-Tekirda	1.53	337	ePN	Pb	20 43 59.9	-0.1
RKY	Sarkoy-Tekirda	1.53	337	ePn	Pb	20 43 59.9	-0.1
IZI	Iznik	1.57	47	ePN	Pb	20 44 00.1	-0.6
IZI	Iznik	1.57	47	ePn	Pb	20 44 00.1	-0.6
GELI	Tayfur-Gelibol	1.60	315	ePN	Pn	20 44 00.2	+0.4
GELI	Tayfur-Gelibol	1.60	315	ePn	Pn	20 44 00.2	+0.4
AYDN	Tasoluk	1.62	182	i P	Pb	20 44 01.4	-0.1
AYDN				i S	Sn	20 44 20.8	-0.3
AYDN	Tasoluk	1.62	182	i P	Pb	20 44 01.4	-0.1
AYDN				i S	Sn	20 44 20.8	-0.3
CTKS	Kestanelik-??a	2.00	12	ePN	Pn	20 44 06.3	+1.0
CTKS	Kestanelik-??a	2.00	12	ePn	Pn	20 44 06.3	+1.0

SOF **08** *20:59:43.2, 41°.27N×22°.67E, h16km, MD2.7*
SKO **08** *20:59:43.6, 41°.31N×22°.68E, h15km, M2.0, ML2.8*
ATH **08** *20:59:44.2, 41°.30N×22°.70E, h20km±1km, MD3.0/8*
BEO **08** *20:59:44.1±0.7, 41°.18N×22°.59E, h0km, ML2.5/6*
CSEM **08** *20:59:44.5±0.1, 41°.27N×22°.69E, h2km, ML2.8, Error ellipse: s-maj=1.9km s-min=1.8km az=52.0*
THE **08** *20:59:44.6, 41°.29N×22°.70E, h1km±1km, ML2.5/16, Error ellipse: s-maj=1.2km s-min=0.4km az=286.0*
ISC 08 20:59:44.2±0.8**, 41°.29N**±0°.01×**22°.68E**±0°.01**, h7**km±5km**, n116,** σ**1ˢ11**/178**, 3C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	291	P	Pg	20 59 45.9	-0.4
VAY				S	Sg	20 59 48.2	+0.4
VAY	Valandovo	0.09	291	ePg	Pg	20 59 46.6	+0.2
VAY				eSg	Sg	20 59 48.5	+0.7
VAY	Valandovo	0.09	291	i Pg	Pg	20 59 46.5	+0.2
VAY				i Sg	Sg	20 59 48.3	+0.5
VAY				eLg	Lg	20 59 48.4	
	comp=E,6µm,0.3s						
VAY				eLg	Lg	20 59 48.6	
	comp=N,7µm,0.2s						
VAY	Valandovo	0.09	291	P	Pg	20 59 45.9	-0.4
VAY	Valandovo	0.09	291	ePg	Pg	20 59 46.6	+0.2
VAY				S	Sg	20 59 48.2	+0.4
VAY				eLg	Lg	20 59 49.0	
	comp=N,7µm,0.2s						
KNT	Kendrikon	0.21	127	P	Pg	20 59 49.1	+0.6
KNT				S	Sg	20 59 52.2	+0.8
KNT	Kendrikon	0.21	127	P	Pg	20 59 49.1	+0.6
KNT				S	Sg	20 59 52.2	+0.8
GRG	Griva	0.39	212	P	Pg	20 59 52.6	+0.7
GRG				S	Sg	20 59 58.5	+1.5
GRG	Griva	0.39	212	ePB	Pg	20 59 52.6	+0.7
GRG				eSB	Sg	20 59 58.5	+1.5
GRG	Griva	0.39	212	P	Pg	20 59 52.6	+0.7
GRG				S	Sg	20 59 58.5	+1.5
KKB	Krupnik	0.65	28	i Pg	Pg	20 59 56.9	+0.1
KKB	Krupnik	0.65	28	i Pg	Pg	20 59 56.9	+0.1
THE	Thessaloniki	0.69	161	P	Pg	20 59 57.7	+0.1
THE				S	Sg	21 00 07.0	+0.4
THE	Thessaloniki	0.69	161	P	Pg	20 59 57.7	+0.1
THE				S	Sg	21 00 07.0	+0.4
SOH	Sokhos	0.69	132	P	Pg	20 59 57.4	-0.2
SOH				S	Sg	21 00 07.0	+0.3
SOH	Sokhos	0.69	132	ePN	Pg	20 59 57.6	0.0
SOH				eSN	Sg	21 00 07.0	+0.3
SOH	Sokhos	0.69	132	ePn	Pg	20 59 57.6	0.0
SOH				S	Sg	21 00 07.0	+0.3
SRS	Serrai	0.71	104	P	Pg	20 59 57.8	-0.2
SRS				S	Sg	21 00 07.6	+0.3
SRS	Serrai	0.71	104	P	Pg	20 59 57.8	-0.2
SRS				S	Sg	21 00 07.6	+0.3
HORT	Hortiatis	0.76	155	P	Pg	20 59 59.1	+0.2
HORT				S	Sb	21 00 10.2	-0.2
HORT	Hortiatis	0.76	155	P	Pg	20 59 59.1	+0.2
HORT				S	Sb	21 00 10.2	-0.2
MMB	Musomiste	0.85	69	i Pg	Pg	21 00 00.5	0.0
MMB	Musomiste	0.85	69	i Pg	Pg	21 00 00.5	0.0
NVR	Nevrokopi	0.90	86	P	Pg	21 00 01.1	-0.4
NVR				S	Sb	21 00 13.2	-1.1
NVR	Nevrokopi	0.90	86	ePN	Pg	21 00 01.3	-0.2
NVR				eSN	Sb	21 00 13.2	-1.1
NVR	Nevrokopi	0.90	86	P	Pg	21 00 01.1	-0.4
NVR				S	Sb	21 00 13.2	-1.1
BIA	Bitola	1.06	256	P	Pb	21 00 04.8	0.0
BIA				S	Sg	21 00 19.4	+1.2
BIA	Bitola	1.06	256	ePg	Pb	21 00 04.0	-0.8
BIA				eSg	Sg	21 00 19.0	+0.8
BIA	Bitola	1.06	256	ePg	Pb	21 00 04.0	-0.8
BIA	Bitola	1.06	256	P	Pb	21 00 04.8	0.0
BIA				eSg	Sg	21 00 19.0	+0.8
PLG	Polygyros	1.09	147	P	Pb	21 00 04.8	-0.5
PLG				S	Sn	21 00 20.6	-0.5
PLG	Polygyros	1.09	147	ePN	Pb	21 00 04.8	-0.5
PLG				eSN	Sg	21 00 19.4	+0.2
PLG	Polygyros	1.09	147	P	Pb	21 00 04.8	-0.5
PLG				eSn	Sg	21 00 19.4	+0.2
PLG				S	Sn	21 00 20.6	-0.5
FNA	Florina	1.10	243	P	Pb	21 00 05.4	-0.3
FNA				S	Sn	21 00 21.2	-0.5
FNA	Florina	1.10	243	ePN	Pb	21 00 05.4	-0.3
FNA	Florina	1.10	243	P	Pb	21 00 05.4	-0.3
FNA				S	Sn	21 00 21.2	-0.5
SKO	Skopje	1.15	307	ePg	Pb	21 00 05.6	-0.8
SKO				eSg	Sb	21 00 21.5	0.0
SKO				eLg	Lg	21 00 23.4	
	comp=Z,26nm,0.4s						
SKO				eLg	Lg	21 00 23.4	
	comp=N,62nm,0.5s						
LIT	Litokhoron	1.20	187	P	Pn	21 00 06.6	-0.8
LIT	Litokhoron	1.20	187	ePN	Pn	21 00 07.1	-0.3
LIT	Litokhoron	1.20	187	P	Pn	21 00 06.6	-0.8
LIT	Litokhoron	1.20	187	ePn	Pn	21 00 07.1	-0.3
KZN	Kozani	1.20	215	P	Pb	21 00 07.3	0.0
KZN				S	Sn	21 00 24.7	+0.7
KZN	Kozani	1.20	215	ePN	Pg	21 00 07.8	+0.6
KZN	Kozani	1.20	215	P	Pb	21 00 07.3	0.0
KZN	Kozani	1.20	215	ePn	Pg	21 00 07.8	+0.6
KZN				S	Sn	21 00 24.7	+0.7
VTS	Vitosha	1.36	17	P	Pb	21 00 09.9	-0.2
VTS				S	Sg	21 00 29.8	+1.8
VTS	Vitosha	1.36	17	P	Pb	21 00 09.5	-0.6
VTS	Vitosha	1.36	17	ePg	Pg	21 00 10.7	+0.4
VTS				eSg	Sg	21 00 31.3	+3.3
VTS	Vitosha	1.36	17	⇓iP	Pg	21 00 11.6	+1.3
VTS				S	Sg	21 00 28.9	+0.9
VTS	Vitosha	1.36	17	P	Pb	21 00 09.9	-0.2
VTS	Vitosha	1.36	17	ePg	Pg	21 00 10.7	+0.4
VTS				S	Sg	21 00 29.8	+1.8
VTS				eSg	Sg	21 00 31.3	+3.3
OUR	Ouranopolis	1.38	133	P	Pb	21 00 09.8	-0.5
OUR				S	Sg	21 00 28.8	+0.3
OUR	Ouranopolis	1.38	133	P	Pb	21 00 09.8	-0.5
OUR				S	Sg	21 00 28.8	+0.3
KAVA	Kavala	1.42	101	P	Pb	21 00 10.5	-0.5
KAVA				S	Sg	21 00 29.8	-0.1
KAVA	Kavala	1.42	101	P	Pb	21 00 10.5	-0.5
KAVA				S	Sg	21 00 29.8	-0.1
NEST	Nestorio	1.51	235	P	Pb	21 00 12.7	+0.1
NEST				S	Sg	21 00 33.9	+1.1
NEST	Nestorio	1.51	235	P	Pb	21 00 12.7	+0.1
NEST				S	Sg	21 00 33.9	+1.1
RZN	Rozhen	1.58	75	P	Pg	21 00 14.7	+0.1
RZN	Rozhen	1.58	75	P	Pg	21 00 14.7	+0.1
BARS	Barje	1.65	338	ePn	Pb	21 00 14.5	-0.5
BARS				eSn	Sg	21 00 38.4	+1.0
BARS	Barje	1.65	338	ePn	Pb	21 00 14.5	-0.5
BARS				eSn	Sg	21 00 38.4	+1.0
PLD	Plovdiv	1.72	61	P	Pg	21 00 19.4	+2.1
PLD	Plovdiv	1.72	61	ePn	Pg	21 00 17.8	+0.5
PLD	Plovdiv	1.72	61	ePn	Pg	21 00 17.8	+0.5
PLD	Plovdiv	1.72	61	P	Pg	21 00 19.4	+2.1
PHP	Peshkopia	1.72	284	P	Pb	21 00 15.5	-0.7
PHP				S	Sg	21 00 39.3	-0.4
PHP	Peshkopia	1.72	284	P	Pb	21 00 15.5	-0.7
PHP				S	Sg	21 00 39.3	-0.4
THL	Klokotos Trika	1.80	197	P	Pb	21 00 16.4	-1.0
THL	Klokotos Trika	1.80	197	P	Pb	21 00 16.4	-1.0
XOR	Xorichti	1.96	168	P	Pn	21 00 17.8	-0.1
XOR				S	Sb	21 00 44.4	-0.5
XOR	Xorichti	1.96	168	P	Pn	21 00 17.8	-0.1
XOR				S	Sb	21 00 44.4	-0.5
ZAPS	Zavoj	1.98	359	ePn	Pb	21 00 20.6	0.0
ZAPS				eSn	Sg	21 00 47.0	-0.9
NEO	Neokhori	2.02	168	P	Pn	21 00 18.6	-0.2
NEO	Neokhori	2.02	168	ePB	Pn	21 00 19.0	+0.2
NEO	Neokhori	2.02	168	P	Pn	21 00 18.6	-0.2
NEO	Neokhori	2.02	168	ePb	Pn	21 00 19.0	+0.2
RDO	Rodhopi	2.16	93	P	Pn	21 00 21.2	+0.6
RDO				S	Sb	21 00 48.4	-2.3
RDO	Rodhopi	2.16	93	ePB	Pn	21 00 20.7	+0.1
RDO	Rodhopi	2.16	93	ePb	Pn	21 00 20.7	+0.1
RDO	Rodhopi	2.16	93	P	Pn	21 00 21.2	+0.6
RDO				S	Sb	21 00 48.4	-2.3
MPEP	Malo Peshtene	2.21	21	P	Pg	21 00 26.3	-0.3
SELS	Selova	2.25	330	ePn	Pb	21 00 23.3	-1.8
SELS				eSn	Sb	21 00 52.8	-0.4
AGG	Agios Georgios	2.28	187	P	Pn	21 00 23.2	+0.9
AGG				S	Sb	21 00 52.9	-1.2
AGG	Agios Georgios	2.28	187	ePB	Pn	21 00 23.4	+1.1
AGG	Agios Georgios	2.28	187	P	Pn	21 00 23.2	+0.9
AGG				S	Sb	21 00 52.9	-1.2
AOS	Alonnisos	2.31	156	P	Pn	21 00 22.4	-0.2
AOS				S	Sb	21 00 53.9	-1.0
AOS	Alonnisos	2.31	156	ePN	Pn	21 00 23.0	+0.4
AOS	Alonnisos	2.31	156	P	Pn	21 00 22.4	-0.2
AOS	Alonnisos	2.31	156	ePn	Pn	21 00 23.0	+0.4
AOS				S	Sb	21 00 53.9	-1.0
SMTH	Samothraki Isl	2.31	110	ePB	Pn	21 00 23.8	+1.1
SMTH	Samothraki Isl	2.31	110	ePb	Pn	21 00 23.8	+1.1
LIA	Limnos Island	2.36	125	P	Pn	21 00 23.9	+0.5
LIA				S	Sb	21 00 54.3	-2.1
LIA	Limnos Island	2.36	125	P	Pn	21 00 23.9	+0.5
LIA				S	Sb	21 00 54.3	-2.1
ALN	Alexandroupoli	2.58	98	P	Pn	21 00 27.1	+0.8
ALN				S	Sn	21 00 59.1	+1.2
ALN	Alexandroupoli	2.58	98	ePN	Pn	21 00 27.2	+0.9
ALN	Alexandroupoli	2.58	98	P	Pn	21 00 27.1	+0.8
ALN				S	Sn	21 00 59.1	+1.2
BOLS	Boljevac	2.59	348	ePn	Pb	21 00 29.0	-2.0
BOLS				eSn	Sb	21 01 02.1	-0.9
BOLS	Boljevac	2.59	348	ePn	Pb	21 00 29.0	-2.0
BOLS				eSn	Sb	21 01 02.1	-0.9
KALE	Kalithea	2.92	188	P	Pn	21 00 32.6	+1.4
KALE	Kalithea	2.92	188	P	Pn	21 00 32.6	+1.4
GRUS	Gruza	2.97	332	ePn	Pn	21 00 33.1	+1.3
GRUS				eSn	Sb	21 01 10.4	-3.6
GRUS	Gruza	2.97	332	ePn	Pn	21 00 33.1	+1.3
GRUS				eSn	Sb	21 01 10.4	-3.6
BBLS	Lazići	3.53	318	ePn	Pn	21 00 40.8	+1.3
BBLS	Lazići	3.53	318	ePn	Pn	21 00 40.8	+1.3
GZR	Gura Zlata	4.10	1	⇓iP	Pb	21 00 53.5	-3.3
GZR	Gura Zlata	4.10	1	S	Sg	21 01 57.1	+1.2
LOT	Lotru	4.23	10	⇑iP	Pn	21 00 49.3	+0.1
LOT	Lotru	4.23	10	⇑iP	Pn	21 00 49.3	+0.1
LOT				S	Sn	21 01 38.0	-0.9
BZS	Buzias	4.39	350	⇓iP	Pb	21 00 57.8	-3.9
BZS	Buzias	4.39	350	S	Sg	21 02 03.9	-1.4
MLR	Muntele Rosu	4.83	28	⇑iP	Pb	21 01 03.4	-5.8
MLR	Muntele Rosu	4.83	28	S	Sg	21 02 23.3	+4.1
PLOR	Plostina	5.40	31	⇓iP	Pn	21 01 10.8	+5.7
PLOR	Plostina	5.40	31	S	Sb	21 02 27.6	+3.9
DRGR		5.50	0	⇓iP	Pn	21 01 11.2	+4.6
DRGR		5.50	0	S	Sg	21 02 36.8	-4.0

IDC **08** *21:03:10.4±3.3, 35°.99N×141°.92E, h0km, mb3.3/2, mb1 3.4/3, mb1mx3.2/26, mbtmp3.1/3, ML2.8/1, Error ellipse: s-maj=89.1km s-min=31.7km az=56.0*
ISCJB **08** *21:03:15.8±1.1, 35°.47N±0°.06×141°.34E±0°.10, h25km, mb3.3/2, Error ellipse: s-maj=11.8km s-min=7.8km az=158.9*
JMA **08** *21:03:17.4±0.1, 35°.53N×141°.22E, h40km±1km, M2.8*
ISC 08 21:03:17.1±1.4**, 35°.47N**±0°.05×**141°.27E**±0°.09**, h25**km**, n13,** σ**1ˢ03**/16**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.41	305	P	Pb	21 03 26.0	+0.1
CHOJ				eS	Sb	21 03 32.5	+0.7
BSO1	Boso 1	0.85	197	P	Pn	21 03 33.5	+0.5
BSO4	Boso 4	0.90	238	P	Pb	21 03 34.0	0.0
BSO3	Boso 3	0.91	223	P	Pb	21 03 34.1	0.0
JIM2	Oshima 3	1.69	244	P	Pn	21 03 43.7	-1.3
JAG	Ashikaga	1.76	303	P	Pn	21 03 45.9	-0.1
JOD2	Odawara 2	1.80	264	P	Pn	21 03 46.1	-0.5
JOD2				eS	Sn	21 04 07.3	-1.3
JFK	Kawauchi	1.92	350	P	Pn	21 03 47.5	-0.8
JRY	Ryogami san	2.00	287	P	Pn	21 03 49.7	+0.3
MJAR	Matsushiro Arr	2.71	294	Pn	Pn	21 03 59.3	+0.2
	1.4nm,0.3s,baz=97,slow=14,SNR=11						
MAT	Matsushiro	2.71	294	P	Pn	21 03 59.6	+0.5
MAT				eS	Sn	21 04 33.0	+2.0
MKAR	Makanchi Array	44.87	303	P	P	21 11 27.6	-1.7
	0.3nm,0.8s,baz=87,slow=9.2,SNR=3.7						
WRA	Warramunga Arr	55.50	188	P	P	21 12 51.4	+1.3
	0.2nm,0.5s,baz=12,slow=7.5,SNR=8.4						

NIED **08** *21:17:00, 35°.50N×141°.20E, h41km, Mw4.0 Best double couple: M₀1.06000×10^15 NP1:φs43.00000°, δ81.00000°, λ95.00000°. NP2:φs195.00000°, δ10.00000°, λ62.00000°.*
IDC **08** *21:17:13.1±0.9, 35°.48N×141°.70E, h0km, mb3.7/9, mb1 3.8/15, mb1mx3.7/31, mbtmp3.7/15, ML3.5/5, MS3.0/5, Ms1 3.0/5, ms1mx2.5/42, Error ellipse: s-maj=24.3km s-min=17.0km az=80.0*
ISCJB **08** *21:17:15.4±0.7, 35°.50N±0°.04×141°.59E±0°.07, h25km, mb3.7/9, MS3.4/1, Error ellipse: s-maj=8.7km s-min=5.7km az=9.4*
JMA **08** *21:17:20.1±0.1, 35°.53N×141°.20E, h41km±1km, M3.6*
ISC 08 21:17:17.4±0.8**, 35°.53N**±0°.04×**141°.46E**±0°.08**, h25**km**, n27,** σ**1ˢ21**/31**, mb3.8**/9**, 4C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.52	290	⇓P	Pn	21 17 28.7	-0.6
BSO1	Boso 1	0.96	205	P	Pb	21 17 36.1	+1.1
JCN	Nagara	1.04	264	P	Pb	21 17 37.2	+0.5
BSO3	Boso 3	1.07	227	⇑P	Pn	21 17 36.8	+0.3
BSO4	Boso 4	1.07	240	⇑P	Pn	21 17 36.6	-0.1
JIM2	Oshima 3	1.85	245	P	Pn	21 17 46.2	-1.4
JAG	Ashikaga	1.86	299	P	Pn	21 17 47.5	-0.2
JFK	Kawauchi	1.90	346	P	Pb	21 17 50.5	-0.9
JFK				eS	Sn	21 18 12.7	+1.4
JOD2	Odawara 2	1.96	263	⇑P	Pn	21 17 48.6	-0.5
JOD2				eS	Sn	21 18 09.5	-3.4
JRY	Ryogami san	2.14	284	⇑P	Pn	21 17 52.2	+0.6
JHJ	Hachijo jima 2	2.78	211	Pn	Pn	21 18 01.2	+0.9
	20nm,0.3s,baz=58,slow=14,SNR=20						
JHJ				Sn	Sn	21 18 31.2	-1.8
	49nm,0.3s,baz=62,slow=22,SNR=5.4						
MJAR	Matsushiro Arr	2.83	292	Pn	Pn	21 18 01.8	+0.8
	8.6nm,0.3s,baz=108,slow=16,SNR=71						
MJAR				LR	LR	21 19 10.9	
	comp=Z,198nm,21.1s,baz=170,slow=40						
MAT	Matsushiro	2.83	292	P	Pn	21 18 01.6	+0.6
MAT				eS	Sn	21 18 34.9	+0.6
ASAJ	Asahikawa	8.62	5	Pn	Pn	21 19 21.2	+0.7
	1.5nm,0.3s,baz=204,slow=11,SNR=11						
ASAJ				Sn	Sn	21 20 56.0	-1.0
	baz=269,slow=26,SNR=1.2						
ASAJ				LR	LR	21 23 16.5	
	comp=Z,50nm,20.0s,baz=353,slow=42						
JNU	Nakatsue	9.08	258	Pn	Pn	21 19 29.5	+2.6
	0.2nm,0.3s,baz=197,slow=2.8,SNR=3.5						
KSRS	Korea Array	11.07	284	Pn	Pn	21 19 57.3	+3.2
	0.1nm,0.3s,baz=98,slow=13,SNR=2.6						
KSRS				LR	LR	21 23 56.1	
	comp=Z,97nm,21.7s,baz=345,slow=36						
USRK	Ussuriysk Arra	11.30	323	Pn	Pn	21 19 58.1	+0.9
	0.1nm,0.3s,baz=126,slow=12,SNR=6.5						
USRK				LR	LR	21 23 59.9	
	comp=Z,92nm,21.7s,baz=347,slow=36						
SONM	Songino Array	28.68	306	P	P	21 23 11.7	-0.7
	0.3nm,0.3s,baz=108,slow=9.3,SNR=3.0						
ZALV	Zalesovo Beam	42.97	314	P	P	21 25 14.0	-0.2
	1.5nm,0.5s,baz=95,slow=8.0,SNR=5.4						
MKAR	Makanchi Array	44.97	303	P	P	21 25 30.9	+0.5
	0.8nm,0.7s,baz=82,slow=8.3,SNR=12						
WRA	Warramunga Arr	55.58	188	P	P	21 26 49.6	-1.3
	0.6nm,0.4s,baz=2.6,slow=7.2,SNR=22						
ASAR	Alice Springs	59.31	188	P	P	21 27 16.5	-0.7
	0.2nm,0.4s,baz=6.7,slow=6.1,SNR=7.0						
FINES	FINESS Array B	70.17	333	P	P	21 28 28.6	+1.1
	0.4nm,0.4s,baz=114,slow=9.3,SNR=2.8						
AKASG	Malin Array Be	75.51	323	P	P	21 28 60.0	+0.6
	0.5nm,0.5s,baz=45,slow=6.7,SNR=3.8						
NB2	NORSAR Subarra	75.59	337	P	P	21 29 01.3	+1.6
	comp=Z,0.1nm,0.6s,baz=48,slow=6.2						
NOA	NORSAR Array B	75.59	337	P	P	21 29 00.4	+0.7
	comp=Z,0.7nm,0.8s,baz=39,slow=5.8,SNR=4.8						
NOA				LR	LR	22 05 13.7	
	comp=Z,17nm,19.2s,baz=160,slow=38						
NVAR	Mina Array Bea	75.86	53	P	P	21 29 01.2	-0.7
	comp=Z,0.3nm,0.3s,baz=337,slow=2.1,SNR=4.4						

NEIC **08** *21:32:11.5±0.6, 43°.73N×105°.31W, h0km, ML3.0, Error ellipse: s-maj=10.8km s-min=7.1km az=15.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
ISCJB **08** *21:32:12.4±0.2, 43°.76N±0°.01×105°.34W±0°.02, h0km, Error ellipse: s-maj=2.4km s-min=1.8km az=174.1*
ISC 08 21:32:12.9±0.7**, 43°.74N**±0°.01×**105°.33W**±0°.02**, h0**km**, n204,** σ**0ˢ83**/244**, 100C-90D, Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I23A	Meade Ranch, G	0.24	337	P	Pg	21 32 18.8	+1.4
	baz=0.3,SNR=353						
I23A				⇑S	Sg	21 32 21.3	+0.9
	baz=0.3						
I23A	Meade Ranch, G	0.24	337	P	Pg	21 32 18.8	+1.4
	baz=0.3,SNR=353						
I23A				⇑S	Sg	21 32 21.3	+0.9
	baz=0.3						
J23A	Dilts Ranch, B	0.38	205	P	Pg	21 32 21.0	+1.0
	baz=0.4,SNR=227						
J23A				⇓S	Sg	21 32 26.0	+1.2
	baz=0.4						
J23A	Dilts Ranch, B	0.38	205	P	Pg	21 32 21.0	+1.0
	baz=0.4,SNR=227						
J23A				⇓S	Sg	21 32 26.0	+1.2
	baz=0.4						
I24A	Kuemmerle Ranc	0.53	77	P	Pg	21 32 23.2	+0.3
	baz=0.5,SNR=489						
I24A				⇓S	Sg	21 32 30.6	+0.9
	baz=0.5						
I24A	Kuemmerle Ranc	0.53	77	P	Pg	21 32 23.2	+0.3
	baz=0.5,SNR=489						
I24A				⇓S	Sg	21 32 30.6	+0.9
	baz=0.5						
J24A	Dixon Ranch, L	0.64	130	⇑P	Pg	21 32 25.1	0.0
	baz=0.6						
J24A	Dixon Ranch, L	0.64	130	⇑P	Pg	21 32 25.1	0.0
	baz=0.6						
H23A	Clabaugh Cattl	0.82	357	⇑P	Pg	21 32 28.4	-0.2
	baz=0.8,SNR=24						
H23A	Clabaugh Cattl	0.82	357	⇑P	Pg	21 32 28.4	-0.2
	baz=0.8,SNR=24						
I22A	9 Mile Ranch,	0.84	281	P	Pg	21 32 29.7	+0.6
	baz=0.9,SNR=532						
I22A				⇑S	Sg	21 32 40.7	+0.7
	baz=0.9						
I22A	9 Mile Ranch,	0.84	281	P	Pg	21 32 29.7	+0.6
	baz=0.9,SNR=532						
I22A				⇑S	Sg	21 32 40.7	+0.7
	baz=0.9						
J22A	Midwest	0.90	249	⇓P	Pg	21 32 30.0	0.0
	baz=0.9						
J22A	Midwest	0.90	249	⇓P	Pg	21 32 30.0	0.0
	baz=0.9						
K23A	Bowen Ranch, D	1.01	192	⇓P	Pg	21 32 32.0	-0.3
	baz=1.0						
K23A	Bowen Ranch, D	1.01	192	⇓P	Pg	21 32 32.0	-0.3
	baz=1.0						
RSSD	Black Hills	1.01	68	eP	Pg	21 32 31.6	-0.6
RSSD				S	Sb	21 32 47.8	+0.5
K24A	Anderson Ranch	1.09	159	⇑P	Pg	21 32 33.3	-0.4
	baz=1.1,SNR=70						
K24A				⇑S	Sb	21 32 49.0	-0.4
	baz=1.1						
K24A	Anderson Ranch	1.09	159	⇑P	Pg	21 32 33.3	-0.4
	baz=1.1,SNR=70						
K24A				⇑S	Sb	21 32 49.0	-0.4
	baz=1.1						
H22A	Clearmont	1.12	320	⇑P	Pg	21 32 34.6	+0.3
	baz=1.1,SNR=40						
H22A	Clearmont	1.12	320	⇑P	Pg	21 32 34.6	+0.3
	baz=1.1,SNR=40						
H24A	Dirks Ranch, A	1.15	29	P	Pg	21 32 34.1	-0.8
	baz=1.2,SNR=170						
H24A	Dirks Ranch, A	1.15	29	P	Pg	21 32 34.1	-0.8
	baz=1.2,SNR=170						
K22A	Casper	1.40	219	P	Pn	21 32 39.0	-0.8

baz=1.4,SNR=211
K22A ⇑S Sn 21 32 59.2 +0.2
baz=1.4
K22A Casper 1.40 219 P Pn 21 32 39.0 -0.8
baz=1.4,SNR=211
K22A ⇑S **Sn 21 32 59.2 +0.2**
baz=1.4
I21A Big Trails, Te 1.42 273 ⇓P **Pn 21 32 39.1 -1.0**
baz=1.4
I21A Big Trails, Te 1.42 273 ⇓P **Pn 21 32 39.1 -1.0**
baz=1.4
G23A Biddle 1.46 358 P **Pn 21 32 40.0 -0.6**
baz=1.5,SNR=171
G23A ⇓S **Sn 21 33 00.9 +0.5**
baz=1.5
G23A Biddle 1.46 358 P **Pn 21 32 40.0 -0.6**
baz=1.5,SNR=171
G23A ⇓S **Sn 21 33 00.9 +0.5**
baz=1.5
H21A Big Horn, Sher 1.51 306 ⇓P **Pn 21 32 41.4 +0.1**
baz=1.5,SNR=125
H21A Big Horn, Sher 1.51 306 ⇓P **Pn 21 32 41.4 +0.1**
baz=1.5,SNR=125
K25A Mack Ranch, Ha 1.56 136 ⇓P **Pb 21 32 42.2 -0.4**
baz=1.5,SNR=58
K25A Mack Ranch, Ha 1.56 136 ⇓P **Pb 21 32 42.2 -0.4**
baz=1.5,SNR=58
J21A Lysite 1.59 256 P **Pn 21 32 42.0 -0.5**
baz=1.6,SNR=79
J21A ⇓S **Sg 21 33 04.6 +0.8**
baz=1.6
J21A Lysite 1.59 256 P **Pn 21 32 42.0 -0.5**
baz=1.6,SNR=79
J21A ⇓S **Sg 21 33 04.6 +0.8**
baz=1.6
G22A Birney 1.63 335 ⇓P **Pb 21 32 43.3 -0.5**
baz=1.6,SNR=223
G22A Birney 1.63 335 ⇓P **Pb 21 32 43.3 -0.5**
baz=1.6,SNR=223
L23A Garrett 1.65 190 ⇓P **Pn 21 32 43.1 -0.2**
baz=1.6
L23A ⇓S **Sb 21 33 05.7 0.0**
baz=1.6
L23A Garrett 1.65 190 ⇓P **Pn 21 32 43.1 -0.2**
baz=1.6
L23A ⇓S **Sb 21 33 05.7 0.0**
baz=1.6
G24A Alzada 1.71 22 ⇑P **Pn 21 32 44.3 +0.2**
baz=1.7,SNR=34
G24A ⇑S **Sb 21 33 07.2 -0.2**
baz=1.7
G24A Alzada 1.71 22 ⇑P **Pn 21 32 44.3 +0.2**
baz=1.7,SNR=34
G24A ⇑S **Sb 21 33 07.2 -0.2**
baz=1.7
L24A Wheatland 1.73 170 ⇓P **Pn 21 32 44.4 +0.1**
baz=1.7,SNR=24
L24A ⇑S **Sb 21 33 07.7 -0.1**
baz=1.7
L24A Wheatland 1.73 170 ⇓P **Pn 21 32 44.4 +0.1**
baz=1.7,SNR=24
L24A ⇑S **Sb 21 33 07.7 -0.1**
baz=1.7
L25A Engebretsen Ra 1.88 147 ⇓Pb **Pb 21 32 47.8 -0.3**
baz=1.9,SNR=39
L25A Engebretsen Ra 1.88 147 ⇓Pb **Pb 21 32 47.8 -0.3**
baz=1.9,SNR=39
K26A Motz Farm, Whi 1.89 123 ⇑P **Pn 21 32 46.9 +0.4**
baz=1.9,SNR=14
K26A Motz Farm, Whi 1.89 123 ⇑P **Pn 21 32 46.9 +0.4**
baz=1.9,SNR=14
L22A Ellis Ranch, M 1.89 206 ⇓P **Pn 21 32 47.3 +0.7**
baz=1.9
L22A ⇓Sb **Sg 21 33 14.2 +0.5**
baz=1.9
L22A Ellis Ranch, M 1.89 206 ⇓P **Pn 21 32 47.3 +0.7**
baz=1.9
L22A ⇓Sb **Sg 21 33 14.2 +0.5**
baz=1.9
F23A Volborg 1.98 359 P **Pn 21 32 48.1 +0.4**
baz=2.0,SNR=270
F23A ⇑Sb **Sg 21 33 16.6 +0.2**
baz=2.0
F23A Volborg 1.98 359 P **Pn 21 32 48.1 +0.4**
baz=2.0,SNR=270
F23A ⇑Sb **Sg 21 33 16.6 +0.2**
baz=2.0
G21A Lodge Grass 2.00 319 ⇓P **Pn 21 32 48.5 +0.5**
baz=2.0,SNR=46
G21A ⇑Sb **Sg 21 33 17.4 +0.3**
baz=2.0
G21A Lodge Grass 2.00 319 ⇓P **Pn 21 32 48.5 +0.5**
baz=2.0,SNR=46
G21A ⇑Sb **Sg 21 33 17.4 +0.3**
baz=2.0
I20A Worland 2.03 277 ⇑P **Pn 21 32 49.4 +1.0**
baz=2.0,SNR=264
I20A Worland 2.03 277 ⇑P **Pn 21 32 49.4 +1.0**
baz=2.0,SNR=264
J20A Shoshoni 2.04 260 ⇑Pb **Pb 21 32 50.7 -0.1**
baz=2.0
J20A ⇑Sb **Sg 21 33 18.6 +0.3**
baz=2.0
J20A Shoshoni 2.04 260 ⇑Pb **Pb 21 32 50.7 -0.1**
baz=2.0
J20A ⇑Sb **Sg 21 33 18.6 +0.3**
baz=2.0
H20A Greybull 2.06 292 ⇑P **Pn 21 32 49.1 +0.2**
baz=2.1,SNR=10
H20A ⇑S **Sn 21 33 16.2 +0.9**
baz=2.1
H20A Greybull 2.06 292 ⇑P **Pn 21 32 49.1 +0.2**
baz=2.1,SNR=10
H20A ⇑S **Sn 21 33 16.2 +0.9**
baz=2.1
F24A Ekalaka 2.19 16 ⇓P **Pn 21 32 51.2 +0.5**
baz=2.2,SNR=67
F24A ⇑Sb **Sg 21 33 22.9 -0.5**
baz=2.2
F24A Ekalaka 2.19 16 ⇓P **Pn 21 32 51.2 +0.5**
baz=2.2,SNR=67
F24A ⇑Sb **Sg 21 33 22.9 -0.5**
baz=2.2
M23A Laramie 2.29 187 ⇓P **Pn 21 32 52.6 +0.4**
baz=2.3
M23A Laramie 2.29 187 ⇓P **Pn 21 32 52.6 +0.4**
baz=2.3
M24A Cheyenne 2.31 170 ⇑Pb **Pb 21 32 55.6 +0.2**
baz=2.3
M24A Cheyenne 2.31 170 ⇑Pb **Pb 21 32 55.6 +0.2**
baz=2.3
L21A Rawlins 2.32 221 ⇓P **Pn 21 32 53.5 +0.9**
baz=2.3,SNR=50
L21A Rawlins 2.32 221 ⇓P **Pn 21 32 53.5 +0.9**
baz=2.3,SNR=50
PHWY Pilot Hill 2.44 182 *e*Pn **Pn 21 32 52.7 -1.6**
PHWY *e*Sg **Sg 21 33 32.0 +0.7**
K20A Yellowstone Ra 2.45 245 ⇓P **Pn 21 32 55.5 +1.2**
baz=2.5,SNR=74
K20A Yellowstone Ra 2.45 245 ⇓P **Pn 21 32 55.5 +1.2**
baz=2.5,SNR=74
K27A Flueckinger Fa 2.49 114 ⇑P **Pn 21 32 55.1 +0.3**
baz=2.5,SNR=37
K27A Flueckinger Fa 2.49 114 ⇑P **Pn 21 32 55.1 +0.3**
baz=2.5,SNR=37
M25A Palm-Egli Farm 2.49 157 ⇓P **Pn 21 32 56.1 +1.3**
baz=2.5
M25A Palm-Egli Farm 2.49 157 ⇓P **Pn 21 32 56.1 +1.3**
baz=2.5
M22A Cedar Creek Ra 2.52 202 ⇓P **Pn 21 32 56.9 +1.7**
baz=2.5
M22A Cedar Creek Ra 2.52 202 ⇓P **Pn 21 32 56.9 +1.7**
baz=2.5
G20A Bridger 2.54 307 P **Pn 21 32 55.4 0.0**
baz=2.6,SNR=223
G20A Bridger 2.54 307 P **Pn 21 32 55.4 0.0**
baz=2.6,SNR=223
M21A Separation Pea 2.61 216 ⇓P **Pn 21 32 58.5 +2.0**
baz=2.6,SNR=92
M21A Separation Pea 2.61 216 ⇓P **Pn 21 32 58.5 +2.0**
baz=2.6,SNR=92
I19A Meeteetse 2.66 278 ⇑P **Pn 21 32 58.5 +1.3**
baz=2.7,SNR=23
I19A Meeteetse 2.66 278 ⇑P **Pn 21 32 58.5 +1.3**
baz=2.7,SNR=23
K19A Absolon Red Bu 2.72 252 ⇑P **Pn 21 32 59.5 +1.5**
baz=2.7
K19A Absolon Red Bu 2.72 252 ⇑P **Pn 21 32 59.5 +1.5**

baz=2.7
E22A Miles City 2.73 351 ⇑P **Pn 21 32 57.9 -0.1**
baz=2.8
E22A Miles City 2.73 351 ⇑P **Pn 21 32 57.9 -0.1**
baz=2.8
J19A Crowheart 2.75 261 ⇓P **Pn 21 33 00.2 +1.9**
baz=2.8,SNR=98
J19A Crowheart 2.75 261 ⇓P **Pn 21 33 00.2 +1.9**
baz=2.8,SNR=98
E23A Ismay 2.75 0 P **Pn 21 32 58.5 +0.2**
baz=2.8,SNR=46
E23A Ismay 2.75 0 P **Pn 21 32 58.5 +0.2**
baz=2.8,SNR=46
H19A Powell 2.78 291 ⇑P **Pn 21 32 59.4 +0.5**
baz=2.8,SNR=28
H19A Powell 2.78 291 ⇑P **Pn 21 32 59.4 +0.5**
baz=2.8,SNR=28
F20A Billings 2.87 317 ⇑P **Pn 21 32 59.9 0.0**
baz=2.9,SNR=45
F20A Billings 2.87 317 ⇑P **Pn 21 32 59.9 0.0**
baz=2.9,SNR=45
N23A Red Feather La 2.88 189 ⇓P **Pn 21 33 01.6 +1.3**
baz=2.9,SNR=21
N23A Red Feather La 2.88 189 ⇓P **Pn 21 33 01.6 +1.3**
baz=2.9,SNR=21
E24A Baker 2.91 14 ⇑P **Pn 21 33 01.3 +0.8**
baz=2.9,SNR=53
E24A Baker 2.91 14 ⇑P **Pn 21 33 01.3 +0.8**
baz=2.9,SNR=53
N22A Wattenberg Ran 3.06 196 ⇓Pb **Pb 21 33 07.7 -0.5**
baz=3.0
N22A Wattenberg Ran 3.06 196 ⇓Pb **Pb 21 33 07.7 -0.5**
baz=3.0
E21A Keefer Ranch, 3.06 337 ⇓P **Pn 21 33 01.9 -0.6**
baz=3.1,SNR=10
E21A Keefer Ranch, 3.06 337 ⇓P **Pn 21 33 01.9 -0.6**
baz=3.1,SNR=10
M20A Sweetwater, Wa 3.08 224 ⇑Pb **Pb 21 33 08.8 +0.1**
baz=3.1
M20A Sweetwater, Wa 3.08 224 ⇑Pb **Pb 21 33 08.8 +0.1**
baz=3.1
RLMT Red Lodge 3.14 297 *e*Pn **Pn 21 33 01.7 -2.1**
BW06 Boulder Array 3.24 254 *e*Pn **Pn 21 33 05.0 -0.1**
H18A Shoshone NF, C 3.25 288 ⇓P **Pn 21 33 05.5 +0.2**
baz=3.3
H18A Shoshone NF, C 3.25 288 ⇓P **Pn 21 33 05.5 +0.2**
baz=3.3
N26A Koester Ranch, 3.31 151 ⇓P **Pn 21 33 06.9 +0.9**
baz=3.3
N26A Koester Ranch, 3.31 151 ⇓P **Pn 21 33 06.9 +0.9**
baz=3.3
F19A Roth Farm, Mol 3.32 311 ⇓P **Pn 21 33 06.9 +0.7**
baz=3.3,SNR=60
F19A Roth Farm, Mol 3.32 311 ⇓P **Pn 21 33 06.9 +0.7**
baz=3.3,SNR=60
G18A Lazy EL Ranch, 3.41 299 ⇑P **Pn 21 33 08.1 +0.7**
baz=3.4,SNR=28
G18A Lazy EL Ranch, 3.41 299 ⇑P **Pn 21 33 08.1 +0.7**
baz=3.4,SNR=28
D24A Glendive 3.45 12 ⇓P **Pn 21 33 08.6 +0.8**
baz=3.5,SNR=28
D24A Glendive 3.45 12 ⇓P **Pn 21 33 08.6 +0.8**
baz=3.5,SNR=28
D22A Cohagen 3.46 350 ⇓P **Pn 21 33 08.1 +0.1**
baz=3.5,SNR=21
D22A Cohagen 3.46 350 ⇓P **Pn 21 33 08.1 +0.1**
baz=3.5,SNR=21
D21A La Casta Ranch 3.52 341 ⇑P **Pn 21 33 09.1 +0.2**
baz=3.5
D21A La Casta Ranch 3.52 341 ⇑P **Pn 21 33 09.1 +0.2**
baz=3.5
E19A Rath Farm, Rou 3.65 319 ⇑P **Pn 21 33 10.6 -0.1**
baz=3.7,SNR=21
E19A Rath Farm, Rou 3.65 319 ⇑P **Pn 21 33 10.6 -0.1**
baz=3.7,SNR=21
OGNE Ogallala 3.72 138 *e*Pn Pn 21 33 08.3 -3.3
OGNE *e*Pg **Pg 21 33 22.1 -2.0**
OGNE Sg **Sg 21 34 12.0 -0.2**
LOHW Long Hollow 3.83 270 *e*Pn **Pn 21 33 12.1 -1.1**
LOHW *e*Pg **Pg 21 33 24.8 -1.3**
C24A Savage 3.84 9 ⇑P **Pn 21 33 14.5 +1.2**
baz=3.9,SNR=7.4
C24A Savage 3.84 9 ⇑P **Pn 21 33 14.5 +1.2**
baz=3.9,SNR=7.4
D20A Manuel Ranch, 3.88 330 ⇑P **Pn 21 33 14.1 +0.2**
baz=3.9,SNR=32
D20A Manuel Ranch, 3.88 330 ⇑P **Pn 21 33 14.1 +0.2**
baz=3.9,SNR=32
MOOW Moose Ponds 3.92 272 Pn **Pn 21 33 12.6 -1.9**
ISCO Idaho Springs 3.95 183 *e*Pn **Pn 21 33 13.9 -1.0**
ISCO *e*Sg **Sb 21 34 13.1 +1.2**
ISCO Idaho Springs 3.95 183 ⇑P **Pn 21 33 15.8 +0.8**
baz=3.9
ISCO Idaho Springs 3.95 183 ⇑P **Pn 21 33 15.8 +0.8**
baz=3.9
SNOW Snow King Moun 3.95 268 *e*Pn **Pn 21 33 14.6 -0.3**
C22A Vida 4.02 355 ⇓P **Pn 21 33 16.5 +0.8**
baz=4.0
C22A Vida 4.02 355 ⇓P **Pn 21 33 16.5 +0.8**
baz=4.0
IMW Indian Meadow 4.06 274 *e*Pn **Pn 21 33 14.5 -2.0**
C23A Lambert 4.06 1 ⇑P **Pn 21 33 17.4 +1.1**
baz=4.1
C23A Lambert 4.06 1 ⇑P **Pn 21 33 17.4 +1.1**
baz=4.1
TPAW Teton Pass 4.09 268 *e*Pn **Pn 21 33 18.7 +1.8**
O27A Beecher Island 4.14 148 ⇑P **Pn 21 33 18.1 +0.7**
baz=4.1
O27A Beecher Island 4.14 148 ⇑P **Pn 21 33 18.1 +0.7**
baz=4.1
N28A Pribbeno Ranch 4.16 136 ⇓P **Pn 21 33 18.2 +0.6**
baz=4.1,SNR=8.1
N28A Pribbeno Ranch 4.16 136 ⇓P **Pn 21 33 18.2 +0.6**
baz=4.1,SNR=8.1
C21A Desert Coulee 4.26 344 ⇑P **Pn 21 33 19.1 0.0**
baz=4.3
C21A Desert Coulee 4.26 344 ⇑P **Pn 21 33 19.1 0.0**
baz=4.3
E18A Harlowton 4.30 313 ⇑P **Pn 21 33 20.3 +0.7**
baz=4.3,SNR=20
E18A Harlowton 4.30 313 ⇑P **Pn 21 33 20.3 +0.7**
baz=4.3,SNR=20
C20A Veseth Ranch, 4.39 336 ⇓P **Pn 21 33 21.2 +0.4**
baz=4.4
C20A Veseth Ranch, 4.39 336 ⇓P **Pn 21 33 21.2 +0.4**
baz=4.4
P26A Davis Ranch, A 4.44 160 ⇑P **Pn 21 33 22.2 +0.7**
baz=4.4,SNR=11
P26A Davis Ranch, A 4.44 160 ⇑P **Pn 21 33 22.2 +0.7**
baz=4.4,SNR=11
O28A Krutsinger Ran 4.49 142 ⇓P **Pn 21 33 22.2 0.0**
baz=4.5,SNR=8.1
O28A Krutsinger Ran 4.49 142 ⇓P **Pn 21 33 22.2 0.0**
baz=4.5,SNR=8.1
B22A Reddig Ranch S 4.58 354 ⇑P **Pn 21 33 23.6 +0.2**
baz=4.6
B22A Reddig Ranch S 4.58 354 ⇑P **Pn 21 33 23.6 +0.2**
baz=4.6
P27A Ficken Ranch, 4.67 153 ⇓P **Pn 21 33 24.9 +0.3**
baz=4.6
P27A Ficken Ranch, 4.67 153 ⇓P **Pn 21 33 24.9 +0.3**
baz=4.6
C19A Slack Wire Ran 4.76 328 P **Pn 21 33 26.0 0.0**
baz=4.8,SNR=30
C19A Slack Wire Ran 4.76 328 P **Pn 21 33 26.0 0.0**
baz=4.8,SNR=30
BOZ Bozeman (W) 4.88 295 *e*Pn **Pn 21 33 26.2 -1.3**
P28A Saint Francis 4.96 146 ⇓P **Pn 21 33 28.6 0.0**
baz=4.9
P28A Saint Francis 4.96 146 ⇓P **Pn 21 33 28.6 0.0**
baz=4.9
B20A Solberg Farm, 5.05 339 ⇑P **Pn 21 33 30.1 +0.1**
baz=5.1,SNR=8.8
B20A Solberg Farm, 5.05 339 ⇑P **Pn 21 33 30.1 +0.1**
baz=5.1,SNR=8.8
HWUT Hardware Ranch 5.07 247 *e*Pn **Pn 21 33 29.8 -0.4**
6.4nm,0.6s
D17A Six Diamond Ra 5.08 314 ⇓P **Pn 21 33 30.6 +0.2**
baz=5.1,SNR=57
D17A Six Diamond Ra 5.08 314 ⇓P **Pn 21 33 30.6 +0.2**
baz=5.1,SNR=57
A24A Westby 5.26 10 ⇑P **Pn 21 33 33.6 +0.8**
baz=5.3,SNR=29
A24A Westby 5.26 10 ⇑P **Pn 21 33 33.6 +0.8**
baz=5.3,SNR=29
A22A Carney Farms, 5.27 356 ⇑P **Pn 21 33 33.0 +0.1**
baz=5.3
A22A Carney Farms, 5.27 356 ⇑P **Pn 21 33 33.0 +0.1**

baz=5.3
EGMT Eagleton 5.28 326 *e*Pn **Pn 21 33 30.4 -2.6**
EGMT Sn Sn 21 34 27.2 -7.4
E16A East Helena 5.28 304 ⇑P **Pn 21 33 33.7 +0.5**
baz=5.3,SNR=6.2
E16A East Helena 5.28 304 ⇑P **Pn 21 33 33.7 +0.5**
baz=5.3,SNR=6.2
B19A Brinkman Farms 5.34 333 ⇓P **Pn 21 33 33.9 +0.1**
baz=5.4
B19A Brinkman Farms 5.34 333 ⇓P **Pn 21 33 33.9 +0.1**
baz=5.4
HRY Holter Researc 5.46 305 *e*Pn **Pn 21 33 35.1 -0.5**
HRY *e*Pg **Pg 21 33 54.9 -2.6**
D16A Dana Ranch, Ca 5.47 309 ⇓P **Pn 21 33 36.1 +0.3**
baz=5.5,SNR=8.4
D16A Dana Ranch, Ca 5.47 309 ⇓P **Pn 21 33 36.1 +0.3**
baz=5.5,SNR=8.4
LRM Limekiln Ridge 5.47 295 *e*Pn **Pn 21 33 37.2 +1.3**
B18A Beardsley Farm 5.58 328 ⇓P **Pn 21 33 37.5 +0.3**
baz=5.6,SNR=7.3
B18A Beardsley Farm 5.58 328 ⇓P **Pn 21 33 37.5 +0.3**
baz=5.6,SNR=7.3
E15A Deer Lodge 5.83 300 ⇑P **Pn 21 33 40.2 -0.4**
baz=5.8,SNR=16
E15A Deer Lodge 5.83 300 ⇑P **Pn 21 33 40.2 -0.4**
baz=5.8,SNR=16
C16A Fuhringer Ranc 6.05 314 ⇓P **Pn 21 33 43.2 -0.4**
baz=6.1,SNR=6.7
C16A Fuhringer Ranc 6.05 314 ⇓P **Pn 21 33 43.2 -0.4**
baz=6.1,SNR=6.7
ECSD EROS Data Cent 6.32 87 *e*Pn Pn 21 33 42.1 -5.2
ECSD *e*Pg **Pb 21 34 06.0 +2.3**
CHMT Chamberlain Mo 6.42 302 *e*Pn **Pn 21 33 49.8 +1.0**
CHMT *e*Sg **Sg 21 35 40.1 +1.2**
B16A M & M Farms, S 6.44 319 P **Pn 21 33 48.9 0.0**
baz=6.5,SNR=24
B16A M & M Farms, S 6.44 319 P **Pn 21 33 48.9 0.0**
baz=6.5,SNR=24
HLID Hailey 6.59 272 *e*Pn Pn 21 33 54.9 +3.8
D14A Greenough 6.65 303 ⇑P **Pn 21 33 51.9 0.0**
baz=6.7,SNR=11
D14A Greenough 6.65 303 ⇑P **Pn 21 33 51.9 0.0**
baz=6.7,SNR=11
B15A Bradely Ranch, 6.79 315 ⇑P **Pn 21 33 53.3 -0.5**
baz=6.8,SNR=5.7
B15A Bradely Ranch, 6.79 315 ⇑P **Pn 21 33 53.3 -0.5**
baz=6.8,SNR=5.7
S18A Hurst Farm, Bl 7.00 212 ⇑P **Pn 21 33 57.4 +0.4**
baz=7.0,SNR=8.4
S18A Hurst Farm, Bl 7.00 212 ⇑P **Pn 21 33 57.4 +0.4**
baz=7.0,SNR=8.4
A15A Johnson Ranch, 7.32 318 ⇑P **Pn 21 34 00.0 -1.0**
baz=7.3,SNR=6.0
A15A Johnson Ranch, 7.32 318 ⇑P **Pn 21 34 00.0 -1.0**
baz=7.3,SNR=6.0
MVU Marysvale 7.37 227 *e*Pn **Pn 21 34 04.4 +2.5**
MVU *e*Pg **Pg 21 34 32.5 -1.5**
A14A Double T Ranch 7.66 316 ⇓P **Pn 21 34 05.0 -0.7**
baz=7.7
A14A Double T Ranch 7.66 316 ⇓P **Pn 21 34 05.0 -0.7**
baz=7.7
AGMN Agassiz Nation 8.01 52 *e*Pn Pn 21 34 03.5 -6.9
AGMN *e*Pg Pb 21 34 37.9 +5.4
FFC Flin Flon 11.21 10 *e*Pn **Pn 21 34 51.7 -2.5**

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*AZER **08** 21:35:59.2, 41°.47N×47°.79E, h10km*
*MOS **08** 21:36:00.8±0.9, 41°.53N×47°.88E, h11km, mb4.4/1, Error ellipse: s-maj=10.3km s-min=5.8km az=107.2*
*IDC **08** 21:36:00.4±1.1, 41°.48N×47°.90E, h0km, mb3.2/3, mb1 3.4/7, mb1mx3.2/29, mbtmp3.3/7, ML3.4/3, Error ellipse: s-maj=17.6km s-min=9.7km az=152.0*
*CSEM **08** 21:36:01.8±0.2, 41°.67N×47°.96E, h5km, mb4.4, Error ellipse: s-maj=5.0km s-min=4.3km az=31.0*
*TIF **08** 21:36:01.4, 41°.49N×47°.82E, h15km±2km*
*NSSP **08** 21:36:02.9, 41°.58N×47°.95E, Ms3.1*
*NNC **08** 21:36:04.1±18.0, 41°.65N×48°.53E, h0km, mb3.6, Error ellipse: s-maj=212.5km s-min=134.8km az=100.0*
ISC 08 21:36:01.1±0.9, **41°.53N**±0°.02×**47°.86E**±0°.02, **h11**km±6km, **n74**, σ**1s.57**/122, **mb2.8**/3, **16C-11D, Eastern Caucasus**

Code Station Name Δ° AZ° Phase ID (Op, ISC) Time (h m s) Res (ISC)
AKT Akhty 0.11 246 *i* PG **Pg 21 36 03.0 -1.1**
KSMR Kasumkent 0.21 69 *i* PG **Pg 21 36 05.5 -0.2**
KSMR *e*S **Sg 21 36 11.0 +2.1**
KSMR Kasumkent 0.21 69 *i* Pg **Pg 21 36 05.5 -0.2**
QUBA Quba, Azerbaij 0.50 109 ⇑P **Pb 21 36 11.6 -0.4**
SNR=593
QUBA ⇑S **Sb 21 36 20.0 +0.6**
SEKA Sheki 0.59 238 ⇓P **Pg 21 36 11.9 -0.7**
SNR=614
SEKA ⇑S **Sg 21 36 20.0 -0.4**
DRN Derbent 0.61 35 ⇓*i*PG **Pb 21 36 13.5 -0.4**
DRN *i* S **Sb 21 36 23.5 +1.0**
URKR Urkarakh 0.66 345 *i* PG **Pg 21 36 13.5 -0.5**
URKR *e*S **Sg 21 36 22.5 -0.3**
URKR pmax pmax
comp=Z,468nm,0.2s
URKR Urkarakh 0.66 345 *i* Pg **Pg 21 36 13.5 -0.5**
comp=Z,468nm,0.2s
IML Ismayilli 0.77 162 ⇓P **Pb 21 36 16.7 +0.2**
SNR=13
IML ⇓S **Sb 21 36 28.2 +1.1**
KMKR Kumukh 0.83 317 *e*PG **Pg 21 36 16.0 -1.2**
KMKR *e*S **Sg 21 36 28.0 -0.1**
KMKR pmax pmax
comp=Z,967nm,0.3s
KMKR Kumukh 0.83 317 *e*Pg **Pg 21 36 16.0 -1.2**
comp=Z,967nm,0.3s
KMKR *e*Sg **Sg 21 36 28.0 -0.1**
SIZA Siyzn 0.90 119 ⇓P **Pb 21 36 19.1 +0.3**
SNR=149
SIZA ⇑S **Sn 21 36 33.7 +0.8**
PQL Pirkuli 0.92 143 ⇑P **Pb 21 36 19.3 +0.1**
SNR=37
PQL ⇑S **Sn 21 36 32.8 -0.6**
SGKR Sergokala 0.95 351 *i* PG **Pg 21 36 19.0 -0.4**
SGKR *e*S **Sb 21 36 33.0 +0.9**
SGKR pmax pmax
comp=Z,370nm,0.3s
SGKR Sergokala 0.95 351 *i* Pg **Pg 21 36 19.0 -0.4**
comp=Z,370nm,0.3s
ARKR Arakani 1.26 329 *e*PG **Pn 21 36 23.6 -1.1**
ARKR *e*S **Sb 21 36 41.0 -0.1**
ARKR pmax pmax
comp=Z,92nm,0.2s
ARKR Arakani 1.26 329 *e*Pg **Pn 21 36 23.6 -1.1**
comp=Z,92nm,0.2s
ARKR *e*Sg **Sb 21 36 41.0 -0.1**
XNZR Khunzakh 1.33 320 ⇑*i*PG **Pn 21 36 25.3 -0.5**
XNZR *e*S **Sg 21 36 44.5 +0.4**
XNZR pmax pmax
comp=Z,254nm,0.3s
XNZR Khunzakh 1.33 320 *i* Pg **Pn 21 36 25.3 -0.5**
comp=Z,254nm,0.3s
XNZR *e*Sg **Sg 21 36 44.5 +0.4**
BUJR Buynaksk 1.42 337 *e*PG **Pn 21 36 27.2 +0.4**
BUJR *e*S **Sg 21 36 48.2 +1.5**
BUJR pmax pmax
comp=Z,135nm,0.3s
BUJR Buynaksk 1.42 337 *e*Pg **Pn 21 36 27.2 +0.4**
comp=Z,135nm,0.3s
UNCR Uncukul 1.43 327 *e*PG **Pn 21 36 27.0 0.0**
UNCR *e*S **Sn 21 36 46.0 +0.2**
UNCR pmax pmax
comp=Z,176nm,0.9s
UNCR Uncukul 1.43 327 *e*Pg **Pn 21 36 27.0 0.0**
comp=Z,176nm,0.9s
UNCR *e*Sg **Sn 21 36 46.0 +0.2**
GANJ Ganja 1.46 233 ⇓P **Pn 21 36 27.1 -0.4**
SNR=71
GANJ ⇑S **Sn 21 36 47.0 +0.5**
MAK Makhachkala 1.46 350 ⇑*i*PG **Pb 21 36 28.1 -0.2**
MAK *i* 21 36 48.6
MAK pmax pmax
comp=Z,134nm,0.7s
MAK smax smax
comp=E,1μm,0.5s
MAK smax smax
comp=N,1μm,0.5s
MAK Makhachkala 1.46 350 *i* Pg **Pb 21 36 28.1 -0.2**
comp=N,134nm,0.7s
KRNR Karanay 1.48 332 ⇑*i*PG **Pn 21 36 27.5 -0.3**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRNR				iS	Sb	21 36 48.0	+0.4
KRNR				pmax	pmax		
	comp=Z,74nm,0.3s						
KRNR	Karanay	1.48	332	iPg	Pn	21 36 27.5	-0.3
	comp=Z,74nm,0.3s						
KRNR				iSg	Sb	21 36 48.0	+0.4
BTLR	Botlikh	1.67	314	ePN	Pn	21 36 30.4	0.0
BTLR				eS	Sb	21 36 53.4	+0.4
BTLR	Botlikh	1.67	314	ePn	Pn	21 36 30.4	0.0
BTLR				eSg	Sb	21 36 53.4	+0.4
DBC	Dubki	1.68	333	ePN	Pn	21 36 30.9	+0.4
DBC				iS	Sb	21 36 54.3	+1.0
DBC	Dubki	1.68	333	ePn	Pn	21 36 30.9	+0.4
DBC				iSg	Sb	21 36 54.3	+1.0
DLMR	Dylym	1.79	330	ePN	Pn	21 36 33.0	+1.0
DLMR				S	Sg	21 37 01.5	+2.7
DLMR				pmax	pmax		
	comp=Z,344nm,0.3s						
DLMR	Dylym	1.79	330	ePn	Pn	21 36 33.0	+1.0
	comp=Z,344nm,0.3s						
DGRG	David-gareji	1.87	269	P	Pb	21 36 35.1	-0.3
DGRG				S	Sg	21 37 02.4	+1.1
VADZ	Vardenis	2.10	231	eP	Pb	21 36 40.0	+0.7
VADZ				eS	Sg	21 37 09.0	+0.4
VADZ	Vardenis	2.10	231	P	Pb	21 36 40.0	+0.7
VADZ				S	Sg	21 37 09.0	+0.4
GRS	Goris	2.33	210	⇑iP	Pn	21 36 39.0	-0.6
GRS				⇑iS	Sb	21 37 12.0	-0.2
GRS	Goris	2.33	210	⇑P	Pn	21 36 39.0	-0.6
GRS				S	Sb	21 37 12.0	-0.2
TBLG	Delisi	2.35	276	P	Pn	21 36 41.4	+1.7
TBLG				S	Sb	21 37 12.1	-0.4
TBLG	Delisi	2.35	276	PN	Pn	21 36 41.4	+1.7
TBLG				iS	Sb	21 37 12.1	-0.4
TBLG	Delisi	2.35	276	P	Pn	21 36 41.4	+1.7
TBLG				S	Sb	21 37 12.1	-0.4
DUS	Dusheti	2.43	285	P	Pb	21 36 44.3	-0.6
DUS				S	Sg	21 37 17.8	-1.3
KZR	Kazreti	2.59	268	P	Pn	21 36 45.5	+2.4
KZR				S	Sn	21 37 16.9	+2.3
GUDG	Gudauri	2.69	292	P	Pn	21 36 47.3	+2.8
GUDG				S	Sg	21 37 31.7	+4.1
GNI	Garni	2.74	241	⇓iP	Pb	21 36 48.1	-2.1
GNI				⇑iS	Sb	21 37 26.3	+2.5
GNI	Garni	2.74	241	Pn	Pb	21 36 49.0	-1.2
	comp=Z,5.3nm,0.3s,baz=264,slow=6.9,SNR=15						
GNI				Lg	Lg	21 37 27.6	
	comp=Z,12nm,0.3s,baz=139,slow=19,SNR=10						
GNI	Garni	2.74	241	⇓P	Pb	21 36 48.1	-2.1
GNI	Garni	2.74	241	Pn	Pb	21 36 49.0	-1.2
GNI				S	Sb	21 37 26.3	+2.5
GOR	Gori	2.84	281	P	Pn	21 36 48.6	+2.1
GOR				S	Sb	21 37 26.5	-0.2
AKH	Akhalkalaki	3.29	269	P	Pb	21 36 56.8	-2.7
AKH				S	Sb	21 37 36.8	-2.7
ONI	Oni	3.45	289	P	Pb	21 36 59.6	-2.7
ONI				S	Sb	21 37 45.9	+1.7
KBZ	Khabaz	4.27	303	PN	Pn	21 37 09.2	+3.1
KBZ						21 38 01.8	
KBZ				smax	smax		
	comp=N,1.0nm,0.3s						
KBZ	Khabaz	4.27	303	Pn	Pn	21 37 09.2	+3.1
	comp=N,0.4nm,0.3s,baz=132,slow=11,SNR=3.7						
KBZ				Sn	Sn	21 38 01.8	+6.0
	comp=N,0.8nm,0.3s,baz=194,slow=10,SNR=4.0						
KBZ				Lg	Lg	21 38 16.6	
	comp=N,1.0nm,0.3s,baz=309,slow=11,SNR=5.1						
KBZ	Khabaz	4.27	303	Pn	Pn	21 37 09.2	+3.1
	comp=N,1.0nm,0.3s						
AKTK	Aktyubinsk	11.36	35	P	Pn	21 38 42.4	-0.9
AKTK				S	Sn	21 40 46.8	-3.3
AKTO	Aktyubinsk	11.36	35	⇑Pn	Pn	21 38 40.5	-2.8
	comp=N,1.3nm,0.6s						
AKTO				⇓Sn	Sn	21 40 47.9	-2.2
	comp=N,1.1nm,0.5s						
AKTO	Aktyubinsk	11.36	35	P	Pn	21 38 42.4	-0.9
AKTO						21 40 46.8	
AKTO	Aktyubinsk	11.36	35	Pn	Pn	21 38 42.4	-0.9
	comp=N,0.3nm,0.3s,baz=205,slow=14,SNR=4.5						
AKTO				Sn	Sn	21 40 46.8	-3.3
	comp=N,0.2nm,0.3s,baz=217,slow=20,SNR=4.2						
AKTO	Aktyubinsk	11.36	35	Pn	Pn	21 38 40.5	-2.8
	comp=N,1.3nm,0.6s						
AKTO				Sn	Sn	21 40 47.9	-2.2
	comp=N,1.1nm,0.5s						
AB31	Akbulak array	11.47	44	⇓Pn	Pn	21 38 43.8	-1.0
	comp=N,0.3nm,0.3s,baz=239,slow=15,SNR=5.7						
AB31				⇑Sn	Sn	21 40 48.1	-4.8
	comp=N,0.3nm,0.3s,baz=225,slow=24,SNR=2.8						
AB31	Akbulak array	11.47	44	Pn	Pn	21 38 43.8	-1.0
	comp=N,0.3nm,0.3s,baz=239,SNR=5.7						
KK31	Karatay Array	16.82	77	⇓P	Pn	21 39 55.9	-0.6
	comp=N,0.3nm,0.3s,baz=291,slow=13,SNR=13						
BVAR	Borovoye Array	19.04	45	P	P	21 40 23.0	0.0
BVAR	Borovoye Array	19.04	45	P	P	21 40 23.0	0.0
	comp=N,0.1nm,0.3s,baz=237,slow=12,SNR=3.6						
BVAR	Borovoye Array	19.04	45	P	P	21 40 23.0	0.0
KURBB	Kurchatov Arra	23.00	56	P	P	21 41 07.5	+1.8
	comp=N,0.1nm,0.3s,baz=257,slow=12,SNR=3.4						
KURK	Kurchatov	23.07	56	P	P	21 41 07.6	+1.1
KURK	Kurchatov	23.07	56	P	P	21 41 07.6	+1.1
FINES	FINESS Array B	23.90	334	P	P	21 41 15.9	+1.4
	comp=N,0.8nm,0.5s,baz=140,slow=11,SNR=4.4						
FINES	FINESS Array B	23.90	334	P	P	21 41 16.0	+1.4
MKAR	Makanchi Array	25.12	66	P	P	21 41 27.2	+1.3
MKAR	Makanchi Array	25.12	66	P	P	21 41 27.2	+1.3
	comp=N,0.1nm,0.4s,baz=264,slow=9.4,SNR=3.2						
MKAR	Makanchi Array	25.12	66	P	P	21 41 27.2	+1.3

IDC 08 21:51:22.6±2.2, 0°.15S×97°.48E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.6/26, mbtmp3.7/8, ML3.8/1, Error ellipse: s-maj=77.9km s-min=20.6km az=58.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	18.54	4	P	P	21 55 40.4	-0.6
	0.1nm,0.3s,baz=193,slow=10,SNR=2.8						
WRA	Warramunga Arr	41.10	121	P	P	21 59 07.9	-0.7
	0.6nm,0.8s,baz=303,slow=9.0,SNR=4.6						
ASAR	Alice Springs	42.38	126	P	P	21 59 19.3	+0.3
	0.5nm,0.6s,baz=297,slow=7.9,SNR=6.5						
SONM	Songino Array	48.41	8	P	P	22 00 06.4	-0.3
	0.3nm,0.3s,baz=199,slow=7.0,SNR=3.6						
MKAR	Makanchi Array	48.61	346	P	P	22 00 08.4	+0.4
	1.4nm,0.7s,baz=157,slow=8.4,SNR=17						
KURBB	Kurchatov Arra	53.09	345	P	P	22 00 41.0	-0.8
	0.3nm,0.7s,baz=178,slow=7.1,SNR=6.5						
USRK	Ussuriysk Arra	53.78	30	P	P	22 00 47.0	+0.1
	1.0nm,0.6s,baz=238,slow=6.8,SNR=4.2						
ZALV	Zalesovo Beam	54.92	351	P	P	22 00 55.1	+0.1
	1.2nm,0.4s,baz=161,slow=6.0,SNR=7.2						

IDC 08 22:10:14.5±1.5, 34°.16N×86°.16E, h0km, mb3.3/4, mb1 3.6/8, mb1mx3.4/29, mbtmp3.4/8, ML3.3/4, MS2.8/1, Ms1 2.8/1, ms1mx2.2/21, Error ellipse: s-maj=35.4km s-min=27.7km az=66.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	12.96	348	Pn	Pn	22 13 20.1	+0.2
	0.0nm,0.3s,baz=159,slow=14,SNR=8.1						
KURBB	Kurchatov Arra	17.38	344	P	Pn	22 14 18.1	-0.2
	0.0nm,0.3s,baz=160,slow=12,SNR=9.9						
CMAR	Chiang Mai Arr	19.36	141	P	Pn	22 14 42.4	-0.3
	0.1nm,0.3s,baz=328,slow=12,SNR=4.1						
ZALV	Zalesovo Beam	19.81	358	P	P	22 14 46.7	+0.2
	0.1nm,0.3s,baz=187,slow=12,SNR=7.3						
SONM	Songino Array	20.41	42	P	P	22 14 52.4	-0.8
	0.4nm,0.6s,baz=226,slow=12,SNR=3.9						
BVAR	Borovoye Array	21.96	334	LR	LR	22 24 55.5	
	comp=Z,25nm,21.1s,baz=228,slow=40						
NOA	NORSAR Array B	53.63	324	P	P	22 19 37.3	-0.1
	0.3nm,0.7s,baz=83,slow=7.4,SNR=3.3						
GERES	GERESS Array B	54.22	309	P	P	22 19 42.3	+0.3
	0.4nm,0.5s,baz=74,slow=7.3,SNR=6.2						
TORD	Torodi Ar. Bea	78.22	278	P	P	22 22 15.8	-0.6
	0.4nm,0.9s,baz=53,slow=4.3,SNR=4.1						

*ISCJB **08** 22:15:03.2±0.6, 37°.85N±0°.03×121°.92W±0°.03, h6km±5km, Error ellipse: s-maj=4.7km s-min=3.6km az=36.6*

*IDC **08** 22:15:04.5±1.9, 38°.17N×122°.16W, h0km, mb1 3.3/6, mb1mx3.2/32, mbtmp3.0/6, ML3.4/6, Error ellipse: s-maj=22.0km s-min=12.9km az=54.0*

*NEIC **08** 22:15:04.5, 37°.82N×121°.97W, h9km, MW3.5(BRK), After NCEDC.*

NEIC Felt [V] at Diablo; [IV] at Danville; [III] at Alamo and San Ramon; [II] at Alameda, Clayton, Concord, Dublin, Lafayette, Martinez, Oakland, Pleasant Hill, Pleasanton, San Francisco and Walnut Creek. Also felt at Antioch, Berkeley, Crockett, Discovery Bay, Emeryville, Fremont, Hayward, Livermore, Newark, Oakley, Orinda, Pacifica, Pinole, Pittsburg, Richmond, San Jose, San Mateo, Santa Clara, South San Francisco, Stockton and Sunol.

ISC 08 22:15:03.9±1.3, 37°.85N±0°.03×122°.00W±0°.03, h2km±11km, n31, σ1s.33/44, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAC	San Andreas	0.43	232	eP	Pb	22 15 13.5	-0.7
SAC				eS	Sg	22 15 18.1	+0.6
MCCM	Marconi Confer	0.76	293	eP	Pb	22 15 19.9	+0.1
MCCM				eS	Sb	22 15 30.7	+0.1
SAO	San Andreas Ge	1.17	158	eP	Pg	22 15 25.9	-0.4
SAO				eS	Sg	22 15 40.0	-1.4
CMB	Columbia Colle	1.29	81	ePn	Pn	22 15 27.6	-1.3
CMB				eSn	Sb	22 15 44.5	-1.4
HOPS	Hopland	1.42	324	ePn	Pn	22 15 30.4	-0.4
HOPS				eSn	Sb	22 15 49.2	-0.5
KCPM	Cahto Peak	2.21	326	ePn	Pn	22 15 41.4	-0.5
KIPM	Iron Peak	2.27	330	ePn	Pb	22 15 45.5	-0.2
KIPM				eSn	Sn	22 16 11.2	-0.2
WCN	Washoe City	2.28	50	ePn	Pn	22 15 41.9	-0.9
WCN				eSg	Sg	22 16 16.5	-0.6
BEKR	Beckworth	2.39	32	ePn	Pn	22 15 44.0	-0.3
BEKR				eSn	Sn	22 16 14.5	+0.3
WDC	Whiskeytown Da	2.76	351	ePn	Pn	22 15 42.9	-6.3
WDC				eSn	Sn	22 16 21.6	-1.5
NVAR	Mina Array Bea	2.97	78	Pn	Pn	22 15 53.9	+1.6
NVAR				Pg	Pg	22 16 01.7	+0.9
NVAR				Lg	Lg	22 16 43.0	
NVAR	Mina Array Bea	2.97	78	Pn	Pn	22 15 53.9	+1.6
	2.2nm,0.3s,baz=259,slow=13,SNR=26						
NVAR				Pg	Pg	22 16 01.7	+0.9
	7.7nm,0.3s,baz=261,slow=16,SNR=34						
NVAR				Lg	Lg	22 16 43.0	
	6.8nm,0.3s,baz=256,slow=34,SNR=6.6						
NV11	Mina Array Sit	3.08	78	ePn	Pn	22 15 54.6	+0.8
NV11				ePg	Pg	22 16 02.7	-0.3
NV11				eSn	Sn	22 16 28.2	-3.2
KHMM	Horse Mountain	3.31	337	ePn	Pn	22 15 56.9	0.0
ISA	Isabella	3.57	127	ePn	Pn	22 16 00.1	-0.4
ISA				ePg	Pb	22 16 09.6	+1.7
ISA				eSg	Sg	22 16 57.5	-1.2
YBH	Yreka Blue Hor	3.92	352	ePn	Pn	22 16 05.6	+0.4
YBH				eSn	Sn	22 16 51.2	-0.6
YBH				Lg	Lg	22 16 59.5	
YBH	Yreka Blue Hor	3.92	352	Pn	Pn	22 16 03.6	-1.6
	0.3nm,0.3s,baz=163,slow=12,SNR=3.5						
YBH				Lg	Lg	22 16 59.5	
	0.4nm,0.3s,baz=118,slow=16,SNR=4.0						
KRMB	Red Mountain	3.96	339	ePn	Pn	22 16 06.2	+0.4
BMN	Battle Mountai	4.52	54	ePn	Pn	22 16 13.3	-0.3
HUMO	Hull Mountain	4.81	352	ePn	Pn	22 16 16.8	-0.6
MWC	Mount Wilson	4.82	137	ePn	Pn	22 16 16.5	-1.3
MWC				eSn	Sn	22 17 15.3	+1.0
GSC	Goldstone	4.89	120	ePn	Pn	22 16 17.2	-1.4
GSC				eSn	Sn	22 17 13.4	-2.4
WVOR	Wild Horse Val	5.25	28	ePn	Pn	22 16 21.2	-2.4
	7.3nm,0.8s						
ELK	Elko	5.99	59	Pn	Pn	22 16 34.2	+0.5
ELK				Lg	Lg	22 18 07.4	
ELK	Elko	5.99	59	Pn	Pn	22 16 34.2	+0.5
	0.4nm,0.3s,baz=256,slow=14,SNR=6.6						
ELK				Lg	Lg	22 18 07.4	
	0.1nm,0.3s,baz=221,slow=15,SNR=2.5						
PFO	Pinyon Flat Ob	6.18	132	Pn	Pn	22 16 43.2	+6.9
PFO	Pinyon Flat Ob	6.18	132	Pn	Pn	22 16 43.2	+6.9
	0.3nm,0.3s,baz=314,slow=14,SNR=4.6						
PDAR	Pinedale Array	10.69	59	Pn	Pn	22 17 41.5	+3.2
PDAR	Pinedale Array	10.69	59	Pn	Pn	22 17 41.5	+3.2
	0.1nm,0.3s,baz=237,slow=14,SNR=2.4						
TXAR	Lajitas Array	17.45	114	P	P	22 19 12.9	+2.9
TXAR	Lajitas Array	17.45	114	P	P	22 19 12.9	+2.9
	0.0nm,0.3s,baz=286,slow=7.4,SNR=3.6						

*ISCJB **08** 22:31:05.8±0.6, 39°.1S±0°.1×78°.4E±0°.1, h10km, mb4.3/8, MS4.1/21, Error ellipse: s-maj=16.8km s-min=12.9km az=147.1*

*IDC **08** 22:31:06.1±0.8, 39°.00S×78°.37E, h0km, mb4.2/8, mb1 4.3/8, mb1mx3.9/23, mbtmp4.2/8, MS4.0/21, Ms1 4.0/21, ms1mx3.8/41, Error ellipse: s-maj=29.4km s-min=19.8km az=1.0*

*NEIC **08** 22:31:07.1±0.4, 39°.01S×78°.32E, h10km, mb4.5/4, Error ellipse: s-maj=12.6km s-min=10.0km az=143.0*

ISC 08 22:31:07.3±0.7, 39°.0S±0°.1×78°.3E±0°.1, h10km, n37, σ0s.65/23, mb4.3/8, MS4.2/21, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAF	Port-aux-Franc	11.85	207	Pn	Pn	22 33 56.1	-0.1
MAW	Mawson	29.90	192	LR	LR	22 46 58.3	
	comp=Z,282nm,19.1s,baz=24,slow=32						
CASY	Casey	32.85	157	P	P	22 37 40.8	+0.1
MBWA	Marble Bar	39.61	76	eP	P	22 38 38.8	-0.2
BOSA	Boshof	44.75	267	eP	P	22 39 20.1	-1.0
	15nm,1.3s						
BOSA	Boshof	44.75	267	P	P	22 39 20.9	-0.3
	4.6nm,0.9s,baz=108,slow=9.6,SNR=4.4						
BOSA				LR	LR	22 53 51.7	
	comp=Z,258nm,20.3s,baz=147,slow=30						
LBTB	Lobatse	46.24	271	eP	P	22 39 33.4	+0.4
	3.4nm,0.9s						
LBTB	Lobatse	46.24	271	P	P	22 39 34.1	+1.2
	3.1nm,1.0s,baz=131,slow=11,SNR=2.7						
ASAR	Alice Springs	49.15	89	P	P	22 39 56.2	+0.7
ASAR	Alice Springs	49.15	89	P	P	22 39 56.2	+0.7
	2.5nm,0.9s,baz=226,slow=6.3,SNR=19						
ASAR				LR	LR	23 00 05.7	
	comp=Z,253nm,18.1s,baz=42,slow=35						
VNDA	Vanda	50.86	164	eP	P	22 40 07.3	-0.4
	1.4nm,0.8s						
VNDA	Vanda	50.86	164	P	P	22 40 08.2	+0.5
	1.5nm,1.0s,baz=254,slow=6.7,SNR=2.9						
VNDA				LR	LR	23 00 14.4	
	comp=Z,342nm,18.8s,baz=266,slow=34						
STKA	Stephens Creek	51.12	103	P	P	22 40 10.1	-0.2
STKA	Stephens Creek	51.12	103	P	P	22 40 10.6	+0.3
	4.4nm,1.1s,baz=225,slow=2.9,SNR=2.6						
STKA				LR	LR	22 57 20.8	
	comp=Z,246nm,21.6s,baz=206,slow=31						
QSPA	South Pole Qui	51.14	180	eP	P	22 40 10.4	+0.2
	16nm,1.4s						
QSPA	South Pole Qui	51.14	180	P	P	22 40 10.5	+0.4
	4.8nm,0.9s,baz=269,slow=3.4,SNR=5.2						
QSPA				LR	LR	23 00 29.3	
	comp=Z,438nm,18.7s,baz=124,slow=34						
WRA	Warramunga Arr	51.51	85	P	P	22 40 12.9	-0.5
WRA	Warramunga Arr	51.51	85	P	P	22 40 12.9	-0.5
	5.7nm,0.9s,baz=236,slow=7.2,SNR=16						
WRA				LR	LR	22 59 01.6	
	comp=Z,242nm,19.8s,baz=200,slow=32						
KMBO	Kilima Mbogo	53.18	305	LR	LR	22 57 54.2	
	comp=Z,111nm,18.7s,baz=95,slow=30						
CMAR	Chiang Mai Arr	60.35	23	LR	LR	23 02 45.5	
	comp=Z,48nm,18.5s,baz=11,slow=32						
DAV	Davao City (W)	63.37	55	LR	LR	23 06 19.0	
	comp=Z,46nm,20.1s,baz=191,slow=33						
PMG	Port Moresby	67.70	84	LR	LR	23 09 40.6	
	comp=Z,122nm,18.2s,baz=273,slow=34						
DZM	Mont Dzumac	75.04	106	LR	LR	23 08 51.6	
	comp=Z,301nm,19.1s,baz=50,slow=30						
USHA	Ushuaia	82.27	199	LR	LR	23 15 29.0	
	comp=Z,107nm,20.5s,baz=336,slow=32						
MKAR	Makanchi Array	85.51	3	P	P	22 43 45.8	+0.7
MKAR	Makanchi Array	85.51	3	P	P	22 43 45.8	+0.7
	0.8nm,0.9s,baz=181,slow=5.6,SNR=5.8						
MKAR				LR	LR	23 19 06.9	
	comp=Z,102nm,22.0s,baz=183,slow=34						
TORD	Torodi Ar. Bea	88.08	289	LR	LR	23 24 03.9	
	comp=Z,100nm,18.3s,baz=125,slow=36						
KBZ	Khabaz	88.39	335	LR	LR	23 20 16.7	
	comp=Z,41nm,21.5s,baz=299,slow=33						
BRTR	Keskin Array B	88.40	327	LR	LR	23 19 20.1	
	comp=Z,32nm,20.7s,baz=77,slow=33						
DBIC	Dimbokro	88.89	279	LR	LR	23 21 48.0	
	comp=Z,80nm,18.5s,baz=89,slow=34						
SONM	Songino Array	90.02	18	LR	LR	23 24 01.9	
	comp=Z,45nm,18.7s,baz=324,slow=35						
ULN	Ulaanbaatar	90.21	19	P	P	22 44 07.6	-0.1
AKTO	Aktyubinsk	90.86	347	LR	LR	23 23 40.0	
	comp=Z,35nm,18.5s,baz=173,slow=35						
ZALV	Zalesovo Beam	92.77	4	LR	LR	23 23 00.6	
	comp=Z,74nm,21.9s,baz=249,slow=34						
INK	Inuvik	145.91	20	PKPbc	PKPdf	22 50 44.3	-0.9
INK	Inuvik	145.91	20	PKPbc	PKPdf	22 50 44.3	-0.9
	1.2nm,0.8s,baz=330,slow=2.2,SNR=3.6						
BW06	Boulder Array	172.95	55	ePKPdf	PKPdf	22 51 15.8	-0.9

*BJI **08** 23:02:13.8, 51°.74N×178°.38W, h46km, mB4.7/4, mb4.7/8, Ms4.5/3, Ms7 4.2/3*

*ISCJB **08** 23:02:14.7±0.6, 51°.27N±0°.07×178°.47W±0°.03, h55km±3km, mb4.1/52, MS3.7/4, Error ellipse: s-maj=11.6km s-min=3.4km az=175.4*

*NEIC **08** 23:02:15.8±0.6, 51°.34N×178°.48W, h48km±4km, mb4.2/22, Error ellipse: s-maj=12.8km s-min=2.9km az=178.0*

*IDC **08** 23:02:16.9±2.6, 51°.33N×178°.46W, h63km±23km, mb3.7/26, mb1 3.9/28, mb1mx3.8/37, mbtmp3.7/28, ML3.6/2, MS3.0/3, Ms1 3.0/3, ms1mx2.7/33, Error ellipse: s-maj=19.6km s-min=10.0km az=178.0*

ISC 08 23:02:14.7±0.7, 51°.23N±0°.08×178°.47W±0°.03, h43km±5km, n287, σ0s.75/294, mb4.2/61, MS3.7/4, 75C-95D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAKI	Gareloi-Kavalg	0.39	327	P	Pn	23 02 23.4	-0.8
GALAA	Gareloi Lava P	0.56	341	P	Pn	23 02 26.8	+0.4
GAEA	Gareloi East	0.58	343	P	Pn	23 02 27.0	+0.4
GANE	Gareloi Northe	0.62	342	P	Pn	23 02 27.4	+0.3
TAFL	Tanaga Flats	0.64	34	P	Pn	23 02 27.0	-0.3
TAFL				S	Sn	23 02 36.4	0.0
TASE	Tanaga Southea	0.66	24	P	Pn	23 02 27.8	0.0
TAPA	Tanaga Point A	0.72	35	P	Pn	23 02 28.3	-0.1
TANO	Tanaga North	0.72	18	P	Pn	23 02 28.9	+0.4
TANO				S	Sn	23 02 40.1	+1.7
TAFP	Tanaga Falls P	0.74	24	P	Pn	23 02 28.7	-0.1
TAFP				S	Sn	23 02 40.1	+1.3
KIKV	Kanaga Island	1.04	51	P	Pn	23 02 32.4	-0.5
KIRH	Kanaga Island	1.09	52	P	Pn	23 02 33.2	-0.3
KINC	Kanaga Island	1.09	50	P	Pn	23 02 33.3	-0.2
CERAA	Semis' Rag'd T	1.33	301	P	Pn	23 02 37.4	+0.5
CESW	Semis' Southwe	1.40	299	P	Pn	23 02 38.0	+0.3
AMKA	Amchitka	1.40	277	P	Pn	23 02 36.4	-1.4
AMKA				S	Sn	23 02 55.4	+0.4
ETKA	Kagalaska Isla	1.44	63	P	Pn	23 02 37.6	-0.6
CEAP	Semis' Anvil P	1.44	303	P	Pn	23 02 39.2	+0.9
CETU	Semis' Tuman	1.47	301	P	Pn	23 02 39.3	+0.7
GSCK	Great Sitkin C	1.64	61	P	Pn	23 02 41.0	0.0
GSTD	Great Sitkin T	1.67	59	P	Pn	23 02 41.5	0.0
GSTD				S	Sn	23 03 04.5	+2.8
GSMY	Great Sitkin M	1.71	61	P	Pn	23 02 41.9	-0.1
GSTR	Great Sitkin T	1.73	59	P	Pn	23 02 42.9	+0.6
LSSE	Little Sitkin	1.98	292	P	Pn	23 02 46.2	+0.6
LSPA	Little Sitkin	1.98	293	P	Pn	23 02 46.2	+0.5
LSSA	Little Sitkin	2.01	292	P	Pn	23 02 46.8	+0.7
LSNW	Little Sitkin	2.02	293	P	Pn	23 02 46.6	+0.4
ATKA	Atka Island	2.83	68	P	Pn	23 02 56.8	-0.6
KOWE	Korovin West	2.86	65	P	Pn	23 02 59.2	+1.5
KOKL	Mount Kliuchef	2.87	66	P	Pn	23 02 59.8	+1.9
KOKV	Korovin Volcan	2.91	65	P	Pn	23 02 59.7	+1.3
KOFP	Korovin Flat P	2.91	67	P	Pn	23 03 00.2	+1.7
KOSE	Korovin Southe	2.96	66	P	Pn	23 03 01.2	+2.0
SMY	Shemya	4.83	291	P	Pn	23 03 26.3	+1.6
FX1	Attu Island--F	5.42	291	P	Pn	23 03 35.2	+2.4
FX1	Attu Island--F	5.42	291	P	Pn	23 03 33.3	+0.4
	2.8nm,0.3s,baz=79,slow=19,SNR=8.6						
FX1				S	Sn	23 04 38.0	+4.1
	2.5nm,0.3s,baz=258,slow=20,SNR=2.3						
FX1				LR	LR	23 05 42.6	
	comp=Z,142nm,20.4s,baz=158,slow=38						
NIKH	Nikolski High	6.18	70	P	Pn	23 03 44.4	+1.1
SPIA	Saint Paul Isl	7.66	36	ePn	Pn	23 04 07.6	+4.0
UNV	Unalaska Valle	7.76	66	ePn	Pn	23 04 05.7	+0.9
KDAK	Kodiak Island	16.34	56	P	Pn	23 05 59.8	-0.9
	1.5nm,0.3s,baz=269,slow=8.4,SNR=17						
SPU	Mount Spurr	17.62	45	eP	P	23 06 19.7	+2.4
SEW	Seward	18.48	50	eP	P	23 06 26.7	0.0
TRF	Thorofare Moun	19.32	40	eP	P	23 06 36.5	+0.5
	10nm,0.9s						
ILAR	Eielson Array	21.23	38	P	P	23 06 55.0	-1.6
	0.6nm,0.6s,baz=252,slow=11,SNR=5.2						
ILAR				LR	LR	23 16 27.2	
	comp=Z,39nm,19.9s,baz=138,slow=40						
DOT	Dot Lake	21.97	42	eP	P	23 07 04.3	-0.2
	8.3nm,0.8s						
EGAK	Eagle	23.53	41	eP	P	23 07 19.3	-1.2
	3.6nm,0.7s						
DLBC	Dease Lake	28.27	56	LR	LR	23 18 23.7	
	comp=Z,33nm,21.3s,baz=129,slow=34						
MJAR	Matsushiro Arr	33.96	261	P	P	23 08 53.8	0.0
	0.5nm,0.4s,baz=287,slow=14,SNR=4.3						
MDJ	Mudanjiang	34.80	280	P	P	23 09 03.7	+2.7
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,43nm,3.9s						
YKA	Yellowknife Ar	35.19	46	P	P	23 09 03.2	-0.8
	comp=Z,2.0nm,0.9s,baz=281,slow=8.3,SNR=8.9						
YBH	Yreka Blue Hor	38.70	82	P	P	23 09 35.8	+1.5
	comp=Z,2.2nm,0.8s,baz=204,slow=0.8,SNR=6.3						
NEW	Newport	38.74	70	eP	P	23 09 35.3	+0.7
	comp=Z,6.1nm,1.1s						
NEW	Newport	38.74	70	P	P	23 09 34.7	+0.2
	comp=Z,3.2nm,0.6s,baz=286,slow=8.7,SNR=6.2						
NEW	Newport	38.74	70	⇑P	P	23 09 34.7	+0.2
	baz=39,SNR=5.4						
WALA	Waterton Lakes	40.24	67	eP	P	23 09 47.1	+0.1
	comp=Z,0.2nm,1.2s						
B13A	Whitefish	40.25	68	⇑P	P	23 09 47.2	+0.1
	baz=40						
BSMT	Bassoo Peak	40.31	69	eP	P	23 09 48.6	+0.8
BLMT	Blacktail Moun	40.48	69	eP	P	23 09 50.1	+0.9
C13A	Hot Springs	40.52	69	⇓P	P	23 09 49.1	-0.3
	baz=40						
A14A	Double T Ranch	40.56	67	⇓P	P	23 09 49.7	-0.1
	baz=40,SNR=10						
JNU	Nakatsue	40.76	264	P	P	23 09 51.9	+0.5
	comp=Z,6.1nm,0.9s,baz=67,slow=7.6,SNR=3.6						
WVOR	Wild Horse Val	40.83	78	eP	P	23 09 53.2	+1.2
	comp=Z,4.3nm,0.9s						
D13A	Huson	40.88	70	⇑P	P	23 09 52.5	+0.1
	baz=41						
B14A	Marquette Ranc	40.95	67	⇑P	P	23 09 53.0	0.0
	baz=41						
A15A	Johnson Ranch,	40.96	66	⇑P	P	23 09 52.1	-0.8
	baz=41						
F12A	Elk City	41.10	72	⇓P	P	23 09 54.4	+0.2
	baz=41,SNR=8.6						
MSO	Missoula	41.33	70	eP	P	23 09 56.5	+0.4
	comp=Z,1.7nm,0.8s						
MSO	Missoula	41.33	70	⇓P	P	23 09 56.0	-0.1
	baz=41						
SLMT	Seeley Lake	41.38	69	eP	P	23 09 55.7	-0.8
	comp=Z,3.5nm,1.1s						
B15A	Bradely Ranch,	41.38	67	⇓P	P	23 09 56.1	-0.4
	baz=41,SNR=6.4						
G12A	Big Creek, Yel	41.38	73	⇓P	P	23 09 56.8	+0.2
	baz=41						
D14A	Greenough	41.45	69	⇓P	P	23 09 57.1	0.0
	baz=41						
C15A	Salmond Ranch,	41.63	68	⇓P	P	23 09 58.9	+0.4
	baz=41,SNR=12						
F13A	Darby	41.63	71	⇑P	P	23 09 59.0	+0.4
	baz=41						
H12A	Diamond D Ranc	41.98	73	⇓P	P	23 10 01.3	-0.2
	baz=42						
MFID	Camas Ranch	42.01	75	⇓P	P	23 10 01.9	+0.3
	baz=42						
D15A	Lincoln	42.05	69	⇑P	P	23 10 02.0	0.0
	baz=42						
A17A	Triple J Farms	42.14	65	⇓P	P	23 10 02.3	-0.3
	baz=42,SNR=10						
E15A	Deer Lodge	42.30	70	⇓P	P	23 10 03.9	-0.1
	baz=42						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
B17A	L&G Farms, Che	42.41	66	⇓P	P	23 10 04.5	-0.3
	baz=42						
D16A	Dana Ranch, Ca	42.63	68	⇓P	P	23 10 06.9	+0.3
	baz=42						
C17A	Wharram Farm,	42.77	67	⇓P	P	23 10 07.4	-0.3
	baz=43						
HLID	Hailey	42.78	74	*e*P	P	23 10 08.3	+0.2
	comp=Z,4.3nm,0.9s						
HLID	Hailey	42.78	74	⇓P	P	23 10 08.6	+0.5
	baz=43,SNR=8.1						
B18A	Beardsley Farm	42.95	66	⇓P	P	23 10 09.1	-0.1
	baz=43						
MCMT	McKenzie Canyo	43.03	72	*e*P	P	23 10 09.9	-0.2
	comp=Z,0.9nm,0.5s						
G15A	Dillon	43.06	71	⇓P	P	23 10 09.8	-0.5
	baz=43						
D17A	Six Diamond Ra	43.06	68	⇓P	P	23 10 10.1	-0.2
	baz=43						
EGMT	Eagleton	43.15	66	*e*P	P	23 10 10.9	+0.1
	comp=Z,4.3nm,0.9s						
EGMT	Eagleton	43.15	66	⇓P	P	23 10 10.6	-0.2
	baz=43						
I14A	Mackay	43.16	73	⇑P	P	23 10 11.7	+0.6
	baz=43,SNR=8.2						
A19A	Klindworth Far	43.27	65	⇑P	P	23 10 11.6	-0.1
	baz=43						
BOZ	Bozeman (W)	43.31	70	*e*P	P	23 10 11.5	-0.7
	comp=Z,1.9nm,0.7s						
E17A	Martinsdale	43.33	69	⇓P	P	23 10 12.0	-0.4
	baz=43						
NVAR	Mina Array Bea	43.37	83	P	P	23 10 13.8	+0.9
	comp=Z,0.7nm,0.7s,baz=291,slow=8.0,SNR=6.2						
B19A	Brinkman Farms	43.39	65	⇑P	P	23 10 12.7	-0.1
	baz=43						
G16A	Moss Hill, Enn	43.43	71	⇑P	P	23 10 13.1	-0.1
	baz=43						
D18A	Linhart Farms,	43.56	67	⇑P	P	23 10 14.6	+0.5
	baz=43						
C19A	Slack Wire Ran	43.71	66	⇑P	P	23 10 15.5	+0.2
	baz=44,SNR=14						
F17A	Fitzpatrick Pl	43.74	69	⇓P	P	23 10 15.6	-0.1
	baz=44						
E18A	Harlowton	43.83	68	⇑P	P	23 10 16.8	+0.5
	baz=44,SNR=5.7						
ELK	Elko	43.89	78	*e*P	P	23 10 18.2	+1.2
	comp=Z,2.8nm,0.8s						
B20A	Solberg Farm,	43.93	65	⇓P	P	23 10 17.1	0.0
	baz=44						
H16A	Russell Place,	44.05	71	⇓P	P	23 10 18.5	+0.2
	baz=44						
D19A	Cripps Ranch,	44.11	67	⇑P	P	23 10 18.7	+0.1
	baz=44						
A21A	Bergtoll Ranch	44.26	64	⇑P	P	23 10 20.0	+0.3
	baz=44						
F18A	Big Timber	44.30	69	⇑P	P	23 10 20.0	-0.1
	baz=44						
C20A	Veseth Ranch,	44.32	66	⇑P	P	23 10 20.1	0.0
	baz=44,SNR=6.6						
B21A	Ellsworth Farm	44.50	64	⇑P	P	23 10 21.5	-0.1
	baz=44						
D20A	Manuel Ranch,	44.58	66	⇓P	P	23 10 22.3	0.0
	baz=44						
IMW	Indian Meadow	44.69	72	*e*P	P	23 10 28.2	+4.7
	comp=Z,12nm,0.3s						
C21A	Desert Coulee	44.78	65	⇓P	P	23 10 23.7	-0.1
	baz=45						
HVU	Hansel Valley	44.79	75	*e*P	P	23 10 25.2	+1.1
	comp=Z,5.6nm,0.7s						
A22A	Carney Farms,	44.83	63	⇓P	P	23 10 24.1	-0.1
	baz=45						
E20A	Meyer Farm, Mu	44.90	67	⇑P	P	23 10 24.7	-0.1
	baz=45						
RLMT	Red Lodge	44.99	69	*e*P	P	23 10 25.2	-0.6
	comp=Z,6.1nm,0.8s						
R11A	Troy Canyon, C	45.11	81	⇓P	P	23 10 26.0	-0.7
	baz=45						
B22A	Reddig Ranch S	45.15	64	⇓P	P	23 10 26.5	-0.2
	baz=45						
H19A	Powell	45.41	70	⇑P	P	23 10 29.6	+0.6
	baz=45						
C22A	Vida	45.51	65	⇓P	P	23 10 29.8	+0.1
	baz=45						
G20A	Bridger	45.56	69	⇓P	P	23 10 29.9	-0.2
	baz=45,SNR=7.3						
HWUT	Hardware Ranch	45.63	75	*e*P	P	23 10 31.2	+0.4
D22A	Cohagen	45.67	65	⇓P	P	23 10 31.0	+0.2
	baz=45,SNR=7.1						
DUG	Dugway	45.70	77	*e*P	P	23 10 32.6	+1.2
	comp=Z,5.8nm,0.9s						
DUG	Dugway	45.70	77	⇓P	P	23 10 32.1	+0.8
	baz=46						
I19A	Meeteetse	45.76	71	⇓P	P	23 10 31.6	-0.3
	baz=46						
F21A	Absaloka Mine,	45.85	67	⇑P	P	23 10 32.4	0.0
	baz=46						
C23A	Lambert	45.88	64	⇑P	P	23 10 32.8	+0.3
	baz=46						
A24A	Westby	45.93	62	⇓P	P	23 10 32.9	0.0
	baz=46						
BW06	Boulder Array	46.16	72	*e*P	P	23 10 35.5	+0.4
	comp=Z,6.7nm,0.8s						
PDAR	Pinedale Array	46.16	72	P	P	23 10 35.1	0.0
	comp=Z,6.3nm,0.7s,baz=298,slow=4.0,SNR=55						
E22A	Miles City	46.19	66	⇓P	P	23 10 34.8	-0.2
	baz=46						
GSC	Goldstone	46.26	85	⇓P	P	23 10 36.1	+0.4
	baz=46						
I20A	Worland	46.33	70	⇑P	P	23 10 36.3	+0.1
	baz=46						
ULN	Ulaanbaatar	46.51	297	*e*P	P	23 10 31.9	-5.7
	comp=Z,1.0nm,0.5s						
DAU	Daniels Canyon	46.52	76	*e*P	P	23 10 38.5	+0.4
	comp=Z,2.6nm,0.8s						
E23A	Ismay	46.53	66	⇓P	P	23 10 37.3	-0.4
	baz=46,SNR=6.1						
K19A	Absolon Red Bu	46.55	72	⇑P	P	23 10 37.5	-0.6
	baz=46,SNR=6.6						
G22A	Birney	46.68	68	⇓P	P	23 10 39.2	+0.2
	baz=46						
D24A	Glendive	46.74	64	⇑P	P	23 10 39.3	0.0
	baz=46						
SONM	Songino Array	46.90	297	P	P	23 10 40.7	+0.1
	comp=Z,1.2nm,0.6s,baz=69,slow=8.6,SNR=11						
I21A	Big Trails, Te	46.90	70	⇑P	P	23 10 40.7	0.0
	baz=47						
F23A	Volborg	46.91	67	⇑P	P	23 10 40.5	-0.2
	baz=47,SNR=5.2						
K20A	Yellowstone Ra	46.95	72	⇓P	P	23 10 41.0	-0.1
	baz=47						
H22A	Clearmont	47.00	68	⇓P	P	23 10 41.3	-0.1
	baz=47						
E24A	Baker	47.06	65	⇑P	P	23 10 42.0	+0.1
	baz=47						
J21A	Lysite	47.08	70	⇑P	P	23 10 42.5	+0.3
	baz=47						
MVU	Marysvale	47.10	79	*e*P	P	23 10 43.6	+1.1
	comp=Z,3.5nm,1.2s						
G23A	Biddle	47.21	67	⇓P	P	23 10 43.2	+0.1
	baz=47						
I22A	9 Mile Ranch,	47.33	69	⇑P	P	23 10 44.3	+0.2
	baz=47						
L20A	Wamsutter	47.34	72	⇓P	P	23 10 44.4	+0.2
	baz=47						
F24A	Ekalaka	47.39	66	⇑P	P	23 10 44.5	+0.1
	baz=47						
Q16A	Castle Valley	47.48	78	⇓P	P	23 10 45.6	+0.2
	baz=47						
J22A	Midwest	47.61	70	⇓P	P	23 10 46.0	-0.2
	baz=47,SNR=5.8						
G24A	Alzada	47.70	66	⇓P	P	23 10 46.4	-0.5
	baz=48						
M20A	Sweetwater, Wa	47.74	73	⇓P	P	23 10 47.7	+0.3
	baz=48						
SRU	San Rafael	47.76	77	⇓P	P	23 10 47.9	+0.3
	baz=48						
O19A	Miners Draw (B	47.89	75	⇑P	P	23 10 48.8	+0.3
	baz=48						
HHC	Hu-ho-hao-te	47.93	286	*e*P	P	23 10 48.0	-0.7
HHC				pP	pP	23 11 00.6	-0.1
HHC				sP	sP	23 11 05.6	-0.2
HHC				PP	PP	23 12 39.4	-1.3
HHC				S	S	23 17 40.5	-2.6
HHC				sS	sS	23 18 01.7	-1.4
HHC				SS	SS	23 21 03.1	-8.6
HHC				pmax	pmax		
	comp=Z,34nm,0.9s						
HHC				pmax	pmax		
	comp=Z,230nm,6.7s						
HHC				LR	LR		
	comp=N,370nm,17.2s						
HHC				LR	LR		
	comp=E,470nm,15.2s						
HHC				LR	LR		
	comp=Z,230nm,15.3s						
L21A	Rawlins	47.94	72	⇓P	P	23 10 48.9	-0.1
	baz=48						
H24A	Dirks Ranch, A	47.96	67	⇑P	P	23 10 48.8	-0.1
	baz=48						
K22A	Casper	48.04	71	⇓P	P	23 10 49.3	-0.3
	baz=48						
N20A	Spence Gulch,	48.09	74	⇑P	P	23 10 50.0	-0.1
	baz=48						
M21A	Separation Pea	48.16	72	⇓P	P	23 10 50.8	+0.1
	baz=48						
U15A	North Rim	48.35	81	⇓P	P	23 10 52.6	+0.3
	baz=48						
P19A	Cripple Cowboy	48.38	75	⇑P	P	23 10 52.1	-0.3
	baz=48						
O20A	White River Ci	48.52	74	⇓P	P	23 10 53.2	-0.3
	baz=48,SNR=8.7						
N21A	Black Mountain	48.58	73	⇓P	P	23 10 54.2	+0.3
	baz=48						
M22A	Cedar Creek Ra	48.74	72	⇑P	P	23 10 55.4	+0.3
	baz=48						
L23A	Garrett	48.84	71	⇑P	P	23 10 55.6	-0.3
	baz=49,SNR=7.0						
O21A	Pagoda	48.94	74	⇑P	P	23 10 56.9	+0.2
	baz=49						
MDND	Maddock	48.97	61	⇓P	P	23 10 56.6	+0.1
	baz=49						
S18A	Hurst Farm, Bl	48.97	78	⇑P	P	23 10 57.1	+0.1
	baz=49						
N22A	Wattenberg Ran	49.19	73	⇑P	P	23 10 58.8	+0.1
	baz=49						
M23A	Laramie	49.22	71	⇑P	P	23 10 58.8	0.0
	baz=49						
P21A	Newcastle	49.38	74	⇑P	P	23 11 00.5	+0.5
	baz=49						
N23A	Red Feather La	49.44	72	⇓P	P	23 11 01.0	+0.5
	baz=49						
O22A	Kremmling	49.53	73	⇑P	P	23 11 01.5	+0.2
	baz=49						
O23A	Lake Granby, G	49.88	73	⇓P	P	23 11 04.1	+0.2
	baz=50						
S20A	Disappointment	49.89	77	⇓P	P	23 11 03.9	0.0
	baz=50						
ISCO	Idaho Springs	50.32	73	*e*P	P	23 11 08.0	+0.8
	comp=Z,2.0nm,0.9s						
ISCO	Idaho Springs	50.32	73	⇓P	P	23 11 07.5	+0.2
	baz=50						
S21A	Coal Bank Pass	50.34	77	⇓P	P	23 11 07.8	+0.3
	baz=50						
SPITS	Spitsbergen Ar	50.54	356	P	P	23 11 07.1	-0.9
	comp=Z,1.4nm,0.5s,baz=38,slow=9.6,SNR=14						
R22A	Saguache, Gunn	50.62	75	⇑P	P	23 11 09.8	+0.3
	baz=50						
J28A	Allard Ranch,	50.67	67	⇓P	P	23 11 09.9	+0.4
	baz=50						
U21A	Nageezi	51.22	78	⇑P	P	23 11 14.5	+0.6
	baz=51						
T22A	Edith	51.30	77	⇓P	P	23 11 15.0	+0.4
	baz=51						
BRSD	Miller	51.35	64	⇑P	P	23 11 14.5	-0.1
	baz=51						
P25A	Willow Gulch B	51.37	72	⇓P	P	23 11 14.8	-0.1
	baz=51						
O26A	Horse Wrangler	51.42	71	⇓P	P	23 11 15.2	-0.1
	baz=51						
R24A	Sanders Place,	51.61	74	⇓P	P	23 11 16.9	0.0
	baz=51						
V21A	Milan	51.63	78	⇑P	P	23 11 17.8	+0.7
	baz=52						
U22A	Llaves	51.74	77	⇑P	P	23 11 18.4	+0.5
	baz=52						
P26A	Davis Ranch, A	51.83	72	⇓P	P	23 11 19.1	+0.8
	baz=52						
S24A	Houchin Ranch,	51.93	75	⇑P	P	23 11 19.9	+0.5
	baz=52						
O27A	Beecher Island	51.95	71	⇑P	P	23 11 19.9	+0.7
	baz=52						
U23A	El Rito	52.18	77	⇑P	P	23 11 21.6	+0.4
	baz=52						
P27A	Ficken Ranch,	52.29	71	⇑P	P	23 11 22.4	+0.7
	baz=52						
S25A	Robets Cordova	52.39	74	⇑P	P	23 11 23.0	+0.4
	baz=52						
O28A	Krutsinger Ran	52.40	70	⇑P	P	23 11 23.1	+0.6
	baz=52						
X21A	Alamocita Cree	52.43	80	⇑P	P	23 11 23.7	+0.6
	baz=52						
V23A	Ortiz Mt. (NFS	52.57	77	⇑P	P	23 11 24.9	+0.9
	baz=52						
T25A	Trinidad	52.74	75	⇓P	P	23 11 25.6	+0.4
	baz=52						
Y21A	Point of Rocks	52.79	80	⇓P	P	23 11 26.1	+0.4
	baz=53						
S26A	Kim	52.99	74	⇑P	P	23 11 27.1	+0.1
	baz=53						
T26A	Comanche Natio	53.21	74	⇓P	P	23 11 28.6	-0.1
	baz=53						
P29A	Atwood	53.24	70	⇑P	P	23 11 29.0	+0.3
	baz=53						
W24A	Lazy 6 Ranch,	53.39	77	⇑P	P	23 11 30.1	0.0
	baz=53						
V25A	Rancho No Teng	53.46	76	⇓P	P	23 11 30.7	+0.1
	baz=53						
U26A	Atchley Ranch,	53.63	75	⇑P	P	23 11 31.8	+0.1
	baz=53						
Q29A	Oakley	53.67	71	⇑P	P	23 11 32.1	+0.2
	baz=54						
Y23A	Lovelace Mesa,	53.85	79	⇓P	P	23 11 33.7	+0.3
	baz=54						
S28A	Manter	53.96	73	⇓P	P	23 11 34.0	-0.1
	baz=54						
W25A	X Bar L Ranch,	53.97	77	⇓P	P	23 11 34.4	+0.2
	baz=54						
V26A	Tequesquite Ra	54.00	76	⇓P	P	23 11 34.7	+0.3
	baz=54						
Y24A	Capitan	54.23	79	⇑P	P	23 11 36.3	+0.1
	baz=54,SNR=6.7						
ZALV	Zalesovo Beam	54.28	314	P	P	23 11 36.7	+0.7
	comp=Z,0.4nm,0.3s,baz=87,slow=5.9,SNR=3.5						
ZALV				PcP	PcP	23 12 39.9	+0.3
	comp=Z,1.8nm,0.7s,baz=32,slow=5.6,SNR=8.5						
SPMN	St. Paul	54.29	60	⇑P	P	23 11 36.1	-0.1
	baz=54						
X25A	Clemmons Ranch	54.30	78	⇓P	P	23 11 37.2	+0.5
	baz=54						
R30A	Dighton	54.48	71	⇑P	P	23 11 38.3	+0.5
	baz=54						
Q31A	Ellis	54.53	70	⇓P	P	23 11 38.4	+0.2
	baz=54						
Z24A	Sheeppen Canyo	54.67	79	⇑P	P	23 11 39.7	+0.3
	baz=54						
Y25A	Mesa, Roswell	54.69	78	⇓P	P	23 11 40.2	+0.7
	baz=54						
S30A	Montezuma	54.79	72	⇓P	P	23 11 40.6	+0.5
	baz=55						
X26A	CR and CF Fran	54.81	77	⇓P	P	23 11 40.3	-0.1
	baz=55						
R31A	Burdett	54.92	71	⇓P	P	23 11 40.9	-0.1
	baz=55						
W27A	Bowe Ranch, En	54.93	76	⇓P	P	23 11 41.1	-0.1
	baz=55						
124A	Stringfield Ra	55.05	80	⇓P	P	23 11 42.4	+0.3
	baz=55						
125A	Gardner Draw,	55.57	79	⇑P	P	23 11 45.8	0.0
	baz=55						
T31A	Randall Ranch,	55.62	72	⇓P	P	23 11 45.9	-0.1
	baz=55						
Y27A	Causey	55.66	77	⇓P	P	23 11 46.4	0.0
	baz=56						
GTA	Gaotai	55.81	292	*e*P	P	23 11 48.4	+0.9
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
226B	Tecolote Peak,	56.27	79	⇓P	P	23 11 50.8	+0.1
	baz=56						
425A	Indio Mountain	56.65	81	⇓P	P	23 11 54.1	+0.6
	baz=56						
227A	Bennet, Jal	56.85	79	⇑P	P	23 11 55.3	+0.5
	baz=57						
326A	Caldwell Ranch	56.90	80	⇑P	P	23 11 55.5	+0.2
	baz=57						
Y30A	Stafford Cattl	57.05	76	⇑P	P	23 11 56.4	+0.1
	baz=57						
228A	UT Block 9, Go	57.21	78	⇓P	P	23 11 57.3	-0.2
	baz=57						
Z30A	Sanderson Ranc	57.31	76	⇓P	P	23 11 58.1	+0.1
	baz=57						
428A	Kincaid Ranch,	58.11	79	⇓P	P	23 12 04.0	+0.2
	baz=58						
ARCES	ARCESS Array B	58.27	350	P	P	23 12 03.1	-1.1
	comp=Z,0.7nm,0.6s,baz=34,slow=8.8,SNR=7.9						
230A	Sterling City	58.28	77	⇑P	P	23 12 05.0	+0.1
	baz=58						
TXAR	Lajitas Array	58.47	81	P	P	23 12 06.1	-0.2
	comp=Z,0.6nm,0.7s,baz=307,slow=4.8,SNR=8.7						
429A	Davenport Ranc	58.67	79	⇓P	P	23 12 06.9	-0.7
	baz=58						
231A	Bronte	58.73	77	⇓P	P	23 12 07.8	-0.3
	baz=59						
529A	Stev Forest Ra	58.82	80	⇓P	P	23 12 08.7	0.0
	baz=59						
628A	Black Gap, Mar	58.85	81	⇓P	P	23 12 09.0	+0.1
	baz=59						
430A	Baggett Ranch,	58.96	78	⇑P	P	23 12 09.6	-0.1
	baz=59						
232A	Coleman	59.17	76	⇑P	P	23 12 11.0	-0.1
	baz=59						
530A	J-C Ranch, Com	59.35	79	⇓P	P	23 12 12.3	-0.1
	baz=59						
431A	Sonora	59.42	78	⇓P	P	23 12 12.5	-0.4
	baz=59						
MK31	Makanchi Array	60.29	309	*e*P	P	23 12 17.3	-1.3
MKAR	Makanchi Array	60.29	309	P	P	23 12 17.6	-1.0
	comp=Z,0.7nm,0.8s,baz=58,slow=6.8,SNR=8.2						
MKAR				PcP	PcP	23 13 03.7	+0.3
	comp=Z,0.3nm,0.6s,baz=65,slow=3.3,SNR=3.1						
GYA	Guiyang	60.54	276	*e*P	P	23 12 22.7	+2.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SFIN	Scholer Farm	60.64	61	⇑P	P	23 12 21.0	0.0
	baz=60						
OLIL	Olney	61.23	63	*e*P	P	23 12 25.2	+0.3
	comp=Z,16nm,0.8s						
CPCT	Cooper Cave	65.57	63	*e*P	P	23 12 54.3	+0.6
TKL	Tuckaleechee C	65.84	63	P	P	23 12 55.4	-0.1
	comp=Z,7.7nm,0.8s,baz=295,slow=2.6,SNR=9.4						
FINES	FINESS Array B	65.97	347	P	P	23 12 54.6	-1.3
	comp=Z,1.5nm,0.6s,baz=56,slow=7.1,SNR=3.7						
KMSC	Kings Mountain	67.57	62	⇑P	P	23 13 06.5	-0.1
	baz=67						
NB2	NORSAR Subarra	67.81	355	P	P	23 13 06.9	-0.8
	comp=Z,0.4nm,0.6s,baz=6.0,slow=6.5						
NOA	NORSAR Array B	67.81	355	P	P	23 13 06.7	-1.0
	comp=Z,0.7nm,0.8s,baz=5.4,slow=6.2,SNR=5.2						
AKTO	Aktyubinsk	67.92	325	P	P	23 13 08.1	-0.5
	comp=Z,0.7nm,0.3s,baz=56,slow=7.3,SNR=2.6						
HFS	Hagfors	68.56	353	P	P	23 13 11.5	-0.8
	comp=Z,0.4nm,0.5s,baz=79,slow=7.5,SNR=5.1						
CMAR	Chiang Mai Arr	71.23	276	P	P	23 13 29.3	-0.1
	comp=Z,0.4nm,0.3s,baz=22,slow=7.4,SNR=5.0						
TAPN	Taplejung	71.45	291	*e*P	P	23 13 32.4	+1.5
	comp=Z,20nm,0.8s						
ODAN	Odare	72.00	290	*e*P	P	23 13 35.3	+1.1
GUN	Gumba	72.10	292	*e*P	P	23 13 36.0	+1.1
	comp=Z,64nm,0.6s						
RAMN	Ramite	72.40	291	*e*P	P	23 13 37.5	+0.9
	comp=Z,32nm,0.6s						
KKN	Kakani	72.54	293	*e*P	P	23 13 38.6	+1.2
	comp=Z,15nm,0.6s						
PKI	Pulchoki	72.63	292	*e*P	P	23 13 38.9	+0.8
	comp=Z,15nm,0.6s						
PKIN	Phulchoki	72.63	292	*e*P	P	23 13 39.0	+1.0
	comp=Z,11nm,0.5s						
DMN	Daman	72.78	293	*e*P	P	23 13 40.2	+1.4
	comp=Z,27nm,1.0s						
DANN	Dangsing	73.00	294	*e*P	P	23 13 41.3	+1.1
	comp=Z,35nm,0.8s						
KOLN	Koldanda	73.53	294	*e*P	P	23 13 44.1	+0.9
	comp=Z,13nm,0.9s						
PYUN	Piuthan	73.63	294	*e*P	P	23 13 44.7	+0.9
RAR	Rarotonga	73.98	162	LR	LR	23 40 50.3	
	comp=Z,273nm,19.7s,baz=308,slow=31						
AKASG	Malin Array Be	75.75	342	P	P	23 13 55.3	-0.2
	comp=Z,0.3nm,0.4s,baz=18,slow=5.4,SNR=4.7						
AK02	Malin Array Si	75.80	342	*e*P	P	23 13 54.8	-0.9
KBZ	Khabaz	78.84	331	P	P	23 14 13.2	+0.4
	comp=Z,1.7nm,0.8s,baz=31,slow=5.9,SNR=6.3						
BUR08	Bucovina Ar. S	79.43	344	*e*P	P	23 14 13.4	-2.7
WRA	Warramunga Arr	82.05	224	P	P	23 14 29.2	-1.0
	comp=Z,0.7nm,0.7s,baz=38,slow=5.8,SNR=4.5						
TUE	Stuetta	82.44	355	*e*P	P	23 14 27.9	-4.5
	comp=Z,5.8nm,0.8s						
BRTR	Keskin Array B	85.17	336	P	P	23 14 46.0	-0.3
	comp=Z,1.6nm,0.7s,baz=45,slow=4.3,SNR=8.3						
ASAR	Alice Springs	85.52	223	P	P	23 14 47.8	-0.2
	comp=Z,0.9nm,0.6s,baz=25,slow=5.8,SNR=7.4						
ESDC	Sonseca Array	89.34	4	P	P	23 15 05.5	-0.9
	comp=Z,0.4nm,0.6s,baz=335,slow=4.5,SNR=3.2						
BOSA	Boshof	151.23	313	PKPbc	PKPbc	23 22 03.0	-0.1
	comp=Z,1.7nm,0.5s,baz=39,slow=3.0,SNR=7.4						

IDC 08 23:03:11.2±2.0**, 8°.04S×129°.94E, h0km, mb3.4**/1**, mb1 3.4**/4**, mb1mx3.3**/20**, mbtmp3.3**/4**, ML3.1**/3**, Error ellipse: s-maj=70.8km s-min=28.2km az=78.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.84	202	Pn	Pn	23 05 49.3	+1.6
	0.1nm,0.3s,baz=18,slow=11,SNR=7.3						
FITZ				Sn	Sn	23 07 47.1	-2.8
	0.2nm,0.3s,baz=53,slow=20,SNR=4.4						
WRA	Warramunga Arr	12.57	161	Pn	Pn	23 06 10.2	-1.3
	0.1nm,0.3s,baz=338,slow=13,SNR=7.6						
WRA				Sn	Sn	23 08 26.1	-6.3
	0.2nm,0.3s,baz=339,slow=23,SNR=6.3						
ASAR	Alice Springs	15.99	167	Pn	Pn	23 06 57.4	-0.4
	0.1nm,0.3s,baz=340,slow=8.3,SNR=3.8						
MKAR	Makanchi Array	69.06	327	P	P	23 14 18.9	0.0
	0.2nm,0.4s,baz=115,slow=7.7,SNR=3.5						

IDC 08 23:07:54.4±2.1**, 20°.07S×70°.63W, h0km, mb4.0**/2**, mb1 4.3**/3**, mb1mx3.8**/18**, mbtmp4.1**/3**, ML4.5**/1**, Error ellipse: s-maj=69.6km s-min=54.4km az=159.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	4.45	33	Pn	Pn	23 09 03.5	-0.2
	15nm,0.3s,baz=199,slow=8.5,SNR=410						
SIV	San Ignacio	9.96	68	Pn	Pn	23 10 11.1	-7.8
	1.4nm,0.3s,baz=246,slow=16,SNR=20						
TORD	Torodi Ar. Bea	78.41	71	P	P	23 19 57.7	+0.1
	0.7nm,0.5s,baz=253,slow=5.0,SNR=9.2						
YKA	Yellowknife Ar	89.31	341	P	P	23 20 52.4	+0.2
	0.5nm,0.6s,baz=146,slow=4.6,SNR=3.9						
SONM	Songino Array	152.19	4	PKPbc	PKPbc	23 27 51.8	-0.4
	0.4nm,0.4s,baz=347,slow=4.4,SNR=3.3						

SKO 08 23:11:15.7, 41°.28N×22°.69E, h1km, M0.2, ML0.5, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.10	294	*i* Pg	Pg	23 11 17.2	-0.5
VAY				*i* Sg	Sg	23 11 19.2	+0.2
VAY				*e*Lg	Lg	23 11 19.2	
	comp=N,54nm,0.2s						
VAY				*e*Lg	Lg	23 11 19.4	
	comp=E,13nm,0.2s						

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*IDC **08** 23:11:27.9±1.1, 37°.92N×20°.28E, h0km, mb3.8/8, mb1 3.8/15, mb1mx3.7/34, mbtmp3.7/15, ML3.3/7, MS3.1/3, Ms1 3.1/3, ms1mx2.4/54, Error ellipse: s-maj=18.8km s-min=17.7km az=144.0*

*ISCJB **08** 23:11:28.6±0.5, 37°.88N±0°.02×20°.03E±0°.02, h12km±3km, mb3.9/13, MS3.9/1, Error ellipse: s-maj=3.2km s-min=1.8km az=40.8*

*HLW **08** 23:11:29.5, 38°.05N×20°.64E, h25km±18km, Md4.3, Ml4.0*

*CSEM **08** 23:11:29.4±0.1, 37°.89N×20°.10E, h2km, mb4.2/5, Error ellipse: s-maj=2.6km s-min=1.5km az=45.0*

*PDG **08** 23:11:30.5±0.4, 37°.96N×20°.17E, h11km±1km, ML4.0/9, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*

*ATH **08** 23:11:30.1, 37°.93N×20°.18E, h16km±2km, ML4.2*

*THE **08** 23:11:31.0, 37°.94N×20°.20E, h4km, ML4.0/21, Error*

ellipse: s-maj=0.8km s-min=0.5km az=231.0

ISC 08 23:11:29.6±1.0,**37.90N**±0.02×**20.13E**±0.02,**h14**km±7km,

n392,σ1.73/534,**mb3.8**/13,**23C-15D,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	Valsamata	0.46	52	P	Pg	23 11 38.6	-0.2
VLS				S	Sg	23 11 44.4	-0.5
VLS	Valsamata	0.46	52	ePB	Pg	23 11 38.8	+0.1
VLS				eSB	Sg	23 11 44.3	-0.6
VLS	Valsamata	0.46	52	P	Pg	23 11 38.5	-0.2
VLS	Valsamata	0.46	52	ePb	Pg	23 11 38.8	+0.1
VLS				S	Sg	23 11 44.4	-0.5
KFL	Anninata	0.56	68	P	Pg	23 11 40.4	-0.2
KFL				S	Sg	23 11 47.2	-0.9
KFL	Anninata	0.56	68	P	Pg	23 11 40.4	-0.2
KFL				S	Sg	23 11 47.2	-0.9
LKD2	Lefkada island	0.98	25	P	Pb	23 11 47.7	-0.8
LKD2				S	Sb	23 12 02.0	+0.7
LKD2	Lefkada island	0.98	25	ePN	Pb	23 11 47.9	-0.6
LKD2	Lefkada island	0.98	25	ePn	Pb	23 11 47.9	-0.6
LKD2	Lefkada island	0.98	25	P	Pg	23 11 48.5	-0.1
LKD2				S	Sb	23 12 02.0	+0.7
AXS	Araxos	1.03	73	P	Pb	23 11 48.4	-0.8
AXS				S	Sg	23 12 03.1	+0.2
AXS	Araxos	1.03	73	P	Pb	23 11 48.4	-0.8
AXS				S	Sg	23 12 03.1	+0.2
RLS	Riolos of Patr	1.07	81	P	Pb	23 11 49.3	-0.6
RLS				S	Sn	23 12 05.0	+0.2
RLS	Riolos of Patr	1.07	81	ePN	Pb	23 11 49.7	-0.2
RLS	Riolos of Patr	1.07	81	P	Pb	23 11 49.3	-0.6
RLS	Riolos of Patr	1.07	81	ePn	Pb	23 11 49.7	-0.2
RLS				S	Sg	23 12 04.4	+0.2
AMT	Artemida-Makis	1.30	106	ePN	Pg	23 11 55.0	+0.3
AMT	Artemida-Makis	1.30	106	P	Pb	23 11 54.3	+0.4
AMT	Artemida-Makis	1.30	106	ePn	Pg	23 11 55.0	+0.3
AMT				S	Sg	23 12 12.4	+0.7
UPR	University Cam	1.36	73	P	Pg	23 11 55.5	-0.3
UPR				S	Sg	23 12 14.8	+1.2
PSA1	Psathopyrgos	1.45	72	ePN	Pb	23 11 56.4	0.0
EFP	Efpalio	1.50	69	P	Pb	23 11 56.9	-0.3
EFP				S	Sg	23 12 17.9	+0.1
EFP	Efpalio	1.50	69	ePN	Pb	23 11 57.1	-0.1
EFP	Efpalio	1.50	69	ePn	Pb	23 11 57.1	-0.1
EFP				S	Sg	23 12 17.6	-0.2
LAKA	Lakka	1.50	76	P	Pn	23 11 56.7	+0.6
LAKA				S	Sb	23 12 16.9	+0.7
LAKA	Lakka	1.50	76	ePN	Pb	23 11 57.4	+0.1
LAKA	Lakka	1.50	76	ePn	Pb	23 11 57.4	+0.1
LAKA				S	Sb	23 12 16.9	+0.7
ITM	Ithomi	1.60	116	P	Pb	23 11 58.5	-0.4
ITM				S	Sg	23 12 21.0	-0.1
ITM	Ithomi	1.60	116	ePN	Pb	23 11 58.6	-0.4
ITM	Ithomi	1.60	116	ePn	Pb	23 11 58.6	-0.4
ITM				S	Sg	23 12 21.0	-0.1
KLV	Kalavryta, Ach	1.60	84	ePN	Pg	23 12 00.1	-0.3
KLV	Kalavryta, Ach	1.60	84	ePn	Pg	23 12 00.1	-0.3
PYL	PYLOS	1.63	127	P	Pb	23 11 58.8	-0.6
PYL				S	Sb	23 12 21.0	+1.2
PYL	PYLOS	1.63	127	ePN	Pb	23 11 59.3	-0.1
PYL	PYLOS	1.63	127	P	Pb	23 11 58.8	-0.6
PYL	PYLOS	1.63	127	ePn	Pb	23 11 59.3	-0.1
PYL				S	Sb	23 12 21.0	+1.2
IGT	Igoumenitsa	1.64	6	P	Pb	23 11 59.0	-0.7
IGT				S	Sg	23 12 21.7	-0.7
IGT	Igoumenitsa	1.64	6	P	Pb	23 11 59.0	-0.7
IGT				S	Sg	23 12 21.7	-0.7
KALE	Kalithea	1.66	72	P	Pb	23 11 59.6	-0.4
KALE				S	Sb	23 12 21.6	+0.8
KALE	Kalithea	1.66	72	ePN	Pb	23 12 00.6	+0.6
KALE	Kalithea	1.66	72	P	Pb	23 11 59.6	-0.4
KALE	Kalithea	1.66	72	ePn	Pb	23 12 00.6	+0.6
KALE				S	Sb	23 12 21.6	+0.8
EVR	Evrytania	1.67	52	P	Pb	23 12 00.0	-0.2
EVR				S	Sb	23 12 21.9	+0.8
EVR	Evrytania	1.67	52	ePN	Pb	23 12 00.9	+0.7
EVR	Evrytania	1.67	52	P	Pb	23 12 00.0	-0.2
EVR	Evrytania	1.67	52	ePn	Pb	23 12 00.9	+0.7
EVR				S	Sb	23 12 21.9	+0.8
GUR	Goura	1.75	88	P	Pb	23 12 01.1	-0.5
GUR				S	Sb	23 12 23.4	-0.1
GUR	Goura	1.75	88	ePN	Pb	23 12 01.9	+0.3
GUR	Goura	1.75	88	P	Pb	23 12 01.1	-0.5
GUR	Goura	1.75	88	ePn	Pb	23 12 01.9	+0.3
GUR				S	Sb	23 12 23.4	-0.1
KEK	Kerkira	1.83	352	P	Pb	23 12 01.9	-1.0
KEK				S	Sb	23 12 26.7	+1.0
KEK	Kerkira	1.83	352	ePN	Pb	23 12 02.5	-0.4
KEK	Kerkira	1.83	352	P	Pb	23 12 01.9	-1.0
KEK	Kerkira	1.83	352	ePn	Pb	23 12 02.5	-0.4
KEK				S	Sb	23 12 26.7	+1.0
JAN	Janina	1.85	18	P	Pb	23 12 02.1	-1.1
JAN				S	Sb	23 12 26.8	+0.6
JAN	Janina	1.85	18	ePN	Pb	23 12 02.9	-0.3
JAN	Janina	1.85	18	P	Pb	23 12 02.1	-1.1
JAN	Janina	1.85	18	ePn	Pb	23 12 02.9	-0.3
JAN				S	Sb	23 12 26.8	+0.6
VLX	Vlachokerasia	1.86	106	P	Pb	23 12 02.8	-0.7
VLX				S	Sb	23 12 26.6	-0.1
VLX	Vlachokerasia	1.86	106	ePN	Pb	23 12 03.4	-0.1
VLX	Vlachokerasia	1.86	106	P	Pb	23 12 02.8	-0.7
VLX	Vlachokerasia	1.86	106	ePn	Pb	23 12 03.4	-0.1
VLX				S	Sb	23 12 26.6	-0.1
MAKR	Makrakomi, Fth	1.93	54	P	Pn	23 12 03.3	+1.3
MAKR				S	Sn	23 12 27.6	+1.5
MAKR	Makrakomi, Fth	1.93	54	P	Pn	23 12 03.3	+1.3
MAKR				S	Sn	23 12 27.6	+1.5
DSF	Desfina	1.96	74	P	Pn	23 12 03.5	+1.0
DSF				S	Sn	23 12 28.2	+1.3
DSF	Desfina	1.96	74	P	Pn	23 12 03.5	+1.0
DSF				S	Sn	23 12 28.2	+1.3
SRN	Sarande	1.98	357	ePN	Pb	23 12 04.7	-0.8
SRN				iSN	Sg	23 12 36.9	+3.5
SRN	Sarande	1.98	357	P	Pb	23 12 04.1	-1.4
SRN				S	Sb	23 12 30.8	+0.8
SRN	Sarande	1.98	357	P	Pb	23 12 04.1	-1.4
SRN	Sarande	1.98	357	ePn	Pb	23 12 04.7	-0.8
SRN				S	Sb	23 12 30.8	+0.8
THAL	Thalero	2.01	85	P	Pb	23 12 04.8	-1.1
THAL				S	Sb	23 12 29.8	-1.0
THAL	Thalero	2.01	85	P	Pb	23 12 04.8	-1.1
THAL				S	Sb	23 12 29.8	-1.0
AGG	Agios Georgios	2.06	56	P	Pb	23 12 05.5	-1.3
AGG				S	Sb	23 12 31.2	-1.2
AGG	Agios Georgios	2.06	56	ePN	Pb	23 12 06.7	-0.1
AGG	Agios Georgios	2.06	56	P	Pb	23 12 05.5	-1.3
AGG	Agios Georgios	2.06	56	ePn	Pb	23 12 06.7	-0.1
AGG				S	Sb	23 12 31.2	-1.2
DYR	Agios Nikonas	2.09	122	P	Pb	23 12 06.0	-1.3
DYR				S	Sb	23 12 33.4	+0.2
DYR	Agios Nikonas	2.09	122	ePN	Pb	23 12 06.2	-1.1
DYR	Agios Nikonas	2.09	122	P	Pb	23 12 06.0	-1.3
DYR				S	Sb	23 12 33.4	+0.2
AXAR	Agios Charalam	2.17	66	P	Pn	23 12 06.2	+0.8
AXAR				S	Sn	23 12 33.5	+1.4
AXAR	Agios Charalam	2.17	66	P	Pn	23 12 06.2	+0.8
AXAR				S	Sn	23 12 33.5	+1.4
THL	Klokotos Trika	2.23	41	P	Pn	23 12 07.1	+1.0
THL				S	Sb	23 12 36.2	-0.8
THL	Klokotos Trika	2.23	41	ePN	Pb	23 12 08.6	-1.0
THL	Klokotos Trika	2.23	41	P	Pn	23 12 07.1	+1.0
THL	Klokotos Trika	2.23	41	ePn	Pb	23 12 08.6	-1.0
THL				S	Sb	23 12 36.2	-0.8
LTK	Loutraki	2.25	86	P	Pn	23 12 07.7	+1.3
LTK				S	Sb	23 12 36.5	-1.2
LTK	Loutraki	2.25	86	ePB	Pn	23 12 08.0	+1.6
LTK	Loutraki	2.25	86	P	Pn	23 12 07.7	+1.3
LTK	Loutraki	2.25	86	ePb	Pn	23 12 08.0	+1.6
LTK				S	Sb	23 12 36.5	-1.2
LSK	Leskovik	2.28	9	ePN	Pb	23 12 11.1	+0.5
LSK				iSN	Sn	23 12 31.4	-3.5
LSK	Leskovik	2.28	9	ePn	Pb	23 12 11.1	+0.5
LKR	Lokris	2.38	71	P	Pn	23 12 09.9	+1.7
LKR				S	Sn	23 12 39.3	+2.1
LKR	Lokris	2.38	71	ePB	Pn	23 12 09.9	+1.7
LKR	Lokris	2.38	71	P	Pn	23 12 09.9	+1.7
LKR				S	Sn	23 12 39.3	+2.1
ATAL	Atalanti	2.41	70	P	Pn	23 12 10.1	+1.5
ATAL				S	Sn	23 12 39.6	+1.6
ATAL	Atalanti	2.41	70	P	Pn	23 12 10.1	+1.5
ATAL				S	Sn	23 12 39.6	+1.6
DIDY	Didyma	2.48	99	P	Pn	23 12 10.9	+1.2
DIDY				S	Sb	23 12 42.8	-1.7
DIDY	Didyma	2.48	99	P	Pn	23 12 10.9	+1.2
DIDY				S	Sb	23 12 42.8	-1.7
DID	Didima	2.50	98	P	Pn	23 12 10.8	+1.0
DID				S	Sn	23 12 42.1	+2.0
DID	Didima	2.50	98	ePB	Pn	23 12 11.0	+1.2
DID	Didima	2.50	98	P	Pn	23 12 10.8	+1.0
DID				S	Sn	23 12 42.1	+2.0
VIL2	Platees	2.50	82	P	Pn	23 12 11.5	+1.6
VIL2				S	Sn	23 12 42.5	+2.3
VLI	Veliai	2.53	117	P	Pb	23 12 12.8	-2.0
VLI	Veliai	2.53	117	ePB	Pb	23 12 13.6	-1.2
VLI	Veliai	2.53	117	P	Pb	23 12 12.8	-2.0
VLI	Veliai	2.53	117	ePb	Pb	23 12 13.6	-1.2
SMIA	Simia	2.61	67	P	Pn	23 12 12.9	+1.5
SMIA				S	Sn	23 12 45.1	+2.1
SMIA	Simia	2.61	67	P	Pn	23 12 12.9	+1.5
SMIA				S	Sn	23 12 45.1	+2.1
NEST	Nestorio	2.61	16	P	Pn	23 12 13.5	+2.0
NEST	Nestorio	2.61	16	P	Pn	23 12 13.5	+2.0
VLO	Vlora	2.62	349	ePN	Pn	23 12 12.1	+0.7
VLO				iSN	Sg	23 12 52.9	-0.7
VLO	Vlora	2.62	349	P	Pn	23 12 13.2	+1.8
VLO	Vlora	2.62	349	ePn	Pn	23 12 12.1	+0.7
VLO	Vlora	2.62	349	P	Pn	23 12 13.2	+1.8
KZN	Kozani	2.73	27	P	Pn	23 12 14.3	+1.3
KZN	Kozani	2.73	27	ePB	Pb	23 12 15.8	-2.4
KZN	Kozani	2.73	27	P	Pn	23 12 14.3	+1.3
KZN	Kozani	2.73	27	ePb	Pb	23 12 15.8	-2.4
KBN	Korca	2.77	10	ePN	Pb	23 12 17.0	-2.0
KBN				iSN	Sg	23 12 58.6	0.0
KBN	Korca	2.77	10	P	Pn	23 12 15.6	+1.9
KBN				S	Sb	23 12 50.4	-2.4
KBN	Korca	2.77	10	P	Pn	23 12 15.6	+1.9
KBN	Korca	2.77	10	ePn	Pb	23 12 17.0	-2.0
KBN				S	Sb	23 12 50.4	-2.4
NEO	Neokhori	2.80	59	P	Pn	23 12 15.6	+1.5
NEO				S	Sn	23 12 49.3	+1.6
NEO	Neokhori	2.80	59	ePN	Pn	23 12 15.4	+1.3
NEO	Neokhori	2.80	59	P	Pn	23 12 15.6	+1.5
NEO				S	Sn	23 12 49.3	+1.6
XOR	Xorichti	2.81	58	P	Pn	23 12 15.5	+1.3
XOR	Xorichti	2.81	58	P	Pn	23 12 15.5	+1.3
KYTH	Kithira	2.83	124	P	Pn	23 12 17.2	+2.8
KYTH	Kithira	2.83	124	P	Pn	23 12 17.2	+2.8
ATH	Athens Observa	2.84	87	P	Pn	23 12 16.0	+1.5
ATH				S	Sn	23 12 51.3	+2.8
ATH	Athens Observa	2.84	87	ePN	Pn	23 12 16.3	+1.8
ATH	Athens Observa	2.84	87	P	Pn	23 12 16.0	+1.5
ATH	Athens Observa	2.84	87	ePn	Pn	23 12 16.3	+1.8
ATH				S	Sn	23 12 51.3	+2.8
MRKA	Markates	2.84	72	P	Pn	23 12 16.1	+1.6
MRKA				S	Sn	23 12 50.2	+1.6
MRKA	Markates	2.84	72	P	Pn	23 12 16.1	+1.6
MRKA				S	Sn	23 12 50.2	+1.6
ATHU	Athens Univers	2.89	87	P	Pn	23 12 16.6	+1.3
ATHU				S	Sn	23 12 52.6	+2.8
ATHU	Athens Univers	2.89	87	P	Pn	23 12 16.6	+1.3
ATHU				S	Sn	23 12 52.6	+2.8
SKIA	Skiathos	2.91	63	P	Pn	23 12 17.0	+1.5
SKIA	Skiathos	2.91	63	P	Pn	23 12 17.0	+1.5
TIP	Timpagrande	2.94	297	P	Pn	23 12 18.4	+2.5
TIP				S	Sb	23 12 55.0	-2.6
TIP	Timpagrande	2.94	297	P	Pn	23 12 18.4	+2.5
TIP				S	Sb	23 12 55.0	-2.6
PTL	Penteli	2.96	86	P	Pn	23 12 17.2	+1.0
PTL				S	Sn	23 12 53.9	+2.4
PTL	Penteli	2.96	86	P	Pn	23 12 17.2	+1.0
PTL				S	Sn	23 12 53.9	+2.4
FNA	Florina	3.04	18	P	Pn	23 12 19.1	+1.7
FNA				S	Sn	23 12 56.2	+2.6
FNA	Florina	3.04	18	ePN	Pn	23 12 19.1	+1.7
FNA	Florina	3.04	18	P	Pn	23 12 19.1	+1.7
FNA				S	Sn	23 12 56.2	+2.6
AOS	Alonnisos	3.21	65	P	Pn	23 12 20.5	+0.9
AOS				S	Sn	23 13 00.1	+2.5
AOS	Alonnisos	3.21	65	ePN	Pn	23 12 20.5	+0.9
AOS	Alonnisos	3.21	65	P	Pn	23 12 20.5	+0.9
AOS				S	Sn	23 13 00.1	+2.5
ANKY	Antikythira Is	3.25	128	ePN	Pn	23 12 23.2	+3.0
ANKY	Antikythira Is	3.25	128	ePn	Pn	23 12 23.2	+3.0
BIA	Bitola	3.25	16	P	Pn	23 12 22.1	+1.8
BIA				S	Sn	23 13 01.2	+2.4
BIA	Bitola	3.25	16	ePn	Pn	23 12 22.2	+2.0
BIA	Bitola	3.25	16	P	Pn	23 12 22.1	+1.8
BIA				S	Sn	23 13 01.2	+2.4
MRMA	Marmari	3.36	86	P	Pn	23 12 22.8	+1.1
MRMA				S	Sn	23 13 03.2	+1.7
MRMA	Marmari	3.36	86	P	Pn	23 12 22.8	+1.1
MRMA				S	Sn	23 13 03.2	+1.7
TIR	Tirane	3.45	357	ePN	Pn	23 12 24.8	+1.8
TIR				iSN	Sn	23 13 07.4	+3.7
TIR	Tirane	3.45	357	ePn	Pn	23 12 24.8	+1.8
TIR				iSn	Sn	23 13 07.4	+3.7
THE	Thessaloniki	3.51	38	P	Pn	23 12 25.2	+1.5
THE				S	Sn	23 13 06.2	+1.2
THE	Thessaloniki	3.51	38	P	Pn	23 12 25.2	+1.5
THE				S	Sn	23 13 06.2	+1.2
GRG	Griva	3.53	29	P	Pn	23 12 25.2	+1.2
GRG	Griva	3.53	29	ePN	Pn	23 12 25.7	+1.7
GRG	Griva	3.53	29	P	Pn	23 12 25.2	+1.2
GRG	Griva	3.53	29	ePn	Pn	23 12 25.7	+1.7
HORT	Hortiatis	3.55	40	P	Pn	23 12 25.6	+1.2
HORT				S	Sn	23 13 08.3	+2.1
HORT	Hortiatis	3.55	40	P	Pn	23 12 25.6	+1.2
HORT				S	Sn	23 13 08.3	+2.1
PLG	Polygyros	3.57	45	P	Pn	23 12 25.5	+0.8
PLG				S	Sn	23 13 07.4	+0.7
PLG	Polygyros	3.57	45	ePN	Pn	23 12 25.4	+0.8
PLG	Polygyros	3.57	45	P	Pn	23 12 25.5	+0.8
PLG				S	Sn	23 13 07.4	+0.7
PHP	Peshkopia	3.79	4	ePN	Pn	23 12 29.1	+1.4
PHP				ePN	Sn	23 13 15.7	+3.6
PHP	Peshkopia	3.79	4	P	Pn	23 12 29.3	+1.6
PHP				S	Sn	23 13 14.9	+2.8
PHP	Peshkopia	3.79	4	ePn	Pn	23 12 29.1	+1.4
PHP				S	Sn	23 13 14.9	+2.8
SOH	Sokhos	3.84	40	P	Pn	23 12 29.8	+1.4
SOH				S	Sn	23 13 14.4	+1.0
SOH	Sokhos	3.84	40	ePN	Pn	23 12 30.3	+1.9
SOH	Sokhos	3.84	40	P	Pn	23 12 29.8	+1.4
SOH	Sokhos	3.84	40	ePn	Pn	23 12 30.3	+1.9
SOH				S	Sn	23 13 14.4	+1.0
OUR	Ouranopolis	3.86	50	P	Pn	23 12 29.9	+1.3
OUR	Ouranopolis	3.86	50	P	Pn	23 12 29.9	+1.3
KNT	Kendrikon	3.90	32	P	Pn	23 12 30.4	+1.3
KNT	Kendrikon	3.90	32	P	Pn	23 12 30.4	+1.3
VAY	Valandovo	3.91	28	P	Pn	23 12 30.3	+1.1
VAY	Valandovo	3.91	28	ePn	Pn	23 12 30.1	+1.0
VAY	Valandovo	3.91	28	P	Pn	23 12 30.3	+1.1
VAY	Valandovo	3.91	28	ePn	Pn	23 12 30.6	+1.4
BAI	Bari	4.07	323	ePn	Pn	23 12 33.9	+2.4
ULC	Ulcinj	4.12	351	⇓iPn	Pn	23 12 32.7	+0.6
ULC				eSn	Sn	23 13 22.7	+2.6
ULC	Ulcinj	4.12	351	⇓iPn	Pn	23 12 32.7	+0.6
ULC				eSn	Sn	23 13 22.7	+2.6
PUK	Puka	4.14	358	ePN	Pn	23 12 33.2	+0.6
PUK				iSN	Sn	23 13 23.4	+2.5
PUK	Puka	4.14	358	ePn	Pn	23 12 33.2	+0.6
PUK				iSn	Sn	23 13 23.4	+2.5
SRS	Serrai	4.18	39	P	Pn	23 12 34.5	+1.4
SRS	Serrai	4.18	39	P	Pn	23 12 34.5	+1.4
SKO	Skopje	4.19	13	ePn	Pn	23 12 34.6	+1.5
SKO	Skopje	4.19	13	ePn	Pn	23 12 35.1	+1.9
APE	Apeiranthos	4.38	99	P	Pn	23 12 36.5	+0.8
APE	Apeiranthos	4.38	99	⇓iP	Pb	23 12 42.1	-4.2
APE	Apeiranthos	4.38	99	P	Pn	23 12 36.5	+0.8
LIA	Limnos Island	4.42	62	P	Pn	23 12 37.3	+1.1
LIA	Limnos Island	4.42	62	P	Pn	23 12 37.3	+1.1
BCI	Bajram Curri	4.46	359	ePN	Pn	23 12 38.0	+1.1
BCI				iSN	Sn	23 13 30.8	+2.1
BCI	Bajram Curri	4.46	359	ePn	Pn	23 12 38.0	+1.1
BCI				iSn	Sn	23 13 30.8	+2.1
THR3	Thira Island,	4.46	108	P	Pn	23 12 39.0	+2.1
THR3	Thira Island,	4.46	108	P	Pn	23 12 39.0	+2.1
NVR	Nevrokopi	4.49	39	P	Pn	23 12 38.4	+1.1
NVR				S	Sn	23 13 31.8	+2.4
NVR	Nevrokopi	4.49	39	ePN	Pn	23 12 38.9	+1.6
NVR	Nevrokopi	4.49	39	P	Pn	23 12 38.4	+1.1
NVR	Nevrokopi	4.49	39	ePn	Pn	23 12 38.9	+1.6
NVR				S	Sn	23 13 31.8	+2.4
BUM	Brajici-Budva	4.50	348	ePn	Pn	23 12 38.8	+1.4
BUM				eSn	Sn	23 13 31.4	+1.8
BUM	Brajici-Budva	4.50	348	ePn	Pn	23 12 38.8	+1.4
BUM				eSn	Sn	23 13 31.4	+1.8
SANT	Santorini	4.52	108	P	Pn	23 12 39.1	+1.4
SANT	Santorini	4.52	108	P	Pn	23 12 39.1	+1.4
THR1	Thera Island	4.52	108	P	Pn	23 12 39.1	+1.4
THR1	Thera Island	4.52	108	P	Pn	23 12 39.1	+1.4
KKB	Krupnik	4.57	29	P	Pn	23 12 40.9	+2.6
KKB	Krupnik	4.57	29	P	Pn	23 12 40.9	+2.6
PDG	Podgorica	4.58	352	ePn	Pn	23 12 39.4	+1.0
PDG	Podgorica	4.58	352	⇓iPn	Pn	23 12 40.3	+1.9
PDG				eSn	Sn	23 13 32.9	+1.5
TTG	Podgorica	4.58	352	⇓iPn	Pn	23 12 40.3	+1.9
TTG				eSn	Sn	23 13 32.9	+1.5
KAVA	Kavala	4.59	46	P	Pn	23 12 39.8	+1.2
KAVA				S	Sn	23 13 34.8	+3.0
KAVA	Kavala	4.59	46	P	Pn	23 12 39.8	+1.2
KAVA				S	Sn	23 13 34.8	+3.0
MMB	Musomiste	4.61	36	P	Pn	23 12 41.2	+2.2
MMB	Musomiste	4.61	36	P	Pn	23 12 41.2	+2.2
SIGR	SIGRI	4.68	72	P	Pn	23 12 41.9	+2.1
SIGR	SIGRI	4.68	72	P	Pn	23 12 41.9	+2.1
PVY	Plav	4.69	358	ePn	Pn	23 12 42.2	+2.1
PVY				eSn	Sn	23 13 35.7	+1.2
PVY	Plav	4.69	358	ePn	Pn	23 12 42.2	+2.1
PVY				eSn	Sn	23 13 35.7	+1.2
CHOS	Chios island	4.70	82	P	Pn	23 12 41.1	+1.0
CHOS	Chios island	4.70	82	P	Pn	23 12 41.1	+1.0
HCY	Herceg Novi	4.71	345	⇑iPn	Pn	23 12 41.9	+1.6
HCY				eSn	Sn	23 13 36.2	+1.4
HCY	Herceg Novi	4.71	345	⇑iPn	Pn	23 12 41.9	+1.6
HCY				eSn	Sn	23 13 36.2	+1.4
SIVA	Sivas	4.74	126	P	Pn	23 12 43.5	+2.8
SIVA	Sivas	4.74	126	P	Pn	23 12 43.5	+2.8
BEY	Berane	4.97	358	⇑iPn	Pn	23 12 46.1	+2.2
BEY				eSn	Sn	23 13 42.7	+1.4
IVA	Berane	4.97	358	⇑iPn	Pn	23 12 46.1	+2.2
IVA				eSn	Sn	23 13 42.7	+1.4
MS1	Monte Sant'Ang	4.99	321	ePn	Pn	23 12 46.4	+2.3
NKY	Niksic	4.99	350	⇑iPn	Pn	23 12 45.7	+1.6
NKY				eSn	Sn	23 13 43.0	+1.3
NKY	Niksic	4.99	350	⇑iPn	Pn	23 12 45.7	+1.6
NKY				eSn	Sn	23 13 43.0	+1.3
PRK	Paraskevi	5.00	72	P	Pn	23 12 47.1	+2.9
PRK	Paraskevi	5.00	72	P	Pn	23 12 47.1	+2.9
BARS	Barje	5.08	14	ePn	Pn	23 12 46.5	+1.2
BARS	Barje	5.08	14	ePn	Pn	23 12 46.5	+1.2
LAST	Lasithi	5.10	121	P	Pn	23 12 47.5	+1.8
LAST	Lasithi	5.10	121	P	Pn	23 12 47.5	+1.8
URLA	Izmir	5.12	83	iP	Pn	23 12 47.1	+1.2
URLA	Izmir	5.12	83	iP	Pn	23 12 47.1	+1.2
NPS	Neapolis	5.14	119	P	Pn	23 12 47.9	+1.8
NPS				S	Sn	23 13 48.7	+3.5
NPS	Neapolis	5.14	119	ePN	Pn	23 12 48.5	+2.4
NPS	Neapolis	5.14	119	P	Pn	23 12 47.9	+1.8
NPS	Neapolis	5.14	119	ePn	Pn	23 12 48.5	+2.4
NPS				S	Sn	23 13 48.7	+3.5
BRY	Bratogost	5.14	347	⇑iPn	Pn	23 12 47.7	+1.4
BRY				eSn	Sn	23 13 46.4	+0.8
BRY	Bratogost	5.14	347	⇑iPn	Pn	23 12 47.7	+1.4
BRY				eSn	Sn	23 13 46.4	+0.8
RZN	Rozhen	5.18	42	P	Pn	23 12 50.0	+3.1
RZN	Rozhen	5.18	42	P	Pn	23 12 50.0	+3.1
VTS	Vitosha	5.25	26	P	Pn	23 12 49.9	+2.1
VTS	Vitosha	5.25	26	P	Pn	23 12 50.1	+2.3
VTS	Vitosha	5.25	26	ePn	Pn	23 12 49.6	+1.8
VTS	Vitosha	5.25	26	⇑iP	Pn	23 12 50.2	+2.4
VTS	Vitosha	5.25	26	ePn	Pn	23 12 49.6	+1.8
VTS	Vitosha	5.25	26	P	Pn	23 12 49.9	+2.1
RDO	Rodhopi	5.29	51	P	Pn	23 12 49.4	+1.2
RDO	Rodhopi	5.29	51	P	Pn	23 12 49.4	+1.2
STON	Ston	5.30	340	ePn	Pn	23 12 48.5	+0.1
STON				Sn	Sn	23 13 45.4	-3.8
STON	Ston	5.30	340	ePn	Pn	23 12 48.4	+0.1
SMG	Samos	5.32	90	ePN	Pn	23 12 50.5	+1.9
SMG	Samos	5.32	90	ePn	Pn	23 12 50.5	+1.9
SELS	Selova	5.37	8	ePn	Pn	23 12 50.2	+0.9
UPM	Unac-Piva	5.38	350	⇓iPn	Pn	23 12 52.2	+2.5
UPM				eSn	Sn	23 13 52.8	+1.3
UPM	Unac-Piva	5.38	350	⇓iPn	Pn	23 12 52.2	+2.5
UPM				eSn	Sn	23 13 52.8	+1.3
PLE	Pljevlja	5.46	354	⇑iPn	Pn	23 12 53.1	+2.5
PLE				eSn	Sn	23 13 54.5	+1.3
PLE	Pljevlja	5.46	354	⇑iPn	Pn	23 12 53.1	+2.5
PLE				eSn	Sn	23 13 54.5	+1.3
ALN	Alexandroupoli	5.47	55	P	Pn	23 12 52.0	+1.3
ALN	Alexandroupoli	5.47	55	P	Pn	23 12 52.0	+1.3
PLD	Plovdiv	5.48	38	P	Pn	23 12 52.2	+1.4
PLD	Plovdiv	5.48	38	P	Pn	23 12 52.2	+1.4
ZKR	Zakros	5.63	118	P	Pn	23 12 55.0	+2.0
ZKR				S	Sn	23 14 01.4	+3.9
ZKR	Zakros	5.63	118	P	Pn	23 12 55.0	+2.0
ZKR				S	Sn	23 14 01.4	+3.9
ZAPS	Zavoj	5.70	19	ePn	Pn	23 12 55.7	+1.8
BBLS	Lazići	5.99	355	ePn	Pn	23 12 59.3	+1.4
BBLS	Lazići	5.99	355	ePn	Pn	23 12 59.3	+1.4
GRUS	Gruza	6.00	4	ePn	Pn	23 12 59.0	+1.0
GRUS	Gruza	6.00	4	ePn	Pn	23 12 59.0	+1.0
MPEP	Malo Peshtene	6.11	26	P	Pn	23 13 02.7	+3.3
KARP	Karpathos	6.12	110	P	Pn	23 13 01.4	+1.8
KARP				S	Sn	23 14 13.1	+3.7
KARP	Karpathos	6.12	110	P	Pn	23 13 01.4	+1.8
KARP				S	Sn	23 14 13.1	+3.7
BALY	Balya	6.13	70	iP	Pn	23 13 01.1	+1.3
BALY	Balya	6.13	70	iP	Pn	23 13 01.1	+1.3
DIVS	Divibare	6.20	359	ePn	Pn	23 13 00.8	+0.1
DIVS	Divibare	6.20	359	ePn	Pn	23 13 00.8	+0.1
EDRB	Edirne	6.44	50	P	Pn	23 13 05.6	+1.6
EDRB	Edirne	6.44	50	P	Pn	23 13 05.6	+1.6
LTBQ	Tobruq	6.61	151	iP	Pn	23 13 08.4	+2.1
	SNR=22						
ARG	Arkhangelos	6.61	102	P	Pn	23 13 08.6	+2.2
ARG				S	Sn	23 14 26.2	+4.7
ARG	Arkhangelos	6.61	102	P	Pn	23 13 08.6	+2.2
ARG				S	Sn	23 14 26.2	+4.7
TEKS	Tekeris	6.66	356	ePn	Pn	23 13 07.8	+0.7
TEKS	Tekeris	6.66	356	ePn	Pn	23 13 07.8	+0.7
DURS	Dursunbey	6.74	73	iP	Pn	23 13 04.4	-3.8
TURN	Turunc	6.82	96	iP	Pn	23 13 09.9	+0.6
TURN	Turunc	6.82	96	iP	Pn	23 13 09.9	+0.6
LJBD	Adjabya	6.97	180	iP	Pn	23 13 11.6	+0.4
	SNR=22						
SLUM		7.64	145	S	Sn	23 14 37.0	-10
	baz=148						
GZR	Gura Zlata	7.75	14	⇑iP	Pn	23 13 21.8	-0.2
GZR	Gura Zlata	7.75	14	⇑iP	Pn	23 13 21.8	-0.2
NVLJ	Novalja	7.75	331	ePn	Pn	23 13 23.1	+1.1
NVLJ				Sn	Sn	23 14 46.7	-2.8
NVLJ	Novalja	7.75	331	ePn	Pn	23 13 23.0	+1.1
AKAS	Kas	7.76	99	iP	Pn	23 13 24.8	+2.6
AKAS	Kas	7.76	99	iP	Pn	23 13 24.8	+2.6
ARR	Arges	8.19	23	⇑iP	Pn	23 13 29.0	+0.9
ARR	Arges	8.19	23	⇑iP	Pn	23 13 29.0	+0.9
VOIR		8.38	24	⇓iP	Pn	23 13 33.0	+2.3
VOIR		8.38	24	⇓iP	Pn	23 13 33.0	+2.3
BOJS	Bojanci	8.43	336	iPn	Pn	23 13 32.3	+1.0
BOJS				iSn	Sn	23 15 03.5	-2.7
BOJS	Bojanci	8.43	336	iPn	Pn	23 13 32.3	+1.0
CRES	Cresnjev	8.65	338	iPn	Pn	23 13 34.9	+0.5
CRES				eSn	Sn	23 15 07.7	-4.1
CRES	Cresnjev	8.65	338	iPn	Pn	23 13 34.9	+0.5
MLR	Muntele Rosu	8.74	28	⇓iP	Pn	23 13 40.0	+4.3
MLR	Muntele Rosu	8.74	28	Pn	Pn	23 13 37.5	+1.8
	0.1nm,0.3s,baz=214,slow=10,SNR=4.3						
GOLS	Golise	8.77	339	iPn	Pn	23 13 36.4	+0.4
GOLS				eSn	Sn	23 15 10.7	-4.0
GOLS	Golise	8.77	339	iPn	Pn	23 13 36.4	+0.4
HMAT	Matruh	8.89	138	AMP		23 15 00.0	
	comp=E,40μm,0.6s,logA/T=4.8,baz=140						
KEST	Kesra	8.91	259	Pn	Pn	23 13 40.1	+2.1
	comp=E,0.1nm,0.3s,baz=74,slow=9.1,SNR=3.9						
KEST				Sn	Sn	23 15 19.9	+1.7
	comp=E,0.1nm,0.3s,baz=24,slow=20,SNR=4.7						
CEY	Cerknica	8.91	333	iPn	Pn	23 13 39.6	+1.6
CEY				iSn	Sn	23 15 15.0	-3.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CEY	**Cerknica**	**8.91**	**333**	*i* Pn	**Pn**	**23 13 39.6**	**+1.6**
PDKS	**Podkum**	**9.01**	**337**	*i* Pn	**Pn**	**23 13 40.2**	**+1.0**
PDKS				*e*Sn	**Sn**	**23 15 16.0**	**-4.5**
PDKS	**Podkum**	**9.01**	**337**	*i* Pn	**Pn**	**23 13 40.2**	**+1.0**
TIRR	**Tirgusor**	**9.05**	**41**	⇑*i*P	Pn	23 14 06.5	+27
VNDS	**Vrh nad Dolski**	**9.14**	**336**	*i* Pn	**Pn**	**23 13 42.6**	**+1.5**
VNDS				*e*Sn	**Sn**	**23 15 20.5**	**-3.1**
JAVS	**Javornik**	**9.18**	**332**	*i* Pn	**Pn**	**23 13 42.6**	**+1.0**
JAVS				*i* Sn	**Sn**	**23 15 19.3**	**-5.4**
JAVS	**Javornik**	**9.18**	**332**	*i* Pn	**Pn**	**23 13 42.6**	**+1.0**
PLOR	**Plostina**	**9.31**	**29**	⇑*i*P	**Pn**	**23 13 46.5**	**+3.0**
PLOR	**Plostina**	**9.31**	**29**	⇑*i*P	**Pn**	**23 13 46.5**	**+3.0**
VRI	**Vrincioaia**	**9.36**	**30**	⇓*i*P	**Pn**	**23 13 47.1**	**+3.1**
VRI	**Vrincioaia**	**9.36**	**30**	⇓*i*P	**Pn**	**23 13 47.1**	**+3.1**
VOY	**Vojsko**	**9.36**	**332**	*e*Pn	**Pn**	**23 13 45.9**	**+1.8**
VOY				*e*Sn	**Sn**	**23 15 24.5**	**-4.7**
VOY	**Vojsko**	**9.36**	**332**	*e*Pn	**Pn**	**23 13 45.9**	**+1.8**
LJFR	**Jufra**	**9.48**	**204**	*i* P	**Pn**	**23 13 45.6**	**-0.2**
	SNR=22						
PERS	**Pernice**	**9.49**	**339**	*i* Pn	**Pn**	**23 13 45.8**	**0.0**
PERS				*i* Sn	**Sn**	**23 15 26.4**	**-5.8**
PERS	**Pernice**	**9.49**	**339**	*i* Pn	**Pn**	**23 13 45.8**	**0.0**
OBKA	**Obir**	**9.55**	**336**	⇓*i*Pn	**Pn**	**23 13 47.4**	**+0.7**
OBKA				⇑*i*Sn	**Sn**	**23 15 29.9**	**-3.9**
OBKA	**Obir**	**9.55**	**336**	Pn	**Pn**	**23 13 47.4**	**+0.7**
SOKA	**Soboth**	**9.55**	**338**	⇑*i*Pn	**Pn**	**23 13 46.8**	**+0.1**
SOKA				⇓*i*Sn	**Sn**	**23 15 28.9**	**-5.0**
SOKA	**Soboth**	**9.55**	**338**	Pn	**Pn**	**23 13 46.8**	**+0.1**
SWA2		**9.71**	**151**	P	**Pn**	**23 13 48.3**	**-0.5**
	baz=154						
SWA2				S	Sn	23 15 27.1	-11
	baz=154						
SWA2		**9.71**	**151**	P	**Pn**	**23 13 48.3**	**-0.5**
KBA	**Koelnbreinsper**	**10.45**	**334**	⇑*i*Pn	**Pn**	**23 13 59.7**	**+0.6**
KBA				⇑*i*Sn	**Sn**	**23 15 51.5**	**-4.5**
KBA	**Koelnbreinsper**	**10.45**	**334**	Pn	**Pn**	**23 13 59.7**	**+0.6**
KECS	**Kecovo**	**10.59**	**1**	*e*SN	Sn	23 15 45.5	-14
VYHS	**Vyhne**	**10.63**	**355**	*e*PN	Pn	23 14 05.1	+3.6
VYHS				*e*SN	Sn	23 15 51.6	-8.7
VYHS	**Vyhne**	**10.63**	**355**	*e*Pn	Pn	23 14 05.1	+3.6
BRTR	**Keskin Array B**	**10.70**	**76**	Pn	**Pn**	**23 14 01.1**	**-1.4**
	comp=E,0.0nm,0.3s,baz=284,slow=19,SNR=2.0						
MOA	**Molln**	**10.83**	**339**	⇓*i*Pn	**Pn**	**23 14 04.6**	**+0.4**
MOA				⇑*i*Sn	**Sn**	**23 16 01.1**	**-4.2**
MOA	**Molln**	**10.83**	**339**	Pn	**Pn**	**23 14 04.6**	**+0.4**
CRVS	**Cervenica-Dubn**	**11.04**	**5**	*e*PN	**Pn**	**23 14 09.8**	**+2.7**
CRVS	**Cervenica-Dubn**	**11.04**	**5**	*e*Pn	**Pn**	**23 14 09.8**	**+2.7**
KOLS	**Kolonicke sedl**	**11.14**	**7**	*e*PN	Pn	23 14 13.9	+5.5
DAVOX	**Davos/Dischmat**	**11.67**	**323**	Pn	**Pn**	**23 14 17.3**	**+1.5**
	comp=E,0.2nm,0.3s,baz=162,slow=19,SNR=2.6						
DAVOX				Sn	**Sn**	**23 16 25.9**	**0.0**
	comp=E,0.6nm,0.3s,baz=18,slow=20,SNR=4.3						
DAVOX				LR	LR	23 19 22.4	
	comp=E,73nm,19.4s,baz=89,slow=40						
GERES	**GERESS Array B**	**11.89**	**339**	Pn	**Pn**	**23 14 19.4**	**+0.6**
	comp=E,0.4nm,0.3s,baz=158,slow=14,SNR=11						
GERES				Sn	Sn	23 16 24.1	-7.2
	comp=E,0.5nm,0.3s,baz=153,slow=22,SNR=6.0						
AWBH		**12.05**	**140**	P	**Pn**	**23 14 19.1**	**-1.8**
	baz=142						
KHC	**Kasperske Hory**	**12.19**	**339**	*e*P	**Pn**	**23 14 23.2**	**+0.4**
KHC				*e*S	Sn	23 16 31.1	-7.3
KHC	**Kasperske Hory**	**12.19**	**339**	Pn	**Pn**	**23 14 23.2**	**+0.4**
AMAG	**Maghara**	**13.01**	**120**	P	**Pn**	**23 14 31.8**	**-2.2**
	baz=121						
RSH		**13.18**	**118**	P	**Pn**	**23 14 33.7**	**-2.6**
	baz=119						
SUZ		**13.26**	**124**	P	**Pn**	**23 14 35.5**	**-1.9**
	baz=125						
HINF	**Hinteralfeld**	**13.88**	**320**	*e*P	**Pn**	**23 14 48.3**	**+2.5**
HNKL	**Nakhl**	**13.97**	**121**	P	**Pn**	**23 14 45.1**	**-2.0**
	baz=122						
CDF	**Champ du Feu**	**14.07**	**322**	*e*P	**Pn**	**23 14 51.1**	**+2.6**
	comp=E,2.4nm,0.3s						
CDF	**Champ du Feu**	**14.07**	**322**	*e*P	**Pn**	**23 14 51.1**	**+2.6**
	comp=E,2.0nm,0.3s						
HAU	**Haudompre**	**14.26**	**319**	*e*P	**Pn**	**23 14 52.7**	**+1.7**
	comp=E,3.5nm,0.3s						
AKASG	**Malin Array Be**	**14.35**	**24**	Pn	**Pn**	**23 14 50.2**	**-2.0**
	comp=E,0.5nm,0.3s,baz=207,slow=12,SNR=3.6						
EIL	**Elat**	**14.79**	**119**	Pn	**Pn**	**23 14 56.3**	**-2.1**
	comp=E,0.3nm,0.3s,baz=264,slow=7.8,SNR=5.5						
ASF	**Jabal al Asfar**	**14.87**	**108**	LR	LR	23 20 49.8	
	comp=E,19nm,19.4s,baz=142,slow=38						
HKAT	**Jabal Katrina**	**14.89**	**125**	P	**Pn**	**23 14 58.4**	**-1.5**
	baz=126						
GNI	**Garni**	**19.24**	**76**	P	**P**	**23 15 52.5**	**-1.2**
	comp=E,0.3nm,0.3s,baz=185,slow=18,SNR=5.4						
BHD	**Baghdad**	**20.24**	**96**	*e*P	P	23 15 53.7	-11
BHD				*e*S	S	23 19 36.7	-14
HFS	**Hagfors**	**22.63**	**352**	P	**P**	**23 16 30.5**	**+0.6**
	comp=E,4.0nm,0.6s,baz=155,slow=11,SNR=47						
NB2	**NORSAR Subarra**	**23.83**	**349**	P	**P**	**23 16 42.3**	**+0.2**
	comp=Z,0.1nm,0.4s,baz=149,slow=11						
NOA	**NORSAR Array B**	**23.83**	**349**	P	**P**	**23 16 42.2**	**+0.1**
	comp=Z,0.8nm,0.4s,baz=160,slow=9.0,SNR=12						
FINES	**FINESS Array B**	**23.86**	**7**	P	**P**	**23 16 42.2**	**0.0**
	comp=Z,1.2nm,0.4s,baz=169,slow=11,SNR=11						
MIB	**Mutribah**	**23.94**	**102**	*e*P	**P**	**23 16 42.9**	**-0.4**
MIB				AMb	AMB	23 16 44.9	
	comp=Z,12nm,0.5s						
MIB	**Mutribah**	**23.94**	**102**	*e*P	**P**	**23 16 42.9**	**-0.4**
	comp=Z,12nm,0.5s						
NAY	**Al-Naaiem**	**24.12**	**103**	*e*P	**P**	**23 16 45.0**	**0.0**
NAY				AMb	AMB	23 16 45.8	
	comp=Z,6.0nm,0.6s						
NAY	**Al-Naaiem**	**24.12**	**103**	*e*P	**P**	**23 16 45.0**	**0.0**
	comp=Z,6.0nm,0.6s						
UMR	**Umm Al-Rimmam**	**24.34**	**102**	*e*P	**P**	**23 16 47.0**	**-0.1**
UMR				AMb	AMB	23 16 47.6	
	comp=Z,11nm,0.6s						
UMR	**Umm Al-Rimmam**	**24.34**	**102**	*e*P	**P**	**23 16 47.0**	**-0.1**
	comp=Z,11nm,0.6s						
KAF	**Kangasniemi**	**24.54**	**7**	*e*p	**P**	**23 16 48.8**	**+0.2**
	comp=Z,1.2nm,0.5s						
KAF	**Kangasniemi**	**24.54**	**7**	*e*P	**P**	**23 16 48.8**	**+0.2**
	comp=Z,1.2nm,0.5s						
JOF	**Joensuu**	**25.97**	**12**	*e*p	**P**	**23 17 02.1**	**+0.7**
	comp=Z,0.8nm,0.4s						
JOF	**Joensuu**	**25.97**	**12**	*e*P	**P**	**23 17 02.1**	**+0.7**
	comp=Z,0.8nm,0.4s						
TORD	**Torodi Ar. Bea**	**29.62**	**219**	P	**P**	**23 17 36.1**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=33,slow=8.7,SNR=8.0						
ARCES	**ARCESS Array B**	**31.83**	**4**	P	**P**	**23 17 53.6**	**0.0**
	comp=Z,0.4nm,0.4s,baz=185,slow=9.7,SNR=9.9						
MKAR	**Makanchi Array**	**45.71**	**58**	P	**P**	**23 19 49.3**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=271,slow=7.5,SNR=13						
ZALV	**Zalesovo Beam**	**46.11**	**48**	P	**P**	**23 19 52.5**	**-0.6**
	comp=Z,3.6nm,0.4s,baz=274,slow=8.2,SNR=20						
SONM	**Songino Array**	**60.88**	**50**	P	**P**	**23 21 41.5**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=308,slow=7.1,SNR=2.4						
ANMO	**Albuquerque**	**92.21**	**319**	LR	LR	00 05 24.9	
	comp=Z,46nm,19.6s,baz=194,slow=35						

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*ISCJB **08** 23:31:24.3±0.6, 52°.40S±0°.08×13°.6E±0°.2, h10km, mb4.1/9, MS3.2/8, Error ellipse: s-maj=19.1km s-min=11.9km az=171.9*

*IDC **08** 23:31:24.9±0.8, 52°.39S×13°.51E, h0km, mb4.1/11, mb1 4.2/11, mb1mx4.0/22, mbtmp4.1/11, MS3.3/8, Ms1 3.2/8, ms1mx3.1/26, Error ellipse: s-maj=26.4km s-min=18.4km az=73.0*

*NEIC **08** 23:31:26.2±0.4, 52°.41S×13°.56E, h10km, mb4.4/2, Error ellipse: s-maj=16.8km s-min=10.1km az=87.0*

ISC 08 23:31:26.3±0.6**, 52°.41S**±0°.10×**13°.6E**±0°.2**, h10km, n30, σ0s.47**/27**, mb4.2**/9**, MS3.3**/8**, 1C, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAIT	**Maitri**	**18.45**	**182**	*e*P	P	23 35 31.1	-11
SNAA	**Sanae**	**20.66**	**195**	*e*P	**P**	**23 36 06.1**	**+0.2**
SNAA	**Sanae**	**20.66**	**195**	*e*P	**P**	**23 36 05.8**	**-0.1**
	24nm,0.9s						
SNAA	**Sanae**	**20.66**	**195**	P	**P**	**23 36 06.4**	**+0.5**
	8.7nm,0.9s,baz=26,slow=9.2,SNR=63						
SNAA				LR	LR	23 42 33.5	
	comp=Z,26nm,20.0s,baz=251,slow=32						
SYO	**Syowa Base**	**20.67**	**153**	⇑*e*Pn	**P**	**23 36 05.0**	**-0.9**
SUR	**Sutherland**	**20.70**	**18**	*e*P	**P**	**23 36 06.2**	**-0.5**
SUR	**Sutherland**	**20.70**	**18**	P	**P**	**23 36 06.8**	**+0.1**
	8.7nm,0.9s,baz=252,slow=20,SNR=2.2						
VNA1	**Neumayer--Stat**	**20.81**	**200**	*e*P	Pn	23 36 08.8	-1.1
BOSA	**Boshof**	**25.31**	**25**	LR	LR	23 45 06.5	
	comp=Z,80nm,18.9s,baz=170,slow=32						
MAW	**Mawson**	**27.98**	**142**	P	**P**	**23 37 16.5**	**-0.2**
MAW	**Mawson**	**27.98**	**142**	P	**P**	**23 37 16.5**	**-0.2**
	0.6nm,0.3s,baz=288,slow=22,SNR=3.8						
MAW				LR	LR	23 47 42.0	
	comp=Z,17nm,18.4s,baz=64,slow=35						
QSPA	**South Pole Qui**	**37.83**	**180**	*e*P	**P**	**23 38 42.0**	**-0.8**
	6.8nm,1.1s						
QSPA	**South Pole Qui**	**37.83**	**180**	P	**P**	**23 38 42.9**	**+0.2**
	2.9nm,0.7s,baz=244,slow=6.4,SNR=6.7						
QSPA				LR	LR	23 53 06.0	
	comp=Z,83nm,21.9s,baz=253,slow=34						
VNDA	**Vanda**	**48.85**	**171**	*e*P	**P**	**23 40 11.0**	**-0.2**
VNDA	**Vanda**	**48.85**	**171**	P	**P**	**23 40 11.5**	**+0.2**
	0.9nm,0.8s,baz=297,slow=9.0,SNR=3.7						
VNDA				LR	LR	00 00 44.9	
	comp=Z,91nm,21.2s,baz=162,slow=36						
KMBO	**Kilima Mbogo**	**54.81**	**29**	LR	LR	00 05 00.3	
	comp=Z,17nm,19.1s,baz=274,slow=37						
CPUP	**Villa Florida**	**58.09**	**267**	P	**P**	**23 41 19.7**	**0.0**
CPUP	**Villa Florida**	**58.09**	**267**	P	**P**	**23 41 19.7**	**0.0**
	2.5nm,0.8s,baz=81,slow=6.5,SNR=7.4						
DBIC	**Dimbokro**	**60.91**	**339**	LR	LR	00 03 09.7	
	comp=Z,29nm,20.2s,baz=355,slow=31						
TORD	**Torodi Ar. Bea**	**66.09**	**347**	P	**P**	**23 42 13.0**	**-0.4**
TORD	**Torodi Ar. Bea**	**66.09**	**347**	P	**P**	**23 42 13.0**	**-0.4**
	1.4nm,0.9s,baz=184,slow=6.5,SNR=6.2						
TORD				LR	LR	00 03 34.1	
	comp=Z,30nm,20.8s,baz=235,slow=29						
SIV	**San Ignacio**	**68.13**	**272**	P	**P**	**23 42 26.2**	**-0.4**
SIV	**San Ignacio**	**68.13**	**272**	P	**P**	**23 42 26.2**	**-0.4**
	1.0nm,0.8s,baz=216,slow=19,SNR=3.5						
LPAZ	**La Paz**	**72.23**	**266**	P	**P**	**23 42 52.4**	**0.0**
	2.8nm,0.8s,baz=108,slow=6.0,SNR=14						
ASAR	**Alice Springs**	**88.18**	**128**	P	**P**	**23 44 18.1**	**+0.5**
ASAR	**Alice Springs**	**88.18**	**128**	P	**P**	**23 44 18.1**	**+0.5**
	1.3nm,0.8s,baz=201,slow=5.0,SNR=9.2						
ESDC	**Sonseca Array**	**92.97**	**347**	P	**P**	**23 44 39.2**	**0.0**
	0.6nm,0.4s,baz=241,slow=15,SNR=7.6						
ARE0	**ARCESS Array S**	**121.94**	**5**	PKPdf	**PKPdf**	**23 50 19.2**	**0.0**
YKA	**Yellowknife Ar**	**151.14**	**311**	PKP	**PKPdf**	**23 51 13.4**	**+1.0**
YKA				PKPbc	**PKPbc**	**23 51 18.5**	**+0.2**
YKA	**Yellowknife Ar**	**151.14**	**311**	PKP	**PKPdf**	**23 51 13.4**	**+1.0**
	0.3nm,0.5s,baz=98,slow=2.3,SNR=5.1						
YKA				PKPbc	**PKPbc**	**23 51 18.5**	**+0.2**
	2.0nm,0.7s,baz=88,slow=2.5,SNR=14						

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*IDC **08** 23:34:11.1±2.9, 31°.72S×177°.87W, h0km, mb4.1/3, mb1 4.3/5, mb1mx3.9/20, mbtmp4.1/5, ML3.5/2, MS3.4/2, Ms1 3.5/2, ms1mx2.8/26, Error ellipse: s-maj=67.2km s-min=25.5km az=115.0*

*ISCJB **08** 23:34:13.6±1.1, 31°.76S±0°.09×177°.8W±0°.2, h35km, mb4.1/4, MS3.5/1, Error ellipse: s-maj=28.0km s-min=8.5km az=20.5*

*NEIC **08** 23:34:15.9±0.7, 31°.70S×177°.90W, h35km, mb4.1/2, Error ellipse: s-maj=19.7km s-min=8.6km az=112.0*

ISC 08 23:34:15.6±1.2**, 31°.7S**±0°.1×**177°.8W**±0°.2**, h35km, n16, σ0s.50**/17**, mb4.2**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.44**	**358**	Pn	**Pn**	**23 34 53.1**	**+0.1**
RAO				Sn	Sn	23 35 14.0	-7.6
RAO	**Raoul Island**	**2.44**	**358**	Pn	**Pn**	**23 34 53.1**	**+0.1**
	54nm,0.3s,baz=49,slow=20,SNR=2.4						
RAO				Sn	Sn	23 35 14.0	-7.6
	99nm,0.3s,baz=94,slow=22,SNR=5.1						
RAO				LR	LR	23 35 25.7	
	comp=Z,891nm,19.4s,baz=288,slow=30						
URZ	**Urewera**	**7.75**	**211**	Pn	**Pn**	**23 36 05.4**	**-0.6**
URZ				Sn	**Sn**	**23 37 32.7**	**+0.2**
URZ	**Urewera**	**7.75**	**211**	Pn	**Pn**	**23 36 05.4**	**-0.6**
	0.1nm,0.3s,baz=94,slow=18,SNR=1.7						
URZ				Sn	**Sn**	**23 37 32.7**	**+0.2**
	1.0nm,0.3s,baz=182,slow=18,SNR=6.2						
AFI	**Afiamalu**	**18.56**	**19**	P	**Pn**	**23 38 29.7**	**-0.2**
STKA	**Stephens Creek**	**34.35**	**259**	*e*P	**P**	**23 40 58.9**	**-0.3**
	1.3nm,1.2s						
STKA	**Stephens Creek**	**34.35**	**259**	P	**P**	**23 41 00.5**	**+1.3**
	1.6nm,0.8s,baz=119,slow=10,SNR=2.8						
ASAR	**Alice Springs**	**43.20**	**268**	P	**P**	**23 42 13.4**	**0.0**
ASAR	**Alice Springs**	**43.20**	**268**	P	**P**	**23 42 13.4**	**0.0**
	1.3nm,0.5s,baz=106,slow=7.4,SNR=21						
WRAB	**Tennant Creek**	**44.30**	**273**	*e*P	**P**	**23 42 21.7**	**-0.7**
	6.8nm,1.0s						
WRA	**Warramunga Arr**	**44.31**	**273**	P	**P**	**23 42 21.9**	**-0.4**
WRA	**Warramunga Arr**	**44.31**	**273**	P	**P**	**23 42 21.9**	**-0.4**
	2.0nm,0.3s,baz=112,slow=8.0,SNR=32						
VNDA	**Vanda**	**46.82**	**186**	P	**P**	**23 42 41.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**93.97**	**289**	LR	LR	00 27 15.9	
	comp=Z,14nm,19.0s,baz=140,slow=34						
FINES	**FINESS Array B**	**146.41**	**339**	PKPbc	**PKPbc**	**23 53 52.1**	**0.0**
FINES	**FINESS Array B**	**146.41**	**339**	PKPbc	**PKPbc**	**23 53 52.1**	**0.0**
	0.9nm,0.6s,baz=11,slow=2.8,SNR=2.2						

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*MOS **08** 23:35:03.3±1.5, 48°.67N×154°.83E, h57km, mb4.1/9, Error ellipse: s-maj=15.8km s-min=7.1km az=62.1*

*ISCJB **08** 23:35:05.0±0.7, 48°.74N±0°.07×154°.8E±0°.1, h67km±7km, mb3.6/14, Error ellipse: s-maj=15.9km s-min=4.8km az=135.5*

*IDC **08** 23:35:04.6±0.7, 48°.64N×154°.59E, h46km±7km, mb3.5/12, mb1 3.7/15, mb1mx3.6/28, mbtmp3.5/15, ML3.7/2, MS3.0/4, Ms1 3.0/4, ms1mx2.4/32, Error ellipse: s-maj=24.3km s-min=13.1km az=142.0*

*KRSC **08** 23:35:05.1±0.6, 48°.64N×155°.69E, h10km±10km, ML4.3*

ISC 08 23:35:05.2±0.8**, 48°.65N**±0°.09×**154°.92E**±0°.09**, h56km**±8km**, n51, σ1s.62**/60**, mb3.7**/14**, MS3.0**/3**, 3C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.17**	**20**	*e*P	**Pn**	**23 35 39.8**	**+0.8**
SKR				*e*S	**Sn**	**23 36 04.6**	**-0.1**
SKR	**Severo-Kuril's**	**2.17**	**20**	*e*PN	Pn	23 35 35.0	-4.0
SKR				*e*S	**Sn**	**23 36 01.2**	**-3.5**
SKR				pmax	pmax		
	comp=Z,80nm,0.5s						
SKR				smax	smax		
	comp=N,670μm,0.4s						
SKR				smax	smax		
	comp=E,310nm,0.5s						
SKR				smax	smax		
	comp=N,1μm,2.0s						
SKR				smax	smax		
	comp=E,800nm,2.0s						
MIPR	**Malaya Ipel'ka**	**3.81**	**17**	*e*P	**Pn**	**23 36 02.9**	**+1.5**
ASAK	**Asacha**	**4.19**	**26**	*e*P	**Pn**	**23 36 08.6**	**+2.0**
ASAK				*e*S	**Sn**	**23 36 54.5**	**+0.2**
MTVR	**Mutnovka**	**4.36**	**27**	*e*P	**Pn**	**23 36 10.2**	**+1.2**
MTVR				*e*S	**Sn**	**23 36 57.6**	**-1.0**
GRL	**Gorelyy**	**4.39**	**26**	P	**Pn**	**23 36 11.3**	**+1.9**
RUS	**Russkaya**	**4.42**	**30**	*e*P	**Pn**	**23 36 10.0**	**+0.3**
RUS				*e*S	**Sn**	**23 36 57.5**	**-2.4**
RUS	**Russkaya**	**4.42**	**30**	PN	**Pn**	**23 36 10.0**	**+0.3**
RUS				S	**Sn**	**23 36 57.5**	**-2.4**
APC	**Apacha**	**4.51**	**18**	*e*P	**Pn**	**23 36 13.1**	**+2.2**
APC				S	**Sn**	**23 37 01.9**	**0.0**
PETK	**Petropavlovsk-**	**4.79**	**20**	PN	**Pn**	**23 36 16.6**	**+1.8**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK	**Petropavlovsk-**	**4.79**	**20**	P	**Pn**	**23 36 16.6**	**+1.8**
	comp=Z,2.2nm,0.3s,baz=182,slow=14,SNR=17						
PET	**Petropavlovsk**	**4.97**	**27**	*e*S	**Sn**	**23 37 12.0**	**-1.4**
PET	**Petropavlovsk**	**4.97**	**27**	*e*PN	**Pn**	**23 36 18.7**	**+1.5**
PET				*e*S	**Sn**	**23 37 14.3**	**+0.9**
PET				smax	smax		
	comp=N,101nm,0.6s						
PET				smax	smax		
	comp=E,97nm,0.5s						
UGLR	**Uglovaya**	**5.19**	**27**	P	**Pn**	**23 36 22.0**	**+1.7**
KOK	**Koryaka**	**5.20**	**25**	*e*P	**Pn**	**23 36 23.2**	**+2.7**
SMAR	**Somma**	**5.23**	**27**	P	**Pn**	**23 36 22.2**	**+1.3**
KRER	**Koryakskii**	**5.25**	**26**	*e*P	**Pn**	**23 36 22.3**	**+1.1**
SDLR	**Sedlovina**	**5.26**	**27**	*e*P	**Pn**	**23 36 22.1**	**+0.7**
GNL	**Ganaly**	**5.39**	**19**	*e*P	**Pn**	**23 36 25.8**	**+2.7**
SPN	**Mys Shipunski**	**5.50**	**34**	*e*P	**Pn**	**23 36 24.6**	**+0.2**
SPN				*e*S	**Sn**	**23 37 24.7**	**-1.5**
SPN	**Mys Shipunski**	**5.50**	**34**	PN	**Pn**	**23 36 24.6**	**+0.2**
KUR	**Kuril'sk**	**5.92**	**237**	*i* PN	**Pn**	**23 36 31.9**	**+1.7**
KUR				*i* S	**Sn**	**23 37 38.8**	**+2.2**
MKZ	**Mys Kozlova**	**7.27**	**33**	*e*P	**Pn**	**23 36 48.0**	**-0.7**
MKZ	**Mys Kozlova**	**7.27**	**33**	PN	**Pn**	**23 36 48.0**	**-0.7**
TUMR	**Tumrok**	**7.38**	**24**	P	**Pn**	**23 36 51.7**	**+1.4**
YSS	**Yuzh-Sakhalins**	**8.37**	**263**	*e*PN	**Pn**	**23 37 05.0**	**+1.3**
ASAJ	**Asahikawa**	**9.65**	**247**	P	**Pn**	**23 37 23.3**	**+2.0**
	comp=E,3.2nm,0.3s,baz=99,slow=18,SNR=15						
ASAJ				LR	LR	23 40 39.7	
	comp=E,60nm,21.5s,baz=214,slow=36						
ERM	**Erimo**	**10.61**	**236**	⇑*e*PN	**Pn**	**23 37 33.3**	**-1.0**
FX1	**Attu Island--F**	**12.29**	**63**	P	**Pn**	**23 37 57.3**	**0.0**
	comp=E,1.4nm,0.3s,baz=75,slow=22,SNR=5.7						
FX1				S	Sn	23 40 04.5	-8.1
	comp=E,1.8nm,0.3s,baz=158,slow=19,SNR=5.9						
USRK	**Ussuriysk Arra**	**16.40**	**263**	P	**Pn**	**23 38 47.4**	**-4.1**
	comp=E,0.1nm,0.3s,baz=92,slow=5.8,SNR=3.5						
VLA	**Vladivostok**	**16.93**	**260**	⇑*e*P	**Pn**	**23 38 56.9**	**-1.2**
VLA				pmax	pmax		
	comp=Z,16nm,0.6s						
MJAR	**Matsushiro Arr**	**17.21**	**231**	P	**Pn**	**23 38 58.0**	**-3.7**
	comp=Z,0.3nm,0.3s,baz=27,slow=12,SNR=3.2						
BILL	**Bilibino**	**20.27**	**12**	*e*P	Pn	23 39 38.3	+0.2
BILL				pmax	pmax		
	comp=Z,11nm,1.1s						
KSRS	**Korea Array**	**22.56**	**250**	P	**P**	**23 39 59.0**	**-1.5**
	comp=Z,1.4nm,0.6s,baz=43,slow=9.8,SNR=6.9						
SONM	**Songino Array**	**31.89**	**287**	LR	LR	23 54 57.0	
	comp=Z,46nm,20.2s,baz=61,slow=38						
ILAR	**Eielson Array**	**34.30**	**40**	P	**P**	**23 41 46.8**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=255,slow=7.2,SNR=4.8						
KRAR	**Krasnoyarsk**	**37.45**	**305**	⇑*e*P	**P**	**23 42 11.5**	**-1.2**
ZALV	**Zalesovo Beam**	**42.51**	**305**	LR	LR	00 01 57.5	
	comp=Z,18nm,19.5s,baz=72,slow=38						
MKAR	**Makanchi Array**	**47.16**	**297**	P	**P**	**23 43 30.7**	**-1.2**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,18nm,21.0s						
MKAR	**Makanchi Array**	**47.16**	**297**	P	**P**	**23 43 30.6**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=60,slow=7.4,SNR=7.8						
MKAR				LR	LR	00 04 52.4	
	comp=Z,18nm,21.0s,baz=258,slow=38						
KURK	**Kurchatov**	**47.34**	**303**	⇓*e*P	**P**	**23 43 32.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,4.0nm,2.5s						
YKA	**Yellowknife Ar**	**48.67**	**38**	P	**P**	**23 43 44.5**	**+1.3**
	comp=Z,0.7nm,0.8s,baz=296,slow=7.6,SNR=4.0						
CMAR	**Chiang Mai Arr**	**54.00**	**257**	P	**P**	**23 44 22.8**	**-0.9**
	comp=Z,2.7nm,0.8s,baz=30,slow=7.2,SNR=12						
NVAR	**Mina Array Bea**	**60.49**	**64**	P	**P**	**23 45 11.2**	**+1.8**
	comp=Z,0.3nm,0.5s,baz=285,slow=6.8,SNR=3.9						
NVAR				pP	**pP**	**23 45 24.1**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=311,slow=6.2,SNR=2.7						
PDAR	**Pinedale Array**	**62.65**	**56**	P	**P**	**23 45 25.7**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=298,slow=3.2,SNR=6.3						
FINES	**FINESS Array B**	**62.83**	**335**	P	**P**	**23 45 23.9**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=76,slow=6.3,SNR=3.4						
OBN	**Obninsk**	**64.42**	**326**	*e*P	**P**	**23 45 35.4**	**+0.3**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	**NORSAR Array B**	**66.81**	**342**	P	**P**	**23 45 50.5**	**0.0**
	comp=Z,0.2nm,0.7s,baz=43,slow=7.3,SNR=2.9						
WRA	**Warramunga Arr**	**70.72**	**201**	P	**P**	**23 46 14.7**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=16,slow=6.6,SNR=5.0						
ASAR	**Alice Springs**	**74.41**	**200**	P	**P**	**23 46 37.3**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=13,slow=4.8,SNR=7.8						
ASAR				pP	**PcP**	**23 46 50.7**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=12,slow=5.6,SNR=2.3						
TXAR	**Lajitas Array**	**75.51**	**62**	P	**P**	**23 46 45.2**	**+1.6**
	comp=Z,0.6nm,0.6s,baz=300,slow=4.5,SNR=6.4						
TXAR				pP	**pP**	**23 46 58.7**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=304,slow=4.4,SNR=5.4						

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*ISK **08** 23:43:09.8, 37°.88N×29°.20E, h3km, MD2.7*

*DDA **08** 23:43:09.8, 37°.90N×29°.23E, h7km, MD2.8*

*CSEM **08** 23:43:09.9±0.2, 37°.89N×29°.23E, h2km, MD2.7, Error ellipse: s-maj=3.5km s-min=2.5km az=104.0*

*ISCJB **08** 23:43:10.2±0.5, 37°.89N±0°.02×29°.21E±0°.04, h6km±5km, Error ellipse: s-maj=5.5km s-min=4.2km az=9.0*

ISC 08 23:43:10.1±1.0**, 37°.89N**±0°.02×**29°.22E**±0°.03**, h6km**±10km**, n22, σ0s.60**/42**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.20**	**227**	*e*PG	**Pg**	**23 43 14.2**	**0.0**
DENT				*e*SG	**Sg**	**23 43 17.7**	**+0.8**
DENT	**Denizli**	**0.20**	**227**	*e*Pg	**Pg**	**23 43 14.2**	**0.0**
DENT				*e*Sg	**Sg**	**23 43 17.7**	**+0.8**
DNZL	**Cakiroluk**	**0.24**	**214**	*i* P	**Pg**	**23 43 15.0**	**0.0**
DNZL				*i* S	**Sg**	**23 43 18.8**	**+0.5**
DNZL	**Cakiroluk**	**0.24**	**214**	*i* P	**Pg**	**23 43 15.0**	**0.0**
DNZL				*i* S	**Sg**	**23 43 18.8**	**+0.5**
KHAL	**Karahalli**	**0.52**	**24**	*i* P	**Pg**	**23 43 20.1**	**-0.1**
KHAL				*i* S	**Sg**	**23 43 27.4**	**+0.3**
KHAL	**Karahalli**	**0.52**	**24**	*i* P	**Pg**	**23 43 20.1**	**-0.1**
KHAL				*i* S	**Sg**	**23 43 27.4**	**+0.3**
GOLH	**Golhisar**	**0.71**	**157**	*i* P	**Pg**	**23 43 22.9**	**-0.9**
GOLH				*i* S	**Sb**	**23 43 34.2**	**-0.8**
GOLH	**Golhisar**	**0.71**	**157**	*i* P	**Pg**	**23 43 22.9**	**-0.9**
GOLH				*i* S	**Sb**	**23 43 34.2**	**-0.8**
KULA	**Kula-Manisa**	**0.76**	**325**	*e*PG	**Pb**	**23 43 25.5**	**-0.4**
KULA				*e*SG	**Sb**	**23 43 36.5**	**0.0**
KULA	**Kula-Manisa**	**0.76**	**325**	*e*Pg	**Pb**	**23 43 25.5**	**-0.4**
KULA				*e*Sg	**Sb**	**23 43 36.5**	**0.0**
MANT	**Manisa**	**0.79**	**319**	*i* P	**Pg**	**23 43 25.3**	**-0.1**
MANT				*i* S	**Sb**	**23 43 37.0**	**-0.5**
MANT	**Manisa**	**0.79**	**319**	*i* P	**Pg**	**23 43 25.3**	**-0.1**
MANT				*i* S	**Sb**	**23 43 37.0**	**-0.5**
AYDN	**Tasoluk**	**1.09**	**258**	*i* P	**Pg**	**23 43 30.6**	**-0.4**
AYDN				*i* S	**Sg**	**23 43 44.3**	**-0.8**
AYDN	**Tasoluk**	**1.09**	**258**	*i* P	**Pg**	**23 43 30.6**	**-0.4**
AYDN				*i* S	**Sg**	**23 43 44.3**	**-0.8**
GDZ	**Gediz**	**1.21**	**10**	*i* P	**Pg**	**23 43 32.7**	**-0.7**
GDZ				*i* S	**Sb**	**23 43 49.0**	**-0.5**
GDZ	**Gediz**	**1.21**	**10**	*i* P	**Pg**	**23 43 32.7**	**-0.7**
GDZ				*i* S	**Sb**	**23 43 49.0**	**-0.5**
DEMI	**Demirci**	**1.21**	**341**	*i* P	**Pg**	**23 43 33.0**	**-0.4**
DEMI				*i* S	**Sg**	**23 43 49.0**	**-0.2**
DEMI	**Demirci**	**1.21**	**341**	*i* P	**Pg**	**23 43 33.0**	**-0.4**
DEMI				*i* S	**Sg**	**23 43 49.0**	**-0.2**
SHUT	**Suhut-Afyon**	**1.24**	**57**	*e*PN	**Pn**	**23 43 34.6**	**+0.5**
SHUT				*e*SN	**Sn**	**23 43 52.6**	**+1.4**
SHUT	**Suhut-Afyon**	**1.24**	**57**	*e*Pn	**Pn**	**23 43 34.6**	**+0.5**
SHUT				*e*Sn	**Sn**	**23 43 52.6**	**+1.4**
TVSB	**Tavsanli**	**1.56**	**7**	*e*PN	**Pn**	**23 43 38.7**	**+0.1**
TVSB	**Tavsanli**	**1.56**	**7**	*e*Pn	**Pn**	**23 43 38.7**	**+0.1**

WEL 08 23:43:49.9±0.2**, 37°.05S**×**177°.22E, h5km, ML3.5**/7**, 2C-1D, Error ellipse: s-maj=2.1km s-min=1.9km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WIZ	**White Island**	**0.48**	**183**	PG	Pg	23 43 59.5	+0.3
WIZ				SG	Sg	23 44 05.3	-0.1
OPRZ	**Ohinepanea**	**0.95**	**213**	⇓P*	Pg	23 44 07.3	-1.0
OPRZ				S*	Sg	23 44 18.9	-1.7
MXZ	**Matakaoa Point**	**1.01**	**121**	⇑P*	Pg	23 44 08.1	-1.1
MXZ				S*	Sg	23 44 20.5	-1.8
MXZ				AML	AML	23 44 25.1	
TGRZ	**Tauranga**	**1.02**	**228**	P*	Pg	23 44 09.1	-0.4
TGRZ				S*	Sg	23 44 22.1	-0.7
TGRZ				AML	AML	23 44 24.9	
MARZ	**Manawahe**	**1.03**	**205**	P*	Pg	23 44 08.8	-1.0
MARZ				S*	Sg	23 44 20.8	-2.4
URZ	**Urewera**	**1.21**	**184**	⇑P*	Pg	23 44 11.1	-2.1
URZ				AML	AML	23 44 31.1	
URZ				AML	AML	23 44 33.7	
KUZ	**Kuaotunu**	**1.24**	**284**	P*	Pg	23 44 12.6	-1.1
KUZ				AML	AML	23 44 29.7	
KUZ				AML	AML	23 44 29.7	
KUZ				AML	AML	23 44 29.8	
KUZ				AML	AML	23 44 29.8	
MWZ	**Matawai**	**1.31**	**169**	P*	Pn	23 44 12.3	-2.6
MWZ				AML	AML	23 44 35.4	
MWZ				AML	AML	23 44 35.8	
PUZ	**Puketiti**	**1.31**	**141**	P*	Pn	23 44 14.5	-0.5
PUZ				AML	AML	23 44 45.3	
PUZ				AML	AML	23 44 52.7	
MKAZ	**Moumakai**	**1.64**	**267**	PN	Pn	23 44 18.2	-1.2
MKAZ				AML	AML	23 44 42.3	

IDC 09 00:11:25.1±1.1, 18°.37N×122°.32E, h0km, mb3.6/7, mb1 3.8/7, mb1mx3.5/26, mbtmp3.6/7, MS2.9/2, Ms1 2.9/2, ms1mx2.1/30, Error ellipse: s-maj=53.1km s-min=20.1km az=62.0
ISCJB 09 00:11:33.2±0.8, 17°.78N±0°.05×120°.08E±0°.06, h40km±11km, mb3.6/6, MS2.8/2, Error ellipse: s-maj=10.1km s-min=8.1km az=27.4
MAN 09 00:11:33, 17°.76N×120°.10E, h28km, mb4.7, ML3.6, MS3.6
ISC 09 00:11:32.0±1.9, 17°.78N±0°.06×120°.02E±0°.06, h23km±15km, n21, σ0s93/21, mb3.7/6, 2C-2D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.44	71	⇓iP	Pn	00 11 43.0	+0.1
ABRA	Dolores	0.67	101	eP	Pn	00 11 45.3	-0.7
ABRA				eS	Sb	00 11 54.1	+0.2
PIP	Pasuquin	0.79	46	⇑iP	Pn	00 11 47.6	-0.1
BOLP	Bolinao	1.39	184	eP	Pb	00 11 57.1	-0.2
BOLP				eS	Sb	00 12 14.4	-0.2
BCPH	Baguio City Da	1.49	159	⇑iP	Pn	00 11 57.6	+0.1
CVP	Callao Caves	1.72	92	⇓iP	Pn	00 11 60.0	-0.5
CAUP	Cauayan	1.91	115	eP	Pn	00 12 04.1	+1.0
CAUP				eS	Sn	00 12 26.9	+0.4
SCZP	Santa Cruz	1.99	183	eP	Pn	00 12 03.7	-0.6
SCZP				eS	Sb	00 12 32.5	+0.6
PALP	Palanan	2.40	107	eP	Pn	00 12 09.8	-0.1
PALP				eS	Sn	00 12 38.5	-0.1
BALP	Baler	2.51	143	eP	Pn	00 12 11.9	+0.5
BALP				eS	Sn	00 12 41.2	-0.1
POLP	Polilio Island	3.55	148	eP	Pb	00 12 33.7	-0.3
CMAR	Chiang Mai Arr	20.05	275	P	Pn	00 16 23.4	+18
	0.8nm,0.3s,baz=86,slow=8.6,SNR=5.2						
KSRS	Korea Array	20.80	18	LR	LR	00 24 44.3	
	comp=Z,17nm,18.7s,baz=240,slow=41						
WRA	Warramunga Arr	40.03	159	P	P	00 19 00.1	-5.3
	0.3nm,0.3s,baz=353,slow=8.4,SNR=4.6						
MKAR	Makanchi Array	42.42	321	P	P	00 19 29.0	+4.2
	0.5nm,0.9s,baz=112,slow=9.0,SNR=4.3						
ASAR	Alice Springs	43.36	161	P	P	00 19 28.9	-3.8
	0.5nm,0.4s,baz=338,slow=6.9,SNR=7.8						
KURBB	Kurchatov Arra	46.48	324	P	P	00 19 59.8	+2.6
	1.0nm,0.8s,baz=120,slow=8.4,SNR=11						
ARCES	ARCESS Array B	75.07	339	P	P	00 23 10.9	-0.6
	1.4nm,0.9s,baz=86,slow=9.8,SNR=5.7						
EIL	Elat	77.25	297	LR	LR	01 00 34.8	
	comp=Z,10nm,18.4s,baz=82,slow=37						
NB2	NORSAR Subarra	83.36	332	P	P	00 23 55.4	-1.7
	comp=Z,0.5nm,0.7s,baz=66,slow=4.8						
NOA	NORSAR Array B	83.36	332	P	P	00 23 55.8	-1.3
	comp=Z,0.3nm,0.6s,baz=64,slow=4.9,SNR=4.8						

ISCJB 09 00:17:18.3±0.3, 37°.45N±0°.03×72°.13E±0°.06, h150km, mb3.5/11, Error ellipse: s-maj=7.0km s-min=2.9km az=160.0
IDC 09 00:17:21.0±2.9, 37°.42N×72°.29E, h185km±24km, mb3.2/11, mb1 3.5/17, mb1mx3.3/33, mbtmp3.4/17, Error ellipse: s-maj=24.5km s-min=13.8km az=173.0
NNC 09 00:17:28.9±2.4, 38°.11N×72°.22E, h217km±17km, mb3.1, mpv4.0, Error ellipse: s-maj=22.4km s-min=11.3km az=14.0
ISC 09 00:17:17.9±0.6, 37°.51N±0°.05×72°.13E±0°.07, h150km, n59, σ1s89/55, mb3.6/11, 10C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.69	183	⇑P	Pn	00 18 19.4	+5.1
CEP				S	Sn	00 19 02.0	+4.1
CHCP	Chirah Chowk	3.96	166	⇑P	Pn	00 18 23.3	+5.6
THW	Thamme Wali	4.72	184	⇓P	Pn	00 18 32.0	+4.3
AML	Almayashu	4.77	14	P	Pn	00 18 33.1	+4.5
	SNR=48						
UCH	Uchtor	5.05	21	P	Sn	00 19 33.4	+2.8
	SNR=19						
KZA	Kyzart	5.16	27	P	Pn	00 18 37.7	+3.9
	SNR=17						
EKS2	Erkin-Say	5.30	13	P	Pn	00 18 40.2	+4.9
	SNR=13						
AAK	Ala-Archa	5.43	19	P	Pn	00 18 42.9	+5.8
	SNR=6.0						
AAK	Ala-Archa	5.43	19	P	Pn	00 18 41.8	+4.7
	6.5nm,0.3s,baz=107,slow=5.5,SNR=16						
AAK				S	Sn	00 19 42.9	+4.0
	6.5nm,0.3s,baz=324,slow=23,SNR=20						
SARP	Sargodha	5.60	175	P	Pn	00 18 42.5	+3.2
SARP				S	Sn	00 19 44.0	+1.2
ULHL	Ulahol	5.69	33	P	Pn	00 18 44.3	+3.7
	SNR=6.3						
KK31	Karatay Array	5.72	348	P	Pn	00 18 45.2	+4.4
	16nm,0.4s,baz=155,slow=11,SNR=595						
KK31				S	Sn	00 19 47.3	+1.7
	17nm,0.2s,baz=159,slow=19,SNR=20						
CHMS	Chumysh	5.83	19	P	Pn	00 18 47.0	+4.6
	SNR=7.2						
THN	Thein Dam	5.86	149	ePKP	Pn	00 18 43.0	+0.2
THN				eS	Sn	00 19 47.3	-1.8
TKM2	Tokmak 2	6.02	25	⇑P	Pn	00 18 49.4	+4.4
	7.7nm,0.6s						
TKM2				⇑S	Sn	00 19 53.6	+0.4
	10nm,0.8s						
TKM2	Tokmak 2	6.02	25	P	Pn	00 18 49.7	+4.6
	SNR=13						
USP	Ospenovka	6.03	17	P	Pn	00 18 49.7	+4.8
	SNR=6.3						
DHRM	DHARAMSHALA	6.27	146	ePKP	Pn	00 18 50.8	+2.3
DHRM				eS	Sn	00 19 57.9	-1.4
DHRM				AML	AML	00 20 01.5	
	comp=N,476nm,0.5s						
DHRM				AML	AML	00 20 01.6	
	comp=E,246nm,0.5s						
SDNR	Sundarnagar	7.21	145	ePKP	Pn	00 19 03.0	+2.2
SDNR				eS	Sn	00 20 20.6	-0.9
SMLA	Simla	7.61	145	iP	Pn	00 19 08.1	+1.9
SMLA				eS	Sn	00 20 26.4	-4.7
SMLA				AML	AML	00 20 33.1	
	comp=E,236nm,0.4s						
SMLA				AML	AML	00 20 34.5	
	comp=N,177nm,0.4s						
DDI	Dehra Dun	8.70	144	ePKP	Pn	00 19 22.8	+2.0
MK31	Makanchi Array	11.94	36	⇓P	Pn	00 20 06.1	+2.8
	comp=N,1.3nm,0.4s,baz=219,slow=13,SNR=39						
MKAR	Makanchi Array	11.94	36	P	Pn	00 20 05.3	+1.9
	comp=N,0.2nm,0.3s,baz=202,slow=10,SNR=11						
PYUN	Piuthan	13.09	133	eP	Pn	00 20 17.6	-0.9
	comp=N,58nm,0.4s						
DANN	Dangsing	13.37	130	eP	Pn	00 20 21.1	-1.0
	comp=N,42nm,0.3s						
KOLN	Koldanda	13.69	132	eP	Pn	00 20 25.8	-0.4
	comp=N,24nm,0.3s						
KUR17	Kurchatov Arra	13.88	17	P	P	00 20 29.5	-1.9
KURBB	Kurchatov Arra	13.88	17	P	P	00 20 32.2	+0.7
	comp=N,0.3nm,0.3s,baz=204,slow=11,SNR=53						
KURK	Kurchatov	13.99	17	⇓P	Pn	00 20 30.6	+1.1
	comp=N,10nm,0.9s						
AB31	Akbulak array	14.68	327	⇑P	P	00 20 40.4	0.0
	comp=N,1.5nm,0.3s,baz=134,slow=14,SNR=80						
AB31				⇓S	Sn	00 23 16.1	-4.9
	comp=N,2.1nm,0.5s,baz=149,slow=23,SNR=7.5						
KKN	Kakani	14.71	127	eP	Pn	00 20 38.8	-0.2
	comp=N,62nm,0.7s						
DMN	Daman	14.73	128	eP	Pn	00 20 39.3	+0.1
	comp=N,28nm,0.3s						
PKIN	Phulchoki	14.93	128	eP	P	00 20 42.5	-1.2
	comp=N,50nm,0.6s						
BHPL	Bhopal	14.94	161	eS	Sn	00 23 17.1	-11
PKI	Pulchoki	14.94	128	eP	P	00 20 42.5	-1.4
	comp=N,44nm,0.6s						
GUN	Gumba	15.01	126	eP	Pn	00 20 43.1	+0.3
	comp=N,61nm,0.4s						
VOSK	Vostochnaya	15.23	357	⇑P	P	00 20 45.6	-0.9
	comp=N,1.0nm,0.8s						
BVA0	Borovoye Array	15.56	356	⇑P	P	00 20 50.2	+0.1
	comp=N,3.1nm,0.8s,baz=168,slow=13,SNR=16						
BVAR	Borovoye Array	15.56	356	P	P	00 20 51.2	+1.1
	comp=N,0.5nm,0.3s,baz=168,slow=13,SNR=20						
BVAR				S	Sn	00 23 40.4	-1.6
	comp=N,0.2nm,0.3s,baz=165,slow=22,SNR=2.8						
ZRNK	Zerenda	15.59	353	⇑P	P	00 20 50.3	-0.2
	comp=N,2.1nm,0.7s						
BRVK	Borovoye	15.60	356	⇑P	P	00 20 50.6	+0.1
	comp=N,7.0nm,0.9s						
RAMN	Ramite	16.13	127	eP	P	00 20 57.3	+0.4
	comp=N,43nm,0.4s						
AKTO	Aktyubinsk	16.39	326	⇓P	P	00 21 01.4	+2.1
	comp=N,5.0nm,0.4s						
AKTO				⇑S	S	00 23 58.2	-3.0
	comp=N,2.7nm,0.7s						
AKTO	Aktyubinsk	16.39	326	P	P	00 21 02.0	+2.6
	comp=N,2.8nm,0.3s,baz=117,slow=9.6,SNR=32						
AKTO				S	S	00 23 58.6	-2.6
	comp=N,0.3nm,0.3s,baz=61,slow=18,SNR=3.9						
TAPN	Taplejung	16.59	123	eP	Pn	00 21 02.8	+0.7
	comp=N,20nm,0.3s						
ODAN	Odare	16.70	125	eP	Pn	00 21 04.1	+0.6
	comp=N,17nm,0.3s						
ZALV	Zalesovo Beam	18.62	24	P	Pn	00 21 25.1	-0.7
	comp=N,3.8nm,0.3s,baz=221,slow=9.7,SNR=101						
GNI	Garni	21.46	286	P	P	00 21 58.3	+3.6
	comp=N,1.0nm,0.3s,baz=230,slow=6.3,SNR=3.6						
KBZ	Khabaz	22.96	295	P	P	00 22 11.2	+2.1
	comp=N,1.0nm,0.6s,baz=127,slow=10,SNR=4.2						
SONM	Songino Array	27.02	57	P	P	00 22 46.9	+0.9
	comp=N,1.5nm,0.6s,baz=256,slow=9.3,SNR=8.3						
BRTR	Keskin Array B	30.00	286	P	P	00 23 14.2	+1.6
	comp=N,0.6nm,0.5s,baz=107,slow=8.5,SNR=6.4						
FINES	FINESS Array B	37.16	325	P	P	00 24 14.8	+0.9
	comp=N,0.5nm,0.4s,baz=180,slow=7.6,SNR=4.1						
ARCES	ARCESS Array B	40.56	337	P	P	00 24 43.0	+0.9
	comp=N,0.7nm,0.8s,baz=105,slow=7.2,SNR=5.1						
NB2	NORSAR Subarra	44.12	322	P	P	00 25 11.0	-0.1
	comp=Z,0.3nm,0.5s,baz=93,slow=7.9						
NOA	NORSAR Array B	44.12	322	P	P	00 25 11.2	+0.1
	comp=Z,0.4nm,0.8s,baz=95,slow=8.3,SNR=4.6						
TORD	Torodi Ar. Bea	66.64	269	P	P	00 27 51.9	-0.7
	comp=Z,0.4nm,0.4s,baz=46,slow=6.0,SNR=14						
ILAR	Eielson Array	73.56	16	P	P	00 28 33.1	-0.9
	comp=Z,1.0nm,0.9s,baz=324,slow=5.0,SNR=8.5						
YKA	Yellowknife Ar	80.19	3	P	P	00 29 10.8	-0.3
	comp=Z,1.2nm,0.5s,baz=350,slow=5.5,SNR=16						
WRA	Warramunga Arr	81.77	123	P	P	00 29 17.9	-2.2
	comp=Z,0.3nm,0.7s,baz=326,slow=4.7,SNR=3.0						

TIF 09 00:35:23.9, 42°.50N×43°.97E, h16km±1km
MOS 09 00:35:25.1±1.3, 42°.46N×43°.90E, h11km, mb3.9/1, Error ellipse: s-maj=12.1km s-min=5.3km az=86.6
CSEM 09 00:35:25.1, 42°.46N×43°.90E, h11km, mb3.9, After OBN
ISC 09 00:35:24.8±1.0, 42°.45N±0°.02×43°.91E±0°.02, h8km±9km, n47, σ0s62/94, 6C-9D, Western Caucasus

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ZEI	Tsey	0.32	359	⇓iPG	Pg	00 35 31.0	-0.2
ZEI				iS	Sg	00 35 36.0	+0.4
ZEI	Tsey	0.32	359	iPg	Pg	00 35 31.0	-0.2
ZEI				iSg	Sg	00 35 36.0	+0.4
ONI	Oni	0.36	293	P	Pg	00 35 32.4	+0.5
ONI				S	Sb	00 35 38.5	-1.0
GUDG	Gudauri	0.42	87	P	Pg	00 35 31.9	-1.1
GUDG				S	Sg	00 35 37.7	-0.9
LACR	Lac	0.48	37	⇓iPG	Pg	00 35 33.1	-0.9
LACR				eS	Sg	00 35 40.2	-0.1
LACR	Lac	0.48	37	iPg	Pg	00 35 33.1	-0.9
LACR				eSg	Sg	00 35 40.2	-0.1
GOR	Gori	0.48	162	P	Pg	00 35 34.7	+0.6
GOR				S	Sb	00 35 42.7	-0.1
DIGR	Digorskoe uzhe	0.51	332	⇓iPG	Pg	00 35 34.4	-0.3
DIGR				iS	Sg	00 35 41.5	0.0
DIGR	Digorskoe uzhe	0.51	332	iPg	Pg	00 35 34.4	-0.3
DIGR				iSg	Sg	00 35 41.5	0.0
KORR	Kora	0.65	10	⇑iPG	Pg	00 35 37.3	0.0
KORR				eS	Sb	00 35 46.7	-1.0
KORR	Kora	0.65	10	iPg	Pg	00 35 37.3	0.0
KORR				eSg	Sb	00 35 46.7	-1.0
DUS	Dusheti	0.69	121	P	Pg	00 35 38.4	+0.3
DUS				S	Sb	00 35 48.6	-0.3
ARNR	Ardon	0.79	20	⇓iPG	Pg	00 35 40.3	+0.3
ARNR				eS	Sb	00 35 51.3	-0.4
ARNR	Ardon	0.79	20	iPg	Pg	00 35 40.3	+0.3
ARNR				eSg	Sb	00 35 51.3	-0.4
VLKR	Vladikavkaz	0.83	43	ePG	Pb	00 35 41.6	+0.2
VLKR				eS	Sb	00 35 53.7	+1.0
VLKR	Vladikavkaz	0.83	43	ePg	Pb	00 35 41.6	+0.2
VLKR				eSg	Sb	00 35 53.7	+1.0
LSNR	Lesken	0.83	355	⇓iPG	Pg	00 35 40.8	+0.1
LSNR				eS	Sg	00 35 52.0	+0.5
LSNR	Lesken	0.83	355	iPg	Pg	00 35 40.8	+0.1
LSNR				eSg	Sg	00 35 52.0	+0.5
SNJR	Sundja	0.91	47	⇓iPG	Pg	00 35 42.3	0.0
SNJR				eS	Sb	00 35 55.7	+0.5
SNJR	Sundja	0.91	47	iPg	Pg	00 35 42.3	0.0
SNJR				eSg	Sb	00 35 55.7	+0.5
TBLG	Delisi	0.95	139	P	Pg	00 35 42.6	-0.3
TBLG				S	Sb	00 35 56.3	+0.2
TBLG	Delisi	0.95	139	iPG	Pg	00 35 42.6	-0.3
TBLG				iS	Sb	00 35 56.3	+0.2
TBLG	Delisi	0.95	139	iPg	Pg	00 35 42.6	-0.3
TBLG				iSg	Sb	00 35 56.3	+0.2
BTKR	Batakoyurt	1.04	27	ePG	Pn	00 35 45.8	+0.1
BTKR				eS	Sn	00 36 00.2	-0.2
BTKR	Batakoyurt	1.04	27	ePg	Pn	00 35 45.8	+0.1
BTKR				eSg	Sn	00 36 00.2	-0.2
NCK	Nalchik	1.07	348	⇑ePG	Pb	00 35 45.5	-0.1
NCK				iS	Sn	00 36 00.7	-0.6
NCK	Nalchik	1.07	348	ePg	Pb	00 35 45.5	-0.1
NCK				iSg	Sn	00 36 00.7	-0.6
AKH	Akhalkalaki	1.08	197	P	Pg	00 35 45.4	-0.1
AKH				S	Sn	00 36 01.4	-0.3
KZR	Kazreti	1.13	160	P	Pb	00 35 45.9	-0.7
KZR				S	Sb	00 36 01.5	+0.1
PRTR	Priterechnaya	1.33	12	⇑iPG	Pg	00 35 50.9	+0.6
PRTR				iS	Sg	00 36 09.3	+1.7
PRTR	Priterechnaya	1.33	12	iPg	Pg	00 35 50.9	+0.6
PRTR				iSg	Sg	00 36 09.3	+1.7
CHVG	Ch'k'valeri	1.37	282	P	Pg	00 35 51.1	0.0
CHVG				S	Sg	00 36 10.8	+1.9
TRKR	Terskaya	1.41	25	⇑iPG	Pg	00 35 51.9	0.0
TRKR				eS	Sg	00 36 11.6	+1.4
TRKR	Terskaya	1.41	25	iPg	Pg	00 35 51.9	0.0
TRKR				eSg	Sg	00 36 11.6	+1.4
DGRG	David-gareji	1.48	132	P	Pg	00 35 52.9	-0.2
DGRG				S	Sg	00 36 14.3	+2.0
SHAR	Shatzhatmas	1.58	325	⇓iPG	Pb	00 35 54.1	-0.3
SHAR				eS	Sg	00 36 15.2	-0.4
SHAR	Shatzhatmas	1.58	325	iPg	Pb	00 35 54.1	-0.3
SHAR				eSg	Sg	00 36 15.2	-0.4
GRO	Groznyy	1.61	57	⇑iPG	Pb	00 35 55.0	+0.2
GRO				eS	Sg	00 36 16.9	+0.3
GRO	Groznyy	1.61	57	iPg	Pb	00 35 55.0	+0.2
GRO				eSg	Sg	00 36 16.9	+0.3
PYA	Pyatigorsk	1.70	339	⇑ePN	Pb	00 35 56.0	-0.4
PYA				iS	Sb	00 36 18.5	+0.5
PYA	Pyatigorsk	1.70	339	ePn	Pb	00 35 56.0	-0.4
PYA				iSg	Sb	00 36 18.5	+0.5
KIV	Kislovodsk	1.75	330	⇓iPN	Pb	00 35 57.0	-0.2
KIV				eS	Sg	00 36 20.3	-0.8
KIV	Kislovodsk	1.75	330	iPn	Pb	00 35 57.0	-0.2
KIV				eSg	Sg	00 36 20.3	-0.8
BEYR	Belyy Ugol+	1.76	333	⇓ePN	Pb	00 35 57.0	-0.3
BEYR				iS	Sb	00 36 19.8	+0.3
BEYR	Belyy Ugol+	1.76	333	ePn	Pb	00 35 57.0	-0.3
BEYR				iSg	Sb	00 36 19.8	+0.3
DBC	Dubki	2.23	74	iPN	Pb	00 36 04.9	-0.4
DBC				iS	Sg	00 36 36.2	-0.2
DBC	Dubki	2.23	74	iPn	Pb	00 36 04.9	-0.4
DBC				iSb	Sg	00 36 36.2	-0.2

IDC 09 00:36:29.7±1.0, 33°.20S×178°.46W, h0km, mb4.1/3, mb1 4.4/4, mb1mx4.0/18, mbtmp4.1/4, ML3.7/1, MS3.7/4, Ms1 3.7/4, ms1mx3.2/23, Error ellipse: s-maj=42.1km s-min=27.3km az=149.0
ISCJB 09 00:36:34.5±1.1, 33°.47S±0°.09×178°.6W±0°.2, h41km, mb4.2/6, MS3.7/3, Error ellipse: s-maj=19.1km s-min=12.9km az=16.5
NEIC 09 00:36:40.2±2.7, 33°.26S×178°.71W, h79km±21km, mb4.4/4, Error ellipse: s-maj=22.2km s-min=17.6km az=63.0
ISC 09 00:36:35.3±0.8, 33°.4S±0°.1×178°.5W±0°.1, h41km, n31, σ1s31/31, mb4.4/6, MS3.7/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.02	215	ePn	Pn	00 38 01.4	-0.4
	46nm,0.9s						
URZ				Sn	Sn	00 39 08.2	-1.2
URZ	Urewera	6.02	215	Pn	Pn	00 38 01.6	-0.2
	1.8nm,0.3s,baz=292,slow=9.2,SNR=7.8						
URZ				Sn	Sn	00 39 18.8	+9.4
	5.4nm,0.3s,baz=161,slow=19,SNR=5.8						
OUZ	Omahuta	6.80	252	ePn	Pn	00 38 15.0	+2.4
DZM	Mont Dzumac	17.46	306	ePn	P	00 40 36.4	-0.3
	9.0nm,1.1s						
DZM	Mont Dzumac	17.46	306	Pn	P	00 40 36.7	-0.1
	0.1nm,0.3s,baz=107,slow=20,SNR=4.3						
DZM				LR	LR	00 45 58.3	
	comp=Z,229nm,20.1s,baz=222,slow=33						
STKA	Stephens Creek	33.51	261	ePn	P	00 43 09.9	-1.1
STKA	Stephens Creek	33.51	261	LR	LR	00 56 23.0	
	comp=Z,117nm,19.4s,baz=177,slow=36						
ASAR	Alice Springs	42.63	270	P	P	00 44 28.7	+0.8
ASAR	Alice Springs	42.63	270	P	P	00 44 28.7	+0.8
	1.8nm,0.6s,baz=107,slow=7.5,SNR=25						
WRAB	Tennant Creek	43.89	276	eP	P	00 44 36.7	-1.4
	4.1nm,0.5s						
WRA	Warramunga Arr	43.89	276	P	P	00 44 38.3	+0.2
WRA	Warramunga Arr	43.89	276	P	P	00 44 38.3	+0.2
	3.7nm,0.4s,baz=114,slow=7.6,SNR=23						
FITZ	Fitzroy Crossi	52.01	272	eP	P	00 45 40.3	-0.6
	2.0nm,0.6s						
FITZ	Fitzroy Crossi	52.01	272	LR	LR	01 08 56.6	
	comp=Z,68nm,19.5s,baz=114,slow=37						
QSPA	South Pole Qui	56.70	180	P	P	00 46 16.6	+2.0
	2.7nm,0.6s						
QSPA	South Pole Qui	56.70	180	LR	LR	01 07 54.7	
	comp=Z,79nm,18.7s,baz=32,slow=33						
NVAR	Mina Array Bea	90.72	43	P	P	00 49 34.8	+0.8
NVAR	Mina Array Bea	90.72	43	P	P	00 49 34.8	+0.8
	0.2nm,0.4s,baz=187,slow=4.2,SNR=3.8						
ARCES	ARCESS Array B	141.43	347	PKP	PKPdf	00 55 58.3	-2.5
ARCES	ARCESS Array B	141.43	347	PKP	PKPdf	00 55 58.3	-2.5
	0.7nm,0.7s,baz=62,slow=1.4,SNR=6.4						
JOF	Joensuu	145.04	337	ep	PKPdf	00 56 07.0	-0.3
	0.9nm,0.4s						
KAF	Kangasniemi	147.22	339	ep	PKPbc	00 56 11.8	-1.6
	2.8nm,0.6s						
FINES	FINESS Array B	147.80	338	PKPbc	PKPbc	00 56 14.2	-0.7
FINES	FINESS Array B	147.80	338	PKPbc	PKPbc	00 56 14.2	-0.7
	4.6nm,0.5s,baz=49,slow=5.8,SNR=32						
NB2	NORSAR Subarra	151.65	350	PKP	PKPbc	00 56 23.8	-0.7
	comp=Z,0.8nm,0.6s,baz=16,slow=2.5						
NOA	NORSAR Array B	151.65	350	PKPbc	PKPbc	00 56 23.4	-1.1
NOA				PKPab	PKPab	00 56 33.8	+0.4
NOA	NORSAR Array B	151.65	350	PKPbc	PKPbc	00 56 23.4	-1.1
	comp=Z,1.1nm,0.7s,baz=14,slow=4.1,SNR=12						
NOA				PKPab	PKPab	00 56 33.8	+0.4
	comp=Z,1.0nm,0.7s,baz=14,slow=4.2,SNR=7.0						
BRTR	Keskin Array B	153.54	293	PKPbc	PKPbc	00 56 28.7	-0.9
BRTR	Keskin Array B	153.54	293	PKPbc	PKPbc	00 56 28.7	-0.9
	comp=Z,0.8nm,0.5s,baz=145,slow=3.5,SNR=7.6						
TORD	Torodi Ar. Bea	159.83	180	PKPab	PKPab	00 57 11.5	+2.1
TORD	Torodi Ar. Bea	159.83	180	PKPab	PKPab	00 57 11.5	+2.1
	comp=Z,0.4nm,0.9s,baz=228,slow=3.7,SNR=3.3						

DDA 09 00:45:45.5, 37°.87N×29°.19E, h8km, MD2.6
ISCJB 09 00:45:46.2±0.6, 37°.91N±0°.03×29°.18E±0°.04, h5km±7km, Error ellipse: s-maj=5.8km s-min=4.1km az=15.0
CSEM 09 00:45:46.1±0.3, 37°.91N×29°.20E, h2km, MD2.5, Error ellipse: s-maj=6.3km s-min=4.4km az=117.0
ISK 09 00:45:47.0, 37°.92N×29°.08E, h18km, MD2.5
ISC 09 00:45:46.6±1.2, 37°.91N±0°.02×29°.19E±0°.03, h2km±14km, n18, σ0s90/33, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.20	219	ePG	Pg	00 45 51.8	+1.3
DENT				eSG	Sg	00 45 55.6	+2.5
DENT	Denizli	0.20	219	ePg	Pg	00 45 51.8	+1.3
DNZL	Cakiroluk	0.25	208	iP	Pg	00 45 49.8	-1.6
DNZL				iS	Sg	00 45 54.0	-0.6
DNZL	Cakiroluk	0.25	208	iP	Pg	00 45 49.8	-1.6
DNZL				iS	Sg	00 45 54.0	-0.6
KHAL	Karahalli	0.52	27	iP	Pg	00 45 56.1	-0.4
KHAL				iS	Sg	00 46 03.0	-0.2
KHAL	Karahalli	0.52	27	iP	Pg	00 45 56.1	-0.4
KHAL				iS	Sg	00 46 03.0	-0.2
GOLH	Golhisar	0.73	156	iP	Pg	00 45 56.4	-4.2
GOLH				iS	Sg	00 46 10.6	+0.5
GOLH	Golhisar	0.73	156	iP	Pg	00 45 56.4	-4.2
GOLH				iS	Sg	00 46 10.6	+0.5
KULA	Kula-Manisa	0.74	325	ePG	Pg	00 46 01.2	+0.5
KULA				eSG	Sg	00 46 10.6	+0.4
KULA	Kula-Manisa	0.74	325	ePg	Pg	00 46 01.2	+0.5
KULA				eSg	Sg	00 46 10.6	+0.4
MANT	Manisa	0.77	319	iP	Pg	00 46 01.1	-0.2
MANT				iS	Sg	00 46 11.5	+0.2
MANT	Manisa	0.77	319	iP	Pg	00 46 01.1	-0.2
MANT				iS	Sg	00 46 11.5	+0.2
YER	Yerkesik	1.06	223	ePG	Pg	00 46 06.8	-0.1
YER				eSG	Sg	00 46 21.2	+0.5
YER	Yerkesik	1.06	223	ePg	Pg	00 46 06.8	-0.1
YER				eSg	Sg	00 46 21.2	+0.5
AYDN	Tasoluk	1.07	257	iP	Pg	00 46 06.3	-0.8
AYDN				iS	Sg	00 46 19.7	-1.3
AYDN	Tasoluk	1.07	257	iP	Pg	00 46 06.3	-0.8
AYDN				iS	Sg	00 46 19.7	-1.3
SHUT	Suhut-Afyon	1.25	59	ePN	Pg	00 46 10.3	-0.2
SHUT				eSN	Sn	00 46 29.0	+0.4
SHUT	Suhut-Afyon	1.25	59	ePn	Pg	00 46 10.3	-0.2
SHUT				eSn	Sn	00 46 29.0	+0.4

MEX 09 01:30:32.4±0.3, 15°.31N×95°.65W, h18km±27km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.63	315	iP	Pb	01 30 42.7	-2.3
HUIG				iS	Sg	01 30 50.9	-2.6
PCIG		2.37	80	iP	Pn	01 31 07.9	-2.5
PCIG				eS	Sn	01 31 35.0	-4.1
PNIG	Pinotepa	2.62	295	iP	Pn	01 31 11.2	-2.6
PNIG				iS	Sn	01 31 41.6	-3.6
UTMO	Huajuapan	3.25	321	eP	Pn	01 31 19.4	-3.4
UTMO				iS	Sn	01 31 58.0	-3.3

MAN 09 01:36:06, 17°.95N×120°.32E, h35km, mb4.0, ML2.8, MS2.5, 1D, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIPP	Brgy, Tapao	0.13	102	⇓eP	Pn	01 36 13.7	+1.5
ABRA	Dolores	0.48	129	eP	Pn	01 36 18.1	+1.8
ABRA				eS	Sn	01 36 26.9	+3.3
APYP	Conner	0.88	96	eP	Pn	01 36 24.6	+2.6
APYP				eS	Sn	01 36 38.6	+5.0

IDC 09 01:49:15.2±1.1, 35°.24N×23°.15E, h0km, mb3.5/6, mb1 3.5/9, mb1mx3.3/30, mbtmp3.4/9, ML3.1/3, Error ellipse: s-maj=24.3km s-min=21.8km az=131.0
ISCJB 09 01:49:18.5±0.8, 34°.97N±0°.07×23°.02E±0°.07, h38km, mb3.3/6, Error ellipse: s-maj=10.8km s-min=6.3km az=36.3
ATH 09 01:49:21.9, 35°.16N×23°.30E, h55km±3km, MD3.3/8
CSEM 09 01:49:22.6±0.4, 35°.14N×23°.24E, h49km±3km, MD3.3, Error ellipse: s-maj=12.9km s-min=3.7km az=46.0
ISC 09 01:49:20.8±0.9, 35°.09N±0°.07×23°.18E±0°.08, h38km, n31, σ1s41/36, mb3.1/6, Crete

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANKY	Antikythira Is	0.78	8	eP	Pn	01 49 36.6	+1.3
ANKY				eS	Sn	01 49 47.7	+2.0
ANKY	Antikythira Is	0.78	8	eP	Pn	01 49 36.6	+1.3
ANKY				eS	Sn	01 49 47.7	+2.0
GVD	Gavdhos	0.79	108	eP	Pn	01 49 37.0	+1.6
GVD				eS	Sn	01 49 47.8	+1.8
GVD	Gavdhos	0.79	108	eP	Pn	01 49 37.0	+1.6
GVD				eS	Sn	01 49 47.8	+1.8
KYTH	Kithira	1.19	355	eP	Pn	01 49 42.6	+1.7
KYTH	Kithira	1.19	355	eP	Pn	01 49 42.6	+1.7
SIVA	Sivas	1.34	93	eP	Pn	01 49 44.3	+1.3
SIVA				eS	Sn	01 50 00.0	+0.4
SIVA	Sivas	1.34	93	eP	Pn	01 49 44.3	+1.3
SIVA				eS	Sn	01 50 00.0	+0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	Lasithi	1.89	87	eP	Pn	01 49 52.3	+1.7
LAST	Lasithi	1.89	87	eP	Pn	01 49 52.3	+1.7
NPS	Neapolis	2.00	84	eP	Pn	01 49 53.2	+1.1
NPS	Neapolis	2.00	84	eP	Pn	01 49 53.2	+1.1
SANT	Santorini	2.25	55	eP	Pn	01 49 56.2	+0.6
SANT	Santorini	2.25	55	eP	Pn	01 49 56.2	+0.6
ZKR	Zakros	2.49	89	eP	Pn	01 50 00.6	+1.8
ZKR	Zakros	2.49	89	eP	Pn	01 50 00.6	+1.8
STON	Ston	8.86	333	ePn	Pn	01 51 22.7	-3.4
STON				Sn	Sn	01 52 54.1	-11
BRTR	Keskin Array B	9.52	58	Pn	Pn	01 51 34.6	-0.8
	0.0nm,0.3s,baz=243,slow=13,SNR=2.5						
MMAI	Mount Meron Ar	10.35	98	Pn	Pn	01 51 47.5	+0.7
	0.4nm,0.3s,baz=311,slow=13,SNR=2.7						
MMAI				Sn	Sn	01 53 32.0	-10
	0.8nm,0.3s,baz=47,slow=47,SNR=4.1						
EIL	Elat	11.32	115	Pn	Pn	01 51 58.7	-1.3
	0.2nm,0.3s,baz=14,slow=18,SNR=6.3						
EIL				Sn	Sn	01 53 55.5	-10
	0.2nm,0.3s,baz=73,slow=16,SNR=2.6						
GERES	GERESS Array B	15.42	336	Pn	Pn	01 52 56.6	+1.0
	0.2nm,0.3s,baz=157,slow=12,SNR=6.8						
AKASG	Malin Array Be	16.21	14	Pn	Pn	01 53 06.1	+0.6
	1.7nm,0.3s,baz=206,slow=11,SNR=6.2						
HFS	Hagfors	25.80	349	P	P	01 54 46.3	-1.7
	1.3nm,0.4s,baz=144,slow=10,SNR=20						
NB2	NORSAR Subarra	27.07	347	P	P	01 55 00.2	+0.6
	comp=Z,0.3nm,0.7s,baz=156,slow=9.3						
NB2	NORSAR Subarra	27.07	347	P	P	01 55 00.2	+0.6
	comp=Z,0.3nm,0.7s,SNR=3.8						
NOA	NORSAR Array B	27.07	347	P	P	01 54 58.8	-0.8
	comp=Z,0.2nm,0.4s,baz=148,slow=9.4,SNR=8.0						
TORD	Torodi Ar. Bea	29.23	227	P	P	01 55 19.5	+0.4
	comp=Z,0.1nm,0.3s,baz=31,slow=8.8,SNR=7.6						
ARCES	ARCESS Array B	34.52	1	P	P	01 56 02.8	-2.2
	comp=Z,0.1nm,0.4s,baz=178,slow=9.9,SNR=4.1						
MKAR	Makanchi Array	45.17	56	P	P	01 57 32.4	-1.3
	comp=Z,0.1nm,0.3s,baz=264,slow=7.4,SNR=5.4						
ZALV	Zalesovo Beam	46.22	46	P	P	01 57 40.1	-1.8
	comp=Z,0.6nm,0.3s,baz=277,slow=5.7,SNR=3.1						
PMSA	Palmer Station	120.01	210	PKP	PKPdf	02 08 06.9	+0.7
	comp=Z,46nm,1.0s,baz=94,slow=1.9,SNR=14						

*BJI **09** 01:52:00.5, 33°.90N×89°.22E, h7km, mB4.3/2, mb4.5/3, Ms4.0/3, Ms7 3.5/3*
*IDC **09** 01:52:03.5±0.7, 33°.73N×88°.71E, h0km, mb4.0/11, mb1 4.1/15, mb1mx3.9/30, mbtmp4.0/15, ML3.5/3, MS3.4/7, Ms1 3.4/7, ms1mx3.0/37, Error ellipse: s-maj=24.7km s-min=15.4km az=57.0*
*ISCJB **09** 01:52:04.2±0.4, 33°.94N±0°.04×89°.15E±0°.08, h17km, mb3.9/11, MS3.5/4, Error ellipse: s-maj=9.6km s-min=5.3km az=21.9*
ISC 09 01:52:06.3±0.6**, 33°.95N**±0°.07×**89°.09E**±0°.07**, h17km, n35, σ1s.72**/33**, mb3.8**/11**, MS3.5**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	4.59	157	Pg	Pb	01 53 21.4	-5.2
GUN	Gumba	6.62	205	eP	Pn	01 53 43.3	+0.1
	49nm,0.7s						
TAPN	Taplejung	6.69	191	eP	Pn	01 53 45.6	+1.5
	21nm,0.4s						
KKN	Kakani	6.96	209	eP	Pn	01 53 48.4	+0.7
PKI	Pulchoki	7.11	207	eP	Pn	01 53 50.1	+0.3
	40nm,0.8s						
PKIN	Phulchoki	7.11	208	eP	Pn	01 53 49.7	-0.1
	17nm,0.5s						
DMN	Daman	7.19	210	eP	Pn	01 53 51.3	+0.4
	43nm,0.7s						
DANN	Dangsing	7.21	221	eP	Pn	01 53 50.6	-0.7
	24nm,0.6s						
ODAN	Odare	7.22	192	eP	Pn	01 53 52.0	+0.7
	66nm,0.6s						
RAMN	Ramite	7.30	198	eP	Pn	01 53 51.8	-0.7
	38nm,0.5s						
KOLN	Koldanda	7.76	219	eP	Pn	01 53 59.3	+0.6
	19nm,0.7s						
GTA	Gaotai	10.19	55	eP	Pn	01 54 29.6	-2.2
GTA				pP		01 54 33.1	
GTA				sP		01 54 35.7	
GTA				S	Sn	01 56 25.3	-0.4
GTA				sS		01 56 30.3	
GTA				SS	SnSn	01 56 37.9	+0.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,44nm,4.5s						
GTA				LR	LR		
	comp=N,690nm,17.1s						
GTA				LR	LR		
	comp=E,430nm,16.6s						
GTA				LR	LR		
	comp=Z,150nm,14.7s						
LZH	Lanzhou	12.28	76	eP	Pn	01 54 56.2	-4.4
LZH				pP	pP	01 54 59.7	
LZH				sP		01 55 02.7	
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
MKAR	Makanchi Array	13.83	340	Pn	Pn	01 55 20.8	-0.7
	comp=Z,0.1nm,0.3s,baz=150,slow=12,SNR=10.0						
AAK	Ala-Archa	14.35	311	LR	LR	02 02 23.3	
	comp=Z,78nm,21.7s,baz=352,slow=43						
CMAR	Chiang Mai Arr	17.77	148	P	P	01 56 14.1	+0.5
	baz=328,slow=12,SNR=9.0						
CMAR				LR	LR	02 03 41.6	
	comp=Z,84nm,18.1s,baz=320,slow=39						
KURBB	Kurchatov Arra	18.37	338	P	Pn	01 56 20.2	+0.2
	comp=Z,0.1nm,0.3s,baz=149,slow=12,SNR=35						
SONM	Songino Array	19.00	38	P	Pn	01 56 31.4	+3.4
	comp=Z,0.3nm,0.3s,baz=225,slow=12,SNR=21						
SONM				LR	LR	02 04 42.5	
	comp=Z,123nm,20.1s,baz=32,slow=39						
HHC	Hu-ho-hao-te	19.11	62	eP	P	01 56 23.1	-5.3
HHC				PP	PnPn	01 56 40.3	-1.6
HHC				S	Sn	01 59 52.7	-10
HHC				sS	S	01 59 59.6	-5.0
HHC				SS	SnSn	02 00 19.6	+2.7
HHC				pmax	pmax		
	comp=Z,32nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,7.0s						
HHC				LR	LR		
	comp=N,670nm,15.1s						
HHC				LR	LR		
	comp=E,840nm,14.3s						
HHC				LR	LR		
	comp=Z,400nm,12.8s						
ZALV	Zalesovo Beam	20.22	353	P	Pn	01 56 42.2	0.0
	comp=Z,9.9nm,0.8s,baz=163,slow=11,SNR=37						
BVAR	Borovoye Array	23.27	331	P	P	01 57 14.4	+1.6
	comp=Z,1.4nm,0.7s,baz=134,slow=11,SNR=6.4						
AKTO	Aktyubinsk	28.03	315	LR	LR	02 10 35.6	
	comp=Z,60nm,21.8s,baz=115,slow=40						
USRK	Ussuriysk Arra	34.50	60	P	P	01 58 56.1	+2.7
	comp=Z,1.2nm,0.5s,baz=254,slow=7.1,SNR=6.2						
FINES	FINESS Array B	48.03	325	LR	LR	02 22 33.5	
	comp=Z,70nm,20.9s,baz=124,slow=38						
MLR	Muntele Rosu	48.76	303	P	P	02 00 52.4	+2.1
	comp=Z,0.6nm,0.9s,baz=140,slow=5.9,SNR=4.9						
ARCES	ARCESS Array B	49.42	335	P	P	02 00 56.3	+1.4
	comp=Z,2.0nm,1.0s,baz=79,slow=6.5,SNR=4.7						
NB2	NORSAR Subarra	55.21	325	P	P	02 01 37.6	-0.4
	comp=Z,0.4nm,0.6s,baz=82,slow=7.4						
NOA	NORSAR Array B	55.21	325	P	P	02 01 36.4	-1.6
	comp=Z,0.9nm,0.8s,baz=82,slow=7.3,SNR=6.3						
NOA				LR	LR	02 26 53.4	
	comp=Z,58nm,20.6s,baz=90,slow=38						
GERES	GERESS Array B	56.23	310	P	P	02 01 46.1	+0.6
	comp=Z,0.7nm,0.7s,baz=79,slow=5.1,SNR=8.4						
GERES				LR	LR	02 31 13.0	
	comp=Z,35nm,19.6s,baz=268,slow=42						
WRA	Warramunga Arr	68.77	134	P	P	02 03 10.3	+0.7
	comp=Z,1.7nm,0.5s,baz=326,slow=6.6,SNR=12						
ASAR	Alice Springs	71.41	137	P	P	02 03 26.3	+0.6
	comp=Z,2.1nm,0.9s,baz=318,slow=5.6,SNR=10						
TORD	Torodi Ar. Bea	80.65	280	P	P	02 04 16.6	-2.1
	comp=Z,0.4nm,0.6s,baz=53,slow=4.3,SNR=7.5						
YKA	Yellowknife Ar	82.01	11	P	P	02 04 25.2	+0.2
	comp=Z,0.3nm,0.6s,baz=341,slow=5.0,SNR=7.2						
BOSA	Boshof	86.71	232	P	P	02 04 47.3	-2.2
	comp=Z,2.5nm,0.9s,baz=18,slow=3.2,SNR=3.3						
CPUP	Villa Florida	150.08	276	PKPbc	PKPbc	02 11 54.8	-1.5
	comp=Z,0.7nm,0.6s,baz=70,slow=5.5,SNR=3.0						

IDC 09 01:56:30.7±3.0**, 35°.44S×111°.49W, h0km, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.7**/17**, mbtmp3.8**/3**, MS3.8**/11**, Ms1 3.8**/11**, ms1mx3.7**/21**, Error ellipse: s-maj=105.6km s-min=45.3km az=32.0, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	32.44	112	LR	LR	02 12 50.9	
	comp=Z,93nm,19.2s,baz=337,slow=30						
USHA	Ushuaia	35.31	137	LR	LR	02 14 03.0	
	comp=Z,406nm,20.9s,baz=255,slow=30						
PMSA	Palmer Station	40.69	151	LR	LR	02 14 54.3	
	comp=Z,15nm,21.8s,baz=165,slow=27						
LPAZ	La Paz	43.02	75	P	P	02 04 32.9	-0.2
	1.5nm,0.9s,baz=217,slow=5.1,SNR=5.5						
LPAZ				LR	LR	02 18 46.9	
	comp=Z,80nm,18.9s,baz=81,slow=31						
CPUP	Villa Florida	46.87	94	LR	LR	02 21 01.7	
	comp=Z,115nm,19.0s,baz=229,slow=31						
ROSC	El Rosal	53.14	49	LR	LR	02 24 11.0	
	comp=Z,71nm,20.2s,baz=210,slow=31						
VNDA	Vanda	54.99	195	LR	LR	02 25 48.1	
	comp=Z,64nm,18.9s,baz=120,slow=32						
RPZ	Rata Peaks	58.26	236	LR	LR	02 27 58.9	
	comp=Z,130nm,18.2s,baz=75,slow=32						
BDFB	Brasilia	59.60	88	LR	LR	02 29 29.8	
	comp=Z,96nm,18.1s,baz=210,slow=33						
NVAR	Mina Array Bea	73.77	354	P	P	02 08 07.0	+0.2
	0.5nm,0.7s,baz=204,slow=5.0,SNR=4.7						
MAW	Mawson	77.19	178	LR	LR	02 38 56.2	
	comp=Z,77nm,19.5s,baz=355,slow=33						
PDAR	Pinedale Array	77.85	1	P	P	02 08 29.9	-0.3
	1.4nm,1.0s,baz=184,slow=3.6,SNR=4.5						
ASAR	Alice Springs	94.66	237	LR	LR	02 44 22.3	
	comp=Z,110nm,19.8s,baz=180,slow=30						
AKASG	Malin Array Be	147.93	49	PKPbc	PKPbc	02 16 17.4	0.0
	0.9nm,0.7s,baz=298,slow=4.1,SNR=5.8						
BRTR	Keskin Array B	152.15	71	PKPbc	PKPbc	02 16 27.6	-0.6
	0.4nm,0.8s,baz=256,slow=5.8,SNR=3.7						
BRTR				PKPab	PKPab	02 16 37.2	-0.7
	0.9nm,1.0s,baz=20,slow=3.9,SNR=3.8						

*ISCJB **09** 02:04:15.1±0.6, 38°.50N±0°.04×23°.44E±0°.05, h13km±5km, Error ellipse: s-maj=6.6km s-min=6.0km az=163.7*
*THE **09** 02:04:15.8, 38°.51N×23°.42E, h3km±11km, ML1.7/1, Error ellipse: s-maj=11.1km s-min=0.3km az=46.0*
*CSEM **09** 02:04:15.2±0.1, 38°.51N×23°.46E, h10km, ML1.7/1, Error ellipse: s-maj=3.1km s-min=2.3km az=72.0*
*ATH **09** 02:04:16.1, 38°.44N×23°.47E, h30km±1km, MD2.5/5*
ISC 09 02:04:15.7±1.0**, 38°.51N**±0°.03×**23°.43E**±0°.03**, h10km**±11km**, n24, σ0s.34**/37**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRKA	Markates	0.23	31	P	Pg	02 04 20.5	-0.1
MRKA				S	Sg	02 04 23.8	0.0
MRKA	Markates	0.23	31	P	Pg	02 04 20.5	-0.1
MRKA				S	Sg	02 04 23.8	0.0
VIL2	Platees	0.32	204	P	Pg	02 04 22.1	0.0
VIL2				S	Sg	02 04 26.6	+0.2
LKR	Lokris	0.37	293	P	Pg	02 04 22.5	-0.5
LKR				S	Sg	02 04 28.1	+0.2
LKR	Lokris	0.37	293	P	Pg	02 04 22.5	-0.5
LKR				S	Sg	02 04 28.1	+0.2
ATAL	Atalanti	0.37	300	P	Pg	02 04 22.9	-0.2
ATAL				S	Sg	02 04 28.1	+0.1
ATAL	Atalanti	0.37	300	P	Pg	02 04 22.9	-0.2
ATAL				S	Sg	02 04 28.1	+0.1
SMIA	Simia	0.41	335	P	Pg	02 04 23.7	-0.2
SMIA				S	Sg	02 04 29.6	+0.3
SMIA	Simia	0.41	335	P	Pg	02 04 23.7	-0.2
SMIA				S	Sg	02 04 29.6	+0.3
PTL	Penteli	0.57	143	ePB	Pg	02 04 26.5	-0.3
PTL	Penteli	0.57	143	ePb	Pg	02 04 26.5	-0.3
LTK	Loutraki	0.60	217	P	Pg	02 04 27.3	-0.2
LTK	Loutraki	0.60	217	ePN	Pg	02 04 27.7	+0.2
LTK				eSN	Sb	02 04 37.1	+0.1
LTK	Loutraki	0.60	217	P	Pg	02 04 27.3	-0.2
LTK	Loutraki	0.60	217	ePn	Pg	02 04 27.7	+0.2
LTK				eSn	Sb	02 04 37.1	+0.1
DSF	Desfina	0.72	263	P	Pg	02 04 28.9	-0.7
DSF				S	Sg	02 04 39.5	+0.5
DSF	Desfina	0.72	263	P	Pg	02 04 28.9	-0.7
DSF				S	Sg	02 04 39.5	+0.5
DID	Didima	1.01	189	P	Pg	02 04 34.6	-0.5
DID	Didima	1.01	189	ePN	Pg	02 04 34.6	-0.5
DID	Didima	1.01	189	P	Pg	02 04 34.6	-0.5
GUR	Goura	1.03	237	ePN	Pb	02 04 35.7	0.0
GUR	Goura	1.03	237	ePn	Pb	02 04 35.7	0.0
KLV	Kalavryta, Ach	1.11	246	ePN	Pn	02 04 37.5	+0.1
KLV	Kalavryta, Ach	1.11	246	ePn	Pn	02 04 37.5	+0.1

IDC 09 02:06:18.5±31.0**, 21°.16S×177°.14W, h550km**±315km**, mb2.8**/4**, mb1 3.0**/4**, mb1mx2.8**/19**, mbtmp2.8**/4**, Error ellipse: s-maj=415.7km s-min=59.7km az=40.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	34.23	265	P	P	02 12 19.4	+0.3
	1.5nm,0.4s,baz=81,slow=13,SNR=2.4						
ASAR	Alice Springs	45.15	257	P	P	02 13 45.4	-1.3
	0.6nm,0.9s,baz=98,slow=6.7,SNR=3.3						
WRA	Warramunga Arr	45.31	262	P	P	02 13 48.0	+0.1
	0.3nm,0.3s,baz=96,slow=8.3,SNR=4.9						
VNDA	Vanda	57.33	185	P	P	02 15 13.8	-0.1
	1.3nm,0.5s,baz=38,slow=8.5,SNR=10						

*NIED **09** 02:07:00, 40°.20N×142°.50E, h35km, Mw4.6 Best double couple: M0 8.88000×10^15 NP1:φs33.00000°, δ79.00000°, λ105.00000°. NP2:φs157.00000°, δ19.00000°, λ35.00000°.*
*BJI **09** 02:07:33.0, 40°.20N×142°.89E, h55km, mB4.8/31, mb4.8/47, Ms4.3/35, Ms7 4.1/34*
*MOS **09** 02:07:35.6±0.9, 40°.23N×142°.51E, h49km, mb5.0/72, Error ellipse: s-maj=8.0km s-min=4.5km az=103.7*
*ISCJB **09** 02:07:35.1±0.4, 40°.18N±0°.03×142°.49E±0°.04, h45km±3km, mb4.7/118, MS4.1/30, Error ellipse: s-maj=5.5km s-min=3.5km az=39.9*
*JMA **09** 02:07:35.5±0.1, 40°.15N×142°.46E, h35km±1km, M4.5*
JMA Felt II J1.
*IDC **09** 02:07:36.1±0.5, 40°.11N×142°.48E, h42km±3km, mb4.2/26, mb1 4.4/29, mb1mx4.3/33, mbtmp4.2/29, ML4.1/3, MS3.9/19, Ms1 3.9/19, ms1mx3.6/41, Error ellipse: s-maj=12.5km s-min=9.8km az=103.0*
*NEIC **09** 02:07:38.0±0.6, 40°.14N×142°.51E, h60km±4km, mb4.9/38, MW4.6(NIED), Error ellipse: s-maj=6.1km s-min=4.1km az=135.0*
NEIC Felt at Ichinoseki. Recorded [2 JMA] in Aomori and Iwate and [1 JMA] in Miyagi.
*SZGRF **09** 02:07:39.5, 40°.52N×142°.86E, h45km, mb4.9, Near east coast of eastern Honshu, Japan*
ISC 09 02:07:36.7±0.3**, 40°.14N**±0°.03×**142°.52E**±0°.03**, h50km**±1km**, h49km:pP-P, n465, σ1s.22**/560**, mb4.8**/125**, MS4.1**/32**, 82C-83D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	0.54	248	⇓P	Pn	02 07 46.0	-2.3
JTH				S	Sn	02 07 53.5	-3.2
MIYJ	Miyakonagasawa	0.78	224	⇓P	Pn	02 07 49.3	-2.1
MIYJ				S	Sn	02 07 59.2	-2.9
JANG	Nango	0.80	287	⇓P	Pn	02 07 49.5	-2.2
JANG				S	Sn	02 07 59.3	-3.4
JKZ	Kuzumaki	0.92	261	⇓P	Pn	02 07 51.8	-1.6
JKZ				S	Sn	02 08 03.4	-2.2
JOM	Ohasama	1.15	235	⇓P	Pn	02 07 55.5	-0.9
JOM				S	Sn	02 08 10.5	-0.6
OFUJ	Ofunato	1.24	212	⇓P	Pn	02 07 56.7	-0.9
JTM	Tenmabayashi	1.28	301	⇓P	Pn	02 07 56.9	-1.2
JAH	Hinai	1.44	273	⇓P	Pn	02 07 59.5	-0.8
JAH				S	Sn	02 08 17.4	-0.7
JMK	Ichinoseki	1.55	221	P	Pn	02 08 01.4	-0.4
JMK				eS	Sn	02 08 21.1	+0.3
JRG	Rokugo	1.63	244	⇓P	Pn	02 08 02.3	-0.6
ERM	Erimo	1.94	14	eP	Pn	02 08 06.5	-0.6
ERM				eS	Sn	02 08 27.3	-2.9
ERM	Erimo	1.94	14	ePn	Pn	02 08 06.5	-0.6
ERM				eS	Sn	02 08 27.3	-2.9
ASAJ	Asahikawa	3.98	1	ePn	Pn	02 08 35.4	+0.3
ASAJ				S	Sn	02 09 20.4	0.0
ASAJ				eS		02 09 29.5	
ASAJ	Asahikawa	3.98	1	P	Pn	02 08 35.3	+0.3
	13nm,0.3s,baz=205,slow=14,SNR=16						
ASAJ				S	Sn	02 09 20.4	0.0
	19nm,0.3s,baz=287,slow=30,SNR=3.9						
ASAJ				LR	LR	02 10 35.5	
	comp=Z,2µm,21.6s,baz=185,slow=45						
YUK	Yuzh-Kuril'sk	4.62	32	iP	Pn	02 08 42.7	-1.2
YUK				iS	Sn	02 09 31.1	-5.1
YUK				pmax	pmax		
	comp=E,133nm,0.2s						
YUK				pmax	pmax		
	comp=Z,448nm,0.5s						
YUK				pmax	pmax		
	comp=N,110nm,0.5s						
YUK				smax	smax		
	comp=N,1µm,0.5s						
YUK				smax	smax		
	comp=E,624nm,0.4s						
YUK				smax	smax		
	comp=E,2µm,2.5s						
YUK				smax	smax		
	comp=N,2µm,2.2s						
YUK				MLR	MLR		
	comp=Z,477nm,18.0s						
MJAR	Matsushiro Arr	4.93	225	P	Pn	02 08 50.2	+2.0
MJAR	Matsushiro Arr	4.93	225	P	Pn	02 08 50.2	+2.0
	comp=Z,16nm,0.3s,baz=33,slow=13,SNR=274						
MJAR				LR	LR	02 10 58.0	
	comp=Z,937nm,20.7s,baz=35,slow=41						
MAJO	Matsushiro	4.94	225	eP	Pn	02 08 49.9	+1.7
MAJO	Matsushiro	4.94	225	ePn	Pn	02 08 49.9	+1.7
MAT	Matsushiro	4.94	225	P	Pn	02 08 49.6	+1.3
MAT				eS	Sn	02 09 46.9	+2.9
KUR	Kuril'sk	6.44	36c	iP	Pn	02 09 08.0	-0.8
KUR				iS	Sn	02 10 17.2	-3.7
KUR				pmax	pmax		
	comp=Z,79nm,0.6s						
KUR				pmax	pmax		
	comp=E,55nm,0.6s						
KUR				pmax	pmax		
	comp=N,22nm,0.2s						
KUR				smax	smax		
	comp=N,223nm,0.7s						
KUR				smax	smax		
	comp=E,62nm,0.3s						
KUR				MLR	MLR		
	comp=Z,294nm,23.0s						
YSS	Yuzh-Sakhalins	6.81	1	⇓iP	Pn	02 09 15.0	+1.1
YSS				eS	Sn	02 10 33.0	+2.9
YSS				pmax	pmax		
	comp=N,60nm,1.0s						
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				smax	smax		
	comp=N,80nm,1.2s						
YSS				MLR	MLR		
	comp=Z,800nm,20.0s						
JHJ	Hachijo jima 2	7.34	198	P	Pn	02 09 20.5	-0.7
	comp=Z,34nm,0.3s,baz=58,slow=13,SNR=11						
JHJ				S	Sn	02 10 38.0	-5.2
	comp=Z,30nm,0.3s,baz=73,slow=19,SNR=3.3						
USRK	Ussuriysk Arra	8.81	301	P	Pn	02 09 43.1	+1.8
	comp=Z,1.4nm,0.3s,baz=106,slow=14,SNR=40						
HABR	Khabarovsk	9.90	330	P	Pn	02 09 53.0	-3.1
HABR				pmax	pmax		
	comp=Z,36nm,1.6s						
HABR				pmax	pmax		
	comp=E,30nm,1.2s						
HABR				pmax	pmax		
	comp=N,34nm,2.4s						
HABR				MLR	MLR		
	comp=Z,542nm,17.0s						
MDJ	Mudanjiang	10.55	299	P	Pn	02 10 07.3	+2.2
MDJ				S	Sn	02 12 02.6	+0.8
MDJ				pmax	pmax		
	comp=Z,32nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,120nm,4.3s						
MDJ				LR	LR		
	comp=N,160nm,16.3s						
MDJ				LR	LR		
	comp=E,500nm,17.3s						
MDJ				LR	LR		
	comp=Z,740nm,15.3s						
MDJ	Mudanjiang	10.55	299	ePn	Pn	02 10 07.6	+2.4
	comp=Z,33nm,0.9s						
JNU	Nakatsue	11.67	237	ePn	Pn	02 10 21.0	+0.5
JNU	Nakatsue	11.67	237	P	Pn	02 10 20.9	+0.3
	comp=Z,0.5nm,0.3s,baz=41,slow=10.0,SNR=7.3						
JNU				LR	LR	02 15 15.0	
	comp=Z,328nm,18.3s,baz=51,slow=39						
KSRS	Korea Array	11.70	261	P	Pn	02 10 25.5	+4.7
	comp=Z,0.7nm,0.3s,baz=73,slow=14,SNR=13						
KSRS				LR	LR	02 14 34.7	
	comp=Z,541nm,18.5s,baz=78,slow=36						
KSAR	Wonju Array Be	11.73	261	P	Pn	02 10 25.5	+4.2
KLR	Kul'dur	11.88	323	eP	Pn	02 10 17.2	-6.0
KLR				MLR	MLR		
	comp=E,600nm,13.0s						
KLR				MLR	MLR		
	comp=Z,1µm,13.0s						
CN2	Changchun	13.22	292	eP	Pn	02 10 44.4	+2.9
CN2				esP		02 11 03.0	
CN2				eS	Sn	02 13 10.3	+3.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,400nm,17.0s						
CN2				LR	LR		
	comp=E,400nm,17.0s						
CN2				LR	LR		
	comp=Z,400nm,19.0s						
PETK	Petropavlovsk-	16.60	34	LR	LR	02 18 18.5	
	comp=Z,72nm,18.8s,baz=222,slow=39						
BJI	Beijing	20.13	278	P	P	02 11 59.9	-6.5
BJI				pP	pP	02 12 17.4	-0.5
BJI				sP	sP	02 12 24.3	+0.2
BJI				S	S	02 15 48.4	-1.3
BJI				sS	sS	02 16 10.9	+2.7
BJI				pmax	pmax		
	comp=Z,20nm,0.8s						
BJI				LR	LR		
	comp=N,220nm,17.8s						
BJI				LR	LR		
	comp=E,190nm,28.1s						
BJI				LR	LR		
	comp=Z,190nm,29.8s						
CLNS	Chul'man	20.28	331	eP	P	02 12 08.1	+0.1
CLNS				pmax	pmax		
	comp=Z,19nm,1.0s						
CLNS				pmax	pmax		
	comp=E,13nm,1.0s						
CLNS				pmax	pmax		
	comp=N,12nm,1.0s						
NJ2	Nanjing	20.71	254	eP	P	02 12 13.1	+0.4
NJ2				pP	pP	02 12 24.0	-0.2
NJ2				sP	sP	02 12 31.1	+0.6
NJ2				S	S	02 16 03.0	+1.7
NJ2				sS	sS	02 16 19.0	-0.9
NJ2				pmax	pmax		
	comp=Z,40nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,110nm,10.7s						
NJ2				LR	LR		
	comp=N,130nm,18.3s						
NJ2				LR	LR		
	comp=E,210nm,26.3s						
NJ2				LR	LR		
	comp=Z,250nm,25.5s						
YAK	Yakutsk	23.27	345	eP	P	02 12 36.1	-3.4
YAK				e*PP	pP	02 12 45.9	-5.5
YAK				e		02 12 58.9	
YAK				eS	S	02 16 40.7	-7.1
YAK				pmax	pmax		
	comp=E,14nm,1.1s						
YAK				pmax	pmax		
	comp=Z,64nm,1.1s						
YAK				pmax	pmax		
	comp=N,22nm,1.1s						

YAK pmax pmax
comp=Z,33nm,1.1s
YAK pmax pmax
comp=N,34nm,1.4s
YAK pmax pmax
comp=E,14nm,0.9s
YAK smax smax
comp=N,175nm,3.3s
YAK smax smax
comp=E,135nm,3.0s
YAK MLR MLR
comp=Z,117nm,13.0s
YAK MLR MLR
comp=E,101nm,17.0s
YAK MLR MLR
comp=N,188nm,18.0s
HHC Hu-ho-hao-te 23.49 282 *e*P **P 02 12 39.0 -3.0**
HHC pP **pP 02 12 55.4 +1.2**
HHC sP **sP 02 13 02.9 +2.6**
HHC PP **PnPn 02 13 14.9 +4.6**
HHC PcP **PcP 02 16 28.2 +1.7**
HHC S S 02 16 45.0 -7.1
HHC sS **sS 02 17 09.9 -3.5**
HHC SS **SnSn 02 17 37.2 +5.6**
HHC pmax pmax
comp=Z,29nm,0.9s
HHC pmax pmax
comp=Z,160nm,5.5s
HHC LR LR
comp=N,310nm,14.7s
HHC LR LR
comp=E,770nm,14.2s
HHC LR LR
comp=Z,700nm,16.7s
YHNB Yeheng 23.50 235 *e*P **P 02 12 41.2 -1.0**
FX1 Attu Island--F 24.43 48 LR LR 02 21 37.1
comp=Z,72nm,20.2s,baz=245,slow=34
YULB Yu-li 24.48 233 *e*P **P 02 12 51.3 +0.2**
WHN Wuhan 24.80 256 ⇓P **P 02 12 54.0 0.0**
WHN S S 02 17 03.2 -10
WHN pmax pmax
comp=Z,42nm,0.5s
WHN LR LR
comp=N,420nm,15.4s
WHN LR LR
comp=E,1µm,22.7s
WHN LR LR
comp=Z,700nm,15.7s
ULN Ulaanbaatar 26.47 299 *e*P **P 02 13 08.2 -1.0**
comp=Z,10.0nm,1.2s
SONM Songino Array 26.91 299 P **P 02 13 12.9 -0.2**
SONM PcP **PcP 02 16 34.0 0.0**
SONM Songino Array 26.91 299 P **P 02 13 12.9 -0.2**
comp=Z,4.2nm,0.6s,baz=99,slow=8.9,SNR=24
SONM PcP **PcP 02 16 34.0 0.0**
comp=Z,1.8nm,0.8s,baz=88,slow=2.1,SNR=5.5
SONM LR LR 02 24 24.1
comp=Z,376nm,18.9s,baz=46,slow=38
TLY Talaya 29.06 306 *e*P **P 02 13 32.1 0.0**
TLY pmax pmax
comp=Z,10.0nm,1.7s
ZAK Zakamensk 29.14 304 *e*P **P 02 13 32.1 -0.8**
ZAK pmax pmax
comp=Z,7.0nm,1.5s
LZH Lanzhou 30.53 275 *e*P **P 02 13 46.8 +1.4**
LZH pP **pP 02 13 57.0 -1.3**
LZH sP **sP 02 14 07.2 +3.1**
LZH *e*S **S 02 18 41.2 -2.4**
LZH sS **sS 02 19 04.1 -1.2**
LZH pmax pmax
comp=Z,17nm,1.0s
LZH pmax pmax
comp=Z,67nm,4.8s
LZH LR LR
comp=N,270nm,13.8s
LZH LR LR
comp=E,220nm,12.2s
LZH LR LR
comp=Z,390nm,15.8s
BILL Bilibino 30.81 17 *e*P **P 02 13 47.2 -0.1**
BILL *i* 02 14 02.2
BILL *i* 02 14 43.9
BILL *i* 02 16 44.4
BILL pmax pmax
comp=Z,11nm,1.5s
TIXI Tiksi 32.33 352 ⇓*i*P **P 02 13 59.0 -1.6**
TIXI pmax pmax
comp=Z,8.0nm,1.8s
GTA Gaotai 32.60 283 P **P 02 14 04.4 +0.9**
GTA pP **pP 02 14 17.5 +1.1**
GTA sP **sP 02 14 24.5 +2.2**
GTA S **S 02 19 16.5 +0.7**
GTA sS sS 02 19 42.4 +4.9
GTA pmax pmax
comp=Z,10.0nm,0.9s
GTA pmax pmax
comp=Z,75nm,5.2s
GTA LR LR
comp=N,160nm,16.1s
GTA LR LR
comp=E,360nm,17.8s
GTA LR LR
comp=Z,370nm,18.5s
CD2 Chengdu 32.65 266 *e*P **P 02 14 02.5 -1.4**
CD2 pP **pP 02 14 16.9 +0.1**
CD2 sP **sP 02 14 23.6 +0.9**
CD2 PP **PnPn 02 15 12.9 -0.1**
CD2 S **S 02 19 13.2 -3.3**
CD2 sS **sS 02 19 37.2 -1.0**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,30nm,4.8s
CD2 LR LR
comp=N,290nm,19.0s
CD2 LR LR
comp=E,270nm,23.8s
CD2 LR LR
comp=Z,200nm,13.2s
GYA Guiyang 32.69 256 P **P 02 14 05.8 +1.4**
GYA pP **pP 02 14 21.2 +3.9**
GYA sP sP 02 14 28.0 +4.8
GYA PP **PnPn 02 15 15.3 +1.6**
GYA S **S 02 19 17.0 -0.4**
GYA sS sS 02 19 43.8 +4.6
GYA ScP **ScP 02 20 28.9 -0.1**
GYA ScS **ScS 02 24 25.4 -3.6**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,80nm,4.9s
GYA LR LR
comp=N,350nm,17.7s
GYA LR LR
comp=E,220nm,18.3s
GYA LR LR
comp=Z,360nm,17.8s
KMI Kunming 36.37 258 P **P 02 14 35.9 -0.4**
KMI pP **pP 02 14 50.5 +1.1**
KMI sP **sP 02 14 56.6 +1.4**
KMI PP **PP 02 16 04.3 +4.6**
KMI S **S 02 20 14.7 +0.4**
KMI sS **ScP 02 20 40.2 -2.1**
KMI SS **SnSn 02 22 39.9 -5.5**
KMI pmax pmax
comp=Z,22nm,0.8s
KMI pmax pmax
comp=Z,110nm,4.9s
KMI LR LR
comp=N,220nm,16.4s
KMI LR LR
comp=E,160nm,17.2s
KMI LR LR
comp=Z,280nm,17.2s
WMQ Urumqi 40.29 294 P **P 02 15 09.1 +0.1**
WMQ pP **pP 02 15 24.0 +1.9**
WMQ sP **sP 02 15 31.0 +3.1**
WMQ *e*S **S 02 21 12.0 -0.9**
WMQ sS **sS 02 21 35.0 0.0**
WMQ pmax pmax
comp=Z,11nm,0.6s
WMQ pmax pmax
comp=Z,99nm,3.5s
WMQ LR LR
comp=N,96nm,17.4s
WMQ LR LR
comp=E,130nm,22.0s
WMQ LR LR
comp=Z,110nm,20.6s
ZAA0 Zalesovo Array 40.53 310 *e*P **P 02 15 10.4 -0.2**
ZAA0 *e*PcP **PcP 02 17 12.6 +0.4**
ZALV Zalesovo Beam 40.53 310 P **P 02 15 10.3 -0.3**
ZALV 02 17 12.2
ZALV pmax pmax
comp=Z,8.0nm,0.6s
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV MLR MLR
comp=Z,251nm,18.0s
ZALV Zalesovo Beam 40.53 310 P **P 02 15 10.3 -0.3**
ZALV PcP **PcP 02 17 12.2 0.0**
ZALV Zalesovo Beam 40.53 310 P **P 02 15 10.3 -0.3**
comp=Z,7.5nm,0.6s,baz=90,slow=8.0,SNR=39
ZALV PcP **PcP 02 17 12.2 0.0**
comp=Z,2.9nm,0.6s,baz=94,slow=3.4,SNR=4.1
ZALV LR LR 02 32 56.7
comp=Z,251nm,18.0s,baz=249,slow=38
NVS Novosibirsk 41.38 311 *e*P **P 02 15 14.8 -2.9**
NVS pmax pmax
comp=E,6.0nm,1.1s
NVS pmax pmax
comp=Z,11nm,1.1s
CHTO Chiang Mai 42.95 253 *e*P **P 02 15 31.5 +0.7**
CHTO pmax pmax
comp=Z,10.0nm,1.0s
CHTO Chiang Mai 42.95 253 *e*P **P 02 15 31.5 +0.7**
comp=Z,9.9nm,1.0s
CMAR Chiang Mai Arr 43.17 253 P **P 02 15 33.5 +0.8**
CMAR Chiang Mai Arr 43.17 253 P **P 02 15 33.5 +0.8**
comp=Z,1.3nm,0.3s,baz=60,slow=6.2,SNR=7.7
MK31 Makanchi Array 43.27 300 *i* P **P 02 15 32.7 -0.5**
MK31 pmax pmax
comp=Z,13nm,0.9s
MKAR Makanchi Array 43.27 300 P **P 02 15 33.0 -0.2**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR MLR MLR
comp=Z,180nm,20.3s
MKAR Makanchi Array 43.27 300 P **P 02 15 33.0 -0.2**
MKAR Makanchi Array 43.27 300 P **P 02 15 33.0 -0.2**
comp=Z,4.5nm,0.6s,baz=82,slow=9.9,SNR=44
MKAR LR LR 02 34 22.5
comp=Z,180nm,20.3s,baz=50,slow=37
KDAK Kodiak Island 44.24 44 P **P 02 15 39.8 -0.9**
KDAK Kodiak Island 44.24 44 P **P 02 15 39.8 -0.9**
comp=Z,4.8nm,0.8s,baz=260,slow=11,SNR=3.3
KURK Kurchatov 44.76 306 P **P 02 15 45.2 +0.2**
KURK pmax pmax
comp=Z,32nm,0.8s
KURK Kurchatov 44.76 306 *e*P **P 02 15 44.7 -0.3**
comp=Z,32nm,0.7s
KURBB Kurchatov Arra 44.83 306 P **P 02 15 45.2 -0.4**
comp=Z,32nm,0.8s,baz=81,slow=8.7,SNR=113
COLD Coldfoot 45.03 30 *e*P **P 02 15 48.2 +1.3**
comp=Z,5.4nm,0.9s
COLA College 46.01 34 *e*P **P 02 15 53.7 -1.0**
COLA pmax pmax
comp=Z,6.0nm,0.8s
COLA College 46.01 34 *e*P **P 02 15 53.7 -1.0**
comp=Z,5.5nm,0.8s
ILAR Eielson Array 46.43 34 P **P 02 15 58.8 +0.8**
ILAR Eielson Array 46.43 34 P **P 02 15 58.8 +0.8**
comp=Z,3.2nm,0.8s,baz=267,slow=6.2,SNR=48
TAPN Taplejung 46.65 272 *e*P **P 02 16 00.7 +0.1**
comp=Z,8.6nm,0.4s
ODAN Odare 47.15 271 *e*P **P 02 16 04.5 +0.1**
comp=Z,21nm,0.6s
RAMN Ramite 47.70 272 *e*P **P 02 16 08.7 0.0**
comp=Z,75nm,1.0s
GUN Gumba 47.77 273 *e*P **P 02 16 09.6 +0.2**
comp=Z,77nm,0.8s
KKN Kakani 48.29 274 *e*P **P 02 16 13.4 +0.2**
comp=Z,55nm,0.7s
PKI Pulchoki 48.30 273 *e*P **P 02 16 13.2 -0.2**
PKIN Phulchoki 48.31 273 *e*P **P 02 16 13.1 -0.3**
DMN Daman 48.51 274 *e*P **P 02 16 15.2 +0.2**
comp=Z,20nm,0.8s
EGAK Eagle 48.87 34 *e*P **P 02 16 17.3 +0.4**
comp=Z,3.8nm,0.8s
TKM2 Tokmak 2 48.97 296 *e*P **P 02 16 18.7 +0.4**
TKM2 pmax pmax
comp=Z,15nm,0.8s
TKM2 Tokmak 2 48.97 296 *e*P **P 02 16 18.7 +0.4**
comp=Z,15nm,0.8s
TKM2 Tokmak 2 48.97 296 P **P 02 16 18.7 +0.4**
SNR=22
BVA0 Borovoye Array 49.17 311 *i* P **P 02 16 19.4 0.0**
BVA0 pmax pmax
comp=Z,12nm,0.4s
BVAR Borovoye Array 49.17 311 P **P 02 16 19.6 +0.3**
BVAR pmax pmax
comp=Z,14nm,0.4s
BVAR MLR MLR
comp=Z,177nm,18.6s
BVAR Borovoye Array 49.17 311 P **P 02 16 19.6 +0.3**
BVAR Borovoye Array 49.17 311 P **P 02 16 19.6 +0.3**
comp=Z,14nm,0.4s,baz=69,slow=8.5,SNR=59
BVAR LR LR 02 38 14.0
comp=Z,177nm,18.6s,baz=73,slow=37
DANN Dangsing 49.17 275 *e*P **P 02 16 20.5 +0.4**
comp=Z,84nm,0.7s
BRVK Borovoye 49.22 311 *d i*P **P 02 16 20.3 +0.5**
BRVK pmax pmax
comp=Z,10.0nm,0.6s
BRVK Borovoye 49.22 311 *e*P **P 02 16 20.1 +0.3**
comp=Z,17nm,0.8s
KBK Karagaybulak 49.51 296 P **P 02 16 22.8 +0.5**
SNR=22
KZA Kyzart 49.51 295 P **P 02 16 23.8 +1.1**
SNR=6.3
KOLN Koldanda 49.58 275 *e*P **P 02 16 23.3 +0.2**
comp=Z,18nm,0.6s
USP Ospenovka 49.60 297 P **P 02 16 22.7 -0.2**
SNR=6.1
AAK Ala-Archa 49.83 296 LR LR 02 38 40.4
comp=Z,130nm,21.5s,baz=59,slow=37
PYUN Piuthan 49.88 275 *e*P **P 02 16 25.5 +0.1**
KSH Kashi 49.98 292 *e*P P 02 16 29.7 +3.8
KSH *e*pP pP 02 16 45.3 +5.9
KSH *e*sP sP 02 16 52.6 +7.4
KSH *e*PcP **PcP 02 17 47.3 +1.9**
KSH *e*PP PP 02 18 26.2 +5.2
KSH *e*S **S 02 23 35.1 +2.0**
KSH *e*sS sS 02 24 02.7 +7.0
KSH pmax pmax
comp=Z,10.0nm,0.8s
KSH pmax pmax
comp=Z,190nm,6.0s
KSH LR LR
comp=N,290nm,5.6s
KSH LR LR
comp=E,310nm,6.0s
KSH LR LR
comp=Z,520nm,6.0s
EKS2 Erkin-Say 50.31 297 *e*P **P 02 16 28.5 +0.1**
EKS2 pmax pmax
comp=Z,6.0nm,0.8s
EKS2 Erkin-Say 50.31 297 *e*P **P 02 16 28.5 +0.1**
comp=Z,6.0nm,0.8s
EKS2 Erkin-Say 50.31 297 P **P 02 16 28.7 +0.3**
SNR=7.6
AML Almayashu 50.57 296 P **P 02 16 31.3 +0.7**
SNR=11
KULM Kulim 51.15 239 *e*P **P 02 16 35.8 +1.0**
comp=Z,9.1nm,0.8s
INK Inuvik 51.24 28 P **P 02 16 36.1 +1.4**
INK Inuvik 51.24 28 P **P 02 16 36.1 +1.4**
comp=Z,4.3nm,0.5s,baz=296,slow=7.3,SNR=25
KK31 Karatay Array 52.36 298 *i* P **P 02 16 43.0 -0.6**
KK31 pmax pmax
comp=Z,10.0nm,0.9s
KKAR Karatay Array 52.36 298 *e*P **P 02 16 43.2 -0.4**
KKAR pmax pmax
comp=Z,8.0nm,0.8s
KKAR Karatay Array 52.36 298 *e*P **P 02 16 43.2 -0.4**
comp=Z,8.4nm,0.8s
SVE Sverdlovsk 53.42 317 ⇑*e*P **P 02 16 52.1 +1.0**
SVE *e*PPP PPP 02 19 56.5
SVE pmax pmax
comp=Z,44nm,0.8s
SVE MLR MLR
comp=Z,383nm,17.0s
SOKR Solikamsk 54.41 321 *d i*P **P 02 16 58.0 -0.3**
SOKR pmax pmax
comp=Z,10.0nm,0.8s
ARU Arti 54.64 317 *c i*P **P 02 17 00.1 +0.1**
ARU 02 18 02.1
ARU 02 19 00.8
ARU S **S 02 24 33.0 -3.0**
ARU pmax pmax
comp=Z,39nm,1.0s
ARU MLR MLR
comp=Z,315nm,16.0s
AB31 Akbulak array 56.63 309 *i* P **P 02 17 14.1 -0.3**
AB31 pmax pmax
comp=Z,15nm,0.6s
ABKAR Akbulak array 56.63 309 *e*P **P 02 17 14.4 0.0**
KBL Kabul 57.15 290 *e*P **P 02 17 17.8 -0.8**
KBL pmax pmax
comp=Z,40nm,0.8s
KBL Kabul 57.15 290 *e*P **P 02 17 17.8 -0.8**
comp=Z,40nm,0.8s
AKTO Aktyubinsk 57.27 311 P **P 02 17 18.9 0.0**
AKTO pmax pmax
comp=Z,15nm,0.8s
AKTO Aktyubinsk 57.27 311 P **P 02 17 18.9 0.0**
AKTO Aktyubinsk 57.27 311 P **P 02 17 18.9 0.0**
comp=Z,15nm,0.8s,baz=72,slow=10,SNR=47
RES Resolute Bay 59.38 15 P **P 02 17 33.6 +0.4**
RES Resolute Bay 59.38 15 P **P 02 17 33.6 +0.4**
comp=Z,5.1nm,0.7s,baz=308,slow=7.2,SNR=6.7
APA Apatity 60.22 335 ⇑*i*P **P 02 17 39.0 -0.1**
APA *i* 02 17 50.0
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,200nm,15.0s
WRAB Tennant Creek 60.24 189 *e*P **P 02 17 39.8 0.0**
WRAB pmax pmax
comp=Z,6.0nm,0.8s
WRAB Tennant Creek 60.24 189 *e*P **P 02 17 39.8 0.0**
comp=Z,6.0nm,0.8s
WRA Warramunga Arr 60.25 189 P **P 02 17 39.3 -0.6**
WRA pP **pP 02 17 51.6 -2.1**
WRA Warramunga Arr 60.25 189 P **P 02 17 39.3 -0.6**
comp=Z,3.1nm,0.7s,baz=6.9,slow=7.1,SNR=15
WRA pP **pP 02 17 51.6 -2.1**
comp=Z,10nm,0.8s,baz=6.9,slow=7.1,SNR=17
TMCR Tamitsa 60.45 331 *e*P **P 02 17 39.7 -1.0**
TMCR pmax pmax
comp=Z,33nm,1.3s
YKW3 Yellowknife Ar 60.66 31 *e*P **P 02 17 43.0 +0.8**
comp=Z,0.1nm,1.0s
YKA Yellowknife Ar 60.70 31 P **P 02 17 43.2 +0.8**
YKA pP **pP 02 17 54.8 -1.5**
YKA Yellowknife Ar 60.70 31 P **P 02 17 43.2 +0.8**
comp=Z,1.9nm,0.9s,baz=300,slow=6.7,SNR=14
YKA pP **pP 02 17 54.7 -1.5**
comp=Z,2.2nm,0.6s,baz=302,slow=6.6,SNR=16
KEV Kevo 60.85 339 *ep* **P 02 17 42.6 -0.8**
comp=Z,5.9nm,0.6s
KEV Kevo 60.85 339 *e*P **P 02 17 42.6 -0.8**
KEV pmax pmax
comp=Z,6.0nm,0.6s
ARCES ARCESS Array B 61.40 339 P **P 02 17 47.3 +0.1**
ARCES ARCESS Array B 61.40 339 P **P 02 17 47.3 +0.1**
comp=Z,3.1nm,0.8s,baz=59,slow=8.8,SNR=9.9
ARCES LR LR 02 49 24.8
comp=Z,56nm,18.3s,baz=40,slow=41
KLMR Klimovskoe 61.61 327 *e*P **P 02 17 47.6 -1.0**
KLMR pmax pmax
comp=Z,21nm,1.3s
DAG Danmarks Havn 62.76 355 ⇑*i*P **P 02 17 56.0 -0.1**
DAG *i* *PP **pP 02 18 08.9 -1.1**
DAG pmax pmax
comp=Z,4.0nm,0.8s
DAG Danmarks Havn 62.76 355 ⇑*i*P **P 02 17 56.0 -0.1**
comp=Z,5.2nm,0.8s
DAG *i* pP **pP 02 18 08.9 -1.1**
JOF Joensuu 63.64 332 *ep* **P 02 18 01.8 -0.3**
comp=Z,6.5nm,0.5s
JOF Joensuu 63.64 332 *e*P **P 02 18 01.8 -0.3**
JOF pmax pmax
comp=Z,7.0nm,0.5s
ASAR Alice Springs 63.98 189 P **P 02 18 04.9 +0.1**
ASAR Alice Springs 63.98 189 P **P 02 18 04.9 +0.1**
comp=Z,1.9nm,0.7s,baz=3.4,slow=6.0,SNR=17
KAF Kangasniemi 65.95 332 *ep* **P 02 18 15.2 -2.0**
comp=Z,6.6nm,0.6s
KAF Kangasniemi 65.95 332 *e*P **P 02 18 15.2 -2.0**
KAF pmax pmax
comp=Z,7.0nm,0.6s
VRHR Novokhopersk 65.98 317 *e*P **P 02 18 16.4 -1.1**
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,10.0nm,1.2s
VRHR pmax pmax
comp=E,20nm,1.3s
OBN Obninsk 66.14 323 ⇓*i*P P 02 18 15.1 -3.4
OBN pmax pmax
comp=Z,18nm,1.0s
OBN MLR MLR
comp=Z,200nm,17.0s
FINES FINESS Array B 66.48 332 P **P 02 18 20.2 -0.3**
FINES pP **pP 02 18 33.1 -1.4**
FINES FINESS Array B 66.48 332 P **P 02 18 20.2 -0.3**
comp=Z,9.0nm,0.7s,baz=38,slow=7.0,SNR=21
FINES pP **pP 02 18 33.1 -1.4**
comp=Z,11nm,0.8s,baz=39,slow=9.8,SNR=11
FINES LR LR 02 49 49.4
comp=Z,138nm,18.9s,baz=152,slow=38
VSR Storozhevoye 67.18 318 *e*P **P 02 18 24.8 -0.4**
VSR pmax pmax
comp=Z,20nm,0.9s
VSR pmax pmax
comp=N,20nm,1.1s
VSR pmax pmax
comp=E,10.0nm,0.8s
MAK Makhachkala 67.24 308 *e*P P 02 18 31.9 +6.2
MAK MLR MLR
comp=Z,196nm,20.0s
NEW Newport 67.32 45 ⇓P **P 02 18 27.4 +1.2**
baz=67
SUMG Summit 67.58 0 ⇑*i*P **P 02 18 29.0 +1.1**
SUMG *i* *PP **pP 02 18 42.3 +0.4**
SUMG pmax pmax
comp=Z,7.0nm,0.7s
SUMG Summit 67.58 0 *e*P **P 02 18 28.8 +0.8**
comp=Z,14nm,0.7s
SUMG *e* **pP 02 18 42.7 +0.8**
SUMG Summit 67.58 0 ⇑*i*P **P 02 18 29.0 +1.1**
comp=Z,6.8nm,0.7s
SUMG *i* pP **pP 02 18 42.3 +0.4**
C11A Tepee Creek (N 68.04 45 ⇓P **P 02 18 32.3 +1.5**
baz=68
A13A Flathead Natio 68.39 44 ⇑P **P 02 18 34.6 +1.6**
baz=68
B13A Whitefish 68.69 44 ⇑P **P 02 18 36.0 +1.1**
baz=68,SNR=6.3
A14A Double T Ranch 68.89 43 ⇓P **P 02 18 37.1 +0.9**
baz=69
C13A Hot Springs 69.05 45 ⇓P **P 02 18 38.7 +1.6**
baz=69
JTMT Jette 69.17 45 *e*P **P 02 18 38.9 +0.9**
JTMT *e* **pP 02 18 52.8 +0.9**
A15A Johnson Ranch, 69.24 43 ⇑P **P 02 18 39.4 +1.1**
baz=69
B14A Marquette Ranc 69.33 44 ⇑P **P 02 18 40.0 +1.0**
baz=69,SNR=5.4
DUS Dusheti 69.44 308 P **P 02 18 41.2 +1.5**
C14A Swan Lake 69.44 44 ⇓P **P 02 18 41.0 +1.5**
baz=69
SWMT Swartz Lake 69.46 45 *e*P **P 02 18 40.8 +1.1**
SWMT *e* **pP 02 18 54.5 +0.7**
D13A Huson 69.46 45 ⇓P **P 02 18 40.5 +0.8**
baz=69,SNR=6.3
KIV Kislovodsk 69.54 311 *e*P **P 02 18 41.0 +0.8**
KIV pmax pmax
comp=Z,36nm,0.9s
KIV MLR MLR
comp=Z,125nm,18.0s
KBZ Khabaz 69.55 310 P **P 02 18 41.3 +1.2**
KBZ pmax pmax
comp=Z,9.0nm,0.7s
KBZ MLR MLR
comp=Z,79nm,18.4s

KBZ **Khabaz** 69.55 310 P **P** 02 18 41.3 +1.2
KBZ **Khabaz** 69.55 310 P **P** 02 18 41.3 +1.2
comp=Z,9,4nm,0.7s,baz=56,slow=4.8,SNR=26
KBZ LR LR 02 51 50.9
comp=Z,79nm,18.4s,baz=34,slow=38
TBLG Delisi 69.62 308 P **P** 02 18 40.8 +0.1
B15A Bradely Ranch, 69.74 43 ⇑P **P** 02 18 42.7 +1.3
baz=70,SNR=6.9
F12A Elk City 69.83 47 ⇓P **P** 02 18 43.4 +1.3
baz=70
A16A West Butte Ran 69.85 42 ⇑P **P** 02 18 42.7 +0.6
baz=70
SLMT Seeley Lake 69.90 45 *e*P **P** 02 18 43.8 +1.4
MSO Missoula 69.91 45 ⇑P **P** 02 18 43.4 +1.0
baz=70
D14A Greenough 69.99 45 ⇓P **P** 02 18 43.7 +0.7
baz=70,SNR=6.1
E13A Victor 70.01 46 ⇓P **P** 02 18 43.9 +0.8
baz=70
C15A Salmond Ranch, 70.05 44 ⇑P **P** 02 18 44.7 +1.4
baz=70,SNR=9.9
B16A M & M Farms, S 70.13 43 ⇓P **P** 02 18 44.7 +1.0
baz=70,SNR=5.0
IZAR Zarasai 70.26 327 *e*P **P** 02 18 44.6 +0.3
IZAR AMB AMB 02 18 46.2
comp=Z,4.8nm,1.2s
A17A Triple J Farms 70.32 42 ⇑P **P** 02 18 45.6 +0.7
baz=70,SNR=6.1
IDID Didziasalis 70.35 327 *e*P **P** 02 18 45.1 +0.3
IDID AMB AMB 02 18 46.9
comp=Z,6.0nm,1.1s
ISAL Salakas 70.43 327 *e*P **P** 02 18 45.6 +0.3
ISAL AMB AMB 02 18 47.5
comp=Z,9.9nm,1.1s
IIGN Ignalina 70.54 327 *e*P **P** 02 18 46.3 +0.2
IIGN AMB AMB 02 18 48.1
comp=Z,7.0nm,1.1s
FFC Flin Flon 70.64 34 *e*P **P** 02 18 47.1 +0.5
FFC *e* 02 19 00.9
FFC pmax pmax
comp=Z,8.0nm,0.9s
FFC Flin Flon 70.64 34 *e*P **P** 02 18 47.1 +0.5
comp=Z,7.7nm,0.9s
FFC *e* **pP** 02 19 00.9 +0.2
B17A L&G Farms, Che 70.67 43 ⇑P **P** 02 18 48.1 +1.0
baz=70
A18A Metzger Ranch, 70.77 42 ⇓P **P** 02 18 48.8 +1.1
baz=70
E15A Deer Lodge 70.86 45 ⇓P **P** 02 18 49.3 +0.9
baz=71,SNR=5.9
MFID Camas Ranch 70.92 49 ⇑P **P** 02 18 49.7 +1.0
baz=71
D16A Dana Ranch, Ca 71.07 44 ⇑P **P** 02 18 50.5 +0.9
baz=71
I12A Atlanta 71.09 48 ⇓P **P** 02 18 50.6 +0.8
baz=71
C17A Wharram Farm, 71.11 43 ⇓P **P** 02 18 50.5 +0.7
baz=71
B18A Beardsley Farm 71.14 42 ⇑P **P** 02 18 50.9 +1.0
baz=71
F15A Butte 71.31 45 ⇓P **P** 02 18 52.2 +1.1
baz=71,SNR=8.0
A19A Klindworth Far 71.32 41 ⇓P **P** 02 18 51.9 +0.9
baz=71
LRM Limekiln Ridge 71.34 45 *e*P **P** 02 18 52.7 +1.3
LRM *e* **pP** 02 19 06.5 +1.0
EGMT Eagleton 71.39 42 *e*P **P** 02 18 52.2 +0.8
comp=Z,5.9nm,0.9s
EGMT *e* **pP** 02 19 06.5 +1.0
EGMT Eagleton 71.39 42 ⇓P **P** 02 18 51.9 +0.5
baz=71
D17A Six Diamond Ra 71.45 44 ⇓P **P** 02 18 52.3 +0.4
baz=71
NB2 NORSAR Subarra 71.66 337 P **P** 02 18 52.7 0.0
comp=Z,10nm,0.8s,baz=38,slow=6.2
NOA NORSAR Array B 71.66 337 P **P** 02 18 52.8 0.0
NOA pP **pP** 02 19 05.7 -1.2
NOA NORSAR Array B 71.66 337 P **P** 02 18 52.8 0.0
comp=Z,7.1nm,0.8s,baz=38,slow=6.1,SNR=57
NOA pP **pP** 02 19 05.7 -1.2
comp=Z,9.0nm,0.8s,baz=38,slow=6.1,SNR=13
NOA LR LR 02 53 02.8
comp=Z,87nm,21.8s,baz=25,slow=38
G15A Dillon 71.73 46 ⇓P **P** 02 18 55.1 +1.5
baz=72,SNR=5.9
E17A Martinsdale 71.80 44 ⇑P **P** 02 18 54.9 +0.9
baz=72
F16A Kennard Place, 71.81 45 ⇑P **P** 02 18 55.0 +0.9
baz=72
D18A Linhart Farms, 71.89 43 ⇓P **P** 02 18 55.7 +1.2
baz=72
C19A Slack Wire Ran 71.94 42 ⇓P **P** 02 18 56.1 +1.4
baz=72,SNR=10
I14A Mackay 71.97 47 ⇓P **P** 02 18 56.6 +1.5
baz=72
G16A Moss Hill, Enn 72.07 46 ⇓P **P** 02 18 56.7 +1.0
baz=72
A21A Bergtoll Ranch 72.19 40 ⇑P **P** 02 18 57.3 +1.1
baz=72
E18A Harlowton 72.23 44 ⇓P **P** 02 18 57.8 +1.2
baz=72
F17A Fitzpatrick Pl 72.26 45 ⇑P **P** 02 18 57.8 +1.0
baz=72
AKASG Malin Array Be 72.38 322 P **P** 02 18 57.3 +0.2
AKASG *PP **pP** 02 19 10.3 -1.0
AKASG pmax pmax
comp=Z,4.0nm,0.5s
AKASG pmax pmax
comp=Z,4.0nm,0.6s
AKASG Malin Array Be 72.38 322 P **P** 02 18 57.3 +0.2
AKASG pP **pP** 02 19 10.2 -1.0
AKASG Malin Array Be 72.38 322 P **P** 02 18 57.3 +0.2
comp=Z,3.8nm,0.5s,baz=44,slow=6.0,SNR=26
AKASG pP **pP** 02 19 10.2 -1.0
comp=Z,4.0nm,0.6s,baz=45,slow=6.0,SNR=7.0
KIEV Kiev 72.39 322 *e*P **P** 02 18 56.8 -0.4
KIEV *e* 02 19 10.3
KIEV pmax pmax
comp=Z,11nm,0.9s
KIEV Kiev 72.39 322 *e*P **P** 02 18 56.8 -0.4
comp=Z,11nm,0.9s
KIEV *e* **pP** 02 19 10.3 -1.1
D19A Cripps Ranch, 72.39 43 ⇓P **P** 02 18 58.4 +1.0
baz=72
NVAR Mina Array Bea 72.46 54 P **P** 02 18 59.3 +1.1
NVAR Mina Array Bea 72.46 54 P **P** 02 18 59.3 +1.1
comp=Z,0.2nm,0.3s,baz=288,slow=6.9,SNR=3.8
C20A Veseth Ranch, 72.49 42 ⇑P **P** 02 18 59.1 +1.1
baz=72
A22A Carney Farms, 72.69 40 ⇑P **P** 02 19 00.0 +0.9
baz=72,SNR=6.9
F18A Big Timber 72.77 44 ⇓P **P** 02 19 01.0 +1.3
baz=72,SNR=6.2
D20A Manuel Ranch, 72.83 42 ⇑P **P** 02 19 01.5 +1.5
baz=73
C21A Desert Coulee 72.88 41 ⇓P **P** 02 19 01.4 +1.1
baz=73
E19A Rath Farm, Rou 72.90 43 ⇑P **P** 02 19 02.1 +1.6
baz=73,SNR=6.5
B22A Reddig Ranch S 73.11 40 ⇓P **P** 02 19 02.4 +0.7
baz=73
F19A Roth Farm, Mol 73.21 44 ⇑P **P** 02 19 03.5 +1.2
baz=73
E20A Meyer Farm, Mu 73.21 43 ⇓P **P** 02 19 03.4 +1.1
baz=73
D22A Cohagen 73.79 41 ⇑P **P** 02 19 06.9 +1.2
baz=74
C23A Lambert 73.85 40 ⇑P **P** 02 19 07.1 +1.1
baz=74
G20A Bridger 74.01 44 ⇑P **P** 02 19 07.8 +0.7
baz=74
R11A Troy Canyon, C 74.19 53 ⇑P **P** 02 19 09.1 +0.8
baz=74
D23A Lindsay 74.27 41 ⇑P **P** 02 19 09.8 +1.3
baz=74
MPMC Manual Prospec 74.43 56 ⇑P **P** 02 19 10.1 +0.4
baz=74
G21A Lodge Grass 74.54 43 ⇓P **P** 02 19 10.0 -0.2
baz=74
E23A Ismay 74.67 42 ⇓P **P** 02 19 11.8 +1.0
baz=74
D24A Glendive 74.75 41 ⇑P **P** 02 19 12.7 +1.5
baz=74
J19A Crowheart 74.84 46 ⇓P **P** 02 19 13.1 +1.1
baz=75
PDAR Pinedale Array 74.89 47 P **P** 02 19 13.0 +0.6
PDAR pP **PcP** 02 19 26.4 +0.3
comp=Z,0.5nm,0.5s,baz=318,slow=3.6,SNR=4.9
PDAR pP **PcP** 02 19 26.4 +0.3
comp=Z,0.9nm,0.5s,baz=253,slow=1.5,SNR=5.2
H21A Big Horn, Sher 75.03 44 ⇓P **P** 02 19 13.8 +0.8
baz=75
BSD Bornholm Skovb 75.12 332 *i*P **P** 02 19 10.5 -2.6
BSD *i* 02 19 25.2
BSD pmax pmax
comp=Z,5.0nm,1.1s
BSD Bornholm Skovb 75.12 332 *i*P **P** 02 19 10.5 -2.6
comp=Z,4.9nm,1.1s
BSD *i* 02 19 25.2
E24A Baker 75.13 41 ⇑P **P** 02 19 14.2 +0.7
baz=75
J20A Shoshoni 75.32 45 ⇓P **P** 02 19 15.4 +0.7
baz=75
LVV L'vov 75.38 324 *e*P **P** 02 19 14.8 0.0
H22A Clearmont 75.42 44 ⇓P **P** 02 19 16.0 +0.8
baz=75
I21A Big Trails, Te 75.44 45 ⇑P **P** 02 19 16.3 +0.9
baz=75
BFSC Mount Baldy Ra 75.45 57 ⇑P **P** 02 19 17.2 +1.6
baz=75
RDF Al-Radifah 75.47 296 *e*P **P** 02 19 14.8 -0.8
RDF AMb AMB 02 19 16.4
comp=Z,35nm,1.1s
NAY Al-Naaiem 75.49 296 *e*P **P** 02 19 14.8 -1.0
NAY AMb AMB 02 19 15.6
comp=Z,12nm,0.8s
COP Copenhagen 75.54 333 *i*P **P** 02 19 13.1 -2.4
COP pmax pmax
comp=Z,8.0nm,1.0s
COP Copenhagen 75.54 333 *i*P **P** 02 19 13.1 -2.4
comp=Z,8.0nm,1.0s
KWP Kalwaria Pacla 76.11 324 *e*P **P** 02 19 19.7 +0.8
KWP pmax pmax
comp=Z,22nm,1.1s
KWP Kalwaria Pacla 76.11 324 *e*P **P** 02 19 19.7 +0.8
comp=Z,22nm,1.1s
KWP Kalwaria Pacla 76.11 324 ⇓*i*P **P** 02 19 20.2 +1.3
KWP Kalwaria Pacla 76.11 324 *e*P **P** 02 19 19.7 +0.8
J22A Midwest 76.15 44 ⇑P **P** 02 19 19.7 +0.3
baz=76
H24A Dirks Ranch, A 76.25 43 ⇓P **P** 02 19 20.3 +0.3
baz=76
BUR08 Bucovina Ar. S 76.40 322 *e*P **P** 02 19 21.6 +0.9
BURAR Bucovina Array 76.41 322 ⇑*i*P **P** 02 19 22.0 +1.2
TESR Tescani 76.50 320 ⇑*i*P **P** 02 19 21.9 +0.7
CFR Carcaliu 76.70 319 ⇑P **P** 02 19 22.9 +0.6
CFR Carcaliu 76.70 319 ⇑*i*P **P** 02 19 22.9 +0.6
KOLS Kolonicke sedl 76.82 324 *e*P **P** 02 19 23.2 +0.3
KOLS pmax pmax
comp=Z,3.0nm,1.0s
KOLS Kolonicke sedl 76.82 324 *e*P **P** 02 19 23.2 +0.3
KOLS *e*PCP **PcP** 02 19 32.4 -1.6
N20A Spence Gulch, 76.90 47 ⇓P **P** 02 19 24.6 +0.8
baz=77
STHS Stebnicka Huta 76.92 325 *e*P **P** 02 19 25.1 +1.6
STHS pmax pmax
comp=Z,3.0nm,0.7s
STHS Stebnicka Huta 76.92 325 *e*P **P** 02 19 25.1 +1.6
VRI Vrincioaia 76.92 320 ⇓P **P** 02 19 24.7 +1.1
VRI Vrincioaia 76.92 320 ⇓*i*P **P** 02 19 24.7 +1.1
OJC Ojcow 76.94 326 *e*P **P** 02 19 24.4 +0.8
OJC Ojcow 76.94 326 *e*P **P** 02 19 24.4 +0.8
TIRR Tirgusor 77.06 318 ⇓P **P** 02 19 25.0 +0.7
TIRR Tirgusor 77.06 318 ⇓*i*P **P** 02 19 25.0 +0.7
CRVS Cervenica-Dubn 77.20 325 *e*P **P** 02 19 22.6 -2.5
CRVS pmax pmax
comp=Z,4.0nm,1.3s
CRVS Cervenica-Dubn 77.20 325 *e*P **P** 02 19 22.6 -2.5
CRVS *e*PCP **PcP** 02 19 34.5 -1.2
TRPA Tarpa 77.28 323 ⇓*i*P **P** 02 19 26.6 +1.1
U15A North Rim 77.43 53 ⇑P **P** 02 19 28.2 +1.2
baz=77
BRTR Keskin Array B 77.44 312 P **P** 02 19 27.2 +0.4
BRTR Keskin Array B 77.44 312 P **P** 02 19 27.2 +0.4
comp=Z,2.2nm,0.7s,baz=98,slow=4.4,SNR=13
BRTR LR LR 02 58 27.2
comp=Z,34nm,21.1s,baz=205,slow=39
MLR Muntele Rosu 77.57 320 ⇓*i*P **P** 02 19 28.1 +0.7
KECS Kecovo 77.94 325 *e*P **P** 02 19 29.5 +0.2
KECS pmax pmax
comp=Z,2.0nm,1.1s
KECS Kecovo 77.94 325 *e*P **P** 02 19 29.5 +0.2
VOIR 78.05 320 ⇓P **P** 02 19 31.2 +1.2
VOIR 78.05 320 ⇓*i*P **P** 02 19 31.2 +1.2
N23A Red Feather La 78.15 46 ⇓P **P** 02 19 31.4 +0.5
baz=78
MORC Moravsky Berou 78.23 327 *e*P **P** 02 19 30.8 0.0
MORC pmax pmax
comp=Z,12nm,1.4s
MORC Moravsky Berou 78.23 327 *e*P **P** 02 19 30.8 0.0
comp=Z,12nm,1.4s
MORC Moravsky Berou 78.23 327 ⇓*i*P **P** 02 19 32.2 +1.3
DPC Dobruska-Polom 78.29 328 *e*P **P** 02 19 32.4 +1.2
DPC *e**PP **pP** 02 19 45.1 -0.4
DPC Dobruska-Polom 78.29 328 *e*P **P** 02 19 32.4 +1.2
DPC *e*pP **pP** 02 19 45.1 -0.4
UPC Upice 78.29 328 *e*P **P** 02 19 32.2 +1.1
UPC *e**PP **pP** 02 19 45.3 -0.1
UPC Upice 78.29 328 *e*P **P** 02 19 32.2 +1.1
UPC *e*pP **pP** 02 19 45.3 -0.1
ARR Arges 78.31 320 ⇑*i*P **P** 02 19 32.3 +0.9
L25A Engebretsen Ra 78.35 44 ⇑P **P** 02 19 32.6 +0.8
baz=78
M24A Cheyenne 78.37 45 ⇓P **P** 02 19 32.4 +0.5
baz=78
PSZ Piszkesteto 78.63 325 ⇑P **P** 02 19 34.2 +1.0
PSZ Piszkesteto 78.63 325 ⇑*i*P **P** 02 19 34.2 +1.0
O23A Lake Granby, G 78.63 47 ⇑P **P** 02 19 34.7 +1.1
baz=78
VYHS Vyhne 78.66 326 *e*P **P** 02 19 34.1 +0.9
VYHS pmax pmax
comp=Z,2.0nm,0.9s
VYHS Vyhne 78.66 326 *e*P **P** 02 19 34.1 +0.9
BRG Berggiesshubel 78.82 330 *e*(P) pP 02 19 47.9 -0.4
comp=Z,5.2nm,1.1s
CLL Collm 78.83 330 *i*P **P** 02 19 34.0 -0.1
CLL *i* 02 19 46.5
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL Collm 78.83 330 *i*P **P** 02 19 34.0 -0.1
comp=Z,6.0nm,0.9s
CLL *i* pP **pP** 02 19 46.5 -1.9
CLL *e* 02 19 54.0
VRAC Vranov 78.98 327 ⇑*i*P **P** 02 19 36.1 +1.1
PRU Pruhonice 79.28 329 *e*P **P** 02 19 37.2 +0.6
PRU *e**PP **pP** 02 19 50.6 -0.3
PRU MLR MLR
comp=Z,100nm,19.8s
PRU Pruhonice 79.28 329 *e*P **P** 02 19 37.2 +0.6
PRU *e*pP **pP** 02 19 50.6 -0.3
PRU AMS AMS 02 57 20.0
comp=Z,100nm,19.8s
TREC Trest 79.45 328 *e*P **P** 02 19 38.2 +0.7
TREC *e**PP **pP** 02 19 51.7 -0.1
TREC Trest 79.45 328 *e*P **P** 02 19 38.2 +0.7
TREC *e*pP **pP** 02 19 51.7 -0.1
KHC Kasperske Hory 80.35 329 *e*P **P** 02 19 43.0 +0.6
KHC *e* 02 19 56.5
KHC pmax pmax
comp=Z,9.0nm,1.0s
KHC Kasperske Hory 80.35 329 *e*P **P** 02 19 42.9 +0.6
KHC *e*pP **pP** 02 19 56.2 -0.6
KHC Kasperske Hory 80.35 329 *e*P **P** 02 19 43.0 +0.6
comp=Z,8.9nm,1.0s
KHC *e* **pP** 02 19 56.5 -0.3
CONA Conrad Observa 80.36 327 ⇓*i*P **P** 02 19 42.2 -0.3
comp=Z,6.3nm,1.1s
CONA ⇑*i*pP **pP** 02 19 57.3 +0.3
comp=Z,8.3nm,1.1s
GERES GERESS Array B 80.52 329 P **P** 02 19 43.9 +0.5
GERES pP **pP** 02 19 56.6 -1.1
GERES GERESS Array B 80.52 329 P **P** 02 19 43.9 +0.5
comp=Z,1.7nm,0.7s,baz=35,slow=5.3,SNR=22
GERES pP **pP** 02 19 56.6 -1.1
comp=Z,1.6nm,0.7s,baz=28,slow=6.0,SNR=7.6
GERES LR LR 02 57 50.6
comp=Z,94nm,19.5s,baz=29,slow=37
GRF Grafenberg Arr 80.81 330 *e*P **P** 02 19 45.7 +0.9
comp=Z,14nm,1.0s
GRF *e*pP **pP** 02 19 59.0 -0.2
GRF Grafenberg Arr 80.81 330 *e*P **P** 02 19 45.7 +0.9
GRF *e**PP **pP** 02 19 59.0 -0.2
GRF pmax pmax
comp=Z,14nm,1.0s
GRFO Grafenberg 80.81 330 *e*P **P** 02 19 45.2 +0.4
GRFO pmax pmax
comp=Z,14nm,1.0s
GRFO Grafenberg 80.81 330 *e*P **P** 02 19 45.2 +0.4
comp=Z,14nm,1.0s
ECSD EROS Data Cent 80.96 39 *e*P **P** 02 19 46.1 +0.4
comp=Z,2.7nm,0.8s
VTS Vitosha 81.03 319 ⇑P **P** 02 19 46.4 0.0
VTS Vitosha 81.03 319 ⇑*i*P **P** 02 19 46.4 0.0
X21A Alamocita Cree 81.49 52 ⇓P **P** 02 19 50.1 +1.1
baz=81
T25A Trinidad 81.61 48 ⇑P **P** 02 19 50.3 +0.7
baz=81
GROS Grobnik 81.67 326 *i*P **P** 02 19 49.7 +0.2
GROS *i* pP **pP** 02 20 03.1 -0.8
SOKA Soboth 81.69 326 ⇑*i*P **P** 02 19 50.4 +0.7
comp=Z,12nm,1.3s
SOKA ⇑*i*pP **pP** 02 20 03.2 -0.8
comp=Z,7.3nm,0.8s
Z20A Nine Sixteen R 81.91 53 ⇑P **P** 02 19 52.0 +0.8
baz=82
T26A Comanche Natio 82.05 48 ⇓P **P** 02 19 52.5 +0.6
baz=82
KBA Koelnbreinsper 82.08 328 ⇓*i*P **P** 02 19 52.4 +0.5
comp=Z,5.7nm,0.6s
SCHQ Schefferville 82.12 17 P **P** 02 19 52.3 +0.6
SCHQ Schefferville 82.12 17 P **P** 02 19 52.3 +0.6
comp=Z,3.8nm,1.0s,baz=311,slow=9.3,SNR=5.7
120A U Bar Ranch, L 82.27 54 ⇑P **P** 02 19 54.1 +1.1
baz=82
W24A Lazy 6 Ranch, 82.38 50 ⇑P **P** 02 19 54.5 +0.8
baz=82
V25A Rancho No Teng 82.40 49 ⇓P **P** 02 19 54.4 +0.6
baz=82
BOJS Bojanci 82.53 326 *i*P **P** 02 19 54.0 +0.1
JAVS Javornik 82.73 327 *i*P **P** 02 19 54.6 -0.6
MOTA Moosalm 82.77 329 ⇓*i*P P 02 19 51.8 -3.6
comp=Z,4.9nm,0.7s
220A Playas Peak, P 82.77 54 ⇓P **P** 02 19 56.8 +1.1
baz=82
V26A Tequesquite Ra 82.91 49 ⇑P **P** 02 19 57.4 +1.0
baz=83
W25A X Bar L Ranch, 82.93 49 ⇑P **P** 02 19 57.3 +0.9
baz=83
CDF Champ du Feu 83.33 332 *e*P **P** 02 19 58.3 +0.1
comp=Z,10nm,0.8s
CDF Champ du Feu 83.33 332 *e*P **P** 02 19 58.3 +0.1
CDF pmax pmax
comp=Z,10.0nm,0.8s
CDF Champ du Feu 83.33 332 *e*P **P** 02 19 58.3 +0.1
comp=Z,10nm,0.8s
T29A Hugoton 83.35 46 ⇑P **P** 02 19 59.6 +1.1
baz=83
PAGF Fort de Pagny 83.76 333 *e*P **P** 02 20 00.8 +0.5
comp=Z,3.7nm,0.8s
PAGF Fort de Pagny 83.76 333 *e*P **P** 02 20 00.8 +0.5
comp=Z,3.7nm,0.8s
APE Apeiranthos 83.85 314 ⇓P **P** 02 20 00.1 -0.9
APE Apeiranthos 83.85 314 ⇓*i*P **P** 02 20 00.1 -0.9
HINF Hinteralfeld 83.98 332 *e*P **P** 02 20 01.4 -0.1
HINF Hinteralfeld 83.98 332 *e*P **P** 02 20 01.4 -0.1
HINF Hinteralfeld 83.98 332 *e*P **P** 02 20 01.4 -0.1
HAU Haudompre 84.01 332 *e*P **P** 02 20 01.4 -0.2
comp=Z,4.2nm,0.7s
HAU *e*R
comp=Z,59nm,20.0s
HAU Haudompre 84.01 332 *e*P **P** 02 20 01.4 -0.2
HAU pmax pmax
comp=Z,4.0nm,0.7s
HAU Haudompre 84.01 332 *e*P **P** 02 20 01.4 -0.2
comp=Z,4.2nm,0.7s
MEZF Maizieres J'vi 84.04 333 *e*P **P** 02 20 02.1 +0.4
MEZF Maizieres J'vi 84.04 333 *e*P **P** 02 20 02.1 +0.4
124A Stringfield Ra 84.10 52 ⇓P **P** 02 20 03.6 +1.0
baz=84
Z25A Roswell 84.14 51 ⇑P **P** 02 20 03.7 +1.1
baz=84
SFTF Sexfontaines 84.30 333 *e*P **P** 02 20 03.2 +0.2
comp=Z,20nm,1.0s
SFTF Sexfontaines 84.30 333 *e*P **P** 02 20 03.2 +0.2
comp=Z,20nm,1.0s
224A Cornudas Mount 84.50 52 ⇓P **P** 02 20 05.6 +1.1
baz=84
Z26A Caprock 84.58 51 ⇓P **P** 02 20 06.1 +1.2
baz=84
125A Gardner Draw, 84.61 51 ⇓P **P** 02 20 06.1 +1.1
baz=84
Y27A Causey 84.63 50 ⇑P **P** 02 20 06.3 +1.2
baz=84
324A Moseley Ranch, 84.96 53 ⇓P **P** 02 20 07.9 +1.1
baz=85
Z27A Tatum 85.00 50 ⇓P **P** 02 20 08.1 +1.1
baz=85
PPT Papeete 85.27 118 LR LR 02 50 54.9
comp=Z,135nm,20.4s,baz=2.5,slow=30
CABF La Chapelle 85.28 332 *e*P **P** 02 20 08.3 +0.2
CABF La Chapelle 85.28 332 *e*P **P** 02 20 08.3 +0.2
CABF La Chapelle 85.28 332 *e*P **P** 02 20 08.3 +0.2
226B Tecolote Peak, 85.31 51 ⇑P **P** 02 20 09.3 +0.8
baz=85
LOR Lormes 85.51 333 ⇑*i*P **P** 02 20 09.3 +0.1
comp=Z,21nm,0.9s
LOR *e*R
comp=Z,112nm,22.5s
LOR Lormes 85.51 333 ⇑*i*P **P** 02 20 09.3 +0.1
comp=Z,21nm,0.9s
FLN La Foliniere 85.62 336 *e*P **P** 02 20 09.9 +0.3
FLN *e*R
comp=Z,92nm,21.5s
FLN La Foliniere 85.62 336 *e*P **P** 02 20 09.9 +0.3
FLN La Foliniere 85.62 336 *e*P **P** 02 20 09.9 +0.3
LDF La Druitiere 85.66 336 *e*P **P** 02 20 10.3 +0.5
comp=Z,14nm,1.0s
LDF La Druitiere 85.66 336 *e*P **P** 02 20 10.3 +0.5
LDF pmax pmax
comp=Z,14nm,1.0s
LDF La Druitiere 85.66 336 *e*P **P** 02 20 10.3 +0.5
comp=Z,14nm,1.0s
425A Indio Mountain 85.72 53 ⇓P **P** 02 20 11.6 +1.0
baz=86
SSF Saint Saulge 85.81 333 ⇑*i*P **P** 02 20 10.8 +0.2
comp=Z,12nm,0.8s
SSF Saint Saulge 85.81 333 ⇑*i*P **P** 02 20 10.8 +0.2
SSF pmax pmax
comp=Z,12nm,0.8s
SSF Saint Saulge 85.81 333 ⇑*i*P **P** 02 20 10.8 +0.2
comp=Z,12nm,0.8s
Z29A Hungry Hill Ra 85.92 49 ⇑P **P** 02 20 12.9 +1.3
baz=86
HYF Humbligny 85.93 334 *e*P **P** 02 20 11.8 +0.6
HYF Humbligny 85.93 334 *e*P **P** 02 20 11.8 +0.6
LPL La Plagne 85.97 331 ⇑*i*P **P** 02 20 12.0 +0.3
comp=Z,18nm,0.9s
LPL La Plagne 85.97 331 ⇑*i*P **P** 02 20 12.0 +0.3
LPL pmax pmax
comp=Z,18nm,0.9s
LPL La Plagne 85.97 331 ⇑*i*P **P** 02 20 12.0 +0.3
comp=Z,18nm,0.9s
LPG La Plagne 85.98 331 *e*P **P** 02 20 12.2 +0.4
comp=Z,21nm,0.9s
LPG La Plagne 85.98 331 *e*P **P** 02 20 12.2 +0.4
LPG pmax pmax
comp=Z,21nm,0.9s
LPG La Plagne 85.98 331 *e*P **P** 02 20 12.2 +0.4
comp=Z,21nm,0.9s
SMF Signal de Mont 86.06 333 *e*P **P** 02 20 12.1 +0.2
comp=Z,21nm,1.1s
SMF Signal de Mont 86.06 333 *e*P **P** 02 20 12.1 +0.2
SMF pmax pmax
comp=Z,21nm,1.1s
SMF Signal de Mont 86.06 333 *e*P **P** 02 20 12.1 +0.2
comp=Z,21nm,1.1s
GRR Gorron 86.07 337 *e*P **P** 02 20 12.1 +0.3
comp=Z,59nm,1.2s
GRR Gorron 86.07 337 *e*P **P** 02 20 12.1 +0.3
GRR pmax pmax
comp=Z,59nm,1.2s
GRR Gorron 86.07 337 *e*P **P** 02 20 12.1 +0.3
comp=Z,59nm,1.2s
Z30A Sanderson Ranc 86.23 49 ⇑P **P** 02 20 14.0 +1.0
baz=86
426A McDonald Obser 86.39 52 ⇑P **P** 02 20 14.9 +0.8
baz=86

BGF	Bois d'Agland	86.48	333	eP	P	02 20 14.2	+0.3
	comp=Z,8.5nm,0.8s						
BGF	Bois d'Agland	86.48	333	eP	P	02 20 14.2	+0.3
BGF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BGF	Bois d'Agland	86.48	333	eP	P	02 20 14.2	+0.3
	comp=Z,8.5nm,0.8s						
MBDF	Montbardon	86.62	330	eP	P	02 20 14.5	-0.3
	comp=Z,8.8nm,0.8s						
MBDF	Montbardon	86.62	330	eP	P	02 20 14.5	-0.3
MBDF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MBDF	Montbardon	86.62	330	eP	P	02 20 14.5	-0.3
	comp=Z,8.8nm,0.8s						
SGMF	Saint Gilles	86.70	337	eP	P	02 20 15.5	+0.6
SGMF	Saint Gilles	86.70	337	eP	P	02 20 15.5	+0.6
SGMF	Saint Gilles	86.70	337	eP	P	02 20 15.5	+0.6
Z31A	Sharp Cattle R	86.78	48	⇓P	P	02 20 16.7	+1.0
	baz=86						
ORIF	Oris-en-Rattie	86.80	331	eP	P	02 20 15.9	+0.3
	comp=Z,17nm,1.0s						
ORIF				eR			
	comp=Z,103nm,22.5s						
ORIF	Oris-en-Rattie	86.80	331	eP	P	02 20 15.9	+0.3
ORIF				pmax	pmax		
	comp=Z,17nm,1.0s						
ORIF	Oris-en-Rattie	86.80	331	eP	P	02 20 15.9	+0.3
	comp=Z,17nm,1.0s						
TCF	Toulx Ste Croi	86.93	334	eP	P	02 20 16.5	+0.3
TCF	Toulx Ste Croi	86.93	334	eP	P	02 20 16.5	+0.3
TCF	Toulx Ste Croi	86.93	334	eP	P	02 20 16.5	+0.3
527A	Woodward Ranch	87.01	52	⇓P	P	02 20 17.8	+0.8
	baz=87						
626A	Big Bend Ranch	87.11	53	⇑P	P	02 20 18.6	+1.1
	baz=87						
428A	Kincaid Ranch,	87.16	52	⇑P	P	02 20 18.8	+1.1
	baz=87						
QUIF	Quistinic	87.18	338	eP	P	02 20 17.6	+0.3
QUIF	Quistinic	87.18	338	eP	P	02 20 17.6	+0.3
QUIF	Quistinic	87.18	338	eP	P	02 20 17.6	+0.3
VIVF	Saint-Julien-l	87.30	331	eP	P	02 20 18.4	+0.4
VIVF	Saint-Julien-l	87.30	331	eP	P	02 20 18.4	+0.4
VIVF	Saint-Julien-l	87.30	331	eP	P	02 20 18.4	+0.4
MFF	Saint Martin d	87.43	335	eP	P	02 20 19.2	+0.7
	comp=Z,59nm,1.2s						
MFF	Saint Martin d	87.43	335	eP	P	02 20 19.2	+0.7
MFF				pmax	pmax		
	comp=Z,59nm,1.2s						
MFF	Saint Martin d	87.43	335	eP	P	02 20 19.2	+0.7
	comp=Z,59nm,1.2s						
528A	Cox Ranch, San	87.50	52	⇓P	P	02 20 20.4	+1.1
	baz=87						
TXAR	Lajitas Array	87.56	53	P	P	02 20 20.4	+0.8
TXAR	Lajitas Array	87.56	53	P	P	02 20 20.4	+0.8
	comp=Z,0.4nm,0.7s,baz=292,slow=3.4,SNR=8.4						
LMR	La Mourre	87.90	330	eP	P	02 20 20.8	0.0
LMR	La Mourre	87.90	330	eP	P	02 20 20.8	0.0
LMR	La Mourre	87.90	330	eP	P	02 20 20.8	0.0
RJF	Les Rejaudoux	88.02	334	eP	P	02 20 22.2	+0.8
RJF				eR			
	comp=Z,99nm,21.0s						
RJF	Les Rejaudoux	88.02	334	eP	P	02 20 22.2	+0.8
RJF	Les Rejaudoux	88.02	334	eP	P	02 20 22.2	+0.8
CAF	Calviac	88.17	333	eP	P	02 20 23.0	+0.9
	comp=Z,41nm,1.3s						
CAF	Calviac	88.17	333	eP	P	02 20 23.0	+0.9
CAF				pmax	pmax		
	comp=Z,41nm,1.3s						
CAF	Calviac	88.17	333	eP	P	02 20 23.0	+0.9
	comp=Z,41nm,1.3s						
530A	J-C Ranch, Com	88.38	51	⇑P	P	02 20 24.7	+1.3
	baz=88						
531A	Rocksprings	88.84	51	⇑P	P	02 20 26.6	+1.0
	baz=89						
MTLF	Montolieu	89.50	332	eP	P	02 20 28.9	+0.5
MTLF	Montolieu	89.50	332	eP	P	02 20 28.9	+0.5
MTLF	Montolieu	89.50	332	eP	P	02 20 28.9	+0.5
ESDC	Sonseca Array	94.87	335	P	P	02 20 53.4	0.0
ESDC				pP	pP	02 21 06.5	-1.4
ESDC	Sonseca Array	94.87	335	P	P	02 20 53.4	0.0
	comp=Z,0.2nm,0.3s,baz=20,slow=4.3,SNR=4.2						
ESDC				pP	pP	02 21 06.5	-1.4
	comp=Z,1.2nm,0.7s,baz=7.3,slow=4.0,SNR=3.3						
ESDC				LR	LR	03 08 39.5	
	comp=Z,72nm,18.9s,baz=205,slow=39						
TORD	Torodi Ar. Bea	115.71	317	PKP	PKPdf	02 26 13.2	-0.8
TORD				pPKP	pPKiKP	02 26 26.9	-2.1
TORD				PP	PP	02 27 10.2	-6.0
TORD	Torodi Ar. Bea	115.71	317	PKP	PKPdf	02 26 13.2	-0.8
	comp=Z,0.3nm,0.5s,baz=36,slow=1.8,SNR=8.7						
TORD				pPKP	pPKiKP	02 26 26.9	-2.1
	comp=Z,0.3nm,0.7s,baz=35,slow=2.2,SNR=1.6						
TORD				PP	PP	02 27 10.2	-6.0
	comp=Z,2.4nm,1.1s,baz=20,slow=6.5,SNR=5.9						
SNAA	Sanae	143.97	198	ePKPdf	PKPbc	02 27 03.2	-0.1
LPAZ	La Paz	144.33	57	PKP	PKPbc	02 27 07.4	+0.6
LPAZ	La Paz	144.33	57	PKP	PKPbc	02 27 07.4	+0.6
	comp=Z,1.2nm,0.7s,baz=314,slow=2.7,SNR=6.1						
BDFB	Brasilia	153.92	24	PKPbc	PKPbc	02 27 30.1	-0.9
BDFB	Brasilia	153.92	24	PKPbc	PKPbc	02 27 30.1	-0.9
	comp=Z,3.0nm,0.8s,baz=95,slow=12,SNR=3.6						
PLCA	Paso Flores	154.90	102	PKPab	PKPab	02 27 47.2	-0.7
PLCA	Paso Flores	154.90	102	PKPab	PKPab	02 27 47.2	-0.7
	comp=Z,1.5nm,0.9s,baz=221,slow=6.8,SNR=3.8						

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*ISCJB **09** 02:09:41.9±0.8, 10.°77N±0.°06×62.°33W±0.°03, h91km±8km, Error ellipse: s-maj=10.5km s-min=5.3km az=174.3*
*FUNV **09** 02:09:44.1, 10.°78N×62.°27W, h80km, MW2.6*
ISC 09 02:09:42.2±1.5**, 10.°79N**±0.°07×**62.°31W**±0.°04**, h92**km±11km**,**
n15, σ1.s**32**/25**, 1C-1D, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIV	Guiria	0.17	148	⇑iP	Pn	02 09 55.8	+0.5
GUIV				eS	Sn	02 10 03.9	-1.3
TRN	Trinidad (W)	0.91	99	eP	Pn	02 10 01.8	+0.8
TRN				eS	Sn	02 10 14.2	-0.9
CRUV	Carupano	0.91	263	⇓eP	Pn	02 10 01.9	+0.8
CRUV				eS	Sn	02 10 14.7	-0.5
TBH	Brigand Hill	1.26	104	eS	Sn	02 10 24.6	+2.1
TOSP	Speyside	1.82	74	eP	Pn	02 10 12.3	+0.2
TOSP				eS	Sn	02 10 33.3	-1.5
ORIV	Oritupano	2.02	212	eP	Pn	02 10 16.5	+1.7
ORIV				eS	Sn	02 10 39.6	0.0
PCRV	Puerto La Cruz	2.37	255	eP	Pn	02 10 19.8	+0.5
PCRV				eS	Sn	02 10 46.8	-1.0
RIOV	Rio Grande	2.75	170	eP	Pn	02 10 25.9	+1.4
RIOV				eS	Sn	02 10 54.5	-2.4
PRGV	PARIAGUAN	3.06	229	eP	Pn	02 10 28.9	+0.3
PRGV				eS	Sn	02 11 04.3	-0.1
GURV	El Guri	3.11	194	eP	Pn	02 10 30.3	+1.1
CUPV	Cœpira	3.50	258	eP	Pn	02 10 35.8	+1.3
CUPV				eS	Sn	02 11 13.8	-1.2
BIRV	Birongo	3.90	266	eP	Pn	02 10 41.8	+1.9
MERV	Las Mercedes	4.21	249	eP	Pn	02 10 45.3	+1.2
MERV				eS	Sn	02 11 30.2	-2.1
LUEV	Luepa	4.99	170	eP	Pn	02 10 54.6	-0.3
BAUV	El Baul	5.94	252	eP	Pn	02 11 07.6	0.0

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*IDC **09** 02:22:49.0±1.4, 26.°46N×126.°70E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.6/26, mbtmp3.9/4, ML3.5/1, Error ellipse: s-maj=55.2km s-min=25.5km az=68.0*
*ISCJB **09** 02:22:54.8±0.5, 26.°80N±0.°07×127.°48E±0.°07, h81km±5km, mb4.0/3, Error ellipse: s-maj=14.9km s-min=4.7km az=142.0*
*JMA **09** 02:22:56.1±0.1, 26.°90N×127.°42E, h71km±2km, M3.8*
JMA Felt I J1.
ISC 09 02:22:56.0±0.9**, 26.°74N**±0.°06×**127.°55E**±0.°05**, h79**km±7km**,**
n20, σ1.s**07**/28**, mb4.3**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGN	Aguni-jima	0.31	241	P	Pn	02 23 07.7	-0.5
JAGN				S	Sn	02 23 16.1	-1.1
JIH	Iheya	0.47	52	P	Pn	02 23 09.2	-0.2
JIH				S	Sn	02 23 18.4	-0.9
JJT2	Tamagusuku 2	0.63	163	P	Pn	02 23 12.6	+1.7
JOW	Kunigami	0.66	82	P	Pn	02 23 11.6	+0.5
JOW				eS	Sn	02 23 22.8	+0.4
JKE	Kume jima 2	0.80	239	P	Pn	02 23 12.3	-0.3
JKE				eS	Sn	02 23 24.2	-0.8
JTK	Tokunoshima	1.62	50	P	Pn	02 23 22.8	-0.1
JTK				eS	Sn	02 23 42.8	-0.5
JAMN	Amaminishikomi	2.08	44	P	Pn	02 23 28.1	-0.8
JAMN				eS	Sn	02 23 53.7	-0.3
JAM	Amami Oshima	2.47	47	P	Pn	02 23 33.9	-0.3
JAM				eS	Sn	02 24 03.1	-0.3
JZK	Kikaishima	2.66	53	P	Pn	02 23 36.9	+0.1
JOGS	Gusukube	2.76	225	P	Pn	02 23 37.9	-0.2
JTJ	Tarama	3.31	231	P	Pn	02 23 45.7	+0.1
JMZ	Minamidaito 2	3.42	105	P	Pn	02 23 45.7	-1.4
JMZ				eS	Sn	02 24 23.2	-3.4
JNN	Nakanoshima	3.71	33	P	Pn	02 23 51.4	+0.4
JIJ	Ishigaki jima	3.88	233	P	Pn	02 23 52.7	-0.6
IRIF	Iriomote-Funau	4.20	236	P	Pn	02 23 56.7	-1.0
YOJ	Yonaguni jima	4.68	242	P	Pn	02 24 04.4	+0.2
MJAR	Matsushiro Arr	13.33	40	Pn	P	02 26 09.5	+0.8
	0.2nm,0.3s,baz=232,slow=11,SNR=4.8						
MKAR	Makanchi Array	40.74	312	P	P	02 30 28.4	-0.8
	0.5nm,0.6s,baz=104,slow=9.9,SNR=9.3						
WRA	Warramunga Arr	46.87	171	P	P	02 31 19.5	+1.0
	4.0nm,0.7s,baz=352,slow=8.6,SNR=14						
ASAR	Alice Springs	50.49	172	P	P	02 31 47.8	+1.5
	1.8nm,0.6s,baz=360,slow=14,SNR=21						

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*ISCJB **09** 02:24:51.7±0.3, 21.°53S±0.°09×179.°40W±0.°06, h604km, mb4.5/51, Error ellipse: s-maj=13.1km s-min=5.6km az=152.4*
*IDC **09** 02:24:51.5±1.6, 21.°40S×179.°32W, h592km±17km, mb3.9/13, mb1 4.2/15, mb1mx3.9/21, mbtmp4.0/15, Error ellipse: s-maj=18.7km s-min=11.7km az=155.0*
*BJI **09** 02:24:54.1, 21.°40S×179.°50W, h619km, mB4.6/3, mb4.7/9*
*NEIC **09** 02:24:54.4±0.6, 21.°44S×179.°48W, h624km±7km, mb4.4/32, Error ellipse: s-maj=9.3km s-min=4.5km az=144.0*
ISC 09 02:24:52.7±0.4**, 21.°55S**±0.°08×**179.°33W**±0.°07**, h604**km**,**
n306, σ0.s**80**/324**, mb4.4**/51**, 93C-93D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	4.52	327	eP	P	02 26 23.3	+0.9
AFI	Afiamalu	10.46	45	eP	P	02 27 07.5	-8.9
AFI				S	S	02 29 05.3	-8.9
AFI	Afiamalu	10.46	45	P	P	02 27 12.9	-3.4
	13nm,0.3s,baz=103,slow=14,SNR=6.8						
AFI				S	S	02 29 05.3	-8.9
	baz=200,slow=22,SNR=1.2						
DZM	Mont Dzumac	13.22	265	eP	P	02 27 43.0	-0.9
DZM	Mont Dzumac	13.22	265	P	P	02 27 43.8	-0.1
DZM	Mont Dzumac	13.22	265	P	P	02 27 43.8	-0.1
	2.7nm,0.3s,baz=79,slow=19,SNR=20						
EIDS	Eidsvold	27.38	256	eP	P	02 29 51.8	+0.1
	35nm,0.6s						
ARMA	Armidale	27.50	245	eP	P	02 29 53.4	+0.6
	32nm,0.8s						
CTAO	Charters Tower	32.16	266	eP	P	02 30 33.0	+0.1
	47nm,0.5s						
PMG	Port Moresby	34.39	285	eP	P	02 30 51.2	-0.3
	50nm,0.8s						
PMG	Port Moresby	34.39	285	P	P	02 30 50.7	-0.8
	45nm,0.7s,baz=92,slow=4.7,SNR=14						
TAU	Tasmania Unive	35.01	225	eP	P	02 30 56.7	+0.5
STKA	Stephens Creek	36.22	245	eP	P	02 31 06.6	+0.2
	10nm,1.1s						
STKA	Stephens Creek	36.22	245	P	P	02 31 06.9	+0.5
	18nm,0.4s,baz=89,slow=9.6,SNR=80						
COEN	Coen	36.42	276	eP	P	02 31 08.6	+0.3
	220nm,0.7s						
BBOO	Buckleboo	40.97	244	eP	P	02 31 44.3	-0.4
	249nm,0.8s						
AS31	Alice Springs	43.07	258	eP	P	02 32 01.0	-0.3
ASAR	Alice Springs	43.08	258	P	P	02 32 01.0	-0.3
ASAR				ScP	ScP	02 36 33.1	+1.4
ASAR				S	S	02 37 42.6	-2.3
ASAR	Alice Springs	43.08	258	P	P	02 32 01.0	-0.3
	47nm,0.6s,baz=94,slow=7.8,SNR=376						
ASAR				ScP	ScP	02 36 33.1	+1.4
	3.9nm,0.8s,baz=102,slow=4.4,SNR=11						
ASAR				S	S	02 37 42.6	-2.3
	2.0nm,0.9s,baz=98,slow=16,SNR=7.8						
WRAB	Tennant Creek	43.22	263	eP	P	02 32 01.6	-0.9
	51nm,0.9s						
WRA	Warramunga Arr	43.23	263	P	P	02 32 01.4	-1.2
WRA				ScP	ScP	02 36 33.4	+1.1
WRA	Warramunga Arr	43.23	263	P	P	02 32 01.4	-1.2
	21nm,0.3s,baz=95,slow=7.7,SNR=349						
WRA				ScP	ScP	02 36 33.4	+1.1
	3.0nm,0.9s,baz=90,slow=4.0,SNR=7.0						
FORT	Forrest	47.74	248	eP	P	02 32 35.6	-1.0
	55nm,0.6s						
FITZ	Fitzroy Crossi	51.66	264	P	P	02 33 05.1	-0.3
FITZ	Fitzroy Crossi	51.66	264	P	P	02 33 05.1	-0.3
	8.7nm,0.3s,baz=119,slow=4.7,SNR=102						
MBWA	Marble Bar	56.42	258	eP	P	02 33 37.8	-0.8
VNDA	Vanda	56.77	185	P	P	02 33 41.5	+1.4
VNDA	Vanda	56.77	185	P	P	02 33 41.5	+1.4
	0.4nm,0.5s,baz=359,slow=8.2,SNR=4.1						
CASY	Casey	62.49	205	eP	P	02 34 18.2	+0.1
	7.3nm,0.9s						
QSPA	South Pole Qui	68.53	180	eP	P	02 34 56.7	+0.8
	96nm,2.9s						
KSM	Kuching	72.33	279	eP	P	02 35 18.5	-0.5
	14nm,0.7s						
PETK	Petropavlovsk-	76.97	346	P	P	02 35 43.6	-0.4
PETK	Petropavlovsk-	76.97	346	P	P	02 35 43.6	-0.4
	2.7nm,0.7s,baz=142,slow=7.4,SNR=6.3						
VES	Vestal, Richgr	80.65	46	⇓P	P	02 36 04.4	+0.5
	baz=81						
MURC	Murrieta	80.67	48	⇑P	P	02 36 03.9	-0.2
	baz=81						
KHMM	Horse Mountain	80.75	39	eP	P	02 36 05.4	+0.9
	11nm,0.9s						
RCTC	Rector, Farmer	80.81	45	⇑P	P	02 36 05.3	+0.5
	baz=81						
MONP	Monument Peak	80.83	49	⇓P	P	02 36 05.2	0.0
	baz=81						
EDW2	Edwards Air Fo	80.84	47	⇑P	P	02 36 05.4	+0.4
	baz=81						
DVTC	Desert V Tower	80.93	50	⇓P	P	02 36 05.9	+0.3
	baz=81						
ISA	Isabella	80.95	46	eP	P	02 36 05.9	+0.3
	7.2nm,0.8s						
ISA	Isabella	80.95	46	⇑P	P	02 36 05.9	+0.3
	baz=81,SNR=7.3						
KRMB	Red Mountain	81.05	39	eP	P	02 36 07.0	+1.0
	34nm,3.0s						
CMB	Columbia Colle	81.07	43	eP	P	02 36 05.9	-0.2
	7.8nm,1.0s						
PFO	Pinyon Flat Ob	81.20	49	⇓P	P	02 36 06.8	-0.1
	baz=81						
WDC	Whiskeytown Da	81.27	40	eP	P	02 36 07.1	+0.1
	11nm,1.1s						
BELC	Belle Mtn. Jos	81.73	49	⇓P	P	02 36 09.9	+0.2
	baz=82,SNR=5.6						
MLAC	Mammoth Lakes	81.84	44	⇑P	P	02 36 10.5	+0.2
	baz=82						
MPMC	Manual Prospec	81.84	46	⇓P	P	02 36 10.2	0.0
	baz=82,SNR=9.0						
GSC	Goldstone	81.88	47	eP	P	02 36 10.5	+0.1
	4.7nm,0.8s						
GSC	Goldstone	81.88	47	⇓P	P	02 36 10.2	-0.2
	baz=82,SNR=5.2						
YBH	Yreka Blue Hor	81.88	39	eP	P	02 36 10.8	+0.5
	5.6nm,0.9s						
HEC	Hector,Ludlow	81.95	48	⇑P	P	02 36 10.6	-0.1
	baz=82,SNR=9.7						
IPM	Ipoh	82.03	278	eP	P	02 36 11.6	+0.1
BEKR	Beckworth	82.17	42	eP	P	02 36 12.2	+0.4
	3.1nm,0.7s						
HUMO	Hull Mountain	82.28	38	eP	P	02 36 12.8	+0.7
	20nm,1.4s						
CN2	Changchun	82.38	323	eP	P	02 36 14.6	+2.1
GMRC	Granite Mounta	82.39	48	⇑P	P	02 36 13.1	+0.1
	baz=83,SNR=5.4						
IRM	Iron Mountain	82.41	49	⇓P	P	02 36 13.6	+0.6
	baz=83						
GRAC	Grapevine Rang	82.44	45	⇑P	P	02 36 13.7	+0.7
	baz=83						
FURC	Furnace Creek,	82.49	46	⇑P	P	02 36 13.9	+0.7
	baz=83						
TUQ	Turquoise Moun	82.56	47	⇑P	P	02 36 14.2	+0.4
	baz=83						
Y12C	Blythe	82.63	49	⇓P	P	02 36 14.9	+0.9
	baz=83						
NVAR	Mina Array Bea	82.64	44	P	P	02 36 14.2	-0.1
NVAR	Mina Array Bea	82.64	44	P	P	02 36 14.2	-0.1
	7.0nm,0.8s,baz=224,slow=7.5,SNR=10						
113A	Mohawk Valley,	82.66	51	⇑P	P	02 36 14.9	+0.7
	baz=83						
LDFC	Landfair	82.93	48	eP	P	02 36 16.1	+0.5
	14nm,0.6s						
PDMCI	Parker Dam,Lak	83.19	49	⇑P	P	02 36 17.6	+0.8
	baz=83						
Z14A	Wintersburg	83.56	51	⇓P	P	02 36 19.6	+0.9
	baz=84						
FRIS	Frissel Point	83.77	37	P	P	02 36 22.1	+2.4
W13A	Hualapai Mount	83.79	49	⇑P	P	02 36 20.4	+0.3
	baz=84						
Y14A	Wickenburg	83.81	50	⇓P	P	02 36 20.5	+0.5
	baz=84						
R11A	Troy Canyon, C	84.37	45	⇑P	P	02 36 23.4	+0.7
	baz=85						
TUC	Tucson	84.60	52	eP	P	02 36 24.7	+0.7
	26nm,0.9s						
WVOR	Wild Horse Val	84.73	40	eP	P	02 36 24.8	+0.4
	5.3nm,1.0s						
VIPM	Ingram Point	84.79	38	P	P	02 36 24.8	+0.1
X16A	Lo Mia Camp, P	85.17	50	⇑P	P	02 36 27.4	+0.6
	baz=85						
319A	Douglas	85.27	54	⇑P	P	02 36 28.1	+0.9
	baz=86						
CCUT	Cedar City	85.43	47	eP	P	02 36 28.1	+0.1
	4.3nm,1.0s						
U15A	North Rim	85.58	48	⇑P	P	02 36 29.1	+0.3
	baz=86,SNR=18						
WUAZ	Wupatki	85.77	49	⇓P	P	02 36 30.1	+0.5
	baz=86						
BJI	Beijing	85.77	316	P	P	02 36 28.7	-0.5
BJI				pP	pP	02 38 39.1	+1.0
BJI				sP	sP	02 39 39.0	+0.4
BJI				S	S	02 46 11.7	-0.9
BJI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
320A	Kipp Ranch, An	85.82	54	⇑P	P	02 36 30.8	+0.9
	baz=86,SNR=6.2						
ELK	Elko	85.89	43	eP	P	02 36 29.8	-0.3
TRW	Toppenish Ridg	85.91	36	P	P	02 36 30.2	+0.5
NAC	Naches	86.02	36	P	P	02 36 30.7	+0.4
220A	Playas Peak, P	86.08	54	⇓P	P	02 36 31.9	+0.8
	baz=86						
GYA	Guiyang	86.09	300	eP	P	02 36 31.0	-0.2
GYA				pP	pP	02 38 43.2	+2.9
GYA				sP	sP	02 39 44.0	+3.3
GYA				PP	PP	02 40 04.3	+0.8
GYA				SKS	SKSac	02 45 56.7	-4.0
GYA				S	SKKSac	02 46 13.4	+2.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
EBG	Ellensburg	86.26	36	P	P	02 36 32.0	+0.5
X18A	Snowflake	86.30	51	⇑P	P	02 36 32.5	+0.4
	baz=86						
120A	U Bar Ranch, L	86.31	53	⇓P	P	02 36 32.9	+0.7
	baz=86						
TBM	Table Mountain	86.40	36	P	P	02 36 32.4	+0.3
Z20A	Nine Sixteen R	86.61	53	⇑P	P	02 36 34.3	+0.7
	baz=87						
121A	Cookes Peak, D	86.93	53	⇓P	P	02 36 35.4	+0.3
	baz=87						
MFID	Camas Ranch	86.99	41	eP	P	02 36 34.9	-0.1
	comp=Z,6.7nm,0.9s						
MFID	Camas Ranch	86.99	41	⇓P	P	02 36 35.0	-0.1
	baz=87,SNR=8.4						
Y20A	Horse Springs,	87.14	52	⇑P	P	02 36 36.6	+0.5
	baz=87						
222A	Williams Famil	87.25	54	⇓P	P	02 36 37.3	+0.7
	baz=88						
X20A	Quemado	87.35	51	⇓P	P	02 36 37.5	+0.4
	baz=88						
Z21A	St. Cloud Mine	87.38	53	⇑P	P	02 36 37.8	+0.5
	baz=88						
OD2	Odessa Site #2	87.57	36	P	P	02 36 37.8	+0.2
I12A	Atlanta	87.62	41	⇓P	P	02 36 38.8	+0.7
	baz=88						
W20A	Ramah	87.63	51	⇑P	P	02 36 38.8	+0.4
	baz=88						
Y21A	Point of Rocks	87.70	52	⇓P	P	02 36 39.3	+0.5
	baz=88						
TRF	Thorofare Moun	87.73	13	eP	P	02 36 35.9	-2.2
	comp=Z,12nm,0.7s						
S18A	Hurst Farm, Bl	87.81	48	⇓P	P	02 36 39.4	+0.2
	baz=88						
X21A	Alamocita Cree	87.83	52	⇑P	P	02 36 39.7	+0.4
	baz=88						
Z22A	Elephant Butte	87.88	53	⇑P	P	02 36 40.0	+0.4
	baz=88						
HLID	Hailey	87.93	41	eP	P	02 36 39.8	+0.3
	comp=Z,4.7nm,0.8s						
HLID	Hailey	87.93	41	⇓P	P	02 36 39.8	+0.3
	baz=88,SNR=11						
HVU	Hansel Valley	88.02	43	eP	P	02 36 40.3	+0.4
SRU	San Rafael	88.14	47	⇑P	P	02 36 40.7	+0.1
	baz=88						
324A	Moseley Ranch,	88.18	55	⇑P	P	02 36 40.9	-0.1
	baz=88,SNR=10						
Y22A	Socorro	88.19	52	⇓P	P	02 36 41.2	+0.2
	baz=88						
H12A	Diamond D Ranc	88.19	40	⇑P	P	02 36 40.5	-0.2
	baz=88,SNR=9.6						
G12A	Big Creek, Yel	88.23	40	⇑P	P	02 36 41.0	+0.1
	baz=88						
MCK	McKinley	88.26	13	eP	P	02 36 39.7	-0.7
425A	Indio Mountain	88.27	56	⇓P	P	02 36 41.6	+0.3
	baz=88,SNR=11						
MNTX	Cornudas Mount	88.37	55	eP	P	02 36 41.9	+0.2
	comp=Z,5.1nm,0.9s						
626A	Big Bend Ranch	88.39	57	⇓P	P	02 36 42.2	+0.2
	baz=89,SNR=12						
Z23A	Rita Site, Whi	88.43	53	⇑P	P	02 36 42.4	+0.3
	baz=89						
224A	Cornudas Mount	88.43	55	⇓P	P	02 36 42.5	+0.4
	baz=89,SNR=7.0						
325A	Bean Ranch, Si	88.54	55	⇓P	P	02 36 42.5	-0.2
	baz=89,SNR=9.6						
F12A	Elk City	88.61	39	⇓P	P	02 36 42.2	-0.4
	baz=89,SNR=10						
526A	Mary Lane Ranc	88.65	57	⇓P	P	02 36 43.3	+0.2
	baz=89,SNR=9.0						
TXAR	Lajitas Array	88.67	58	P	P	02 36 43.6	+0.4
TXAR	Lajitas Array	88.67	58	P	P	02 36 43.6	+0.4
	comp=Z,4.6nm,0.8s,baz=214,slow=6.4,SNR=56						
I14A	Mackay	88.72	41	⇑P	P	02 36 43.5	+0.3
	baz=89,SNR=13						
KMI	Kunming	88.72	298	P	P	02 36 44.6	+0.9
KMI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
124A	Stringfield Ra	88.76	54	⇓P	P	02 36 43.7	0.0
	baz=89,SNR=5.5						
U21A	Nageezi	88.84	50	⇓P	P	02 36 43.9	-0.1
	baz=89,SNR=7.0						
Y23A	Lovelace Mesa,	88.86	53	⇓P	P	02 36 44.3	+0.1
	baz=89						
627A	Terlingua Ranc	88.94	58	⇑P	P	02 36 44.7	+0.3
	baz=89,SNR=11						
NEW	Newport	88.95	36	eP	P	02 36 43.5	-0.4
	comp=Z,1.2nm,0.4s						
426A	McDonald Obser	88.96	56	⇑P	P	02 36 44.8	+0.1
	baz=89,SNR=9.6						
225A	Deer Hill, Car	88.98	55	⇑P	P	02 36 44.7	0.0
	baz=89,SNR=6.4						
ANMO	Albuquerque	89.03	52	eP	P	02 36 44.5	-0.4
	comp=Z,4.2nm,1.0s						
527A	Woodward Ranch	89.06	57	⇓P	P	02 36 45.0	-0.1
	baz=89,SNR=6.9						
Z24A	Sheeppen Canyo	89.11	54	⇓P	P	02 36 45.3	0.0
	baz=89						
F13A	Darby	89.17	39	⇓P	P	02 36 44.7	-0.5
	baz=89						
C11A	Tepee Creek (N	89.19	37	⇓P	P	02 36 45.2	0.0
	baz=89						
T21A	Navajo Lake	89.19	50	⇑P	P	02 36 45.9	+0.3
	baz=89						
HHC	Hu-ho-hao-te	89.20	315	eP	P	02 36 45.6	+0.2
HHC				pP	pP	02 38 57.6	+2.0
HHC				sP	sP	02 39 57.0	+1.3
HHC				PP	PP	02 40 30.2	+2.5
HHC				SKS	SKSac	02 46 18.3	-0.1
HHC				S	S	02 46 42.5	-2.1
HHC				sS	sS	02 50 34.1	-2.7
HHC				SS	SS	02 53 00.2	+1.8
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,200nm,5.8s						

M17A Scullys Gap (B 89.22 44 ⇓P P 02 36 45.6 -0.1
baz=89
326A Caldwell Ranch 89.28 56 ⇓P P 02 36 45.9 -0.1
baz=90
DOT Dot Lake 89.29 15 *e*P P 02 36 44.5 -0.7
comp=Z,3.8nm,0.8s
CMAR Chiang Mai Arr 89.30 290 P P 02 36 47.2 +1.0
CMAR Chiang Mai Arr 89.30 290 P P 02 36 47.2 +1.0
comp=Z,1.7nm,0.4s,baz=138,slow=3.3,SNR=12
Y24A Capitan 89.32 53 ⇓P P 02 36 46.2 -0.1
baz=90,SNR=6.8
S21A Coal Bank Pass 89.33 49 ⇓P P 02 36 46.3 -0.1
baz=90
125A Gardner Draw, 89.34 54 ⇓P P 02 36 46.5 +0.2
baz=90
628A Black Gap, Mar 89.34 58 ⇓P P 02 36 46.5 +0.2
baz=90
P19A Cripple Cowboy 89.44 47 ⇓P P 02 36 46.8 +0.1
baz=90
PLCA Paso Flores 89.45 134 P P 02 36 47.0 +0.3
PLCA Paso Flores 89.45 134 P P 02 36 47.0 +0.3
comp=Z,1.7nm,0.6s,baz=247,slow=4.4,SNR=8.2
226B Tecolote Peak, 89.47 55 ⇓P P 02 36 46.7 -0.1
baz=90,SNR=9.9
COLA College 89.50 13 *e*P P 02 36 44.5 -1.5
427A Hayter Ranch, 89.52 57 ⇑P P 02 36 47.3 +0.2
baz=90,SNR=18
Z25A Roswell 89.57 54 ⇓P P 02 36 47.5 +0.2
baz=90
Q20A Ridgley Place, 89.58 48 ⇑P P 02 36 47.6 +0.3
baz=90
V23A Ortiz Mt. (NFS 89.59 51 ⇑P P 02 36 48.1 +0.6
baz=90
X24A Lazy VL Ranch, 89.61 52 ⇑P P 02 36 47.4 -0.1
baz=90
ILAR Eielson Array 89.61 13 P P 02 36 44.9 -1.7
ILAR Eielson Array 89.61 13 P P 02 36 44.9 -1.7
comp=Z,1.7nm,0.6s,baz=216,slow=5.0,SNR=35
O19A Miners Draw (B 89.67 46 ⇑P P 02 36 47.7 +0.1
baz=90
528A Cox Ranch, San 89.71 57 ⇓P P 02 36 48.0 -0.1
baz=90,SNR=5.1
P20A De Beque 89.78 47 ⇓P P 02 36 48.2 0.0
baz=90
D13A Huson 89.80 38 ⇑P P 02 36 48.2 +0.2
baz=90
126A Clayton Basin, 89.82 55 ⇑P P 02 36 48.4 0.0
baz=90
Y25A Mesa, Roswell 89.87 53 ⇓P P 02 36 48.8 +0.1
baz=90
I16A Newdale 89.90 42 ⇑P P 02 36 49.4 +0.8
baz=90
W24A Lazy 6 Ranch, 89.92 52 ⇓P P 02 36 48.6 -0.4
baz=90
G15A Dillon 89.95 41 ⇑P P 02 36 48.7 -0.1
baz=90,SNR=5.1
MSO Missoula 89.96 39 ⇑P P 02 36 49.1 +0.3
baz=90
Q21A Lamborn Mesa, 90.03 48 ⇑P P 02 36 49.6 +0.2
baz=90
428A Kincaid Ranch, 90.03 57 ⇓P P 02 36 49.9 +0.4
baz=90
S22A 4UR Ranch, Cre 90.04 49 ⇓P P 02 36 49.6 -0.1
baz=90
TPAW Teton Pass 90.05 43 *e*P P 02 36 49.7 +0.2
C13A Hot Springs 90.05 38 ⇓P P 02 36 48.6 -0.5
baz=90
Z26A Caprock 90.12 54 ⇓P P 02 36 49.9 +0.1
baz=90
529A Stev Forest Ra 90.14 58 ⇑P P 02 36 49.9 -0.1
baz=90
O20A White River Ci 90.18 46 ⇓P P 02 36 50.2 +0.1
baz=90
328A Wristen Ranch, 90.21 56 ⇑P P 02 36 50.5 +0.2
baz=90
M19A Rock Springs 90.22 45 ⇓P P 02 36 50.3 0.0
baz=90
V24A Rampart Ranch, 90.24 51 ⇓P P 02 36 50.7 +0.2
baz=90
IMW Indian Meadow 90.26 42 *e*P P 02 36 50.5 0.0
comp=Z,5.5nm,0.9s
F15A Butte 90.29 40 ⇓P P 02 36 50.7 +0.3
baz=90
CD2 Chengdu 90.31 303 *e*P P 02 36 50.5 -0.2
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,40nm,6.2s
R22A Saguache, Gunn 90.31 49 ⇑P P 02 36 51.1 +0.2
baz=90
127A Arkansas Junct 90.34 55 ⇓P P 02 36 50.7 -0.2
baz=90
D14A Greenough 90.34 39 ⇑P P 02 36 50.1 -0.5
baz=91
L19A Farson 90.38 44 ⇓P P 02 36 50.8 -0.2
baz=91,SNR=7.6
G16A Moss Hill, Enn 90.39 41 ⇓P P 02 36 50.7 -0.2
baz=91
P21A Newcastle 90.43 47 ⇓P P 02 36 51.4 +0.1
baz=91
H16A Russell Place, 90.47 41 ⇓P P 02 36 51.8 +0.5
baz=91
N20A Spence Gulch, 90.50 46 ⇓P P 02 36 51.2 -0.4
baz=91,SNR=7.4
Q22A Crested Butte, 90.50 48 ⇑P P 02 36 51.6 -0.2
baz=91
PDAR Pinedale Array 90.58 44 P P 02 36 51.4 -0.5
PDAR Pinedale Array 90.58 44 P P 02 36 51.4 -0.5
comp=Z,2.5nm,0.8s,baz=208,slow=3.1,SNR=16
429A Davenport Ranc 90.61 57 ⇑P P 02 36 51.7 -0.4
baz=91,SNR=17
W25A X Bar L Ranch, 90.61 52 ⇓P P 02 36 51.7 -0.4
baz=91
228A UT Block 9, Go 90.69 56 ⇓P P 02 36 52.5 +0.1
baz=91
V25A Rancho No Teng 90.77 52 ⇑P P 02 36 52.4 -0.5
baz=91
F16A Kennard Place, 90.79 40 ⇓P P 02 36 53.0 +0.4
baz=91
530A J-C Ranch, Com 90.84 58 ⇓P P 02 36 53.1 -0.1
baz=91
M20A Sweetwater, Wa 90.86 45 ⇓P P 02 36 53.2 0.0
baz=91
329A Wagon Wheel Ra 90.90 56 ⇑P P 02 36 53.4 -0.1
baz=91
EGAK Eagle 90.94 15 *e*P P 02 36 51.7 -1.0
comp=Z,1.8nm,0.6s
N21A Black Mountain 90.96 46 ⇓P P 02 36 53.5 -0.3
baz=91,SNR=5.8
128A Castleberry Fa 90.98 55 ⇓P P 02 36 53.9 +0.1
baz=91
L20A Wamsutter 91.00 45 ⇓P P 02 36 54.1 +0.3
baz=91
Y27A Causey 91.00 54 ⇑P P 02 36 53.6 -0.3
baz=91
J19A Crowheart 91.14 43 ⇑P P 02 36 54.6 +0.2
baz=91
631A Perdido Creek 91.15 59 ⇑P P 02 36 54.5 -0.1
baz=91
B14A Marquette Ranc 91.15 38 ⇑P P 02 36 53.8 -0.5
baz=91
U25A Circle Dot Ran 91.17 51 ⇑P P 02 36 54.0 -0.7
baz=91
430A Baggett Ranch, 91.19 57 ⇓P P 02 36 54.2 -0.6
baz=91
MSTX Muleshoe 91.33 54 ⇑P P 02 36 55.0 -0.5
baz=92
O22A Kremmling 91.34 47 ⇓P P 02 36 55.4 -0.2
baz=92
732A Laxson Ranch, 91.36 60 ⇑P P 02 36 55.5 -0.1
baz=92
V26A Tequesquite Ra 91.36 52 ⇓P P 02 36 55.2 -0.3
baz=92
A14A Double T Ranch 91.39 37 ⇓P P 02 36 54.9 -0.5
baz=92
F17A Fitzpatrick Pl 91.43 41 ⇓P P 02 36 55.9 +0.3
baz=92
M21A Separation Pea 91.46 46 ⇓P P 02 36 55.7 -0.3
baz=92
129A Stewart Farms, 91.46 55 ⇑P P 02 36 55.4 -0.6
baz=92
D16A Dana Ranch, Ca 91.46 39 ⇑P P 02 36 55.8 +0.1
baz=92
R24A Sanders Place, 91.47 49 ⇓P P 02 36 56.5 +0.4
baz=92
531A Rocksprings 91.48 58 ⇓P P 02 36 56.1 0.0
baz=92
T25A Trinidad 91.49 51 ⇓P P 02 36 56.0 -0.3
baz=92
U26A Atchley Ranch, 91.65 51 ⇑P P 02 36 56.8 -0.1
baz=92
N22A Wattenberg Ran 91.70 47 ⇑P P 02 36 56.9 -0.3
baz=92,SNR=6.3
S25A Robets Cordova 91.70 50 ⇓P P 02 36 56.9 -0.2
baz=92
A15A Johnson Ranch, 91.78 37 ⇑P P 02 36 56.3 -0.8
baz=92
ISCO Idaho Springs 91.82 48 ⇓P P 02 36 57.7 -0.1
baz=92
Z29A Hungry Hill Ra 91.84 55 ⇑P P 02 36 57.6 -0.2
baz=92
H19A Powell 91.86 42 ⇓P P 02 36 58.3 +0.6
baz=92
532A Rocksprings 91.97 58 ⇑P P 02 36 58.3 -0.1
baz=92
K21A Alcova 92.01 45 ⇑P P 02 36 58.6 +0.1
baz=92
D17A Six Diamond Ra 92.03 39 ⇓P P 02 36 58.4 +0.1
baz=92
N23A Red Feather La 92.08 47 ⇓P P 02 36 58.9 0.0
baz=92
T26A Comanche Natio 92.09 51 ⇑P P 02 36 58.5 -0.5
baz=92
Y29A Porterfield Fa 92.12 54 ⇑P P 02 36 58.9 -0.1
baz=92
E18A Harlowton 92.21 40 ⇑P P 02 36 59.6 +0.4
baz=92
C17A Wharram Farm, 92.23 39 ⇑P P 02 36 59.1 -0.1
baz=92
L22A Ellis Ranch, M 92.27 45 ⇑P P 02 36 59.8 +0.1
baz=92
432A Menard 92.36 58 ⇑P P 02 36 59.4 -0.7
baz=93
S26A Kim 92.37 50 ⇓P P 02 36 59.9 -0.3
baz=93
231A Bronte 92.37 57 ⇑P P 02 36 59.5 -0.7
baz=93
H20A Greybull 92.39 43 ⇑P P 02 36 59.5 -0.6
baz=93
A16A West Butte Ran 92.41 38 ⇓P P 02 36 59.8 -0.3
baz=93
LZH Lanzhou 92.42 308 *e*P P 02 37 01.5 +1.1
LZH pP pP 02 39 11.3 +0.2
LZH pmax pmax
comp=Z,14nm,1.0s
F19A Roth Farm, Mol 92.45 41 ⇓P P 02 37 00.2 -0.1
baz=93
I21A Big Trails, Te 92.53 44 ⇓P P 02 36 59.9 -0.8
baz=93
332A Millersview 92.60 57 ⇑P P 02 37 00.6 -0.6
baz=93
131A Roby 92.61 56 ⇑P P 02 37 00.6 -0.7
baz=93
P25A Willow Gulch B 92.69 48 ⇑P P 02 37 01.7 0.0
baz=93
L23A Garrett 92.80 46 ⇑P P 02 37 02.0 -0.1
baz=93
J22A Midwest 92.87 44 ⇑P P 02 37 01.9 -0.5
baz=93
232A Coleman 92.88 57 ⇓P P 02 37 02.0 -0.5
baz=93
A17A Triple J Farms 92.92 38 ⇓P P 02 37 02.1 -0.2
baz=93
I22A 9 Mile Ranch, 93.08 44 ⇑P P 02 37 03.0 -0.3
baz=93
R27A Eads 93.14 50 ⇓P P 02 37 02.8 -0.8
baz=93
C19A Slack Wire Ran 93.29 40 ⇑P P 02 37 04.3 +0.2
baz=94
R28A Tribune 93.86 50 ⇓P P 02 37 06.7 -0.2
baz=94
H24A Dirks Ranch, A 94.70 44 ⇑P P 02 37 09.9 -0.7
baz=95
YKA Yellowknife Ar 97.98 25 P Pdif 02 37 23.8 -0.8
YKA Yellowknife Ar 97.98 25 P Pdif 02 37 23.8 -0.8
comp=Z,0.3nm,0.7s,baz=245,slow=4.5,SNR=3.8
MKAR Makanchi Array 111.01 313 PKKPbc PKKPbc 02 53 15.3 -2.8
MKAR Makanchi Array 111.01 313 PKKPbc PKKPbc 02 53 15.3 -2.8
comp=Z,0.3nm,0.6s,baz=257,slow=4.6,SNR=4.2
BVAR Borovoye Array 119.07 320 PKP PKPdf 02 42 32.0 -1.6
BVAR Borovoye Array 119.07 320 PKP PKPdf 02 42 32.0 -1.6
comp=Z,0.9nm,0.3s,baz=131,slow=2.5,SNR=4.0
ARCES ARCESS Array B 129.71 349 PKP PKPdf 02 42 52.1 -1.4
ARCES SKPbc SKPbc 02 45 20.4 +0.1
ARCES ARCESS Array B 129.71 349 PKP PKPdf 02 42 52.1 -1.4
comp=Z,2.2nm,0.7s,baz=88,slow=1.2,SNR=20
ARCES SKPbc SKPbc 02 45 20.4 +0.1
comp=Z,3.1nm,0.8s,baz=1.4,slow=3.6,SNR=7.1
FINES FINESS Array B 136.41 343 PKP PKPdf 02 43 05.8 -0.5
FINES FINESS Array B 136.41 343 PKP PKPdf 02 43 05.8 -0.5
comp=Z,1.6nm,0.8s,baz=16,slow=2.0,SNR=4.0
NB2 NORSAR Subarra 139.85 352 PKP PKPpre 02 43 04.5
comp=Z,0.6nm,0.6s,baz=26,slow=3.0
NOA NORSAR Array B 139.85 352 PKPpre PKPpre 02 43 04.5
NOA PKP PKPdf 02 43 12.3 -0.3
NOA NORSAR Array B 139.85 352 PKhKP PKPpre 02 43 04.5
comp=Z,0.6nm,0.6s,baz=30,slow=3.6,SNR=6.2
NOA PKP PKPdf 02 43 12.3 -0.3
comp=Z,0.5nm,0.4s,baz=14,slow=3.9,SNR=4.2
AKASG Malin Array Be 143.30 329 PKP PKPab 02 43 16.1 -1.3
AKASG Malin Array Be 143.30 329 PKP PKPab 02 43 16.1 -1.3
comp=Z,3.4nm,0.6s,baz=43,slow=3.8,SNR=14
BRTR Keskin Array B 146.59 310 PKPbc PKPbc 02 43 27.1 -0.9
BRTR Keskin Array B 146.59 310 PKPbc PKPbc 02 43 27.1 -0.9
comp=Z,0.5nm,0.6s,baz=95,slow=2.9,SNR=4.9
KOLS Kolonicke sedl 147.70 333 *e*PKP PKPbc 02 43 30.5 +0.2
KOLS *e* 02 43 33.7
STHS Stebnicka Huta 147.75 335 *e*PKP PKPbc 02 43 30.4 -0.1
STHS *e* 02 43 33.6
CRVS Cervenica-Dubn 148.06 334 *e*PKP PKPdf 02 43 28.6 +1.4
NIE Niedzica 148.11 335 *e*PKP PKPbc 02 43 31.7 +0.3
UPC Upice 148.68 341⇑*e*PKP PKPbc 02 43 32.4 -0.3
DPC Dobruska-Polom 148.72 341⇑*e*PKP PKPbc 02 43 32.7 -0.2
DPC *e*PKPAB PKPab 02 43 39.4 +0.3
CLL Collm 148.77 345 *i* PKPbc PKPbc 02 43 32.2 -0.7
comp=Z,6.0nm,0.6s
KECS Kecovo 148.79 334 *e*PKP PKPbc 02 43 31.1 -1.9
BRG Berggiesshubel 148.93 344 *e*PKP PKPbc 02 43 32.6 -0.7
comp=Z,3.0nm,0.6s
PVCC Panska Ves 149.08 343⇑*e*PKP PKPbc 02 43 33.0 -0.7
VYHS Vyhne 149.43 336 *e*PKP PKPbc 02 43 33.8 -0.8
VYHS *e* 02 43 41.6
PRU Pruhonice 149.57 342⇑*e*PKP PKPbc 02 43 34.2 -0.7
PRU *e*PKPAB PKPab 02 43 41.2 -1.4
NKC Novy Kostel 149.90 345⇑*e*PKP PKPbc 02 43 35.1 -0.6
TREC Trest 149.91 340⇑*e*PKP PKPbc 02 43 35.1 -0.6
ZST Bratislava 150.32 338 *e*PKP PKPbc 02 43 35.6 -1.1
KHC Kasperske Hory 150.62 343⇑*e*PKP PKPbc 02 43 36.9 -0.5
KHC *e*PKPAB PKPab 02 43 47.1 +0.1
KHC Kasperske Hory 150.62 343 *e*PKPbc PKPbc 02 43 36.8 -0.6
GERES GERESS Array B 150.84 342 PKPbc PKPbc 02 43 37.0 -1.0
GERES GERESS Array B 150.84 342 PKPbc PKPbc 02 43 37.0 -1.0
comp=Z,1.4nm,0.6s,baz=33,slow=1.9,SNR=18
CSNA Conrad Observa 150.98 339⇑*i*PKPbc PKPbc 02 43 37.6 -0.7
comp=Z,3.0nm,0.7s
DBIC Dimbokro 164.28 159 PKPab PKPab 02 44 46.5 -0.4
DBIC Dimbokro 164.28 159 PKPab PKPab 02 44 46.5 -0.4
comp=Z,4.5nm,0.9s,baz=160,slow=5.6,SNR=3.5
TORD Torodi Ar. Bea 171.59 187 PKP PKPdf 02 43 51.4 -2.3
TORD PKPab PKPab 02 45 18.3 -0.9
TORD Torodi Ar. Bea 171.59 187 PKP PKPdf 02 43 51.4 -2.3
comp=Z,0.9nm,0.9s,baz=355,slow=1.6,SNR=7.8
TORD PKPab PKPab 02 45 18.3 -0.9
comp=Z,0.4nm,0.8s,baz=172,slow=3.1,SNR=4.0

IDC 09 02:25:20.5±9.1**, 33°.14S×178°.60W, h60**km±80km**, mb3.8**/1**, mb1 4.2**/2**, mb1mx3.5**/18**, mbtmp3.9**/2**, ML3.9**/1**, Error ellipse: s-maj=68.3km s-min=57.4km az=157.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.19**	**213**	P	Pn	02 26 49.0	-0.2
	2.9nm,0.3s,baz=324,slow=3.1,SNR=12						
URZ				S	Sn	02 27 59.3	+0.8
	1.8nm,0.3s,baz=189,slow=19,SNR=5.2						
WRA	**Warramunga Arr**	**43.76**	**275**	P	P	02 33 20.2	-0.2
	1.7nm,0.5s,baz=117,slow=7.4,SNR=2.7						
KAF	**Kangasniemi**	**146.93**	**339**	*e*p	PKPdf	02 44 54.2	+0.7
	0.8nm,0.5s						
FINES	**FINESS Array B**	**147.51**	**338**	PKPbc	PKPbc	02 44 56.6	-0.5
	1.7nm,0.5s,baz=48,slow=5.9,SNR=9.8						
NB2	**NORSAR Subarra**	**151.36**	**350**	PKP	PKPbc	02 45 06.6	-0.2
	comp=Z,0.2nm,0.4s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**151.36**	**350**	PKPbc	PKPbc	02 45 06.5	-0.3
	comp=Z,0.6nm,0.8s,baz=13,slow=4.1,SNR=4.2						
BRTR	**Keskin Array B**	**153.34**	**294**	PKPbc	PKPbc	02 45 11.8	-0.2
	comp=Z,0.3nm,0.4s,baz=148,slow=5.2,SNR=3.2						

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*IDC **09** 02:28:31.1±1.0, 6°.53N×124°.51E, h0km, mb4.0/8, mb1 4.1/8, mb1mx3.8/26, mbtmp4.0/8, MS3.3/5, Ms1 3.3/5, ms1mx2.7/32, Error ellipse: s-maj=21.4km s-min=13.9km az=167.0*
*MAN **09** 02:28:32, 6°.45N×124°.67E, h20km, mb5.1, ML4.1, MS4.2*
MAN INTESITY IV - KORONADAL CITY SOUTH COTABATO; INTENSITY II - SURALLAH SOUTH COTABATO; GENERAL SANTOS.
ISC 09 02:28:31.7±1.8**, 6°.52N**±0°.07×**124°.67E**±0°.04**, h7**km±11km**, n24, σ1ˢ13**/27**, mb4.0**/8**, MS3.1**/4**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KCP	**Kidapawan**	**0.64**	**41**	⇓*i*P	**Pn**	**02 28 48.8**	**+1.5**
KCP				*i* S	**Sn**	**02 28 57.1**	**-0.6**
CTBH	**Cotabato--PC H**	**0.81**	**329**	⇓*e*P	**Pn**	**02 28 49.0**	**-0.5**
CTBH				*i* S	**Sn**	**02 29 01.8**	**-0.1**
DMPH	**Davao City--Mi**	**1.00**	**56**	⇑*e*P	**Pg**	**02 28 50.8**	**-0.2**
DMPH				*e*S	**Sg**	**02 29 02.8**	**-1.2**
DAV	**Davao City (W)**	**1.05**	**59**	Pg	**Pn**	**02 28 53.4**	**+0.5**
	128nm,0.3s,baz=237,slow=7.6,SNR=12						
DAV				Lg	Lg	02 29 10.7	
	275nm,0.3s,baz=160,slow=22,SNR=3.5						
BUKP	**Musuan**	**1.41**	**16**	*e*P	**Pn**	**02 28 58.4**	**+0.6**
BUKP				*e*S	Sg	02 29 28.2	+11
MATI	**Mati**	**1.63**	**75**	*e*P	**Pn**	**02 29 00.6**	**-0.2**
MATI				*e*S	**Sn**	**02 29 22.5**	**+0.4**
PAGZ	**Pagadian**	**1.84**	**316**	*e*P	**Pn**	**02 29 04.3**	**+0.7**
PAGZ				*e*S	**Sg**	**02 29 33.7**	**+2.9**
CGP	**Cagayan de Oro**	**1.92**	**1**	*e*P	**Pb**	**02 29 06.8**	**-0.3**
CGP				*e*S	**Sn**	**02 29 29.6**	**+0.3**
DCPH	**Dipolog City**	**2.43**	**328**	⇑*e*P	**Pb**	**02 29 14.4**	**-1.4**
IPIL	**Ipil**	**2.43**	**301**	*e*P	**Pn**	**02 29 12.7**	**+0.8**
IPIL				*e*S	**Sb**	**02 29 44.5**	**-1.6**
ZMPH	**Zamboanga City**	**2.62**	**280**	⇑*e*P	**Pn**	**02 29 13.8**	**-0.7**
ZMPH				*e*S	**Sn**	**02 29 46.8**	**+0.1**
KAPI	**Kappang**	**12.47**	**203**	LR	LR	02 36 14.8	
	comp=Z,136nm,20.1s,baz=252,slow=37						
JNU	**Nakatsue**	**27.09**	**11**	LR	LR	02 44 10.4	
	comp=Z,92nm,19.1s,baz=52,slow=35						
CMAR	**Chiang Mai Arr**	**27.73**	**298**	LR	LR	02 45 52.8	
	comp=Z,50nm,19.1s,baz=115,slow=38						
WRA	**Warramunga Arr**	**27.96**	**160**	P	**P**	**02 34 24.7**	**+1.6**
	1.6nm,0.6s,baz=336,slow=11,SNR=3.1						
KSRS	**Korea Array**	**30.93**	**5**	LR	LR	02 48 41.5	
	comp=Z,39nm,18.6s,baz=30,slow=39						
ASAR	**Alice Springs**	**31.33**	**164**	P	**P**	**02 34 54.0**	**+1.1**
	0.5nm,0.5s,baz=339,slow=7.0,SNR=2.9						
MJAR	**Matsushiro Arr**	**32.35**	**21**	LR	LR	02 46 59.4	
	comp=Z,42nm,18.5s,baz=160,slow=34						
MKAR	**Makanchi Array**	**54.11**	**325**	P	**P**	**02 37 59.0**	**+1.6**
	1.8nm,0.9s,baz=125,slow=8.2,SNR=13						
ZALV	**Zalesovo Beam**	**57.19**	**333**	P	**P**	**02 38 19.3**	**+0.1**
	0.4nm,0.3s,baz=114,slow=7.0,SNR=3.6						
KURBB	**Kurchatov Arra**	**58.30**	**327**	P	**P**	**02 38 25.8**	**-1.3**
	2.7nm,0.8s,baz=124,slow=6.4,SNR=23						
BVAR	**Borovoye Array**	**63.88**	**327**	P	**P**	**02 39 05.2**	**+0.2**
	1.7nm,0.8s,baz=111,slow=8.1,SNR=8.1						
ILAR	**Eielson Array**	**83.48**	**26**	P	**P**	**02 41 00.3**	**+0.4**
	0.2nm,0.8s,baz=246,slow=4.4,SNR=3.8						
FINES	**FINESS Array B**	**88.42**	**332**	P	**P**	**02 41 23.1**	**-1.2**
	5.4nm,1.1s,baz=106,slow=10,SNR=4.3						

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*NEIC **09** 02:41:11.9, 19°.40N×67°.38W, h31km, MD3.5(RSPR), After RSPR.*
RSPR 09 02:41:11.9, 19°.40N×67°.38W, h31km±8km**, MD3.5**/4**, 10C-3D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	**Aguadilla, PR**	**0.96**	**164**	⇑*e*P	Pn	02 41 27.4	-1.9
AGPR	**Aguadilla, PR**	**0.96**	**164**	*e*S	Sn	02 41 39.6	-2.3
AGPR	**Aguadilla, PR**	**0.96**	**164**	*e*Pg	Pn	02 41 27.1	-2.2
AGPR				*e*S	Sn	02 41 38.4	-3.5
AOPR	**Arecibo Observ**	**1.20**	**150**	⇓*e*P	Pn	02 41 30.9	-1.7
AOPR	**Arecibo Observ**	**1.20**	**150**	⇓*e*P	Pn	02 41 30.9	-1.7
LRS	**Lares**	**1.21**	**155**	*e*Pn	Pn	02 41 30.9	-1.9
LRS				*e*S	Sn	02 41 45.7	-2.5
LSP	**Las Mesas**	**1.25**	**167**	⇑*e*P	Pn	02 41 31.6	-1.7
LSP				*e*S	Sn	02 41 47.1	-2.0
LSP	**Las Mesas**	**1.25**	**167**	*e*Pn	Pn	02 41 31.9	-1.3
LSP				*e*S	Sn	02 41 47.6	-1.5
CRPR	**Cabo Rojo, PR**	**1.41**	**169**	⇑*e*P	Pn	02 41 33.9	-1.5
CRPR	**Cabo Rojo, PR**	**1.41**	**169**	*e*S	Sn	02 41 50.9	-2.0
CRPR	**Cabo Rojo, PR**	**1.41**	**169**	⇑*e*P	Pn	02 41 33.9	-1.5
CRPR				*e*S	Sn	02 41 50.9	-2.0
CELP	**Cerrillos**	**1.52**	**150**	⇓*e*P	Pn	02 41 35.8	-1.2
CELP				*e*S	Sn	02 41 53.9	-1.9
CELP	**Cerrillos**	**1.52**	**150**	*e*Pn	Pn	02 41 36.1	-0.9
CELP				*e*S	Sn	02 41 54.7	-1.1
OBIP	**Obispado Ponce**	**1.54**	**151**	⇑*e*P	Pn	02 41 35.7	-1.4
OBIP	**Obispado Ponce**	**1.54**	**151**	*e*S	Sn	02 41 54.3	-1.8
OBIP	**Obispado Ponce**	**1.54**	**151**	⇑*e*P	Pn	02 41 35.7	-1.4
OBIP				*e*S	Sn	02 41 54.3	-1.8
SJG	**San Juan**	**1.73**	**137**	*e*Pn	Pn	02 41 38.8	-1.1
SJG				*e*S	Sn	02 42 00.3	-0.6
CBYP	**Canovanas**	**1.83**	**128**	*e*Pn	Pn	02 41 41.1	-0.2
CPD	**Cerro la Pandu**	**1.94**	**134**	⇑*e*P	Pn	02 41 41.3	-1.5
CPD	**Cerro la Pandu**	**1.94**	**134**	*e*S	Sn	02 42 04.2	-2.0
CPD	**Cerro la Pandu**	**1.94**	**134**	⇑*e*P	Pn	02 41 41.3	-1.5
CPD				*e*S	Sn	02 42 04.2	-2.0
MTP	**Monte Pirata**	**2.16**	**126**	⇑*e*P	Pn	02 41 44.4	-1.4
MTP	**Monte Pirata**	**2.16**	**126**	⇑*e*P	Pn	02 41 44.4	-1.4

IDC 09 02:48:56.0±16.0**, 5°.02S×129°.40E, h133**km±175km**, mb3.7**/2**, mb1 3.6**/5**, mb1mx3.3**/21**, mbtmp3.5**/5**, ML4.0**/3**, Error ellipse: s-maj=118.3km s-min=56.0km az=46.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.51**	**195**	P	Pn	02 52 02.4	-0.1
	0.5nm,0.3s,baz=19,slow=13,SNR=11						
FITZ				S	Sn	02 54 25.4	-6.4
	0.6nm,0.3s,baz=100,slow=22,SNR=6.6						
WRA	**Warramunga Arr**	**15.60**	**162**	P	P	02 52 29.7	-0.5
	0.7nm,0.3s,baz=346,slow=13,SNR=39						
WRA				S	Sn	02 55 09.9	-12
	0.3nm,0.3s,baz=335,slow=22,SNR=6.6						
ASAR	**Alice Springs**	**19.04**	**167**	P	P	02 53 07.8	-0.3
	0.3nm,0.3s,baz=338,slow=9.5,SNR=6.8						
ASAR				S	S	02 56 20.6	-17
	0.1nm,0.3s,baz=349,slow=19,SNR=8.5						
MKAR	**Makanchi Array**	**66.25**	**327**	P	P	02 59 30.1	+0.2
	0.7nm,0.4s,baz=121,slow=8.5,SNR=13						
ZALV	**Zalesovo Beam**	**69.55**	**334**	P	P	02 59 50.1	-0.3
	0.8nm,0.3s,baz=114,slow=3.6,SNR=2.2						

IDC 09 03:02:02.4±11.0**, 1°.87N×127°.94E, h144**km±113km**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.0**/21**, mbtmp3.2**/3**, Error ellipse: s-maj=157.8km s-min=29.3km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.57**	**164**	P	P	03 06 50.7	0.0
	0.7nm,0.4s,baz=344,slow=11,SNR=8.2						
ASAR	**Alice Springs**	**26.04**	**167**	P	P	03 07 22.4	+0.1
	0.6nm,0.5s,baz=345,slow=7.1,SNR=10						
MKAR	**Makanchi Array**	**59.76**	**325**	P	P	03 11 52.1	-0.1
	0.2nm,0.3s,baz=123,slow=8.2,SNR=7.4						
TORD	**Torodi Ar. Bea**	**124.63**	**287**	PKP	PKPdf	03 20 45.5	-0.3
	1.7nm,1.3s,baz=82,slow=1.9,SNR=5.9						

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*GUC **09** 03:19:28.1±0.4, 42°.84S×72°.60W, h3km±7km, ML3.0*
*ISCJB **09** 03:19:29.1±1.2, 42°.84S±0°.05×72°.5W±0°.1, h10km, mb3.3/2, MS2.7/1, Error ellipse: s-maj=15.0km s-min=5.2km az=154.8*
*IDC **09** 03:19:30.5±3.0, 42°.78S×72°.54W, h0km, mb3.3/3, mb1 3.8/4, mb1mx3.6/17, mbtmp3.5/4, ML4.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/10, Error ellipse: s-maj=63.5km*

s-min=24.0km az=141.0

ISC 09 03:19:29.5±1.9**, 42°.80S**±0°.09×**72°.5W**±0°.2**, h10km, n9, σ1°.60/10, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUNY	Huinay	0.42	3	eP	Pg	03 19 37.2	-0.6
HUNY				i S	Sg	03 19 44.6	+1.3
HUNY				AML	AML	03 19 52.5	
	comp=E,2μm,0.5s						
FUTA	Futaleufœ	0.59	132	eP	Pg	03 19 40.5	-0.4
FUTA				i S	Sb	03 19 50.2	-0.1
FUTA				AML	AML	03 19 52.6	
	comp=N,1μm,0.3s						
PUEL	Puelo Alto	1.14	6	eP	Pb	03 19 50.2	-1.0
PUEL				eS	Sn	03 20 07.4	+0.3
PUEL				AML	AML	03 20 20.1	
	comp=E,562nm,0.5s						
PMCH	Puerto Montt	1.35	346	eP	Pn	03 19 53.4	-1.0
PMCH				eS	Sg	03 20 12.5	-0.3
PLCA	Paso Flores	2.50	35	Pn	Pb	03 20 13.6	-1.1
	comp=E,13nm,0.3s,baz=216,slow=16,SNR=72						
PLCA				Lg	Lg	03 20 50.3	
	comp=E,30nm,0.3s,baz=292,slow=22,SNR=14						
PLCA				LR	LR	03 21 24.2	
	comp=E,373nm,20.9s,baz=264,slow=45						
COYC	Coyhaique	2.79	175	AML	AML	03 21 03.3	
	comp=E,100nm,0.8s						
CPUP	Villa Florida	20.56	42	P	Pn	03 24 10.2	-0.3
	comp=E,0.6nm,0.6s,baz=216,slow=8.7,SNR=3.0						
CPUP				LR	LR	03 31 24.8	
	comp=E,33nm,18.2s,baz=60,slow=35						
LPAZ	La Paz	26.68	9	P	P	03 25 12.9	+3.5
	comp=E,0.7nm,0.7s,baz=198,slow=8.8,SNR=3.3						
TXAR	Lajitas Array	77.31	332	P	P	03 31 26.1	+1.9
	comp=E,0.3nm,0.8s,baz=163,slow=6.5,SNR=3.6						

MEX 09 03:23:17.1±0.8**, 17°.04N×100°.71W, h6km**±4km**, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.42	89	i P	Pg	03 23 25.0	-0.4
CAIG				i S	Sg	03 23 31.0	+0.1
ACX	Acapulco	0.83	102	i P	Pg	03 23 29.9	-3.3
ACX				eS	Sg	03 23 41.6	-2.5
ZIIG	Zihuatanejo	0.91	308	i P	Pg	03 23 32.8	-1.9
ZIIG				eS	Sg	03 23 43.8	-2.8
ARIG	Puente Sto Nin	1.28	16	i P	Pn	03 23 38.1	-3.5
ARIG				eS	Sg	03 23 54.0	-4.5
MEIG	Mezcala	1.36	50	i P	Pn	03 23 39.6	-3.3
MEIG				eS	Sb	03 23 55.4	-5.7
PLIG	Platanillo	1.77	40	i P	Pn	03 23 45.6	-2.9
PLIG				eS	Sn	03 24 06.6	-4.8
YAIG	Yautepec	2.40	41	i P	Pn	03 23 54.5	-2.7
YAIG				i S	Sn	03 24 22.4	-4.6
PNIG	Pinotepa	2.56	104	i P	Pn	03 23 56.9	-2.4
PNIG				eS	Sn	03 24 27.1	-3.7

IDC 09 03:28:40.8±10.0**, 8°.93S×116°.01E, h130km**±112km**, mb2.8/3, mb1 3.1/4, mb1mx2.9/22, mbtmp2.9/4, ML3.5/1, Error ellipse: s-maj=148.2km s-min=39.6km az=49.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.06	135	P	Pn	03 31 40.6	-0.9
	0.2nm,0.3s,baz=314,slow=11,SNR=6.5						
FITZ				S	Sn	03 33 57.9	-7.9
	0.2nm,0.3s,baz=304,slow=18,SNR=8.0						
WRA	Warramunga Arr	20.83	124	P	P	03 33 12.7	+0.4
	0.4nm,0.4s,baz=300,slow=12,SNR=4.9						
ASAR	Alice Springs	22.54	133	P	P	03 33 30.1	0.0
	0.8nm,0.7s,baz=305,slow=9.2,SNR=7.8						
MKAR	Makanchi Array	63.09	335	P	P	03 38 54.3	0.0
	0.1nm,0.5s,baz=122,slow=7.7,SNR=2.6						

MAN 09 03:37:47, 10°.32N×124°.92E, h4km, mb4.1, ML2.9, MS2.6, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	Maasin	0.20	197	eP	Pg	03 37 52.8	+1.9
MSLP				eS	Sg	03 38 00.9	+7.5
PLP	Palo	0.84	4	⇓eP	Pg	03 38 03.6	+0.5
PLP				eS	Sn	03 38 18.7	+0.2
CNP	Catarman	2.19	354	eP	Pb	03 38 26.2	-1.0

*ISK **09** 03:40:11.0, 38°.80N×26°.02E, h6km, MD3.5*
*DDA **09** 03:40:12.6, 38°.81N×26°.08E, h9km, MD3.4*
*ATH **09** 03:40:12.4, 38°.85N×26°.05E, h27km, MD3.1/5*
*CSEM **09** 03:40:12.6±0.1, 38°.81N×26°.02E, h10km, ML3.3/3, Error ellipse: s-maj=3.5km s-min=2.3km az=71.0*
*ISCJB **09** 03:40:12.3±0.6, 38°.82N±0°.02×26°.05E±0°.03, h9km±4km, Error ellipse: s-maj=4.6km s-min=2.7km az=163.6*
*THE **09** 03:40:13.7, 38°.83N×26°.06E, h12km±1km, ML3.3/3, Error ellipse: s-maj=2.8km s-min=1.1km az=86.0*

ISC 09 03:40:12.0±1.2**, 38°.81N**±0°.02×**26°.00E**±0°.03**, h5km**±10km**, n118, σ0°.55/146, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	Chios island	0.42	174	P	Pb	03 40 22.3	+0.4
CHOS	Chios island	0.42	174	ePB	Pb	03 40 22.4	+0.5
CHOS				eSB	Sb	03 40 29.5	+0.9
CHOS	Chios island	0.42	174	P	Pb	03 40 22.3	+0.4
CHOS				eSb	Sb	03 40 29.5	+0.9
SIGR	SIGRI	0.42	344	P	Pb	03 40 22.3	+0.4
SIGR				S	Sb	03 40 27.9	-0.7
SIGR	SIGRI	0.42	344	P	Pb	03 40 22.3	+0.4
SIGR				S	Sb	03 40 27.9	-0.7
PRK	Paraskevi	0.49	25	P	Pg	03 40 22.0	+0.6
PRK				S	Sb	03 40 29.6	-0.9
PRK	Paraskevi	0.49	25	ePB	Pg	03 40 22.0	+0.6
PRK				eSB	Sg	03 40 28.4	+0.6
PRK	Paraskevi	0.49	25	P	Pg	03 40 22.0	+0.6
PRK				eSb	Sg	03 40 28.4	+0.6
PRK				S	Sb	03 40 29.6	-0.9
AYVA	Ayvalik	0.73	47	i P	Pg	03 40 26.0	-0.1
AYVA				i S	Sg	03 40 35.7	0.0
AYVA	Ayvalik	0.73	47	i P	Pg	03 40 26.0	-0.1
AYVA				i S	Sg	03 40 35.7	0.0
BLCB	Balcova	0.92	117	ePG	Pg	03 40 28.9	-0.7
BLCB				eSG	Sg	03 40 41.5	0.0
BLCB	Balcova	0.92	117	ePg	Pg	03 40 28.9	-0.7
BLCB				eSg	Sg	03 40 41.5	0.0
BOZC	Bozcaada	1.04	2	i P	Pb	03 40 32.3	-0.1
BOZC				i S	Sb	03 40 46.9	+0.6
EZN	Ezine	1.05	14	ePG	Pg	03 40 31.6	-0.6
EZN				eSG	Sb	03 40 46.1	-0.6
EZN	Ezine	1.05	14	ePg	Pg	03 40 31.6	-0.6
EZN				eSg	Sb	03 40 46.1	-0.6
IZM	Izmir	1.07	112	ePG	Pg	03 40 31.8	-0.7
IZM	Izmir	1.07	112	ePg	Pg	03 40 31.8	-0.7
LIA	Limnos Island	1.26	330	P	Pn	03 40 36.8	+0.5
LIA				S	Sb	03 40 53.0	+0.2
LIA	Limnos Island	1.26	330	ePN	Pg	03 40 36.0	-0.2
LIA				eSN	Sb	03 40 52.8	0.0
LIA	Limnos Island	1.26	330	ePn	Pg	03 40 36.0	-0.2
LIA	Limnos Island	1.26	330	P	Pn	03 40 36.8	+0.5
LIA				eSn	Sb	03 40 52.8	0.0
SMG	Samos	1.28	149	ePN	Pb	03 40 36.8	+0.3
SMG				eSN	Sn	03 40 54.5	+0.5
SMG	Samos	1.28	149	ePn	Pb	03 40 36.8	+0.3
SMG				eSn	Sn	03 40 54.5	+0.5
AKHS	Akhisar	1.42	86	i P	Pn	03 40 38.3	-0.1
AKHS				i S	Sg	03 40 57.4	-0.1
AKHS	Akhisar	1.42	86	i P	Pn	03 40 38.3	-0.1
AKHS				i S	Sg	03 40 57.4	-0.1
GCAM	G?zelcaml?	1.47	138	i P	Pb	03 40 39.6	-0.1
GCAM				i S	Sn	03 40 59.0	+0.4
GCAM	G?zelcaml?	1.47	138	i P	Pb	03 40 39.6	-0.1
GCAM				i S	Sn	03 40 59.0	+0.4
GELI	Tayfur-Gelibol	1.63	13	ePN	Pn	03 40 41.0	-0.4
GELI	Tayfur-Gelibol	1.63	13	ePn	Pn	03 40 41.0	-0.4
LPK	Lapseki	1.67	20	ePN	Pn	03 40 41.6	-0.3
LPK	Lapseki	1.67	20	ePn	Pn	03 40 41.6	-0.3
BALB	Balikesir	1.68	60	ePN	Pn	03 40 40.7	-1.3
BALB	Balikesir	1.68	60	ePn	Pn	03 40 40.7	-1.3
AOS	Alonnisos	1.69	283	P	Pb	03 40 43.4	-0.2
AOS	Alonnisos	1.69	283	P	Pb	03 40 43.4	-0.2
SMTH	Samothraki Isl	1.70	348	ePN	Pn	03 40 41.8	-0.6
SMTH	Samothraki Isl	1.70	348	ePn	Pn	03 40 41.8	-0.6
APE	Apeiranthos	1.77	192	ePN	Pn	03 40 42.9	-0.5
APE				eSN	Sn	03 41 06.4	+0.1
APE	Apeiranthos	1.77	192	P	Pn	03 40 43.1	-0.2
APE	Apeiranthos	1.77	192	P	Pn	03 40 43.1	-0.2
APE				eSn	Sn	03 41 06.4	+0.1
GONE	Gonen-Balikesi	1.80	46	ePN	Pn	03 40 42.9	-0.7
GONE	Gonen-Balikesi	1.80	46	ePn	Pn	03 40 42.9	-0.7
AYDN	Tasoluk	1.87	127	i P	Pn	03 40 43.6	-1.0
AYDN				i S	Sg	03 41 12.1	+0.1
AYDN	Tasoluk	1.87	127	i P	Pn	03 40 43.6	-1.0
AYDN				i S	Sg	03 41 12.1	+0.1
KRBG	Karabiga-Canak	1.88	32	ePN	Pn	03 40 44.5	-0.2
KRBG	Karabiga-Canak	1.88	32	ePn	Pn	03 40 44.5	-0.2
ENEZ	Enez	1.93	3	ePN	Pn	03 40 45.1	-0.4
ENEZ	Enez	1.93	3	ePn	Pn	03 40 45.1	-0.4
BODT	Bodrum	2.02	149	ePN	Pn	03 40 46.2	-0.6
BODT	Bodrum	2.02	149	ePn	Pn	03 40 46.2	-0.6
MLSB	Milas	2.06	137	ePN	Pn	03 40 46.8	-0.4
MLSB	Milas	2.06	137	ePn	Pn	03 40 46.8	-0.4
RKY	Sarkoy-Tekirda	2.09	25	ePN	Pn	03 40 46.9	-0.8
RKY	Sarkoy-Tekirda	2.09	25	ePn	Pn	03 40 46.9	-0.8
ALN	Alexandroupoli	2.09	1	P	Pn	03 40 47.3	-0.3
ALN	Alexandroupoli	2.09	1	P	Pn	03 40 47.3	-0.3
KULA	Kula-Manisa	2.10	97	ePN	Pn	03 40 47.4	-0.5
KULA	Kula-Manisa	2.10	97	ePn	Pn	03 40 47.4	-0.5
BNT	Bandirma	2.14	43	ePN	Pn	03 40 48.0	-0.4
BNT	Bandirma	2.14	43	ePn	Pn	03 40 48.0	-0.4
MRMT	Marmara Adasi	2.18	34	ePN	Pn	03 40 48.4	-0.5
MRMT	Marmara Adasi	2.18	34	ePn	Pn	03 40 48.4	-0.5
DST	Dursunbey	2.18	68	ePN	Pn	03 40 48.5	-0.5
DST	Dursunbey	2.18	68	ePn	Pn	03 40 48.5	-0.5
MFT	Murefte	2.21	26	ePN	Pn	03 40 49.6	+0.2
MFT	Murefte	2.21	26	ePn	Pn	03 40 49.6	+0.2
KCTX	Karacabey (Bur	2.33	51	ePN	Pn	03 40 50.6	-0.4
KCTX	Karacabey (Bur	2.33	51	ePn	Pn	03 40 50.6	-0.4
DAT	Datca	2.42	148	ePN	Pn	03 40 51.8	-0.5
DAT	Datca	2.42	148	ePn	Pn	03 40 51.8	-0.5
YER	Yerkesik	2.46	132	ePN	Pn	03 40 52.5	-0.3
YER	Yerkesik	2.46	132	ePn	Pn	03 40 52.5	-0.3
ORLT	Orhaneli	2.56	60	ePN	Pn	03 40 54.3	+0.1
ORLT	Orhaneli	2.56	60	ePn	Pn	03 40 54.3	+0.1
MDNY	Mudanya-Bursa	2.72	54	ePN	Pn	03 40 56.5	+0.3
MDNY	Mudanya-Bursa	2.72	54	ePn	Pn	03 40 56.6	+0.3
TVSB	Tavsanli	2.77	75	ePN	Pn	03 40 57.0	0.0
TVSB	Tavsanli	2.77	75	ePn	Pn	03 40 57.0	0.0
ARMT	Armutlu	2.82	51	ePN	Pn	03 40 58.0	+0.2
ARMT	Armutlu	2.82	51	ePn	Pn	03 40 58.0	+0.2
KDZ	Kurdzhali	2.88	351	i P	Pn	03 40 58.1	-0.4
KDZ	Kurdzhali	2.88	351	i P	Pn	03 40 58.1	-0.4
GEMT	Gemlik	2.95	56	ePN	Pn	03 40 59.4	-0.1
GEMT	Gemlik	2.95	56	ePn	Pn	03 40 59.4	-0.1
SLVT	Silivri	2.96	34	ePN	Pn	03 41 00.3	+0.8
SLVT	Silivri	2.96	34	ePn	Pn	03 41 00.3	+0.8
EDRB	Edirne	3.09	10	ePN	Pn	03 41 02.5	+1.1
EDRB	Edirne	3.09	10	ePn	Pn	03 41 02.5	+1.1
CTKS	Kestanelik-??a	3.10	38	ePN	Pn	03 41 02.4	+0.9
CTKS	Kestanelik-??a	3.10	38	ePn	Pn	03 41 02.4	+0.9
YLV	Yalova	3.14	55	ePN	Pn	03 41 02.9	+0.7
YLV	Yalova	3.14	55	ePn	Pn	03 41 02.9	+0.7
BUY	Buyukada	3.15	49	ePN	Pn	03 41 02.6	+0.4
BUY	Buyukada	3.15	49	ePn	Pn	03 41 02.6	+0.4
BGKT	Bogazkoy	3.19	41	ePN	Pn	03 41 03.0	+0.3
BGKT	Bogazkoy	3.19	41	ePn	Pn	03 41 03.0	+0.3
CTYL	Yal??k??y-??at	3.19	33	ePN	Pn	03 41 02.7	-0.1
CTYL	Yal??k??y-??at	3.19	33	ePn	Pn	03 41 02.7	-0.1
ALT	Altintas	3.21	84	ePN	Pn	03 41 03.5	+0.3
ALT	Altintas	3.21	84	ePn	Pn	03 41 03.5	+0.3
ISK	Istanbul-Kandi	3.26	45	ePN	Pn	03 41 04.8	+1.1
ISK	Istanbul-Kandi	3.26	45	ePn	Pn	03 41 04.8	+1.1
FETY	Fethiye	3.27	131	ePN	Pn	03 41 04.1	+0.3
FETY	Fethiye	3.27	131	ePn	Pn	03 41 04.1	+0.3
MMB	Musomiste	3.28	329	i P	Pn	03 41 03.5	-0.6
MMB	Musomiste	3.28	329	i P	Pn	03 41 03.5	-0.6
ADVT	Abdulvahap	3.31	59	ePN	Pn	03 41 04.9	+0.4
ADVT	Abdulvahap	3.31	59	ePn	Pn	03 41 04.9	+0.4
KLYT	Kilyos	3.38	43	ePN	Pn	03 41 05.9	+0.5
KLYT	Kilyos	3.38	43	ePn	Pn	03 41 05.9	+0.5
GPA	Golpazari	3.65	65	ePN	Pn	03 41 09.8	+0.7
GPA	Golpazari	3.65	65	ePn	Pn	03 41 09.8	+0.7
KKB	Krupnik	3.79	325	i P	Pn	03 41 10.0	-1.0
KKB	Krupnik	3.79	325	i P	Pn	03 41 10.0	-1.0
GULT	Gulveren	3.85	64	ePN	Pn	03 41 12.1	+0.2
GULT	Gulveren	3.85	64	ePn	Pn	03 41 12.1	+0.2
MDUB	Mudurnu	4.34	66	ePN	Pn	03 41 19.6	+0.9
MDUB	Mudurnu	4.34	66	ePn	Pn	03 41 19.6	+0.9

WEL 09 04:00:56.1±0.8**, 36°.97S×177°.78E, h221km**±8km**, ML3.5/5, Error ellipse: s-maj=11.8km s-min=9.1km az=90.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MWZ	Matawai	1.37	188	PN	Pn	04 01 30.7	0.0
MWZ				SN	S	04 01 58.3	+0.5
MWZ				AML	AML	04 01 59.6	
URZ	Urewera	1.39	202	PN	Pn	04 01 29.8	-0.9
URZ				SN	S	04 01 57.4	-0.4
CNGZ	Carnagh Statio	1.55	167	PN	Pn	04 01 32.9	+0.9
CNGZ				SN	S	04 01 59.2	-0.9
KNZ	Kokohu	2.05	182	PN	Pn	04 01 36.4	-0.1
KNZ				SN	S	04 02 07.2	-1.0
BKZ	Black Stump Fm	2.41	204	PN	Pn	04 01 40.2	-0.3
BKZ				SN	S	04 02 15.8	+0.7
PRHZ	Porangahau	3.41	195	PN	Pn	04 01 51.5	-0.1
MRZ	Mangatainoka R	4.06	204	PN	Pn	04 01 57.3	-2.1
TIWZ	Tintock	4.08	201	PN	Pn	04 01 58.2	-1.4
OGWZ	Otaki Gorge	4.34	207	PN	Pn	04 02 00.5	-2.3
KIW	Kapiti Island	4.48	209	PN	Pn	04 02 02.0	-2.6

*ISCJB **09** 04:05:12.0±0.8, 11°.4S±0°.1×117°.3E±0°.1, h34km, mb3.7/2, MS2.7/1, Error ellipse: s-maj=23.6km s-min=6.8km az=43.9*
*IDC **09** 04:05:12.5±4.0, 11°.54S×117°.65E, h0km, mb3.8/2, mb1 3.6/4, mb1mx3.4/19, mbtmp3.5/4, ML3.3/2, MS2.9/1, Ms1 2.9/1, ms1mx1.7/31, Error ellipse: s-maj=251.2km s-min=26.4km az=46.0*
*DJA **09** 04:05:20.5±1.0, 11°S±5°×11°7E±°, h50km, M4.5/9, mb4.6/4, MLv4.4/9*

ISC 09 04:05:13.9±1.4**, 11°.5S**±0°.1×**117°.3E**±0°.1**, h34km, n14, σ1°.40/16, South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	Denpasar	3.38	321	P	Pn	04 06 04.8	+0.6
IGBI				S	Sn	04 06 42.0	-1.2
KHKI	Kahang-Kahang	3.50	331	P	Pn	04 06 07.2	+1.3
KHKI				S	Sn	04 06 45.4	-0.8
SRBI	Singaraja	3.94	328	P	Pn	04 06 14.0	+2.1
JAGI	Jajag, Banyuwa	4.30	314	P	Pn	04 06 17.0	+0.1
JAGI				S	Sn	04 07 03.8	-2.1
GMJI	Gumukmas	4.95	310	P	Pn	04 06 25.5	-0.3
BLJI	Banyuglugur	5.20	315	P	Pn	04 06 30.5	+1.3
BLJI				S	Sn	04 07 28.3	+0.2
PWJI	Pagerwojo	6.41	302	P	Pn	04 06 47.3	+1.4
	48nm,2.4s,0.3nm						
PCJI	Pacitan	6.85	298	P	Pn	04 06 53.6	+1.6
	77nm,2.5s,0.4nm						
PCJI				S	Sn	04 08 07.7	-1.2
	77nm,2.5s,0.4nm						
UGM	Wanagama	7.56	297	P	Pn	04 07 03.3	+1.6
	149nm,2.3s,1.1nm						
WRA	Warramunga Arr	18.43	119	P	P	04 09 25.0	-1.6
	0.1nm,0.3s,baz=290,slow=13,SNR=7.6						
WRA				S	Sn	04 12 32.7	-19
	0.1nm,0.3s,baz=288,slow=24,SNR=5.0						
ASAR	Alice Springs	19.92	130	P	P	04 09 43.1	+0.3
	0.1nm,0.3s,baz=303,slow=10.0,SNR=8.3						
ASAR				S	S	04 13 13.2	-12
	0.1nm,0.3s,baz=296,slow=22,SNR=6.0						
DAV	Davao City (W)	20.17	24	LR	LR	04 17 25.8	
	comp=Z,37nm,21.8s,baz=203,slow=36						
MKAR	Makanchi Array	65.91	334	P	P	04 16 02.0	+5.7
	0.3nm,0.4s,baz=150,slow=6.5,SNR=6.3						
ZALV	Zalesovo Beam	70.76	340	P	P	04 16 31.0	+4.5
	0.3nm,0.3s,baz=141,slow=7.1,SNR=4.0						

IDC 09 04:16:57.4±8.1**, 5°.62S×151°.07E, h88km**±57km**, mb3.5/3, mb1 3.7/4, mb1mx3.3/19, mbtmp3.6/4, ML3.3/1, MS2.6/1, Ms1 2.6/1, ms1mx1.7/21, Error ellipse: s-maj=95.0km s-min=53.7km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.41	226	P	Pn	04 18 15.2	-0.3
	6.2nm,0.3s,baz=37,slow=10,SNR=7.7						
PMG				S	Sn	04 19 16.8	+0.3
	6.9nm,0.3s,baz=115,slow=19,SNR=7.5						
PMG				LR	LR	04 19 38.0	
	comp=Z,66nm,20.4s,baz=150,slow=30						
WRA	Warramunga Arr	21.62	227	P	P	04 21 42.0	+1.4
	1.9nm,0.5s,baz=54,slow=10.0,SNR=18						
ASAR	Alice Springs	24.40	221	P	P	04 22 07.6	-0.1
	0.7nm,0.6s,baz=59,slow=8.6,SNR=10						
FITZ	Fitzroy Crossi	27.76	241	P	P	04 22 37.7	-0.4
	1.2nm,0.3s,baz=58,slow=9.5,SNR=10						
TORD	Torodi Ar. Bea	148.90	286	PKPbc	PKPbc	04 36 35.2	-0.8
	1.0nm,0.5s,baz=88,slow=2.2,SNR=28						

*DJA **09** 04:20:47.8±1.6, 4°N±6°×9°5E±1°5, h10km, M4.7/7, mb4.8/3, mB5.7/1, MLv4.7/7, Mw(mB)5.3/1*
*IDC **09** 04:21:01.0±0.8, 1°.87N×97°.10E, h0km, mb4.1/16, mb1 4.2/16, mb1mx4.0/29, mbtmp4.1/16, MS3.5/5, Ms1 3.5/5, ms1mx3.0/40, Error ellipse: s-maj=26.5km s-min=15.6km az=58.0*
*ISCJB **09** 04:21:03.0±0.6, 1°.77N±0°.07×96°.94E±0°.08, h28km, mb4.2/21, MS3.5/4, Error ellipse: s-maj=11.9km s-min=9.7km az=147.6*
*NEIC **09** 04:21:08.1±1.9, 1°.89N×97°.13E, h52km±15km, mb4.4/5, Error ellipse: s-maj=17.3km s-min=6.5km az=58.0*

ISC 09 04:21:05.5±0.6**, 1°.93N**±0°.07×**97°.09E**±0°.09**, h28km, n54, σ0°.80/49, mb4.3/21, MS3.5/4, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.90	302	P	Pb	04 21 27.8	+5.3
KCSI	Kotacane, Aceh	1.72	23	P	Pb	04 21 36.2	-0.3
KCSI				S	Sb	04 22 07.0	+9.3
TSI	Tuntungan	2.15	43	P	Pb	04 21 42.8	-0.9
PPI	Padang Panjang	4.07	126	P	Pb	04 22 16.6	+0.1
BKNI	Bangkinang	4.26	112	P	Pb	04 22 37.3	+18
IPM	Ipoh	4.67	57	ePn	Pn	04 22 17.2	+2.9
IPM				eS	Sb	04 23 29.8	+7.0
IPM	Ipoh	4.67	57	P	Pn	04 22 18.0	+3.7
	41nm,0.9s,0.2nm						
KULM	Kulim	4.88	47	ePn	Pn	04 22 18.2	+1.2
KULM	Kulim	4.88	47	P	Pn	04 22 14.5	-2.5
	47nm,1.0s,0.2nm						
CMAR	Chiang Mai Arr	16.52	6	Pn	P	04 24 57.9	+0.1
CMAR	Chiang Mai Arr	16.52	6	Pn	P	04 24 57.9	+0.1
	0.5nm,0.3s,baz=189,slow=11,SNR=4.7						
CMAR				LR	LR	04 32 07.0	
	comp=Z,156nm,18.0s,baz=185,slow=40						
SHL	Shillong	24.03	348	ePKP	P	04 26 18.5	0.0
WRA	Warramunga Arr	42.52	123	P	P	04 28 57.8	-1.2
WRA	Warramunga Arr	42.52	123	P	P	04 28 57.8	-1.2
	1.1nm,0.8s,baz=303,slow=9.0,SNR=6.1						
FORT	Forrest	43.90	140	eP	P	04 29 09.9	0.0
	20nm,0.9s						
ASAR	Alice Springs	43.92	128	P	P	04 29 09.4	-0.8
ASAR	Alice Springs	43.92	128	P	P	04 29 09.4	-0.8
	0.7nm,0.7s,baz=300,slow=7.9,SNR=7.2						
TKM2	Tokmak 2	45.10	338	eP	P	04 29 19.9	+0.3
	5.0nm,1.1s						
KSAR	Wonju Array Be	45.28	35	P	P	04 29 21.1	+0.2
KSRS	Korea Array	45.31	35	P	P	04 29 21.1	0.0
	2.5nm,0.9s,baz=236,slow=8.4,SNR=9.5						
SONM	Songino Array	46.43	9	P	P	04 29 30.2	+0.3
SONM	Songino Array	46.43	9	P	P	04 29 30.2	+0.3
	1.2nm,0.5s,baz=186,slow=7.2,SNR=8.5						
MK31	Makanchi Array	46.51	346	eP	P	04 29 30.5	0.0
MKAR	Makanchi Array	46.51	346	P	P	04 29 30.5	+0.1
MKAR	Makanchi Array	46.51	346	P	P	04 29 30.5	+0.1
	3.9nm,0.9s,baz=164,slow=8.9,SNR=18						
MKAR				LR	LR	04 52 55.7	
	comp=Z,55nm,18.5s,baz=165,slow=41						
KKAR	Karatay Array	47.36	334	eP	P	04 29 37.1	0.0
	3.5nm,1.0s						
KURBB	Kurchatov Arra	51.00	345	P	P	04 30 05.1	+0.3
	2.6nm,0.7s,baz=169,slow=7.2,SNR=22						
KURK	Kurchatov	51.06	345	eP	P	04 30 05.7	+0.4
	6.8nm,1.1s						
MJAR	Matsushiro Arr	51.23	43	P	P	04 30 07.3	+0.5
MJAR	Matsushiro Arr	51.23	43	P	P	04 30 07.3	+0.5
	1.3nm,0.7s,baz=210,slow=5.7,SNR=6.8						
USRK	Ussuriysk Arra	52.21	31	P	P	04 30 14.2	+0.2
	5.6nm,1.0s,baz=223,slow=6.7,SNR=9.6						
ZAA0	Zalesovo Array	52.82	351	eP	P	04 30 18.7	+0.3
ZALV	Zalesovo Beam	52.82	351	P	P	04 30 18.6	+0.2
ZALV	Zalesovo Beam	52.82	351	P	P	04 30 18.5	+0.2
	6.6nm,0.5s,baz=180,slow=6.5,SNR=42						
ZALV				LR	LR	04 58 37.8	
	comp=Z,30nm,19.0s,baz=339,slow=43						
CTA	Charters Tower	52.93	117	P	P	04 30 19.1	-0.6
CTA	Charters Tower	52.93	117	P	P	04 30 19.1	-0.6
	1.1nm,0.4s,baz=306,slow=8.7,SNR=3.2						
STKA	Stephens Creek	53.93	132	LR	LR	04 56 43.0	
	comp=Z,69nm,18.1s,baz=282,slow=40						
BVAR	Borovoye Array	55.53	341	P	P	04 30 37.5	-0.6
BVAR	Borovoye Array	55.53	341	P	P	04 30 37.5	-0.6
	2.6nm,0.7s,baz=138,slow=8.9,SNR=14						
ABKAR	Akbulak array	56.82	332	eP	P	04 30 47.0	-0.4
	2.9nm,0.8s						
KMBO	Kilima Mbogo	59.91	268	LR	LR	04 53 19.8	
	comp=Z,32nm,20.4s,baz=250,slow=32						
BRTR	Keskin Array B	68.54	312	P	P	04 32 06.8	+0.8
BRTR	Keskin Array B	68.54	312	P	P	04 32 06.8	+0.8
	0.5nm,0.7s,baz=147,slow=2.9,SNR=3.6						
ARCES	ARCESS Array B	81.81	340	P	P	04 33 22.7	+1.0
ARCES	ARCESS Array B	81.81	340	P	P	04 33 22.7	+1.0
	1.0nm,0.9s,baz=106,slow=5.7,SNR=5.0						
GERES	GERESS Array B	84.19	319	P	P	04 33 34.5	0.0
GERES	GERESS Array B	84.19	319	P	P	04 33 34.5	0.0
	1.0nm,0.8s,baz=106,slow=7.2,SNR=7.5						
NB2	NORSAR Subarra	86.32	331	P	P	04 33 44.3	-0.5
	comp=Z,0.3nm,0.6s,baz=96,slow=4.6						
NOA	NORSAR Array B	86.32	331	P	P	04 33 44.0	-0.8
NOA	NORSAR Array B	86.32	331	P	P	04 33 44.0	-0.8
	comp=Z,0.7nm,0.9s,baz=95,slow=5.4,SNR=3.6						
QSPA	South Pole Qui	91.87	180	P	P	04 34 10.6	-0.4
QSPA	South Pole Qui	91.87	180	P	P	04 34 10.6	-0.4
	comp=Z,1.4nm,1.1s,baz=142,slow=2.2,SNR=4.2						
CPUP	Villa Florida	145.46	223	PKPbc	PKPab	04 40 42.0	0.0
CPUP	Villa Florida	145.46	223	PKPbc	PKPab	04 40 42.0	0.0
	comp=Z,2.6nm,0.8s,baz=112,slow=3.2,SNR=6.7						

*MOS **09** 04:23:38.3±0.7, 49°.69N×157°.08E, h10km, mb4.3/1, Error ellipse: s-maj=97.6km s-min=27.6km az=82.6*

KRSC 09 04:23:38.3±1.4**, 49°.69N×157°.08E, h10km**±10km**, ML4.1, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.17	328	eP	Pb	04 23 58.8	-1.8
SKR				eS	Sb	04 24 13.8	-2.0
SKR	Severo-Kuril's	1.17	328	ePN	Pb	04 23 54.0	-6.6
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,90nm,0.5s						
MIPR	Malaya Ipel'ka	2.60	356	eP	Pn	04 24 21.0	+0.6
MIPR				S	Sn	04 24 51.8	-0.2
ASAK	Asacha	2.75	11	eP	Pn	04 24 24.5	+2.0
ASAK				S	Sn	04 24 58.5	+2.7
MTVR	Mutnovka	2.88	14	eP	Pn	04 24 26.5	+2.0
MTVR				eS	Sn	04 25 01.3	+2.0
RUS	Russkaya	2.89	18	i P	Pn	04 24 26.0	+1.6
RUS				eS	Sn	04 25 00.6	+1.4
RUS	Russkaya	2.89	18	PN	Pn	04 24 26.0	+1.6
RUS				S	Sn	04 25 00.6	+1.4
GRL	Gorelyy	2.93	12	eP	Pn	04 24 27.7	+2.6
GRL				S	Sb	04 25 03.9	-3.0
APC	Apacha	3.24	1	eP	Pn	04 24 31.4	+2.3
APC				S	Sn	04 25 09.9	+2.2
PET	Petropavlovsk	3.48	16	P	Pn	04 24 34.8	+2.3
PET				eS	Sn	04 25 16.0	+2.3

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
PET	Petropavlovsk	3.48	16	*e*PN	Pn	04 24 35.0	+2.5
PET				*e*S	Sn	04 25 17.8	+4.1
PET				smax	smax		
	comp=E,145nm,0.6s						
PET				smax	smax		
	comp=N,86nm,0.7s						
UGLR	Uglovaya	3.69	17	*e*P	Pn	04 24 38.2	+2.7
UGLR				*e*S	Sn	04 25 22.1	+3.0
AVH	Avacha	3.73	16	P	Pn	04 24 39.1	+3.1
AVH				S	Sn	04 25 24.0	+4.0
KOK	Koryaka	3.74	14	*e*P	Pn	04 24 39.5	+3.4
KOK				S	Sn	04 25 24.4	+4.2
SMAR	Somma	3.74	16	P	Pn	04 24 38.5	+2.2
KRER	Koryakskii	3.77	15	*e*P	Pn	04 24 39.3	+2.6
SDLR	Sedlovina	3.77	17	*e*P	Pn	04 24 38.6	+2.0
SDLR				S	Sn	04 25 22.5	+1.5
SPN	Mys Shipunski	3.88	27	*e*P	Pn	04 24 40.2	+2.3
SPN				*e*S	Sn	04 25 25.5	+2.0
SPN	Mys Shipunski	3.88	27	PN	Pn	04 24 40.2	+2.3
SPN				S	Sn	04 25 25.5	+2.0
GNL	Ganaly	4.05	7	*e*P	Pn	04 24 42.9	+2.5
MKZ	Mys Kozlova	5.65	29	*e*P	Pn	04 25 03.5	+1.3
MKZ				S	Sn	04 26 06.4	-0.7
MKZ	Mys Kozlova	5.65	29	PN	Pn	04 25 03.5	+1.3
TUMR	Tumrok	5.91	17	P	Pn	04 25 07.7	+1.8
SRDR	Sredinnyy	6.83	12	P	Pn	04 25 20.7	+2.2

IDC 09 04:32:16.3±3.0**, 30°.60S×177°.68W, h0km, mb3.8**/3**, mb1 4.0**/4**, mb1mx3.8**/19**, mbtmp3.9**/4**, ML3.4**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.7**/29**, Error ellipse: s-maj=65.4km s-min=21.2km az=105.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
RAO	Raoul Island	1.36	351	Pn	Pb	04 32 43.2	+0.7
	109nm,0.3s,baz=95,slow=21,SNR=7.6						
RAO				Sn	Sb	04 33 00.2	-0.2
	719nm,0.3s,baz=20,slow=23,SNR=14						
URZ	Urewera	8.77	208	Pn	Pn	04 34 23.0	-1.3
	0.4nm,0.3s,baz=225,slow=2.9,SNR=2.4						
URZ				Sn	Sn	04 35 58.3	-5.6
	1.1nm,0.3s,baz=154,slow=13,SNR=8.0						
DZM	Mont Dzumac	16.56	297	LR	LR	04 41 02.5	
	comp=Z,96nm,19.1s,baz=21,slow=32						
STKA	Stephens Creek	34.71	257	P	P	04 39 09.8	+1.8
	3.4nm,1.0s,baz=100,slow=10,SNR=2.9						
ASAR	Alice Springs	43.38	267	P	P	04 40 20.2	-0.5
	0.5nm,0.7s,baz=106,slow=7.5,SNR=6.5						
WRA	Warramunga Arr	44.38	272	P	P	04 40 28.1	-0.7
	0.5nm,0.4s,baz=110,slow=8.0,SNR=17						
FINES	FINESS Array B	145.43	340	PKPbc	PKPbc	04 51 54.5	-0.9
	2.5nm,0.6s,baz=85,slow=3.3,SNR=4.8						

IDC 09 04:54:55.8±1.9**, 1°.71N×126°.40E, h0km, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.6**/21**, mbtmp3.9**/3**, Error ellipse: s-maj=170.2km s-min=23.7km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.89	160	P	P	05 00 01.8	+0.5
	3.8nm,0.5s,baz=339,slow=11,SNR=39						
ASAR	Alice Springs	26.26	164	P	P	05 00 32.5	-0.6
	0.5nm,0.5s,baz=347,slow=7.6,SNR=6.5						
MKAR	Makanchi Array	59.02	326	P	P	05 04 57.6	0.0
	0.9nm,0.4s,baz=116,slow=8.0,SNR=12						

IDC 09 05:00:36.1±1.3**, 5°.76S×142°.54E, h0km, mb3.7**/4**, mb1 3.9**/5**, mb1mx3.7**/16**, mbtmp3.8**/5**, ML3.8**/1**, Error ellipse: s-maj=57.7km s-min=28.6km az=109.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.20	209	Pn	Pn	05 04 22.5	-2.8
	0.7nm,0.3s,baz=26,slow=14,SNR=31						
WRA				Sn	Sn	05 07 07.8	-18
	0.1nm,0.3s,baz=28,slow=24,SNR=2.8						
WRA				Lg	Lg	05 09 08.8	
	0.1nm,0.3s,baz=36,slow=24,SNR=5.2						
ASAR	Alice Springs	19.65	204	P	P	05 05 07.0	+0.3
	0.3nm,0.3s,baz=31,slow=11,SNR=22						
ASAR				S	S	05 08 35.1	-14
	0.1nm,0.3s,baz=16,slow=28,SNR=3.5						
ASAR				Lg	Lg	05 11 05.2	
	baz=27,slow=31,SNR=4.8						
FITZ	Fitzroy Crossi	20.57	232	P	P	05 05 15.6	-1.1
	2.5nm,0.8s,baz=58,slow=12,SNR=3.6						
MKAR	Makanchi Array	74.53	322	P	P	05 12 17.6	+0.8
	0.2nm,0.5s,baz=120,slow=5.2,SNR=3.2						
QSPA	South Pole Qui	84.21	180	P	P	05 13 09.7	+0.3
	2.3nm,1.2s,baz=338,slow=5.5,SNR=3.0						
ILAR	Eielson Array	87.03	24	P	P	05 13 22.5	-0.7
	0.6nm,0.9s,baz=244,slow=5.1,SNR=6.6						

IDC ***09*** *05:11:01.8±0.4, 22°.69S×171°.52E, h0km, mb4.8/25, mb1 5.0/28, mb1mx4.9/29, mbtmp4.9/28, ML4.4/2, MS5.0/21, Ms1 5.0/21, ms1mx4.8/31, Error ellipse: s-maj=13.4km s-min=12.4km az=170.0*

NOU ***09*** *05:11:02.9±0.8, 21°.44S×171°.83E, h30km, MD3.4, ML3.9*

NEIC ***09*** *05:11:04.5±0.2, 22°.69S×171°.47E, h14km, mb5.2/48, MW5.4, Error ellipse: s-maj=6.5km s-min=5.3km az=148.0, Moment Tensor Solution. s37 Moment tensor: Scale 10^{17}Nm; M_{rr}1.00; $M_{\theta\theta}$-1.29; $M_{\phi\phi}$0.29; $M_{r\theta}$0.75; $M_{\theta\phi}$0.19; $M_{\phi r}$0.02; Best double couple: $M_0$1.40000×10^{17} NP1: ϕ_s91.00000°, δ62.00000°, λ83.00000°. NP2: ϕ_s285.00000°, δ29.00000°, λ103.00000°. Principal axes: T 1.2300, Plg72.0000°, Azm344.0000°; N 0.3000, Plg6.0000°, Azm93.0000°; P -1.5300, Plg16.0000°, Azm185.0000°;*

ISCJB ***09*** *05:11:07.1±1.0, 22°.72S±0°.04×171°.41E±0°.04, h41km±8km, mb5.1/88, MS5.1/48 Error ellipse: s-maj=6.8km s-min=5.7km az=174.5*

MOS ***09*** *05:11:08.1±1.4, 22°.74S×171°.41E, h47km, mb5.4/29, MS5.2/11, Error ellipse: s-maj=9.8km s-min=8.3km az=140.4*

AUST ***09*** *05:11:08.8, 22°.99S×171°.63E, h35km*

BJI ***09*** *05:11:11.7, 21°.96S×171°.36E, h57km, mB5.3/35, mb5.0/45, Ms5.3/40, Ms7 5.0/40*

GCMT ***09*** *05:11:11.1±0.1, 22°.85S×171°.40E, h23km, MW5.5, Moment Tensor Solution. s87,c159; s99,c198; Moment tensor: Scale 10^{17}Nm; M_{rr}1.43±.03; $M_{\theta\theta}$-1.73±.03; $M_{\phi\phi}$0.30±.03; $M_{r\theta}$1.40±.06; $M_{\theta\phi}$1.33±.02; $M_{\phi r}$0.12±.05; Best double couple: $M_0$2.50000×10^{17} NP1: ϕ_s327.00000°, δ37.00000°, λ140.00000°. NP2: ϕ_s91.00000°, δ67.00000°, λ60.00000°. Principal axes: T 2.1800, Plg57.0000°, Azm320.0000°; N 0.5700, Plg28.0000°, Azm104.0000°; P -2.7500, Plg17.0000°, Azm203.0000°; Data Used: II IU IC G CN. Surface waves from 113 sta.*

DJA ***09*** *05:11:30.9±4.5, 23°S±9°×17°1E±2°7, h182km±29km, M4.9/18, mB5.4/10, mb5.0/18, Mw(mB)4.9/10, Mwp5.2/1*

ISC 09 05:11:09.9±0.3**, 22°.78S**±0°.05**×171°.46E**±0°.05**, h55**km±2km**, h54**km**:pP-P, n407, σ1**s**48**/468**, mb5.2**/87**, MS5.1**/48**, 28C-8D, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase Op	Phase ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.27	278	*e*S	Sn	05 12 58.7	-2.3
BAYA				AMP		05 13 07.5	
	comp=Z,53nm,0.0s						
NORM	Noumea	4.63	276	*e*P	Pn	05 12 15.0	-2.3
NORM				*e*S	Sn	05 13 09.1	-0.7
NORM				AMP		05 13 13.4	
	comp=Z,555nm,2.2s						
DZM	Mont Dzumac	4.69	278	*e*Pn	Pn	05 12 15.6	-2.6
	comp=Z,832nm,1.1s						
DZM				*e*Sn	Sn	05 13 15.2	+3.8
	comp=Z,3μm,1.2s						
DZM				*e*LR	LR	05 13 27.4	
	comp=Z,17μm,22.8s						
DZM	Mont Dzumac	4.69	278	*e*P	Pn	05 12 15.4	-2.8
DZM				*e*S	Sn	05 13 09.0	-2.4
DZM				AMP		05 13 20.5	
	comp=Z,5μm,2.6s						
DZM	Mont Dzumac	4.69	278	Pn	Pn	05 12 15.5	-2.8
DZM				Sn	Sn	05 13 07.4	-4.0
DZM	Mont Dzumac	4.69	278	Pn	Pn	05 12 15.5	-2.8
	comp=Z,27nm,0.3s,baz=104,slow=14,SNR=381						
DZM				Sn	Sn	05 13 07.4	-4.0
	comp=Z,49nm,0.3s,baz=78,slow=19,SNR=4.0						
NOUC	Port Laguerre	4.81	277	*e*P	Pn	05 12 18.6	-1.2
NOUC				*e*S	Sn	05 13 14.8	+0.5
NOUC				AMP		05 13 34.4	
	comp=Z,220nm,1.7s						
NFK	Norfolk Island	6.99	206	P	Pn	05 12 45.9	-3.8
	baz=6.9,SNR=134						
NFK				S	Sn	05 13 59.8	-8.0
	baz=6.9,SNR=13						
MSVF	Nonsavu	7.97	52	*e*P	Pn	05 13 04.9	+1.7
MSVF	Nonsavu	7.97	52	*e*Pn	Pn	05 13 04.9	+1.7
RAO	Raoul Island	11.52	126	LR	LR	05 17 14.4	
	comp=Z,13μm,19.7s,baz=348,slow=32						
LHI	Lord Howe Isla	14.04	229	P	Pn	05 14 13.2	-13
	baz=14,SNR=3.0						
URZ	Urewera	16.17	164	*e*Pn	Pn	05 14 54.1	+0.6
URZ	Urewera	16.17	164	Pn	Pn	05 14 53.3	-0.2
	comp=Z,1.0nm,0.3s,baz=354,slow=11,SNR=6.8						
URZ				LR	LR	05 19 43.1	
	comp=Z,12μm,19.6s,baz=346,slow=32						
HNR	Honiara	17.26	318	*e*Pn	Pn	05 15 06.9	-0.3
HNR	Honiara	17.26	318	Pn	Pn	05 15 06.4	-0.8
	comp=Z,4.8nm,0.3s,baz=204,slow=8.4,SNR=8.0						
AFI	Afiamalu	18.18	64	*e*P	P	05 15 16.2	-2.1
AFI	Afiamalu	18.18	64	P	P	05 15 15.7	-2.6
	comp=Z,1.1nm,0.3s,baz=181,slow=21,SNR=3.1						
AFI				LR	LR	05 21 01.6	
	comp=Z,3μm,19.0s,baz=235,slow=33						
SNZO	South Karori	18.68	172	*e*Pn	Pn	05 15 25.5	+1.3
	comp=Z,252nm,1.2s						
EIDS	Eidsvold	18.78	258	*e*Pn	Pn	05 15 27.7	+2.0
	comp=Z,477nm,2.1s						
EIDS	Eidsvold	18.78	258	P	Pn	05 15 27.4	+1.7
	baz=19,SNR=15						
EIDS				S	S	05 19 13.7	+18
	baz=19,SNR=5.0						
ARMA	Armidale	19.27	243	*e*Pn	Pn	05 15 33.3	+1.6
	comp=Z,124nm,1.3s						
ARMA	Armidale	19.27	243	P	Pn	05 15 33.3	+1.6
	baz=19,SNR=19						
KHZ	Kahutara	19.66	175	*e*Pn	Pn	05 15 35.1	-0.8
	comp=Z,327nm,1.5s						
MGCD	Mangrove Creek	20.72	235	P	Pn	05 15 48.8	+0.1
	baz=21,SNR=11						
RPZ	Rata Peaks	20.88	181	*e*P	P	05 15 48.1	+0.6
RPZ	Rata Peaks	20.88	181	P	P	05 15 47.8	+0.4
	comp=Z,203nm,1.2s,baz=354,slow=10,SNR=11						
RPZ				LR	LR	05 22 42.2	
	comp=Z,6μm,21.9s,baz=0.3,slow=33						
RMQ	Roma	20.95	255	P	Pn	05 15 51.3	-0.2
	baz=21,SNR=39						
RMQ				S	Sn	05 19 54.0	+6.5
	baz=21,SNR=4.1						
CNB	Canberra Magne	22.94	232	P	P	05 16 11.1	+1.6
	baz=23,SNR=5.2						
CAN	Canberra	23.21	232	*e*P	P	05 16 12.7	+0.5
CAN				pmax	pmax		
	comp=Z,243nm,1.5s						
CAN	Canberra	23.21	232	*e*P	P	05 16 12.7	+0.5
	comp=Z,243nm,1.5s						
CTA	Charters Tower	23.60	272	P	P	05 16 16.0	0.0
CTA	Charters Tower	23.60	272	P	P	05 16 16.0	0.0
	comp=Z,22nm,0.9s,baz=92,slow=12,SNR=4.4						
CTAO	Charters Tower	23.60	272	*e*P	P	05 16 16.9	+0.9
CTAO				pmax	pmax		
	comp=Z,107nm,1.3s						
CTAO	Charters Tower	23.60	272	*e*P	P	05 16 16.9	+0.9
	comp=Z,107nm,1.3s						
MILA	Mila	23.92	228	P	P	05 16 20.9	+2.1
	baz=24,SNR=6.4						
CMSA	Cobar Meteorol	24.48	244	P	P	05 16 25.1	+1.2
	baz=24,SNR=35						
QLP	Quilpie	25.00	256	P	P	05 16 30.1	+1.4
	baz=25,SNR=13						
MTSU	Mount Surprise	25.83	275	P	P	05 16 37.3	+1.0
	baz=26,SNR=32						
RAR	Rarotonga	26.71	92	LR	LR	05 25 21.0	
	comp=Z,2μm,18.7s,baz=263,slow=32						
PMG	Port Moresby	26.81	296	*e*P	P	05 16 44.2	-0.9
PMG	Port Moresby	26.81	296	P	P	05 16 45.6	+0.5
	comp=Z,73nm,1.1s,comp=Z,1μm						
PMG	Port Moresby	26.81	296	P	P	05 16 44.0	-1.1
	comp=Z,41nm,0.8s,baz=96,slow=3.8,SNR=8.5						
STKA	Stephens Creek	27.96	245	*e*P	P	05 16 55.7	+0.4
	comp=Z,13nm,1.4s						
STKA	Stephens Creek	27.96	245	P	P	05 16 55.8	+0.4
	comp=Z,24nm,1.1s,baz=80,slow=11,SNR=11						
STKA				LR	LR	05 27 03.4	
	comp=Z,2μm,20.6s,baz=72,slow=34						
STKA	Stephens Creek	27.96	245	P	P	05 16 56.5	+1.2
	baz=28,SNR=7.4						
MOO	Moorlands	28.16	220	P	P	05 16 59.2	+2.3
	baz=28,SNR=5.1						
COEN	Coen	28.20	283	*e*P	P	05 16 57.8	+0.2
	comp=Z,370nm,0.9s						
COEN	Coen	28.20	283	P	P	05 16 58.3	+0.7
	baz=28,SNR=16						
TAU	Tasmania Unive	28.36	219	*e*P	P	05 16 58.6	-0.1
TAU	Tasmania Unive	28.36	219	*e*P	P	05 16 58.6	-0.1
AS31	Alice Springs	34.46	261	*e*P	P	05 17 52.1	-0.5
ASAR	Alice Springs	34.46	261	P	P	05 17 52.1	-0.5
ASAR				PcP	PcP	05 20 26.4	-0.6
ASAR				ScP	ScP	05 24 15.1	+7.4
ASAR	Alice Springs	34.46	261	P	P	05 17 52.1	-0.5
	comp=Z,23nm,0.8s,baz=88,slow=9.1,SNR=145						
ASAR				PcP	PcP	05 20 26.4	-0.6
	comp=Z,2.1nm,0.6s,baz=117,slow=3.6,SNR=5.3						
ASAR				ScP	ScP	05 24 15.1	+7.4
	comp=Z,1.5nm,0.8s,baz=104,slow=3.7,SNR=5.6						
ASAR				LR	LR	05 31 51.2	
	comp=Z,2μm,18.1s,baz=98,slow=36						
WRAB	Tennant Creek	34.62	268	*e*P	P	05 17 52.7	-1.3
WRAB				pmax	pmax		
	comp=Z,25nm,1.0s						
WRAB	Tennant Creek	34.62	268	*e*P	P	05 17 52.7	-1.3
	comp=Z,25nm,1.0s						
WRA	Warramunga Arr	34.62	268	P	P	05 17 52.5	-1.6
WRA				PcP	PcP	05 20 27.1	-0.5
WRA				S	S	05 23 26.1	+6.2
WRA				ScP	ScP	05 24 14.8	+6.5
WRA	Warramunga Arr	34.62	268	P	P	05 17 52.5	-1.6
	comp=Z,4.9nm,0.6s,baz=97,slow=8.4,SNR=62						
WRA				PcP	PcP	05 20 27.1	-0.5
	comp=Z,1.5nm,0.7s,baz=86,slow=2.7,SNR=3.4						
WRA				S	S	05 23 26.1	+6.2
	comp=Z,5.7nm,1.3s,baz=97,slow=16,SNR=7.7						
WRA				ScP	ScP	05 24 14.8	+6.5
	comp=Z,1.8nm,1.0s,baz=89,slow=3.0,SNR=4.0						
TBI	Tubuai	35.89	99	*e*LQ	LQ	05 26 07.7	
	comp=Z,1μm,28.8s						
TBI				*e*LR	LR	05 27 39.3	
	comp=Z,3μm,28.0s						
PPT2	Papeete2	36.86	89	*e*LQ	LQ	05 26 28.1	
	comp=Z,2μm,26.8s						
PPT2				*e*LR	LR	05 28 06.6	
	comp=Z,3μm,23.2s						
PPT	Papeete	36.87	89	LR	LR	05 29 29.2	
	comp=Z,2μm,20.3s,baz=254,slow=30						
KDU	Kakadu	38.36	278	P	P	05 18 25.5	-0.4
	baz=38,SNR=10						
FORT	Forrest	39.36	249	*e*P	P	05 18 34.4	+0.3
	comp=Z,51nm,0.9s						
FORT	Forrest	39.36	249	P	P	05 18 34.8	+0.6
	baz=39,SNR=8.0						
MTN	Manton Dam	39.53	277	P	P	05 18 35.2	-0.5
	baz=40,SNR=7.1						
KNRA	Kununurra	40.82	272	P	P	05 18 47.4	+1.1
	baz=41,SNR=3.1						
FAKI	Fak Fak	42.80	292	P	P	05 19 07.2	+4.6
	baz=43,SNR=3.9						
FITZ	Fitzroy Crossi	43.06	267	P	P	05 19 04.9	+0.3
FITZ	Fitzroy Crossi	43.06	267	P	P	05 19 04.9	+0.3
	comp=Z,39nm,1.0s,baz=129,slow=7.7,SNR=41						
KMBL	Kambalda	44.65	248	P	P	05 19 17.6	+0.3
	baz=45,SNR=6.0						
NLAI	Namlea	47.12	288	P	P	05 19 38.0	+1.1
	comp=Z,58nm,1.5s,comp=Z,1μm						
MBWA	Marble Bar	47.80	262	*e*P	P	05 19 42.1	0.0
	comp=Z,55nm,0.8s						
MEEK	Meekatharra	47.88	254	P	P	05 19 42.3	-0.5
	baz=48,SNR=19						
LBMI	Labuha	48.04	291	P	P	05 19 46.9	+2.8
	comp=Z,107nm,1.2s,comp=Z,1μm						
KLBR	Kellerberrin	48.17	247	P	P	05 19 44.6	-0.2
	baz=48,SNR=10						
DRV	Dumont d'Urvil	48.18	196	P	P	05 19 42.0	-2.4
DRV				S	S	05 26 34.0	-5.3
DRV				SS	SS	05 30 11.0	+2.2
DRV				L	L	05 31 00.0	
DRV				R		05 33 00.0	
NWAO	Narrogin (SRO)	48.54	246	*e*P	P	05 19 47.4	-0.3
NWAO	Narrogin (SRO)	48.54	246	P	P	05 19 47.2	-0.6
	comp=Z,43nm,1.0s,baz=91,slow=7.3,SNR=9.6						
NWAO				LR	LR	05 38 34.8	
	comp=Z,2μm,21.9s,baz=96,slow=34						
RKT	Rikitea	49.09	101	*e*LQ	LQ	05 31 23.4	
	comp=Z,1μm,27.0s						
RKT				*e*LR	LR	05 33 44.2	
	comp=Z,2μm,28.5s						
MORW	Morawa	49.86	251	P	P	05 19 58.3	+0.4
	baz=50,SNR=18						
KAPI	Kappang	52.90	281	*e*P	P	05 20 20.1	-0.7
KAPI	Kappang	52.90	281	P	P	05 20 18.8	-2.0
KAPI	Kappang	52.90	281	P	P	05 20 19.8	-1.0
	comp=Z,18nm,0.9s,baz=104,slow=4.2,SNR=5.2						
VNDA	Vanda	54.99	183	P	P	05 20 34.6	-0.5
VNDA	Vanda	54.99	183	P	P	05 20 34.6	-0.5
	comp=Z,2.9nm,1.0s,baz=352,slow=9.3,SNR=6.9						
VNDA				LR	LR	05 40 51.9	
	comp=Z,1μm,19.3s,baz=9.0,slow=32						
SBA	Scott Base	55.17	181	*e*P	P	05 20 37.6	+1.2
SBA				pmax	pmax		
	comp=Z,142nm,1.8s						
SBA	Scott Base	55.17	181	*e*P	P	05 20 37.6	+1.2
	comp=Z,142nm,1.8s						
CASY	Casey	57.75	205	*e*P	P	05 20 54.4	-0.5
	comp=Z,44nm,1.3s						
MYLDM	Lahad Datu	58.72	292	P	P	05 21 02.6	+0.1
TSM	Tawau	58.82	290	P	P	05 21 03.2	+0.1
KKM	Kota Kinabalu	61.12	291	*e*P	P	05 21 19.7	+0.7
	comp=Z,85nm,1.1s						
KKM	Kota Kinabalu	61.12	291	P	P	05 21 19.0	0.0
KKM	Kota Kinabalu	61.12	291	P	P	05 21 20.7	+1.7
	baz=61,SNR=8.8						
BTM	Bintulu	62.49	287	P	P	05 21 28.5	+0.3
SBUM	Sibu	62.91	285	P	P	05 21 31.3	+0.4
KSM	Kuching	64.19	283	*e*P	P	05 21 39.1	-0.3
	comp=Z,48nm,0.8s						
KSM	Kuching	64.19	283	P	P	05 21 38.9	-0.4
KSM	Kuching	64.19	283	P	P	05 21 40.9	+1.5
	baz=64,SNR=9.0						
MIR	Mirnyy	64.73	206	⇑*i*P	P	05 21 43.0	+1.0
MIR				*i*		05 21 58.0	
MIR				pmax	pmax		
	comp=Z,69nm,1.3s						
MJAR	Matsushiro Arr	66.84	331	P	P	05 21 54.7	-1.3
MJAR	Matsushiro Arr	66.84	331	P	P	05 21 54.7	-1.3
	comp=Z,5.7nm,0.6s,baz=152,slow=5.0,SNR=13						
MJAR				LR	LR	05 48 14.7	
	comp=Z,444nm,20.7s,baz=115,slow=33						
MAJO	Matsushiro	66.84	331	*e*P	P	05 21 54.9	-1.1
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MAJO	Matsushiro	66.84	331	*e*P	P	05 21 54.9	-1.1
	comp=Z,7.8nm,0.6s						
MAT	Matsushiro	66.84	331	P	P	05 21 55.2	-0.8
MAT				S	S	05 30 46.6	+2.1
QSPA	South Pole Qui	67.29	180	P	P	05 21 58.4	-0.3
QSPA	South Pole Qui	67.29	180	P	P	05 21 58.4	-0.3
	comp=Z,31nm,1.1s,baz=22,slow=2.4,SNR=40						
YHNB	Yeheng	67.73	311	*e*P	P	05 22 02.0	+0.1
	comp=Z,19nm,0.8s						
JNU	Nakatsue	67.74	324	P	P	05 22 01.6	-0.2
JNU	Nakatsue	67.74	324	P	P	05 22 01.6	-0.2
	comp=Z,8.7nm,0.9s,baz=108,slow=9.0,SNR=5.0						
JNU				LR	LR	05 47 42.4	
	comp=Z,806nm,21.6s,baz=40,slow=32						
QZH	Quanzhou	69.86	310	P	P	05 22 16.4	+1.3
QZH				*e*S	S	05 31 21.3	+0.5
QZH				pmax	pmax		
	comp=Z,740nm,3.7s						
QZH				LR	LR		
	comp=N,2μm,18.6s						
QZH				LR	LR		
	comp=E,1μm,19.2s						
QZH				LR	LR		
	comp=Z,1μm,22.5s						
MYKOM	Kota Tinggi	70.15	281	P	P	05 22 16.7	-0.5
YUK	Yuzh-Kuril'sk	70.51	341	*c i*P	P	05 22 15.7	-2.9
YUK				*e*PPP	PPP	05 26 38.5	
YUK				*e*S	S	05 31 24.1	-3.6
YUK				*e*		05 32 06.9	
YUK				*e*SSS	SSS	05 39 10.3	
KGM	Kluang	70.73	281	P	P	05 22 20.2	-0.5
KUR	Kuril'sk	71.02	343	*c i*P	P	05 22 17.1	-4.6
KUR				*i* S	S	05 31 37.1	+3.5
KUR				pmax	pmax		
	comp=Z,136nm,4.3s						
KUR				pmax	pmax		
	comp=E,66nm,4.3s						
KUR				pmax	pmax		
	comp=N,100nm,4.3s						
ASAJ	Asahikawa	71.63	339	LR	LR	05 51 11.9	
	comp=N,1μm,20.9s,baz=174,slow=34						
SSE	Sheshan	72.05	316	P	P	05 22 28.9	+0.7
SSE				sP	sP	05 22 48.9	-0.8
SSE				pmax	pmax		
	comp=Z,38nm,0.8s						
SSE				LR	LR		
	comp=N,330nm,20.1s						
SSE				LR	LR		
	comp=E,490nm,19.8s						
SSE				LR	LR		
	comp=Z,410nm,17.3s						
KSRS	Korea Array	72.58	325	P	P	05 22 31.5	+0.2
	comp=Z,6.1nm,1.0s,baz=145,slow=6.5,SNR=16						
KSRS				LR	LR	05 52 38.3	
	comp=Z,579nm,19.7s,baz=134,slow=34						
KSAR	Wonju Array Be	72.59	325	P	P	05 22 31.5	+0.1
FRIM	Kepong	72.78	281	P	P	05 22 32.8	-0.2
QIZ	Qiongzhong	73.12	300	P	P	05 22 37.1	+2.2
QIZ				pP	pP	05 22 49.3	-0.9
QIZ				sP	sP	05 22 54.9	-1.4
QIZ				S	S	05 31 59.4	+0.6
QIZ				sS	sS	05 32 26.3	+1.7
QIZ				pmax	pmax		
	comp=Z,18nm,1.6s						
QIZ				LR	LR		
	comp=Z,500nm,33.4s						
IPM	Ipoh	73.84	282	*e*P	P	05 22 39.4	0.0
	comp=Z,38nm,0.9s						
IPM	Ipoh	73.84	282	P	P	05 22 39.2	-0.1
YSS	Yuzh-Sakhalins	74.09	340	*e*P	P	05 22 41.0	+1.1
NJ2	Nanjing	74.18	315	*e*P	P	05 22 41.6	+0.8
NJ2				pP	PcP	05 22 55.3	-0.3
NJ2				sP	sP	05 23 01.1	-1.2
NJ2				sS	sS	05 32 34.0	-2.0
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,260nm,10.0s						
NJ2				LR	LR		
	comp=N,470nm,21.2s						
NJ2				LR	LR		
	comp=E,530nm,22.1s						
NJ2				LR	LR		
	comp=Z,540nm,18.0s						
SKR	Severo-Kuril's	74.39	350	*e*P	P	05 22 36.0	-5.5
SKR				*e*		05 32 20.0	
SKR				MLR	MLR		
	comp=N,1μm,20.0s						
SKR				MLR	MLR		
	comp=Z,1μm,20.0s						
KULM	Kulim	74.52	283	*e*P	P	05 22 43.1	-0.1
	comp=Z,24nm,0.9s						
KULM	Kulim	74.52	283	P	P	05 22 42.8	-0.4
USRK	Ussuriysk Arra	75.81	332	P	P	05 22 49.5	-0.5
	comp=Z,3.3nm,0.7s,baz=145,slow=5.5,SNR=15						
MAW	Mawson	75.94	202	P	P	05 22 51.4	+0.9
MAW	Mawson	75.94	202	P	P	05 22 51.4	+0.9
	comp=Z,17nm,0.9s,baz=116,slow=9.1,SNR=21						
MAW				LR	LR	05 54 36.2	
	comp=Z,1μm,18.8s,baz=89,slow=34						
WHN	Wuhan	76.25	312	⇓P	P	05 22 51.7	-1.0
WHN				S	S	05 32 35.7	+2.5
WHN				LR	LR		
	comp=N,940nm,15.0s						
WHN				LR	LR		
	comp=E,1μm,14.7s						
WHN				LR	LR		

comp=Z,1µm,17.6s
PET Petropavlovsk 76.30 352 *e*P **P** 05 22 51.2 -1.3
PET *e*S **S** 05 32 32.3 -0.5
PET pmax pmax
comp=Z,300nm,14.7s
PET pmax pmax
comp=Z,300nm,4.4s
PEA0B Petropavlovsk- 76.51 352 P **P** 05 22 50.6 -3.1
PETK Petropavlovsk- 76.51 352 P **P** 05 22 55.3 +1.6
PETK Petropavlovsk- 76.51 352 P **P** 05 22 55.3 +1.6
PETK Petropavlovsk- 76.51 352 P **P** 05 22 55.3 +1.6
comp=Z,4.4nm,0.6s,baz=159,slow=6.2,SNR=4.2
PETK LR LR 05 51 17.9
comp=Z,1µm,20.7s,baz=158,slow=32
DL2 Dalian 77.07 322 P **P** 05 22 56.8 -0.4
DL2 S **S** 05 32 44.5 +2.7
DL2 pmax pmax
comp=Z,52nm,1.3s
DL2 pmax pmax
comp=Z,240nm,5.3s
DL2 LR LR
comp=E,450nm,20.4s
DL2 LR LR
comp=Z,430nm,22.4s
MDJ Mudanjiang 77.21 331 P **P** 05 22 58.3 +0.4
MDJ pP **pP** 05 23 11.5 -1.8
MDJ sP **sP** 05 23 18.1 -1.3
MDJ PP **PP** 05 25 51.5 -1.2
MDJ sS **sS** 05 33 08.2 -0.9
MDJ pmax pmax
comp=Z,14nm,1.5s
MDJ pmax pmax
comp=Z,170nm,7.1s
MDJ LR LR
comp=N,500nm,23.5s
MDJ LR LR
comp=E,340nm,24.1s
MDJ LR LR
comp=Z,730nm,24.8s
MDJ Mudanjiang 77.21 331 *e*P **P** 05 22 58.1 +0.3
comp=Z,5.3nm,0.6s
SNY Shenyang 78.06 325 ⇑P **P** 05 23 02.6 -0.1
SNY pmax pmax
comp=Z,18nm,1.5s
SNY LR LR
comp=N,440nm,22.8s
SNY LR LR
comp=E,470nm,21.6s
SNY LR LR
comp=Z,700nm,22.2s
CN2 Changchun 78.55 328 *e*P **P** 05 23 05.2 -0.1
CN2 *es*P **sP** 05 23 28.6 +1.8
CN2 PP **PP** 05 26 05.2 +1.3
CN2 *e*S **S** 05 32 57.0 -0.5
CN2 pmax pmax
comp=Z,40nm,1.3s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,600nm,20.0s
CN2 LR LR
comp=E,700nm,20.0s
CN2 LR LR
comp=Z,900nm,23.0s
ENH Enshi 79.51 309 *e*P **P** 05 23 10.3 -0.7
comp=Z,47nm,1.2s
GYA Guiyang 79.53 304 P **P** 05 23 13.0 +1.8
GYA pP **pP** 05 23 29.8 +3.0
GYA sP **sP** 05 23 36.5 +3.7
GYA PP **PP** 05 26 16.7 +4.1
GYA S **S** 05 33 09.9 +0.9
GYA SKS **SKSac** 05 33 19.2 -4.4
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,160nm,5.2s
GYA LR LR
comp=N,780nm,19.7s
GYA LR LR
comp=E,520nm,20.3s
GYA LR LR
comp=Z,660nm,18.8s
KLR Kul'dur 79.94 335 *e*P P 05 23 08.9 -3.9
KLR *e*S **S** 05 33 07.0 -5.1
KLR pmax pmax
comp=Z,78nm,1.8s
BJI Beijing 80.98 320 P **P** 05 23 18.6 +0.1
BJI pP **pP** 05 23 35.5 +1.4
BJI sP **sP** 05 23 41.9 +1.8
BJI PP **PP** 05 26 25.5 +1.3
BJI S **S** 05 33 21.4 -1.9
BJI pmax pmax
comp=Z,23nm,1.6s
BJI pmax pmax
comp=Z,260nm,10.0s
BJI LR LR
comp=N,720nm,22.6s
BJI LR LR
comp=E,700nm,23.4s
BJI LR LR
comp=Z,890nm,24.2s
CM31 Chiang Mai Arr 81.83 294 *e*P **P** 05 23 23.6 0.0
comp=Z,51nm,1.2s
CMAR Chiang Mai Arr 81.83 294 P **P** 05 23 24.9 +1.3
CMAR Chiang Mai Arr 81.83 294 P **P** 05 23 24.9 +1.3
comp=Z,12nm,0.8s,baz=132,slow=3.8,SNR=50
KMI Kunming 81.89 301 P **P** 05 23 25.1 +1.1
KMI pP **pP** 05 23 37.2 -2.4
KMI sP **sP** 05 23 42.5 -3.1
KMI PP **PP** 05 26 32.0 -0.3
KMI S **S** 05 33 29.9 -4.0
KMI pmax pmax
comp=Z,32nm,1.5s
KMI pmax pmax
comp=Z,240nm,6.1s
KMI LR LR
comp=N,670nm,16.1s
KMI LR LR
comp=E,460nm,14.9s
KMI LR LR
comp=Z,590nm,18.4s
CHTO Chiang Mai 81.99 294 *e*P **P** 05 23 25.4 +1.0
CHTO pmax pmax
comp=Z,77nm,1.4s
CHTO Chiang Mai 81.99 294 *e*P **P** 05 23 25.4 +1.0
comp=Z,77nm,1.4s
XAN Xi'an 82.01 312 P **P** 05 23 24.3 0.0
XAN pP **pP** 05 23 40.8 +1.0
XAN PP **PP** 05 26 37.5 +4.5
XAN SKS **S** 05 33 35.0 +0.5
XAN S **SKSac** 05 33 38.0 -2.2
XAN pmax pmax
comp=Z,6.0nm,1.3s
XAN pmax pmax
comp=Z,71nm,9.4s
XAN LR LR
comp=N,290nm,18.7s
XAN LR LR
comp=E,180nm,16.1s
XAN LR LR
comp=Z,130nm,16.9s
CD2 Chengdu 84.02 307 *e*P **P** 05 23 35.8 +1.1
CD2 pP **pP** 05 23 51.1 +0.8
CD2 sP **sP** 05 23 57.2 +0.8
CD2 PP **PP** 05 26 52.4 +2.9
CD2 SKS **SKSac** 05 33 50.8 -2.7
CD2 S **S** 05 33 55.4 +0.4
CD2 sS **sS** 05 34 21.2 -0.1
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 pmax pmax
comp=Z,300nm,11.2s
CD2 LR LR
comp=N,540nm,17.8s
CD2 LR LR
comp=E,490nm,15.5s
CD2 LR LR
comp=Z,460nm,21.4s
HHC Hu-ho-hao-te 84.24 319 *e*P **P** 05 23 36.5 +0.8
HHC pP **pP** 05 23 53.9 +2.6
HHC PP **PP** 05 26 53.6 +2.4
HHC S **S** 05 33 57.0 +0.1
HHC sS **sS** 05 34 24.3 +1.0
HHC pmax pmax
comp=Z,69nm,0.9s
HHC pmax pmax
comp=Z,440nm,6.4s
HHC LR LR
comp=N,870nm,18.8s
HHC LR LR
comp=E,1µm,18.9s
HHC LR LR
comp=Z,2µm,19.5s
KDAK Kodiak Island 85.69 18 P **P** 05 23 43.4 +1.0
KDAK Kodiak Island 85.69 18 P **P** 05 23 43.4 +1.0
comp=Z,6.9nm,0.9s,baz=113,slow=18,SNR=4.4
SNAA Sanae 85.72 182 *e*P **P** 05 23 42.1 -0.6
SNAA Sanae 85.72 182 P **P** 05 23 42.1 -0.6
comp=Z,0.9nm,1.3s
SNAA Sanae 85.72 182 P **P** 05 23 42.1 -0.6
comp=Z,2.1nm,0.9s,baz=194,slow=7.8,SNR=25
SAO San Andreas Ge 86.62 48 *e*P **P** 05 23 47.9 +0.4
SAO pmax pmax
comp=Z,14nm,1.0s
SAO San Andreas Ge 86.62 48 *e*P **P** 05 23 47.9 +0.4
comp=Z,14nm,1.0s
LZH Lanzhou 86.62 311 *e*P **P** 05 23 47.0 -0.7
LZH pP **pP** 05 24 04.8 +1.4
LZH sP **sP** 05 24 10.8 +1.4
LZH PP **PP** 05 27 09.8 -0.8
LZH *e*S **SKKSac** 05 34 19.0 +0.7
LZH sS **sS** 05 34 47.2 +0.1
LZH pmax pmax
comp=Z,21nm,1.0s
LZH pmax pmax
comp=Z,120nm,5.6s
LZH LR LR
comp=N,650nm,17.8s
LZH LR LR
comp=E,430nm,13.6s
LZH LR LR
comp=Z,860nm,19.8s
VNA1 Neumayer--Stat 86.83 180 *e*P P 05 23 42.2 -5.8
VNA1 Neumayer--Stat 86.83 180 *e*PcP P 05 23 43.7 -4.3
VNA1 Neumayer--Stat 86.83 180 *e*pP pP 05 24 01.4 -2.3
KIPM Iron Peak 86.89 44 *e*P **P** 05 23 49.9 +1.0
comp=Z,24nm,1.0s
KHMM Horse Mountain 87.31 43 *e*P **P** 05 23 51.3 +0.3
comp=Z,25nm,1.1s
KRMB Red Mountain 87.56 43 *e*P **P** 05 23 53.0 +0.9
comp=Z,7.3nm,1.1s
WDC Whiskeytown Da 87.91 44 *e*P **P** 05 23 53.9 +0.2
WDC pmax pmax
comp=Z,23nm,1.3s
WDC Whiskeytown Da 87.91 44 *e*P **P** 05 23 53.9 +0.2
comp=Z,22nm,1.3s
CMB Columbia Colle 88.00 47 *e*P **P** 05 23 53.9 -0.3
CMB pmax pmax
comp=Z,18nm,1.2s
CMB Columbia Colle 88.00 47 *e*P **P** 05 23 53.9 -0.3
comp=Z,18nm,1.2s
ISA Isabella 88.13 50 *e*P **P** 05 23 55.2 +0.3
ISA pmax pmax
comp=Z,29nm,1.2s
ISA Isabella 88.13 50 *e*P **P** 05 23 55.1 +0.3
comp=Z,29nm,1.2s
YBH Yreka Blue Hor 88.42 43 *e*P **P** 05 23 56.4 +0.3
comp=Z,26nm,1.4s
HUMO Hull Mountain 88.74 42 *e*P **P** 05 23 58.0 +0.4
comp=Z,24nm,1.2s
LTIM Timbered Crate 88.91 44 P **P** 05 23 59.5 +1.0
BEKR Beckworth 88.96 46 *e*P **P** 05 23 58.0 -0.9
comp=Z,13nm,1.3s
WCN Washoe City 89.07 46 *e*P **P** 05 23 59.7 +0.3
WCN pmax pmax
comp=Z,14nm,1.2s
WCN Washoe City 89.07 46 *e*P **P** 05 23 59.6 +0.3
comp=Z,14nm,1.2s
GSC Goldstone 89.14 51 *e*P **P** 05 24 00.2 +0.5
GSC pmax pmax
comp=Z,6.0nm,1.1s
GSC Goldstone 89.14 51 *e*P **P** 05 24 00.2 +0.5
comp=Z,6.4nm,1.1s
MPOR Mary's Peak 89.42 40 P **P** 05 24 01.5 +0.7
NVAR Mina Array Bea 89.61 48 P **P** 05 24 02.1 +0.2
NVAR Mina Array Bea 89.61 48 P **P** 05 24 02.1 +0.2
comp=Z,12nm,0.9s,baz=228,slow=7.1,SNR=51
NVAR LR LR 05 56 25.9
comp=Z,956nm,20.0s,baz=115,slow=30
NV11 Mina Array Sit 89.72 48 *e*P **P** 05 24 01.3 -1.1
BILL Bilibino 90.63 358 ⇑*i*P **P** 05 24 06.0 +0.3
BILL *i* 05 24 24.3
BILL *i* PS **PS** 05 36 06.6 -4.8
BILL *i* SS SS 05 41 06.7 +6.8
BILL pmax pmax
comp=Z,10.0nm,1.2s
BILL Bilibino 90.63 358 *e*P **P** 05 24 05.3 -0.4
comp=Z,8.0nm,1.1s
NLWA Neilton Lookou 90.82 38 *e*P **P** 05 24 07.0 -0.1
comp=Z,11nm,1.1s
YAK Yakutsk 90.86 342 *e*P P 05 23 56.5 -10
YAK *e**SS **SKSac** 05 34 37.0 +3.4
YAK *e*SS **SS** 05 41 04.2 +0.8
YAK pmax pmax
comp=E,5.0nm,0.9s
YAK pmax pmax
comp=Z,7.0nm,0.9s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=Z,13nm,0.6s
YAK pmax pmax
comp=N,2.0nm,0.6s
YAK pmax pmax
comp=E,3.0nm,0.6s
ULN Ulaanbaatar 90.92 323 *e*P **P** 05 24 07.4 -0.4
comp=E,49nm,1.4s
GTA Gaotai 91.05 313 ⇓P **P** 05 24 09.7 +1.2
GTA pP **pP** 05 24 25.3 +1.0
GTA sP **sP** 05 24 31.1 +0.8
GTA SKS **SKSac** 05 34 36.3 +0.2
GTA S **S** 05 35 03.4 +1.3
GTA sS **sS** 05 35 29.3 +0.5
GTA pmax pmax
comp=Z,9.0nm,1.5s
GTA pmax pmax
comp=Z,150nm,5.9s
GTA LR LR
comp=N,330nm,19.9s
GTA LR LR
comp=E,450nm,22.3s
GTA LR LR
comp=Z,450nm,22.8s
VIPM Ingram Point 91.19 42 P **P** 05 24 09.2 +0.1
VIPM Ingram Point 91.19 42 P **P** 05 24 09.2 +0.1
TDL Tradedollar La 91.20 39 P **P** 05 24 09.7 +0.6
SONM Songino Array 91.28 322 P **P** 05 24 09.3 -0.1
SONM Songino Array 91.28 322 P **P** 05 24 09.3 -0.1
comp=Z,21nm,1.1s,baz=134,slow=4.2,SNR=41
BMN Battle Mountai 91.32 46 *e*P **P** 05 24 10.9 +1.0
BMN pmax pmax
comp=Z,21nm,1.2s
BMN Battle Mountai 91.32 46 *e*P **P** 05 24 10.9 +1.0
comp=Z,21nm,1.2s
WVOR Wild Horse Val 91.38 44 *e*P **P** 05 24 09.9 -0.1
WVOR pmax pmax
comp=Z,16nm,1.1s
WVOR Wild Horse Val 91.38 44 *e*P **P** 05 24 09.9 -0.1
comp=Z,16nm,1.1s
TUC Tucson 92.24 56 *e*P **P** 05 24 14.9 +0.7
TUC pmax pmax
comp=Z,3.0nm,0.9s
TUC Tucson 92.24 56 *e*P **P** 05 24 14.9 +0.7
comp=Z,2.7nm,0.9s
ARUT Antelope Range 92.69 50 *e*P **P** 05 24 16.9 +0.7
ARUT pmax pmax
comp=Z,5.0nm,1.0s
ARUT Antelope Range 92.69 50 *e*P **P** 05 24 16.9 +0.7
comp=Z,4.9nm,1.0s
COLA College 92.83 16 *e*P **P** 05 24 14.3 -1.7
COLA pmax pmax
comp=Z,11nm,1.3s
COLA College 92.83 16 *e*P **P** 05 24 14.3 -1.7
comp=Z,12nm,1.3s
ILAR Eielson Array 93.00 17 P **P** 05 24 14.5 -2.3
ILAR Eielson Array 93.00 17 P **P** 05 24 14.5 -2.3
comp=Z,1.8nm,0.9s,baz=233,slow=6.4,SNR=18
ILAR LR LR 06 02 57.2
comp=Z,1µm,19.1s,baz=254,slow=34
MFID Camas Ranch 93.66 44 *e*P **P** 05 24 20.5 0.0
comp=Z,5.5nm,1.1s
COLD Coldfoot 94.18 14 *e*P **P** 05 24 22.1 0.0
comp=Z,3.8nm,1.0s
ZAK Zakamensk 94.36 323 *e*P **P** 05 24 22.8 -0.7
ZAK pmax pmax
comp=Z,13nm,1.4s
PLCA Paso Flores 94.53 138 P **P** 05 24 26.1 +1.4
PLCA Paso Flores 94.53 138 P **P** 05 24 26.1 +1.4
comp=Z,1.3nm,0.7s,baz=223,slow=4.9,SNR=3.8
PLCA LR LR 05 57 40.2
comp=Z,270nm,21.8s,baz=231,slow=30
EGAK Eagle 94.60 18 *e*P **P** 05 24 23.8 -0.3
comp=Z,7.8nm,1.2s
HLID Hailey 94.64 45 *e*P **P** 05 24 26.9 +1.8
comp=Z,2.3nm,0.9s
TLY Talaya 94.83 325 *e*P **P** 05 24 25.1 -0.5
TLY *e* 05 34 52.7
TLY pmax pmax
comp=Z,14nm,1.3s
TXAR Lajitas Array 96.64 61 P **P** 05 24 34.9 +0.5
TXAR PKKP **PKKPdf** 05 41 19.4 -0.4
TXAR Lajitas Array 96.64 61 P **P** 05 24 34.9 +0.5
comp=Z,0.6nm,0.8s,baz=218,slow=5.7,SNR=7.5
TXAR PKKP **PKKPdf** 05 41 19.4 -0.4
comp=Z,0.4nm,0.9s,baz=120,slow=2.0,SNR=3.5
TXAR LR LR 06 00 52.5
comp=Z,740nm,19.2s,baz=10.0,slow=31
SNOW Snow King Moun 96.99 46 *e*P **P** 05 24 37.5 +1.5
comp=Z,2.8nm,0.9s
PDAR Pinedale Array 97.51 47 P Pdif 05 24 39.0 +0.8
PDAR Pinedale Array 97.51 47 P Pdif 05 24 39.0 +0.8
comp=Z,0.5nm,0.8s,baz=194,slow=3.4,SNR=4.8
PDAR LR LR 06 05 00.7
comp=Z,682nm,18.4s,baz=130,slow=33
WMQ Urumqi 101.13 313 *e*P **Pdif** 05 24 55.4 +1.2
WMQ pP pP 05 25 06.0 -4.1
WMQ PP **PP** 05 29 07.0 +3.2
WMQ SKS **SKSac** 05 35 30.0 +1.3
WMQ S **Sdif** 05 36 27.0 -1.9
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ pmax pmax
comp=Z,170nm,4.8s
WMQ LR LR
comp=N,880nm,17.2s
WMQ LR LR
comp=E,1µm,20.0s
WMQ LR LR
comp=Z,1µm,22.5s
YKA Yellowknife Ar 102.85 27 Pdif **Pdif** 05 25 02.1 +0.9
YKA PP **PP** 05 29 13.7 -2.4
YKA Yellowknife Ar 102.85 27 Pdiff **Pdif** 05 25 02.1 +0.9
comp=Z,0.2nm,0.6s,baz=260,slow=3.6,SNR=4.2
YKA PP **PP** 05 29 13.6 -2.4
comp=Z,0.4nm,1.0s,baz=258,slow=6.4,SNR=3.7
MKAR Makanchi Array 105.69 314 P **Pdif** 05 25 16.7 +2.4
MKAR Makanchi Array 105.69 314 Pdif **Pdif** 05 25 16.7 +2.4
MKAR PKiKP **PKiKP** 05 29 26.1 -1.0
MKAR PKKP **PKKPdf** 05 41 00.8 -2.8
MKAR Makanchi Array 105.69 314 Pdiff **Pdif** 05 25 16.7 +2.4
comp=Z,0.7nm,0.6s,baz=119,slow=4.3,SNR=8.7
MKAR PKiKP **PKiKP** 05 29 26.1 -1.0
comp=Z,1.0nm,0.8s,baz=87,slow=3.9,SNR=4.4
MKAR PKKP **PKKPdf** 05 41 00.8 -2.8
comp=Z,0.7nm,0.7s,baz=287,slow=3.9,SNR=5.8
KURK Kurchatov 109.04 318 *e*PKPdf **PKiKP** 05 29 31.9 -1.2
KURK PKKP **PKKPab** 05 40 51.8 +0.4
KURBB Kurchatov Arra 109.07 318 PKiKP **PKiKP** 05 29 32.2 -0.9
comp=Z,1.0nm,0.7s,baz=104,slow=1.9,SNR=10
KURBB PKKP **PKKPab** 05 40 51.8 +0.5
comp=Z,0.2nm,0.4s,baz=285,slow=3.7,SNR=4.5
KKAR Karatay Array 112.98 309 *e*PKiKP **PKiKP** 05 29 40.3 -0.6
KKAR Karatay Array 112.98 309 *e*PKPdf **PKiKP** 05 29 40.3 -0.6
BVAR Borovoye Array 114.45 319 PKiKP PKPdf 05 29 42.2 -1.1
BVAR Borovoye Array 114.45 319 PKP PKPdf 05 29 42.2 -1.2
BVAR Borovoye Array 114.45 319 PKP PKPdf 05 29 42.2 -1.2
comp=Z,2.3nm,0.6s,baz=106,slow=3.1,SNR=11
BRVK Borovoye 114.51 319 ⇑*i*PKiKP PKPdf 05 29 44.5 +1.0
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BOSA Boshof 119.40 214 PKP **PKPdf** 05 29 52.1 -1.8
BOSA Boshof 119.40 214 PKP **PKPdf** 05 29 52.1 -1.8
comp=Z,4.3nm,1.1s,baz=180,slow=1.0,SNR=2.2
ABKAR Akbulak array 120.84 315 *e*P **PKPdf** 05 29 55.0 -0.8
ARU Arti 121.30 323 PKiKP **PKPdf** 05 29 57.4 +1.0
ARU pmax pmax
comp=Z,13nm,1.0s
AKTO Aktyubinsk 122.06 316 PKiKP **PKPdf** 05 29 56.5 -1.6
AKTO Aktyubinsk 122.06 316 PKP **PKPdf** 05 29 56.5 -1.6
AKTO Aktyubinsk 122.06 316 PKP **PKPdf** 05 29 56.5 -1.6
comp=Z,5.5nm,0.7s,baz=125,slow=3.8,SNR=21
BDFB Brasilia 125.68 131 PKP **PKPdf** 05 30 05.6 -0.6
BDFB Brasilia 125.68 131 PKP **PKPdf** 05 30 05.6 -0.6
comp=Z,5.5nm,0.6s,baz=275,slow=2.8,SNR=8.8
APA Apatity 128.24 341 ⇑*i*PKiKP PKPdf 05 30 20.3 +11
APA MLR MLR
comp=Z,900nm,21.0s
ARCES ARCESS Array B 129.00 345 PKP **PKPdf** 05 30 10.6 -0.2
ARCES ARCESS Array B 129.00 345 PKP **PKPdf** 05 30 10.6 -0.2
comp=Z,1.6nm,0.7s,baz=29,slow=2.1,SNR=6.0
RDF Al-Radifah 129.54 289 *e*P **PKPdf** 05 30 14.2 +1.1
RDF AMb AMB 05 30 16.7
comp=Z,53nm,1.6s
KLMR Klimovskoe 129.62 332 *e*PKiKP **PKPdf** 05 30 10.5 -1.7
KLMR *e* 05 32 25.0
KLMR pmax pmax
comp=Z,20nm,1.4s
KLMR MLR MLR
comp=Z,716nm,21.0s
MAK Makhachkala 129.78 308 PKiKP **PKPdf** 05 30 12.2 -0.8
MAK *e* 05 32 20.4
MAK *e*PPP PPP 05 35 13.0
MAK *e* 05 37 18.6
MAK *e*PS **PS** 05 42 30.4 -5.7
MIB Mutribah 129.81 290 *e*P **PKPdf** 05 30 15.0 +1.4
MIB AMb AMB 05 30 16.9
comp=Z,32nm,1.3s
NAY Al-Naaiem 129.84 290 *e*P **PKPdf** 05 30 14.9 +1.3
NAY AMb AMB 05 30 16.8
comp=Z,15nm,1.5s
MOS Moscow 132.76 326 *e*PKHKP PKPpre 05 29 53.6
KIV Kislovodsk 133.13 310 *i* P **Pdif** 05 27 14.2 -2.3
KIV *i* 05 30 19.0
KIV *e* 05 32 44.5
KIV *e*PPP PPP 05 35 36.8
KIV *e*PS **PS** 05 43 01.8 -3.5
KIV *e*SS SS 05 50 24.2 -1.9
KIV pmax pmax
comp=Z,26nm,1.1s
OBN Obninsk 133.58 326 *e*PKiKP **PKPdf** 05 30 16.8 -3.0
OBN *i* 05 32 48.8
OBN pmax pmax
comp=Z,9.0nm,1.2s
SOC Sochi 135.31 310 *i* PKiKP **PKPdf** 05 30 23.1 -0.4
SOC *e* 05 32 55.5
SOC *e*PPP PPP 05 36 01.3
SOC MLR MLR
comp=Z,401nm,20.0s
NOA NORSAR Array B 139.38 345 PKP **PKPdf** 05 30 30.3 -0.3
NOA NORSAR Array B 139.38 345 PKP **PKPdf** 05 30 30.3 -0.3
comp=Z,1.0nm,1.0s,baz=30,slow=2.6,SNR=3.1
AKASG Malin Array Be 139.56 323 PKiKP **PKPdf** 05 30 31.5 +0.4
AKASG Malin Array Be 139.56 323 PKP **PKPdf** 05 30 31.5 +0.4
AKASG Malin Array Be 139.56 323 PKP **PKPdf** 05 30 31.5 +0.4
comp=Z,3.6nm,0.9s,baz=64,slow=1.7,SNR=11
AK01 Malin Array Si 139.57 323 *e*PKPdf **PKPdf** 05 30 30.4 -0.7
KIEV Kiev 139.57 323 *e*PKiKP **PKPdf** 05 30 31.2 +0.1
KIEV Kiev 139.57 323 *e*PKPdf **PKPdf** 05 30 31.2 +0.1
AK02 Malin Array Si 139.59 323 *e*PKPdf **PKPdf** 05 30 29.1 -2.0
KIS Kishinev 141.51 318 *e*PKP **PKPdf** 05 30 33.0 -1.7
KIS LRM MLR 06 36 24.0
comp=Z,400nm,22.0s
KIS Kishinev 141.51 318 *e*PKiKP **PKPdf** 05 30 33.0 -1.7
KIS *e* 05 33 40.0
LVV L'vov 142.85 325 *e*PKiKP **PKPdf** 05 30 33.4 -3.6
KWP Kalwaria Pacla 143.66 325 *e*PKiKP PKPbc 05 30 36.7 +0.6
KWP Kalwaria Pacla 143.66 325 *e*PKPdf PKPbc 05 30 36.7 +0.7
MLR Muntele Rosu 143.97 317 PKP PKPab 05 30 36.9 +0.2
MLR Muntele Rosu 143.97 317 PKP PKPab 05 30 36.9 +0.2
comp=Z,6.4nm,1.0s,baz=162,slow=20,SNR=6.9
DOPR Dopca 144.09 318 ⇓*i*P PKPbc 05 30 37.5 0.0
SECR 144.10 317 ⇑*i*P **PKPdf** 05 30 39.0 -0.4
KOLS Kolonicke sedl 144.30 325 *e*PKHKP PKPpre 05 30 32.8
KOLS Kolonicke sedl 144.30 325 *e*PKP PKPpre 05 30 32.8
UZH Uzhgorod 144.47 324 ⇑*i*PKiKP **PKPdf** 05 30 39.7 -0.2

UZH				i		05 30 52.7	
STHS	Stebnicka Huta	144.55	326	ePKIKP	PKPab	05 30 37.2	-1.4
STHS	Stebnicka Huta	144.55	326	ePKP	PKPab	05 30 37.2	-1.4
TRPA	Tarpa	144.62	323	⇑iP	PKPbc	05 30 39.4	+0.4
TRPA	Tarpa	144.62	323	⇑ePKPbc	PKPbc	05 30 39.5	+0.5
CRVS	Cervenica-Dubn	144.75	325	ePKIKP	PKPab	05 30 37.6	-1.8
CRVS	Cervenica-Dubn	144.75	325	ePKP	PKPab	05 30 37.6	-1.8
OJC	Ojcow	144.77	328	ePKIKP	PKPab	05 30 39.3	-0.1
OJC	Ojcow	144.77	328	ePKP	PKPab	05 30 39.3	-0.1
NIE	Niedzica	145.03	327	ePKIKP	PKPdf	05 30 41.3	+0.4
NIE	Niedzica	145.03	327	ePKP	PKPdf	05 30 41.3	+0.4
DRGR		145.27	321	⇑PKIKP	PKPdf	05 30 41.8	+0.3
DRGR		145.27	321	⇑iP	PKPdf	05 30 41.8	+0.3
KECS	Kecovo	145.52	325	ePKIKP	PKPab	05 30 42.4	+0.2
KECS	Kecovo	145.52	325	ePKP	PKPab	05 30 42.4	+0.2
RUE	Ruedersdorf	145.77	336	ePKPbc	PKPab	05 30 43.1	+0.2
BSEG	Bad Segeberg	145.78	340	ePKPbc	PKPab	05 30 43.2	+0.3
BSEG	Bad Segeberg	145.78	340	ePKP2	PKPab	05 30 43.2	+0.3
OKC	Ostrava-Krasne	145.82	329	ePKP2	PKPbc	05 30 42.9	+0.1
OKC				MLR	MLR		
	comp=Z,400nm,23.3s						
OKC	Ostrava-Krasne	145.82	329	ePKP	PKPbc	05 30 42.9	+0.1
OKC				AMS	AMS	06 34 20.0	
	comp=Z,400nm,23.3s						
GZR	Gura Zlata	145.97	319	⇑PKIKP	PKPbc	05 30 43.6	+0.1
GZR	Gura Zlata	145.97	319	⇑iP	PKPpre	05 30 37.5	
KSP	Ksiaz	145.97	332	ePKP2	PKPab	05 30 43.6	-0.3
KSP				e		05 34 03.5	
KSP				MLR	MLR		
	comp=Z,900nm,22.4s						
KSP	Ksiaz	145.97	332	ePKP	PKPab	05 30 43.5	-0.3
MORC	Moravsky Berou	146.15	329	ePKP2	PKPdf	05 30 43.3	+0.5
MORC	Moravsky Berou	146.15	329	ePKPdf	PKPdf	05 30 43.3	+0.5
PSZ	Piszkesteto	146.18	325	⇓ePKPdf	PKPab	05 30 45.2	+0.4
DPC	Dobruska-Polom	146.31	331	ePKP2	PKPab	05 30 44.8	-0.4
DPC	Dobruska-Polom	146.31	331	ePKP	PKPab	05 30 44.8	-0.4
UPC	Upice	146.34	331	ePKP2	PKPbc	05 30 44.4	0.0
UPC	Upice	146.34	331	ePKP	PKPbc	05 30 44.4	0.0
VYHS	Vyhne	146.37	326	ePKP2	PKPab	05 30 45.4	0.0
VYHS	Vyhne	146.37	326	ePKP	PKPab	05 30 45.4	0.0
BUD	Budapest	146.91	325	⇑ePKPdf	PKPbc	05 30 46.4	+0.3
VRAC	Vranov	146.92	329	PKPbc	PKPdf	05 30 44.9	+0.8
VRAC	Vranov	146.92	329	PKPbc	PKPdf	05 30 44.9	+0.8
	comp=Z,33nm,1.0s,baz=58,slow=3.9,SNR=29						
BRG	Berggiesshubel	146.94	334	ePKP	PKPbc	05 30 46.4	+0.2
	comp=Z,63nm,1.3s						
BRG				epPKP	pPKPdf	05 31 02.4	+1.9
	comp=Z,26nm,1.1s						
BRG				e		05 31 06.4	
	comp=Z,27nm,1.0s						
BRG				e		05 34 13.0	
BRG				e		05 37 52.0	
BRG	Berggiesshubel	146.94	334	ePKPbc	PKPbc	05 30 46.7	+0.6
BRG	Berggiesshubel	146.94	334	ePKP2	PKPbc	05 30 46.3	+0.2
BRG				e		05 34 13.0	
BRG				e		05 37 52.0	
BRG				pmax	pmax		
	comp=Z,63nm,1.3s						
BRG				pmax	pmax		
	comp=Z,26nm,1.1s						
BRG				pmax	pmax		
	comp=Z,27nm,1.0s						
PVCC	Panska Ves	146.94	333	ePKP2	PKPbc	05 30 46.5	+0.4
PVCC				MLR	MLR		
	comp=Z,600nm,20.4s						
PVCC	Panska Ves	146.94	333	ePKP	PKPbc	05 30 46.5	+0.4
PVCC				AMS	AMS	06 37 50.0	
	comp=Z,600nm,20.4s						
CLL	Collm	146.99	335	ePKPbc	PKPbc	05 30 46.6	+0.4
CLL	Collm	146.99	335	⇑iPKP2	PKPbc	05 30 46.1	-0.1
CLL				pmax	pmax		
	comp=Z,48nm,1.3s						
CLL				MLR	MLR		
	comp=Z,700nm,20.4s						
CLL	Collm	146.99	335	⇑iPKPbc	PKPbc	05 30 46.1	-0.1
	comp=Z,48nm,1.3s						
CLL				i sPKiKP	sPKiKP	05 30 56.6	-14
CLL				e		05 31 02.0	
CLL				ePP	PP	05 34 12.0	+1.4
CLL				eSSS	SSS	05 58 45.0	
CLL				Lm	MLR	06 38 00.0	
	comp=N,500nm,21.0s						
CLL				Lm	MLR	06 38 00.0	
	comp=E,200nm,20.0s						
CLL				Lm	MLR	06 38 00.0	
	comp=Z,700nm,20.4s						
SMOL	Smolenice	147.06	328	ePKP2	PKPab	05 30 48.2	+0.1
SMOL	Smolenice	147.06	328	ePKP	PKPab	05 30 48.2	+0.1
NRDL	Niedersach Rie	147.07	339	ePKPbc	PKPbc	05 30 46.9	+0.6
FBE	Freiberg	147.15	334	ePKPbc	PKPbc	05 30 47.5	+0.9
EKA	Eskdalemuir Ar	147.24	354	PKPbc	PKPdf	05 30 45.0	+0.6
EKA	Eskdalemuir Ar	147.24	354	PKPbc	PKPdf	05 30 45.0	+0.6
	comp=Z,2.3nm,0.6s,baz=7.7,slow=2.9,SNR=7.1						
PKSG		147.30	325	⇓ePKPdf	PKPbc	05 30 47.6	+0.4
PRA	Prague	147.34	332	PKP	PKPbc	05 30 48.0	+0.8
PRU	Pruhonice	147.36	332	ePKP2	PKPbc	05 30 47.4	+0.1
PRU				MLR	MLR		
	comp=Z,700nm,23.3s						
PRU	Pruhonice	147.36	332	ePKP	PKPbc	05 30 47.4	+0.1
PRU				AMS	AMS	06 36 10.0	
	comp=Z,700nm,23.3s						
ZST	Bratislava	147.44	327	ePKIKP	PKPdf	05 30 45.3	+0.3
ZST	Bratislava	147.44	327	ePKP	PKPdf	05 30 45.3	+0.3
TREC	Trest	147.44	330	ePKP2	PKPbc	05 30 47.8	+0.2
TREC				MLR	MLR		
	comp=Z,600nm,24.5s						
TREC	Trest	147.44	330	ePKP	PKPbc	05 30 47.8	+0.2
TREC				AMS	AMS	06 40 00.0	
	comp=Z,600nm,24.5s						
CLZ	Clausthal	147.52	338	ePKPbc	PKPbc	05 30 48.5	+0.8
CLZ	Clausthal	147.52	338	ePKP2	PKPbc	05 30 48.5	+0.8
NEUB	Neuenburg	147.53	336	ePKPbc	PKPbc	05 30 48.4	+0.7
PKST	T˜'s	147.57	325	⇓ePKPdf	PKPbc	05 30 47.4	-0.6
PKS9	Tamasi	147.87	324	⇑ePKPdf	PKPbc	05 30 49.7	+0.9
TANN	Tannenbergstha	147.90	334	ePKPbc	PKPbc	05 30 49.4	+0.6
PKSM	Moragy	147.90	323	⇓PKP2	PKPbc	05 30 48.7	-0.1
PKSM	Moragy	147.90	323	⇓iP	PKPbc	05 30 48.7	-0.1
PKSM	Moragy	147.90	323	⇑ePbPb	PKPbc	05 30 48.8	-0.1
WERD	Werda	147.93	335	ePKPbc	PKPbc	05 30 49.5	+0.6
PLN	Plauen	147.96	335	ePKPbc	PKPbc	05 30 49.6	+0.7
IBBN	Ibbenburen	147.97	341	ePKPbc	PKPbc	05 30 49.3	+0.5
GUNZ	Gunzen	147.99	334	ePKPbc	PKPbc	05 30 49.8	+0.8
WERN	Wernitzgruen	148.03	334	ePKPbc	PKPbc	05 30 50.0	+0.9
NKC	Novy Kostel	148.05	334	ePKP2	PKPbc	05 30 49.3	+0.1
NKC				MLR	MLR		
	comp=Z,600nm,28.1s						
NKC	Novy Kostel	148.05	334	ePKP	PKPbc	05 30 49.3	+0.1
NKC				AMS	AMS	06 39 00.0	
	comp=Z,600nm,28.1s						
MOX	Moxa	148.05	336	ePKPbc	PKPbc	05 30 49.6	+0.5
MOX	Moxa	148.05	336	ePKP2	PKPbc	05 30 49.6	+0.5
CONA	Conrad Observa	148.23	328	⇑iPKPbc	PKPbc	05 30 49.4	-0.4
	comp=Z,36nm,1.1s,SNR=14						
MANZ	Manzenberg	148.38	334	ePKPbc	PKPbc	05 30 50.8	+0.8
KHC	Kasperske Hory	148.42	332	ePKIKP	PKPdf	05 30 47.6	+1.0
KHC	Kasperske Hory	148.42	332	ePKP	PKPbc	05 30 50.5	+0.3
KHC				epPKP	pPKPdf	05 30 58.5	-4.5
KHC				ex	x	05 31 11.5	
KHC				AMS	AMS	06 37 50.0	
	comp=Z,600nm,21.2s						
KHC	Kasperske Hory	148.42	332	ePKPdf	PKPdf	05 30 47.6	+1.0
UBBA	Unterbreizbach	148.50	337	ePKPbc	PKPbc	05 30 51.0	+0.9
ROTZ	Rotzenmuhle	148.51	334	ePKPbc	PKPbc	05 30 51.2	+0.8
GEC2	GERESS Array S	148.58	331	ePKPbc	PKPbc	05 30 51.1	+0.4
GEC2	GERESS Array S	148.58	331	ePKP2	PKPbc	05 30 51.1	+0.4
GERES	GERESS Array B	148.58	331	PKPbc	PKPbc	05 30 49.9	-0.8
GERES	GERESS Array B	148.58	331	PKPbc	PKPbc	05 30 49.9	-0.8
	comp=Z,12nm,0.9s,baz=52,slow=1.7,SNR=40						
WET	Wettzell	148.71	332	ePKPbc	PKPbc	05 30 51.8	+0.9
WET	Wettzell	148.71	332	ePKP2	PKPbc	05 30 51.8	+0.9
BEHE	Becsehely	148.74	325	⇑ePKPdf	PKPbc	05 30 51.6	+0.5
BUG	Bochum--Univer	148.88	341	ePKPbc	PKPbc	05 30 51.5	+0.3
GRF	Grafenberg Arr	148.96	335	ePKPbc	PKPbc	05 30 52.2	+0.7
GRF	Grafenberg Arr	148.96	335	ePKP2	PKPbc	05 30 52.2	+0.7
KOGS	Kog	149.03	326	i PKPbc	PKPbc	05 30 51.7	-0.1
MOA	Molln	149.05	329	⇑iPKPdf	PKPdf	05 30 46.5	-1.2
	comp=Z,27nm,1.6s,SNR=6.4						
PERS	Pernice	149.49	327	ePKPbc	PKPbc	05 30 52.6	-0.4
SOKA	Soboth	149.50	327	⇑iPKiKP	PKiKP	05 30 53.7	-0.5
	comp=Z,52nm,1.2s						
TNS	Taunus Mts	149.54	338	ePKPbc	PKPbc	05 30 53.6	+0.6
TNS	Taunus Mts	149.54	338	ePKP2	PKPbc	05 30 53.6	+0.6
RJOB	Jochberg	149.81	331	ePKPbc	PKPbc	05 30 53.9	+0.1
KBA	Koelnbreinsper	150.04	329	⇑ipPKPdf	PKPbc	05 30 52.6	-1.8
	comp=Z,49nm,1.0s,SNR=6.3						
LJU	Ljubljana	150.19	327	i PKPdf	PKPdf	05 30 49.7	+0.2
LJU				i PKPbc	PKPbc	05 30 54.8	+0.1
STU	Stuttgart	150.49	336	ePKPbc	PKPbc	05 30 55.8	+0.5
VOY	Vojsko	150.51	327	ePKPbc	PKPbc	05 30 54.1	-1.5
VOY				e		05 31 06.1	
VOY				e		05 31 08.3	
WTTA	Wattenberg	150.68	331	i PKPbc	PKPbc	05 30 55.9	-0.1
	comp=Z,77nm,1.5s,SNR=12						
WLF	Walferdange	150.78	340	ePKPbc	PKPbc	05 30 57.0	+1.1
LANF	Langenberg	150.82	338	PKP	PKPbc	05 30 56.8	+0.7
MOTA	Moosalm	150.85	332	⇑iPKPbc	PKPbc	05 30 56.0	-0.4
	comp=Z,60nm,1.3s						
BFO	Black Forest	151.18	336	ePKPbc	PKPbc	05 30 57.0	+0.1
BFO	Black Forest	151.18	336	ePKIKP	PKPbc	05 30 56.5	-0.5
BFO	Black Forest	151.18	336	ePKPbc	PKPbc	05 30 56.5	-0.5
FETA	Feichten	151.26	332	⇑isPKPdf	PKPbc	05 30 57.3	-0.1
	comp=Z,37nm,1.2s,SNR=9.5						
DAVA	Damuels	151.41	333	⇑isPKPdf	PKPbc	05 30 57.7	0.0
	comp=Z,27nm,1.4s						
ECH	Echery	151.70	338	PKP	PKPbc	05 30 57.7	-0.4
DAVOX	Davos/Dischmat	151.81	333	PKPbc	PKPbc	05 30 57.7	-1.0
DAVOX	Davos/Dischmat	151.81	333	PKPbc	PKPbc	05 30 57.7	-1.0
	comp=Z,16nm,0.7s,baz=90,slow=3.0,SNR=14						
MOF	Molkenrain	152.01	337	ePKIKP	PKPbc	05 30 56.6	-2.4
MOF	Molkenrain	152.01	337	eP	PKPbc	05 30 56.6	-2.4
MOF	Molkenrain	152.01	337	PKP	PKPbc	05 30 56.6	-2.4
BBS	Basel-Blauen	152.20	336	ePKIKP	PKPbc	05 30 56.0	-3.3
BBS	Basel-Blauen	152.20	336	eP	PKPbc	05 30 56.0	-3.3
TUE	Stuetta	152.28	333	ePKPbc	PKPbc	05 30 59.2	-0.5
DBIC	Dimbokro	163.59	193	PKP	PKPdf	05 31 07.8	+0.3
DBIC	Dimbokro	163.59	193	PKP	PKPdf	05 31 07.8	+0.3
	comp=Z,11nm,1.1s,baz=197,slow=4.0,SNR=3.5						
EBNR	Beni Rached	163.95	329	P	PKPab	05 32 02.0	+1.8
EANR	'Ain N'Sour	164.43	330	P	PKPab	05 32 00.0	-2.3
TOA0	Torodi Ar. Sit	166.34	227	ePKPdf	PKPdf	05 31 10.5	+0.7
TORD	Torodi Ar. Bea	166.34	227	PKP	PKPdf	05 31 09.1	-0.7
TORD				PKPab	PKPab	05 32 11.2	-0.1
TORD	Torodi Ar. Bea	166.34	227	PKP	PKPdf	05 31 09.1	-0.7
	comp=Z,6.9nm,1.0s,baz=122,slow=0.6,SNR=24						
TORD				PKPab	PKPab	05 32 11.2	-0.1
	comp=Z,4.2nm,0.8s,baz=122,slow=3.5,SNR=12						
TAM	Tamanrasset	167.02	273	ePKPab	PKPab	05 32 16.3	+1.8
	comp=Z,21nm,1.4s						

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*IDC **09** 05:26:54.4±0.6, 36°.04N×29°.08E, h0km, mb4.1/20, mb1 4.1/26, mb1mx4.1/33, mbtmp4.1/26, ML4.0/5, MS3.5/9, Ms1 3.5/9, ms1mx3.3/46, Error ellipse: s-maj=14.7km s-min=12.5km az=156.0*

*NEIC **09** 05:26:56.0, 35°.96N×29°.08E, h16km, mb4.7/31, ML4.4(ISK), After ISK.*

*PDA **09** 05:26:57.4, 35°.90N×29°.10E, h10km, mb4.4*

*ISK **09** 05:26:57.1, 36°.01N×29°.11E, h20km, ML4.5*

*ISCJB **09** 05:26:58.3±0.1, 35°.96N±0°.01×29°.16E±0°.01, h55km±2km, mb4.3/50, MS3.9/4, Error ellipse: s-maj=2.4km s-min=1.6km az=30.2*

*HLW **09** 05:26:58.3, 36°.03N×29°.11E, h31km±13km, Md4.4, Ml4.5*

*ATH **09** 05:26:58.9, 36°.14N×29°.13E, h43km±4km, MD4.4/45, ML4.3*

*DDA **09** 05:26:58.6, 36°.06N×29°.07E, h39km, ML4.4*

*NSSC **09** 05:26:58.0±1.8, 36°.14N×29°.43E, h0km±246km, ML4.0*

*CSEM **09** 05:26:59.2±0.1, 35°.98N×29°.14E, h30km, mb4.6/26, Ms3.3, Mw3.9, Error ellipse: s-maj=2.6km s-min=1.7km az=35.0*

*THE **09** 05:27:01.0, 36°.10N×29°.15E, h29km±30km, ML4.8/1, Error ellipse: s-maj=30.3km s-min=1.5km az=34.0*

*NIC **09** 05:27:02.5±0.2, 36°.13N×29°.48E, h55km, mb4.6, ML4.3, MW3.9*

ISC 09 05:26:59.4±0.6**, 35°.98N**±0°.03×**29°.16E**±0°.02**, h37**km±1km**, n688,** σ1§**36**/726**, mb4.3**/50**, MS3.6**/4**, 17C-12D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.38	64	eP	Pn	05 27 08.5	+0.3
AKAS	Kas	0.44	55	i P	Pn	05 27 09.2	0.0
AKAS				i S	Sn	05 27 17.1	+0.8
AKAS	Kas	0.44	55	i P	Pn	05 27 09.2	0.0
AKAS				i S	Sn	05 27 17.1	+0.8
FETY	Fethiye	0.65	355	PG	Pn	05 27 10.5	-1.8
FETY				eSG	Sn	05 27 18.9	-2.5
FETY	Fethiye	0.65	355	i Pg	Pn	05 27 10.5	-1.8
FETY				eSg	Sn	05 27 18.9	-2.5
ARG	Arkhangelos	0.87	286	P	Pn	05 27 15.1	0.0
ARG				S	Sn	05 27 26.8	+0.2
ARG	Arkhangelos	0.87	286	eP	Pn	05 27 15.1	0.0
ARG				eS	Sn	05 27 27.4	+0.8
ARG	Arkhangelos	0.87	286	eP	Pn	05 27 15.1	0.0
ARG				eS	Sn	05 27 27.4	+0.8
ELL	Elmali	0.97	38	ePG	Pn	05 27 16.9	+0.2
ELL				eSG	Sn	05 27 30.3	+0.9
ELL	Elmali	0.97	38	ePg	Pn	05 27 16.9	+0.2
ELL				eSg	Sn	05 27 30.3	+0.9
TURN	Turunc	0.99	333	i P	Pn	05 27 17.6	+0.8
TURN				i S	Sn	05 27 31.5	+1.9
TURN	Turunc	0.99	333	i P	Pn	05 27 17.6	+0.8
TURN				i S	Sn	05 27 31.5	+1.9
GLHS	Glhisar (BURDU	1.20	13	ePN	Pn	05 27 20.0	+0.2
GLHS	Glhisar (BURDU	1.20	13	ePn	Pn	05 27 20.0	+0.2
GOLH	Golhisar	1.29	14	i P	Pn	05 27 22.2	+1.1
GOLH				i S	Sn	05 27 38.7	+1.6
GOLH	Golhisar	1.29	14	i P	Pn	05 27 22.2	+1.1
GOLH				i S	Sn	05 27 38.7	+1.6
YER	Yerkesik	1.35	329	ePN	Pn	05 27 21.0	-0.8
YER	Yerkesik	1.35	329	ePn	Pn	05 27 21.0	-0.8
KORT	Korkueli	1.40	43	i P	Pn	05 27 24.2	+1.7
KORT				i S	Sn	05 27 43.6	+3.8
KORT	Korkueli	1.40	43	i P	Pn	05 27 24.2	+1.7
KORT				i S	Sn	05 27 43.6	+3.8
DAT	Datca	1.48	301	ePN	Pn	05 27 22.7	-0.9
DAT				eSN	Sn	05 27 41.4	-0.3
DAT	Datca	1.48	301	ePn	Pn	05 27 22.7	-0.9
DAT				eSn	Sn	05 27 41.4	-0.3
ANTB	Antalya	1.51	52	ePN	Pn	05 27 24.9	+0.9
ANTB	Antalya	1.51	52	ePn	Pn	05 27 24.9	+0.9
KARP	Karpathos	1.68	256	P	Pn	05 27 27.9	+1.6
KARP				S	Sn	05 27 47.9	+1.3
KARP	Karpathos	1.68	256	eP	Pn	05 27 28.0	+1.6
KARP				eS	Sn	05 27 48.7	+2.1
KARP	Karpathos	1.68	256	P	Pn	05 27 27.9	+1.6
KARP				eS	Sn	05 27 48.7	+2.1
DNZL	Cakiroluk	1.71	357	i Pn	Pn	05 27 27.0	+0.2
DNZL				i Sn	Sn	05 27 48.0	+0.6
NIS1	Nisyros Isl.	1.72	292	P	Pn	05 27 27.1	+0.3
NIS1	Nisyros Isl.	1.72	292	eP	Pn	05 27 27.1	+0.3
NIS1				eS	Sn	05 27 47.0	-0.4
NIS1	Nisyros Isl.	1.72	292	eP	Pn	05 27 27.1	+0.3
NIS1				eS	Sn	05 27 47.0	-0.4
MLSB	Milas	1.72	320	ePN	Pn	05 27 27.4	+0.7
MLSB	Milas	1.72	320	ePn	Pn	05 27 27.5	+0.7
DENT	Denizli	1.77	357	ePN	Pn	05 27 27.0	-0.6
DENT	Denizli	1.77	357	ePn	Pn	05 27 27.0	-0.6
BODT	Bodrum	1.84	306	ePN	Pn	05 27 28.1	-0.3
BODT	Bodrum	1.84	306	ePn	Pn	05 27 28.1	-0.3
BCK	Bucak	1.87	37	ePN	Pn	05 27 28.9	-0.1
BCK	Bucak	1.87	37	ePn	Pn	05 27 28.9	-0.1
AYDN	Tasoluk	1.96	329	i Pn	Pn	05 27 30.2	-0.1
AYDN				i Sn	Sn	05 27 53.0	-0.7
ISP	Isparta	2.14	30	ePN	Pn	05 27 33.0	+0.4
ISP	Isparta	2.14	30	ePn	Pn	05 27 33.0	+0.4
GCAM	G?zelcaml?	2.31	319	i Pn	Pn	05 27 34.9	0.0
GCAM				i Sn	Sn	05 27 59.8	-2.1
KHL	Karahalli	2.35	7	ePN	Pn	05 27 35.5	-0.1
KHL	Karahalli	2.35	7	ePn	Pn	05 27 35.5	-0.1
SMG	Samos	2.54	313	eP	Pn	05 27 37.6	-0.4
SMG				eS	Sn	05 28 05.9	-1.8
SMG	Samos	2.54	313	eP	Pn	05 27 37.6	-0.4
ZKR	Zakros	2.55	251	eP	Pn	05 27 40.4	+2.2
ZKR				eS	Sn	05 28 09.9	+1.9
ZKR	Zakros	2.55	251	eP	Pn	05 27 40.4	+2.2
ZKR				eS	Sn	05 28 09.9	+1.9
KULA	Kula-Manisa	2.56	351	ePN	Pn	05 27 37.8	-0.6
KULA	Kula-Manisa	2.56	351	ePn	Pn	05 27 37.8	-0.6
GAZI	Gazipasa	2.57	83	i P	Pn	05 27 38.9	+0.4
GAZI				i S	Sn	05 28 07.4	-1.1
GAZI	Gazipasa	2.57	83	i P	Pn	05 27 38.9	+0.4
GAZI				i S	Sn	05 28 07.4	-1.1
AKMC	Akamas	2.76	109	⇑P	Pn	05 27 42.0	+0.9
AKMC	Akamas	2.76	109	⇑P	Pn	05 27 42.0	+0.9
SHUT	Suhut-Afyon	2.80	23	ePN	Pn	05 27 41.9	+0.2
SHUT	Suhut-Afyon	2.80	23	ePn	Pn	05 27 41.9	+0.2
PPCY	Paphos	2.82	112	⇓P	Pn	05 27 43.3	+1.4
PPCY	Paphos	2.82	112	⇓P	Pn	05 27 43.3	+1.4
IZM	Izmir	2.85	328	ePN	Pn	05 27 41.8	-0.6
IZM	Izmir	2.85	328	ePn	Pn	05 27 41.8	-0.6
ALFC	Alevga	2.92	105	P	Pn	05 27 43.9	+0.5
	50nm,0.2s						
ALFC				S	Sn	05 28 17.0	-0.2
ALFC	Alevga	2.92	105	P	Pn	05 27 43.9	+0.5
	50nm,0.2s						
ALFC				S	Sn	05 28 17.0	-0.2
BLCB	Balcova	2.93	325	ePN	Pn	05 27 42.7	-0.8
BLCB	Balcova	2.93	325	ePn	Pn	05 27 42.7	-0.8
NPS	Neapolis	2.98	257	P	Pn	05 27 45.4	+1.3
NPS	Neapolis	2.98	257	eP	Pn	05 27 45.3	+1.2
NPS				eS	Sn	05 28 19.2	+0.6
NPS	Neapolis	2.98	257	P	Pn	05 27 45.4	+1.3
NPS				eS	Sn	05 28 19.2	+0.6
SANT	Santorini	3.02	278	P	Pn	05 27 45.2	+0.5
SANT	Santorini	3.02	278	eP	Pn	05 27 45.2	+0.5
SANT				eS	Sn	05 28 19.1	-0.5
SANT	Santorini	3.02	278	ePn	Pn	05 27 44.8	+0.1
SANT	Santorini	3.02	278	ePn	Pn	05 27 44.8	+0.1
SANT	Santorini	3.02	278	eP	Pn	05 27 45.2	+0.5
SANT				eS	Sn	05 28 19.1	-0.5
XRY	Khrisi	3.04	250	eP	Pn	05 27 46.7	+1.8
XRY	Khrisi	3.04	250	eP	Pn	05 27 46.7	+1.8
THR3	Thira Island,	3.07	279	P	Pn	05 27 46.3	+1.0
THR3	Thira Island,	3.07	279	P	Pn	05 27 46.3	+1.0
ERMK	Ermenek	3.10	77	i Pn	Pn	05 27 47.8	+1.8
ERMK				i Sn	Sn	05 28 25.7	+3.8
LAST	Lasithi	3.11	256	eP	Pn	05 27 47.5	+1.5
LAST				eS	Sn	05 28 23.0	+1.1
LAST	Lasithi	3.11	256	eP	Pn	05 27 47.5	+1.5
LAST				eS	Sn	05 28 23.0	+1.1
APE	Apeiranthos	3.12	291	ePN	Pn	05 27 46.5	+0.4
APE	Apeiranthos	3.12	291	P	Pn	05 27 46.4	+0.4
APE	Apeiranthos	3.12	291	eP	Pn	05 27 46.5	+0.4
APE				eS	Sn	05 28 21.8	-0.2
APE	Apeiranthos	3.12	291	eP	Pn	05 27 46.5	+0.4
APE				eS	Sn	05 28 21.8	-0.2
ALT	Altintas	3.16	14	ePN	Pn	05 27 47.1	+0.4
ALT	Altintas	3.16	14	ePn	Pn	05 27 47.1	+0.4
LEF	Lefka	3.16	105	ePN	Pn	05 27 47.1	+0.5
LEF	Lefka	3.16	105	ePn	Pn	05 27 47.1	+0.5
AKDN	Akdeniz- K˜–br	3.18	101	ePN	Pn	05 27 47.8	+1.0
AKDN	Akdeniz- K˜–br	3.18	101	ePn	Pn	05 27 47.8	+1.0
KONT	Konya--Tatoy	3.23	52	ePN	Pn	05 27 48.5	+1.0
KONT	Konya--Tatoy	3.23	52	ePn	Pn	05 27 48.5	+1.0
SZAC	Souni-Zanaja	3.28	111	P	Pn	05 27 49.8	+1.5
SZAC				S	Sn	05 28 26.6	+0.5
SZAC	Souni-Zanaja	3.28	111	P	Pn	05 27 49.8	+1.5
SZAC				S	Sn	05 28 26.6	+0.5
LADK	Ladik-KONYA	3.39	48	ePN	Pn	05 27 50.5	+0.7
LADK	Ladik-KONYA	3.39	48	ePn	Pn	05 27 50.5	+0.7
MAMC	Mammari	3.41	103	⇑P	Pn	05 27 51.0	+1.0
MAMC	Mammari	3.41	103	⇑P	Pn	05 27 51.0	+1.0
CHOS	Chios island	3.45	315	P	Pn	05 27 50.4	-0.2
CHOS	Chios island	3.45	315	eP	Pn	05 27 50.2	-0.4
CHOS				eS	Sn	05 28 27.5	-2.8
CHOS	Chios island	3.45	315	P	Pn	05 27 50.4	-0.2
TVSB	Tavsanli	3.47	4	ePN	Pn	05 27 50.7	-0.3
TVSB	Tavsanli	3.47	4	ePn	Pn	05 27 50.7	-0.3
CSS	Prodhromos	3.55	105	⇓P	Pn	05 27 53.2	+1.1
	17nm,0.5s						
CSS				S	Sn	05 28 32.4	-0.4
CSS	Prodhromos	3.55	105	ePN	Pn	05 27 53.1	+1.1
CSS	Prodhromos	3.55	105	P	Pn	05 27 53.6	+1.6
CSS	Prodhromos	3.55	105	Pn	Pn	05 27 53.1	+1.1
CSS				S	Sn	05 28 32.4	-0.4
CSS				Sn	Sn	05 28 33.0	+0.2
KIZT	Kizilcal	3.61	36	ePN	Pn	05 27 53.9	+1.0
KIZT	Kizilcal	3.61	36	ePn	Pn	05 27 53.9	+1.0
LFK	Lefkose	3.63	100	ePN	Pn	05 27 54.4	+1.3
LFK	Lefkose	3.63	100	ePn	Pn	05 27 54.4	+1.3
DST	Dursunbey	3.64	353	ePN	Pn	05 27 53.5	+0.2
DST	Dursunbey	3.64	353	ePn	Pn	05 27 53.5	+0.2
AKIN	Ak˜–nc˜–lar- K	3.64	104	ePN	Pn	05 27 54.5	+1.2
AKIN	Ak˜–nc˜–lar- K	3.64	104	ePn	Pn	05 27 54.5	+1.2
SIVA	Sivas	3.68	256	eP	Pn	05 27 56.1	+2.4
SIVA	Sivas	3.68	256	eP	Pn	05 27 56.1	+2.4
ESKT	Eskisehir	3.78	20	ePN	Pn	05 27 56.0	+0.8
ESKT	Eskisehir	3.78	20	ePn	Pn	05 27 56.0	+0.8
BALB	Balikesir	3.79	345	ePN	Pn	05 27 55.8	+0.6
BALB	Balikesir	3.79	345	ePn	Pn	05 27 55.8	+0.6
SVRH	Sivrihisar-ESK	3.93	28	ePN	Pn	05 27 58.1	+0.9
SVRH	Sivrihisar-ESK	3.93	28	ePn	Pn	05 27 58.2	+0.9
PRK	Paraskevi	3.98	326	P	Pn	05 27 57.8	-0.1
PRK	Paraskevi	3.98	326	eP	Pn	05 27 57.5	-0.4
PRK	Paraskevi	3.98	326	P	Pn	05 27 57.8	-0.1
VAM	Vamos	4.08	263	P	Pn	05 28 01.2	+2.0
VAM	Vamos	4.08	263	eP	Pn	05 28 01.4	+2.2
VAM	Vamos	4.08	263	P	Pn	05 28 01.2	+2.0
PHNC	Paralimni	4.09	102	P	Pn	05 28 03.0	+3.6
	20nm,0.7s						
PHNC				S	Sn	05 28 51.2	+5.1
PHNC	Paralimni	4.09	102	P	Pn	05 28 03.0	+3.6
	20nm,0.7s						
PHNC				S	Sn	05 28 51.2	+5.1
EREN	Erenkoy	4.10	95	ePN	Pn	05 28 01.1	+1.6
EREN	Erenkoy	4.10	95	ePn	Pn	05 28 01.1	+1.6
SULT	Sultanhani-AKS	4.13	56	ePN	Pn	05 28 01.4	+1.5
SULT	Sultanhani-AKS	4.13	56	ePn	Pn	05 28 01.4	+1.5
SIGR	SIGRI	4.16	322	P	Pn	05 27 59.8	-0.5
SIGR	SIGRI	4.16	322	P	Pn	05 27 59.8	-0.5
GONE	Gonen-Balikesi	4.22	344	ePN	Pn	05 28 01.9	+0.8
GONE	Gonen-Balikesi	4.22	344	ePn	Pn	05 28 01.9	+0.8
CAVI	Cavuskoy	4.25	7	ePN	Pn	05 28 01.9	+0.3
CAVI	Cavuskoy	4.25	7	ePn	Pn	05 28 01.9	+0.3
GVD	Gavdhos	4.30	256	eP	Pn	05 28 04.1	+1.9
GVD	Gavdhos	4.30	256	ePn	Pn	05 28 02.7	+0.5
GVD	Gavdhos	4.30	256	ePn	Pn	05 28 02.7	+0.5
GVD	Gavdhos	4.30	256	eP	Pn	05 28 04.1	+1.9
KCTX	Karacabey (Bur	4.32	352	ePN	Pn	05 28 03.5	+0.9
KCTX	Karacabey (Bur	4.32	352	ePn	Pn	05 28 03.5	+0.9
MDNY	Mudanya-Bursa	4.38	357	ePN	Pn	05 28 04.4	+1.0
MDNY	Mudanya-Bursa	4.38	357	ePn	Pn	05 28 04.4	+1.0
GPA	Golpazari	4.39	12	ePN	Pn	05 28 04.2	+0.6
GPA	Golpazari	4.39	12	ePn	Pn	05 28 04.2	+0.6
EZN	Ezine	4.44	331	ePN	Pn	05 28 05.0	+0.8
EZN	Ezine	4.44	331	ePn	Pn	05 28 05.0	+0.8
GEMT	Gemlik	4.45	0	ePN	Pn	05 28 04.9	+0.7
GEMT	Gemlik	4.45	0	ePn	Pn	05 28 04.9	+0.7
ADVT	Abdulvahap	4.47	6	ePN	Pn	05 28 05.2	+0.7
ADVT	Abdulvahap	4.47	6	ePn	Pn	05 28 05.3	+0.7
BNT	Bandirma	4.47	348	ePN	Pn	05 28 05.5	+0.9
BNT	Bandirma	4.47	348	ePn	Pn	05 28 05.5	+0.9
GULT	Gulveren	4.57	13	ePN	Pn	05 28 07.1	+1.1
GULT	Gulveren	4.57	13	ePn	Pn	05 28 07.1	+1.1
YLV	Yalova	4.58	2	ePN	Pn	05 28 07.2	+1.1
YLV	Yalova	4.58	2	ePn	Pn	05 28 07.2	+1.1
ARMT	Armutlu	4.58	357	ePN	Pn	05 28 07.2	+1.1
ARMT	Armutlu	4.58	357	ePn	Pn	05 28 07.2	+1.1
KRBG	Karabiga-Canak	4.64	342	ePN	Pn	05 28 07.7	+0.8
KRBG	Karabiga-Canak	4.64	342	ePn	Pn	05 28 07.7	+0.8
AFSR	Af¯ar-Bala (A	4.64	41	ePN	Pn	05 28 08.3	+1.2
AFSR	Af¯ar-Bala (A	4.64	41	ePn	Pn	05 28 08.3	+1.2
PTL	Penteli	4.71	298	eP	Pn	05 28 08.4	+0.5
PTL	Penteli	4.71	298	eP	Pn	05 28 08.4	+0.5
ANKY	Antikythira Is	4.75	270	eP	Pn	05 28 09.9	+1.4
ANKY	Antikythira Is	4.75	270	eP	Pn	05 28 09.9	+1.4
MDUB	Mudurnu	4.76	19	ePN	Pn	05 28 09.8	+1.1
MDUB	Mudurnu	4.76	19	ePn	Pn	05 28 09.8	+1.1
MRMT	Marmara Adasi	4.77	346	ePN	Pn	05 28 09.8	+0.9
MRMT	Marmara Adasi	4.77	346	ePn	Pn	05 28 09.8	+0.9
SPNC	Sapanca-Adapaz	4.78	11	ePN	Pn	05 28 10.0	+1.1
SPNC	Sapanca-Adapaz	4.78	11	ePn	Pn	05 28 10.0	+1.1
ATH	Athens Observa	4.79	296	eP	Pn	05 28 09.8	+0.9
ATH	Athens Observa	4.79	296	eP	Pn	05 28 09.8	+0.9
ANTO	Ankara	4.83	35	ePN	Pn	05 28 11.2	+1.6
ANTO	Ankara	4.83	35	ePn	Pn	05 28 11.2	+1.6
NIG	Nigde	4.85	62	ePN	Pn	05 28 11.5	+1.4
NIG	Nigde	4.85	62	ePn	Pn	05 28 11.5	+1.4
BUY	Buyukada	4.86	360	ePN	Pn	05 28 10.7	+0.7
BUY	Buyukada	4.86	360	ePn	Pn	05 28 10.7	+0.7
NAIG	Nisos Aigina	4.88	293	eP	Pn	05 28 10.9	+0.7

NAIG	Nisos Aigina	4.88	293	eP	Pn	05 28 10.9	+0.7
GELI	Tayfur-Gelibol	4.89	335	ePN	Pn	05 28 11.3	+1.0
GELI	Tayfur-Gelibol	4.89	335	ePn	Pn	05 28 11.3	+1.0
RKY	Sarkoy-Tekirda	4.95	342	ePN	Pn	05 28 12.2	+1.0
RKY	Sarkoy-Tekirda	4.95	342	ePn	Pn	05 28 12.2	+1.0
KYTH	Kithira	4.96	275	P	Pn	05 28 12.3	+0.9
KYTH	Kithira	4.96	275	eP	Pn	05 28 12.9	+1.5
KYTH	Kithira	4.96	275	eP	Pn	05 28 12.9	+1.5
DID	Didima	4.99	289	P	Pn	05 28 13.0	+1.2
DID	Didima	4.99	289	eP	Pn	05 28 12.9	+1.2
DID	Didima	4.99	289	P	Pn	05 28 13.0	+1.2
LIA	Limnos Island	5.01	322	eP	Pn	05 28 12.1	0.0
LIA	Limnos Island	5.01	322	eP	Pn	05 28 12.1	0.0
MFT	Murefte	5.02	343	ePN	Pn	05 28 12.3	+0.1
MFT	Murefte	5.02	343	ePn	Pn	05 28 12.3	+0.1
KRTS	Karatas	5.06	81	ePN	Pn	05 28 14.6	+2.0
KRTS	Karatas	5.06	81	ePn	Pn	05 28 14.6	+2.0
ISK	Istanbul-Kandi	5.08	359	ePN	Pn	05 28 14.2	+1.3
ISK	Istanbul-Kandi	5.08	359	ePn	Pn	05 28 14.2	+1.3
VLI	Veliai	5.08	280	P	Pn	05 28 14.5	+1.5
VLI	Veliai	5.08	280	eP	Pn	05 28 14.4	+1.5
VLI	Veliai	5.08	280	eP	Pn	05 28 14.4	+1.5
BRTR	Keskin Array B	5.15	42	Pn	Pn	05 28 14.6	+0.5
BRTR				Sn	Sn	05 29 10.3	-2.0
BRTR	Keskin Array B	5.15	42	Pn	Pn	05 28 14.6	+0.5
	1.3nm,0.3s,baz=211,slow=14,SNR=24						
BRTR				Sn	Sn	05 29 10.3	-2.0
	3.7nm,0.3s,baz=215,slow=17,SNR=9.0						
BRTR				LR	LR	05 30 23.6	
	comp=Z,222nm,18.4s,baz=312,slow=41						
BRTR	Keskin Array B	5.15	42	Pn	Pn	05 28 14.6	+0.5
BRTR				Sn	Sn	05 29 10.3	-2.0
HMAT	Matruh	5.17	200	AMP		05 29 00.0	
	comp=N,480µm,0.7s,logA/T=5.8,baz=200						
HMAT	Matruh	5.17	200	P	Pn	05 28 10.6	-3.7
SILT	Sile	5.18	4	ePN	Pn	05 28 15.3	+1.0
SILT	Sile	5.18	4	ePn	Pn	05 28 15.3	+1.0
BGKT	Bogazkoy	5.20	357	ePN	Pn	05 28 15.7	+1.1
BGKT	Bogazkoy	5.20	357	ePn	Pn	05 28 15.7	+1.1
AOS	Alonnisos	5.26	309	eP	Pn	05 28 16.3	+0.8
AOS	Alonnisos	5.26	309	eP	Pn	05 28 16.3	+0.8
KLYT	Kilyos	5.26	359	ePN	Pn	05 28 16.9	+1.4
KLYT	Kilyos	5.26	359	ePn	Pn	05 28 16.9	+1.4
CTKS	Kestanelik-??a	5.27	355	ePN	Pn	05 28 16.9	+1.3
CTKS	Kestanelik-??a	5.27	355	ePn	Pn	05 28 16.9	+1.3
SLVT	Silivri	5.29	352	ePN	Pn	05 28 17.2	+1.3
SLVT	Silivri	5.29	352	ePn	Pn	05 28 17.2	+1.3
ENEZ	Enez	5.30	334	ePN	Pn	05 28 17.0	+1.0
ENEZ	Enez	5.30	334	ePn	Pn	05 28 17.0	+1.0
SMTH	Samothraki Isl	5.31	329	eP	Pn	05 28 16.6	+0.4
SMTH	Samothraki Isl	5.31	329	eP	Pn	05 28 16.6	+0.4
LTK	Loutraki	5.36	294	eP	Pn	05 28 18.5	+1.7
LTK	Loutraki	5.36	294	eP	Pn	05 28 18.5	+1.7
HBRG	Burj al ‘Arab	5.42	174	P	Pn	05 28 18.6	+0.9
	baz=173						
HBRG	Burj al ‘Arab	5.42	174	P	Pn	05 28 18.6	+0.9
ALN	Alexandroupoli	5.48	334	eP	Pn	05 28 18.3	-0.2
ALN	Alexandroupoli	5.48	334	eP	Pn	05 28 18.3	-0.2
CTYL	Yal??k??y-??at	5.53	353	ePN	Pn	05 28 20.6	+1.5
CTYL	Yal??k??y-??at	5.53	353	ePn	Pn	05 28 20.6	+1.5
SKIA	Skiathos	5.53	307	P	Pn	05 28 19.9	+0.8
SKIA	Skiathos	5.53	307	P	Pn	05 28 19.9	+0.8
SLUM		5.56	217	P	Pn	05 28 19.7	+0.2
	baz=217						
SLUM				S	Sn	05 29 17.1	-5.1
	baz=217						
SLUM		5.56	217	P	Pn	05 28 19.7	+0.2
DYR	Agios Nikonas	5.56	280	eP	Pn	05 28 21.2	+1.6
DYR	Agios Nikonas	5.56	280	eP	Pn	05 28 21.2	+1.6
LKR	Lokris	5.58	300	eP	Pn	05 28 21.3	+1.4
LKR	Lokris	5.58	300	eP	Pn	05 28 21.3	+1.4
KDZE	Karadeniz Ereo	5.61	18	ePN	Pn	05 28 22.1	+1.8
KDZE	Karadeniz Ereo	5.61	18	ePn	Pn	05 28 22.1	+1.8
VLX	Vlachokerasia	5.62	286	eP	Pn	05 28 21.9	+1.4
VLX	Vlachokerasia	5.62	286	eP	Pn	05 28 21.9	+1.4
BHL	Bhannes	5.72	109	eP	Pn	05 28 20.9	-1.0
BHL	Bhannes	5.72	109	eP	Pn	05 28 20.9	-1.0
HNTI	Hanita	5.75	118	Pn	Pn	05 28 23.1	+1.0
NEO	Neokhori	5.76	307	eP	Pn	05 28 22.6	+0.2
NEO	Neokhori	5.76	307	eP	Pn	05 28 22.6	+0.2
GUR	Goura	5.80	292	eP	Pn	05 28 24.7	+1.8
GUR	Goura	5.80	292	eP	Pn	05 28 24.7	+1.8
CANT	Cankiri	5.80	36	ePN	Pn	05 28 24.8	+1.9
HWQ	Hawqa	5.82	105	eP	Pn	05 28 24.0	+0.8
HWQ	Hawqa	5.82	105	eP	Pn	05 28 24.0	+0.8
LTBQ	Tobruq	5.85	229	i P	Pn	05 28 24.9	+1.3
	SNR=23						
OFRI	‘Ofer	5.87	123	Pn	Pn	05 28 25.0	+1.1
WRDH	Warideh	5.92	92⇑	eP	Pn	05 28 23.9	-0.6
WRDH				eS	Sn	05 29 28.7	-2.4
WRDH				AML	AML	05 29 34.1	
	comp=N,158nm,0.6s						
WRDH				AML	AML	05 29 38.7	
	comp=E,144nm,0.5s						
WRDH				AML	AML	05 29 44.7	
	comp=Z,72nm,0.8s						
WRDH	Warideh	5.92	92	eP	Pn	05 28 25.0	+0.5
WRDH	Warideh	5.92	92	eP	Pn	05 28 25.0	+0.5
	SNR=45						
WRDH				eS	Sn	05 29 28.7	-2.4
	comp=Z,72nm,0.8s,SNR=40						
BIDA	Albida	5.92	97⇑	eP	Pn	05 28 24.9	+0.2
BIDA				eS	Sn	05 29 26.6	-4.7
BIDA				AML	AML	05 29 32.5	
	comp=N,402nm,0.8s						
BIDA				AML	AML	05 29 32.8	
	comp=Z,528nm,0.7s						
BIDA				AML	AML	05 29 33.8	
	comp=E,847nm,0.7s						
BIDA	Albida	5.92	97	eP	Pn	05 28 24.9	+0.2
BIDA				eP		05 28 25.4	
BIDA				eS	Sn	05 29 27.6	-3.7
BIDA				AML	AML	05 29 32.5	
	comp=N,402nm,0.8s						
BIDA				AML	AML	05 29 33.8	
	comp=E,847nm,0.7s						
BIDA	Albida	5.92	97	eP	Pn	05 28 24.9	+0.2
	SNR=45						
SAFT	Safranbolu	5.93	27	ePN	Pn	05 28 26.7	+2.0
SAFT	Safranbolu	5.93	27	ePn	Pn	05 28 26.7	+2.0
MMC7	Mount Meron ar	5.93	118	Pn	Pn	05 28 25.2	+0.4
ITM	Ithomi	5.94	284	eP	Pn	05 28 27.1	+2.3
ITM	Ithomi	5.94	284	eP	Pn	05 28 27.1	+2.3
MMA0	Mount Meron ar	5.94	118	Pn	Pn	05 28 25.3	+0.4
MMAI	Mount Meron Ar	5.94	118	Pn	Pn	05 28 25.3	+0.4
MMAI				Sn	Sn	05 29 29.3	-2.5
MMAI	Mount Meron Ar	5.94	118	Pn	Pn	05 28 25.3	+0.4
	comp=E,63nm,0.3s,baz=306,slow=12,SNR=98						
MMAI				Sn	Sn	05 29 29.3	-2.5
	comp=E,134nm,0.3s,baz=306,slow=28,SNR=22						
MMAI	Mount Meron Ar	5.94	118	Pn	Pn	05 28 25.3	+0.4
KLV	Kalavryta, Ach	5.97	292	eP	Pn	05 28 26.7	+1.4
KLV	Kalavryta, Ach	5.97	292	eP	Pn	05 28 26.7	+1.4
RCY	Rachaya	6.03	112	eP	Pn	05 28 26.5	+0.3
RCY	Rachaya	6.03	112	eP	Pn	05 28 26.5	+0.3
KSDI	Kefar Szold	6.04	116	Pn	Pn	05 28 26.9	+0.7
KSDI				Sn	Sn	05 29 32.3	-1.7
PYL	PYLOS	6.05	281	eP	Pn	05 28 27.9	+1.6
PYL	PYLOS	6.05	281	eP	Pn	05 28 27.9	+1.6
KALE	Kalithea	6.10	295	eP	Pn	05 28 28.6	+1.6
KALE	Kalithea	6.10	295	eP	Pn	05 28 28.6	+1.6
HAWK	Haweek	6.11	102⇑	eP	Pn	05 28 27.7	+0.5
HAWK				eS	Sn	05 29 31.9	-3.9
HAWK				AML	AML	05 29 35.5	
	comp=N,335nm,0.4s						
HAWK				AML	AML	05 29 36.0	
	comp=E,179nm,0.4s						
HAWK				AML	AML	05 29 36.2	
	comp=Z,316nm,0.6s						
HAWK	Haweek	6.11	102	eP	Pn	05 28 27.6	+0.4
HAWK				eS	Sn	05 29 31.9	-3.9
HAWK				AML	AML	05 29 35.1	
	comp=N,344nm,0.8s						
HAWK				AML	AML	05 29 35.9	
	comp=E,179nm,0.4s						
HAWK	Haweek	6.11	102⇑	eP	Pn	05 28 27.7	+0.5
	SNR=45						
SLTI	Sal’it	6.14	126	Pn	Pn	05 28 28.3	+0.7
LAKA	Lakka	6.16	294	eP	Pn	05 28 29.2	+1.3
LAKA	Lakka	6.16	294	eP	Pn	05 28 29.2	+1.3
AMT	Artemida-Makis	6.18	287	eP	Pn	05 28 29.7	+1.6
AMT	Artemida-Makis	6.18	287	eP	Pn	05 28 29.7	+1.6
FKH	Fakeheh	6.19	104	eP	Pn	05 28 28.8	+0.4
FKH	Fakeheh	6.19	104	eP	Pn	05 28 28.8	+0.4
AGG	Agios Georgios	6.22	301	eP	Pn	05 28 30.0	+1.4
AGG	Agios Georgios	6.22	301	eP	Pn	05 28 30.0	+1.4
KSHT	Keshet	6.25	117	Pn	Pn	05 28 30.5	+1.3
PSA1	Psathopyrgos	6.26	294	eP	Pn	05 28 30.6	+1.4
KFRA	Kufra	6.27	95	eP	Pn	05 28 28.6	-0.8
KFRA	Kufra	6.27	95	eP	Pn	05 28 28.6	-0.8
	SNR=45						
MMLI	Mount Malkishu	6.28	122	Pn	Pn	05 28 30.2	+0.7
EFP	Efpalio	6.28	295	eP	Pn	05 28 31.1	+1.6
EFP	Efpalio	6.28	295	eP	Pn	05 28 31.1	+1.6
RSH		6.29	141	P	Pn	05 28 30.2	+0.5
	baz=141						
RSH		6.29	141	P	Pn	05 28 30.2	+0.5
AMAG	Maghara	6.31	146	P	Pn	05 28 30.0	+0.1
	baz=146						
AMAG	Maghara	6.31	146	P	Pn	05 28 30.0	+0.1
SQR		6.32	164	P	Pn	05 28 30.5	+0.5
	baz=163						
SQR		6.32	164	P	Pn	05 28 30.5	+0.5
HMYD	Mayadein	6.32	167	P	Pn	05 28 30.9	+0.8
	baz=166						
HMYD	Mayadein	6.32	167	P	Pn	05 28 30.9	+0.8
QASN	Qassioun	6.35	111	eP	Pn	05 28 30.1	-0.3
QASN				eS	Sn	05 29 37.2	-4.5
QASN				AML	AML	05 29 42.1	
	comp=E,428nm,0.6s						
QASN				AML	AML	05 29 42.7	
	comp=Z,923nm,0.6s						
QASN				AML	AML	05 29 46.5	
	comp=N,1µm,0.6s						
QASN	Qassioun	6.35	111	eP	Pn	05 28 31.0	+0.5
QASN				AML	AML	05 29 42.1	
	comp=E,428nm,0.6s						
QASN				AML	AML	05 29 42.7	
	comp=Z,923nm,0.6s						
QASN				AML	AML	05 29 46.5	
	comp=N,1µm,0.6s						
QASN	Qassioun	6.35	111	eP	Pn	05 28 31.0	+0.5
	SNR=45						
KDZ	Kurdzhali	6.37	334	i P	Pn	05 28 31.6	+0.9
KDZ	Kurdzhali	6.37	334	i P	Pn	05 28 31.6	+0.9
KOT	Kottamia	6.44	159	P	Pn	05 28 32.5	+0.8
	baz=158						
KOT	Kottamia	6.44	159	P	Pn	05 28 32.6	+0.8
HNAT	Natroun	6.45	169	P	Pn	05 28 32.3	+0.5
	baz=168						
HNAT	Natroun	6.45	169	P	Pn	05 28 32.3	+0.5
HMDT	Nahal Hemdat	6.46	123	Pn	Pn	05 28 32.7	+0.8
HMDT				Sn	Sn	05 29 42.1	-2.2
FYM	Al Fayyum	6.47	165	P	Pn	05 28 32.8	+0.7
	baz=165						
FYM	Al Fayyum	6.47	165	P	Pn	05 28 32.8	+0.7
AYT	Al ‘Ayyat	6.48	164	P	Pn	05 28 33.2	+1.0
	baz=164						
AYT	Al ‘Ayyat	6.48	164	P	Pn	05 28 33.2	+1.0
HHAG	Hagoal	6.50	157	P	Pn	05 28 33.2	+0.7
	baz=156						
HHAG	Hagoal	6.50	157	P	Pn	05 28 33.2	+0.7
TCHB	Talchebab	6.53	118	eP	Pn	05 28 34.1	+1.1
TCHB				eS	Sn	05 29 45.0	-1.2
TCHB				AML	AML	05 29 49.4	
	comp=N,747nm,0.7s						
TCHB				AML	AML	05 29 56.2	
	comp=Z,652nm,0.6s						
TCHB				AML	AML	05 30 12.8	
	comp=E,209nm,0.7s						
TCHB	Talchebab	6.53	118	eP	Pn	05 28 34.4	+1.4
TCHB				eS	Sn	05 29 43.6	-2.6
TCHB				AML	AML	05 29 49.4	
	comp=N,747nm,0.7s						
TCHB				AML	AML	05 29 56.1	
	comp=Z,652nm,0.6s						
TCHB	Talchebab	6.53	118	eP	Pn	05 28 34.1	+1.1
	SNR=45						
TCHB				eS	Sn	05 29 45.0	-1.2
	comp=Z,209nm,0.7s,SNR=40						
TOTH	TOTAH	6.54	111	eP	Pn	05 28 34.5	+1.5
TOTH				eS	Sn	05 29 43.9	-2.4
TOTH				AML	AML	05 29 46.8	
	comp=E,332nm,0.7s						
TOTH				AML	AML	05 29 46.9	
	comp=N,326nm,0.7s						
TOTH				AML	AML	05 29 49.7	
	comp=Z,132nm,0.5s						
TOTH	TOTAH	6.54	111	eP	Pn	05 28 34.5	+1.5
	SNR=45						
TOTH				eS	Sn	05 29 43.9	-2.4
	comp=Z,132nm,0.5s,SNR=40						
EVR	Evrytania	6.54	299	eP	Pn	05 28 34.7	+1.6
EVR	Evrytania	6.54	299	eP	Pn	05 28 34.7	+1.6
HSAF	As Saff	6.66	162	P	Pn	05 28 35.2	+0.5
	baz=161						
HSAF	As Saff	6.66	162	P	Pn	05 28 35.2	+0.5
RZN	Rozhen	6.67	330	i P	Pn	05 28 34.6	-0.3
RZN	Rozhen	6.67	330	i P	Pn	05 28 34.6	-0.3
KZIT	Kziot	6.69	138	Pn	Pn	05 28 35.6	+0.5
THL	Klokotos Trika	6.69	304	eP	Pn	05 28 35.5	+0.4
THL	Klokotos Trika	6.69	304	eP	Pn	05 28 35.5	+0.4
GLL	Jalalah	6.74	161	P	Pn	05 28 36.8	+1.0
	baz=160						
GLL	Jalalah	6.74	161	P	Pn	05 28 36.8	+1.0
RTMI	Retamim	6.74	135	Pn	Pn	05 28 36.2	+0.3
YTIR	Yattir	6.77	131	Pn	Pn	05 28 37.1	+0.8
DSI	Dead Sea	6.80	129	Pn	Pn	05 28 36.7	+0.1
SUZ		6.86	152	P	Pn	05 28 38.2	+0.8
	baz=152						
SUZ		6.86	152	P	Pn	05 28 38.2	+0.8
ROOS	tl_alroos	6.91	103	eP	Pn	05 28 39.1	+0.9
ROOS				eP		05 28 39.7	
ROOS				eS	Sn	05 29 50.8	-4.7
ROOS				eS		05 29 51.4	
ROOS	tl_alroos	6.91	103	eP	Pn	05 28 40.3	+2.1
ROOS	tl_alroos	6.91	103	eP	Pn	05 28 39.1	+0.9
	SNR=45						
MZDA	Masada	6.96	130	Pn	Pn	05 28 39.3	+0.5
MMB	Musomiste	7.02	324	i P	Pn	05 28 40.1	+0.4
MMB	Musomiste	7.02	324	i P	Pn	05 28 40.1	+0.4
SALA	Sala	7.06	115	eP	Pn	05 28 42.2	+1.8
SALA				eS	Sn	05 29 58.7	-0.8
SALA				AML	AML	05 30 02.6	
	comp=Z,267nm,0.6s						
SALA				AML	AML	05 30 03.2	
	comp=N,238nm,0.7s						
SALA				AML	AML	05 30 03.9	
	comp=E,28nm,0.5s						
SALA				AML	AML	05 30 04.6	
	comp=Z,227nm,0.6s						
SALA	Sala	7.06	115	eP	Pn	05 28 42.2	+1.8
	SNR=45						
SALA				eS	Sn	05 29 58.7	-0.8
	comp=Z,227nm,0.6s,SNR=40						
RMNI	Mount Ramon	7.13	137	Pn	Pn	05 28 41.6	+0.4
VLS	Valsamata	7.19	290	eP	Pn	05 28 43.7	+1.7
VLS	Valsamata	7.19	290	eP	Pn	05 28 43.7	+1.7
HNKL	Nakhl	7.27	145	P	Pn	05 28 43.1	0.0
	baz=144						
HNKL	Nakhl	7.27	145	P	Pn	05 28 43.1	0.0
ZFRI	Zfri	7.39	135	Pn	Pn	05 28 44.4	-0.4
SWA2		7.41	206	P	Pn	05 28 44.9	-0.1
	baz=206						
SWA2		7.41	206	P	Pn	05 28 44.9	-0.1
ZALF	Zalf	7.41	112	eP	Pn	05 28 46.0	+1.0
ZALF				eS	Sn	05 30 04.8	-3.1
ZALF				AML	AML	05 30 16.4	
	comp=N,79nm,0.6s						
ZALF				AML	AML	05 30 23.3	
	comp=E,136nm,0.8s						
ZALF				AML	AML	05 30 32.2	
	comp=Z,74nm,0.6s						
ZALF	Zalf	7.41	112	eP	Pn	05 28 46.4	+1.4
ZALF				AML	AML	05 30 16.4	
	comp=N,79nm,0.6s						
ZALF				AML	AML	05 30 23.2	
	comp=E,136nm,0.8s						
ZALF	Zalf	7.41	112	eP	Pn	05 28 46.0	+1.0
	SNR=45						
PRNI	Paran	7.45	137	Pn	Pn	05 28 45.4	-0.2
ASF	Jabal al Asfar	7.46	118	Pn	Pn	05 28 47.0	+1.2
ASF				Sn	Sn	05 30 08.3	-0.8
ASF	Jabal al Asfar	7.46	118	Pn	Pn	05 28 47.0	+1.2
	comp=E,3.5nm,0.3s,baz=175,slow=4.7,SNR=19						
ASF				Sn	Sn	05 30 08.3	-0.8
	comp=E,4.5nm,0.3s,baz=156,slow=20,SNR=7.8						
ASF				LR	LR	05 32 06.7	
	comp=E,136nm,21.7s,baz=175,slow=41						
KRMI	Paran Flat	7.48	140	Pn	Pn	05 28 46.0	-0.1
JAN	Janina	7.53	302	eP	Pn	05 28 47.6	+1.0
JAN	Janina	7.53	302	eP	Pn	05 28 47.6	+1.0
KKB	Krupnik	7.54	323	i P	Pn	05 28 48.1	+1.3
KKB	Krupnik	7.54	323	i P	Pn	05 28 48.1	+1.3
AWBH		7.64	182	P	Pn	05 28 48.3	+0.1
	baz=182						
AWBH		7.64	182	P	Pn	05 28 48.3	+0.1
HRFI	Mount Harif	7.71	139	Pn	Pn	05 28 49.4	+0.2
FNA	Florina	7.77	310	eP	Pn	05 28 51.2	+1.3
FNA	Florina	7.77	310	eP	Pn	05 28 51.2	+1.3
MBRI	Mt Berech	7.84	140	Pn	Pn	05 28 51.1	+0.1
EIL	Elat	7.96	141	Pn	Pn	05 28 52.8	+0.2
EIL				Sn	Sn	05 30 16.4	-4.9
EIL	Elat	7.96	141	Pn	Pn	05 28 52.8	+0.2
	comp=E,11nm,0.3s,baz=326,slow=11,SNR=31						
EIL				Sn	Sn	05 30 16.4	-4.9
	comp=E,18nm,0.3s,baz=61,slow=19,SNR=8.5						
EIL				LR	LR	05 32 53.8	
	comp=E,151nm,19.5s,baz=78,slow=45						
EIL	Elat	7.96	141	Pn	Pn	05 28 52.8	+0.2
KBN	Korca	8.05	308	ePN	Pn	05 28 55.7	+1.9
KBN				i SN	Sn	05 29 57.7	-26
KBN	Korca	8.05	308	ePG	Pn	05 28 57.0	+3.2
KBN				i SG		05 29 09.3	
KBN	Korca	8.05	308	ePn	Pn	05 28 55.7	+1.9
KBN	Korca	8.05	308	ePg	Pn	05 28 57.0	+3.2
VTS	Vitosha	8.05	327	i P	Pn	05 28 55.9	+2.0
VTS	Vitosha	8.05	327⇓	iP	Pn	05 28 54.2	+0.3
VTS	Vitosha	8.05	327⇓	iP	Pn	05 28 54.2	+0.3
MNKR	ALMNKUR	8.20	87	eP	Pn	05 28 56.0	+0.2
MNKR	ALMNKUR	8.20	87	eP	Pn	05 28 56.0	+0.2
	SNR=45						
SRN	Sarande	8.21	301	ePN	Pn	05 28 58.5	+2.5
SRN				i SN	Sn	05 30 07.2	-20
SRN	Sarande	8.21	301	ePn	Pn	05 28 58.5	+2.5
KEK	Kerkira	8.29	299	eP	Pn	05 28 58.8	+1.8
KEK	Kerkira	8.29	299	eP	Pn	05 28 58.8	+1.8
TIRR	Tirgusor	8.48	356⇑	iP	Pn	05 28 59.3	-0.4
TIRR	Tirgusor	8.48	356⇑	iP	Pn	05 28 59.3	-0.4
HKAT	Jabal Katrina	8.49	150	P	Pn	05 29 00.1	+0.1
	baz=149						
HKAT	Jabal Katrina	8.49	150	P	Pn	05 29 00.1	+0.1
HFRF	Wahat Farafira	8.84	185	P	Pn	05 29 05.0	+0.4
	baz=185						
HFRF	Wahat Farafira	8.84	185	P	Pn	05 29 05.0	+0.4
PHP	Peshkopia	8.87	313	ePN	Pn	05 29 08.6	+3.6
PHP	Peshkopia	8.87	313	ePn	Pn	05 29 08.6	+3.6
LJBD	Adjabya	9.03	239	i P	Pn	05 29 06.7	-0.5
	SNR=22						
TLCR		9.20	358⇑	iP	Pn	05 29 14.0	+4.6
CFR	Carcaliu	9.22	355⇑	iP	Pn	05 29 12.5	+2.8
CFR	Carcaliu	9.22	355⇑	iP	Pn	05 29 12.5	+2.8
PUK	Puka	9.41	313	ePN	Pn	05 29 19.4	+7.0
BCI	Bajram Curri	9.51	315	ePN	Pn	05 29 25.3	+12
HHRG	Al Ghardaqah	9.51	156	P	Pn	05 29 15.3	+1.5
	baz=155						
HHRG	Al Ghardaqah	9.51	156	P	Pn	05 29 15.3	+1.5
MLR	Muntele Rosu	9.80	347	Pn	Pn	05 29 21.0	+3.1
MLR	Muntele Rosu	9.80	347	Pn	Pn	05 29 21.0	+3.1
	comp=E,0.2nm,0.3s,baz=150,slow=8.1,SNR=13						
MLR	Muntele Rosu	9.80	347	Pn	Pn	05 29 21.0	+3.1
VOIR		9.94	343⇓	iP	Pn	05 29 28.9	+9.1
PLOR	Plostina	10.04	350⇓	iP	Pn	05 29 26.6	+5.6
VRI	Vrincioaia	10.04	350⇑	iP	Pn	05 29 22.4	+1.4
VRI	Vrincioaia	10.04	350⇑	iP	Pn	05 29 22.4	+1.4
GRUS	Gruza	10.21	323	eP	Pn	05 29 25.3	+2.0
TIP	Timpagrande	10.35	292	ePn	Pn	05 29 23.6	-1.7
	comp=E,52nm,0.4s						
TIP				eSn	Sn	05 31 12.8	-7.1
TESR	Tescani	10.69	351⇑	iP	Pn	05 29 38.7	+8.9
DIVS	Divibare	10.72	322	eP	Pn	05 29 32.2	+1.8
CEL	Celeste	10.83	286	ePn	Pn	05 29 30.1	-1.8
	comp=E,53nm,0.3s						
CEL				eSn	Sn	05 31 28.7	-3.2
KIS	Kishinev	11.01	359	eP	Pn	05 29 44.0	+10
KIS				LRM	MLR	05 34 48.0	
	comp=E,500nm,16.0s						
STON	Ston	11.21	311	ePn	Pn	05 29 39.6	+2.5
STON				Sn	Sn	05 31 42.5	+1.6
STON	Ston	11.21	311	ePn	Pn	05 29 39.5	+2.5
STON				Sn	Sn	05 31 42.5	+1.6
CUC	Castrocucco	11.26	295	ePn	Pn	05 29 37.4	-0.4
	comp=E,167nm,0.7s						
CUC				eSn	Sn	05 31 38.8	-3.5
CUC	Castrocucco	11.26	295	ePn	Pn	05 29 37.4	-0.4
	comp=E,167nm,0.7s						
WDD	Wield Dalam	11.87	274	ePn	Pn	05 29 43.3	-2.7
	comp=E,80nm,0.4s						
BURAR	Bucovina Array	11.99	347⇓	iP	Pn	05 29 51.6	+3.9
CHVG	Ch’k’valeri	12.05	52	P	P	05 30 13.1	+12
AKH	Akhalkalaki	12.44	60	P	P	05 30 07.3	+2.0
BHD	Baghdad	12.83	98	eP	P	05 30 06.3	-3.1
BHD				eS	S	05 32 36.7	-9.0
LKFR	Kufra	12.85	205	i P	Pn	05 29 58.6	-1.0
	SNR=22						
ONI	Oni	12.88	55	P	P	05 30 09.5	-0.6
GNI	Garni	12.96	67	LR	LR	05 36 11.4	
	comp=E,262nm,19.2s,baz=274,slow=43						
KBZ	Khabaz	13.07	50	Pn	P	05 30 07.5	-4.6
KBZ	Khabaz	13.07	50	Pn	P	05 30 07.5	-4.6
	comp=E,0.1nm,0.3s,baz=257,slow=7.0,SNR=2.4						
GOR	Gori	13.08	58	P	Pn	05 30 05.9	+3.4
KZR	Kazreti	13.08	61	P	P	05 30 08.7	-3.6
TBLG	Delisi	13.42	60	P	P	05 30 17.1	+1.0
GUDG	Gudauri	13.52	57	P	P	05 30 18.9	+1.6
DUS	Dusheti	13.53	59	P	P	05 30 22.7	+5.4
PSZ	Piszkesteto	13.76	333	ePn	Pn	05 30 10.2	-1.6
	comp=E,106nm,1.5s						
DGRG	David-gareji	13.78	62	P	P	05 30 18.1	-2.0
NVLJ	Novalja	13.86	313	ePn	Pn	05 30 14.1	+1.0
NVLJ	Novalja	13.86	313	ePn	Pn	05 30 14.1	+1.0
IBDR	Badra	14.12	97	eP	Pn	05 30 17.4	+0.6
IBDR				eS	Sn	05 32 52.7	+0.6
BOJS	Bojanci	14.18	316	ePn	P	05 30 20.8	-3.6
BOJS	Bojanci	14.18	316	Pn	P	05 30 20.8	-3.6
KWP	Kalwaria Pacla	14.43	343⇓	iP	P	05 30 28.7	+1.5
KWP	Kalwaria Pacla	14.43	343⇓	iP	P	05 30 28.7	+1.5
GBRS	Gornja Briga	14.45	316	ePn	Pn	05 30 23.5	+2.3
AKASG	Malin Array Be	14.71	0	Pn	Pn	05 30 24.2	-0.5
AKASG	Malin Array Be	14.71	0	Pn	Pn	05 30 24.2	-0.5
	comp=E,0.4nm,0.3s,baz=185,slow=9.3,SNR=2.9						
AKASG	Malin Array Be	14.71	0	Pn	Pn	05 30 24.2	-0.5
VOY	Vojsko	15.26	316	ePn	Pn	05 30 32.9	+0.8
VOY				e		05 30 37.7	
VOY	Vojsko	15.26	316	ePn	Pn	05 30 32.9	+0.8
KEST	Kesra	16.07	275	Pn	Pn	05 30 41.7	-0.9
KEST	Kesra	16.07	275	Pn	Pn	05 30 41.7	-0.9
	comp=E,0.4nm,0.3s,baz=60,slow=3.7,SNR=9.0						
KEST	Kesra	16.07	275	Pn	Pn	05 30 41.7	-0.9
MORC	Moravsky Berou	16.18	332⇑	iP	Pn	05 30 44.1	+0.3
VRAC	Vranov	16.18	329⇓	iP	P	05 30 47.0	+0.4
VRAC	Vranov	16.18	329	ePKIKP	P	05 30 45.6	-1.0
VRAC	Vranov	16.18	329⇓	iP	P	05 30 47.0	+0.4
MIB	Mutribah	16.46	107	eP	Pn	05 30 47.9	+0.5
MIB				AMb	AMB	05 30 59.6	
	comp=Z,34nm,0.8s						
MIB	Mutribah	16.46	107	eP	Pn	05 30 47.9	+0.5
	comp=Z,34nm,0.8s						
NAY	Al-Naaiem	16.64	109	eP	Pn	05 30 49.7	0.0
NAY				AMb	AMB	05 31 01.5	
	comp=Z,22nm,1.0s						
NAY	Al-Naaiem	16.64	109	eP	Pn	05 30 49.7	0.0
	comp=Z,22nm,1.0s						
TREC	Trest	16.64	327	AMS	AMS	05 37 40.0	
	comp=Z,200nm,19.2s						
PGF	Pioggiola	16.91	299	eP	Pn	05 30 52.1	-1.2
	comp=Z,58nm,1.2s						
PGF	Pioggiola	16.91	299	eP	Pn	05 30 52.1	-1.2
	comp=Z,58nm,1.2s						
RDF	Al-Radifah	17.03	109	eP	Pn	05 30 54.5	-0.1
RDF	Al-Radifah	17.03	109	eP	Pn	05 30 54.5	-0.1
GERES	GERESS Array B	17.15	323	LR	LR	05 38 16.0	
	comp=Z,210nm,18.6s,baz=131,slow=40						
KHC	Kasperske Hory	17.40	324	AMS	AMS	05 38 30.0	
	comp=Z,300nm,15.6s						
LGHD	Ghdames	17.57	256	i P	Pn	05 31 00.9	-0.5
	SNR=41						
PRU	Pruhonice	17.57	327	AMS	AMS	05 38 10.0	
	comp=Z,200nm,16.8s						
DAVOX	Davos/Dischmat	18.00	313	LR	LR	05 39 20.8	

	comp=Z,391nm,18.0s,baz=91,slow=42						
SAOF	**Saorge**	**18.35**	**302**	*e*P	**P**	**05 31 10.0**	**-0.7**
SAOF	**Saorge**	**18.35**	**302**	*e*P	**P**	**05 31 10.0**	**-0.7**
SBF	**Sospel**	**18.39**	**302**	*e*P	**P**	**05 31 09.0**	**-2.2**
	comp=Z,42nm,0.8s						
SBF	**Sospel**	**18.39**	**302**	*e*P	**P**	**05 31 09.0**	**-2.2**
	comp=Z,42nm,0.8s						
SBF	**Sospel**	**18.39**	**302**	*e*P	**P**	**05 31 09.0**	**-2.2**
	comp=Z,21nm,0.8s						
REVF	**Revere**	**18.40**	**302**	*e*P	**Pn**	**05 31 14.6**	**+3.1**
TOUF	**Mont Tournerai**	**18.57**	**302**	*e*P	**P**	**05 31 13.0**	**-0.3**
TOUF	**Mont Tournerai**	**18.57**	**302**	*e*P	**P**	**05 31 13.0**	**-0.3**
NKC	**Novy Kostel**	**18.69**	**325**	AMS	AMS	05 39 30.0	
	comp=Z,200nm,13.7s						
CALN	**Calern**	**18.74**	**301**	*e*P	**P**	**05 31 13.7**	**-1.4**
CALN	**Calern**	**18.74**	**301**	*e*P	**P**	**05 31 13.7**	**-1.4**
FRF	**La Foret Royal**	**18.85**	**301**	*e*P	**P**	**05 31 15.8**	**-0.4**
	comp=Z,167nm,1.5s						
FRF	**La Foret Royal**	**18.85**	**301**	*e*P	**P**	**05 31 15.8**	**-0.4**
	comp=Z,167nm,1.5s						
FRF	**La Foret Royal**	**18.85**	**301**	*e*P	**P**	**05 31 15.8**	**-0.4**
	comp=Z,84nm,1.5s						
LMR	**La Mourre**	**18.89**	**300**	*e*P	**P**	**05 31 15.2**	**-1.3**
	comp=Z,151nm,1.5s						
LMR	**La Mourre**	**18.89**	**300**	*e*P	**P**	**05 31 15.2**	**-1.3**
	comp=Z,151nm,1.5s						
LMR	**La Mourre**	**18.89**	**300**	*e*P	**P**	**05 31 15.2**	**-1.3**
	comp=Z,76nm,1.5s						
MBDF	**Montbardon**	**19.12**	**304**	*e*P	**P**	**05 31 18.1**	**-1.2**
	comp=Z,37nm,0.7s						
MBDF	**Montbardon**	**19.12**	**304**	*e*P	**P**	**05 31 18.1**	**-1.2**
	comp=Z,37nm,0.7s						
MBDF	**Montbardon**	**19.12**	**304**	*e*P	**P**	**05 31 18.1**	**-1.2**
	comp=Z,18nm,0.7s						
BNI	**Bardonecchia**	**19.29**	**305**	*e*P	**P**	**05 31 19.6**	**-1.6**
	comp=Z,17nm,1.0s						
BNI	**Bardonecchia**	**19.29**	**305**	*e*P	**P**	**05 31 19.6**	**-1.6**
	comp=Z,17nm,1.0s						
LPG	**La Plagne**	**19.40**	**306**	*e*P	**P**	**05 31 21.6**	**-0.9**
	comp=Z,25nm,0.6s						
LPG	**La Plagne**	**19.40**	**306**	*e*P	**P**	**05 31 21.6**	**-0.9**
	comp=Z,25nm,0.6s						
LPG	**La Plagne**	**19.40**	**306**	*e*P	**P**	**05 31 21.6**	**-0.9**
	comp=Z,13nm,0.6s						
LPL	**La Plagne**	**19.42**	**306**	*e*P	**P**	**05 31 21.2**	**-1.4**
	comp=Z,44nm,0.9s						
LPL	**La Plagne**	**19.42**	**306**	*e*P	**P**	**05 31 21.2**	**-1.4**
	comp=Z,44nm,0.9s						
LPL	**La Plagne**	**19.42**	**306**	*e*P	**P**	**05 31 21.2**	**-1.4**
	comp=Z,22nm,0.9s						
SMRF	**Simiane la Rot**	**19.71**	**301**	*e*P	**P**	**05 31 24.0**	**-1.6**
SMRF	**Simiane la Rot**	**19.71**	**301**	*e*P	**P**	**05 31 24.0**	**-1.6**
SMRF	**Simiane la Rot**	**19.71**	**301**	*e*P	**P**	**05 31 24.0**	**-1.6**
ORIF	**Oris-en-Rattie**	**19.78**	**304**	*e*P	**P**	**05 31 24.9**	**-1.5**
	comp=Z,50nm,1.1s						
ORIF				*e*R			
	comp=Z,185nm,19.8s						
ORIF	**Oris-en-Rattie**	**19.78**	**304**	*e*P	**P**	**05 31 24.9**	**-1.5**
	comp=Z,50nm,1.1s						
ORIF	**Oris-en-Rattie**	**19.78**	**304**	*e*P	**P**	**05 31 24.9**	**-1.5**
	comp=Z,25nm,1.1s						
CABF	**La Chapelle**	**20.26**	**309**	*e*P	**P**	**05 31 29.3**	**-2.3**
	comp=Z,48nm,0.7s						
CABF	**La Chapelle**	**20.26**	**309**	*e*P	**P**	**05 31 29.3**	**-2.3**
	comp=Z,48nm,0.7s						
CABF	**La Chapelle**	**20.26**	**309**	*e*P	**P**	**05 31 29.3**	**-2.3**
	comp=Z,24nm,0.7s						
CDF	**Champ du Feu**	**20.34**	**314**	*e*P	**P**	**05 31 31.0**	**-1.4**
	comp=Z,32nm,1.0s						
CDF	**Champ du Feu**	**20.34**	**314**	*e*P	**P**	**05 31 31.0**	**-1.4**
	comp=Z,32nm,1.0s						
CDF	**Champ du Feu**	**20.34**	**314**	*e*P	**P**	**05 31 31.0**	**-1.4**
	comp=Z,16nm,1.0s						
VIVF	**Saint-Julien-l**	**20.58**	**303**	*e*P	**P**	**05 31 33.2**	**-1.8**
	comp=Z,41nm,0.8s						
VIVF	**Saint-Julien-l**	**20.58**	**303**	*e*P	**P**	**05 31 33.2**	**-1.8**
	comp=Z,41nm,0.8s						
VIVF	**Saint-Julien-l**	**20.58**	**303**	*e*P	**P**	**05 31 33.2**	**-1.8**
	comp=Z,21nm,0.8s						
HAU	**Haudompre**	**20.69**	**313**	*e*P	**P**	**05 31 35.2**	**-1.0**
	comp=Z,21nm,0.8s						
HAU				*e*R			
	comp=Z,380nm,18.8s						
HAU	**Haudompre**	**20.69**	**313**	*e*P	**P**	**05 31 35.2**	**-1.0**
	comp=Z,21nm,0.8s						
HAU	**Haudompre**	**20.69**	**313**	*e*P	**P**	**05 31 35.2**	**-1.0**
	comp=Z,10nm,0.8s						
ADJB	**Djebel Djouab**	**20.78**	**278**	P	Pn	05 31 40.5	+0.6
LASF	**Ste Croix**	**20.94**	**300**	*e*P	**P**	**05 31 39.2**	**+0.3**
	comp=Z,44nm,1.1s						
LASF	**Ste Croix**	**20.94**	**300**	*e*P	**P**	**05 31 39.2**	**+0.3**
	comp=Z,44nm,1.1s						
LASF	**Ste Croix**	**20.94**	**300**	*e*P	**P**	**05 31 39.2**	**+0.3**
	comp=Z,22nm,1.1s						
EMHD	**Djebel Mahouad**	**21.16**	**278**	P	**P**	**05 31 44.4**	**+2.9**
PAGF	**Fort de Pagny**	**21.31**	**313**	*e*P	**P**	**05 31 41.1**	**-1.8**
	comp=Z,6.7nm,0.7s						
PAGF	**Fort de Pagny**	**21.31**	**313**	*e*P	**P**	**05 31 41.1**	**-1.8**
	comp=Z,6.7nm,0.7s						
PAGF	**Fort de Pagny**	**21.31**	**313**	*e*P	**P**	**05 31 41.1**	**-1.8**
	comp=Z,3.3nm,0.7s						
SFTF	**Sexfontaines**	**21.57**	**312**	*e*P	**P**	**05 31 43.9**	**-1.7**
	comp=Z,32nm,0.9s						
SFTF	**Sexfontaines**	**21.57**	**312**	*e*P	**P**	**05 31 43.9**	**-1.7**
	comp=Z,32nm,0.9s						
SFTF	**Sexfontaines**	**21.57**	**312**	*e*P	**P**	**05 31 43.9**	**-1.7**
	comp=Z,16nm,0.9s						
LBL	**Lubilhac**	**21.66**	**303**	*e*P	**P**	**05 31 49.2**	**+2.5**
LBL	**Lubilhac**	**21.66**	**303**	*e*P	**P**	**05 31 49.2**	**+2.5**
SMF	**Signal de Mont**	**21.71**	**307**	*e*P	**P**	**05 31 45.0**	**-2.1**
	comp=Z,66nm,0.9s						
SMF	**Signal de Mont**	**21.71**	**307**	*e*P	**P**	**05 31 45.0**	**-2.1**
	comp=Z,66nm,0.9s						
SMF	**Signal de Mont**	**21.71**	**307**	*e*P	**P**	**05 31 45.0**	**-2.1**
	comp=Z,33nm,0.9s						
LOR	**Lormes**	**21.92**	**309**	*e*P	**P**	**05 31 47.9**	**-1.5**
	comp=Z,18nm,0.8s						
LOR				*e*R			
	comp=Z,140nm,22.8s						
LOR	**Lormes**	**21.92**	**309**	*e*P	**P**	**05 31 47.9**	**-1.5**
	comp=Z,18nm,0.8s						
LOR	**Lormes**	**21.92**	**309**	*e*P	**P**	**05 31 47.9**	**-1.5**
	comp=Z,9.1nm,0.8s						
MTLF	**Montolieu**	**21.94**	**298**	*e*P	**P**	**05 31 47.5**	**-2.1**
	comp=Z,40nm,1.1s						
MTLF	**Montolieu**	**21.94**	**298**	*e*P	**P**	**05 31 47.5**	**-2.1**
	comp=Z,40nm,1.1s						
MTLF	**Montolieu**	**21.94**	**298**	*e*P	**P**	**05 31 47.5**	**-2.1**
	comp=Z,20nm,1.1s						
SSF	**Saint Saulge**	**22.07**	**308**	*e*P	**P**	**05 31 49.2**	**-1.8**
	comp=Z,27nm,0.7s						
SSF	**Saint Saulge**	**22.07**	**308**	*e*P	**P**	**05 31 49.2**	**-1.8**
	comp=Z,27nm,0.7s						
SSF	**Saint Saulge**	**22.07**	**308**	*e*P	**P**	**05 31 49.2**	**-1.8**
	comp=Z,14nm,0.7s						
BGF	**Bois d'Agland**	**22.32**	**306**	*e*P	**P**	**05 31 51.7**	**-2.0**
	comp=Z,15nm,0.6s						
BGF	**Bois d'Agland**	**22.32**	**306**	*e*P	**P**	**05 31 51.7**	**-2.0**
	comp=Z,15nm,0.6s						
BGF	**Bois d'Agland**	**22.32**	**306**	*e*P	**P**	**05 31 51.7**	**-2.0**
	comp=Z,7.6nm,0.6s						
CAF	**Calviac**	**22.39**	**302**	*e*P	**P**	**05 31 54.3**	**-0.1**
	comp=Z,28nm,1.1s						
CAF	**Calviac**	**22.39**	**302**	*e*P	**P**	**05 31 54.3**	**-0.1**
	comp=Z,28nm,1.1s						
CAF	**Calviac**	**22.39**	**302**	*e*P	**P**	**05 31 54.3**	**-0.1**
	comp=Z,14nm,1.1s						
ETRT	**Tiaret**	**22.61**	**277**	P	P	05 31 49.5	-7.5
TCF	**Toulx Ste Croi**	**22.66**	**305**	*e*P	**P**	**05 31 54.2**	**-3.1**
TCF	**Toulx Ste Croi**	**22.66**	**305**	*e*P	**P**	**05 31 54.2**	**-3.1**
RJF	**Les Rejaudoux**	**22.86**	**303**	*e*P	**P**	**05 31 58.2**	**-1.2**
	comp=Z,57nm,1.2s						
RJF				*e*R			
	comp=Z,163nm,20.0s						
RJF	**Les Rejaudoux**	**22.86**	**303**	*e*P	**P**	**05 31 58.2**	**-1.2**
	comp=Z,57nm,1.2s						
RJF	**Les Rejaudoux**	**22.86**	**303**	*e*P	**P**	**05 31 58.2**	**-1.2**
	comp=Z,28nm,1.2s						
EPF	**Esparros**	**23.25**	**296**	*e*P	**P**	**05 32 03.0**	**-0.4**
EPF	**Esparros**	**23.25**	**296**	*e*P	**P**	**05 32 03.0**	**-0.4**
EPF	**Esparros**	**23.25**	**296**	*e*P	**P**	**05 32 03.0**	**-0.4**
LFF	**La Frestale**	**23.30**	**301**	*e*P	**P**	**05 32 02.2**	**-1.7**
LFF	**La Frestale**	**23.30**	**301**	*e*P	**P**	**05 32 02.2**	**-1.7**
LFF	**La Frestale**	**23.30**	**301**	*e*P	**P**	**05 32 02.2**	**-1.7**
ETSF	**Etsaut**	**23.89**	**296**	*e*P	**P**	**05 32 08.3**	**-1.3**
	comp=Z,16nm,0.9s						
ETSF	**Etsaut**	**23.89**	**296**	*e*P	**P**	**05 32 08.3**	**-1.3**
	comp=Z,16nm,0.9s						
ETSF	**Etsaut**	**23.89**	**296**	*e*P	**P**	**05 32 08.3**	**-1.3**
	comp=Z,8.1nm,0.9s						
MFF	**Saint Martin d**	**24.31**	**305**	*e*P	**P**	**05 32 11.4**	**-1.9**
	comp=Z,12nm,0.7s						
MFF	**Saint Martin d**	**24.31**	**305**	*e*P	**P**	**05 32 11.4**	**-1.9**
	comp=Z,12nm,0.7s						
MFF	**Saint Martin d**	**24.31**	**305**	*e*P	**P**	**05 32 11.4**	**-1.9**
	comp=Z,6.2nm,0.7s						
SJPF	**Ste Jean**	**24.40**	**296**	*e*P	**P**	**05 32 12.9**	**-1.3**
	comp=Z,55nm,1.2s						
SJPF	**Ste Jean**	**24.40**	**296**	*e*P	**P**	**05 32 12.9**	**-1.3**
	comp=Z,55nm,1.2s						
SJPF	**Ste Jean**	**24.40**	**296**	*e*P	**P**	**05 32 12.9**	**-1.3**
	comp=Z,27nm,1.2s						
LDF	**La Druitiere**	**24.89**	**310**	*e*P	**P**	**05 32 17.6**	**-1.0**
	comp=Z,20nm,0.7s						
LDF	**La Druitiere**	**24.89**	**310**	*e*P	**P**	**05 32 17.6**	**-1.0**
	comp=Z,20nm,0.7s						
LDF	**La Druitiere**	**24.89**	**310**	*e*P	**P**	**05 32 17.6**	**-1.0**
	comp=Z,10nm,0.7s						
FLN	**La Foliniere**	**25.17**	**310**	*e*P	**P**	**05 32 19.4**	**-1.7**
	comp=Z,10nm,0.5s						
FLN				*e*R			
	comp=Z,192nm,17.8s						
FLN	**La Foliniere**	**25.17**	**310**	*e*P	**P**	**05 32 19.4**	**-1.7**
	comp=Z,10nm,0.5s						
FLN	**La Foliniere**	**25.17**	**310**	*e*P	**P**	**05 32 19.4**	**-1.7**
	comp=Z,5.2nm,0.5s						
GRR	**Gorron**	**25.29**	**309**	*e*P	**P**	**05 32 20.5**	**-1.7**
	comp=Z,77nm,1.1s						
GRR	**Gorron**	**25.29**	**309**	*e*P	**P**	**05 32 20.5**	**-1.7**
	comp=Z,77nm,1.1s						
GRR	**Gorron**	**25.29**	**309**	*e*P	**P**	**05 32 20.5**	**-1.7**
	comp=Z,38nm,1.1s						
AKTO	**Aktyubinsk**	**25.31**	**46**	P	**P**	**05 32 21.7**	**-0.7**
AKTO	**Aktyubinsk**	**25.31**	**46**	P	**P**	**05 32 21.7**	**-0.7**
	comp=Z,1.7nm,0.6s,baz=245,slow=11,SNR=4.9						
AKTO	**Aktyubinsk**	**25.31**	**46**	P	**P**	**05 32 21.7**	**-0.7**
FINES	**FINESS Array B**	**25.56**	**357**	P	**P**	**05 32 24.4**	**-0.1**
FINES	**FINESS Array B**	**25.56**	**357**	P	**P**	**05 32 24.4**	**-0.1**
	comp=Z,3.2nm,0.6s,baz=148,slow=11,SNR=5.5						
FINES				LR	LR	05 43 32.6	
	comp=Z,143nm,18.1s,baz=357,slow=39						
FINES	**FINESS Array B**	**25.56**	**357**	P	**P**	**05 32 24.4**	**-0.1**
HFS	**Hagfors**	**26.15**	**342**	P	**P**	**05 32 28.7**	**-1.1**
HFS	**Hagfors**	**26.15**	**342**	P	**P**	**05 32 28.7**	**-1.1**
	comp=Z,1.1nm,0.5s,baz=148,slow=8.7,SNR=4.6						
HFS				LR	LR	05 44 06.3	
	comp=Z,228nm,21.0s,baz=56,slow=40						
HFS	**Hagfors**	**26.15**	**342**	P	**P**	**05 32 28.7**	**-1.1**
KAF	**Kangasniemi**	**26.21**	**357**	*e*p	P	05 32 38.7	+8.3
	comp=Z,5.5nm,0.6s						
SGMF	**Saint Gilles**	**26.33**	**308**	*e*P	**P**	**05 32 30.1**	**-1.5**
SGMF	**Saint Gilles**	**26.33**	**308**	*e*P	**P**	**05 32 30.1**	**-1.5**
SGMF	**Saint Gilles**	**26.33**	**308**	*e*P	**P**	**05 32 30.1**	**-1.5**
ESDC	**Sonseca Array**	**26.34**	**288**	P	**P**	**05 32 31.2**	**-0.7**
ESDC	**Sonseca Array**	**26.34**	**288**	P	**P**	**05 32 31.2**	**-0.7**
	comp=Z,5.4nm,0.7s,baz=80,slow=9.1,SNR=21						
ESDC	**Sonseca Array**	**26.34**	**288**	P	**P**	**05 32 31.2**	**-0.7**
QUIF	**Quistinic**	**26.64**	**307**	*e*P	**P**	**05 32 32.6**	**-1.8**
QUIF	**Quistinic**	**26.64**	**307**	*e*P	**P**	**05 32 32.6**	**-1.8**
QUIF	**Quistinic**	**26.64**	**307**	*e*P	**P**	**05 32 32.6**	**-1.8**
ROSF	**Rostrenen**	**26.82**	**308**	*e*P	**P**	**05 32 33.5**	**-2.5**
ROSF	**Rostrenen**	**26.82**	**308**	*e*P	**P**	**05 32 33.5**	**-2.5**
JOF	**Joensuu**	**27.00**	**2**	*e*p	**P**	**05 32 36.7**	**-0.7**
	comp=Z,1.9nm,0.5s						
JOF	**Joensuu**	**27.00**	**2**	*e*P	**P**	**05 32 36.7**	**-0.7**
	comp=Z,1.9nm,0.5s						
NOA	**NORSAR Array B**	**27.56**	**341**	P	**P**	**05 32 42.9**	**+0.3**
NOA	**NORSAR Array B**	**27.56**	**341**	P	**P**	**05 32 42.9**	**+0.3**
	comp=Z,0.6nm,0.7s,baz=146,slow=9.4,SNR=3.4						
NOA				LR	LR	05 44 34.1	
	comp=Z,80nm,20.7s,baz=150,slow=39						
NOA	**NORSAR Array B**	**27.56**	**341**	P	**P**	**05 32 42.8**	**+0.3**
MDT	**Midelt**	**27.97**	**273**	P	**P**	**05 32 46.6**	**0.0**
MDT	**Midelt**	**27.97**	**273**	P	**P**	**05 32 46.6**	**0.0**
	comp=Z,2.5nm,0.9s,baz=82,slow=14,SNR=2.7						
MDT	**Midelt**	**27.97**	**273**	P	**P**	**05 32 46.6**	**0.0**
PBRG	**Braganca**	**28.40**	**293**	*e*P	**P**	**05 32 51.5**	**+1.2**
	comp=Z,24nm,2.0s						
PBRG	**Braganca**	**28.40**	**293**	*e*P	**P**	**05 32 51.5**	**+1.2**
	comp=Z,24nm,2.0s						
MVO	**Moncorvo**	**28.62**	**291**	*e*P	**P**	**05 32 52.1**	**-0.2**
	comp=Z,28nm,1.9s						
MVO	**Moncorvo**	**28.62**	**291**	*e*P	**P**	**05 32 52.1**	**-0.2**
	comp=Z,28nm,1.9s						
PBAR	**Barrancos**	**28.85**	**285**	*e*P	**P**	**05 32 54.0**	**-0.3**
	comp=Z,39nm,1.5s						
PBAR	**Barrancos**	**28.85**	**285**	*e*P	**P**	**05 32 54.0**	**-0.3**
	comp=Z,39nm,1.5s						
MTE	**Manteigas**	**29.05**	**290**	*e*P	**P**	**05 32 55.7**	**-0.4**
	comp=Z,61nm,1.8s						
MTE	**Manteigas**	**29.05**	**290**	*e*P	**P**	**05 32 55.7**	**-0.4**
	comp=Z,61nm,1.8s						
PESTR	**Estremoz**	**29.20**	**287**	*e*P	**P**	**05 32 56.8**	**-0.6**
	comp=Z,23nm,1.0s						
PESTR	**Estremoz**	**29.20**	**287**	*e*P	**P**	**05 32 56.8**	**-0.6**
	comp=Z,23nm,1.0s						
PVIS	**Viseu**	**29.30**	**291**	*e*P	**P**	**05 32 57.8**	**-0.5**
	comp=Z,27nm,1.4s						
PVIS	**Viseu**	**29.30**	**291**	*e*P	**P**	**05 32 57.8**	**-0.5**
	comp=Z,27nm,1.4s						
PVAQ	**Vaqueiros**	**29.49**	**284**	*e*P	**P**	**05 32 59.3**	**-0.6**
	comp=Z,37nm,1.9s						
PVAQ	**Vaqueiros**	**29.49**	**284**	*e*P	**P**	**05 32 59.3**	**-0.6**
	comp=Z,37nm,1.9s						
PBEJ	**Beja**	**29.52**	**285**	*e*P	**P**	**05 33 00.1**	**-0.1**
	comp=Z,25nm,1.5s						
PBEJ	**Beja**	**29.52**	**285**	*e*P	**P**	**05 33 00.1**	**-0.1**
	comp=Z,25nm,1.5s						
EVOP	**Sao Brissos**	**29.66**	**286**	*e*P	**P**	**05 33 02.7**	**+1.3**
	comp=Z,8.4nm,0.8s						
EVOP	**Sao Brissos**	**29.66**	**286**	*e*P	**P**	**05 33 02.7**	**+1.3**
	comp=Z,4.2nm,0.8s						
PBDV	**Barranco-do-Ve**	**29.68**	**284**	*e*P	**P**	**05 33 01.5**	**-0.2**
	comp=Z,62nm,1.8s						
PBDV	**Barranco-do-Ve**	**29.68**	**284**	*e*P	**P**	**05 33 01.5**	**-0.2**
	comp=Z,62nm,1.8s						
TORD	**Torodi Ar. Bea**	**33.57**	**234**	P	**P**	**05 33 36.6**	**+0.6**
TORD	**Torodi Ar. Bea**	**33.57**	**234**	P	**P**	**05 33 36.6**	**+0.6**
	comp=Z,5.5nm,0.6s,baz=37,slow=8.4,SNR=46						
TORD	**Torodi Ar. Bea**	**33.57**	**234**	P	**P**	**05 33 36.6**	**+0.6**
ARCES	**ARCESS Array B**	**33.67**	**358**	P	**P**	**05 33 35.6**	**-0.7**
ARCES	**ARCESS Array B**	**33.67**	**358**	P	**P**	**05 33 35.6**	**-0.7**
	comp=Z,1.2nm,0.5s,baz=174,slow=9.5,SNR=6.0						
ARCES	**ARCESS Array B**	**33.67**	**358**	P	**P**	**05 33 35.6**	**-0.7**
KURBB	**Kurchatov Arra**	**38.06**	**52**	P	**P**	**05 34 15.9**	**+1.8**
	comp=Z,3.3nm,0.6s,baz=274,slow=9.0,SNR=17						
KURK	**Kurchatov**	**38.12**	**51**	P	**P**	**05 34 15.9**	**+1.3**
KURK	**Kurchatov**	**38.12**	**51**	P	**P**	**05 34 15.9**	**+1.3**
MKAR	**Makanchi Array**	**40.59**	**58**	P	**P**	**05 34 35.7**	**+0.3**
MKAR	**Makanchi Array**	**40.59**	**58**	P	**P**	**05 34 35.7**	**+0.3**
	comp=Z,1.3nm,0.6s,baz=273,slow=7.0,SNR=13						
MKAR	**Makanchi Array**	**40.59**	**58**	P	**P**	**05 34 35.7**	**+0.3**
ZALV	**Zalesovo Beam**	**42.08**	**47**	P	**P**	**05 34 46.8**	**-0.6**
ZALV	**Zalesovo Beam**	**42.08**	**47**	P	**P**	**05 34 46.8**	**-0.6**
	comp=Z,0.9nm,0.6s,baz=258,slow=7.2,SNR=1.4						
ZALV	**Zalesovo Beam**	**42.08**	**47**	P	**P**	**05 34 46.8**	**-0.6**
SPITS	**Spitsbergen Ar**	**42.65**	**356**	P	**P**	**05 34 50.5**	**-1.3**
SPITS	**Spitsbergen Ar**	**42.65**	**356**	P	**P**	**05 34 50.5**	**-1.3**
	comp=Z,6.6nm,0.9s,baz=114,slow=9.4,SNR=4.6						
SPITS	**Spitsbergen Ar**	**42.65**	**356**	P	**P**	**05 34 50.5**	**-1.3**
DBIC	**Dimbokro**	**42.67**	**235**	P	**P**	**05 34 52.8**	**+0.2**
DBIC	**Dimbokro**	**42.67**	**235**	P	**P**	**05 34 52.8**	**+0.2**
	comp=Z,2.8nm,0.5s,baz=17,slow=8.2,SNR=6.9						
DBIC	**Dimbokro**	**42.67**	**235**	P	**P**	**05 34 52.8**	**+0.2**
LIC	**Lamto**	**43.11**	**235**	*e*P	P	05 35 01.3	+5.1
LIC	**Lamto**	**43.11**	**235**	*e*P	P	05 35 01.3	+5.1
GTA	**Gaotai**	**54.69**	**64**	*e*P	**P**	**05 36 26.7**	**+1.8**
GTA				pP	**pP**	**05 36 34.6**	**-1.4**
GTA				sP	**sP**	**05 36 39.4**	**-1.0**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	**56.43**	**52**	P	**P**	**05 36 37.5**	**+0.2**
SONM	**Songino Array**	**56.43**	**52**	P	**P**	**05 36 37.5**	**+0.2**
	comp=Z,1.2nm,0.8s,baz=298,slow=6.4,SNR=2.9						
SONM	**Songino Array**	**56.43**	**52**	P	**P**	**05 36 37.5**	**+0.2**
CMAR	**Chiang Mai Arr**	**63.25**	**86**	P	**P**	**05 37 24.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**63.25**	**86**	P	**P**	**05 37 24.6**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=301,slow=8.0,SNR=5.2						
CMAR	**Chiang Mai Arr**	**63.25**	**86**	P	**P**	**05 37 24.6**	**+0.1**
BOSA	**Boshof**	**64.36**	**184**	P	**P**	**05 37 31.6**	**+0.1**
BOSA	**Boshof**	**64.36**	**184**	P	**P**	**05 37 31.6**	**+0.1**
	comp=Z,3.4nm,1.0s,baz=355,slow=7.4,SNR=5.2						
BOSA	**Boshof**	**64.36**	**184**	P	**P**	**05 37 31.6**	**+0.1**
SCHQ	**Schefferville**	**64.65**	**320**	P	P	05 37 29.3	-3.8
SCHQ	**Schefferville**	**64.65**	**320**	P	P	05 37 29.3	-3.8
	comp=Z,2.9nm,0.6s,baz=56,slow=5.6,SNR=9.9						
USRK	**Ussuriysk Arra**	**73.93**	**47**	P	**P**	**05 38 33.3**	**+2.6**
	comp=Z,2.8nm,0.8s,baz=297,slow=5.6,SNR=5.0						
KSAR	**Wonju Array Be**	**75.16**	**54**	P	**P**	**05 38 37.9**	**0.0**
KSAR	**Wonju Array Be**	**75.16**	**54**	P	**P**	**05 38 37.9**	**0.0**
KSRS	**Korea Array**	**75.17**	**54**	P	**P**	**05 38 37.9**	**-0.1**
	comp=Z,1.3nm,0.8s,baz=307,slow=4.4,SNR=3.3						
YKA	**Yellowknife Ar**	**77.62**	**344**	P	**P**	**05 38 51.2**	**-0.2**
YKA	**Yellowknife Ar**	**77.62**	**344**	P	**P**	**05 38 51.2**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=33,slow=5.2,SNR=8.2						
YKA	**Yellowknife Ar**	**77.62**	**344**	P	**P**	**05 38 51.2**	**-0.2**
ILAR	**Eielson Array**	**79.53**	**358**	P	**P**	**05 39 02.2**	**+0.3**
ILAR	**Eielson Array**	**79.53**	**358**	P	**P**	**05 39 02.2**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=358,slow=5.4,SNR=2.9						
ILAR	**Eielson Array**	**79.53**	**358**	P	**P**	**05 39 02.2**	**+0.3**
MJAR	**Matsushiro Arr**	**82.32**	**50**	P	P	05 39 24.2	+6.9
MJAR	**Matsushiro Arr**	**82.32**	**50**	P	P	05 39 24.2	+6.9
	comp=Z,0.8nm,0.4s,baz=317,slow=3.7,SNR=6.6						
BDFB	**Brasilia**	**89.04**	**250**	LR	LR	06 24 54.6	
	comp=Z,587nm,18.2s,baz=190,slow=39						

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*IDC **09** 05:32:11.5±2.3, 22°.54S×171°.39E, h0km, mb3.7/3, mb1 4.1/4, mb1mx3.8/18, mbtmp3.8/4, ML4.0/1, Error ellipse: s-maj=121.8km s-min=29.5km az=169.0*

ISC 09 05:32:22.9±1.8**, 19°.5S**±0°.5×**170°.3E**±0°.4**, h35km, n7, σ1s41**/7**, mb3.6**/3**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.15**	**229**	*e*S	**Sn**	**05 34 11.0**	**-0.2**
DZM	**Mont Dzumac**	**4.43**	**233**	*e*P	Pn	05 33 24.3	-3.4
DZM				*e*S	**Sn**	**05 34 18.7**	**+0.7**
DZM	**Mont Dzumac**	**4.43**	**233**	Pn	Pn	05 33 24.5	-3.1
	6.9nm,0.3s,baz=294,slow=24,SNR=74						
DZM				Sn	**Sn**	**05 34 19.1**	**+1.0**
	5.9nm,0.3s,baz=143,slow=20,SNR=4.2						
NOUC	**Port Laguerre**	**4.55**	**234**	*e*P	**Pn**	**05 33 28.0**	**-1.3**
NOUC				*e*S	**Sn**	**05 34 23.0**	**+2.0**
WRA	**Warramunga Arr**	**33.80**	**263**	P	**P**	**05 39 01.5**	**-0.3**
	0.4nm,0.5s,baz=98,slow=8.4,SNR=8.7						
ASAR	**Alice Springs**	**34.03**	**256**	P	P	05 39 00.5	-3.4
	1.0nm,0.7s,baz=99,slow=9.7,SNR=7.1						
NVAR	**Mina Array Bea**	**88.22**	**48**	P	**P**	**05 45 11.5**	**+0.7**
	0.1nm,0.3s,baz=219,slow=10,SNR=3.9						

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*IDC **09** 05:38:17.9±0.4, 10°.86N×91°.74E, h0km, mb4.8/30, mb1 4.9/31, mb1mx4.8/33, mbtmp4.7/31, ML4.4/1, MS4.3/4, Ms1 4.3/4, ms1mx3.6/37, Error ellipse: s-maj=14.1km s-min=11.9km az=59.0*

*BJI **09** 05:38:18.6, 10°.49N×91°.65E, h37km, mB4.9/27, mb4.9/52, Ms4.6/38, Ms7 4.2/38*

*ISCJB **09** 05:38:20.3±0.1, 10°.78N±0°.02×91°.72E±0°.02, h29km, mb5.0/211, MS4.6/29, Error ellipse: s-maj=3.6km s-min=2.8km az=33.5*

*MOS **09** 05:38:21.3±0.9, 10°.87N×91°.74E, h33km, mb5.4/94, MS4.6/16, Error ellipse: s-maj=7.1km s-min=3.8km az=117.9*

*SZGRF **09** 05:38:22.3, 10°.70N×91°.33E, h30km, mb5.2, MS4.9, Andaman Islands, India, region*

*NEIC **09** 05:38:23.0±0.1, 10°.82N×91°.72E, h35km, mb5.2/72, Error ellipse: s-maj=4.6km s-min=3.4km az=204.0*

*TEH **09** 05:38:24.0, 10°.80N×91°.75E, h38km, ML5.0*

*DJA **09** 05:38:40.1±0.6, 10°N±6°×9°2E±°, h217km±8km, M5.2/15, mB5.6/10, mb4.8/15, MLv5.7/1, Mw(mB)5.1/10*

ISC 09 05:38:22.7±0.3**, 10°.79N**±0°.03×**91°.67E**±0°.03**, h33**km±1km**, h33km:pP-P, n611, σ1s28**/717**, mb5.1**/211**, MS4.6**/30**, 29C-38D, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.36**	**51**	*e*PKP	Pn	05 38 45.6	+0.3
PBA				*e*S	Sn	05 39 03.2	+1.0
DGPR	**DIGLIPUR**	**2.67**	**27**	*e*PKP	**Pn**	**05 39 02.8**	**-0.7**
DGPR				*e*S	**Sn**	**05 39 35.9**	**+1.2**
CMBY	**CAMPBELL BAY**	**4.37**	**149**	*e*PKP	**Pn**	**05 39 26.9**	**+0.2**
CMBY				*e*S	**Sn**	**05 40 15.9**	**-0.7**
BSI	**Banda Aceh**	**6.37**	**145**	P	**Pn**	**05 39 55.5**	**+1.2**
LHMI	**Lhok Sumawe**	**7.61**	**136**	P	Pb	05 40 25.6	-8.3
	328nm,0.8s,4µm1.8nm						
KCSI	**Kotacane, Aceh**	**9.42**	**140**	P	Pn	05 40 53.3	+17
SNSI	**Sinabang, Aceh**	**9.53**	**151**	P	Pn	05 40 44.5	+6.9
	8µm,0.9s,63µm						
TSI	**Tuntungan**	**9.96**	**136**	P	Pn	05 41 03.9	+20
CM31	**Chiang Mai Arr**	**10.37**	**42**	Pn	**Pn**	**05 40 48.9**	**-0.3**
	6.8nm,0.4s						
CMAR	**Chiang Mai Arr**	**10.37**	**42**	Pn	**Pn**	**05 40 48.0**	**-1.3**
CMAR				Sn	**Sn**	**05 42 49.6**	**+5.3**
CMAR	**Chiang Mai Arr**	**10.37**	**42**	Pn	**Pn**	**05 40 48.0**	**-1.3**
	0.9nm,0.3s,baz=237,slow=14,SNR=10						
CMAR				Sn	**Sn**	**05 42 49.6**	**+5.3**
	baz=80,slow=18,SNR=5.1						
CMAR				LR	LR	05 45 14.7	
	comp=Z,389nm,18.0s,baz=222,slow=41						
KULM	**Kulim**	**10.44**	**121**	*e*Pn	**Pn**	**05 40 49.2**	**-0.9**
KULM	**Kulim**	**10.44**	**121**	P	**Pn**	**05 40 49.2**	**-0.9**
KULM	**Kulim**	**10.44**	**121**	P	Pn	05 40 59.6	+10
	40nm,1.3s						
VIS	**Vishakhapatnam**	**10.62**	**311**	*e*PKP	**Pn**	**05 40 50.2**	**-2.4**
VIS				AMB	AMB	05 40 53.1	
	comp=Z,270nm,0.7s						
VIS				*e*x	x	05 42 39.1	
CHTO	**Chiang Mai**	**10.63**	**41**	*e*P	**Pn**	**05 40 52.1**	**-0.7**
CHTO				*e*		05 42 48.2	
CHTO	**Chiang Mai**	**10.63**	**41**	*e*Pn	**Pn**	**05 40 52.0**	**-0.7**
CHTO				*e*Sn	**Sn**	**05 42 48.2**	**-2.6**
CHTO	**Chiang Mai**	**10.63**	**41**	P	Pn	05 41 09.9	+17
	comp=Z,20nm,1.2s						
IPM	**Ipoh**	**11.19**	**123**	*e*Pn	**Pn**	**05 40 59.2**	**-1.2**
IPM	**Ipoh**	**11.19**	**123**	P	**Pn**	**05 40 59.3**	**-1.2**
IPM	**Ipoh**	**11.19**	**123**	P	**Pn**	**05 41 00.4**	**-0.1**
PALK	**Pallekele**	**11.38**	**253**	*e*Pn	**Pn**	**05 41 04.2**	**+1.1**
PALK				*e*Sn	Sn	05 42 58.9	-10
PALK	**Pallekele**	**11.38**	**253**	Pn	**Pn**	**05 41 02.6**	**-0.5**
	comp=Z,221nm,0.8s,SNR=8.0						
PALK	**Pallekele**	**11.38**	**253**	P	Pn	05 41 15.1	+12
	comp=Z,69nm,1.0s,comp=Z,2µm						
FRIM	**Kepong**	**12.40**	**127**	P	**Pn**	**05 41 16.1**	**-0.9**
KTGM	**Kuala Trenggan**	**12.58**	**115**	P	Pn	05 41 15.8	-3.6
MNSI	**Mandailing Nat**	**12.66**	**141**	P	Pn	05 41 14.6	-6.0
BKNI	**Bangkinang**	**13.96**	**138**	P	**Pn**	**05 41 36.6**	**-1.7**
	comp=Z,188nm,0.7s,comp=Z,3µm						
PPI	**Padang Panjang**	**14.15**	**142**	P	**Pn**	**05 41 41.2**	**+0.3**
	comp=Z,76nm,1.0s,comp=Z,1µm						
HYB	**Hyderabad**	**14.32**	**299**	*i* P	**Pn**	**05 41 41.0**	**-2.3**
HYB				*e*PP	**PnPn**	**05 41 51.0**	**-0.4**
HYB				*e*S	**Sn**	**05 44 21.0**	**-0.1**
HYB	**Hyderabad**	**14.32**	**299**	*e*P	**Pn**	**05 41 41.0**	**-2.3**
HYB	**Hyderabad**	**14.32**	**299**	*e*x	**Sn**	**05 44 22.7**	**+1.6**
HYB				AMB	AMB	05 44 24.9	
	comp=Z,240nm,1.2s						
HYB	**Hyderabad**	**14.32**	**299**	*e*P	**Pn**	**05 41 41.0**	**-2.3**
HYB				*e*		05 41 51.0	
HYB				*e*S	**S**	**05 44 41.0**	**+0.4**
TRD	**Trivandrum**	**14.68**	**262**	*e*PKP	**Pn**	**05 41 47.1**	**-1.1**
TRD				AMB	AMB	05 41 56.9	
	comp=Z,54nm,0.9s						
TRD				*e*x	x	05 44 13.6	
SHL	**Shillong**	**14.70**	**1**	*e*PKP	**Pn**	**05 41 46.6**	**-1.9**
SHL				AMB	AMB	05 41 54.1	
	comp=Z,25nm,0.2s						
MYKOM	**Kota Tinggi**	**15.04**	**126**	P	**P**	**05 41 59.0**	**+1.0**
	comp=Z,28nm,1.4s						
RGRI	**Rengat**	**15.33**	**136**	P	P	05 42 16.1	+15
NGP	**Nagpur**	**15.90**	**312**	*e*PKP	**Pn**	**05 42 03.8**	**-0.4**
NGP				*e*x	x	05 42 09.8	
	comp=Z,130nm,0.9s						
NGP				*e*x	x	05 44 47.8	
LATR	**Latur**	**16.46**	**299**	*e*PKP	**Pn**	**05 42 11.0**	**-0.3**
ODAN	**Odare**	**16.48**	**346**	*e*P	**Pn**	**05 42 09.4**	**-2.4**
JBP	**Jabalpur**	**16.61**	**319**	*e*PKP	**Pn**	**05 42 13.1**	**0.0**
JBP				*i* x	x	05 42 19.3	
	comp=Z,68nm,1.2s						
JBP				*e*x	x	05 45 04.4	
RAMN	**Ramite**	**16.77**	**344**	*e*P	**Pn**	**05 42 13.1**	**-2.3**
	comp=Z,143nm,0.7s						
TAPN	**Taplejung**	**16.89**	**348**	*e*P	**Pn**	**05 42 14.8**	**-2.1**
	comp=Z,161nm,0.9s						

PKI	Pulchoki	17.70	341	eP	Pn	05 42 25.2	-1.9
	comp=Z,104nm,0.7s						
KMI	Kunming	17.70	35	P	Pn	05 42 27.3	+0.3
KMI				pP	pP	05 42 36.1	-0.2
KMI				sP	sP	05 42 42.4	+1.9
KMI				PP	PnPn	05 42 44.4	+6.4
KMI				S	Sn	05 45 43.9	+0.4
KMI				sS	sS	05 45 57.1	-6.6
KMI				SS	SnSn	05 46 10.0	+12
KMI				pmax	pmax		
	comp=Z,17nm,0.9s						
KMI				LR	LR		
	comp=N,360nm,18.0s						
KMI				LR	LR		
	comp=E,370nm,17.3s						
KMI				LR	LR		
	comp=Z,230nm,18.7s						
PKIN	Phulchoki	17.71	341	eP	Pn	05 42 25.3	-1.8
	comp=Z,82nm,0.6s						
DMN	Daman	17.83	341	eP	Pn	05 42 26.8	-1.8
	comp=Z,176nm,0.8s						
GUN	Gumba	17.88	343	eP	Pn	05 42 27.6	-1.7
	comp=Z,98nm,0.9s						
KKN	Kakani	17.95	341	eP	Pn	05 42 28.9	-1.1
	comp=Z,92nm,0.9s						
KAD	Karad	18.15	293	ex	Pn	05 42 33.6	+1.2
KAD				ex	x	05 45 37.0	
BHPL	Bhopal	18.39	314	ePKP	P	05 42 32.7	-2.3
BHPL				AMB	AMB	05 42 38.6	
	comp=Z,46nm,0.8s						
KOLN	Koldanda	18.52	337	eP	P	05 42 36.3	-0.3
	comp=Z,117nm,0.6s						
LSA	Lhasa	18.82	359	P	Pn	05 42 41.0	+0.2
LSA				pmax	pmax		
	comp=Z,30nm,1.0s						
LSA	Lhasa	18.82	359	eP	P	05 42 40.2	0.0
LSA				pmax	pmax		
	comp=Z,48nm,0.6s						
LSA	Lhasa	18.82	359	eP	P	05 42 40.2	0.0
	comp=Z,48nm,0.6s						
POO	Poona	18.87	296⇓	iP	P	05 42 38.0	-2.4
	comp=Z,159nm,1.2s						
POO				ePP	PnPn	05 42 52.5	-1.3
DANN	Dangsing	18.98	338	eP	P	05 42 41.8	+0.1
	comp=Z,184nm,0.8s						
PYUN	Piuthan	19.05	336	eP	P	05 42 42.8	+0.4
QIZ	Qiongzhong	19.36	63	P	P	05 42 45.6	-0.1
QIZ				S	S	05 46 22.8	-0.3
QIZ				pmax	pmax		
	comp=Z,14nm,1.9s						
QIZ				LR	LR		
	comp=N,430nm,20.5s						
QIZ				LR	LR		
	comp=E,180nm,18.9s						
QIZ				LR	LR		
	comp=Z,640nm,17.3s						
KASI	Kota Agung	20.63	141	P	P	05 42 57.3	-2.3
KSM	Kuching	20.70	115	eP	P	05 42 59.8	-0.5
	comp=Z,53nm,0.8s						
KSM	Kuching	20.70	115	P	P	05 42 59.8	-0.5
KSM	Kuching	20.70	115	P	P	05 43 01.0	+0.7
	comp=Z,76nm,1.0s,comp=Z,814nm						
TPI	Tanjungpandan	20.84	129	P	P	05 43 01.1	-0.7
	comp=Z,29nm,0.8s						
GYA	Guiyang	21.05	40	⇓P	P	05 43 04.9	+0.7
GYA				pP	pP	05 43 14.3	+1.4
GYA				PP	PnPn	05 43 30.0	+6.2
GYA				S	S	05 46 53.2	-3.8
GYA				sS	sS	05 47 09.8	-1.2
GYA				ScP	ScP	05 50 44.7	-0.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,580nm,15.7s						
GYA				LR	LR		
	comp=E,420nm,16.3s						
GYA				LR	LR		
	comp=Z,560nm,15.8s						
SBUM	Sibu	22.01	111	P	P	05 43 13.5	-0.9
SBUM	Sibu	22.01	111	P	P	05 43 11.7	-2.7
	comp=Z,30nm,1.0s						
NDI	New Delhi	22.36	325	ePKP	P	05 43 16.0	-2.1
NDI				eS	S	05 47 20.0	-2.0
STKI	Sintang	22.39	117	P	P	05 43 16.0	-2.5
	comp=Z,60nm,1.1s,comp=Z,16µm						
AJM	Ajmer	22.40	316	ePKP	P	05 43 16.0	-2.6
BTM	Bintulu	22.54	108	P	P	05 43 21.8	+1.7
CD2	Chengdu	22.95	27⇑	iP	P	05 43 23.7	-0.6
CD2				pP	pP	05 43 33.2	0.0
CD2				sP	sP	05 43 37.5	+0.2
CD2				PP	PnPn	05 43 52.6	+3.0
CD2				PcP	PcP	05 47 13.2	-0.7
CD2				S	S	05 47 25.9	-6.5
CD2				sS	sS	05 47 43.9	-3.9
CD2				SS	SnSn	05 48 12.2	+6.4
CD2				ScS	ScS	05 54 31.2	-4.2
CD2				pmax	pmax		
	comp=Z,80nm,1.2s						
CD2				pmax	pmax		
	comp=Z,210nm,7.1s						
CD2				LR	LR		
	comp=N,720nm,13.2s						
CD2				LR	LR		
	comp=E,930nm,16.7s						
CD2				LR	LR		
	comp=Z,570nm,17.8s						
PBKI	Pangkalan Bun	24.00	123	P	P	05 43 34.4	-0.2
	comp=Z,215nm,1.1s,comp=Z,9µm						
SMLA	Simla	24.30	329	ePKP	P	05 43 37.4	+0.2
SMLA				AMB	AMB	05 43 39.7	
	comp=Z,73nm,2.9s						
TGJI	Tegal	24.69	135	P	P	05 43 35.3	-5.6
	comp=Z,74nm,0.8s,comp=Z,4µm						
SDNR	Sundarnagar	24.70	329	ePKP	P	05 43 40.0	-0.9
KKM	Kota Kinabalu	24.73	99	P	P	05 43 39.7	-1.7
BHK	Bhakra	24.92	328	ex	P	05 43 46.0	+3.1
ENH	Enshi	25.50	38	eP	P	05 43 47.5	-0.7
	comp=Z,127nm,0.7s						
DHRM	DHARAMSHALA	25.64	329	ePKP	P	05 43 48.7	-0.9
DHRM				AMB	AMB	05 43 51.2	
	comp=Z,38nm,1.3s						
SDKM	Sandakan	25.77	99	P	P	05 43 50.8	0.0
TSM	Tawau	26.75	102	P	P	05 43 59.6	-0.1
BBKI	Banjar Baru	27.06	120	P	P	05 44 01.3	-1.1
MYLDM	Lahad Datu	27.14	100	P	P	05 44 06.7	+3.6
MYLDM	Lahad Datu	27.14	100	P	P	05 44 13.5	+10
LZH	Lanzhou	27.49	22	eP	P	05 44 07.0	+0.7
LZH				pP	pP	05 44 16.9	+1.2
LZH				sP	sP	05 44 20.8	+1.0
LZH				PP	PnPn	05 44 53.0	+1.2
LZH				eS	S	05 48 44.1	-1.1
LZH				sS	sS	05 49 03.1	+2.3
LZH				pmax	pmax		
	comp=Z,62nm,1.4s						
LZH				pmax	pmax		
	comp=Z,160nm,5.8s						
LZH				LR	LR		
	comp=N,390nm,12.5s						
LZH				LR	LR		
	comp=E,370nm,13.4s						
LZH				LR	LR		
	comp=Z,570nm,16.7s						
XAN	Xi'an	28.01	32	P	P	05 44 09.0	-1.8
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WHN	Wuhan	28.81	44	P	P	05 44 18.3	+0.4
WHN				pmax	pmax		
	comp=Z,32nm,0.9s						
GTA	Gaotai	29.41	13	⇓P	P	05 44 24.1	+0.9
GTA				pP	pP	05 44 33.6	+0.8
GTA				sP	sP	05 44 37.7	+0.9
GTA				PcP	PcP	05 47 30.4	+1.6
GTA				S	S	05 49 15.4	+0.2
GTA				sS	sS	05 49 31.8	+0.9
GTA				SS	SnSn	05 50 50.7	+7.2
GTA				pmax	pmax		
	comp=Z,44nm,1.1s						
GTA				pmax	pmax		
	comp=Z,150nm,4.3s						
GTA				LR	LR		
	comp=N,330nm,19.0s						
GTA				LR	LR		
	comp=E,450nm,19.9s						
GTA				LR	LR		
	comp=Z,450nm,22.8s						
SSLB	Suanglung	30.72	61	eP	P	05 44 35.3	+0.3
	comp=Z,10nm,0.8s						
KBL	Kabul	31.39	322	eP	P	05 44 41.1	+0.2
KBL	Kabul	31.39	322	eP	P	05 44 41.1	+0.2
KSH	Kashi	31.83	337	eP	P	05 44 44.1	-0.6
KSH				epP	pP	05 44 53.6	-0.6
KSH				esP	sP	05 44 57.6	-0.6
KSH				ePP	PnPn	05 45 48.2	-1.6
KSH				ePcP	PcP	05 47 37.1	+1.9
KSH				eS	S	05 49 47.6	-5.6
KSH				esS	sS	05 50 04.1	-4.8
KSH				pmax	pmax		
	comp=Z,69nm,0.8s						
KSH				pmax	pmax		
	comp=Z,400nm,5.0s						
KSH				LR	LR		
	comp=N,620nm,9.7s						
KSH				LR	LR		
	comp=E,640nm,10.2s						
KSH				LR	LR		
	comp=Z,660nm,10.3s						
KAPI	Kappang	32.06	118	eP	P	05 44 45.1	-1.6
	comp=Z,30nm,1.0s						
NJ2	Nanjing	32.81	46	eP	P	05 44 53.8	+0.6
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ	Urumqi	33.09	355	P	P	05 44 56.8	+1.3
WMQ				pP	pP	05 45 06.5	+1.4
WMQ				sP	sP	05 45 11.0	+1.9
WMQ				PP	PnPn	05 46 08.0	+2.3
WMQ				eS	S	05 50 13.0	+0.5
WMQ				PcS	PcS	05 51 21.0	-2.9
WMQ				pmax	pmax		
	comp=Z,31nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.2s						
WMQ				LR	LR		
	comp=N,640nm,17.8s						
WMQ				LR	LR		
	comp=E,800nm,22.9s						
WMQ				LR	LR		
	comp=Z,650nm,23.4s						
ULHL	Ulahol	34.12	339	P	P	05 45 05.9	+1.2
	SNR=14						
KZA	Kyzart	34.33	338	P	P	05 45 08.2	+1.4
	SNR=29						
HHC	Hu-ho-hao-te	34.70	27	eP	P	05 45 09.7	0.0
HHC				pP	pP	05 45 20.9	+1.7
HHC				sP	sP	05 45 24.6	+1.4
HHC				PP	PP	05 46 29.8	+1.1
HHC				S	S	05 50 37.2	-0.5
HHC				sS	sS	05 50 52.7	-0.8
HHC				PcS	PcS	05 51 31.3	+1.5
HHC				SS	SnSn	05 52 49.2	-2.9
HHC				pmax	pmax		
	comp=Z,54nm,1.0s						
HHC				pmax	pmax		
	comp=Z,250nm,5.9s						
HHC				LR	LR		
	comp=N,870nm,16.9s						
HHC				LR	LR		
	comp=E,1µm,15.5s						
HHC				LR	LR		
	comp=Z,2µm,16.3s						
KBK	Karagaybulak	34.94	338	P	P	05 45 13.6	+1.8
	SNR=14						
TKM2	Tokmak 2	34.94	339	eP	P	05 45 12.8	+1.0
TKM2				pmax	pmax		
	comp=Z,16nm,1.1s						
TKM2	Tokmak 2	34.94	339	eP	P	05 45 12.8	+1.0
	comp=Z,16nm,1.1s						
TKM2	Tokmak 2	34.94	339	P	P	05 45 13.3	+1.6
	SNR=13						
AML	Almayashu	34.96	336	P	P	05 45 13.9	+1.7
	SNR=64						
AAK	Ala-Archa	35.09	338	eP	P	05 45 14.5	+1.5
AAK				pmax	pmax		
	comp=Z,65nm,1.3s						
AAK	Ala-Archa	35.09	338	eP	P	05 45 14.5	+1.5
	comp=Z,65nm,1.3s						
AAK	Ala-Archa	35.09	338	P	P	05 45 15.1	+2.1
	SNR=20						
AAK	Ala-Archa	35.09	338	P	P	05 45 14.9	+1.9
	comp=Z,196nm,1.1s,SNR=12						
FRU	Bishkek	35.21	338	i P	P	05 45 16.0	+2.1
FRU				pmax	pmax		
	comp=Z,60nm,2.0s						
FRU				MLR	MLR		
	comp=Z,500nm,13.0s						
CHMS	Chumysh	35.31	338	P	P	05 45 16.3	+1.6
	SNR=9.7						
EKS2	Erkin-Say	35.38	337	P	P	05 45 17.5	+2.0
	SNR=23						
USP	Ospenovka	35.63	338	P	P	05 45 18.9	+1.3
	SNR=45						
BJT	Baijiatuau	36.31	33	eP	P	05 45 23.2	-0.1
	comp=Z,20nm,0.6s						
BJI	Beijing	36.33	33	P	P	05 45 23.9	+0.4
BJI				S	S	05 51 04.9	+2.5
BJI				pmax	pmax		
	comp=Z,43nm,0.8s						
BJI				pmax	pmax		
	comp=Z,130nm,4.5s						
BJI				LR	LR		
	comp=N,320nm,20.2s						
BJI				LR	LR		
	comp=E,420nm,25.3s						
BJI				LR	LR		
	comp=Z,280nm,20.2s						
MK31	Makanchi Array	36.75	349	ceP	P	05 45 27.6	+0.5
MK31				pmax	pmax		
	comp=Z,25nm,0.6s						
MK31	Makanchi Array	36.75	349	eP	P	05 45 27.4	+0.4
MKAR	Makanchi Array	36.75	349	ceP	P	05 45 27.7	+0.6
MKAR				pmax	pmax		
	comp=Z,32nm,0.7s						
MKAR	Makanchi Array	36.75	349	P	P	05 45 27.1	0.0
MKAR				PcP	PcP	05 47 49.1	+0.1
MKAR	Makanchi Array	36.75	349	P	P	05 45 27.1	0.0
	comp=Z,32nm,0.8s,baz=167,slow=8.3,SNR=267						
MKAR				PcP	PcP	05 47 49.1	+0.1
	comp=Z,2.4nm,0.5s,baz=180,slow=1.8,SNR=5.9						
KK31	Karatay Array	37.08	334	i P	P	05 45 30.5	+0.6
KK31				pmax	pmax		
	comp=Z,17nm,0.6s						
KKAR	Karatay Array	37.08	334	eP	P	05 45 30.7	+0.8
KKAR				pmax	pmax		
	comp=Z,32nm,0.8s						
KKAR	Karatay Array	37.08	334	eP	P	05 45 30.7	+0.8
	comp=Z,32nm,0.8s						
SONM	Songino Array	38.95	16	P	P	05 45 46.0	+0.3
SONM				PcP	PcP	05 47 56.4	+0.5
SONM	Songino Array	38.95	16	P	P	05 45 46.0	+0.3
	comp=Z,19nm,0.8s,baz=201,slow=8.6,SNR=68						
SONM				PcP	PcP	05 47 56.4	+0.5
	comp=Z,4.0nm,0.8s,baz=209,slow=4.0,SNR=4.4						
ULN	Ulaanbaatar	39.16	16	eP	P	05 45 47.5	0.0
	comp=Z,16nm,1.0s						
ISRV	Sarvestan	40.41	303	eP	P	05 46 00.5	+2.1
ISHV	Shirvan	40.48	317	eP	P	05 46 00.6	+1.9
ZAK	Zakamensk	40.62	11	eP	P	05 45 59.5	0.0
ZAK				e		05 46 08.9	
ZAK				e		05 47 58.6	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KURBB	Kurchatov Arra	41.16	347	P	P	05 46 04.3	+0.5
	comp=Z,13nm,0.7s,baz=167,slow=7.3,SNR=8.6						
KURBB				PcP	PcP	05 48 02.4	-0.3
	comp=Z,4.5nm,0.8s,baz=164,slow=2.8,SNR=6.3						
KURK	Kurchatov	41.23	347	d iP	P	05 46 04.3	-0.1
KURK				pmax	pmax		
	comp=Z,72nm,1.7s						
KURK	Kurchatov	41.23	347	eP	P	05 46 04.7	+0.3
KURK				PcP	PcP	05 48 02.4	-0.6
KURK	Kurchatov	41.23	347	P	P	05 46 05.9	+1.5
	comp=Z,194nm,1.2s,SNR=24						
MOY	Mondy	41.46	9	eP	P	05 46 07.5	+1.0
SNY	Shenyang	41.67	36	⇑P	P	05 46 08.1	0.0
SNY				pmax	pmax		
	comp=Z,21nm,1.2s						
TLY	Talaya	41.93	11	eP	P	05 46 12.1	+2.0
TLY				pmax	pmax		
	comp=Z,21nm,1.6s						
TLY				MLR	MLR		
	comp=Z,352nm,20.0s						
KSAR	Wonju Array Be	41.96	45	P	P	05 46 10.2	-0.4
KSRS	Korea Array	41.99	45	P	P	05 46 10.2	-0.7
	comp=Z,5.3nm,1.1s,baz=248,slow=9.1,SNR=7.8						
KSRS				LR	LR	06 03 02.1	
	comp=Z,374nm,19.1s,baz=237,slow=35						
IANJ	Anjilo	42.13	312	eP	P	05 46 12.2	-0.2
JNU	Nakatsue	42.26	52	eP	P	05 46 12.4	-0.8
	comp=Z,26nm,1.9s						
IZEF	Zefreh	42.28	308	eP	P	05 46 13.7	+0.1
ISHM	Shahmirzad	42.74	312	eP	P	05 46 18.9	+1.6
IFIR	Firoozkooh	43.06	311	eP	P	05 46 21.7	+1.7
IPIR	Pirpir	43.33	307	eP	P	05 46 23.1	+0.9
ZAA0	Zalesovo Array	43.39	354	eP	P	05 46 22.0	+0.1
ZALV	Zalesovo Beam	43.39	354	P	P	05 46 21.9	0.0
ZALV	Zalesovo Beam	43.39	354	P	P	05 46 21.9	0.0
ZALV	Zalesovo Beam	43.39	354	P	P	05 46 21.9	0.0
	comp=Z,33nm,0.8s,baz=177,slow=9.5,SNR=92						
IVRN	Varamin	43.56	310	eP	P	05 46 24.5	+0.8
IDMV	Damavand	43.57	311	eP	P	05 46 25.7	+1.6
IPRN	Peran	43.62	312	eP	P	05 46 26.2	+1.9
CN2	Changchun	43.97	35	eP	P	05 46 27.0	+0.2
CN2				epP	pP	05 46 36.8	+0.2
CN2				esP	sP	05 46 40.8	+0.3
CN2				PcP	PcP	05 48 12.4	+0.2
CN2				eS	S	05 52 56.8	+0.3
CN2				pmax	pmax		
	comp=Z,30nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,300nm,14.0s						
CN2				LR	LR		
	comp=E,300nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,15.0s						
NVS	Novosibirsk	44.44	353⇓	iP	P	05 46 29.0	-1.4
NVS				pmax	pmax		
	comp=Z,27nm,1.1s						
NVS				pmax	pmax		
	comp=N,13nm,0.9s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.8s						
RDF	Al-Radifah	44.94	300	eP	P	05 46 36.0	+1.2
RDF				AMb	AMB	05 46 37.4	
	comp=Z,52nm,0.9s						
VOSK	Vostochnaya	45.03	342	P	P	05 46 35.0	-0.1
VOSK				pmax	pmax		
	comp=Z,20nm,0.7s						
KRAR	Krasnoyarsk	45.12	1⇑	iP	P	05 46 36.6	+0.9
KRAR				pmax	pmax		
	comp=Z,20nm,0.4s						
NAY	Al-Naaiem	45.28	301	eP	P	05 46 38.4	+0.9
NAY				AMb	AMB	05 46 39.7	
	comp=Z,26nm,0.9s						
MIB	Mutribah	45.34	301	eP	P	05 46 39.0	+1.0
MIB				AMb	AMB	05 46 40.2	
	comp=Z,44nm,1.0s						
BVA0	Borovoye Array	45.47	342	i P	P	05 46 38.4	-0.2
BVA0				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BVAR	Borovoye Array	45.47	342	P	P	05 46 38.4	-0.2
BVAR						05 48 17.6	
BVAR	Borovoye Array	45.47	342	P	P	05 46 38.4	-0.2
BVAR				PcP	PcP	05 48 17.6	+0.4
BVAR	Borovoye Array	45.47	342	P	P	05 46 38.4	-0.2
	comp=Z,9.5nm,0.9s,baz=139,slow=8.4,SNR=4.6						
BVAR				PcP	PcP	05 48 17.6	+0.4
	comp=Z,3.2nm,0.7s,baz=137,slow=3.4,SNR=3.9						
BRVK	Borovoye	45.53	342	d iP	P	05 46 39.1	0.0
BRVK				pmax	pmax		
	comp=Z,17nm,1.1s						
BRVK	Borovoye	45.53	342	eP	P	05 46 39.0	-0.1
	comp=Z,14nm,1.0s						
RAYN	Ar Rayn	45.70	292	P	P	05 46 43.9	+2.9
	comp=Z,204nm,0.9s,SNR=8.5						
RAYN	Ar Rayn	45.70	292	eP	P	05 46 43.2	+2.3
	comp=Z,28nm,0.8s						
ZRNK	Zerenda	45.84	341	P	P	05 46 41.2	-0.3
ZRNK				pmax	pmax		
	comp=Z,13nm,0.9s						
AB31	Akbulak array	46.52	332	i P	P	05 46 47.9	+1.0
AB31				pmax	pmax		
	comp=Z,17nm,0.6s						
ABKAR	Akbulak array	46.52	332	eP	P	05 46 48.0	+1.0
	comp=Z,19nm,0.7s						
MDJ	Mudanjiang	46.86	37	P	P	05 46 50.7	+1.0
MDJ				pP	pP	05 46 59.3	-0.2
MDJ				sP	sP	05 47 03.2	-0.2
MDJ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,77nm,5.3s						
VLA	Vladivostok	47.47	40⇑	eP	P	05 46 54.7	+0.3
VLA				pmax	pmax		
	comp=Z,25nm,0.6s						
USRK	Ussuriysk Arra	48.09	39	P	P	05 46 58.5	-0.7
	comp=Z,2.3nm,0.7s,baz=252,slow=9.2,SNR=6.5						
AKTO	Aktyubinsk	48.24	332	P	P	05 47 00.6	+0.3
AKTO	Aktyubinsk	48.24	332	P	P	05 47 00.6	+0.3
AKTO	Aktyubinsk	48.24	332	P	P	05 47 00.6	+0.3
	comp=Z,8.9nm,0.6s,baz=99,slow=9.6,SNR=41						
MAT	Matsushiro	49.11	51	P	P	05 47 06.8	-0.5
MJAR	Matsushiro Arr	49.11	51	P	P	05 47 07.1	-0.2
MJAR				PcP	PcP	05 48 30.5	-0.1
MJAR	Matsushiro Arr	49.11	51	P	P	05 47 07.1	-0.2
	comp=Z,1.6nm,0.7s,baz=255,slow=7.0,SNR=6.9						
MJAR				PcP	PcP	05 48 30.5	-0.1
	comp=Z,4.1nm,0.7s,baz=227,slow=2.4,SNR=8.4						
MJAR				LR	LR	06 08 41.9	
	comp=Z,247nm,19.0s,baz=250,slow=37						
GNI	Garni	50.67	314	eP	P	05 47 20.3	+1.1
	comp=Z,44nm,1.1s						
KLR	Kul'dur	50.70	33	eP	P	05 47 15.3	-3.8
DGRG	David-gareji	50.73	315	P	P	05 47 21.6	+2.0
TBLG	Delisi	51.28	316	P	P	05 47 25.0	+1.3
TBLG	Delisi	51.28	316	eP	P	05 47 24.9	+1.3
DUS	Dusheti	51.44	316	P	P	05 47 30.1	+5.1
GUDG	Gudauri	51.74	316	P	P	05 47 29.5	+2.2
SVE	Sverdlovsk	51.81	339⇑	eP	P	05 47 28.1	+0.8
SVE				pmax	pmax		
	comp=Z,53nm,1.3s						
WRA	Warramunga Arr	51.93	126	P	P	05 47 28.3	-0.5
WRA	Warramunga Arr	51.93	126	P	P	05 47 28.3	-0.5
	comp=Z,5.7nm,0.5s,baz=306,slow=8.5,SNR=104						
WRAB	Tennant Creek	51.94	126	eP	P	05 47 28.2	-0.6
WRAB				pmax	pmax		
	comp=Z,26nm,0.6s						
WRAB	Tennant Creek	51.94	126	eP	P	05 47 28.2	-0.6
	comp=Z,26nm,0.6s						
WRAB	Tennant Creek	51.94	126	P	P	05 47 28.1	-0.7
	comp=Z,239nm,0.5s,SNR=17						
HABR	Khabarovsk	52.11	35	P	P	05 47 27.2	-2.5
HABR						05 49 25.5	
HABR				eS	S	05 54 49.2	-2.4
HABR				e*SS	sS	05 55 06.4	-1.6
HABR				eSSS	SSS	06 00 10.1	
HABR				pmax	pmax		
	comp=E,69nm,2.3s						
HABR				pmax	pmax		
	comp=Z,12nm,0.8s						
HABR				pmax	pmax		
	comp=N,30nm,2.3s						
HABR				MLR	MLR		
	comp=Z,239nm,21.0s						
ARU	Arti	52.27	337	d iP	P	05 47 31.1	+0.4
ARU						05 49 28.4	
ARU				S	S	05 54 56.2	+2.6
ARU				SS	SS	05 58 25.2	-6.2
ARU				pmax	pmax		
	comp=Z,58nm,1.7s						
CLNS	Chul'man	52.62	22	eP	P	05 47 34.3	+1.0
CLNS				pmax	pmax		
	comp=Z,20nm,0.9s						
CLNS				pmax	pmax		
	comp=N,10.0nm,1.0s						
CLNS				pmax	pmax		
	comp=E,11nm,1.0s						
KBZ	Khabaz	53.30	317	P	P	05 47 39.5	+1.0
KBZ	Khabaz	53.30	317	P	P	05 47 39.5	+1.0
KBZ	Khabaz	53.30	317	P	P	05 47 39.5	+1.0
	comp=E,12nm,1.0s,baz=140,slow=7.9,SNR=17						
KIV	Kislovodsk	53.53	317	eP	P	05 47 41.3	+0.9
KIV				pmax	pmax		
	comp=Z,66nm,1.0s						

AS31 Alice Springs 53.65 130 eP P 05 47 41.5 +0.1
ASAR Alice Springs 53.65 130 P P 05 47 41.0 -0.5
ASAR S S 05 55 10.0 -3.3
ASAR Alice Springs 53.65 130 P P 05 47 41.0 -0.5
comp=Z,10nm,0.7s,baz=306,slow=6.7,SNR=94
ASAR S S 05 55 10.0 -3.3
comp=Z,0.8nm,0.7s,baz=300,slow=13,SNR=6.8
SOKR Solikamsk 55.22 339c iP P 05 47 53.6 +1.4
SOKR pmax pmax
comp=Z,20nm,0.9s
SOKR MLR MLR
comp=Z,370nm,23.0s
KMBO Kilima Mbogo 55.39 261 eP P 05 47 54.7 +0.2
comp=Z,17nm,1.4s
KMBO Kilima Mbogo 55.39 261 P P 05 47 56.4 +1.9
comp=Z,3.6nm,0.6s,baz=59,slow=11,SNR=9.7
SOC Sochi 55.40 316 iP P 05 47 54.1 +0.3
SOC pmax pmax
comp=Z,23nm,1.0s
YSS Yuzh-Sakhalins 56.06 40 eP P 05 47 59.5 +1.0
YSS e 05 48 14.0
VRHR Novokhopersk 57.16 325 eP P 05 48 06.2 0.0
VRHR pmax pmax
comp=Z,60nm,0.7s
VRHR pmax pmax
comp=N,20nm,1.3s
VRHR pmax pmax
comp=E,40nm,0.9s
YAK Yakutsk 58.06 20 eP P 05 48 10.7 -1.6
YAK e*PP pP 05 48 16.9 -5.5
YAK e 05 49 07.9
YAK e 05 50 23.5
YAK eS S 05 56 07.3 -3.5
YAK e*SS sS 05 56 26.1 -1.2
YAK e 05 57 51.1
YAK eSS SS 06 00 06.3 +4.0
YAK pmax pmax
comp=Z,22nm,0.8s
YAK pmax pmax
comp=E,15nm,1.3s
YAK pmax pmax
comp=N,10.0nm,1.0s
YAK pmax pmax
comp=Z,9.0nm,0.5s
YAK pmax pmax
comp=N,6.0nm,0.8s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK smax smax
comp=N,51nm,3.0s
YAK smax smax
comp=E,60nm,2.3s
VORD Divnogorie 58.44 324 eP P 05 48 13.3 -1.9
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,20nm,0.6s
VORD MLR MLR
comp=Z,190nm,19.0s
VORD MLR MLR
comp=N,380nm,20.0s
VORD MLR MLR
comp=E,170nm,21.0s
VSR Storozhevoye 58.62 324 eP P 05 48 15.9 -0.5
VSR pmax pmax
comp=Z,20nm,0.8s
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,40nm,1.1s
VSR MLR MLR
comp=Z,510nm,29.0s
VSR MLR MLR
comp=N,380nm,25.0s
VSR MLR MLR
comp=E,330nm,23.0s
BR131 Keskin Array S 58.69 310 eP P 05 48 16.8 -0.7
comp=E,8.4nm,0.8s
BRTR Keskin Array B 58.69 310 P P 05 48 16.4 -1.1
BRTR Keskin Array B 58.69 310 P P 05 48 16.4 -1.1
comp=E,8.8nm,0.7s,baz=126,slow=8.0,SNR=54
PMG Port Moresby 58.73 108 epP pP 05 48 29.5 +1.7
MOS Moscow 61.34 329 eP P 05 48 31.5 -3.5
MOS e 05 49 14.5
MOS pmax pmax
comp=Z,72nm,1.1s
MOS pmax pmax
comp=Z,100nm,1.0s
OBN Obninsk 61.63 328⇓iP P 05 48 33.9 -3.1
OBN i 05 48 42.7
OBN i 05 49 14.5
OBN e 05 50 53.2
OBN pmax pmax
comp=Z,47nm,1.2s
KLMR Klimovskoe 62.78 334d iP P 05 48 45.0 +0.3
KLMR pmax pmax
comp=Z,90nm,1.6s
CFR Carcaliu 63.82 315 ⇓P P 05 48 52.0 +0.2
CFR Carcaliu 63.82 315⇓iP P 05 48 52.0 +0.2
STKA Stephens Creek 63.87 134 P P 05 48 52.6 +0.3
STKA Stephens Creek 63.87 134 P P 05 48 52.6 +0.3
comp=Z,5.4nm,0.7s,baz=311,slow=4.7,SNR=17
AK02 Malin Array Si 64.37 321 eP P 05 48 54.5 -0.8
AKASG Malin Array Be 64.37 321ceP P 05 48 54.5 -0.8
AKASG pmax pmax
comp=Z,9.0nm,0.6s
AKASG Malin Array Be 64.37 321 P P 05 48 54.0 -1.3
AKASG Malin Array Be 64.37 321 P P 05 48 54.0 -1.3
comp=Z,8.5nm,0.7s,baz=89,slow=5.1,SNR=29
AK01 Malin Array Si 64.37 321 eP P 05 48 54.5 -0.8
KIEV Kiev 64.38 321 eP P 05 48 54.6 -0.8
KIEV pmax pmax
comp=Z,14nm,0.9s
KIEV Kiev 64.38 321 eP P 05 48 54.6 -0.8
comp=Z,14nm,0.9s
SANT Santorini 64.55 305 eP P 05 48 55.0 -1.9
comp=Z,23nm,0.8s
TIXI Tiksi 64.89 12d iP P 05 48 57.3 -1.0
TIXI pmax pmax
comp=Z,40nm,1.7s
VRI Vrincioaia 64.92 316 ⇓P P 05 49 00.4 +1.3
VRI Vrincioaia 64.92 316⇓iP P 05 49 00.4 +1.3
PLOR Plostina 64.97 316 ⇑P P 05 49 00.4 +1.0
PLOR Plostina 64.97 316⇑iP P 05 49 00.4 +1.0
TMCR Tamitsa 65.01 337 eP P 05 48 59.0 -0.2
TMCR e 05 49 12.0
TMCR pmax pmax
comp=Z,19nm,0.4s
TESR Tescani 65.10 316⇑iP P 05 49 00.5 +0.3
KDZ Kurdzhali 65.19 311 eP P 05 49 00.5 -0.4
MLR Muntele Rosu 65.39 315⇑iP P 05 49 03.4 +1.1
PVL Pavlikeni 65.47 313 eP P 05 49 02.9 +0.3
MTUR Matau 65.97 315 ⇓P P 05 49 06.6 +0.7
MTUR Matau 65.97 315⇓iP P 05 49 06.6 +0.7
VOIR 66.01 315 ⇑P P 05 49 06.4 +0.2
VOIR 66.01 315⇑iP P 05 49 06.4 +0.2
BURAR Bucovina Array 66.26 317⇓iP P 05 49 08.4 +0.6
BUR08 Bucovina Ar. S 66.28 317 eP P 05 49 08.2 +0.3
MPEP Malo Peshtene 66.64 313 eP P 05 49 10.4 +0.2
NACGM Naroch 66.88 325 e P 05 49 09.0 -2.4
LOT Lotru 66.90 315⇑iP P 05 49 12.0 +0.1
VTS Vitosha 66.93 312 ⇓P P 05 49 12.0 -0.3
VTS Vitosha 66.93 312 eP P 05 49 10.7 -1.6
KKB Krupnik 66.94 311 eP P 05 49 10.7 -1.5
PETK Petropavlovsk- 67.10 37 P P 05 49 11.5 -1.4
PETK Petropavlovsk- 67.10 37 P P 05 49 11.5 -1.4
PETK Petropavlovsk- 67.10 37 P P 05 49 11.5 -1.4
comp=Z,1.2nm,0.6s,baz=243,slow=4.7,SNR=3.4
JOF Joensuu 67.18 334 ep P 05 49 13.5 +0.3
comp=Z,40nm,0.7s
JOF Joensuu 67.18 334 eP P 05 49 13.5 +0.3
JOF pmax pmax
comp=Z,40nm,0.7s
CJR Cluj-Napoca 67.20 316⇓iP P 05 49 14.6 +0.8
LVV L'vov 67.43 320 eP P 05 49 14.4 -0.7
GZR Gura Zlata 67.58 315⇓iP P 05 49 16.8 +0.6
DRGR 67.82 316 ⇑P P 05 49 18.3 +0.6
DRGR 67.82 316⇑iP P 05 49 18.3 +0.6
LSZ Lusaka 68.00 249 eP P 05 49 20.8 +1.4
comp=Z,12nm,0.9s
LVZ Lovozero 68.00 340d iP P 05 49 18.5 +0.1
LVZ pmax pmax
comp=Z,30nm,1.1s

TRPA Tarpa 68.12 318⇓iP P 05 49 19.9 +0.5
KWP Kalwaria Pacla 68.24 319 eP P 05 49 20.5 +0.3
KWP pmax pmax
comp=Z,51nm,0.6s
KWP Kalwaria Pacla 68.24 319 eP P 05 49 20.5 +0.3
comp=Z,51nm,0.6s
KWP Kalwaria Pacla 68.24 319⇑iP P 05 49 19.8 -0.4
KWP Kalwaria Pacla 68.24 319 eP P 05 49 20.6 +0.3
APA Apatity 68.28 339⇑eP P 05 49 21.0 +1.0
APA pmax pmax
comp=Z,39nm,1.0s
APA MLR MLR
comp=Z,600nm,20.0s
KOLS Kolonicke sedl 68.42 318 eP P 05 49 21.7 +0.4
KOLS pmax pmax
comp=Z,8.0nm,1.2s
KOLS Kolonicke sedl 68.42 318 eP P 05 49 21.7 +0.4
KOLS e 05 49 26.4
KOLS epP pP 05 49 30.3 -1.2
SUW Suwalki 68.73 324 eP P 05 49 22.6 -0.5
SUW Suwalki 68.73 324 eP P 05 49 22.6 -0.5
SUW Suwalki 68.73 324 eP P 05 49 22.7 -0.4
CRVS Cervenica-Dubn 68.94 318 eP P 05 49 23.0 -1.6
CRVS pmax pmax
comp=Z,18nm,1.2s
CRVS Cervenica-Dubn 68.94 318 eP P 05 49 23.0 -1.6
CRVS e 05 49 29.7
CRVS epP pP 05 49 34.7 -0.1
FIA1 FINESS Array S 69.01 332 eP P 05 49 24.8 +0.1
FINES FINESS Array B 69.01 332 P P 05 49 24.4 -0.3
FINES FINESS Array B 69.01 332 P P 05 49 24.4 -0.3
comp=Z,26nm,0.7s,baz=98,slow=8.6,SNR=40
KAF Kangasniemi 69.10 333 ep P 05 49 25.2 -0.1
comp=Z,18nm,0.8s
KAF Kangasniemi 69.10 333 eP P 05 49 25.2 -0.1
KAF pmax pmax
comp=Z,18nm,0.8s
STHS Stebnicka Huta 69.16 319 eP P 05 49 26.4 +0.5
STHS pmax pmax
comp=Z,7.0nm,0.9s
STHS Stebnicka Huta 69.16 319 eP P 05 49 26.4 +0.5
STHS e 05 49 32.8
STHS epP pP 05 49 36.3 +0.2
KECS Kecovo 69.53 318 eP P 05 49 28.5 +0.3
KECS pmax pmax
comp=Z,5.0nm,0.8s
KECS Kecovo 69.53 318 eP P 05 49 28.5 +0.3
KECS epP pP 05 49 35.0 -3.5
NIE Niedzica 69.76 319 eP P 05 49 30.8 +1.1
NIE Niedzica 69.76 319 eP P 05 49 30.8 +1.1
PSZ Piszkesteto 69.86 317 eP P 05 49 29.9 -0.5
PSZ pmax pmax
comp=Z,17nm,1.2s
PSZ Piszkesteto 69.86 317 eP P 05 49 29.9 -0.5
comp=Z,17nm,1.2s
PSZ Piszkesteto 69.86 317⇓iP P 05 49 30.4 0.0
OJC Ojcow 70.19 320 eP P 05 49 32.6 +0.3
OJC pmax pmax
comp=Z,23nm,0.8s
OJC Ojcow 70.19 320 eP P 05 49 32.5 +0.3
comp=Z,23nm,0.8s
OJC Ojcow 70.19 320 eP P 05 49 32.4 +0.2
PKSM Moragy 70.55 315 ⇓P P 05 49 34.2 -0.3
PKSM Moragy 70.55 315⇓iP P 05 49 34.2 -0.3
VYHS Vyhne 70.62 318 eP P 05 49 35.0 +0.1
VYHS pmax pmax
comp=Z,5.0nm,0.9s
VYHS Vyhne 70.62 318 eP P 05 49 35.0 +0.1
CAN Canberra 70.93 133 P P 05 49 36.6 -0.5
CAN Canberra 70.93 133 P P 05 49 36.6 -0.5
OKC Ostrava-Krasne 71.20 319 eP P 05 49 38.7 +0.3
OKC MLR MLR
comp=Z,400nm,23.3s
OKC Ostrava-Krasne 71.20 319 eP P 05 49 38.7 +0.3
OKC AMS AMS 06 34 30.0
comp=Z,400nm,23.3s
KEV Kevo 71.29 341 ep P 05 49 37.8 -0.7
comp=Z,7.5nm,0.7s
KEV Kevo 71.29 341 eP P 05 49 39.3 +0.8
KEV pmax pmax
comp=Z,46nm,1.4s
KEV Kevo 71.29 341 eP P 05 49 39.3 +0.8
comp=Z,46nm,1.4s
MORC Moravsky Berou 71.59 319 eP P 05 49 40.8 0.0
MORC pmax pmax
comp=Z,13nm,0.9s
MORC Moravsky Berou 71.59 319 eP P 05 49 40.8 0.0
comp=Z,13nm,0.9s
MORC Moravsky Berou 71.59 319⇑iP P 05 49 41.4 +0.6
TIP Timpagrande 71.59 308 eP P 05 49 41.0 -0.1
comp=Z,11nm,1.0s
ARCES ARCESS Array B 71.71 340 P P 05 49 41.6 +0.5
ARCES ARCESS Array B 71.71 340 P P 05 49 41.6 +0.5
comp=Z,14nm,0.8s,baz=98,slow=6.5,SNR=55
ARCES LR LR 06 27 32.9
comp=Z,702nm,20.9s,baz=57,slow=41
ARE0 ARCESS Array S 71.71 340 eP P 05 49 41.6 +0.5
ZST Bratislava 71.75 317 eP P 05 49 40.6 -1.1
ZST pmax pmax
comp=Z,13nm,0.9s
ZST Bratislava 71.75 317 eP P 05 49 40.6 -1.1
KOGS Kog 72.22 315 iP P 05 49 44.6 0.0
CEL Celeste 72.26 307 eP P 05 49 45.8 +0.7
comp=Z,32nm,0.9s
CUC Castrocucco 72.33 309 eP P 05 49 45.3 -0.2
comp=Z,15nm,1.3s
DPC Dobruska-Polom 72.42 319 eP P 05 49 46.5 +0.7
DPC e 05 49 55.4
DPC Dobruska-Polom 72.42 319 eP P 05 49 46.5 +0.7
DPC epP pP 05 49 55.4 -0.7
KSP Ksiaz 72.47 320⇓eP P 05 49 46.7 +0.7
KSP Ksiaz 72.47 320 eP P 05 49 46.7 +0.7
CONA Conrad Observa 72.56 317⇓iP P 05 49 46.7 -0.1
comp=Z,7.5nm,1.0s
UPC Upice 72.63 320 eP P 05 49 47.8 +0.8
UPC e 05 49 56.5
UPC Upice 72.63 320 eP P 05 49 47.8 +0.8
UPC epP pP 05 49 56.5 -0.8
ARSA Arzberg 72.76 316⇑iP P 05 49 47.9 +0.1
comp=Z,9.4nm,0.7s
BOJS Bojanci 72.87 314 iP P 05 49 48.4 -0.1
TREC Trest 72.89 318 AMS AMS 06 40 30.0
comp=Z,500nm,18.7s
PERS Pernice 73.01 316 iP P 05 49 49.5 +0.2
SOKA Soboth 73.07 316⇑iP P 05 49 49.9 +0.1
comp=Z,20nm,1.2s
OBKA Obir 73.39 315⇑iP P 05 49 52.2 +0.5
comp=Z,11nm,0.8s
LJU Ljubljana 73.40 315 eP P 05 49 51.9 +0.3
PRU Pruhonice 73.54 319 eP P 05 49 52.8 +0.4
PRU e 05 50 01.8
PRU MLR MLR
comp=Z,600nm,20.5s
PRU Pruhonice 73.54 319 eP P 05 49 52.8 +0.4
PRU epP pP 05 50 01.8 -0.9
PRU AMS AMS 06 35 50.0
comp=Z,600nm,20.5s
LBTB Lobatse 73.54 240 eP P 05 49 55.0 +2.1
comp=Z,16nm,0.7s
LBTB epP pP 05 50 01.6 -1.7
PVCC Panska Ves 73.55 320 eP P 05 49 53.1 +0.7
PVCC MLR MLR
comp=Z,600nm,20.4s
PVCC Panska Ves 73.55 320 eP P 05 49 53.1 +0.7
PVCC AMS AMS 06 38 00.0
comp=Z,600nm,20.4s
PRA Prague 73.61 319 P P 05 49 53.0 +0.2
BSD Bornholm Skovb 73.64 324 iP P 05 49 52.2 -0.6
BSD pmax pmax
comp=Z,21nm,0.7s
BSD MLR MLR
comp=Z,620nm,21.0s
BSD Bornholm Skovb 73.64 324 iP P 05 49 52.2 -0.6
comp=Z,21nm,0.7s
BSD
comp=Z,620nm,21.0s
CADS Cadrg 73.95 315 iP P 05 49 54.6 -0.3
BRG Berggiesshubel 73.96 320 iP P 05 49 55.4 +0.5
comp=Z,17nm,0.8s
BRG e 05 52 49.4
comp=Z,6.1nm,1.0s
BRG Berggiesshubel 73.96 320 eP P 05 49 55.4 +0.5
comp=Z,17nm,0.8s
BRG epP pP 05 50 04.2 -0.9

BRG Berggiesshubel 73.96 320 iP P 05 49 55.3 +0.5
BRG e 05 52 49.4
BRG pmax pmax
comp=Z,17nm,0.8s
BRG pmax pmax
comp=Z,6.0nm,1.0s
MYKA Terra Mystica 74.02 315⇓iP P 05 49 55.3 0.0
comp=Z,8.6nm,0.9s
GEC2 GERESS Array S 74.04 318 eP P 05 49 55.8 +0.3
comp=Z,14nm,0.8s
GEC2 GERESS Array S 74.04 318 eP P 05 49 55.8 +0.3
GEC2 pmax pmax
comp=Z,14nm,0.8s
GERES GERESS Array B 74.04 318 P P 05 49 55.4 -0.1
GERES GERESS Array B 74.04 318 P P 05 49 55.4 -0.1
comp=Z,8.6nm,0.7s,baz=81,slow=6.1,SNR=57
KHC Kasperske Hory 74.13 318 eP P 05 49 55.9 0.0
KHC e 05 50 05.1
KHC e 05 50 12.5
KHC MLR MLR
comp=Z,600nm,21.2s
KHC Kasperske Hory 74.13 318 eP P 05 49 55.9 0.0
KHC epP pP 05 50 05.1 -1.1
KHC esP sP 05 50 12.5 +2.5
KHC AMS AMS 06 37 40.0
comp=Z,600nm,21.2s
KHC Kasperske Hory 74.13 318 eP P 05 49 56.0 +0.1
comp=Z,7.9nm,0.7s
RUE Ruedersdorf 74.14 322 eP P 05 49 56.3 +0.5
comp=Z,72nm,1.3s
RUE epP pP 05 50 04.9 -1.2
KBA Koelnbreinsper 74.24 316⇑iP P 05 49 55.8 -0.9
comp=Z,10nm,1.1s
BILL Bilibino 74.31 22⇑iP P 05 49 56.4 -0.1
BILL i 05 50 01.9
BILL i 05 50 08.6
BILL i 05 52 41.8
BILL pmax pmax
comp=Z,15nm,1.6s
BILL Bilibino 74.31 22 eP P 05 49 55.9 -0.5
comp=Z,6.6nm,1.1s
FBE Freiberg 74.34 320 eP P 05 49 57.8 +0.8
comp=Z,37nm,0.7s
FBE epP pP 05 50 06.7 -0.6
CLL Collm 74.57 320 eP P 05 49 58.4 0.0
comp=Z,12nm,0.8s
CLL epP pP 05 50 07.3 -1.4
CLL Collm 74.57 320⇓iP P 05 49 58.3 -0.1
CLL i *PP pP 05 50 07.4 -1.3
CLL pmax pmax
comp=Z,12nm,0.9s
CLL MLR MLR
comp=Z,700nm,20.4s
CLL Collm 74.57 320⇓iP P 05 49 58.3 -0.1
comp=Z,12nm,0.9s
CLL Lm MLR 05 38 00.0
comp=N,500nm,21.0s
CLL Lm MLR 05 38 00.0
comp=E,200nm,20.0s
CLL Lm MLR 05 38 00.0
comp=Z,700nm,20.4s
CLL i pP pP 05 50 07.4 -1.3
WET Wettzell 74.59 318 eP P 05 49 59.0 +0.4
comp=Z,11nm,0.7s
WET epP pP 05 50 07.8 -1.1
WET Wettzell 74.59 318 eP P 05 49 59.0 +0.4
WET e*PP pP 05 50 07.8 -1.1
WET pmax pmax
comp=Z,11nm,0.7s
RJOB Jochberg 74.62 317 eP P 05 49 58.3 -0.5
comp=Z,11nm,1.2s
HFS Hagfors 74.72 330 P P 05 49 59.0 0.0
HFS Hagfors 74.72 330 P P 05 49 59.0 0.0
comp=Z,16nm,0.7s,baz=111,slow=7.9,SNR=44
ABTA Abfaltersbach 74.80 316⇑iP P 05 49 59.6 -0.3
comp=Z,8.0nm,0.9s
TANN Tannenbergstha 74.89 319 eP P 05 50 00.7 +0.4
comp=Z,11nm,1.3s
TANN epP pP 05 50 09.5 -1.1
NKC Novy Kostel 74.89 319 eP P 05 50 00.8 +0.5
NKC MLR MLR
comp=Z,600nm,18.7s
NKC Novy Kostel 74.89 319 eP P 05 50 00.8 +0.5
NKC AMS AMS 06 40 00.0
comp=Z,600nm,18.7s
WERN Wernitzgruen 74.94 319 eP P 05 50 01.1 +0.5
comp=Z,9.0nm,0.8s
WERN epP pP 05 50 09.7 -1.2
GUNZ Gunzen 74.97 319 eP P 05 50 01.2 +0.4
comp=Z,11nm,0.7s
GUNZ epP pP 05 50 09.9 -1.2
WERD Werda 74.99 319 eP P 05 50 01.2 +0.4
comp=Z,12nm,0.7s
WERD epP pP 05 50 09.9 -1.3
ROTZ Rotzenmuhle 75.04 319 eP P 05 50 02.1 +1.0
comp=Z,23nm,1.1s
ROTZ epP pP 05 50 10.8 -0.7
PLN Plauen 75.09 319 eP P 05 50 01.7 +0.3
comp=Z,52nm,0.8s
PLN epP pP 05 50 10.5 -1.2
BOSA Boshof 75.11 236 P P 05 50 03.6 +1.6
BOSA Boshof 75.11 236 P P 05 50 03.6 +1.6
comp=Z,20nm,0.7s,baz=79,slow=5.6,SNR=38
MANZ Manzenberg 75.11 319 eP P 05 50 02.4 +0.9
comp=Z,59nm,1.6s
MANZ epP pP 05 50 11.2 -0.7
NEUB Neuenburg 75.34 320 eP P 05 50 03.1 +0.3
comp=Z,16nm,0.9s
NEUB epP pP 05 50 11.8 -1.3
WTTA Wattenberg 75.40 316⇓iP P 05 50 02.9 -0.6
comp=Z,16nm,0.7s
MOX Moxa 75.43 320 eP P 05 50 03.8 +0.4
comp=Z,12nm,0.7s
MOX Moxa 75.43 320 eP P 05 50 03.8 +0.4
MOX pmax pmax
comp=Z,12nm,0.7s
GRF Grafenberg Arr 75.68 319 eP P 05 50 05.6 +0.8
comp=Z,34nm,1.2s
GRF eL L 06 40 59.7
comp=Z,672nm,19.8s
GRF Grafenberg Arr 75.68 319 eP P 05 50 05.6 +0.8
GRF pmax pmax
comp=Z,34nm,1.2s
RETA Reutte 76.00 316⇑iP P 05 50 06.2 -0.5
comp=Z,12nm,0.6s
NB2 NORSAR Subarra 76.01 330 P P 05 50 05.9 -0.5
comp=Z,14nm,0.8s,baz=97,slow=5.3
NB2 NORSAR Subarra 76.01 330 P P 05 50 05.9 -0.5
baz=97,slow=5.3
NOA NORSAR Array B 76.01 330 P P 05 50 06.0 -0.5
NOA NORSAR Array B 76.01 330 P P 05 50 06.0 -0.5
comp=Z,9.7nm,0.7s,baz=94,slow=5.6,SNR=58
FETA Feichten 76.02 316⇓iP P 05 50 06.8 -0.2
comp=Z,12nm,0.8s
CLZ Clausthal 76.22 321 eP P 05 50 08.4 +0.5
comp=Z,24nm,0.7s
CLZ Clausthal 76.22 321 eP P 05 50 08.4 +0.5
CLZ pmax pmax
comp=Z,24nm,0.7s
BSEG Bad Segeberg 76.27 323 eP P 05 50 08.7 +0.7
comp=Z,58nm,1.0s
BSEG epP pP 05 50 17.6 -0.7
BSEG Bad Segeberg 76.27 323 eP P 05 50 08.7 +0.7
BSEG e*PP pP 05 50 17.6 -0.7
BSEG pmax pmax
comp=Z,58nm,1.0s
FUORN Ofenpass-Fuorn 76.35 315 eP P 05 50 09.3 +0.3
comp=Z,6.0nm,0.8s
FUORN epP pP 05 50 18.5 -0.8
NRDL Niedersach Rie 76.39 322 eP P 05 50 09.3 +0.7
comp=Z,23nm,1.2s
UBBA Unterbreizbach 76.46 320 eP P 05 50 09.5 +0.4
comp=Z,4.0nm,0.6s
DAVA Damuels 76.60 316⇓iP P 05 50 10.0 -0.3
comp=Z,20nm,0.6s
KONO Kongsberg 76.76 329 eP P 05 50 10.6 -0.1
KONO pmax pmax
comp=Z,38nm,1.6s
KONO Kongsberg 76.76 329 eP P 05 50 10.6 -0.1
comp=Z,38nm,1.6s
MUD Monsted U'grnd 76.94 326 iP P 05 50 12.6 +0.9
MUD pmax pmax
comp=Z,13nm,0.8s
MUD MLR MLR
comp=Z,650nm,20.0s
MUD Monsted U'grnd 76.94 326 iP P 05 50 12.6 +0.9

comp=Z,13nm,0.8s
MUD
comp=Z,650nm,20.0s
TUE Stuetta 76.99 315 *e*P **P** 05 50 12.3 -0.2
comp=Z,9.4nm,0.8s
PGF Pioggiola 77.41 311 *e*P **P** 05 50 14.4 -0.5
PGF Pioggiola 77.41 311 *e*P **P** 05 50 14.4 -0.5
PGF Pioggiola 77.41 311 *e*P **P** 05 50 14.4 -0.5
TNS Taunus Mts 77.46 319 *e*P **P** 05 50 15.2 +0.3
comp=Z,16nm,0.8s
TNS Taunus Mts 77.46 319 *e*P **P** 05 50 15.2 +0.3
TNS pmax pmax
comp=Z,16nm,0.8s
KBS Kingsbay 77.50 349 *de*P **P** 05 50 14.5 -0.1
KBS pmax pmax
comp=Z,17nm,1.1s
KEST Kesra 77.59 304 *e*P **P** 05 50 15.4 -0.6
KEST Kesra 77.59 304 P **P** 05 50 16.1 +0.1
comp=Z,8.8nm,0.9s,baz=105,slow=1.9,SNR=26
BFO Black Forest 77.61 317 *e*P **P** 05 50 15.6 -0.2
comp=Z,14nm,1.0s
BFO Black Forest 77.61 317 *e*P **P** 05 50 15.6 -0.2
BFO pmax pmax
comp=Z,14nm,1.0s
BFO Black Forest 77.61 317 *e*P **P** 05 50 15.2 -0.5
comp=Z,10nm,0.9s
IBBN Ibbenburen 77.83 321 *e*P **P** 05 50 17.5 +0.7
comp=Z,42nm,1.2s
FELD Feldberg im Sc 77.85 317 *e*P **P** 05 50 17.0 -0.2
LANF Langenberg 77.93 318 *e*P **P** 05 50 17.9 +0.4
LANF Langenberg 77.93 318 *e*P **P** 05 50 17.9 +0.4
LANF Langenberg 77.93 318 *e*P **P** 05 50 17.9 +0.4
BUG Bochum--Univer 78.17 320 *e*P **P** 05 50 19.2 +0.5
comp=Z,44nm,1.6s
BBS Basel-Blauen 78.20 316 *e*P **P** 05 50 20.1 +1.0
BBS Basel-Blauen 78.20 316 *e*P **P** 05 50 20.1 +1.0
CDF Champ du Feu 78.31 317 *e*P **P** 05 50 19.3 -0.4
comp=Z,24nm,0.9s
CDF Champ du Feu 78.31 317 *e*P **P** 05 50 19.3 -0.4
CDF pmax pmax
comp=Z,24nm,0.9s
CDF Champ du Feu 78.31 317 *e*P **P** 05 50 19.3 -0.4
comp=Z,24nm,0.9s
RUP Ruppelstein 78.38 319 *e*P **P** 05 50 20.1 +0.1
RUP Ruppelstein 78.38 319 *e*P **P** 05 50 20.1 +0.1
SENIN Lac Senin/Sane 78.41 315 *e*P **P** 05 50 20.9 +0.4
comp=Z,22nm,0.9s
MOF Molkenrain 78.43 317 *e*P **P** 05 50 20.3 -0.1
SBF Sospel 78.47 313 *e*P **P** 05 50 20.5 -0.2
comp=Z,27nm,0.8s
SBF Sospel 78.47 313 *e*P **P** 05 50 20.5 -0.2
SBF pmax pmax
comp=Z,27nm,0.8s
SBF Sospel 78.47 313 *e*P **P** 05 50 20.5 -0.2
comp=Z,27nm,0.8s
HINF Hinteralfeld 78.62 317 *e*P **P** 05 50 20.7 -0.7
HINF Hinteralfeld 78.62 317 *e*P **P** 05 50 20.7 -0.7
HINF Hinteralfeld 78.62 317 *e*P **P** 05 50 20.7 -0.7
LPG La Plagne 78.85 314 *e*P **P** 05 50 23.1 +0.1
comp=Z,36nm,0.7s
LPG La Plagne 78.85 314 *e*P **P** 05 50 23.1 +0.1
LPG pmax pmax
comp=Z,36nm,0.7s
LPG La Plagne 78.85 314 *e*P **P** 05 50 23.1 +0.1
comp=Z,36nm,0.7s
LPL La Plagne 78.86 314 *e*P **P** 05 50 23.1 +0.1
comp=Z,50nm,0.7s
LPL La Plagne 78.86 314 *e*P **P** 05 50 23.1 +0.1
LPL pmax pmax
comp=Z,50nm,0.7s
LPL La Plagne 78.86 314 *e*P **P** 05 50 23.1 +0.1
comp=Z,50nm,0.7s
MBDF Montbardon 78.89 314 *e*P **P** 05 50 22.3 -0.8
comp=Z,22nm,0.8s
MBDF Montbardon 78.89 314 *e*P **P** 05 50 22.3 -0.8
MBDF pmax pmax
comp=Z,22nm,0.8s
MBDF Montbardon 78.89 314 *e*P **P** 05 50 22.3 -0.8
comp=Z,22nm,0.8s
RSL Roselend 78.92 315 *e*P **P** 05 50 23.3 +0.1
RSL Roselend 78.92 315 *e*P **P** 05 50 23.3 +0.1
RSL Roselend 78.92 315 *e*P **P** 05 50 23.3 +0.1
BNI Bardonecchia 78.93 314 *e*P **P** 05 50 23.3 0.0
BNI pmax pmax
comp=Z,12nm,0.8s
BNI Bardonecchia 78.93 314 *e*P **P** 05 50 23.3 0.0
comp=Z,12nm,0.8s
HAU Haudompre 78.95 317 *e*P **P** 05 50 22.9 -0.3
comp=Z,47nm,0.9s
HAU *e*R
comp=Z,641nm,23.0s
HAU Haudompre 78.95 317 *e*P **P** 05 50 22.9 -0.3
HAU pmax pmax
comp=Z,47nm,0.9s
HAU Haudompre 78.95 317 *e*P **P** 05 50 22.9 -0.3
comp=Z,47nm,0.9s
FRF La Foret Royal 79.06 312 *e*P **P** 05 50 23.7 -0.2
comp=Z,44nm,1.1s
FRF La Foret Royal 79.06 312 *e*P **P** 05 50 23.7 -0.2
FRF pmax pmax
comp=Z,44nm,1.1s
FRF La Foret Royal 79.06 312 *e*P **P** 05 50 23.7 -0.2
comp=Z,44nm,1.1s
THEF They Montfort 79.18 317 *e*P **P** 05 50 24.2 -0.2
THEF They Montfort 79.18 317 *e*P **P** 05 50 24.2 -0.2
THEF They Montfort 79.18 317 *e*P **P** 05 50 24.2 -0.2
LMR La Mourre 79.18 312 *e*P **P** 05 50 24.4 -0.1
LMR La Mourre 79.18 312 *e*P **P** 05 50 24.4 -0.1
LMR La Mourre 79.18 312 *e*P **P** 05 50 24.4 -0.1
CABF La Chapelle 79.23 316 *e*P **P** 05 50 25.1 +0.3
comp=Z,33nm,0.8s
CABF La Chapelle 79.23 316 *e*P **P** 05 50 25.1 +0.3
CABF pmax pmax
comp=Z,33nm,0.8s
CABF La Chapelle 79.23 316 *e*P **P** 05 50 25.1 +0.3
comp=Z,33nm,0.8s
PAGF Fort de Pagny 79.33 318 *e*P **P** 05 50 25.2 0.0
comp=Z,6.6nm,0.6s
PAGF Fort de Pagny 79.33 318 *e*P **P** 05 50 25.2 0.0
comp=Z,6.6nm,0.6s
ORIF Oris-en-Rattie 79.50 314 *e*P **P** 05 50 25.9 -0.5
comp=Z,12nm,0.7s
ORIF *e*R
comp=Z,605nm,21.5s
ORIF Oris-en-Rattie 79.50 314 *e*P **P** 05 50 25.9 -0.5
ORIF pmax pmax
comp=Z,12nm,0.7s
ORIF Oris-en-Rattie 79.50 314 *e*P **P** 05 50 25.9 -0.5
comp=Z,12nm,0.7s
OG35 Corcelles 79.63 315 *e*P **P** 05 50 27.1 +0.1
GIVF Givet 79.80 319 *e*P **P** 05 50 27.7 0.0
GIVF Givet 79.80 319 *e*P **P** 05 50 27.7 0.0
GIVF Givet 79.80 319 *e*P **P** 05 50 27.7 0.0
SMRF Simiane la Rot 79.80 313 *e*P **P** 05 50 28.4 +0.5
comp=Z,12nm,0.7s
SMRF Simiane la Rot 79.80 313 *e*P **P** 05 50 28.4 +0.5
comp=Z,12nm,0.7s
SFTF Sexfontaines 79.81 317 *e*P **P** 05 50 27.8 -0.1
comp=Z,69nm,0.8s
SFTF Sexfontaines 79.81 317 *e*P **P** 05 50 27.8 -0.1
comp=Z,69nm,0.8s
BAIF Baives 80.20 319 *e*P **P** 05 50 30.1 +0.2
comp=Z,40nm,0.9s
BAIF Baives 80.20 319 *e*P **P** 05 50 30.1 +0.2
BAIF pmax pmax
comp=Z,40nm,0.9s
BAIF Baives 80.20 319 *e*P **P** 05 50 30.1 +0.2
comp=Z,40nm,0.9s
VIVF Saint-Julien-l 80.36 314 *e*P **P** 05 50 31.1 +0.1
comp=Z,42nm,0.7s
VIVF Saint-Julien-l 80.36 314 *e*P **P** 05 50 31.1 +0.1
VIVF pmax pmax
comp=Z,42nm,0.7s
VIVF Saint-Julien-l 80.36 314 *e*P **P** 05 50 31.1 +0.1
comp=Z,42nm,0.7s
SSB Saint Sauveur 80.42 314 *e*P **P** 05 50 31.2 0.0
SSB pmax pmax
comp=Z,13nm,0.6s
SSB Saint Sauveur 80.42 314 *e*P **P** 05 50 31.2 0.0
comp=Z,13nm,0.6s
SSB Saint Sauveur 80.42 314 *e*P **P** 05 50 31.3 0.0
LOR Lormes 80.69 316 *e*P **P** 05 50 32.5 -0.1
comp=Z,43nm,0.8s
LOR *e*R
comp=Z,781nm,22.0s
LOR Lormes 80.69 316 *e*P **P** 05 50 32.5 -0.1
comp=Z,43nm,0.8s
SMF Signal de Mont 80.77 316 *e*P **P** 05 50 32.8 -0.2
comp=Z,37nm,0.7s
SMF Signal de Mont 80.77 316 *e*P **P** 05 50 32.8 -0.2
SMF pmax pmax
comp=Z,37nm,0.7s
SMF Signal de Mont 80.77 316 *e*P **P** 05 50 32.8 -0.2
comp=Z,37nm,0.7s
MAW Mawson 80.90 191 P **P** 05 50 34.5 +1.4
MAW Mawson 80.90 191 P **P** 05 50 34.5 +1.4
comp=Z,3.8nm,0.7s,baz=35,slow=6.4,SNR=8.7
SSF Saint Saulge 80.95 316 *e*P **P** 05 50 33.9 -0.1
comp=Z,26nm,0.9s
SSF Saint Saulge 80.95 316 *e*P **P** 05 50 33.9 -0.1
SSF pmax pmax
comp=Z,26nm,0.9s
SSF Saint Saulge 80.95 316 *e*P **P** 05 50 33.9 -0.1
comp=Z,26nm,0.9s
LASF Ste Croix 81.03 313 *e*P **P** 05 50 35.0 +0.5
comp=Z,39nm,0.8s
LASF Ste Croix 81.03 313 *e*P **P** 05 50 35.0 +0.5
comp=Z,39nm,0.8s
LBL Lubilhac 81.33 314 *e*P **P** 05 50 37.4 +1.2
LBL Lubilhac 81.33 314 *e*P **P** 05 50 37.4 +1.2
LBL Lubilhac 81.33 314 *e*P **P** 05 50 37.4 +1.2
PYM Petit Puy Mans 81.44 315 *e*P **P** 05 50 37.2 +0.5
PYM Petit Puy Mans 81.44 315 *e*P **P** 05 50 37.2 +0.5
PYM Petit Puy Mans 81.44 315 *e*P **P** 05 50 37.2 +0.5
BGF Bois d'Agland 81.46 316 *e*P **P** 05 50 36.9 +0.2
comp=Z,40nm,0.8s
BGF Bois d'Agland 81.46 316 *e*P **P** 05 50 36.9 +0.2
BGF pmax pmax
comp=Z,40nm,0.8s
BGF Bois d'Agland 81.46 316 *e*P **P** 05 50 36.9 +0.2
comp=Z,40nm,0.8s
HYF Humbligny 81.52 316 *e*P **P** 05 50 37.5 +0.5
HYF Humbligny 81.52 316 *e*P **P** 05 50 37.5 +0.5
TCF Toulx Ste Croi 81.93 316 *e*P **P** 05 50 39.4 +0.2
comp=Z,19nm,0.8s
TCF Toulx Ste Croi 81.93 316 *e*P **P** 05 50 39.4 +0.2
TCF pmax pmax
comp=Z,19nm,0.8s
TCF Toulx Ste Croi 81.93 316 *e*P **P** 05 50 39.4 +0.2
comp=Z,19nm,0.8s
CAF Calviac 82.20 314 *e*P **P** 05 50 41.1 +0.4
comp=Z,20nm,0.8s
CAF Calviac 82.20 314 *e*P **P** 05 50 41.1 +0.4
CAF pmax pmax
comp=Z,20nm,0.8s
CAF Calviac 82.20 314 *e*P **P** 05 50 41.1 +0.4
comp=Z,20nm,0.8s
MTLF Montolieu 82.30 313 *e*P **P** 05 50 41.5 +0.3
comp=Z,43nm,0.8s
MTLF Montolieu 82.30 313 *e*P **P** 05 50 41.5 +0.3
MTLF pmax pmax
comp=Z,43nm,0.8s
MTLF Montolieu 82.30 313 *e*P **P** 05 50 41.5 +0.3
comp=Z,43nm,0.8s
TAM Tamanrasset 82.38 292 *e*P **P** 05 50 43.2 +1.0
TAM pmax pmax
comp=Z,30nm,1.4s
TAM Tamanrasset 82.38 292 *e*P **P** 05 50 43.2 +1.0
comp=Z,30nm,1.4s
RJF Les Rejaudoux 82.53 315 *e*P **P** 05 50 42.9 +0.5
comp=Z,58nm,1.0s
RJF *e*R
comp=Z,582nm,20.5s
RJF Les Rejaudoux 82.53 315 *e*P **P** 05 50 42.9 +0.5
RJF pmax pmax
comp=Z,58nm,1.0s
RJF Les Rejaudoux 82.53 315 *e*P **P** 05 50 42.9 +0.5
comp=Z,58nm,1.0s
LFF La Frestale 83.13 314 *e*P **P** 05 50 46.1 +0.6
LFF La Frestale 83.13 314 *e*P **P** 05 50 46.1 +0.6
LFF La Frestale 83.13 314 *e*P **P** 05 50 46.1 +0.6
LDF La Druitiere 83.18 318 *e*P **P** 05 50 45.5 -0.2
comp=Z,37nm,0.8s
LDF La Druitiere 83.18 318 *e*P **P** 05 50 45.5 -0.2
LDF pmax pmax
comp=Z,37nm,0.8s
LDF La Druitiere 83.18 318 *e*P **P** 05 50 45.5 -0.2
comp=Z,37nm,0.8s
FLN La Foliniere 83.39 318 *e*P **P** 05 50 46.7 0.0
comp=Z,26nm,0.8s
FLN *e*R
comp=Z,712nm,23.0s
FLN La Foliniere 83.39 318 *e*P **P** 05 50 46.7 0.0
FLN pmax pmax
comp=Z,26nm,0.8s
FLN La Foliniere 83.39 318 *e*P **P** 05 50 46.7 0.0
comp=Z,26nm,0.8s
MFF Saint Martin d 83.50 316 *e*P **P** 05 50 47.4 +0.1
comp=Z,45nm,0.7s
MFF Saint Martin d 83.50 316 *e*P **P** 05 50 47.4 +0.1
MFF pmax pmax
comp=Z,45nm,0.7s
MFF Saint Martin d 83.50 316 *e*P **P** 05 50 47.4 +0.1
comp=Z,45nm,0.7s
GRR Gorron 83.70 318 *e*P **P** 05 50 48.2 -0.1
GRR Gorron 83.70 318 *e*P **P** 05 50 48.2 -0.1
GRR Gorron 83.70 318 *e*P **P** 05 50 48.2 -0.1
EKA Eskdalemuir Ar 83.95 325 P **P** 05 50 50.0 +0.5
EKA Eskdalemuir Ar 83.95 325 P **P** 05 50 50.0 +0.5
comp=Z,7.9nm,0.6s,baz=92,slow=5.3,SNR=35
DAG Danmarks Havn 84.12 347 ⇓*i* P **P** 05 50 49.3 -0.6
DAG pmax pmax
comp=Z,4.0nm,0.7s
DAG MLR MLR
comp=Z,420nm,22.0s
DAG Danmarks Havn 84.12 347 ⇓*i* P **P** 05 50 49.3 -0.6
comp=Z,5.1nm,0.7s
DAG
comp=Z,370nm,22.0s
ETSF Etsaut 84.37 312 *e*P **P** 05 50 52.5 +0.5
comp=Z,28nm,1.1s
ETSF Etsaut 84.37 312 *e*P **P** 05 50 52.5 +0.5
ETSF pmax pmax
comp=Z,28nm,1.1s
ETSF Etsaut 84.37 312 *e*P **P** 05 50 52.5 +0.5
comp=Z,28nm,1.1s
SJPF Ste Jean 84.82 313 *e*P **P** 05 50 54.6 +0.4
SJPF Ste Jean 84.82 313 *e*P **P** 05 50 54.6 +0.4
SJPF Ste Jean 84.82 313 *e*P **P** 05 50 54.6 +0.4
ESDC Sonseca Array 87.49 310 P **P** 05 51 07.7 +0.2
ESDC Sonseca Array 87.49 310 P **P** 05 51 07.7 +0.2
comp=Z,2.3nm,0.5s,baz=77,slow=4.4,SNR=12
SCO Scoresbysund 87.54 342 *e*P **P** 05 51 08.0 +1.1
SCO *i* 05 51 18.2
SCO pmax pmax
comp=Z,4.0nm,1.0s
SCO MLR MLR
comp=Z,470nm,20.0s
SCO Scoresbysund 87.54 342 *i* P **P** 05 51 08.0 +1.1
comp=Z,3.6nm,1.0s
SCO *i* 05 51 18.2
SCO
comp=Z,460nm,20.0s
TORD Torodi Ar. Bea 87.57 283 P **P** 05 51 09.2 +1.0
TORD PP **PP** 05 54 34.9 +1.3
TORD PKKPbc **PKKPbc** 06 08 57.1 +0.6
TORD Torodi Ar. Bea 87.57 283 P **P** 05 51 09.2 +1.0
comp=Z,4.5nm,0.9s,baz=84,slow=4.5,SNR=25
TORD PP **PP** 05 54 34.9 +1.3
comp=Z,1.7nm,0.9s,baz=65,slow=7.5,SNR=6.5
TORD PKKPbc **PKKPbc** 06 08 57.1 +0.6
comp=Z,0.4nm,0.5s,baz=297,slow=2.7,SNR=6.3
MDT Midelt 89.44 303 P **P** 05 51 16.5 -0.4
MDT Midelt 89.44 303 P **P** 05 51 16.5 -0.4
comp=Z,3.4nm,0.9s,baz=76,slow=4.2,SNR=9.6
MVO Moncorvo 89.44 312 *e*P **P** 05 51 18.3 +1.6
comp=Z,42nm,1.6s
MVO *e*LQ LQ 06 31 04.9
MVO *e*LR LR 06 37 06.2
comp=Z,481nm,20.0s
MTE Manteigas 90.00 311 *e*P **P** 05 51 18.8 -0.5
comp=Z,54nm,1.6s
MTE *e*LQ LQ 06 32 34.8
MTE *e*LR LR 06 39 36.4
comp=Z,440nm,20.0s
PCBR Castelo Branco 90.09 311 *e*P **P** 05 51 20.5 +0.9
comp=Z,20nm,1.6s
PMRV Marv??o 90.12 310 *e*LR LR 06 35 24.8
comp=Z,460nm,18.0s
PBAR Barrancos 90.16 309 *e*P **P** 05 51 21.1 +1.1
comp=Z,35nm,1.2s
COLD Coldfoot 90.51 20 *e*P **P** 05 51 20.1 -0.9
comp=Z,28nm,2.2s
SUMG Summit 90.77 347 ⇓*i* P **P** 05 51 23.0 +0.4
SUMG *i* *PP **pP** 05 51 32.0 -1.1
SUMG pmax pmax
comp=Z,11nm,1.0s
SUMG MLR MLR
comp=Z,410nm,19.0s
SUMG Summit 90.77 347 *e*P **P** 05 51 22.7 +0.1
comp=Z,27nm,1.2s
SUMG Summit 90.77 347 ⇓*i* P **P** 05 51 23.0 +0.4
comp=Z,11nm,1.0s
SUMG *i* pP **pP** 05 51 32.0 -1.1
SUMG
comp=Z,410nm,19.0s
EVO Evora 90.81 309 *e*P **P** 05 51 23.9 +0.9
comp=Z,29nm,1.9s
PBEJ Beja 90.83 309 *e*P **P** 05 51 24.4 +1.3
comp=Z,31nm,1.7s
PMTG Montargil 90.84 310 *e*P **P** 05 51 23.9 +0.8
comp=Z,44nm,1.3s
PTOM Tomar 90.84 310 *e*P **P** 05 51 24.4 +1.3
comp=Z,37nm,1.8s
PVAQ Vaqueiros 90.87 308 *e*P **P** 05 51 24.8 +1.5
comp=Z,44nm,1.7s
PVAQ *e*LR LR 06 34 49.4
comp=Z,787nm,20.0s
PBDV Barranco-do-Ve 91.07 308 *e*P **P** 05 51 26.3 +2.0
comp=Z,59nm,1.8s
SVW2 Sparrevohn 91.26 27 *e*P **P** 05 51 26.4 +1.8
comp=Z,12nm,1.1s
PNCL Nicolau / Gran 91.31 309 *e*P **P** 05 51 26.9 +1.6
comp=Z,30nm,1.8s
PFVI Vila Bisbo 91.79 308 *e*P **P** 05 51 29.1 +1.5
comp=Z,76nm,1.3s
TRF Thorofare Moun 92.37 23 *e*P **P** 05 51 29.7 -0.2
MCK McKinley 92.75 23 *e*P **P** 05 51 31.9 +0.4
MCK pmax pmax
comp=Z,9.0nm,0.8s
MCK McKinley 92.75 23 *e*P **P** 05 51 31.9 +0.4
comp=Z,9.3nm,0.8s
SPU Mount Spurr 92.75 26 *e*P **P** 05 51 32.2 +0.6
ILAR Eielson Array 92.96 21 P **P** 05 51 31.1 -1.3
ILAR Eielson Array 92.96 21 P **P** 05 51 31.1 -1.3
comp=Z,2.7nm,0.7s,baz=301,slow=4.5,SNR=34
PMR Palmer 93.77 25 *e*P **P** 05 51 34.9 -1.3
PMR pmax pmax
comp=Z,6.0nm,0.7s
PMR Palmer 93.77 25 *e*P **P** 05 51 34.9 -1.3
comp=Z,5.7nm,0.7s
MENT Mentasta 95.15 22 *e*P **P** 05 51 43.0 +0.4
YKA Yellowknife Ar 104.14 12 Pdif **Pdif** 05 52 22.3 -0.4
YKA PP **PKiKP** 05 56 36.1 -3.5
YKA PKKPbc **PKKPbc** 06 08 10.2 -3.2
YKA Yellowknife Ar 104.14 12 Pdiff **Pdif** 05 52 22.3 -0.4
comp=Z,0.1nm,0.6s,baz=334,slow=4.1,SNR=4.2
YKA PP **PKiKP** 05 56 36.1 -3.5
comp=Z,0.4nm,0.8s,baz=338,slow=8.0,SNR=4.7
YKA PKKPbc **PKKPbc** 06 08 10.2 -3.2
comp=Z,0.3nm,0.8s,baz=155,slow=2.8,SNR=5.3
FFC Flin Flon 113.72 9*c* *i*PKIKP **PKiKP** 05 56 58.7 +0.9
MFID Camas Ranch 120.51 23 *e*PKPdf **PKPdf** 05 57 11.8 +0.4
SNOW Snow King Moun 122.26 19 *e*PKPdf **PKPdf** 05 57 15.6 +0.7
PDAR Pinedale Array 123.27 19 PKP **PKPdf** 05 57 16.7 -0.2
PDAR Pinedale Array 123.27 19 PKP **PKPdf** 05 57 16.7 -0.2
comp=Z,1.4nm,0.7s,baz=116,slow=2.1,SNR=13
NVAR Mina Array Bea 123.59 28 PKP **PKPdf** 05 57 18.7 +1.1
NVAR Mina Array Bea 123.59 28 PKP **PKPdf** 05 57 18.7 +1.1
comp=Z,2.4nm,0.6s,baz=323,slow=2.4,SNR=28
NV11 Mina Array Sit 123.66 28 *e*PKPdf **PKPdf** 05 57 18.5 +0.9
ECSD EROS Data Cent 125.21 7 *e*PKPdf **PKPdf** 05 57 20.0 -0.3
MVU Marysvale 126.12 23 *e*PKPdf **PKPdf** 05 57 23.8 +1.3
BNM Barren Site 132.04 21 *e*PKPdf **PKPdf** 05 57 34.3 +0.5
CLNB Carlsbad 134.68 19 *e*PKPdf **PKPdf** 05 57 35.7 -3.0
MNTX Cornudas Mount 134.70 21 *e*PKPdf **PKPdf** 05 57 39.2 +0.5
TXAR Lajitas Array 137.45 20 PKP **PKPdf** 05 57 44.2 +0.3
TXAR PP PP 06 00 38.6 +11
TXAR Lajitas Array 137.45 20 PKhKP PKPpre 05 57 31.7
comp=Z,0.1nm,0.5s,baz=194,slow=1.9,SNR=2.9
TXAR PKP **PKPdf** 05 57 44.2 +0.3
comp=Z,1.1nm,0.6s,baz=321,slow=1.2,SNR=14
TXAR PP PP 06 00 38.6 +11
comp=Z,1.2nm,1.2s,baz=49,slow=3.8,SNR=4.9
JCT Junction City 137.51 15 *e*PKIKP **PKPdf** 05 57 44.3 +0.4
JCT Junction City 137.51 15 *e*PKPdf **PKPdf** 05 57 44.3 +0.4
BDFB Brasilia 140.50 259 PKP **PKPdf** 05 57 50.4 +0.6
BDFB Brasilia 140.50 259 PKP **PKPdf** 05 57 50.4 +0.6
comp=Z,3.7nm,0.7s,baz=89,slow=3.7,SNR=4.6
LRS Lares 144.16 324 *e*PKPdf PKPbc 05 57 54.2 0.0
SDDR Presa de Saban 145.97 330 *e*PKPdf **PKPdf** 05 57 59.2 -0.1
PLCA Paso Flores 146.30 205 *e*PKPbc **PKPbc** 05 58 00.5 +0.1
PLCA Paso Flores 146.30 205 PKPbc **PKPbc** 05 58 00.5 +0.1
comp=Z,6.3nm,0.8s,baz=163,slow=2.2,SNR=21
CPUP Villa Florida 146.92 238 PKPbc **PKPbc** 05 58 02.5 0.0
CPUP Villa Florida 146.92 238 PKPbc **PKPbc** 05 58 02.5 0.0
comp=Z,6.5nm,0.7s,baz=122,slow=2.7,SNR=16
ROSC El Rosal 159.12 317 PKP **PKPdf** 05 58 19.7 +0.6
ROSC PKPab **PKPab** 05 58 57.3 +1.5
ROSC El Rosal 159.12 317 PKP **PKPdf** 05 58 19.7 +0.6
comp=Z,1.8nm,0.6s,baz=96,slow=21,SNR=3.7
ROSC PKPab **PKPab** 05 58 57.3 +1.5
comp=Z,5.3nm,0.9s,baz=93,slow=23,SNR=5.0
LPAZ La Paz 159.62 252 *e*PKPdf **PKPdf** 05 58 19.4 -0.4
LPAZ PKP **PKPdf** 05 58 20.0 +0.2
LPAZ PKPab **PKPab** 05 58 58.5 +0.1
LPAZ La Paz 159.62 252 PKP **PKPdf** 05 58 20.0 +0.2
comp=Z,1.5nm,0.7s,baz=121,slow=2.1,SNR=8.9
LPAZ PKPab **PKPab** 05 58 58.5 +0.1
comp=Z,5.5nm,1.0s,baz=77,slow=4.6,SNR=11
OTAV Otavalo 165.28 318 *e*PKPdf **PKPdf** 05 58 24.3 -1.1

IDC 09 05:40:14.0±17.0, 1°20'N×96°92'E, h0km, mb4.3/6, mb1 4.3/6, mb1mx3.9/27, mbtmp4.3/6, Error ellipse: s-maj=347.6km s-min=57.8km az=4.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KGM	**Kluang**	**6.45**	**83**	P		P	05 41 44.4	-5.9
MYKOM	**Kota Tinggi**	**6.95**	**85**	P		Pn	05 41 51.4	-5.8
KSRS	**Korea Array**	**46.00**	**35**	P		P	05 48 38.9	-0.4
	4.4nm,1.0s,baz=220,slow=10,SNR=6.9							
SONM	**Songino Array**	**47.17**	**9**	P		P	05 48 48.3	-0.2
	2.1nm,0.9s,baz=176,slow=8.5,SNR=3.1							
MKAR	**Makanchi Array**	**47.17**	**346**	P		P	05 48 48.2	-0.1
	2.6nm,0.8s,baz=158,slow=9.0,SNR=4.9							
KURBB	**Kurchatov Arra**	**51.66**	**345**	P		P	05 49 21.9	-0.5
	3.0nm,0.7s,baz=167,slow=7.3,SNR=5.1							
ZALV	**Zalesovo Beam**	**53.51**	**351**	P		P	05 49 36.3	+0.2
	12nm,0.7s,baz=178,slow=6.5,SNR=16							
BVAR	**Borovoye Array**	**56.16**	**341**	P		P	05 49 55.4	0.0
	3.1nm,0.7s,baz=138,slow=8.0,SNR=5.7							

*ISCJB **09** 05:44:25.8±0.8, 13°.03N±0°.03×58°.91W±0°.06, h81km±9km, Error ellipse: s-maj=8.9km s-min=4.8km az=179.9*
*TRN **09** 05:44:25.5, 13°.04N×58°.91W, h69km, MD3.9, M4.2(FDF)*
*FUNV **09** 05:44:29.7, 12°.66N×58°.93W, h6km, MW3.6*

ISC 09 05:44:25.3±2.0, 13°.02N±0°.04×58°.8W±0°.1, h73km±15km, n40, σ1s50/59, 2C, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
BBSP	**Saint Philip**	**0.62**	**278**	*e*P		**Pn**	**05 44 40.0**	**+0.4**
BBSP				*e*S		**Sn**	**05 44 49.9**	**-0.2**
MCLT	**Moule a Chique**	**2.17**	**289**	*e*P		**Pn**	**05 44 59.5**	**+0.2**
MCLT				*e*S		**Sn**	**05 45 25.4**	**+0.1**
BHS	**Barnard House**	**2.26**	**277**	*e*P		**Pn**	**05 45 00.6**	**+0.1**
BHS				*e*S		**Sn**	**05 45 27.7**	**+0.3**
SLPE	**Piton Saint Es**	**2.26**	**291**	*e*P		**Pn**	**05 45 01.9**	**+1.3**
SLPE				*e*S		**Sn**	**05 45 27.5**	**-0.2**
SLW	**Petit Monier**	**2.28**	**296**	*e*P		**Pn**	**05 45 01.0**	**+0.2**
SLW	**Petit Monier**	**2.28**	**296**	*e*P		**Pn**	**05 45 01.0**	**+0.2**
SLW	**Petit Monier**	**2.28**	**296**	*e*P		**Pn**	**05 45 01.8**	**+0.9**
SLW				*e*S		**Sn**	**05 45 27.2**	**-0.9**
SLB	**Belfond**	**2.30**	**291**	*e*P		**Pn**	**05 45 02.1**	**+1.0**
SLB				*e*S		**Sn**	**05 45 28.8**	**+0.3**
SLDE	**Delcer**	**2.31**	**290**	*e*P		**Pn**	**05 45 02.2**	**+1.0**
SLDE				*e*S		**Sn**	**05 45 28.4**	**-0.2**
SVB	**Belmont**	**2.38**	**276**	*e*P		**Pn**	**05 45 02.7**	**+0.6**
SVB				*e*S		**Sn**	**05 45 29.6**	**-0.7**
TOSP	**Speyside**	**2.40**	**224**	*e*P		**Pn**	**05 45 04.6**	**+2.2**
TOSP				*e*S		**Sn**	**05 45 31.0**	**+0.3**
MVM	**Montagne Vaucl**	**2.52**	**307**	*e*P		**Pn**	**05 45 04.6**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
GRSS	**Sisters**	**2.81**	**255**	*e*P	**Pn**	**05 45 09.4**	**+1.4**
GRSS				*e*S	**Sn**	**05 45 39.9**	**-1.0**
FDF	**Fort de France**	**2.83**	**307**	⇑*i*P	**Pn**	**05 45 08.4**	**+0.1**
FDF	**Fort de France**	**2.83**	**307**	*e*P	**Pn**	**05 45 08.6**	**+0.3**
FDF				⇑*e*S	**Sn**	**05 45 40.1**	**-1.2**
FDF				*e*S		05 45 40.2	
GRHS	**Sauteurs**	**2.86**	**254**	*e*P	**Pn**	**05 45 10.2**	**+1.5**
GRHS				*e*S	**Sn**	**05 45 40.6**	**-1.5**
GRW	**Mount Saint Ca**	**2.90**	**253**	*e*P	**Pn**	**05 45 09.4**	**+0.2**
TBH	**Brigand Hill**	**3.34**	**221**	*e*P	**Pn**	**05 45 17.7**	**+2.4**
TBH				*e*S	**Sn**	**05 45 53.5**	**-0.4**
TRN	**Trinidad (W)**	**3.46**	**227**	*e*P	**Pn**	**05 45 18.3**	**+1.5**
TRN				*e*S	**Sn**	**05 45 54.9**	**-1.7**
MGG	**Marie-Galante**	**3.76**	**320**	*e*P	**Pn**	**05 45 20.9**	**0.0**
TBG	**Guadaloupe-3**	**3.92**	**316**	*e*P	**Pn**	**05 45 23.7**	**+0.6**
DOG	**Dongo Capester**	**4.03**	**318**	*e*P	**Pn**	**05 45 25.2**	**+0.5**
PHG	**Guadaloupe-2**	**4.04**	**318**	*e*P	**Pn**	**05 45 25.4**	**+0.6**
HMG	**Houelmont**	**4.05**	**317**	*e*P	**Pn**	**05 45 25.7**	**+0.8**
SCG	**Saint Claude**	**4.07**	**318**	*e*P	**Pn**	**05 45 25.9**	**+0.7**
BCG	**Bois Riant Cap**	**4.07**	**319**	*e*P	**Pn**	**05 45 25.8**	**+0.5**
GUIV	**Guiria**	**4.08**	**235**	*e*P	**Pn**	**05 45 27.3**	**+2.0**
GUIV				*e*S	**Sn**	**05 46 09.9**	**-2.0**
SEG	**Port Louis**	**4.24**	**323**	*e*P	**Pn**	**05 45 28.6**	**+1.0**
CRUV	**Carupano**	**4.91**	**242**	*e*P	**Pn**	**05 45 38.8**	**+2.1**
CRUV				*e*S	**Sn**	**05 46 29.8**	**-2.3**
SKI	**Saint Kitts**	**5.71**	**319**	*e*P	**Pn**	**05 45 48.8**	**+1.2**
SKI				*e*S	**Sn**	**05 46 51.2**	**-0.7**
RIOV	**Rio Grande**	**5.73**	**211**	*e*P	**Pn**	**05 45 49.5**	**+1.5**
RIOV				*e*S	**Sn**	**05 46 47.5**	**-5.0**
ORIV	**Oritupano**	**5.97**	**229**	*e*P	**Pn**	**05 45 52.8**	**+1.6**
ORIV				*e*S	**Sn**	**05 46 54.4**	**-3.9**
PCRV	**Puerto La Cruz**	**6.36**	**244**	*e*P	**Pn**	**05 45 58.2**	**+1.7**
GURV	**El Guri**	**6.70**	**219**	*e*P	**Pn**	**05 46 01.7**	**+0.5**
PRGV	**PARIAGUAN**	**7.12**	**234**	*e*P	**Pn**	**05 46 07.7**	**+0.9**
CUPV	**Cœpira**	**7.43**	**247**	*e*P	**Pn**	**05 46 13.7**	**+2.4**
LUEV	**Luepa**	**7.59**	**200**	*e*P	**Pn**	**05 46 13.2**	**-0.4**
BIRV	**Birongo**	**7.72**	**252**	*e*P	**Pn**	**05 46 17.1**	**+2.1**
TURV	**Turiamo**	**9.19**	**255**	*e*P	**Pn**	**05 46 37.8**	**+2.6**
MAPV	**Macapo**	**9.96**	**252**	*e*P	**Pn**	**05 46 47.6**	**+1.8**

CSEM ***09*** *05:46:47.8, 50.°26N×18.°79E, h0km, After GFU*

PRU 09 05:46:47.3, 50.°29N×18.°79E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.61**	**223**	*e*PG	Pg	05 46 59.1	0.0
OKC				*e*SG	Sg	05 47 07.3	+0.2
OKC	**Ostrava-Krasne**	**0.61**	**223**	Pg	Pg	05 46 59.1	0.0
OKC				Sg	Sg	05 47 07.3	+0.2
OJC	**Ojcow**	**0.65**	**96**	*e*Pg	Pg	05 46 59.7	-0.1
OJC				*e*Sg	Sg	05 47 08.1	-0.2
NIE	**Niedzica**	**1.32**	**131**	*e*Pg	Pg	05 47 12.7	+0.1
NIE				*e*Sg	Sg	05 47 29.7	0.0
DPC	**Dobruska-Polom**	**1.58**	**273**	*e*PG	Pn	05 47 16.8	+0.1
DPC				*e*SG	Sn	05 47 37.7	-0.2
DPC	**Dobruska-Polom**	**1.58**	**273**	Pg	Pn	05 47 16.8	+0.1
DPC				Sg	Sn	05 47 37.7	-0.2
UPC	**Upice**	**1.79**	**278**	*e*SG	Sb	05 47 44.4	+0.4
UPC	**Upice**	**1.79**	**278**	Sg	Sb	05 47 44.4	+0.4
KHC	**Kasperske Hory**	**3.58**	**253**	*e*SG	Sg	05 48 40.5	-1.8
KHC	**Kasperske Hory**	**3.58**	**253**	Sg	Sg	05 48 40.5	-1.8

ISK ***09*** *06:00:43.8, 37.°25N×28.°23E, h5km, MD2.6*
DDA ***09*** *06:00:44.9, 37.°26N×28.°22E, h7km, MD2.8*
CSEM ***09*** *06:00:44.6±0.2, 37.°24N×28.°23E, h2km, MD2.6, Error ellipse: s-maj=3.9km s-min=3.1km az=27.0*

ISC 09 06:00:45.1±1.0**, 37.°25N**±0.°03×**28.°21E**±0.°03**, h8**km±11km**, n28,** σ1.°08/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**152**	*e*PG	**Pg**	**06 00 47.3**	**-0.7**
YER	**Yerkesik**	**0.13**	**152**	*e*Pg	**Pg**	**06 00 47.3**	**-0.7**
MLSB	**Milas**	**0.34**	**277**	*e*PG	**Pg**	**06 00 51.5**	**-0.3**
MLSB				*e*SG	**Sg**	**06 00 56.7**	**+0.3**
MLSB	**Milas**	**0.34**	**277**	*e*Pg	**Pg**	**06 00 51.6**	**-0.3**
MLSB				*e*Sg	**Sg**	**06 00 56.7**	**+0.3**
AYDN	**Tasoluk**	**0.48**	**328**	*i* P	**Pg**	**06 00 54.6**	**+0.1**
AYDN				*i* S	**Sg**	**06 01 00.7**	**-0.1**
AYDN	**Tasoluk**	**0.48**	**328**	*i* P	**Pg**	**06 00 54.6**	**+0.1**
AYDN				*i* S	**Sg**	**06 01 00.7**	**-0.1**
TURN	**Turunc**	**0.49**	**140**	*i* P	**Pg**	**06 00 53.5**	**-1.2**
TURN	**Turunc**	**0.49**	**140**	*i* P	**Pg**	**06 00 53.5**	**-1.2**
DAT	**Datca**	**0.73**	**224**	*e*PG	**Pg**	**06 00 58.3**	**-0.8**
DAT	**Datca**	**0.73**	**224**	*e*Pg	**Pg**	**06 00 58.3**	**-0.8**
BODT	**Bodrum**	**0.74**	**255**	*e*PG	**Pg**	**06 00 58.9**	**-0.5**
BODT				*e*SG	**Sg**	**06 01 10.1**	**+1.1**
BODT	**Bodrum**	**0.74**	**255**	*e*Pg	**Pg**	**06 00 58.9**	**-0.5**
BODT				*e*Sg	**Sg**	**06 01 10.1**	**+1.1**
DNZL	**Cakiroluk**	**0.80**	**57**	*i* P	**Pg**	**06 01 00.2**	**-0.3**
DNZL	**Cakiroluk**	**0.80**	**57**	*i* P	**Pg**	**06 01 00.2**	**-0.3**
GCAM	**G?zelcaml?**	**0.89**	**300**	*i* P	**Pb**	**06 01 02.7**	**-0.2**
GCAM	**G?zelcaml?**	**0.89**	**300**	*i* P	**Pb**	**06 01 02.7**	**-0.2**
FETY	**Fethiye**	**0.94**	**131**	*e*PG	**Pg**	**06 01 01.6**	**-1.5**
FETY	**Fethiye**	**0.94**	**131**	*e*Pg	**Pg**	**06 01 01.6**	**-1.5**
GLHS	**Glhisar (BURDU**	**1.04**	**95**	*e*PG	**Pg**	**06 01 03.7**	**-1.3**
GLHS	**Glhisar (BURDU**	**1.04**	**95**	*e*Pg	**Pg**	**06 01 03.7**	**-1.3**
MANT	**Manisa**	**1.27**	**13**	*i* P	**Pn**	**06 01 09.2**	**-0.2**
MANT				*i* S	**Sb**	**06 01 26.2**	**+0.2**
MANT	**Manisa**	**1.27**	**13**	*i* P	**Pn**	**06 01 09.2**	**-0.2**
MANT				*i* S	**Sb**	**06 01 26.2**	**+0.2**
KULA	**Kula-Manisa**	**1.31**	**16**	*e*PN	**Pn**	**06 01 09.4**	**-0.4**
KULA	**Kula-Manisa**	**1.31**	**16**	*e*Pn	**Pn**	**06 01 09.4**	**-0.4**
ELL	**Elmali**	**1.45**	**110**	*e*PN	**Pn**	**06 01 11.6**	**-0.2**
ELL	**Elmali**	**1.45**	**110**	*e*Pn	**Pn**	**06 01 11.6**	**-0.2**
AKAS	**Kas**	**1.52**	**132**	*i* P	**Pg**	**06 01 14.2**	**0.0**
AKAS				*i* S	**Sg**	**06 01 38.4**	**+4.6**
AKAS	**Kas**	**1.52**	**132**	*i* P	**Pg**	**06 01 14.2**	**0.0**

BJI ***09*** *06:30:24.8, 6.°56S×127.°88E, h10km, mB5.0/25, mb4.8/37, Ms4.5/10, Ms7 4.1/19*
IDC ***09*** *06:30:28.9±0.5, 5.°98S×127.°78E, h0km, mb4.5/18, mb1 4.7/21, mb1mx4.6/26, mbtmp4.6/21, ML4.6/4, MS4.0/14, Ms1 4.0/14, ms1mx3.6/32, Error ellipse: s-maj=22.0km s-min=11.9km az=70.0*
NEIC ***09*** *06:30:30.3±0.3, 6.°03S×127.°83E, h10km, mb5.0/13, Error ellipse: s-maj=9.5km s-min=5.2km az=60.0*
ISCJB ***09*** *06:30:31.7±0.2, 6.°00S±0.°03×127.°93E±0.°03, h33km, mb4.8/50, MS4.1/19, Error ellipse: s-maj=4.5km s-min=3.8km az=1.0*
MOS ***09*** *06:30:32.2±1.1, 5.°95S×127.°82E, h33km, mb5.1/15, Error ellipse: s-maj=17.6km s-min=7.8km az=117.3*
DJA ***09*** *06:30:35.8±1.3, 6°S±2°×12°8E±°, h30km±15km, M4.9/31, mB5.4/25, mb5.2/31, MLv5.0/15, Mw(mB)4.9/25*

ISC 09 06:30:34.1±0.3**, 6.°01S**±0.°04×**127.°89E**±0.°05**, h35**km**, n172,** σ1.°81/198**, mb4.9**/49**, MS4.1**/19**, 3C-2D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	**Ambon**	**2.33**	**8**	P	**Pn**	**06 31 07.4**	**-2.5**
AAI				S	**Sn**	**06 31 33.6**	**-3.7**
MSAI	**Masohi**	**2.84**	**21**	P	**Pn**	**06 31 16.2**	**-0.8**
MSAI				S	**Sn**	**06 31 49.0**	**-1.0**
NLAI	**Namlea**	**2.86**	**344**	P	**Pn**	**06 31 16.1**	**-1.1**
NLAI				S	**Sn**	**06 31 48.6**	**-1.9**
BBSI	**Bau Bau**	**5.32**	**275**	P	**Pn**	**06 31 52.1**	**+1.1**
	565nm,0.7s,4μm2.0nm						
FAKI	**Fak Fak**	**5.32**	**55**	P	**Pn**	**06 31 51.5**	**+0.4**
	431nm,0.7s,5μm1.6nm						
LBMI	**Labuha**	**5.35**	**356**	P	**Pn**	**06 31 54.3**	**+2.8**
	191nm,1.1s,2μm0.8nm						
LBMI				S	**Sn**	**06 32 50.3**	**-1.6**
	191nm,1.1s,2μm0.8nm						
MMRI	**Maumere**	**6.18**	**245**	P	**Pn**	**06 32 02.6**	**-0.3**
	472nm,0.8s,4μm1.8nm						
LUWI	**Luwuk**	**7.10**	**314**	P	**Pn**	**06 32 14.7**	**-0.8**
	196nm,1.1s,2μm0.6nm						
LUWI				S	**Sn**	**06 33 33.7**	**-1.3**
	196nm,1.1s,2μm0.6nm						
BSSI	**Bau Bau, Buton**	**7.36**	**269**	P	**Pn**	**06 32 20.0**	**+0.9**
	483nm,0.6s,6μm2.2nm						
SKSI	**Soroako, Sulaw**	**7.39**	**298**	P	**Pn**	**06 32 19.4**	**-0.2**
	79nm,0.6s,780nm0.3nm						
RKPI	**Ransiki, Papua**	**7.70**	**55**	P	**Pn**	**06 32 23.7**	**-0.2**
	225nm,0.7s,6μm1.0nm						
BKSI	**Bulukumba**	**7.76**	**275**	P	**Pn**	**06 32 24.6**	**0.0**
	266nm,1.0s,3μm0.9nm						
MNI	**Manado**	**8.00**	**338**	P	**Pn**	**06 32 29.5**	**+1.5**
	194nm,0.9s,4μm0.6nm						
KAPI	**Kappang**	**8.16**	**277**	*e*Pn	**Pn**	**06 32 29.4**	**-0.7**
KAPI	**Kappang**	**8.16**	**277**	P	**Pn**	**06 32 29.7**	**-0.4**
	256nm,0.8s,2μm						
KAPI	**Kappang**	**8.16**	**277**	Pn	**Pn**	**06 32 28.9**	**-1.1**
	15nm,0.3s,baz=114,slow=12,SNR=83						
KAPI				LR	LR	06 35 45.1	
	comp=Z,2μm,18.8s,baz=97,slow=39						
SPSI	**Sidrap Palu**	**8.34**	**284**	P	**Pn**	**06 32 33.1**	**+0.6**
	150nm,0.6s,1μm						
BASI	**Baing, Sumba**	**8.36**	**239**	P	**Pn**	**06 32 34.7**	**+1.9**
	413nm,0.7s,4μm						
TTSI	**Tana Toraja**	**8.56**	**290**	P	Pn	06 32 40.1	+4.5
	78nm,0.8s,1μm						
MRSI	**Marisa**	**8.76**	**317**	P	**Pn**	**06 32 38.9**	**+0.6**
	69nm,0.8s,944nm						
WBSI	**Waikabubak, Su**	**9.16**	**246**	P	Pn	06 32 47.9	+4.1
	93nm,0.9s,1μm						
FITZ	**Fitzroy Crossi**	**12.22**	**190**	*e*Pn	**Pn**	**06 33 23.3**	**-2.4**
FITZ				Sn	Sn	06 35 32.7	-8.1
FITZ				*e*Sn	Sn	06 35 32.8	-8.0
FITZ	**Fitzroy Crossi**	**12.22**	**190**	Pn	**Pn**	**06 33 22.9**	**-2.9**
	8.6nm,0.3s,baz=14,slow=12,SNR=92						
FITZ				Sn	Sn	06 35 32.7	-8.1
	4.3nm,0.3s,baz=275,slow=17,SNR=6.3						
FITZ				LR	LR	06 38 54.9	
	comp=Z,414nm,18.3s,baz=21,slow=41						
KHKI	**Kahang-Kahang**	**12.40**	**258**	P	Pn	06 33 31.2	+2.9
	46nm,1.4s						
BBKI	**Banjar Baru**	**13.24**	**280**	P	**P**	**06 33 51.5**	**+2.4**
TSM	**Tawau**	**14.31**	**315**	P	**Pn**	**06 33 56.4**	**+2.1**
MYLDM	**Lahad Datu**	**14.54**	**320**	P	**P**	**06 34 02.4**	**-1.1**
MYLDM	**Lahad Datu**	**14.54**	**320**	P	**P**	**06 34 02.7**	**-0.8**
WRAB	**Tennant Creek**	**15.20**	**156**	*e*P	**Pn**	**06 34 03.6**	**-2.7**
WRAB				pmax	pmax		
	comp=Z,114nm,0.9s						
WRAB	**Tennant Creek**	**15.20**	**156**	*e*Pn	**Pn**	**06 34 03.5**	**-2.7**
	comp=Z,114nm,0.9s						
WRAB				*e*Sn	Sn	06 36 44.4	-9.2
WRA	**Warramunga Arr**	**15.21**	**156**	Pn	**Pn**	**06 34 02.9**	**-3.4**
WRA				Sn	Sn	06 36 43.8	-10
WRA	**Warramunga Arr**	**15.21**	**156**	Pn	**Pn**	**06 34 02.9**	**-3.4**
	comp=Z,2.6nm,0.3s,baz=336,slow=12,SNR=93						
WRA				Sn	Sn	06 36 43.8	-10
	comp=Z,1.3nm,0.3s,baz=331,slow=22,SNR=9.7						
WRA				LR	LR	06 40 31.5	
	comp=Z,331nm,18.8s,baz=340,slow=40						
SDKM	**Sandakan**	**15.74**	**317**	P	**P**	**06 34 15.7**	**-1.2**
SJI	**Sawahan**	**16.10**	**263**	P	**P**	**06 34 20.2**	**-0.7**
	comp=Z,67nm,1.5s,comp=Z,5μm						
PBKI	**Pangkalan Bun**	**16.50**	**281**	P	**P**	**06 34 27.4**	**+2.1**
	comp=Z,499nm,1.1s,comp=Z,5μm						
KKM	**Kota Kinabalu**	**16.70**	**316**	P	**P**	**06 34 27.4**	**-0.3**
PCJI	**Pacitan**	**16.72**	**262**	P	**Pn**	**06 34 24.7**	**-1.1**
	comp=Z,89nm,1.5s						
COEN	**Coen**	**16.99**	**119**	*e*Pn	**P**	**06 34 29.5**	**-1.3**
	comp=Z,2μm,2.1s						
MBWA	**Marble Bar**	**17.01**	**207**	*e*Pn	**Pn**	**06 34 27.8**	**-1.6**
	comp=Z,18nm,0.6s						
MBWA				*e*Sn	Sn	06 37 26.3	-11
BTM	**Bintulu**	**17.38**	**301**	P	**P**	**06 34 37.0**	**+1.9**
STKI	**Sintang**	**17.46**	**290**	P	**P**	**06 34 36.6**	**+0.7**
	comp=Z,54nm,0.5s,comp=Z,13μm						
SBUM	**Sibu**	**17.76**	**298**	P	**P**	**06 34 40.6**	**+1.4**
SBUM	**Sibu**	**17.76**	**298**	P	**P**	**06 34 40.0**	**+0.7**
	comp=Z,91nm,1.1s,comp=Z,1μm						
AS31	**Alice Springs**	**18.49**	**162**	*e*Pn	**Pn**	**06 34 46.6**	**-1.1**
ASAR	**Alice Springs**	**18.49**	**162**	P	**Pn**	**06 34 46.5**	**-1.1**
ASAR				S	Sn	06 38 04.4	-8.9
ASAR	**Alice Springs**	**18.49**	**162**	P	**Pn**	**06 34 46.5**	**-1.1**
	comp=Z,1.5nm,0.3s,baz=337,slow=11,SNR=146						
ASAR				S	Sn	06 38 04.4	-8.9
	comp=Z,0.6nm,0.3s,baz=346,slow=22,SNR=6.6						
ASAR				LR	LR	06 42 21.7	
	comp=Z,400nm,19.2s,baz=335,slow=38						
KSM	**Kuching**	**19.06**	**292**	*e*Pn	**Pn**	**06 34 54.0**	**-0.6**
	comp=Z,81nm,1.2s						
KSM	**Kuching**	**19.06**	**292**	P	**Pn**	**06 34 55.2**	**+0.6**
KSM	**Kuching**	**19.06**	**292**	P	**Pn**	**06 34 55.1**	**+0.5**
	comp=Z,70nm,1.1s,comp=Z,999nm						
PMG	**Port Moresby**	**19.39**	**101**	*e*P	**Pn**	**06 34 58.3**	**-0.3**
	comp=Z,103nm,1.1s						
PMG	**Port Moresby**	**19.39**	**101**	P	**Pn**	**06 35 01.4**	**+2.8**
	comp=Z,94nm,1.7s,comp=Z,1μm						
PMG	**Port Moresby**	**19.39**	**101**	P	**Pn**	**06 34 59.0**	**+0.4**
	comp=Z,1.6nm,0.3s,baz=286,slow=8.8,SNR=6.2						
CISI	**Cisompet, Garu**	**19.99**	**264**	P	Pn	06 35 04.3	-1.4
	comp=Z,93nm,0.7s						
LEM	**Lembang**	**20.16**	**267**	P	Pn	06 35 07.3	-0.6
	comp=Z,84nm,0.7s,comp=Z,6μm						
TPI	**Tanjungpandan**	**20.43**	**278**	P	Pn	06 35 09.9	-0.9
	comp=Z,36nm,1.9s,comp=Z,554nm						
PPBI	**Pangkal Pinang**	**22.02**	**279**	P	**P**	**06 35 26.5**	**+0.8**
CTA	**Charters Tower**	**22.68**	**130**	P	**P**	**06 35 34.6**	**+1.9**
CTA	**Charters Tower**	**22.68**	**130**	P	**P**	**06 35 34.6**	**+1.9**
	comp=Z,7.9nm,0.8s,baz=310,slow=10,SNR=7.0						
CTAO	**Charters Tower**	**22.68**	**130**	*e*P	**P**	**06 35 34.2**	**+1.5**
CTAO				pmax	pmax		
	comp=Z,27nm,1.0s						
CTAO	**Charters Tower**	**22.68**	**130**	*e*P	**P**	**06 35 34.2**	**+1.5**
	comp=Z,27nm,1.0s						
FORT	**Forrest**	**24.64**	**180**	*e*P	**P**	**06 35 52.8**	**+1.3**
	comp=Z,94nm,0.9s						
MYKOM	**Kota Tinggi**	**25.22**	**287**	P	**P**	**06 35 57.9**	**+1.0**
KGM	**Kluang**	**25.80**	**287**	P	**P**	**06 36 02.7**	**+0.6**
KTGM	**Kuala Trenggan**	**27.16**	**294**	P	**P**	**06 36 15.9**	**+1.5**
BBOO	**Buckleboo**	**27.73**	**165**	*e*P	**P**	**06 36 19.9**	**+0.5**
FRIM	**Kepong**	**27.79**	**289**	P	**P**	**06 36 19.3**	**-0.8**
NWAO	**Narrogin (SRO)**	**28.56**	**199**	P	**P**	**06 36 27.0**	**+0.2**
NWAO	**Narrogin (SRO)**	**28.56**	**199**	P	**P**	**06 36 27.0**	**+0.2**
	comp=Z,5.4nm,0.4s,baz=26,slow=10,SNR=12						
NWAO				LR	LR	06 49 44.0	
	comp=Z,196nm,19.5s,baz=13,slow=40						
STKA	**Stephens Creek**	**28.75**	**155**	P	**P**	**06 36 30.1**	**+1.6**
	comp=Z,12nm,0.7s,baz=318,slow=10,SNR=15						
STKA				LR	LR	06 49 25.7	
	comp=Z,242nm,18.2s,baz=240,slow=39						
IPM	**Ipoh**	**28.77**	**291**	*e*P	**P**	**06 36 28.6**	**-0.4**
	comp=Z,63nm,2.0s						
IPM	**Ipoh**	**28.77**	**291**	P	**P**	**06 36 28.7**	**-0.2**
KULM	**Kulim**	**29.42**	**292**	*e*P	**P**	**06 36 34.3**	**-0.3**
	comp=Z,15nm,1.1s						
KULM	**Kulim**	**29.42**	**292**	P	**P**	**06 36 34.5**	**-0.1**
QIZ	**Qiongzhong**	**30.58**	**325**	P	**P**	**06 36 43.0**	**-1.8**
QIZ				S	**S**	**06 41 49.8**	**+5.2**
QIZ				pmax	pmax		
	comp=Z,12nm,1.1s						
QIZ				LR	LR		
	comp=Z,120nm,13.1s						
CAN	**Canberra**	**35.06**	**149**	*e*P	**P**	**06 37 24.3**	**+0.4**
CAN	**Canberra**	**35.06**	**149**	*e*P	**P**	**06 37 24.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**37.49**	**311**	P	**P**	**06 37 45.6**	**+0.8**
CMAR	**Chiang Mai Arr**	**37.49**	**311**	P	**P**	**06 37 45.6**	**+0.8**
	comp=Z,8.0nm,0.8s,baz=142,slow=7.1,SNR=30						
CMAR				LR	LR	06 53 33.5	
	comp=Z,180nm,20.9s,baz=126,slow=37						
CHTO	**Chiang Mai**	**37.71**	**311**	*e*P	**P**	**06 37 46.7**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,21nm,1.1s						
CHTO	**Chiang Mai**	**37.71**	**311**	*e*P	**P**	**06 37 46.7**	**+0.1**
	comp=Z,21nm,1.1s						
GYA	**Guiyang**	**38.27**	**328**	P	**P**	**06 37 53.4**	**+2.0**
GYA				PP	**PnPn**	**06 39 24.5**	**+3.2**
GYA				PcP	**PcP**	**06 40 07.2**	**+2.0**
GYA				S	**S**	**06 43 47.9**	**+4.5**
GYA				ScP	**ScP**	**06 43 53.8**	**+3.2**
GYA				SS	**SnSn**	**06 46 27.0**	**-3.0**
GYA				ScS	**ScS**	**06 48 02.1**	**+1.5**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=N,480nm,17.5s						
GYA				LR	LR		
	comp=E,450nm,18.3s						
GYA				LR	LR		
	comp=Z,470nm,17.8s						
WHN	**Wuhan**	**38.59**	**341**	P	**P**	**06 37 54.0**	**+0.2**
NJ2	**Nanjing**	**38.81**	**348**	*e*P	**P**	**06 37 58.0**	**+2.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMI	**Kunming**	**39.45**	**323**	P	**P**	**06 38 02.7**	**+1.3**
KMI				pP	**pP**	**06 38 06.6**	**-5.0**
KMI				sP	sP	06 38 08.6	-7.2
KMI				PP	**PnPn**	**06 39 39.0**	**+3.6**
KMI				S	**S**	**06 44 06.9**	**+5.6**
KMI				SS	**SS**	**06 46 54.4**	**-2.1**
KMI				pmax	pmax		
	comp=Z,22nm,0.9s						
KMI				pmax	pmax		
	comp=Z,110nm,4.3s						
KMI				LR	LR		
	comp=N,92nm,13.5s						
KMI				LR	LR		
	comp=E,110nm,16.0s						
KMI				LR	LR		
	comp=Z,130nm,14.2s						
ENH	**Enshi**	**40.16**	**335**	*e*P	**P**	**06 38 06.9**	**-0.1**
KSAR	**Wonju Array Be**	**43.23**	**360**	P	**P**	**06 38 32.8**	**+0.8**
KSRS	**Korea Array**	**43.24**	**0**	P	**P**	**06 38 32.8**	**+0.8**
	comp=Z,3.5nm,0.8s,baz=175,slow=9.2,SNR=12						
KSRS				LR	LR	06 55 29.3	
	comp=Z,74nm,18.4s,baz=27,slow=35						
CD2	**Chengdu**	**43.37**	**329**	*e*P	**P**	**06 38 33.2**	**0.0**
CD2				pP	**pP**	**06 38 39.1**	**-4.5**
CD2				sP	sP	06 38 41.8	-6.0
CD2				PP	**PcP**	**06 40 18.0**	**-3.5**
CD2				S	**S**	**06 45 03.2**	**+4.2**
CD2				sS	sS	06 45 10.2	-5.8
CD2				SS	**SS**	**06 48 10.1**	**-3.6**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,90nm,6.4s						
CD2				LR	LR		
	comp=N,90nm,14.2s						
CD2				LR	LR		
	comp=Z,120nm,13.2s						
MJAR	**Matsushiro Arr**	**43.42**	**12**	P	**P**	**06 38 33.0**	**-0.5**
MJAR	**Matsushiro Arr**	**43.42**	**12**	P	**P**	**06 38 33.0**	**-0.5**
	comp=Z,2.2nm,0.9s,baz=189,slow=9.7,SNR=4.2						
BJI	**Beijing**	**47.08**	**348**	P	**P**	**06 39 01.7**	**-0.7**
BJI				pmax	pmax		
	comp=Z,13nm,1.1s						
BJI				pmax	pmax		
	comp=Z,68nm,4.3s						
LZH	**Lanzhou**	**47.57**	**333**	*e*P	**P**	**06 39 06.2**	**-0.4**
LZH				pP	pP	06 39 09.4	-7.6
LZH				sP	sP	06 39 13.1	-8.1
LZH				PP	**PP**	**06 41 01.3**	**+2.8**
LZH				*e*S	**S**	**06 45 56.4**	**-3.3**
LZH				SS	**SS**	**06 49 24.4**	**-3.8**
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,73nm,4.2s						
LZH				LR	LR		
	comp=Z,1μm,16.9s						
HHC	**Hu-ho-hao-te**	**48.98**	**344**	*e*P	**P**	**06 39 18.6**	**+1.3**
HHC				sP	**sP**	**06 39 28.0**	**-3.9**
HHC				PcP	**PcP**	**06 40 44.1**	**+3.0**
HHC				PP	**PP**	**06 41 15.2**	**+4.1**
HHC				PcS	**PcS**	**06 44 39.6**	**+2.2**
HHC				S	**S**	**06 46 24.3**	**+4.9**
HHC				sS	sS	06 46 31.4	-5.2
HHC				ScS	**ScS**	**06 49 09.6**	**+2.5**
HHC				pmax	pmax		
	comp=Z,36nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,6.5s						
HHC				LR	LR		
	comp=Z,140nm,14.3s						
CN2	**Changchun**	**49.63**	**358**	*e*P	P	06 39 26.9	+4.8
CN2				*e*S	S	06 46 35.9	+7.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
LSA	**Lhasa**	**50.04**	**317**	*e*P	**P**	**06 39 26.4**	**+0.3**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LSA	**Lhasa**	**50.04**	**317**	*e*P	**P**	**06 39 26.4**	**+0.3**
	comp=Z,7.8nm,0.6s						
USRK	**Ussuriysk Arra**	**50.11**	**4**	P	**P**	**06 39 25.8**	**+0.1**
	comp=Z,2.1nm,0.7s,baz=187,slow=12,SNR=4.7						
GTA	**Gaotai**	**52.11**	**332**	⇓P	**P**	**06 39 41.4**	**+0.3**
GTA				pP	pP	06 39 46.0	-5.6
GTA				sP	sP	06 39 48.5	-7.2
GTA				S	**S**	**06 47 05.3**	**+2.3**
GTA				sS	sS	06 47 12.9	-7.4
GTA				SS	**SS**	**06 50 41.7**	**+0.9**
GTA				pmax	pmax		
	comp=Z,18nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,5.9s						
GTA				LR	LR		
	comp=N,150nm,20.9s						
GTA				LR	LR		
	comp=E,280nm,22.3s						
GTA				LR	LR		
	comp=Z,91nm,19.0s						
GUN	**Gumba**	**52.73**	**312**	*e*P	**P**	**06 39 45.3**	**-0.8**
	comp=Z,35nm,0.5s						
PKI	**Pulchoki**	**52.89**	**311**	*e*P	**P**	**06 39 46.4**	**-0.9**
	comp=Z,10nm,0.5s						
PKIN	**Phulchoki**	**52.91**	**311**	*e*P	**P**	**06 39 46.3**	**-1.0**
	comp=Z,10nm,0.6s						
KKN	**Kakani**	**53.11**	**311**	*e*P	**P**	**06 39 48.2**	**-0.5**
	comp=Z,10nm,0.4s						
DMN	**Daman**	**53.14**	**311**	*e*P	**P**	**06 39 48.6**	**-0.4**
RPZ	**Rata Peaks**	**53.30**	**142**	LR	LR	07 02 10.2	
	comp=Z,388nm,20.6s,baz=284,slow=36						
KOLN	**Koldanda**	**54.36**	**310**	*e*P	**P**	**06 39 57.1**	**-0.8**
	comp=Z,44nm,0.9s						
DANN	**Dangsing**	**54.54**	**311**	*e*P	**P**	**06 39 58.8**	**-0.5**
	comp=Z,32nm,0.8s						
URZ	**Urewera**	**54.87**	**133**	LR	LR	07 05 00.1	
	comp=Z,180nm,19.2s,baz=314,slow=38						
PYUN	**Piuthan**	**54.99**	**310**	*e*P	**P**	**06 40 01.9**	**-0.6**
KLR	**Kul'dur**	**55.11**	**3**	*e*P	**P**	**06 40 02.7**	**0.0**
ULN	**Ulaanbaatar**	**56.70**	**343**	*e*P	**P**	**06 40 13.5**	**-0.8**
SONM	**Songino Array**	**56.86**	**343**	P	**P**	**06 40 15.7**	**+0.3**
SONM	**Songino Array**	**56.86**	**343**	P	**P**	**06 40 15.7**	**+0.3**
	comp=Z,5.0nm,1.0s,baz=158,slow=7.6,SNR=19						
SONM				LR	LR	07 08 14.8	
	comp=Z,91nm,18.4s,baz=140,slow=40						
ZAK	**Zakamensk**	**60.06**	**342**	*e*P	**P**	**06 40 37.0**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
WMQ	**Urumqi**	**61.43**	**328**	P	**P**	**06 40 47.3**	**+0.2**
WMQ				pP	**pP**	**06 40 54.0**	**-3.8**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,170nm,6.0s						
WMQ				LR	LR		
	comp=Z,180nm,21.6s						
DLH	**Dalhousie**	**62.45**	**311**	*e*PKP	P	06 40 51.0	-3.4
PETK	**Petropavlovsk-**	**64.07**	**19**	P	**P**	**06 41 05.0**	**+0.7**
PETK						06 43 29.1	
PETK	**Petropavlovsk-**	**64.07**	**19**	P	**P**	**06 41 05.0**	**+0.7**
PETK				PP	**PP**	**06 43 29.1**	**+3.4**
PETK	**Petropavlovsk-**	**64.07**	**19**	P	**P**	**06 41 05.0**	**+0.7**
	comp=Z,1.2nm,0.7s,baz=172,slow=5.1,SNR=4.5						
PETK				PP	**PP**	**06 43 29.1**	**+3.4**
	comp=Z,0.4nm,0.3s,baz=203,slow=11,SNR=4.4						
KSH	**Kashi**	**65.88**	**318**	*e*P	**P**	**06 41 17.1**	**+0.5**
KSH				*e*pP	pP	06 41 21.8	-5.6
KSH				*e*sP	sP	06 41 24.5	-6.9
KSH				*e*PcP	**PcP**	**06 41 48.1**	**+0.8**
KSH				*e*PP	**PP**	**06 43 44.2**	**+2.2**
KSH				*e*S	**S**	**06 50 00.5**	**-1.0**
KSH				pmax	pmax		
	comp=Z,17nm,0.7s						
KSH				pmax	pmax		
	comp=Z,410nm,4.6s						
MK31	**Makanchi Array**	**66.26**	**328**	*e*P	**P**	**06 41 18.2**	**-0.6**
MK31				pmax	pmax		
	comp=Z,7.0nm,0.6s						
MK31	**Makanchi Array**	**66.26**	**328**	*e*P	**P**	**06 41 18.1**	**-0.6**
MKAR	**Makanchi Array**	**66.26**	**328**	P	**P**	**06 41 18.2**	**-0.6**
MKAR	**Makanchi Array**	**66.26**	**328**	P	**P**	**06 41 18.1**	**-0.6**
MKAR	**Makanchi Array**	**66.26**	**328**	P	**P**	**06 41 18.1**	**-0.6**
	comp=Z,5.5nm,0.5s,baz=123,slow=8.0,SNR=69						
YAK	**Yakutsk**	**67.85**	**1**	*e*P	**P**	**06 41 27.7**	**-0.8**
YAK				*e*		06 41 38.1	
YAK				pmax	pmax		
	comp=Z,28nm,1.4s						
YAK				pmax	pmax		

	comp=N,15nm,1.7s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
ZAA0	**Zalesovo Array**	**69.78**	**335**	*e*P	**P**	**06 41 40.0**	**-0.6**
ZALV	**Zalesovo Beam**	**69.78**	**335**	*i* P	**P**	**06 41 39.7**	**-1.0**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**69.78**	**335**	P	**P**	**06 41 39.2**	**-1.5**
ZALV	**Zalesovo Beam**	**69.78**	**335**	P	**P**	**06 41 39.2**	**-1.5**
	comp=Z,1.6nm,0.4s,baz=128,slow=5.9,SNR=7.4						
KURBB	**Kurchatov Arra**	**70.58**	**329**	P	**P**	**06 41 45.1**	**-0.5**
	comp=Z,4.5nm,0.6s,baz=144,slow=5.9,SNR=18						
KURBB				PP	**PP**	**06 44 24.2**	**+1.9**
	comp=Z,1.7nm,0.3s,baz=118,slow=9.6,SNR=11						
KURK	**Kurchatov**	**70.59**	**329**	P	**P**	**06 41 45.1**	**-0.6**
KURK						06 44 24.3	
KURK	**Kurchatov**	**70.59**	**329**	P	**P**	**06 41 45.1**	**-0.6**
KURK				PP	**PP**	**06 44 24.2**	**+1.8**
VNDA	**Vanda**	**73.69**	**173**	P	**P**	**06 42 04.4**	**+0.6**
VNDA	**Vanda**	**73.69**	**173**	P	**P**	**06 42 04.4**	**+0.6**
	comp=Z,1.4nm,0.7s,baz=302,slow=8.4,SNR=7.4						
VNDA				LR	LR	07 15 45.6	
	comp=Z,88nm,18.4s,baz=307,slow=37						
VOSK	**Vostochnaya**	**75.65**	**328**	P	**P**	**06 42 14.5**	**-1.1**
VOSK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BVAR	**Borovoye Array**	**76.12**	**328**	P	**P**	**06 42 17.9**	**-0.3**
BVAR	**Borovoye Array**	**76.12**	**328**	P	**P**	**06 42 17.9**	**-0.3**
BVAR	**Borovoye Array**	**76.12**	**328**	P	**P**	**06 42 17.9**	**-0.3**
	comp=Z,3.3nm,0.5s,baz=131,slow=5.9,SNR=24						
BRVK	**Borovoye**	**76.19**	**328**	*e*P	**P**	**06 42 18.2**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,17nm,1.2s						
BRVK	**Borovoye**	**76.19**	**328**	*e*P	**P**	**06 42 18.2**	**-0.4**
	comp=Z,17nm,1.2s						
ZRNK	**Zerenda**	**76.81**	**328**	P	**P**	**06 42 20.7**	**-1.5**
ZRNK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TIXI	**Tiksi**	**77.50**	**0**⇑	*e*P	**P**	**06 42 26.5**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AB31	**Akbulak array**	**80.44**	**322**	*i* P	**P**	**06 42 41.8**	**-0.4**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ABKAR	**Akbulak array**	**80.44**	**322**	*e*P	**P**	**06 42 41.8**	**-0.4**
	comp=Z,11nm,0.5s						
PPT	**Papeete**	**81.12**	**107**	LR	LR	07 15 39.1	
	comp=Z,141nm,18.7s,baz=297,slow=33						
AKTO	**Aktyubinsk**	**82.01**	**323**	P	**P**	**06 42 50.8**	**+0.2**
AKTO	**Aktyubinsk**	**82.01**	**323**	P	**P**	**06 42 50.8**	**+0.2**
AKTO	**Aktyubinsk**	**82.01**	**323**	P	**P**	**06 42 50.8**	**+0.2**
	comp=Z,24nm,0.7s,baz=108,slow=7.2,SNR=44						
SVE	**Sverdlovsk**	**82.84**	**329**⇑	*e*P	**P**	**06 42 55.1**	**+0.4**
SVE				pmax	pmax		
	comp=Z,24nm,1.1s						
ARU	**Arti**	**83.76**	**328** *d*	*i*P	**P**	**06 42 59.1**	**-0.4**
ARU						06 46 10.8	
ARU				S	**S**	**06 53 21.0**	**+1.1**
ARU				SS	**SS**	**06 58 44.3**	**-3.4**
ARU				pmax	pmax		
	comp=Z,14nm,1.0s						
RDF	**Al-Radifah**	**84.47**	**300**	*e*P	**P**	**06 43 03.6**	**-0.2**
RDF				AMb	AMB	06 43 05.6	
	comp=Z,26nm,1.2s						
NAY	**Al-Naaiem**	**84.79**	**300**	*e*P	**P**	**06 43 05.0**	**-0.3**
NAY				AMb	AMB	06 43 06.3	
	comp=Z,20nm,0.9s						
MIB	**Mutribah**	**84.81**	**301**	*e*P	**P**	**06 43 05.0**	**-0.4**
MIB				AMb	AMB	06 43 06.5	
	comp=Z,46nm,1.0s						
IBDR	**Badra**	**86.55**	**304**	*e*P	**P**	**06 43 11.0**	**-3.0**
IBDR				*e*S	S	06 53 39.0	-9.4
KBZ	**Khabaz**	**90.50**	**314**	P	**P**	**06 43 32.2**	**-0.3**
KBZ	**Khabaz**	**90.50**	**314**	P	**P**	**06 43 32.1**	**-0.3**
KBZ	**Khabaz**	**90.50**	**314**	P	**P**	**06 43 32.1**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=80,slow=6.1,SNR=6.2						
KMBO	**Kilima Mbogo**	**90.51**	**269**	LR	LR	07 21 19.1	
	comp=Z,166nm,18.6s,baz=276,slow=34						
KIV	**Kislovodsk**	**90.68**	**314**	*e*P	**P**	**06 43 31.1**	**-2.4**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ILAR	**Eielson Array**	**93.35**	**25**	P	**P**	**06 43 44.1**	**-1.1**
ILAR	**Eielson Array**	**93.35**	**25**	P	**P**	**06 43 44.1**	**-1.1**
	comp=Z,0.3nm,0.7s,baz=251,slow=5.4,SNR=4.7						
APA	**Apatity**	**97.23**	**337**⇑	*e*P	P	06 43 55.7	-7.2
APA				MLR	MLR		
	comp=Z,100nm,16.0s						
ARCES	**ARCESS Array B**	**99.92**	**340**	P	**Pdif**	**06 44 13.7**	**-1.3**
ARCES	**ARCESS Array B**	**99.92**	**340**	P	**Pdif**	**06 44 13.7**	**-1.3**
	comp=Z,2.0nm,0.9s,baz=68,slow=5.9,SNR=4.5						
YKA	**Yellowknife Ar**	**107.78**	**26**	PKKPbc	PKKPbc	07 00 11.7	-1.8
YKA	**Yellowknife Ar**	**107.78**	**26**	PKKPbc	PKKPbc	07 00 11.6	-1.8
	comp=Z,0.1nm,0.5s,baz=116,slow=3.4,SNR=4.3						
TORD	**Torodi Ar. Bea**	**126.56**	**282**	PKP	**PKPdf**	**06 49 35.6**	**+1.0**
TORD	**Torodi Ar. Bea**	**126.56**	**282**	PKP	**PKPdf**	**06 49 35.6**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=90,slow=1.7,SNR=5.3						
CPUP	**Villa Florida**	**147.46**	**171**	PKPbc	**PKPbc**	**06 50 13.6**	**-1.5**
CPUP	**Villa Florida**	**147.46**	**171**	PKPbc	**PKPbc**	**06 50 13.6**	**-1.5**
	comp=Z,1.6nm,0.7s,baz=144,slow=4.2,SNR=5.5						
LPAZ	**La Paz**	**152.76**	**145**	PKPbc	**PKPbc**	**06 50 28.3**	**-0.8**
LPAZ	**La Paz**	**152.76**	**145**	PKPbc	**PKPbc**	**06 50 28.3**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=140,slow=1.4,SNR=5.9						

*IDC **09** 06:33:08.7±6.5, 6°.78N×73°.20W, h171^{km}±36^{km}, mb2.9/1, mb1 3.4/2, mb1mx2.9/22, mbtmp3.2/2, Error ellipse: s-maj=165.5km s-min=30.6km az=95.0*
*FUNV **09** 06:33:14.3, 7°.07N×72°.70W, h130^{km}, MW3.4*
ISC 09 06:33:08.9±1.3, **7°.1N**±0°.1×**72°.8W**±0°.1, **h166**^{km}, **n19, σ2^{s}21**/20, **5D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.94**	**31**⇓	*i*P	**Pn**	**06 33 35.9**	**+0.8**
CAPV				*e*S	**Sn**	**06 33 51.6**	**-3.6**
VIGV	**El Vigia**	**2.27**	**39**⇓	*i*P	**Pn**	**06 33 50.3**	**+2.1**
VIGV				*e*S	**Sn**	**06 34 16.9**	**-1.8**
SOCV	**Socops**	**2.28**	**57**⇓	*e*P	**Pn**	**06 33 50.1**	**+1.8**
SOCV				*e*S	**Sn**	**06 34 15.6**	**-3.1**
ROSC	**El Rosal**	**2.66**	**215**	P	Pn	06 33 48.0	-5.3
	46nm,0.3s,baz=91,slow=23,SNR=366						
ROSC				S	Sn	06 34 19.0	-8.6
	69nm,0.3s,baz=108,slow=17,SNR=8.9						
ELOV	**Elorza**	**3.29**	**91**⇓	*e*P	**Pn**	**06 34 02.3**	**+1.7**
QARV	**Quebrada Arrib**	**3.85**	**35**	*e*P	**Pn**	**06 34 10.6**	**+2.8**
CURV	**Curarigua**	**4.06**	**43**	*e*P	**Pn**	**06 34 12.4**	**+1.9**
DABV	**Dabajuro**	**4.40**	**29**	*e*P	**Pn**	**06 34 17.1**	**+2.3**
TEPV	**Terepaima**	**4.59**	**51**⇓	*e*P	**Pn**	**06 34 19.5**	**+2.2**
SIQV	**Siquisique**	**4.63**	**39**	*e*P	**Pn**	**06 34 19.8**	**+1.8**
MAPV	**Macapo**	**5.10**	**57**	*e*P	**Pn**	**06 34 25.9**	**+1.9**
MONV	**Montecano**	**5.61**	**30**	*e*P	**Pn**	**06 34 31.9**	**+1.2**
TURV	**Turiamo**	**5.95**	**55**	*e*P	**Pn**	**06 34 36.7**	**+1.6**
BIRV	**Birongo**	**7.29**	**62**	*e*P	**Pn**	**06 34 54.7**	**+1.8**
CUPV	**Cœpira**	**7.54**	**66**	*e*P	**Pn**	**06 34 57.3**	**+0.9**
LPAZ	**La Paz**	**23.65**	**169**	pP	pP	06 38 35.1	-2.7
	0.9nm,0.8s,baz=348,slow=12,SNR=5.9						
YKA	**Yellowknife Ar**	**63.16**	**340**	P	**P**	**06 43 18.8**	**0.0**
	0.2nm,0.5s,baz=132,slow=6.6,SNR=13						
ASAR	**Alice Springs**	**149.51**	**234**	PKPbc	**PKPdf**	**06 52 36.9**	**+2.1**
	0.4nm,0.7s,baz=123,slow=3.4,SNR=3.7						
WRA	**Warramunga Arr**	**150.73**	**241**	PKPbc	**PKPbc**	**06 52 40.1**	**-2.4**
	0.3nm,0.4s,baz=107,slow=2.7,SNR=12						

*IDC **09** 06:38:17.2±4.9, 36°.39N×71°.09E, h217^{km}±38^{km}, mb3.0/3, mb1 3.2/6, mb1mx2.9/29, mbtmp3.1/6, Error ellipse: s-maj=65.7km s-min=32.4km az=130.0*
*ISCJB **09** 06:38:19.9±0.7, 36°.73N±0°.04×70°.7E±0°.1, h188^{km}, mb3.3/3, Error ellipse: s-maj=16.8km s-min=5.2km az=172.9*
*NNC **09** 06:38:27.2±17.0, 37°.25N×71°.71E, h297^{km}±206^{km}, mb2.4, mpv3.5, Error ellipse: s-maj=197.6km s-min=100.5km az=4.0*
ISC 09 06:38:20.0±0.9, **36°.75N**±0°.06×**70°.9E**±0°.1, **h188**^{km}, **n14, σ1^{s}86**/17, **mb3.3**/3, **1C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.04**	**163**	⇓P	**Pn**	**06 39 11.8**	**+2.1**
CEP				S	**Sn**	**06 39 50.0**	**+1.5**
CHCP	**Chirah Chowk**	**3.66**	**147**	P	**Pn**	**06 39 18.7**	**+1.5**
THW	**Thamme Wali**	**4.01**	**169**	⇓P	**Pn**	**06 39 22.7**	**+1.1**
SARP	**Sargodha**	**5.04**	**162**	P	**Pn**	**06 39 34.4**	**-0.3**
SARP				S	**Sn**	**06 40 31.0**	**-2.4**
KK31	**Karatay Array**	**6.36**	**358**	P	**Pn**	**06 39 53.6**	**+1.9**
	5.5nm,0.6s,baz=165,slow=11,SNR=64						
KK31				⇓S	**Sn**	**06 41 05.5**	**+1.3**
	2.3nm,0.5s,baz=162,slow=22,SNR=7.6						
AAK	**Ala-Archa**	**6.51**	**24**	P	**Pn**	**06 39 56.1**	**+2.2**
	1.5nm,0.3s,baz=152,slow=3.3,SNR=8.5						
AAK				S	**Sn**	**06 41 10.1**	**+1.9**
	0.4nm,0.3s,baz=315,slow=23,SNR=14						
TKM2	**Tokmak 2**	**7.16**	**29**	⇑P	**Pn**	**06 40 01.8**	**-0.7**
	1.4nm,0.6s						
TKM2				⇓S	**Sn**	**06 41 20.5**	**-3.1**
	5.2nm,1.3s						
AB31	**Akbulak array**	**14.81**	**331**	⇓P	**P**	**06 41 41.3**	**-0.2**
	0.3nm,0.2s,baz=144,slow=11,SNR=14						
BVAR	**Borovoye Array**	**16.28**	**359**	P	**Pn**	**06 41 58.7**	**+0.6**
	0.3nm,0.3s,baz=161,slow=12,SNR=4.6						
AKTO	**Aktyubinsk**	**16.51**	**330**	⇓P	**Pn**	**06 42 00.1**	**-0.8**
	1.3nm,0.3s						
AKTO	**Aktyubinsk**	**16.51**	**330**	P	**Pn**	**06 42 00.3**	**-0.6**
	0.6nm,0.3s,baz=148,slow=11,SNR=12						
ARCES	**ARCESS Array B**	**40.88**	**338**	P	**P**	**06 45 40.5**	**-2.6**
	0.6nm,0.6s,baz=118,slow=7.3,SNR=5.6						
TORD	**Torodi Ar. Bea**	**65.61**	**268**	P	P	06 48 39.0	-5.1
	0.5nm,0.5s,baz=54,slow=5.9,SNR=11						
YKA	**Yellowknife Ar**	**81.01**	**3**	P	P	06 50 09.1	-4.2
	0.1nm,0.5s,baz=349,slow=5.4,SNR=5.4						

IDC 09 06:52:48.0±8.9, **7°.58N**×**126°.52E, h131**^{km}±81^{km}, **mb3.5**/8, **mb1 3.6**/8, **mb1mx3.4**/25, **mbtmp3.5**/8, **Error ellipse: s-maj=50.3km s-min=19.2km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CGP	**Cagayan de Oro**	**2.01**	**296**	*e*P	Pn	06 53 24.7	+2.5
CGP				*i* S	Sn	06 53 37.7	-11
WRA	**Warramunga Arr**	**28.41**	**164**	P	P	06 58 30.6	+0.3
	0.2nm,0.6s,baz=344,slow=8.6,SNR=2.8						
ASAR	**Alice Springs**	**31.88**	**167**	P	P	06 59 00.4	-0.5
	0.3nm,0.5s,baz=345,slow=7.2,SNR=3.7						
ASAR				PcP	PcP	07 01 48.8	+0.2
	0.4nm,0.6s,baz=357,slow=2.5,SNR=5.4						
MKAR	**Makanchi Array**	**54.32**	**324**	P	P	07 02 01.3	+0.4
	2.5nm,0.4s,baz=115,slow=7.0,SNR=63						
MKAR				PcP	PcP	07 03 03.1	-0.1
	0.9nm,0.7s,baz=117,slow=4.3,SNR=8.4						
AKTO	**Aktyubinsk**	**70.55**	**321**	P	P	07 03 48.2	-0.5
	1.8nm,0.5s,baz=122,slow=4.5,SNR=9.9						
ILAR	**Eielson Array**	**81.74**	**26**	P	P	07 04 51.3	-0.4
	0.2nm,0.7s,baz=231,slow=5.7,SNR=4.9						
ARCES	**ARCESS Array B**	**86.79**	**340**	P	P	07 05 16.3	-0.8
	1.3nm,0.9s,baz=80,slow=6.7,SNR=4.8						
FINES	**FINESS Array B**	**88.37**	**332**	P	P	07 05 25.6	+0.8
	0.5nm,0.3s,baz=54,slow=9.3,SNR=3.7						
YKA	**Yellowknife Ar**	**96.10**	**24**	P	P	07 06 00.9	+0.5
	0.1nm,0.5s,baz=304,slow=5.2,SNR=3.8						
TORD	**Torodi Ar. Bea**	**121.46**	**290**	PKP	PKPdf	07 11 26.2	-0.7
	0.6nm,0.8s,baz=60,slow=1.8,SNR=9.1						

IDC 09 07:45:34.9±37.0, **22°.35S**×**172°.66W, h0**^{km}, **mb4.1**/3, **mb1 4.2**/3, **mb1mx3.7**/20, **mbtmp4.1**/3, **Error ellipse: s-maj=703.6km s-min=170.1km az=86.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**41.55**	**247**	P	P	07 53 24.7	+0.2
	3.4nm,1.0s,baz=87,slow=8.5,SNR=3.6						
ASAR	**Alice Springs**	**48.96**	**258**	P	P	07 54 23.4	-0.1
	0.9nm,0.5s,baz=101,slow=7.0,SNR=15						
WRA	**Warramunga Arr**	**49.28**	**262**	P	P	07 54 25.5	-0.4
	0.7nm,0.3s,baz=102,slow=7.6,SNR=75						

*ISCJB **09** 07:56:52.3±0.5, 34°.84S±0°.05×67°.97W±0°.09, h10^{km}, mb4.0/11, Error ellipse: s-maj=11.7km s-min=6.2km az=150.5*
*IDC **09** 07:56:52.4±0.7, 34°.89S×68°.14W, h0^{km}, mb4.0/7, mb1 4.1/12, mb1mx4.0/20, mbtmp3.9/12, ML3.9/5, Error ellipse: s-maj=24.9km s-min=12.1km az=100.0*
*NEIC **09** 07:56:55.1±2.3, 34°.83S×68°.04W, h16^{km}±14^{km}, mb4.0/5, MD4.2(SJA), Error ellipse: s-maj=9.6km s-min=6.3km az=83.0*
NEIC Felt [IV] at San Rafael.
ISC 09 07:56:54.1±0.6, **34°.87S**±0°.06×**68°.03W**±0°.08, **h10**^{km}, **n40, σ0^{s}69**/44, **mb4.0**/11, **Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**3.26**	**357**	Pn	**Pn**	**07 57 45.5**	**+0.2**
CFAA				Pg	**Pb**	**07 57 52.9**	**+0.8**
CFAA				Lg	Lg	07 58 35.8	
CFAA	**Coronel Fontan**	**3.26**	**357**	Pn	**Pn**	**07 57 45.5**	**+0.2**
	1.8nm,0.3s,baz=169,slow=15,SNR=177						
CFAA				Pg	**Pb**	**07 57 52.9**	**+0.8**
	4.6nm,0.3s,baz=172,slow=18,SNR=41						
CFAA				Lg	Lg	07 58 35.8	
	18nm,0.3s,baz=176,slow=15,SNR=11						
TRQA	**Tornquist**	**5.82**	**125**	*e*Pn	**Pn**	**07 58 21.4**	**+0.9**
	35nm,0.6s						
TRQA				*e*Sn	**Sn**	**07 59 26.6**	**-0.8**
PLCA	**Paso Flores**	**6.18**	**198**	*e*Pn	**Pn**	**07 58 26.4**	**+0.9**
	14nm,0.6s						
PLCA				*e*Pg	Pg	07 58 48.4	-4.0
PLCA				Lg	Lg	08 00 03.9	
PLCA				*e*Sg	Sg	08 00 06.9	-5.6
PLCA	**Paso Flores**	**6.18**	**198**	Pn	**Pn**	**07 58 25.9**	**+0.4**
	0.3nm,0.3s,baz=4.4,slow=13,SNR=6.9						
PLCA				Pg	Pb	07 58 46.2	+4.4
	0.5nm,0.3s,baz=27,slow=12,SNR=5.3						
PLCA				Lg	Lg	08 00 03.9	
	4.9nm,0.3s,baz=270,slow=17,SNR=7.8						
LCO	**Las Campanas**	**6.26**	**338**	*e*Pn	**Pn**	**07 58 26.1**	**-0.7**
	25nm,0.3s						
LCO				*e*Sn	**Sn**	**07 59 38.4**	**-0.2**
CPUP	**Villa Florida**	**12.54**	**50**	Pn	**Pn**	**07 59 51.5**	**-1.0**
CPUP				Lg	Lg	08 03 36.7	
CPUP	**Villa Florida**	**12.54**	**50**	Pn	**Pn**	**07 59 51.5**	**-1.0**
	0.7nm,0.3s,baz=198,slow=12,SNR=7.1						
CPUP				Lg	Lg	08 03 36.7	
	2.0nm,0.3s,baz=307,slow=20,SNR=2.5						
LPAZ	**La Paz**	**18.50**	**360**	*e*P	**P**	**08 01 11.9**	**+0.8**
	2.9nm,0.6s						
LPAZ	**La Paz**	**18.50**	**360**	P	**Pn**	**08 01 12.2**	**+1.0**
	0.5nm,0.3s,baz=166,slow=12,SNR=26						
SIV	**San Ignacio**	**19.81**	**20**	P	**P**	**08 01 24.6**	**-0.3**
SIV	**San Ignacio**	**19.81**	**20**	P	**P**	**08 01 24.6**	**-0.3**
	0.3nm,0.3s,baz=200,slow=10,SNR=11						
SAML	**Samuel**	**26.18**	**11**	*e*P	**P**	**08 02 28.5**	**-0.3**
	1.9nm,0.7s						
BDFB	**Brasilia**	**26.26**	**48**	P	**P**	**08 02 29.7**	**0.0**
BDFB	**Brasilia**	**26.26**	**48**	P	**P**	**08 02 29.7**	**0.0**
	1.5nm,0.5s,baz=200,slow=9.3,SNR=3.2						
QSPA	**South Pole Qui**	**55.37**	**180**	P	**P**	**08 06 28.4**	**+0.3**
QSPA	**South Pole Qui**	**55.37**	**180**	P	**P**	**08 06 28.4**	**+0.3**
	2.3nm,0.8s,baz=156,slow=2.9,SNR=9.2						
OXF	**Oxford**	**71.86**	**342**	*e*P	**P**	**08 08 16.3**	**-0.7**
	4.2nm,0.6s						
TXAR	**Lajitas Array**	**72.17**	**328**	P	**P**	**08 08 18.6**	**-0.5**
TXAR	**Lajitas Array**	**72.17**	**328**	P	**P**	**08 08 18.6**	**-0.5**
	0.3nm,0.8s,baz=148,slow=7.5,SNR=4.6						
DBIC	**Dimbokro**	**72.37**	**68**	P	**P**	**08 08 21.3**	**+0.8**
DBIC	**Dimbokro**	**72.37**	**68**	P	**P**	**08 08 21.3**	**+0.8**
	5.7nm,0.9s,baz=190,slow=4.9,SNR=4.7						
WVT	**Waverly**	**73.01**	**343**	*e*P	**P**	**08 08 23.1**	**-0.7**
	2.3nm,0.7s						
ANMO	**Albuquerque**	**78.19**	**329**	*e*P	**P**	**08 08 54.2**	**+0.4**
	0.5nm,0.5s						
TORD	**Torodi Ar. Bea**	**81.44**	**68**	P	**P**	**08 09 12.0**	**+0.3**
TORD	**Torodi Ar. Bea**	**81.44**	**68**	P	**P**	**08 09 12.0**	**+0.3**
	1.4nm,0.6s,baz=236,slow=4.7,SNR=11						
PDAR	**Pinedale Array**	**86.08**	**331**	P	**P**	**08 09 35.7**	**+0.6**
PDAR	**Pinedale Array**	**86.08**	**331**	P	**P**	**08 09 35.7**	**+0.6**
	0.7nm,0.7s,baz=156,slow=4.6,SNR=7.0						
NVAR	**Mina Array Bea**	**86.53**	**323**	P	**P**	**08 09 36.8**	**-0.6**
NVAR	**Mina Array Bea**	**86.53**	**323**	P	**P**	**08 09 36.8**	**-0.6**
	0.2nm,0.3s,baz=161,slow=7.3,SNR=3.5						
WRA	**Warramunga Arr**	**121.49**	**205**	PKP	**PKPdf**	**08 15 46.9**	**-1.4**
WRA	**Warramunga Arr**	**121.49**	**205**	PKP	**PKPdf**	**08 15 46.9**	**-1.4**
	0.5nm,0.6s,baz=166,slow=1.6,SNR=12						
BVAR	**Borovoye Array**	**145.60**	**45**	PKPbc	**PKPdf**	**08 16 32.7**	**+0.7**
BVAR	**Borovoye Array**	**145.60**	**45**	PKPbc	**PKPdf**	**08 16 32.7**	**+0.7**
	0.5nm,0.5s,baz=215,slow=1.8,SNR=5.0						
KURBB	**Kurchatov Arra**	**151.14**	**47**	PKPbc	**PKPbc**	**08 16 47.4**	**+0.4**
	0.8nm,0.6s,baz=296,slow=2.9,SNR=9.4						
KURK	**Kurchatov**	**151.16**	**46**	PKPbc	**PKPbc**	**08 16 47.4**	**+0.4**
ZALV	**Zalesovo Beam**	**153.07**	**37**	PKPbc	**PKPbc**	**08 16 51.2**	**0.0**
ZALV	**Zalesovo Beam**	**153.07**	**37**	PKPbc	**PKPbc**	**08 16 51.2**	**0.0**
	1.1nm,0.4s,baz=281,slow=0.7,SNR=4.8						
MKAR	**Makanchi Array**	**154.74**	**53**	PKPab	**PKPab**	**08 17 09.4**	**-0.8**
MKAR	**Makanchi Array**	**154.74**	**53**	PKPab	**PKPab**	**08 17 09.4**	**-0.8**
	0.1nm,0.3s,baz=290,slow=3.5,SNR=3.1						

*SKO **09** 08:11:08.6, 40°.75N×22°.06E, h23^{km}, M2.0, ML2.3*
*CSEM **09** 08:11:09.3±0.1, 40°.74N×22°.06E, h8^{km}, ML2.6/4, Error ellipse: s-maj=2.9km s-min=2.7km az=133.0*
*ISCJB **09** 08:11:09.0±0.5, 40°.78N±0°.02×22°.05E±0°.03, h2^{km}±4^{km}, Error ellipse: s-maj=3.8km s-min=3.1km az=140.0*
*ATH **09** 08:11:09.6, 40°.72N×22°.08E, h5^{km}±3^{km}, MD3.2/6*
*THE **09** 08:11:09.4, 40°.75N×22°.04E, h19^{km}±3^{km}, ML2.6/4, Error ellipse: s-maj=3.5km s-min=0.5km az=340.0*
*BEO **09** 08:11:10.8±1.5, 40°.80N×22°.14E, h13^{km}±5^{km}, ML2.1/3*
ISC 09 08:11:09.4±0.9, **40°.75N**±0°.02×**22°.06E**±0°.02, **h13**^{km}±8^{km}, **n47, σ0^{s}53**/80, **Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRG	**Griva**	**0.33**	**52**	P	**Pg**	**08 11 16.4**	**+0.3**
GRG				S	**Sb**	**08 11 22.2**	**-0.2**
GRG	**Griva**	**0.33**	**52**	*e*PB	**Pg**	**08 11 16.5**	**+0.3**
GRG				*e*SB	**Sb**	**08 11 22.2**	**-0.2**
GRG	**Griva**	**0.33**	**52**	P	**Pg**	**08 11 16.4**	**+0.3**
GRG				S	**Sb**	**08 11 22.2**	**-0.2**
KZN	**Kozani**	**0.50**	**207**	P	**Pg**	**08 11 19.0**	**-0.3**
KZN				S	**Sg**	**08 11 25.9**	**0.0**
KZN	**Kozani**	**0.50**	**207**	*e*PG	**Pg**	**08 11 18.9**	**-0.3**
KZN				*e*SB	**Sg**	**08 11 26.0**	**0.0**
KZN	**Kozani**	**0.50**	**207**	P	**Pg**	**08 11 19.0**	**-0.3**
KZN				S	**Sg**	**08 11 25.9**	**0.0**
FNA	**Florina**	**0.52**	**274**	P	**Pg**	**08 11 19.6**	**-0.1**
FNA				S	**Sg**	**08 11 26.8**	**+0.1**
FNA	**Florina**	**0.52**	**274**	*e*PG	**Pg**	**08 11 19.7**	**0.0**
FNA				*e*SB	**Sb**	**08 11 27.9**	**-0.1**
FNA	**Florina**	**0.52**	**274**	P	**Pg**	**08 11 19.6**	**-0.1**
FNA				S	**Sg**	**08 11 26.8**	**+0.1**
FNA				*e*Sb	**Sb**	**08 11 27.9**	**-0.1**
BIA	**Bitola**	**0.62**	**296**	P	**Pg**	**08 11 21.3**	**-0.2**
BIA				S	**Sg**	**08 11 29.8**	**0.0**
BIA	**Bitola**	**0.62**	**296**	*e*Pg	**Pg**	**08 11 21.3**	**-0.2**
BIA				*e*Sg	**Sg**	**08 11 29.9**	**+0.2**
BIA	**Bitola**	**0.62**	**296**	P	**Pg**	**08 11 21.3**	**-0.2**
BIA				S	**Sg**	**08 11 29.8**	**0.0**
VAY	**Valandovo**	**0.69**	**34**	P	**Pg**	**08 11 22.0**	**-0.8**
VAY				S	**Sb**	**08 11 32.6**	**-0.1**
VAY	**Valandovo**	**0.69**	**34**	*e*Pg	**Pg**	**08 11 21.7**	**-1.1**
VAY				*e*Sg	**Sg**	**08 11 31.8**	**0.0**
VAY	**Valandovo**	**0.69**	**34**	*e*Pg	**Pg**	**08 11 21.9**	**-0.8**
VAY				*e*Sg	**Sg**	**08 11 31.9**	**0.0**
VAY				*e*Lg	Lg	08 11 34.8	
	comp=N,120nm,0.4s						
VAY				*e*Lg	Lg	08 11 35.0	
	comp=E,112nm,0.7s						
VAY	**Valandovo**	**0.69**	**34**	P	**Pg**	**08 11 22.0**	**-0.8**
VAY	**Valandovo**	**0.69**	**34**	*e*Pg	**Pg**	**08 11 22.4**	**-0.4**
VAY				*e*Sg	**Sg**	**08 11 31.8**	**0.0**
VAY				S	**Sb**	**08 11 32.6**	**-0.1**
VAY				*e*Lg	Lg	08 11 35.4	
	comp=E,112nm,0.7s						
KNT	**Kendrikon**	**0.75**	**57**	P	**Pg**	**08 11 24.0**	**-0.1**
KNT				S	**Sb**	**08 11 34.5**	**-0.1**
KNT	**Kendrikon**	**0.75**	**57**	P	**Pg**	**08 11 24.0**	**-0.1**
KNT				S	**Sb**	**08 11 34.5**	**-0.1**
HORT	**Hortiatis**	**0.80**	**101**	P	**Pg**	**08 11 24.7**	**-0.3**
HORT	**Hortiatis**	**0.80**	**101**	P	**Pg**	**08 11 24.7**	**-0.3**
SOH	**Sokhos**	**0.98**	**86**	P	**Pb**	**08 11 27.9**	**-0.4**
SOH	**Sokhos**	**0.98**	**86**	*e*PG	**Pb**	**08 11 28.0**	**-0.4**
SOH	**Sokhos**	**0.98**	**86**	*e*Pg	**Pb**	**08 11 28.0**	**-0.4**
PLG	**Polygyros**	**1.12**	**109**	*e*PG	**Pb**	**08 11 29.9**	**-0.8**
PLG				*e*SB	**Sb**	**08 11 45.0**	**-0.2**
PLG	**Polygyros**	**1.12**	**109**	*e*Pg	**Pb**	**08 11 29.9**	**-0.8**
PLG				*e*Sb	**Sb**	**08 11 45.0**	**-0.2**
THL	**Klokotos Trika**	**1.19**	**182**	*e*PB	**Pg**	**08 11 32.2**	**-0.1**
THL				*e*SB	**Sn**	**08 11 47.6**	**-0.1**
THL	**Klokotos Trika**	**1.19**	**182**	*e*Pb	**Pg**	**08 11 32.2**	**-0.1**
THL				*e*Sb	**Sn**	**08 11 47.6**	**-0.1**
SKO	**Skopje**	**1.30**	**339**	*e*Pg	**Pn**	**08 11 33.1**	**-0.3**
SKO				*e*Sg	**Sb**	**08 11 50.4**	**-0.1**
SKO				*e*Lg	Lg	08 11 51.5	
	comp=Z,44nm,0.3s						
SKO				*e*Lg	Lg	08 11 51.8	
	comp=N,86nm,0.4s						
SKO	**Skopje**	**1.30**	**339**	*e*Pg	**Pn**	**08 11 33.6**	**+0.2**
SKO				*e*Sg	**Sn**	**08 11 50.9**	**+0.2**
SKO				*e*Lg	Lg	08 11 52.3	
	comp=N,86nm,0.4s						
NVR	**Nevrokopi**	**1.49**	**66**	*e*PB	**Pg**	**08 11 38.8**	**+0.8**
NVR				*e*SB	**Sg**	**08 11 57.8**	**+0.5**
NVR	**Nevrokopi**	**1.49**	**66**	*e*Pb	**Pg**	**08 11 38.8**	**+0.8**
NVR				*e*Sb	**Sg**	**08 11 57.8**	**+0.5**
NEO	**Neokhori**	**1.70**	**148**	*e*PB	**Pg**	**08 11 41.6**	**-0.4**
NEO	**Neokhori**	**1.70**	**148**	*e*Pb	**Pg**	**08 11 41.6**	**-0.4**
AGG	**Agios Georgios**	**1.74**	**173**	*e*PG	**Pb**	**08 11 41.0**	**-0.3**
AGG	**Agios Georgios**	**1.74**	**173**	*e*Pg	**Pb**	**08 11 41.0**	**-0.3**
EVR	**Evrytania**	**1.84**	**186**	*e*PN	**Pg**	**08 11 44.9**	**+0.1**
EVR				*e*SN	**Sg**	**08 12 09.8**	**+1.0**
EVR	**Evrytania**	**1.84**	**186**	*e*Pn	**Pg**	**08 11 44.9**	**+0.1**
VTS	**Vitosha**	**2.03**	**25**	*e*Pn	**Pn**	**08 11 44.7**	**+1.2**
VTS				*e*Sn	**Sn**	**08 12 07.5**	**-1.3**
VTS	**Vitosha**	**2.03**	**25**	*e*Pn	**Pn**	**08 11 44.7**	**+1.2**
VTS				*e*Sn	**Sn**	**08 12 07.5**	**-1.3**
BARS	**Barje**	**2.07**	**355**	*e*Pn	**Pn**	**08 11 44.9**	**+1.0**
BARS				*e*Sn	**Sn**	**08 12 10.3**	**+0.7**
BARS	**Barje**	**2.07**	**355**	*e*Pn	**Pn**	**08 11 44.9**	**+1.0**
BARS				*e*Sn	**Sn**	**08 12 10.3**	**+0.7**
LKD2	**Lefkada island**	**2.24**	**209**	*e*PN	**Pb**	**08 11 50.0**	**+0.2**
LKD2	**Lefkada island**	**2.24**	**209**	*e*Pn	**Pb**	**08 11 50.0**	**+0.2**
SELS	**Selova**	**2.56**	**344**	*e*Pn	**Pn**	**08 11 50.9**	**+0.2**
KLV	**Kalavryta, Ach**	**2.71**	**179**	*e*PN	**Pb**	**08 11 56.8**	**-1.0**
KLV	**Kalavryta, Ach**	**2.71**	**179**	*e*Pn	**Pb**	**08 11 56.8**	**-1.0**

*CSEM **09** 08:24:47.9±0.2, 37°.72N×38°.10E, h2^{km}, MD3.0, Error ellipse: s-maj=5.8km s-min=4.4km az=166.0*
*DDA **09** 08:24:48.4, 37°.75N×38°.02E, h7^{km}, MD3.0*
*ISK **09** 08:24:48.1, 37°.47N×38°.11E, h26^{km}, MD2.6*
ISC 09 08:24:48.0±1.3, **37°.72N**±0°.04×**38°.09E**±0°.03, **h2**^{km}±11^{km}, **n13, σ0^{s}53**/24, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.59**	**347**	*i* P	**Pg**	**08 24 59.3**	**0.0**
AKCD				*i* S	**Sn**	**08 25 12.8**	**-1.0**
AKCD	**Akcadag**	**0.59**	**347**	*i* P	**Pg**	**08 24 59.3**	**0.0**
AKCD				*i* S	**Sn**	**08 25 12.8**	**-1.0**
URFA	**Urfa**	**0.65**	**115**	*e*PG	**Pg**	**08 25 00.0**	**-0.4**
URFA				*e*SG	**Sg**	**08 25 09.2**	**+0.5**
URFA	**Urfa**	**0.65**	**115**	*e*Pg	**Pg**	**08 25 00.0**	**-0.4**
URFA				*e*Sg	**Sg**	**08 25 09.3**	**+0.5**
KMRS	**Kahramanmaras**	**0.97**	**258**	*e*PG	**Pg**	**08 25 06.4**	**-0.1**
KMRS				*e*SG	**Sg**	**08 25 19.5**	**+0.4**
KMRS	**Kahramanmaras**	**0.97**	**258**	*e*Pg	**Pg**	**08 25 06.4**	**-0.1**
KMRS				*e*Sg	**Sg**	**08 25 19.5**	**+0.4**
AYKD	**Aykdinkavak**	**1.06**	**254**	*i* P	**Pg**	**08 25 07.7**	**-0.6**
AYKD				*i* S	**Sb**	**08 25 24.0**	**+0.5**
SVRC	**Sivrice-ELAZID**	**1.17**	**55**	*e*PN	**Pn**	**08 25 11.3**	**-0.1**
SVRC				*e*SN	**Sn**	**08 25 28.3**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.17**	**55**	*e*Pn	**Pn**	**08 25 11.4**	**-0.1**
SVRC				*e*Sn	**Sn**	**08 25 28.3**	**+0.2**
KUZU	**Kuzuini**	**1.24**	**221**	*i* P	**Pg**	**08 25 11.0**	**-0.8**
KUZU				*i* S	**Sn**	**08 25 30.1**	**+0.4**
KUZU	**Kuzuini**	**1.24**	**221**	*i* P	**Pg**	**08 25 11.0**	**-0.8**
KUZU				*i* S	**Sn**	**08 25 30.1**	**+0.4**
SARI	**SarD1z-Kayseri**	**1.49**	**298**	*e*PN	**Pn**	**08 25 16.0**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.49**	**298**	*e*Pn	**Pn**	**08 25 16.0**	**+0.1**

*CSEM **09** 08:27:19.2, 37°.20N×27°.91E, h26^{km}, MD2.2, After ISK*
ISK 09 08:27:19.2, 37°.20N×**27°.91E, h26**^{km}, **MD2.2, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLSB	**Milas**	**0.14**	**312**	*e*PG	Pb	08 27 24.6	+0.2

MLSB				eSG	Sb	08 27 28.5	+0.5
MLSB	Milas	0.14	312	ePg	Pb	08 27 24.6	+0.2
MLSB				eSg	Sb	08 27 28.5	+0.5
YER	Yerkesik	0.30	102	ePG	Pb	08 27 26.9	+0.5
YER				eSG	Sb	08 27 32.4	+1.0
YER	Yerkesik	0.30	102	ePg	Pb	08 27 26.9	+0.4
YER				eSg	Sb	08 27 32.4	+1.0
BODT	Bodrum	0.50	254	ePG	Pb	08 27 29.9	+0.5
BODT				eSG	Sn	08 27 38.1	-0.4
BODT	Bodrum	0.50	254	ePg	Pb	08 27 29.9	+0.4
BODT				eSg	Sn	08 27 38.1	-0.4
DAT	Datca	0.54	210	ePG	Pb	08 27 30.5	+0.3
DAT	Datca	0.54	210	ePg	Pb	08 27 30.5	+0.2

*ISCJB **09** 08:36:15.2±0.5, 59°.85N±0°.05×22°.30E±0°.05, h0km, Error ellipse: s-maj=7.0km s-min=3.7km az=168.8*
*CSEM **09** 08:36:15.8±0.2, 59°.89N×22°.38E, h2km, ML2.2, Error ellipse: s-maj=6.9km s-min=4.1km az=162.0, Mining explosion.*
*IDC **09** 08:36:15.9±3.3, 59°.75N×22°.38E, h0km, mb1 2.9/3, mb1mx2.8/28, mbtmp2.8/3, ML2.5/3, Error ellipse: s-maj=50.0km s-min=13.9km az=162.0*
*HEL **09** 08:36:16.4±0.1, 59°.81N×22°.29E, h0km, ML1.9, ML2.2(UPP), Explosion*
*UPP **09** 08:36:19.0, 59°.82N×21°.86E, h0km, ML2.2, Suspected Mining explosion.*
ISC 09 08:36:15.1±0.9**, 59°.82N**±0°.04×**22°.30E**±0°.03**, h0km, n39, σ1s.07**/52**, Baltic States - Belarus - Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MEF	Metsahovi	1.12	69	eP	Pg	08 36 36.5	0.0
MEF				eS	Sg	08 36 51.9	+0.8
MEF	Metsahovi	1.12	69	P	Pg	08 36 36.5	0.0
MEF				S	Sg	08 36 51.8	+0.8
AAL	Aland	1.21	288	eP	Pg	08 36 38.0	-0.3
AAL				eS	Sg	08 36 54.1	0.0
AAL	Aland	1.21	288	P	Pg	08 36 38.0	-0.3
AAL				S	Sg	08 36 54.0	0.0
RAF	Rauma	1.23	348	eP	Pg	08 36 38.5	-0.3
RAF				eS	Sg	08 36 55.2	+0.5
RAF	Rauma	1.23	348	P	Pg	08 36 38.4	-0.3
RAF				S	Sg	08 36 55.1	+0.5
MTSE	Matsula	1.36	144	eP	Pg	08 36 40.6	-0.4
MTSE	Matsula	1.36	144	P	Pg	08 36 40.6	-0.4
NRTU	Norrtaelje	1.86	267	eP	Pn	08 36 49.0	+0.8
NRTU	Norrtaelje	1.86	267	P	Pn	08 36 49.0	+0.8
PVF	Pernaja	1.92	66	eP	Pb	08 36 50.4	-0.5
PVF				eS	Sb	08 37 15.0	-0.4
PVF				MSG		08 37 18.6	
	comp=Z,6.5nm,0.1s						
PVF	Pernaja	1.92	66	P	Pb	08 36 50.3	-0.5
PVF				S	Sb	08 37 14.9	-0.4
FORU	Forsmark	2.14	287	eP	Pn	08 36 53.4	+1.4
FORU	Forsmark	2.14	287	P	Pn	08 36 53.3	+1.4
FLYU	Flymyra	2.24	280	eP	Pn	08 36 54.4	+1.0
FLYU	Flymyra	2.24	280	P	Pn	08 36 54.4	+1.0
NYNU	Nynaeshamn	2.35	251	eP	Pn	08 36 56.0	+1.2
NYNU	Nynaeshamn	2.35	251	P	Pn	08 36 56.0	+1.2
FIA0	FINESS Array S	2.47	47	ePB	Pb	08 36 59.2	-1.1
FIA0				eSG	Sb	08 37 31.9	+0.7
FIA0				MSG		08 37 33.6	
	comp=Z,5.5nm,0.1s						
FIA0	FINESS Array S	2.47	47	Pb	Pb	08 36 59.2	-1.1
FIA0				Sg	Sb	08 37 31.9	+0.7
FINES	FINESS Array B	2.47	47	Pn	Pb	08 36 58.9	-1.3
	comp=Z,1.1nm,0.3s,baz=230,slow=13,SNR=27						
FINES				Sn	Sb	08 37 31.0	-0.2
	comp=Z,2.8nm,0.3s,baz=249,slow=20,SNR=20						
BACU	Backbrunna	2.62	273	eP	Pn	08 37 00.0	+1.4
BACU	Backbrunna	2.62	273	P	Pn	08 37 00.0	+1.4
KEF	Keuruu	2.66	27	ePB	Pb	08 37 03.1	-0.5
KEF				eSG	Sb	08 37 37.9	+1.1
KEF				MSG		08 37 40.5	
	comp=Z,3.7nm,0.2s						
KEF	Keuruu	2.66	27	Pb	Pb	08 37 03.1	-0.5
KEF				Sg	Sb	08 37 37.8	+1.1
IGGU	Iggoen	2.69	295	eP	Pn	08 37 00.8	+1.2
IGGU	Iggoen	2.69	295	P	Pn	08 37 00.8	+1.2
KAF	Kangasniemi	3.01	39	ePB	Pb	08 37 07.5	-2.0
KAF				MSG		08 37 47.9	
	comp=Z,3.9nm,0.2s						
KAF	Kangasniemi	3.01	39	Pb	Pb	08 37 07.5	-2.0
ARNU	Arnoeviken	3.06	310	eP	Pn	08 37 05.9	+1.3
ARNU	Arnoeviken	3.06	310	P	Pn	08 37 05.9	+1.3
ESKU	Eskilstuna	3.07	261	eP	Pn	08 37 06.3	+1.6
ESKU	Eskilstuna	3.07	261	P	Pn	08 37 06.3	+1.6
VAF	Ylistaro	3.23	3	ePB	Pb	08 37 11.8	-1.5
VAF	Ylistaro	3.23	3	Pb	Pb	08 37 11.8	-1.5
FALU	Falun	3.31	285	eP	Pn	08 37 09.6	+1.6
FALU	Falun	3.31	285	P	Pn	08 37 09.6	+1.6
NOA	NORSAR Array B	5.63	287	Pn	Pn	08 37 39.8	-0.2
	comp=Z,0.2nm,0.3s,baz=94,slow=12,SNR=4.9						
ARCES	ARCESS Array B	9.85	7	Pn	Pn	08 38 36.1	-1.6
	comp=Z,0.1nm,0.3s,baz=184,slow=13,SNR=6.5						

*NEIC **09** 08:39:11.5±1.4, 31°.75S×177°.72W, h39km±10km, mb4.6/4, Error ellipse: s-maj=17.8km s-min=10.2km az=106.0*
*IDC **09** 08:39:12.2±3.3, 31°.72S×177°.96W, h38km±25km, mb4.1/5, mb1 4.3/8, mb1mx3.9/22, mbtmp4.2/8, ML4.2/2, MS3.7/11, Ms1 3.7/11, ms1mx3.5/27, Error ellipse: s-maj=29.2km s-min=19.5km az=103.0*
ISC 09 08:39:09.7±0.7**, 31°.85S**±0°.06×**177°.8W**±0°.1**, h24km, n59, σ1s.14**/52**, mb4.5**/7**, MS3.7**/9**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.59	358	ePn	Pn	08 39 49.5	-0.6
RAO				Sn	Sn	08 40 19.4	-1.5
RAO	Raoul Island	2.59	358	Pn	Pn	08 39 49.7	-0.4
	133nm,0.3s,baz=104,slow=20,SNR=12						
RAO				Sn	Sn	08 40 19.4	-1.5
	241nm,0.3s,baz=61,slow=24,SNR=5.8						
RAO				LR	LR	08 40 27.1	
	comp=Z,774nm,21.4s,baz=191,slow=30						
CNGZ	Carnagh Statio	7.37	205	PN	Pn	08 40 54.3	-1.5
MWZ	Matawai	7.50	209	PN	Pn	08 40 55.4	-2.3
MWZ				SN	Sn	08 42 21.3	-0.7
URZ	Urewera	7.62	212	ePn	Pn	08 40 59.6	+0.3
URZ				eSn	Sn	08 42 21.8	-3.1
URZ	Urewera	7.62	212	PN	Pn	08 40 57.2	-2.0
URZ				SN	Sn	08 42 22.8	-2.1
URZ	Urewera	7.62	212	Pn	Pn	08 40 59.4	+0.2
	1.3nm,0.3s,baz=160,slow=16,SNR=7.7						
URZ				Sn	Sn	08 42 22.3	-2.5
	6.2nm,0.3s,baz=169,slow=19,SNR=8.6						
OUZ	Omahuta	7.91	243	ePn	Pn	08 41 08.2	+5.0
MRZ	Mangatainoka R	10.27	209	PN	Pn	08 41 30.4	-5.2
MRZ				SN	Sn	08 43 21.9	-8.1
HOWZ	Holdsworth Sta	10.50	209	SN	Sn	08 43 26.2	-9.4
MSVF	Nonsavu	14.54	344	ePn	Pn	08 42 33.9	-0.3
DZM	Mont Dzumac	17.06	301	eP	P	08 43 10.0	+1.6
	39nm,1.2s						
DZM				eLR	LR	08 47 01.1	
DZM	Mont Dzumac	17.06	301	Pn	Pn	08 43 07.3	+0.6
DZM	Mont Dzumac	17.06	301	Pn	Pn	08 43 07.3	+0.6
	baz=126,slow=15,SNR=3.6						
DZM				LR	LR	08 48 24.4	
	comp=Z,644nm,19.0s,baz=336,slow=33						
TBI	Tubuai	26.47	78	eLR	LR	08 51 09.8	
	217nm,28.8s						
PPT2	Papeete2	29.22	68	eLR	LR	08 52 24.3	
	188nm,26.5s						
PPT	Papeete	29.23	68	LR	LR	08 54 49.2	
	comp=Z,81nm,18.9s,baz=204,slow=32						
HNR	Honiara	30.37	312	LR	LR	08 55 58.2	
	comp=Z,126nm,19.0s,baz=134,slow=33						
CTAO	Charters Tower	34.20	281	eP	P	08 45 55.0	+1.5
	17nm,1.3s						
STKA	Stephens Creek	34.32	259	eP	P	08 45 55.7	+1.3
	3.7nm,1.4s						
STKA	Stephens Creek	34.32	259	P	P	08 45 55.3	+0.9
	3.4nm,0.9s,baz=105,slow=13,SNR=4.6						
STKA				LR	LR	08 57 56.0	
	comp=Z,214nm,18.1s,baz=24,slow=33						
AS31	Alice Springs	43.20	268	eP	P	08 47 08.5	-0.5
ASAR	Alice Springs	43.20	268	P	P	08 47 08.4	-0.6
ASAR	Alice Springs	43.20	268	P	P	08 47 08.4	-0.6
	2.1nm,0.4s,baz=105,slow=7.2,SNR=56						
ASAR				LR	LR	09 05 15.7	
	comp=Z,93nm,18.6s,baz=298,slow=36						
WRAB	Tennant Creek	44.31	274	eP	P	08 47 18.8	+0.8
	5.3nm,0.6s						
WRA	Warramunga Arr	44.32	274	P	P	08 47 17.3	-0.7
WRA	Warramunga Arr	44.32	274	P	P	08 47 17.3	-0.7
	2.5nm,0.4s,baz=111,slow=8.0,SNR=23						
QSPA	South Pole Qui	58.26	180	eP	P	08 49 04.2	+2.1
	5.5nm,0.7s						
QSPA	South Pole Qui	58.26	180	P	P	08 49 04.7	+2.6
	2.0nm,0.9s,baz=337,slow=3.9,SNR=8.2						
KAPI	Kappang	64.02	281	LR	LR	09 16 15.9	
	comp=Z,98nm,20.5s,baz=209,slow=35						
MJAR	Matsushiro Arr	79.52	325	LR	LR	09 19 15.6	
	comp=Z,39nm,20.5s,baz=140,slow=30						
KSRS	Korea Array	85.55	320	LR	LR	09 24 54.1	
	comp=Z,22nm,20.4s,baz=160,slow=32						
PETK	Petropavlovsk-	87.25	346	P	P	08 51 53.5	-0.2
PETK	Petropavlovsk-	87.25	346	P	P	08 51 53.5	-0.2
	2.1nm,0.7s,baz=126,slow=9.3,SNR=5.1						
PDAR	Pinedale Array	97.08	44	LR	LR	09 30 21.2	
	comp=Z,40nm,18.2s,baz=83,slow=32						
LPAZ	La Paz	97.42	114	LR	LR	09 25 57.2	
	comp=Z,39nm,19.0s,baz=1.3,slow=29						
MKAR	Makanchi Array	118.81	309	PKP	PKPdf	08 57 55.3	-0.4
MKAR	Makanchi Array	118.81	309	PKP	PKPdf	08 57 55.3	-0.4
	0.5nm,0.9s,baz=84,slow=3.8,SNR=5.3						
JOF	Joensuu	143.82	338	ep	PKPab	08 58 38.6	-0.5
	0.6nm,0.4s						
KAF	Kangasniemi	145.96	340	ep	PKPdf	08 58 44.8	-1.0
	5.0nm,0.7s						
KBZ	Khabaz	146.03	302	PKPbc	PKPdf	08 58 47.4	+1.0
KBZ	Khabaz	146.03	302	PKPbc	PKPdf	08 58 47.4	+1.0
	3.3nm,0.9s,baz=107,slow=3.4,SNR=6.2						
FINES	FINESS Array B	146.55	339	PKPbc	PKPdf	08 58 47.5	+0.7
FINES	FINESS Array B	146.55	339	PKPbc	PKPdf	08 58 47.5	+0.7
	5.1nm,0.7s,baz=55,slow=7.2,SNR=7.4						
NB2	NORSAR Subarra	150.21	351	PKP	PKPbc	08 58 57.7	-0.3
	comp=Z,3.0nm,1.0s,baz=17,slow=2.6						
NOA	NORSAR Array B	150.21	351	PKPbc	PKPbc	08 58 57.6	-0.4
NOA	NORSAR Array B	150.21	351	PKPbc	PKPbc	08 58 57.6	-0.4
	comp=Z,1.0nm,0.8s,baz=12,slow=4.0,SNR=3.8						
ASF	Jabal al Asfar	150.63	280	PKPbc	PKPbc	08 59 00.4	+0.4
ASF	Jabal al Asfar	150.63	280	PKPbc	PKPbc	08 59 00.4	+0.4
	comp=Z,3.3nm,0.8s,baz=258,slow=0.2,SNR=6.0						
EIL	Elat	151.81	274	PKPbc	PKPbc	08 59 01.9	-0.7
EIL	Elat	151.81	274	PKPbc	PKPbc	08 59 01.9	-0.7
	comp=Z,6.6nm,0.9s,baz=26,slow=7.2,SNR=4.5						
MMAI	Mount Meron Ar	151.99	281	PKPbc	PKPbc	08 59 01.3	-1.8
MMAI	Mount Meron Ar	151.99	281	PKPbc	PKPbc	08 59 01.3	-1.8
	comp=Z,1.7nm,0.4s,baz=73,slow=6.8,SNR=7.9						
AKASG	Malin Array Be	152.53	321	PKPbc	PKPbc	08 59 03.4	-0.2
AKASG	Malin Array Be	152.53	321	PKPbc	PKPbc	08 59 03.4	-0.2
	comp=Z,0.4nm,0.3s,baz=66,slow=2.0,SNR=9.6						
BRTR	Keskin Array B	153.39	296	PKPbc	PKPbc	08 59 06.1	0.0
BRTR				PKPab	PKPab	08 59 17.6	-0.8
BRTR	Keskin Array B	153.39	296	PKPbc	PKPbc	08 59 06.1	0.0
	comp=Z,2.9nm,0.9s,baz=100,slow=3.4,SNR=14						
BRTR				PKPab	PKPab	08 59 17.6	-0.8
	comp=Z,1.9nm,1.0s,baz=103,slow=5.2,SNR=5.4						
TORD	Torodi Ar. Bea	161.38	179	PKPab	PKPab	08 59 52.6	-0.2
TORD	Torodi Ar. Bea	161.38	179	PKPab	PKPab	08 59 52.6	-0.2
	comp=Z,0.3nm,0.6s,baz=183,slow=4.2,SNR=2.6						

IDC 09 08:41:13.2±1.7**, 4°.08N**×**127°.14E, h0km, mb3.9**/5**, mb1 4.0**/5**, mb1mx3.7**/25**, mbtmp3.9**/5**, 1D, Error ellipse: s-maj=173.3km s-min=20.5km az=65.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	4.25	317	⇓iP	Pb	08 42 25.5	-3.4
WRA	Warramunga Arr	24.89	164	P	P	08 46 37.5	-0.4
	2.5nm,0.7s,baz=344,slow=10,SNR=17						
STKA	Stephens Creek	38.31	160	P	P	08 48 36.0	+0.4
	0.9nm,0.4s,baz=336,slow=11,SNR=4.3						
MKAR	Makanchi Array	57.51	325	P	P	08 51 03.7	-0.6
	0.5nm,0.5s,baz=119,slow=7.7,SNR=14						
BVAR	Borovoye Array	67.26	327	P	P	08 52 10.6	+1.1
	0.8nm,0.5s,baz=99,slow=6.6,SNR=5.0						
AKTO	Aktyubinsk	73.65	321	P	P	08 52 48.3	-0.3
	0.8nm,0.7s,baz=90,slow=10,SNR=4.4						

*ISCJB **09** 08:42:41.5±1.0, 37°.88N±0°.04×29°.27E±0°.08, h10km±6km, Error ellipse: s-maj=11.5km s-min=4.8km az=27.5*
*DDA **09** 08:42:41.0, 37°.89N×29°.21E, h7km, MD2.8*
*CSEM **09** 08:42:41.2±0.4, 37°.87N×29°.28E, h12km, MD2.8, Error ellipse: s-maj=10.2km s-min=4.5km az=117.0*
*ISK **09** 08:42:41.1, 37°.93N×29°.29E, h5km, MD2.6*
ISC 09 08:42:41.4±1.1**, 37°.87N**±0°.04×**29°.27E**±0°.06**, h15km**±8km**, n16, σ0s.70**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.22	239	ePG	Pb	08 42 47.0	-0.1
DENT				eSG	Sg	08 42 51.5	+1.8
DENT	Denizli	0.22	239	ePg	Pb	08 42 47.0	-0.1
DENT				eSg	Sg	08 42 51.5	+1.8
DNZL	Cakiroluk	0.25	225	i P	Pg	08 42 46.1	-0.8
DNZL				i S	Sg	08 42 50.0	-0.7
DNZL	Cakiroluk	0.25	225	i P	Pg	08 42 46.1	-0.8
DNZL				i S	Sg	08 42 50.0	-0.7
KHAL	Karahalli	0.53	19	i P	Pg	08 42 51.8	-0.2
KHAL				i S	Sb	08 42 59.8	-0.4
KHAL	Karahalli	0.53	19	i P	Pg	08 42 51.8	-0.2
KHAL				i S	Sb	08 42 59.8	-0.4
KULA	Kula-Manisa	0.80	324	ePG	Pg	08 42 56.6	-0.5
KULA				eSG	Sg	08 43 07.4	-0.3
KULA	Kula-Manisa	0.80	324	ePg	Pg	08 42 56.6	-0.5
KULA				eSg	Sg	08 43 07.4	-0.3
YER	Yerkesik	1.07	227	ePN	Pn	08 43 02.4	+0.5
YER	Yerkesik	1.07	227	ePn	Pn	08 43 02.4	+0.5
AYDN	Tasoluk	1.12	260	i P	Pb	08 43 02.3	-0.2
AYDN				i S	Sb	08 43 17.0	+0.1
AYDN	Tasoluk	1.12	260	i P	Pb	08 43 02.3	-0.2
AYDN				i S	Sb	08 43 17.0	+0.1
DEMI	Demirci	1.25	340	i P	Pn	08 43 04.6	+0.2
DEMI				i S	Sb	08 43 20.9	+0.1
DEMI	Demirci	1.25	340	i P	Pn	08 43 04.6	+0.2
DEMI				i S	Sb	08 43 20.9	+0.1
TVSB	Tavsanli	1.59	5	ePN	Pn	08 43 09.8	+0.7
TVSB	Tavsanli	1.59	5	ePn	Pn	08 43 09.8	+0.7

IDC 09 08:51:09.3±2.0**, 30°.95S**×**178°.13W, h0km, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/19**, mbtmp4.0**/3**, Error ellipse: s-maj=57.1km s-min=33.3km az=45.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.97	268	P	P	08 59 10.3	-0.1
	0.5nm,0.4s,baz=106,slow=7.4,SNR=16						
WRA	Warramunga Arr	44.01	273	P	P	08 59 18.7	-0.1
	0.9nm,0.4s,baz=113,slow=7.8,SNR=16						
QSPA	South Pole Qui	59.16	180	P	P	09 01 11.7	-0.1
	3.3nm,0.7s,baz=26,slow=2.8,SNR=20						
FINES	FINESS Array B	145.62	340	PKPbc	PKPdf	09 10 48.3	-0.6
	1.6nm,0.7s,baz=147,slow=6.3,SNR=2.4						

*CSEM **09** 08:59:04.7, 37°.28N×28°.19E, h5km, MD2.5, After ISK*
ISK 09 08:59:04.7, 37°.28N×**28°.19E, h5km, MD2.5, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.16	151	ePG	Pg	08 59 09.2	+1.1
YER				eSG	Sg	08 59 11.2	+0.9
YER	Yerkesik	0.16	151	ePg	Pg	08 59 09.2	+1.2
YER				eSg	Sg	08 59 11.2	+1.0
MLSB	Milas	0.33	274	ePG	Pg	08 59 12.0	+0.9
MLSB				eSG	Sb	08 59 18.2	-0.5
MLSB	Milas	0.33	274	ePg	Pg	08 59 12.0	+0.9
MLSB				eSg	Sb	08 59 18.2	-0.5
BODT	Bodrum	0.73	253	ePG	Pb	08 59 19.9	-0.1
BODT				eSG	Sb	08 59 31.2	+0.9
BODT	Bodrum	0.73	253	ePg	Pb	08 59 19.9	-0.1
BODT				eSg	Sb	08 59 31.2	+0.9
DAT	Datca	0.73	222	ePG	Pb	08 59 19.9	-0.2
DAT				eSG	Sb	08 59 31.4	+0.9
DAT	Datca	0.73	222	ePg	Pb	08 59 19.9	-0.2
DAT				eSg	Sb	08 59 31.4	+0.9
FETY	Fethiye	0.96	131	ePG	Pb	08 59 24.1	+0.2
FETY				eSG	Sn	08 59 39.2	+0.2
FETY	Fethiye	0.96	131	ePg	Pb	08 59 24.1	+0.2
FETY				eSg	Sn	08 59 39.3	+0.3

IDC 09 09:02:56.9±1.9**, 14°.48S**×**76°.55W, h0km, mb3.4**/3**, mb1 3.7**/5**, mb1mx3.5**/20**, mbtmp3.5**/5**, ML3.6**/2**, MS3.1**/2**, Ms1 3.1**/2**, ms1mx2.7**/14**, Error ellipse: s-maj=47.6km s-min=18.7km az=67.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.49	353	Pn	Pn	09 03 38.8	0.0
	10.0nm,0.3s,baz=168,slow=11,SNR=16						
NNA				Pg	Pb	09 03 43.1	+0.4
	10.0nm,0.3s,baz=152,slow=11,SNR=16						
NNA				Sn	Sn	09 04 07.6	-2.4
	22nm,0.3s,baz=153,slow=12,SNR=6.9						
NNA				Lg	Lg	09 04 15.5	
	37nm,0.3s,baz=204,slow=16,SNR=8.3						
ATAH	Atahualpa	7.52	346	Pn	Pn	09 04 54.2	+5.9
	0.6nm,0.3s,baz=190,slow=2.9,SNR=5.1						
ATAH				Sn	Sn	09 06 22.3	+7.5
	0.3nm,0.3s,baz=204,slow=20,SNR=1.8						
ATAH				LR	LR	09 07 59.6	
	comp=Z,65nm,18.2s,baz=287,slow=40						
LPAZ	La Paz	8.32	104	Pn	Pn	09 05 01.5	+1.9
	0.4nm,0.3s,baz=284,slow=7.2,SNR=18						
SIV	San Ignacio	15.01	98	LR	LR	09 12 45.9	
	comp=Z,146nm,18.1s,slow=39						
TXAR	Lajitas Array	50.82	329	P	P	09 12 00.2	+0.7
	0.1nm,0.6s,baz=159,slow=8.5,SNR=3.4						
TORD	Torodi Ar. Bea	82.18	74	P	P	09 15 19.4	-1.0
	1.1nm,0.7s,baz=257,slow=5.0,SNR=6.0						
YKA	Yellowknife Ar	82.29	343	P	P	09 15 19.6	-0.3
	0.2nm,0.8s,baz=155,slow=4.8,SNR=3.5						

MEX 09 09:05:32.7±0.5**, 18°.44N**×**99°.86W, h5km**±4km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	Platanillo	0.34	98	eP	Pg	09 05 39.0	-0.5
PLIG				eS	Sg	09 05 43.8	-0.3
ARIG	Puente Sto Nin	0.49	251	eP	Pg	09 05 41.8	-0.5
ARIG				eS	Sg	09 05 48.8	+0.1
MEIG	Mezcala	0.56	156	i P	Pg	09 05 43.4	-0.2
MEIG				eS	Sg	09 05 51.0	0.0
YAIG	Yautepec	0.86	61	eP	Pg	09 05 47.4	-2.1
YAIG				i S	Sg	09 05 58.9	-1.8
MZVM		0.95	38	i P	Pg	09 05 49.0	-2.0
MZVM				i S	Sg	09 06 00.9	-2.5
SZVM	Salazar	0.99	27	eP	Pg	09 05 50.1	-2.1
SZVM				i S	Sg	09 06 03.5	-2.0
PPM	Popocatepetl	1.32	62	i P	Pn	09 05 53.9	-4.6
PPM				i S	Sb	09 06 11.9	-4.5
CAIG	El Cayaco	1.44	196	eP	Pn	09 05 56.7	-2.7
CAIG				i S	Sb	09 06 13.6	-5.0
ZIIG	Zihuatanejo	1.74	242	i P	Pn	09 06 00.9	-2.7
ZIIG				i S	Sn	09 06 21.2	-4.9

IDC 09 09:11:50.1±6.2**, 2°.89S**×**140°.60E, h0km, mb3.2**/2**, mb1 3.6**/3**, mb1mx3.4**/17**, mbtmp3.4**/3**, ML3.8**/1**, Error ellipse: s-maj=233.7km s-min=32.4km az=89.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.02	199	P	P	09 16 02.7	-0.1
	0.3nm,0.3s,baz=21,slow=13,SNR=25						
ASAR	Alice Springs	21.65	197	P	P	09 16 42.1	-0.2
	0.5nm,0.4s,baz=26,slow=9.9,SNR=12						
MKAR	Makanchi Array	71.08	322	P	P	09 23 10.3	0.0
	0.2nm,0.5s,baz=123,slow=7.1,SNR=3.3						

*NSSP **09** 09:40:42.4, 38°.37N×44°.63E, h10km, Ms2.9*
*ISCJB **09** 09:40:46.6±1.0, 38°.29N±0°.07×44°.52E±0°.06, h10km, Error ellipse: s-maj=11.1km s-min=5.3km az=151.6*
ISC 09 09:40:44.1±1.5**, 38°.35N**±0°.07×**44°.60E**±0°.05**, h10km, n9, σ1s.17**/14**, 1C-3D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	Van	0.95	281	i P	Pn	09 41 03.5	-0.3
HAKT	HAKKARI	1.06	222	i P	Pn	09 41 07.4	+2.2
HAKT				i S	Sn	09 41 26.6	+6.5
GEVA	Gevas	1.21	269	i P	Pg	09 41 06.6	-0.8
GEVA				i S	Sn	09 41 23.5	-0.4
DYDN	Diyadin	1.39	330	i P	Pg	09 41 10.7	-0.2
TUTA	Tutak	1.75	308	i P	Pg	09 41 15.9	-1.7
TUTA				i S	Sg	09 41 39.9	-0.5
GRS	Goris	1.78	49	⇓iP	Pg	09 41 17.0	-1.2
GRS				⇓iS	Sg	09 41 42.0	+0.7
GNI	Garni	1.81	3	⇑iP	Pg	09 41 18.9	+0.1
GNI				⇓iS	Sg	09 41 44.4	+2.2
VADZ	Vardenis	2.03	26	eP	Pg	09 41 23.0	-0.1
VADZ				eS	Sg	09 41 50.0	+0.6
BEST	Besiri	2.67	261	i P	Pg	09 41 35.9	+0.7
BEST				i S	Sg	09 42 11.5	+1.7

*ISK **09** 09:42:05.9, 39°.89N×28°.83E, h2km, MD2.8*
*ISCJB **09** 09:42:06.9±0.5, 39°.92N±0°.02×28°.85E±0°.03, h2km±6km, Error ellipse: s-maj=4.3km s-min=3.8km az=34.3*
*DDA **09** 09:42:06.8, 39°.91N×28°.86E, h7km, MD3.0*
*CSEM **09** 09:42:06.9±0.1, 39°.91N×28°.84E, h2km, MD2.8, Error ellipse: s-maj=2.1km s-min=1.9km az=106.0*
ISC 09 09:42:07.0±1.0**, 39°.91N**±0°.02×**28°.83E**±0°.02**, h5km**±9km**, n40, σ0s.44**/58**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ORLT	Orhaneli	0.14	19	ePG	Pg	09 42 09.9	0.0
ORLT	Orhaneli	0.14	19	ePg	Pg	09 42 10.0	0.0
ULDT	Uludag	0.33	45	i P	Pg	09 42 13.5	0.0
ULDT				i S	Sg	09 42 17.6	-0.3
ULDT	Uludag	0.33	45	i P	Pg	09 42 13.5	0.0
ULDT				i S	Sg	09 42 17.6	-0.3
DST	Dursunbey	0.35	209	ePG	Pg	09 42 13.5	-0.2
DST				eSG	Sg	09 42 18.8	+0.5
DST	Dursunbey	0.35	209	ePg	Pg	09 42 13.5	-0.2
DST				eSg	Sg	09 42 18.8	+0.5
DURS	Dursunbey	0.41	222	i P	Pg	09 42 14.8	-0.2
DURS				i S	Sg	09 42 21.1	+0.7
DURS	Dursunbey	0.41	222	i P	Pg	09 42 14.8	-0.2
DURS				i S	Sg	09 42 21.1	+0.7
KCTX	Karacabey (Bur	0.51	314	ePG	Pg	09 42 16.8	-0.1
KCTX				eSG	Sb	09 42 25.3	-1.0
KCTX	Karacabey (Bur	0.51	314	ePg	Pg	09 42 16.8	-0.1
KCTX				eSg	Sb	09 42 25.3	-1.0
ARMT	Armutlu	0.66	2	ePG	Pg	09 42 19.4	-0.3
ARMT	Armutlu	0.66	2	ePg	Pg	09 42 19.4	-0.3
TVSB	Tavsanli	0.67	133	ePG	Pg	09 42 19.0	-0.8
TVSB				eSG	Sg	09 42 29.3	+0.8
TVSB	Tavsanli	0.67	133	ePg	Pg	09 42 19.0	-0.8
TVSB				eSg	Sg	09 42 29.3	+0.8
YLV	Yalova	0.78	32	ePG	Pg	09 42 22.2	+0.3
YLV	Yalova	0.78	32	ePg	Pg	09 42 22.2	+0.3
ADVT	Abdulvahap	0.87	53	ePG	Pg	09 42 24.0	+0.3
ADVT	Abdulvahap	0.87	53	ePg	Pg	09 42 24.0	+0.3
GONE	Gonen-Balikesi	0.89	279	ePG	Pg	09 42 24.0	-0.2
GONE	Gonen-Balikesi	0.89	279	ePg	Pg	09 42 24.0	-0.2
BALY	Balya	0.95	260	i P	Pg	09 42 25.2	0.0
BALY				i S	Sn	09 42 41.0	-0.1
BALY	Balya	0.95	260	i P	Pg	09 42 25.2	0.0
BALY				i S	Sn	09 42 41.0	-0.1
GDZ	Gediz	0.96	148	i P	Pb	09 42 26.0	-0.2
GDZ				i S	Sn	09 42 42.4	+0.9
GDZ	Gediz	0.96	148	i P	Pb	09 42 26.0	-0.2
GDZ				i S	Sn	09 42 42.4	+0.9
BUY	Buyukada	0.97	13	ePG	Pg	09 42 25.8	+0.2
BUY	Buyukada	0.97	13	ePg	Pg	09 42 25.8	+0.2
MRMT	Marmara Adasi	1.17	307	ePN	Pg	09 42 29.6	0.0
MRMT	Marmara Adasi	1.17	307	ePn	Pg	09 42 29.6	0.0
ALT	Altintas	1.30	130	ePN	Pn	09 42 31.8	-0.3
ALT				eSN	Sn	09 42 50.6	+0.7
ALT	Altintas	1.30	130	ePn	Pn	09 42 31.8	-0.3
ALT				eSn	Sn	09 42 50.7	+0.7
GULT	Gulveren	1.39	67	ePN	Pn	09 42 33.0	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GULT	**Gulveren**	**1.39**	**67**	*e*Pn	**Pn**	**09 42 33.0**	**-0.2**
MANT	**Manisa**	**1.43**	**189**	*i* P	**Pn**	**09 42 34.1**	**+0.2**
MANT				*i* S	**Sn**	**09 42 53.5**	**+0.3**
MANT	**Manisa**	**1.43**	**189**	*i* P	**Pn**	**09 42 34.1**	**+0.2**
MANT				*i* S	**Sn**	**09 42 53.5**	**+0.3**
MFT	**Murefte**	**1.48**	**307**	*e*PN	**Pb**	**09 42 35.0**	**0.0**
MFT	**Murefte**	**1.48**	**307**	*e*Pn	**Pb**	**09 42 35.0**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.49**	**302**	*e*PN	**Pb**	**09 42 35.0**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.49**	**302**	*e*Pn	**Pb**	**09 42 35.0**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.87**	**286**	*e*PN	**Pn**	**09 42 40.0**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.87**	**286**	*e*Pn	**Pn**	**09 42 40.0**	**+0.3**

*CSEM **09** 10:00:31.2±0.1, 41°.67N×15°.86E, h20km, ML3.2/7, Error ellipse: s-maj=2.4km s-min=2.1km az=33.0*

ROM 09 10:00:31.7±0.1**, 41°.66N×15°.85E, h18**km±1km**, Md2.5**/17**, Ml2.2**/10**, Error ellipse: s-maj=1.4km s-min=1.0km az=24.0, Southern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MSAG	**Monte S. Angel**	**0.07**	**44**	Pg	Pg	10 00 35.4	+0.2
MSAG				Sg	Sg	10 00 38.1	+0.5
	415nm,0.4s						
MSAG	**Monte S. Angel**	**0.07**	**44**	Pg	Pg	10 00 35.4	+0.2
MSAG				Sg	Sg	10 00 38.1	+0.5
	415nm,0.4s						
SGRT	**San Giovanni R**	**0.12**	**320**	Pg	Pg	10 00 35.7	0.0
SGRT				Sg	Sg	10 00 38.6	+0.1
	1μm,0.2s						
SGRT	**San Giovanni R**	**0.12**	**320**	Pg	Pg	10 00 35.7	0.0
SGRT				Sg	Sg	10 00 38.6	+0.1
	1μm,0.2s						
MELA	**Melanico ??? S**	**0.54**	**275**	Pg	Pg	10 00 42.1	-0.4
MELA				Sg	Sb	10 00 50.4	+0.4
	292nm,0.4s						
MELA	**Melanico ??? S**	**0.54**	**275**	Pg	Pg	10 00 42.1	-0.4
MELA				Sg	Sb	10 00 50.4	+0.4
	292nm,0.4s						
MOCO	**Biccari - m.te**	**0.59**	**241**	Pg	Pg	10 00 43.2	-0.5
MOCO				Sg	Sb	10 00 52.0	+0.2
	20nm,0.4s						
SGTA	**Sant Agata di**	**0.64**	**215**	Pg	Pb	10 00 44.0	-0.4
SGTA				Sg	Sb	10 00 52.7	-0.4
	110nm,0.4s						
SGTA	**Sant Agata di**	**0.64**	**215**	Pg	Pb	10 00 44.0	-0.4
SGTA				Sg	Sb	10 00 52.7	-0.4
	110nm,0.4s						
MRVN	**Minervino Murg**	**0.66**	**156**	Pg	Pb	10 00 43.7	-1.0
MRVN				Sg	Sg	10 00 54.0	+0.5
MRVN	**Minervino Murg**	**0.66**	**156**	Pg	Pb	10 00 43.7	-1.0
MRVN				Sg	Sg	10 00 54.0	+0.5
VULT	**Monte Vulture**	**0.73**	**194**	Pg	Pb	10 00 45.7	-0.3
VULT				Sg	Sg	10 00 56.5	+0.6
	141nm,0.3s						
VULT	**Monte Vulture**	**0.73**	**194**	Pg	Pb	10 00 45.7	-0.3
VULT				Sg	Sg	10 00 56.5	+0.6
	141nm,0.3s						
CAFE	**Carife**	**0.78**	**216**	Pg	Pb	10 00 46.4	-0.5
CAFE				Sg	Sb	10 00 57.4	+0.1
CAFE	**Carife**	**0.78**	**216**	Pg	Pb	10 00 46.4	-0.5
CAFE				Sg	Sb	10 00 57.4	+0.1
SNAL	**S. Angelo Dei**	**0.88**	**213**	Pg	Pb	10 00 47.5	-1.0
SNAL				Sg	Sb	10 01 00.3	+0.3
SNAL	**S. Angelo Dei**	**0.88**	**213**	Pg	Pb	10 00 47.5	-1.0
SNAL				Sg	Sb	10 01 00.3	+0.3
MRLC	**Muro Lucano**	**0.94**	**197**	Pg	Pb	10 00 49.5	-0.1
MRLC				Sg	Sb	10 01 02.0	+0.2
	77nm,0.5s						
MRLC	**Muro Lucano**	**0.94**	**197**	Pg	Pb	10 00 49.5	-0.1
MRLC				Sg	Sb	10 01 02.0	+0.2
	77nm,0.5s						
AMUR	**Altamura**	**0.95**	**143**	Pg	Pb	10 00 49.3	-0.3
AMUR				Sg	Sg	10 01 02.6	-0.1
	51nm,0.2s						
AMUR	**Altamura**	**0.95**	**143**	Pg	Pb	10 00 49.3	-0.3
AMUR				Sg	Sg	10 01 02.6	-0.1
	51nm,0.2s						
TRIV	**Trivento**	**0.98**	**277**	Pg	Pb	10 00 50.2	0.0
TRIV				Sg	Sn	10 01 04.0	0.0
TRIV	**Trivento**	**0.98**	**277**	Pg	Pb	10 00 50.2	0.0
TRIV				Sg	Sn	10 01 04.0	0.0
MCRV	**Calabrutti - M**	**1.02**	**210**	Pg	Pb	10 00 50.9	0.0
MCRV				Sg	Sb	10 01 04.4	+0.3
	47nm,0.3s						
MCRV	**Calabrutti - M**	**1.02**	**210**	Pg	Pb	10 00 50.9	0.0
MCRV				Sg	Sb	10 01 04.4	+0.3
	47nm,0.3s						
PTRJ	**Pietraroja**	**1.03**	**254**	Pg	Pb	10 00 50.5	-0.7
	43nm,0.3s						
PTRJ	**Pietraroja**	**1.03**	**254**	Pg	Pb	10 00 50.5	-0.7
	43nm,0.3s						
VAGA	**Valle Agricola**	**1.23**	**259**	Pg	Pb	10 00 55.0	+0.4
	20nm,0.3s						
VAGA	**Valle Agricola**	**1.23**	**259**	Pg	Pb	10 00 55.0	+0.4
	20nm,0.3s						
NOCI	**Noci**	**1.27**	**133**	Pg	Pn	10 00 54.6	+0.1
NOCI	**Noci**	**1.27**	**133**	Pg	Pn	10 00 54.6	+0.1
LTRZ	**Laterza**	**1.29**	**145**	Pg	Pb	10 00 55.3	-0.1
LTRZ	**Laterza**	**1.29**	**145**	Pg	Pb	10 00 55.3	-0.1
INTR	**Introdacqua**	**1.49**	**284**	Pg	Pb	10 00 58.5	-0.5
INTR	**Introdacqua**	**1.49**	**284**	Pg	Pb	10 00 58.5	-0.5
STON	**Ston**	**1.83**	**48**	*e*Pn	Pn	10 01 01.7	-0.6
STON				Sn	Sn	10 01 22.3	-2.7
STON	**Ston**	**1.83**	**48**	*e*Pn	Pn	10 01 01.6	-0.6
STON				Sn	Sn	10 01 22.2	-2.8

NNC 09 10:08:59.1±0.4**, 43°.76N×69°.67E, h0**km**, mb3.6, mpv2.2, 4C-2D, Error ellipse: s-maj=8.6km s-min=2.2km az=50.0, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK09	**Karatay Array**	**0.88**	**136**	P	Pg	10 09 16.7	+0.6
KK09				S	Sb	10 09 29.0	-0.9
KK08	**Karatay Array**	**0.89**	**137**	P	Pg	10 09 16.2	-0.1
KK08				S	Sb	10 09 29.1	-0.9
KK04	**Karatay Array**	**0.90**	**137**	P	Pg	10 09 16.6	+0.2
KK04				S	Sg	10 09 29.0	+1.0
KK01	**Karatay Array**	**0.90**	**137**	P	Pg	10 09 16.1	-0.4
KK01				S	Sg	10 09 28.9	+0.8
KK03	**Karatay Array**	**0.90**	**137**	P	Pg	10 09 16.4	0.0
KK03				S	Sg	10 09 29.0	+0.9
KK05	**Karatay Array**	**0.90**	**136**	P	Pg	10 09 16.8	+0.3
KK05				S	Sg	10 09 28.8	+0.7
KK02	**Karatay Array**	**0.90**	**137**	P	Pg	10 09 16.5	-0.1
KK02				S	Sg	10 09 29.2	+0.9
KK31	**Karatay Array**	**0.90**	**137**	⇓P	Pg	10 09 16.7	+0.1
	1.7nm,0.5s,baz=325,slow=16,SNR=155						
KK31				⇑S	Sg	10 09 29.1	+0.8
	9.5nm,0.3s,baz=303,slow=27,SNR=96						
KK31				⇓Rg	Rg	10 09 33.2	
	84nm,0.9s,baz=322,slow=31,SNR=25						
KK07	**Karatay Array**	**0.91**	**138**	P	Pg	10 09 16.4	-0.2
KK07				S	Sg	10 09 29.3	+0.8
KK06	**Karatay Array**	**0.92**	**137**	P	Pg	10 09 16.8	0.0
KK06				S	Sg	10 09 29.3	+0.6
MK31	**Makanchi Array**	**9.40**	**67**	⇑Pn	Pn	10 11 16.9	+1.0
	0.5nm,0.4s,baz=243,slow=15,SNR=12						
MK31				⇑Sn	Sn	10 13 02.5	+0.2
	0.6nm,0.7s						
MK31				⇑Lg	Lg	10 13 59.7	
	1.1nm,0.8s,baz=244,slow=30						

IDC 09 10:09:12.2±5.3**, 25°.05S×179°.80E, h528**km±65km**, mb3.0**/5**, mb1 3.3**/7**, mb1mx3.1**/19**, mbtmp3.1**/7**, Error ellipse: s-maj=33.7km s-min=26.9km az=18.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.61**	**281**	P	P	10 11 58.0	+0.7
	0.2nm,0.3s,baz=81,slow=10,SNR=3.9						
RPZ	**Rata Peaks**	**19.95**	**199**	P	P	10 13 08.4	-0.4
	0.6nm,0.3s,baz=38,slow=12,SNR=2.6						
STKA	**Stephens Creek**	**34.14**	**250**	P	P	10 15 13.4	+0.1
	2.0nm,0.9s,baz=103,slow=7.5,SNR=5.5						
ASAR	**Alice Springs**	**41.69**	**262**	P	P	10 16 15.0	+0.1
	0.7nm,0.3s,baz=94,slow=7.2,SNR=17						
WRA	**Warramunga Arr**	**42.16**	**267**	P	P	10 16 18.2	-0.5
	1.5nm,0.3s,baz=100,slow=7.2,SNR=107						
NVAR	**Mina Array Bea**	**85.70**	**44**	P	P	10 20 56.1	+0.5
	0.2nm,0.6s,baz=234,slow=7.3,SNR=3.8						
TXAR	**Lajitas Array**	**91.19**	**58**	P	P	10 21 20.9	-0.4
	0.4nm,0.8s,baz=201,slow=6.6,SNR=4.6						

*ISCJB **09** 10:12:26.5±0.9, 60°.6S±0°.2×27°.3W±0°.6, h10km, mb3.8/3, Error ellipse: s-maj=50.4km s-min=13.6km az=146.9*
*IDC **09** 10:12:26.4±1.4, 60°.57S×27°.30W, h0km, mb3.9/3, mb1 4.0/4, mb1mx3.8/16, mbtmp3.9/4, ML3.4/1, Error ellipse: s-maj=54.7km s-min=36.0km az=35.0*

ISC 09 10:12:28.2±0.9**, 60°.5S**±0°.2×**27°.3W**±0°.3**, h10**km**, n10,** σ**0°.67**/9**, mb4.0**/3**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.76**	**150**	*e*Pn	**Pn**	**10 15 30.0**	**+0.7**
SNAA	**Sanae**	**14.77**	**149**	*e*Pn	**Pn**	**10 15 56.4**	**-0.4**
SNAA	**Sanae**	**14.77**	**149**	*e*Sn	Sn	10 18 31.9	-8.3
SNAA	**Sanae**	**14.77**	**149**	Pn	**Pn**	**10 15 56.3**	**-0.4**
	0.2nm,0.3s,baz=328,slow=16,SNR=47						
SNAA				Sn	Sn	10 18 27.0	-13
	0.0nm,0.3s,baz=308,slow=17,SNR=4.3						
CPUP	**Villa Florida**	**39.86**	**316**	P	**P**	**10 20 01.4**	**-0.2**
	0.4nm,0.3s,baz=163,slow=8.3,SNR=4.6						
LPAZ	**La Paz**	**53.02**	**308**	P	**P**	**10 21 46.3**	**+0.5**
	1.2nm,0.5s,baz=162,slow=3.2,SNR=5.1						
TORD	**Torodi Ar. Bea**	**77.02**	**29**	P	**P**	**10 24 21.2**	**+0.2**
	0.6nm,0.4s,baz=198,slow=6.3,SNR=12						
YKA	**Yellowknife Ar**	**139.38**	**315**	PKP	**PKPdf**	**10 31 53.8**	**0.0**
	0.4nm,0.8s,baz=127,slow=2.2,SNR=7.2						
INK	**Inuvik**	**149.12**	**316**	PKPbc	**PKPbc**	**10 32 13.6**	**-1.2**
	1.3nm,0.6s,baz=80,slow=4.0,SNR=14						
ILAR	**Eielson Array**	**152.87**	**305**	PKPbc	**PKPbc**	**10 32 23.9**	**+0.1**
	0.7nm,0.6s,baz=122,slow=1.2,SNR=8.0						

IDC 09 10:16:52.7±2.4**, 17°.69S×167°.82E, h0**km**, mb3.9**/4**, mb1 4.1**/5**, mb1mx3.7**/20**, mbtmp3.9**/5**, ML3.5**/1**, MS3.4**/3**, Ms1 3.3**/3**, ms1mx3.0**/28**, Error ellipse: s-maj=50.9km s-min=33.7km az=107.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.55**	**196**	Pn	Pn	10 18 03.3	+0.3
	2.3nm,0.3s,baz=60,slow=14,SNR=30						
DZM				LR	LR	10 18 54.4	
	comp=Z,148nm,19.4s,baz=242,slow=27						
DZM				Sn	Sn	10 18 54.8	-1.9
	8.3nm,0.3s,baz=324,slow=23,SNR=9.0						
STKA	**Stephens Creek**	**27.59**	**234**	P	P	10 22 42.5	+0.7
	2.0nm,0.6s,baz=84,slow=9.2,SNR=2.8						
STKA				LR	LR	10 33 29.0	
	comp=Z,100nm,19.6s,baz=25,slow=36						
WRA	**Warramunga Arr**	**31.74**	**261**	P	P	10 23 18.1	-0.7
	0.2nm,0.4s,baz=81,slow=6.0,SNR=6.3						
ASAR	**Alice Springs**	**32.23**	**254**	P	P	10 23 21.9	-1.2
	0.9nm,0.5s,baz=80,slow=8.3,SNR=11						
ASAR				LR	LR	10 36 51.4	
	comp=Z,108nm,18.7s,baz=267,slow=37						
FITZ	**Fitzroy Crossi**	**40.08**	**263**	P	P	10 24 31.3	+1.1
	2.5nm,0.8s,baz=89,slow=7.5,SNR=2.6						
ARCES	**ARCESS Array B**	**123.23**	**345**	PKP	PKPdf	10 35 50.5	-0.4
	0.8nm,0.7s,baz=54,slow=2.1,SNR=7.4						

IDC 09 10:20:19.4±1.1**, 11°.35N×142°.82E, h0**km**, mb3.7**/7**, mb1 4.0**/7**, mb1mx3.7**/24**, mbtmp3.7**/7**, Error ellipse: s-maj=35.8km s-min=23.1km az=89.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.20**	**195**	P	P	10 26 48.8	-0.5
	0.5nm,0.8s,baz=19,slow=9.5,SNR=3.3						
ASAR	**Alice Springs**	**35.88**	**194**	P	P	10 27 21.1	-0.2
	0.3nm,0.5s,baz=23,slow=12,SNR=6.0						
CMAR	**Chiang Mai Arr**	**42.90**	**285**	P	P	10 28 21.4	+1.2
	1.8nm,0.6s,baz=84,slow=6.8,SNR=7.6						
MKAR	**Makanchi Array**	**61.73**	**317**	P	P	10 30 39.5	-0.2
	0.6nm,0.6s,baz=100,slow=6.6,SNR=6.0						
ZALV	**Zalesovo Beam**	**62.29**	**326**	P	P	10 30 42.2	-1.1
	0.3nm,0.3s,baz=111,slow=7.9,SNR=2.1						
YKA	**Yellowknife Ar**	**85.75**	**27**	P	P	10 32 59.5	-0.8
	0.1nm,0.5s,baz=287,slow=5.2,SNR=4.4						
NVAR	**Mina Array Bea**	**89.87**	**51**	P	P	10 33 22.4	+1.5
	0.7nm,0.7s,baz=286,slow=5.0,SNR=5.3						

IDC 09 10:22:00.8±4.8**, 13°.07S×166°.94E, h234**km±50km**, mb3.4**/10**, mb1 3.6**/11**, mb1mx3.4**/22**, mbtmp3.4**/11**, Error ellipse: s-maj=38.2km s-min=22.2km az=145.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.97**	**183**	P	Pn	10 24 06.5	-0.1
	0.4nm,0.3s,baz=0.0,slow=20,SNR=4.1						
CTA	**Charters Tower**	**21.01**	**248**	P	P	10 26 27.0	+0.4
	2.5nm,0.7s,baz=76,slow=12,SNR=3.5						
STKA	**Stephens Creek**	**29.86**	**227**	P	P	10 27 47.1	+0.6
	1.9nm,0.3s,baz=56,slow=10,SNR=19						
WRA	**Warramunga Arr**	**31.96**	**253**	P	P	10 28 04.6	-0.5
	2.3nm,1.0s,baz=85,slow=9.0,SNR=9.8						
ASAR	**Alice Springs**	**33.00**	**247**	P	P	10 28 13.7	-0.5
	2.4nm,0.6s,baz=75,slow=9.2,SNR=47						
FITZ	**Fitzroy Crossi**	**40.04**	**257**	P	P	10 29 12.8	-0.8
	1.9nm,0.8s,baz=73,slow=11,SNR=2.9						
MJAR	**Matsushiro Arr**	**56.29**	**332**	P	P	10 31 16.6	-0.7
	1.0nm,0.7s,baz=165,slow=8.3,SNR=4.7						
SONM	**Songino Array**	**80.98**	**324**	P	P	10 33 51.2	+1.8
	0.3nm,0.3s,baz=134,slow=6.2,SNR=3.6						
ILAR	**Eielson Array**	**85.05**	**18**	P	P	10 34 09.2	-0.5
	0.5nm,0.4s,baz=232,slow=5.3,SNR=11						
MKAR	**Makanchi Array**	**95.78**	**317**	P	P	10 35 01.1	+0.7
	0.4nm,0.8s,baz=107,slow=4.1,SNR=4.4						
YKA	**Yellowknife Ar**	**96.22**	**27**	P	P	10 35 01.9	0.0
	0.1nm,0.7s,baz=256,slow=4.6,SNR=3.4						
ARCES	**ARCESS Array B**	**118.57**	**346**	PKP	PKPdf	10 40 19.1	-1.1
	0.4nm,0.4s,baz=46,slow=2.6,SNR=7.5						

IDC 09 10:27:38.8±1.6**, 18°.32S×64°.69E, h0**km**, mb3.8**/4**, mb1 3.9**/5**, mb1mx3.6**/26**, mbtmp3.8**/5**, ML3.9**/1**, MS3.5**/9**, Ms1 3.5**/9**, ms1mx3.1**/35**, Error ellipse: s-maj=54.4km s-min=32.2km az=38.0, Mauritius - Reunion region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**16.61**	**266**	Pn	Pn	10 31 31.6	-1.8
	0.4nm,0.3s,baz=83,slow=13,SNR=3.4						
KMBO	**Kilima Mbogo**	**31.89**	**299**	LR	LR	10 45 43.8	
	comp=Z,47nm,19.1s,baz=96,slow=34						
CMAR	**Chiang Mai Arr**	**49.68**	**44**	LR	LR	10 53 12.6	
	comp=Z,44nm,20.0s,baz=49,slow=31						
EIL	**Elat**	**55.66**	**328**	LR	LR	10 58 53.8	
	comp=Z,41nm,20.3s,baz=95,slow=34						
GNI	**Garni**	**61.06**	**343**	LR	LR	11 03 47.3	
	comp=Z,24nm,19.2s,baz=232,slow=36						
ASAR	**Alice Springs**	**64.29**	**108**	P	P	10 38 16.2	-0.3
	0.9nm,0.7s,baz=263,slow=6.2,SNR=9.6						
ASAR				LR	LR	11 04 34.1	
	comp=Z,84nm,18.3s,baz=72,slow=34						
WRA	**Warramunga Arr**	**65.38**	**104**	P	P	10 38 23.5	-0.2
	1.8nm,1.2s,baz=260,slow=5.7,SNR=5.6						
MKAR	**Makanchi Array**	**66.72**	**13**	P	P	10 38 31.5	-0.1
	0.3nm,0.8s,baz=194,slow=5.3,SNR=3.8						
MKAR				LR	LR	11 06 59.7	
	comp=Z,23nm,18.2s,baz=168,slow=35						
STKA	**Stephens Creek**	**69.68**	**118**	LR	LR	11 04 48.7	
	comp=Z,62nm,19.4s,baz=25,slow=32						
ZALV	**Zalesovo Beam**	**74.02**	**12**	P	P	10 39 15.3	-0.8
	0.6nm,0.3s,baz=201,slow=7.7,SNR=2.7						
ZALV				LR	LR	11 09 02.9	
	comp=Z,20nm,19.5s,baz=250,slow=34						
KSRS	**Korea Array**	**81.30**	**46**	LR	LR	11 15 11.9	
	comp=Z,28nm,18.4s,baz=194,slow=35						
ILAR	**Eielson Array**	**128.98**	**17**	PKP	PKPdf	10 46 50.2	+2.1
	0.3nm,1.0s,baz=333,slow=1.0,SNR=3.5						

MEX 09 10:27:44.5±0.3**, 16°.91N×100°.18W, h9**km±5km**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.17**	**328**	*i* P	Pg	10 27 47.8	-0.3
CAIG				*e*S	Sg	10 27 50.1	-0.4
ARIG	**Puente Sto Nin**	**1.38**	**353**	*i* P	Pn	10 28 06.3	-3.6
ARIG				*i* S	Sb	10 28 23.0	-5.2
PLIG	**Platanillo**	**1.61**	**23**	*i* P	Pn	10 28 09.6	-3.6
PLIG				*e*S	Sn	10 28 29.8	-4.5
PNIG	**Pinotepa**	**2.03**	**104**	*i* P	Pn	10 28 15.3	-3.6
PNIG				*i* S	Sn	10 28 39.6	-4.8

*LDG **09** 10:37:58.2±0.1, 43°.46N×10°.48E, h2km, Ml3.4/11, Error ellipse: s-maj=3.0km s-min=2.1km az=11.0*
*GEN **09** 10:37:58.4, 43°.43N×10°.67E, h12km, ML3.2*
*IDC **09** 10:37:58.9±1.7, 43°.45N×10°.72E, h0km, mb3.2/2, mb1 3.4/5, mb1mx3.3/29, mbtmp3.3/5, ML3.3/3, MS3.0/2, Ms1 3.0/2, ms1mx2.4/21, Error ellipse: s-maj=39.7km s-min=18.7km az=106.0*
*ISCJB **09** 10:37:58.5±0.3, 43°.46N±0°.02×10°.55E±0°.02, h11km±2km, mb3.3/2, MS3.2/1, Error ellipse: s-maj=2.7km s-min=2.5km az=164.0*
*ROM **09** 10:37:59.6±0.2, 43°.51N×10°.56E, h9km±2km, Ml3.3/10, Error ellipse: s-maj=1.7km s-min=1.3km az=62.0*
*CSEM **09** 10:37:59.0±0.1, 43°.46N×10°.53E, h5km, ML3.8/5, Error ellipse: s-maj=2.8km s-min=2.2km az=11.0*
*SZGRF **09** 10:38:02.0, 43°.47N×10°.49E, h10km, mb3.6, Central Italy*
*VIE **09** 10:38:03.3±0.5, 43°.66N×10°.45E, h8km, mb2.9/10, ML3.3/12, Error ellipse: s-maj=4.8km s-min=3.8km az=123.0 65 km W of Florence*
*STR **09** 10:38:06.6±0.5, 43°.75N×9°.88E, h10km, Ml3.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 09 10:37:59.1±1.0**, 43°.46N**±0°.02×**10°.48E**±0°.02**, h9**km±7km**, n166,** σ**1°.63**/231**, 6C-10D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PII	**Pisa**	**0.27**	**7**	Pg	**Pg**	**10 38 04.6**	**+0.2**
PII	**Pisa**	**0.27**	**7**	Pg	**Pg**	**10 38 04.6**	**+0.2**
GROG	**Isola di Gorgo**	**0.43**	**266**	Pg	**Pb**	**10 38 09.3**	**+0.5**
GROG				Sg	**Sb**	**10 38 17.0**	**+1.6**
	852nm,0.6s						
GROG	**Isola di Gorgo**	**0.43**	**266**	Pg	**Pb**	**10 38 09.3**	**+0.5**
MAIM	**Mastiano**	**0.46**	**1**	Pg	**Pg**	**10 38 08.1**	**+0.1**
MAIM				Sg	**Sg**	**10 38 13.9**	**-0.1**
	2μm,0.7s						
MAIM	**Mastiano**	**0.46**	**1**	P	**Pg**	**10 38 07.9**	**-0.1**
MAIM	**Mastiano**	**0.46**	**1**	Pg	**Pg**	**10 38 08.1**	**+0.1**
MAIM				Sg	**Sg**	**10 38 13.9**	**-0.1**
	2μm,0.7s						
MAIM				S	**Sb**	**10 38 14.2**	**-2.0**
GRFL	**Gerfalco**	**0.48**	**130**	Pg	**Pg**	**10 38 08.4**	**+0.1**
	404nm,0.2s						
GRFL	**Gerfalco**	**0.48**	**130**	Pg	**Pg**	**10 38 08.4**	**+0.1**
	404nm,0.2s						
CRMI	**Carmignano**	**0.49**	**47**	Pg	**Pg**	**10 38 08.0**	**-0.5**
CRMI	**Carmignano**	**0.49**	**47**	Pg	**Pg**	**10 38 08.0**	**-0.5**
CSNT	**Castellina Chi**	**0.59**	**88**	Pg	**Pg**	**10 38 09.7**	**-0.8**
CSNT				Sg	**Sg**	**10 38 16.8**	**-1.5**
	902nm,0.6s						
CSNT	**Castellina Chi**	**0.59**	**88**	Pg	**Pg**	**10 38 09.7**	**-0.8**
CSNT				Sg	**Sg**	**10 38 16.8**	**-1.5**
	902nm,0.6s						
BDI	**Bagni Di Lucca**	**0.61**	**8**	Pg	**Pg**	**10 38 10.6**	**-0.3**
BDI				Sg	**Sg**	**10 38 18.6**	**-0.3**
	3μm,1.0s						
BDI	**Bagni Di Lucca**	**0.61**	**8**	Pg	**Pg**	**10 38 10.6**	**-0.3**
BDI				Sg	**Sg**	**10 38 18.6**	**-0.3**
	3μm,1.0s						
VLC	**Villacollemand**	**0.70**	**355**	Pg	**Pg**	**10 38 12.6**	**-0.1**
VLC				Sg	**Sb**	**10 38 22.1**	**-1.3**
	2μm,0.9s						
VLC	**Villacollemand**	**0.70**	**355**	Pg	**Pg**	**10 38 12.6**	**-0.1**
VLC				Sg	**Sb**	**10 38 22.1**	**-1.3**
	2μm,0.9s						
VINC	**Vinca**	**0.72**	**341**	P	**Pg**	**10 38 13.2**	**+0.2**
VINC				S	**Sb**	**10 38 23.3**	**-0.6**
CASP	**Castiglione de**	**0.72**	**157**	Pg	**Pg**	**10 38 13.8**	**+0.8**
CASP				Sg	**Sb**	**10 38 25.2**	**+1.3**
CASP	**Castiglione de**	**0.72**	**157**	Pg	**Pg**	**10 38 13.8**	**+0.8**
PZZT	**Monte Pizzetto**	**0.73**	**22**	Pg	**Pg**	**10 38 12.6**	**-0.5**
PZZT				Sg	**Sg**	**10 38 21.8**	**-0.8**
	2μm,0.5s						
PZZT	**Monte Pizzetto**	**0.73**	**22**	Pg	**Pg**	**10 38 12.6**	**-0.5**
PZZT				Sg	**Sg**	**10 38 21.8**	**-0.8**
	2μm,0.5s						
FNVD	**Fontana Vidola**	**0.85**	**33**	Pg	**Pg**	**10 38 14.8**	**-0.6**
	4μm,0.7s						
FNVD	**Fontana Vidola**	**0.85**	**33**	Pg	**Pg**	**10 38 14.8**	**-0.6**
	4μm,0.7s						
BACM	**Baccana**	**0.87**	**340**	P	**Pg**	**10 38 15.9**	**+0.1**
BACM				S	**Sb**	**10 38 27.7**	**-0.5**
SEI	**Scarperia**	**0.87**	**47**	Pg	**Pg**	**10 38 15.4**	**-0.4**
	1μm,0.3s						
SEI	**Scarperia**	**0.87**	**47**	Pg	**Pg**	**10 38 15.4**	**-0.4**
	1μm,0.3s						
GSCL	**Gusciola**	**0.90**	**5**	Pg	**Pb**	**10 38 16.3**	**-0.5**
	1.0nm,0.3s						
GSCL	**Gusciola**	**0.90**	**5**	Pg	**Pb**	**10 38 16.3**	**-0.5**
	1.0nm,0.3s						
VMG	**Vicchio**	**0.92**	**57**	Pg	**Pg**	**10 38 15.9**	**-0.9**
	38nm,1.0s						
VMG	**Vicchio**	**0.92**	**57**	Pg	**Pg**	**10 38 15.9**	**-0.9**
	38nm,1.0s						
ARCI	**Arcidosso**	**0.95**	**129**	Pg	**Pg**	**10 38 17.1**	**-0.2**
	1μm,1.3s						
ARCI	**Arcidosso**	**0.95**	**129**	Pg	**Pg**	**10 38 17.1**	**-0.2**
	1μm,1.3s						
ERBM	**Eremo**	**0.96**	**357**	Pg	**Pb**	**10 38 17.9**	**-0.1**
	2μm,1.0s						
ERBM	**Eremo**	**0.96**	**357**	Pg	**Pb**	**10 38 17.9**	**-0.1**
	2μm,1.0s						
ASQU	**Asqua**	**1.01**	**70**	Pg	**Pg**	**10 38 17.3**	**-1.2**
	768nm,1.0s						
ASQU	**Asqua**	**1.01**	**70**	Pg	**Pg**	**10 38 17.3**	**-1.2**
	768nm,1.0s						
CODM	**Codolo**	**1.04**	**334**	P	**Pg**	**10 38 18.6**	**-0.4**
CODM				S	**Sg**	**10 38 32.3**	**-0.2**
GRAM	**Graiana**	**1.07**	**344**	P	**Pg**	**10 38 19.6**	**-0.1**
GRAM				S	**Sg**	**10 38 33.4**	**-0.3**
CRE	**Caprese Michel**	**1.08**	**81**	Pg	**Pg**	**10 38 19.1**	**-0.7**
CRE				Sg	**Sg**	**10 38 32.1**	**-1.8**
CRE	**Caprese Michel**	**1.08**	**81**	Pg	**Pg**	**10 38 19.1**	**-0.7**
CRE				Sg	**Sg**	**10 38 32.1**	**-1.8**
SFI	**Santa Sofia**	**1.09**	**65**	Pg	**Pg**	**10 38 18.7**	**-1.2**
SFI				Sg	**Sb**	**10 38 33.3**	**-1.1**
SFI	**Santa Sofia**	**1.09**	**65**	Pg	**Pg**	**10 38 18.7**	**-1.2**
SFI				Sg	**Sb**	**10 38 33.3**	**-1.1**
CAFI	**Castiglion Fio**	**1.09**	**96**	Pg	**Pg**	**10 38 19.0**	**-1.0**
CAFI	**Castiglion Fio**	**1.09**	**96**	Pg	**Pg**	**10 38 19.0**	**-1.0**
MSSA	**Maissana**	**1.10**	**321**	Pg	**Pn**	**10 38 20.8**	**0.0**
MSSA	**Maissana**	**1.10**	**321**	Pg	**Pn**	**10 38 20.8**	**0.0**
MAON	**Monte Argentar**	**1.14**	**155**	Pg	**Pb**	**10 38 20.7**	**-0.1**
MAON				Sg	**Sn**	**10 38 36.9**	**+0.1**
MAON	**Monte Argentar**	**1.14**	**155**	Pg	**Pb**	**10 38 20.7**	**-0.1**
MAON				Sg	**Sn**	**10 38 36.9**	**+0.1**
MTRZ	**Monterenzio**	**1.16**	**37**	Pg	**Pg**	**10 38 19.9**	**-1.5**
MTRZ	**Monterenzio**	**1.16**	**37**	Pg	**Pg**	**10 38 19.9**	**-1.5**
BADI	**Badiali**	**1.28**	**87**	Pg	**Pn**	**10 38 22.3**	**-0.9**
BADI	**Badiali**	**1.28**	**87**	Pg	**Pn**	**10 38 22.3**	**-0.9**
PARC	**Parchiule**	**1.29**	**81**	Pg	**Pb**	**10 38 23.2**	**-0.4**
PARC	**Parchiule**	**1.29**	**81**	Pg	**Pb**	**10 38 23.2**	**-0.4**
MGAB	**Montegabbione**	**1.31**	**114**	Pg	**Pn**	**10 38 22.7**	**-0.9**
MGAB	**Montegabbione**	**1.31**	**114**	Pg	**Pn**	**10 38 22.7**	**-0.9**
PGF	**Pioggiola**	**1.42**	**231**	*e*P	**Pn**	**10 38 25.4**	**+0.3**
PGF				*e*Sn	**Sn**	**10 38 41.9**	**-2.0**
	89nm,0.5s						
PGF	**Pioggiola**	**1.42**	**231**	*e*P	**Pn**	**10 38 25.4**	**+0.3**
PGF				*e*Sn	**Sn**	**10 38 41.9**	**-2.0**
	44nm,0.5s						
GENL	**Genova Univers**	**1.45**	**311**	P	**Pn**	**10 38 23.4**	**-2.0**
GENL				S	**Sn**	**10 38 41.3**	**-3.2**
PIEI	**Pieia**	**1.50**	**86**	Pg	**Pn**	**10 38 26.2**	**0.0**
PIEI				Sg	**Sb**	**10 38 45.6**	**-0.6**
PIEI	**Pieia**	**1.50**	**86**	Pg	**Pn**	**10 38 26.2**	**0.0**
PIEI				Sg	**Sb**	**10 38 45.6**	**-0.6**
BOB	**Bobbio (Coli)**	**1.50**	**331**	Pg	**Pb**	**10 38 27.4**	**+0.2**
BOB	**Bobbio (Coli)**	**1.50**	**331**	Pg	**Pb**	**10 38 27.4**	**+0.2**
PCP	**Piancastagn**	**1.77**	**308**	P	**Pn**	**10 38 29.5**	**-0.4**
PCP				S	**Sn**	**10 38 50.6**	**-1.9**
RORO	**Rocca Rossa**	**1.87**	**291**	P	**Pn**	**10 38 29.9**	**-1.3**
RORO				S	**Sn**	**10 38 51.6**	**-3.3**
NEGI	**Seborga**	**2.05**	**282**	P	**Pn**	**10 38 32.4**	**-1.4**
SAOF	**Saorge**	**2.19**	**285**	P	**Pn**	**10 38 35.8**	**+0.2**
SAOF	**Saorge**	**2.19**	**285**	P	**Pn**	**10 38 35.8**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SBF	Sospel	2.25	281	eP	Pn	10 38 37.2	+0.7
SBF				eSn	Sn	10 39 02.0	-2.4
	82nm,0.5s						
SBF	Sospel	2.25	281	eP	Pn	10 38 37.2	+0.7
SBF				eSn	Sn	10 39 02.0	-2.4
	41nm,0.5s						
AUTN	L'Aution	2.28	285	P	Pn	10 38 38.2	+1.1
AUTN	L'Aution	2.28	285	P	Pn	10 38 38.2	+1.1
REVF	Revere	2.28	278	P	Pn	10 38 37.3	+0.4
REVF	Revere	2.28	278	P	Pn	10 38 37.3	+0.4
ENR	Entracque	2.34	290	P	Pn	10 38 37.1	-0.7
TOUF	Mont Tournerai	2.41	284	P	Pn	10 38 39.5	+0.7
TOUF	Mont Tournerai	2.41	284	P	Pn	10 38 39.5	+0.7
MVIF	Mont Vial	2.45	281	P	Pn	10 38 40.1	+0.7
MVIF	Mont Vial	2.45	281	P	Pn	10 38 40.1	+0.7
CALN	Calern	2.62	278	P	Pn	10 38 42.3	+0.5
CALN	Calern	2.62	278	P	Pn	10 38 42.3	+0.5
FRF	La Foret Royal	2.79	273	eP	Pn	10 38 43.9	0.0
FRF				eSn	Sn	10 39 14.5	-3.2
	12nm,0.3s						
FRF	La Foret Royal	2.79	273	eP	Pn	10 38 43.9	0.0
FRF				eSn	Sn	10 39 14.5	-3.2
	6.2nm,0.3s						
TRAV	Traversella	2.84	317	P	Pn	10 38 43.6	-1.0
LMR	La Mourre	2.90	269	eP	Pn	10 38 45.6	+0.3
LMR				eSn	Sn	10 39 17.2	-3.1
	10nm,0.3s						
LMR	La Mourre	2.90	269	eP	Pn	10 38 45.6	+0.3
LMR				eSn	Sn	10 39 17.2	-3.1
	5.2nm,0.3s						
MBDF	Montbardon	2.96	297	eP	Pn	10 38 47.2	+0.9
MBDF				eSn	Sn	10 39 18.6	-3.4
	85nm,0.9s						
MBDF	Montbardon	2.96	297	eP	Pn	10 38 47.2	+0.9
MBDF				eSn	Sn	10 39 18.6	-3.4
	42nm,0.9s						
DAVOX	Davos/Dischmat	3.35	353	Pn	Pn	10 38 54.2	+2.5
	7.4nm,0.3s,baz=179,slow=12,SNR=30						
DAVOX				Sn	Sb	10 39 35.4	-4.2
	4.6nm,0.3s,baz=160,slow=20,SNR=6.0						
NVLJ	Novalja	3.35	69	ePn	Pn	10 38 52.0	+0.3
NVLJ				Sn	Sn	10 39 28.9	-2.6
NVLJ	Novalja	3.35	69	ePn	Pn	10 38 51.9	+0.3
NVLJ				Sn	Sn	10 39 28.9	-2.6
LPG	La Plagne	3.36	309	eP	Pn	10 38 53.8	+1.8
LPG	La Plagne	3.36	309	eP	Pn	10 38 53.8	+1.8
LPL	La Plagne	3.38	309	eP	Pn	10 38 53.9	+1.7
LPL	La Plagne	3.38	309	eP	Pn	10 38 53.9	+1.7
VOY	Vojsko	3.54	42	ePn	Pn	10 38 55.1	+0.8
VOY				e		10 38 58.3	
VOY				eSn	Sn	10 39 34.3	-2.0
VOY	Vojsko	3.54	42	ePn	Pn	10 38 55.1	+0.8
VOY				eSn	Sn	10 39 34.3	-2.0
FETA	Feichten	3.57	3	⇓iPn	Pn	10 38 57.6	+2.9
FETA	Feichten	3.57	3	Pn	Pn	10 38 57.6	+2.9
ABTA	Abfaltersbach	3.59	23	⇓iPn	Pn	10 38 56.6	+1.7
	SNR=9.6						
ABTA				⇓iSn	Sn	10 39 38.7	+1.2
ABTA	Abfaltersbach	3.59	23	Pn	Pn	10 38 56.6	+1.7
	SNR=9.6						
ABTA				Sn	Sn	10 39 38.7	+1.2
SMRF	Simiane la Rot	3.59	280	eP	Pn	10 38 56.7	+1.7
SMRF	Simiane la Rot	3.59	280	eP	Pn	10 38 56.7	+1.7
ORIF	Oris-en-Rattie	3.62	295	eP	Pn	10 38 57.5	+2.2
ORIF				eSn	Sn	10 39 34.6	-3.6
	45nm,0.7s						
ORIF	Oris-en-Rattie	3.62	295	eP	Pn	10 38 57.5	+2.2
DAVA	Damuels	3.85	354	ePn	Pn	10 39 02.7	+4.1
DAVA				eSn	Sn	10 39 48.2	+4.1
DAVA	Damuels	3.85	354	⇓iPn	Pn	10 39 00.4	+1.8
	SNR=7.4						
DAVA				⇓iSn	Sn	10 39 45.2	+1.1
DAVA	Damuels	3.85	354	Pn	Pn	10 39 00.4	+1.8
	SNR=7.4						
DAVA				Sn	Sn	10 39 45.2	+1.1
WTTA	Wattenberg	3.89	12	ePn	Pn	10 39 02.7	+3.5
WTTA				eSn	Sn	10 39 48.3	+3.2
WTTA	Wattenberg	3.89	12	⇓iPn	Pn	10 39 01.2	+2.0
	SNR=17						
WTTA				⇑iSn	Sn	10 39 46.0	+0.9
WTTA	Wattenberg	3.89	12	Sn	Sn	10 39 46.0	+0.9
MOTA	Moosalm	3.91	6	⇓iPn	Pn	10 39 01.4	+2.0
	SNR=12						
MOTA				⇓iSn	Sn	10 39 45.8	+0.2
OBER	Oberstdorf	3.95	358	ePn	Pn	10 39 03.0	+3.1
OBER				eSn	Sn	10 39 50.4	+4.0
WATA	Walderalm	3.95	11	⇑iPn	Pn	10 39 02.0	+2.0
WATA				⇑iSn	Sn	10 39 47.1	+0.5
RETA	Reutte	4.03	3	⇑iPn	Pn	10 39 03.1	+2.1
	SNR=7.7						
KBA	Koelnbreinsper	4.15	28	ePn	Pn	10 39 05.3	+2.5
KBA				eSn	Sn	10 39 51.8	+0.4
KBA	Koelnbreinsper	4.15	28	⇓iPn	Pn	10 39 05.2	+2.5
KBA				⇓iSn	Sn	10 39 52.1	+0.7
KBA	Koelnbreinsper	4.15	28	Pn	Pn	10 39 05.2	+2.5
KBA				Sn	Sn	10 39 52.1	+0.7
OBKA	Obir	4.20	42	eSn	Sn	10 39 54.9	+2.3
VIVF	Saint-Julien-l	4.41	290	eP	Pn	10 39 07.6	+1.5
VIVF	Saint-Julien-l	4.41	290	eP	Pn	10 39 07.6	+1.5
CABF	La Chapelle	4.43	317	eP	Pn	10 39 08.1	+1.6
CABF	La Chapelle	4.43	317	eP	Pn	10 39 08.1	+1.6
BBS	Basel-Blauen	4.52	333	P	Pn	10 39 09.0	+1.3
BBS				S	Sn	10 39 59.9	-0.4
RJOB	Jochberg	4.58	20	ePn	Pn	10 39 11.3	+2.8
RJOB				eSn	Sn	10 40 02.6	+0.8
LOMF	Lomont	4.67	328	P	Pn	10 39 10.5	+0.8
LOMF				S	Sn	10 40 03.5	-0.5
LOMF	Lomont	4.67	328	P	Pn	10 39 10.5	+0.8
LOMF				S	Sn	10 40 03.5	-0.5
LASF	Ste Croix	4.84	280	eP	Pn	10 39 13.2	+1.2
LASF	Ste Croix	4.84	280	eP	Pn	10 39 13.2	+1.2
MOF	Molkenrain	4.98	333	P	Pn	10 39 15.5	+1.4
HINF	Hinteralfeld	5.05	331	eP	Pn	10 39 16.3	+1.4
HINF				eSn	Sn	10 40 08.7	-4.6
	28nm,0.7s						
BFO	Black Forest	5.10	344	ePn	Pn	10 39 17.3	+1.7
BFO				eSn	Sn	10 40 09.7	-4.9
MOA	Molln	5.13	30	eSn	Sn	10 40 12.8	-2.6
MOA	Molln	5.13	30	⇑iPn	Pn	10 39 17.7	+1.6
MOA				⇑iSn	Sn	10 40 16.1	+0.7
MOA	Molln	5.13	30	Pn	Pn	10 39 17.7	+1.6
MOA				Sn	Sn	10 40 16.1	+0.7
ECH	Echery	5.29	335	P	Pn	10 39 19.4	+1.1
ECH	Echery	5.29	335	P	Pn	10 39 19.4	+1.1
HAU	Haudompre	5.39	329	ePn	Pn	10 39 17.1	-2.5
HAU	Haudompre	5.39	329	eP	Pn	10 39 21.2	+1.6
HAU				eSn	Sn	10 40 16.7	-5.1
	51nm,0.6s						
HAU	Haudompre	5.39	329	eP	Pn	10 39 21.2	+1.6
CDF	Champ du Feu	5.43	337	eP	Pn	10 39 21.4	+1.1
CDF	Champ du Feu	5.43	337	eP	Pn	10 39 21.4	+1.1
SMF	Signal de Mont	5.68	306	eP	Pn	10 39 25.5	+1.9
SMF				eSn	Sn	10 40 24.0	-4.9
	12nm,0.6s						
SMF	Signal de Mont	5.68	306	eP	Pn	10 39 25.5	+1.9
LANF	Langenberg	5.83	342	P	Pn	10 39 26.8	+1.2
LANF	Langenberg	5.83	342	P	Pn	10 39 26.8	+1.2
GEC2	GERESS Array S	5.83	21	ePn	Pn	10 39 26.6	+0.8
GEC2				eSn	Sn	10 40 30.5	-2.3
GERES	GERESS Array B	5.83	21	Pn	Pn	10 39 25.5	-0.3
	0.7nm,0.3s,baz=197,slow=15,SNR=13						
GERES				Sn	Sn	10 40 31.2	-1.6
	0.9nm,0.3s,baz=201,slow=22,SNR=6.1						
WET	Wettzell	5.92	15	ePn	Pn	10 39 27.1	+0.1
LOR	Lormes	6.02	312	eP	Pn	10 39 29.9	+1.6
LOR	Lormes	6.02	312	eP	Pn	10 39 29.9	+1.6
KHC	Kasperske Hory	6.07	20	ePN	Pn	10 39 29.0	+0.1
KHC				ex	x	10 40 08.0	
KHC				eSN	Sn	10 40 36.0	-2.5
KHC				ex	x	10 40 57.0	
PAGF	Fort de Pagny	6.08	329	eP	Pn	10 39 31.2	+2.1
PAGF	Fort de Pagny	6.08	329	eP	Pn	10 39 31.2	+2.1
SSF	Saint Saulge	6.10	309	eP	Pn	10 39 31.3	+2.0
SSF	Saint Saulge	6.10	309	eP	Pn	10 39 31.3	+2.0
CAF	Calviac	6.23	287	eP	Pn	10 39 32.5	+1.4
CAF	Calviac	6.23	287	eP	Pn	10 39 32.5	+1.4
BGF	Bois d'Agland	6.24	302	eP	Pn	10 39 33.5	+2.3
BGF				eSn	Sn	10 40 31.7	-11
	16nm,0.5s						
BGF	Bois d'Agland	6.24	302	eP	Pn	10 39 33.5	+2.3
KEST	Kesra	7.77	187	Pn	Pn	10 39 53.8	+1.4
	0.1nm,0.3s,baz=0.0,slow=1.0,SNR=1.9						
HFS	Hagfors	16.82	6	LR	LR	10 48 50.6	
	comp=Z,29nm,18.3s,baz=144,slow=39						
FRB	Frobisher Bay	47.51	324	LR	LR	11 04 50.1	
	comp=Z,26nm,18.2s,baz=199,slow=34						
MKAR	Makanchi Array	49.14	60	P	P	10 46 47.4	+0.4
	0.2nm,0.5s,baz=285,slow=6.9,SNR=3.0						
YKA	Yellowknife Ar	65.62	335	P	P	10 48 44.0	+1.1
	0.3nm,0.9s,baz=45,slow=6.4,SNR=4.2						

*CSEM **09** 10:51:07.5, 35.68N×26.77E, h27km, MD2.7, After ATH*

ATH 09 10:51:07.5, 35.68N×26.77E, h27km±2km, MD2.7/4, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.34	112	ePB	Pb	10 51 15.4	0.0
KARP				eSB	Sb	10 51 21.4	+0.6
KARP	Karpathos	0.34	112	ePb	Pb	10 51 15.4	0.0
KARP				eSb	Sb	10 51 21.4	+0.6
ZKR	Zakros	0.72	219	ePB	Pb	10 51 20.6	-0.9
ZKR				eSN	Sn	10 51 32.4	+0.2
ZKR	Zakros	0.72	219	ePb	Pb	10 51 20.6	-0.9
ZKR				eSn	Sn	10 51 32.4	+0.2
NPS	Neapolis	1.03	247	ePN	Pb	10 51 27.1	+0.3
NPS				eSN	Sb	10 51 40.9	+0.9
NPS	Neapolis	1.03	247	ePn	Pb	10 51 27.1	+0.3
NPS				eSn	Sb	10 51 40.9	+0.9
LAST	Lasithi	1.18	244	ePN	Pb	10 51 30.7	+1.4
LAST	Lasithi	1.18	244	ePn	Pb	10 51 30.7	+1.4
XRY	Khrisi	1.19	228	ePN	Pb	10 51 29.8	+0.4
XRY	Khrisi	1.19	228	ePn	Pb	10 51 29.8	+0.4
VAM	Vamos	2.11	263	ePN	Pb	10 51 43.3	-1.8
VAM	Vamos	2.11	263	ePn	Pb	10 51 43.3	-1.8

*GUC **09** 11:01:17.9±0.4, 42.84S×72.62W, h2km±5km, ML3.2*
*ISCJB **09** 11:01:18.7±0.8, 42.83S±0.05×72.6W±0.1, h10km, mb3.7/6, Error ellipse: s-maj=11.9km s-min=5.8km az=162.5*
*IDC **09** 11:01:24.2±5.8, 42.83S×72.06W, h33km±42km, mb3.6/6, mb1 3.9/7, mb1mx3.7/19, mbtmp3.7/7, ML3.8/1, Error ellipse: s-maj=45.1km s-min=22.9km az=89.0*

ISC 09 11:01:19.6±1.1, 42.76S±0.06×72.4W±0.2, h10km, n14, σ0.88/13, mb3.8/6, 2D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUNY	Huinay	0.38	355	eP	Pb	11 01 27.2	-1.1
HUNY				i S	Sb	11 01 34.4	+0.1
HUNY				AML	AML	11 01 35.8	
	comp=N,3μm,0.5s						
FUTA	Futaleufœ	0.57	139	⇓iP	Pb	11 01 30.6	-1.1
FUTA				i S	Sb	11 01 40.8	+0.8
FUTA				AML	AML	11 01 43.7	
	comp=N,1μm,0.2s						
PUEL	Puelo Alto	1.09	3	⇓iP	Pg	11 01 40.6	+0.1
PUEL				AML	AML	11 02 10.4	
	comp=E,496nm,0.7s						
PLCA	Paso Flores	2.44	35	Pn	Pb	11 02 02.6	-0.9
	comp=E,5.7nm,0.3s,baz=218,slow=17,SNR=68						
PLCA				Lg	Lg	11 02 40.1	
	comp=E,61nm,0.3s,baz=102,slow=15,SNR=20						
COYC	Coyhaique	2.82	176	AML	AML	11 02 50.4	
	comp=E,91nm,0.7s						
SIV	San Ignacio	28.38	23	P	P	11 07 15.0	+0.9
	comp=E,0.6nm,0.6s,baz=208,slow=12,SNR=4.0						
SNAA	Sanae	43.68	155	P	P	11 09 23.2	-1.0
	comp=E,2.0nm,1.2s,baz=234,slow=11,SNR=4.3						
VNDA	Vanda	55.49	192	P	P	11 10 55.8	+1.8
	comp=E,2.4nm,1.1s,baz=159,slow=6.1,SNR=4.2						
TXAR	Lajitas Array	77.30	332	P	P	11 13 16.3	+2.1
	comp=E,0.3nm,0.8s,baz=153,slow=8.4,SNR=5.0						
TORD	Torodi Ar. Bea	87.47	70	P	P	11 14 07.6	+0.1
	comp=E,0.5nm,0.9s,baz=216,slow=7.1,SNR=3.5						
PDAR	Pinedale Array	91.47	334	P	P	11 14 26.9	+0.9
	comp=E,0.4nm,0.7s,baz=122,slow=5.6,SNR=4.6						
ILAR	Eielson Array	121.80	331	PKP	PKPdf	11 20 13.2	+0.6
	comp=E,0.2nm,0.7s,baz=101,slow=0.9,SNR=3.2						
KURBB	Kurchatov Arra	158.65	58	PKP	PKPdf	11 21 17.6	+1.0
	comp=E,0.2nm,0.5s,baz=279,slow=1.5,SNR=3.0						
MKAR	Makanchi Array	161.59	69	PKP	PKPdf	11 21 20.7	+0.6
	comp=E,0.4nm,1.0s,baz=248,slow=1.6,SNR=3.7						
MKAR				PKPab	PKPab	11 22 05.0	-0.1
	comp=E,0.3nm,0.7s,baz=257,slow=4.4,SNR=4.6						

*BJI **09** 11:28:45.0, 60.30N×152.10W, h19km, mB4.8/1, mb4.5/5*
*ISCJB **09** 11:28:56.6±0.2, 60.34N±0.02×152.15W±0.04, h97km±2km, mb4.0/17, Error ellipse: s-maj=3.8km s-min=2.7km az=143.7*
*NEIC **09** 11:28:58.8, 60.34N×152.19W, h83km, MG3.8(AEIC), After AEIC.*
*IDC **09** 11:29:00.7±0.7, 60.58N×152.12W, h108km±5km, mb3.7/14, mb1 3.8/18, mb1mx3.7/30, mbtmp3.6/18, MS2.8/2, Ms1 2.8/2, ms1mx2.2/46, Error ellipse: s-maj=14.6km s-min=10.6km az=24.0*

ISC 09 11:28:59.0±0.4, 60.35N±0.03×152.23W±0.03, h99km±3km, n130, σ1.81/167, mb4.0/17, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDT	Redoubt	0.24	339	P	Pn	11 29 10.8	-2.5
RSO	Redoubt South	0.28	294	ePn	Pn	11 29 11.3	-2.3
DFR	Drift River	0.33	318	P	Pn	11 29 11.2	-2.5
RDWB	Redoubt West	0.33	295	P	Pn	11 29 10.7	-3.1
RDWB				S	Sn	11 29 20.6	-4.2
RDJH	Redoubt Jeurge	0.37	311	P	Pn	11 29 11.6	-2.4
RDJH				S	Sn	11 29 21.9	-3.3
ILIM	Iliamna	0.45	234	P	Pn	11 29 12.1	-2.3
IVE	Iliamna Volcan	0.51	230	P	Pn	11 29 12.7	-2.2
IVE				S	Sn	11 29 23.6	-3.2
NNL	Ninilchik	0.56	123	P	Pn	11 29 13.8	-1.3
NKA	Nikishka	0.63	51	P	Pn	11 29 15.2	-0.4
HOM	Homer	0.75	157	P	Pn	11 29 15.1	-1.7
SPU	Mount Spurr	0.84	6	P	Pn	11 29 15.9	-1.8
CKL	Chakachamna La	0.85	357	P	Pn	11 29 16.1	-1.8
OPT	Oil Point	0.86	216	P	Pn	11 29 16.1	-1.8
BRLK	Bradley Lake	0.89	130	P	Pn	11 29 16.2	-2.0
BRLK				S	Sn	11 29 30.2	-2.4
BGL	Barrier Glacie	0.92	355	P	Pn	11 29 17.0	-1.6
SLKM	Skilak Lake	1.01	80	P	Pn	11 29 17.4	-2.1
AUE	Augustine Isla	1.15	211	P	Pn	11 29 19.2	-1.7
AUNW	Augustine NWes	1.16	213	P	Pn	11 29 19.4	-1.7
AUW	Augustine West	1.16	213	P	Pn	11 29 19.6	-1.6
STLK	Strandline Lak	1.17	9	P	Pn	11 29 19.9	-1.4
AUI	Augustine Isla	1.18	211	P	Pn	11 29 20.0	-1.3
AUI				S	Sn	11 29 36.4	-1.8
SUA	Susitna One	1.34	32	P	Pn	11 29 22.1	-1.2
SUA				S	Sn	11 29 41.0	-0.7
SEW	Seward	1.41	99	P	Pn	11 29 21.6	-2.5
MCNL	McNeil River	1.58	223	P	Pn	11 29 24.6	-1.5
SKT	Skwentna	1.67	11	P	Pn	11 29 25.9	-1.4
FOSS	Fourpeaked Sta	1.72	206	P	Pn	11 29 26.3	-1.6
FONW	Fourpeaked Sta	1.74	210	P	Pn	11 29 26.6	-1.6
SVW2	Sparrevohn	1.81	296	P	Pn	11 29 27.2	-1.8
SVW2				S	Sn	11 29 49.0	-2.9
PMR	Palmer	1.96	49	ePn	Pn	11 29 28.8	-2.1
PMR				eSn	Sn	11 29 52.4	-2.9
KAPH	Katmai Pasha	2.06	212	P	Pn	11 29 31.1	-1.2
CUT	Chulitna	2.27	24	P	Pn	11 29 34.1	-0.9
KAWH	Katmai	2.37	215	P	Pn	11 29 35.1	-1.2
SML	Sawmill	2.40	51	ePn	Pn	11 29 34.9	-1.8
SML				eSn	Sn	11 29 59.2	-6.4
KAKN	Katmai Knife C	2.52	216	P	Pn	11 29 36.9	-1.4
KDAK	Kodiak Island	2.58	184	P	Pn	11 29 36.7	-2.4
KDAK	Kodiak Island	2.58	184	P	Pn	11 29 36.5	-2.5
	46nm,0.3s,baz=26,slow=9.8,SNR=383						
KDAK				S	Sn	11 30 05.3	-4.4
	45nm,0.3s,baz=26,slow=13,SNR=5.9						
KCE	Katmai Mt Cerb	2.60	217	P	Pn	11 29 38.8	-0.6
KABU	Katmai Buttres	2.60	218	P	Pn	11 29 38.5	-1.0
KELA	Mount Kelaz	2.62	225	P	Pn	11 29 38.6	-1.1
KABR	Katmai Barrier	2.63	213	P	Pn	11 29 38.6	-1.2
VLZ	Valdez	3.00	72	P	Pn	11 29 42.1	-2.5
MID	Middleton Isla	3.11	105	P	Pn	11 29 44.8	-1.2
MID				S	Sn	11 30 19.2	-3.2
TT01	Tatalina	3.14	326	P	Pn	11 29 45.4	-1.1
OHAK	Old Harbor	3.18	190	P	Pn	11 29 44.2	-2.8
EYAK	Cordova Ski Ar	3.22	84	P	Pn	11 29 44.3	-3.3
TRF	Thorofare Moun	3.25	16	P	Pn	11 29 46.6	-1.5
DIV	Divide	3.27	73	Pn	Pn	11 29 45.8	-2.5
DIV				eSn	Sn	11 30 22.6	-3.8
KLU	Klutina	3.29	67	P	Pn	11 29 46.0	-2.5
PLK5	Peulik 5	3.36	227	P	Pn	11 29 48.8	-0.6
PLK1	Peulik 1	3.41	223	P	Pn	11 29 49.7	-0.4
RND	Reindeer	3.46	26	P	Pn	11 29 49.9	-1.0
CHUM	Lake Minchumin	3.55	359	P	Pn	11 29 51.1	-0.8
MCK	McKinley	3.73	23	ePn	Pn	11 29 54.6	+0.1
NICHA	Nichawak Mount	4.12	88	P	Pn	11 29 57.5	-2.1
BERG	Berg Lake	4.24	86	P	Pn	11 29 59.3	-1.9
VRDI	Verde Repeater	4.39	75	P	Pn	11 30 01.6	-2.0
KHIT	Khitrov Hills	4.46	85	P	Pn	11 30 01.8	-2.6
NEA	Nenana	4.49	18	P	Pn	11 30 04.0	-0.6
WRH	Wood River Hil	4.56	23	P	Pn	11 30 04.9	-0.8
ANNW	Aniakchak Nort	4.61	225	P	Pn	11 30 05.8	-0.5
KULT	Kultieth River	4.73	87	P	Pn	11 30 06.8	-1.3
CCB	Clear Creek Bu	4.78	24	P	Pn	11 30 07.3	-1.2
BARK	Barkley Ridge	4.84	85	P	Pn	11 30 07.4	-2.1
PTPK	Patty Peak	4.86	76	P	Pn	11 30 07.5	-2.4
RIDG	Independ'e Rid	4.87	42	P	Pn	11 30 08.8	-1.0
KIAG	Kiagna River	4.90	79	P	Pn	11 30 08.6	-1.8
BALM	Baldy	4.91	78	P	Pn	11 30 09.4	-1.1
GCSA	Galena City Sc	4.91	336	P	Pn	11 30 09.3	-1.0
COLA	College	4.97	22	P	Pn	11 30 10.3	-0.8
MDM	Murphy Dome	4.98	20	P	Pn	11 30 10.5	-0.9
IL1	Eielson Array	5.08	27	P	Pn	11 30 11.4	-1.2
ILAR	Eielson Array	5.08	27	P	Pn	11 30 11.3	-1.4
ILAR				S	Sn	11 31 05.8	-4.2
ILAR	Eielson Array	5.08	27	P	Pn	11 30 11.3	-1.4
	5.1nm,0.3s,baz=215,slow=13,SNR=138						
ILAR				S	Sn	11 31 05.8	-4.2
	5.6nm,0.3s,baz=208,slow=25,SNR=6.2						
GLM	Gilmore Dome	5.16	24	P	Pn	11 30 12.8	-1.0
GRNC	Granite Creek	5.19	81	P	Pn	11 30 13.0	-1.3
CHGN	Chignik	5.20	221	ePn	Pn	11 30 14.3	0.0
CHGN				eSn	Sn	11 31 12.1	-0.8
BARN	Barnard Glacie	5.24	78	P	Pn	11 30 13.0	-2.1
SCRK	Sand Creek	5.31	43	P	Pn	11 30 14.9	-0.9
IM3	Indian Mountai	5.70	354	P	Pn	11 30 19.9	-1.1
PRP	Porcupine Dome	6.02	28	P	Pn	11 30 24.2	-1.4
PNL	Peninsula	6.47	90	P	Pn	11 30 29.8	-1.8
SDPT	Sand Point	6.67	225	P	Pn	11 30 32.7	-1.5
EGAK	Eagle	6.77	44	ePn	Pn	11 30 34.1	-1.4
	23nm,0.7s						
EGAK				eSn	Sn	11 31 46.9	-4.2
COLD	Coldfoot	6.97	7	P	Pn	11 30 36.0	-2.2
DAWY	Dawson	7.06	53	P	Pn	11 30 37.7	-1.9
HYT	Haines Junctio	7.27	80	P	Pn	11 30 39.7	-2.8
BM3	Burnt Mountain	7.85	22	P	Pn	11 30 47.9	-2.3
SKAG	Skagway	8.54	89	ePn	Pn	11 30 59.1	-0.6
	5.6nm,0.6s						
SKAG				eSn	Sn	11 32 32.5	-1.6
WHY	Whitehorse	8.57	80	P	Pn	11 30 57.8	-2.3
TNA	Tin City	8.84	313	ePn	Pn	11 31 05.2	+1.6
WRAK	Wrangell Islan	11.14	102	ePn	Pn	11 31 34.8	-0.2
	6.6nm,0.6s						
WRAK				eSn	Sn	11 33 36.6	-0.6
INK	Inuvik	11.33	37	P	Pn	11 31 35.8	-1.5
INK				ScP	ScP	11 40 46.1	+0.8
INK	Inuvik	11.33	37	P	Pn	11 31 35.8	-1.5
	0.1nm,0.3s,baz=233,slow=16,SNR=22						
INK				ScP	ScP	11 40 46.1	+0.8
	0.0nm,0.3s,baz=208,slow=3.1,SNR=3.4						
DLBC	Dease Lake	11.47	90	P	Pn	11 31 38.4	-1.0
DLBC				S	Sn	11 33 38.5	-6.9
DLBC	Dease Lake	11.47	90	P	Pn	11 31 38.4	-1.0
	0.4nm,0.3s,baz=213,slow=5.4,SNR=4.3						
DLBC				S	Sn	11 33 38.5	-6.9
	0.2nm,0.3s,baz=64,slow=27,SNR=1.4						
YKA	Yellowknife Ar	17.96	67	P	P	11 33 00.6	-0.4
YKA				pP	pP	11 33 20.1	+0.5
YKA				PcP	PcP	11 37 31.4	+0.1
YKA				ScP	ScP	11 40 58.5	+1.3
YKA	Yellowknife Ar	17.96	67	P	P	11 33 00.6	-0.4
	0.1nm,0.3s,baz=282,slow=11,SNR=23						
YKA				pP	pP	11 33 20.1	+0.5
	0.2nm,0.3s,baz=278,slow=10.0,SNR=10						
YKA				PcP	PcP	11 37 31.4	+0.1
	0.0nm,0.3s,baz=276,slow=1.4,SNR=4.7						
YKA				ScP	ScP	11 40 58.4	+1.3
	0.0nm,0.3s,baz=296,slow=2.3,SNR=7.1						
NEW	Newport	23.47	105	LR	LR	11 43 10.9	
	comp=Z,39nm,19.9s,baz=287,slow=36						
PETK	Petropavlovsk-	27.79	278	P	P	11 34 38.7	+0.5
PETK	Petropavlovsk-	27.79	278	P	P	11 34 38.7	+0.5
	3.4nm,1.0s,baz=91,slow=13,SNR=3.6						
PETK				LR	LR	11 46 00.8	
	comp=Z,16nm,21.6s,baz=262,slow=37						
NVAR	Mina Array Bea	30.56	120	P	P	11 35 05.1	+2.0
NVAR				pP	pP	11 35 26.8	+1.5
NVAR	Mina Array Bea	30.56	120	P	P	11 35 05.1	+2.0
	0.9nm,0.8s,baz=308,slow=9.2,SNR=9.1						
NVAR				pP	pP	11 35 26.8	+1.5
	0.8nm,0.9s,baz=312,slow=7.7,SNR=4.7						
PDAR	Pinedale Array	31.11	105	P	P	11 35 09.9	+1.9
PDAR				pP	pP	11 35 31.6	+1.5
PDAR	Pinedale Array	31.11	105	P	P	11 35 09.9	+1.9
	0.5nm,0.8s,baz=270,slow=4.4,SNR=4.0						
PDAR				pP	pP	11 35 31.6	+1.5
	0.4nm,0.5s,baz=301,slow=6.2,SNR=3.1						
TXAR	Lajitas Array	44.75	112	P	P	11 37 04.3	+1.9
TXAR				pP	pP	11 37 25.0	-0.6
TXAR				PcP	PcP	11 38 41.0	-1.8
TXAR	Lajitas Array	44.75	112	P	P	11 37 04.3	+1.9
	0.9nm,0.7s,baz=320,slow=6.1,SNR=16						
TXAR				pP	pP	11 37 25.0	-0.6
	0.5nm,0.9s,baz=352,slow=8.0,SNR=3.2						
TXAR				PcP	PcP	11 38 41.1	-1.8
	0.2nm,0.9s,baz=351,slow=2.3,SNR=2.1						
USRK	Ussuriysk Arra	46.31	285	P	P	11 37 14.0	-0.3
	0.9nm,0.6s,baz=64,slow=9.5,SNR=2.9						
CN2	Changchun	49.72	290	eP	P	11 37 41.2	+0.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ARCES	ARCESS Array B	50.40	1	P	P	11 37 44.3	-1.2
ARCES				pP	pP	11 38 10.5	+1.4
ARCES	ARCESS Array B	50.40	1	P	P	11 37 44.3	-1.2
	comp=Z,0.6nm,0.6s,baz=358,slow=7.3,SNR=6.2						
ARCES				pP	pP	11 38 10.5	+1.4
	comp=Z,1.6nm,0.9s,baz=32,slow=8.6,SNR=2.1						
KSRS	Korea Array	53.48	283	P	P	11 38 09.2	+0.5
	comp=Z,3.2nm,0.9s,baz=45,slow=6.2,SNR=6.5						
KSAR	Wonju Array Be	53.50	283	P	P	11 38 09.2	+0.3
SONM	Songino Array	54.90	306	P	P	11 38 20.1	+1.1
SONM				pP	pP	11 38 46.1	+3.1
SONM	Songino Array	54.90	306	P	P	11 38 20.1	+1.1
	comp=Z,5.2nm,0.7s,baz=40,slow=7.9,SNR=28						
SONM				pP	pP	11 38 46.1	+3.1
	comp=Z,0.7nm,0.7s,baz=43,slow=6.5,SNR=1.9						
ZALV	Zalesovo Beam	57.32	324	P	P	11 38 35.8	-0.2
ZALV				pP	pP	11 39 03.2	+3.1
ZALV	Zalesovo Beam	57.32	324	P	P	11 38 35.8	-0.2
	comp=Z,2.8nm,0.5s,baz=30,slow=7.4,SNR=12						
ZALV				pP	pP	11 39 03.2	+3.1
	comp=Z,0.4nm,0.3s,baz=49,slow=6.6,SNR=1.5						
BVAR	Borovoye Array	61.94	332	P	P	11 39 07.5	-0.1
BVAR	Borovoye Array	61.94	332	P	P	11 39 07.5	-0.1
	comp=Z,1.5nm,0.5s,baz=45,slow=6.5,SNR=7.1						
MKAR	Makanchi Array	64.40	322	P	P	11 39 23.0	-1.1
MKAR	Makanchi Array	64.40	322	P	P	11 39 23.0	-1.1
	comp=Z,1.0nm,0.6s,baz=45,slow=6.4,SNR=18						
GTA	Gaotai	64.54	305	eP	P	11 39 25.6	+0.4
GTA				pP	pP	11 39 31.3	-19
GTA				sP	sP	11 39 34.4	-26
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
LZH	Lanzhou	65.68	300	eP	P	11 39 30.5	-2.1
LZH				pP	pP	11 39 35.0	-22
LZH				sP	sP	11 39 37.8	-30
LZH				pmax	pmax		
	comp=Z,16nm,1.5s						
AKASG	Malin Array Be	69.30	359	P	P	11 39 53.8	-1.2
AKASG	Malin Array Be	69.30	359	P	P	11 39 53.8	-1.2
	comp=Z,0.9nm,0.5s,baz=291,slow=18,SNR=3.1						
BRTR	Keskin Array B	80.17	355	P	P	11 40 58.2	+0.1
BRTR	Keskin Array B	80.17	355	P	P	11 40 58.2	+0.1
	comp=Z,0.5nm,0.6s,baz=19,slow=5.3,SNR=3.2						
CMAR	Chiang Mai Arr	83.06	295	P	P	11 41 13.0	-0.4
CMAR	Chiang Mai Arr	83.06	295	P	P	11 41 13.0	-0.4
	comp=Z,1.2nm,0.7s,baz=11,slow=5.3,SNR=6.2						
BOSA	Boshof	148.22	4	PKPbc	PKPbc	11 48 32.4	-0.6
BOSA	Boshof	148.22	4	PKPbc	PKPbc	11 48 32.4	-0.6
	comp=Z,2.8nm,0.6s,baz=331,slow=1.6,SNR=9.6						

CSEM 09 12:00:46.3, 12°.05N×43°.79E, h10km, ML3.6, After DHMR
DHMR 09 12:00:46.3±1.1**, 12°.05N×43°.79E, h10**km±12km**, ML3.6, 2C-4D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRBA	At Turbah	1.22	15	⇑iP	Pn	12 01 09.1	-0.6
TRBA				iS	Sn	12 01 26.3	-0.2
TRBA				AML	AML	12 01 31.1	
	comp=E,1µm,0.6s						
UDYN	Al 'Udayn	1.91	5	⇓iP	Pn	12 01 19.5	+0.3
UDYN				iS	Sg	12 01 47.0	-1.3
UDYN	Al 'Udayn	1.91	5	⇓iP	Pn	12 01 19.5	+0.3
UDYN				iS	Sg	12 01 47.0	-1.3
LBOS		2.30	38	⇑iP	Pb	12 01 26.9	-1.5
LBOS				iS	Sb	12 01 58.1	+1.0
BDHA	Al Bayda'	2.58	42	⇓iP	Pb	12 01 31.2	-1.9
BDHA				iS	Sb	12 02 05.3	+0.2
BDHA				AML	AML	12 02 13.5	
	comp=N,400nm,0.4s						
BDHA	Al Bayda'	2.58	42	⇓iP	Pb	12 01 31.2	-1.9
BDHA				iS	Sb	12 02 05.3	+0.2

MEX 09 12:16:25.7±0.8**, 15°.87N×96°.21W, h16**km±999km**, MD3.6, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.14	136	iP	Pg	12 16 28.6	-1.1
HUIG				eS	Sg	12 16 31.8	-0.5
PNIG	Pinotepa	1.91	286	iP	Pn	12 16 55.1	-2.6
PNIG				eS	Sn	12 17 16.0	-5.4
PCIG		2.89	93	iP	Pn	12 17 08.6	-2.5
PCIG				eS	Sn	12 17 41.3	-4.2

ISK 09 12:21:53.8, 36°.78N×37°.45E, h10km, MD2.8
CSEM 09 12:21:54.9±0.6, 36°.82N×37°.49E, h10km, MD2.9, Error ellipse: s-maj=12.5km s-min=5.5km az=11.0
DDA 09 12:21:57.4, 37°.06N×37°.54E, h5km, MD2.9
ISC 09 12:21:55.6±1.9**, 36°.97N**±0°.08×**37°.47E**±0°.04**, h3**km±11km**, n19, σ0s67**/31**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.29	314	ePG	Pb	12 22 03.5	0.0
GAZ				eSG	Sb	12 22 09.8	+1.0
GAZ	Gaziantep	0.29	314	ePg	Pb	12 22 03.5	0.0
GAZ				eSg	Sb	12 22 09.8	+1.0
GZT	Gaziantep	0.39	11	iP	Pg	12 22 02.9	-0.2
GZT				iS	Sg	12 22 07.9	-0.4
AYKD	Aykdinkavak	0.69	310	iP	Pb	12 22 09.8	-0.5
AYKD				iS	Sg	12 22 18.0	+0.2
KMRS	Kahramanmaras	0.70	320	ePG	Pb	12 22 10.5	0.0
KMRS				eSG	Sn	12 22 22.7	-1.2
KMRS	Kahramanmaras	0.70	320	ePg	Pb	12 22 10.5	0.0
KMRS				eSg	Sn	12 22 22.7	-1.2
ANDN	Andirin	1.08	304	iP	Pn	12 22 18.6	+0.8
ANDN				iS	Sn	12 22 34.0	+0.5
ANDN	Andirin	1.08	304	iP	Pn	12 22 18.6	+0.8
ANDN				iS	Sn	12 22 34.0	+0.5
URFA	Urfa	1.18	66	ePN	Pg	12 22 18.2	+0.1
URFA				eSN	Sn	12 22 36.0	+0.4
URFA	Urfa	1.18	66	ePn	Pg	12 22 18.2	+0.1
URFA				eSn	Sn	12 22 36.0	+0.4
AKCD	Akcadag	1.37	15	iP	Pg	12 22 22.5	+0.7
AKCD				iS	Sb	12 22 39.8	-0.1
AKCD	Akcadag	1.37	15	iP	Pg	12 22 22.5	+0.7
AKCD				iS	Sb	12 22 39.8	-0.1
KOZT	Kozan	1.41	292	ePN	Pn	12 22 21.2	-1.0
KOZT	Kozan	1.41	292	ePn	Pn	12 22 21.2	-1.0
MYA	Malataya	1.55	29	ePN	Pb	12 22 24.7	-0.3
MYA	Malataya	1.55	29	ePn	Pb	12 22 24.7	-0.3
DARE	Darende-Malaty	1.60	0	ePN	Pb	12 22 25.7	-0.1
SARI	SarD1z-Kayseri	1.66	330	ePN	Pb	12 22 26.1	-0.8
SARI	SarD1z-Kayseri	1.66	330	ePn	Pb	12 22 26.1	-0.8

ISK 09 12:25:11.7, 37°.46N×34°.45E, h4km, MD2.9
DDA 09 12:25:12.2, 37°.47N×34°.55E, h5km, MD3.0
CSEM 09 12:25:13.2±0.3, 37°.48N×34°.60E, h2km, MD3.0, Error ellipse: s-maj=7.8km s-min=7.7km az=92.0
ISC 09 12:25:13.0±1.2**, 37°.45N**±0°.03×**34°.53E**±0°.03**, h2**km±11km**, n22, σ1s25**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GULE	Gulek	0.26	130	iP	Pg	12 25 17.3	-0.6
GULE				iS	Sg	12 25 21.9	+0.6
GULE	Gulek	0.26	130	iP	Pg	12 25 17.3	-0.6
GULE				iS	Sg	12 25 21.9	+0.6
NIG	Nigde	0.66	5	ePG	Pg	12 25 25.0	-0.8
NIG				eSG	Sg	12 25 34.8	+0.4
NIG	Nigde	0.66	5	ePg	Pg	12 25 25.0	-0.8
NIG				eSg	Sg	12 25 34.8	+0.4
KOZT	Kozan	1.03	88	ePN	Pb	12 25 33.0	-0.6
KOZT				eSN	Sn	12 25 48.9	-0.7
KOZT	Kozan	1.03	88	ePn	Pb	12 25 33.0	-0.6
KOZT				eSn	Sn	12 25 48.9	-0.7
CEYT	Ceyhan	1.06	114	ePN	Pn	12 25 34.2	-0.8
CEYT	Ceyhan	1.06	114	ePn	Pn	12 25 34.2	-0.8
YURE	YUREGIR	1.08	125	iP	Pb	12 25 34.2	-0.2
YURE				iS	Sn	12 25 52.7	+2.0
YURE	YUREGIR	1.08	125	iP	Pb	12 25 34.2	-0.2
YURE				iS	Sn	12 25 52.7	+2.0
KRTS	Karatas	1.10	142	ePN	Pg	12 25 34.4	+0.2
KRTS	Karatas	1.10	142	ePn	Pg	12 25 34.4	+0.2
ERMK	Ermenek	1.53	239	iP	Pb	12 25 41.5	-0.7
ERMK				iS	Sg	12 26 03.7	+1.6
ERMK	Ermenek	1.53	239	iP	Pb	12 25 41.5	-0.7
ERMK				iS	Sg	12 26 03.7	+1.6
SARI	SarD1z-Kayseri	1.77	57	ePN	Pn	12 25 44.7	-0.2
SARI	SarD1z-Kayseri	1.77	57	ePn	Pn	12 25 44.7	-0.2
YAYL	Yayladag	1.90	138	iP	Pb	12 25 47.2	-1.2
YAYL				iS	Sg	12 26 13.8	-0.2
YAYL	Yayladag	1.90	138	iP	Pb	12 25 47.2	-1.2
YAYL				iS	Sg	12 26 13.8	-0.2
PINB	Pinarbasi	1.92	50	iP	Pb	12 25 47.7	-1.2
PINB				iS	Sg	12 26 18.3	+3.6
PINB	Pinarbasi	1.92	50	iP	Pb	12 25 47.7	-1.2
PINB				iS	Sg	12 26 18.3	+3.6
GAZI	Gazipasa	2.15	236	iP	Pb	12 25 52.2	-0.6
GAZI				iS	Sb	12 26 20.1	+0.2
GAZI	Gazipasa	2.15	236	iP	Pb	12 25 52.2	-0.6
GAZI				iS	Sb	12 26 20.1	+0.2

IDC 09 12:26:08.2±1.8**, 17°.33S×69°.34W, h161**km±11km**, mb3.6**/6**, mb1 3.7**/7**, mb1mx3.4**/19**, mbtmp3.7**/7**, Error ellipse: s-maj=25.1km s-min=20.6km az=33.0, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	1.55	48	P	Pn	12 26 39.6	-0.2
	25nm,0.3s,baz=238,slow=6.7,SNR=581						
LPAZ				S	Sn	12 27 04.0	-0.1
	8.3nm,0.3s,baz=35,slow=18,SNR=14						
SIV	San Ignacio	8.03	82	P	Pn	12 28 02.2	+0.1
	7.5nm,0.3s,baz=282,slow=11,SNR=54						
SIV				S	Sn	12 29 29.6	-2.2
	0.2nm,0.3s,baz=19,slow=17,SNR=1.6						
BDFB	Brasilia	20.52	88	P	P	12 30 36.1	+1.9
	2.2nm,0.4s,baz=219,slow=8.7,SNR=3.9						
PLCA	Paso Flores	23.35	182	P	P	12 31 01.9	-0.3
	1.9nm,0.8s,baz=356,slow=13,SNR=4.6						
DBIC	Dimbokro	68.00	75	P	P	12 36 50.6	+0.1
	1.2nm,0.6s,baz=197,slow=11,SNR=6.0						
ULM	Lac du Bonnet	71.24	342	P	P	12 37 09.7	+0.1
	2.0nm,0.4s,baz=191,slow=5.2,SNR=2.1						
TORD	Torodi Ar. Bea	76.38	71	P	P	12 37 40.2	-0.1
	0.4nm,0.3s,baz=246,slow=5.0,SNR=17						
YKA	Yellowknife Ar	87.14	341	P	P	12 38 35.2	-0.3
	0.5nm,0.6s,baz=133,slow=5.0,SNR=15						
WRA	Warramunga Arr	136.27	213	PKP	PKPdf	12 45 11.3	-0.2
	0.5nm,1.1s,baz=144,slow=1.8,SNR=4.5						

IDC 09 12:26:10.3±11.0, 32°.00N×138°.26E, h384km±26km, mb2.8/2, mb1 2.6/5, mb1mx2.4/29, mbtmp2.6/5, Error ellipse: s-maj=180.9km s-min=47.3km az=148.0
JMA 09 12:26:11.8±0.4, 32°.21N×138°.13E, h388km, M3.3
ISCJB 09 12:26:13.0±1.2, 32°.5N±0°.1×138°.1E±0°.1, h392km±8km, mb2.9/2, Error ellipse: s-maj=21.5km s-min=9.5km az=144.8
ISC 09 12:26:14.2±1.7**, 32°.5N**±0°.2×**138°.04E**±0°.09**, h385**km±10km**, n21, σ1s37**/30**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	2.18	330	P	Pn	12 27 10.6	+0.7
JWZ	Kozaga	2.20	298	P	Pn	12 27 09.5	-0.6
JKN2	Miekihoku	2.27	320	P	Pn	12 27 10.7	+0.2
JOD2	Odawara 2	2.88	17	P	Pn	12 27 16.0	+0.8
JOD2				eS	S	12 28 06.9	+2.3
BSO3	Boso 3	3.08	41	P	Pn	12 27 16.5	0.0
BSO3				eS	S	12 28 07.1	+0.1
BSO4	Boso 4	3.13	37	eS	S	12 28 07.8	-0.3
BSO1	Boso 1	3.25	48	P	Pn	12 27 17.8	0.0
BSO1				eS	S	12 28 08.5	-0.8
JAI	Aioi	3.27	294	P	Pn	12 27 17.8	-0.7
JHU	Hanno	3.49	17	P	Pn	12 27 21.2	+0.7
JHU				eS	S	12 28 12.8	-1.3
JRY	Ryogami san	3.57	11	P	Pn	12 27 22.8	+1.6
JRY				eS	S	12 28 16.7	+1.2
MJAR	Matsushiro Arr	4.02	2	P	Pn	12 27 26.4	+0.9
	0.4nm,0.3s,baz=185,slow=9.2,SNR=4.5						
JAG	Ashikaga	4.07	16	P	Pn	12 27 26.2	+0.2
JAG				eS	S	12 28 22.4	-1.8
JYT	Yasato	4.11	25	eS	S	12 28 21.7	-3.2
JHO	Hitachi	4.59	26	P	Pn	12 27 31.2	0.0
JHO				eS	S	12 28 30.6	-3.0
JHS	Saijyo	4.79	303	P	Pn	12 27 33.2	-0.1
JFK	Kawauchi	5.37	25	P	Pn	12 27 40.0	+0.6
JFK				eS	S	12 28 46.3	-2.4
JNU	Nakatsue	6.06	278	P	Pn	12 27 45.9	-1.0
	0.4nm,0.3s,baz=99,slow=12,SNR=5.5						
JMK	Ichinoseki	6.93	21	P	P	12 27 57.9	+0.5
JMK				eS	S	12 29 18.7	-1.3
KSRS	Korea Array	9.65	304	P	P	12 28 29.4	+1.2
	0.2nm,0.3s,baz=123,slow=10,SNR=4.7						
MKAR	Makanchi Array	44.32	306	P	P	12 33 47.5	-0.1
	0.3nm,0.4s,baz=85,slow=9.8,SNR=5.8						
KURBB	Kurchatov Arra	46.73	311	P	P	12 34 05.7	-0.5
	0.3nm,0.4s,baz=101,slow=6.4,SNR=6.9						

IDC 09 12:28:35.1±2.3**, 5°.18S×150°.76E, h260**km±18km**, mb3.2**/5**, mb1 3.4**/6**, mb1mx3.1**/19**, mbtmp3.3**/6**, Error ellipse: s-maj=46.9km s-min=15.9km az=120.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.51	220	P	Pn	12 29 56.2	-1.2
	2.2nm,0.3s,baz=47,slow=10,SNR=8.0						
PMG				S	S	12 31 06.1	+2.9
	1.6nm,0.3s,baz=37,slow=20,SNR=2.1						
WRA	Warramunga Arr	21.69	226	P	P	12 33 05.1	-0.5
	1.2nm,0.4s,baz=52,slow=10.0,SNR=31						
WRA				S	S	12 36 49.0	+1.7
	0.3nm,0.8s,baz=32,slow=23,SNR=2.0						
WRA				PcP	PcP	12 36 56.7	+0.3
	0.3nm,0.5s,baz=39,slow=2.2,SNR=6.3						
ASAR	Alice Springs	24.52	220	P	P	12 33 31.2	-0.2
	0.6nm,0.4s,baz=51,slow=8.8,SNR=16						
FITZ	Fitzroy Crossi	27.70	240	P	P	12 33 59.4	-0.4
	3.2nm,1.1s,baz=66,slow=8.8,SNR=8.8						
SONM	Songino Array	65.58	329	P	P	12 38 52.3	+0.9
	0.3nm,0.5s,baz=123,slow=7.0,SNR=2.8						
YKA	Yellowknife Ar	96.71	28	P	P	12 41 35.1	-0.6
	0.1nm,0.6s,baz=277,slow=5.6,SNR=4.9						
TORD	Torodi Ar. Bea	148.48	287	PKPbc	PKPbc	12 47 50.9	-1.3
	0.3nm,0.4s,baz=66,slow=2.5,SNR=6.0						

GUC 09 12:50:55.3±1.1**, 33°.48S×70°.97W, h89**km±4km**, MD3.7, ML3.6, 7C-8D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TACH	Talagante	0.18	170	⇓iP	Pn	12 51 08.4	+0.2
TACH				iS	Sn	12 51 17.9	+0.2
SAN	Santiago	0.26	85	⇓iP	Pn	12 51 08.6	+0.1
SAN				iS	Sn	12 51 18.4	+0.1
SAN				AML	AML	12 51 27.0	
	comp=E,5µm,0.5s						
STL	Santa Lucia	0.28	82	⇑iP	Pn	12 51 08.6	0.0
STL				iS	Sn	12 51 18.4	-0.1
STL				AML	AML	12 51 18.6	
	comp=N,934nm,0.2s						
ANTU	Antumapu	0.30	108	⇑iP	Pn	12 51 08.8	+0.1
ANTU				iS	Sn	12 51 18.9	+0.3
ANTU				AML	AML	12 51 19.6	
	comp=N,6µm,0.5s						
LACH	Col Las Americ	0.37	87	⇑iP	Pn	12 51 09.2	0.0
LACH				iS	Sn	12 51 19.8	+0.4
LACH				AML	AML	12 51 20.9	
	comp=N,1µm,0.4s						
CLCH	Cerro Calan	0.37	78	⇑iP	Pn	12 51 09.4	+0.2
CLCH				iS	Sn	12 51 20.0	+0.5
CLCH				AML	AML	12 51 20.7	
	comp=N,3µm,0.5s						
CLCH				AML	AML	12 51 21.2	
	comp=N,4µm,0.5s						
PEL	Peldehue	0.41	36	⇓iP	Pn	12 51 09.7	+0.3
PEL				iS	Sn	12 51 20.2	+0.4
PEL				AML	AML	12 51 21.8	
	comp=E,12µm,0.3s						
PCH	Pirque	0.41	111	⇓iP	Pn	12 51 09.4	0.0
PCH				iS	Sn	12 51 20.4	+0.5
SJCH	San Jose de Ma	0.54	108	⇓iP	Pn	12 51 09.8	-0.6
SJCH				iS	Sn	12 51 21.3	-0.4
SJCH				AML	AML	12 51 21.8	
	comp=N,3µm,0.3s						
LNV	Longovilo	0.60	217	⇓iP	Pn	12 51 10.8	0.0
LNV				iS	Sn	12 51 22.4	0.0
CACH	El Canelo	0.71	154	⇑iP	Pn	12 51 12.6	+0.6
CACH				iS	Sn	12 51 26.1	+1.6
IHA	Instituto Hidr	0.72	309	⇓iP	Pn	12 51 12.2	+0.3
IHA				iS	Sn	12 51 25.2	+0.9
LMEL	Las Melosas	0.74	120	⇑iP	Pn	12 51 13.0	+0.6
LMEL				iS	Sn	12 51 26.4	+1.2
LMEL				AML	AML	12 51 26.8	
	comp=N,8µm,0.2s						
CHNG	Los Chungos	1.65	344	⇓iP	Pn	12 51 23.1	+0.1
CHNG				iS	Sn	12 51 42.7	-1.1
CHNG				AML	AML	12 51 45.0	
	comp=E,663nm,0.5s						
COCH	Cobquecura	3.04	209	AML	AML	12 52 15.7	
	comp=E,215nm,0.3s						
TLL	Tololo Astrono	3.30	3	⇑iP	Pn	12 51 45.4	+0.2
TLL				iS	Sn	12 52 23.2	-0.6

NIED 09 13:01:00, 22°.50N×125°.30E, h32km, Mw3.9 Best double couple: $M_0$7.53000×10^{14} NP1:φs140.00000°, δ84.00000°, λ18.00000°. NP2:φs48.00000°, δ72.00000°, λ173.00000°.
IDC 09 13:01:43.6±0.9, 22°.39N×125°.39E, h0km, mb3.7/8, mb1 3.8/11, mb1mx3.7/28, mbtmp3.7/11, ML3.5/2, MS2.6/1, Ms1 2.6/1, ms1mx1.7/30, Error ellipse: s-maj=29.1km s-min=16.3km az=80.0
ISCJB 09 13:01:46.3±0.6, 22°.62N±0°.04×125°.57E±0°.04, h38km, mb3.7/9, Error ellipse: s-maj=6.3km s-min=5.5km az=161.5
JMA 09 13:01:46.8±0.5, 22°.54N×125°.33E, h42km, M4.0
ISC 09 13:01:47.9±0.9**, 22°.54N**±0°.07×**125°.56E**±0°.04**, h38**km**, n28, σ2s50**/41**, mb3.7**/9**, Southeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	2.21	313	P	Pn	13 02 19.8	-2.3
HATJ				S	Sn	13 02 43.3	-4.9
JKRS	Kuro-shima	2.21	320	P	Pn	13 02 20.8	-1.3
JKRS				S	Sn	13 02 45.3	-2.9
JOGS	Gusukube	2.22	356	P	Pn	13 02 22.1	-0.1
JOGS				eS	Sn	13 02 49.2	+0.9
JIJ	Ishigaki jima	2.24	325	P	Pn	13 02 20.9	-1.5
JIJ				S	Sn	13 02 45.2	-3.6
JTJ	Tarama	2.24	339	P	Pn	13 02 21.8	-0.6
JTJ				eS	Sn	13 02 47.8	-1.0
JMJ	Miyako jima 2	2.28	354	P	Pn	13 02 22.5	-0.5
JMJ				eS	Sn	13 02 50.8	+0.9
IRIF	Iriomote-Funau	2.46	317	P	Pn	13 02 24.0	-1.4
IRIF				S	Sn	13 02 50.7	-3.5
YOJ	Yonaguni jima	3.03	310	P	Pn	13 02 31.8	-1.5
YOJ				S	Sn	13 03 03.7	-4.6
JKE	Kume jima 2	3.93	16	P	Pn	13 02 44.6	-1.2
JKE				S	Sn	13 03 29.3	-1.3
JAGN	Aguni-jima	4.31	20	P	Pn	13 02 50.0	-1.0
JAGN				eS	Sn	13 03 39.1	-0.9
JOW	Kunigami	4.94	29	P	Pn	13 02 58.7	-0.9
JOW				eS	Sn	13 03 53.8	-1.6
JIH	Iheya	4.98	26	P	Pn	13 02 52.3	-7.9
JIH				eS	Sn	13 03 53.8	-2.7
JTK	Tokunoshima	6.06	30	P	Pn	13 03 13.9	-1.1
JTK				eS	Sn	13 04 18.9	-4.2
JMZ	Minamidaito 2	6.11	57	P	Pn	13 03 13.5	-2.2
JMZ				eS	Sn	13 04 18.4	-6.0
JAMN	Amaminishikomi	6.55	29	P	Pn	13 03 21.4	-0.3
JAMN				eS	Sn	13 04 30.3	-4.9
JAM	Amami Oshima	6.89	31	P	Pn	13 03 26.6	+0.2
JAM				eS	Sn	13 04 38.7	-4.9
JNU	Nakatsue	11.54	23	Pn	Pn	13 04 32.9	+2.7
	0.2nm,0.3s,baz=191,slow=5.2,SNR=3.3						
KSRS	Korea Array	15.01	7	Pn	Pn	13 05 17.8	+0.6
	baz=193,slow=13,SNR=3.3						
KSRS				LR	LR	13 11 37.2	
	comp=Z,20nm,18.0s,baz=210,slow=39						
MJAR	Matsushiro Arr	17.75	35	P	P	13 05 56.3	+3.8
	0.2nm,0.3s,baz=215,slow=8.9,SNR=11						
USRK	Ussuriysk Arra	22.25	12	P	P	13 06 43.6	+2.3
	3.0nm,0.7s,baz=203,slow=11,SNR=8.4						
CMAR	Chiang Mai Arr	25.25	266	P	P	13 07 11.2	+0.6
	0.7nm,0.7s,baz=63,slow=8.2,SNR=3.3						
ASAJ	Asahikawa	25.70	29	P	P	13 07 21.4	+6.9
	4.8nm,0.5s,baz=250,slow=17,SNR=8.0						
SONM	Songino Array	29.54	333	P	P	13 07 51.4	+2.4
	0.4nm,0.4s,baz=126,slow=9.1,SNR=3.1						
MKAR	Makanchi Array	42.32	316	P	P	13 09 39.1	+1.0
	0.7nm,0.8s,baz=104,slow=10,SNR=5.8						
WRA	Warramunga Arr	43.08	168	P	P	13 09 43.9	-0.5
	1.2nm,0.6s,baz=347,slow=8.9,SNR=16						
ZALV	Zalesovo Beam	43.83	326	P	P	13 09 50.3	+0.2
	0.5nm,0.3s,baz=129,slow=13,SNR=3.1						
KURBB	Kurchatov Arra	45.96	320	P	P	13 10 07.4	+0.2
	0.3nm,0.6s,baz=110,slow=8.2,SNR=5.8						
ASAR	Alice Springs	46.64	169	P	P	13 10 13.0	+0.3
	0.5nm,0.4s,baz=353,slow=10,SNR=14						
ASAR				PcP	PcP	13 11 48.4	+2.2
	0.3nm,0.7s,baz=349,slow=3.6,SNR=3.1						

CSEM 09 13:08:05.1±0.9, 39°.60N×25°.92E, h6km±3km, MD2.8, Error ellipse: s-maj=14.5km s-min=7.8km az=52.0
DDA 09 13:08:06.4, 39°.61N×26°.07E, h7km, MD2.9
ISK 09 13:08:06.1, 39°.66N×25°.98E, h5km, MD2.8
ISC 09 13:08:06.2±3.2**, 39°.6N**±0°.1×**26°.0E**±0°.1**, h14**km±11km**, n17, σ0s54**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.24	9	iP	Pg	13 08 11.2	-0.2
BOZC				iS	Sg	13 08 15.3	+0.4
EZN	Ezine	0.33	48	ePG	Pg	13 08 12.7	-0.3
EZN				eSG	Sg	13 08 17.9	+0.3
EZN	Ezine	0.33	48	ePg	Pg	13 08 12.7	-0.3
EZN				eSg	Sg	13 08 17.9	+0.3
GELI	Tayfur-Gelibol	0.87	24	ePG	Pg	13 08 22.5	-0.6
GELI				eSG	Sg	13 08 34.2	-0.3
GELI	Tayfur-Gelibol	0.87	24	ePg	Pg	13 08 22.5	-0.6
GELI				eSg	Sg	13 08 34.2	-0.3
ENEZ	Enez	1.14	6	ePN	Pg	13 08 27.2	-0.9
ENEZ				eSN	Sg	13 08 43.0	0.0
ENEZ	Enez	1.14	6	ePn	Pg	13 08 27.2	-0.9
ENEZ				eSn	Sg	13 08 43.0	0.0
BALY	Balya	1.25	83	iP	Pg	13 08 29.6	-0.7
BALY				iS	Sg	13 08 46.5	-0.1
BALY	Balya	1.25	83	iP	Pg	13 08 29.6	-0.7
BALY				iS	Sg	13 08 46.5	-0.1
KRBG	Karabiga-Canak	1.27	51	ePN	Pn	13 08 29.5	0.0
KRBG	Karabiga-Canak	1.27	51	ePn	Pn	13 08 29.5	0.0
RKY	Sarkoy-Tekirda	1.41	39	ePN	Pb	13 08 32.5	+0.2
RKY	Sarkoy-Tekirda	1.41	39	ePn	Pb	13 08 32.5	+0.2
MFT	Murefte	1.53	39	ePN	Pb	13 08 34.4	0.0
MFT	Murefte	1.53	39	ePn	Pb	13 08 34.4	0.0
MRMT	Marmara Adasi	1.58	50	ePN	Pn	13 08 34.9	+1.1
MRMT	Marmara Adasi	1.58	50	ePn	Pn	13 08 34.9	+1.1

WEL 09 13:08:11.8±0.3**, 37°.13S×177°.25E, h5**km**, ML3.6**/6**, 2C-1D, Error ellipse: s-maj=2.4km s-min=1.5km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WIZ	White Island	0.40	187	PG	Pg	13 08 19.6	0.0
WIZ				SG	Sg	13 08 25.7	+0.9
OPRZ	Ohinepanea	0.91	217	⇓P*	Pg	13 08 27.9	-1.3
OPRZ				S*	Sg	13 08 40.0	-0.9
MXZ	Matakaoa Point	0.95	118	⇑P*	Pg	13 08 28.8	-1.2
MXZ				S*	Sg	13 08 41.1	-1.2
MXZ				AML	AML	13 08 45.8	
MXZ				AML	AML	13 08 50.3	
MARZ	Manawahe	0.97	208	P*	Pg	13 08 30.0	-0.5
MARZ				S*	Sg	13 08 41.9	-1.3
TGRZ	Tauranga	0.99	232	P*	Pg	13 08 29.9	-0.9
TGRZ				S*	Sg	13 08 42.3	-1.4
TGRZ				AML	AML	13 08 43.9	
URZ	Urewera	1.14	186	P*	Pg	13 08 31.7	-1.9
URZ				AML	AML	13 08 51.7	
URZ				AML	AML	13 08 55.5	
MWZ	Matawai	1.23	170	⇑P*	Pg	13 08 32.8	-2.5
MWZ				AML	AML	13 08 55.3	
MWZ				AML	AML	13 08 55.4	
MWZ				AML	AML	13 08 56.0	
PUZ	Puketiti	1.24	140	P*	Pg	13 08 35.2	-0.4
PUZ				AML	AML	13 08 56.1	
PUZ				AML	AML	13 08 56.1	
TOZ	Tahuroa Road	1.52	246	P*	Pn	13 08 37.0	-2.5
CNGZ	Carnagh Statio	1.55	151	PN	Pn	13 08 39.9	-0.1
MKAZ	Moumakai	1.67	270	AML	AML	13 09 09.7	
MKAZ				AML	AML	13 09 15.7	
BKZ	Black Stump Fm	2.12	196	P*	Pn	13 08 46.5	-1.5
RVAZ	Riverhead Bore	2.17	279	PN	Pn	13 08 46.3	-2.2

ISK 09 13:36:41.8, 37°.20N×28°.18E, h19km, MD2.6
ISCJB 09 13:36:42.5±0.7, 37°.18N±0°.05×28°.19E±0°.05, h19km±8km, Error ellipse: s-maj=9.7km s-min=5.6km az=34.9
DDA 09 13:36:42.6, 37°.20N×28°.24E, h7km, MD2.7
CSEM 09 13:36:42.3±0.1, 37°.18N×28°.18E, h18km±1km, MD2.6, Error ellipse: s-maj=3.8km s-min=2.3km az=26.0
ISC 09 13:36:42.5±0.9**, 37°.20N**±0°.04×**28°.17E**±0°.03**, h15**km±6km**, n18, σ0s63**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.11	122	ePG	Pg	13 36 45.7	-0.3
YER				eSG	Sg	13 36 48.9	+0.7
YER	Yerkesik	0.11	122	ePg	Pg	13 36 45.7	-0.3
YER				eSg	Sg	13 36 48.9	+0.7
MLSB	Milas	0.33	288	ePG	Pg	13 36 49.2	0.0
MLSB				eSG	Sb	13 36 55.1	0.0
MLSB	Milas	0.33	288	ePg	Pg	13 36 49.2	0.0
MLSB				eSg	Sb	13 36 55.1	0.0
TURN	Turunc	0.47	132	iP	Pg	13 36 51.9	0.0
TURN				iS	Sg	13 36 57.3	-1.0
TURN	Turunc	0.47	132	iP	Pg	13 36 51.9	0.0
TURN				iS	Sg	13 36 57.3	-1.0
AYDN	Tasoluk	0.52	334	iP	Pb	13 36 53.2	-0.1
AYDN				iS	Sb	13 37 00.6	0.0
AYDN	Tasoluk	0.52	334	iP	Pb	13 36 53.2	-0.1
AYDN				iS	Sb	13 37 00.6	0.0
DAT	Datca	0.66	226	ePG	Pg	13 36 55.4	-0.1
DAT	Datca	0.66	226	ePg	Pg	13 36 55.4	-0.1
BODT	Bodrum	0.70	259	ePG	Pb	13 36 56.5	+0.2
BODT	Bodrum	0.70	259	ePg	Pb	13 36 56.5	+0.2
DNZL	Cakiroluk	0.86	55	iP	Pg	13 36 59.0	-0.2
DNZL				iS	Sn	13 37 14.7	+2.1
DNZL	Cakiroluk	0.86	55	iP	Pg	13 36 59.0	-0.2
FETY	Fethiye	0.92	127	ePG	Pb	13 37 00.3	+0.2
FETY	Fethiye	0.92	127	ePg	Pb	13 37 00.4	+0.2
KULA	Kula-Manisa	1.38	16	ePN	Pn	13 37 06.4	-0.8
KULA	Kula-Manisa	1.38	16	ePn	Pn	13 37 06.4	-0.8

MAN 09 13:40:34, 16.34°N×120.28°E, h7km, mb4.4, ML3.2, MS3.0, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BCPH	Baguio City Da	0.29	81	⇑iP	Pg	13 40 40.9	+0.9
BOLP	Bolinao	0.36	277	eP	Pb	13 40 42.9	+0.2
BOLP				eS	Sb	13 40 52.9	+4.4
SCZP	Santa Cruz	0.66	213	eP	Pg	13 40 47.0	+0.3
SCZP				eS	Sn	13 41 00.9	+0.5
ABRA	Dolores	1.37	17	eP	Pn	13 40 56.9	-2.7
ABRA				eS	Sg	13 41 22.1	+4.0
BALP	Baler	1.38	115	eP	Pn	13 40 59.0	-0.7
BALP				eS	Sg	13 41 18.4	0.0
SIPP	Brgy, Tapao	1.59	6	⇓eP	Pn	13 41 02.5	0.0
CAUP	Cauayan	1.60	68	eP	Pn	13 41 03.0	+0.3
APYP	Conner	1.77	31	eP	Pn	13 41 03.8	-1.3
APYP				eS	Sn	13 41 26.4	-1.5
PALP	Palanan	2.18	70	eP	Pb	13 41 12.3	-1.5
SGCP	Mt. Cagua	2.54	41	eP	Pn	13 41 16.5	+0.9
SGCP				eS	Sg	13 41 56.0	+0.4

MEX 09 13:41:28.2±0.8, 18.22°N×99.43°W, h5km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLIG	Platanillo	0.18	339	eP	Pg	13 41 31.0	-1.0
PLIG				i S	Sg	13 41 34.0	-0.5
MEIG	Mezcala	0.34	211	eP	Pg	13 41 34.5	-0.5
MEIG				i S	Sg	13 41 38.9	-0.7
YAIG	Yautepec	0.73	29	i P	Pg	13 41 41.2	-1.3
YAIG				i S	Sg	13 41 51.9	-0.1
ARIG	Puente Sto Nin	0.87	274	i P	Pg	13 41 43.5	-1.5
ARIG				i S	Sg	13 41 55.4	-0.9
PPM	Popocatepetl	1.14	42	eP	Pg	13 41 46.8	-3.9
PPM				i S	Sg	13 42 02.7	-3.3
CAIG	El Cayaco	1.41	214	i P	Pn	13 41 51.1	-3.4
CAIG				i S	Sb	13 42 08.5	-4.8
ZIIG	Zihuatanejo	2.03	253	i P	Pn	13 42 00.2	-2.8
ZIIG				i S	Sn	13 42 25.2	-3.5
PNIG	Pinotepa	2.21	145	i P	Pn	13 42 03.1	-2.5
PNIG				i S	Sn	13 42 29.2	-4.0

ISK 09 13:45:41.7, 40.39°N×25.81°E, h20km, MD2.7
ATH 09 13:45:41.8, 40.39°N×25.77°E, h19km±2km, MD3.1/8
CSEM 09 13:45:41.7±0.2, 40.39°N×25.78°E, h15km, MD3.1, Error ellipse: s-maj=4.8km s-min=4.0km az=174.0
ISCJB 09 13:45:42.1±0.4, 40.40°N±0.03°×25.78°E±0.03°, h19km±5km, Error ellipse: s-maj=4.5km s-min=3.5km az=160.5
THE 09 13:45:42.3, 40.39°N×25.76°E, h10km±1km, ML2.5/5, Error ellipse: s-maj=1.3km s-min=0.6km az=51.0
ISC 09 13:45:41.7±0.9, 40.39°N±0.02°×25.78°E±0.02°, h14km±7km, n47, σ0.56/71, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMTH	Samothraki Isl	0.20	292	ePB	Pg	13 45 46.5	+0.2
SMTH				eSB	Sg	13 45 49.6	+0.1
SMTH	Samothraki Isl	0.20	292	ePb	Pg	13 45 46.5	+0.2
ENEZ	Enez	0.45	40	ePG	Pb	13 45 51.0	-0.4
ENEZ				eSG	Sb	13 45 57.9	0.0
ENEZ	Enez	0.45	40	ePg	Pb	13 45 51.0	-0.4
ENEZ				eSg	Sb	13 45 57.9	0.0
GELI	Tayfur-Gelibol	0.53	89	ePG	Pg	13 45 52.3	+0.1
GELI				eSG	Sb	13 46 00.3	0.0
GELI	Tayfur-Gelibol	0.53	89	ePg	Pg	13 45 52.3	+0.1
GELI				eSg	Sb	13 46 00.4	0.0
ALN	Alexandroupoli	0.54	22	P	Pb	13 45 52.7	-0.3
ALN				S	Sb	13 46 00.5	-0.2
ALN	Alexandroupoli	0.54	22	ePN	Pg	13 45 52.6	+0.2
ALN				eSN	Sb	13 46 00.5	-0.2
ALN	Alexandroupoli	0.54	22	P	Pb	13 45 52.7	-0.3
ALN				S	Sb	13 46 00.5	-0.2
LIA	Limnos Island	0.67	223	P	Pg	13 45 54.9	+0.1
LIA				S	Sb	13 46 04.5	+0.1
LIA	Limnos Island	0.67	223	ePN	Pg	13 45 55.0	+0.1
LIA				eSN	Sb	13 46 04.8	+0.4
LIA	Limnos Island	0.67	223	P	Pg	13 45 54.9	+0.1
LIA				S	Sb	13 46 04.5	+0.1
RDO	Rodhopi	0.77	346	P	Pb	13 45 56.9	-0.1
RDO	Rodhopi	0.77	346	P	Pb	13 45 56.9	-0.1
RKY	Sarkoy-Tekirda	1.10	74	ePN	Pb	13 46 02.3	-0.4
RKY				eSN	Sb	13 46 17.2	+0.2
RKY	Sarkoy-Tekirda	1.10	74	ePn	Pb	13 46 02.3	-0.4
RKY				eSn	Sb	13 46 17.2	+0.2
KAVA	Kavala	1.14	302	P	Pb	13 46 03.0	-0.1
KAVA				S	Sn	13 46 18.8	+0.2
KAVA	Kavala	1.14	302	P	Pb	13 46 03.0	-0.1
KAVA				S	Sn	13 46 18.8	+0.2
KRBG	Karabiga-Canak	1.16	90	ePN	Pn	13 46 03.0	-0.5
KRBG	Karabiga-Canak	1.16	90	ePn	Pn	13 46 03.0	-0.5
SIGR	SIGRI	1.18	177	P	Pg	13 46 04.4	-0.1
SIGR				S	Sg	13 46 20.5	+0.6
SIGR	SIGRI	1.18	177	P	Pg	13 46 04.4	-0.1
SIGR				S	Sg	13 46 20.5	+0.6
PRK	Paraskevi	1.21	162	P	Pg	13 46 04.9	-0.1
PRK				S	Sg	13 46 20.9	+0.2
PRK	Paraskevi	1.21	162	ePN	Pg	13 46 04.9	-0.1
PRK				eSN	Sg	13 46 20.9	+0.2
PRK	Paraskevi	1.21	162	P	Pg	13 46 04.9	-0.1
PRK				S	Sg	13 46 20.9	+0.2
MFT	Murefte	1.21	71	ePN	Pn	13 46 04.3	0.0
MFT	Murefte	1.21	71	ePn	Pn	13 46 04.3	0.0
OUR	Ouranopolis	1.37	268	P	Pn	13 46 05.9	-0.6
OUR				S	Sg	13 46 25.7	-0.3
OUR	Ouranopolis	1.37	268	P	Pn	13 46 05.9	-0.6
OUR				S	Sg	13 46 25.7	-0.3
MRMT	Marmara Adasi	1.40	81	ePN	Pn	13 46 06.3	-0.6
MRMT	Marmara Adasi	1.40	81	ePn	Pn	13 46 06.3	-0.6
GONE	Gonen-Balikesi	1.50	103	ePN	Pn	13 46 07.8	-0.5
GONE	Gonen-Balikesi	1.50	103	ePn	Pn	13 46 07.8	-0.5
EDRB	Edirne	1.62	26	ePN	Pn	13 46 10.2	+0.3
EDRB	Edirne	1.62	26	ePn	Pn	13 46 10.2	+0.3
NVR	Nevrokopi	1.74	304	ePB	Pn	13 46 12.0	+0.4
NVR	Nevrokopi	1.74	304	ePb	Pn	13 46 12.0	+0.4
PLG	Polygyros	1.78	270	ePN	Pn	13 46 13.1	+0.9
PLG	Polygyros	1.78	270	ePn	Pn	13 46 13.1	+0.9
SRS	Serrai	1.81	294	P	Pn	13 46 12.3	-0.2
SRS				S	Sn	13 46 36.2	+0.9
SRS	Serrai	1.81	294	P	Pn	13 46 12.3	-0.2
SRS				S	Sn	13 46 36.2	+0.9
SOH	Sokhos	1.90	284	ePN	Pb	13 46 16.0	-0.1
SOH	Sokhos	1.90	284	ePn	Pb	13 46 16.0	-0.1
CHOS	Chios island	2.02	174	ePB	Pn	13 46 16.1	+0.7
CHOS	Chios island	2.02	174	ePb	Pn	13 46 16.1	+0.7
GRG	Griva	2.63	283	ePB	Pb	13 46 26.3	-2.3
GRG	Griva	2.63	283	ePb	Pb	13 46 26.3	-2.3

IDC 09 13:52:11.0±0.7, 6.01°S×105.16°E, h0km, mb3.9/15, mb1 4.1/15, mb1mx4.0/25, mbtmp3.9/15, Error ellipse: s-maj=31.8km s-min=13.3km az=54.0
DJA 09 13:52:14.0±0.4, 6°S±4°×10°5E±°, h10km, M4.5/11, MLv4.5/11
ISC 09 13:52:11.2±1.7, 6.31°S±0.05°×105.14°E±0.04°, h3km±11km, n32, σ1.86/36, mb4.1/15, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BLSI	Bandar Lampung	0.94	6	P	Pg	13 52 28.6	-0.6
SBJI	Serang	1.00	79	P	Pg	13 52 29.2	-1.1
SBJI				S	Sn	13 52 49.1	+2.4
KASI	Kota Agung	1.01	320	P	Pn	13 52 33.6	+1.3
TNG	Tangerang	1.50	85	P	Pn	13 52 38.2	-0.8
SKJI	Sukabumi	1.56	116	P	Pn	13 52 39.9	0.0
SKJI				S	Sb	13 53 02.0	+0.9
LWLI	Liwa	1.68	320	P	Pg	13 52 44.6	+1.3
LEM	Lembang	2.51	102	P	Pn	13 52 55.8	+2.7
MNAI	Manna	2.91	311	P	Pn	13 53 00.1	+1.6
MNAI				S	Sb	13 53 41.4	+1.5
CISI	Cisompet, Garu	2.93	115	P	Pn	13 52 59.8	+1.0
PMBI	Palembang	3.38	354	P	Pn	13 53 06.2	+1.3
KSI	Kapahiang	3.66	316	P	Pb	13 53 14.7	-1.9
TGJI	Tegal	3.99	98	P	Pg	13 53 29.0	+1.3
PPBI	Pangkal Pinang	4.23	14	P	Pn	13 53 17.7	+1.0
PPBI				S	Sb	13 54 23.0	+5.1
TPI	Tanjungpandan	4.32	35	P	Pn	13 53 20.5	+2.6
TPI				S	Sb	13 54 17.8	-2.7
BJII	Banjamegara	4.65	103	P	Pg	13 53 39.7	-0.6
FITZ	Fitzroy Crossi	23.18	122	P	P	13 57 19.9	+0.7
	6.5nm,1.1s,baz=334,slow=8.9,SNR=4.9						
CMAR	Chiang Mai Arr	25.36	346	P	P	13 57 38.3	-1.4
	0.5nm,0.8s,baz=179,slow=7.8,SNR=3.4						
WRA	Warramunga Arr	31.42	118	P	P	13 58 34.1	+0.1
	2.8nm,0.7s,baz=302,slow=9.0,SNR=19						
ASAR	Alice Springs	32.59	125	P	P	13 58 45.4	+1.1
	3.7nm,1.1s,baz=301,slow=8.0,SNR=38						
ASAR				PcP	PcP	14 01 33.0	+2.2
	0.4nm,0.8s,baz=349,slow=2.1,SNR=4.7						
CTA	Charters Tower	42.17	113	P	P	14 00 07.3	+1.8
	5.3nm,0.9s,baz=288,slow=9.8,SNR=4.9						
STKA	Stephens Creek	42.47	132	P	P	14 00 10.0	+2.1
	2.7nm,0.5s,baz=312,slow=12,SNR=12						
MJAR	Matsushiro Arr	52.69	34	P	P	14 01 26.7	-0.5
	0.4nm,0.6s,baz=243,slow=5.3,SNR=3.6						
SONM	Songino Array	53.92	1	P	P	14 01 36.1	-0.1
	0.2nm,0.5s,baz=163,slow=6.2,SNR=4.4						
SONM				PcP	PcP	14 02 40.3	-1.3
	0.3nm,0.5s,baz=174,slow=4.2,SNR=3.6						
USRK	Ussuriysk Arra	55.80	23	P	P	14 01 46.5	-3.2
	1.3nm,0.8s,baz=168,slow=10.0,SNR=3.1						
MKAR	Makanchi Array	56.63	341	P	P	14 01 53.9	-1.7
	0.7nm,0.8s,baz=134,slow=9.8,SNR=4.6						
ZALV	Zalesovo Beam	62.42	347	P	P	14 02 33.5	-1.9
	0.5nm,0.3s,baz=139,slow=2.7,SNR=3.6						
KBZ	Khabaz	74.91	318	P	P	14 03 52.3	-1.2
	2.7nm,0.9s,baz=260,slow=1.7,SNR=6.6						
VNDA	Vanda	76.99	169	P	P	14 04 07.8	+2.9
	1.1nm,0.9s,baz=298,slow=2.9,SNR=3.3						
BRTR	Keskin Array B	80.00	312	P	P	14 04 22.2	-0.2
	0.9nm,0.6s,baz=139,slow=5.9,SNR=5.3						
AKASG	Malin Array Be	86.01	322	P	P	14 04 50.7	-2.4
	0.9nm,0.6s,baz=64,slow=8.4,SNR=3.2						
YKA	Yellowknife Ar	116.84	19	PKP	PKPdf	14 10 54.7	-2.3
	0.1nm,0.3s,baz=335,slow=2.8,SNR=3.1						
TXAR	Lajitas Array	144.46	46	PKP	PKPbc	14 11 49.0	+0.6
	1.1nm,0.8s,baz=325,slow=1.5,SNR=9.0						

IDC 09 13:53:43.2±5.1, 5.47°S×105.85°E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/23, mbtmp3.6/4, Error ellipse: s-maj=197.2km s-min=27.8km az=62.0, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	31.22	120	P	P	14 00 05.0	+0.3
	0.4nm,0.5s,baz=298,slow=9.3,SNR=4.6						
ASAR	Alice Springs	32.51	127	P	P	14 00 16.1	+0.1
	0.4nm,0.7s,baz=301,slow=8.2,SNR=4.9						
STKA	Stephens Creek	42.52	133	P	P	14 01 40.0	-0.6
	2.3nm,0.8s,baz=307,slow=11,SNR=3.9						
SONM	Songino Array	53.08	0	P	P	14 03 02.3	-0.1
	0.4nm,0.8s,baz=181,slow=6.9,SNR=2.1						

IDC 09 14:12:28.8±3.3, 0.36°N×97.82°E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.4/25, mbtmp3.5/5, ML4.2/1, Error ellipse: s-maj=138.5km s-min=23.7km az=58.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	18.02	3	P	P	14 16 41.8	+0.4
	0.3nm,0.3s,baz=198,slow=11,SNR=4.2						
WRA	Warramunga Arr	41.07	122	P	P	14 20 14.2	-0.3
	0.2nm,0.4s,baz=304,slow=8.7,SNR=4.7						
ASAR	Alice Springs	42.40	127	P	P	14 20 25.5	+0.1
	0.3nm,0.6s,baz=300,slow=7.4,SNR=3.7						
MKAR	Makanchi Array	48.20	346	P	P	14 21 11.2	+0.1
	0.4nm,0.7s,baz=155,slow=7.7,SNR=5.5						
ZALV	Zalesovo Beam	54.48	351	P	P	14 21 57.4	-0.6
	0.7nm,0.3s,baz=187,slow=8.4,SNR=4.3						

IDC 09 14:23:10.0±1.1, 22.79°S×171.38°E, h0km, mb4.0/9, mb1 4.2/10, mb1mx4.1/19, mbtmp4.1/10, ML4.3/1, MS3.6/6, Ms1 3.6/6, ms1mx3.0/24, Error ellipse: s-maj=27.1km s-min=24.7km az=154.0
NEIC 09 14:23:11.8±0.5, 22.78°S×171.35°E, h10km, mb4.7/2, Error ellipse: s-maj=14.3km s-min=10.7km az=153.0
ISCJB 09 14:23:15.8±0.7, 22.8°S±0.1°×171.26°E±0.07°, h49km, mb4.1/10, MS3.6/4, Error ellipse: s-maj=16.7km s-min=8.3km az=15.3
AUST 09 14:24:33.5, 23.45°S×166.19°E, h450km
ISC 09 14:23:16.6±0.7, 22.90°S±0.09°×171.36°E±0.07°, h49km, n43, σ1.30/38, mb4.0/10, MS3.5/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.62	279	eP	Pn	14 24 22.1	-1.9
DZM				eS	Sn	14 25 14.7	-1.7
DZM	Mont Dzumac	4.62	279	eP	Pn	14 24 22.9	-1.1
DZM				Sn	Sn	14 25 15.3	-1.1
DZM	Mont Dzumac	4.62	279	Pn	Pn	14 24 22.9	-1.1
	13nm,0.3s,baz=117,slow=21,SNR=136						
DZM				Sn	Sn	14 25 15.3	-1.1
	8.5nm,0.3s,baz=162,slow=17,SNR=5.1						
NOUC	Port Laguerre	4.74	279	eP	Pn	14 24 24.2	-1.4
NOUC				eS	Sn	14 25 18.0	-1.3
NFK	Norfolk Island	6.85	206	P	Sn	14 26 07.3	-3.7
	baz=5.8,SNR=6.0						
MSVF	Nonsavu	8.11	52	P	Pn	14 25 09.6	-2.3
	20nm,1.0s						
URZ	Urewera	16.09	163	LR	LR	14 31 38.7	
	comp=Z,242nm,18.3s,baz=341,slow=31						
HNR	Honiara	17.29	319	LR	LR	14 32 42.6	
	comp=Z,67nm,20.2s,baz=112,slow=33						
RPZ	Rata Peaks	20.76	181	P	Pn	14 27 55.3	-0.9
RPZ	Rata Peaks	20.76	181	P	Pn	14 27 55.3	-0.9
	16nm,1.0s,baz=6.7,slow=18,SNR=3.0						
RPZ				LR	LR	14 34 11.9	
	comp=Z,222nm,18.8s,baz=3.5,slow=32						
RMQ	Roma	20.84	256	P	Pn	14 27 58.2	+1.0
	baz=16,SNR=6.1						
RMQ				S	S	14 30 43.6	-61
	baz=16,SNR=6.9						
CMSA	Cobar Meteorol	24.35	244	P	P	14 28 31.7	+1.8
	baz=20,SNR=8.4						
QLP	Quilpie	24.89	256	P	P	14 28 36.1	+1.2
	baz=20,SNR=11						
MTSU	Mount Surprise	25.75	276	P	P	14 28 44.4	+1.6
	baz=21,SNR=6.8						
STKA	Stephens Creek	27.83	245	eP	P	14 29 01.7	+0.3
STKA	Stephens Creek	27.83	245	P	P	14 29 01.8	+0.3
	2.4nm,0.7s,baz=125,slow=13,SNR=6.3						
STKA				LR	LR	14 38 46.8	
	comp=Z,103nm,19.6s,baz=197,slow=34						
MMPI	Merauke	33.00	291	P	P	14 29 57.4	+10
	baz=29,SNR=3.9						
AS31	Alice Springs	34.35	261	eP	P	14 29 59.1	+0.1
ASAR	Alice Springs	34.35	261	P	P	14 29 58.9	-0.1
ASAR	Alice Springs	34.35	261	P	P	14 29 58.9	-0.1
	2.8nm,0.8s,baz=87,slow=9.2,SNR=26						
WRA	Warramunga Arr	34.53	268	P	P	14 29 59.6	-1.0
WRA	Warramunga Arr	34.53	268	P	P	14 29 59.6	-1.0
	0.7nm,0.4s,baz=98,slow=8.5,SNR=31						
MTN	Manton Dam	39.46	278	P	P	14 30 45.6	+3.2
	baz=35,SNR=4.0						
FITZ	Fitzroy Crossi	42.96	268	P	P	14 31 12.1	+1.0
	baz=38,SNR=4.4						
MBWA	Marble Bar	47.69	262	eP	P	14 31 48.9	+0.3
	8.5nm,0.9s						
MEEK	Meekatharra	47.76	254	P	P	14 31 49.3	+0.1
	baz=43,SNR=4.7						
VNDA	Vanda	54.87	183	LR	LR	14 53 17.9	
	comp=Z,95nm,19.4s,baz=32,slow=33						
SBA	Scott Base	55.05	181	eP	P	14 32 44.5	+1.7
	4.1nm,0.8s						
MJAR	Matsushiro Arr	66.90	331	P	P	14 34 04.6	+0.9
MJAR	Matsushiro Arr	66.90	331	P	P	14 34 04.6	+0.9
	0.7nm,0.8s,baz=158,slow=7.2,SNR=4.2						
ASAJ	Asahikawa	71.71	339	LR	LR	15 00 00.3	
	comp=Z,29nm,20.6s,baz=166,slow=31						
MAW	Mawson	75.80	202	P	P	14 34 57.9	+0.9
MAW	Mawson	75.80	202	P	P	14 34 57.9	+0.9
	1.5nm,0.8s,baz=122,slow=8.0,SNR=4.5						
CMAR	Chiang Mai Arr	81.80	294	P	P	14 35 32.7	+1.9
CMAR	Chiang Mai Arr	81.80	294	P	P	14 35 32.7	+1.9
	0.4nm,0.4s,baz=140,slow=3.5,SNR=3.1						
NVAR	Mina Array Bea	89.76	48	P	P	14 36 09.8	-0.3
NVAR	Mina Array Bea	89.76	48	P	P	14 36 09.8	-0.3
	0.5nm,0.7s,baz=227,slow=5.4,SNR=4.8						
SONM	Songino Array	91.32	322	P	P	14 36 16.0	-1.0
SONM	Songino Array	91.32	322	P	P	14 36 16.0	-1.0
	0.5nm,0.8s,baz=129,slow=5.0,SNR=4.5						
GERES	GERESS Array B	148.64	331	PKPbc	PKPbc	14 42 58.0	-0.3
GERES	GERESS Array B	148.64	331	PKPbc	PKPbc	14 42 58.0	-0.3
	0.2nm,0.4s,baz=86,slow=4.2,SNR=2.5						
TORD	Torodi Ar. Bea	166.20	227	PKPab	PKPab	14 44 18.1	+0.1
TORD	Torodi Ar. Bea	166.20	227	PKPab	PKPab	14 44 18.1	+0.1
	0.3nm,0.7s,baz=132,slow=2.6,SNR=5.5						

ISK 09 14:47:39.4, 34.38°N×25.45°E, h31km, ML4.1
IDC 09 14:47:39.5±0.9, 34.78°N×25.52°E, h0km, mb4.0/17, mb1 4.0/21, mb1mx3.9/34, mbtmp4.0/21, ML3.7/4, MS3.0/7, Ms1 3.0/7, ms1mx2.7/45, Error ellipse: s-maj=21.4km s-min=15.9km az=13.0
HLW 09 14:47:41.4, 34.87°N×25.54°E, h33km±12km, Md3.6, Ml3.3
MOS 09 14:47:43.0±2.1, 34.40°N×25.51°E, h53km, mb4.3/16, Error ellipse: s-maj=11.9km s-min=5.5km az=75.7
ISCJB 09 14:47:43.5±0.3, 34.60°N±0.02°×25.63°E±0.03°, h42km±3km, mb3.9/23, MS3.0/4, Error ellipse: s-maj=3.8km s-min=3.2km az=41.2
CSEM 09 14:47:44.7±0.1, 34.63°N×25.60°E, h30km, mb4.0/13, Error ellipse: s-maj=3.1km s-min=2.4km az=37.0
ATH 09 14:47:45.7, 34.83°N×25.50°E, h38km, MD3.7/23
THE 09 14:47:46.1, 34.73°N×25.53°E, h12km±2km, ML4.2/1, Error ellipse: s-maj=3.0km s-min=1.1km az=351.0
ISC 09 14:47:44.7±0.5, 34.63°N±0.04°×25.55°E±0.03°, h39km±3km, n276, σ1.34/292, mb4.0/23, MS3.0/4, 5C-10D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAST	Lasithi	0.53	354	P	Pn	14 47 54.1	-1.9
LAST				S	Sn	14 48 01.7	-2.2
LAST	Lasithi	0.53	354	ePB	Pn	14 47 54.5	-1.5
LAST				eSB	Sn	14 48 01.2	-2.7
LAST	Lasithi	0.53	354	P	Pn	14 47 54.1	-1.9
LAST	Lasithi	0.53	354	ePb	Pn	14 47 54.5	-1.5
LAST				eSb	Sn	14 48 01.2	-2.7
NPS	Neapolis	0.63	5	P	Pn	14 47 56.3	-1.0
NPS				S	Sn	14 48 05.0	-1.2
NPS	Neapolis	0.63	5	ePB	Pn	14 47 56.4	-0.9
NPS				eSB	Sn	14 48 02.7	-3.5
NPS	Neapolis	0.63	5	ePb	Pn	14 47 56.4	-0.9
NPS				eSb	Sn	14 48 02.7	-3.5
NPS				S		14 48 05.0	
SIVA	Sivas	0.72	303	P	Pn	14 47 58.9	+0.5
SIVA				S	Sn	14 48 09.1	+0.9
SIVA	Sivas	0.72	303	ePN	Pn	14 47 58.3	-0.1
SIVA				eSN	Sn	14 48 07.8	-0.4
SIVA	Sivas	0.72	303	ePn	Pn	14 47 58.3	-0.1
SIVA	Sivas	0.72	303	P	Pn	14 47 58.9	+0.5
SIVA				eSn	Sn	14 48 07.8	-0.4
SIVA				S		14 48 09.1	
ZKR	Zakros	0.73	49	P	Pn	14 47 58.5	-0.1
ZKR				S	Sn	14 48 09.7	+1.1
ZKR	Zakros	0.73	49	ePN	Pn	14 47 59.1	+0.5
ZKR				eSN	Sn	14 48 09.0	+0.4
ZKR	Zakros	0.73	49	P	Pn	14 47 58.5	-0.1
ZKR	Zakros	0.73	49	ePn	Pn	14 47 59.1	+0.5
ZKR				eSn	Sn	14 48 09.0	+0.4
GVD	Gavdhos	1.22	280	P	Pn	14 48 07.5	+2.2
GVD	Gavdhos	1.22	280	P	Pn	14 48 07.5	+2.2
VAM	Vamos	1.35	305	P	Pn	14 48 09.0	+2.0
VAM				S	Sn	14 48 25.8	+2.1
VAM	Vamos	1.35	305	ePN	Pn	14 48 07.7	+0.7
VAM				eSN	Sn	14 48 24.1	+0.4
VAM	Vamos	1.35	305	ePn	Pn	14 48 07.7	+0.7
VAM	Vamos	1.35	305	P	Pn	14 48 09.0	+2.0
VAM				eSn	Sn	14 48 24.1	+0.4
VAM				S		14 48 25.8	
KARP	Karpathos	1.61	55	P	Pn	14 48 13.6	+2.9
KARP				S	Sn	14 48 33.6	+3.4
KARP	Karpathos	1.61	55	ePB	Pn	14 48 12.6	+1.9
KARP				eSN	Sn	14 48 31.7	+1.5
KARP	Karpathos	1.61	55	ePb	Pn	14 48 12.6	+1.9
KARP	Karpathos	1.61	55	P	Pn	14 48 13.6	+2.9
KARP				eSn	Sn	14 48 31.7	+1.5
KARP				S		14 48 33.6	
SANT	Santorini	1.74	358	ePB	Pn	14 48 13.0	+0.6
SANT				eSN	Sn	14 48 31.8	-1.6
SANT	Santorini	1.74	358	ePb	Pn	14 48 13.0	+0.6
SANT				eSn	Sn	14 48 31.8	-1.6
ANKY	Antikythira Is	2.21	305	ePN	Pn	14 48 20.4	+1.5
ANKY	Antikythira Is	2.21	305	ePn	Pn	14 48 20.4	+1.5
NIS1	Nisyros Isl.	2.37	34	ePN	Pn	14 48 22.1	+0.9
NIS1	Nisyros Isl.	2.37	34	ePn	Pn	14 48 22.1	+0.9
APE	Apeiranthos	2.43	360	ePN	Pn	14 48 22.4	+0.4
APE				eSN	Sn	14 48 52.5	+2.0
APE	Apeiranthos	2.43	360	P	Pn	14 48 22.5	+0.5
APE	Apeiranthos	2.43	360	ePN	Pn	14 48 22.5	+0.5
APE	Apeiranthos	2.43	360	⇓P	Pn	14 48 25.5	+3.5
APE	Apeiranthos	2.43	360	⇓iP	Pn	14 48 25.5	+3.5
APE	Apeiranthos	2.43	360	P	Pn	14 48 22.5	+0.5
APE				eSn	Sn	14 48 52.5	+2.0
KYTH	Kithira	2.63	309	ePN	Pn	14 48 25.1	+0.5
KYTH	Kithira	2.63	309	ePn	Pn	14 48 25.1	+0.5
ARG	Arkhangelos	2.63	52	P	Pn	14 48 26.9	+2.2
ARG				S	Sn	14 48 57.5	+2.1
ARG	Arkhangelos	2.63	52	ePN	Pn	14 48 26.9	+2.2
ARG	Arkhangelos	2.63	52	P	Pn	14 48 26.9	+2.2
ARG				S	Sn	14 48 57.5	+2.1
DAT	Datca	2.67	38	ePN	Pn	14 48 25.1	-0.2
DAT	Datca	2.67	38	ePn	Pn	14 48 25.1	-0.2
BODT	Bodrum	2.82	30	ePN	Pn	14 48 27.3	+0.1
BODT	Bodrum	2.82	30	ePn	Pn	14 48 27.3	+0.1
LTBQ	Tobruq	2.91	208	i P	Pn	14 48 31.3	+2.8
	SNR=35						
VLI	Veliai	2.97	315	P	Pn	14 48 29.5	+0.2
VLI	Veliai	2.97	315	ePN	Pn	14 48 29.6	+0.2
VLI	Veliai	2.97	315	ePn	Pn	14 48 29.6	+0.2
SLUM		3.14	185	P	Pn	14 48 31.9	+0.1
	baz=185						
SLUM				AMP		14 49 00.0	
	comp=N,80µm,0.3s,logA/T=5.4,baz=185						
SLUM		3.14	185	P	Pn	14 48 31.9	+0.1
SLUM				S	Sn	14 49 08.3	+0.3
MLSB	Milas	3.22	34	ePN	Pn	14 48 33.0	+0.2
MLSB	Milas	3.22	34	ePn	Pn	14 48 33.0	+0.2
SMG	Samos	3.24	18	ePN	Pn	14 48 33.9	+0.8
SMG	Samos	3.24	18	ePn	Pn	14 48 33.9	+0.8
YER	Yerkesik	3.34	41	ePN	Pn	14 48 34.8	+0.2
YER	Yerkesik	3.34	41	ePn	Pn	14 48 34.8	+0.2
TURN	Turunc	3.34	47	i P	Pn	14 48 31.9	-2.6
TURN				i S	Sn	14 49 03.7	-9.2
DYR	Agios Nikonas	3.37	310	P	Pn	14 48 36.2	+1.4
DYR	Agios Nikonas	3.37	310	ePN	Pn	14 48 36.3	+1.4
DYR	Agios Nikonas	3.37	310	ePn	Pn	14 48 36.3	+1.4
DID	Didima	3.42	328	ePN	Pn	14 48 35.9	+0.3
DID	Didima	3.42	328	ePn	Pn	14 48 35.9	+0.3
FETY	Fethiye	3.51	54	ePN	Pn	14 48 36.5	-0.3
FETY	Fethiye	3.51	54	ePn	Pn	14 48 36.5	-0.3
AKAS	Kas	3.68	63	eP	Pn	14 48 40.0	+0.8
AKAS				i S	Sn	14 49 12.9	-8.6
AKAS	Kas	3.68	63	eP	Pn	14 48 40.0	+0.8
VLX	Vlachokerasia	3.75	318	ePN	Pn	14 48 41.5	+1.4
VLX	Vlachokerasia	3.75	318	ePn	Pn	14 48 41.5	+1.4
CHOS	Chios island	3.77	6	ePN	Pn	14 48 41.6	+1.2
CHOS	Chios island	3.77	6	ePn	Pn	14 48 41.6	+1.2
BLCB	Balcova	3.94	17	ePN	Pn	14 48 43.2	+0.6
BLCB	Balcova	3.94	17	ePn	Pn	14 48 43.2	+0.6
LTK	Loutraki	3.97	329	ePN	Pn	14 48 43.3	+0.2
LTK	Loutraki	3.97	329	ePn	Pn	14 48 43.3	+0.2
IZM	Izmir	4.00	20	ePN	Pn	14 48 44.1	+0.5
IZM	Izmir	4.00	20	ePn	Pn	14 48 44.1	+0.5
GLHS	Glhisar (BURDU	4.08	51	ePN	Pn	14 48 44.6	-0.1
GLHS	Glhisar (BURDU	4.08	51	ePn	Pn	14 48 44.6	-0.1
ELL	Elmali	4.13	58	ePN	Pn	14 48 45.3	-0.1
ELL	Elmali	4.13	58	ePn	Pn	14 48 45.3	-0.1
DNZL	Cakiroluk	4.16	42	i P	Pn	14 48 46.6	+0.7
DNZL				eS	Sn	14 49 33.1	-0.3
DNZL	Cakiroluk	4.16	42	i P	Pn	14 48 46.6	+0.7
DNZL				eS	Sn	14 49 33.1	-0.3
GOLH	Golhisar	4.17	50	i P	Pn	14 48 46.8	+0.9
GOLH				i S	Sn	14 49 29.6	-3.9
GOLH	Golhisar	4.17	50	i P	Pn	14 48 46.8	+0.9
GUR	Goura	4.19	323	ePN	Pn	14 48 46.9	+0.7
GUR	Goura	4.19	323	ePn	Pn	14 48 46.9	+0.7
DENT	Denizli	4.20	41	ePN	Pn	14 48 46.6	+0.3

DENT	Denizli	4.20	41	ePn	Pn	14 48 46.6	+0.3
KORT	Korkueli	4.56	57	i P	Pn	14 48 52.2	+0.8
KORT				eS	Sn	14 49 43.7	+0.5
KORT	Korkueli	4.56	57	i P	Pn	14 48 52.2	+0.8
KORT				eS	Sn	14 49 43.7	+0.5
LAKA	Lakka	4.61	322	ePN	Pn	14 48 52.5	+0.6
LAKA	Lakka	4.61	322	ePn	Pn	14 48 52.5	+0.6
KULA	Kula-Manisa	4.62	32	ePN	Pn	14 48 52.7	+0.7
KULA	Kula-Manisa	4.62	32	ePn	Pn	14 48 52.7	+0.7
KALE	Kalithea	4.65	325	ePN	Pn	14 48 53.6	+1.2
KALE	Kalithea	4.65	325	ePn	Pn	14 48 53.6	+1.2
TRIZ	Trizonia	4.66	324	ePN	Pn	14 48 54.0	+1.5
TRIZ	Trizonia	4.66	324	ePn	Pn	14 48 54.0	+1.5
ANTB	Antalya	4.73	60	ePN	Pn	14 48 53.6	+0.1
ANTB	Antalya	4.73	60	ePn	Pn	14 48 53.6	+0.1
RLS	Riolos of Patr	4.75	317	ePN	Pn	14 48 55.7	+2.0
RLS	Riolos of Patr	4.75	317	ePn	Pn	14 48 55.7	+2.0
KHAL	Karahalli	4.90	39	i P	Pn	14 48 56.4	+0.4
KHAL				eS	Sn	14 49 49.3	-2.2
KHAL	Karahalli	4.90	39	i P	Pn	14 48 56.4	+0.4
BCK	Bucak	4.97	54	ePN	Pn	14 48 57.2	+0.4
BCK	Bucak	4.97	54	ePn	Pn	14 48 57.2	+0.4
EZN	Ezine	5.22	7	ePN	Pn	14 49 01.2	+1.0
EZN	Ezine	5.22	7	ePn	Pn	14 49 01.2	+1.0
BALB	Balikesir	5.33	20	ePN	Pn	14 49 03.0	+1.2
BALB	Balikesir	5.33	20	ePn	Pn	14 49 03.0	+1.2
SHUT	Suhut-Afyon	5.62	44	ePN	Pn	14 49 06.0	+0.2
SHUT	Suhut-Afyon	5.62	44	ePn	Pn	14 49 06.0	+0.2
GONE	Gonen-Balikesi	5.67	17	ePN	Pn	14 49 07.6	+1.2
GONE	Gonen-Balikesi	5.67	17	ePn	Pn	14 49 07.6	+1.2
ALT	Altintas	5.74	38	ePN	Pn	14 49 08.2	+0.8
ALT	Altintas	5.74	38	ePn	Pn	14 49 08.2	+0.8
TVSB	Tavsanli	5.74	32	ePN	Pn	14 49 08.5	+1.0
TVSB	Tavsanli	5.74	32	ePn	Pn	14 49 08.5	+1.0
GAZI	Gazipasa	5.75	72	i P	Pn	14 49 06.0	-1.6
GAZI				i S	Sn	14 49 59.1	-13
GAZI	Gazipasa	5.75	72	i P	Pn	14 49 06.0	-1.6
GELI	Tayfur-Gelibol	5.80	7	ePN	Pn	14 49 09.2	+1.0
GELI	Tayfur-Gelibol	5.80	7	ePn	Pn	14 49 09.3	+1.0
LJBD	Adjabya	5.83	232	i P	Pn	14 49 10.5	+1.8
	SNR=24						
KRBG	Karabiga-Canak	5.92	13	ePN	Pn	14 49 10.9	+1.1
KRBG	Karabiga-Canak	5.92	13	ePn	Pn	14 49 10.9	+1.1
LEF	Lefka	6.06	83	ePN	Pn	14 49 10.5	-1.3
LEF	Lefka	6.06	83	ePn	Pn	14 49 10.5	-1.3
MRMT	Marmara Adasi	6.18	15	ePN	Pn	14 49 14.5	+1.0
MRMT	Marmara Adasi	6.18	15	ePn	Pn	14 49 14.5	+1.0
RKY	Sarkoy-Tekirda	6.18	12	ePN	Pn	14 49 14.5	+1.0
RKY	Sarkoy-Tekirda	6.18	12	ePn	Pn	14 49 14.5	+1.0
MFT	Murefte	6.30	12	ePN	Pn	14 49 16.5	+1.4
MFT	Murefte	6.30	12	ePn	Pn	14 49 16.5	+1.4
ERMK	Ermenek	6.33	69	eP	Pn	14 49 15.9	+0.3
ERMK				eS	Sn	14 50 15.6	-11
ERMK	Ermenek	6.33	69	eP	Pn	14 49 15.9	+0.3
CSS	Prodhromos	6.41	85	ePN	Pn	14 49 16.6	-0.1
CSS	Prodhromos	6.41	85	ePn	Pn	14 49 16.6	-0.1
KONT	Konya--Tatoy	6.42	57	ePN	Pn	14 49 17.0	+0.2
KONT	Konya--Tatoy	6.42	57	ePn	Pn	14 49 17.0	+0.2
LADK	Ladik-KONYA	6.55	55	ePN	Pn	14 49 18.8	+0.2
LADK	Ladik-KONYA	6.55	55	ePn	Pn	14 49 18.8	+0.2
KDHN	Kadinhani	6.56	52	eP	Pn	14 49 18.6	-0.1
KDHN				eS	Sn	14 50 28.9	-3.4
KDHN	Kadinhani	6.56	52	eP	Pn	14 49 18.6	-0.1
LFK	Lefkose	6.59	82	ePN	Pn	14 49 18.2	-0.9
LFK	Lefkose	6.59	82	ePn	Pn	14 49 18.2	-0.9
KIZT	Kizilcal	6.62	48	ePN	Pn	14 49 20.1	+0.5
KIZT	Kizilcal	6.62	48	ePn	Pn	14 49 20.1	+0.5
KOT	Kottamia	7.09	130	P	Pn	14 49 26.2	+0.2
	baz=131						
KOT				S	Sn	14 50 41.0	-4.4
	baz=131						
KOT	Kottamia	7.09	130	P	Pn	14 49 26.2	+0.2
KOT				S	Sn	14 50 41.0	-4.4
MMB	Musomiste	7.09	349	i P	Pn	14 49 30.5	+4.5
HSAF	As Saff	7.14	133	P	Pn	14 49 27.1	+0.5
	baz=134						
HSAF	As Saff	7.14	133	P	Pn	14 49 27.1	+0.5
HHAG	Hagoal	7.25	128	P	Pn	14 49 27.9	-0.3
	baz=129						
HHAG	Hagoal	7.25	128	P	Pn	14 49 27.9	-0.3
GLL	Jalalah	7.26	132	P	Pn	14 49 28.7	+0.4
	baz=133						
GLL	Jalalah	7.26	132	P	Pn	14 49 28.7	+0.4
EDRB	Edirne	7.26	7	ePN	Pn	14 49 28.9	+0.6
EDRB	Edirne	7.26	7	ePn	Pn	14 49 28.9	+0.6
KKB	Krupnik	7.48	346	i P	Pn	14 49 36.8	+5.6
RSH		7.80	116	P	Pn	14 49 35.6	0.0
	baz=117						
RSH		7.80	116	P	Pn	14 49 35.6	0.0
SUZ		7.80	126	P	Pn	14 49 35.1	-0.6
	baz=127						
SUZ		7.80	126	P	Pn	14 49 35.1	-0.6
HFRF	Wahat Farafira	7.83	162	P	Pn	14 49 36.9	+0.8
	baz=162						
HFRF	Wahat Farafira	7.83	162	P	Pn	14 49 36.9	+0.8
ZAF		7.99	130	P	Pn	14 49 38.2	-0.1
	baz=131						
ZAF		7.99	130	P	Pn	14 49 38.2	-0.1
VTS	Vitosha	8.15	348	⇑P	Pn	14 49 47.5	+6.8
VTS	Vitosha	8.15	348	i P	Pn	14 49 46.7	+6.0
VTS	Vitosha	8.15	348	⇑iP	Pn	14 49 47.5	+6.8
BRTR	Keskin Array B	8.22	49	Pn	Pn	14 49 40.5	-1.0
	comp=N,0.3nm,0.3s,baz=222,slow=13,SNR=7.8						
BRTR	Keskin Array B	8.22	49	P	Pn	14 49 40.5	-1.0
MMAI	Mount Meron Ar	8.36	98	Pn	Pn	14 49 42.1	-1.3
	comp=N,4.1nm,0.3s,baz=281,slow=9.9,SNR=8.2						
MMAI				Sn	Sn	14 51 11.8	-4.8
	comp=N,4.4nm,0.3s,baz=277,slow=13,SNR=2.5						
HNKL	Nakhl	8.54	121	P	Pn	14 49 46.3	+0.4
	baz=122						
HNKL	Nakhl	8.54	121	P	Pn	14 49 46.3	+0.4
PRD	Provadia	8.68	9	i P	Pn	14 49 51.7	+4.1
MPEP	Malo Peshtene	8.82	351	i P	Pn	14 49 54.9	+5.2
EIL	Elat	9.38	119	Pn	Pn	14 49 56.1	-1.3
	comp=N,0.9nm,0.3s,baz=342,slow=7.0,SNR=10.0						
EIL				Sn	Sn	14 51 36.0	-5.6
	comp=N,1.9nm,0.3s,baz=46,slow=15,SNR=3.4						
HKAT	Jabal Katrina	9.43	128	P	Pn	14 49 57.6	-0.6
	baz=129						
HKAT	Jabal Katrina	9.43	128	P	Pn	14 49 57.6	-0.6
ASF	Jabal al Asfar	9.80	101	Pn	Pn	14 50 01.7	-1.5
	comp=N,0.3nm,0.3s,baz=170,slow=14,SNR=4.0						
ASF				Sn	Sn	14 51 46.4	-5.7
	comp=N,0.5nm,0.3s,baz=267,slow=23,SNR=2.3						
TIRR	Tirgusor	10.06	12	⇓P	Pn	14 50 12.5	+5.9
TIRR	Tirgusor	10.06	12	⇓iP	Pn	14 50 12.5	+5.9
ISR	Istrita	10.50	4	⇑P	Pn	14 50 18.5	+5.8
ISR	Istrita	10.50	4	⇑iP	Pn	14 50 18.5	+5.8
CFR	Carcaliu	10.72	10	⇓P	Pn	14 50 21.2	+5.6
CFR	Carcaliu	10.72	10	⇓iP	Pn	14 50 21.2	+5.6
HSFG		10.80	136	P	Pn	14 50 16.9	0.0
	baz=136						
HSFG		10.80	136	P	Pn	14 50 16.9	0.0
MLR	Muntele Rosu	10.85	1	⇓iP	Pn	14 50 22.5	+5.0
MLR	Muntele Rosu	10.85	1	Pn	Pn	14 50 22.9	+5.3
	comp=N,0.0nm,0.3s,baz=193,slow=8.0,SNR=11						
MLR				LR	LR	14 54 55.4	
	comp=N,39nm,20.8s,baz=338,slow=41						
GZR	Gura Zlata	10.96	350	⇓iP	Pn	14 50 12.3	-6.6
UZH	Uzhgorod	14.20	351	eP	Pn	14 51 03.3	+0.3
KIV	Kislovodsk	16.18	50	eP	P	14 51 31.9	-0.1
KIV				pmax	pmax		
	comp=Z,28nm,1.0s						
KIV				MLR	MLR		
	comp=Z,11nm,11.0s						
KIV	Kislovodsk	16.18	50	eP	P	14 51 31.9	-0.1
	comp=Z,11nm,11.0s						
KBZ	Khabaz	16.21	51	P	P	14 51 33.8	+1.6
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KBZ	Khabaz	16.21	51	Pn	P	14 51 33.8	+1.6
	comp=Z,1.1nm,0.3s,baz=237,slow=7.9,SNR=77						
KBZ	Khabaz	16.21	51	P	P	14 51 33.8	+1.6
	comp=Z,1.0nm,0.3s						
GNI	Garni	16.21	65	LR	LR	14 59 11.3	
	comp=Z,110nm,19.1s,baz=258,slow=43						
GNI	Garni	16.21	65	eP	P	14 51 32.5	+0.1
	comp=Z,6.0nm,0.8s						
AKASG	Malin Array Be	16.28	8	P	Pn	14 51 31.5	+1.2
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	Malin Array Be	16.28	8	Pn	Pn	14 51 31.5	+1.2
	comp=Z,2.0nm,0.3s,baz=197,slow=11,SNR=6.0						
AKASG	Malin Array Be	16.28	8	P	Pn	14 51 31.5	+1.2
	comp=Z,2.0nm,0.3s						
TBLG	Delisi	16.66	59	P	P	14 51 45.6	+8.4
TBLG	Delisi	16.66	59	eP	P	14 51 45.6	+8.4
GERES	GERESS Array B	16.70	332	Pn	P	14 51 39.7	+2.0
	comp=Z,0.1nm,0.3s,baz=129,slow=10,SNR=4.6						
GERES				LR	LR	14 58 56.7	
	comp=Z,48nm,19.3s,baz=84,slow=41						
GERES	GERESS Array B	16.70	332	P	P	14 51 39.7	+2.0
	comp=Z,48nm,19.3s						
GUDG	Gudauri	16.73	57	P	P	14 51 40.9	+2.7
DGRG	David-gareji	17.02	61	P	P	14 51 41.7	+0.4
MIB	Mutribah	19.05	99	eP	Pn	14 52 04.1	-0.5
MIB				AMb	AMB	14 52 07.3	
	comp=Z,31nm,0.7s						
MIB	Mutribah	19.05	99	eP	Pn	14 52 04.1	-0.5
	comp=Z,31nm,0.7s						
VORD	Divnogorie	19.14	27	eP	Pn	14 52 06.5	+1.0
VORD				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VORD				pmax	pmax		
	comp=N,10.0nm,0.6s						
VORD				pmax	pmax		
	comp=E,30nm,0.6s						
VORD	Divnogorie	19.14	27	eP	Pn	14 52 06.5	+1.0
	comp=E,3.0nm,0.8s						
NAY	Al-Naaiem	19.17	100	eP	P	14 52 05.2	+0.3
NAY				AMb	AMB	14 52 10.1	
	comp=Z,6.3nm,1.5s						
NAY	Al-Naaiem	19.17	100	eP	P	14 52 05.2	+0.3
	comp=Z,6.3nm,1.5s						
VSR	Storozhevoye	19.29	27	eP	P	14 52 06.7	+0.6
VSR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
VSR				pmax	pmax		
	comp=N,10.0nm,1.1s						
VSR				pmax	pmax		
	comp=E,3.0nm,0.4s						
VSR	Storozhevoye	19.29	27	eP	P	14 52 06.7	+0.6
	comp=E,10.0nm,1.1s						
RDF	Al-Radifah	19.54	101	eP	P	14 52 08.8	-0.2
RDF				AMb	AMB	14 52 13.0	
	comp=Z,13nm,0.4s						
RDF	Al-Radifah	19.54	101	eP	P	14 52 08.8	-0.2
	comp=Z,13nm,0.4s						
VRHR	Novokhopersk	20.17	30	eP	P	14 52 15.6	0.0
VRHR				pmax	pmax		
	comp=Z,20nm,0.5s						
VRHR				pmax	pmax		
	comp=N,40nm,0.7s						
VRHR				pmax	pmax		
	comp=E,10.0nm,0.4s						
VRHR	Novokhopersk	20.17	30	eP	P	14 52 15.6	0.0
	comp=E,40nm,0.7s						
OBN	Obninsk	21.87	17	i P	P	14 52 30.9	-3.0
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HFS	Hagfors	26.66	347	P	P	14 53 18.0	-1.6
	comp=Z,0.5nm,0.4s,baz=160,slow=11,SNR=7.0						
HFS				LR	LR	15 03 57.0	
	comp=Z,37nm,20.2s,baz=315,slow=37						
HFS	Hagfors	26.66	347	P	P	14 53 18.0	-1.6
	comp=Z,37nm,20.3s						
FINES	FINESS Array B	26.83	1	P	P	14 53 19.1	-2.0
	comp=Z,0.9nm,0.3s,baz=154,slow=11,SNR=6.5						
FINES				LR	LR	15 04 39.1	
	comp=Z,52nm,19.7s,baz=182,slow=38						
NOA	NORSAR Array B	27.99	345	LR	LR	15 05 33.8	
	comp=Z,16nm,21.5s,baz=190,slow=39						
AKTK	Aktyubinsk	28.38	46	P	P	14 53 34.8	-0.4
	comp=Z,1.0nm,0.4s						
AKTO	Aktyubinsk	28.38	46	P	P	14 53 34.8	-0.4
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTO				pmax	pmax		
	comp=N,1.0nm,0.4s						
AKTO	Aktyubinsk	28.38	46	P	P	14 53 34.8	-0.4
	comp=N,2.7nm,0.6s,baz=248,slow=7.7,SNR=6.9						
AKTO				ScP	ScP	15 00 28.2	+3.4
	comp=N,0.7nm,0.4s,baz=205,slow=5.2,SNR=4.7						
EKA	Eskdalemuir Ar	28.65	325	P	P	14 53 38.4	+0.9
	comp=N,0.4nm,0.3s,baz=128,slow=8.9,SNR=4.1						
EKA	Eskdalemuir Ar	28.65	325	P	P	14 53 38.4	+0.9
TORD	Torodi Ar. Bea	30.40	231	P	P	14 53 54.8	+1.4
	comp=N,0.7nm,0.4s,baz=35,slow=8.1,SNR=12						
ARCES	ARCESS Array B	34.96	360	P	P	14 54 30.5	-2.1
	comp=N,0.8nm,0.4s,baz=182,slow=8.9,SNR=14						
BRVK	Borovoye	36.43	46	⇓eP	P	14 54 45.9	+0.4
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	Borovoye	36.43	46	eP	P	14 54 45.9	+0.4
	comp=Z,4.0nm,1.0s						
BVAR	Borovoye Array	36.48	46	P	P	14 54 46.0	+0.1
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BVAR	Borovoye Array	36.48	46	P	P	14 54 46.0	+0.1
	comp=Z,1.9nm,0.8s,baz=249,slow=7.5,SNR=13						
BVAR	Borovoye Array	36.48	46	P	P	14 54 46.0	+0.1
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	41.27	50	d iP	P	14 55 26.3	+0.3
KURK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KURK	Kurchatov	41.27	50	i P	P	14 55 26.3	+0.3
	comp=Z,6.0nm,1.7s						
MKAR	Makanchi Array	43.80	56	P	P	14 55 47.1	+0.4
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MKAR	Makanchi Array	43.80	56	P	P	14 55 47.1	+0.4
	comp=Z,3.7nm,0.7s,baz=278,slow=6.5,SNR=52						
MKAR	Makanchi Array	43.80	56	P	P	14 55 47.1	+0.4
	comp=Z,4.0nm,0.7s						
SPITS	Spitsbergen Ar	43.83	357	P	P	14 55 45.9	-0.6
	comp=Z,3.1nm,1.0s,baz=209,slow=15,SNR=6.7						
SPITS	Spitsbergen Ar	43.83	357	P	P	14 55 45.9	-0.6
	comp=Z,3.0nm,1.0s						
NVS	Novosibirsk	44.24	44	eP	P	14 55 49.5	-0.5
NVS	Novosibirsk	44.24	44	eP	P	14 55 49.5	-0.5
ZALV	Zalesovo Beam	45.14	46	P	P	14 55 56.8	-0.4
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ZALV	Zalesovo Beam	45.14	46	P	P	14 55 56.8	-0.4
	comp=Z,3.0nm,0.6s,baz=263,slow=9.6,SNR=12						
ZALV	Zalesovo Beam	45.14	46	P	P	14 55 56.8	-0.4
	comp=Z,3.0nm,0.6s						
DANN	Dangsing	49.45	80	eP	P	14 56 32.7	+1.2
	comp=Z,48nm,0.8s						
KOLN	Koldanda	49.55	81	eP	P	14 56 33.1	+1.0
	comp=Z,8.7nm,0.7s						
DMN	Daman	50.84	81	eP	P	14 56 42.7	+0.7
	comp=Z,35nm,0.9s						
KKN	Kakani	50.91	80	eP	P	14 56 43.2	+0.8
	comp=Z,14nm,0.7s						
PKIN	Phulchoki	51.09	81	eP	P	14 56 44.3	+0.5
	comp=Z,18nm,0.9s						
PKI	Pulchoki	51.10	81	eP	P	14 56 44.6	+0.6
GUN	Gumba	51.35	80	eP	P	14 56 46.5	+0.6
	comp=Z,18nm,0.7s						
RAMN	Ramite	52.32	81	eP	P	14 56 52.9	-0.1
TAPN	Taplejung	53.06	80	eP	P	14 56 58.3	-0.3
ZAK	Zakamensk	56.86	48	eP	P	14 57 26.0	+0.6
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZAK	Zakamensk	56.86	48	eP	P	14 57 26.0	+0.6
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	59.58	50	P	P	14 57 45.2	+0.7
	comp=Z,1.6nm,0.7s,baz=288,slow=8.1,SNR=16						
SONM				LR	LR	15 28 28.1	
	comp=Z,24nm,19.6s,baz=73,slow=41						
SONM	Songino Array	59.58	50	P	P	14 57 45.2	+0.7
	comp=Z,24nm,19.6s						
TIXI	Tiksi	61.55	21	⇑eP	P	14 57 54.9	-2.5
TIXI				pmax	pmax		
	comp=Z,1.0nm,1.2s						
SCHQ	Schefferville	63.79	320	P	P	14 58 12.1	-0.6
	comp=Z,1.8nm,0.5s,baz=0.6,slow=2.4,SNR=8.1						
CMAR	Chiang Mai Arr	66.32	83	P	P	14 58 29.9	+0.3
	comp=Z,1.3nm,0.9s,baz=308,slow=8.0,SNR=7.0						
CMAR	Chiang Mai Arr	66.32	83	P	P	14 58 29.9	+0.3
	comp=Z,1.0nm,0.9s						
USRK	Ussuriysk Arra	77.00	45	P	P	14 59 32.7	-0.7
	comp=Z,0.6nm,0.5s,baz=5.7,slow=5.7,SNR=4.0						
YKA	Yellowknife Ar	78.05	342	P	P	14 59 38.2	-0.7
	comp=Z,0.3nm,0.4s,baz=32,slow=5.1,SNR=4.8						
YKA	Yellowknife Ar	78.05	342	P	P	14 59 38.2	-0.7
KSRS	Korea Array	78.35	53	P	P	14 59 42.0	+0.9
	comp=Z,1.2nm,0.8s,baz=304,slow=4.9,SNR=3.4						
KSRS	Korea Array	78.35	53	P	P	14 59 42.0	+0.9
	comp=Z,1.0nm,0.8s						
MJAR	Matsushiro Arr	85.44	48	P	P	15 00 18.7	+0.3
	comp=Z,1.0nm,0.9s,baz=287,slow=6.7,SNR=6.0						
MJAR	Matsushiro Arr	85.44	48	P	P	15 00 18.7	+0.3
	comp=Z,1.0nm,0.9s						

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*CSEM **09** 14:47:45.9, 42.°35N×13.°48E, h10km, After ROM*

ROM 09 14:47:45.9±0.1**, 42.°35N×13.°48E, h10**km**, Ml2.6**/23**, Error ellipse: s-maj=0.8km s-min=0.6km az=60.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.06	277	Pg	Pg	14 47 48.2	+0.2
AQU				Sg	Sg	14 47 49.4	-0.2
	16µm,0.3s						
AQU	L'Aquila	0.06	277	Pg	Pg	14 47 48.2	+0.2
AQU				Sg	Sg	14 47 49.4	-0.2
	16µm,0.3s						
FAGN	Fagnano	0.11	136	Pg	Pg	14 47 49.2	+0.5
FAGN				Sg	Sg	14 47 51.4	+0.7
	6µm,0.3s						
FAGN	Fagnano	0.11	136	Pg	Pg	14 47 49.2	+0.5
FAGN				Sg	Sg	14 47 51.4	+0.7
	6µm,0.3s						
CAMP	Campotosto	0.20	345	Pg	Pg	14 47 50.7	+0.5
CAMP				Sg	Sg	14 47 53.8	+0.6
	2µm,0.7s						
CAMP	Campotosto	0.20	345	Pg	Pg	14 47 50.7	+0.5
CAMP				Sg	Sg	14 47 53.8	+0.6
	2µm,0.7s						
VCEL	Villa Celiera	0.27	80	Pg	Pg	14 47 52.2	+0.6
VCEL				Sg	Sb	14 47 56.8	-1.1
	2µm,0.4s						
VCEL	Villa Celiera	0.27	80	Pg	Pg	14 47 52.2	+0.6
VCEL				Sg	Sb	14 47 56.8	-1.1
	2µm,0.4s						
FIAM	Fiamignano	0.28	254	Pg	Pg	14 47 52.1	+0.4
FIAM				Sg	Sb	14 47 56.9	-1.2
	467nm,0.4s						
FIAM	Fiamignano	0.28	254	Pg	Pg	14 47 52.1	+0.4
FIAM				Sg	Sb	14 47 56.9	-1.2
	467nm,0.4s						
TERO	Teramo	0.29	18	Pg	Pg	14 47 52.2	+0.3
TERO				Sg	Sg	14 47 56.7	+0.8
TERO	Teramo	0.29	18	Pg	Pg	14 47 52.2	+0.3
TERO				Sg	Sg	14 47 56.7	+0.8
PTQR	Pietraquaria	0.33	190	Pg	Pg	14 47 53.0	+0.4
PTQR				Sg	Sg	14 47 58.2	+1.1
PTQR	Pietraquaria	0.33	190	Pg	Pg	14 47 53.0	+0.4
PTQR				Sg	Sg	14 47 58.2	+1.1
LNSS	Leonessa	0.41	308	Pg	Pg	14 47 54.4	+0.2
LNSS				Sg	Sg	14 48 00.7	+0.9
	927nm,0.5s						
LNSS	Leonessa	0.41	308	Pg	Pg	14 47 54.4	+0.2
LNSS				Sg	Sg	14 48 00.7	+0.9
	927nm,0.5s						
INTR	Introdacqua	0.46	137	Pg	Pg	14 47 55.4	+0.4
INTR				Sg	Sb	14 48 03.0	-0.3
	752nm,0.7s						
INTR	Introdacqua	0.46	137	Pg	Pg	14 47 55.4	+0.4
INTR				Sg	Sb	14 48 03.0	-0.3
	752nm,0.7s						
VVLD	Villa Vallelon	0.49	167	Pg	Pg	14 47 55.6	+0.1
	273nm,0.6s						
VVLD	Villa Vallelon	0.49	167	Pg	Pg	14 47 55.6	+0.1
	273nm,0.6s						
CERT	Cerreto	0.54	223	Pg	Pg	14 47 56.5	-0.1
	821nm,0.6s						
CERT	Cerreto	0.54	223	Pg	Pg	14 47 56.5	-0.1
	821nm,0.6s						
NRCA	Norcia	0.56	331	Pg	Pg	14 47 56.8	-0.1
NRCA				Sg	Sb	14 48 05.4	-0.6
	335nm,0.3s						
NRCA	Norcia	0.56	331	Pg	Pg	14 47 56.8	-0.1
NRCA				Sg	Sb	14 48 05.4	-0.6
	335nm,0.3s						
GUAR	Guarcino	0.57	193	Pg	Pg	14 47 57.0	0.0
	326nm,0.8s						
GUAR	Guarcino	0.57	193	Pg	Pg	14 47 57.0	0.0
	326nm,0.8s						
MNS	Montasola	0.59	274	Pg	Pg	14 47 57.7	+0.2
	156nm,0.5s						
MNS	Montasola	0.59	274	Pg	Pg	14 47 57.7	+0.2
	156nm,0.5s						
OFFI	Offida	0.61	14	Pg	Pb	14 47 58.6	-0.1
	1µm,0.6s						
OFFI	Offida	0.61	14	Pg	Pb	14 47 58.6	-0.1
	1µm,0.6s						
MTCE	Montecelio	0.64	240	Pg	Pg	14 47 58.1	-0.2
	301nm,0.9s						
MTCE	Montecelio	0.64	240	Pg	Pg	14 47 58.1	-0.2
	301nm,0.9s						
SDI	San Donato	0.68	159	Pg	Pg	14 47 58.9	-0.3
	211nm,0.4s						
SDI	San Donato	0.68	159	Pg	Pg	14 47 58.9	-0.3
	211nm,0.4s						
CESX	Cesi	0.71	292	Pg	Pb	14 48 00.2	-0.3
	107nm,0.4s						
CESX	Cesi	0.71	292	Pg	Pb	14 48 00.2	-0.3
	107nm,0.4s						
FDMO	Fiordimonte	0.75	337	Pg	Pg	14 48 00.0	-0.4
FDMO				Sg	Sb	14 48 11.4	0.0
	132nm,0.6s						
FDMO	Fiordimonte	0.75	337	Pg	Pg	14 48 00.0	-0.4
FDMO				Sg	Sb	14 48 11.4	0.0
	132nm,0.6s						
CESI	CESI - Serrava	0.78	327	Pg	Pg	14 48 00.8	-0.3
	43nm,0.4s						
CESI	CESI - Serrava	0.78	327	Pg	Pg	14 48 00.8	-0.3
	43nm,0.4s						
GUMA	Gualdo di Mace	0.79	25	Pg	Pg	14 48 00.5	-0.7
	621nm,0.5s						
GUMA	Gualdo di Mace	0.79	25	Pg	Pg	14 48 00.5	-0.7
	621nm,0.5s						
GIUL	Giuliano Di Ro	0.81	192	Pg	Pb	14 48 01.9	-0.2
	113nm,0.6s						
GIUL	Giuliano Di Ro	0.81	192	Pg	Pb	14 48 01.9	-0.2
	113nm,0.6s						
CERA	Filignano	0.85	152	Pg	Pg	14 48 01.8	-0.6
	182nm,0.4s						
CERA	Filignano	0.85	152	Pg	Pg	14 48 01.8	-0.6
	182nm,0.4s						
MIDA	Miranda	0.91	140	Pg	Pg	14 48 03.0	-0.6
	141nm,0.6s						
MIDA	Miranda	0.91	140	Pg	Pg	14 48 03.0	-0.6
	141nm,0.6s						
CING	Cingoli	1.05	349	Pg	Pg	14 48 05.6	-0.6
	85nm,0.5s						
CING	Cingoli	1.05	349	Pg	Pg	14 48 05.6	-0.6
	85nm,0.5s						
ARVD	Arcevia	1.22	341	Pg	Pn	14 48 08.7	-0.4
	77nm,0.8s						
ARVD	Arcevia	1.22	341	Pg	Pn	14 48 08.7	-0.4
	77nm,0.8s						

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*DJA **09** 15:15:25.8±1.3, 56°S±12°×2°7W±2°3, h10km, M5.2/8, mB5.5/2, mb5.2/8, Mw(mB)5.0/2*

*BJI **09** 15:15:35.1, 56.°30S×26.°50W, h90km, mB5.1/9, Ms5.1/8, Ms7 4.7/9*

*IDC **09** 15:15:35.9±1.2, 56.°26S×26.°71W, h92km±9km, mb4.7/17, mb1 4.7/19, mb1mx4.6/24, mbtmp4.7/19, MS3.8/12, Ms1 3.8/12, ms1mx3.7/22, Error ellipse: s-maj=12.3km s-min=11.6km az=73.0*

*ISCJB **09** 15:15:35.1±0.3, 56.°27S±0.°06×26.°7W±0.°1, h101km, mb4.9/25, Error ellipse: s-maj=10.2km s-min=8.2km az=137.6*

*NEIC **09** 15:15:36.8±1.1, 56.°27S×26.°72W, h102km±9km, mb5.2/11, Error ellipse: s-maj=8.4km s-min=7.2km az=219.0*

*GCMT **09** 15:15:36.5±0.3, 56.°41S×26.°34W, h61km±3km, MW5.0, Moment Tensor Solution. s24,c26; s61,c79; Moment tensor: Scale 10^{16}Nm; M_{rr}0.08±.22; $M_{\theta\theta}$3.00±.17; $M_{\phi\phi}$-3.08±.18; $M_{r\theta}$-1.55±.11; $M_{\theta\phi}$-1.09±.16; $M_{\phi r}$1.60±.11; Best double couple: $M_0$3.90000×10^{16} NP1:ϕ_s233.00000°, δ56.00000°, λ176.00000°. NP2:ϕ_s325.00000°, δ87.00000°, λ34.00000°. Principal axes: T 4.0600, Plg26.0000°, Azm195.0000°; N -0.2800, Plg56.0000°, Azm330.0000°; P -3.7800, Plg21.0000°, Azm94.0000°; Data Used: II IU G IC.*

ISC 09 15:15:36.6±0.3**, 56.°29S**±0.°07×**26.°79W**±0.°07**, h101**km**,**

n132,σ1^{s}20/154,mb4.9/24,1C,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	16.49	158	eP	P	15 19 22.3	0.0
VNA1	Neumayer--Stat	16.49	158	eScP	ScP	15 27 33.6	+2.3
SNAA	Sanae	18.43	156	eP	P	15 19 42.0	-1.8
SNAA	Sanae	18.43	156	eSn	S	15 22 58.5	-10
SNAA	Sanae	18.43	156	eScP	ScP	15 27 36.8	+1.3
SNAA	Sanae	18.43	156	eScS	ScS	15 31 18.4	+2.3
SNAA	Sanae	18.43	156	eP	P	15 19 41.8	-2.0
	57nm,0.6s						
SNAA				S	S	15 22 55.1	-14
SNAA				ScP	ScP	15 27 37.0	+1.5
SNAA	Sanae	18.43	156	P	P	15 19 42.0	-1.8
	1.1nm,0.3s,baz=312,slow=9.4,SNR=130						
SNAA				S	S	15 22 55.1	-14
	0.1nm,0.3s,baz=352,slow=7.1,SNR=2.6						
SNAA				ScP	ScP	15 27 37.0	+1.5
	0.2nm,0.3s,baz=253,slow=1.5,SNR=13						
EFI	East Falkland	18.86	271	eP	P	15 19 49.3	+0.8
PMSA	Palmer Station	19.91	230	eP	Pn	15 20 01.1	-1.3
	198nm,1.1s						
PMSA				ScP	ScP	15 27 39.8	+1.0
PMSA	Palmer Station	19.91	230	P	Pn	15 20 01.1	-1.3
	4.2nm,0.3s,baz=58,slow=6.7,SNR=9.7						
PMSA				ScP	ScP	15 27 39.8	+1.0
	1.5nm,0.3s,baz=21,slow=3.1,SNR=3.5						
MAIT	Maitri	21.91	146	eP	P	15 20 09.4	-12
USHA	Ushuaia	23.34	256	P	P	15 20 40.6	+5.0
USHA				ScP	ScP	15 27 48.9	+1.3
USHA	Ushuaia	23.34	256	P	P	15 20 40.6	+5.0
	20nm,0.9s,baz=75,slow=11,SNR=3.7						
USHA				ScP	ScP	15 27 48.9	+1.3
	12nm,0.8s,baz=117,slow=6.8,SNR=2.6						
SYO	Syowa Base	31.26	140	⇑eP	P	15 21 43.6	-2.6
PLCA	Paso Flores	32.26	280	ScP	ScP	15 28 14.3	-1.0
PLCA	Paso Flores	32.26	280	ScP	ScP	15 28 14.3	-1.0
	2.1nm,0.7s,baz=84,slow=4.3,SNR=5.3						
QSPA	South Pole Qui	33.96	180	P	P	15 22 09.7	-0.4
QSPA				PcP	PcP	15 24 45.4	-0.3
QSPA				ScP	ScP	15 28 20.9	0.0
QSPA	South Pole Qui	33.96	180	P	P	15 22 09.7	-0.4
	39nm,0.5s,baz=203,slow=4.1,SNR=159						
QSPA				PcP	PcP	15 24 45.3	-0.3
	6.1nm,0.8s,baz=243,slow=2.3,SNR=4.0						
QSPA				ScP	ScP	15 28 20.9	0.0
	23nm,1.0s,baz=222,slow=2.7,SNR=14						
CPUP	Villa Florida	37.14	311	ScP	ScP	15 28 32.9	0.0
CPUP	Villa Florida	37.14	311	ScP	ScP	15 28 32.9	0.0
	1.4nm,0.5s,baz=184,slow=3.6,SNR=4.0						
CPUP				LR	LR	15 36 06.8	
	comp=Z,112nm,18.6s,baz=326,slow=33						
CFAA	Coronel Fontan	37.86	293	P	P	15 22 42.3	-1.2
CFAA	Coronel Fontan	37.86	293	P	P	15 22 42.3	-1.2
	1.0nm,0.6s,baz=153,slow=10.0,SNR=5.2						
CFAA				LR	LR	15 36 13.8	
	comp=Z,14nm,18.9s,baz=147,slow=33						
MAW	Mawson	39.82	143	P	P	15 22 59.0	-0.4
MAW				PcP	PcP	15 25 06.3	+3.1
MAW				ScP	ScP	15 28 44.7	+2.2
MAW	Mawson	39.82	143	P	P	15 22 59.0	-0.4
	7.8nm,0.6s,baz=224,slow=9.6,SNR=23						
MAW				PcP	PcP	15 25 06.3	+3.1
	3.7nm,0.6s,baz=234,slow=8.5,SNR=3.7						
MAW				ScP	ScP	15 28 44.7	+2.2
	2.2nm,0.7s,baz=237,slow=7.5,SNR=4.5						
SUR	Sutherland	40.49	74	eP	P	15 23 05.4	-0.1
	19nm,0.7s						
SUR	Sutherland	40.49	74	P	P	15 23 05.5	-0.1
	218nm,0.7s,SNR=9.8						
SUR	Sutherland	40.49	74	P	P	15 23 05.7	+0.1
	23nm,0.7s,baz=220,slow=7.3,SNR=27						
SUR				LR	LR	15 36 37.1	
	comp=Z,176nm,21.2s,baz=236,slow=31						
LVC	Limon Verde	45.61	300	eP	P	15 23 47.8	+0.8
BOSA	Boshof	45.81	75	P	P	15 23 47.0	-1.3
BOSA	Boshof	45.81	75	P	P	15 23 47.0	-1.3
	16nm,0.8s,baz=216,slow=11,SNR=13						
BOSA				LR	LR	15 40 07.6	
	comp=Z,197nm,19.3s,baz=217,slow=32						
SBA	Scott Base	45.86	184	eP	P	15 23 47.5	-0.4
	20nm,0.8s						
VNDA	Vanda	46.34	183	eP	P	15 23 51.7	0.0
	44nm,0.7s						
VNDA	Vanda	46.34	183	P	P	15 23 51.8	0.0
	45nm,0.7s,baz=189,slow=6.0,SNR=79						
VNDA				LR	LR	15 42 10.2	
	comp=Z,98nm,20.3s,baz=166,slow=34						
SIV	San Ignacio	47.90	313	P	P	15 24 04.1	-0.5
SIV	San Ignacio	47.90	313	P	P	15 24 04.1	-0.5
	3.2nm,0.7s,baz=184,slow=7.2,SNR=10						
LBTB	Lobatse	48.87	73	eP	P	15 24 08.1	-3.9
	43nm,0.7s						
LBTB	Lobatse	48.87	73	LR	LR	15 41 37.3	
	comp=Z,85nm,18.6s,baz=214,slow=32						
TSUM	Tsumeb	49.61	60	eP	P	15 24 17.3	-0.4
	39nm,0.9s						
LPAZ	La Paz	50.70	305	eP	P	15 24 27.0	+0.5
LPAZ				ScP	ScP	15 29 28.3	-0.6
LPAZ	La Paz	50.70	305	P	P	15 24 27.1	+0.6
	13nm,0.5s,baz=140,slow=5.6,SNR=54						
LPAZ				ScP	ScP	15 29 28.3	-0.6
	2.4nm,0.8s,baz=113,slow=5.0,SNR=5.3						
ARE	Arequipa	52.11	301	eP	P	15 24 37.0	+0.3
CASY	Casey	53.61	160	eP	P	15 24 46.4	-0.3
	16nm,1.0s						
SAML	Samuel	55.13	314	eP	P	15 24 57.8	-0.6
	7.9nm,0.9s						
DRV	Dumont d'Urvil	56.96	174	S	S	15 32 38.0	-19
LSZ	Lusaka	58.25	68	eP	P	15 25 19.4	-1.2
	53nm,1.1s						
LSZ	Lusaka	58.25	68	P	P	15 25 20.0	-0.6
	23nm,0.8s,baz=211,slow=5.8,SNR=37						
ATAH	Atahualpa	63.51	300	P	P	15 25 58.5	+2.0
ATAH	Atahualpa	63.51	300	P	P	15 25 58.5	+2.0
	9.9nm,0.9s,baz=156,slow=8.7,SNR=6.0						
DBIC	Dimbokro	65.29	24	P	P	15 26 07.6	0.0
DBIC	Dimbokro	65.29	24	P	P	15 26 07.6	0.0
	13nm,0.6s,baz=175,slow=6.8,SNR=17						
DBIC				LR	LR	15 47 25.4	
	comp=Z,134nm,20.4s,baz=157,slow=29						
OTAV	Otavalo	69.97	303	eP	P	15 26 38.5	+0.8
	14nm,0.9s						
TORD	Torodi Ar. Bea	73.16	29	P	P	15 26 56.2	+0.2
TORD	Torodi Ar. Bea	73.16	29	P	P	15 26 56.2	+0.2
	12nm,0.5s,baz=201,slow=6.2,SNR=176						
TORD				LR	LR	15 53 39.1	
	comp=Z,35nm,18.8s,baz=310,slow=31						
KMBO	Kilima Mbogo	74.92	69	P	P	15 27 07.9	+1.1
KMBO	Kilima Mbogo	74.92	69	P	P	15 27 07.9	+1.1
	2.1nm,0.7s,baz=217,slow=5.1,SNR=4.0						
KMBO				LR	LR	15 58 49.5	
	comp=Z,67nm,20.9s,baz=97,slow=35						
RPZ	Rata Peaks	79.23	193	P	P	15 27 30.5	+0.2
RPZ	Rata Peaks	79.23	193	P	P	15 27 30.5	+0.2
	13nm,0.7s,baz=251,slow=1.4,SNR=5.2						
URZ	Urewera	83.65	199	P	P	15 27 53.8	+0.2
URZ	Urewera	83.65	199	P	P	15 27 53.8	+0.2
	9.6nm,0.7s,baz=236,slow=8.0,SNR=4.7						
NWAO	Narrogin (SRO)	86.01	150	P	P	15 28 07.6	+2.0
NWAO	Narrogin (SRO)	86.01	150	P	P	15 28 07.6	+2.0
	6.7nm,0.6s,baz=194,slow=4.2,SNR=6.1						
TBI	Tubuai	87.10	231	eLR	LR	15 56 17.8	
	178nm,30.2s						
ATD	Arta Tunnel	88.55	67	LR	LR	16 06 41.2	
	comp=Z,67nm,18.2s,baz=171,slow=35						
MDT	Midelt	90.74	19	LR	LR	16 03 19.6	
	comp=Z,66nm,19.0s,baz=302,slow=32						
STKA	Stephens Creek	91.63	170	P	P	15 28 33.6	+1.4
STKA				PP	PP	15 32 09.7	-1.0
STKA	Stephens Creek	91.63	170	P	P	15 28 33.6	+1.4
	2.7nm,0.5s,baz=152,slow=2.5,SNR=6.6						
STKA				PP	PP	15 32 09.7	-1.0
	2.0nm,0.7s,baz=162,slow=9.3,SNR=3.2						
PPT2	Papeete2	92.21	233	eLR	LR	15 58 39.0	
	291nm,30.5s						
PPT	Papeete	92.23	233	LR	LR	16 00 42.6	
	comp=Z,71nm,21.3s,baz=196,slow=29						
ASAR	Alice Springs	98.69	162	P	Pdif	15 29 06.7	+2.1
ASAR				PP	PP	15 32 59.5	-6.1
ASAR	Alice Springs	98.69	162	P	Pdif	15 29 06.7	+2.1
	3.3nm,0.6s,baz=186,slow=4.3,SNR=54						
ASAR				PP	PP	15 32 59.5	-6.1
	1.2nm,0.8s,baz=197,slow=5.7,SNR=4.3						
AS31	Alice Springs	98.69	162	eP	Pdif	15 29 05.4	+0.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	101.15	193	eLR	LR	16 03 06.6	
	58nm,23.9s						
WRA	Warramunga Arr	102.41	162	P	Pdif	15 29 22.7	+1.6
WRA	Warramunga Arr	102.41	162	P	Pdif	15 29 22.7	+1.6
	0.7nm,0.5s,baz=194,slow=4.2,SNR=6.8						
BRTR	Keskin Array B	108.44	45	PP	PP	15 34 14.7	-4.9
BRTR	Keskin Array B	108.44	45	PP	PP	15 34 14.7	-4.9
	0.7nm,0.8s,baz=180,slow=2.9,SNR=3.6						
GERES	GERESS Array B	110.07	27	PP	PP	15 34 25.8	-5.3
GERES	GERESS Array B	110.07	27	PP	PP	15 34 25.8	-5.3
	0.4nm,0.6s,baz=229,slow=10,SNR=2.9						
HFS	Hagfors	120.43	22	PKKPbc	PKKPbc	15 44 20.9	-0.1
HFS	Hagfors	120.43	22	PKKPbc	PKKPbc	15 44 20.9	-0.1
	0.9nm,0.5s,baz=354,slow=2.9,SNR=6.3						
PDAR	Pinedale Array	120.66	302	PKP	PKPdf	15 34 14.7	-1.3
PDAR	Pinedale Array	120.66	302	PKP	PKPdf	15 34 14.7	-1.3
	0.3nm,0.4s,baz=129,slow=5.5,SNR=4.0						
NVAR	Mina Array Bea	121.69	293	PKP	PKPdf	15 34 18.4	+0.3
NVAR	Mina Array Bea	121.69	293	PKP	PKPdf	15 34 18.4	+0.3
	0.1nm,0.3s,baz=155,slow=3.0,SNR=3.3						
FINES	FINESS Array B	124.49	28	PKP	PKPdf	15 34 21.9	-0.5
FINES	FINESS Array B	124.49	28	PKP	PKPdf	15 34 21.9	-0.5
	1.1nm,0.6s,baz=98,slow=2.8,SNR=3.5						
CMAR	Chiang Mai Arr	124.77	110	PKP	PKPdf	15 34 24.6	+0.3
CMAR	Chiang Mai Arr	124.77	110	PKP	PKPdf	15 34 24.6	+0.3
	0.9nm,0.8s,baz=230,slow=2.8,SNR=5.7						
AKTO	Aktyubinsk	127.30	53	PKP	PKPdf	15 34 29.2	+1.1
AKTO	Aktyubinsk	127.30	53	PKP	PKPdf	15 34 29.2	+1.1
	0.6nm,0.5s,baz=288,slow=3.2,SNR=2.0						
ABKAR	Akbulak array	127.32	55	ePKPdf	PKPdf	15 34 27.9	-0.3
ARCES	ARCESS Array B	131.08	22	PKP	PKPdf	15 34 34.0	-0.8
ARCES	ARCESS Array B	131.08	22	PKP	PKPdf	15 34 34.0	-0.8
	0.7nm,0.5s,baz=174,slow=2.4,SNR=9.8						
KMI	Kunming	132.24	109	PKP	PKPdf	15 34 37.8	-0.8
BVAR	Borovoye Array	134.72	58	PKP	PKPdf	15 34 42.0	-0.1
BVAR	Borovoye Array	134.72	58	PKP	PKPdf	15 34 42.0	-0.1
	0.5nm,0.4s,baz=224,slow=4.1,SNR=4.3						
GYA	Guiyang	135.37	112	Pdif	Pdif	15 31 45.4	-2.1
GYA				sPKP		15 35 17.6	
GYA				PP	PP	15 37 25.0	+3.0
GYA				PKS	PKSdf	15 38 18.9	-1.9
GYA				SKKS		15 44 05.6	
GYA				SS	SS	15 55 10.3	+0.4
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
GYA				LR	LR		
	comp=N,180nm,20.5s						
GYA				LR	LR		
	comp=E,150nm,21.3s						
GYA				LR	LR		
	comp=Z,170nm,20.8s						
YKA	Yellowknife Ar	136.50	318	PKP	PKPdf	15 34 44.9	-0.2
YKA				SKPbc	SKPbc	15 38 08.2	+0.2
YKA	Yellowknife Ar	136.50	318	PKP	PKPdf	15 34 44.8	-0.2
	comp=Z,1.9nm,0.6s,baz=125,slow=2.4,SNR=23						
YKA				SKPbc	SKPbc	15 38 08.1	+0.2
	comp=Z,4.6nm,0.9s,baz=127,slow=2.6,SNR=24						
YKW3	Yellowknife Ar	136.54	318	ePKPdf	PKPdf	15 34 44.8	-0.4
MKAR	Makanchi Array	136.75	71	PKP	PKPdf	15 34 45.3	-0.8
MKAR				SKPbc	SKPbc	15 38 08.6	-0.8
MKAR	Makanchi Array	136.75	71	PKP	PKPdf	15 34 45.3	-0.8
	comp=Z,0.3nm,0.7s,baz=197,slow=1.6,SNR=5.0						
MKAR				SKPbc	SKPbc	15 38 08.6	-0.8
	comp=Z,0.8nm,0.9s,baz=266,slow=3.6,SNR=4.3						
KURBB	Kurchatov Arra	137.21	65	PKP	PKPdf	15 34 48.9	+2.1
	comp=Z,0.7nm,0.8s,baz=246,slow=2.8,SNR=3.1						
KURBB				PP	PP	15 37 33.6	+0.2
	comp=Z,0.7nm,0.5s,baz=244,slow=5.9,SNR=6.9						
KURBB				SKPbc	SKPbc	15 38 10.5	0.0
	comp=Z,0.9nm,0.5s,baz=228,slow=3.5,SNR=9.4						
KURK	Kurchatov	137.31	65	PKP	PKPdf	15 34 48.9	+1.9
KURK				PP	PP	15 37 33.6	-0.5
KURK				SKPbc	SKPbc	15 38 10.5	-0.3
CD2	Chengdu	137.38	105	ePKP	PKPdf	15 34 47.2	-0.7
CD2				sPKP		15 35 23.0	
CD2				PP	PP	15 37 37.8	+3.2
CD2				SKS	SKSdf	15 41 46.9	-2.3
CD2				SKKS	SKKSac	15 44 17.8	-1.2
CD2				SS	SS	15 55 34.8	+1.0
CD2				AMB	AMB		
	comp=Z,100nm,6.2s						
CD2				LR	LR		
	comp=N,150nm,21.8s						
CD2				LR	LR		
	comp=Z,120nm,22.4s						
WMQ	Urumqi	137.74	78	ePKP	PKPdf	15 34 48.0	-0.1
WMQ				LR	LR		
	comp=N,130nm,23.4s						
WMQ				LR	LR		
	comp=E,200nm,28.8s						
WMQ				LR	LR		
	comp=Z,110nm,26.5s						
LZH	Lanzhou	141.35	100	ePKP	PKPdf	15 34 54.4	-0.7
LZH				sPKP		15 35 29.4	
LZH				SKKS		15 44 45.5	
LZH				SS	SS	15 56 19.2	-1.5
LZH				AMB	AMB		
	comp=Z,110nm,7.9s						
LZH				LR	LR		
	comp=N,350nm,18.1s						
LZH				LR	LR		
	comp=E,250nm,15.9s						
LZH				LR	LR		
	comp=Z,460nm,20.1s						
ZALV	Zalesovo Beam	142.28	64	PKP	PKPdf	15 34 58.0	+2.2
ZALV	Zalesovo Beam	142.28	64	PKP	PKPdf	15 34 58.0	+2.2
	comp=Z,2.8nm,0.5s,baz=240,slow=3.5,SNR=16						
INK	Inuvik	146.13	320	PKPbc	PKPbc	15 35 03.2	-0.2
INK				SKPbc	SKiKP	15 38 33.0	+0.1
INK	Inuvik	146.13	320	PKPbc	PKPbc	15 35 03.2	-0.2
	comp=Z,7.4nm,0.6s,baz=94,slow=3.0,SNR=18						
INK				SKPbc	SKiKP	15 38 33.0	+0.1
	comp=Z,5.5nm,0.8s,baz=123,slow=1.8,SNR=5.6						
MENT	Mentasta	148.62	308	ePKPbc	PKPbc	15 35 10.2	-0.2
DIV	Divide	148.97	305	ePKPbc	PKPbc	15 35 11.4	0.0
HHC	Hu-ho-hao-te	148.98	102	ePKPbc	PKPdf	15 35 07.8	-0.1
HHC				pPKP	pPKPdf	15 35 33.6	-2.0
HHC				sPKP		15 35 44.6	
HHC				PKS	PKSdf	15 38 40.7	-2.2
HHC				PP	PP	15 38 46.6	+2.2
HHC				SKS	SKSdf	15 42 05.2	-1.4
HHC				SKKS	SKKSac	15 45 23.8	-1.6
HHC				SS	SS	15 57 48.2	+0.7
HHC				AMB	AMB		
	comp=Z,120nm,9.5s						
HHC				LR	LR		
	comp=N,130nm,19.0s						
HHC				LR	LR		
	comp=E,160nm,20.2s						
HHC				LR	LR		
	comp=Z,110nm,19.0s						
PAX	Paxson	149.39	308	ePKPbc	PKPbc	15 35 12.3	-0.1
SML	Sawmill	150.35	305	ePKPbc	PKPbc	15 35 14.4	-0.3
ILAR	Eielson Array	150.44	311	PKP	PKPdf	15 35 08.7	-0.7
ILAR				PKPbc	PKPbc	15 35 14.2	-0.5
ILAR	Eielson Array	150.44	311	PKP	PKPdf	15 35 08.7	-0.7
	comp=Z,2.7nm,0.7s,baz=215,slow=0.9,SNR=5.4						
ILAR				PKPbc	PKPbc	15 35 14.2	-0.5
	comp=Z,5.9nm,0.7s,baz=144,slow=3.7,SNR=32						
SONM	Songino Array	150.52	87	PKPbc	PKPbc	15 35 15.2	-0.4
SONM	Songino Array	150.52	87	PKPbc	PKPbc	15 35 15.2	-0.4
	comp=Z,2.9nm,0.6s,baz=217,slow=3.6,SNR=24						
ULN	Ulaanbaatar	150.90	87	ePKPbc	PKPbc	15 35 15.8	-0.8
MCK	McKinley	151.09	309	ePKPbc	PKPbc	15 35 16.6	+0.2
KDAK	Kodiak Island	151.12	296	ePKPbc	PKPbc	15 35 16.6	+0.1
TRF	Thorofare Moun	151.62	308	ePKPbc	PKPbc	15 35 16.9	-0.9
COLD	Coldfoot	152.15	316	ePKPbc	PKPbc	15 35 18.8	+0.2
MJAR	Matsushiro Arr	157.80	147	PKPab	PKPab	15 35 53.2	-0.5
MJAR	Matsushiro Arr	157.80	147	PKPab	PKPab	15 35 53.2	-0.5
	comp=Z,0.9nm,0.7s,baz=200,slow=5.2,SNR=4.6						
CN2	Changchun	158.41	114	ePKP	PKPdf	15 35 19.0	-2.0
CN2				PP	PP	15 39 37.0	-0.2
MDJ	Mudanjiang	161.07	118	PKP	PKPdf	15 35 26.4	+2.4
PETK	Petropavlovsk-	175.88	221	PKPab	PKPab	15 37 14.7	+1.6
PETK	Petropavlovsk-	175.88	221	PKPab	PKPab	15 37 14.7	+1.6
	comp=Z,2.4nm,1.0s,baz=153,slow=4.8,SNR=3.1						

*ISCJB **09** 15:15:50.6±0.4, 31°52S±0°04×69°24W±0°05, h116km±4km, mb4.1/7, Error ellipse: s-maj=7.5km s-min=5.6km az=30.8*
*IDC **09** 15:15:50.5±3.0, 31°58S×69°16W, h102km±26km, mb3.8/5, mb1 3.9/9, mb1mx3.8/21, mbtmp3.7/9, MS3.8/3, Ms1 3.8/3, ms1mx3.1/33, Error ellipse: s-maj=31.7km s-min=16.8km az=85.0*
*GUC **09** 15:15:50.6±0.8, 31°52S×69°55W, h152km±18km, MD4.0, ML4.4*
*NEIC **09** 15:15:51.0±0.4, 31°51S×69°20W, h106km±4km, mb4.2/4, MD4.5(SJA), Error ellipse: s-maj=8.2km s-min=5.6km az=102.0*
NEIC Felt [IV] at San Juan.

ISC 09 15:15:51.0±0.7, 31°46S±0°04×69°27W±0°04, h108km±6km, n230, σ1^{s}17/245, mb3.9/7, 89C-91D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	Coronel Fontan	0.90	99	P	Pn	15 16 12.0	+1.0
CFAA				S	Sn	15 16 27.2	+1.1
CFAA	Coronel Fontan	0.90	99	P	Pn	15 16 12.0	+1.0
	34nm,0.3s,baz=281,slow=9.2,SNR=1392						
CFAA				S	Sn	15 16 27.2	+1.1
	99nm,0.3s,baz=290,slow=12,SNR=32						
CMCH	Combarbala	1.51	281	⇓iP	Pn	15 16 18.6	+0.7
CMCH				iS	Sn	15 16 39.9	+1.6
CMCH	Combarbala	1.51	281	⇓iP	Pn	15 16 18.6	+0.7
CMCH				iS	Sn	15 16 39.9	+1.6
CMCH				AML	AML	15 16 42.6	
	comp=N,23μm,0.4s						
CHNG	Los Chungos	1.94	257	⇓iP	Pn	15 16 23.0	-0.2
CHNG				iS	Sn	15 16 46.9	-0.9
CHNG	Los Chungos	1.94	257	⇓iP	Pn	15 16 23.0	-0.2
CHNG				iS	Sn	15 16 46.9	-0.9
CHNG				AML	AML	15 16 55.0	
	comp=E,2μm,0.6s						
PEL	Peldehue	2.06	215	⇓iP	Pn	15 16 24.8	0.0
PEL				iS	Sn	15 16 50.8	+0.3
PEL				AML	AML	15 16 52.3	
	comp=N,4μm,0.3s						
ROCH	El Roble	2.11	224	⇑iP	Pn	15 16 25.3	-0.2
ROCH				iS	Sn	15 16 51.7	-0.1
ROCH				AML	AML	15 16 54.4	
	comp=E,2μm,0.3s						
CLCH	Cerro Calan	2.21	209	⇑iP	Pn	15 16 27.1	+0.5
CLCH				iS	Sn	15 16 54.4	+0.5
CLCH				AML	AML	15 16 56.5	
	comp=E,3μm,0.5s						
CLCH				AML	AML	15 16 57.1	
	comp=E,3μm,0.5s						
FSR	Penalolen	2.27	207	iS	Sn	15 16 56.3	+0.8
FSR				AML	AML	15 16 58.0	
	comp=E,353nm,0.5s						
SAN	Santiago	2.31	210	iS	Sn	15 16 56.2	+0.1
ANTU	Antumapu	2.40	208	⇓iP	Pn	15 16 29.3	+0.2
ANTU				iS	Sn	15 16 59.3	+1.1
ANTU	Antumapu	2.40	208	⇓iP	Pn	15 16 29.3	+0.2
ANTU				iS	Sn	15 16 59.3	+1.1
ANTU				AML	AML	15 17 03.7	
	comp=N,2μm,0.3s						
PCH	Pirque	2.40	206	eP	Pn	15 16 29.5	+0.4
PCH	Pirque	2.40	206	eP	Pn	15 16 29.5	+0.4
RCDM	Rinconada Maip	2.40	212	eP	Pn	15 16 29.6	+0.4
RCDM				iS	Sn	15 16 59.0	+0.6
RCDM	Rinconada Maip	2.40	212	eP	Pn	15 16 29.6	+0.4
RCDM				iS	Sn	15 16 59.0	+0.6
RCDM				AML	AML	15 17 01.9	
	comp=E,2μm,0.2s						
LMEL	Las Melosas	2.50	198	iP	Pn	15 16 30.9	+0.3
LMEL	Las Melosas	2.50	198	iP	Pn	15 16 30.9	+0.3
TACH	Talagante	2.60	212	⇑iP	Pn	15 16 31.2	-0.5
TACH				iS	Sn	15 17 02.0	-1.0
TACH	Talagante	2.60	212	⇑iP	Pn	15 16 31.2	-0.5
TACH				iS	Sn	15 17 02.0	-1.0
CHCH	Chadas Angostu	2.73	205	⇑iP	Pn	15 16 33.5	+0.1
CHCH	Chadas Angostu	2.73	205	⇑iP	Pn	15 16 33.5	+0.1
LCO	Las Campanas	2.74	333	ePn	Pn	15 16 34.5	+0.7
LCO				eSn	Sn	15 17 03.4	-3.2
CACH	El Canelo	2.87	203	⇓iP	Pn	15 16 35.8	+0.4
CACH	El Canelo	2.87	203	⇓iP	Pn	15 16 35.8	+0.4
LNV	Longovilo	3.07	215	P	Pn	15 16 36.1	-1.7
LNV	Longovilo	3.07	215	⇑iP	Pn	15 16 36.1	-1.7
LVC	Limon Verde	8.82	2	eP	Pn	15 17 53.8	-2.1
	comp=E,8.8nm,0.6s						
TRQA	Tornquist	8.90	140	eP	Pn	15 17 55.0	-1.7
	comp=E,94nm,0.8s						
PLCA	Paso Flores	9.31	186	eP	Pn	15 18 01.0	-1.2
PLCA	Paso Flores	9.31	186	P	Pn	15 18 01.1	-1.2
	comp=E,0.2nm,0.3s,baz=27,slow=16,SNR=4.0						
CPUP	Villa Florida	11.64	67	P	Pn	15 18 31.9	-1.8
CPUP	Villa Florida	11.64	67	P	Pn	15 18 31.9	-1.8
	comp=E,0.6nm,0.3s,baz=216,slow=10,SNR=6.1						
LPAZ	La Paz	15.14	4	eP	P	15 19 21.9	-0.5
	comp=E,8.4nm,0.8s						
LPAZ	La Paz	15.14	4	P	Pn	15 19 21.3	+1.5
	comp=E,0.5nm,0.3s,baz=178,slow=6.8,SNR=29						
LPAZ				LR	LR	15 25 15.2	
	comp=E,87nm,18.5s,baz=18,slow=37						
SIV	San Ignacio	17.12	28	P	Pn	15 19 44.3	+0.6
SIV	San Ignacio	17.12	28	P	Pn	15 19 44.3	+0.6
	comp=E,0.5nm,0.3s,baz=219,slow=10,SNR=7.1						
SAML	Samuel	23.11	15	eP	P	15 20 48.2	+0.6
SNAA	Sanae	53.07	159	P	P	15 24 55.5	-1.3
SNAA	Sanae	53.07	159	P	P	15 24 55.5	-1.3
	comp=E,1.6nm,0.7s,baz=300,slow=9.8,SNR=5.2						
QSPA	South Pole Qui	58.77	180	P	P	15 25 37.3	-0.2
QSPA	South Pole Qui	58.77	180	P	P	15 25 37.3	-0.2
	comp=E,4.0nm,0.7s,baz=170,slow=3.3,SNR=2.4						
631A	Perdido Creek	67.46	331	⇓P	P	15 26 36.5	+1.4
	baz=68						
532A	Rocksprings	67.81	332	⇑P	P	15 26 38.7	+1.3
	baz=68						
JCT	Junction City	68.08	332	⇑P	P	15 26 40.2	+1.1
	baz=68						
531A	Rocksprings	68.11	331	⇑P	P	15 26 40.5	+1.2
	baz=68						
432A	Menard	68.42	332	⇑P	P	15 26 42.3	+1.1
	baz=69						
530A	J-C Ranch, Com	68.42	330	⇓P	P	15 26 42.4	+1.2
	baz=69						
628A	Black Gap, Mar	68.52	329	⇓P	P	15 26 43.6	+1.7
	baz=69,SNR=5.4						
627A	Terlingua Ranc	68.72	328	⇑P	P	15 26 44.6	+1.5
	baz=69						
TXAR	Lajitas Array	68.74	328	P	P	15 26 44.8	+1.5
TXAR	Lajitas Array	68.74	328	P	P	15 26 44.8	+1.5
	comp=E,1.0nm,0.7s,baz=151,slow=8.5,SNR=9.3						
529A	Stev Forest Ra	68.78	330	⇓P	P	15 26 44.8	+1.3
	baz=69,SNR=10						
332A	Millersview	68.85	332	⇓P	P	15 26 44.8	+0.9
	baz=69						
430A	Baggett Ranch,	68.94	331	⇑P	P	15 26 45.6	+1.2
	baz=69						
528A	Cox Ranch, San	69.06	329	⇓P	P	15 26 46.1	+0.9
	baz=69,SNR=5.4						
331A	San Angelo	69.06	332	⇓P	P	15 26 46.2	+1.0
	baz=69						
429A	Davenport Ranc	69.07	330	⇓P	P	15 26 46.2	+1.0
	baz=69						
626A	Big Bend Ranch	69.14	328	⇓P	P	15 26 47.5	+1.8
	baz=70,SNR=5.6						
232A	Coleman	69.26	333	⇓P	P	15 26 47.5	+1.1
	baz=70						
527A	Woodward Ranch	69.41	329	⇑P	P	15 26 48.6	+1.2
	baz=70,SNR=5.0						
330A	Mertzon	69.45	331	⇓P	P	15 26 48.7	+1.1
	baz=70						
428A	Kincaid Ranch,	69.50	330	⇓P	P	15 26 49.3	+1.4
	baz=70						
526A	Mary Lane Ranc	69.55	328	⇑P	P	15 26 50.0	+1.7
	baz=70						
231A	Bronte	69.57	332	⇑P	P	15 26 49.2	+1.0
	baz=70						
329A	Wagon Wheel Ra	69.86	331	⇓P	P	15 26 51.2	+1.2
	baz=70						
ABTX	Abilene, Hawle	69.91	333	⇓P	P	15 26 51.4	+1.1
	baz=70						
427A	Hayter Ranch,	69.92	329	⇑P	P	15 26 51.8	+1.4
	baz=70						
426A	McDonald Obser	70.04	328	⇑P	P	15 26 52.6	+1.2
	baz=70,SNR=5.3						
328A	Wristen Ranch,	70.12	330	⇑P	P	15 26 52.8	+1.2
	baz=70						
131A	Roby	70.25	332	⇑P	P	15 26 53.4	+1.0
	baz=71						
Z32A	Haskell	70.45	333	⇑P	P	15 26 54.1	+0.5
	baz=71						
425A	Indio Mountain	70.57	328	⇑P	P	15 26 55.7	+1.1
	baz=71						
228A	UT Block 9, Go	70.66	330	⇓P	P	15 26 55.9	+0.9
	baz=71						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
Z31A	**Sharp Cattle R**	**70.72**	**333**	⇓P	**P**	**15 26 56.1**	**+0.9**
	baz=71						
128A	**Castleberry Fa**	**71.05**	**331**	⇑P	**P**	**15 26 58.1**	**+0.7**
	baz=71						
325A	**Bean Ranch, Si**	**71.06**	**328**	⇓P	**P**	**15 26 58.1**	**+0.6**
	baz=71,SNR=6.5						
Z30A	**Sanderson Ranc**	**71.08**	**332**	⇓P	**P**	**15 26 58.3**	**+0.8**
	baz=72						
226B	**Tecolote Peak,**	**71.31**	**329**	⇑P	**P**	**15 26 59.7**	**+0.8**
	baz=72						
324A	**Moseley Ranch,**	**71.35**	**328**	⇓P	**P**	**15 26 59.5**	**+0.2**
	baz=72						
126A	**Clayton Basin,**	**71.73**	**330**	⇑P	**P**	**15 27 02.4**	**+1.0**
	baz=72						
224A	**Cornudas Mount**	**71.91**	**328**	⇓P	**P**	**15 27 03.5**	**+0.9**
	baz=72						
125A	**Gardner Draw,**	**72.02**	**329**	⇓P	**P**	**15 27 04.2**	**+1.1**
	baz=72						
Z26A	**Caprock**	**72.25**	**330**	⇓P	**P**	**15 27 05.3**	**+0.8**
	baz=73,SNR=7.7						
MSTX	**Muleshoe**	**72.34**	**331**	⇑P	**P**	**15 27 05.9**	**+0.9**
	baz=73						
124A	**Stringfield Ra**	**72.40**	**329**	⇓P	**P**	**15 27 07.0**	**+1.4**
	baz=73						
Y27A	**Causey**	**72.43**	**331**	⇑P	**P**	**15 27 06.6**	**+1.0**
	baz=73						
319A	**Douglas**	**73.10**	**325**	⇑P	**P**	**15 27 11.3**	**+1.7**
	baz=74						
220A	**Playas Peak, P**	**73.16**	**326**	⇑P	**P**	**15 27 11.9**	**+1.9**
	baz=74						
Z23A	**Rita Site, Whi**	**73.23**	**328**	⇑P	**P**	**15 27 11.9**	**+1.5**
	baz=74						
X26A	**CR and CF Fran**	**73.27**	**331**	⇑P	**P**	**15 27 11.5**	**+0.9**
	baz=74						
121A	**Cookes Peak, D**	**73.33**	**327**	⇓P	**P**	**15 27 12.7**	**+1.7**
	baz=74						
W27A	**Bowe Ranch, En**	**73.41**	**332**	⇑P	**P**	**15 27 12.4**	**+1.1**
	baz=74						
Z22A	**Elephant Butte**	**73.55**	**328**	⇑P	**P**	**15 27 13.7**	**+1.5**
	baz=74						
X25A	**Clemmons Ranch**	**73.61**	**330**	⇓P	**P**	**15 27 13.7**	**+1.1**
	baz=74						
Y23A	**Lovelace Mesa,**	**73.71**	**329**	⇑P	**P**	**15 27 14.6**	**+1.4**
	baz=74						
W26A	**Owens Ranch, T**	**73.72**	**331**	⇑P	**P**	**15 27 14.1**	**+0.9**
	baz=74						
120A	**U Bar Ranch, L**	**73.74**	**326**	⇓P	**P**	**15 27 15.1**	**+1.7**
	baz=74						
W25A	**X Bar L Ranch,**	**74.12**	**331**	⇑P	**P**	**15 27 16.8**	**+1.3**
	baz=74						
Y22A	**Socorro**	**74.12**	**328**	⇓P	**P**	**15 27 17.2**	**+1.6**
	baz=74						
T30A	**Plains**	**74.17**	**334**	⇑P	**P**	**15 27 16.1**	**+0.5**
	baz=75						
X23A	**Hourglass Bar**	**74.32**	**329**	⇓P	**P**	**15 27 18.5**	**+1.7**
	baz=75						
V26A	**Tequesquite Ra**	**74.34**	**331**	⇑P	**P**	**15 27 17.6**	**+0.8**
	baz=75						
Y21A	**Point of Rocks**	**74.50**	**328**	⇓P	**P**	**15 27 20.0**	**+2.1**
	baz=75						
W24A	**Lazy 6 Ranch,**	**74.51**	**330**	⇑P	**P**	**15 27 19.3**	**+1.4**
	baz=75						
LAZ	**Ladron**	**74.59**	**328**	*e*P	**P**	**15 27 20.4**	**+2.1**
V25A	**Rancho No Teng**	**74.72**	**331**	⇓P	**P**	**15 27 20.5**	**+1.4**
	baz=75						
Y20A	**Horse Springs,**	**74.75**	**327**	⇑P	**P**	**15 27 20.9**	**+1.6**
	baz=75						
W23A	**Werner Place,**	**74.79**	**329**	⇓P	**P**	**15 27 20.8**	**+1.3**
	baz=75						
X21A	**Alamocita Cree**	**74.92**	**328**	⇑P	**P**	**15 27 22.3**	**+2.0**
	baz=75						
U25A	**Circle Dot Ran**	**75.11**	**331**	⇓P	**P**	**15 27 22.8**	**+1.5**
	baz=76						
X20A	**Quemado**	**75.33**	**327**	⇓P	**P**	**15 27 24.3**	**+1.7**
	baz=76						
W21A	**San Fidel**	**75.42**	**328**	⇓P	**P**	**15 27 25.1**	**+2.0**
	baz=76						
T25A	**Trinidad**	**75.75**	**332**	⇓P	**P**	**15 27 26.1**	**+1.2**
	baz=76						
V22A	**San Miguel Ran**	**75.76**	**329**	⇑P	**P**	**15 27 27.0**	**+1.9**
	baz=76,SNR=9.2						
Q30A	**Quinter**	**75.77**	**336**	⇑P	**P**	**15 27 26.0**	**+1.2**
	baz=76						
S26A	**Kim**	**75.79**	**333**	⇑P	**P**	**15 27 26.2**	**+1.1**
	baz=76						
W20A	**Ramah**	**75.81**	**328**	⇓P	**P**	**15 27 27.0**	**+1.6**
	baz=76						
P31A	**Stockton**	**75.96**	**336**	⇓P	**P**	**15 27 26.2**	**+0.4**
	baz=76						
R27A	**Eads**	**76.11**	**333**	⇑P	**P**	**15 27 27.4**	**+0.6**
	baz=76						
V20A	**Brimhall**	**76.35**	**328**	⇓P	**P**	**15 27 30.2**	**+1.8**
	baz=77						
R26A	**Arlington**	**76.37**	**333**	⇓P	**P**	**15 27 29.6**	**+1.2**
	baz=77						
W18A	**Petrified Fore**	**76.38**	**327**	⇓P	**P**	**15 27 30.1**	**+1.5**
	baz=77						
S24A	**Houchin Ranch,**	**76.50**	**331**	⇓P	**P**	**15 27 30.8**	**+1.5**
	baz=77						
U21A	**Nageezi**	**76.52**	**329**	⇑P	**P**	**15 27 31.0**	**+1.6**
	baz=77,SNR=5.9						
X16A	**Lo Mia Camp, P**	**76.62**	**325**	⇓P	**P**	**15 27 32.4**	**+2.4**
	baz=77						
T22A	**Edith**	**76.68**	**330**	⇓P	**P**	**15 27 32.5**	**+2.3**
	baz=77						
T21A	**Navajo Lake**	**76.94**	**329**	⇑P	**P**	**15 27 33.2**	**+1.5**
	baz=77						
S22A	**4UR Ranch, Cre**	**77.27**	**330**	⇑P	**P**	**15 27 34.5**	**+0.9**
	baz=78						
S21A	**Coal Bank Pass**	**77.61**	**330**	⇑P	**P**	**15 27 37.6**	**+2.1**
	baz=78						
Q24A	**Divide**	**77.61**	**332**	⇑P	**P**	**15 27 36.9**	**+1.4**
	baz=78						
TSUM	**Tsumeb**	**77.64**	**105**	P	**P**	**15 27 36.3**	**+0.3**
P25A	**Willow Gulch B**	**77.70**	**333**	⇓P	**P**	**15 27 37.3**	**+1.5**
	baz=78						
S20A	**Disappointment**	**78.00**	**329**	⇓P	**P**	**15 27 39.3**	**+1.7**
	baz=78						
BC3	**Big Chuckawall**	**78.05**	**322**	⇓P	**P**	**15 27 40.0**	**+2.2**
	baz=78						
R20A	**Redvale**	**78.30**	**329**	⇓P	**P**	**15 27 40.7**	**+1.5**
	baz=79						
W13A	**Hualapai Mount**	**78.37**	**324**	⇑P	**P**	**15 27 41.6**	**+1.9**
	baz=79						
ISCO	**Idaho Springs**	**78.51**	**332**	⇑P	**P**	**15 27 41.7**	**+1.2**
	baz=79						
PFO	**Pinyon Flat Ob**	**78.55**	**321**	⇓P	**P**	**15 27 42.8**	**+2.2**
	baz=79						
S18A	**Hurst Farm, Bl**	**78.61**	**328**	⇑P	**P**	**15 27 42.8**	**+1.8**
	baz=79,SNR=7.6						
U15A	**North Rim**	**78.65**	**326**	⇓P	**P**	**15 27 43.4**	**+2.1**
	baz=79						
P22A	**Eagle**	**78.80**	**331**	⇑P	**P**	**15 27 42.8**	**+0.8**
	baz=79						
ECSD	**EROS Data Cent**	**78.90**	**340**	*e*P	**P**	**15 27 42.6**	**+0.5**
	comp=E,7.0nm,1.0s						
O23A	**Lake Granby, G**	**78.98**	**332**	⇓P	**P**	**15 27 44.5**	**+1.5**
	baz=79						
GMRC	**Granite Mounta**	**79.03**	**323**	⇑P	**P**	**15 27 45.1**	**+1.9**
	baz=79						
O22A	**Kremmling**	**79.19**	**332**	⇓P	**P**	**15 27 45.5**	**+1.3**
	baz=80						
N23A	**Red Feather La**	**79.58**	**333**	⇑P	**P**	**15 27 47.6**	**+1.4**
	baz=80						
N22A	**Wattenberg Ran**	**79.70**	**332**	⇓P	**P**	**15 27 48.5**	**+1.6**
	baz=80						
P19A	**Cripple Cowboy**	**79.76**	**330**	⇑P	**P**	**15 27 49.2**	**+2.1**
	baz=80						
M23A	**Laramie**	**79.98**	**333**	⇓P	**P**	**15 27 49.3**	**+1.0**
	baz=80						
SRU	**San Rafael**	**80.01**	**329**	⇑P	**P**	**15 27 49.5**	**+1.0**
	baz=80						
O19A	**Miners Draw (B**	**80.38**	**330**	⇑P	**P**	**15 27 51.7**	**+1.3**
	baz=81						
L23A	**Garrett**	**80.53**	**333**	⇑P	**P**	**15 27 52.0**	**+0.8**
	baz=81						
MPMC	**Manual Prospec**	**80.97**	**322**	⇓P	**P**	**15 27 55.4**	**+1.7**
	baz=81						
K23A	**Bowen Ranch, D**	**81.05**	**334**	⇑P	**P**	**15 27 54.6**	**+0.7**
	baz=81						
L21A	**Rawlins**	**81.05**	**332**	⇓P	**P**	**15 27 54.7**	**+0.7**
	baz=81						
R11A	**Troy Canyon, C**	**81.77**	**325**	⇓P	**P**	**15 27 59.5**	**+1.7**
	baz=82						
DUG	**Dugway**	**81.92**	**328**	⇑P	**P**	**15 27 59.3**	**+0.8**
	baz=82						
J22A	**Midwest**	**81.93**	**334**	⇓P	**P**	**15 27 59.3**	**+0.7**
	baz=82						
K20A	**Yellowstone Ra**	**82.02**	**332**	⇑P	**P**	**15 27 59.1**	**0.0**
	baz=82						
I22A	**9 Mile Ranch,**	**82.35**	**334**	⇑P	**P**	**15 28 01.3**	**+0.6**
	baz=83						
K19A	**Absolon Red Bu**	**82.37**	**332**	⇓P	**P**	**15 28 01.4**	**+0.5**
	baz=83						
H24A	**Dirks Ranch, A**	**82.37**	**335**	⇑P	**P**	**15 28 01.2**	**+0.5**
	baz=83						
J20A	**Shoshoni**	**82.51**	**333**	⇑P	**P**	**15 28 02.7**	**+1.1**
	baz=83						
I21A	**Big Trails, Te**	**82.58**	**333**	⇑P	**P**	**15 28 02.7**	**+0.8**
	baz=83						
PDAR	**Pinedale Array**	**82.61**	**331**	P	**P**	**15 28 02.5**	**+0.4**
PDAR	**Pinedale Array**	**82.61**	**331**	P	**P**	**15 28 02.5**	**+0.4**
	comp=E,1.3nm,0.7s,baz=143,slow=7.6,SNR=9.6						
G23A	**Biddle**	**83.07**	**335**	⇑P	**P**	**15 28 04.9**	**+0.6**
	baz=84						
NVAR	**Mina Array Bea**	**83.19**	**323**	P	**P**	**15 28 06.4**	**+1.1**
NVAR	**Mina Array Bea**	**83.19**	**323**	P	**P**	**15 28 06.4**	**+1.1**
	comp=E,1.5nm,0.9s,baz=156,slow=6.1,SNR=8.3						
NVAR				LR	LR	16 03 40.2	
	comp=E,61nm,18.1s,baz=123,slow=34						
H20A	**Greybull**	**83.43**	**333**	⇑P	**P**	**15 28 07.0**	**+0.8**
	baz=84						
I19A	**Meeteetse**	**83.44**	**332**	⇑P	**P**	**15 28 07.1**	**+0.7**
	baz=84						
ELK	**Elko**	**83.48**	**327**	LR	LR	15 59 19.2	
	comp=E,139nm,19.3s,slow=31						
I18A	**Diamond G Ranc**	**83.49**	**332**	⇑P	**P**	**15 28 07.7**	**+1.0**
	baz=84						
F23A	**Volborg**	**83.52**	**335**	⇓P	**P**	**15 28 07.0**	**+0.4**
	baz=84						
G21A	**Lodge Grass**	**83.75**	**334**	⇓P	**P**	**15 28 08.4**	**+0.6**
	baz=84						
G20A	**Bridger**	**84.13**	**333**	⇓P	**P**	**15 28 10.3**	**+0.5**
	baz=84						
H18A	**Shoshone NF, C**	**84.24**	**332**	⇑P	**P**	**15 28 11.3**	**+0.8**
	baz=85,SNR=7.0						
D23A	**Lindsay**	**84.70**	**336**	⇑P	**P**	**15 28 13.3**	**+0.8**
	baz=85						
C24A	**Savage**	**84.75**	**337**	⇓P	**P**	**15 28 13.2**	**+0.5**
	baz=85						
F19A	**Roth Farm, Mol**	**84.94**	**333**	⇓P	**P**	**15 28 14.9**	**+1.1**
	baz=85						
D22A	**Cohagen**	**85.02**	**336**	⇓P	**P**	**15 28 14.7**	**+0.6**
	baz=85						
E20A	**Meyer Farm, Mu**	**85.18**	**334**	⇓P	**P**	**15 28 15.8**	**+0.9**
	baz=86,SNR=8.0						
D21A	**La Casta Ranch**	**85.24**	**335**	⇓P	**P**	**15 28 15.9**	**+0.7**
	baz=86						
C23A	**Lambert**	**85.24**	**337**	⇓P	**P**	**15 28 15.8**	**+0.6**
	baz=86						
F18A	**Big Timber**	**85.28**	**333**	⇓P	**P**	**15 28 16.0**	**+0.5**
	baz=86,SNR=7.4						
HLID	**Hailey**	**85.33**	**329**	⇑P	**P**	**15 28 17.3**	**+1.4**
	baz=86						
E19A	**Rath Farm, Rou**	**85.39**	**334**	⇑P	**P**	**15 28 16.5**	**+0.5**
	baz=86,SNR=11						
F17A	**Fitzpatrick Pl**	**85.65**	**332**	⇓P	**P**	**15 28 18.3**	**+0.9**
	baz=86						
MCMT	**McKenzie Canyo**	**85.66**	**331**	*e*P	**P**	**15 28 19.0**	**+1.4**
	comp=E,1.2nm,0.9s						
D20A	**Manuel Ranch,**	**85.67**	**335**	⇓P	**P**	**15 28 17.7**	**+0.3**
	baz=86,SNR=5.3						
A24A	**Westby**	**85.82**	**338**	⇓P	**P**	**15 28 18.4**	**+0.4**
	baz=86						
E18A	**Harlowton**	**85.90**	**333**	⇓P	**P**	**15 28 19.3**	**+0.7**
	baz=86						
C21A	**Desert Coulee**	**85.92**	**336**	⇑P	**P**	**15 28 19.2**	**+0.6**
	baz=86						
D19A	**Cripps Ranch,**	**86.01**	**334**	⇑P	**P**	**15 28 19.7**	**+0.6**
	baz=86						
C20A	**Veseth Ranch,**	**86.15**	**335**	⇓P	**P**	**15 28 20.4**	**+0.7**
	baz=86						
H12A	**Diamond D Ranc**	**86.30**	**329**	⇑P	**P**	**15 28 22.3**	**+1.6**
	baz=87						
F15A	**Butte**	**86.33**	**331**	⇑P	**P**	**15 28 21.8**	**+0.9**
	baz=87						
B21A	**Ellsworth Farm**	**86.41**	**336**	⇑P	**P**	**15 28 21.9**	**+1.0**
	baz=87						
A22A	**Carney Farms,**	**86.51**	**337**	⇓P	**P**	**15 28 22.6**	**+1.1**
	baz=87						
C19A	**Slack Wire Ran**	**86.55**	**334**	⇓P	**P**	**15 28 22.2**	**+0.5**
	baz=87						
F14A	**Wisdom**	**86.67**	**331**	⇑P	**P**	**15 28 23.5**	**+1.0**
	baz=87						
D17A	**Six Diamond Ra**	**86.69**	**333**	⇓P	**P**	**15 28 23.1**	**+0.6**
	baz=87,SNR=8.7						
E15A	**Deer Lodge**	**86.87**	**332**	⇓P	**P**	**15 28 24.3**	**+1.0**
	baz=87						
D16A	**Dana Ranch, Ca**	**86.92**	**333**	⇑P	**P**	**15 28 24.8**	**+1.2**
	baz=87,SNR=6.4						
F13A	**Darby**	**87.06**	**330**	⇓P	**P**	**15 28 25.4**	**+1.1**
	baz=87						
C17A	**Wharram Farm,**	**87.11**	**333**	⇑P	**P**	**15 28 25.0**	**+0.6**
	baz=88						
B19A	**Brinkman Farms**	**87.12**	**335**	⇓P	**P**	**15 28 24.6**	**+0.2**
	baz=88						
B18A	**Beardsley Farm**	**87.37**	**334**	⇑P	**P**	**15 28 26.3**	**+0.6**
	baz=88						
E13A	**Victor**	**87.52**	**331**	⇑P	**P**	**15 28 27.7**	**+1.2**
	baz=88						
B17A	**L&G Farms, Che**	**87.67**	**334**	⇑P	**P**	**15 28 28.0**	**+0.9**
	baz=88						
D14A	**Greenough**	**87.75**	**332**	⇑P	**P**	**15 28 28.8**	**+1.2**
	baz=88						
A18A	**Metzger Ranch,**	**87.83**	**335**	⇑P	**P**	**15 28 28.2**	**+0.4**
	baz=88						
C15A	**Salmond Ranch,**	**87.95**	**332**	⇓P	**P**	**15 28 29.5**	**+1.0**
	baz=88						
D13A	**Huson**	**88.15**	**331**	⇑P	**P**	**15 28 29.5**	**+0.1**
	baz=88						
A17A	**Triple J Farms**	**88.17**	**334**	⇓P	**P**	**15 28 30.2**	**+0.8**
	baz=89,SNR=5.4						
A14A	**Double T Ranch**	**89.23**	**333**	⇓P	**P**	**15 28 34.2**	**-0.3**
	baz=90						
ASAR	**Alice Springs**	**120.86**	**205**	PKP	**PKPdf**	**15 34 29.5**	**-1.6**
ASAR	**Alice Springs**	**120.86**	**205**	PKP	**PKPdf**	**15 34 29.5**	**-1.6**
	comp=E,0.3nm,0.7s,baz=128,slow=1.5,SNR=2.8						
EKS2	**Erkin-Say**	**148.70**	**59**	*e*PKPbc	**PKPbc**	**15 35 26.3**	**+0.7**
AAK	**Ala-Archa**	**149.22**	**58**	PKPbc	**PKPbc**	**15 35 26.8**	**-0.2**
AAK	**Ala-Archa**	**149.22**	**58**	PKPbc	**PKPbc**	**15 35 26.8**	**-0.2**
	comp=E,2.8nm,0.3s,baz=209,slow=5.1,SNR=6.3						
KURBB	**Kurchatov Arra**	**149.43**	**42**	PKPbc	**PKPbc**	**15 35 27.6**	**+0.6**
	comp=E,2.2nm,0.8s,baz=297,slow=3.4,SNR=11						
KURK	**Kurchatov**	**149.44**	**42**	PKPbc	**PKPbc**	**15 35 27.6**	**+0.6**
TKM2	**Tokmak 2**	**149.97**	**58**	*e*PKPbc	**PKPbc**	**15 35 28.9**	**+0.1**
ZALV	**Zalesovo Beam**	**150.84**	**32**	PKPbc	**PKPbc**	**15 35 30.7**	**+0.4**
ZALV	**Zalesovo Beam**	**150.84**	**32**	PKPbc	**PKPbc**	**15 35 30.7**	**+0.4**
	comp=E,5.8nm,0.6s,baz=303,slow=3.0,SNR=18						
MKAR	**Makanchi Array**	**153.34**	**47**	PKPbc	**PKPbc**	**15 35 36.5**	**+0.4**
MKAR	**Makanchi Array**	**153.34**	**47**	PKPbc	**PKPbc**	**15 35 36.5**	**+0.4**
	comp=E,1.2nm,0.8s,baz=293,slow=2.2,SNR=6.5						

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*IDC **09** 15:18:17.6±0.8, 5°.87S×105°.47E, h0km, mb4.0/12, mb1 4.1/12, mb1mx4.0/26, mbtmp4.0/12, MS3.5/3, Ms1 3.5/3, ms1mx2.7/43, Error ellipse: s-maj=33.8km s-min=14.4km az=53.0*

*DJA **09** 15:18:20.3±0.5, 6°S±5°×10°5E±°, h10km, M4.4/12, MLv4.4/12*

ISC 09 15:18:21.1±0.6**, 5°.91S**±0°.06×**105°.44E**±0°.05**, h26km, n35, σ1s.24**/28**, mb4.0**/13**, MS3.4**/3**, 2C-2D, Sunda Strait**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLSI	**Bandar Lampung**	**0.57**	**340**	P	**Pn**	**15 18 35.3**	**+1.7**
SBJI	**Serang**	**0.72**	**107**	P	**Pb**	**15 18 34.9**	**-0.1**
KASI	**Kota Agung**	**1.01**	**292**	P	**Pn**	**15 18 39.7**	**0.0**
TNG	**Tangerang**	**1.23**	**102**	P	**Pb**	**15 18 44.1**	**+0.4**
SKJI	**Sukabumi**	**1.55**	**135**	P	**Pn**	**15 18 45.1**	**-2.0**
LWLI	**Liwa**	**1.64**	**303**	P	**Pb**	**15 18 51.4**	**+0.7**
LEM	**Lembang**	**2.35**	**113**	P	**Pb**	**15 19 01.2**	**-1.7**
CISI	**Cisompet, Garu**	**2.87**	**125**	P	**Pn**	**15 19 06.9**	**+1.6**
MNAI	**Manna**	**2.92**	**302**	P	Pb	15 19 09.5	-3.0
PMBI	**Palembang**	**3.04**	**347**	P	**Pb**	**15 19 14.0**	**-0.5**
KSI	**Kapahiang**	**3.62**	**308**	P	**Pb**	**15 19 21.8**	**-2.7**
PPBI	**Pangkal Pinang**	**3.79**	**11**	P	**Pb**	**15 19 25.2**	**-2.1**
TPI	**Tanjungpandan**	**3.83**	**35**	P	**Pb**	**15 19 26.7**	**-1.4**
FITZ	**Fitzroy Crossi**	**23.14**	**123**	P	**P**	**15 23 25.4**	**-0.2**
	3.5nm,0.9s,baz=272,slow=9.0,SNR=4.1						
CMAR	**Chiang Mai Arr**	**25.05**	**345**	P	P	15 23 49.0	+5.6
	1.3nm,0.9s,baz=181,slow=9.1,SNR=7.0						
NWAO	**Narrogin (SRO)**	**29.04**	**159**	LR	LR	15 35 29.2	
	comp=Z,82nm,18.5s,baz=22,slow=36						
WRA	**Warramunga Arr**	**31.35**	**119**	P	**P**	**15 24 40.4**	**+0.5**
	2.6nm,0.6s,baz=298,slow=9.4,SNR=25						
WRA				PcP	**PcP**	**15 27 34.2**	**+0.6**
	0.3nm,0.5s,baz=314,slow=2.1,SNR=6.0						
ASAR	**Alice Springs**	**32.58**	**126**	P	**P**	**15 24 50.8**	**+0.1**
	1.2nm,0.5s,baz=299,slow=7.8,SNR=38						
ASAR				LR	LR	15 37 49.0	
	comp=Z,61nm,21.7s,baz=314,slow=36						
CTA	**Charters Tower**	**42.05**	**113**	P	**P**	**15 26 10.3**	**-0.7**
	2.1nm,0.6s,baz=270,slow=9.1,SNR=3.9						
STKA	**Stephens Creek**	**42.52**	**132**	P	**P**	**15 26 15.3**	**+0.6**
	7.6nm,0.5s,baz=306,slow=8.9,SNR=12						
MJAR	**Matsushiro Arr**	**52.19**	**33**	P	**P**	**15 27 30.6**	**+0.7**
	0.5nm,0.7s,baz=221,slow=6.9,SNR=3.9						
SONM	**Songino Array**	**53.52**	**1**	P	**P**	**15 27 39.9**	**+0.3**
	0.8nm,0.9s,baz=184,slow=7.6,SNR=4.7						
MKAR	**Makanchi Array**	**56.35**	**341**	P	**P**	**15 27 59.8**	**-0.2**
	0.4nm,0.6s,baz=142,slow=7.7,SNR=7.3						
KURBB	**Kurchatov Arra**	**60.91**	**341**	P	**P**	**15 28 32.2**	**+0.6**
	0.4nm,0.2s,baz=153,slow=6.3,SNR=3.7						
ZALV	**Zalesovo Beam**	**62.11**	**346**	P	**P**	**15 28 39.5**	**-0.2**
	1.1nm,0.7s,baz=150,slow=4.5,SNR=5.9						
BRTR	**Keskin Array B**	**79.95**	**312**	P	**P**	**15 30 28.3**	**-0.1**
	0.5nm,0.5s,baz=141,slow=7.0,SNR=3.4						
QSPA	**South Pole Qui**	**84.07**	**180**	P	**P**	**15 30 50.3**	**+0.8**
	2.5nm,1.0s,baz=329,slow=5.9,SNR=4.7						
VRI	**Vrincioaia**	**86.39**	**317**	⇓*i*P	**P**	**15 30 58.6**	**-2.8**
MLR	**Muntele Rosu**	**86.86**	**316**	⇓*i*P	P	15 30 58.1	-5.7
ARR	**Arges**	**87.74**	**316**	⇑*i*P	P	15 31 02.1	-5.9
BURAR	**Bucovina Array**	**87.77**	**318**	⇑*i*P	P	15 31 02.4	-5.7
KOLS	**Kolonicke sedl**	**89.93**	**319**	*e*	P	15 31 21.7	+3.5
GERES	**GERESS Array B**	**95.55**	**318**	LR	LR	16 14 53.1	
	comp=Z,34nm,20.6s,baz=263,slow=36						
TXAR	**Lajitas Array**	**143.97**	**46**	PKP	**PKPdf**	**15 37 55.4**	**+0.2**
	0.6nm,0.9s,baz=304,slow=2.9,SNR=5.6						
BDFB	**Brasilia**	**146.09**	**231**	PKPbc	**PKPab**	**15 38 01.6**	**+0.9**
	1.7nm,0.4s,baz=166,slow=8.3,SNR=3.4						

MEX 09 15:21:56.5±0.7**, 17°.26N**×**100°.48W, h42km**±10km**, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.29**	**136**	*i* P	Pn	15 22 03.2	-1.7
CAIG				*i* S	Sn	15 22 09.0	-1.7
ZIIG	**Zihuatanejo**	**1.00**	**290**	*i* P	Pn	15 22 13.4	-0.7
ZIIG				*i* S	Sn	15 22 24.6	-2.6
ARIG	**Puente Sto Nin**	**1.02**	**7**	*e*P	Pn	15 22 12.9	-1.6
ARIG				*e*S	Sn	15 22 25.6	-2.1
MEIG	**Mezcala**	**1.05**	**51**	*i* P	Pn	15 22 12.8	-2.1
MEIG				*e*S	Sn	15 22 26.1	-2.4
PLIG	**Platanillo**	**1.46**	**39**	*i* P	Pn	15 22 18.9	-1.6
PLIG				*e*S	Sn	15 22 36.9	-1.7
YAIG	**Yautepec**	**2.08**	**40**	*e*P	Pn	15 22 27.0	-2.2
YAIG				*i* S	Sn	15 22 51.5	-2.5
PNIG	**Pinotepa**	**2.41**	**111**	*e*P	Pn	15 22 33.1	-0.4

IDC 09 15:24:04.2±3.1**, 2°.77S**×**140°.79E, h0km, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.4**/18**, mbtmp3.5**/4**, ML3.7**/1**, Error ellipse: s-maj=93.5km s-min=27.9km az=93.0, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.19**	**200**	P	Pn	15 28 18.2	-0.2
	0.2nm,0.3s,baz=21,slow=12,SNR=14						
FITZ	**Fitzroy Crossi**	**21.28**	**223**	P	P	15 28 52.5	0.0
	1.7nm,0.9s,baz=51,slow=13,SNR=2.2						
ASAR	**Alice Springs**	**21.81**	**197**	P	P	15 28 57.3	-0.9
	0.5nm,0.7s,baz=26,slow=11,SNR=7.2						
MKAR	**Makanchi Array**	**71.12**	**322**	P	P	15 35 25.1	+0.4
	0.3nm,0.4s,baz=101,slow=6.0,SNR=7.1						

IDC 09 15:27:37.6±0.9**, 33°.29N**×**86°.13E, h0km, mb3.5**/9**, mb1 3.8**/12**, mb1mx3.6**/30**, mbtmp3.6**/12**, ML3.4**/3**, Error ellipse: s-maj=29.4km s-min=19.4km az=54.0, Xizang**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**13.80**	**349**	Pn	Pn	15 30 53.0	-1.4
	0.1nm,0.3s,baz=162,slow=14,SNR=4.6						
KURBB	**Kurchatov Arra**	**18.20**	**344**	P	Pn	15 31 49.5	-2.0
	0.1nm,0.3s,baz=164,slow=10.0,SNR=3.3						
CMAR	**Chiang Mai Arr**	**18.71**	**139**	P	P	15 31 55.8	-2.0
	0.1nm,0.3s,baz=323,slow=13,SNR=10						
ZALV	**Zalesovo Beam**	**20.67**	**358**	P	P	15 32 17.4	-1.4
	0.4nm,0.3s,baz=185,slow=7.1,SNR=2.8						
SONM	**Songino Array**	**21.07**	**40**	P	P	15 32 24.6	+1.1
	0.5nm,0.7s,baz=243,slow=13,SNR=5.6						
AKTO	**Aktyubinsk**	**26.82**	**318**	P	P	15 33 21.1	+1.7
	1.7nm,0.8s,baz=118,slow=5.3,SNR=6.2						
NOA	**NORSAR Array B**	**54.31**	**325**	P	P	15 37 03.7	-1.8
	0.6nm,0.5s,baz=85,slow=7.4,SNR=4.2						
GERES	**GERESS Array B**	**54.75**	**310**	P	P	15 37 08.8	-0.2
	0.9nm,0.7s,baz=67,slow=7.4,SNR=7.3						
ASAR	**Alice Springs**	**72.66**	**135**	P	P	15 39 07.6	+0.2
	0.4nm,0.9s,baz=333,slow=5.7,SNR=3.9						
ILAR	**Eielson Array**	**73.88**	**21**	P	P	15 39 14.4	+0.5
	0.5nm,0.8s,baz=308,slow=4.0,SNR=4.2						
TORD	**Torodi Ar. Bea**	**78.31**	**278**	P	P	15 39 40.4	+0.4
	0.4nm,0.6s,baz=50,slow=5.5,SNR=5.5						
YKA	**Yellowknife Ar**	**83.09**	**10**	P	P	15 40 05.2	+0.4
	0.2nm,0.7s,baz=335,slow=5.3,SNR=4.8						

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*DJA **09** 15:30:45.2±1.2, 6°S±25°×10°6E±1°4, h68km±20km, M3.5/4, MLv3.5/4*

*IDC **09** 15:30:51.5±40.0, 6°.31S×105°.99E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/23, mbtmp3.6/3, MS3.5/2, Ms1 3.5/2, ms1mx2.4/37, Error ellipse: s-maj=683.5km s-min=175.1km az=133.0*

ISC 09 15:30:41.0±2.1**, 5°.7S**±0°.5×**106°.0E**±0°.3**, h147km, n10, σ2s.43**/5**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SBJI	**Serang**	**0.47**	**160**	P	**Pn**	**15 31 00.6**	**-1.3**
BLSI	**Bandar Lampung**	**0.79**	**293**	P	**Pn**	**15 31 01.7**	**-2.1**
KASI	**Kota Agung**	**1.48**	**276**	P	**Pn**	**15 31 09.8**	**-0.3**
LEM	**Lembang**	**1.99**	**125**	P	**Pn**	**15 31 17.1**	**+1.0**
LWLI	**Liwa**	**2.02**	**289**	P	**Pn**	**15 31 18.4**	**+2.2**
WRA	**Warramunga Arr**	**31.01**	**120**	P	pP	15 37 08.4	-7.9
	0.3nm,0.4s,baz=295,slow=9.9,SNR=5.3						
ASAR	**Alice Springs**	**32.29**	**126**	P	pP	15 37 18.8	-8.7
	0.2nm,0.4s,baz=298,slow=8.1,SNR=12						
STKA	**Stephens Creek**	**42.28**	**133**	P	pP	15 38 43.3	-9.5
	3.9nm,0.9s,baz=327,slow=8.8,SNR=6.9						
OPO	**Ambohidratompo**	**58.65**	**252**	LR	LR	15 59 19.1	
	comp=Z,87nm,20.2s,baz=273,slow=29						
KBZ	**Khabaz**	**74.99**	**318**	LR	LR	16 16 03.9	
	comp=Z,18nm,21.3s,baz=308,slow=36						

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*IDC **09** 15:31:18.0±2.7, 85°.25N×13°.58E, h0km, mb3.7/8, mb1 3.8/10, mb1mx3.6/31, mbtmp3.8/10, ML3.9/2, MS3.1/4, Ms1 3.1/4, ms1mx2.5/52, Error ellipse: s-maj=58.3km s-min=25.2km az=128.0*

*ISCJB **09** 15:31:20.9±1.1, 84°.73N±0°.08×1°5E±°, h10km, mb3.6/8, MS3.1/2, Error ellipse: s-maj=18.5km s-min=10.3km az=19.5*

*CSEM **09** 15:31:23.4±0.6, 84°.72N×15°.16E, h10km, ML3.8, Error ellipse: s-maj=14.9km s-min=11.6km az=39.0*

*NAO **09** 15:31:24.4±9.3, 84°.83N×7°.07E, h26km±72km, ML3.8*

ISC 09 15:31:23.0±1.2**, 84°.72N**±0°.09×**16°.4E**±0°.1**, h10km, n32, σ1s.77**/37**, mb3.7**/8**, North of Svalbard**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**5.86**	**188**	Pn	**Pn**	**15 32 50.3**	**+0.6**
KBS				Sn	**Sn**	**15 33 57.5**	**+0.7**
KBS	**Kingsbay**	**5.86**	**188**	*e*P	**Pn**	**15 32 50.6**	**+0.9**
KBS				*e*S	**Sn**	**15 33 57.5**	**+0.7**
KBS				AML	AML	15 34 00.1	
	comp=Z,15nm,0.4s						
KBS	**Kingsbay**	**5.86**	**188**	Pn	**Pn**	**15 32 50.3**	**+0.6**
KBS	**Kingsbay**	**5.86**	**188**	*e*P	**Pn**	**15 32 50.6**	**+0.9**
	SNR=51						
KBS				*e*S	**Sn**	**15 33 57.5**	**+0.7**
	comp=Z,15nm,0.4s,SNR=51						
SPA0	**Spitsbergen Ar**	**6.58**	**180**	Pn	**Pn**	**15 33 00.7**	**+1.1**
	baz=9.5,slow=11						
SPA0				Sn	**Sn**	**15 34 15.1**	**+0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SPA0	Spitsbergen Ar	6.58	180	Pn	Pn	15 33 00.7	+1.1
	baz=9.5,slow=11						
SPA0				Sn	Sn	15 34 15.1	+0.5
SPA0	Spitsbergen Ar	6.58	180	Pn	Pn	15 33 00.7	+1.1
	baz=9.5,slow=11,SNR=166						
SPA0				Sn	Sn	15 34 15.1	+0.5
SPITS	Spitsbergen Ar	6.58	180	Pn	Pn	15 33 02.2	+2.5
	baz=4.8,slow=11,SNR=116						
SPITS				Sn	Sn	15 34 15.4	+0.8
	baz=350,slow=41,SNR=1.5						
DAG	Danmarks Havn	9.46	234	*i* P	Pn	15 33 38.2	-0.8
	comp=Z,3.8nm,0.8s						
SUMG	Summit	15.09	251	*i* P	Pn	15 34 47.9	-8.3
	comp=Z,5.3nm,0.8s						
ARA0	ARCESS Array S	15.36	168	Pn	Pn	15 34 59.2	-0.3
	baz=356,slow=12						
ARA0				Sn	Sn	15 37 44.2	-5.1
	baz=348,slow=14						
ARA0	ARCESS Array S	15.36	168	Pn	Pn	15 34 59.2	-0.3
	baz=356,slow=12						
ARA0				Sn	Sn	15 37 44.2	-5.1
	baz=348,slow=14						
ARA0	ARCESS Array S	15.36	168	Pn	Pn	15 34 59.2	-0.3
	baz=356,slow=11,SNR=7.2						
ARCES	ARCESS Array B	15.36	168	Pn	Pn	15 35 00.3	+0.8
	comp=Z,0.3nm,0.3s,baz=355,slow=12,SNR=19						
ARCES				LR	LR	15 41 08.5	
	comp=Z,37nm,19.2s,baz=0.1,slow=37						
RES	Resolute Bay	18.02	307	LR	LR	15 42 30.6	
	comp=Z,66nm,19.1s,baz=119,slow=38						
FIA0	FINESS Array S	23.49	168	P	P	15 36 34.4	+2.1
	baz=353,slow=12						
FIA0	FINESS Array S	23.49	168	P	P	15 36 34.4	+2.1
	baz=353,slow=12						
FIA0	FINESS Array S	23.49	168	P	P	15 36 34.4	+2.1
	baz=353,slow=11,SNR=9.9						
FINES	FINESS Array B	23.49	168	P	P	15 36 34.6	+2.2
	comp=Z,4.4nm,0.8s,baz=2.4,slow=10.0,SNR=6.0						
NB2	NORSAR Subarra	23.83	186	P	P	15 36 37.5	+1.7
	comp=Z,2.3nm,0.9s,baz=359,slow=9.3						
NOA	NORSAR Array B	23.83	186	P	P	15 36 38.4	+2.6
	comp=Z,1.6nm,0.8s,baz=359,slow=9.6,SNR=4.1						
HFS	Hagfors	24.72	183	P	P	15 36 44.9	+1.0
	baz=11,slow=10						
HFS	Hagfors	24.72	183	P	P	15 36 44.9	+1.0
	baz=11,slow=10						
HFS	Hagfors	24.72	183	P	P	15 36 45.5	+1.6
	comp=Z,1.8nm,0.9s,baz=359,slow=12,SNR=4.5						
HFS	Hagfors	24.72	183	P	P	15 36 44.9	+1.0
	baz=11,slow=9.9,SNR=4.5						
INK	Inuvik	26.55	335	LR	LR	15 46 49.2	
	comp=Z,43nm,20.0s,baz=300,slow=36						
AKASG	Malin Array Be	34.32	165	P	P	15 38 09.8	+0.7
	comp=Z,0.6nm,0.4s,baz=354,slow=8.4,SNR=3.1						
KURBB	Kurchatov Arra	37.33	112	P	P	15 38 34.6	-0.2
	comp=Z,0.6nm,0.8s,baz=357,slow=7.9,SNR=2.3						
MKAR	Makanchi Array	41.46	109	LR	LR	15 59 48.8	
	comp=Z,28nm,18.9s,baz=105,slow=41						
SONM	Songino Array	42.63	84	P	P	15 39 17.5	-1.5
	comp=Z,0.5nm,0.8s,baz=350,slow=7.9,SNR=3.7						
BRTR	Keskin Array B	45.41	161	P	P	15 39 42.0	+0.6
	comp=Z,0.5nm,0.7s,baz=357,slow=12,SNR=2.6						
TORD	Torodi Ar. Bea	71.80	195	P	P	15 42 44.4	-0.9
	comp=Z,1.1nm,0.9s,baz=359,slow=6.6,SNR=6.9						

IDC 09 15:35:51.2±58.0**, 19°.53S**×**179°.20E, h0**km**, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.7**/18**, mbtmp4.0**/3**, Error ellipse: s-maj=1039.0km s-min=154.7km az=80.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.87	242	P	P	15 42 53.0	0.0
	6.3nm,1.2s,baz=104,slow=14,SNR=3.5						
WRA	Warramunga Arr	42.13	262	P	P	15 43 45.8	+0.1
	0.4nm,0.3s,baz=97,slow=7.8,SNR=12						
ASAR	Alice Springs	42.18	256	P	P	15 43 45.6	-0.5
	1.7nm,0.7s,baz=89,slow=7.8,SNR=40						

*BJI **09** 15:42:43.2, 8°.80S×112°.50E, h40km, mB4.8/8, mb4.7/17*
*MOS **09** 15:42:49.2±0.9, 8°.45S×112°.60E, h66km, mb4.8/33, Error ellipse: s-maj=13.4km s-min=8.0km az=113.8*
*ISCJB **09** 15:42:51.5±0.3, 8°.71S±0°.04×112°.51E±0°.02, h95km±2km, mb4.5/47, Error ellipse: s-maj=7.0km s-min=3.1km az=14.1*
*IDC **09** 15:42:51.9±2.7, 8°.54S×112°.59E, h74km±23km, mb4.3/27, mb1 4.3/28, mb1mx4.2/33, mbtmp4.3/28, MS3.3/6, Ms1 3.3/6, ms1mx2.8/26, Error ellipse: s-maj=16.5km s-min=10.4km az=56.0*
*AUST **09** 15:42:51.6±0.3, 8°.86S×112°.51E, h65km, Error ellipse: s-maj=0.9km s-min=0.5km az=11.0*
*DJA **09** 15:42:52.2±0.6, 9°S±3°×11°3E±°, h22km±6km, M4.8/20, mb4.9/15, mB5.3/8, MLv4.9/20, Mw(mB)4.7/8, Mwp6.2/1*
*NEIC **09** 15:42:55.3±1.3, 8°.58S×112°.62E, h108km±10km, mb4.5/9, Error ellipse: s-maj=12.5km s-min=6.2km az=49.0*
ISC 09 15:42:52.2±0.7**, 8°.62S**±0°.06×**112°.56E**±0°.03**, h82**km±6km**, n187, σ1°.26**/197**, mb4.6**/46**, 3C-3D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GMJI	Gumukmas	0.94	69	P	Pn	15 43 10.9	+0.2
GMJI				S	Sn	15 43 25.5	+1.0
PWJI	Pagerwojo	0.95	308	P	Pn	15 43 10.3	-0.5
PWJI				S	Sn	15 43 24.7	0.0
SJI	Sawahan	1.18	318	P	Pn	15 43 14.0	+0.4
SJI				S	Sn	15 43 31.5	+1.8
BLJI	Banyuglugur	1.34	50	P	Pn	15 43 17.4	+1.7
PCJI	Pacitan	1.43	287	P	Pn	15 43 16.8	+0.1
PCJI				S	Sn	15 43 34.7	-0.5
JAGI	Jajag, Banyuwa	1.58	85	P	Pn	15 43 19.4	+0.6
JAGI				S	Sn	15 43 38.6	-0.2
JAGI	Jajag, Banyuwa	1.58	85	P	Pn	15 43 18.6	-0.1
	baz=1.7,SNR=459						
JAGI				S	Sn	15 43 38.8	0.0
	baz=1.7,SNR=11						
GRJI	Gresik	1.69	357	S	Sn	15 43 46.1	+4.8
BYJI	Banyuwangi	1.82	77	P	Pn	15 43 24.2	+2.3
BYJI				S	Sn	15 43 49.2	+4.8
UGM	Wanagama	2.13	289	P	Pn	15 43 28.0	+2.0
UGM				S	Sn	15 43 53.3	+1.5
UGM	Wanagama	2.13	289	P	Pn	15 43 26.0	0.0
	baz=2.2,SNR=317						
UGM				S	Sn	15 43 49.7	-2.0
	baz=2.2,SNR=7.0						
YOGI	Yogyakarta	2.38	289	P	Pn	15 43 31.8	+2.6
IGBI	Denpasar	2.57	95	P	Pn	15 43 33.5	+1.7
IGBI				S	Sn	15 44 02.3	+0.2
SMRI	Semarang	2.61	306	P	Pn	15 43 34.6	+2.2
SMRI	Semarang	2.61	306	P	Pn	15 43 34.0	+1.5
	baz=2.7,SNR=21						
DNP	Denpasar	2.62	91	P	Pn	15 43 35.5	+2.9
DNP				S	Sn	15 44 06.2	+2.7
KHKI	Kahang-Kahang	3.03	85	P	Pn	15 43 39.3	+1.3
KHKI				S	Sn	15 44 13.5	+0.2
BJII	Banjamegara	3.10	294	P	Pn	15 43 41.2	+2.2
TGJI	Tegal	3.82	297	P	Pn	15 43 49.4	+0.6
CISI	Cisompet, Garu	4.81	282	P	Pn	15 44 02.7	+0.4
CISI	Cisompet, Garu	4.81	282	P	Pn	15 44 01.9	-0.5
	baz=4.8,SNR=49						
CISI				S	Sn	15 44 55.6	-1.3
	baz=4.8,SNR=5.0						
LEM	Lembang	5.21	290	P	Pn	15 44 11.3	+3.4
	97nm,1.0s,3µm0.8nm						
LEM	Lembang	5.21	290	P	Pn	15 44 11.2	+3.4
	baz=5.3,SNR=9.5						
BBKI	Banjar Baru	5.60	24	P	Pn	15 44 17.0	+3.9
	452nm,0.9s,4µm1.6nm						
PBKI	Pangkalan Bun	5.94	351	P	Pn	15 44 21.5	+3.8
	343nm,0.8s,4µm1.5nm						
KBKI	Kotabaru	6.39	34	P	Pn	15 44 27.5	+3.7
	42nm,0.7s,520nm0.2nm						
XMI	Christmas Isla	7.01	254	P	Pn	15 44 29.4	-3.0
	baz=6.9,SNR=8.1						
XMI				S	Sn	15 45 36.5	-14
	baz=6.9,SNR=6.0						
XMIS	Christmas Isla	7.06	254	P	Pn	15 44 30.0	-3.0
	baz=7.0,SNR=22						
XMIS				S	Sn	15 45 36.9	-15
	baz=7.0,SNR=10						
KAPI	Kappang	7.99	64	Pn	Pn	15 44 47.6	+1.9
KAPI				S	Sn	15 46 10.6	-4.0
KAPI	Kappang	7.99	64	P	Pn	15 44 45.6	-0.1
	3.0nm,0.3s,baz=199,slow=11,SNR=6.1						
KAPI				S	Sn	15 46 10.6	-4.0
	baz=234,slow=23,SNR=2.5						
BKSI	Bulukumba	8.19	67	P	Pn	15 44 50.3	+1.9
	24nm,0.6s,309nm						
BSSI	Bau Bau, Buton	8.24	73	P	Pn	15 44 50.7	+1.6
	98nm,0.6s,3µm134µm						
SPSI	Sidrap Palu	8.53	58	P	Pn	15 44 55.2	+2.2
	23nm,1.1s						
KASI	Kota Agung	8.57	290	P	Pn	15 44 55.1	+1.5
	47nm,1.0s						
STKI	Sintang	8.69	353	P	Pn	15 44 59.6	+4.3
	65nm,0.8s,6µm						
TTSI	Tana Toraja	9.10	53	P	Pn	15 45 04.8	+4.0
	20nm,1.1s						
MMRI	Maumere	9.57	91	P	Pn	15 45 07.8	+0.5
	57nm,0.9s,946nm						
KSM	Kuching	10.27	347	*e*P	Pn	15 45 20.5	+3.7
	14nm,0.8s						
KSM	Kuching	10.27	347	P	Pn	15 45 20.5	+3.7
	20nm,1.0s						
KSM	Kuching	10.27	347	P	Pn	15 45 20.7	+3.9
	baz=11,SNR=9.3						
MNAI	Manna	10.43	293	P	Pn	15 45 19.4	+0.3
	338nm,0.9s						
MNAI	Manna	10.43	293	P	Pn	15 45 19.3	+0.3
	baz=10,SNR=9.3						
MNAI				S	Sn	15 47 11.1	-3.1
	baz=10,SNR=4.6						
SBUM	Sibu	11.00	358	P	Pn	15 45 31.4	+4.6
KSI	Kapahiang	11.06	296	P	Pn	15 45 28.2	+0.5
	385nm,0.7s						
MBWA	Marble Bar	14.26	152	*e*P	Pn	15 46 03.9	-6.4
	17nm,0.6s						
FITZ	Fitzroy Crossi	15.83	128	*e*P	Pn	15 46 27.6	-2.8
	8.2nm,0.8s						
FITZ				S	Sn	15 49 11.3	-14
FITZ	Fitzroy Crossi	15.83	128	P	Pn	15 46 27.9	-2.5
	0.8nm,0.3s,baz=309,slow=9.7,SNR=23						
FITZ				S	Sn	15 49 11.3	-14
	0.9nm,0.3s,baz=202,slow=19,SNR=6.1						
FITZ				LR	LR	15 53 12.1	
	comp=Z,59nm,18.1s,baz=314,slow=39						
FITZ	Fitzroy Crossi	15.83	128	P	Pn	15 46 27.8	-2.6
	baz=16,SNR=17						
KNRA	Kununurra	17.32	115	P	Pn	15 46 49.4	+0.5
	baz=17,SNR=25						
MTN	Manton Dam	18.73	105	P	P	15 47 04.8	+0.2
	baz=19,SNR=23						
MEEK	Meekatharra	18.82	163	P	P	15 47 05.4	-0.2
	baz=19,SNR=42						
MEEK				S	S	15 50 18.4	-17
	baz=19,SNR=7.1						
KDU	Kakadu	19.98	103	P	P	15 47 17.7	-0.5
	baz=20,SNR=25						
SWI	Sorong	20.16	69	P	Pn	15 47 24.3	+1.6
	baz=20,SNR=5.0						
FAKI	Fak Fak	20.39	75	P	P	15 47 22.2	-0.5
	baz=20,SNR=5.0						
MORW	Morawa	20.61	171	P	Pn	15 47 28.2	+0.3
	baz=20,SNR=6.1						
KLBR	Kellerberrin	23.37	169	P	P	15 48 06.4	+13
	baz=23,SNR=5.2						
WRA	Warramunga Arr	23.89	120	P	P	15 47 58.5	-0.1
WRA				PcP	PcP	15 51 40.0	+0.4
WRA				ScP	ScP	15 55 10.9	+0.1
WRA	Warramunga Arr	23.89	120	P	P	15 47 58.5	-0.1
	7.9nm,0.6s,baz=296,slow=11,SNR=95						
WRA				PcP	PcP	15 51 40.0	+0.4
	1.0nm,0.3s,baz=327,slow=1.8,SNR=9.9						
WRA				ScP	ScP	15 55 10.9	+0.1
	0.6nm,0.5s,baz=303,slow=2.1,SNR=8.4						
WRAB	Tennant Creek	23.89	120	*e*P	P	15 47 58.1	-0.5
WRAB				pmax	pmax		
	comp=Z,11nm,0.8s						
WRAB	Tennant Creek	23.89	120	*e*P	P	15 47 58.0	-0.5
	comp=Z,11nm,0.8s						
NWAO	Narrogin (SRO)	24.57	171	LR	LR	15 55 59.3	
	comp=Z,102nm,21.9s,baz=127,slow=32						
AS31	Alice Springs	25.33	129	*e*P	P	15 48 11.4	-0.2
ASAR	Alice Springs	25.33	129	P	P	15 48 11.8	+0.2
ASAR				PcP	PcP	15 51 43.4	+0.7
ASAR	Alice Springs	25.33	129	P	P	15 48 11.8	+0.2
	comp=Z,4.8nm,0.7s,baz=304,slow=9.4,SNR=86						
ASAR				PcP	PcP	15 51 43.4	+0.7
	comp=Z,1.3nm,0.3s,baz=306,slow=2.0,SNR=8.0						
ASAR				LR	LR	15 59 32.0	
	comp=Z,52nm,18.4s,baz=190,slow=40						
CMAR	Chiang Mai Arr	30.07	334	P	P	15 48 55.0	+1.1
CMAR				PcP	PcP	15 51 55.9	+1.7
CMAR	Chiang Mai Arr	30.07	334	P	P	15 48 55.0	+1.1
	comp=Z,3.3nm,0.8s,baz=168,slow=8.4,SNR=18						
CMAR				PcP	PcP	15 51 55.9	+1.7
	comp=Z,1.8nm,0.7s,baz=188,slow=2.9,SNR=9.3						
CMAR				LR	LR	16 02 07.5	
	comp=Z,27nm,18.9s,baz=150,slow=38						
COEN	Coen	30.47	103	P	P	15 48 58.3	+0.6
	baz=30,SNR=4.1						
MTSU	Mount Surprise	32.26	110	P	P	15 49 14.9	+1.6
	baz=32,SNR=14						
CTA	Charters Tower	34.50	113	P	P	15 49 32.6	-0.2
CTA	Charters Tower	34.50	113	P	P	15 49 32.6	-0.2
	comp=Z,4.0nm,0.9s,baz=256,slow=13,SNR=3.7						
QLP	Quilpie	34.93	125	P	P	15 49 38.1	+1.7
	baz=35,SNR=8.1						
STKA	Stephens Creek	35.53	135	*e*P	P	15 49 42.4	+0.8
	comp=Z,1.7nm,0.5s						
STKA				PcP	PcP	15 52 10.1	+0.9
STKA	Stephens Creek	35.53	135	P	P	15 49 42.5	+0.9
	comp=Z,8.2nm,0.4s,baz=309,slow=8.1,SNR=81						
STKA				PcP	PcP	15 52 10.1	+0.9
	comp=Z,6.6nm,0.5s,baz=340,slow=5.0,SNR=8.8						
STKA	Stephens Creek	35.53	135	P	P	15 49 42.5	+0.9
	baz=35,SNR=52						
JNU	Nakatsue	45.02	22	P	P	15 50 59.3	-0.5
JNU	Nakatsue	45.02	22	P	P	15 50 59.3	-0.5
	comp=Z,5.4nm,0.7s,baz=158,slow=5.4,SNR=5.7						
LZH	Lanzhou	45.22	350	*e*P	P	15 51 02.3	+0.8
LZH				pP	pP	15 51 07.0	-14
LZH				sP	sP	15 51 10.7	-20
LZH				pmax	pmax		
	comp=Z,15nm,1.4s						
HNR	Honiara	46.78	95	P	P	15 51 14.4	+0.4
HNR	Honiara	46.78	95	P	P	15 51 14.4	+0.4
	comp=Z,32nm,0.9s,baz=319,slow=0.4,SNR=4.9						
KSAR	Wonju Array Be	48.01	16	P	P	15 51 24.5	+1.4
KSRS	Korea Array	48.03	16	P	P	15 51 24.5	+1.2
	comp=Z,4.3nm,0.7s,baz=205,slow=8.3,SNR=14						
KSRS				LR	LR	16 09 57.7	
	comp=Z,19nm,20.4s,baz=185,slow=34						
GTA	Gaotai	49.23	347	*e*P	P	15 51 34.0	+1.4
GTA				pP	pP	15 51 38.9	-14
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MAT	Matsushiro	50.98	27	P	P	15 51 44.6	-1.1
MJAR	Matsushiro Arr	50.98	27	P	P	15 51 44.7	-1.0
MJAR	Matsushiro Arr	50.98	27	P	P	15 51 44.7	-1.0
	comp=Z,3.5nm,0.6s,baz=204,slow=8.0,SNR=18						
MDJ	Mudanjiang	55.18	15	P	P	15 52 15.7	-0.7
MDJ				pmax	pmax		
	comp=Z,11nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,40nm,5.3s						
USRK	Ussuriysk Arra	55.44	17	P	P	15 52 18.1	-0.1
	comp=Z,15nm,0.8s,baz=202,slow=5.3,SNR=31						
ULN	Ulaanbaatar	56.45	356	*e*P	P	15 52 24.3	-1.3
	comp=Z,3.1nm,0.6s						
SONM	Songino Array	56.47	355	P	P	15 52 25.8	+0.1
SONM				PcP	PcP	15 53 21.8	+0.1
SONM	Songino Array	56.47	355	P	P	15 52 25.8	+0.1
	comp=Z,3.6nm,0.6s,baz=177,slow=8.4,SNR=41						
SONM				PcP	PcP	15 53 21.8	+0.1
	comp=Z,1.9nm,0.7s,baz=176,slow=3.9,SNR=6.4						
ERM	Erimo	57.66	27⇓	*e*P	P	15 52 30.5	-3.5
ERM				pmax	pmax		
	comp=Z,41nm,1.2s						
ASAJ	Asahikawa	59.12	25	P	P	15 52 44.1	0.0
ASAJ	Asahikawa	59.12	25	P	P	15 52 44.1	0.0
	comp=Z,2.0nm,0.3s,baz=216,slow=11,SNR=7.9						
KLR	Kul'dur	60.01	14	*e*P	P	15 52 45.8	-4.5
HABR	Khabarovsk	60.21	17	*e*P	P	15 52 47.4	-4.2
HABR				*e**SP	sP	15 53 01.6	-20
HABR				*e*		15 53 33.3	
HABR				*e*		15 54 59.5	
HABR				*e*S	S	16 00 57.4	-1.6
HABR				*e*		16 02 34.9	
HABR				*e*SS	SS	16 04 55.4	-2.4
HABR				pmax	pmax		
	comp=Z,22nm,2.1s						
HABR				pmax	pmax		
	comp=E,57nm,3.1s						
HABR				pmax	pmax		
	comp=N,27nm,3.1s						
HABR				MLR	MLR		
	comp=Z,35nm,21.0s						
KZA	Kyzart	60.91	329	P	P	15 52 56.9	-0.2
	SNR=9.3						
TKM2	Tokmak 2	61.35	330	*i* P	P	15 52 59.3	-0.5
TKM2	Tokmak 2	61.35	330	P	P	15 52 59.3	-0.5
	SNR=12						
MKAR	Makanchi Array	61.40	337	P	P	15 52 59.3	-0.5
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MKAR	Makanchi Array	61.40	337	P	P	15 52 59.3	-0.5
MKAR	Makanchi Array	61.40	337	P	P	15 52 59.3	-0.5
	comp=Z,3.9nm,0.4s,baz=149,slow=7.4,SNR=87						
KBK	Karagaybulak	61.48	329	P	P	15 53 00.8	+0.2
	SNR=8.4						
YSS	Yuzh-Sakhalins	61.51	23	*e*P	P	15 53 00.0	-0.4
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
AAK	Ala-Archa	61.70	329	P	P	15 53 02.4	+0.3
AAK						15 53 43.4	
AAK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AAK	Ala-Archa	61.70	329	P	P	15 53 02.4	+0.3
AAK				PcP	PcP	15 53 43.4	+0.6
AAK	Ala-Archa	61.70	329	P	P	15 53 02.4	+0.3
	comp=Z,4.7nm,0.7s,baz=170,slow=2.6,SNR=9.9						
AAK				PcP	PcP	15 53 43.4	+0.6
	comp=Z,0.8nm,0.3s,baz=162,slow=4.7,SNR=3.7						
AML	Almayashu	61.75	328	P	P	15 53 02.3	-0.4
	SNR=11						
EKS2	Erkin-Say	62.09	328	*e*P	P	15 53 03.9	-0.7
EKS2				pmax	pmax		
	comp=Z,11nm,0.8s						
EKS2	Erkin-Say	62.09	328	*e*P	P	15 53 03.9	-0.7
	comp=Z,11nm,0.8s						
EKS2	Erkin-Say	62.09	328	P	P	15 53 04.3	-0.3
	SNR=11						
KKAR	Karatay Array	64.12	327	*e*P	P	15 53 16.7	-1.2
KKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KKAR	Karatay Array	64.12	327	*e*P	P	15 53 16.7	-1.2
	comp=Z,2.6nm,0.6s						
KURK	Kurchatov	66.01	337⇑	*i*P	P	15 53 28.7	-1.2
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ZALV	Zalesovo Beam	66.59	343	P	P	15 53 32.6	-1.0
ZALV				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ZALV	Zalesovo Beam	66.59	343	P	P	15 53 32.6	-1.0
ZALV	Zalesovo Beam	66.59	343	P	P	15 53 32.6	-1.0
	comp=Z,6.0nm,0.5s,baz=150,slow=4.4,SNR=28						
BRVK	Borovoye	71.16	335⇓	*e*P	P	15 54 01.4	-0.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
YAK	Yakutsk	71.68	8	*e*P	P	15 54 02.9	-2.0
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.3s						
PETK	Petropavlovsk-	72.44	27	P	P	15 54 09.8	+0.2
PETK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PETK	Petropavlovsk-	72.44	27	P	P	15 54 09.8	+0.2
PETK	Petropavlovsk-	72.44	27	P	P	15 54 09.8	+0.2
	comp=Z,3.3nm,0.6s,baz=213,slow=3.7,SNR=12						
VNDA	Vanda	73.41	170	LR	LR	16 23 59.9	
	comp=Z,57nm,21.9s,baz=244,slow=34						
ABKAR	Akbulak array	73.68	327	*e*P	P	15 54 16.3	-0.8
	comp=Z,13nm,0.7s						
AKTO	Aktyubinsk	75.38	327	P	P	15 54 26.5	-0.4
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKTO	Aktyubinsk	75.38	327	P	P	15 54 26.5	-0.4
AKTO	Aktyubinsk	75.38	327	P	P	15 54 26.5	-0.4
	comp=Z,3.6nm,0.6s,baz=134,slow=2.7,SNR=8.2						
SVE	Sverdlovsk	77.82	334⇑	*e*P	P	15 54 40.5	0.0
SVE				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ARU	Arti	78.51	333*d*	*i*P	P	15 54 43.3	-1.0
ARU				S	S	16 04 37.4	+3.4
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TIXI	Tiksi	80.83	5*c*	*i*P	P	15 54 55.4	-1.1
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
QSPA	South Pole Qui	81.38	180	P	P	15 55 00.8	+0.8
QSPA	South Pole Qui	81.38	180	P	P	15 55 00.7	+0.8
	comp=Z,3.1nm,0.9s,baz=310,slow=2.9,SNR=15						
KBZ	Khabaz	81.57	317	P	P	15 55 01.4	+0.3
KBZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	Khabaz	81.57	317	P	P	15 55 01.4	+0.3
KBZ	Khabaz	81.57	317	P	P	15 55 01.4	+0.3
	comp=Z,5.3nm,0.8s,baz=100,slow=4.7,SNR=13						
KIV	Kislovodsk	81.79	317	*e*P	P	15 55 03.6	+1.2
KIV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ASF	Jabal al Asfar	82.60	304	P	P	15 55 07.0	+0.1
ASF	Jabal al Asfar	82.60	304	P	P	15 55 07.0	+0.1
	comp=Z,3.8nm,0.8s,baz=334,slow=6.9,SNR=6.7						
BOSA	Boshof	83.58	242	P	P	15 55 12.8	+0.7
BOSA	Boshof	83.58	242	P	P	15 55 12.8	+0.7
	comp=Z,1.7nm,0.8s,baz=101,slow=5.2,SNR=4.0						
EIL	Elat	83.60	301	P	P	15 55 12.7	+0.6
EIL	Elat	83.60	301	P	P	15 55 12.7	+0.6
	comp=Z,6.2nm,0.8s,baz=11,slow=3.5,SNR=8.5						
EIL	Elat	83.60	301	P	P	15 55 12.9	+0.9
	baz=84,SNR=5.9						
MMAI	Mount Meron Ar	84.03	305	P	P	15 55 15.9	+1.7
MMAI	Mount Meron Ar	84.03	305	P	P	15 55 15.9	+1.7
	comp=Z,8.4nm,0.8s,baz=114,slow=7.4,SNR=7.7						
BILL	Bilibino	85.28	18	*e*P	P	15 55 18.8	-0.8
BILL				pmax	pmax		
	comp=Z,5.0nm,1.6s						
BRTR	Keskin Array B	87.03	311	P	P	15 55 28.8	-0.3
BRTR	Keskin Array B	87.03	311	P	P	15 55 28.8	-0.3
	comp=Z,4.7nm,0.8s,baz=126,slow=6.3,SNR=28						
OBN	Obninsk	89.10	326	*e*P	P	15 55 34.1	-4.2
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AKASG	Malin Array Be	92.40	321	P	P	15 55 52.6	-1.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	Malin Array Be	92.40	321	P	P	15 55 52.6	-1.1
AKASG	Malin Array Be	92.40	321	P	P	15 55 52.6	-1.1
	comp=Z,1.7nm,0.6s,baz=109,slow=3.6,SNR=5.6						
KOLS	Kolonicke sedl	96.61	318	*e*P	P	15 56 13.0	-0.1
KOLS	Kolonicke sedl	96.61	318	*e*P	P	15 56 13.0	-0.1
ARCES	ARCESS Array B	96.98	339	P	P	15 56 14.9	+0.5
ARCES	ARCESS Array B	96.98	339	P	P	15 56 14.9	+0.5
	comp=Z,0.9nm,0.8s,baz=92,slow=5.4,SNR=2.4						
KECS	Kecovo	97.75	318	*e*P	P	15 56 16.9	-1.4
KECS	Kecovo	97.75	318	*e*P	P	15 56 16.9	-1.4
SPITS	Spitsbergen Ar	99.65	348	P	Pdif	15 56 25.2	-1.0
SPITS	Spitsbergen Ar	99.65	348	P	Pdif	15 56 25.2	-1.0
	comp=Z,1.7nm,0.8s,baz=115,slow=7.5,SNR=6.9						
TORD	Torodi Ar. Bea	112.13	281	PKiKP	PKiKP	16 01 18.8	-0.5
TORD	Torodi Ar. Bea	112.13	281	PKiKP	PKiKP	16 01 18.8	-0.5
	comp=Z,0.4nm,0.4s,baz=46,slow=1.5,SNR=8.4						
YKA	Yellowknife Ar	116.36	22	PKP	PKPdf	16 01 25.9	-0.1
YKA	Yellowknife Ar	116.36	22	PKP	PKPdf	16 01 25.9	-0.1
	comp=Z,0.9nm,0.6s,baz=312,slow=1.7,SNR=12						
DBIC	Dimbokro	118.00	273	PKP	PKPdf	16 01 30.2	-0.4
DBIC	Dimbokro	118.00	273	PKP	PKPdf	16 01 30.2	-0.4
	comp=Z,5.0nm,1.1s,baz=153,slow=4.5,SNR=2.7						
NVAR	Mina Array Bea	125.62	49	PKP	PKPdf	16 01 47.1	+2.2
NVAR	Mina Array Bea	125.62	49	PKP	PKPdf	16 01 47.1	+2.2
	comp=Z,0.9nm,0.7s,baz=240,slow=3.0,SNR=8.5						
FFC	Flin Flon	126.43	24	*i* PKIKP	PKPdf	16 01 47.1	+1.5
PDAR	Pinedale Array	129.86	40	PKP	PKPdf	16 01 52.5	-0.4
PDAR	Pinedale Array	129.86	40	PKP	PKPdf	16 01 52.5	-0.4
	comp=Z,0.3nm,0.4s,baz=183,slow=1.8,SNR=3.5						
CPUP	Villa Florida	143.90	196	PKP	PKPdf	16 02 18.2	-0.7
CPUP	Villa Florida	143.90	196	PKP	PKPdf	16 02 18.2	-0.7
	comp=Z,1.8nm,0.5s,baz=142,slow=2.7,SNR=7.6						
ACCN	Adirondack Com	144.94	8	*e*PKP	PKPdf	16 02 20.1	-0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TRY	Troy	145.58	8	ePKPbc	PKPab	16 02 22.4	+0.5
ACSO	Alum Creek Sta	145.60	21	ePKPbc	PKPab	16 02 22.1	0.0
BINY	Binghamton	145.71	11	ePKPbc	PKPbc	16 02 22.2	+0.1
WCI	Wyandotte Cave	145.97	27	ePKP2	PKPdf	16 02 22.1	-0.1
WCI	Wyandotte Cave	145.97	27	ePKPbc	PKPdf	16 02 22.1	-0.1
WVT	Waverly	146.91	31	ePKP2	PKPbc	16 02 26.3	+0.5
WVT	Waverly	146.91	31	ePKPbc	PKPbc	16 02 26.3	+0.5
OXF	Oxford	147.27	35	ePKP2	PKPbc	16 02 27.4	+0.6
OXF	Oxford	147.27	35	ePKPbc	PKPbc	16 02 27.4	+0.6
TZTN	Tazewell	148.58	25	ePKPbc	PKPbc	16 02 30.7	+0.5
CPCT	Cooper Cave	149.06	28	ePKPbc	PKPbc	16 02 31.8	+0.3
BDFB	Brasilia	149.16	219	PKPbc	PKPbc	16 02 33.1	+0.7
BDFB	Brasilia	149.16	219	PKPbc	PKPbc	16 02 33.1	+0.7
	comp=Z,4.5nm,0.6s,baz=333,slow=2.3,SNR=4.7						
JSRW	J. Sargeant Re	149.55	16	ePKPdf	PKPdf	16 02 26.2	-1.8

*ISCJB **09** 15:51:27.5±0.4, 50°.03N±0°.03×18°.55E±0°.03, h0^{km}, Error ellipse: s-maj=4.5km s-min=2.2km az=11.0*
*WAR **09** 15:51:28.4, 49°.99N×18°.65E*
*IPEC **09** 15:51:28.6±0.2, 49°.96N×18°.70E, h2^{km}±3^{km}, ML2.2/4, Error ellipse: s-maj=7.6km s-min=1.1km az=158.0*
*CSEM **09** 15:51:28.8±0.2, 49°.97N×18°.56E, h2^{km}, ML2.9/9, Error ellipse: s-maj=5.5km s-min=2.9km az=8.0*
*PRU **09** 15:51:29.9, 49°.97N×18°.56E, h0^{km}*
*VIE **09** 15:51:30.4±0.5, 49°.71N×18°.53E, h0^{km}, mb1.8/2, ML2.6/4, Error ellipse: s-maj=3.3km s-min=2.1km az=84.0 24 km ESE of Ostrava Suspected Mining induced.*
ISC 09 15:51:28.6±0.7, 49°.98N±0°.03×18°.59E±0°.02, h0^{km}, n40, σ0^s.95/72, 2C-2D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	Raciborz	0.28	293	ePg	Pb	15 51 35.4	-1.1
RAC				eSg	Sb	15 51 40.8	-0.9
OKC	Ostrava-Krasne	0.32	244	ePG	Pb	15 51 36.0	-1.2
OKC				eSG	Sg	15 51 39.0	+0.2
	comp=Z,120nm,0.6s						
OKC	Ostrava-Krasne	0.32	244	Pg	Pb	15 51 36.0	-1.2
OKC				Sg	Sg	15 51 39.0	+0.2
	120nm,0.6s						
MORC	Moravsky Berou	0.71	254	ePg	Pg	15 51 42.8	+0.7
	baz=76						
MORC				eSg	Sb	15 51 52.9	-1.2
	63nm,0.3s,baz=76						
OJC	Ojcow	0.81	72	ePg	Pg	15 51 43.0	-1.2
OJC				eSg	Sg	15 51 54.0	-0.8
OJC	Ojcow	0.81	72	ePg	Pg	15 51 43.0	-1.2
OJC				eSg	Sg	15 51 54.0	-0.8
NIE	Niedzica	1.25	116	ePg	Pb	15 51 53.0	-0.1
NIE				eSg	Sb	15 52 10.3	+0.6
NIE				e		15 52 12.0	
NIE	Niedzica	1.25	116	ePg	Pb	15 51 53.0	-0.1
NIE				eSg	Sb	15 52 10.3	+0.6
JAVC	Velka Javorina	1.27	209	eSg	Sn	15 52 12.4	+1.0
	20nm,0.5s						
VRAC	Vranov	1.46	244	ePg	Pb	15 51 56.7	0.0
	baz=64						
VRAC				eSg	Sn	15 52 16.4	+0.3
	44nm,0.5s,baz=64						
VYHS	Vyhne	1.49	174	ePG	Pg	15 51 57.5	+0.3
VYHS				eSG	Sg	15 52 14.6	-1.9
VYHS	Vyhne	1.49	174	ePg	Pg	15 51 57.5	+0.3
VYHS				eSg	Sg	15 52 14.6	-1.9
DPC	Dobruska-Polom	1.51	285	ePG	Pn	15 51 56.6	-0.3
DPC				eSG	Sg	15 52 17.0	0.0
DPC	Dobruska-Polom	1.51	285	Pg	Pn	15 51 56.6	-0.3
DPC				Sg	Sg	15 52 17.0	0.0
KRUC	Moravsky	1.70	238	ePn	Pn	15 51 59.9	+0.4
	baz=58						
KRUC				eSg	Sb	15 52 22.9	+0.3
	15nm,0.3s,baz=58						
KSP	Ksiaz	1.71	301	ePn	Pn	15 51 58.7	-0.9
KSP				ePg	Pg	15 52 02.3	+1.0
KSP				eSg	Sb	15 52 22.9	0.0
KSP	Ksiaz	1.71	301	ePn	Pn	15 51 58.8	-0.9
UPC	Upice	1.74	289	eSG	Sb	15 52 24.1	+0.3
	comp=Z,12nm,0.6s						
UPC	Upice	1.74	289	Sg	Sb	15 52 24.1	+0.3
	12nm,0.6s						
STHS	Stebnicka Huta	1.81	107	ePN	Pb	15 52 02.3	-0.3
STHS				eSN	Sg	15 52 27.2	+0.4
STHS	Stebnicka Huta	1.81	107	ePn	Pb	15 52 02.3	-0.3
STHS				eSn	Sg	15 52 27.2	+0.4
KECS	Kecovo	1.94	140	ePN	Pn	15 52 02.7	-0.2
KECS				eSN	Sn	15 52 27.5	-0.4
KECS	Kecovo	1.94	140	ePn	Pn	15 52 02.7	-0.2
KECS				eSn	Sn	15 52 27.5	-0.4
CRVS	Cervenica-Dubn	2.16	119	ePN	Pn	15 52 06.6	+0.7
CRVS				eSN	Sn	15 52 34.5	+1.2
CRVS	Cervenica-Dubn	2.16	119	ePn	Pn	15 52 06.6	+0.7
CRVS				eSn	Sn	15 52 34.5	+1.2
PRU	Pruhonice	2.61	272	eSG	Sb	15 52 50.0	+1.1
	comp=Z,9.6nm,0.4s						
PRU	Pruhonice	2.61	272	Sg	Sb	15 52 50.0	+1.1
	9.6nm,0.4s						
KOLS	Kolonicke sedl	2.62	112	eSN	Sn	15 52 45.9	+1.2
KOLS	Kolonicke sedl	2.62	112	eSn	Sn	15 52 45.9	+1.2
PVCC	Panska Ves	2.64	284	eSG	Sg	15 52 53.2	-0.2
PVCC	Panska Ves	2.64	284	Sg	Sg	15 52 53.2	-0.2
CONA	Conrad Observa	2.73	222	⇑iPg	Pb	15 52 18.1	-0.2
CONA				⇓iSg	Sb	15 52 53.6	+1.3
	4.9nm,0.4s						
CONA	Conrad Observa	2.73	222	Pg	Pb	15 52 18.1	-0.2
CONA				Sg	Sb	15 52 53.6	+1.3
	4.9nm,0.4s						
BRG	Berggiesshubel	3.11	289	PG	Pb	15 52 26.2	+1.5
BRG				SG	Sg	15 53 06.6	-1.7
	6.6nm,0.7s						
BRG				PG		16 39 41.6	
BRG				SG		16 40 01.5	
	12nm,0.3s						
KHC	Kasperske Hory	3.37	257	ePN	Pn	15 52 22.0	-0.5
KHC				ePG	Pb	15 52 30.8	+1.5
KHC				eSN	Sn	15 53 02.5	-0.8
KHC				eSG	Sg	15 53 15.2	-1.7
	comp=Z,17nm,0.6s						
KHC	Kasperske Hory	3.37	257	Pn	Pn	15 52 22.0	-0.5
KHC	Kasperske Hory	3.37	257	Pg	Pb	15 52 30.8	+1.5
KHC				Sn	Sn	15 53 02.5	-0.8
KHC				Sg	Sg	15 53 15.2	-1.7
	17nm,0.6s						
MOA	Molln	3.56	235	⇑iPn	Pn	15 52 24.3	-0.8
MOA				⇓iSg	Sg	15 53 21.5	-1.4
	9.0nm,0.4s						
MOA	Molln	3.56	235	Pn	Pn	15 52 24.3	-0.8
MOA				Sg	Sg	15 53 21.5	-1.4
	9.0nm,0.4s						
CLL	Collm	3.80	293	e(Pg)	Pg	15 52 49.0	+7.6
CLL				eSg	Sg	15 53 32.0	+1.4
	comp=Z,10.0nm,0.6s						

*NIED **09** 15:55:00, 40°.10N×142°.50E, h44^{km}, Mw3.8 Best double couple: $M_0$4.74000×10^{14} NP1:ϕ_s23.00000°, δ76.00000°, λ95.00000°. NP2:ϕ_s184.00000°, δ15.00000°, λ71.00000°.*
*ISCJB **09** 15:55:19.9±0.7, 40°.15N±0°.04×142°.56E±0°.07, h46^{km}±7^{km}, mb3.7/9, Error ellipse: s-maj=9.5km s-min=5.8km az=26.4*
*JMA **09** 15:55:20.9±0.1, 40°.14N×142°.48E, h34^{km}±1^{km}, M4.0*
*MOS **09** 15:55:20.8±0.7, 40°.16N×142°.61E, h56^{km}, mb4.2/4, Error ellipse: s-maj=25.6km s-min=13.2km az=82.7*
*IDC **09** 15:55:22.7±2.4, 40°.16N×142°.65E, h58^{km}±21^{km}, mb3.4/8, mb1 3.6/11, mb1mx3.4/29, mbtmp3.5/11, ML3.5/2, Error ellipse: s-maj=25.7km s-min=14.1km az=98.0*
ISC 09 15:55:21.1±0.9, 40°.12N±0°.05×142°.52E±0°.07, h39^{km}±4^{km}, n24, σ0^s.92/32, mb3.7/9, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.53	250	⇓P	Pn	15 55 31.7	-0.5
JTH				S	Sn	15 55 39.6	-0.5
MIYJ	Miyakonagasawa	0.77	225	⇓P	Pn	15 55 34.9	-0.5
MIYJ				S	Sn	15 55 44.8	-0.9
JANG	Nango	0.81	288	⇓P	Pn	15 55 35.2	-0.7
JANG				S	Sn	15 55 45.3	-1.4
JKZ	Kuzumaki	0.92	262	⇓P	Pn	15 55 37.5	0.0
JKZ				S	Sn	15 55 49.2	-0.4
JOM	Ohasama	1.15	236	⇓P	Pn	15 55 41.1	+0.5
JOM				eS	Sn	15 55 55.3	+0.3
OFUJ	Ofunato	1.23	212	⇓P	Pn	15 55 42.3	+0.6
JTM	Tenmabayashi	1.29	301	⇓P	Pn	15 55 42.7	+0.2
JTM				S	Sn	15 55 58.5	0.0
JAH	Hinai	1.44	273	⇓P	Pn	15 55 45.3	+0.7
JAH				eS	Sn	15 56 03.3	+1.0
JMK	Ichinoseki	1.54	221	P	Pn	15 55 46.9	+0.9
ASAJ	Asahikawa	3.99	1	P	Pn	15 56 21.3	+1.7
	2.6nm,0.3s,baz=227,slow=8.5,SNR=27						
ASAJ				S	Sn	15 57 05.7	+0.5
	2.5nm,0.3s,baz=180,slow=9.1,SNR=2.7						
YUK	Yuzh-Kuril'sk	4.63	31	iP	Pn	15 56 29.0	+0.5
YUK				eS	Sn	15 57 19.3	-1.7
YUK				pmax	pmax		
	comp=N,15nm,0.3s						
YUK				pmax	pmax		
	comp=Z,43nm,0.3s						
YUK				pmax	pmax		
	comp=E,20nm,0.3s						
YUK				smax	smax		
	comp=E,116nm,0.5s						
YUK				smax	smax		
	comp=N,125nm,0.6s						
MJAR	Matsushiro Arr	4.92	225	P	Pn	15 56 35.6	+3.1
	comp=N,2.0nm,0.3s,baz=33,slow=13,SNR=45						
USRK	Ussuriysk Arra	8.81	301	P	Pn	15 57 29.8	+4.1
	comp=N,0.2nm,0.3s,baz=92,slow=13,SNR=7.9						
SONM	Songino Array	26.92	299	P	P	16 00 58.6	+0.1
	comp=N,0.3nm,0.4s,baz=95,slow=8.5,SNR=3.8						
ZALV	Zalesovo Beam	40.54	310	P	P	16 02 56.2	0.0
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	40.54	310	P	P	16 02 56.2	0.0
	comp=Z,0.6nm,0.3s,baz=98,slow=7.1,SNR=4.4						
KURK	Kurchatov	44.77	306	P	P	16 03 30.9	+0.4
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURBB	Kurchatov Arra	44.84	306	P	P	16 03 30.9	-0.2
	comp=Z,3.0nm,0.6s,baz=82,slow=8.7,SNR=14						
ILAR	Eielson Array	46.44	34	P	P	16 03 43.1	-0.5
	comp=Z,0.2nm,0.5s,baz=266,slow=8.0,SNR=3.1						
BVAR	Borovoye Array	49.18	311	P	P	16 04 05.1	+0.1
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
BVAR	Borovoye Array	49.18	311	P	P	16 04 05.1	+0.1
	comp=Z,1.9nm,0.4s,baz=61,slow=8.7,SNR=12						
WRA	Warramunga Arr	60.24	189	P	P	16 05 24.7	-0.6
	comp=Z,0.2nm,0.5s,baz=7.2,slow=7.2,SNR=4.0						
ASAR	Alice Springs	63.97	189	P	P	16 05 50.0	-0.3
	comp=Z,0.1nm,0.4s,baz=2.6,slow=6.4,SNR=6.9						
NOA	NORSAR Array B	71.67	337	P	P	16 06 38.5	+0.1
	comp=Z,0.5nm,0.6s,baz=38,slow=6.0,SNR=3.6						

*ISCJB **09** 16:08:46.7±0.5, 41°.33N±0°.03×22°.65E±0°.05, h13^{km}±5^{km}, Error ellipse: s-maj=6.9km s-min=4.8km az=7.3*
*CSEM **09** 16:08:46.8±0.1, 41°.31N×22°.70E, h12^{km}, ML1.8, Error ellipse: s-maj=3.5km s-min=2.8km az=75.0*
*ATH **09** 16:08:47.2, 41°.32N×22°.69E, h12^{km}±9^{km}, MD2.8/5*
*SKO **09** 16:08:47.2, 41°.30N×22°.66E, h12^{km}, M1.2, ML1.9*
*BEO **09** 16:08:48.6±1.2, 41°.29N×22°.58E, h5^{km}±3^{km}, ML1.8/3*
ISC 09 16:08:47.6±1.0, 41°.30N±0°.02×22°.69E±0°.03, h7^{km}±9^{km}, n18, σ0^s.65/33, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	285	ePg	Pg	16 08 49.4	-0.4
VAY				eSg	Sg	16 08 51.3	+0.1
VAY	Valandovo	0.09	285	i Pg	Pg	16 08 49.5	-0.2
VAY				i Sg	Sg	16 08 51.3	+0.1
VAY				eLg	Lg	16 08 51.4	
	comp=E,537nm,0.3s						
VAY				eLg	Lg	16 08 51.5	
	comp=N,979nm,0.6s						
VAY	Valandovo	0.09	285	ePg	Pg	16 08 49.4	-0.4
VAY				i Sg	Sg	16 08 51.8	+0.6
VAY				eLg	Lg	16 08 52.0	
	comp=N,979nm,0.6s						
GRG	Griva	0.40	212	ePB	Pg	16 08 55.6	+0.1
GRG				eSB	Sg	16 09 01.5	+0.8
GRG	Griva	0.40	212	ePb	Pg	16 08 55.6	+0.1
GRG				eSb	Sg	16 09 01.5	+0.8
SOH	Sokhos	0.69	133	ePB	Pg	16 09 00.7	-0.2
SOH				eSB	Sg	16 09 10.2	+0.2
SOH	Sokhos	0.69	133	ePb	Pg	16 09 00.7	-0.2
SOH				eSb	Sg	16 09 10.2	+0.2
NVR	Nevrokopi	0.89	86	ePG	Pg	16 09 03.4	-1.2
NVR				eSB	Sg	16 09 16.6	+0.5
NVR	Nevrokopi	0.89	86	ePg	Pg	16 09 03.4	-1.2
NVR				eSb	Sg	16 09 16.6	+0.5
PLG	Polygyros	1.09	148	ePN	Pg	16 09 08.3	-0.2
PLG				eSB	Sg	16 09 22.7	+0.1
PLG	Polygyros	1.09	148	ePn	Pg	16 09 08.3	-0.2
PLG				eSb	Sg	16 09 22.7	+0.1
FNA	Florina	1.12	243	ePN	Pg	16 09 08.3	-0.7
FNA	Florina	1.12	243	ePn	Pg	16 09 08.3	-0.7
VTS	Vitosha	1.35	17	ePg	Pg	16 09 13.9	+0.4
VTS				eSg	Sg	16 09 33.0	+1.9
VTS	Vitosha	1.35	17	ePg	Pg	16 09 13.9	+0.4
BARS	Barje	1.65	337	ePg	Pb	16 09 18.2	-0.2
BARS				eSg	Sg	16 09 39.9	-0.8
BARS	Barje	1.65	337	ePg	Pb	16 09 18.2	-0.2
BARS				eSg	Sg	16 09 39.9	-0.8
ZAPS	Zavoj	1.98	359	ePg	Pb	16 09 24.3	+0.4
ZAPS				eSg	Sg	16 09 51.4	+0.3

IDC 09 16:27:36.1±1.5, 4°.64S×137°.25E, h0^{km}, mb3.6/2, mb1 3.7/5, mb1mx3.4/18, mbtmp3.4/5, ML3.1/3, MS4.1/1, Ms1 4.1/1, ms1mx2.6/24, Error ellipse: s-maj=62.0km s-min=27.2km az=101.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.47	190	Pn	Pn	16 31 13.7	-2.2
	0.1nm,0.3s,baz=10.0,slow=13,SNR=5.7						
WRA				Sn	Sn	16 33 56.2	-12
	0.1nm,0.3s,baz=16,slow=25,SNR=3.7						
FITZ	Fitzroy Crossi	17.55	219	P	P	16 31 43.4	-0.1
	0.1nm,0.3s,baz=14,slow=15,SNR=2.4						
ASAR	Alice Springs	19.19	189	P	P	16 32 01.9	+0.2
	0.1nm,0.3s,baz=7.8,slow=11,SNR=11						
RAO	Raoul Island	48.95	125	LR	LR	16 52 50.6	
	comp=Z,239nm,21.8s,baz=109,slow=31						
MKAR	Makanchi Array	70.44	323	P	P	16 38 52.8	+0.4
	0.2nm,0.6s,baz=117,slow=7.3,SNR=4.8						
ILAR	Eielson Array	88.18	25	P	P	16 40 28.3	-0.5
	0.5nm,0.8s,baz=245,slow=3.9,SNR=3.8						

*CSEM **09** 16:32:44.5, 37°.04N×16°.42E, h24^{km}, MD2.8/16, After ROM*
*ROM **09** 16:32:44.5±0.3, 37°.04N×16°.42E, h24^{km}±2^{km}, Md2.8/16, Ml2.7/12, Error ellipse: s-maj=3.3km s-min=1.7km az=124.0*
ISC 09 16:32:42.3±1.4, 36°.98N±0°.05×16°.52E±0°.04, h18^{km}±7^{km}, n49, σ0^s.73/60, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAZ	Palizzi	1.05	337	Pg	Pg	16 33 03.0	+0.3
MPAZ				Sg	Sb	16 33 16.0	+0.6
	132nm,0.2s						
MPAZ	Palizzi	1.05	337	Pg	Pg	16 33 03.0	+0.3
MPAZ				Sg	Sb	16 33 16.0	+0.6
	132nm,0.2s						
HAVL	Avola	1.12	269	Pg	Pg	16 33 04.0	+0.1
HAVL				Sg	Sg	16 33 18.4	-0.1
	389nm,0.3s						
HAVL	Avola	1.12	269	Pg	Pg	16 33 04.0	+0.1
HAVL				Sg	Sg	16 33 18.4	-0.1
	389nm,0.3s						
SOI	Samo	1.15	341	Pg	Pg	16 33 04.4	-0.1
	41nm,0.3s						
SOI	Samo	1.15	341	Pg	Pg	16 33 04.4	-0.1
	41nm,0.3s						
SSY	Sortino	1.17	279	Pg	Pb	16 33 04.3	+0.3
SSY				Sg	Sb	16 33 18.8	0.0
SSY	Sortino	1.17	279	Pg	Pb	16 33 04.3	+0.3
SSY				Sg	Sb	16 33 18.8	0.0
MTTG	Motta San Giov	1.21	327	Pg	Pb	16 33 05.3	+0.6
	59nm,0.4s						
MTTG	Motta San Giov	1.21	327	Pg	Pb	16 33 05.3	+0.6
	59nm,0.4s						
HCRL	Carlentini	1.22	285	Pg	Pb	16 33 05.2	+0.3
HCRL				Sg	Sb	16 33 19.9	-0.5
	271nm,0.2s						
HCRL	Carlentini	1.22	285	Pg	Pb	16 33 05.2	+0.3
HCRL				Sg	Sb	16 33 19.9	-0.5
	271nm,0.2s						
CEL	Celeste	1.37	339	Pg	Pb	16 33 07.9	+0.5
CEL				Sg	Sb	16 33 24.8	+0.2
	85nm,0.5s						
CEL	Celeste	1.37	339	Pg	Pb	16 33 07.9	+0.5
CEL				Sg	Sb	16 33 24.8	+0.2
	85nm,0.5s						
MSCL	Scilla	1.37	335	Pg	Pb	16 33 07.9	+0.4
	97nm,0.1s						
MSCL	Scilla	1.37	335	Pg	Pb	16 33 07.9	+0.4
	97nm,0.1s						
HMDC	Modica	1.39	269	Pg	Pb	16 33 07.8	0.0
HMDC				Sg	Sb	16 33 25.1	-0.1
	402nm,0.2s						
HMDC	Modica	1.39	269	Pg	Pb	16 33 07.8	0.0
HMDC				Sg	Sb	16 33 25.1	-0.1
	402nm,0.2s						
HVZN	Vizzini	1.46	278	Pg	Pn	16 33 08.3	+0.5
HVZN	Vizzini	1.46	278	Pg	Pn	16 33 08.3	+0.5
PLAC	Placanica	1.47	358	Pg	Pb	16 33 08.8	-0.3
	60nm,0.5s						
PLAC	Placanica	1.47	358	Pg	Pb	16 33 08.8	-0.3
	60nm,0.5s						
MSRU	Castanea	1.51	328	Pg	Pb	16 33 09.8	0.0
	49nm,0.4s						
MSRU	Castanea	1.51	328	Pg	Pb	16 33 09.8	0.0
	49nm,0.4s						
MILZ	Milazzo	1.64	322	Pg	Pb	16 33 11.9	-0.1
	59nm,0.5s						
MILZ	Milazzo	1.64	322	Pg	Pb	16 33 11.9	-0.1
	59nm,0.5s						
JOPP	Joppolo	1.70	343	Pg	Pb	16 33 12.5	-0.5
	48nm,0.4s						
JOPP	Joppolo	1.70	343	Pg	Pb	16 33 12.5	-0.5
	48nm,0.4s						
GALF	Gagliano Caste	1.72	296	Pg	Pb	16 33 13.2	-0.1
GALF	Gagliano Caste	1.72	296	Pg	Pb	16 33 13.2	-0.1
RAFF	Raffo Rosso	1.74	279	Pg	Pb	16 33 13.3	-0.4
RAFF	Raffo Rosso	1.74	279	Pg	Pb	16 33 13.3	-0.4
VPL	Vulcano Piano	1.85	319	Pg	Pb	16 33 14.9	-0.7
VPL	Vulcano Piano	1.85	319	Pg	Pb	16 33 14.9	-0.7
VLS	Valsamata	3.45	69	eP	Pn	16 33 34.1	-1.0
AMT	Artemida-Makis	4.18	81	eP	Pn	16 33 42.9	-2.3
EFP	Efpalio	4.51	70	eP	Pn	16 33 50.2	+0.5
KLV	Kalavryta, Ach	4.60	75	eP	Pn	16 33 51.4	+0.4
EVR	Evrytania	4.61	64	eP	Pn	16 33 52.1	+1.0
TRIZ	Trizonia	4.62	71	eP	Pn	16 33 52.9	+1.7
DYR	Agios Nikonas	4.67	91	eP	Pn	16 33 50.3	-1.6
KALE	Kalithea	4.67	71	eP	Pn	16 33 53.9	+1.8
GUR	Goura	4.73	77	eP	Pn	16 33 54.2	+1.3
VLI	Veliai	5.16	91	eP	Pn	16 33 53.6	-5.0
KYTH	Kithira	5.29	96	eP	Pn	16 34 01.7	+1.2
DID	Didima	5.39	82	eP	Pn	16 34 01.7	-0.1
LKR	Lokris	5.39	70	eP	Pn	16 34 02.9	+1.0
NEO	Neokhori	5.77	64	eP	Pn	16 34 07.1	0.0
STON	Ston	5.95	8	i Pn	Pn	16 34 07.9	-1.6
STON				Sn	Sn	16 35 09.2	-7.9

IDC 09 16:34:30.9±2.9, 22°.70S×171°.35E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.7/19, mbtmp3.7/6, ML3.6/1, Error ellipse: s-maj=92.1km s-min=42.5km az=163.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.58	277	eP	Pn	16 35 43.2	+1.7
DZM				eS	Sn	16 36 35.8	+0.2
DZM	Mont Dzumac	4.58	277	Pn	Pn	16 35 43.5	+2.0
	2.9nm,0.3s,baz=279,slow=22,SNR=45						
DZM				Sn	Sn	16 36 35.2	-0.4
	1.0nm,0.3s,baz=150,slow=20,SNR=3.5						
ASAR	Alice Springs	34.37	261	P	P	16 41 19.1	-0.7
	0.7nm,0.7s,baz=91,slow=9.2,SNR=9.6						
WRA	Warramunga Arr	34.53	267	P	P	16 41 20.4	-0.9
	0.4nm,0.8s,baz=96,slow=8.3,SNR=7.0						
FITZ	Fitzroy Crossi	42.96	267	P	P	16 42 31.9	-0.1
	2.7nm,1.0s,baz=105,slow=12,SNR=2.9						
CMAR	Chiang Mai Arr	81.71	294	P	P	16 46 53.4	+1.6
	0.9nm,0.8s,baz=139,slow=4.7,SNR=5.3						
SONM	Songino Array	91.16	322	P	P	16 47 36.6	-1.1
	0.4nm,0.8s,baz=124,slow=4.4,SNR=4.0						

*ISCJB **09** 16:41:10.3±0.3, 63°.16N±0°.02×150°.45W±0°.06, h127^{km}±3^{km}, mb3.5/4, Error ellipse: s-maj=4.6km s-min=3.7km az=23.9*
*IDC **09** 16:41:11.0±4.2, 63°.27N×150°.68W, h115^{km}±32^{km}, mb3.1/4, mb1 3.3/5, mb1mx3.0/25, mbtmp3.2/5, Error ellipse: s-maj=41.0km s-min=24.2km az=44.0*
*NEIC **09** 16:41:11.8, 63°.16N×150°.48W, h116^{km}, MG3.1(AEIC), After AEIC.*
ISC 09 16:41:11.3±0.8, 63°.16N±0°.03×150°.48W±0°.04, h121^{km}±5^{km}, n82, σ0^s.65/93, mb3.5/4, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRF	Thorofare Moun	0.30	16	P	Pn	16 41 27.9	-0.7
TRF				S	Sn	16 41 40.9	-0.8
HUR	Hurricane	0.42	115	P	Pn	16 41 29.1	+0.1
CUT	Chulitna	0.76	173	P	Pn	16 41 31.5	+0.2
CAST	Castle Rocks	0.77	290	P	Pn	16 41 31.2	-0.1
CAST				S	Sn	16 41 46.0	-0.5
RND	Reindeer	0.78	71	P	Pn	16 41 31.6	+0.1
RND				S	Sn	16 41 46.9	+0.3
PPLA	Purkeypile	0.82	252	P	Pn	16 41 32.2	+0.3
MCK	McKinley	0.90	50	P	Pn	16 41 32.6	+0.1
MCK				S	Sn	16 41 48.6	+0.1
CHUM	Lake Minchumin	1.10	312	P	Pn	16 41 34.6	+0.3
CHUM				S	Sn	16 41 51.3	-0.5
BWN	Browne	1.11	24	P	Pn	16 41 35.1	+0.6
SKT	Skwentna	1.28	203	P	Pn	16 41 36.4	0.0
SKT				S	Sn	16 41 55.7	+0.4
NEA	Nenana	1.55	23	P	Pn	16 41 39.2	-0.2
SML	Sawmill	1.68	143	ePn	Pn	16 41 40.5	-0.5
SML				eSn	Sn	16 42 03.3	-0.3
WRH	Wood River Hil	1.69	38	P	Pn	16 41 41.1	+0.1
PMR	Palmer	1.69	158	P	Pn	16 41 40.8	-0.2
PMR				S	Sn	16 42 03.6	-0.1
SUA	Susitna One	1.71	184	P	Pn	16 41 41.9	+0.5
STLK	Strandline Lak	1.78	201	P	Pn	16 41 42.3	+0.1
MLY	Manley	1.88	357	P	Pn	16 41 43.3	0.0
CCB	Clear Creek Bu	1.90	37	P	Pn	16 41 43.6	+0.1
CGLM	Capps Glacier	1.99	202	P	Pn	16 41 45.7	+0.9
HDA	Harding Lake	2.00	50	P	Pn	16 41 45.0	+0.2
MDM	Murphy Dome	2.06	28	P	Pn	16 41 45.5	0.0
COLA	College	2.07	33	P	Pn	16 41 45.9	+0.2
BGL	Barrier Glacie	2.10	206	P	Pn	16 41 46.8	+0.7
SPU	Mount Spurr	2.12	201	P	Pn	16 41 47.3	+1.0
CKL	Chakachamna La	2.15	205	P	Pn	16 41 47.3	+0.5
ILAR	Eielson Array	2.26	43	P	Pn	16 41 48.0	-0.1
ILAR				S	Sn	16 42 15.6	-0.7
ILAR	Eielson Array	2.26	43	P	Pn	16 41 48.0	-0.1
	8.1nm,0.3s,baz=225,slow=13,SNR=303						
ILAR				S	Sn	16 42 15.6	-0.7
	6.2nm,0.3s,baz=222,slow=16,SNR=13						
IL1	Eielson Array	2.27	43	P	Pn	16 41 48.0	-0.1
GLM	Gilmore Dome	2.28	35	P	Pn	16 41 48.6	+0.2
PAX	Paxson	2.29	93	P	Pn	16 41 48.9	+0.4
TT01	Tatalina	2.54	267	P	Pn	16 41 51.1	-0.4
HARP	HAARP	2.56	105	P	Pn	16 41 52.3	+0.4
RIDG	Independ'e Rid	2.60	75	P	Pn	16 41 52.8	+0.4
SLKM	Skilak Lake	2.67	177	P	Pn	16 41 53.1	-0.2
KLU	Klutina	2.71	126	P	Pn	16 41 53.3	-0.5
DFR	Drift River	2.78	203	P	Pn	16 41 55.0	+0.2
VLZ	Valdez	2.82	134	P	Pn	16 41 54.2	-0.9
RDWB	Redoubt West	2.91	204	P	Pn	16 41 56.2	-0.3
RSO	Redoubt South	2.92	203	ePn	Pn	16 41 57.3	+0.6
DOT	Dot Lake	2.93	77	P	Pn	16 41 56.7	0.0
DIV	Divide	3.00	131	P	Pn	16 41 56.7	-1.0
SCRK	Sand Creek	3.02	71	P	Pn	16 41 58.0	+0.1
MENT	Mentasta	3.09	91	P	Pn	16 41 59.0	+0.3
SEW	Seward	3.11	170	eP	Pn	16 41 58.6	-0.3
SEW				eS	Sn	16 42 32.9	-2.8
SVW2	Sparrevohn	3.17	231	P	Pn	16 41 59.9	+0.1
IM3	Indian Mountai	3.17	335	P	Pn	16 41 59.7	0.0
BRLK	Bradley Lake	3.41	183	P	Pn	16 42 03.4	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GLB	Gilahina Butte	3.56	116	P	Pn	16 42 05.0	+0.1
GOAT	Goat Mountain	3.76	131	P	Pn	16 42 07.1	-0.5
VRDI	Verde Repeater	3.82	117	P	Pn	16 42 08.0	-0.6
MCARA	McCarthy VSAT	3.91	114	P	Pn	16 42 09.9	+0.3
RAGM	Ragged Mountai	3.92	133	P	Pn	16 42 09.2	-0.5
BCA3	Beaver Creek A	3.95	87	P	Pn	16 42 09.7	-0.5
COLD	Coldfoot	4.09	2	P	Pn	16 42 12.3	+0.5
PTPK	Patty Peak	4.25	114	P	Pn	16 42 14.4	+0.1
BERG	Berg Lake	4.25	128	P	Pn	16 42 13.9	-0.2
BALM	Baldy	4.38	115	P	Pn	16 42 15.5	-0.4
KHIT	Khitrov Hills	4.38	125	P	Pn	16 42 16.4	+0.5
EGAK	Eagle	4.42	64	ePn	Pn	16 42 15.4	-0.9
KIAG	Kiagna River	4.43	117	P	Pn	16 42 15.8	-0.9
BGLC	Bering Glacier	4.59	128	P	Pn	16 42 19.2	+0.5
BARN	Barnard Glacie	4.65	113	P	Pn	16 42 20.1	+0.5
BARK	Barkley Ridge	4.69	123	P	Pn	16 42 19.9	-0.2
KULT	Kultieth River	4.71	125	P	Pn	16 42 20.2	-0.1
BM3	Burnt Mountain	4.93	27	P	Pn	16 42 23.4	+0.1
DAWY	Dawson	5.03	75	P	Pn	16 42 24.6	0.0
KAKN	Katmai Knife C	5.37	207	P	Pn	16 42 30.0	+0.8
KDAK	Kodiak Island	5.50	192	P	Pn	16 42 30.4	-0.4
KABR	Katmai Barrier	5.51	206	P	Pn	16 42 30.5	-0.5
OHAK	Old Harbor	6.12	194	P	Pn	16 42 38.5	-0.7
PNL	Peninsula	6.37	118	P	Pn	16 42 42.7	+0.1
HYT	Haines Junctio	6.54	105	P	Pn	16 42 44.9	-0.1
SCHQ	Schefferville	40.90	61	P	P	16 48 41.3	+0.2
SCHQ	Schefferville	40.90	61	P	P	16 48 41.3	+0.2
	1.5nm,0.8s,baz=331,slow=13,SNR=4.5						
TXAR	Lajitas Array	45.12	116	P	P	16 49 17.7	+2.2
TXAR	Lajitas Array	45.12	116	P	P	16 49 17.7	+2.2
	0.3nm,0.7s,baz=335,slow=5.5,SNR=4.2						
ARCES	ARCESS Array B	47.56	2	P	P	16 49 32.8	-1.1
ARCES	ARCESS Array B	47.56	2	P	P	16 49 32.8	-1.1
	0.9nm,0.8s,baz=348,slow=8.3,SNR=4.8						
MKAR	Makanchi Array	62.70	322	P	P	16 51 22.1	-0.7
MKAR	Makanchi Array	62.70	322	P	P	16 51 22.1	-0.7
	0.2nm,0.4s,baz=43,slow=4.6,SNR=3.6						
QSPA	South Pole Qui	152.97	180	PKPbc	PKPbc	17 00 52.7	+0.2
QSPA	South Pole Qui	152.97	180	PKPbc	PKPbc	17 00 52.7	+0.2
	1.6nm,1.2s,baz=194,slow=0.9,SNR=5.6						

IDC 09 16:44:21.4±2.2, 3°.76S×154°.33E, h0km, mb3.4/4, mb1 3.7/4, mb1mx3.4/18, mbtmp3.4/4, Error ellipse: s-maj=90.1km s-min=27.2km az=119.0, North of Solomon Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.27	229	P	P	16 49 50.4	+0.7
	0.5nm,0.4s,baz=53,slow=9.5,SNR=10						
ASAR	Alice Springs	27.95	223	P	P	16 50 13.0	-0.8
	0.2nm,0.3s,baz=54,slow=9.0,SNR=17						
MKAR	Makanchi Array	80.55	319	P	P	16 56 36.0	+0.2
	0.1nm,0.5s,baz=110,slow=6.3,SNR=3.0						
ILAR	Eielson Array	80.63	22	P	P	16 56 35.6	-0.1
	0.4nm,0.7s,baz=255,slow=6.4,SNR=4.1						

AUST 09 16:43:47.4, 29°.93S×172°.64W, h450km
IDC 09 16:44:42.8±3.4, 31°.50S×179°.18E, h476km±33km, mb3.5/7, mb1 3.6/8, mb1mx3.3/21, mbtmp3.5/8, Error ellipse: s-maj=37.5km s-min=16.9km az=44.0
ISCJB 09 16:44:44.9±1.2, 31°.73S±0°.07×178°.9E±0°.2, h500km, mb3.9/7, Error ellipse: s-maj=24.1km s-min=6.8km az=164.3
ISC 09 16:44:45.2±1.4, 31°.74S±0°.10×179°.0E±0°.2, h500km, n34, σ1^{s}32/37, mb4.0/7, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.69	193	PN	P	16 46 30.1	+2.0
URZ				SN	S	16 47 51.1	-1.4
URZ	Urewera	6.69	193	P	P	16 46 29.3	+1.2
	2.5nm,0.3s,baz=330,slow=3.8,SNR=36						
URZ				S	S	16 47 50.3	-2.2
	2.2nm,0.3s,baz=95,slow=18,SNR=9.3						
MWZ	Matawai	6.69	190	PN	P	16 46 30.0	+1.8
MWZ				SN	S	16 47 51.8	-0.9
KNZ	Kokohu	7.35	188	PN	P	16 46 36.0	+1.3
BKZ	Black Stump Fm	7.69	195	PN	P	16 46 39.8	+1.5
BKZ				SN	S	16 48 08.1	-3.1
FWVZ	Far West T-bar	8.02	200	PN	P	16 46 43.5	+1.7
BHHZ	Black Hill Sta	8.10	197	PN	P	16 46 43.5	+1.0
TSZ	Takapari Road	8.67	196	PN	P	16 46 49.1	+0.7
MRZ	Mangatainoka R	9.33	196	PN	P	16 46 55.7	+0.4
OGWZ	Otaki Gorge	9.58	198	PN	P	16 46 58.5	+0.6
CAW	Cannon Point	9.88	198	PN	P	16 47 02.1	+1.0
TCW	Tory Channel	10.20	201	PN	P	16 47 05.4	+0.9
QRZ	Quartz Range	10.48	208	PN	P	16 47 08.9	+1.5
TUWZ	Tuamarina	10.50	202	PN	P	16 47 08.7	+1.1
THZ	Tophouse	11.14	204	PN	P	16 47 15.8	+1.2
LTZ	Lake Taylor	12.26	204	PN	P	16 47 26.3	-0.1
OXZ	Oxford	12.82	204	PN	P	16 47 31.9	-0.3
DZM	Mont Dzumac	14.79	308	P	P	16 47 55.6	+2.2
QLP	Quilpie	30.75	271	P	P	16 50 20.0	+0.9
	baz=38,SNR=5.3						
CTA	Charters Tower	31.58	284	P	P	16 50 27.1	+0.9
	6.4nm,0.5s,baz=109,slow=11,SNR=11						
STKA	Stephens Creek	31.72	260	P	P	16 50 29.0	+1.6
	3.1nm,0.4s,baz=106,slow=10,SNR=16						
STKA	Stephens Creek	31.72	260	P	P	16 50 29.1	+1.7
	baz=39,SNR=13						
MTSU	Mount Surprise	34.12	285	P	P	16 50 48.6	+0.7
	baz=41,SNR=11						
ASAR	Alice Springs	40.54	270	P	P	16 51 40.1	-0.5
	3.6nm,0.7s,baz=107,slow=7.4,SNR=74						
WRA	Warramunga Arr	41.65	275	P	P	16 51 48.7	-0.8
	5.3nm,0.4s,baz=112,slow=7.9,SNR=95						
FORT	Forrest	43.27	257	P	P	16 52 02.0	0.0
	baz=50,SNR=7.9						
KDU	Kakadu	46.70	283	P	P	16 52 27.5	-1.1
	baz=53,SNR=3.3						
MTN	Manton Dam	47.73	282	P	P	16 52 35.4	-1.0
	baz=54,SNR=4.6						
MTN				S	S	16 59 31.2	+36
	baz=54,SNR=6.9						
KNRA	Kununurra	48.32	277	P	P	16 52 40.4	-0.4
	baz=55,SNR=6.9						
FITZ	Fitzroy Crossi	49.85	273	P	P	16 52 51.8	-0.3
	1.1nm,0.3s,baz=132,slow=5.5,SNR=15						
FITZ	Fitzroy Crossi	49.85	273	P	P	16 52 51.8	-0.3
	baz=57,SNR=6.3						
QSPA	South Pole Qui	58.37	180	P	P	16 53 53.2	+1.5
	1.3nm,0.5s,baz=126,slow=1.4,SNR=21						
PETK	Petropavlovsk-	86.52	347	P	P	16 56 33.1	-1.0
	1.1nm,0.8s,baz=155,slow=11,SNR=3.5						
FINES	FINESS Array B	145.47	337	PKPbc	PKPbc	17 03 24.5	-1.8
	1.7nm,0.5s,baz=48,slow=5.7,SNR=7.3						

CSEM 09 16:49:12.8±0.1, 39°.92N×39°.24E, h5km, MD2.7, Error ellipse: s-maj=3.4km s-min=2.8km az=107.0
ISK 09 16:49:12.1, 39°.94N×39°.23E, h5km, MD2.7
DDA 09 16:49:12.8, 39°.89N×39°.27E, h7km, MD2.7
ISC 09 16:49:12.9±0.9, 39°.92N±0°.02×39°.23E±0°.03, h16km±8km, n25, σ0^{s}72/42, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EZC	Erzincan	0.19	150	ePG	Pg	16 49 16.9	-0.6
EZC	Erzincan	0.19	150	ePg	Pg	16 49 16.9	-0.6
KELT	Kelkit	0.23	4	i P	Pg	16 49 18.8	+0.6
KELT				i S	Sg	16 49 22.2	+0.3
KELT	Kelkit	0.23	4	i P	Pg	16 49 18.8	+0.6
KELT				i S	Sg	16 49 22.2	+0.3
EUZM	Uzumlu	0.41	120	i P	Pg	16 49 21.0	-0.3
EUZM				i S	Sg	16 49 26.3	-0.7
EUZM	Uzumlu	0.41	120	i P	Pg	16 49 21.0	-0.3
EUZM				i S	Sg	16 49 26.3	-0.7
ERZN	Erzincan	0.50	131	ePG	Pg	16 49 22.5	-0.4
ERZN				eSG	Sg	16 49 30.5	+0.9
GUMT	Gumushane	0.57	19	ePG	Pg	16 49 23.6	-0.7
GUMT				eSG	Sg	16 49 31.6	-0.4
GUMT	Gumushane	0.57	19	ePg	Pg	16 49 23.6	-0.7
GUMT				eSg	Sg	16 49 31.6	-0.4
ILIC	ilic-Erzincan	0.69	228	ePG	Pg	16 49 25.8	-0.6
ILIC				eSG	Sb	16 49 36.6	+0.6
ILIC	ilic-Erzincan	0.69	228	ePg	Pg	16 49 25.8	-0.6
ILIC				eSg	Sb	16 49 36.6	+0.6
SUSE	Susehri	0.84	291	i P	Pb	16 49 30.0	+0.8
SUSE				i S	Sb	16 49 41.0	+0.6
SUSE	Susehri	0.84	291	i P	Pb	16 49 30.0	+0.8
SUSE				i S	Sb	16 49 41.0	+0.6
BAYT	Ayd˜–ntepe-Bay	0.84	55	ePG	Pg	16 49 28.7	-0.6
BAYT				eSG	Sg	16 49 40.1	-0.4
BAYT	Ayd˜–ntepe-Bay	0.84	55	ePg	Pg	16 49 28.7	-0.6
BAYT				eSg	Sg	16 49 40.1	-0.4
KEMA	Kemaliye	0.86	222	i P	Pg	16 49 29.7	+0.1
KEMA				eS	Sg	16 49 39.2	-1.8
KEMA	Kemaliye	0.86	222	i P	Pg	16 49 29.7	+0.1
KEMA				eS	Sg	16 49 39.2	-1.8
PTK	Pertek	1.03	173	ePG	Pb	16 49 33.0	+0.5
PTK	Pertek	1.03	173	ePg	Pb	16 49 33.0	+0.5
ESPY	Espiye-Giresun	1.07	339	ePG	Pb	16 49 32.3	-0.8
ESPY	Espiye-Giresun	1.07	339	ePg	Pb	16 49 32.3	-0.8
BINT	Bingol	1.43	136	ePn	Pb	16 49 39.9	+0.8
ELZG	Elazig	1.43	188	eP	Pb	16 49 40.0	+0.8
ELZG				eS	Sg	16 49 58.9	-0.2
ELZG	Elazig	1.43	188	eP	Pb	16 49 40.0	+0.8
ELZG				eS	Sg	16 49 58.9	-0.2
BNGB	Bingˆ¶l	1.45	129	ePN	Pb	16 49 39.9	+0.3

NSSC 09 17:29:48.1±1.0, 36°.34N×40°.74E, h74km±8km, MD1.3, ML2.3
ISCJB 09 17:29:50.9±0.9, 36°.38N±0°.03×40°.84E±0°.06, h3km±6km, Error ellipse: s-maj=8.1km s-min=4.7km az=18.6
DDA 09 17:29:50.1, 36°.41N×40°.66E, h7km, MD3.1
CSEM 09 17:29:51.4±0.6, 36°.36N×40°.84E, h5km, ML2.3, Error ellipse: s-maj=13.6km s-min=8.0km az=101.0
ISK 09 17:29:51.8, 36°.36N×40°.71E, h5km, MD3.2
ISC 09 17:29:50.3±1.3, 36°.38N±0°.03×40°.79E±0°.04, h7km±11km, n21, σ0^{s}55/34, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SFNV	Sufian	0.55	275	i P	Pb	17 30 02.5	+0.2
SFNV				eS	Sb	17 30 11.2	+0.8
SFNV				AML	AML	17 30 23.9	
	comp=N,121nm,0.5s						
SFNV				AML	AML	17 30 24.5	
	comp=E,91nm,0.6s						
SFNV				AML	AML	17 30 26.6	
	comp=Z,175nm,0.6s						
SFNV	Sufian	0.55	275	i P	Pb	17 30 02.5	+0.2
	SNR=138						
SFNV				eS	Sb	17 30 11.2	+0.8
	comp=Z,175nm,0.6s,SNR=138						
MZRK	Al-Mazaregh	0.56	191	eP	Pg	17 30 01.3	+0.2
MZRK				eS	Sb	17 30 11.1	+0.5
MZRK				AML	AML	17 30 21.5	
	comp=N,275nm,0.5s						
MZRK				AML	AML	17 30 22.4	
	comp=E,254nm,0.3s						
MZRK				AML	AML	17 30 26.5	
	comp=Z,88nm,0.7s						
MZRK	Al-Mazaregh	0.56	191	eP	Pg	17 30 01.3	+0.2
	SNR=138						
MZRK				eS	Sb	17 30 11.1	+0.5
	comp=Z,88nm,0.7s,SNR=138						
KBSD	Kabsdagh	0.66	343	i P	Pg	17 30 03.5	+0.5
KBSD				eS	Sb	17 30 13.6	+0.1
KBSD				AML	AML	17 30 16.2	
	comp=E,202nm,0.5s						
KBSD				AML	AML	17 30 24.3	
	comp=Z,83nm,0.7s						
KBSD				AML	AML	17 30 27.5	
	comp=N,79nm,0.5s						
KBSD	Kabsdagh	0.66	343	i P	Pg	17 30 03.5	+0.5
	SNR=129						
KBSD				eS	Sb	17 30 13.6	+0.1
	comp=N,79nm,0.5s,SNR=129						
MARD	Mardin	0.94	360	i P	Pg	17 30 07.6	-0.7
MARD				i S	Sb	17 30 21.8	+0.1
KSRV	Kasrt alli	1.53	251	eP	Pn	17 30 16.6	-1.5
KSRV				eS	Sn	17 30 38.3	0.0
KSRV				AML	AML	17 30 45.5	
	comp=Z,31nm,0.5s						
KSRV				AML	AML	17 30 46.4	
	comp=N,21nm,0.5s						
KSRV				AML	AML	17 30 48.4	
	comp=E,22nm,0.2s						
BEST	Besiri	1.56	14	i P	Pn	17 30 18.8	+0.2
BEST				i S	Sn	17 30 38.6	-0.5
DIYA	Diyarbakir	1.64	341	eP	Pn	17 30 19.5	-0.1
DIYA				i S	Sn	17 30 41.2	+0.3
DIYA	Diyarbakir	1.64	341	eP	Pn	17 30 19.5	-0.1
DIYA				i S	Sn	17 30 41.2	+0.3
BTMT	Batman	1.90	17	ePN	Pb	17 30 25.3	0.0
BTMT				eSN	Sb	17 30 49.6	+0.3
BTMT	Batman	1.90	17	ePn	Pb	17 30 25.3	0.0
BTMT				eSn	Sb	17 30 49.6	+0.3
URFA	Urfa	1.90	305	ePN	Pb	17 30 25.8	+0.4
URFA				eSN	Sg	17 30 51.0	-0.5
URFA	Urfa	1.90	305	ePn	Pb	17 30 25.8	+0.4
URFA				eSn	Sg	17 30 51.0	-0.5
SVRC	Sivrice-ELAZID	2.32	330	ePN	Pb	17 30 32.2	-0.4
SVRC	Sivrice-ELAZID	2.32	330	ePn	Pb	17 30 32.2	-0.4
BINT	Bingol	2.51	355	ePn	Pb	17 30 37.1	+1.3
BNGB	Bingˆ¶l	2.61	358	ePN	Pb	17 30 37.1	-0.4
KMRS	Kahramanmaras	3.31	291	ePN	Pb	17 30 46.2	-3.2
KMRS	Kahramanmaras	3.31	291	ePn	Pb	17 30 46.2	-3.2

SZGRF 09 17:51:12.8, 21°.48S×178°.09W, h33km, Fiji Islands region
ISCJB 09 17:52:16.2±0.5, 19°.83S±0°.09×178°.22W±0°.08, h569km, mb4.0/17, Error ellipse: s-maj=14.3km s-min=7.2km az=142.3
AUST 09 17:52:17.3±12.0, 19°.67S×177°.83W, h596km±3km, Error ellipse: s-maj=4.5km s-min=2.5km az=244.0
IDC 09 17:52:21.4±1.9, 19°.90S×178°.32W, h617km±23km, mb3.5/17, mb1 3.7/19, mb1mx3.7/23, mbtmp3.5/19, Error ellipse: s-maj=15.4km s-min=10.7km az=150.0
ISC 09 17:52:17.2±0.6, 19°.8S±0°.1×178°.19W±0°.10, h569km, n77, σ1^{s}03/79, mb4.1/17, 8C-6D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.46	48	P	P	17 54 20.6	+0.4
	3.6nm,0.3s,baz=330,slow=20,SNR=4.0						
AFI				S	S	17 55 58.3	-2.6
	4.4nm,0.3s,baz=22,slow=19,SNR=4.3						
DZM	Mont Dzumac	14.54	258	eP	P	17 55 24.8	+3.0
DZM	Mont Dzumac	14.54	258	P	P	17 55 25.4	+3.5
	1.3nm,0.3s,baz=94,slow=19,SNR=29						
URZ	Urewera	18.88	191	P	P	17 56 00.9	-1.2
	4.2nm,0.3s,baz=307,slow=3.7,SNR=24						
RPZ	Rata Peaks	25.53	198	P	P	17 57 00.6	-0.8
	17nm,1.0s,baz=128,slow=13,SNR=5.7						
CTA	Charters Tower	33.39	263	P	P	17 58 10.6	+0.9
	17nm,0.4s,baz=92,slow=11,SNR=31						
QLP	Quilpie	35.11	252	P	P	17 58 24.3	+0.4
	baz=35,SNR=29						
MTSU	Mount Surprise	35.45	266	P	P	17 58 27.6	+0.7
	baz=36,SNR=26						
COEN	Coen	37.36	273	P	P	17 58 43.6	+1.1
	baz=38,SNR=15						
STKA	Stephens Creek	37.95	243	P	P	17 58 47.0	-0.1
	3.2nm,0.9s,baz=94,slow=9.1,SNR=6.7						
STKA	Stephens Creek	37.95	243	P	P	17 58 48.0	+0.8
	baz=38,SNR=6.1						
BBOO	Buckleboo	42.72	243	P	P	17 59 25.3	+0.2
	baz=43,SNR=12						
ASAR	Alice Springs	44.52	256	P	P	17 59 39.3	+0.1
	8.2nm,0.5s,baz=86,slow=8.1,SNR=291						
ASAR				PcP	PcP	18 01 09.3	-0.7
	0.9nm,0.4s,baz=111,slow=4.1,SNR=5.9						
ASAR				S	S	18 05 30.6	-3.4
	1.2nm,0.7s,baz=93,slow=16,SNR=8.8						
WRA	Warramunga Arr	44.53	261	P	P	17 59 38.8	-0.5
	5.8nm,0.5s,baz=97,slow=7.9,SNR=160						
WRA				S	S	18 05 29.7	-4.4
	0.4nm,0.7s,baz=97,slow=12,SNR=3.0						
KDU	Kakadu	47.76	271	P	P	18 00 03.7	-0.1
	baz=48,SNR=8.3						
MTN	Manton Dam	48.98	270	P	P	18 00 12.5	-0.3
	baz=49,SNR=7.5						
KNRA	Kununurra	50.53	266	P	P	18 00 24.0	-0.1
	baz=51,SNR=8.6						
SWI	Sorong	52.89	284	P	P	18 00 41.7	+0.5
	baz=53,SNR=6.3						
FITZ	Fitzroy Crossi	52.95	262	P	P	18 00 41.8	+0.2
	baz=53,SNR=6.7						
MEEK	Meekatharra	57.99	250	P	P	18 01 15.5	-0.9
	baz=58,SNR=8.0						
KLBR	Kellerberrin	58.21	245	P	P	18 01 17.4	-0.5
	baz=58,SNR=5.6						
VNDA	Vanda	58.63	185	P	P	18 01 20.7	+0.9
	1.3nm,0.6s,baz=345,slow=7.5,SNR=11						
MJAR	Matsushiro Arr	69.51	324	P	P	18 02 29.4	0.0
	6.1nm,0.6s,baz=155,slow=5.9,SNR=24						
MAT	Matsushiro	69.51	324	P	P	18 02 29.3	-0.1
UGM	Wanagama	69.80	269	P	P	18 02 31.2	-0.4
	baz=70,SNR=3.6						
PETK	Petropavlovsk-	75.51	345	P	P	18 03 03.5	0.0
	7.1nm,0.7s,baz=148,slow=9.3,SNR=16						
KSRS	Korea Array	76.22	319	P	P	18 03 08.8	+1.1
	1.9nm,0.7s,baz=124,slow=5.4,SNR=6.5						
USRK	Ussuriysk Arra	78.25	326	P	P	18 03 20.1	+1.5
	6.3nm,0.8s,baz=108,slow=3.5,SNR=18						
YBH	Yreka Blue Hor	79.83	39	P	P	18 03 28.6	+1.4
	0.9nm,0.5s,baz=217,slow=4.4,SNR=5.8						
NVAR	Mina Array Bea	80.61	44	P	P	18 03 32.5	+1.0
	1.0nm,0.8s,baz=219,slow=9.5,SNR=5.4						
TXAR	Lajitas Array	86.81	57	P	P	18 04 03.5	+1.3
	0.2nm,0.5s,baz=211,slow=6.9,SNR=2.9						
ILAR	Eielson Array	87.64	13	P	P	18 04 04.3	-0.8
	6.6nm,1.1s,baz=225,slow=5.8,SNR=22						
CMAR	Chiang Mai Arr	89.70	290	P	P	18 04 17.1	+1.3
	3.1nm,0.9s,baz=116,slow=2.8,SNR=19						
SONM	Songino Array	95.08	319	P	P	18 04 39.8	-0.1
	0.3nm,0.6s,baz=136,slow=2.7,SNR=5.6						
YKA	Yellowknife Ar	95.92	25	P	P	18 04 42.6	-0.5
	0.1nm,0.3s,baz=263,slow=4.9,SNR=3.8						
MKAR	Makanchi Array	110.56	314	PKiKP	PKiKP	18 09 43.6	-1.9
	0.5nm,0.6s,baz=212,slow=0.4,SNR=9.8						
ARCES	ARCESS Array B	128.16	350	PKP	PKPdf	18 10 17.6	-1.0
	0.9nm,0.4s,baz=73,slow=1.0,SNR=21						
FINES	FINESS Array B	135.01	344	PKP	PKPdf	18 10 31.3	-0.4
	1.5nm,0.8s,baz=48,slow=2.8,SNR=3.5						
AKASG	Malin Array Be	142.28	331	PKhKP	PKPpre	18 10 40.6	
	4.4nm,0.4s,baz=43,slow=4.0,SNR=17						
KWP	Kalwaria Pacla	145.84	336	⇓iP	PKPbc	18 10 52.7	-0.6
BRTR	Keskin Array B	146.21	313	PKPbc	PKPbc	18 10 53.9	-1.0
	2.7nm,0.6s,baz=138,slow=4.6,SNR=19						
BURAR	Bucovina Array	146.33	331	⇑iP	PKPbc	18 10 54.6	-0.2
KOLS	Kolonicke sedl	146.57	335	e	PKPbc	18 10 54.8	-0.5
STHS	Stebnicka Huta	146.57	337	e	PKPbc	18 10 55.5	+0.2
CFR	Carcaliu	146.58	325	⇑iP	PKPbc	18 10 55.1	-0.3
CRVS	Cervenica-Dubn	146.91	336	e	PKPbc	18 10 57.0	+0.8
TRPA	Tarpa	147.10	334	⇓iP	PKPbc	18 10 56.3	-0.4
CLL	Collm	147.31	347	ePKPbc	PKPbc	18 10 56.7	-0.4
CLL	Collm	147.31	347	⇓iPKP	PKPbc	18 10 56.5	-0.6
	comp=Z,10.0nm,0.9s						
CLL				⇑i		18 11 00.6	
	comp=Z,7.0nm,0.8s						
UPC	Upice	147.31	343	eP	PKPbc	18 10 57.2	0.0
UPC				ex	x	18 11 01.3	
DPC	Dobruska-Polom	147.37	343	eP	PKPbc	18 10 57.5	+0.1
DPC				ex	x	18 11 01.9	
DOPR	Dopca	147.45	329	⇓iP	PKPbc	18 10 58.0	+0.3
BRG	Berggiesshubel	147.50	346	eP	PKPbc	18 10 57.4	-0.3
	comp=Z,8.4nm,1.1s						
BRG				e		18 11 01.3	
	comp=Z,4.3nm,0.7s						
BRG	Berggiesshubel	147.50	346	ePKPbc	PKPbc	18 10 57.5	-0.2
MLR	Muntele Rosu	147.51	328	⇓iP	PKPbc	18 10 56.6	-1.5
FBE	Freiberg	147.59	346	ePKPbc	PKPbc	18 10 58.0	+0.1
KECS	Kecovo	147.62	337	e	PKPbc	18 10 58.2	+0.1
PVCC	Panska Ves	147.67	345	eP	PKPbc	18 10 58.2	+0.1
DRGR		148.07	332	⇑iP	PKPbc	18 10 58.9	-0.5
PRU	Pruhonice	148.18	344	eP	PKPbc	18 10 59.1	-0.3
PRU				ex	x	18 11 04.5	
VYHS	Vyhne	148.21	338	e	PKPbc	18 10 59.5	-0.1
VYHS				e		18 11 05.2	
ARR	Arges	148.25	329	⇑iP	PKPbc	18 11 00.4	+0.6
PLN	Plauen	148.26	347	ePKPbc	PKPbc	18 10 59.4	-0.2
TANN	Tannenbergstha	148.26	347	ePKPbc	PKPbc	18 10 59.3	-0.4
WERD	Werda	148.26	347	ePKPbc	PKPbc	18 10 59.5	-0.2
GUNZ	Gunzen	148.34	347	ePKPbc	PKPbc	18 10 59.7	-0.2
NKC	Novy Kostel	148.44	347	eP	PKPbc	18 11 00.1	0.0
MANZ	Manzenberg	148.74	347	ePKPbc	PKPbc	18 11 00.7	-0.2
ROTZ	Rotzenmuhle	148.93	347	ePKPbc	PKPbc	18 11 01.1	-0.2
TNS	Taunus Mts	149.15	352	ePKPbc	PKPbc	18 11 01.7	-0.2
KHC	Kasperske Hory	149.21	345	eP	PKPbc	18 11 01.9	-0.1
KHC				ex	x	18 11 09.2	
GEC2	GERESS Array S	149.44	344	ePKPbc	PKPbc	18 11 02.2	-0.5
GERES	GERESS Array B	149.44	344	PKPbc	PKPbc	18 11 02.2	-0.5
	comp=Z,4.6nm,0.8s,baz=31,slow=2.9,SNR=27						
BZS	Buzias	149.46	332	⇑iP	PKPbc	18 11 02.4	-0.3
CONA	Conrad Observa	149.68	341	⇑iPKPbc	PKPbc	18 11 02.8	-0.4
	comp=Z,4.8nm,0.7s						
WTTA	Wattenberg	151.42	346	⇑iPKPbc	PKPbc	18 11 06.6	-0.8
	comp=Z,3.7nm,0.6s						
ABTA	Abfaltersbach	151.69	344	⇓iPKPbc	PKPbc	18 11 06.6	-1.3
	comp=Z,5.0nm,0.5s						

MAN 09 18:01:46, 18°.47N×120°.72E, h17km, mb4.2, ML3.0, MS2.8, 1C, Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.17	212	⇑iP	Pb	18 01 52.4	+1.7
APYP	Conner	0.79	140	eP	Pg	18 02 01.8	+0.4
APYP				eS	Sn	18 02 14.8	+1.1
ABRA	Dolores	0.82	180	eP	Pb	18 02 01.8	0.0
ABRA				eS	Sn	18 02 15.3	+0.8
SGCP	Mt. Cagua	1.28	100	eP	Pn	18 02 08.9	-0.2
SGCP				eS	Sg	18 02 27.7	+0.1
CAUP	Cauayan	1.85	145	eP	Pb	18 02 19.6	+0.2

IDC 09 18:12:44.1±0.6, 60°.16S×26°.80W, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.1/18, mbtmp4.1/9, Error ellipse: s-maj=25.4km s-min=17.6km az=57.0
ISCJB 09 18:12:46.8±0.5, 60°.29S±0°.09×26°.7W±0°.2, h34km, mb4.2/17, Error ellipse: s-maj=15.9km s-min=9.8km az=138.4
NEIC 09 18:12:49.6±3.5, 60°.20S×26°.76W, h39km±31km, mb4.4/10, Error ellipse: s-maj=13.3km s-min=9.1km az=48.0
ISC 09 18:12:49.1±0.5, 60°.2S±0°.1×26°.8W±0°.1, h34km, n50, σ0^{s}86/44, mb4.3/17, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	12.95	152	ePn	Pn	18 15 46.0	-4.3
SNAA	Sanae	14.95	150	ePn	Pn	18 16 12.4	-5.1
SNAA	Sanae	14.95	150	eSn	Sn	18 18 45.0	-17
SNAA	Sanae	14.95	150	ePn	Pn	18 16 11.8	-5.8
	2.8nm,0.5s						
SNAA				Sn	Sn	18 18 42.6	-19
SNAA	Sanae	14.95	150	Pn	Pn	18 16 12.0	-5.6
	0.1nm,0.3s,baz=322,slow=14,SNR=41						
SNAA				Sn	Sn	18 18 42.6	-19
	0.1nm,0.3s,baz=297,slow=18,SNR=4.1						
QSPA	South Pole Qui	30.05	180	eP	P	18 18 55.1	+0.4
	8.7nm,1.1s						
QSPA				PcP	PcP	18 21 55.3	-0.3
QSPA	South Pole Qui	30.05	180	P	P	18 18 55.3	+0.6
	1.3nm,0.5s,baz=223,slow=4.0,SNR=14						
QSPA				PcP	PcP	18 21 55.3	-0.3
	0.5nm,0.6s,baz=239,slow=5.9,SNR=4.1						
TRQA	Tornquist	31.34	299	eP	P	18 19 06.9	+0.8
	3.6nm,0.7s						
MAW	Mawson	36.76	140	P	P	18 19 52.6	-0.1
MAW	Mawson	36.76	140	P	P	18 19 52.6	-0.1
	1.6nm,0.9s,baz=243,slow=9.0,SNR=3.6						
CFAA	Coronel Fontan	39.52	297	P	P	18 20 16.4	0.0
CFAA	Coronel Fontan	39.52	297	P	P	18 20 16.4	0.0
	0.8nm,0.7s,baz=164,slow=8.5,SNR=11						
CPUP	Villa Florida	39.79	315	P	P	18 20 17.6	-0.9
CPUP	Villa Florida	39.79	315	P	P	18 20 17.6	-0.9
	1.1nm,0.3s,baz=147,slow=7.0,SNR=5.8						
SBA	Scott Base	41.96	184	P	P	18 20 34.2	-1.7
	6.5nm,1.4s						
VNDA	Vanda	42.44	183	P	P	18 20 40.8	+0.9
VNDA	Vanda	42.44	183	P	P	18 20 40.8	+0.9
	0.7nm,0.5s,baz=154,slow=7.3,SNR=3.6						
LCO	Las Campanas	42.84	297	eP	P	18 20 44.1	+0.2
	5.9nm,0.7s						
BOSA	Boshof	46.93	72	eP	P	18 21 15.8	-0.6
	7.4nm,1.2s						
BOSA	Boshof	46.93	72	P	P	18 21 16.2	-0.2
	1.7nm,0.5s,baz=196,slow=9.4,SNR=7.5						
LVC	Limon Verde	47.65	303	eP	P	18 21 18.8	-3.4
	3.7nm,0.7s						
SIV	San Ignacio	50.63	316	P	P	18 21 44.9	+0.2

SIV	**San Ignacio**	**50.63**	**316**	P	**P**	**18 21 44.9**	**+0.2**
	1.9nm,0.5s,baz=197,slow=7.9,SNR=14						
TSUM	**Tsumeb**	**51.63**	**57**	P	**P**	**18 21 52.1**	**-0.2**
	2.6nm,0.8s						
SAML	**Samuel**	**57.91**	**316**	eP	**P**	**18 22 37.3**	**-0.3**
	2.1nm,0.7s						
LSZ	**Lusaka**	**59.77**	**66**	P	**P**	**18 22 50.3**	**-0.4**
	8.3nm,1.4s						
OTAV	**Otavalo**	**72.15**	**305**	P	**P**	**18 24 10.9**	**+0.2**
	3.8nm,0.9s						
TORD	**Torodi Ar. Bea**	**76.58**	**29**	P	**P**	**18 24 36.8**	**+1.0**
TORD	**Torodi Ar. Bea**	**76.58**	**29**	P	**P**	**18 24 36.8**	**+1.0**
	3.7nm,0.4s,baz=199,slow=6.3,SNR=32						
ASAR	**Alice Springs**	**94.97**	**162**	P	**P**	**18 26 07.2**	**-0.8**
ASAR	**Alice Springs**	**94.97**	**162**	P	**P**	**18 26 07.2**	**-0.8**
	0.4nm,0.6s,baz=184,slow=4.7,SNR=5.1						
CMAR	**Chiang Mai Arr**	**123.34**	**113**	PKP	**PKPdf**	**18 31 42.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**123.34**	**113**	PKP	**PKPdf**	**18 31 42.7**	**+0.5**
	0.3nm,0.5s,baz=226,slow=3.4,SNR=4.0						
AKTO	**Aktyubinsk**	**129.57**	**56**	PKP	**PKPdf**	**18 31 52.7**	**-0.3**
AKTO	**Aktyubinsk**	**129.57**	**56**	PKP	**PKPdf**	**18 31 52.7**	**-0.3**
	1.6nm,0.9s,baz=183,slow=4.1,SNR=5.1						
BVAR	**Borovoye Array**	**136.72**	**61**	PKP	**PKPdf**	**18 32 09.1**	**+2.7**
BVAR	**Borovoye Array**	**136.72**	**61**	PKP	**PKPdf**	**18 32 09.1**	**+2.7**
	0.2nm,0.5s,baz=264,slow=1.4,SNR=3.6						
MK31	**Makanchi Array**	**137.87**	**75**	P	**PKPdf**	**18 32 09.8**	**+1.0**
MKAR	**Makanchi Array**	**137.87**	**75**	PKP	**PKPdf**	**18 32 08.5**	**-0.3**
MKAR	**Makanchi Array**	**137.87**	**75**	PKP	**PKPdf**	**18 32 08.5**	**-0.3**
	0.2nm,0.5s,baz=212,slow=2.9,SNR=3.4						
KURBB	**Kurchatov Arra**	**138.75**	**69**	PKhKP	PKPpre	18 32 03.6	
	0.2nm,0.5s,baz=238,slow=3.5,SNR=3.8						
KURBB				PKP	**PKiKP**	**18 32 11.3**	**-1.0**
	0.1nm,0.3s,baz=232,slow=2.6,SNR=5.5						
KURK	**Kurchatov**	**138.86**	**69**	PKPpre	PKPpre	18 32 03.6	
KURK				PKP	**PKiKP**	**18 32 11.3**	**-1.2**
YKA	**Yellowknife Ar**	**139.31**	**315**	PKP	**PKPdf**	**18 32 10.7**	**-0.2**
YKA	**Yellowknife Ar**	**139.31**	**315**	PKP	**PKPdf**	**18 32 10.7**	**-0.2**
	0.2nm,0.5s,baz=140,slow=2.0,SNR=4.2						
ZALV	**Zalesovo Beam**	**143.85**	**69**	PKP	PKPbc	18 32 16.8	-0.4
ZALV	**Zalesovo Beam**	**143.85**	**69**	PKP	PKPbc	18 32 16.8	-0.4
	0.5nm,0.4s,baz=212,slow=6.4,SNR=4.7						
SONM	**Songino Array**	**150.52**	**94**	PKPbc	**PKPbc**	**18 32 36.4**	**+0.2**
SONM	**Songino Array**	**150.52**	**94**	PKPbc	**PKPbc**	**18 32 36.4**	**+0.2**
	2.4nm,0.8s,baz=224,slow=3.1,SNR=21						
ILAR	**Eielson Array**	**152.87**	**306**	PKPbc	**PKPbc**	**18 32 40.8**	**0.0**
ILAR	**Eielson Array**	**152.87**	**306**	PKPbc	**PKPbc**	**18 32 40.8**	**0.0**
	0.5nm,0.8s,baz=165,slow=2.5,SNR=4.7						

*IDC **09** 18:16:43.5±0.7, 3°.20N×125°.94E, h0km, mb3.9/12, mb1 4.0/12, mb1mx3.9/23, mbtmp3.9/12, Error ellipse: s-maj=42.8km s-min=13.6km az=76.0*

*ISCJB **09** 18:16:49.2±0.4, 3°.27N±0°.07×126°.2E±0°.1, h53km, mb3.9/13, Error ellipse: s-maj=19.3km s-min=5.1km az=153.5*

*AUST **09** 18:16:54.3, 3°.50N×127°.00E, h100km*

ISC 09 18:16:51.0±0.6**, 3°.29N**±0°.09×**126°.3E**±0°.2**, h53km, n25, σ1ˢ15**/24**, mb3.9**/13**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**4.38**	**333**	⇑iP	**Pn**	**18 17 56.2**	**+1.1**
PAGZ	**Pagadian**	**5.35**	**328**	eP	**Pn**	**18 18 08.5**	**+0.1**
PAGZ				eS	**Sn**	**18 19 09.9**	**+1.3**
LUWI	**Luwuk**	**5.53**	**219**	P	Pn	18 18 19.8	+8.9
	baz=6.2,SNR=14						
IPIL	**Ipil**	**5.77**	**321**	eP	**Pn**	**18 18 13.9**	**-0.3**
IPIL				eS	**Sn**	**18 19 18.1**	**-1.0**
OCLP	**Ormoc**	**7.88**	**348**	eP	Pn	18 18 54.6	+12
FAKI	**Fak Fak**	**8.61**	**136**	P	Pn	18 18 55.7	+2.7
	baz=8.3,SNR=3.9						
MTN	**Manton Dam**	**16.75**	**163**	P	**Pn**	**18 20 40.8**	**-1.4**
	baz=17,SNR=7.5						
MTN				S	Sn	18 23 24.0	-23
	baz=17,SNR=4.2						
KDU	**Kakadu**	**17.04**	**159**	P	**Pn**	**18 20 45.5**	**-0.2**
	baz=17,SNR=7.3						
KNRA	**Kununurra**	**19.01**	**173**	P	**Pn**	**18 21 09.6**	**-0.1**
	baz=19,SNR=6.4						
FITZ	**Fitzroy Crossi**	**21.27**	**182**	P	**P**	**18 21 32.4**	**-0.7**
	0.9nm,0.3s,baz=331,slow=12,SNR=6.7						
FITZ	**Fitzroy Crossi**	**21.27**	**182**	P	**P**	**18 21 34.8**	**+1.8**
	baz=22,SNR=10						
WRA	**Warramunga Arr**	**24.42**	**161**	P	**P**	**18 22 03.8**	**-1.0**
	3.3nm,0.5s,baz=342,slow=9.8,SNR=34						
ASAR	**Alice Springs**	**27.82**	**165**	P	**P**	**18 22 35.0**	**-0.4**
	0.8nm,0.5s,baz=343,slow=6.9,SNR=22						
MEEK	**Meekatharra**	**30.66**	**193**	P	**P**	**18 23 02.8**	**+2.1**
	baz=31,SNR=3.2						
CMAR	**Chiang Mai Arr**	**30.68**	**301**	P	**P**	**18 23 01.9**	**+0.9**
	0.3nm,0.3s,baz=115,slow=8.0,SNR=5.5						
KSRS	**Korea Array**	**34.03**	**2**	P	**P**	**18 23 29.9**	**-0.1**
	0.9nm,0.6s,baz=178,slow=10,SNR=5.5						
STKA	**Stephens Creek**	**37.90**	**158**	P	**P**	**18 24 01.6**	**-1.6**
	2.9nm,0.8s,baz=346,slow=10,SNR=7.7						
STKA	**Stephens Creek**	**37.90**	**158**	P	**P**	**18 24 03.8**	**+0.6**
	baz=38,SNR=4.2						
USRK	**Ussuriysk Arra**	**41.05**	**6**	P	**P**	**18 24 30.5**	**+1.2**
	1.6nm,0.9s,baz=94,slow=2.5,SNR=3.1						
SONM	**Songino Array**	**47.56**	**342**	P	**P**	**18 25 20.3**	**-1.1**
	0.7nm,0.6s,baz=158,slow=9.7,SNR=11						
PETK	**Petropavlovsk-**	**56.02**	**22**	P	**P**	**18 26 25.4**	**+1.2**
	0.5nm,0.5s,baz=151,slow=3.3,SNR=3.0						
MKAR	**Makanchi Array**	**57.64**	**326**	P	**P**	**18 26 35.0**	**-0.9**
	0.9nm,0.5s,baz=117,slow=8.7,SNR=18						
ZALV	**Zalesovo Beam**	**60.76**	**333**	P	**P**	**18 26 57.1**	**-0.1**
	0.5nm,0.3s,baz=138,slow=7.5,SNR=4.4						
AKTO	**Aktyubinsk**	**73.70**	**322**	P	**P**	**18 28 18.6**	**-0.7**
	0.5nm,0.3s,baz=117,slow=12,SNR=3.3						
AKASG	**Malin Array Be**	**91.92**	**321**	P	**P**	**18 29 52.1**	**-1.7**
	0.8nm,0.5s,baz=78,slow=3.8,SNR=3.5						

*ISCJB **09** 18:39:11.8±0.2, 59°.08N±0°.02×154°.23W±0°.05, h140km±2km, mb3.8/27, Error ellipse: s-maj=4.8km s-min=2.8km az=137.1*

*NEIC **09** 18:39:14.0, 59°.02N×154°.16W, h132km, mb4.2/8, After AEIC.*

NEIC Felt [III] at Homer. Also felt at Anchorage, Kodiak, Ninilchik and Seward.

*IDC **09** 18:39:14.3±0.6, 59°.32N×154°.32W, h135km±4km, mb3.6/20, mb1 3.8/23, mb1mx3.7/33, mbtmp3.6/23, MS2.8/3, Ms1 2.8/3, ms1mx2.5/36, Error ellipse: s-maj=13.2km s-min=9.0km az=21.0*

ISC 09 18:39:12.8±0.4**, 59°.10N**±0°.03×**154°.22W**±0°.04**, h135km**±4km**, n150, σ1ˢ14**/168**, mb3.9**/27**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCNL	**McNeil River**	**0.10**	**326**	P	**Pn**	**18 39 31.3**	**+0.3**
FONW	**Fourpeaked Sta**	**0.31**	**149**	P	**Pn**	**18 39 31.7**	**0.0**
FOSS	**Fourpeaked Sta**	**0.41**	**137**	P	**Pn**	**18 39 31.9**	**0.0**
AUW	**Augustine West**	**0.47**	**55**	P	**Pn**	**18 39 33.0**	**+0.8**
AUNW	**Augustine NWes**	**0.47**	**54**	P	**Pn**	**18 39 33.0**	**+0.8**
AUL	**Augustine Lava**	**0.49**	**55**	P	**Pn**	**18 39 33.1**	**+0.8**
KAPH	**Katmai Pasha**	**0.51**	**187**	P	**Pn**	**18 39 32.5**	**-0.1**
KAPH				S	**Sn**	**18 39 46.9**	**-0.5**
KAHG	**Katmai Hook Gl**	**0.63**	**196**	P	**Pn**	**18 39 33.1**	**-0.2**
KAHG				S	**Sn**	**18 39 49.0**	**+0.3**
OPT	**Oil Point**	**0.75**	**42**	P	**Pn**	**18 39 35.1**	**+1.0**
KAWH	**Katmai**	**0.78**	**203**	P	**Pn**	**18 39 33.9**	**-0.4**
KAKN	**Katmai Knife C**	**0.92**	**209**	P	**Pn**	**18 39 35.2**	**-0.3**
KAKN				S	**Sn**	**18 39 51.5**	**-1.1**
KCE	**Katmai Mt Cerb**	**0.99**	**211**	P	**Pn**	**18 39 36.3**	**+0.1**
KABU	**Katmai Buttres**	**1.00**	**214**	P	**Pn**	**18 39 36.0**	**-0.2**
KABU				S	**Sn**	**18 39 53.8**	**-0.2**
KELA	**Mount Kelaz**	**1.03**	**231**	P	**Pn**	**18 39 36.3**	**-0.2**
KABR	**Katmai Barrier**	**1.05**	**202**	P	**Pn**	**18 39 36.1**	**-0.6**
IVE	**Iliamna Volcan**	**1.11**	**33**	P	**Pn**	**18 39 38.1**	**+0.9**
IVE				S	**Sn**	**18 39 56.5**	**+0.7**
ILW	**Iliamna West**	**1.11**	**29**	P	**Pn**	**18 39 38.1**	**+0.7**
HOM	**Homer**	**1.44**	**66**	P	**Pn**	**18 39 41.7**	**+1.3**
PLWL	**Peulik Whale M**	**1.53**	**227**	P	**Pn**	**18 39 41.6**	**+0.1**
RSO	**Redoubt South**	**1.56**	**28**	ePn	**Pn**	**18 39 42.8**	**+0.7**
RDWB	**Redoubt West**	**1.56**	**26**	P	**Pn**	**18 39 42.1**	**+0.2**
RDWB				S	**Sn**	**18 40 05.2**	**+0.9**
KDAK	**Kodiak Island**	**1.58**	**146**	P	**Pn**	**18 39 41.0**	**-1.0**
KDAK				S	**Sn**	**18 40 02.0**	**-2.3**
KDAK	**Kodiak Island**	**1.58**	**146**	P	**Pn**	**18 39 41.1**	**-1.0**
	baz=338,slow=11						
KDAK				S	**Sn**	**18 40 01.7**	**-2.6**
	291nm,0.3s,baz=214,slow=18,SNR=22						
NCT	**North Crescent**	**1.61**	**23**	P	**Pn**	**18 39 43.5**	**+1.0**
RDJH	**Redoubt Jeurge**	**1.66**	**25**	P	**Pn**	**18 39 44.0**	**+0.9**
DFR	**Drift River**	**1.69**	**27**	P	**Pn**	**18 39 44.3**	**+0.9**
PLK3	**Peulik 3**	**1.78**	**218**	P	**Pn**	**18 39 44.5**	**+0.1**
PLK3				S	**Sn**	**18 40 07.8**	**-0.7**
BRLK	**Bradley Lake**	**1.83**	**67**	P	**Pn**	**18 39 45.4**	**+0.4**
OHAK	**Old Harbor**	**1.95**	**165**	P	**Pn**	**18 39 45.0**	**-1.3**
OHAK				S	**Sn**	**18 40 09.4**	**-2.6**
CKL	**Chakachamna La**	**2.31**	**23**	P	**Pn**	**18 39 51.9**	**+1.1**
SPU	**Mount Spurr**	**2.35**	**27**	P	**Pn**	**18 39 52.0**	**+0.7**
BGL	**Barrier Glacie**	**2.36**	**22**	P	**Pn**	**18 39 52.7**	**+1.3**
SLKM	**Skilak Lake**	**2.47**	**53**	P	**Pn**	**18 39 53.2**	**+0.5**
SEW	**Seward**	**2.63**	**65**	P	**Pn**	**18 39 54.9**	**+0.2**
STLK	**Strandline Lak**	**2.69**	**25**	P	**Pn**	**18 39 56.3**	**+0.8**
SUA	**Susitna One**	**2.94**	**35**	P	**Pn**	**18 39 59.4**	**+0.6**
ANNE	**Aniakchak Nort**	**3.00**	**225**	P	**Pn**	**18 39 59.4**	**-0.1**
ANNW	**Aniakchak Nort**	**3.01**	**226**	P	**Pn**	**18 40 00.3**	**+0.6**
ANPK	**Aniakchak Peak**	**3.07**	**224**	P	**Pn**	**18 40 00.4**	**-0.2**
SKT	**Skwentna**	**3.18**	**24**	P	**Pn**	**18 40 02.8**	**+0.9**
PMR	**Palmer**	**3.56**	**43**	ePn	**Pn**	**18 40 05.7**	**-1.0**
PMR				eSn	Sn	18 40 31.2	-17
CHGN	**Chignik**	**3.59**	**221**	P	**Pn**	**18 40 07.0**	**-0.2**
CUT	**Chulitna**	**3.84**	**29**	P	**Pn**	**18 40 11.0**	**+0.6**
TT01	**Tatalina**	**3.92**	**348**	P	**Pn**	**18 40 12.7**	**+1.2**
VNHG	**Veniaminof 1**	**3.92**	**225**	P	**Pn**	**18 40 12.8**	**+1.2**
SML	**Sawmill**	**3.99**	**45**	P	**Pn**	**18 40 11.8**	**-0.6**
MID	**Middleton Isla**	**4.06**	**82**	P	**Pn**	**18 40 13.3**	**0.0**
VNWF	**Veniaminof 8**	**4.12**	**226**	P	**Pn**	**18 40 14.8**	**+0.5**
VLZ	**Valdez**	**4.44**	**59**	P	**Pn**	**18 40 18.6**	**+0.2**
CAST	**Castle Rocks**	**4.46**	**12**	P	**Pn**	**18 40 19.6**	**+1.0**
EYAK	**Cordova Ski Ar**	**4.52**	**68**	P	**Pn**	**18 40 19.3**	**-0.1**
DIV	**Divide**	**4.69**	**61**	P	**Pn**	**18 40 21.8**	**0.0**
TRF	**Thorofare Moun**	**4.76**	**22**	P	**Pn**	**18 40 22.3**	**-0.5**
KLU	**Klutina**	**4.78**	**56**	P	**Pn**	**18 40 23.0**	**0.0**
CHUM	**Lake Minchumin**	**4.89**	**10**	P	**Pn**	**18 40 25.5**	**+1.2**
RAGM	**Ragged Mountai**	**5.00**	**71**	P	**Pn**	**18 40 26.1**	**+0.2**
RND	**Reindeer**	**5.04**	**29**	P	**Pn**	**18 40 26.3**	**-0.1**
SDPT	**Sand Point**	**5.07**	**225**	P	**Pn**	**18 40 25.4**	**-1.4**
MCK	**McKinley**	**5.30**	**26**	P	**Pn**	**18 40 29.6**	**-0.2**
NICHA	**Nichawak Mount**	**5.32**	**73**	P	**Pn**	**18 40 30.8**	**+0.6**
BERG	**Berg Lake**	**5.48**	**72**	P	**Pn**	**18 40 32.3**	**+0.1**
HARP	**HAARP**	**5.55**	**49**	P	**Pn**	**18 40 33.1**	**0.0**
BGLC	**Bering Glacier**	**5.65**	**75**	P	**Pn**	**18 40 34.9**	**+0.4**
GRIN	**Grindle Hills**	**5.65**	**73**	P	**Pn**	**18 40 34.6**	**+0.1**
KHIT	**Khitrov Hills**	**5.71**	**72**	P	**Pn**	**18 40 35.5**	**+0.1**
PAX	**Paxson**	**5.76**	**44**	P	**Pn**	**18 40 35.9**	**-0.2**
VRDI	**Verde Repeater**	**5.79**	**64**	P	**Pn**	**18 40 36.7**	**+0.2**
DTNA	**Dutton South F**	**5.90**	**231**	P	**Pn**	**18 40 37.0**	**-0.9**
DT1	**Dutton Round H**	**5.94**	**231**	P	**Pn**	**18 40 38.1**	**-0.3**
KULT	**Kultieth River**	**5.94**	**74**	P	**Pn**	**18 40 38.8**	**+0.3**
NEA	**Nenana**	**6.01**	**22**	P	**Pn**	**18 40 38.6**	**-0.7**
MCARA	**McCarthy VSAT**	**6.03**	**63**	P	**Pn**	**18 40 40.1**	**+0.5**
DRIA	**Deer Island**	**6.03**	**230**	P	**Pn**	**18 40 39.5**	**-0.3**
BARK	**Barkley Ridge**	**6.07**	**73**	P	**Pn**	**18 40 40.7**	**+0.4**
WRH	**Wood River Hil**	**6.12**	**26**	P	**Pn**	**18 40 39.9**	**-0.9**
MLY	**Manley**	**6.17**	**14**	P	**Pn**	**18 40 41.1**	**-0.4**
KIAG	**Kiagna River**	**6.22**	**68**	P	**Pn**	**18 40 42.8**	**+0.4**
PTPK	**Patty Peak**	**6.24**	**65**	P	**Pn**	**18 40 43.4**	**+0.8**
BALM	**Baldy**	**6.25**	**67**	P	**Pn**	**18 40 43.3**	**+0.5**
CCB	**Clear Creek Bu**	**6.34**	**26**	P	**Pn**	**18 40 42.6**	**-1.0**
MENT	**Mentasta**	**6.39**	**49**	ePn	**Pn**	**18 40 44.7**	**+0.2**
RIDG	**Independ'e Rid**	**6.47**	**40**	P	**Pn**	**18 40 46.3**	**+0.7**
GRNC	**Granite Creek**	**6.48**	**70**	P	**Pn**	**18 40 46.3**	**+0.4**
MDM	**Murphy Dome**	**6.52**	**23**	P	**Pn**	**18 40 45.3**	**-0.9**
COLA	**College**	**6.52**	**25**	P	**Pn**	**18 40 45.5**	**-0.7**
BARN	**Barnard Glacie**	**6.59**	**67**	P	**Pn**	**18 40 48.0**	**+0.7**
IL1	**Eielson Array**	**6.66**	**28**	P	**Pn**	**18 40 46.7**	**-1.3**
ILAR	**Eielson Array**	**6.66**	**28**	P	**Pn**	**18 40 46.7**	**-1.3**
	22nm,0.3s,baz=216,slow=14,SNR=808						
ILAR				S	**Sn**	**18 41 58.3**	**-4.2**
	21nm,0.3s,baz=215,slow=26,SNR=10.0						
ILAR				LR	LR	18 43 44.7	
	comp=Z,45nm,18.9s,baz=346,slow=42						
DOT	**Dot Lake**	**6.68**	**43**	ePn	**Pn**	**18 40 48.2**	**-0.1**
	96nm,0.5s						
IM3	**Indian Mountai**	**6.91**	**2**	P	**Pn**	**18 40 52.1**	**+0.7**
SCRK	**Sand Creek**	**6.91**	**41**	P	**Pn**	**18 40 51.4**	**-0.2**
BCA3	**Beaver Creek A**	**7.22**	**51**	P	**Pn**	**18 40 55.8**	**+0.1**
PNL	**Peninsula**	**7.59**	**79**	P	**Pn**	**18 41 00.9**	**+0.3**
PRP	**Porcupine Dome**	**7.60**	**28**	P	**Pn**	**18 41 01.4**	**+0.6**
COLD	**Coldfoot**	**8.36**	**11**	ePn	**Pn**	**18 41 09.7**	**-1.1**
EGAK	**Eagle**	**8.38**	**42**	ePn	**Pn**	**18 41 09.9**	**-1.2**
HYT	**Haines Junctio**	**8.56**	**71**	P	**Pn**	**18 41 14.7**	**+0.9**
UNV	**Unalaska Valle**	**8.59**	**238**	ePn	**Pn**	**18 41 12.1**	**-1.9**
DAWY	**Dawson**	**8.64**	**49**	P	**Pn**	**18 41 15.1**	**+0.4**
BM3	**Burnt Mountain**	**9.39**	**23**	P	**Pn**	**18 41 22.7**	**-2.0**
GAMB	**Gambell**	**9.58**	**307**	P	**Pn**	**18 41 28.2**	**+1.1**
SKAG	**Skagway**	**9.67**	**80**	ePn	**Pn**	**18 41 28.9**	**+0.4**
WHY	**Whitehorse**	**9.84**	**73**	P	**Pn**	**18 41 31.7**	**+0.9**
CRAG	**Craig**	**11.96**	**99**	ePn	**Pn**	**18 41 57.3**	**-1.5**
CRAG				eSn	**Sn**	**18 44 07.0**	**-3.6**
WRAK	**Wrangell Islan**	**11.97**	**93**	ePn	**Pn**	**18 41 59.6**	**+0.7**
WRAK				eSn	Sn	18 44 03.9	-6.9
DLBC	**Dease Lake**	**12.56**	**83**	ePn	**Pn**	**18 42 08.4**	**+1.8**
DLBC				eSn	Sn	18 44 09.8	-15
DLBC	**Dease Lake**	**12.56**	**83**	P	**Pn**	**18 42 09.6**	**+3.0**
	10nm,0.3s,baz=275,slow=8.5,SNR=17						
DLBC				S	**Sn**	**18 44 22.2**	**-2.7**
	1.8nm,0.3s,baz=191,slow=22,SNR=3.8						
INK	**Inuvik**	**12.94**	**36**	P	**Pn**	**18 42 11.2**	**-0.1**
	2.2nm,0.3s,baz=232,slow=16,SNR=29						
INK				LR	LR	18 47 45.9	
	comp=Z,31nm,21.4s,baz=302,slow=40						
FX1	**Attu Island--F**	**19.13**	**265**	P	**P**	**18 43 25.4**	**+0.2**
	1.5nm,0.3s,baz=0.0,slow=20,SNR=4.8						
BILL	**Bilibino**	**19.37**	**314**	eP	**P**	**18 43 27.8**	**+0.2**
	20nm,0.6s						
YKW3	**Yellowknife Ar**	**19.39**	**63**	eP	**P**	**18 43 28.8**	**+1.0**
YKW3				e		18 44 05.3	
YKA	**Yellowknife Ar**	**19.40**	**63**	P	**P**	**18 43 29.3**	**+1.3**
	0.5nm,0.3s,baz=277,slow=9.9,SNR=44						
YKA				ScP	**ScP**	**18 51 08.0**	**+1.7**
	0.1nm,0.3s,baz=286,slow=2.2,SNR=4.7						
NEW	**Newport**	**24.18**	**100**	pP	**pP**	**18 44 44.6**	**+0.8**
	2.7nm,0.6s,baz=308,slow=16,SNR=8.0						
NEW				LR	LR	18 53 36.1	
	comp=Z,49nm,18.9s,baz=50,slow=36						
YBH	**Yreka Blue Hor**	**26.19**	**118**	pP	pP	18 45 07.0	+3.9
	7.0nm,0.9s,baz=341,slow=4.4,SNR=18						
PETK	**Petropavlovsk-**	**26.97**	**278**	P	**P**	**18 44 42.0**	**+0.6**
	2.1nm,0.5s,baz=83,slow=12,SNR=5.4						
ELK	**Elko**	**30.49**	**110**	P	**P**	**18 45 14.7**	**+1.7**
	0.5nm,0.5s,baz=254,slow=7.4,SNR=3.2						
NVAR	**Mina Array Bea**	**30.86**	**116**	P	**P**	**18 45 19.1**	**+2.8**
	1.2nm,0.7s,baz=310,slow=8.4,SNR=7.0						
NVAR				pP	**pP**	**18 45 47.7**	**+2.5**
	2.8nm,0.8s,baz=309,slow=8.6,SNR=10						
PDAR	**Pinedale Array**	**31.81**	**101**	P	P	18 45 28.3	+3.7
	0.3nm,0.4s,baz=298,slow=6.0,SNR=3.1						
PDAR				pP	pP	18 45 56.4	+2.8
	1.6nm,0.7s,baz=328,slow=5.3,SNR=6.7						
LAZ	**Ladron**	**39.44**	**108**	eP	**P**	**18 46 31.3**	**+1.6**
	5.1nm,0.9s						
BNM	**Barren Site**	**39.89**	**107**	P	**P**	**18 46 31.5**	**-2.0**
	16nm,1.1s						
MNTX	**Cornudas Mount**	**42.49**	**108**	eP	**P**	**18 46 55.5**	**+1.1**
	2.6nm,0.8s						
MNTX				e		18 47 16.1	
SPITS	**Spitsbergen Ar**	**42.85**	**3**	P	**P**	**18 46 56.1**	**-0.7**
	0.5nm,0.4s,baz=13,slow=7.7,SNR=6.8						
TXAR	**Lajitas Array**	**45.27**	**108**	P	**P**	**18 47 19.6**	**+2.8**
	1.5nm,0.9s,baz=318,slow=7.3,SNR=9.0						
MJAR	**Matsushiro Arr**	**48.21**	**273**	P	**P**	**18 47 41.1**	**+1.7**
	0.4nm,0.4s,baz=359,slow=8.5,SNR=4.9						
ARCES	**ARCESS Array B**	**51.66**	**0**	PcP	**PcP**	**18 49 16.8**	**+0.2**
	0.8nm,0.5s,baz=353,slow=4.2,SNR=5.0						
KSRS	**Korea Array**	**52.77**	**282**	P	**P**	**18 48 14.4**	**+0.9**
	1.5nm,0.7s,baz=46,slow=7.9,SNR=5.1						
ULN	**Ulaanbaatar**	**54.51**	**305**	eP	**P**	**18 48 26.9**	**+0.5**
	4.1nm,0.8s						
SONM	**Songino Array**	**54.81**	**306**	P	**P**	**18 48 29.7**	**+1.2**
	7.4nm,0.8s,baz=42,slow=7.6,SNR=78						
ZALV	**Zalesovo Beam**	**57.73**	**323**	P	**P**	**18 48 49.2**	**+0.4**
	2.6nm,0.5s,baz=31,slow=6.7,SNR=18						
ZALV				pP	**pP**	**18 49 21.5**	**+0.9**
	1.5nm,0.7s,baz=29,slow=7.1,SNR=3.6						
NOA	**NORSAR Array B**	**59.66**	**8**	pP	pP	18 49 35.4	+1.2
	0.8nm,0.8s,baz=350,slow=6.8,SNR=3.4						
KURK	**Kurchatov**	**62.42**	**325**	eP	**P**	**18 49 20.0**	**-0.9**
	1.9nm,0.8s						
KURK				e		18 49 52.7	
KURBB	**Kurchatov Arra**	**62.53**	**325**	P	**P**	**18 49 21.3**	**-0.3**
	1.6nm,0.7s,baz=29,slow=6.5,SNR=20						
KURBB				pP	**pP**	**18 49 53.9**	**+0.1**
	1.8nm,1.0s,baz=27,slow=6.0,SNR=5.9						
KURBB				PP	PP	18 51 30.9	-9.2
	0.2nm,0.4s,baz=33,slow=10,SNR=3.1						
BVAR	**Borovoye Array**	**62.57**	**331**	P	**P**	**18 49 21.6**	**-0.3**
	2.8nm,0.7s,baz=36,slow=7.7,SNR=21						
BVAR				pP	**pP**	**18 49 54.3**	**+0.2**
	2.4nm,0.8s,baz=42,slow=6.8,SNR=6.3						
EKA	**Eskdalemuir Ar**	**63.59**	**18**	P	**P**	**18 49 27.1**	**-1.4**
	0.5nm,0.6s,baz=338,slow=5.5,SNR=3.9						
EKA				pP	**pP**	**18 50 00.6**	**-0.3**
	0.3nm,0.4s,baz=333,slow=6.0,SNR=1.9						
MK31	**Makanchi Array**	**64.74**	**321**	eP	**P**	**18 49 35.6**	**-0.7**
MKAR	**Makanchi Array**	**64.74**	**321**	P	**P**	**18 49 35.7**	**-0.5**
	1.5nm,0.8s,baz=43,slow=6.1,SNR=17						
MKAR				PP	**PP**	**18 51 54.9**	**-4.8**
	0.5nm,0.7s,baz=49,slow=8.4,SNR=4.4						
AKTO	**Aktyubinsk**	**67.71**	**338**	P	**P**	**18 49 54.4**	**-0.7**
	1.1nm,0.7s,baz=356,slow=9.0,SNR=3.9						
AKTO				pP	**pP**	**18 50 28.1**	**+0.4**
	2.4nm,0.9s,baz=10,slow=6.4,SNR=4.3						
ABKAR	**Akbulak array**	**68.45**	**337**	eP	**P**	**18 49 58.4**	**-1.3**
	0.7nm,0.5s						
ABKAR				e		18 50 32.5	
KKAR	**Karatay Array**	**71.66**	**327**	eP	**P**	**18 50 18.8**	**-0.6**
	0.8nm,0.6s						
GERES	**GERESS Array B**	**71.96**	**8**	P	**P**	**18 50 22.9**	**+1.7**
	0.2nm,0.4s,baz=20,slow=3.2,SNR=2.5						
ESDC	**Sonseca Array**	**78.53**	**23**	P	**P**	**18 50 59.8**	**+0.9**
	0.7nm,0.5s,baz=343,slow=5.5,SNR=4.8						
BRTR	**Keskin Array B**	**81.32**	**354**	P	**P**	**18 51 14.0**	**0.0**
	0.4nm,0.8s,baz=72,slow=4.7,SNR=3.1						
CMAR	**Chiang Mai Arr**	**82.67**	**294**	P	**P**	**18 51 22.2**	**+1.1**
	0.9nm,0.8s,baz=18,slow=5.3,SNR=5.2						
MDT	**Midelt**	**85.00**	**25**	P	**P**	**18 51 34.6**	**+1.7**
	2.0nm,0.9s,baz=328,slow=8.0,SNR=3.6						
LBTB	**Lobatse**	**145.94**	**0**	PKPbc	**PKPbc**	**18 58 36.8**	**+0.5**
	4.2nm,0.5s,baz=348,slow=4.7,SNR=14						
QSPA	**South Pole Qui**	**148.89**	**180**	ePKPbc	**PKPbc**	**18 58 43.2**	**+0.2**
QSPA	**South Pole Qui**	**148.89**	**180**	PKPbc	**PKPbc**	**18 58 43.6**	**+0.7**
	2.7nm,0.8s,baz=123,slow=0.6,SNR=15						
BOSA	**Boshof**	**149.52**	**1**	PKPbc	**PKPbc**	**18 58 45.9**	**+0.1**
	2.8nm,0.6s,baz=19,slow=4.1,SNR=9.5						
SNAA	**Sanae**	**162.92**	**149**	ePKP	**PKPab**	**18 59 47.2**	**-0.3**
SNAA	**Sanae**	**162.92**	**149**	PKPab	**PKPab**	**18 59 46.9**	**-0.5**
	0.5nm,0.7s,baz=209,slow=9.5,SNR=11						

MEX 09 18:42:09.2±0.3**, 16°.95N×100°.10W, h7km**±4km**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.19**	**301**	iP	Pg	18 42 12.7	-0.3
CAIG				eS	Sg	18 42 15.7	+0.1
ARIG	**Puente Sto Nin**	**1.34**	**350**	iP	Pn	18 42 30.5	-3.9
ARIG				eS	Sb	18 42 47.4	-4.9
ZIIG	**Zihuatanejo**	**1.46**	**297**	iP	Pn	18 42 32.3	-3.8
ZIIG				iS	Sn	18 42 50.7	-4.7
PLIG	**Platanillo**	**1.54**	**21**	iP	Pn	18 42 33.8	-3.4
PLIG				eS	Sn	18 42 52.6	-5.1
YAIG	**Yautepec**	**2.14**	**27**	iP	Pn	18 42 42.5	-3.1
YAIG				iS	Sn	18 43 08.4	-4.1

*ISCJB **09** 18:48:05.2±0.5, 23°.81N±0°.03×122°.65E±0°.02, h21km±5km, Error ellipse: s-maj=5.4km s-min=2.9km az=170.3*

*TAP **09** 18:48:05.7, 23°.81N×122°.55E, h14km, ML2.8, D*

*JMA **09** 18:48:06.2±0.3, 24°.02N×122°.62E, h26km, M1.9*

ISC 09 18:48:04.2±1.1**, 23°.85N**±0°.04×**122°.66E**±0°.02**, h15km**±9km**, n31, σ0ˢ53**/57**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.69**	**28**	P	**Pg**	**18 48 17.4**	**-0.3**
YOJ				S	**Sg**	**18 48 25.1**	**-1.8**
HWA	**Hwalien**	**0.97**	**278**	eP	**Pg**	**18 48 23.0**	**0.0**
	baz=280						
TWD	**Chiawan**	**1.00**	**284**	eP	**Pg**	**18 48 23.5**	**+0.1**
	baz=287						
TWD				eS	**Sg**	**18 48 36.4**	**-0.2**
	baz=287						
ENA	**Nanau**	**1.02**	**305**	P	**Pn**	**18 48 24.1**	**+0.1**
	baz=309						
ENA				eS	**Sg**	**18 48 37.6**	**+0.4**
	baz=309						
TWC	**Suao**	**1.06**	**316**	eP	**Pb**	**18 48 24.1**	**-0.1**
	baz=321						
TWC				eS	**Sb**	**18 48 37.4**	**-0.6**
	baz=321						
HATJ	**Hateruma jima**	**1.07**	**78**	P	**Pg**	**18 48 25.5**	**+0.6**
HATJ				eS	**Sg**	**18 48 39.1**	**+0.2**
IRIF	**Iriomote-Funau**	**1.09**	**63**	P	**Pn**	**18 48 25.3**	**+0.3**
IRIF				S	**Sn**	**18 48 40.1**	**+0.2**
ESL	**Shilin**	**1.12**	**269**	eP	**Pb**	**18 48 25.4**	**+0.1**
	baz=270						
ESL				eS	**Sb**	**18 48 39.6**	**-0.1**
	baz=270						
TWE	**Neicheng**	**1.26**	**314**	eP	**Pg**	**18 48 29.0**	**+0.6**
	baz=318						
TWE				S	**Sg**	**18 48 44.7**	**0.0**
	baz=318						
EHY	**Hungye**	**1.27**	**255**	eP	**Pn**	**18 48 27.6**	**+0.2**
	baz=254						
EHY				eS	**Sb**	**18 48 43.6**	**-0.4**
	baz=254						
ENTT	**Nioudou**	**1.27**	**309**	P	**Pg**	**18 48 28.4**	**-0.3**
	baz=312						
ENTT				eS	**Sn**	**18 48 44.6**	**+0.2**
	baz=312						
JKRS	**Kuro-shima**	**1.30**	**72**	P	**Pg**	**18 48 29.1**	**0.0**
JKRS				eS	**Sg**	**18 48 46.4**	**+0.4**
WHF	**Hehuan Shan**	**1.31**	**283**	eP	**Pn**	**18 48 28.6**	**+0.2**
	baz=285						
WHF				eS	**Sb**	**18 48 45.3**	**-0.3**
	baz=285						
NNS	**Nan Shan**	**1.31**	**297**	eP	**Pb**	**18 48 29.0**	**+0.3**
	baz=300						
NNS				eS	**Sb**	**18 48 45.7**	**+0.3**
	baz=300						
TWF1	**Yuli**	**1.34**	**249**	eP	**Pg**	**18 48 30.0**	**0.0**
	baz=248						
TWF1				eS	**Sb**	**18 48 45.4**	**-0.6**
	baz=248						
CHKT	**Chengkung**	**1.40**	**238**	eP	**Pn**	**18 48 29.5**	**+0.3**
	baz=236						
CHKT				eS	**Sn**	**18 48 46.8**	**-0.6**
	baz=236						
TWT	**Tachien**	**1.41**	**287**	eP	**Pb**	**18 48 30.5**	**+0.1**
	baz=289						
TWT				eS	**Sn**	**18 48 48.5**	**+0.4**
	baz=289						
NSK	**Sanguang**	**1.45**	**305**	eP	**Pb**	**18 48 31.0**	**+0.1**
	baz=308						
NSK				eS	**Sb**	**18 48 49.2**	**0.0**
	baz=308						
JIJ	**Ishigaki jima**	**1.45**	**69**	P	**Pn**	**18 48 30.3**	**+0.4**
JIJ				S	**Sn**	**18 48 48.3**	**-0.5**
NWF	**Wu-fen Shan**	**1.46**	**327**	eP	**Pn**	**18 48 30.7**	**+0.6**
	baz=330						
SMLT	**Sun Moon Lake**	**1.61**	**272**	eP	**Pn**	**18 48 33.0**	**+0.8**
	baz=272						
SMLT				eS	**Sn**	**18 48 52.5**	**-0.3**
	baz=272						
ELDTW	**Lidau**	**1.64**	**247**	eP	**Pn**	**18 48 33.0**	**+0.4**
	baz=246						
ELDTW				eS	**Sn**	**18 48 52.9**	**-0.7**
	baz=246						
TYC	**Yuchr**	**1.65**	**272**	eP	**Pn**	**18 48 33.4**	**+0.7**
	baz=273						
TYC				eS	**Sn**	**18 48 53.4**	**-0.3**
	baz=273						
ALS	**Alishan**	**1.73**	**259**	eP	**Pn**	**18 48 34.8**	**+0.8**
	baz=259						
TTN	**Taitung**	**1.76**	**232**	eP	**Pn**	**18 48 34.7**	**+0.5**
	baz=230						
TTN				eS	**Sn**	**18 48 55.8**	**-0.6**
	baz=230						
TWG	**Pinlang**	**1.78**	**235**	eP	**Pn**	**18 48 35.0**	**+0.5**
	baz=233						
TWG				eS	**Sn**	**18 48 56.2**	**-0.6**
	baz=233						
CHN5	**Tsauling**	**1.83**	**263**	eP	**Pn**	**18 48 36.4**	**+1.1**
	baz=263						
CHN4	**Tsaushan**	**1.96**	**256**	eP	**Pb**	**18 48 39.4**	**-0.1**
	baz=255						
WTP	**Ta-pu**	**1.97**	**253**	eP	**Pn**	**18 48 37.8**	**+0.7**
	baz=252						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WTP				eS	Sn	18 49 01.1	-0.5
	baz=252						
ECL	Taimali	2.00	232	eP	Pn	18 48 38.1	+0.6
	baz=230						
ECL				eS	Sn	18 49 01.6	-0.6
	baz=230						
EAST	Anshuo	2.21	229	eP	Pn	18 48 41.1	+0.7
	baz=227						
EAST				eS	Sn	18 49 06.9	-0.7
	baz=227						

*NIED **09** 18:50:00, 27°.40N×130°.40E, h5km, Mw4.1 Best double couple: M0 1.34000×10^15 NP1:φs186.00000°, δ58.00000°, λ-127.00000°. NP2:φs61.00000°, δ47.00000°, λ-46.00000°.*
*ISCJB **09** 18:50:09.7±1.2, 27°.39N±0°.03×130°.37E±0°.04, h29km±9km, mb3.9/21, MS3.3/6, Error ellipse: s-maj=5.6km s-min=4.4km az=36.7*
*JMA **09** 18:50:09.7±0.1, 27°.36N×130°.37E, h69km, M4.1*
*MOS **09** 18:50:10.6±0.8, 27°.44N×130°.51E, h33km, mb4.1/15, Error ellipse: s-maj=19.4km s-min=11.2km az=102.4*
*IDC **09** 18:50:12.8±5.8, 27°.46N×130°.44E, h33km±45km, mb3.6/15, mb1 3.8/18, mb1mx3.7/29, mbtmp3.7/18, ML3.7/3, MS3.3/7, Ms1 3.3/7, ms1mx2.9/31, Error ellipse: s-maj=20.1km s-min=16.9km az=89.0*
ISC 09 18:50:09.6±1.9, **27°.38N**±0°.04×**130°.37E**±0°.04, **h15**km±12km, **n55**, σ**1°.36**/62, **mb3.9**/21, **MS3.3**/6, **3C-2D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JZK	Kikaishima	0.99	340	P	Pg	18 50 28.7	-0.2
JZK				S	Sn	18 50 43.0	+0.2
JAM	Amami Oshima	1.23	327	P	Pn	18 50 31.5	-0.8
JAM				S	Sb	18 50 46.3	-1.9
JTK	Tokunoshima	1.32	288	P	Pn	18 50 32.9	-0.6
JTK				S	Sb	18 50 49.2	-1.6
JAMN	Amaminishikomi	1.36	309	P	Pn	18 50 33.2	-0.9
JAMN				S	Sb	18 50 49.5	-2.5
JMZ	Minamidaito 2	1.73	154	P	Pn	18 50 37.7	-1.5
JMZ				S	Sn	18 50 57.7	-3.4
JOW	Kunigami	1.94	254	P	Pn	18 50 41.4	-0.7
JOW				eS	Sn	18 51 04.7	-1.5
JIH	Iheya	2.16	261	P	Pn	18 50 44.6	-0.5
JIH				S	Sn	18 51 09.7	-2.0
JNN	Nakanoshima	2.49	350	eS	Sn	18 51 17.5	-2.3
JJT2	Tamagusuku 2	2.65	243	P	Pn	18 50 51.7	-0.1
JJT2				eS	Sn	18 51 22.3	-1.3
JAGN	Aguni-jima	2.90	255	P	Pn	18 50 54.5	-0.7
JAGN				S	Sn	18 51 26.7	-3.1
JKC	Kuchinoerabu	3.08	357	P	Pn	18 50 57.7	0.0
JKC				eS	Sn	18 51 31.2	-3.0
JTN	Tanegashima 3	3.31	9	P	Pn	18 50 59.5	-1.4
JTN				eS	Sn	18 51 37.1	-2.8
JKE	Kume jima 2	3.37	253	P	Pn	18 51 00.4	-1.3
JKE				eS	Sn	18 51 39.4	-2.0
JNU	Nakatsue	5.74	4	Pn	Pn	18 51 34.0	-0.4
	8.3nm,0.3s,baz=165,slow=3.9,SNR=74						
JNU				Sn	Sn	18 52 34.6	-5.3
	2.0nm,0.3s,baz=199,slow=20,SNR=5.8						
JHJ	Hachijo jima 2	9.95	53	Pn	Pn	18 52 33.8	+1.7
	6.8nm,0.3s,baz=216,slow=22,SNR=4.8						
JHJ				LR	LR	18 56 04.4	
	comp=Z,75nm,20.9s,baz=96,slow=36						
VLA	Vladivostok	15.75	4	⇑eP	Pn	18 53 41.3	-10
USRK	Ussuriysk Arra	16.84	4	Pn	P	18 54 08.6	+1.8
	0.1nm,0.3s,baz=175,slow=11,SNR=9.2						
ASAJ	Asahikawa	19.39	27	P	P	18 54 34.4	-0.6
	0.1nm,0.3s,baz=227,slow=19,SNR=2.6						
KLR	Kul'dur	21.84	2	eP	P	18 54 57.1	-4.4
SONM	Songino Array	27.69	324	P	P	18 55 58.2	+1.0
	0.8nm,0.8s,baz=140,slow=9.4,SNR=5.2						
SONM				LR	LR	19 08 20.6	
	comp=Z,51nm,19.2s,baz=266,slow=39						
CMAR	Chiang Mai Arr	30.20	260	P	P	18 56 21.8	+2.0
	0.3nm,0.7s,baz=56,slow=7.0,SNR=3.8						
PETK	Petropavlovsk-	32.73	31	P	P	18 56 41.8	+0.2
PETK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PETK	Petropavlovsk-	32.73	31	P	P	18 56 41.8	+0.2
	comp=Z,1.4nm,0.9s,baz=205,slow=6.4,SNR=3.5						
TAPN	Taplejung	37.74	280	eP	P	18 57 25.7	+0.3
ODAN	Odare	38.11	279	eP	P	18 57 28.6	+0.1
GUN	Gumba	39.24	281	eP	P	18 57 38.5	+0.4
PKI	Pulchoki	39.72	281	eP	P	18 57 42.7	+0.7
PKIN	Phulchoki	39.73	281	eP	P	18 57 42.6	+0.6
KKN	Kakani	39.79	281	eP	P	18 57 43.4	+0.9
MKAR	Makanchi Array	42.22	310	P	P	18 58 01.3	-0.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	42.22	310	P	P	18 58 01.2	-0.8
	comp=Z,0.7nm,0.6s,baz=99,slow=9.8,SNR=9.9						
ZALV	Zalesovo Beam	42.52	321	P	P	18 58 05.2	+0.9
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV				MLR	MLR		
	comp=Z,22nm,19.8s						
ZALV	Zalesovo Beam	42.52	321	P	P	18 58 05.2	+0.9
	comp=Z,1.2nm,0.6s,baz=106,slow=7.9,SNR=5.8						
ZALV				LR	LR	19 19 12.9	
	comp=Z,22nm,19.8s,baz=69,slow=41						
TIXI	Tiksi	44.32	359	⇑eP	P	18 58 18.5	-0.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,2.5s						
KURK	Kurchatov	45.32	315	⇓eP	P	18 58 26.4	-0.5
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KURBB	Kurchatov Arra	45.36	315	P	P	18 58 26.1	-1.0
	comp=Z,1.2nm,1.0s,baz=102,slow=8.6,SNR=8.2						
BILL	Bilibino	45.99	18	d iP	P	18 58 32.0	+0.1
BILL				e		19 00 12.3	
BILL				pmax	pmax		
	comp=Z,11nm,1.6s						
WRA	Warramunga Arr	47.20	175	P	P	18 58 42.4	+0.4
	comp=Z,0.6nm,0.6s,baz=354,slow=8.5,SNR=4.9						
BVAR	Borovoye Array	50.70	317	LR	LR	19 22 53.3	
	comp=Z,43nm,19.6s,baz=228,slow=39						
BRVK	Borovoye	50.77	318	⇑eP	P	18 59 09.5	+0.5
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ASAR	Alice Springs	50.86	176	P	P	18 59 10.8	+0.8
	comp=Z,0.6nm,0.5s,baz=6.2,slow=14,SNR=13						
ASAR				LR	LR	19 20 01.5	
	comp=Z,85nm,18.9s,baz=168,slow=35						
ARU	Arti	57.68	321	P	P	18 59 59.2	-0.1
AKTO	Aktyubinsk	58.39	314	P	P	19 00 05.4	+1.0
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKTO				MLR	MLR		
	comp=Z,28nm,21.2s						
AKTO	Aktyubinsk	58.39	314	P	P	19 00 05.4	+1.0
	comp=Z,0.6nm,0.4s,baz=74,slow=12,SNR=3.8						
AKTO				LR	LR	19 26 36.8	
	comp=Z,28nm,21.2s,baz=287,slow=37						
ILAR	Eielson Array	62.52	29	P	P	19 00 31.8	-0.6
	comp=Z,0.5nm,0.8s,baz=275,slow=6.8,SNR=5.3						
SPITS	Spitsbergen Ar	68.09	348	P	P	19 01 07.4	-1.0
	comp=Z,2.6nm,0.8s,baz=50,slow=9.0,SNR=4.6						
KBZ	Khabaz	69.90	310	P	P	19 01 22.2	+2.1
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBZ	Khabaz	69.90	310	P	P	19 01 22.2	+2.1
	comp=Z,1.6nm,0.6s,baz=228,slow=1.9,SNR=6.3						
KIV	Kislovodsk	69.97	310	eP	P	19 01 21.4	+0.7
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
FINES	FINESS Array B	72.80	331	P	P	19 01 37.4	+0.1
	comp=Z,0.8nm,0.4s,baz=38,slow=9.6,SNR=6.2						
YKA	Yellowknife Ar	76.67	26	P	P	19 02 00.2	+0.5
	comp=Z,0.7nm,0.7s,baz=296,slow=5.4,SNR=7.1						
JMIC	Jan Mayen	77.72	347	LR	LR	19 35 40.5	
	comp=Z,12nm,21.9s,baz=256,slow=35						
BRTR	Keskin Array B	77.83	308	P	P	19 02 07.6	+0.8
	comp=Z,1.0nm,0.9s,baz=106,slow=4.0,SNR=5.2						
NB2	NORSAR Subarra	79.12	334	P	P	19 02 12.7	-0.7
	comp=Z,0.8nm,0.7s,baz=48,slow=5.6						
NOA	NORSAR Array B	79.12	334	P	P	19 02 13.1	-0.3
	comp=Z,0.4nm,0.6s,baz=52,slow=5.6,SNR=2.8						

MAN 09 18:53:57, 10°.39N×125°.11E, h4km, mb4.2, ML3.0, MS2.8, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.36	225	eP	Pb	18 54 05.4	-0.5
MSLP				eS	Sb	18 54 13.0	+1.1
PLP	Palo	0.78	350	⇓eP	Pb	18 54 13.1	-0.1
PLP				eS	Sb	18 54 24.9	+0.7
OCLP	Ormoc	0.82	323	eP	Pb	18 54 14.3	+0.4
OCLP				eS	Sn	18 54 28.3	+0.3
LLP	Lapu-Lapu	1.13	266	eP	Pn	18 54 19.8	+0.1
LLP				eS	Sn	18 54 36.0	+0.3
BESP	Borongan	1.25	15	eP	Pg	18 54 20.2	-0.7
BESP				eS	Sn	18 54 41.4	+2.9
TBP	Tagbilaran	1.42	241	eP	Pg	18 54 24.5	+0.3
CNP	Catarman	2.15	348	eP	Pb	18 54 35.3	-1.3
CNP				eS	Sg	18 55 05.2	-1.1

IDC 09 19:03:55.7±4.5, **30°.02N**×**69°.73E**, **h0**km, **mb3.2**/4, **mb1 3.4**/5, **mb1mx3.2**/31, **mbtmp3.2**/5, **ML2.9**/1, **Error ellipse: s-maj=151.9km s-min=28.3km az=80.0, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	19.38	27	P	Pn	19 08 23.9	-0.2
	0.0nm,0.3s,baz=208,slow=9.8,SNR=2.7						
KURBB	Kurchatov Arra	21.61	15	P	P	19 08 46.3	-0.9
	0.5nm,0.7s,baz=206,slow=9.6,SNR=4.1						
BVAR	Borovoye Array	22.99	1	P	P	19 09 02.2	+0.3
	0.3nm,0.4s,baz=201,slow=7.3,SNR=2.6						
WRA	Warramunga Arr	79.57	120	P	P	19 16 05.0	+0.1
	0.4nm,0.8s,baz=314,slow=5.1,SNR=3.7						
ASAR	Alice Springs	81.51	123	P	P	19 16 15.3	0.0
	0.2nm,0.6s,baz=312,slow=5.9,SNR=5.0						

*ISCJB **09** 19:25:50.1±0.9, 3°.51S±0°.04×80°.1W±0°.1, h70km±7km, mb3.4/4, Error ellipse: s-maj=19.6km s-min=6.2km az=5.3*
*IGQ **09** 19:25:50.5, 3°.49S×80°.04W, h69km±106km, Mb4.5, Ms4.3, Error ellipse: s-maj=6.5km s-min=2.4km az=6.1*
*IDC **09** 19:25:54.4±1.1, 3°.41S×78°.59W, h0km, mb3.5/4, mb1 3.9/7, mb1mx3.7/24, mbtmp3.8/7, ML3.9/3, Error ellipse: s-maj=40.8km s-min=16.7km az=73.0*
ISC 09 19:25:50.9±1.3, **3°.50S**±0°.06×**80°.1W**±0°.1, **h61**km±10km, **n51**, σ**0°.73**/48, **mb3.5**/4, **9C-10D, Peru-Ecuador border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARNL	Arenillas	0.05	178	⇓P	Pn	19 26 00.3	+0.2
ARNL	Arenillas	0.05	178	⇓S	Sn	19 26 07.0	+0.4
MACE	Macas	2.24	57	⇑P	Pn	19 26 25.6	-0.3
RIOE	Riobamba	2.25	40	⇓P	Pn	19 26 25.9	-0.3
IGUA	Igualata	2.46	36	P	Pn	19 26 28.6	-0.6
CHIS	Cerro-Chispas-	2.52	345	P	Pn	19 26 29.6	0.0
BMAS	Trigal station	2.54	39	P	Pn	19 26 30.0	-0.2
ARRY	Arrayan	2.55	39	⇓P	Pn	19 26 30.0	-0.4
BIL2	Estacion Bilba	2.56	38	⇓P	Pn	19 26 31.2	+0.8
PAT1	Patacocha	2.56	39	P	Pn	19 26 30.6	+0.1
RETU	Refugio	2.60	39	⇑P	Pn	19 26 31.4	+0.2
JUI6	Juive	2.61	38	P	Pn	19 26 31.3	+0.2
ULBA	Ulba	2.63	39	P	Pn	19 26 31.9	+0.5
RUN5	Runtun	2.64	38	⇓P	Pn	19 26 32.0	+0.5
PECV	Mancha de Ca P	2.71	0	P	Pn	19 26 32.1	-0.1
PISA	Pisayambo	2.95	35	P	Pn	19 26 36.3	+0.4
BMOR	Cotopaxi Volca	3.19	30	P	Pn	19 26 39.6	+0.5
CAMI	Rancho Maria	3.21	29	P	Pn	19 26 40.3	+0.9
MOV1	Cotopaxi Vol s	3.21	30	P	Pn	19 26 39.6	+0.1
BNAS	Cotopaxi Volca	3.23	29	⇑P	Pn	19 26 40.2	+0.5
BREF	Cotopaxi Volca	3.25	30	⇓P	Pn	19 26 41.1	+1.0
NAS2	Nasa	3.26	29	P	Pn	19 26 41.1	+1.0
TAMB	Tambo	3.27	31	P	Pn	19 26 41.1	+0.9
BTAM	Cotopaxi Volca	3.27	31	⇑P	Pn	19 26 40.6	+0.3
BVC2	Cotopaxi Volca	3.27	30	P	Pn	19 26 40.8	+0.4
VC1	Cotopaxi 1	3.29	30	P	Pn	19 26 41.3	+0.7
COV1	Cotopaxi Volc	3.31	31	P	Pn	19 26 41.1	+0.3
PITA	Cotopaxi Volc	3.35	29	⇓P	Pn	19 26 42.0	+0.7
JUA2	San Juan 2	3.58	24	P	Pn	19 26 45.1	+0.7
ANTI	Antisana	3.58	32	⇑P	Pn	19 26 44.6	0.0
TERV	Terraza Guagua	3.61	24	S	Sn	19 27 28.2	+1.5
TERV	Terraza Guagua	3.61	24	P	Pn	19 26 45.9	+0.8
GGP	Refugio Guagua	3.62	24	⇑P	Pn	19 26 45.6	+0.6
PINO	Pino	3.63	24	⇑P	Pn	19 26 45.8	+0.6
YANA	Yana	3.68	24	P	Pn	19 26 46.4	+0.6
YANA	Yana	3.68	24	S	Sn	19 27 27.6	-0.7
ATAH	Atahualpa	3.98	155	Pn	Pn	19 26 51.6	+1.8
	5.7nm,0.3s,baz=6.7,slow=11,SNR=22						
ATAH				Lg	Lg	19 27 54.9	
	16nm,0.3s,baz=123,slow=14,SNR=3.9						
OTAV	Otavalo	4.05	24	⇑S	Sn	19 27 38.0	+0.7
OTAV	Otavalo	4.05	24	⇑P	Pn	19 26 51.0	+0.1
CAYR	Refugio Cayamb	4.05	31	P	Pn	19 26 51.1	0.0
CHAR	Charly	4.15	35	P	Pn	19 26 52.6	+0.3
LAV4	Lava4-Reventad	4.17	36	⇓P	Pn	19 26 52.8	+0.4
CONE	Cono NE Rev Vo	4.18	35	⇓P	Pn	19 26 53.3	+0.7
LITE	Lita	4.61	22	S	Sn	19 27 51.2	+0.7
LITE	Lita	4.61	22	P	Pn	19 26 58.2	0.0
NNA	Nana	9.02	159	Pn	Pn	19 27 59.6	+1.0
	2.1nm,0.3s,baz=4.8,slow=12,SNR=3.3						
NNA				Sn	Sn	19 29 31.5	-7.1
	2.1nm,0.3s,baz=319,slow=19,SNR=2.4						
NNA				Lg	Lg	19 30 27.1	
	2.2nm,0.3s,baz=244,slow=18,SNR=5.2						
LPAZ	La Paz	17.30	138	Pn	Pn	19 29 48.0	-1.1
	0.3nm,0.3s,baz=325,slow=13,SNR=15						
SIV	San Ignacio	22.43	125	P	P	19 30 43.0	-1.9
	1.3nm,0.5s,baz=302,slow=11,SNR=8.1						
NVAR	Mina Array Bea	54.67	323	P	P	19 35 31.4	+17
	0.2nm,0.5s,baz=153,slow=6.1,SNR=3.6						
YKA	Yellowknife Ar	70.85	344	P	P	19 37 15.2	+14
	0.4nm,0.7s,baz=138,slow=6.0,SNR=6.3						
TORD	Torodi Ar. Bea	82.78	76	P	P	19 38 13.5	+4.3
	0.8nm,1.1s,baz=267,slow=7.6,SNR=3.8						

WEL 09 19:39:03.4±0.8, **36°.18S**×**178°.10E**, **h193**km±17km, **ML3.5**/3, **1C, Error ellipse: s-maj=17.8km s-min=11.9km az=0.0, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	1.89	176	PN	Pn	19 39 40.1	-0.1
PUZ				SN	Sn	19 40 07.9	-1.3
MWZ	Matawai	2.20	192	PN	Pn	19 39 44.0	+0.5
MWZ				SN	Sn	19 40 14.6	-0.3
URZ	Urewera	2.22	201	⇑PN	Pn	19 39 43.7	+0.1
URZ				SN	Sn	19 40 15.0	-0.2
CNGZ	Carnagh Statio	2.30	178	PN	Pn	19 39 45.1	+0.6
KNZ	Kokohu	2.85	187	PN	Pn	19 39 50.4	-0.4
NMHZ	Naumai	3.09	199	PN	Pn	19 39 54.4	+0.6

*ISCJB **09** 19:43:01.3±0.5, 23°.03S±0°.08×113°.4W±0°.1, h10km, mb4.3/26, MS3.9/16, Error ellipse: s-maj=18.6km s-min=9.7km az=158.6*
*IDC **09** 19:43:02.1±0.8, 22°.99S×113°.44W, h0km, mb4.0/12, mb1 4.3/12, mb1mx4.2/21, mbtmp4.0/12, MS3.9/16, Ms1 3.9/16, ms1mx3.7/26, Error ellipse: s-maj=30.0km s-min=18.5km az=64.0*
*NEIC **09** 19:43:03.3±0.3, 23°.03S×113°.36W, h10km, mb4.7/15, Error ellipse: s-maj=13.2km s-min=7.8km az=69.0*
*GCMT **09** 19:43:06.8±0.4, 23°.25S×113°.35W, h26km±1km, MW4.9, Moment Tensor Solution. s23,c25; s62,c82; Moment tensor: Scale 10^16Nm; Mrr0.46±.16; Mθθ-1.04±.14; Mφφ0.59±.15; Mrθ-0.26±.23; Mθφ2.78±.10; Mφr-0.20±.26; Best double couple: M0 2.90000×10^16 NP1:φs172.00000°, δ83.00000°, λ175.00000°. NP2:φs262.00000°, δ85.00000°, λ7.00000°. Principal axes: T 2.7200, Plg8.0000°, Azm127.0000°; N 0.4100, Plg82.0000°, Azm296.0000°; P -3.1300, Plg1.0000°, Azm37.0000°; Data Used: II IU G IC CN.*
ISC 09 19:43:03.3±0.6, **23°.1S**±0°.1×**113°.4W**±0°.2, **h10**km, **n67**, σ**0°.88**/57, **mb4.5**/26, **MS3.9**/16, **Easter Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPT	Papeete	34.34	272	LR	LR	20 00 33.1	
	comp=Z,207nm,20.6s,baz=30,slow=31						
ATAH	Atahualpa	37.14	70	LR	LR	20 00 31.2	
	comp=Z,57nm,21.4s,baz=53,slow=28						
PLCA	Paso Flores	39.95	126	P	P	19 50 39.0	+0.9
PLCA	Paso Flores	39.95	126	P	P	19 50 39.0	+0.9
	1.7nm,0.6s,baz=276,slow=9.2,SNR=2.6						
PLCA				LR	LR	20 02 39.0	
	comp=Z,348nm,19.3s,baz=348,slow=29						
CFAA	Coronel Fontan	40.75	112	P	P	19 50 45.5	+0.7
CFAA	Coronel Fontan	40.75	112	P	P	19 50 45.5	+0.7
	0.6nm,0.9s,baz=265,slow=8.4,SNR=6.2						
LVC	Limon Verde	40.85	98	P	P	19 50 44.3	-1.6
	23nm,1.4s						
LPAZ	La Paz	42.98	89	eP	P	19 51 04.8	+1.0
LPAZ	La Paz	42.98	89	P	P	19 51 05.0	+1.2
	5.5nm,0.9s,baz=270,slow=5.9,SNR=16						
LPAZ				LR	LR	20 04 27.9	
	comp=Z,74nm,20.0s,baz=282,slow=30						
TRQA	Tornquist	46.15	121	eP	P	19 51 28.7	+0.5
	19nm,1.2s						
ROSC	El Rosal	47.13	59	LR	LR	20 06 51.3	
	comp=Z,97nm,18.9s,baz=207,slow=30						
SAML	Samuel	49.98	82	eP	P	19 51 57.6	-0.5
	5.7nm,1.1s						
CPUP	Villa Florida	50.68	106	LR	LR	20 07 25.1	
	comp=Z,23nm,19.8s,baz=72,slow=29						
TXAR	Lajitas Array	52.91	11	P	P	19 52 20.2	+0.4
TXAR	Lajitas Array	52.91	11	P	P	19 52 20.2	+0.4
	1.4nm,1.1s,baz=187,slow=9.8,SNR=4.0						
TXAR				LR	LR	20 10 48.8	
	comp=Z,128nm,18.5s,baz=5.0,slow=32						
MNTX	Cornudas Mount	54.97	8	eP	P	19 52 34.2	-0.5
	2.8nm,1.1s						
PFO	Pinyon Flat Ob	56.42	357	P	P	19 52 44.3	-1.0
PFO	Pinyon Flat Ob	56.42	357	P	P	19 52 44.3	-1.0
	0.7nm,0.3s,baz=173,slow=8.1,SNR=2.7						
ANMO	Albuquerque	58.05	7	LR	LR	20 13 16.4	
	comp=Z,120nm,21.4s,baz=24,slow=31						
NV11	Mina Array Sit	61.32	356	eP	P	19 53 19.5	+0.3
NVAR	Mina Array Bea	61.33	356	P	P	19 53 20.3	+0.9
NVAR	Mina Array Bea	61.33	356	P	P	19 53 20.3	+0.9
	3.1nm,0.8s,baz=186,slow=9.6,SNR=21						
DUG	Dugway	62.92	0	eP	P	19 53 29.1	-0.9
	6.5nm,1.3s						
ELK	Elko	63.49	358	P	P	19 53 34.3	+0.5
ELK	Elko	63.49	358	P	P	19 53 34.3	+0.5
	0.7nm,0.6s,baz=171,slow=6.7,SNR=5.3						
YBH	Yreka Blue Hor	65.03	352	LR	LR	20 13 51.7	
	comp=Z,37nm,21.5s,baz=201,slow=28						
WVOR	Wild Horse Val	65.33	356	eP	P	19 53 46.0	+0.3
	4.0nm,1.0s						
SBA	Scott Base	65.50	193	eP	P	19 53 45.5	-0.8
	23nm,1.6s						
PDAR	Pinedale Array	65.58	3	P	P	19 53 46.1	-1.3
PDAR	Pinedale Array	65.58	3	P	P	19 53 46.1	-1.3
	1.0nm,0.7s,baz=165,slow=7.7,SNR=7.2						
PDAR				LR	LR	20 17 31.3	
	comp=Z,74nm,18.8s,baz=341,slow=32						
HUMO	Hull Mountain	65.92	352	eP	P	19 53 49.5	+0.1
	3.2nm,1.0s						
HLID	Hailey	66.29	359	eP	P	19 53 52.0	0.0
	5.5nm,1.1s						
VNDA	Vanda	66.54	194	P	P	19 53 53.7	+0.7
VNDA	Vanda	66.54	194	P	P	19 53 53.7	+0.7
	1.1nm,0.8s,baz=83,slow=5.6,SNR=5.0						
VNDA				LR	LR	20 16 09.8	
	comp=Z,159nm,19.1s,baz=140,slow=30						
QSPA	South Pole Qui	67.11	180	eP	P	19 53 56.5	-0.5
	19nm,1.3s						
CHMT	Chamberlain Mo	69.63	0	eP	P	19 54 11.7	-1.3
	1.4nm,0.9s						
NEW	Newport	71.06	357	eP	P	19 54 21.2	-0.3
	4.9nm,1.1s						
NEW	Newport	71.06	357	P	P	19 54 21.4	-0.1
	3.3nm,0.9s,baz=209,slow=4.0,SNR=5.3						
NEW				LR	LR	20 21 02.3	
	comp=Z,40nm,20.5s,baz=200,slow=32						
WALA	Waterton Lakes	71.78	360	eP	P	19 54 25.7	-0.2
COWI	Conover	72.25	17	eP	P	19 54 28.2	-0.4
	5.6nm,0.9s						
SADO	Sadowa	74.37	25	LR	LR	20 23 51.7	
	comp=Z,92nm,19.3s,baz=200,slow=33						
SNAA	Sanae	74.51	162	eP	P	19 54 40.5	-1.3
	17nm,1.6s						
DLBC	Dease Lake	82.35	351	eP	P	19 55 24.8	-0.3
YKA	Yellowknife Ar	85.25	359	P	P	19 55 39.5	-0.2
YKA	Yellowknife Ar	85.25	359	P	P	19 55 39.5	-0.2
	2.0nm,1.0s,baz=176,slow=4.7,SNR=14						
SCHQ	Schefferville	87.18	25	LR	LR	20 30 50.4	
	comp=Z,76nm,18.5s,baz=270,slow=33						
PMR	Palmer	89.11	344	P	P	19 55 58.4	0.0
	11nm,1.0s						
STKA	Stephens Creek	89.94	235	LR	LR	20 30 47.6	
	comp=Z,133nm,18.2s,baz=144,slow=32						
ILAR	Eielson Array	91.30	346	P	P	19 56 09.9	+1.3
ILAR	Eielson Array	91.30	346	P	P	19 56 09.9	+1.3
	0.4nm,0.9s,baz=189,slow=5.0,SNR=3.6						
ASAR	Alice Springs	99.85	239	LR	LR	20 38 21.8	
	comp=Z,109nm,19.3s,baz=139,slow=33						
SONM	Songino Array	139.89	318	PKP	PKPdf	20 02 33.2	+1.3
SONM	Songino Array	139.89	318	PKP	PKPdf	20 02 33.2	+1.3
	0.5nm,0.9s,baz=45,slow=0.6,SNR=3.7						
KMBO	Kilima Mbogo	142.64	126	PKPpre	PKPpre	20 02 34.2	
KMBO	Kilima Mbogo	142.64	126	PKhKP	PKPpre	20 02 34.2	
	0.6nm,0.2s,baz=35,slow=16,SNR=4.8						
ZALV	Zalesovo Beam	146.23	341	PKPbc	PKPbc	20 02 43.9	+0.2
ZALV	Zalesovo Beam	146.23	341	PKPbc	PKPbc	20 02 43.9	+0.2
	1.3nm,0.5s,baz=355,slow=1.8,SNR=7.6						
CMAR	Chiang Mai Arr	149.49	267	PKPbc	PKPbc	20 02 53.6	0.0
CMAR	Chiang Mai Arr	149.49	267	PKPbc	PKPbc	20 02 53.6	0.0
	1.5nm,0.8s,baz=53,slow=0.4,SNR=11						
CHTO	Chiang Mai	149.57	268	ePKPbc	PKPbc	20 02 55.1	+1.3
KURK	Kurchatov	150.85	344	ePKPdf	PKPdf	20 02 51.2	+0.9
AKTO	Aktyubinsk	151.84	12	PKPbc	PKPbc	20 02 58.6	+0.3
AKTO	Aktyubinsk	151.84	12	PKPbc	PKPbc	20 02 58.6	+0.3
	2.1nm,0.9s,baz=347,slow=3.4,SNR=8.1						
MK31	Makanchi Array	153.16	336	ePKPbc	PKPbc	20 02 59.9	-1.5
MKAR	Makanchi Array	153.16	336	PKPbc	PKPbc	20 02 60.0	-1.4
MKAR	Makanchi Array	153.16	336	PKPbc	PKPbc	20 02 60.0	-1.4
	1.1nm,0.8s,baz=48,slow=0.4,SNR=14						
ABKAR	Akbulak array	153.31	10	ePKPdf	PKPdf	20 02 53.0	-1.1
ABKAR				ePKPbc	PKPbc	20 03 01.3	-0.3
ABKAR				ePKPab	PKPab	20 03 14.5	+1.1

*ISCJB **09** 19:59:07.5±0.3, 34°.29N±0°.02×25°.43E±0°.02, h46km±4km, mb3.9/22, MS3.4/1, Error ellipse: s-maj=3.6km s-min=2.4km az=32.1*
*HLW **09** 19:59:07.4, 34°.48N×25°.40E, h32km±8km, Md4.0, Ml3.8*
*MOS **09** 19:59:08.9±1.3, 34°.42N×25°.50E, h33km, mb4.1/12, Error ellipse: s-maj=12.8km s-min=7.2km az=76.4*
*IDC **09** 19:59:09.6±3.6, 34°.37N×25°.42E, h33km±29km, mb3.7/14, mb1 3.8/24, mb1mx3.7/36, mbtmp3.8/24, ML4.1/9, MS3.1/2, Ms1 3.1/2, ms1mx2.3/48, Error ellipse: s-maj=16.8km s-min=13.9km az=172.0*
*CSEM **09** 19:59:09.3±0.1, 34°.32N×25°.38E, h40km, mb3.9/14, Ms2.5, Mw3.7, Error ellipse: s-maj=3.5km s-min=2.2km az=30.0*
*ATH **09** 19:59:09.0, 34°.39N×25°.27E, h82km±2km, ML3.7*
*ISK **09** 19:59:10.3, 34°.47N×25°.65E, h58km, MD4.4*
*DDA **09** 19:59:13.6, 34°.48N×25°.83E, h15km, MD3.5*
*NIC **09** 19:59:14.5±0.2, 34°.39N×25°.97E, h25km, mb4.7, ML4.3, MW3.4*
*NSSC **09** 19:59:35.3±6.1, 34°.01N×28°.11E, h1km±999km, ML3.0*
ISC 09 19:59:09.3±0.8, **34°.32N**±0°.04×**25°.43E**±0°.04, **h49**km±10km, **n337**, σ**1°.34**/343, **mb3.9**/22, **1C-4D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAST	Lasithi	0.84	3	eP	Pn	19 59 25.3	+0.3
LAST				eS	Sn	19 59 39.5	+3.1
LAST	Lasithi	0.84	3	eP	Pn	19 59 25.3	+0.3
SIVA	Sivas	0.87	324	eP	Pn	19 59 25.4	+0.2
SIVA				eS	Sn	19 59 37.2	+0.4
SIVA	Sivas	0.87	324	eP	Pn	19 59 25.4	+0.2
SIVA				eS	Sn	19 59 37.2	+0.4
NPS	Neapolis	0.95	9	eP	Pn	19 59 27.4	+1.0
NPS				eS	Sn	19 59 41.5	+2.5
NPS	Neapolis	0.95	9	eP	Pn	19 59 27.4	+1.0
ZKR	Zakros	1.03	39	eP	Pn	19 59 30.0	+2.7
GVD	Gavdhos	1.23	296	eP	Pn	19 59 30.2	+0.2
GVD	Gavdhos	1.23	296	eP	Pn	19 59 30.2	+0.2
VAM	Vamos	1.49	317	eP	Pn	19 59 34.0	+0.4
VAM	Vamos	1.49	317	eP	Pn	19 59 34.0	+0.4
KARP	Karpathos	1.88	49	eP	Pn	19 59 41.8	+2.8
SANT	Santorini	2.05	1	eP	Pn	19 59 42.6	+1.3
SANT	Santorini	2.05	1	eP	Pn	19 59 42.6	+1.3
ANKY	Antikythira Is	2.33	312	eP	Pn	19 59 45.8	+0.6

ANKY **Antikythira Is** 2.33 312 *e*P Pn 19 59 45.8 +0.6
LTBQ **Tobruq** 2.59 210 *i* P Pn 19 59 49.9 +1.2
SNR=76
NIS1 **Nisyros Isl.** 2.69 32 *e*P Pn 19 59 52.3 +2.2
NIS1 **Nisyros Isl.** 2.69 32 *e*P Pn 19 59 52.3 +2.2
APE **Apeiranthos** 2.75 2 *e*PN Pn 19 59 52.0 +1.1
APE *e*SN Sn 20 00 21.8 -1.1
APE **Apeiranthos** 2.75 2 *e*P Pn 19 59 52.0 +1.1
APE *e*S Sn 20 00 22.6 -0.3
APE **Apeiranthos** 2.75 2 *e*P Pn 19 59 52.0 +1.1
APE *e*Sn Sn 20 00 21.8 -1.1
KYH **Kithira** 2.77 316 *e*P Pn 19 59 51.1 -0.1
KYTH **Kithira** 2.77 316 *e*P Pn 19 59 51.1 -0.1
SLUM 2.82 184 AMP 20 00 00.0
comp=N,300µm,0.3s,logA/T=6.0,baz=184
SLUM 2.82 184 P Pn 19 59 52.5 +0.6
ARG **Arkhangelos** 2.91 49 *e*P Pn 19 59 55.6 +2.6
DAT **Datca** 2.98 35 *e*PN Pn 19 59 53.7 -0.4
DAT **Datca** 2.98 35 *e*Pn Pn 19 59 53.7 -0.4
BODT **Bodrum** 3.14 29 *e*PN Pn 19 59 56.0 -0.2
BODT **Bodrum** 3.14 29 *e*Pn Pn 19 59 56.0 -0.2
VLI **Veliai** 3.14 320 *e*P Pn 19 59 56.2 -0.1
VLI **Veliai** 3.14 320 *e*P Pn 19 59 56.2 -0.1
HMAT **Matruh** 3.51 156 S Sn 20 00 41.8 +0.3
baz=156
HMAT **Matruh** 3.51 156 S Sn 20 00 41.8 +0.3
DYR **Agios Nikonas** 3.51 315 *e*P Pn 20 00 01.5 +0.1
DYR **Agios Nikonas** 3.51 315 *e*P Pn 20 00 01.5 +0.1
MLSB **Milas** 3.53 32 *e*PN Pn 20 00 01.6 0.0
MLSB **Milas** 3.53 32 *e*Pn Pn 20 00 01.6 0.0
YER **Yerkesik** 3.65 39 *e*PN Pn 20 00 03.5 +0.3
YER **Yerkesik** 3.65 39 *e*Pn Pn 20 00 03.5 +0.3
DID **Didima** 3.65 331 *e*P Pn 20 00 02.5 -0.7
DID *e*S Sn 20 00 42.2 -2.8
DID **Didima** 3.65 331 *e*P Pn 20 00 02.5 -0.7
DID *e*S Sn 20 00 42.2 -2.8
FETY **Fethiye** 3.77 51 *e*PN Pn 20 00 05.6 +0.7
FETY **Fethiye** 3.77 51 *e*Pn Pn 20 00 05.6 +0.7
KSL **Kastellorizon** 3.86 61 *e*P Pn 20 00 08.3 +2.2
AYDN **Tasoluk** 3.88 30 *i* P Pn 20 00 08.8 +2.3
AYDN *e*S Sn 20 00 49.4 -1.4
AYDN **Tasoluk** 3.88 30 *i* P Pn 20 00 08.8 +2.3
AYDN *e*S Sn 20 00 49.4 -1.4
ATH **Athens Observa** 3.90 340 *e*P Pn 20 00 06.8 +0.1
ATH **Athens Observa** 3.90 340 *e*P Pn 20 00 06.8 +0.1
AKAS **Kas** 3.91 60 *i* P Pn 20 00 08.7 +1.7
AKAS *e*S Sn 20 00 49.4 -2.3
AKAS **Kas** 3.91 60 *i* P Pn 20 00 08.7 +1.7
AKAS *e*S Sn 20 00 49.4 -2.3
VLX **Vlachokerasia** 3.93 322 *e*P Pn 20 00 07.9 +0.8
VLX **Vlachokerasia** 3.93 322 *e*P Pn 20 00 07.9 +0.8
PTL **Penteli** 3.93 342 *e*P Pn 20 00 07.8 +0.6
PTL **Penteli** 3.93 342 *e*P Pn 20 00 07.8 +0.6
PYL **PYLOS** 3.96 312 *e*P Pn 20 00 05.6 -1.8
PYL **PYLOS** 3.96 312 *e*P Pn 20 00 05.6 -1.8
ITM **Ithomi** 4.04 316 *e*P Pn 20 00 08.1 -0.4
ITM **Ithomi** 4.04 316 *e*P Pn 20 00 08.1 -0.4
CHOS **Chios island** 4.09 7 *e*P Pn 20 00 08.7 -0.7
CHOS **Chios island** 4.09 7 *e*P Pn 20 00 08.7 -0.7
LTK **Loutraki** 4.20 332 *e*P Pn 20 00 10.6 -0.2
LTK **Loutraki** 4.20 332 *e*P Pn 20 00 10.6 -0.2
BLCB **Balcova** 4.26 17 *e*PN Pn 20 00 12.0 +0.4
BLCB **Balcova** 4.26 17 *e*Pn Pn 20 00 12.0 +0.4
IZM **Izmir** 4.33 19 *e*PN Pn 20 00 12.8 +0.1
IZM **Izmir** 4.33 19 *e*Pn Pn 20 00 12.8 +0.1
GLHS **Glhisar (BURDU** 4.36 48 *e*PN Pn 20 00 12.9 -0.1
GLHS **Glhisar (BURDU** 4.36 48 *e*Pn Pn 20 00 12.9 -0.1
GUR **Goura** 4.39 326 *e*P Pn 20 00 13.2 -0.3
GUR *e*S Sn 20 01 00.5 -3.0
GUR **Goura** 4.39 326 *e*P Pn 20 00 13.2 -0.3
GUR *e*S Sn 20 01 00.5 -3.0
AMT **Artemida-Makis** 4.41 318 *e*P Pn 20 00 13.5 -0.1
AMT **Artemida-Makis** 4.41 318 *e*P Pn 20 00 13.5 -0.1
GOLH **Golhisar** 4.45 48 *i* P Pn 20 00 16.6 +2.4
GOLH *e*S Sn 20 01 02.9 -1.8
GOLH **Golhisar** 4.45 48 *i* P Pn 20 00 16.6 +2.4
GOLH *e*S Sn 20 01 02.9 -1.8
DNZL **Cakiroluk** 4.46 40 *i* P Pn 20 00 16.2 +1.6
DNZL *e*S Sn 20 01 07.6 +2.3
DNZL **Cakiroluk** 4.46 40 *i* P Pn 20 00 16.2 +1.6
DNZL *e*S Sn 20 01 07.6 +2.3
DENT **Denizli** 4.50 39 *e*PN Pn 20 00 15.1 +0.1
DENT **Denizli** 4.50 39 *e*Pn Pn 20 00 15.1 +0.1
KLV **Kalavryta, Ach** 4.57 325 *e*P Pn 20 00 15.1 -0.8
KLV **Kalavryta, Ach** 4.57 325 *e*P Pn 20 00 15.1 -0.8
LAKA **Lakka** 4.81 326 *e*P Pn 20 00 17.9 -1.2
LAKA *e*S Sn 20 01 10.5 -3.0
LAKA **Lakka** 4.81 326 *e*P Pn 20 00 17.9 -1.2
LAKA *e*S Sn 20 01 10.5 -3.0
KORT **Korkueli** 4.82 55 *i* P Pn 20 00 22.0 +2.6
KORT *i* S Sn 20 01 15.4 +1.4
KORT **Korkueli** 4.82 55 *i* P Pn 20 00 22.0 +2.6
KORT *i* S Sn 20 01 15.4 +1.4
KALE **Kalithea** 4.86 328 *e*P Pn 20 00 19.0 -0.8
KALE **Kalithea** 4.86 328 *e*P Pn 20 00 19.0 -0.8
TRIZ **Trizonia** 4.87 327 *e*P Pn 20 00 20.6 +0.7
TRIZ **Trizonia** 4.87 327 *e*P Pn 20 00 20.6 +0.7
KULA **Kula-Manisa** 4.93 31 *e*PN Pn 20 00 21.0 +0.1
KULA **Kula-Manisa** 4.93 31 *e*Pn Pn 20 00 21.0 +0.1
ANTB **Antalya** 4.97 57 *e*PN Pn 20 00 21.9 +0.5
ANTB **Antalya** 4.97 57 *e*Pn Pn 20 00 21.9 +0.5
EFP **Efpalio** 4.99 326 *e*P Pn 20 00 22.3 +0.7
EFP **Efpalio** 4.99 326 *e*P Pn 20 00 22.3 +0.7
AOS **Alonnisos** 5.00 346 *e*P Pn 20 00 22.3 +0.5
AOS **Alonnisos** 5.00 346 *e*P Pn 20 00 22.3 +0.5
SWA2 5.06 180 P Pn 20 00 23.0 +0.4
baz=179
SWA2 S Sn 20 01 17.7 -2.0
baz=179
SWA2 5.06 180 P Pn 20 00 23.0 +0.4
SWA2 S Sn 20 01 17.7 -2.0
KHAL **Karahalli** 5.21 38 *i* P Pn 20 00 25.8 +1.1
KHAL *i* S Sn 20 01 20.3 -3.2
KHAL **Karahalli** 5.21 38 *i* P Pn 20 00 25.8 +1.1
KHAL *i* S Sn 20 01 20.3 -3.2
BCK **Bucak** 5.23 52 *e*PN Pn 20 00 25.1 +0.1
BCK **Bucak** 5.23 52 *e*Pn Pn 20 00 25.1 +0.1
NEO **Neokhori** 5.29 341 *e*P Pn 20 00 26.4 +0.7
NEO **Neokhori** 5.29 341 *e*P Pn 20 00 26.4 +0.7
AGG **Agios Georgios** 5.32 333 *e*P Pn 20 00 27.7 +1.6
AGG **Agios Georgios** 5.32 333 *e*P Pn 20 00 27.7 +1.6
LJBD **Adjabya** 5.57 234 *i* P Pn 20 00 29.3 -0.3
SNR=76
AKMC **Akamas** 5.73 81 P Pn 20 00 31.6 -0.2
AKMC **Akamas** 5.73 81 P Pn 20 00 31.6 -0.2
PPCY **Paphos** 5.73 82 P Pn 20 00 32.1 +0.3
PPCY *e*S Sn 20 01 32.9 -3.3
PPCY **Paphos** 5.73 82 P Pn 20 00 32.1 +0.3
DST **Dursunbey** 5.86 25 *e*PN Pn 20 00 33.7 +0.1
DST **Dursunbey** 5.86 25 *e*Pn Pn 20 00 33.7 +0.1
LKD2 **Lefkada island** 5.89 321 *e*P Pn 20 00 33.1 -0.9
LKD2 **Lefkada island** 5.89 321 *e*P Pn 20 00 33.1 -0.9
SHUT **Suhut-Afyon** 5.91 43 *e*PN Pn 20 00 34.2 -0.1
SHUT **Suhut-Afyon** 5.91 43 *e*Pn Pn 20 00 34.2 -0.1
GAZI **Gazipasa** 5.95 69 *i* P Pn 20 00 34.9 +0.1
GAZI *e*S Sn 20 01 31.8 -10
GAZI **Gazipasa** 5.95 69 *i* P Pn 20 00 34.9 +0.1
ALFC **Alevga** 5.96 80 P Pn 20 00 35.0 0.0
comp=N,11nm,0.2s
ALFC S Sn 20 01 38.9 -3.0
ALFC **Alevga** 5.96 80 P Pn 20 00 35.0 0.0
comp=N,11nm,0.2s
GONE **Gonen-Balikesi** 6.00 17 *e*PN Pn 20 00 35.3 -0.1
GONE **Gonen-Balikesi** 6.00 17 *e*Pn Pn 20 00 35.3 -0.1
ALT **Altintas** 6.04 37 *e*PN Pn 20 00 36.1 0.0
ALT **Altintas** 6.04 37 *e*Pn Pn 20 00 36.1 0.0
GELI **Tayfur-Gelibol** 6.13 7 *e*PN Pn 20 00 37.8 +0.6
GELI **Tayfur-Gelibol** 6.13 7 *e*Pn Pn 20 00 37.8 +0.6
LEF **Lefka** 6.19 80 *e*PN Pn 20 00 37.8 -0.3
LEF **Lefka** 6.19 80 *e*Pn Pn 20 00 37.8 -0.3
LUJL **Ujela** 6.26 215 *i* P Pn 20 00 39.0 -0.1
SNR=70
ERIK **Erikli-Kesan** 6.40 7 *e*PN Pn 20 00 41.5 +0.6
ERIK **Erikli-Kesan** 6.40 7 *e*Pn Pn 20 00 41.5 +0.6
HMYD **Mayadein** 6.41 133 P Pn 20 00 42.3 +1.2
baz=134
HMYD **Mayadein** 6.41 133 P Pn 20 00 42.3 +1.2
HNAT **Natroun** 6.42 135 P Pn 20 00 42.4 +1.2
baz=136
HNAT **Natroun** 6.42 135 P Pn 20 00 42.4 +1.2

MAMC **Mammari** 6.47 80 P Pn 20 00 42.1 +0.2
MAMC **Mammari** 6.47 80 P Pn 20 00 42.1 +0.2
ERMK **Ermenek** 6.53 67 *i* P Pn 20 00 45.2 +2.3
ERMK *e*S Sn 20 01 45.5 -11
ERMK **Ermenek** 6.53 67 *i* P Pn 20 00 45.2 +2.3
CSS **Prodhromos** 6.54 82 P Pn 20 00 43.2 +0.3
comp=N,2.7nm,0.4s
CSS S Sn 20 01 52.7 -3.5
CSS **Prodhromos** 6.54 82 *e*PN Pn 20 00 43.2 +0.3
CSS **Prodhromos** 6.54 82 P Pn 20 00 43.2 +0.3
comp=N,2.7nm,0.4s
KONT **Konya--Tatoy** 6.67 55 *e*PN Pn 20 00 44.5 -0.3
KONT **Konya--Tatoy** 6.67 55 *e*Pn Pn 20 00 44.5 -0.3
LADK **Ladik-KONYA** 6.81 53 *e*PN Pn 20 00 46.4 -0.3
LADK **Ladik-KONYA** 6.81 53 *e*Pn Pn 20 00 46.4 -0.3
KIZT **Kizilcal** 6.90 47 *e*PN Pn 20 00 47.7 -0.2
KIZT **Kizilcal** 6.90 47 *e*Pn Pn 20 00 47.7 -0.2
KOT **Kottamia** 6.97 127 S Sn 20 02 03.4 -3.4
baz=128
HSAF **As Saff** 7.00 130 P Pn 20 00 50.4 +1.2
baz=131
HSAF **As Saff** 7.00 130 P Pn 20 00 50.4 +1.2
SRN **Sarande** 7.05 324 *e*PN Pn 20 00 48.6 -1.2
SRN **Sarande** 7.05 324 *e*Pn Pn 20 00 48.6 -1.2
PHNC **Paralimni** 7.12 82 P Pn 20 00 52.5 +1.7
comp=N,2.1nm,0.6s
PHNC S Sn 20 02 08.1 -2.3
PHNC **Paralimni** 7.12 82 P Pn 20 00 52.5 +1.7
comp=N,2.1nm,0.6s
GLL **Jalalah** 7.12 130 P Pn 20 00 51.7 +0.7
baz=130
GLL **Jalalah** 7.12 130 P Pn 20 00 51.7 +0.7
HHAG **Hagoal** 7.13 126 P Pn 20 00 52.0 +0.9
baz=126
HHAG S Sn 20 02 06.9 -4.0
baz=126
HHAG **Hagoal** 7.13 126 P Pn 20 00 52.0 +0.9
EREN **Erenkoy** 7.28 78 *e*PN Pn 20 00 53.2 +0.2
EREN **Erenkoy** 7.28 78 *e*Pn Pn 20 00 53.2 +0.2
RZN **Rozhen** 7.38 356 *e*P Pn 20 00 54.0 -0.6
RZN **Rozhen** 7.38 356 *e*P Pn 20 00 54.0 -0.6
MMB **Musomiste** 7.38 350 *e*P Pn 20 00 57.2 +2.7
SULT **Sultanhani-AKS** 7.59 57 *e*PN Pn 20 00 56.8 -0.6
SULT **Sultanhani-AKS** 7.59 57 *e*Pn Pn 20 00 56.8 -0.6
SUZ **7.70 123** P Pn 20 00 59.6 +0.7
baz=124
SUZ 7.70 123 P Pn 20 00 59.6 +0.7
KKB **Krupnik** 7.76 347 *e*P Pn 20 01 06.3 +6.7
OFRI **'Ofer** 8.16 99 Pn Pn 20 01 05.7 +0.6
KZIT **Kziot** 8.29 112 Pn Pn 20 01 06.5 -0.4
SLTI **Sal'it** 8.31 102 Pn Pn 20 01 07.5 +0.4
PHP **Peshkopia** 8.34 333 *e*PN Pn 20 01 06.1 -1.5
PHP **Peshkopia** 8.34 333 *e*Pn Pn 20 01 06.1 -1.5
MMA0 **Mount Meron ar** 8.41 96 Pn Pn 20 01 08.8 +0.2
MMAI **Mount Meron Ar** 8.41 96 Pn Pn 20 01 08.9 +0.3
comp=N,3.9nm,0.3s,baz=284,slow=12,SNR=14
MMAI Sn Sn 20 02 39.0 -3.2
comp=N,18nm,0.3s,baz=276,slow=23,SNR=15
VTS **Vitosha** 8.44 349 ⇓*i* P Pn 20 01 18.9 +10
RTMI **Retamim** 8.45 110 Pn Pn 20 01 09.5 +0.3
HNKL **Nakhl** 8.47 119 AMP 20 02 00.0
comp=N,640µm,0.8s,logA/T=4.9,baz=119
BRTR **Keskin Array B** 8.49 48 Pn Pn 20 01 11.7 +1.9
comp=N,0.3nm,0.3s,baz=219,slow=15,SNR=9.4
BRTR Sn Sn 20 02 44.1 -0.2
comp=N,0.1nm,0.3s,baz=212,slow=23,SNR=3.1
BRTR **Keskin Array B** 8.49 48 P Pn 20 01 11.7 +1.9
BRTR S Sn 20 02 44.1 -0.2
MMLI **Mount Malkishu** 8.56 100 Pn Pn 20 01 10.4 -0.3
KSDI **Kefar Szold** 8.59 95 Pn Pn 20 01 11.6 +0.6
HMDT **Nahal Hemdat** 8.70 101 Pn Pn 20 01 12.8 +0.3
HWQ **Hawqa** 8.70 87 *e*P Pn 20 01 12.9 +0.3
HWQ **Hawqa** 8.70 87 *e*P Pn 20 01 12.9 +0.3
RMNI **Mount Ramon** 8.71 113 Pn Pn 20 01 13.6 +0.8
BRBR **Barbar** 8.79 93 *e*P Pn 20 01 13.3 -0.6
BRBR **Barbar** 8.79 93 *e*P Pn 20 01 14.4 +0.4
BRBR *i* S Sn 20 02 24.8 -27
BRBR AML AML 20 02 52.4
comp=N,49nm,0.5s
BRBR AML AML 20 02 54.1
comp=E,22nm,0.6s
DSI **Dead Sea** 8.80 105 Pn Pn 20 01 13.7 -0.1
PUK **Puka** 8.86 332 *e*PN Pn 20 01 13.6 -1.1
PUK **Puka** 8.86 332 *e*Pn Pn 20 01 13.6 -1.1
MZDA **Masada** 8.88 107 Pn Pn 20 01 14.6 -0.3
KRMI **Paran Flat** 8.91 115 Pn Pn 20 01 15.6 +0.1
TCHB **Talchebab** 8.95 98 *e*P Pn 20 01 16.4 +0.4
BIDA **Albida** 9.00 82 *e*P Pn 20 01 11.6 -5.1
PRNI **Paran** 9.01 113 Pn Pn 20 01 17.4 +0.1
ZFRI **Zfri** 9.05 112 Pn Pn 20 01 17.4 +0.1
HAWK **Haweek** 9.07 86 *e*P Pn 20 01 16.6 -1.0
HAWK **Haweek** 9.07 86 *e*P Pn 20 01 17.4 -0.3
HAWK ⇓*i* 20 01 18.1
baz=242,slow=14
HAWK *e*S Sn 20 02 33.3 -25
HAWK AML AML 20 02 56.0
comp=N,31nm,0.3s
HAWK AML AML 20 02 59.5
comp=E,18nm,0.5s
BCI **Bajram Curri** 9.07 334 *e*PN Pn 20 01 17.5 -0.1
BCI **Bajram Curri** 9.07 334 *e*Pn Pn 20 01 17.5 -0.1
MPEP **Malo Peshtene** 9.12 352 *e*P Pn 20 01 28.0 +10
MBRI **Mt Berech** 9.22 117 Pn Pn 20 01 20.0 +0.3
EIL **Elat** 9.31 117 Pn Pn 20 01 20.6 -0.3
comp=E,1.9nm,0.3s,baz=320,slow=14,SNR=36
EIL Sn Sn 20 02 58.6 -5.7
comp=E,7.6nm,0.3s,baz=302,slow=19,SNR=8.8
EIL **Elat** 9.31 117 Pn Pn 20 01 20.7 -0.3
SALA **Sala** 9.57 96 *e*P Pn 20 01 24.6 -0.1
SALA **Sala** 9.57 96 *e*P Pn 20 01 25.0 +0.4
ROOS **tl_alroos** 9.82 88 *e*P Pn 20 01 28.4 +0.5
ROOS ⇓*i* 20 01 35.9
baz=293,slow=4.4
ASF **Jabal al Asfar** 9.84 99 Pn Pn 20 01 28.4 +0.2
comp=E,0.4nm,0.3s,baz=303,slow=18,SNR=3.7
ASF Sn Sn 20 03 13.9 -3.3
comp=E,1.2nm,0.3s,baz=261,slow=17,SNR=5.7
ZALF **Zalf** 10.02 95 *e*P Pn 20 01 35.5 +4.8
STON **Ston** 10.46 327 *e*Pn Pn 20 01 33.0 -3.6
STON Sn Sn 20 03 20.1 -12
MLR **Muntele Rosu** 11.17 2 ⇓*i* P Pn 20 01 49.1 +2.8
MLR **Muntele Rosu** 11.17 2 Pn Pn 20 01 48.3 +2.0
comp=E,0.0nm,0.3s,baz=166,slow=10,SNR=4.3
MLR **Muntele Rosu** 11.17 2 P Pn 20 01 48.3 +2.0
NVLJ **Novalja** 13.08 325 *e*Pn Pn 20 02 08.0 -4.2
NVLJ Sn Sn 20 04 23.9 -12
PGF **Pioggiola** 15.26 307 *e*P Pn 20 02 39.7 -1.8
comp=E,45nm,1.2s
VRAC **Vranov** 16.34 339 Pn P 20 02 58.6 +1.1
comp=E,0.5nm,0.3s,baz=135,slow=13,SNR=3.2
VRAC **Vranov** 16.34 339 P P 20 02 58.6 +1.1
comp=E,1.0nm,0.3s
GNI **Garni** 16.43 64 LR LR 20 10 56.0
comp=E,46nm,18.7s,baz=88,slow=43
KIV **Kislovodsk** 16.46 49 *i* P P 20 02 57.8 -1.1
KIV pmax pmax
comp=Z,16nm,1.1s
KIV MLR MLR
comp=Z,33nm,20.0s
KIV **Kislovodsk** 16.46 49 *i* P P 20 02 57.8 -1.1
comp=Z,33nm,20.0s
KBZ **Khabaz** 16.48 50 P P 20 02 58.7 -0.3
KBZ **Khabaz** 16.48 50 Pn P 20 02 58.7 -0.3
comp=Z,0.3nm,0.3s,baz=254,slow=7.7,SNR=17
KBZ **Khabaz** 16.48 50 P P 20 02 58.7 -0.3
AKASG **Malin Array Be** 16.61 8 P P 20 02 58.9 -1.4
AKASG 20 06 06.5
AKASG pmax pmax
comp=Z,4.0nm,0.3s
AKASG smax smax
comp=N,1.0nm,0.3s
AKASG **Malin Array Be** 16.61 8 Pn P 20 02 58.9 -1.4
comp=N,3.9nm,0.3s,baz=200,slow=11,SNR=9.8
AKASG Sn S 20 06 06.5 -4.7
comp=N,0.6nm,0.3s,baz=193,slow=20,SNR=4.4
AKASG **Malin Array Be** 16.61 8 P P 20 02 58.9 -1.4
comp=N,4.0nm,0.3s
FETA **Feichten** 16.86 323 ⇑*i* P P 20 03 05.0 +1.7
SBF **Sospel** 16.88 310 *e*P Pn 20 02 58.0 -4.1
GERES **GERESS Array B** 16.93 333 Pn P 20 03 04.7 +0.6
comp=N,0.3nm,0.3s,baz=151,slow=12,SNR=15
GERES **GERESS Array B** 16.93 333 P P 20 03 04.7 +0.6
DAVOX **Davos/Dischmat** 17.13 321 Pn P 20 03 05.7 -0.7
comp=N,0.3nm,0.3s,baz=145,slow=15,SNR=4.9

DAVOX **Davos/Dischmat** 17.13 321 P P 20 03 05.7 -0.7
LMR **La Mourre** 17.25 307 *e*P Pn 20 03 04.3 -2.2
FRF **La Foret Royal** 17.25 308 *e*P Pn 20 03 02.7 -3.9
MBDF **Montbardon** 17.72 311 *e*P Pn 20 03 10.1 -2.4
comp=N,17nm,0.9s
SMRF **Simiane la Rot** 18.13 308 *e*P P 20 03 14.5 -2.8
LPL **La Plagne** 18.14 314 *e*P Pn 20 03 17.2 -0.6
LPL **La Plagne** 18.14 314 *e*P Pn 20 03 17.2 -0.6
ORIF **Oris-en-Rattie** 18.37 311 *e*P P 20 03 17.9 -2.0
ORIF *e*R
comp=N,46nm,21.8s
ORIF **Oris-en-Rattie** 18.37 311 *e*P P 20 03 17.9 -2.0
MIB **Mutribah** 19.10 98 *e*P Pn 20 03 29.9 +0.7
MIB AMb AMB 20 03 38.7
comp=Z,9.5nm,0.6s
MIB **Mutribah** 19.10 98 *e*P Pn 20 03 29.9 +0.7
VIVF **Saint-Julien-l** 19.10 310 *e*P Pn 20 03 27.7 -1.4
VIVF **Saint-Julien-l** 19.10 310 *e*P Pn 20 03 27.7 -1.4
CABF **La Chapelle** 19.11 316 *e*P Pn 20 03 27.9 -1.4
CABF **La Chapelle** 19.11 316 *e*P Pn 20 03 27.9 -1.4
NAY **Al-Naaiem** 19.21 99 *e*P Pn 20 03 31.9 +1.4
NAY AMb AMB 20 03 36.1
comp=Z,8.6nm,0.6s
NAY **Al-Naaiem** 19.21 99 *e*P Pn 20 03 31.9 +1.4
comp=Z,8.6nm,0.6s
LASF **Ste Croix** 19.30 307 *e*P Pn 20 03 30.8 -0.8
LASF **Ste Croix** 19.30 307 *e*P Pn 20 03 30.8 -0.8
HINF **Hinteralfeld** 19.38 320 *e*P P 20 03 30.2 -0.7
HINF **Hinteralfeld** 19.38 320 *e*P P 20 03 30.2 -0.7
VORD **Divnogorie** 19.46 27 *e*P Pn 20 03 33.8 +0.5
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,20nm,0.9s
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD **Divnogorie** 19.46 27 *e*P Pn 20 03 33.8 +0.5
CDF **Champ du Feu** 19.53 322 *e*P Pn 20 03 32.4 -1.8
comp=Z,7.6nm,0.8s
CDF **Champ du Feu** 19.53 322 *e*P Pn 20 03 32.4 -1.8
comp=Z,3.8nm,0.8s
VSR **Storozhevoye** 19.61 26 *e*P Pn 20 03 36.8 +1.7
VSR pmax pmax
comp=Z,10.0nm,1.2s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,5.0nm,1.0s
HAU **Haudompre** 19.76 320 *e*P Pn 20 03 35.5 -1.5
comp=E,9.8nm,0.6s
HAU *e*R
comp=E,31nm,19.0s
HAU **Haudompre** 19.76 320 *e*P Pn 20 03 35.5 -1.5
comp=E,4.9nm,0.6s
MTLF **Montolieu** 20.15 303 *e*P Pn 20 03 39.4 -2.2
MTLF **Montolieu** 20.15 303 *e*P Pn 20 03 39.4 -2.2
PAGF **Fort de Pagny** 20.43 320 *e*P Pn 20 03 45.4 +0.6
comp=E,6.2nm,0.9s
SMF **Signal de Mont** 20.45 313 *e*P Pn 20 03 44.7 -0.4
SMF **Signal de Mont** 20.45 313 *e*P Pn 20 03 44.7 -0.4
VRHR **Novokhopersk** 20.48 30 *e*P Pn 20 03 45.1 -0.3
VRHR pmax pmax
comp=N,30nm,0.8s
VRHR pmax pmax
comp=Z,30nm,0.8s
VRHR pmax pmax
comp=E,6.0nm,0.6s
VRHR **Novokhopersk** 20.48 30 *e*P Pn 20 03 45.1 -0.3
LOR **Lormes** 20.75 315 *e*P P 20 03 45.7 -0.1
comp=E,8.3nm,0.7s
LOR *e*R
comp=E,26nm,17.2s
LOR **Lormes** 20.75 315 *e*P P 20 03 45.7 -0.1
comp=E,4.2nm,0.7s
MEZF **Maizieres J'vi** 20.75 319 *e*P P 20 03 46.0 +0.2
MEZF **Maizieres J'vi** 20.75 319 *e*P P 20 03 46.0 +0.2
BGF **Bois d'Agland** 21.01 312 *e*P P 20 03 49.0 +0.4
comp=E,18nm,0.6s
BGF **Bois d'Agland** 21.01 312 *e*P P 20 03 49.0 +0.4
comp=E,9.1nm,0.6s
TCF **Toulx Ste Croi** 21.28 311 *e*P P 20 03 52.0 +0.4
TCF **Toulx Ste Croi** 21.28 311 *e*P P 20 03 52.0 +0.4
RJF **Les Rejaudoux** 21.32 308 *e*P P 20 03 52.7 +0.8
comp=E,13nm,0.7s
RJF *e*R
comp=E,58nm,18.5s
RJF **Les Rejaudoux** 21.32 308 *e*P P 20 03 52.7 +0.8
comp=E,3.3nm,0.7s
EPF **Esparros** 21.38 301 *e*P P 20 03 54.3 +1.7
EPF **Esparros** 21.38 301 *e*P P 20 03 54.3 +1.7
LFF **La Frestale** 21.70 307 *e*P P 20 03 56.7 +0.8
LFF **La Frestale** 21.70 307 *e*P P 20 03 56.7 +0.8
GIVF **Givet** 21.84 322 *e*P P 20 03 56.5 -0.9
GIVF **Givet** 21.84 322 *e*P P 20 03 56.5 -0.9
ETSF **Etsaut** 21.98 301 *e*P P 20 04 00.2 +1.1
comp=E,4.1nm,0.6s
ETSF **Etsaut** 21.98 301 *e*P P 20 04 00.2 +1.1
comp=E,2.0nm,0.6s
BAIF **Baives** 22.13 322 *e*P P 20 03 58.8 -1.7
comp=E,13nm,0.7s
BAIF **Baives** 22.13 322 *e*P P 20 03 58.8 -1.7
comp=E,6.7nm,0.7s
MFF **Saint Martin d** 22.89 310 *e*P P 20 04 08.0 -0.7
comp=E,12nm,0.7s
MFF **Saint Martin d** 22.89 310 *e*P P 20 04 08.0 -0.7
comp=E,6.2nm,0.7s
LDF **La Druitiere** 23.73 315 *e*P P 20 04 15.1 -1.7
LDF **La Druitiere** 23.73 315 *e*P P 20 04 15.1 -1.7
ESDC **Sonseca Array** 24.02 291 P P 20 04 20.2 +0.6
comp=E,1.3nm,0.6s,baz=83,slow=9.4,SNR=9.3
FLN **La Foliniere** 24.02 315 *e*P P 20 04 18.8 -0.7
FLN *e*R
comp=E,38nm,20.2s
FLN **La Foliniere** 24.02 315 *e*P P 20 04 18.8 -0.7
GRR **Gorron** 24.08 314 *e*P P 20 04 19.3 -0.7
GRR **Gorron** 24.08 314 *e*P P 20 04 19.3 -0.7
SGMF **Saint Gilles** 25.05 312 *e*P P 20 04 28.9 +0.1
SGMF **Saint Gilles** 25.05 312 *e*P P 20 04 28.9 +0.1
QUIF **Quistinic** 25.30 311 *e*P P 20 04 31.3 +0.2
QUIF **Quistinic** 25.30 311 *e*P P 20 04 31.3 +0.2
ROSF **Rostrenen** 25.53 312 *e*P P 20 04 33.2 +0.1
ROSF **Rostrenen** 25.53 312 *e*P P 20 04 33.2 +0.1
HFS **Hagfors** 26.95 347 P P 20 04 46.8 +1.0
comp=E,0.8nm,0.5s,baz=168,slow=11,SNR=7.4
HFS **Hagfors** 26.95 347 P P 20 04 46.8 +1.0
comp=E,1.0nm,0.5s
FINES **FINESS Array B** 27.15 1 P P 20 04 48.3 +0.7
comp=E,0.9nm,0.6s,baz=163,slow=14,SNR=4.1
FINES **FINESS Array B** 27.15 1 P P 20 04 48.3 +0.7
comp=E,1.0nm,0.6s
NOA **NORSAR Array B** 28.27 345 P P 20 05 00.9 +3.2
comp=E,0.4nm,0.6s,baz=146,slow=9.6,SNR=4.0
NOA **NORSAR Array B** 28.27 345 P P 20 05 00.9 +3.2
AKTK **Aktyubinsk** 28.67 46 P P 20 05 03.0 +1.7
comp=E,1.0nm,0.3s
AKTO **Aktyubinsk** 28.67 46 P P 20 05 03.0 +1.7
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO **Aktyubinsk** 28.67 46 P P 20 05 03.0 +1.7
comp=Z,0.6nm,0.3s,baz=214,slow=7.1,SNR=3.4
EKA **Eskdalemuir Ar** 28.86 325 P P 20 05 03.4 +0.5
comp=Z,0.5nm,0.4s,baz=119,slow=9.1,SNR=5.9
EKA **Eskdalemuir Ar** 28.86 325 P P 20 05 03.4 +0.5
comp=Z,1.0nm,0.4s
TORD **Torodi Ar. Bea** 30.13 231 P P 20 05 16.4 +1.8
comp=Z,1.3nm,0.5s,baz=33,slow=8.3,SNR=28
ARCES **ARCESS Array B** 35.27 0 P P 20 05 59.3 +0.4
comp=Z,0.6nm,0.6s,baz=172,slow=9.4,SNR=8.9
ARCES **ARCESS Array B** 35.27 0 P P 20 05 59.3 +0.4
comp=Z,1.0nm,0.6s
DBIC **Dimbokro** 39.22 232 P P 20 06 36.5 +3.6
comp=Z,3.9nm,0.8s,baz=53,slow=10,SNR=2.5
MKAR **Makanchi Array** 44.06 56 P P 20 07 14.7 +2.4
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR **Makanchi Array** 44.06 56 P P 20 07 14.7 +2.4
comp=Z,1.4nm,0.6s,baz=268,slow=7.5,SNR=23
MKAR **Makanchi Array** 44.06 56 P P 20 07 14.7 +2.4
comp=Z,1.0nm,0.6s
NVS **Novosibirsk** 44.53 44 *e*P P 20 07 17.0 +1.1
NVS **Novosibirsk** 44.53 44 *e*P P 20 07 17.0 +1.1
ZALV **Zalesovo Beam** 45.43 46 P P 20 07 24.6 +1.6
ZALV pmax pmax
comp=Z,2.0nm,0.5s
ZALV **Zalesovo Beam** 45.43 46 P P 20 07 24.6 +1.6

comp=Z,1.6nm,0.5s,baz=270,slow=8.6,SNR=9.4
ZALV Zalesovo Beam 45.43 46 P P 20 07 24.6 +1.6
comp=Z,2.0nm,0.5s
ZAK Zakamensk 57.14 48 eP P 20 08 53.5 +2.6
ZAK pmax pmax
comp=Z,2.0nm,1.1s
ZAK Zakamensk 57.14 48 eP P 20 08 53.5 +2.6
comp=Z,2.0nm,1.1s
SONM Songino Array 59.85 50 P P 20 09 12.6 +2.8
comp=Z,0.8nm,0.6s,baz=290,slow=6.9,SNR=8.7
SONM Songino Array 59.85 50 P P 20 09 12.6 +2.8
comp=Z,1.0nm,0.6s
BOSA Boshof 62.59 180 P P 20 09 35.2 +6.8
comp=Z,2.3nm,0.9s,baz=43,slow=4.3,SNR=3.1
USRK Ussuriysk Arra 77.28 45 P P 20 10 59.2 +0.8
comp=Z,1.4nm,0.6s,baz=2.7,slow=8.2,SNR=4.4
KSRS Korea Array 78.62 52 P P 20 11 08.4 +2.4
comp=Z,0.6nm,0.5s,baz=300,slow=4.9,SNR=3.1
KSRS LR LR 20 51 19.6
comp=Z,15nm,18.4s,baz=105,slow=40
KSRS Korea Array 78.62 52 P P 20 11 08.4 +2.4
comp=Z,15nm,18.4s

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*ISCJB **09** 20:10:21.7±0.4, 32.°08N±0.°04×104.°81E±0.°06, h15km, mb3.9/14, MS3.0/2, Error ellipse: s-maj=7.6km s-min=4.3km az=34.3*

*IDC **09** 20:10:21.7±0.9, 32.°12N×104.°72E, h0km, mb3.7/11, mb1 3.8/13, mb1mx3.6/30, mbtmp3.7/13, ML3.2/2, MS3.1/2, Ms1 3.1/2, ms1mx2.4/38, Error ellipse: s-maj=41.8km s-min=16.5km az=59.0*

*BJI **09** 20:10:22.2, 32.°10N×104.°51E, h10km, mb3.9/3, ML3.4/13, Ms3.5/2, Ms7 3.3/4*

ISC 09 20:10:23.7±0.5**, 32.°18N**±0.°04×**104.°68E**±0.°05**, h15**km**, n22, σ1s.77**/31**, mb3.9**/14**, 3C, Sichuan**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
CD2 Chengdu 1.49 212 Pn Pn 20 10 48.9 -1.1
CD2 Pg Pb 20 10 49.9 -1.2
CD2 Sn Sn 20 11 07.8 -1.4
CD2 Sg Sb 20 11 09.5 -0.3
CD2 smax smax
comp=N,3μm,1.2s
CD2 smax smax
comp=E,3μm,1.0s
LZH Lanzhou 3.96 350 Pn Pn 20 11 28.0 +3.8
LZH Sn Sb 20 12 17.9 -3.3
LZH Sg Sg 20 12 28.9 -2.1
LZH smax smax
comp=N,150nm,0.9s
LZH smax smax
comp=E,110nm,0.6s
LZH LR LR
comp=N,330nm,4.1s
LZH LR LR
comp=E,350nm,5.6s
LZH LR LR
comp=Z,450nm,7.5s
XAN Xi’an 4.01 61 Pn Pb 20 11 29.5 -4.7
XAN Pg Pg 20 11 39.0 -1.7
XAN Sn Sn 20 12 15.5 +3.9
XAN Sg Sg 20 12 33.8 +1.1
XAN smax smax
comp=N,140nm,0.7s
XAN smax smax
comp=E,82nm,0.6s
GTA Gaotai 8.23 333 eP Pn 20 12 24.7 +2.0
GTA pP pP 20 12 29.3
GTA sP sP 20 12 31.7
GTA S Sn 20 14 00.2 +4.7
GTA sS sS 20 14 05.4
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA LR LR
comp=N,150nm,8.1s
GTA LR LR
comp=E,110nm,7.6s
GTA LR LR
comp=Z,86nm,8.3s
HHC Hu-ho-hao-te 10.27 31 eP Pn 20 12 48.6 -2.1
HHC sP 20 12 54.6
HHC PP PnPn 20 12 56.9 -1.5
HHC S Sn 20 14 43.8 -1.8
HHC sS 20 14 49.2
HHC SS SnSn 20 14 56.7 -0.9
HHC pmax pmax
comp=Z,40nm,0.8s
HHC pmax pmax
comp=Z,170nm,5.2s
HHC LR LR
comp=N,250nm,6.0s
HHC LR LR
comp=E,210nm,7.0s
HHC LR LR
comp=Z,220nm,8.7s
CMAR Chiang Mai Arr 14.61 202 Pn Pn 20 13 51.1 +1.1
comp=Z,0.1nm,0.3s,baz=12,slow=10,SNR=5.5
SONM Songino Array 15.70 4 Pn P 20 14 06.8 -1.6
comp=Z,0.1nm,0.3s,baz=178,slow=16,SNR=6.2
MKAR Makanchi Array 22.52 317 P P 20 15 24.0 +1.2
comp=Z,1.2nm,0.8s,baz=113,slow=11,SNR=15
ZALV Zalesovo Beam 25.99 333 P P 20 15 56.7 +1.0
comp=Z,3.7nm,0.5s,baz=130,slow=10,SNR=18
ZALV LR LR 20 27 28.6
comp=Z,25nm,18.4s,baz=253,slow=39
KURBB Kurchatov Arra 26.70 321 P P 20 16 03.0 +0.8
comp=Z,0.7nm,0.7s,baz=128,slow=9.4,SNR=8.9
AKTO Aktyubinsk 38.78 312 P P 20 17 48.7 +1.1
comp=Z,0.5nm,0.6s,baz=94,slow=15,SNR=3.6
PETK Petropavlovsk- 43.08 45 LR LR 20 37 14.3
comp=Z,33nm,18.4s,baz=302,slow=37
ARCES ARCESS Array B 56.49 336 P P 20 20 05.3 +0.5
comp=Z,0.8nm,0.4s,baz=88,slow=7.7,SNR=19
BRTR Keskin Array B 56.65 299 P P 20 20 06.6 +0.1
comp=Z,0.4nm,0.7s,baz=74,slow=5.2,SNR=3.2
FINES FINESS Array B 56.96 326 P P 20 20 08.4 +0.3
comp=Z,0.4nm,0.4s,baz=95,slow=8.6,SNR=4.0
AKASG Malin Array Be 57.02 313 P P 20 20 08.9 +0.1
comp=Z,0.5nm,0.3s,baz=70,slow=7.1,SNR=2.6
WRA Warramunga Arr 59.10 147 P P 20 20 23.6 0.0
comp=Z,1.2nm,0.8s,baz=328,slow=9.0,SNR=10
ASAR Alice Springs 62.16 150 P P 20 20 44.3 -0.2
comp=Z,0.5nm,0.8s,baz=328,slow=6.2,SNR=4.3
PGF Pioggiola 72.84 310 ⇑iP P 20 21 52.6 +0.5
comp=Z,4.4nm,0.5s
LPG La Plagne 72.88 313 ⇑iP P 20 21 53.2 +0.7
comp=Z,6.3nm,0.5s
LPL La Plagne 72.88 313 ⇑iP P 20 21 53.2 +0.8
comp=Z,5.0nm,0.4s
YKA Yellowknife Ar 80.53 17 P P 20 22 35.6 +0.7
comp=Z,0.5nm,0.8s,baz=322,slow=4.9,SNR=3.9

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*ISCJB **09** 20:25:12.9±0.8, 37.°71N±0.°03×20.°04E±0.°05, h19km±5km, Error ellipse: s-maj=6.9km s-min=5.1km az=148.1*

*CSEM **09** 20:25:13.9±0.5, 37.°73N×20.°13E, h13km±3km, MD4.0, Error ellipse: s-maj=7.3km s-min=4.8km az=51.0*

*ATH **09** 20:25:14.6, 37.°78N×20.°17E, h35km±3km, MD4.0/29*

ISC 09 20:25:15.0±1.4**, 37.°77N**±0.°03×**20.°20E**±0.°05**, h18**km±6km**, n72, σ0s.96**/104**, Ionian Sea**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
VLS Valsamata 0.51 37 ePN Pb 20 25 25.5 -0.1
VLS eSN Sn 20 25 34.5 -1.4
VLS Valsamata 0.51 37 P Pb 20 25 25.4 -0.1
VLS S Sb 20 25 34.0 +1.3
KFL Anninata 0.58 54 P Pb 20 25 26.7 +0.1
KFL S Sb 20 25 35.6 +1.0
RLS Riolos of Patr 1.04 73 ePN Pg 20 25 35.1 -0.2
RLS Riolos of Patr 1.04 73 P Pn 20 25 34.6 -0.2
RLS Riolos of Patr 1.04 73 ePn Pg 20 25 35.1 -0.2
RLS S Sg 20 25 50.1 +1.1
LKD2 Lefkada island 1.08 19 ePN Pg 20 25 35.7 -0.3
LKD2 Lefkada island 1.08 19 ePn Pg 20 25 35.7 -0.3
LKD2 S Sg 20 25 50.7 +0.4
AMT Artemida-Makis 1.22 101 ePB Pn 20 25 36.4 -0.9
AMT eSN Sg 20 25 55.0 +0.4
AMT Artemida-Makis 1.22 101 P Pn 20 25 36.2 -1.1
AMT eSn Sg 20 25 55.0 +0.4
LAKA Lakka 1.48 71 ePN Pb 20 25 41.6 -0.5
LAKA Lakka 1.48 71 ePn Pb 20 25 41.6 -0.5
LAKA S Sg 20 26 03.6 +0.6
ITM Ithomi 1.50 113 ePN Pn 20 25 39.7 -1.3
ITM eSN Sn 20 26 00.2 +0.1
ITM Ithomi 1.50 113 ePn Pn 20 25 39.7 -1.3
ITM eSn Sn 20 26 00.2 +0.1
EFP Efpalio 1.50 63 ePN Pb 20 25 41.6 -0.8
EFP eSN Sb 20 26 02.0 +0.9
EFP Efpalio 1.50 63 ePn Pb 20 25 41.6 -0.8
EFP eSn Sb 20 26 02.0 +0.9
EFP S Sg 20 26 03.2 -0.3
PYL PYLOS 1.51 125 ePN Pb 20 25 42.3 -0.2
PYL PYLOS 1.51 125 ePn Pb 20 25 42.3 -0.2
KLV Kalavryta, Ach 1.57 79 ePN Pn 20 25 42.5 +0.4
KLV Kalavryta, Ach 1.57 79 ePn Pn 20 25 42.5 +0.4
TRIZ Trizonia 1.60 67 ePB Pb 20 25 43.1 -0.9
TRIZ Trizonia 1.60 67 P Pn 20 25 42.8 +0.4
TRIZ Trizonia 1.60 67 ePb Pb 20 25 43.1 -0.9
TRIZ S Sg 20 26 06.7 +0.2
KALE Kalithea 1.66 67 ePB Pn 20 25 43.9 +0.6
KALE eSN Sb 20 26 05.7 +0.1
KALE Kalithea 1.66 67 P Pn 20 25 43.9 +0.6
KALE eSn Sb 20 26 05.7 +0.1
KALE S Sg 20 26 09.1 +0.7
GUR Goura 1.71 84 ePN Pn 20 25 44.0 0.0
GUR Goura 1.71 84 P Pn 20 25 44.0 0.0
EVR Evrytania 1.71 47 ePB Pb 20 25 45.3 -0.7
EVR Evrytania 1.71 47 ePb Pb 20 25 45.3 -0.7
EVR S Sg 20 26 10.1 -0.1
VLX Vlachokerasia 1.78 102 ePN Pn 20 25 44.7 -0.3
VLX eSN Sb 20 26 09.2 0.0
VLX Vlachokerasia 1.78 102 ePn Pn 20 25 44.7 -0.3
VLX eSn Sb 20 26 09.2 0.0
DSF Desfina 1.95 70 P Pn 20 25 47.3 0.0
KEK Kerkira 1.97 351 ePN Pn 20 25 46.9 -0.6
KEK Kerkira 1.97 351 ePn Pn 20 25 46.9 -0.6
DYR Agios Nikonas 1.98 120 ePB Pb 20 25 49.0 -1.5
DYR eSN Sn 20 26 11.9 -0.1
DYR Agios Nikonas 1.98 120 ePb Pb 20 25 49.0 -1.5
DYR eSn Sn 20 26 11.9 -0.1
AGG Agios Georgios 2.09 53 ePN Pn 20 25 49.8 +0.5
AGG eSN Sn 20 26 14.8 -0.1
AGG Agios Georgios 2.09 53 ePn Pn 20 25 49.8 +0.5
AGG eSn Sn 20 26 14.8 -0.1
SRN Sarande 2.12 356 ePN Pb 20 25 52.0 -0.8
SRN Sarande 2.12 356 ePn Pb 20 25 52.0 -0.8
LTK Loutraki 2.21 82 ePN Pn 20 25 50.4 -0.4
LTK Loutraki 2.21 82 ePn Pn 20 25 50.4 -0.4
LKR Lokris 2.38 67 ePN Pn 20 25 52.7 -0.4
LKR eSN Sn 20 26 23.4 +1.6
LKR Lokris 2.38 67 ePn Pn 20 25 52.7 -0.4
LKR eSn Sn 20 26 23.4 +1.6
VLI Veliai 2.42 115 ePN Pn 20 25 54.3 +0.5
VLI eSN Sn 20 26 24.5 +1.5
VLI Veliai 2.42 115 ePn Pn 20 25 54.3 +0.5
VLI eSn Sn 20 26 24.5 +1.5
DID Didima 2.43 95 ePN Pn 20 25 54.5 +0.7
DID Didima 2.43 95 ePn Pn 20 25 54.5 +0.7
KYTH Kithira 2.71 122 ePN Pn 20 25 58.9 +1.1
KYTH Kithira 2.71 122 ePn Pn 20 25 58.9 +1.1
KZN Kozani 2.82 25 ePB Pn 20 26 01.1 +1.8
KZN Kozani 2.82 25 ePb Pn 20 26 01.1 +1.8
NEO Neokhori 2.83 56 ePN Pn 20 25 58.7 -0.7
NEO eSN Sn 20 26 31.4 -1.6
NEO Neokhori 2.83 56 ePn Pn 20 25 58.7 -0.7
PTL Penteli 2.92 83 ePN Pn 20 26 00.4 -0.1
PTL eSN Sn 20 26 34.0 -1.1
PTL Penteli 2.92 83 ePn Pn 20 26 00.4 -0.1
PTL eSn Sn 20 26 34.0 -1.1
ANKY Antikythira Is 3.13 126 ePN Pn 20 26 03.8 +0.3
ANKY Antikythira Is 3.13 126 ePn Pn 20 26 03.8 +0.3
PLG Polygyros 3.63 43 ePN Pn 20 26 09.8 -0.6
PLG eSN Sn 20 26 49.6 -3.2
PLG Polygyros 3.63 43 ePn Pn 20 26 09.8 -0.6
PHP Peshkopia 3.92 3 ePN Pn 20 26 15.6 +1.2
PHP Peshkopia 3.92 3 ePn Pn 20 26 15.6 +1.2
PUK Puka 4.28 357 ePN Pn 20 26 20.9 +1.6
PUK Puka 4.28 357 ePn Pn 20 26 20.9 +1.6
LIA Limnos Island 4.44 60 ePN Pn 20 26 20.4 -1.0
LIA Limnos Island 4.44 60 ePn Pn 20 26 20.4 -1.0
STON Ston 5.45 340 ePn Pn 20 26 32.6 -2.6
STON Sn Sn 20 27 31.1 -6.3
STON Ston 5.45 340 ePn Pn 20 26 32.6 -2.6
KARP Karpathos 6.02 109 ePN Pn 20 26 43.8 +0.6
KARP Karpathos 6.02 109 ePn Pn 20 26 43.8 +0.6
NVLJ Novalja 7.89 331 ePn Pn 20 27 09.6 +0.8
NVLJ Sn Sn 20 28 31.1 -6.5
NVLJ Novalja 7.89 331 ePn Pn 20 27 09.6 +0.8

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*ISCJB **09** 20:41:39.0±0.5, 60.°40S±0.°09×26.°8W±0.°2, h20km, mb4.3/14, MS3.6/4, Error ellipse: s-maj=17.0km s-min=9.8km az=143.2*

*IDC **09** 20:41:38.4±0.5, 60.°21S×26.°80W, h0km, mb4.4/12, mb1 4.4/12, mb1mx4.3/17, mbtmp4.4/12, MS3.4/5, Ms1 3.4/5, ms1mx3.2/24, Error ellipse: s-maj=19.5km s-min=15.6km az=52.0*

*NEIC **09** 20:41:45.4±0.4, 60.°38S×26.°73W, h55km, mb4.6/6, Error ellipse: s-maj=17.6km s-min=11.6km az=54.0*

ISC 09 20:41:41.3±0.4**, 60.°28S**±0.°09×**26.°7W**±0.°1**, h20**km**, n69, σ0s.87**/70**, mb4.5**/14**, MS3.5**/4**, South Sandwich Islands region**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
VNA1 Neumayer--Stat 12.84 152 ePn Pn 20 44 40.0 -2.3
SNAA Sanae 14.84 150 ePn Pn 20 45 07.0 -2.6
SNAA Sanae 14.84 150 eSn Sn 20 47 38.7 -15
SNAA Sanae 14.84 150 ePn Pn 20 45 05.2 -4.5
6.9nm,0.6s
SNAA eSn Sn 20 47 36.3 -17
SNAA Sn S 20 47 38.3 -33
SNAA Sanae 14.84 150 Pn Pn 20 45 05.8 -3.9
0.6nm,0.3s,baz=318,slow=14,SNR=170
SNAA Sn Sn 20 47 38.3 -15
0.2nm,0.3s,baz=322,slow=19,SNR=5.0
SNAA LR LR 20 49 28.6
comp=Z,35nm,20.8s,baz=228,slow=32
QSPA South Pole Qui 29.96 180 eP P 20 47 48.7 +0.9
19nm,1.0s
QSPA PcP PcP 20 50 50.1 +0.5
QSPA South Pole Qui 29.96 180 P P 20 47 49.3 +1.5
4.7nm,1.0s,baz=213,slow=3.2,SNR=22
QSPA PcP PcP 20 50 50.1 +0.5
0.9nm,0.5s,baz=180,slow=5.1,SNR=3.4
QSPA LR LR 20 59 29.6
comp=Z,85nm,19.9s,baz=210,slow=36
PLCA Paso Flores 33.21 286 P P 20 48 16.2 -0.3
PLCA Paso Flores 33.21 286 P P 20 48 16.2 -0.3
2.1nm,0.7s,baz=142,slow=7.5,SNR=7.1
PLCA LR LR 20 59 56.8
comp=Z,145nm,18.8s,baz=174,slow=33
MAW Mawson 36.65 140 P P 20 48 46.3 +0.5
MAW PcP PcP 20 51 09.2 +1.1
MAW Mawson 36.65 140 P P 20 48 46.3 +0.5
2.2nm,0.7s,baz=232,slow=8.8,SNR=6.5
MAW PcP PcP 20 51 09.2 +1.1
1.6nm,0.7s,baz=233,slow=5.1,SNR=3.7
MAW LR LR 21 04 10.9
comp=Z,21nm,20.0s,baz=67,slow=37
CPUP Villa Florida 39.89 315 P P 20 49 13.3 -0.1
CPUP Villa Florida 39.89 315 P P 20 49 13.3 -0.1
1.2nm,0.3s,baz=152,slow=7.3,SNR=11
SUR Sutherland 41.68 70 P P 20 49 29.5 +1.0
SUR Sutherland 41.68 70 P P 20 49 29.5 +1.0
2.7nm,0.7s,baz=229,slow=11,SNR=3.2
VNDA Vanda 42.35 183 eP P 20 49 34.6 +1.4
4.4nm,1.0s
VNDA Vanda 42.35 183 P P 20 49 35.0 +1.8
1.2nm,0.8s,baz=147,slow=3.6,SNR=4.4
BOSA Boshof 46.92 71 eP P 20 50 09.7 -0.6
11nm,1.0s
BOSA Boshof 46.92 71 P P 20 50 10.3 0.0
5.9nm,0.7s,baz=205,slow=7.0,SNR=16
BDFB Brasilia 47.19 331 P P 20 50 12.9 +0.4
BDFB Brasilia 47.19 331 P P 20 50 12.9 +0.4
1.9nm,0.4s,baz=231,slow=5.7,SNR=3.3
LPAZ La Paz 53.10 307 eP P 20 50 57.4 -0.4
3.8nm,0.5s
LPAZ La Paz 53.10 307 P P 20 50 57.8 0.0
3.7nm,0.5s,baz=115,slow=5.0,SNR=20
SAML Samuel 58.01 316 eP P 20 51 30.9 -1.5
2.7nm,0.6s
DBIC Dimbokro 68.94 23 P P 20 52 44.6 0.0
DBIC Dimbokro 68.94 23 P P 20 52 44.6 0.0
3.9nm,0.6s,baz=215,slow=2.7,SNR=7.0
OTAV Otavalo 72.25 304 eP P 20 53 05.3 -0.1
4.9nm,0.9s
TOA0 Torodi Ar. Sit 76.64 28 eP P 20 53 30.6 +0.2
TORD Torodi Ar. Bea 76.64 28 P P 20 53 30.7 +0.4
TORD Torodi Ar. Bea 76.64 28 P P 20 53 30.7 +0.4
9.3nm,0.5s,baz=199,slow=6.2,SNR=298
ASAR Alice Springs 94.87 162 P P 20 55 01.0 -0.7
ASAR Alice Springs 94.87 162 P P 20 55 01.0 -0.7
0.5nm,0.6s,baz=183,slow=5.5,SNR=7.6
ASAR LR LR 21 39 15.3
comp=Z,97nm,18.0s,baz=65,slow=36
PDAR Pinedale Array 122.75 300 PKP PKPdf 21 00 33.9 -1.0
PDAR Pinedale Array 122.75 300 PKP PKPdf 21 00 33.9 -1.0
0.3nm,0.5s,baz=142,slow=4.6,SNR=3.0
NVAR Mina Array Bea 123.20 290 PKP PKPdf 21 00 35.9 0.0
NVAR Mina Array Bea 123.20 290 PKP PKPdf 21 00 35.9 0.0
0.2nm,0.4s,baz=143,slow=1.8,SNR=2.4
CMAR Chiang Mai Arr 123.26 113 PKP PKPdf 21 00 36.8 +0.5
CMAR Chiang Mai Arr 123.26 113 PKP PKPdf 21 00 36.8 +0.5
1.0nm,0.9s,baz=241,slow=4.2,SNR=7.0
NOA NORSAR Array B 124.48 21 PKP PKPdf 21 00 37.5 +0.2
NOA NORSAR Array B 124.48 21 PKP PKPdf 21 00 37.5 +0.2
1.2nm,0.9s,baz=189,slow=1.5,SNR=3.6
FINES FINESS Array B 127.99 29 PKP PKPdf 21 00 43.7 -0.2
FINES FINESS Array B 127.99 29 PKP PKPdf 21 00 43.7 -0.2
2.8nm,0.8s,baz=170,slow=1.2,SNR=7.0
KAF Kangasniemi 128.63 29 ep PKPdf 21 00 43.6 -1.5
1.4nm,0.6s
ABKAR Akbulak array 129.49 58 ePKPdf PKPdf 21 00 46.3 -0.9
JOF Joensuu 130.55 31 ep PKPdf 21 00 47.9 -0.9
0.6nm,0.4s
AAK Ala-Archa 131.03 74 PKP PKPdf 21 00 52.2 +1.6
AAK Ala-Archa 131.03 74 PKP PKPdf 21 00 52.2 +1.6
1.3nm,0.4s,baz=202,slow=4.1,SNR=4.4
ARCES ARCESS Array B 134.77 23 PKP PKPdf 21 00 56.5 -0.1
ARCES ARCESS Array B 134.77 23 PKP PKPdf 21 00 56.5 -0.1
1.6nm,0.9s,baz=169,slow=1.2,SNR=6.8
MK31 Makanchi Array 137.85 75 ePKPdf PKPdf 21 01 03.0 -0.1
MKAR Makanchi Array 137.85 75 PKP PKPdf 21 01 02.7 -0.3
MKAR Makanchi Array 137.85 75 PKP PKPdf 21 01 02.7 -0.3
0.4nm,0.6s,baz=243,slow=2.1,SNR=5.3
KURBB Kurchatov Arra 138.75 69 PKhKP PKPpre 21 00 56.7
0.4nm,0.6s,baz=234,slow=3.7,SNR=6.4
KURBB PKP PKPdf 21 01 05.3 +0.8
0.9nm,0.9s,baz=246,slow=1.9,SNR=7.4
KURK Kurchatov 138.85 69 PKPpre PKPpre 21 00 56.7
KURK PKP PKPdf 21 01 05.3 +0.6
YKA Yellowknife Ar 139.41 315 PKP PKPdf 21 01 05.0 -0.3
YKA Yellowknife Ar 139.41 315 PKP PKPdf 21 01 05.0 -0.3
0.9nm,0.6s,baz=140,slow=2.3,SNR=3.9
ZALV Zalesovo Beam 143.84 69 PKPpre PKPpre 21 01 10.5
ZALV PKP PKPdf 21 01 14.8 +1.3
ZALV Zalesovo Beam 143.84 69 PKhKP PKPpre 21 01 10.5
1.2nm,0.5s,baz=220,slow=4.5,SNR=6.9
ZALV PKP PKPdf 21 01 14.8 +1.3
0.9nm,0.4s,baz=247,slow=3.0,SNR=6.2
INK Inuvik 149.15 316 PKPbc PKPbc 21 01 25.4 -0.9
INK Inuvik 149.15 316 PKPbc PKPbc 21 01 25.4 -0.9
2.8nm,0.7s,baz=148,slow=1.5,SNR=8.5
SONM Songino Array 150.47 94 PKPbc PKPbc 21 01 30.3 -0.1
SONM Songino Array 150.47 94 PKPbc PKPbc 21 01 30.3 -0.1
4.3nm,0.8s,baz=219,slow=2.9,SNR=32
ULN Ulaanbaatar 150.81 94 ePKPbc PKPbc 21 01 30.6 -0.6
KSAR Wonju Array Be 152.02 133 PKPbc PKPbc 21 01 34.5 +0.4
KSRS Korea Array 152.04 133 PKPbc PKPbc 21 01 34.5 +0.4
3.5nm,1.1s,baz=192,slow=1.9,SNR=4.9
KDAK Kodiak Island 152.69 289 PKPbc PKPbc 21 01 34.9 0.0
KDAK Kodiak Island 152.69 289 PKPbc PKPbc 21 01 34.9 0.0
3.1nm,0.5s,baz=108,slow=3.2,SNR=5.2
ILAR Eielson Array 152.96 305 PKPbc PKPbc 21 01 34.6 -0.7
ILAR Eielson Array 152.96 305 PKPbc PKPbc 21 01 34.6 -0.7
1.5nm,0.7s,baz=149,slow=5.2,SNR=11

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*NIED **09** 20:46:00, 29.°70N×138.°90E, h480km, Mw4.3 Best double couple: M0 3.42000×10^15 NP1:φs 250.00000°, δ88.00000°, λ-68.00000°. NP2:φs 345.00000°, δ22.00000°, λ-174.00000°.*

*JMA **09** 20:46:10.0±0.1, 29.°67N×138.°86E, h503km, M4.2*

*MOS **09** 20:46:10.2±0.8, 29.°61N×138.°39E, h478km, mb4.0/26, Error ellipse: s-maj=20.1km s-min=8.1km az=106.9*

*ISCJB **09** 20:46:10.3±0.4, 29.°61N±0.°04×138.°65E±0.°06, h487km±3km, mb3.9/36, Error ellipse: s-maj=7.9km s-min=6.3km az=168.9*

*BJI **09** 20:46:11.0, 29.°50N×138.°44E, h499km, mB4.6/10, mb4.5/22*

*IDC **09** 20:46:11.8±0.8, 29.°68N×138.°50E, h481km±8km, mb3.4/16, mb1 3.5/22, mb1mx3.4/31, mbtmp3.4/22, Error ellipse: s-maj=16.5km s-min=9.2km az=77.0*

ISC 09 20:46:11.1±0.7**, 29.°65N**±0.°06×**138.°64E**±0.°07**, h479**km±6km**, n85, σ1s.21**/106**, mb4.0**/35**, 4C-2D, Southeast of Honshu**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
JHCJ Hachijojimakas 3.55 16 P P 20 47 25.3 +0.9
JHCJ eS S 20 48 23.5 -0.6
JHJ Hachijo jima 2 3.59 15 P P 20 47 25.8 +1.1
79nm,0.3s,baz=133,slow=4.9,SNR=49
JHJ S S 20 48 25.9 +1.2
22nm,0.3s,baz=91,slow=23,SNR=3.5
JHJ2 Mitsune 3.59 16 P P 20 47 25.6 +0.9
JHJ2 eS S 20 48 25.1 +0.4
CBIJ Chichi jima 4.03 128 P P 20 47 28.1 -0.3
CBIJ eS S 20 48 29.2 -2.1
TTO1 TONANKAI O.B.S 4.26 339 P P 20 47 32.5 +2.6
JHHJ Haha-jima-NKT 4.34 133 P P 20 47 31.1 0.0
TK02 Tokai 2 4.35 350 P P 20 47 33.8 +3.1
JWZ Kozaga 4.60 328 P P 20 47 34.9 +1.7
JWZ eS S 20 48 41.2 +0.9
JIE Ise 5.00 341 P P 20 47 38.8 +2.0
JIE eS S 20 48 49.0 +2.1
BSO1 Boso 1 5.37 21 P P 20 47 40.3 +0.7
BSO1 eS S 20 48 52.5 +0.4
JOD2 Odawara 2 5.61 4 P P 20 47 42.6 0.0
JOD2 eS S 20 48 57.3 -0.1
JTO Tosashimizu 5.93 304 P P 20 47 47.3 +1.5
JRY Ryogami san 6.35 2 P P 20 47 50.3 +0.4
JRY eS S 20 49 06.8 -4.0
MJAR Matsushiro Arr 6.88 357 P P 20 47 55.0 -0.2
3.8nm,0.3s,baz=171,slow=11,SNR=113
MJAR S S 20 49 18.9 -1.8
0.3nm,0.3s,baz=291,slow=30,SNR=3.0
MAJO Matsushiro 6.88 357 i P P 20 47 55.1 -0.1
MAT Matsushiro 6.88 357 P P 20 47 55.2 0.0
MAT S S 20 49 17.9 -2.8
MAT Matsushiro 6.88 357 P P 20 47 55.2 0.0
MAT eS S 20 49 18.3 -2.4
JHS Saijyo 7.09 320 P P 20 47 58.9 +1.5
JHS eS S 20 49 24.6 -0.1
JNU Nakatsue 7.48 299 P P 20 48 02.8 +1.2
2.3nm,0.3s,baz=88,slow=4.8,SNR=19
JSJ Shimokoshiki 7.95 287 P P 20 48 07.2 +0.8
JMK Ichinoseki 9.52 12 P P 20 48 24.5 +1.6
JMK eS S 20 50 08.6 -2.8
KSRS Korea Array 11.85 314 P P 20 48 47.8 -0.1
2.4nm,0.3s,baz=127,slow=10,SNR=47
JKB Kayabe 12.36 8 P P 20 48 55.2 +1.9
JKB eS S 20 51 07.8 +0.6
ERM Erimo 12.87 15 ⇓eP P 20 49 00.9 +2.2
ASAJ Asahikawa 14.78 11 P P 20 49 21.6 +2.6
0.4nm,0.3s,baz=209,slow=14,SNR=5.2
ASAJ S S 20 52 02.5 +8.3
0.3nm,0.3s,baz=229,slow=20,SNR=6.9
USRK Ussuriysk Arra 15.45 342 P P 20 49 27.0 +0.9
1.9nm,0.3s,baz=151,slow=9.9,SNR=24
SNY Shenyang 17.21 319 ⇑P P 20 49 43.8 -0.7
CN2 Changchun 17.61 327 eP P 20 49 48.3 -0.2
CN2 pmax pmax
comp=Z,10.0nm,0.7s
KLR Kul’dur 20.25 347 eP P 20 50 09.8 -3.0
XAN Xi’an 25.58 288 P P 20 51 00.0 -0.9
XAN pmax pmax
comp=Z,6.0nm,0.6s
XAN pmax pmax
comp=Z,15nm,5.5s
LZH Lanzhou 29.81 292 eP P 20 51 37.1 -1.1
LZH pmax pmax
comp=Z,12nm,1.0s
SONM Songino Array 30.71 315 P P 20 51 45.6 -0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,3.9nm,0.8s,baz=125,slow=8.2,SNR=22						
SONM				PcP	PcP	20 54 30.0	+0.8
	comp=Z,0.2nm,0.5s,baz=120,slow=5.2,SNR=2.2						
SONM				ScP	ScP	20 57 25.5	-0.5
	comp=Z,0.4nm,0.5s,baz=134,slow=3.7,SNR=5.2						
YAK	Yakutsk	32.92	352	eP	P	20 52 03.8	-0.4
YAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA	Gaotai	33.22	298	eP	P	20 52 07.0	-0.4
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ZAK	Zakamensk	33.63	318	eP	P	20 52 10.4	-0.3
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TLY	Talaya	33.99	320	eP	P	20 52 13.6	0.0
TLY				pmax	pmax		
	comp=Z,9.0nm,1.7s						
CMAR	Chiang Mai Arr	37.76	262	P	P	20 52 44.9	-0.5
	comp=Z,0.5nm,0.4s,baz=83,slow=4.6,SNR=6.8						
BILL	Bilibino	41.74	15	eP	P	20 53 19.0	+2.2
BILL				i *PP	pP	20 54 44.1	-1.0
BILL				e		20 55 07.3	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TIXI	Tiksi	42.39	355⇑	eP	P	20 53 21.7	-0.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TAPN	Taplejung	44.53	280	ePn	P	20 53 39.4	-0.2
	comp=Z,9.4nm,0.4s						
ODAN	Odare	44.93	279	ePn	P	20 53 42.4	-0.3
	comp=Z,14nm,0.5s						
ZALV	Zalesovo Beam	45.51	318	P	P	20 53 45.7	-0.7
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV				pmax	pmax		
	comp=N,1.0nm,0.7s						
ZALV	Zalesovo Beam	45.51	318	P	P	20 53 45.7	-0.7
	comp=N,1.7nm,0.4s,baz=101,slow=6.0,SNR=12						
ZALV				ScP	ScP	20 58 20.8	-1.3
	comp=N,1.0nm,0.7s,baz=118,slow=3.9,SNR=5.4						
RAMN	Ramite	45.59	280	ePn	P	20 53 47.4	-0.3
	comp=N,12nm,0.4s						
GUN	Gumba	45.94	281	ePn	P	20 53 50.6	0.0
	comp=N,13nm,0.3s						
PKI	Pulchoki	46.44	281	ePn	P	20 53 53.7	-0.6
MKAR	Makanchi Array	46.45	308	P	P	20 53 53.3	-0.4
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR				pmax	pmax		
	comp=N,1.0nm,0.7s						
MKAR	Makanchi Array	46.45	308	P	P	20 53 53.2	-0.4
	comp=N,3.0nm,0.7s,baz=92,slow=8.8,SNR=39						
MKAR				ScP	ScP	20 58 25.0	-1.2
	comp=N,0.5nm,0.7s,baz=82,slow=4.3,SNR=6.3						
PKIN	Phulchoki	46.45	281	ePn	P	20 53 53.6	-0.7
	comp=N,3.3nm,0.6s						
KKN	Kakani	46.49	281	ePn	P	20 53 54.2	-0.4
DMN	Daman	46.69	281	ePn	P	20 53 55.8	-0.3
DANN	Dangsing	47.63	283	ePn	P	20 54 03.5	+0.2
	comp=N,22nm,0.7s						
KOLN	Koldanda	47.92	282	ePn	P	20 54 05.3	-0.1
	comp=N,12nm,0.7s						
PYUN	Piuthan	48.35	283	ePn	P	20 54 08.7	+0.1
	comp=N,13nm,0.4s						
KURK	Kurchatov	48.97	313c	iP	P	20 54 11.7	-0.9
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURBB	Kurchatov Arra	49.02	313	P	P	20 54 12.4	-0.6
	comp=Z,5.6nm,0.6s,baz=92,slow=6.8,SNR=67						
WRA	Warramunga Arr	49.48	185	P	P	20 54 16.9	+0.1
	comp=Z,6.4nm,0.6s,baz=1.3,slow=7.8,SNR=137						
WRA				ScP	ScP	20 58 40.2	+0.9
	comp=Z,0.6nm,0.9s,baz=353,slow=5.1,SNR=3.9						
ASAR	Alice Springs	53.21	185	P	P	20 54 44.1	+0.3
	comp=Z,2.5nm,0.6s,baz=16,slow=11,SNR=53						
ASAR				ScP	ScP	20 58 55.7	+0.3
	comp=Z,0.6nm,0.9s,baz=0.0,slow=4.1,SNR=3.8						
BRVK	Borovoye	54.11	316c	eP	P	20 54 49.4	-0.4
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ILAR	Eielson Array	57.00	29	P	P	20 55 10.7	+0.9
	comp=Z,0.3nm,0.5s,baz=261,slow=4.5,SNR=3.6						
ARU	Arti	60.49	321d	iP	P	20 55 32.8	-0.7
ARU						20 57 49.3	
ARU				S	S	21 03 12.8	+1.7
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
STKA	Stephens Creek	61.26	177	P	P	20 55 40.0	+1.2
	comp=Z,7.6nm,0.6s,baz=329,slow=6.6,SNR=37						
KEV	Kevo	69.53	340	ep	P	20 56 30.5	+0.1
	comp=Z,2.0nm,0.6s						
KEV	Kevo	69.53	340	eP	P	20 56 30.5	+0.1
KEV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	ARCESS Array B	70.09	340	P	P	20 56 34.4	+0.6
	comp=Z,2.9nm,0.8s,baz=66,slow=8.6,SNR=20						
JOF	Joensuu	71.40	333	ep	P	20 56 40.7	-0.9
	comp=Z,3.5nm,0.5s						
JOF	Joensuu	71.40	333	eP	P	20 56 40.7	-0.9
JOF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
OBN	Obninsk	72.64	324	eP	P	20 56 44.6	-4.4
OBN				e*PP	pP	20 58 25.5	-5.6
OBN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KAF	Kangasniemi	73.81	333	ep	P	20 56 54.6	-0.9
	comp=Z,2.0nm,0.6s						
KAF	Kangasniemi	73.81	333	eP	P	20 56 54.6	-0.9
KAF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBZ	Khabaz	73.98	311	P	P	20 56 57.1	+0.2
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	Khabaz	73.98	311	P	P	20 56 57.1	+0.2
	comp=Z,3.1nm,0.8s,baz=138,slow=4.0,SNR=10						
KIV	Kislovodsk	74.02	312	eP	P	20 56 58.0	+0.7
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
FINES	FINESS Array B	74.27	333	P	P	20 56 57.8	-0.4
	comp=Z,1.3nm,0.5s,baz=55,slow=7.2,SNR=9.5						
MIB	Mutribah	76.92	297	eP	P	20 57 12.7	-0.9
MIB				AMb	AMB	20 57 13.8	
	comp=Z,12nm,0.7s						
RDF	Al-Radifah	77.15	296	eP	P	20 57 14.2	-0.7
RDF				AMb	AMB	20 57 19.6	
	comp=Z,7.9nm,1.5s						
NAY	Al-Naaiem	77.25	296	eP	P	20 57 14.6	-0.8
NAY				AMb	AMB	20 57 15.2	
	comp=Z,4.4nm,0.8s						
AKASG	Malin Array Be	78.70	322	P	P	20 57 22.4	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKASG	Malin Array Be	78.70	322	P	P	20 57 22.4	-0.4
	comp=Z,1.3nm,0.7s,baz=55,slow=5.1,SNR=4.1						
NB2	NORSAR Subarra	80.06	337	P	P	20 57 29.5	-0.4
	comp=Z,0.8nm,0.5s,baz=45,slow=5.1						
NOA	NORSAR Array B	80.06	337	P	P	20 57 29.8	-0.1
	comp=Z,1.0nm,0.6s,baz=46,slow=5.2,SNR=6.5						
NVAR	Mina Array Bea	81.36	51	P	P	20 57 39.2	+1.8
	comp=Z,0.3nm,0.4s,baz=297,slow=6.0,SNR=2.4						
BRTR	Keskin Array B	81.98	311	P	P	20 57 40.5	+0.1
	comp=Z,2.0nm,0.8s,baz=90,slow=4.4,SNR=13						
SADO	Sadowa	98.31	26	P	Pdif	20 58 56.2	-0.3
	comp=Z,2.2nm,0.5s,baz=293,slow=5.5,SNR=3.2						
TORD	Torodi Ar. Bea	120.55	309	PKP	PKPdf	21 04 08.1	-0.3
	comp=Z,0.2nm,0.5s,baz=43,slow=1.7,SNR=8.1						

OTT 09 20:50:33.7±0.1, 62°.05N×79°.62W, h5km, MN3.6/29, 97km southwest from Ivujivik, Qc Boothia Ungava Seismic Zone., Hudson Strait region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKVQ	Akulivik	1.43	151	PG	Pn	20 51 00.3	+0.1
AKVQ				SG	Sb	20 51 18.8	-0.4
AKVQ				Trac		20 51 21.6	
	comp=Z,70nm,0.1s						
INUQ	Inukjuak	3.69	168	PN	Pn	20 51 31.5	+0.2
INUQ				SN	Sn	20 52 13.6	-1.5
INUQ				LG	Lg	20 52 27.6	
INUQ				Trac		20 52 29.9	
	comp=Z,76nm,0.3s						
FRB	Frobisher Bay	5.34	67	PN	Pn	20 51 53.6	-0.3
FRB				SN	Sn	20 52 51.5	-4.2
FRB				Trac		20 53 18.9	
	comp=Z,33nm,0.4s						
FRB				LG	Lg	20 53 22.9	
QILN	Qililugaq Expl	5.47	331	PN	Pn	20 51 55.0	-0.7
QILN				SN	Sn	20 52 55.4	-3.5
QILN				LG	Lg	20 53 25.4	
QILN				Trac		20 53 34.6	
	comp=Z,37nm,0.3s						
SEDN	First Sedna Si	5.48	288	PN	Pn	20 51 55.1	-0.7
SEDN				SN	Sn	20 52 55.9	-3.2
SEDN				LG	Lg	20 53 26.8	
SEDN				Trac		20 53 30.2	
	comp=Z,28nm,0.3s						
JOSN	Second Sedna S	5.62	287	PN	Pn	20 51 57.1	-0.7
JOSN				SN	Sn	20 52 58.2	-4.4
JOSN				LG	Lg	20 53 31.0	
JOSN				Trac		20 53 37.0	
	comp=Z,29nm,0.3s						
WAGN	Wager Bay	5.78	316	PN	Pn	20 51 59.9	-0.1
WAGN				SN	Sn	20 53 02.9	-3.7
WAGN				LG	Lg	20 53 34.5	
WAGN				Trac		20 53 37.8	
	comp=Z,53nm,0.2s						
NUNN	Nunuq Camp, NU	6.01	307	PN	Pn	20 52 02.5	-0.6
NUNN				SN	Sn	20 53 07.3	-4.9
NUNN				LG	Lg	20 53 40.5	
NUNN				Trac		20 53 48.4	
	comp=Z,34nm,0.3s						
SRLN	Sarcpa Lake, N	6.71	348	PN	Pn	20 52 07.6	-5.1
SRLN				SN	Sn	20 53 24.4	-5.0
SRLN				LG	Lg	20 54 07.0	
SRLN				Trac		20 54 19.7	
	comp=Z,66nm,0.6s						
KUQ	Kuujjuuaa	6.86	120	PN	Pn	20 52 14.2	-0.5
KUQ				SN	Sn	20 53 28.0	-5.0
KUQ				Trac		20 54 13.9	
	comp=Z,26nm,0.3s						
ARVN	Arviat, NU	6.97	268	PN	Pn	20 52 15.2	-1.1
ARVN				SN	Sn	20 53 30.7	-5.0
ARVN				LG	Lg	20 54 16.7	
ARVN				Trac		20 54 16.9	
	comp=Z,33nm,0.5s						
LAIN	Lailor River,	7.27	349	PN	Pn	20 52 19.6	-0.8
LAIN				SN	Sn	20 53 37.2	-6.0
LAIN				Trac		20 54 19.6	
	comp=Z,31nm,0.3s						
LAIN				LG	Lg	20 54 20.1	
BULN	Bullion Camp,	7.32	312	PN	Pn	20 52 20.5	-0.6
BULN				SN	Sn	20 53 39.0	-5.5
BULN				LG	Lg	20 54 21.4	
BULN				Trac		20 54 34.7	
	comp=Z,19nm,0.2s						
ILON	Igloolik, Nuna	7.41	354	PN	Pn	20 52 21.4	-0.8
ILON				SN	Sn	20 53 40.7	-5.8
ILON				LG	Lg	20 54 24.5	
ILON				Trac		20 54 24.9	
	comp=Z,28nm,0.3s						
KUGN	Kugaaruk Camp,	7.49	329	PN	Pn	20 52 22.0	-1.4
KUGN				SN	Sn	20 53 43.6	-4.9
KUGN				Trac		20 54 32.0	
	comp=Z,27nm,0.4s						
KUGN				LG	Lg	20 54 33.3	
AP3N	Apex site 3 Nu	7.70	347	PN	Pn	20 52 25.7	-0.6
AP3N				SN	Sn	20 53 48.1	-5.7
AP3N				LG	Lg	20 54 32.1	
AP3N				Trac		20 54 33.7	
	comp=Z,49nm,0.8s						
YBKN	Baker Lake, Hu	7.75	294	PN	Pn	20 52 26.5	-0.4
YBKN				SN	Sn	20 53 49.3	-5.6
YBKN				Trac		20 54 39.8	
	comp=Z,27nm,0.3s						
YBKN				LG	Lg	20 54 42.8	
STLN	Stellar Camp,	7.78	318	PN	Pn	20 52 26.5	-0.9
STLN				SN	Sn	20 53 49.9	-5.8
STLN				LG	Lg	20 54 37.7	
STLN				Trac		20 54 46.9	
	comp=Z,16nm,0.2s						
FCC	Fort Churchill	7.88	252	PN	Pn	20 52 28.6	-0.2
FCC				SN	Sn	20 53 53.5	-4.8
FCC				LG	Lg	20 54 44.9	
FCC				Trac		20 54 52.6	
	comp=Z,21nm,0.6s						
GIFN	Gifford Fjord,	8.02	355	PN	Pn	20 52 29.3	-1.3
GIFN				SN	Sn	20 53 54.9	-6.7
GIFN				LG	Lg	20 54 42.6	
GIFN				Trac		20 54 45.0	
	comp=Z,42nm,0.5s						
SILO	Sutton Inlier	8.09	203	PN	Pn	20 52 30.2	-1.5
SILO				SN	Sn	20 53 56.4	-7.0
SILO				LG	Lg	20 54 42.3	
SILO				Trac		20 54 59.0	
	comp=Z,19nm,0.5s						
LG4Q	La Grande 4	8.94	158	PN	Pn	20 52 41.5	-1.9
LG4Q				SN	Sn	20 54 14.2	-10
LG4Q				LG	Lg	20 55 09.2	
LG4Q				Trac		20 55 10.2	
	comp=Z,26nm,0.3s						
WEMQ	Wemindji, Queb	9.07	174	PN	Pn	20 52 44.2	-0.9
WEMQ				SN	Sn	20 54 19.9	-7.5
WEMQ				LG	Lg	20 55 14.6	
WEMQ				Trac		20 55 16.4	
	comp=Z,33nm,0.5s						
VIMO	Victor Mine	9.52	195	PN	Pn	20 52 50.6	-0.7
VIMO				SN	Sn	20 54 31.3	-7.3
VIMO				Trac		20 55 35.1	
	comp=Z,14nm,0.4s						
SCHQ	Schefferville	9.85	132	PN	Pn	20 52 52.9	-2.9
SCHQ				SN	Sn	20 54 39.4	-7.3
SCHQ				LG	Lg	20 55 40.9	
SCHQ				Trac		20 55 42.7	
	comp=Z,41nm,0.8s						
YOSQ	Ashton Mining	10.03	153	PN	Pn	20 52 57.4	-1.0
YOSQ				SN	Sn	20 54 42.9	-8.4
YOSQ				LG	Lg	20 55 42.1	
MALO	McAlpine Lake	12.06	180	PN	Pn	20 53 24.1	-1.9
MALO				SN	Sn	20 55 30.1	-11
MALO				LG	Lg	20 56 39.9	
MALO				Trac		20 57 08.8	
	comp=Z,22nm,0.8s						
PKLO	Pickle Lake	12.09	214	PN	Pn	20 53 24.3	-2.1
PKLO				SN	Sn	20 55 31.6	-10
PKLO				Trac		20 56 52.3	
	comp=Z,100nm,1.0s						
NANO	Nakina Ontario	12.41	202	PN	Pn	20 53 28.4	-2.4
NANO				SN	Sn	20 55 39.6	-10
NANO				Trac		20 57 02.4	
	comp=Z,23nm,0.9s						
KAPO	Kapuskasing	12.73	189	PN	Pn	20 53 33.6	-1.6
KAPO				SN	Sn	20 55 47.4	-10
KAPO				Trac		20 57 11.3	
	comp=Z,10.0nm,0.5s						
GTO	Geraldton	12.99	202	SN	Sn	20 55 50.4	-13
GTO				Trac		20 57 33.7	
	comp=Z,1.2nm,0.0s						
FFC	Flin Flon	13.78	248	PN	Pn	20 53 44.0	-5.4
FFC				SN	Sn	20 56 10.6	-12
FFC				LG	Lg	20 57 50.8	
SMQ	Clarke City	13.83	143	PN	Pn	20 53 48.1	-2.1
SMQ				SN	Sn	20 56 09.7	-14
SMQ				Trac		20 57 47.4	
	comp=Z,5.5nm,0.4s						
PNPO	Pukaskwa Natio	14.00	199	PN	Pn	20 53 48.8	-3.8
VLDQ	Val d'Or	14.03	174	SN	Sn	20 56 13.9	-15
ICQ	Pointe Anglais	14.31	146	PN	Pn	20 53 54.5	-2.2
ICQ				SN	Sn	20 56 23.1	-13
ICQ				Trac		20 58 34.0	
	comp=Z,70nm,1.4s						

IDC 09 20:58:44.7±1.1, 1°.24N×127°.24E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/22, mbtmp3.8/6, Error ellipse: s-maj=119.0km s-min=16.9km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.17	162	P	P	21 03 42.5	0.0
	2.4nm,0.5s,baz=342,slow=11,SNR=41						
ASAR	Alice Springs	25.59	166	P	P	21 04 15.7	-0.1
	2.6nm,0.6s,baz=353,slow=16,SNR=24						
STKA	Stephens Creek	35.63	159	P	P	21 05 44.5	0.0
	1.6nm,0.8s,baz=325,slow=12,SNR=2.7						
SONM	Songino Array	49.81	342	P	P	21 07 39.8	+0.3
	0.3nm,0.8s,baz=156,slow=11,SNR=2.6						
MKAR	Makanchi Array	59.88	326	P	P	21 08 52.3	-0.1
	0.6nm,0.5s,baz=120,slow=7.5,SNR=12						
KURBB	Kurchatov Arra	64.10	328	P	P	21 09 20.4	-0.3
	0.8nm,0.5s,baz=128,slow=6.2,SNR=6.0						

IDC 09 21:09:31.4±7.2, 17°.40S×171°.20W, h0km, mb4.2/6, mb1 4.4/6, mb1mx3.9/24, mbtmp4.3/6, Error ellipse: s-maj=149.8km s-min=127.6km az=139.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	21.54	254	P	P	21 14 24.2	+1.6
	2.9nm,0.5s,baz=78,slow=13,SNR=8.2						
CTA	Charters Tower	40.30	259	P	P	21 17 08.9	-1.8
	2.0nm,0.4s,baz=71,slow=11,SNR=5.3						
STKA	Stephens Creek	44.92	242	P	P	21 17 48.0	-0.2
	1.4nm,0.4s,baz=85,slow=11,SNR=12						
WRA	Warramunga Arr	51.47	258	P	P	21 18 38.5	-0.5
	1.3nm,0.3s,baz=97,slow=7.6,SNR=50						
ASAR	Alice Springs	51.53	253	P	P	21 18 38.9	-0.6
	3.9nm,0.7s,baz=88,slow=8.1,SNR=55						
FITZ	Fitzroy Crossi	59.88	259	P	P	21 19 40.6	+1.2
	2.0nm,0.4s,baz=121,slow=5.7,SNR=14						

IDC 09 21:22:47.8±55.0, 16°.11S×174°.26W, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/19, mbtmp3.7/3, Error ellipse: s-maj=1049.0km s-min=178.2km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.97	240	P	P	21 30 49.7	+0.7
	2.3nm,1.1s,baz=112,slow=11,SNR=3.7						
WRA	Warramunga Arr	48.88	257	P	P	21 31 35.0	-0.8
	0.4nm,0.9s,baz=97,slow=8.0,SNR=4.7						
ASAR	Alice Springs	49.11	252	P	P	21 31 37.1	-0.4
	0.5nm,0.5s,baz=88,slow=8.3,SNR=10						

ISCJB 09 21:32:39.9±1.2, 37°.88N±0°.05×29°.25E±0°.08, h18km±24km, Error ellipse: s-maj=12.1km s-min=7.0km az=32.3
CSEM 09 21:32:39.2, 37°.87N×29°.22E, h10km, MD2.7, After DDA
DDA 09 21:32:39.2, 37°.87N×29°.22E, h10km, MD2.7
ISC 09 21:32:39.8±1.1, 37°.89N±0°.03×29°.21E±0°.05, h12km±9km, n11, σ0s.89/20, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.19	226	ePG	Pb	21 32 46.5	+1.1
DENT				eSG	Sg	21 32 49.7	+2.7
DNZL	Cakiroluk	0.24	213	i P	Pg	21 32 44.1	-0.8
DNZL				i S	Sg	21 32 47.4	-0.9
DNZL	Cakiroluk	0.24	213	i P	Pg	21 32 44.1	-0.8
DNZL				i S	Sg	21 32 47.4	-0.9
KHAL	Karahalli	0.53	25	i P	Pg	21 32 49.9	-0.3
KHAL				eS	Sg	21 32 57.3	+0.1
KHAL	Karahalli	0.53	25	i P	Pg	21 32 49.9	-0.3
KHAL				eS	Sg	21 32 57.3	+0.1
KULA	Kula-Manisa	0.76	325	ePG	Pb	21 32 55.4	+0.4
MANT	Manisa	0.79	320	i P	Pg	21 32 55.1	-0.1
MANT				i S	Sg	21 33 05.4	-0.1
MANT	Manisa	0.79	320	i P	Pg	21 32 55.1	-0.1
MANT				i S	Sg	21 33 05.4	-0.1
AYDN	Tasoluk	1.08	258	i P	Pn	21 33 00.4	-0.5
AYDN				i S	Sb	21 33 14.2	-0.3
AYDN	Tasoluk	1.08	258	i P	Pn	21 33 00.4	-0.5
AYDN				i S	Sb	21 33 14.2	-0.3
DALY	Dalyan (Mu˜la	1.16	203	ePG	Pn	21 33 02.1	+0.3

CSEM 09 21:42:42.3±0.1, 37°.84N×36°.14E, h2km, MD2.5, Error ellipse: s-maj=3.6km s-min=2.4km az=117.0
ISK 09 21:42:43.6, 37°.57N×36°.18E, h22km, MD2.5
DDA 09 21:42:44.6, 37°.60N×36°.16E, h7km, MD2.8
ISC 09 21:42:44.4±1.0, 37°.57N±0°.04×36°.15E±0°.03, h13km±8km, n12, σ0s.48/24, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ANDN	Andirin	0.16	86	i P	Pg	21 42 48.2	-0.1
ANDN				i S	Sg	21 42 51.2	+0.2
ANDN	Andirin	0.16	86	i P	Pg	21 42 48.2	-0.1
ANDN				i S	Sg	21 42 51.2	+0.2
KOZT	Kozan	0.27	251	ePG	Pb	21 42 50.7	-0.4
KOZT				eSG	Sb	21 42 55.9	+0.3
KOZT	Kozan	0.27	251	ePg	Pb	21 42 50.7	-0.4
KOZT				eSg	Sb	21 42 55.9	+0.3
AYKD	Aykdinkavak	0.55	106	i P	Pb	21 42 55.5	-0.4
AYKD				i S	Sb	21 43 03.1	-0.5
KMRS	Kahramanmaras	0.60	96	ePG	Pg	21 42 55.6	-0.5
KMRS				eSG	Sg	21 43 04.3	+0.2
KMRS	Kahramanmaras	0.60	96	ePg	Pg	21 42 55.6	-0.5
KMRS				eSg	Sg	21 43 04.3	+0.2
SARI	SarD1z-Kayseri	0.86	14	ePG	Pg	21 43 00.6	-0.5
SARI				eSG	Sb	21 43 13.3	+0.3
SARI	SarD1z-Kayseri	0.86	14	ePg	Pg	21 43 00.6	-0.5
SARI				eSg	Sb	21 43 13.3	+0.3
PINB	Pinarbasi	1.13	10	eP	Pg	21 43 06.5	+0.4
PINB				eS	Sg	21 43 21.0	+0.2
PINB	Pinarbasi	1.13	10	eP	Pg	21 43 06.5	+0.4
PINB				eS	Sg	21 43 21.0	+0.2
GZT	Gaziantep	1.15	100	eP	Pg	21 43 07.5	+1.0
GZT				i S	Sg	21 43 22.4	+0.9

IDC 09 21:59:55.3±2.2, 43°.53N×105°.23W, h0km, mb3.7/3, mb1 3.8/6, mb1mx3.5/29, mbtmp3.7/6, ML3.4/3, Error ellipse: s-maj=66.4km s-min=8.5km az=153.0
ISCJB 09 21:59:56.3±0.2, 43°.75N±0°.01×105°.29W±0°.02, h0km, mb3.7/3, Error ellipse: s-maj=2.3km s-min=2.0km az=172.0
NEIC 09 21:59:56.6±0.3, 43°.72N×105°.13W, h0km, ML3.1, Error ellipse: s-maj=4.3km s-min=4.0km az=139.0, Suspected Mining explosion.
NEIC 70 km [45 miles] SSE of Gillette.
ISC 09 21:59:56.2±0.6, 43°.70N±0°.01×105°.30W±0°.02, h0km, n189, σ1s.31/253, mb3.7/3, 74C-84D, Wyoming

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
I23A	Meade Ranch, G	0.29	336	⇓P	Pg	22 00 02.9	+1.1
	baz=0.3,SNR=351						
I23A				⇓S	Sg	22 00 05.6	0.0
	baz=0.3						
I23A	Meade Ranch, G	0.29	336	⇓P	Pg	22 00 02.9	+1.1
	baz=0.3,SNR=351						
I23A				⇓S	Sg	22 00 05.6	0.0
	baz=0.3						
J23A	Dilts Ranch, B	0.35	212	⇑P	Pb	22 00 05.1	-0.3
	baz=0.4,SNR=200						
J23A				⇑S	Sb	22 00 10.0	-1.4
	baz=0.4						
J23A	Dilts Ranch, B	0.35	212	⇑P	Pb	22 00 05.1	-0.3
	baz=0.4,SNR=200						
J23A				⇑S	Sb	22 00 10.0	-1.4
	baz=0.4						
I24A	Kuemmerle Ranc	0.51	71	P	Pb	22 00 07.4	-0.8
	baz=0.4,SNR=107						
I24A				⇓S	Sg	22 00 14.7	+2.0
	baz=0.4						
I24A	Kuemmerle Ranc	0.51	71	P	Pb	22 00 07.4	-0.8
	baz=0.4,SNR=107						
I24A				⇓S	Sg	22 00 14.7	+2.0
	baz=0.4						
J24A	Dixon Ranch, L	0.59	128	⇓P	Pb	22 00 09.0	-0.5
	baz=0.5,SNR=10						
J24A	Dixon Ranch, L	0.59	128	⇓P	Pb	22 00 09.0	-0.5
	baz=0.5,SNR=10						
H23A	Clabaugh Cattl	0.87	355	⇑P	Pg	22 00 12.8	-0.1
	baz=0.9						
H23A				⇑S	Sg	22 00 24.4	+0.2
	baz=0.9						
H23A	Clabaugh Cattl	0.87	355	⇑P	Pg	22 00 12.8	-0.1
	baz=0.9						
H23A				⇑S	Sg	22 00 24.4	+0.2
	baz=0.9						
I22A	9 Mile Ranch,	0.88	283	P	Pg	22 00 13.8	+0.7
	baz=1.0,SNR=306						
I22A				⇓S	Sg	22 00 25.1	+0.5
	baz=1.0						
I22A	9 Mile Ranch,	0.88	283	P	Pg	22 00 13.8	+0.7

baz=1.0,SNR=306
I22A ⇓S Sg 22 00 25.1 +0.5
baz=1.0
J22A Midwest 0.90 252 P Pg 22 00 14.2 +0.7
baz=1.0,SNR=148
J22A Midwest 0.90 252 P Pg 22 00 14.2 +0.7
baz=1.0,SNR=148
K23A Bowen Ranch, D 0.97 194 ⇑P Pb 22 00 16.4 +0.3
baz=1.0,SNR=26
K23A Bowen Ranch, D 0.97 194 ⇑P Pb 22 00 16.4 +0.3
baz=1.0,SNR=26
K24A Anderson Ranch 1.04 160 ⇓P Pb 22 00 17.8 +0.7
baz=1.0,SNR=9.9
K24A Anderson Ranch 1.04 160 ⇓P Pb 22 00 17.8 +0.7
baz=1.0,SNR=9.9
H22A Clearmont 1.18 320 ⇑P Pg 22 00 18.8 0.0
baz=1.2,SNR=72
H22A Clearmont 1.18 320 ⇑P Pg 22 00 18.8 0.0
baz=1.2,SNR=72
H24A Dirks Ranch, A 1.18 27 ⇓P Pg 22 00 18.2 -0.6
baz=1.1
H24A Dirks Ranch, A 1.18 27 ⇓P Pg 22 00 18.2 -0.6
baz=1.1
K22A Casper 1.38 221 P Pn 22 00 23.1 +0.2
baz=1.5,SNR=260
K22A ⇓S Sn 22 00 43.2 +1.3
baz=1.5
K22A Casper 1.38 221 P Pn 22 00 23.1 +0.2
baz=1.5,SNR=260
K22A ⇓S Sn 22 00 43.2 +1.3
baz=1.5
I21A Big Trails, Te 1.45 275 ⇑P Pn 22 00 22.9 -1.0
baz=1.5
I21A ⇑S Sb 22 00 43.4 +0.1
baz=1.5
I21A Big Trails, Te 1.45 275 ⇑P Pn 22 00 22.9 -1.0
baz=1.5
I21A ⇑S Sb 22 00 43.4 +0.1
baz=1.5
G23A Biddle 1.50 358 ⇑P Pn 22 00 24.1 -0.5
baz=1.5,SNR=115
G23A Biddle 1.50 358 ⇑P Pn 22 00 24.1 -0.5
baz=1.5,SNR=115
K25A Mack Ranch, Ha 1.51 136 ⇑P Pg 22 00 26.3 +1.3
baz=1.4,SNR=111
K25A Mack Ranch, Ha 1.51 136 ⇑P Pg 22 00 26.3 +1.3
baz=1.4,SNR=111
H21A Big Horn, Sher 1.56 307 ⇓P Pn 22 00 25.6 +0.2
baz=1.6,SNR=121
H21A Big Horn, Sher 1.56 307 ⇓P Pn 22 00 25.6 +0.2
baz=1.6,SNR=121
J21A Lysite 1.60 258 P Pn 22 00 26.1 +0.1
baz=1.7,SNR=74
J21A Lysite 1.60 258 P Pn 22 00 26.1 +0.1
baz=1.7,SNR=74
L23A Garrett 1.61 191 P Pg 22 00 27.3 +0.2
baz=1.6,SNR=410
L23A Garrett 1.61 191 P Pg 22 00 27.3 +0.2
baz=1.6,SNR=410
L24A Wheatland 1.68 171 ⇓P Pg 22 00 28.4 +0.1
baz=1.7,SNR=25
L24A ⇓S Sg 22 00 51.9 +1.9
baz=1.7
L24A Wheatland 1.68 171 ⇓P Pg 22 00 28.4 +0.1
baz=1.7,SNR=25
L24A ⇓S Sg 22 00 51.9 +1.9
baz=1.7
G24A Alzada 1.75 21 ⇑P Pn 22 00 28.6 +0.7
baz=1.7,SNR=56
G24A ⇓Sb Sg 22 00 53.1 +0.7
baz=1.7
G24A Alzada 1.75 21 ⇑P Pn 22 00 28.6 +0.7
baz=1.7,SNR=56
G24A ⇓Sb Sg 22 00 53.1 +0.7
baz=1.7
L25A Engebretsen Ra 1.83 147 Pb Pg 22 00 31.7 +0.5
baz=1.8,SNR=210
L25A Engebretsen Ra 1.83 147 Pb Pg 22 00 31.7 +0.5
baz=1.8,SNR=210
K26A Motz Farm, Whi 1.84 122 ⇓P Pb 22 00 31.0 +0.1
baz=1.8,SNR=57
K26A Motz Farm, Whi 1.84 122 ⇓P Pb 22 00 31.0 +0.1
baz=1.8,SNR=57
L22A Ellis Ranch, M 1.86 207 P Pb 22 00 31.6 +0.3
baz=1.9,SNR=140
L22A ⇓Sb Sg 22 00 58.1 +2.1
baz=1.9
L22A Ellis Ranch, M 1.86 207 P Pb 22 00 31.6 +0.3
baz=1.9,SNR=140
L22A ⇓Sb Sg 22 00 58.1 +2.1
baz=1.9
F23A Volborg 2.02 358 ⇓P Pn 22 00 32.2 +0.5
baz=2.0,SNR=109
F23A ⇓Sb Sg 22 01 00.9 -0.4
baz=2.0
F23A Volborg 2.02 358 ⇓P Pn 22 00 32.2 +0.5
baz=2.0,SNR=109
F23A ⇓Sb Sg 22 01 00.9 -0.4
baz=2.0
J20A Shoshoni 2.06 261 ⇑Pb Pb 22 00 35.0 +0.5
baz=2.2
J20A ⇑Sb Sg 22 01 02.9 +0.7
baz=2.2
J20A Shoshoni 2.06 261 ⇑Pb Pb 22 00 35.0 +0.5
baz=2.2
J20A ⇑Sb Sg 22 01 02.9 +0.7
baz=2.2
I20A Worland 2.06 278 ⇑P Pn 22 00 33.6 +1.3
baz=2.2,SNR=195
I20A Worland 2.06 278 ⇑P Pn 22 00 33.6 +1.3
baz=2.2,SNR=195
H20A Greybull 2.10 293 ⇓P Pn 22 00 33.5 +0.7
baz=2.2,SNR=30
H20A Greybull 2.10 293 ⇓P Pn 22 00 33.5 +0.7
baz=2.2,SNR=30
F24A Ekalaka 2.23 16 ⇑P Pn 22 00 35.5 +0.9
baz=2.2,SNR=48
F24A Ekalaka 2.23 16 ⇑P Pn 22 00 35.5 +0.9
baz=2.2,SNR=48
M24A Cheyenne 2.25 171 ⇓Pb Pg 22 00 39.5 +0.1
baz=2.3
M24A ⇓Sb Sg 22 01 10.8 +2.2
baz=2.3
M24A Cheyenne 2.25 171 ⇓Pb Pg 22 00 39.5 +0.1
baz=2.3
M24A ⇓Sb Sg 22 01 10.8 +2.2
baz=2.3
PHWY Pilot Hill 2.40 183 *e*Pn Pn 22 00 38.4 +1.4
PHWY *e*Sn Sn 22 01 02.9 -4.3
K20A Yellowstone Ra 2.46 246 ⇓Sb Sg 22 01 14.3 -0.8
baz=2.5
K20A Yellowstone Ra 2.46 246 ⇓Sb Sg 22 01 14.3 -0.8
baz=2.5
G20A Bridger 2.58 307 P Pn 22 00 39.6 +0.1
baz=2.7,SNR=205
G20A Bridger 2.58 307 P Pn 22 00 39.6 +0.1
baz=2.7,SNR=205
I19A Meeteetse 2.69 279 ⇑P Pn 22 00 42.8 +1.8
baz=2.8,SNR=58
I19A Meeteetse 2.69 279 ⇑P Pn 22 00 42.8 +1.8
baz=2.8,SNR=58
J19A Crowheart 2.77 262 ⇓Sb Sb 22 01 23.1 +1.9
baz=2.9
J19A Crowheart 2.77 262 ⇓Sb Sb 22 01 23.1 +1.9
baz=2.9
E22A Miles City 2.78 351 ⇓P Pn 22 00 41.8 -0.2
baz=2.8,SNR=16
E22A Miles City 2.78 351 ⇓P Pn 22 00 41.8 -0.2
baz=2.8,SNR=16
H19A Powell 2.83 291 ⇑P Pn 22 00 43.8 +1.0
baz=2.9,SNR=26
H19A Powell 2.83 291 ⇑P Pn 22 00 43.8 +1.0
baz=2.9,SNR=26
E24A Baker 2.95 13 ⇑P Pn 22 00 45.2 +0.8
baz=2.9,SNR=63
E24A Baker 2.95 13 ⇑P Pn 22 00 45.2 +0.8
baz=2.9,SNR=63
RLMT Red Lodge 3.18 298 *e*Pn Pn 22 00 48.5 +0.8
RLMT *e*Sn Sn 22 01 25.5 -1.0
BW06 Boulder Array 3.25 255 *e*Pn Pn 22 00 50.5 +1.8
BW06 *e*Sg Sg 22 01 40.2 -0.4
PDAR Pinedale Array 3.25 255 Pn Pn 22 00 50.7 +2.0
PDAR Pg Pg 22 00 59.0 +0.6
PDAR Lg Lg 22 01 35.4
PDAR Pinedale Array 3.25 255 Pn Pn 22 00 50.7 +2.0
3.1nm,0.3s,baz=72,slow=17,SNR=37
PDAR Pg Pg 22 00 59.0 +0.6
7.2nm,0.3s,baz=72,slow=19,SNR=29
PDAR Lg Lg 22 01 35.4
8.0nm,0.3s,baz=74,slow=30,SNR=10
I18A Diamond G Ranc 3.28 272 ⇓Sb Sb 22 01 37.7 +1.8
baz=3.4
I18A Diamond G Ranc 3.28 272 ⇓Sb Sb 22 01 37.7 +1.8
baz=3.4
F19A Roth Farm, Mol 3.37 311 ⇑P Pn 22 00 51.1 +0.8
baz=3.4,SNR=37
F19A ⇓S Sn 22 01 31.8 +0.7
baz=3.4
F19A Roth Farm, Mol 3.37 311 ⇑P Pn 22 00 51.1 +0.8
baz=3.4,SNR=37
F19A ⇓S Sn 22 01 31.8 +0.7
baz=3.4
E20A Meyer Farm, Mu 3.45 325 ⇓P Pn 22 00 50.6 -0.7
baz=3.5,SNR=11
E20A Meyer Farm, Mu 3.45 325 ⇓P Pn 22 00 50.6 -0.7
baz=3.5,SNR=11
G18A Lazy EL Ranch, 3.45 299 ⇑P Pn 22 00 52.2 +0.7
baz=3.5,SNR=21
G18A ⇑S Sn 22 01 34.1 +1.0
baz=3.5
G18A Lazy EL Ranch, 3.45 299 ⇑P Pn 22 00 52.2 +0.7
baz=3.5,SNR=21
G18A ⇑S Sn 22 01 34.1 +1.0
baz=3.5
D23A Lindsay 3.48 1 ⇓P Pn 22 00 52.5 +0.8
baz=3.5,SNR=24
D23A Lindsay 3.48 1 ⇓P Pn 22 00 52.5 +0.8
baz=3.5,SNR=24
D24A Glendive 3.49 11 ⇓P Pn 22 00 53.0 +1.2
baz=3.5,SNR=49
D24A Glendive 3.49 11 ⇓P Pn 22 00 53.0 +1.2
baz=3.5,SNR=49
D22A Cohagen 3.51 350 ⇓P Pn 22 00 52.3 +0.3
baz=3.5,SNR=24
D22A ⇓S Sn 22 01 35.9 +1.6
baz=3.5
D22A Cohagen 3.51 350 ⇓P Pn 22 00 52.3 +0.3
baz=3.5,SNR=24
D22A ⇓S Sn 22 01 35.9 +1.6
baz=3.5
O23A Lake Granby, G 3.51 188 ⇓Sb Sg 22 01 47.9 -1.2
baz=3.5
O23A Lake Granby, G 3.51 188 ⇓Sb Sg 22 01 47.9 -1.2
baz=3.5
OGNE Ogallala 3.66 138 *e*Pn Pn 22 00 54.1 -0.1
OGNE *e*Pg Pg 22 01 06.3 -0.2
E19A Rath Farm, Rou 3.71 319 P Pn 22 00 54.8 0.0
baz=3.8,SNR=21
E19A Rath Farm, Rou 3.71 319 P Pn 22 00 54.8 0.0
baz=3.8,SNR=21
GCMT Greycliff 3.75 305 *e*Pn Pn 22 00 56.9 +1.4
GCMT *e*Sg Sb 22 01 46.3 -3.1
LKWY Lake 3.77 285 *e*Pn Pn 22 00 58.0 +2.1
F18A Big Timber 3.84 307 ⇑P Pn 22 00 57.7 +1.0
baz=3.9,SNR=38
F18A Big Timber 3.84 307 ⇑P Pn 22 00 57.7 +1.0
baz=3.9,SNR=38
LOHW Long Hollow 3.85 271 *e*Pn Pn 22 00 59.1 +2.2
LOHW *e*Sn Sb 22 01 53.7 +1.2
C24A Savage 3.88 9 ⇓P Pn 22 00 58.6 +1.4
baz=3.9,SNR=27
C24A Savage 3.88 9 ⇓P Pn 22 00 58.6 +1.4
baz=3.9,SNR=27
ISCO Idaho Springs 3.90 184 *e*Pn Pn 22 00 57.6 -0.1
ISCO *e*Pg Pg 22 01 08.9 -2.1
ISCO *e*Sg Sg 22 02 01.8 +0.2
D20A Manuel Ranch, 3.94 330 ⇑P Pn 22 00 57.9 -0.1
baz=4.0,SNR=32
D20A Manuel Ranch, 3.94 330 ⇑P Pn 22 00 57.9 -0.1
baz=4.0,SNR=32
MOOW Moose Ponds 3.95 273 *e*Pn Pn 22 01 01.0 +2.7
MOOW *e*Pg Pg 22 01 13.0 +1.1
MOOW Sn Sb 22 01 55.9 +0.6
SNOW Snow King Moun 3.97 268 *e*Pn Pn 22 01 01.6 +3.0
SNOW *e*Sn Sb 22 01 52.8 -3.2
C22A Vida 4.07 354 ⇓P Pn 22 01 01.0 +1.3
baz=4.1,SNR=22
C22A Vida 4.07 354 ⇓P Pn 22 01 01.0 +1.3
baz=4.1,SNR=22
IMW Indian Meadow 4.09 275 *e*Pn Pn 22 01 02.6 +2.3
IMW *e*S Sg 22 02 06.8 -0.8
N28A Pribbeno Ranch 4.10 136 ⇑P Pn 22 01 02.3 +2.1
baz=4.0,SNR=9.0
N28A Pribbeno Ranch 4.10 136 ⇑P Pn 22 01 02.3 +2.1
baz=4.0,SNR=9.0
C23A Lambert 4.11 1 ⇓P Pn 22 01 01.6 +1.4
baz=4.1,SNR=38
C23A Lambert 4.11 1 ⇓P Pn 22 01 01.6 +1.4
baz=4.1,SNR=38
TPAW Teton Pass 4.11 269 *e*Pn Pn 22 01 02.5 +2.0
TPAW *e*Pg Pg 22 01 21.1 +6.1
TPAW Sn Sb 22 02 00.8 +0.8
D19A Cripps Ranch, 4.29 325 ⇓P Pn 22 01 02.5 -0.3
baz=4.3,SNR=6.5
D19A Cripps Ranch, 4.29 325 ⇓P Pn 22 01 02.5 -0.3
baz=4.3,SNR=6.5
C21A Desert Coulee 4.32 344 ⇑P Pn 22 01 03.4 +0.2
baz=4.3,SNR=7.1
C21A Desert Coulee 4.32 344 ⇑P Pn 22 01 03.4 +0.2
baz=4.3,SNR=7.1
AHID Auburn Hatcher 4.34 260 *e*Pn Pn 22 01 06.1 +2.4
AHID *e*Pg Pg 22 01 19.8 +0.4
E18A Harlowton 4.35 313 ⇑P Pn 22 01 04.4 +0.8
baz=4.4,SNR=40
E18A Harlowton 4.35 313 ⇑P Pn 22 01 04.4 +0.8
baz=4.4,SNR=40
RRI2 Red Ridge 4.39 268 *e*Pn Pn 22 01 06.5 +2.1
QLMT Earthquake Lak 4.55 287 *e*Pn Pn 22 01 09.2 +2.7
QLMT *e*Pg Pg 22 01 22.6 -0.8
P27A Ficken Ranch, 4.61 153 ⇑P Pn 22 01 09.3 +2.0
baz=4.6,SNR=11
P27A Ficken Ranch, 4.61 153 ⇑P Pn 22 01 09.3 +2.0
baz=4.6,SNR=11
B22A Reddig Ranch S 4.63 354 ⇑P Pn 22 01 07.9 +0.4
baz=4.6,SNR=9.0
B22A Reddig Ranch S 4.63 354 ⇑P Pn 22 01 07.9 +0.4
baz=4.6,SNR=9.0
E17A Martinsdale 4.81 307 ⇑P Pn 22 01 11.0 +0.9
baz=4.9,SNR=18
E17A Martinsdale 4.81 307 ⇑P Pn 22 01 11.0 +0.9
baz=4.9,SNR=18
C19A Slack Wire Ran 4.82 328 ⇓P Pn 22 01 10.0 0.0
baz=4.9,SNR=30
C19A Slack Wire Ran 4.82 328 ⇓P Pn 22 01 10.0 0.0
baz=4.9,SNR=30
DGMT Dagmar 4.83 9 *e*Pn Pn 22 01 11.2 +0.9
DGMT *e*Sg Sb 22 02 23.0 +2.5
P28A Saint Francis 4.90 146 ⇑P Pn 22 01 12.7 +1.5
baz=4.9,SNR=12
P28A Saint Francis 4.90 146 ⇑P Pn 22 01 12.7 +1.5
baz=4.9,SNR=12
BOZ Bozeman (W) 4.92 296 *e*Pn Pn 22 01 13.5 +2.0
4.2nm,0.3s
BOZ *e*Pg Pb 22 01 25.3 +2.0
HWUT Hardware Ranch 5.07 248 *e*Pn Pn 22 01 14.8 +1.1
7.7nm,0.5s
HWUT Sg Sg 22 02 37.5 -1.6
B20A Solberg Farm, 5.11 339 ⇓P Pn 22 01 14.1 0.0
baz=5.1,SNR=6.6
B20A Solberg Farm, 5.11 339 ⇓P Pn 22 01 14.1 0.0
baz=5.1,SNR=6.6
D17A Six Diamond Ra 5.13 314 ⇑P Pn 22 01 14.8 +0.4
baz=5.2,SNR=52
D17A Six Diamond Ra 5.13 314 ⇑P Pn 22 01 14.8 +0.4
baz=5.2,SNR=52
A24A Westby 5.30 9 ⇓P Pn 22 01 17.8 +1.1
baz=5.3,SNR=32
A24A Westby 5.30 9 ⇓P Pn 22 01 17.8 +1.1
baz=5.3,SNR=32
EGMT Eagleton 5.33 326 *e*Pn Pn 22 01 19.1 +2.0
18nm,0.5s
EGMT Pg Pb 22 01 32.5 +2.3
EGMT Sn Sn 22 02 20.8 +1.6
DLMT Dillon 5.48 290 *e*Pn Pn 22 01 21.1 +1.9
3.0nm,0.6s
DLMT *e*Pg Pb 22 01 35.6 +2.8
DLMT *e*Sn Sb 22 02 33.7 -5.4
HRY Holter Researc 5.51 305 *e*Pn Pn 22 01 20.3 +0.6
12nm,0.4s
HRY *e*Pg Pg 22 01 40.8 -1.0
HRY *e*Sn Sb 22 02 39.0 -1.0
DAU Daniels Canyon 5.52 236 *e*Pn Pn 22 01 20.6 +0.7
7.4nm,0.6s
DAU *e*Sn Sn 22 02 31.2 +7.0
JLU Jordanelle 5.52 238 *e*Pn Pn 22 01 21.3 +1.4
6.5nm,0.6s
MCMT McKenzie Canyo 5.54 284 *e*Pn Pn 22 01 21.9 +1.7
1.7nm,0.4s
MCMT *e*Pg Pg 22 01 40.4 -2.0
R26A Arlington 5.57 165 ⇓P Pn 22 01 22.1 +1.7
baz=5.6,SNR=11
R26A Arlington 5.57 165 ⇓P Pn 22 01 22.1 +1.7
baz=5.6,SNR=11
R25A Fountain Ranch 5.60 172 ⇓P Pn 22 01 22.5 +1.6
baz=5.6,SNR=7.7
R25A Fountain Ranch 5.60 172 ⇓P Pn 22 01 22.5 +1.6
baz=5.6,SNR=7.7
E15A Deer Lodge 5.87 300 ⇑P Pn 22 01 25.0 +0.4
baz=5.9,SNR=9.1
E15A Deer Lodge 5.87 300 ⇑P Pn 22 01 25.0 +0.4
baz=5.9,SNR=9.1
PV04 Paradox Valley 5.96 208 *e*Pn Pn 22 01 27.3 +1.5
PV04 *e*Pg Pg 22 01 50.9 +0.5
PV04 *e*Sg Sg 22 03 06.7 -0.9
R28A Tribune 5.96 153 ⇑P Pn 22 01 27.1 +1.3
baz=5.9,SNR=8.5
R28A Tribune 5.96 153 ⇑P Pn 22 01 27.1 +1.3
baz=5.9,SNR=8.5
B17A L&G Farms, Che 5.98 322 ⇑P Pn 22 01 26.5 +0.4
baz=6.0,SNR=11
B17A L&G Farms, Che 5.98 322 ⇑P Pn 22 01 26.5 +0.4
baz=6.0,SNR=11
S25A Robets Cordova 6.07 174 ⇑P Pn 22 01 28.7 +1.4
baz=6.1,SNR=5.9
S25A Robets Cordova 6.07 174 ⇑P Pn 22 01 28.7 +1.4
baz=6.1,SNR=5.9
PV01 Paradox Valley 6.08 205 *e*Pn Pn 22 01 28.5 +0.9
344nm,0.6s
PV01 *e*Sn Sn 22 02 34.2 -3.9
C16A Fuhringer Ranc 6.10 315 ⇓P Pn 22 01 27.2 -0.5
baz=6.2,SNR=8.3
C16A Fuhringer Ranc 6.10 315 ⇓P Pn 22 01 27.2 -0.5
baz=6.2,SNR=8.3
ECSD EROS Data Cent 6.29 87 *e*Pn Pn 22 01 30.0 -0.3
5.3nm,0.3s
CHMT Chamberlain Mo 6.46 303 *e*Pn Pn 22 01 33.6 +0.8
1.3nm,0.4s
CHMT *e*Sn Sn 22 02 49.7 +2.3
B16A M & M Farms, S 6.49 319 ⇓P Pn 22 01 33.0 -0.1
baz=6.5,SNR=25
B16A M & M Farms, S 6.49 319 ⇓P Pn 22 01 33.0 -0.1
baz=6.5,SNR=25
DUG Dugway 6.61 241 *e*Pn Pn 22 01 36.9 +2.2
DUG Sn Sn 22 02 53.6 +2.8
D14A Greenough 6.70 303 ⇓P Pn 22 01 36.0 +0.1
baz=6.8,SNR=9.7
D14A Greenough 6.70 303 ⇓P Pn 22 01 36.0 +0.1
baz=6.8,SNR=9.7
B15A Bradely Ranch, 6.85 315 ⇑P Pn 22 01 37.3 -0.7
baz=6.9,SNR=8.1
B15A Bradely Ranch, 6.85 315 ⇑P Pn 22 01 37.3 -0.7
baz=6.9,SNR=8.1
S18A Hurst Farm, Bl 6.98 212 ⇑P Pn 22 01 41.5 +1.5
baz=7.0,SNR=12
S18A Hurst Farm, Bl 6.98 212 ⇑P Pn 22 01 41.5 +1.5
baz=7.0,SNR=12
YBMT Yellow Bay 7.38 307 *e*Pn Pn 22 01 46.6 +1.3
3.2nm,0.3s
ULM Lac du Bonnet 9.19 41 Pn Pn 22 02 08.1 -1.8
ULM Lac du Bonnet 9.19 41 Pn Pn 22 02 08.1 -1.8
1.4nm,0.3s,baz=235,slow=10,SNR=6.8
NVAR Mina Array Bea 11.14 246 Pn Pn 22 02 37.5 +0.7
NVAR Mina Array Bea 11.14 246 Pn Pn 22 02 37.5 +0.7
0.1nm,0.3s,baz=59,slow=14,SNR=4.2
FFC Flin Flon 11.25 10 *e*Pn Pn 22 02 36.9 -1.2
2.5nm,0.6s
ARCES ARCESS Array B 61.46 18 P P 22 10 12.4 -1.6
ARCES ARCESS Array B 61.46 18 P P 22 10 12.4 -1.6
0.5nm,0.6s,baz=310,slow=7.0,SNR=3.5
ZALV Zalesovo Beam 82.34 354 P P 22 12 19.4 -0.1
ZALV Zalesovo Beam 82.34 354 P P 22 12 19.4 -0.1
0.3nm,0.5s,baz=31,slow=3.4,SNR=2.8
MKAR Makanchi Array 89.64 355 P P 22 12 56.2 +0.4
MKAR Makanchi Array 89.64 355 P P 22 12 56.2 +0.4
0.2nm,0.6s,baz=7.6,slow=4.0,SNR=4.3

MEX 09 22:05:29.5±0.5, 17°.06N×100°.13W, h5km, MD4.0, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.13**	**266**	*i* P		Pg	22 05 31.4	-0.7
CAIG				*i* S		Sg	22 05 34.3	+0.4
ARIG	**Puente Sto Nin**	**1.23**	**351**	*i* P		Pg	22 05 49.1	-4.2
ARIG				*e*S		Sg	22 06 05.5	-3.8
ZIIG	**Zihuatanejo**	**1.38**	**294**	*i* P		Pn	22 05 51.9	-3.6
ZIIG				*i* S		Sb	22 06 09.5	-4.3
PLIG	**Platanillo**	**1.46**	**24**	*i* P		Pn	22 05 52.7	-4.0
PLIG				*e*S		Sb	22 06 11.8	-4.5
PNIG	**Pinotepa**	**2.03**	**109**	*i* P		Pn	22 06 01.7	-2.8
PNIG				*e*S		Sn	22 06 26.2	-4.1
YAIG	**Yautepec**	**2.06**	**29**	*e*P		Pn	22 06 01.3	-3.8
YAIG				*i* S		Sn	22 06 26.9	-4.5

IDC ***09*** *22:24:26.9±1.5, 5°.73S×130°.84E, h0km, mb3.8/3, mb1 3.8/5, mb1mx3.6/18, mbtmp3.7/5, ML3.6/2, MS3.0/1, Ms1 3.0/1, ms1mx2.6/22, Error ellipse: s-maj=167.7km s-min=21.5km az=71.0*
ISCJB ***09*** *22:24:33.6±0.7, 5°.83S±0°.04×131°.3E±0°.2, h86km, mb3.6/3, Error ellipse: s-maj=29.9km s-min=6.0km az=177.7*
AUST ***09*** *22:24:34.6±0.0, 5°.77S×131°.07E, h47km±1km, Error ellipse: s-maj=3.8km s-min=0.9km az=280.0*
ISC 09 22:24:34.2±0.9, 5°.83S±0°.06×131°.3E±0°.1, h86km, n12, σ2s 79/15, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**3.05**	**19**	P		Pn	22 25 19.7	-0.6
baz=3.1,SNR=43								
FAKI				S		Sn	22 25 52.2	-3.7
baz=3.1,SNR=21								
SWI	**Sorong**	**4.93**	**360**	P		Pn	22 25 46.6	+0.8
baz=4.9,SNR=8.1								
SWI				S		Sn	22 26 32.6	-9.0
baz=4.9,SNR=8.8								
KDU	**Kakadu**	**6.92**	**170**	P		Pn	22 26 15.3	+2.3
baz=7.1,SNR=24								
KDU				S		Sn	22 27 29.8	-0.5
baz=7.1,SNR=8.7								
MTN	**Manton Dam**	**6.97**	**181**	P		Pn	22 26 16.2	+2.4
baz=7.1,SNR=7.3								
MTN				S		Sn	22 27 32.5	+0.9
baz=7.1,SNR=9.3								
KNRA	**Kununurra**	**10.09**	**194**	P		Pn	22 26 57.0	+0.7
baz=10,SNR=6.3								
KNRA				S		Sn	22 28 45.4	-2.3
baz=10,SNR=4.4								
FITZ	**Fitzroy Crossi**	**13.38**	**204**	S		Sn	22 30 02.2	-5.5
baz=13,SNR=3.9								
COEN	**Coen**	**14.24**	**125**	P		P	22 27 56.6	0.0
baz=14,SNR=4.4								
WRA	**Warramunga Arr**	**14.35**	**168**	Pn		Pn	22 27 52.5	-0.7
0.3nm,0.3s,baz=350,slow=13,SNR=17								
WRA				Sn		Sn	22 30 24.8	-6.5
1.1nm,0.3s,baz=342,slow=22,SNR=11								
ASAR	**Alice Springs**	**17.92**	**172**	P		Pn	22 28 40.2	+2.4
0.2nm,0.3s,baz=346,slow=14,SNR=15								
ASAR				S		Sn	22 31 53.0	-4.6
0.3nm,0.3s,baz=346,slow=25,SNR=6.1								
ASAR				LR		LR	22 35 02.0	
comp=Z,45nm,19.7s,baz=245,slow=35								
STKA	**Stephens Creek**	**27.66**	**161**	P		P	22 30 18.7	+4.7
0.9nm,0.6s,baz=342,slow=6.4,SNR=5.3								
SONM	**Songino Array**	**57.75**	**340**	P		P	22 34 18.3	+2.0
0.2nm,0.3s,baz=175,slow=6.0,SNR=2.3								
MKAR	**Makanchi Array**	**67.95**	**326**	P		P	22 35 25.5	+1.6
0.5nm,0.4s,baz=116,slow=7.7,SNR=11								

CSEM ***09*** *22:28:42.5, 36°.49N×21°.77E, h5km, MD3.5, After ATH*
ATH 09 22:28:42.5, 36°.49N×21°.77E, h5km±2km, MD3.5/17, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.41**	**357**	*e*PB		Pg	22 28 50.7	+0.3
PYL				*e*SB		Sg	22 28 56.8	+1.1
PYL	**PYLOS**	**0.41**	**357**	*e*Pb		Pg	22 28 50.7	+0.3

PYL				*e*Sb	Sg	22 28 56.8	+1.1
DYR	**Agios Nikonas**	**0.53**	**59**	*e*PG	Pg	22 28 52.7	0.0
DYR				*e*SB	Sb	22 29 01.0	-1.3
DYR	**Agios Nikonas**	**0.53**	**59**	*e*Pg	Pg	22 28 52.7	0.0
DYR				*e*Sb	Sb	22 29 01.0	-1.3
ITM	**Ithomi**	**0.70**	**10**	*e*PB	Pg	22 28 56.5	+0.5
ITM				*e*SB	Sg	22 29 06.2	+1.0
ITM	**Ithomi**	**0.70**	**10**	*e*Pb	Pg	22 28 56.5	+0.5
ITM				*e*Sb	Sg	22 29 06.2	+1.0
VLI	**Veliai**	**0.97**	**76**	*e*PB	Pg	22 29 01.4	+0.3
VLI	**Veliai**	**0.97**	**76**	*e*Pb	Pg	22 29 01.4	+0.3
VLX	**Vlachokerasia**	**1.00**	**29**	*e*PN	Pg	22 29 02.1	+0.1
VLX	**Vlachokerasia**	**1.00**	**29**	*e*Pn	Pg	22 29 02.1	+0.1
AMT	**Artemida-Makis**	**1.04**	**357**	*e*PN	Pg	22 29 02.8	+0.2
AMT				*e*SB	Sb	22 29 17.6	+0.5
AMT	**Artemida-Makis**	**1.04**	**357**	*e*Pn	Pg	22 29 02.8	+0.2
AMT				*e*Sb	Sb	22 29 17.6	+0.5
KYTH	**Kithira**	**1.04**	**101**	*e*PG	Pg	22 29 02.3	-0.3
KYTH	**Kithira**	**1.04**	**101**	*e*Pg	Pg	22 29 02.3	-0.3
ANKY	**Antikythira Is**	**1.39**	**116**	*e*PB	Pg	22 29 09.4	+0.3
ANKY	**Antikythira Is**	**1.39**	**116**	*e*Pb	Pg	22 29 09.4	+0.3
GUR	**Goura**	**1.51**	**17**	*e*PG	Pb	22 29 11.0	-0.3
GUR	**Goura**	**1.51**	**17**	*e*Pg	Pb	22 29 11.0	-0.3
DID	**Didima**	**1.55**	**49**	*e*PB	Pb	22 29 12.0	+0.2
DID	**Didima**	**1.55**	**49**	*e*Pb	Pb	22 29 12.0	+0.2
KLV	**Kalavryta, Ach**	**1.58**	**11**	*e*PB	Pb	22 29 12.4	+0.1
KLV	**Kalavryta, Ach**	**1.58**	**11**	*e*Pb	Pb	22 29 12.4	+0.1
RLS	**Riolos of Patr**	**1.58**	**351**	*e*PG	Pb	22 29 12.4	+0.1
RLS	**Riolos of Patr**	**1.58**	**351**	*e*Pg	Pb	22 29 12.4	+0.1
LAKA	**Lakka**	**1.75**	**5**	*e*PN	Pg	22 29 15.8	-0.4
LAKA	**Lakka**	**1.75**	**5**	*e*Pn	Pg	22 29 15.8	-0.4
LTK	**Loutraki**	**1.80**	**32**	*e*PN	Pb	22 29 16.6	+0.5
LTK	**Loutraki**	**1.80**	**32**	*e*Pn	Pb	22 29 16.6	+0.5
TRIZ	**Trizonia**	**1.89**	**7**	*e*PN	Pb	22 29 18.0	+0.6
TRIZ	**Trizonia**	**1.89**	**7**	*e*Pn	Pb	22 29 18.0	+0.6
KALE	**Kalithea**	**1.92**	**9**	*e*PN	Pg	22 29 19.0	-0.4
KALE	**Kalithea**	**1.92**	**9**	*e*Pn	Pg	22 29 19.0	-0.4
EFP	**Efpalio**	**1.94**	**3**	*e*PN	Pg	22 29 19.5	-0.1
EFP	**Efpalio**	**1.94**	**3**	*e*Pn	Pg	22 29 19.5	-0.1

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*IDC **09** 22:42:36.9±0.4, 55.°18S×126.°90W, h0km, mb5.0/18, mb1 5.0/18, mb1mx5.0/20, mbtmp4.9/18, MS5.2/21, Ms1 5.2/21, ms1mx5.1/22, Error ellipse: s-maj=17.3km s-min=13.7km az=169.0*

*ISCJB **09** 22:42:37.2±0.3, 55.°16S±0.°06×126.°8W±0.°1, h10km, mb5.2/46, MS5.1/186, Error ellipse: s-maj=10.7km s-min=8.1km az=39.9*

*NEIC **09** 22:42:39.0±0.2, 55.°06S×126.°66W, h10km, mb5.3/32, MS5.2/142, MW5.6, MW5.6, Error ellipse: s-maj=10.7km s-min=8.5km az=124.0, Moment Tensor Solution. s13 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.54; $M_{\theta\theta}$2.28; $M_{\phi\phi}$-1.75; $M_{r\theta}$0.31; $M_{\theta\phi}$2.18; $M_{\phi r}$0.40; Best double couple: $M_0$3.00000×10^{17} NP1:ϕ_s21.00000°, δ90.00000°, λ171.00000°. NP2:ϕ_s111.00000°, δ81.00000°, λ0.00000°. Principal axes: T 3.2900, Plg6.0000°, Azm336.0000°; N -0.5600, Plg80.0000°, Azm200.0000°; P -2.7300, Plg6.0000°, Azm66.0000°;*

*MOS **09** 22:42:38.4±1.3, 55.°13S×126.°84W, h10km, mb5.2/28, MS5.1/28 Error ellipse: s-maj=23.2km s-min=12.6km az=75.9*

*BJI **09** 22:42:39.2, 55.°00S×126.°50W, h10km, mB5.5/21, Ms5.5/25, Ms7 5.1/26*

*GCMT **09** 22:42:43.1±0.1, 55.°22S×126.°86W, h17km, MW5.6, Moment Tensor Solution. s94,c171; s60,c68; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.49±.03; $M_{\theta\theta}$2.09±.04; $M_{\phi\phi}$-1.60±.03; $M_{r\theta}$-0.36±.09; $M_{\theta\phi}$2.56±.03; $M_{\phi r}$-0.02±.08; Best double couple: $M_0$3.20000×10^{17} NP1:ϕ_s198.00000°, δ84.00000°, λ179.00000°. NP2:ϕ_s288.00000°, δ89.00000°, λ6.00000°. Principal axes: T 3.4300, Plg5.0000°, Azm153.0000°; N -0.5100, Plg84.0000°, Azm297.0000°; P -2.9200, Plg3.0000°, Azm63.0000°; Data Used: II IU IC G CN. Surface waves: sta=108, comp=208, per= 50.*

*NEIC **09** 22:43:00.9±0.0, 55.°33S×125.°82W, h10km, Moment Tensor Solution. s112 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.47; $M_{\theta\theta}$2.18; $M_{\phi\phi}$-1.71; $M_{r\theta}$2.15; $M_{\theta\phi}$2.26; $M_{\phi r}$1.11; Best double couple: $M_0$3.60000×10^{17} NP1:ϕ_s18.00000°, δ75.00000°, λ157.00000°. NP2:ϕ_s114.00000°, δ68.00000°, λ16.00000°. Principal axes: T 4.4100, Plg26.0000°, Azm334.0000°; N -1.6600, Plg63.0000°, Azm167.0000°; P -2.7600, Plg4.0000°, Azm67.0000°;*

ISC 09 22:42:39.3±0.2, **55.°10S**±0.°08×**126.°54W**±0.°06, **h10**km, **n641**, σ**1**s**.44**/538, **mb5.2**/46, **MS5.2**/187, **68C-76D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**31.44**	**133**	P	**P**	**22 49 01.7**	**+1.4**
PMSA	**Palmer Station**	**31.44**	**133**	P	**P**	**22 49 01.7**	**+1.4**
	65nm,1.0s,baz=271,slow=7.8,SNR=5.1						
PMSA				LR	LR	22 58 03.4	
	comp=Z,4μm,20.6s,baz=263,slow=29						
SBA	**Scott Base**	**32.01**	**202**	*e*P	**P**	**22 49 06.7**	**+1.5**
SBA				pmax	pmax		
	comp=Z,179nm,2.1s						
SBA				MLR	MLR		
	comp=Z,913nm,21.0s						
SBA	**Scott Base**	**32.01**	**202**	*e*P	**P**	**22 49 06.7**	**+1.5**
	comp=Z,179nm,2.1s						
SBA				LR	LR		
	comp=Z,913nm,21.0s						
USHA	**Ushuaia**	**32.53**	**114**	P	**P**	**22 49 10.5**	**+0.6**
USHA	**Ushuaia**	**32.53**	**114**	P	**P**	**22 49 10.5**	**+0.6**
	comp=Z,29nm,0.9s,baz=216,slow=8.7,SNR=6.2						
USHA				LR	LR	22 59 06.7	
	comp=Z,4μm,18.6s,baz=214,slow=30						
VNDA	**Vanda**	**33.05**	**202**	*e*P	**P**	**22 49 15.8**	**+1.5**
	comp=Z,36nm,1.3s						
VNDA				*e*PcP	**PcP**	**22 51 58.1**	**+0.8**
VNDA	**Vanda**	**33.05**	**202**	P	**P**	**22 49 16.0**	**+1.7**
	comp=Z,7.6nm,1.0s,baz=94,slow=8.3,SNR=19						
QSPA	**South Pole Qui**	**35.08**	**180**	*e*P	**P**	**22 49 33.0**	**+0.8**
	comp=Z,77nm,1.1s						
QSPA	**South Pole Qui**	**35.08**	**180**	P	**P**	**22 49 33.1**	**+0.9**
	comp=Z,38nm,1.0s,baz=98,slow=7.2,SNR=55						
QSPA				LR	LR	23 02 16.8	
	comp=Z,4μm,18.2s,baz=88,slow=34						
PLCA	**Paso Flores**	**39.09**	**92**	*e*P	**P**	**22 50 07.5**	**+1.2**
	comp=Z,272nm,2.6s						
PLCA	**Paso Flores**	**39.09**	**92**	P	**P**	**22 50 07.3**	**+1.0**
	comp=Z,11nm,1.0s,baz=219,slow=9.5,SNR=14						
PLCA				LR	LR	23 01 59.6	
	comp=Z,3μm,20.8s,baz=228,slow=30						
EFI	**East Falkland**	**39.50**	**114**	PFAKE		22 50 20.0	+10
EFI				LR	LR		
	comp=Z,4μm,21.0s						
SNZO	**South Karori**	**40.29**	**265**	PFAKE		22 50 30.0	+14
SNZO				LR	LR		
	comp=Z,2μm,20.0s						
PPT	**Papeete**	**41.41**	**326**	LR	LR	23 03 12.4	
	comp=Z,4μm,18.1s,baz=184,slow=30						
DRV	**Dumont d'Urvil**	**42.53**	**216**	PP	PP	22 51 58.0	-15
DRV				S	**S**	**22 56 52.0**	**-4.2**
DRV				L	L	23 00 00.0	
DRV				R		23 02 00.0	
TRQA	**Tornquist**	**45.80**	**96**	*e*P	**P**	**22 51 01.1**	**+0.1**
	comp=Z,2μm,2.9s						
TRQA				LR	LR		
	comp=Z,2μm,20.0s						
VNA1	**Neumayer--Stat**	**47.09**	**156**	*e*P	**P**	**22 51 11.6**	**+1.0**
LCO	**Las Campanas**	**47.35**	**80**	*e*P	**P**	**22 51 13.5**	**0.0**
	comp=Z,22nm,0.9s						
LCO				LR	LR		
	comp=Z,3μm,20.0s						
SNAA	**Sanae**	**47.51**	**159**	*e*P	**P**	**22 51 14.1**	**+0.1**
SNAA	**Sanae**	**47.51**	**159**	*e*P	**P**	**22 51 13.7**	**-0.2**
	comp=Z,44nm,0.8s						
SNAA	**Sanae**	**47.51**	**159**	P	**P**	**22 51 13.8**	**-0.2**
	comp=Z,15nm,0.8s,baz=226,slow=6.5,SNR=96						
MAIT	**Maitri**	**50.94**	**164**	*e*P	P	22 51 30.9	-9.2
CASY	**Casey**	**51.53**	**206**	*e*P	**P**	**22 51 46.7**	**+2.1**
	comp=Z,135nm,1.9s						
CASY				LR	LR		
	comp=Z,1μm,19.0s						
LVC	**Limon Verde**	**53.33**	**77**	*e*P	**P**	**22 51 59.1**	**+0.2**
	comp=Z,15nm,0.6s						
LVC				LR	LR		
	comp=Z,1μm,20.0s						
AFI	**Afiamalu**	**53.95**	**301**	PFAKE		22 52 10.0	+6.8
AFI				LR	LR		
	comp=Z,1μm,21.0s						
TAU	**Tasmania Unive**	**54.30**	**245**	PFAKE		22 52 20.0	+15
TAU				LR	LR		
	comp=Z,3μm,20.0s						
MIR	**Mirnyy**	**55.06**	**198**	⇑*i*P	P	22 52 14.0	+3.5
MIR				pmax	pmax		
	comp=Z,88nm,1.2s						
SYO	**Syowa Base**	**55.78**	**174**	⇑*e*P	**P**	**22 52 14.2**	**-1.4**
SYO	**Syowa Base**	**55.78**	**174**	⇑*e*sP	sP	22 52 20.8	+0.7
MSVF	**Nonsavu**	**56.03**	**289**	PFAKE		22 52 30.0	+12
MSVF				LR	LR		
	comp=Z,716nm,20.0s						
ARE	**Arequipa**	**56.88**	**70**	*e*P	**P**	**22 52 25.0**	**+0.5**
ARE	**Arequipa**	**56.88**	**70**	*e*P	**P**	**22 52 25.0**	**+0.5**
CPUP	**Villa Florida**	**57.04**	**90**	P	**P**	**22 52 24.4**	**-0.8**
CPUP				PcP	**PcP**	**22 53 20.4**	**+0.3**
CPUP	**Villa Florida**	**57.04**	**90**	P	**P**	**22 52 24.4**	**-0.8**
	comp=Z,10nm,0.7s,baz=218,slow=6.8,SNR=28						
CPUP				PcP	**PcP**	**22 53 20.4**	**+0.3**
	comp=Z,4.9nm,0.7s,baz=193,slow=7.2,SNR=3.3						
CPUP				LR	LR	23 13 36.5	
	comp=Z,6μm,18.4s,baz=210,slow=32						
MAW	**Mawson**	**57.41**	**184**	P	**P**	**22 52 27.2**	**0.0**
MAW	**Mawson**	**57.41**	**184**	P	**P**	**22 52 27.2**	**0.0**
	comp=Z,11nm,0.9s,baz=188,slow=7.2,SNR=18						
MAW				LR	LR	23 14 07.1	
	comp=Z,2μm,21.5s,baz=65,slow=33						
NNA	**Nana**	**57.82**	**62**	PFAKE		22 52 40.0	+9.1
NNA				LR	LR		
	comp=Z,855nm,19.0s						
LPAZ	**La Paz**	**58.85**	**73**	*e*P	**P**	**22 52 39.1**	**+0.3**
	comp=Z,78nm,1.1s						
LPAZ	**La Paz**	**58.85**	**73**	P	**P**	**22 52 39.1**	**+0.3**
	comp=Z,24nm,1.0s,baz=214,slow=6.9,SNR=54						
LPAZ				LR	LR	23 11 55.6	
	comp=Z,2μm,19.0s,baz=214,slow=30						
CAN	**Canberra**	**58.91**	**252**	PFAKE		22 52 50.0	+12
CAN				LR	LR		
	comp=Z,1μm,20.0s						
ARMA	**Armidale**	**61.13**	**258**	*e*P	P	22 53 01.1	+7.4
	comp=Z,229nm,2.3s						
PAYG	**Puerto Ayora**	**61.77**	**42**	PFAKE		22 53 10.0	+12
PAYG				LR	LR		
	comp=Z,1μm,19.0s						
XMAS	**Kiritimati**	**62.37**	**325**	PFAKE		22 53 10.0	+8.1
XMAS				LR	LR		
	comp=Z,5μm,19.0s						
FUNA	**Funafuti**	**63.09**	**296**	PFAKE		22 53 20.0	+13
FUNA				LR	LR		
	comp=Z,8μm,20.0s						
SPB	**Sao Paulo**	**64.83**	**96**	PFAKE		22 53 30.0	+12
SPB				LR	LR		
	comp=Z,2μm,20.0s						
EIDS	**Eidsvold**	**65.31**	**261**	*e*P	**P**	**22 53 20.5**	**-0.8**
	comp=Z,98nm,2.2s						
STKA	**Stephens Creek**	**65.53**	**249**	*e*P	**P**	**22 53 22.1**	**-0.6**
	comp=Z,24nm,2.0s						
STKA	**Stephens Creek**	**65.53**	**249**	P	**P**	**22 53 20.5**	**-2.2**
	comp=Z,12nm,1.1s,baz=102,slow=5.0,SNR=3.1						
STKA				LR	LR	23 15 47.2	
	comp=Z,2μm,21.6s,baz=145,slow=30						
SAML	**Samuel**	**67.60**	**73**	*e*P	**P**	**22 53 34.6**	**-1.4**
	comp=Z,42nm,1.0s						
SAML				LR	LR		
	comp=Z,2μm,22.0s						
OTAV	**Otavalo**	**67.64**	**54**	*e*P	**P**	**22 53 35.7**	**-1.1**
	comp=Z,83nm,1.4s						
OTAV				LR	LR		
	comp=Z,1μm,21.0s						
BDFB	**Brasilia**	**70.77**	**90**	P	**P**	**22 53 55.2**	**-0.7**
BDFB	**Brasilia**	**70.77**	**90**	P	**P**	**22 53 55.2**	**-0.7**
	comp=Z,12nm,0.9s,baz=197,slow=6.0,SNR=13						
BDFB				LR	LR	23 21 52.2	
	comp=Z,4μm,19.6s,baz=66,slow=33						
CTAO	**Charters Tower**	**72.19**	**260**	*e*P	P	22 54 00.5	-3.8
CTAO				pmax	pmax		
	comp=Z,37nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,824nm,20.0s						
CTAO	**Charters Tower**	**72.19**	**260**	*e*P	P	22 54 00.5	-3.8
	comp=Z,37nm,1.3s						
CTAO				LR	LR		
	comp=Z,824nm,20.0s						
HNR	**Honiara**	**72.89**	**278**	PFAKE		22 54 20.0	+12
HNR				LR	LR		
	comp=Z,484nm,19.0s						
ROSC	**El Rosal**	**73.62**	**55**	*e*P	**P**	**22 54 15.0**	**+1.9**
ROSC	**El Rosal**	**73.62**	**55**	P	**P**	**22 54 15.0**	**+1.9**
	comp=Z,42nm,0.9s,baz=134,slow=5.3,SNR=19						
ROSC				LR	LR	23 20 42.7	
	comp=Z,1μm,18.6s,baz=202,slow=31						
BCIP	**Isla Barro Col**	**74.95**	**48**	PFAKE		22 54 30.0	+10
BCIP				LR	LR		
	comp=Z,2μm,21.0s						
AS31	**Alice Springs**	**76.16**	**249**	*e*P	**P**	**22 54 24.8**	**-2.7**
ASAR	**Alice Springs**	**76.16**	**249**	P	**P**	**22 54 24.5**	**-3.0**
ASAR	**Alice Springs**	**76.16**	**249**	P	**P**	**22 54 24.5**	**-3.0**
	comp=Z,7.7nm,0.7s,baz=147,slow=6.4,SNR=54						
ASAR				LR	LR	23 23 23.8	
	comp=Z,2μm,18.8s,baz=144,slow=32						
TGUH	**Tegucigalpa,Un**	**76.45**	**39**	*e*P	**P**	**22 54 29.2**	**+0.3**
	comp=Z,50nm,1.1s						
TGUH				LR	LR		
	comp=Z,721nm,21.0s						
NWAO	**Narrogin (SRO)**	**76.75**	**231**	PFAKE		22 54 40.0	+9.3
NWAO				LR	LR		
	comp=Z,705nm,21.0s						
SDV	**Santo Domingo**	**78.89**	**57**	*e*P	**P**	**22 54 42.2**	**-0.6**
	comp=Z,28nm,0.9s						
SDV				LR	LR		
	comp=Z,5.0nm,21.0s						
WRA	**Warramunga Arr**	**78.94**	**251**	P	**P**	**22 54 40.2**	**-2.8**
WRA	**Warramunga Arr**	**78.94**	**251**	P	**P**	**22 54 40.2**	**-2.8**
	comp=Z,10nm,0.8s,baz=144,slow=5.1,SNR=43						
WRA				LR	LR	23 28 11.7	
	comp=Z,652nm,19.5s,baz=125,slow=35						
WRAB	**Tennant Creek**	**78.94**	**251**	*e*P	**P**	**22 54 39.9**	**-3.1**
WRAB				pmax	pmax		
	comp=Z,25nm,1.1s						
WRAB				MLR	MLR		
	comp=Z,847nm,19.0s						
WRAB	**Tennant Creek**	**78.94**	**251**	*e*P	**P**	**22 54 39.9**	**-3.1**
	comp=Z,25nm,1.1s						
WRAB				LR	LR		
	comp=Z,847nm,19.0s						
WRAB	**Tennant Creek**	**78.94**	**251**	P	**P**	**22 54 40.7**	**-2.3**
	comp=Z,102nm,0.8s,SNR=5.2						
PMG	**Port Moresby**	**80.24**	**268**	PFAKE		22 55 00.0	+10
PMG				LR	LR		
	comp=Z,733nm,19.0s						
KIP	**Kipapa**	**80.82**	**330**	PFAKE		22 55 00.0	+7.1
KIP				LR	LR		
	comp=Z,3μm,22.0s						
TEIG	**Tepich**	**81.81**	**36**	*e*P	**P**	**22 54 58.0**	**-0.2**
TEIG	**Tepich**	**81.81**	**36**	P	**P**	**22 54 58.4**	**+0.2**
	comp=Z,15nm,0.9s,baz=183,slow=6.6,SNR=4.6						
TEIG				LR	LR	23 24 01.3	
	comp=Z,504nm,18.6s,baz=342,slow=30						
MTDJ	**Mount Denham**	**84.04**	**46**	PFAKE		22 55 20.0	+10
MTDJ				LR	LR		
	comp=Z,931nm,21.0s						
MBWA	**Marble Bar**	**85.54**	**239**	*e*P	P	22 55 09.7	-7.9
	comp=Z,21nm,1.0s						
RCBR	**Riachuelo**	**85.63**	**94**	PFAKE		22 55 30.0	+12
RCBR				LR	LR		
	comp=Z,1μm,19.0s						
KVTX	**Kingsville**	**85.91**	**25**	PFAKE		22 55 30.0	+11
KVTX				LR	LR		
	comp=Z,582nm,19.0s						
GRGR	**Grenville**	**86.12**	**63**	PFAKE		22 55 30.0	+10
GRGR				LR	LR		
	comp=Z,855nm,20.0s						
TXAR	**Lajitas Array**	**86.36**	**20**	P	**P**	**22 55 21.5**	**+0.3**
TXAR	**Lajitas Array**	**86.36**	**20**	P	**P**	**22 55 21.5**	**+0.3**
	comp=Z,6.0nm,1.0s,baz=188,slow=7.6,SNR=23						
TXAR				LR	LR	23 26 01.4	
	comp=Z,261nm,18.4s,baz=5.0,slow=30						
626A	**Big Bend Ranch**	**86.48**	**19**	⇓P	**P**	**22 55 22.7**	**+0.8**
	baz=87						
627A	**Terlingua Ranc**	**86.53**	**20**	⇑P	**P**	**22 55 22.2**	**+0.1**
	baz=87,SNR=17						
732A	**Laxson Ranch,**	**86.56**	**23**	⇑P	**P**	**22 55 23.7**	**+1.6**
	baz=87,SNR=8.4						
GTBY	**Guantanamo Bay**	**86.57**	**47**	PFAKE		22 55 30.0	+7.6
GTBY				LR	LR		
	comp=Z,611nm,22.0s						
628A	**Black Gap, Mar**	**86.66**	**21**	⇓P	**P**	**22 55 23.0**	**+0.3**
	baz=87,SNR=17						
526A	**Mary Lane Ranc**	**86.98**	**19**	⇓P	**P**	**22 55 24.9**	**+0.5**
	baz=87,SNR=6.4						
631A	**Perdido Creek**	**87.08**	**22**	⇑P	**P**	**22 55 24.0**	**-0.7**
	baz=87,SNR=6.9						
527A	**Woodward Ranch**	**87.16**	**20**	⇓P	**P**	**22 55 24.9**	**-0.3**
	baz=88						
528A	**Cox Ranch, San**	**87.34**	**20**	⇓P	**P**	**22 55 27.3**	**+1.2**
	baz=88						
632A	**Uvalde**	**87.35**	**23**	⇑P	**P**	**22 55 25.9**	**-0.1**
	baz=88,SNR=6.0						
319A	**Douglas**	**87.40**	**15**	⇓P	**P**	**22 55 26.6**	**+0.3**
	baz=88						
SDDR	**Presa de Saban**	**87.40**	**51**	PFAKE		22 55 40.0	+13
SDDR				LR	LR		
	comp=Z,478nm,20.0s						
529A	**Stev Forest Ra**	**87.42**	**21**	⇑P	**P**	**22 55 26.3**	**-0.1**
	baz=88,SNR=26						
320A	**Kipp Ranch, An**	**87.47**	**15**	⇑P	**P**	**22 55 26.7**	**0.0**
	baz=88						
425A	**Indio Mountain**	**87.52**	**18**	⇓P	**P**	**22 55 27.4**	**+0.4**
	baz=88,SNR=13						
426A	**McDonald Obser**	**87.59**	**19**	⇓P	**P**	**22 55 26.9**	**-0.5**
	baz=88,SNR=8.5						
530A	**J-C Ranch, Com**	**87.62**	**22**	⇓P	**P**	**22 55 27.7**	**+0.3**
	baz=88						
531A	**Rocksprings**	**87.81**	**22**	⇓P	**P**	**22 55 28.4**	**+0.1**
	baz=88,SNR=6.4						
427A	**Hayter Ranch,**	**87.88**	**20**	⇑P	**P**	**22 55 28.6**	**-0.1**
	baz=88						
428A	**Kincaid Ranch,**	**87.91**	**20**	⇑P	**P**	**22 55 29.2**	**+0.5**
	baz=88,SNR=7.3						
532A	**Rocksprings**	**87.92**	**23**	⇓P	**P**	**22 55 28.8**	**+0.1**
	baz=88,SNR=16						
429A	**Davenport Ranc**	**87.97**	**21**	⇑P	**P**	**22 55 28.8**	**-0.2**
	baz=88,SNR=6.3						
220A	**Playas Peak, P**	**88.03**	**15**	⇓P	**P**	**22 55 30.9**	**+1.5**
	baz=88						
BBGH	**Gun Hill**	**88.05**	**64**	PFAKE		22 55 40.0	+10
BBGH				LR	LR		
	comp=Z,625nm,20.0s						
MONP	**Monument Peak**	**88.07**	**9**	⇑P	**P**	**22 55 30.1**	**+0.5**
	baz=88						
324A	**Moseley Ranch,**	**88.08**	**18**	⇓P	**P**	**22 55 29.0**	**-0.6**
	baz=88,SNR=17						
325A	**Bean Ranch, Si**	**88.10**	**18**	⇓P	**P**	**22 55 29.3**	**-0.5**
	baz=88,SNR=16						
TUC	**Tucson**	**88.11**	**13**	*e*P	**P**	**22 55 29.8**	**+0.2**
TUC				pmax	pmax		
	comp=Z,252nm,1.6s						
TUC				MLR	MLR		
	comp=Z,732nm,19.0s						
TUC	**Tucson**	**88.11**	**13**	*e*P	**P**	**22 55 29.8**	**+0.2**
	comp=Z,252nm,1.6s						
TUC				LR	LR		
	comp=Z,732nm,19.0s						
326A	**Caldwell Ranch**	**88.23**	**19**	⇑P	P	22 55 33.4	+3.2
	baz=88						
430A	**Baggett Ranch,**	**88.26**	**22**	⇓P	**P**	**22 55 29.9**	**-0.5**
	baz=89,SNR=5.7						
JCT	**Junction City**	**88.28**	**23**	*e*P	**P**	**22 55 30.9**	**+0.5**
JCT				pmax	pmax		
	comp=Z,60nm,1.4s						
JCT				MLR	MLR		
	comp=Z,293nm,19.0s						
JCT	**Junction City**	**88.28**	**23**	*e*P	**P**	**22 55 30.9**	**+0.5**
	comp=Z,60nm,1.4s						
JCT				LR	LR		
	comp=Z,293nm,19.0s						
JCT	**Junction City**	**88.28**	**23**	⇓P	**P**	**22 55 29.2**	**-1.2**
	baz=89,SNR=7.6						
431A	**Sonora**	**88.30**	**22**	⇓P	**P**	**22 55 31.1**	**+0.5**
	baz=89,SNR=18						
MNTX	**Cornudas Mount**	**88.34**	**18**	*e*P	**P**	**22 55 29.9**	**-0.8**
	comp=Z,19nm,1.4s						
MNTX				LR	LR		
	comp=Z,678nm,20.0s						
222A	**Williams Famil**	**88.45**	**16**	⇓P	**P**	**22 55 32.4**	**+1.1**
	baz=89						
SUR	**Sutherland**	**88.47**	**153**	PFAKE		22 55 40.0	+8.1
SUR				LR	LR		
	comp=Z,1μm,21.0s						
328A	**Wristen Ranch,**	**88.52**	**20**	⇑P	**P**	**22 55 31.6**	**0.0**
	baz=89						
FDF	**Fort de France**	**88.58**	**62**	PFAKE		22 55 40.0	+7.8
FDF				LR	LR		
	comp=Z,1μm,22.0s						
432A	**Menard**	**88.66**	**23**	⇑P	**P**	**22 55 33.9**	**+1.6**
	baz=89						
224A	**Cornudas Mount**	**88.69**	**18**	⇓P	**P**	**22 55 32.5**	**+0.1**
	baz=89,SNR=31						
121A	**Cookes Peak, D**	**88.76**	**16**	⇓P	**P**	**22 55 32.5**	**-0.3**
	baz=89						
PFO	**Pinyon Flat Ob**	**88.78**	**8**	*e*P	P	22 55 35.8	+3.0
	comp=Z,22nm,1.2s						
PFO				LR	LR		
	comp=Z,1μm,20.0s						
PFO	**Pinyon Flat Ob**	**88.78**	**8**	P	**P**	**22 55 33.4**	**+0.5**
	comp=Z,5.4nm,1.1s,baz=220,slow=2.4,SNR=4.9						
329A	**Wagon Wheel Ra**	**88.78**	**21**	⇑P	**P**	**22 55 33.2**	**+0.3**
	baz=89						
225A	**Deer Hill, Car**	**88.84**	**18**	⇑P	**P**	**22 55 32.8**	**-0.4**
	baz=89						
330A	**Mertzon**	**88.87**	**21**	⇓P	**P**	**22 55 33.5**	**+0.3**
	baz=89,SNR=16						
226B	**Tecolote Peak,**	**88.93**	**19**	⇑P	**P**	**22 55 32.4**	**-1.2**
	baz=89						
331A	**San Angelo**	**88.94**	**22**	⇑P	**P**	**22 55 32.8**	**-0.7**
	baz=89						
SJG	**San Juan**	**89.02**	**56**	PFAKE		22 55 50.0	+16
SJG				LR	LR		
	comp=Z,502nm,20.0s						
227A	**Bennet, Jal**	**89.03**	**20**	⇑P	**P**	**22 55 36.4**	**+2.4**
	baz=89						
332A	**Millersview**	**89.16**	**23**	⇓P	**P**	**22 55 34.6**	**0.0**
	baz=90						
Z20A	**Nine Sixteen R**	**89.20**	**15**	⇑P	**P**	**22 55 35.2**	**+0.3**
	baz=90,SNR=11						
BELC	**Belle Mtn. Jos**	**89.21**	**9**	⇑P	**P**	**22 55 35.6**	**+0.7**
	baz=90,SNR=9.9						
124A	**Stringfield Ra**	**89.31**	**18**	⇓P	**P**	**22 55 35.6**	**+0.1**
	baz=90						
BFSC	**Mount Baldy Ra**	**89.31**	**7**	⇓P	**P**	**22 55 35.9**	**+0.6**
	baz=90						
230A	**Sterling City**	**89.35**	**21**	⇑P	**P**	**22 55 35.6**	**+0.1**
	baz=90						
125A	**Gardner Draw,**	**89.41**	**18**	⇑P	**P**	**22 55 35.4**	**-0.4**
	baz=90,SNR=7.3						
IRM	**Iron Mountain**	**89.44**	**9**	⇑P	**P**	**22 55 36.5**	**+0.6**
	baz=90						
Y14A	**Wickenburg**	**89.44**	**11**	⇑P	**P**	**22 55 36.2**	**+0.4**
	baz=90						
126A	**Clayton Basin,**	**89.51**	**19**	⇓P	**P**	**22 55 35.5**	**-0.7**
	baz=90						
Z21A	**St. Cloud Mine**	**89.54**	**16**	⇓P	**P**	**22 55 36.0**	**-0.5**
	baz=90						
231A	**Bronte**	**89.57**	**22**	⇑P	**P**	**22 55 36.1**	**-0.4**
	baz=90						
Z22A	**Elephant Butte**	**89.60**	**16**	⇓P	**P**	**22 55 37.9**	**+1.1**
	baz=90,SNR=10						
232A	**Coleman**	**89.67**	**23**	⇓P	**P**	**22 55 36.7**	**-0.2**
	baz=90,SNR=8.5						
Z23A	**Rita Site, Whi**	**89.72**	**17**	⇑P	**P**	**22 55 37.7**	**+0.4**
	baz=90						
128A	**Castleberry Fa**	**89.78**	**20**	⇑P	**P**	**22 55 37.9**	**+0.4**
	baz=90,SNR=8.4						
129A	**Stewart Farms,**	**89.92**	**21**	⇓P	**P**	**22 55 38.4**	**+0.3**
	baz=90						
Z24A	**Sheeppen Canyo**	**89.94**	**18**	⇓P	**P**	**22 55 38.3**	**-0.1**
	baz=90						
HEC	**Hector,Ludlow**	**90.00**	**8**	⇓P	**P**	**22 55 38.8**	**+0.3**
	baz=90						
Z25A	**Roswell**	**90.00**	**18**	⇓P	**P**	**22 55 35.4**	**-3.2**
	baz=90,SNR=8.9						
GMRC	**Granite Mounta**	**90.01**	**9**	⇓P	**P**	**22 55 37.5**	**-1.0**
	baz=90						
Y20A	**Horse Springs,**	**90.02**	**15**	⇑P	**P**	**22 55 38.5**	**-0.3**
	baz=90						
X16A	**Lo Mia Camp, P**	**90.10**	**12**	⇓P	**P**	**22 55 39.7**	**+0.6**
	baz=90						
Z26A	**Caprock**	**90.13**	**19**	⇑P	**P**	**22 55 38.8**	**-0.3**
	baz=90,SNR=7.2						
Y21A	**Point of Rocks**	**90.22**	**16**	⇓P	**P**	**22 55 39.7**	**0.0**
	baz=90						
Y22A	**Socorro**	**90.26**	**16**	⇑P	**P**	**22 55 39.2**	**-0.7**

baz=91
Z27A Tatum 90.31 19 ⇓P **P 22 55 40.2 +0.2**
baz=91,SNR=9.7
ABTX Abilene, Hawle 90.38 22 ⇑P **P 22 55 40.0 -0.2**
baz=91
X18A Snowflake 90.40 14 ⇑P **P 22 55 39.5 -1.0**
baz=91
Y23A Lovelace Mesa, 90.41 17 ⇑P **P 22 55 39.1 -1.4**
baz=91
GSC Goldstone 90.43 8 *e*P **P 22 55 42.1 +1.6**
GSC pmax pmax
comp=Z,24nm,1.4s
GSC Goldstone 90.43 8 *e*P **P 22 55 42.0 +1.6**
comp=Z,24nm,1.4s
GSC Goldstone 90.43 8 ⇓P **P 22 55 38.9 -1.6**
baz=91
W13A Hualapai Mount 90.50 10 ⇑P **P 22 55 41.2 +0.3**
baz=91
Y24A Capitan 90.51 17 ⇓P **P 22 55 41.1 +0.1**
baz=91
BNM Barren Site 90.53 16 *e*P **P 22 55 41.2 +0.1**
comp=Z,17nm,1.3s
Z29A Hungry Hill Ra 90.56 21 ⇓P **P 22 55 40.6 -0.6**
baz=91
X20A Quemado 90.62 15 ⇑P P 22 55 36.0 -5.6
baz=91
X21A Alamocita Cree 90.63 15 ⇑P **P 22 55 42.0 +0.4**
baz=91,SNR=7.4
Y25A Mesa, Roswell 90.63 18 ⇑P **P 22 55 40.7 -0.8**
baz=91
LAZ Ladron 90.69 16 *e*P **P 22 55 42.8 +0.9**
comp=Z,11nm,1.4s
Z30A Sanderson Ranc 90.70 21 ⇓P **P 22 55 41.2 -0.5**
baz=91,SNR=6.0
ANWB Willy Bob 90.76 60 PFAKE **22 55 50.0 +7.7**
ANWB LR LR
comp=Z,576nm,20.0s
Y27A Causey 90.88 19 ⇑P **P 22 55 41.3 -1.3**
baz=91,SNR=13
Z31A Sharp Cattle R 90.94 22 ⇓P **P 22 55 42.4 -0.5**
baz=91
X23A Hourglass Bar 91.02 17 ⇑P **P 22 55 43.4 0.0**
baz=91
Z32A Haskell 91.07 22 ⇓P **P 22 55 43.4 0.0**
baz=91
X24A Lazy VL Ranch, 91.13 17 ⇓P **P 22 55 43.6 -0.3**
baz=92
MPMC Manual Prospec 91.13 7 ⇑P **P 22 55 44.6 +0.8**
baz=92
WUAZ Wupatki 91.19 12 *e*P **P 22 55 44.3 +0.2**
comp=Z,18nm,1.1s
WUAZ LR LR
comp=Z,1μm,20.0s
WUAZ Wupatki 91.19 12 ⇓P P 22 55 36.5 -7.6
baz=92
W20A Ramah 91.19 15 ⇑P **P 22 55 44.6 +0.4**
baz=92,SNR=5.8
ANMO Albuquerque 91.33 16 *e*P **P 22 55 44.8 -0.1**
comp=Z,11nm,0.8s
ANMO Albuquerque 91.33 16 P **P 22 55 44.7 -0.1**
comp=Z,9.5nm,1.0s,baz=193,slow=6.7,SNR=14
ANMO LR LR 23 29 49.9
comp=Z,501nm,18.4s,baz=173,slow=31
X26A CR and CF Fran 91.40 19 ⇑P **P 22 55 44.4 -0.7**
baz=92
Y31A Rekieta Farm, 91.53 22 ⇑P **P 22 55 47.8 +2.3**
baz=92
W25A X Bar L Ranch, 91.94 18 ⇓P **P 22 55 47.0 -0.5**
baz=92
U15A North Rim 91.98 11 ⇑P **P 22 55 48.3 +0.4**
baz=92
AMTX Amarillo 92.13 20 PFAKE **22 56 00.0 +12**
AMTX LR LR
comp=Z,442nm,20.0s
V22A San Miguel Ran 92.21 16 ⇑P **P 22 55 49.7 +0.8**
baz=92,SNR=9.8
BRAL Brewton 92.22 33 PFAKE **22 56 00.0 +11**
BRAL LR LR
comp=Z,349nm,20.0s
VBMS Vicksburg 92.31 30 PFAKE **22 56 00.0 +11**
VBMS LR LR
comp=Z,261nm,20.0s
V25A Rancho No Teng 92.51 18 ⇓P **P 22 55 50.0 -0.3**
baz=93
U21A Nageezi 92.60 15 ⇓P **P 22 55 50.5 -0.1**
baz=93
WMOK Wichita Mounta 92.60 23 PFAKE **22 56 00.0 +10**
WMOK LR LR
comp=Z,235nm,19.0s
V26A Tequesquite Ra 92.62 18 ⇑P **P 22 55 50.3 -0.4**
baz=93
U22A Llaves 92.67 16 ⇓P **P 22 55 50.6 -0.4**
baz=93
CMB Columbia Colle 92.92 5 *e*P **P 22 55 51.1 -0.8**
CMB pmax pmax
comp=Z,3.0nm,0.4s
CMB Columbia Colle 92.92 5 *e*P **P 22 55 51.1 -0.8**
comp=Z,3.5nm,0.4s
CCUT Cedar City 92.98 10 *e*P **P 22 55 53.7 +1.3**
comp=Z,11nm,1.3s
WAKE Wake Island 93.14 300 PFAKE **22 56 00.0 +6.7**
WAKE LR LR
comp=Z,560nm,21.0s
TPH Tonopah 93.15 7 PFAKE **22 56 00.0 +6.8**
TPH LR LR
comp=Z,1μm,22.0s
BOSA Boshof 93.18 155 *e*P P 22 55 49.0 -4.7
BOSA Boshof 93.18 155 P **P 22 55 51.2 -2.6**
comp=Z,4.0nm,0.8s,baz=169,slow=5.2,SNR=7.8
BOSA LR LR 23 33 48.3
comp=Z,2μm,19.6s,baz=199,slow=33
T22A Edith 93.28 16 ⇑P **P 22 55 54.1 +0.2**
baz=94
NVAR Mina Array Bea 93.43 6 P **P 22 55 55.1 +0.6**
NVAR Mina Array Bea 93.43 6 P **P 22 55 55.1 +0.6**
comp=Z,0.5nm,0.3s,baz=218,slow=10,SNR=4.1
NVAR LR LR 23 28 24.6
comp=Z,2μm,21.0s,baz=170,slow=29
S18A Hurst Farm, Bl 93.51 13 ⇑P **P 22 55 55.4 +0.5**
baz=94
R11A Troy Canyon, C 93.56 9 ⇓P P 22 55 49.5 -5.5
baz=94
MIAR Mount Ida 93.67 27 PFAKE **22 56 10.0 +15**
MIAR LR LR
comp=Z,319nm,20.0s
MIDW Midway 93.70 317 PFAKE **22 56 10.0 +14**
MIDW LR LR
comp=Z,801nm,19.0s
S21A Coal Bank Pass 93.79 15 ⇓P **P 22 55 56.0 -0.3**
baz=94
MVU Marysvale 94.04 11 *e*P P 22 56 00.9 +3.6
comp=Z,18nm,1.4s
MVU LR LR
comp=Z,1μm,20.0s
LRAL Lakeview Retre 94.11 32 PFAKE **22 56 10.0 +13**
LRAL LR LR
comp=Z,390nm,22.0s
PV04 Paradox Valley 94.35 14 *e*P P 22 56 07.6 +9.0
OXF Oxford 94.77 30 PFAKE 22 56 10.0 +10
OXF LR LR
comp=Z,192nm,19.0s
BMN Battle Mountai 95.50 7 PFAKE **22 56 10.0 +6.2**
BMN LR LR
comp=Z,2μm,20.0s
DUG Dugway 95.65 11 *e*P P 22 56 11.4 +6.9
DUG pmax pmax
comp=Z,13nm,1.4s
DUG MLR MLR
comp=Z,774nm,20.0s
DUG Dugway 95.65 11 *e*P P 22 56 11.4 +6.9
comp=Z,13nm,1.4s
DUG LR LR
comp=Z,774nm,20.0s
ISCO Idaho Springs 96.21 16 PFAKE **22 56 20.0 +13**
ISCO LR LR
comp=Z,825nm,20.0s
NHSC New Hope 96.43 38 PFAKE **22 56 20.0 +12**
NHSC LR LR
comp=Z,480nm,19.0s
YBH Yreka Blue Hor 96.52 3 LR LR 23 29 56.3
comp=Z,2μm,20.1s,baz=137,slow=29
HWUT Hardware Ranch 97.18 11 PFAKE **22 56 20.0 +8.4**
HWUT LR LR
comp=Z,928nm,21.0s
KSU1 Kansas State U 97.27 23 PFAKE **22 56 20.0 +8.2**
KSU1 LR LR
comp=Z,332nm,19.0s
WVOR Wild Horse Val 97.40 6 PFAKE **22 56 20.0 +7.6**
WVOR LR LR
comp=Z,1μm,20.0s
TKL Tuckaleechee C 97.55 34 LR LR 23 35 33.4
comp=Z,332nm,20.8s,baz=27,slow=32
OGNE Ogallala 97.94 18 PFAKE **22 56 30.0 +15**
OGNE LR LR
comp=Z,668nm,19.0s
AHID Auburn Hatcher 98.38 11 PFAKE **22 56 30.0 +13**
AHID LR LR
comp=Z,826nm,20.0s
BW06 Boulder Array 98.56 13 PFAKE **22 56 30.0 +12**
BW06 LR LR
comp=Z,1μm,20.0s
PDAR Pinedale Array 98.56 13 LR LR 23 33 15.3
comp=Z,1μm,18.3s,baz=205,slow=31
HLID Hailey 98.83 9 PFAKE **22 56 30.0 +11**
HLID LR LR
comp=Z,646nm,22.0s
KAPI Kappang 99.16 248 PFAKE **22 56 30.0 +9.1**
KAPI LR LR
comp=Z,738nm,21.0s
CNNC Cliffs of the 99.17 38 PFAKE **22 56 30.0 +10**
CNNC LR LR
comp=Z,2μm,21.0s
BMO Blue Mountains 99.89 7 PFAKE **22 56 30.0 +6.6**
BMO LR LR
comp=Z,796nm,20.0s
TSUM Tsumeb 99.94 146 PFAKE **22 56 40.0 +15**
TSUM LR LR
comp=Z,792nm,21.0s
BLA Blacksburg 100.07 36 PFAKE **22 56 40.0 +16**
BLA LR LR
comp=Z,336nm,19.0s
LKWY Lake 100.24 12 PFAKE **22 56 40.0 +15**
LKWY LR LR
comp=Z,1μm,20.0s
HDIL Hopedale 100.45 28 PFAKE **22 56 40.0 +14**
HDIL LR LR
comp=Z,310nm,21.0s
SCIA State Center 100.73 25 PFAKE **22 56 40.0 +13**
SCIA LR LR
comp=Z,299nm,20.0s
RLMT Red Lodge 100.92 12 PFAKE **22 56 40.0 +12**
RLMT LR LR
comp=Z,1μm,21.0s
BOZ Bozeman (W) 101.17 11 PFAKE **22 56 40.0 +11**
BOZ LR LR
comp=Z,758nm,19.0s
HAWA Hanford 101.30 5 PFAKE **22 56 40.0 +11**
HAWA LR LR
comp=Z,941nm,22.0s
ECSD EROS Data Cent 101.70 22 PFAKE **22 56 40.0 +8.6**
ECSD LR LR
comp=Z,310nm,19.0s
BBSR BB Station 101.92 50 PFAKE **22 56 40.0 +7.4**
BBSR LR LR
comp=Z,353nm,21.0s
ACSO Alum Creek Sta 101.99 33 PFAKE **22 56 40.0 +7.3**
ACSO LR LR
comp=Z,197nm,19.0s
CBN Corbin 102.01 38 PFAKE **22 56 40.0 +7.2**
CBN LR LR
comp=Z,538nm,22.0s
MSO Missoula 102.11 9 PFAKE **22 56 40.0 +6.7**
MSO LR LR
comp=Z,1μm,20.0s
NLWA Neilton Lookou 102.15 2 PFAKE **22 56 40.0 +6.7**
NLWA LR LR
comp=Z,723nm,20.0s
NEW Newport 103.30 6 PFAKE **22 56 50.0 +12**
NEW LR LR
comp=Z,798nm,19.0s
AAM Ann Arbor 103.67 31 PFAKE **22 56 50.0 +10**
AAM LR LR
comp=Z,401nm,22.0s
EGMT Eagleton 103.72 12 PFAKE **22 56 50.0 +10**
EGMT LR LR
comp=Z,299nm,20.0s
RER Riviere de l'E 104.02 182 PFAKE **22 56 50.0 +7.4**
RER LR LR
comp=Z,2μm,20.0s
ERPA Erie 104.64 34 PFAKE **22 57 00.0 +16**
ERPA LR LR
comp=Z,479nm,20.0s
DGMT Dagmar 104.90 15 PFAKE **22 57 00.0 +14**
DGMT LR LR
comp=Z,523nm,22.0s
COWI Conover 105.67 26 PFAKE 23 01 10.0
COWI LR LR
comp=Z,303nm,19.0s
ABPO Ambohimpanom 105.99 174 PFAKE 23 01 10.0
ABPO LR LR
comp=Z,3μm,19.0s
BINY Binghamton 106.04 37 PFAKE 23 01 10.0
BINY LR LR
comp=Z,635nm,22.0s
AGMN Agassiz Nation 106.21 21 PFAKE 23 01 10.0
AGMN LR LR
comp=Z,423nm,19.0s
LSZ Lusaka 106.70 155 PFAKE 23 01 20.0
LSZ LR LR
comp=Z,2μm,20.0s
EYMN Ely 106.83 24 PFAKE 23 01 20.0
EYMN LR LR
comp=Z,351nm,19.0s
DIB Dawson Inlet, 108.05 356 T T 00 57 57.4
NCB Newcomb 108.21 37 PFAKE 23 01 20.0
NCB LR LR
comp=Z,320nm,21.0s
LONY Lake Ozonia 108.66 36 PFAKE 23 01 20.0
LONY LR LR
comp=Z,495nm,19.0s
LBNH Lisbon 109.26 38 PFAKE 23 01 20.0
LBNH LR LR
comp=Z,561nm,21.0s
SACV Santiago Islan 109.54 92 PFAKE 23 01 20.0
SACV LR LR
comp=Z,562nm,21.0s
KSM Kuching 109.58 243 PFAKE 23 01 20.0
KSM LR LR
comp=Z,294nm,20.0s
WRAK Wrangell Islan 111.26 357 PFAKE 23 01 20.0
WRAK LR LR
comp=Z,1μm,20.0s
FFC Flin Flon 111.31 15 PFAKE 23 01 20.0
FFC LR LR
comp=Z,1μm,21.0s
KDAK Kodiak Island 114.48 345 PFAKE 23 01 30.0 +12
KDAK LR LR
comp=Z,2μm,20.0s
MSKU Masuku 114.68 135 PFAKE 23 01 30.0 +10
MSKU LR LR
comp=Z,2.0nm,21.0s
DGAR Diego Garcia 115.72 201 PFAKE 23 01 30.0 +8.1
DGAR LR LR
comp=Z,560nm,19.0s
KULM Kulim 117.64 236 PFAKE 23 01 40.0 +14
KULM LR LR
comp=Z,250nm,21.0s
TRF Thorofare Moun 119.65 348 *e*PKPdf **PKPdf 23 01 30.2 +2.2**
EGAK Eagle 120.08 353 *e*PKPdf **PKPdf 23 01 29.5 +0.9**
EGAK LR LR
comp=Z,1μm,19.0s
MSEY Mahe Island 120.41 182 PFAKE 23 01 40.0 +9.0
MSEY LR LR
comp=Z,840nm,20.0s
ILAR Eielson Array 120.56 350 PKP **PKPdf 23 01 28.3 -1.3**
ILAR Eielson Array 120.56 350 PKP **PKPdf 23 01 28.3 -1.3**
comp=Z,3.1nm,0.8s,baz=197,slow=1.5,SNR=14
COLA College 120.76 350 PFAKE 23 01 40.0 +10
COLA LR LR
comp=Z,820nm,20.0s
MBAR Mbarara 121.44 153 PFAKE 23 01 40.0 +6.9
MBAR LR LR
comp=Z,586nm,19.0s
MJAR Matsushiro Arr 121.83 289 PKP **PKPdf 23 01 31.5 -1.4**
MJAR Matsushiro Arr 121.83 289 PKP **PKPdf 23 01 31.5 -1.4**
comp=Z,2.1nm,0.9s,baz=130,slow=1.9,SNR=5.1
TORD Torodi Ar. Bea 122.10 115 PKP **PKPdf 23 01 33.0 -1.1**
TORD Torodi Ar. Bea 122.10 115 PKP **PKPdf 23 01 33.0 -1.1**
comp=Z,1.0nm,0.7s,baz=206,slow=1.1,SNR=5.8
KMBO Kilima Mbogo 122.40 161 PFAKE 23 01 50.0 +15
KMBO LR LR
comp=Z,1μm,20.0s
YHNB Yeheng 122.43 267 PFAKE 23 01 50.0 +16
YHNB LR LR
comp=Z,246nm,21.0s
TATO Taipei 122.60 268 PFAKE 23 01 50.0 +15
TATO LR LR
comp=Z,429nm,19.0s
INK Inuvik 123.20 357 PKP **PKPdf 23 01 33.4 -1.1**
INK Inuvik 123.20 357 PKP **PKPdf 23 01 33.4 -1.1**
comp=Z,0.8nm,0.5s,baz=146,slow=3.6,SNR=4.3
ERM Erimo 123.23 297 ||PKIKP **PKPdf 23 01 35.8 +0.5**
ERM Erimo 123.23 297 PFAKE 23 01 50.0 +15
ERM LR LR
comp=Z,661nm,20.0s
QIZ Qiongzhong 124.49 253 PKP **PKPdf 23 01 38.8 +0.3**
QIZ PP **PP 23 03 26.2 +1.4**
QIZ SS SS 23 20 20.8 +3.3
QIZ AMB AMB
comp=Z,110nm,7.6s
QIZ LR LR
comp=Z,270nm,24.9s
PETK Petropavlovsk- 124.59 315 PKIKP **PKPdf 23 01 36.6 -1.0**
PETK pmax pmax
comp=Z,3.0nm,0.8s
PETK Petropavlovsk- 124.59 315 PKP **PKPdf 23 01 36.6 -1.0**
PETK Petropavlovsk- 124.59 315 PKP **PKPdf 23 01 36.6 -1.0**
comp=Z,2.9nm,0.8s,baz=132,slow=2.1,SNR=5.4
FRB Frobisher Bay 126.69 28 PKP **PKPdf 23 01 41.1 -0.1**
FRB Frobisher Bay 126.69 28 PKP **PKPdf 23 01 41.1 -0.1**
comp=Z,3.3nm,0.9s,baz=199,slow=2.9,SNR=4.5
INCN Inchon 128.92 282 PFAKE 23 02 00.0 +14
INCN LR LR
comp=Z,364nm,22.0s
NJ2 Nanjing 129.45 271 *e*PKP **PKPdf 23 01 49.1 +1.5**
NJ2 sPKP 23 01 54.1
NJ2 PP **PP 23 03 58.0 +0.3**
NJ2 PKS **PKSdf 23 05 27.0 +2.9**
NJ2 SKS **SKSdf 23 08 58.0 -0.9**
NJ2 AMB AMB
comp=Z,120nm,5.6s
NJ2 LR LR
comp=N,320nm,29.4s
NJ2 LR LR
comp=E,2μm,28.3s
NJ2 LR LR
comp=Z,340nm,24.0s
CMAR Chiang Mai Arr 129.79 242 PKP **PKPdf 23 01 48.6 0.0**
CMAR Chiang Mai Arr 129.79 242 PKP **PKPdf 23 01 48.6 0.0**
comp=Z,4.3nm,0.9s,baz=212,slow=1.9,SNR=17
CHTO Chiang Mai 130.09 242 *e*PKIKP **PKPdf 23 01 50.5 +1.3**
CHTO MLR MLR
comp=Z,285nm,22.0s
CHTO Chiang Mai 130.09 242 *e*PKPdf **PKPdf 23 01 50.5 +1.3**
CHTO LR LR
comp=Z,285nm,22.0s
TAM Tamanrasset 132.11 113 *e*PKIKP **PKPdf 23 01 53.8 +0.7**
TAM MLR MLR
comp=Z,443nm,21.0s
TAM Tamanrasset 132.11 113 *e*PKPdf **PKPdf 23 01 53.8 +0.7**
TAM LR LR
comp=Z,443nm,21.0s
MDJ Mudanjiang 132.16 291 PKP **PKPdf 23 01 53.8 +1.5**
MDJ sPKP 23 01 58.6
MDJ PP **PP 23 04 16.5 +1.3**
MDJ PKS **PKSdf 23 05 30.5 +1.9**
MDJ SKS **SKSdf 23 09 05.4 +2.1**
MDJ AMB AMB
comp=Z,140nm,5.7s
MDJ LR LR
comp=N,150nm,17.1s
MDJ LR LR
comp=E,160nm,17.1s
MDJ LR LR
comp=Z,320nm,17.1s
GYA Guiyang 132.16 256 *e*Pdif **Pdif 22 58 48.7 +1.2**
GYA PKP **PKiKP 23 01 54.0 -0.1**
GYA PP PP 23 04 20.5 +5.2
GYA SKKS 23 11 11.0
GYA SS **SS 23 21 55.2 +2.2**
GYA AMB AMB
comp=Z,130nm,7.8s
GYA LR LR
comp=N,280nm,22.5s
GYA LR LR
comp=E,190nm,23.3s
GYA LR LR
comp=Z,220nm,22.8s
BILL Bilibino 132.41 332 *i* PKIKP **PKPdf 23 01 52.9 +0.8**
BILL *i* 23 04 19.5
BILL *i* SS SS 23 22 00.3 +5.3
BILL pmax pmax
comp=Z,11nm,1.1s
BILL Bilibino 132.41 332 PFAKE 23 02 00.0 +7.9
BILL LR LR
comp=Z,325nm,21.0s
KMI Kunming 133.26 251 PKP **PKPdf 23 01 56.7 +1.4**
KMI sPKP 23 02 03.0
KMI PP **PP 23 04 24.6 +2.1**
KMI SKKS 23 11 20.7
KMI SS **SS 23 22 05.5 -1.0**
KMI AMB AMB
comp=Z,70nm,5.7s
KMI LR LR
comp=N,150nm,18.2s
KMI LR LR
comp=E,110nm,21.2s
KMI LR LR
comp=Z,260nm,19.9s
RTC Rabat Centre 133.78 91 PFAKE 23 02 10.0 +14
RTC LR LR
comp=Z,612nm,20.0s
CN2 Changchun 133.88 287 *e*PKP **PKPdf 23 01 55.1 -0.5**
CN2 PP **PP 23 04 30.6 +4.4**
CN2 LR LR
comp=N,200nm,19.0s
CN2 LR LR
comp=E,200nm,19.0s
CN2 LR LR
comp=Z,200nm,21.0s
SFJD Kangerlussuaq 134.23 32 PFAKE 23 02 10.0 +15
SFJD LR LR
comp=Z,419nm,19.0s
BJI Beijing 136.60 277 PKP **PKPdf 23 01 59.3 -1.5**
BJI PP **PP 23 04 44.3 +0.8**
BJI SS SS 23 22 44.3 -2.0
BJI LR LR
comp=N,140nm,23.3s
BJI LR LR
comp=E,180nm,23.3s
BJI LR LR
comp=Z,190nm,28.2s
CD2 Chengdu 137.21 257 *e*PKP **PKPdf 23 02 02.3 0.0**
CD2 PP **PP 23 04 47.6 +0.4**
CD2 PKS **PKSdf 23 05 36.5 -2.1**
CD2 SKS **SKSdf 23 09 10.5 -2.4**
CD2 SKKS **SKKSac 23 11 41.0 -0.5**
CD2 SS **SS 23 22 56.0 +2.5**
CD2 AMB AMB
comp=Z,140nm,6.2s
CD2 LR LR
comp=N,330nm,22.6s
CD2 LR LR
comp=E,380nm,24.0s
CD2 LR LR
comp=Z,370nm,25.0s
MTE Manteigas 137.82 84 PFAKE 23 02 10.0 +6.9
MTE LR LR
comp=Z,722nm,21.0s
PAB San Pablo 139.09 88 PFAKE 23 02 20.0 +14
PAB LR LR
comp=Z,535nm,21.0s
ESDC Sonseca Array 139.40 88 PKP **PKPdf 23 02 07.0 +1.0**
ESDC Sonseca Array 139.40 88 PKP **PKPdf 23 02 07.0 +1.0**
comp=Z,0.8nm,0.6s,baz=246,slow=2.6,SNR=10
HHC Hu-ho-hao-te 139.78 274 *e*PKP **PKPdf 23 02 03.4 -3.4**
HHC sPKP 23 02 09.0
HHC PKS PKSdf 23 05 37.1 -5.7
HHC SS SS 23 23 21.2 -3.0
HHC AMB AMB
comp=Z,190nm,7.1s
HHC LR LR
comp=N,260nm,19.0s
HHC LR LR
comp=E,490nm,19.0s
HHC LR LR
comp=Z,420nm,20.2s

SUMG Summit 140.77 28 *i* PKIKP **PKPdf** 23 02 08.8 +0.9
SUMG pmax pmax
comp=Z,5.0nm,1.0s
SUMG Summit 140.77 28 *e*PKPdf PKPdf 23 02 16.9 +9.0
SUMG Summit 140.77 28 *i* P **PKPdf** 23 02 08.8 +0.9
comp=Z,4.7nm,1.0s
LZH Lanzhou 140.96 262 *e*PKP **PKPdf** 23 02 09.9 +0.8
LZH PP **PP** 23 05 12.0 +1.4
LZH PKS **PKSdf** 23 05 48.0 +2.8
LZH SKKS 23 11 59.1
LZH SS **SS** 23 23 39.6 +1.5
LZH AMB AMB
comp=Z,150nm,6.4s
LZH LR LR
comp=N,370nm,19.6s
LZH LR LR
comp=E,400nm,20.1s
LZH LR LR
comp=Z,440nm,20.5s
ODAN Odare 142.54 235 *e*P **PKPdf** 23 02 10.1 -2.2
comp=Z,30nm,1.0s
TAPN Taplejung 142.80 236 *e*P **PKPdf** 23 02 09.2 -3.7
RAMN Ramite 142.98 234 *e*P PKiKP 23 02 10.8 -5.5
comp=Z,27nm,0.9s
SJPF Ste Jean 143.19 86 *e*PKIKP **PKPdf** 23 02 11.7 -1.0
comp=Z,62nm,1.5s
SJPF Ste Jean 143.19 86 *e*PKIKP **PKPdf** 23 02 11.7 -1.0
SJPF Ste Jean 143.19 86 *e*PKPdf **PKPdf** 23 02 11.7 -1.0
ETSF Etsaut 143.44 86 *e*PKIKP **PKPdf** 23 02 12.1 -1.1
ETSF Etsaut 143.44 86 *e*PKIKP **PKPdf** 23 02 12.1 -1.1
ETSF Etsaut 143.44 86 *e*PKPdf **PKPdf** 23 02 12.1 -1.1
BORG Borgarnes 143.51 44 PFAKE 23 02 20.0 +7.5
BORG LR LR
comp=Z,480nm,19.0s
EPF Esparros 144.03 87 *e*PKIKP PKPbc 23 02 12.5 +0.3
comp=Z,21nm,0.9s
EPF Esparros 144.03 87 *e*PKIKP PKPbc 23 02 12.5 +0.3
EPF Esparros 144.03 87 *e*PKPdf PKPbc 23 02 12.5 +0.3
PKI Pulchoki 144.06 233 *e*P **PKPab** 23 02 12.0 -0.6
comp=Z,63nm,1.1s
PKIN Phulchoki 144.07 233 *e*P **PKPab** 23 02 12.0 -0.6
comp=Z,154nm,1.8s
GUN Gumba 144.13 234 *e*P **PKPab** 23 02 11.6 -1.3
comp=Z,96nm,1.1s
DMN Daman 144.23 233 *e*P **PKPab** 23 02 11.7 -1.5
comp=Z,72nm,0.9s
KEST Kesra 144.25 104 PKP PKPbc 23 02 13.6 +0.4
KEST Kesra 144.25 104 PKP PKPbc 23 02 13.6 +0.4
comp=Z,3.8nm,0.9s,baz=211,slow=2.8,SNR=8.8
KKN Kakani 144.31 233 *e*P **PKPab** 23 02 12.9 -0.5
MLS Moulis 144.42 88 PKP **PKPab** 23 02 12.4 -0.7
MLS Moulis 144.42 88 PKP **PKPab** 23 02 12.4 -0.7
CARF Carcanieres 144.85 89 PKP **PKPab** 23 02 14.1 -0.7
CARF Carcanieres 144.85 89 PKP **PKPab** 23 02 14.1 -0.7
QUIF Quistinic 144.91 78 *e*PKIKP PKPbc 23 02 14.7 0.0
comp=Z,79nm,1.0s
QUIF Quistinic 144.91 78 *e*PKIKP PKPbc 23 02 14.7 0.0
QUIF Quistinic 144.91 78 *e*PKPdf PKPbc 23 02 14.7 0.0
FILF Fillols 145.01 89 PKP **PKPbc** 23 02 14.1 -1.3
FILF Fillols 145.01 89 PKP **PKPbc** 23 02 14.1 -1.3
SCO Scoresbysund 145.03 35 *i* PKIKP **PKPdf** 23 02 14.9 -0.1
SCO pmax pmax
comp=Z,11nm,1.0s
SCO Scoresbysund 145.03 35 *i* P **PKPdf** 23 02 14.9 -0.1
comp=Z,11nm,1.0s
KOLN Koldanda 145.05 231 *e*P **PKPbc** 23 02 13.8 -2.3
comp=Z,68nm,0.8s
ROSF Rostrenen 145.08 77 *e*PKIKP **PKPbc** 23 02 14.8 -0.5
comp=Z,354nm,1.9s
ROSF Rostrenen 145.08 77 *e*PKP2 **PKPbc** 23 02 14.8 -0.5
ROSF Rostrenen 145.08 77 *e*PKPdf **PKPbc** 23 02 14.8 -0.5
CIT Chita 145.13 290 *e*PKIKP **PKPbc** 23 02 13.7 -1.7
CIT pmax pmax
comp=Z,105nm,2.8s
SJAF Saint Jean de 145.15 90 PKP **PKPbc** 23 02 14.5 -1.2
SJAF Saint Jean de 145.15 90 PKP **PKPbc** 23 02 14.5 -1.2
TIXI Tiksi 145.29 327⇑ *e*PKP2 **PKPbc** 23 02 13.6 -1.7
MTLF Montolieu 145.30 88 *e*PKIKP **PKPbc** 23 02 14.9 -1.3
comp=Z,46nm,0.9s
MTLF Montolieu 145.30 88 *e*PKP2 **PKPbc** 23 02 14.9 -1.3
MTLF Montolieu 145.30 88 *e*PKPdf **PKPbc** 23 02 14.9 -1.3
LFF La Frestale 145.42 85 *e*PKIKP **PKPdf** 23 02 15.7 -0.8
comp=Z,140nm,1.3s
LFF La Frestale 145.42 85 *e*PKP2 **PKPdf** 23 02 15.7 -0.8
LFF La Frestale 145.42 85 *e*PKPdf **PKPdf** 23 02 15.7 -0.8
SGMF Saint Gilles 145.43 78 *e*PKIKP **PKPdf** 23 02 15.3 -1.1
comp=Z,55nm,0.9s
SGMF Saint Gilles 145.43 78 *e*PKP2 **PKPdf** 23 02 15.3 -1.1
SGMF Saint Gilles 145.43 78 *e*PKPdf **PKPdf** 23 02 15.3 -1.1
DANN Dangsing 145.48 232 *e*P **PKPdf** 23 02 15.4 -2.1
comp=Z,175nm,0.9s
GTA Gaotai 145.56 262⇑ PKPbc **PKPdf** 23 02 16.3 -0.8
GTA PKPab **PKiKP** 23 02 19.4 -1.7
GTA PP **PP** 23 05 41.8 +3.5
GTA PKS **PKSdf** 23 05 50.8 -1.8
GTA SKS **SKSdf** 23 09 20.1 -5.9
GTA SKKS **SKKSac** 23 12 26.8 -3.1
GTA SS **SS** 23 24 30.1 -1.0
GTA AMB AMB
comp=Z,190nm,7.6s
GTA LR LR
comp=N,240nm,20.9s
GTA LR LR
comp=E,350nm,21.4s
GTA LR LR
comp=Z,340nm,19.0s
PYUN Piuthan 145.61 230 *e*P **PKPdf** 23 02 15.7 -1.9
comp=Z,335nm,1.1s
MFF Saint Martin d 145.88 82 *e*PKIKP **PKPdf** 23 02 16.1 -1.1
comp=Z,202nm,1.5s
MFF Saint Martin d 145.88 82 *e*PKIKP **PKPdf** 23 02 16.1 -1.1
MFF Saint Martin d 145.88 82 *e*PKPdf **PKPdf** 23 02 16.1 -1.1
RJF Les Rejaudoux 146.08 85 *e*PKIKP **PKPdf** 23 02 17.4 -0.2
comp=Z,146nm,1.4s
RJF *e*R
comp=Z,1µm,21.5s
RJF Les Rejaudoux 146.08 85 *e*PKIKP **PKPdf** 23 02 17.4 -0.2
RJF Les Rejaudoux 146.08 85 *e*PKPdf **PKPdf** 23 02 17.4 -0.2
CAF Calviac 146.17 86 *e*PKIKP **PKPdf** 23 02 17.1 -0.7
comp=Z,142nm,1.5s
CAF Calviac 146.17 86 *e*PKIKP **PKPdf** 23 02 17.1 -0.7
CAF Calviac 146.17 86 *e*PKPdf **PKPdf** 23 02 17.1 -0.7
GRR Gorron 146.46 78 *e*PKIKP **PKPdf** 23 02 17.6 -0.5
comp=Z,108nm,1.5s
GRR Gorron 146.46 78 *e*PKIKP **PKPdf** 23 02 17.6 -0.5
GRR Gorron 146.46 78 *e*PKPdf **PKPdf** 23 02 17.6 -0.5
ULN Ulaanbaatar 146.58 280 *e*PKPdf **PKPdf** 23 02 18.5 -0.1
ULN LR LR
comp=Z,357nm,19.0s
LASF Ste Croix 146.69 88 *e*PKIKP **PKPdf** 23 02 18.3 -0.4
comp=Z,50nm,1.3s
LASF Ste Croix 146.69 88 *e*PKPdf **PKPdf** 23 02 18.3 -0.4
DAG Danmarks Havn 146.83 24⇑ *i*PKP2 **PKPbc** 23 02 19.7 -0.1
DAG pmax pmax
comp=Z,11nm,0.9s
DAG Danmarks Havn 146.83 24⇑ *i*P **PKPbc** 23 02 19.7 -0.1
comp=Z,13nm,0.9s
FLN La Foliniere 146.87 78 *e*PKIKP **PKPdf** 23 02 18.1 -0.7
comp=Z,113nm,1.2s
FLN *e*R
comp=Z,606nm,20.5s
FLN La Foliniere 146.87 78 *e*PKIKP **PKPdf** 23 02 18.1 -0.7
FLN La Foliniere 146.87 78 *e*PKPdf **PKPdf** 23 02 18.1 -0.7
VSL Villasalto 146.91 100 PFAKE 23 02 30.0 +7.4
VSL LR LR
comp=Z,591nm,21.0s
SONM Songino Array 146.94 280 PKPbc **PKPdf** 23 02 18.8 -0.3
SONM Songino Array 146.94 280 PKPbc **PKPdf** 23 02 18.8 -0.3
comp=Z,8.7nm,0.9s,baz=148,slow=3.5,SNR=40
LDF La Druitiere 146.98 79 *e*PKIKP **PKPdf** 23 02 18.0 -1.0
comp=Z,80nm,1.3s
LDF La Druitiere 146.98 79 *e*PKIKP **PKPdf** 23 02 18.0 -1.0
LDF La Druitiere 146.98 79 *e*PKPdf **PKPdf** 23 02 18.0 -1.0
LBL Lubilhac 147.03 86 PKP2 **PKPab** 23 02 23.3 +0.3
LBL Lubilhac 147.03 86 PKP **PKPab** 23 02 23.3 +0.3
TCF Toulx Ste Croi 147.04 84 *e*PKIKP **PKPdf** 23 02 18.6 -0.6
comp=Z,142nm,1.8s
TCF Toulx Ste Croi 147.04 84 *e*PKIKP **PKPdf** 23 02 18.6 -0.6
TCF Toulx Ste Croi 147.04 84 *e*PKPdf **PKPdf** 23 02 18.6 -0.6
WDD Wield Dalam 147.19 110 PFAKE 23 02 30.0 +6.3
WDD LR LR
comp=Z,1µm,19.0s
PYM Petit Puy Mans 147.19 85 PKP2 **PKPab** 23 02 23.7 +0.1
PYM Petit Puy Mans 147.19 85 PKP **PKPab** 23 02 23.7 +0.1

AGO Saint Agoulin 147.44 85 PKP **PKPab** 23 02 24.2 -0.3
BGF Bois d'Agland 147.56 84 *e*PKIKP **PKPdf** 23 02 18.7 -1.4
comp=Z,49nm,1.0s
BGF Bois d'Agland 147.56 84 *e*PKIKP **PKPdf** 23 02 18.7 -1.4
BGF Bois d'Agland 147.56 84 *e*PKPdf **PKPdf** 23 02 18.7 -1.4
SMRF Simiane la Rot 147.62 90 *e*PKIKP **PKPdf** 23 02 20.0 -0.3
comp=Z,55nm,1.2s
SMRF Simiane la Rot 147.62 90 *e*PKPdf **PKPdf** 23 02 20.0 -0.3
VIVF Saint-Julien-l 147.63 88 *e*PKIKP **PKPdf** 23 02 20.3 0.0
comp=Z,82nm,1.7s
VIVF Saint-Julien-l 147.63 88 *e*PKIKP **PKPdf** 23 02 20.3 0.0
VIVF Saint-Julien-l 147.63 88 *e*PKPdf **PKPdf** 23 02 20.3 0.0
LMR La Mourre 147.76 92 *e*PKIKP **PKPdf** 23 02 19.8 -0.7
comp=Z,35nm,1.0s
LMR La Mourre 147.76 92 *e*PKIKP **PKPdf** 23 02 19.8 -0.7
LMR La Mourre 147.76 92 *e*PKPdf **PKPdf** 23 02 19.8 -0.7
SSB Saint Sauveur 147.80 87 *e*PKIKP **PKPdf** 23 02 20.4 -0.1
SSB MLR MLR
comp=Z,478nm,20.0s
SSB Saint Sauveur 147.80 87 *e*PKPdf **PKPdf** 23 02 20.4 -0.1
SSB LR LR
comp=Z,478nm,20.0s
RAYN Ar Rayn 147.91 166 *e*PKPdf **PKPbc** 23 02 23.7 -0.7
FRF La Foret Royal 147.98 91 *e*PKIKP **PKPdf** 23 02 19.6 -1.2
comp=Z,80nm,1.3s
FRF La Foret Royal 147.98 91 *e*PKHKP **PKPdf** 23 02 19.6 -1.2
FRF La Foret Royal 147.98 91 *e*PKPdf **PKPdf** 23 02 19.6 -1.2
SMF Signal de Mont 148.18 84 *e*PKIKP **PKPdf** 23 02 20.5 -0.6
SMF Signal de Mont 148.18 84 *e*PKIKP **PKPdf** 23 02 20.5 -0.6
SMF Signal de Mont 148.18 84 *e*PKPdf **PKPdf** 23 02 20.5 -0.6
SSF Saint Saulge 148.22 84 *e*PKIKP **PKPdf** 23 02 20.7 -0.4
comp=Z,106nm,1.9s
SSF Saint Saulge 148.22 84 *e*PKIKP **PKPdf** 23 02 20.7 -0.4
SSF Saint Saulge 148.22 84 *e*PKPdf **PKPdf** 23 02 20.7 -0.4
CALN Calern 148.24 91 PKP **PKPab** 23 02 27.0 -0.9
ORIF Oris-en-Rattie 148.36 89 *e*PKIKP **PKPdf** 23 02 20.2 -1.3
comp=Z,74nm,1.3s
ORIF *e*R
comp=Z,603nm,19.8s
ORIF Oris-en-Rattie 148.36 89 *e*PKHKP **PKPdf** 23 02 20.2 -1.3
ORIF Oris-en-Rattie 148.36 89 *e*PKPdf **PKPdf** 23 02 20.2 -1.3
ESK Eskdalemuir 148.43 66 *e*PKP2 **PKPbc** 23 02 25.2 +0.5
ESK MLR MLR
comp=Z,381nm,20.0s
ESK Eskdalemuir 148.43 66 *e*PKPdf **PKPbc** 23 02 25.2 +0.5
ESK LR LR
comp=Z,381nm,20.0s
MVIF Mont Vial 148.48 91 PKP **PKPab** 23 02 28.9 0.0
NDI New Delhi 148.53 223 *e*PKP **PKPbc** 23 02 24.0 -1.9
LOR Lormes 148.53 83 *e*PKIKP **PKPdf** 23 02 21.3 -0.3
comp=Z,30nm,0.9s
LOR *e*R
comp=Z,656nm,20.5s
LOR Lormes 148.53 83 *e*PKPdf **PKPdf** 23 02 21.3 -0.3
TOUF Mont Tournerai 148.60 91 PKP **PKPbc** 23 02 27.2 +1.4
SBF Sospel 148.62 92 *e*PKIKP **PKPdf** 23 02 21.2 -0.8
comp=Z,58nm,1.0s
SBF Sospel 148.62 92 *e*PKIKP **PKPdf** 23 02 21.2 -0.8
SBF Sospel 148.62 92 *e*PKPdf **PKPdf** 23 02 21.2 -0.8
PGF Pioggiola 148.70 95 *e*PKIKP **PKPdf** 23 02 21.5 -0.7
comp=Z,154nm,1.4s
PGF Pioggiola 148.70 95 *e*PKIKP **PKPdf** 23 02 21.5 -0.7
PGF Pioggiola 148.70 95 *e*PKPdf **PKPdf** 23 02 21.5 -0.7
SAOF Saorge 148.76 91 PKP **PKPbc** 23 02 27.2 +1.2
BNI Bardonecchia 148.90 89 *e*PKIKP **PKPdf** 23 02 23.9 +1.4
BNI MLR MLR
comp=Z,475nm,20.0s
BNI Bardonecchia 148.90 89 *e*PKPdf **PKPdf** 23 02 23.9 +1.4
BNI LR LR
comp=Z,475nm,20.0s
LPG La Plagne 149.20 88 *e*PKIKP **PKPdf** 23 02 22.6 -0.5
comp=Z,31nm,0.8s
LPG La Plagne 149.20 88 *e*PKIKP **PKPdf** 23 02 22.6 -0.5
LPG La Plagne 149.20 88 *e*PKPdf **PKPdf** 23 02 22.6 -0.5
LPL La Plagne 149.20 88 *e*PKPdf **PKPdf** 23 02 22.6 -0.5
comp=Z,30nm,0.9s
LPL La Plagne 149.20 88 *e*PKIKP **PKPdf** 23 02 22.6 -0.5
LPL La Plagne 149.20 88 *e*PKPdf **PKPdf** 23 02 22.6 -0.5
CABF La Chapelle 149.45 86 *e*PKIKP **PKPdf** 23 02 22.1 -1.1
CABF La Chapelle 149.45 86 *e*PKIKP **PKPdf** 23 02 22.1 -1.1
CABF La Chapelle 149.45 86 *e*PKPdf **PKPdf** 23 02 22.1 -1.1
CEL Celeste 149.69 108 *e*PKPdf **PKPbc** 23 02 27.3 -1.2
CEL LR LR
comp=Z,536nm,22.0s
SFTF Sexfontaines 149.71 83 *e*PKIKP **PKPdf** 23 02 22.9 -0.6
SFTF Sexfontaines 149.71 83 *e*PKPdf **PKPdf** 23 02 22.9 -0.6
MEZF Maizieres J'vi 149.87 82 *e*PKIKP **PKPdf** 23 02 22.9 -0.8
MEZF Maizieres J'vi 149.87 82 *e*PKPdf **PKPdf** 23 02 22.9 -0.8
ZAK Zakamensk 150.00 282 *e*PKHKP **PKPdf** 23 02 27.6 +3.6
ZAK pmax pmax
comp=Z,5.0nm,1.3s
BAIF Baives 150.17 79 *e*PKIKP **PKPdf** 23 02 23.4 -0.7
comp=Z,79nm,1.2s
BAIF Baives 150.17 79 *e*PKIKP **PKPdf** 23 02 23.4 -0.7
BAIF Baives 150.17 79 *e*PKPdf **PKPdf** 23 02 23.4 -0.7
THEF They Montfort 150.26 83 PKP **PKPbc** 23 02 31.1 +1.6
LOMF Lomont 150.27 85 PKP **PKPbc** 23 02 31.5 +1.8
PAGF Fort de Pagny 150.28 83 *e*PKIKP **PKPdf** 23 02 23.8 -0.6
PAGF Fort de Pagny 150.28 83 *e*PKPdf **PKPdf** 23 02 23.8 -0.6
HAU Haudompre 150.35 84 *e*PKIKP **PKPdf** 23 02 24.0 -0.5
comp=Z,57nm,1.4s
HAU *e*R
comp=Z,690nm,23.0s
HAU Haudompre 150.35 84 *e*PKIKP **PKPdf** 23 02 24.0 -0.5
HAU Haudompre 150.35 84 *e*PKPdf **PKPdf** 23 02 24.0 -0.5
TLY Talaya 150.40 284 *e*PKIKP **PKPbc** 23 02 30.3 +0.5
TLY *e* 23 02 34.4
TLY pmax pmax
comp=Z,42nm,1.9s
DOU Dourbes 150.41 79 PKPbc **PKPbc** 23 02 31.1 +1.3
VLC Villacollemand 150.50 94 PFAKE 23 02 40.0 +3.0
VLC LR LR
comp=Z,294nm,20.0s
GIVF Givet 150.54 79 *e*PKIKP **PKPdf** 23 02 24.3 -0.4
comp=Z,65nm,1.0s
GIVF Givet 150.54 79 *e*PKIKP **PKPdf** 23 02 24.3 -0.4
GIVF Givet 150.54 79 *e*PKPdf **PKPdf** 23 02 24.3 -0.4
HINF Hinteralfeld 150.54 85 *e*PKIKP **PKPdf** 23 02 24.1 -0.8
comp=Z,67nm,1.4s
HINF Hinteralfeld 150.54 85 *e*PKIKP **PKPdf** 23 02 24.1 -0.8
HINF Hinteralfeld 150.54 85 *e*PKPdf **PKPdf** 23 02 24.1 -0.8
MOF Molkenrain 150.72 85 PKP **PKPbc** 23 02 30.4 -0.3
TIP Timpagrande 150.81 108 *e*PKPdf **PKPdf** 23 02 28.0 +2.4
TIP *e*PKPdf **PKPbc** 23 02 29.9 -1.3
TIP LR LR
comp=Z,636nm,21.0s
CUC Castrocucco 150.87 105 *e*PKPdf **PKPdf** 23 02 26.7 +1.1
CUC LR LR
comp=Z,305nm,20.0s
ECH Echery 150.92 84 *e*PKIKP **PKPdf** 23 02 26.5 +1.1
ECH MLR MLR
comp=Z,369nm,19.0s
ECH Echery 150.92 84 *e*PKPdf **PKPdf** 23 02 26.5 +1.1
ECH LR LR
comp=Z,369nm,19.0s
ECH Echery 150.92 84 PKP **PKPbc** 23 02 31.2 +0.1
BCLA Clavier 150.96 79 PKPbc **PKPbc** 23 02 32.7 +1.6
WLF Walferdange 151.08 81 PKPbc **PKPbc** 23 02 33.2 +1.8
WLF Walferdange 151.08 81 PFAKE 23 02 40.0 +0.8
WLF LR LR
comp=Z,468nm,20.0s
AQU L'Aquila 151.09 99 *e*PKPdf **PKPbc** 23 02 30.8 -1.0
AQU LR LR
comp=Z,669nm,21.0s
AQU L'Aquila 151.09 99⇑ *i*P **PKPbc** 23 02 30.6 -1.2
CDF Champ du Feu 151.09 84 *e*PKIKP **PKPdf** 23 02 24.7 -1.1
comp=Z,24nm,1.1s
CDF Champ du Feu 151.09 84 *e*PKIKP **PKPdf** 23 02 24.7 -1.1
CDF Champ du Feu 151.09 84 *e*PKPdf **PKPdf** 23 02 24.7 -1.1
TUE Stuetta 151.24 89 *e*PKPdf **PKPbc** 23 02 30.4 -1.8
TUE LR LR
comp=Z,533nm,20.0s
MEM Membach 151.44 79 PKPbc **PKPbc** 23 02 33.3 +1.1
MEM APKPab 23 02 48.2
BFO Black Forest 151.65 85 *e*PKIKP **PKPbc** 23 02 31.4 -1.4
BFO MLR MLR
comp=Z,528nm,22.0s
BFO Black Forest 151.65 85 *e*PKPdf **PKPbc** 23 02 31.4 -1.4
BFO LR LR
comp=Z,528nm,22.0s
LANF Langenberg 151.68 83 PKP **PKPbc** 23 02 32.1 -0.7
MOY Mondy 151.88 283 *e*PKIKP **PKPbc** 23 02 34.6 +1.3
DAVA Damuels 151.99 88⇓ *i*sPKPdf sPKPdf 23 02 32.5 +0.6
comp=Z,12nm,0.8s

FETA Feichten 152.34 89⇓ *i*sPKPdf sPKPdf 23 02 33.7 +1.3
comp=Z,23nm,0.9s
STU Stuttgart 152.37 85 *e*PKIKP **PKPbc** 23 02 35.9 +1.5
STU Stuttgart 152.37 85 *e*PKPdf **PKPbc** 23 02 35.9 +1.5
KBS Kingsbay 152.39 16 *e*PKIKP **PKPbc** 23 02 35.9 +2.3
KBS MLR MLR
comp=Z,572nm,19.0s
KBS Kingsbay 152.39 16 *e*PKPdf **PKPbc** 23 02 35.9 +2.3
KBS LR LR
comp=Z,572nm,19.0s
RETA Reutte 152.60 88⇓ *i*sPKPdf sPKPdf 23 02 33.6 +1.0
comp=Z,16nm,1.0s
MOTA Moosalm 152.72 89⇓ *i*PKPbc **PKPbc** 23 02 34.8 -0.6
comp=Z,17nm,0.7s
SPITS Spitsbergen Ar 153.55 16 PKPbc **PKPbc** 23 02 37.1 +0.9
SPITS Spitsbergen Ar 153.55 16 PKPbc **PKPbc** 23 02 37.1 +0.9
comp=Z,16nm,1.1s,baz=321,slow=2.8,SNR=5.6
GRF Grafenberg Arr 153.98 84 *e*PKPbc **PKPbc** 23 02 41.1 +3.2
GRF *e*PP **PP** 23 06 28.0 +1.2
TIR Tirane 154.03 108 PFAKE 23 02 40.0 +1.7
TIR LR LR
comp=Z,488nm,20.0s
NKC Novy Kostel 154.93 84 *e*PKPDF **PKPdf** 23 02 29.5 -1.7
NKC *e*PP **PP** 23 06 31.4 -0.8
NKC AMS AMS 00 04 30.0
comp=Z,400nm,21.3s
GERES GERESS Array B 154.99 88 PKP **PKPdf** 23 02 31.4 -0.1
GERES PP **PP** 23 06 32.4 -0.2
GERES GERESS Array B 154.99 88 PKP **PKPdf** 23 02 31.4 -0.1
comp=Z,1.5nm,0.9s,baz=247,slow=0.7,SNR=9.7
GERES PP **PP** 23 06 32.4 -0.2
comp=Z,0.3nm,0.7s,baz=231,slow=7.2,SNR=3.2
KHC Kasperske Hory 155.06 87 *e*PKIKP PKPdf 23 02 39.9 +8.5
KHC *e* 23 02 56.6
KHC *e* 23 06 32.6
KHC *e*SS SS 23 26 12.5 -4.0
KHC MLR MLR
comp=Z,400nm,18.4s
KHC Kasperske Hory 155.06 87⇑ *e*PKP PKPdf 23 02 39.9 +8.5
KHC *ex* x 23 02 49.0
KHC *e*PKPAB **PKPab** 23 02 56.6 +0.5
KHC *e*PP **PP** 23 06 32.6 -0.3
KHC *e*SS SS 23 26 12.5 -4.0
KHC AMS AMS 00 13 10.0
comp=Z,400nm,18.4s
WMQ Urumqi 155.31 257 *e*PKP **PKPdf** 23 02 34.0 +2.0
WMQ PKS **PKSdf** 23 06 07.0 +1.0
WMQ *e*PP **PP** 23 06 39.0 +4.7
WMQ SKS **SKSdf** 23 09 39.0 +0.8
WMQ SKKS **SKKSac** 23 13 28.0 +4.7
WMQ SS **SS** 23 26 20.0 +0.9
WMQ AMB AMB
comp=Z,150nm,7.7s
WMQ LR LR
comp=N,440nm,24.5s
WMQ LR LR
comp=E,410nm,27.2s
WMQ LR LR
comp=Z,700nm,23.4s
MUD Monsted U'grnd 155.38 68 *i* PKP2 **PKPab** 23 02 58.2 +1.1
MUD pmax pmax
comp=Z,18nm,0.9s
MUD MLR MLR
comp=Z,410nm,21.0s
MUD Monsted U'grnd 155.38 68 *i* P **PKPab** 23 02 58.2 +1.1
comp=Z,18nm,0.9s
CSS Prodhromos 155.51 137 PFAKE 23 02 40.0 +7.5
CSS LR LR
comp=Z,523nm,20.0s
CLL Collm 155.72 82⇓ *i*PKIKP **PKPdf** 23 02 33.9 +1.7
CLL *i* 23 02 58.1
CLL pmax pmax
comp=Z,26nm,1.7s
CLL MLR MLR
comp=Z,400nm,20.6s
CLL Collm 155.72 82 *i* PKPdf **PKPdf** 23 02 33.9 +1.7
CLL ⇓ *i*PKPab **PKPab** 23 02 58.1 -0.7
comp=Z,26nm,1.7s
CLL *i* pPKPab **pPKPab** 23 03 03.2 +1.1
CLL *e*(PP) 23 06 24.0
CLL *e*PSKS 23 16 54.0
CLL *e*SS SS 23 26 23.0 -0.5
CLL *e*PSS PSS 23 27 11.0
CLL *e*SSS SSS 23 32 24.0
CLL Lm MLR 00 09 00.0
comp=Z,400nm,20.6s
PRA Prague 155.99 86 PKPDF **PKPdf** 23 02 35.0 +2.4
PRU Pruhonice 156.02 86 *e*PKPDF **PKPdf** 23 02 33.8 +1.2
PRU *ex* x 23 02 49.4
PRU *e*PP **PP** 23 06 36.8 -1.4
PRU *e*SS SS 23 26 23.1 -3.6
PRU AMS AMS 00 10 30.0
comp=Z,400nm,20.8s
SOP Sopron 156.04 93⇓ *e*PKPdf **PKPdf** 23 02 30.5 -2.2
BRG Berggiesshubel 156.07 84 *e*PKP **PKPdf** 23 02 34.8 +2.1
comp=Z,6.5nm,1.2s
BRG *e* 23 03 05.0
comp=Z,18nm,1.4s
BRG
comp=N,236nm,17.7s
BRG
comp=E,179nm,21.9s
BRG
comp=Z,179nm,21.0s
BRG Berggiesshubel 156.07 84 *e*PKIKP **PKPdf** 23 02 34.8 +2.1
BRG pmax pmax
comp=Z,7.0nm,1.2s
BRG pmax pmax
comp=Z,18nm,1.4s
BRG MLR MLR
comp=N,236nm,17.7s
BRG MLR MLR
comp=E,179nm,21.9s
TREC Trest 156.24 88 *e*PKPDF **PKPdf** 23 02 31.7 -1.3
TREC *ex* x 23 02 48.2
TREC *e*PP **PP** 23 06 38.4 -1.0
TREC *e*SS SS 23 26 30.7 +1.5
TREC AMS AMS 00 07 30.0
comp=E,300nm,20.3s
KONO Kongsberg 156.27 61 PFAKE 23 02 40.0 +7.4
KONO LR LR
comp=Z,690nm,21.0s
PVCC Panska Ves 156.28 85 AMS AMS 00 05 20.0
comp=Z,400nm,19.1s
PKSM Moragy 156.42 98⇓ *e*PKPdf **PKPdf** 23 02 34.7 +1.4
ZST Bratislava 156.62 92 *e*PKIKP **PKPdf** 23 02 36.7 +3.2
ZST Bratislava 156.62 92 *e*PKP **PKPdf** 23 02 36.7 +3.2
VTS Vitosha 156.70 110 ⇓PKIKP **PKPdf** 23 02 34.6 +0.6
VTS Vitosha 156.70 110⇓ *i*P **PKPdf** 23 02 34.6 +0.6
ISP Isparta 156.76 129 PFAKE 23 02 50.0 -14
ISP LR LR
comp=Z,388nm,20.0s
VRAC Vranov 156.88 89⇑ *i*P **PKPdf** 23 02 34.0 +0.2
UPC Upice 157.10 86 *e*PKIKP **PKPdf** 23 02 35.9 +1.9
UPC Upice 157.10 86 *e*PKPDF **PKPdf** 23 02 35.9 +1.9
UPC *ex* x 23 02 50.2
DPC Dobruska-Polom 157.20 87 *e*PKIKP **PKPdf** 23 02 34.3 +0.1
DPC *e*SS SS 23 26 39.7 +0.1
DPC Dobruska-Polom 157.20 87 *e*PKPDF **PKPdf** 23 02 34.3 +0.1
DPC *ex* x 23 02 50.6
DPC *e*PP **PP** 23 06 40.7 -4.1
DPC *e*SS SS 23 26 39.7 +0.1
NB2 NORSAR Subarra157.22 58 PKP **PKPab** 23 03 04.7 -0.3
comp=Z,5.7nm,1.0s,baz=266,slow=4.4
NOA NORSAR Array B157.22 58 PKP **PKPdf** 23 02 35.0 +1.1
NOA PKPab **PKPab** 23 03 04.3 -0.7
NOA NORSAR Array B157.22 58 PKP **PKPdf** 23 02 35.0 +1.1
comp=Z,0.9nm,0.9s,baz=281,slow=1.8,SNR=3.2
NOA PKPab **PKPab** 23 03 04.3 -0.7
comp=Z,2.6nm,0.8s,baz=267,slow=4.5,SNR=9.5
BHD Baghdad 157.26 160 *e*PKP PKPdf 23 02 40.7 +5.9
BHD *e*PP **PP** 23 06 48.8 +4.6
BHD *e*SKS **SKSdf** 23 09 44.5 +4.0
BHD *e*SkkS 23 13 36.0
KRLC Kraliky 157.34 88 *e*PKIKP **PKPdf** 23 02 34.2 -0.2
KRLC Kraliky 157.34 88 *e*PKPDF **PKPdf** 23 02 34.2 -0.2
KRLC *ex* x 23 02 49.7
BUD Budapest 157.35 95⇓ *e* **PKPab** 23 03 07.4 +1.5
IBDR Badra 157.38 163 *e*PkP **PKPdf** 23 02 39.7 +4.8
IBDR *e*PP **PP** 23 06 43.4 -1.5
IBDR *e*SKS **SKSdf** 23 09 42.1 +1.4
IBDR *e*SkkS 23 13 24.1
MORC Moravsky Berou 157.64 89 *e*PKIKP **PKPdf** 23 02 34.6 -0.2
MORC Moravsky Berou 157.64 89 *e*PKPdf **PKPdf** 23 02 34.6 -0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
MORC	Moravsky Berou	157.64	89	⇓iP	PKPdf	23 02 36.8	+2.0
BZS	Buzias	157.76	102	⇓PKIKP	PKPdf	23 02 37.5	+2.5
BZS	Buzias	157.76	102	⇓iP	PKPdf	23 02 37.5	+2.5
VYHS	Vyhne	157.77	93	ePKIKP	PKPdf	23 02 36.8	+1.9
VYHS	Vyhne	157.77	93	ePKP	PKPdf	23 02 36.8	+1.9
OKC	Ostrava-Krasne	158.02	89	ePKPDF	PKPdf	23 02 35.3	+0.1
OKC				ex	x	23 02 50.5	
OKC				ePP	PP	23 06 48.3	-0.9
OKC				AMS	AMS	00 05 50.0	
	comp=Z,300nm,22.6s						
PSZ	Piszkesteto	158.07	95	PFAKE		23 02 50.0	+15
PSZ				LR	LR		
	comp=Z,438nm,20.0s						
PSZ	Piszkesteto	158.07	95	⇓ePKPdf	PKPdf	23 02 36.6	+1.2
KSH	Kashi	158.33	233	eSKKS	SKKSac	23 13 45.1	+5.6
KSH				AMB	AMB		
	comp=Z,320nm,6.0s						
KSH				LR	LR		
	comp=N,680nm,12.1s						
KSH				LR	LR		
	comp=E,220nm,4.5s						
KSH				LR	LR		
	comp=Z,300nm,7.0s						
KECS	Kecovo	158.71	94	ePKIKP	PKPdf	23 02 39.0	+2.9
KECS	Kecovo	158.71	94	ePKP	PKPdf	23 02 39.0	+2.9
LOT	Lotru	158.86	105	⇓iP	PKPdf	23 02 36.6	+0.1
ARR	Arges	159.29	106	⇓iP	PKPdf	23 02 37.2	+0.3
ANTO	Ankara	159.45	129	PFAKE		23 02 50.0	+13
ANTO				LR	LR		
	comp=Z,514nm,20.0s						
CRVS	Cervenica-Dubn	159.48	94	ePKIKP	PKPdf	23 02 41.8	+4.8
CRVS	Cervenica-Dubn	159.48	94	ePKP	PKPdf	23 02 41.8	+4.8
VOIR		159.56	106	⇓PKIKP	PKPdf	23 02 38.7	+1.4
VOIR		159.56	106	⇓iP	PKPdf	23 02 38.7	+1.4
STHS	Stebnicka Huta	159.60	93	ePKIKP	PKPdf	23 02 35.4	-1.7
STHS	Stebnicka Huta	159.60	93	ePKP	PKPdf	23 02 35.4	-1.7
TRPA	Tarpa	159.70	97	⇑ePKPdf	PKPdf	23 02 35.8	-1.4
BRTR	Keskin Array B	159.70	131	PKP	PKPdf	23 02 38.4	+0.7
BRTR				PKPab	PKPab	23 03 15.9	-0.6
BRTR	Keskin Array B	159.70	131	PKP	PKPdf	23 02 38.4	+0.7
	comp=Z,1.2nm,0.8s,baz=191,slow=2.9,SNR=8.3						
BRTR				PKPab	PKPab	23 03 15.9	-0.6
	comp=Z,7.2nm,1.0s,baz=183,slow=4.8,SNR=9.9						
KOLS	Kolonicke sedl	159.96	95	e	PKPdf	23 02 47.1	+10
DOPR	Dopca	160.07	106	⇓iP	PKPdf	23 02 45.9	+8.1
MLR	Muntele Rosu	160.09	107	⇑iP	PKPdf	23 02 37.4	-0.5
MKAR	Makanchi Array	160.14	257	PKIKP	PKPdf	23 02 36.9	-0.9
MKAR						23 03 17.2	
MKAR						23 06 57.7	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MKAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MKAR	Makanchi Array	160.14	257	PKP	PKPdf	23 02 36.9	-0.9
MKAR				PKPab	PKPab	23 03 17.2	-0.8
MKAR				PP	PP	23 06 57.7	-3.1
MKAR	Makanchi Array	160.14	257	PKP	PKPdf	23 02 36.9	-0.9
	comp=Z,0.3nm,0.8s,baz=132,slow=2.1,SNR=2.9						
MKAR				PKPab	PKPab	23 03 17.2	-0.8
	comp=Z,2.8nm,0.8s,baz=135,slow=6.2,SNR=9.7						
MKAR				PP	PP	23 06 57.7	-3.1
	comp=Z,3.0nm,1.0s,baz=132,slow=6.7,SNR=7.4						
ISR	Istrita	160.18	109	⇓PKIKP	PKPdf	23 02 39.4	+1.5
ISR	Istrita	160.18	109	⇓iP	PKPdf	23 02 39.4	+1.5
KWP	Kalwaria Pacla	160.54	94	⇑PKIKP	PKPdf	23 02 38.3	+0.2
KWP	Kalwaria Pacla	160.54	94	PFAKE		23 02 50.0	+12
KWP				LR	LR		
	comp=Z,625nm,21.0s						
KWP	Kalwaria Pacla	160.54	94	⇑iP	PKPdf	23 02 38.3	+0.2
KWP	Kalwaria Pacla	160.54	94	ePKP	PKPdf	23 02 39.7	+1.6
PLOR	Plostina	160.70	108	⇑PKIKP	PKPdf	23 02 37.6	-0.9
PLOR	Plostina	160.70	108	⇑iP	PKPdf	23 02 37.6	-0.9
VRI	Vrincioaia	160.75	108	⇓PKIKP	PKPdf	23 02 38.4	-0.1
VRI	Vrincioaia	160.75	108	⇓iP	PKPdf	23 02 38.4	-0.1
ARCES	ARCESS Array B	160.84	30	PKPab	PKPab	23 03 19.6	-0.9
ARCES	ARCESS Array B	160.84	30	PKPab	PKPab	23 03 19.6	-0.9
	comp=Z,3.6nm,0.8s,baz=309,slow=4.5,SNR=11						
BURAR	Bucovina Array	160.94	101	⇓iP	PKPdf	23 02 39.9	+1.1
CFR	Carcaliu	161.08	111	⇑PKIKP	PKPdf	23 02 38.7	-0.1
CFR	Carcaliu	161.08	111	⇑iP	PKPdf	23 02 38.7	-0.1
TESR	Tescani	161.10	106	⇑iP	PKPdf	23 02 40.8	+2.0
KEV	Kevo	161.14	29	PFAKE		23 02 50.0	+12
KEV				LR	LR		
	comp=Z,513nm,20.0s						
TKM2	Tokmak 2	161.14	239	PFAKE		23 02 50.0	+11
TKM2				LR	LR		
	comp=Z,449nm,21.0s						
AAK	Ala-Archa	161.46	236	PFAKE		23 02 50.0	+10
AAK				LR	LR		
	comp=Z,548nm,21.0s						
FRU	Bishkek	161.55	237	ePKP2	PKPab	23 03 30.0	+5.7
EKS2	Erkin-Say	161.82	235	PFAKE		23 02 50.0	+10
EKS2				LR	LR		
	comp=Z,452nm,20.0s						
ZALV	Zalesovo Beam	161.84	279	PKIKP	PKPdf	23 02 35.9	-3.4
ZALV						23 03 22.8	
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ZALV	Zalesovo Beam	161.84	279	PKP	PKPdf	23 02 35.9	-3.4
ZALV				PKPab	PKPab	23 03 22.8	-2.4
ZALV	Zalesovo Beam	161.84	279	PKP	PKPdf	23 02 35.9	-3.4
	comp=Z,0.3nm,0.3s,baz=333,slow=1.6,SNR=2.8						
ZALV				PKPab	PKPab	23 03 22.8	-2.4
	comp=Z,8.5nm,0.8s,baz=112,slow=3.9,SNR=20						
SUW	Suwalki	162.47	81	ePKIKP	PKPdf	23 02 39.2	-0.7
SUW	Suwalki	162.47	81	ePKPdf	PKPdf	23 02 39.2	-0.7
KIS	Kishinev	162.59	108	ePKP	PKPdf	23 02 33.0	-7.3
KIS	Kishinev	162.59	108	ePP	PP	23 07 09.0	-4.8
KIS				LRM	MLR	00 24 32.0	
	comp=Z,600nm,19.0s						
KIS	Kishinev	162.59	108	ePKIKP	PKPdf	23 02 33.0	-7.3
KIS				e		23 03 28.0	
KIS				pmax	pmax		
	comp=Z,600nm,19.0s						
NVS	Novosibirsk	162.96	281	ePKP2	PKPab	23 03 20.0	-10
NVS				i		23 07 15.5	
NVS				pmax	pmax		
	comp=Z,32nm,1.9s						
NVS				pmax	pmax		
	comp=N,7.0nm,1.6s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.6s						
GNI	Garni	163.95	155	PFAKE		23 02 50.0	+7.9
GNI				LR	LR		
	comp=Z,609nm,20.0s						
SIM	Simferopol’	164.00	121	i PKIKP	PKPdf	23 02 41.0	-0.8
SIM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	Kurchatov	164.24	264	PFAKE		23 02 50.0	+8.3
KURK				LR	LR		
	comp=Z,858nm,21.0s						
APA	Apatity	164.34	29	⇑ePKIKP	PKPdf	23 02 45.0	+3.7
FINES	FINESS Array B	164.35	55	PKPab	PKPab	23 03 35.8	-0.2
FINES	FINESS Array B	164.35	55	PKPab	PKPab	23 03 35.8	-0.2
	comp=Z,1.8nm,0.8s,baz=291,slow=4.3,SNR=2.9						
KIEV	Kiev	164.75	97	PFAKE		23 02 50.0	+7.8
KIEV				LR	LR		
	comp=Z,646nm,22.0s						
AKASG	Malin Array Be	164.76	97	PKIKP	PKPdf	23 02 40.0	-2.2
AKASG						23 03 37.0	
AKASG	Malin Array Be	164.76	97	PKP	PKPdf	23 02 40.0	-2.2
AKASG				PKPab	PKPab	23 03 37.0	-1.2
AKASG	Malin Array Be	164.76	97	PKP	PKPdf	23 02 39.9	-2.2
	comp=Z,0.4nm,0.4s,baz=251,slow=2.8,SNR=6.5						
AKASG				PKPab	PKPab	23 03 37.0	-1.2
	comp=Z,4.4nm,0.8s,baz=249,slow=4.9,SNR=7.9						
SOC	Sochi	165.44	137	ePKIKP	PKPdf	23 02 38.4	-4.6
SOC				e		23 09 48.7	
SOC				eSS	SS	23 27 59.5	-5.2
ANN	Anapa	165.45	129	ePKP2	PKPab	23 03 35.5	-5.8
ANN				eSS	SS	23 28 03.9	-1.1
ANN				pmax	pmax		
	comp=Z,220nm,7.5s						
ANN				pmax	pmax		
	comp=Z,37nm,1.4s						
KBZ	Khabaz	166.72	145	PKP2	PKPab	23 03 45.1	-1.8
KBZ						23 07 33.9	
KBZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KBZ	Khabaz	166.72	145	PKPab	PKPab	23 03 45.1	-1.8
KBZ				PP	PP	23 07 33.9	-1.0
KBZ	Khabaz	166.72	145	PKPab	PKPab	23 03 45.1	-1.8
	comp=Z,9.6nm,0.9s,baz=192,slow=4.4,SNR=12						
KBZ				PP	PP	23 07 33.9	-1.0
	comp=Z,0.5nm,0.4s,baz=229,slow=4.1,SNR=3.5						
KIV	Kislovodsk	166.85	144	ePKIKP	PKPdf	23 02 44.0	-0.3
KIV				i		23 03 45.4	
KIV				e		23 07 33.5	
KIV				e		23 09 48.4	
KIV				eSS	SS	23 28 18.8	-0.3
KIV				eSSS	SSS	23 34 51.0	
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MAK	Makhachkala	167.24	160	PKIKP	PKPdf	23 02 41.9	-2.5
MAK				e		23 07 34.5	
MAK				eSS	SS	23 28 23.2	+0.8
MAK				eSSS	SSS	23 34 50.3	
MAK				pmax	pmax		
	comp=Z,117nm,1.8s						
BRVK	Borovoye	169.90	265	PFAKE		23 03 00.0	+14
BRVK				LR	LR		
	comp=Z,786nm,20.0s						
VORD	Divnogorie	170.52	110	ePKP2	PKPab	23 04 16.2	+13
VORD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VORD				pmax	pmax		
	comp=N,60nm,0.8s						
VORD				pmax	pmax		
	comp=E,50nm,0.9s						
VSR	Storozhevoye	170.58	109	ePKP2	PKPab	23 04 16.5	+13
VSR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
VSR				pmax	pmax		
	comp=N,5.0nm,0.7s						
VSR				pmax	pmax		
	comp=E,6.0nm,0.7s						
VSR				pmax	pmax		
	comp=Z,190nm,4.6s						
VSR				pmax	pmax		
	comp=N,80nm,4.7s						
VSR				pmax	pmax		
	comp=E,60nm,3.1s						
VRHR	Novokhopersk	171.83	115	ePKP2	PKPab	23 04 08.0	-1.4
VRHR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VRHR				pmax	pmax		
	comp=N,3.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,2.0nm,0.4s						
VRHR				pmax	pmax		
	comp=Z,80nm,4.5s						
VRHR				pmax	pmax		
	comp=N,90nm,5.1s						
VRHR				pmax	pmax		
	comp=E,70nm,4.7s						

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*ISCJB **09** 22:55:08.5±0.4, 35°.92N±0°.02×53°.02E±0°.02, h8^{km}±3^{km}, mb3.6/3, Error ellipse: s-maj=3.6km s-min=3.1km az=30.4*
*AZER **09** 22:55:09.8, 35°.52N×52°.48E, h176^{km}*
*CSEM **09** 22:55:09.7±0.1, 35°.87N×53°.01E, h2^{km}, ML3.7, Error ellipse: s-maj=3.6km s-min=3.4km az=22.0*
*TEH **09** 22:55:10.2, 35°.89N×53°.03E, h4^{km}, ML3.7*
*NNC **09** 22:55:13.8±1.5, 36°.96N×51°.35E, h0^{km}, mb3.6, Error ellipse: s-maj=57.1km s-min=10.5km az=123.0*
*THR **09** 22:55:15.1±0.6, 35°.77N×52°.60E, h14^{km}±5^{km}, ML3.7*
*KISR **09** 22:55:17.4±0.7, 34°.54N×53°.40E, h21^{km}±999^{km}, ML2.9*
ISC 09 22:55:09.2±0.9**, 35°.88N**±0°.02×**53°.00E**±0°.02**, h9**^{km}±7^{km}**, n111,** σ1§**55**/128**, mb3.6**/3**, 28C-10D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISHM	Shahmirzad	0.25	107	⇓ePg	Pg	22 55 14.4	+0.1
ISHM				e		22 55 22.1	
	comp=Z,16µm,0.2s						
ISHM	Shahmirzad	0.25	107	⇓ePg	Pg	22 55 14.4	+0.1
IALA	Alasht	0.25	323	⇑ePg	Pg	22 55 13.9	-0.5
IALA				eSg	Sg	22 55 18.1	+0.2
IALA				e		22 55 18.9	
	comp=Z,66µm,0.2s						
IALA	Alasht	0.25	323	⇑ePg	Pg	22 55 13.9	-0.5
IALA				eSg	Sg	22 55 18.1	+0.2
IFIR	Firoozkooh	0.31	220	⇑ePg	Pg	22 55 15.4	0.0
IFIR				eSg	Sb	22 55 21.3	-1.1
IFIR				e		22 55 23.7	
	comp=Z,73µm,0.2s						
IFIR	Firoozkooh	0.31	220	⇑ePg	Pg	22 55 15.4	0.0
IFIR				eSg	Sb	22 55 21.3	-1.1
ILAS	Lasjerd	0.50	184	ePg	Pg	22 55 19.0	+0.1
ILAS				eSg	Sg	22 55 26.6	+1.1
ILAS				e		22 55 27.1	
	comp=Z,96µm,0.1s						
ILAS	Lasjerd	0.50	184	ePg	Pg	22 55 19.0	+0.1
ILAS				eSg	Sg	22 55 26.6	+1.1
IANJ	Anjilo	0.85	119	⇓ePg	Pg	22 55 25.2	-0.4
IANJ				eSg	Sg	22 55 36.4	-0.3
IANJ				e		22 55 42.0	
	comp=Z,12µm,0.1s						
IANJ	Anjilo	0.85	119	⇓ePg	Pg	22 55 25.2	-0.4
IANJ				eSg	Sg	22 55 36.4	-0.3
IGLO	Ghaloghah	0.92	47	ePg	Pg	22 55 26.7	-0.1
IGLO				e		22 55 51.5	
	comp=Z,19µm,0.2s						
IVRN	Varamin	1.36	230	eSg	Sg	22 55 54.8	+1.8
IVRN	Varamin	1.36	230	eSg	Sg	22 55 54.8	+1.8
CHTH	Charan	1.52	272	ePg	Pn	22 55 37.4	+0.5
CHTH	Charan	1.52	272	ePg	Pn	22 55 37.4	+0.5
IR3	Iran Long-Peri	1.66	256	ePn	Pb	22 55 39.9	-0.1
IR3				eSg	Sg	22 56 03.2	+0.7
IR3	Iran Long-Peri	1.66	256	ePn	Pb	22 55 39.9	-0.1
IR3				eSg	Sg	22 56 03.2	+0.7
THKV	Tehran--Karaj	1.72	272	ePg	Pb	22 55 41.3	+0.2
THKV				AML	AML	22 56 13.7	
	comp=N,1µm,0.6s						
THKV				AML	AML	22 56 14.6	
	comp=E,1µm,0.8s						
THKV	Tehran--Karaj	1.72	272	ePg	Pb	22 55 41.3	+0.2
IMHD	Mahdasht	1.91	265	ePn	Pb	22 55 44.4	+0.2
IMHD				e		22 56 15.1	
	comp=Z,6µm,0.1s						
IMHD	Mahdasht	1.91	265	ePn	Pb	22 55 44.4	+0.2
GHVR	GHOM	1.98	225	ePg	Pg	22 55 46.2	-0.8
GHVR				AML	AML	22 56 22.6	
	comp=N,996nm,0.4s						
GHVR				AML	AML	22 56 22.9	
	comp=E,1µm,0.6s						
GHVR	GHOM	1.98	225	ePg	Pg	22 55 46.2	-0.8
IMND	Minoodasht	2.38	54	ePn	Pb	22 55 52.4	+0.2
IMND				eSg	Sg	22 56 24.4	-1.1
IRAZ	Razeghan	2.54	260	ePn	Pb	22 55 53.2	-2.0
IRAZ				e		22 56 36.0	
	comp=Z,5µm,0.2s						
IRAZ	Razeghan	2.54	260	ePn	Pb	22 55 53.2	-2.0
ASAO	Ashtian	2.77	242	ePn	Pb	22 55 56.7	-2.4
ASAO				eSg	Sb	22 56 31.8	-1.5
ASAO				AML	AML	22 56 41.2	
	comp=N,460nm,0.5s						
ASAO	Ashtian	2.77	242	ePn	Pb	22 55 56.7	-2.4
IKLH	Kolahrood	2.81	205	ePn	Pn	22 55 56.3	+1.7
IKLH				e		22 56 52.1	
	comp=Z,4µm,0.3s						
IKLH	Kolahrood	2.81	205	ePn	Pn	22 55 56.3	+1.7
IZEF	Zefreh	3.03	191	ePn	Pn	22 55 59.0	+1.4
IZEF				eSg	Sg	22 56 44.2	-2.3
IZEF				e		22 56 53.1	
	comp=Z,3µm,0.2s						
IZEF	Zefreh	3.03	191	ePn	Pn	22 55 59.0	+1.4
KHMZ	Khomeyn	3.29	230	ePn	Pn	22 56 03.9	+2.8
KHMZ	Khomeyn	3.29	230	ePn	Pn	22 56 03.9	+2.8
IGAR	Gharneh	3.56	193	e		22 56 25.7	
	comp=Z,993nm,0.2s						
IGAR				ePn	Pn	22 56 06.2	+1.4
IPIR	Pirpir	3.63	209	e	Pg	22 56 21.9	+3.1
	comp=Z,2µm,0.2s						
ICHK	Chekchek	3.81	162	ePn	Pn	22 56 09.8	+1.5
ICHK				e		22 57 24.9	
	comp=Z,3µm,0.3s						
ICHK	Chekchek	3.81	162	ePn	Pn	22 56 09.8	+1.5
ISAD	Sadrabad	4.00	172	ePn	Pn	22 56 11.0	+0.1
ISAD				e		22 57 25.1	
	comp=Z,2µm,0.2s						
ISAD	Sadrabad	4.00	172	ePn	Pn	22 56 11.0	+0.1
ISFR	Sfrayin	4.20	72	ePn	Pn	22 56 14.6	+0.9
ISFR				e		22 57 35.6	
	comp=Z,1µm,0.3s						
ISFR	Sfrayin	4.20	72	ePn	Pn	22 56 14.6	+0.9
LKRN	Lenkeran, Azer	4.39	311	⇑P	Pn	22 56 17.2	+1.2
	SNR=9.0						
LKRN				⇑S	Sn	22 57 07.5	+0.2
LKRN	Lenkeran, Azer	4.39	311	P	Pn	22 56 17.2	+1.2
	SNR=9.0						
LKRN				S	Sn	22 57 07.6	+0.2
IMEH	Mehriz	4.68	163	ePn	Pn	22 56 21.3	+1.1
IMEH				e		22 57 49.9	
	comp=Z,928nm,0.3s						
IMEH	Mehriz	4.68	163	ePn	Pn	22 56 21.3	+1.1
SNGE	Sanandaj	4.68	262	ePn	Pn	22 56 23.2	+3.0
SNGE	Sanandaj	4.68	262	ePn	Pn	22 56 23.2	+3.0
ISRB	Sarab	4.70	296	ePn	Pn	22 56 23.8	+3.4
ISRB				e		22 56 26.0	
	comp=Z,1µm,0.2s						
ISRB	Sarab	4.70	296	ePn	Pn	22 56 23.8	+3.4
IAKL	Akhelmad	4.71	80	ePn	Pn	22 56 21.7	+1.0
IAKL				e		22 57 53.8	
	comp=Z,238nm,0.3s						
IBAF	Bafgh	4.78	153	ePn	Pn	22 56 22.6	+1.0
IBAF				e		22 57 55.2	
	comp=Z,1µm,0.3s						
IBAF	Bafgh	4.78	153	ePn	Pn	22 56 22.6	+1.0
IPAY	Payeh	4.89	82	ePn	Pn	22 56 24.1	+1.0
IPAY				e		22 57 37.8	
	comp=Z,176nm,0.3s						
IPAY	Payeh	4.89	82	ePn	Pn	22 56 24.1	+1.0
GLBA	Clilabad	4.96	314	⇑P	Pn	22 56 25.4	+1.5
	SNR=20						
GLBA				⇑S	Sn	22 57 21.3	-0.2
GLBA	Clilabad	4.96	314	P	Pn	22 56 25.4	+1.5
	SNR=20						
GLBA				S	Sn	22 57 21.3	-0.2
IMOG	Moghan	5.15	86	ePn	Pn	22 56 27.7	+1.0
IMOG	Moghan	5.15	86	ePn	Pn	22 56 27.7	+1.0
ALIB	Äli-Bayra	5.15	323	⇑P	Pn	22 56 29.6	+3.1
	SNR=3.1						
ALIB				⇑S	Sn	22 57 33.1	+7.0
ALIB	Äli-Bayra	5.15	323	P	Pn	22 56 29.6	+3.1
	SNR=3.1						
IVIS	Veis	5.21	257	ePn	Pn	22 56 27.9	+0.4
IVIS	Veis	5.21	257	ePn	Pn	22 56 27.9	+0.4
ISRO	Mashad	5.26	83	ePn	Pn	22 56 29.0	+0.9
ISRO	Mashad	5.26	83	ePn	Pn	22 56 29.0	+0.9
IHRS	Heris	5.35	299	ePn	Pn	22 56 32.0	+2.6
IHRS				e		22 56 36.4	
	comp=Z,330nm,0.1s						
IHRS	Heris	5.35	299	ePn	Pn	22 56 32.0	+2.6
IDHR	Dehrash	5.53	260	ePn	Pn	22 56 34.7	+2.7
IDHR	Dehrash	5.53	260	ePn	Pn	22 56 34.7	+2.7
ITEG	Tejag	5.61	120	ePn	Pn	22 56 35.3	+2.3
ITEG				e		22 58 27.0	
	comp=Z,480nm,0.3s						
ITEG	Tejag	5.61	120	ePn	Pn	22 56 35.3	+2.3
IMYA	Miami	5.77	83	ePn	Pn	22 56 35.8	+0.6
IMYA				e		22 57 07.9	
	comp=Z,262nm,0.5s						
IMYA	Miami	5.77	83	ePn	Pn	22 56 35.8	+0.6
PQL	Pirkuli	6.00	326	⇑P	Pn	22 56 40.6	+2.3
	SNR=3.1						
PQL				⇑S	Sn	22 57 48.7	+1.5
PQL	Pirkuli	6.00	326	P	Pn	22 56 40.6	+2.3
	SNR=3.1						
PQL				S	Sn	22 57 48.7	+1.5
IKOO	Kooshah	6.05	123	ePn	Pn	22 56 40.3	+1.1
IKOO	Kooshah	6.05	123	ePn	Pn	22 56 40.3	+1.1
SIZA	Siyzn	6.10	329	⇑P	Pn	22 56 43.5	+3.9
	SNR=7.2						
SIZA				⇑S	Sn	22 57 50.3	+0.7
IML	Ismayilli	6.20	324	⇑P	Pn	22 56 42.5	+1.6
	SNR=4.2						
IML				⇑S	Sn	22 57 51.3	-0.6
IML	Ismayilli	6.20	324	P	Pn	22 56 42.5	+1.6
	SNR=4.2						
IML				S	Sn	22 57 51.3	-0.6
BRDA	Brd	6.34	315	⇑P	Pn	22 56 45.2	+2.4
	SNR=5.2						
BRDA				⇑S	Sn	22 57 58.1	+2.7
BRDA	Brd	6.34	315	P	Pn	22 56 45.2	+2.4
	SNR=5.2						
BRDA				S	Sn	22 57 58.1	+2.7
ISHB	Shabestar	6.37	294	ePn	Pn	22 56 44.7	+1.2
ISHB				e		22 56 58.4	
	comp=Z,125nm,0.3s						
ISHB	Shabestar	6.37	294	ePn	Pn	22 56 44.7	+1.2
QUBA	Quba, Azerbaij	6.50	329	⇑P	Pn	22 56 47.7	+2.6
	SNR=4.2						
QUBA				⇑S	Sn	22 58 00.1	+0.6
QUBA	Quba, Azerbaij	6.50	329	P	Pn	22 56 47.7	+2.6
	SNR=4.2						
QUBA				S	Sn	22 58 00.1	+0.6
SEKA	Sheki	7.00	321	⇑P	Pn	22 56 53.3	+1.4
	SNR=8.9						
SEKA				⇓S	Sn	22 58 09.9	-1.7
SEKA	Sheki	7.00	321	P	Pn	22 56 53.3	+1.4
	SNR=8.9						
GANJ	Ganja	7.08	314	⇑P	Pn	22 56 54.3	+1.2
	SNR=15						
GANJ				⇑S	Sn	22 58 12.2	-1.6
GANJ	Ganja	7.08	314	P	Pn	22 56 54.3	+1.2
	SNR=15						
MIB	Mutribah	7.71	220	eP	Pn	22 57 03.3	+1.7
MIB	Mutribah	7.71	220	eP	Pn	22 57 03.3	+1.7
UMR	Umm Al-Rimmam	7.72	217	eP	Pn	22 57 03.3	+1.5
UMR	Umm Al-Rimmam	7.72	217	eP	Pn	22 57 03.3	+1.5
DGRG	David-gareji	8.15	315	P	Pn	22 57 09.1	+1.3
NAY	Al-Naaiem	8.20	218	eP	Pn	22 57 09.6	+1.2
NAY				eS	Sn	22 58 34.2	-7.1
NAY				AML	AML	22 58 48.3	
	comp=Z,1.5nm,0.5s						
NAY	Al-Naaiem	8.20	218	eP	Pn	22 57 09.6	+1.2
RDF	Al-Radifah	8.32	215	eP	Pn	22 57 10.5	+0.4
RDF	Al-Radifah	8.32	215	eP	Pn	22 57 10.5	+0.4
GUDG	Gudauri	9.32	317	P	Pn	22 57 25.0	+1.1
AB31	Akbulak array	14.30	19	⇑Pn	Pn	22 58 30.9	-0.9
	comp=Z,0.3nm,0.5s,baz=205,slow=13,SNR=8.6						
AB31				Sn	Sn	23 01 04.6	-5.9
	comp=Z,1.2nm,0.6s,baz=201,slow=23,SNR=3.5						
AB31	Akbulak array	14.30	19	Pn	Pn	22 58 30.9	-0.9
	comp=Z,0.3nm,0.5s,SNR=8.6						
AB31				Sn	Sn	23 01 04.6	-5.9
	comp=Z,1.2nm,0.6s,SNR=3.5						
AKTO	Aktyubinsk	14.99	12	⇑Pn	Pn	22 58 37.5	-3.7
	comp=Z,2.8nm,1.1s						
AKTO				⇓Sn	Sn	23 01 18.7	-8.7
	comp=Z,2.0nm,0.7s						
AKTO	Aktyubinsk	14.99	12	Pn	Pn	22 58 37.5	-3.7
	comp=Z,2.8nm,1.1s						
AKTO				Sn	Sn	23 01 18.7	-8.7
	comp=Z,2.0nm,0.7s						
ZRNK	Zerenda	20.46	29	⇓Pn	Pn	22 59 52.0	+2.9
	comp=Z,0.9nm,0.8s						
ZRNK				⇓Sn	Sn	23 03 41.4	+1.8
	comp=Z,2.4nm,1.3s						
ZRNK	Zerenda	20.46	29	Pn	Pn	22 59 52.0	+2.9
	comp=Z,0.9nm,0.8s						
ZRNK				Sn	Sn	23 03 41.4	+1.7
	comp=Z,2.4nm,1.3s						
BRVK	Borovoye	21.05	30	⇑Pn	P	22 59 59.2	+5.9
	comp=Z,5.6nm,1.3s						
BRVK				⇑Sn	Sn	23 03 55.3	+1.5
	comp=Z,3.8nm,1.0s						
BRVK	Borovoye	21.05	30	Pn	P	22 59 59.2	+5.9
	comp=Z,5.6nm,1.3s						
BRVK				Sn	Sn	23 03 55.3	+1.5
	comp=Z,3.8nm,1.0s						
BVA0	Borovoye Array	21.07	30	⇓Pn	P	22 59 59.7	+6.2
	comp=Z,2.4nm,0.8s,baz=226,slow=15,SNR=4.4						
BVA0				Sn	Sn	23 03 55.9	+1.6
	comp=Z,11nm,1.4s,baz=234,slow=17,SNR=9.1						
BVA0	Borovoye Array	21.07	30	Pn	P	22 59 59.7	+6.2
	comp=Z,2.4nm,0.8s,SNR=4.4						
BVA0				Sn	Sn	23 03 55.9	+1.6
	comp=Z,11nm,1.4s,SNR=9.1						
VOSK	Vostochnaya	21.09	31	⇑Pn	P	23 00 00.3	+6.5
	comp=Z,2.3nm,0.8s						
VOSK				⇓Sn	Sn	23 03 59.1	+4.2
	comp=Z,3.4nm,1.4s						

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*ISCJB **09** 23:15:13.4±0.3, 61°.97N±0°.02×79°.75W±0°.06, h25^{km},*

mb3.4/7, Error ellipse: s-maj=4.3km s-min=2.8km az=149.7
IDC **09** *23:15:15.7±0.7, 62°.02N×79°.52W, h0km, mb3.6/7, mb1 3.9/11, mb1mx3.6/34, mbtmp3.7/11, ML3.1/4, Error ellipse: s-maj=11.6km s-min=8.0km az=174.0*
OTT **09** *23:15:16.2±0.1, 62°.06N×79°.62W, h5km, MN3.9/39, 97km southwest from Ivujivik, Qc Boothia Ungava Seismic Zone.*
ISC 09 23:15:14.9±0.5, **61°.97N**±0°.03×**79°.65W**±0°.04, **h25km, n54, σ2s.52**/78, **mb3.5**/7, **Hudson Bay**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKVQ	Akulivik	1.36	148	PG	Pb	23 15 42.3	+2.7
AKVQ				SG	Sb	23 16 00.9	+4.4
AKVQ				Trac		23 16 03.8	
	comp=Z,301nm,0.1s						
INUQ	Inukjuak	3.61	167	PN	Pn	23 16 13.9	+4.8
INUQ				SN	Sb	23 16 57.8	-3.5
INUQ				Trac		23 17 12.7	
	comp=Z,126nm,0.2s						
FRB	Frobisher Bay	5.39	66	PN	Pn	23 16 36.1	+2.6
FRB				SN	Sn	23 17 34.8	+0.1
FRB				LG	Lg	23 17 59.4	
FRB				Trac		23 18 02.3	
	comp=Z,49nm,0.3s						
FRB	Frobisher Bay	5.39	66	Pn	Pn	23 16 36.2	+2.6
	0.5nm,0.3s,baz=260,slow=14,SNR=8.4						
FRB				Sn	Sn	23 17 33.5	-1.2
	11nm,0.3s,baz=151,slow=0.7,SNR=11						
FRB				Lg	Lg	23 17 58.2	
	12nm,0.3s,baz=344,slow=21,SNR=5.4						
SEDN	First Sedna Si	5.49	289	PN	Pn	23 16 37.1	+2.2
SEDN				SN	Sn	23 17 37.8	+0.6
SEDN				LG	Lg	23 18 07.7	
SEDN				Trac		23 18 10.8	
	comp=Z,71nm,0.4s						
QILN	Qililugaq Expl	5.54	331	PN	Pn	23 16 37.6	+2.1
QILN				SN	Sn	23 17 36.8	-1.5
QILN				LG	Lg	23 18 09.4	
QILN				Trac		23 18 18.1	
	comp=N,54nm,0.3s						
JOSN	Second Sedna S	5.63	288	PN	Pn	23 16 38.8	+2.0
JOSN				SN	Sn	23 17 41.5	+0.9
JOSN				Trac		23 18 13.5	
	comp=Z,58nm,0.3s						
JOSN				LG	Lg	23 18 13.8	
WAGN	Wager Bay	5.83	317	PN	Pn	23 16 41.6	+2.0
WAGN				SN	Sn	23 17 44.4	-1.2
WAGN				LG	Lg	23 18 16.1	
WAGN				Trac		23 18 20.1	
	comp=Z,114nm,0.3s						
NUNN	Nunuq Camp, NU	6.05	308	PN	Pn	23 16 44.7	+2.1
NUNN				SN	Sn	23 17 50.5	-0.4
NUNN				LG	Lg	23 18 24.3	
NUNN				Trac		23 18 43.4	
	comp=Z,113nm,0.6s						
SRLN	Sarcpa Lake, N	6.79	349	PN	Pn	23 16 54.6	+1.9
SRLN				SN	Sn	23 18 06.4	-2.7
SRLN				LG	Lg	23 18 44.7	
SRLN				Trac		23 19 02.0	
	comp=Z,128nm,0.6s						
KUQ	Kuujjuuaa	6.83	120	PN	Pn	23 16 58.2	+4.9
KUQ				SN	Sn	23 18 11.2	+1.0
KUQ				LG	Lg	23 18 49.0	
KUQ				Trac		23 18 56.2	
	comp=Z,84nm,0.5s						
ARVN	Arviat, NU	6.95	269	PN	Pn	23 16 57.7	+2.8
ARVN				SN	Sn	23 18 13.3	+0.3
ARVN				LG	Lg	23 18 56.4	
ARVN				Trac		23 18 59.4	
	comp=Z,82nm,0.6s						
LAIN	Lailor River,	7.35	349	PN	Pn	23 17 01.9	+1.5
LAIN				SN	Sn	23 18 20.7	-2.1
LAIN				Trac		23 19 02.4	
	comp=Z,138nm,0.8s						
LAIN				LG	Lg	23 19 05.1	
BULN	Bullion Camp,	7.36	313	PN	Pn	23 17 02.4	+1.7
BULN				SN	Sn	23 18 20.6	-2.7
BULN				LG	Lg	23 19 03.2	
BULN				Trac		23 19 15.8	
	comp=Z,94nm,0.7s						
ILON	Igloolik, Nuna	7.49	354	PN	Pn	23 17 03.6	+1.3
ILON				SN	Sn	23 18 23.6	-2.7
ILON				LG	Lg	23 19 04.2	
ILON				Trac		23 19 07.3	
	comp=Z,72nm,0.4s						
KUGN	Kugaaruk Camp,	7.55	329	PN	Pn	23 17 04.5	+1.3
KUGN				SN	Sn	23 18 25.6	-2.2
KUGN				LG	Lg	23 19 12.7	
KUGN				Trac		23 19 13.7	
	comp=Z,62nm,0.5s						
YBKN	Baker Lake, Hu	7.77	295	PN	Pn	23 17 08.4	+2.3
YBKN				SN	Sn	23 18 32.5	-0.7
YBKN				LG	Lg	23 19 22.6	
YBKN				Trac		23 19 23.1	
	comp=Z,79nm,0.6s						
AP3N	Apex site 3 Nu	7.78	347	PN	Pn	23 17 07.9	+1.6
AP3N				SN	Sn	23 18 31.1	-2.3
AP3N				LG	Lg	23 19 14.6	
AP3N				Trac		23 19 16.0	
	comp=Z,66nm,0.6s						
STLN	Stellar Camp,	7.83	319	PN	Pn	23 17 08.8	+1.8
STLN				SN	Sn	23 18 32.9	-1.7
STLN				LG	Lg	23 19 15.8	
STLN				Trac		23 19 33.7	
	comp=Z,68nm,0.5s						
FCC	Fort Churchill	7.84	252	PN	Pn	23 17 10.5	+3.3
FCC				SN	Sn	23 18 35.4	+0.4
FCC				LG	Lg	23 19 26.3	
FCC				Trac		23 19 35.4	
	comp=Z,30nm,0.4s						
SILO	Sutton Inlier	8.00	203	PN	Pn	23 17 12.7	+3.2
SILO				SN	Sn	23 18 40.1	+1.0
SILO				Trac		23 19 36.0	
	comp=Z,43nm,0.5s						
SILO				LG	Lg	23 19 36.9	
GIFN	Gifford Fjord,	8.10	355	PN	Pn	23 17 11.8	+1.1
GIFN				SN	Sn	23 18 37.6	-3.7
GIFN				LG	Lg	23 19 24.2	
GIFN				Trac		23 19 27.3	
	comp=Z,78nm,0.6s						
LG4Q	La Grande 4	8.87	158	PN	Pn	23 17 24.4	+3.1
LG4Q				SN	Sn	23 18 59.1	-1.2
LG4Q				LG	Lg	23 19 52.8	
LG4Q				Trac		23 19 55.3	
	comp=Z,72nm,0.4s						
WEMQ	Wemindji, Queb	8.98	173	PN	Pn	23 17 26.5	+3.6
WEMQ				SN	Sn	23 19 05.9	+2.8
WEMQ				LG	Lg	23 19 57.9	
WEMQ				Trac		23 19 58.9	
	comp=Z,91nm,0.6s						
VIMO	Victor Mine	9.44	195	PN	Pn	23 17 32.5	+3.5
VIMO				SN	Sn	23 19 14.5	+0.3
VIMO				Trac		23 20 17.5	
	comp=Z,29nm,0.4s						
SCHQ	Schefferville	9.80	131	PN	Pn	23 17 35.2	+1.1
SCHQ				SN	Sn	23 19 20.8	-2.5
SCHQ				Trac		23 20 24.5	
	comp=Z,49nm,0.5s						
SCHQ	Schefferville	9.80	131	Pn	Pn	23 17 35.0	+0.9
	1.2nm,0.3s,baz=325,slow=15,SNR=11						
SCHQ				Sn	Sn	23 19 19.3	-4.0
	3.0nm,0.3s,baz=48,slow=15,SNR=5.3						
SCHQ				Lg	Lg	23 20 17.9	
	6.9nm,0.3s,baz=82,slow=12,SNR=8.4						
YOSQ	Ashton Mining	9.96	153	PN	Pn	23 17 39.2	+2.9
YOSQ				SN	Sn	23 19 25.4	-1.8
YOSQ				LG	Lg	23 20 27.9	
YOSQ				Trac		23 20 28.6	
	comp=Z,46nm,0.4s						
MALO	McAlpine Lake	11.97	180	PN	Pn	23 18 06.5	+2.7
MALO				SN	Sn	23 20 14.2	-2.2
MALO				LG	Lg	23 21 22.5	
MALO				Trac		23 21 30.9	
	comp=Z,40nm,0.7s						
PKLO	Pickle Lake	12.01	214	PN	Pn	23 18 06.4	+2.2
PKLO				SN	Sn	23 20 13.6	-3.6
PKLO				Trac		23 21 34.7	
	comp=Z,257nm,1.0s						
MATQ	Matagami	12.29	174	PN	Pn	23 18 10.7	+2.6
MATQ				SN	Sn	23 20 20.2	-3.9
MATQ				Trac		23 21 42.0	
	comp=Z,36nm,0.6s						
NANO	Nakina Ontario	12.32	202	PN	Pn	23 18 10.2	+1.6
NANO				SN	Sn	23 20 24.5	-0.4
NANO				Trac		23 21 48.4	
	comp=Z,29nm,0.6s						
KAPO	Kapuskasing	12.65	189	PN	Pn	23 18 16.2	+3.3
KAPO				SN	Sn	23 20 29.9	-2.9
KAPO				LG	Lg	23 21 52.5	
KAPO				Trac		23 21 57.8	
	comp=Z,34nm,0.7s						
GTO	Geraldton	12.91	202	PN	Pn	23 18 21.7	+5.1
GTO				SN	Sn	23 20 35.0	-4.3
GTO				Trac		23 21 21.0	
	comp=Z,0.8nm,0.0s						
SFJD	Kangerlussuaq	13.40	55	SN	Sn	23 20 45.9	-5.0
SFJD				Trac		23 22 55.1	
	comp=Z,81nm,0.8s						
FFC	Flin Flon	13.73	248	SN	Sn	23 20 54.3	-4.9
FFC				SN	Sn	23 20 54.8	-4.4
FFC				Trac		23 22 31.9	
	comp=Z,52nm,0.6s						
SMQ	Clarke City	13.78	143	PN	Pn	23 18 28.7	+0.3
SMQ				SN	Sn	23 20 55.2	-5.1
SMQ				Trac		23 22 28.6	
	comp=Z,19nm,0.5s						
RES	Resolute Bay	13.88	343	Pn	Pn	23 18 29.1	-0.5
	0.4nm,0.3s,baz=148,slow=11,SNR=8.9						
RES				Sn	Sn	23 20 53.7	-8.9
	0.5nm,0.3s,baz=307,slow=5.2,SNR=1.3						
RES				Lg	Lg	23 22 21.9	
	1.1nm,0.3s,baz=55,slow=22,SNR=5.8						
PNPO	Pukaskwa Natio	13.91	199	PN	Pn	23 18 31.3	+1.1
PNPO				SN	Sn	23 20 58.2	-5.5
VLDQ	Val d'Or	13.94	174	PN	Pn	23 18 29.9	-0.8
VLDQ				SN	Sn	23 20 57.2	-7.2
VLDQ				Trac		23 22 30.1	
	comp=Z,55nm,0.9s						
ICQ	Pointe Anglais	14.25	145	PN	Pn	23 18 35.0	+0.2
ICQ				SN	Sn	23 21 07.7	-4.2
ICQ				LG	Lg	23 22 38.8	
ICQ				Trac		23 22 46.2	
	comp=Z,71nm,1.1s						
BELQ	Belleterre	14.61	177	PN	Pn	23 18 39.1	-0.7
BELQ				SN	Sn	23 21 15.7	-5.1
BELQ				LG	Lg	23 22 48.6	
BELQ				Trac		23 23 05.4	
	comp=Z,41nm,0.9s						
ULM	Lac du Bonnet	14.77	225	Pn	Pn	23 18 40.8	-1.0
	0.7nm,0.3s,baz=34,slow=12,SNR=5.2						
ULM				Sn	Sn	23 21 16.8	-7.6
	1.2nm,0.3s,baz=208,slow=18,SNR=4.8						
ULM				Lg	Lg	23 22 53.6	
	1.8nm,0.3s,baz=300,slow=22,SNR=6.9						
GSQ	Grosses Roches	14.85	146	SN	Sn	23 21 23.3	-3.3
GSQ				Trac		23 23 11.2	
	comp=Z,11nm,0.3s						
LMQ	La Malbaie	15.39	156	PN	P	23 18 53.5	-1.2
LMQ				SN	Sn	23 21 36.8	-2.9
LMQ				LG	Lg	23 23 13.2	
LMQ				Trac		23 23 18.3	
	comp=Z,85nm,1.2s						
YKA	Yellowknife Ar	16.18	287	Pn	Pn	23 18 59.1	-1.1
	0.4nm,0.3s,baz=73,slow=12,SNR=13						
YKA				Sn	Sn	23 21 49.9	-8.7
	0.4nm,0.3s,baz=70,slow=24,SNR=6.2						
YKA				Lg	Lg	23 23 34.9	
	0.4nm,0.3s,baz=74,slow=30,SNR=12						
SADO	Sadowa	17.23	179	Lg	Lg	23 24 01.7	
	0.3nm,0.3s,baz=287,slow=19,SNR=2.6						
INK	Inuvik	22.82	309	P	P	23 20 18.6	+3.3
	0.9nm,0.5s,baz=91,slow=13,SNR=4.2						
INK				Lg	Lg	23 27 08.8	
	2.9nm,0.9s,baz=225,slow=13,SNR=3.1						
PDAR	Pinedale Array	26.12	237	P	P	23 20 52.2	+5.4
	1.6nm,0.9s,baz=48,slow=9.0,SNR=8.3						
TKL	Tuckaleechee C	26.46	188	P	P	23 20 55.0	+5.3
	0.5nm,0.3s,baz=8.1,slow=7.1,SNR=3.0						
ILAR	Eielson Array	28.99	305	P	P	23 21 16.9	+4.8
	0.4nm,0.7s,baz=69,slow=7.3,SNR=4.6						
TXAR	Lajitas Array	36.26	217	P	P	23 22 21.7	+5.8
	0.3nm,0.4s,baz=50,slow=7.4,SNR=6.7						
MKAR	Makanchi Array	70.62	13	P	P	23 26 31.9	+4.3
	0.2nm,0.6s,baz=30,slow=4.2,SNR=3.7						
TORD	Torodi Ar. Bea	74.43	91	P	P	23 26 54.4	+3.7
	0.3nm,0.8s,baz=338,slow=7.3,SNR=2.9						

CSEM **09** *23:56:43.1±0.4, 41°.30N×22°.74E, h17km±1km, MD3.4, Error ellipse: s-maj=10.8km s-min=8.2km az=33.0*
SKO **09** *23:56:44.1, 41°.28N×22°.72E, h11km, M0.8, ML1.1*
ATH **09** *23:56:44.2, 41°.27N×22°.76E, h26km±12km, MD3.4/3*
ISC 09 23:56:43.8±1.4, **41°.27N**±0°.06×**22°.71E**±0°.07, **h14km**±14km, **n8, σ0s.23**/15, **1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.12	295	⇑iPg	Pg	23 56 47.0	-0.2
VAY				i Sg	Sg	23 56 49.4	0.0
VAY				eLg	Lg	23 56 49.5	
	comp=N,158nm,0.6s						
VAY				eLg	Lg	23 56 49.6	
	comp=E,79nm,0.2s						
VAY	Valandovo	0.12	295	i Sg	Sg	23 56 49.8	+0.4
VAY				eLg	Lg	23 56 50.0	
	comp=E,79nm,0.2s						
SOH	Sokhos	0.66	132	ePN	Pg	23 56 56.8	+0.1
SOH				eSN	Sb	23 57 06.5	+0.3
SOH	Sokhos	0.66	132	ePn	Pg	23 56 56.8	+0.1
SOH				eSn	Sb	23 57 06.5	+0.3
NVR	Nevrokopi	0.87	84	ePN	Pb	23 57 00.5	-0.2
NVR				eSN	Sg	23 57 12.2	+0.1
NVR	Nevrokopi	0.87	84	ePn	Pb	23 57 00.5	-0.2
NVR				eSn	Sg	23 57 12.2	+0.1
PLG	Polygyros	1.06	148	ePN	Pb	23 57 03.8	0.0
PLG				eSN	Sg	23 57 17.7	-0.3
PLG	Polygyros	1.06	148	ePn	Pb	23 57 03.8	0.0
PLG				eSn	Sg	23 57 17.7	-0.3

IDC **09** *23:57:28.0±1.9, 6°.66N×71°.10W, h0km, mb3.7/2, mb1 3.7/3, mb1mx3.4/24, mbtmp3.6/3, ML1.4/1, Error ellipse: s-maj=54.6km s-min=18.4km az=154.0*
FUNV **09** *23:57:29.6, 6°.27N×71°.22W, h5km, MW4.0*
ISC 09 23:57:29.3±1.6, **6°.44N**±0°.06×**71°.15W**±0°.05, **h1km**±12km, **n20, σ0s.99**/28, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELOV	Elorza	1.75	71	eP	Pb	23 58 02.5	+0.4
ELOV				eS	Sg	23 58 25.9	+0.4
CAPV	Capacho	1.83	321	eP	Pb	23 58 02.9	-0.8
CAPV				eS	Sb	23 58 27.4	+0.3
SOCV	Socops	1.86	9	eP	Pn	23 58 03.0	+0.8
SOCV				eS	Sg	23 58 29.4	+0.5
VIGV	El Vigia	2.39	355	eP	Pn	23 58 11.1	+1.5
VIGV				eS	Sb	23 58 41.8	-1.5
SANV	Sanarito	3.44	28	eP	Pn	23 58 24.9	+0.8
SANV				eS	Sn	23 59 06.6	+1.1
ROSC	El Rosal	3.53	244	Pn	Pn	23 58 27.4	+1.8
	0.6nm,0.3s,baz=90,slow=20,SNR=2.3						
ROSC				Pg	Pg	23 58 36.5	-0.6
	4.9nm,0.3s,baz=92,slow=18,SNR=12						
ROSC				Lg	Lg	23 59 23.1	
	11nm,0.3s,baz=57,slow=20,SNR=4.7						
CURV	Curarigua	3.74	18	eP	Pn	23 58 29.1	+0.8
QARV	Quebrada Arrib	3.79	9	eP	Pn	23 58 30.4	+1.5
QARV				eS	Sn	23 59 14.9	+0.7
BAUV	El Baul	3.96	51	eP	Pn	23 58 31.4	+0.2
TEPV	Terepaima	4.00	29	eP	Pn	23 58 32.8	+1.0
MAPV	Macapo	4.30	38	eP	Pn	23 58 36.6	+0.8
MAPV				eS	Sn	23 59 26.0	-0.6
SIQV	Siquisique	4.39	18	eP	Pn	23 58 37.8	+0.8
DABV	Dabajuro	4.48	6	eP	Pn	23 58 39.3	+0.9
TURV	Turiamo	5.16	39	eP	Pn	23 58 48.1	+0.5
MERV	Las Mercedes	5.56	60	eP	Pn	23 58 53.1	-0.1
MONV	Montecano	5.60	12	eP	Pn	23 58 54.1	+0.3
BIRV	Birongo	6.28	50	eP	Pn	23 59 03.5	+0.5
CUPV	Cœpira	6.41	56	eP	Pn	23 59 04.7	-0.2
LPAZ	La Paz	22.78	172	P	P	00 02 35.3	+1.3
	1.9nm,0.7s,baz=326,slow=12,SNR=9.6						
TORD	Torodi Ar. Bea	71.90	78	P	P	00 08 53.0	-1.7
	0.3nm,0.5s,baz=286,slow=6.8,SNR=9.9						

IDC **10** *00:09:36.7±1.7, 33°.58N×136°.78E, h378km±30km, mb2.8/3, mb1 3.0/5, mb1mx2.7/28, mbtmp2.8/5, Error ellipse: s-maj=59.8km s-min=21.1km az=55.0*
ISCJB **10** *00:09:38.9±0.6, 33°.94N±0°.10×136°.67E±0°.08, h383km, mb2.9/3, Error ellipse: s-maj=13.1km s-min=8.5km az=175.8*
JMA **10** *00:09:38.9±0.4, 33°.89N×136°.68E, h383km±4km, M3.0*
ISC 10 00:09:38.1±0.9, **33°.87N**±0°.09×**136°.71E**±0°.07, **h383km, n20, σ1s.25**/24, **mb3.1**/3, **Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	Ise	0.52	360	P	Pn	00 10 27.1	+1.1
JAA	Atsumi	0.84	25	P	Pn	00 10 27.8	+1.0
TK02	Tokai 2	0.88	84	P	Pn	00 10 27.9	+1.2
JWZ	Kozaga	0.90	248	P	Pn	00 10 27.4	+0.3
JWT	Wachi	1.78	323	P	Pn	00 10 32.1	+1.1
JWT				eS	S	00 11 14.3	+0.5
JGM	Miyama	1.83	0	P	Pn	00 10 32.5	+1.1
JAI	Aioi	1.88	268	P	Pn	00 10 32.7	+1.0
JMN	Monobe	2.36	267	P	Pn	00 10 36.2	+1.2
JOD2	Odawara 2	2.41	54	eS	S	00 11 21.8	+0.3
JKG	Kaga	2.42	353	P	Pn	00 10 36.3	+1.0
JHJ2	Mitsune	2.70	105	P	Pn	00 10 40.2	+2.6
JHJ2				eS	S	00 11 26.1	+0.5
JRY	Ryogami san	2.80	39	P	Pn	00 10 39.1	+0.8
JRY				eS	S	00 11 26.6	-0.4
MAT	Matsushiro	2.94	24	P	Pn	00 10 39.9	+0.5
MAT				S	S	00 11 28.4	-0.6
MAT	Matsushiro	2.94	24	P	Pn	00 10 38.4	-1.0
MJAR	Matsushiro Arr	2.94	24	P	Pn	00 10 39.8	+0.4
	3.1nm,0.3s,baz=196,slow=9.2,SNR=42						
JHS	Saijyo	3.18	292	P	Pn	00 10 42.8	+1.3
KSRS	Korea Array	8.00	299	P	P	00 11 33.5	+0.2
	0.5nm,0.3s,baz=112,slow=13,SNR=8.5						
SONM	Songino Array	26.64	311	P	P	00 14 44.9	+1.4
	0.7nm,0.6s,baz=116,slow=10,SNR=5.5						
MKAR	Makanchi Array	42.64	304	P	P	00 16 58.5	0.0
	0.1nm,0.4s,baz=90,slow=9.7,SNR=4.5						
WRA	Warramunga Arr	53.55	183	P	P	00 18 18.1	-3.1
	0.4nm,0.4s,baz=2.0,slow=7.3,SNR=2.5						

PGC **10** *00:22:15.7±4.9, 61°.50N×141°.00W, h1km, ML2.8/3, 204km Wnw of Haines Jct., Yt Southern Alaska*
NEIC **10** *00:22:16.6, 61°.54N×140°.71W, h0km, ML2.8(PGC), ML2.7(AEIC), After AEIC.*
ISC 10 00:22:16.2±1.2, **61°.51N**±0°.03×**140°.80W**±0°.02, **h7km**±11km, **n37, σ1s.35**/55, **5D, Southern Yukon Territory**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARN	Barnard Glacie	0.61	223	P	Pb	00 22 29.3	0.0
BARN				S	Sn	00 22 39.8	-1.9
PTPK	Patty Peak	0.86	249	P	Pn	00 22 34.1	-0.8
PTPK				S	Sn	00 22 46.9	-1.0
BALM	Baldy	0.88	238	P	Pn	00 22 34.2	-0.9
GRNC	Granite Creek	0.91	211	P	Pb	00 22 34.5	+0.2
GRNC				S	Sn	00 22 49.6	+0.7
KIAG	Kiagna River	0.95	233	P	Pn	00 22 35.5	-0.6
KIAG				S	Sn	00 22 51.5	+1.3
MCARA	McCarthy VSAT	1.07	264	P	Pn	00 22 38.3	+0.7
MCARA				S	Sn	00 22 54.7	+1.9
VRDI	Verde Repeater	1.31	259	P	Pg	00 22 41.8	+0.6
BARK	Barkley Ridge	1.38	217	P	Pg	00 22 43.3	+0.6
BARK				S	Sg	00 23 03.3	+2.8
GLB	Gilahina Butte	1.45	269	P	Pg	00 22 44.2	+0.3
GLB				S	Sg	00 23 04.7	+2.1
KULT	Kultieth River	1.57	218	P	Pb	00 22 45.6	0.0
KHIT	Khitrov Hills	1.60	229	P	Pg	00 22 46.2	-0.6
KHIT				S	Sg	00 23 09.2	+1.7
BCA3	Beaver Creek A	1.63	344	P	Pb	00 22 45.8	-0.9
HYT	Haines Junctio	1.74	112	P	Pn	00 22 47.2	+0.2
HYT	Haines Junctio	1.74	112	⇓Pn	Pn	00 22 47.1	+0.2
HYT				⇓Sg	Sb	00 23 11.3	+0.8
GRIN	Grindle Hills	1.74	226	P	Pg	00 22 49.0	-0.5
BERG	Berg Lake	1.80	233	P	Pb	00 22 49.6	+0.1
BGLC	Bering Glacier	1.85	222	P	Pb	00 22 49.8	-0.4
PNL	Peninsula	1.97	159	P	Pn	00 22 51.0	+1.1
MENT	Mentasta	1.98	318	ePn	Pn	00 22 50.7	+0.5
MENT				eS	Sg	00 23 19.9	+0.1
NICHA	Nichawak Mount	2.01	232	P	Pg	00 22 54.4	-0.2
SUCK	Suckling Hills	2.05	227	P	Pg	00 22 55.1	-0.3
GOAT	Goat Mountain	2.12	246	P	Pb	00 22 54.8	-0.2
RAGM	Ragged Mountai	2.20	241	P	Pb	00 22 56.8	+0.5
HARP	HAARP	2.25	296	P	Pb	00 22 56.3	-0.8
SGAM	Sherman Glacie	2.37	247	P	Pb	00 22 58.2	-1.0
DIV	Divide	2.43	263	ePn	Pb	00 22 57.9	-2.3
DIV				eSn	Sb	00 23 28.8	-1.5
KLU	Klutina	2.46	272	P	Pb	00 22 59.6	-1.1
DOT	Dot Lake	2.63	326	ePn	Pn	00 22 59.7	+0.6
DOT				eSn	Sb	00 23 32.5	-3.5
DAWY	Dawson	2.65	14	P	Pn	00 22 59.8	+0.4
DAWY	Dawson	2.65	14	⇓Pn	Pn	00 22 59.9	+0.5
DAWY				⇓Sn	Sn	00 23 32.4	+0.6
DAWY				⇑Sg	Sb	00 23 38.2	+1.5
RIDG	Independ'e Rid	2.92	322	P	Pn	00 23 04.7	+1.6
WHY	Whitehorse	3.00	104	P	Pn	00 23 04.4	+0.2
WHY	Whitehorse	3.00	104	⇑Pn	Pn	00 23 04.8	+0.6
WHY				⇓Pg	Pb	00 23 10.1	+0.1
WHY				⇑Sn	Sn	00 23 42.0	+1.6
WHY				⇑Sg	Sg	00 23 50.8	-1.6
EGAK	Eagle	3.29	357	P	Pn	00 23 09.9	+1.8
TRF	Thorofare Moun	4.81	298	ePn	Pn	00 23 28.4	-0.7
TRF				Sg	Sg	00 24 51.4	+0.8
BM3	Burnt Mountain	6.16	346	P	Pn	00 23 49.4	+1.8
DLBC	Dease Lake	6.22	115	⇑Sg	Sg	00 25 31.4	-4.2

IDC **10** *00:23:52.7±2.7, 27°.99N×57°.00E, h0km, mb3.5/3, mb1 3.5/3, mb1mx3.2/27, mbtmp3.5/3, Error ellipse: s-maj=74.6km s-min=30.0km az=157.0*
CSEM **10** *00:23:57.4±0.4, 28°.50N×56°.87E, h10km, ML3.3, Error ellipse: s-maj=13.7km s-min=5.4km az=90.0*
OMAN **10** *00:23:57.5±0.0, 28°.16N×57°.61E, h6km, Error ellipse: s-maj=48.7km s-min=5.0km az=297.0*
KISR **10** *00:23:58.8±0.6, 28°.86N×56°.17E, h34km±999km, ML3.2*
ISCJB **10** *00:23:59.8±0.6, 28°.48N±0°.04×56°.52E±0°.06, h31km, mb3.3/3, Error ellipse: s-maj=7.3km s-min=5.0km az=172.4*
ISC 10 00:23:59.8±1.0, **28°.50N**±0°.04×**56°.76E**±0°.07, **h31km, n23, σ1s.20**/30, **mb3.2**/3, **2C-2D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	1.21	205	ePg	Pn	00 24 21.5	+0.8
KRBR	Kerman	1.48	0	ePg	Pn	00 24 24.8	+0.2
KRBR				eSg	Sb	00 24 44.1	-1.3
BANOM	Banah	2.60	189	⇓P	Pn	00 24 39.0	-0.7
	SNR=60						
BANOM				⇑S	Sn	00 25 11.1	+0.9
BANOM	Banah	2.60	189	P	Pn	00 24 39.0	-0.7
	SNR=60						
BANOM				S	Sn	00 25 11.1	+0.9
GHIR	Ghir-Karzin	3.33	267	ePn	Pn	00 24 51.7	+1.9
NAZ	Nazwa, Dubai	3.63	196	⇓P	Pn	00 24 54.3	+0.4
	SNR=21						
NAZ	Nazwa, Dubai	3.63	196	P	Pn	00 24 54.3	+0.4
HATD	Hatta, Dubai	3.70	189	⇑P	Pn	00 24 54.8	0.0
HATD	Hatta, Dubai	3.70	189	P	Pn	00 24 54.9	0.0
FAQ	Al Faqa, Dubai	3.88	196	P	Pn	00 24 57.4	+0.1
ASUD	Al Ashush, Dub	4.06	199	P	Pn	00 25 00.7	+0.9
	SNR=53						
ASUD	Al Ashush, Dub	4.06	199	P	Pn	00 25 00.7	+0.9
TABS	Tabas	5.14	3	ePn	Pn	00 25 16.3	+1.5
NASN	Na'in	5.47	323	ePn	Pn	00 25 21.2	+1.7
RDF	Al-Radifah	8.10	275	eP	Pn	00 25 56.0	+0.8
RDF				eS	Sn	00 27 24.5	-1.2
RDF				AML	AML	00 27 25.1	
	comp=Z,4.8nm,0.4s						
RDF	Al-Radifah	8.10	275	eP	Pn	00 25 56.0	+0.8
RDF				eS	Sn	00 27 24.5	-1.2
	comp=Z,4.8nm,0.4s						
MIB	Mutribah	8.34	281	eP	Pn	00 25 59.6	+1.1
MIB				eS	Sn	00 27 29.2	-2.4
MIB				AML	AML	00 27 31.0	
	comp=Z,2.8nm,0.3s						
MIB	Mutribah	8.34	281	eP	Pn	00 25 59.6	+1.1
NAY	Al-Naaiem	8.38	277	eP	Pn	00 25 59.8	+0.7
NAY				eS	Sn	00 27 30.8	-1.8

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NAY				AML	AML	00 27 31.3	
	comp=Z,1.5nm,0.3s						
NAY	Al-Naaiem	8.38	277	eP	Pn	00 25 59.8	+0.7
BRTR	Keskin Array B	22.11	306	P	P	00 28 54.9	+2.2
	comp=Z,0.8nm,0.8s,baz=116,slow=11,SNR=8.4						
MKAR	Makanchi Array	27.06	41	P	P	00 29 39.0	-0.4
	comp=Z,0.2nm,0.6s,baz=231,slow=8.7,SNR=3.2						
TORD	Torodi Ar. Bea	53.25	265	P	P	00 33 14.7	-1.2
	comp=Z,0.9nm,0.5s,baz=64,slow=7.1,SNR=18						

IDC 10 00:43:02.5±2.2, 6°.69S×129°.51E, h0km, mb3.6/1, mb1 3.7/4, mb1mx3.5/20, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=89.6km s-min=28.6km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.95	198	Pn	Pn	00 45 53.5	-0.8
	0.4nm,0.3s,baz=17,slow=12,SNR=7.6						
FITZ				Sn	Sn	00 47 59.8	-8.6
	0.2nm,0.3s,baz=315,slow=20,SNR=4.6						
WRA	Warramunga Arr	13.98	161	Pn	Pn	00 46 21.9	-0.2
	0.2nm,0.3s,baz=344,slow=13,SNR=4.6						
WRA				Sn	Sn	00 48 54.9	-3.2
	0.3nm,0.3s,baz=335,slow=21,SNR=4.7						
ASAR	Alice Springs	17.40	166	P	P	00 47 07.6	-0.6
	0.1nm,0.3s,baz=340,slow=9.1,SNR=5.4						
ASAR				S	Sn	00 50 16.3	-5.0
	0.1nm,0.3s,baz=346,slow=25,SNR=3.6						
MKAR	Makanchi Array	67.71	327	P	P	00 54 01.8	0.0
	0.3nm,0.5s,baz=124,slow=7.5,SNR=5.1						

IDC 10 00:43:32.2±30.0, 15°.84S×173°.60W, h0km, mb4.0/4, mb1 4.2/4, mb1mx3.7/21, mbtmp4.0/4, MS2.9/1, Ms1 2.9/1, ms1mx2.0/37, Error ellipse: s-maj=597.5km s-min=156.7km az=86.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.61	43	LR	LR	00 44 49.4	
	comp=Z,244nm,20.1s,baz=317,slow=30						
STKA	Stephens Creek	43.65	240	P	P	00 51 38.7	-0.1
	0.8nm,0.5s,baz=89,slow=16,SNR=3.0						
WRA	Warramunga Arr	49.55	257	P	P	00 52 24.5	-0.8
	0.3nm,0.4s,baz=91,slow=6.6,SNR=2.8						
ASAR	Alice Springs	49.79	252	P	P	00 52 26.9	-0.2
	2.4nm,0.4s,baz=89,slow=8.1,SNR=28						
FITZ	Fitzroy Crossi	57.93	258	P	P	00 53 27.3	+0.6
	2.9nm,1.1s,baz=97,slow=8.1,SNR=2.4						

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*ATH **10** 00:46:00.7, 36°.28N×20°.71E, h10km±4km, MD3.9/18*
*CSEM **10** 00:46:06.2±0.5, 36°.52N×20°.98E, h2km, ML2.6/5, Error ellipse: s-maj=9.2km s-min=5.0km az=30.0*
*THE **10** 00:46:07.7, 36°.56N×21°.07E, h1km±1km, ML2.6/5, Error ellipse: s-maj=1.7km s-min=0.7km az=206.0*
ISC 10 00:46:05.5±2.3, 36°.50N±0°.08×20°.96E±0°.07, h2km±11km, n62, σ0.s53/77, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYL	PYLOS	0.74	58	P	Pg	00 46 19.6	-0.1
PYL	PYLOS	0.74	58	ePG	Pg	00 46 19.5	-0.1
PYL				eSN	Sn	00 46 34.7	-0.2
PYL	PYLOS	0.74	58	P	Pg	00 46 19.6	-0.1
PYL				eSn	Sn	00 46 34.7	-0.2
ITM	Ithomi	1.03	49	P	Pg	00 46 24.9	-0.3
ITM				S	Sg	00 46 38.7	+0.1
ITM	Ithomi	1.03	49	ePB	Pb	00 46 25.9	-0.2
ITM	Ithomi	1.03	49	P	Pg	00 46 24.9	-0.3
ITM	Ithomi	1.03	49	ePb	Pb	00 46 25.9	-0.2
DYR	Agios Nikonas	1.14	76	P	Pg	00 46 27.4	+0.2
DYR				S	Sb	00 46 42.6	-0.5
DYR	Agios Nikonas	1.14	76	ePB	Pg	00 46 27.4	+0.2
DYR	Agios Nikonas	1.14	76	P	Pg	00 46 27.4	+0.2
DYR				S	Sb	00 46 42.6	-0.5
AMT	Artemida-Makis	1.19	30	ePG	Pg	00 46 28.5	+0.2
AMT	Artemida-Makis	1.19	30	ePg	Pg	00 46 28.5	+0.2
VLX	Vlachokerasia	1.43	52	P	Pn	00 46 32.5	-0.1
VLX				S	Sg	00 46 51.7	+0.2
VLX	Vlachokerasia	1.43	52	ePG	Pn	00 46 32.7	+0.1
VLX	Vlachokerasia	1.43	52	P	Pn	00 46 32.5	-0.1
VLX				S	Sg	00 46 51.7	+0.2
VLI	Veliai	1.60	82	P	Pn	00 46 35.2	+0.3
VLI				S	Sb	00 46 56.6	0.0
VLI	Veliai	1.60	82	ePG	Pn	00 46 35.2	+0.3
VLI	Veliai	1.60	82	P	Pn	00 46 35.2	+0.3
VLI				S	Sb	00 46 56.6	0.0
RLS	Riolos of Patr	1.61	14	P	Pn	00 46 35.0	+0.1
RLS	Riolos of Patr	1.61	14	ePN	Pn	00 46 35.0	+0.1
RLS	Riolos of Patr	1.61	14	P	Pn	00 46 35.0	+0.1
KYTH	Kithira	1.69	97	P	Pn	00 46 36.5	+0.4
KYTH	Kithira	1.69	97	P	Pn	00 46 36.5	+0.4
VLS	Valsamata	1.70	350	P	Pn	00 46 36.7	+0.5
VLS				S	Sg	00 47 00.3	+0.2
VLS	Valsamata	1.70	350	ePN	Pn	00 46 35.2	-1.0
VLS	Valsamata	1.70	350	ePn	Pn	00 46 35.2	-1.0
VLS	Valsamata	1.70	350	P	Pn	00 46 36.7	+0.5
VLS				S	Sg	00 47 00.3	+0.2
GUR	Goura	1.81	37	P	Pn	00 46 38.1	+0.3
GUR				S	Sn	00 47 01.6	+0.2
GUR	Goura	1.81	37	ePN	Pn	00 46 38.3	+0.5
GUR	Goura	1.81	37	P	Pn	00 46 38.1	+0.3
GUR				S	Sn	00 47 01.6	+0.2
KLV	Kalavryta, Ach	1.81	31	ePN	Pn	00 46 38.0	+0.3
KLV	Kalavryta, Ach	1.81	31	ePn	Pn	00 46 38.0	+0.3
LAKA	Lakka	1.92	25	P	Pn	00 46 40.0	+0.8
LAKA	Lakka	1.92	25	ePG	Pb	00 46 40.7	-0.5
LAKA	Lakka	1.92	25	P	Pn	00 46 40.0	+0.8
LAKA	Lakka	1.92	25	ePg	Pb	00 46 40.7	-0.5
THAL	Thalero	2.05	41	P	Pn	00 46 41.3	+0.3
THAL	Thalero	2.05	41	P	Pn	00 46 41.3	+0.3
TRIZ	Trizonia	2.06	25	P	Pn	00 46 41.7	+0.6
TRIZ	Trizonia	2.06	25	ePN	Pn	00 46 42.2	+1.1
TRIZ	Trizonia	2.06	25	P	Pn	00 46 41.7	+0.6
TRIZ	Trizonia	2.06	25	ePn	Pn	00 46 42.2	+1.1
EFP	Efpalio	2.06	21	P	Pn	00 46 42.1	+0.9
EFP	Efpalio	2.06	21	ePB	Pn	00 46 40.4	-0.8
EFP	Efpalio	2.06	21	ePb	Pn	00 46 40.4	-0.8
EFP	Efpalio	2.06	21	P	Pn	00 46 42.1	+0.9
DID	Didima	2.08	60	P	Pn	00 46 41.0	-0.4
DID	Didima	2.08	60	ePB	Pn	00 46 41.0	-0.4
DID	Didima	2.08	60	P	Pn	00 46 41.0	-0.4
KALE	Kalithea	2.11	26	ePN	Pn	00 46 43.1	+1.2
KALE	Kalithea	2.11	26	ePn	Pn	00 46 43.1	+1.2
LTK	Loutraki	2.21	46	ePB	Pn	00 46 43.2	0.0
LTK	Loutraki	2.21	46	ePb	Pn	00 46 43.2	0.0
DSF	Desfina	2.28	33	P	Pn	00 46 44.5	+0.3
DSF				S	Sn	00 47 13.1	+0.2
DSF	Desfina	2.28	33	P	Pn	00 46 44.5	+0.3
DSF				S	Sn	00 47 13.1	+0.2
EVR	Evrytania	2.50	15	P	Pn	00 46 48.3	+1.0
EVR	Evrytania	2.50	15	ePN	Pn	00 46 48.4	+1.1
EVR	Evrytania	2.50	15	P	Pn	00 46 48.3	+1.0
AXAR	Agios Charalam	2.63	30	P	Pn	00 46 49.3	+0.3
AXAR	Agios Charalam	2.63	30	P	Pn	00 46 49.3	+0.3
LKR	Lokris	2.69	36	ePN	Pn	00 46 49.7	-0.1
LKR	Lokris	2.69	36	ePn	Pn	00 46 49.7	-0.1

IDC 10 00:50:00.7±1.9, 0°.76S×133°.22E, h0km, mb3.8/3, mb1 3.9/5, mb1mx3.6/22, mbtmp3.8/5, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/32, Error ellipse: s-maj=79.1km s-min=24.3km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	18.78	203	P	P	00 54 21.7	+0.1
	0.2nm,0.3s,baz=23,slow=12,SNR=7.2						
FITZ				S	Sn	00 57 37.1	-16
	0.1nm,0.3s,baz=356,slow=19,SNR=2.2						
WRA	Warramunga Arr	19.10	177	P	P	00 54 24.9	-0.4
	0.2nm,0.3s,baz=356,slow=12,SNR=4.9						
WRA				S	Sn	00 57 47.4	-13
	0.1nm,0.3s,baz=356,slow=24,SNR=3.1						
ASAR	Alice Springs	22.78	178	P	P	00 55 05.2	+0.1
	1.3nm,0.4s,baz=358,slow=12,SNR=20						
STKA	Stephens Creek	31.95	166	P	P	00 56 28.5	+0.1
	1.2nm,0.7s,baz=338,slow=5.4,SNR=2.6						
KSRS	Korea Array	38.34	353	LR	LR	01 13 31.0	
	comp=Z,30nm,18.2s,baz=245,slow=37						
MKAR	Makanchi Array	64.95	324	P	P	01 00 42.2	-0.1
	0.6nm,0.6s,baz=119,slow=7.8,SNR=5.6						

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*IDC **10** 00:56:03.5±1.1, 35°.79N×69°.73E, h0km, mb3.9/5, mb1 3.9/6, mb1mx3.5/28, mbtmp3.8/6, ML3.0/1, Error ellipse: s-maj=37.1km s-min=24.6km az=141.0*
*ISCJB **10** 00:56:15.8±0.8, 36°.20N±0°.05×69°.4E±0°.1, h100km, mb3.6/4, Error ellipse: s-maj=13.3km s-min=6.1km az=157.4*
*NNC **10** 00:56:26.2±3.5, 36°.88N×69°.54E, h115km±43km, mb3.2, mpv3.9, Error ellipse: s-maj=26.7km s-min=20.0km az=12.0*
ISC 10 00:56:17.4±1.0, 36°.29N±0°.08×69°.7E±0°.1, h100km, n35, σ1.s75/32, mb3.5/4, 2C-7D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	3.08	142	⇓P	Pn	00 57 12.2	+7.8
CEP				S	Sn	00 57 50.0	+9.5
THW	Thamme Wali	3.89	153	⇓P	Pn	00 57 22.2	+7.0
CHCP	Chirah Chowk	3.96	130	P	Pn	00 57 23.0	+6.9
AML	Almayashu	6.62	27	P	Pn	00 57 54.5	+2.1
	SNR=38						
KK31	Karatay Array	6.84	5	⇑P	Pn	00 57 56.8	+1.8
	3.3nm,0.5s,baz=195,slow=17,SNR=85						
KK31				S	Sn	00 59 07.2	-4.1
	3.9nm,0.3s,baz=187,slow=14,SNR=10						
UCH	Uchtor	7.03	31	P	Sn	00 59 15.5	-1.0
	SNR=8.8						
EKS2	Erkin-Say	7.12	25	P	Pn	00 58 01.5	+2.6
	SNR=6.2						
KZA	Kyzart	7.23	35	P	Pn	00 58 02.4	+1.7
	SNR=22						
AAK	Ala-Archa	7.36	29	P	Pn	00 58 05.5	+3.3
	SNR=5.3						
KBK	Karagaybulak	7.56	31	P	Pn	00 58 07.9	+2.9
	SNR=8.2						
ULHL	Ulahol	7.84	39	P	Pn	00 58 11.1	+2.2
	SNR=7.5						
USP	Ospenovka	7.90	27	P	Pn	00 58 11.3	+1.8
	SNR=14						
TKM2	Tokmak 2	8.05	33	⇑P	Pn	00 58 13.6	+1.8
	4.5nm,0.5s						
TKM2				⇓S	Sn	00 59 39.8	-1.4
	11nm,0.7s						
TKM2	Tokmak 2	8.05	33	P	Pn	00 58 13.6	+1.8
	SNR=11						
PYUN	Piuthan	13.93	122	eP	Pn	00 59 31.0	+0.4
	8.1nm,0.2s						
MKAR	Makanchi Array	14.11	38	Pn	Pn	00 59 30.9	-1.7
	0.1nm,0.3s,baz=229,slow=13,SNR=4.9						
DANN	Dangsing	14.31	120	eP	Pn	00 59 36.0	+0.5
	7.1nm,0.3s						
AB31	Akbulak array	14.77	334	P	Pn	00 59 41.1	+0.1
	1.8nm,0.3s,baz=152,slow=11,SNR=96						
AB31				S	Sn	01 02 15.9	-7.9
	1.7nm,0.5s,baz=154,slow=24,SNR=6.2						
KUR16	Kurchatov Arra	15.69	21	⇓P	P	00 59 54.5	0.0
	1.6nm,0.8s						
KKN	Kakani	15.71	118	eP	Pn	00 59 54.1	+0.8
	14nm,0.5s						
KURK	Kurchatov	15.80	21	⇓P	Pn	00 59 55.0	+1.1
	4.2nm,1.1s						
PKIN	Phulchoki	15.93	119	eP	Pn	00 59 56.9	+0.9
	8.2nm,0.4s						
PKIN	Phulchoki	15.93	119	eP	Pn	00 59 57.3	+1.3
	4.5nm,0.3s						
GUN	Gumba	16.07	117	eP	Pn	00 59 59.4	+1.5
	8.4nm,0.4s						
AKTO	Aktyubinsk	16.45	333	⇓P	P	01 00 05.2	+2.2
ZRNK	Zerenda	16.66	359	⇓P	Pn	01 00 05.3	+0.6
	2.8nm,1.4s						
BVA0	Borovoye Array	16.74	2	P	P	01 00 07.3	+1.1
	0.1nm,0.4s,baz=175,slow=10,SNR=6.1						
RAMN	Ramite	17.16	118	eP	Pn	01 00 11.9	+0.8
	7.2nm,0.4s						
TAPN	Taplejung	17.73	115	eP	Pn	01 00 20.0	+1.9
	11nm,0.6s						
ODAN	Odare	17.78	117	eP	Pn	01 00 19.8	+1.2
	4.3nm,0.4s						
ZALV	Zalesovo Beam	20.57	26	P	P	01 00 47.6	-0.3
	5.2nm,0.6s,baz=219,slow=11,SNR=23						
SONM	Songino Array	29.35	55	P	P	01 02 09.7	-1.1
	1.0nm,0.8s,baz=247,slow=9.7,SNR=6.1						
TORD	Torodi Ar. Bea	64.62	268	P	P	01 06 43.6	-1.0
	0.2nm,0.6s,baz=68,slow=4.7,SNR=5.4						
WRA	Warramunga Arr	82.81	121	P	P	01 08 28.1	-2.6
	0.2nm,0.3s,baz=324,slow=4.6,SNR=6.7						
STKA	Stephens Creek	95.55	126	P	P	01 09 29.2	-2.0
	0.5nm,0.3s,baz=290,slow=19,SNR=2.9						

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*ISCJB **10** 01:02:37.8±0.6, 36°.12S±0°.09×100°.3W±0°.1, h14km, mb4.1/20, MS3.8/15, Error ellipse: s-maj=15.1km s-min=12.6km az=144.6*
*IDC **10** 01:02:37.8±0.7, 36°.09S×100°.13W, h0km, mb3.9/10, mb1 4.2/10, mb1mx4.0/21, mbtmp3.9/10, MS3.9/14, Ms1 3.9/14, ms1mx3.7/25, Error ellipse: s-maj=22.3km s-min=18.1km az=91.0*
*NEIC **10** 01:02:39.2±0.5, 36°.08S×100°.20W, h10km, mb4.4/11, Error ellipse: s-maj=13.3km s-min=11.9km az=53.0*
*GCMT **10** 01:02:42.8±0.3, 36°.21S×100°.00W, h20km±1km, MW4.8, Moment Tensor Solution. s19,c21; s63,c80; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.83±.16; $M_{\theta\theta}$0.12±.13; $M_{\phi\phi}$0.71±.11; $M_{r\theta}$-0.19±.23; $M_{\theta\phi}$-2.13±.09; $M_{\phi r}$0.58±.19; Best double couple: $M_0$2.20000×10^{16} NP1:ϕ_s274.00000°, δ73.00000°, λ-176.00000°. NP2:ϕ_s183.00000°, δ86.00000°, λ-17.00000°. Principal axes: T 2.6500, Plg9.0000°, Azm229.0000°; N -0.8500, Plg72.0000°, Azm350.0000°; P -1.8000, Plg15.0000°, Azm137.0000°; Data Used: IU IC II G CN.*
ISC 10 01:02:39.9±0.6, 36°.1S±0°.1×100°.2W±0°.1, h14km, n54, σ0.s99/42, mb4.3/20, MS3.8/15, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	23.59	110	eP	P	01 07 50.8	+0.4
	5.7nm,1.0s						
PLCA	Paso Flores	23.59	110	P	P	01 07 49.9	-0.5
	4.9nm,1.0s,baz=269,slow=12,SNR=7.0						
PLCA				LR	LR	01 13 27.6	
	comp=Z,134nm,21.0s,baz=192,slow=28						
LCO	Las Campanas	25.74	83	eP	P	01 08 09.9	-0.5
	18nm,1.0s						
CFAA	Coronel Fontan	26.81	90	P	P	01 08 19.0	-0.8
CFAA	Coronel Fontan	26.81	90	P	P	01 08 19.0	-0.8
	0.4nm,0.6s,baz=272,slow=9.7,SNR=5.0						
CFAA				LR	LR	01 16 49.0	
	comp=Z,14nm,21.1s,baz=252,slow=32						
USHA	Ushuaia	28.72	141	LR	LR	01 17 12.1	
	comp=Z,576nm,21.2s,baz=249,slow=30						
LVC	Limon Verde	30.21	72	eP	P	01 08 51.1	+0.7
	12nm,1.2s						
TRQA	Tornquist	30.38	105	eP	P	01 08 53.2	+1.7
	20nm,1.6s						
NNA	Nana	31.90	47	LR	LR	01 19 01.0	
	comp=Z,137nm,18.5s,baz=309,slow=31						
LPAZ	La Paz	34.61	64	eP	P	01 09 30.1	+0.7
	10nm,1.2s						
LPAZ	La Paz	34.61	64	P	P	01 09 29.9	+0.5
	4.9nm,1.0s,baz=218,slow=5.8,SNR=17						
LPAZ				LR	LR	01 20 09.2	
	comp=Z,93nm,21.9s,baz=117,slow=30						
ATAH	Atahualpa	35.02	40	P	P	01 09 35.5	+2.9
ATAH	Atahualpa	35.02	40	P	P	01 09 35.5	+2.9
	3.9nm,0.6s,baz=235,slow=16,SNR=3.3						
PMSA	Palmer Station	35.87	154	LR	LR	01 20 27.9	
	comp=Z,503nm,18.6s,baz=161,slow=30						
SIV	San Ignacio	40.06	70	P	P	01 10 14.4	-0.6
SIV	San Ignacio	40.06	70	P	P	01 10 14.4	-0.6
	4.1nm,0.9s,baz=249,slow=10,SNR=14						
SAML	Samuel	43.11	60	eP	P	01 10 39.2	-0.7
	8.9nm,1.2s						
ROSC	El Rosal	47.37	36	LR	LR	01 27 22.3	
	comp=Z,120nm,21.4s,baz=206,slow=31						
BDFB	Brasilia	50.49	80	LR	LR	01 31 23.3	
	comp=Z,151nm,20.1s,baz=304,slow=34						
QSPA	South Pole Qui	54.13	180	P	P	01 12 03.6	-0.7
QSPA	South Pole Qui	54.13	180	P	P	01 12 03.6	-0.7
	1.3nm,1.0s,baz=110,slow=5.3,SNR=3.3						
VNDA	Vanda	56.78	195	P	P	01 12 22.7	-0.3
VNDA	Vanda	56.78	195	P	P	01 12 22.7	-0.3
	2.5nm,1.1s,baz=100,slow=6.2,SNR=6.7						
TEIG	Tepich	57.12	13	LR	LR	01 33 32.2	
	comp=Z,78nm,18.6s,baz=134,slow=32						
SNAA	Sanae	58.42	158	P	P	01 12 34.8	0.0
SNAA	Sanae	58.42	158	P	P	01 12 34.8	0.0
	0.6nm,0.9s,baz=270,slow=10,SNR=3.6						
TXAR	Lajitas Array	65.16	357	P	P	01 13 20.0	-0.5
TXAR	Lajitas Array	65.16	357	P	P	01 13 20.0	-0.5
	0.6nm,0.8s,baz=158,slow=10,SNR=5.1						
MNTX	Cornudas Mount	67.61	355	eP	P	01 13 35.5	-0.6
	2.4nm,1.2s						
TKL	Tuckaleechee C	72.99	14	LR	LR	01 43 36.5	
	comp=Z,52nm,20.9s,baz=93,slow=34						
NVAR	Mina Array Bea	76.02	345	P	P	01 14 27.9	+1.1
NVAR	Mina Array Bea	76.02	345	P	P	01 14 27.9	+1.1
	1.1nm,0.6s,baz=163,slow=6.6,SNR=4.9						
BW06	Boulder Array	78.95	353	eP	P	01 14 42.5	-0.5
	4.7nm,1.2s						
PDAR	Pinedale Array	78.95	353	P	P	01 14 42.3	-0.7
PDAR	Pinedale Array	78.95	353	P	P	01 14 42.3	-0.7
	1.2nm,0.8s,baz=144,slow=6.6,SNR=4.5						
ECSD	EROS Data Cent	79.51	3	eP	P	01 14 45.9	+0.1
	5.5nm,1.1s						
TPAW	Teton Pass	79.81	352	eP	P	01 14 45.6	-2.2
	4.0nm,1.1s						
YBH	Yreka Blue Hor	80.15	343	LR	LR	01 42 49.6	
	comp=Z,49nm,21.1s,baz=198,slow=30						
HLID	Hailey	80.33	350	eP	P	01 14 51.5	+1.0
	4.3nm,1.1s						
STKA	Stephens Creek	91.04	229	LR	LR	01 46 40.9	
	comp=Z,127nm,19.4s,baz=32,slow=29						
SCHQ	Schefferville	94.97	19	LR	LR	01 55 14.3	
	comp=Z,82nm,18.4s,baz=84,slow=33						
BOSA	Boshof	97.66	134	LR	LR	01 52 06.6	
	comp=Z,72nm,18.9s,baz=68,slow=30						
DBIC	Dimbokro	98.16	88	LR	LR	01 57 17.5	
	comp=Z,54nm,18.5s,baz=302,slow=33						
MORC	Moravsky Berou	133.67	53	ePKPdf	PKPdf	01 21 55.6	-0.1
BRTR	Keskin Array B	143.66	70	PKPpre	PKPpre	01 22 10.0	
BRTR				PKP	PKPdf	01 22 15.6	+1.2
BRTR	Keskin Array B	143.66	70	PKhKP	PKPpre	01 22 10.0	
	0.2nm,0.6s,baz=256,slow=1.2,SNR=3.0						
BRTR				PKP	PKPdf	01 22 15.6	+1.2
	0.7nm,0.9s,baz=277,slow=1.2,SNR=6.1						
KBZ	Khabaz	150.83	63	PKP	PKPdf	01 22 27.6	+1.6
KBZ				PKPbc	PKiKP	01 22 32.5	+0.2
KBZ	Khabaz	150.83	63	PKP	PKPdf	01 22 27.6	+1.6
	1.0nm,0.8s,baz=249,slow=10.0,SNR=2.2						
KBZ				PKPbc	PKiKP	01 22 32.5	+0.2
	1.6nm,0.8s,baz=334,slow=4.6,SNR=3.1						
CMAR	Chiang Mai Arr	155.66	229	PKPab	PKPab	01 23 00.4	+0.5
CMAR	Chiang Mai Arr	155.66	229	PKPab	PKPab	01 23 00.4	+0.5
	1.0nm,0.3s,baz=174,slow=2.7,SNR=5.8						
KURK	Kurchatov	165.35	3	PKPab	PKPab	01 23 42.6	+1.5
KURBB	Kurchatov Arra	165.44	3	PKPab	PKPab	01 23 42.6	+1.1
	0.6nm,0.8s,baz=348,slow=4.9,SNR=2.7						
MKAR	Makanchi Array	169.15	351	PKPab	PKPab	01 23 56.1	-2.0
MKAR	Makanchi Array	169.15	351	PKPab	PKPab	01 23 56.1	-2.0
	0.1nm,0.3s,baz=11,slow=2.2,SNR=2.5						

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*IDC **10** 01:22:30.8±1.2, 17°.47N×102°.72W, h0km, mb3.7/7, mb1 4.0/8, mb1mx3.8/22, mbtmp3.7/8, ML3.5/1, Error ellipse: s-maj=55.7km s-min=22.3km az=71.0*
*ISCJB **10** 01:22:37.5±1.3, 17°.79N±0°.07×103°.23W±0°.06, h30km±7km, mb3.6/7, Error ellipse: s-maj=13.8km s-min=4.7km az=35.9*
*MEX **10** 01:22:39.7±0.4, 17°.87N×103°.19W, h3km±2km, MD4.1*
ISC 10 01:22:38.4±1.8, 17°.83N±0°.10×103°.20W±0°.07, h27km±11km, n17, σ1.s44/25, mb3.8/7, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.47	343	eP	Pb	01 22 47.9	-0.3
MMIG				eS	Sb	01 22 54.4	-0.5
R15V		1.52	331	eP	Pn	01 23 03.7	-0.2
R15V				i S	Sn	01 23 22.9	0.0
ZIIG	Zihuatanejo	1.67	97	i P	Pn	01 23 06.5	+0.7
ZIIG				eS	Sn	01 23 27.2	+0.7
EZ5V		1.68	347	i P	Pn	01 23 06.5	+0.3
EZ5V				i S	Sn	01 23 26.9	-0.1
CJM	Chamela	2.41	314	i P	Pn	01 23 17.6	+1.6
CJM				i S	Sn	01 23 45.4	+0.8
SFJM	Santa Fe	2.64	3	i P	Pn	01 23 19.1	-0.3
SFJM				i S	Sn	01 23 51.6	+0.9
ARIG	Puente Sto Nin	2.75	80	i P	Pn	01 23 21.3	+0.5
ARIG				i S	Sn	01 23 54.1	+0.9
CAIG	El Cayaco	2.91	105	i P	Pn	01 23 23.3	+0.4
CAIG				eS	Sn	01 23 58.3	+1.3
ACX	Acapulco	3.34	106	i P	Pn	01 23 28.3	-0.5
ACX				i S	Sn	01 24 08.2	+0.6
TXAR	Lajitas Array	11.46	358	Pn	Pn	01 25 23.3	+2.9
	0.1nm,0.3s,baz=181,slow=13,SNR=5.4						
TXAR				Lg	Lg	01 28 31.2	
	0.1nm,0.3s,baz=185,slow=34,SNR=2.6						
NVAR	Mina Array Bea	24.40	330	P	P	01 27 58.1	+3.3
	0.5nm,0.6s,baz=146,slow=9.9,SNR=4.9						
PDAR	Pinedale Array	25.43	349	P	P	01 28 04.1	-0.1
	0.2nm,0.3s,baz=160,slow=11,SNR=2.2						
YKA	Yellowknife Ar	45.32	353	P	P	01 30 52.9	-0.8
	0.6nm,0.9s,baz=161,slow=7.2,SNR=7.1						
SCHQ	Schefferville	46.21	28	P	P	01 30 58.2	-2.7
	3.2nm,0.8s,baz=268,slow=2.8,SNR=4.9						
ILAR	Eielson Array	55.23	339	P	P	01 32 10.3	+1.5
	1.0nm,0.9s,baz=144,slow=5.8,SNR=8.8						
PLCA	Paso Flores	65.69	153	P	P	01 33 14.2	-6.4
	1.1nm,0.7s,baz=342,slow=3.2,SNR=2.6						
PETK	Petropavlovsk-	81.25	323	P	P	01 34 49.9	-2.1
	0.6nm,0.5s,baz=99,slow=7.4,SNR=2.7						

MEX 10 01:29:21.6±0.9, 15°.00N×93°.08W, h60km±13km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.72	349	i P	Pn	01 29 34.4	-1.7
PCIG				eS	Sn	01 29 45.1	-1.5
THIG		0.79	96	i P	Pn	01 29 35.5	-1.5
THIG				i S	Sn	01 29 46.5	-1.8
CCIG	Comitan	1.57	35	eP	Pn	01 29 46.5	-1.0
CCIG				i S	Sn	01 30 04.4	-2.6
TGIG		1.77	359	i P	Pn	01 29 47.7	-2.4
TGIG				i S	Sn	01 30 10.3	-1.4

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*ISCJB **10** 01:35:15.2±0.4, 41°.33N±0°.02×22°.70E±0°.03, h6km±5km, Error ellipse: s-maj=4.4km s-min=3.8km az=143.8*
*CSEM **10** 01:35:15.5±0.1, 41°.32N×22°.69E, h8km, ML1.6/5, Error ellipse: s-maj=3.2km s-min=2.5km az=64.0*
*SKO **10** 01:35:15.5, 41°.30N×22°.68E, h11km, M1.1, ML1.5*
*ATH **10** 01:35:16.5, 41°.24N×22°.73E, h4km, MD3.2/5*
*THE **10** 01:35:16.2, 41°.28N×22°.69E, h2km±2km, ML1.6/5, Error ellipse: s-maj=2.6km s-min=0.3km az=181.0*
*BEO **10** 01:35:16.4±1.2, 41°.27N×22°.44E, h0km, ML1.4/4*
ISC 10 01:35:16.1±0.9, 41°.28N±0°.02×22°.68E±0°.02, h7km±6km, n32, σ0.s70/54, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.09	297	P	Pg	01 35 17.9	-0.3
VAY	Valandovo	0.09	297	i Pg	Pg	01 35 17.9	-0.3
VAY				i Sg	Sg	01 35 19.9	+0.2
VAY				i Lg	Lg	01 35 19.9	
	comp=E,262nm,0.3s						
VAY				i Lg	Lg	01 35 20.1	
	comp=N,312nm,0.2s						
VAY	Valandovo	0.09	297	P	Pg	01 35 17.9	-0.3
VAY	Valandovo	0.09	297	i Pg	Pg	01 35 18.4	+0.1
VAY				eSg	Sg	01 35 19.9	+0.2
VAY				i Lg	Lg	01 35 20.5	
	comp=N,312nm,0.2s						
KNT	Kendrikon	0.20	125	P	Pg	01 35 20.3	+0.1
KNT				S	Sg	01 35 23.1	+0.1
KNT	Kendrikon	0.20	125	P	Pg	01 35 20.3	+0.1
KNT				S	Sg	01 35 23.1	+0.1
GRG	Griva	0.38	213	P	Pg	01 35 23.7	+0.1
GRG				S	Sg	01 35 29.3	+0.6
GRG	Griva	0.38	213	ePG	Pg	01 35 23.9	+0.3
GRG				eSG	Sg	01 35 29.2	+0.6
GRG	Griva	0.38	213	P	Pg	01 35 23.7	+0.1

GRG				eSg	Sg	01 35 29.2	+0.6
SOH	Sokhos	0.69	132	P	Pg	01 35 28.9	-0.4
SOH				S	Sg	01 35 39.1	+0.8
SOH	Sokhos	0.69	132	ePG	Pg	01 35 28.8	-0.5
SOH				eSG	Sg	01 35 36.9	-1.4
SOH	Sokhos	0.69	132	P	Pg	01 35 28.9	-0.4
SOH				eSg	Sg	01 35 36.9	-1.4
SOH				S	Sg	01 35 39.1	+0.8
SRS	Serrai	0.71	103	P	Pg	01 35 29.4	-0.4
SRS				S	Sg	01 35 39.6	+0.6
SRS	Serrai	0.71	103	P	Pg	01 35 29.4	-0.4
SRS				S	Sg	01 35 39.6	+0.6
HORT	Hortiatis	0.75	155	P	Pg	01 35 30.3	-0.3
HORT				S	Sg	01 35 41.3	+0.9
HORT	Hortiatis	0.75	155	P	Pg	01 35 30.3	-0.3
HORT				S	Sg	01 35 41.3	+0.9
NVR	Nevrokopi	0.90	85	P	Pg	01 35 32.7	-0.5
NVR	Nevrokopi	0.90	85	ePG	Pg	01 35 32.8	-0.5
NVR	Nevrokopi	0.90	85	ePg	Pg	01 35 32.8	-0.5
PLG	Polygyros	1.08	147	P	Pg	01 35 36.3	-0.5
PLG	Polygyros	1.08	147	ePB	Pg	01 35 36.3	-0.5
PLG	Polygyros	1.08	147	P	Pg	01 35 36.3	-0.5
FNA	Florina	1.10	244	P	Pg	01 35 37.0	-0.2
FNA				S	Sn	01 35 52.9	-0.6
FNA	Florina	1.10	244	ePG	Pb	01 35 37.2	-0.3
FNA	Florina	1.10	244	ePg	Pb	01 35 37.2	-0.3
FNA				S	Sn	01 35 52.9	-0.6
VTS	Vitosha	1.37	17	P	Pg	01 35 41.9	-0.5
VTS	Vitosha	1.37	17	i Pg	Pn	01 35 41.4	-0.4
VTS				eSg	Sn	01 36 02.5	+2.3
VTS	Vitosha	1.37	17	i Pg	Pn	01 35 41.4	-0.4
VTS	Vitosha	1.37	17	P	Pg	01 35 41.9	-0.5
VTS				eSg	Sn	01 36 02.5	+2.3
BARS	Barje	1.66	338	i Pg	Pn	01 35 45.9	+0.2
BARS				eSg	Sn	01 36 06.6	-0.7
BARS	Barje	1.66	338	i Pg	Pn	01 35 45.9	+0.2
BARS				eSg	Sn	01 36 06.6	-0.7
ZAPS	Zavoj	1.99	359	i Pg	Pb	01 35 52.9	+0.2
ZAPS				eSg	Sg	01 36 20.1	0.0

IDC 10 01:42:47.6±0.8, 42°.80S×72°.37W, h0^{km}, mb4.0/6, mb1 4.2/7, mb1mx3.9/19, mbtmp4.0/7, ML4.1/1, MS3.4/2, Ms1 3.3/2, ms1mx2.9/20, Error ellipse: s-maj=34.3km s-min=14.3km az=111.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.47	34	Pn	Pn	01 43 30.9	+1.7
	9.8nm,0.3s,baz=212,slow=14,SNR=85						
PLCA				Lg	Lg	01 44 08.1	
	34nm,0.3s,baz=162,slow=19,SNR=18						
PLCA				LR	LR	01 44 43.4	
	comp=Z,370nm,21.7s,baz=199,slow=47						
SIV	San Ignacio	28.41	23	P	P	01 48 42.7	-1.2
	0.6nm,0.6s,baz=228,slow=8.5,SNR=3.2						
BDFB	Brasilia	34.17	45	LR	LR	02 04 57.0	
	comp=Z,117nm,19.3s,baz=270,slow=39						
SNAA	Sanae	43.65	155	P	P	01 50 53.2	-0.3
	2.4nm,1.2s,baz=266,slow=13,SNR=3.4						
QSPA	South Pole Qui	47.45	180	P	P	01 51 24.4	+0.6
	7.1nm,1.1s,baz=158,slow=4.8,SNR=7.2						
VNDA	Vanda	55.45	192	P	P	01 52 24.8	+1.5
	4.2nm,1.3s,baz=141,slow=6.0,SNR=3.7						
TXAR	Lajitas Array	77.34	332	P	P	01 54 44.4	+0.3
	0.2nm,0.5s,baz=148,slow=5.3,SNR=3.6						
PDAR	Pinedale Array	91.50	334	P	P	01 55 55.5	-0.3
	0.2nm,0.3s,baz=172,slow=3.0,SNR=4.1						
STKA	Stephens Creek	99.42	209	P	Pdif	01 56 30.6	-1.5
	1.4nm,0.8s,baz=162,slow=20,SNR=2.8						
PETK	Petropavlovsk-	145.58	305	PKPbc	PKPab	02 02 27.4	-0.1
	1.2nm,0.8s,baz=79,slow=7.5,SNR=4.0						
KURBB	Kurchatov Arra	158.67	58	PKP	PKPdf	02 02 44.4	-2.0
	0.2nm,0.3s,baz=266,slow=1.2,SNR=3.3						
MKAR	Makanchi Array	161.61	69	PKPab	PKPab	02 03 32.7	-2.2
	0.1nm,0.3s,baz=267,slow=2.9,SNR=2.4						

IDC 10 02:05:03.6±6.0, 8°.55S×119°.73E, h194^{km}±98^{km}, mb3.1/2, mb1 3.2/3, mb1mx2.8/22, mbtmp3.0/3, Error ellipse: s-maj=172.5km s-min=60.4km az=27.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.11	130	P	P	02 09 00.6	-0.6
	0.3nm,0.3s,baz=305,slow=12,SNR=5.7						
WRA				S	S	02 12 19.3	+0.7
	baz=307,slow=26,SNR=2.7						
ASAR	Alice Springs	20.25	140	P	P	02 09 24.6	+0.4
	0.8nm,0.4s,baz=311,slow=8.9,SNR=11						
STKA	Stephens Creek	30.85	142	P	P	02 11 01.6	-0.1
	0.8nm,0.4s,baz=316,slow=10,SNR=4.6						

IDC 10 02:23:57.5±1.5, 0°.19N×125°.86E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.5/24, mbtmp3.6/5, Error ellipse: s-maj=190.9km s-min=19.8km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.66	158	P	P	02 28 48.7	-1.2
	0.5nm,0.6s,baz=340,slow=12,SNR=4.7						
ASAR	Alice Springs	24.96	162	P	P	02 29 23.6	+0.6
	0.2nm,0.5s,baz=344,slow=9.9,SNR=3.9						
ASAR				PcP	PcP	02 32 59.2	+0.6
	0.4nm,0.4s,baz=349,slow=2.1,SNR=7.0						
MKAR	Makanchi Array	59.99	327	P	P	02 34 05.8	-0.2
	0.6nm,0.5s,baz=130,slow=8.6,SNR=8.8						
KURBB	Kurchatov Arra	64.27	329	P	P	02 34 34.5	0.0
	0.7nm,0.6s,baz=124,slow=6.2,SNR=11						
AKTO	Aktyubinsk	75.90	322	P	P	02 35 46.2	+0.2
	1.4nm,0.3s,baz=119,slow=6.5,SNR=10						
TORD	Torodi Ar. Bea	123.11	286	PKP	PKPdf	02 42 56.2	-1.1
	1.0nm,1.2s,baz=87,slow=2.5,SNR=4.4						

ISCJB 10 02:44:29.7±0.5, 31°.71N±0°.07×130°.67E±0°.08, h122^{km}±3^{km}, mb3.4/8, Error ellipse: s-maj=11.9km s-min=9.9km az=42.6

JMA 10 02:44:31.2, 31°.68N×130°.74E, h113^{km}±1^{km}, M3.2

IDC 10 02:44:33.5±4.1, 32°.02N×130°.52E, h131^{km}±17^{km}, mb3.3/8, mb1 3.5/9, mb1mx3.3/26, mbtmp3.3/9, MS2.8/1, Ms1 2.8/1, ms1mx1.7/17, Error ellipse: s-maj=61.4km s-min=24.5km az=2.0

ISC 10 02:44:30.5±0.8, 31°.69N±0°.07×130°.72E±0°.07, h118^{km}±6^{km}, n18, σ1^{s}20/24, mb3.5/8, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSU	Suzuyama	0.30	231	P	Pn	02 44 47.4	+0.2
JSU				S	Sn	02 44 59.5	-0.3
JTZ	Takazaki	0.37	56	P	Pn	02 44 47.6	+0.1
JTZ				S	Sn	02 44 59.8	-0.5
JNAR	Kushima--Naru	0.50	109	P	Pn	02 44 48.5	+0.4
JNAR				S	Sn	02 45 01.5	0.0
JIU2	Izumi 2	0.85	5	P	Pn	02 44 51.5	+0.6
JIU2				S	Sn	02 45 06.5	+0.1
JSJ	Shimokoshiki	0.86	269	P	Pn	02 44 51.5	+0.5
JSJ				S	Sn	02 45 06.8	+0.4
JTN	Tanegashima 3	1.06	168	P	Pn	02 44 53.1	+0.2
JNU	Nakatsue	1.43	5	P	Pn	02 44 57.6	+0.6
	31nm,0.3s,baz=222,slow=5.4,SNR=148						
JNU				S	Sn	02 45 16.6	-0.5
	11nm,0.3s,baz=206,slow=10,SNR=11						
MAT	Matsushiro	7.87	50	P	Pn	02 46 24.1	+2.0
MAT				S	Sn	02 47 45.8	-3.7
MJAR	Matsushiro Arr	7.87	50	P	Pn	02 46 24.1	+2.0
	2.2nm,0.3s,baz=239,slow=14,SNR=14						
ASAJ	Asahikawa	15.52	34	LR	LR	02 54 22.8	
	comp=Z,34nm,19.3s,baz=271,slow=38						
SONM	Songino Array	24.54	318	P	P	02 49 37.7	-1.4
	0.4nm,0.4s,baz=127,slow=9.2,SNR=3.8						
ILAR	Eielson Array	58.62	30	P	P	02 54 15.3	+0.6
	0.4nm,0.7s,baz=289,slow=7.9,SNR=6.6						
ARCES	ARCESS Array B	65.75	338	P	P	02 55 01.4	-0.8
	1.0nm,0.8s,baz=72,slow=8.3,SNR=7.5						
FINES	FINESS Array B	69.21	330	P	P	02 55 23.4	-0.7
	0.8nm,0.3s,baz=66,slow=4.6,SNR=12						
YKA	Yellowknife Ar	72.67	26	P	P	02 55 45.3	+0.3
	0.1nm,0.6s,baz=302,slow=5.8,SNR=3.1						
NOA	NORSAR Array B	75.38	334	P	P	02 56 00.2	-0.7
	0.4nm,0.5s,baz=50,slow=5.6,SNR=3.2						
BRTR	Keskin Array B	75.42	308	P	P	02 56 01.9	+0.2
	0.5nm,0.8s,baz=102,slow=5.2,SNR=4.7						
NVAR	Mina Array Bea	85.18	47	P	P	02 56 55.2	+1.2
	0.3nm,0.4s,baz=305,slow=3.2,SNR=3.9						

MOS 10 02:52:48.4±0.9, 6°.29S×128°.23E, h307^{km}, mb4.7/37, Error ellipse: s-maj=12.7km s-min=6.0km az=109.9

NEIC 10 02:52:50.9±0.6, 6°.29S×128°.29E, h323^{km}±6^{km}, mb4.8/34, Error ellipse: s-maj=6.7km s-min=3.6km az=63.0

ISCJB 10 02:52:50.5±0.3, 6°.31S±0°.02×128°.43E±0°.03, h333^{km}±2^{km}, mb4.7/87, Error ellipse: s-maj=4.6km s-min=3.3km az=159.6

TEH 10 02:52:51.0, 6°.27S×128°.29E, h326^{km}, ML4.8

IDC 10 02:52:51.1±0.9, 6°.34S×128°.26E, h325^{km}±8^{km}, mb4.4/23, mb1 4.5/29, mb1mx4.5/32, mbtmp4.5/29, Error ellipse: s-maj=11.0km s-min=5.6km az=71.0

DJA 10 02:52:52.2±0.2, 6°S±3°×12°8E±°, h301^{km}±5^{km}, M5.2/27, mB5.6/24, mb5.4/27, MLv5.7/14, Mw(mB)5.0/24, Mwp7.2/1

ISC 10 02:52:50.7±0.3, 6°.35S±0°.03×128°.36E±0°.04, h323^{km}±1^{km}, h323^{km}:pP-P, n319, σ1^{s}43/529, mb4.8/87, 5C-19D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	2.65	356	P	Pn	02 53 46.3	+1.4
AAI				S	S	02 54 28.2	-0.1
MSAI	Masohi	3.03	11	P	Pn	02 53 48.2	-0.3
MSAI				S	S	02 54 29.1	-5.6
NLAI	Namlea	3.33	338	P	Pn	02 53 53.2	+1.8
NLAI				S	S	02 54 39.7	-0.2
FAKI	Fak Fak	5.16	49	P	Pn	02 54 10.2	-0.9
	2µm,0.6s,28µm11nm						
FAKI				S	S	02 55 07.4	-8.4
	2µm,0.6s,28µm11nm						
LBMI	Labuha	5.73	351	P	Pn	02 54 18.2	+0.5
	2µm,0.8s,20µm5.9nm						
LBMI				S	S	02 55 20.3	-7.6
	2µm,0.8s,20µm5.9nm						
BBSI	Bau Bau	5.82	278	P	Pn	02 54 20.5	+1.8
	1µm,1.1s,14µm4.9nm						
BBSI				S	S	02 55 29.2	-0.5
	1µm,1.1s,14µm4.9nm						
MMRI	Maumere	6.48	249	P	Pn	02 54 28.6	+2.2
	364nm,1.0s,4µm1.3nm						
TNTI	Ternate	7.14	352	P	Pn	02 54 34.7	+0.4
	277nm,0.8s,3µm0.8nm						
TNTI				S	S	02 55 57.0	-1.2
	277nm,0.8s,3µm0.8nm						
RKPI	Ransiki, Papua	7.53	51	P	Pn	02 54 39.5	+0.5
	2µm,0.8s,59µm18nm						
RKPI				S	S	02 56 02.6	-4.3
	2µm,0.8s,59µm18nm						
LUWI	Luwuk	7.67	313	P	Pn	02 54 42.0	+1.4
	597nm,1.1s,5µm1.8nm						
BSSI	Bau Bau, Buton	7.82	271	P	Pn	02 54 44.2	+1.7
	284nm,1.2s,4µm1.2nm						
KMSI	Cibinong	8.14	327	P	Pn	02 54 47.3	+0.9
	750nm,1.0s,6µm						
KMSI				S	S	02 56 19.4	-1.0
	750nm,1.0s,6µm						
GAMI	Galela, Maluku	8.15	356	P	Pn	02 54 47.9	+1.5
	1µm,1.0s,10µm						
BKSI	Bulukumba	8.26	277	P	Pn	02 54 48.5	+0.8
	424nm,1.1s,4µm						
MNI	Manado	8.50	335	P	Pn	02 54 50.8	+0.1
	565nm,0.9s,5µm						
BASI	Baing, Sumba	8.61	243	P	P	02 54 56.2	+0.2
	273nm,0.8s,8µm2.6nm						
WSI	Waingapu	8.64	247	P	P	02 54 57.4	+1.1
	1µm,0.5s,27µm12nm						
KAPI	Kappang	8.67	278	ePn	Pn	02 54 52.5	-0.2
KAPI				S	S	02 56 29.6	-2.4
KAPI	Kappang	8.67	278	P	Pn	02 54 52.7	0.0
	167nm,1.0s,2µm						
KAPI	Kappang	8.67	278	P	Pn	02 54 52.4	-0.2
	12nm,0.3s,baz=88,slow=5.6,SNR=37						
KAPI				S	S	02 56 29.7	-2.4
	baz=78,slow=19,SNR=1.4						
SPSI	Sidrap Palu	8.88	285	P	Pn	02 54 56.2	+1.0
	274nm,1.0s,3µm						
TTSI	Tana Toraja	9.12	291	P	Pn	02 54 59.9	+1.7
	273nm,1.0s,2µm						
BAKI	Biak	9.27	57	P	P	02 55 02.0	-1.4
	980nm,1.1s,8µm						
MRSI	Marisa	9.32	316	P	Pn	02 55 01.9	+1.2
	337nm,1.2s,3µm						
FITZ	Fitzroy Crossi	11.98	193	P	Pn	02 55 31.6	-1.1
FITZ				S	S	02 57 45.7	-0.6
FITZ	Fitzroy Crossi	11.98	193	P	Pn	02 55 31.6	-1.1
	11nm,0.3s,baz=26,slow=9.6,SNR=242						
FITZ				S	S	02 57 45.7	-0.6
	7.0nm,0.3s,baz=53,slow=15,SNR=6.7						
BKB	Balikpapan	12.50	293	P	P	02 55 43.0	+3.8
	496nm,1.2s,4µm						
SMKI	Samarinda	12.57	297	P	P	02 55 43.7	+3.6
	552nm,0.8s,21µm						
JAY	Jayapura	12.88	73	P	P	02 55 40.7	-2.8
	1µm,0.5s,48µm						
DAV	Davao City (W)	13.61	348	P	P	02 55 50.0	-1.5
DAV				S	S	02 58 20.8	-0.6
DAV	Davao City (W)	13.61	348	P	P	02 55 50.0	-1.5
	49nm,0.3s,baz=191,slow=10,SNR=3.6						
DAV				S	S	02 58 20.8	-0.6
	173nm,0.3s,baz=90,slow=5.1,SNR=3.2						
BBKI	Banjar Baru	13.77	281	P	Pn	02 55 56.0	+1.9
	158nm,1.2s						
CTBH	Cotabato--PC H	14.09	343	⇑iP	P	02 55 57.2	+0.5
JAGI	Jajag, Banyuwa	14.24	261	P	Pn	02 56 02.1	+2.4
	55nm,0.9s						
BUKP	Musuan	14.51	347	eP	Pn	02 56 02.3	-0.5
WRAB	Tennant Creek	14.71	157	eP	P	02 56 04.1	+0.5
WRAB				eS	S	02 58 40.4	-3.2
WRAB				pmax	pmax		
	comp=Z,105nm,0.6s						
WRAB	Tennant Creek	14.71	157	eP	P	02 56 04.1	+0.5
	comp=Z,106nm,0.6s						
WRAB				eS	S	02 58 40.4	-3.2
WRA	Warramunga Arr	14.71	157	P	P	02 56 04.2	+0.6
WRA				S	S	02 58 41.0	-2.7
WRA	Warramunga Arr	14.71	157	P	P	02 56 04.2	+0.6
	comp=Z,31nm,0.3s,baz=340,slow=12,SNR=542						
WRA				S	S	02 58 41.0	-2.7
	comp=Z,8.1nm,0.3s,baz=342,slow=18,SNR=16						
BLJI	Banyuglugur	14.72	264	P	Pn	02 56 06.4	+1.1
TSM	Tawau	14.88	315	P	Pn	02 56 07.6	+0.5
PAGZ	Pagadian	14.95	341	eP	Pn	02 56 07.4	-0.6
BUTP	Butuan	15.46	350	eP	Pn	02 56 15.4	+1.6
SDKM	Sandakan	16.31	317	P	Pn	02 56 23.5	-0.3
COEN	Coen	16.42	119	eP	P	02 56 23.5	+1.2
	comp=Z,7µm,0.8s						
MSLP	Maasin	16.74	348	eP	P	02 56 26.0	+0.4
MBWA	Marble Bar	16.93	209	eP	P	02 56 27.7	0.0
	comp=Z,80nm,0.8s						
KKM	Kota Kinabalu	17.27	315	eP	P	02 56 32.0	+0.4
	comp=Z,65nm,1.1s						
KKM	Kota Kinabalu	17.27	315	P	P	02 56 32.5	+0.8
KDM	Kudat	17.49	319	P	P	02 56 35.0	+1.2
OCLP	Ormoc	17.68	348	eP	P	02 56 30.6	-5.3
GUIM	Jordan	17.81	341	eP	P	02 56 37.4	+0.2
BTM	Bintulu	17.96	301	P	Pn	02 56 41.6	-1.3
AS31	Alice Springs	18.03	163	eP	P	02 56 40.5	+1.0
AS31				eS	S	02 59 48.8	-0.7
ASAR	Alice Springs	18.03	163	P	P	02 56 41.1	+1.5
ASAR				S	S	02 59 48.0	-1.4
ASAR	Alice Springs	18.03	163	P	P	02 56 41.1	+1.5
	comp=Z,44nm,0.3s,baz=342,slow=11,SNR=1931						
ASAR				S	S	02 59 48.0	-1.4
	comp=Z,8.4nm,0.3s,baz=345,slow=20,SNR=58						
SBUM	Sibu	18.33	298	P	P	02 56 45.7	+2.9
BATP	Bataraza	18.36	325	eP	P	02 56 44.2	+1.1
CUYO	Cuyo Island	18.58	337	eP	P	02 56 45.4	-0.1
PMG	Port Moresby	18.87	100	eP	P	02 56 50.6	+2.0
PMG	Port Moresby	18.87	100	P	P	02 56 50.8	+2.2
	comp=Z,21nm,0.3s,baz=298,slow=2.0,SNR=57						
CNP	Catarman	19.09	349	eP	P	02 56 50.9	0.0
ENPP	El Nido	19.57	333	eP	P	02 56 55.8	-0.2
KSM	Kuching	19.62	293	eP	P	02 56 57.1	+0.5
KSM	Kuching	19.62	293	P	P	02 56 57.3	+0.7
OTRP	Odiongan	19.62	341	eP	P	02 56 57.4	+0.8
SJMP	San Jose	20.02	339	eP	P	02 57 00.8	+0.2
AUQP	San Andres	20.34	344	eP	P	02 57 05.8	+2.0
BOAC	Boac	20.71	342	eP	P	02 57 07.7	+0.3
TGY	Tagaytay City	21.61	340	P	P	02 57 15.1	-0.6
TGY	Tagaytay City	21.61	340	P	P	02 57 15.1	-0.6
	comp=Z,648nm,0.6s,baz=169,slow=3.5,SNR=12						
CTA	Charters Tower	22.10	130	P	P	02 57 21.9	+1.8
CTA	Charters Tower	22.10	130	P	P	02 57 21.9	+1.8
	comp=Z,180nm,0.8s,baz=310,slow=12,SNR=149						
CTAO	Charters Tower	22.10	130	eP	P	02 57 22.2	+2.1
CTAO	Charters Tower	22.10	130	eP	P	02 57 22.2	+2.1
BALP	Baler	22.95	343	eP	P	02 57 26.3	-1.5
FORT	Forrest	24.31	181	eP	P	02 57 40.4	+0.4
APYP	Conner	25.06	344	eP	P	02 57 43.5	-3.2
MYKOM	Kota Tinggi	25.77	287	P	P	02 57 54.5	+1.3
BBOO	Buckleboo	27.29	166	eP	P	02 58 07.0	+0.5
	comp=Z,990nm,0.7s						
STKA	Stephens Creek	28.25	156	eP	P	02 58 15.8	+0.7
STKA				pP	pP	02 59 16.0	0.0
STKA	Stephens Creek	28.25	156	P	P	02 58 15.9	+0.8
	comp=Z,50nm,0.5s,baz=327,slow=8.7,SNR=200						
STKA				pP	pP	02 59 16.0	0.0
	comp=Z,34nm,0.8s,baz=324,slow=8.9,SNR=4.4						
NWAO	Narrogin (SRO)	28.40	200	P	P	02 58 16.2	-0.2
NWAO				pP	pP	02 59 13.7	-3.7
NWAO	Narrogin (SRO)	28.40	200	P	P	02 58 16.2	-0.2
	comp=Z,12nm,0.8s,baz=40,slow=7.9,SNR=4.4						
NWAO				pP	pP	02 59 13.7	-3.7
	comp=Z,23nm,0.6s,baz=25,slow=11,SNR=3.6						
EIDS	Eidsvold	28.81	134	eP	P	02 58 20.4	+0.3
YULB	Yu-li	30.35	347	eP	P	02 58 29.8	-3.8
	comp=Z,28nm,1.1s						
TPUB	Ta-pu	30.42	346	eP	P	02 58 31.8	-2.4
	comp=Z,39nm,0.5s						
SSLB	Suanglung	30.81	347	eP	P	02 58 34.8	-2.8
	comp=Z,22nm,0.8s						
QIZ	Qiongzhong	31.12	324	P	P	02 58 38.2	-2.2
QIZ				pP	pP	02 59 41.3	-0.7
QIZ				sP	sP	03 00 18.9	-0.5
QIZ				S	S	03 03 23.3	+1.4
QIZ				pmax	pmax		
	comp=Z,52nm,3.0s						
QIZ	Qiongzhong	31.12	324	P	P	02 58 38.2	-2.2
QIZ				pP	pP	02 59 41.3	-0.7
QIZ				sP	sP	03 00 18.9	-0.5
QIZ				S	S	03 03 23.3	+1.4
QIZ				pmax	pmax		
	comp=Z,52nm,3.0s						
QIZ	Qiongzhong	31.12	324	P	P	02 58 38.2	-2.2
QIZ				pP	pP	02 59 41.3	-0.7
QIZ				sP	sP	03 00 18.9	-0.5
QIZ				S	S	03 03 23.3	+1.4
QIZ				pmax	pmax		
	comp=Z,52nm,3.0s						
YHNB	Yeheng	31.57	348	eP	P	02 58 42.1	-2.2
	comp=Z,35nm,0.6s						
ARMA	Armidale	32.43	140	eP	P	02 58 53.3	+1.6
	comp=Z,17nm,0.7s						
JOW	Kunigami	32.98	360	eP	P	02 58 56.5	+0.1
	comp=Z,65nm,0.8s						
CAN	Canberra	34.53	149	eP	P	02 59 11.2	+1.5
CAN				pmax	pmax		
	comp=Z,105nm,0.7s						
CAN	Canberra	34.53	149	eP	P	02 59 11.2	+1.5
	comp=Z,105nm,0.7s						
CMAR	Chiang Mai Arr	38.07	311	P	P	02 59 39.2	-0.3
CMAR				ScP	ScP	03 05 04.2	+0.2
CMAR	Chiang Mai Arr	38.07	311	P	P	02 59 39.2	-0.3
	comp=Z,5.1nm,0.4s,baz=143,slow=7.1,SNR=21						
CMAR				ScP	ScP	03 05 04.2	+0.2
	comp=Z,3.5nm,0.8s,baz=156,slow=2.6,SNR=11						
CHTO	Chiang Mai	38.28	311	eP	P	02 59 41.6	+0.3
CHTO				pmax	pmax		
	comp=Z,21nm,1.0s						
CHTO	Chiang Mai	38.28	311	eP	P	02 59 41.6	+0.3
	comp=Z,21nm,1.0s						
GYA	Guiyang	38.81	328	P	P	02 59 46.8	+1.2
GYA				pP	pP	03 00 51.2	+1.8
GYA				sP	sP	03 01 27.0	+0.8
GYA				PcP	PcP	03 01 50.6	+0.9
GYA				ScP	ScP	03 05 07.4	+0.7
GYA				S	S	03 05 21.0	+2.1
GYA				PcS	PcS	03 05 39.7	-0.2
GYA				ScS	ScS	03 09 17.8	-1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.6s						
GYA	Guiyang	38.81	328	P	P	02 59 46.8	+1.2
GYA				pP	pP	03 00 51.2	+1.8
GYA				sP	sP	03 01 27.0	+0.8
GYA				PcP	PcP	03 01 50.6	+0.9
GYA				ScP	ScP	03 05 07.4	+0.7
GYA				S	S	03 05 21.0	+2.1
GYA				PcS	PcS	03 05 39.7	-0.2
GYA				ScS	ScS	03 09 17.8	-1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.6s						
GYA	Guiyang	38.81	328	P	P	02 59 46.8	+1.2
GYA				pP	pP	03 00 51.2	+1.8
GYA				sP	sP	03 01 27.0	+0.8
GYA				PcP	PcP	03 01 50.6	+0.9
GYA				ScP	ScP	03 05 07.4	+0.7
GYA				S	S	03 05 21.0	+2.1
GYA				PcS	PcS	03 05 39.7	-0.2
GYA				ScS	ScS	03 09 17.8	-1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.6s						
WHN	Wuhan	39.06	341	⇓P	P	02 59 47.5	+0.1
WHN				pmax	pmax		
	comp=Z,220nm,1.0s						
WHN	Wuhan	39.06	341	⇓P	P	02 59 47.5	+0.1
WHN				pmax	pmax		
	comp=Z,220nm,1.0s						
WHN	Wuhan	39.06	341	⇓P	P	02 59 47.5	+0.1
WHN				pmax	pmax		
	comp=Z,220nm,1.0s						
NJ2	Nanjing	39.24	347	eP	P	02 59 49.3	+0.4
NJ2				pmax	pmax		
	comp=Z,100nm,0.8s						
NJ2	Nanjing	39.24	347	eP	P	02 59 49.3	+0.4
NJ2				pmax	pmax		
	comp=Z,100nm,0.8s						
NJ2	Nanjing	39.24	347	eP	P	02 59 49.3	+0.4
NJ2				pmax	pmax		
	comp=Z,100nm,0.8s						
JNU	Nakatsue	39.32	3	eP	P	02 59 49.1	-0.5
	comp=Z,14nm,1.0s						
JNU	Nakatsue	39.32	3	P	P	02 59 48.9	-0.8
	comp=Z,34nm,0.8s,baz=193,slow=5.5,SNR=11						
NOUC	Port Laguerre	39.83	117	eP	P	02 59 53.8	-0.1
DZM	Mont Dzumac	39.94	117	eP	P	02 59 54.5	-0.5
DZM	Mont Dzumac	39.94	117	P	P	02 59 55.7	+0.7
DZM	Mont Dzumac	39.94	117	P	P	02 59 55.7	+0.7
	comp=Z,31nm,0.6s,baz=280,slow=7.6,SNR=54						
KMI	Kunming	40.00	322	P	P	02 59 56.4	+0.9
KMI				pP	pP	03 01 02.1	+2.5
KMI				sP	sP	03 01 38.4	+2.0
KMI				S	S	03 05 38.6	+1.8
KMI				sS	sS	03 07 31.3	-0.8
KMI				pmax	pmax		
	comp=Z,36nm,1.1s						
KMI				pmax	pmax		
	comp=Z,150nm,4.4s						
KMI				LR	LR		
	comp=N,110nm,17.8s						
KMI				LR	LR		
	comp=E,110nm,21.0s						
KMI				LR	LR		
	comp=Z,100nm,18.6s						
KMI	Kunming	40.00	322	P	P	02 59 56.4	+0.9
KMI				pP	pP	03 01 02.1	+2.5
KMI				sP	sP	03 01 38.4	+2.0
KMI				S	S	03 05 38.6	+1.8
KMI				sS	sS	03 07 31.3	-0.8
KMI				pmax	pmax		
	comp=Z,36nm,1.1s						
KMI				pmax	pmax		
	comp=Z,150nm,4.4s						
KMI				LR	LR		
	comp=N,110nm,17.8s						
KMI				LR	LR		
	comp=E,110nm,21.0s						
KMI				LR	LR		

comp=Z,100nm,18.6s
KMI Kunming 40.00 322 P **P** **02 59 56.4 +0.9**
KMI pP **pP** **03 01 02.1 +2.5**
KMI sP **sP** **03 01 38.4 +2.0**
KMI S **S** **03 05 38.6 +1.8**
KMI sS **sS** **03 07 31.3 -0.8**
KMI pmax pmax
comp=Z,36nm,1.1s
KMI pmax pmax
comp=Z,150nm,4.4s
KMI LR LR
comp=N,110nm,17.8s
KMI LR LR
comp=E,110nm,21.0s
KMI LR LR
comp=Z,100nm,18.6s
ENH Enshi 40.66 335 *e*P **P** **02 59 60.0 -0.6**
comp=Z,38nm,0.7s
KSAR Wonju Array Be 43.56 359 P **P** **03 00 24.1 +0.5**
KSRS Korea Array 43.57 359 P **P** **03 00 24.1 +0.4**
comp=Z,37nm,0.5s,baz=177,slow=9.6,SNR=120
MJAR Matsushiro Arr 43.65 12 P **P** **03 00 23.0 -1.4**
MJAR ScP **ScP** **03 05 24.5 -1.1**
MJAR Matsushiro Arr 43.65 12 P **P** **03 00 23.0 -1.4**
comp=Z,26nm,0.9s,baz=189,slow=9.1,SNR=45
MJAR ScP **ScP** **03 05 24.5 -1.1**
comp=Z,1.2nm,0.7s,baz=207,slow=6.2,SNR=5.7
MAJO Matsushiro 43.65 12 *e*P **P** **03 00 23.2 -1.2**
MAJO pmax pmax
comp=Z,50nm,1.1s
MAJO Matsushiro 43.65 12 *e*P **P** **03 00 23.2 -1.2**
comp=Z,50nm,1.1s
MAT Matsushiro 43.65 12 P **P** **03 00 23.1 -1.3**
MAT *e*S **S** **03 06 27.4 -1.9**
CD2 Chengdu 43.89 329 *e*P **P** **03 00 26.3 -0.2**
CD2 pP **pP** **03 01 32.5 +0.6**
CD2 sP **sP** **03 02 08.5 +0.2**
CD2 PP **PP** **03 02 15.6 -0.7**
CD2 S **S** **03 06 33.0 -0.1**
CD2 sS **sS** **03 08 30.2 0.0**
CD2 SS **ScS** **03 09 51.6 +1.8**
CD2 pmax pmax
comp=Z,90nm,0.5s
CD2 pmax pmax
comp=Z,140nm,4.8s
CD2 Chengdu 43.89 329 *e*P **P** **03 00 26.3 -0.2**
CD2 pP **pP** **03 01 32.5 +0.6**
CD2 sP **sP** **03 02 08.5 +0.2**
CD2 PP **PP** **03 02 15.6 -0.7**
CD2 S **S** **03 06 33.0 -0.1**
CD2 sS **sS** **03 08 30.2 0.0**
CD2 SS **ScS** **03 09 51.6 +1.8**
CD2 pmax pmax
comp=Z,90nm,0.5s
CD2 pmax pmax
comp=Z,140nm,4.8s
CD2 Chengdu 43.89 329 *e*P **P** **03 00 26.3 -0.2**
CD2 pP **pP** **03 01 32.5 +0.6**
CD2 sP **sP** **03 02 08.5 +0.2**
CD2 PP **PP** **03 02 15.6 -0.7**
CD2 S **S** **03 06 33.0 -0.1**
CD2 sS **sS** **03 08 30.2 0.0**
CD2 SS **ScS** **03 09 51.6 +1.8**
CD2 pmax pmax
comp=Z,90nm,0.5s
CD2 pmax pmax
comp=Z,140nm,4.8s
XAN Xi'an 44.18 337 P **P** **03 00 27.6 -1.1**
XAN pmax pmax
comp=Z,27nm,0.8s
XAN pmax pmax
comp=Z,20nm,5.1s
XAN Xi'an 44.18 337 P **P** **03 00 27.6 -1.1**
XAN pmax pmax
comp=Z,27nm,0.8s
XAN pmax pmax
comp=Z,20nm,5.1s
XAN Xi'an 44.18 337 P **P** **03 00 27.6 -1.1**
XAN pmax pmax
comp=Z,27nm,0.8s
XAN pmax pmax
comp=Z,20nm,5.1s
BJT Baijiatuau 47.48 347 *e*P **P** **03 00 53.3 -0.8**
comp=Z,71nm,0.8s
BJI Beijing 47.50 347 P **P** **03 00 53.8 -0.5**
BJI pmax pmax
comp=Z,120nm,0.8s
BJI Beijing 47.50 347 P **P** **03 00 53.8 -0.5**
BJI pmax pmax
comp=Z,120nm,0.8s
BJI Beijing 47.50 347 P **P** **03 00 53.8 -0.5**
BJI pmax pmax
comp=Z,120nm,0.8s
SHL Shillong 47.56 313⇓*i*P **P** **03 00 56.0 +0.8**
LZH Lanzhou 48.08 333 ⇓P **P** **03 00 59.2 +0.3**
LZH pP **pP** **03 02 08.0 +2.4**
LZH PcP **PcP** **03 02 20.5 -0.6**
LZH sP **sP** **03 02 42.3 +0.6**
LZH PP **PP** **03 02 57.5 +2.8**
LZH ScP **ScP** **03 05 43.0 -1.3**
LZH S **S** **03 07 31.0 -1.4**
LZH sS **sS** **03 09 32.5 +1.1**
LZH Lanzhou 48.08 333 SS SS 03 11 04.0 -2.5
LZH pmax pmax
comp=Z,35nm,1.0s
LZH pmax pmax
comp=Z,160nm,5.0s
LZH Lanzhou 48.08 333 ⇓P **P** **03 00 59.2 +0.3**
LZH pP **pP** **03 02 08.0 +2.4**
LZH PcP **PcP** **03 02 20.5 -0.6**
LZH sP **sP** **03 02 42.3 +0.6**
LZH PP **PP** **03 02 57.5 +2.8**
LZH ScP **ScP** **03 05 43.0 -1.3**
LZH S **S** **03 07 31.0 -1.4**
LZH sS **sS** **03 09 32.5 +1.1**
LZH Lanzhou 48.08 333 SS SS 03 11 04.0 -2.5
LZH pmax pmax
comp=Z,35nm,1.0s
LZH pmax pmax
comp=Z,160nm,5.0s
LZH Lanzhou 48.08 333 ⇓P **P** **03 00 59.2 +0.3**
LZH pP **pP** **03 02 08.0 +2.4**
LZH PcP **PcP** **03 02 20.5 -0.6**
LZH sP **sP** **03 02 42.3 +0.6**
LZH PP **PP** **03 02 57.5 +2.8**
LZH ScP **ScP** **03 05 43.0 -1.3**
LZH S **S** **03 07 31.0 -1.4**
LZH sS **sS** **03 09 32.5 +1.1**
LZH Lanzhou 48.08 333 SS SS 03 11 04.0 -2.5
LZH pmax pmax
comp=Z,35nm,1.0s
LZH pmax pmax
comp=Z,160nm,5.0s
VLA Vladivostok 49.34 3*d*i*P* **P** **03 01 07.8 -0.3**
VLA pmax pmax
comp=Z,86nm,1.2s
HHC Hu-ho-hao-te 49.43 343 *e*P **P** **03 01 11.8 +2.8**
HHC pP **pP** **03 02 18.4 +2.3**
HHC sP **sP** **03 02 53.3 +1.2**
HHC PP **PP** **03 03 10.8 +3.9**
HHC PcS **PcS** **03 06 24.6 +1.5**
HHC S **S** **03 07 53.8 +2.8**
HHC sS **sS** **03 09 51.2 +0.6**
HHC ScS **ScS** **03 10 26.7 +0.6**
HHC Hu-ho-hao-te 49.43 343 SS **SS** **03 11 28.9 +1.2**
HHC pmax pmax
comp=Z,37nm,1.1s
HHC pmax pmax
comp=Z,110nm,5.2s
HHC LR LR
comp=N,160nm,14.9s
HHC LR LR
comp=E,900nm,14.1s
HHC LR LR
comp=Z,160nm,16.0s
HHC Hu-ho-hao-te 49.43 343 *e*P **P** **03 01 11.8 +2.8**
HHC pP **pP** **03 02 18.4 +2.3**
HHC sP **sP** **03 02 53.3 +1.2**
HHC PP **PP** **03 03 10.8 +3.9**
HHC PcS **PcS** **03 06 24.6 +1.5**
HHC S **S** **03 07 53.8 +2.8**
HHC sS **sS** **03 09 51.2 +0.6**
HHC ScS **ScS** **03 10 26.7 +0.6**
HHC Hu-ho-hao-te 49.43 343 SS **SS** **03 11 28.9 +1.2**
HHC pmax pmax
comp=Z,37nm,1.1s
HHC pmax pmax
comp=Z,110nm,5.2s
HHC LR LR
comp=N,160nm,14.9s
HHC LR LR
comp=E,900nm,14.1s
HHC LR LR
comp=Z,160nm,16.0s
MSVF Nonsavu 49.76 108 *e*P **P** **03 01 14.2 +2.4**
MSVF pmax pmax
comp=Z,37nm,0.9s
MSVF Nonsavu 49.76 108 *e*P **P** **03 01 14.2 +2.4**
comp=Z,37nm,0.9s
CN2 Changchun 49.98 357 ⇑P **P** **03 01 12.6 -0.3**
CN2 *e*pP **pP** **03 02 23.0 +2.8**
CN2 *e*S **S** **03 07 59.0 +0.8**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 Changchun 49.98 357 ⇑P **P** **03 01 12.6 -0.3**
CN2 *e*pP **pP** **03 02 23.0 +2.8**
CN2 *e*S **S** **03 07 59.0 +0.8**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 Changchun 49.98 357 ⇑P **P** **03 01 12.6 -0.3**
CN2 *e*pP **pP** **03 02 23.0 +2.8**
CN2 *e*S **S** **03 07 59.0 +0.8**
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
ERM Erimo 49.99 14⇓*e*P **P** **03 01 14.2 +1.2**
ERM pmax pmax
comp=Z,22nm,1.7s
USRK Ussuriysk Arra 50.42 3 P **P** **03 01 16.4 +0.2**
comp=Z,20nm,0.5s,baz=190,slow=7.4,SNR=68
LSA Lhasa 50.61 317 *e*P **P** **03 01 18.9 +0.5**
LSA pmax pmax
comp=Z,49nm,0.6s
LSA Lhasa 50.61 317 *e*P **P** **03 01 18.9 +0.5**
comp=Z,49nm,0.6s
MDJ Mudanjiang 50.74 1 P **P** **03 01 18.7 +0.2**
MDJ pP **pP** **03 02 25.1 -0.9**
MDJ sP **sP** **03 03 01.1 -0.8**
MDJ ScP **ScP** **03 05 55.1 -0.2**
MDJ PcS **PcS** **03 06 28.6 +0.3**
MDJ S **S** **03 08 09.3 +0.8**
MDJ sS **sS** **03 10 08.8 0.0**
MDJ pmax pmax
comp=Z,26nm,1.0s
MDJ pmax pmax
comp=Z,9.0nm,1.4s
MDJ Mudanjiang 50.74 1 P **P** **03 01 18.7 +0.2**
MDJ pP **pP** **03 02 25.1 -0.9**
MDJ sP **sP** **03 03 01.1 -0.8**
MDJ ScP **ScP** **03 05 55.1 -0.2**
MDJ PcS **PcS** **03 06 28.6 +0.3**
MDJ S **S** **03 08 09.3 +0.8**
MDJ sS **sS** **03 10 08.8 0.0**
MDJ pmax pmax
comp=Z,26nm,1.0s
MDJ pmax pmax
comp=Z,9.0nm,1.4s
MDJ Mudanjiang 50.74 1 P **P** **03 01 18.7 +0.2**
MDJ pP **pP** **03 02 25.1 -0.9**
MDJ sP **sP** **03 03 01.1 -0.8**
MDJ ScP **ScP** **03 05 55.1 -0.2**
MDJ PcS **PcS** **03 06 28.6 +0.3**
MDJ S **S** **03 08 09.3 +0.8**
MDJ sS **sS** **03 10 08.8 0.0**
MDJ pmax pmax
comp=Z,26nm,1.0s
MDJ pmax pmax
comp=Z,9.0nm,1.4s
MDJ Mudanjiang 50.74 1 *e*P **P** **03 01 18.0 -0.5**
comp=Z,64nm,1.4s
ODAN Odare 51.60 312 *e*P **P** **03 01 25.3 -0.2**
comp=Z,81nm,0.5s
TAPN Taplejung 51.64 312 *e*P **P** **03 01 25.8 -0.1**
comp=Z,91nm,0.4s
ASAJ Asahikawa 51.85 13 P **P** **03 01 26.7 0.0**
ASAJ Asahikawa 51.85 13 P **P** **03 01 26.7 0.0**
comp=Z,7.5nm,0.5s,baz=234,slow=8.7,SNR=9.0
RAMN Ramite 52.24 311 *e*P **P** **03 01 30.3 +0.1**
comp=Z,190nm,0.6s
GTA Gaotai 52.63 332⇓*i*P **P** **03 01 33.1 +0.4**
GTA pP **pP** **03 02 40.8 +0.1**
GTA sP **sP** **03 03 15.7 -0.7**
GTA ScP **ScP** **03 06 04.1 +0.3**
GTA S **S** **03 08 35.4 +0.8**
GTA sS **sS** **03 10 34.7 -1.0**
GTA Gaotai 52.63 332 SS **SKiKP** **03 12 19.7 +2.6**
GTA pmax pmax
comp=Z,79nm,0.8s
GTA pmax pmax
comp=Z,120nm,5.2s
GTA LR LR
comp=N,110nm,19.5s
GTA LR LR
comp=E,170nm,19.5s
GTA LR LR
comp=Z,78nm,19.5s
GTA Gaotai 52.63 332⇓*i*P **P** **03 01 33.1 +0.4**
GTA pP **pP** **03 02 40.8 +0.1**
GTA sP **sP** **03 03 15.7 -0.7**
GTA ScP **ScP** **03 06 04.1 +0.3**
GTA S **S** **03 08 35.4 +0.8**
GTA sS **sS** **03 10 34.7 -1.0**
GTA Gaotai 52.63 332 SS **SKiKP** **03 12 19.7 +2.6**
GTA pmax pmax
comp=Z,79nm,0.8s
GTA pmax pmax
comp=Z,120nm,5.2s
GTA LR LR
comp=N,110nm,19.5s
GTA LR LR
comp=E,170nm,19.5s
GTA LR LR
comp=Z,78nm,19.5s
GTA Gaotai 52.63 332⇓*i*P **P** **03 01 33.1 +0.4**
GTA pP **pP** **03 02 40.8 +0.1**
GTA sP **sP** **03 03 15.7 -0.7**
GTA ScP **ScP** **03 06 04.1 +0.3**
GTA S **S** **03 08 35.4 +0.8**
GTA sS **sS** **03 10 34.7 -1.0**
GTA Gaotai 52.63 332 SS **SKiKP** **03 12 19.7 +2.6**
GTA pmax pmax
comp=Z,79nm,0.8s
GTA pmax pmax
comp=Z,120nm,5.2s
GTA LR LR
comp=N,110nm,19.5s
GTA LR LR
comp=E,170nm,19.5s
GTA LR LR
comp=Z,78nm,19.5s
RPZ Rata Peaks 52.75 142 *e*P **P** **03 01 34.8 +1.4**
comp=Z,168nm,1.0s
RPZ Rata Peaks 52.75 142 P **P** **03 01 34.4 +1.0**
comp=Z,139nm,0.8s,baz=282,slow=2.3,SNR=34
GUN Gumba 53.30 312 *e*P **P** **03 01 37.8 -0.2**
comp=Z,214nm,0.7s
PKI Pulchoki 53.47 311 *e*P **P** **03 01 38.7 -0.5**
comp=Z,46nm,0.6s
PKIN Phulchoki 53.48 311 *e*P **P** **03 01 38.8 -0.4**
comp=Z,13nm,0.5s
KKN Kakani 53.68 311 *e*P **P** **03 01 40.3 -0.3**
comp=Z,81nm,0.8s
DMN Daman 53.71 311 *e*P **P** **03 01 40.6 -0.3**
comp=Z,86nm,0.9s
URZ Urewera 54.30 133 *e*P **P** **03 01 44.8 +0.2**
comp=Z,84nm,1.1s
URZ Urewera 54.30 133 P **P** **03 01 45.0 +0.4**
comp=Z,30nm,0.6s,baz=241,slow=3.9,SNR=13
YSS Yuzh-Sakhalins 54.58 12 *e*P **P** **03 01 47.5 +1.1**
YSS pmax pmax
comp=Z,14nm,0.6s
HABR Khabarovsk 54.90 5 *e*P **P** **03 01 47.6 -1.0**
HABR *e* 03 02 45.6
HABR *e**PP PcP 03 02 51.7 +5.5
HABR *e* 03 03 53.8
HABR *e*S **S** **03 09 05.2 +0.9**
HABR *e**SS **ScS** **03 10 59.4 -4.4**
HABR *e* 03 11 05.4
HABR *e*SS **SS** **03 12 54.7 +1.3**
HABR pmax pmax
comp=Z,39nm,1.2s
HABR pmax pmax
comp=N,14nm,0.7s
HABR pmax pmax
comp=E,17nm,0.7s
HABR MLR MLR
comp=Z,88nm,21.0s
KOLN Koldanda 54.93 310 *e*P **P** **03 01 49.5 -0.1**
comp=Z,83nm,0.7s
DANN Dangsing 55.11 311 *e*P **P** **03 01 50.5 -0.5**
comp=Z,64nm,0.8s
KLR Kul'dur 55.42 3 *e*P P 03 01 48.0 -4.3
KLR pmax pmax
comp=Z,62nm,1.6s
PYUN Piuthan 55.56 310 *e*P **P** **03 01 53.9 -0.1**
comp=Z,143nm,0.8s
ULN Ulaanbaatar 57.15 343 *e*P **P** **03 02 05.4 +0.7**
comp=Z,79nm,1.3s
SONM Songino Array 57.32 343 P **P** **03 02 06.2 +0.4**
SONM ScP **ScP** **03 06 24.2 0.0**
SONM Songino Array 57.32 343 P **P** **03 02 06.2 +0.4**
comp=Z,29nm,0.8s,baz=161,slow=7.5,SNR=152
SONM ScP **ScP** **03 06 24.2 0.0**
comp=Z,0.9nm,0.8s,baz=167,slow=4.1,SNR=4.3
ZAK Zakamensk 60.53 342 *e*P **P** **03 02 27.4 -0.2**
ZAK *e* 03 10 15.2
ZAK pmax pmax
comp=Z,9.0nm,1.2s
TLY Talaya 61.56 343⇑*i*P **P** **03 02 35.7 +1.3**
TLY *e* 03 03 17.6
TLY *e*S S 03 10 59.1 +29
TLY pmax pmax
comp=Z,23nm,1.6s
WMQ Urumqi 61.97 328 P **P** **03 02 38.2 +0.9**
WMQ pP **PcP** **03 03 18.0 +3.4**
WMQ sP **pP** **03 03 49.0 +1.1**
WMQ pmax pmax
comp=Z,61nm,1.0s
WMQ pmax pmax
comp=Z,130nm,5.2s
WMQ Urumqi 61.97 328 P **P** **03 02 38.2 +0.9**
WMQ pP **PcP** **03 03 18.0 +3.4**
WMQ sP **pP** **03 03 49.0 +1.1**
WMQ pmax pmax
comp=Z,61nm,1.0s
WMQ pmax pmax
comp=Z,130nm,5.2s
WMQ Urumqi 61.97 328 P **P** **03 02 38.2 +0.9**
WMQ pP **PcP** **03 03 18.0 +3.4**
WMQ sP **pP** **03 03 49.0 +1.1**
WMQ pmax pmax
comp=Z,61nm,1.0s
WMQ pmax pmax
comp=Z,130nm,5.2s
MOY Mondy 62.36 341 *e*P **P** **03 02 41.0 +1.2**
MOY pmax pmax
comp=Z,42nm,1.6s
CLNS Chul'man 63.03 358 *e*P **P** **03 02 44.4 +0.4**
CLNS pmax pmax
comp=Z,10.0nm,1.0s
CLNS pmax pmax
comp=E,4.0nm,1.0s
CLNS pmax pmax
comp=N,7.0nm,0.9s
PETK Petropavlovsk- 64.23 19 P **P** **03 02 52.5 +0.7**
PETK pmax pmax
comp=Z,7.0nm,0.7s
PETK Petropavlovsk- 64.23 19 P **P** **03 02 52.5 +0.7**
PETK Petropavlovsk- 64.23 19 P **P** **03 02 52.5 +0.7**
comp=Z,6.8nm,0.7s,baz=192,slow=7.4,SNR=23
KSH Kashi 66.44 318 P **P** **03 03 07.0 +0.6**
KSH *e*PcP **PcP** **03 03 34.8 +1.5**
KSH *e*pP **pP** **03 04 18.5 +0.5**
KSH *e*sP **sP** **03 04 52.3 -0.5**
KSH *e*PP **PP** **03 05 39.7 +2.2**
KSH *e*S S 03 11 23.9 -6.4
KSH *e*ScS **SKSac** **03 12 28.7 -2.2**
KSH Kashi 66.44 318 *e*sS **sS** **03 13 32.9 -4.3**
KSH pmax pmax
comp=Z,43nm,0.9s
KSH pmax pmax
comp=Z,150nm,3.5s
KSH LR LR
comp=N,240nm,5.7s
KSH LR LR
comp=E,280nm,5.4s
KSH LR LR
comp=Z,350nm,5.1s
KSH Kashi 66.44 318 P **P** **03 03 07.0 +0.6**
KSH *e*PcP **PcP** **03 03 34.8 +1.5**
KSH *e*pP **pP** **03 04 18.5 +0.5**
KSH *e*sP **sP** **03 04 52.3 -0.5**
KSH *e*PP **PP** **03 05 39.7 +2.2**
KSH *e*S S 03 11 23.9 -6.4
KSH *e*ScS **SKSac** **03 12 28.7 -2.2**
KSH Kashi 66.44 318 *e*sS **sS** **03 13 32.9 -4.3**
KSH pmax pmax
comp=Z,43nm,0.9s
KSH pmax pmax
comp=Z,150nm,3.5s
KSH LR LR
comp=N,240nm,5.7s
KSH LR LR
comp=E,280nm,5.4s
KSH LR LR
comp=Z,350nm,5.1s
KSH Kashi 66.44 318 P **P** **03 03 07.0 +0.6**
KSH *e*PcP **PcP** **03 03 34.8 +1.5**
KSH *e*pP **pP** **03 04 18.5 +0.5**
KSH *e*sP **sP** **03 04 52.3 -0.5**
KSH *e*PP **PP** **03 05 39.7 +2.2**
KSH *e*S S 03 11 23.9 -6.4
KSH *e*ScS **SKSac** **03 12 28.7 -2.2**
KSH Kashi 66.44 318 *e*sS **sS** **03 13 32.9 -4.3**
KSH pmax pmax
comp=Z,43nm,0.9s
KSH pmax pmax
comp=Z,150nm,3.5s
KSH LR LR
comp=N,240nm,5.7s
KSH LR LR
comp=E,280nm,5.4s
KSH LR LR
comp=Z,350nm,5.1s
MK31 Makanchi Array 66.79 327 *e*P **P** **03 03 08.4 +0.1**
MK31 pmax pmax
comp=Z,3.0nm,0.3s
MKAR Makanchi Array 66.79 327 P **P** **03 03 08.7 +0.4**
MKAR pmax pmax
comp=Z,24nm,0.6s
MKAR Makanchi Array 66.79 327 P **P** **03 03 08.7 +0.4**
MKAR Makanchi Array 66.79 327 P **P** **03 03 08.7 +0.4**
comp=Z,24nm,0.6s,baz=128,slow=7.8,SNR=312
ULHL Ulahol 67.69 321 P **P** **03 03 14.8 +0.6**
SNR=8.5
YAK Yakutsk 68.18 1*d*i*P* **P** **03 03 16.4 -0.1**
YAK *e* 03 03 38.1
YAK *e**PP pP 03 04 21.7 -6.9
YAK *e*S **S** **03 11 48.4 -1.4**
YAK *e* 03 12 40.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAK				pmax	pmax		
	comp=Z,48nm,0.8s						
YAK				pmax	pmax		
	comp=N,14nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				smax	smax		
	comp=N,56nm,1.6s						
YAK				smax	smax		
	comp=E,36nm,2.0s						
KZA	Kyzart	68.23	320	P	P	03 03 19.0	+1.2
	SNR=23						
TKM2	Tokmak 2	68.45	321	eP	P	03 03 19.4	+0.5
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TKM2	Tokmak 2	68.45	321	eP	P	03 03 19.4	+0.5
	comp=Z,10nm,0.7s						
TKM2	Tokmak 2	68.45	321	P	P	03 03 19.4	+0.5
	SNR=16						
KBK	Karagaybulak	68.72	321	P	P	03 03 21.3	+0.8
	SNR=7.3						
AAK	Ala-Archa	68.99	320	eP	P	03 03 22.8	+0.6
AAK				pmax	pmax		
	comp=Z,26nm,1.2s						
AAK	Ala-Archa	68.99	320	eP	P	03 03 22.8	+0.6
	comp=Z,26nm,1.2s						
AAK	Ala-Archa	68.99	320	P	P	03 03 23.3	+1.1
	SNR=7.7						
KBL	Kabul	69.10	311	eP	P	03 03 23.2	+0.1
KBL				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KBL	Kabul	69.10	311	eP	P	03 03 23.2	+0.1
	comp=Z,5.7nm,0.5s						
AML	Almayashu	69.25	320	P	P	03 03 25.1	+1.0
	SNR=23						
USP	Ospenovka	69.31	321	P	P	03 03 24.6	+0.7
	SNR=23						
EKS2	Erkin-Say	69.46	320	eP	P	03 03 25.7	+0.7
EKS2				pmax	pmax		
	comp=Z,25nm,1.2s						
EKS2	Erkin-Say	69.46	320	eP	P	03 03 25.7	+0.7
	comp=Z,25nm,1.2s						
EKS2	Erkin-Say	69.46	320	P	P	03 03 26.0	+1.0
	SNR=18						
ZAA0	Zalesovo Array	70.28	334	eP	P	03 03 28.8	-0.7
ZALV	Zalesovo Beam	70.28	334	i P	P	03 03 29.0	-0.6
ZALV				pmax	pmax		
	comp=Z,51nm,1.1s						
ZALV	Zalesovo Beam	70.28	334	P	P	03 03 28.9	-0.6
ZALV	Zalesovo Beam	70.28	334	P	P	03 03 28.9	-0.6
	comp=Z,51nm,1.1s,baz=108,slow=4.8,SNR=59						
KURBB	Kurchatov Arra	71.11	329	P	P	03 03 34.4	-0.1
	comp=Z,13nm,0.4s,baz=131,slow=5.0,SNR=194						
KURK	Kurchatov	71.12	329	eP	P	03 03 34.6	0.0
KURK				pmax	pmax		
	comp=Z,56nm,0.9s						
KURK	Kurchatov	71.12	329	eP	P	03 03 34.6	0.0
	comp=Z,56nm,0.9s						
NVS	Novosibirsk	71.57	334⇓	iP	P	03 03 35.3	-1.9
NVS				eS	S	03 12 23.8	-5.4
NVS				pmax	pmax		
	comp=N,11nm,1.3s						
NVS				pmax	pmax		
	comp=Z,30nm,1.3s						
NVS				smax	smax		
	comp=N,3.0nm,0.8s						
NVS				smax	smax		
	comp=E,18nm,1.8s						
KK31	Karatay Array	71.78	319	i P	P	03 03 38.6	-0.1
KK31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KKAR	Karatay Array	71.78	319	eP	P	03 03 38.8	+0.1
KKAR				pmax	pmax		
	comp=Z,14nm,1.0s						
KKAR	Karatay Array	71.78	319	eP	P	03 03 38.8	+0.1
	comp=Z,14nm,1.0s						
VNDA	Vanda	73.29	173	eP	P	03 03 46.5	-0.5
	comp=Z,2.9nm,0.8s						
VNDA	Vanda	73.29	173	P	P	03 03 46.8	-0.1
	comp=Z,3.0nm,0.5s,baz=317,slow=7.1,SNR=23						
MAW	Mawson	74.96	201	P	P	03 03 56.7	+0.1
MAW	Mawson	74.96	201	P	P	03 03 56.7	+0.1
	comp=Z,7.5nm,1.0s,baz=67,slow=7.3,SNR=11						
IDAH	Dahanechah	75.64	306	eP	P	03 04 02.2	+0.7
IKOO	Kooshah	76.24	305	eP	P	03 04 05.5	+0.6
ITEG	Tejag	76.58	306	eP	P	03 04 07.2	+0.5
BVA0	Borovoye Array	76.65	328	i P	P	03 04 06.2	-0.2
BVA0				pmax	pmax		
	comp=Z,13nm,1.0s						
BRVK	Borovoye	76.72	328d	iP	P	03 04 06.4	-0.4
BRVK				pmax	pmax		
	comp=Z,16nm,1.4s						
BRVK	Borovoye	76.72	328	eP	P	03 04 06.2	-0.5
	comp=Z,16nm,1.0s						
TIXI	Tiksi	77.84	0d	iP	P	03 04 12.1	-0.4
TIXI				i *PP	pP	03 05 25.6	-1.1
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BILL	Bilibino	78.86	14	eP	P	03 04 18.9	+0.7
BILL				e		03 04 26.4	
BILL				pmax	pmax		
	comp=Z,12nm,0.7s						
OPO	Ambohidratompo	79.66	252	P	P	03 04 23.7	0.0
OPO	Ambohidratompo	79.66	252	P	P	03 04 23.7	0.0
	comp=Z,2.4nm,0.7s,baz=64,slow=1.6,SNR=4.4						
AB31	Akbulak array	80.99	322	i P	P	03 04 29.3	-0.6
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ABKAR	Akbulak array	80.99	322	eP	P	03 04 29.5	-0.4
	comp=Z,2.5nm,0.4s						
AKTO	Aktyubinsk	82.56	323	P	P	03 04 37.9	-0.2
AKTO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SVE	Sverdlovsk	83.37	329	eP	P	03 04 42.3	+0.3
SVE				pmax	pmax		
	comp=Z,21nm,1.4s						
QSPA	South Pole Qui	83.63	180	eP	P	03 04 42.5	-0.8
	comp=Z,12nm,0.7s						
QSPA	South Pole Qui	83.63	180	P	P	03 04 42.9	-0.4
	comp=Z,8.8nm,0.5s,baz=315,slow=1.3,SNR=128						
SYO	Syowa Base	83.68	201⇓	eP	P	03 04 42.0	-1.4
SYO	Syowa Base	83.68	201⇓	ePcP	PcP	03 04 47.4	+0.6
ARU	Arti	84.29	328d	iP	P	03 04 46.2	-0.5
ARU						03 08 05.3	
ARU				S	S	03 14 38.5	-5.8
ARU				pmax	pmax		
	comp=Z,14nm,1.2s						
RDF	Al-Radifah	85.05	300	eP	P	03 04 51.3	+0.3
RDF				AMb	AMB	03 04 52.0	
	comp=Z,11nm,0.5s						
NAY	Al-Naaiem	85.37	300	eP	P	03 04 52.3	-0.3
NAY				AMb	AMB	03 04 53.5	
	comp=Z,9.6nm,0.6s						
MIB	Mutribah	85.38	301	eP	P	03 04 52.2	-0.4
MIB				AMb	AMB	03 04 54.9	
	comp=Z,16nm,0.8s						
ILAR	Eielson Array	93.45	25	P	P	03 05 28.1	-1.6
ILAR	Eielson Array	93.45	25	P	P	03 05 28.1	-1.6
	comp=Z,0.3nm,0.7s,baz=281,slow=5.5,SNR=5.4						
SNAA	Sanae	95.91	194	eP	P	03 05 41.0	+0.1
	comp=Z,2.7nm,0.9s						
BRTR	Keskin Array B	97.64	309	P	P	03 05 49.1	-0.4
BRTR	Keskin Array B	97.64	309	P	P	03 05 49.1	-0.4
	comp=Z,0.3nm,0.5s,baz=140,slow=6.7,SNR=3.1						
LSZ	Lusaka	98.08	254	eP	P	03 05 51.3	-0.6
BOSA	Boshof	98.38	240	eP	Pdif	03 05 52.6	-0.5
	comp=Z,12nm,1.4s						
BOSA	Boshof	98.38	240	P	Pdif	03 05 52.1	-1.0
	comp=Z,4.9nm,1.2s,baz=85,slow=12,SNR=3.3						
LBTB	Lobatse	98.80	244	eP	P	03 05 55.1	+0.1
	comp=Z,5.0nm,1.1s						
ARCES	ARCESS Array B	100.40	340	PKKPbc	PKKPbc	03 22 14.9	-4.2
	comp=Z,1.0nm,0.9s,baz=247,slow=2.5,SNR=6.1						
YKA	Yellowknife Ar	107.88	26	PKiKP	PKiKP	03 10 38.7	-1.0
YKA				PKKPbc	PKKPbc	03 21 52.0	-4.4
YKA				PKKPab	PKKPdf	03 22 01.4	-7.4
YKA	Yellowknife Ar	107.88	26	PKiKP	PKiKP	03 10 38.7	-1.0
	comp=Z,0.4nm,0.6s,baz=294,slow=1.4,SNR=8.2						
YKA				PKKPbc	PKKPbc	03 21 52.0	-4.4
	comp=Z,0.2nm,0.5s,baz=108,slow=3.2,SNR=5.3						
YKA				PKKPab	PKKPdf	03 22 01.3	-7.4
	comp=Z,0.2nm,0.6s,baz=132,slow=1.0,SNR=4.1						
GERES	GERESS Array B	110.88	320	PKiKP	PKiKP	03 10 45.4	-0.5
GERES				PP	PP	03 11 24.8	-4.3
GERES	GERESS Array B	110.88	320	PKiKP	PKiKP	03 10 45.4	-0.5
	comp=Z,0.1nm,0.3s,baz=85,slow=2.3,SNR=4.5						
GERES				PP	PP	03 11 24.8	-4.3
	comp=Z,0.4nm,0.7s,baz=81,slow=8.2,SNR=4.1						
HLID	Hailey	113.95	45	ePKP		03 10 52.7	
DUG	Dugway	115.96	48	ePKIKP	PKPdf	03 10 56.6	+0.6
DUG	Dugway	115.96	48	ePKPdf	PKPdf	03 10 56.6	+0.6
TPAW	Teton Pass	116.39	44	ePKPdf	PKPdf	03 10 57.4	+0.5
LPL	La Plagne	116.39	318	ePP	PP	03 12 09.0	+0.9
	comp=Z,13nm,1.1s						
MOOW	Moose Ponds	116.46	44	ePKPdf	PKPdf	03 10 57.0	+0.1
LOHW	Long Hollow	116.60	44	ePKPdf	PKPdf	03 10 57.4	+0.2
PDAR	Pinedale Array	117.58	45	PKP	PKPdf	03 10 56.9	-2.2
PDAR				PKKPbc	PKKPbc	03 21 21.4	-2.3
PDAR	Pinedale Array	117.58	45	PKP	PKPdf	03 10 56.9	-2.2
	comp=Z,0.7nm,0.7s,baz=338,slow=1.6,SNR=5.9						
PDAR				PKKPbc	PKKPbc	03 21 21.4	-2.3
	comp=Z,0.5nm,0.6s,baz=97,slow=4.6,SNR=2.9						
TUC	Tucson	119.35	57	ePKIKP	PKPdf	03 11 03.4	+0.7
TUC	Tucson	119.35	57	ePKPdf	PKPdf	03 11 03.4	+0.7
ANMO	Albuquerque	122.22	53	ePKPdf	PKPdf	03 11 09.1	+0.8
ULM	Lac du Bonnet	122.78	32	PKP	PKPdf	03 11 07.2	-1.3
ULM	Lac du Bonnet	122.78	32	PKP	PKPdf	03 11 07.2	-1.3
	comp=Z,2.2nm,0.4s,baz=326,slow=6.3,SNR=2.3						
MNTX	Cornudas Mount	123.95	56	ePKPdf	PKPdf	03 11 12.1	+0.6
TXAR	Lajitas Array	125.98	58	PKP	PKPdf	03 11 15.4	-0.1
TXAR				SKPbc	SKiKP	03 13 58.5	-22
TXAR	Lajitas Array	125.98	58	PKP	PKPdf	03 11 15.4	-0.1
	comp=Z,0.6nm,0.5s,baz=232,slow=1.5,SNR=6.7						
TXAR				SKPbc	SKiKP	03 13 58.5	-22
	comp=Z,1.4nm,0.9s,baz=210,slow=4.3,SNR=7.0						
TORD	Torodi Ar. Bea	127.08	282	PKP	PKPdf	03 11 17.1	-0.8
TORD				SKPbc	SKiKP	03 14 01.2	-22
TORD	Torodi Ar. Bea	127.08	282	PKP	PKPdf	03 11 17.1	-0.8
	comp=Z,1.2nm,0.7s,baz=62,slow=2.0,SNR=16						
TORD				SKPbc	SKiKP	03 14 01.2	-22
	comp=Z,3.7nm,0.9s,baz=80,slow=3.7,SNR=13						
WMOK	Wichita Mounta	128.25	50	ePKIKP	PKPdf	03 11 19.9	+0.3
WMOK	Wichita Mounta	128.25	50	ePKPdf	PKPdf	03 11 19.9	+0.3
JCT	Junction City	128.89	56	ePKIKP	PKPdf	03 11 21.0	+0.1
JCT	Junction City	128.89	56	ePKPdf	PKPdf	03 11 21.0	+0.1
PLCA	Paso Flores	130.03	161	ePKPdf	PKPdf	03 11 23.7	+0.8
PLCA				SKPbc	SKPbc	03 14 14.3	-0.6
PLCA	Paso Flores	130.03	161	PKP	PKPdf	03 11 23.4	+0.5
	comp=Z,2.1nm,0.7s,baz=159,slow=2.9,SNR=6.5						
PLCA				SKPbc	SKPbc	03 14 14.3	-0.6
	comp=Z,1.0nm,0.8s,baz=293,slow=0.9,SNR=2.3						
SCHQ	Schefferville	130.13	11	PKP	PKPdf	03 11 22.6	+0.1
SCHQ				SKPbc	SKPbc	03 14 13.4	-1.3
SCHQ	Schefferville	130.13	11	PKP	PKPdf	03 11 22.6	+0.1
	comp=Z,1.5nm,0.6s,baz=353,slow=8.1,SNR=3.0						
SCHQ				SKPbc	SKPbc	03 14 13.4	-1.3
	comp=Z,8.2nm,1.0s,baz=13,slow=5.3,SNR=7.9						
DBIC	Dimbokro	133.53	273	PKP	PKPdf	03 11 30.4	+0.3
DBIC				SKPbc	SKPbc	03 14 26.6	-1.3
DBIC	Dimbokro	133.53	273	PKP	PKPdf	03 11 30.4	+0.3
	comp=Z,8.3nm,1.1s,baz=56,slow=6.2,SNR=3.2						
DBIC				SKPbc	SKPbc	03 14 26.6	-1.3
	comp=Z,9.4nm,1.1s,baz=76,slow=1.8,SNR=3.8						
TRQA	Tornquist	134.79	168	ePKPdf	PKPdf	03 11 32.7	+0.8
WVT	Waverly	135.55	43	ePKIKP	PKPdf	03 11 33.8	+0.5
WVT	Waverly	135.55	43	ePKPdf	PKPdf	03 11 33.8	+0.5
LRAL	Lakeview Retre	137.78	46	ePKPdf	PKPdf	03 11 37.2	-0.2
LRAL				eSKPbc	SKPbc	03 14 39.7	-0.7
LRAL				eSKPab	SKPab	03 14 48.7	0.0
CPUP	Villa Florida	147.05	171	PKP	PKPdf	03 11 54.4	+0.4
CPUP				PKPbc	PKPbc	03 11 56.5	-0.1
CPUP	Villa Florida	147.05	171	PKP	PKPdf	03 11 54.4	+0.4
	comp=Z,7.5nm,0.5s,baz=187,slow=1.8,SNR=41						
CPUP				PKPbc	PKPbc	03 11 56.5	-0.1
	comp=Z,7.8nm,0.5s,baz=208,slow=2.4,SNR=42						
NNA	Nana	149.02	126	ePKPdf	PKPdf	03 11 57.4	-0.2
NNA				ePKPbc	PKPbc	03 12 02.5	+0.4
LPAZ	La Paz	152.22	144	ePKPdf	PKPdf	03 12 04.0	+0.8
LPAZ				ePKPbc	PKiKP	03 12 10.5	+0.1
LPAZ				ePKPab	PKPab	03 12 22.5	+1.3
LPAZ	La Paz	152.22	144	PKP	PKPdf	03 12 04.0	+0.8
	comp=Z,3.1nm,1.0s,baz=142,slow=11,SNR=9.5						
LPAZ				PKPbc	PKiKP	03 12 10.7	+0.3
	comp=Z,4.5nm,0.4s,baz=168,slow=18,SNR=43						
LPAZ				PKPab	PKPab	03 12 22.0	+0.9
	comp=Z,8.7nm,0.6s,baz=200,slow=3.7,SNR=22						
OTAV	Otavalo	152.57	102	ePKPdf	PKPdf	03 12 03.9	+0.2
OTAV				ePKPbc	PKiKP	03 12 11.4	+0.3
OTAV				ePKPab	PKPab	03 12 23.7	+0.9

IDC 10 03:29:52.6±1.2**, 8°.92S**×**127°.00E, h0**^{km}**, mb3.8**/3**, mb1 4.0**/6**, mb1mx3.7**/20**, mbtmp3.8**/6**, ML3.7**/3**, Error ellipse: s-maj=55.5km s-min=24.5km az=77.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.22	188	Pn	Pn	03 32 08.0	+0.9
	0.6nm,0.3s,baz=12,slow=13,SNR=20						
FITZ				Sn	Sn	03 33 47.5	-4.2
	0.8nm,0.3s,baz=93,slow=20,SNR=7.3						
WRA	Warramunga Arr	13.06	148	Pn	Pn	03 32 58.6	-1.0
	0.5nm,0.3s,baz=316,slow=13,SNR=20						
WRA				Sn	Sn	03 35 17.6	-8.2
	0.3nm,0.3s,baz=323,slow=25,SNR=4.9						
ASAR	Alice Springs	16.09	157	Pn	Pn	03 33 40.6	+0.2
	0.3nm,0.3s,baz=329,slow=9.3,SNR=15						
ASAR				Sn	Sn	03 36 32.7	-7.0
	0.0nm,0.3s,baz=324,slow=20,SNR=4.1						
PETK	Petropavlovsk-	67.09	20	P	P	03 40 47.5	-0.3
	0.6nm,0.6s,baz=199,slow=7.6,SNR=2.5						
MKAR	Makanchi Array	68.25	329	P	P	03 40 55.7	+0.4
	0.5nm,0.6s,baz=129,slow=8.1,SNR=7.8						
ZALV	Zalesovo Beam	72.03	335	P	P	03 41 18.2	-0.1
	1.0nm,0.6s,baz=153,slow=9.7,SNR=5.0						

KRSC 10 04:01:20.2±0.8**, 53°.09N**×**163°.04E, h41**^{km}±40^{km}**, ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	1.66	333	P	Pn	04 01 47.2	+0.4
MKZ				S	Sn	04 02 06.5	-0.4
SPN	Mys Shipunski	1.82	271	P	Pn	04 01 50.6	+1.6
SPN				S	Sn	04 02 13.0	+2.2
NLC	Nalytchevo	2.23	274	P	Pn	04 01 56.2	+1.6
NLC				S	Sn	04 02 22.4	+1.6
SDLR	Sedlovina	2.51	276	P	Pn	04 02 00.7	+2.1
SDLR				S	Sn	04 02 30.6	+2.6
UGLR	Uglovaya	2.54	274	P	Pn	04 02 01.5	+2.4
UGLR				S	Sn	04 02 31.1	+2.2
SMAR	Somma	2.56	276	P	Pn	04 02 01.4	+2.0
SMAR				S	Sn	04 02 31.4	+1.9
KRER	Koryakskii	2.59	276	P	Pn	04 02 02.4	+2.6
KRER				S	Sn	04 02 33.3	+3.0
AVH	Avacha	2.59	276	P	Pn	04 02 02.4	+2.7
AVH				S	Sn	04 02 32.6	+2.5
PET	Petropavlovsk	2.65	270	S	Sn	04 02 33.9	+2.7
KOK	Koryaka	2.66	276	P	Pn	04 02 03.1	+2.5
KOK				S	Sn	04 02 34.6	+2.9
RUS	Russkaya	2.83	258	P	Pn	04 02 04.7	+1.9
RUS				S	Sn	04 02 37.1	+1.5
MTVR	Mutnovka	3.01	260	P	Pn	04 02 07.7	+2.2
MTVR				S	Sn	04 02 42.2	+1.7
GNL	Ganaly	3.11	283	P	Pn	04 02 10.0	+3.1
GNL				S	Sn	04 02 46.8	+3.9
KMNR	Kamenistaya	3.13	330	S	Sn	04 02 46.5	+3.1
ASAK	Asacha	3.20	259	P	Pn	04 02 10.4	+2.3
ASAK				S	Sn	04 02 47.6	+2.5
APC	Apacha	3.56	270	P	Pn	04 02 17.1	+4.3
APC				S	Sn	04 02 58.5	+4.9

*ATH **10** 04:03:52.3, 38°.87N×22°.20E, h13^{km}±2^{km}, MD3.2/11*
*CSEM **10** 04:03:52.0±0.1, 38°.87N×22°.20E, h14^{km}, MD2.6, Error ellipse: s-maj=2.1km s-min=1.2km az=127.0*
THE 10 04:03:52.7, 38°.85N×**22°.22E, h2**^{km}±17^{km}**, ML2.0**/5**, Error ellipse: s-maj=17.0km s-min=0.3km az=311.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAKR	Makrakomi, Fth	0.18	338	P	Pg	04 03 56.3	+0.1
MAKR	Makrakomi, Fth	0.18	338	P	Pg	04 03 56.3	+0.1
MAKR				S	Sg	04 03 59.2	+0.6
AGG	Agios Georgios	0.19	27	P	Pg	04 03 56.5	0.0
AGG				S	Sg	04 03 59.5	+0.4
AGG	Agios Georgios	0.19	27	ePG	Pg	04 03 56.5	0.0
AGG				eSG	Sg	04 03 59.5	+0.4
AGG	Agios Georgios	0.19	27	ePG	Pg	04 03 56.5	0.0
AGG				eSG	Sg	04 03 59.5	+0.4
AGG	Agios Georgios	0.19	27	P	Pg	04 03 56.5	0.0
AGG				eSg	Sg	04 03 59.5	+0.4
EVR	Evrytania	0.33	282	P	Pg	04 03 59.0	-0.1
EVR	Evrytania	0.33	282	ePB	Pg	04 03 59.1	0.0
EVR				eSB	Sg	04 04 03.0	-0.5
EVR	Evrytania	0.33	282	ePB	Pg	04 03 59.0	-0.1
EVR				eSB	Sg	04 04 03.5	0.0
EVR	Evrytania	0.33	282	P	Pg	04 03 58.8	-0.3
EVR				S	Sg	04 04 03.3	-0.2
AXAR	Agios Charalam	0.35	103	P	Pg	04 03 59.6	0.0
AXAR				S	Sg	04 04 04.8	+0.6
AXAR	Agios Charalam	0.35	103	P	Pg	04 03 59.6	0.0
AXAR				S	Sg	04 04 04.8	+0.6
KALE	Kalithea	0.46	188	P	Pg	04 04 01.5	-0.2
KALE	Kalithea	0.46	188	ePG	Pg	04 04 01.5	-0.2
KALE				eSB	Sg	04 04 08.6	+0.8
KALE	Kalithea	0.46	188	ePG	Pg	04 04 01.5	-0.2
KALE				eSB	Sg	04 04 09.0	+1.2
KALE	Kalithea	0.46	188	P	Pg	04 04 01.5	-0.2
KALE				S	Sg	04 04 08.3	+0.6
KALE				eSb	Sb	04 04 09.0	-2.1
EFP	Efpalio	0.49	210	P	Pg	04 04 01.9	-0.2
EFP	Efpalio	0.49	210	ePG	Pg	04 04 01.9	-0.2
EFP				eSB	Sg	04 04 10.0	+1.6
EFP	Efpalio	0.49	210	ePB	Pg	04 04 01.8	-0.3
EFP				eSB	Sg	04 04 09.9	+1.5
EFP	Efpalio	0.49	210	P	Pg	04 04 01.9	-0.2
EFP				S	Sg	04 04 09.2	+0.8
TRIZ	Trizonia	0.50	193	P	Pg	04 04 02.0	-0.2
TRIZ				S	Sg	04 04 09.2	+0.5
TRIZ	Trizonia	0.50	193	ePG	Pg	04 04 02.0	-0.2
TRIZ				eSB	Sg	04 04 10.2	+1.5
TRIZ	Trizonia	0.50	193	ePB	Pg	04 04 02.0	-0.2
TRIZ				eSB	Sg	04 04 10.2	+1.5
TRIZ	Trizonia	0.50	193	P	Pg	04 04 02.0	-0.2
TRIZ				S	Sg	04 04 09.2	+0.5
TRIZ				eSb	Sb	04 04 10.2	-1.7
DSF	Desfina	0.50	151	P	Pg	04 04 01.9	-0.5
DSF				S	Sg	04 04 09.7	+0.7
DSF	Desfina	0.50	151	P	Pg	04 04 01.9	-0.5
DSF				S	Sg	04 04 09.2	+0.2
LAKA	Lakka	0.64	197	P	Pg	04 04 04.9	-0.1
LAKA	Lakka	0.64	197	ePB	Pg	04 04 04.3	-0.7
LAKA				eSB	Sg	04 04 14.5	+1.2
LAKA	Lakka	0.64	197	ePB	Pg	04 04 05.4	+0.4
LAKA				eSB	Sg	04 04 14.4	+1.1
LAKA	Lakka	0.64	197	P	Pg	04 04 04.9	-0.1
LAKA	Lakka	0.64	197	ePb	Pg	04 04 05.4	+0.4
LAKA				eSb	Sg	04 04 14.4	+1.1
LKR	Lokris	0.64	108	P	Pg	04 04 04.8	-0.2
LKR				S	Sg	04 04 14.2	+0.8
LKR	Lokris	0.64	108	ePB	Pg	04 04 04.9	-0.1
LKR	Lokris	0.64	108	ePB	Pg	04 04 04.8	-0.2
LKR				eSB	Sg	04 04 13.0	-0.4
LKR	Lokris	0.64	108	P	Pg	04 04 04.8	-0.2
LKR				eSb	Sg	04 04 13.0	-0.4
ATAL	Atalanti	0.65	104	P	Pg	04 04 04.8	-0.4
ATAL	Atalanti	0.65	104	P	Pg	04 04 04.8	-0.4
SMIA	Simia	0.77	88	P	Pg	04 04 07.5	-0.1
SMIA	Simia	0.77	88	P	Pg	04 04 07.5	-0.1
KLV	Kalavryta, Ach	0.81	184	ePG	Pg	04 04 07.8	-0.5
KLV	Kalavryta, Ach	0.81	184	ePB	Pg	04 04 08.0	-0.3
KLV				eSB	Sg	04 04 19.7	+0.9
KLV	Kalavryta, Ach	0.81	184	ePb	Pg	04 04 08.0	-0.3
KLV				eSb	Sg	04 04 19.7	+0.9
NEO	Neokhori	0.91	59	P	Pg	04 04 09.4	-0.8
NEO	Neokhori	0.91	59	ePB	Pg	04 04 09.4	-0.8
NEO	Neokhori	0.91	59	ePB	Pg	04 04 09.4	-0.8
NEO				eSB	Sg	04 04 22.4	+0.4
NEO	Neokhori	0.91	59	P	Pg	04 04 09.4	-0.8
NEO				eSb	Sg	04 04 22.4	+0.4
XOR	Xorichti	0.92	55	P	Pg	04 04 10.0	-0.4
XOR				S	Sg	04 04 23.1	+0.8
XOR	Xorichti	0.92	55	P	Pg	04 04 10.0	-0.4
XOR				S	Sg	04 04 23.1	+0.8
GUR	Goura	0.92	174	P	Pg	04 04 10.0	-0.5
GUR				S	Sg	04 04 23.3	+0.8
GUR	Goura	0.92	174	ePB	Pg	04 04 10.4	-0.1
GUR				eSB	Sg	04 04 23.3	+0.8
GUR	Goura	0.92	174	ePB	Pg	04 04 10.4	-0.1
GUR				eSB	Sg	04 04 23.1	+0.6
GUR	Goura	0.92	174	P	Pg	04 04 10.0	-0.5
GUR	Goura	0.92	174	ePb	Pg	04 04 10.4	-0.1
GUR				eSb	Sg	04 04 23.1	+0.6
LTK	Loutraki	1.01	144	P	Pg	04 04 11.8	-0.4
LTK	Loutraki	1.01	144	ePB	Pg	04 04 11.9	-0.3
LTK	Loutraki	1.01	144	P	Pg	04 04 11.8	-0.4

*ISCJB **10** 04:05:58.0±1.8, 39°.31N±0°.09×33°.02E±0°.08, h7^{km}±10^{km}, Error ellipse: s-maj=16.0km s-min=7.6km az=28.8*
*ISK **10** 04:05:59.0, 39°.48N×33°.16E, h5^{km}, MD2.5*
*CSEM **10** 04:06:01.0±0.6, 39°.47N×33°.11E, h2^{km}, MD2.5, Error ellipse: s-maj=20.6km s-min=9.2km az=30.0*
*DDA **10** 04:06:02.2, 39°.55N×33°.23E, h8^{km}, MD2.5*
ISC 10 04:06:00.6±1.6**, 39°.44N**±0°.06×**33°.09E**±0°.05**, h8**^{km}±7^{km}**, n14, σ1§39**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFSR	Af¯ar-Bala (A	0.02	306	ePG	Pg	04 06 00.8	-1.3
AFSR				eSG	Sg	04 06 02.3	-1.0
AFSR	Af¯ar-Bala (A	0.02	306	ePg	Pg	04 06 00.8	-1.3
AFSR				eSg	Sg	04 06 02.3	-1.0
BBAL	Bala	0.11	15	i P	Pg	04 06 04.0	+0.8
BBAL				i S	Sg	04 06 06.7	+1.7
BBAL	Bala	0.11	15	i P	Pg	04 06 04.0	+0.8
BBAL				i S	Sg	04 06 06.7	+1.7
ANTO	Ankara	0.49	332	ePG	Pg	04 06 09.6	-0.4
ANTO				eSG	Sg	04 06 18.0	+1.5
ANTO	Ankara	0.49	332	ePg	Pg	04 06 09.6	-0.4
ANTO				eSg	Sg	04 06 18.0	+1.5
KAMT	Kaman	0.49	98	ePG	Pg	04 06 08.7	-1.4
KAMT				eSG	Sg	04 06 16.3	-0.2
KAMT	Kaman	0.49	98	ePg	Pg	04 06 08.7	-1.4
KAMT				eSg	Sg	04 06 16.3	-0.2
LOD	Lodumlu	0.52	331	ePG	Pg	04 06 09.7	-0.9
LOD	Lodumlu	0.52	331	ePg	Pg	04 06 09.7	-0.9
CDAG	Cicekdag	1.01	79	i P	Pg	04 06 18.9	-1.1
CDAG				i S	Sb	04 06 32.6	-1.3
CDAG	Cicekdag	1.01	79	i P	Pg	04 06 18.9	-1.1
CDAG				i S	Sb	04 06 32.6	-1.3
AVNT	Avonos	1.52	115	i P	Pg	04 06 31.9	+2.1
AVNT				i S	Sg	04 06 51.2	+1.6
AVNT	Avonos	1.52	115	i P	Pg	04 06 31.9	+2.1
AVNT				i S	Sg	04 06 51.2	+1.6

*NIED **10** 04:06:00, 35°.60N×141°.10E, h32^{km}, Mw4.6 Best double couple: $M_0$1.02000×10^{16} NP1:ϕ_s135.00000°, δ70.00000°, λ-39.00000°. NP2:ϕ_s240.00000°, δ54.00000°, λ-155.00000°.*
*BJI **10** 04:06:29.4, 34°.90N×141°.00E, h35^{km}, mB4.9/3, mb4.7/7, Ms4.6/6, Ms7 4.2/6*
*JMA **10** 04:06:33.4±0.1, 35°.58N×141°.14E, h38^{km}±1^{km}, M4.8 Broadband fault plane solution: P waves. NP1: ϕ_s230.00000°, δ74.00000°, λ-114.00000°. NP2: ϕ_s107.00000°, δ29.00000°, λ-36.00000°. Principal axes: T Plg25.0000°, Azm338.0000°; N Plg23.0000°, Azm237.0000°; P Plg55.0000°, Azm110.0000°;*
JMA Felt II J1.
*ISCJB **10** 04:06:33.2±0.6, 35°.55N±0°.04×141°.14E±0°.06, h35^{km}±5^{km}, mb4.6/40, MS4.0/24 Error ellipse: s-maj=8.1km s-min=5.8km az=17.9*
*MOS **10** 04:06:34.9±0.9, 35°.89N×141°.16E, h33^{km}, mb4.8/15, Error ellipse: s-maj=15.3km s-min=9.4km az=77.1*
*NEIC **10** 04:06:34.8±0.5, 35°.58N×141°.11E, h35^{km}, mb4.4/11, Error ellipse: s-maj=12.0km s-min=8.6km az=178.0*
NEIC Recorded [2 JMA] in Chiba and Ibaraki; [1 JMA] in Fukushima, Gumma, Kanagawa, Saitama and Tochigi.
*IDC **10** 04:06:35.5±1.7, 35°.53N×141°.03E, h45^{km}±20^{km}, mb4.4/17, mb1 4.5/20, mb1mx4.4/35, mbtmp4.4/20, ML3.8/3, MS3.9/20, Ms1 3.9/20, ms1mx3.8/34, Error ellipse: s-maj=19.8km*

s-min=11.7km az=91.0

ISC 10 04:06:33.8±0.5**,35°.51N**±0°.04×**141°.04E**±0°.04**,h34**km±1km**,**
h34km**:pP-P,n365,**σ0s.**92**/367**,mb4.5**/40**,MS4.0**/24**,**
132C-129D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.24	323	⇓P	Pb	04 06 40.9	0.0
CHOJ				S	Sb	04 06 46.4	+0.6
JCN	Nagara	0.69	262	⇓P	Pb	04 06 48.9	+1.5
KTR	Katsuura	0.69	239	⇓P	Pb	04 06 48.4	+0.9
BSO4	Boso 4	0.77	228	P	Pb	04 06 49.5	+0.7
BSO3	Boso 3	0.83	211	⇑P	Pb	04 06 49.7	+0.1
BSO1	Boso 1	0.86	183	⇑P	Pn	04 06 49.4	+0.5
JYT	Yasato	0.99	317	P	Pn	04 06 51.3	+0.1
JIM2	Oshima 3	1.54	239	⇓P	Pn	04 06 59.0	+0.2
JIM2				eS	Sn	04 07 18.4	+0.8
JAG	Ashikaga	1.57	306	P	Pn	04 07 00.3	+1.0
JOD2	Odawara 2	1.61	262	P	Pn	04 07 01.2	+1.4
JOD2				eS	Sb	04 07 22.4	-0.5
JFK	Kawauchi	1.86	356	P	Pn	04 07 02.2	-1.0
MJAR	Matsushiro Arr	2.51	295	P	Pn	04 07 14.1	+1.9
MJAR	Matsushiro Arr	2.51	295	P	Pn	04 07 14.1	+1.9
	49nm,0.3s,baz=100,slow=10,SNR=145						
MAJO	Matsushiro	2.51	295	eP	Pn	04 07 14.4	+2.2
MAJO	Matsushiro	2.51	295	ePn	Pn	04 07 14.4	+2.2
MAT	Matsushiro	2.51	295	P	Pn	04 07 14.4	+2.2
MAT				eS	Sn	04 07 42.0	+0.3
JHJ	Hachijo jima 2	2.60	204	P	Pn	04 07 14.1	+0.7
	163nm,0.3s,baz=118,slow=1.0,SNR=57						
JHJ				S	Sn	04 07 46.1	+2.3
	432nm,0.3s,baz=79,slow=24,SNR=8.6						
ERM	Erimo	6.70	14	eP	Pn	04 08 08.5	-1.2
ERM	Erimo	6.70	14	ePn	Pn	04 08 08.5	-1.2
ASAJ	Asahikawa	8.68	7	P	Pn	04 08 35.0	-1.9
ASAJ	Asahikawa	8.68	7	P	Pn	04 08 35.0	-1.9
	9.5nm,0.3s,baz=201,slow=12,SNR=13						
ASAJ				LR	LR	04 12 39.3	
	comp=Z,430nm,20.3s,baz=191,slow=42						
KSRS	Korea Array	10.73	284	LR	LR	04 13 20.4	
	comp=Z,1μm,21.1s,baz=95,slow=38						
USRK	Ussuriysk Arra	11.11	324	P	Pn	04 09 12.1	+1.9
	0.7nm,0.3s,baz=134,slow=12,SNR=26						
USRK				LR	LR	04 13 14.7	
	comp=Z,474nm,21.9s,baz=139,slow=36						
YSS	Yuzh-Sakhalins	11.51	6	⇑eP	Pn	04 09 14.0	-1.5
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
SKR	Severo-Kuril's	18.68	31	eP	P	04 10 49.0	+0.1
SKR				pmax	pmax		
	comp=N,100nm,0.6s						
SKR				pmax	pmax		
	comp=E,60nm,0.6s						
SKR				pmax	pmax		
	comp=Z,110nm,1.0s						
PETK	Petropavlovsk-	21.16	29	P	P	04 11 16.6	+0.8
PETK				pmax	pmax		
	comp=Z,12nm,0.9s						
PETK				MLR	MLR		
	comp=Z,171nm,21.6s						
PETK	Petropavlovsk-	21.16	29	P	P	04 11 16.6	+0.8
PETK	Petropavlovsk-	21.16	29	P	P	04 11 16.6	+0.8
	comp=Z,12nm,0.8s,baz=207,slow=9.3,SNR=14						
PETK				LR	LR	04 19 15.0	
	comp=Z,171nm,21.6s,baz=220,slow=36						
PET	Petropavlovsk	21.48	30	eP	P	04 11 31.8	+13
PET				eS	S	04 15 18.7	+3.3
PET				pmax	pmax		
	comp=Z,100nm,13.4s						
PET				pmax	pmax		
	comp=Z,74nm,1.1s						
PET				MLR	MLR		
	comp=Z,400nm,21.0s						
QZH	Quanzhou	22.02	248	P	P	04 11 23.0	-2.3
QZH				S	S	04 15 16.2	-10
QZH				LR	LR		
	comp=N,910nm,16.4s						
QZH				LR	LR		
	comp=E,960nm,16.0s						
QZH				LR	LR		
	comp=Z,840nm,19.6s						
SONM	Songino Array	28.41	306	LR	LR	04 24 23.4	
	comp=Z,185nm,19.9s,baz=284,slow=38						
LZH	Lanzhou	30.05	282	eP	P	04 12 35.1	-4.8
LZH				pP	pP	04 12 47.0	-2.7
LZH				sP	sP	04 12 52.5	-1.3
LZH				PP	PnPn	04 13 34.0	-3.4
LZH				eS	S	04 17 29.0	-7.1
LZH				sS	sS	04 17 48.7	-3.6
LZH				eSS	SnSn	04 19 07.4	-2.4
LZH				pmax	pmax		
	comp=Z,31nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,5.3s						
LZH				LR	LR		
	comp=N,540nm,12.6s						
LZH				LR	LR		
	comp=E,670nm,13.2s						
LZH				LR	LR		
	comp=Z,770nm,16.5s						
GYA	Guiyang	30.69	263	eP	P	04 12 44.3	-1.3
GYA				pP	pP	04 12 56.7	+1.3
GYA				sP	sP	04 13 02.0	+2.5
GYA				PcP	PcP	04 15 42.3	-0.7
GYA				S	S	04 17 41.9	-4.3
GYA				sS	sS	04 18 01.7	-0.7
GYA				ScP	ScP	04 19 20.0	-3.0
GYA				ScS	ScS	04 23 14.5	-5.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DAV	Davao City (W)	31.66	210	LR	LR	04 23 42.6	
	comp=Z,207nm,19.1s,baz=347,slow=32						
QIZ	Qiongzhong	32.04	247	P	P	04 12 54.8	-2.6
QIZ				pP	pP	04 13 05.7	-1.5
QIZ				sP	sP	04 13 10.7	-0.6
QIZ				S	S	04 18 03.1	-4.0
QIZ				pmax	pmax		
	comp=Z,11nm,1.5s						
QIZ				LR	LR		
	comp=N,210nm,22.6s						
QIZ				LR	LR		
	comp=Z,180nm,22.2s						
GTA	Gaotai	32.75	289	P	P	04 13 07.0	+3.5
GTA				pP	pP	04 13 18.7	+5.3
GTA				sP	sP	04 13 24.3	+6.8
GTA				S	S	04 18 24.4	+6.3
GTA				sS	sS	04 18 44.6	+10
GTA				SS	SS	04 20 28.2	-11
GTA				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,50nm,5.9s						
GTA				LR	LR		
	comp=N,180nm,18.5s						
GTA				LR	LR		
	comp=E,220nm,17.1s						
GTA				LR	LR		
	comp=Z,280nm,19.5s						
KMI	Kunming	34.45	263	P	P	04 13 16.0	-2.6
KMI				pP	pP	04 13 25.7	-2.8
KMI				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CMAR	Chiang Mai Arr	40.83	257	LR	LR	04 32 58.3	
	comp=Z,242nm,19.8s,baz=68,slow=39						
WMQ	Urumqi	41.27	298	eP	P	04 14 08.4	-7.4
WMQ				pmax	pmax		
	comp=Z,19nm,1.0s						
ZALV	Zalesovo Beam	42.73	314	P	P	04 14 27.7	+0.3
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ZALV				MLR	MLR		
	comp=Z,90nm,21.7s						
ZALV	Zalesovo Beam	42.73	314	P	P	04 14 27.7	+0.3
ZALV	Zalesovo Beam	42.73	314	P	P	04 14 27.7	+0.3
	comp=Z,7.7nm,0.5s,baz=98,slow=7.7,SNR=8.9						
ZALV				LR	LR	04 32 04.7	
	comp=Z,90nm,21.6s,baz=70,slow=36						
MKAR	Makanchi Array	44.68	303	LR	LR	04 33 49.6	
	comp=Z,110nm,21.9s,baz=89,slow=37						
KURK	Kurchatov	46.64	309	P	P	04 15 00.5	+1.9
KURK				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KURK	Kurchatov	46.64	309	P	P	04 15 00.5	+1.9
KURBB	Kurchatov Arra	46.71	309	P	P	04 15 00.5	+1.4
	comp=Z,5.4nm,0.5s,baz=84,slow=8.6,SNR=8.6						
KDAK	Kodiak Island	48.44	41	P	P	04 15 12.4	-0.1
KDAK	Kodiak Island	48.44	41	P	P	04 15 12.4	-0.1
	comp=Z,12nm,0.7s,baz=260,slow=5.5,SNR=15						
COEN	Coen	49.24	177	eP	P	04 15 12.7	-6.4
	comp=Z,84nm,0.6s						
COLA	College	50.53	32	eP	P	04 15 29.5	+1.2
COLA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
COLA	College	50.53	32	eP	P	04 15 29.5	+1.2
	comp=Z,4.9nm,0.6s						
ILAR	Eielson Array	50.95	32	P	P	04 15 31.4	-0.1
ILAR	Eielson Array	50.95	32	P	P	04 15 31.4	-0.1
	comp=Z,6.2nm,0.8s,baz=268,slow=6.2,SNR=65						
BVAR	Borovoye Array	51.38	313	LR	LR	04 36 22.8	
	comp=Z,68nm,20.6s,baz=77,slow=35						
WRA	Warramunga Arr	55.51	188	P	P	04 16 05.7	+0.1
WRA	Warramunga Arr	55.51	188	P	P	04 16 05.7	+0.1
	comp=Z,24nm,0.4s,baz=4.4,slow=7.6,SNR=15						
INK	Inuvik	55.88	27	P	P	04 16 08.2	+0.6
INK	Inuvik	55.88	27	P	P	04 16 08.2	+0.6
	comp=Z,3.4nm,0.5s,baz=286,slow=7.4,SNR=11						
ASAR	Alice Springs	59.24	188	LR	LR	04 40 28.4	
	comp=Z,127nm,20.4s,baz=355,slow=34						
DLBC	Dease Lake	60.02	37	P	P	04 16 38.6	+1.7
DLBC	Dease Lake	60.02	37	P	P	04 16 38.6	+1.7
	comp=Z,1.5nm,0.5s,baz=290,slow=6.3,SNR=4.6						
DZM	Mont Dzumac	62.13	153	P	P	04 16 53.4	+1.9
	comp=Z,12nm,0.9s,baz=8.8,slow=7.3,SNR=8.0						
DZM				LR	LR	04 40 25.1	
	comp=Z,122nm,20.1s,baz=210,slow=33						
YKA	Yellowknife Ar	65.28	30	P	P	04 17 11.6	-0.2
YKA	Yellowknife Ar	65.28	30	P	P	04 17 11.5	-0.2
	comp=Z,3.2nm,0.8s,baz=299,slow=6.5,SNR=34						
FINES	FINESS Array B	70.02	332	LR	LR	04 53 31.9	
	comp=Z,113nm,18.7s,baz=10,slow=40						
NEW	Newport	71.44	44	⇑P	P	04 17 50.7	0.0
	baz=71						
YBH	Yreka Blue Hor	71.52	52	P	P	04 17 52.5	+1.2
YBH	Yreka Blue Hor	71.52	52	P	P	04 17 52.5	+1.2
	comp=Z,2.8nm,0.8s,baz=313,slow=2.3,SNR=9.2						
C11A	Tepee Creek (N	72.16	44	⇑P	P	04 17 55.2	+0.2
	baz=72						
SUMG	Summit	72.20	360	*i* P	P	04 17 56.1	+0.9
SUMG				pmax	pmax		
	comp=Z,32nm,0.7s						
SUMG	Summit	72.20	360	*i* P	P	04 17 56.1	+0.9
	comp=Z,32nm,0.7s						
A13A	Flathead Natio	72.57	42	⇑P	P	04 17 57.7	+0.2
	baz=72						
B13A	Whitefish	72.86	42	⇑P	P	04 17 59.7	+0.6
	baz=72						
A14A	Double T Ranch	73.09	42	⇑P	P	04 18 00.9	+0.3
	baz=73						
C13A	Hot Springs	73.19	43	⇓P	P	04 18 01.5	+0.3
	baz=73						
E12A	Beaver Dam Sad	73.33	45	⇓P	P	04 18 02.4	+0.3
	baz=73,SNR=7.4						
A15A	Johnson Ranch,	73.46	41	⇑P	P	04 18 02.7	-0.1
	baz=73						
B14A	Marquette Ranc	73.52	42	⇓P	P	04 18 03.5	+0.4
	baz=73						
D13A	Huson	73.58	44	⇓P	P	04 18 03.5	0.0
	baz=73						
C14A	Swan Lake	73.60	43	⇑P	P	04 18 03.9	+0.3
	baz=73						
SWMT	Swartz Lake	73.60	43	eP	P	04 18 03.8	+0.2
WVOR	Wild Horse Val	73.71	49	eP	P	04 18 04.8	+0.4
WVOR				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WVOR	Wild Horse Val	73.71	49	eP	P	04 18 04.8	+0.4
	comp=Z,6.3nm,1.3s						
F12A	Elk City	73.89	45	⇑P	P	04 18 05.4	+0.1
	baz=74,SNR=9.2						
B15A	Bradely Ranch,	73.93	42	⇓P	P	04 18 05.9	+0.4
	baz=74,SNR=12						
BEKR	Beckworth	74.02	52	eP	P	04 18 06.7	+0.4
	comp=Z,2.8nm,0.8s						
MSO	Missoula	74.03	44	eP	P	04 18 06.0	0.0
	comp=Z,2.4nm,1.0s						
MSO	Missoula	74.03	44	P	P	04 18 06.1	0.0
	baz=74						
A16A	West Butte Ran	74.08	41	⇑P	P	04 18 06.7	+0.3
	baz=74						
E13A	Victor	74.11	44	⇓P	P	04 18 06.2	-0.4
	baz=74						
D14A	Greenough	74.12	43	⇑P	P	04 18 06.7	0.0
	baz=74						
G12A	Big Creek, Yel	74.20	46	⇓P	P	04 18 06.6	-0.6
	baz=74						
C15A	Salmond Ranch,	74.22	42	⇑P	P	04 18 07.9	+0.6
	baz=74,SNR=13						
B16A	M & M Farms, S	74.34	41	⇓P	P	04 18 07.8	-0.1
	baz=74,SNR=5.9						
F13A	Darby	74.40	45	⇑P	P	04 18 08.0	-0.3
	baz=74						
E14A	Clinton	74.52	44	⇓P	P	04 18 08.7	-0.3
	baz=74						
A17A	Triple J Farms	74.56	41	⇓P	P	04 18 09.5	+0.3
	baz=74,SNR=7.8						
C16A	Fuhringer Ranc	74.68	42	⇓P	P	04 18 10.1	+0.2
	baz=74,SNR=7.6						
D15A	Lincoln	74.70	43	⇓P	P	04 18 10.0	-0.1
	baz=74						
H12A	Diamond D Ranc	74.81	46	⇓P	P	04 18 11.0	+0.2
	baz=74						
MFID	Camas Ranch	74.88	47	⇓P	P	04 18 11.5	+0.4
	baz=75						
B17A	L&G Farms, Che	74.90	41	⇓P	P	04 18 11.4	+0.3
	baz=75,SNR=6.1						
E15A	Deer Lodge	74.99	43	⇓P	P	04 18 11.8	0.0
	baz=75,SNR=5.9						
A18A	Metzger Ranch,	75.03	40	⇓P	P	04 18 11.8	0.0
	baz=75						
I12A	Atlanta	75.08	47	⇓P	P	04 18 12.5	+0.2
	baz=75,SNR=5.0						
D16A	Dana Ranch, Ca	75.24	42	⇓P	P	04 18 13.2	+0.1
	baz=75,SNR=6.3						
C17A	Wharram Farm,	75.31	42	⇓P	P	04 18 13.0	-0.5
	baz=75						
AKASG	Malin Array Be	75.31	322	P	P	04 18 13.2	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AKASG				MLR	MLR		
	comp=Z,145nm,18.8s						
AKASG	Malin Array Be	75.31	322	P	P	04 18 13.2	-0.1
AKASG	Malin Array Be	75.31	322	P	P	04 18 13.2	-0.1
	comp=Z,1.8nm,0.4s,baz=50,slow=5.9,SNR=8.4						
AKASG				LR	LR	04 54 29.6	
	comp=Z,145nm,18.8s,baz=45,slow=38						
B18A	Beardsley Farm	75.38	41	⇑P	P	04 18 14.2	+0.3
	baz=75,SNR=9.0						
F15A	Butte	75.42	44	⇓P	P	04 18 14.8	+0.4
	baz=75,SNR=14						
E16A	East Helena	75.47	43	⇓P	P	04 18 14.5	+0.1
	baz=75						
NB2	NORSAR Subarra	75.47	337	P	PcP	04 18 37.1	+10
	comp=Z,2.7nm,0.7s,baz=41,slow=5.9						
NOA	NORSAR Array B	75.47	337	LR	LR	04 54 09.8	
	comp=Z,81nm,19.8s,baz=25,slow=38						
A19A	Klindworth Far	75.60	40	⇑P	P	04 18 15.3	+0.2
	baz=75						
EGMT	Eagleton	75.62	41	⇓P	P	04 18 15.3	0.0
	baz=75,SNR=5.2						
HLID	Hailey	75.64	47	⇓P	P	04 18 15.7	+0.2
	baz=75						
D17A	Six Diamond Ra	75.64	42	⇑P	P	04 18 15.7	+0.2
	baz=75,SNR=6.6						
B19A	Brinkman Farms	75.78	40	⇑P	P	04 18 16.4	+0.2
	baz=75						
MCMT	McKenzie Canyo	75.81	45	P	P	04 18 19.4	+2.7
F16A	Kennard Place,	75.94	44	⇓P	P	04 18 17.5	+0.3
	baz=76,SNR=5.3						
E17A	Martinsdale	75.96	43	⇑P	P	04 18 18.1	+0.7
	baz=76,SNR=6.7						
I14A	Mackay	75.99	46	⇓P	P	04 18 18.4	+0.8
	baz=76,SNR=14						
BOZ	Bozeman (W)	76.02	44	eP	P	04 18 18.4	+0.7
BOZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BOZ	Bozeman (W)	76.02	44	eP	P	04 18 18.4	+0.7
	comp=Z,4.4nm,1.1s						
A20A	Cobblestone Ra	76.05	39	⇓P	P	04 18 17.9	+0.2
	baz=76						
D18A	Linhart Farms,	76.09	42	⇑P	P	04 18 18.5	+0.5
	baz=76						
NVAR	Mina Array Bea	76.15	53	P	P	04 18 19.6	+0.9
NVAR	Mina Array Bea	76.15	53	P	P	04 18 19.6	+0.9
	comp=Z,3.5nm,0.8s,baz=282,slow=5.8,SNR=27						
C19A	Slack Wire Ran	76.17	41	⇓P	P	04 18 18.9	+0.5
	baz=76,SNR=18						
F17A	Fitzpatrick Pl	76.41	43	⇑P	P	04 18 20.3	+0.4
	baz=76						
E18A	Harlowton	76.42	42	⇑P	P	04 18 20.6	+0.6
	baz=76						
A21A	Bergtoll Ranch	76.50	39	⇑P	P	04 18 20.5	+0.3
	baz=76						
G17A	Pierce Place,	76.72	44	⇑P	P	04 18 22.0	+0.3
	baz=76						
C20A	Veseth Ranch,	76.74	40	⇓P	P	04 18 22.1	+0.5
	baz=76,SNR=6.7						
H16A	Russell Place,	76.80	44	⇓P	P	04 18 22.8	+0.6
	baz=76						
F18A	Big Timber	76.93	43	⇑P	P	04 18 23.2	+0.4
	baz=77,SNR=6.7						
A22A	Carney Farms,	77.01	38	⇓P	P	04 18 23.1	-0.1
	baz=77,SNR=9.9						
GCMT	Greycliff	77.03	43	eP	P	04 18 23.8	+0.4
	comp=Z,3.1nm,1.0s						
D20A	Manuel Ranch,	77.06	41	⇑P	P	04 18 23.8	+0.4
	baz=77,SNR=6.2						
E19A	Rath Farm, Rou	77.10	42	⇑P	P	04 18 24.3	+0.6
	baz=77,SNR=12						
PKM	Peak Mountain	77.13	56	⇓P	P	04 18 25.1	+0.9
	baz=77						
C21A	Desert Coulee	77.14	40	⇓P	P	04 18 23.9	0.0
	baz=77						
I16A	Newdale	77.16	45	⇑P	P	04 18 25.4	+1.1
	baz=77,SNR=7.6						
H17A	Grant Village	77.37	44	⇑P	P	04 18 27.3	+1.8
	baz=77						
F19A	Roth Farm, Mol	77.39	42	⇑P	P	04 18 25.9	+0.5
	baz=77						
B22A	Reddig Ranch S	77.41	39	⇓P	P	04 18 25.5	+0.1
	baz=77						
E20A	Meyer Farm, Mu	77.42	41	⇑P	P	04 18 26.1	+0.6
	baz=77,SNR=7.6						
GRAC	Grapevine Rang	77.57	53	⇓P	P	04 18 27.0	+0.6
	baz=77						
HVU	Hansel Valley	77.66	47	eP	P	04 18 27.4	+0.4
HVU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HVU	Hansel Valley	77.66	47	eP	P	04 18 27.4	+0.4
	comp=Z,3.1nm,0.7s						
RLMT	Red Lodge	77.66	43	eP	P	04 18 27.9	+0.9
	comp=Z,1.7nm,0.6s						
H18A	Shoshone NF, C	77.71	44	⇑P	P	04 18 27.4	+0.1
	baz=77						
C22A	Vida	77.83	39	⇓P	P	04 18 27.6	-0.1
	baz=78						
R11A	Troy Canyon, C	77.94	51	⇓P	P	04 18 29.2	+0.5
	baz=78						
A24A	Westby	78.02	38	⇑P	P	04 18 28.7	-0.1
	baz=78						
MPMC	Manual Prospec	78.03	54	⇓P	P	04 18 28.3	-0.9
	baz=78						
D22A	Cohagen	78.06	40	⇓P	P	04 18 29.3	+0.4
	baz=78,SNR=7.4						
H19A	Powell	78.10	43	⇑P	P	04 18 29.7	+0.3
	baz=78						
C23A	Lambert	78.15	39	⇑P	P	04 18 29.5	0.0
	baz=78						
G20A	Bridger	78.18	42	⇓P	P	04 18 30.0	+0.2
	baz=78						
FURC	Furnace Creek,	78.21	54	⇑P	P	04 18 30.3	+0.4
	baz=78						
DGMT	Dagmar	78.22	38	⇓P	P	04 18 30.5	+0.7
	baz=78						
EDW2	Edwards Air Fo	78.38	55	⇑P	P	04 18 31.3	+0.3
	baz=78						
HWUT	Hardware Ranch	78.49	47	eP	P	04 18 32.6	+0.9
	comp=Z,7.9nm,1.0s						
D23A	Lindsay	78.55	40	⇑P	P	04 18 31.9	+0.2
	baz=78						
DUG	Dugway	78.59	49	⇑P	P	04 18 33.0	+0.8
	baz=78						
C24A	Savage	78.72	39	⇑P	P	04 18 32.9	+0.2
	baz=78						
H20A	Greybull	78.76	43	⇑P	P	04 18 33.5	+0.5
	baz=78						
GSC	Goldstone	78.92	55	⇓P	P	04 18 33.2	-0.8
	baz=79						
J19A	Crowheart	78.93	44	⇑P	P	04 18 34.4	+0.3
	baz=79						
E23A	Ismay	78.93	40	⇓P	P	04 18 33.9	+0.1
	baz=79						
BW06	Boulder Array	78.95	45	eP	P	04 18 33.4	-0.8
	comp=Z,6.7nm,1.3s						
PDAR	Pinedale Array	78.95	45	P	P	04 18 34.3	0.0
PDAR	Pinedale Array	78.95	45	P	P	04 18 34.3	0.0
	comp=Z,2.4nm,0.7s,baz=258,slow=1.8,SNR=22						
BFSC	Mount Baldy Ra	78.97	56	⇑P	P	04 18 34.0	-0.4
	baz=79						
I20A	Worland	79.03	43	⇓P	P	04 18 34.6	+0.1
	baz=79						
D24A	Glendive	79.04	39	⇑P	P	04 18 34.5	+0.1
	baz=79						
H21A	Big Horn, Sher	79.20	42	⇓P	P	04 18 35.6	+0.2
	baz=79						
G22A	Birney	79.23	42	⇑P	P	04 18 35.9	+0.3
	baz=79						
K19A	Absolon Red Bu	79.33	45	⇑P	P	04 18 36.1	-0.2
	baz=79						
F23A	Volborg	79.39	41	⇓P	P	04 18 36.6	+0.3
	baz=79						
J20A	Shoshoni	79.43	44	⇓P	P	04 18 37.0	+0.3
	baz=79						
I21A	Big Trails, Te	79.58	43	⇑P	P	04 18 37.4	-0.1
	baz=79						
H22A	Clearmont	79.60	42	⇓P	P	04 18 38.0	+0.4
	baz=79						
BRTR	Keskin Array B	79.63	312	LR	LR	04 56 25.0	
	comp=Z,32nm,19.2s,baz=250,slow=38						
MURC	Murrieta	79.65	56	⇓P	P	04 18 38.3	+0.4
	baz=79						
G23A	Biddle	79.73	41	⇓P	P	04 18 38.2	0.0
	baz=79						
F24A	Ekalaka	79.81	40	⇑P	P	04 18 38.8	+0.1
	baz=80						
I22A	9 Mile Ranch,	79.98	43	⇓P	P	04 18 39.7	0.0
	baz=80						
GMRC	Granite Mounta	79.99	54	⇓P	P	04 18 39.6	-0.3
	baz=80						
PFO	Pinyon Flat Ob	80.15	56	P	P	04 18 41.2	+0.5
PFO	Pinyon Flat Ob	80.15	56	P	P	04 18 41.2	+0.5
	comp=Z,4.6nm,0.8s,baz=304,slow=5.3,SNR=5.2						
PFO	Pinyon Flat Ob	80.15	56	⇑P	P	04 18 40.3	-0.4
	baz=80						
BELC	Belle Mtn. Jos	80.22	55	⇓P	P	04 18 40.7	-0.5
	baz=80						
J22A	Midwest	80.29	43	⇓P	P	04 18 41.4	0.0
	baz=80						
K21A	Alcova	80.36	44	⇑P	P	04 18 41.6	-0.2
	baz=80						
H24A	Dirks Ranch, A	80.48	41	⇓P	P	04 18 42.1	-0.2
	baz=80						
MONP	Monument Peak	80.59	56	⇑P	P	04 18 43.4	+0.1
	baz=80						
SRU	San Rafael	80.65	48	⇑P	P	04 18 43.8	+0.3
	baz=80						
IRM	Iron Mountain	80.70	55	⇑P	P	04 18 44.0	+0.4
	baz=80						
L21A	Rawlins	80.72	45	⇓P	P	04 18 44.2	+0.4
	baz=80						
O19A	Miners Draw (B	80.75	47	⇑P	P	04 18 44.2	+0.3
	baz=80						
BC3	Big Chuckawall	80.79	55	⇑P	P	04 18 44.7	+0.5
	baz=80						
N20A	Spence Gulch,	80.92	46	⇓P	P	04 18 45.1	+0.2
	baz=81						
M21A	Separation Pea	80.95	45	⇓P	P	04 18 44.8	-0.3
	baz=81						
W13A	Hualapai Mount	80.97	53	⇓P	P	04 18 45.4	+0.1
	baz=81						
U15A	North Rim	81.19	51	⇑P	P	04 18 47.1	+0.5
	baz=81						
P19A	Cripple Cowboy	81.25	47	⇓P	P	04 18 47.3	+0.5
	baz=81						
PDMCI	Parker Dam,Lak	81.28	54	⇑P	P	04 18 46.7	0.0
	baz=81						
Y12C	Blythe	81.36	55	⇑P	P	04 18 47.4	+0.4
	baz=81						
O20A	White River Ci	81.38	46	⇓P	P	04 18 47.8	+0.5
	baz=81						
N21A	Black Mountain	81.40	46	⇓P	P	04 18 47.8	+0.3
	baz=81						
L23A	Garrett	81.57	44	⇓P	P	04 18 48.2	-0.2

	baz=81						
DPC	**Dobruska-Polom**	**81.58**	**328**	*e*P	P	04 18 51.7	+3.7
DPC				*e*pP	pP	04 19 00.9	+2.2
J25A	**Sunshine Ranch**	**81.78**	**42**	⇓P	**P**	**04 18 49.5**	**+0.2**
	baz=81						
M23A	**Laramie**	**81.98**	**44**	⇑P	**P**	**04 18 50.3**	**-0.2**
	baz=82						
N22A	**Wattenberg Ran**	**81.99**	**45**	⇓P	**P**	**04 18 51.0**	**+0.4**
	baz=82						
Q20A	**Ridgley Place,**	**82.09**	**47**	⇑P	**P**	**04 18 51.1**	**-0.1**
	baz=82						
BRG	**Berggiesshubel**	**82.20**	**329**	*e*P	**P**	**04 18 52.8**	**+1.6**
	comp=Z,5.3nm,1.1s						
BRG	**Berggiesshubel**	**82.20**	**329**	*e*P	**P**	**04 18 52.8**	**+1.6**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
N23A	**Red Feather La**	**82.23**	**45**	⇑P	**P**	**04 18 52.7**	**+0.9**
	baz=82						
P21A	**Newcastle**	**82.23**	**47**	⇓P	**P**	**04 18 52.3**	**+0.4**
	baz=82						
Y14A	**Wickenburg**	**82.25**	**54**	⇓P	**P**	**04 18 52.0**	**+0.1**
	baz=82						
CLL	**Collm**	**82.26**	**330**	⇑*i*P	**P**	**04 18 52.8**	**+1.3**
	comp=Z,9.0nm,1.0s						
CLL				*e*pP	**pP**	**04 19 02.0**	**-0.2**
CLL				*i* sP	**sP**	**04 19 06.2**	**0.0**
CLL				*i*		04 19 09.7	
CLL				*e*PP	**PP**	**04 22 00.0**	**+0.5**
CLL				LmV		04 59 00.0	
	comp=Z,100nm,18.4s						
WUAZ	**Wupatki**	**82.34**	**52**	⇑P	**P**	**04 18 52.8**	**+0.4**
	baz=82						
O22A	**Kremmling**	**82.35**	**46**	⇑P	**P**	**04 18 52.9**	**+0.3**
	baz=82						
113A	**Mohawk Valley,**	**82.45**	**55**	⇑P	**P**	**04 18 52.9**	**+0.1**
	baz=82						
M24A	**Cheyenne**	**82.49**	**44**	⇑P	**P**	**04 18 53.6**	**+0.5**
	baz=82						
R20A	**Redvale**	**82.53**	**48**	⇓P	**P**	**04 18 53.7**	**+0.3**
	baz=82						
K26A	**Motz Farm, Whi**	**82.58**	**42**	⇑P	**P**	**04 18 53.1**	**-0.4**
	baz=82						
P22A	**Eagle**	**82.60**	**46**	⇓P	**P**	**04 18 54.2**	**+0.4**
	baz=82						
PRU	**Pruhonice**	**82.62**	**328**	AMS	AMS	05 00 20.0	
	comp=Z,200nm,21.8s						
O23A	**Lake Granby, G**	**82.69**	**45**	⇑P	**P**	**04 18 54.6**	**+0.3**
	baz=82						
TREC	**Trest**	**82.73**	**328**	AMS	AMS	04 59 30.0	
	comp=Z,100nm,13.8s						
S20A	**Disappointment**	**82.77**	**48**	⇓P	**P**	**04 18 55.1**	**+0.3**
	baz=82						
ISCO	**Idaho Springs**	**83.13**	**45**	⇑P	**P**	**04 18 57.1**	**+0.4**
	baz=83						
R22A	**Saguache, Gunn**	**83.48**	**47**	⇓P	**P**	**04 18 58.4**	**-0.1**
	baz=83						
K28A	**Ten Mile Ranch**	**83.55**	**41**	⇓P	**P**	**04 18 58.6**	**+0.1**
	baz=83						
KHC	**Kasperske Hory**	**83.68**	**328**	*e*P	**P**	**04 19 00.1**	**+1.2**
KHC				*e*PP	**PP**	**04 22 11.7**	**+0.5**
S22A	**4UR Ranch, Cre**	**83.75**	**48**	⇓P	**P**	**04 19 00.6**	**+0.7**
	baz=83						
GERES	**GERESS Array B**	**83.84**	**328**	LR	LR	05 01 26.9	
	comp=Z,116nm,19.4s,baz=65,slow=39						
X18A	**Snowflake**	**83.87**	**52**	⇑P	**P**	**04 19 00.9**	**+0.6**
	baz=84						
V20A	**Brimhall**	**84.00**	**50**	⇓P	**P**	**04 19 01.6**	**+0.6**
	baz=84,SNR=5.8						
R23A	**Moffat**	**84.06**	**47**	⇑P	**P**	**04 19 02.3**	**+0.9**
	baz=84,SNR=6.5						
U21A	**Nageezi**	**84.10**	**49**	⇓P	**P**	**04 19 02.1**	**+0.5**
	baz=84						
P25A	**Willow Gulch B**	**84.16**	**45**	⇑P	**P**	**04 19 02.4**	**+0.6**
	baz=84						
T22A	**Edith**	**84.18**	**48**	⇓P	**P**	**04 19 02.9**	**+0.9**
	baz=84,SNR=6.5						
N27A	**Anderson Farm,**	**84.21**	**43**	⇑P	**P**	**04 19 03.2**	**+1.2**
	baz=84						
W20A	**Ramah**	**84.41**	**51**	⇑P	**P**	**04 19 03.4**	**+0.3**
	baz=84						
R24A	**Sanders Place,**	**84.46**	**46**	⇑P	**P**	**04 19 04.1**	**+0.7**
	baz=84						
Q25A	**Bedland, Calha**	**84.51**	**45**	⇑P	**P**	**04 19 04.1**	**+0.5**
	baz=84						
EYMN	**Ely**	**84.58**	**32**	*e*P	**P**	**04 19 03.1**	**-0.4**
	comp=Z,5.8nm,1.0s						
U22A	**Llaves**	**84.63**	**49**	⇓P	**P**	**04 19 05.1**	**+0.9**
	baz=84						
O27A	**Beecher Island**	**84.66**	**44**	⇑P	**P**	**04 19 05.0**	**+0.7**
	baz=84						
T23A	**Casias Ranch,**	**84.69**	**48**	⇑P	**P**	**04 19 05.5**	**+0.8**
	baz=84						
X20A	**Quemado**	**84.78**	**51**	⇑P	**P**	**04 19 06.1**	**+1.0**
	baz=84,SNR=6.0						
S24A	**Houchin Ranch,**	**84.79**	**47**	⇓P	**P**	**04 19 06.2**	**+1.1**
	baz=84						
M29A	**Burnside Ranch**	**84.79**	**42**	⇑P	**P**	**04 19 06.2**	**+1.4**
	baz=84						
N28A	**Pribbeno Ranch**	**84.85**	**43**	⇑P	**P**	**04 19 05.6**	**+0.5**
	baz=84						
V22A	**San Miguel Ran**	**84.89**	**49**	⇑P	**P**	**04 19 06.1**	**+0.5**
	baz=85						
Q26A	**Hugo**	**84.93**	**45**	⇑P	**P**	**04 19 06.5**	**+0.9**
	baz=85						
R25A	**Fountain Ranch**	**85.00**	**46**	⇑P	**P**	**04 19 06.7**	**+0.6**
	baz=85						
U23A	**El Rito**	**85.06**	**48**	⇑P	**P**	**04 19 07.5**	**+1.0**
	baz=85,SNR=14						
Y20A	**Horse Springs,**	**85.27**	**51**	⇓P	**P**	**04 19 08.1**	**+0.6**
	baz=85,SNR=6.2						
X21A	**Alamocita Cree**	**85.30**	**51**	⇑P	**P**	**04 19 08.3**	**+0.6**
	baz=85,SNR=5.4						
KSCO	**Kaye Shedlock'**	**85.38**	**44**	⇑P	**P**	**04 19 08.0**	**+0.2**
	baz=85						
R26A	**Arlington**	**85.39**	**45**	⇑P	**P**	**04 19 08.1**	**+0.2**
	baz=85,SNR=11						
P28A	**Saint Francis**	**85.49**	**44**	⇓P	**P**	**04 19 08.7**	**+0.3**
	baz=85						
U24A	**Moreno Valley**	**85.56**	**48**	⇑P	**P**	**04 19 10.7**	**+1.7**
	baz=85						
T25A	**Trinidad**	**85.60**	**47**	⇑P	**P**	**04 19 09.9**	**+0.8**
	baz=85						
Z20A	**Nine Sixteen R**	**85.64**	**52**	⇓P	**P**	**04 19 10.1**	**+0.8**
	baz=85,SNR=11						
Y21A	**Point of Rocks**	**85.65**	**51**	⇓P	**P**	**04 19 10.3**	**+0.8**
	baz=85						
R27A	**Eads**	**85.78**	**45**	⇓P	**P**	**04 19 10.4**	**+0.5**
	baz=85						
Q28A	**Sharon Springs**	**85.80**	**44**	⇑P	**P**	**04 19 10.1**	**+0.2**
	baz=85						
S26A	**Kim**	**85.83**	**46**	⇑P	**P**	**04 19 10.1**	**0.0**
	baz=86						
W23A	**Werner Place,**	**85.85**	**49**	⇑P	**P**	**04 19 11.0**	**+0.6**
	baz=86						
O30A	**MW Ranch, Wils**	**86.02**	**42**	⇑P	**P**	**04 19 11.0**	**+0.1**
	baz=86						
V24A	**Rampart Ranch,**	**86.02**	**48**	⇓P	**P**	**04 19 12.2**	**+1.0**
	baz=86,SNR=6.6						
SPMN	**St. Paul**	**86.05**	**35**	⇓P	**P**	**04 19 11.5**	**+0.7**
	baz=86						
T26A	**Comanche Natio**	**86.06**	**46**	⇑P	**P**	**04 19 11.4**	**0.0**
	baz=86,SNR=5.0						
U25A	**Circle Dot Ran**	**86.09**	**47**	⇑P	**P**	**04 19 12.3**	**+0.8**
	baz=86,SNR=7.9						
Z21A	**St. Cloud Mine**	**86.10**	**51**	⇓P	**P**	**04 19 12.2**	**+0.6**
	baz=86						
Y22A	**Socorro**	**86.14**	**51**	⇑P	**P**	**04 19 12.2**	**+0.4**
	baz=86						
BGNE	**Belgrade**	**86.18**	**40**	⇓P	**P**	**04 19 12.4**	**+0.8**
	baz=86						
W24A	**Lazy 6 Ranch,**	**86.28**	**49**	⇓P	**P**	**04 19 13.6**	**+1.1**
	baz=86,SNR=8.4						
319A	**Douglas**	**86.30**	**54**	⇑P	**P**	**04 19 13.5**	**+0.9**
	baz=86						
R28A	**Tribune**	**86.30**	**45**	⇑P	**P**	**04 19 13.1**	**+0.7**
	baz=86						
V25A	**Rancho No Teng**	**86.34**	**48**	⇓P	**P**	**04 19 13.5**	**+0.8**
	baz=86,SNR=9.6						
Q29A	**Oakley**	**86.40**	**44**	⇓P	**P**	**04 19 13.2**	**+0.3**
	baz=86						
220A	**Playas Peak, P**	**86.45**	**53**	⇑P	**P**	**04 19 13.5**	**+0.2**
	baz=86						
U26A	**Atchley Ranch,**	**86.50**	**47**	⇓P	**P**	**04 19 14.2**	**+0.6**
	baz=86						
Z22A	**Elephant Butte**	**86.59**	**51**	⇑P	**P**	**04 19 15.1**	**+1.2**
	baz=86						
X24A	**Lazy VL Ranch,**	**86.69**	**49**	⇓P	**P**	**04 19 15.4**	**+0.8**
	baz=86						
Y23A	**Lovelace Mesa,**	**86.72**	**50**	⇓P	**P**	**04 19 14.9**	**+0.2**
	baz=86						
Q30A	**Quinter**	**86.76**	**43**	⇑P	**P**	**04 19 14.5**	**-0.1**
	baz=86						
P31A	**Stockton**	**86.85**	**42**	⇑P	**P**	**04 19 15.0**	**0.0**
	baz=86						
W25A	**X Bar L Ranch,**	**86.85**	**48**	⇓P	**P**	**04 19 15.4**	**+0.2**
	baz=86						
V26A	**Tequesquite Ra**	**86.87**	**47**	⇓P	**P**	**04 19 15.7**	**+0.5**
	baz=86,SNR=5.1						
SCHQ	**Schefferville**	**86.88**	**16**	P	**P**	**04 19 14.4**	**-0.4**
SCHQ	**Schefferville**	**86.88**	**16**	P	**P**	**04 19 14.4**	**-0.4**
	comp=Z,5.4nm,0.9s,baz=310,slow=4.2,SNR=6.6						
SCHQ				LR	LR	05 01 37.5	
	comp=Z,94nm,21.2s,baz=352,slow=38						
T28A	**Walsh**	**86.97**	**46**	⇓P	**P**	**04 19 15.8**	**+0.1**
	baz=87						
U27A	**Thompson Grove**	**87.02**	**46**	⇓P	**P**	**04 19 16.2**	**+0.2**
	baz=87						
Z23A	**Rita Site, Whi**	**87.05**	**51**	⇓P	**P**	**04 19 16.2**	**+0.1**
	baz=87						
Y24A	**Capitan**	**87.11**	**50**	⇑P	**P**	**04 19 16.5**	**0.0**
	baz=87						
X25A	**Clemmons Ranch**	**87.19**	**49**	⇑P	**P**	**04 19 16.9**	**0.0**
	baz=87						
V27A	**Dan Oppiter Fa**	**87.47**	**47**	⇑P	**P**	**04 19 18.5**	**+0.3**
	baz=87						
Z24A	**Sheeppen Canyo**	**87.55**	**50**	⇓P	**P**	**04 19 19.3**	**+0.6**
	baz=87						
S30A	**Montezuma**	**87.56**	**44**	⇑P	**P**	**04 19 18.9**	**+0.4**
	baz=87						
Y25A	**Mesa, Roswell**	**87.57**	**49**	⇓P	**P**	**04 19 19.2**	**+0.5**
	baz=87						
R31A	**Burdett**	**87.63**	**43**	⇑P	**P**	**04 19 18.8**	**0.0**
	baz=87						
W27A	**Bowe Ranch, En**	**87.80**	**48**	⇓P	**P**	**04 19 20.2**	**+0.4**
	baz=88,SNR=5.7						
124A	**Stringfield Ra**	**87.91**	**51**	⇓P	**P**	**04 19 20.8**	**+0.4**
	baz=88						
Z25A	**Roswell**	**87.98**	**50**	⇓P	**P**	**04 19 21.3**	**+0.7**
	baz=88						
224A	**Cornudas Mount**	**88.28**	**51**	⇑P	**P**	**04 19 21.5**	**-0.7**
	baz=88						
T31A	**Randall Ranch,**	**88.38**	**44**	⇑P	**P**	**04 19 22.9**	**+0.6**
	baz=88						
125A	**Gardner Draw,**	**88.44**	**50**	⇑P	**P**	**04 19 23.0**	**+0.1**
	baz=88						
Z26A	**Caprock**	**88.45**	**49**	⇑P	**P**	**04 19 23.1**	**+0.3**
	baz=88						
Z27A	**Tatum**	**88.89**	**49**	⇑P	**P**	**04 19 24.6**	**-0.4**
	baz=89						
X29A	**Tulia**	**89.04**	**47**	⇑P	**P**	**04 19 25.7**	**+0.1**
	baz=89						
226B	**Tecolote Peak,**	**89.13**	**50**	⇑P	**P**	**04 19 26.2**	**+0.2**
	baz=89						
V31A	**Spring Creek L**	**89.22**	**45**	⇓P	**P**	**04 19 27.2**	**+0.9**
	baz=89						
Z29A	**Hungry Hill Ra**	**89.85**	**48**	⇑P	**P**	**04 19 30.2**	**+0.8**
	baz=90						
X31A	**McDonald Ranch**	**89.94**	**46**	⇑P	**P**	**04 19 30.1**	**+0.4**
	baz=90						
Z30A	**Sanderson Ranc**	**90.19**	**48**	⇑P	**P**	**04 19 31.1**	**+0.2**
	baz=90						
Y31A	**Rekieta Farm,**	**90.24**	**47**	⇓P	**P**	**04 19 31.6**	**+0.5**
	baz=90						
427A	**Hayter Ranch,**	**90.44**	**51**	⇑P	**P**	**04 19 32.5**	**+0.2**
	baz=90						
328A	**Wristen Ranch,**	**90.45**	**50**	⇑P	**P**	**04 19 32.6**	**+0.4**
	baz=90						
526A	**Mary Lane Ranc**	**90.53**	**52**	⇓P	**P**	**04 19 32.9**	**+0.2**
	baz=90						
Y32A	**R-V Farms, Ver**	**90.69**	**46**	⇑P	**P**	**04 19 33.4**	**+0.1**
	baz=90						
Z31A	**Sharp Cattle R**	**90.75**	**47**	⇓P	**P**	**04 19 33.3**	**-0.3**
	baz=90						
130A	**Snyder**	**90.76**	**48**	⇑P	**P**	**04 19 33.9**	**+0.3**
	baz=90						
527A	**Woodward Ranch**	**90.78**	**52**	⇑P	**P**	**04 19 33.6**	**-0.3**
	baz=90						
626A	**Big Bend Ranch**	**90.84**	**52**	⇑P	**P**	**04 19 34.5**	**+0.4**
	baz=90						
329A	**Wagon Wheel Ra**	**90.90**	**50**	⇑P	**P**	**04 19 34.5**	**+0.2**
	baz=91						
428A	**Kincaid Ranch,**	**90.98**	**51**	⇓P	**P**	**04 19 34.8**	**+0.1**
	baz=91						
230A	**Sterling City**	**91.16**	**49**	⇓P	**P**	**04 19 35.4**	**-0.1**
	baz=91						
Z32A	**Haskell**	**91.16**	**47**	⇑P	**P**	**04 19 35.7**	**+0.2**
	baz=91						
TXAR	**Lajitas Array**	**91.29**	**52**	P	**P**	**04 19 36.4**	**+0.2**
TXAR	**Lajitas Array**	**91.29**	**52**	P	**P**	**04 19 36.4**	**+0.2**
	comp=Z,1.2nm,0.7s,baz=296,slow=3.4,SNR=14						
TXAR				LR	LR	04 57 40.1	
	comp=Z,69nm,18.2s,baz=5.0,slow=34						
528A	**Cox Ranch, San**	**91.30**	**51**	⇓P	**P**	**04 19 36.6**	**+0.3**
	baz=91						
627A	**Terlingua Ranc**	**91.39**	**52**	⇓P	**P**	**04 19 36.8**	**+0.1**
	baz=91						
TUL1	**Tulsa**	**91.42**	**43**	⇑P	**P**	**04 19 36.8**	**+0.3**
	baz=91						
330A	**Mertzon**	**91.45**	**49**	⇑P	**P**	**04 19 35.9**	**-1.0**
	baz=91						
ABTX	**Abilene, Hawle**	**91.54**	**47**	⇓P	**P**	**04 19 37.3**	**+0.1**
	baz=91						
429A	**Davenport Ranc**	**91.54**	**50**	⇓P	**P**	**04 19 37.7**	**+0.4**
	baz=91						
231A	**Bronte**	**91.61**	**48**	⇓P	**P**	**04 19 37.8**	**+0.2**
	baz=91						
529A	**Stev Forest Ra**	**91.68**	**51**	⇓P	**P**	**04 19 38.3**	**+0.4**
	baz=91						
628A	**Black Gap, Mar**	**91.69**	**52**	⇓P	**P**	**04 19 37.9**	**-0.1**
	baz=91						
331A	**San Angelo**	**91.98**	**49**	⇓P	**P**	**04 19 39.0**	**-0.3**
	baz=92						
232A	**Coleman**	**92.05**	**48**	⇓P	**P**	**04 19 39.5**	**-0.1**
	baz=92						
530A	**J-C Ranch, Com**	**92.22**	**50**	⇓P	**P**	**04 19 40.3**	**-0.1**
	baz=92						
431A	**Sonora**	**92.31**	**49**	⇑P	**P**	**04 19 39.7**	**-1.1**
	baz=92						
332A	**Millersview**	**92.35**	**48**	⇓P	**P**	**04 19 41.2**	**+0.2**
	baz=92						
432A	**Menard**	**92.67**	**49**	⇓P	**P**	**04 19 41.6**	**-0.8**
	baz=92						
531A	**Rocksprings**	**92.70**	**50**	⇓P	**P**	**04 19 42.7**	**0.0**
	baz=92						
JCT	**Junction City**	**92.94**	**49**	⇓P	**P**	**04 19 43.4**	**-0.3**
	baz=93						
532A	**Rocksprings**	**93.13**	**49**	⇑P	**P**	**04 19 44.5**	**-0.1**
	baz=93						
631A	**Perdido Creek**	**93.20**	**50**	⇑P	**P**	**04 19 45.5**	**+0.6**
	baz=93						
WHTX	**Lake Whitney**	**93.29**	**47**	⇓P	**P**	**04 19 45.4**	**+0.1**
	baz=93						
732A	**Laxson Ranch,**	**94.06**	**50**	⇓P	**P**	**04 19 49.0**	**+0.2**
	baz=94						
ESDC	**Sonseca Array**	**98.51**	**333**	LR	LR	05 09 30.9	
	comp=Z,60nm,18.6s,baz=295,slow=38						
SAML	**Samuel**	**145.53**	**46**	*e*PKPbc	**PKPdf**	**04 26 08.8**	**-0.2**
LPAZ	**La Paz**	**147.71**	**61**	*e*PKPbc	**PKPbc**	**04 26 15.7**	**-0.4**

TEH ***10*** *04:06:23.0, 35°.03N×138°.37E, h32km, ML5.0*

BJI ***10*** *04:06:57.9, 34°.43N×136°.93E, h344km, mB4.7/22, mb5.2/61*

NIED ***10*** *04:07:00, 34°.60N×136°.60E, h380km, Mw5.1 Best double couple: $M_0$5.22000×10^{16} NP1:ϕ_s91.00000°, δ88.00000°, λ10.00000°. NP2:ϕ_s1.00000°, δ80.00000°, λ178.00000°.*

MOS ***10*** *04:07:01.7±0.9, 34°.51N×136°.69E, h357km, mb4.5/51, Error ellipse: s-maj=9.0km s-min=5.4km az=107.6*

JMA ***10*** *04:07:02.9±0.2, 34°.61N×136°.61E, h355km±2km, M5.0 Broadband fault plane solution: P waves. NP1: ϕ_s29.00000°, δ76.00000°, λ-157.00000°. NP2: ϕ_s293.00000°, δ67.00000°, λ-15.00000°. Principal axes: T Plg6.0000°, Azm160.0000°; N Plg63.0000°, Azm58.0000°; P Plg26.0000°, Azm253.0000°;*

JMA Felt I J1.

ISCJB ***10*** *04:07:02.0±0.2, 34°.55N±0°.02×136°.68E±0°.03, h359km±1km, mb4.6/92 Error ellipse: s-maj=4.2km s-min=3.1km az=136.3*

NEIC ***10*** *04:07:02.6±0.3, 34°.46N×136°.63E, h352km±3km, mb5.1/20, MW5.1(NIED), Error ellipse: s-maj=5.7km s-min=4.3km az=125.0*

IDC ***10*** *04:07:02.7±0.5, 34°.50N×136°.69E, h350km±4km, mb4.1/29, mb1 4.3/33, mb1mx4.2/38, mbtmp4.2/33, Error ellipse: s-maj=7.9km s-min=7.2km az=118.0*

DJA ***10*** *04:07:06.1±2.4, 34°N±7°×13°7E±1°0, h385km±28km, M4.6/18, mB5.2/10, mb5.0/18, Mw(mB)4.5/10*

ISC 10 04:07:02.8±0.3**, 34°.55N**±0°.03×**136°.64E**±0°.03**, h353**km±3km**, h352**km**:pP-P, n354, σ1s.21**/437**, mb4.5**/93**, 33C-36D, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	**Ise**	**0.17**	**161**	⇓P	**Pn**	**04 07 47.6**	**+0.6**
JIE				S	**S**	**04 08 22.1**	**-0.3**
TSUJ	**Tsu 2**	**0.24**	**311**	⇓P	**Pn**	**04 07 47.6**	**+0.7**
TSUJ				S	**S**	**04 08 21.9**	**-0.4**
JAA	**Atsumi**	**0.42**	**79**	⇓P	**Pn**	**04 07 47.9**	**+0.7**
JKN2	**Miekihoku**	**0.44**	**224**	⇓P	**Pn**	**04 07 47.8**	**+0.5**
JAO	**Obara**	**0.87**	**35**	P	**Pn**	**04 07 49.0**	**+0.6**
JWY	**Kouya**	**0.93**	**249**	⇓P	**Pn**	**04 07 49.5**	**+0.8**
JWY				S	**S**	**04 08 24.2**	**-1.3**
TTO1	**TONANKAI O.B.S**	**0.94**	**173**	P	**Pn**	**04 07 49.4**	**+1.0**
HMMJ	**Hamamatsu 2**	**0.94**	**71**	⇓P	**Pn**	**04 07 48.9**	**+0.3**
JYZW	**Yoshizawa**	**1.00**	**64**	P	**Pn**	**04 07 49.0**	**+0.2**
TK02	**Tokai 2**	**1.11**	**123**	P	**Pn**	**04 07 50.0**	**+0.9**
TK02				*e*S	**S**	**04 08 27.4**	**+1.2**
JGM	**Miyama**	**1.14**	**3**	P	**Pn**	**04 07 50.0**	**+0.6**
JGM				*e*S	**S**	**04 08 26.9**	**0.0**
JGF	**Kuroka**	**1.20**	**29**	P	**Pn**	**04 07 49.8**	**+0.1**
JWT	**Wachi**	**1.25**	**306**	P	**Pn**	**04 07 50.0**	**+0.1**
JWT				*e*S	**S**	**04 08 26.9**	**-0.8**
JWZ	**Kozaga**	**1.28**	**217**	P	**Pn**	**04 07 50.2**	**0.0**
JWZ				*e*S	**S**	**04 08 27.4**	**-0.7**
JKG	**Kaga**	**1.74**	**352**	P	**Pn**	**04 07 52.7**	**+0.2**
JKG				*e*S	**S**	**04 08 31.4**	**-1.1**
JNT	**Takato**	**1.80**	**43**	P	**Pn**	**04 07 53.2**	**+0.1**
JYN	**Shimob**	**1.82**	**58**	P	**Pn**	**04 07 53.3**	**+0.1**
JAI	**Aioi**	**1.97**	**248**	P	**Pn**	**04 07 54.6**	**+0.4**
JAI				*e*S	**S**	**04 08 34.7**	**-0.7**
JAD	**Aida**	**2.07**	**281**	⇑P	**Pn**	**04 07 55.1**	**+0.3**
JOD2	**Odawara 2**	**2.13**	**70**	P	**Pn**	**04 07 55.5**	**+0.2**
JNG	**Nsakai**	**2.20**	**32**	P	**Pn**	**04 07 56.1**	**+0.3**
JJS	**Sakaide**	**2.25**	**266**	⇑P	**Pn**	**04 07 56.7**	**+0.6**
JRY	**Ryogami san**	**2.36**	**51**	P	**Pn**	**04 07 57.4**	**+0.4**
JRY				*e*S	**S**	**04 08 41.3**	**+0.8**
MAJO	**Matsushiro**	**2.36**	**32**	*e*P	**Pn**	**04 07 57.0**	**+0.1**
MAJO	**Matsushiro**	**2.36**	**32**	*e*Pn	**Pn**	**04 07 57.0**	**+0.1**
MAT	**Matsushiro**	**2.36**	**32**	P	**Pn**	**04 07 56.8**	**-0.2**
MAT				S	**S**	**04 08 38.6**	**-1.9**
MAT	**Matsushiro**	**2.36**	**32**	P	**Pn**	**04 07 57.2**	**+0.2**
MAT				*e*S	**S**	**04 08 39.6**	**-0.9**
MJAR	**Matsushiro Arr**	**2.36**	**32**	P	**Pn**	**04 07 57.4**	**+0.4**
MJAR				S	**S**	**04 08 39.3**	**-1.3**
MJAR	**Matsushiro Arr**	**2.36**	**32**	P	**Pn**	**04 07 57.4**	**+0.4**
	416nm,0.3s,baz=208,slow=8.2,SNR=53						
MJAR				S	**S**	**04 08 39.3**	**-1.3**
	baz=222,slow=14,SNR=3.7						
MRT2	**Murotomisaki 2**	**2.38**	**241**	⇑P	**Pn**	**04 07 57.6**	**+0.4**
JMN	**Monobe**	**2.43**	**251**	P	**Pn**	**04 07 58.4**	**+0.7**
JKR	**Kurayoshi**	**2.46**	**290**	⇑P	**Pn**	**04 07 58.0**	**+0.3**
JJN	**Nakama**	**2.83**	**26**	P	**Pn**	**04 08 01.5**	**+0.8**
JJG	**Jouge**	**2.88**	**273**	P	**Pn**	**04 08 01.9**	**+0.6**
JHS	**Saijyo**	**2.93**	**280**	⇑P	**Pn**	**04 08 02.4**	**+0.6**
JHS				*e*S	**S**	**04 08 49.5**	**+0.2**
JET	**Tanbara**	**3.08**	**256**	⇓P	**Pn**	**04 08 03.7**	**+0.6**
JNM	**Ikuma**	**3.11**	**289**	⇑P	**Pn**	**04 08 03.9**	**+0.6**
SAI	**Saigo**	**3.16**	**302**	⇑P	**Pn**	**04 08 04.1**	**+0.4**
SAI				*e*S	**S**	**04 08 52.4**	**-0.4**
JKU	**Kubokawa**	**3.22**	**248**	⇓P	**Pn**	**04 08 05.0**	**+0.6**
JHM	**Kurahashi**	**3.43**	**264**	⇓P	**Pn**	**04 08 06.9**	**+0.6**
JHT	**Toyohira**	**3.48**	**273**	⇓P	**Pn**	**04 08 07.4**	**+0.6**
JNA	**Nagahama**	**3.59**	**255**	⇓P	**Pn**	**04 08 08.8**	**+0.9**
UWA2	**Uwa jima 2**	**3.60**	**249**	⇓P	**Pn**	**04 08 08.6**	**+0.6**
JTO	**Tosashimizu**	**3.62**	**243**	P	**Pn**	**04 08 08.6**	**+0.4**
JTO				*e*S	**S**	**04 09 01.2**	**+0.3**
JSD	**Sado**	**3.71**	**20**	P	**Pn**	**04 08 08.8**	**-0.2**
JHIK	**Hikimi**	**3.89**	**271**	⇓P	**Pn**	**04 08 11.6**	**+0.8**
JNS	**Sasagawa**	**3.91**	**33**	P	**Pn**	**04 08 10.5**	**-0.5**
JKD	**Kudamatsu**	**3.98**	**264**	⇓P	**Pn**	**04 08 12.8**	**+1.1**
JKI	**Kunimi**	**4.31**	**259**	⇓P	**Pn**	**04 08 16.2**	**+1.1**
JUS	**Usuki**	**4.33**	**251**	⇓P	**Pn**	**04 08 16.2**	**+0.8**
JAW	**Awa shima**	**4.42**	**28**	P	**Pn**	**04 08 16.0**	**-0.2**
JKIT	**Kitakata**	**4.74**	**247**	⇓P	**Pn**	**04 08 21.1**	**+1.4**
JFA	**Akaike**	**4.92**	**262**	⇓P	**Pn**	**04 08 22.3**	**+0.7**
JNU	**Nakatsue**	**5.00**	**255**	P	**Pn**	**04 08 23.4**	**+0.8**
JNU				S	**S**	**04 09 28.5**	**+1.3**
JNU	**Nakatsue**	**5.00**	**255**	⇓P	**Pn**	**04 08 23.5**	**+0.8**
JNU	**Nakatsue**	**5.00**	**255**	P	**Pn**	**04 08 23.4**	**+0.8**
	31nm,0.3s,baz=72,slow=4.3,SNR=156						
JNU				S	**S**	**04 09 28.5**	**+1.3**
	baz=188,slow=12,SNR=5.9						
JIU2	**Izumi 2**	**5.26**	**249**	⇓P	**Pn**	**04 08 26.3**	**+0.9**
JTA	**Tamana**	**5.33**	**254**	P	**Pn**	**04 08 27.0**	**+0.8**
JTZ	**Takazaki**	**5.35**	**242**	⇓P	**Pn**	**04 08 27.6**	**+1.2**
KSRS	**Korea Array**	**7.63**	**295**	P	**P**	**04 08 54.0**	**+0.1**
	12nm,0.3s,baz=109,slow=12,SNR=307						
KSRS				S	**S**	**04 10 25.0**	**+3.0**
	baz=103,slow=21,SNR=4.4						
KSAR	**Wonju Array Be**	**7.66**	**295**	P	**P**	**04 08 54.0**	**-0.2**
KSAR				S	**S**	**04 10 25.0**	**+2.5**
INCN	**Inchon**	**8.62**	**293**	*e*Pn	**Pn**	**04 09 05.3**	**+1.1**
ERM	**Erimo**	**9.04**	**33**	*e*P	**Pn**	**04 09 08.8**	**-0.3**
ERM				*e*S	S	04 10 43.5	-9.0
ERM	**Erimo**	**9.04**	**33**	*e*Pn	**Pn**	**04 09 08.8**	**-0.3**
ERM				*e*S	S	04 10 43.5	-9.0
USRK	**Ussuriysk Arra**	**10.28**	**341**	P	**P**	**04 09 24.7**	**-0.2**
	64nm,0.3s,baz=154,slow=11,SNR=296						
USRK				S	**S**	**04 11 21.6**	**+2.0**
	baz=126,slow=20,SNR=1.3						
ASAJ	**Asahikawa**	**10.60**	**24**	P	**Pn**	**04 09 26.9**	**-0.8**
ASAJ	**Asahikawa**	**10.60**	**24**	P	**Pn**	**04 09 26.9**	**-0.8**
	42nm,0.3s,baz=233,slow=11,SNR=17						
MDJ	**Mudanjiang**	**11.42**	**334**	P	**P**	**04 09 37.9**	**+0.2**
MDJ				S	**S**	**04 11 41.2**	**-3.6**
MDJ				pmax	pmax		
	comp=Z,950nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,450nm,4.2s						
MDJ				LR	LR		
	comp=N,380nm,18.6s						
MDJ				LR	LR		
	comp=E,280nm,21.0s						
MDJ				LR	LR		
	comp=Z,470nm,19.7s						
MDJ	**Mudanjiang**	**11.42**	**334**	*e*Pn	**P**	**04 09 38.1**	**+0.4**
YUK	**Yuzh-Kuril'sk**	**11.85**	**34***c*	*i*P	**P**	**04 09 39.8**	**-2.6**
YUK				*i* S	S	04 11 47.3	-6.9
YUK				pmax	pmax		
	comp=E,83nm,0.5s						
YUK				pmax	pmax		
	comp=Z,188nm,0.5s						
YUK				pmax	pmax		
	comp=N,106nm,0.2s						
YUK				pmax	pmax		
	comp=E,2µm,2.2s						
YUK				pmax	pmax		
	comp=N,3µm,2.2s						
YUK				MLR	MLR		
	comp=Z,192nm,12.0s						
CN2	**Changchun**	**12.66**	**320**	⇑P	**Pn**	**04 09 52.1**	**-0.1**
CN2				*e*S	**S**	**04 12 07.8**	**-3.4**
CN2				pmax	pmax		
	comp=Z,80nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
DL2	**Dalian**	**12.80**	**294**	P	**P**	**04 09 53.3**	**+0.3**
DL2				S	**S**	**04 12 11.1**	**-2.9**
DL2				pmax	pmax		
	comp=Z,48nm,0.6s						
DL2				LR	LR		
	comp=N,290nm,15.6s						
DL2				LR	LR		
	comp=E,380nm,15.7s						
DL2				LR	LR		
	comp=Z,450nm,20.1s						
YSS	**Yuzh-Sakhalins**	**13.22**	**19**	⇑*i*P	**Pn**	**04 09 58.2**	**-0.4**
YSS				*i* S	**S**	**04 12 16.8**	**-5.5**
YSS				pmax	pmax		
	comp=N,860nm,0.5s						
YSS				pmax	pmax		
	comp=Z,1µm,0.5s						
YSS				smax	smax		
	comp=N,800nm,5.0s						

YSS smax smax
comp=E,600nm,5.0s
YSS smax smax
comp=N,510nm,0.9s
YSS smax smax
comp=E,470nm,0.9s
YSS MLR MLR
comp=E,700nm,17.0s
YSS MLR MLR
comp=Z,500nm,17.0s
SSE Sheshan 13.45 259 P P 04 09 59.9 -0.3
SSE S S **04 12 28.7 +1.5**
SSE pmax pmax
comp=Z,88nm,0.8s
SSE pmax pmax
comp=Z,190nm,8.1s
SSE LR LR
comp=N,610nm,21.6s
SSE LR LR
comp=E,220nm,21.6s
SSE LR LR
comp=Z,590nm,18.0s
KUR Kuril'sk 13.70 36*d i* P **Pn 04 10 04.8 +0.6**
KUR *i* S **S 04 12 33.0 +1.1**
KUR pmax pmax
comp=Z,61nm,0.8s
KUR pmax pmax
comp=N,34nm,0.8s
KUR smax smax
comp=N,216nm,1.2s
KUR smax smax
comp=E,143nm,0.6s
KUR MLR MLR
comp=N,510nm,18.0s
KUR MLR MLR
comp=E,573nm,18.0s
KUR MLR MLR
comp=Z,409nm,18.0s
HABR Khabarovsk 13.96 356*ce* P **P 04 10 04.4 -1.2**
HABR *e* S **S 04 12 36.6 -0.5**
HABR pmax pmax
comp=Z,355nm,1.2s
HABR pmax pmax
comp=N,122nm,0.9s
HABR pmax pmax
comp=E,110nm,1.8s
HABR MLR MLR
comp=Z,232nm,17.0s
UGL Uglegorsk 15.06 14 *e* P **Pn 04 10 19.5 -0.5**
UGL *e* S **S 04 13 04.0 +4.8**
UGL pmax pmax
comp=Z,284nm,0.6s
UGL pmax pmax
comp=N,800nm,5.0s
UGL pmax pmax
comp=E,500nm,5.0s
UGL smax smax
comp=E,1μm,5.0s
UGL smax smax
comp=N,1μm,8.0s
UGL MLR MLR
comp=N,700nm,20.0s
UGL MLR MLR
comp=E,600nm,20.0s
NJ2 Nanjing 15.08 265 *e* P **P 04 10 18.4 +0.3**
NJ2 sP sP 04 11 43.5 -10
NJ2 S S **04 12 59.5 -0.6**
NJ2 PcP **PcP 04 14 57.5 -4.0**
NJ2 ScP **ScP 04 17 57.5 -3.9**
NJ2 pmax pmax
comp=Z,200nm,1.0s
NJ2 pmax pmax
comp=Z,130nm,7.8s
NJ2 LR LR
comp=N,600nm,20.6s
NJ2 LR LR
comp=E,1μm,22.0s
NJ2 LR LR
comp=Z,660nm,20.6s
KLR Kul'dur 15.10 348⇓ *i* P **P 04 10 13.8 -4.4**
KLR *e* S **S 04 12 54.0 -6.2**
KLR pmax pmax
comp=N,98nm,1.4s
KLR pmax pmax
comp=E,170nm,1.4s
KLR pmax pmax
comp=Z,420nm,1.4s
KLR MLR MLR
comp=E,500nm,11.0s
KLR MLR MLR
comp=Z,1μm,11.0s
TIA Tai'an 16.00 282 P **P 04 10 28.3 +0.2**
TIA S **S 04 13 17.2 -1.2**
TIA LR LR
comp=N,700nm,17.2s
TIA LR LR
comp=E,1μm,24.9s
TIA LR LR
comp=Z,500nm,22.6s
YHNB Yeheng 16.51 237 *e* P **P 04 10 32.8 -1.0**
comp=Z,96nm,0.7s
NACB Ninganchiao 16.68 236 P **P 04 10 33.4 -2.2**
comp=Z,114nm,0.3s
BJI Beijing 17.17 295 P **P 04 10 40.4 -0.2**
BJI S **S 04 13 37.7 -3.4**
BJI pmax pmax
comp=Z,32nm,0.4s
BJI LR LR
comp=N,230nm,20.1s
BJI LR LR
comp=E,260nm,23.9s
BJI LR LR
comp=Z,350nm,28.8s
BJT Baijiatuau 17.17 295 *e* P **P 04 10 40.5 -0.1**
comp=Z,31nm,0.4s
SSLB Suanglung 17.38 236 *e* P **P 04 10 41.3 -1.8**
comp=Z,63nm,0.3s
SSLB *e* S **S 04 13 44.4 -1.3**
YULB Yu-li 17.41 234 *e* P **P 04 10 40.4 -3.0**
comp=Z,63nm,0.5s
YULB *e* S **S 04 13 47.6 +1.4**
TPUB Ta-pu 17.92 235 *e* P **P 04 10 46.7 -2.1**
comp=Z,218nm,0.7s
TWG Pinlang 17.95 233 *e* P **P 04 10 47.5 -1.7**
WHN Wuhan 19.20 264 P **P 04 11 01.9 -0.4**
WHN S **S 04 14 20.1 -0.2**
WHN pmax pmax
comp=Z,870nm,0.7s
WHN pmax pmax
comp=Z,2μm,2.9s
WHN pmax pmax
comp=Z,1μm,2.9s
WHN LR LR
comp=N,1μm,18.5s
WHN LR LR
comp=E,2μm,19.9s
WHN LR LR
comp=Z,2μm,16.6s
HIA Hailar 19.28 325 *e* P **P 04 11 01.2 -1.7**
comp=Z,168nm,0.5s
HHC Hu-ho-hao-te 20.77 295⇓ *e* P **P 04 11 18.4 +0.7**
HHC pmax pmax
comp=Z,240nm,1.0s
HHC pmax pmax
comp=Z,250nm,5.0s
HHC LR LR
comp=N,480nm,11.3s
HHC LR LR
comp=E,1μm,13.7s
HHC LR LR
comp=Z,450nm,13.2s
GUMO Guam 22.16 158 *e* P **P 04 11 29.7 -0.7**
comp=Z,286nm,0.6s
XAN Xi'an 22.88 277 P **P 04 11 36.7 -0.1**
XAN S **S 04 15 16.6 -3.2**
XAN pmax pmax
comp=Z,53nm,0.7s
XAN LR LR
comp=N,340nm,17.7s
XAN LR LR
comp=E,160nm,20.3s
XAN LR LR
comp=Z,140nm,19.8s
ENH Enshi 23.29 267 *e* P **P 04 11 40.1 -0.4**
comp=Z,140nm,0.6s
CLNS Chul'man 23.68 344 *e* P **P 04 11 44.7 +1.0**
CLNS *e* S **S 04 15 38.0 +6.1**

CLNS pmax pmax
comp=Z,77nm,0.7s
CLNS pmax pmax
comp=N,69nm,0.9s
CLNS pmax pmax
comp=E,25nm,0.8s
CLNS pmax pmax
comp=E,18nm,0.7s
CLNS pmax pmax
comp=N,44nm,0.9s
CLNS pmax pmax
comp=Z,16nm,0.8s
CLNS smax smax
comp=E,23nm,0.9s
CLNS smax smax
comp=N,29nm,0.9s
PETK Petropavlovsk- 23.82 32 P **P 04 11 45.8 +0.8**
PETK pmax pmax
comp=Z,49nm,0.8s
PETK Petropavlovsk- 23.82 32 P **P 04 11 45.8 +0.8**
PETK Petropavlovsk- 23.82 32 P **P 04 11 45.8 +0.8**
comp=Z,49nm,0.8s,baz=214,slow=7.2,SNR=19
CIT Chita 24.07 324 *e* P **P 04 11 47.8 +0.5**
CIT *e* 04 15 40.4
CIT pmax pmax
comp=Z,158nm,1.2s
ULN Ulaanbaatar 25.75 310 P **P 04 12 04.4 +1.9**
comp=Z,37nm,0.9s,comp=Z,319nm
SONM Songino Array 26.15 310 P **P 04 12 08.1 +2.0**
SONM ScP **ScP 04 18 28.2 +0.1**
SONM Songino Array 26.15 310 P **P 04 12 08.1 +2.0**
comp=Z,21nm,0.8s,baz=114,slow=9.2,SNR=51
SONM ScP **ScP 04 18 28.2 +0.1**
comp=Z,2.2nm,0.7s,baz=169,slow=3.7,SNR=5.5
LZH Lanzhou 26.74 283 ⇓ P **P 04 12 11.2 -0.2**
LZH pmax pmax
comp=Z,43nm,1.0s
LZH pmax pmax
comp=Z,160nm,4.1s
LZH LR LR
comp=N,290nm,11.2s
LZH LR LR
comp=E,660nm,12.5s
LZH LR LR
comp=Z,750nm,13.6s
CD2 Chengdu 27.83 272 *e* P **P 04 12 23.6 +2.6**
CD2 PcP **PcP 04 15 30.5 +3.6**
CD2 SS SS 04 18 42.9 -10
CD2 pmax pmax
comp=Z,120nm,0.5s
CD2 pmax pmax
comp=Z,140nm,4.8s
CD2 LR LR
comp=N,570nm,17.8s
CD2 LR LR
comp=E,1μm,20.2s
CD2 LR LR
comp=Z,1μm,15.5s
YAK Yakutsk 27.85 353 *e* P **P 04 12 19.5 -1.2**
YAK *e* 04 13 26.7
YAK *e* 04 15 29.6
YAK *e*S **S 04 16 36.8 -0.4**
YAK *e* 04 22 22.0
YAK pmax pmax
comp=Z,48nm,1.0s
YAK pmax pmax
comp=N,17nm,1.1s
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=N,12nm,0.6s
YAK pmax pmax
comp=Z,18nm,0.6s
YAK pmax pmax
comp=E,8.0nm,0.7s
YAK smax smax
comp=E,76nm,1.8s
YAK smax smax
comp=N,80nm,1.7s
QIZ Qiongzhong 28.36 244 *e* P **P 04 12 26.3 +0.5**
comp=N,18nm,0.8s
ZAK Zakamensk 28.95 313 *e* P **P 04 12 31.9 +1.2**
ZAK pmax pmax
comp=Z,8.0nm,0.9s
TLY Talaya 29.21 316 *e* P **P 04 12 35.3 +2.4**
TLY pmax pmax
comp=Z,27nm,1.5s
TLY MLR MLR
comp=Z,126nm,15.0s
GTA Gaotai 29.68 290 ⇓ P **P 04 12 37.4 +0.1**
GTA S **S 04 17 06.9 +0.2**
GTA pmax pmax
comp=Z,14nm,1.1s
GTA pmax pmax
comp=Z,61nm,5.2s
GTA LR LR
comp=N,180nm,17.8s
GTA LR LR
comp=E,220nm,16.1s
GTA LR LR
comp=Z,280nm,18.3s
MOY Mondy 30.75 315 *e* P **P 04 12 47.6 +1.2**
KMI Kunming 30.75 261 P **P 04 12 46.1 -0.8**
KMI pmax pmax
comp=Z,71nm,0.6s
KMI LR LR
comp=N,190nm,15.7s
KMI LR LR
comp=E,330nm,16.7s
KMI LR LR
comp=Z,340nm,24.0s
KDM Kudat 33.02 218 P **P 04 13 07.8 +1.4**
MYLDM Lahad Datu 33.71 214 P **P 04 13 13.6 +1.4**
MYLDM Lahad Datu 33.71 214 P **P 04 13 13.7 +1.4**
MYLDM Lahad Datu 33.71 214 P **P 04 13 13.3 +1.0**
comp=Z,106nm,1.0s,comp=Z,862nm
SDKM Sandakan 33.93 216 P **P 04 13 14.2 0.0**
SDKM Sandakan 33.93 216 P **P 04 13 15.8 +1.6**
UBPT Khong Chiam 33.96 243 P **P 04 13 14.5 +0.1**
comp=Z,99nm,0.8s
KKM Kota Kinabalu 34.08 218 *e* P **P 04 13 15.9 +0.3**
comp=Z,25nm,0.7s
KKM Kota Kinabalu 34.08 218 P **P 04 13 16.4 +0.9**
KKM Kota Kinabalu 34.08 218 P **P 04 13 18.7 +3.2**
comp=Z,40nm,0.9s
TSM Tawau 34.78 214 P **P 04 13 21.3 -0.2**
RKPI Ransiki, Papua 35.95 184 P P 04 13 43.2 +12
PBKT Sadao Pong 36.58 250 P **P 04 13 36.8 +0.3**
CHTO Chiang Mai 36.91 255 *e* P **P 04 13 38.9 -0.4**
CHTO *e* 04 15 53.0
CHTO pmax pmax
comp=Z,20nm,0.7s
CHTO Chiang Mai 36.91 255 *e* P **P 04 13 38.9 -0.4**
comp=Z,20nm,0.7s
CHTO *e*PcP **PcP 04 15 53.0 +0.8**
CHTO Chiang Mai 36.91 255 P **P 04 13 39.2 -0.1**
comp=Z,40nm,1.0s
CMAR Chiang Mai Arr 37.10 254 P **P 04 13 40.9 0.0**
CMAR PP **PP 04 15 16.1 +1.8**
CMAR PcP **PcP 04 15 53.9 +1.1**
CMAR ScP **ScP 04 19 06.3 +0.8**
CMAR Chiang Mai Arr 37.10 254 P **P 04 13 40.9 0.0**
comp=Z,10nm,0.5s,baz=51,slow=6.4,SNR=28
CMAR PP **PP 04 15 16.1 +1.8**
comp=Z,1.7nm,0.3s,baz=46,slow=9.4,SNR=5.3
CMAR PcP **PcP 04 15 53.9 +1.1**
comp=Z,4.1nm,1.0s,baz=21,slow=0.8,SNR=4.8
CMAR ScP **ScP 04 19 06.3 +0.8**
comp=Z,1.4nm,0.3s,baz=25,slow=3.0,SNR=4.7
TIXI Tiksi 37.39 356*c i* P **P 04 13 42.2 -0.3**
TIXI pmax pmax
comp=Z,34nm,0.8s
FAKI Fak Fak 37.50 187 P **P 04 13 44.5 +0.3**
BILL Bilibino 37.53 18*c i* P **P 04 13 44.4 +0.6**
BILL *e* 04 15 24.2
BILL *e*S **S 04 19 08.6 +2.8**
BILL pmax pmax
comp=Z,137nm,1.0s
CHBT CHBT 37.91 244 P **P 04 13 48.2 +0.6**
BTM Bintulu 38.12 220 P **P 04 13 49.0 -0.3**
BTM Bintulu 38.12 220 P **P 04 13 49.3 -0.1**
WMQ Urumqi 38.56 299 *e* P **P 04 13 53.6 +0.8**
WMQ PcP **PcP 04 16 01.0 +3.9**
WMQ pmax pmax
comp=Z,20nm,1.1s
WMQ pmax pmax
comp=Z,98nm,5.6s
WMQ LR LR
comp=N,520nm,21.0s
WMQ LR LR
comp=E,250nm,17.7s
WMQ LR LR
comp=Z,330nm,23.0s
LSA Lhasa 38.58 276 P **P 04 13 54.2 +0.6**
LSA Lhasa 38.58 276 *e* P **P 04 13 54.5 +0.9**
LSA pmax pmax
comp=Z,22nm,0.4s
LSA Lhasa 38.58 276 *e* P **P 04 13 54.5 +0.9**
comp=Z,22nm,0.4s
SBUM Sibu 39.21 221 P **P 04 13 58.2 -0.1**
SBUM Sibu 39.21 221 P **P 04 13 58.4 +0.1**
SBUM Sibu 39.21 221 P **P 04 13 57.8 -0.5**
comp=Z,45nm,1.1s,comp=Z,396nm
SHL Shillong 39.49 269 *e*PKP **P 04 14 01.5 +0.7**
ZAA0 Zalesovo Array 40.80 315 *e* P **P 04 14 10.5 -0.3**
ZALV Zalesovo Beam 40.80 315 P **P 04 14 11.0 +0.2**
ZALV 04 16 04.0
ZALV pmax pmax
comp=Z,7.0nm,0.4s
ZALV pmax pmax
comp=Z,13nm,0.6s
ZALV pmax pmax
comp=N,12nm,0.7s
ZALV Zalesovo Beam 40.80 315 P **P 04 14 11.0 +0.2**
ZALV PcP **PcP 04 16 04.0 0.0**
ZALV ScP **ScP 04 19 18.9 -0.4**
ZALV Zalesovo Beam 40.80 315 P **P 04 14 11.0 +0.2**
comp=N,7.0nm,0.4s,baz=91,slow=8.7,SNR=15
ZALV PcP **PcP 04 16 04.0 0.0**
comp=N,13nm,0.6s,baz=99,slow=3.2,SNR=11
ZALV ScP **ScP 04 19 18.9 -0.4**
comp=N,12nm,0.7s,baz=108,slow=4.1,SNR=16
KSM Kuching 41.07 222 *e* P **P 04 14 13.6 +0.2**
comp=N,61nm,0.6s
KSM Kuching 41.07 222 P **P 04 14 13.9 +0.5**
KSM Kuching 41.07 222 P **P 04 14 13.9 +0.5**
KSM Kuching 41.07 222 P **P 04 14 13.6 +0.2**
comp=N,112nm,0.8s,comp=N,1μm
NVS Novosibirsk 41.83 316⇓ *i* P **P 04 14 17.8 -1.2**
NVS *i* S **S 04 20 07.6 -1.8**
NVS *e*SSS SSS 04 23 38.0
NVS pmax pmax
comp=Z,9.0nm,0.6s
NVS pmax pmax
comp=N,6.0nm,0.9s
NVS smax smax
comp=N,12nm,1.4s
NVS smax smax
comp=E,20nm,1.6s
MK31 Makanchi Array 42.20 304 *i* P **P 04 14 22.9 +0.7**
MK31 pmax pmax
comp=Z,11nm,0.5s
MKAR Makanchi Array 42.20 304 P **P 04 14 23.1 +0.9**
MKAR 04 16 09.2
MKAR pmax pmax
comp=Z,13nm,0.5s
MKAR pmax pmax
comp=Z,5.0nm,0.8s
MKAR pmax pmax
comp=N,3.0nm,0.5s
MKAR Makanchi Array 42.20 304 P **P 04 14 23.1 +0.9**
MKAR PcP **PcP 04 16 09.2 +0.3**
MKAR ScP **ScP 04 19 24.5 -0.5**
MKAR Makanchi Array 42.20 304 P **P 04 14 23.1 +0.9**
comp=N,13nm,0.5s,baz=89,slow=10,SNR=188
MKAR PcP **PcP 04 16 09.2 +0.3**
comp=N,4.6nm,0.8s,baz=68,slow=5.8,SNR=3.9
MKAR ScP **ScP 04 19 24.5 -0.5**
comp=N,2.8nm,0.5s,baz=73,slow=4.9,SNR=9.7
TAPN Taplejung 42.24 274 *e* P **P 04 14 23.1 0.0**
comp=N,134nm,0.4s
KAPI Kappang 42.46 205 *e* P **P 04 14 23.0 -1.5**
comp=N,46nm,0.5s
KAPI Kappang 42.46 205 P **P 04 14 23.0 -1.5**
comp=N,79nm,1.0s,comp=N,934nm
KTGM Kuala Trenggan 42.49 234 P **P 04 14 25.6 +0.8**
KTGM Kuala Trenggan 42.49 234 P **P 04 14 25.7 +0.8**
ODAN Odare 42.69 274 *e* P **P 04 14 26.4 -0.2**
comp=N,88nm,0.4s
RAMN Ramite 43.31 274 *e* P **P 04 14 31.3 -0.2**
comp=N,285nm,0.7s
GUN Gumba 43.54 276 *e* P **P 04 14 33.6 +0.2**
comp=N,220nm,0.5s
PKI Pulchoki 44.05 275 *e* P **P 04 14 37.2 -0.3**
comp=N,204nm,0.7s
PKIN Phulchoki 44.06 275 *e* P **P 04 14 37.2 -0.2**
comp=N,84nm,0.4s
KKN Kakani 44.07 276 *e* P **P 04 14 37.2 -0.3**
comp=N,212nm,0.6s
KULM Kulim 44.22 237 *e* P **P 04 14 38.2 -0.2**
comp=N,24nm,0.8s
KULM Kulim 44.22 237 P **P 04 14 38.6 +0.1**
KULM Kulim 44.22 237 P **P 04 14 38.8 +0.3**
KULM Kulim 44.22 237 P **P 04 14 38.5 +0.1**
comp=N,31nm,1.1s,comp=N,490nm
DMN Daman 44.28 276 *e* P **P 04 14 39.1 -0.1**
comp=N,96nm,0.5s
KURK Kurchatov 44.46 310 P **P 04 14 40.8 +0.9**
KURK pmax pmax
comp=Z,6.0nm,0.5s
KURK pmax pmax
comp=N,2.0nm,0.6s
KURK Kurchatov 44.46 310 P **P 04 14 40.8 +0.9**
KURK ScP **ScP 04 19 33.6 -0.5**
KURBB Kurchatov Arra 44.52 310 P **P 04 14 40.8 +0.4**
comp=N,6.3nm,0.5s,baz=88,slow=7.2,SNR=71
KURBB ScP **ScP 04 19 33.6 -0.8**
comp=N,1.7nm,0.6s,baz=99,slow=3.4,SNR=6.0
IPM Ipoh 44.54 236 *e* P **P 04 14 40.2 -0.8**
comp=N,66nm,0.8s
IPM Ipoh 44.54 236 P **P 04 14 40.5 -0.5**
IPM Ipoh 44.54 236 P **P 04 14 40.6 -0.4**
IPM Ipoh 44.54 236 P **P 04 14 39.6 -1.4**
comp=N,88nm,1.0s,comp=N,1μm
MYKOM Kota Tinggi 44.68 230 P **P 04 14 42.4 +0.3**
MYKOM Kota Tinggi 44.68 230 P **P 04 14 41.7 -0.4**
comp=N,27nm,1.1s
PMG Port Moresby 44.84 165 *e* P **P 04 14 42.3 -1.0**
PMG Port Moresby 44.84 165 P **P 04 14 41.0 -2.2**
comp=N,9.2nm,0.4s,baz=27,slow=2.3,SNR=5.3
KGM Kuang 44.85 231 P **P 04 14 43.8 +0.4**
KGM Kluang 44.85 231 P **P 04 14 43.8 +0.4**
FRIM Kepong 45.04 234 P **P 04 14 44.9 0.0**
DANN Dangsing 45.11 277 *e* P **P 04 14 46.2 +0.5**
comp=N,602nm,0.5s
KOLN Koldanda 45.46 277 *e* P **P 04 14 48.4 +0.1**
comp=N,186nm,0.7s
ULHL Ulahol 47.09 298 P **P 04 15 00.9 +0.2**
SNR=17
TKM2 Tokmak 2 47.42 299 *i* P **P 04 15 03.7 +0.5**
TKM2 Tokmak 2 47.42 299 P **P 04 15 03.7 +0.5**
SNR=14
KZA Kyzart 47.84 298 P **P 04 15 08.2 +1.6**
SNR=15
KSH Kashi 47.89 295 P P 04 15 10.5 +3.8
KSH *e*PcP PcP 04 16 34.5 +5.5
KSH *e*PP **PP 04 17 03.6 +1.3**
KSH pmax pmax
comp=Z,21nm,0.8s
KSH LR LR
comp=N,180nm,5.3s
KSH LR LR
comp=E,290nm,8.0s
KSH LR LR
comp=Z,330nm,5.7s
KBK Karagaybulak 47.94 299 P **P 04 15 08.0 +0.9**
SNR=19
USP Ospenovka 48.14 300 P **P 04 15 08.7 +0.3**
SNR=11
FRU Bishkek 48.14 299 *e* P **P 04 15 09.0 +0.5**
AAK Ala-Archa 48.27 299 *e* P **P 04 15 10.2 +0.6**
AAK pmax pmax
comp=Z,8.0nm,0.8s
AAK Ala-Archa 48.27 299 *e* P **P 04 15 10.2 +0.6**
comp=Z,8.3nm,0.8s
AAK Ala-Archa 48.27 299 P **P 04 15 10.3 +0.6**
SNR=7.2
EKS2 Erkin-Say 48.78 299 P **P 04 15 14.0 +0.6**
SNR=5.7
UGM Wanagama 48.94 215 *e* P **P 04 15 11.8 -2.9**
comp=Z,368nm,1.4s
AML Almayashu 48.96 299 P **P 04 15 16.3 +1.3**

SNR=41
BVA0 Borovoye Array 49.40 313 P **P** **04 15 18.0 +0.3**
BVA0 pmax pmax
comp=Z,7.0nm,0.7s
BVAR Borovoye Array 49.40 313 P **P** **04 15 18.2 +0.5**
BVAR 04 16 34.5
BVAR pmax pmax
comp=Z,5.0nm,0.4s
BVAR pmax pmax
comp=Z,9.0nm,0.6s
BVAR pmax pmax
comp=N,8.0nm,0.7s
BVAR Borovoye Array 49.40 313 P **P** **04 15 18.2 +0.5**
BVAR PcP **PcP** **04 16 34.5 +0.4**
BVAR ScP **ScP** **04 19 54.8 -0.1**
BVAR Borovoye Array 49.40 313 P **P** **04 15 18.2 +0.5**
comp=N,5.0nm,0.4s,baz=102,slow=8.4,SNR=36
BVAR PcP **PcP** **04 16 34.5 +0.4**
comp=N,9.0nm,0.6s,baz=88,slow=3.2,SNR=5.7
BVAR ScP **ScP** **04 19 54.8 -0.1**
comp=N,8.1nm,0.7s,baz=100,slow=4.7,SNR=13
BRVK Borovoye 49.46 313 *d i*P **P** **04 15 18.7 +0.5**
BRVK pmax pmax
comp=Z,8.0nm,0.9s
KKR Kurukshetra 50.16 282 *e*PKP **P** **04 15 23.3 -0.5**
BISR Bishrakh 50.18 280 *e*4 P 04 15 15.2 -8.7
AGRA Agra 50.30 279 *e*PKP **P** **04 15 23.9 -0.8**
NDI New Delhi 50.32 281 *e*PKP **P** **04 15 23.0 -1.9**
JBP Jabalpur 50.33 273 *e*4 **P** **04 15 25.3 +0.3**
AYAN Aya Nagar 50.47 280 *e*PKP **P** **04 15 25.7 -0.3**
BHGR Bahadurgarh 50.54 281 *e*PKP **P** **04 15 26.5 -0.1**
RTK Rohtak 50.84 281 *e*PKP **P** **04 15 28.5 -0.2**
KK31 Karatay Array 51.02 301 P **P** **04 15 30.0 +0.1**
KK31 pmax pmax
comp=Z,13nm,0.5s
KDAK Kodiak Island 51.51 40 P **P** **04 15 34.0 +0.8**
KDAK Kodiak Island 51.51 40 P **P** **04 15 34.0 +0.8**
comp=Z,16nm,0.4s,baz=280,slow=3.2,SNR=34
KHET Khetri 51.70 281 *e*PKP **P** **04 15 34.0 -1.1**
AJM Ajmer 53.29 279 *i* P **P** **04 15 46.0 -0.8**
ILAR Eielson Array 53.64 31 P **P** **04 15 49.2 +0.7**
ILAR ScP **ScP** **04 20 12.7 -0.4**
ILAR Eielson Array 53.64 31 P **P** **04 15 49.2 +0.7**
comp=Z,11nm,0.6s,baz=260,slow=5.3,SNR=27
ILAR ScP **ScP** **04 20 12.7 -0.4**
comp=Z,0.5nm,0.8s,baz=282,slow=4.3,SNR=2.9
WRAB Tennant Creek 54.23 183 *e*P **P** **04 15 52.4 -0.9**
WRAB pmax pmax
comp=Z,15nm,0.4s
WRAB Tennant Creek 54.23 183 *e*P **P** **04 15 52.4 -0.9**
comp=Z,15nm,0.4s
HYB Hyderabad 54.23 267 *i* P **P** **04 15 52.5 -1.1**
WRA Warramunga Arr 54.24 183 P **P** **04 15 52.7 -0.7**
WRA ⇑*e* 04 46 12.7
WRA Warramunga Arr 54.24 183 P **P** **04 15 52.7 -0.7**
comp=Z,20nm,0.4s,baz=358,slow=7.7,SNR=303
WRA PKP2bc 04 46 12.7
comp=Z,0.5nm,1.0s,baz=219,slow=4.3,SNR=4.8
CTA Charters Tower 55.10 169 P **P** **04 15 59.6 +0.1**
CTA Charters Tower 55.10 169 P **P** **04 15 59.6 +0.1**
comp=Z,4.2nm,0.5s,baz=346,slow=8.2,SNR=6.1
ARU Arti 55.65 319 *d i*P **P** **04 16 03.4 +0.4**
ARU S **S** **04 23 19.7 -1.1**
ARU 04 25 08.5
ARU pmax pmax
comp=Z,6.0nm,0.8s
AB31 Akbulak array 56.57 310 P **P** **04 16 09.4 -0.1**
AB31 pmax pmax
comp=Z,7.0nm,0.4s
AKTO Aktyubinsk 57.44 312 P **P** **04 16 16.2 +0.6**
AKTO pmax pmax
comp=Z,7.0nm,0.6s
AKTO pmax pmax
comp=N,3.0nm,0.7s
AKTO Aktyubinsk 57.44 312 P **P** **04 16 16.1 +0.6**
AKTO ScP **ScP** **04 20 29.2 -0.9**
AKTO Aktyubinsk 57.44 312 P **P** **04 16 16.1 +0.6**
comp=N,7.4nm,0.6s,baz=74,slow=13,SNR=35
AKTO ScP **ScP** **04 20 29.2 -0.9**
comp=N,3.1nm,0.7s,baz=67,slow=3.6,SNR=4.4
POO Poona 57.56 271 ⇓*i*P **P** **04 16 16.0 -1.0**
comp=N,10.0nm,1.0s
KAD Karad 57.89 270 *e*4 04 16 00.0
AS31 Alice Springs 57.96 183 *e*P **P** **04 16 18.7 -0.7**
ASAR Alice Springs 57.96 183 P **P** **04 16 19.1 -0.4**
ASAR Alice Springs 57.96 183 P **P** **04 16 19.1 -0.4**
comp=N,9.2nm,0.5s,baz=16,slow=12,SNR=130
INK Inuvik 58.33 26 P **P** **04 16 22.4 +1.0**
INK pP **pP** **04 17 39.0 +2.5**
INK Inuvik 58.33 26 P **P** **04 16 22.4 +1.0**
comp=N,18nm,0.4s,baz=299,slow=6.3,SNR=49
INK pP **pP** **04 17 39.0 +2.5**
comp=N,7.2nm,0.9s,baz=288,slow=7.5,SNR=2.6
COCO West Island 59.90 226 *i* P **P** **04 16 33.9 +1.1**
IMYA Miami 60.77 296 *e*P **P** **04 16 38.9 +0.2**
IMOG Moghan 61.43 296 *e*P **P** **04 16 43.6 +0.4**
IKRD Kardeh 61.77 297 *e*P P 04 16 41.4 -4.1
KBS Kingsbay 62.41 350 *c i*P **P** **04 16 49.2 +0.6**
KBS pmax pmax
comp=Z,19nm,1.0s
ALE Alert 62.79 3 P **P** **04 16 49.9 -1.2**
comp=Z,160nm,0.6s,SNR=8.6
DLBC Dease Lake 62.94 36 P **P** **04 16 53.5 +1.0**
DLBC pP **pP** **04 18 10.5 +1.7**
DLBC Dease Lake 62.94 36 P **P** **04 16 53.5 +1.0**
comp=Z,4.9nm,0.6s,baz=324,slow=5.4,SNR=6.8
DLBC pP **pP** **04 18 10.5 +1.7**
comp=Z,3.5nm,0.9s,baz=256,slow=4.2,SNR=2.3
DZM Mont Dzumac 63.04 149 *e*P **P** **04 16 52.8 -0.8**
comp=Z,30nm,1.3s
KLMR Klimovskoe 63.75 327 *e*P **P** **04 16 56.9 -0.7**
KLMR pmax pmax
comp=Z,10.0nm,1.2s
KEV Kevo 64.36 339 *e*p **P** **04 17 01.0 -0.3**
comp=Z,5.2nm,0.5s
KEV Kevo 64.36 339 *e*P **P** **04 17 01.0 -0.3**
KEV pmax pmax
comp=Z,5.0nm,0.5s
ARCES ARCESS Array B 64.92 339 P **P** **04 17 05.4 +0.4**
ARCES PP **PP** **04 19 31.4 -1.0**
ARCES ARCESS Array B 64.92 339 P **P** **04 17 05.4 +0.4**
comp=Z,6.9nm,0.5s,baz=68,slow=9.2,SNR=202
ARCES PP **PP** **04 19 31.4 -1.0**
comp=Z,3.0nm,0.9s,baz=357,slow=6.1,SNR=4.3
RES Resolute Bay 65.93 13 P **P** **04 17 11.8 +0.6**
RES Resolute Bay 65.93 13 P **P** **04 17 11.8 +0.6**
comp=Z,31nm,0.6s,baz=327,slow=4.9,SNR=24
STKA Stephens Creek 66.24 175 P **P** **04 17 14.4 +0.6**
STKA Stephens Creek 66.24 175 P **P** **04 17 14.4 +0.6**
comp=Z,4.1nm,0.4s,baz=336,slow=6.7,SNR=30
JOF Joensuu 66.29 331 *e*p **P** **04 17 13.8 +0.1**
comp=Z,5.2nm,0.4s
JOF Joensuu 66.29 331 *e*P **P** **04 17 13.8 +0.1**
JOF pmax pmax
comp=Z,5.0nm,0.4s
IFIR Firoozkooh 66.47 298 *e*P **P** **04 17 16.4 +0.6**
ICHK Chekchek 66.78 294 *e*P **P** **04 17 17.8 +0.1**
VRHR Novokhopersk 66.88 317 *e*P **P** **04 17 20.8 +3.2**
VRHR pmax pmax
comp=Z,5.0nm,0.7s
VRHR pmax pmax
comp=N,20nm,0.6s
VRHR pmax pmax
comp=E,20nm,0.8s
OBN Obninsk 67.72 322 *e*P **P** **04 17 22.9 +0.2**
OBN *e* 04 17 44.1
OBN *e*S **S** **04 25 52.3 +1.4**
OBN pmax pmax
comp=Z,6.0nm,1.0s
OBN MLR MLR
comp=Z,100nm,16.0s
YKA Yellowknife Ar 67.86 28 P **P** **04 17 23.6 +0.1**
YKA pP **pP** **04 18 40.2 -1.0**
YKA P'P' 04 45 36.5
YKA Yellowknife Ar 67.86 28 P **P** **04 17 23.6 +0.1**
comp=Z,5.0nm,0.8s,baz=298,slow=6.2,SNR=18
YKA pP **pP** **04 18 40.2 -1.0**
comp=Z,1.4nm,0.8s,baz=298,slow=6.5,SNR=2.6
YKA PKPPKP P'P'df 04 45 36.5 -9.4
comp=Z,0.4nm,0.8s,baz=121,slow=2.2,SNR=5.9
DAG Danmarks Havn 67.87 354 ⇑*i*P **P** **04 17 23.8 +0.5**
DAG pmax pmax
comp=Z,15nm,0.8s
DAG Danmarks Havn 67.87 354 ⇑*i*P **P** **04 17 23.8 +0.5**
comp=Z,20nm,0.8s

IGZV Ghazvin 67.97 300 *e*P **P** **04 17 25.7 +0.7**
VSR Storozhevoye 68.20 318 *e*P P 04 17 31.9 +6.1
VSR pmax pmax
comp=Z,5.0nm,0.8s
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=E,9.0nm,0.4s
HOQ Hoqain 68.60 284 ⇑P **P** **04 17 29.2 +0.4**
SNR=6.1
HOQ Hoqain 68.60 284 P **P** **04 17 29.2 +0.4**
SNR=6.1
KAF Kangasniemi 68.69 332 *e*p **P** **04 17 28.3 -0.3**
comp=E,4.6nm,0.4s
KAF Kangasniemi 68.69 332 *e*P **P** **04 17 28.3 -0.3**
KAF pmax pmax
comp=Z,5.0nm,0.4s
HATD Hatta, Dubai 68.94 286 ⇑P **P** **04 17 31.5 +0.7**
SNR=7.0
HATD Hatta, Dubai 68.94 286 P **P** **04 17 31.5 +0.7**
SNR=7.0
FINES FINESS Array B 69.15 331 P **P** **04 17 31.5 0.0**
FINES FINESS Array B 69.15 331 P **P** **04 17 31.5 0.0**
comp=Z,5.4nm,0.5s,baz=68,slow=5.1,SNR=20
KBZ Khabaz 69.52 309 P **P** **04 17 35.1 +1.1**
KBZ pmax pmax
comp=Z,12nm,0.8s
KBZ Khabaz 69.52 309 P **P** **04 17 35.1 +1.1**
KBZ Khabaz 69.52 309 P **P** **04 17 35.1 +1.1**
comp=Z,12nm,0.8s,baz=78,slow=2.9,SNR=30
KIV Kislovodsk 69.55 310 *e*P **P** **04 17 32.2 -2.1**
KIV *e* 04 17 52.9
KIV *e**PP **pP** **04 18 51.9 -0.5**
KIV *e**SP **sP** **04 19 30.0 -0.3**
KIV *e*S **S** **04 26 11.9 -1.1**
KIV pmax pmax
comp=Z,14nm,0.8s
KIV MLR MLR
comp=Z,72nm,19.0s
UMR Umm Al-Rimmam 73.11 294 *e*P **P** **04 17 55.4 -0.2**
UMR AMb AMB 04 17 56.3
comp=Z,61nm,0.5s
MIB Mutribah 73.26 295 *e*P **P** **04 17 56.2 -0.3**
MIB AMb AMB 04 17 56.9
comp=Z,99nm,0.6s
KBD Kabd 73.31 294 *e*P **P** **04 17 56.7 -0.1**
KBD AMb AMB 04 17 57.7
comp=Z,54nm,0.5s
RDF Al-Radifah 73.55 294 *e*P **P** **04 17 58.2 0.0**
RDF AMb AMB 04 17 58.8
comp=Z,134nm,0.6s
NAY Al-Naaiem 73.62 294 *e*P **P** **04 17 58.3 -0.2**
NAY AMb AMB 04 17 59.3
comp=Z,66nm,0.5s
AKASG Malin Array Be 73.82 321 P **P** **04 17 59.6 +0.3**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 73.82 321 P **P** **04 17 59.6 +0.3**
AKASG Malin Array Be 73.82 321 P **P** **04 17 59.6 +0.3**
comp=Z,2.2nm,0.5s,baz=50,slow=5.9,SNR=9.5
SCO Scoresbysund 74.13 353 ⇑*i*P **P** **04 18 00.7 0.0**
SCO pmax pmax
comp=Z,7.0nm,0.9s
SCO Scoresbysund 74.13 353 ⇑*i*P **P** **04 18 00.7 0.0**
comp=Z,6.5nm,0.9s
RBK Rabkut 74.19 281 P **P** **04 18 01.5 -0.5**
SNR=11
RBK Rabkut 74.19 281 P **P** **04 18 01.5 -0.5**
SNR=11
NOA NORSAR Array B 74.91 336 P **P** **04 18 05.0 -0.3**
NOA PP **PP** **04 20 54.0 -3.8**
NOA NORSAR Array B 74.91 336 P **P** **04 18 05.0 -0.3**
comp=Z,2.2nm,0.5s,baz=45,slow=5.7,SNR=24
NOA PP **PP** **04 20 54.0 -3.8**
comp=Z,2.4nm,0.9s,baz=39,slow=7.5,SNR=5.9
YBH Yreka Blue Hor 74.92 50 pP pP 04 19 26.4 +1.1
YBH Yreka Blue Hor 74.92 50 pP pP 04 19 26.4 +1.1
comp=Z,3.7nm,1.0s,baz=6.3,slow=2.1,SNR=3.8
ABTO Aybut 75.00 281 ⇓P **P** **04 18 06.3 -0.4**
SNR=11
ABTO Aybut 75.00 281 P **P** **04 18 06.3 -0.4**
SNR=11
BRTR Keskin Array B 77.51 310 P **P** **04 18 21.0 +0.5**
BRTR Keskin Array B 77.51 310 P **P** **04 18 21.0 +0.5**
comp=Z,6.0nm,0.9s,baz=102,slow=5.2,SNR=34
KWP Kalwaria Pacla 77.80 323 ⇑P **P** **04 18 23.4 +1.7**
KWP Kalwaria Pacla 77.80 323 ⇑*i*P **P** **04 18 23.4 +1.7**
RAYN Ar Rayn 77.93 290 P **P** **04 18 23.5 +0.6**
comp=Z,282nm,0.8s,SNR=14
VRI Vrincioaia 78.03 318 ⇓P **P** **04 18 23.8 +0.8**
VRI Vrincioaia 78.03 318 ⇓*i*P **P** **04 18 23.8 +0.8**
SFJD Kangerlussuaq 78.62 3 *i* P **P** **04 18 26.4 +0.7**
MLR Muntele Rosu 78.69 318 ⇑*i*P **P** **04 18 26.0 -0.7**
MUD Monsted U'grnd 79.00 333 *e*P **P** **04 18 27.9 0.0**
MUD pmax pmax
comp=Z,9.0nm,1.0s
MUD Monsted U'grnd 79.00 333 *i* P **P** **04 18 27.9 0.0**
comp=Z,8.5nm,1.0s
VOIR 79.22 318 ⇓P P 04 18 33.8 +4.3
VOIR 79.22 318 ⇓*i*P P 04 18 33.8 +4.3
ARR Arges 79.49 318 ⇑*i*P **P** **04 18 32.2 +1.3**
NVAR Mina Array Bea 79.57 50 P **P** **04 18 32.5 +0.8**
NVAR pP **pP** **04 19 53.0 +0.8**
NVAR PKKPbc PKKPbc 04 37 22.3 +6.5
NVAR Mina Array Bea 79.57 50 P **P** **04 18 32.5 +0.8**
comp=Z,1.6nm,0.7s,baz=299,slow=6.0,SNR=5.0
NVAR pP **pP** **04 19 53.0 +0.8**
comp=Z,2.0nm,0.8s,baz=295,slow=5.1,SNR=2.7
NVAR PKKPbc PKKPbc 04 37 22.3 +6.5
comp=Z,0.3nm,0.3s,baz=233,slow=3.9,SNR=3.7
DPC Dobruska-Polom 80.41 326 *e*P **P** **04 18 37.3 +1.6**
DPC *e* 04 21 44.5
DPC Dobruska-Polom 80.41 326 *e*P **P** **04 18 37.3 +1.6**
DPC *e*PP **PP** **04 21 44.5 +0.8**
CLL Collm 81.23 328 *e*P **P** **04 18 41.0 +1.1**
CLL Collm 81.23 328 *e*P **P** **04 18 41.0 +1.1**
CLL *e*PcP **PcP** **04 18 45.0 0.0**
PDAR Pinedale Array 82.14 43 P **P** **04 18 45.8 +0.6**
PDAR pP **pP** **04 20 05.0 -1.2**
PDAR Pinedale Array 82.14 43 P **P** **04 18 45.8 +0.6**
comp=Z,2.0nm,0.6s,baz=214,slow=1.2,SNR=8.3
PDAR pP **pP** **04 20 05.0 -1.2**
comp=Z,1.0nm,0.7s,baz=299,slow=3.9,SNR=2.6
KHC Kasperske Hory 82.53 326 *e*P **P** **04 18 46.6 -0.1**
KHC Kasperske Hory 82.53 326 *e*P **P** **04 18 46.6 -0.1**
GERES GERESS Array B 82.68 326 P **P** **04 18 48.2 +0.6**
GERES GERESS Array B 82.68 326 P **P** **04 18 48.2 +0.6**
comp=Z,0.7nm,0.5s,baz=35,slow=5.8,SNR=10
SOKA Soboth 83.59 324 ⇓*i*PcP **P** **04 18 52.8 +0.6**
comp=Z,3.6nm,0.7s
ULM Lac du Bonnet 83.66 31 P **P** **04 18 53.3 +0.9**
ULM Lac du Bonnet 83.66 31 P **P** **04 18 53.3 +0.9**
comp=Z,1.6nm,0.3s,baz=329,slow=9.6,SNR=2.9
LPL La Plagne 88.33 327 ⇑*i*P **P** **04 19 15.6 +0.2**
comp=Z,4.3nm,0.6s
LPL La Plagne 88.33 327 ⇑*i*P **P** **04 19 15.6 +0.2**
LPL La Plagne 88.33 327 ⇑*i*P **P** **04 19 15.6 +0.2**
LPG La Plagne 88.33 327 ⇑*i*P **P** **04 19 15.7 +0.2**
comp=Z,6.6nm,0.7s
LPG La Plagne 88.33 327 ⇑*i*P **P** **04 19 15.7 +0.2**
LPG La Plagne 88.33 327 ⇑*i*P **P** **04 19 15.7 +0.2**
SMF Signal de Mont 88.69 330 *e*P P 04 19 20.5 +3.7
SMF Signal de Mont 88.69 330 *e*P P 04 19 20.5 +3.7
SMF Signal de Mont 88.69 330 *e*P P 04 19 20.5 +3.7
TXAR Lajitas Array 94.69 50 pP **pP** **04 21 07.7 0.0**
TXAR PKKPbc **PKKPbc** **04 36 40.6 +1.1**
TXAR Lajitas Array 94.69 50 pP **pP** **04 21 07.7 0.0**
comp=Z,1.1nm,0.9s,baz=316,slow=3.8,SNR=2.4
TXAR PKKPbc **PKKPbc** **04 36 40.6 +1.1**
comp=Z,0.1nm,0.4s,baz=151,slow=6.4,SNR=4.3
TORD Torodi Ar. Bea 116.13 310 PKP **PKPdf** **04 25 04.0 -1.0**
TORD Torodi Ar. Bea 116.13 310 PKP **PKPdf** **04 25 04.0 -1.0**
comp=Z,1.7nm,0.5s,baz=41,slow=1.2,SNR=80
BOSA Boshof 122.25 255 PKP **PKPdf** **04 25 16.2 -0.3**
BOSA Boshof 122.25 255 PKP **PKPdf** **04 25 16.2 -0.3**
comp=Z,2.5nm,0.8s,baz=87,slow=2.0,SNR=9.7
QSPA South Pole Qui 124.30 180 *e*P **PKPdf** **04 25 19.1 0.0**
DBIC Dimbokro 125.20 311 PKP **PKPdf** **04 25 22.2 -0.1**
DBIC Dimbokro 125.20 311 PKP **PKPdf** **04 25 22.2 -0.1**
comp=Z,5.8nm,0.7s,baz=28,slow=5.2,SNR=11
LIC Lamto 125.65 311 ⇑*i*PKIKP **PKPdf** **04 25 22.5 -0.8**
comp=Z,26nm,0.9s
LIC Lamto 125.65 311 ⇑*i*PKPdf **PKPdf** **04 25 22.5 -0.8**
SNAA Sanae 137.23 198 PKPpre PKPpre 04 25 30.2
SNAA Sanae 137.23 198 PKhKP PKPpre 04 25 30.2

comp=Z,1.0nm,0.7s,baz=134,slow=3.9,SNR=18
LPAZ La Paz 151.29 57 PKPbc **PKPbc** **04 26 16.8 +0.6**
LPAZ La Paz 151.29 57 PKPbc **PKPbc** **04 26 16.8 +0.6**
comp=Z,7.8nm,0.9s,baz=312,slow=4.7,SNR=16

IDC 10 04:34:47.1±4.7**, 23°.12N×142°.64E, h110**km±42km**, mb3.7**/19**, mb1 3.9**/21**, mb1mx3.8**/27**, mbtmp3.7**/21**, Error ellipse: s-maj=19.4km s-min=12.7km az=87.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**13.91**	**345**	P	Pn	04 37 57.5	-2.1
	1.2nm,0.3s,baz=160,slow=11,SNR=5.1						
KSRS	**Korea Array**	**19.08**	**322**	P	Pn	04 39 02.6	-0.4
	0.1nm,0.3s,baz=137,slow=13,SNR=2.8						
SONM	**Songino Array**	**37.93**	**320**	P	P	04 41 53.0	-1.0
	1.1nm,0.5s,baz=133,slow=7.2,SNR=6.4						
CMAR	**Chiang Mai Arr**	**41.00**	**272**	P	P	04 42 20.1	+0.4
	0.5nm,0.3s,baz=55,slow=6.9,SNR=2.9						
WRA	**Warramunga Arr**	**43.56**	**191**	P	P	04 42 40.2	-0.1
	2.2nm,0.3s,baz=8.0,slow=7.9,SNR=80						
ASAR	**Alice Springs**	**47.27**	**191**	P	P	04 43 09.0	-0.6
	0.5nm,0.3s,baz=11,slow=6.1,SNR=13						
ZALV	**Zalesovo Beam**	**52.79**	**321**	P	P	04 43 51.2	+0.3
	0.9nm,0.4s,baz=77,slow=6.7,SNR=6.7						
MKAR	**Makanchi Array**	**53.37**	**312**	P	P	04 43 56.5	+1.2
	1.4nm,0.5s,baz=88,slow=9.4,SNR=27						
MKAR				PcP	PcP	04 45 01.4	+0.1
	0.6nm,0.6s,baz=85,slow=5.6,SNR=6.4						
STKA	**Stephens Creek**	**54.70**	**181**	P	P	04 44 05.1	+0.2
	2.1nm,0.6s,baz=331,slow=13,SNR=2.4						
ILAR	**Eielson Array**	**61.01**	**28**	P	P	04 44 48.6	-0.2
	0.7nm,0.7s,baz=259,slow=6.3,SNR=6.7						
INK	**Inuvik**	**66.47**	**24**	P	P	04 45 24.6	+0.1
	1.1nm,0.6s,baz=294,slow=7.9,SNR=3.7						
YKA	**Yellowknife Ar**	**75.44**	**28**	P	P	04 46 19.2	+0.4
	1.0nm,0.5s,baz=291,slow=5.8,SNR=34						
KEV	**Kevo**	**76.86**	**341**	*e*p	P	04 46 26.6	0.0
	1.6nm,0.5s						
ARCES	**ARCESS Array B**	**77.42**	**341**	P	P	04 46 30.4	+0.6
	2.1nm,0.5s,baz=70,slow=7.8,SNR=34						
JOF	**Joensuu**	**78.82**	**334**	*e*p	P	04 46 37.9	+0.3
	2.6nm,0.3s						
KBZ	**Khabaz**	**81.02**	**314**	P	P	04 46 50.0	+0.1
	2.0nm,0.7s,baz=84,slow=5.7,SNR=6.8						
FINES	**FINESS Array B**	**81.69**	**334**	P	P	04 46 52.6	-0.4
	2.0nm,0.3s,baz=51,slow=5.3,SNR=24						
NVAR	**Mina Array Bea**	**82.66**	**51**	P	P	04 46 58.8	-0.1
	0.4nm,0.6s,baz=287,slow=4.2,SNR=4.3						
AKASG	**Malin Array Be**	**86.06**	**324**	P	P	04 47 14.3	-1.2
	0.5nm,0.4s,baz=54,slow=4.8,SNR=5.1						
PDAR	**Pinedale Array**	**86.74**	**45**	P	P	04 47 20.2	+0.9
	0.2nm,0.3s,baz=294,slow=5.4,SNR=2.2						
NB2	**NORSAR Subarra**	**87.44**	**339**	P	P	04 47 20.3	-1.8
	comp=Z,0.3nm,0.4s,baz=46,slow=4.3						
NOA	**NORSAR Array B**	**87.44**	**339**	P	P	04 47 20.1	-1.9
	comp=Z,0.3nm,0.3s,baz=40,slow=4.9,SNR=6.1						
BRTR	**Keskin Array B**	**89.00**	**313**	P	P	04 47 29.4	-0.6
	comp=Z,0.7nm,0.7s,baz=83,slow=3.9,SNR=4.3						
GERES	**GERESS Array B**	**95.11**	**329**	P	P	04 47 56.5	-1.5
	comp=Z,0.2nm,0.2s,baz=53,slow=5.1,SNR=2.4						
TORD	**Torodi Ar. Bea**	**127.45**	**309**	PKP	PKPdf	04 53 39.0	-1.0
	comp=Z,0.5nm,0.9s,baz=49,slow=1.9,SNR=3.4						
DBIC	**Dimbokro**	**136.56**	**309**	PKP	PKPdf	04 53 59.0	+1.8
	comp=Z,9.9nm,1.1s,baz=117,slow=6.8,SNR=2.7						
LPAZ	**La Paz**	**150.29**	**82**	PKPbc	PKPbc	04 54 27.2	+0.2
	comp=Z,1.2nm,0.4s,baz=333,slow=2.3,SNR=4.7						

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*ISCJB **10** 05:02:03.5±0.6, 55°.1S±0°.1×126°.8W±0°.3, h10km, mb4.3/12, MS4.3/17, Error ellipse: s-maj=23.1km s-min=15.0km az=35.4*

*IDC **10** 05:02:03.5±0.8, 54°.99S×126°.84W, h0km, mb4.0/8, mb1 4.2/8, mb1mx4.0/16, mbtmp4.0/8, MS4.3/17, Ms1 4.3/17, ms1mx4.2/22, Error ellipse: s-maj=35.0km s-min=20.7km az=145.0*

*NEIC **10** 05:02:05.0±0.4, 55°.05S×126°.86W, h10km, mb4.8/7, Error ellipse: s-maj=18.0km s-min=12.7km az=128.0*

*GCMT **10** 05:02:16.0±0.3, 55°.19S×126°.96W, h16km±1km, MW4.9, Moment Tensor Solution. s26,c34; s71,c103; Moment tensor: Scale 10^{16}Nm; M_{rr}0.08±.12; $M_{\theta\theta}$2.20±.13; $M_{\phi\phi}$-2.28±.13; $M_{r\theta}$0.40±.32; $M_{\theta\phi}$2.04±.09; $M_{\phi r}$0.34±.30; Best double couple: $M_0$3.10000×10^{16} NP1:ϕ_s114.00000°, δ81.00000°, λ4.00000°. NP2:ϕ_s23.00000°, δ86.00000°, λ171.00000°. Principal axes: T 3.0700, Plg9.0000°, Azm339.0000°; N 0.0100, Plg80.0000°, Azm178.0000°; P -3.0800, Plg3.0000°, Azm69.0000°; Data Used: II IU G IC CN.*

ISC 10 05:02:05.0±0.7**, 55°.0S**±0°.1×**126°.8W**±0°.2**, h10**km**, n38, σ0ˢ.89**/27**, mb4.4**/12**, MS4.3**/17**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMSA	**Palmer Station**	**31.62**	**133**	LR	LR	05 17 53.5	
	comp=Z,546nm,19.2s,baz=64,slow=30						
VNDA	**Vanda**	**33.05**	**202**	P	**P**	**05 08 40.3**	**+0.3**
VNDA	**Vanda**	**33.05**	**202**	P	**P**	**05 08 40.3**	**+0.3**
	0.8nm,0.6s,baz=57,slow=1.0,SNR=4.1						
VNDA				LR	LR	05 18 59.4	
	comp=Z,146nm,20.4s,baz=83,slow=31						
QSPA	**South Pole Qui**	**35.15**	**180**	*e*P	**P**	**05 08 58.8**	**+0.3**
	113nm,2.0s						
QSPA	**South Pole Qui**	**35.15**	**180**	P	**P**	**05 08 59.5**	**+1.0**
	2.6nm,0.9s,baz=92,slow=4.6,SNR=6.4						
PLCA	**Paso Flores**	**39.26**	**93**	LR	LR	05 21 46.4	
	comp=Z,463nm,18.4s,baz=206,slow=30						
RPZ	**Rata Peaks**	**40.68**	**259**	LR	LR	05 22 40.3	
	comp=Z,358nm,20.4s,baz=159,slow=30						
URZ	**Urewera**	**40.77**	**270**	LR	LR	05 23 11.6	
	comp=Z,500nm,18.2s,baz=38,slow=31						
PPT	**Papeete**	**41.25**	**326**	LR	LR	05 23 51.6	
	comp=Z,527nm,19.1s,baz=176,slow=32						
RAR	**Rarotonga**	**41.84**	**310**	LR	LR	05 22 41.2	
	comp=Z,383nm,18.9s,baz=270,slow=30						
SNAA	**Sanae**	**47.64**	**159**	*e*P	**P**	**05 10 40.0**	**-0.8**
	30nm,1.7s						
CPUP	**Villa Florida**	**57.21**	**90**	LR	LR	05 33 11.5	
	comp=Z,760nm,19.2s,baz=206,slow=33						
MAW	**Mawson**	**57.47**	**184**	LR	LR	05 37 48.5	
	comp=Z,126nm,20.3s,baz=166,slow=37						
LPAZ	**La Paz**	**59.00**	**73**	*e*P	**P**	**05 12 04.6**	**-0.9**
	3.0nm,0.6s						
LPAZ	**La Paz**	**59.00**	**73**	P	**P**	**05 12 04.6**	**-0.9**
	2.4nm,0.3s,baz=201,slow=5.3,SNR=25						
LPAZ				LR	LR	05 31 29.7	
	comp=Z,160nm,18.4s,baz=25,slow=30						
STKA	**Stephens Creek**	**65.40**	**249**	*e*P	**P**	**05 12 47.8**	**+0.2**
	1.4nm,1.1s						
STKA	**Stephens Creek**	**65.40**	**249**	P	**P**	**05 12 49.1**	**+1.6**
	2.8nm,1.0s,baz=56,slow=3.6,SNR=2.6						
STKA				LR	LR	05 34 56.3	
	comp=Z,240nm,18.1s,baz=204,slow=30						
BDFB	**Brasilia**	**70.94**	**90**	LR	LR	05 41 46.1	
	comp=Z,405nm,18.3s,baz=351,slow=34						
ROSC	**El Rosal**	**73.72**	**55**	P	**P**	**05 13 40.8**	**+1.4**
ROSC	**El Rosal**	**73.72**	**55**	P	**P**	**05 13 40.8**	**+1.4**
	1.2nm,0.4s,baz=257,slow=18,SNR=3.1						
ROSC				LR	LR	05 40 36.1	
	comp=Z,145nm,18.2s,baz=5.7,slow=31						
ASAR	**Alice Springs**	**76.03**	**249**	P	**P**	**05 13 52.1**	**-0.3**
ASAR	**Alice Springs**	**76.03**	**249**	P	**P**	**05 13 52.1**	**-0.3**
	0.7nm,0.7s,baz=154,slow=6.5,SNR=6.5						
ASAR				LR	LR	05 43 05.5	
	comp=Z,218nm,19.1s,baz=175,slow=32						
WRA	**Warramunga Arr**	**78.80**	**251**	P	**P**	**05 14 07.2**	**-0.7**
WRA	**Warramunga Arr**	**78.80**	**251**	P	**P**	**05 14 07.2**	**-0.7**
	0.1nm,0.3s,baz=138,slow=4.7,SNR=7.3						
WRAB	**Tennant Creek**	**78.80**	**251**	*e*P	**P**	**05 14 07.7**	**-0.3**
	4.4nm,0.8s						
TXAR	**Lajitas Array**	**86.35**	**20**	P	**P**	**05 14 47.1**	**+0.1**
TXAR	**Lajitas Array**	**86.35**	**20**	P	**P**	**05 14 47.1**	**+0.1**
	0.3nm,0.8s,baz=188,slow=7.6,SNR=4.0						
TXAR				LR	LR	05 44 41.3	
	comp=Z,47nm,18.6s,baz=130,slow=30						
TUC	**Tucson**	**88.08**	**14**	*e*P	**P**	**05 14 54.2**	**-1.0**
	15nm,1.5s						
JCT	**Junction City**	**88.28**	**23**	*e*P	**P**	**05 14 57.0**	**+0.8**
	3.1nm,0.7s						
BOSA	**Boshof**	**93.31**	**156**	LR	LR	05 53 21.2	
	comp=Z,205nm,20.3s,baz=165,slow=33						
PDAR	**Pinedale Array**	**98.53**	**13**	LR	LR	05 52 30.2	
	comp=Z,127nm,19.1s,baz=6.5,slow=31						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULN	**Ulaanbaatar**	**146.40**	**281**	*e*PKPdf	**PKPbc**	**05 21 44.8**	**-0.6**
SONM	**Songino Array**	**146.76**	**280**	PKPbc	**PKPab**	**05 21 47.4**	**-0.2**
SONM	**Songino Array**	**146.76**	**280**	PKPbc	**PKPab**	**05 21 47.4**	**-0.2**
	0.6nm,0.7s,baz=147,slow=2.9,SNR=4.4						
MKAR	**Makanchi Array**	**159.99**	**258**	PKPab	**PKPab**	**05 22 41.5**	**-1.6**
MKAR	**Makanchi Array**	**159.99**	**258**	PKPab	**PKPab**	**05 22 41.5**	**-1.6**
	0.1nm,0.5s,baz=79,slow=7.5,SNR=2.6						
ZALV	**Zalesovo Beam**	**161.65**	**280**	PKPab	**PKPab**	**05 22 50.6**	**+0.4**
ZALV	**Zalesovo Beam**	**161.65**	**280**	PKPab	**PKPab**	**05 22 50.6**	**+0.4**
	0.5nm,0.3s,baz=117,slow=1.6,SNR=3.2						

*SKO **10** 05:06:55.4, 40°.14N×21°.89E, h2km, M1.4, ML1.8*
*ISCJB **10** 05:06:56.7±0.7, 40°.30N±0°.03×21°.90E±0°.06, h7km±6km, Error ellipse: s-maj=8.2km s-min=5.2km az=10.0*
*ATH **10** 05:06:56.3, 40°.29N×21°.92E, h5km±1km, MD3.0/5*
*CSEM **10** 05:06:56.4±0.3, 40°.29N×21°.87E, h10km, MD3.0, Error ellipse: s-maj=8.4km s-min=5.1km az=87.0*
ISC 10 05:06:56.7±1.2**, 40°.28N**±0°.03×**21°.91E**±0°.04**, h4**km±10km**, n14, σ0s.50**/26**, Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KZN	**Kozani**	**0.11**	**283**	*e*PG	**Pg**	**05 06 58.6**	**-0.4**
KZN				*e*SG	**Sg**	**05 07 00.8**	**+0.3**
KZN	**Kozani**	**0.11**	**283**	*e*Pg	**Pg**	**05 06 58.6**	**-0.4**
KZN				*e*Sg	**Sg**	**05 07 00.8**	**+0.3**
FNA	**Florina**	**0.64**	**321**	*e*PB	**Pg**	**05 07 09.1**	**0.0**
FNA				*e*SB	**Sg**	**05 07 18.1**	**+0.6**
FNA	**Florina**	**0.64**	**321**	*e*Pb	**Pg**	**05 07 09.1**	**0.0**
FNA				*e*Sb	**Sg**	**05 07 18.1**	**+0.6**
GRG	**Griva**	**0.77**	**29**	*e*PB	**Pg**	**05 07 11.2**	**-0.3**
GRG				*e*SB	**Sg**	**05 07 21.9**	**+0.4**
GRG	**Griva**	**0.77**	**29**	*e*Pb	**Pg**	**05 07 11.2**	**-0.3**
GRG				*e*Sb	**Sg**	**05 07 21.9**	**+0.4**
BIA	**Bitola**	**0.86**	**329**	*e*Pg	**Pg**	**05 07 12.4**	**-0.8**
BIA				*e*Sg	**Sb**	**05 07 26.7**	**+0.5**
BIA	**Bitola**	**0.86**	**329**	*e*Pg	**Pg**	**05 07 12.4**	**-0.8**
BIA				*e*Sg	**Sb**	**05 07 26.6**	**+0.5**
VAY	**Valandovo**	**1.15**	**26**	*e*Pg	**Pg**	**05 07 18.8**	**0.0**
VAY				*e*Sg	**Sn**	**05 07 35.7**	**-0.2**
VAY				*e*Lg	Lg	05 07 36.9	
	comp=E,20nm,1.2s						
VAY				*e*Lg	Lg	05 07 38.5	
	comp=N,28nm,1.0s						
VAY	**Valandovo**	**1.15**	**26**	*e*Pg	**Pn**	**05 07 19.3**	**-0.3**
VAY				*e*Sg	**Sn**	**05 07 36.1**	**+0.3**
VAY				*e*Lg	Lg	05 07 39.0	
	comp=N,28nm,1.0s						
AGG	**Agios Georgios**	**1.30**	**165**	*e*PB	**Pn**	**05 07 21.1**	**-0.6**
AGG	**Agios Georgios**	**1.30**	**165**	*e*Pb	**Pn**	**05 07 21.1**	**-0.6**
EVR	**Evrytania**	**1.37**	**183**	*e*PB	**Pn**	**05 07 22.5**	**-0.2**
EVR				*e*SB	**Sg**	**05 07 41.4**	**+0.8**
EVR	**Evrytania**	**1.37**	**183**	*e*Pb	**Pn**	**05 07 22.5**	**-0.2**
EVR				*e*Sb	**Sg**	**05 07 41.4**	**+0.8**

IDC 10 05:11:47.3±31.0**, 11°.45S×165°.60E, h0**km**, mb4.1**/3**, mb1 4.2**/4**, mb1mx3.7**/20**, mbtmp4.1**/4**, ML3.7**/1**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.4**/27**, Error ellipse: s-maj=536.4km s-min=50.7km az=50.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**10.59**	**176**	Pn	Pn	05 14 20.6	0.0
	0.5nm,0.3s,baz=309,slow=14,SNR=6.8						
DZM				LR	LR	05 17 45.5	
	comp=Z,112nm,20.9s,baz=336,slow=34						
PMG	**Port Moresby**	**18.25**	**275**	LR	LR	05 21 00.7	
	comp=Z,122nm,19.2s,baz=64,slow=30						
STKA	**Stephens Creek**	**30.05**	**224**	P	P	05 17 58.4	+0.1
	2.3nm,0.7s,baz=62,slow=5.4,SNR=4.7						
WRA	**Warramunga Arr**	**31.21**	**250**	P	P	05 18 08.4	-0.3
	2.3nm,0.8s,baz=81,slow=8.9,SNR=11						
ASAR	**Alice Springs**	**32.49**	**244**	P	P	05 18 20.1	+0.1
	1.8nm,0.7s,baz=72,slow=9.7,SNR=18						

*JMA **10** 05:19:30.7±0.2, 30°.62N×139°.05E, h453km, M3.7*
*ISCJB **10** 05:19:31.4±0.5, 30°.57N±0°.06×138°.9E±0°.1, h433km±5km, mb3.7/14, Error ellipse: s-maj=16.3km s-min=7.8km az=161.4*
*IDC **10** 05:19:32.5±0.8, 30°.62N×138°.72E, h420km±9km, mb3.2/11, mb1 3.3/15, mb1mx3.2/28, mbtmp3.2/15, Error ellipse: s-maj=21.8km s-min=12.3km az=79.0*
ISC 10 05:19:32.0±0.8**, 30°.57N**±0°.07×**138°.9E**±0°.1**, h423**km±9km**, n32, σ1s.25**/43**, mb3.6**/14**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.62**	**18**	P	**P**	**05 20 35.3**	**+1.3**
JHCJ				*e*S	**S**	**05 21 25.3**	**+0.8**
JHJ	**Hachijo jima 2**	**2.66**	**17**	P	**P**	**05 20 34.6**	**+0.3**
	16nm,0.3s,baz=86,slow=22,SNR=10						
JHJ				S	**S**	**05 21 25.0**	**0.0**
	64nm,0.3s,baz=253,slow=23,SNR=10						
JHJ2	**Mitsune**	**2.67**	**18**	P	**P**	**05 20 35.6**	**+1.3**
JHJ2				S	**S**	**05 21 26.0**	**+1.0**
TK02	**Tokai 2**	**3.49**	**345**	P	**P**	**05 20 42.8**	**+2.2**
TTO2	**TONANKAI O.B.S**	**3.52**	**334**	P	**P**	**05 20 43.2**	**+2.5**
JWZ	**Kozaga**	**3.98**	**319**	P	**P**	**05 20 46.1**	**+1.0**
JIE	**Ise**	**4.22**	**335**	P	**P**	**05 20 49.0**	**+1.7**
BSO1	**Boso 1**	**4.45**	**23**	P	**P**	**05 20 50.0**	**+1.1**
BSO1				*e*S	**S**	**05 21 52.1**	**+0.3**
CBIJ	**Chichi jima**	**4.53**	**139**	P	**P**	**05 20 50.7**	**+0.2**
CBIJ				S	**S**	**05 21 52.3**	**-2.1**
JOD2	**Odawara 2**	**4.69**	**2**	P	**P**	**05 20 51.7**	**-0.1**
JOD2				*e*S	**S**	**05 21 56.7**	**-0.3**
JRY	**Ryogami san**	**5.43**	**0**	P	**P**	**05 20 59.6**	**+0.3**
JRY				*e*S	**S**	**05 22 09.2**	**-1.5**
MJAR	**Matsushiro Arr**	**5.98**	**355**	P	**P**	**05 21 04.4**	**-0.6**
	3.8nm,0.3s,baz=184,slow=10,SNR=26						
MJAR				S	**S**	**05 22 20.8**	**-0.4**
	1.3nm,0.3s,baz=93,slow=7.8,SNR=7.7						
MAT	**Matsushiro**	**5.98**	**355**	P	**P**	**05 21 04.7**	**-0.3**
MAT				S	**S**	**05 22 16.5**	**-4.7**
MAT	**Matsushiro**	**5.98**	**355**	P	**P**	**05 21 04.9**	**-0.1**
JHS	**Saijyo**	**6.54**	**314**	P	**P**	**05 21 12.5**	**+1.1**
JMK	**Ichinoseki**	**8.59**	**12**	P	**P**	**05 21 34.4**	**+0.9**
KSRS	**Korea Array**	**11.37**	**310**	P	**P**	**05 22 04.8**	**+0.6**
	0.8nm,0.3s,baz=124,slow=11,SNR=13						
USRK	**Ussuriysk Arra**	**14.65**	**340**	P	**P**	**05 22 40.3**	**+0.6**
	0.2nm,0.3s,baz=143,slow=10,SNR=4.5						
SONM	**Songino Array**	**30.20**	**314**	P	**P**	**05 25 05.6**	**-0.3**
	0.5nm,0.4s,baz=131,slow=6.5,SNR=4.6						
CMAR	**Chiang Mai Arr**	**38.07**	**261**	P	**P**	**05 26 12.4**	**-0.3**
	3.6nm,0.8s,baz=51,slow=7.1,SNR=12						
ZALV	**Zalesovo Beam**	**44.96**	**317**	P	**P**	**05 27 06.8**	**-0.4**
	0.8nm,0.5s,baz=95,slow=11,SNR=3.6						
ZALV				PcP	**PcP**	**05 28 40.1**	**+0.1**
	0.3nm,0.3s,baz=118,slow=3.5,SNR=4.5						
MKAR	**Makanchi Array**	**46.03**	**307**	P	**P**	**05 27 15.2**	**-0.6**
	2.6nm,0.7s,baz=92,slow=9.3,SNR=16						
MKAR				PcP	**PcP**	**05 28 44.5**	**+0.6**
	0.9nm,0.9s,baz=85,slow=4.8,SNR=3.6						
WRA	**Warramunga Arr**	**50.41**	**186**	P	**P**	**05 27 49.5**	**+0.7**
	0.7nm,0.4s,baz=1.2,slow=7.7,SNR=11						
ASAR	**Alice Springs**	**54.13**	**186**	P	**P**	**05 28 17.0**	**+1.2**
	0.6nm,0.5s,baz=13,slow=12,SNR=8.3						
ARCES	**ARCESS Array B**	**69.30**	**340**	P	**P**	**05 29 54.1**	**-0.8**
	0.7nm,0.8s,baz=68,slow=8.0,SNR=8.3						
YKA	**Yellowknife Ar**	**70.48**	**28**	P	**P**	**05 30 03.6**	**+1.5**
	0.3nm,0.7s,baz=294,slow=6.0,SNR=4.4						
KBZ	**Khabaz**	**73.52**	**311**	P	**P**	**05 30 20.8**	**+0.6**
	3.1nm,0.8s,baz=73,slow=4.8,SNR=8.4						
FINES	**FINESS Array B**	**73.54**	**332**	P	**P**	**05 30 20.2**	**+0.2**
	0.5nm,0.4s,baz=204,slow=4.2,SNR=3.4						
MIB	**Mutribah**	**76.68**	**297**	*e*P	**P**	**05 30 37.8**	**-0.5**
MIB				AMb	AMB	05 30 38.3	
	comp=Z,11nm,0.6s						
RDF	**Al-Radifah**	**76.92**	**296**	*e*P	**P**	**05 30 39.0**	**-0.6**
RDF				AMb	AMB	05 30 39.5	
	comp=Z,11nm,0.6s						
NAY	**Al-Naaiem**	**77.01**	**296**	*e*P	**P**	**05 30 39.1**	**-1.0**
NAY				AMb	AMB	05 30 40.2	
	comp=Z,7.7nm,1.2s						
BRTR	**Keskin Array B**	**81.51**	**311**	P	**P**	**05 31 04.3**	**+0.2**
	comp=Z,1.8nm,0.8s,baz=106,slow=2.7,SNR=9.1						

IDC 10 06:14:43.4±5.2**, 30°.78S×137°.96E, h0**km**, mb1 2.9**/3**, mb1mx2.9**/16**, mbtmp2.7**/3**, ML2.4**/3**, Error ellipse: s-maj=111.6km s-min=19.3km az=37.0, South Australia**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**3.30**	**110**	Pn	Pn	06 15 35.4	-1.0
	0.1nm,0.3s,baz=308,slow=12,SNR=3.7						
STKA				Pg	Pb	06 15 43.4	+0.5
	0.7nm,0.3s,baz=298,slow=13,SNR=9.8						
STKA				Sn	Sn	06 16 13.3	-3.1
	1.3nm,0.3s,baz=298,slow=16,SNR=6.1						
STKA				Lg	Lg	06 16 29.4	
	1.6nm,0.3s,baz=222,slow=23,SNR=5.7						
ASAR	**Alice Springs**	**7.95**	**332**	Pn	Pn	06 16 41.2	+0.9
	0.0nm,0.3s,baz=156,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**11.27**	**342**	Pn	Pn	06 17 25.3	-0.5
	0.0nm,0.3s,baz=160,slow=12,SNR=3.0						

IDC 10 06:23:46.6±1.4**, 34°.60S×54°.33E, h0**km**, mb3.9**/5**, mb1 4.0**/5**, mb1mx3.7**/24**, mbtmp3.9**/5**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.8**/28**, Error ellipse: s-maj=85.3km s-min=25.5km az=31.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**17.18**	**336**	LR	LR	06 32 16.1	
	comp=Z,151nm,21.0s,baz=331,slow=30						
ASAR	**Alice Springs**	**68.75**	**105**	P	P	06 34 52.6	0.0
	0.6nm,0.7s,baz=232,slow=5.7,SNR=5.4						
TORD	**Torodi Ar. Bea**	**68.90**	**304**	P	P	06 34 53.6	+0.1
	0.5nm,0.8s,baz=134,slow=8.0,SNR=3.1						
STKA	**Stephens Creek**	**70.70**	**116**	P	P	06 35 04.6	+0.1
	1.2nm,0.9s,baz=209,slow=10,SNR=2.4						
WRA	**Warramunga Arr**	**70.96**	**101**	P	P	06 35 06.4	+0.1
	2.6nm,0.8s,baz=240,slow=5.7,SNR=11						
MKAR	**Makanchi Array**	**84.84**	**19**	P	P	06 36 22.9	+0.2
	0.7nm,0.9s,baz=210,slow=5.0,SNR=6.1						
ILAR	**Eielson Array**	**147.17**	**17**	PKPbc	PKPdf	06 43 29.6	+1.0
	0.6nm,0.8s,baz=323,slow=2.9,SNR=5.5						
YKA	**Yellowknife Ar**	**151.22**	**349**	PKPbc	PKPbc	06 43 40.8	-0.3
	1.4nm,1.1s,baz=5.9,slow=2.7,SNR=4.9						

IDC 10 06:24:41.7±1.8**, 9°.00S×123°.86E, h0**km**, mb3.5**/1**, mb1 3.7**/4**, mb1mx3.5**/21**, mbtmp3.5**/4**, ML3.6**/3**, Error ellipse: s-maj=125.1km s-min=27.2km az=63.0, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.21**	**169**	Pn	Pn	06 26 55.1	-0.7
	0.9nm,0.3s,baz=353,slow=12,SNR=29						
FITZ				Sn	Sn	06 28 30.9	-9.4
	3.1nm,0.3s,baz=214,slow=18,SNR=16						
WRA	**Warramunga Arr**	**14.86**	**138**	Pn	Pn	06 28 12.6	-0.7
	0.2nm,0.3s,baz=320,slow=14,SNR=15						
WRA				Sn	Sn	06 30 49.1	-10
	0.6nm,0.3s,baz=310,slow=24,SNR=9.4						
ASAR	**Alice Springs**	**17.46**	**148**	Pn	P	06 28 48.1	0.0
	0.2nm,0.3s,baz=321,slow=12,SNR=13						
ASAR				Sn	Sn	06 31 51.5	-11
	0.2nm,0.3s,baz=324,slow=23,SNR=9.0						
MKAR	**Makanchi Array**	**66.75**	**330**	P	P	06 35 34.8	0.0
	0.3nm,0.5s,baz=130,slow=6.0,SNR=5.9						

*ISCJB **10** 06:25:56.3±0.8, 51°.49N±0°.04×16°.07E±0°.04, h0km, Error ellipse: s-maj=5.4km s-min=3.3km az=11.0*
*CSEM **10** 06:25:57.6±0.5, 51°.51N×16°.05E, h2km, ML3.4/9, Error ellipse: s-maj=8.2km s-min=4.8km az=3.0*
*PRU **10** 06:25:58.8, 51°.49N×16°.07E, h0km*
*VIE **10** 06:25:59.6±0.4, 51°.34N×16°.14E, h0km, mb2.2/2, ML2.6/4, Error ellipse: s-maj=2.6km s-min=2.5km az=169.0 66 km WNW of Wroclaw Suspected Mining induced.*
*WAR **10** 06:25:59.2, 51°.49N×16°.09E*
ISC 10 06:25:58.4±1.1**, 51°.49N**±0°.05×**16°.08E**±0°.03**, h0**km**, n29, σ0s.55**/59**, 3C-1D, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.67**	**168**	*e*Pg	**Pg**	**06 26 11.4**	**+0.4**
KSP				*e*Sg	**Sg**	**06 26 19.7**	**0.0**
KSP	**Ksiaz**	**0.67**	**168**	*e*Pg	**Pg**	**06 26 11.5**	**+0.4**
KSP				*e*Sg	**Sg**	**06 26 20.8**	**+1.1**
UPC	**Upice**	**0.99**	**182**	*e*PG	**Pg**	**06 26 17.1**	**-0.2**
UPC				*e*SG	**Sg**	**06 26 30.7**	**+0.6**
	comp=Z,22nm,0.2s						
UPC	**Upice**	**0.99**	**182**	Pg	**Pg**	**06 26 17.1**	**-0.2**
UPC				Sg	**Sg**	**06 26 30.7**	**+0.6**
	22nm,0.2s						
DPC	**Dobruska-Polom**	**1.16**	**172**	*e*PG	**Pg**	**06 26 20.0**	**-0.5**
DPC				*e*SG	**Sg**	**06 26 36.1**	**+0.7**
DPC	**Dobruska-Polom**	**1.16**	**172**	Pg	**Pg**	**06 26 20.0**	**-0.5**
DPC				Sg	**Sg**	**06 26 36.1**	**+0.7**
PVCC	**Panska Ves**	**1.36**	**225**	*e*PG	**Pg**	**06 26 24.0**	**-0.4**
PVCC				*e*SG	**Sg**	**06 26 42.3**	**+0.4**
	comp=Z,126nm,0.2s						
PVCC	**Panska Ves**	**1.36**	**225**	Pg	**Pg**	**06 26 24.0**	**-0.4**
PVCC				Sg	**Sg**	**06 26 42.3**	**+0.4**
	126nm,0.2s						
BRG	**Berggiesshubel**	**1.48**	**246**	PG	**Pn**	**06 26 26.4**	**+0.1**
BRG				SG	**Sb**	**06 26 46.6**	**+0.5**
	89nm,0.4s						
PRU	**Pruhonice**	**1.80**	**214**	*e*PG	**Pn**	**06 26 31.6**	**+1.0**
PRU				*e*SG	**Sg**	**06 26 56.3**	**+0.3**
	comp=Z,25nm,0.3s						
PRU	**Pruhonice**	**1.80**	**214**	Pg	**Pn**	**06 26 31.6**	**+1.0**
PRU				Sg	**Sg**	**06 26 56.3**	**+0.3**
	25nm,0.3s						
CLL	**Collm**	**1.94**	**266**	*e*Pg	**Pb**	**06 26 34.0**	**-0.5**
CLL				*e*		06 26 37.0	
CLL				*i* Sg	**Sb**	**06 27 00.3**	**+1.1**
	comp=Z,21nm,0.6s						
OKC	**Ostrava-Krasne**	**2.12**	**141**	*e*PG	**Pb**	**06 26 37.6**	**0.0**
OKC				*e*SG	**Sg**	**06 27 06.3**	**0.0**
	comp=Z,16nm,0.5s						
OKC	**Ostrava-Krasne**	**2.12**	**141**	Pg	**Pb**	**06 26 37.6**	**0.0**
OKC				Sg	**Sg**	**06 27 06.3**	**0.0**
	comp=Z,16nm,0.5s						
TREC	**Trest**	**2.23**	**190**	*e*PG	**Pb**	**06 26 39.3**	**-0.3**
TREC				*e*SG	**Sg**	**06 27 10.2**	**+0.1**
	comp=Z,12nm,0.2s						
TREC	**Trest**	**2.23**	**190**	Pg	**Pb**	**06 26 39.3**	**-0.3**
TREC				Sg	**Sg**	**06 27 10.2**	**+0.1**
	comp=Z,12nm,0.2s						
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	**Pn**	**06 26 42.1**	**+0.1**
NKC				*e*PG	**Pb**	**06 26 46.7**	**+0.4**
NKC				*e*SG	**Sg**	**06 27 22.7**	**+0.1**
	comp=Z,65nm,0.3s						
NKC	**Novy Kostel**	**2.62**	**243**	Pn	**Pn**	**06 26 42.1**	**+0.1**
NKC	**Novy Kostel**	**2.62**	**243**	Pg	**Pb**	**06 26 46.7**	**+0.4**
NKC				Sg	**Sg**	**06 27 22.7**	**+0.1**
	comp=Z,65nm,0.3s						
OJC	**Ojcow**	**2.68**	**117**	*e*Pg	**Pg**	**06 26 49.8**	**+0.1**
OJC				*e*Sg	**Sg**	**06 27 24.7**	**+0.3**
OJC	**Ojcow**	**2.68**	**117**	*e*Pg	**Pg**	**06 26 49.8**	**+0.1**
OJC				*e*Sg	**Sg**	**06 27 24.7**	**+0.3**
KHC	**Kasperske Hory**	**2.86**	**215**	*e*PN	**Pn**	**06 26 45.5**	**+0.3**
KHC				*e*PG	**Pb**	**06 26 50.8**	**+0.6**
KHC				*e*SN	**Sn**	**06 27 19.4**	**-0.9**
KHC				*e*SG	**Sg**	**06 27 29.1**	**-1.0**
	comp=Z,7.7nm,0.4s						
KHC	**Kasperske Hory**	**2.86**	**215**	Pn	**Pn**	**06 26 45.5**	**+0.3**
KHC	**Kasperske Hory**	**2.86**	**215**	Pg	**Pb**	**06 26 50.8**	**+0.6**
KHC				Sn	**Sn**	**06 27 19.4**	**-0.9**
KHC				Sg	**Sg**	**06 27 29.1**	**-1.0**
	comp=Z,7.7nm,0.4s						
CONA	**Conrad Observa**	**3.57**	**182**	⇑*i*Pn	**Pn**	**06 26 54.1**	**-1.0**
CONA				⇑*i*Sg	**Sg**	**06 27 52.8**	**-0.3**
	comp=Z,9.5nm,0.4s						
CONA	**Conrad Observa**	**3.57**	**182**	Pn	**Pn**	**06 26 54.1**	**-1.0**
CONA				Sg	**Sg**	**06 27 52.8**	**-0.3**
	comp=Z,9.5nm,0.4s						
MOA	**Molln**	**3.83**	**199**	⇑*i*Pn	**Pn**	**06 26 58.8**	**+0.2**
MOA				⇓*i*Sg	**Sg**	**06 28 02.1**	**+0.7**
	comp=Z,11nm,0.6s						
MOA	**Molln**	**3.83**	**199**	Pn	**Pn**	**06 26 58.8**	**+0.2**
MOA				Sg	**Sg**	**06 28 02.1**	**+0.7**
	comp=Z,11nm,0.6s						
SARI	**SarD1z-Kayseri**	**19.37**	**125**	*e*PN	**Pn**	**06 30 26.2**	**-0.5**

MAN 10 06:53:55, 17°.70N×120°.22E, h40km**, mb3.9, ML2.6, MS2.2, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.32**	**45**	⇑*i*P	Pn	06 54 06.1	+2.6
ABRA	**Dolores**	**0.47**	**96**	*e*P	Pn	06 54 08.1	+2.7
ABRA				*e*S	Sn	06 54 17.1	+4.4
APYP	**Conner**	**0.99**	**80**	*e*P	Pn	06 54 13.7	+1.3
APYP				*e*S	Sn	06 54 26.3	+1.1

*NEIC **10** 07:22:18.8, 16°.39N×98°.46W, h5km, MD4.1(MEX), After MEX.*
MEX 10 07:22:18.8±0.3**, 16°.39N×98°.46W, h5**km±5km**, MD4.1, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.32**	**90**	*i* P	Pg	07 22 24.6	-0.5
PNIG				*e*S	Sg	07 22 29.8	+0.3
PNIG	**Pinotepa**	**0.32**	**90**	*i* P	Pg	07 22 24.6	-0.5
PNIG				*e*S	Sg	07 22 29.8	+0.3
ACX	**Acapulco**	**1.42**	**290**	*i* P	Pn	07 22 42.3	-3.0
ACX				*e*S	Sb	07 23 00.6	-3.7
ACX	**Acapulco**	**1.42**	**290**	*i* P	Pn	07 22 42.3	-3.0
ACX				*e*S	Sb	07 23 00.6	-3.7
OXX	**Oaxaca**	**1.80**	**67**	*i* P	Pn	07 22 47.7	-3.2
OXX				*e*S	Sn	07 23 09.3	-5.1
OXX	**Oaxaca**	**1.80**	**67**	*i* P	Pn	07 22 47.7	-3.2
OXX				*e*S	Sn	07 23 09.3	-5.1
CAIG	**El Cayaco**	**1.85**	**291**	*i* P	Pn	07 22 47.6	-3.6
CAIG				*e*S	Sn	07 23 10.7	-4.2
CAIG	**El Cayaco**	**1.85**	**291**	*i* P	Pn	07 22 47.6	-3.6
CAIG				*e*S	Sn	07 23 10.7	-4.2
MEIG	**Mezcala**	**1.88**	**324**	*i* P	Pn	07 22 48.5	-3.3
MEIG				*e*S	Sn	07 23 11.1	-5.0
MEIG	**Mezcala**	**1.88**	**324**	*i* P	Pn	07 22 48.5	-3.3
MEIG				*e*S	Sn	07 23 11.1	-5.0
PLIG	**Platanillo**	**2.22**	**334**	*i* P	Pn	07 22 53.7	-2.8
PLIG				*e*S	Sn	07 23 19.6	-4.8
PLIG	**Platanillo**	**2.22**	**334**	*i* P	Pn	07 22 53.7	-2.8
PLIG				*e*S	Sn	07 23 19.6	-4.8
TPIG	**Tehuac#an**	**2.27**	**27**	*e*P	Pn	07 22 52.0	-5.3
TPIG				*i* S	Sn	07 23 21.6	-4.3
TPIG	**Tehuac#an**	**2.27**	**27**	*e*P	Pn	07 22 52.0	-5.3
TPIG				*i* S	Sn	07 23 21.6	-4.3
HUIG	**Huatulco**	**2.35**	**105**	*i* P	Pn	07 22 55.0	-3.1
HUIG				*i* S	Sn	07 23 22.6	-4.8
HUIG	**Huatulco**	**2.35**	**105**	*i* P	Pn	07 22 55.0	-3.1
HUIG				*i* S	Sn	07 23 22.6	-4.8
YAIG	**Yautepec**	**2.52**	**347**	*i* P	Pn	07 22 57.4	-3.3
YAIG				*e*S	Sn	07 23 28.2	-3.7
YAIG	**Yautepec**	**2.52**	**347**	*i* P	Pn	07 22 57.4	-3.3
YAIG				*e*S	Sn	07 23 28.2	-3.7
ARIG	**Puente Sto Nin**	**2.60**	**316**	*i* P	Pn	07 22 59.2	-2.4
ARIG				*e*S	Sn	07 23 29.2	-4.4
ZIIG	**Zihuatanejo**	**3.11**	**293**	*e*P	Pn	07 23 05.1	-3.5
ZIIG				*i* S	Sn	07 23 42.7	-3.5
ZIIG	**Zihuatanejo**	**3.11**	**293**	*e*P	Pn	07 23 05.1	-3.5
ZIIG				*i* S	Sn	07 23 42.7	-3.5
TEIG	**Tepich**	**10.40**	**67**	Pn	Pn	07 24 48.8	+0.1

*IDC **10** 07:38:37.5±4.9, 22°.88N×121°.78E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/26, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=111.1km s-min=51.9km az=3.0*
*ISCJB **10** 07:38:44.4±0.4, 23°.85N±0°.01×121°.63E±0°.02, h4km±2km, mb3.3/3, Error ellipse: s-maj=3.8km s-min=2.1km az=25.1*
*TAP **10** 07:38:44.8, 23°.88N×121°.56E, h9km, ML3.8, B*
ISC 10 07:38:44.6±0.8**, 23°.84N**±0°.02×**121°.61E**±0°.03**, h10**km±5km**, n54, σ0s.71**/90**, mb3.4**/3**, 7C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ESF	**Shoufeng Towns**	**0.10**	**288**	*i* P	**Pg**	**07 38 46.8**	**-0.4**
	baz=260						
ESF				S	**Sg**	**07 38 48.4**	**-0.7**
	baz=260						
HWA	**Hwalien**	**0.14**	**358**	⇑*i*P	**Pg**	**07 38 48.0**	**+0.2**
	baz=18						
HWA				*e*S	**Sg**	**07 38 50.6**	**+0.6**
	baz=18						
TEGC	**Jichi Village**	**0.14**	**206**	P	**Pb**	**07 38 49.1**	**-0.3**
	baz=183						
TEGC				S	**Sg**	**07 38 53.0**	**+2.8**
	baz=183						
ESL	**Shilin**	**0.17**	**261**	⇑*i*P	**Pg**	**07 38 47.9**	**-0.4**
	baz=239						
ESL				S	**Sg**	**07 38 49.9**	**-0.9**
	baz=239						
TWD	**Chiawan**	**0.24**	**357**	⇑*i*P	**Pg**	**07 38 49.5**	**-0.1**
	baz=359						
TWD				*i* S	**Sg**	**07 38 52.6**	**-0.3**
	baz=359						
EHY	**Hungye**	**0.42**	**219**	*e*P	**Pg**	**07 38 53.2**	**+0.2**
	baz=218						
EHY				*e*S	**Sg**	**07 38 59.0**	**+0.4**
	baz=218						
WHF	**Hehuan Shan**	**0.44**	**314**	⇑*i*P	**Pg**	**07 38 52.8**	**-0.6**
	baz=315						
WHF				S	**Sg**	**07 38 58.1**	**-1.2**
	baz=315						
TWF1	**Yuli**	**0.56**	**211**	*e*P	**Pb**	**07 38 55.8**	**-0.8**
	baz=215						
TWT	**Tachien**	**0.57**	**316**	P	**Pg**	**07 38 55.7**	**-0.1**
	baz=305						
TWT				S	**Sg**	**07 39 02.8**	**-0.6**
	baz=305						
ENA	**Nanau**	**0.60**	**11**	⇑*i*P	**Pg**	**07 38 56.0**	**-0.2**
	baz=8.0						
NNS	**Nan Shan**	**0.64**	**340**	⇑*i*P	**Pg**	**07 38 56.7**	**-0.3**
	baz=342						
NNS				S	**Sg**	**07 39 04.4**	**-1.1**
	baz=342						
SMLT	**Sun Moon Lake**	**0.65**	**274**	*i* P	**Pg**	**07 38 57.1**	**-0.2**
	baz=271						
SMLT				S	**Sg**	**07 39 05.5**	**-0.4**
	baz=271						
TYC	**Yuchr**	**0.69**	**275**	⇓*i*P	**Pg**	**07 38 57.7**	**-0.4**
	baz=283						
TYC				S	**Sg**	**07 39 06.2**	**-0.9**
	baz=283						
YUS	**Yu-Shan**	**0.70**	**240**	P	**Pb**	**07 38 58.9**	**-0.3**
	baz=237						
YUS				S	**Sg**	**07 39 08.0**	**+0.6**
	baz=237						
CHKT	**Chengkung**	**0.77**	**197**	*e*P	**Pb**	**07 38 59.8**	**-0.3**
	baz=196						
CHKT				*e*S	**Sn**	**07 39 13.5**	**+0.4**
	baz=196						
TWC	**Suao**	**0.80**	**16**	P	**Pg**	**07 38 59.8**	**-0.3**
	baz=10.0						
TWC				S	**Sg**	**07 39 10.8**	**+0.4**
	baz=10.0						
ENTT	**Nioudou**	**0.80**	**357**	⇑*i*P	**Pg**	**07 38 59.9**	**-0.2**
	baz=359						
ENTT				S	**Sg**	**07 39 10.5**	**0.0**
	baz=359						
ALS	**Alishan**	**0.81**	**246**	*e*P	**Pb**	**07 39 00.7**	**-0.2**
	baz=244						
ALS				*e*S	**Sg**	**07 39 10.2**	**-0.7**
	baz=244						
ELDTW	**Lidau**	**0.85**	**220**	*e*P	**Pb**	**07 39 01.3**	**-0.2**
	baz=217						
WNT	**Mingjian**	**0.85**	**273**	P	**Pb**	**07 39 01.7**	**+0.3**
	baz=271						
WNT				*e*S	**Sn**	**07 39 14.3**	**-0.8**
	baz=271						
NSK	**Sanguang**	**0.86**	**345**	*i* P	**Pg**	**07 39 01.2**	**-0.1**
	baz=336						
NSK				S	**Sg**	**07 39 11.3**	**-1.3**
	baz=336						
TWE	**Neicheng**	**0.88**	**3**	*e*P	**Pg**	**07 39 01.2**	**-0.3**
	baz=5.0						
TWE				*e*S	**Sb**	**07 39 14.1**	**+0.3**
	baz=5.0						
CHN5	**Tsauling**	**0.89**	**254**	⇓*i*P	**Pn**	**07 39 02.5**	**-0.7**
	baz=242						
CHN5				*e*S	**Sn**	**07 39 15.6**	**-0.6**
	baz=242						
TCU	**Taichung**	**0.91**	**290**	P	**Pb**	**07 39 02.6**	**+0.1**
	baz=284						
TCU				*e*S	**Sn**	**07 39 16.0**	**-0.6**
	baz=284						
TWQ1	**Liyutan**	**0.92**	**304**	*e*P	**Pb**	**07 39 02.8**	**+0.1**
	baz=303						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TWQ1				eS	Sg	07 39 14.4	+0.1
	baz=303						
NSTT	**Nanjuang**	**0.96**	**325**	eP	**Pg**	**07 39 03.3**	**0.0**
	baz=325						
NSTT				eS	**Sg**	**07 39 15.6**	**-0.2**
	baz=325						
NSY	**Sanyi**	**0.96**	**307**	P	**Pn**	**07 39 04.2**	**0.0**
	baz=306						
NSY				eS	**Sg**	**07 39 16.5**	**+0.7**
	baz=306						
WGK	**Gukeng**	**0.97**	**261**	P	**Pn**	**07 39 04.2**	**-0.2**
	baz=261						
WGK				S	**Sn**	**07 39 18.1**	**-0.1**
	baz=261						
CHN4	**Tsaushan**	**1.05**	**243**	P	**Pn**	**07 39 05.0**	**-0.4**
	baz=235						
CHN4				S	**Sn**	**07 39 20.0**	**-0.1**
	baz=235						
CHN2	**Minshiung**	**1.08**	**254**	eP	**Pn**	**07 39 06.8**	**+0.9**
	baz=253						
WTP	**Ta-pu**	**1.09**	**237**	P	**Pn**	**07 39 05.7**	**-0.2**
	baz=238						
WTP				S	**Sn**	**07 39 21.7**	**+0.6**
	baz=238						
HSN	**Hsinchu**	**1.12**	**329**	eP	**Pg**	**07 39 06.7**	**+0.5**
	baz=339						
HSN				eS	**Sg**	**07 39 21.5**	**+0.7**
	baz=339						
TWG	**Pinlang**	**1.13**	**206**	eP	**Pb**	**07 39 04.5**	**-1.7**
	baz=192						
CHY	**Chiayi**	**1.14**	**253**	eP	**Pg**	**07 39 06.6**	**0.0**
	baz=253						
CHY				eS	**Sn**	**07 39 23.2**	**+0.9**
	baz=253						
TWK	**Hsinying**	**1.18**	**241**	eP	**Pg**	**07 39 07.6**	**+0.3**
	baz=242						
TWK				eS	**Sn**	**07 39 24.3**	**+1.0**
	baz=242						
CHN1	**Nanshi**	**1.19**	**237**	P	**Pg**	**07 39 07.8**	**+0.3**
	baz=240						
CHN1				S	**Sn**	**07 39 24.7**	**+1.1**
	baz=240						
TAP1	**Taipei**	**1.20**	**356**	eP	**Pn**	**07 39 06.8**	**-0.6**
	baz=355						
TWB1	**Santiao Chiao**	**1.21**	**16**	eP	**Pb**	**07 39 07.5**	**-0.1**
	baz=8.0						
WTCT	**Ta-ch'eng**	**1.22**	**271**	eP	**Pn**	**07 39 07.5**	**-0.1**
	baz=271						
WTCT				eS	**Sg**	**07 39 24.5**	**+0.6**
	baz=271						
NWF	**Wu-fen Shan**	**1.24**	**7**	eP	**Pb**	**07 39 08.1**	**-0.1**
	baz=5.0						
NWF				eS	**Sb**	**07 39 24.4**	**+0.3**
	baz=5.0						
TWS1	**Kuangyinshan**	**1.27**	**352**	eP	**Pb**	**07 39 08.9**	**+0.3**
	baz=350						
TWS1				eS	**Sn**	**07 39 25.8**	**+0.3**
	baz=350						
ECL	**Taimali**	**1.38**	**206**	eP	**Pg**	**07 39 10.2**	**-0.8**
	baz=191						
YOJ	**Yonaguni jima**	**1.42**	**64**	eP	**Pn**	**07 39 09.7**	**-0.8**
	baz=64						
TWY	**Chenhua**	**1.43**	**360**	eP	**Pn**	**07 39 10.9**	**+0.3**
	baz=360						
TWM1	**Shoushan**	**1.49**	**227**	eP	**Pg**	**07 39 14.0**	**+0.8**
	baz=229						
EAST	**Anshuo**	**1.61**	**206**	eP	**Pn**	**07 39 12.7**	**-0.4**
	baz=195						
SCZT	**Fangliau**	**1.72**	**212**	eP	**Pb**	**07 39 15.7**	**-0.6**
	baz=213						
WDGT	**Dungji**	**1.88**	**253**	eP	**Pn**	**07 39 16.9**	**+0.1**
	baz=255						
WDGT				eS	**Sb**	**07 39 42.2**	**-0.4**
	baz=255						
PNG	**Penghu**	**1.90**	**262**	eP	**Pn**	**07 39 17.3**	**+0.1**
	baz=264						
PNG				eS	**Sb**	**07 39 42.1**	**-1.2**
	baz=264						
TWK1	**Hengchun**	**2.03**	**202**	eP	**Pn**	**07 39 18.5**	**-0.4**
	baz=190						
KSRS	**Korea Array**	**14.61**	**20**	Pn	**P**	**07 42 18.2**	**+0.4**
	0.1nm,0.3s,baz=201,slow=12,SNR=4.6						
MKAR	**Makanchi Array**	**38.85**	**316**	P	**P**	**07 46 12.7**	**+2.7**
	0.2nm,0.6s,baz=113,slow=11,SNR=3.4						
ZALV	**Zalesovo Beam**	**40.74**	**327**	P	**P**	**07 46 25.4**	**-0.1**
	0.3nm,0.4s,baz=126,slow=7.3,SNR=2.7						
YKA	**Yellowknife Ar**	**83.13**	**23**	P	**P**	**07 51 09.3**	**-1.2**
	0.3nm,0.7s,baz=314,slow=4.9,SNR=6.5						

*NOU **10** 08:10:07.4±0.6, 10°.62S×166°.10E, h30km, MD4.5, ML3.3*

*IDC **10** 08:10:12.9±0.5, 11°.07S×166°.32E, h127km±4km, mb4.6/25, mb1 4.7/27, mb1mx4.7/28, mbtmp4.6/27, MS3.8/15, Ms1 3.8/15, ms1mx3.6/30, Error ellipse: s-maj=9.7km s-min=8.6km az=115.0*

*BJI **10** 08:10:12.0, 10°.71S×166°.68E, h133km, mB4.9/29, mb5.1/45*

*MOS **10** 08:10:13.0±0.9, 11°.04S×166°.26E, h137km, mb5.0/46, Error ellipse: s-maj=8.8km s-min=7.7km az=139.1*

*ISCJB **10** 08:10:13.2±0.9, 11°.13S±0°.03×166°.27E±0°.03, h142km±8km, mb4.9/152, Error ellipse: s-maj=5.5km s-min=4.7km az=149.7*

*GCMT **10** 08:10:13.9±0.2, 11°.15S×166°.28E, h134km±1km, MW5.1, Moment Tensor Solution. s61,c74; s90,c128; Moment tensor: Scale 10^{16}Nm; M_{rr}4.73±.12; $M_{\theta\theta}$-1.47±.18; $M_{\phi\phi}$-3.27±.17; $M_{r\theta}$0.16±.13; $M_{\theta\phi}$2.56±.16; $M_{\phi r}$-2.04±.13; Best double couple: $M_0$5.30000×10^{16} NP1:ϕ_s313.00000°, δ36.00000°, λ71.00000°. NP2:ϕ_s156.00000°, δ56.00000°, λ104.00000°. Principal axes: T 5.2500, Plg75.0000°, Azm106.0000°; N 0.1300, Plg11.0000°, Azm329.0000°; P -5.3900, Plg10.0000°, Azm237.0000°; Data Used: II IU IC G CN.*

*NEIC **10** 08:10:14.9±0.6, 11°.08S×166°.28E, h146km±5km, mb5.0/102 Error ellipse: s-maj=4.0km s-min=2.9km az=142.0*

*DJA **10** 08:10:20.8±1.3, 11°S±6°×16°7E±°, h194km±14km, M4.7/18, mB5.2/5, mb4.8/18, Mw(mB)4.7/5*

ISC 10 08:10:13.6±0.3**, 11°.13S**±0°.04×**166°.36E**±0°.04**, h135**km±2km**, h134**km**:pP-P, n680,** σ1.03/796**, mb5.0**/152**, 160C-137D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.54**	**284**	P	**Pn**	**08 11 47.0**	**-0.4**
HNR				S	**Sn**	**08 13 00.2**	**-0.6**
HNR	**Honiara**	**6.54**	**284**	P	**Pn**	**08 11 47.0**	**-0.4**
	10nm,0.3s,baz=94,slow=3.9,SNR=4.3						
HNR				S	**Sn**	**08 13 00.2**	**-0.6**
	6.3nm,0.3s,baz=180,slow=19,SNR=2.6						
DZM	**Mont Dzumac**	**10.88**	**180**	eP	**Pn**	**08 12 46.5**	**+0.8**
	109nm,0.8s						
DZM				eLQ	LQ	08 14 34.0	
	1μm,27.7s						
DZM				eS	**Sn**	**08 14 48.9**	**+3.1**
	88nm,0.8s						
DZM				eLR	LR	08 15 27.3	
DZM	**Mont Dzumac**	**10.88**	**180**	ePn	**Pn**	**08 12 47.1**	**+1.4**
	160nm,0.8s						
DZM				eSn	**Sn**	**08 14 44.4**	**-1.4**
DZM				S		08 14 45.1	
DZM	**Mont Dzumac**	**10.88**	**180**	P	**Pn**	**08 12 47.8**	**+2.1**
	15nm,0.3s,baz=25,slow=17,SNR=248						
DZM				S	**Sn**	**08 14 45.1**	**-0.7**
	2.3nm,0.3s,baz=322,slow=19,SNR=8.5						
NOUC	**Port Laguerre**	**10.91**	**180**	eP	**Pn**	**08 12 46.7**	**+0.7**
NOUC				eS	**Sn**	**08 14 44.6**	**-1.7**
NOUC				AMP		08 14 48.7	
	comp=Z,12nm,0.0s						
BAYA	**Yate Dam**	**10.97**	**177**	eP	**Pn**	**08 12 47.9**	**+1.1**
BAYA				eS	**Sn**	**08 14 47.7**	**-0.2**
MVNO	**Noumea**	**11.08**	**180**	eP	**Pn**	**08 12 50.3**	**+2.1**
MVNO				eS	**Sn**	**08 14 49.7**	**-0.7**
MSVF	**Nonsavu**	**13.08**	**121**	P	P	08 13 24.0	+4.3
	comp=Z,1μm,1.3s,SNR=24						
MSVF	**Nonsavu**	**13.08**	**121**	eP	**P**	**08 13 20.1**	**+0.4**
MSVF	**Nonsavu**	**13.08**	**121**	ePn	**P**	**08 13 20.1**	**+0.4**
TARA	**Tarawa**	**14.01**	**28**	ePn	**Pn**	**08 13 26.6**	**+0.2**
EIDS	**Eidsvold**	**20.25**	**224**	eP	**P**	**08 14 39.9**	**+1.5**
	comp=Z,58nm,0.8s						
CTA	**Charters Tower**	**21.30**	**243**	P	**P**	**08 14 49.8**	**0.0**
CTA	**Charters Tower**	**21.30**	**243**	P	**P**	**08 14 49.8**	**0.0**
	comp=Z,12nm,0.8s,baz=73,slow=11,SNR=14						
CTAO	**Charters Tower**	**21.30**	**243**	eP	**P**	**08 14 49.7**	**0.0**
CTAO				pmax	pmax		
	comp=Z,65nm,1.2s						
CTAO	**Charters Tower**	**21.30**	**243**	eP	**P**	**08 14 49.7**	**0.0**
	comp=Z,65nm,1.2s						
AFI	**Afiamalu**	**21.52**	**100**	eP	**P**	**08 14 52.9**	**+0.8**
	comp=Z,145nm,1.0s						
AFI	**Afiamalu**	**21.52**	**100**	P	**P**	**08 14 53.6**	**+1.4**
	comp=Z,53nm,0.6s,baz=89,slow=6.5,SNR=7.1						
COEN	**Coen**	**22.81**	**260**	eP	**P**	**08 15 04.7**	**-0.4**
	comp=Z,302nm,1.2s						
ARMA	**Armidale**	**23.57**	**213**	eP	**P**	**08 15 12.7**	**+0.5**
	comp=Z,74nm,1.3s						
OUZ	**Omahuta**	**24.87**	**166**	eP	**P**	**08 15 24.7**	**+1.0**
	comp=Z,179nm,1.8s						
URZ	**Urewera**	**28.68**	**162**	eP	**P**	**08 15 58.6**	**+0.8**
	comp=Z,328nm,1.8s						
URZ	**Urewera**	**28.68**	**162**	P	**P**	**08 15 58.6**	**+0.8**
	comp=Z,26nm,0.4s,baz=339,slow=8.6,SNR=22						
MWZ	**Matawai**	**28.87**	**162**	PN	**P**	**08 15 60.0**	**+0.3**
RAHZ	**Arahi**	**29.28**	**163**	PN	**P**	**08 16 03.9**	**+0.8**
BKZ	**Black Stump Fm**	**29.34**	**164**	PN	**P**	**08 16 03.7**	**-0.1**
NMHZ	**Naumai**	**29.37**	**163**	PN	**P**	**08 16 04.9**	**+0.9**
KNZ	**Kokohu**	**29.55**	**162**	PN	**P**	**08 16 05.4**	**-0.1**
MRZ	**Mangatainoka R**	**30.52**	**166**	PN	**P**	**08 16 13.7**	**-0.4**
STKA	**Stephens Creek**	**30.80**	**224**	eP	**P**	**08 16 17.3**	**+0.6**
STKA				PcP	**PcP**	**08 19 11.2**	**+0.4**
STKA				ScP	**ScP**	**08 22 43.6**	**+2.4**
STKA	**Stephens Creek**	**30.80**	**224**	P	**P**	**08 16 16.7**	**0.0**
	comp=Z,10.0nm,0.7s,baz=43,slow=11,SNR=21						
STKA				PcP	**PcP**	**08 19 11.2**	**+0.4**
	comp=Z,11nm,0.8s,baz=54,slow=3.4,SNR=7.2						
STKA				ScP	**ScP**	**08 22 43.6**	**+2.4**
	comp=Z,4.2nm,0.8s,baz=21,slow=7.4,SNR=5.3						
STKA				LR	LR	08 26 35.8	
	comp=Z,216nm,19.6s,baz=24,slow=32						
THZ	**Tophouse**	**31.05**	**170**	PN	**P**	**08 16 19.2**	**+0.4**
KHZ	**Kahutara**	**31.79**	**170**	eP	**P**	**08 16 26.3**	**+1.1**
	comp=Z,54nm,0.7s						
LTZ	**Lake Taylor**	**31.95**	**172**	PN	**P**	**08 16 27.4**	**+0.7**
WRAB	**Tennant Creek**	**32.01**	**250**	eP	**P**	**08 16 27.0**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,25nm,1.1s						
WRAB	**Tennant Creek**	**32.01**	**250**	eP	**P**	**08 16 27.0**	**-0.5**
	comp=Z,25nm,1.1s						
WRAB	**Tennant Creek**	**32.01**	**250**	P	**P**	**08 16 27.0**	**-0.5**
	comp=Z,93nm,0.8s,SNR=5.5						
WRA	**Warramunga Arr**	**32.02**	**250**	P	**P**	**08 16 27.5**	**-0.1**
WRA				pP	**pP**	**08 16 56.3**	**-0.3**
WRA				PcP	**PcP**	**08 19 14.9**	**+0.5**
WRA				S	**S**	**08 21 28.0**	**-1.7**
WRA				ScP	**ScP**	**08 22 48.6**	**+3.0**
WRA				PKiKP	**PKiKP**	**08 26 41.5**	**-1.1**
WRA	**Warramunga Arr**	**32.02**	**250**	P	**P**	**08 16 27.5**	**-0.1**
	comp=Z,10nm,0.8s,baz=81,slow=9.0,SNR=26						
WRA				pP	**pP**	**08 16 56.3**	**-0.3**
	comp=Z,7.9nm,0.8s,baz=80,slow=9.0,SNR=5.8						
WRA				PcP	**PcP**	**08 19 14.9**	**+0.5**
	comp=Z,7.6nm,0.7s,baz=76,slow=3.2,SNR=21						
WRA				S	**S**	**08 21 28.0**	**-1.7**
	comp=Z,5.5nm,1.2s,baz=82,slow=15,SNR=6.7						
WRA				ScP	**ScP**	**08 22 48.6**	**+3.0**
	comp=Z,0.8nm,0.9s,baz=81,slow=3.5,SNR=3.2						
WRA				PKiKP	**PKiKP**	**08 26 41.5**	**-1.1**
	comp=Z,1.0nm,0.7s,baz=12,slow=0.7,SNR=12						
OXZ	**Oxford**	**32.45**	**172**	PN	**P**	**08 16 31.3**	**+0.3**
RPZ	**Rata Peaks**	**32.72**	**174**	eP	**P**	**08 16 33.5**	**+0.1**
	comp=Z,178nm,0.7s						
RPZ	**Rata Peaks**	**32.72**	**174**	P	**P**	**08 16 33.8**	**+0.4**
	comp=Z,179nm,0.7s,baz=144,slow=0.2,SNR=59						
RPZ				LR	LR	08 27 55.2	
	comp=Z,534nm,20.2s,baz=212,slow=32						
AS31	**Alice Springs**	**33.30**	**244**	eP	**P**	**08 16 38.9**	**+0.2**
ASAR	**Alice Springs**	**33.30**	**244**	P	**P**	**08 16 38.4**	**-0.3**
ASAR				pP	**pP**	**08 17 06.0**	**-1.8**
ASAR				PcP	**PcP**	**08 19 17.9**	**+0.1**
ASAR				ScP	**ScP**	**08 22 53.2**	**+3.2**
ASAR				PKiKP	**PKiKP**	**08 26 42.0**	**-1.5**
ASAR	**Alice Springs**	**33.30**	**244**	P	**P**	**08 16 38.4**	**-0.3**
	comp=Z,5.2nm,0.8s,baz=66,slow=10,SNR=36						
ASAR				pP	**pP**	**08 17 06.0**	**-1.8**
	comp=Z,5.7nm,0.8s,baz=74,slow=9.5,SNR=4.6						
ASAR				PcP	**PcP**	**08 19 17.9**	**+0.1**
	comp=Z,11nm,0.8s,baz=68,slow=2.6,SNR=30						
ASAR				ScP	**ScP**	**08 22 53.2**	**+3.2**
	comp=Z,1.6nm,0.8s,baz=79,slow=3.9,SNR=6.3						
ASAR				PKiKP	**PKiKP**	**08 26 42.0**	**-1.5**
	comp=Z,0.9nm,0.8s,baz=111,slow=1.5,SNR=6.0						
ASAR				LR	LR	08 28 18.0	
	comp=Z,182nm,20.5s,baz=67,slow=33						
RAR	**Rarotonga**	**33.96**	**111**	LR	LR	08 27 36.5	
	comp=Z,328nm,21.1s,baz=90,slow=31						
BBOO	**Buckleboo**	**35.22**	**227**	eP	**P**	**08 16 55.6**	**+0.5**
	comp=Z,626nm,0.7s						
XMAS	**Kiritimati**	**38.30**	**72**	eP	**P**	**08 17 21.0**	**-0.4**
	comp=Z,35nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.95**	**255**	P	**P**	**08 17 35.2**	**+0.2**
FITZ				PcP	**PcP**	**08 19 38.6**	**+0.6**
FITZ	**Fitzroy Crossi**	**39.95**	**255**	P	**P**	**08 17 35.2**	**+0.2**
	comp=Z,23nm,0.6s,baz=87,slow=7.8						
FITZ				PcP	**PcP**	**08 19 38.6**	**+0.6**
	comp=Z,9.1nm,0.7s,baz=97,slow=2.7,SNR=5.0						
FORT	**Forrest**	**40.49**	**235**	eP	**P**	**08 17 40.4**	**+1.0**
	comp=Z,26nm,0.6s						
MBWA	**Marble Bar**	**45.74**	**251**	eP	**P**	**08 18 22.0**	**+0.2**
	comp=Z,27nm,0.9s						
KAPI	**Kappang**	**46.51**	**274**	eP	**P**	**08 18 27.4**	**-0.5**
	comp=Z,21nm,0.8s						
KIP	**Kipapa**	**47.65**	**47***c*	iP	**P**	**08 18 37.9**	**+1.4**
KIP				pmax	pmax		
	comp=Z,73nm,1.0s						
KIP	**Kipapa**	**47.65**	**47**	eP	**P**	**08 18 37.6**	**+1.1**
POHA	**Pohakuloa**	**48.48**	**51**	eP	**P**	**08 18 44.8**	**+1.6**
	comp=Z,100nm,0.8s						
MYLDM	**Lahad Datu**	**50.31**	**286**	P	P	08 19 02.1	+5.1
	comp=Z,29nm,1.1s						
KKM	**Kota Kinabalu**	**52.74**	**286**	eP	**P**	**08 19 14.2**	**-1.0**
KKM	**Kota Kinabalu**	**52.74**	**286**	P	**P**	**08 19 15.8**	**+0.6**
	comp=Z,51nm,1.4s,comp=Z,694nm						
MJAR	**Matsushiro Arr**	**54.33**	**332**	P	**P**	**08 19 25.1**	**-1.2**
MJAR	**Matsushiro Arr**	**54.33**	**332**	P	**P**	**08 19 25.1**	**-1.2**
	comp=Z,10nm,0.7s,baz=168,slow=8.4,SNR=24						
MAJO	**Matsushiro**	**54.33**	**332**	eP	**P**	**08 19 25.7**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,19nm,1.0s						
MAJO	**Matsushiro**	**54.33**	**332**	eP	**P**	**08 19 25.7**	**-0.6**
	comp=Z,19nm,1.0s						
MAT	**Matsushiro**	**54.33**	**332**	P	**P**	**08 19 25.2**	**-1.1**
MAT				S	**S**	**08 26 51.0**	**-2.9**
JNU	**Nakatsue**	**55.51**	**324**	P	**P**	**08 19 33.9**	**-0.9**
JNU	**Nakatsue**	**55.51**	**324**	P	**P**	**08 19 33.9**	**-0.9**
	comp=Z,18nm,0.9s,baz=159,slow=4.4,SNR=4.9						
SBUM	**Sibu**	**55.51**	**281**	P	**P**	**08 19 36.7**	**+1.5**
	comp=Z,13nm,1.0s						
TPUB	**Ta-pu**	**56.33**	**308**	eP	**P**	**08 19 40.1**	**-0.8**
	comp=Z,30nm,0.9s						
ASAJ	**Asahikawa**	**59.08**	**340**	eP	**P**	**08 19 59.6**	**0.0**
	comp=Z,11nm,0.8s						
KSRS	**Korea Array**	**60.29**	**325**	P	**P**	**08 20 08.1**	**0.0**
	comp=Z,4.9nm,0.7s,baz=136,slow=7.1,SNR=23						
KSRS				PcP	**PcP**	**08 20 52.8**	**+0.8**
	comp=Z,2.9nm,0.7s,baz=141,slow=4.0,SNR=7.2						
KSAR	**Wonju Array Be**	**60.30**	**325**	P	**P**	**08 20 08.1**	**-0.1**
KSAR				PcP	**PcP**	**08 20 52.8**	**+0.7**
YSS	**Yuzh-Sakhalins**	**61.55**	**342**	i P	**P**	**08 20 17.1**	**+0.7**
YSS				pmax	pmax		
	comp=Z,49nm,1.3s						
NJ2	**Nanjing**	**62.51**	**315**	eP	**P**	**08 20 23.3**	**+0.2**
NJ2				PP	**PP**	**08 22 44.7**	**+2.3**
NJ2				S	S	08 28 31.0	-9.1
NJ2				pmax	pmax		
	comp=Z,40nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,50nm,10.4s						
NJ2				LR	LR		
	comp=N,190nm,22.8s						
NJ2				LR	LR		
	comp=E,430nm,20.8s						
NJ2				LR	LR		
	comp=Z,480nm,23.7s						
USRK	**Ussuriysk Arra**	**63.30**	**333**	P	**P**	**08 20 28.1**	**+0.1**
	comp=Z,21nm,1.1s,baz=122,slow=6.4,SNR=18						
USRK				pP	**pP**	**08 20 57.1**	**-3.3**
	comp=Z,7.3nm,1.0s,baz=139,slow=4.7,SNR=2.4						
MYKOM	**Kota Tinggi**	**63.46**	**278**	P	**P**	**08 20 31.8**	**+2.0**
	comp=Z,18nm,1.0s						
PEA0B	**Petropavlovsk-**	**64.41**	**354**	eP	**P**	**08 20 35.3**	**+0.2**
PETK	**Petropavlovsk-**	**64.41**	**354**	P	**P**	**08 20 35.4**	**+0.3**
PETK	**Petropavlovsk-**	**64.41**	**354**	P	**P**	**08 20 35.4**	**+0.3**
PETK	**Petropavlovsk-**	**64.41**	**354**	P	**P**	**08 20 35.4**	**+0.3**
	comp=Z,14nm,0.8s,baz=162,slow=7.9,SNR=29						
PETK				LR	LR	08 47 46.1	
	comp=Z,24nm,18.4s,baz=346,slow=35						
MDJ	**Mudanjiang**	**64.71**	**332**	P	**P**	**08 20 37.5**	**+0.2**
MDJ				pP	**pP**	**08 21 08.9**	**-0.9**
MDJ				sP	**sP**	**08 21 23.4**	**-1.0**
MDJ				S	**S**	**08 29 07.1**	**+0.2**
MDJ				sS	**sS**	**08 30 02.4**	**-0.6**
MDJ				ScS	**SKSac**	**08 30 19.4**	**+0.5**
MDJ				pmax	pmax		
	comp=Z,15nm,1.2s						
HABR	**Khabarovsk**	**65.49**	**338**	eP	**P**	**08 20 41.0**	**-1.2**
HABR				e		08 21 10.3	
HABR				e*PP	pP	08 21 26.7	+12
HABR				e		08 23 06.2	
HABR				ePPP	PPP	08 24 42.0	
HABR				eS	S	08 29 08.7	-7.6
HABR				e		08 30 15.4	
HABR				eSS	SS	08 33 25.3	-7.5
HABR				pmax	pmax		
	comp=Z,34nm,1.0s						
HABR				pmax	pmax		
	comp=N,16nm,0.9s						
HABR				pmax	pmax		
	comp=E,26nm,1.0s						
HABR				MLR	MLR		
	comp=Z,29nm,18.0s						
CN2	**Changchun**	**66.13**	**329**	⇑P	**P**	**08 20 46.9**	**+0.5**
CN2				epP	**pP**	**08 21 18.6**	**-0.5**
CN2				eS	**S**	**08 29 22.9**	**-1.3**
CN2				pmax	pmax		
	comp=Z,30nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
VNDA	**Vanda**	**66.42**	**181**	eP	**P**	**08 20 47.9**	**+0.1**
	comp=Z,34nm,1.1s						
VNDA	**Vanda**	**66.42**	**181**	P	**P**	**08 20 48.4**	**+0.6**
	comp=Z,22nm,1.0s,baz=359,slow=6.5,SNR=59						
SBA	**Scott Base**	**66.71**	**180**	eP	**P**	**08 20 50.8**	**+1.1**
SBA				pmax	pmax		
	comp=Z,49nm,0.9s						
SBA	**Scott Base**	**66.71**	**180**	eP	**P**	**08 20 50.8**	**+1.1**
	comp=Z,49nm,0.9s						
IPM	**Ipoh**	**66.83**	**280**	eP	**P**	**08 20 51.4**	**-0.1**
	comp=Z,17nm,0.8s						
IPM	**Ipoh**	**66.83**	**280**	P	**P**	**08 20 51.5**	**-0.1**
	comp=Z,32nm,1.1s,comp=Z,413nm						
KLR	**Kul'dur**	**67.38**	**336**	eP	P	08 20 51.1	-3.1
KLR				pmax	pmax		
	comp=Z,50nm,1.6s						
BJI	**Beijing**	**68.93**	**321**	P	**P**	**08 21 04.0**	**-0.1**
BJI				pP	**pP**	**08 21 35.8**	**-1.2**
BJI				sP	**sP**	**08 21 51.5**	**0.0**
BJI				S	**S**	**08 29 56.8**	**-1.0**
BJI				SS	**SS**	**08 34 29.2**	**+2.9**
BJI				pmax	pmax		
	comp=Z,26nm,0.9s						
BJI				LR	LR		
	comp=Z,77nm,36.2s						
GYA	**Guiyang**	**68.97**	**304**	P	**P**	**08 21 06.4**	**+1.6**
GYA				pP	**pP**	**08 21 39.7**	**+2.0**
GYA				sP	**sP**	**08 21 54.2**	**+2.0**
GYA				PP	**PP**	**08 23 41.0**	**+1.9**
GYA				ScP		08 25 18.9	
GYA				PcS		08 25 33.4	
GYA				S	**S**	**08 29 58.5**	**-0.6**
GYA				SKS	**SKiKP**	**08 30 47.0**	**+4.3**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
PBKT	**Sadao Pong**	**70.27**	**292**	P	**P**	**08 21 12.5**	**-0.3**
	comp=Z,10nm,0.9s						
XAN	**Xi'an**	**70.63**	**312**	P	**P**	**08 21 14.8**	**+0.1**
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						
XAN				pmax	pmax		
	comp=Z,19nm,5.0s						
KMI	**Kunming**	**71.68**	**301**	P	**P**	**08 21 22.7**	**+1.2**
KMI				pP	**pP**	**08 21 52.8**	**-1.8**
KMI				sP	**sP**	**08 22 09.7**	**+0.6**
KMI				PP	**PP**	**08 24 05.5**	**+2.9**
KMI				S	**S**	**08 30 32.8**	**+1.9**
KMI				sS	**sS**	**08 31 28.2**	**+0.2**
KMI				pmax	pmax		
	comp=Z,29nm,1.4s						
KMI				LR	LR		
	comp=N,61nm,16.5s						
KMI				LR	LR		
	comp=E,74nm,17.1s						
KMI				LR	LR		
	comp=Z,50nm,19.4s						
HHC	**Hu-ho-hao-te**	**72.29**	**319**	eP	**P**	**08 21 26.0**	**+1.4**
HHC				pP	**pP**	**08 22 00.5**	**+2.7**
HHC				sP	**sP**	**08 22 15.9**	**+3.7**
HHC				PP	**PP**	**08 24 10.4**	**+3.1**
HHC				S	**S**	**08 30 36.2**	**-0.8**
HHC				SKS	**SKSac**	**08 31 12.5**	**-4.3**
HHC				ScS	**SKKSac**	**08 31 15.6**	**-1.3**
HHC				sS	**sS**	**08 31 36.3**	**+2.1**
HHC				SS	**SS**	**08 35 19.0**	**+0.9**
HHC				pmax	pmax		
	comp=Z,43nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
HHC				LR	LR		
	comp=N,170nm,16.3s						
HHC				LR	LR		
	comp=E,400nm,15.3s						
HHC				LR	LR		
	comp=Z,200nm,15.2s						
CM31	**Chiang Mai Arr**	**72.70**	**293**	eP	**P**	**08 21 27.6**	**+0.2**
	comp=Z,15nm,0.9s						
CMAR	**Chiang Mai Arr**	**72.70**	**293**	P	**P**	**08 21 28.1**	**+0.7**
CMAR				pP	**pP**	**08 21 59.3**	**-1.3**
CMAR	**Chiang Mai Arr**	**72.70**	**293**	P	**P**	**08 21 28.1**	**+0.7**
	comp=Z,15nm,0.9s,baz=121,slow=4.7,SNR=56						
CMAR				pP	**pP**	**08 21 59.3**	**-1.3**
	comp=Z,8.1nm,1.1s,baz=111,slow=4.6,SNR=3.1						
CMAR				LR	LR	08 50 38.9	
	comp=Z,29nm,21.7s,baz=247,slow=33						
HIA	**Hailar**	**72.75**	**330**	eP	**P**	**08 21 26.5**	**-0.5**
	comp=Z,20nm,1.1s						
CHTO	**Chiang Mai**	**72.81**	**294**	eP	**P**	**08 21 27.8**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,26nm,1.3s						
CHTO	**Chiang Mai**	**72.81**	**294**	eP	**P**	**08 21 27.8**	**-0.2**
	comp=Z,26nm,1.3s						
CHTO	**Chiang Mai**	**72.81**	**294**	P	**P**	**08 21 28.6**	**+0.5**
	comp=Z,24nm,1.3s						
CD2	**Chengdu**	**73.14**	**307**	eP	**P**	**08 21 30.5**	**+0.7**
CD2				pP	**pP**	**08 22 03.9**	**+0.9**
CD2				sP	**sP**	**08 22 18.8**	**+1.4**
CD2				PP	**PP**	**08 24 17.3**	**+2.6**
CD2				S	**S**	**08 30 45.7**	**-1.2**
CD2				ScS	**SKSac**	**08 31 22.5**	**-1.0**
CD2				sS	**sS**	**08 31 43.9**	**-0.3**
CD2				SS	**SS**	**08 35 32.2**	**+0.9**
CD2				pmax	pmax		
	comp=Z,50nm,0.8s						
CD2				pmax	pmax		
	comp=Z,140nm,7.2s						
CD2				LR	LR		
	comp=N,130nm,14.3s						
CD2				pmax	pmax		
	comp=Z,110nm,10.7s						
LZH	**Lanzhou**	**75.27**	**312**	⇑P	**P**	**08 21 43.5**	**+1.3**
LZH				pP	**pP**	**08 22 13.5**	**-2.1**
LZH				sP	**sP**	**08 22 32.7**	**+2.8**
LZH				PP	**PP**	**08 24 36.0**	**+3.3**
LZH				eS	**S**	**08 31 10.0**	**-0.7**
LZH				sS	**sS**	**08 32 09.7**	**+1.4**
LZH				eSS	**SS**	**08 36 05.0**	**+1.3**
LZH				pmax	pmax		
	comp=Z,56nm,1.5s						
LZH				pmax	pmax		
	comp=Z,150nm,5.2s						
LZH				LR	LR		
	comp=N,410nm,12.0s						
LZH				LR	LR		
	comp=E,370nm,13.1s						

LZH LR LR
comp=Z,750nm,17.0s
CLNS Chul'man 75.88 338 *e*P **P 08 21 46.3 +1.3**
CLNS pmax pmax
comp=E,5.0nm,0.9s
CLNS pmax pmax
comp=Z,21nm,1.0s
CLNS pmax pmax
comp=N,10.0nm,1.0s
KDAK Kodiak Island 76.44 21 *e*P **P 08 21 47.8 -0.3**
comp=N,16nm,1.0s
KDAK Kodiak Island 76.44 21 P **P 08 21 48.1 0.0**
comp=N,15nm,0.9s,baz=194,slow=6.6,SNR=11
GAMB Gambell 76.55 10 *e*P **P 08 21 48.6 +0.1**
comp=N,37nm,0.7s
CIT Chita 77.54 330 *e*P **P 08 21 55.2 +0.7**
CIT *e* 08 22 29.6
YAK Yakutsk 78.35 343 *e*P **P 08 21 57.1 -1.5**
YAK pmax pmax
comp=Z,32nm,0.8s
YAK pmax pmax
comp=N,14nm,1.1s
YAK pmax pmax
comp=E,11nm,1.3s
RSO Redoubt South 78.40 19 *e*P **P 08 21 58.5 -0.7**
comp=E,52nm,0.9s
ULN Ulaanbaatar 78.73 324 *e*P **P 08 22 01.6 +0.3**
comp=E,40nm,1.2s
ULN Ulaanbaatar 78.73 324 P **P 08 22 02.5 +1.2**
QSPA South Pole Qui 78.87 180 *e*P **P 08 22 01.5 -0.3**
comp=E,22nm,0.9s
BILL Bilibino 78.96 360⇑*i*P **P 08 22 02.0 +0.1**
BILL *e* 08 22 37.8
BILL *e* 08 25 00.7
BILL pmax pmax
comp=Z,38nm,1.0s
BILL Bilibino 78.96 360 *e*P **P 08 22 01.9 +0.1**
comp=Z,43nm,0.9s
SONM Songino Array 79.09 324 P **P 08 22 03.5 +0.2**
SONM pP **pP 08 22 35.6 -1.3**
SONM Songino Array 79.09 324 P **P 08 22 03.5 +0.2**
comp=Z,14nm,1.0s,baz=135,slow=5.5,SNR=42
SONM pP **pP 08 22 35.6 -1.3**
comp=Z,2.5nm,0.8s,baz=136,slow=3.7,SNR=2.8
SEW Seward 79.25 21 *e*P **P 08 22 03.5 -0.1**
comp=Z,24nm,0.8s
GTA Gaotai 79.56 314⇑P **P 08 22 06.9 +1.0**
GTA pP **pP 08 22 40.2 +0.5**
GTA sP **sP 08 22 56.0 +2.0**
GTA S **S 08 31 55.9 -0.9**
GTA SKS **SKSac 08 32 05.1 -5.2**
GTA sS **sS 08 32 56.4 +1.4**
GTA SS **SS 08 37 09.2 +1.1**
GTA pmax pmax
comp=Z,30nm,1.2s
GTA pmax pmax
comp=Z,110nm,5.9s
GTA LR LR
comp=N,70nm,16.6s
GTA LR LR
comp=E,96nm,16.6s
GTA LR LR
comp=Z,75nm,17.6s
PMR Palmer 80.43 20 *e*P **P 08 22 09.7 -0.2**
PMR Palmer 80.43 20 *e*P **P 08 22 09.7 -0.2**
SML Sawmill 80.85 20 *e*P **P 08 22 11.8 -0.5**
SML pmax pmax
comp=Z,14nm,1.3s
SML Sawmill 80.85 20 *e*P **P 08 22 11.8 -0.5**
comp=Z,14nm,1.3s
DIV Divide 81.27 21 *e*P **P 08 22 14.4 -0.1**
comp=Z,52nm,0.9s
TRF Thorofare Moun 81.41 18 *e*P **P 08 22 13.6 -1.8**
comp=Z,17nm,0.7s
MCK McKinley 82.03 18 *e*P **P 08 22 17.8 -0.6**
MCK pmax pmax
comp=Z,34nm,0.9s
MCK McKinley 82.03 18 *e*P **P 08 22 17.8 -0.6**
comp=Z,34nm,0.9s
ZAK Zakamensk 82.12 325 *e*P **P 08 22 18.6 -0.7**
ZAK pmax pmax
comp=Z,15nm,1.0s
MCCM Marconi Confer 82.12 49 *e*P **P 08 22 20.0 +0.6**
comp=Z,27nm,0.8s
KCPM Cahto Peak 82.16 47 *e*P **P 08 22 20.9 +1.1**
comp=Z,18nm,0.9s
KIPM Iron Peak 82.28 47 *e*P **P 08 22 21.2 +0.8**
comp=Z,57nm,1.3s
HOPS Hopland 82.28 48 *e*P **P 08 22 20.7 +0.4**
comp=Z,60nm,1.3s
KHMM Horse Mountain 82.49 46 *e*P **P 08 22 22.6 +1.1**
comp=Z,39nm,1.0s
TLY Talaya 82.53 326*c i*P **P 08 22 21.2 -0.1**
TLY pmax pmax
comp=Z,18nm,0.8s
TLY Talaya 82.53 326 P **P 08 22 21.2 -0.1**
comp=Z,138nm,0.7s,SNR=6.3
KRMB Red Mountain 82.61 45 *e*P **P 08 22 22.9 +0.8**
comp=Z,13nm,1.2s
SAO San Andreas Ge 82.72 50 *e*P **P 08 22 23.1 +0.6**
SAO pmax pmax
comp=Z,23nm,1.1s
SAO San Andreas Ge 82.72 50 *e*P **P 08 22 23.1 +0.6**
comp=Z,23nm,1.1s
COLA College 83.18 18 *e*P **P 08 22 23.9 -0.3**
COLA pmax pmax
comp=Z,47nm,0.8s
COLA College 83.18 18 *e*P **P 08 22 23.9 -0.3**
comp=Z,47nm,0.8s
MENT Mentasta 83.20 21 *e*P **P 08 22 24.8 +0.3**
WDC Whiskeytown Da 83.23 47 *e*P **P 08 22 25.7 +0.6**
WDC pmax pmax
comp=Z,31nm,1.4s
WDC Whiskeytown Da 83.23 47 *e*P **P 08 22 25.7 +0.6**
comp=Z,31nm,1.4s
SMMC Simmler 83.35 52⇑P **P 08 22 27.1 +1.2**
baz=84
PKM Peak Mountain 83.36 53⇓P **P 08 22 27.2 +1.0**
baz=84,SNR=8.7
ILAR Eielson Array 83.40 18 P **P 08 22 24.8 -0.7**
ILAR pP **pP 08 22 56.9 -2.5**
ILAR PKKP **PKKPdf 08 40 40.8 +2.4**
ILAR Eielson Array 83.40 18 P **P 08 22 24.8 -0.7**
comp=Z,15nm,0.6s,baz=253,slow=4.9,SNR=197
ILAR pP **pP 08 22 56.9 -2.5**
comp=Z,4.6nm,0.8s,baz=228,slow=6.5,SNR=2.4
ILAR PKKP **PKKPdf 08 40 40.8 +2.4**
comp=Z,0.4nm,0.6s,baz=359,slow=2.4,SNR=7.1
ILAR LR LR 08 57 21.3
comp=Z,41nm,18.0s,baz=226,slow=34
YBH Yreka Blue Hor 83.52 45 *e*P **P 08 22 27.7 +1.0**
comp=Z,23nm,0.9s
YBH *e*pP **pP 08 23 01.0 +0.3**
YBH Yreka Blue Hor 83.52 45 LR LR 08 51 58.3
comp=Z,34nm,19.1s,baz=204,slow=30
DOT Dot Lake 83.55 20 *e*P **P 08 22 26.5 +0.2**
comp=Z,73nm,0.9s
HUMO Hull Mountain 83.66 45 *e*P **P 08 22 28.1 +0.7**
comp=Z,24nm,0.9s
BLG Laguna Peak 83.71 54⇑P **P 08 22 28.3 +0.6**
baz=84
CMB Columbia Colle 83.93 49 *e*P **P 08 22 29.0 +0.2**
CMB pmax pmax
comp=Z,19nm,0.9s
CMB Columbia Colle 83.93 49 *e*P **P 08 22 29.0 +0.2**
comp=Z,18nm,0.9s
MPOR Mary's Peak 83.96 43 P **P 08 22 30.1 +1.2**
CIS Catalina Islan 84.02 54⇑P **P 08 22 29.9 +0.5**
baz=84
WRAK Wrangell Islan 84.11 29 *e*P **P 08 22 29.5 +0.3**
comp=Z,29nm,0.8s
COR Corvallis 84.16 43 *e*P **P 08 22 31.1 +1.4**
COR pmax pmax
comp=Z,14nm,1.0s
COR Corvallis 84.16 43 *e*P **P 08 22 31.1 +1.4**
comp=Z,14nm,1.0s
LBCM Butte Creek Ri 84.17 47 P **P 08 22 30.8 +0.7**
ARVC Arvin 84.20 53⇑P **P 08 22 30.9 +0.7**
baz=84
COLD Coldfoot 84.22 16 *e*P **P 08 22 30.1 +0.6**
comp=Z,10nm,1.0s
VES Vestal, Richgr 84.23 52⇑P **P 08 22 30.6 +0.4**
baz=84,SNR=5.1
RCTC Rector, Farmer 84.25 51⇑P **P 08 22 30.9 +0.5**
baz=84
DECC Green Verdugo 84.33 54⇓P **P 08 22 31.2 +0.3**
baz=84
SKAG Skagway 84.35 26 *e*P **P 08 22 30.1 -0.2**
comp=Z,16nm,0.8s
MWC Mount Wilson 84.54 54 *e*P **P 08 22 32.6 +0.4**
MWC pmax pmax
comp=Z,54nm,1.5s
MWC Mount Wilson 84.54 54 *e*P **P 08 22 32.5 +0.4**
comp=Z,54nm,1.5s
BEKR Beckworth 84.56 48 *e*P **P 08 22 32.7 +0.6**
comp=Z,19nm,1.1s
ISA Isabella 84.64 52 *e*P **P 08 22 33.0 +0.5**
ISA pmax pmax
comp=Z,25nm,1.3s
ISA Isabella 84.64 52 *e*P **P 08 22 33.0 +0.5**
comp=Z,25nm,1.3s
ISA Isabella 84.64 52⇑P **P 08 22 33.2 +0.7**
baz=85,SNR=15
EDW2 Edwards Air Fo 84.79 53⇑P **P 08 22 34.1 +0.8**
baz=85,SNR=21
WCN Washoe City 84.81 48 *e*P **P 08 22 34.3 +0.9**
WCN pmax pmax
comp=Z,12nm,0.9s
WCN Washoe City 84.81 48 *e*P **P 08 22 34.3 +0.9**
comp=Z,12nm,0.9s
BFSC Mount Baldy Ra 84.86 54⇑P **P 08 22 34.0 +0.3**
baz=85,SNR=9.3
MAW Mawson 84.87 202 P **P 08 22 33.4 +0.5**
MAW Mawson 84.87 202 P **P 08 22 33.4 +0.5**
comp=Z,9.3nm,0.9s,baz=109,slow=5.6,SNR=16
109C Camp Elliot, M 84.91 55⇓P **P 08 22 34.5 +0.7**
baz=85
MLAC Mammoth Lakes 84.97 50⇓P **P 08 22 35.2 +0.9**
baz=85
MURC Murrieta 85.04 55⇑P **P 08 22 35.1 +0.6**
baz=85
CWC Cottonwood Cre 85.18 52⇓P **P 08 22 35.8 +0.6**
baz=85,SNR=19
LRMC Laurel Mountai 85.20 53⇑P **P 08 22 36.2 +0.8**
baz=85,SNR=8.4
BAR Barrett 85.20 56 *e*P **P 08 22 35.8 +0.5**
comp=Z,4.9nm,1.1s
EGAK Eagle 85.25 20 *e*P **P 08 22 35.0 +0.2**
BBRC Big Bear Solar 85.45 54⇓P **P 08 22 37.3 +0.5**
baz=86
MONP Monument Peak 85.47 55⇑P **P 08 22 37.7 +0.9**
baz=86,SNR=6.6
VBEM Beaver Butte 85.47 43 P **P 08 22 37.0 +0.6**
MPMC Manual Prospec 85.53 52⇑P **P 08 22 37.8 +0.8**
baz=86,SNR=18
RRX Edison Barstow 85.57 53⇑P **P 08 22 37.8 +0.7**
baz=86
NVAR Mina Array Bea 85.61 50 P **P 08 22 38.2 +0.8**
NVAR pP **pP 08 23 10.4 -1.2**
NVAR PKKPbc **PKKPbc 08 40 40.1 -1.0**
NVAR Mina Array Bea 85.61 50 P **P 08 22 38.2 +0.8**
comp=Z,10nm,0.8s,baz=242,slow=7.7,SNR=89
NVAR pP **pP 08 23 10.4 -1.2**
comp=Z,5.1nm,0.8s,baz=235,slow=7.6,SNR=4.8
NVAR PKKPbc **PKKPbc 08 40 40.1 -1.0**
comp=Z,0.6nm,0.7s,baz=90,slow=2.9,SNR=6.2
NVAR LR LR 08 51 12.0
comp=Z,66nm,21.2s,baz=133,slow=29
BLN Blyn Mountain 85.64 39 P **P 08 22 38.5 +1.4**
PFO Pinyon Flat Ob 85.64 55 P **P 08 22 38.0 +0.5**
comp=Z,63nm,1.1s,SNR=5.8
PFO Pinyon Flat Ob 85.64 55 *e*P **P 08 22 38.1 +0.5**
comp=Z,17nm,1.1s
PFO Pinyon Flat Ob 85.64 55⇓P **P 08 22 38.1 +0.5**
baz=86,SNR=7.7
NV11 Mina Array Sit 85.73 50 *e*P **P 08 22 38.1 +0.2**
GSC Goldstone 85.84 53 *e*P **P 08 22 39.0 +0.5**
GSC pmax pmax
comp=Z,17nm,1.3s
GSC Goldstone 85.84 53 *e*P **P 08 22 39.0 +0.5**
comp=Z,17nm,1.3s
GSC Goldstone 85.84 53⇑P **P 08 22 39.2 +0.7**
baz=86,SNR=9.6
GRAC Grapevine Rang 85.89 51⇓P **P 08 22 39.6 +0.9**
baz=86,SNR=9.1
LON Longmire 85.92 41 *e*P **P 08 22 38.3 -0.3**
LON pmax pmax
comp=Z,12nm,1.3s
LON Longmire 85.92 41 *e*P **P 08 22 38.3 -0.3**
comp=Z,12nm,1.3s
VIPM Ingram Point 85.92 43 P **P 08 22 39.4 +0.6**
VIPM Ingram Point 85.92 43 P **P 08 22 39.4 +0.6**
SWSC Sam W. Stewart 85.98 55⇓P **P 08 22 39.9 +0.8**
baz=86
HEC Hector,Ludlow 86.08 54⇑P **P 08 22 40.2 +0.6**
baz=86,SNR=6.3
BELC Belle Mtn. Jos 86.11 54⇓P **P 08 22 40.8 +0.9**
baz=86,SNR=27
FURC Furnace Creek, 86.13 52⇑P **P 08 22 40.5 +0.7**
baz=86,SNR=14
DLBC Dease Lake 86.20 28 *e*P **P 08 22 39.7 0.0**
DLBC Dease Lake 86.20 28 LR LR 08 52 21.0
comp=Z,46nm,21.8s,baz=131,slow=29
TIXI Tiksi 86.29 349⇓*i*P **P 08 22 39.4 -0.3**
TIXI pmax pmax
comp=Z,12nm,1.0s
SHOC Shoshone 86.42 53⇑P **P 08 22 41.8 +0.5**
baz=87,SNR=6.9
BC3 Big Chuckawall 86.45 55⇑P **P 08 22 42.7 +1.1**
baz=87,SNR=11
TUQ Turquoise Moun 86.57 53⇓P **P 08 22 42.8 +0.7**
baz=87
GMRC Granite Mounta 86.60 54⇑P **P 08 22 42.9 +0.7**
baz=87,SNR=14
WVOR Wild Horse Val 86.61 46 *e*P **P 08 22 42.7 +0.6**
WVOR pmax pmax
comp=Z,25nm,1.2s
WVOR Wild Horse Val 86.61 46 *e*P **P 08 22 42.7 +0.6**
comp=Z,25nm,1.2s
IRM Iron Mountain 86.83 54⇓P **P 08 22 44.2 +0.9**
baz=87,SNR=17
LDFC Landfair 87.11 54 *e*P **P 08 22 45.6 +0.9**
comp=Z,103nm,1.4s
Y12C Blythe 87.23 55⇑P **P 08 22 46.3 +1.1**
baz=87,SNR=9.2
HAWA Hanford 87.27 42 *e*P **P 08 22 44.6 -0.5**
comp=Z,16nm,0.9s
REDWA Red Mountain 87.30 42 P **P 08 22 46.4 +1.2**
NEE2 Needles Airpor 87.42 54⇑P **P 08 22 46.9 +0.9**
baz=88
WTV Waterville 87.43 40 P **P 08 22 46.4 +0.5**
113A Mohawk Valley, 87.59 56⇓P **P 08 22 48.0 +1.1**
baz=88
R11A Troy Canyon, C 87.64 50⇓P **P 08 22 47.8 +0.6**
baz=88,SNR=23
PDMCI Parker Dam,Lak 87.68 55⇓P **P 08 22 48.3 +1.0**
baz=88,SNR=20
W13A Hualapai Mount 88.09 54⇓P **P 08 22 50.3 +0.8**
baz=88,SNR=26
BMO Blue Mountains 88.27 44 *e*P **P 08 22 50.2 +0.2**
BMO pmax pmax
comp=Z,51nm,1.8s
BMO Blue Mountains 88.27 44 *e*P **P 08 22 50.2 +0.2**
comp=Z,51nm,1.8s
Z14A Wintersburg 88.40 56⇓P **P 08 22 52.1 +1.3**
baz=88
Y14A Wickenburg 88.50 55⇓P **P 08 22 52.2 +0.9**
baz=89
ELK Elko 88.55 48 *e*P **P 08 22 52.3 +0.7**
comp=Z,13nm,1.2s
MFID Camas Ranch 88.87 45 *e*P **P 08 22 53.4 +0.5**
comp=Z,12nm,1.1s
MFID Camas Ranch 88.87 45⇓P **P 08 22 53.5 +0.6**
baz=89
CCUT Cedar City 89.12 52 *e*P **P 08 22 55.6 +1.2**
comp=Z,21nm,1.0s
ARUT Antelope Range 89.12 51 *e*P **P 08 22 55.3 +1.0**
ARUT pmax pmax
comp=Z,17nm,0.9s
ARUT Antelope Range 89.12 51 *e*P **P 08 22 55.2 +1.0**
comp=Z,17nm,0.9s
NEW Newport 89.41 41 *e*P **P 08 22 55.3 +0.1**
comp=Z,2.5nm,0.6s
NEW Newport 89.41 41⇑P **P 08 22 55.2 +0.1**
baz=90,SNR=10
I12A Atlanta 89.46 45⇑P **P 08 22 56.6 +0.9**
baz=90,SNR=15
WMQ Urumqi 89.59 315 P **P 08 22 55.9 -0.2**
WMQ pP **pP 08 23 30.0 -0.6**
WMQ pmax pmax
comp=Z,20nm,1.0s
WMQ pmax pmax
comp=Z,170nm,5.0s
U15A North Rim 89.67 53⇓P **P 08 22 58.4 +1.4**
baz=90,SNR=57
G12A Big Creek, Yel 89.70 44⇑P **P 08 22 57.2 +0.4**
baz=90
INK Inuvik 89.78 19 LR LR 09 02 54.8
comp=Z,54nm,18.9s,baz=249,slow=35
H12A Diamond D Ranc 89.86 45⇑P **P 08 22 58.0 +0.5**
baz=90,SNR=16
X16A Lo Mia Camp, P 89.87 55⇓P **P 08 22 59.3 +1.4**
baz=90
E12A Beaver Dam Sad 89.89 43⇓P **P 08 22 57.6 0.0**
baz=90,SNR=21
HLID Hailey 89.90 46 *e*P **P 08 22 58.5 +0.7**
comp=Z,12nm,0.9s
HLID Hailey 89.90 46⇑P **P 08 22 58.7 +0.9**
baz=90,SNR=21
F12A Elk City 89.92 43⇑P **P 08 22 57.9 +0.1**
baz=90,SNR=40
TUC Tucson 89.92 57 *e*P **P 08 22 58.9 +0.9**
TUC pmax pmax
comp=Z,17nm,1.3s
TUC Tucson 89.92 57 *e*P **P 08 22 58.9 +0.9**
comp=Z,17nm,1.3s
WUAZ Wupatki 90.18 54 *e*P **P 08 23 00.1 +0.8**
comp=Z,11nm,0.8s
WUAZ Wupatki 90.18 54⇑P **P 08 23 00.5 +1.2**
baz=90,SNR=14
DUG Dugway 90.19 49 *e*P **P 08 22 59.7 +0.5**
DUG pmax pmax
comp=Z,12nm,0.8s
DUG Dugway 90.19 49 *e*P **P 08 22 59.7 +0.5**
comp=Z,12nm,0.8s
DUG Dugway 90.19 49⇓P **P 08 22 60.0 +0.8**
baz=90,SNR=21
D12A Red Ives Fores 90.21 42⇑P **P 08 22 59.3 +0.3**
baz=90
MVU Marysvale 90.23 51 *e*P **P 08 23 01.0 +1.4**
comp=Z,15nm,0.8s
MVU *e*pP **pP 08 23 36.1 +2.1**
C12B Naegeli Ranch, 90.31 41⇓P **P 08 22 59.8 +0.4**
baz=90
B12A Libby 90.45 41⇑P **P 08 23 00.7 +0.7**
baz=91
A12A Yaak River Ran 90.54 40⇓P **P 08 23 01.2 +0.7**
baz=91
F13A Darby 90.55 43⇑P **P 08 23 01.0 +0.3**
baz=91,SNR=42
HVU Hansel Valley 90.61 48 *e*P **P 08 23 01.8 +0.7**
HVU *e**PP **pP 08 23 35.4 -0.2**
HVU pmax pmax
comp=Z,29nm,1.0s
HVU Hansel Valley 90.61 48 *e*P **P 08 23 01.8 +0.7**
comp=Z,29nm,1.0s
HVU *e*pP **pP 08 23 35.4 -0.2**
I14A Mackay 90.67 45⇑P **P 08 23 02.5 +1.1**
baz=91,SNR=38
BSMT Basoop Peak 90.80 41 *e*P **P 08 23 02.0 +0.2**
comp=Z,15nm,0.8s
D13A Huson 90.81 42⇑P **P 08 23 01.4 -0.3**
baz=91,SNR=10
E13A Victor 90.82 43⇑P **P 08 23 01.6 -0.2**
baz=91,SNR=14
C13A Hot Springs 90.89 42⇑P **P 08 23 02.2 0.0**
baz=91,SNR=11
319A Douglas 90.96 58⇓P **P 08 23 04.4 +1.5**
baz=91,SNR=9.7
G14A Jackson 91.00 44⇑P **P 08 23 03.5 +0.6**
baz=91
MPU Maple Canyon 91.03 50 *e*P **P 08 23 03.3 +0.2**
comp=Z,22nm,1.4s
MSO Missoula 91.08 43 *e*P **P 08 23 03.0 -0.1**
comp=Z,3.9nm,0.9s
MSO Missoula 91.08 43⇑P **P 08 23 02.8 -0.3**
baz=91,SNR=7.1
X18A Snowflke 91.09 55⇓P **P 08 23 04.7 +1.1**
baz=91,SNR=12
Q16A Castle Valley 91.12 51⇑P **P 08 23 04.9 +1.3**
baz=91,SNR=5.6
B13A Whitefish 91.14 41⇑P **P 08 23 03.5 +0.2**
baz=91,SNR=15
F14A Wisdom 91.20 44⇑P **P 08 23 03.9 +0.1**
baz=91,SNR=12
HYB Hyderabad 91.22 287 *i*P **P 08 23 03.0 -1.3**
SWMT Swartz Lake 91.22 42 *e*P **P 08 23 03.2 -0.5**
comp=Z,5.7nm,1.0s
E14A Clinton 91.28 43⇑P **P 08 23 04.3 +0.2**
baz=91
JLU Jordanelle 91.30 49 *e*P **P 08 23 05.0 +0.5**
JLU *e*pP **pP 08 23 38.0 -0.9**
MCMT McKenzie Canyo 91.31 45 *e*P **P 08 23 04.8 +0.4**
comp=Z,2.9nm,0.8s
A13A Flathead Natio 91.33 40⇓P **P 08 23 04.9 +0.7**
baz=92
W18A Petrified Fore 91.39 55⇑P **P 08 23 05.8 +0.9**
baz=92
D14A Greenough 91.44 42⇓P **P 08 23 04.4 -0.4**
baz=92,SNR=15
HWUT Hardware Ranch 91.45 48 *e*P **P 08 23 05.3 +0.3**
comp=Z,9.5nm,0.8s
C14A Swan Lake 91.45 42⇓P **P 08 23 04.7 0.0**
baz=92
SLMT Seeley Lake 91.48 42 *e*P **P 08 23 04.0 -1.0**
comp=Z,3.1nm,0.7s
CHMT Chamberlain Mo 91.56 43 *e*P **P 08 23 05.0 -0.4**
comp=Z,12nm,1.2s
320A Kipp Ranch, An 91.58 59⇓P **P 08 23 07.3 +1.5**
baz=92,SNR=10
DLMT Dillon 91.62 44 *e*P **P 08 23 05.9 +0.2**
comp=Z,20nm,0.9s
SRU San Rafael 91.66 51⇓P **P 08 23 06.5 +0.5**
baz=92
WALA Waterton Lakes 91.68 40 *e*P **P 08 23 06.0 +0.2**
comp=Z,0.6nm,1.1s
220A Playas Peak, P 91.70 58⇓P **P 08 23 07.1 +0.7**
baz=92
S18A Hurst Farm, Bl 91.75 52⇑P **P 08 23 07.2 +0.6**
baz=92,SNR=10.0
F15A Butte 91.81 44⇑P **P 08 23 07.0 +0.4**
baz=92,SNR=27
LRM Limekiln Ridge 91.83 44 *e*P **P 08 23 06.9 +0.1**
comp=Z,124nm,1.1s
LRM *e*pP **pP 08 23 40.2 -1.0**
E15A Deer Lodge 91.85 43⇑P **P 08 23 07.1 +0.4**
baz=92,SNR=27
SYO Syowa Base 91.88 197⇑*e*X **P 08 23 03.6 -2.6**
Z20A Nine Sixteen R 91.90 57⇓P **P 08 23 08.4 +1.1**
baz=92,SNR=6.2
B14A Marquette Ranc 91.91 41⇑P **P 08 23 06.9 0.0**
baz=92,SNR=29
A14A Double T Ranch 91.97 41⇓P **P 08 23 07.5 +0.4**
baz=92,SNR=11
RRI2 Red Ridge 92.03 46 *e*P **P 08 23 08.3 +0.5**
comp=Z,4.1nm,0.6s
RRI2 *e*pP **pP 08 23 41.5 -0.8**
D15A Lincoln 92.08 43⇑P **P 08 23 07.9 +0.1**
baz=92,SNR=11
M17A Scullys Gap (B 92.08 48⇓P **P 08 23 08.0 0.0**
baz=92
C15A Salmond Ranch, 92.20 42⇑P **P 08 23 08.5 +0.2**
baz=92,SNR=48
Y20A Horse Springs, 92.24 56⇑P **P 08 23 10.0 +1.1**
baz=92,SNR=6.1
X20A Quemado 92.27 55⇓P **P 08 23 10.2 +1.2**
baz=92,SNR=8.4
QLMT Earthquake Lak 92.30 45 P **P 08 23 09.6 +0.7**
TPAW Teton Pass 92.33 46 *e*P **P 08 23 09.3 +0.1**
comp=Z,3.3nm,0.8s
221A Mesquite Ranch 92.35 58⇓P **P 08 23 10.4 +1.1**
baz=92
BOZ Bozeman (W) 92.35 44 *e*P **P 08 23 09.2 +0.2**
BOZ *e**PP **pP 08 23 42.9 -0.6**
BOZ pmax pmax
comp=Z,10.0nm,1.2s
BOZ Bozeman (W) 92.35 44 *e*P **P 08 23 09.2 +0.2**
comp=Z,10nm,1.2s
BOZ *e*pP **pP 08 23 42.9 -0.6**
B15A Bradely Ranch, 92.36 41⇓P **P 08 23 08.7 -0.3**
baz=92,SNR=15
F16A Kennard Place, 92.38 44⇑P **P 08 23 10.0 +0.8**
baz=92,SNR=21
W20A Ramah 92.39 55⇓P **P 08 23 10.6 +1.0**
baz=92,SNR=6.8
H16A Russell Place, 92.39 45⇑P **P 08 23 10.6 +1.2**
baz=92,SNR=11
A15A Johnson Ranch, 92.41 41⇑P **P 08 23 09.2 0.0**
baz=92,SNR=19
IMW Indian Meadow 92.43 46 *e*P **P 08 23 10.1 +0.4**

IMW *e*pP **pP** 08 23 41.7 -2.4
comp=Z,7.3nm,1.0s

121A Cookes Peak, D 92.45 57 ⇑P **P** 08 23 10.9 +1.1
baz=93,SNR=11

SNOW Snow King Moun 92.46 46 *e*P **P** 08 23 09.9 +0.2
comp=Z,6.4nm,0.9s

E16A East Helena 92.52 43 ⇓P **P** 08 23 10.4 +0.6
baz=93,SNR=5.5

MOOW Moose Ponds 92.53 46 *e*P **P** 08 23 09.9 -0.1
comp=Z,3.4nm,0.9s

V20A Brimhall 92.55 54 ⇑P **P** 08 23 10.7 +0.4
baz=93

LOHW Long Hollow 92.60 46 *e*P **P** 08 23 10.1 -0.3
comp=Z,2.2nm,0.7s

LOHW *e*pP **pP** 08 23 43.6 -1.2

U20A Newcomb 92.63 54 ⇓P **P** 08 23 11.2 +0.6
baz=93

I17A Pilgrim Ck. 92.69 46 ⇓P **P** 08 23 11.8 +1.0
baz=93

Z21A St. Cloud Mine 92.69 57 ⇑P **P** 08 23 12.2 +1.2
baz=93,SNR=8.2

D16A Dana Ranch, Ca 92.72 43 ⇓P **P** 08 23 11.2 +0.5
baz=93,SNR=12

PV04 Paradox Valley 92.74 52 *e*P **P** 08 23 11.5 +0.4

C16A Fuhringer Ranc 92.77 42 ⇓P **P** 08 23 11.0 +0.1
baz=93,SNR=15

H17A Grant Village 92.79 45 ⇑P **P** 08 23 12.9 +1.7
baz=93,SNR=6.9

X21A Alamocita Cree 92.83 56 ⇑P **P** 08 23 12.8 +1.2
baz=93

Y21A Point of Rocks 92.83 56 ⇑P **P** 08 23 12.8 +1.2
baz=93,SNR=6.4

G17A Pierce Place, 92.88 45 ⇑P **P** 08 23 12.7 +1.2
baz=93

222A Williams Famil 92.93 58 ⇓P **P** 08 23 12.9 +0.9
baz=93

B16A M & M Farms, S 92.94 41 ⇓P **P** 08 23 11.5 -0.1
baz=93,SNR=11

P19A Cripple Cowboy 92.94 50 ⇓P **P** 08 23 12.5 +0.5
baz=93,SNR=6.0

PV01 Paradox Valley 92.94 52 *e*P **P** 08 23 12.3 +0.2
comp=Z,315nm,0.8s

O19A Miners Draw (B 92.97 50 ⇓P **P** 08 23 12.3 +0.2
baz=93

S20A Disappointment 93.05 52 ⇑P **P** 08 23 13.4 +0.8
baz=93

E17A Martinsdale 93.06 43 ⇑P **P** 08 23 12.9 +0.6
baz=93,SNR=7.3

F17A Fitzpatrick Pl 93.07 44 ⇓P **P** 08 23 13.5 +1.1
baz=93,SNR=14

R20A Redvale 93.10 52 ⇓P **P** 08 23 13.2 +0.4
baz=93,SNR=9.2

BW06 Boulder Array 93.16 47 *e*P **P** 08 23 12.8 -0.2
comp=Z,4.8nm,1.0s

BW06 *e*pP **pP** 08 23 45.9 -1.6

PDAR Pinedale Array 93.16 47 P **P** 08 23 12.8 -0.2

PDAR PKKP **PKKPdf** 08 40 19.9 -0.9

PDAR Pinedale Array 93.16 47 P **P** 08 23 12.8 -0.2
comp=Z,4.4nm,0.9s,baz=228,slow=2.3,SNR=28

PDAR PKKP **PKKPdf** 08 40 19.9 -0.9
comp=Z,1.0nm,0.7s,baz=96,slow=5.5,SNR=11

PDAR LR LR 09 01 29.5
comp=Z,28nm,19.1s,baz=90,slow=33

L19A Farson 93.17 48 ⇓P **P** 08 23 13.4 +0.4
baz=93

I18A Diamond G Ranc 93.18 46 ⇓P **P** 08 23 13.5 +0.4
baz=93,SNR=6.5

M19A Rock Springs 93.19 48 ⇑P **P** 08 23 13.5 +0.3
baz=93

Z22A Elephant Butte 93.26 57 ⇓P **P** 08 23 14.2 +0.6
baz=93,SNR=9.8

U21A Nageezi 93.32 54 ⇑P **P** 08 23 14.6 +0.8
baz=93,SNR=34

Q20A Ridgley Place, 93.32 51 ⇑P **P** 08 23 13.9 +0.2
baz=93,SNR=5.8

D17A Six Diamond Ra 93.32 43 ⇓P **P** 08 23 14.0 +0.5
baz=93,SNR=7.6

P20A De Beque 93.36 51 ⇑P **P** 08 23 14.5 +0.6
baz=94,SNR=8.1

C17A Wharram Farm, 93.38 42 ⇑P **P** 08 23 13.9 +0.3
baz=94,SNR=21

S21A Coal Bank Pass 93.45 52 ⇑P **P** 08 23 15.3 +0.8
baz=94,SNR=12

B17A L&G Farms, Che 93.50 42 ⇓P **P** 08 23 14.3 +0.1
baz=94,SNR=21

T21A Navajo Lake 93.53 53 ⇓P **P** 08 23 15.6 +0.8
baz=94

O20A White River Ci 93.60 50 ⇓P **P** 08 23 15.4 +0.4
baz=94

J19A Crowheart 93.63 47 ⇓P **P** 08 23 15.2 +0.1
baz=94

K19A Absolon Red Bu 93.69 47 ⇓P **P** 08 23 15.1 -0.2
baz=94,SNR=8.6

G18A Lazy EL Ranch, 93.69 45 ⇓P **P** 08 23 15.9 +0.7
baz=94

A17A Triple J Farms 93.71 41 ⇑P **P** 08 23 15.5 +0.4
baz=94,SNR=23

BNM Barren Site 93.71 56 *e*P **P** 08 23 15.9 +0.2
comp=Z,3.9nm,1.0s

F18A Big Timber 93.71 44 ⇓P **P** 08 23 16.3 +1.0
baz=94,SNR=5.3

E18A Harlowton 93.72 43 ⇓P **P** 08 23 16.4 +1.1
baz=94,SNR=13

N20A Spence Gulch, 93.72 49 ⇓P **P** 08 23 16.3 +0.7
baz=94

GCMT Greycliff 93.72 44 *e*P **P** 08 23 16.3 +1.0
comp=Z,2.5nm,0.9s

123A Bell Site, Whi 93.73 58 ⇓P **P** 08 23 16.2 +0.5
baz=94

R21A Cimarron 93.78 52 ⇑P **P** 08 23 17.0 +1.0
baz=94

I19A Meeteetse 93.83 46 ⇑P **P** 08 23 16.6 +0.6
baz=94

Q21A Lamborn Mesa, 93.85 51 ⇓P **P** 08 23 16.7 +0.5
baz=94,SNR=5.7

Z23A Rita Site, Whi 93.87 57 ⇓P **P** 08 23 17.0 +0.7
baz=94

L20A Wamsutter 93.89 48 ⇓P **P** 08 23 16.8 +0.4
baz=94

M20A Sweetwater, Wa 93.90 49 ⇑P **P** 08 23 17.2 +0.8
baz=94

U22A Llaves 93.94 54 ⇑P **P** 08 23 17.4 +0.7
baz=94

H19A Powell 93.96 45 ⇑P **P** 08 23 17.4 +0.9
baz=94,SNR=6.6

ZAA0 Zalesovo Array 93.98 324 P **P** 08 23 14.7 -1.4

ZALV Zalesovo Beam 93.98 324 *i* P **P** 08 23 15.3 -0.8

ZALV pmax pmax
comp=Z,15nm,0.9s

ZALV Zalesovo Beam 93.98 324 P **P** 08 23 15.0 -1.1

ZALV Zalesovo Beam 93.98 324 P **P** 08 23 15.0 -1.1
comp=Z,15nm,0.9s,baz=110,slow=4.5,SNR=46

ZALV LR LR 09 04 11.8
comp=Z,24nm,18.6s,baz=340,slow=34

ANMO Albuquerque 94.00 55 *e*P **P** 08 23 16.7 -0.2
comp=Z,1.5nm,0.7s

ANMO Albuquerque 94.00 55 LR LR 08 59 35.7
comp=Z,41nm,21.0s,baz=298,slow=32

MKAR Makanchi Array 94.00 317 *i* P **P** 08 23 16.3 -0.2

MKAR pmax pmax
comp=Z,18nm,0.7s

MKAR Makanchi Array 94.00 317 P **P** 08 23 16.2 -0.2

MKAR pP **pP** 08 23 47.3 -3.6

MKAR PKKP **PKKPdf** 08 40 17.2 -2.0

MKAR Makanchi Array 94.00 317 P **P** 08 23 16.2 -0.2
comp=Z,18nm,0.8s,baz=95,slow=6.2,SNR=199

MKAR pP **pP** 08 23 47.3 -3.6
comp=Z,4.4nm,0.9s,baz=90,slow=6.0,SNR=3.6

MKAR PKKP **PKKPdf** 08 40 17.2 -2.0
comp=Z,2.3nm,0.7s,baz=282,slow=3.4,SNR=7.2

K20A Yellowstone Ra 94.02 47 ⇓P **P** 08 23 17.0 +0.1
baz=94

T22A Edith 94.03 53 ⇑P **P** 08 23 17.6 +0.5
baz=94

P21A Newcastle 94.08 51 ⇑P **P** 08 23 17.7 +0.5
baz=94

EGMT Eagleton 94.12 42 *e*P **P** 08 23 16.9 -0.1
comp=Z,15nm,1.0s

EGMT Eagleton 94.12 42 ⇑P **P** 08 23 17.4 +0.4
baz=94,SNR=11

Y23A Lovelace Mesa, 94.14 56 ⇓P **P** 08 23 17.4 -0.2
baz=94

X23A Hourglass Bar 94.15 56 ⇑P **P** 08 23 18.2 +0.5
baz=94

324A Moseley Ranch, 94.16 59 ⇓P **P** 08 23 17.8 +0.1
baz=94

B18A Beardsley Farm 94.19 42 ⇑P **P** 08 23 17.6 +0.3
baz=94,SNR=8.1

S22A 4UR Ranch, Cre 94.22 53 ⇑P **P** 08 23 18.8 +0.7
baz=94,SNR=8.1

F19A Roth Farm, Mol 94.23 44 ⇑P **P** 08 23 18.2 +0.6
baz=94,SNR=7.1

224A Cornudas Mount 94.24 58 ⇓P **P** 08 23 18.6 +0.5
baz=94

A18A Metzger Ranch, 94.25 41 ⇑P **P** 08 23 17.9 +0.3
baz=94

N21A Black Mountain 94.26 49 ⇓P **P** 08 23 18.8 +0.7
baz=94

W23A Werner Place, 94.28 55 ⇓P **P** 08 23 18.7 +0.4
baz=94

MNTX Cornudas Mount 94.29 59 *e*P **P** 08 23 18.3 +0.2
comp=Z,2.9nm,1.0s

J20A Shoshoni 94.34 47 ⇓P **P** 08 23 19.0 +0.8
baz=94

V23A Ortiz Mt. (NFS 94.36 55 ⇑P **P** 08 23 19.5 +0.9
baz=94

Q22A Crested Butte, 94.36 51 ⇑P **P** 08 23 19.3 +0.6
baz=94,SNR=11

R22A Saguache, Gunn 94.37 52 ⇓P **P** 08 23 19.5 +0.8
baz=94

SMCO Snowmass 94.37 51 *e*P **P** 08 23 19.3 +0.4
comp=Z,3.8nm,1.0s

124A Stringfield Ra 94.41 58 ⇑P **P** 08 23 19.7 +0.8
baz=94

I20A Worland 94.42 46 ⇓P **P** 08 23 19.0 +0.4
baz=94

E19A Rath Farm, Rou 94.46 44 ⇑P **P** 08 23 19.4 +0.8
baz=95,SNR=8.6

425A Indio Mountain 94.46 60 ⇓P **P** 08 23 19.5 +0.4
baz=95

U23A El Rito 94.46 54 ⇓P **P** 08 23 19.6 +0.5
baz=95,SNR=7.9

D19A Cripps Ranch, 94.53 43 ⇑P **P** 08 23 19.7 +0.7
baz=95,SNR=15

C19A Slack Wire Ran 94.53 42 ⇑P **P** 08 23 19.6 +0.6
baz=95,SNR=12

M21A Separation Pea 94.53 49 ⇑P **P** 08 23 19.2 -0.1
baz=95

325A Bean Ranch, Si 94.58 59 ⇑P **P** 08 23 19.5 -0.2
baz=95

Z24A Sheeppen Canyo 94.59 57 ⇓P **P** 08 23 21.2 +1.5
baz=95

L21A Rawlins 94.59 48 ⇓P **P** 08 23 20.6 +1.0
baz=95

G20A Bridger 94.61 45 ⇑P **P** 08 23 20.1 +0.7
baz=95

P22A Eagle 94.61 51 ⇑P **P** 08 23 20.5 +0.8
baz=95

H20A Greybull 94.62 46 ⇓P **P** 08 23 19.9 +0.5
baz=95

Y24A Capitan 94.64 56 ⇑P **P** 08 23 21.1 +1.2
baz=95

T23A Casias Ranch, 94.71 53 ⇓P **P** 08 23 20.8 +0.6
baz=95

B19A Brinkman Farms 94.74 42 ⇑P **P** 08 23 20.2 +0.3
baz=95,SNR=13

YKA Yellowknife Ar 94.77 27 P **P** 08 23 18.1 -1.4

YKA PKiKP **PKiKP** 08 28 00.7 -0.4

YKA PKKP PKKPdf 08 40 08.8 -9.4

YKA Yellowknife Ar 94.77 27 P **P** 08 23 18.1 -1.4
comp=Z,4.9nm,0.5s,baz=258,slow=4.6,SNR=158

YKA PKiKP **PKiKP** 08 28 00.6 -0.4
comp=Z,0.2nm,0.5s,baz=254,slow=1.2,SNR=6.5

YKA PKKP PKKPdf 08 40 08.8 -9.4
comp=Z,0.1nm,0.7s,baz=80,slow=2.8,SNR=4.1

YKW3 Yellowknife Ar 94.78 27 P **P** 08 23 18.0 -1.6

J21A Lysite 94.80 47 ⇑P **P** 08 23 20.7 +0.3
baz=95,SNR=5.1

K21A Alcova 94.81 48 ⇓P **P** 08 23 20.9 +0.4
baz=95

225A Deer Hill, Car 94.83 58 ⇓P **P** 08 23 21.1 +0.3
baz=95

O22A Krummling 94.88 50 ⇑P **P** 08 23 21.3 +0.3
baz=95,SNR=5.6

W24A Lazy 6 Ranch, 94.89 55 ⇑P **P** 08 23 21.3 +0.2
baz=95

E20A Meyer Farm, Mu 94.91 44 ⇑P **P** 08 23 21.7 +1.0
baz=95,SNR=9.3

A19A Klindworth Far 94.97 41 ⇑P **P** 08 23 21.0 +0.1
baz=95,SNR=7.0

626A Big Bend Ranch 94.97 61 ⇑P **P** 08 23 21.8 +0.4
baz=95

I21A Big Trails, Te 94.99 46 ⇑P **P** 08 23 21.7 +0.5
baz=95

D20A Manuel Ranch, 95.02 43 ⇓P **P** 08 23 21.9 +0.8
baz=95,SNR=12

125A Gardner Draw, 95.06 58 ⇓P **P** 08 23 22.0 +0.2
baz=95

V24A Rampart Ranch, 95.09 55 ⇑P **P** 08 23 22.3 +0.3
baz=95

526A Mar Lane Ranc 95.10 61 ⇑P **P** 08 23 22.1 +0.1
baz=95

Z25A Roswell 95.12 57 ⇓P **P** 08 23 22.3 +0.3
baz=95

C20A Veseth Ranch, 95.22 43 ⇓P **P** 08 23 22.2 +0.2
baz=95,SNR=8.8

Y25A Mesa, Roswell 95.25 57 ⇓P **P** 08 23 22.7 0.0
baz=95

426A McDonald Obser 95.25 60 ⇓P **P** 08 23 22.8 0.0
baz=95

L22A Ellis Ranch, M 95.29 48 ⇑P **P** 08 23 22.9 +0.1
baz=95

TXAR Lajitas Array 95.34 61 P **P** 08 23 23.2 +0.2

TXAR PP **PP** 08 27 15.7 +0.3

TXAR PKKP **PKKPbc** 08 40 16.4 +0.4

TXAR Lajitas Array 95.34 61 P **P** 08 23 23.2 +0.2
comp=Z,1.7nm,0.8s,baz=231,slow=4.6,SNR=18

TXAR PP **PP** 08 27 15.7 +0.3
comp=Z,0.9nm,1.0s,baz=241,slow=6.9,SNR=7.2

TXAR PKKP **PKKPbc** 08 40 16.4 +0.4
comp=Z,0.2nm,0.5s,baz=87,slow=4.1,SNR=4.1

TXAR LR LR 09 01 11.6
comp=Z,48nm,20.6s,baz=5.0,slow=32

B20A Solberg Farm, 95.34 42 ⇑P **P** 08 23 22.8 +0.2
baz=96,SNR=6.9

226B Tecolote Peak, 95.38 58 ⇑P **P** 08 23 23.4 +0.2
baz=96

326A Caldwell Ranch 95.40 59 ⇑P **P** 08 23 23.6 +0.3
baz=96

N23A Red Feather La 95.46 50 ⇓P **P** 08 23 24.3 +0.8
baz=96

S24A Houchin Ranch, 95.46 53 ⇓P **P** 08 23 24.4 +0.6
baz=96

A20A Cobblestone Ra 95.49 41 ⇑P **P** 08 23 23.4 +0.1
baz=96,SNR=9.8

J22A Midwest 95.50 47 ⇓P **P** 08 23 24.0 +0.5
baz=96

ISCO Idaho Springs 95.52 51 *e*P **P** 08 23 23.9 0.0

ISCO pmax pmax
comp=Z,2.0nm,0.8s

ISCO Idaho Springs 95.52 51 *e*P **P** 08 23 23.9 0.0
comp=Z,1.7nm,0.8s

ISCO Idaho Springs 95.52 51 ⇑P **P** 08 23 25.0 +1.0
baz=96

126A Clayton Basin, 95.59 58 ⇑P **P** 08 23 25.0 +0.8
baz=96

627A Terlingua Ranc 95.60 61 ⇓P **P** 08 23 24.9 +0.6
baz=96

E21A Keefer Ranch, 95.63 44 ⇓P **P** 08 23 24.9 +0.9
baz=96

V25A Rancho No Teng 95.63 55 ⇑P **P** 08 23 24.9 +0.5
baz=96

R24A Sanders Place, 95.64 52 ⇓P **P** 08 23 24.8 +0.4
baz=96

W25A X Bar L Ranch, 95.66 55 ⇑P **P** 08 23 24.5 0.0
baz=96

M23A Laramie 95.72 49 ⇓P **P** 08 23 24.9 +0.2
baz=96

Z26A Caprock 95.73 57 ⇓P **P** 08 23 24.8 0.0
baz=96

D21A La Casta Ranch 95.78 43 ⇓P **P** 08 23 25.3 +0.6
baz=96

H22A Clearmont 95.80 46 ⇓P **P** 08 23 25.2 +0.4
baz=96

427A Hayter Ranch, 95.81 60 ⇓P **P** 08 23 25.5 +0.2
baz=96

L23A Garrett 95.84 48 ⇓P **P** 08 23 25.5 +0.2
baz=96

U25A Circle Dot Ran 95.89 54 ⇑P **P** 08 23 25.9 +0.4
baz=96

B21A Ellsworth Farm 96.00 42 ⇑P **P** 08 23 25.9 +0.3
baz=96,SNR=5.7

T25A Trinidad 96.01 53 ⇑P **P** 08 23 26.3 +0.2
baz=96

628A Black Gap, Mar 96.03 61 ⇓P **P** 08 23 26.3 +0.1
baz=96

S25A Robets Cordova 96.08 53 ⇑P **P** 08 23 26.9 +0.5
baz=96

127A Arkansas Junct 96.15 58 ⇑P **P** 08 23 26.7 0.0
baz=96

A21A Bergtoll Ranch 96.16 41 ⇓P **P** 08 23 26.6 +0.3
baz=96,SNR=17

R25A Fountain Ranch 96.27 52 ⇓P **P** 08 23 27.6 +0.4
baz=96

V26A Tequesquite Ra 96.29 55 ⇑P **P** 08 23 27.7 +0.4
baz=96

D22A Cohagen 96.34 43 ⇑P **P** 08 23 27.8 +0.6
baz=96

328A Wristen Ranch, 96.40 59 ⇑P **P** 08 23 27.9 0.0
baz=96

428A Kincaid Ranch, 96.40 60 ⇓P **P** 08 23 28.2 +0.4
baz=96

Q25A Bedland, Calha 96.42 52 ⇓P **P** 08 23 28.1 +0.1
baz=96

U26A Atchley Ranch, 96.42 54 ⇓P **P** 08 23 28.1 +0.1
baz=96

Y27A Causey 96.50 57 ⇓P **P** 08 23 28.3 0.0
baz=97

P25A Willow Gulch B 96.57 51 ⇑P **P** 08 23 29.2 +0.7
baz=97

C22A Vida 96.64 43 ⇓P **P** 08 23 28.7 +0.3
baz=97

B22A Reddig Ranch S 96.65 42 ⇑P **P** 08 23 28.8 +0.3
baz=97

X27A F and S Farms, 96.67 56 ⇑P **P** 08 23 29.5 +0.5
baz=97

228A UT Block 9, Go 96.70 59 ⇓P **P** 08 23 29.7 +0.5
baz=97

529A Stev Forest Ra 96.71 61 ⇓P **P** 08 23 29.5 +0.2
baz=97

W27A Bowe Ranch, En 96.76 56 ⇑P **P** 08 23 29.5 0.0
baz=97

A22A Carney Farms, 96.81 42 ⇓P **P** 08 23 29.3 +0.1
baz=97,SNR=5.3

S26A Kim 96.83 53 ⇑P **P** 08 23 29.7 0.0
baz=97

MSTX Muleshoe 96.83 57 ⇓P **P** 08 23 29.9 +0.1
baz=97

128A Castleberry Fa 96.87 58 ⇑P **P** 08 23 29.9 0.0
baz=97

R26A Arlington 96.95 52 ⇑P **P** 08 23 30.4 +0.2
baz=97

Q26A Hugo 96.98 52 ⇑P **P** 08 23 30.6 +0.2
baz=97

D23A Lindsay 97.00 43 ⇓P **P** 08 23 30.6 +0.5
baz=97

429A Davenport Ranc 97.06 60 ⇓P **P** 08 23 30.8 0.0
baz=97

SNAA Sanae 97.07 183 *e*P **P** 08 23 27.8 -2.3
comp=Z,3.7nm,1.0s

H24A Dirks Ranch, A 97.09 46 ⇑P Pdif 08 23 31.3 +0.5
baz=97

KURK Kurchatov 97.09 320 P **P** 08 23 29.0 -1.3

KURK Kurchatov 97.09 320 P **P** 08 23 29.0 -1.3

KURK Kurchatov 97.09 320 P **P** 08 23 29.1 -1.3
comp=Z,29nm,1.2s,SNR=5.3

C23A Lambert 97.11 43 ⇓P Pdif 08 23 31.2 +0.5
baz=97

329A Wagon Wheel Ra 97.12 59 ⇓P Pdif 08 23 31.4 +0.3
baz=97

KURBB Kurchatov Arra 97.14 320 P **P** 08 23 29.0 -1.5
comp=Z,1.0nm,0.7s,baz=95,slow=3.8,SNR=18

U27A Thompson Grove 97.16 54 ⇑P **P** 08 23 31.3 +0.1
baz=97

P26A Davis Ranch, A 97.21 51 ⇓P Pdif 08 23 31.8 +0.3
baz=97

Y28A McKinney Farm, 97.25 57 ⇓P **P** 08 23 31.7 0.0
baz=97

KSH Kashi 97.28 309 *e*P Pdif 08 23 33.0 +1.2

KSH *ep*P pP 08 24 09.0 +2.8

KSH *es*P sP 08 24 24.1 +3.7

KSH *e*PP **PP** 08 27 35.1 +5.0

KSH *e*SKS **SKSac** 08 33 55.9 -0.7

KSH *e*S S 08 34 38.7 -5.6

KSH *es*S sS 08 35 45.5 +1.1

KSH pmax pmax
comp=Z,7.0nm,0.8s

KSH pmax pmax
comp=Z,230nm,4.7s

KSH LR LR
comp=N,570nm,10.2s

KSH LR LR
comp=E,400nm,7.7s

KSH LR LR
comp=Z,350nm,5.3s

T27A Campo 97.33 54 ⇑P **P** 08 23 32.0 0.0
baz=97

O26A Horse Wrangler 97.33 51 ⇓P **P** 08 23 32.1 +0.2
baz=97

129A Stewart Farms, 97.38 58 ⇑P Pdif 08 23 32.6 +0.3
baz=98

A23A Redstone 97.48 42 ⇑P Pdif 08 23 33.2 +0.9
baz=98

C24A Savage 97.58 43 ⇓P Pdif 08 23 33.4 +0.7
baz=98

D24A Glendive 97.59 44 ⇓P Pdif 08 23 33.7 +0.9
baz=98

Y29A Porterfield Fa 97.72 57 ⇑P **P** 08 23 33.9 +0.1
baz=98

K26A Motz Farm, Whi 97.78 48 ⇑P **P** 08 23 33.9 0.0
baz=98

X29A Tulia 97.78 56 ⇑P **P** 08 23 34.0 0.0
baz=98

330A Mertzon 97.79 60 ⇑P **P** 08 23 34.3 +0.2
baz=98

P27A Ficken Ranch, 97.80 51 ⇓P **P** 08 23 34.1 0.0
baz=98

T28A Walsh 97.82 54 ⇓P **P** 08 23 34.3 +0.1
baz=98

DGMT Dagmar 97.86 42 ⇑P **P** 08 23 34.1 +0.1
baz=98

230A Sterling City 97.91 59 ⇑P **P** 08 23 34.5 -0.2
baz=98

N27A Anderson Farm, 98.00 50 ⇓Pdiff Pdif 08 23 35.2 +0.3
baz=98

631A Perdido Creek 98.01 62 ⇑Pdiff **P** 08 23 35.1 0.0
baz=98

A24A Westby 98.05 42 ⇑Pdiff Pdif 08 23 35.6 +0.8
baz=98

Z30A Sanderson Ranc 98.09 58 ⇑Pdiff **P** 08 23 35.5 +0.1
baz=98

431A Sonora 98.17 60 ⇑Pdiff **P** 08 23 35.6 -0.2
baz=98

R28A Tribune 98.23 53 ⇑Pdiff **P** 08 23 36.1 +0.2
baz=98

732A Laxson Ranch, 98.44 62 ⇓Pdiff Pdif 08 23 37.6 +0.6
baz=99

231A Bronte 98.58 59 ⇓Pdiff **P** 08 23 37.6 0.0
baz=99

532A Rocksprings 98.69 61 ⇑Pdiff **P** 08 23 38.3 +0.1
baz=99

632A Uvalde 98.71 62 ⇓Pdiff **P** 08 23 38.1 -0.1
baz=99

432A Menard 98.89 60 ⇓Pdiff **P** 08 23 39.0 0.0
baz=99

U30A WK&E Inc. Balk 98.91 55 ⇑Pdiff Pdif 08 23 39.4 +0.4
baz=99

Z31A Sharp Cattle R 98.91 58 ⇑Pdiff **P** 08 23 38.5 -0.5
baz=99

Q29A Oakley 98.94 52 ⇑Pdiff **P** 08 23 39.3 +0.2
baz=99

ABTX Abilene, Hawle 99.24 59 ⇑Pdiff **Pdif** 08 23 40.1 -0.4
baz=99

R30A Dighton 99.42 53 ⇑Pdiff **Pdif** 08 23 41.2 0.0
baz=100

Z32A Haskell 99.46 58 ⇑Pdiff **Pdif** 08 23 41.5 0.0
baz=100

T31A Randall Ranch, 99.75 54 ⇓Pdiff **Pdif** 08 23 43.0 +0.3
baz=100

FFC Flin Flon 99.94 36 *i* P **Pdif** 08 23 42.8 -0.3

P31A Stockton 100.25 52 ⇑Pdiff **Pdif** 08 23 45.7 +0.8
baz=100

BVAR Borovoye Array 102.39 322 P **Pdif** 08 23 52.9 -1.1

BVAR Borovoye Array 102.39 322 P **Pdif** 08 23 52.9 -1.1

BVAR Borovoye Array 102.39 322 P **Pdif** 08 23 52.9 -1.1
comp=Z,1.8nm,0.8s,baz=104,slow=5.4,SNR=9.1

APA Apatity 115.71 342 ⇓ *i*PKIKP **PKPdf** 08 28 40.5 +1.0

APA MLR MLR
comp=Z,100nm,16.0s

KEV Kevo 116.04 345 *ep* **PKPdf** 08 28 38.9 -1.2
comp=Z,5.2nm,0.6s

KEV Kevo 116.04 345 *e*PKIKP **PKPdf** 08 28 38.9 -1.2

KEV pmax pmax
comp=Z,5.0nm,0.6s

ARCES	ARCESS Array B	116.57	346	PKP	PKPdf	08 28 40.5	-0.6
ARCES				PKKPbc	PKKPbc	08 39 08.9	-3.0
ARCES	ARCESS Array B	116.57	346	PKP	PKPdf	08 28 40.5	-0.6
	comp=Z,8.2nm,0.6s,baz=68,slow=2.7,SNR=76						
ARCES				PKKPbc	PKKPbc	08 39 08.9	-3.0
	comp=Z,1.3nm,0.9s,baz=190,slow=3.7,SNR=7.9						
JOF	Joensuu	119.24	338	*e*p	PKPdf	08 28 45.8	-0.6
	comp=Z,8.8nm,0.7s						
JOF	Joensuu	119.24	338	*e*PKIKP	PKPdf	08 28 45.8	-0.6
JOF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LPAZ	La Paz	119.60	116	PKP	PKPdf	08 28 48.7	-0.6
LPAZ				PKKPbc	PKKPbc	08 38 59.8	-0.6
LPAZ	La Paz	119.60	116	PKP	PKPdf	08 28 48.7	-0.6
	comp=Z,1.6nm,0.7s,baz=324,slow=2.3,SNR=8.2						
LPAZ				PKKPbc	PKKPbc	08 38 59.8	-0.6
	comp=Z,1.3nm,0.8s,baz=94,slow=1.9,SNR=5.5						
SCHQ	Schefferville	119.78	32	PKP	PKPdf	08 28 46.9	-0.9
SCHQ				PKKPbc	PKKPab	08 39 00.0	+0.4
SCHQ	Schefferville	119.78	32	PKP	PKPdf	08 28 46.9	-0.9
	comp=Z,1.3nm,0.5s,baz=255,slow=3.4,SNR=6.6						
SCHQ				PKKPbc	PKKPab	08 39 00.0	+0.4
	comp=Z,5.5nm,0.8s,baz=118,slow=2.4,SNR=8.2						
VRHR	Novokhopersk	120.10	323	*e*PKIKP	PKPdf	08 28 47.8	-0.6
VRHR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VRHR				pmax	pmax		
	comp=N,9.0nm,0.6s						
VRHR				pmax	pmax		
	comp=E,9.0nm,0.8s						
RDF	Al-Radifah	120.46	297	*e*P	PKPdf	08 28 49.4	-0.4
RDF				AMb	AMB	08 28 50.4	
	comp=Z,26nm,0.7s						
MIB	Mutribah	120.58	298	*e*P	PKPdf	08 28 49.9	-0.1
MIB				AMb	AMB	08 28 50.8	
	comp=Z,21nm,0.9s						
NAY	Al-Naaiem	120.71	297	*e*P	PKPdf	08 28 49.6	-0.7
NAY				AMb	AMB	08 28 52.3	
	comp=Z,6.2nm,1.0s						
OBN	Obninsk	121.19	329	*i* PKIKP	PKPdf	08 28 46.9	-3.4
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VSR	Storozhevoye	121.49	324	*e*PKIKP	PKPdf	08 28 50.8	-0.3
VSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
VSR				pmax	pmax		
	comp=N,7.0nm,1.2s						
VSR				pmax	pmax		
	comp=E,7.0nm,0.9s						
VORD	Divnogorie	121.51	324	*e*PKIKP	PKPdf	08 28 50.1	-1.0
VORD				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VORD				pmax	pmax		
	comp=N,50nm,0.7s						
VORD				pmax	pmax		
	comp=E,30nm,0.9s						
KAF	Kangasniemi	121.54	339	*e*p	PKPdf	08 28 49.5	-1.3
	comp=E,5.1nm,0.6s						
KAF	Kangasniemi	121.54	339	*e*PKIKP	PKPdf	08 28 49.5	-1.3
KAF				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KBZ	Khabaz	121.63	315	PKIKP	PKPdf	08 28 52.0	+0.4
KBZ	Khabaz	121.63	315	PKP	PKPdf	08 28 52.0	+0.4
KBZ	Khabaz	121.63	315	PKP	PKPdf	08 28 52.0	+0.4
	comp=Z,1.7nm,0.8s,baz=21,slow=1.0,SNR=5.9						
FINES	FINESS Array B	122.07	339	PKP	PKPdf	08 28 51.1	-0.8
FINES	FINESS Array B	122.07	339	PKP	PKPdf	08 28 51.1	-0.8
	comp=Z,4.8nm,0.7s,baz=48,slow=2.1,SNR=8.8						
CPUP	Villa Florida	123.52	132	PKP	PKPdf	08 28 55.4	-0.4
CPUP	Villa Florida	123.52	132	PKP	PKPdf	08 28 55.4	-0.4
	comp=Z,2.9nm,0.7s,baz=315,slow=1.4,SNR=14						
ANN	Anapa	125.01	317	*i* PKIKP	PKPdf	08 28 57.0	-1.0
ANN				*e*		08 29 42.3	
ANN				*e*		08 35 39.2	
ANN				pmax	pmax		
	comp=Z,33nm,1.1s						
BOSA	Boshof	125.47	223	PKP	PKPdf	08 28 59.9	+0.2
BOSA	Boshof	125.47	223	PKP	PKPdf	08 28 59.9	+0.2
	comp=Z,13nm,0.7s,baz=114,slow=2.0,SNR=30						
SAML	Samuel	126.83	110	*e*PKPdf	PKPdf	08 29 01.8	-0.6
NB2	NORSAR Subarra	126.94	345	PKPdf	PKPdf	08 29 01.0	-0.3
	comp=Z,5.1nm,1.1s,baz=31,slow=1.9						
NOA	NORSAR Array B	126.94	345	PKP	PKPdf	08 29 00.6	-0.7
NOA	NORSAR Array B	126.94	345	PKP	PKPdf	08 29 00.6	-0.7
	comp=Z,5.3nm,0.7s,baz=32,slow=2.0,SNR=27						
AKASG	Malin Array Be	127.27	327	PKIKP	PKPdf	08 29 01.3	-0.9
AKASG	Malin Array Be	127.27	327	PKP	PKPdf	08 29 01.3	-0.9
AKASG	Malin Array Be	127.27	327	PKP	PKPdf	08 29 01.3	-0.9
	comp=Z,1.0nm,0.5s,baz=148,slow=1.1,SNR=6.8						
BRTR	Keskin Array B	129.47	313	PKP	PKPdf	08 29 06.7	-0.2
BRTR	Keskin Array B	129.47	313	PKP	PKPdf	08 29 06.7	-0.2
	comp=Z,1.6nm,0.8s,baz=121,slow=2.6,SNR=9.0						
LSZ	Lusaka	130.97	238	*e*PKPdf	PKPdf	08 29 11.0	+0.6
KOLS	Kolonicke sedl	131.94	329	*e*PKIKP	PKPdf	08 29 13.2	+2.0
KOLS	Kolonicke sedl	131.94	329	*e*PKP	PKPdf	08 29 13.2	+2.0
STHS	Stebnicka Huta	132.15	330	*e*PKIKP	PKPdf	08 29 14.5	+3.0
STHS	Stebnicka Huta	132.15	330	*e*PKP	PKPdf	08 29 14.5	+3.0
CRVS	Cervenica-Dubn	132.37	329	*e*PKIKP	PKPdf	08 29 10.0	-2.0
CRVS	Cervenica-Dubn	132.37	329	*e*PKP	PKPdf	08 29 10.0	-2.0
DPC	Dobruska-Polom	133.79	334	*e*PKPdf	PKPdf	08 29 15.7	+1.1
UPC	Upice	133.81	334	*e*PKPdf	PKPdf	08 29 16.0	+1.4
VYHS	Vyhne	133.95	330	*e*PKIKP	PKPdf	08 29 14.6	-0.3
VYHS	Vyhne	133.95	330	*e*PKP	PKPdf	08 29 14.6	-0.3
BRG	Berggiesshubel	134.39	336	*i* PKP	PKPdf	08 29 17.6	+1.9
	comp=Z,7.1nm,0.8s						
BRG	Berggiesshubel	134.39	336	*i* PKIKP	PKPdf	08 29 17.6	+1.9
BRG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
PVCC	Panska Ves	134.40	335	*e*PKPdf	PKPdf	08 29 16.1	+0.4
CLL	Collm	134.42	337	*i* PKIKP	PKPdf	08 29 17.2	+1.5
CLL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CLL	Collm	134.42	337	*i* PKPdf	PKPdf	08 29 17.2	+1.5
	comp=Z,8.0nm,0.7s						
CLL				*e*PKSbc	PKSbc	08 32 48.0	+1.2
NKC	Novy Kostel	135.49	336	*e*PKPdf	PKPdf	08 29 19.5	+1.7
CONA	Conrad Observa	135.76	332⇓	*i*PKPdf	PKPdf	08 29 18.1	-0.4
	comp=Z,4.4nm,0.6s						
KHC	Kasperske Hory	135.88	334	*e*PKIKP	PKPdf	08 29 18.5	-0.1
KHC	Kasperske Hory	135.88	334	*e*PKPdf	PKPdf	08 29 19.1	+0.5
KHC	Kasperske Hory	135.88	334	*e*PKPdf	PKPdf	08 29 18.0	-0.6
GERES	GERESS Array B	136.05	334	PKP	PKPdf	08 29 18.7	-0.3
GERES	GERESS Array B	136.05	334	PKP	PKPdf	08 29 18.7	-0.3
	comp=Z,3.4nm,0.8s,baz=48,slow=1.5,SNR=17						
BDFB	Brasilia	136.80	127	PKP	PKPdf	08 29 20.9	-0.4
BDFB	Brasilia	136.80	127	PKP	PKPdf	08 29 20.9	-0.4
	comp=Z,5.7nm,0.9s,baz=198,slow=5.6,SNR=6.9						
SOKA	Soboth	137.06	331⇓	*i*PKPdf	PKPdf	08 29 19.5	-1.4
	comp=Z,4.6nm,0.9s						
KBA	Koelnbreinsper	137.54	333⇑	*i*PKPdf	PKPdf	08 29 19.6	-2.3
	comp=Z,4.6nm,0.7s						
FETA	Feichten	138.72	335⇓	*i*PKiKP	PKPdf	08 29 24.6	+0.5
	comp=Z,9.5nm,0.9s						
TUE	Stuetta	139.74	335	*e*PKPdf	PKPdf	08 29 25.1	-0.8
BNI	Bardonecchia	141.97	336	*e*PKHKP	PKPpre	08 29 24.8	
BNI	Bardonecchia	141.97	336	*e*PKPdf	PKPpre	08 29 24.8	
LRDF	Laroque-de-Fa	145.32	339	PKP	PKPab	08 29 36.4	+0.4
SJAF	Saint Jean de	145.60	338	PKP	PKPdf	08 29 36.5	+0.3
FILF	Fillols	145.65	339	PKP	PKPbc	08 29 37.2	+0.3
CARF	Carcanieres	145.67	339	PKP	PKPdf	08 29 37.1	+0.6
MLS	Moulis	145.80	341	PKP	PKPbc	08 29 37.4	+0.1
VALF	Valcebollere	145.98	339	PKP	PKPbc	08 29 38.2	+0.2
KEST	Kesra	147.85	323	PKPbc	PKPbc	08 29 43.3	-0.1
KEST	Kesra	147.85	323	PKPbc	PKPbc	08 29 43.3	-0.1
	comp=Z,12nm,0.9s,baz=30,slow=1.7,SNR=21						
CMAH	Djebel Manchou	148.29	327	P	PKPbc	08 29 44.5	0.0
ABSA	Djebel Ababsia	148.52	326	P	PKPbc	08 29 45.5	+0.4
CKFL	Kef-Lekhel	148.84	327	P	PKPbc	08 29 46.3	+0.3
PBRG	Braganca	148.85	350	*e*PKPdf	PKPbc	08 29 45.7	0.0
CASM	Ain Smara	149.06	327	P	PKPbc	08 29 45.6	-0.9
DFRA	Djebel Bou Aff	149.17	328	P	PKPbc	08 29 47.8	+1.0
CTEI	Djebel Teioual	149.26	327	P	PKPbc	08 29 47.5	+0.4
POLO	Lamas de Olo	149.44	351	*e*PKPdf	PKPbc	08 29 47.6	+0.3
MVO	Moncorvo	149.52	350	*e*PKPdf	PKPbc	08 29 47.9	+0.4
PVRL	Vila Real	149.52	351	*e*PKPdf	PKPbc	08 29 47.8	+0.4
CKHR	Kef el Ahmar	149.76	328	P	PKPbc	08 29 48.6	+0.3
PTO	Porto	149.78	352	*e*PKPdf	PKPbc	08 29 48.6	+0.6
PVIS	Viseu	150.10	351	*e*PKPdf	PKPbc	08 29 49.4	+0.5
ESDC	Sonseca Array	150.30	345	PKPbc	PKPbc	08 29 49.3	-0.1
ESDC				PKPab	PKPab	08 29 56.5	+0.6
ESDC	Sonseca Array	150.30	345	PKPbc	PKPbc	08 29 49.3	-0.1
	comp=Z,7.5nm,0.8s,baz=8.3,slow=2.8,SNR=5.9						
ESDC				PKPab	PKPab	08 29 56.5	+0.6
	comp=Z,7.3nm,0.6s,baz=11,slow=4.1,SNR=15						
ESLA	Sonseca Array	150.30	345	*e*PKPdf	PKPdf	08 29 43.4	-0.7
ESLA				*e*PKPbc	PKPbc	08 29 48.6	-0.7
ESLA				*e*PKPab	PKPab	08 29 56.1	+0.2
MTE	Manteigas	150.35	351	*e*PKPdf	PKPbc	08 29 49.8	+0.3
PAB	San Pablo	150.52	345	*e*PKIKP	PKPdf	08 29 43.8	-0.7
PAB				*e*		08 29 56.0	
PAB	San Pablo	150.52	345	*e*PKPdf	PKPdf	08 29 43.8	-0.7
PAB				*e*PKPbc	PKPbc	08 29 49.2	-0.7
PAB				*e*PKPab	PKPab	08 29 56.0	-0.9
EMHD	Djebel Mahouad	150.88	332	P	PKPbc	08 29 51.8	+0.9
PCBR	Castelo Branco	150.89	350	*e*PKPdf	PKPbc	08 29 50.8	+0.1
PTOM	Tomar	151.25	352	*e*PKPdf	PKPbc	08 29 51.8	+0.3
PMRV	Marv??o	151.28	350	*e*PKPdf	PKPbc	08 29 52.0	+0.4
EBNR	Beni Rached	151.44	334	P	PKPab	08 29 59.3	-1.5
PMTG	Montargil	151.76	351	*e*PKPdf	PKPbc	08 29 52.6	-0.1
PMTG	Montargil	151.76	351	*e*PKPab	PKPab	08 30 03.6	+1.7
PESTR	Estremoz	151.86	350	*e*PKPdf	PKPbc	08 29 53.2	+0.2
PESTR	Estremoz	151.86	350	*e*PKPab	PKPab	08 30 03.4	+1.0
EANR	'Ain N'Sour	151.91	334	P	PKPbc	08 29 53.5	+0.3
PMAFR	Mafra	152.02	353	*e*PKPab	PKPab	08 30 03.8	+0.8
EVO	Evora	152.25	350	*e*PKPdf	PKPbc	08 29 54.2	+0.4
EVO	Evora	152.25	350	*e*PKPab	PKPab	08 30 05.2	+1.2
ETRT	Tiaret	152.30	333	P	PKPbc	08 29 55.0	+0.8
PBAR	Barrancos	152.43	349	*e*PKPdf	PKPbc	08 29 54.6	+0.4
PBAR	Barrancos	152.43	349	*e*PKPab	PKPab	08 30 06.0	+1.3
PBEJ	Beja	152.72	350	*e*PKPdf	PKPbc	08 29 55.2	+0.3
PBEJ	Beja	152.72	350	*e*PKPab	PKPab	08 30 07.5	+1.5
PNCL	Nicolau / Gran	152.75	351	*e*PKPdf	PKPbc	08 29 55.3	+0.4
PCVE	Castro Verde	153.14	350	*e*PKPdf	PKPbc	08 29 56.4	+0.6
PVAQ	Vaqueiros	153.30	349	*e*PKPdf	PKPbc	08 29 56.9	+0.7
PBDV	Barranco-do-Ve	153.50	350	*e*PKPdf	PKPbc	08 29 57.3	+0.6
PBDV	Barranco-do-Ve	153.50	350	*e*PKPab	PKPab	08 30 10.5	+1.2
MORF	Marmelete	153.55	351	*e*PKPdf	PKPbc	08 29 57.6	+0.8
TORD	Torodi Ar. Bea	164.88	279	PKP	PKPdf	08 30 02.3	-0.4
TORD				PKPab	PKPab	08 30 58.6	-1.0
TORD	Torodi Ar. Bea	164.88	279	PKP	PKPdf	08 30 02.3	-0.4
	comp=Z,5.3nm,1.1s,baz=45,slow=1.0,SNR=15						
TORD				PKPab	PKPab	08 30 58.6	-1.0
	comp=Z,5.2nm,1.0s,baz=78,slow=4.4,SNR=9.7						
DBIC	Dimbokro	170.26	244	PKP	PKPdf	08 30 05.7	-0.8
DBIC	Dimbokro	170.26	244	PKP	PKPdf	08 30 05.7	-0.8
	comp=Z,4.9nm,0.8s,baz=176,slow=2.7,SNR=4.4						

BJI ***10*** *08:23:38.8, 45°.20N×94°.12E, h10^{km}, mb4.5/2, ML3.9/7, Ms3.4/2, Ms7 3.0/2*

NNC ***10*** *08:23:43.9±2.3, 45°.19N×93°.60E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=41.0km s-min=16.8km az=33.0*

ISC 10 08:23:45.9±2.1**, 45°.1N**±0°.2×**93°.9E**±0°.1**, h10**^{km}**, n6,** σ**2^{s}77**/7**, 2C-2D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	4.58	257	Pn	Pn	08 24 54.0	-1.3
WMQ				Sn	Sn	08 25 47.9	-0.7
WMQ				smax	smax		
	comp=N,210nm,1.0s						
WMQ				smax	smax		
	comp=E,120nm,0.7s						
GTA	Gaotai	7.17	140	Pn	Pn	08 25 26.7	-4.1
GTA				Pg	Pb	08 25 49.4	-1.0
GTA				Sn	Sn	08 26 45.7	-6.7
GTA				Sg	Sb	08 27 20.3	+4.2
GTA				smax	smax		
	comp=N,40nm,0.8s						
GTA				smax	smax		
	comp=E,43nm,1.1s						
GTA				LR	LR		
	comp=N,110nm,6.2s						
GTA				LR	LR		
	comp=E,170nm,6.7s						
GTA				LR	LR		
	comp=Z,48nm,7.1s						
MK31	Makanchi Array	8.25	286	Pn	Pn	08 25 41.7	-3.8
	comp=Z,0.5nm,0.3s,baz=99,slow=14,SNR=21						
MK31				⇑Pg	Pb	08 26 11.1	+2.3
	comp=Z,3.2nm,0.6s,baz=102,slow=16,SNR=4.0						
MK31				⇓Lg	Lg	08 27 59.4	
	comp=Z,10nm,0.6s,baz=97,slow=32,SNR=4.8						
KURK	Kurchatov	11.68	304	⇑Lg	Lg	08 29 47.6	
	comp=Z,30nm,1.0s						
KUR16	Kurchatov Arra	11.72	304	⇓Lg	Lg	08 29 48.1	
	comp=Z,7.8nm,0.9s						
LZH	Lanzhou	11.74	136	*e*P	Pn	08 26 31.5	-2.0
LZH				pP		08 26 33.7	
LZH				sP		08 26 36.0	
LZH				*e*PP	PnPn	08 26 41.3	+0.2
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				LR	LR		
	comp=N,110nm,10.2s						
LZH				LR	LR		
	comp=E,100nm,10.0s						
LZH				LR	LR		
	comp=Z,140nm,12.3s						

ISCJB ***10*** *08:34:23.3±0.8, 7°.56N±0°.08×73°.02W±0°.10, h152^{km}±8^{km}, mb3.6/1, Error ellipse: s-maj=19.9km s-min=7.1km az=39.8*

IDC ***10*** *08:34:23.5±7.3, 7°.41N×72°.88W, h156^{km}±43^{km}, mb3.3/1, mb1 3.5/2, mb1mx2.9/23, mbtmp3.3/2, Error ellipse: s-maj=164.0km s-min=29.9km az=96.0*

FUNV ***10*** *08:34:26.0, 7°.49N×73°.03W, h140^{km}, MW3.6*

ISC 10 08:34:24.2±0.9**, 7°.59N**±0°.08×**73°.05W**±0°.09**, h137**^{km}±8^{km}**, n17,** σ**1^{s}43**/25**, 1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAPV	Capacho	0.78	69⇓	*e*P	Pn	08 34 47.5	+1.4
CAPV				*e*S	Sn	08 35 04.2	+1.4
VIGV	El Vigia	2.08	53	*e*P	Pn	08 35 01.6	+2.0
VIGV				*e*S	Sn	08 35 27.4	+0.7
SOCV	Socops	2.28	72	*e*P	Pn	08 35 03.1	+1.2
SOCV				*e*S	Sn	08 35 30.9	-0.1
ROSC	El Rosal	3.00	205	P	Pn	08 35 10.4	-1.1
	8.3nm,0.3s,baz=72,slow=20,SNR=28						
ROSC				S	Sn	08 35 47.4	-0.5
	28nm,0.3s,baz=296,slow=20,SNR=16						
ELOV	Elorza	3.58	99	*e*P	Pn	08 35 19.1	+0.4
CURV	Curarigua	3.89	52	*e*P	Pn	08 35 23.9	+1.2
CURV				*e*S	Sn	08 36 06.8	-1.3
DABV	Dabajuro	4.08	36	*e*P	Pn	08 35 26.4	+1.2
DABV				*e*S	Sn	08 36 11.1	-1.4
TEPV	Terepaima	4.48	58	*e*P	Pn	08 35 31.9	+1.4
MAPV	Macapo	5.05	64	*e*P	Pn	08 35 38.9	+0.7
MONV	Montecano	5.29	35	*e*P	Pn	08 35 42.7	+1.4
TURV	Turiamo	5.88	61	*e*P	Pn	08 35 49.7	+0.6
MERV	Las Mercedes	6.88	76	*e*P	Pn	08 36 02.2	-0.4
BIRV	Birongo	7.28	66	*e*P	Pn	08 36 07.1	-1.0
CUPV	Cœpira	7.58	71	*e*P	Pn	08 36 11.1	-1.0
YKA	Yellowknife Ar	62.57	340	P	P	08 44 32.2	-1.1
	0.5nm,0.5s,baz=131,slow=6.6,SNR=16						
YKA				pP	pP	08 45 05.2	-1.0
	0.3nm,0.6s,baz=127,slow=7.0,SNR=3.9						
ASAR	Alice Springs	149.61	235	PKPbc	PKPdf	08 53 55.1	+1.3
	0.3nm,0.6s,baz=108,slow=3.0,SNR=3.9						
WRA	Warramunga Arr	150.76	242	PKPbc	PKPdf	08 53 58.3	+2.7
	0.4nm,0.4s,baz=104,slow=2.8,SNR=17						
WRA				pPKPbc	pPKPbc	08 54 35.2	-2.6
	0.2nm,0.4s,baz=105,slow=2.8,SNR=1.8						

JMA ***10*** *08:48:59.7±0.2, 44°.83N×145°.42E, h22^{km}±2^{km}, M3.8*
JMA Felt I J1.

NIED ***10*** *08:49:00, 44°.90N×145°.50E, h5^{km}, Mw3.7 Best double couple: $M_0$4.66000×10^{14} NP1:ϕ_s239.00000°, δ47.00000°, λ86.00000°. NP2:ϕ_s64.00000°, δ43.00000°, λ94.00000°.*

MOS ***10*** *08:49:01.5±2.3, 44°.77N×145°.71E, h33^{km}, mb3.9/1, Error ellipse: s-maj=23.1km s-min=18.8km az=83.8*

IDC ***10*** *08:49:09.5±2.7, 44°.80N×145°.46E, h92^{km}±27^{km}, mb3.1/7, mb1 3.5/8, mb1mx3.3/25, mbtmp3.1/8, Error ellipse: s-maj=33.0km s-min=18.2km az=126.0*

ISC 10 08:49:02.1±1.4**, 44°.68N**±0°.05×**145°.58E**±0°.04**, h28**^{km}±11^{km}**, n20,** σ**1^{s}17**/27**, mb3.5**/7**, 1C-1D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	0.67	162*d*	*i*PN	Pb	08 49 14.7	-0.6
YUK				*i* S	Sn	08 49 25.4	+0.2
YUK				pmax	pmax		
	comp=E,269nm,0.3s						
YUK				pmax	pmax		
	comp=Z,676nm,0.3s						
YUK				pmax	pmax		
	comp=N,334nm,0.2s						
YUK				smax	smax		
	comp=N,287nm,0.6s						
YUK				smax	smax		
	comp=E,3μm,0.6s						
JRA	Rausu	0.81	204	P	Pb	08 49 16.8	-0.7
JRA				*e*S	Sn	08 49 29.2	+0.6
JNK	Nakash	1.25	210	P	Pn	08 49 23.0	-0.7
NEM2	Nemuro 2	1.32	175	P	Pn	08 49 24.2	-0.3
NEM2				*e*S	Sb	08 49 42.2	-0.4
JTKR	Abashiri--Toko	1.39	240	P	Pn	08 49 23.6	-1.9
JTKR				*e*S	Sn	08 49 41.1	-1.8
KUR	Kuril'sk	1.72	70*c*	*i*PN	Pn	08 49 29.3	-0.7
KUR				*i* S	Sn	08 49 50.6	-0.4
KUR				pmax	pmax		
	comp=Z,35nm,0.5s						
KUR				pmax	pmax		
	comp=N,13nm,0.2s						
KUR				pmax	pmax		
	comp=E,13nm,0.2s						
KUR				smax	smax		
	comp=N,96nm,0.4s						
KUR				smax	smax		
	comp=E,54nm,0.1s						
JMP	Maruseppu	1.73	248	P	Pn	08 49 28.7	-1.5
JMP				*e*S	Sn	08 49 49.8	-1.5
JAK	Akkeshi	1.80	201	P	Pn	08 49 31.1	0.0
JAR	Ashorobuto	1.90	224	P	Pn	08 49 32.1	-0.4
JKK2	Kamakawa 2	2.19	249	P	Pn	08 49 35.4	-1.1
ASAJ	Asahikawa	2.21	256	P	Pb	08 49 42.4	+1.1
	comp=E,11nm,0.3s,baz=89,slow=19,SNR=7.5						
ASAJ				S	Sb	08 50 11.2	+3.0
	comp=E,11nm,0.3s,baz=296,slow=33,SNR=6.0						
YSS	Yuzh-Sakhalins	3.01	320	*e*PN	Pn	08 49 46.8	-1.0
ILAR	Eielson Array	41.41	37	P	P	08 56 45.1	-0.4
	comp=E,0.7nm,0.7s,baz=276,slow=8.2,SNR=10						
MKAR	Makanchi Array	43.16	296	P	P	08 56 59.3	-0.7
MKAR	Makanchi Array	43.16	296	P	P	08 56 59.3	-0.7
	comp=E,0.4nm,0.9s,baz=79,slow=7.5,SNR=3.1						
WRA	Warramunga Arr	65.12	192	P	P	08 59 40.4	+0.2
	comp=E,0.3nm,0.6s,baz=15,slow=7.2,SNR=3.9						
NVAR	Mina Array Bea	68.04	57	P	P	09 00 00.1	+1.0
	comp=E,0.2nm,0.6s,baz=296,slow=6.9,SNR=4.7						
ASAR	Alice Springs	68.84	191	P	P	09 00 05.0	+1.2
	comp=E,0.2nm,0.8s,baz=9.9,slow=5.9,SNR=2.6						
PDAR	Pinedale Array	70.17	49	P	P	09 00 12.5	+0.3
	comp=E,0.4nm,0.6s,baz=318,slow=2.0,SNR=4.3						
TXAR	Lajitas Array	83.06	55	P	P	09 01 25.7	+0.5
	comp=E,0.2nm,0.6s,baz=328,slow=3.2,SNR=3.1						

ISCJB ***10*** *09:34:35.6±0.3, 40°.36N±0°.02×27°.55E±0°.03, h12^{km}±3^{km}, Error ellipse: s-maj=3.9km s-min=3.4km az=160.7*

DDA ***10*** *09:34:35.5, 40°.33N×27°.51E, h19^{km}, MD2.9*

ISK ***10*** *09:34:35.0, 40°.34N×27°.53E, h17^{km}, MD2.9*

CSEM ***10*** *09:34:35.8±0.1, 40°.36N×27°.54E, h15^{km}, MD2.9, Error ellipse: s-maj=2.2km s-min=1.8km az=49.0*

ISC 10 09:34:35.6±0.9**, 40°.36N**±0°.02×**27°.53E**±0°.02**, h13**^{km}±7^{km}**, n81,** σ**0^{s}29**/100**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBG	Karabiga-Canak	0.18	281	*e*PG	Pb	09 34 40.1	-0.6
KRBG				*e*SG	Sg	09 34 42.8	+0.3
KRBG	Karabiga-Canak	0.18	281	*e*Pg	Pb	09 34 40.1	-0.6
KRBG				*e*Sg	Sg	09 34 42.8	+0.3
MRMT	Marmara Adasi	0.25	12	*e*PG	Pb	09 34 41.9	-0.1
MRMT				*e*SG	Sb	09 34 45.8	-0.4
MRMT	Marmara Adasi	0.25	12	*e*Pg	Pb	09 34 41.9	-0.1
MRMT				*e*Sg	Sb	09 34 45.8	-0.4
GONE	Gonen-Balikesi	0.34	159	*e*PG	Pg	09 34 42.2	-0.2
GONE				*e*SG	Sg	09 34 47.1	+0.1
GONE	Gonen-Balikesi	0.34	159	*e*Pg	Pg	09 34 42.2	-0.2
GONE				*e*Sg	Sg	09 34 47.1	+0.1
RKY	Sarkoy-Tekirda	0.42	321	*e*PG	Pb	09 34 44.7	-0.2
RKY				*e*SG	Sb	09 34 51.1	-0.1
RKY	Sarkoy-Tekirda	0.42	321	*e*Pg	Pb	09 34 44.7	-0.2
RKY				*e*Sg	Sb	09 34 51.1	-0.1
SART	Tekirdag	0.42	321	*i* P	Pb	09 34 45.0	+0.1
SART				*i* S	Sb	09 34 51.3	+0.1
SART	Tekirdag	0.42	321	*i* P	Pb	09 34 45.0	+0.1
MFT	Murefte	0.47	336	*e*PG	Pb	09 34 45.6	0.0
MFT				*e*SG	Sb	09 34 52.6	+0.1
MFT	Murefte	0.47	336	*e*Pg	Pb	09 34 45.7	0.0
MFT				*e*Sg	Sb	09 34 52.6	+0.1
BALY	Balya	0.62	173	*i* P	Pg	09 34 47.8	+0.1
BALY				*i* S	Sg	09 34 56.3	+0.3
BALY	Balya	0.62	173	*i* P	Pg	09 34 47.8	+0.1
BALY				*i* S	Sg	09 34 56.3	+0.3
TKR	Tekirdag	0.63	1	*e*PG	Pg	09 34 47.7	-0.2
TKR	Tekirdag	0.63	1	*e*Pg	Pg	09 34 47.7	-0.2
KCTX	Karacabey (Bur	0.64	98	*e*PG	Pg	09 34 47.9	-0.2
KCTX	Karacabey (Bur	0.64	98	*e*Pg	Pg	09 34 47.9	-0.2
BALB	Balikesir	0.77	159	*e*PG	Pg	09 34 50.2	-0.3
BALB	Balikesir	0.77	159	*e*Pg	Pg	09 34 50.2	-0.3
GELI	Tayfur-Gelibol	0.80	273	*e*PG	Pb	09 34 51.0	-0.4
GELI	Tayfur-Gelibol	0.80	273	*e*Pg	Pb	09 34 51.0	-0.4
ERIK	Erikli-Kesan	0.83	292	*e*PG	Pb	09 34 51.5	-0.3
ERIK	Erikli-Kesan	0.83	292	*e*Pg	Pb	09 34 51.5	-0.3
SLVT	Silivri	1.01	31	*e*PG	Pg	09 34 55.2	+0.1
SLVT	Silivri	1.01	31	*e*Pg	Pg	09 34 55.2	+0.1
MDNY	Mudanya-Bursa	1.04	89	*e*PG	Pb	09 34 55.2	-0.1
MDNY	Mudanya-Bursa	1.04	89	*e*Pg	Pb	09 34 55.2	-0.1
ARMT	Armutlu	1.04	78	*e*PG	Pb	09 34 55.5	+0.1
ARMT	Armutlu	1.04	78	*e*Pg	Pb	09 34 55.5	+0.1
DURS	Dursunbey	1.05	136	*i* P	Pb	09 34 55.7	+0.1
DURS				*i* S	Sn	09 35 11.0	+0.4
DURS	Dursunbey	1.05	136	*i* P	Pb	09 34 55.7	+0.1
DURS				*i* S	Sn	09 35 11.0	+0.4
EZN	Ezine	1.06	240	*e*PG	Pn	09 34 56.0	-0.1
EZN	Ezine	1.06	240	*e*Pg	Pn	09 34 56.0	-0.1
ORLT	Orhaneli	1.09	106	*e*PN	Pb	09 34 56.0	-0.3
ORLT	Orhaneli	1.09	106	*e*Pn	Pb	09 34 56.0	-0.3
ENEZ	Enez	1.11	290	*e*PN	Pn	09 34 56.5	-0.2
ENEZ	Enez	1.11	290	*e*Pn	Pn	09 34 56.6	-0.2
DST	Dursunbey	1.13	132	*e*PN	Pb	09 34 56.5	-0.4
DST	Dursunbey	1.13	132	*e*Pn	Pb	09 34 56.6	-0.4
CTKS	Kestanelik-??a	1.15	40	*e*PN	Pb	09 34 57.1	-0.2
CTKS	Kestanelik-??a	1.15	40	*e*Pn	Pb	09 34 57.1	-0.2
AYVA	Ayvalik	1.23	212	*i* P	Pg	09 34 59.8	+0.5
AYVA	Ayvalik	1.23	212	*i* P	Pg	09 34 59.8	+0.5
BOZC	Bozcaada	1.24	246	*e*P	Pn	09 34 58.4	-0.2
BOZC				*i* S	Sb	09 35 14.7	-0.1
ULDT	Uludag	1.25	99	*i* P	Pg	09 35 00.3	+0.7
ULDT	Uludag	1.25	99	*i* P	Pg	09 35 00.3	+0.7
BGKT	Bogazkoy	1.25	49	*e*PN	Pn	09 34 58.4	-0.3
BGKT	Bogazkoy	1.25	49	*e*Pn	Pn	09 34 58.4	-0.3
CTYL	Yal??k??y-??at	1.25	27	*e*PN	Pn	09 34 58.1	-0.6
CTYL	Yal??k??y-??at	1.25	27	*e*Pn	Pn	09 34 58.1	-0.6
GEMT	Gemlik	1.27	86	*e*PN	Pn	09 34 58.7	-0.3
GEMT	Gemlik	1.27	86	*e*Pn	Pn	09 34 58.7	-0.3
BUY	Buyukada	1.31	67	*e*PN	Pn	09 34 59.2	-0.3
BUY	Buyukada	1.31	67	*e*P	Pn	09 34 59.6	+0.1
BUY	Buyukada	1.31	67	*e*Pn	Pn	09 34 59.2	-0.3
BUY	Buyukada	1.31	67	*e*P	Pn	09 34 59.6	+0.1
ISK	Istanbul-Kandi	1.36	58	*e*PN	Pn	09 35 00.2	+0.1
ISK	Istanbul-Kandi	1.36	58	*e*Pn	Pn	09 35 00.3	+0.1
YLV	Yalova	1.42	81	*e*PN	Pb	09 35 01.7	-0.3
YLV	Yalova	1.42	81	*e*Pn	Pb	09 35 01.7	-0.3
KLYT	Kilyos	1.46	52	*e*PN	Pn	09 35 01.6	+0.1
KLYT	Kilyos	1.46	52	*e*Pn	Pn	09 35 01.6	+0.1
AKHS	Akhisar	1.50	171	*i* P	Pn	09 35 02.1	+0.1
AKHS				*i* S	Sb	09 35 22.1	+0.1
AKHS	Akhisar	1.50	171	*i* P	Pn	09 35 02.1	+0.1
AKHS				*i* S	Sb	09 35 22.1	+0.1
EDRB	Edirne	1.60	339	*e*PN	Pn	09 35 03.7	+0.2
EDRB	Edirne	1.60	339	*e*Pn	Pn	09 35 03.7	+0.2
DEMI	Demirci	1.60	145	*e*P	Pb	09 35 04.6	-0.4
DEMI				*i* S	Sg	09 35 26.7	-0.5
DEMI	Demirci	1.60	145	*e*P	Pb	09 35 04.6	-0.4
ADVT	Abdulvahap	1.69	87	*e*PN	Pn	09 35 04.7	0.0
ADVT	Abdulvahap	1.69	87	*e*Pn	Pn	09 35 04.7	0.0
TVSB	Tavsanli	1.74	121	*e*PN	Pn	09 35 05.5	-0.1
TVSB	Tavsanli	1.74	121	*e*Pn	Pn	09 35 05.5	-0.1
SILT	Sile	1.79	63	*e*PN	Pn	09 35 05.8	-0.3
SILT	Sile	1.79	63	*e*Pn	Pn	09 35 05.8	-0.3
KULA	Kula-Manisa	2.04	154	*e*PN	Pn	09 35 09.2	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KULA	**Kula-Manisa**	**2.04**	**154**	ePn	**Pn**	**09 35 09.2**	**-0.4**
GULT	**Gulveren**	**2.28**	**87**	ePN	**Pn**	**09 35 12.7**	**-0.3**
GULT	**Gulveren**	**2.28**	**87**	ePn	**Pn**	**09 35 12.7**	**-0.3**
ALT	**Altintas**	**2.38**	**122**	ePN	**Pn**	**09 35 14.5**	**+0.2**
ALT	**Altintas**	**2.38**	**122**	ePn	**Pn**	**09 35 14.5**	**+0.2**

*ISCJB **10** 09:42:16.5±0.5, 47°.58N±0°.03×13°.16E±0°.04, h0km, Error ellipse: s-maj=4.9km s-min=3.1km az=154.2*
*CSEM **10** 09:42:17.3±0.1, 47°.57N×13°.17E, h1km, ML2.6/7, Error ellipse: s-maj=3.9km s-min=2.5km az=153.0, Mining explosion.*
*VIE **10** 09:42:17.1±0.1, 47°.58N×13°.16E, h0km, mb1.6/6, ML2.1/8, Error ellipse: s-maj=0.9km s-min=0.8km az=145.0 3 km SSW of Golling Mining explosion.*
*PRU **10** 09:42:18.9, 47°.56N×13°.29E, h0km*
ISC 10 09:42:17.8±0.8**, 47°.57N**±0°.03×**13°.17E**±0°.02**, h0km, n16, σ0s62**/32**, 8C-7D, Austria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KBA	**Koelnbreinsper**	**0.50**	**167**	⇑iPg	**Pg**	**09 42 27.4**	**+0.1**
	6.7nm,0.3s						
KBA				⇑iSg	**Sg**	**09 42 34.2**	**+0.4**
	10nm,0.3s						
KBA	**Koelnbreinsper**	**0.50**	**167**	Pg	**Pg**	**09 42 27.4**	**+0.1**
	6.7nm,0.3s						
KBA				Sg	**Sg**	**09 42 34.2**	**+0.4**
	10nm,0.3s						
MOA	**Molln**	**0.79**	**69**	⇓iPg	**Pg**	**09 42 32.9**	**0.0**
	1.4nm,0.3s						
MOA				⇑iSg	**Sg**	**09 42 44.0**	**+0.8**
	3.3nm,0.1s						
MOA	**Molln**	**0.79**	**69**	Pg	**Pg**	**09 42 32.9**	**0.0**
	1.4nm,0.3s						
MOA				Sg	**Sg**	**09 42 44.0**	**+0.8**
	3.3nm,0.1s						
ABTA	**Abfaltersbach**	**0.94**	**209**	⇓iPg	**Pg**	**09 42 35.5**	**-0.2**
	4.3nm,0.3s						
ABTA				⇓iSg	**Sg**	**09 42 48.2**	**+0.4**
	3.1nm,0.2s						
ABTA	**Abfaltersbach**	**0.94**	**209**	Pg	**Pg**	**09 42 35.5**	**-0.2**
	4.3nm,0.3s						
ABTA				Sg	**Sg**	**09 42 48.2**	**+0.4**
	3.1nm,0.2s						
WTTA	**Wattenberg**	**1.09**	**254**	⇓iPg	**Pg**	**09 42 38.0**	**-0.6**
	10nm,0.4s						
WTTA				⇑iSg	**Sg**	**09 42 53.1**	**+0.4**
	29nm,0.5s						
WTTA	**Wattenberg**	**1.09**	**254**	Pg	**Pg**	**09 42 38.0**	**-0.6**
	10nm,0.4s						
WTTA				Sg	**Sg**	**09 42 53.1**	**+0.4**
	29nm,0.5s						
MOTA	**Moosalm**	**1.42**	**262**	⇓iPg	**Pn**	**09 42 44.5**	**-0.5**
	12nm,0.4s						
MOTA				⇑iSg	**Sg**	**09 43 04.0**	**+0.6**
	19nm,0.5s						
MOTA	**Moosalm**	**1.42**	**262**	Pg	**Pn**	**09 42 44.5**	**-0.5**
	12nm,0.4s						
MOTA				Sg	**Sg**	**09 43 04.0**	**+0.6**
	19nm,0.5s						
KHC	**Kasperske Hory**	**1.59**	**10**	ePG	**Pb**	**09 42 47.8**	**-0.3**
KHC				eSG	**Sg**	**09 43 09.7**	**+0.8**
	comp=Z,8.9nm,0.4s						
KHC	**Kasperske Hory**	**1.59**	**10**	Pg	**Pb**	**09 42 47.8**	**-0.3**
KHC				Sg	**Sg**	**09 43 09.7**	**+0.8**
	8.9nm,0.4s						
CONA	**Conrad Observa**	**1.85**	**78**	⇑iPn	**Pn**	**09 42 49.8**	**-1.0**
CONA				⇑iPg	**Pb**	**09 42 52.7**	**+0.2**
	0.9nm,0.2s						
CONA				⇓iSg	**Sb**	**09 43 16.7**	**+0.5**
	9.1nm,0.5s						
CONA	**Conrad Observa**	**1.85**	**78**	Pn	**Pn**	**09 42 49.8**	**-1.0**
DAVA	**Damuels**	**2.25**	**264**	⇓iPg	**Pb**	**09 42 59.9**	**+0.5**
	7.1nm,0.5s						
DAVA				⇑iSg	**Sg**	**09 43 31.3**	**+1.1**
	27nm,0.6s						
DAVA	**Damuels**	**2.25**	**264**	Pg	**Pb**	**09 42 59.9**	**+0.5**
	7.1nm,0.5s						
DAVA				Sg	**Sg**	**09 43 31.3**	**+1.1**
	27nm,0.6s						

*ISCJB **10** 09:46:16.2±0.6, 1°.20N±0°.06×121°.09E±0°.08, h29km, mb3.9/7, Error ellipse: s-maj=13.1km s-min=6.2km az=145.3*
*DJA **10** 09:46:19.6±0.4, 1°N±4°×12°1E±°, h10km, M4.3/7, mb4.4/2, mB4.7/2, MLv4.3/7, Mw(mB)3.9/2*
*IDC **10** 09:46:21.7±5.4, 0°.86N×121°.18E, h83km±56km, mb3.6/7, mb1 3.7/9, mb1mx3.5/26, mbtmp3.6/9, ML4.0/2, Error ellipse: s-maj=61.5km s-min=15.4km az=65.0*
ISC 10 09:46:17.2±0.7**, 1°.04N**±0°.06×**121°.08E**±0°.09**, h29km, n17, σ1s84**/16**, mb3.9**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.02**	**123**	P	**Pb**	**09 46 36.5**	**+0.1**
MRSI				S	**Sb**	**09 46 49.6**	**+0.1**
LUWI	**Luwuk**	**2.67**	**141**	P	**Pb**	**09 47 01.3**	**-3.1**
LUWI				S	**Sb**	**09 47 37.3**	**+0.5**
KMSI	**Cibinong**	**2.94**	**99**	P	**Pb**	**09 47 09.7**	**+0.8**
SKSI	**Soroako, Sulaw**	**3.56**	**176**	P	**Pn**	**09 47 12.2**	**+1.6**
TTSI	**Tana Toraja**	**4.25**	**197**	P	Pn	09 47 24.7	+4.6
MYLDM	**Lahad Datu**	**4.85**	**328**	P	Pn	09 47 32.8	+4.5
SPSI	**Sidrap Palu**	**5.14**	**195**	P	Pn	09 47 36.4	+4.0
	34nm,0.8s,522nm0.1nm						
KAPI	**Kappang**	**6.16**	**192**	P	**Pn**	**09 47 47.6**	**+1.2**
	1.4nm,0.3s,baz=0.0,slow=13,SNR=4.4						
KKM	**Kota Kinabalu**	**6.95**	**316**	P	Pn	09 48 05.4	+8.1
KKM				S	**Sn**	**09 49 15.3**	**-0.1**
FITZ	**Fitzroy Crossi**	**19.55**	**167**	P	**P**	**09 50 41.7**	**-1.0**
	0.7nm,0.3s,baz=359,slow=9.1,SNR=17						
WRA	**Warramunga Arr**	**24.57**	**149**	P	**P**	**09 51 31.3**	**-3.6**
	3.8nm,0.5s,baz=328,slow=11,SNR=92						
ASAR	**Alice Springs**	**27.54**	**154**	P	**P**	**09 51 59.2**	**-2.5**
	1.2nm,0.5s,baz=344,slow=14,SNR=35						
STKA	**Stephens Creek**	**38.08**	**151**	P	**P**	**09 53 30.8**	**-2.7**
	1.1nm,0.5s,baz=342,slow=8.8,SNR=12						
USRK	**Ussuriysk Arra**	**44.05**	**11**	P	**P**	**09 54 22.3**	**-0.2**
	3.0nm,0.8s,baz=188,slow=6.9,SNR=6.3						
SONM	**Songino Array**	**48.32**	**347**	P	**P**	**09 54 56.9**	**+0.7**
	2.1nm,0.7s,baz=166,slow=7.7,SNR=8.9						
MKAR	**Makanchi Array**	**56.73**	**329**	P	**P**	**09 55 58.4**	**-0.1**
	0.2nm,0.5s,baz=128,slow=8.4,SNR=3.8						
KURBB	**Kurchatov Arra**	**61.11**	**331**	P	**P**	**09 56 27.8**	**-0.9**
	0.3nm,0.3s,baz=137,slow=6.6,SNR=3.1						

*ISK **10** 09:51:57.9, 37°.87N×29°.27E, h10km, MD2.9*
*ISCJB **10** 09:51:58.1±0.5, 37°.89N±0°.02×29°.26E±0°.04, h10km±4km, Error ellipse: s-maj=5.5km s-min=3.7km az=22.2*
*DDA **10** 09:51:58.0, 37°.88N×29°.22E, h7km, MD2.8*
*CSEM **10** 09:51:58.1±0.1, 37°.86N×29°.27E, h8km, MD2.9, Error ellipse: s-maj=4.0km s-min=3.1km az=111.0*
ISC 10 09:51:57.8±0.9**, 37°.89N**±0°.02×**29°.25E**±0°.03**, h14km**±7km**, n38, σ0s51**/56**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.22**	**232**	ePG	**Pg**	**09 52 03.1**	**+0.4**
DENT				eSG	**Sb**	**09 52 07.4**	**-0.1**
DENT	**Denizli**	**0.22**	**232**	ePg	**Pg**	**09 52 03.1**	**+0.4**
DENT				eSg	**Sb**	**09 52 07.4**	**-0.1**
DNZL	**Cakiroluk**	**0.26**	**219**	i P	**Pg**	**09 52 02.9**	**-0.4**
DNZL				i S	**Sg**	**09 52 06.7**	**-0.4**
DNZL	**Cakiroluk**	**0.26**	**219**	i P	**Pg**	**09 52 02.9**	**-0.4**
DNZL				i S	**Sg**	**09 52 06.7**	**-0.4**
KHAL	**Karahalli**	**0.52**	**22**	i P	**Pg**	**09 52 08.3**	**+0.2**
KHAL				i S	**Sb**	**09 52 16.2**	**0.0**
KHAL	**Karahalli**	**0.52**	**22**	i P	**Pg**	**09 52 08.3**	**+0.2**
KHAL				i S	**Sb**	**09 52 16.2**	**0.0**
GOLH	**Golhisar**	**0.70**	**159**	i P	**Pg**	**09 52 11.1**	**-0.3**
GOLH				i S	**Sn**	**09 52 23.9**	**-0.1**
GOLH	**Golhisar**	**0.70**	**159**	i P	**Pg**	**09 52 11.1**	**-0.3**
GOLH				i S	**Sn**	**09 52 23.9**	**-0.1**
GLHS	**Glhisar (BURDU**	**0.76**	**165**	ePG	**Pg**	**09 52 12.6**	**0.0**
GLHS				eSG	**Sb**	**09 52 23.5**	**+0.4**
GLHS	**Glhisar (BURDU**	**0.76**	**165**	ePg	**Pg**	**09 52 12.6**	**0.0**
GLHS				eSg	**Sb**	**09 52 23.5**	**+0.4**
KULA	**Kula-Manisa**	**0.78**	**324**	ePG	**Pb**	**09 52 13.9**	**+0.7**
KULA	**Kula-Manisa**	**0.78**	**324**	ePg	**Pb**	**09 52 13.9**	**+0.7**
MANT	**Manisa**	**0.81**	**318**	i P	**Pg**	**09 52 13.7**	**+0.1**
MANT	**Manisa**	**0.81**	**318**	i P	**Pg**	**09 52 13.7**	**+0.1**
ISP	**Isparta**	**1.01**	**93**	ePG	**Pg**	**09 52 17.3**	**0.0**
ISP	**Isparta**	**1.01**	**93**	ePg	**Pg**	**09 52 17.3**	**0.0**
YER	**Yerkesik**	**1.07**	**226**	ePG	**Pb**	**09 52 18.2**	**-0.1**
YER				eSG	**Sn**	**09 52 33.7**	**+0.4**
YER	**Yerkesik**	**1.07**	**226**	ePg	**Pb**	**09 52 18.2**	**-0.1**
YER				eSg	**Sn**	**09 52 33.7**	**+0.4**
AYDN	**Tasoluk**	**1.11**	**259**	i P	**Pn**	**09 52 19.2**	**+0.2**
AYDN				i S	**Sg**	**09 52 33.8**	**+0.2**
AYDN	**Tasoluk**	**1.11**	**259**	i P	**Pn**	**09 52 19.2**	**+0.2**
AYDN				i S	**Sg**	**09 52 33.8**	**+0.2**
DALY	**Dalyan (Mu˜la**	**1.17**	**204**	ePN	**Pn**	**09 52 19.8**	**0.0**
DALY	**Dalyan (Mu˜la**	**1.17**	**204**	ePn	**Pn**	**09 52 19.8**	**0.0**
GDZ	**Gediz**	**1.21**	**9**	i P	**Pg**	**09 52 21.9**	**+0.7**
GDZ				i S	**Sb**	**09 52 34.9**	**-1.3**
GDZ	**Gediz**	**1.21**	**9**	i P	**Pg**	**09 52 21.9**	**+0.7**
GDZ				i S	**Sb**	**09 52 34.9**	**-1.3**
SHUT	**Suhut-Afyon**	**1.22**	**57**	ePN	**Pg**	**09 52 21.6**	**+0.3**
SHUT	**Suhut-Afyon**	**1.22**	**57**	ePn	**Pg**	**09 52 21.6**	**+0.3**
ELL	**Elmali**	**1.25**	**155**	ePN	**Pn**	**09 52 21.1**	**0.0**
ELL	**Elmali**	**1.25**	**155**	ePn	**Pn**	**09 52 21.1**	**0.0**
FETY	**Fethiye**	**1.26**	**186**	ePN	**Pb**	**09 52 21.6**	**+0.2**
FETY	**Fethiye**	**1.26**	**186**	ePn	**Pb**	**09 52 21.6**	**+0.2**
ALT	**Altintas**	**1.35**	**30**	ePN	**Pg**	**09 52 24.0**	**+0.3**
ALT	**Altintas**	**1.35**	**30**	ePn	**Pg**	**09 52 24.0**	**+0.3**
BODT	**Bodrum**	**1.75**	**242**	ePN	**Pb**	**09 52 29.2**	**-0.5**
BODT	**Bodrum**	**1.75**	**242**	ePn	**Pb**	**09 52 29.2**	**-0.5**
DAT	**Datca**	**1.77**	**230**	ePN	**Pn**	**09 52 29.2**	**+1.1**
DAT	**Datca**	**1.77**	**230**	ePn	**Pn**	**09 52 29.2**	**+1.1**
DURS	**Dursunbey**	**1.81**	**341**	i P	**Pg**	**09 52 32.1**	**-0.5**
DURS				i S	**Sn**	**09 52 50.7**	**-0.9**
DURS	**Dursunbey**	**1.81**	**341**	i P	**Pg**	**09 52 32.1**	**-0.5**
DURS				i S	**Sn**	**09 52 50.7**	**-0.9**

*CSEM **10** 09:52:11.6±0.2, 39°.54N×29°.87E, h10km, MD2.9, Error ellipse: s-maj=3.7km s-min=3.4km az=99.0*
ISK 10 09:52:11.0, 39°.54N×29°.89E, h8km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.34**	**254**	ePG	Pg	09 52 17.9	0.0
TVSB				eSG	Sg	09 52 23.8	+1.3
TVSB	**Tavsanli**	**0.34**	**254**	ePg	Pg	09 52 17.9	0.0
TVSB				eSg	Sg	09 52 23.8	+1.3
ALT	**Altintas**	**0.52**	**160**	ePG	Pg	09 52 21.4	+0.2
ALT				eSG	Sg	09 52 29.1	+1.0
ALT	**Altintas**	**0.52**	**160**	ePg	Pg	09 52 21.5	+0.3
ALT				eSg	Sg	09 52 29.1	+1.0
CAVI	**Cavuskoy**	**0.66**	**357**	ePG	Pb	09 52 24.8	0.0
CAVI	**Cavuskoy**	**0.66**	**357**	ePg	Pb	09 52 24.8	0.0
ADVT	**Abdulvahap**	**0.90**	**353**	ePG	Pg	09 52 28.1	-0.1
ADVT	**Abdulvahap**	**0.90**	**353**	ePg	Pg	09 52 28.1	-0.1
GULT	**Gulveren**	**1.01**	**28**	ePG	Pb	09 52 31.1	+0.2
GULT				eSG	Sb	09 52 45.3	+0.8
GULT	**Gulveren**	**1.01**	**28**	ePg	Pb	09 52 31.1	+0.2
GULT				eSg	Sn	09 52 45.3	-0.8
GEMT	**Gemlik**	**1.04**	**329**	ePG	Pb	09 52 31.2	-0.1
GEMT	**Gemlik**	**1.04**	**329**	ePg	Pb	09 52 31.2	-0.1
MDNY	**Mudanya-Bursa**	**1.13**	**317**	ePN	Pg	09 52 32.7	0.0
MDNY	**Mudanya-Bursa**	**1.13**	**317**	ePn	Pg	09 52 32.7	0.0
SVRH	**Sivrihisar-ESK**	**1.27**	**94**	ePN	Pg	09 52 35.9	+0.3
SVRH	**Sivrihisar-ESK**	**1.27**	**94**	ePn	Pg	09 52 35.9	+0.3
ARMT	**Armutlu**	**1.29**	**323**	ePN	Pb	09 52 35.6	+0.1
ARMT	**Armutlu**	**1.29**	**323**	ePn	Pb	09 52 35.6	+0.1
MDUB	**Mudurnu**	**1.37**	**47**	ePN	Pb	09 52 37.0	0.0
MDUB	**Mudurnu**	**1.37**	**47**	ePn	Pb	09 52 37.0	0.0
SILT	**Sile**	**1.62**	**354**	ePN	Pb	09 52 40.8	-0.3
SILT	**Sile**	**1.62**	**354**	ePn	Pb	09 52 40.8	-0.3
BALY	**Balya**	**1.76**	**277**	eP	Pn	09 52 42.6	+0.7
BALY	**Balya**	**1.76**	**277**	eP	Pn	09 52 42.6	+0.7
GONE	**Gonen-Balikesi**	**1.77**	**287**	ePN	Pn	09 52 42.7	+0.8
GONE	**Gonen-Balikesi**	**1.77**	**287**	ePn	Pn	09 52 42.7	+0.8

CSEM 10 10:03:41.1, 45°.97N×15°.47E, h0km, ML0.8, 4C, Mining explosion. After LJU, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CESS	**Cesta pri Krsk**	**0.01**	**305**	⇑iPg	Pg	10 03 40.7	-0.5
CESS				i Sg	Sg	10 03 40.9	-0.5
CESS							
	comp=Z,3µm,0.2s						
CESS	**Cesta pri Krsk**	**0.01**	**305**	⇑iPg	Pg	10 03 40.7	-0.6
CESS				i Sg	Sg	10 03 40.9	-0.5
	comp=Z,3µm,0.2s						
LEGS	**Legarje**	**0.11**	**259**	i Pg	Pg	10 03 43.1	-0.1
LEGS				i Sg	Sg	10 03 45.7	+1.0
LEGS	**Legarje**	**0.11**	**259**	i Pg	Pg	10 03 43.1	-0.1
LEGS				i Sg	Sg	10 03 45.7	+1.0
GOLS	**Golise**	**0.12**	**69**	⇑iPg	Pg	10 03 43.1	-0.2
GOLS				i Sg	Sg	10 03 45.7	+0.7
GOLS							
	comp=Z,26nm,0.2s						
GOLS	**Golise**	**0.12**	**69**	⇑iPg	Pg	10 03 43.2	-0.2
GOLS				i Sg	Sg	10 03 45.7	+0.7
	comp=Z,26nm,0.2s						
DOBS	**Dobrina**	**0.18**	**360**	i Pg	Pg	10 03 44.4	-0.2
DOBS	**Dobrina**	**0.18**	**360**	i Pg	Pg	10 03 44.4	-0.2

*NEIC **10** 10:06:19.9, 19°.22N×65°.25W, h8km, MD3.5(RSPR), After RSPR.*
RSPR 10 10:06:19.9, 19°.22N×65°.25W, h8km±2km**, MD3.5**/7**, 31C, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**0.91**	**162**	⇑eP	Pg	10 06 36.0	-1.4
STVI	**Saint Thomas**	**0.91**	**162**	⇑eP	Pg	10 06 36.1	-1.3
STVI				eS	Sg	10 06 47.9	-1.3
STVI	**Saint Thomas**	**0.91**	**162**	⇑eP	Pg	10 06 36.0	-1.4
STVI				eS	Sg	10 06 47.9	-1.3
ABVI	**Anegada Island**	**0.99**	**119**	⇑eP	Pg	10 06 36.8	-2.3
ABVI				eS	Sg	10 06 50.3	-1.7
ABV	**Anegada**	**0.99**	**119**	⇑eP	Pg	10 06 36.8	-2.3
ABV	**Anegada**	**0.99**	**119**	⇑eP	Pg	10 06 36.8	-2.3
ABV				eS	Sg	10 06 50.3	-1.7
TBVI	**Tortola**	**1.00**	**143**	⇑eP	Pg	10 06 37.0	-2.1
TBVI				eS	Sg	10 06 50.5	-1.6
TBVI	**Tortola**	**1.00**	**143**	⇑eP	Pg	10 06 37.0	-2.1
TBVI				eS	Sg	10 06 50.5	-1.6
TBVI	**Tortola**	**1.00**	**143**	⇑eP	Pg	10 06 37.0	-2.1
TBVI				eS	Sg	10 06 50.5	-1.6
CBYP	**Canovanas**	**1.11**	**212**	⇑eP	Pg	10 06 38.5	-2.8
CBYP	**Canovanas**	**1.11**	**212**	⇑eP	Pg	10 06 38.5	-2.8
CBYP	**Canovanas**	**1.11**	**212**	⇑eP	Pg	10 06 38.5	-2.8
MTP	**Monte Pirata**	**1.16**	**195**	⇑eP	Pg	10 06 39.2	-3.0
MTP	**Monte Pirata**	**1.16**	**195**	⇑eP	Pg	10 06 39.2	-3.0
MTP	**Monte Pirata**	**1.16**	**195**	⇑eP	Pg	10 06 39.2	-3.0
CPD	**Cerro la Pandu**	**1.34**	**208**	⇑eP	Pn	10 06 41.7	-3.3
CPD	**Cerro la Pandu**	**1.34**	**208**	⇑eP	Pn	10 06 41.7	-3.3
CPD	**Cerro la Pandu**	**1.34**	**208**	⇑eP	Pn	10 06 41.7	-3.3
SJG	**San Juan**	**1.40**	**218**	⇑eP	Pn	10 06 42.5	-3.3
SJG	**San Juan**	**1.40**	**218**	⇑eP	Pn	10 06 42.9	-2.9
SJG	**San Juan**	**1.40**	**218**	⇑eP	Pn	10 06 42.5	-3.3
SJG	**San Juan**	**1.40**	**218**	⇑eP	Pn	10 06 42.9	-2.9
SJG	**San Juan**	**1.40**	**218**	⇑eP	Pn	10 06 42.9	-2.9
AOPR	**Arecibo Observ**	**1.67**	**239**	⇑eP	Pn	10 06 46.5	-3.2
AOPR	**Arecibo Observ**	**1.67**	**239**	⇑eP	Pn	10 06 46.5	-3.2
AOPR	**Arecibo Observ**	**1.67**	**239**	⇑eP	Pn	10 06 46.5	-3.2
CELP	**Cerrillos**	**1.70**	**228**	⇑eP	Pn	10 06 47.1	-2.9
CELP	**Cerrillos**	**1.70**	**228**	⇑eP	Pn	10 06 47.1	-2.9
CELP	**Cerrillos**	**1.70**	**228**	ePn	Pn	10 06 47.3	-2.7
CELP				eSn	Sn	10 07 08.7	-3.3
OBIP	**Obispado Ponce**	**1.74**	**228**	ePn	Pn	10 06 47.7	-2.9
LRS	**Lares**	**1.77**	**239**	ePn	Pn	10 06 48.3	-2.7
LRS				eSn	Sn	10 07 14.4	+0.5
LSP	**Las Mesas**	**2.03**	**239**	ePn	Pn	10 06 52.8	-1.8
LSP				eSn	Sn	10 07 20.2	0.0
CRPR	**Cabo Rojo, PR**	**2.14**	**236**	⇑eP	Pn	10 06 53.0	-3.0
CRPR	**Cabo Rojo, PR**	**2.14**	**236**	⇑eP	Pn	10 06 53.3	-2.7
CRPR	**Cabo Rojo, PR**	**2.14**	**236**	⇑eP	Pn	10 06 53.0	-3.0
SDDR	**Presa de Saban**	**5.72**	**269**	ePn	Pn	10 07 42.0	-3.4

GUC 10 10:26:54.2±0.8**, 31°.96S×71°.87W, h10km**±3km**, MD3.5, ML2.7, 2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.33**	**76**	⇓iP	Pg	10 27 01.0	+0.3
CHNG				i S	Sb	10 27 06.4	-1.0
CHNG				AML	AML	10 27 06.6	
	comp=E,436nm,0.5s						
CMCH	**Combarbala**	**1.08**	**44**	i P	Pb	10 27 12.4	-2.7
CMCH				i S	Sg	10 27 26.6	-2.7
CMCH				AML	AML	10 27 30.4	
	comp=N,1µm,0.8s						
CLCH	**Cerro Calan**	**1.82**	**142**	⇓iP	Pn	10 27 25.5	-0.2
CLCH				i S	Sn	10 27 49.5	+0.7
CLCH				AML	AML	10 27 55.1	
	comp=N,155nm,0.5s						
TLL	**Tololo Astrono**	**2.01**	**27**	eP	Pn	10 27 28.8	+0.3
TLL				i S	Sb	10 27 55.6	-0.9
TLL				AML	AML	10 28 00.5	
	comp=E,94nm,0.5s						
CACH	**El Canelo**	**2.40**	**154**	eS	Sb	10 28 06.7	-0.8

MAN 10 10:39:25, 5°.61N×126°.05E, h104km, mb4.0, ML2.7, MS2.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.34**	**9**	eP	Pn	10 39 50.2	+0.6
MATI				eS	Sn	10 40 09.3	+1.1
CTBH	**Cotabato--PC H**	**2.40**	**312**	⇑iP	Pn	10 40 04.0	+1.1
BUKP	**Musuan**	**2.46**	**337**	eP	Pn	10 40 04.3	+0.5
BUKP				eS	Sn	10 40 34.0	+0.6
PAGZ	**Pagadian**	**3.46**	**310**	eP	Pn	10 40 18.2	+1.2

MEX 10 10:52:56.6±0.3**, 15°.67N×93°.45W, h87km**±5km**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PCIG		**0.23**	**81**	i P	Pn	10 53 08.0	-1.2
PCIG				eS	Sn	10 53 16.8	-1.9
TGIG		**1.15**	**16**	i P	Pn	10 53 16.6	-1.3
TGIG				eS	Sn	10 53 32.6	-1.3
THIG		**1.37**	**123**	i P	Pn	10 53 19.0	-1.6
THIG				i S	Sn	10 53 37.5	-1.3
CCIG	**Comitan**	**1.40**	**64**	i P	Pn	10 53 19.8	-1.5
CCIG				eS	Sn	10 53 38.1	-1.7

IDC 10 11:08:36.0±7.1**, 4°.08S×141°.29E, h0km, mb3.3**/2**, mb1 3.7**/3**, mb1mx3.4**/16**, mbtmp3.5**/3**, ML3.9**/1**, MS2.8**/1**, Ms1 2.8**/1**, ms1mx1.9**/21**, Error ellipse: s-maj=262.9km s-min=32.3km az=91.0, New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.16**	**203**	Pn	Pn	11 12 37.6	+0.3
	0.4nm,0.3s,baz=23,slow=12,SNR=31						
DAV	**Davao City (W)**	**19.20**	**305**	LR	LR	11 20 38.6	
	comp=Z,31nm,20.4s,baz=235,slow=38						
ASAR	**Alice Springs**	**20.73**	**199**	P	P	11 13 18.2	-0.2
	0.7nm,0.8s,baz=28,slow=10,SNR=7.3						
MKAR	**Makanchi Array**	**72.44**	**322**	P	P	11 20 04.5	+0.1
	0.4nm,0.6s,baz=126,slow=6.7,SNR=7.1						

*NSSC **10** 11:25:46.9±2.1, 35°.91N×40°.65E, h124km±27km, MD1.7, ML1.9*
*ISCJB **10** 11:25:48.4±0.8, 37°.23N±0°.03×39°.30E±0°.04, h3km±6km, Error ellipse: s-maj=5.6km s-min=4.4km az=43.6*
*DDA **10** 11:25:48.5, 37°.17N×39°.25E, h30km, MD3.1*
*ISK **10** 11:25:49.8, 37°.32N×39°.18E, h5km, MD2.9*
*CSEM **10** 11:25:49.0±0.2, 37°.22N×39°.27E, h5km, MD2.9, Error ellipse: s-maj=5.8km s-min=3.8km az=58.0*
ISC 10 11:25:49.0±1.2**, 37°.22N**±0°.03×**39°.26E**±0°.03**, h8km**±10km**, n21, σ1s04**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.41**	**303**	ePG	**Pg**	**11 25 57.0**	**0.0**
URFA				eSG	**Sg**	**11 26 02.7**	**+0.2**
URFA	**Urfa**	**0.41**	**303**	ePg	**Pg**	**11 25 57.0**	**0.0**
URFA				eSg	**Sg**	**11 26 02.7**	**+0.2**
ATAB	**Bozova**	**0.81**	**288**	eP	**Pb**	**11 26 05.0**	**-0.3**
ATAB				eS	**Sb**	**11 26 16.5**	**+0.1**
ATAB	**Bozova**	**0.81**	**288**	eP	**Pb**	**11 26 05.0**	**-0.3**
ATAB				eS	**Sb**	**11 26 16.5**	**+0.1**
KBSD	**Kabsdagh**	**1.05**	**102**	eP	**Pb**	**11 26 09.8**	**+0.3**
KBSD				eS	**Sn**	**11 26 26.9**	**+1.9**
KBSD				AML	AML	11 26 27.6	
	comp=E,47nm,0.2s						
KBSD				AML	AML	11 26 28.9	
	comp=N,25nm,0.2s						
KBSD	**Kabsdagh**	**1.05**	**102**	eP	**Pb**	**11 26 09.8**	**+0.3**
	SNR=133						
KBSD				eS	**Sn**	**11 26 26.9**	**+1.9**
	comp=N,25nm,0.2s,SNR=133						
SFNV	**Sufian**	**1.05**	**139**	eP	**Pb**	**11 26 08.9**	**-0.6**
SFNV				eS	**Sb**	**11 26 20.7**	**-2.8**
SFNV				AML	AML	11 26 29.1	
	comp=E,23nm,0.2s						
SFNV				AML	AML	11 26 29.9	
	comp=N,38nm,0.2s						
SFNV	**Sufian**	**1.05**	**139**	eP	**Pb**	**11 26 08.9**	**-0.6**
	SNR=147						
SFNV				eS	**Sb**	**11 26 20.7**	**-2.8**
	comp=N,38nm,0.2s,SNR=147						
SVRC	**Sivrice-ELAZID**	**1.16**	**2**	ePG	**Pb**	**11 26 11.2**	**-0.2**
SVRC				eSG	**Sb**	**11 26 27.2**	**+0.6**
SVRC	**Sivrice-ELAZID**	**1.16**	**2**	ePg	**Pb**	**11 26 11.2**	**-0.2**
SVRC				eSg	**Sb**	**11 26 27.2**	**+0.6**
MARD	**Mardin**	**1.22**	**85**	ePn	**Pn**	**11 26 11.2**	**-1.3**
MARD				eSn	**Sb**	**11 26 28.7**	**+0.4**
MYA	**Malataya**	**1.28**	**329**	ePN	**Pn**	**11 26 13.2**	**-0.1**
MYA				eSN	**Sn**	**11 26 30.4**	**-0.4**
MYA	**Malataya**	**1.28**	**329**	ePn	**Pn**	**11 26 13.3**	**-0.1**
MYA				eSn	**Sn**	**11 26 30.5**	**-0.4**
KSRV	**Kasrt alli**	**1.37**	**189**	eP	**Pn**	**11 26 14.0**	**-0.4**
KSRV				eS	**Sg**	**11 26 35.0**	**+2.0**
KSRV				AML	AML	11 26 36.4	
	comp=N,10nm,0.2s						
KSRV				AML	AML	11 26 36.7	
	comp=E,17nm,0.2s						
KSRV	**Kasrt alli**	**1.37**	**189**	eP	**Pn**	**11 26 14.0**	**-0.4**
	SNR=123						
KSRV				eS	**Sg**	**11 26 35.0**	**+2.0**
	comp=E,17nm,0.2s,SNR=123						
AKCD	**Akcadag**	**1.51**	**316**	ePn	**Pn**	**11 26 16.5**	**0.0**
AKCD				eSn	**Sg**	**11 26 37.4**	**0.0**
PTK	**Pertek**	**1.67**	**4**	ePN	**Pb**	**11 26 20.1**	**-0.1**
PTK	**Pertek**	**1.67**	**4**	ePn	**Pb**	**11 26 20.1**	**-0.1**
JHLN	**Al Jahlan**	**1.68**	**203**	eP	**Pn**	**11 26 18.6**	**-0.1**
JHLN				eS	**Sb**	**11 26 41.9**	**+0.3**
JHLN				AML	AML	11 26 45.3	
	comp=N,11nm,0.2s						
JHLN				AML	AML	11 27 04.5	
	comp=E,19nm,0.3s						
JHLN	**Al Jahlan**	**1.68**	**203**	eP	**Pn**	**11 26 18.6**	**-0.1**
	SNR=118						
JHLN				eS	**Sb**	**11 26 41.8**	**+0.3**
	comp=E,19nm,0.3s,SNR=118						
AYKD	**Aykdinkavak**	**1.96**	**276**	ePn	**Pn**	**11 26 22.7**	**+0.1**
AYKD				eSn	**Sg**	**11 26 50.3**	**-1.7**

*IDC **10** 11:41:41.6±2.7, 35°.38N×141°.38E, h0km, mb3.3/2, mb1 3.3/4, mb1mx3.1/27, mbtmp3.1/4, ML2.6/2, Error ellipse: s-maj=52.2km s-min=34.2km az=61.0*
*ISCJB **10** 11:41:43.8±1.2, 35°.56N±0°.05×141°.3E±0°.1, h33km, mb3.5/2, Error ellipse: s-maj=14.2km s-min=6.0km az=157.8*
*JMA **10** 11:41:44.9±0.1, 35°.57N×141°.12E, h38km±1km, M2.4*
ISC 10 11:41:44.7±1.5**, 35°.58N**±0°.05×**141°.2E**±0°.1**, h33km, n12, σ1s36**/16**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.30**	**294**	P	**Pb**	**11 41 52.3**	**-0.1**
CHOJ				S	**Sb**	**11 41 57.7**	**0.0**
KTR	**Katsuura**	**0.84**	**239**	P	**Pb**	**11 42 00.1**	**-0.7**
BSO4	**Boso 4**	**0.92**	**230**	P	**Pb**	**11 42 01.0**	**-1.1**
BSO1	**Boso 1**	**0.94**	**191**	P	**Pb**	**11 42 01.4**	**-0.8**
BSO3	**Boso 3**	**0.96**	**216**	P	**Pb**	**11 42 01.1**	**-1.5**

JYT	Yasato	1.04	309	P	Pn	11 42 02.8	-0.1
JYT				S	Sn	11 42 16.0	-0.3
JHO	Hitachi	1.15	334	P	Pn	11 42 04.6	+0.2
MJAR	Matsushiro Arr	2.61	293	Pn	Pb	11 42 27.7	-3.0
	0.8nm,0.3s,baz=102,slow=7.9,SNR=8.9						
MAT	Matsushiro	2.61	293	P	Pn	11 42 26.9	+2.4
MAT				S	Sn	11 42 56.7	+1.6
JHJ	Hachijo jima 2	2.72	206	Pn	Pn	11 42 25.8	-0.3
	3.4nm,0.3s,baz=273,slow=9.8,SNR=4.1						
JHJ				Sn	Sn	11 42 58.4	+0.6
	5.7nm,0.3s,baz=83,slow=23,SNR=3.6						
WRA	Warramunga Arr	55.60	188	P	P	11 51 16.9	-0.3
	0.5nm,0.5s,baz=1.9,slow=7.7,SNR=8.5						
ASAR	Alice Springs	59.33	188	P	P	11 51 44.6	+1.2
	0.2nm,0.8s,baz=7.8,slow=7.5,SNR=2.6						

IDC 10 11:50:43.2±2.5, 1°81N×128°57E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/21, mbtmp3.4/3, Error ellipse: s-maj=138.4km s-min=24.6km az=90.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.34	166	P	P	11 55 43.8	+0.9
	0.5nm,0.4s,baz=346,slow=11,SNR=17						
ASAR	Alice Springs	25.85	169	P	P	11 56 15.8	-0.8
	0.2nm,0.5s,baz=353,slow=7.7,SNR=8.2						
MJAR	Matsushiro Arr	35.69	13	P	P	11 57 43.4	0.0
	0.9nm,0.5s,baz=214,slow=6.8,SNR=6.8						

IDC 10 11:58:04.0±3.7, 12°20S×166°88E, h216km±36km, mb3.7/15, mb1 3.8/16, mb1mx3.8/22, mbtmp3.7/16, Error ellipse: s-maj=24.0km s-min=16.7km az=145.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	9.82	182	P	Pn	12 00 22.7	+1.8
	0.6nm,0.3s,baz=7.0,slow=11,SNR=24						
DZM				S	S	12 02 09.5	-1.7
	0.2nm,0.3s,baz=41,slow=20,SNR=3.0						
CTA	Charters Tower	21.29	246	P	P	12 02 34.5	+0.4
	3.1nm,0.6s,baz=83,slow=8.1,SNR=3.9						
STKA	Stephens Creek	30.41	226	P	P	12 03 55.6	-0.6
	1.0nm,0.4s,baz=60,slow=9.4,SNR=5.8						
WRA	Warramunga Arr	32.16	252	P	P	12 04 11.2	-0.6
	1.3nm,0.8s,baz=81,slow=8.8,SNR=15						
ASAR	Alice Springs	33.30	245	P	P	12 04 20.9	-0.7
	2.2nm,0.7s,baz=72,slow=9.7,SNR=40						
ASAR				pP	pP	12 05 06.8	+1.1
	1.3nm,0.7s,baz=69,slow=9.5,SNR=5.1						
FITZ	Fitzroy Crossi	40.17	256	P	P	12 05 19.9	+0.3
	3.2nm,0.9s,baz=84,slow=6.5,SNR=6.7						
MJAR	Matsushiro Arr	55.51	332	P	P	12 07 15.3	-1.5
	4.1nm,0.9s,baz=169,slow=8.4,SNR=10						
KSRS	Korea Array	61.46	325	P	P	12 07 57.7	-0.1
	1.8nm,0.9s,baz=142,slow=6.4,SNR=4.6						
PETK	Petropavlovsk-	65.52	354	P	P	12 08 24.7	+0.6
	2.6nm,0.9s,baz=138,slow=8.8,SNR=7.6						
CMAR	Chiang Mai Arr	73.59	294	P	P	12 09 15.6	+1.4
	2.9nm,1.0s,baz=125,slow=4.2,SNR=11						
SONM	Songino Array	80.25	323	P	P	12 09 51.7	+0.9
	0.8nm,0.7s,baz=127,slow=3.9,SNR=6.5						
ILAR	Eielson Array	84.25	18	P	P	12 10 10.5	-0.5
	4.4nm,0.7s,baz=239,slow=5.5,SNR=45						
NVAR	Mina Array Bea	85.92	49	P	P	12 10 20.5	+0.3
	1.0nm,0.9s,baz=234,slow=7.4,SNR=8.7						
MKAR	Makanchi Array	95.12	317	P	P	12 11 02.8	+0.1
	2.2nm,0.8s,baz=94,slow=6.2,SNR=15						
ZALV	Zalesovo Beam	95.14	324	P	P	12 11 01.2	-1.3
	0.4nm,0.3s,baz=127,slow=3.8,SNR=4.0						
YKA	Yellowknife Ar	95.49	27	P	P	12 11 02.5	-1.4
	0.2nm,0.4s,baz=249,slow=5.2,SNR=5.8						
ARCES	ARCESS Array B	117.73	346	PKP	PKPdf	12 16 23.4	-0.5
	1.6nm,0.4s,baz=85,slow=1.9,SNR=28						
KEST	Kesra	149.00	323	PKPbc	PKPbc	12 17 26.4	-0.7
	3.0nm,1.0s,baz=28,slow=1.2,SNR=6.0						
ESDC	Sonseca Array	151.46	345	PKPbc	PKPbc	12 17 32.9	+0.2
	0.2nm,0.3s,baz=17,slow=3.1,SNR=11						
ESDC				PKPab	PKPab	12 17 41.9	+0.2
	0.3nm,0.3s,baz=13,slow=3.4,SNR=5.2						
TORD	Torodi Ar. Bea	165.51	275	PKPab	PKPab	12 18 43.1	-0.3
	2.0nm,1.1s,baz=83,slow=3.9,SNR=6.9						

IDC 10 12:26:58.6±1.9, 18°25S×178°12W, h548km±22km, mb3.2/10, mb1 3.5/12, mb1mx3.3/22, mbtmp3.3/12, Error ellipse: s-maj=24.0km s-min=13.1km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.46	56	P	P	12 28 50.7	-0.5
	7.5nm,0.3s,baz=233,slow=10,SNR=7.4						
DZM	Mont Dzumac	14.99	253	P	P	12 30 08.3	+0.2
	0.8nm,0.3s,baz=79,slow=17,SNR=13						
STKA	Stephens Creek	38.72	242	P	P	12 33 36.0	-0.1
	4.2nm,0.7s,baz=54,slow=7.0,SNR=12						
WRA	Warramunga Arr	44.85	260	P	P	12 34 24.4	-0.2
	1.8nm,0.5s,baz=96,slow=7.3,SNR=75						
ASAR	Alice Springs	44.97	255	P	P	12 34 25.4	-0.1
	7.4nm,0.6s,baz=88,slow=8.8,SNR=106						
MJAR	Matsushiro Arr	68.34	323	P	P	12 37 05.5	-0.1
	0.6nm,0.5s,baz=149,slow=5.9,SNR=4.0						
QSPA	South Pole Qui	71.81	180	P	P	12 37 25.6	-0.3
	0.6nm,0.9s,baz=198,slow=6.4,SNR=5.2						
PETK	Petropavlovsk-	74.08	345	P	P	12 37 38.5	-0.2
	1.9nm,0.6s,baz=141,slow=7.7,SNR=8.7						
NVAR	Mina Array Bea	79.47	44	P	P	12 38 09.4	+0.5
	0.8nm,0.7s,baz=221,slow=8.1,SNR=6.4						
TXAR	Lajitas Array	85.94	57	P	P	12 38 42.1	+0.7
	0.8nm,0.6s,baz=214,slow=6.3,SNR=12						
ILAR	Eielson Array	86.15	13	P	P	12 38 40.9	-0.5
	0.6nm,0.4s,baz=219,slow=4.8,SNR=14						
PDAR	Pinedale Array	87.40	43	P	P	12 38 47.9	-0.3
	0.4nm,0.5s,baz=194,slow=5.5,SNR=4.0						
ARCES	ARCESS Array B	126.69	350	PKP	PKPdf	12 44 58.5	-0.8
	0.8nm,0.6s,baz=355,slow=2.1,SNR=6.9						
BRTR	Keskin Array B	145.22	315	PKPbc	PKPdf	12 45 34.9	+0.4
	0.8nm,0.8s,baz=127,slow=3.8,SNR=3.6						
GERES	GERESS Array B	148.01	345	PKPbc	PKPbc	12 45 41.9	-0.8
	0.5nm,0.4s,baz=60,slow=3.2,SNR=4.1						

GUC 10 12:34:38.4±0.9, 30°76S×71°46W, h36km±4km, MD3.8, ML3.3, 3C-3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	0.57	137	⇑iP	Pn	12 34 50.0	-0.2
CMCH				i S	Sn	12 34 58.4	-0.1
CMCH				AML	AML	12 34 59.0	
	comp=E,8μm,0.2s						
TLL	Tololo Astrono	0.82	44	⇓iP	Pn	12 34 54.4	+0.7
TLL				i S	Sn	12 35 06.4	+1.5
TLL				AML	AML	12 35 07.6	
	comp=N,745nm,0.4s						
CHNG	Los Chungos	1.12	182	⇑iP	Pn	12 34 57.9	+0.4
CHNG				i S	Sn	12 35 13.3	+1.5
CHNG				AML	AML	12 35 14.2	
	comp=E,306nm,0.2s						
LCO	Las Campanas	1.86	21	⇓iP	Pn	12 35 09.2	+1.1
LCO				i S	Sn	12 35 33.4	+2.8
LCO				AML	AML	12 35 38.3	
	comp=N,247nm,0.2s						
ROCH	El Roble	2.24	170	⇓iP	Pn	12 35 13.9	+0.7
ROCH				eS	Sn	12 35 42.9	+3.0
ROCH				AML	AML	12 35 55.6	
	comp=N,246nm,0.7s						
PEL	Peldehue	2.47	165	eP	Pn	12 35 17.6	+1.4
PEL				eS	Sn	12 35 47.2	+2.1
PEL				AML	AML	12 36 05.2	
	comp=E,321nm,0.3s						
LMEL	Las Melosas	3.26	161	⇑iP	Pn	12 35 29.3	+2.1
LMEL				i S	Sn	12 36 07.1	+2.2
LMEL				AML	AML	12 36 17.4	
	comp=N,122nm,0.1s						

ISCJB 10 12:47:25.0±0.5, 41°29N±0°03×22°67E±0°04, h13km±5km, Error ellipse: s-maj=6.0km s-min=4.7km az=41.6
SKO 10 12:47:25.8, 41°30N×22°67E, h10km, M1.7, ML2.2
CSEM 10 12:47:25.5±0.3, 41°29N×22°72E, h4km±1km, ML2.1, Error ellipse: s-maj=6.4km s-min=5.1km az=54.0
ATH 10 12:47:26.4, 41°22N×22°72E, h18km±1km, MD3.3/7
BEO 10 12:47:27.8±0.8, 41°31N×22°58E, h4km±3km, ML2.1/5
ISC 10 12:47:25.9±1.0, 41°25N±0°02×22°68E±0°02, h5km±9km, n32, σ0s88/49, 2C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.11	310	i Pg	Pg	12 47 27.9	-0.2
VAY				i Sg	Sg	12 47 29.6	-0.1
VAY				i Lg	Lg	12 47 29.6	
	comp=E,2μm,0.5s						
VAY				i Lg	Lg	12 47 29.7	
	comp=N,2μm,0.3s						
VAY	Valandovo	0.11	310	i Pg	Pg	12 47 28.3	+0.2
VAY				i Sg	Sg	12 47 29.5	-0.1
VAY				i Lg	Lg	12 47 30.1	
	comp=N,2μm,0.3s						
GRG	Griva	0.36	215	ePB	Pb	12 47 34.3	-0.5
GRG				eSB	Sg	12 47 39.0	+1.4
GRG	Griva	0.36	215	ePb	Pb	12 47 34.3	-0.5
GRG				eSb	Sg	12 47 39.0	+1.4
SOH	Sokhos	0.67	130	ePN	Pb	12 47 39.4	-0.7
SOH				eSN	Sg	12 47 47.2	-0.2
SOH	Sokhos	0.67	130	ePn	Pb	12 47 39.4	-0.7
SOH				eSn	Sg	12 47 47.2	-0.2
NVR	Nevrokopi	0.90	83	ePN	Pb	12 47 43.4	-0.6
NVR				eSN	Sb	12 47 55.4	-0.9
NVR	Nevrokopi	0.90	83	ePn	Pb	12 47 43.4	-0.6
NVR				eSn	Sb	12 47 55.4	-0.9
PLG	Polygyros	1.05	146	ePN	Pg	12 47 45.4	-0.7
PLG				eSN	Sg	12 47 59.1	-0.6
PLG	Polygyros	1.05	146	ePn	Pg	12 47 45.4	-0.7
PLG				eSn	Sg	12 47 59.1	-0.6
FNA	Florina	1.09	245	ePN	Pb	12 47 47.0	-0.3
FNA	Florina	1.09	245	ePn	Pb	12 47 47.0	-0.3
SKO	Skopje	1.18	308	i Pg	Pg	12 47 47.6	-0.8
SKO				i Sg	Sb	12 48 03.9	-0.3
SKO				i Lg	Lg	12 48 06.1	
	comp=N,22nm,0.3s						
SKO				i Lg	Lg	12 48 11.4	
	comp=E,24nm,0.6s						
SKO	Skopje	1.18	308	i Pg	Pg	12 47 48.1	-0.3
SKO				i Sg	Sg	12 48 01.4	-2.2
SKO				i Lg	Lg	12 48 11.8	
	comp=E,24nm,0.6s						
VTS	Vitosha	1.40	16	⇑iPg	Pg	12 47 52.9	+0.2
VTS				i Sg	Sg	12 48 11.6	+0.8
VTS	Vitosha	1.40	16	⇑iPg	Pg	12 47 52.9	+0.2
BARS	Barje	1.69	338	ePg	Pn	12 47 56.5	+0.4
BARS				i Sg	Sb	12 48 18.6	-0.5
BARS	Barje	1.69	338	ePg	Pn	12 47 56.5	+0.4
BARS				i Sg	Sb	12 48 18.6	-0.5
PLD	Plovdiv	1.74	60	ePn	Pg	12 47 59.8	+0.6
PLD				eSn	Sg	12 48 21.5	-0.3
PLD				i Sg	Sb	12 48 24.2	+3.7
THL	Klokotos Trika	1.76	197	ePN	Pb	12 47 58.7	+0.1
THL	Klokotos Trika	1.76	197	ePn	Pb	12 47 58.7	+0.1
ZAPS	Zavoj	2.02	359	i Sg	Sg	12 48 30.1	-0.7
RDO	Rodhopi	2.16	92	ePB	Pn	12 48 02.7	+0.2
RDO	Rodhopi	2.16	92	ePb	Pn	12 48 02.7	+0.2
AGG	Agios Georgios	2.24	187	ePN	Pn	12 48 04.7	+1.0
AGG	Agios Georgios	2.24	187	ePn	Pn	12 48 04.7	+1.0
AOS	Alonnisos	2.27	156	ePB	Pn	12 48 04.1	0.0
AOS	Alonnisos	2.27	156	ePb	Pn	12 48 04.1	0.0
ALN	Alexandroupoli	2.57	97	ePN	Pn	12 48 08.6	+0.4
ALN	Alexandroupoli	2.57	97	ePn	Pn	12 48 08.6	+0.4
DIVS	Divibare	3.47	326	ePn	Pn	12 48 21.4	+0.8
DIVS	Divibare	3.47	326	ePn	Pn	12 48 21.4	+0.8

MAN 10 13:09:12, 11°25N×123°79E, h118km, mb4.2, ML3.0, MS2.7, 1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.83	104	eP	Pn	13 09 34.5	+2.3
OCLP				eS	Sn	13 09 48.1	+0.6
PLP	Palo	1.17	94	⇓eP	Pn	13 09 29.0	-6.6
PLP				i S	Sn	13 09 37.3	-16
GUIM	Jordan	1.33	242	eP	Pn	13 09 38.6	+1.3
GUIM				eS	Sn	13 10 04.2	+7.6
CNP	Catarman	1.52	34	eP	Pn	13 09 40.8	+1.3
CNP				eS	Sn	13 10 02.2	+1.7
MSLP	Maasin	1.53	136	eP	Pn	13 09 41.2	+1.6
MSLP				eS	Sn	13 09 59.9	-0.7
BUKP	Musuan	3.58	159	eP	Pn	13 10 12.1	+6.2

IDC 10 13:11:25.6±4.9, 46°44N×149°60E, h151km±46km, mb3.1/5, mb1 3.4/6, mb1mx3.1/25, mbtmp3.1/6, Error ellipse: s-maj=49.9km s-min=21.1km az=107.0
MOS 10 13:11:27.7±0.9, 46°48N×149°86E, h188km, mb4.2/1, Error ellipse: s-maj=71.5km s-min=18.6km az=63.7
JMA 10 13:11:31.4±0.6, 45°43N×150°22E, h193km, M3.6
ISC 10 13:11:27.6±1.2, 45°5N±0°1×150°5E±0°1, h200km, n28, σ1s75/31, mb3.1/5, 2C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.87	263c	iPN	Pn	13 12 04.9	+0.2
KUR				i S	Sn	13 12 32.4	-1.2
KUR				pmax	pmax		
	comp=Z,33nm,0.7s						
KUR				pmax	pmax		
	comp=N,10.0nm,0.2s						
KUR				pmax	pmax		
	comp=E,5.0nm,0.7s						
KUR				smax	smax		
	comp=E,42nm,0.5s						
KUR				smax	smax		
	comp=N,88nm,0.5s						
YUK	Yuzh-Kuril'sk	3.61	248c	iPN	Pn	13 12 26.5	+2.0
YUK				i S	Sn	13 13 10.3	+1.3
YUK				pmax	pmax		
	comp=N,6.0nm,0.2s						
YUK				pmax	pmax		
	comp=E,12nm,0.2s						
YUK				pmax	pmax		
	comp=Z,34nm,0.2s						
YUK				smax	smax		
	comp=N,33nm,0.3s						
YUK				smax	smax		
	comp=E,53nm,0.3s						
NEM2	Nemuro 2	4.01	240	P	Pn	13 12 30.8	+1.3
NEM2				eS	Sn	13 13 17.2	-0.8
JRA	Rausu	4.13	250	P	Pn	13 12 32.8	+1.8
JNK	Nakash	4.55	247	P	Pn	13 12 37.9	+1.7
JAK	Akkeshi	4.86	241	P	Pn	13 12 41.6	+1.5
JAK				eS	Sn	13 13 36.4	-0.8
JTKR	Abashiri--Toko	4.93	254	P	Pn	13 12 42.3	+1.2
JAR	Ashorobuto	5.30	248	P	Pn	13 12 48.5	+2.8
JMP	Maruseppu	5.30	256	P	Pn	13 12 47.1	+1.4
JOB	Onbets	5.44	244	P	Pn	13 12 49.7	+2.1
JOB				eS	Sn	13 13 49.8	-0.9
JKK2	Kamakawa 2	5.76	256	P	Pn	13 12 53.3	+1.6
ASAJ	Asahikawa	5.79	259	P	Pn	13 12 53.6	+1.6
JCH	Churui	5.89	243	P	Pn	13 12 54.8	+1.4
JCH				eS	Sn	13 13 59.0	-2.2
JEM	Erimo	6.35	239	eS	Sn	13 14 11.3	-0.6
JNBK	Urakawa-nobuka	6.45	243	P	Pn	13 13 01.2	+0.6
JNBK				eS	Sn	13 14 10.9	-3.4
JKB	Kayabe	7.75	246	P	Pn	13 13 18.6	+1.2
JKB				eS	Sn	13 14 39.7	-5.1
JANG	Nango	8.34	235	P	Pn	13 13 25.8	+0.6
JANG				eS	Sn	13 14 55.3	-3.6
JTM	Tenmabayashi	8.34	239	eS	Sn	13 14 53.8	-5.2
JTH	Tanohata	8.43	232	eS	Sn	13 14 58.3	-2.9
PETK	Petropavlovsk-	8.96	29	PN	Pn	13 13 25.3	-7.8
PETK	Petropavlovsk-	8.96	29	P	Pn	13 13 25.3	-7.8
	comp=E,0.4nm,0.3s,baz=189,slow=12,SNR=9.9						
JRG	Rokugo	9.49	234	P	Pn	13 13 42.5	+2.3
JRG				eS	Sn	13 15 25.6	-0.8
JIO	Ouri	9.78	227	P	Pn	13 13 46.3	+2.4
JIO				eS	Sn	13 15 31.9	-1.4
ILAR	Eielson Array	38.66	38	P	P	13 18 30.8	-0.6
	comp=E,0.4nm,0.6s,baz=260,slow=7.0,SNR=6.4						
YKA	Yellowknife Ar	53.01	35	P	P	13 20 23.1	-0.2
	comp=E,0.3nm,0.7s,baz=300,slow=7.1,SNR=3.7						
FINES	FINESS Array B	64.39	334	P	P	13 21 37.5	-4.2
	comp=E,1.6nm,0.6s,baz=57,slow=5.1,SNR=5.0						
WRA	Warramunga Arr	66.76	197	P	P	13 22 04.7	+7.4
	comp=E,0.3nm,0.8s,baz=14,slow=6.6,SNR=3.2						
ASAR	Alice Springs	70.46	196	P	P	13 22 28.7	+8.6
	comp=E,0.2nm,0.6s,baz=14,slow=6.1,SNR=5.1						

IDC 10 13:18:24.6±2.6, 5°31N×94°18E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/27, mbtmp3.5/5, Error ellipse: s-maj=105.8km s-min=22.7km az=61.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	13.87	19	Pn	Pn	13 21 44.2	+1.5
	baz=208,slow=14,SNR=4.3						
MKAR	Makanchi Array	42.59	348	P	P	13 26 22.2	-0.3
	0.6nm,0.4s,baz=163,slow=7.7,SNR=8.1						
WRA	Warramunga Arr	46.78	124	P	P	13 26 56.1	-0.3
	0.4nm,0.7s,baz=305,slow=9.0,SNR=6.4						
ASAR	Alice Springs	48.28	128	P	P	13 27 07.9	0.0
	0.2nm,0.5s,baz=312,slow=8.0,SNR=3.9						
ZALV	Zalesovo Beam	49.09	353	P	P	13 27 13.4	-0.2
	1.0nm,0.3s,baz=168,slow=8.8,SNR=3.2						

IDC 10 13:22:56.8±7.7, 18°97S×175°63W, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/19, mbtmp3.6/3, Error ellipse: s-maj=333.0km s-min=39.6km az=143.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.05	260	P	P	13 31 30.4	-0.1
	0.2nm,0.5s,baz=98,slow=7.5,SNR=5.4						
ASAR	Alice Springs	47.06	255	P	P	13 31 30.4	-0.2
	1.7nm,0.6s,baz=89,slow=8.2,SNR=31						
ILAR	Eielson Array	86.35	12	P	P	13 35 40.3	0.0
	0.1nm,0.5s,baz=228,slow=6.1,SNR=4.5						

CSEM 10 13:25:18.7±0.3, 37°88N×29°27E, h2km, MD2.6, Error ellipse: s-maj=7.1km s-min=4.3km az=102.0
DDA 10 13:25:18.1, 37°87N×29°23E, h7km, MD2.6
ISK 10 13:25:20.2, 37°93N×29°04E, h8km, MD2.6
ISC 10 13:25:19.1±1.0, 37°90N±0°03×29°19E±0°05, h14km±7km, n16, σ0s74/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.20	221	ePG	Pg	13 25 24.3	+0.7
DENT				eSG	Sg	13 25 27.3	+0.7
DENT	Denizli	0.20	221	ePg	Pg	13 25 24.3	+0.7
DENT				eSg	Sg	13 25 27.3	+0.7
DNZL	Cakiroluk	0.24	209	i P	Pg	13 25 23.2	-1.3
DNZL				i S	Sg	13 25 26.8	-1.3
DNZL	Cakiroluk	0.24	209	i P	Pg	13 25 23.2	-1.3
DNZL				i S	Sg	13 25 26.8	-1.3
KHAL	Karahalli	0.52	26	i P	Pg	13 25 28.8	-0.7
KHAL				i S	Sg	13 25 36.4	-0.1
KHAL	Karahalli	0.52	26	i P	Pg	13 25 28.8	-0.7
KHAL				i S	Sg	13 25 36.4	-0.1
GOLH	Golhisar	0.72	156	i P	Pg	13 25 31.5	-1.7
GOLH				i S	Sg	13 25 43.2	+0.4
GOLH	Golhisar	0.72	156	i P	Pg	13 25 31.5	-1.7
GOLH				i S	Sg	13 25 43.2	+0.4
KULA	Kula-Manisa	0.74	326	ePG	Pg	13 25 33.2	-0.4
KULA				eSG	Sb	13 25 43.4	-0.6
KULA	Kula-Manisa	0.74	326	ePg	Pg	13 25 33.2	-0.4
KULA				eSg	Sb	13 25 43.4	-0.6
MANT	Manisa	0.77	320	i P	Pb	13 25 34.8	+0.3
MANT				i S	Sb	13 25 45.3	+0.3
MANT	Manisa	0.77	320	i P	Pb	13 25 34.8	+0.3
MANT				i S	Sb	13 25 45.3	+0.3
YER	Yerkesik	1.05	224	ePG	Pg	13 25 39.2	-0.2
YER				eSG	Sn	13 25 53.9	-0.2
YER	Yerkesik	1.05	224	ePg	Pg	13 25 39.2	-0.2
YER				eSg	Sn	13 25 53.9	-0.2
TVSB	Tavsanli	1.56	8	ePN	Pb	13 25 48.9	+1.1
TVSB	Tavsanli	1.56	8	ePn	Pb	13 25 48.9	+1.1

ISK 10 13:25:39.8, 38°74N×38°14E, h5km, MD3.0
DDA 10 13:25:41.1, 38°76N×38°15E, h7km, MD3.0
CSEM 10 13:25:41.8±0.2, 38°70N×38°21E, h5km, MD3.0, Error ellipse: s-maj=5.9km s-min=4.9km az=129.0
ISC 10 13:25:41.5±1.0, 38°75N±0°02×38°16E±0°02, h14km±10km, n37, σ1s10/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	Malataya	0.47	153	ePG	Pg	13 25 50.0	-0.9
MYA				eSG	Sg	13 25 57.8	+0.5
MYA	Malataya	0.47	153	ePg	Pg	13 25 50.0	-0.9
AKCD	Akcadag	0.49	202	i P	Pg	13 25 50.4	-0.8
AKCD				i S	Sg	13 25 58.1	+0.3
AKCD	Akcadag	0.49	202	i P	Pg	13 25 50.4	-0.8
AKCD				i S	Sg	13 25 58.1	+0.3
DARE	Darende-Malaty	0.56	252	ePG	Pg	13 25 51.3	-1.2
DARE				eSG	Sg	13 25 59.8	-0.2
DARE	Darende-Malaty	0.56	252	ePg	Pg	13 25 51.3	-1.2
KEMA	Kemaliye	0.58	26	i P	Pg	13 25 52.8	-0.2
KEMA				i S	Sb	13 26 02.3	+0.5
KEMA	Kemaliye	0.58	26	i P	Pg	13 25 52.8	-0.2
KEMA				i S	Sb	13 26 02.3	+0.5
ELZG	Elazig	0.69	111	i P	Pg	13 25 54.1	-1.0
ELZG				i S	Sg	13 26 04.5	+0.2
ELZG	Elazig	0.69	111	i P	Pg	13 25 54.1	-1.0
ELZG				i S	Sg	13 26 04.5	+0.2
ILIC	ilic-Erzincan	0.77	24	ePG	Pg	13 25 56.3	-0.3
ILIC	ilic-Erzincan	0.77	24	ePg	Pg	13 25 56.3	-0.3
SVRC	Sivrice-ELAZID	0.97	112	ePG	Pg	13 25 59.6	-0.7
SVRC	Sivrice-ELAZID	0.97	112	ePg	Pg	13 25 59.7	-0.7
PTK	Pertek	0.97	81	ePG	Pg	13 25 59.6	-0.8
PTK	Pertek	0.97	81	ePg	Pg	13 25 59.6	-0.8
EZC	Erzincan	1.37	42	ePn	Pg	13 26 08.9	+1.0
PINB	Pinarbasi	1.38	268	i P	Pn	13 26 06.8	+0.2
PINB				i S	Sg	13 26 26.4	+0.4
PINB	Pinarbasi	1.38	268	i P	Pn	13 26 06.8	+0.2
URFA	Urfa	1.41	158	ePN	Pb	13 26 07.8	+0.2
URFA	Urfa	1.41	158	ePn	Pb	13 26 07.8	+0.2
SARI	SarD1z-Kayseri	1.41	257	ePN	Pb	13 26 07.8	+0.1
SARI	SarD1z-Kayseri	1.41	257	ePn	Pb	13 26 07.8	+0.1
SUSE	Susehri	1.46	1	i P	Pg	13 26 09.8	+0.2
SUSE				i S	Sn	13 26 21.7	-5.0
SUSE	Susehri	1.46	1	i P	Pg	13 26 09.8	+0.2
GZT	Gaziantep	1.47	199	i P	Pg	13 26 12.1	+2.4
GZT				i S	Sg	13 26 29.6	+0.8
ERZN	Erzincan	1.48	55	ePN	Pb	13 26 08.9	0.0
KMRS	Kahramanmaras	1.59	219	ePN	Pn	13 26 10.2	+0.9
KMRS	Kahramanmaras	1.59	219	ePn	Pn	13 26 10.2	+0.9
KELT	Kelkit	1.64	31	i P	Pb	13 26 12.1	+0.4
KELT				i S	Sb	13 26 33.5	+1.3
KELT	Kelkit	1.64	31	i P	Pb	13 26 12.1	+0.4
KELT				i S	Sb	13 26 33.5	+1.3
GAZ	Gaziantep	1.74	206	ePN	Pb	13 26 12.8	-0.5
GAZ	Gaziantep	1.74	206	ePn	Pb	13 26 12.9	-0.5
BNN	Bunyan	1.81	274	ePN	Pn	13 26 13.2	+0.8
BNN	Bunyan	1.81	274	ePn	Pn	13 26 13.2	+0.8
KOZT	Kozan	2.23	236	ePN	Pn	13 26 19.6	+1.5
KOZT	Kozan	2.23	236	ePn	Pn	13 26 19.6	+1.5

WEL 10 13:26:09.0±0.2, 44°97S×167°46E, h102km±1km, ML3.5/8, 6C-3D, Error ellipse: s-maj=2.2km s-min=1.1km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.45	49	⇑PN	Pn	13 26 24.8	+0.1
MSZ				AML	AML	13 26 25.3	
MSZ				SN	Sn	13 26 36.1	-0.2
DCZ	Deep Cove	0.55	203	PN	Pn	13 26 25.2	-0.2
DCZ				SN	Sn	13 26 36.9	-0.7
DCZ				AML	AML	13 26 37.4	
DCZ				AML	AML	13 26 37.7	
DCZ				AML	AML	13 26 37.7	
MLZ	Mavora Lakes	0.63	127	⇑PN	Pn	13 26 25.8	-0.3
MLZ				SN	Sn	13 26 37.8	-1.1
MLZ				AML	AML	13 26 38.6	
WHZ	Wether Hill Ro	0.99	160	⇓PN	Pn	13 26 29.3	-0.2
WHZ				AML	AML	13 26 44.6	
WHZ				AML	AML	13 26 45.9	
WKZ	Wanaka	1.12	83	⇑PN	Pn	13 26 30.9	0.0
WKZ				AML	AML	13 26 48.5	
WKZ				AML	AML	13 26 48.5	
WKZ				AML	AML	13 26 49.2	
WKZ				AML	AML	13 26 49.2	
JCZ	Jackson Bay	1.29	47	⇑PN	Pn	13 26 32.6	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCZ				AML	AML	13 26 50.0	
JCZ				AML	AML	13 26 50.1	
EAZ	**Earnscleugh**	**1.34**	**102**	PN	Pn	13 26 33.2	-0.2
EAZ				AML	AML	13 26 50.7	
EAZ				AML	AML	13 26 50.7	
EAZ				AML	AML	13 26 51.0	
EAZ				AML	AML	13 26 51.0	
TUZ	**Tuapeka**	**1.82**	**124**	⇓PN	Pn	13 26 39.1	-0.2
TUZ				AML	AML	13 27 00.5	
TUZ				AML	AML	13 27 00.8	
APZ	**The Paps**	**1.90**	**169**	⇑PN	Pn	13 26 40.2	-0.2
SYZ	**Scrubby Hill**	**1.96**	**144**	PN	Pn	13 26 40.9	-0.2
LBZ	**Lake Benmore**	**2.03**	**74**	PN	Pn	13 26 40.8	-1.3
FOZ	**Fox Glacier**	**2.13**	**50**	⇓PN	Pn	13 26 43.1	-0.2
ODZ	**Otahua Downs**	**2.26**	**93**	⇑PN	Pn	13 26 43.9	-1.1
RPZ	**Rata Peaks**	**2.87**	**65**	PN	Pn	13 26 51.0	-2.0
WVZ	**Waitaha Valley**	**3.03**	**52**	PN	Pn	13 26 53.5	-1.6
LTZ	**Lake Taylor**	**4.11**	**60**	PN	Pn	13 27 06.8	-2.9

*ISK **10** 13:31:17.7, 39°.50N×26°.14E, h11km, MD3.0*
*ISCJB **10** 13:31:18.1±0.9, 39°.51N±0°.03×26°.10E±0°.08, h10km±6km, Error ellipse: s-maj=10.0km s-min=5.3km az=174.9*
*DDA **10** 13:31:18.1, 39°.49N×26°.20E, h7km, MD2.8*
*CSEM **10** 13:31:18.3±0.2, 39°.50N×26°.12E, h12km, MD3.0, Error ellipse: s-maj=5.3km s-min=2.3km az=80.0*
ISC 10 13:31:18.6±1.3**, 39°.50N**±0°.03×**26°.16E**±0°.06**, h12**km±11km**, n33, σ0^{s}37**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.35**	**21**	*e*PG	**Pg**	**13 31 25.6**	**-0.1**
EZN				*e*SG	**Sg**	**13 31 30.9**	**+0.5**
EZN	**Ezine**	**0.35**	**21**	*e*Pg	**Pg**	**13 31 25.6**	**-0.1**
EZN				*e*Sg	**Sg**	**13 31 30.9**	**+0.5**
BOZC	**Bozcaada**	**0.35**	**346**	*i* P	**Pg**	**13 31 25.7**	**-0.1**
AYVA	**Ayvalik**	**0.45**	**115**	*i* P	**Pb**	**13 31 28.3**	**-0.1**
AYVA	**Ayvalik**	**0.45**	**115**	*i* P	**Pb**	**13 31 28.3**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.93**	**15**	*e*PG	**Pg**	**13 31 36.0**	**-0.5**
GELI				*e*SG	**Sb**	**13 31 49.3**	**+0.4**
GELI	**Tayfur-Gelibol**	**0.93**	**15**	*e*Pg	**Pg**	**13 31 36.0**	**-0.5**
GELI				*e*Sg	**Sb**	**13 31 49.3**	**+0.4**
BALY	**Balya**	**1.15**	**77**	*i* P	**Pb**	**13 31 40.2**	**-0.2**
BALY				*i* S	**Sg**	**13 31 55.7**	**0.0**
BALY	**Balya**	**1.15**	**77**	*i* P	**Pb**	**13 31 40.2**	**-0.2**
BALY				*i* S	**Sg**	**13 31 55.7**	**0.0**
URLA	**Izmir**	**1.19**	**163**	*i* P	**Pn**	**13 31 40.8**	**-0.2**
URLA				*i* S	**Sb**	**13 31 56.6**	**+0.3**
URLA	**Izmir**	**1.19**	**163**	*i* P	**Pn**	**13 31 40.8**	**-0.2**
URLA				*i* S	**Sb**	**13 31 56.6**	**+0.3**
ERIK	**Erikli-Kesan**	**1.20**	**13**	*e*PN	**Pn**	**13 31 40.7**	**-0.5**
ERIK	**Erikli-Kesan**	**1.20**	**13**	*e*Pn	**Pn**	**13 31 40.7**	**-0.5**
ENEZ	**Enez**	**1.24**	**360**	*e*PN	**Pn**	**13 31 41.4**	**-0.3**
ENEZ	**Enez**	**1.24**	**360**	*e*Pn	**Pn**	**13 31 41.4**	**-0.3**
KRBG	**Karabiga-Canak**	**1.25**	**44**	*e*PN	**Pn**	**13 31 41.7**	**-0.1**
KRBG	**Karabiga-Canak**	**1.25**	**44**	*e*Pn	**Pn**	**13 31 41.7**	**-0.1**
GONE	**Gonen-Balikesi**	**1.29**	**65**	*e*PN	**Pn**	**13 31 42.4**	**-0.1**
GONE	**Gonen-Balikesi**	**1.29**	**65**	*e*Pn	**Pn**	**13 31 42.4**	**-0.1**
BLCB	**Balcova**	**1.31**	**148**	*e*PN	**Pn**	**13 31 42.7**	**+0.1**
BLCB	**Balcova**	**1.31**	**148**	*e*Pn	**Pn**	**13 31 42.7**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.42**	**33**	*e*PN	**Pn**	**13 31 44.2**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.42**	**33**	*e*Pn	**Pn**	**13 31 44.2**	**-0.1**
SART	**Tekirdag**	**1.42**	**33**	*i* P	**Pn**	**13 31 44.3**	**0.0**
SART				*i* S	**Sg**	**13 32 03.9**	**-0.5**
SART	**Tekirdag**	**1.42**	**33**	*i* P	**Pn**	**13 31 44.3**	**0.0**
SART				*i* S	**Sg**	**13 32 03.9**	**-0.5**
AKHS	**Akhisar**	**1.43**	**115**	*i* P	**Pn**	**13 31 44.1**	**-0.2**
AKHS				*i* S	**Sb**	**13 32 03.9**	**+0.7**
AKHS	**Akhisar**	**1.43**	**115**	*i* P	**Pn**	**13 31 44.1**	**-0.2**
AKHS				*i* S	**Sb**	**13 32 03.9**	**+0.7**
MFT	**Murefte**	**1.55**	**33**	*e*PN	**Pn**	**13 31 46.3**	**+0.3**
MFT	**Murefte**	**1.55**	**33**	*e*Pn	**Pn**	**13 31 46.3**	**+0.3**
MRMT	**Marmara Adasi**	**1.56**	**44**	*e*PN	**Pn**	**13 31 46.1**	**-0.1**
MRMT	**Marmara Adasi**	**1.56**	**44**	*e*Pn	**Pn**	**13 31 46.1**	**-0.1**
EDRB	**Edirne**	**2.39**	**10**	*e*PN	**Pn**	**13 31 58.3**	**+0.8**
EDRB	**Edirne**	**2.39**	**10**	*e*Pn	**Pn**	**13 31 58.3**	**+0.8**

*IDC **10** 13:40:31.7±4.0, 36°.28N×70°.89E, h154km±34km, mb3.4/8, mb1 3.6/13, mb1mx3.3/32, mbtmp3.4/13, Error ellipse: s-maj=27.7km s-min=18.5km az=33.0*
*ISCJB **10** 13:40:34.6±0.5, 36°.45N±0°.04×70°.85E±0°.08, h188km, mb3.6/7, Error ellipse: s-maj=9.4km s-min=3.4km az=154.5*
*NNC **10** 13:40:36.0±6.3, 36°.92N×69°.68E, h0km, mb4.2, mpv4.1, Error ellipse: s-maj=75.5km s-min=43.8km az=113.0*
ISC 10 13:40:36.1±0.6**, 36°.57N**±0°.05×**70°.99E**±0°.08**, h188**km**, n50, σ1^{s}57**/57**, mb3.6**/7**, 4C-5D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.84**	**164**	⇑P	**Pn**	**13 41 25.7**	**+2.2**
CEP				S	**Sn**	**13 42 02.0**	**+1.7**
CHCP	**Chirah Chowk**	**3.45**	**147**	P	**Pn**	**13 41 33.3**	**+2.6**
THW	**Thamme Wali**	**3.82**	**170**	⇑P	**Pn**	**13 41 37.0**	**+1.7**
THN	**Thein Dam**	**5.68**	**135**	*e*PKP	**Pn**	**13 41 57.5**	**-1.6**
THN				*e*S	**Sn**	**13 43 01.0**	**-3.4**
DLH	**Dalhousie**	**5.75**	**133**	*e*PKP	**Pn**	**13 42 01.0**	**+0.8**
DLH				*e*S	**Sn**	**13 43 06.0**	**-0.3**
AML	**Almayashu**	**5.94**	**20**	P	**Pn**	**13 42 04.0**	**+1.3**
	SNR=126						
UCH	**Uchtor**	**6.27**	**25**	P	**Sn**	**13 43 18.4**	**-0.5**
	SNR=15						
KZA	**Kyzart**	**6.41**	**30**	P	**Pn**	**13 42 09.8**	**+0.9**
	SNR=8.8						
EKS2	**Erkin-Say**	**6.45**	**19**	P	**Pn**	**13 42 10.9**	**+1.8**
	SNR=17						
KK31	**Karatay Array**	**6.54**	**357**	⇓Pn	**Pn**	**13 42 11.2**	**+1.1**
	5.5nm,0.3s,baz=186,slow=12,SNR=121						
KK31				Sn	**Sn**	**13 43 21.2**	**-3.3**
	18nm,0.5s,baz=185,slow=17,SNR=11						
AAK	**Ala-Archa**	**6.63**	**23**	P	**Pn**	**13 42 13.5**	**+1.9**
	SNR=13						
AAK	**Ala-Archa**	**6.63**	**23**	P	**Pn**	**13 42 11.5**	**-0.1**
	7.0nm,0.3s,baz=162,slow=5.1,SNR=23						
AAK				S	**Sn**	**13 43 27.5**	**+0.5**
	2.8nm,0.3s,baz=159,slow=23,SNR=19						
KBK	**Karagaybulak**	**6.80**	**25**	P	**Pn**	**13 42 15.9**	**+2.1**
	SNR=12						
CHMS	**Chumysh**	**7.04**	**23**	P	**Pn**	**13 42 18.6**	**+1.8**
	SNR=8.2						
SDNR	**Sundarnagar**	**7.08**	**134**	*e*PKP	**Pn**	**13 42 16.0**	**-1.5**
SDNR				*e*x	S	13 43 32.0	
USP	**Ospenovka**	**7.21**	**21**	P	**Pn**	**13 42 20.5**	**+1.5**
	SNR=7.1						
TKM2	**Tokmak 2**	**7.27**	**28**	⇑Pn	**Pn**	**13 42 21.4**	**+1.5**
	25nm,0.6s						
TKM2	**Tokmak 2**	**7.27**	**28**	P	**Pn**	**13 42 21.6**	**+1.7**
	SNR=44						
SMLA	**Simla**	**7.47**	**135**	*i* P	**Pn**	**13 42 22.6**	**+0.1**
SMLA				*i* S	**Sn**	**13 43 44.5**	**-2.2**
SMLA				⇓E		13 43 47.3	
	comp=N,961nm,0.3s						
SMLA				⇓E		13 43 47.8	
	comp=E,1μm,0.4s						
KHET	**Khetri**	**9.40**	**153**	*e*PKP	**Pn**	**13 42 46.2**	**-1.6**
KHET				*e*S	Sn	13 44 22.8	-10
KHET				AML	AML	13 44 30.8	
	comp=N,110nm,0.1s						
KHET				AML	AML	13 44 31.0	
	comp=E,143nm,0.2s						
AYAN	**Aya Nagar**	**9.58**	**146**	*e*S	Sn	13 44 31.1	-6.0
AGRA	**Agra**	**11.02**	**146**	*e*PKP	**Pn**	**13 43 08.1**	**-0.7**
AGRA				*e*x	**S**	**13 45 12.6**	**-2.6**
AGRA				AML	AML	13 46 03.9	
	comp=N,67nm,0.0s						
AGRA				AML	AML	13 46 08.3	
	comp=E,62nm,0.3s						
PYUN	**Piuthan**	**13.19**	**126**	*e*P	**Pn**	**13 43 35.3**	**-1.4**
	comp=E,24nm,0.3s						
MKAR	**Makanchi Array**	**13.24**	**36**	P	**Pn**	**13 43 38.0**	**+1.1**
	baz=223,slow=13,SNR=3.2						
DANN	**Dangsing**	**13.53**	**124**	*e*P	**Pn**	**13 43 40.4**	**-0.6**
	comp=E,18nm,0.3s						
KOLN	**Koldanda**	**13.81**	**126**	*e*P	**Pn**	**13 43 44.1**	**-0.3**
	comp=E,6.9nm,0.2s						
DMN	**Daman**	**14.92**	**123**	*e*P	**Pn**	**13 43 58.2**	**+0.1**
	comp=E,18nm,0.5s						
KKN	**Kakani**	**14.92**	**122**	*e*P	**Pn**	**13 43 58.0**	**-0.1**
	comp=E,22nm,0.5s						
AB31	**Akbulak array**	**15.02**	**331**	P	**Pn**	**13 43 58.4**	**-0.5**
	comp=E,1.1nm,0.4s,baz=145,slow=12,SNR=67						
AB31				S	**Sn**	**13 46 41.2**	**-5.4**
	comp=E,0.7nm,0.3s,baz=155,slow=22,SNR=3.8						
KURBB	**Kurchatov Arra**	**15.06**	**19**	P	**P**	**13 44 00.5**	**+0.3**
	comp=E,0.1nm,0.3s,baz=214,slow=12,SNR=5.4						
PKIN	**Phulchoki**	**15.14**	**122**	*e*P	**Pn**	**13 44 00.8**	**0.0**
PKI	**Pulchoki**	**15.15**	**122**	*e*P	**Pn**	**13 44 01.5**	**+0.5**
	comp=E,36nm,0.5s						
GUN	**Gumba**	**15.26**	**120**	*e*P	**Pn**	**13 44 02.7**	**+0.3**
	comp=E,15nm,0.5s						
RAMN	**Ramite**	**16.36**	**121**	*e*P	**Pn**	**13 44 15.7**	**+0.1**
	comp=E,22nm,0.4s						
ZRNK	**Zerenda**	**16.44**	**356**	⇑P	**Pn**	**13 44 18.0**	**+1.9**
	comp=E,2.9nm,1.1s						
BVA0	**Borovoye Array**	**16.46**	**359**	⇓P	Pn	13 44 22.3	+6.0
	comp=E,1.5nm,0.5s,baz=168,slow=12,SNR=12						
BVAR	**Borovoye Array**	**16.46**	**359**	P	**Pn**	**13 44 16.9**	**+0.6**
	comp=E,0.7nm,0.3s,baz=171,slow=11,SNR=14						
BVAR				S	**S**	**13 47 18.1**	**+0.3**
	comp=E,0.3nm,0.3s,baz=174,slow=19,SNR=3.5						
AKTO	**Aktyubinsk**	**16.71**	**330**	⇓P	**Pn**	**13 44 19.8**	**+0.4**
	comp=E,5.2nm,0.8s						
AKTO	**Aktyubinsk**	**16.71**	**330**	P	**Pn**	**13 44 19.2**	**-0.2**
	comp=E,0.9nm,0.3s,baz=142,slow=9.8,SNR=14						
TAPN	**Taplejung**	**16.89**	**118**	*e*P	**Pn**	**13 44 22.3**	**+0.3**
	comp=E,19nm,0.4s						
ODAN	**Odare**	**16.96**	**120**	*e*P	**P**	**13 44 22.1**	**+0.4**
	comp=E,8.9nm,0.4s						
ZALV	**Zalesovo Beam**	**19.85**	**25**	P	**P**	**13 44 53.9**	**+1.4**
	comp=E,1.9nm,0.4s,baz=218,slow=10,SNR=9.9						
ARCES	**ARCESS Array B**	**41.08**	**338**	P	**P**	**13 48 02.0**	**+1.1**
	comp=E,1.0nm,0.6s,baz=112,slow=8.0,SNR=11						
NB2	**NORSAR Subarra**	**44.32**	**323**	P	**P**	**13 48 27.6**	**+0.5**
	comp=Z,0.7nm,0.6s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**44.32**	**323**	P	**P**	**13 48 27.7**	**+0.5**
	comp=Z,1.0nm,0.7s,baz=97,slow=7.8,SNR=4.4						
TORD	**Torodi Ar. Bea**	**65.71**	**269**	P	**P**	**13 50 59.0**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=55,slow=5.6,SNR=8.7						
ILAR	**Eielson Array**	**74.71**	**16**	P	**P**	**13 51 55.1**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=311,slow=4.6,SNR=4.2						
YKA	**Yellowknife Ar**	**81.17**	**3**	P	**P**	**13 52 31.3**	**+1.0**
	comp=Z,0.9nm,0.4s,baz=351,slow=5.3,SNR=9.8						
WRA	**Warramunga Arr**	**82.03**	**122**	P	**P**	**13 52 34.6**	**-0.9**
	comp=Z,1.1nm,0.5s,baz=325,slow=5.0,SNR=32						
ASAR	**Alice Springs**	**84.30**	**125**	P	**P**	**13 52 45.9**	**-1.1**
	comp=Z,1.2nm,0.6s,baz=311,slow=4.9,SNR=34						

*IDC **10** 13:41:00.7±6.5, 52°.69N×175°.78W, h169km±64km, mb3.1/5, mb1 3.4/8, mb1mx3.1/31, mbtmp3.1/8, Error ellipse: s-maj=46.5km s-min=29.4km az=170.0*
*ISCJB **10** 13:41:02.6±0.4, 52°.7N±0°.2×176°.00W±0°.07, h212km±8km, mb3.3/5, Error ellipse: s-maj=26.2km s-min=5.8km az=170.8*
*NEIC **10** 13:41:05.1, 52°.35N×175°.96W, h211km, MG3.4(AEIC), After AEIC.*
ISC 10 13:41:03.0±0.7**, 52°.7N**±0°.2×**176°.00W**±0°.05**, h207**km±10km**, n35, σ1^{s}11**/42**, mb3.4**/5**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GSTR	**Great Sitkin T**	**0.65**	**183**	P	**Pn**	**13 41 32.2**	**+0.7**
GSTD	**Great Sitkin T**	**0.69**	**188**	P	**Pn**	**13 41 31.9**	**0.0**
GSTD				S	**S**	**13 41 54.6**	**+0.5**
GSMY	**Great Sitkin M**	**0.70**	**183**	P	**Pn**	**13 41 31.8**	**0.0**
GSCK	**Great Sitkin C**	**0.74**	**188**	P	**Pn**	**13 41 32.1**	**+0.2**
ADAG	**Mount Adagdak**	**0.85**	**206**	P	**Pn**	**13 41 33.1**	**+0.6**
ETKA	**Kagalaska Isla**	**0.92**	**196**	P	**Pn**	**13 41 32.9**	**0.0**
KINC	**Kanaga Island**	**1.07**	**221**	P	**Pn**	**13 41 34.3**	**+0.4**
KIRH	**Kanaga Island**	**1.08**	**219**	P	**Pn**	**13 41 34.5**	**+0.4**
KIKV	**Kanaga Island**	**1.13**	**220**	P	**Pn**	**13 41 34.5**	**+0.2**
KOWE	**Korovin West**	**1.13**	**109**	P	**Pn**	**13 41 35.8**	**+1.5**
KOKL	**Mount Kliuchef**	**1.17**	**110**	P	**Pn**	**13 41 36.4**	**+1.6**
ATKA	**Atka Island**	**1.23**	**115**	P	**Pn**	**13 41 35.6**	**+0.5**
ATKA				S	**S**	**13 41 59.3**	**-0.4**
KOFP	**Korovin Flat P**	**1.25**	**111**	P	**Pn**	**13 41 36.6**	**+1.3**
TAPA	**Tanaga Point A**	**1.45**	**231**	P	**Pn**	**13 41 37.1**	**+0.2**
TAFP	**Tanaga Falls P**	**1.48**	**236**	P	**Pn**	**13 41 37.5**	**+0.3**
TANO	**Tanaga North**	**1.54**	**238**	P	**Pn**	**13 41 38.5**	**+0.9**
TASE	**Tanaga Southea**	**1.55**	**235**	P	**Pn**	**13 41 38.4**	**+0.6**
GANE	**Gareloi Northe**	**1.94**	**243**	P	**Pn**	**13 41 41.9**	**+0.5**
GANE				S	**S**	**13 42 10.2**	**-0.7**
GAEA	**Gareloi East**	**1.94**	**241**	P	**Pn**	**13 41 42.0**	**+0.6**
GALAA	**Gareloi Lava P**	**1.97**	**241**	P	**Pn**	**13 41 42.1**	**+0.5**
GAKI	**Gareloi-Kavalg**	**2.10**	**237**	P	**Pn**	**13 41 43.0**	**0.0**
CERAA	**Semis' Rag'd T**	**2.78**	**254**	P	**Pn**	**13 41 51.4**	**+1.0**
CERB	**Semis' Cerberu**	**2.80**	**255**	P	**Pn**	**13 41 51.8**	**+1.1**
CERB				S	**S**	**13 42 27.5**	**+0.1**
CESW	**Semis' Southwe**	**2.85**	**255**	P	**Pn**	**13 41 52.0**	**+0.8**
AMKA	**Amchitka**	**3.21**	**247**	P	**Pn**	**13 41 55.0**	**-0.3**
AMKA				S	**S**	**13 42 32.6**	**-3.3**
LSPA	**Little Sitkin**	**3.42**	**259**	P	**Pn**	**13 41 58.9**	**+1.0**
LSPA				S	**S**	**13 42 41.6**	**+1.1**
UNV	**Unalaska Valle**	**5.80**	**75**	*e*Pn	**Pn**	**13 42 28.9**	**+1.2**
KDAK	**Kodiak Island**	**14.23**	**60**	P	**Pn**	**13 44 14.1**	**-1.1**
	0.5nm,0.3s,baz=259,slow=10,SNR=4.0						
KDAK				S	**S**	**13 46 49.0**	**-3.9**
	0.3nm,0.3s,baz=209,slow=19,SNR=4.0						
PETK	**Petropavlovsk-**	**15.84**	**282**	P	**Pn**	**13 44 35.7**	**+0.8**
	0.1nm,0.3s,baz=101,slow=12,SNR=5.5						
ILAR	**Eielson Array**	**19.09**	**40**	P	**P**	**13 45 09.5**	**-0.2**
	0.1nm,0.3s,baz=236,slow=9.3,SNR=10						
INK	**Inuvik**	**25.34**	**36**	P	**P**	**13 46 11.4**	**+1.0**
	0.8nm,0.6s,baz=255,slow=9.0,SNR=2.6						
YKA	**Yellowknife Ar**	**33.03**	**48**	P	**P**	**13 47 18.7**	**+0.4**
	0.6nm,0.6s,baz=284,slow=8.7,SNR=5.8						
NVAR	**Mina Array Bea**	**41.70**	**86**	P	**P**	**13 48 32.1**	**+0.6**
	0.5nm,0.6s,baz=302,slow=5.2,SNR=4.6						
PDAR	**Pinedale Array**	**44.26**	**75**	P	**P**	**13 48 52.3**	**+0.3**
	0.6nm,0.6s,baz=273,slow=3.4,SNR=5.9						
TXAR	**Lajitas Array**	**56.76**	**84**	P	**P**	**13 50 25.8**	**+0.3**
	0.5nm,0.6s,baz=303,slow=5.9,SNR=6.7						

*ISK **10** 13:49:40.9, 37°.08N×38°.81E, h10km, MD2.9*
*DDA **10** 13:49:46.8, 37°.38N×38°.48E, h8km, MD2.8*
*CSEM **10** 13:49:46.8, 37°.38N×38°.48E, h8km, MD2.8, After DDA*
ISC 10 13:49:42.2±2.9**, 37°.1N**±0°.1×**38°.7E**±0°.1**, h6**km±13km**, n10, σ0^{s}90**/17**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URFA	**Urfa**	**0.34**	**12**	*e*PG	**Pg**	**13 49 48.5**	**-0.3**
URFA				*e*SG	**Sg**	**13 49 54.4**	**+1.0**
GZT	**Gaziantep**	**0.96**	**285**	*i* P	**Pn**	**13 50 02.8**	**+0.4**
MYA	**Malataya**	**1.24**	**349**	*e*PN	**Pg**	**13 50 05.5**	**-0.5**
MYA				*e*SN	**Sn**	**13 50 23.2**	**-0.1**
AKCD	**Akcadag**	**1.35**	**332**	*i* P	**Pn**	**13 50 08.7**	**+1.0**
AKCD	**Akcadag**	**1.35**	**332**	*i* P	**Pn**	**13 50 08.7**	**+1.0**
SVRC	**Sivrice-ELAZID**	**1.35**	**20**	*e*PN	**Pg**	**13 50 06.7**	**-1.4**
SVRC				*e*SN	**Sg**	**13 50 25.0**	**-0.6**
ELZG	**Elazig**	**1.40**	**8**	*i* P	**Pg**	**13 50 09.2**	**+0.1**
ELZG				*i* S	**Sb**	**13 50 26.3**	**-0.8**
ELZG	**Elazig**	**1.40**	**8**	*i* P	**Pg**	**13 50 09.2**	**+0.1**
ELZG				*i* S	**Sb**	**13 50 26.3**	**-0.8**
AYKD	**Aykdinkavak**	**1.56**	**282**	*i* P	**Pb**	**13 50 12.0**	**+0.5**
AYKD				*i* S	**Sb**	**13 50 30.4**	**-1.2**
AYKD	**Aykdinkavak**	**1.56**	**282**	*i* P	**Pb**	**13 50 12.0**	**+0.5**
AYKD				*i* S	**Sb**	**13 50 30.4**	**-1.2**

IDC 10 13:59:15.4±3.4**, 7°.83S**×**68°.16E, h0**km**, mb3.6**/3**, mb1 3.6**/3**, mb1mx3.4**/26**, mbtmp3.6**/3**, MS3.4**/9**, Ms1 3.4**/9**, ms1mx3.0**/34**, Error ellipse: s-maj=93.0km s-min=70.2km az=174.0, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**31.50**	**281**	LR	LR	14 15 26.7	
	comp=Z,60nm,21.1s,baz=86,slow=31						
ATD	**Arta Tunnel**	**31.68**	**307**	LR	LR	14 17 00.6	
	comp=Z,28nm,18.0s,baz=76,slow=34						
CMAR	**Chiang Mai Arr**	**40.06**	**49**	LR	LR	14 21 28.2	
	comp=Z,33nm,20.2s,baz=54,slow=33						
BOSA	**Boshof**	**45.37**	**237**	LR	LR	14 26 24.6	
	comp=Z,78nm,18.6s,baz=156,slow=36						
NWAO	**Narrogin (SRO)**	**51.75**	**126**	LR	LR	14 24 00.3	
	comp=Z,65nm,20.6s,baz=229,slow=29						
MKAR	**Makanchi Array**	**55.81**	**12**	P	P	14 08 54.1	-0.4
	0.5nm,0.8s,baz=188,slow=6.7,SNR=5.3						
MKAR				LR	LR	14 33 57.3	
	comp=Z,29nm,18.3s,baz=84,slow=37						
BRTR	**Keskin Array B**	**57.08**	**329**	P	P	14 09 03.8	0.0
	0.8nm,0.8s,baz=145,slow=8.1,SNR=4.0						
ZALV	**Zalesovo Beam**	**63.13**	**11**	LR	LR	14 38 39.8	
	comp=Z,19nm,18.1s,baz=68,slow=38						
SONM	**Songino Array**	**64.89**	**27**	P	P	14 09 57.0	+0.2
	0.7nm,0.9s,baz=217,slow=7.2,SNR=4.3						
SONM				LR	LR	14 37 46.8	
	comp=Z,68nm,20.2s,baz=73,slow=36						
KSRS	**Korea Array**	**71.63**	**46**	LR	LR	14 41 54.5	
	comp=Z,24nm,18.4s,baz=146,slow=36						
PDAR	**Pinedale Array**	**145.14**	**357**	PKPbc	PKPbc	14 18 54.1	-0.9
	0.7nm,0.9s,baz=85,slow=2.1,SNR=5.7						
NVAR	**Mina Array Bea**	**148.98**	**10**	PKPbc	PKPbc	14 19 05.6	-0.6
	0.6nm,0.7s,baz=338,slow=1.0,SNR=5.4						

IDC 10 14:02:20.8±1.8**, 8°.10S**×**125°.12E, h0**km**, mb3.7**/1**, mb1 4.0**/4**, mb1mx3.6**/21**, mbtmp3.8**/4**, ML3.8**/3**, Error ellipse: s-maj=102.6km s-min=26.8km az=67.0, Timor region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.96**	**177**	Pn	Pn	14 04 44.7	-0.5
	0.6nm,0.3s,baz=357,slow=10,SNR=39						
FITZ				Sn	Sn	14 06 32.7	-5.1
	0.4nm,0.3s,baz=279,slow=13,SNR=4.1						
WRA	**Warramunga Arr**	**14.78**	**144**	Pn	Pn	14 05 50.4	-0.9
	0.6nm,0.3s,baz=319,slow=13,SNR=31						
WRA				Sn	Sn	14 08 27.6	-8.4
	0.3nm,0.3s,baz=320,slow=24,SNR=6.7						
ASAR	**Alice Springs**	**17.62**	**152**	P	Pn	14 06 28.5	+0.5
	0.3nm,0.3s,baz=322,slow=10,SNR=26						
ASAR				S	Sn	14 09 39.3	-5.8
	0.1nm,0.3s,baz=339,slow=24,SNR=4.3						
MKAR	**Makanchi Array**	**66.59**	**329**	P	P	14 13 13.1	+0.1
	0.6nm,0.6s,baz=134,slow=7.0,SNR=5.8						

*ISCJB **10** 14:05:31.0±0.5, 50°.18N±0°.03×19°.02E±0°.03, h0km, Error ellipse: s-maj=5.1km s-min=2.2km az=10.7*
*CSEM **10** 14:05:32.3±0.3, 50°.18N×19°.06E, h2km, ML3.0/11, Error ellipse: s-maj=7.5km s-min=2.8km az=3.0*
*PRU **10** 14:05:33.2, 50°.17N×19°.06E, h0km*
*WAR **10** 14:05:33.4, 50°.09N×19°.17E*
*IPEC **10** 14:05:33.3±0.2, 50°.06N×19°.16E, h0km, ML2.4/4, Error ellipse: s-maj=7.8km s-min=1.1km az=159.0*
ISC 10 14:05:33.2±0.8**, 50°.09N**±0°.04×**19°.11E**±0°.02**, h0**km**, n37, σ1^{s}15**/59**, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.46**	**74**	*e*Pg	**Pg**	**14 05 41.7**	**-0.4**
OJC				*e*Sg	**Sg**	**14 05 47.4**	**-0.7**
OJC	**Ojcow**	**0.46**	**74**	*e*Pg	**Pg**	**14 05 41.7**	**-0.4**
OJC				*e*Sg	**Sg**	**14 05 47.4**	**-0.7**
OKC	**Ostrava-Krasne**	**0.67**	**248**	*e*PG	**Pg**	**14 05 45.6**	**-0.5**
OKC				*e*SG	**Sg**	**14 05 54.6**	**-0.1**
	comp=Z,29nm,0.4s						
OKC	**Ostrava-Krasne**	**0.67**	**248**	Pg	**Pg**	**14 05 45.6**	**-0.5**
OKC				Sg	**Sg**	**14 05 54.6**	**-0.1**
	29nm,0.4s						
NIE	**Niedzica**	**1.03**	**130**	*e*Pg	**Pg**	**14 05 52.7**	**-0.3**
NIE				*e*Sg	**Sb**	**14 06 08.1**	**0.0**
NIE	**Niedzica**	**1.03**	**130**	*e*Pg	**Pg**	**14 05 52.7**	**-0.3**
MORC	**Moravsky Berou**	**1.06**	**253**	*e*Pg	**Pg**	**14 05 53.5**	**0.0**
	baz=74						
MORC				*e*Sg	**Sg**	**14 06 07.7**	**+0.5**
	71nm,0.4s,baz=74						
STHS	**Stebnicka Huta**	**1.54**	**115**	*e*PN	**Pb**	**14 06 02.6**	**-0.1**
STHS				*e*SN	**Sg**	**14 06 23.1**	**+0.4**
STHS	**Stebnicka Huta**	**1.54**	**115**	*e*Pn	**Pb**	**14 06 02.6**	**-0.1**
STHS				*e*Sn	**Sg**	**14 06 23.1**	**+0.4**
JAVC	**Velka Javorina**	**1.55**	**218**	*e*Sg	**Sg**	**14 06 25.6**	**+2.7**
	24nm,0.8s						
VYHS	**Vyhne**	**1.61**	**186**	*e*PN	**Pn**	**14 06 01.8**	**-1.1**
VYHS				*e*SN	**Sn**	**14 06 23.3**	**-1.0**
VYHS	**Vyhne**	**1.61**	**186**	*e*Pn	**Pn**	**14 06 01.8**	**-1.1**
VYHS				*e*Sn	**Sn**	**14 06 23.3**	**-1.0**
DPC	**Dobruska-Polom**	**1.81**	**279**	*e*PG	**Pn**	**14 06 04.8**	**-0.9**
DPC				*e*SG	**Sn**	**14 06 29.3**	**0.0**
DPC	**Dobruska-Polom**	**1.81**	**279**	Pg	**Pn**	**14 06 04.8**	**-0.9**
DPC				Sg	**Sn**	**14 06 29.3**	**0.0**
VRAC	**Vranov**	**1.81**	**245**	*e*Pn	**Pn**	**14 06 06.7**	**+1.0**
	baz=65						
VRAC				*e*Sg	**Sb**	**14 06 30.5**	**0.0**
	31nm,0.6s,baz=65						
KECS	**Kecovo**	**1.84**	**150**	*e*PN	**Pn**	**14 06 06.9**	**+0.8**
KECS				*e*SN	**Sn**	**14 06 30.4**	**+0.2**
KECS	**Kecovo**	**1.84**	**150**	*e*Pn	**Pn**	**14 06 06.9**	**+0.8**
KECS				*e*Sn	**Sn**	**14 06 30.4**	**+0.2**
CRVS	**Cervenica-Dubn**	**1.94**	**127**	*e*PN	**Pn**	**14 06 07.1**	**-0.4**
CRVS				*e*SN	**Sn**	**14 06 33.3**	**+0.7**
CRVS	**Cervenica-Dubn**	**1.94**	**127**	*e*Pn	**Pn**	**14 06 07.1**	**-0.4**
CRVS				*e*Sn	**Sn**	**14 06 33.3**	**+0.7**
KSP	**Ksiaz**	**1.95**	**294**	*e*Pg	**Pg**	**14 06 11.9**	**+1.3**
KSP				*e*Sg	**Sg**	**14 06 35.5**	**-0.3**
UPC	**Upice**	**2.03**	**283**	*e*SG	**Sn**	**14 06 35.6**	**+0.9**
	comp=Z,5.9nm,0.4s						
UPC	**Upice**	**2.03**	**283**	Sg	**Sn**	**14 06 35.6**	**+0.9**
	5.9nm,0.4s						
KRUC	**Moravsky**	**2.04**	**241**	*e*Pn	**Pn**	**14 06 09.6**	**+0.7**
	baz=60						
KRUC				*e*Sg	**Sb**	**14 06 37.5**	**+0.3**
	18nm,0.5s,baz=60						
KOLS	**Kolonicke sedl**	**2.37**	**118**	*e*PN	**Pn**	**14 06 13.0**	**-0.3**
KOLS				*e*SN	**Sn**	**14 06 43.0**	**0.0**
KOLS	**Kolonicke sedl**	**2.37**	**118**	*e*Pn	**Pn**	**14 06 13.1**	**-0.3**
KOLS				*e*Sn	**Sn**	**14 06 43.0**	**0.0**
TREC	**Trest**	**2.48**	**253**	*e*SG	**Sb**	**14 06 51.5**	**+1.7**
	comp=Z,8.9nm,0.3s						
TREC	**Trest**	**2.48**	**253**	Sg	**Sb**	**14 06 51.5**	**+1.7**
	8.9nm,0.3s						
PVCC	**Panska Ves**	**2.94**	**280**	*e*SG	**Sb**	**14 07 05.3**	**+2.3**
	comp=Z,18nm,0.3s						
PVCC	**Panska Ves**	**2.94**	**280**	Sg	**Sb**	**14 07 05.3**	**+2.3**
	18nm,0.3s						
PRU	**Pruhonice**	**2.94**	**270**	*e*SG	**Sb**	**14 07 04.6**	**+1.5**
	comp=Z,4.6nm,0.3s						
PRU	**Pruhonice**	**2.94**	**270**	Sg	**Sb**	**14 07 04.6**	**+1.5**
	4.6nm,0.3s						
BRG	**Berggiesshubel**	**3.39**	**285**	SG	**Sg**	**14 07 21.2**	**-0.9**
	7.0nm,0.4s						
KHC	**Kasperske Hory**	**3.72**	**257**	*e*PG	**Pg**	**14 06 43.0**	**-1.5**
KHC				*e*SG	**Sg**	**14 07 30.6**	**-2.1**
	comp=Z,10.0nm,0.6s						
KHC	**Kasperske Hory**	**3.72**	**257**	Sg	**Sg**	**14 07 30.6**	**-2.1**
	10.0nm,0.6s						
CLL	**Collm**	**4.07**	**290**	*e*Sg	**Sg**	**14 07 43.0**	**-0.8**
	comp=Z,7.0nm,0.6s						
NKC	**Novy Kostel**	**4.28**	**274**	*e*SG	**Sg**	**14 07 47.9**	**-2.9**
	comp=Z,4.7nm,0.4s						
NKC	**Novy Kostel**	**4.28**	**274**	Sg	**Sg**	**14 07 47.9**	**-2.9**
	comp=Z,4.7nm,0.4s						

IDC 10 14:18:57.4±1.4**, 29°.45N**×**102°.88E, h0**km**, mb3.4**/4**, mb1 3.6**/5**, mb1mx3.3**/26**, mbtmp3.4**/5**, ML3.6**/1**, Error ellipse: s-maj=42.9km s-min=24.2km az=63.0, Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	**Songino Array**	**18.56**	**7**	Pn	Pn	14 23 16.2	+0.1
	0.2nm,0.3s,baz=184,slow=12,SNR=5.2						
KSRS	**Korea Array**	**22.32**	**62**	P	P	14 23 56.5	-0.1
	1.3nm,0.8s,baz=244,slow=10,SNR=4.9						
MKAR	**Makanchi Array**	**23.60**	**323**	P	P	14 24 09.7	-0.2
	1.0nm,0.8s,baz=125,slow=10,SNR=13						
WRA	**Warramunga Arr**	**57.72**	**144**	P	P	14 28 50.0	-0.1
	0.3nm,0.5s,baz=337,slow=7.8,SNR=9.1						
ASAR	**Alice Springs**	**60.65**	**147**	P	P	14 29 10.4	-0.1
	0.4nm,1.0s,baz=335,slow=6.3,SNR=4.9						

*NAO **10** 14:47:22.1±0.7, 63°.78N×20°.63E, ML2.5*
*ISCJB **10** 14:47:23.8±1.3, 63°.82N±0°.02×20°.52E±0°.07, h26km±14km, Error ellipse: s-maj=5.3km s-min=3.4km az=21.2*
*BER **10** 14:47:23.3±4.0, 63°.78N×20°.51E, h0km±18km, ML2.7, ML2.5(NAO)*
*CSEM **10** 14:47:24.5±0.1, 63°.81N×20°.52E, h19km, ML2.7, Error ellipse: s-maj=3.4km s-min=2.4km az=115.0*
*HEL **10** 14:47:24.0±0.2, 63°.80N×20°.49E, h10km, ML2.7, ML2.0(UPP), ML2.7(BER)*
*UPP **10** 14:47:25.1, 63°.82N×20°.45E, h25km, ML2.0*
*IDC **10** 14:47:26.9±0.8, 63°.95N×22°.37E, h0km, mb1 3.0/5, mb1mx2.9/29, mbtmp3.0/5, ML3.2/2, Error ellipse:*

s-maj=9.5km s-min=7.2km az=100.0

ISC 10 14:47:25.1±0.8**, 63°.84N**±0°.02×**20°.53E**±0°.02**, h25**km±5km**,**
n95, σ**1**s**.70**/140**, 3C-2D, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UMAU	**Umeaa**	**0.08**	**58**	⇑iP	**Pb**	**14 47 29.7**	**0.0**
UMAU				iS	**Sb**	**14 47 33.3**	**+0.6**
UMAU	**Umeaa**	**0.08**	**58**	P	**Pb**	**14 47 29.6**	**0.0**
UMAU				S	**Sb**	**14 47 33.2**	**+0.6**
BURU	**Burvik**	**0.83**	**26**	⇑iP	**Pb**	**14 47 40.9**	**0.0**
BURU				iS	**Sn**	**14 47 52.7**	**0.0**
BURU	**Burvik**	**0.83**	**26**	⇑P	**Pb**	**14 47 40.9**	**0.0**
BURU				S	**Sn**	**14 47 52.6**	**0.0**
BREU	**Bredtraesk**	**0.86**	**274**	⇓iP	**Pb**	**14 47 40.5**	**-1.0**
BREU	**Bredtraesk**	**0.86**	**274**	⇓P	**Pb**	**14 47 40.5**	**-1.0**
VAF	**Ylistaro**	**1.25**	**129**	eP	**Pn**	**14 47 46.1**	**-0.9**
VAF				eS	**Sn**	**14 48 01.4**	**-1.5**
VAF	**Ylistaro**	**1.25**	**129**	P	**Pn**	**14 47 46.0**	**-0.9**
VAF				S	**Sn**	**14 48 01.4**	**-1.5**
LILU	**Lilltraesk**	**1.48**	**349**	eP	**Pb**	**14 47 51.2**	**-0.7**
LILU	**Lilltraesk**	**1.48**	**349**	P	**Pb**	**14 47 51.1**	**-0.7**
HEMU	**Hemsoen**	**1.62**	**225**	eP	**Pn**	**14 47 51.5**	**-0.5**
HEMU				eS	**Sn**	**14 48 12.2**	**+0.1**
HEMU	**Hemsoen**	**1.62**	**225**	P	**Pn**	**14 47 51.5**	**-0.5**
HEMU				S	**Sn**	**14 48 12.2**	**+0.1**
SJUU	**Sjulsmark**	**1.74**	**15**	eP	**Pn**	**14 47 54.7**	**+1.0**
SJUU	**Sjulsmark**	**1.74**	**15**	P	**Pn**	**14 47 54.6**	**+1.0**
HARU	**Harads**	**2.34**	**4**	eP	**Pn**	**14 48 03.2**	**+1.3**
HARU	**Harads**	**2.34**	**4**	P	**Pn**	**14 48 03.2**	**+1.3**
KALU	**Kalix**	**2.36**	**30**	eP	**Pn**	**14 48 03.2**	**+1.0**
KALU	**Kalix**	**2.36**	**30**	P	**Pn**	**14 48 03.1**	**+1.0**
HASU	**Hassela**	**2.46**	**228**	eP	**Pn**	**14 48 03.4**	**-0.1**
HASU	**Hassela**	**2.46**	**228**	P	**Pn**	**14 48 03.4**	**-0.1**
NOD	**Norderasen**	**2.56**	**264**	eP	**Pn**	**14 48 04.6**	**-0.3**
NOD	**Norderasen**	**2.56**	**264**	P	**Pn**	**14 48 04.6**	**-0.3**
KEF	**Keuruu**	**2.60**	**128**	eP	**Pn**	**14 48 07.2**	**+1.8**
KEF				eS	**Sn**	**14 48 38.7**	**+2.6**
KEF				MSG		14 48 40.0	
	comp=Z,49nm,0.1s						
KEF				eSG	**Sb**	**14 48 46.2**	**+3.8**
KEF	**Keuruu**	**2.60**	**128**	P	**Pn**	**14 48 07.2**	**+1.8**
KEF				Sg	**Sb**	**14 48 46.1**	**+3.8**
HUDU	**Hudiksvall**	**2.63**	**218**	eP	**Pn**	**14 48 07.5**	**+1.6**
HUDU	**Hudiksvall**	**2.63**	**218**	P	**Pn**	**14 48 07.5**	**+1.6**
OUL	**Oulu**	**2.64**	**59**	eP	**Pn**	**14 48 05.8**	**-0.2**
OUL				eS	**Sn**	**14 48 36.5**	**-0.6**
OUL	**Oulu**	**2.64**	**59**	P	**Pn**	**14 48 05.8**	**-0.2**
OUL				S	**Sn**	**14 48 36.5**	**-0.6**
SUF	**Sumiainen**	**2.78**	**111**	eP	**Pn**	**14 48 07.6**	**-0.3**
SUF				eS	**Sn**	**14 48 41.2**	**+0.5**
SUF				MSG		14 48 47.8	
	comp=Z,16nm,0.1s						
SUF				eSG	**Sb**	**14 48 51.5**	**+3.9**
SUF	**Sumiainen**	**2.78**	**111**	P	**Pn**	**14 48 07.6**	**-0.3**
SUF				S	**Sn**	**14 48 41.1**	**+0.5**
SUF				Sg	**Sb**	**14 48 51.4**	**+3.9**
ERTU	**Ertsjaerv**	**2.81**	**14**	eP	**Pn**	**14 48 09.2**	**+0.8**
ERTU	**Ertsjaerv**	**2.81**	**14**	P	**Pn**	**14 48 09.2**	**+0.8**
RAF	**Rauma**	**2.89**	**168**	eP	**Pn**	**14 48 10.8**	**+1.4**
RAF				eS	**Sn**	**14 48 46.3**	**+3.1**
RAF				MSG		14 48 51.1	
	comp=Z,16nm,0.1s						
RAF				eSG	**Sb**	**14 48 52.8**	**+2.2**
RAF	**Rauma**	**2.89**	**168**	P	**Pn**	**14 48 10.8**	**+1.4**
RAF				Sg	**Sb**	**14 48 52.8**	**+2.2**
KAF	**Kangasniemi**	**3.16**	**121**	eP	**Pn**	**14 48 12.5**	**-0.6**
KAF				eS	**Sn**	**14 48 50.6**	**+0.7**
KAF				MSG		14 49 01.7	
	comp=Z,36nm,0.2s						
KAF	**Kangasniemi**	**3.16**	**121**	P	**Pn**	**14 48 12.5**	**-0.6**
KAF				S	**Sn**	**14 48 50.6**	**+0.7**
KJN	**Kajaani**	**3.18**	**82**	eP	**Pn**	**14 48 13.0**	**-0.4**
KJN				eS	**Sn**	**14 48 51.2**	**+0.8**
KJN				MSG		14 49 04.4	
	comp=Z,31nm,0.2s						
KJN	**Kajaani**	**3.18**	**82**	P	**Pn**	**14 48 13.0**	**-0.4**
KJN				S	**Sn**	**14 48 51.2**	**+0.8**
ROTU	**Roteberg**	**3.26**	**224**	eP	**Pn**	**14 48 14.4**	**-0.1**
ROTU	**Roteberg**	**3.26**	**224**	P	**Pn**	**14 48 14.4**	**-0.1**
PAJU	**Pajala**	**3.37**	**18**	eP	**Pn**	**14 48 16.8**	**+0.7**
PAJU	**Pajala**	**3.37**	**18**	P	**Pn**	**14 48 16.8**	**+0.7**
MOR8	**Moi Rana**	**3.48**	**315**	eSg	**Sb**	**14 49 13.4**	**+5.5**
MOR8				AML	AML	14 49 14.5	
	comp=Z,40nm,0.4s						
MOR8	**Moi Rana**	**3.48**	**315**	eSG	**Sb**	**14 49 13.4**	**+5.5**
MOR8				AML	AML	14 49 14.5	
	comp=Z,40nm,0.4s						
MOR8	**Moi Rana**	**3.48**	**315**	eSg	**Sb**	**14 49 13.4**	**+5.5**
	comp=Z,40nm,0.4s,SNR=90						
FIA0	**FINESS Array S**	**3.51**	**131**	Pn	**Pn**	**14 48 17.8**	**-0.2**
	baz=323,slow=16						
FIA0				Sn	**Sn**	**14 48 58.1**	**-0.6**
	baz=322,slow=28						
FIA0				Lg	Lg	14 49 10.0	
	baz=319,slow=28						
FIA0	**FINESS Array S**	**3.51**	**131**	Pn	**Pn**	**14 48 17.8**	**-0.2**
	baz=323,slow=16						
FIA0				Sn	**Sn**	**14 48 58.1**	**-0.6**
	baz=322,slow=28						
FIA0				Lg	Lg	14 49 10.0	
	baz=319,slow=28						
FIA0	**FINESS Array S**	**3.51**	**131**	eSG	**Sb**	**14 49 10.9**	**+2.3**
FIA0				MSG		14 49 12.8	
	comp=Z,14nm,0.2s						
FIA0	**FINESS Array S**	**3.51**	**131**	Pn	**Pn**	**14 48 17.8**	**-0.2**
	baz=323,slow=15,SNR=50						
FIA0				Sn	**Sn**	**14 48 58.1**	**-0.6**
	baz=322,slow=23,SNR=50						
FIA0				Lg	Lg	14 49 10.0	
	baz=319,slow=26,SNR=7.3						
FINES	**FINESS Array B**	**3.51**	**131**	Pn	**Pn**	**14 48 16.7**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=326,slow=14,SNR=5.9						
FINES				Lg	Lg	14 49 02.5	
	comp=Z,2.0nm,0.3s,baz=325,slow=26,SNR=8.0						
RNF	**Rovaniemi**	**3.61**	**37**	eP	**Pn**	**14 48 19.6**	**+0.3**
RNF				eS	**Sn**	**14 49 01.0**	**-0.2**
RNF	**Rovaniemi**	**3.61**	**37**	P	**Pn**	**14 48 19.6**	**+0.3**
RNF				S	**Sn**	**14 49 00.9**	**-0.2**
SALU	**Saltoluokta**	**3.65**	**348**	eP	**Pn**	**14 48 21.2**	**+1.2**
SALU	**Saltoluokta**	**3.65**	**348**	P	**Pn**	**14 48 21.1**	**+1.2**
MASU	**Masugnsbyn**	**3.68**	**9**	eP	**Pn**	**14 48 21.0**	**+0.7**
MASU	**Masugnsbyn**	**3.68**	**9**	P	**Pn**	**14 48 21.0**	**+0.7**
AAL	**Aland**	**3.69**	**184**	eP	**Pn**	**14 48 20.4**	**0.0**
AAL				eS	**Sn**	**14 49 03.2**	**+0.2**
AAL	**Aland**	**3.69**	**184**	P	**Pn**	**14 48 20.3**	**0.0**
AAL				S	**Sn**	**14 49 03.1**	**+0.2**
FLYU	**Flymyra**	**3.93**	**200**	eP	**Pn**	**14 48 23.1**	**-0.6**
FLYU	**Flymyra**	**3.93**	**200**	P	**Pn**	**14 48 23.1**	**-0.6**
OSTU	**Oestervaala**	**3.96**	**205**	eP	**Pn**	**14 48 23.5**	**-0.6**
OSTU	**Oestervaala**	**3.96**	**205**	P	**Pn**	**14 48 23.5**	**-0.6**
LANU	**Lannavaara**	**4.27**	**7**	eP	**Pn**	**14 48 29.2**	**+0.8**
LANU				eS	**Sn**	**14 49 15.6**	**-1.7**
LANU	**Lannavaara**	**4.27**	**7**	P	**Pn**	**14 48 29.2**	**+0.8**
NRTU	**Norrtaelje**	**4.28**	**193**	eP	**Pn**	**14 48 28.1**	**-0.4**
NRTU	**Norrtaelje**	**4.28**	**193**	P	**Pn**	**14 48 28.1**	**-0.4**
BACU	**Backbrunna**	**4.32**	**204**	eP	**Pn**	**14 48 26.8**	**-2.2**
BACU	**Backbrunna**	**4.32**	**204**	P	**Pn**	**14 48 26.8**	**-2.2**
HFS	**Hagfors**	**4.92**	**224**	Pn	**Pn**	**14 48 36.9**	**-0.5**
	baz=40,slow=12						
HFS				Pg	**Pb**	**14 48 47.9**	**-2.5**
	baz=42,slow=16						
HFS				Lg	Lg	14 49 51.3	
	baz=58,slow=37						
HFS	**Hagfors**	**4.92**	**224**	Pn	**Pn**	**14 48 36.9**	**-0.5**
	baz=40,slow=12						
HFS				Pg	**Pb**	**14 48 47.9**	**-2.5**
	baz=42,slow=16						
HFS				Lg	Lg	14 49 51.3	
	baz=58,slow=37						
HFS	**Hagfors**	**4.92**	**224**	eP	**Pn**	**14 48 36.9**	**-0.5**
HFS				ePB	**Pb**	**14 48 47.9**	**-2.5**
HFS				eSG	**Sb**	**14 49 51.3**	**+2.2**
HFS	**Hagfors**	**4.92**	**224**	Pn	**Pb**	**14 48 49.0**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=41,slow=14,SNR=6.3						
HFS				Sn	**Sb**	**14 49 51.1**	**+2.0**
	comp=Z,1.6nm,0.3s,baz=56,slow=25,SNR=4.8						
HFS	**Hagfors**	**4.92**	**224**	Pn	**Pn**	**14 48 36.9**	**-0.5**
	baz=40,slow=11,SNR=50						
HFS				Lg	Lg	14 49 51.3	
	baz=58,slow=30,SNR=70						
NRAU	**Nora**	**5.02**	**214**	eP	**Pn**	**14 48 38.2**	**-0.5**
NRAU	**Nora**	**5.02**	**214**	P	**Pn**	**14 48 38.2**	**-0.5**
NB2	**NORSAR Subarra**	**5.16**	**241**	Pn	**Pn**	**14 48 39.5**	**-1.2**
	baz=57,slow=16						
NB2				Pg	**Pb**	**14 48 55.1**	**+0.6**
	baz=46,slow=18						
NB2				Lg	Lg	14 50 02.8	
	baz=53,slow=37						
NB2	**NORSAR Subarra**	**5.16**	**241**	Pn	**Pn**	**14 48 39.5**	**-1.2**
	baz=57,slow=16						
NB2				Pg	**Pb**	**14 48 55.1**	**+0.6**
	baz=46,slow=18						
NB2				Lg	Lg	14 50 02.8	
	baz=53,slow=37						
NB2	**NORSAR Subarra**	**5.16**	**241**	eP	**Pn**	**14 48 39.5**	**-1.2**
NB2				ePG	**Pb**	**14 48 55.1**	**+0.6**
NB2				eSG	Sb	14 50 02.8	+6.9
NB2	**NORSAR Subarra**	**5.16**	**241**	Pn	**Pn**	**14 48 39.5**	**-1.2**
	baz=57,slow=14,SNR=50						
NB2	**NORSAR Subarra**	**5.16**	**241**	Pg	**Pb**	**14 48 55.1**	**+0.6**
	baz=46,slow=16,SNR=90						
NB2				Sg	Sb	14 50 02.8	+6.9
NOA	**NORSAR Array B**	**5.16**	**241**	Pn	**Pb**	**14 48 55.1**	**+0.6**
	comp=Z,0.8nm,0.3s,baz=62,slow=15,SNR=11						
NOA				Sn	**Sb**	**14 49 59.7**	**+3.7**
	comp=Z,2.7nm,0.3s,baz=65,slow=14,SNR=10						
KTK1	**Kautokeino**	**5.31**	**11**	eP	**Pn**	**14 48 42.9**	**+0.3**
KTK1				AML	AML	14 50 11.7	
	comp=Z,28nm,0.5s						
KTK1	**Kautokeino**	**5.31**	**11**	eP	**Pn**	**14 48 42.9**	**+0.3**
KTK1				AML	AML	14 50 11.7	
	comp=Z,28nm,0.5s						
KTK1	**Kautokeino**	**5.31**	**11**	P	**Pn**	**14 48 42.9**	**+0.3**
VIKU	**Vikbolandet**	**5.67**	**201**	eP	**Pn**	**14 48 46.3**	**-1.3**
VIKU	**Vikbolandet**	**5.67**	**201**	P	**Pn**	**14 48 46.3**	**-1.3**
ARA0	**ARCESS Array S**	**6.05**	**17**	Pn	**Pn**	**14 48 51.9**	**-0.9**
	baz=196,slow=16						
ARA0				Sn	**Sn**	**14 49 56.8**	**-4.4**
	baz=191,slow=28						
ARA0				Lg	Lg	14 50 31.4	
	baz=206,slow=28						
ARA0	**ARCESS Array S**	**6.05**	**17**	Pn	**Pn**	**14 48 51.9**	**-0.9**
	baz=196,slow=16						
ARA0				S	**Sn**	**14 49 56.8**	**-4.4**
	baz=191,slow=28						
ARA0				Lg	Lg	14 50 31.4	
	baz=206,slow=28						
ARA0	**ARCESS Array S**	**6.05**	**17**	eP	**Pn**	**14 48 51.9**	**-0.9**
ARA0				eS	**Sn**	**14 49 56.8**	**-4.4**
ARA0				eSG	Sb	14 50 31.4	+10
ARA0	**ARCESS Array S**	**6.05**	**17**	P	**Pn**	**14 48 51.9**	**-0.9**
ARA0				Lg	Lg	14 50 31.4	
	baz=206,slow=27,SNR=1.0						
ARCES	**ARCESS Array B**	**6.05**	**17**	Pn	**Pn**	**14 48 52.0**	**-0.8**
	comp=Z,0.4nm,0.3s,baz=198,slow=14,SNR=20						
ARCES				Sn	**Sn**	**14 49 56.2**	**-4.9**
	comp=Z,0.7nm,0.3s,baz=192,slow=17,SNR=3.4						
ARCES				Lg	Lg	14 50 29.0	
	comp=Z,1.0nm,0.3s,baz=184,slow=28,SNR=4.4						
SPA0	**Spitsbergen Ar**	**14.47**	**357**	Pn	**Pn**	**14 50 46.4**	**-1.4**
	baz=164,slow=14						
SPA0	**Spitsbergen Ar**	**14.47**	**357**	P	**Pn**	**14 50 46.4**	**-1.4**
	baz=164,slow=14						
SPA0	**Spitsbergen Ar**	**14.47**	**357**	eP	**Pn**	**14 50 46.4**	**-1.4**
SPITS	**Spitsbergen Ar**	**14.47**	**357**	Pn	**Pn**	**14 50 46.6**	**-1.2**
	baz=166,slow=18,SNR=9.5						

*ISK **10** 14:48:25.2, 37°.29N×28°.28E, h7km, MD2.6*
*ISCJB **10** 14:48:26.5±0.6, 37°.22N±0°.05×28°.21E±0°.06, h9km±10km, Error ellipse: s-maj=10.8km s-min=4.4km az=38.6*
*DDA **10** 14:48:26.3, 37°.23N×28°.18E, h7km, MD2.9*
*CSEM **10** 14:48:26.5±0.1, 37°.23N×28°.23E, h10km, MD2.6, Error ellipse: s-maj=3.9km s-min=2.7km az=40.0*

ISC 10 14:48:26.2±0.9**, 37°.23N**±0°.04×**28°.24E**±0°.04**, h13**km±6km**,**
n14, σ**0**s**.30**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**159**	PG	**Pg**	**14 48 28.9**	**-0.3**
YER				eSG	**Sg**	**14 48 31.6**	**+0.3**
YER	**Yerkesik**	**0.10**	**159**	i Pg	**Pg**	**14 48 28.9**	**-0.3**
YER				eSg	**Sg**	**14 48 31.6**	**+0.3**
MLSB	**Milas**	**0.38**	**281**	ePG	**Pg**	**14 48 33.7**	**-0.1**
MLSB				eSG	**Sg**	**14 48 39.3**	**+0.4**
MLSB	**Milas**	**0.38**	**281**	ePg	**Pg**	**14 48 33.7**	**-0.1**
MLSB				eSg	**Sg**	**14 48 39.3**	**+0.4**
TURN	**Turunc**	**0.46**	**140**	eP	**Pg**	**14 48 35.5**	**+0.3**
TURN				eS	**Sb**	**14 48 42.4**	**-0.3**
TURN	**Turunc**	**0.46**	**140**	eP	**Pg**	**14 48 35.5**	**+0.3**
TURN				eS	**Sb**	**14 48 42.4**	**-0.3**
AYDN	**Tasoluk**	**0.52**	**327**	eP	**Pg**	**14 48 36.4**	**0.0**
AYDN				eS	**Sg**	**14 48 43.5**	**+0.1**
AYDN	**Tasoluk**	**0.52**	**327**	eP	**Pg**	**14 48 36.4**	**0.0**
AYDN				eS	**Sg**	**14 48 43.5**	**+0.1**
DALY	**Dalyan (Mu˜la**	**0.53**	**141**	ePG	**Pg**	**14 48 36.4**	**-0.1**
DALY				eSG	**Sb**	**14 48 44.9**	**+0.2**
DALY	**Dalyan (Mu˜la**	**0.53**	**141**	ePg	**Pg**	**14 48 36.4**	**-0.1**
DALY				eSg	**Sb**	**14 48 44.9**	**+0.2**
DAT	**Datca**	**0.73**	**227**	ePG	**Pb**	**14 48 40.8**	**+0.1**
DAT	**Datca**	**0.73**	**227**	ePg	**Pb**	**14 48 40.8**	**+0.1**
DNZL	**Cakiroluk**	**0.79**	**54**	eP	**Pg**	**14 48 41.8**	**+0.2**
DNZL				eS	**Sn**	**14 48 54.4**	**-0.6**
DNZL	**Cakiroluk**	**0.79**	**54**	eP	**Pg**	**14 48 41.8**	**+0.2**
DNZL				eS	**Sn**	**14 48 54.4**	**-0.6**

*ISK **10** 14:52:28.2, 38°.01N×35°.63E, h9km, MD2.8*
*DDA **10** 14:52:28.1, 38°.00N×35°.60E, h7km, MD2.9*
*CSEM **10** 14:52:28.3±0.2, 38°.01N×35°.63E, h15km, MD2.8, Error ellipse: s-maj=4.3km s-min=3.5km az=44.0*

ISC 10 14:52:28.0±1.3**, 38°.00N**±0°.03×**35°.61E**±0°.03**, h4**km±12km**,**
n21, σ**0**s**.65**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.55**	**161**	ePG	**Pb**	**14 52 39.4**	**-0.8**
KOZT				eSG	**Sb**	**14 52 47.2**	**-1.2**
KOZT	**Kozan**	**0.55**	**161**	ePg	**Pb**	**14 52 39.4**	**-0.8**
KOZT				eSg	**Sb**	**14 52 47.3**	**-1.2**
ANDN	**Andirin**	**0.72**	**126**	eP	**Pg**	**14 52 42.1**	**+0.3**
ANDN				eS	**Sg**	**14 52 51.0**	**-0.2**
ANDN	**Andirin**	**0.72**	**126**	eP	**Pg**	**14 52 42.1**	**+0.3**
ANDN				eS	**Sg**	**14 52 51.0**	**-0.2**
SARI	**SarD1z-Kayseri**	**0.76**	**58**	ePG	**Pg**	**14 52 42.9**	**+0.4**
SARI				eSG	**Sb**	**14 52 53.7**	**-0.9**
NIG	**Nigde**	**0.79**	**278**	ePG	**Pb**	**14 52 44.0**	**-0.5**
NIG				eSG	**Sb**	**14 52 55.7**	**0.0**
NIG	**Nigde**	**0.79**	**278**	ePg	**Pb**	**14 52 44.0**	**-0.5**
NIG				eSg	**Sb**	**14 52 55.7**	**0.0**
PINB	**Pinarbasi**	**0.92**	**43**	eP	**Pg**	**14 52 45.2**	**-0.4**
PINB				eS	**Sb**	**14 52 59.2**	**-0.1**
PINB	**Pinarbasi**	**0.92**	**43**	eP	**Pg**	**14 52 45.2**	**-0.4**
PINB				eS	**Sb**	**14 52 59.2**	**-0.1**
AVNT	**Avonos**	**0.97**	**323**	eP	**Pb**	**14 52 47.1**	**-0.4**
AVNT				eS	**Sb**	**14 53 00.8**	**0.0**
AVNT	**Avonos**	**0.97**	**323**	eP	**Pb**	**14 52 47.1**	**-0.4**
AVNT				eS	**Sb**	**14 53 00.8**	**0.0**
GULE	**Gulek**	**0.97**	**223**	eP	**Pg**	**14 52 46.5**	**-0.2**
GULE				eS	**Sb**	**14 53 01.4**	**+0.5**
GULE	**Gulek**	**0.97**	**223**	eP	**Pg**	**14 52 46.5**	**-0.2**
GULE				eS	**Sb**	**14 53 01.4**	**+0.5**
CEYT	**Ceyhan**	**1.00**	**173**	ePG	**Pb**	**14 52 48.0**	**+0.2**
CEYT	**Ceyhan**	**1.00**	**173**	ePg	**Pb**	**14 52 48.1**	**+0.2**
AYKD	**Aykdinkavak**	**1.12**	**121**	eP	**Pg**	**14 52 49.5**	**+0.1**
AYKD				eS	**Sn**	**14 53 07.5**	**+1.1**
KMRS	**Kahramanmaras**	**1.14**	**116**	ePN	**Pg**	**14 52 50.0**	**+0.1**
KMRS	**Kahramanmaras**	**1.14**	**116**	ePn	**Pg**	**14 52 50.0**	**+0.1**
DARE	**Darende-Malaty**	**1.58**	**68**	ePN	**Pn**	**14 52 56.8**	**-0.2**
AKCD	**Akcadag**	**1.85**	**80**	eP	**Pg**	**14 53 03.1**	**-0.3**
AKCD				eS	**Sg**	**14 53 29.6**	**+2.2**
AKCD	**Akcadag**	**1.85**	**80**	eP	**Pg**	**14 53 03.1**	**-0.3**

*ISK **10** 15:02:23.8, 38°.11N×38°.26E, h7km, MD2.6*
*DDA **10** 15:02:24.8, 38°.16N×38°.28E, h7km, MD2.7*
*ISCJB **10** 15:02:25.9±1.3, 38°.21N±0°.08×38°.26E±0°.05, h6km±9km, Error ellipse: s-maj=14.7km s-min=5.3km az=159.9*
*CSEM **10** 15:02:25.9±0.6, 38°.30N×38°.23E, h5km, MD2.6, Error ellipse: s-maj=18.3km s-min=9.0km az=3.0*

ISC 10 15:02:25.7±1.2**, 38°.20N**±0°.07×**38°.25E**±0°.03**, h10**km±8km**,**
n11, σ**0**s**.85**/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	**Malataya**	**0.18**	**48**	ePG	**Pg**	**15 02 29.1**	**-0.5**
MYA				eSG	**Sg**	**15 02 33.4**	**+1.0**
MYA	**Malataya**	**0.18**	**48**	ePg	**Pg**	**15 02 29.1**	**-0.5**
MYA				eSg	**Sg**	**15 02 33.4**	**+1.0**
AKCD	**Akcadag**	**0.28**	**290**	eP	**Pg**	**15 02 30.5**	**-0.8**
AKCD				eS	**Sg**	**15 02 36.2**	**+1.1**
AKCD	**Akcadag**	**0.28**	**290**	eP	**Pg**	**15 02 30.5**	**-0.8**
AKCD				eS	**Sg**	**15 02 36.2**	**+1.1**
DARE	**Darende-Malaty**	**0.71**	**302**	ePG	**Pg**	**15 02 39.2**	**-0.1**
DARE				eSG	**Sb**	**15 02 50.2**	**+0.1**
DARE	**Darende-Malaty**	**0.71**	**302**	ePg	**Pg**	**15 02 39.2**	**-0.1**
DARE				eSg	**Sb**	**15 02 50.2**	**+0.1**
PTK	**Pertek**	**1.13**	**52**	ePN	**Pb**	**15 02 46.8**	**-0.7**
PTK				eSN	**Sn**	**15 03 04.6**	**+1.1**
PTK	**Pertek**	**1.13**	**52**	ePn	**Pb**	**15 02 46.8**	**-0.7**
PTK				eSn	**Sn**	**15 03 04.6**	**+1.1**
AYKD	**Aykdinkavak**	**1.39**	**236**	eP	**Pg**	**15 02 52.4**	**+0.1**
AYKD				eS	**Sg**	**15 03 11.2**	**+0.8**
SARI	**SarD1z-Kayseri**	**1.46**	**279**	ePN	**Pn**	**15 02 51.6**	**-0.7**
SARI	**SarD1z-Kayseri**	**1.46**	**279**	ePn	**Pn**	**15 02 51.6**	**-0.7**

MAN 10 15:07:05, 17°.93N×120°.70E, h35km**, mb3.9, ML2.6, MS2.2, 1C-1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.23**	**268**	⇑iP	Pn	15 07 14.7	+2.6
ABRA	**Dolores**	**0.28**	**178**	eP	Pn	15 07 15.4	+2.6
ABRA				eS	Sn	15 07 20.9	+2.9
PIP	**Pasuquin**	**0.40**	**349**	⇓iP	Pn	15 07 16.9	+2.7
APYP	**Conner**	**0.52**	**98**	eP	Pn	15 07 18.4	+2.4
APYP				eS	Sn	15 07 26.4	+2.8

IDC 10 15:15:42.4±0.8**, 2°.82S×145°.68E, h0**km**, mb3.9**/12**, mb1 4.0**/13**, mb1mx3.9**/22**, mbtmp3.9**/13**, ML2.5**/1**, MS3.5**/7**, Ms1 3.5**/7**, ms1mx3.1**/32**, Error ellipse: s-maj=27.0km s-min=16.4km az=88.0, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.71**	**167**	Pn	Pn	15 17 21.9	-0.3
	0.5nm,0.3s,baz=358,slow=10,SNR=3.8						
PMG				LR	LR	15 20 07.0	
	comp=Z,413nm,18.7s,baz=188,slow=39						
WRA	**Warramunga Arr**	**20.30**	**212**	P	P	15 20 20.7	+0.6
	4.9nm,0.7s,baz=34,slow=12,SNR=16						
ASAR	**Alice Springs**	**23.65**	**208**	P	P	15 20 55.8	+0.1
	2.4nm,0.8s,baz=36,slow=8.5,SNR=13						
ASAR				LR	LR	15 30 05.4	
	comp=Z,76nm,19.2s,baz=29,slow=36						
FITZ	**Fitzroy Crossi**	**24.83**	**231**	P	P	15 21 06.4	-0.2
	3.4nm,0.8s,baz=59,slow=12,SNR=3.4						
DZM	**Mont Dzumac**	**27.80**	**135**	P	P	15 21 33.5	-0.1
	0.8nm,0.4s,baz=351,slow=10,SNR=7.3						
DZM				LR	LR	15 31 06.0	
	comp=Z,95nm,19.3s,baz=202,slow=33						
STKA	**Stephens Creek**	**29.16**	**187**	LR	LR	15 34 26.7	
	comp=Z,81nm,18.6s,baz=23,slow=39						
JNU	**Nakatsue**	**38.39**	**340**	LR	LR	15 36 03.8	
	comp=Z,44nm,19.5s,baz=66,slow=32						
KSRS	**Korea Array**	**43.33**	**339**	P	P	15 23 45.3	-1.0
	0.4nm,0.5s,baz=154,slow=7.1,SNR=2.9						
KSRS				LR	LR	15 38 21.5	
	comp=Z,41nm,21.9s,baz=164,slow=31						
AFI	**Afiamalu**	**43.43**	**107**	LR	LR	15 38 30.5	
	comp=Z,151nm,19.2s,baz=144,slow=32						
CMAR	**Chiang Mai Arr**	**50.63**	**297**	P	P	15 24 44.4	+0.6
	1.5nm,0.9s,baz=116,slow=6.1,SNR=8.4						
PETK	**Petropavlovsk-**	**56.63**	**9**	P	P	15 25 29.1	+1.9
	0.4nm,0.5s,baz=156,slow=11,SNR=3.6						
SONM	**Songino Array**	**61.01**	**331**	P	P	15 25 57.7	-0.2
	0.8nm,0.8s,baz=139,slow=9.2,SNR=5.1						
MKAR	**Makanchi Array**	**74.22**	**320**	P	P	15 27 21.2	-0.2
	0.7nm,0.8s,baz=101,slow=5.8,SNR=6.4						
KURBB	**Kurchatov Arra**	**77.91**	**323**	P	P	15 27 42.2	0.0
	0.6nm,0.9s,baz=120,slow=4.5,SNR=4.2						
ILAR	**Eielson Array**	**83.10**	**23**	P	P	15 28 09.5	-0.3
	1.0nm,0.9s,baz=252,slow=5.4,SNR=6.7						
BVAR	**Borovoye Array**	**83.44**	**324**	P	P	15 28 11.4	-0.4
	1.4nm,0.7s,baz=101,slow=7.5,SNR=6.8						
TORD	**Torodi Ar. Bea**	**142.94**	**288**	PKP	PKPdf	15 35 17.0	-2.3
	0.4nm,0.8s,baz=80,slow=1.6,SNR=2.3						

*ISCJB **10** 15:18:01.9±0.3, 5°.46S±0°.03×35°.71E±0°.03, h10km, mb4.2/13, MS3.5/6, Error ellipse: s-maj=4.9km s-min=3.8km az=3.1*
*BUL **10** 15:18:01.4±21.0, 5°.40S×36°.89E, h0km±113km, MD3.9*
*IDC **10** 15:18:02.6±0.7, 5°.52S×35°.84E, h0km, mb4.1/9, mb1 4.3/12, mb1mx4.0/31, mbtmp4.2/12, ML4.9/4, MS3.6/9, Ms1 3.6/9, ms1mx3.2/39, Error ellipse: s-maj=23.2km s-min=12.3km az=129.0*
*PRE **10** 15:18:03.3±4.1, 5°.47S×35°.76E, h10km, mb4.3*

ISC 10 15:18:03.1±0.6**, 5°.47S**±0°.03×**35°.70E**±0°.04**, h10**km**, n36,** σ**1**s**.85**/45**, mb4.2**/13**, MS3.5**/6**, 1C, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIBA	**KIBA**	**0.70**	**66**	i P	**Pg**	**15 18 15.1**	**-1.6**
KIBA				i S	**Sg**	**15 18 23.8**	**-2.1**
DODT	**Dodoma, Tanzan**	**0.72**	**176**	i P	**Pg**	**15 18 16.1**	**-1.0**
DODT				i S	**Sg**	**15 18 24.7**	**-1.8**
MANYT	**Many**	**1.19**	**271**	i P	**Pb**	**15 18 24.2**	**-1.7**
MANYT				i P	**Pn**	**15 18 24.4**	**-1.6**
MANYT				i S	**Sb**	**15 18 38.6**	**-2.9**
BBAT	**Babati**	**1.36**	**350**	i P	**Pn**	**15 18 27.4**	**-0.9**
BBAT				i S	**Sb**	**15 18 44.7**	**-1.6**
SINGT	**Sing**	**1.59**	**308**	i S	**Sn**	**15 18 47.8**	**-4.4**
KMBO	**Kilima Mbogo**	**4.58**	**20**	⇑iP	**Pn**	**15 19 11.8**	**-1.0**
KMBO				eS	**Sn**	**15 20 06.0**	**-0.3**
KMBO	**Kilima Mbogo**	**4.58**	**20**	Pn	**Pn**	**15 19 11.6**	**-1.2**
	37nm,0.3s,baz=192,slow=15,SNR=376						
KMBO				Pg	**Pb**	**15 19 22.9**	**-0.9**
	108nm,0.3s,baz=202,slow=19,SNR=32						
KMBO				Lg	Lg	15 20 22.8	
	141nm,0.3s,baz=104,slow=22,SNR=7.3						
KMBO				LR	LR	15 21 06.2	
	comp=Z,815nm,18.6s,baz=271,slow=40						
MZM	**Mzuzu**	**6.16**	**196**	i P	**Pn**	**15 19 35.8**	**+1.6**
MZM				i S	**Sb**	**15 21 01.0**	**-3.3**
ENT	**Entebbe**	**6.37**	**329**	i P	Pn	15 19 42.0	+4.8
ENT				i S	**Sn**	**15 20 51.9**	**+1.8**
MBAR	**Mbarara**	**6.92**	**314**	eP	**Pn**	**15 19 44.9**	**0.0**
MBAR				eS	**Sn**	**15 21 03.4**	**-0.5**
MBAR	**Mbarara**	**6.92**	**314**	Pn	**Pn**	**15 19 45.6**	**+0.8**
	40nm,0.3s,baz=134,slow=17,SNR=44						
MBAR				Sn	**Sn**	**15 21 03.8**	**0.0**
	144nm,0.3s,baz=314,slow=23,SNR=12						
MBAR				Lg	Lg	15 21 43.0	
	210nm,0.3s,baz=39,slow=23,SNR=12						
MBAR	**Mbarara**	**6.92**	**314**	i P	**Pn**	**15 19 45.8**	**+1.0**
MBAR				i S	**Sn**	**15 21 01.0**	**-2.8**
LSZ	**Lusaka**	**12.23**	**217**	Pn	**Pn**	**15 20 58.5**	**+0.9**
	3.6nm,0.3s,baz=43,slow=12,SNR=22						
LSZ				Sn	**Sn**	**15 23 12.0**	**-2.1**
	1.2nm,0.3s,baz=108,slow=20,SNR=2.6						
LSZ				Lg	Lg	15 24 28.3	
	8.9nm,0.3s,baz=308,slow=19,SNR=12						
LSZ				LR	LR	15 25 45.3	
	comp=Z,237nm,21.9s,baz=213,slow=38						
LSZ	**Lusaka**	**12.23**	**217**	i P	**Pn**	**15 20 58.0**	**+0.4**
LSZ				i S	Sn	15 23 45.1	+31
OPO	**Ambohidratompo**	**17.18**	**140**	Pn	**Pn**	**15 22 03.9**	**+0.3**
	1.3nm,0.3s,baz=299,slow=15,SNR=3.2						
ATD	**Arta Tunnel**	**18.32**	**23**	Lg	Lg	15 27 39.9	
	1.3nm,0.3s,baz=66,slow=21,SNR=4.5						
ATD				LR	LR	15 29 23.7	
	comp=Z,169nm,19.1s,baz=63,slow=37						
SLR	**Silverton**	**21.37**	**199**	eP	**P**	**15 22 53.5**	**+2.5**
SLR				AMB	AMB	15 22 54.9	
	comp=Z,20nm,2.7s						
LBTB	**Lobatse**	**21.72**	**205**	eP	**P**	**15 22 54.5**	**-0.2**
LBTB				AMB	AMB	15 22 55.7	
	comp=Z,29nm,3.5s						
LBTB	**Lobatse**	**21.72**	**205**	P	**P**	**15 22 55.4**	**+0.7**
	comp=Z,24nm,1.0s,baz=27,slow=11,SNR=21						
LBTB				Lg	Lg	15 29 15.8	
	comp=Z,22nm,0.9s,baz=116,slow=14,SNR=5.7						
LBTB				LR	LR	15 31 07.0	

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,188nm,19.9s,baz=42,slow=36						
ERPM	east rand prop	21.95	198	eP	P	15 22 58.9	+1.6
ERPM				AMB	AMB	15 22 59.3	
	comp=Z,25nm,1.3s						
KSR	Koster	21.95	202	eP	P	15 22 59.4	+2.1
KSR				AMB	AMB	15 23 01.1	
	comp=Z,25nm,1.4s						
TSUM	Tsumeb	22.32	231	eP	P	15 23 01.4	+0.2
TSUM	Tsumeb	22.32	231	P	P	15 23 04.7	+3.4
	comp=Z,4.3nm,0.8s,baz=40,slow=12,SNR=7.4						
TSUM				S	S	15 27 10.4	+3.5
	comp=Z,2.7nm,0.8s,baz=126,slow=17,SNR=2.7						
TSUM				Lg	Lg	15 29 47.1	
	comp=Z,12nm,0.9s,baz=320,slow=22,SNR=6.5						
TSUM				LR	LR	15 30 57.1	
	comp=Z,118nm,18.8s,baz=77,slow=35						
PRYS	Parys	22.77	200	eP	P	15 23 08.0	+2.0
SWZ	Schweizer	23.75	203	eP	P	15 23 14.3	-1.5
SWZ				AMB	AMB	15 23 24.0	
	comp=Z,43nm,1.1s						
BOSA	Boshof	25.06	202	eP	P	15 23 26.1	-1.8
BOSA				AMB	AMB	15 23 40.3	
	comp=Z,24nm,3.4s						
BOSA	Boshof	25.06	202	P	P	15 23 28.8	+0.9
	comp=Z,11nm,0.9s,baz=18,slow=9.7,SNR=14						
BOSA				Lg	Lg	15 31 01.9	
	comp=Z,17nm,1.0s,baz=120,slow=20,SNR=3.5						
BOSA				LR	LR	15 33 27.5	
	comp=Z,169nm,18.9s,baz=14,slow=37						
HVD	Gariep Dam	26.79	200	eP	P	15 23 43.1	-0.5
TORD	Torodi Ar. Bea	38.51	299	P	P	15 25 28.8	+2.8
	comp=Z,1.9nm,0.9s,baz=108,slow=7.7,SNR=9.2						
TORD				LR	LR	15 41 10.8	
	comp=Z,71nm,21.4s,baz=210,slow=36						
DBIC	Dimbokro	42.24	286	LR	LR	15 43 27.8	
	comp=Z,73nm,21.6s,baz=90,slow=36						
KBZ	Khabaz	49.40	7	LR	LR	15 48 03.6	
	comp=Z,50nm,18.8s,baz=23,slow=36						
GERES	GERESS Array B	57.41	343	P	P	15 27 54.9	+3.0
	comp=Z,0.2nm,0.4s,baz=155,slow=10,SNR=3.9						
MKAR	Makanchi Array	66.34	33	P	P	15 28 52.4	+0.3
	comp=Z,2.3nm,0.9s,baz=230,slow=5.3,SNR=13						
CMAR	Chiang Mai Arr	66.69	67	P	P	15 28 55.1	+0.2
	comp=Z,1.4nm,0.8s,baz=265,slow=7.5,SNR=10.0						
KURBB	Kurchatov Arra	66.92	28	P	P	15 28 56.4	+0.8
	comp=Z,1.7nm,0.9s,baz=229,slow=7.2,SNR=9.6						
SONM	Songino Array	81.27	40	P	P	15 30 21.6	+1.8
	comp=Z,1.3nm,0.9s,baz=238,slow=5.3,SNR=6.8						

IDC 10 15:38:05.1±4.4**, 28.30N×105.14E, h60**^{km}±47^{km}**, mb3.2**/4**, mb1 3.4**/6**, mb1mx3.1**/27**, mbtmp3.2**/6**, ML3.4**/1**, Error ellipse: s-maj=34.2km s-min=20.3km az=78.0, Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.32	211	P	Pn	15 40 44.2	0.0
	baz=21,slow=12,SNR=9.2						
SONM	Songino Array	19.53	3	P	P	15 42 27.2	-0.6
	0.1nm,0.3s,baz=187,slow=10.0,SNR=3.7						
KSRS	Korea Array	21.16	59	P	P	15 42 45.3	0.0
	0.6nm,0.4s,baz=242,slow=11,SNR=4.9						
MKAR	Makanchi Array	25.71	322	P	P	15 43 29.9	+0.1
	0.6nm,0.6s,baz=127,slow=10,SNR=7.9						
WRA	Warramunga Arr	55.65	146	P	P	15 47 34.9	-0.3
	0.8nm,0.7s,baz=337,slow=8.2,SNR=13						
ASAR	Alice Springs	58.63	149	P	P	15 47 56.4	+0.1
	0.4nm,0.6s,baz=334,slow=6.9,SNR=13						

MEX 10 15:38:08.7±0.4**, 17.20N×100.35W, h40**^{km}±9^{km}**, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.17	152	iP	Pn	15 38 14.3	-1.5
CAIG				iS	Sn	15 38 19.0	-1.7
ARIG	Puente Sto Nin	1.07	0	iP	Pn	15 38 25.8	-1.5
ARIG				iS	Sn	15 38 38.4	-2.7
ZIIG	Zihuatanejo	1.14	291	iP	Pn	15 38 26.7	-1.5
ZIIG				iS	Sn	15 38 40.4	-2.2
PLIG	Platanillo	1.43	34	iP	Pn	15 38 31.6	-0.8
PLIG				eS	Sn	15 38 47.5	-2.6

CASC 10 15:46:42.3±1.5**, 9.02N×82.85W, h13**^{km}±8^{km}**, MD3.5, 3D, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRU2	Volcan	0.27	144	eP	Pg	15 46 48.6	+0.4
BRU2				eS	Sb	15 46 53.5	-0.4
TBS2		0.29	139	eP	Pg	15 46 48.9	+0.3
TBS2				eS	Sb	15 46 53.8	-0.7
BRU	Baru	0.35	126	eP	Pb	15 46 50.6	-0.4
BRU				eS	Sb	15 46 57.2	+0.2
ACR	Cerro Adams	0.48	221⇓	iP	Pg	15 46 51.0	-0.8
ACR				eS	Sb	15 46 59.0	-0.6
URSC	Urasca	1.22	312⇓	eP	Pn	15 47 04.5	-0.9
URSC				eS	Sb	15 47 20.2	-1.2
SJS	Escuela Geolog	1.50	308	eS	Sb	15 47 30.0	+0.7
CGA2	Cerro Gallo 2	1.88	302⇓	eP	Pn	15 47 14.4	+0.1
CGA2				eS	Sn	15 47 38.0	+0.1
BCIP	Isla Barro Col	2.98	87	eP	Pn	15 47 29.6	+0.3
BCIP				eS	Sn	15 48 05.3	+0.3
PTP	Ponta Puerca	19.08	59	eP	x	15 46 58.3	
PTP				eS	x	15 47 08.2	

*TIR **10** 15:53:52.6±3.0, 39.60N×20.61E, h0^{km}±13^{km}*
*THE **10** 15:53:53.4, 39.54N×20.66E, h0^{km}±2^{km}, ML3.3/5, Error ellipse: s-maj=2.1km s-min=0.8km az=245.0*
*ATH **10** 15:53:53.2, 39.53N×20.65E, h9^{km}±1^{km}, MD3.5/28, ML3.3*
*SKO **10** 15:53:53.2, 39.48N×20.57E, h0^{km}*
*CSEM **10** 15:53:53.4±0.2, 39.54N×20.65E, h2^{km}, ML3.3/5, Error ellipse: s-maj=5.0km s-min=3.6km az=74.0*
*BEO **10** 15:54:05.3±1.2, 40.37N×20.48E, h0^{km}, ML2.6/2*
ISC 10 15:53:53.6±1.0**, 39.56N**±0.02**×20.66E**±0.02**, h7**^{km}±8^{km}**, n104, σ1.11**/128**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAN	Janina	0.18	56	P	Pg	15 53 56.9	-0.3
JAN	Janina	0.18	56	ePG	Pg	15 53 56.8	-0.4
JAN				eSG	Sg	15 54 00.5	+0.8
JAN	Janina	0.18	56	P	Pg	15 53 56.9	-0.3
JAN				eSg	Sg	15 54 00.5	+0.8
IGT	Igoumenitsa	0.25	264	P	Pg	15 53 58.1	-0.5
IGT				S	Sg	15 54 02.6	+0.6
IGT	Igoumenitsa	0.25	264	P	Pg	15 53 58.1	-0.5
IGT				S	Sg	15 54 02.6	+0.6
SRN	Sarande	0.60	303	ePG	Pg	15 54 04.8	-0.4
SRN				iSG	Sb	15 54 15.7	+0.5
SRN	Sarande	0.60	303	P	Pg	15 54 04.6	-0.6
SRN	Sarande	0.60	303	ePg	Pg	15 54 04.8	-0.4
	SNR=9.0						
SRN				iSg	Sb	15 54 15.7	+0.5
	SNR=9.0						
KEK	Kerkira	0.68	283	P	Pg	15 54 06.1	-0.6
KEK	Kerkira	0.68	283	ePG	Pg	15 54 06.1	-0.6
KEK				eSB	Sb	15 54 16.1	-1.4
KEK	Kerkira	0.68	283	P	Pg	15 54 06.1	-0.6
KEK				eSb	Sb	15 54 16.1	-1.4
LKD2	Lefkada island	0.77	180	P	Pg	15 54 07.8	-0.6
LKD2	Lefkada island	0.77	180	ePB	Pg	15 54 07.7	-0.6
LKD2	Lefkada island	0.77	180	ePb	Pg	15 54 07.7	-0.6
NEST	Nestorio	0.91	19	P	Pg	15 54 10.5	-0.5
NEST	Nestorio	0.91	19	P	Pg	15 54 10.5	-0.5
THL	Klokotos Trika	1.05	89	P	Pg	15 54 12.7	-1.0
THL	Klokotos Trika	1.05	89	ePG	Pg	15 54 12.9	-0.8
THL				eSB	Sb	15 54 27.8	-0.2
THL	Klokotos Trika	1.05	89	ePg	Pg	15 54 12.9	-0.8
THL				eSb	Sb	15 54 27.8	-0.2
KBN	Korca	1.07	5	ePN	Pb	15 54 14.4	-0.1
KBN	Korca	1.07	5	ePn	Pb	15 54 14.4	-0.1
EVR	Evrytania	1.10	125	P	Pg	15 54 13.5	-1.2
EVR				S	Sb	15 54 30.5	+0.9
EVR	Evrytania	1.10	125	ePG	Pg	15 54 13.3	-1.4
EVR	Evrytania	1.10	125	P	Pg	15 54 13.5	-1.2
EVR				S	Sb	15 54 30.5	+0.9
KZN	Kozani	1.14	48	ePG	Pg	15 54 14.4	-1.0
KZN	Kozani	1.14	48	ePg	Pg	15 54 14.4	-1.0
MAKR	Makrakomi, Fth	1.27	115	P	Pg	15 54 16.8	-1.1
MAKR	Makrakomi, Fth	1.27	115	P	Pg	15 54 16.8	-1.1
FNA	Florina	1.34	24	P	Pn	15 54 18.8	-0.1
FNA				S	Sn	15 54 39.9	+2.8
FNA	Florina	1.34	24	ePG	Pn	15 54 18.8	-0.1
FNA				eSB	Sn	15 54 38.9	+1.8
FNA	Florina	1.34	24	P	Pn	15 54 18.8	-0.1
FNA				eSb	Sn	15 54 38.9	+1.8
VLS	Valsamata	1.38	182	P	Pn	15 54 18.7	-0.6
VLS	Valsamata	1.38	182	ePG	Pn	15 54 18.5	-0.8
VLS	Valsamata	1.38	182	P	Pn	15 54 18.7	-0.6
AGG	Agios Georgios	1.40	112	P	Pn	15 54 19.0	-0.7
AGG				S	Sn	15 54 40.2	+1.7
AGG	Agios Georgios	1.40	112	ePG	Pn	15 54 19.0	-0.7
AGG	Agios Georgios	1.40	112	P	Pn	15 54 19.0	-0.7
AXS	Araxos	1.47	157	P	Pn	15 54 20.4	-0.2
AXS	Araxos	1.47	157	P	Pn	15 54 20.4	-0.2
EFP	Efpalio	1.49	139	ePB	Pn	15 54 21.1	+0.3
EFP	Efpalio	1.49	139	ePb	Pn	15 54 21.1	+0.3
BIA	Bitola	1.55	19	ePn	Pn	15 54 21.9	+0.2
BIA				iSg	Sg	15 54 45.5	+2.1
BIA	Bitola	1.55	19	ePn	Pn	15 54 21.8	+0.2
BIA				iSg	Sg	15 54 45.4	+2.1
TRIZ	Trizonia	1.62	137	ePB	Pg	15 54 24.2	-0.5
TRIZ	Trizonia	1.62	137	ePb	Pg	15 54 24.2	-0.5
RLS	Riolos of Patr	1.62	157	ePB	Pg	15 54 24.4	-0.4
RLS	Riolos of Patr	1.62	157	ePb	Pg	15 54 24.4	-0.4
KALE	Kalithea	1.64	135	ePB	Pb	15 54 24.1	-0.1
KALE	Kalithea	1.64	135	ePb	Pb	15 54 24.1	-0.1
LAKA	Lakka	1.67	142	ePB	Pb	15 54 24.8	+0.1
LAKA	Lakka	1.67	142	ePb	Pb	15 54 24.8	+0.1
TIR	Tirane	1.89	342	ePN	Pg	15 54 30.0	+0.2
TIR	Tirane	1.89	342	ePn	Pg	15 54 30.0	+0.2
	SNR=4.0						
KLV	Kalavryta, Ach	1.91	142	ePG	Pb	15 54 28.0	-0.8
KLV	Kalavryta, Ach	1.91	142	ePg	Pb	15 54 28.0	-0.8
GRG	Griva	1.93	43	ePG	Pb	15 54 29.2	0.0
GRG	Griva	1.93	43	ePg	Pb	15 54 29.2	0.0
NEO	Neokhori	2.00	96	ePN	Pb	15 54 29.5	-0.9
NEO	Neokhori	2.00	96	ePn	Pb	15 54 29.5	-0.9
LKR	Lokris	2.03	116	ePN	Pb	15 54 30.0	-0.9
LKR	Lokris	2.03	116	ePn	Pb	15 54 30.0	-0.9
GUR	Goura	2.09	140	ePN	Pb	15 54 30.7	-1.2
GUR	Goura	2.09	140	ePn	Pb	15 54 30.7	-1.2
PHP	Peshkopia	2.13	356	ePN	Pg	15 54 33.9	-0.6
PHP	Peshkopia	2.13	356	ePn	Pg	15 54 33.9	-0.6
	SNR=4.0						
AMT	Artemida-Makis	2.18	158	ePG	Pb	15 54 33.2	-0.3
AMT	Artemida-Makis	2.18	158	ePg	Pb	15 54 33.2	-0.3
VAY	Valandovo	2.29	39	ePn	Pg	15 54 37.5	+0.1
VAY				eSn	Sb	15 55 02.5	-1.2
VAY	Valandovo	2.29	39	ePn	Pb	15 54 33.8	-1.4
VAY	Valandovo	2.29	39	ePn	Pb	15 54 34.2	-1.0
VAY				eSn	Sb	15 55 02.5	-1.2
PLG	Polygyros	2.29	68	ePB	Pn	15 54 32.8	+0.9
PLG	Polygyros	2.29	68	ePb	Pn	15 54 32.8	+0.9
LTK	Loutraki	2.37	130	ePN	Pn	15 54 34.0	+1.1
LTK	Loutraki	2.37	130	ePn	Pn	15 54 34.0	+1.1
AOS	Alonnisos	2.53	98	P	Pn	15 54 35.0	-0.1
AOS				S	Sn	15 55 06.9	+0.7
AOS	Alonnisos	2.53	98	P	Pn	15 54 35.0	-0.1
AOS				S	Sn	15 55 06.9	+0.7
PUK	Puka	2.55	347	ePN	Pg	15 54 41.3	-1.2
VLX	Vlachokerasia	2.57	148	ePN	Pn	15 54 37.6	+1.8
VLX	Vlachokerasia	2.57	148	ePn	Pn	15 54 37.6	+1.8
ITM	Ithomi	2.58	157	ePN	Pn	15 54 36.8	+1.0
ITM	Ithomi	2.58	157	ePn	Pn	15 54 36.8	+1.0
PYL	PYLOS	2.79	162	ePB	Pn	15 54 38.8	+0.1
PYL	PYLOS	2.79	162	ePb	Pn	15 54 38.8	+0.1
BCI	Bajram Curri	2.84	351	ePN	Pb	15 54 43.5	-1.2
BCI	Bajram Curri	2.84	351	ePn	Pb	15 54 43.5	-1.2
	SNR=4.0						
NAIG	Nisos Aigina	2.85	128	ePB	Pn	15 54 39.8	+0.2
NAIG	Nisos Aigina	2.85	128	ePb	Pn	15 54 39.8	+0.2
ATH	Athens Observa	2.87	123	ePN	Pn	15 54 40.8	+1.0
ATH	Athens Observa	2.87	123	ePn	Pn	15 54 40.8	+1.0
DID	Didima	2.88	135	ePN	Pn	15 54 40.6	+0.6
DID	Didima	2.88	135	ePn	Pn	15 54 40.6	+0.6
DYR	Agios Nikonas	3.09	154	ePN	Pn	15 54 44.1	+1.3
DYR	Agios Nikonas	3.09	154	ePn	Pn	15 54 44.1	+1.3
VLI	Veliai	3.36	147	ePN	Pn	15 54 47.1	+0.6
VLI	Veliai	3.36	147	ePn	Pn	15 54 47.1	+0.6
BARS	Barje	3.37	15	ePn	Pn	15 54 49.3	+2.6
BARS				eSn	Sn	15 55 21.0	-6.0
BARS	Barje	3.37	15	ePn	Pn	15 54 49.3	+2.6
VTS	Vitosha	3.59	32	ePn	Pb	15 54 54.6	-3.0
VTS				eSn	Sn	15 55 31.2	-1.5
VTS	Vitosha	3.59	32	ePn	Pb	15 54 54.6	-3.0
VTS				eSn	Sn	15 55 31.2	-1.5
KYTH	Kithira	3.77	149	ePN	Pn	15 54 54.0	+1.7
KYTH	Kithira	3.77	149	ePn	Pn	15 54 54.0	+1.7
ZAPS	Zavoj	4.00	21	eSn	Sn	15 55 38.8	-3.7
DIVS	Divibare	4.56	354	ePn	Pn	15 55 04.2	+1.0
DIVS				eSn	Sn	15 55 48.2	-8.3
DIVS	Divibare	4.56	354	ePn	Pn	15 55 04.2	+1.0

*BJI **10** 15:54:54.6, 44.93N×148.28E, h103^{km}, mB4.9/35, mb5.2/56*
*NEIC **10** 15:54:56.0±0.1, 44.98N×148.15E, mb5.0/141, Error ellipse: s-maj=5.3km s-min=2.5km az=155.0*
NEIC Felt [IV] at Kuril'sk. Recorded [1 JMA] in eastern Hokkaido.
*MOS **10** 15:54:55.2±1.0, 44.89N×148.27E, h103^{km}, mb4.9/91, Error ellipse: s-maj=6.1km s-min=4.3km az=100.6*
MOS Felt (III-IV) at Kuril'sk.
*ISCJB **10** 15:54:55.4±0.3, 44.84N±0.03×148.28E±0.02, h104^{km}±2^{km}, mb4.9/288, Error ellipse: s-maj=4.4km s-min=2.6km az=159.4*
*IDC **10** 15:54:55.6±0.4, 45.00N×148.14E, h91^{km}±3^{km}, mb4.5/28, mb1 4.7/33, mb1mx4.7/34, mbtmp4.5/33, MS3.6/24, Ms1 3.6/24, ms1mx3.5/35, Error ellipse: s-maj=10.7km s-min=8.2km az=144.0*
*SKHL **10** 15:54:56.4±0.5, 44.87N×148.44E, h97^{km}±7^{km}, mb5.8/5, mbh5.6/4, Ms4.1/3, msh5.1/5*
SKHL Felt (III-IV) at Kurilsk.
*JMA **10** 15:54:56.8±0.3, 44.52N×148.43E, h96^{km}, M4.7*
JMA Felt I J1.
*GCMT **10** 15:54:57.8±0.3, 44.89N×148.37E, h88^{km}±3^{km}, MW4.9, Moment Tensor Solution. s26,c33; s72,c107; Moment tensor: Scale 10^{16}Nm; M_{rr}1.56±.12; $M_{\theta\theta}$0.93±.12; $M_{\phi\phi}$-2.50±.11; $M_{r\theta}$-1.18±.08; $M_{\theta\phi}$-0.14±.11; $M_{\phi r}$-1.65±.07; Best double couple: $M_0$3.00000×10^{16} NP1:ϕ_s331.00000°, δ33.00000°, λ37.00000°. NP2:ϕ_s209.00000°, δ71.00000°, λ118.00000°. Principal axes: T 2.7800, Plg56.0000°, Azm154.0000°; N 0.3700, Plg26.0000°, Azm19.0000°; P -3.1600, Plg21.0000°, Azm278.0000°; Data Used: II IU IC G CN.*
*SZGRF **10** 15:54:58.8, 46.66N×148.46E, h33^{km}, mb5.1, MS3.7, Northwest of Kuril Islands, Russia*
*DJA **10** 15:55:00.9±6.1, 45°N±12°×14°8E±2°3, h133^{km}±51^{km}, M4.8/9, mB5.2/3, mb4.9/9, Mw(mB)4.5/3*
*NIED **10** 15:55:00, 44.40N×148.50E, h86^{km}, Mw4.9 Best double couple: $M_0$2.27000×10^{16} NP1:ϕ_s199.00000°, δ54.00000°, λ114.00000°. NP2:ϕ_s341.00000°, δ42.00000°, λ60.00000°.*
*NSSC **10** 15:55:49.8±0.5, 47.52N×149.45E, h572^{km}±999^{km}*
ISC 10 15:54:55.7±0.3**, 44.86N**±0.04**×148.29E**±0.03**, h94**^{km}±1^{km}**, h94**^{km}**:pP-P, n1120, σ1.04**/1287**, mb5.0**/295**, 299C-242D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	0.48	321c	iPN	Pn	15 55 11.5	+0.9
KUR				iS	Sn	15 55 23.4	+1.5
KUR				pmax	pmax		
	comp=E,2µm,0.4s						
KUR				pmax	pmax		
	comp=N,3µm,0.4s						
KUR				smax	smax		
	comp=N,7µm,0.3s						
KUR				smax	smax		
	comp=E,14µm,0.6s						
KUR	Kuril'sk	0.48	321⇑	iP	Pn	15 55 11.6	+0.9
KUR				AMB	AMB	15 55 11.8	
	comp=E,30µm,1.0s						
KUR				AMB	AMB	15 55 11.8	
	comp=E,108µm,1.2s						
KUR				AMB	AMB	15 55 11.8	
	comp=E,33µm,1.6s						
KUR				AMB	AMB	15 55 12.6	
	comp=E,20µm,2.0s						
KUR				AMB	AMB	15 55 12.6	
	comp=E,20µm,2.0s						
KUR				AMB	AMB	15 55 12.6	
	comp=E,15µm,2.0s						
KUR				iS	Sn	15 55 23.4	+1.5
KUR				A	A	15 55 24.0	
	comp=E,65µm,2.0s						
KUR				A	A	15 55 24.0	
	comp=E,38µm,2.0s						
KUR				A	A	15 55 24.0	
	comp=E,128µm,1.0s						
KUR				A	A	15 55 24.0	
	comp=E,72µm,1.5s						
YUK	Yuzh-Kuril'sk	1.93	246d	iPN	Pn	15 55 28.5	+1.4
YUK				iS	Sn	15 55 52.1	+1.1
YUK				pmax	pmax		
	comp=Z,8µm,0.5s						
YUK				pmax	pmax		
	comp=N,651nm,0.5s						
YUK				pmax	pmax		
	comp=E,4µm,0.5s						
YUK				smax	smax		
	comp=N,8µm,0.8s						
YUK				smax	smax		
	comp=E,18µm,0.8s						
YUK	Yuzh-Kuril'sk	1.93	246⇓	iP	Pn	15 55 28.5	+1.4
YUK				AMB	AMB	15 55 29.1	
	comp=E,650nm,0.5s						
YUK				AMB	AMB	15 55 29.1	
	comp=E,4µm,0.5s						
YUK				AMB	AMB	15 55 29.1	
	comp=E,8µm,0.5s						
YUK				iS	Sn	15 55 52.2	+1.2
YUK				A	A	15 55 56.7	
	comp=E,8µm,0.8s						
YUK				A	A	15 55 56.7	
	comp=E,18µm,0.8s						
NEM2	Nemuro 2	2.37	232	P	Pn	15 55 33.0	+0.2
NEM2				eS	Sn	15 55 59.4	-1.9
JRA	Rausu	2.45	249	P	Pn	15 55 35.7	+1.8
JRA				eS	Sn	15 56 05.9	+2.6
JNK	Nakash	2.87	245	P	Pn	15 55 41.1	+1.6
JNK				eS	Sn	15 56 14.7	+1.4
JAK	Akkeshi	3.20	236	P	Pn	15 55 44.1	+0.2
JAK				eS	Sn	15 56 19.1	-2.0
JTKR	Abashiri--Toko	3.27	256	P	Pn	15 55 46.8	+2.0
JAR	Ashorobuto	3.62	246	P	Pn	15 55 51.5	+2.0
JAR				eS	Sn	15 56 33.6	+2.4
JSE	Soyaes	4.06	273	P	Pn	15 55 57.9	+2.4
JKK2	Kamakawa 2	4.10	258	P	Pn	15 55 58.5	+2.4
JKK2				eS	Sn	15 56 48.8	+5.9
ASAJ	Asahikawa	4.14	262	eP	Pn	15 55 59.3	+2.6
ASAJ	Asahikawa	4.14	262	P	Pn	15 55 59.8	+3.1
	comp=E,94nm,0.3s,baz=85,slow=19,SNR=823						
ASAJ				LR	LR	15 57 23.9	
	comp=E,1µm,19.5s,baz=15,slow=36						
JCH	Churui	4.22	240	P	Pn	15 55 58.1	+0.4
JCH				eS	Sn	15 56 44.6	-1.3
YSS	Yuzh-Sakhalins	4.40	300⇓	iPN	Pn	15 56 03.2	+3.1
YSS				iS	Sn	15 56 53.0	+2.9
YSS				pmax	pmax		
	comp=N,590nm,0.5s						
YSS				pmax	pmax		
	comp=E,900nm,0.5s						
YSS				pmax	pmax		
	comp=Z,1µm,0.5s						
YSS				smax	smax		
	comp=N,1µm,2.0s						
YSS				smax	smax		
	comp=E,3µm,2.0s						
YSS				smax	smax		
	comp=E,2µm,1.0s						
YSS				MLR	MLR		
	comp=N,900nm,14.0s						
YSS				MLR	MLR		
	comp=E,800nm,14.0s						
YSS				MLR	MLR		
	comp=Z,1µm,14.0s						
YSS	Yuzh-Sakhalins	4.40	300⇓	iP	Pn	15 56 03.2	+3.1
YSS			⇓	iP	Pn	15 56 03.2	+3.1
YSS				AMB	AMB	15 56 04.1	
	comp=Z,590nm,0.5s						
YSS				AMB	AMB	15 56 04.1	
	comp=Z,900nm,0.5s						
YSS				AMB	AMB	15 56 04.1	
	comp=Z,1µm,0.5s						
YSS				iS	Sn	15 56 53.0	+2.9
YSS				A	A	15 56 58.0	
	comp=Z,1µm,2.0s						
YSS				A	A	15 56 58.0	
	comp=Z,3µm,2.0s						
YSS				A	A	15 56 58.0	
	comp=Z,2µm,1.0s						
YSS				eLQ	LQ	15 57 08.0	
YSS				eLR	LR	15 57 28.0	
YSS				AMS	AMS	15 57 57.0	
	comp=Z,900nm,14.0s						
YSS				AMS	AMS	15 57 57.0	
	comp=Z,800nm,14.0s						
YSS				AMS	AMS	15 57 57.0	
	comp=Z,1µm,14.0s						
JFR	Furan	4.45	250	P	Pn	15 56 02.9	+2.1
JFR				eS	Sn	15 56 55.6	+4.2
JWK2	Keihoku	4.55	278	P	Pn	15 56 05.9	+3.7
ERM	Erimo	4.70	235c	iPN	Pn	15 56 05.8	+1.6
ERM				pmax	pmax		
	comp=Z,1µm,0.6s						
ERM	Erimo	4.70	235	eP	Pn	15 56 04.9	+0.7
ERM	Erimo	4.70	235	Pn	Pn	15 56 05.9	+1.7
	comp=Z,18µm,0.5s						
JNBK	Urakawa-nobuka	4.78	239	P	Pn	15 56 05.2	-0.1
JNBK				eS	Sn	15 56 57.8	-1.7
JHR	Hokuryu	4.85	259	P	Pn	15 56 09.3	+3.1
JYG	Yagishiri	4.92	267	P	Pn	15 56 10.1	+2.9
JEW	Eniwo	5.35	250	P	Pn	15 56 15.3	+2.3
UGL	Uglegorsk	6.00	317⇓	iPN	Pn	15 56 24.6	+2.8
UGL				eS	Sn	15 57 32.0	+3.1
UGL				pmax	pmax		
	comp=N,93nm,0.7s						
UGL				pmax	pmax		
	comp=E,167nm,0.7s						
UGL				pmax	pmax		
	comp=Z,423nm,0.7s						
UGL				pmax	pmax		
	comp=N,800nm,3.0s						
UGL				pmax	pmax		
	comp=E,700nm,3.0s						
UGL				smax	smax		
	comp=N,449nm,1.0s						
UGL				smax	smax		
	comp=E,382nm,1.0s						
UGL				smax	smax		
	comp=N,2µm,6.0s						
UGL				smax	smax		
	comp=E,1µm,6.0s						
UGL	Uglegorsk	6.00	317⇓	iP	Pn	15 56 24.6	+2.8
UGL				AMB	AMB	15 56 25.5	
	comp=E,93nm,0.7s						
UGL				AMB	AMB	15 56 25.5	
	comp=E,167nm,0.7s						
UGL				AMB	AMB	15 56 25.5	
	comp=E,423nm,0.7s						
UGL				AMB	AMB	15 56 26.0	
	comp=E,800nm,3.0s						
UGL				AMB	AMB	15 56 26.0	
	comp=E,700nm,3.0s						
UGL				eS	Sn	15 57 32.0	+3.1
UGL				A	A	15 57 36.0	
	comp=E,449nm,1.0s						
UGL				A	A	15 57 36.0	
	comp=E,382nm,1.0s						
UGL				A	A	15 57 40.0	
	comp=E,2µm,6.0s						
UGL				A	A	15 57 40.0	
	comp=E,1µm,6.0s						
JKB	Kayabe	6.07	243	P	Pn	15 56 22.7	-0.1
JKB				eS	Sn	15 57 27.2	-3.6
JOT	Ohata	6.34	239	P	Pn	15 56 25.0	-1.5
JOT				eS	Sn	15 57 32.4	-5.0
JOSM	Okushiri--Mats	6.99	250	P	Pn	15 56 35.9	+0.6
JOSM				eS	Sn	15 57 50.3	-3.0
TYV	Tymovskoe	7.10	330	eP	Pn	15 56 39.8	+3.0
TYV				AMB	AMB	15 56 42.0	
	comp=E,700nm,2.0s						

TYV AMB AMB 15 56 45.0
comp=E,88nm,1.0s
TYV AMB AMB 15 56 45.0
comp=E,154nm,1.0s
TYV *e*S **Sn** **15 57 58.0 +2.2**
TYV A A 15 58 16.0
comp=E,1μm,10.0s
TYV AMS AMS 16 02 28.0
comp=E,400nm,14.0s
TYV AMS AMS 16 02 28.0
comp=E,500nm,14.0s
SKR Severo-Kuril's 7.85 39 ⇓*i*PN **Pn** **15 56 46.5 -0.5**
SKR pmax pmax
comp=N,250nm,0.5s
SKR pmax pmax
comp=E,250nm,0.5s
SKR pmax pmax
comp=Z,300nm,0.5s
SKR pmax pmax
comp=N,1μm,3.0s
SKR pmax pmax
comp=E,800nm,3.0s
SKR pmax pmax
comp=Z,1μm,3.0s
SKR MLR MLR
comp=E,1μm,16.0s
SKR MLR MLR
comp=Z,1μm,16.0s
SKR Severo-Kuril's 7.85 39 ⇓*i*P **Pn** **15 56 46.5 -0.5**
SKR AMB AMB 15 56 49.5
comp=Z,250nm,0.5s
SKR AMB AMB 15 56 49.5
comp=Z,300nm,0.5s
SKR AMB AMB 15 56 53.0
comp=Z,1μm,3.0s
SKR AMB AMB 15 56 53.0
comp=Z,1μm,3.0s
SKR AMB AMB 15 56 53.0
comp=Z,800nm,3.0s
SKR *e*S **Sn** **15 58 11.0 -3.1**
SKR A A 15 58 19.2
comp=Z,300nm,0.2s
SKR A A 15 58 19.2
comp=Z,160nm,0.5s
SKR A A 15 58 19.2
comp=Z,50nm,0.5s
SKR A A 15 58 34.0
comp=Z,1μm,10.0s
SKR AMS AMS 15 59 24.0
comp=Z,1μm,16.0s
SKR AMS AMS 15 59 24.0
comp=Z,1μm,16.0s
JMK Ichinoseki 7.92 224 P **Pn** **15 56 45.4 -2.5**
JMK *e*S Sn 15 58 08.2 -7.6
TEY Ternei 8.30 275 *e*P **Pn** **15 56 54.7 +1.6**
TEY AMB AMB 15 56 55.0
comp=Z,2μm,2.6s
TEY AMB AMB 15 56 55.0
comp=Z,151nm,1.0s
TEY AMB AMB 15 56 55.0
comp=Z,60nm,1.0s
TEY AMB AMB 15 56 55.0
comp=Z,1μm,2.6s
TEY *e*L L 15 58 50.0
OKH Okha 9.38 340 *e*PN **Pn** **15 57 10.0 +2.3**
OKH *e*S Sn 15 59 02.0 +11
OKH pmax pmax
comp=Z,700nm,5.0s
OKH smax smax
comp=N,500nm,6.0s
OKH smax smax
comp=E,600nm,6.0s
OKH Okha 9.38 340 *e*P **Pn** **15 57 10.0 +2.3**
OKH *e*P 15 57 10.2
OKH AMB AMB 15 57 10.6
comp=E,700nm,5.0s
OKH A A 15 59 07.8
comp=E,500nm,6.0s
OKH A A 15 59 07.8
comp=E,600nm,6.0s
OKH *e*LQ LQ 16 01 27.0
OKH AMS AMS 16 02 49.4
comp=E,500nm,8.0s
OKH AMS AMS 16 02 49.4
comp=E,700nm,10.0s
OKH AMS AMS 16 02 49.4
comp=E,600nm,10.0s
NKL Nikolayevsk 9.68 332 *e*P **Pn** **15 57 09.0 -2.9**
NKL AMB AMB 15 57 12.0
comp=E,500nm,2.0s
NKL AMB AMB 15 57 12.0
comp=E,500nm,2.0s
NKL AMB AMB 15 57 13.7
comp=E,290nm,2.0s
HABR Khabarovsk 9.79 296 *de*PN **Pn** **15 57 16.3 +2.9**
HABR *e*S **Sn** **15 59 05.4 +4.0**
HABR pmax pmax
comp=Z,308nm,1.1s
HABR pmax pmax
comp=N,45nm,0.9s
HABR pmax pmax
comp=E,252nm,1.1s
HABR MLR MLR
comp=Z,215nm,16.0s
PEA0B Petropavlovsk- 10.30 33 *e*P **Pn** **15 57 19.8 -0.6**
PETK Petropavlovsk- 10.30 33 PN **Pn** **15 57 20.0 -0.4**
PETK pmax pmax
comp=Z,6.0nm,0.3s
PETK MLR MLR
comp=Z,130nm,19.7s
PETK Petropavlovsk- 10.30 33 P **Pn** **15 57 20.0 -0.4**
PETK ScP **ScP** **16 06 42.3 -0.2**
PETK Petropavlovsk- 10.30 33 P **Pn** **15 57 20.0 -0.4**
comp=Z,5.5nm,0.3s,baz=199,slow=14,SNR=127
PETK LR LR 16 01 40.8
comp=Z,130nm,19.7s,baz=224,slow=40
PETK ScP **ScP** **16 06 42.3 -0.2**
comp=Z,0.1nm,0.3s,baz=158,slow=4.3,SNR=4.4
PET Petropavlovsk 10.63 36 *e*PN **Pn** **15 57 22.4 -2.4**
PET pmax pmax
comp=Z,22nm,0.5s
PET pmax pmax
comp=Z,100nm,6.9s
PET MLR MLR
comp=Z,200nm,20.0s
MAJO Matsushiro 11.29 226 *e*PN **Pn** **15 57 31.5 -2.4**
MAJO pmax pmax
comp=Z,48nm,0.7s
MAJO Matsushiro 11.29 226 *e*P **Pn** **15 57 31.5 -2.4**
comp=Z,48nm,0.7s
MAT Matsushiro 11.29 226 P **Pn** **15 57 31.6 -2.3**
MAT S **Sn** **15 59 33.5 -4.6**
MJAR Matsushiro Arr 11.29 226 P **Pn** **15 57 32.3 -1.6**
MJAR Matsushiro Arr 11.29 226 P **Pn** **15 57 32.3 -1.6**
comp=Z,3.1nm,0.3s,baz=29,slow=13,SNR=94
MJAR LR LR 16 02 13.6
comp=Z,185nm,19.7s,baz=40,slow=39
USRK Ussuriysk Arra 11.66 272 P **Pn** **15 57 39.7 +0.9**
comp=Z,2.6nm,0.3s,baz=85,slow=13,SNR=95
USRK LR LR 16 01 48.4
comp=Z,425nm,20.6s,baz=263,slow=36
VLA Vladivostok 11.95 267 *e*PN **Pn** **15 57 42.4 -0.3**
VLA pmax pmax
comp=Z,27nm,1.0s
KLR Kul'dur 12.10 297 *e*PN **Pn** **15 57 43.0 -1.6**
KLR *e* 16 00 07.0
KLR MLR MLR
comp=Z,1μm,12.0s
MDJ Mudanjiang 13.30 276 P **Pn** **15 57 59.7 -0.9**
MDJ S **Sn** **16 00 24.5 -2.2**
MDJ ScP **ScP** **16 06 47.8 +0.8**
MDJ PcS **PcS** **16 06 57.6 +0.8**
MDJ ScS **ScS** **16 10 24.6 +1.0**
MDJ pmax pmax
comp=Z,5.0nm,1.2s
MDJ pmax pmax
comp=Z,64nm,4.9s
MDJ LR LR
comp=N,240nm,18.9s
MDJ LR LR
comp=E,180nm,19.6s
MDJ LR LR
comp=Z,430nm,23.1s
MDJ Mudanjiang 13.30 276 *e*P **Pn** **15 58 00.1 -0.5**
comp=Z,39nm,0.9s
JHJ Hachijo jima 2 13.45 212 P **Pn** **15 58 02.5 -0.2**
comp=Z,12nm,0.3s,baz=353,slow=14,SNR=5.8

JHJ LR LR 16 03 48.7
comp=Z,62nm,19.3s,baz=5.7,slow=40
ZEA Zeya 16.30 311 *e*P Pn 15 58 30.5 -8.2
CN2 Changchun 16.38 274 *e*P **Pn** **15 58 38.2 -1.5**
CN2 *es*P **sP** **15 59 06.8 -3.8**
CN2 *e*S **Sn** **16 01 34.4 -6.6**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,5.0s
KSRS Korea Array 17.01 251 P **Pn** **15 58 45.9 -1.6**
comp=Z,1.7nm,0.3s,baz=61,slow=12,SNR=36
KSRS PcP **PcP** **16 03 28.9 +1.2**
comp=Z,0.1nm,0.3s,baz=15,slow=1.2,SNR=6.9
KSRS pPcP 16 03 54.6
baz=69,slow=0.4,SNR=6.0
KSRS LR LR 16 04 46.1
comp=Z,144nm,20.9s,baz=5.7,slow=35
KSRS ScP **ScP** **16 06 54.7 +0.9**
comp=Z,0.1nm,0.3s,baz=8.5,slow=2.5,SNR=4.9
KSAR Wonju Array Be 17.04 251 P **Pn** **15 58 45.9 -2.0**
KSAR PcP **PcP** **16 03 28.9 +1.1**
KSAR pPcP 16 03 54.6
KSAR ScP **ScP** **16 06 54.8 +0.8**
INCN Inchon 17.86 253 *e*P **P** **15 58 57.2 -0.2**
comp=Z,55nm,0.9s
JNU Nakatsue 17.86 235 *e*P **P** **15 58 57.5 0.0**
comp=Z,52nm,0.9s
JNU Nakatsue 17.86 235 P **Pn** **15 58 58.2 +0.2**
comp=Z,3.4nm,0.3s,baz=43,slow=6.3,SNR=33
CLNS Chul'man 18.91 318 *e*P **Pn** **15 59 10.6 +0.3**
CLNS *e*S **S** **16 02 39.3 +0.9**
CLNS pmax pmax
comp=N,10.0nm,0.9s
CLNS pmax pmax
comp=Z,19nm,1.0s
CLNS pmax pmax
comp=E,10.0nm,1.1s
CLNS pmax pmax
comp=E,11nm,0.9s
CLNS pmax pmax
comp=N,10.0nm,0.9s
CLNS pmax pmax
comp=Z,9.0nm,0.9s
CLNS smax smax
comp=E,19nm,1.1s
CLNS smax smax
comp=N,27nm,1.0s
CLNS MLR MLR
comp=E,72nm,13.0s
CLNS MLR MLR
comp=Z,139nm,13.0s
CLNS MLR MLR
comp=N,136nm,13.0s
YAK Yakutsk 20.33 334 *e*P **P** **15 59 21.4 -2.5**
YAK *e*S S 16 02 57.9 -8.3
YAK *e* 16 03 32.3
YAK *e* 16 10 39.1
YAK pmax pmax
comp=Z,28nm,0.8s
YAK pmax pmax
comp=E,10.0nm,1.0s
YAK pmax pmax
comp=N,11nm,1.0s
YAK smax smax
comp=E,170nm,1.8s
YAK smax smax
comp=N,121nm,1.3s
DL2 Dalian 20.68 263 P **P** **15 59 28.1 +0.2**
DL2 sP **sP** **15 59 59.0 +1.0**
DL2 S **S** **16 03 13.1 -0.4**
DL2 pmax pmax
comp=Z,17nm,0.6s
DL2 pmax pmax
comp=Z,170nm,3.7s
DL2 LR LR
comp=N,120nm,17.7s
DL2 LR LR
comp=Z,160nm,19.2s
BJI Beijing 24.09 270 P **P** **16 00 02.1 -0.1**
BJI sP **sP** **16 00 32.8 -1.5**
BJI S **S** **16 04 12.5 -0.4**
BJI sS **sS** **16 04 48.9 -0.4**
BJI pmax pmax
comp=Z,71nm,0.9s
BJI LR LR
comp=N,190nm,12.3s
BJI LR LR
comp=E,230nm,13.6s
BJI LR LR
comp=Z,310nm,30.3s
BJT Baijiatuan 24.10 270 *e*P **P** **16 00 02.0 -0.4**
comp=Z,51nm,0.8s
BILL Bilibino 25.07 16 ⇓*i*P **P** **16 00 08.8 -2.0**
BILL *e* 16 00 44.0
BILL *e*S **S** **16 04 23.3 -4.7**
BILL pmax pmax
comp=Z,44nm,1.1s
TIA Tai'an 25.09 261 ⇓P **P** **16 00 11.4 0.0**
TIA pmax pmax
comp=Z,280nm,0.9s
TIA pmax pmax
comp=Z,240nm,6.8s
SSE Sheshan 25.26 246 P **P** **16 00 11.0 -2.0**
SSE S **S** **16 04 32.6 +0.9**
SSE pmax pmax
comp=Z,36nm,0.6s
SSE pmax pmax
comp=Z,100nm,3.6s
SSE LR LR
comp=N,95nm,30.5s
SSE LR LR
comp=E,78nm,30.5s
SSE LR LR
comp=Z,140nm,33.3s
NJ2 Nanjing 26.21 251 *e*P **P** **16 00 22.6 +1.1**
NJ2 pP **pP** **16 00 43.4 +0.9**
NJ2 sP **sP** **16 00 55.5 +1.9**
NJ2 PP **PnPn** **16 01 05.9 0.0**
NJ2 S S 16 04 39.0 -7.6
NJ2 pmax pmax
comp=Z,40nm,0.9s
NJ2 pmax pmax
comp=Z,260nm,5.4s
NJ2 LR LR
comp=N,220nm,19.2s
NJ2 LR LR
comp=E,150nm,20.5s
NJ2 LR LR
comp=Z,260nm,24.7s
HHC Hu-ho-hao-te 27.07 275 *e*P **P** **16 00 27.8 -1.6**
HHC pP **pP** **16 00 51.3 +0.8**
HHC sP **sP** **16 01 03.1 +1.6**
HHC PP **PnPn** **16 01 19.3 +1.7**
HHC S **S** **16 04 57.6 -2.8**
HHC sS **sS** **16 05 35.2 -2.0**
HHC SS **SnSn** **16 06 18.3 +1.4**
HHC PcS **PcS** **16 07 30.2 +0.6**
HHC pmax pmax
comp=Z,93nm,0.9s
HHC pmax pmax
comp=Z,150nm,5.0s
HHC LR LR
comp=N,420nm,14.7s
HHC LR LR
comp=E,520nm,14.0s
HHC LR LR
comp=Z,360nm,12.1s
BTO Baotou 28.25 275 *e*P **P** **16 00 39.7 -0.2**
ULN Ulaanbaatar 28.38 291 P **P** **16 00 42.4 +1.5**
SNR=5.1
ULN Ulaanbaatar 28.38 291 *e*P **P** **16 00 40.8 -0.1**
comp=Z,12nm,0.8s
ULN Ulaanbaatar 28.38 291 P **P** **16 00 42.1 +1.1**
comp=Z,15nm,0.9s
TIXI Tiksi 28.45 347 *e*P **P** **16 00 40.5 -0.6**
TIXI pmax pmax
comp=Z,1.0nm,0.8s
SONM Songino Array 28.82 291 P **P** **16 00 44.9 +0.1**
SONM ScP **ScP** **16 07 24.5 -0.3**
SONM Songino Array 28.82 291 P **P** **16 00 44.9 +0.1**
comp=Z,3.8nm,0.7s,baz=77,slow=8.4,SNR=25
SONM ScP **ScP** **16 07 24.5 -0.3**
comp=Z,1.3nm,0.9s,baz=95,slow=2.3,SNR=5.5
TLY Talaya 30.10 299 *e*P **P** **16 00 57.3 +1.3**
TLY pmax pmax
comp=Z,3.0nm,0.8s
TLY MLR MLR
comp=Z,156nm,17.0s
WHN Wuhan 30.18 253 P **P** **16 00 56.9 +0.1**
WHN S **S** **16 05 47.3 -1.8**
WHN pmax pmax
comp=Z,60nm,1.0s
WHN LR LR
comp=N,390nm,11.9s
WHN LR LR
comp=E,430nm,16.0s
WHN LR LR
comp=Z,230nm,19.1s
ZAK Zakamensk 30.47 297 *e*P **P** **16 00 57.6 -1.8**
ZAK *e* 16 03 56.1
ZAK pmax pmax
comp=Z,2.0nm,1.0s
TPUB Ta-pu 31.17 236 *e*P **P** **16 01 07.3 +1.6**
comp=Z,20nm,0.9s
TNA Tin City 31.47 33 *e*P **P** **16 01 07.8 0.0**
comp=Z,25nm,1.2s
XAN Xi'an 31.98 264 P **P** **16 01 12.8 0.0**
XAN pmax pmax
comp=Z,12nm,0.9s
XAN pmax pmax
comp=Z,17nm,4.0s
ENH Enshi 33.69 258 *e*P **P** **16 01 27.3 -0.4**
comp=Z,73nm,0.9s
LZH Lanzhou 34.56 271 ⇓P P 16 01 26.3 -9.1
LZH pP pP 16 01 48.5 -8.4
LZH sP sP 16 02 00.2 -7.6
LZH PP PnPn 16 02 44.5 -9.3
LZH S **S** **16 06 55.5 -2.0**
LZH sS sS 16 07 25.0 -10
LZH SS SnSn 16 09 02.4 -16
LZH pmax pmax
comp=Z,59nm,1.3s
LZH pmax pmax
comp=Z,220nm,5.3s
LZH LR LR
comp=N,270nm,14.2s
LZH LR LR
comp=E,250nm,12.5s
LZH LR LR
comp=Z,340nm,16.2s
GTA Gaotai 35.93 279 ⇓P **P** **16 01 47.6 +0.6**
GTA pP **pP** **16 02 10.1 +1.5**
GTA sP **sP** **16 02 21.7 +2.2**
GTA PcP **PcP** **16 04 12.6 +0.7**
GTA S **S** **16 07 18.8 +0.5**
GTA ScP **ScP** **16 07 48.6 -0.7**
GTA sS **sS** **16 07 57.0 +1.3**
GTA SS **SnSn** **16 09 46.3 -5.2**
GTA ScS **ScS** **16 11 54.5 -0.5**
GTA pmax pmax
comp=Z,42nm,1.4s
GTA pmax pmax
comp=Z,120nm,6.2s
GTA LR LR
comp=N,250nm,21.6s
GTA LR LR
comp=E,250nm,19.0s
GTA LR LR
comp=Z,90nm,18.1s
CD2 Chengdu 37.34 264 ⇓*i*P **P** **16 01 59.4 +0.5**
CD2 pP **pP** **16 02 21.5 +0.8**
CD2 sP **sP** **16 02 32.8 +1.3**
CD2 PP **PnPn** **16 03 29.1 +1.6**
CD2 PcP **PcP** **16 04 18.0 +1.8**
CD2 S **S** **16 07 38.5 -1.3**
CD2 sS **sS** **16 08 16.5 -0.8**
CD2 SS SnSn 16 10 14.1 -12
CD2 ScS **ScS** **16 12 01.6 -1.4**
CD2 pmax pmax
comp=Z,310nm,0.8s
CD2 pmax pmax
comp=Z,180nm,7.1s
CD2 LR LR
comp=E,230nm,20.2s
CD2 LR LR
comp=Z,170nm,19.0s
OHAK Old Harbor 37.58 49 *e*P **P** **16 01 59.2 -1.4**
comp=Z,17nm,0.7s
RSO Redoubt South 37.59 44 *e*P **P** **16 02 01.0 +0.1**
comp=Z,59nm,1.0s
KDAK Kodiak Island 37.90 48 *e*P **P** **16 02 02.3 -0.9**
comp=Z,56nm,0.8s
KDAK PcP **PcP** **16 04 18.2 +1.0**
KDAK pPcP 16 04 43.9
KDAK Kodiak Island 37.90 48 P **P** **16 02 02.0 -1.2**
comp=Z,475nm,0.9s,SNR=22
KDAK Kodiak Island 37.90 48 P **P** **16 02 02.9 -0.3**
comp=Z,63nm,0.8s,baz=292,slow=4.7,SNR=66
KDAK PcP **PcP** **16 04 18.3 +1.0**
comp=Z,11nm,0.5s,baz=236,slow=3.4,SNR=7.3
KDAK pPcP 16 04 43.9
comp=Z,11nm,0.7s,baz=228,slow=2.3,SNR=4.5
GYA Guiyang 37.99 255 P **P** **16 02 04.3 -0.3**
GYA pP **pP** **16 02 27.4 +1.0**
GYA sP **sP** **16 02 38.7 +1.5**
GYA PP **PnPn** **16 03 36.4 +0.9**
GYA PcP **PcP** **16 04 19.8 +1.5**
GYA S **S** **16 07 48.5 -1.4**
GYA ScP **ScP** **16 07 57.2 0.0**
GYA ScS **ScS** **16 12 05.0 -2.0**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,580nm,17.5s
GYA LR LR
comp=E,490nm,18.3s
GYA LR LR
comp=Z,520nm,17.8s
TRF Thorofare Moun 38.66 39 *e*P **P** **16 02 08.6 -1.2**
comp=Z,5.1nm,0.5s
COLD Coldfoot 38.77 33 *e*P **P** **16 02 10.4 -0.1**
comp=Z,5.6nm,0.6s
COLD *e*PcP **PcP** **16 04 20.8 +0.9**
MCK McKinley 39.25 39 *e*P **P** **16 02 14.2 -0.4**
MCK pmax pmax
comp=Z,12nm,0.9s
MCK McKinley 39.25 39 *e*P **P** **16 02 14.2 -0.4**
comp=Z,12nm,0.9s
SEW Seward 39.26 44 *e*P **P** **16 02 14.3 -0.3**
comp=Z,14nm,0.7s
SML Sawmill 39.64 42 *e*P **P** **16 02 17.4 -0.5**
SML pmax pmax
comp=Z,9.0nm,0.8s
SML Sawmill 39.64 42 *e*P **P** **16 02 17.4 -0.5**
comp=Z,9.4nm,0.8s
COLA College 39.69 37 *e*P **P** **16 02 17.7 -0.4**
COLA *e**PP **pP** **16 02 39.7 -0.3**
COLA pmax pmax
comp=Z,22nm,0.8s
COLA College 39.69 37 *e*P **P** **16 02 17.6 -0.4**
comp=Z,22nm,0.8s
COLA *ep*P **pP** **16 02 39.7 -0.3**
ILAR Eielson Array 40.11 37 P **P** **16 02 21.1 -0.5**
ILAR pP **pP** **16 02 43.1 -0.4**
ILAR PcP **PcP** **16 04 23.4 -0.8**
ILAR pPcP 16 04 48.1
ILAR Eielson Array 40.11 37 P **P** **16 02 21.1 -0.5**
comp=Z,8.3nm,0.7s,baz=265,slow=8.8,SNR=62
ILAR pP **pP** **16 02 43.1 -0.4**
comp=Z,11nm,1.0s,baz=276,slow=8.6,SNR=7.4
ILAR PcP **PcP** **16 04 23.4 -0.8**
comp=Z,2.7nm,0.4s,baz=285,slow=3.5,SNR=12
ILAR pPcP 16 04 48.1
comp=Z,1.5nm,0.8s,baz=277,slow=4.4,SNR=4.4
PAX Paxson 40.86 40 *e*P **P** **16 02 27.1 -0.8**
PAX pmax pmax
comp=Z,4.0nm,0.6s
PAX Paxson 40.86 40 *e*P **P** **16 02 27.1 -0.8**
comp=Z,4.4nm,0.6s
DIV Divide 40.94 43 *e*P **P** **16 02 28.4 -0.2**
comp=Z,7.9nm,0.6s
DIV *ep*P **pP** **16 02 52.3 +1.7**
ZALV Zalesovo Beam 40.99 306 P **P** **16 02 27.3 -1.7**
ZALV 16 04 27.3
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV pmax pmax
comp=Z,13nm,0.4s

ZALV pmax pmax
comp=Z,4.0nm,0.6s
ZALV pmax pmax
comp=N,7.0nm,0.9s
ZALV MLR MLR
comp=Z,85nm,18.4s
ZALV Zalesovo Beam 40.99 306 P **P** **16 02 27.3 -1.7**
ZALV PcP **PcP** **16 04 27.2 0.0**
ZALV pPcP 16 04 52.3
ZALV ScP **ScP** **16 08 07.3 -0.9**
ZALV Zalesovo Beam 40.99 306 P **P** **16 02 27.3 -1.7**
comp=Z,1.1nm,0.3s,baz=92,slow=6.2,SNR=7.2
ZALV PcP **PcP** **16 04 27.2 0.0**
comp=Z,13nm,0.4s,baz=75,slow=3.9,SNR=30
ZALV pPcP 16 04 52.3
comp=Z,4.3nm,0.6s,baz=87,slow=2.5,SNR=5.2
ZALV ScP **ScP** **16 08 07.3 -0.9**
comp=Z,6.6nm,0.9s,baz=83,slow=4.6,SNR=16
ZALV LR LR 16 19 42.0
comp=Z,85nm,18.4s,baz=69,slow=36
QIZ Qiongzhong 41.00 244 P **P** **16 02 28.6 -0.8**
QIZ S **S** **16 08 36.8 +2.1**
QIZ LR LR
comp=Z,98nm,16.6s
DOT Dot Lake 41.42 39 *eP* **P** **16 02 30.9 -1.5**
comp=Z,7.7nm,0.7s
KMI Kunming 41.56 257 P **P** **16 02 34.8 +0.5**
KMI pP **pP** **16 02 55.2 -1.1**
KMI sP **sP** **16 03 08.8 +1.7**
KMI PP **PP** **16 04 12.5 +0.6**
KMI S **S** **16 08 42.2 -1.2**
KMI sS **sS** **16 09 21.7 +0.3**
KMI SS **SS** **16 11 48.6 -2.9**
KMI pmax pmax
comp=Z,55nm,1.1s
KMI LR LR
comp=N,70nm,18.8s
KMI LR LR
comp=E,54nm,18.8s
KMI LR LR
comp=Z,62nm,16.7s
NVS Novosibirsk 41.68 308 *eP* **P** **16 02 32.8 -1.8**
NVS *e* 16 04 26.9
EGAK Eagle 42.55 37 *eP* **P** **16 02 40.8 -0.8**
comp=Z,10nm,0.6s
EGAK *ep*P **pP** **16 03 04.5 +0.8**
MK31 Makanchi Array 44.80 297 *i* P **P** **16 02 58.5 -1.4**
MK31 pmax pmax
comp=Z,2.0nm,0.3s
MKAR Makanchi Array 44.80 297 P **P** **16 02 58.4 -1.5**
MKAR 16 04 40.5
MKAR pmax pmax
comp=Z,4.0nm,0.6s
MKAR pmax pmax
comp=Z,7.0nm,0.6s
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR pmax pmax
comp=N,1.0nm,0.7s
MKAR MLR MLR
comp=Z,88nm,18.7s
MKAR Makanchi Array 44.80 297 P **P** **16 02 58.4 -1.5**
MKAR PcP **PcP** **16 04 40.5 +0.3**
MKAR pPcP 16 05 05.3
MKAR ScP **ScP** **16 08 22.6 -1.2**
MKAR Makanchi Array 44.80 297 P **P** **16 02 58.4 -1.5**
comp=Z,3.7nm,0.6s,baz=79,slow=9.2,SNR=46
MKAR PcP **PcP** **16 04 40.5 +0.3**
comp=Z,7.2nm,0.6s,baz=77,slow=5.8,SNR=12
MKAR pPcP 16 05 05.4
comp=Z,2.7nm,0.6s,baz=75,slow=3.9,SNR=3.6
MKAR ScP **ScP** **16 08 22.6 -1.2**
comp=Z,1.1nm,0.7s,baz=56,slow=3.1,SNR=4.3
MKAR LR LR 16 22 43.7
comp=Z,88nm,18.7s,baz=69,slow=37
INK Inuvik 45.03 31 P **P** **16 03 01.4 +0.1**
INK PcP **PcP** **16 04 41.0 +0.4**
INK Inuvik 45.03 31 P **P** **16 03 01.4 +0.1**
comp=Z,8.3nm,0.4s,baz=276,slow=6.5,SNR=104
INK PcP **PcP** **16 04 41.0 +0.4**
comp=Z,6.3nm,0.8s,baz=270,slow=4.7,SNR=4.1
KURK Kurchatov 45.60 303 P **P** **16 03 05.1 -0.9**
KURK 16 04 43.5
KURK pmax pmax
comp=Z,6.0nm,0.6s
KURK pmax pmax
comp=Z,8.0nm,0.6s
KURK Kurchatov 45.60 303 *eP* **P** **16 03 03.8 -2.3**
comp=Z,6.8nm,0.6s
KURK *e*PcP **PcP** **16 04 42.7 -0.1**
KURK PcP **PcP** **16 04 43.5 +0.6**
KURK Kurchatov 45.60 303 P **P** **16 03 04.5 -1.5**
comp=Z,69nm,0.8s,SNR=16
KURBB Kurchatov Arra 45.68 303 P **P** **16 03 05.1 -1.6**
comp=Z,6.2nm,0.6s,baz=72,slow=8.7,SNR=38
KURBB PcP **PcP** **16 04 43.5 +0.3**
comp=Z,8.3nm,0.6s,baz=74,slow=3.4,SNR=13
SKAG Skagway 46.37 43 *eP* **P** **16 03 12.9 +0.9**
comp=Z,20nm,1.2s
LSA Lhasa 46.98 271 *eP* **P** **16 03 19.1 +1.4**
LSA pmax pmax
comp=Z,43nm,0.9s
LSA Lhasa 46.98 271 *eP* **P** **16 03 19.1 +1.4**
comp=Z,43nm,0.9s
CMMT Chiang Mai 48.38 254 P **P** **16 03 30.1 +2.0**
comp=Z,24nm,0.8s,comp=Z,399nm
CHTO Chiang Mai 48.38 254 *eP* **P** **16 03 29.0 +0.9**
CHTO *e**PP **pP** **16 03 51.7 +1.0**
CHTO pmax pmax
comp=Z,13nm,0.6s
CHTO Chiang Mai 48.38 254 *eP* **P** **16 03 29.0 +0.9**
comp=Z,13nm,0.6s
CHTO *ep*P **pP** **16 03 51.7 +1.0**
CHTO Chiang Mai 48.38 254 P **P** **16 03 29.3 +1.2**
comp=Z,26nm,0.8s,comp=Z,279nm
PBKT Sadao Pong 48.58 250 P **P** **16 03 31.1 +1.5**
comp=Z,6.8nm,0.8s
CMAR Chiang Mai Arr 48.63 254 P **P** **16 03 30.8 +0.8**
CMAR pP **pP** **16 03 52.8 +0.1**
CMAR PcP **PcP** **16 04 55.4 +1.2**
CMAR ScP **ScP** **16 08 41.1 +0.9**
CMAR Chiang Mai Arr 48.63 254 P **P** **16 03 30.8 +0.8**
comp=Z,5.8nm,0.7s,baz=40,slow=7.2,SNR=31
CMAR pP **pP** **16 03 52.8 +0.1**
comp=Z,4.4nm,0.7s,baz=39,slow=7.6,SNR=5.6
CMAR PcP **PcP** **16 04 55.4 +1.2**
comp=Z,2.5nm,0.7s,baz=17,slow=2.1,SNR=6.8
CMAR ScP **ScP** **16 08 41.1 +0.9**
comp=Z,1.9nm,1.0s,baz=28,slow=4.3,SNR=8.6
CMAR LR LR 16 25 43.2
comp=Z,71nm,18.6s,baz=17,slow=38
WRAK Wrangell Islan 48.90 46 *eP* **P** **16 03 32.8 +1.3**
comp=Z,7.4nm,0.5s
SHL Shillong 48.92 266 *e*PKP **P** **16 03 33.0 +0.6**
DLBC Dease Lake 49.30 43 *eP* **P** **16 03 36.4 +1.6**
BVA0 Borovoye Array 49.44 309 P P 16 03 32.3 -3.5
BVA0 pmax pmax
comp=Z,4.0nm,0.6s
BVAR Borovoye Array 49.44 309 P **P** **16 03 34.7 -1.1**
BVAR *PP **pP** **16 03 55.4 -3.1**
BVAR 16 04 56.6
BVAR pmax pmax
comp=Z,3.0nm,0.5s
BVAR pmax pmax
comp=Z,3.0nm,0.4s
BVAR pmax pmax
comp=Z,5.0nm,0.4s
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR pmax pmax
comp=N,2.0nm,0.7s
BVAR MLR MLR
comp=Z,58nm,21.6s
BVAR Borovoye Array 49.44 309 P **P** **16 03 34.7 -1.1**
BVAR pP **pP** **16 03 55.4 -3.1**
BVAR PcP **PcP** **16 04 56.6 0.0**
BVAR pPcP 16 05 22.4
BVAR ScP **ScP** **16 08 42.0 -1.1**
BVAR Borovoye Array 49.44 309 P **P** **16 03 34.7 -1.1**
comp=Z,2.5nm,0.5s,baz=79,slow=9.7,SNR=16
BVAR pP **pP** **16 03 55.4 -3.1**
comp=Z,2.5nm,0.4s,baz=69,slow=6.9,SNR=6.2
BVAR PcP **PcP** **16 04 56.6 0.0**
comp=Z,5.0nm,0.4s,baz=78,slow=3.7,SNR=14
BVAR pPcP 16 05 22.4
comp=Z,1.9nm,0.6s,baz=108,slow=1.9,SNR=3.6

BVAR ScP **ScP** **16 08 42.0 -1.1**
comp=Z,1.5nm,0.7s,baz=72,slow=1.9,SNR=5.9
BVAR LR LR 16 23 55.5
comp=Z,58nm,21.6s,baz=172,slow=35
BRVK Borovoye 49.48 309*c i*P **P** **16 03 35.9 -0.2**
BRVK pmax pmax
comp=Z,8.0nm,1.2s
BRVK Borovoye 49.48 309 *eP* **P** **16 03 35.6 -0.5**
comp=Z,4.3nm,0.7s
KIP Kipapa 49.63 100⇑ *i*P **P** **16 03 37.4 -0.2**
KIP pmax pmax
comp=Z,97nm,2.5s
ULHL Ulahol 50.68 294 P **P** **16 03 46.2 +0.6**
SNR=10
TKM2 Tokmak 2 50.77 295 *eP* **P** **16 03 46.1 -0.2**
TKM2 pmax pmax
comp=Z,9.0nm,0.8s
TKM2 Tokmak 2 50.77 295 *eP* **P** **16 03 46.1 -0.2**
comp=Z,9.4nm,0.8s
TKM2 Tokmak 2 50.77 295 P **P** **16 03 47.4 +1.1**
SNR=6.1
TAPN Taplejung 50.81 271 *eP* **P** **16 03 47.6 +0.8**
comp=Z,112nm,0.8s
USP Ospenovka 51.31 296 P **P** **16 03 50.1 0.0**
SNR=7.4
KBK Karagaybulak 51.32 295 P **P** **16 03 51.5 +1.1**
SNR=7.7
ODAN Odare 51.33 271 *eP* **P** **16 03 51.2 +0.6**
comp=Z,57nm,0.7s
KZA Kyzart 51.41 294 P **P** **16 03 52.1 +0.9**
SNR=18
AAK Ala-Archa 51.62 295 P **P** **16 03 52.5 -0.1**
AAK pmax pmax
comp=Z,3.0nm,0.5s
AAK MLR MLR
comp=Z,48nm,18.5s
AAK Ala-Archa 51.62 295 P **P** **16 03 52.5 -0.1**
AAK Ala-Archa 51.62 295 P **P** **16 03 52.5 -0.1**
comp=Z,2.9nm,0.5s,baz=90,slow=2.7,SNR=7.0
AAK LR LR 16 28 21.9
comp=Z,48nm,18.5s,baz=44,slow=39
GUN Gumba 51.77 273 *eP* **P** **16 03 54.6 +0.5**
RAMN Ramite 51.84 272 *eP* **P** **16 03 54.7 +0.3**
comp=Z,284nm,0.6s
EKS2 Erkin-Say 52.07 296 *eP* **P** **16 03 55.5 -0.3**
EKS2 pmax pmax
comp=Z,9.0nm,0.9s
EKS2 Erkin-Say 52.07 296 *eP* **P** **16 03 55.5 -0.3**
comp=Z,9.3nm,0.9s
EKS2 Erkin-Say 52.07 296 P **P** **16 03 55.8 0.0**
SNR=8.2
KSH Kashi 52.22 291 P P 16 04 01.1 +4.1
KSH *ep*P pP 16 04 24.6 +4.7
KSH *es*P sP 16 04 35.3 +4.8
KSH *e*PcP **PcP** **16 05 09.9 +2.6**
KSH *e*PP PP 16 06 02.7 +6.7
KSH *e*S **S** **16 11 17.0 +2.4**
KSH *es*S sS 16 12 00.7 +6.8
KSH pmax pmax
comp=Z,22nm,0.6s
KSH pmax pmax
comp=Z,200nm,4.8s
KSH LR LR
comp=N,150nm,7.5s
KSH LR LR
comp=E,280nm,6.0s
KSH LR LR
comp=Z,290nm,5.1s
KKN Kakani 52.27 273 *eP* **P** **16 03 58.0 +0.4**
comp=Z,117nm,0.7s
PKI Pulchoki 52.31 273 *eP* **P** **16 03 58.4 +0.4**
PKIN Phulchoki 52.31 273 *eP* **P** **16 03 58.4 +0.4**
AML Almayashu 52.39 295 P **P** **16 03 59.9 +1.4**
SNR=7.8
DMN Daman 52.50 273 *eP* **P** **16 03 59.8 +0.4**
comp=Z,218nm,0.8s
SBUM Sibu 52.83 228 P P 16 04 05.2 +3.6
comp=Z,5.0nm,1.2s
SVE Sverdlovsk 52.90 316⇑ *eP* **P** **16 04 01.8 +0.2**
SVE *e*PPP PPP 16 07 13.6
SVE *e*S S 16 11 34.4 +11
SVE *e*SS SS 16 14 54.2 -8.3
SVE *e*SSS SSS 16 16 58.9
SVE pmax pmax
comp=Z,11nm,0.9s
DANN Dangsing 53.02 275 *eP* **P** **16 04 04.0 +0.8**
comp=Z,416nm,0.7s
KOLN Koldanda 53.47 275 *eP* **P** **16 04 06.9 +0.4**
RES Resolute Bay 53.67 17 P **P** **16 04 05.9 -1.0**
RES Resolute Bay 53.67 17 P **P** **16 04 05.9 -1.0**
comp=Z,11nm,0.8s,baz=320,slow=9.2,SNR=6.9
PYUN Piuthan 53.71 275 *eP* **P** **16 04 08.9 +0.7**
comp=Z,517nm,1.1s
KK31 Karatay Array 53.92 298 *i* P **P** **16 04 08.3 -1.0**
KK31 pmax pmax
comp=Z,1.0nm,0.3s
KKAR Karatay Array 53.92 298 *eP* **P** **16 04 08.6 -0.7**
KKAR pmax pmax
comp=Z,6.0nm,0.6s
KKAR Karatay Array 53.92 298 *eP* **P** **16 04 08.6 -0.7**
comp=Z,5.6nm,0.6s
ARU Arti 54.10 317*d i*P **P** **16 04 09.4 -0.9**
ARU 16 05 12.0
ARU 16 06 09.8
ARU S **S** **16 11 41.1 +1.8**
ARU SS **SS** **16 15 16.9 -4.5**
ARU pmax pmax
comp=Z,11nm,1.2s
YKA Yellowknife Ar 54.42 35 P **P** **16 04 12.6 0.0**
YKA pP **pP** **16 04 35.8 +0.1**
YKA sP **sP** **16 04 43.5 -2.7**
YKA PcP **PcP** **16 05 15.4 +0.4**
YKA Yellowknife Ar 54.42 35 P **P** **16 04 12.5 0.0**
comp=Z,11nm,0.7s,baz=298,slow=7.1,SNR=74
YKA pP **pP** **16 04 35.7 +0.1**
comp=Z,2.9nm,0.7s,baz=300,slow=7.2,SNR=3.6
YKA sP **sP** **16 04 43.5 -2.7**
comp=Z,4.7nm,0.7s,baz=298,slow=6.9,SNR=4.1
YKA PcP **PcP** **16 05 15.4 +0.4**
comp=Z,4.3nm,0.7s,baz=301,slow=3.7,SNR=8.0
LGTI Lohaghat 54.85 278 *ex* pP 16 04 31.2 -8.0
HNR Honiara 55.05 166 LR LR 16 23 22.1
comp=Z,46nm,20.0s,baz=110,slow=31
SMLA Simla 56.02 282 *i* P **P** **16 04 24.7 +0.2**
AB31 Akbulak array 57.01 309 P **P** **16 04 29.5 -1.8**
AB31 pmax pmax
comp=Z,8.0nm,0.3s
ABKAR Akbulak array 57.01 309 *eP* **P** **16 04 29.5 -1.8**
comp=Z,10nm,0.3s
KULM Kulim 57.21 241 *eP* **P** **16 04 34.1 +1.0**
comp=Z,8.7nm,0.6s
KULM *ep*P **pP** **16 04 57.3 +0.9**
NDI New Delhi 57.43 280 *e*PKP **P** **16 04 32.5 -2.1**
AKTO Aktyubinsk 57.44 311 LR LR 16 30 19.0
comp=Z,63nm,18.2s,baz=51,slow=37
APA Apatity 57.70 336⇓ *eP* P 16 04 39.8 +3.9
APA MLR MLR
comp=Z,100nm,25.0s
NLWA Neilton Lookou 57.72 53 *eP* **P** **16 04 37.3 +0.9**
comp=Z,30nm,0.9s
KEV Kevo 57.96 339 *ep* **P** **16 04 34.5 -3.1**
comp=Z,1.4nm,0.3s
KEV Kevo 57.96 339 *eP* **P** **16 04 34.5 -3.1**
KEV pmax pmax
comp=Z,1.0nm,0.3s
HDW Hoodsport 58.04 53 P **P** **16 04 39.9 +1.2**
DAG Danmarks Havn 58.36 356 *i* P **PcP** **16 05 29.3 -0.9**
comp=Z,4.2nm,0.9s
TMCR Tamitsa 58.40 331 *eP* **P** **16 04 41.9 +1.2**
TMCR pmax pmax
comp=Z,17nm,1.0s
ARCES ARCESS Array B 58.49 340 P **P** **16 04 39.0 -2.4**
ARCES PcP **PcP** **16 05 31.4 +0.6**
ARCES ARCESS Array B 58.49 340 P **P** **16 04 39.0 -2.4**
comp=Z,0.8nm,0.3s,baz=32,slow=7.5,SNR=14
ARCES PcP **PcP** **16 05 31.4 +0.6**
comp=Z,1.3nm,0.4s,baz=48,slow=5.4,SNR=7.9
ARCES LR LR 16 32 12.5
comp=Z,44nm,21.8s,baz=45,slow=38
COEN Coen 58.72 186 *eP* **P** **16 04 44.3 +0.8**
comp=Z,214nm,1.1s
JBP Jabalpur 58.88 273 *i* P **P** **16 04 44.1 -0.6**
JBP *e*S **pP** **16 05 10.1 +2.1**
LON Longmire 59.25 53 *eP* **P** **16 04 47.4 +0.4**
LON pmax pmax
comp=Z,13nm,1.2s

LON Longmire 59.25 53 *eP* **P** **16 04 47.4 +0.4**
comp=Z,13nm,1.2s
MTMW Mount Mitchell 59.43 54 P **P** **16 04 49.5 +1.2**
MPOR Mary's Peak 59.50 56 P **P** **16 04 50.4 +1.5**
COR Corvallis 59.60 56 *eP* **P** **16 04 52.4 +3.0**
COR pmax pmax
comp=Z,90nm,1.1s
COR Corvallis 59.60 56 *eP* **P** **16 04 52.4 +3.0**
comp=Z,90nm,1.1s
KLMR Klimovskoe 59.94 328 *eP* **P** **16 04 50.8 -0.6**
KLMR pmax pmax
comp=Z,7.0nm,0.9s
KEBM Edson Butte 59.96 58 *eP* **P** **16 04 53.3 +1.3**
comp=Z,56nm,1.2s
VLL Laurance Lake 60.05 54 P **P** **16 04 53.8 +1.2**
VFP Flag Point 60.26 54 P **P** **16 04 55.2 +1.1**
KBO Bosley Butte 60.41 59 *eP* **P** **16 04 56.4 +1.3**
comp=Z,56nm,1.2s
FRIS Frissel Point 60.52 56 P **P** **16 04 57.2 +1.2**
IRO Indian Ridge 60.55 56 P **P** **16 04 57.1 +0.9**
HAWA Hanford 60.74 52 *eP* **P** **16 04 57.9 +0.7**
comp=Z,56nm,1.5s
F07A Phinny Hill Vi 60.81 53 P **P** **16 04 58.8 +1.2**
HUMO Hull Mountain 60.95 58 *eP* **P** **16 04 59.3 +0.6**
comp=Z,8.6nm,0.6s
NEW Newport 60.98 50 *eP* **P** **16 04 58.8 -0.1**
comp=Z,33nm,1.0s
NEW *ep*P **pP** **16 05 24.0 +1.7**
NEW *es*P **sP** **16 05 32.4 -0.4**
NEW *e*PcP **PcP** **16 05 41.8 +0.6**
NEW Newport 60.98 50⇑ P **P** **16 04 59.2 +0.4**
baz=61,SNR=21
KRMB Red Mountain 61.00 59 *eP* **P** **16 05 00.3 +1.1**
comp=Z,9.2nm,1.0s
KTRM Thompson Ridge 61.10 58 P **P** **16 05 01.1 +1.3**
A12A Yaak River Ran 61.38 48⇑ P **P** **16 05 02.3 +0.8**
baz=61
JOF Joensuu 61.49 332 *ep* **P** **16 04 59.2 -2.7**
comp=Z,12nm,0.4s
JOF Joensuu 61.49 332 *eP* **P** **16 04 59.2 -2.7**
JOF pmax pmax
comp=Z,12nm,0.4s
KHMM Horse Mountain 61.49 60 *eP* **P** **16 05 03.9 +1.4**
comp=Z,54nm,1.2s
YBH Yreka Blue Hor 61.61 58 *eP* **P** **16 05 04.3 +1.1**
comp=Z,34nm,1.1s
B12A Libby 61.69 49⇑ P **P** **16 05 04.4 +0.8**
baz=61
C11A Tepee Creek (N 61.70 50⇑ P **P** **16 05 04.5 +0.8**
baz=62,SNR=24
C12B Naegeli Ranch, 62.20 49⇑ P **P** **16 05 07.8 +0.7**
baz=62,SNR=6.4
WALA Waterton Lakes 62.22 47 *eP* **P** **16 05 07.5 +0.2**
comp=Z,0.8nm,0.9s
KIPM Iron Peak 62.27 60 *eP* **P** **16 05 08.6 +0.8**
comp=Z,31nm,0.8s
KCPM Cahto Peak 62.28 61 *eP* **P** **16 05 08.8 +1.0**
comp=Z,15nm,0.8s
B13A Whitefish 62.34 48⇑ P **P** **16 05 08.8 +0.8**
baz=62,SNR=36
WDC Whiskeytown Da 62.39 59 *eP* **P** **16 05 09.1 +0.8**
WDC pmax pmax
comp=Z,29nm,1.1s
WDC Whiskeytown Da 62.39 59 *eP* **P** **16 05 09.1 +0.8**
comp=Z,29nm,1.1s
BSMT Bassoo Peak 62.49 49 *eP* **P** **16 05 09.8 +0.7**
comp=Z,40nm,1.5s
A14A Double T Ranch 62.53 47⇓ P **P** **16 05 09.6 +0.3**
baz=62,SNR=18
BLMT Blacktail Moun 62.62 49 *eP* **P** **16 05 10.8 +0.8**
comp=Z,41nm,1.0s
D12A Red Ives Fores 62.67 50⇑ P **P** **16 05 10.4 +0.2**
baz=62
C13A Hot Springs 62.71 49⇓ P **P** **16 05 11.2 +0.8**
baz=62,SNR=21
SUMG Summit 62.77 2 *i* P **P** **16 05 09.7 -1.1**
SUMG pmax pmax
comp=Z,7.0nm,0.7s
SUMG Summit 62.77 2 *eP* **P** **16 05 09.5 -1.3**
comp=Z,13nm,0.8s
SUMG Summit 62.77 2 *i* P **P** **16 05 09.7 -1.1**
comp=Z,7.0nm,0.7s
JTMT Jette 62.82 49 *eP* **P** **16 05 12.1 +0.8**
comp=Z,15nm,0.9s
JTMT *e*PcP **PcP** **16 05 49.7 +0.8**
A15A Johnson Ranch, 62.89 47⇓ P **P** **16 05 11.3 -0.3**
baz=63,SNR=20
YBMT Yellow Bay 62.90 49 *eP* **P** **16 05 12.5 +0.7**
comp=Z,14nm,1.1s
BMO Blue Mountains 62.91 53 *eP* **P** **16 05 12.3 +0.4**
comp=Z,12nm,1.0s
E12A Beaver Dam Sad 62.94 51⇑ P **P** **16 05 12.6 +0.6**
baz=63,SNR=83
B14A Marquette Ranc 62.98 48⇑ P **P** **16 05 12.9 +0.5**
baz=63,SNR=25
HOPS Hopland 63.01 61 *eP* **P** **16 05 13.0 +0.5**
comp=Z,23nm,1.2s
SWMT Swartz Lake 63.12 49 *eP* **P** **16 05 13.9 +0.7**
comp=Z,45nm,1.2s
D13A Huson 63.13 49⇓ P **P** **16 05 13.7 +0.5**
baz=63,SNR=43
B15A Bradely Ranch, 63.39 47⇓ P **P** **16 05 15.1 +0.2**
baz=63,SNR=26
A16A West Butte Ran 63.49 46⇓ P **P** **16 05 15.5 -0.1**
baz=63,SNR=14
F12A Elk City 63.51 51⇓ P **P** **16 05 16.6 +0.7**
baz=63,SNR=55
SLMT Seeley Lake 63.55 49 *eP* **P** **16 05 16.6 +0.4**
comp=Z,82nm,1.2s
MSO Missoula 63.57 49 *eP* **P** **16 05 16.6 +0.4**
comp=Z,42nm,1.3s
MSO Missoula 63.57 49⇓ P **P** **16 05 16.6 +0.4**
baz=63,SNR=25
WVOR Wild Horse Val 63.61 56 *eP* **P** **16 05 17.2 +0.6**
WVOR pmax pmax
comp=Z,25nm,1.0s
WVOR Wild Horse Val 63.61 56 *eP* **P** **16 05 17.2 +0.6**
comp=Z,25nm,1.0s
HYB Hyderabad 63.62 269 *i* P **P** **16 05 16.0 -0.8**
D14A Greenough 63.65 49⇓ P **P** **16 05 17.1 +0.3**
baz=63,SNR=46
E13A Victor 63.67 50⇑ P **P** **16 05 17.1 +0.2**
baz=63,SNR=13
KAF Kangasniemi 63.69 334 *ep* **P** **16 05 13.7 -2.8**
comp=Z,5.0nm,0.5s
KAF Kangasniemi 63.69 334 *eP* **P** **16 05 13.7 -2.8**
KAF pmax pmax
comp=Z,5.0nm,0.5s
C15A Salmond Ranch, 63.70 48⇑ P **P** **16 05 18.0 +1.0**
baz=63,SNR=50
B16A M & M Farms, S 63.77 47⇓ P **P** **16 05 17.8 +0.3**
baz=64,SNR=18
CHMT Chamberlain Mo 63.89 49 *eP* **P** **16 05 18.6 +0.2**
comp=Z,8.1nm,0.6s
A17A Triple J Farms 63.96 46⇓ P **P** **16 05 18.8 +0.1**
baz=64,SNR=24
F13A Darby 64.00 51⇓ P **P** **16 05 19.0 0.0**
baz=64,SNR=20
MOS Moscow 64.04 324 *eP* P 16 05 25.4 +6.5
E14A Clinton 64.07 50⇑ P **P** **16 05 20.0 +0.5**
baz=64,SNR=17
C16A Fuhringer Ranc 64.13 48⇑ P **P** **16 05 20.5 +0.7**
baz=64,SNR=62
BEKR Beckworth 64.15 59 *eP* **P** **16 05 20.6 +0.3**
comp=Z,16nm,0.8s
D15A Lincoln 64.20 49⇑ P **P** **16 05 20.8 +0.5**
baz=64,SNR=14
FINES FINESS Array B 64.26 333 P P **16 05 17.9 -2.3**
FINES FINESS Array B 64.26 333 P P **16 05 17.9 -2.3**
comp=Z,9.4nm,0.5s,baz=45,slow=9.2,SNR=41
FINES LR LR 16 36 37.1
comp=Z,67nm,18.5s,baz=197,slow=39
B17A L&G Farms, Che 64.32 47⇑ P **P** **16 05 21.4 +0.4**
baz=64,SNR=18
FFC Flin Flon 64.32 37 *eP* **P** **16 05 20.9 +0.1**
FFC pmax pmax
comp=Z,49nm,0.8s
FFC Flin Flon 64.32 37 *eP* **P** **16 05 20.9 +0.1**
comp=Z,49nm,0.8s
FFC Flin Flon 64.32 37 P **P** **16 05 21.4 +0.6**
comp=Z,414nm,0.4s,SNR=28
A18A Metzger Ranch, 64.41 46⇓ P **P** **16 05 21.7 +0.2**
baz=64,SNR=21
H12A Diamond D Ranc 64.48 52⇓ P **P** **16 05 22.4 +0.1**
baz=64,SNR=36
F14A Wisdom 64.51 50⇑ P **P** **16 05 22.7 +0.2**
baz=64,SNR=5.7

E15A Deer Lodge 64.52 49 ⇓P P 16 05 22.9 +0.4
baz=64,SNR=23
MFID Camas Ranch 64.64 53 eP P 16 05 23.7 +0.5
comp=Z,10nm,0.7s
MFID Camas Ranch 64.64 53 ⇓P P 16 05 23.8 +0.5
baz=64,SNR=9.9
D16A Dana Ranch, Ca 64.72 48 ⇓P P 16 05 24.5 +0.7
baz=64,SNR=35
SCO Scoresbysund 64.75 356 eP P 16 05 24.0 +0.7
SCO pmax pmax
comp=Z,5.0nm,0.9s
SCO Scoresbysund 64.75 356 i P P 16 05 24.0 +0.7
comp=Z,4.5nm,0.9s
C17A Wharram Farm, 64.75 47 ⇓P P 16 05 24.2 +0.3
baz=64,SNR=32
HRY Holter Researc 64.78 49 eP P 16 05 24.8 +0.7
comp=Z,26nm,0.7s
B18A Beardsley Farm 64.78 46 ⇑P P 16 05 24.5 +0.5
baz=64,SNR=23
I12A Atlanta 64.79 53 ⇓P P 16 05 25.0 +0.7
baz=65,SNR=70
WCN Washoe City 64.87 59 eP P 16 05 25.6 +0.7
WCN pmax pmax
comp=Z,22nm,1.0s
WCN Washoe City 64.87 59 eP P 16 05 25.6 +0.7
comp=Z,22nm,1.0s
OBN Obninsk 64.90 324 ⇓iP P 16 05 22.4 -2.1
OBN e 16 07 47.2
OBN pmax pmax
comp=Z,12nm,1.0s
A19A Klindworth Far 64.96 45 ⇓P P 16 05 25.8 +0.6
baz=65
E16A East Helena 64.97 49 ⇓P P 16 05 26.1 +0.8
baz=65,SNR=22
F15A Butte 64.97 50 ⇓P P 16 05 26.1 +0.6
baz=65,SNR=49
LRM Limekiln Ridge 65.00 50 eP P 16 05 26.2 +0.5
comp=Z,294nm,0.7s
EGMT Eagleton 65.03 46 eP P 16 05 25.9 +0.2
comp=Z,43nm,0.9s
EGMT Eagleton 65.03 46 ⇓P P 16 05 26.1 +0.5
baz=65,SNR=38
D17A Six Diamond Ra 65.10 48 ⇓P P 16 05 26.6 +0.4
baz=65,SNR=28
B19A Brinkman Farms 65.17 46 ⇓P P 16 05 27.0 +0.6
baz=65,SNR=31
DLMT Dillon 65.22 50 eP P 16 05 27.5 +0.5
comp=Z,30nm,0.9s
CMB Columbia Colle 65.27 60 eP P 16 05 27.3 0.0
CMB pmax pmax
comp=Z,42nm,1.2s
CMB Columbia Colle 65.27 60 eP P 16 05 27.3 0.0
comp=Z,42nm,1.2s
HLID Hailey 65.35 53 eP P 16 05 28.5 +0.6
comp=Z,16nm,0.9s
HLID Hailey 65.35 53 ⇓P P 16 05 28.6 +0.7
baz=65,SNR=27
VRHR Novokhopersk 65.36 318 eP P 16 05 25.7 -1.9
VRHR pmax pmax
comp=Z,10.0nm,1.1s
VRHR pmax pmax
comp=N,7.0nm,0.9s
VRHR pmax pmax
comp=E,9.0nm,0.5s
SAO San Andreas Ge 65.39 62 eP P 16 05 28.8 +0.7
SAO pmax pmax
comp=Z,7.0nm,0.7s
SAO San Andreas Ge 65.39 62 eP P 16 05 28.8 +0.7
comp=Z,7.3nm,0.7s
A20A Cobblestone Ra 65.40 45 ⇓P P 16 05 28.3 +0.3
baz=65
MCMT McKenzie Canyo 65.42 51 eP P 16 05 28.4 -0.1
comp=Z,6.7nm,1.0s
E17A Martinsdale 65.45 48 ⇓P P 16 05 29.5 +0.9
baz=65,SNR=45
F16A Kennard Place, 65.47 49 ⇑P P 16 05 29.3 +0.7
baz=65,SNR=7.6
D18A Linhart Farms, 65.53 47 ⇓P P 16 05 29.9 +0.9
baz=65
BOZ Bozeman (W) 65.56 49 eP P 16 05 30.0 +0.8
BOZ e*PP pP 16 05 54.0 +1.0
BOZ pmax pmax
comp=Z,34nm,0.6s
BOZ Bozeman (W) 65.56 49 eP P 16 05 30.0 +0.8
comp=Z,34nm,0.6s
BOZ epP pP 16 05 54.0 +1.0
C19A Slack Wire Ran 65.58 46 ⇑P P 16 05 30.1 +0.9
baz=65,SNR=46
B20A Solberg Farm, 65.64 45 ⇓P P 16 05 29.9 +0.3
baz=65
I14A Mackay 65.65 52 ⇓P P 16 05 30.8 +0.9
baz=65
BMN Battle Mountai 65.69 57 eP P 16 05 30.9 +0.8
BMN pmax pmax
comp=Z,14nm,0.6s
BMN Battle Mountai 65.69 57 eP P 16 05 30.9 +0.8
comp=Z,14nm,0.6s
WRAB Tennant Creek 65.72 194 eP P 16 05 29.8 -0.4
WRAB pmax pmax
comp=Z,13nm,0.8s
WRAB Tennant Creek 65.72 194 eP P 16 05 29.8 -0.4
comp=Z,13nm,0.8s
WRAB Tennant Creek 65.72 194 P P 16 05 30.3 +0.1
comp=Z,99nm,0.8s,SNR=5.1
WRA Warramunga Arr 65.73 194 P P 16 05 29.8 -0.5
WRA pP pP 16 05 52.8 -1.3
WRA ⇑e 16 34 08.9
WRA Warramunga Arr 65.73 194 P P 16 05 29.8 -0.5
comp=Z,8.7nm,0.7s,baz=11,slow=6.7,SNR=54
WRA pP pP 16 05 52.8 -1.3
comp=Z,7.2nm,0.8s,baz=12,slow=6.7,SNR=5.7
WRA PKP2bc 16 34 08.9
comp=Z,0.9nm,0.7s,baz=194,slow=3.7,SNR=6.8
A21A Bergtoll Ranch 65.83 44 ⇓P P 16 05 31.5 +0.7
baz=66,SNR=19
E18A Harlowton 65.88 48 ⇑P P 16 05 32.2 +0.9
baz=66,SNR=16
F17A Fitzpatrick Pl 65.92 49 ⇓P P 16 05 32.2 +0.7
baz=66,SNR=18
D19A Cripps Ranch, 66.03 47 ⇓P P 16 05 32.6 +0.5
baz=66,SNR=22
C20A Veseth Ranch, 66.13 46 ⇓P P 16 05 33.5 +0.8
baz=66,SNR=37
B21A Ellsworth Farm 66.16 45 ⇑P P 16 05 33.0 +0.2
baz=66,SNR=7.5
QLMT Earthquake Lak 66.19 50 eP P 16 05 34.0 +0.6
comp=Z,4.9nm,1.2s
POO Poona 66.23 273 ⇑iP P 16 05 34.0 +0.2
comp=Z,60nm,1.0s
G17A Pierce Place, 66.25 49 ⇑P P 16 05 34.7 +1.1
baz=66,SNR=8.6
NVAR Mina Array Bea 66.30 59 P P 16 05 35.0 +0.9
NVAR Mina Array Bea 66.30 59 P P 16 05 35.0 +0.9
comp=Z,27nm,0.7s,baz=292,slow=6.9,SNR=223
A22A Carney Farms, 66.33 44 ⇑P P 16 05 34.3 +0.3
baz=66,SNR=16
H16A Russell Place, 66.37 50 ⇓P P 16 05 35.4 +0.9
baz=66,SNR=28
F18A Big Timber 66.42 48 ⇓P P 16 05 35.6 +1.0
baz=66,SNR=49
VSR Storozhevoye 66.42 320 eP P 16 05 32.7 -1.7
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,3.0nm,0.4s
D20A Manuel Ranch, 66.47 46 ⇑P P 16 05 35.9 +1.0
baz=66,SNR=40
MLAC Mammoth Lakes 66.47 60 ⇑P P 16 05 36.2 +0.9
baz=66
C21A Desert Coulee 66.51 45 ⇑P P 16 05 35.7 +0.6
baz=66,SNR=26
GCMT Greycliff 66.52 48 eP P 16 05 36.1 +0.8
comp=E,22nm,0.9s
VORD Divnogorie 66.53 319 eP P 16 05 31.9 -3.2
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,50nm,0.6s
E19A Rath Farm, Rou 66.54 47 ⇑P P 16 05 36.2 +0.8
baz=66,SNR=15
YMR Madison River 66.55 50 eP P 16 05 36.2 +0.6
comp=E,29nm,0.8s
ELK Elko 66.66 55 eP P 16 05 37.1 +0.7
comp=E,5.8nm,0.8s
B22A Reddig Ranch S 66.75 44 ⇑P P 16 05 37.0 +0.3
baz=66
YFT Old Faithful 66.76 50 eP P 16 05 38.4 +1.4
comp=E,37nm,0.9s
E20A Meyer Farm, Mu 66.86 47 ⇑P P 16 05 38.1 +0.7
baz=67,SNR=14
A23A Redstone 66.86 43 ⇑P P 16 05 37.5 +0.2
baz=67
F19A Roth Farm, Mol 66.86 48 ⇓P P 16 05 38.2 +0.7
baz=67,SNR=26
G18A Lazy EL Ranch, 66.88 49 ⇑P P 16 05 37.9 +0.2
baz=67,SNR=6.9
H17A Grant Village 66.94 50 ⇑P P 16 05 40.2 +2.1
baz=67,SNR=13
IMW Indian Meadow 67.06 50 eP P 16 05 40.2 +1.2
comp=E,37nm,1.0s
D21A La Casta Ranch 67.07 46 ⇓P P 16 05 39.4 +0.7
baz=67,SNR=16
DCID1 Drake Creek 67.13 51 eP P 16 05 39.8 +0.5
comp=E,39nm,0.8s
RLMT Red Lodge 67.17 49 eP P 16 05 40.1 +0.5
comp=E,59nm,1.5s
C22A Vida 67.18 45 ⇑P P 16 05 39.3 0.0
baz=67,SNR=6.7
RRI2 Red Ridge 67.21 51 eP P 16 05 41.1 +1.2
comp=E,67nm,0.8s
TIN Tinemaha 67.21 60 ⇓P P 16 05 40.8 +0.9
baz=67
SMMC Simmler 67.22 62 ⇑P P 16 05 40.7 +0.9
baz=67
H18A Shoshone NF, C 67.25 49 ⇓P P 16 05 40.8 +0.7
baz=67,SNR=18
I17A Pilgrim Ck. 67.25 50 ⇑P P 16 05 41.9 +1.8
baz=67,SNR=8.6
MOOW Moose Ponds 67.27 50 eP P 16 05 41.2 +1.0
comp=E,28nm,0.9s
A24A Westby 67.31 43 ⇓P P 16 05 40.4 +0.3
baz=67,SNR=15
TPAW Teton Pass 67.32 51 eP P 16 05 41.9 +1.3
comp=E,57nm,0.9s
E21A Keefer Ranch, 67.38 46 ⇓P P 16 05 41.3 +0.7
baz=67,SNR=6.7
HVU Hansel Valley 67.42 53 eP P 16 05 41.7 +0.6
HVU e 16 06 08.7
HVU pmax pmax
comp=Z,28nm,0.9s
HVU Hansel Valley 67.42 53 eP P 16 05 41.7 +0.6
comp=Z,28nm,0.9s
HVU epPcP PcP 16 06 08.7 +0.8
D22A Cohagen 67.43 45 ⇑P P 16 05 41.4 +0.4
baz=67,SNR=17
LOHW Long Hollow 67.44 51 eP P 16 05 42.4 +1.1
comp=Z,19nm,0.8s
SNOW Snow King Moun 67.45 51 eP P 16 05 42.0 +0.6
comp=Z,48nm,1.0s
VES Vestal, Richgr 67.46 61 ⇓P P 16 05 41.3 +0.1
baz=67
REDW Red Top Meadow 67.46 51 eP P 16 05 42.0 +0.5
comp=Z,0.2nm,0.6s
C23A Lambert 67.49 44 ⇑P P 16 05 41.7 +0.3
baz=67,SNR=10
DGMT Dagmar 67.52 43 eP P 16 05 41.8 +0.3
comp=Z,54nm,0.6s
DGMT Dagmar 67.52 43 ⇓P P 16 05 41.8 +0.3
baz=67,SNR=16
PKM Peak Mountain 67.60 63 ⇑P P 16 05 43.3 +0.9
baz=67,SNR=9.2
H19A Powell 67.62 49 ⇑P P 16 05 43.0 +0.7
baz=67,SNR=5.5
G20A Bridger 67.66 48 ⇑P P 16 05 42.6 0.0
baz=67,SNR=18
CWC Cottonwood Cre 67.70 60 ⇑P P 16 05 43.5 +0.6
baz=68
AHID Auburn Hatcher 67.72 51 eP P 16 05 43.7 +0.7
comp=Z,30nm,1.1s
GRAC Grapevine Rang 67.78 60 ⇑P P 16 05 44.4 +1.1
baz=68,SNR=36
I18A Diamond G Ranc 67.81 50 ⇑P P 16 05 44.8 +1.1
baz=68,SNR=18
F21A Absaloka Mine, 67.83 47 ⇓P P 16 05 44.0 +0.4
baz=68
D23A Lindsay 67.90 45 ⇑P P 16 05 44.8 +0.8
baz=68,SNR=13
ISA Isabella 67.95 61 eP P 16 05 44.0 -0.5
ISA pmax pmax
comp=Z,9.0nm,0.8s
ISA Isabella 67.95 61 eP P 16 05 44.0 -0.5
comp=Z,9.1nm,0.8s
ISA Isabella 67.95 61 ⇓P P 16 05 44.2 -0.3
baz=68,SNR=5.6
R11A Troy Canyon, C 67.99 57 ⇓P P 16 05 45.3 +0.5
baz=68,SNR=41
E22A Miles City 68.02 46 ⇓P P 16 05 45.1 +0.4
baz=68,SNR=9.7
I19A Meeteetse 68.03 49 ⇑P P 16 05 45.8 +0.8
baz=68,SNR=12
C24A Savage 68.05 44 ⇑P P 16 05 45.4 +0.5
baz=68
ARVC Arvin 68.07 62 ⇑P P 16 05 45.1 -0.1
baz=68
G21A Lodge Grass 68.19 47 ⇓P P 16 05 46.0 +0.1
baz=68
HWUT Hardware Ranch 68.21 53 eP P 16 05 47.0 +0.8
comp=Z,45nm,1.0s
H20A Greybull 68.27 48 ⇓P P 16 05 46.4 +0.1
baz=68
MPMC Manual Prospec 68.31 60 ⇓P P 16 05 47.3 +0.5
baz=68,SNR=39
E23A Ismay 68.31 45 ⇓P P 16 05 47.3 +0.8
baz=68,SNR=35
F22A Rosebud 68.31 47 ⇓P P 16 05 46.9 +0.4
baz=68,SNR=21
D24A Glendive 68.38 45 ⇑P P 16 05 47.8 +0.8
baz=68,SNR=25
DUG Dugway 68.42 54 eP P 16 05 48.1 +0.7
DUG pmax pmax
comp=Z,38nm,0.9s
DUG Dugway 68.42 54 eP P 16 05 48.1 +0.7
comp=Z,38nm,0.9s
DUG Dugway 68.42 54 ⇑P P 16 05 48.2 +0.8
baz=68,SNR=27
FURC Furnace Creek, 68.43 60 ⇓P P 16 05 48.2 +0.9
baz=68,SNR=32
OSI Osito Adit 68.47 62 eP P 16 05 48.5 +0.8
comp=Z,26nm,0.8s
OSI Osito Adit 68.47 62 ⇑P P 16 05 48.2 +0.5
baz=68
J19A Crowheart 68.51 50 ⇓P P 16 05 48.8 +0.8
baz=68,SNR=20
I20A Worland 68.56 49 ⇑P P 16 05 49.0 +0.8
baz=68,SNR=19
LRMC Laurel Mountai 68.56 61 ⇓P P 16 05 48.7 +0.4
baz=68,SNR=5.9
BW06 Boulder Array 68.57 51 eP P 16 05 48.6 +0.2
comp=Z,26nm,0.7s
BW06 epP PcP 16 06 12.8 -0.1
PDAR Pinedale Array 68.57 51 P P 16 05 48.8 +0.3
PDAR pP PcP 16 06 12.6 -0.2
PDAR Pinedale Array 68.57 51 P P 16 05 48.8 +0.3
comp=Z,22nm,0.6s,baz=285,slow=1.8,SNR=186
PDAR pP PcP 16 06 12.6 -0.2
comp=Z,7.5nm,0.7s,baz=300,slow=1.8,SNR=5.9
PDAR LR LR 16 35 25.6
comp=Z,40nm,19.6s,baz=174,slow=35
BLG Laguna Peak 68.58 63 ⇑P P 16 05 48.4 +0.1
baz=68
NOUC Port Laguerre 68.64 162 eP P 16 05 50.3 +1.8
DZM Mont Dzumac 68.64 162 eP P 16 05 51.0 +2.3
DZM eLR LR 16 28 30.1
comp=Z,107nm,1.2s
comp=Z,198nm,23.4s
G22A Birney 68.67 47 ⇓P P 16 05 49.0 +0.2
baz=68,SNR=11
H21A Big Horn, Sher 68.68 48 ⇑P P 16 05 49.4 +0.4
baz=68
EDW2 Edwards Air Fo 68.76 62 ⇑P P 16 05 50.1 +0.6
baz=69,SNR=18
E24A Baker 68.77 45 ⇓P P 16 05 49.7 +0.3
baz=68
F23A Volborg 68.79 46 ⇓P P 16 05 49.7 +0.2
baz=68,SNR=21
M17A Scullys Gap (B 68.81 52 ⇑P P 16 05 50.1 +0.2
baz=69,SNR=8.1
NB2 NORSAR Subarra 68.86 339 P P 16 05 47.3 -2.3
comp=Z,3.7nm,0.3s,baz=30,slow=6.5
NOA NORSAR Array B 68.86 339 P P 16 05 47.9 -1.8
NOA NORSAR Array B 68.86 339 P P 16 05 47.9 -1.8
comp=Z,4.8nm,0.4s,baz=30,slow=6.5,SNR=48
NOA LR LR 16 41 14.7
comp=Z,32nm,18.4s,baz=30,slow=40
L18A Fontenelle, Gr 68.86 52 ⇑P P 16 05 50.6 +0.4
baz=69
K19A Absolon Red Bu 68.92 50 ⇓P P 16 05 50.2 -0.3
baz=69,SNR=6.6
JLU Jordanelle 68.94 53 eP P 16 05 51.5 +0.7
comp=Z,28nm,1.1s
DECC Green Verdugo 68.95 62 ⇑P P 16 05 50.8 +0.1
baz=69
J20A Shoshoni 68.98 49 ⇑P P 16 05 51.5 +0.7
baz=69,SNR=18
H22A Clearmont 69.06 48 ⇑P P 16 05 51.4 +0.1
baz=69
I21A Big Trails, Te 69.09 49 ⇓P P 16 05 52.1 +0.5
baz=69,SNR=59
L19A Farson 69.12 51 ⇑P P 16 05 51.9 +0.1
baz=69,SNR=7.8
G23A Biddle 69.15 47 ⇓P P 16 05 52.0 +0.2
baz=69,SNR=16
SHOC Shoshone 69.16 60 ⇓P P 16 05 52.3 +0.4
baz=69
DAU Daniels Canyon 69.18 53 eP P 16 05 53.2 +0.9
DAU pmax pmax
comp=Z,49nm,1.4s
DAU Daniels Canyon 69.18 53 eP P 16 05 53.2 +0.9
comp=Z,49nm,1.4s
F24A Ekalaka 69.19 46 ⇑P P 16 05 52.4 +0.3
baz=69,SNR=11
GSC Goldstone 69.22 61 eP P 16 05 52.9 +0.5
GSC pmax pmax
comp=Z,16nm,0.9s
GSC Goldstone 69.22 61 eP P 16 05 52.9 +0.5
comp=Z,16nm,0.9s
GSC Goldstone 69.22 61 ⇑P P 16 05 52.7 +0.4
baz=69,SNR=5.6
MPU Maple Canyon 69.22 54 eP P 16 05 53.1 +0.6
comp=Z,39nm,1.0s
K20A Yellowstone Ra 69.31 50 ⇑P P 16 05 52.7 -0.2
baz=69,SNR=11
FMP Fort Macarthur 69.32 63 ⇑P P 16 05 53.3 +0.4
baz=69
J21A Lysite 69.33 49 ⇑P P 16 05 53.2 +0.2
baz=69,SNR=5.2
RRX Edison Barstow 69.38 61 ⇓P P 16 05 54.0 +0.7
baz=69
BFSC Mount Baldy Ra 69.38 62 ⇓P P 16 05 53.6 +0.1
baz=69,SNR=8.9
ASAR Alice Springs 69.45 194 P P 16 05 54.1 +0.5
ASAR ⇑e 16 34 00.2
ASAR Alice Springs 69.45 194 P P 16 05 54.1 +0.5
comp=Z,5.4nm,0.6s,baz=12,slow=5.5,SNR=64
ASAR PKP2bc 16 34 00.2
comp=Z,2.1nm,1.0s,baz=177,slow=3.7,SNR=9.7
ASAR LR LR 16 35 10.1
comp=Z,41nm,18.8s,baz=356,slow=35
CIS Catalina Islan 69.45 63 ⇑P P 16 05 54.2 +0.4
baz=69
I22A 9 Mile Ranch, 69.47 48 ⇓P P 16 05 54.4 +0.5
baz=69,SNR=26
G24A Alzada 69.56 46 ⇓P P 16 05 54.0 -0.3
baz=69,SNR=6.1
H23A Clabaugh Cattl 69.58 47 ⇓P P 16 05 54.3 -0.2
baz=69
KIV Kislovodsk 69.63 312 eP P 16 05 54.9 +0.1
KIV e 16 06 17.0
KIV eS S 16 14 56.8 +1.2
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,56nm,18.0s
M19A Rock Springs 69.63 51 ⇑P P 16 05 55.1 +0.1
baz=69
ARUT Antelope Range 69.64 57 eP P 16 05 55.5 +0.5
ARUT pmax pmax
comp=Z,13nm,0.9s
ARUT Antelope Range 69.64 57 eP P 16 05 55.5 +0.5
comp=Z,12nm,0.9s
SCI San Clemente I 69.64 64 ⇓P P 16 05 56.5 +1.7
baz=70
KBZ Khabaz 69.67 312 P P 16 05 55.4 +0.5
KBZ pmax pmax
comp=Z,4.0nm,0.4s
KBZ MLR MLR
comp=Z,84nm,18.4s
KBZ Khabaz 69.67 312 P P 16 05 55.4 +0.5
KBZ Khabaz 69.67 312 P P 16 05 55.4 +0.5
comp=Z,3.9nm,0.4s,baz=62,slow=3.5,SNR=16
KBZ LR LR 16 42 05.0
comp=Z,84nm,18.4s,baz=38,slow=41
TUQ Turquoise Moun 69.68 60 ⇑P P 16 05 55.8 +0.6
baz=70,SNR=6.7
GUDG Gudauri 69.68 310 P P 16 05 56.0 +0.7
L20A Wamsutter 69.75 51 ⇓P P 16 05 56.1 +0.4
baz=70,SNR=16
J22A Midwest 69.80 49 ⇓P P 16 05 56.2 +0.3
baz=70,SNR=29
HEC Hector,Ludlow 69.83 61 ⇑P P 16 05 56.7 +0.6
baz=70,SNR=34
BBRC Big Bear Solar 69.83 62 ⇑P P 16 05 56.6 +0.3
baz=70
CCUT Cedar City 69.84 57 eP P 16 05 57.1 +0.8
comp=Z,9.7nm,0.9s
DGRG David-gareji 69.88 309 P P 16 05 56.6 +0.3
MVU Marysvale 69.89 55 eP P 16 05 57.4 +0.7
comp=Z,11nm,1.0s
H24A Dirks Ranch, A 69.89 46 ⇑P P 16 05 56.2 -0.2
baz=70,SNR=26
K21A Alcova 69.92 50 ⇓P P 16 05 57.0 +0.3
baz=70
EIDS Eidsvold 69.94 177 eP P 16 05 58.0 +1.5
comp=Z,23nm,1.0s
I23A Meade Ranch, G 69.96 48 ⇑P P 16 05 57.0 +0.1
baz=70
TBLG Delisi 70.04 309 P P 16 05 57.5 +0.3
TBLG Delisi 70.04 309 eP P 16 05 57.5 +0.3
MURC Murrieta 70.09 62 ⇑P P 16 05 57.9 +0.2
baz=70,SNR=5.2
ULM Lac du Bonnet 70.12 38 P P 16 05 57.0 -0.5
ULM Lac du Bonnet 70.12 38 P P 16 05 57.0 -0.5
comp=Z,19nm,0.6s,baz=313,slow=6.3,SNR=16
ONI Oni 70.15 311 P P 16 05 58.6 +0.6
MDND Maddock 70.16 42 ⇓P P 16 05 58.1 +0.3
baz=70,SNR=6.6
M20A Sweeter, Wa 70.18 51 ⇓P P 16 05 59.1 +0.7
baz=70,SNR=22
Q16A Castle Valley 70.22 55 ⇓P P 16 05 59.3 +0.7
baz=70,SNR=10
GMRC Granite Mounta 70.27 60 ⇓P P 16 05 59.3 +0.4
baz=70,SNR=30
K22A Casper 70.30 49 ⇑P P 16 05 59.1 +0.1
baz=70,SNR=21
J23A Dilts Ranch, B 70.30 48 ⇑P P 16 05 58.8 -0.1
baz=70,SNR=6.4
L21A Rawlins 70.31 50 ⇓P P 16 05 59.0 -0.1
baz=70,SNR=17
LDFC Landfair 70.42 60 eP P 16 06 00.1 +0.3
comp=Z,52nm,0.8s
O19A Miners Draw (B 70.46 52 ⇓P P 16 06 00.1 +0.1
baz=70,SNR=7.2
SRU San Rafael 70.47 54 ⇑P P 16 06 00.6 +0.5
baz=70,SNR=59
I24A Kuenerle Ranc 70.47 47 ⇓P P 16 05 59.5 -0.4
baz=70,SNR=5.8
PFO Pinyon Flat Ob 70.55 62 ⇓P P 16 06 00.5 -0.1
baz=70,SNR=5.1
M21A Separation Pea 70.55 50 ⇑P P 16 06 00.8 +0.1
baz=70,SNR=16
BELC Belle Mtn. Jos 70.58 61 ⇑P P 16 06 00.6 -0.2
baz=70,SNR=13
N20A Spence Gulch, 70.58 51 ⇑P P 16 06 01.5 +0.7
baz=70,SNR=37
RSSD Black Hills 70.59 47 eP P 16 06 00.7 -0.1
RSSD pmax pmax
comp=Z,23nm,0.8s
RSSD Black Hills 70.59 47 eP P 16 06 00.7 -0.1
comp=Z,23nm,0.8s
109C Camp Elliot, M 70.61 63 ⇑P P 16 06 01.1 +0.2
baz=70
K23A Bowen Ranch, D 70.71 49 ⇑P P 16 06 01.1 -0.4
baz=70,SNR=7.6
L22A Ellis Ranch, M 70.77 50 ⇑P P 16 06 02.5 +0.6
baz=70,SNR=49
J24A Dixon Ranch, L 70.82 48 ⇑P P 16 06 01.8 -0.3
baz=70
NEE2 Needles Airpor 70.92 60 ⇓P P 16 06 03.1 +0.4
baz=71

P19A	Cripple Cowboy	70.99	53	⇓P	P	16 06 03.6	+0.2
	baz=71,SNR=27						
IRM	Iron Mountain	71.00	61	⇑P	P	16 06 03.8	+0.6
	baz=71,SNR=25						
BAR	Barrett	71.03	63	*e*P	P	16 06 02.9	-0.4
	comp=Z,13nm,0.8s						
MONP	Monument Peak	71.05	62	⇓P	P	16 06 03.8	+0.1
	baz=71,SNR=6.7						
N21A	Black Mountain	71.05	51	⇓P	P	16 06 04.0	+0.4
	baz=71,SNR=12						
O20A	White River Ci	71.07	52	⇓P	P	16 06 03.8	+0.1
	baz=71,SNR=15						
L23A	Garrett	71.11	49	⇑P	P	16 06 03.7	-0.2
	baz=71,SNR=17						
GNI	Garni	71.11	308	*e*P	P	16 06 04.6	+0.7
	comp=Z,8.3nm,0.7s						
M22A	Cedar Creek Ra	71.11	50	⇓P	P	16 06 04.1	+0.1
	baz=71,SNR=13						
BC3	Big Chuckawall	71.14	61	⇑P	P	16 06 04.4	+0.2
	baz=71,SNR=11						
W13A	Hualapai Mount	71.15	59	⇑P	P	16 06 04.7	+0.3
	baz=71,SNR=17						
K24A	Anderson Ranch	71.16	48	⇑P	P	16 06 03.3	-0.9
	baz=71						
AKASG	Malin Array Be	71.17	324	P	P	16 06 02.4	-1.4
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AKASG				MLR	MLR		
	comp=Z,48nm,18.3s						
AKASG	Malin Array Be	71.17	324	P	P	16 06 02.4	-1.4
AKASG	Malin Array Be	71.17	324	P	P	16 06 02.4	-1.4
	comp=Z,2.9nm,0.3s,baz=38,slow=6.1,SNR=11						
AKASG				LR	LR	16 43 06.8	
	comp=Z,48nm,18.3s,baz=60,slow=41						
KIEV	Kiev	71.18	324	*e*P	P	16 06 02.1	-1.8
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KIEV	Kiev	71.18	324	*e*P	P	16 06 02.0	-1.8
	comp=Z,4.5nm,0.6s						
J25A	Sunshine Ranch	71.23	47	⇓P	P	16 06 03.9	-0.6
	baz=71,SNR=13						
U15A	North Rim	71.23	57	⇓P	P	16 06 05.7	+0.8
	baz=71,SNR=30						
SWSC	Sam W. Stewart	71.40	62	⇑P	P	16 06 05.9	+0.3
	baz=71						
P20A	De Beque	71.42	53	⇑P	P	16 06 05.9	+0.1
	baz=71						
O21A	Pagoda	71.45	52	⇓P	P	16 06 06.2	+0.1
	baz=71,SNR=5.5						
PDMCI	Parker Dam,Lak	71.53	60	⇓P	P	16 06 06.7	+0.4
	baz=71,SNR=19						
M23A	Laramie	71.54	50	⇑P	P	16 06 06.8	+0.2
	baz=71						
AGMN	Agassiz Nation	71.56	39	*e*P	P	16 06 05.3	-1.0
	comp=Z,21nm,1.1s						
L24A	Wheatland	71.57	49	⇑P	P	16 06 06.8	+0.2
	baz=71						
N22A	Wattenberg Ran	71.60	51	⇑P	P	16 06 07.6	+0.6
	baz=71,SNR=16						
Y12C	Blythe	71.66	61	⇓P	P	16 06 07.7	+0.6
	baz=72,SNR=7.4						
S18A	Hurst Farm, Bl	71.73	55	⇑P	P	16 06 08.1	+0.3
	baz=72,SNR=48						
K25A	Mack Ranch, Ha	71.73	48	⇑P	P	16 06 07.5	-0.1
	baz=72						
PHWY	Pilot Hill	71.80	50	*e*P	P	16 06 08.0	-0.2
	comp=Z,5.3nm,0.8s						
N23A	Red Feather La	71.82	50	⇑P	P	16 06 08.9	+0.6
	baz=72,SNR=16						
Q20A	Ridgley Place,	71.85	53	⇓P	P	16 06 08.5	+0.1
	baz=72,SNR=15						
PV04	Paradox Valley	71.88	54	*e*P	P	16 06 09.0	+0.4
P21A	Newcastle	71.93	52	⇓P	P	16 06 09.5	+0.6
	baz=72,SNR=16						
O22A	Kremmling	72.00	51	⇓P	P	16 06 09.7	+0.2
	baz=72,SNR=17						
L25A	Engebretsen Ra	72.00	48	⇓P	P	16 06 09.4	+0.1
	baz=72						
M24A	Cheyenne	72.03	49	⇑P	P	16 06 10.2	+0.8
	baz=72,SNR=14						
K26A	Motz Farm, Whi	72.03	47	⇑P	P	16 06 09.2	-0.2
	baz=72,SNR=7.7						
PV01	Paradox Valley	72.25	54	*e*P	P	16 06 11.0	+0.1
	comp=Z,1µm,0.8s						
P22A	Eagle	72.27	52	⇓P	P	16 06 11.6	+0.6
	baz=72,SNR=14						
O23A	Lake Granby, G	72.31	51	⇓P	P	16 06 12.3	+1.0
	baz=72,SNR=40						
R20A	Redvale	72.32	54	⇓P	P	16 06 11.8	+0.5
	baz=72,SNR=6.8						
Q21A	Lamborn Mesa,	72.34	53	⇓P	P	16 06 11.8	+0.4
	baz=72,SNR=13						
WUAZ	Wupatki	72.39	57	*e*P	P	16 06 12.4	+0.7
	comp=Z,16nm,0.9s						
WUAZ	Wupatki	72.39	57	⇑P	P	16 06 12.5	+0.8
	baz=72,SNR=9.8						
SMCO	Snowmass	72.44	52	*e*P	P	16 06 12.5	+0.3
	comp=Z,25nm,0.8s						
N24A	Carr	72.44	50	⇓P	P	16 06 12.8	+0.9
	baz=72,SNR=5.8						
M25A	Palm-Egli Farm	72.46	49	⇓P	P	16 06 12.9	+0.9
	baz=72,SNR=6.1						
Y14A	Wickenburg	72.47	60	⇓P	P	16 06 12.8	+0.7
	baz=72,SNR=26						
J28A	Allard Ranch,	72.52	46	⇑P	P	16 06 12.6	+0.4
	baz=72,SNR=20						
K27A	Flueckinger Fa	72.52	47	⇓P	P	16 06 12.2	-0.1
	baz=72						
L26A	Underwood Farm	72.56	48	⇓P	P	16 06 12.6	+0.1
	baz=72						
S20A	Disappointment	72.58	54	⇑P	P	16 06 13.4	+0.5
	baz=72						
R21A	Cimarron	72.67	53	⇑P	P	16 06 14.3	+0.9
	baz=72,SNR=29						
Q22A	Crested Butte,	72.69	52	⇓P	P	16 06 14.3	+0.7
	baz=72,SNR=17						
ISCO	Idaho Springs	72.76	51	*e*P	P	16 06 14.6	+0.6
ISCO				pmax	pmax		
	comp=Z,21nm,0.9s						
ISCO	Idaho Springs	72.76	51	*e*P	P	16 06 14.6	+0.6
	comp=Z,21nm,0.9s						
ISCO	Idaho Springs	72.76	51	⇓P	P	16 06 14.8	+0.8
	baz=72,SNR=30						
113A	Mohawk Valley,	72.79	61	⇑P	P	16 06 14.2	+0.3
	baz=73						
O24A	Longmont	72.83	50	⇑P	P	16 06 15.2	+1.0
	baz=73						
N25A	Grover	72.88	49	⇓P	P	16 06 15.3	+0.8
	baz=73						
Z14A	Wintersburg	72.89	60	⇓P	P	16 06 14.9	+0.4
	baz=73						
L27A	T5 Ranch, Ells	72.92	47	⇓P	P	16 06 14.6	0.0
	baz=73						
M26A	McRoberts Ranc	72.93	48	⇑P	P	16 06 15.6	+0.9
	baz=73,SNR=6.9						
BRSD	Miller	72.93	44	⇓P	P	16 06 14.3	-0.2
	baz=73,SNR=7.1						
K28A	Ten Mile Ranch	72.97	46	⇓P	P	16 06 15.2	+0.3
	baz=73,SNR=7.8						
S21A	Coal Bank Pass	73.02	54	⇑P	P	16 06 16.5	+0.9
	baz=73,SNR=40						
X16A	Lo Mia Camp, P	73.10	58	⇓P	P	16 06 17.0	+1.1
	baz=73,SNR=27						
R22A	Saguache, Gunn	73.22	53	⇓P	P	16 06 17.9	+1.2
	baz=73,SNR=28						
Q23A	Hartsel	73.27	52	⇓P	P	16 06 17.7	+0.7
	baz=73						
M27A	Reverse DX Ran	73.28	48	⇓P	P	16 06 17.1	+0.3
	baz=73						
N26A	Koester Ranch,	73.34	49	⇓P	P	16 06 17.6	+0.5
	baz=73,SNR=6.2						
P24A	Kohler Place,	73.35	51	⇑P	P	16 06 17.9	+0.6
	baz=73						
K29A	Lazy Trails An	73.47	46	⇓P	P	16 06 18.1	+0.4
	baz=73,SNR=5.7						
U20A	Newcomb	73.49	55	⇑P	P	16 06 18.5	+0.3
	baz=73,SNR=7.4						
S22A	4UR Ranch, Cre	73.51	53	⇓P	P	16 06 19.4	+0.9
	baz=73,SNR=36						
BANOM	Banah	73.54	290	⇑P	P	16 06 18.2	-0.3
	SNR=11						
Q24A	Divide	73.60	51	⇑P	P	16 06 19.4	+0.4
	baz=73,SNR=12						
T21A	Navajo Lake	73.63	54	⇓P	P	16 06 19.7	+0.6
	baz=73,SNR=9.9						
W18A	Petrified Fore	73.64	57	⇑P	P	16 06 19.7	+0.7
	baz=73						
O26A	Horse Wrangler	73.70	49	⇑P	P	16 06 19.5	+0.1
	baz=73						
N27A	Anderson Farm,	73.72	48	⇑P	P	16 06 19.8	+0.4
	baz=74,SNR=25						
EYMN	Ely	73.75	37	*e*P	P	16 06 18.6	-0.7
	comp=Z,29nm,1.0s						
EYMN				*e*pP	pP	16 06 42.6	-0.8
P25A	Willow Gulch B	73.76	50	⇓P	P	16 06 20.3	+0.6
	baz=74,SNR=11						
R23A	Moffat	73.77	52	⇓P	P	16 06 21.0	+1.1
	baz=74,SNR=28						
OGNE	Ogallala	73.89	48	*e*P	P	16 06 20.5	+0.2
	comp=Z,115nm,0.8s						
OGNE				*e*pP	pP	16 06 46.2	+1.7
OGNE	Ogallala	73.89	48	⇓P	P	16 06 20.6	+0.3
	baz=74,SNR=28						
L29A	Maesberg Ranch	73.89	46	⇓P	P	16 06 20.3	0.0
	baz=74						
M28A	Bar X Bar Ranc	73.91	47	⇑P	P	16 06 20.4	0.0
	baz=74						
X18A	Snowflake	73.92	57	⇓P	P	16 06 21.6	+0.8
	baz=74,SNR=10						
V20A	Brimhall	73.92	55	⇓P	P	16 06 21.1	+0.4
	baz=74,SNR=13						
U21A	Nageezi	73.95	54	⇓P	P	16 06 21.5	+0.6
	baz=74,SNR=15						
T22A	Edith	73.98	54	⇓P	P	16 06 22.0	+0.9
	baz=74,SNR=22						
S23A	Nye Farm, Mont	74.01	53	⇓P	P	16 06 22.4	+1.1
	baz=74						
Q25A	Bedland, Calha	74.14	51	⇑P	P	16 06 22.3	+0.3
	baz=74,SNR=5.5						
R24A	Sanders Place,	74.14	52	⇑P	P	16 06 22.8	+0.8
	baz=74,SNR=27						
P26A	Davis Ranch, A	74.17	50	⇑P	P	16 06 22.1	+0.1
	baz=74,SNR=6.9						
O27A	Beecher Island	74.19	49	⇓P	P	16 06 22.0	-0.1
	baz=74,SNR=8.9						
M29A	Burnside Ranch	74.23	47	⇑P	P	16 06 21.8	-0.5
	baz=74						
UOSS	Wadi Hilu	74.26	290	P	P	16 06 22.0	-0.6
	comp=Z,275nm,0.9s,SNR=10.0						
N28A	Pribbeno Ranch	74.33	48	⇑P	P	16 06 22.8	-0.1
	baz=74						
W20A	Ramah	74.37	56	⇑P	P	16 06 23.8	+0.5
	baz=74,SNR=12						
HATD	Hatta, Dubai	74.39	289	⇓P	P	16 06 23.5	+0.1
	SNR=6.1						
V21A	Milan	74.40	55	⇑P	P	16 06 24.2	+0.6
	baz=74						
HOQ	Hoqain	74.43	288	⇑P	P	16 06 24.0	+0.4
U22A	Llaves	74.45	54	⇓P	P	16 06 24.6	+0.7
	baz=74,SNR=17						
T23A	Casias Ranch,	74.46	53	⇑P	P	16 06 24.6	+0.7
	baz=74						
S24A	Houchin Ranch,	74.50	52	⇑P	P	16 06 24.9	+0.7
	baz=74,SNR=11						
Q26A	Hugo	74.53	50	⇓P	P	16 06 24.3	+0.2
	baz=74						
ASHO	Ashiyiah	74.53	289	⇓P	P	16 06 24.6	+0.4
	SNR=9.8						
M30A	Dale-Ortello V	74.58	46	⇑P	P	16 06 23.8	-0.6
	baz=74						
P27A	Ficken Ranch,	74.59	49	⇑P	P	16 06 24.1	-0.3
	baz=74						
ECSD	EROS Data Cent	74.59	43	*e*P	P	16 06 23.9	-0.4
	comp=Z,28nm,0.8s						
O28A	Krutsinger Ran	74.61	48	⇓P	P	16 06 24.4	-0.1
	baz=74						
KWP	Kalwaria Pacla	74.63	327	⇑P	P	16 06 25.3	+0.9
KWP	Kalwaria Pacla	74.63	327	⇑*i*P	P	16 06 25.3	+0.9
KWP	Kalwaria Pacla	74.63	327	*e*P	P	16 06 25.2	+0.9
R25A	Fountain Ranch	74.66	51	⇑P	P	16 06 25.0	+0.1
	baz=74,SNR=19						
JMDO	Jabal Madar	74.70	286	⇑P	P	16 06 26.1	+0.9
N29A	Votaw Ranch, W	74.71	47	⇑P	P	16 06 24.7	-0.3
	baz=74						
V22A	San Miguel Ran	74.75	54	⇓P	P	16 06 26.1	+0.5
	baz=74,SNR=14						
X20A	Quemado	74.77	56	⇓P	P	16 06 26.8	+1.1
	baz=75,SNR=13						
U23A	El Rito	74.87	54	⇓P	P	16 06 27.1	+0.9
	baz=75,SNR=5.3						
W21A	San Fidel	74.87	55	⇓P	P	16 06 26.6	+0.3
	baz=75,SNR=5.4						
S25A	Robets Cordova	74.92	52	⇑P	P	16 06 26.3	-0.2
	baz=75,SNR=14						
TUC	Tucson	74.94	59	*e*P	P	16 06 26.9	+0.4
TUC				pmax	pmax		
	comp=Z,14nm,0.9s						
TUC	Tucson	74.94	59	*e*P	P	16 06 26.9	+0.4
	comp=Z,14nm,0.9s						
KSCO	Kaye Shedlock'	74.95	50	⇓P	P	16 06 26.5	0.0
	baz=75						
N30A	Hueftle Ranch,	75.00	47	⇑P	P	16 06 26.3	-0.5
	baz=75						
R26A	Arlington	75.01	51	⇑P	P	16 06 27.0	+0.1
	baz=75,SNR=17						
P28A	Saint Francis	75.02	49	⇑P	P	16 06 26.6	-0.3
	baz=75						
ASUD	Al Ashush, Dub	75.06	290	⇑P	P	16 06 26.2	-1.0
	SNR=9.4						
BSY	Bisya	75.07	287	P	P	16 06 28.5	+1.2
	SNR=5.7						
ARQ	Araqi	75.13	288	⇑P	P	16 06 28.4	+0.8
O29A	4D Ranch, Culb	75.13	48	⇑P	P	16 06 27.2	-0.2
	baz=75,SNR=13						
BUR08	Bucovina Ar. S	75.21	324	*e*P	P	16 06 27.5	-0.4
BURAR	Bucovina Array	75.22	324	⇑*i*P	P	16 06 27.6	-0.3
SPMN	St. Paul	75.26	40	⇑P	P	16 06 27.5	-0.6
	baz=75						
X21A	Alamocita Cree	75.26	56	⇑P	P	16 06 29.6	+1.1
	baz=75,SNR=29						
OJC	Ojcow	75.26	329	*e*P	P	16 06 28.1	+0.1
OJC	Ojcow	75.26	329	*e*P	P	16 06 28.1	+0.1
V23A	Ortiz Mt. (NFS	75.28	54	⇑P	P	16 06 29.9	+1.3
	baz=75,SNR=7.8						
Y20A	Horse Springs,	75.28	57	⇓P	P	16 06 30.0	+1.3
	baz=75,SNR=23						
T25A	Trinidad	75.31	52	⇑P	P	16 06 29.1	+0.3
	baz=75,SNR=23						
U24A	Moreno Valley	75.33	53	⇑P	P	16 06 29.8	+0.8
	baz=75						
Q28A	Sharon Springs	75.35	49	⇓P	P	16 06 28.5	-0.2
	baz=75,SNR=5.6						
KOLS	Kolonicke sedl	75.36	327	*e*P	P	16 06 27.6	-1.0
KOLS				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KOLS	Kolonicke sedl	75.36	327	*e*P	P	16 06 27.6	-1.0
STHS	Stebnicka Huta	75.37	327	*e*P	P	16 06 29.5	+0.9
STHS				pmax	pmax		
	comp=Z,5.0nm,0.5s						
STHS	Stebnicka Huta	75.37	327	*e*P	P	16 06 29.5	+0.9
R27A	Eads	75.38	50	⇑P	P	16 06 29.0	0.0
	baz=75,SNR=10						
P29A	Atwood	75.44	48	⇓P	P	16 06 29.0	-0.2
	baz=75						
O30A	MW Ranch, Wils	75.48	47	⇓P	P	16 06 28.8	-0.6
	baz=75						
TESR	Tescani	75.48	323	⇑*i*P	P	16 06 29.0	-0.3
S26A	Kim	75.48	51	⇑P	P	16 06 29.3	-0.3
	baz=75,SNR=9.9						
TLCR		75.55	321	⇑P	P	16 06 29.9	+0.2
TLCR		75.55	321	⇑*i*P	P	16 06 29.9	+0.2
BGNE	Belgrade	75.56	45	⇑P	P	16 06 29.4	-0.4
	baz=75						
Y21A	Point of Rocks	75.63	56	⇓P	P	16 06 31.6	+1.0
	baz=75,SNR=14						
KBSD	Kabsdagh	75.66	308	*e*P	P	16 06 31.5	+1.0
LAZ	Ladron	75.67	56	*e*P	P	16 06 31.8	+1.0
	comp=Z,12nm,1.3s						
ANMO	Albuquerque	75.69	55	*e*P	P	16 06 31.5	+0.6
	comp=Z,13nm,0.8s						
CRVS	Cervenica-Dubn	75.71	327	*e*P	P	16 06 28.8	-1.7
CRVS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CRVS	Cervenica-Dubn	75.71	327	*e*P	P	16 06 28.8	-1.7
Z20A	Nine Sixteen R	75.71	58	⇓P	P	16 06 31.9	+0.8
	baz=76,SNR=18						
W23A	Werner Place,	75.72	55	⇑P	P	16 06 31.9	+0.8
	baz=76						
NIE	Niedzica	75.72	328	*e*P	P	16 06 31.1	+0.4
NIE	Niedzica	75.72	328	*e*P	P	16 06 31.1	+0.4
T26A	Comanche Natio	75.74	52	⇑P	P	16 06 31.0	-0.2
	baz=76,SNR=44						
S27A	Las Animas	75.76	51	⇑P	P	16 06 30.9	-0.3
	baz=76,SNR=5.9						
V24A	Rampart Ranch,	75.82	54	⇑P	P	16 06 32.8	+1.1
	baz=76,SNR=17						
U25A	Circle Dot Ran	75.83	53	⇑P	P	16 06 32.0	+0.3
	baz=76,SNR=17						
P30A	Selden	75.84	48	⇓P	P	16 06 31.0	-0.6
	baz=76,SNR=11						
CFR	Carcaliu	75.86	321	⇓P	P	16 06 31.7	+0.3
CFR	Carcaliu	75.86	321	⇓*i*P	P	16 06 31.7	+0.3
R28A	Tribune	75.88	50	⇑P	P	16 06 31.5	-0.3
	baz=76						
TRPA	Tarpa	75.91	326	⇑*i*P	P	16 06 31.7	+0.1
Q29A	Oakley	75.93	49	⇑P	P	16 06 31.7	-0.4
	baz=76,SNR=10						
PLOR	Plostina	76.00	322	⇓P	P	16 06 31.4	-0.9
PLOR	Plostina	76.00	322	⇓*i*P	P	16 06 31.4	-0.9
KSP	Ksiaz	76.00	331	*e*P	P	16 06 32.3	+0.1
KSP	Ksiaz	76.00	331	*e*P	P	16 06 32.5	+0.3
Y22D	IRIS PASSCAL I	76.03	56	⇓P	P	16 06 34.0	+1.2
	baz=76						
LPM	Los Pinos Moun	76.03	55	*e*P	P	16 06 33.3	+0.4
	comp=Z,5.6nm,1.0s						
120A	U Bar Ranch, L	76.08	58	⇓P	P	16 06 34.2	+1.1
	baz=76,SNR=27						
Y22A	Socorro	76.10	56	⇑P	P	16 06 34.1	+0.8
	baz=76,SNR=8.6						
W24A	Lazy 6 Ranch,	76.11	54	⇑P	P	16 06 34.4	+1.1
	baz=76,SNR=33						
V25A	Rancho No Teng	76.11	53	⇑P	P	16 06 34.0	+0.6
	baz=76,SNR=13						
Z21A	St. Cloud Mine	76.12	57	⇑P	P	16 06 34.5	+1.0
	baz=76,SNR=9.5						
BNM	Barren Site	76.15	56	*e*P	P	16 06 34.1	+0.5
	comp=Z,10.0nm,0.9s						
R29A	Marienthal	76.18	49	⇓P	P	16 06 33.2	-0.4
	baz=76,SNR=12						
OKC	Ostrava-Krasne	76.18	329	*e*P	P	16 06 33.6	+0.4
OKC	Ostrava-Krasne	76.18	329	⇑*e*P	P	16 06 33.6	+0.4
COWI	Conover	76.20	37	*e*P	P	16 06 32.6	-0.8
	comp=Z,6.7nm,0.4s						
U26A	Atchley Ranch,	76.21	52	⇓P	P	16 06 34.0	+0.1
	baz=76,SNR=6.9						
Q30A	Quinter	76.27	48	⇑P	P	16 06 33.5	-0.5
	baz=76,SNR=8.1						
SCHQ	Schefferville	76.30	20	P	P	16 06 33.6	-0.2
SCHQ	Schefferville	76.30	20	P	P	16 06 33.6	-0.2
	comp=Z,8.7nm,0.5s,baz=354,slow=5.8,SNR=30						
SCHQ				LR	LR	16 43 52.7	
	comp=Z,50nm,18.4s,baz=269,slow=38						
T27A	Campo	76.30	51	⇑P	P	16 06 34.2	-0.1
	baz=76,SNR=6.6						
P31A	Stockton	76.31	47	⇑P	P	16 06 33.6	-0.6
	baz=76,SNR=10						
HARR	Harsova	76.33	321	⇓P	P	16 06 34.4	+0.3
HARR	Harsova	76.33	321	⇓*i*P	P	16 06 34.4	+0.3
S28A	Manter	76.37	50	⇑P	P	16 06 34.4	-0.3
	baz=76						
UPC	Upice	76.38	331	*e*P	P	16 06 34.4	+0.1
UPC	Upice	76.38	331	⇑*e*P	P	16 06 34.4	+0.1
DPC	Dobruska-Polom	76.40	331	*e*P	P	16 06 34.8	+0.3
DPC	Dobruska-Polom	76.40	331	*e*P	P	16 06 34.8	+0.3
DPC				*e*x	x	16 06 36.8	
KECS	Kecovo	76.42	327	*e*P	P	16 06 34.5	-0.1
KECS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KECS	Kecovo	76.42	327	*e*P	P	16 06 34.5	-0.1
DOPR	Dopca	76.45	323	⇓*i*P	P	16 06 35.5	+0.7
MORC	Moravsky Berou	76.45	330	*e*P	P	16 06 34.7	-0.1
MORC				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MORC	Moravsky Berou	76.45	330	*e*P	P	16 06 34.7	-0.1
	comp=Z,5.3nm,0.6s						
MORC	Moravsky Berou	76.45	330	⇑*i*P	P	16 06 35.2	+0.4
319A	Douglas	76.51	59	⇓P	P	16 06 36.3	+0.7
	baz=76,SNR=25						
X24A	Lazy VL Ranch,	76.55	55	⇓P	P	16 06 36.8	+1.0
	baz=76						
Z22A	Elephant Butte	76.58	56	⇓P	P	16 06 36.7	+0.7
	baz=76,SNR=18						
MLR	Muntele Rosu	76.58	322	⇓*i*P	P	16 06 35.9	+0.2
220A	Playas Peak, P	76.59	58	⇓P	P	16 06 36.7	+0.7
	baz=76,SNR=16						
121A	Cookes Peak, D	76.60	57	⇑P	P	16 06 37.1	+1.0
	baz=76,SNR=10						
ISR	Istrita	76.62	322	⇓P	P	16 06 36.3	+0.5
ISR	Istrita	76.62	322	⇓*i*P	P	16 06 36.3	+0.5
STKA	Stephens Creek	76.62	186	P	P	16 06 37.0	+1.3
STKA	Stephens Creek	76.62	186	P	P	16 06 36.9	+1.3
	comp=Z,8.2nm,0.9s,baz=358,slow=5.7,SNR=15						
V26A	Tequesquite Ra	76.62	53	⇓P	P	16 06 36.0	-0.1
	baz=76,SNR=11						
UMR	Umm Al-Rimmam	76.63	298	*e*P	P	16 06 35.9	-0.2
Y23A	Lovelace Mesa,	76.64	55	⇑P	P	16 06 37.1	+0.7
	baz=76,SNR=26						
W25A	X Bar L Ranch,	76.65	53	⇓P	P	16 06 37.0	+0.7
	baz=76,SNR=30						
Q31A	Ellis	76.69	48	⇓P	P	16 06 35.4	-0.9
	baz=76						
MIB	Mutribah	76.69	299	*e*P	P	16 06 36.2	-0.2
MIB				AMb	AMB	16 06 37.1	
	comp=Z,96nm,0.5s						
CLL	Collm	76.70	333	*e*P	P	16 06 35.7	-0.4
	comp=Z,29nm,0.5s						
CLL	Collm	76.70	333	⇓*i*P	P	16 06 36.0	-0.1
CLL				*i*		16 06 47.5	
CLL				pmax	pmax		
	comp=Z,28nm,0.5s						
CLL	Collm	76.70	333	⇓*i*P	P	16 06 36.0	-0.1
	comp=Z,28nm,0.5s						
CLL				*e*PcP	PcP	16 06 45.0	-2.1
CLL				*e*pP	pP	16 07 01.0	+0.5
CLL				*e*PP	PP	16 09 23.0	-6.0
CLL	Collm	76.70	333	⇑*i*(P)	PcP	16 06 47.5	+0.4
	comp=Z,8.0nm,0.7s						
U27A	Thompson Grove	76.71	52	⇑P	P	16 06 36.5	-0.1
	baz=76,SNR=12						
R30A	Dighton	76.75	49	⇑P	P	16 06 36.3	-0.4
	baz=76						
BRG	Berggiesshubel	76.77	332	*e*P	P	16 06 36.2	-0.3
	comp=Z,3.4nm,0.4s						
BRG							
	comp=N,131nm,25.0s						
BRG							
	comp=E,131nm,27.0s						
BRG							
	comp=Z,49nm,16.0s						
BRG	Berggiesshubel	76.77	332	*e*P	P	16 06 36.2	-0.3
BRG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BRG				MLR	MLR		
	comp=N,131nm,25.0s						
BRG				MLR	MLR		
	comp=E,131nm,27.0s						
BRG				MLR	MLR		
	comp=Z,49nm,16.0s						
S29A	Ulysses	76.78	50	⇑P	P	16 06 36.5	-0.4
	baz=76						
KBD	Kabd	76.91	298	*e*P	P	16 06 37.8	+0.1
DRGR		76.91	325	⇑P	P	16 06 36.9	-0.6
DRGR		76.91	325	⇑*i*P	P	16 06 36.9	-0.6
122A	Conniff Cattle	76.95	57	⇓P	P	16 06 39.4	+1.3
	baz=77						
221A	Mesquite Ranch	76.97	58	⇑P	P	16 06 38.6	+0.4
	baz=77						
320A	Kipp Ranch, An	76.99	59	⇓P	P	16 06 38.6	+0.4
	baz=77						
Y24A	Capitan	77.00	55	⇓P	P	16 06 38.7	+0.3
	baz=77,SNR=20						
Z23A	Rita Site, Whi	77.01	56	⇓P	P	16 06 39.0	+0.6
	baz=77						
VOIR		77.02	323	⇓P	P	16 06 38.7	+0.6
VOIR		77.02	323	⇓*i*P	P	16 06 38.7	+0.6
T29A	Hugoton	77.02	50	⇓P	P	16 06 37.9	-0.4
	baz=77						
X25A	Clemmons Ranch	77.02	54	⇓P	P	16 06 39.3	+0.9
	baz=77,SNR=9.3						
VYHS	Vyhne	77.04	328	*e*P	P	16 06 38.4	+0.3
VYHS				pmax	pmax		
	comp=Z,3µm,12.8s						
VYHS	Vyhne	77.04	328	*e*P	P	16 06 38.4	+0.3
CLZ	Clausthal	77.06	335	*e*P	P	16 06 38.4	+0.2
	comp=Z,9.0nm,0.9s						
CLZ	Clausthal	77.06	335	*e*P	P	16 06 38.4	+0.2
CLZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
U28A	Mallet	77.07	51	⇓P	P	16 06 38.2	-0.4
	baz=77,SNR=5.3						
S30A	Montezuma	77.12	49	⇑P	P	16 06 38.4	-0.4

baz=77
W26A Owens Ranch, T 77.14 53 ⇓P P 16 06 39.6 +0.6
baz=77
NAY Al-Naaiem 77.14 298 eP P 16 06 38.6 -0.4
NAY AMb AMB 16 06 39.8
comp=Z,40nm,0.9s
R31A Burdett 77.14 48 ⇓P P 16 06 37.9 -1.0
baz=77
RDF Al-Radifah 77.17 298 eP P 16 06 39.1 -0.1
RDF AMb AMB 16 06 40.3
comp=Z,156nm,0.8s
V27A Dan Oppiter Fa 77.18 52 ⇓P P 16 06 39.3 +0.1
baz=77,SNR=7.8
NEUB Neuenburg 77.18 334 eP P 16 06 38.4 -0.4
comp=Z,10.0nm,0.6s
VRAC Vranov 77.18 330 ⇓iP P 16 06 39.9 +1.0
ARR Arges 77.25 323 ⇑iP P 16 06 40.1 +0.7
222A Williams Famil 77.31 57 ⇓P P 16 06 40.5 +0.4
baz=77
ESK Eskdalemuir 77.32 344 P P 16 06 39.7 +0.2
comp=Z,105nm,0.4s,SNR=6.2
PRU Pruhonice 77.32 331 eP P 16 06 39.8 +0.2
PRU Pruhonice 77.32 331 ⇑eP P 16 06 39.8 +0.2
BRTR Keskin Array B 77.37 314 P P 16 06 40.2 -0.1
BRTR Keskin Array B 77.37 314 P P 16 06 40.2 -0.1
comp=Z,8.2nm,0.8s,baz=67,slow=3.7,SNR=48
BRTR LR LR 16 41 17.7
comp=Z,20nm,21.2s,baz=275,slow=36
IBBN Ibbenburen 77.42 336 eP P 16 06 40.6 +0.5
comp=Z,13nm,0.9s
123A Bell Site, Whi 77.44 56 ⇓P P 16 06 41.4 +0.6
baz=77
Y25A Mesa, Roswell 77.44 55 ⇑P P 16 06 40.9 +0.2
baz=77,SNR=12
Z24A Sheeppen Canyo 77.47 55 ⇑P P 16 06 41.6 +0.6
baz=77
X26A CR and CF Fran 77.50 54 ⇑P P 16 06 41.4 +0.3
baz=77
T30A Plains 77.51 50 ⇑P P 16 06 40.6 -0.4
baz=77
V28A Channing 77.53 52 ⇓P P 16 06 41.0 -0.2
baz=77
U29A Oasis Ranch, S 77.55 51 ⇓P P 16 06 40.7 -0.5
baz=77
W27A Bowe Ranch, En 77.55 53 ⇓P P 16 06 41.6 +0.2
baz=77,SNR=7.3
TREC Trest 77.58 331 eP P 16 06 41.2 +0.1
TREC Trest 77.58 331 ⇑eP P 16 06 41.2 +0.1
SCIA State Center 77.61 42 eP P 16 06 41.1 -0.3
comp=Z,69nm,0.8s
S31A Mullinville 77.66 49 ⇓P P 16 06 40.9 -0.9
baz=77
WERD Werda 77.67 333 eP P 16 06 41.4 -0.2
comp=Z,10.0nm,1.5s
PLN Plauen 77.69 333 eP P 16 06 41.5 -0.1
comp=Z,15nm,0.6s
ANTO Ankara 77.69 315 eP P 16 06 42.7 +0.7
ANTO pmax pmax
comp=Z,22nm,0.8s
ANTO Ankara 77.69 315 P P 16 06 43.2 +1.2
SNR=5.8
ANTO Ankara 77.69 315 eP P 16 06 42.7 +0.7
comp=Z,22nm,0.8s
MOX Moxa 77.72 333 eP P 16 06 41.5 -0.3
comp=Z,7.0nm,0.6s
MOX Moxa 77.72 333 eP P 16 06 41.5 -0.3
MOX pmax pmax
comp=Z,7.0nm,0.6s
GUNZ Gunzen 77.73 333 eP P 16 06 41.9 -0.1
comp=Z,9.0nm,0.6s
223A Chaparral, Ant 77.78 57 ⇓P P 16 06 43.2 +0.5
baz=78
WERN Wernitzgruen 77.78 333 eP P 16 06 42.3 +0.1
comp=Z,10.0nm,0.4s
NKC Novy Kostel 77.81 333 eP P 16 06 42.5 +0.1
NKC Novy Kostel 77.81 333 ⇑eP P 16 06 42.5 +0.1
NKC ex x 16 06 44.5
U30A WK&E Inc. Balk 77.83 50 ⇓P P 16 06 42.4 -0.4
baz=78
V29A Stinnett 77.83 51 ⇑P P 16 06 42.3 -0.5
baz=78
X27A F and S Farms, 77.83 53 ⇑P P 16 06 43.5 +0.6
baz=78
124A Stringfield Ra 77.87 56 ⇑P P 16 06 43.6 +0.3
baz=78,SNR=8.5
Z25A Roswell 77.89 55 ⇑P P 16 06 43.7 +0.4
baz=78,SNR=6.9
W28A Vega 77.89 52 ⇓P P 16 06 43.8 +0.5
baz=78
ZST Bratislava 77.93 329 eP P 16 06 40.8 -2.2
ZST pmax pmax
comp=Z,5.0nm,1.0s
ZST Bratislava 77.93 329 eP P 16 06 40.8 -2.2
T31A Randall Ranch, 77.94 49 ⇑P P 16 06 42.7 -0.6
baz=78,SNR=6.9
Y26A Elida 77.94 54 ⇑P P 16 06 43.9 +0.4
baz=78
GZR Gura Zlata 78.01 324 ⇑P P 16 06 43.5 -0.1
GZR Gura Zlata 78.01 324 ⇑iP P 16 06 43.5 -0.1
KSU1 Kansas State U 78.06 46 eP P 16 06 43.1 -0.8
comp=Z,16nm,0.5s
MANZ Manzenberg 78.13 333 eP P 16 06 44.0 -0.2
comp=Z,5.0nm,0.6s
224A Cornudas Mount 78.27 56 ⇑P P 16 06 45.8 +0.4
baz=78,SNR=14
W29A Amraillo 78.31 52 ⇑P P 16 06 45.8 +0.3
baz=78
Z26A Caprock 78.32 55 ⇑P P 16 06 46.0 +0.4
baz=78,SNR=40
BUG Bochum--Univer 78.33 336 eP P 16 06 44.7 -0.5
Y27A Causey 78.35 54 ⇑P P 16 06 46.0 +0.2
baz=78,SNR=20
125A Gardner Draw, 78.36 55 ⇑P P 16 06 46.2 +0.3
baz=78,SNR=13
V30A Spur Ranch, Mi 78.37 51 ⇓P P 16 06 45.7 -0.1
baz=78
KHC Kasperske Hory 78.38 332 ⇑iP P 16 06 45.8 +0.2
KHC e 16 06 54.5
KHC e 16 07 10.5
KHC Kasperske Hory 78.38 332 ⇑iP P 16 06 45.8 +0.2
KHC ePCP PcP 16 06 54.5 0.0
KHC epP pP 16 07 10.5 +0.5
KHC Kasperske Hory 78.38 332 eP P 16 06 45.8 +0.2
comp=Z,14nm,0.5s
U31A Nine Bar Ranch 78.38 50 ⇑P P 16 06 46.0 +0.1
baz=78
X28A Dimmitt 78.44 53 ⇓P P 16 06 46.5 +0.3
baz=78
AMTX Amarillo 78.46 52 eP P 16 06 46.7 +0.4
comp=Z,48nm,0.8s
MSTX Muleshoe 78.51 53 ⇑P P 16 06 46.6 0.0
baz=78,SNR=6.1
GEC2 GERESS Array S 78.58 331 eP P 16 06 46.5 -0.3
comp=Z,9.0nm,0.4s
GEC2 GERESS Array S 78.58 331 eP P 16 06 46.5 -0.3
GEC2 pmax pmax
comp=Z,9.0nm,0.4s
GERES GERESS Array B 78.58 331 P P 16 06 46.5 -0.3
GERES GERESS Array B 78.58 331 P P 16 06 46.5 -0.3
comp=Z,7.5nm,0.3s,baz=40,slow=5.4,SNR=118
WET Wettzell 78.61 332 eP P 16 06 47.0 +0.2
comp=Z,6.0nm,0.5s
WET Wettzell 78.61 332 eP P 16 06 47.0 +0.2
WET pmax pmax
comp=Z,6.0nm,0.5s
CONA Conrad Observa 78.61 330 ⇑iP P 16 06 47.5 +0.7
comp=Z,5.8nm,0.5s
MNTX Cornudas Mount 78.63 57 eP P 16 06 47.5 +0.3
comp=Z,14nm,0.8s
MNTX epP pP 16 07 11.6 -0.1
225A Deer Hill, Car 78.66 56 ⇓P P 16 06 47.8 +0.2
baz=78,SNR=8.0
GRF Grafenberg Arr 78.67 333 eP P 16 06 47.6 +0.5
comp=Z,16nm,0.8s
GRF eL L 16 42 05.9
comp=Z,40nm,20.8s
GRF Grafenberg Arr 78.67 333 eP P 16 06 47.6 +0.5
GRF pmax pmax
comp=Z,16nm,0.8s
GRFO Grafenberg 78.67 333 eP P 16 06 47.5 +0.4
GRFO pmax pmax
comp=Z,13nm,0.8s
GRFO Grafenberg 78.67 333 eP P 16 06 47.5 +0.4
comp=Z,13nm,0.8s
Z27A Tatum 78.73 54 ⇑P P 16 06 48.0 +0.2
baz=78,SNR=47
126A Clayton Basin, 78.75 55 ⇑P P 16 06 47.8 -0.2
baz=78,SNR=5.5
324A Moseley Ranch, 78.75 57 ⇓P P 16 06 48.1 0.0
baz=78,SNR=12
X29A Tulia 78.77 52 ⇓P P 16 06 48.4 +0.4
baz=78
V31A Spring Creek L 78.83 50 ⇓P P 16 06 48.5 +0.2
baz=79,SNR=5.4
Y28A McKinney Farm, 78.85 53 ⇓P P 16 06 48.6 +0.1
baz=79
W30A Crocket Farms 78.86 51 ⇓P P 16 06 48.9 +0.4
baz=79
GDL2 Guadalupe Moun 78.87 56 eP P 16 06 49.2 +0.5
comp=Z,6.0nm,0.6s
ARNB Al Arnab 79.01 310 eP P 16 06 49.4 +0.1
WRDH Warideh 79.03 310 eP P 16 06 49.7 +0.3
226B Tecolote Peak, 79.07 56 ⇑P P 16 06 50.0 +0.3
baz=79,SNR=17
325A Bean Ranch, Si 79.11 57 ⇓P P 16 06 50.3 +0.2
baz=79,SNR=15
127A Arkansas Junct 79.11 55 ⇓P P 16 06 50.0 +0.1
baz=79
W31A Holland Ranch, 79.20 51 ⇓P P 16 06 50.8 +0.4
baz=79,SNR=12
Y29A Porterfield Fa 79.22 53 ⇑P P 16 06 50.9 +0.5
baz=79
Z28A Tucker Farm, M 79.22 54 ⇓P P 16 06 50.5 0.0
baz=79
X30A Coker Ranch, T 79.23 52 ⇑P P 16 06 50.6 +0.1
baz=79
MOA Molln 79.24 330 ⇑iP P 16 06 50.3 0.0
comp=Z,5.0nm,1.0s
ROOS tl_alroos 79.53 308 eP P 16 06 52.9 +0.7
227A Bennet, Jal 79.63 55 ⇑P P 16 06 53.1 +0.3
baz=79
Z29A Hungry Hill Ra 79.63 53 ⇑P P 16 06 53.2 +0.5
baz=79,SNR=17
Y30A Stafford Cattl 79.64 52 ⇓P P 16 06 52.9 +0.2
baz=79
128A Castleberry Fa 79.65 54 ⇑P P 16 06 53.2 +0.4
baz=79,SNR=22
BCLA Clavier 79.80 337 P P 16 06 52.9 -0.3
comp=Z,6.3nm,1.0s
RJOB Jochberg 79.85 331 eP P 16 06 55.0 +1.4
comp=Z,7.0nm,0.9s
Y31A Rekieta Farm, 79.93 52 ⇑P P 16 06 54.3 +0.1
baz=80
Z30A Sanderson Ranc 79.94 53 ⇑P P 16 06 54.4 +0.1
baz=80,SNR=29
228A UT Block 9, Go 79.96 55 ⇑P P 16 06 54.8 +0.3
baz=80,SNR=9.6
SOKA Soboth 79.97 329 ⇑iP P 16 06 54.2 -0.1
comp=Z,11nm,0.7s
PERS Pernice 79.97 329 iP P 16 06 54.1 -0.2
129A Stewart Farms, 80.00 54 ⇓P P 16 06 54.7 0.0
baz=80
VTS Vitosha 80.09 322 ⇑P P 16 06 55.3 +0.2
VTS Vitosha 80.09 322 ⇑iP P 16 06 55.3 +0.2
426A McDonald Obser 80.17 56 ⇓P P 16 06 55.8 0.0
baz=80,SNR=22
WMOK Wichita Mounta 80.18 50 eP P 16 06 55.5 -0.1
WMOK pmax pmax
comp=Z,24nm,0.7s
WMOK Wichita Mounta 80.18 50 eP P 16 06 55.5 -0.1
comp=Z,24nm,0.7s
GIVF Givet 80.22 337 eP P 16 06 55.0 -0.5
comp=Z,6.2nm,0.5s
GIVF Givet 80.22 337 eP P 16 06 55.0 -0.5
GIVF Givet 80.22 337 eP P 16 06 55.0 -0.5
KBA Koelnbreinsper 80.22 331 ⇑iP P 16 06 56.2 +0.4
comp=Z,22nm,0.9s
WLF Walferdange 80.24 336 P P 16 06 56.0 +0.4
OBKA Obir 80.28 330 ⇑iP P 16 06 55.8 -0.3
comp=Z,5.4nm,0.7s
Y32A R-V Farms, Ver 80.36 51 ⇑P P 16 06 56.4 -0.1
baz=80,SNR=10
328A Wristen Ranch, 80.37 55 ⇑P P 16 06 56.9 +0.2
baz=80,SNR=33
427A Hayter Ranch, 80.41 56 ⇓P P 16 06 57.3 +0.3
baz=80,SNR=16
ZALF Zalf 80.43 307 eP P 16 06 58.0 +1.0
BAIF Baives 80.43 337 eP P 16 06 55.7 -0.9
comp=Z,6.7nm,0.6s
BAIF Baives 80.43 337 eP P 16 06 55.7 -0.9
BAIF Baives 80.43 337 eP P 16 06 55.7 -0.9
Z31A Sharp Cattle R 80.47 52 ⇓P P 16 06 57.1 -0.1
baz=80,SNR=15
MYKA Terra Mystica 80.50 330 ⇑iP P 16 06 57.0 -0.2
comp=Z,12nm,0.9s
HDIL Hopedale 80.51 41 eP P 16 06 56.2 -1.0
comp=Z,93nm,1.0s
HDIL epP pP 16 07 21.4 -0.3
229A Bryant Ranch, 80.52 54 ⇓P P 16 06 57.7 +0.2
baz=80,SNR=8.7
130A Snyder 80.54 53 ⇑P P 16 06 57.8 +0.2
baz=80
526A Mary Lane Ranc 80.57 57 ⇓P P 16 06 58.5 +0.6
baz=80,SNR=32
WATA Walderalm 80.61 332 ⇑iP P 16 06 58.0 +0.2
comp=Z,19nm,0.4s
WTTA Wattenberg 80.65 332 ⇑iP P 16 06 58.3 +0.3
comp=Z,20nm,0.4s
RETA Reutte 80.75 332 ⇓iP P 16 06 58.4 -0.1
comp=Z,12nm,0.9s
MOTA Moosalm 80.76 332 ⇑iP P 16 06 58.6 0.0
comp=Z,18nm,0.9s
329A Wagon Wheel Ra 80.77 55 ⇑P P 16 06 59.2 +0.3
baz=81,SNR=12
BFO Black Forest 80.78 334 eP P 16 06 58.0 -0.6
comp=Z,26nm,1.9s
BFO Black Forest 80.78 334 eP P 16 06 58.0 -0.6
BFO pmax pmax
comp=Z,26nm,1.9s
VISS Visnje 80.78 329 iP P 16 06 57.6 -1.0
527A Woodward Ranch 80.80 57 ⇓P P 16 06 59.3 +0.2
baz=81,SNR=24
131A Roby 80.81 53 ⇓P P 16 06 59.4 +0.4
baz=81
Z32A Haskell 80.86 52 ⇑P P 16 06 59.1 -0.1
baz=81,SNR=13
BOJS Bojanci 80.89 329 iP P 16 06 58.3 -0.8
TUL1 Tulsa 80.90 48 ⇑P P 16 06 59.3 0.0
baz=81,SNR=6.8
626A Big Bend Ranch 80.92 57 ⇑P P 16 07 00.0 +0.3
baz=81,SNR=30
428A Kincaid Ranch, 80.92 56 ⇓P P 16 07 00.5 +0.8
baz=81,SNR=14
SALA Sala 80.92 307 eP P 16 07 01.0 +1.2
230A Sterling City 80.98 54 ⇑P P 16 07 00.2 +0.2
baz=81,SNR=12
JAVS Javornik 80.99 330 iP P 16 06 58.4 -1.4
CDF Champ du Feu 81.03 335 ⇑iP P 16 06 59.6 -0.4
comp=Z,9.7nm,0.6s
CDF Champ du Feu 81.03 335 ⇑iP P 16 06 59.6 -0.4
CDF Champ du Feu 81.03 335 ⇑iP P 16 06 59.6 -0.4
FETA Feichten 81.17 332 ⇑iP P 16 07 01.2 +0.4
comp=Z,4.4nm,0.5s
DAVA Damuels 81.21 333 ⇑iP P 16 07 00.9 -0.1
comp=Z,12nm,0.8s
ABTX Abilene, Hawle 81.27 52 ⇓P P 16 07 01.8 +0.4
baz=81
528A Cox Ranch, San 81.27 56 ⇓P P 16 07 02.1 +0.5
baz=81,SNR=34
330A Mertzon 81.30 54 ⇑P P 16 07 01.6 0.0
baz=81,SNR=9.9
TXAR Lajitas Array 81.35 57 P P 16 07 02.5 +0.5
TXAR pP pP 16 07 27.3 +0.7
TXAR PKKPbc PKKPbc 16 25 36.5 +2.9
TXAR Lajitas Array 81.35 57 P P 16 07 02.5 +0.5
comp=Z,37nm,0.6s,baz=299,slow=4.0,SNR=450
TXAR pP pP 16 07 27.3 +0.7
comp=Z,5.6nm,0.5s,baz=305,slow=4.4,SNR=3.9
TXAR PKKPbc PKKPbc 16 25 36.5 +2.9
comp=Z,0.3nm,0.4s,baz=129,slow=4.0,SNR=4.3
SKO Skopje 81.36 323 eP P 16 07 02.4 +0.7
PAGF Fort de Pagny 81.36 336 ⇑iP P 16 07 01.7 +0.1
comp=Z,11nm,0.6s
PAGF Fort de Pagny 81.36 336 ⇑iP P 16 07 01.7 +0.1
VAY Valandovo 81.39 322 eP P 16 07 01.4 -0.5
231A Bronte 81.40 53 ⇓P P 16 07 02.0 -0.1
baz=81,SNR=8.1
627A Terlingua Ranc 81.43 57 ⇓P P 16 07 02.7 +0.2
baz=81,SNR=23
429A Davenport Ranc 81.46 55 ⇑P P 16 07 02.5 -0.1
baz=81,SNR=12
SLM Saint Louis 81.58 42 eP P 16 07 02.7 -0.3
SLM Saint Louis 81.58 42 eP P 16 07 02.7 -0.3
MEZF Maizieres J'vi 81.60 336 eP P 16 07 02.4 -0.5
comp=Z,24nm,0.5s
MEZF Maizieres J'vi 81.60 336 eP P 16 07 02.4 -0.5
529A Stev Forest Ra 81.63 56 ⇑P P 16 07 03.7 +0.3
baz=81,SNR=39
SFIN Scholer Farm 81.66 39 ⇓P P 16 07 02.9 -0.4
baz=81,SNR=5.1
HAU Haudompre 81.67 335 ⇑iP P 16 07 02.7 -0.6
comp=Z,13nm,0.6s
HAU eR
comp=Z,45nm,21.0s
HAU Haudompre 81.67 335 ⇑iP P 16 07 02.7 -0.6
HAU Haudompre 81.67 335 ⇑iP P 16 07 02.7 -0.6
HINF Hinteralfeld 81.69 335 ⇑iP P 16 07 02.6 -0.8
comp=Z,8.1nm,0.6s
HINF Hinteralfeld 81.69 335 ⇑iP P 16 07 02.6 -0.8
HINF Hinteralfeld 81.69 335 ⇑iP P 16 07 02.6 -0.8
628A Black Gap, Mar 81.71 57 ⇑P P 16 07 04.1 +0.3
baz=82,SNR=22
430A Baggett Ranch, 81.72 55 ⇑P P 16 07 03.9 0.0
baz=82,SNR=17
331A San Angelo 81.80 54 ⇓P P 16 07 04.3 0.0
baz=82,SNR=5.9
232A Coleman 81.82 53 ⇓P P 16 07 04.6 +0.3
baz=82,SNR=30
SFTF Sexfontaines 81.88 336 eP P 16 07 03.7 -0.6
comp=Z,30nm,0.6s
SFTF Sexfontaines 81.88 336 eP P 16 07 03.7 -0.6
TUE Stuetta 82.10 333 eP P 16 07 05.4 -0.4
comp=Z,8.0nm,0.6s
530A J-C Ranch, Com 82.13 55 ⇓P P 16 07 06.5 +0.4
baz=82,SNR=25
332A Millersview 82.14 53 ⇑P P 16 07 06.3 +0.3
baz=82,SNR=16
431A Sonora 82.16 54 ⇑P P 16 07 06.2 0.0
baz=82,SNR=18
BIA Bitola 82.18 322 eP P 16 07 05.3 -0.9
RAYN Ar Rayn 82.27 295 P P 16 07 07.0 +0.1
comp=Z,59nm,0.6s,SNR=8.4
432A Menard 82.48 54 ⇑P P 16 07 08.0 +0.1
baz=82,SNR=18
531A Rocksprings 82.58 55 ⇑P P 16 07 08.5 +0.2
baz=82,SNR=20
JCT Junction City 82.78 54 eP P 16 07 09.5 +0.1
JCT pmax pmax
comp=Z,54nm,1.3s
JCT Junction City 82.78 54 eP P 16 07 09.4 +0.1
comp=Z,54nm,1.3s
JCT Junction City 82.78 54 ⇑P P 16 07 09.4 0.0
baz=82,SNR=11
SIUC Southern Illin 82.80 42 eP P 16 07 08.5 -0.8
comp=Z,81nm,1.0s
SIUC epP pP 16 07 32.5 -1.5
FLN La Foliniere 82.84 340 ⇑iP P 16 07 09.0 -0.3
comp=Z,9.8nm,0.3s
FLN eR
comp=Z,60nm,19.8s
FLN La Foliniere 82.84 340 ⇑iP P 16 07 09.0 -0.3
FLN La Foliniere 82.84 340 ⇑iP P 16 07 09.0 -0.3
LDF La Druitiere 82.91 339 eP P 16 07 09.2 -0.5
comp=Z,5.5nm,0.5s
LDF La Druitiere 82.91 339 eP P 16 07 09.2 -0.5
LDF La Druitiere 82.91 339 eP P 16 07 09.2 -0.5
WHTX Lake Whitney 82.97 51 ⇑P P 16 07 10.5 +0.2
baz=83,SNR=12
532A Rocksprings 82.98 54 ⇑P P 16 07 10.5 +0.1
baz=83,SNR=30
CABF La Chapelle 83.00 335 eP P 16 07 09.5 -0.8
CABF La Chapelle 83.00 335 eP P 16 07 09.5 -0.8
CABF La Chapelle 83.00 335 eP P 16 07 09.5 -0.8
LOR Lormes 83.06 336 eP P 16 07 10.1 -0.4
comp=Z,13nm,0.5s
LOR eR
comp=Z,65nm,23.0s
LOR Lormes 83.06 336 eP P 16 07 10.1 -0.4
631A Perdido Creek 83.12 55 ⇑P P 16 07 11.3 +0.1
baz=83,SNR=37
GRR Gorron 83.28 340 eP P 16 07 11.6 0.0
comp=Z,16nm,0.5s
GRR Gorron 83.28 340 eP P 16 07 11.6 0.0
GRR Gorron 83.28 340 eP P 16 07 11.6 0.0
SSF Saint Saulge 83.35 337 ⇑iP P 16 07 11.6 -0.4
comp=Z,19nm,0.8s
SSF Saint Saulge 83.35 337 ⇑iP P 16 07 11.6 -0.4
SSF Saint Saulge 83.35 337 ⇑iP P 16 07 11.6 -0.4
PARMO Parma 83.38 43 eP P 16 07 12.6 +0.3
632A Uvalde 83.51 54 ⇑P P 16 07 13.3 +0.2
baz=83,SNR=14
ACSO Alum Creek Sta 83.59 37 eP P 16 07 13.0 -0.3
comp=Z,29nm,1.3s
SMF Signal de Mont 83.63 336 ⇑iP P 16 07 13.2 -0.3
comp=Z,53nm,0.8s
SMF Signal de Mont 83.63 336 ⇑iP P 16 07 13.2 -0.3
SMF Signal de Mont 83.63 336 ⇑iP P 16 07 13.2 -0.3
LPL La Plagne 83.79 334 ⇑iP P 16 07 14.7 +0.2
comp=Z,12nm,0.4s
LPL La Plagne 83.79 334 ⇑iP P 16 07 14.7 +0.2
LPL La Plagne 83.79 334 ⇑iP P 16 07 14.7 +0.2
LPG La Plagne 83.80 334 ⇑iP P 16 07 14.9 +0.2
comp=Z,30nm,0.6s
LPG La Plagne 83.80 334 ⇑iP P 16 07 14.9 +0.2
LPG La Plagne 83.80 334 ⇑iP P 16 07 14.9 +0.2
GNAR Gosnell 83.80 44 eP P 16 07 15.1 +0.6
HBAR Harrisburg 83.81 45 eP P 16 07 15.5 +1.0
SGMF Saint Gilles 83.81 341 eP P 16 07 14.4 +0.1
comp=Z,22nm,0.5s
SGMF Saint Gilles 83.81 341 eP P 16 07 14.4 +0.1
SGMF Saint Gilles 83.81 341 eP P 16 07 14.4 +0.1
ROSF Rostrenen 83.90 341 eP P 16 07 14.4 -0.3
comp=Z,25nm,0.6s
ROSF Rostrenen 83.90 341 eP P 16 07 14.4 -0.3
ROSF Rostrenen 83.90 341 eP P 16 07 14.4 -0.3
PPT Papeete 83.90 122 LR LR 16 42 52.5
comp=Z,66nm,18.4s,baz=358,slow=34
PPT2 Papeete2 83.92 122 eLR LR 16 33 10.4
comp=Z,275nm,33.0s
GLAT Glass 83.92 43 eP P 16 07 16.0 +1.0
732A Laxson Ranch, 83.98 55 ⇓P P 16 07 16.0 +0.5
baz=84,SNR=9.4
BGF Bois d'Agland 84.00 337 eP P 16 07 15.8 +0.5
comp=Z,24nm,0.6s
BGF Bois d'Agland 84.00 337 eP P 16 07 15.8 +0.5
BGF Bois d'Agland 84.00 337 eP P 16 07 15.8 +0.5
BNI Bardonecchia 84.22 334 eP P 16 07 16.0 -0.6
BNI pmax pmax
comp=Z,9.0nm,0.6s
BNI Bardonecchia 84.22 334 eP P 16 07 16.0 -0.6
comp=Z,9.0nm,0.6s
QUIF Quistinic 84.27 341 eP P 16 07 16.5 -0.1
comp=Z,17nm,0.6s
QUIF Quistinic 84.27 341 eP P 16 07 16.5 -0.1
QUIF Quistinic 84.27 341 eP P 16 07 16.5 -0.1
TCF Toulx Ste Croi 84.42 337 ⇑iP P 16 07 17.5 0.0
TCF Toulx Ste Croi 84.42 337 ⇑iP P 16 07 17.5 0.0
TCF Toulx Ste Croi 84.42 337 ⇑iP P 16 07 17.5 0.0
MBDF Montbardon 84.48 334 eP P 16 07 17.6 -0.4
comp=Z,22nm,0.3s
MBDF Montbardon 84.48 334 eP P 16 07 17.6 -0.4
MBDF Montbardon 84.48 334 eP P 16 07 17.6 -0.4
ACCN Adirondack Com 84.51 29 eP P 16 07 17.2 -0.8
comp=Z,7.6nm,0.9s
ORIF Oris-en-Rattie 84.59 334 ⇑iP P 16 07 18.7 +0.3
comp=Z,34nm,0.6s
ORIF eR
comp=Z,41nm,22.0s
ORIF Oris-en-Rattie 84.59 334 ⇑iP P 16 07 18.7 +0.3
ORIF Oris-en-Rattie 84.59 334 ⇑iP P 16 07 18.7 +0.3
SSB Saint Sauveur 84.67 335 eP P 16 07 18.5 -0.3
SSB pmax pmax
comp=Z,9.0nm,0.6s
SSB Saint Sauveur 84.67 335 eP P 16 07 18.5 -0.3
comp=Z,9.0nm,0.6s
WVT Waverly 84.73 42 eP P 16 07 19.3 +0.1
WVT e*PP pP 16 07 43.4 -0.5
WVT pmax pmax
comp=Z,19nm,0.9s
WVT Waverly 84.73 42 eP P 16 07 19.3 +0.1
comp=Z,19nm,0.9s
WVT epP pP 16 07 43.4 -0.5
MFF Saint Martin d 84.76 339 eP P 16 07 19.0 -0.1
comp=Z,29nm,0.6s
MFF Saint Martin d 84.76 339 eP P 16 07 19.0 -0.1
MFF Saint Martin d 84.76 339 eP P 16 07 19.0 -0.1
VIVF Saint-Julien-l 85.01 335 eP P 16 07 20.7 +0.2
comp=Z,20nm,0.5s
VIVF Saint-Julien-l 85.01 335 eP P 16 07 20.7 +0.2

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VIVF	Saint-Julien-l	85.01	335	eP	P	16 07 20.7	+0.2
SBF	Sospel	85.04	333	eP	P	16 07 19.9	-0.8
	comp=Z,32nm,0.4s						
SBF	Sospel	85.04	333	eP	P	16 07 19.9	-0.8
SBF	Sospel	85.04	333	eP	P	16 07 19.9	-0.8
OXF	Oxford	85.26	44	eP	P	16 07 21.4	-0.4
OXF				pmax	pmax		
	comp=Z,82nm,0.9s						
OXF	Oxford	85.26	44	eP	P	16 07 21.4	-0.4
	comp=Z,82nm,0.9s						
RJF	Les Rejaudoux	85.52	337	eP	P	16 07 23.2	+0.3
	comp=Z,10nm,0.7s						
RJF				eR			
	comp=Z,60nm,18.8s						
RJF	Les Rejaudoux	85.52	337	eP	P	16 07 23.2	+0.3
RJF	Les Rejaudoux	85.52	337	eP	P	16 07 23.2	+0.3
SMRF	Simiane la Rot	85.53	334	eP	P	16 07 23.0	-0.1
SMRF	Simiane la Rot	85.53	334	eP	P	16 07 23.0	-0.1
FRF	La Foret Royal	85.57	333	eP	P	16 07 22.2	-1.0
	comp=Z,7.2nm,0.5s						
FRF	La Foret Royal	85.57	333	eP	P	16 07 22.2	-1.0
FRF	La Foret Royal	85.57	333	eP	P	16 07 22.2	-1.0
PGF	Pioggiola	85.69	331	eP	P	16 07 23.3	-0.7
	comp=Z,16nm,0.7s						
PGF	Pioggiola	85.69	331	eP	P	16 07 23.3	-0.7
PGF	Pioggiola	85.69	331	eP	P	16 07 23.3	-0.7
CAF	Calviac	85.71	337	⇑iP	P	16 07 24.7	+0.7
	comp=Z,15nm,0.5s						
CAF	Calviac	85.71	337	⇑iP	P	16 07 24.7	+0.7
CAF	Calviac	85.71	337	⇑iP	P	16 07 24.7	+0.7
LMR	La Mourre	85.81	333	eP	P	16 07 24.1	-0.3
	comp=Z,39nm,0.8s						
LMR	La Mourre	85.81	333	eP	P	16 07 24.1	-0.3
LMR	La Mourre	85.81	333	eP	P	16 07 24.1	-0.3
LASF	Ste Croix	85.97	335	⇑iP	P	16 07 25.7	+0.5
	comp=Z,22nm,0.8s						
LASF	Ste Croix	85.97	335	⇑iP	P	16 07 25.7	+0.5
LFF	La Frestale	86.06	338	eP	P	16 07 25.8	+0.2
	comp=Z,54nm,0.7s						
LFF	La Frestale	86.06	338	eP	P	16 07 25.8	+0.2
LFF	La Frestale	86.06	338	eP	P	16 07 25.8	+0.2
TZTN	Tazewell	86.39	39	eP	P	16 07 27.5	+0.1
	comp=Z,57nm,1.5s						
CPCT	Cooper Cave	86.85	41	eP	P	16 07 29.1	-0.5
CPCT				epP	pP	16 07 54.0	-0.5
MTLF	Montolieu	87.12	336	eP	P	16 07 31.2	+0.3
	comp=Z,6.7nm,0.6s						
MTLF	Montolieu	87.12	336	eP	P	16 07 31.2	+0.3
MTLF	Montolieu	87.12	336	eP	P	16 07 31.2	+0.3
BLA	Blacksburg	87.21	37	eP	P	16 07 31.3	-0.1
BLA				pmax	pmax		
	comp=Z,12nm,0.9s						
BLA	Blacksburg	87.21	37	eP	P	16 07 31.3	-0.1
	comp=Z,12nm,0.9s						
LRAL	Lakeview Retre	87.64	44	eP	P	16 07 33.1	-0.4
	comp=Z,9.2nm,0.7s						
JSRW	J. Sargeant Re	87.86	35	eP	P	16 07 34.4	-0.1
EPF	Esparros	87.94	337	eP	P	16 07 34.4	-0.4
	comp=Z,5.8nm,0.6s						
EPF	Esparros	87.94	337	eP	P	16 07 34.4	-0.4
EPF	Esparros	87.94	337	eP	P	16 07 34.4	-0.4
SJPF	Ste Jean	88.29	338	eP	P	16 07 36.4	0.0
	comp=Z,10nm,0.9s						
SJPF	Ste Jean	88.29	338	eP	P	16 07 36.4	0.0
SJPF	Ste Jean	88.29	338	eP	P	16 07 36.4	0.0
ETSF	Etsaut	88.31	338	eP	P	16 07 36.5	-0.1
	comp=Z,19nm,0.5s						
ETSF	Etsaut	88.31	338	eP	P	16 07 36.5	-0.1
ETSF	Etsaut	88.31	338	eP	P	16 07 36.5	-0.1
TBI	Tubuai	88.43	126	eLR	LR	16 33 49.0	
	comp=Z,138nm,37.2s						
KMSC	Kings Mountain	88.55	39	⇑P	P	16 07 37.6	-0.2
	baz=88,SNR=6.7						
TIGA	Tifton	90.59	42	⇑P	P	16 07 47.8	+0.4
	baz=90						
KEST	Kesra	91.58	328	P	P	16 07 51.5	-0.5
KEST	Kesra	91.58	328	P	P	16 07 51.5	-0.5
	comp=Z,1.1nm,0.5s,baz=28,slow=3.0,SNR=5.7						
KEST				LR	LR	16 49 36.4	
	comp=Z,23nm,20.3s,baz=270,slow=36						
ESDC	Sonseca Array	92.22	339	P	P	16 07 54.0	-0.8
ESDC	Sonseca Array	92.22	339	P	P	16 07 54.0	-0.8
	comp=Z,1.0nm,0.5s,baz=20,slow=4.6,SNR=6.9						
TORD	Torodi Ar. Bea	114.80	324	PKP	PKPdf	16 13 24.6	-1.0
TORD				PKKPbc	PKKPbc	16 24 03.0	+2.0
TORD	Torodi Ar. Bea	114.80	324	PKP	PKPdf	16 13 24.6	-1.0
	comp=Z,1.5nm,0.4s,baz=15,slow=1.8,SNR=33						
TORD				PKKPbc	PKKPbc	16 24 03.0	+2.0
	comp=Z,1.0nm,0.7s,baz=199,slow=3.1,SNR=7.4						
VNDA	Vanda	122.40	177	ePKPdf	PKPdf	16 13 38.2	0.0
VNDA				PKP	PKPdf	16 13 38.6	+0.4
VNDA	Vanda	122.40	177	PKP	PKPdf	16 13 38.6	+0.4
	comp=Z,3.9nm,0.8s,baz=322,slow=4.1,SNR=16						
DBIC	Dimbokro	123.31	328	PKP	PKPdf	16 13 41.5	-0.5
DBIC	Dimbokro	123.31	328	PKP	PKPdf	16 13 41.5	-0.5
	comp=Z,4.2nm,0.5s,baz=24,slow=2.0,SNR=11						
LIC	Lamto	123.78	328	ePKIKP	PKPdf	16 13 41.9	-1.0
	comp=Z,7.9nm,0.6s						
LIC	Lamto	123.78	328	ePKPdf	PKPdf	16 13 41.9	-1.0
MAW	Mawson	128.87	209	PKP	PKPdf	16 13 51.9	+1.1
MAW	Mawson	128.87	209	PKP	PKPdf	16 13 51.9	+1.1
	comp=Z,3.3nm,0.5s,baz=89,slow=3.3,SNR=10						
BOSA	Boshof	132.52	270	SKPbc	SKPbc	16 17 16.7	-0.8
BOSA	Boshof	132.52	270	SKPbc	SKPbc	16 17 16.7	-0.8
	comp=Z,3.0nm,0.8s,baz=86,slow=2.7,SNR=5.0						
SYO	Syowa Base	137.56	210	⇑ePKPdf	PKPdf	16 14 07.6	+0.5
LPAZ	La Paz	138.20	59	PKPpre	PKPpre	16 14 02.1	
LPAZ				PKP	PKPdf	16 14 11.5	+0.8
LPAZ	La Paz	138.20	59	PKhKP	PKPpre	16 14 02.1	
	comp=Z,0.9nm,0.5s,baz=342,slow=3.4,SNR=3.6						
LPAZ				PKP	PKPdf	16 14 11.5	+0.8
	comp=Z,3.6nm,0.8s,baz=9.6,slow=4.6,SNR=11						
SIV	San Ignacio	142.05	50	PKPpre	PKPpre	16 14 09.8	
SIV				PKP	PKPdf	16 14 16.5	-0.4
SIV	San Ignacio	142.05	50	PKhKP	PKPpre	16 14 09.8	
	comp=Z,3.5nm,0.8s,baz=326,slow=2.9,SNR=16						
SIV				PKP	PKPdf	16 14 16.5	-0.4
	comp=Z,4.3nm,0.7s,baz=337,slow=2.0,SNR=10.0						
LCO	Las Campanas	145.42	76	ePKP	PKPab	16 14 23.2	0.0
MAIT	Maitri	146.55	204	eP	PKPdf	16 14 15.0	-8.0
BDFB	Brasilia	147.78	30	PKPbc	PKPbc	16 14 30.1	+0.2
BDFB				pPKPbc	pPKPbc	16 14 55.4	-0.3
BDFB	Brasilia	147.78	30	PKPbc	PKPbc	16 14 30.1	+0.2
	comp=Z,17nm,0.7s,baz=309,slow=2.8,SNR=20						
BDFB				pPKPbc	pPKPbc	16 14 55.4	-0.3
	comp=Z,8.9nm,0.7s,baz=346,slow=1.8,SNR=4.2						
CFAA	Coronel Fontan	148.67	78	PKPbc	PKPbc	16 14 31.8	+0.1
CFAA	Coronel Fontan	148.67	78	PKPbc	PKPbc	16 14 31.8	+0.1
	comp=Z,7.5nm,0.6s,baz=289,slow=3.5,SNR=19						
SNAA	Sanae	149.76	198	ePKPbc	PKPbc	16 14 33.0	-0.2
PLCA	Paso Flores	151.39	96	PKPbc	PKPbc	16 14 38.9	+0.8
PLCA				pPKPbc	pPKPbc	16 15 02.7	-1.3
PLCA	Paso Flores	151.39	96	PKPbc	PKPbc	16 14 38.9	+0.8
	comp=Z,26nm,0.8s,baz=248,slow=3.5,SNR=36						
PLCA				pPKPbc	pPKPbc	16 15 02.7	-1.3
	comp=Z,9.8nm,0.9s,baz=296,slow=2.8,SNR=3.4						
CPUP	Villa Florida	152.33	57	PKP	PKPdf	16 14 34.0	+0.4
CPUP				PKPbc	PKPbc	16 14 40.4	-0.1
CPUP				PKPab	PKPab	16 14 51.0	+0.2
CPUP				pPKPbc	pPKPbc	16 15 06.3	-0.1
CPUP				pPKPab	pPKPab	16 15 16.8	+0.8
CPUP	Villa Florida	152.33	57	PKP	PKPdf	16 14 34.0	+0.4
	comp=Z,0.6nm,0.3s,baz=274,slow=1.5,SNR=7.0						
CPUP				PKPbc	PKPbc	16 14 40.4	-0.1
	comp=Z,1.9nm,0.5s,baz=302,slow=2.8,SNR=7.1						
CPUP				PKPab	PKPab	16 14 51.0	+0.2
	comp=Z,7.1nm,0.7s,baz=300,slow=4.1,SNR=16						
CPUP				pPKPbc	pPKPbc	16 15 06.3	-0.1
	comp=Z,2.8nm,0.7s,baz=342,slow=3.2,SNR=2.2						
CPUP				pPKPab	pPKPab	16 15 16.8	+0.8
	comp=Z,7.3nm,0.8s,baz=289,slow=4.6,SNR=3.1						

*ISCJB **10** 16:20:44.0±2.7, 33°.2S±0°.1×178°.2W±0°.4, h32km, mb4.1/3, MS3.5/2, Error ellipse: s-maj=50.3km s-min=11.2km az=13.0*

*IDC **10** 16:20:43.2±1.3, 32°.88S×178°.47W, h0km, mb4.2/3, mb1 4.4/4, mb1mx3.9/19, mbtmp4.2/4, ML4.0/1, MS3.5/3, Ms1 3.5/3, ms1mx3.1/28, Error ellipse: s-maj=39.9km s-min=33.9km az=173.0*

ISC 10 16:20:47.1±1.2**, 33°.1S**±0°.1×**178°.4W**±0°.2**, h32**km**, n17, σ1s.34**/18**, mb4.2**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MWZ	Matawai	6.23	211	PN	Pn	16 22 17.3	+0.4
MWZ				SN	Sn	16 23 26.7	-0.3
URZ	Urewera	6.36	214	PN	Pn	16 22 18.4	-0.2
URZ				SN	Sn	16 23 29.4	-0.6
URZ	Urewera	6.36	214	Pn	Pn	16 22 18.1	-0.5
	3.0nm,0.3s,baz=152,slow=16,SNR=16						
URZ				Sn	Sn	16 23 30.7	+0.7
	7.0nm,0.3s,baz=284,slow=21,SNR=10						
KNZ	Kokohu	6.75	207	PN	Pn	16 22 22.1	-1.8
DZM	Mont Dzumac	17.33	305	LR	LR	16 29 49.5	
	comp=Z,166nm,19.8s,baz=197,slow=32						
CTA	Charters Tower	34.01	283	P	P	16 27 29.6	+1.4
	1.7nm,0.4s,baz=113,slow=12,SNR=4.7						
ASAR	Alice Springs	42.72	270	P	P	16 28 41.0	-0.4
	2.3nm,0.8s,baz=111,slow=7.8,SNR=27						
ASAR				LR	LR	16 45 39.8	
	comp=Z,60nm,18.3s,baz=160,slow=35						
WRA	Warramunga Arr	43.95	275	P	P	16 28 51.0	-0.4
	2.8nm,0.6s,baz=114,slow=7.8,SNR=46						
PETK	Petropavlovsk-	88.31	346	LR	LR	17 05 44.0	
	comp=Z,20nm,19.6s,baz=250,slow=31						
ARCES	ARCESS Array B	141.11	347	PKP	PKPdf	16 40 13.6	+0.4
	1.0nm,1.0s,baz=45,slow=3.6,SNR=3.8						
JOF	Joensuu	144.75	337	ep	PKPab	16 40 17.0	-1.7
	0.6nm,0.4s						
KAF	Kangasniemi	146.93	339	ep	PKPab	16 40 25.4	-1.6
	2.4nm,0.7s						
FINES	FINESS Array B	147.51	338	PKPbc	PKPab	16 40 27.2	-2.1
	1.5nm,0.4s,baz=68,slow=5.1,SNR=10						
NB2	NORSAR Subarra	151.32	350	PKP	PKPbc	16 40 36.7	0.0
	comp=Z,0.5nm,0.6s,baz=17,slow=2.6						
NOA	NORSAR Array B	151.32	350	PKPbc	PKPbc	16 40 36.8	0.0
	comp=Z,1.0nm,0.7s,baz=14,slow=4.1,SNR=4.6						
BRTR	Keskin Array B	153.49	294	PKPbc	PKPbc	16 40 42.1	-0.3
	comp=Z,0.6nm,0.5s,baz=127,slow=5.4,SNR=4.2						
TORD	Torodi Ar. Bea	160.18	180	PKPab	PKPab	16 41 27.0	+3.2
	comp=Z,0.3nm,0.9s,baz=168,slow=7.4,SNR=2.4						

*ISK **10** 16:21:02.9, 39°.82N×27°.89E, h12km, MD2.5*

*ISCJB **10** 16:21:03.8±0.5, 39°.85N±0°.03×27°.82E±0°.04, h1km±6km, Error ellipse: s-maj=5.3km s-min=4.2km az=149.1*

*DDA **10** 16:21:03.8, 39°.85N×27°.80E, h7km, MD2.6*

*CSEM **10** 16:21:03.8±0.2, 39°.84N×27°.81E, h5km, MD2.5, Error ellipse: s-maj=4.6km s-min=2.9km az=52.0*

ISC 10 16:21:04.0±0.9**, 39°.84N**±0°.02×**27°.84E**±0°.03**, h9**km±8km**, n30, σ0s.60**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BALY	Balya	0.19	241	iP	Pg	16 21 07.9	-0.1
BALY				iS	Sg	16 21 11.0	+0.2
BALY	Balya	0.19	241	iP	Pg	16 21 07.9	-0.1
BALY				iS	Sg	16 21 11.0	+0.2
BALB	Balikesir	0.20	170	ePG	Pg	16 21 07.3	-0.8
BALB				eSG	Sg	16 21 10.8	-0.1
BALB	Balikesir	0.20	170	ePg	Pg	16 21 07.3	-0.8
BALB				eSg	Sg	16 21 10.8	-0.1
GONE	Gonen-Balikesi	0.24	331	ePG	Pg	16 21 08.8	0.0
GONE				eSG	Sg	16 21 13.4	+1.2
GONE	Gonen-Balikesi	0.24	331	ePg	Pg	16 21 08.9	0.0
GONE				eSg	Sg	16 21 13.4	+1.2
DURS	Dursunbey	0.54	115	iP	Pb	16 21 15.5	-0.3
DURS				iS	Sb	16 21 23.3	-0.4
DURS	Dursunbey	0.54	115	iP	Pb	16 21 15.5	-0.3
DURS				iS	Sb	16 21 23.3	-0.4
MRMT	Marmara Adasi	0.79	347	ePG	Pg	16 21 19.2	0.0
MRMT	Marmara Adasi	0.79	347	ePg	Pg	16 21 19.2	0.0
MDNY	Mudanya-Bursa	0.96	56	ePG	Pg	16 21 21.3	-1.2
MDNY	Mudanya-Bursa	0.96	56	ePg	Pg	16 21 21.3	-1.2
RKY	Sarkoy-Tekirda	0.99	330	ePG	Pg	16 21 22.8	-0.2
RKY	Sarkoy-Tekirda	0.99	330	ePg	Pg	16 21 22.8	-0.2
MFT	Murefte	1.04	336	ePG	Pb	16 21 23.9	-0.3
MFT	Murefte	1.04	336	ePg	Pb	16 21 23.9	-0.3
DEMI	Demirci	1.04	139	iP	Pg	16 21 24.1	0.0
DEMI				iS	Sn	16 21 39.6	0.0
DEMI	Demirci	1.04	139	iP	Pg	16 21 24.1	0.0
DEMI				iS	Sn	16 21 39.6	0.0
ULDT	Uludag	1.04	73	iP	Pg	16 21 24.0	-0.1
ULDT				iS	Sn	16 21 39.4	-0.4
ULDT	Uludag	1.04	73	iP	Pg	16 21 24.0	-0.1
ULDT				iS	Sn	16 21 39.4	-0.4
ARMT	Armutlu	1.07	47	ePG	Pg	16 21 23.8	-0.8
ARMT	Armutlu	1.07	47	ePg	Pg	16 21 23.8	-0.8
EZN	Ezine	1.16	270	ePN	Pb	16 21 25.7	-0.5
EZN	Ezine	1.16	270	ePn	Pb	16 21 25.7	-0.5
GELI	Tayfur-Gelibol	1.19	299	ePN	Pb	16 21 26.4	-0.2
GELI	Tayfur-Gelibol	1.19	299	ePn	Pb	16 21 26.4	-0.2
MANT	Manisa	1.46	157	iP	Pb	16 21 31.4	0.0
MANT				iS	Sb	16 21 50.5	+0.5
MANT	Manisa	1.46	157	iP	Pb	16 21 31.4	0.0
MANT				iS	Sb	16 21 50.5	+0.5
GDZ	Gediz	1.48	120	iP	Pb	16 21 32.2	+0.5
GDZ				iS	Sg	16 21 52.8	+1.4
GDZ	Gediz	1.48	120	iP	Pb	16 21 32.2	+0.5
GDZ				iS	Sg	16 21 52.8	+1.4

*DDA **10** 16:23:04.8, 39°.64N×28°.87E, h7km, MD2.5*

*ISCJB **10** 16:23:05.6±0.5, 39°.57N±0°.03×28°.86E±0°.05, h9km±7km, Error ellipse: s-maj=6.7km s-min=5.1km az=8.8*

*CSEM **10** 16:23:05.7±0.2, 39°.57N×28°.83E, h12km, MD2.7, Error ellipse: s-maj=4.2km s-min=3.4km az=84.0*

*ISK **10** 16:23:05.7, 39°.58N×28°.84E, h14km, MD2.7*

ISC 10 16:23:05.8±0.9**, 39°.59N**±0°.03×**28°.83E**±0°.03**, h13**km±7km**, n25, σ1s.10**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DST	Dursunbey	0.16	276	ePG	Pg	16 23 09.7	0.0
DST				eSG	Sb	16 23 14.0	+0.1
DST	Dursunbey	0.16	276	ePg	Pg	16 23 09.7	0.0
DST				eSg	Sb	16 23 14.0	+0.1
DURS	Dursunbey	0.28	273	iP	Pg	16 23 11.5	-0.1
DURS				iS	Sg	16 23 16.2	+0.7
DURS	Dursunbey	0.28	273	iP	Pg	16 23 11.5	-0.1
DURS				iS	Sg	16 23 16.2	+0.7
DEMI	Demirci	0.55	189	iP	Pg	16 23 16.3	-0.3
DEMI				iS	Sg	16 23 22.6	-1.3
DEMI	Demirci	0.55	189	iP	Pg	16 23 16.3	-0.3
DEMI				iS	Sg	16 23 22.6	-1.3
GDZ	Gediz	0.71	134	iP	Pg	16 23 19.3	-0.2
GDZ				iS	Sg	16 23 28.9	0.0
GDZ	Gediz	0.71	134	iP	Pg	16 23 19.3	-0.2
GDZ				iS	Sg	16 23 28.9	0.0
GEMT	Gemlik	0.89	18	ePG	Pn	16 23 23.7	-0.3
GEMT				eSG	Sn	16 23 37.0	+0.3
GEMT	Gemlik	0.89	18	ePg	Pn	16 23 23.7	-0.3
GEMT				eSg	Sn	16 23 37.0	+0.3
BALY	Balya	0.95	280	iP	Pb	16 23 23.2	-0.8
BALY				iS	Sb	16 23 29.7	-6.8
BALY	Balya	0.95	280	iP	Pb	16 23 23.2	-0.8
ARMT	Armutlu	0.98	1	ePG	Pb	16 23 24.4	-0.1
ARMT	Armutlu	0.98	1	ePg	Pb	16 23 24.4	-0.1
CAVI	Cavuskoy	0.99	51	ePG	Pb	16 23 24.3	-0.5
CAVI	Cavuskoy	0.99	51	ePg	Pb	16 23 24.3	-0.5
KULA	Kula-Manisa	1.08	187	ePG	Pg	16 23 27.2	+0.6
KULA	Kula-Manisa	1.08	187	ePg	Pg	16 23 27.2	+0.6
MANT	Manisa	1.12	191	iP	Pb	16 23 26.7	-0.3
MANT				iS	Sn	16 23 44.5	+1.9
MANT	Manisa	1.12	191	iP	Pb	16 23 26.7	-0.3
MANT				iS	Sn	16 23 44.5	+1.9
ALT	Altintas	1.13	118	ePN	Pg	16 23 27.9	+0.4
ALT	Altintas	1.13	118	ePn	Pg	16 23 27.9	+0.4
MRMT	Marmara Adasi	1.39	317	ePN	Pn	16 23 31.3	+0.4
MRMT	Marmara Adasi	1.39	317	ePn	Pn	16 23 31.3	+0.4
SART	Tekirdag	1.68	312	iP	Sn	16 23 52.0	-4.2
SART				iS	Sg	16 24 02.5	+2.8

MEX 10 16:35:28.5±1.1**, 17°.22N**×**94°.56W, h133**km±23km**, MD4.0, Chiapas**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TGIG		1.45	107	iP	Pn	16 35 55.6	-0.7
TGIG				eS	Sn	16 36 15.0	-2.4
PCIG		1.98	139	iP	Pn	16 36 01.2	-1.2
PCIG				eS	Sn	16 36 26.6	-1.8
HUIG	Huatulco	2.07	226	iP	Pn	16 36 01.3	-2.1
HUIG				iS	Sn	16 36 29.3	-1.0
CCIG	Comitan	2.50	111	iP	Pn	16 36 08.0	-1.1
CCIG				iS	Sn	16 36 38.1	-2.2
PNIG	Pinotepa	3.51	257	iP	Pn	16 36 20.8	-1.2
PNIG				iS	Sn	16 37 01.7	-1.6

*CSEM **10** 16:48:02.6±1.2, 37°.90N×29°.49E, h15km, MD2.5, Error ellipse: s-maj=26.1km s-min=11.1km az=107.0*

*DDA **10** 16:48:04.8, 37°.88N×29°.22E, h6km, MD2.4*

*ISK **10** 16:48:08.3, 37°.91N×28°.99E, h5km, MD2.5*

ISC 10 16:48:05.3±1.1**, 37°.95N**±0°.04×**29°.18E**±0°.06**, h15**km±9km**, n14, σ1s.35**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.23	211	ePG	Pg	16 48 12.3	+1.8
DENT				eSG	Sg	16 48 14.7	+0.8
DENT	Denizli	0.23	211	ePg	Pg	16 48 12.3	+1.8
DENT				eSg	Sg	16 48 14.7	+0.8
DNZL	Cakiroluk	0.28	203	iP	Pg	16 48 09.6	-1.8
DNZL				iS	Sg	16 48 13.2	-2.4
DNZL	Cakiroluk	0.28	203	iP	Pg	16 48 09.6	-1.8
DNZL				iS	Sg	16 48 13.2	-2.4
KHAL	Karahalli	0.48	30	iP	Pg	16 48 11.1	-3.9
KHAL				iS	Sb	16 48 22.9	+0.3
KHAL	Karahalli	0.48	30	iP	Pg	16 48 11.1	-3.9
KHAL				iS	Sb	16 48 22.9	+0.3
KULA	Kula-Manisa	0.70	324	ePG	Pn	16 48 21.6	+0.8
KULA				eSG	Sn	16 48 30.8	-0.6
KULA	Kula-Manisa	0.70	324	ePg	Pn	16 48 21.6	+0.8
KULA				eSg	Sn	16 48 30.8	-0.6
MANT	Manisa	0.73	318	iP	Pn	16 48 21.7	+0.4
MANT				iS	Sb	16 48 30.6	+0.8
MANT	Manisa	0.73	318	iP	Pn	16 48 21.7	+0.4
MANT				iS	Sb	16 48 30.6	+0.8
AYDN	Tasoluk	1.07	255	iP	Pg	16 48 25.7	-0.3
AYDN				iS	Sg	16 48 38.3	-1.8
AYDN	Tasoluk	1.07	255	iP	Pg	16 48 25.7	-0.3
AYDN				iS	Sg	16 48 38.3	-1.8
YER	Yerkesik	1.09	222	ePG	Pn	16 48 27.1	+1.0
YER				eSG	Sb	16 48 40.8	+0.9
YER	Yerkesik	1.09	222	ePg	Pn	16 48 27.1	+1.0
YER				eSg	Sb	16 48 40.8	+0.9

IDC 10 16:54:34.2±2.1**, 20°.26S**×**177°.67W, h434**km±25km**, mb3.3**/9**, mb1 3.6**/11**, mb1mx3.4**/21**, mbtmp3.4**/11**, Error ellipse: s-maj=21.4km s-min=13.4km az=133.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.46	43	P	P	16 56 36.9	+2.2
	4.5nm,0.3s,baz=48,slow=21,SNR=5.2						
AFI				S	S	16 58 10.6	-3.0
	5.0nm,0.3s,baz=198,slow=19,SNR=4.8						
URZ	Urewera	18.50	193	P	P	16 58 22.2	-0.2
	0.5nm,0.3s,baz=297,slow=2.3,SNR=3.8						
STKA	Stephens Creek	38.17	244	P	P	17 01 14.8	-0.2
	1.7nm,0.5s,baz=76,slow=11,SNR=10						
ASAR	Alice Springs	44.88	256	P	P	17 02 08.9	+0.2
	5.4nm,0.7s,baz=90,slow=8.6,SNR=135						
ASAR				PcP	PcP	17 03 40.7	-0.9
	0.7nm,0.5s,baz=110,slow=3.6,SNR=4.8						
WRA	Warramunga Arr	44.94	262	P	P	17 02 08.7	-0.5
	1.7nm,0.3s,baz=96,slow=7.8,SNR=136						
QSPA	South Pole Qui	69.81	180	P	P	17 04 59.3	-0.3
	0.8nm,0.5s,baz=130,slow=7.2,SNR=8.6						
MJAR	Matsushiro Arr	70.20	323	P	P	17 05 01.7	-0.4
	1.0nm,0.5s,baz=165,slow=6.0,SNR=4.5						
PETK	Petropavlovsk-	76.12	345	P	P	17 05 35.7	-0.2
	1.1nm,0.6s,baz=134,slow=11,SNR=5.3						
NVAR	Mina Array Bea	80.63	43	P	P	17 06 01.5	+0.6
	0.3nm,0.6s,baz=242,slow=6.2,SNR=3.6						
TXAR	Lajitas Array	86.66	57	P	P	17 06 31.9	+0.8
	0.6nm,0.7s,baz=221,slow=11,SNR=4.1						
CMAR	Chiang Mai Arr	90.33	289	P	P	17 06 49.2	+0.9
	2.2nm,0.8s,baz=113,slow=2.8,SNR=18						
AKASG	Malin Array Be	142.95	331	PKhKP	PKPpre	17 13 11.9	
	1.5nm,0.5s,baz=43,slow=3.7,SNR=5.6						
BRTR	Keskin Array B	146.91	313	PKPbc	PKPdf	17 13 25.7	+1.1
	0.8nm,0.6s,baz=116,slow=5.1,SNR=5.3						

MEX 10 16:57:14.6±0.6**, 17°.73N**×**98°.76W, h57**km±5km**, MD4.0, Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HMTT	Tlapaneco	0.20	70	eP	Pn	16 57 22.2	-1.7
HMTT				eS	Sn	16 57 28.8	-1.8
MEIG	Mezcala	0.84	284	iP	Pn	16 57 29.6	-1.1
MEIG				eS	Sn	16 57 40.4	-2.0
PLIG	Platanillo	0.97	313	iP	Pn	16 57 30.8	-1.5
PLIG				eS	Sn	16 57 43.6	-1.7
YAIG	Yautepec	1.16	345	iP	Pn	16 57 32.9	-2.0
YAIG				eS	Sn	16 57 47.4	-2.7
ACX	Acapulco	1.35	231	iP	Pn	16 57 35.6	-1.8
ACX				eS	Sn	16 57 53.3	-1.0
ACP2	Acapulco	1.37	232	eP	Pn	16 57 35.9	-1.6
ACP2				iS	Sn	16 57 53.0	-1.7
PNIG	Pinotepa	1.46	155	iP	Pn	16 57 38.0	-0.8
PNIG				eS	Sn	16 57 54.9	-2.0
TPIG	Tehuac#an	1.50	62	iP	Pn	16 57 38.0	-1.4
TPIG				eS	Sn	16 57 55.5	-2.5
MZVM		1.52	343	iP	Pn	16 57 38.9	-0.6
MZVM				iS	Sn	16 57 57.0	-1.3
CAIG	El Cayaco	1.59	245	iP	Pn	16 57 38.9	-1.6
CAIG				iS	Sn	16 57 57.1	-2.9
ARIG	Puente Sto Nin	1.61	290	iP	Pn	16 57 40.0	-0.7
ARIG				eS	Sn	16 57 57.6	-2.9
IIO	Organos	1.85	1	eP	Pn	16 57 43.0	-1.6
IIO				iS	Sn	16 58 04.6	-2.6
ZIIG	Zihuatanejo	2.58	268	iP	Pn	16 57 52.6	-1.4
ZIIG				eS	Sn	16 58 22.6	-1.6

*ISCJB **10** 17:04:19.4±1.0, 37°.87N±0°.04×29°.27E±0°.08, h13km±6km, Error ellipse: s-maj=11.4km s-min=5.6km az=28.1*

*CSEM **10** 17:04:19.0±0.4, 37°.85N×29°.31E, h15km, MD2.7, Error ellipse: s-maj=10.0km s-min=3.8km az=118.0*

*DDA **10** 17:04:19.2, 37°.88N×29°.22E, h12km, MD2.5*

*ISK **10** 17:04:20.2, 37°.90N×29°.18E, h18km, MD2.7*

ISC 10 17:04:19.3±1.3**, 37°.86N**±0°.05×**29°.28E**±0°.08**, h15**km±7km**, n16, σ0s.64**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.22	242	ePG	Pb	17 04 25.2	+0.1
DENT				eSG	Sg	17 04 29.3	+1.7
DENT	Denizli	0.22	242	ePg	Pb	17 04 25.2	+0.1
DENT				eSg	Sg	17 04 29.3	+1.7
DNZL	Cakiroluk	0.25	228	iP	Pg	17 04 24.2	-0.6
DNZL				iS	Sg	17 04 27.8	-0.8
DNZL	Cakiroluk	0.25	228	iP	Pg	17 04 24.2	-0.6
DNZL				iS	Sg	17 04 27.8	-0.8
KHAL	Karahalli	0.54	18	iP	Pg	17 04 29.9	0.0
KHAL				iS	Sg	17 04 37.5	+0.3
KHAL	Karahalli	0.54	18	iP	Pg	17 04 29.9	0.0
KHAL				iS	Sg	17 04 37.5	+0.3
KULA	Kula-Manisa	0.82	323	ePG	Pb	17 04 35.2	0.0
KULA				eSG	Sb	17 04 45.9	-0.3
KULA	Kula-Manisa	0.82	323	ePg	Pb	17 04 35.3	0.0
KULA				eSg	Sb	17 04 45.9	-0.3
YER	Yerkesik	1.07	228	ePG	Pg	17 04 40.4	+0.4
YER				eSG	Sn	17 04 55.1	+0.6
YER	Yerkesik	1.07	228	ePg	Pg	17 04 40.4	+0.4
YER				eSg	Sn	17 04 55.2	+0.6
AYDN	Tasoluk	1.13	260	iP	Pb	17 04 40.5	0.0
AYDN				iS	Sb	17 04 54.3	-0.7
AYDN	Tasoluk	1.13	260	iP	Pb	17 04 40.5	0.0
AYDN				iS	Sb	17 04 54.3	-0.7
GDZ	Gediz	1.24	7	iP	Pn	17 04 41.9	-0.3
GDZ				iS	Sb	17 04 58.4	+0.1
GDZ	Gediz	1.24	7	iP	Pn	17 04 41.9	-0.3
GDZ				iS	Sb	17 04 58.4	+0.1
DEMI	Demirci	1.26	340	iP	Pb	17 04 42.9	+0.1
DEMI				iS	Sb	17 04 58.2	-0.8
DEMI	Demirci	1.26	340	iP	Pb	17 04 42.9	+0.1
DEMI				iS	Sb	17 04 58.2	-0.8

CASC 10 17:37:37.7±1.9, 12°.96N×89°.05W, h16km±9km, MD3.5, 4C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	**0.68**	**18**	*e*P	Pg	17 37 50.8	-0.5
SNVI				*e*S	Sb	17 38 01.6	+0.9
LBRS	**Las Brisas**	**0.77**	**1**	*e*P	Pg	17 37 52.4	-0.5
BOQS	**Boqueron**	**0.80**	**344**	⇑*e*P	Pb	17 37 52.9	-0.6
BOQS				*e*S	Sb	17 38 04.3	0.0
SBLS	**San Blas**	**1.03**	**328**	*e*P	Pb	17 37 56.3	-1.3
SNJE	**San Jose**	**1.05**	**329**	*e*P	Pb	17 37 56.5	-1.3
SNJE				*e*S	Sb	17 38 10.2	-1.3
RTR	**El Retiro**	**1.09**	**328**	⇑*e*P	Pb	17 37 57.3	-1.2
CAHU	**Cacacuatique**	**1.15**	**46**	⇑*e*P	Pn	17 37 58.0	-1.4
CNCH	**Conchagua**	**1.23**	**75**	⇑*e*P	Pn	17 37 58.4	-2.0
CNCH				*e*S	Sb	17 38 15.0	-1.6
IXG	**Ixpaco**	**1.82**	**312**	*e*P	Pn	17 38 09.0	+0.4
IXG				*e*S	Sn	17 38 31.8	+0.2
FUG	**Fuego 3**	**2.28**	**311**	*e*P	Pn	17 38 16.2	+1.2
FUG				*e*S	Sn	17 38 42.7	-0.3

*CSEM **10** 17:39:34.2, 44°.29N×45°.73E, h10km, mb4.2, After OBN*
*MOS **10** 17:39:34.2±1.9, 44°.29N×45°.73E, h10km, mb4.2/1, Error ellipse: s-maj=20.3km s-min=9.2km az=69.1*
ISC 10 17:39:29.6±2.7, 44°.6N±0°.1×45°.88E±0°.05, h3km±7km, n23, σ1s.47/32, Ukraine - Moldova - Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRKR	**Terskaya**	**1.19**	**224**	*e*PG	Pg	17 39 48.5	-3.9
TRKR				*e*S	**Sn**	**17 40 10.1**	**+0.3**
TRKR	**Terskaya**	**1.19**	**224**	*e*Pg	Pg	17 39 48.5	-3.9
TRKR				*e*Sg	**Sn**	**17 40 10.1**	**+0.3**
GRO	**Groznyy**	**1.27**	**184**	*e*PG	**Pg**	**17 39 52.6**	**-1.2**
GRO	**Groznyy**	**1.27**	**184**	*e*Pg	**Pg**	**17 39 52.6**	**-1.2**
BTKR	**Batakoyurt**	**1.55**	**219**	*e*PG	**Pn**	**17 39 55.1**	**-3.0**
BTKR				*e*S	**Sn**	**17 40 20.3**	**+1.6**
BTKR	**Batakoyurt**	**1.55**	**219**	*e*Pg	**Pn**	**17 39 55.1**	**-3.0**
BTKR				*e*Sg	**Sn**	**17 40 20.3**	**+1.6**
DBC	**Dubki**	**1.71**	**156**	*i* PG	**Pn**	**17 40 00.5**	**+0.2**
DBC	**Dubki**	**1.71**	**156**	*i* Pg	**Pn**	**17 40 00.5**	**+0.2**
VLKR	**Vladikavkaz**	**1.76**	**210**	*e*PG	**Pn**	**17 40 02.3**	**+1.2**
VLKR	**Vladikavkaz**	**1.76**	**210**	*e*Pg	**Pn**	**17 40 02.3**	**+1.2**
ARNR	**Ardon**	**1.81**	**220**	*e*PG	**Pn**	**17 40 03.5**	**+1.8**
ARNR	**Ardon**	**1.81**	**220**	*e*Pg	**Pn**	**17 40 03.5**	**+1.8**
LSNR	**Lesken**	**1.98**	**229**	*e*PN	**Pb**	**17 40 06.2**	**-0.1**
LSNR				*e*S	Sg	17 40 36.5	+3.3
LSNR	**Lesken**	**1.98**	**229**	*e*Pn	**Pb**	**17 40 06.2**	**-0.1**
LSNR				*e*Sg	Sg	17 40 36.5	+3.3
UNCR	**Uncukul**	**1.98**	**160**	*e*PN	**Pb**	**17 40 06.0**	**-0.3**
UNCR				*i* S	**Sg**	**17 40 34.2**	**+1.0**
UNCR				pmax	pmax		
	comp=Z,34nm,0.2s						
UNCR	**Uncukul**	**1.98**	**160**	*e*Pn	**Pb**	**17 40 06.0**	**-0.3**
	comp=Z,34nm,0.2s						
UNCR				*i* Sg	**Sg**	**17 40 34.2**	**+1.0**
ZEI	**Tsey**	**2.31**	**219**	*e*PN	**Pb**	**17 40 10.2**	**-1.8**
ZEI				*e*S	**Sg**	**17 40 43.5**	**-0.3**
ZEI	**Tsey**	**2.31**	**219**	*e*Pn	**Pb**	**17 40 10.2**	**-1.8**
ZEI				*e*Sg	**Sg**	**17 40 43.5**	**-0.3**
GUDG	**Gudauri**	**2.35**	**206**	P	**Pg**	**17 40 15.3**	**+0.8**
GUDG				S	Sg	17 40 45.9	+0.9
DIGR	**Digorskoe uzhe**	**2.37**	**226**	*e*PN	**Pb**	**17 40 11.4**	**-1.6**
DIGR				*e*S	**Sg**	**17 40 45.5**	**-0.1**
DIGR	**Digorskoe uzhe**	**2.37**	**226**	*e*Pn	**Pb**	**17 40 11.4**	**-1.6**
DIGR				*e*Sg	**Sg**	**17 40 45.5**	**-0.1**
ONI	**Oni**	**2.66**	**222**	P	**Pg**	**17 40 21.0**	**+0.5**
ONI				S	**Sg**	**17 40 55.8**	**+0.9**
DGRG	**David-gareji**	**3.15**	**187**	P	**Pn**	**17 40 17.0**	**-3.1**
DGRG				S	Sb	17 40 57.4	-7.7

*ISCJB **10** 17:57:19.0±0.2, 43°.72N±0°.01×105°.32W±0°.02, h0km, mb3.8/4, Error ellipse: s-maj=2.2km s-min=1.8km az=157.7*
*IDC **10** 17:57:18.4±1.8, 43°.63N×105°.39W, h0km, mb3.8/4, mb1 3.8/8, mb1mx3.5/31, mbtmp3.6/8, ML3.2/4, MS2.7/2, Ms1 2.7/2, ms1mx2.4/43, Error ellipse: s-maj=49.2km s-min=7.1km az=149.0*
*NEIC **10** 17:57:19.6±0.4, 43°.78N×105°.30W, h0km, ML3.5, Error ellipse: s-maj=6.2km s-min=4.9km az=166.0, Suspected Mining explosion.*
NEIC 60 km [35 miles] SSE of Gillette.
ISC 10 17:57:19.2±0.6, 43°.71N±0°.01×105°.33W±0°.02, h0km, n200, σ0s.97/239, mb3.9/4, 96C-78D, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23A	**Meade Ranch, G**	**0.27**	**339**	⇓P	**Pb**	**17 57 26.0**	**-1.0**
	baz=0.2,SNR=70						
I23A	**Meade Ranch, G**	**0.27**	**339**	⇓P	**Pb**	**17 57 26.0**	**-1.0**
	baz=0.2,SNR=70						
J23A	**Dilts Ranch, B**	**0.35**	**208**	⇑P	**Pg**	**17 57 26.7**	**+0.9**
	baz=0.4,SNR=480						
J23A				⇓S	**Sg**	**17 57 30.5**	**+0.1**
	baz=0.4						
J23A	**Dilts Ranch, B**	**0.35**	**208**	⇑P	**Pg**	**17 57 26.7**	**+0.9**
	baz=0.4,SNR=480						
J23A				⇓S	**Sg**	**17 57 30.5**	**+0.1**
	baz=0.4						
I24A	**Kuemmerle Ranc**	**0.53**	**74**	⇑P	**Pg**	**17 57 30.1**	**+0.7**
	baz=0.5,SNR=437						
I24A				⇓S	**Sg**	**17 57 37.5**	**+1.2**
	baz=0.5						
I24A	**Kuemmerle Ranc**	**0.53**	**74**	⇑P	**Pg**	**17 57 30.1**	**+0.7**
	baz=0.5,SNR=437						
I24A				⇓S	**Sg**	**17 57 37.5**	**+1.2**
	baz=0.5						
J24A	**Dixon Ranch, L**	**0.62**	**128**	⇑P	**Pg**	**17 57 31.6**	**+0.5**
	baz=0.6						
J24A				⇑S	**Sg**	**17 57 39.4**	**+0.3**
	baz=0.6						
J24A	**Dixon Ranch, L**	**0.62**	**128**	⇑P	**Pg**	**17 57 31.6**	**+0.5**
	baz=0.6						
J24A				⇑S	**Sg**	**17 57 39.4**	**+0.3**
	baz=0.6						
H23A	**Clabaugh Cattl**	**0.85**	**357**	⇓P	**Pg**	**17 57 36.0**	**+0.5**
	baz=0.8,SNR=24						
H23A				⇑S	**Sb**	**17 57 48.8**	**-0.2**
	baz=0.8						
H23A	**Clabaugh Cattl**	**0.85**	**357**	⇓P	**Pg**	**17 57 36.0**	**+0.5**
	baz=0.8,SNR=24						
H23A				⇑S	**Sb**	**17 57 48.8**	**-0.2**
	baz=0.8						
I22A	**9 Mile Ranch,**	**0.85**	**283**	P	**Pg**	**17 57 36.3**	**+0.7**
	baz=0.9,SNR=596						
I22A				⇑S	**Sg**	**17 57 46.6**	**0.0**
	baz=0.9						
I22A	**9 Mile Ranch,**	**0.85**	**283**	P	**Pg**	**17 57 36.3**	**+0.7**
	baz=0.9,SNR=596						
I22A				⇑S	**Sg**	**17 57 46.6**	**0.0**
	baz=0.9						
J22A	**Midwest**	**0.89**	**251**	P	**Pg**	**17 57 36.4**	**+0.2**
	baz=0.9,SNR=200						
J22A	**Midwest**	**0.89**	**251**	P	**Pg**	**17 57 36.4**	**+0.2**
	baz=0.9,SNR=200						
K23A	**Bowen Ranch, D**	**0.98**	**193**	⇓P	**Pg**	**17 57 37.6**	**-0.4**
	baz=1.0,SNR=6.8						
K23A				⇑S	**Sg**	**17 57 51.2**	**+0.5**
	baz=1.0						
K23A	**Bowen Ranch, D**	**0.98**	**193**	⇓P	**Pg**	**17 57 37.6**	**-0.4**
	baz=1.0,SNR=6.8						
K23A				⇑S	**Sg**	**17 57 51.2**	**+0.5**
	baz=1.0						
RSSD	**Black Hills**	**1.02**	**66**	*e*P	**Pg**	**17 57 38.5**	**-0.2**
K24A	**Anderson Ranch**	**1.06**	**159**	P	**Pg**	**17 57 39.2**	**-0.3**
	baz=1.1,SNR=373						
K24A				⇑S	**Sg**	**17 57 53.6**	**+0.4**
	baz=1.1						
K24A	**Anderson Ranch**	**1.06**	**159**	P	**Pg**	**17 57 39.2**	**-0.3**
	baz=1.1,SNR=373						
K24A				⇑S	**Sg**	**17 57 53.6**	**+0.4**
	baz=1.1						
H22A	**Clearmont**	**1.15**	**321**	⇑P	**Pg**	**17 57 41.7**	**+0.5**
	baz=1.1,SNR=43						
H22A	**Clearmont**	**1.15**	**321**	⇑P	**Pg**	**17 57 41.7**	**+0.5**
	baz=1.1,SNR=43						
J25A	**Sunshine Ranch**	**1.16**	**106**	⇓P	**Pg**	**17 57 41.1**	**-0.3**
	baz=1.2,SNR=75						
J25A	**Sunshine Ranch**	**1.16**	**106**	⇓P	**Pg**	**17 57 41.1**	**-0.3**
	baz=1.2,SNR=75						
H24A	**Dirks Ranch, A**	**1.18**	**28**	P	**Pg**	**17 57 41.5**	**-0.3**
	baz=1.1,SNR=246						
H24A				⇑S	**Sb**	**17 57 58.4**	**+0.1**
	baz=1.1						
H24A	**Dirks Ranch, A**	**1.18**	**28**	P	**Pg**	**17 57 41.5**	**-0.3**
	baz=1.1,SNR=246						
H24A				⇑S	**Sb**	**17 57 58.4**	**+0.1**
	baz=1.1						
K22A	**Casper**	**1.37**	**220**	⇑P	**Pg**	**17 57 44.8**	**-0.7**
	baz=1.4,SNR=143						
K22A				⇑S	**Sb**	**17 58 04.4**	**+0.3**
	baz=1.4						
K22A	**Casper**	**1.37**	**220**	⇑P	**Pg**	**17 57 44.8**	**-0.7**
	baz=1.4,SNR=143						
K22A				⇑S	**Sb**	**17 58 04.4**	**+0.3**
	baz=1.4						
I21A	**Big Trails, Te**	**1.42**	**275**	⇓P	**Pn**	**17 57 45.6**	**-0.9**
	baz=1.4,SNR=298						
I21A	**Big Trails, Te**	**1.42**	**275**	⇓P	**Pn**	**17 57 45.6**	**-0.9**
	baz=1.4,SNR=298						
G23A	**Biddle**	**1.49**	**358**	⇑P	**Pn**	**17 57 47.2**	**-0.1**
	baz=1.4,SNR=253						
G23A				⇓S	**Sn**	**17 58 08.7**	**+1.2**
	baz=1.4						
G23A	**Biddle**	**1.49**	**358**	⇑P	**Pn**	**17 57 47.2**	**-0.1**
	baz=1.4,SNR=253						
G23A				⇓S	**Sn**	**17 58 08.7**	**+1.2**
	baz=1.4						
H21A	**Big Horn, Sher**	**1.53**	**307**	⇓P	**Pn**	**17 57 48.4**	**+0.4**
	baz=1.5,SNR=51						
H21A				⇓S	**Sg**	**17 58 10.1**	**+1.7**
	baz=1.5						
H21A	**Big Horn, Sher**	**1.53**	**307**	⇓P	**Pn**	**17 57 48.4**	**+0.4**
	baz=1.5,SNR=51						
H21A				⇓S	**Sg**	**17 58 10.1**	**+1.7**
	baz=1.5						
K25A	**Mack Ranch, Ha**	**1.53**	**135**	⇓P	**Pn**	**17 57 48.1**	**+0.1**
	baz=1.6,SNR=86						
K25A				⇑S	**Sg**	**17 58 09.2**	**+0.7**
	baz=1.6						
K25A	**Mack Ranch, Ha**	**1.53**	**135**	⇓P	**Pn**	**17 57 48.1**	**+0.1**
	baz=1.6,SNR=86						
K25A				⇑S	**Sg**	**17 58 09.2**	**+0.7**
	baz=1.6						
J21A	**Lysite**	**1.58**	**257**	⇓P	**Pn**	**17 57 48.3**	**-0.4**
	baz=1.6,SNR=101						
J21A				⇓S	**Sn**	**17 58 10.1**	**+0.2**
	baz=1.6						
J21A	**Lysite**	**1.58**	**257**	⇓P	**Pn**	**17 57 48.3**	**-0.4**
	baz=1.6,SNR=101						
J21A				⇓S	**Sn**	**17 58 10.1**	**+0.2**
	baz=1.6						
L23A	**Garrett**	**1.62**	**190**	P	**Pn**	**17 57 48.8**	**-0.4**
	baz=1.7,SNR=201						
L23A				⇓S	**Sn**	**17 58 11.0**	**0.0**
	baz=1.7						
L23A	**Garrett**	**1.62**	**190**	P	**Pn**	**17 57 48.8**	**-0.4**
	baz=1.7,SNR=201						
L23A				⇓S	**Sn**	**17 58 11.0**	**0.0**
	baz=1.7						
G22A	**Birney**	**1.66**	**336**	⇑P	**Pn**	**17 57 50.2**	**+0.6**
	baz=1.6,SNR=92						
G22A	**Birney**	**1.66**	**336**	⇑P	**Pn**	**17 57 50.2**	**+0.6**
	baz=1.6,SNR=92						
L24A	**Wheatland**	**1.69**	**170**	⇑P	**Pn**	**17 57 50.1**	**-0.1**
	baz=1.8,SNR=5.5						
L24A	**Wheatland**	**1.69**	**170**	⇑P	**Pn**	**17 57 50.1**	**-0.1**
	baz=1.8,SNR=5.5						
G24A	**Alzada**	**1.74**	**22**	⇑P	**Pn**	**17 57 51.7**	**+0.9**
	baz=1.7						
G24A	**Alzada**	**1.74**	**22**	⇑P	**Pn**	**17 57 51.7**	**+0.9**
	baz=1.7						
K21A	**Alcova**	**1.77**	**233**	⇓P	**Pn**	**17 57 51.8**	**+0.5**
	baz=1.8,SNR=169						
K21A				⇓S	**Sn**	**17 58 15.0**	**+0.3**
	baz=1.8						
K21A	**Alcova**	**1.77**	**233**	⇓P	**Pn**	**17 57 51.8**	**+0.5**
	baz=1.8,SNR=169						
K21A				⇓S	**Sn**	**17 58 15.0**	**+0.3**
	baz=1.8						
L25A	**Engebretsen Ra**	**1.85**	**147**	⇑Pb	**Pb**	**17 57 53.5**	**-0.5**
	baz=1.9,SNR=79						
L25A				⇑Sg	**Sg**	**17 58 20.2**	**+1.5**
	baz=1.9						
L25A	**Engebretsen Ra**	**1.85**	**147**	⇑Pb	**Pb**	**17 57 53.5**	**-0.5**
	baz=1.9,SNR=79						
L25A				⇑Sg	**Sg**	**17 58 20.2**	**+1.5**
	baz=1.9						
L22A	**Ellis Ranch, M**	**1.87**	**206**	⇑P	**Pn**	**17 57 52.9**	**+0.3**
	baz=1.9,SNR=133						
L22A				⇑Sb	**Sg**	**17 58 19.2**	**+0.1**
	baz=1.9						
L22A	**Ellis Ranch, M**	**1.87**	**206**	⇑P	**Pn**	**17 57 52.9**	**+0.3**
	baz=1.9,SNR=133						
L22A				⇑Sb	**Sg**	**17 58 19.2**	**+0.1**
	baz=1.9						
K26A	**Motz Farm, Whi**	**1.87**	**122**	⇓P	**Pn**	**17 57 52.9**	**+0.3**
	baz=1.9,SNR=24						
K26A	**Motz Farm, Whi**	**1.87**	**122**	⇓P	**Pn**	**17 57 52.9**	**+0.3**
	baz=1.9,SNR=24						
F23A	**Volborg**	**2.01**	**359**	P	**Pn**	**17 57 55.3**	**+0.9**
	baz=1.9,SNR=134						
F23A	**Volborg**	**2.01**	**359**	P	**Pn**	**17 57 55.3**	**+0.9**
	baz=1.9,SNR=134						
G21A	**Lodge Grass**	**2.02**	**319**	⇑P	**Pn**	**17 57 55.3**	**+0.7**
	baz=2.0,SNR=24						
G21A	**Lodge Grass**	**2.02**	**319**	⇑P	**Pn**	**17 57 55.3**	**+0.7**
	baz=2.0,SNR=24						
J20A	**Shoshoni**	**2.03**	**261**	⇑Pb	**Pb**	**17 57 57.1**	**0.0**
	baz=2.1						
J20A				⇓Sb	**Sg**	**17 58 24.7**	**+0.2**
	baz=2.1						
J20A	**Shoshoni**	**2.03**	**261**	⇑Pb	**Pb**	**17 57 57.1**	**0.0**
	baz=2.1						
J20A				⇓Sb	**Sg**	**17 58 24.7**	**+0.2**
	baz=2.1						
I20A	**Worland**	**2.04**	**278**	⇑P	**Pn**	**17 57 56.2**	**+1.3**
	baz=2.0,SNR=308						
I20A				⇓Sb	**Sg**	**17 58 24.5**	**-0.2**
	baz=2.0						
I20A	**Worland**	**2.04**	**278**	⇑P	**Pn**	**17 57 56.2**	**+1.3**
	baz=2.0,SNR=308						
I20A				⇓Sb	**Sg**	**17 58 24.5**	**-0.2**
	baz=2.0						
H20A	**Greybull**	**2.07**	**293**	⇓P	**Pn**	**17 57 56.1**	**+0.8**
	baz=2.1						
H20A	**Greybull**	**2.07**	**293**	⇓P	**Pn**	**17 57 56.1**	**+0.8**
	baz=2.1						
F22A	**Rosebud**	**2.17**	**343**	⇑P	**Pn**	**17 57 57.1**	**+0.5**
	baz=2.1						
F22A	**Rosebud**	**2.17**	**343**	⇑P	**Pn**	**17 57 57.1**	**+0.5**
	baz=2.1						
F24A	**Ekalaka**	**2.22**	**16**	⇑P	**Pn**	**17 57 58.5**	**+1.1**
	baz=2.2						
F24A	**Ekalaka**	**2.22**	**16**	⇑P	**Pn**	**17 57 58.5**	**+1.1**
	baz=2.2						
M23A	**Laramie**	**2.26**	**187**	⇑P	**Pn**	**17 57 58.6**	**+0.6**
	baz=2.3						
M23A	**Laramie**	**2.26**	**187**	⇑P	**Pn**	**17 57 58.6**	**+0.6**
	baz=2.3						
M24A	**Cheyenne**	**2.27**	**170**	⇑P	**Pn**	**17 57 59.2**	**+1.0**
	baz=2.3						
M24A				⇑Sb	**Sg**	**17 58 31.4**	**-0.8**
	baz=2.3						
M24A	**Cheyenne**	**2.27**	**170**	⇑P	**Pn**	**17 57 59.2**	**+1.0**
	baz=2.3						
M24A				⇑Sb	**Sg**	**17 58 31.4**	**-0.8**
	baz=2.3						
L21A	**Rawlins**	**2.30**	**221**	⇓P	**Pn**	**17 57 59.7**	**+1.0**
	baz=2.4,SNR=65						
L21A	**Rawlins**	**2.30**	**221**	⇓P	**Pn**	**17 57 59.7**	**+1.0**
	baz=2.4,SNR=65						
L26A	**Underwood Farm**	**2.35**	**135**	⇓P	**Pn**	**17 57 60.0**	**+0.7**
	baz=2.4						
L26A	**Underwood Farm**	**2.35**	**135**	⇓P	**Pn**	**17 57 60.0**	**+0.7**
	baz=2.4						
PHWY	**Pilot Hill**	**2.41**	**182**	*e*P	**Pn**	**17 58 00.5**	**+0.3**
K20A	**Yellowstone Ra**	**2.44**	**245**	⇑Pb	**Pb**	**17 58 03.3**	**-0.8**
	baz=2.5						
K20A	**Yellowstone Ra**	**2.44**	**245**	⇑Pb	**Pb**	**17 58 03.3**	**-0.8**
	baz=2.5						
M25A	**Palm-Egli Farm**	**2.46**	**157**	⇑P	**Pn**	**17 58 02.1**	**+1.4**
	baz=2.5						
M25A	**Palm-Egli Farm**	**2.46**	**157**	⇑P	**Pn**	**17 58 02.1**	**+1.4**
	baz=2.5						
K27A	**Flueckinger Fa**	**2.48**	**113**	⇓P	**Pn**	**17 58 01.5**	**+0.6**
	baz=2.5						
K27A	**Flueckinger Fa**	**2.48**	**113**	⇓P	**Pn**	**17 58 01.5**	**+0.6**
	baz=2.5						
M22A	**Cedar Creek Ra**	**2.49**	**202**	⇑P	**Pn**	**17 58 02.8**	**+1.5**
	baz=2.6						
M22A				⇑Sb	**Sb**	**17 58 37.6**	**+1.4**
	baz=2.6						
M22A	**Cedar Creek Ra**	**2.49**	**202**	⇑P	**Pn**	**17 58 02.8**	**+1.5**
	baz=2.6						
M22A				⇑Sb	**Sb**	**17 58 37.6**	**+1.4**
	baz=2.6						
G20A	**Bridger**	**2.56**	**307**	P	**Pn**	**17 58 02.4**	**+0.4**
	baz=2.5,SNR=153						
G20A	**Bridger**	**2.56**	**307**	P	**Pn**	**17 58 02.4**	**+0.4**
	baz=2.5,SNR=153						
M21A	**Separation Pea**	**2.58**	**216**	⇓P	**Pn**	**17 58 04.3**	**+1.8**
	baz=2.6						
M21A	**Separation Pea**	**2.58**	**216**	⇓P	**Pn**	**17 58 04.3**	**+1.8**
	baz=2.6						
I19A	**Meeteetse**	**2.67**	**278**	⇑P	**Pn**	**17 58 04.9**	**+1.3**
	baz=2.7						
I19A	**Meeteetse**	**2.67**	**278**	⇑P	**Pn**	**17 58 04.9**	**+1.3**
	baz=2.7						
K19A	**Absolon Red Bu**	**2.72**	**252**	⇓P	**Pn**	**17 58 05.4**	**+1.1**
	baz=2.8						
K19A	**Absolon Red Bu**	**2.72**	**252**	⇓P	**Pn**	**17 58 05.4**	**+1.1**
	baz=2.8						
J19A	**Crowheart**	**2.75**	**262**	⇓P	**Pn**	**17 58 06.4**	**+1.8**
	baz=2.8						
J19A	**Crowheart**	**2.75**	**262**	⇓P	**Pn**	**17 58 06.4**	**+1.8**
	baz=2.8						
M26A	**McRoberts Ranc**	**2.77**	**144**	⇓Sb	**Sb**	**17 58 45.5**	**+1.4**
	baz=2.8						
M26A	**McRoberts Ranc**	**2.77**	**144**	⇓Sb	**Sb**	**17 58 45.5**	**+1.4**
	baz=2.8						
E23A	**Ismay**	**2.79**	**0**	⇑P	**Pn**	**17 58 05.6**	**+0.5**
	baz=2.7,SNR=20						
E23A	**Ismay**	**2.79**	**0**	⇑P	**Pn**	**17 58 05.6**	**+0.5**
	baz=2.7,SNR=20						
H19A	**Powell**	**2.80**	**291**	⇓P	**Pn**	**17 58 06.2**	**+0.9**
	baz=2.8,SNR=32						
H19A	**Powell**	**2.80**	**291**	⇓P	**Pn**	**17 58 06.2**	**+0.9**
	baz=2.8,SNR=32						
N23A	**Red Feather La**	**2.85**	**189**	⇑P	**Pn**	**17 58 07.2**	**+1.0**
	baz=2.9						
N23A	**Red Feather La**	**2.85**	**189**	⇑P	**Pn**	**17 58 07.2**	**+1.0**
	baz=2.9						
E24A	**Baker**	**2.94**	**14**	⇑P	**Pn**	**17 58 08.4**	**+1.1**
	baz=2.9,SNR=12						
E24A	**Baker**	**2.94**	**14**	⇑P	**Pn**	**17 58 08.4**	**+1.1**
	baz=2.9,SNR=12						
N22A	**Wattenberg Ran**	**3.03**	**196**	⇓Pb	**Pb**	**17 58 13.4**	**-0.7**
	baz=3.1						
N22A	**Wattenberg Ran**	**3.03**	**196**	⇓Pb	**Pb**	**17 58 13.4**	**-0.7**
	baz=3.1						
N25A	**Grover**	**3.04**	**162**	⇑S	**Sn**	**17 58 47.2**	**+1.3**
	baz=3.1						
N25A	**Grover**	**3.04**	**162**	⇑S	**Sn**	**17 58 47.2**	**+1.3**
	baz=3.1						
RLMT	**Red Lodge**	**3.15**	**298**	*e*P	**Pn**	**17 58 11.1**	**+0.8**
BW06	**Boulder Array**	**3.23**	**254**	*e*P	**Pn**	**17 58 12.1**	**+0.8**
PDAR	**Pinedale Array**	**3.23**	**254**	Pn	**Pn**	**17 58 12.6**	**+1.2**
PDAR				Pg	**Pb**	**17 58 18.2**	**+0.7**
PDAR				Lg	Lg	17 58 58.1	
PDAR	**Pinedale Array**	**3.23**	**254**	Pn	**Pn**	**17 58 12.6**	**+1.2**
	3.6nm,0.3s,baz=73,slow=17,SNR=43						
PDAR				Pg	**Pb**	**17 58 18.2**	**+0.7**
	12nm,0.3s,baz=72,slow=21,SNR=43						
PDAR				Lg	Lg	17 58 58.1	
	20nm,0.3s,baz=69,slow=36,SNR=8.0						
F19A	**Roth Farm, Mol**	**3.35**	**311**	⇓P	**Pn**	**17 58 13.8**	**+0.9**
	baz=3.3,SNR=44						
F19A	**Roth Farm, Mol**	**3.35**	**311**	⇓P	**Pn**	**17 58 13.8**	**+0.9**
	baz=3.3,SNR=44						
G18A	**Lazy EL Ranch,**	**3.42**	**299**	⇓P	**Pn**	**17 58 15.0**	**+1.0**
	baz=3.4,SNR=36						
G18A	**Lazy EL Ranch,**	**3.42**	**299**	⇓P	**Pn**	**17 58 15.0**	**+1.0**
	baz=3.4,SNR=36						
D22A	**Cohagen**	**3.49**	**350**	⇑P	**Pn**	**17 58 15.3**	**+0.6**
	baz=3.4,SNR=5.7						
D22A	**Cohagen**	**3.49**	**350**	⇑P	**Pn**	**17 58 15.3**	**+0.6**
	baz=3.4,SNR=5.7						
N27A	**Anderson Farm,**	**3.57**	**144**	⇓P	**Pn**	**17 58 16.2**	**+0.3**
	baz=3.6,SNR=36						
N27A	**Anderson Farm,**	**3.57**	**144**	⇓P	**Pn**	**17 58 16.2**	**+0.3**
	baz=3.6,SNR=36						
E19A	**Rath Farm, Rou**	**3.68**	**320**	⇑P	**Pn**	**17 58 17.4**	**0.0**
	baz=3.6,SNR=16						
E19A	**Rath Farm, Rou**	**3.68**	**320**	⇑P	**Pn**	**17 58 17.4**	**0.0**
	baz=3.6,SNR=16						
OGNE	**Ogallala**	**3.69**	**137**	*e*P	**Pn**	**17 58 18.5**	**+0.9**
GCMT	**Greycliff**	**3.72**	**305**	*e*P	**Pn**	**17 58 19.3**	**+1.2**
LKWY	**Lake**	**3.75**	**285**	*e*P	Pn	17 58 22.1	+3.6
F18A	**Big Timber**	**3.81**	**307**	⇓P	**Pn**	**17 58 20.5**	**+1.2**
	baz=3.8,SNR=16						
F18A	**Big Timber**	**3.81**	**307**	⇓P	**Pn**	**17 58 20.5**	**+1.2**
	baz=3.8,SNR=16						
LOHW	**Long Hollow**	**3.83**	**270**	*e*P	**Pn**	**17 58 20.7**	**+1.1**
D20A	**Manuel Ranch,**	**3.91**	**331**	⇑P	**Pn**	**17 58 20.4**	**-0.2**
	baz=3.9,SNR=9.6						
D20A	**Manuel Ranch,**	**3.91**	**331**	⇑P	**Pn**	**17 58 20.4**	**-0.2**
	baz=3.9,SNR=9.6						
ISCO	**Idaho Springs**	**3.92**	**183**	*e*P	**Pn**	**17 58 21.7**	**+0.8**
MOOW	**Moose Ponds**	**3.92**	**272**	*e*P	**Pn**	**17 58 21.3**	**+0.4**
SNOW	**Snow King Moun**	**3.95**	**268**	*e*P	**Pn**	**17 58 19.2**	**-2.1**
REDW	**Red Top Meadow**	**4.03**	**267**	*e*Pg	**Pg**	**17 58 34.5**	**-2.0**
IMW	**Indian Meadow**	**4.06**	**275**	*e*P	**Pn**	**17 58 24.9**	**+2.0**
TPAW	**Teton Pass**	**4.09**	**269**	*e*P	**Pn**	**17 58 23.4**	**+0.2**
E18A	**Harlowton**	**4.32**	**313**	⇑P	**Pn**	**17 58 27.2**	**+1.0**
	baz=4.3,SNR=38						
E18A	**Harlowton**	**4.32**	**313**	⇑P	**Pn**	**17 58 27.2**	**+1.0**
	baz=4.3,SNR=38						
AHID	**Auburn Hatcher**	**4.32**	**259**	*e*P	Pn	17 58 22.9	-3.4
RRI2	**Red Ridge**	**4.37**	**267**	*e*P	**Pn**	**17 58 28.4**	**+1.3**
QLMT	**Earthquake Lak**	**4.52**	**286**	*e*Pg	**Pb**	**17 58 41.9**	**+2.4**
SMCO	**Snowmass**	**4.70**	**196**	*e*P	Pn	17 58 34.9	+3.2
C19A	**Slack Wire Ran**	**4.79**	**328**	⇓P	**Pn**	**17 58 33.3**	**+0.7**
	baz=4.7,SNR=13						
C19A	**Slack Wire Ran**	**4.79**	**328**	⇓P	**Pn**	**17 58 33.3**	**+0.7**
	baz=4.7,SNR=13						
DGMT	**Dagmar**	**4.82**	**9**	*e*P	**Pn**	**17 58 35.9**	**+2.8**
BOZ	**Bozeman (W)**	**4.89**	**295**	*e*P	**Pn**	**17 58 34.5**	**+0.4**
P28A	**Saint Francis**	**4.93**	**146**	⇑P	**Pn**	**17 58 34.4**	**-0.2**
	baz=5.0,SNR=12						
P28A	**Saint Francis**	**4.93**	**146**	⇑P	**Pn**	**17 58 34.4**	**-0.2**
	baz=5.0,SNR=12						
HWUT	**Hardware Ranch**	**5.06**	**248**	*e*P	**Pn**	**17 58 37.2**	**+0.8**
	14nm,0.5s						
D17A	**Six Diamond Ra**	**5.10**	**314**	⇓P	**Pn**	**17 58 37.6**	**+0.6**
	baz=5.1,SNR=36						
D17A	**Six Diamond Ra**	**5.10**	**314**	⇓P	**Pn**	**17 58 37.6**	**+0.6**
	baz=5.1,SNR=36						
EGMT	**Eagleton**	**5.30**	**326**	*e*P	**Pn**	**17 58 39.9**	**+0.2**
	18nm,0.4s						
DLMT	**Dillon**	**5.45**	**290**	*e*P	**Pn**	**17 58 41.7**	**-0.1**
	7.2nm,0.8s						
C17A	**Wharram Farm,**	**5.46**	**318**	⇑P	**Pn**	**17 58 42.6**	**+0.7**
	baz=5.4,SNR=6.8						
C17A	**Wharram Farm,**	**5.46**	**318**	⇑P	**Pn**	**17 58 42.6**	**+0.7**
	baz=5.4,SNR=6.8						
LRM	**Limekiln Ridge**	**5.49**	**295**	*e*P	**Pn**	**17 58 39.9**	**-2.5**
	23nm,0.4s						
DAU	**Daniels Canyon**	**5.51**	**235**	*e*P	**Pn**	**17 58 45.1**	**+2.4**
	14nm,0.5s						
MCMT	**McKenzie Canyo**	**5.51**	**284**	P	Pn	17 58 46.0	+3.2
	2.0nm,0.4s						
HVU	**Hansel Valley**	**5.81**	**253**	*e*P	**Pn**	**17 58 47.7**	**+1.0**
	7.8nm,0.7s						
R28A	**Tribune**	**5.99**	**152**	⇓P	**Pn**	**17 58 48.7**	**-0.4**
	baz=6.0,SNR=17						
R28A	**Tribune**	**5.99**	**152**	⇓P	**Pn**	**17 58 48.7**	**-0.4**
	baz=6.0,SNR=17						
SRU	**San Rafael**	**6.03**	**222**	⇑P	**Pn**	**17 58 49.8**	**0.0**
	baz=6.1,SNR=11						
SRU	**San Rafael**	**6.03**	**222**	⇑P	**Pn**	**17 58 49.8**	**0.0**
	baz=6.1,SNR=11						
S25A	**Robets Cordova**	**6.08**	**173**	⇑P	**Pn**	**17 58 50.6**	**+0.1**
	baz=6.2,SNR=9.0						
S25A	**Robets Cordova**	**6.08**	**173**	⇑P	**Pn**	**17 58 50.6**	**+0.1**
	baz=6.2,SNR=9.0						
PV01	**Paradox Valley**	**6.09**	**205**	*e*P	**Pn**	**17 58 52.3**	**+1.6**
	553nm,0.5s						
S26A	**Kim**	**6.25**	**166**	⇑P	**Pn**	**17 58 52.5**	**-0.3**
	baz=6.3,SNR=6.4						
S26A	**Kim**	**6.25**	**166**	⇑P	**Pn**	**17 58 52.5**	**-0.3**
	baz=6.3,SNR=6.4						
ECSD	**EROS Data Cent**	**6.32**	**87**	*e*P	**Pn**	**17 58 53.8**	**+0.3**

	8.2nm,0.6s						
CHMT	**Chamberlain Mo**	**6.44**	**303**	*e*P	**Pn**	**17 58 56.2**	**+0.8**
	2.2nm,0.5s						
B16A	**M & M Farms, S**	**6.46**	**319**	⇓P	**Pn**	**17 58 55.7**	**+0.1**
	baz=6.4,SNR=11						
B16A	**M & M Farms, S**	**6.46**	**319**	⇓P	**Pn**	**17 58 55.7**	**+0.1**
	baz=6.4,SNR=11						
DUG	**Dugway**	**6.59**	**240**	*e*P	**Pn**	**17 58 58.4**	**+0.9**
	6.0nm,0.4s						
HLID	**Hailey**	**6.59**	**272**	*e*P	**Pn**	**17 58 59.6**	**+2.1**
	2.1nm,0.6s						
D14A	**Greenough**	**6.67**	**303**	⇓P	**Pn**	**17 58 58.4**	**-0.1**
	baz=6.6,SNR=7.7						
D14A	**Greenough**	**6.67**	**303**	⇓P	**Pn**	**17 58 58.4**	**-0.1**
	baz=6.6,SNR=7.7						
S18A	**Hurst Farm, Bl**	**6.98**	**212**	⇑P	**Pn**	**17 59 03.2**	**+0.2**
	baz=7.0,SNR=12						
S18A	**Hurst Farm, Bl**	**6.98**	**212**	⇑P	**Pn**	**17 59 03.2**	**+0.2**
	baz=7.0,SNR=12						
B14A	**Marquette Ranc**	**7.22**	**313**	⇓P	**Pn**	**17 59 06.5**	**+0.4**
	baz=7.2,SNR=8.5						
B14A	**Marquette Ranc**	**7.22**	**313**	⇓P	**Pn**	**17 59 06.5**	**+0.4**
	baz=7.2,SNR=8.5						
YBMT	**Yellow Bay**	**7.35**	**307**	*e*P	**Pn**	**17 59 08.1**	**+0.2**
	2.7nm,0.3s						
MVU	**Marysvale**	**7.35**	**227**	*e*P	**Pn**	**17 59 09.1**	**+1.1**
	5.2nm,0.6s						
ARUT	**Antelope Range**	**8.54**	**229**	*e*P	**Pn**	**17 59 24.5**	**+0.3**
	2.9nm,0.5s						
ULM	**Lac du Bonnet**	**9.19**	**41**	Pn	**Pn**	**17 59 31.4**	**-1.5**
ULM				Sn	**Sn**	**18 01 12.9**	**-4.0**
ULM				Lg	Lg	18 02 03.7	
ULM	**Lac du Bonnet**	**9.19**	**41**	Pn	**Pn**	**17 59 31.4**	**-1.5**
	1.0nm,0.3s,baz=227,slow=13,SNR=4.3						
ULM				Sn	**Sn**	**18 01 12.9**	**-4.0**
	0.9nm,0.3s,baz=325,slow=2.9,SNR=3.5						
ULM				Lg	Lg	18 02 03.7	
	0.3nm,0.3s,baz=142,slow=19,SNR=2.2						
NEW	**Newport**	**9.38**	**303**	LR	LR	18 03 46.4	
	comp=Z,56nm,20.2s,baz=192,slow=41						
NVAR	**Mina Array Bea**	**11.12**	**246**	Pn	**Pn**	**18 00 01.7**	**+2.1**
NVAR				Lg	Lg	18 03 09.9	
NVAR	**Mina Array Bea**	**11.12**	**246**	Pn	**Pn**	**18 00 01.7**	**+2.1**
	0.1nm,0.3s,baz=56,slow=9.7,SNR=4.3						
NVAR				Lg	Lg	18 03 09.9	
	0.1nm,0.3s,baz=56,slow=30,SNR=4.3						
TXAR	**Lajitas Array**	**14.41**	**174**	Lg	Lg	18 04 58.3	
	0.1nm,0.3s,baz=343,slow=30,SNR=3.7						
TKL	**Tuckaleechee C**	**18.40**	**109**	LR	LR	18 07 41.6	
	comp=Z,23nm,19.1s,baz=78,slow=34						
YKA	**Yellowknife Ar**	**19.58**	**347**	P	**P**	**18 01 48.3**	**-0.2**
YKA	**Yellowknife Ar**	**19.58**	**347**	P	**P**	**18 01 48.3**	**-0.2**
	0.1nm,0.3s,baz=158,slow=11,SNR=3.1						
ARCES	**ARCESS Array B**	**61.45**	**18**	P	**P**	**18 07 36.0**	**-0.9**
ARCES	**ARCESS Array B**	**61.45**	**18**	P	**P**	**18 07 36.0**	**-0.9**
	0.7nm,0.5s,baz=334,slow=5.7,SNR=11						
ZALV	**Zalesovo Beam**	**82.33**	**354**	P	**P**	**18 09 41.4**	**-1.0**
ZALV	**Zalesovo Beam**	**82.33**	**354**	P	**P**	**18 09 41.4**	**-1.0**
	0.7nm,0.6s,baz=343,slow=4.6,SNR=4.3						
KURK	**Kurchatov**	**85.89**	**357**	P	**P**	**18 10 00.7**	**+0.1**
KURBB	**Kurchatov Arra**	**85.98**	**358**	P	**P**	**18 10 00.7**	**-0.4**
	0.1nm,0.4s,baz=1.1,slow=4.8,SNR=5.0						
MKAR	**Makanchi Array**	**89.62**	**355**	P	**P**	**18 10 18.4**	**-0.2**
MKAR	**Makanchi Array**	**89.62**	**355**	P	**P**	**18 10 18.4**	**-0.2**
	0.4nm,0.7s,baz=3.0,slow=3.4,SNR=4.7						

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*NIED **10** 17:57:00, 41.°90N×142.°30E, h71km, Mw3.9 Best double couple: M0 9.44000×10^14 NP1:φs38.00000°, δ55.00000°, λ94.00000°. NP2:φs211.00000°, δ35.00000°, λ85.00000°.*
*ISCJB **10** 17:57:55.2±0.3, 41.°94N±0.°03×142.°31E±0.°04, h71km±3km, mb3.7/15, Error ellipse: s-maj=5.8km s-min=3.7km az=140.9*
*MOS **10** 17:57:55.8±1.1, 41.°92N×142.°56E, h87km, mb3.9/11, Error ellipse: s-maj=14.5km s-min=9.1km az=80.3*
*JMA **10** 17:57:55.1±0.2, 41.°93N×142.°30E, h72km±3km, M3.5 Broadband fault plane solution: P waves. NP1: φs41.00000°, δ80.00000°, λ113.00000°. NP2: φs154.00000°, δ25.00000°, λ25.00000°. Principal axes: T Plg50.0000°, Azm337.0000°; N Plg23.0000°, Azm217.0000°; P Plg31.0000°, Azm112.0000°;*
JMA Felt I J1.
*IDC **10** 17:57:57.6±1.6, 42.°02N×142.°28E, h79km±13km, mb3.4/12, mb1 3.6/16, mb1mx3.5/30, mbtmp3.4/16 Error ellipse: s-maj=17.6km s-min=11.9km az=114.0*
ISC 10 17:57:55.8±0.8**, 41.°92N**±0.°04×**142.°29E**±0.°03**, h61**km±7km**,**
n41, σ0.s84/53**, mb3.7**/15**, 4C-9D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.50**	**44**	⇑P	**Pn**	**17 58 07.3**	**-0.5**
JNBK				*e*S	**Sn**	**17 58 17.0**	**+0.4**
ERM	**Erimo**	**0.65**	**81**	*d i*P	**Pn**	**17 58 09.8**	**+0.3**
ERM				pmax	pmax		
	comp=Z,455nm,0.6s						
JEM	**Erimo**	**0.65**	**81**	⇑P	**Pn**	**17 58 09.9**	**+0.4**
JEM				*e*S	**Sn**	**17 58 20.3**	**+0.7**
JBT2	**Biratori 2**	**0.86**	**4**	⇓P	**Pn**	**17 58 11.8**	**-0.3**
JBT2				*e*S	**Sn**	**17 58 24.1**	**+0.1**
JKB	**Kayabe**	**0.94**	**268**	⇓P	**Pn**	**17 58 13.0**	**-0.1**
JKB				*e*S	**Sn**	**17 58 26.2**	**+0.4**
JCH	**Churui**	**1.05**	**49**	⇑P	**Pn**	**17 58 14.7**	**+0.1**
JCH				*e*S	**Sn**	**17 58 29.0**	**+0.5**
JOT	**Ohata**	**1.08**	**240**	⇓P	**Pn**	**17 58 15.0**	**+0.2**
JOT				*e*S	**Sn**	**17 58 29.3**	**+0.3**
JNB	**Noboribetsu**	**1.08**	**301**	⇓P	**Pn**	**17 58 14.3**	**-0.6**
JNB				*e*S	**Sn**	**17 58 28.9**	**-0.2**
JEW	**Eniwo**	**1.11**	**326**	⇓P	**Pn**	**17 58 15.4**	**+0.1**
JEW				*e*S	**Sn**	**17 58 30.4**	**+0.6**
JFR	**Furan**	**1.26**	**10**	⇓P	**Pn**	**17 58 16.9**	**-0.4**
JFR				*e*S	**Sn**	**17 58 32.9**	**-0.5**
JYM2	**Yakumo 2**	**1.44**	**278**	P	**Pn**	**17 58 19.5**	**-0.2**
JSR	**Shiriuchi**	**1.46**	**255**	P	**Pn**	**17 58 20.1**	**+0.2**
JSR				*e*S	**Sn**	**17 58 39.1**	**+1.1**
JANG	**Nango**	**1.65**	**201**	P	**Pn**	**17 58 23.3**	**+0.7**
JANG				*e*S	**Sn**	**17 58 44.1**	**+1.3**
JAR	**Ashorobuto**	**1.76**	**38**	P	**Pn**	**17 58 24.0**	**+0.1**
JAR				*e*S	**Sn**	**17 58 45.8**	**+0.5**
JHR	**Hokuryu**	**1.87**	**347**	P	**Pn**	**17 58 26.2**	**+0.7**
JHR				*e*S	**Sn**	**17 58 49.9**	**+1.9**
ASAJ	**Asahikawa**	**2.21**	**6**	P	**Pn**	**17 58 30.9**	**+0.9**
	comp=Z,10nm,0.3s,baz=207,slow=14,SNR=120						
ASAJ				S	**Sn**	**17 58 56.8**	**+0.6**
	comp=Z,14nm,0.3s,baz=353,slow=32,SNR=13						
YUK	**Yuzh-Kuril'sk**	**3.37**	**50**	*d i*P	**Pn**	**17 58 46.6**	**+0.8**
YUK				*i* S	**Sn**	**17 59 23.6**	**-0.9**
YUK				pmax	pmax		
	comp=N,25nm,0.2s						
YUK				pmax	pmax		
	comp=Z,76nm,0.2s						
YUK				pmax	pmax		
	comp=E,14nm,0.1s						
YUK				smax	smax		
	comp=E,157nm,0.7s						
YUK				smax	smax		
	comp=N,121nm,0.3s						
YSS	**Yuzh-Sakhalins**	**5.04**	**4**	*e*P	**Pn**	**17 59 11.3**	**+2.5**
KUR	**Kuril'sk**	**5.23**	**49**	*d i*P	**Pn**	**17 59 11.9**	**+0.5**
KUR				*i* S	**Sn**	**18 00 11.4**	**+1.1**
KUR				pmax	pmax		
	comp=Z,14nm,0.6s						
KUR				pmax	pmax		
	comp=N,8.0nm,0.6s						
KUR				pmax	pmax		
	comp=E,13nm,0.6s						
KUR				smax	smax		
	comp=N,16nm,0.4s						
KUR				smax	smax		
	comp=E,16nm,0.4s						
MAJO	**Matsushiro**	**6.24**	**212**	*e*P	Pn	17 59 28.9	+3.7
MJAR	**Matsushiro Arr**	**6.24**	**212**	P	Pn	17 59 29.2	+4.0
	comp=E,0.7nm,0.3s,baz=24,slow=13,SNR=10						
USRK	**Ussuriysk Arra**	**7.87**	**290**	P	**Pn**	**17 59 50.1**	**+2.6**
	comp=E,0.2nm,0.3s,baz=91,slow=15,SNR=8.0						
KSRS	**Korea Array**	**11.93**	**253**	P	Pn	18 00 47.2	+4.2
	comp=E,0.3nm,0.3s,baz=59,slow=13,SNR=6.2						
YAK	**Yakutsk**	**21.51**	**344**	*e*P	**P**	**18 02 39.8**	**+0.6**
YAK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONM	**Songino Array**	**25.95**	**295**	P	**P**	**18 03 21.6**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=82,slow=8.6,SNR=5.5						
ZALV	**Zalesovo Beam**	**39.28**	**308**	*i* P	**P**	**18 05 18.3**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**39.28**	**308**	P	**P**	**18 05 17.5**	**-0.7**
	comp=Z,0.9nm,0.5s,baz=88,slow=7.3,SNR=6.7						
MKAR	**Makanchi Array**	**42.27**	**298**	*ce*P	P	18 05 47.2	+4.2
MKAR	**Makanchi Array**	**42.27**	**298**	P	**P**	**18 05 42.5**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=84,slow=9.4,SNR=12						
KURK	**Kurchatov**	**43.59**	**304**	P	**P**	**18 05 53.6**	**0.0**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**43.67**	**304**	P	**P**	**18 05 53.6**	**-0.6**
	comp=Z,3.4nm,0.8s,baz=78,slow=8.7,SNR=24						
BVAR	**Borovoye Array**	**47.89**	**309**	P	**P**	**18 06 27.3**	**-0.2**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**47.89**	**309**	P	**P**	**18 06 27.3**	**-0.2**
	comp=Z,1.2nm,0.3s,baz=82,slow=9.3,SNR=7.2						
WRA	**Warramunga Arr**	**61.99**	**188**	P	**P**	**18 08 08.5**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=6.9,slow=6.9,SNR=5.7						
FINES	**FINESS Array B**	**64.83**	**332**	P	**P**	**18 08 26.9**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=53,slow=10,SNR=11						
ASAR	**Alice Springs**	**65.72**	**188**	P	**P**	**18 08 33.7**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=3.5,slow=7.5,SNR=3.7						
KIV	**Kislovodsk**	**68.25**	**310**	*e*P	**P**	**18 08 50.8**	**+0.7**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NOA	**NORSAR Array B**	**69.95**	**337**	P	**P**	**18 08 59.2**	**-1.0**
	comp=Z,0.7nm,0.6s,baz=35,slow=6.3,SNR=4.1						
NVAR	**Mina Array Bea**	**71.56**	**55**	P	**P**	**18 09 11.5**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=273,slow=5.0,SNR=2.9						
PDAR	**Pinedale Array**	**73.79**	**47**	P	**P**	**18 09 23.8**	**0.0**
	comp=Z,0.3nm,0.6s,baz=242,slow=2.9,SNR=3.3						
BRTR	**Keskin Array B**	**76.14**	**311**	P	**P**	**18 09 36.7**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=71,slow=1.6,SNR=3.6						

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*ISCJB **10** 18:19:39.3±0.7, 40.°32N±0.°04×25.°30E±0.°05, h4km±7km, Error ellipse: s-maj=7.0km s-min=5.8km az=30.4*
*ATH **10** 18:19:40.5, 40.°32N×25.°37E, h9km, MD2.8/6*
*DDA **10** 18:19:40.3, 40.°40N×25.°55E, h7km, MD2.4*
*CSEM **10** 18:19:40.2±0.1, 40.°36N×25.°32E, h10km, MD2.8, Error ellipse: s-maj=3.4km s-min=2.7km az=136.0*
ISC 10 18:19:40.4±1.0**, 40.°34N**±0.°03×**25.°36E**±0.°04**, h11**km±8km**,**
n15, σ0.s30/24**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.19**	**44**	*e*PG	**Pg**	**18 19 44.5**	**0.0**
SMTH				*e*SG	**Sg**	**18 19 47.5**	**+0.1**
SMTH	**Samothraki Isl**	**0.19**	**44**	*e*Pg	**Pg**	**18 19 44.5**	**0.0**
SMTH				*e*Sg	**Sg**	**18 19 47.5**	**+0.1**
LIA	**Limnos Island**	**0.46**	**197**	*e*PB	**Pg**	**18 19 49.2**	**-0.2**
LIA				*e*SB	**Sg**	**18 19 55.4**	**0.0**
LIA	**Limnos Island**	**0.46**	**197**	*e*Pb	**Pg**	**18 19 49.2**	**-0.2**
LIA				*e*Sb	**Sg**	**18 19 55.4**	**0.0**
BOZC	**Bozcaada**	**0.73**	**133**	*i* P	**Pg**	**18 19 54.1**	**-0.4**
BOZC				*i* S	**Sg**	**18 20 03.6**	**-0.4**
ALN	**Alexandroupoli**	**0.77**	**43**	*e*PB	**Pg**	**18 19 55.0**	**-0.3**
ALN				*e*SB	**Sb**	**18 20 06.4**	**+0.2**
ALN	**Alexandroupoli**	**0.77**	**43**	*e*Pb	**Pg**	**18 19 55.0**	**-0.3**
ALN				*e*Sb	**Sb**	**18 20 06.4**	**+0.2**
RDO	**Rodhopi**	**0.82**	**10**	*e*PG	**Pg**	**18 19 55.7**	**-0.6**
RDO	**Rodhopi**	**0.82**	**10**	*e*Pg	**Pg**	**18 19 55.7**	**-0.6**
PLG	**Polygyros**	**1.46**	**272**	*e*PG	**Pg**	**18 20 08.3**	**-0.2**
PLG	**Polygyros**	**1.46**	**272**	*e*Pg	**Pg**	**18 20 08.3**	**-0.2**
NVR	**Nevrokopi**	**1.52**	**312**	*e*PG	**Pb**	**18 20 08.6**	**-0.1**
NVR	**Nevrokopi**	**1.52**	**312**	*e*Pg	**Pb**	**18 20 08.6**	**-0.1**
BALY	**Balya**	**1.84**	**108**	*i* P	**Pn**	**18 20 12.4**	**+0.5**
BALY				*i* S	**Sb**	**18 20 36.8**	**-0.2**
BALY	**Balya**	**1.84**	**108**	*i* P	**Pn**	**18 20 12.4**	**+0.5**
BALY				*i* S	**Sb**	**18 20 36.8**	**-0.2**

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*BJI **10** 18:51:53.7, 55.°76N×111.°29E, h11km, mB4.8/29, mb4.8/43, Ms4.8/41, Ms7 4.5/43*
*IDC **10** 18:51:56.0±0.4, 55.°42N×111.°17E, h0km, mb4.6/37, mb1 4.8/40, mb1mx4.8/41, mbtmp4.6/40, ML4.4/3, MS4.2/38, Ms1 4.2/38, ms1mx4.0/61, Error ellipse: s-maj=10.2km s-min=9.7km az=150.0*
*ISCJB **10** 18:51:55.6±0.5, 55.°48N±0.°02×111.°04E±0.°03, h4km±3km, mb4.8/214, MS4.4/69, Error ellipse: s-maj=2.9km s-min=2.3km az=43.6*
*MOS **10** 18:51:56.9±0.9, 55.°44N×111.°08E, h16km, mb5.0/95, MS4.4/41, Error ellipse: s-maj=5.7km s-min=4.0km az=102.2*
MOS Felt (III-IV) at Kumora, Ulyunkhan; (III) at Angoya, Kichera, Novy Uoyan; (II) at Severobaykal'sk.
*NEIC **10** 18:51:57.9±0.1, 55.°42N×111.°06E, h10km, mb5.0/112, Error ellipse: s-maj=3.3km s-min=2.5km az=152.0*
NEIC Felt [IV] at Kumora and Ulyunkhan; [III] at Angoya, Kichera and Novyy Uoyan; [II] at Severobaykal'sk.
*LDG **10** 18:51:57.3±0.3, 55.°64N×110.°51E, h10km, Mb5.0/21, Ms4.0/7, Error ellipse: s-maj=16.5km s-min=4.0km az=96.0*
*GCMT **10** 18:51:59.8±0.3, 55.°36N×111.°08E, h30km, MW4.8, Moment Tensor Solution. s29,c38; s45,c68; Moment tensor: Scale 10^16Nm; Mrr-1.76±.12; Mθθ0.43±.09; Mφφ1.33±.10; Mrθ-0.43±.13; Mθφ1.08±.07; Mφr0.06±.12; Best double couple: M0 2.00000×10^16 NP1:φs200.00000°, δ44.00000°, λ-110.00000°. NP2:φs47.00000°, δ49.00000°, λ-72.00000°. Principal axes: T 2.0600, Plg3.0000°, Azm124.0000°; N -0.1900, Plg14.0000°, Azm215.0000°; P -1.8700, Plg76.0000°, Azm23.0000°; Data Used: II IU IC CN G.*
*BYKL **10** 18:51:59.1±0.2, 55.°41N×111.°16E, h22km±12km, #FAULT_PLANE Typ Strike Dip Rake NP NS Plane Author # FM 32.00 44.00 -75.00 21 0 IEC + 192.00 48.00 -104.00 IEC #PRINAX sc T_val T_azim T_pl B_val B_azim B_pl P_val P_azim P_pl Author + eTv eTa eTp eBv eBa eBp ePv ePa ePp fCLVD # 292.00 2.00 202.00 10.00 33.00 80.00 IEC + 00.00 0.00 0.00 0.00 0.00 0.00 IEC FELT I=IV MSK at Kumora,Kichera,Argada; III-IV at Ulyunkhan,Angoya, Mogoito,Kurumkan,Kunerma,Ulkan; III at Uoyan; II at Severobaikalsk*
*SZGRF **10** 18:52:07.8, 56.°43N×110.°63E, h24km, mb4.9, MS4.5, Lake Baykal, Russia, region*
ISC 10 18:51:59.0±0.3**, 55.°48N**±0.°02×**111.°19E**±0.°02**, h17**km±1km**,**
h17km:pP-P, n923, σ1.s19/1070**, mb4.9**/232**, MS4.3**/70**,**
234C-225D, Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMO	**Kumora**	**0.41**	**1**	⇑*i*Pg	**Pb**	**18 52 08.2**	**+0.4**
KMO				Pmax		18 52 14.0	
	37µm,1.0s						
KMO				*i* Sg	**Sb**	**18 52 15.3**	**+1.6**
KMO				Smax		18 52 18.4	
	139µm,1.1s						
KMO	**Kumora**	**0.41**	**1**	*e*PG	**Pb**	**18 52 08.2**	**+0.4**
KMO				*e*		18 52 14.0	
KMO				pmax	pmax		
	comp=Z,8µm,0.4s						
KMO				smax	smax		
	comp=N,139µm,1.1s						
KMO	**Kumora**	**0.41**	**1**	*e*P	**Pb**	**18 52 08.2**	**+0.4**
YLYR	**Ulyunkhan**	**0.60**	**182**	⇓*i*Pg	**Pg**	**18 52 09.1**	**-1.8**
YLYR				Pmax		18 52 09.8	
	comp=N,5µm,0.3s						
YLYR				*i* Sg	**Sg**	**18 52 16.9**	**-2.1**
YLYR				Smax		18 52 21.0	
	comp=N,50µm,0.8s						
YLYR	**Ulyunkhan**	**0.60**	**182**	*e*PG	**Pg**	**18 52 09.1**	**-1.8**
YLYR				*e*		18 52 16.5	
YLYR				pmax	pmax		
	comp=Z,8µm,0.3s						
YLYR				smax	smax		
	comp=N,48µm,0.2s						
YLYR	**Ulyunkhan**	**0.60**	**182**	*e*P	**Pg**	**18 52 09.1**	**-1.8**
YOA	**Uoyan**	**0.72**	**24**	⇓*i*Pg	**Pn**	**18 52 13.9**	**-0.5**
YOA				*e*		18 52 18.9	
YOA				max		18 52 21.9	
	comp=N,7µm,0.5s						
YOA				*e*Sg	**Sn**	**18 52 25.6**	**+0.5**
YOA				*e*Sb	Sb	18 52 30.0	+7.3
YOA				max		18 52 39.3	
	comp=N,86µm,1.0s						
YOA	**Uoyan**	**0.72**	**24**	⇑*i*PG	**Pn**	**18 52 14.0**	**-0.5**
YOA				*i*		18 52 25.8	
YOA				pmax	pmax		
	comp=Z,3µm,0.2s						
YOA				smax	smax		
	comp=N,84µm,0.7s						
NIZ	**Nizh Angarsk**	**0.98**	**288**	⇑*i*Pg	**Pb**	**18 52 17.3**	**-0.3**
	comp=N,1µm,0.8s						
NIZ				⇓*i*Pg	**Pb**	**18 52 17.3**	**-0.3**
	comp=N,3µm,0.8s						
NIZ				⇑*i*Pg	**Pb**	**18 52 17.3**	**-0.3**
	comp=N,9µm,0.8s						
NIZ				Pmax		18 52 18.0	
	comp=N,13µm,0.8s						
NIZ				*e*Sg	**Sg**	**18 52 31.0**	**+0.1**
NIZ				Smax		18 52 35.7	
	comp=N,64µm,0.6s						
NIZ	**Nizh Angarsk**	**0.98**	**288**	*e*PG	**Pb**	**18 52 17.2**	**-0.3**
NIZ				*e*		18 52 30.9	
NIZ				pmax	pmax		
	comp=Z,11µm,0.7s						
NIZ				smax	smax		
	comp=E,10µm,0.7s						
NIZ	**Nizh Angarsk**	**0.98**	**288**	*e*P	**Pb**	**18 52 17.2**	**-0.3**
UKT	**Uakit**	**1.39**	**89**	*i* Pg	**Pn**	**18 52 24.0**	**+0.4**
UKT				Pmax		18 52 24.7	
	comp=E,10µm,1.0s						
UKT				*i* Sg	**Sb**	**18 52 42.7**	**+0.8**
UKT				Smax		18 52 44.9	
	comp=E,50µm,1.1s						
UKT	**Uakit**	**1.39**	**89**	⇑*i*PN	**Pn**	**18 52 23.8**	**+0.2**
UKT				*i*		18 52 42.6	
UKT				pmax	pmax		
	comp=Z,10µm,0.9s						
UKT				smax	smax		
	comp=N,26µm,1.0s						
SYVR	**Suvo**	**1.95**	**201**	⇑*i*Pn	**Pn**	**18 52 31.1**	**-0.2**
	comp=N,413nm,0.8s						
SYVR				⇑*i*Pn	**Pn**	**18 52 31.1**	**-0.2**
	comp=N,344nm,0.8s						
SYVR				⇓*i*Pn	**Pn**	**18 52 31.1**	**-0.2**
	comp=N,895nm,0.8s						
SYVR				*e*Pg	**Pb**	**18 52 32.6**	**-1.5**
SYVR				Pmax		18 52 39.1	
	comp=N,5µm,1.0s						
SYVR				*e*		18 52 56.2	
SYVR				*i* Sg	**Sb**	**18 52 58.2**	**+0.1**
SYVR				Smax		18 53 06.5	
	comp=N,22µm,0.7s						
SYVR	**Suvo**	**1.95**	**201**	*e*PN	**Pn**	**18 52 30.9**	**-0.4**
SYVR				*e*		18 52 56.1	
SYVR				pmax	pmax		
	comp=Z,5µm,0.8s						
SYVR				smax	smax		
	comp=N,23µm,0.7s						
MXMB	**Maximikha**	**2.64**	**214**	⇑*i*Pn	**Pn**	**18 52 40.8**	**0.0**
	comp=N,146nm,1.0s						
MXMB				⇑*i*Pn	**Pn**	**18 52 40.8**	**0.0**
	comp=N,146nm,1.0s						
MXMB				⇓*i*Pn	**Pn**	**18 52 40.8**	**0.0**
	comp=N,390nm,1.0s						
MXMB				*i* Pg	**Pb**	**18 52 45.6**	**-0.2**
MXMB				Pmax		18 52 51.5	
	comp=N,7µm,1.2s						
MXMB				*i* Sn	**Sn**	**18 53 13.0**	**+0.6**
MXMB				*i* Sg	**Sb**	**18 53 20.0**	**+2.1**
MXMB				Smax		18 53 23.2	
	comp=N,26µm,0.6s						
NLYR	**Nelyaty**	**2.73**	**66**	⇓*i*Pn	**Pn**	**18 52 43.5**	**+1.5**
NLYR				*e*Pg	**Pb**	**18 52 48.0**	**+0.7**
NLYR				*e*PgPg	**PbPb**	**18 52 50.1**	**-0.4**
NLYR				max		18 52 57.2	
	comp=N,2µm,0.7s						
NLYR				*e*		18 53 16.0	
NLYR				*i* Sg	**Sg**	**18 53 23.9**	**-2.8**
NLYR				Smax		18 53 29.6	
	comp=N,20µm,1.4s						
OGRR	**Ongureny**	**2.79**	**230**	⇑*i*Pn	**Pn**	**18 52 43.3**	**+0.5**
	comp=N,313nm,1.0s						
OGRR				⇑*i*Pn	**Pn**	**18 52 43.3**	**+0.5**
	comp=N,313nm,1.0s						
OGRR				⇓*i*Pn	**Pn**	**18 52 43.3**	**+0.5**
	comp=N,375nm,1.0s						
OGRR				*e*		18 52 46.9	
OGRR				*e*Pg	**Pb**	**18 52 47.6**	**-0.7**
OGRR				Pmax		18 52 54.2	
	comp=N,2µm,1.4s						
OGRR				*i* Sn	**Sn**	**18 53 16.0**	**0.0**
OGRR				*i* Sg	**Sb**	**18 53 23.1**	**+1.0**
OGRR				Smax		18 53 24.6	
	comp=N,13µm,0.5s						
OGRR				*e*		18 53 29.8	
BOD	**Bodaibo**	**2.81**	**32**	⇓*i*Pn	**Pn**	**18 52 44.1**	**+1.0**
	comp=N,146nm,1.1s						
BOD				⇓*i*Pn	**Pn**	**18 52 44.1**	**+1.0**
	comp=N,73nm,1.1s						
BOD				⇓*i*Pn	**Pn**	**18 52 44.1**	**+1.0**
	comp=N,166nm,1.1s						
BOD				*e*Pg	**Pb**	**18 52 48.7**	**0.0**
BOD				Pmax		18 52 55.6	
	comp=N,872nm,0.8s						
BOD				*e*		18 53 20.0	
BOD				*i* Sg	**Sg**	**18 53 26.9**	**-2.4**
BOD				Smax		18 53 45.6	
	comp=N,4µm,1.2s						
BOD	**Bodaibo**	**2.81**	**32**	*e*PN	**Pn**	**18 52 43.7**	**+0.6**
BOD				*e*		18 52 49.1	
BOD				*e*		18 53 26.2	
BOD				pmax	pmax		
	comp=Z,814nm,0.4s						
BOD				smax	smax		
	comp=E,4µm,0.8s						
CIT	**Chita**	**3.74**	**157**	*e*Pn	**Pn**	**18 52 54.5**	**-1.4**
CIT				*e*Pg	**Pb**	**18 53 04.9**	**+0.4**
CIT				Pmax		18 53 05.8	
	comp=E,4µm,1.4s						
CIT				*e*		18 53 38.4	
CIT				*e*Sg	**Sb**	**18 53 51.3**	**+1.8**
CIT				Smax		18 53 57.8	
	comp=E,21µm,2.2s						
CIT	**Chita**	**3.74**	**157**	*e*PN	**Pn**	**18 52 54.5**	**-1.4**
CIT				*e*		18 53 04.9	
CIT				*e*		18 53 51.2	
CIT				pmax	pmax		
	comp=Z,4µm,1.4s						
CIT				smax	smax		
	comp=N,19µm,1.5s						
ZRHB	**Zarechye**	**3.78**	**221**	⇓*i*Pn	**Pn**	**18 52 56.3**	**-0.1**
ZRHB				⇓*i*Pg	**Pb**	**18 53 05.1**	**0.0**
ZRHB				*e*		18 53 12.7	
ZRHB				max		18 53 17.0	
	comp=N,4µm,1.2s						
ZRHB				*e*Sn	**Sn**	**18 53 41.5**	**+1.1**
ZRHB				*i* Sg	**Sg**	**18 53 56.0**	**-4.2**
ZRHB				*e*SgSg	**SbSb**	**18 54 00.8**	**+5.1**
ZRHB				max		18 54 16.5	
	comp=N,34µm,1.4s						
TRG	**Tyrgan**	**3.94**	**228**	⇑*i*Pn	**Pn**	**18 52 58.7**	**0.0**
	comp=N,70nm,1.0s						
TRG				⇑*i*Pn	**Pn**	**18 52 58.7**	**0.0**
	comp=N,93nm,1.0s						
TRG				⇓*i*Pn	**Pn**	**18 52 58.7**	**0.0**
	comp=N,116nm,1.0s						
TRG				*e*Pg	**Pb**	**18 53 08.0**	**0.0**
TRG				*e*		18 53 15.4	
TRG				max		18 53 17.9	
	comp=N,2µm,1.4s						
TRG				*e*		18 53 44.5	
TRG				*e*		18 53 56.0	
TRG				*e*Sg	**Sb**	**18 53 57.9**	**+2.6**
TRG				Smax		18 54 03.0	
	comp=N,5µm,0.5s						
TRG	**Tyrgan**	**3.94**	**228**	*e*PN	**Pn**	**18 52 59.0**	**+0.3**
TRG				*e*		18 53 08.3	
TRG				*e*S	**Sn**	**18 53 43.7**	**-0.8**
TRG				*e*		18 53 57.6	
TRG				pmax	pmax		
	comp=Z,2µm,1.4s						
TRG				smax	smax		
	comp=E,5µm,0.5s						
UUDB	**Ulan-Yde**	**4.18**	**212**	⇑*i*Pn	**Pn**	**18 53 02.2**	**+0.2**
UUDB				*e*Pg	**Pb**	**18 53 13.3**	**+1.2**
UUDB				Pmax		18 53 14.5	
	comp=E,840nm,0.7s						
UUDB				*e*		18 53 17.3	
UUDB				*e*Sg	**Sb**	**18 54 06.3**	**+4.1**
UUDB				Smax		18 54 16.4	
	comp=E,5µm,1.0s						
CRS	**Chara**	**4.20**	**67**	*e*Pn	**Pn**	**18 53 03.9**	**+1.6**

CRS ⇓*i*Pg Pg 18 53 16.3 -3.1
CRS *e* 18 53 22.6
CRS max 18 53 23.8
comp=E,4μm,1.2s
CRS *e*Sg **Sg** **18 54 11.2 -2.6**
CRS Smax 18 54 13.3
comp=E,17μm,1.5s
CRS Chara 4.20 67 *e*PN Pb 18 53 15.8 +3.4
KAB Kabansk 4.36 220 ⇓*i*Pn **Pn** **18 53 04.1 -0.3**
KAB *e*Pg **Pb** **18 53 15.6 +0.5**
KAB Pmax 18 53 25.1
comp=E,2μm,1.2s
KAB *e* 18 53 48.6
KAB *e*Sg **Sb** **18 54 12.3 +4.9**
KAB *e* 18 54 15.4
KAB max 18 54 29.1
comp=E,16μm,1.3s
KAB Kabansk 4.36 220 *e*PN **Pb** **18 53 17.5 +2.4**
HRMR Khuramsha 4.61 215 ⇑*i*Pn **Pn** **18 53 07.9 +0.1**
comp=E,74nm,0.6s
HRMR ⇑*i*Pn **Pn** **18 53 07.9 +0.1**
comp=E,74nm,0.6s
HRMR ⇓*i*Pn **Pn** **18 53 07.9 +0.1**
comp=E,124nm,0.6s
HRMR *e*Pg **Pb** **18 53 20.3 +0.9**
HRMR *e* 18 53 22.2
HRMR max 18 53 28.5
comp=E,3μm,1.4s
HRMR *i* Sg **Sb** **18 54 18.9 +4.3**
HRMR Smax 18 54 29.5
comp=E,15μm,0.6s
TUP Tupik 5.16 98 ⇓*i*Pn **Pn** **18 53 15.2 -0.2**
comp=E,25nm,1.0s
TUP ⇑*i*Pn **Pn** **18 53 15.2 -0.2**
comp=E,88nm,1.0s
TUP ⇑*i*Pn **Pn** **18 53 15.2 -0.2**
comp=E,93nm,1.0s
TUP *e* 18 53 20.0
TUP *e*Pg **Pb** **18 53 31.1 +2.4**
TUP Pmax 18 53 38.9
comp=E,490nm,1.5s
TUP *e*Sn **Sn** **18 54 11.5 -3.0**
TUP *i* Sg **Sg** **18 54 39.8 -4.7**
TUP Smax 18 54 57.4
comp=E,9μm,1.6s
TUP Tupik 5.16 98 *e*PN **Pn** **18 53 15.1 -0.3**
TUP *e* 18 53 30.7
TUP *e* 18 54 39.8
TUP pmax pmax
comp=Z,490nm,1.0s
TUP smax smax
comp=N,9μm,1.4s
IRK Irkutsk 5.22 234 *e*Pn **Pn** **18 53 15.5 -0.7**
IRK *e* 18 53 18.0
IRK *e*Pg **Pb** **18 53 32.3 +2.5**
IRK Pmax 18 53 43.1
comp=N,901nm,0.5s
IRK *e*Sn **Sn** **18 54 12.5 -3.5**
IRK *e*Sg Sb 18 54 38.6 +6.5
IRK Smax 18 54 44.9
comp=N,16μm,1.0s
IRK Irkutsk 5.22 234 *e*PN **Pb** **18 53 32.5 +2.7**
IRK *e* 18 54 36.8
IRK pmax pmax
comp=Z,908nm,0.5s
IRK smax smax
comp=N,16μm,0.9s
LSTR Listvyanka 5.23 229 ⇑*i*Pn **Pn** **18 53 15.6 -0.7**
comp=N,32nm,1.1s
LSTR ⇑*i*Pn **Pn** **18 53 15.6 -0.7**
comp=N,23nm,1.1s
LSTR ⇓*i*Pn **Pn** **18 53 15.6 -0.7**
comp=N,37nm,1.1s
LSTR *e* 18 53 20.9
LSTR *e*Pg **Pb** **18 53 31.4 +1.5**
LSTR Pmax 18 53 42.9
comp=N,253nm,1.0s
LSTR *e* 18 54 14.4
LSTR *e*Sg Sb 18 54 38.5 +6.1
LSTR Smax 18 54 52.0
comp=N,9μm,1.6s
KPC Khapcheranga 5.83 172 *e* Pn 18 53 30.1 +5.5
KPC *e* 18 53 35.4
KPC ⇓*i*Pg **Pb** **18 53 40.9 +0.7**
KPC Pmax 18 53 54.2
comp=N,306nm,0.5s
KPC *e*Sn **Sn** **18 54 29.7 -1.4**
KPC *i* Sg Sb 18 54 56.7 +7.0
KPC *e* 18 55 01.6
KPC max 18 55 04.4
comp=N,7μm,1.1s
TLY Talaya 5.89 233 ⇓*i*Pn **Pn** **18 53 24.0 -1.4**
TLY *e* 18 53 32.7
TLY ⇑*i*Pg Pb 18 53 44.3 +3.2
TLY Pmax 18 53 57.9
comp=N,389nm,1.0s
TLY *e*Sn **Sn** **18 54 29.6 -2.9**
TLY *e* 18 54 55.2
TLY *e*Sg Sb 18 54 57.9 +6.6
TLY Smax 18 55 10.4
comp=N,4μm,1.0s
TLY Talaya 5.89 233 *e*PN **Pn** **18 53 24.2 -1.2**
TLY *e* 18 53 44.2
TLY *e*S **Sn** **18 54 29.5 -2.9**
TLY *e* 18 54 56.5
TLY pmax pmax
comp=Z,402nm,0.7s
TLY smax smax
comp=E,4μm,1.1s
TLY Talaya 5.89 233 *e*P **Pn** **18 53 23.0 -2.4**
TLY Talaya 5.89 233 Pn **Pn** **18 53 24.8 -0.6**
comp=E,549nm,0.5s,SNR=8.7
YKLR Yuktali 5.97 75 *e*Pn **Pn** **18 53 27.4 +0.9**
YKLR *e* 18 53 33.6
YKLR *e*Pg Pb 18 53 47.4 +4.9
YKLR *i* Sg Sg 18 55 04.1 -6.3
ARS Arshan 6.31 239 *e*PN **Pn** **18 53 29.9 -1.3**
ARS *e* 18 53 50.4
ARS *e*S **Sn** **18 54 37.7 -5.1**
ARS *e* 18 55 11.1
ARS pmax pmax
comp=Z,801nm,0.6s
ARS smax smax
comp=N,13μm,0.7s
ZAK Zakamensk 6.99 226 ⇑*i*Pn **Pn** **18 53 40.3 -0.3**
comp=N,5.0nm,1.3s
ZAK ⇑*i*Pn **Pn** **18 53 40.3 -0.3**
comp=N,3.0nm,1.3s
ZAK ⇓*i*Pn **Pn** **18 53 40.3 -0.3**
comp=N,8.0nm,1.3s
ZAK *e*Pg Pb 18 54 04.5 +4.6
ZAK Pmax 18 54 16.2
comp=N,119nm,0.8s
ZAK *e* 18 55 22.5
ZAK *e*Sg Sg 18 55 34.9 -8.3
ZAK Smax 18 55 41.9
comp=N,2μm,1.4s
ZAK Zakamensk 6.99 226 *e*PN **Pn** **18 53 40.3 -0.3**
ZAK *e* 18 54 05.6
ZAK *e* 18 55 34.6
ZAK pmax pmax
comp=Z,117nm,0.7s
ZAK smax smax
comp=E,2μm,1.4s
MOY Mondy 7.17 242 ⇑*i*Pn **Pn** **18 53 43.4 +0.3**
MOY ⇓*i* 18 53 48.4
MOY max 18 53 56.8
comp=E,512nm,1.1s
MOY *e* 18 54 03.7
MOY *e*Pg Pb 18 54 07.8 +4.8
MOY *i* Sn **Sn** **18 55 00.4 -3.7**
MOY *i* Sg Sg 18 55 39.3 -10
MOY Smax 18 55 43.9
comp=E,9μm,1.5s
MOY *e* 18 55 47.6
MOY Mondy 7.17 242 *e*PN **Pn** **18 53 43.4 +0.3**
MOY *e*S **Sn** **18 55 00.2 -3.9**
MOY *e*S Sb 18 55 36.8 +8.6
MOY smax smax
comp=E,9μm,1.5s
IENR Iengra 7.73 79 ⇓*i*Pn **Pn** **18 53 50.9 +0.2**
IENR *e* 18 53 59.0
IENR ⇑*i*Pg Pb 18 54 18.4 +6.0
IENR *e* 18 55 31.7
IENR *e*Sg Sb 18 55 58.2 +14
TNDR Tynda 7.73 87 ⇓*i*Pn **Pn** **18 53 50.9 +0.3**
TNDR *e* 18 53 57.8
TNDR ⇓*i*Pg Pb 18 54 18.3 +5.9
TNDR *i* Sg Sb 18 55 58.9 +15
CLNS Chul'man 7.77 74 ⇓*i*Pn **Pn** **18 53 52.5 +1.2**
CLNS *e* 18 53 59.2
CLNS ⇓*i*Pg Pb 18 54 19.8 +6.6
CLNS *e* 18 55 04.8
CLNS *i* Sg Sb 18 56 01.8 +16
CLNS Chul'man 7.77 74 *e*PN **Pn** **18 53 52.4 +1.2**
CLNS *e*S **Sn** **18 55 21.7 +3.0**
CLNS pmax pmax
comp=N,1.0nm,0.6s
CLNS pmax pmax
comp=Z,3.0nm,0.6s
CLNS pmax pmax
comp=E,3.0nm,0.7s
CLNS smax smax
comp=N,153nm,0.9s
CLNS smax smax
comp=E,125nm,0.9s
CLNS MLR MLR
comp=Z,2μm,13.0s
CLNS MLR MLR
comp=E,2μm,13.0s
CLNS MLR MLR
comp=N,653nm,11.0s
ULN Ulaanbaatar 8.04 200 *e*P **Pn** **18 53 54.2 -0.9**
comp=N,77nm,0.6s
HIA Hailar 8.12 136 *e*P Pn 18 53 52.4 -3.6
comp=N,92nm,0.6s
SONM Songino Array 8.21 203 Pn **Pn** **18 53 57.4 0.0**
SONM Sn **Sn** **18 55 27.8 -1.9**
SONM Lg Lg 18 56 16.7
SONM Songino Array 8.21 203 Pn **Pn** **18 53 57.4 0.0**
comp=N,4.8nm,0.3s,baz=17,slow=13,SNR=90
SONM Sn **Sn** **18 55 27.8 -1.9**
comp=N,16nm,0.3s,baz=18,slow=25,SNR=5.8
SONM Lg Lg 18 56 16.7
comp=N,71nm,0.3s,baz=20,slow=29,SNR=9.2
SONM LR LR 18 57 24.4
comp=N,2μm,19.6s,baz=14,slow=40
KRAR Krasnoyarsk 10.34 281 *c i*P **Pn** **18 54 24.0 -2.3**
KZLR Kyzyl 10.64 256 *e*P **Pn** **18 54 30.7 +0.2**
HVS Khovu-Aksy 11.32 255 *e*P **Pn** **18 54 40.1 +0.2**
ABNR Abakan 11.59 269 *e*P **Pn** **18 54 42.0 -1.4**
YAK Yakutsk 11.60 48 *e*P **Pn** **18 54 41.2 -2.3**
YAK pmax pmax
comp=Z,15nm,0.9s
YAK pmax pmax
comp=E,11nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK MLR MLR
comp=Z,1μm,12.0s
KLR Kul'dur 14.01 108 *e*P Pn 18 55 13.2 -3.2
KLR MLR MLR
comp=N,4μm,12.0s
KLR MLR MLR
comp=Z,6μm,12.0s
HHC Hu-ho-hao-te 14.64 179 *e*P **Pn** **18 55 24.4 -0.9**
HHC pP **P** **18 55 29.8 -1.7**
HHC sP 18 55 33.3
HHC PP **PnPn** **18 55 38.2 +5.1**
HHC S **Sn** **18 58 09.1 +2.0**
HHC SS **S** **18 58 25.9 -0.1**
HHC pmax pmax
comp=Z,24nm,0.8s
HHC pmax pmax
comp=Z,220nm,5.1s
HHC LR LR
comp=N,4μm,9.1s
HHC LR LR
comp=E,3μm,8.0s
HHC LR LR
comp=Z,4μm,8.8s
CN2 Changchun 14.86 136 *e*P **Pn** **18 55 29.5 +1.4**
CN2 *es*P 18 55 36.0
CN2 *e*S **Sn** **18 58 15.3 +3.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=N,1μm,11.0s
CN2 LR LR
comp=E,1μm,11.0s
CN2 LR LR
comp=Z,2μm,12.0s
BTO Baotou 14.90 183 *e*P **P** **18 55 34.9 +0.5**
ZALV Zalesovo Beam 15.29 275 P **Pn** **18 55 33.0 -0.7**
ZALV pmax pmax
comp=Z,2.0nm,0.3s
ZALV MLR MLR
comp=Z,275nm,18.7s
ZALV Zalesovo Beam 15.29 275 Pn **Pn** **18 55 33.0 -0.7**
ZALV Lg Lg 18 59 58.8
ZALV Zalesovo Beam 15.29 275 Pn **Pn** **18 55 33.0 -0.7**
comp=Z,2.2nm,0.3s,baz=77,slow=10,SNR=227
ZALV Lg Lg 18 59 58.8
comp=Z,1.2nm,0.3s,baz=90,slow=24,SNR=5.3
ZALV LR LR 19 01 10.1
comp=Z,275nm,18.7s,baz=68,slow=36
BJI Beijing 15.80 166 P **P** **18 55 43.8 -0.4**
BJI S **S** **18 58 46.2 -3.3**
BJI pmax pmax
comp=Z,31nm,1.0s
BJI LR LR
comp=N,1μm,12.0s
BJI LR LR
comp=E,5μm,11.3s
BJI LR LR
comp=Z,1μm,18.6s
BJT Baijiatuao 15.82 166 *e*P **P** **18 55 43.7 -0.8**
comp=Z,32nm,0.4s
SNY Shenyang 15.89 144 ⇑P **P** **18 55 46.3 +1.1**
SNY pmax pmax
comp=Z,15nm,1.8s
SNY pmax pmax
comp=Z,250nm,3.5s
SNY LR LR
comp=N,2μm,8.5s
SNY LR LR
comp=E,970nm,12.6s
SNY LR LR
comp=Z,2μm,15.5s
NVS Novosibirsk 15.95 279 *e*P **Pn** **18 55 40.3 -2.0**
NVS *e* 18 58 43.9
MDJ Mudanjiang 16.00 125 P **Pn** **18 55 42.9 -0.1**
MDJ S **Sn** **18 58 42.5 +2.6**
MDJ ScP **ScP** **19 04 14.0 +1.4**
MDJ PcS **PcS** **19 04 15.3 +0.5**
MDJ pmax pmax
comp=Z,4.0nm,0.7s
MDJ LR LR
comp=N,2μm,10.4s
MDJ LR LR
comp=E,840nm,10.2s
MDJ LR LR
comp=Z,2μm,9.6s
HABR Khabarovsk 16.23 106 *e*P **Pn** **18 55 44.4 -1.6**
HABR *e* 18 58 45.8
HABR pmax pmax
comp=N,42nm,2.1s
HABR pmax pmax
comp=E,93nm,2.1s
HABR pmax pmax
comp=Z,58nm,2.1s
HABR MLR MLR
comp=Z,1μm,15.0s
USRK Ussuriysk Arra 17.45 122 P **P** **18 56 02.2 -0.3**
comp=Z,0.1nm,0.3s,baz=295,slow=9.1,SNR=3.1
USRK Lg Lg 19 01 07.4
comp=Z,0.3nm,0.3s,baz=318,slow=31,SNR=4.8
USRK LR LR 19 03 12.9
comp=Z,1μm,18.5s,baz=299,slow=39
GTA Gaotai 17.78 210 ⇑P **Pn** **18 56 05.0 -0.6**
GTA pP **P** **18 56 08.7 +2.4**
GTA sP **sP** **18 56 12.1 -1.3**
GTA S **Sn** **18 59 21.3 -2.0**
GTA SS **SnSn** **18 59 43.2 +6.6**
GTA pmax pmax
comp=Z,96nm,4.5s
GTA LR LR
comp=N,1μm,13.3s
GTA LR LR
comp=E,570nm,14.0s
GTA LR LR
comp=Z,2μm,14.5s
TIXI Tiksi 17.90 18 *e*P **Pn** **18 56 04.2 -2.5**
TIXI pmax pmax
comp=Z,57nm,0.9s
DL2 Dalian 18.00 153 P **P** 18 56 14.4 +5.9
DL2 S S 18 59 43.6 +9.3
DL2 pmax pmax
comp=Z,44nm,1.1s
DL2 pmax pmax
comp=Z,250nm,3.9s
DL2 LR LR
comp=N,920nm,17.1s
DL2 LR LR
comp=Z,960nm,10.8s
WMQ Urumqi 19.06 242 P **P** **18 56 20.3 0.0**
WMQ pP **pP** **18 56 27.0 +1.8**
WMQ sP sP 18 56 34.0 +6.6
WMQ S **Sn** **18 59 49.0 -5.1**
WMQ SS **SnSn** **19 00 16.0 +8.1**
WMQ pmax pmax
comp=Z,32nm,0.7s
WMQ pmax pmax
comp=Z,240nm,3.9s
WMQ LR LR
comp=N,1μm,6.0s
WMQ LR LR
comp=E,910nm,9.6s
WMQ LR LR
comp=Z,1μm,16.0s
TIA Tai'an 19.69 166 *e*P Pn 18 56 38.7 +10
MK31 Makanchi Array 19.98 256 *i* P **P** **18 56 29.2 -1.1**
MK31 pmax pmax
comp=Z,17nm,0.5s
MKAR Makanchi Array 19.98 256 P **P** **18 56 29.6 -0.8**
MKAR MLR MLR
comp=Z,923nm,21.4s
MKAR Makanchi Array 19.98 256 P **P** **18 56 29.6 -0.8**
MKAR Lg Lg 19 02 21.6
MKAR Makanchi Array 19.98 256 P **P** **18 56 29.6 -0.8**
comp=Z,1.0nm,0.3s,baz=56,slow=9.6,SNR=59
MKAR Lg Lg 19 02 21.6
comp=Z,0.1nm,0.3s,baz=54,slow=19,SNR=3.7
MKAR LR LR 19 04 28.3
comp=Z,922nm,21.4s,baz=47,slow=38
KURK Kurchatov 20.01 270 P **P** **18 56 31.1 +0.5**
KURK pmax pmax
comp=Z,38nm,0.9s
KURK Kurchatov 20.01 270 *e*P **P** **18 56 29.7 -0.9**
comp=Z,55nm,0.7s
KURK Lg Lg 19 02 29.7
KURK Kurchatov 20.01 270 Pn **P** **18 56 30.0 -0.6**
comp=Z,428nm,0.9s,SNR=9.2
LZH Lanzhou 20.04 198 ⇓P **P** **18 56 31.2 +0.1**
LZH *e*S **S** **19 00 09.5 -6.2**
LZH pmax pmax
comp=Z,63nm,1.2s
LZH pmax pmax
comp=Z,190nm,4.1s
LZH LR LR
comp=N,2μm,12.2s
LZH LR LR
comp=E,740nm,13.0s
LZH LR LR
comp=Z,2μm,13.5s
KURBB Kurchatov Arra 20.11 270 P **P** **18 56 31.1 -0.5**
comp=Z,38nm,0.9s,baz=67,slow=12,SNR=92
KURBB Lg Lg 19 02 29.7
comp=Z,12nm,1.1s,baz=63,slow=31,SNR=5.4
KSAR Wonju Array Be 21.29 141 P **P** **18 56 44.2 -0.2**
KSAR Lg Lg 19 03 12.6
KSRS Korea Array 21.30 141 P **P** **18 56 44.2 -0.3**
comp=Z,2.9nm,0.9s,baz=331,slow=10,SNR=4.2
KSRS Lg Lg 19 03 12.6
comp=Z,15nm,1.1s,baz=334,slow=28,SNR=10
KSRS LR LR 19 06 02.3
comp=Z,439nm,19.0s,baz=331,slow=40
YSS Yuzh-Sakhalins 21.37 100 ⇑*e*P P 18 56 52.0 +6.7
YSS *e**SP sP 18 56 56.0 +3.6
YSS *e* 18 57 09.0
YSS *e*S Sn 19 00 50.0 +0.4
YSS pmax pmax
comp=Z,20nm,0.9s
YSS MLR MLR
comp=E,2μm,13.0s
YSS MLR MLR
comp=Z,2μm,13.0s
XAN Xi'an 21.50 185 P **P** **18 56 46.0 -0.8**
XAN pP **pP** **18 56 49.5 -2.2**
XAN sP **sP** **18 56 52.5 -1.4**
XAN LR LR
comp=N,770nm,11.9s
XAN LR LR
comp=E,160nm,8.6s
XAN LR LR
comp=Z,360nm,13.4s
ASAJ Asahikawa 23.03 106 P **P** **18 57 04.5 +1.5**
ASAJ Asahikawa 23.03 106 P **P** **18 57 04.5 +1.5**
comp=Z,8.1nm,0.8s,baz=326,slow=16,SNR=2.8
ASAJ LR LR 19 05 57.9
comp=Z,311nm,21.6s,baz=346,slow=37
VOSK Vostochnaya 23.51 280 P **P** **18 57 06.8 -0.9**
VOSK pmax pmax
comp=Z,45nm,1.0s
BVA0 Borovoye Array 23.72 281 *i* P **P** **18 57 09.3 -0.5**
BVA0 pmax pmax
comp=Z,39nm,0.7s
BVAR Borovoye Array 23.72 281 P **P** **18 57 09.0 -0.8**
BVAR pmax pmax
comp=Z,14nm,0.6s
BVAR Borovoye Array 23.72 281 P **P** **18 57 09.0 -0.8**
BVAR S Sn 19 01 38.4 -7.3
BVAR Borovoye Array 23.72 281 P **P** **18 57 09.0 -0.8**
comp=Z,14nm,0.6s,baz=73,slow=9.0,SNR=93
BVAR S Sn 19 01 38.4 -7.3
comp=Z,15nm,0.8s,baz=65,slow=27,SNR=4.3
BRVK Borovoye 23.77 281 P **P** **18 57 09.6 -0.6**
BRVK pmax pmax
comp=Z,110nm,1.1s
BRVK Borovoye 23.77 281 *e*P **P** **18 57 09.1 -1.2**
comp=Z,64nm,0.6s
BRVK Borovoye 23.77 281 P **P** **18 57 09.2 -1.0**
comp=Z,213nm,0.6s,SNR=16
WHN Wuhan 25.02 174 ⇓*i*P **P** **18 57 23.4 +1.5**
WHN pmax pmax
comp=Z,50nm,1.0s
WHN LR LR
comp=N,1μm,12.8s
WHN LR LR
comp=E,1μm,14.0s
WHN LR LR
comp=Z,2μm,14.0s
CD2 Chengdu 25.12 195 *e*P **P** **18 57 23.0 +0.2**
CD2 pP **pP** **18 57 27.2 -0.8**
CD2 sP **sP** **18 57 30.2 0.0**
CD2 PP **PnPn** **18 58 00.8 +4.2**
CD2 PcP **PcP** **19 00 58.6 +1.9**
CD2 S **S** **19 01 44.8 -1.9**
CD2 SS **SnSn** **19 02 44.0 +7.4**
CD2 ScS **ScS** **19 08 23.4 +0.2**
CD2 pmax pmax
comp=Z,30nm,1.1s
CD2 pmax pmax
comp=Z,70nm,6.0s
CD2 LR LR
comp=N,670nm,15.6s
CD2 LR LR
comp=E,810nm,11.9s
CD2 LR LR
comp=Z,600nm,16.7s
AAA Alma-Ata 25.14 255 *e*P P 18 57 31.7 +8.7
AAA pmax pmax
comp=Z,200nm,2.1s
AAA MLR MLR
comp=Z,2μm,13.0s
ENH Enshi 25.22 183 *e*P **P** **18 57 23.4 -0.3**
comp=Z,15nm,0.9s
SSE Sheshan 25.38 160 P **P** **18 57 21.9 -3.2**
SSE S **S** **19 01 52.1 +1.4**
SSE pmax pmax
comp=Z,31nm,0.7s
SSE LR LR
comp=N,1μm,13.2s
SSE LR LR
comp=E,380nm,13.2s
SSE LR LR

comp=Z,1μm,13.2s
TKM2 Tokmak 2 26.12 256 *e*P **P** **18 57 32.2 +0.2**
TKM2 pmax pmax
comp=Z,38nm,0.7s
TKM2 Tokmak 2 26.12 256 *e*P **P** **18 57 32.2 +0.2**
comp=Z,38nm,0.7s
TKM2 Tokmak 2 26.12 256 P **P** **18 57 34.8 +2.8**
SNR=32
ULHL Ulahol 26.21 254 P **P** **18 57 36.3 +3.5**
SNR=6.4
MJAR Matsushiro Arr 26.39 125 P **P** **18 57 32.3 -2.0**
MJAR Matsushiro Arr 26.39 125 P **P** **18 57 32.3 -2.0**
comp=Z,0.9nm,0.7s,baz=323,slow=10.0,SNR=4.6
CHMS Chumysh 26.53 257 P **P** **18 57 38.8 +3.2**
SNR=8.7
FRU Bishkek 26.72 257 *e*P **P** **18 57 38.0 +0.8**
FRU MLR MLR
comp=Z,2μm,14.0s
PETK Petropavlovsk- 26.86 76 P **P** **18 57 39.5 +1.2**
PETK pmax pmax
comp=Z,13nm,0.9s
PETK MLR MLR
comp=Z,573nm,18.6s
PETK Petropavlovsk- 26.86 76 P **P** **18 57 39.5 +1.2**
PETK Petropavlovsk- 26.86 76 P **P** **18 57 39.5 +1.2**
comp=Z,13nm,0.8s,baz=277,slow=5.8,SNR=50
PETK LR LR 19 09 00.2
comp=Z,573nm,18.6s,baz=167,slow=38
KZA Kyzart 26.87 255 P **P** **18 57 40.2 +1.2**
SNR=10
AAK Ala-Archa 26.92 257 *e*P **P** **18 57 39.7 +0.5**
AAK pmax pmax
comp=Z,41nm,1.1s
AAK Ala-Archa 26.92 257 *e*P **P** **18 57 39.7 +0.5**
comp=Z,41nm,1.1s
AAK Lg Lg 19 06 02.4
AAK Ala-Archa 26.92 257 P **P** **18 57 39.4 +0.2**
comp=Z,5.9nm,0.8s,baz=42,slow=9.7,SNR=10
AAK Lg Lg 19 06 02.4
comp=Z,0.8nm,0.3s,baz=234,slow=22.5,SNR=3.9
AAK LR LR 19 08 49.4
comp=Z,857nm,19.4s,baz=183,slow=38
EKS2 Erkin-Say 27.30 258 *e*P **P** **18 57 43.0 +0.5**
EKS2 pmax pmax
comp=Z,21nm,0.9s
EKS2 Erkin-Say 27.30 258 *e*P **P** **18 57 43.0 +0.5**
comp=Z,21nm,0.9s
EKS2 Erkin-Say 27.30 258 P **P** **18 57 43.3 +0.8**
SNR=10
PET Petropavlovsk 27.42 75 *e*P **P** **18 57 44.0 +0.7**
PET pmax pmax
comp=Z,37nm,1.0s
PET MLR MLR
comp=Z,600nm,18.0s
PET MLR MLR
comp=Z,700nm,14.0s
SVE Sverdlovsk 27.68 294⇓*i*P **P** **18 57 46.1 +0.5**
SVE *e*S **S** **19 02 30.2 +3.6**
SVE pmax pmax
comp=Z,42nm,0.9s
SVE MLR MLR
comp=Z,1μm,15.0s
BILL Bilibino 27.83 41*d i*P **P** **18 57 48.7 +1.8**
BILL *i* 18 57 54.9
BILL *e* 18 58 32.7
BILL pmax pmax
comp=Z,32nm,1.0s
BILL MLR MLR
comp=Z,100nm,16.0s
BILL Bilibino 27.83 41 *e*P **P** **18 57 48.9 +2.0**
comp=Z,37nm,1.1s
KSH Kashi 28.26 250 *e*P P 18 57 57.2 +6.0
KSH *e*pP pP 18 58 03.0 +6.6
KSH *e*sP sP 18 58 05.9 +7.3
KSH *e*PP **PnPn** **18 58 43.3 +3.8**
KSH *e*PcP **PcP** **19 01 06.9 +2.9**
KSH *e*S S 19 02 44.1 +7.7
KSH *e*sS sS 19 02 54.0 +9.0
KSH pmax pmax
comp=Z,12nm,1.2s
KSH LR LR
comp=N,2μm,11.0s
KSH LR LR
comp=E,1μm,10.9s
KSH LR LR
comp=Z,400nm,6.1s
KK31 Karatay Array 28.84 262 *i* P **P** **18 57 55.8 -0.4**
KK31 pmax pmax
comp=Z,20nm,1.0s
KKAR Karatay Array 28.84 262 *e*P **P** **18 57 55.9 -0.3**
KKAR pmax pmax
comp=Z,26nm,1.0s
KKAR Karatay Array 28.84 262 *e*P **P** **18 57 55.9 -0.3**
comp=Z,26nm,1.0s
ARU Arti 28.89 294*d i*P **P** **18 57 55.7 -0.7**
ARU 18 58 45.8
ARU PPP PPP 18 58 57.0
ARU S **S** **19 02 46.6 +0.9**
ARU SS **SnSn** **19 04 07.3 -0.6**
ARU SSS SSS 19 04 25.7
ARU pmax pmax
comp=Z,5.0nm,0.8s
ARU MLR MLR
comp=Z,1μm,16.0s
GYA Guiyang 29.18 188 P **P** **18 58 01.0 +1.6**
GYA PcP **PcP** **19 01 08.9 +2.4**
GYA S **S** **19 02 51.7 +0.7**
GYA ScP **ScP** **19 04 47.0 0.0**
GYA ScS **ScS** **19 08 41.4 0.0**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.9s
GYA LR LR
comp=N,650nm,17.0s
GYA LR LR
comp=E,590nm,18.1s
GYA LR LR
comp=Z,620nm,17.7s
LSA Lhasa 29.47 217 *e*P **P** **18 58 03.6 +1.2**
LSA pmax pmax
comp=Z,3.0nm,0.6s
LSA Lhasa 29.47 217 *e*P **P** **18 58 03.6 +1.2**
comp=Z,2.8nm,0.6s
KMI Kunming 30.95 195 P **P** **18 58 14.0 -1.2**
KMI pP **pP** **18 58 19.8 -0.7**
KMI sP **sP** **18 58 21.9 -0.7**
KMI PP **PnPn** **18 59 18.6 +2.6**
KMI S **S** **19 03 20.3 +1.3**
KMI SS **SnSn** **19 05 02.4 +3.2**
KMI pmax pmax
comp=Z,15nm,0.9s
KMI pmax pmax
comp=Z,96nm,5.4s
KMI LR LR
comp=N,210nm,12.7s
KMI LR LR
comp=E,560nm,12.7s
KMI LR LR
comp=Z,510nm,15.9s
AB31 Akbulak array 31.29 280 *i* P **P** **18 58 17.3 -0.4**
AB31 pmax pmax
comp=Z,7.0nm,0.7s
ABKAR Akbulak array 31.29 280 *e*P **P** **18 58 17.5 -0.2**
comp=Z,8.0nm,0.8s
AKTO Aktyubinsk 31.76 283 P **P** **18 58 21.4 -0.5**
AKTO pmax pmax
comp=Z,9.0nm,1.0s
AKTO Aktyubinsk 31.76 283 LR LR 19 12 36.0
comp=Z,477nm,18.0s,baz=356,slow=39
TAPN Taplejung 32.84 221 *e*P **P** **18 58 31.8 -0.1**
comp=Z,64nm,1.0s
GUN Gumba 33.04 224 *e*P **P** **18 58 34.2 +0.5**
comp=Z,98nm,1.1s
KKN Kakani 33.39 225 *e*P **P** **18 58 37.5 +0.9**
comp=Z,139nm,0.8s
ODAN Odare 33.41 221 *e*P **P** **18 58 36.7 -0.1**
comp=Z,127nm,0.8s
DANN Dangsing 33.52 227 *e*P **P** **18 58 38.6 +0.8**
comp=Z,104nm,1.1s
PKIN Phulchoki 33.53 224 *e*P **P** **18 58 38.8 +0.9**
comp=Z,24nm,0.8s
PKI Pulchoki 33.53 224 *e*P **P** **18 58 38.5 +0.6**
DMN Daman 33.62 225 *e*P **P** **18 58 39.4 +0.8**
comp=Z,84nm,0.9s
RAMN Ramite 33.62 222 *e*P **P** **18 58 38.0 -0.7**
comp=Z,60nm,1.0s
PYUN Piuthan 34.06 228 *e*P **P** **18 58 43.2 +0.8**
KOLN Koldanda 34.09 227 *e*P **P** **18 58 43.4 +0.7**
comp=Z,76nm,0.7s
TMCR Tamitsa 35.78 314 *e*P **P** **18 58 56.3 -0.3**
TMCR *e* 19 00 16.1
TMCR pmax pmax
comp=Z,23nm,1.3s
LVZ Lovozero 35.79 321 *e*P **P** **18 58 56.0 -0.8**
LVZ pmax pmax
comp=Z,8.0nm,1.6s
QIZ Qiongzhong 36.40 182 P **P** **18 59 02.4 0.0**
QIZ S **S** **19 04 44.9 +2.0**
QIZ pmax pmax
comp=Z,21nm,1.7s
QIZ LR LR
comp=E,200nm,22.1s
QIZ LR LR
comp=Z,550nm,16.2s
KLMR Klimovskoe 36.44 309 *e*P **P** **18 59 01.0 -1.3**
KLMR pmax pmax
comp=Z,21nm,1.1s
KLMR MLR MLR
comp=Z,532nm,16.0s
SPITS Spitsbergen Ar 37.38 340 P **P** **18 59 10.1 -0.1**
SPITS Spitsbergen Ar 37.38 340 P **P** **18 59 10.1 -0.1**
comp=Z,3.1nm,0.7s,baz=75,slow=16,SNR=7.8
KEV Kevo 37.74 326 *ep* **P** **18 59 12.2 -1.0**
comp=Z,11nm,0.6s
KEV Kevo 37.74 326 *e*P **P** **18 59 12.3 -1.0**
KEV pmax pmax
comp=Z,21nm,0.9s
KEV Kevo 37.74 326 *e*P **P** **18 59 12.2 -1.0**
comp=Z,21nm,0.9s
CHTO Chiang Mai 37.77 199 *e*P **P** **18 59 13.5 -0.5**
CHTO pmax pmax
comp=Z,3.0nm,0.8s
CHTO Chiang Mai 37.77 199 *e*P **P** **18 59 13.5 -0.5**
comp=Z,3.1nm,0.8s
CMAR Chiang Mai Arr 38.11 199 P **P** **18 59 16.6 -0.3**
CMAR PcP **PcP** **19 01 31.2 -0.4**
CMAR Chiang Mai Arr 38.11 199 P **P** **18 59 16.6 -0.3**
comp=Z,1.6nm,0.7s,baz=359,slow=8.1,SNR=15
CMAR PcP **PcP** **19 01 31.2 -0.4**
comp=Z,1.2nm,0.7s,baz=347,slow=3.7,SNR=5.5
ARCES ARCESS Array B 38.31 326 P **P** **18 59 17.7 -0.3**
ARCES PcP **PcP** **19 01 31.5 0.0**
ARCES ARCESS Array B 38.31 326 P **P** **18 59 17.7 -0.3**
comp=Z,3.6nm,0.5s,baz=67,slow=11,SNR=41
ARCES PcP **PcP** **19 01 31.5 0.0**
comp=Z,5.7nm,0.7s,baz=64,slow=5.5,SNR=4.5
ARCES LR LR 19 19 07.5
comp=Z,340nm,18.3s,baz=64,slow=42
JOF Joensuu 39.03 314 *ep* **P** **18 59 22.7 -1.5**
comp=Z,8.2nm,0.7s
JOF Joensuu 39.03 314 *e*P **P** **18 59 22.7 -1.5**
JOF pmax pmax
comp=Z,8.0nm,0.7s
VRHR Novokhopersk 40.23 294 *e*P **P** **18 59 31.6 -2.7**
VRHR *e**SP **sP** **18 59 39.4 -2.4**
VRHR pmax pmax
comp=N,10.0nm,0.9s
VRHR pmax pmax
comp=E,20nm,0.9s
VRHR pmax pmax
comp=Z,10.0nm,0.9s
VRHR MLR MLR
comp=E,780nm,13.0s
VRHR MLR MLR
comp=Z,1μm,13.0s
VRHR MLR MLR
comp=N,750nm,15.0s
OBN Obninsk 40.57 302 *e*P P 18 59 32.8 -4.2
OBN *e* 19 01 12.4
OBN *e*SS SS 19 08 46.9 +2.2
OBN pmax pmax
comp=Z,8.0nm,1.1s
OBN MLR MLR
comp=Z,900nm,16.0s
VSR Storozhevoye 41.44 295 *e*P **P** **18 59 43.3 -0.9**
VSR *e**SP **sP** **18 59 52.7 +1.0**
VSR pmax pmax
comp=Z,10.0nm,0.7s
VSR pmax pmax
comp=N,20nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR MLR MLR
comp=N,360nm,12.0s
VSR MLR MLR
comp=Z,1μm,12.0s
VSR MLR MLR
comp=E,590nm,13.0s
KAF Kangasniemi 41.46 315 *ep* **P** **18 59 43.1 -1.1**
comp=E,9.3nm,0.7s
KAF Kangasniemi 41.46 315 *e*P **P** **18 59 43.1 -1.1**
KAF pmax pmax
comp=Z,9.0nm,0.7s
VORD Divnogorie 41.52 295 *e*P **P** **18 59 44.3 -0.6**
VORD *e**SP **sP** **18 59 51.6 -0.7**
VORD pmax pmax
comp=Z,10.0nm,0.6s
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.9s
VORD MLR MLR
comp=N,360nm,12.0s
VORD MLR MLR
comp=E,590nm,12.0s
VORD MLR MLR
comp=Z,890nm,12.0s
FINES FINES Array B 41.90 314 P **P** **18 59 47.5 -0.4**
FINES FINES Array B 41.90 314 P **P** **18 59 47.5 -0.4**
comp=Z,21nm,0.7s,baz=64,slow=13,SNR=51
FINES LR LR 19 18 42.7
comp=Z,430nm,18.7s,baz=61,slow=38
MAK Makhachkala 41.97 280 *e*P **P** **18 59 46.4 -2.2**
MAK *i* S S 19 05 59.4 -6.8
MAK *e*SS **SS** **19 09 08.7 -4.1**
MAK pmax pmax
comp=Z,15nm,0.3s
COLD Coldfoot 43.60 34 *e*P **P** **19 00 02.8 +1.1**
comp=Z,22nm,0.9s
KIV Kislovodsk 44.00 285 *e*P **P** **19 00 04.9 -0.4**
KIV *e* 19 01 47.9
KIV *e* 19 01 51.1
KIV *e*S **S** **19 06 37.6 +1.3**
KIV *e*SS **SS** **19 09 55.6 +2.7**
KIV pmax pmax
comp=Z,30nm,0.8s
KIV MLR MLR
comp=Z,297nm,18.0s
KIV Kislovodsk 44.00 285 P **P** **19 00 06.8 +1.5**
comp=Z,226nm,0.7s,SNR=8.2
KBZ Khabaz 44.03 284 P **P** **19 00 05.7 +0.4**
KBZ pmax pmax
comp=Z,4.0nm,0.7s
KBZ MLR MLR
comp=Z,233nm,18.4s
KBZ Khabaz 44.03 284 P **P** **19 00 05.7 +0.4**
KBZ Khabaz 44.03 284 P **P** **19 00 05.7 +0.4**
comp=Z,3.7nm,0.7s,baz=349,slow=7.3,SNR=9.3
KBZ LR LR 19 21 05.3
comp=Z,232nm,18.4s,baz=263,slow=40
DAG Danmarks Havn 44.27 345⇓*i*P **P** **19 00 05.8 -1.1**
DAG *i* 19 00 11.7
DAG pmax pmax
comp=Z,5.0nm,0.9s
DAG Danmarks Havn 44.27 345⇓*i*P **P** **19 00 05.8 -1.1**
comp=Z,6.3nm,0.9s
DAG *i* 19 00 11.7
IZAR Zarasai 45.05 307 *e*P **P** **19 00 12.5 -0.8**
IDID Didziasalis 45.09 307 *e*P **P** **19 00 12.8 -0.8**
IDID AMB AMB 19 00 14.7
comp=Z,8.7nm,0.7s
ISAL Salakas 45.21 307 *e*P **P** **19 00 13.9 -0.7**
ISAL AMB AMB 19 00 15.7
comp=Z,22nm,1.2s
IIGN Ignalina 45.30 307 *e*P **P** **19 00 14.4 -0.9**
IIGN AMB AMB 19 00 16.4
comp=Z,9.7nm,0.8s
NACGM Naroch 45.32 306 *e* **P** **19 00 13.0 -2.5**
GNI Garni 45.38 279 *e*P **P** **19 00 18.2 +1.9**
comp=Z,11nm,0.8s
GNI Garni 45.38 279 LR LR 19 21 09.2
comp=Z,123nm,20.4s,baz=262,slow=39
HYB Hyderabad 45.39 226 *i* P **P** **19 00 15.0 -1.5**
PPLA Purkeypile 45.51 40 *e*P **P** **19 00 18.0 +0.9**
comp=Z,12nm,0.8s
COLA College 45.80 36 *e*P **P** **19 00 20.9 +1.8**
COLA pmax pmax
comp=Z,33nm,0.8s
COLA College 45.80 36 *e*P **P** **19 00 20.9 +1.8**
comp=Z,33nm,0.8s
TRF Thorofare Moun 45.85 38 *e*P **P** **19 00 20.3 +0.5**
comp=Z,56nm,1.1s
SOC Sochi 45.88 286 *e*P **P** **19 00 19.7 -0.3**
SOC *e* 19 02 00.0
SOC *e*S **S** **19 07 06.4 +3.2**
SOC *e*SS **SS** **19 10 21.4 -6.0**
SOC *e*SSS SSS 19 11 15.2
SOC pmax pmax
comp=Z,14nm,0.7s
SOC MLR MLR
comp=Z,401nm,14.0s
MCK McKinley 46.15 37 *e*P **P** **19 00 23.0 +1.0**
MCK pmax pmax
comp=Z,24nm,0.9s
MCK McKinley 46.15 37 *e*P **P** **19 00 23.0 +1.0**
comp=Z,24nm,0.9s
ILAR Eielson Array 46.18 36 P **P** **19 00 23.2 +1.0**
ILAR Eielson Array 46.18 36 P **P** **19 00 23.2 +1.0**
comp=Z,37nm,0.9s,baz=301,slow=6.7,SNR=243
ILAR LR LR 19 22 09.6
comp=Z,162nm,18.5s,baz=347,slow=39
ANN Anapa 46.31 289 *e*P **P** **19 00 22.9 -0.5**
ANN *e*S **S** **19 07 09.3 -0.2**
ANN pmax pmax
comp=Z,22nm,1.8s
ANN MLR MLR
comp=N,343nm,14.0s
ANN MLR MLR
comp=E,201nm,14.0s
ANN MLR MLR
comp=Z,407nm,14.0s
AKASG Malin Array Be 46.76 300 P **P** **19 00 26.2 -0.7**
AKASG pmax pmax
comp=Z,7.0nm,0.6s
AKASG MLR MLR
comp=Z,690nm,18.2s
AKASG Malin Array Be 46.76 300 P **P** **19 00 26.2 -0.7**
AKASG Malin Array Be 46.76 300 P **P** **19 00 26.2 -0.7**
comp=Z,7.1nm,0.6s,baz=45,slow=8.4,SNR=31
AKASG LR LR 19 22 01.8
comp=Z,690nm,18.2s,baz=55,slow=39
AK01 Malin Array Si 46.77 300 *e*P **P** **19 00 26.4 -0.5**
KIEV Kiev 46.77 300 *e*P **P** **19 00 26.0 -0.9**
KIEV pmax pmax
comp=Z,5.0nm,0.7s
KIEV Kiev 46.77 300 *e*P **P** **19 00 26.0 -0.9**
comp=Z,5.3nm,0.7s
RSO Redoubt South 46.82 43 *e*P **P** **19 00 29.0 +1.6**
comp=Z,61nm,0.8s
JMIC Jan Mayen 46.82 337 LR LR 19 21 31.0
comp=Z,224nm,18.3s,baz=78,slow=38
PMR Palmer 47.45 40 *e*P **P** **19 00 32.9 +0.8**
PMR pmax pmax
comp=Z,38nm,1.0s
PMR Palmer 47.45 40 *e*P **P** **19 00 32.9 +0.8**
comp=Z,38nm,1.0s
HFS Hagfors 47.58 318 LR LR 19 21 56.5
comp=Z,266nm,18.1s,baz=41,slow=38
SML Sawmill 47.60 39 *e*P **P** **19 00 34.2 +0.8**
SML pmax pmax
comp=Z,8.0nm,0.8s
SML Sawmill 47.60 39 *e*P **P** **19 00 34.1 +0.8**
comp=Z,8.4nm,0.8s
INK Inuvik 47.72 27 P **P** **19 00 34.7 +0.6**
INK Inuvik 47.72 27 P **P** **19 00 34.7 +0.6**
comp=Z,19nm,1.0s,baz=334,slow=9.8,SNR=22
PAX Paxson 47.83 37 *e*P **P** **19 00 35.5 +0.3**
PAX pmax pmax
comp=Z,21nm,0.8s
PAX Paxson 47.83 37 *e*P **P** **19 00 35.5 +0.3**
comp=Z,21nm,0.8s
NB2 NORSAR Subarra 47.92 320 P **P** **19 00 35.5 -0.3**
comp=Z,23nm,0.7s,baz=49,slow=7.9
NB2 NORSAR Subarra 47.92 320 P **P** **19 00 35.5 -0.3**
baz=49,slow=7.9
NOA NORSAR Array B 47.92 320 P **P** **19 00 35.5 -0.3**
NOA NORSAR Array B 47.92 320 P **P** **19 00 35.5 -0.3**
comp=Z,22nm,0.8s,baz=48,slow=7.3,SNR=77
NOA LR LR 19 22 17.0
comp=Z,269nm,18.6s,baz=50,slow=38
SIM Simferopol' 47.99 291 *e*P **P** **19 00 37.4 +0.9**
SIM pmax pmax
comp=Z,22nm,0.4s
SIM MLR MLR
comp=Z,410nm,15.7s
EGAK Eagle 48.02 33 *e*P **P** **19 00 37.2 +0.7**
comp=Z,45nm,1.1s
OHAK Old Harbor 48.70 46 *e*P **P** **19 00 42.0 +0.2**
comp=Z,11nm,0.8s
RES Resolute Bay 48.95 9 LR LR 19 22 52.6
comp=Z,187nm,19.0s,baz=247,slow=38
KIS Kishinev 49.38 297 *e*P **P** **19 00 46.0 -1.2**
KIS LRM MLR 19 23 46.0
comp=Z,2μm,15.0s
KIS Kishinev 49.38 297 *e*P **P** **19 00 46.0 -1.2**
KIS MLR MLR
comp=Z,2μm,15.0s
KIS MLR MLR
comp=Z,2μm,14.0s
DAV Davao City (W) 49.62 161 LR LR 19 22 35.8
comp=Z,230nm,19.8s,baz=310,slow=37
LVV L'vov 49.86 302 *e*P P 19 01 00.8 +10
LVV MLR MLR
comp=N,300nm,17.0s
LVV MLR MLR
comp=E,400nm,17.0s
LVV MLR MLR
comp=Z,500nm,17.0s
SCO Scoresbysund 49.95 341 *i* P **P** **19 00 51.0 -0.2**
SCO pmax pmax
comp=Z,6.0nm,0.9s
SCO MLR MLR
comp=Z,210nm,15.0s
SCO Scoresbysund 49.95 341 *i* P **P** **19 00 51.0 -0.2**
comp=Z,6.1nm,0.9s
SCO
comp=Z,210nm,15.0s
SUMG Summit 50.51 349 *e*P **P** **19 00 56.2 +0.3**
SUMG pmax pmax
comp=Z,20nm,1.1s
SUMG Summit 50.51 349 *e*P **P** **19 00 56.2 +0.3**
comp=Z,20nm,1.1s
SUMG Summit 50.51 349 *i* P **P** **19 00 55.8 -0.1**
comp=Z,9.7nm,1.0s
TLCR 50.60 295⇑P **P** **19 00 57.1 +0.6**
TLCR 50.60 295⇑*i*P **P** **19 00 57.1 +0.6**
KWP Kalwaria Pacla 50.62 303⇓P **P** **19 00 57.2 +0.6**
KWP Kalwaria Pacla 50.62 303⇓*i*P **P** **19 00 57.2 +0.6**
KWP Kalwaria Pacla 50.62 303 *e*P **P** **19 00 57.3 +0.6**
GKP Gorka Klasztor 50.67 309 *e*P **P** **19 00 57.1 +0.2**
BURAR Bucovina Array 50.77 299⇓*i*P **P** **19 00 58.0 +0.1**
TESR Tescani 50.80 297⇑*i*P **P** **19 00 58.5 +0.5**
CFR Carcaliu 50.96 295⇑P **P** **19 00 59.4 +0.2**
CFR Carcaliu 50.96 295⇑*i*P **P** **19 00 59.4 +0.2**
VRI Vrincioaia 51.21 297⇑P **P** **19 01 01.8 +0.7**
VRI Vrincioaia 51.21 297⇑*i*P **P** **19 01 01.8 +0.7**
PLOR Plostina 51.26 297⇑P **P** **19 01 01.8 +0.3**
PLOR Plostina 51.26 297⇑*i*P **P** **19 01 01.8 +0.3**
KOLS Kolonicke sedl 51.31 302 *e*P **P** **19 01 02.1 +0.3**
KOLS pmax pmax
comp=Z,9.0nm,0.8s
KOLS Kolonicke sedl 51.31 302 *e*P **P** **19 01 02.1 +0.3**
KOLS *e*PCP **PcP** **19 02 15.9 -0.6**
TIRR Tirgusor 51.31 294 *e*P **P** **19 01 01.1 -0.7**
TIRR pmax pmax
comp=Z,7.0nm,0.8s
TIRR Tirgusor 51.31 294 *e*P **P** **19 01 01.1 -0.7**
comp=Z,6.8nm,0.8s
UMR Umm Al-Rimmam 51.32 267 *e*P **P** **19 01 02.0 -0.1**
MIB Mutribah 51.35 268 *e*P **P** **19 01 01.5 -0.8**
MIB AMb AMB 19 01 03.5
comp=Z,21nm,0.8s
HARR Harsova 51.40 295⇓P **P** **19 01 02.6 +0.1**
HARR Harsova 51.40 295⇓*i*P **P** **19 01 02.6 +0.1**
UZH Uzhgorod 51.51 302 *e*P **P** **19 01 01.8 -1.4**
BMR Baia Mare 51.58 300⇓P **P** **19 01 03.8 0.0**
BMR Baia Mare 51.58 300⇓*i*P **P** **19 01 03.8 0.0**

CRVS Cervenica-Dubn 51.72 303 *e*P **P 19 01 02.6 -2.3**
CRVS pmax pmax
comp=Z,4.0nm,0.9s
CRVS Cervenica-Dubn 51.72 303 *e*P **P 19 01 02.6 -2.3**
CRVS *e*PCP **PcP 19 02 15.2 -2.8**
CRVS *e*PP **PP 19 03 01.2 -0.9**
TRPA Tarpa 51.73 301⇑*i*P **P 19 01 05.7 +0.8**
TRPA Tarpa 51.73 301⇑*e*P **P 19 01 05.7 +0.8**
DOPR Dopca 51.81 298⇓*i*P **P 19 01 07.1 +1.5**
ISR Istrita 51.82 296 ⇓P **P 19 01 06.7 +1.0**
ISR Istrita 51.82 296⇓*i*P **P 19 01 06.7 +1.0**
NAY Al-Naaiem 51.82 267 *e*P **P 19 01 05.5 -0.4**
NAY AMb AMB 19 01 06.8
comp=Z,22nm,0.9s
MUD Monsted U'grnd 51.83 316 *i* P **P 19 01 06.2 +0.7**
MUD pmax pmax
comp=Z,13nm,0.8s
MUD MLR MLR
comp=Z,500nm,16.0s
MUD Monsted U'grnd 51.83 316 *i* P **P 19 01 06.2 +0.7**
comp=Z,13nm,0.8s
MUD
comp=Z,490nm,16.0s
BRTR Keskin Array B 51.83 287 P **P 19 01 06.5 +0.5**
BRTR Keskin Array B 51.83 287 P **P 19 01 06.5 +0.5**
comp=Z,3.6nm,0.8s,baz=64,slow=5.7,SNR=26
MLR Muntele Rosu 51.86 297⇑*i*P **P 19 01 06.3 +0.2**
MLR Muntele Rosu 51.86 297 LR LR 19 25 16.1
comp=Z,142nm,18.8s,baz=55,slow=39
RDF Al-Radifah 51.89 267 *e*P **P 19 01 06.1 -0.3**
RDF AMb AMB 19 01 07.6
comp=Z,32nm,0.9s
PNL Peninsula 52.24 37 *e*P **P 19 01 10.0 +1.4**
comp=Z,15nm,0.8s
VOIR 52.35 297 ⇓P **P 19 01 10.1 +0.4**
VOIR 52.35 297⇓*i*P **P 19 01 10.1 +0.4**
KECS Kecovo 52.48 303 *e*P **P 19 01 10.9 +0.4**
KECS pmax pmax
comp=Z,5.0nm,0.7s
KECS Kecovo 52.48 303 *e*P **P 19 01 10.9 +0.4**
KECS *e*PCP **PcP 19 02 20.5 -0.3**
KECS *e*PP **PP 19 03 08.0 -1.0**
DRGR 52.58 300⇑P **P 19 01 12.0 +0.7**
DRGR 52.58 300⇑*i*P **P 19 01 12.0 +0.7**
ARR Arges 52.61 298⇓*i*P **P 19 01 12.5 +0.9**
OKC Ostrava-Krasne 52.63 306 *e*P **P 19 01 12.2 +0.6**
OKC *e* 19 01 21.3
OKC MLR MLR
comp=Z,600nm,15.8s
OKC Ostrava-Krasne 52.63 306⇓*e*P **P 19 01 12.2 +0.6**
OKC *ex* x 19 01 21.3
OKC *e*SS **SKiKP 19 12 37.2 +6.0**
OKC AMS AMS 19 25 30.0
comp=Z,600nm,15.8s
KSP Ksiaz 52.77 308 *e*P **P 19 01 12.7 +0.1**
KSP *e**PP **pP 19 01 22.3 +4.2**
KSP Ksiaz 52.77 308 *e*P **P 19 01 13.2 +0.6**
MORC Moravsky Berou 52.95 306⇑P **P 19 01 14.1 +0.1**
MORC Moravsky Berou 52.95 306⇑*i*P **P 19 01 14.1 +0.1**
DPC Dobruska-Polom 53.11 307⇓*i*P **P 19 01 15.9 +0.7**
DPC *e* 19 01 21.8
DPC *e* 19 01 25.4
DPC Dobruska-Polom 53.11 307⇓*i*P **P 19 01 15.9 +0.7**
DPC *ep*P **pP 19 01 21.8 +1.2**
DPC *ex* x 19 01 25.4
DPC *e*SS SKiKP 19 12 49.1 +17
UPC Upice 53.14 307 *e*P **P 19 01 16.0 +0.7**
UPC *e* 19 01 25.3
UPC Upice 53.14 307⇓*e*P **P 19 01 16.0 +0.7**
UPC *ex* x 19 01 25.3
PSZ Piszkesteto 53.15 303⇑*e*P **P 19 01 16.7 +1.1**
VYHS Vyhne 53.25 304 *e*P **P 19 01 17.0 +0.8**
VYHS pmax pmax
comp=Z,10.0nm,1.1s
VYHS Vyhne 53.25 304 *e*P **P 19 01 17.0 +0.8**
VYHS *e*PCP **PcP 19 02 23.8 0.0**
PVCC Panska Ves 53.77 308 *e*P **P 19 01 20.8 +0.8**
PVCC *e* 19 01 26.8
PVCC Panska Ves 53.77 308⇓*e*P **P 19 01 20.8 +0.8**
PVCC *ep*P **pP 19 01 26.8 +1.4**
SKAG Skagway 53.77 35 *e*P **P 19 01 21.6 +1.8**
comp=Z,33nm,1.1s
BRG Berggiesshubel 53.80 309 *e*P **P 19 01 20.5 +0.3**
comp=Z,10.0nm,0.8s
CLL Collm 53.91 310 *e*P **P 19 01 20.8 -0.1**
comp=Z,16nm,1.4s
CLL *es*P **sP 19 01 30.3 +1.8**
CLL Collm 53.91 310⇓*i*P **P 19 01 20.5 -0.4**
CLL pmax pmax
comp=Z,16nm,1.4s
CLL MLR MLR
comp=Z,400nm,18.3s
CLL Collm 53.91 310⇓*i*P **P 19 01 20.5 -0.4**
comp=Z,16nm,1.4s
CLL *e*(S) S 19 09 18.0 +23
CLL *e*SS **SS 19 12 35.0 -0.5**
CLL *e* 19 13 15.0
CLL Lm MLR 19 26 00.0
comp=Z,400nm,18.3s
PRU Pruhonice 54.17 308 *e*P **P 19 01 23.6 +0.7**
PRU *e* 19 01 29.4
PRU *e* 19 01 33.2
PRU MLR MLR
comp=Z,400nm,16.1s
PRU Pruhonice 54.17 308⇓*e*P **P 19 01 23.6 +0.7**
PRU *ep*P **pP 19 01 29.4 +1.0**
PRU *ex* x 19 01 33.2
PRU *ex* x 19 13 18.1
PRU AMS AMS 19 26 20.0
comp=Z,400nm,16.1s
TREC Trest 54.24 307 *e*P **P 19 01 23.8 +0.4**
TREC *e* 19 01 30.3
TREC MLR MLR
comp=Z,500nm,16.0s
TREC Trest 54.24 307⇓*e*P **P 19 01 23.8 +0.4**
TREC *ep*P **pP 19 01 30.3 +1.4**
TREC *ex* x 19 01 33.8
TREC AMS AMS 19 26 20.0
comp=Z,500nm,16.0s
ZST Bratislava 54.28 305 *e*P **P 19 01 23.7 0.0**
ZST pmax pmax
comp=Z,4.0nm,1.2s
ZST Bratislava 54.28 305 *e*P **P 19 01 23.7 0.0**
NRDL Niedersach Rie 54.29 312 *e*P **P 19 01 23.9 +0.3**
comp=Z,12nm,1.1s
NEUB Neuenburg 54.51 310 *e*P **P 19 01 25.4 0.0**
comp=Z,14nm,1.1s
NEUB *es*P **sP 19 01 35.0 +2.1**
CLZ Clausthal 54.66 312 *e*P **P 19 01 26.9 +0.4**
comp=Z,21nm,1.5s
CLZ *es*P **sP 19 01 36.4 +2.4**
CLZ Clausthal 54.66 312 *e*P **P 19 01 26.9 +0.4**
CLZ *e**SP **sP 19 01 36.4 +2.4**
CLZ pmax pmax
comp=Z,21nm,1.5s
BORG Borgarnes 54.72 337 LR LR 19 25 57.3
comp=Z,226nm,18.4s,baz=18,slow=37
TANN Tannenbergstha 54.79 309 *e*P **P 19 01 27.8 +0.3**
comp=Z,8.0nm,1.1s
TANN *ep*P **pP 19 01 34.0 +1.1**
TANN *es*P **sP 19 01 37.4 +2.4**
WERD Werda 54.83 309 *e*P **P 19 01 28.1 +0.4**
comp=Z,9.0nm,1.1s
WERD *ep*P **pP 19 01 34.2 +1.0**
WERD *es*P **sP 19 01 37.7 +2.4**
PLN Plauen 54.87 310 *e*P **P 19 01 28.4 +0.4**
comp=Z,62nm,0.9s
PLN *ep*P **pP 19 01 34.7 +1.2**
PLN *es*P **sP 19 01 38.1 +2.5**
GUNZ Gunzen 54.88 309 *e*P **P 19 01 28.5 +0.4**
comp=Z,11nm,1.3s
GUNZ *ep*P **pP 19 01 34.8 +1.2**
GUNZ *es*P **sP 19 01 38.2 +2.5**
WERN Wernitzgruen 54.92 309 *e*P **P 19 01 28.7 +0.3**
comp=Z,14nm,1.0s
WERN *ep*P **pP 19 01 35.2 +1.3**
WERN *es*P **sP 19 01 38.4 +2.4**
NKC Novy Kostel 54.93 309 *e*P **P 19 01 29.0 +0.6**
NKC MLR MLR
comp=Z,500nm,16.6s
NKC Novy Kostel 54.93 309⇓*e*P **P 19 01 29.0 +0.6**
NKC *ex* x 19 13 27.8
NKC AMS AMS 19 27 00.0
comp=Z,500nm,16.6s
PKSM Moragy 54.97 302⇑P **P 19 01 28.2 -0.5**
PKSM Moragy 54.97 302⇑*i*P **P 19 01 28.2 -0.5**
PKSM Moragy 54.97 302⇑*e*P **P 19 01 29.1 +0.4**
MOX Moxa 54.99 310 *e*P **P 19 01 29.3 +0.4**
comp=Z,18nm,1.1s
MOX *ep*P **pP 19 01 35.5 +1.1**
MOX *es*P **sP 19 01 38.9 +2.5**
MOX Moxa 54.99 310 *e*P **P 19 01 29.3 +0.4**
MOX *e**PP **pP 19 01 35.5 +1.1**
MOX *e**SP **sP 19 01 38.9 +2.5**
MOX pmax pmax
comp=Z,18nm,1.1s
CONA Conrad Observa 55.05 305⇓*i*P **P 19 01 30.4 +1.0**
comp=Z,7.2nm,1.1s,SNR=5.7
KHC Kasperske Hory 55.22 308⇓*i*P **P 19 01 31.0 +0.4**
KHC *e* 19 01 36.4
KHC *e* 19 01 40.8
KHC MLR MLR
comp=Z,400nm,13.4s
KHC Kasperske Hory 55.22 308⇓*i*P **P 19 01 31.0 +0.4**
KHC *ep*P **pP 19 01 36.4 +0.3**
KHC *ex* x 19 01 40.8
KHC *ex* x 19 13 22.8
KHC AMS AMS 19 27 30.0
comp=Z,400nm,13.4s
KHC Kasperske Hory 55.22 308 *e*P **P 19 01 31.0 +0.4**
comp=Z,9.1nm,0.8s
MANZ Manzenberg 55.26 309 *e*P **P 19 01 31.0 +0.2**
comp=Z,18nm,1.7s
MANZ *ep*P **pP 19 01 37.4 +1.1**
MANZ *es*P **sP 19 01 40.4 +2.0**
VTS Vitosha 55.31 296⇑P **P 19 01 31.5 +0.1**
VTS Vitosha 55.31 296⇑*i*P **P 19 01 31.5 +0.1**
ROTZ Rotzenmuhle 55.37 309 *e*P **P 19 01 32.4 +0.8**
comp=Z,10.0nm,0.9s
ROTZ *es*P **sP 19 01 41.8 +2.6**
GEC2 GERESS Array S 55.38 307 *e*P **P 19 01 32.1 +0.3**
comp=Z,10.0nm,1.1s
GEC2 *es*P **sP 19 01 41.6 +2.2**
GEC2 GERESS Array S 55.38 307 *e*P **P 19 01 32.1 +0.3**
GEC2 *e**SP **sP 19 01 41.6 +2.2**
GEC2 pmax pmax
comp=Z,10.0nm,1.1s
GERES GERESS Array B 55.38 307 P **P 19 01 31.7 -0.1**
GERES GERESS Array B 55.38 307 P **P 19 01 31.7 -0.1**
comp=Z,3.7nm,0.8s,baz=50,slow=7.1,SNR=31
GERES LR LR 19 27 30.9
comp=Z,368nm,18.8s,baz=84,slow=38
IBBN Ibbenburen 55.41 313 *e*P **P 19 01 31.8 0.0**
comp=Z,13nm,0.8s
IBBN *ep*P **pP 19 01 38.1 +0.8**
IBBN *es*P **sP 19 01 41.2 +1.8**
ASF Jabal al Asfar 55.50 278 LR LR 19 28 07.9
comp=Z,69nm,18.6s,baz=16,slow=39
WET Wettzell 55.53 308 *e*P **P 19 01 33.5 +0.7**
comp=Z,12nm,0.9s
WET *ep*P **pP 19 01 39.8 +1.5**
WET *es*P **sP 19 01 43.1 +2.7**
WET Wettzell 55.53 308 *e*P **P 19 01 33.5 +0.7**
WET *e**PP **pP 19 01 39.8 +1.5**
WET *e**SP **sP 19 01 43.1 +2.7**
WET pmax pmax
comp=Z,12nm,0.9s
UBBA Unterbreizbach 55.56 311 *e*P **P 19 01 33.0 +0.2**
comp=Z,12nm,1.3s
MMAI Mount Meron Ar 55.72 280 LR LR 19 28 45.7
comp=Z,222nm,18.2s,baz=70,slow=40
MOA Molln 55.84 306⇓*i*pP **P 19 01 35.7 +0.6**
comp=Z,7.9nm,0.8s
GRF Grafenberg Arr 55.86 309 *e*P **P 19 01 35.8 +0.6**
comp=Z,11nm,1.0s
GRF *e*L L 19 27 38.5
comp=Z,400nm,18.4s
GRF Grafenberg Arr 55.86 309 *e*P **P 19 01 35.8 +0.6**
GRF pmax pmax
comp=Z,11nm,1.0s
GRF MLR MLR
comp=Z,400nm,18.4s
BUG Bochum--Univer 56.26 313 *e*P **P 19 01 38.0 +0.1**
comp=Z,17nm,1.0s
BUG *ep*P **pP 19 01 44.4 +1.0**
DLBC Dease Lake 56.29 34 *e*P **P 19 01 39.6 +1.4**
DLBC Dease Lake 56.29 34 P **P 19 01 38.9 +0.8**
comp=Z,12nm,1.0s,baz=305,slow=7.6,SNR=18
DLBC LR LR 19 29 22.9
comp=Z,164nm,18.0s,baz=324,slow=40
PERS Pernice 56.34 305 *i* P **P 19 01 39.1 +0.5**
SOKA Soth 56.35 305⇑*i*pP **P 19 01 38.9 +0.2**
comp=Z,7.2nm,1.0s
VAY Valandovo 56.56 296 *i* P **P 19 01 39.7 -0.5**
RJOB Jochberg 56.60 307 *e*P **P 19 01 41.2 +0.7**
comp=Z,7.0nm,1.0s
SKO Skopje 56.66 297 *i* P **P 19 01 41.8 +0.9**
TNS Taunus Mts 56.67 311 *e*P **P 19 01 41.1 +0.1**
comp=Z,8.0nm,1.1s
TNS *ep*P **pP 19 01 47.4 +0.9**
TNS Taunus Mts 56.67 311 *e*P **P 19 01 41.1 +0.1**
TNS *e**PP **pP 19 01 47.4 +0.9**
TNS pmax pmax
comp=Z,8.0nm,1.1s
OBKA Obir 56.70 305⇑*i*pP **P 19 01 42.0 +0.8**
comp=Z,21nm,0.8s
KBA Koelnbreinsper 56.84 306⇓*i*pP **P 19 01 43.3 +1.0**
comp=Z,17nm,0.9s
FUR Furstenfeldbru 56.97 308 *e*P **P 19 01 43.8 +0.7**
comp=Z,25nm,1.1s
FUR Furstenfeldbru 56.97 308 *e*P **P 19 01 43.8 +0.7**
FUR pmax pmax
comp=Z,25nm,1.1s
MYKA Terra Mystica 57.03 305⇓*i*pP **P 19 01 44.2 +0.6**
comp=Z,11nm,0.9s
YKA Yellowknife Ar 57.05 23 P **P 19 01 42.5 -0.8**
YKA Yellowknife Ar 57.05 23 P **P 19 01 42.5 -0.8**
comp=Z,9.6nm,0.7s,baz=330,slow=7.1,SNR=65
VISS Visnje 57.08 304 *i* P **P 19 01 43.8 -0.1**
SFJD Kangerlussuaq 57.08 352 *i* P **P 19 01 43.4 -0.1**
comp=Z,6.5nm,1.1s
BOJS Bojanci 57.11 304 *i* P **P 19 01 44.0 -0.1**
RAYN Ar Rayn 57.22 264 P **P 19 01 44.5 -0.7**
comp=Z,166nm,0.8s,SNR=22
MEM Membach 57.41 313 P **P 19 01 46.3 +0.2**
WTTA Wattenberg 57.48 307⇓*i*pP **P 19 01 47.6 +0.8**
comp=Z,10nm,0.8s
MOTA Moosalm 57.66 308⇓*i*pP **P 19 01 48.5 +0.4**
comp=Z,13nm,1.1s
WLF Walferdange 58.07 312 P **P 19 01 50.9 +0.2**
WLF Walferdange 58.07 312 *e*P **P 19 01 50.9 +0.2**
comp=Z,12nm,1.1s
FETA Feichten 58.07 308⇓*i*pP **P 19 01 51.9 +0.9**
comp=Z,10nm,1.1s
BFO Black Forest 58.15 310 *e*P **P 19 01 51.3 -0.1**
comp=Z,12nm,1.1s
BFO Black Forest 58.15 310 *e*P **P 19 01 51.3 -0.1**
BFO pmax pmax
comp=Z,12nm,1.1s
BFO Black Forest 58.15 310 *e*P **P 19 01 50.9 -0.5**
comp=Z,7.8nm,0.8s
CDF Champ du Feu 58.54 311 *e*P **P 19 01 54.0 -0.2**
comp=Z,16nm,0.8s
CDF Champ du Feu 58.54 311 *e*P **P 19 01 54.0 -0.2**
CDF pmax pmax
comp=Z,16nm,0.8s
CDF Champ du Feu 58.54 311 *e*P **P 19 01 54.0 -0.2**
comp=Z,16nm,0.8s
BAIF Baives 58.57 314 *e*P **P 19 01 53.8 -0.5**
comp=Z,44nm,1.5s
BAIF Baives 58.57 314 *e*P **P 19 01 53.8 -0.5**
BAIF pmax pmax
comp=Z,44nm,1.5s
BAIF Baives 58.57 314 *e*P **P 19 01 53.8 -0.5**
comp=Z,44nm,1.5s
ECH Echery 58.74 311 *e*P **P 19 01 55.5 0.0**
ECH pmax pmax
comp=Z,9.0nm,0.8s
ECH Echery 58.74 311 *e*P **P 19 01 55.5 0.0**
comp=Z,8.7nm,0.8s
PAGF Fort de Pagny 59.10 312 *e*P **P 19 01 57.8 -0.1**
comp=Z,9.5nm,1.1s
PAGF Fort de Pagny 59.10 312 *e*P **P 19 01 57.8 -0.1**
comp=Z,9.5nm,1.1s
TUE Stuetta 59.11 308 *e*P **P 19 01 58.4 +0.1**
comp=Z,10nm,0.9s
HINF Hinteralfeld 59.18 311 *e*P **P 19 01 58.0 -0.6**
HINF Hinteralfeld 59.18 311 *e*P **P 19 01 58.0 -0.6**
HINF Hinteralfeld 59.18 311 *e*P **P 19 01 58.0 -0.6**
HAU Haudompre 59.25 311 *e*P **P 19 01 58.6 -0.5**
comp=Z,24nm,1.0s
HAU *e*R
comp=Z,191nm,22.0s
HAU Haudompre 59.25 311 *e*P **P 19 01 58.6 -0.5**
HAU pmax pmax
comp=Z,24nm,1.0s
HAU Haudompre 59.25 311 *e*P **P 19 01 58.6 -0.5**
comp=Z,24nm,1.0s
MEZF Maizieres J'vi 59.42 312 *e*P **P 19 02 00.0 -0.2**
comp=Z,25nm,0.8s
MEZF Maizieres J'vi 59.42 312 *e*P **P 19 02 00.0 -0.2**
comp=Z,25nm,0.8s
SFTF Sexfontaines 59.66 312 *e*P **P 19 02 01.3 -0.5**
comp=Z,15nm,0.8s
SFTF Sexfontaines 59.66 312 *e*P **P 19 02 01.3 -0.5**
comp=Z,15nm,0.8s
AQU L'Aquila 60.35 302 *e*P **P 19 02 06.2 -0.6**
comp=Z,30nm,1.0s
AQU L'Aquila 60.35 302⇑*i*P **P 19 02 06.5 -0.2**
CABF La Chapelle 60.44 310 *e*P **P 19 02 06.8 -0.5**
CABF La Chapelle 60.44 310 *e*P **P 19 02 06.8 -0.5**
CABF La Chapelle 60.44 310 *e*P **P 19 02 06.8 -0.5**
LOR Lormes 60.89 312 *e*P **P 19 02 09.4 -0.9**
comp=Z,19nm,0.8s
LOR *e*R
comp=Z,194nm,18.0s
LOR Lormes 60.89 312 *e*P **P 19 02 09.4 -0.9**
comp=Z,19nm,0.8s
LPL La Plagne 61.01 309 *e*P **P 19 02 11.4 0.0**
LPL La Plagne 61.01 309 *e*P **P 19 02 11.4 0.0**
LPL La Plagne 61.01 309 *e*P **P 19 02 11.4 0.0**
LPG La Plagne 61.02 309 *e*P **P 19 02 11.7 +0.2**
comp=Z,31nm,1.1s
LPG La Plagne 61.02 309 *e*P **P 19 02 11.7 +0.2**
LPG pmax pmax
comp=Z,31nm,1.1s
LPG La Plagne 61.02 309 *e*P **P 19 02 11.7 +0.2**
comp=Z,31nm,1.1s
TIP Timpagrande 61.11 298 *e*P **P 19 02 11.8 -0.2**
comp=Z,9.0nm,0.8s
SSF Saint Saulge 61.20 312 *e*P **P 19 02 11.6 -0.8**
comp=Z,22nm,1.0s
SSF Saint Saulge 61.20 312 *e*P **P 19 02 11.6 -0.8**
SSF pmax pmax
comp=Z,22nm,1.0s
SSF Saint Saulge 61.20 312 *e*P **P 19 02 11.6 -0.8**
comp=Z,22nm,1.0s
BNI Bardonecchia 61.39 309 *e*P **P 19 02 13.6 -0.3**
BNI pmax pmax
comp=Z,12nm,0.8s
BNI Bardonecchia 61.39 309 *e*P **P 19 02 13.6 -0.3**
comp=Z,12nm,0.8s
MBDF Montbardon 61.60 308 *e*P **P 19 02 14.7 -0.6**
comp=Z,29nm,0.9s
MBDF Montbardon 61.60 308 *e*P **P 19 02 14.7 -0.6**
MBDF pmax pmax
comp=Z,29nm,0.9s
MBDF Montbardon 61.60 308 *e*P **P 19 02 14.7 -0.6**
comp=Z,29nm,0.9s
ORIF Oris-en-Rattie 61.85 309 *e*P **P 19 02 16.7 -0.2**
ORIF *e*R
comp=Z,293nm,18.2s
ORIF Oris-en-Rattie 61.85 309 *e*P **P 19 02 16.7 -0.2**
ORIF Oris-en-Rattie 61.85 309 *e*P **P 19 02 16.7 -0.2**
SBF Sospel 61.98 307 *e*P **P 19 02 17.2 -0.6**
comp=Z,58nm,0.9s
SBF Sospel 61.98 307 *e*P **P 19 02 17.2 -0.6**
SBF pmax pmax
comp=Z,58nm,0.9s
SBF Sospel 61.98 307 *e*P **P 19 02 17.2 -0.6**
comp=Z,58nm,0.9s
CEL Celeste 62.25 298 *e*P **P 19 02 18.7 -0.9**
comp=Z,17nm,0.8s
PGF Pioggiola 62.28 305 *e*P **P 19 02 19.5 -0.4**
comp=Z,21nm,0.8s
PGF Pioggiola 62.28 305 *e*P **P 19 02 19.5 -0.4**
PGF pmax pmax
comp=Z,21nm,0.8s
PGF Pioggiola 62.28 305 *e*P **P 19 02 19.5 -0.4**
comp=Z,21nm,0.8s
TCF Toulx Ste Croi 62.36 312 *e*P **P 19 02 19.6 -0.6**
comp=Z,14nm,0.9s
TCF Toulx Ste Croi 62.36 312 *e*P **P 19 02 19.6 -0.6**
TCF pmax pmax
comp=Z,14nm,0.9s
TCF Toulx Ste Croi 62.36 312 *e*P **P 19 02 19.6 -0.6**
comp=Z,14nm,0.9s
VIVF Saint-Julien-l 62.43 310 *e*P **P 19 02 20.4 -0.3**
comp=Z,10nm,0.8s
VIVF Saint-Julien-l 62.43 310 *e*P **P 19 02 20.4 -0.3**
VIVF pmax pmax
comp=Z,10.0nm,0.8s
VIVF Saint-Julien-l 62.43 310 *e*P **P 19 02 20.4 -0.3**
comp=Z,10nm,0.8s
FRF La Foret Royal 62.57 308 *e*P **P 19 02 20.9 -0.8**
comp=Z,71nm,1.4s
FRF La Foret Royal 62.57 308 *e*P **P 19 02 20.9 -0.8**
FRF pmax pmax
comp=Z,71nm,1.4s
FRF La Foret Royal 62.57 308 *e*P **P 19 02 20.9 -0.8**
comp=Z,71nm,1.4s
SMRF Simiane la Rot 62.73 309 *e*P **P 19 02 22.6 -0.1**
comp=Z,16nm,0.8s
SMRF Simiane la Rot 62.73 309 *e*P **P 19 02 22.6 -0.1**
comp=Z,16nm,0.8s
MFF Saint Martin d 63.09 314 *e*P **P 19 02 24.3 -0.7**
MFF Saint Martin d 63.09 314 *e*P **P 19 02 24.3 -0.7**
MFF Saint Martin d 63.09 314 *e*P **P 19 02 24.3 -0.7**
LASF Ste Croix 63.41 310 *e*P **P 19 02 27.4 +0.2**
comp=Z,41nm,1.4s
LASF Ste Croix 63.41 310 *e*P **P 19 02 27.4 +0.2**
comp=Z,41nm,1.4s
FFC Flin Flon 66.84 20 *i* P **P 19 02 49.0 -0.3**
KEST Kesra 67.48 300 LR LR 19 35 48.6
comp=Z,94nm,18.2s,baz=297,slow=39
JCW Jim Creek 67.52 35 P **P 19 02 54.6 +0.9**
NLWA Neilton Lookou 67.56 37 *e*P **P 19 02 53.9 -0.1**
comp=Z,31nm,1.4s
RVC Mount Rainier- 68.59 36 P **P 19 03 02.0 +1.4**
LON Longmire 68.82 36 *e*P **P 19 03 02.8 +0.8**
LON pmax pmax
comp=Z,17nm,1.4s
LON Longmire 68.82 36 *e*P **P 19 03 02.8 +0.8**
comp=Z,17nm,1.4s
A12A Yaak River Ran 68.82 31 ⇓P **P 19 03 02.6 +0.7**
baz=69
TBM Table Mountain 68.85 35 P **P 19 03 02.9 +0.7**
NEW Newport 68.98 32 P **P 19 03 03.1 +0.1**
NEW Newport 68.98 32 P **P 19 03 03.1 +0.1**
comp=Z,4.0nm,0.8s,baz=355,slow=8.5,SNR=4.4
NEW Newport 68.98 32 ⇓P **P 19 03 03.4 +0.5**
baz=69
A13A Flathead Natio 69.18 30⇑P **P 19 03 04.6 +0.4**
baz=69
WALA Waterton Lakes 69.21 30 *e*P **P 19 03 04.9 +0.4**
comp=Z,0.4nm,1.0s
B12A Libby 69.26 31⇑P **P 19 03 05.1 +0.4**
baz=69
A14A Double T Ranch 69.43 30 ⇓P **P 19 03 05.8 0.0**
baz=69,SNR=9.4
A15A Johnson Ranch, 69.62 29 ⇓P **P 19 03 06.7 -0.2**
baz=69,SNR=30
TRW Toppenish Ridg 69.64 36 P **P 19 03 08.3 +1.3**
B13A Whitefish 69.67 31 ⇓P **P 19 03 07.6 +0.4**
baz=69,SNR=6.1
HAWA Hanford 69.88 35 *e*P **P 19 03 09.5 +1.0**
comp=Z,23nm,1.2s
A16A West Butte Ran 69.95 28 ⇓P **P 19 03 08.8 -0.3**
baz=70,SNR=9.7
C12B Naegeli Ranch, 69.97 32 ⇓P **P 19 03 10.0 +0.9**
baz=70
B14A Marquette Ranc 70.03 30 ⇓P **P 19 03 09.6 +0.1**
baz=70,SNR=10
BLMT Blacktail Moun 70.03 31 *e*P **P 19 03 10.5 +0.9**
comp=Z,14nm,1.4s
SCHQ Schefferville 70.04 359 P **P 19 03 08.4 -0.9**
SCHQ Schefferville 70.04 359 P **P 19 03 08.4 -0.9**
comp=Z,5.0nm,0.8s,baz=352,slow=5.0,SNR=7.6
BSMT Bassoo Peak 70.05 31 P **P 19 03 10.9 +1.2**
VFP Flag Point 70.19 37 P **P 19 03 11.3 +0.7**
A17A Triple J Farms 70.20 28⇑P **P 19 03 10.2 -0.2**
baz=70,SNR=19
YBMT Yellow Bay 70.26 31 *e*P **P 19 03 11.7 +0.7**
comp=Z,14nm,1.2s

C13A **Hot Springs** 70.27 31 ⇑P P 19 03 11.7 +0.8
baz=70,SNR=11
B15A **Bradely Ranch,** 70.27 29 ⇑P P 19 03 10.7 -0.3
baz=70,SNR=8.5
JTMT **Jette** 70.29 31 eP P 19 03 12.2 +1.1
comp=Z,18nm,1.4s
ESDC **Sonseca Array** 70.36 312 P P 19 03 11.1 -0.5
ESDC **Sonseca Array** 70.36 312 P P 19 03 11.1 -0.5
ESDC LR LR 19 38 14.8
comp=Z,5.4nm,0.8s,baz=30,slow=6.2,SNR=18
B16A **M & M Farms, S** 70.41 29 ⇓P P 19 03 11.9 0.0
comp=Z,185nm,18.7s,baz=235,slow=40
baz=70
A18A **Metzger Ranch,** 70.45 27 ⇑P P 19 03 11.7 -0.3
baz=70,SNR=5.9
SWMT **Swartz Lake** 70.59 31 eP P 19 03 13.8 +0.9
comp=Z,35nm,1.2s
A19A **Klindworth Far** 70.72 27 ⇑P P 19 03 13.8 +0.1
baz=70,SNR=7.4
C15A **Salmond Ranch,** 70.75 30 ⇓P P 19 03 13.8 -0.1
baz=70,SNR=6.0
B17A **L&G Farms, Che** 70.77 28 ⇓P P 19 03 14.2 +0.2
baz=70
D13A **Huson** 70.83 31 ⇑P P 19 03 14.8 +0.4
baz=71,SNR=9.4
B18A **Beardsley Farm** 70.95 28 ⇓P P 19 03 15.1 0.0
baz=71,SNR=7.4
SLMT **Seeley Lake** 70.98 30 eP P 19 03 16.0 +0.7
comp=Z,47nm,1.3s
A20A **Cobblestone Ra** 70.98 26 ⇑P P 19 03 15.5 +0.3
baz=71
E12A **Beaver Dam Sad** 71.11 32 ⇑P P 19 03 16.6 +0.5
baz=71,SNR=14
B19A **Brinkman Farms** 71.11 27 ⇑P P 19 03 15.9 -0.1
baz=71
D14A **Greenough** 71.12 31 ⇑P P 19 03 16.8 +0.7
baz=71,SNR=35
A21A **Bergtoll Ranch** 71.12 25 ⇑P P 19 03 16.0 -0.1
baz=71
MSO **Missoula** 71.22 31 eP P 19 03 17.6 +0.8
comp=Z,19nm,1.3s
MSO **Missoula** 71.22 31 P P 19 03 17.2 +0.4
baz=71
PMG **Port Moresby** 71.27 142 LR LR 19 31 03.3
comp=Z,117nm,19.1s,baz=155,slow=33
EGMT **Eagleton** 71.30 28 eP P 19 03 17.4 +0.3
comp=Z,4.0nm,0.3s
EGMT **Eagleton** 71.30 28 ⇑P P 19 03 17.1 0.0
baz=71
KEBM **Edson Butte** 71.31 40 eP P 19 03 18.9 +1.6
comp=Z,16nm,1.1s
CHMT **Chamberlain Mo** 71.34 30 eP P 19 03 17.9 +0.3
comp=Z,8.3nm,0.9s
B20A **Solberg Farm,** 71.36 26 ⇓P P 19 03 17.4 -0.1
baz=71,SNR=7.6
A22A **Carney Farms,** 71.36 25 ⇑P P 19 03 17.0 -0.6
baz=71
C17A **Wharram Farm,** 71.39 28 ⇑P P 19 03 17.7 -0.1
baz=71,SNR=14
D15A **Lincoln** 71.44 30 ⇑P P 19 03 18.4 +0.3
baz=71,SNR=6.3
E13A **Victor** 71.50 31 ⇑P P 19 03 18.9 +0.4
baz=71,SNR=15
B21A **Ellsworth Farm** 71.62 26 ⇑P P 19 03 19.0 -0.1
baz=71
A23A **Redstone** 71.64 24 ⇑P P 19 03 19.1 -0.1
baz=71
D16A **Dana Ranch, Ca** 71.72 29 ⇓P P 19 03 19.8 -0.1
baz=72,SNR=9.9
E14A **Clinton** 71.72 31 ⇓P P 19 03 20.4 +0.6
baz=72,SNR=8.6
C19A **Slack Wire Ran** 71.75 27 ⇑P P 19 03 20.0 +0.1
baz=72,SNR=6.4
F12A **Elk City** 71.80 32 ⇑P P 19 03 20.3 0.0
baz=72,SNR=5.5
D17A **Six Diamond Ra** 71.84 29 ⇑P P 19 03 20.4 -0.2
baz=72,SNR=9.0
A24A **Westby** 71.88 24 ⇑P P 19 03 20.5 -0.1
baz=72
KBO **Bosley Butte** 71.92 40 eP P 19 03 21.2 +0.1
comp=Z,9.8nm,1.1s
HRY **Holter Researc** 71.93 30 eP P 19 03 21.8 +0.7
comp=Z,14nm,0.7s
E15A **Deer Lodge** 71.96 30 ⇓P P 19 03 21.6 +0.3
baz=72,SNR=6.1
BMO **Blue Mountains** 71.97 34 eP P 19 03 21.5 +0.2
comp=Z,25nm,1.1s
B22A **Reddig Ranch S** 71.99 25 ⇑P P 19 03 21.1 -0.2
baz=72
C20A **Veseth Ranch,** 72.04 27 ⇓P P 19 03 21.7 +0.1
baz=72
HUMO **Hull Mountain** 72.04 39 eP P 19 03 22.5 +0.9
comp=Z,22nm,1.5s
D18A **Linhart Farms,** 72.04 28 ⇑P P 19 03 22.0 +0.3
baz=72,SNR=6.9
F13A **Darby** 72.05 32 ⇓P P 19 03 21.8 +0.1
baz=72
E16A **East Helena** 72.14 30 ⇑P P 19 03 22.9 +0.6
baz=72,SNR=21
C21A **Desert Coulee** 72.16 26 ⇓P P 19 03 22.3 -0.1
baz=72,SNR=5.5
ULM **Lac du Bonnet** 72.25 18 P P 19 03 21.3 -1.5
ULM **Lac du Bonnet** 72.25 18 P P 19 03 21.3 -1.5
ULM LR LR 19 37 07.6
comp=Z,2.0nm,0.5s,baz=332,slow=5.2,SNR=3.4
DGMT **Dagmar** 72.26 24 eP P 19 03 23.1 +0.2
comp=Z,101nm,18.8s,baz=343,slow=38
DGMT **Dagmar** 72.26 24 ⇓P P 19 03 22.8 -0.1
comp=Z,26nm,0.9s
F14A **Wisdom** 72.31 31 ⇑P P 19 03 23.9 +0.4
baz=72
D19A **Cripps Ranch,** 72.32 27 ⇓P P 19 03 23.4 +0.1
baz=72,SNR=13
E17A **Martinsdale** 72.43 29 ⇑P P 19 03 24.6 +0.5
baz=72,SNR=11
C22A **Vida** 72.53 25 ⇑P P 19 03 24.7 +0.1
baz=72
F15A **Butte** 72.54 30 ⇑P P 19 03 25.1 +0.3
baz=72,SNR=8.2
LRM **Limekiln Ridge** 72.57 30 eP P 19 03 25.4 +0.3
comp=Z,46nm,0.9s
D20A **Manuel Ranch,** 72.58 27 ⇑P P 19 03 24.7 -0.2
baz=72
E18A **Harlowton** 72.59 28 ⇑P P 19 03 25.6 +0.6
baz=72,SNR=8.9
C23A **Lambert** 72.65 25 ⇑P P 19 03 25.8 +0.5
baz=72,SNR=6.7
F16A **Kennard Place,** 72.84 30 ⇓P P 19 03 26.6 +0.1
baz=73,SNR=5.0
YBH **Yreka Blue Hor** 72.89 39 eP P 19 03 27.6 +0.7
comp=Z,9.7nm,1.3s
YBH **Yreka Blue Hor** 72.89 39 P P 19 03 27.2 +0.3
comp=Z,3.7nm,0.7s,baz=30,slow=3.7,SNR=10
D21A **La Casta Ranch** 72.89 26 ⇑P P 19 03 26.5 -0.2
baz=73
DLMT **Dillon** 72.94 31 eP P 19 03 27.6 +0.4
comp=Z,19nm,1.0s
BOZ **Bozeman (W)** 72.96 30 eP P 19 03 28.1 +0.8
BOZ pmax pmax
comp=Z,11nm,1.5s
BOZ **Bozeman (W)** 72.96 30 eP P 19 03 28.1 +0.8
comp=Z,11nm,1.5s
E19A **Rath Farm, Rou** 72.99 28 ⇑P P 19 03 27.9 +0.5
baz=73,SNR=7.6
F17A **Fitzpatrick Pl** 73.00 29 ⇑P P 19 03 28.0 +0.5
baz=73,SNR=6.6
H12A **Diamond D Ranc** 73.01 33 ⇓P P 19 03 27.0 -0.6
baz=73
EVO **Evora** 73.01 314 eP P 19 03 28.1 +0.6
EVO eR
comp=Z,229nm,17.8s
D22A **Cohagen** 73.02 26 ⇓P P 19 03 27.5 0.0
baz=73,SNR=5.4
EVOP **Sao Brissos** 73.06 314 eP P 19 03 28.1 +0.4
EVOP **Sao Brissos** 73.06 314 eP P 19 03 28.1 +0.4
C24A **Savage** 73.09 24 ⇓P P 19 03 28.0 +0.2
baz=73
E20A **Meyer Farm, Mu** 73.12 27 ⇓P P 19 03 28.0 -0.1
baz=73
D23A **Lindsay** 73.23 25 ⇓P P 19 03 29.5 +0.7
baz=73,SNR=5.8
F18A **Big Timber** 73.26 29 ⇑P P 19 03 29.6 +0.6
baz=73,SNR=8.1
MCMT **McKenzie Canyo** 73.36 31 eP P 19 03 30.5 +0.8
comp=Z,4.3nm,1.1s
E21A **Keefer Ranch,** 73.36 26 ⇑P P 19 03 29.5 0.0
baz=73
GCMT **Greycliff** 73.38 29 eP P 19 03 30.5 +0.8
comp=Z,9.6nm,1.1s
D24A **Glendive** 73.50 24 ⇑P P 19 03 30.9 +0.6
baz=73
G17A **Pierce Place,** 73.51 29 ⇑P P 19 03 31.5 +1.0
baz=73
F19A **Roth Farm, Mol** 73.51 28 ⇓P P 19 03 30.9 +0.4
baz=73,SNR=8.5
I12A **Atlanta** 73.60 33 ⇑P P 19 03 32.2 +1.0
baz=73,SNR=36
WVOR **Wild Horse Val** 73.69 36 eP P 19 03 32.5 +0.9
WVOR pmax pmax
comp=Z,8.0nm,1.0s
WVOR **Wild Horse Val** 73.69 36 eP P 19 03 32.5 +0.9
comp=Z,8.2nm,1.0s
MFID **Camas Ranch** 73.73 34 eP P 19 03 32.9 +1.2
comp=Z,14nm,1.0s
MFID **Camas Ranch** 73.73 34 ⇑P P 19 03 32.7 +0.9
baz=74,SNR=7.6
E22A **Miles City** 73.74 26 ⇓P P 19 03 31.8 +0.1
baz=74
QLMT **Earthquake Lak** 73.77 30 eP P 19 03 32.9 +0.7
comp=Z,2.2nm,1.3s
G18A **Lazy EL Ranch,** 73.84 29 ⇑P P 19 03 32.3 -0.2
baz=74
E23A **Ismay** 73.84 25 ⇓P P 19 03 32.5 +0.2
baz=74
MDND **Maddock** 73.84 21 ⇑P P 19 03 32.1 -0.1
baz=74
H16A **Russell Place,** 73.93 30 ⇓P P 19 03 33.6 +0.5
baz=74,SNR=5.3
I14A **Mackay** 74.00 32 ⇓P P 19 03 33.7 +0.3
baz=74
F21A **Absaloka Mine,** 74.02 27 ⇑P P 19 03 33.3 -0.1
baz=74
E24A **Baker** 74.02 25 ⇓P P 19 03 33.7 +0.3
baz=74
HLID **Hailey** 74.03 33 eP P 19 03 34.5 +0.8
comp=Z,6.5nm,1.0s
HLID **Hailey** 74.03 33 ⇑P P 19 03 34.3 +0.7
baz=74,SNR=7.6
RLMT **Red Lodge** 74.10 29 eP P 19 03 34.6 +0.6
comp=Z,19nm,1.1s
F22A **Rosebud** 74.28 26 ⇑P P 19 03 34.6 -0.3
baz=74
G20A **Bridger** 74.29 28 ⇑P P 19 03 35.0 -0.1
baz=74,SNR=9.0
FITZ **Fitzroy Crossi** 74.31 166 eP P 19 03 33.4 -1.7
comp=Z,30nm,1.3s
FITZ **Fitzroy Crossi** 74.31 166 P P 19 03 34.4 -0.7
comp=Z,7.7nm,0.7s,baz=0.0,slow=4.9,SNR=13
H18A **Shoshone NF, C** 74.40 29 ⇑P P 19 03 36.1 +0.2
baz=74
H17A **Grant Village** 74.41 30 ⇓P P 19 03 36.8 +0.8
baz=74
F23A **Volborg** 74.55 26 ⇑P P 19 03 36.1 -0.4
baz=74
G21A **Lodge Grass** 74.55 27 ⇓P P 19 03 36.6 +0.1
baz=74
H19A **Powell** 74.59 29 ⇓P P 19 03 37.1 +0.2
baz=74
F24A **Ekalaka** 74.66 25 ⇓P P 19 03 37.1 0.0
baz=74
IMW **Indian Meadow** 74.76 30 eP P 19 03 39.3 +1.3
comp=Z,14nm,1.4s
G22A **Birney** 74.79 26 ⇓P P 19 03 37.6 -0.4
baz=74
MOOW **Moose Ponds** 74.95 30 eP P 19 03 40.0 +0.9
comp=Z,22nm,1.4s
H20A **Greybull** 75.03 28 ⇓P P 19 03 39.3 0.0
baz=75
G23A **Biddle** 75.04 26 ⇓P P 19 03 39.1 -0.3
baz=75,SNR=8.1
LOHW **Long Hollow** 75.12 30 eP P 19 03 40.7 +0.7
comp=Z,20nm,1.4s
TPAW **Teton Pass** 75.13 30 eP P 19 03 41.1 +1.0
comp=Z,34nm,1.3s
H21A **Big Horn, Sher** 75.15 27 ⇑P P 19 03 40.0 -0.1
baz=75
G24A **Alzada** 75.16 25 ⇓P P 19 03 39.5 -0.5
baz=75
RRI2 **Red Bridge** 75.16 31 eP P 19 03 41.4 +1.1
comp=Z,29nm,1.5s
I19A **Meeteetse** 75.18 29 ⇓P P 19 03 40.6 +0.2
baz=75
SNOW **Snow King Moun** 75.21 30 eP P 19 03 42.3 +1.7
comp=Z,17nm,1.1s
I18A **Diamond G Ranc** 75.26 29 ⇑P P 19 03 41.5 +0.6
baz=75
H22A **Clearmont** 75.36 27 ⇑P P 19 03 41.2 0.0
baz=75
BEKR **Beckworth** 75.38 39 eP P 19 03 41.8 +0.2
comp=Z,4.2nm,0.9s
I20A **Worland** 75.49 28 ⇓P P 19 03 42.2 +0.1
baz=75
H23A **Clabaugh Cattl** 75.63 26 ⇑P P 19 03 42.4 -0.4
baz=75
H24A **Dirks Ranch, A** 75.67 25 ⇑P P 19 03 42.1 -0.9
baz=75
I21A **Big Trails, Te** 75.84 28 ⇓P P 19 03 43.8 -0.3
baz=75,SNR=9.6
J19A **Crowheart** 75.88 29 ⇑P P 19 03 45.0 +0.7
baz=76,SNR=15
I22A **9 Mile Ranch,** 75.98 27 ⇑P P 19 03 44.8 0.0
baz=76
J20A **Shoshoni** 76.06 28 ⇓P P 19 03 45.8 +0.5
baz=76,SNR=5.8
HVU **Hansel Valley** 76.16 32 eP P 19 03 47.0 +1.1
HVU pmax pmax
comp=Z,5.0nm,0.8s
HVU **Hansel Valley** 76.16 32 eP P 19 03 47.0 +1.1
comp=Z,5.5nm,0.8s
I23A **Meade Ranch, G** 76.18 26 ⇑P P 19 03 45.8 -0.2
baz=76
BW06 **Boulder Array** 76.19 30 eP P 19 03 45.9 -0.3
comp=Z,5.4nm,1.1s
PDAR **Pinedale Array** 76.19 30 P P 19 03 45.8 -0.4
PDAR **Pinedale Array** 76.19 30 P P 19 03 45.8 -0.4
comp=Z,4.1nm,1.0s,baz=14,slow=3.1,SNR=14
PDAR LR LR 19 42 35.5
comp=Z,83nm,19.2s,baz=157,slow=40
J21A **Lysite** 76.24 28 ⇑P P 19 03 46.2 -0.2
baz=76
ELK **Elko** 76.33 35 eP P 19 03 48.1 +1.2
comp=Z,7.5nm,0.9s
ELK **Elko** 76.33 35 P P 19 03 48.0 +1.0
comp=Z,7.7nm,0.8s,baz=323,slow=5.7,SNR=10
K19A **Absolon Red Bu** 76.34 29 ⇑P P 19 03 46.5 -0.4
baz=76
RSSD **Black Hills** 76.38 25 eP P 19 03 46.5 -0.7
RSSD pmax pmax
comp=Z,5.0nm,0.8s
RSSD **Black Hills** 76.38 25 eP P 19 03 46.5 -0.7
comp=Z,5.1nm,0.8s
MDT **Midelt** 76.42 309 LR LR 19 39 50.9
comp=Z,98nm,18.2s,baz=56,slow=38
J22A **Midwest** 76.43 27 ⇓P P 19 03 46.8 -0.6
baz=76,SNR=6.0
I24A **Kuemmerle Ranc** 76.48 26 ⇑P P 19 03 47.3 -0.3
baz=76
K20A **Yellowstone Ra** 76.63 29 ⇓P P 19 03 48.2 -0.4
baz=76,SNR=5.2
J23A **Dilts Ranch, B** 76.68 27 ⇓P P 19 03 48.4 -0.4
baz=76
HWUT **Hardware Ranch** 76.68 32 eP P 19 03 50.1 +1.2
comp=Z,43nm,2.0s
L18A **Fontenelle, Gr** 76.84 30 ⇑P P 19 03 49.0 -0.8
baz=77
L19A **Farson** 76.87 30 ⇓P P 19 03 49.9 -0.1
baz=77
K21A **Alcova** 76.95 28 ⇓P P 19 03 50.1 -0.3
baz=77,SNR=7.4
J24A **Dixon Ranch, L** 76.97 26 ⇓P P 19 03 50.7 +0.2
baz=77
CMB **Columbia Colle** 76.99 39 eP P 19 03 51.2 +0.6
CMB pmax pmax
comp=Z,5.0nm,1.1s
CMB **Columbia Colle** 76.99 39 eP P 19 03 51.2 +0.6
comp=Z,5.4nm,1.1s
M17A **Scullys Gap (B** 77.07 31 ⇓P P 19 03 51.4 +0.3
baz=77,SNR=12
J25A **Sunshine Ranch** 77.13 25 ⇑P P 19 03 51.1 -0.1
baz=77
K22A **Casper** 77.13 28 ⇓P P 19 03 50.9 -0.5
baz=77
BRSD **Miller** 77.23 22 ⇓P P 19 03 51.5 -0.2
baz=77,SNR=10
L20A **Wamsutter** 77.24 29 ⇑P P 19 03 52.2 +0.1
baz=77,SNR=6.7
K23A **Bowen Ranch, D** 77.27 27 ⇑P P 19 03 51.7 -0.4
baz=77
NVAR **Mina Array Bea** 77.38 38 P P 19 03 53.8 +0.8
NVAR **Mina Array Bea** 77.38 38 P P 19 03 53.8 +0.8
comp=Z,5.9nm,0.8s,baz=312,slow=4.0,SNR=43
NVAR LR LR 19 37 33.0
comp=Z,79nm,21.1s,baz=337,slow=35
M19A **Rock Springs** 77.47 30 ⇓P P 19 03 53.5 +0.1
baz=77
K24A **Anderson Ranch** 77.50 26 ⇓P P 19 03 52.9 -0.5
baz=77
L21A **Rawlins** 77.54 28 ⇑P P 19 03 53.9 +0.1
baz=77
DUG **Dugway** 77.59 33 eP P 19 03 55.2 +1.2
DUG pmax pmax
comp=Z,12nm,1.0s
DUG **Dugway** 77.59 33 eP P 19 03 55.2 +1.2
comp=Z,12nm,1.0s
DUG **Dugway** 77.59 33 ⇓P P 19 03 54.7 +0.7
baz=77,SNR=5.0
SPMN **St. Paul** 77.64 17 ⇑P P 19 03 53.3 -0.6
baz=77
WRA **Warramunga Arr** 77.66 158 P P 19 03 53.0 -1.2
WRA **Warramunga Arr** 77.66 158 P P 19 03 53.0 -1.2
comp=Z,8.9nm,0.8s,baz=347,slow=6.3,SNR=41
J28A **Allard Ranch,** 77.70 24 ⇓P P 19 03 54.4 0.0
baz=77,SNR=8.5
L22A **Ellis Ranch, M** 77.73 28 ⇓P P 19 03 55.2 +0.3
baz=78,SNR=10
M20A **Sweetwater, Wa** 77.76 29 ⇑P P 19 03 55.6 +0.6
baz=78
K25A **Mack Ranch, Ha** 77.84 26 ⇓P P 19 03 55.8 +0.4
baz=78
L23A **Garrett** 77.85 27 ⇑P P 19 03 55.0 -0.5
baz=78,SNR=7.2
DAU **Daniels Canyon** 77.87 32 eP P 19 03 56.7 +1.0
DAU **Daniels Canyon** 77.87 32 eP P 19 03 56.7 +1.0
M21A **Separation Pea** 77.88 29 ⇑P P 19 03 55.4 -0.3
baz=78
MLAC **Mammoth Lakes** 77.91 38 ⇓P P 19 03 56.7 +0.8
baz=78
K26A **Motz Farm, Whi** 77.93 25 ⇓P P 19 03 55.5 -0.3
baz=78
L24A **Wheatland** 78.11 27 ⇑P P 19 03 56.9 +0.1
baz=78
K27A **Flueckinger Fa** 78.15 25 ⇓P P 19 03 57.0 0.0
baz=78
L25A **Engebretsen Ra** 78.25 26 ⇓P P 19 03 57.7 +0.1
baz=78
M22A **Cedar Creek Ra** 78.28 28 ⇑P P 19 03 57.8 -0.1
baz=78
K28A **Ten Mile Ranch** 78.35 24 ⇓P P 19 03 58.1 0.0
baz=78
N20A **Spence Gulch,** 78.35 29 ⇑P P 19 03 59.1 +0.8
baz=78,SNR=11
R11A **Troy Canyon, C** 78.38 36 ⇑P P 19 03 59.0 +0.5
baz=78,SNR=9.6
ECSD **EROS Data Cent** 78.39 20 eP P 19 03 57.9 -0.3
comp=Z,18nm,1.4s
M23A **Laramie** 78.45 27 ⇑P P 19 03 59.1 +0.3
baz=78
K29A **Lazy Trails An** 78.54 23 ⇓P P 19 03 59.3 +0.2
baz=78
L26A **Underwood Farm** 78.58 25 ⇓P P 19 03 59.4 0.0
baz=78
O19A **Miners Draw (B** 78.60 30 ⇓P P 19 03 59.9 +0.2
baz=78,SNR=7.2
N21A **Black Mountain** 78.62 29 ⇑P P 19 03 60.0 +0.2
baz=78,SNR=6.1
TIN **Tinemaha** 78.64 38 ⇓P P 19 04 00.9 +1.1
baz=78
PHWY **Pilot Hill** 78.67 27 eP P 19 04 00.6 +0.4
comp=Z,31nm,1.4s
M24A **Cheyenne** 78.68 27 ⇑P P 19 04 00.9 +0.8
baz=78,SNR=5.6
L27A **T5 Ranch, Ells** 78.72 25 ⇓P P 19 04 00.3 +0.2
baz=78
N22A **Wattenberg Ran** 78.88 28 ⇓P P 19 04 02.0 +0.7
baz=79
M25A **Palm-Egli Farm** 78.91 26 ⇓P P 19 04 01.8 +0.5
baz=79
N23A **Red Feather La** 78.92 28 ⇑P P 19 04 02.2 +0.7
baz=78,SNR=9.4
GRAC **Grapevine Rang** 78.99 38 ⇓P P 19 04 03.1 +1.5
baz=79,SNR=10
O20A **White River Ci** 79.00 30 ⇑P P 19 04 02.6 +0.7
baz=79,SNR=7.9
M26A **McRoberts Ranc** 79.10 26 ⇑P P 19 04 02.6 +0.3
baz=79
O21A **Pagoda** 79.14 29 ⇓P P 19 04 01.9 -0.8
baz=79
L29A **Maesberg Ranch** 79.17 23 ⇑P P 19 04 02.5 -0.1
baz=79
M27A **Reverse DX Ran** 79.23 25 ⇑P P 19 04 03.0 +0.1
baz=79
P19A **Cripple Cowboy** 79.26 30 ⇑P P 19 04 03.4 +0.1
baz=79,SNR=12
N24A **Carr** 79.27 27 ⇑P P 19 04 04.1 +0.9
baz=79
Q16A **Castle Valley** 79.27 32 ⇓P P 19 04 03.9 +0.6
baz=79,SNR=5.8
SRU **San Rafael** 79.29 32 ⇓P P 19 04 03.9 +0.5
baz=79
O22A **Kremmling** 79.45 28 ⇑P P 19 04 04.8 +0.4
baz=79,SNR=13
N25A **Grover** 79.48 26 ⇓P P 19 04 05.4 +1.0
baz=79
P20A **De Beque** 79.55 30 ⇑P P 19 04 05.4 +0.5
baz=79
O23A **Lake Granby, G** 79.57 28 ⇓P P 19 04 06.1 +1.0
baz=79
M28A **Bar X Bar Ranc** 79.60 24 ⇓P P 19 04 05.3 +0.3
baz=79
FURC **Furnace Creek,** 79.64 38 ⇓P P 19 04 06.1 +1.0
baz=79
N26A **Koester Ranch,** 79.69 26 ⇓P P 19 04 05.8 +0.3
baz=79
M29A **Burnside Ranch** 79.71 24 ⇓P P 19 04 05.2 -0.3
baz=79
SADO **Sadowa** 79.74 7 P P 19 04 04.6 -0.9
SADO **Sadowa** 79.74 7 P P 19 04 04.6 -0.9
comp=Z,3.2nm,0.4s,baz=338,slow=6.3,SNR=5.5
MPMC **Manual Prospec** 79.79 38 ⇑P P 19 04 07.0 +0.7
baz=80,SNR=5.4
P21A **Newcastle** 79.79 29 ⇓P P 19 04 07.1 +0.9
baz=80
OGNE **Ogallala** 79.87 25 eP P 19 04 06.2 -0.2
comp=Z,19nm,0.7s
OGNE **Ogallala** 79.87 25 ⇓P P 19 04 06.2 -0.2
baz=80,SNR=5.3
N27A **Anderson Farm,** 79.88 25 ⇑P P 19 04 06.8 +0.3
baz=80
O24A **Longmont** 79.88 27 ⇓P P 19 04 07.2 +0.6
baz=80
P22A **Eagle** 79.92 29 ⇑P P 19 04 07.6 +0.7
baz=80,SNR=7.6
TAM **Tamanrasset** 79.93 296 eP P 19 04 07.7 +0.6
TAM pmax pmax
comp=Z,6.0nm,1.0s
TAM **Tamanrasset** 79.93 296 eP P 19 04 07.7 +0.6
comp=Z,5.7nm,1.0s
PKM **Peak Mountain** 79.99 40 ⇑P P 19 04 08.4 +1.1
baz=80
ISCO **Idaho Springs** 80.04 28 eP P 19 04 08.1 +0.5
ISCO pmax pmax
comp=Z,13nm,1.4s
ISCO **Idaho Springs** 80.04 28 eP P 19 04 08.1 +0.5
comp=Z,13nm,1.4s
ISCO **Idaho Springs** 80.04 28 ⇑P P 19 04 08.2 +0.6
baz=80,SNR=5.7
Q20A **Ridgley Place,** 80.08 30 ⇓P P 19 04 08.0 +0.2
baz=80,SNR=8.4
O26A **Horse Wrangler** 80.22 26 ⇓P P 19 04 08.4 0.0
baz=80
N28A **Pribbeno Ranch** 80.23 25 ⇑P P 19 04 08.4 0.0
baz=80
LRMC **Laurel Mountai** 80.24 39 ⇑P P 19 04 09.5 +0.9
baz=80
SMCO **Snowmass** 80.25 29 eP P 19 04 09.5 +0.6
comp=Z,33nm,1.2s
BGNE **Belgrade** 80.30 22 ⇓P P 19 04 08.7 0.0
baz=80
SHOC **Shoshone** 80.36 37 ⇓P P 19 04 10.1 +1.0
baz=80
Q21A **Lamborn Mesa,** 80.40 30 ⇓P P 19 04 10.3 +0.8
baz=80
PV04 **Paradox Valley** 80.43 31 eP P 19 04 10.5 +0.9

O27A	Beecher Island	80.47	26	⇑P	P	19 04 09.8	+0.1
	baz=80						
Q22A	Crested Butte,	80.56	29	⇑P	P	19 04 11.3	+0.8
	baz=80,SNR=6.2						
EDW2	Edwards Air Fo	80.67	39	⇑P	P	19 04 11.6	+0.8
	baz=80						
P25A	Willow Gulch B	80.69	27	⇑P	P	19 04 11.1	+0.1
	baz=80						
O28A	Krutsinger Ran	80.70	25	⇑P	P	19 04 11.0	+0.1
	baz=80						
GSC	Goldstone	80.71	38	eP	P	19 04 11.9	+0.8
GSC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GSC	Goldstone	80.71	38	eP	P	19 04 11.9	+0.8
	comp=Z,7.2nm,1.1s						
GSC	Goldstone	80.71	38	⇑P	P	19 04 12.1	+1.0
	baz=80						
S18A	Hurst Farm, Bl	80.76	32	⇑P	P	19 04 11.6	+0.1
	baz=80,SNR=14						
PV01	Paradox Valley	80.77	31	eP	P	19 04 12.3	+0.8
	comp=Z,2µm,1.1s						
R20A	Redvale	80.77	31	⇑P	P	19 04 12.1	+0.6
	baz=80,SNR=5.6						
Q24A	Divide	80.94	28	⇑P	P	19 04 12.7	+0.1
	baz=81						
S20A	Disappointment	81.11	31	⇓P	P	19 04 14.2	+0.9
	baz=81,SNR=16						
ASAR	Alice Springs	81.18	159	P	P	19 04 12.4	-1.0
ASAR	Alice Springs	81.18	159	P	P	19 04 12.4	-1.0
	comp=Z,4.2nm,0.8s,baz=355,slow=5.5,SNR=44						
R22A	Saguache, Gunn	81.19	29	⇑P	P	19 04 14.9	+1.0
	baz=81,SNR=13						
U15A	North Rim	81.20	34	⇑P	P	19 04 15.2	+1.2
	baz=81						
Q25A	Bedland, Calha	81.23	27	⇓P	P	19 04 14.0	+0.1
	baz=81						
HEC	Hector,Ludlow	81.31	38	⇑P	P	19 04 15.1	+0.9
	baz=81,SNR=8.3						
S21A	Coal Bank Pass	81.43	30	⇑P	P	19 04 16.1	+1.0
	baz=81,SNR=23						
R23A	Moffat	81.49	29	⇓P	P	19 04 16.0	+0.6
	baz=81,SNR=8.6						
KSCO	Kaye Shedlock'	81.55	26	⇓P	P	19 04 16.0	+0.5
	baz=81						
GMRC	Granite Mounta	81.58	37	⇓P	P	19 04 16.5	+0.7
	baz=81						
S22A	4UR Ranch, Cre	81.63	30	⇓P	P	19 04 16.8	+0.6
	baz=81,SNR=13						
R24A	Sanders Place,	81.64	28	⇓P	P	19 04 16.9	+0.8
	baz=81						
KMBO	Kilima Mbogo	81.87	256	eP	P	19 04 18.1	+0.5
	comp=Z,12nm,1.4s						
KMBO	Kilima Mbogo	81.87	256	P	P	19 04 17.8	+0.2
	comp=Z,5.3nm,0.9s,baz=243,slow=24,SNR=11						
KMBO				LR	LR	19 43 39.0	
	comp=Z,117nm,18.5s,baz=92,slow=38						
W13A	Hualapai Mount	81.90	36	⇓P	P	19 04 18.0	+0.5
	baz=82						
R25A	Fountain Ranch	81.94	28	⇑P	P	19 04 17.4	-0.2
	baz=82,SNR=7.1						
R26A	Arlington	82.02	27	⇓P	P	19 04 18.1	+0.1
	baz=82						
T21A	Navajo Lake	82.13	30	⇑P	P	19 04 19.2	+0.5
	baz=82						
S24A	Houchin Ranch,	82.17	28	⇓P	P	19 04 19.4	+0.3
	baz=82,SNR=10						
BELC	Belle Mtn. Jos	82.17	38	⇑P	P	19 04 19.3	+0.4
	baz=82,SNR=5.7						
SCI	San Clemente I	82.17	40	⇓P	P	19 04 20.5	+1.8
	baz=82						
R27A	Eads	82.19	26	⇓P	P	19 04 18.8	-0.1
	baz=82						
T22A	Edith	82.29	30	⇓P	P	19 04 20.0	+0.4
	baz=82						
IRM	Iron Mountain	82.32	37	⇓P	P	19 04 20.5	+0.9
	baz=82,SNR=9.0						
WUAZ	Wupatki	82.33	34	eP	P	19 04 21.0	+1.2
	comp=Z,4.3nm,0.8s						
WUAZ	Wupatki	82.33	34	⇑P	P	19 04 20.6	+0.9
	baz=82						
S25A	Robets Cordova	82.36	28	⇑P	P	19 04 19.5	-0.4
	baz=82,SNR=8.4						
PFO	Pinyon Flat Ob	82.36	38	P	P	19 04 20.0	+0.1
PFO	Pinyon Flat Ob	82.36	38	P	P	19 04 20.0	+0.1
	comp=Z,3.9nm,0.4s,baz=216,slow=0.7,SNR=6.1						
PFO	Pinyon Flat Ob	82.36	38	⇑P	P	19 04 20.5	+0.6
	baz=82						
R28A	Tribune	82.39	26	⇑P	P	19 04 19.7	-0.2
	baz=82						
U20A	Newcomb	82.41	31	⇑P	P	19 04 20.7	+0.6
	baz=82,SNR=6.5						
T23A	Casias Ranch,	82.51	29	⇑P	P	19 04 21.4	+0.6
	baz=82						
PDMCI	Parker Dam,Lak	82.54	36	⇓P	P	19 04 21.1	+0.5
	baz=82						
U21A	Nageezi	82.62	31	⇑P	P	19 04 21.7	+0.4
	baz=82,SNR=13						
S26A	Kim	82.65	27	⇓P	P	19 04 21.1	-0.2
	baz=82,SNR=8.5						
BC3	Big Chuckawall	82.67	38	⇑P	P	19 04 22.2	+0.7
	baz=82,SNR=5.2						
S27A	Las Animas	82.74	27	⇓P	P	19 04 21.3	-0.5
	baz=82						
R30A	Dighton	82.81	24	⇑P	P	19 04 21.7	-0.3
	baz=83						
T25A	Trinidad	82.86	28	⇑P	P	19 04 22.4	-0.1
	baz=83						
U22A	Llaves	82.90	30	⇓P	P	19 04 23.6	+0.9
	baz=83,SNR=12						
Y12C	Blythe	82.91	37	⇓P	P	19 04 23.3	+0.8
	baz=83						
V20A	Brimhall	82.97	32	⇓P	P	19 04 23.4	+0.4
	baz=83						
MONP	Monument Peak	83.03	39	⇑P	P	19 04 24.3	+0.9
	baz=83						
T26A	Comanche Natio	83.04	27	⇓P	P	19 04 23.1	-0.3
	baz=83,SNR=9.0						
V21A	Milan	83.20	31	⇓P	P	19 04 25.0	+0.6
	baz=83						
W18A	Petrified Fore	83.21	33	⇓P	P	19 04 25.1	+0.8
	baz=83						
SFIN	Scholer Farm	83.25	14	⇑P	P	19 04 23.7	-0.4
	baz=83						
Y14A	Wickenburg	83.25	36	⇓P	P	19 04 25.2	+0.8
	baz=83						
V22A	San Miguel Ran	83.31	30	⇓P	P	19 04 25.5	+0.6
	baz=83,SNR=16						
X16A	Lo Mia Camp, P	83.32	34	⇑P	P	19 04 26.0	+1.1
	baz=83						
GLA	Glamis	83.44	37	⇓P	P	19 04 26.1	+0.7
	baz=83						
U25A	Circle Dot Ran	83.55	28	⇓P	P	19 04 26.3	+0.2
	baz=83,SNR=6.5						
W20A	Ramah	83.58	32	⇓P	P	19 04 27.2	+0.9
	baz=83						
X18A	Snowflake	83.69	33	⇓P	P	19 04 27.7	+0.9
	baz=84						
U26A	Atchley Ranch,	83.74	28	⇓P	P	19 04 27.3	+0.3
	baz=84						
U27A	Thompson Grove	83.95	27	⇓P	P	19 04 27.9	-0.1
	baz=84						
V25A	Rancho No Teng	84.03	29	⇑P	P	19 04 28.9	+0.4
	baz=84,SNR=6.9						
113A	Mohawk Valley,	84.06	37	⇓P	P	19 04 29.4	+0.9
	baz=84						
X20A	Quemado	84.12	32	⇑P	P	19 04 30.1	+1.0
	baz=84,SNR=6.2						
U28A	Mallet	84.14	27	⇓P	P	19 04 28.8	-0.2
	baz=84						
W23A	Werner Place,	84.23	30	⇑P	P	19 04 30.4	+0.8
	baz=84,SNR=5.6						
V26A	Tequesquite Ra	84.29	28	⇑P	P	19 04 29.7	-0.1
	baz=84,SNR=8.8						
ANMO	Albuquerque	84.35	30	P	P	19 04 30.6	+0.4
ANMO	Albuquerque	84.35	30	P	P	19 04 30.6	+0.4
	comp=Z,11nm,1.2s,baz=343,slow=5.4,SNR=4.5						
U30A	WK&E Inc. Balk	84.39	25	⇓P	P	19 04 30.9	+0.7
	baz=84						
W24A	Lazy 6 Ranch,	84.40	29	⇑P	P	19 04 30.8	+0.4
	baz=84						
X21A	Alamocita Cree	84.43	31	⇓P	P	19 04 31.7	+1.0
	baz=84,SNR=6.2						
W25A	X Bar L Ranch,	84.65	29	⇑P	P	19 04 31.8	+0.2
	baz=84,SNR=5.6						
LAZ	Ladron	84.66	31	eP	P	19 04 32.9	+1.2
	comp=Z,1.5nm,0.8s						
Y20A	Horse Springs,	84.75	32	⇑P	P	19 04 32.9	+0.6
	baz=84						
V29A	Stinnett	84.80	26	⇑P	P	19 04 32.6	+0.3
	baz=84						
Y21A	Point of Rocks	84.87	32	⇑P	P	19 04 34.2	+1.3
	baz=85,SNR=6.6						
LPM	Los Pinos Moun	84.89	31	eP	P	19 04 33.6	+0.7
	comp=Z,1.7nm,0.7s						
W26A	Owens Ranch, T	84.96	28	⇑P	P	19 04 33.7	+0.6
	baz=85						
X24A	Lazy VL Ranch,	85.00	30	⇓P	P	19 04 34.4	+1.0
	baz=85						
BNM	Barren Site	85.04	31	eP	P	19 04 35.1	+1.4
Y22A	Socorro	85.14	31	⇑P	P	19 04 35.2	+1.1
	baz=85,SNR=6.0						
W27A	Bowe Ranch, En	85.17	28	⇑P	P	19 04 34.5	+0.3
	baz=85,SNR=5.9						
W28A	Vega	85.21	27	⇑P	P	19 04 34.9	+0.5
	baz=85						
X25A	Clemmons Ranch	85.25	29	⇑P	P	19 04 35.2	+0.6
	baz=85						
V31A	Spring Creek L	85.31	25	⇓P	P	19 04 35.7	+0.9
	baz=85						
Y23A	Lovelace Mesa,	85.41	30	⇑P	P	19 04 36.2	+0.7
	baz=85						
Z20A	Nine Sixteen R	85.42	33	⇓P	P	19 04 36.2	+0.6
	baz=85						
X26A	CR and CF Fran	85.46	28	⇑P	P	19 04 36.1	+0.5
	baz=85						
W29A	Amraillo	85.48	26	⇑P	P	19 04 36.1	+0.4
	baz=85						
Z21A	St. Cloud Mine	85.52	32	⇑P	P	19 04 36.5	+0.4
	baz=85						
Y24A	Capitan	85.59	30	⇓P	P	19 04 36.9	+0.4
	baz=85						
AMTX	Amarillo	85.70	27	eP	P	19 04 37.6	+0.8
	comp=Z,14nm,1.0s						
Z22A	Elephant Butte	85.78	31	⇑P	P	19 04 37.8	+0.5
	baz=86						
Y25A	Mesa, Roswell	85.81	29	⇑P	P	19 04 37.9	+0.5
	baz=86,SNR=10.0						
W31A	Holland Ranch,	85.84	25	⇑P	P	19 04 38.0	+0.5
	baz=86						
X28A	Dimmitt	85.91	27	⇑P	P	19 04 38.4	+0.4
	baz=86						
Y26A	Elida	86.04	29	⇓P	P	19 04 39.2	+0.6
	baz=86						
TUL1	Tulsa	86.09	22	⇑P	P	19 04 38.7	+0.1
	baz=86						
X29A	Tulia	86.11	27	⇑P	P	19 04 39.3	+0.5
	baz=86						
Z24A	Sheeppen Canyo	86.17	30	⇓P	P	19 04 40.3	+1.0
	baz=86,SNR=5.6						
121A	Cookes Peak, D	86.21	32	⇑P	P	19 04 40.3	+0.8
	baz=86						
Y27A	Causey	86.26	28	⇑P	P	19 04 40.0	+0.3
	baz=86						
MSTX	Muleshoe	86.28	28	⇑P	P	19 04 40.1	+0.4
	baz=86						
Z25A	Roswell	86.40	29	⇓P	P	19 04 41.5	+1.1
	baz=86						
Y28A	McKinney Farm,	86.48	27	⇓P	P	19 04 41.6	+0.9
	baz=86						
WMOK	Wichita Mounta	86.55	24	eP	P	19 04 41.7	+0.8
WMOK				pmax	pmax		
	comp=Z,23nm,1.2s						
WMOK	Wichita Mounta	86.55	24	eP	P	19 04 41.7	+0.8
	comp=Z,23nm,1.2s						
220A	Playas Peak, P	86.56	33	⇑P	P	19 04 42.0	+0.8
	baz=86						
Z26A	Caprock	86.61	29	⇑P	P	19 04 41.8	+0.5
	baz=86						
Y29A	Porterfield Fa	86.67	27	⇑P	P	19 04 41.9	+0.2
	baz=86,SNR=5.2						
124A	Stringfield Ra	86.74	30	⇑P	P	19 04 42.7	+0.6
	baz=86,SNR=6.7						
Z27A	Tatum	86.78	28	⇑P	P	19 04 42.2	0.0
	baz=86,SNR=7.1						
Y30A	Stafford Cattl	86.86	26	⇑P	P	19 04 42.5	+0.1
	baz=87						
Y31A	Rekieta Farm,	86.93	26	⇑P	P	19 04 43.0	+0.2
	baz=87						
125A	Gardner Draw,	87.00	30	⇓P	P	19 04 43.7	+0.4
	baz=87						
Z28A	Tucker Farm, M	87.03	28	⇑P	P	19 04 43.6	+0.2
	baz=87						
Y32A	R-V Farms, Ver	87.09	25	⇓P	P	19 04 43.9	+0.3
	baz=87						
126A	Clayton Basin,	87.19	29	⇑P	P	19 04 44.6	+0.4
	baz=87						
Z29A	Hungry Hill Ra	87.23	27	⇓P	P	19 04 44.7	+0.3
	baz=87						
224A	Cornudas Mount	87.30	31	⇑P	P	19 04 45.2	+0.4
	baz=87						
127A	Arkansas Junct	87.35	29	⇓P	P	19 04 45.4	+0.4
	baz=87						
Z30A	Sanderson Ranc	87.36	27	⇓P	P	19 04 45.0	+0.1
	baz=87,SNR=13						
225A	Deer Hill, Car	87.47	30	⇑P	P	19 04 45.9	+0.2
	baz=87						
Z31A	Sharp Cattle R	87.58	26	⇑P	P	19 04 46.0	0.0
	baz=87,SNR=6.0						
128A	Castleberry Fa	87.63	28	⇓P	P	19 04 46.1	-0.2
	baz=87						
226B	Tecolote Peak,	87.69	29	⇓P	P	19 04 46.5	-0.1
	baz=88						
MNTX	Cornudas Mount	87.70	31	eP	P	19 04 47.5	+1.0
	comp=Z,1.5nm,0.5s						
Z32A	Haskell	87.75	25	⇑P	P	19 04 46.9	+0.2
	baz=88,SNR=8.2						
324A	Moseley Ranch,	87.91	31	⇓P	P	19 04 48.5	+0.8
	baz=88						
325A	Bean Ranch, Si	88.12	30	⇓P	P	19 04 49.1	+0.3
	baz=88						
131A	Roby	88.13	26	⇑P	P	19 04 49.2	+0.6
	baz=88						
ABTX	Abilene, Hawle	88.36	26	⇑P	P	19 04 50.2	+0.5
	baz=88,SNR=5.4						
229A	Bryant Ranch,	88.43	28	⇓P	P	19 04 50.5	+0.4
	baz=88						
230A	Sterling City	88.69	27	⇑P	P	19 04 51.7	+0.4
	baz=88						
328A	Wristen Ranch,	88.72	29	⇓P	P	19 04 51.5	+0.1
	baz=88,SNR=7.6						
329A	Wagon Wheel Ra	88.84	28	⇑P	P	19 04 52.5	+0.5
	baz=89						
231A	Bronte	88.85	26	⇓P	P	19 04 52.3	+0.3
	baz=89,SNR=5.2						
426A	McDonald Obser	89.05	30	⇓P	P	19 04 53.4	+0.2
	baz=89,SNR=6.2						
427A	Hayter Ranch,	89.06	29	⇑P	P	19 04 53.2	+0.1
	baz=89						
232A	Coleman	89.06	26	⇑P	P	19 04 53.3	+0.3
	baz=89						
KMSC	Kings Mountain	89.10	10	⇑P	P	19 04 53.2	+0.1
	baz=89						
330A	Mertzon	89.13	27	⇑P	P	19 04 53.7	+0.3
	baz=89,SNR=10						
428A	Kincaid Ranch,	89.37	29	⇓P	P	19 04 55.3	+0.7
	baz=89,SNR=7.0						
331A	San Angelo	89.42	27	⇑P	P	19 04 54.9	+0.2
	baz=89						
WHTX	Lake Whitney	89.49	24	⇓P	P	19 04 55.1	+0.2
	baz=89						
332A	Millersview	89.52	26	⇑P	P	19 04 55.7	+0.5
	baz=89,SNR=7.4						
526A	Mary Lane Ranc	89.61	30	⇓P	P	19 04 55.9	+0.1
	baz=89						
527A	Woodward Ranch	89.66	30	⇓P	P	19 04 56.4	+0.4
	baz=89,SNR=6.1						
429A	Davenport Ranc	89.68	28	⇑P	P	19 04 56.1	+0.1
	baz=89						
430A	Baggett Ranch,	89.70	27	⇑P	P	19 04 56.1	0.0
	baz=90						
528A	Cox Ranch, San	89.88	29	⇓P	P	19 04 57.6	+0.6
	baz=90,SNR=6.4						
TORD	Torodi Ar. Bea	89.96	293	P	P	19 04 57.5	+0.1
TORD	Torodi Ar. Bea	89.96	293	P	P	19 04 57.5	+0.1
	comp=Z,11nm,0.8s,baz=36,slow=4.6,SNR=66						
TORD				LR	LR	19 51 41.9	
	comp=Z,115nm,18.1s,baz=160,slow=40						
431A	Sonora	89.97	27	⇑P	P	19 04 57.4	+0.1
	baz=90						
432A	Menard	89.99	26	⇓P	P	19 04 57.6	+0.2
	baz=90						
529A	Stev Forest Ra	90.07	28	⇑P	P	19 04 58.0	+0.2
	baz=90,SNR=7.1						
626A	Big Bend Ranch	90.07	30	⇑P	P	19 04 58.1	+0.2
	baz=90						
530A	J-C Ranch, Com	90.28	28	⇑P	P	19 04 59.2	+0.4
	baz=90,SNR=7.4						
JCT	Junction City	90.36	26	⇓P	P	19 04 59.2	+0.1
	baz=90						
627A	Terlingua Ranc	90.38	30	⇓P	P	19 04 59.8	+0.5
	baz=90,SNR=5.8						
TXAR	Lajitas Array	90.41	30	P	P	19 05 00.4	+0.9
TXAR	Lajitas Array	90.41	30	P	P	19 05 00.4	+0.9
	comp=Z,1.4nm,0.9s,baz=343,slow=1.3,SNR=10.0						
TXAR				LR	LR	19 51 03.5	
	comp=Z,77nm,18.4s,baz=190,slow=39						
531A	Rocksprings	90.47	27	⇑P	P	19 04 59.8	+0.1
	baz=90,SNR=5.9						
628A	Black Gap, Mar	90.49	29	⇓P	P	19 05 00.2	+0.5
	baz=90,SNR=11						
532A	Rocksprings	90.67	27	⇓P	P	19 05 00.8	+0.2
	baz=90,SNR=8.5						
STKA	Stephens Creek	90.82	154	P	P	19 04 59.2	-1.6
STKA	Stephens Creek	90.82	154	P	P	19 04 59.2	-1.6
	comp=Z,3.6nm,0.9s,baz=4.0,slow=11,SNR=3.0						
STKA				LR	LR	19 45 08.2	
	comp=Z,98nm,18.3s,baz=205,slow=35						
631A	Perdido Creek	91.18	27	⇓P	P	19 05 02.8	-0.1
	baz=91,SNR=6.3						
632A	Uvalde	91.30	27	⇓P	P	19 05 03.2	-0.2
	baz=91						
732A	Laxson Ranch,	91.99	27	⇓P	P	19 05 06.8	+0.2
	baz=92						
DBIC	Dimbokro	98.83	295	P	P	19 05 37.0	-0.9
DBIC	Dimbokro	98.83	295	P	P	19 05 37.0	-0.9
	comp=Z,4.1nm,0.9s,baz=326,slow=6.1,SNR=4.3						
DBIC				LR	LR	19 54 41.1	
	comp=Z,79nm,19.0s,baz=59,slow=38						
VNDA	Vanda	136.38	166	PKP	PKPdf	19 11 17.1	-0.6
VNDA	Vanda	136.38	166	PKP	PKPdf	19 11 17.1	-0.6
	comp=Z,0.4nm,0.6s,baz=325,slow=4.5,SNR=3.4						
SIV	San Ignacio	140.14	348	PKP	PKPdf	19 11 26.4	-0.1
SIV	San Ignacio	140.14	348	PKP	PKPdf	19 11 26.4	-0.1
	comp=Z,2.7nm,1.1s,baz=315,slow=2.1,SNR=4.4						
QSPA	South Pole Qui	145.24	180	PKPbc	PKPbc	19 11 32.4	-1.5
QSPA	South Pole Qui	145.24	180	PKPbc	PKPbc	19 11 32.3	-1.5
	comp=Z,42nm,0.7s,baz=284,slow=6.6,SNR=3.2						
LVC	Limon Verde	147.18	0	PKPbc	PKPbc	19 11 41.7	+0.5
LVC	Limon Verde	147.18	0	PKPbc	PKPbc	19 11 41.7	+0.5
	comp=Z,10nm,0.8s,baz=354,slow=3.7,SNR=9.7						
SNAA	Sanae	148.57	214	PKPbc	PKPbc	19 11 42.4	-0.8
SNAA	Sanae	148.57	214	PKPbc	PKPbc	19 11 42.4	-0.8
	comp=Z,3.6nm,0.9s,baz=135,slow=3.4,SNR=33						
CPUP	Villa Florida	149.70	339	PKPbc	PKPbc	19 11 46.0	-1.3
CPUP	Villa Florida	149.70	339	PKPbc	PKPbc	19 11 46.0	-1.3
	comp=Z,6.9nm,0.8s,baz=20,slow=2.2,SNR=3.8						

BER 10 18:53:29.4±4.3**,79°.13N×5°.68E,h0**km±71km**,MD2.0,**
ML1.2,ML1.6(NAO)**,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBS	Kingsbay	1.22	97	eP	Pg	18 53 50.6	-2.0
KBS				eS	Sb	18 54 09.8	+0.4
KBS				AML	AML	18 54 17.4	
	comp=Z,6.5nm,0.3s						
SPA0	Spitsbergen Ar	2.32	109	Pn	Pn	18 54 07.2	-1.5
	baz=307,slow=8.6						
SPA0				Lg	Lg	18 54 38.4	
	baz=307,slow=37						

HEL 10 19:02:30.6±0.4**,67°.75N×33°.84E,h0**km**,ML1.4,**
Explosion,Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRF	Varrio	1.61	272	eP	Pn	19 02 58.8	-1.5
VRF				eS	Sn	19 03 19.8	-2.0
VRF				MSG		19 03 23.4	
	comp=Z,2.2nm,0.1s						
MSF	Maaselka	2.65	228	eP	Pn	19 03 14.8	+0.3
MSF				eS	Sn	19 03 46.4	-0.8
SGF	Sodankyl	2.82	267	eP	Pn	19 03 17.2	+0.4
SGF				eS	Sn	19 03 51.2	-0.3
KEV	Kevo	3.20	312	eP	Pn	19 03 22.3	+0.2
KEV				eS	Sn	19 04 00.2	-0.7
KEV				MSG		19 04 04.8	
	comp=Z,0.9nm,0.2s						
RNF	Rovaniemi	3.26	253	eP	Pn	19 03 22.1	-0.7
RNF				eS	Sn	19 04 01.5	-0.8
ARA0	ARCESS Array S	3.54	304	eP	Pn	19 03 26.3	-0.4
ARA0				eS	Sn	19 04 08.4	-0.9

*ISCJB **10** 19:02:40.0±0.7, 42°.79S±0°.09×72°.5W±0°.2, h10km, mb4.1/8, Error ellipse: s-maj=20.2km s-min=11.2km az=22.4*
*IDC **10** 19:02:40.1±0.8, 42°.79S×72°.50W, h0km, mb3.9/9, mb1 4.1/10, mb1mx4.0/21, mbtmp4.0/10, ML3.9/1, Error ellipse: s-maj=31.6km s-min=13.0km az=113.0*
*NEIC **10** 19:02:41.3±0.5, 42°.85S×72°.55W, h10km, mb4.7/4, Error ellipse: s-maj=19.7km s-min=11.1km az=112.0*
ISC 10 19:02:41.4±0.7**,42°.78S**±0°.09×**72°.5W**±0°.1**,h10**km**,n32,**
σ**0s.95**/30**,mb4.2**/8**,Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	Paso Flores	2.51	36	Pn	Pn	19 03 23.6	+1.2
PLCA				Pg	Pb	19 03 26.7	0.0
PLCA				Lg	Lg	19 04 01.8	
PLCA	Paso Flores	2.51	36	Pn	Pn	19 03 23.6	+1.2
	6.1nm,0.3s,baz=217,slow=17,SNR=122						
PLCA				Pg	Pb	19 03 26.7	0.0
	6.1nm,0.3s,baz=218,slow=16,SNR=81						
PLCA				Lg	Lg	19 04 01.8	
	34nm,0.3s,baz=106,slow=19,SNR=18						
TRQA	Tornquist	9.31	63	eP	Pn	19 04 57.5	+1.9
LVC	Limon Verde	20.33	10	eP	Pn	19 07 20.1	0.0
	4.5nm,0.7s						
LVC	Limon Verde	20.33	10	P	P	19 07 18.4	+0.4
	3.7nm,0.8s,baz=178,slow=9.3,SNR=3.8						
CPUP	Villa Florida	20.57	42	P	Pn	19 07 22.1	-0.4
CPUP	Villa Florida	20.57	42	P	Pn	19 07 22.1	-0.4
	0.9nm,0.6s,baz=222,slow=9.8,SNR=3.7						
SIV	San Ignacio	28.44	24	P	P	19 08 35.1	-1.3
SIV	San Ignacio	28.44	24	P	P	19 08 35.1	-1.3
	0.9nm,0.8s,baz=224,slow=11,SNR=4.2						
SNAA	Sanae	43.71	155	eP	P	19 10 45.3	-0.9
	15nm,1.5s						
SNAA	Sanae	43.71	155	P	P	19 10 46.2	0.0
	2.5nm,1.3s,baz=254,slow=7.6,SNR=4.7						
QSPA	South Pole Qui	47.47	180	eP	P	19 11 16.1	0.0
	14nm,1.2s						
QSPA	South Pole Qui	47.47	180	P	P	19 11 16.8	+0.6
	9.6nm,1.2s,baz=151,slow=5.3,SNR=9.8						
VNDA	Vanda	55.45	192	P	P	19 12 16.8	+1.3
VNDA	Vanda	55.45	192	P	P	19 12 16.8	+1.3
	4.2nm,1.2s,baz=132,slow=5.3,SNR=5.0						
LRAL	Lakeview Retre	76.61	348	eP	P	19 14 32.1	+0.3
	4.4nm,0.3s						
TXAR	Lajitas Array	77.27	332	P	P	19 14 36.9	+1.0
TXAR	Lajitas Array	77.27	332	P	P	19 14 36.9	+1.0
	0.2nm,0.3s,baz=155,slow=7.5,SNR=3.8						
TORD	Torodi Ar. Bea	87.58	70	P	P	19 15 28.5	-1.4
TORD	Torodi Ar. Bea	87.58	70	P	P	19 15 28.5	-1.4
	0.8nm,0.9s,baz=247,slow=5.9,SNR=3.2						
PDAR	Pinedale Array	91.44	334	P	P	19 15 47.5	-0.1
PDAR	Pinedale Array	91.44	334	P	P	19 15 47.5	-0.1
	0.9nm,0.9s,baz=153,slow=5.0,SNR=4.7						
JOF	Joensuu	133.01	37	ep	PKPdf	19 22 01.2	+5.3
	1.2nm,0.4s						
ABKAR	Akbulak array	146.81	62	ePKPdf	PKPdf	19 22 20.7	-0.5
BVAR	Borovoye Array	153.38	54	PKP	PKPdf	19 22 31.4	0.0
BVAR	Borovoye Array	153.38	54	PKP	PKPdf	19 22 31.4	0.0
	0.2nm,0.5s,baz=270,slow=0.1,SNR=3.6						
KURBB	Kurchatov Arra	158.75	58	PKP	PKPdf	19 22 37.8	-0.8
	0.1nm,0.5s,baz=266,slow=1.5,SNR=4.7						
KURK	Kurchatov	158.78	58	PKP	PKPdf	19 22 37.8	-0.8
ZALV	Zalesovo Beam	161.33	45	PKP	PKPdf	19 22 40.7	-0.7
ZALV	Zalesovo Beam	161.33	45	PKP	PKPdf	19 22 40.7	-0.7
	0.3nm,0.4s,baz=5.0,slow=3.4,SNR=3.9						
MKAR	Makanchi Array	161.69	69	PKPab	PKPab	19 23 26.5	-0.9
MKAR	Makanchi Array	161.69	69	PKPab	PKPab	19 23 26.5	-0.9
	0.5nm,0.8s,baz=255,slow=2.4,SNR=6.6						

*DDA **10** 19:07:21.5, 37°.91N×32°.00E, h7km, MD2.9*
*ISK **10** 19:07:22.1, 37°.87N×32°.09E, h5km, MD2.6*
*CSEM **10** 19:07:23.1±0.4, 37°.92N×32°.11E, h8km, MD2.6, Error*

ellipse: s-maj=9.6km s-min=6.3km az=73.0

ISC 10 19:07:22.5±1.2**,37.93N**±0.02×**32.01E**±0.04**,h5**km±11km**,**
n16,σ1.32/29**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KONT	**Konya--Tatoy**	**0.28**	**87**	*e*PG	**Pg**	**19 07 27.1**	**-0.7**
KONT				*e*SG	**Sg**	**19 07 31.0**	**-0.5**
KONT	**Konya--Tatoy**	**0.28**	**87**	*e*Pg	**Pg**	**19 07 27.1**	**-0.7**
KONT				*e*Sg	**Sg**	**19 07 31.0**	**-0.5**
LADK	**Ladik-KONYA**	**0.39**	**46**	*e*PG	**Pg**	**19 07 30.0**	**0.0**
LADK				*e*SG	**Sg**	**19 07 36.2**	**+1.2**
LADK	**Ladik-KONYA**	**0.39**	**46**	*e*Pg	**Pg**	**19 07 30.0**	**0.0**
LADK				*e*Sg	**Sg**	**19 07 36.2**	**+1.2**
KDHN	**Kadinhani**	**0.59**	**8**	*i* P	**Pg**	**19 07 34.1**	**+0.2**
KDHN				*i* S	**Sg**	**19 07 42.4**	**+0.7**
KDHN	**Kadinhani**	**0.59**	**8**	*i* P	**Pg**	**19 07 34.1**	**+0.2**
KDHN				*i* S	**Sg**	**19 07 42.4**	**+0.7**
KIZT	**Kizilcal**	**0.95**	**354**	*e*PG	**Pn**	**19 07 42.2**	**-0.4**
KIZT				*e*SG	**Sn**	**19 07 57.2**	**+0.4**
KIZT	**Kizilcal**	**0.95**	**354**	*e*Pg	**Pn**	**19 07 42.3**	**-0.4**
BOLV	**Bolvadin**	**1.15**	**314**	*i* P	**Pg**	**19 07 43.0**	**-1.5**
BOLV				*i* S	**Sn**	**19 08 02.5**	**+0.9**
BOLV	**Bolvadin**	**1.15**	**314**	*i* P	**Pg**	**19 07 43.0**	**-1.5**
BOLV				*i* S	**Sn**	**19 08 02.5**	**+0.9**
SULT	**Sultanhani-AKS**	**1.22**	**77**	*e*PN	**Pn**	**19 07 45.5**	**-0.8**
SULT	**Sultanhani-AKS**	**1.22**	**77**	*e*Pn	**Pn**	**19 07 45.5**	**-0.8**
ERMK	**Ermenek**	**1.48**	**151**	*i* P	**Pn**	**19 07 48.3**	**-1.7**
ERMK				*i* S	**Sg**	**19 08 11.8**	**+1.9**
ERMK	**Ermenek**	**1.48**	**151**	*i* P	**Pn**	**19 07 48.3**	**-1.7**
ERMK				*i* S	**Sg**	**19 08 11.8**	**+1.9**
GAZI	**Gazipasa**	**1.71**	**172**	*i* P	**Pg**	**19 07 54.4**	**-0.9**
GAZI				*i* S	**Sg**	**19 08 20.3**	**+2.8**
GAZI	**Gazipasa**	**1.71**	**172**	*i* P	**Pg**	**19 07 54.4**	**-0.9**
GAZI				*i* S	**Sg**	**19 08 20.3**	**+2.8**

*IDC **10** 19:08:06.5±0.7, 32.31N×85.22E, h0km, mb3.8/10, mb1 4.0/12, mb1mx3.8/30, mbtmp3.8/12, ML3.7/2, MS3.2/1, Ms1 3.2/1, ms1mx2.3/44, Error ellipse: s-maj=28.1km s-min=15.5km az=52.0*
*ISCJB **10** 19:08:07.5±0.5, 32.37N±0.05×85.15E±0.08, h16km, mb3.9/10, MS3.2/1, Error ellipse: s-maj=9.3km s-min=7.6km az=6.1*

ISC 10 19:08:09.5±0.7**,32.42N**±0.07×**85.22E**±0.09**,h16**km**,n19,**
σ1.22/19**,mb4.0**/10**,1D,Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**10.11**	**280**	P	Pn	19 10 38.3	+4.2
JBP	**Jabalpur**	**10.32**	**208**	⇓*e*PKP	**Pn**	**19 10 38.7**	**+1.9**
JBP				*i* x	x	19 10 40.1	
	comp=Z,14nm,0.7s						
JBP				*e*S	**Sn**	**19 12 33.1**	**+0.9**
CEP	**Cherat**	**11.25**	**281**	P	**Pn**	**19 10 49.4**	**-0.4**
CEP				S	**Sn**	**19 12 54.0**	**-1.3**
MKAR	**Makanchi Array**	**14.53**	**352**	Pn	**Pn**	**19 11 36.7**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=169,slow=11,SNR=8.1						
CMAR	**Chiang Mai Arr**	**18.60**	**135**	P	**P**	**19 12 25.4**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=327,slow=12,SNR=23						
KURBB	**Kurchatov Arra**	**18.85**	**347**	P	**Pn**	**19 12 28.4**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=165,slow=10,SNR=10						
ZALV	**Zalesovo Beam**	**21.52**	**359**	P	**P**	**19 12 57.7**	**+0.1**
	comp=Z,3.9nm,0.6s,baz=184,slow=9.3,SNR=17						
SONM	**Songino Array**	**22.24**	**40**	P	**P**	**19 13 06.4**	**+0.8**
	comp=Z,3.1nm,1.0s,baz=221,slow=9.9,SNR=11						
BVAR	**Borovoye Array**	**23.21**	**337**	P	**P**	**19 13 16.2**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=148,slow=8.5,SNR=3.1						
JNU	**Nakatsue**	**38.16**	**76**	LR	LR	19 32 14.1	
	comp=Z,35nm,18.6s,baz=340,slow=38						
AKASG	**Malin Array Be**	**44.56**	**311**	P	**P**	**19 16 20.0**	**-0.4**
	comp=Z,1.3nm,0.5s,baz=76,slow=8.0,SNR=5.3						
MLR	**Muntele Rosu**	**46.91**	**304**	P	**P**	**19 16 41.0**	**+1.7**
	comp=Z,1.2nm,0.9s,baz=127,slow=4.0,SNR=11						
ARCES	**ARCESS Array B**	**49.50**	**336**	P	**P**	**19 16 59.1**	**+0.3**
	comp=Z,1.8nm,0.9s,baz=113,slow=9.3,SNR=3.5						
NOA	**NORSAR Array B**	**54.58**	**325**	P	**P**	**19 17 36.2**	**-0.6**
	comp=Z,3.5nm,1.3s,baz=54,slow=7.6,SNR=1.9						
WRA	**Warramunga Arr**	**70.13**	**131**	P	**P**	**19 19 20.2**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=326,slow=6.6,SNR=23						
ASAR	**Alice Springs**	**72.60**	**134**	P	**P**	**19 19 35.4**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=317,slow=5.9,SNR=11						
TORD	**Torodi Ar. Bea**	**77.67**	**278**	P	**P**	**19 20 04.4**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=52,slow=4.2,SNR=5.3						
SIV	**San Ignacio**	**145.36**	**290**	PKPbc	**PKPbc**	**19 27 45.3**	**-1.8**
	comp=Z,1.0nm,0.5s,baz=100,slow=4.9,SNR=6.5						
CPUP	**Villa Florida**	**146.92**	**271**	PKPbc	**PKPbc**	**19 27 51.7**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=258,slow=2.9,SNR=4.9						

*ISCJB **10** 19:16:15.5±0.3, 51.52N±0.02×16.08E±0.02, h0km, mb3.4/6, Error ellipse: s-maj=2.3km s-min=1.7km az=5.7*
*IPEC **10** 19:16:17.0±0.9, 51.60N×16.25E, h3km±4km, ML3.1/4, Error ellipse: s-maj=4.8km s-min=3.9km az=21.0*
*IDC **10** 19:16:17.9±0.5, 51.56N×16.06E, h0km, mb3.5/6, mb1 3.6/14, mb1mx3.5/32, mbtmp3.5/14, ML3.3/7, Error ellipse: s-maj=9.7km s-min=5.5km az=103.0*
*CSEM **10** 19:16:17.0±0.2, 51.56N×16.11E, h2km, ML3.9/15, Error ellipse: s-maj=3.5km s-min=2.3km az=9.0*
*BGR **10** 19:16:18.6±0.4, 51.52N×16.10E, h1km, ML3.5/16, Error ellipse: s-maj=4.4km s-min=2.2km az=18.0*
*PRU **10** 19:16:18.2, 51.53N×16.07E, h0km*
*WAR **10** 19:16:19.2, 51.50N×16.09E*
*VIE **10** 19:16:19.5±0.4, 51.34N×16.10E, h0km, mb3.1/7, ML3.1/9, Error ellipse: s-maj=2.5km s-min=1.6km az=4.0 69 km WNW of Wroclaw Suspected Mining induced.*

ISC 10 19:16:16.5±0.5**,51.55N**±0.02×**16.11E**±0.02**,h0**km**,n128,**
σ1.38/221**,mb3.4**/6**,17C-13D,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.71**	**171**	*e*Pg	**Pb**	**19 16 31.8**	**0.0**
KSP				*e*Sg	**Sb**	**19 16 41.5**	**-0.7**
KSP	**Ksiaz**	**0.71**	**171**	*e*Pg	**Pb**	**19 16 31.7**	**-0.1**
KSP				*e*Sg	**Sb**	**19 16 41.5**	**-0.7**
KSP	**Ksiaz**	**0.71**	**171**	*e*	Sg	19 16 46.2	+6.8
KSP	**Ksiaz**	**0.71**	**171**	Pg	**Pb**	**19 16 31.8**	**0.0**
KSP				Sg	**Sb**	**19 16 41.5**	**-0.7**
UPC	**Upice**	**1.04**	**183**	*e*PG	**Pb**	**19 16 37.3**	**-0.1**
UPC				*e*SG	**Sb**	**19 16 51.1**	**-0.5**
	comp=Z,145nm,0.4s						
UPC	**Upice**	**1.04**	**183**	Pg	**Pb**	**19 16 37.3**	**-0.1**
UPC				Sg	**Sb**	**19 16 51.1**	**-0.5**
	145nm,0.4s						
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*Pg	**Pn**	**19 16 40.6**	**-0.1**
DPC				*e*Sg	**Sb**	**19 16 56.5**	**+0.1**
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG	**Pb**	**19 16 40.4**	**+0.2**
DPC				*e*SG	**Sg**	**19 16 55.5**	**+0.3**
DPC	**Dobruska-Polom**	**1.21**	**174**	Pg	**Pn**	**19 16 40.6**	**-0.1**
DPC				Sg	**Sg**	**19 16 55.5**	**+0.3**
PVCC	**Panska Ves**	**1.41**	**224**	*e*PG	**Pb**	**19 16 44.1**	**+0.4**
PVCC				*e*SG	**Sn**	**19 17 03.5**	**+0.8**
	comp=Z,517nm,0.3s						
PVCC	**Panska Ves**	**1.41**	**224**	Pg	**Pb**	**19 16 44.1**	**+0.4**
PVCC				Sg	**Sn**	**19 17 03.5**	**+0.8**
	517nm,0.3s						
BRG	**Berggiesshubel**	**1.52**	**245**	*e*Pn	**Pn**	**19 16 45.1**	**+0.1**
BRG				*e*Pg	**Pg**	**19 16 46.5**	**+0.9**
BRG				*e*Sg	**Sn**	**19 17 07.3**	**+1.9**
BRG	**Berggiesshubel**	**1.52**	**245**	Pn	**Pn**	**19 16 45.1**	**+0.1**
PRA	**Prague**	**1.82**	**216**	PG	**Pb**	**19 16 50.0**	**-0.7**
PRA				SG	**Sg**	**19 17 16.0**	**+1.0**
PRU	**Pruhonice**	**1.85**	**213**	*e*PN	**Pn**	**19 16 50.0**	**+0.5**
PRU				*e*PG	**Pg**	**19 16 52.1**	**+0.1**
PRU				*e*SG	**Sg**	**19 17 16.7**	**+0.8**
	comp=Z,122nm,0.4s						
PRU	**Pruhonice**	**1.85**	**213**	Sg	**Sg**	**19 17 16.7**	**+0.8**
	122nm,0.4s						
GKP	**Gorka Klasztor**	**1.86**	**21**	*e*Pg	Pg	19 16 57.2	+5.1
GKP				*e*Sg	**Sg**	**19 17 19.9**	**+3.7**
GKP	**Gorka Klasztor**	**1.86**	**21**	*e*Pg	Pg	19 16 57.3	+5.1
GKP				*e*Sg	**Sg**	**19 17 20.0**	**+3.7**
CLL	**Collm**	**1.96**	**264**	*e*Pn	**Pn**	**19 16 50.7**	**-0.3**
CLL				*e*Sg	**Sg**	**19 17 20.3**	**+0.9**
CLL	**Collm**	**1.96**	**264**	*i* Pn	**Pn**	**19 16 50.8**	**-0.2**
CLL				*e*Pg	**Pg**	**19 16 54.0**	**-0.1**
CLL				*i*		19 16 57.9	
CLL				*e*Sg	**Sg**	**19 17 20.0**	**+0.6**
	comp=Z,155nm,0.4s						
CLL	**Collm**	**1.96**	**264**	Pn	**Pn**	**19 16 50.7**	**-0.3**
CLL				Sg	**Sg**	**19 17 20.3**	**+0.9**
RAC	**Raciborz**	**1.97**	**137**	*e*Pg	**Pg**	**19 16 55.2**	**+0.9**
RAC				*e*Sg	**Sg**	**19 17 20.8**	**+0.9**
MORC	**Moravsky Berou**	**1.99**	**152**	*e*Pn	**Pn**	**19 16 51.5**	**0.0**
MORC				*e*Sg	**Sb**	**19 17 20.0**	**+1.0**
MORC	**Moravsky Berou**	**1.99**	**152**	⇑*i*P	**Pn**	**19 16 51.8**	**+0.3**
MORC	**Moravsky Berou**	**1.99**	**152**	S	**Sb**	**19 17 19.9**	**+1.0**
MORC	**Moravsky Berou**	**1.99**	**152**	⇑*i*P	**Pn**	**19 16 51.8**	**+0.3**
MORC				Sg	**Sb**	**19 17 20.0**	**+1.0**
OKC	**Ostrava-Krasne**	**2.15**	**142**	*e*Pn	**Pn**	**19 16 53.4**	**-0.1**
OKC				*e*Pg	**Pg**	**19 16 58.2**	**+0.6**
OKC				*e*Sg	**Sg**	**19 17 24.8**	**-0.6**
OKC	**Ostrava-Krasne**	**2.15**	**142**	*e*PN	**Pn**	**19 16 53.5**	**-0.1**
OKC				*e*PG	**Pb**	**19 16 56.9**	**+0.7**
OKC				*e*SG	**Sg**	**19 17 25.0**	**-0.4**
	comp=Z,125nm,0.5s						
OKC	**Ostrava-Krasne**	**2.15**	**142**	Pn	**Pn**	**19 16 53.5**	**-0.1**
OKC	**Ostrava-Krasne**	**2.15**	**142**	Pg	**Pg**	**19 16 58.2**	**+0.6**
OKC				Sg	**Sg**	**19 17 25.0**	**-0.4**
	comp=Z,125nm,0.5s						
VRAC	**Vranov**	**2.26**	**172**	⇑*i*P	**Pn**	**19 16 56.6**	**+1.4**
VRAC	**Vranov**	**2.26**	**172**	Pn	**Pb**	**19 16 56.9**	**-1.3**
	comp=Z,6.1nm,0.3s,baz=343,slow=13,SNR=27						
VRAC				Pg	**Pg**	**19 17 00.7**	**+0.8**
	comp=Z,10.0nm,0.3s,baz=349,slow=16,SNR=25						
VRAC				Lg	Lg	19 17 29.6	
	comp=Z,22nm,0.3s,baz=93,slow=23,SNR=11						
VRAC	**Vranov**	**2.26**	**172**	*e*Pn	**Pn**	**19 16 55.7**	**+0.5**
	baz=355						
VRAC	**Vranov**	**2.26**	**172**	⇑*i*P	**Pn**	**19 16 56.6**	**+1.4**
VRAC				S	**Sb**	**19 17 27.1**	**+0.4**
VRAC				*e*Sg	**Sg**	**19 17 29.5**	**+0.4**
	comp=Z,112nm,0.5s,baz=355						
TREC	**Trest**	**2.29**	**190**	*e*PN	**Pn**	**19 16 56.7**	**+1.2**
TREC				*e*PG	**Pb**	**19 16 59.6**	**+0.9**
TREC				*e*SG	**Sg**	**19 17 30.2**	**+0.2**
	comp=Z,79nm,0.3s						
TREC	**Trest**	**2.29**	**190**	Pn	**Pn**	**19 16 56.7**	**+1.2**
TREC	**Trest**	**2.29**	**190**	Pg	**Pb**	**19 16 59.6**	**+0.9**
TREC				Sg	**Sg**	**19 17 30.2**	**+0.2**
	comp=Z,79nm,0.3s						
KRUC	**Moravsky**	**2.49**	**176**	*e*Pn	**Pn**	**19 16 59.5**	**+1.2**
	baz=358						
KRUC				*e*Sg	**Sg**	**19 17 36.5**	**-0.1**
	comp=Z,48nm,0.3s,baz=358						
TANN	**Tannenbergstha**	**2.57**	**245**	*e*Pn	**Pn**	**19 17 00.2**	**+0.8**
TANN				*e*Pg	**Pg**	**19 17 06.5**	**+0.8**
TANN				*e*Sg	**Sg**	**19 17 39.3**	**+0.3**
TANN	**Tannenbergstha**	**2.57**	**245**	Pn	**Pn**	**19 17 00.2**	**+0.8**
WERD	**Werda**	**2.64**	**247**	*e*Pn	**Pn**	**19 17 01.1**	**+0.7**
WERD				*e*Pg	**Pg**	**19 17 07.7**	**+0.5**
WERD				*e*Sg	**Sg**	**19 17 41.3**	**-0.1**
WERD	**Werda**	**2.64**	**247**	Pn	**Pn**	**19 17 01.1**	**+0.7**
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN	**Pn**	**19 17 01.6**	**+0.9**
NKC				*e*PG	**Pg**	**19 17 07.2**	**-0.4**
NKC				*e*SG	**Sg**	**19 17 43.9**	**+1.8**
	comp=Z,241nm,0.5s						
NKC	**Novy Kostel**	**2.67**	**242**	Pn	**Pn**	**19 17 01.6**	**+0.9**
NKC				Sg	**Sg**	**19 17 43.9**	**+1.8**
	comp=Z,241nm,0.5s						
OJC	**Ojcow**	**2.69**	**118**	*e*Pn	**Pn**	**19 16 59.9**	**-1.1**
OJC				*e*Pg	**Pg**	**19 17 08.3**	**+0.3**
OJC				*e*Sg	**Sg**	**19 17 43.8**	**+1.0**
OJC	**Ojcow**	**2.69**	**118**	*e*Pn	**Pn**	**19 16 59.9**	**-1.1**
OJC	**Ojcow**	**2.69**	**118**	*e*Pg	**Pg**	**19 17 08.3**	**+0.3**
OJC				Sg	**Sg**	**19 17 44.4**	**+1.6**
JAVC	**Velka Javorina**	**2.87**	**159**	*e*Sg	**Sg**	**19 17 51.3**	**+2.6**
	comp=Z,140nm,1.1s						
KHC	**Kasperske Hory**	**2.91**	**215**	*e*PN	**Pn**	**19 17 04.6**	**+0.5**
KHC				*e*PG	**Pb**	**19 17 10.9**	**+1.6**
KHC				*e*SN	**Sn**	**19 17 39.7**	**-0.1**
KHC				*e*SG	**Sg**	**19 17 49.7**	**-0.3**
	comp=Z,52nm,0.4s						
KHC	**Kasperske Hory**	**2.91**	**215**	Pn	**Pn**	**19 17 04.6**	**+0.5**
MOX	**Moxa**	**2.97**	**254**	*e*Sg	**Sg**	**19 17 52.8**	**+0.8**
MOX	**Moxa**	**2.97**	**254**	Sg	**Sg**	**19 17 52.8**	**+0.8**
MANZ	**Manzenberg**	**2.98**	**240**	*e*Pn	**Pn**	**19 17 06.2**	**+1.1**
MANZ				*e*Pg	**Pg**	**19 17 14.4**	**+0.8**
MANZ				*e*Sg	**Sg**	**19 17 52.6**	**+0.3**
MANZ	**Manzenberg**	**2.98**	**240**	Pn	**Pn**	**19 17 06.2**	**+1.1**
ROTZ	**Rotzenmuhle**	**3.06**	**236**	*e*Pn	**Pn**	**19 17 07.0**	**+0.9**
ROTZ				*e*Sg	**Sg**	**19 17 54.8**	**+0.1**
ROTZ	**Rotzenmuhle**	**3.06**	**236**	Pn	**Pn**	**19 17 07.0**	**+0.9**
ROTZ				Sg	**Sg**	**19 17 54.8**	**+0.1**
GEC2	**GERESS Array S**	**3.12**	**211**	*e*Pn	**Pn**	**19 17 08.6**	**+1.6**
GEC2				*e*Sg	**Sg**	**19 17 55.4**	**-1.1**
GEC2	**GERESS Array S**	**3.12**	**211**	Pn	**Pn**	**19 17 08.6**	**+1.6**
GEC2				Sg	**Sg**	**19 17 55.4**	**-1.1**
GERES	**GERESS Array B**	**3.12**	**211**	Pn	**Pn**	**19 17 07.8**	**+0.8**
	comp=Z,5.7nm,0.3s,baz=29,slow=13,SNR=119						
GERES				Pg	**Pg**	**19 17 16.1**	**-0.1**
	comp=Z,12nm,0.3s,baz=29,slow=15,SNR=42						
GERES				Lg	Lg	19 17 56.1	
	comp=Z,16nm,0.3s,baz=34,slow=26,SNR=15						
SMOL	**Smolenice**	**3.15**	**164**	*e*PG	**Pg**	**19 17 17.5**	**+0.6**
SMOL				*e*SN	Sn	19 17 32.6	-13
SMOL				*e*SG	**Sg**	**19 17 57.7**	**0.0**
SMOL	**Smolenice**	**3.15**	**164**	*e*Pg	**Pg**	**19 17 17.5**	**+0.6**
SMOL				*e*Sg	**Sg**	**19 17 57.7**	**0.0**
WET	**Wettzell**	**3.17**	**222**	*e*Pn	**Pn**	**19 17 08.9**	**+1.2**
WET				*e*Sg	**Sg**	**19 17 57.0**	**-1.4**
WET	**Wettzell**	**3.17**	**222**	Pn	**Pn**	**19 17 08.9**	**+1.2**
WET				Sg	**Sg**	**19 17 57.0**	**-1.4**
ZST	**Bratislava**	**3.41**	**169**	*e*PG	**Pb**	**19 17 19.8**	**+2.0**
ZST				*e*SN	Sn	19 17 36.6	-16
ZST				*e*SG	**Sg**	**19 18 05.4**	**-0.8**
ZST	**Bratislava**	**3.41**	**169**	*e*Pg	**Pb**	**19 17 19.8**	**+2.0**
ZST				*e*Sg	**Sg**	**19 18 05.4**	**-0.8**
NIE	**Niedzica**	**3.43**	**127**	*e*P	**Pg**	**19 17 21.6**	**-0.6**
NIE				*e*S	**Sg**	**19 18 05.7**	**-0.8**
VYHS	**Vyhne**	**3.52**	**149**	*e*PN	**Pn**	**19 17 12.9**	**+0.4**
VYHS				*e*PG	**Pg**	**19 17 26.4**	**+2.4**
VYHS				*e*SG	**Sg**	**19 18 12.6**	**+2.9**
VYHS	**Vyhne**	**3.52**	**149**	*e*Pn	**Pn**	**19 17 12.9**	**+0.4**
CLZ	**Clausthal**	**3.58**	**277**	*e*Pn	**Pn**	**19 17 14.8**	**+1.4**
CLZ				*e*Pg	**Pg**	**19 17 24.9**	**-0.2**
CLZ				*e*Sg	**Sg**	**19 18 11.0**	**-0.5**
CLZ	**Clausthal**	**3.58**	**277**	Pn	**Pn**	**19 17 14.8**	**+1.4**
GRA1	**Grafenberg Arr**	**3.62**	**241**	Pn	**Pn**	**19 17 15.0**	**+1.1**
GRA1	**Grafenberg Arr**	**3.62**	**241**	Pg	**Pg**	**19 17 27.8**	**+1.9**
GRA1				Sg	**Sg**	**19 18 14.4**	**+1.5**
GRF	**Grafenberg Arr**	**3.62**	**241**	*e*Pn	**Pn**	**19 17 15.0**	**+1.1**
GRF				*e*Pg	**Pg**	**19 17 27.8**	**+1.9**
GRF				*e*Sg	**Sg**	**19 18 14.4**	**+1.5**
CONA	**Conrad Observa**	**3.62**	**183**	⇓*i*Pn	**Pn**	**19 17 14.7**	**+0.7**
	SNR=27						
CONA				⇑*i*Pg	**Pg**	**19 17 25.6**	**-0.4**
CONA				⇓*i*Sg	**Sg**	**19 18 12.6**	**-0.3**
	comp=Z,65nm,0.5s						
CONA	**Conrad Observa**	**3.62**	**183**	Pn	**Pn**	**19 17 14.7**	**+0.7**
	SNR=27						
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P	**Pn**	**19 17 13.6**	**-0.5**
BSD				*i* S	**Sn**	**19 17 56.6**	**-1.2**
BSD	**Bornholm Skovb**	**3.65**	**349**	*i* P	**Pn**	**19 17 13.6**	**-0.5**
BSD				*i* S	**Sn**	**19 17 56.6**	**-1.2**
MOA	**Molln**	**3.89**	**199**	⇑*i*Pn	**Pn**	**19 17 18.7**	**+1.2**
	SNR=85						
MOA				⇑*i*Sn	**Sn**	**19 18 02.8**	**-1.1**
MOA				⇑*i*Sg	**Sg**	**19 18 21.7**	**+0.3**
	comp=Z,105nm,0.9s						
MOA	**Molln**	**3.89**	**199**	Pn	**Pn**	**19 17 18.7**	**+1.2**
	SNR=85						
MOA				Sn	**Sn**	**19 18 02.8**	**-1.1**
MOA				Sg	**Sg**	**19 18 21.7**	**+0.3**
	comp=Z,105nm,0.9s						
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*PN	**Pn**	**19 17 18.5**	**+0.7**
STHS				*e*PG	**Pg**	**19 17 34.4**	**+3.0**
STHS				*e*SG	**Sg**	**19 18 27.7**	**+5.6**
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*Pn	**Pn**	**19 17 18.5**	**+0.7**
KECS	**Kecovo**	**4.17**	**136**	*e*PN	**Pn**	**19 17 20.3**	**-1.0**
KECS				*e*PG	**Pg**	**19 17 37.7**	**+1.4**
KECS				*e*SG	**Sg**	**19 18 35.0**	**+4.7**
KECS	**Kecovo**	**4.17**	**136**	*e*Pn	**Pn**	**19 17 20.3**	**-1.0**
ARSA	**Arzberg**	**4.32**	**185**	⇑*i*Pn	**Pn**	**19 17 23.7**	**+0.3**
ARSA				⇓*i*Sg	**Sg**	**19 18 34.8**	**-0.4**
	comp=Z,102nm,0.9s						
ARSA	**Arzberg**	**4.32**	**185**	Pn	**Pn**	**19 17 23.7**	**+0.3**
CRVS	**Cervenica-Dubn**	**4.34**	**126**	*e*PN	**Pn**	**19 17 20.7**	**-3.0**
CRVS				*e*PG	**Pg**	**19 17 39.7**	**+0.1**
CRVS				*e*SG	**Sg**	**19 18 33.4**	**-2.4**
CRVS	**Cervenica-Dubn**	**4.34**	**126**	*e*Pn	**Pn**	**19 17 20.7**	**-3.0**
PSZ	**Piszkesteto**	**4.38**	**144**	⇑*i*P	**Pn**	**19 17 24.4**	**0.0**
PSZ	**Piszkesteto**	**4.38**	**144**	⇑*i*P	**Pn**	**19 17 24.4**	**0.0**
KOLS	**Kolonicke sedl**	**4.74**	**121**	*e*PN	**Pn**	**19 17 29.5**	**+0.3**
KOLS				*e*PG	Pg	19 17 52.5	+5.2
KOLS				*e*SG	**Sg**	**19 18 51.1**	**+2.4**
KOLS	**Kolonicke sedl**	**4.74**	**121**	*e*Pn	**Pn**	**19 17 29.5**	**+0.3**
KBA	**Koelnbreinsper**	**4.82**	**203**	⇑*i*Pn	**Pn**	**19 17 32.1**	**+1.6**
	SNR=30						
KBA				⇑*i*Sg	**Sg**	**19 18 52.5**	**+1.1**
	comp=Z,20nm,0.4s						
KBA	**Koelnbreinsper**	**4.82**	**203**	Pn	**Pn**	**19 17 32.1**	**+1.6**
	SNR=30						
KBA				Sg	**Sg**	**19 18 52.5**	**+1.1**
	comp=Z,20nm,0.4s						
WATA	**Walderalm**	**5.15**	**217**	⇓*i*Pn	**Pn**	**19 17 35.6**	**+0.7**
WATA				⇓*i*Sg	**Sg**	**19 19 05.4**	**+3.6**
	comp=Z,27nm,0.6s						
WATA	**Walderalm**	**5.15**	**217**	Pn	**Pn**	**19 17 35.6**	**+0.7**
WATA				Sg	**Sg**	**19 19 05.4**	**+3.6**
	comp=Z,27nm,0.6s						
WTTA	**Wattenberg**	**5.19**	**216**	⇓*i*Pn	**Pn**	**19 17 35.6**	**+0.1**
WTTA				⇓*i*Sg	**Sg**	**19 19 05.8**	**+2.8**
	comp=Z,21nm,0.5s						
WTTA	**Wattenberg**	**5.19**	**216**	Pn	**Pn**	**19 17 35.6**	**+0.1**
WTTA				Sg	**Sg**	**19 19 05.8**	**+2.8**
	comp=Z,21nm,0.5s						
MOTA	**Moosalm**	**5.32**	**220**	⇓*i*Pn	**Pn**	**19 17 37.8**	**+0.5**
MOTA				⇓*i*Sg	**Sg**	**19 19 09.9**	**+2.5**
	comp=Z,16nm,0.5s						
MOTA	**Moosalm**	**5.32**	**220**	Pn	**Pn**	**19 17 37.8**	**+0.5**
MOTA				Sg	**Sg**	**19 19 09.9**	**+2.5**
	comp=Z,16nm,0.5s						
TRPA	**Tarpa**	**5.38**	**127**	⇑*i*P	**Pn**	**19 17 37.9**	**-0.1**
TRPA	**Tarpa**	**5.38**	**127**	⇑*i*P	**Pn**	**19 17 37.9**	**-0.1**
PKSM	**Moragy**	**5.59**	**162**	⇓*i*P	**Pn**	**19 17 42.8**	**+1.9**
PKSM	**Moragy**	**5.59**	**162**	⇓*i*P	**Pn**	**19 17 42.8**	**+1.9**
VOY	**Vojsko**	**5.71**	**196**	*e*Pn	**Pg**	**19 18 05.9**	**0.0**
VOY				*e*Sn	**Sg**	**19 19 24.0**	**+4.2**
DAVOX	**Davos/Dischmat**	**6.28**	**223**	Pn	**Pn**	**19 17 52.1**	**+1.6**
	comp=Z,0.8nm,0.3s,baz=22,slow=16,SNR=6.5						
DAVOX				Lg	Lg	19 19 36.9	
	comp=Z,1.3nm,0.3s,baz=207,slow=21,SNR=4.7						
DRGR		**6.43**	**135**	⇑*i*P	**Pn**	**19 17 54.1**	**+1.6**
DRGR		**6.43**	**135**	⇑*i*P	**Pn**	**19 17 54.1**	**+1.6**
MEM	**Membach**	**6.44**	**266**	PN	**Pn**	**19 17 52.9**	**+0.4**
WLF	**Walferdange**	**6.61**	**257**	PN	**Pn**	**19 17 55.9**	**+1.0**
BCLA	**Clavier**	**6.92**	**265**	PN	**Pn**	**19 18 00.1**	**+1.0**
BURAR	**Bucovina Array**	**7.11**	**120**	⇓*i*P	**Pn**	**19 18 03.3**	**+1.5**
BURAR	**Bucovina Array**	**7.11**	**120**	⇓*i*P	**Pn**	**19 18 03.3**	**+1.5**
DOU	**Dourbes**	**7.44**	**263**	PN	**Pn**	**19 18 08.0**	**+1.7**
AKASG	**Malin Array Be**	**8.30**	**91**	Pn	**Pn**	**19 18 16.7**	**-1.3**
	comp=Z,1.7nm,0.3s,baz=281,slow=12,SNR=10						
AKASG				Sn	**Sn**	**19 19 49.2**	**-3.1**
	comp=Z,1.0nm,0.3s,baz=274,slow=22,SNR=3.1						
HFS	**Hagfors**	**8.71**	**352**	Pn	**Pn**	**19 18 21.7**	**-2.0**
	comp=Z,0.1nm,0.3s,baz=168,slow=14,SNR=3.3						
HFS				Sn	**Sn**	**19 20 00.1**	**-2.5**
	comp=Z,0.2nm,0.3s,baz=166,slow=20,SNR=3.2						
NOA	**NORSAR Array B**	**9.89**	**346**	Pn	**Pn**	**19 18 38.8**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=158,slow=11,SNR=2.6						
NOA				Lg	Lg	19 21 31.4	
	comp=Z,0.2nm,0.3s,baz=240,slow=15,SNR=3.6						
FINES	**FINESS Array B**	**11.33**	**25**	Pn	**Pn**	**19 18 57.5**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=205,slow=8.4,SNR=6.1						
FINES				Sn	Sn	19 20 56.5	-10
	comp=Z,0.3nm,0.3s,baz=229,slow=17,SNR=5.3						
KAF	**Kangasniemi**	**11.95**	**24**	*e*p	**Pn**	**19 19 06.3**	**-1.7**
	comp=Z,2.3nm,0.8s						
KAF	**Kangasniemi**	**11.95**	**24**	*e*P	**Pn**	**19 19 06.3**	**-1.7**
	comp=Z,2.3nm,0.8s						
EKA	**Eskdalemuir Ar**	**12.09**	**296**	Pn	Pn	19 19 06.5	-3.4
	baz=105,slow=14,SNR=4.9						
JOF	**Joensuu**	**14.01**	**30**	*e*p	**Pn**	**19 19 33.1**	**-2.9**
	comp=Z,0.8nm,0.4s						
ARCES	**ARCESS Array B**	**18.59**	**10**	Pn	**P**	**19 20 32.1**	**-2.7**
	comp=Z,0.2nm,0.3s,baz=192,slow=11,SNR=6.4						
BVAR	**Borovoye Array**	**32.57**	**66**	P	**P**	**19 22 50.2**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=286,slow=7.3,SNR=2.8						
KURBB	**Kurchatov Arra**	**38.16**	**66**	P	**P**	**19 23 37.2**	**0.0**
	comp=Z,0.4nm,0.5s,baz=299,slow=8.7,SNR=3.5						
TORD	**Torodi Ar. Bea**	**40.03**	**202**	P	**P**	**19 23 52.8**	**-0.4**
	comp=Z,0.5nm,0.9s,baz=5.7,slow=10,SNR=3.1						
MKAR	**Makanchi Array**	**42.20**	**69**	P	**P**	**19 24 12.0**	**+1.2**
	comp=Z,0.3nm,0.8s,baz=318,slow=7.8,SNR=2.6						
SONM	**Songino Array**	**54.89**	**55**	P	**P**	**19 25 48.2**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=293,slow=7.7,SNR=2.9						
YKA	**Yellowknife Ar**	**59.82**	**336**	P	**P**	**19 26 24.0**	**+1.0**
	comp=Z,0.6nm,0.6s,baz=41,slow=5.7,SNR=3.0						

IDC 10 19:16:28.0±3.6**,1.93S**×**100.89E,h0**km**,mb3.5**/6**,**
mb1 3.7/6**,mb1mx3.4**/25**,mbtmp3.5**/6**,Error ellipse:**
s-maj=196.8km s-min=20.1km az=52.0,Southern
Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**37.26**	**121**	P	P	19 23 41.9	0.0
	0.9nm,0.8s,baz=299,slow=9.1,SNR=5.8						
ASAR	**Alice Springs**	**38.58**	**127**	P	P	19 23 53.0	0.0
	0.2nm,0.4s,baz=299,slow=7.5,SNR=12						
MKAR	**Makanchi Array**	**51.21**	**344**	P	P	19 25 33.3	0.0
	0.2nm,0.3s,baz=162,slow=9.0,SNR=9.0						
KURBB	**Kurchatov Arra**	**55.74**	**343**	P	P	19 26 07.8	+1.4
	0.2nm,0.6s,baz=158,slow=7.6,SNR=3.0						
ZALV	**Zalesovo Beam**	**57.27**	**349**	P	P	19 26 16.8	-0.5
	0.2nm,0.3s,baz=146,slow=8.0,SNR=2.5						
ARCES	**ARCESS Array B**	**86.71**	**340**	P	P	19 29 11.9	-1.6
	1.2nm,1.0s,baz=98,slow=7.5,SNR=4.5						

IDC 10 19:20:14.7±4.4**,4.97S**×**152.85E,h96**km±38km**,mb3.6**/7**,**
mb1 3.8/8**,mb1mx3.5**/21**,mbtmp3.7**/8**,MS3.0**/1**,Ms1 3.0**/1**,**
ms1mx2.4/29**,Error ellipse: s-maj=27.5km**
s-min=23.4km az=162.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**7.16**	**232**	P	Pn	19 21 56.9	+0.1
	4.4nm,0.3s,baz=30,slow=9.7,SNR=14						
PMG				S	Sn	19 23 17.6	+0.9
	4.4nm,0.3s,baz=72,slow=7.3,SNR=4.2						
HNR	**Honiara**	**8.32**	**123**	LR	LR	19 24 55.3	
	comp=Z,96nm,18.5s,baz=132,slow=34						
DZM	**Mont Dzumac**	**21.50**	**143**	P	P	19 24 55.6	-0.5
	8.0nm,0.7s,baz=337,slow=16,SNR=13						
WRA	**Warramunga Arr**	**23.37**	**229**	P	P	19 25 15.2	+0.1
	5.8nm,0.5s,baz=52,slow=10.0,SNR=72						
ASAR	**Alice Springs**	**26.05**	**223**	P	P	19 25 39.8	+0.4
	1.3nm,0.4s,baz=55,slow=9.2,SNR=30						
STKA	**Stephens Creek**	**28.77**	**200**	P	P	19 26 03.6	+0.1
	1.7nm,0.7s,baz=25,slow=16,SNR=5.2						
FITZ	**Fitzroy Crossi**	**29.62**	**242**	P	P	19 26 10.9	-0.3
	1.6nm,0.3s,baz=70,slow=7.5,SNR=27						
MKAR	**Makanchi Array**	**80.49**	**319**	P	P	19 32 15.9	-0.4
	0.1nm,0.5s,baz=112,slow=6.4,SNR=3.4						
ILAR	**Eielson Array**	**82.30**	**22**	P	P	19 32 26.0	+0.6
	0.4nm,0.9s,baz=237,slow=7.3,SNR=2.8						
DIB	**Dawson Inlet,**	**84.86**	**36**	T	T	21 05 50.1	
	SNR=12						
TORD	**Torodi Ar. Bea**	**150.41**	**288**	PKPbc	PKPbc	19 39 55.6	-0.6
	0.9nm,0.8s,baz=94,slow=2.1,SNR=8.1						

TAP 10 19:30:55.3,23.88N×**121.57E,h10**km**,ML3.7,14C-4D,B,**
Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESF	**Shoufeng Towns**	**0.06**	**263**	⇓*i*P	Pg	19 30 57.5	+0.2
	baz=265						
ESF				*i* S	Sg	19 30 59.1	+0.4
	baz=265						
HWA	**Hwalien**	**0.10**	**19**	⇑*i*P	Pg	19 30 58.4	+0.6
	baz=18						
HWA				S	Sg	19 31 01.1	+1.4
	baz=18						
ESL	**Shilin**	**0.14**	**243**	⇑*i*P	Pg	19 30 58.6	+0.2
	baz=250						
ESL				S	Sg	19 31 00.8	+0.1
	baz=250						
TEGC	**Jichi Village**	**0.17**	**189**	P	Pg	19 30 59.8	+0.9
	baz=188						
TEGC				*e*S	Sg	19 31 03.5	+2.1
	baz=188						
TWD	**Chiawan**	**0.20**	**7**	⇑*i*P	Pg	19 30 59.9	+0.4
	baz=356						
TWD				*i* S	Sg	19 31 03.0	+0.6
	baz=356						

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHY	Hungye	0.43	211	P	Pg	19 31 03.8	0.0
	baz=220						
EHY				eS	Sg	19 31 09.7	+0.2
	baz=220						
TWT	Tachien	0.52	316	⇑iP	Pb	19 31 06.4	-0.4
	baz=304						
TWT				iS	Sb	19 31 13.8	-0.8
	baz=304						
ENA	Nanau	0.57	16	⇑P	Pg	19 31 06.5	+0.1
	baz=4.0						
ENA				eS	Sb	19 31 14.9	-0.7
	baz=4.0						
TWF1	Yuli	0.58	205	⇑P	Pg	19 31 06.5	0.0
	baz=217						
TWF1				eS	Sb	19 31 15.6	-0.3
	baz=217						
NNS	Nan Shan	0.59	342	⇑iP	Pg	19 31 07.2	+0.4
	baz=341						
NNS				S	Sg	19 31 14.8	0.0
	baz=341						
SMLT	Sun Moon Lake	0.61	271	⇑P	Pb	19 31 07.9	-0.3
	baz=271						
SMLT				S	Sb	19 31 16.3	-0.7
	baz=271						
TYC	Yuchr	0.65	272	P	Pb	19 31 08.3	-0.4
	baz=283						
TYC				S	Sg	19 31 17.0	+0.6
	baz=283						
YUS	Yu-Shan	0.69	236	P	Pg	19 31 09.3	+0.2
	baz=238						
YUS				eS	Sb	19 31 19.4	-0.6
	baz=238						
ENTT	Nioudou	0.76	360	⇑iP	Pg	19 31 10.3	+0.3
	baz=358						
ENTT				eS	Sb	19 31 21.1	0.0
	baz=358						
TWC	Suao	0.77	19	eP	Pg	19 31 10.4	+0.2
	baz=9.0						
TWC				eS	Sb	19 31 21.9	+0.5
	baz=9.0						
ALS	Alishan	0.79	243	⇑P	Pb	19 31 11.3	-0.2
	baz=245						
ALS				eS	Sg	19 31 21.3	-0.2
	baz=245						
CHKT	Chengkung	0.80	194	eP	Pg	19 31 10.5	-0.1
	baz=197						
CHKT				eS	Sb	19 31 23.3	+1.2
	baz=197						
WNT	Mingjian	0.81	270	P	Pn	19 31 12.6	-0.2
	baz=271						
WNT				eS	Sn	19 31 24.7	-0.2
	baz=271						
NSK	Sanguang	0.82	346	⇑iP	Pb	19 31 11.7	0.0
	baz=335						
NSK				eS	Sg	19 31 21.3	-0.6
	baz=335						
TWE	Neicheng	0.84	6	⇑P	Pb	19 31 11.9	-0.1
	baz=4.0						
TWE				eS	Sb	19 31 23.8	+0.3
	baz=4.0						
ELDTW	Lidau	0.85	217	eP	Pg	19 31 10.8	-1.0
	baz=218						
TCU	Taichung	0.86	288	⇓eP	Pn	19 31 13.7	+0.2
	baz=284						
TCU				eS	Sn	19 31 25.9	-0.3
	baz=284						
CHN5	Tsauling	0.86	251	⇓iP	Pn	19 31 13.3	-0.4
	baz=244						
CHN5				eS	Sn	19 31 26.5	+0.1
	baz=244						
TWQ1	Liyutan	0.86	303	eP	Pn	19 31 13.5	-0.1
	baz=303						
TWQ1				S	Sn	19 31 25.7	-0.7
	baz=303						
NSTT	Nanjuang	0.91	325	⇑iP	Pn	19 31 13.8	-0.4
	baz=324						
NSTT				S	Sb	19 31 25.9	+0.5
	baz=324						
NSY	Sanyi	0.91	306	P	Pn	19 31 14.8	+0.5
	baz=306						
NSY				eS	Sb	19 31 25.9	+0.3
	baz=306						
WGK	Gukeng	0.94	258	iP	Pn	19 31 14.8	+0.2
	baz=262						
WGK				S	Sn	19 31 29.0	+0.9
	baz=262						
CHN4	Tsaushan	1.04	240	P	Pn	19 31 16.0	+0.1
	baz=236						
CHN4				eS	Sn	19 31 31.2	+0.6
	baz=236						
CHN2	Minshiung	1.06	251	eP	Pn	19 31 17.3	+1.0
	baz=255						
CHN2				eS	Sn	19 31 32.4	+1.3
	baz=255						
HSN	Hsinchu	1.07	329	eP	Pn	19 31 17.7	+1.4
	baz=338						
HSN				eS	Sn	19 31 32.6	+1.3
	baz=338						
WTP	Ta-pu	1.08	234	⇑eP	Pn	19 31 16.7	+0.1
	baz=245						
WTP				eS	Sn	19 31 32.2	+0.5
	baz=245						
CHY	Chiayi	1.11	250	eP	Pg	19 31 16.8	+0.1
	baz=254						
CHY				eS	Sn	19 31 33.2	+0.8
	baz=254						
TWG	Pinlang	1.15	204	eP	Pb	19 31 16.1	-1.1
	baz=206						
TAP1	Taipei	1.16	358	eP	Pb	19 31 16.9	-0.5
	baz=355						
TAP	Taipei	1.16	357	eP	Pn	19 31 18.2	+0.6
	baz=353						
TAP				eS	Sn	19 31 33.4	-0.1
	baz=353						
TWK	Hsinying	1.16	239	eP	Pn	19 31 18.1	+0.3
	baz=243						
TWK				S	Sn	19 31 34.9	+1.2
	baz=243						
CHN1	Nanshi	1.18	234	P	Pg	19 31 18.5	+0.5
	baz=239						
CHN1				eS	Sn	19 31 35.5	+1.4
	baz=239						
WTCT	Ta-ch'eng	1.18	270	eP	Pg	19 31 19.0	+1.1
	baz=272						
WTCT				eS	Sn	19 31 35.5	+1.5
	baz=272						
TWB1	Santiao Chiao	1.19	19	eP	Pg	19 31 18.6	+0.4
	baz=7.0						
NWF	Wu-fen Shan	1.20	9	eP	Pg	19 31 18.8	+0.3
	baz=5.0						
NWF				eS	Sn	19 31 36.0	+1.2
	baz=5.0						
TWS1	Kuangyinshan	1.23	354	eP	Pg	19 31 19.6	+0.7
	baz=350						
TWS1				eS	Sn	19 31 38.3	+3.1
	baz=350						
WSF	Szhu	1.26	259	eP	Pg	19 31 20.1	+0.7
	baz=263						
WSF				eS	Sn	19 31 37.7	+1.8
	baz=263						
CHN8	Yiju	1.35	247	eP	Pg	19 31 21.4	+0.1
	baz=253						
CHN8				eS	Sg	19 31 41.0	+2.1
	baz=253						
CHN3	Shinhua	1.36	234	eP	Pg	19 31 21.7	+0.2
	baz=238						
TWY	Chenhua	1.39	1	eP	Pb	19 31 21.2	-0.2
	baz=359						
ECL	Taimali	1.40	204	eP	Pn	19 31 18.8	-2.1
	baz=188						
YOJ	Yonaguni jima	1.44	66	⇓P	Pn	19 31 20.7	-0.7
	baz=65						
TWM1	Shoushan	1.49	225	eP	Pg	19 31 24.5	+0.7
	baz=229						
SGLT	Jiouru	1.52	221	eP	Pg	19 31 24.8	+0.5
	baz=212						
EAST	Anshuo	1.63	204	eP	Pn	19 31 23.3	-0.9
	baz=193						
SCZT	Fangliau	1.73	210	eP	Pb	19 31 26.5	-0.7
	baz=200						
WDGT	Dungji	1.86	251	eP	Pn	19 31 27.5	+0.3
	baz=256						
WDGT				eS	Sb	19 31 53.4	+0.8
	baz=256						
PNG	Penghu	1.87	261	eP	Pn	19 31 27.9	+0.5
	baz=266						
PNG				eS	Sb	19 31 52.4	-0.7
	baz=266						
TWK1	Hengchun	2.05	200	eP	Pn	19 31 29.2	-0.7
	baz=204						

ISCJB **10** *19:43:55.9±0.5, 19°.02S±0°.04×69°.35W±0°.09, h115km±6km, mb4.0/4, Error ellipse: s-maj=14.2km s-min=6.2km az=3.5*
GUC **10** *19:43:55.7±0.7, 19°.06S×69°.37W, h115km±4km, ML4.2*
IDC **10** *19:43:56.9±1.8, 18°.94S×69°.36W, h114km±14km, mb3.9/5, mb1 4.0/7, mb1mx3.6/20, mbtmp3.9/7, Error ellipse: s-maj=30.5km s-min=14.2km az=104.0*
ISC 10 19:43:56.5±0.7**, 19°.01S**±0°.04×**69°.32W**±0°.08**, h109**km±7km**, n21, σ1.03**/28**, mb4.1**/4**, 5C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNMC	Minimini	0.29	245	⇓iP	Pn	19 44 12.5	0.0
MNMC				iS	Sn	19 44 25.0	+0.6
MNMC				AML	AML	19 44 25.6	
	comp=N,32µm,0.2s						
PSGC	Pisagua	0.96	232	⇑iP	Pn	19 44 17.0	-0.3
PSGC				iS	Sn	19 44 32.8	-0.2
PSGC				AML	AML	19 44 33.4	
	comp=N,7µm,0.3s						
ARCH	Arica	1.06	299	⇓iP	Pn	19 44 18.1	-0.1
ARCH				iS	Sn	19 44 34.6	0.0
ARCH				AML	AML	19 44 36.4	
	comp=N,6µm,0.6s						
HMBC	Humberstone	1.37	203	⇑iP	Pn	19 44 21.5	-0.4
HMBC				iS	Sn	19 44 40.8	-0.3
HMBC				AML	AML	19 44 43.2	
	comp=E,2µm,0.6s						
PB01	Plate Boundary	2.03	184	⇑iP	Pn	19 44 29.6	-0.3
PB01				iS	Sn	19 44 55.2	-0.3
PB01				AML	AML	19 44 56.7	
	comp=N,2µm,0.3s						
PB07	Plate Boundary	2.76	191	AML	AML	19 45 20.4	
	comp=N,786nm,0.3s						
PB09	Plate Boundary	2.77	179	⇑iP	Pn	19 44 39.8	+0.1
PB09				AML	AML	19 45 16.8	
	comp=E,2µm,0.8s						
LPAZ	La Paz	2.93	23	P	Pn	19 44 43.7	+1.5
	comp=E,29nm,0.3s,baz=211,slow=6.1,SNR=294						
LPAZ				S	Sn	19 45 16.9	-0.4
	comp=E,3.1nm,0.3s,baz=34,slow=3.9,SNR=3.6						
PB04	Plate Boundary	3.24	183	⇑iP	Pn	19 44 47.5	+1.8
PB04				AML	AML	19 45 38.5	
	comp=E,417nm,0.3s						
LVC	Limon Verde	3.61	174	eP	Pn	19 44 50.9	+0.1
LVC	Limon Verde	3.61	174	P	Pn	19 44 51.1	+0.3
	comp=E,11nm,0.3s,baz=352,slow=12,SNR=158						
LVC				S	Sn	19 45 32.1	-0.7
	comp=E,53nm,0.3s,baz=129,slow=21,SNR=31						
SIV	San Ignacio	8.42	70	P	Pn	19 45 52.9	-2.9
	comp=E,4.6nm,0.3s,baz=267,slow=11,SNR=37						
BDFB	Brasilia	20.61	84	P	P	19 48 28.2	+0.9
	comp=E,5.3nm,0.5s,baz=247,slow=7.8,SNR=8.6						
PLCA	Paso Flores	21.68	183	P	P	19 48 39.9	+1.5
	comp=E,4.9nm,0.9s,baz=1.6,slow=11,SNR=8.3						
DBIC	Dimbokro	68.42	75	P	P	19 54 48.6	+1.5
	comp=E,1.2nm,0.3s,baz=211,slow=6.5,SNR=7.7						
TORD	Torodi Ar. Bea	76.90	71	P	P	19 55 35.8	-1.5
	comp=E,1.5nm,0.4s,baz=251,slow=5.3,SNR=16						
YKA	Yellowknife Ar	88.72	341	P	P	19 56 36.6	-0.6
	comp=E,0.8nm,0.5s,baz=127,slow=4.7,SNR=8.1						
YKA				pP	pP	19 57 06.8	+1.1
	comp=E,0.9nm,0.6s,baz=135,slow=4.6,SNR=4.9						
ASAR	Alice Springs	131.91	209	PKP	PKPdf	20 02 57.0	-0.8
	comp=E,0.3nm,0.6s,baz=140,slow=1.6,SNR=6.6						
WRA	Warramunga Arr	134.87	212	PKP	PKPdf	20 03 02.9	-0.5
	comp=E,0.6nm,0.9s,baz=148,slow=1.6,SNR=4.6						
ZALV	Zalesovo Beam	139.85	24	PKP	PKPdf	20 03 11.6	+0.1
	comp=E,0.4nm,0.4s,baz=342,slow=3.2,SNR=2.7						
SONM	Songino Array	151.03	6	PKPbc	PKPbc	20 03 36.3	-0.5
	comp=E,0.4nm,0.4s,baz=313,slow=2.2,SNR=7.8						

ISK **10** *19:52:39.6, 37°.94N×32°.07E, h10km, MD2.9*
CSEM **10** *19:52:39.9±0.1, 37°.93N×32°.06E, h8km, MD2.9, Error ellipse: s-maj=2.7km s-min=2.3km az=59.0*
DDA **10** *19:52:40.2, 37°.95N×32°.09E, h7km, MD2.8*
ISC 10 19:52:40.5±1.1**, 37°.95N**±0°.03×**32°.07E**±0°.04**, h10**km±10km**, n18, σ0.51**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONT	Konya--Tatoy	0.23	91	ePG	Pg	19 52 44.7	-0.5
KONT				eSG	Sg	19 52 48.9	+0.5
KONT	Konya--Tatoy	0.23	91	ePg	Pg	19 52 44.7	-0.5
KONT				eSg	Sg	19 52 48.9	+0.5
LADK	Ladik-KONYA	0.34	43	ePG	Pg	19 52 47.0	-0.3
LADK				eSG	Sg	19 52 52.3	+0.5
LADK	Ladik-KONYA	0.34	43	ePg	Pg	19 52 47.0	-0.3
LADK				eSg	Sg	19 52 52.3	+0.5
KDHN	Kadinhani	0.57	3	iP	Pg	19 52 51.5	-0.1
KDHN				iS	Sg	19 52 59.7	+0.6
KDHN	Kadinhani	0.57	3	iP	Pg	19 52 51.5	-0.1
KDHN				iS	Sg	19 52 59.7	+0.6
KIZT	Kizilcal	0.94	351	ePG	Pg	19 52 58.2	-0.4
KIZT				eSG	Sb	19 53 11.9	+0.4
KIZT	Kizilcal	0.94	351	ePg	Pg	19 52 58.2	-0.4
KIZT				eSg	Sb	19 53 11.9	+0.4
SULT	Sultanhani-AKS	1.17	77	ePN	Pb	19 53 02.6	-0.2
SULT	Sultanhani-AKS	1.17	77	ePn	Pb	19 53 02.6	-0.2
BOLV	Bolvadin	1.17	311	iP	Pb	19 53 02.6	-0.3
BOLV				iS	Sn	19 53 19.3	+0.2
BOLV	Bolvadin	1.17	311	iP	Pb	19 53 02.6	-0.3
BOLV				iS	Sn	19 53 19.3	+0.2
ISP	Isparta	1.23	264	ePN	Pn	19 53 03.4	-0.5
ISP	Isparta	1.23	264	ePn	Pn	19 53 03.4	-0.5
ERMK	Ermenek	1.47	153	iP	Pn	19 53 06.9	-0.3
ERMK				iS	Sg	19 53 28.6	+0.9
ERMK	Ermenek	1.47	153	iP	Pn	19 53 06.9	-0.3
ERMK				iS	Sg	19 53 28.6	+0.9
GAZI	Gazipasa	1.72	173	iP	Pn	19 53 10.0	-0.5
GAZI				iS	Sg	19 53 36.9	+1.0
GAZI	Gazipasa	1.72	173	iP	Pn	19 53 10.0	-0.5

IDC 10 20:10:50.5±5.1**, 19°.41S**×**178°.04W, h0**km**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.5**/19**, mbtmp3.5**/2**, Error ellipse: s-maj=309.8km s-min=46.7km az=152.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.73	261	P	P	20 19 06.1	+0.2
	0.6nm,0.6s,baz=100,slow=8.7,SNR=5.0						
ASAR	Alice Springs	44.74	256	P	P	20 19 05.6	-0.4
	0.4nm,0.7s,baz=81,slow=8.6,SNR=7.0						
ARCES	ARCESS Array B	127.85	350	PKP	PKPdf	20 29 56.9	-0.6
	0.5nm,0.5s,baz=45,slow=1.9,SNR=7.5						
BRTR	Keskin Array B	146.08	313	PKPbc	PKPbc	20 30 32.6	-0.4
	0.4nm,0.7s,baz=67,slow=3.0,SNR=4.4						

NEIC 10 20:35:31.0, 36°.41N×**117°.85W, h4**km**, ML3.6**(PAS)**, After PAS., California-Nevada border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ISA	Isabella	0.90	214	eP	Pg	20 35 47.4	-0.9
GSC	Goldstone	1.39	142	eP	Pn	20 35 55.8	-1.5
OSI	Osito Adit	1.92	202	eP	Pb	20 36 06.0	-0.8
MWC	Mount Wilson	2.18	185	ePn	Pn	20 36 07.5	-0.9
PASC	Pasadena Art C	2.25	187	ePn	Pn	20 36 06.5	-2.6
LDFC	Landfair	2.59	120	ePn	Pn	20 36 13.3	-0.6
CMB	Columbia Colle	2.60	310	ePn	Pn	20 36 16.1	+2.2
CMB				eSn	Sn	20 36 47.7	+1.7
SAO	San Andreas Ge	2.92	278	ePn	Pn	20 36 19.1	+0.9
PFO	Pinyon Flat Ob	3.02	157	ePn	Pn	20 36 18.9	-0.9
PFO				ePg	Pb	20 36 26.4	+0.9
WCN	Washoe City	3.26	333	ePn	Pn	20 36 21.7	-1.5
CCUT	Cedar City	3.77	71	ePn	Pn	20 36 29.9	-0.3
CCUT				ePg	Pb	20 36 40.8	+2.3
BAR	Barrett	3.84	165	ePn	Pn	20 36 30.9	-0.1
BAR				ePg	Pb	20 36 40.2	+0.8
BEKR	Beckworth	3.98	331	ePg	Pb	20 36 43.3	+1.2
BMN	Battle Mountai	4.05	7	ePn	Pn	20 36 34.3	+0.3
BMN				ePg	Pg	20 36 46.4	-2.4
BMN				eSg	Sg	20 37 38.0	-3.5
ELK	Elko	4.79	24	ePn	Pn	20 36 44.3	-0.1
ELK				ePg	Pg	20 37 00.0	-3.2
ELK				eSg	Sg	20 38 00.4	-5.1
MVU	Marysvale	4.95	63	ePg	Pg	20 37 04.5	-1.8
WUAZ	Wupatki	5.33	98	ePg	Pg	20 37 09.4	-3.9
	7.9nm,0.7s						
DUG	Dugway	5.48	45	ePg	Pg	20 37 13.1	-3.1
	4.4nm,0.6s						
HVU	Hansel Valley	6.66	35	ePg	Pg	20 37 35.7	-3.1
	4.2nm,0.5s						

ISCJB **10** *20:42:50.0±1.6, 7°.36S±0°.09×156°.16E±0°.08, h58km±16km, mb4.5/25, MS3.8/7, Error ellipse: s-maj=16.4km s-min=10.6km az=139.5*
IDC **10** *20:42:52.3±2.6, 7°.43S×156°.16E, h66km±23km, mb4.1/16, mb1 4.2/19, mb1mx4.1/23, mbtmp4.1/19, MS3.7/9, Ms1 3.7/9, ms1mx3.2/30, Error ellipse: s-maj=18.1km s-min=14.3km az=108.0*
NEIC **10** *20:42:52.7±1.1, 7°.43S×156°.20E, h73km±10km, mb4.5/8, Error ellipse: s-maj=10.8km s-min=8.1km az=139.0*
ISC 10 20:42:54.4±1.5**, 7°.37S**±0°.09×**156°.07E**±0°.07**, h83**km±14km**, n92, σ0.75**/96**, mb4.4**/25**, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	4.34	118	P	Pn	20 43 54.2	-3.8
HNR				S	Sn	20 44 48.2	+0.7
HNR	Honiara	4.34	118	P	Pn	20 43 54.2	-3.8
	54nm,0.3s,baz=238,slow=8.1,SNR=7.7						
HNR				S	Sn	20 44 48.2	+0.7
	46nm,0.3s,baz=94,slow=23,SNR=3.1						
PMG	Port Moresby	9.05	256	P	Pn	20 45 02.2	-0.1
PMG	Port Moresby	9.05	256	P	Pn	20 45 02.2	-0.1
	0.8nm,0.3s,baz=109,slow=18,SNR=2.6						
PMG				LR	LR	20 48 25.3	
	comp=Z,382nm,18.3s,baz=81,slow=36						
CTA	Charters Tower	15.82	216	P	Pn	20 46 32.8	+0.4
CTA	Charters Tower	15.82	216	P	Pn	20 46 32.8	+0.4
	0.4nm,0.3s,baz=45,slow=5.7,SNR=2.9						
DZM	Mont Dzumac	17.71	147	LR	LR	20 52 45.0	
	comp=Z,102nm,19.8s,baz=248,slow=34						
KWAJ	Kwajalein Atol	19.76	36	eP	P	20 47 16.1	-1.8
	27nm,0.6s						
WRAB	Tennant Creek	24.48	237	eP	P	20 48 05.6	-0.4
	8.2nm,0.8s						
WRA	Warramunga Arr	24.50	237	P	P	20 48 05.4	-0.7
WRA				PcP	PcP	20 51 43.1	+0.2
WRA	Warramunga Arr	24.50	237	P	P	20 48 05.4	-0.7
	3.6nm,0.8s,baz=61,slow=9.8,SNR=9.8						
WRA				PcP	PcP	20 51 43.1	+0.2
	1.4nm,0.6s,baz=62,slow=2.6,SNR=7.7						
AS31	Alice Springs	26.74	230	eP	P	20 48 28.6	+2.2
ASAR	Alice Springs	26.74	230	P	P	20 48 25.1	-1.3
ASAR				PcP	PcP	20 51 48.3	+0.3
ASAR	Alice Springs	26.74	230	P	P	20 48 25.1	-1.3
	0.8nm,0.8s,baz=59,slow=10,SNR=11						
ASAR				PcP	PcP	20 51 48.3	+0.3
	1.1nm,0.7s,baz=74,slow=1.6,SNR=7.1						
ASAR				LR	LR	20 58 47.5	
	comp=Z,112nm,18.7s,baz=150,slow=36						
STKA	Stephens Creek	27.87	207	P	P	20 48 36.9	+0.5
STKA	Stephens Creek	27.87	207	P	P	20 48 36.9	+0.5
	0.9nm,0.4s,baz=34,slow=13,SNR=8.7						
STKA				LR	LR	20 59 44.6	
	comp=Z,153nm,18.1s,baz=200,slow=36						
FITZ	Fitzroy Crossi	31.49	247	P	P	20 49 07.6	-1.0
FITZ				PcP	PcP	20 52 00.7	+0.7
FITZ	Fitzroy Crossi	31.49	247	P	P	20 49 07.6	-1.0
	2.0nm,0.6s,baz=16,slow=4.6,SNR=7.2						
FITZ				PcP	PcP	20 52 00.7	+0.7
	3.3nm,0.8s,baz=124,slow=5.5,SNR=3.7						
MBWA	Marble Bar	37.68	245	eP	P	20 49 59.2	-2.8
MJAR	Matsushiro Arr	46.79	340	P	P	20 51 14.8	-0.9
MJAR				PcP	PcP	20 52 48.2	+0.5
MJAR	Matsushiro Arr	46.79	340	P	P	20 51 14.8	-0.9
	1.8nm,0.7s,baz=166,slow=7.7,SNR=6.7						
MJAR				PcP	PcP	20 52 48.2	+0.5
	2.4nm,0.7s,baz=163,slow=4.8,SNR=7.9						
JNU	Nakatsue	46.86	331	eP	P	20 51 16.5	+0.2
	6.0nm,0.7s						
KSRS	Korea Array	51.78	331	P	P	20 51 54.3	+0.6
	4.3nm,0.6s,baz=145,slow=7.1,SNR=16						
KSRS				PcP	PcP	20 53 07.0	+1.1
	1.8nm,0.8s,baz=151,slow=3.7,SNR=4.9						
KSAR	Wonju Array Be	51.78	331	P	P	20 51 54.3	+0.5
KSAR				PcP	PcP	20 53 07.0	+1.1
ASAJ	Asahikawa	52.68	348	LR	LR	21 14 30.2	
	comp=Z,72nm,19.2s,baz=177,slow=36						
PETK	Petropavlovsk-	60.27	1	P	P	20 52 54.2	+0.3
PETK	Petropavlovsk-	60.27	1	P	P	20 52 54.2	+0.3
	2.7nm,0.8s,baz=168,slow=8.6,SNR=8.1						
PETK				LR	LR	21 16 54.2	
	comp=Z,44nm,18.2s,baz=334,slow=34						
CMAR	Chiang Mai Arr	61.91	295	P	P	20 53 06.7	+0.8
CMAR	Chiang Mai Arr	61.91	295	P	P	20 53 06.7	+0.8
	2.2nm,0.7s,baz=127,slow=5.5,SNR=26						
ULN	Ulaanbaatar	69.90	327	eP	P	20 53 57.7	+1.0
	8.3nm,1.0s						
VNDA	Vanda	70.18	179	LR	LR	21 20 34.9	
	comp=Z,134nm,22.0s,baz=269,slow=32						
SONM	Songino Array	70.23	327	P	P	20 53 59.9	+1.2
SONM	Songino Array	70.23	327	P	P	20 53 59.9	+1.2
	9.6nm,0.8s,baz=139,slow=6.8,SNR=62						
LSA	Lhasa	72.37	304	eP	P	20 54 13.2	+0.8
	4.9nm,0.8s						
ILAR	Eielson Array	83.33	21	P	P	20 55 11.2	-0.7
ILAR	Eielson Array	83.33	21	P	P	20 55 11.2	-0.7
	0.5nm,0.4s,baz=244,slow=5.4,SNR=7.5						
MK31	Makanchi Array	84.39	318	eP	P	20 55 18.3	+0.6
MKAR	Makanchi Array	84.39	318	P	P	20 55 18.4	+0.6
MKAR	Makanchi Array	84.39	318	P	P	20 55 18.4	+0.6
	28nm,0.7s,baz=102,slow=5.9,SNR=329						
MAW	Mawson	84.46	203	P	P	20 55 17.1	-0.5
MAW	Mawson	84.46	203	P	P	20 55 17.1	-0.5
	1.7nm,0.6s,baz=90,slow=7.8,SNR=8.6						
ZALV	Zalesovo Beam	85.09	326	P	P	20 55 20.6	-0.4
ZALV	Zalesovo Beam	85.09	326	P	P	20 55 20.6	-0.4
	21nm,0.5s,baz=112,slow=5.8,SNR=92						
KURK	Kurchatov	87.79	322	eP	P	20 55 33.7	-0.6
	3.4nm,0.4s						
KURBB	Kurchatov Arra	87.82	322	P	P	20 55 34.4	-0.1
	5.3nm,0.6s,baz=101,slow=4.5,SNR=88						
AAK	Ala-Archa	88.79	313	P	P	20 55 40.3	+0.9
AAK	Ala-Archa	88.79	313	P	P	20 55 40.3	+0.9
	2.1nm,0.3s,baz=120,slow=3.3,SNR=7.9						
EKS2	Erkin-Say	89.31	313	eP	P	20 55 43.1	+1.3
	2.3nm,0.8s						
INK	Inuvik	89.70	21	LR	LR	21 31 59.5	
	comp=Z,56nm,19.1s,baz=253,slow=33						
NVAR	Mina Array Bea	91.12	52	P	P	20 55 50.6	+0.2
NVAR	Mina Array Bea	91.12	52	P	P	20 55 50.6	+0.2
	1.4nm,1.0s,baz=224,slow=8.1,SNR=6.8						
NVAR				LR	LR	21 32 60.0	
	comp=Z,56nm,18.2s,baz=325,slow=33						
KKAR	Karatay Array	91.75	313	eP	P	20 55 53.3	+0.2
	0.9nm,0.6s						
BVAR	Borovoye Array	93.24	323	P	P	20 55 58.9	-0.8
BVAR	Borovoye Array	93.24	323	P	P	20 55 58.9	-0.8
	3.5nm,0.5s,baz=104,slow=5.1,SNR=18						
YKA	Yellowknife Ar	96.17	28	P	P	20 56 12.6	-0.3
YKA	Yellowknife Ar	96.17	28	P	P	20 56 12.5	-0.3
	0.9nm,0.8s,baz=264,slow=4.3,SNR=7.8						
ARCES	ARCESS Array B	110.26	343	PKiKP	PKiKP	21 01 16.6	+0.3
ARCES	ARCESS Array B	110.26	343	PKiKP	PKiKP	21 01 16.6	+0.3
	0.5nm,0.7s,baz=85,slow=3.9,SNR=3.7						
AKASG	Malin Array Be	118.47	325	PKP	PKPdf	21 01 31.6	-0.9
AKASG	Malin Array Be	118.47	325	PKP	PKPdf	21 01 31.6	-0.9
	1.3nm,0.5s,baz=48,slow=2.8,SNR=4.4						
BRTR	Keskin Array B	119.43	312	PKP	PKPdf	21 01 34.4	-0.5
BRTR	Keskin Array B	119.43	312	PKP	PKPdf	21 01 34.4	-0.5
	0.5nm,0.6s,baz=85,slow=2.7,SNR=4.5						
BOSA	Boshof	120.61	231	PKP	PKPdf	21 01 37.8	+0.3
BOSA	Boshof	120.61	231	PKP	PKPdf	21 01 37.8	+0.3
	1.6nm,0.7s,baz=22,slow=5.4,SNR=3.3						
GERES	GERESS Array B	127.93	329	PKP	PKPdf	21 01 51.2	+0.4
GERES	GERESS Array B	127.93	329	PKP	PKPdf	21 01 51.2	+0.4
	0.5nm,0.5s,baz=169,slow=1.4,SNR=5.1						
LPAZ	La Paz	130.34	119	PKP	PKPdf	21 01 57.1	+0.1
LPAZ	La Paz	130.34	119	PKP	PKPdf	21 01 57.1	+0.1
	1.5nm,0.6s,baz=8.0,slow=2.6,SNR=7.9						
CPUP	Villa Florida	133.38	137	PKP	PKPdf	21 02 00.9	-0.8
CPUP	Villa Florida	133.38	137	PKP	PKPdf	21 02 00.9	-0.8
	0.3nm,0.3s,baz=144,slow=7.8,SNR=3.2						
ESDC	Sonseca Array	143.18	334	PKP	PKPbc	21 02 16.8	+0.3
ESDC	Sonseca Array	143.18	334	PKP	PKPbc	21 02 16.8	+0.3
	0.6nm,0.5s,baz=28,slow=3.6,SNR=8.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PVIS	**Viseu**	**143.85**	**339**	*e*P	PKPbc	21 02 19.2	+0.8
MTE	**Manteigas**	**144.00**	**339**	*e*P	PKPbc	21 02 19.8	+0.9
PCBR	**Castelo Branco**	**144.47**	**338**	*e*P	**PKPdf**	**21 02 20.9**	**-0.6**
PMRV	**Marv??o**	**144.79**	**338**	*e*P	**PKPdf**	**21 02 22.1**	**-0.1**
PTOM	**Tomar**	**145.00**	**339**	*e*P	**PKPdf**	**21 02 22.8**	**+0.3**
PESTR	**Estremoz**	**145.36**	**337**	*e*P	**PKPab**	**21 02 23.8**	**+0.5**
PMTG	**Montargil**	**145.42**	**338**	*e*P	**PKPab**	**21 02 23.7**	**+0.2**
PBAR	**Barrancos**	**145.74**	**336**	*e*P	**PKPab**	**21 02 25.3**	**+0.6**
EVO	**Evora**	**145.81**	**337**	*e*P	**PKPab**	**21 02 24.9**	**-0.1**
PMAFR	**Mafra**	**145.90**	**339**	*e*P	**PKPdf**	**21 02 24.1**	**0.0**
PBEJ	**Beja**	**146.19**	**337**	*e*P	**PKPab**	**21 02 26.9**	**+0.4**
PNCL	**Nicolau / Gran**	**146.37**	**338**	*e*P	**PKPab**	**21 02 27.3**	**+0.2**
PCVE	**Castro Verde**	**146.60**	**337**	*e*P	**PKPab**	**21 02 28.2**	**+0.2**
PVAQ	**Vaqueiros**	**146.67**	**336**	*e*P	**PKPab**	**21 02 27.8**	**-0.5**
PTEO	**Sao Teotonio**	**146.94**	**338**	*e*P	**PKPab**	**21 02 29.5**	**+0.1**
BDFB	**Brasilia**	**146.95**	**134**	PKPbc	**PKPdf**	**21 02 26.8**	**+0.2**
BDFB	**Brasilia**	**146.95**	**134**	PKPbc	**PKPdf**	**21 02 26.8**	**+0.2**
	6.2nm,0.6s,baz=276,slow=2.8,SNR=7.8						
TAM	**Tamanrasset**	**147.79**	**302**	*e*PKPbc	**PKPbc**	**21 02 31.8**	**+0.9**
TORD	**Torodi Ar. Bea**	**154.16**	**285**	PKP	**PKPdf**	**21 02 37.1**	**-0.6**
TORD				PKPbc	**PKPbc**	**21 02 45.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**154.16**	**285**	PKP	**PKPdf**	**21 02 37.1**	**-0.6**
	0.4nm,0.7s,baz=115,slow=1.8,SNR=4.0						
TORD				PKPbc	**PKPbc**	**21 02 45.5**	**-0.4**
	1.1nm,0.6s,baz=76,slow=2.0,SNR=9.1						

*NNC **10** 20:56:33.1±2.6, 39°.06N×73°.43E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=21.0km s-min=12.2km az=173.0*
*IDC **10** 20:56:34.7±0.9, 39°.42N×73°.89E, h0km, mb3.8/6, mb1 3.9/9, mb1mx3.6/28, mbtmp3.8/9, ML3.2/3, Error ellipse: s-maj=18.9km s-min=12.7km az=98.0*
*BJI **10** 20:56:34.6, 39°.50N×73°.63E, h7km, mb3.7/3, ML3.4/3, Ms3.5/1, Ms7 3.6/1*
ISC 10 20:56:35.1±0.9**, 39°.47N**±0°.07×**74°.04E**±0°.06**, h10km, n31, σ1s.76**/28**, mb3.8**/8**, 5C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**1.50**	**88**	Pg	**Pn**	**20 57 02.5**	**+0.3**
KSH				Sg	**Sn**	**20 57 19.8**	**-2.1**
KSH				smax	smax		
	comp=N,380nm,0.5s						
KSH				smax	smax		
	comp=E,430nm,0.4s						
AML	**Almayashu**	**2.67**	**354**	P	**Pb**	**20 57 22.1**	**-1.2**
	SNR=25						
KZA	**Kyzart**	**2.76**	**19**	P	**Pb**	**20 57 25.4**	**+0.6**
	SNR=25						
UCH	**Uchtor**	**2.78**	**7**	P	**Sb**	**20 58 02.8**	**+3.4**
	SNR=6.3						
AAK	**Ala-Archa**	**3.18**	**6**	P	**Pb**	**20 57 30.6**	**-1.2**
	SNR=21						
AAK	**Ala-Archa**	**3.18**	**6**	Pn	**Pb**	**20 57 30.3**	**-1.5**
	comp=E,4.1nm,0.3s,baz=163,slow=8.7,SNR=18						
AAK				Pg	**Pg**	**20 57 35.0**	**-1.0**
	comp=E,8.9nm,0.3s,baz=143,slow=6.5,SNR=24						
AAK				Lg	Lg	20 58 15.1	
	comp=E,7.0nm,0.3s,baz=101,slow=23,SNR=3.7						
EKS2	**Erkin-Say**	**3.19**	**357**	P	**Pb**	**20 57 30.0**	**-2.1**
	SNR=17						
ULHL	**Ulahol**	**3.24**	**30**	P	**Pb**	**20 57 33.7**	**+0.9**
	SNR=15						
KBK	**Karagaybulak**	**3.26**	**12**	P	**Pb**	**20 57 33.2**	**+0.1**
	SNR=31						
CHMS	**Chumysh**	**3.56**	**8**	P	**Pb**	**20 57 36.0**	**-2.3**
	SNR=17						
TKM2	**Tokmak 2**	**3.64**	**18**	⇑Pn	**Pb**	**20 57 37.1**	**-2.6**
	comp=E,9.9nm,0.5s						
TKM2				⇑Sn	**Sg**	**20 58 31.0**	**-1.1**
	comp=E,18nm,0.5s						
TKM2	**Tokmak 2**	**3.64**	**18**	P	**Pb**	**20 57 37.5**	**-2.2**
	SNR=9.7						
KNDC	**Almaty**	**4.34**	**30**	⇓Pg	Pg	20 58 02.5	+4.2
	comp=E,18nm,0.5s						
KNDC				⇑Lg	Lg	20 59 06.4	
	comp=E,72nm,0.7s						
KK31	**Karatay Array**	**4.50**	**325**	Pn	**Pn**	**20 57 45.1**	**+1.8**
	comp=E,1.8nm,0.2s,baz=128,slow=12,SNR=105						
KK31				Pg	**Pg**	**20 57 58.3**	**-3.0**
	comp=E,7.3nm,0.5s,baz=150,slow=16,SNR=5.8						
KK31				⇑Sn	**Sn**	**20 58 38.4**	**+2.6**
	comp=E,8.9nm,0.3s,baz=152,slow=16,SNR=4.8						
KK31				⇓Lg	Lg	20 58 57.9	
	comp=E,19nm,0.5s,baz=175,slow=28,SNR=4.4						
MKAR	**Makanchi Array**	**9.48**	**37**	Pn	Pn	20 58 55.2	+3.5
	comp=E,0.1nm,0.3s,baz=211,slow=16,SNR=3.1						
VOSK	**Vostochnaya**	**13.42**	**352**	⇓P	Pn	20 59 49.8	+4.2
	comp=E,1.8nm,0.9s						
BVA0	**Borovoye Array**	**13.79**	**351**	P	P	20 59 55.0	-4.1
	comp=E,1.7nm,0.7s,baz=161,slow=8.9,SNR=4.7						
BVAR	**Borovoye Array**	**13.79**	**351**	Pn	**Pn**	**20 59 50.1**	**-0.4**
	baz=156,slow=11,SNR=5.0						
ZRNK	**Zerenda**	**13.92**	**347**	⇓P	Pn	20 59 56.2	+3.8
	comp=E,1.6nm,0.9s						
AB31	**Akbulak array**	**14.03**	**319**	P	**Pn**	**20 59 51.9**	**-1.9**
	comp=E,0.3nm,0.3s,baz=125,slow=15,SNR=18						
AKTO	**Aktyubinsk**	**15.74**	**319**	⇑P	**Pn**	**21 00 16.5**	**-0.2**
	comp=E,2.9nm,0.7s						
AKTO	**Aktyubinsk**	**15.74**	**319**	Pn	**Pn**	**21 00 16.6**	**-0.2**
	comp=E,0.3nm,0.3s,baz=111,slow=13,SNR=9.0						
GTA	**Gaotai**	**19.89**	**82**	*e*P	Pn	21 01 13.5	+5.1
GTA				pP	pP	21 01 17.0	+7.4
GTA				sP	sP	21 01 19.6	+8.7
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KBZ	**Khabaz**	**23.60**	**291**	P	P	21 01 53.5	+7.5
	comp=Z,1.8nm,0.7s,baz=110,slow=5.0,SNR=4.9						
BRTR	**Keskin Array B**	**30.95**	**284**	P	P	21 02 57.0	+4.6
	comp=Z,0.6nm,0.7s,baz=92,slow=7.4,SNR=4.9						
FINES	**FINESS Array B**	**36.46**	**323**	P	**P**	**21 03 40.6**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=107,slow=13,SNR=6.0						
ARCES	**ARCESS Array B**	**39.38**	**335**	P	**P**	**21 04 05.7**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=108,slow=9.0,SNR=7.9						
GERES	**GERESS Array B**	**43.25**	**303**	P	**P**	**21 04 36.3**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=55,slow=8.5,SNR=2.9						
TORD	**Torodi Ar. Bea**	**68.17**	**269**	P	**P**	**21 07 35.5**	**-0.4**
	comp=Z,0.5nm,0.6s,baz=43,slow=4.5,SNR=6.8						
WRA	**Warramunga Arr**	**81.60**	**124**	P	**P**	**21 08 55.0**	**+1.6**
	comp=Z,1.1nm,0.6s,baz=325,slow=5.3,SNR=9.4						
ASAR	**Alice Springs**	**84.05**	**127**	P	**P**	**21 09 08.0**	**+1.9**
	comp=Z,0.6nm,0.6s,baz=314,slow=5.2,SNR=11						

MEX 10 21:03:19.5±0.7**, 16°.89N**×**99°.61W, h37km**±11km**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.24**	**266**	*e*P	Pn	21 03 25.8	-2.3
ACX				*i* S	Sn	21 03 31.2	-5.1
ACP2	**Acapulco**	**0.27**	**267**	*i* P	Pn	21 03 26.0	-1.8
ACP2				*i* S	Sn	21 03 30.5	-4.9
CAIG	**El Cayaco**	**0.65**	**284**	*e*P	Pn	21 03 30.5	-1.8
CAIG				*i* S	Sn	21 03 39.4	-1.9
MEIG	**Mezcala**	**1.03**	**359**	*i* P	Pn	21 03 35.4	-2.2
MEIG				*i* S	Sn	21 03 48.8	-2.1
PLIG	**Platanillo**	**1.50**	**4**	*i* P	Pn	21 03 42.6	-1.4
PLIG				*i* S	Sn	21 04 00.3	-2.2
PNIG	**Pinotepa**	**1.50**	**109**	*e*P	Pn	21 03 42.6	-1.3
PNIG				*i* P		21 03 44.6	
PNIG				*i* S	Sn	21 04 02.9	+0.5
ARIG	**Puente Sto Nin**	**1.55**	**333**	*i* P	Pn	21 03 43.1	-1.6
ARIG				*i* S	Sn	21 04 01.7	-1.9

*IDC **10** 21:04:44.0±6.2, 11°.88S×166°.80E, h172km±53km, mb3.8/16, mb1 3.9/16, mb1mx3.8/22, mbtmp3.8/16, Error ellipse: s-maj=23.9km s-min=14.9km az=105.0*
*ISCJB **10** 21:04:45.4±0.5, 11°.83S±0°.07×166°.7E±0°.1, h200km, mb4.0/30, Error ellipse: s-maj=14.5km s-min=9.1km az=24.7*
*NEIC **10** 21:04:46.3±3.1, 11°.83S×166°.76E, h194km±28km, mb4.2/15, Error ellipse: s-maj=12.6km s-min=8.0km az=88.0*
ISC 10 21:04:47.1±0.6**, 11°.9S**±0°.1×**166°.8E**±0°.1**, h200km, n62, σ0s.55**/63**, mb4.0**/30**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EIDS	**Eidsvold**	**19.98**	**226**	*e*P	**P**	**21 09 05.3**	**+1.0**
	8.5nm,0.6s						
COEN	**Coen**	**23.06**	**262**	*e*P	**P**	**21 09 34.5**	**-0.7**
	25nm,0.8s						
ARMA	**Armidale**	**23.16**	**215**	*e*P	**P**	**21 09 36.1**	**0.0**
	15nm,0.9s						
STKA	**Stephens Creek**	**30.53**	**225**	P	**P**	**21 10 42.4**	**+0.5**
	3.4nm,0.7s,baz=45,slow=8.0,SNR=9.7						
WRAB	**Tennant Creek**	**32.12**	**251**	*e*P	**P**	**21 10 55.2**	**-0.7**
	2.7nm,0.8s						
WRA	**Warramunga Arr**	**32.13**	**251**	P	**P**	**21 10 55.5**	**-0.6**
WRA				PcP	**PcP**	**21 13 40.4**	**+0.1**
WRA	**Warramunga Arr**	**32.13**	**251**	P	**P**	**21 10 55.5**	**-0.6**
	1.5nm,0.7s,baz=84,slow=9.0,SNR=7.6						
WRA				PcP	**PcP**	**21 13 40.4**	**+0.1**
	1.5nm,0.7s,baz=76,slow=3.2,SNR=7.2						
ASAR	**Alice Springs**	**33.31**	**245**	P	**P**	**21 11 05.5**	**-0.8**
ASAR				PcP	**PcP**	**21 13 43.3**	**-0.3**
ASAR	**Alice Springs**	**33.31**	**245**	P	**P**	**21 11 05.5**	**-0.8**
	1.8nm,0.6s,baz=71,slow=9.9,SNR=28						
ASAR				PcP	**PcP**	**21 13 43.3**	**-0.3**
	1.1nm,0.6s,baz=77,slow=2.4,SNR=11						
FITZ	**Fitzroy Crossi**	**40.12**	**256**	*e*P	**P**	**21 12 04.3**	**+0.6**
	3.2nm,0.8s						
MBWA	**Marble Bar**	**45.86**	**252**	*e*P	**P**	**21 12 50.2**	**+0.5**
	6.8nm,0.8s						
KKM	**Kota Kinabalu**	**53.32**	**287**	*e*P	**P**	**21 13 45.5**	**-0.7**
	5.6nm,0.6s						
MJAR	**Matsushiro Arr**	**55.16**	**332**	P	P	21 13 57.8	-1.3
MJAR	**Matsushiro Arr**	**55.16**	**332**	P	P	21 13 57.8	-1.3
	1.7nm,0.7s,baz=168,slow=8.4,SNR=5.5						
MAJO	**Matsushiro**	**55.16**	**332**	*e*P	**P**	**21 13 58.1**	**-0.9**
TWG	**Pinlang**	**56.48**	**308**	*e*P	**P**	**21 14 08.2**	**-0.5**
	28nm,0.5s						
ASAJ	**Asahikawa**	**59.91**	**340**	*e*P	**P**	**21 14 31.2**	**-0.7**
	1.6nm,0.5s						
ASAJ	**Asahikawa**	**59.91**	**340**	P	**P**	**21 14 32.3**	**+0.3**
	3.5nm,0.5s,baz=78,slow=9.3,SNR=3.8						
KSRS	**Korea Array**	**61.12**	**325**	P	**P**	**21 14 40.9**	**+0.7**
	1.1nm,0.6s,baz=123,slow=9.1,SNR=3.8						
KSAR	**Wonju Array Be**	**61.13**	**325**	P	**P**	**21 14 40.9**	**+0.6**
PETK	**Petropavlovsk-**	**65.19**	**354**	P	**P**	**21 15 07.2**	**+0.5**
PETK	**Petropavlovsk-**	**65.19**	**354**	P	**P**	**21 15 07.2**	**+0.5**
	0.9nm,0.4s,baz=152,slow=9.7,SNR=1.9						
VNDA	**Vanda**	**65.68**	**181**	P	**P**	**21 15 09.6**	**+0.1**
VNDA	**Vanda**	**65.68**	**181**	P	**P**	**21 15 09.6**	**+0.1**
	1.0nm,0.6s,baz=20,slow=8.8,SNR=6.2						
CASY	**Casey**	**65.96**	**202**	*e*P	**P**	**21 15 11.3**	**-0.2**
	4.1nm,0.4s						
SBA	**Scott Base**	**65.97**	**180**	*e*P	**P**	**21 15 11.7**	**+0.3**
	1.9nm,0.6s						
CMAR	**Chiang Mai Arr**	**73.34**	**293**	P	**P**	**21 15 58.9**	**+1.4**
CMAR	**Chiang Mai Arr**	**73.34**	**293**	P	**P**	**21 15 58.9**	**+1.4**
	2.9nm,0.8s,baz=118,slow=4.8,SNR=17						
CHTO	**Chiang Mai**	**73.46**	**294**	*e*P	**P**	**21 15 58.6**	**+0.4**
	1.6nm,0.6s						
QSPA	**South Pole Qui**	**78.13**	**180**	*e*P	**P**	**21 16 23.7**	**-0.2**
	9.4nm,1.2s						
ULN	**Ulaanbaatar**	**79.55**	**324**	*e*P	**P**	**21 16 31.6**	**-0.4**
	2.4nm,0.7s						
BILL	**Bilibino**	**79.71**	**360**	P	P	21 16 30.7	-1.5
SONM	**Songino Array**	**79.92**	**324**	P	**P**	**21 16 33.8**	**-0.1**
SONM	**Songino Array**	**79.92**	**324**	P	**P**	**21 16 33.7**	**-0.1**
	1.3nm,0.7s,baz=127,slow=9.2,SNR=7.2						
YBH	**Yreka Blue Hor**	**83.78**	**45**	P	**P**	**21 16 54.3**	**+0.2**
YBH	**Yreka Blue Hor**	**83.78**	**45**	P	**P**	**21 16 54.3**	**+0.2**
	0.7nm,0.5s,baz=338,slow=5.4,SNR=3.2						
ILAR	**Eielson Array**	**84.00**	**18**	P	**P**	**21 16 53.7**	**-0.9**
ILAR	**Eielson Array**	**84.00**	**18**	P	**P**	**21 16 53.7**	**-0.9**
	3.2nm,0.6s,baz=233,slow=5.7,SNR=28						
DOT	**Dot Lake**	**84.12**	**20**	*e*P	P	21 16 53.6	-1.7
	4.3nm,1.1s						
NVAR	**Mina Array Bea**	**85.82**	**50**	P	**P**	**21 17 04.8**	**+0.2**
NVAR	**Mina Array Bea**	**85.82**	**50**	P	**P**	**21 17 04.8**	**+0.2**
	0.5nm,0.7s,baz=235,slow=8.7,SNR=5.0						
EGAK	**Eagle**	**85.83**	**20**	*e*P	**P**	**21 17 03.4**	**-0.2**
	3.7nm,0.7s						
MK31	**Makanchi Array**	**94.80**	**317**	*e*P	**P**	**21 17 45.9**	**-0.2**
MKAR	**Makanchi Array**	**94.80**	**317**	P	**P**	**21 17 45.8**	**-0.3**
MKAR	**Makanchi Array**	**94.80**	**317**	P	**P**	**21 17 45.8**	**-0.3**
	3.1nm,0.7s,baz=92,slow=6.5,SNR=31						
ZALV	**Zalesovo Beam**	**94.81**	**324**	P	P	21 17 44.4	-1.5
ZALV	**Zalesovo Beam**	**94.81**	**324**	P	P	21 17 44.4	-1.5
	0.3nm,0.4s,baz=46,slow=6.2,SNR=3.7						
KURBB	**Kurchatov Arra**	**97.95**	**320**	P	P	21 17 58.2	-2.0
	0.2nm,0.5s,baz=93,slow=3.7,SNR=3.5						
ARCES	**ARCESS Array B**	**117.39**	**346**	PKP	**PKPdf**	**21 23 07.8**	**-0.4**
ARCES	**ARCESS Array B**	**117.39**	**346**	PKP	**PKPdf**	**21 23 07.8**	**-0.4**
	1.3nm,0.6s,baz=89,slow=2.7,SNR=18						
FINES	**FINESS Array B**	**122.90**	**339**	PKP	**PKPdf**	**21 23 18.4**	**-0.6**
FINES	**FINESS Array B**	**122.90**	**339**	PKP	**PKPdf**	**21 23 18.4**	**-0.6**
	0.8nm,0.6s,baz=15,slow=5.8,SNR=4.6						
BRTR	**Keskin Array B**	**130.25**	**312**	PKP	**PKPdf**	**21 23 33.6**	**-0.4**
BRTR	**Keskin Array B**	**130.25**	**312**	PKP	**PKPdf**	**21 23 33.6**	**-0.4**
	0.3nm,0.5s,baz=118,slow=5.5,SNR=3.0						
GERES	**GERESS Array B**	**136.88**	**334**	PKP	**PKPdf**	**21 23 45.8**	**-0.3**
GERES	**GERESS Array B**	**136.88**	**334**	PKP	**PKPdf**	**21 23 45.8**	**-0.3**
	0.2nm,0.5s,baz=52,slow=1.6,SNR=4.1						
KEST	**Kesra**	**148.67**	**323**	PKPbc	**PKPbc**	**21 24 11.6**	**+0.5**
KEST	**Kesra**	**148.67**	**323**	PKPbc	**PKPbc**	**21 24 11.6**	**+0.5**
	2.3nm,0.8s,baz=250,slow=6.5,SNR=6.9						
ESDC	**Sonseca Array**	**151.12**	**345**	PKPbc	**PKPbc**	**21 24 17.3**	**+0.3**
ESDC				PKPab	**PKPab**	**21 24 25.9**	**+0.7**
ESDC	**Sonseca Array**	**151.12**	**345**	PKPbc	**PKPbc**	**21 24 17.3**	**+0.3**
	1.0nm,0.7s,baz=14,slow=2.1,SNR=7.5						
ESDC				PKPab	**PKPab**	**21 24 25.9**	**+0.7**
	0.6nm,0.4s,baz=19,slow=3.9,SNR=6.2						
TORD	**Torodi Ar. Bea**	**165.35**	**277**	PKP	**PKPdf**	**21 24 28.5**	**0.0**
TORD				PKPab	**PKPab**	**21 25 27.4**	**-0.1**
TORD	**Torodi Ar. Bea**	**165.35**	**277**	PKP	**PKPdf**	**21 24 28.5**	**0.0**
	0.8nm,1.0s,baz=119,slow=1.8,SNR=4.3						
TORD				PKPab	**PKPab**	**21 25 27.4**	**-0.1**
	0.8nm,0.9s,baz=97,slow=4.1,SNR=3.1						

IDC 10 21:07:39.4±7.5**, 18°.22S**×**173°.72W, h0km, mb3.7**/3**, mb1 4.1**/1**, mb1mx3.7**/20**, mbtmp3.7**/3**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx3.0**/23**, Error ellipse: s-maj=327.5km s-min=36.8km az=141.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.80**	**261**	LR	LR	21 27 00.1	
	comp=Z,260nm,21.0s,baz=55,slow=31						
WRA	**Warramunga Arr**	**48.96**	**259**	P	P	21 16 27.7	-0.3
	0.3nm,0.3s,baz=96,slow=7.1,SNR=5.8						
ASAR	**Alice Springs**	**49.00**	**254**	P	P	21 16 28.4	0.0
	1.9nm,0.6s,baz=92,slow=8.3,SNR=26						
ILAR	**Eielson Array**	**85.25**	**11**	P	P	21 20 17.6	0.0
	0.3nm,0.9s,baz=195,slow=5.2,SNR=2.7						

IDC 10 21:09:52.5±2.5**, 6°.81S**×**154°.69E, h0km, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/18**, mbtmp3.4**/4**, MS3.5**/1**, Ms1 3.4**/1**, ms1mx2.7**/13**, Error ellipse: s-maj=108.7km s-min=31.9km az=126.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.67**	**235**	P	P	21 15 05.7	-0.2
	0.8nm,0.7s,baz=58,slow=9.7,SNR=3.4						
ASAR	**Alice Springs**	**26.06**	**228**	P	P	21 15 28.1	+0.2
	0.5nm,0.9s,baz=60,slow=9.2,SNR=2.6						
STKA	**Stephens Creek**	**27.77**	**204**	LR	LR	21 25 53.8	
	comp=Z,86nm,18.4s,baz=205,slow=35						
MKAR	**Makanchi Array**	**83.07**	**319**	P	P	21 22 21.2	+1.0
	0.2nm,0.5s,baz=102,slow=4.5,SNR=3.1						
ILAR	**Eielson Array**	**83.32**	**22**	P	P	21 22 20.8	-0.1
	0.2nm,0.5s,baz=226,slow=8.6,SNR=2.0						
TORD	**Torodi Ar. Bea**	**152.68**	**285**	PKPbc	PKPbc	21 29 51.9	-0.5
	0.5nm,0.7s,baz=56,slow=2.5,SNR=2.8						
TORD				PKPab	PKPab	21 30 02.0	-1.0
	0.7nm,0.7s,baz=102,slow=1.6,SNR=4.7						

IDC 10 22:01:37.9±0.9**, 14°.21N**×**145°.13E, h0km, mb3.8**/9**, mb1 4.0**/9**, mb1mx3.8**/25**, mbtmp3.8**/9**, Error ellipse: s-maj=34.8km s-min=17.8km az=93.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**29.89**	**356**	P	P	22 07 45.7	-1.5
	1.8nm,0.4s,baz=186,slow=17,SNR=3.2						
WRA	**Warramunga Arr**	**35.56**	**198**	P	P	22 08 36.7	-0.3
	2.9nm,0.6s,baz=17,slow=9.5,SNR=33						
ASAR	**Alice Springs**	**39.21**	**196**	P	P	22 09 07.6	-0.5
	0.5nm,0.4s,baz=20,slow=7.8,SNR=9.8						
CMAR	**Chiang Mai Arr**	**44.43**	**282**	P	P	22 09 51.9	+0.9
	0.4nm,0.6s,baz=87,slow=4.6,SNR=3.1						
STKA	**Stephens Creek**	**45.95**	**184**	P	P	22 10 02.3	-0.4
	2.5nm,0.4s,baz=2.3,slow=11,SNR=20						
SONM	**Songino Array**	**46.38**	**324**	P	P	22 10 05.7	-0.5
	0.2nm,0.3s,baz=134,slow=6.2,SNR=2.8						
MKAR	**Makanchi Array**	**61.22**	**316**	P	P	22 11 55.2	+0.4
	0.2nm,0.3s,baz=87,slow=9.8,SNR=4.2						
ILAR	**Eielson Array**	**67.91**	**25**	P	P	22 12 36.9	-1.2
	0.2nm,0.4s,baz=261,slow=5.8,SNR=3.1						
NVAR	**Mina Array Bea**	**86.34**	**51**	P	P	22 14 24.4	+1.8
	0.2nm,0.3s,baz=281,slow=6.0,SNR=3.4						

*IDC **10** 22:05:32.3±0.5, 41°.71S×84°.23W, h0km, mb4.3/15, mb1 4.4/16, mb1mx4.4/19, mbtmp4.3/16, ML3.6/2, MS4.3/21, Ms1 4.2/21, ms1mx4.2/31, Error ellipse: s-maj=21.0km s-min=15.1km az=112.0*
*ISCJB **10** 22:05:33.4±0.3, 41°.78S±0°.06×84°.01W±0°.08, h10km, mb4.9/55, MS4.4/19, Error ellipse: s-maj=9.0km s-min=8.5km az=33.3*
*GCMT **10** 22:05:34.2±0.2, 41°.60S×84°.39W, h12km, MW5.0, Moment Tensor Solution. s33,c45; s81,c126; Moment tensor: Scale 10^{16}Nm; M_{rr}-4.18±.10; $M_{\theta\theta}$0.17±.09; $M_{\phi\phi}$4.01±.09; $M_{r\theta}$0.98±.34; $M_{\theta\phi}$-0.73±.08; $M_{\phi r}$-0.29±.28; Best double couple: $M_0$4.30000×10^{16} NP1:ϕ_s181.00000°, δ43.00000°, λ-73.00000°. NP2:ϕ_s338.00000°, δ49.00000°, λ-105.00000°. Principal axes: T 4.1700, Plg3.0000°, Azm79.0000°; N 0.2200, Plg12.0000°, Azm348.0000°; P -4.3900, Plg78.0000°, Azm184.0000°; Data Used: II IU IC G CN.*
*NEIC **10** 22:05:34.7±0.3, 41°.78S×84°.08W, h10km, mb5.2/41 Error ellipse: s-maj=9.6km s-min=8.7km az=86.0*
*BJI **10** 22:05:35.2, 41°.70S×84°.20W, h10km, mB5.1/11, Ms5.1/9, Ms7 5.2/10*
ISC 10 22:05:34.6±0.3**, 41°.68S**±0°.07×**84°.04W**±0°.07**, h10km, n141, σ1s.74**/162**, mb5.0**/55**, MS4.4**/19**, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**10.21**	**89**	Pn	**Pn**	**22 08 00.5**	**-0.8**
PLCA	**Paso Flores**	**10.21**	**89**	Pn	**Pn**	**22 08 00.5**	**-0.8**
	0.2nm,0.3s,baz=152,slow=0.7,SNR=4.6						
PLCA				LR	LR	22 11 20.7	
	comp=Z,4μm,19.1s,baz=345,slow=34						
CFAA	**Coronel Fontan**	**16.16**	**57**	Pn	**Pn**	**22 09 20.5**	**-1.3**
CFAA	**Coronel Fontan**	**16.16**	**57**	Pn	**Pn**	**22 09 20.5**	**-1.3**
	0.1nm,0.3s,baz=214,slow=11,SNR=2.6						
CFAA				LR	LR	22 14 27.9	
	comp=Z,245nm,21.5s,baz=207,slow=33						
LCO	**Las Campanas**	**16.65**	**45**	*e*Pn	**P**	**22 09 30.8**	**+0.1**
	191nm,2.2s						
USHA	**Ushuaia**	**16.72**	**147**	LR	LR	22 15 16.9	
	comp=Z,557nm,20.4s,baz=239,slow=35						
TRQA	**Tornquist**	**17.31**	**85**	*e*Pn	**P**	**22 09 39.5**	**+1.7**
	2μm,2.5s						
LVC	**Limon Verde**	**22.86**	**38**	*e*P	**P**	**22 10 40.3**	**+2.0**
LVC	**Limon Verde**	**22.86**	**38**	P	**P**	**22 10 40.0**	**+1.6**
	12nm,1.1s,baz=191,slow=10,SNR=9.0						
LVC				LR	LR	22 17 22.7	
	comp=Z,860nm,19.0s,baz=213,slow=31						
PMSA	**Palmer Station**	**25.81**	**160**	LR	LR	22 18 52.5	
	comp=Z,319nm,18.4s,baz=266,slow=31						
CPUP	**Villa Florida**	**26.78**	**64**	P	**P**	**22 11 14.9**	**+0.3**
CPUP	**Villa Florida**	**26.78**	**64**	P	**P**	**22 11 14.9**	**+0.3**
	9.7nm,1.0s,baz=230,slow=7.4,SNR=14						
CPUP				LR	LR	22 21 29.9	
	comp=Z,1μm,18.1s,baz=216,slow=36						
LPAZ	**La Paz**	**28.78**	**33**	*e*P	**P**	**22 11 36.0**	**+2.7**
LPAZ	**La Paz**	**28.78**	**33**	P	**P**	**22 11 33.3**	**0.0**
	3.1nm,1.0s,baz=191,slow=8.7,SNR=9.5						
LPAZ				LR	LR	22 19 35.9	
	comp=Z,119nm,18.3s,baz=258,slow=29						
SAML	**Samuel**	**37.44**	**35**	*e*P	**P**	**22 12 49.5**	**+1.4**
	19nm,1.3s						
BDFB	**Brasilia**	**40.43**	**61**	P	**P**	**22 13 13.6**	**+0.3**
BDFB	**Brasilia**	**40.43**	**61**	P	**P**	**22 13 13.6**	**+0.3**
	5.1nm,0.9s,baz=208,slow=8.3,SNR=5.6						
BDFB				LR	LR	22 30 09.4	
	comp=Z,1μm,18.7s,baz=304,slow=36						
OTAV	**Otavalo**	**42.03**	**8**	*e*P	**P**	**22 13 28.6**	**+1.8**
	9.5nm,1.2s						
RKT	**Rikitea**	**46.11**	**277**	*e*LR	LR	22 26 51.7	
	2μm,26.0s						
ROSC	**El Rosal**	**47.15**	**13**	P	**P**	**22 14 08.9**	**+1.3**
ROSC	**El Rosal**	**47.15**	**13**	P	**P**	**22 14 08.9**	**+1.3**
	2.6nm,0.3s,baz=123,slow=21,SNR=3.8						
ROSC				LR	LR	22 32 20.4	
	comp=Z,366nm,18.4s,baz=187,slow=34						
SNAA	**Sanae**	**48.34**	**155**	*e*P	**P**	**22 14 15.9**	**0.0**
	28nm,1.1s						
QSPA	**South Pole Qui**	**48.56**	**180**	P	**P**	**22 14 17.6**	**-0.1**
QSPA				PcP	**PcP**	**22 15 42.3**	**-1.0**
QSPA	**South Pole Qui**	**48.56**	**180**	P	**P**	**22 14 17.6**	**-0.1**
	6.4nm,0.9s,baz=138,slow=4.4,SNR=14						
QSPA				PcP	**PcP**	**22 15 42.3**	**-1.0**
	5.8nm,1.0s,baz=175,slow=2.9,SNR=4.0						
SDV	**Santo Domingo**	**51.80**	**17**	*e*P	**P**	**22 14 43.9**	**+1.0**
	35nm,1.5s						
SBA	**Scott Base**	**53.47**	**194**	*e*P	**P**	**22 14 54.9**	**+0.6**
	95nm,2.3s						
VNDA	**Vanda**	**54.55**	**194**	*e*P	**P**	**22 15 02.6**	**+0.5**
VNDA	**Vanda**	**54.55**	**194**	P	**P**	**22 15 02.4**	**+0.2**
	2.9nm,1.1s,baz=114,slow=7.2,SNR=5.8						
VNDA				LR	LR	22 33 41.3	
	comp=Z,443nm,19.9s,baz=118,slow=31						
TBI	**Tubuai**	**56.81**	**267**	*e*S	**S**	**22 23 10.5**	**-1.9**
	161nm,29.0s						
TBI				*e*LR	LR	22 31 44.5	
	704nm,31.2s						
PPT2	**Papeete2**	**60.34**	**272**	*e*S	**S**	**22 23 57.1**	**-1.5**
	263nm,28.0s						
PPT2				*e*LR	LR	22 33 17.4	
	929nm,27.5s,baz=132						
PPT	**Papeete**	**60.35**	**272**	LR	LR	22 33 42.7	
	comp=Z,447nm,19.9s,baz=143,slow=28						
MAW	**Mawson**	**68.20**	**167**	P	**P**	**22 16 33.5**	**-1.1**
MAW	**Mawson**	**68.20**	**167**	P	**P**	**22 16 33.5**	**-1.1**
	3.4nm,0.8s,baz=196,slow=12,SNR=6.9						
MAW				LR	LR	22 47 01.9	
	comp=Z,184nm,20.6s,baz=137,slow=36						
CASY	**Casey**	**71.79**	**186**	*e*P	**P**	**22 16 57.6**	**+0.9**
	138nm,2.6s						
TXAR	**Lajitas Array**	**72.95**	**342**	P	**P**	**22 17 04.8**	**+0.7**
TXAR	**Lajitas Array**	**72.95**	**342**	P	**P**	**22 17 04.8**	**+0.7**
	0.2nm,0.5s,baz=82,slow=1.9,SNR=4.7						
TXAR				LR	LR	22 42 49.3	
	comp=Z,110nm,18.8s,baz=355,slow=31						
JCT	**Junction City**	**73.26**	**346**	*e*P	**P**	**22 17 05.4**	**-0.4**
	33nm,1.6s						
LRAL	**Lakeview Retre**	**74.40**	**357**	*e*P	**P**	**22 17 12.6**	**+0.3**
	14nm,1.1s						
MIAR	**Mount Ida**	**76.36**	**352**	*e*P	**P**	**22 17 24.2**	**+0.6**
	21nm,1.8s						
PLAL	**Pickwick Lake**	**76.38**	**357**	*e*P	**P**	**22 17 24.5**	**+0.8**
	13nm,1.0s						
CPCT	**Cooper Cave**	**76.76**	**360**	*e*P	**P**	**22 17 26.2**	**+0.4**
TKL	**Tuckaleechee C**	**76.96**	**0**	LR	LR	22 45 18.8	
	comp=Z,102nm,19.1s,baz=105,slow=31						
WMOK	**Wichita Mounta**	**77.24**	**348**	*e*P	**P**	**22 17 28.6**	**0.0**
	21nm,1.6s						
GNAR	**Gosnell**	**77.46**	**355**	*e*P	**P**	**22 17 31.0**	**+1.3**
WVT	**Waverly**	**77.51**	**357**	*e*P	**P**	**22 17 28.9**	**-1.1**
	15nm,1.3s						
TZTN	**Tazewell**	**77.85**	**0**	*e*P	P	22 17 37.8	+5.9
AMTX	**Amarillo**	**77.89**	**345**	*e*P	**P**	**22 17 33.5**	**+1.2**
	45nm,1.9s						
ANMO	**Albuquerque**	**78.98**	**341**	*e*P	**P**	**22 17 40.1**	**+1.6**
	114nm,2.7s						
SIUC	**Southern Illin**	**79.16**	**356**	*e*P	**P**	**22 17 40.8**	**+1.7**
	24nm,1.0s						
USIN	**University of**	**79.34**	**357**	*e*P	**P**	**22 17 41.6**	**+1.5**
	32nm,0.9s						
OLIL	**Olney**	**80.12**	**357**	*e*P	**P**	**22 17 45.2**	**+0.9**
	28nm,1.0s						
KSU1	**Kansas State U**	**81.21**	**350**	*e*P	**P**	**22 17 51.0**	**+0.8**
MVL	**Millersville**	**81.60**	**6**	*e*P	**P**	**22 17 53.4**	**+1.2**
	17nm,1.3s						
HDIL	**Hopedale**	**81.99**	**356**	*e*P	**P**	**22 17 54.8**	**+0.5**
PV01	**Paradox Valley**	**82.53**	**341**	*e*P	**P**	**22 17 58.5**	**+1.1**
	206nm,0.3s						
ISCO	**Idaho Springs**	**83.44**	**343**	*e*P	**P**	**22 18 01.9**	**-0.3**
BOSA	**Boshof**	**84.38**	**124**	*e*P	**P**	**22 18 08.0**	**+0.6**
BOSA	**Boshof**	**84.38**	**124**	P	**P**	**22 18 07.4**	**0.0**
	12nm,1.0s,baz=229,slow=5.0,SNR=15						
BOSA				LR	LR	22 48 04.6	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,194nm,21.0s,baz=160,slow=30						
JFWS	Jewell Farm	84.40	355	eP	P	22 18 07.0	+0.4
	50nm,1.4s						
ACCN	Adirondack Com	85.19	8	eP	P	22 18 11.6	+1.0
	28nm,1.3s						
DUG	Dugway	85.58	338	eP	P	22 18 12.0	-0.8
	2.5nm,1.0s						
NVAR	Mina Array Bea	85.63	334	P	P	22 18 13.5	+0.3
NVAR	Mina Array Bea	85.63	334	P	P	22 18 13.5	+0.3
	0.7nm,0.7s,baz=160,slow=2.9,SNR=8.6						
ECSD	EROS Data Cent	85.78	351	eP	P	22 18 12.2	-1.3
	23nm,1.4s						
LONY	Lake Ozonia	86.33	7	eP	P	22 18 17.7	+1.4
	25nm,1.3s						
DBIC	Dimbokro	86.38	78	P	P	22 18 17.0	-0.3
DBIC	Dimbokro	86.38	78	P	P	22 18 17.0	-0.3
	2.8nm,0.9s,baz=130,slow=4.2,SNR=2.6						
DBIC				LR	LR	22 52 57.3	
	comp=Z,210nm,18.6s,baz=195,slow=33						
HWUT	Hardware Ranch	86.56	340	eP	P	22 18 18.5	+0.8
	66nm,2.2s						
ELK	Elko	86.78	337	eP	P	22 18 20.9	+2.0
	22nm,1.8s						
HVU	Hansel Valley	87.04	339	eP	P	22 18 20.1	0.0
BW06	Boulder Array	87.16	341	eP	P	22 18 20.9	+0.2
	26nm,2.0s						
PDAR	Pinedale Array	87.16	341	P	P	22 18 19.8	-0.9
PDAR	Pinedale Array	87.16	341	P	P	22 18 19.8	-0.9
	0.8nm,0.8s,baz=151,slow=2.1,SNR=5.7						
PDAR				LR	LR	22 51 23.9	
	comp=Z,68nm,21.2s,baz=352,slow=32						
RSSD	Black Hills	87.28	346	eP	P	22 18 20.9	-0.4
	8.6nm,1.1s						
COWI	Conover	87.51	356	eP	P	22 18 21.5	-0.5
	29nm,1.4s						
SNOW	Snow King Moun	88.10	341	eP	P	22 18 26.4	+1.2
RRI2	Red Ridge	88.13	340	eP	P	22 18 26.9	+1.5
	36nm,2.0s						
TPAW	Teton Pass	88.17	341	eP	P	22 18 28.0	+2.4
	34nm,2.1s						
LOHW	Long Hollow	88.20	341	eP	P	22 18 26.5	+0.8
	13nm,1.9s						
MOOW	Moose Ponds	88.37	341	eP	P	22 18 25.6	-0.8
IMW	Indian Meadow	88.55	341	eP	P	22 18 29.7	+2.3
	20nm,1.8s						
DZM	Mont Dzumac	89.12	241	eLR	LR	22 46 51.1	
	662nm,29.1s						
HLID	Hailey	89.15	338	eP	P	22 18 31.8	+1.7
	72nm,2.6s						
WVOR	Wild Horse Val	89.36	335	eP	P	22 18 31.1	+0.1
	17nm,1.7s						
EYMN	Ely	89.49	355	eP	P	22 18 31.1	-0.2
	11nm,1.4s						
MCMT	McKenzie Canyo	89.91	340	eP	P	22 18 33.9	+0.2
	6.4nm,1.4s						
AGMN	Agassiz Nation	90.20	352	eP	P	22 18 33.3	-1.3
	67nm,2.7s						
DLMT	Dillon	90.34	340	eP	P	22 18 37.5	+2.0
	41nm,2.0s						
LRM	Limekiln Ridge	90.73	341	eP	P	22 18 39.7	+2.2
HUMO	Hull Mountain	90.95	332	eP	P	22 18 40.9	+2.6
	29nm,2.1s						
CHMT	Chamberlain Mo	91.95	340	eP	P	22 18 45.1	+2.1
ULM	Lac du Bonnet	92.13	352	P	P	22 18 41.6	-1.9
ULM	Lac du Bonnet	92.13	352	P	P	22 18 41.6	-1.9
	1.3nm,0.4s,baz=179,slow=6.6,SNR=2.2						
ULM				LR	LR	22 57 30.9	
	comp=Z,65nm,18.0s,baz=346,slow=34						
SLMT	Seeley Lake	92.32	340	eP	P	22 18 46.7	+2.0
TORD	Torodi Ar. Bea	95.48	77	P	P	22 18 59.5	-0.3
TORD	Torodi Ar. Bea	95.48	77	P	P	22 18 59.5	-0.3
	3.7nm,1.0s,baz=254,slow=1.9,SNR=11						
TORD				LR	LR	23 02 12.2	
	comp=Z,158nm,18.8s,baz=185,slow=36						
STKA	Stephens Creek	95.59	218	LR	LR	22 55 14.2	
	comp=Z,148nm,18.5s,baz=208,slow=31						
SCHQ	Schefferville	97.26	10	LR	LR	22 56 36.2	
	comp=Z,97nm,21.0s,baz=248,slow=32						
ILAR	Eielson Array	116.87	335	PKP	PKPdf	22 24 16.4	-1.8
ILAR	Eielson Array	116.87	335	PKP	PKPdf	22 24 16.4	-1.8
	0.6nm,0.8s,baz=163,slow=1.7,SNR=5.5						
GERES	GERESS Array B	124.33	52	PKP	PKPdf	22 24 33.2	0.0
GERES	GERESS Array B	124.33	52	PKP	PKPdf	22 24 33.2	0.0
	0.5nm,0.8s,baz=173,slow=0.8,SNR=5.9						
BRG	Berggiesshubel	125.34	50	e(P)	PKPdf	22 24 40.0	+5.1
	18nm,1.8s						
ZST	Bratislava	126.10	54	ePKP	PKPdf	22 24 39.4	+3.0
VYHS	Vyhne	127.28	55	ePKP	PKPdf	22 24 38.8	+0.1
NOA	NORSAR Array B	127.74	38	PKP	PKPdf	22 24 39.0	-0.2
NOA	NORSAR Array B	127.74	38	PKP	PKPdf	22 24 39.0	-0.2
	0.8nm,0.9s,baz=253,slow=1.9,SNR=3.7						
KWP	Kalwaria Pacla	130.07	54	ePKPdf	PKPdf	22 24 45.5	+1.6
BRTR	Keskin Array B	133.64	71	PKP	PKPdf	22 24 51.2	0.0
BRTR	Keskin Array B	133.64	71	PKP	PKPdf	22 24 51.2	0.0
	0.6nm,0.8s,baz=240,slow=2.0,SNR=4.2						
PETK	Petropavlovsk-	137.93	308	PKP	PKPdf	22 24 55.4	-3.2
PETK	Petropavlovsk-	137.93	308	PKP	PKPdf	22 24 55.4	-3.2
	0.8nm,0.4s,baz=170,slow=8.8,SNR=3.0						
AKH	Akhalkalaki	141.24	72	P	PKPdf	22 25 05.8	+0.6
KBZ	Khabaz	141.51	69	PKP	PKPdf	22 25 05.6	+0.2
KBZ	Khabaz	141.51	69	PKP	PKPdf	22 25 05.6	+0.2
	1.8nm,0.9s,baz=243,slow=2.1,SNR=4.3						
ONI	Oni	141.57	71	P	PKPdf	22 25 11.2	+5.5
TBLG	Delisi	142.23	72	P	PKPdf	22 25 03.2	-3.6
GUDG	Gudauri	142.26	71	P	PKPdf	22 25 02.6	-4.5
DGRG	David-gareji	142.60	73	P	PKPdf	22 25 15.1	+7.6
MJAR	Matsushiro Arr	147.06	275	PKPbc	PKPdf	22 25 14.7	-0.6
MJAR	Matsushiro Arr	147.06	275	PKPbc	PKPdf	22 25 14.7	-0.6
	2.4nm,0.9s,baz=160,slow=2.9,SNR=7.2						
USRK	Ussuriysk Arra	153.62	288	PKPbc	PKPbc	22 25 31.7	-1.3
	2.2nm,0.9s,baz=106,slow=10,SNR=3.6						
ABKAR	Akbulak array	153.83	61	ePKPdf	PKPdf	22 25 25.2	-0.1
MDJ	Mudanjiang	155.38	288	PKP	PKPdf	22 25 27.7	0.0
CMAR	Chiang Mai Arr	156.71	187	PKPab	PKPab	22 25 59.1	-0.3
CMAR	Chiang Mai Arr	156.71	187	PKPab	PKPab	22 25 59.1	-0.3
	1.2nm,0.7s,baz=207,slow=4.8,SNR=5.4						
CN2	Changchun	158.28	286	ePKP	PKPdf	22 25 28.8	-2.7
CN2				epPKP	pPKPdf	22 25 38.0	+3.1
CN2				ePP	PP	22 29 47.2	+0.7
CN2				eSS	SS	22 49 42.6	-4.6
CN2				AMB	AMB		
	comp=Z,200nm,8.0s						
CN2				LR	LR		
	comp=N,400nm,22.0s						
CN2				LR	LR		
	comp=E,800nm,22.0s						
CN2				LR	LR		
	comp=Z,900nm,23.0s						
GYA	Guiyang	162.44	214	PKP	PKPdf	22 25 36.8	0.0
GYA				PKPab	PKPab	22 26 25.9	+1.5
GYA				PKS	PKSdf	22 29 08.5	-1.6
GYA				PP	PP	22 30 11.6	+3.5
GYA				SKKS		22 36 56.1	
GYA				SS	SS	22 50 29.8	+0.3
GYA				AMB	AMB		
	comp=Z,130nm,7.9s						
GYA				LR	LR		
	comp=N,150nm,22.0s						
GYA				LR	LR		
	comp=E,130nm,24.1s						
GYA				LR	LR		
	comp=Z,140nm,22.7s						
KMI	Kunming	162.56	201	PKP	PKPdf	22 25 36.9	-0.2
KMI				pPKP	pPKPdf	22 25 40.3	-0.2
KMI				sPKP		22 25 42.2	
KMI				PP	PP	22 30 10.9	+2.3
KMI				SS	SS	22 50 31.7	+1.3
KMI				AMB	AMB		
	comp=Z,65nm,5.1s						
KMI				LR	LR		
	comp=N,140nm,22.4s						
KMI				LR	LR		
	comp=E,75nm,25.0s						
KMI				LR	LR		
	comp=Z,110nm,29.3s						
KSH	Kashi	164.67	91	PKP	PKPdf	22 25 39.1	+0.6
KSH				ePP	PP	22 30 18.3	-2.6
KSH				eSKS	SKSdf	22 32 37.4	-5.4
KSH				AMB	AMB		
	comp=Z,320nm,4.2s						
KSH				LR	LR		
	comp=Z,200nm,5.1s						
KURK	Kurchatov	165.00	47	ePKPdf	PKPdf	22 25 36.6	-1.6
ZALV	Zalesovo Beam	165.65	27	PKP	PKPdf	22 25 35.9	-2.8
ZALV				PKPab	PKPab	22 26 37.9	+0.3
ZALV	Zalesovo Beam	165.65	27	PKP	PKPdf	22 25 35.9	-2.8
	comp=Z,0.4nm,0.4s,baz=318,slow=1.9,SNR=4.4						
ZALV				PKPab	PKPab	22 26 37.9	+0.3
	comp=Z,0.4nm,0.4s,baz=311,slow=5.3,SNR=2.7						
CD2	Chengdu	167.55	213	ePKP	PKPdf	22 25 41.0	+0.1
CD2				PKPab	PKPab	22 26 48.5	+1.8
CD2				SKKS		22 37 22.5	
CD2				SS	SS	22 51 21.8	+0.2
CD2				AMB	AMB		
	comp=Z,110nm,7.2s						
CD2				LR	LR		
	comp=N,150nm,17.8s						
CD2				LR	LR		
	comp=Z,190nm,11.9s						
HHC	Hu-ho-hao-te	168.22	271	ePKP	PKPdf	22 25 43.2	+2.0
HHC				PKS	PKSdf	22 29 14.4	+0.7
HHC				PP	PP	22 30 43.6	+4.3
HHC				SKS	SKSdf	22 32 45.6	+0.7
HHC				SKKS	SKKSac	22 37 29.6	+3.6
HHC				SS	SS	22 51 33.1	+2.7
HHC				AMB	AMB		
	comp=Z,65nm,8.9s						
HHC				LR	LR		
	comp=N,280nm,19.2s						
HHC				LR	LR		
	comp=E,390nm,20.3s						
HHC				LR	LR		
	comp=Z,390nm,21.0s						
MKAR	Makanchi Array	168.95	58	PKP	PKPdf	22 25 40.2	-1.1
MKAR				PKPab	PKPab	22 26 52.6	+0.1
MKAR				PP	PP	22 30 42.7	+0.2
MKAR	Makanchi Array	168.95	58	PKP	PKPdf	22 25 40.2	-1.1
	comp=Z,0.4nm,0.9s,baz=291,slow=4.0,SNR=3.7						
MKAR				PKPab	PKPab	22 26 52.7	+0.1
	comp=Z,0.8nm,0.8s,baz=308,slow=2.8,SNR=4.6						
MKAR				PP	PP	22 30 42.7	+0.2
	comp=Z,0.8nm,1.1s,baz=297,slow=6.3,SNR=4.9						
SONM	Songino Array	170.36	313	PKP	PKPdf	22 25 39.1	-3.2
SONM				PKPab	PKPab	22 26 55.4	-3.5
SONM				PP	PP	22 30 45.3	-4.1
SONM	Songino Array	170.36	313	PKP	PKPdf	22 25 39.1	-3.2
	comp=Z,0.1nm,0.3s,baz=58,slow=5.6,SNR=2.5						
SONM				PKPab	PKPab	22 26 55.4	-3.5
	comp=Z,0.2nm,0.3s,baz=64,slow=5.1,SNR=4.9						
SONM				PP	PP	22 30 45.3	-4.1
	comp=Z,0.1nm,0.3s,baz=113,slow=3.3,SNR=4.0						
LZH	Lanzhou	171.69	230	ePKP	PKPdf	22 25 43.5	+0.1
LZH				pPKP	pPKPdf	22 25 46.7	-0.1
LZH				sPKP		22 25 48.0	
LZH				SKKS		22 37 41.3	
LZH				AMB	AMB		
	comp=Z,160nm,8.6s						
LZH				LR	LR		
	comp=N,380nm,18.1s						
LZH				LR	LR		
	comp=E,360nm,18.0s						
LZH				LR	LR		
	comp=Z,420nm,20.3s						
WMQ	Urumqi	173.55	68	ePKP	PKPdf	22 25 47.0	+3.2
WMQ				PKS	PKSdf	22 29 19.0	+3.0
WMQ				ePP	PP	22 31 11.0	+5.4
WMQ				SKS	SKSdf	22 32 50.0	+3.1
WMQ				AMB	AMB		
	comp=Z,93nm,4.6s						
WMQ				LR	LR		
	comp=N,170nm,23.6s						
WMQ				LR	LR		
	comp=E,250nm,26.0s						
WMQ				LR	LR		
	comp=Z,180nm,37.6s						

*NEIC **10** 22:05:42.3,32°.06N×115°.49W,h6km,ML3.7(ECX), ML3.5(PAS),After ECX.*
NEIC Felt at El Centro, California.
ECX 10 22:05:42.3±0.6**,32°.06N×115°.49W,h6km,MD3.6,ML3.7, 7C-2D,California-Baja California border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EMX	El Mayor	0.22	109	eP	Pg	22 05 43.9	-2.7
EMX				eS	Sg	22 05 47.1	-2.5
EMX	El Mayor	0.22	109	⇑eP	Pg	22 05 43.9	-2.7
EMX				eS	Sg	22 05 47.1	-2.5
EMX				⇑e		22 05 47.9	
	comp=E,12μm,0.4s						
CPBX	Cerro Prieto	0.39	23	⇓eP	Pg	22 05 49.1	-0.8
CPBX				eS	Sg	22 05 54.7	-0.3
CPBX				⇓e		22 05 59.9	
	comp=E,21μm,0.2s						
CPBX				⇑e		22 06 00.1	
	comp=N,18μm,0.3s						
SGL	Mount Signal	0.62	341	eP	Pg	22 05 52.9	-1.4
SGL	Mount Signal	0.62	341	eP	Pg	22 05 52.9	-1.4
YUH	Yuha Desert	0.69	328	eP	Pg	22 05 53.9	-1.7
YUH	Yuha Desert	0.69	328	eP	Pg	22 05 53.9	-1.7
ECBX	El Chinero	0.69	148	⇑eP	Pg	22 05 52.7	-3.0
ECBX				eS	Sg	22 06 02.2	-2.4
ECBX				⇑e		22 06 03.9	
	comp=E,2μm,0.5s						
ERPC	Ernies Place	0.70	348	eP	Pg	22 05 54.9	-0.8
DVTC	Desert V Tower	0.79	319	eP	Pg	22 05 56.8	-0.9
EMSC	East Mesa	0.80	32	eP	Pg	22 05 56.3	-1.3
COK	Cook Ranch	0.81	346	eP	Pg	22 05 56.9	-1.0
COA	Coachella	0.86	21	eP	Pg	22 05 56.9	-1.8
SWSC	Sam W. Stewart	0.92	343	eP	Pg	22 05 58.3	-1.6
CRR	Carrizo Plain	0.92	334	eP	Pg	22 05 57.9	-2.1
CRR	Carrizo Plain	0.92	334	eP	Pg	22 05 57.9	-2.1
YMD	Yuma Desert	0.94	58	eP	Pg	22 05 58.6	-1.7
YMD	Yuma Desert	0.94	58	eP	Pg	22 05 58.6	-1.7
SPX	San Pedro Mart	1.01	179	⇑eP	Pg	22 06 00.2	-2.0
SPX				eS	Sg	22 06 13.9	-1.8
CBX	Cerro Bola	1.03	284	⇑eP	Pg	22 06 00.4	-1.9
CBX				eS	Sg	22 06 14.1	-1.7
GLA	Glamis	1.13	29	ePn	Pg	22 06 00.6	-3.6
GLA				eS	Sg	22 06 16.0	-3.0
BAR	Barrett	1.18	302	eP	Pg	22 06 02.7	-2.3
BAR				eS	Sg	22 06 18.0	-2.4
BAR	Barrett	1.18	302	eP	Pg	22 06 02.5	-2.5
PFO	Pinyon Flat Ob	1.75	332	ePn	Pn	22 06 10.0	-3.3
PFO				eSn	Sn	22 06 35.7	-0.3
LDFC	Landfair	3.03	6	ePn	Pn	22 06 29.1	-1.8
LDFC				S	Sg	22 07 21.9	+2.0
MWC	Mount Wilson	3.05	316	ePn	Pn	22 06 30.4	-1.0
MWC				eSn	Sn	22 07 06.4	-2.0
MWC				eSg	Sb	22 07 16.3	+1.3
PASC	Pasadena Art C	3.09	314	ePn	Pn	22 06 29.8	-1.9
PASC				eS	Sb	22 07 14.5	-1.3
GSC	Goldstone	3.41	342	ePn	Pn	22 06 34.9	-1.4
GSC				eS	Sg	22 07 30.7	-1.6
OSI	Osito Adit	3.72	314	ePn	Pn	22 06 43.4	+3.0
OSI				eSn	Sb	22 07 36.2	+2.3
TUC	Tucson	3.99	85	ePn	Pn	22 06 43.1	-1.1
TUC				ePg	Pg	22 06 57.6	-1.4
TUC				eSn	Sn	22 07 29.2	-2.2
CCUT	Cedar City	5.75	17	ePn	Pn	22 07 07.4	-1.1
	comp=E,1.8nm,0.6s						
CCUT				eSg	Sg	22 08 46.5	-1.0
MVU	Marysvale	6.96	22	ePn	Pn	22 07 23.4	-1.8
	comp=E,2.7nm,0.9s						

*CSEM **10** 22:20:43.4±0.4,37°.06N×32°.17E,h2km,MD3.1,Error ellipse: s-maj=12.8km s-min=5.0km az=76.0*
*DDA **10** 22:20:43.9,37°.04N×32°.28E,h27km,MD3.1*
*ISK **10** 22:20:47.0,37°.27N×32°.28E,h4km,MD2.6*
ISC 10 22:20:43.0±1.2**,37°.07N**±0°.03×**32°.22E**±0°.06**,h6km**±11km**, n16,**σ**0.50**/28**,Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ERMK	Ermenek	0.70	127	i P	Pg	22 20 56.3	-0.2
ERMK				i S	Sb	22 21 07.2	-0.5
ERMK	Ermenek	0.70	127	i P	Pg	22 20 56.3	-0.2
ERMK				i S	Sb	22 21 07.2	-0.5
GAZI	Gazipasa	0.83	175	i P	Pg	22 20 58.9	-0.1
GAZI				i S	Sg	22 21 10.5	+0.6
GAZI	Gazipasa	0.83	175	i P	Pg	22 20 58.9	-0.1
GAZI				i S	Sg	22 21 10.5	+0.6
KONT	Konya--Tatoy	0.88	7	ePG	Pb	22 21 00.7	-0.1
KONT				eSG	Sg	22 21 10.7	-0.8
KONT	Konya--Tatoy	0.88	7	ePg	Pb	22 21 00.7	-0.1
KONT				eSg	Sg	22 21 10.7	-0.8
LADK	Ladik-KONYA	1.14	6	ePG	Pb	22 21 05.4	+0.2
LADK				eSG	Sg	22 21 18.8	-0.8
LADK	Ladik-KONYA	1.14	6	ePg	Pb	22 21 05.4	+0.2
LADK				eSg	Sg	22 21 18.8	-0.8
KDHN	Kadinhani	1.45	357	i P	Pn	22 21 10.0	0.0
KDHN				i S	Sn	22 21 29.2	-0.2
KDHN	Kadinhani	1.45	357	i P	Pn	22 21 10.0	0.0
KDHN				i S	Sn	22 21 29.2	-0.2
SULT	Sultanhani-AKS	1.53	42	ePN	Pg	22 21 13.2	+0.9
SULT	Sultanhani-AKS	1.53	42	ePn	Pg	22 21 13.2	+0.9
KIZT	Kizilcal	1.83	352	ePN	Pb	22 21 17.2	+0.3
KIZT	Kizilcal	1.83	352	ePn	Pb	22 21 17.3	+0.3
GULE	Gulek	2.05	83	eP	Pb	22 21 20.7	-0.1
GULE				i S	Sb	22 21 47.0	+0.4
GULE	Gulek	2.05	83	eP	Pb	22 21 20.7	-0.1
GULE				i S	Sb	22 21 47.0	+0.4

IDC 10 22:26:04.4±2.9**,32°.95S×178°.31W,h0km,mb3.8**/2**, mb1 4.2**/4**,mb1mx3.9**/19**,mbtmp4.1**/4**,ML4.1**/2**,MS3.5**/2**, Ms1 3.5**/2**,ms1mx3.1**/30**,Error ellipse: s-maj=70.6km s-min=32.7km az=114.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.70	5	LR	LR	22 28 13.5	
	comp=Z,276nm,20.2s,baz=43,slow=35						
URZ	Urewera	6.48	214	Pn	Pn	22 27 41.5	+0.4
	3.1nm,0.3s,baz=238,slow=5.2,SNR=10						
URZ				Sn	Sn	22 28 55.0	-0.8
	4.4nm,0.3s,baz=130,slow=22,SNR=8.8						
RPZ	Rata Peaks	13.60	215	Pn	Pn	22 29 17.9	-0.6
	1.2nm,0.3s,baz=7.6,slow=16,SNR=4.9						
ASAR	Alice Springs	42.78	270	P	P	22 34 04.0	+0.1
	0.7nm,0.7s,baz=114,slow=6.4,SNR=3.1						
WRA	Warramunga Arr	43.99	275	P	P	22 34 13.6	-0.1
	0.4nm,0.3s,baz=114,slow=7.8,SNR=4.5						
KDAK	Kodiak Island	92.94	13	LR	LR	23 18 29.8	
	comp=Z,62nm,18.8s,baz=99,slow=34						
FINES	FINESS Array B	147.43	338	PKPbc	PKPbc	22 45 48.5	-0.9
	0.7nm,0.4s,baz=55,slow=5.3,SNR=7.3						

*IDC **10** 22:29:43.2±1.4,10°.42S×162°.22E,h0km,mb3.8/4, mb1 4.1/7,mb1mx3.8/23,mbtmp4.0/7,ML4.2/3,MS3.5/3, Ms1 3.5/3,ms1mx3.1/31,Error ellipse: s-maj=34.0km s-min=27.2km az=21.0*
*ISCJB **10** 22:29:48.1±0.7,10°.64S±0°.08×162°.10E±0°.09,h54km, mb3.9/5,MS3.8/1,Error ellipse: s-maj=15.0km s-min=8.2km az=139.2*
*NEIC **10** 22:29:48.1±0.5,10°.48S×162°.08E,h35km,mb4.6/3,Error ellipse: s-maj=10.6km s-min=9.2km az=80.0*
ISC 10 22:29:49.6±0.8**,10°.62S**±0°.09×**162°.1E**±0°.1**,h54km,n24, σ1.37**/25**,mb3.7**/5**,Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HNR	Honiara	2.43	299	ePn	Pn	22 30 24.1	-2.7
HNR				eSn	Sn	22 30 55.0	-0.4
HNR	Honiara	2.43	299	Pn	Pn	22 30 24.0	-2.9
	214nm,0.3s,baz=162,slow=22,SNR=15						
HNR				Sn	Sn	22 30 56.6	+1.2
	977nm,0.3s,baz=180,slow=23,SNR=12						
HNR				LR	LR	22 31 27.2	
	comp=Z,567nm,18.1s,baz=198,slow=42						
DZM	Mont Dzumac	12.12	160	ePn	Pn	22 32 40.5	+0.8
DZM				eSn	Sn	22 34 50.2	-3.3
DZM	Mont Dzumac	12.12	160	Pn	Pn	22 32 39.9	+0.1
	0.7nm,0.3s,baz=180,slow=21,SNR=12						
DZM				Sn	Sn	22 34 53.6	+0.1
	0.6nm,0.3s,baz=285,slow=20,SNR=5.2						
PMG	Port Moresby	14.76	273	LR	LR	22 38 21.4	
	comp=Z,143nm,20.2s,baz=275,slow=35						
CTA	Charters Tower	17.93	236	P	Pn	22 33 55.7	+0.4
CTA	Charters Tower	17.93	236	P	Pn	22 33 55.7	+0.4
	0.3nm,0.3s,baz=69,slow=15,SNR=6.1						
CTAO	Charters Tower	17.93	236	eP	Pn	22 33 55.7	+0.4
	7.3nm,0.7s						
COEN	Coen	18.79	258	eP	P	22 34 04.5	-0.2
	63nm,0.8s						
AFI	Afiamalu	25.73	100	LR	LR	22 43 33.0	
	comp=Z,268nm,21.0s,baz=158,slow=32						
WRAB	Tennant Creek	28.29	248	eP	P	22 35 39.2	+1.0
	22nm,1.4s						
FITZ	Fitzroy Crossi	36.04	254	P	P	22 36 48.7	+2.6
	2.4nm,0.7s,baz=76,slow=8.0,SNR=3.1						
KKM	Kota Kinabalu	48.59	288	eP	P	22 38 28.1	-0.2
MAJO	Matsushiro	52.02	336	eP	P	22 38 53.3	-0.5
CHTO	Chiang Mai	68.79	295	eP	P	22 40 48.8	+0.1
SONM	Songino Array	76.24	325	P	P	22 41 33.9	+1.3
SONM	Songino Array	76.24	325	P	P	22 41 33.8	+1.3
	0.5nm,0.5s,baz=137,slow=6.2,SNR=4.4						
LSA	Lhasa	79.11	303	eP	P	22 41 49.2	-0.1
DIB	Dawson Inlet,	84.28	33	T	T	00 15 29.0	
NVAR	Mina Array Bea	88.50	51	P	P	22 42 36.9	+0.1
NVAR	Mina Array Bea	88.50	51	P	P	22 42 36.9	+0.1
	0.1nm,0.4s,baz=246,slow=6.4,SNR=2.2						
MK31	Makanchi Array	90.78	317	eP	P	22 42 46.4	-0.6
MKAR	Makanchi Array	90.78	317	P	P	22 42 47.4	+0.4
MKAR	Makanchi Array	90.78	317	P	P	22 42 47.4	+0.4
	0.1nm,0.6s,baz=94,slow=4.6,SNR=3.6						

*ISCJB **10** 22:47:22.6±0.5,2°.80S±0°.08×68°.00E±0°.10,h11km, mb4.0/14,MS4.0/4,Error ellipse: s-maj=14.2km s-min=11.9km az=171.5*
*IDC **10** 22:47:23.0±1.0,2°.80S×67°.94E,h0km,mb3.8/11, mb1 4.0/11,mb1mx3.7/28,mbtmp3.8/11,MS4.1/4, Ms1 4.0/4,ms1mx3.1/46,Error ellipse: s-maj=27.1km s-min=23.3km az=20.0*
*NEIC **10** 22:47:24.2±0.5,2°.81S×67°.94E,h10km,mb4.4/5,Error ellipse: s-maj=13.6km s-min=11.3km az=93.0*
ISC 10 22:47:24.6±0.6**,2°.8S**±0°.1×**67°.9E**±0°.1**,h11km,n30, σ1.09**/27**,mb4.0**/14**,MS4.0**/4**,Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DGAR	Diego Garcia	6.39	136	eP	Pn	22 48 58.2	-0.5
RER	Riviere de l'E	21.74	212	eP	P	22 52 16.9	+0.5
	44nm,0.8s						
OPO	Ambohidratompo	25.64	231	LR	LR	23 00 57.6	
	comp=Z,635nm,19.4s,baz=342,slow=32						
KMBO	Kilima Mbogo	30.72	273	LR	LR	23 04 29.1	
	comp=Z,187nm,21.7s,baz=159,slow=33						
CMAR	Chiang Mai Arr	37.14	54	P	P	22 54 37.2	+1.5
CMAR	Chiang Mai Arr	37.14	54	P	P	22 54 37.2	+1.5
	0.6nm,0.5s,baz=228,slow=11,SNR=7.2						
LSZ	Lusaka	41.07	250	eP	P	22 55 09.2	+0.4
	3.4nm,1.0s						
LSZ	Lusaka	41.07	250	P	P	22 55 10.5	+1.6
	1.1nm,0.7s,baz=90,slow=11,SNR=2.7						
AAK	Ala-Archa	45.65	7	eP	P	22 55 45.2	-0.3
	6.1nm,1.4s						
AAK	Ala-Archa	45.65	7	P	P	22 55 45.6	+0.2
	1.1nm,0.5s,baz=201,slow=14,SNR=4.6						
BOSA	Boshof	48.02	233	eP	P	22 56 03.8	-0.4
	11nm,1.6s						
BOSA	Boshof	48.02	233	LR	LR	23 12 58.2	
	comp=Z,134nm,21.5s,baz=125,slow=32						
MKAR	Makanchi Array	51.02	13	P	P	22 56 25.1	-1.5
MKAR	Makanchi Array	51.02	13	P	P	22 56 25.1	-1.5
	0.4nm,0.8s,baz=183,slow=5.8,SNR=4.9						
KBZ	Khabaz	51.53	337	P	P	22 56 30.9	+0.4
KBZ	Khabaz	51.53	337	P	P	22 56 30.9	+0.4
	1.9nm,0.9s,baz=167,slow=0.9,SNR=3.6						
BRTR	Keskin Array B	52.77	327	P	P	22 56 39.9	-0.2
BRTR	Keskin Array B	52.77	327	P	P	22 56 39.9	-0.2
	0.7nm,0.9s,baz=157,slow=6.7,SNR=5.6						
KURK	Kurchatov	54.13	8	eP	P	22 56 47.6	-1.9
	2.3nm,1.0s						
ZALV	Zalesovo Beam	58.31	12	P	P	22 57 18.1	-1.3
ZALV	Zalesovo Beam	58.31	12	P	P	22 57 18.1	-1.3
	1.1nm,0.7s,baz=190,slow=7.3,SNR=5.9						
SONM	Songino Array	60.62	29	P	P	22 57 36.7	+1.1
SONM	Songino Array	60.62	29	P	P	22 57 36.7	+1.1
	2.5nm,1.0s,baz=225,slow=7.1,SNR=13						
SONM				LR	LR	23 23 38.3	
	comp=Z,212nm,18.4s,baz=328,slow=36						
WRA	Warramunga Arr	66.86	110	P	P	22 58 17.0	-0.3
WRA	Warramunga Arr	66.86	110	P	P	22 58 17.0	-0.3
	0.5nm,0.5s,baz=288,slow=5.8,SNR=2.7						
ASAR	Alice Springs	66.88	114	P	P	22 58 17.4	0.0
ASAR	Alice Springs	66.88	114	P	P	22 58 17.4	0.0

	0.4nm,0.5s,baz=277,slow=5.6,SNR=4.2						
ESDC	**Sonseca Array**	**77.99**	**311**	P	**P**	**22 59 23.4**	**0.0**
	1.1nm,0.8s,baz=98,slow=5.2,SNR=3.7						
TXAR	**Lajitas Array**	**152.47**	**344**	PKPbc	**PKPbc**	**23 07 20.2**	**-1.7**
TXAR	**Lajitas Array**	**152.47**	**344**	PKPbc	**PKPbc**	**23 07 20.2**	**-1.7**
	0.2nm,0.5s,baz=66,slow=4.4,SNR=2.9						

NIED ***10*** *22:53:00, 35°.30N×137°.50E, h11km, Mw3.4 Best double couple: M₀1.46000×10¹⁴ NP1:φs154.00000°, δ51.00000°, λ66.00000°. NP2:φs9.00000°, δ45.00000°, λ116.00000°.*

JMA 10 22:53:04.2, 35°.29N×137°.47E, h11km, M3.7, 5D Broadband fault plane solution: P waves. NP1: φs151.00000°**,** δ50.00000°**,** λ66.00000°. **NP2:**φs5.00000°**,** δ46.00000°**,** λ115.00000°. **Principal axes:** T Plg72.0000°**,** Azm355.0000°**;** N Plg18.0000°**,** Azm166.0000°**;** P Plg2.0000°**,** Azm257.0000°**; Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAO	**Obara**	**0.17**	**262**	⇓P	Pg	22 53 08.2	+0.1
JAO				S	Sg	22 53 11.1	+0.2
JNY	**Yasuok**	**0.33**	**78**	⇓P	Pg	22 53 10.9	0.0
JNY				S	Sg	22 53 15.7	+0.3
SHZ3	**Shizuoka 3**	**0.65**	**110**	⇓P	Pg	22 53 16.7	-0.2
SHZ3				S	Sg	22 53 25.8	+0.4
JGM	**Miyama**	**0.74**	**304**	⇓P	Pg	22 53 18.3	-0.2
JGM				S	Sg	22 53 27.4	-0.9
JYN	**Shimob**	**0.90**	**76**	⇓P	Pg	22 53 21.2	-0.5
TSUJ	**Tsu 2**	**1.04**	**236**	P	Pb	22 53 22.7	-1.5
TSUJ				S	Sg	22 53 37.2	-0.5

CASC 10 23:04:04.9±4.6**, 8°.73N**×**82°.92W, h13**km±50km**, MD3.5, 1C, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRU2	**Volcan**	**0.23**	**74**	⇑iP	Pg	23 04 10.6	+0.6
BRU2				eS	Sb	23 04 15.4	0.0
ACR	**Cerro Adams**	**0.26**	**253**	eP	Pn	23 04 13.2	-1.4
TBS2		**0.26**	**76**	eP	Pb	23 04 12.4	+0.6
TBS2				eS	Sb	23 04 16.5	+0.2
CGA2	**Cerro Gallo 2**	**1.99**	**310**	eP	Pn	23 04 39.9	+1.3

NOU ***10*** *23:08:52.9±2.1, 16°.24S×168°.59E, h30km, MD4.1, ML4.7*
BJI ***10*** *23:09:01.6, 16°.69S×168°.43E, h213km, mB4.9/24, mb5.0/38*
IDC ***10*** *23:09:02.3±0.5, 17°.06S×168°.26E, h216km±4km, mb4.3/24, mb1 4.4/26, mb1mx4.4/29, mbtmp4.3/26, Error ellipse: s-maj=10.3km s-min=9.0km az=110.0*
MOS ***10*** *23:09:02.5±1.0, 17°.05S×168°.19E, h226km, mb5.0/19, Error ellipse: s-maj=9.4km s-min=8.5km az=14.3*
NEIC ***10*** *23:09:02.3±0.1, 17°.01S×168°.22E, mb5.1/38, Error ellipse: s-maj=5.2km s-min=4.1km az=145.0*
ISCJB ***10*** *23:09:03.1±0.7, 17°.06S±0°.04×168°.20E±0°.04, h233km±6km, mb4.8/73, Error ellipse: s-maj=6.2km s-min=5.6km az=37.6*
GCMT ***10*** *23:09:05.9±0.2, 17°.01S×168°.15E, h238km±1km, MW5.3, Moment Tensor Solution. s54,c76; s70,c104; Moment tensor: Scale 10¹⁷Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M₀1.10000×10¹⁷ NP1:φs270.00000°, δ62.00000°, λ152.00000°. NP2:φs14.00000°, δ65.00000°, λ31.00000°. Principal axes: T 1.0600, Plg39.0000°, Azm233.0000°; N 0.0500, Plg51.0000°, Azm49.0000°; P -1.1100, Plg2.0000°, Azm141.0000°; Data Used: II IU IC G CN.*
DJA ***10*** *23:09:06.1±2.6, 17°S±8°×16°8E±1°1, h250km±34km, M5.1/14, mB5.5/8, mb5.3/14, Mw(mB)4.9/8*
ISC 10 23:09:02.8±0.3**, 17°.08S**±0°.04×**168°.32E**±0°.05**, h222**km±2km**, h222**km**:pP-P, n430,** σ1**s.32**/504**, mb4.9**/70**, 19C-13D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**5.23**	**195**	eS	**S**	**23 11 24.7**	**+2.5**
DZM	**Mont Dzumac**	**5.27**	**199**	ePn	**Pn**	**23 10 19.4**	**-1.8**
	701nm,1.2s						
DZM				eSn	**S**	**23 11 28.1**	**+4.8**
	1µm,1.2s						
DZM	**Mont Dzumac**	**5.27**	**199**	eP	**Pn**	**23 10 19.3**	**-2.0**
DZM				eS	**S**	**23 11 24.7**	**+1.4**
DZM				AMP		23 11 32.4	
	comp=Z,2µm,0.7s						
DZM	**Mont Dzumac**	**5.27**	**199**	ePn	**Pn**	**23 10 20.8**	**-0.4**
	comp=Z,199nm,0.8s						
DZM				eS	**S**	**23 11 23.6**	**+0.3**
DZM	**Mont Dzumac**	**5.27**	**199**	P	**Pn**	**23 10 20.9**	**-0.3**
	comp=Z,15nm,0.3s,baz=36,slow=17,SNR=111						
DZM				S	**S**	**23 11 27.4**	**+4.0**
	comp=Z,23nm,0.3s,baz=121,slow=21,SNR=9.7						
NOUC	**Port Laguerre**	**5.34**	**200**	eP	**Pn**	**23 10 23.1**	**+1.1**
NOUC				AMP		23 11 41.1	
	comp=Z,66nm,7.7s						
MVNO	**Noumea**	**5.46**	**199**	eP	**Pn**	**23 10 22.9**	**-0.5**
MVNO				eS	**S**	**23 11 30.3**	**+2.9**
MSVF	**Nonsavu**	**9.32**	**95**	Pn	**Pn**	**23 11 15.0**	**+2.0**
	comp=Z,644nm,1.4s,SNR=12						
MSVF	**Nonsavu**	**9.32**	**95**	eP	**Pn**	**23 11 15.0**	**+2.0**
MSVF	**Nonsavu**	**9.32**	**95**	ePn	**Pn**	**23 11 15.0**	**+2.0**
HNR	**Honiara**	**11.14**	**312**	ePn	**Pn**	**23 11 34.9**	**-1.4**
HNR				eS	**S**	**23 13 36.5**	**-3.0**
HNR	**Honiara**	**11.14**	**312**	P	**Pn**	**23 11 35.9**	**-0.4**
	comp=Z,8.5nm,0.3s,baz=284,slow=5.2,SNR=8.5						
RAO	**Raoul Island**	**17.50**	**136**	eP	**Pn**	**23 12 53.3**	**-0.4**
	comp=Z,1µm,0.9s						
EIDS	**Eidsvold**	**18.05**	**240**	eP	**P**	**23 12 58.8**	**+1.1**
	comp=Z,298nm,1.1s						
OUZ	**Omahuta**	**18.67**	**166**	eP	**Pn**	**23 13 06.5**	**-1.0**
	comp=Z,618nm,1.4s						
TARA	**Tarawa**	**18.87**	**14**	eP	**P**	**23 13 06.5**	**-0.2**
	comp=Z,510nm,1.4s						
ARMA	**Armidale**	**20.20**	**226**	eP	**P**	**23 13 21.6**	**+0.7**
	comp=Z,241nm,1.0s						
CTA	**Charters Tower**	**21.12**	**258**	P	**P**	**23 13 30.7**	**0.0**
CTA				S	**S**	**23 17 10.6**	**-1.2**
CTA	**Charters Tower**	**21.12**	**258**	P	**P**	**23 13 30.7**	**0.0**
	comp=Z,112nm,0.8s,baz=85,slow=12,SNR=56						
CTA				S	**S**	**23 17 10.6**	**-1.2**
	comp=Z,1.6nm,0.5s,baz=168,slow=20,SNR=2.1						
CTAO	**Charters Tower**	**21.12**	**258**	eP	**P**	**23 13 30.6**	**0.0**
CTAO				pmax	pmax		
	comp=Z,132nm,0.8s						
CTAO	**Charters Tower**	**21.12**	**258**	eP	**P**	**23 13 30.6**	**0.0**
	comp=Z,132nm,0.8s						
PMG	**Port Moresby**	**21.95**	**288**	eP	**P**	**23 13 39.1**	**+0.3**
PMG	**Port Moresby**	**21.95**	**288**	P	**P**	**23 13 39.8**	**+1.1**
PMG	**Port Moresby**	**21.95**	**288**	P	**P**	**23 13 38.5**	**-0.2**
	comp=Z,34nm,0.8s,baz=72,slow=5.5,SNR=6.1						
HIZ	**Hauiti**	**22.11**	**166**	PN	**P**	**23 13 42.5**	**+2.4**
URZ	**Urewera**	**22.47**	**162**	eP	**P**	**23 13 44.5**	**+1.2**
URZ	**Urewera**	**22.47**	**162**	PN	**P**	**23 13 44.3**	**+1.0**
URZ	**Urewera**	**22.47**	**162**	P	**P**	**23 13 44.1**	**+0.8**
	comp=Z,74nm,1.0s,baz=39,slow=6.4,SNR=14						
MWZ	**Matawai**	**22.67**	**161**	PN	**P**	**23 13 46.4**	**+1.3**
FWVZ	**Far West T-bar**	**22.98**	**165**	PN	**P**	**23 13 50.3**	**+2.1**
BKZ	**Black Stump Fm**	**23.14**	**164**	PN	**P**	**23 13 50.4**	**+1.0**
KNZ	**Kokohu**	**23.34**	**161**	PN	**P**	**23 13 51.7**	**+0.6**
ANWZ	**Angora Road**	**24.35**	**165**	PN	**P**	**23 13 57.9**	**-2.4**
COEN	**Coen**	**24.42**	**274**	eP	**P**	**23 14 01.2**	**0.0**
	comp=Z,413nm,1.0s						
CAN	**Canberra**	**25.03**	**220**	eP	**P**	**23 14 07.1**	**+0.5**
CAN				pmax	pmax		
	comp=Z,82nm,1.0s						
CAN	**Canberra**	**25.03**	**220**	eP	**P**	**23 14 07.1**	**+0.5**
	comp=Z,82nm,1.0s						
KHZ	**Kahutara**	**25.65**	**171**	eP	**P**	**23 14 11.5**	**-0.5**
	comp=Z,89nm,1.3s						
RPZ	**Rata Peaks**	**26.66**	**176**	P	**P**	**23 14 21.2**	**+0.2**
RPZ	**Rata Peaks**	**26.66**	**176**	P	**P**	**23 14 21.2**	**+0.2**
	comp=Z,12nm,0.6s,baz=321,slow=6.5,SNR=4.2						
STKA	**Stephens Creek**	**28.33**	**234**	P	**P**	**23 14 36.5**	**+0.4**
STKA				PcP	**PcP**	**23 17 43.1**	**0.0**
STKA				ScP	**ScP**	**23 21 04.8**	**+1.8**
STKA	**Stephens Creek**	**28.33**	**234**	P	**P**	**23 14 36.5**	**+0.4**
	comp=Z,195nm,0.8s,baz=57,slow=7.3,SNR=234						
STKA				PcP	**PcP**	**23 17 43.1**	**0.0**
	comp=Z,10nm,0.9s,baz=98,slow=5.9,SNR=3.0						
STKA				ScP	**ScP**	**23 21 04.9**	**+1.8**
	comp=Z,5.6nm,1.0s,baz=133,slow=4.8,SNR=3.5						
WRAB	**Tennant Creek**	**32.30**	**260**	eP	**P**	**23 15 09.7**	**-1.5**
WRAB				e		23 17 54.0	
WRAB				pmax	pmax		
	comp=Z,179nm,1.7s						
WRAB	**Tennant Creek**	**32.30**	**260**	eP	**P**	**23 15 09.7**	**-1.5**
	comp=Z,179nm,1.7s						
WRAB				ePcP	**PcP**	**23 17 54.0**	**+0.2**
WRAB	**Tennant Creek**	**32.30**	**260**	P	**P**	**23 15 09.6**	**-1.6**
	comp=Z,238nm,1.3s,SNR=14						
WRA	**Warramunga Arr**	**32.31**	**260**	P	**P**	**23 15 09.7**	**-1.5**
WRA				PcP	**PcP**	**23 17 53.7**	**-0.1**
WRA				S	**S**	**23 20 06.2**	**-2.4**
WRA				ScP	**ScP**	**23 21 18.3**	**+1.9**
WRA	**Warramunga Arr**	**32.31**	**260**	P	**P**	**23 15 09.7**	**-1.5**
	comp=Z,26nm,0.8s,baz=90,slow=8.7,SNR=79						
WRA				PcP	**PcP**	**23 17 53.7**	**-0.1**
	comp=Z,7.9nm,0.7s,baz=90,slow=2.8,SNR=10						
WRA				S	**S**	**23 20 06.2**	**-2.4**
	comp=Z,3.3nm,1.1s,baz=89,slow=14,SNR=4.6						
WRA				ScP	**ScP**	**23 21 18.3**	**+1.9**
	comp=Z,6.9nm,1.1s,baz=86,slow=3.7,SNR=10						
AS31	**Alice Springs**	**32.86**	**253**	eP	**P**	**23 15 15.4**	**-0.6**
AS31				ePcP	**PcP**	**23 17 54.9**	**-0.5**
ASAR	**Alice Springs**	**32.86**	**253**	P	**P**	**23 15 15.3**	**-0.7**
ASAR				PcP	**PcP**	**23 17 55.0**	**-0.3**
ASAR				S	**S**	**23 20 13.2**	**-3.8**
ASAR				ScP	**ScP**	**23 21 20.2**	**+2.0**
ASAR	**Alice Springs**	**32.86**	**253**	P	**P**	**23 15 15.3**	**-0.7**
	comp=Z,263nm,0.7s,baz=78,slow=9.0,SNR=1306						
ASAR				PcP	**PcP**	**23 17 55.0**	**-0.3**
	comp=Z,7.1nm,0.8s,baz=101,slow=2.7,SNR=6.3						
ASAR				S	**S**	**23 20 13.2**	**-3.8**
	comp=Z,1.6nm,1.1s,baz=87,slow=20,SNR=2.9						
ASAR				ScP	**ScP**	**23 21 20.2**	**+2.0**
	comp=Z,6.7nm,1.1s,baz=91,slow=3.7,SNR=15						
BBOO	**Buckleboo**	**33.01**	**236**	eP	**P**	**23 15 17.3**	**+0.1**
	comp=Z,1µm,0.8s						
BBOO				epP	**pP**	**23 16 00.2**	**-2.1**
BBOO				ePcP	**PcP**	**23 17 54.9**	**-0.7**
FORT	**Forrest**	**39.03**	**242**	eP	**P**	**23 16 08.0**	**-0.1**
	comp=Z,232nm,0.7s						
PPT2	**Papeete2**	**40.14**	**97**	eLR	LR	23 31 25.0	
	comp=Z,2µm,26.8s						
FITZ	**Fitzroy Crossi**	**40.63**	**262**	eP	**P**	**23 16 21.5**	**+0.1**
	comp=Z,261nm,0.8s						
MBWA	**Marble Bar**	**45.95**	**257**	eP	**P**	**23 17 03.9**	**0.0**
	comp=Z,82nm,0.9s						
MBWA				ePcP	**PcP**	**23 18 36.2**	**-0.8**
NWAO	**Narrogin (SRO)**	**48.45**	**241**	eP	**P**	**23 17 22.4**	**-0.6**
	comp=Z,151nm,0.9s						
KAPI	**Kappang**	**49.01**	**278**	eP	**P**	**23 17 26.7**	**-0.8**
	comp=Z,120nm,1.0s						
KAPI				epP	**pP**	**23 18 17.2**	**+1.4**
KAPI	**Kappang**	**49.01**	**278**	P	**P**	**23 17 26.5**	**-1.0**
	comp=Z,666nm,0.9s,SNR=10						
KAPI	**Kappang**	**49.01**	**278**	P	**P**	**23 17 26.7**	**-0.8**
	comp=Z,79nm,0.9s,baz=135,slow=5.3						
MYLDM	**Lahad Datu**	**53.95**	**290**	P	**P**	**23 18 06.4**	**+2.3**
TSM	**Tawau**	**54.15**	**288**	P	**P**	**23 18 06.8**	**+1.3**
SDKM	**Sandakan**	**55.32**	**290**	P	**P**	**23 18 15.7**	**+1.7**
KDM	**Kudat**	**56.19**	**291**	P	**P**	**23 18 21.0**	**+0.9**
KKM	**Kota Kinabalu**	**56.37**	**290**	eP	**P**	**23 18 21.6**	**0.0**
	comp=Z,91nm,1.6s						
KKM				ePcP	**PcP**	**23 19 15.7**	**-0.3**
KKM	**Kota Kinabalu**	**56.37**	**290**	P	**P**	**23 18 21.7**	**+0.1**
UGM	**Wanagama**	**56.98**	**272**	eP	**P**	**23 18 25.7**	**0.0**
	comp=Z,227nm,1.1s						
BTM	**Bintulu**	**58.10**	**285**	P	**P**	**23 18 34.5**	**+1.0**
SBUM	**Sibu**	**58.62**	**284**	P	**P**	**23 18 37.8**	**+0.7**
KSM	**Kuching**	**60.06**	**282**	eP	**P**	**23 18 46.9**	**-0.1**
	comp=Z,49nm,0.9s						
KSM	**Kuching**	**60.06**	**282**	P	**P**	**23 18 47.3**	**+0.3**
MJAR	**Matsushiro Arr**	**60.44**	**332**	P	**P**	**23 18 48.5**	**-0.5**
MJAR	**Matsushiro Arr**	**60.44**	**332**	P	**P**	**23 18 48.5**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=166,slow=7.8,SNR=8.0						
VNDA	**Vanda**	**60.55**	**182**	P	**P**	**23 18 49.4**	**+0.2**
VNDA	**Vanda**	**60.55**	**182**	P	**P**	**23 18 49.4**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=357,slow=7.8,SNR=7.3						
SBA	**Scott Base**	**60.80**	**180**	eP	**P**	**23 18 52.8**	**+1.9**
SBA				pmax	pmax		
	comp=Z,40nm,1.4s						
SBA	**Scott Base**	**60.80**	**180**	eP	**P**	**23 18 52.8**	**+1.9**
	comp=Z,40nm,1.4s						
XMIS	**Christmas Isla**	**61.01**	**267**	eP	**P**	**23 18 53.6**	**+0.3**
	comp=Z,478nm,0.9s						
TPUB	**Ta-pu**	**61.50**	**309**	eP	**P**	**23 18 55.7**	**-0.7**
	comp=Z,49nm,1.2s						
SSLB	**Suanglung**	**61.55**	**310**	eP	**P**	**23 18 56.1**	**-0.6**
	comp=Z,22nm,1.0s						
CASY	**Casey**	**61.76**	**203**	eP	**P**	**23 18 56.7**	**-0.7**
	comp=Z,88nm,1.3s						
CASY				epP	**pP**	**23 19 49.0**	**+0.9**
ASAJ	**Asahikawa**	**65.28**	**340**	P	**P**	**23 19 19.5**	**-1.2**
ASAJ	**Asahikawa**	**65.28**	**340**	P	**P**	**23 19 19.5**	**-1.2**
	comp=Z,3.4nm,0.3s,baz=331,slow=28,SNR=4.9						
MYKOM	**Kota Tinggi**	**66.23**	**280**	P	**P**	**23 19 27.9**	**+0.5**
KGM	**Kluang**	**66.81**	**280**	P	**P**	**23 19 31.7**	**+0.6**
NJ2	**Nanjing**	**68.05**	**316**	eP	**P**	**23 19 39.8**	**+1.3**
NJ2				pP	**pP**	**23 20 25.2**	**-4.9**
NJ2				PP	**PP**	**23 22 15.6**	**+3.7**
NJ2				S	**S**	**23 28 22.0**	**+2.1**
NJ2				pmax	pmax		
	comp=Z,40nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,30nm,4.2s						
NJ2				LR	LR		
	comp=N,260nm,28.5s						
NJ2				LR	LR		
	comp=E,180nm,23.5s						
NJ2				LR	LR		
	comp=Z,200nm,28.4s						
KTGM	**Kuala Trenggan**	**68.11**	**283**	P	**P**	**23 19 40.3**	**+1.0**
MIR	**Mirnyy**	**68.62**	**205**	⇑iP	**P**	**23 19 43.0**	**+1.6**
MIR				e		23 20 09.0	
MIR				pmax	pmax		
	comp=Z,88nm,1.2s						
FRIM	**Kepong**	**68.81**	**280**	P	**P**	**23 19 43.6**	**0.0**
USRK	**Ussuriysk Arra**	**69.42**	**333**	P	**P**	**23 19 48.2**	**+1.6**
	comp=Z,1.0nm,0.6s,baz=116,slow=8.9,SNR=3.3						
USRK				pP	**pP**	**23 20 38.6**	**+0.2**
	comp=Z,9.8nm,1.2s,baz=134,slow=5.5,SNR=3.6						
WHN	**Wuhan**	**70.26**	**312**	P	**P**	**23 19 51.0**	**-1.0**
KULM	**Kulim**	**70.42**	**282**	eP	**P**	**23 19 53.1**	**-0.3**
	comp=Z,23nm,1.0s						
KULM	**Kulim**	**70.42**	**282**	P	**P**	**23 19 53.5**	**+0.2**
PETK	**Petropavlovsk-**	**70.50**	**353**	P	**P**	**23 19 53.2**	**+0.2**
PETK				*PP	**pP**	**23 20 43.0**	**-2.0**
PETK	**Petropavlovsk-**	**70.50**	**353**	P	**P**	**23 19 53.2**	**+0.2**
PETK				pP	**pP**	**23 20 43.0**	**-2.0**
PETK	**Petropavlovsk-**	**70.50**	**353**	P	**P**	**23 19 53.2**	**+0.2**
	comp=Z,4.1nm,0.9s,baz=142,slow=7.5,SNR=7.4						
PETK				pP	**pP**	**23 20 43.0**	**-2.0**
	comp=Z,2.7nm,0.8s,baz=182,slow=4.3,SNR=1.9						
MDJ	**Mudanjiang**	**70.81**	**332**	P	**P**	**23 19 56.4**	**+1.3**
MDJ				pP	**pP**	**23 20 45.8**	**-1.4**
MDJ				sP	**sP**	**23 21 08.5**	**-2.5**
MDJ				S	**S**	**23 28 55.0**	**+3.4**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HABR	**Khabarovsk**	**71.68**	**337**	eP	**P**	**23 19 59.1**	**-1.1**
HABR				e		23 20 16.9	
HABR				e		23 22 40.7	
HABR				eS	**S**	**23 29 03.0**	**+1.7**
HABR				e		23 29 44.9	
HABR				eSS	**SS**	**23 33 43.6**	**+1.2**
HABR				pmax	pmax		
	comp=N,63nm,2.1s						
HABR				pmax	pmax		
	comp=E,156nm,2.1s						
HABR				pmax	pmax		
	comp=Z,112nm,2.6s						
HABR				MLR	MLR		
	comp=Z,74nm,19.0s						
QSPA	**South Pole Qui**	**72.96**	**180**	P	**P**	**23 20 08.2**	**+0.3**
QSPA	**South Pole Qui**	**72.96**	**180**	P	**P**	**23 20 08.1**	**+0.3**
	comp=Z,28nm,1.0s,baz=7.6,slow=1.5,SNR=81						
ENH	**Enshi**	**73.63**	**310**	eP	**P**	**23 20 11.7**	**-0.4**
	comp=Z,32nm,0.8s						
GYA	**Guiyang**	**73.87**	**305**	P	**P**	**23 20 15.4**	**+1.6**
GYA				pP	**pP**	**23 21 08.8**	**+2.6**
GYA				sP	**sP**	**23 21 32.0**	**+2.1**
GYA				PP	**PP**	**23 23 05.6**	**+3.6**
GYA				SS	**SS**	**23 34 19.0**	**+2.1**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,5.4s						
GYA				LR	LR		
	comp=N,750nm,19.0s						
GYA				LR	LR		
	comp=E,630nm,20.1s						
GYA				LR	LR		
	comp=Z,840nm,18.7s						
BJI	**Beijing**	**74.72**	**321**	P	**P**	**23 20 18.9**	**+0.8**
BJI				sP	**sP**	**23 21 35.8**	**+1.4**
BJI				S	**S**	**23 29 38.8**	**+3.0**
BJI				pmax	pmax		
	comp=Z,24nm,0.7s						
XAN	**Xi'an**	**76.01**	**313**	P	**P**	**23 20 26.4**	**+0.7**
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
KMI	**Kunming**	**76.39**	**302**	P	**P**	**23 20 29.5**	**+1.2**
KMI				PcP	**PcP**	**23 20 40.1**	**+1.0**
KMI				pP	**pP**	**23 21 23.4**	**+2.3**
KMI				sP	**sP**	**23 21 46.6**	**+1.9**
KMI				S	**S**	**23 29 54.5**	**-0.8**
KMI				SS	**SS**	**23 34 58.0**	**+2.7**
KMI				pmax	pmax		
	comp=Z,52nm,1.4s						
KMI				pmax	pmax		
	comp=Z,160nm,3.7s						
KMI				LR	LR		
	comp=N,130nm,17.6s						
KMI				LR	LR		
	comp=E,61nm,17.0s						
KMI				LR	LR		
	comp=Z,110nm,19.9s						
CM31	**Chiang Mai Arr**	**76.82**	**294**	eP	**P**	**23 20 30.8**	**+0.2**
	comp=Z,51nm,1.3s						
CMAR	**Chiang Mai Arr**	**76.82**	**294**	P	**P**	**23 20 31.3**	**+0.8**
CMAR	**Chiang Mai Arr**	**76.82**	**294**	P	**P**	**23 20 31.3**	**+0.8**
	comp=Z,16nm,1.0s,baz=126,slow=4.2,SNR=57						
CHTO	**Chiang Mai**	**76.96**	**294**	eP	**P**	**23 20 30.9**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,28nm,1.0s						
CHTO	**Chiang Mai**	**76.96**	**294**	eP	**P**	**23 20 30.9**	**-0.4**
	comp=Z,28nm,1.0s						
HHC	**Hu-ho-hao-te**	**78.02**	**320**	eP	**P**	**23 20 37.8**	**+1.0**
HHC				pP	**pP**	**23 21 32.2**	**+2.3**
HHC				sP	**sP**	**23 21 55.7**	**+2.3**
HHC				PP	**PP**	**23 23 40.1**	**+3.6**
HHC				S	**S**	**23 30 12.6**	**+0.6**
HHC				SKS	**SKSac**	**23 30 26.3**	**-3.4**
HHC				ScS	**ScS**	**23 30 34.2**	**-1.5**
HHC				sS	**sS**	**23 31 46.1**	**+1.3**
HHC				SS	**SS**	**23 35 22.8**	**+3.9**
HHC				pmax	pmax		
	comp=Z,55nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,6.7s						
CD2	**Chengdu**	**78.23**	**308**	P	**P**	**23 20 39.0**	**+0.8**
CD2				pP	**pP**	**23 21 32.0**	**+0.8**
CD2				sP	**sP**	**23 21 55.4**	**+0.6**
CD2				PP	**PP**	**23 23 40.5**	**+2.0**
CD2				S	**S**	**23 30 13.2**	**-1.3**
CD2				ScS	**SKKSac**	**23 30 34.7**	**+1.9**
CD2				sS	**sS**	**23 31 46.7**	**-0.7**
CD2				SS	**SS**	**23 35 24.4**	**+2.0**
CD2				pmax	pmax		
	comp=Z,60nm,1.1s						
CD2				pmax	pmax		
	comp=Z,120nm,5.9s						
MAW	**Mawson**	**80.10**	**202**	P	**P**	**23 20 48.4**	**+0.8**
MAW	**Mawson**	**80.10**	**202**	P	**P**	**23 20 48.4**	**+0.8**
	comp=Z,14nm,0.9s,baz=109,slow=7.3,SNR=14						
LZH	**Lanzhou**	**80.64**	**312**	⇑P	**P**	**23 20 52.8**	**+1.6**
LZH				pP	**pP**	**23 21 47.0**	**+2.5**
LZH				sP	**sP**	**23 22 10.2**	**+2.2**
LZH				PP	**PP**	**23 24 01.5**	**+3.1**
LZH				S	**S**	**23 30 41.3**	**+1.5**
LZH				SKS	**SKSac**	**23 30 45.5**	**-2.8**
LZH				sS	**sS**	**23 32 14.7**	**+1.5**
LZH				pmax	pmax		
	comp=Z,100nm,1.6s						
LZH				pmax	pmax		
	comp=Z,360nm,7.2s						
SVW2	**Sparrevohn**	**83.09**	**17**	eP	**P**	**23 21 03.4**	**+0.2**
YAK	**Yakutsk**	**84.56**	**343**	eP	**P**	**23 21 09.5**	**-1.0**
YAK				pmax	pmax		
	comp=Z,25nm,1.2s						
ULN	**Ulaanbaatar**	**84.61**	**324**	eP	**P**	**23 21 12.0**	**+0.7**
	comp=Z,15nm,0.8s						
KCPM	**Cahto Peak**	**84.86**	**46**	eP	**P**	**23 21 13.2**	**+0.5**
	comp=Z,9.8nm,0.7s						
KCPM				epP	**pP**	**23 22 06.3**	**-0.3**
BILL	**Bilibino**	**84.89**	**359**	eP	**P**	**23 21 12.0**	**0.0**
BILL				i *PP	**pP**	**23 22 04.5**	**-1.5**
BILL				pmax	pmax		
	comp=Z,67nm,1.5s						
HOPS	**Hopland**	**84.90**	**47**	eP	**P**	**23 21 14.3**	**+1.6**
SONM	**Songino Array**	**84.97**	**323**	P	**P**	**23 21 13.2**	**+0.1**
SONM	**Songino Array**	**84.97**	**323**	P	**P**	**23 21 13.2**	**+0.1**
	comp=Z,11nm,0.9s,baz=137,slow=5.0,SNR=38						
KIPM	**Iron Peak**	**84.98**	**46**	eP	**P**	**23 21 14.6**	**+1.3**
KIPM				epP	**pP**	**23 22 08.6**	**+1.3**
GTA	**Gaotai**	**85.01**	**314**	⇑P	**P**	**23 21 14.5**	**+1.0**
GTA				pP	**pP**	**23 22 08.6**	**+1.2**
GTA				sP	**sP**	**23 22 31.6**	**+0.8**
GTA				SKS	**SKSac**	**23 31 14.7**	**-2.2**
GTA				S	**S**	**23 31 23.9**	**+0.1**
GTA				sS	**sS**	**23 32 59.2**	**+1.1**
GTA				pmax	pmax		
	comp=Z,30nm,1.1s						
GTA				pmax	pmax		
	comp=Z,110nm,7.4s						
GTA				LR	LR		
	comp=N,330nm,19.5s						
GTA				LR	LR		
	comp=E,260nm,19.2s						
GTA				LR	LR		
	comp=Z,220nm,20.0s						
SAO	**San Andreas Ge**	**85.08**	**49**	eP	**P**	**23 21 14.9**	**+1.2**
SAO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SAO	**San Andreas Ge**	**85.08**	**49**	eP	**P**	**23 21 14.9**	**+1.2**
	comp=Z,7.7nm,0.8s						
KHMM	**Horse Mountain**	**85.30**	**45**	eP	**P**	**23 21 16.4**	**+1.5**
	comp=Z,11nm,0.8s						
SHL	**Shillong**	**85.56**	**298**	⇑iP	**P**	**23 21 17.0**	**+0.4**
WDC	**Whiskeytown Da**	**85.97**	**46**	eP	**P**	**23 21 18.9**	**+0.9**
WDC	**Whiskeytown Da**	**85.97**	**46**	eP	**P**	**23 21 18.9**	**+0.9**
YBH	**Yreka Blue Hor**	**86.37**	**44**	eP	**P**	**23 21 21.1**	**+1.0**
	comp=Z,10.0nm,1.1s						
YBH				epP	**pP**	**23 22 14.4**	**+0.2**
YBH	**Yreka Blue Hor**	**86.37**	**44**	P	**P**	**23 21 21.3**	**+1.2**
	comp=Z,7.4nm,1.0s,baz=190,slow=2.4,SNR=12						
YBH				pP	**pP**	**23 22 13.3**	**-0.9**
	comp=Z,1.8nm,0.4s,baz=187,slow=6.3,SNR=3.4						
CMB	**Columbia Colle**	**86.38**	**49**	eP	**P**	**23 21 21.0**	**+0.8**
CMB				e*PP	**pP**	**23 22 14.2**	**0.0**
CMB				pmax	pmax		
	comp=Z,12nm,0.8s						
CMB	**Columbia Colle**	**86.38**	**49**	eP	**P**	**23 21 21.0**	**+0.8**
	comp=Z,12nm,0.8s						
CMB				epP	**pP**	**23 22 14.2**	**0.0**
TRF	**Thorofare Moun**	**86.47**	**17**	eP	**P**	**23 21 18.4**	**-1.7**
HUMO	**Hull Mountain**	**86.60**	**44**	eP	**P**	**23 21 22.4**	**+1.3**
	comp=Z,6.1nm,0.8s						
HUMO				epP	**pP**	**23 22 15.0**	**-0.2**
SYO	**Syowa Base**	**86.75**	**196**	⇓eP	**P**	**23 21 19.8**	**-1.5**
ISA	**Isabella**	**86.81**	**51**	eP	**P**	**23 21 23.5**	**+1.1**
ISA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ISA	**Isabella**	**86.81**	**51**	eP	**P**	**23 21 23.4**	**+1.1**
	comp=Z,7.0nm,0.9s						
LBCM	**Butte Creek Ri**	**86.90**	**46**	P	**P**	**23 21 23.6**	**+0.8**
BEKR	**Beckworth**	**87.17**	**47**	eP	**P**	**23 21 24.9**	**+0.8**
	comp=Z,2.9nm,0.7s						
BEKR				epP	**pP**	**23 22 17.8**	**-0.5**
GSC	**Goldstone**	**87.93**	**52**	eP	**P**	**23 21 28.5**	**+0.8**
GSC	**Goldstone**	**87.93**	**52**	eP	**P**	**23 21 28.5**	**+0.8**
ZAK	**Zakamensk**	**88.04**	**324**	⇑iP	**P**	**23 21 27.6**	**-0.2**
ZAK				e		23 22 24.7	
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
NVAR	**Mina Array Bea**	**88.04**	**49**	P	**P**	**23 21 28.8**	**+0.5**
NVAR				pP	**pP**	**23 22 21.9**	**-0.7**

NVAR	Mina Array Bea	88.04	49	P	P	23 21 28.8	+0.5
	comp=Z,4.8nm,0.8s,baz=228,slow=8.0,SNR=42						
NVAR				pP	pP	23 22 21.9	-0.7
	comp=Z,2.1nm,0.9s,baz=230,slow=8.5,SNR=4.0						
ILAR	Eielson Array	88.44	18	P	P	23 21 27.6	-1.6
ILAR				pP	pP	23 22 21.1	-2.5
ILAR	Eielson Array	88.44	18	P	P	23 21 27.6	-1.6
	comp=Z,1.4nm,0.6s,baz=235,slow=5.2,SNR=12						
ILAR				pP	pP	23 22 21.1	-2.5
	comp=Z,3.0nm,0.9s,baz=233,slow=6.1,SNR=6.5						
TLY	Talaya	88.49	326	*e*P	P	23 21 30.2	+0.4
TLY				pmax	pmax		
	comp=Z,10.0nm,1.4s						
WPW	White Pass	89.32	40	P	P	23 21 35.2	+1.3
WVOR	Wild Horse Val	89.41	45	*e*P	P	23 21 34.7	+0.2
WVOR				*e**PP	pP	23 22 28.2	-0.7
WVOR				pmax	pmax		
	comp=Z,12nm,1.0s						
WVOR	Wild Horse Val	89.41	45	*e*P	P	23 21 34.7	+0.2
	comp=Z,12nm,1.0s						
WVOR				*e*pP	pP	23 22 28.2	-0.7
I07A	Izee	89.51	43	P	P	23 21 35.5	+0.5
BMN	Battle Mountai	89.60	47	*e*P	P	23 21 36.6	+1.1
BMN	Battle Mountai	89.60	47	*e*P	P	23 21 36.6	+1.1
NAC	Naches	89.78	41	P	P	23 21 37.4	+1.3
ETW	Entiat	90.45	40	P	P	23 21 40.0	+0.8
MAIT	Maitri	90.88	188	*e*P	P	23 21 31.0	-10
MAIT				*e*		23 22 29.9	
SNAA	Sanae	91.27	183	*e*P	P	23 21 41.9	-0.7
	comp=Z,9.9nm,0.9s						
SNAA	Sanae	91.27	183	P	P	23 21 41.9	-0.7
	comp=Z,3.6nm,0.9s,baz=201,slow=3.9,SNR=24						
TUC	Tucson	91.56	57	*e*P	P	23 21 45.7	+1.0
TUC				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TUC	Tucson	91.56	57	*e*P	P	23 21 45.6	+1.0
	comp=Z,3.4nm,0.7s						
HLID	Hailey	92.71	45	*e*P	P	23 21 51.1	+1.2
HYB	Hyderabad	94.76	287	*i* P	P	23 21 59.0	-0.7
ANMO	Albuquerque	95.80	55	P	P	23 22 04.5	+0.3
ANMO	Albuquerque	95.80	55	P	P	23 22 04.5	+0.3
	comp=Z,0.4nm,0.3s,baz=208,slow=7.7,SNR=3.5						
TXAR	Lajitas Array	96.51	61	P	P	23 22 07.9	+0.4
TXAR				pP	pP	23 23 01.4	-0.7
TXAR	Lajitas Array	96.51	61	P	P	23 22 07.9	+0.4
	comp=Z,0.6nm,0.9s,baz=225,slow=6.5,SNR=6.0						
TXAR				pP	pP	23 23 01.4	-0.7
	comp=Z,1.1nm,0.9s,baz=208,slow=5.1,SNR=6.9						
KAD	Karad	98.75	285	*e*x	pP	23 23 09.7	-2.7
YKA	Yellowknife Ar	99.16	27	P	Pdif	23 22 18.2	-0.2
YKA				pP	pP	23 23 11.6	-1.5
YKA	Yellowknife Ar	99.16	27	P	Pdif	23 22 18.2	-0.2
	comp=Z,0.5nm,0.5s,baz=249,slow=4.5,SNR=5.9						
YKA				pP	pP	23 23 11.6	-1.5
	comp=Z,0.9nm,0.8s,baz=254,slow=4.4,SNR=2.5						
MK31	Makanchi Array	99.59	316	*e*P	Pdif	23 22 20.1	-0.6
MK31	Makanchi Array	99.59	316	*e*P	Pdif	23 22 20.1	-0.6
MKAR	Makanchi Array	99.59	316	P	Pdif	23 22 20.8	+0.1
MKAR	Makanchi Array	99.59	316	P	Pdif	23 22 20.8	+0.1
MKAR				PKiKP	PKiKP	23 26 46.0	-2.5
MKAR	Makanchi Array	99.59	316	P	Pdif	23 22 20.8	+0.1
	comp=Z,2.0nm,0.8s,baz=100,slow=5.5,SNR=15						
MKAR				PKiKP	PKiKP	23 26 46.0	-2.5
	comp=Z,1.0nm,0.9s,baz=82,slow=3.8,SNR=3.1						
ZALV	Zalesovo Beam	99.87	323	P	Pdif	23 22 21.0	-0.8
ZALV	Zalesovo Beam	99.87	323	P	Pdif	23 22 20.9	-0.8
ZALV				PKiKP	PKiKP	23 26 47.7	-1.1
ZALV	Zalesovo Beam	99.87	323	P	Pdif	23 22 21.0	-0.8
	comp=Z,1.7nm,0.8s,baz=122,slow=5.4,SNR=9.2						
ZALV				PKiKP	PKiKP	23 26 47.7	-1.1
	comp=Z,0.3nm,0.3s,baz=27,slow=1.6,SNR=2.9						
KURK	Kurchatov	102.83	319	P	Pdif	23 22 36.6	+1.6
KURK				*i*		23 26 53.5	
KURK	Kurchatov	102.83	319	P	Pdif	23 22 36.6	+1.6
KURK				PKiKP	PKiKP	23 26 53.5	-0.7
KURBB	Kurchatov Arra	102.87	319	P	Pdif	23 22 36.6	+1.4
	comp=Z,0.2nm,0.8s,baz=123,slow=3.4,SNR=3.6						
KURBB				PKiKP	PKiKP	23 26 53.5	-0.8
	comp=Z,1.4nm,0.9s,baz=104,slow=1.6,SNR=8.9						
BVAR	Borovoye Array	108.20	321	PKiKP	PKiKP	23 27 03.7	-0.4
BVAR	Borovoye Array	108.20	321	PKiKP	PKiKP	23 27 03.7	-0.4
	comp=Z,1.7nm,0.8s,baz=227,slow=33,SNR=5.8						
ABKAR	Akbulak array	114.71	317	*e*PKiKP	PKiKP	23 27 16.7	+0.1
ARU	Arti	114.98	325	*i* PKIKP	PKPdf	23 27 16.2	-0.7
ARU						23 28 19.1	
ARU						23 33 45.2	
AKTO	Aktyubinsk	115.89	318	PKIKP	PKPdf	23 27 18.6	-0.2
AKTO	Aktyubinsk	115.89	318	PKP	PKPdf	23 27 18.6	-0.2
AKTO	Aktyubinsk	115.89	318	PKP	PKPdf	23 27 18.6	-0.2
	comp=Z,3.5nm,0.8s,baz=85,slow=1.0,SNR=7.5						
SPITS	Spitsbergen Ar	117.36	354	PKP	PKPdf	23 27 20.2	-0.8
SPITS	Spitsbergen Ar	117.36	354	PKP	PKPdf	23 27 20.2	-0.8
	comp=Z,9.1nm,1.0s,baz=105,slow=6.5,SNR=13						
LVZ	Lovozero	121.34	341	*i* PKIKP	PKPdf	23 27 27.8	-1.0
LVZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
BOSA	Boshof	122.21	219	PKP	PKPdf	23 27 31.4	-0.6
BOSA	Boshof	122.21	219	PKP	PKPdf	23 27 31.4	-0.6
	comp=Z,6.1nm,0.9s,baz=134,slow=2.6,SNR=3.7						
KEV	Kevo	122.24	345	*e*p	PKPdf	23 27 29.0	-1.4
	comp=Z,4.3nm,0.7s						
KEV	Kevo	122.24	345	*e*PKIKP	PKPdf	23 27 29.0	-1.4
KEV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ARCES	ARCESS Array B	122.77	345	PKP	PKPdf	23 27 31.2	-0.3
ARCES	ARCESS Array B	122.77	345	PKP	PKPdf	23 27 31.2	-0.3
	comp=Z,6.6nm,0.6s,baz=68,slow=2.2,SNR=87						
ARE0	ARCESS Array S	122.77	345	*e*PKPdf	PKPdf	23 27 31.2	-0.3
KLMR	Klimovskoe	123.22	333	*e*PKIKP	PKPdf	23 27 30.1	-2.5
KLMR				pmax	pmax		
	comp=Z,31nm,1.3s						
RDF	Al-Radifah	124.70	294	*e*P	PKPdf	23 27 36.2	-0.2
RDF				AMb	AMB	23 27 37.5	
	comp=Z,60nm,1.1s						
MIB	Mutribah	124.91	295	*e*P	PKPdf	23 27 36.0	-0.8
MIB				AMb	AMB	23 27 37.7	
	comp=Z,47nm,1.0s						
NAY	Al-Naaiem	124.98	294	*e*P	PKPdf	23 27 36.0	-0.9
NAY				AMb	AMB	23 27 38.2	
	comp=Z,19nm,1.1s						
JOF	Joensuu	125.43	337	*e*p	PKPdf	23 27 36.0	-0.7
	comp=Z,14nm,0.8s						
JOF	Joensuu	125.43	337	*e*PKIKP	PKPdf	23 27 36.0	-0.7
JOF				pmax	pmax		
	comp=Z,14nm,0.8s						
VRHR	Novokhopersk	125.94	321	*e*PKIKP	PKPdf	23 27 37.4	-0.7
VRHR				pmax	pmax		
	comp=Z,20nm,0.9s						
VRHR				pmax	pmax		
	comp=N,3.0nm,0.7s						
VRHR				pmax	pmax		
	comp=E,10.0nm,1.1s						
GNI	Garni	126.36	308	*e*PKPdf	PKPdf	23 27 38.9	-0.6
GNI				PKP	PKPdf	23 27 40.1	+0.6
GNI	Garni	126.36	308	PKP	PKPdf	23 27 40.1	+0.6
	comp=E,7.6nm,0.8s,baz=194,slow=1.8,SNR=6.6						
KBZ	Khabaz	127.08	312	PKIKP	PKPdf	23 27 40.7	+0.2
KBZ	Khabaz	127.08	312	PKP	PKPdf	23 27 40.7	+0.2
KBZ	Khabaz	127.08	312	PKP	PKPdf	23 27 40.7	+0.2
	comp=E,4.4nm,0.9s,baz=282,slow=2.4,SNR=11						
KIV	Kislovodsk	127.18	313	*e*PKIKP	PKPdf	23 27 41.1	+0.3
OBN	Obninsk	127.21	327	⇑*i*PKIKP	PKPdf	23 27 40.1	-0.3
OBN				pmax	pmax		
	comp=Z,26nm,1.2s						
VSR	Storozhevoye	127.35	322	*e*PKIKP	PKPdf	23 27 40.5	-0.3
VSR				pmax	pmax		
	comp=N,4.0nm,0.9s						
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.3s						
VORD	Divnogorie	127.37	322	*e*PKIKP	PKPdf	23 27 40.4	-0.4
VORD				pmax	pmax		
	comp=Z,20nm,0.5s						
VORD				pmax	pmax		
	comp=N,100nm,0.6s						
VORD				pmax	pmax		
	comp=E,110nm,0.6s						
KAF	Kangasniemi	127.74	339	*e*p	PKPdf	23 27 40.3	-0.9
	comp=E,5.3nm,0.7s						
KAF	Kangasniemi	127.74	339	*e*PKIKP	PKPdf	23 27 40.3	-0.9
KAF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
FIA1	FINESS Array S	128.26	338	*e*PKPdf	PKPdf	23 27 41.8	-0.4
FINES	FINESS Array B	128.27	338	PKP	PKPdf	23 27 41.4	-0.8

FINES				SKP		23 30 42.7	
FINES	FINESS Array B	128.27	338	PKP	PKPdf	23 27 41.4	-0.8
	comp=Z,5.9nm,0.9s,baz=61,slow=12,SNR=8.6						
FINES				SKP		23 30 42.7	
	comp=Z,2.4nm,0.8s,baz=35,slow=5.1,SNR=8.6						
KMBO	Kilima Mbogo	128.50	254	PKP	PKPdf	23 27 45.1	+0.6
KMBO	Kilima Mbogo	128.50	254	PKP	PKPdf	23 27 45.1	+0.6
	comp=Z,3.4nm,0.8s,baz=237,slow=22,SNR=8.1						
ANN	Anapa	130.59	315	*i* PKIKP	PKPdf	23 27 46.4	-0.7
ANN				*e*		23 28 43.5	
ANN				*e*		23 34 38.4	
ANN				*e*SS	SS	23 47 18.8	+3.4
ANN				pmax	pmax		
	comp=Z,25nm,1.3s						
NB2	NORSAR Subarra	133.14	345	PKPdf	PKPdf	23 27 51.1	-0.5
	comp=Z,2.3nm,0.9s,baz=31,slow=1.9						
NOA	NORSAR Array B	133.14	345	PKP	PKPdf	23 27 51.0	-0.5
NOA				SKPbc	SKPbc	23 30 59.2	+0.7
NOA	NORSAR Array B	133.14	345	PKP	PKPdf	23 27 51.0	-0.5
	comp=Z,2.5nm,0.8s,baz=32,slow=2.0,SNR=11						
NOA				SKPbc	SKPbc	23 30 59.2	+0.7
	comp=Z,2.7nm,0.9s,baz=32,slow=2.6,SNR=4.9						
AKASG	Malin Array Be	133.23	325*c*	*i*PKIKP	PKPdf	23 27 51.5	-0.4
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKASG	Malin Array Be	133.23	325	PKP	PKPdf	23 27 51.3	-0.6
AKASG				SKPbc	SKPbc	23 30 59.2	+0.1
AKASG	Malin Array Be	133.23	325	PKP	PKPdf	23 27 51.3	-0.6
	comp=Z,5.7nm,0.9s,baz=61,slow=2.3,SNR=11						
AKASG				SKPbc	SKPbc	23 30 59.2	+0.1
	comp=Z,0.5nm,0.4s,baz=65,slow=2.8,SNR=6.1						
HFS	Hagfors	133.25	343	PKP	PKPdf	23 27 50.4	-1.3
HFS				SKPbc	SKPbc	23 30 59.4	+0.6
HFS	Hagfors	133.25	343	PKP	PKPdf	23 27 50.4	-1.3
	comp=Z,4.2nm,0.8s,baz=143,slow=3.7,SNR=7.5						
HFS				SKPbc	SKPbc	23 30 59.4	+0.6
	comp=Z,4.0nm,1.0s,baz=46,slow=4.2,SNR=6.3						
BR131	Keskin Array S	134.78	309	*e*PKPdf	PKPdf	23 27 55.9	+0.5
BRTR	Keskin Array B	134.78	309	PKP	PKPdf	23 27 55.0	-0.4
BRTR				PP	PP	23 30 28.0	-4.0
BRTR				SKP		23 31 05.1	
BRTR	Keskin Array B	134.78	309	PKP	PKPdf	23 27 55.0	-0.4
	comp=Z,4.9nm,1.0s,baz=130,slow=1.9,SNR=24						
BRTR				PP	PP	23 30 28.0	-4.0
	comp=Z,0.6nm,0.9s,baz=99,slow=4.8,SNR=3.2						
BRTR				SKP		23 31 05.1	
	comp=Z,0.5nm,0.8s,baz=112,slow=1.6,SNR=2.7						
MMAI	Mount Meron Ar	134.87	300	PKP	PKPdf	23 27 57.4	+1.7
MMAI				SKP		23 31 08.2	
MMAI	Mount Meron Ar	134.87	300	PKP	PKPdf	23 27 57.4	+1.7
	baz=67,slow=4.8						
MMAI				SKP		23 31 08.2	
	comp=Z,1.3nm,0.6s,baz=46,slow=6.2,SNR=4.3						
KIS	Kishinev	135.28	321	*e*PPP	PPP	23 38 09.0	
KIS				*e*L	L	00 17 30.0	
KIS				LRM	MLR	00 32 56.0	
	comp=Z,1μm,21.0s						
ANTO	Ankara	135.37	310	*e*PKIKP	PKPdf	23 27 56.0	-0.4
ANTO	Ankara	135.37	310	*e*PKPdf	PKPdf	23 27 56.0	-0.4
CFR	Carcaliu	136.54	319	⇑*i*P	PKPdf	23 27 58.5	+0.2
TESR	Tescani	136.82	321	⇓*i*P	PKPdf	23 27 59.5	+0.7
BUR08	Bucovina Ar. S	137.08	323	*e*PKPdf	PKPdf	23 27 58.8	-0.6
VRI	Vrincioaia	137.09	320	⇓*i*P	PKPdf	23 27 58.8	-0.6
KWP	Kalwaria Pacla	137.30	327	*e*PKIKP	PKPdf	23 27 59.3	-0.3
KWP	Kalwaria Pacla	137.30	327	*e*PKPdf	PKPdf	23 27 59.3	-0.3
KWP	Kalwaria Pacla	137.30	327	⇑*i*P	PKPdf	23 28 00.2	+0.6
KWP	Kalwaria Pacla	137.30	327	*e*PKP	PKPdf	23 27 59.6	0.0
MLR	Muntele Rosu	137.76	320	PKP	PKPdf	23 27 59.9	-0.8
MLR	Muntele Rosu	137.76	320	⇓*i*P	PKPdf	23 28 01.1	+0.4
MLR	Muntele Rosu	137.76	320	PKP	PKPdf	23 27 59.9	-0.8
	comp=Z,1.4nm,1.0s						
KOLS	Kolonicke sedl	137.95	327	*e*PKIKP	PKPdf	23 28 01.7	+0.9
KOLS	Kolonicke sedl	137.95	327	*e*PKP	PKPdf	23 28 01.7	+0.9
UZH	Uzhgorod	138.12	326	*e*PKHKP	PKPpre	23 27 51.0	
UZH				*i*		23 28 01.4	
STHS	Stebnicka Huta	138.19	328	*e*PKIKP	PKPdf	23 28 02.0	+0.7
STHS	Stebnicka Huta	138.19	328	*e*PKP	PKPdf	23 28 02.0	+0.7
CRVS	Cervenica-Dubn	138.40	327	*e*PKIKP	PKPdf	23 27 58.9	-2.8
CRVS	Cervenica-Dubn	138.40	327	*e*PKP	PKPdf	23 27 58.9	-2.8
ARR	Arges	138.62	321	⇑*i*P	PKPdf	23 28 03.4	+1.2
DRGR		138.97	324	⇑*i*P	PKPpre	23 27 52.1	
LOT	Lotru	139.09	321	⇓*i*P	PKPdf	23 28 04.7	+1.5
KECS	Kecovo	139.16	327	*e*PKIKP	PKPdf	23 28 01.3	-1.8
KECS				*e*		23 30 57.8	
KECS	Kecovo	139.16	327	*e*PKP	PKPdf	23 28 01.3	-1.8
KECS				*e*PP	PP	23 30 57.8	-0.6
OKC	Ostrava-Krasne	139.44	330	*e*PKIKP	PKPdf	23 28 03.9	+0.4
OKC	Ostrava-Krasne	139.44	330	*e*PKPdf	PKPdf	23 28 03.9	+0.4
OKC				*e*x	x	23 28 06.5	
OKC				*e*SKP		23 31 21.0	
KSP	Ksiaz	139.57	333	*e*PKIKP	PKPdf	23 28 06.5	+2.8
KSP	Ksiaz	139.57	333	*e*PKP	PKPdf	23 28 05.0	+1.3
GZR	Gura Zlata	139.71	322	⇓*i*P	PKPpre	23 27 53.5	
MORC	Moravsky Berou	139.76	331	*e*PKIKP	PKPdf	23 28 02.6	-1.6
MORC	Moravsky Berou	139.76	331	*e*PKPdf	PKPdf	23 28 02.6	-1.6
MORC	Moravsky Berou	139.76	331	⇑*i*P	PKPdf	23 28 01.4	-2.8
PSZ	Piszkesteto	139.82	327	*e*PKPdf	PKPdf	23 27 58.6	-5.8
DPC	Dobruska-Polom	139.92	332	*e*PKIKP	PKPdf	23 28 05.3	+0.9
DPC	Dobruska-Polom	139.92	332	*e*PKPdf	PKPdf	23 28 05.3	+0.9
DPC				*e*x	x	23 28 07.5	
DPC				*e*SKP		23 31 21.9	
UPC	Upice	139.94	333	*e*PKIKP	PKPpre	23 28 01.6	
UPC	Upice	139.94	333	*e*PKPpre	PKPpre	23 28 01.6	
UPC				*e*PKPdf	PKiKP	23 28 07.1	+0.2
UPC				*e*SKP		23 31 21.7	
VYHS	Vyhne	140.00	328	*e*PKIKP	PKPdf	23 28 04.6	0.0
VYHS				*e*		23 31 03.3	
VYHS	Vyhne	140.00	328	*e*PKP	PKPdf	23 28 04.6	0.0
VYHS				*e*PP	PP	23 31 03.2	-0.3
VRAC	Vranov	140.53	331	PKP	PKPdf	23 28 04.3	-1.2
VRAC	Vranov	140.53	331	⇓*i*P	PKPdf	23 28 04.8	-0.7
VRAC	Vranov	140.53	331	PKP	PKPdf	23 28 04.3	-1.2
	comp=Z,3.6nm,0.9s,baz=111,slow=2.5,SNR=5.1						
PVCC	Panska Ves	140.55	334	*e*PKIKP	PKPdf	23 28 06.4	+0.9
PVCC	Panska Ves	140.55	334	*e*PKPdf	PKPdf	23 28 06.4	+0.9
PVCC				*e*SKP		23 31 23.9	
BRG	Berggiesshubel	140.55	334	*e*PKP	PKPpre	23 28 00.2	
	comp=Z,3.9nm,0.8s						
BRG				*e*		23 28 08.2	
	comp=Z,16nm,1.4s						
BRG				*e*		23 32 21.2	
	comp=Z,67nm,2.0s						
BRG	Berggiesshubel	140.55	334	*e*PKHKP	PKPpre	23 28 00.2	
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,16nm,1.4s						
BRG				pmax	pmax		
	comp=Z,67nm,2.0s						
CLL	Collm	140.60	336	*i* PKIKP	PKPpre	23 28 02.0	
CLL				pmax	pmax		
	comp=Z,17nm,1.8s						
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CLL	Collm	140.60	336	*i* PKPpre	PKPpre	23 28 02.0	
CLL				*i* PKPdf	PKPdf	23 28 05.0	-0.5
	comp=Z,17nm,1.8s						
CLL				*i* PKiKP	PKiKP	23 28 08.2	0.0
	comp=Z,6.0nm,0.9s						
CLL				*e*SKPbc	SKiKP	23 31 23.0	-0.1
VTS	Vitosha	140.91	318	⇓*i*P	PKPdf	23 28 03.4	-3.2
PRU	Pruhonice	140.96	333	*e*PKIKP	PKPdf	23 28 05.9	-0.4
PRU	Pruhonice	140.96	333	*e*PKPdf	PKPdf	23 28 05.9	-0.4
PRU				*e*x	x	23 28 09.1	
PRU				*e*SKP		23 31 24.4	
TREC	Trest	141.05	332	*e*PKIKP	PKPdf	23 28 06.6	+0.1
TREC	Trest	141.05	332	*e*PKPdf	PKPdf	23 28 06.6	+0.1
ZST	Bratislava	141.06	329	*e*PKIKP	PKPdf	23 28 06.2	-0.3
ZST	Bratislava	141.06	329	*e*PKP	PKPdf	23 28 06.2	-0.3
EKA	Eskdalemuir Ar	141.26	352	PKPpre	PKPpre	23 28 00.5	
EKA	Eskdalemuir Ar	141.26	352	PKhKP	PKPpre	23 28 00.5	
	comp=Z,1.3nm,0.7s,baz=0.5,slow=2.6,SNR=5.0						
PKSM	Moragy	141.57	326	⇑*i*P	PKPdf	23 28 03.5	-3.9
PKSM	Moragy	141.57	326	*e*	PKPdf	23 28 01.6	-5.8
NKC	Novy Kostel	141.66	335	*e*PKIKP	PKPdf	23 28 05.9	-1.6
NKC	Novy Kostel	141.66	335	*e*PKPdf	PKPdf	23 28 05.9	-1.6
NKC				*e*x	x	23 28 08.4	
SOP	Sopron	141.68	329	*e*	PKPdf	23 28 02.9	-4.7
CONA	Conrad Observa	141.84	330	⇓*i*PKPdf	PKPdf	23 28 04.5	-3.6
	comp=Z,9.1nm,1.4s						
VAY	Valandovo	141.95	317	*e*PKP	PKPdf	23 28 08.1	-0.1
KHC	Kasperske Hory	142.02	333	*e*PKPpre	PKPpre	23 28 04.5	
KHC				*e*PKPdf	PKPdf	23 28 08.2	0.0

KHC				*e*SKP		23 31 25.9	
KHC	Kasperske Hory	142.02	333	*e*PKPdf	PKPpre	23 28 02.7	
GERES	GERESS Array B	142.18	332	PKPpre	PKPpre	23 28 03.9	
GERES				SKPbc	SKiKP	23 31 26.4	-0.2
GERES	GERESS Array B	142.18	332	PKhKP	PKPpre	23 28 03.9	
	comp=Z,2.6nm,0.9s,baz=48,slow=2.0,SNR=15						
GERES				SKPbc	SKiKP	23 31 26.4	-0.2
	comp=Z,0.4nm,0.8s,baz=56,slow=1.8,SNR=5.0						
GRF	Grafenberg Arr	142.57	335	*e*PKIKP	PKPdf	23 28 06.0	-3.2
MOA	Molln	142.66	331	⇑*i*PKPdf	PKPdf	23 28 06.6	-2.8
	comp=Z,13nm,1.0s,SNR=6.8						
BIA	Bitola	142.91	317	*e*PKP	PKPdf	23 28 08.3	-1.8
FNA	Florina	143.00	317	*e*P		23 28 07.7	
PERS	Pernice	143.11	329	*i* PKPbc	PKPab	23 28 06.2	0.0
SOKA	Soboth	143.12	329	⇑*i*PKPdf	PKPab	23 28 06.9	+0.5
	comp=Z,15nm,0.9s						
DID	Didima	143.19	311	*e*P	PKPbc	23 28 08.5	+0.2
SISC	Sisak	143.26	326	P	PKPbc	23 28 08.3	+0.1
VAM	Vamos	143.26	307	*e*P	PKPbc	23 28 08.3	-0.2
OBKA	Obir	143.48	329	⇓*i*PKPdf	PKPbc	23 28 08.4	-0.5
	comp=Z,18nm,1.0s						
TOD	Tromm	143.57	337	PKIKP	PKPbc	23 28 08.5	-0.5
TOD	Tromm	143.57	337	PKP	PKPbc	23 28 08.5	-0.5
KBA	Koelnbreinsper	143.65	331	⇓*i*PKPdf	PKPab	23 28 08.7	+0.2
	comp=Z,36nm,1.2s,SNR=12						
GUR	Goura	143.66	312	*e*P	PKPab	23 28 07.9	-0.9
MEM	Membach	143.66	341	PKP	PKPbc	23 28 09.5	+0.4
TIR	Tirane	143.69	318	*e*PKIKP	PKPbc	23 28 09.1	-0.4
TIR	Tirane	143.69	318	*e*PKPdf	PKPab	23 28 09.1	+0.4
VLI	Veliai	143.72	310	*e*P	PKPab	23 28 08.0	-1.0
KLV	Kalavryta, Ach	143.75	312	*e*P	PKPab	23 28 07.7	-1.4
LAKA	Lakka	143.78	312	*e*P	PKPab	23 28 09.5	+0.3
ABH	Alteburg	143.78	339	PKP	PKPbc	23 28 09.6	0.0
BOJS	Bojanci	143.82	327	*i* PKPbc	PKPbc	23 28 10.1	+0.3
KYTH	Kithira	143.82	309	*e*P	PKPbc	23 28 09.8	-0.3
VISS	Visnje	143.83	328	*i* PKPbc	PKPab	23 28 09.4	+0.3
MYKA	Terra Mystica	143.83	330	⇑*i*PKPdf	PKPab	23 28 09.2	+0.1
	comp=Z,26nm,1.3s						
JAN	Janina	143.90	315	*e*P	PKPbc	23 28 10.0	-0.3
BCLA	Clavier	144.05	341	PKP	PKPbc	23 28 10.5	+0.3
RUP	Ruppelstein	144.10	339	PKIKP	PKPbc	23 28 10.7	+0.2
RUP	Ruppelstein	144.10	339	PKP	PKPbc	23 28 10.7	+0.2
STU	Stuttgart	144.10	336	*e*PKIKP	PKPbc	23 28 10.4	-0.1
STU	Stuttgart	144.10	336	*e*PKPdf	PKPbc	23 28 10.4	-0.1
VOY	Vojsko	144.14	329	*i* PKPbc	PKPab	23 28 10.3	-0.1
VOY				*e*		23 28 15.2	
VOY				*e*		23 28 21.7	
STON	Ston	144.15	322	P	PKPab	23 28 10.1	-0.3
JAVS	Javornik	144.15	329	*i* PKPbc	PKPab	23 28 10.5	0.0
DYR	Agios Nikonas	144.15	310	*e*P	PKPab	23 28 10.4	-0.3
RLS	Riolos of Patr	144.22	312	*e*P	PKPbc	23 28 11.1	-0.1
WATA	Walderalm	144.26	333	⇓*i*PKPdf	PKPbc	23 28 11.1	-0.2
	comp=Z,13nm,0.9s						
ITM	Ithomi	144.28	311	*e*P	PKPab	23 28 10.9	-0.2
ABTA	Abfaltersbach	144.28	331	⇑*i*PKPab	PKPab	23 28 10.5	-0.4
	comp=Z,66nm,1.0s,SNR=32						
AMT	Artemida-Makis	144.28	311	*e*P	PKPab	23 28 11.1	0.0
WTTA	Wattenberg	144.28	332	⇓*i*PKPdf	PKPbc	23 28 11.3	-0.1
	comp=Z,26nm,1.0s						
WLF	Walferdange	144.44	340	PKP	PKPdf	23 28 12.3	-0.1
WLF	Walferdange	144.44	340	*e*PKIKP	PKPdf	23 28 12.2	-0.2
WLF	Walferdange	144.44	340	*e*PKPdf	PKPdf	23 28 12.2	-0.2
LANF	Langenberg	144.45	338	PKIKP	PKPbc	23 28 12.0	+0.4
LANF	Langenberg	144.45	338	PKP	PKPbc	23 28 12.0	+0.4
LANF	Langenberg	144.45	338	PKP	PKPbc	23 28 12.0	+0.4
LKD2	Lefkada island	144.45	314	*e*P	PKPab	23 28 11.5	-0.2
MOTA	Moosalm	144.46	333	⇑*i*PKPdf	PKPbc	23 28 11.8	-0.1
	comp=Z,70nm,1.0s,SNR=42						
RETA	Reutte	144.49	334	*i* PKPdf	PKPbc	23 28 11.9	+0.1
	comp=Z,46nm,1.1s,SNR=23						
PYL	PYLOS	144.53	310	*e*P	PKPab	23 28 11.2	-0.9
DOU	Dourbes	144.55	342	PKP	PKPdf	23 28 12.4	-0.2
KEK	Kerkira	144.58	316	*e*P	PKPab	23 28 11.5	-0.7
NVLJ	Novalja	144.66	326	P	PKPab	23 28 12.2	-0.1
VLS	Valsamata	144.79	313	*e*P	PKPbc	23 28 11.9	-1.1
BFO	Black Forest	144.80	337	*e*PKIKP	PKPab	23 28 12.8	+0.1
BFO	Black Forest	144.80	337	*e*PKP	PKPab	23 28 12.8	+0.1
SPAK	Spaichingen-Ko	144.81	336	PKP	PKPdf	23 28 13.1	-0.1
FETA	Feichten	144.87	333	⇑*i*PKPdf	PKPdf	23 28 13.5	+0.1
	comp=Z,106nm,1.1s,SNR=79						
DAVA	Damuels	145.02	334	*i* PKPdf	PKPab	23 28 13.8	0.0
	comp=Z,113nm,1.1s,SNR=33						
LIBD	Limburg	145.22	337	PKP2	PKPab	23 28 14.4	+0.1
LIBD	Limburg	145.22	337	PKP	PKPab	23 28 14.4	+0.1
FELD	Feldberg im Sc	145.29	337	PKP	PKPab	23 28 14.6	-0.2
ECH	Echery	145.33	338	*e*PKP2	PKPdf	23 28 14.1	+0.1
ECH	Echery	145.33	338	*e*PKP	PKPdf	23 28 14.1	+0.1
ECH	Echery	145.33	338	PKP	PKPbc	23 28 14.4	+0.1
DAVOX	Davos/Dischmat	145.42	334	PKPbc	PKPdf	23 28 14.5	+0.1
DAVOX	Davos/Dischmat	145.42	334	PKPbc	PKPdf	23 28 14.5	+0.1
	comp=Z,32nm,0.8s,baz=266,slow=0.6,SNR=40						
MOF	Molkenrain	145.64	337	PKP2	PKPbc	23 28 15.5	+0.1
MOF	Molkenrain	145.64	337	PKP	PKPbc	23 28 15.5	+0.1
MOF	Molkenrain	145.64	337	PKP	PKPbc	23 28 15.5	+0.1
THEF	They Montfort	145.73	339	PKP2	PKPbc	23 28 15.7	+0.2
THEF	They Montfort	145.73	339	PKP	PKPbc	23 28 15.7	+0.2
THEF	They Montfort	145.73	339	PKP	PKPbc	23 28 15.7	+0.2
BBS	Basel-Blauen	145.82	337	PKP2	PKPbc	23 28 15.5	-0.4
BBS	Basel-Blauen	145.82	337	PKP	PKPbc	23 28 15.5	-0.4
TUE	Stuetta	145.89	334	*e*PKPdf	PKPdf	23 28 14.9	-0.3
TUE				*e*pPKPdf	pPKPdf	23 29 11.4	-1.2
LOMF	Lomont	146.17	337	PKP2	PKPbc	23 28 17.4	+0.4
LOMF	Lomont	146.17	337	PKP	PKPbc	23 28 17.4	+0.4
LOMF	Lomont	146.17	337	PKP	PKPbc	23 28 17.4	+0.4
TIP	Timpagrande	146.86	317	*e*PKP	PKPbc	23 28 18.3	-0.9
OG01	Vacheresse	147.08	336	PKP	PKPbc	23 28 20.1	+0.5
OG01	Vacheresse	147.08	336	PKP	PKPbc	23 28 20.1	+0.5
RSL	Roselend	147.64	336	PKP2	PKPbc	23 28 21.4	+0.2
RSL	Roselend	147.64	336	PKP	PKPbc	23 28 21.4	+0.2
RSL	Roselend	147.64	336	PKP	PKPbc	23 28 21.4	+0.2
CEL	Celeste	147.93	317	*e*PKPbc	PKPbc	23 28 21.2	-0.9
BNI	Bardonecchia	148.14	335	*e*PKIKP	PKPdf	23 28 19.0	0.0
BNI				*e*		23 28 22.8	
BNI	Bardonecchia	148.14	335	*e*PKPdf	PKPdf	23 28 19.0	0.0
BNI				*e*PKPbc	PKPbc	23 28 22.8	+0.2
AGO	Saint Agoulin	148.58	340	PKP	PKPbc	23 28 23.7	+0.2
AGO	Saint Agoulin	148.58	340	PKP	PKPbc	23 28 23.7	+0.2
SAOF	Saorge	148.63	333	PKP2	PKPbc	23 28 23.6	-0.1
SAOF	Saorge	148.63	333	PKP	PKPbc	23 28 23.6	-0.1
SAOF	Saorge	148.63	333	PKP	PKPbc	23 28 23.6	-0.1
AUTN	L'Aution	148.68	333	PKP2	PKPbc	23 28 23.9	-0.1
AUTN	L'Aution	148.68	333	PKP	PKPbc	23 28 23.9	-0.1
AUTN	L'Aution	148.68	333	PKP	PKPbc	23 28 23.9	-0.1
TOUF	Mont Tournerai	148.74	333	PKP2	PKPbc	23 28 24.1	-0.1
TOUF	Mont Tournerai	148.74	333	PKP	PKPbc	23 28 24.1	-0.1
TOUF	Mont Tournerai	148.74	333	PKP	PKPbc	23 28 24.1	-0.1
SSB	Saint Sauveur	148.77	338	*e*PKIKP	PKPdf	23 28 18.5	-1.4
SSB				*e*		23 28 24.8	
SSB	Saint Sauveur	148.77	338	*e*PKPdf	PKPdf	23 28 18.5	-1.4
SSB				*e*PKPbc	PKiKP	23 28 24.8	-0.5
MVIF	Mont Vial	148.88	333	PKP2	PKPbc	23 28 23.6	-0.8
MVIF	Mont Vial	148.88	333	PKP	PKPbc	23 28 23.6	-0.8
MVIF	Mont Vial	148.88	333	PKP	PKPbc	23 28 23.6	-0.8
PYM	Petit Puy Mans	148.89	340	PKP2	PKPbc	23 28 24.7	+0.4
PYM	Petit Puy Mans	148.89	340	PKP	PKPbc	23 28 24.7	+0.4
PYM	Petit Puy Mans	148.89	340	PKP	PKPbc	23 28 24.7	+0.4
REVF	Revere	148.91	333	PKP2	PKPbc	23 28 24.3	-0.1
REVF	Revere	148.91	333	PKP	PKPbc	23 28 24.3	-0.1
REVF	Revere	148.91	333	PKP	PKPbc	23 28 24.3	-0.1
CALN	Calern	149.11	333	PKP2	PKPbc	23 28 24.7	-0.3
CALN	Calern	149.11	333	PKP	PKPbc	23 28 24.7	-0.3
CALN	Calern	149.11	333	PKP	PKPbc	23 28 24.7	-0.3
LBL	Lubilhac	149.27	339	PKP	PKPbc	23 28 26.3	+1.0
KEST	Kesra	153.64	319	PKPbc	PKPbc	23 28 35.4	-0.2
KEST				PKPab	PKPab	23 28 50.4	+1.3
KEST	Kesra	153.64	319	PKPbc	PKPbc	23 28 35.4	-0.2
	comp=Z,3.4nm,0.9s,baz=242,slow=1.3,SNR=11						
KEST				PKPab	PKPab	23 28 50.4	+1.3
	comp=Z,5.3nm,1.0s,baz=309,slow=2.4,SNR=7.8						
ESDC	Sonseca Array	156.50	345	PKPbc	PKPdf	23 28 41.2	+10
ESDC				PKPab	PKPab	23 29 00.5	-0.6
ESDC	Sonseca Array	156.50	345	PKPbc	PKPdf	23 28 41.2	+10
	comp=Z,1.1nm,0.8s,baz=3.7,slow=1.6,SNR=5.6						
ESDC				PKPab	PKPab	23 29 00.5	-0.6
	comp=Z,0.8nm,0.6s,baz=16,slow=3.1,SNR=4.3						
TAM	Tamanrasset	162.86	292	*e*PKIKP	PKPdf	23 28 39.5	+0.3
TAM	Tamanrasset	162.86	292	*e*PKPdf	PKPdf	23 28 39.5	+0.3
TORD	Torodi Ar. Bea	166.50	255	PKP	PKPdf	23 28 41.5	-0.9
TORD				PKPab	PKPab	23 29 45.2	-0.5
TORD				PP	PP	23 33 30.5	-3.6
TORD	Torodi Ar. Bea	166.50	255	PKP	PKPdf	23 28 41.4	-0.9

comp=Z,5.1nm,1.0s,baz=68,slow=1.0,SNR=5.8
TORD PKPab **PKPab** **23 29 45.2 -0.5**
comp=Z,7.7nm,0.8s,baz=101,slow=4.0,SNR=16
TORD PP **PP** **23 33 30.5 -3.6**
comp=Z,2.5nm,1.2s,baz=107,slow=3.5,SNR=3.8
DBIC Dimbokro 167.69 214 PKP **PKPdf 23 28 41.5 -1.8**
DBIC Dimbokro 167.69 214 PKP **PKPdf 23 28 41.5 -1.8**
comp=Z,7.1nm,0.9s,baz=67,slow=5.8,SNR=3.1

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*ISK **10** 23:11:43.9, 39.26N×27.88E, h4km, MD2.7*
*ISCJB **10** 23:11:45.0±0.8, 39.30N±0.04×27.89E±0.05, h11km±6km, Error ellipse: s-maj=6.5km s-min=6.0km az=156.9*
*CSEM **10** 23:11:45.1±0.3, 39.29N×27.89E, h15km, MD2.7, Error ellipse: s-maj=5.8km s-min=4.5km az=88.0*
*DDA **10** 23:11:45.7, 39.33N×27.94E, h8km, MD2.6*
ISC 10 23:11:45.2±1.0**, 39.30N**±0.02×**27.90E**±0.03**, h15**km±10km**, n22, σ0s42**/34**, Turkey**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
BALB Balikesir 0.34 358 *e*PG **Pg 23 11 51.8 -0.4**
BALB *e*SG **Sb 23 11 58.2 -0.1**
BALB Balikesir 0.34 358 *e*Pg **Pg 23 11 51.8 -0.4**
BALB *e*Sg **Sb 23 11 58.2 -0.1**
AKHS Akhisar 0.42 189 *e*P **Pg 23 11 53.7 +0.1**
AKHS *i* S **Sb 23 12 01.4 +0.8**
AKHS Akhisar 0.42 189 *e*P **Pg 23 11 53.7 +0.1**
AKHS *i* S **Sb 23 12 01.4 +0.8**
BALY Balya 0.49 334 *i* P **Pg 23 11 55.2 +0.3**
BALY *i* S **Sg 23 12 02.0 +0.5**
BALY Balya 0.49 334 *i* P **Pg 23 11 55.2 +0.3**
BALY *i* S **Sg 23 12 02.0 +0.5**
DURS Dursunbey 0.54 56 *i* P **Pg 23 11 55.4 -0.4**
DURS *i* S **Sg 23 12 03.2 +0.1**
DURS Dursunbey 0.54 56 *i* P **Pg 23 11 55.4 -0.4**
DURS *i* S **Sg 23 12 03.2 +0.1**
DST Dursunbey 0.64 61 *e*PG **Pg 23 11 57.7 0.0**
DST *e*SG **Sb 23 12 07.0 +0.1**
DST Dursunbey 0.64 61 *e*Pg **Pg 23 11 57.7 0.0**
DST *e*Sg **Sb 23 12 07.0 +0.1**
DEMI Demirci 0.69 112 *i* P **Pg 23 11 58.5 -0.1**
DEMI *i* S **Sb 23 12 08.4 +0.1**
DEMI Demirci 0.69 112 *i* P **Pg 23 11 58.5 -0.1**
DEMI *i* S **Sb 23 12 08.4 +0.1**
GONE Gonen-Balikesi 0.77 348 *e*PG **Pg 23 11 59.6 -0.4**
GONE Gonen-Balikesi 0.77 348 *e*Pg **Pg 23 11 59.6 -0.4**
KCTX Karacabey (Bur 1.03 20 *e*PG **Pb 23 12 04.9 +0.2**
KCTX Karacabey (Bur 1.03 20 *e*Pg **Pb 23 12 04.9 +0.2**
BLCB Balcova 1.13 216 *e*PN **Pb 23 12 05.4 -1.0**
BLCB Balcova 1.13 216 *e*Pn **Pb 23 12 05.4 -1.0**
TVSB Tavsanli 1.22 82 *e*PN **Pn 23 12 08.0 +0.1**
TVSB Tavsanli 1.22 82 *e*Pn **Pn 23 12 08.0 +0.1**
ARMT Armutlu 1.47 30 *e*PN **Pg 23 12 13.2 -0.2**
ARMT Armutlu 1.47 30 *e*Pn **Pg 23 12 13.2 -0.2**

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*IDC **10** 23:13:18.6±0.4, 41.69S×84.27W, h0km, mb4.9/24, mb1 4.9/26, mb1mx4.9/27, mbtmp4.9/26, ML3.9/1, MS5.1/23, Ms1 5.1/23, ms1mx5.1/24, Error ellipse: s-maj=16.2km s-min=10.8km az=97.0*
*ISCJB **10** 23:13:20.1±0.2, 41.65S±0.04×83.96W±0.06, h10km, mb5.5/146, MS5.2/181, Error ellipse: s-maj=6.7km s-min=5.1km az=147.1*
*MOS **10** 23:13:20.0±1.2, 41.67S×84.16W, h10km, mb5.8/40, MS5.2/33, Error ellipse: s-maj=14.2km s-min=7.5km az=91.9*
*NEIC **10** 23:13:21.1±0.2, 41.72S×84.00W, h10km, mb5.7/114, MS5.2/145, MW5.7, MW5.6, Error ellipse: s-maj=7.7km s-min=6.0km az=72.0, Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.93; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$2.10; $M_{r\theta}$2.33; $M_{\theta\phi}$0.95; $M_{\phi r}$-3.61; Best double couple: $M_0$4.80000×10^{17} NP1:ϕ_s220.00000°, δ22.00000°, λ-29.00000°. NP2:ϕ_s337.00000°, δ80.00000°, λ-109.00000°. Principal axes: T 4.2500, Plg31.0000°, Azm83.0000°; N 1.0200, Plg19.0000°, Azm340.0000°; P -5.2700, Plg51.0000°, Azm225.0000°;*
*BJI **10** 23:13:21.6, 41.60S×84.00W, h10km, mB5.4/26, Ms5.6/28, Ms7 5.5/28*
*GCMT **10** 23:13:22.3±0.1, 41.61S×84.38W, h12km, MW5.6, Moment Tensor Solution. s85,c149; s66,c74; Moment tensor: Scale 10^{17}Nm; M_{rr}-3.12±.03; $M_{\theta\theta}$-0.14±.03; $M_{\phi\phi}$3.26±.03; $M_{r\theta}$0.84±.09; $M_{\theta\phi}$-0.62±.03; $M_{\phi r}$0.33±.08; Best double couple: $M_0$3.40000×10^{17} NP1:ϕ_s335.00000°, δ46.00000°, λ-112.00000°. NP2:ϕ_s185.00000°, δ49.00000°, λ-69.00000°. Principal axes: T 3.3700, Plg2.0000°, Azm260.0000°; N 0.0000, Plg16.0000°, Azm351.0000°; P -3.3700, Plg74.0000°, Azm165.0000°; Data Used: II IU IC G CN. Surface waves: sta=113, comp=233 , per= 50.*
*DJA **10** 23:13:23.4±1.9, 42°S±34°×8°4W±2°7, h10km, M5.2/8, mB6.0/3, mb5.2/8, Mw(mB)5.6/3*
*NEIC **10** 23:13:33.3±0.0, 41.78S×83.45W, h10km, Moment Tensor Solution. s138 Moment tensor: Scale 10^{17}Nm; M_{rr}-3.15; $M_{\theta\theta}$0.15; $M_{\phi\phi}$2.99; $M_{r\theta}$1.48; $M_{\theta\phi}$-0.84; $M_{\phi r}$0.41; Best double couple: $M_0$3.50000×10^{17} NP1:ϕ_s324.00000°, δ49.00000°, λ-119.00000°. NP2:ϕ_s186.00000°, δ49.00000°, λ-59.00000°. Principal axes: T 3.2200, Plg0.0000°, Azm254.0000°; N 0.5600, Plg22.0000°, Azm344.0000°; P -3.7900, Plg67.0000°, Azm164.0000°;*
ISC 10 23:13:21.8±0.6**, 41.59S**±0.05×**84.09W**±0.06**, h16**km±3km**, n1021, σ1s27**/1000**, mb5.6**/147**, MS5.3**/181**, 237C-233D, West Chile Rise**

Code Station Name Δ° AZ° Phase ID Op ISC Time h m s Res ISC
COYC Coyhaique 9.58 119 *i* P Pn 23 15 43.1 +4.2
COYC Coyhaique 9.58 119 *i* P Pn 23 15 43.1 +4.2
PLCA Paso Flores 10.25 90 *e*Pn Pn 23 15 52.6 +4.4
PLCA Paso Flores 10.25 90 Pn **Pn 23 15 49.1 +0.8**
0.2nm,0.3s,baz=266,slow=11,SNR=12
PLCA LR LR 23 19 07.1
comp=Z,42μm,18.8s,baz=341,slow=34
LMEL Las Melosas 13.43 59 *e*P **Pn 23 16 30.2 -1.6**
LMEL Las Melosas 13.43 59 *e*P **Pn 23 16 30.2 -1.6**
CFAA Coronel Fontan 16.15 57 Pn **Pn 23 17 07.0 -1.1**
CFAA Coronel Fontan 16.15 57 Pn **Pn 23 17 07.0 -1.1**
0.0nm,0.3s,baz=227,slow=11,SNR=8.4
CFAA LR LR 23 22 14.2
comp=Z,2μm,21.2s,baz=214,slow=33
LCO Las Campanas 16.62 45 *e*Pn **Pn 23 17 15.3 +1.0**
219nm,1.5s
USHA Ushuaia 16.81 147 Pn **Pn 23 17 17.0 +0.8**
USHA Ushuaia 16.81 147 Pn **Pn 23 17 17.0 +0.8**
0.5nm,0.3s,baz=278,slow=15,SNR=2.9
USHA LR LR 23 22 56.4
comp=Z,8μm,19.5s,baz=288,slow=34
TRQA Tornquist 17.34 86 *e*Pn **P 23 17 24.9 +0.5**
6μm,2.2s
EFI East Falkland 20.42 128 *e*P **P 23 17 59.5 +1.5**
EFI pmax pmax
comp=Z,248nm,1.4s
EFI MLR MLR
comp=Z,19μm,20.0s
EFI East Falkland 20.42 128 *e*P **P 23 17 59.5 +1.5**
comp=Z,248nm,1.4s
EFI LR LR
comp=Z,19μm,20.0s
LPA La Plata 21.55 81*ce*P **P 23 18 12.0 +1.6**
LPA PPP PPP 23 19 35.0
LPA PPP(2) 23 20 11.0
LPA S Sn 23 22 16.0 -1.3
LPA PPS PPS 23 22 24.0
LPA SCS **ScS 23 29 30.0 -2.8**
LVC Limon Verde 22.82 39 *e*P **P 23 18 26.1 +1.8**
comp=Z,1μm,2.4s
LVC Limon Verde 22.82 39 P **P 23 18 26.0 +1.8**
comp=Z,64nm,1.1s,baz=197,slow=9.3,SNR=29
LVC LR LR 23 25 08.9
comp=Z,8μm,19.2s,baz=214,slow=31
PMSA Palmer Station 25.91 160 P **P 23 18 52.6 -0.1**
PMSA Palmer Station 25.91 160 P **P 23 18 52.6 -0.1**
comp=Z,23nm,1.0s,baz=136,slow=1.9,SNR=2.1
PMSA LR LR 23 26 09.0
comp=Z,3μm,20.8s,baz=329,slow=30
CPUP Villa Florida 26.77 64 P **P 23 19 01.1 +0.2**
CPUP Villa Florida 26.77 64 P **P 23 19 01.1 +0.2**
comp=Z,24nm,1.0s,baz=235,slow=8.7,SNR=39
CPUP LR LR 23 29 16.5
comp=Z,14μm,18.6s,baz=218,slow=36
ARE Arequipa 27.30 27 *e*P **P 23 19 07.0 +1.0**
ARE Arequipa 27.30 27 *e*P **P 23 19 07.0 +1.0**
LPAZ La Paz 28.73 33 *e*P **P 23 19 21.0 +1.9**
LPAZ PcP PcP 23 22 36.1 +6.7
LPAZ La Paz 28.73 33 P **P 23 19 20.3 +1.2**
comp=Z,15nm,0.8s,baz=198,slow=6.1,SNR=42
LPAZ PcP PcP 23 22 36.1 +6.7
comp=Z,5.3nm,1.1s,baz=221,slow=4.7,SNR=4.0
LPAZ LR LR 23 29 01.8
comp=Z,852nm,19.8s,baz=193,slow=33
NNA Nana 30.17 14 *e*P **P 23 19 31.8 +0.6**
NNA Nana 30.17 14 P **P 23 19 31.1 -0.1**
comp=Z,24nm,0.7s,baz=203,slow=9.6,SNR=10
NNA LR LR 23 28 18.7
comp=Z,3μm,20.3s,baz=180,slow=30
SIV San Ignacio 32.32 45 P **P 23 19 50.5 +0.2**
SIV San Ignacio 32.32 45 P **P 23 19 50.5 +0.2**
comp=Z,34nm,1.1s,baz=237,slow=12,SNR=54
SIV LR LR 23 32 23.5
comp=Z,6μm,21.0s,slow=35
ATAH Atahualpa 34.69 10 P **P 23 20 13.3 +2.1**
ATAH Atahualpa 34.69 10 P **P 23 20 13.3 +2.1**
comp=Z,15nm,0.8s,baz=170,slow=10,SNR=7.8
ATAH LR LR 23 30 50.6
comp=Z,3μm,19.8s,baz=188,slow=30
SPB Sao Paulo 35.39 71 *e*P **P 23 20 17.6 +0.7**
comp=Z,39nm,1.1s
SPB LR LR
comp=Z,18μm,20.0s
SAML Samuel 37.39 35 *e*P **P 23 20 34.8 +0.8**
comp=Z,58nm,1.3s
SAML *e*PcP **PcP 23 22 54.5 +1.8**
SAML LR LR
comp=Z,4μm,22.0s
CAM4 Nova Friburgo 39.65 74⇓*i*P **P 23 20 55.6 +2.4**
CAM4 *i* 23 20 59.8
CAM4 *i* 23 21 06.6
CAM4 *i* 23 21 08.9
CAM4 *i* 23 21 12.1
CAM4 *i* 23 21 27.0
CAM4 *i* 23 21 48.0
CAM4 *i* 23 22 09.2
BDFB Brasilia 40.42 61 P **P 23 20 59.9 +0.3**
BDFB PcP PcP 23 23 08.1 +5.7
BDFB Brasilia 40.42 61 P **P 23 20 59.9 +0.3**
comp=Z,27nm,1.1s,baz=226,slow=8.2,SNR=23
BDFB PcP PcP 23 23 08.1 +5.7
comp=Z,4.3nm,0.7s,baz=186,slow=7.2,SNR=3.4
BDFB LR LR 23 37 55.7
comp=Z,11μm,18.5s,baz=207,slow=36
PAYG Puerto Ayora 41.11 351 PFAKE 23 21 20.0 +15
PAYG LR LR
comp=Z,2μm,21.0s
OTAV Otavalo 41.95 8 *e*P **P 23 21 15.0 +2.6**
comp=Z,109nm,1.8s
OTAV LR LR
comp=Z,1μm,20.0s
RKT Rikitea 46.06 277 *e*S **S 23 28 25.6 -4.1**
comp=Z,1μm,25.5s
RKT *e*LR LR 23 34 40.2
comp=Z,15μm,26.2s
ROSC El Rosal 47.08 13 P **P 23 21 53.7 +0.4**
ROSC El Rosal 47.08 13 P **P 23 21 53.7 +0.4**
comp=Z,3.9nm,0.4s,baz=96,slow=20,SNR=14
ROSC LR LR 23 40 06.6
comp=Z,3μm,18.1s,baz=185,slow=34
SNAA Sanae 48.44 155 *e*P **P 23 22 02.3 -0.6**
SNAA PcP PcP 23 23 34.8 +5.9
SNAA Sanae 48.44 155 P **P 23 22 02.2 -0.7**
comp=Z,18nm,1.2s,baz=259,slow=6.6,SNR=26
SNAA PcP PcP 23 23 34.8 +5.9
comp=Z,2.0nm,0.8s,baz=284,slow=13,SNR=2.5
QSPA South Pole Qui 48.65 180 P **P 23 22 03.5 -1.2**
QSPA PcP PcP 23 23 36.2 +6.4
QSPA LR LR
comp=Z,2μm,20.0s
QSPA South Pole Qui 48.65 180 P **P 23 22 03.5 -1.2**
comp=Z,15nm,1.0s,baz=144,slow=3.0,SNR=16
QSPA PcP PcP 23 23 36.2 +6.4
comp=Z,19nm,0.9s,baz=218,slow=4.3,SNR=5.7
BCIP Isla Barro Col 50.66 5 PFAKE 23 22 30.0 +10
BCIP LR LR
comp=Z,956nm,19.0s
JTS JuntasAbangare 51.63 359 P **P 23 22 30.3 +2.7**
comp=Z,277nm,1.1s,SNR=6.4
JTS JuntasAbangare 51.63 359 *e*P **P 23 22 30.4 +2.8**
comp=Z,499nm,1.2s
JTS LR LR
comp=Z,2μm,20.0s
SDV Santo Domingo 51.73 17 *e*P **P 23 22 29.3 +0.7**
comp=Z,105nm,1.6s
SDV LR LR
comp=Z,5.0nm,20.0s
SBA Scott Base 53.55 194 *e*P **P 23 22 42.8 +1.7**
SBA pmax pmax
comp=Z,315nm,2.3s
SBA MLR MLR
comp=Z,3μm,20.0s
SBA Scott Base 53.55 194 *e*P **P 23 22 42.8 +1.7**
comp=Z,316nm,2.3s
SBA LR LR
comp=Z,3μm,20.0s
TRIS Tristan da Cun 54.23 111 PFAKE 23 23 00.0 +13
TRIS LR LR
comp=Z,4μm,19.0s
VNDA Vanda 54.62 194 *e*P **P 23 22 49.2 +0.3**
VNDA *e*PcP **PcP 23 23 52.3 +0.6**
VNDA *e*PP **PP 23 24 51.9 +0.9**
VNDA Vanda 54.62 194 P **P 23 22 48.7 -0.3**
comp=Z,5.9nm,1.1s,baz=132,slow=5.4,SNR=13
VNDA LR LR 23 41 28.5
comp=Z,4μm,20.4s,baz=134,slow=31
TGUH Tegucigalpa,Un 55.45 356 *e*P **P 23 22 58.2 +2.6**
comp=Z,60nm,0.8s
TGUH LR LR
comp=Z,1μm,21.0s
RCBR Riachuelo 55.65 64 PFAKE 23 23 10.0 +13
RCBR LR LR
comp=Z,6μm,20.0s
TBI Tubuai 56.77 267 *e*S **S 23 30 56.4 -1.2**
comp=Z,1μm,29.2s
TBI *e*LR LR 23 39 28.1
comp=Z,7μm,31.2s
GRGR Grenville 57.32 26 *e*P **P 23 23 09.4 +0.4**
comp=Z,420nm,1.0s
GRGR *e*PP **PP 23 25 16.3 -0.2**
GRGR LR LR
comp=Z,2μm,22.0s
BBGH Gun Hill 58.98 28 PFAKE 23 23 30.0 +9.4
BBGH LR LR
comp=Z,4μm,22.0s
MTDJ Mount Denham 59.82 7 PFAKE 23 23 40.0 +14
MTDJ LR LR
comp=Z,619nm,22.0s
FDF Fort de France 59.92 26 PFAKE 23 23 40.0 +13
FDF LR LR
comp=Z,3μm,22.0s
PPT2 Papeete2 60.30 272 *e*S **S 23 31 44.0 +0.3**
comp=Z,2μm,26.8s
PPT2 *e*LR LR 23 41 03.6
comp=Z,9μm,27.8s
PPT Papeete 60.31 272 LR LR 23 42 51.8
comp=Z,2μm,19.0s,baz=104,slow=30
CRPR Cabo Rojo, PR 61.35 18 *e*P P 23 23 42.6 +5.9
comp=Z,198nm,1.8s
SDDR Presa de Saban 61.42 14 PFAKE 23 23 50.0 +13
SDDR LR LR
comp=Z,2μm,22.0s
OBIP Obispado Ponce 61.50 19 *e*P **P 23 23 38.6 +0.8**
comp=Z,181nm,1.6s
CELP Cerrillos 61.54 19 *e*P **P 23 23 38.8 +0.8**
TEIG Tepich 61.62 356 *e*P **P 23 23 38.1 -0.5**
TEIG LR LR
comp=Z,900nm,21.0s
TEIG Tepich 61.62 356 P **P 23 23 37.8 -0.7**
baz=201,slow=4.5
SJG San Juan 61.68 19 *e*P **P 23 23 39.3 +0.4**
comp=Z,138nm,1.7s
SJG LR LR
comp=Z,1μm,19.0s
LRS Lares 61.69 19 *e*P **P 23 23 39.8 +0.7**
GTBY Guantanamo Bay 61.77 10 *e*P **P 23 23 40.1 +0.6**
comp=Z,64nm,1.3s
GTBY *e*PP **PP 23 25 56.1 +0.3**
GTBY LR LR
comp=Z,618nm,21.0s
HUMP Col San Antoni 61.79 20 *e*P **P 23 23 39.8 +0.1**
comp=Z,45nm,1.3s
CBYP Canovanas 61.91 20 *e*P **P 23 23 39.1 -1.4**
comp=Z,193nm,1.7s
SYO Syowa Base 62.16 160⇓*e*P **P 23 23 40.0 -1.6**
ANWB Willy Bob 62.48 24 PFAKE 23 24 00.0 +16
ANWB LR LR
comp=Z,1μm,20.0s
DRV Dumont d'Urvil 66.92 198 S S 23 32 58.0 -6.7
DRV L L 23 41 00.0
DRV R 23 45 00.0
MAW Mawson 68.29 167 P **P 23 24 20.4 -1.0**
MAW Mawson 68.29 167 P **P 23 24 20.4 -1.0**
comp=Z,15nm,0.8s,baz=194,slow=7.6,SNR=12
MAW LR LR 23 53 19.9
comp=Z,1μm,18.1s,baz=215,slow=35
ASCN Ascension 69.63 82 PFAKE 23 24 40.0 +9.4
ASCN LR LR
comp=Z,603nm,21.0s
KVTX Kingsville 69.97 347 PFAKE 23 24 50.0 +18
KVTX LR LR
comp=Z,558nm,19.0s
SHEL Horse Pasture 70.95 95 PFAKE 23 24 50.0 +11
SHEL LR LR
comp=Z,3μm,20.0s
SNZO South Karori 71.03 231 PFAKE 23 24 50.0 +11
SNZO LR LR
comp=Z,2μm,20.0s
732A Laxson Ranch, 71.49 345 ⇑P **P 23 24 41.1 -0.4**
baz=72,SNR=16
CASY Casey 71.87 186 *e*P **P 23 24 43.2 -0.2**
comp=Z,261nm,1.9s
CASY LR LR
comp=Z,2μm,19.0s
MIR Mirnyy 72.17 179 *e*P **P 23 24 44.0 -1.1**
MIR pmax pmax
comp=Z,108nm,1.8s
MIR MLR MLR
comp=N,1μm,18.0s
MIR MLR MLR
comp=Z,2μm,18.0s
632A Uvalde 72.22 346 ⇑P **P 23 24 45.6 -0.3**
baz=73,SNR=12
632A ⇓S S 23 34 14.1 +6.3
baz=73
631A Perdido Creek 72.27 345 ⇓P **P 23 24 45.8 -0.4**
baz=73,SNR=9.1
TIGA Tifton 72.67 0 ⇓P **P 23 24 47.5 -1.0**
baz=73
628A Black Gap, Mar 72.83 343 ⇓P **P 23 24 49.4 -0.1**
baz=73,SNR=20
532A Rocksprings 72.84 346 ⇑P **P 23 24 49.2 -0.4**
baz=73,SNR=28
TXAR Lajitas Array 72.85 342 P **P 23 24 50.3 +0.6**
TXAR Lajitas Array 72.85 342 P **P 23 24 50.3 +0.6**
comp=Z,1.7nm,0.8s,baz=160,slow=8.3,SNR=21
TXAR LR LR 23 51 27.9
comp=Z,912nm,19.2s,baz=5.0,slow=31
627A Terlingua Ranc 72.91 342 ⇑P **P 23 24 50.0 -0.1**
baz=73,SNR=10
531A Rocksprings 73.00 345 ⇓P **P 23 24 50.9 +0.3**
baz=74,SNR=34
530A J-C Ranch, Com 73.14 344 ⇑P **P 23 24 51.3 -0.1**
baz=74,SNR=25
JCT Junction City 73.17 346 *e*P **P 23 24 53.3 +1.8**
JCT pmax pmax
comp=Z,54nm,1.2s
JCT MLR MLR
comp=Z,362nm,22.0s
JCT Junction City 73.17 346 *e*P **P 23 24 53.3 +1.8**
comp=Z,54nm,1.2s
JCT LR LR
comp=Z,362nm,22.0s
JCT Junction City 73.17 346 ⇑P **P 23 24 51.2 -0.3**
baz=74,SNR=8.1
626A Big Bend Ranch 73.17 342 ⇑P **P 23 24 51.6 0.0**
baz=74,SNR=14
529A Stev Forest Ra 73.30 344 ⇓P **P 23 24 51.9 -0.5**
baz=74
528A Cox Ranch, San 73.45 343 ⇓P **P 23 24 52.4 -0.9**
baz=74,SNR=13
431A Sonora 73.51 345 ⇑P **P 23 24 53.6 +0.1**
baz=74,SNR=14
432A Menard 73.55 346 ⇓P **P 23 24 53.0 -0.8**
baz=74
527A Woodward Ranch 73.62 342 ⇓P **P 23 24 54.5 +0.2**
baz=74,SNR=14
526A Mary Lane Ranc 73.65 342 ⇑P **P 23 24 54.8 +0.3**
baz=74,SNR=15
VBMS Vicksburg 73.68 354 PFAKE 23 25 10.0 +16
VBMS LR LR
comp=Z,351nm,20.0s
429A Davenport Ranc 73.71 344 ⇑P **P 23 24 54.7 -0.1**
baz=74,SNR=13
430A Baggett Ranch, 73.74 345 ⇓P **P 23 24 54.5 -0.4**
baz=74
428A Kincaid Ranch, 73.98 343 ⇓P **P 23 24 56.1 -0.2**
baz=74
332A Millersview 74.03 346 ⇑P **P 23 24 56.2 -0.4**
baz=74,SNR=20
331A San Angelo 74.09 346 ⇓P **P 23 24 56.8 -0.1**
baz=75,SNR=10
426A McDonald Obser 74.22 342 ⇑P **P 23 24 57.5 -0.4**
baz=75,SNR=12
WHTX Lake Whitney 74.25 348 ⇓P **P 23 24 57.6 -0.2**
baz=75,SNR=9.3
427A Hayter Ranch, 74.25 343 ⇑P **P 23 24 57.8 -0.1**
baz=75,SNR=12
LRAL Lakeview Retre 74.31 357 *e*P **P 23 24 57.5 -0.6**
comp=Z,48nm,1.2s
LRAL LR LR
comp=Z,317nm,21.0s
330A Mertzon 74.33 345 ⇑P **P 23 24 57.9 -0.4**
baz=75,SNR=7.4
NHSC New Hope 74.42 3 *e*P **P 23 24 59.5 +0.8**
comp=Z,104nm,1.0s
NHSC LR LR
comp=Z,522nm,22.0s
232A Coleman 74.51 346 ⇓P **P 23 24 58.1 -1.2**
baz=75,SNR=16
425A Indio Mountain 74.56 341 ⇑P **P 23 24 59.2 -0.6**
baz=75
329A Wagon Wheel Ra 74.57 344 ⇑P **P 23 24 58.7 -1.1**
baz=75
328A Wristen Ranch, 74.64 343 ⇑P **P 23 24 59.6 -0.6**
baz=75,SNR=7.6
231A Bronte 74.68 346 ⇑P **P 23 24 59.7 -0.6**
baz=75
327A Balmorhea Ranc 74.77 343 ⇓P **P 23 24 59.9 -1.0**
baz=75
230A Sterling City 74.78 345 ⇓P **P 23 24 59.9 -1.0**
baz=75,SNR=7.5
326A Caldwell Ranch 74.83 342 ⇓P **P 23 25 00.5 -0.8**
baz=75
229A Bryant Ranch, 75.00 344 ⇓P **P 23 25 01.4 -0.8**
baz=76
325A Bean Ranch, Si 75.11 342 ⇑P **P 23 25 01.7 -1.4**
baz=76
RFTA Plano 75.14 349 *e*P **P 23 25 03.6 +0.8**
ABTX Abilene, Hawle 75.23 346 ⇓P **P 23 25 03.2 -0.2**
baz=76,SNR=13
228A UT Block 9, Go 75.30 344 ⇓P **P 23 25 03.0 -1.0**
baz=76
324A Moseley Ranch, 75.30 341 ⇓P **P 23 25 02.9 -1.2**
baz=76
227A Bennet, Jal 75.35 343 ⇑P **P 23 25 03.8 -0.5**
baz=76
131A Roby 75.41 346 ⇑P **P 23 25 03.9 -0.6**
baz=76,SNR=12
130A Snyder 75.44 345 ⇓P **P 23 25 04.2 -0.5**
baz=76,SNR=6.5
MNTX Cornudas Mount 75.53 341 *e*P **P 23 25 05.8 +0.7**
comp=Z,7.7nm,1.4s
MNTX LR LR
comp=Z,673nm,21.0s
226B Tecolote Peak, 75.61 342 ⇑P **P 23 25 05.7 0.0**
baz=76,SNR=5.3
129A Stewart Farms, 75.65 345 ⇑P **P 23 25 05.9 -0.1**
baz=76
BBSR BB Station 75.74 17 PFAKE 23 25 20.0 +14
BBSR LR LR
comp=Z,502nm,19.0s
128A Castleberry Fa 75.77 344 ⇑P **P 23 25 06.6 -0.1**
baz=76,SNR=9.6

225A **Deer Hill, Car** 75.79 342 ⇑P P 23 25 06.4 -0.5
baz=76
Z32A **Haskell** 75.86 347 ⇓P P 23 25 06.9 -0.2
baz=76,SNR=20
OXF **Oxford** 75.89 355 eP P 23 25 06.0 -1.2
OXF pmax pmax
comp=Z,153nm,1.1s
OXF MLR MLR
comp=Z,316nm,19.0s
OXF **Oxford** 75.89 355 eP P 23 25 06.0 -1.2
comp=Z,153nm,1.1s
OXF LR LR
comp=Z,316nm,19.0s
224A **Cornudas Mount** 75.92 341 ⇓P P 23 25 07.1 -0.5
baz=76,SNR=7.6
320A **Kipp Ranch, An** 75.99 339 ⇓P P 23 25 08.1 +0.1
baz=76
Z31A **Sharp Cattle R** 75.99 346 ⇓P P 23 25 07.7 -0.1
baz=76,SNR=18
127A **Arkansas Junct** 76.00 343 ⇓P P 23 25 07.9 -0.1
baz=76,SNR=6.8
223A **Chaparral, Ant** 76.08 341 ⇑P P 23 25 08.6 +0.2
baz=77
126A **Clayton Basin,** 76.12 343 ⇑P P 23 25 08.2 -0.5
baz=77
Z30A **Sanderson Ranc** 76.14 345 ⇑P P 23 25 08.1 -0.6
baz=77,SNR=12
Z29A **Hungry Hill Ra** 76.23 345 ⇓P P 23 25 08.6 -0.7
baz=77,SNR=6.9
319A **Douglas** 76.23 338 ⇑P P 23 25 09.4 0.0
baz=77
125A **Gardner Draw,** 76.28 342 ⇓P P 23 25 09.4 -0.2
baz=77,SNR=9.6
PLAL **Pickwick Lake** 76.29 357 eP P 23 25 08.1 -1.3
comp=Z,51nm,1.1s
222A **Williams Famil** 76.34 340 ⇓P P 23 25 10.0 0.0
baz=77
UALR **University of** 76.37 353 eP P 23 25 11.0 +1.1
comp=Z,47nm,1.2s
Z28A **Tucker Farm, M** 76.39 344 ⇑P P 23 25 10.0 -0.2
baz=77
KMSC **Kings Mountain** 76.40 2 ⇓P P 23 25 09.5 -0.6
baz=77,SNR=13
221A **Mesquite Ranch** 76.42 339 ⇓P P 23 25 10.3 -0.1
baz=77
124A **Stringfield Ra** 76.50 342 ⇓P P 23 25 11.1 +0.1
baz=77,SNR=16
220A **Playas Peak, P** 76.52 339 ⇑P P 23 25 11.5 +0.5
baz=77,SNR=14
Y32A **R-V Farms, Ver** 76.54 347 ⇑P P 23 25 10.7 -0.2
baz=77,SNR=7.2
Z27A **Tatum** 76.59 344 ⇓P P 23 25 11.1 -0.3
baz=77,SNR=15
123A **Bell Site, Whi** 76.63 341 ⇑P P 23 25 11.4 -0.2
baz=77
Y31A **Rekieta Farm,** 76.64 346 ⇑P P 23 25 11.3 -0.2
baz=77,SNR=5.9
CPCT **Cooper Cave** 76.67 360 eP P 23 25 11.1 -0.5
Y30A **Stafford Cattl** 76.67 346 ⇓P P 23 25 11.5 -0.3
baz=77,SNR=8.4
Z26A **Caprock** 76.71 343 ⇓P P 23 25 11.8 -0.3
baz=77,SNR=11
Y29A **Porterfield Fa** 76.80 345 ⇓P P 23 25 12.2 -0.3
baz=77
TKL **Tuckaleechee C** 76.88 0 eP P 23 25 11.8 -0.9
122A **Conniff Cattle** 76.88 340 ⇑P P 23 25 13.2 +0.2
baz=77
Z25A **Roswell** 76.89 342 ⇓P P 23 25 13.1 +0.1
baz=77,SNR=11
121A **Cookes Peak, D** 76.92 340 ⇑P P 23 25 13.9 +0.6
baz=77,SNR=6.2
ELIM **Elim** 76.95 125 eP P 23 25 13.5 -0.1
ELIM AMB AMB 23 25 21.3
comp=Z,132nm,1.9s
Y28A **McKinney Farm,** 76.97 345 ⇓P P 23 25 13.2 -0.2
baz=78,SNR=8.0
Z24A **Sheeppen Canyo** 77.08 342 ⇑P P 23 25 14.2 0.0
baz=78
Y27A **Causey** 77.13 344 ⇑P P 23 25 14.2 -0.1
baz=78,SNR=14
MSTX **Muleshoe** 77.13 344 ⇑P P 23 25 14.5 +0.1
baz=78,SNR=18
WMOK **Wichita Mounta** 77.15 348 eP P 23 25 13.1 -1.2
WMOK e 23 28 10.7
WMOK pmax pmax
comp=Z,127nm,1.8s
WMOK MLR MLR
comp=Z,293nm,20.0s
WMOK **Wichita Mounta** 77.15 348 eP P 23 25 13.1 -1.2
comp=Z,127nm,1.8s
WMOK ePP PP 23 28 10.7 +2.1
WMOK LR LR
comp=Z,293nm,20.0s
120A **U Bar Ranch, L** 77.16 339 ⇓P P 23 25 15.2 +0.6
baz=78,SNR=8.7
X30A **Coker Ranch, T** 77.22 346 ⇓P P 23 25 14.4 -0.4
baz=78,SNR=12
Z23A **Rita Site, Whi** 77.22 341 ⇓P P 23 25 15.1 +0.2
baz=78
X31A **McDonald Ranch** 77.24 347 ⇓P P 23 25 14.3 -0.6
baz=78
Y26A **Elida** 77.31 343 ⇑P P 23 25 15.2 -0.2
baz=78,SNR=6.1
GNAR **Gosnell** 77.37 355 eP P 23 25 18.1 +2.6
comp=Z,979nm,0.8s
X29A **Tulia** 77.38 345 ⇓P P 23 25 15.2 -0.6
baz=78
Z22A **Elephant Butte** 77.40 341 ⇑P P 23 25 16.1 +0.1
baz=78
WVT **Waverly** 77.42 357 eP P 23 25 14.9 -0.9
WVT pmax pmax
comp=Z,173nm,1.8s
WVT **Waverly** 77.42 357 eP P 23 25 14.9 -0.9
comp=Z,173nm,1.8s
Y25A **Mesa, Roswell** 77.50 343 ⇓P P 23 25 16.0 -0.4
baz=78,SNR=6.6
TUC **Tucson** 77.54 337 eP P 23 25 18.5 +1.8
TUC pmax pmax
comp=Z,125nm,1.5s
TUC MLR MLR
comp=Z,518nm,19.0s
TUC **Tucson** 77.54 337 eP P 23 25 18.4 +1.8
comp=Z,125nm,1.5s
TUC LR LR
comp=Z,518nm,19.0s
X28A **Dimmitt** 77.55 345 ⇓P P 23 25 16.0 -0.7
baz=78
Z21A **St. Cloud Mine** 77.63 340 ⇑P P 23 25 17.7 +0.4
baz=78,SNR=6.2
GLAT **Glass** 77.63 356 eP P 23 25 17.1 +0.1
Z20A **Nine Sixteen R** 77.69 339 ⇑P P 23 25 18.5 +1.0
baz=78,SNR=13
TZTN **Tazewell** 77.76 0 eP P 23 25 18.5 +0.8
comp=Z,70nm,1.3s
W31A **Holland Ranch,** 77.78 347 ⇑P P 23 25 17.6 -0.2
baz=78
AMTX **Amarillo** 77.80 345 eP P 23 25 18.7 +0.6
comp=Z,111nm,1.6s
AMTX LR LR
comp=Z,687nm,19.0s
Y23A **Lovelace Mesa,** 77.82 341 ⇓P P 23 25 18.9 +0.6
baz=78
X27A **F and S Farms,** 77.85 344 ⇓P P 23 25 18.0 -0.4
baz=78
TUL1 **Tulsa** 77.87 350 ⇓P P 23 25 17.8 -0.5
baz=78,SNR=12
W30A **Crocket Farms** 77.89 346 ⇓P P 23 25 17.7 -0.8
baz=78
X26A **CR and CF Fran** 77.91 343 ⇓P P 23 25 18.6 -0.2
baz=78,SNR=6.0
W29A **Amraillo** 78.02 345 ⇓P P 23 25 18.9 -0.5
baz=78
Y22A **Socorro** 78.05 341 ⇓P P 23 25 19.4 -0.1
baz=78
PARMO **Parma** 78.05 355 eP P 23 25 26.0 +6.7
X25A **Clemmons Ranch** 78.07 343 ⇓P P 23 25 19.0 -0.7
baz=79
Y22D **IRIS PASSCAL I** 78.17 341 ⇓P P 23 25 20.6 +0.4
baz=79
BNM **Barren Site** 78.17 341 eP P 23 25 21.4 +1.1
comp=Z,28nm,1.6s
W27A **Bowe Ranch, En** 78.25 344 ⇑P P 23 25 20.5 -0.1
baz=79,SNR=5.6
W28A **Vega** 78.26 345 ⇓P P 23 25 20.6 -0.1
baz=79
LENM **Lemitar** 78.27 341 eP P 23 25 22.9 +2.1
X24A **Lazy VL Ranch,** 78.28 342 ⇓P P 23 25 20.6 -0.3
baz=79

Y21A **Point of Rocks** 78.29 340 ⇑P P 23 25 21.5 +0.5
baz=79,SNR=5.9
LPM **Los Pinos Moun** 78.32 341 eP P 23 25 22.9 +1.8
V31A **Spring Creek L** 78.33 347 ⇑P P 23 25 21.6 +0.6
baz=79,SNR=14
Y20A **Horse Springs,** 78.38 340 ⇑P P 23 25 22.4 +0.9
baz=79,SNR=5.9
W26A **Owens Ranch, T** 78.42 344 ⇑P P 23 25 21.8 +0.2
baz=79
V30A **Spur Ranch, Mi** 78.47 346 ⇓P P 23 25 21.7 0.0
baz=79
X23A **Hourglass Bar** 78.47 342 ⇓P P 23 25 22.0 +0.1
baz=79
LAZ **Ladron** 78.53 341 eP P 23 25 23.2 +0.9
comp=Z,31nm,1.4s
X22A **Bernardo** 78.60 341 ⇓P P 23 25 22.4 -0.3
baz=79
KOMG **Komaggas** 78.69 120 eP P 23 25 24.1 +0.8
KOMG AMB AMB 23 25 30.9
comp=Z,72nm,1.5s
W25A **X Bar L Ranch,** 78.69 343 ⇑P P 23 25 23.0 -0.1
baz=79,SNR=15
V29A **Stinnett** 78.73 346 ⇑P P 23 25 22.9 -0.3
baz=79
X21A **Alamocita Cree** 78.74 340 ⇑P P 23 25 24.1 +0.6
baz=79,SNR=13
V28A **Channing** 78.74 345 ⇓P P 23 25 23.1 -0.2
baz=79
V27A **Dan Oppiter Fa** 78.87 345 ⇓P P 23 25 23.8 -0.2
baz=79
113A **Mohawk Valley,** 78.88 335 ⇓P P 23 25 24.0 +0.1
baz=79
ANMO **Albuquerque** 78.89 341 eP P 23 25 23.6 -0.7
comp=Z,112nm,1.5s
ANMO LR LR
comp=Z,708nm,20.0s
ANMO **Albuquerque** 78.89 341 P P 23 25 24.2 0.0
comp=Z,21nm,1.2s,baz=158,slow=8.2,SNR=47
W24A **Lazy 6 Ranch,** 78.89 342 ⇑P P 23 25 24.6 +0.3
baz=79,SNR=17
U31A **Nine Bar Ranch** 78.92 347 ⇑P P 23 25 24.0 -0.1
baz=79
XMAS **Kiritimati** 78.97 283 PFAKE 23 25 40.0 +15
XMAS LR LR
comp=Z,3μm,20.0s
X20A **Quemado** 79.01 340 ⇑P P 23 25 24.8 -0.1
baz=80
W23A **Werner Place,** 79.02 342 ⇑P P 23 25 25.7 +0.7
baz=80
CVNA **Calvinia** 79.03 122 eP P 23 25 26.1 +0.7
CVNA AMB AMB 23 25 32.9
comp=Z,100nm,1.9s
SIUC **Southern Illin** 79.07 356 eP P 23 25 26.5 +1.7
comp=Z,122nm,1.2s
SUR **Sutherland** 79.09 124 eP P 23 25 23.9 -1.8
SUR AMB AMB 23 25 34.3
comp=Z,61nm,2.8s
SUR **Sutherland** 79.09 124 eP P 23 25 26.3 +0.5
comp=Z,258nm,1.8s
SUR LR LR
comp=Z,1μm,19.0s
V26A **Tequesquite Ra** 79.10 344 ⇓P P 23 25 25.5 +0.2
baz=80
W22A **Albuquerque** 79.11 341 ⇓P P 23 25 25.9 +0.5
baz=80
Z14A **Wintersburg** 79.17 336 ⇑P P 23 25 25.9 +0.3
baz=80
AFI **Afiamalu** 79.20 261 PFAKE 23 25 40.0 +14
AFI LR LR
comp=Z,2μm,20.0s
SACV **Santiago Islan** 79.20 59 PFAKE 23 25 40.0 +14
SACV LR LR
comp=Z,3μm,20.0s
U30A **WK&E Inc. Balk** 79.21 346 ⇓P P 23 25 25.5 -0.3
baz=80
U29A **Oasis Ranch, S** 79.25 346 ⇑P P 23 25 25.7 -0.3
baz=80
USIN **University of** 79.25 357 eP P 23 25 27.1 +1.2
comp=Z,128nm,1.0s
V25A **Rancho No Teng** 79.32 343 ⇓P P 23 25 26.8 +0.2
baz=80,SNR=15
W21A **San Fidel** 79.34 341 ⇓P P 23 25 27.0 +0.3
baz=80
U28A **Mallet** 79.35 345 ⇓P P 23 25 26.8 +0.1
baz=80
V24A **Rampart Ranch,** 79.36 343 ⇑P P 23 25 27.0 +0.2
baz=80
X18A **Snowflake** 79.39 339 ⇑P P 23 25 28.0 +1.0
baz=80,SNR=5.2
GLA **Glamis** 79.48 334 eP P 23 25 30.9 +3.6
GLA pmax pmax
comp=Z,159nm,2.0s
GLA **Glamis** 79.48 334 eP P 23 25 30.9 +3.6
comp=Z,159nm,2.0s
GLA **Glamis** 79.48 334 ⇑P P 23 25 27.8 +0.5
baz=80
U27A **Thompson Grove** 79.51 345 ⇓P P 23 25 27.5 0.0
baz=80,SNR=6.4
DVTC **Desert V Tower** 79.55 333 ⇓P P 23 25 28.0 +0.3
baz=80
W20A **Ramah** 79.56 340 ⇓P P 23 25 28.7 +0.8
baz=80,SNR=13
V23A **Ortiz Mt. (NFS** 79.58 342 ⇑P P 23 25 28.6 +0.6
baz=80
T31A **Randall Ranch,** 79.60 347 ⇓P P 23 25 27.9 0.0
baz=80,SNR=7.5
CBN **Corbin** 79.66 5 PFAKE 23 25 40.0 +12
CBN LR LR
comp=Z,530nm,21.0s
U26A **Atchley Ranch,** 79.67 344 ⇓P P 23 25 28.6 +0.1
baz=80
T30A **Plains** 79.70 347 ⇓P P 23 25 28.4 0.0
baz=80
SWSC **Sam W. Stewart** 79.70 333 ⇓P P 23 25 28.5 0.0
baz=80
X16A **Lo Mia Camp, P** 79.70 337 ⇑P P 23 25 29.6 +0.9
baz=80,SNR=8.2
Y14A **Wickenburg** 79.72 336 ⇑P P 23 25 29.8 +1.1
baz=80,SNR=8.0
U25A **Circle Dot Ran** 79.82 343 ⇑P P 23 25 29.5 +0.2
baz=80,SNR=11
MONP **Monument Peak** 79.87 333 ⇓P P 23 25 30.0 +0.4
baz=80
W18A **Petrified Fore** 79.88 339 ⇓P P 23 25 29.9 +0.3
baz=80
V22A **San Miguel Ran** 79.92 341 ⇑P P 23 25 30.9 +1.0
baz=80,SNR=15
T29A **Hugoton** 79.94 346 ⇑P P 23 25 29.7 -0.1
baz=80
V21A **Milan** 79.99 341 ⇓P P 23 25 30.5 +0.3
baz=80
U24A **Moreno Valley** 80.02 343 ⇑P P 23 25 30.8 +0.4
baz=80
Y12C **Blythe** 80.03 335 ⇑P P 23 25 31.0 +0.8
baz=80
OLIL **Olney** 80.03 357 eP P 23 25 30.3 +0.3
comp=Z,104nm,1.1s
SLM **Saint Louis** 80.05 355 eP P 23 25 31.3 +1.1
SLM pmax pmax
comp=Z,76nm,1.1s
SLM **Saint Louis** 80.05 355 eP P 23 25 31.3 +1.1
comp=Z,76nm,1.1s
T28A **Walsh** 80.05 345 ⇑P P 23 25 30.7 +0.3
baz=81
S31A **Mullinville** 80.08 348 ⇑P P 23 25 30.3 -0.1
baz=81
109C **Camp Elliot, M** 80.11 332 ⇓P P 23 25 30.5 -0.1
baz=81
T27A **Campo** 80.11 345 ⇑P P 23 25 30.7 0.0
baz=81
U23A **El Rito** 80.14 342 ⇑P P 23 25 31.9 +0.8
baz=81,SNR=19
V20A **Brimhall** 80.19 340 ⇓P P 23 25 31.4 0.0
baz=81,SNR=13
BC3 **Big Chuckawall** 80.24 334 ⇓P P 23 25 31.7 +0.1
baz=81
S30A **Montezuma** 80.26 347 ⇓P P 23 25 31.9 +0.5
baz=81,SNR=11
U22A **Llaves** 80.35 342 ⇓P P 23 25 33.1 +0.9
baz=81,SNR=13
S29A **Ulysses** 80.36 346 ⇑P P 23 25 32.3 +0.3
baz=81
T26A **Comanche Natio** 80.39 344 ⇑P P 23 25 32.6 +0.3
baz=81,SNR=13
PDMCI **Parker Dam,Lak** 80.41 335 ⇓P P 23 25 32.7 +0.5
baz=81
BLO **Bloomington** 80.42 358 eP P 23 25 32.0 -0.2
BLO pmax pmax
comp=Z,90nm,1.0s
BLO **Bloomington** 80.42 358 eP P 23 25 32.0 -0.2
comp=Z,90nm,1.0s
S28A **Manter** 80.47 346 ⇓P P 23 25 32.4 -0.2
baz=81
T25A **Trinidad** 80.53 344 ⇑P P 23 25 33.4 +0.3
baz=81,SNR=23
PFO **Pinyon Flat Ob** 80.54 333 P P 23 25 35.2 +2.1
comp=Z,86nm,1.1s,SNR=5.4
PFO **Pinyon Flat Ob** 80.54 333 eP P 23 25 35.7 +2.6
comp=Z,33nm,1.3s
PFO LR LR
comp=Z,629nm,20.0s
PFO **Pinyon Flat Ob** 80.54 333 ⇑P P 23 25 33.4 +0.2
baz=81
U21A **Nageezi** 80.59 341 ⇑P P 23 25 34.2 +0.8
baz=81,SNR=17
IRM **Iron Mountain** 80.61 334 ⇑P P 23 25 34.3 +1.0
baz=81,SNR=7.0
SCI **San Clemente I** 80.70 331 ⇓P P 23 25 34.5 +0.7
baz=81
WUAZ **Wupatki** 80.71 338 eP P 23 25 32.8 -1.3
comp=Z,79nm,1.8s
WUAZ LR LR
comp=Z,374nm,20.0s
WUAZ **Wupatki** 80.71 338 ⇓P P 23 25 35.0 +0.9
baz=81
BELC **Belle Mtn. Jos** 80.74 334 ⇑P P 23 25 35.1 +0.8
baz=81
R31A **Burdett** 80.74 348 ⇓P P 23 25 33.9 -0.1
baz=81
S27A **Las Animas** 80.75 345 ⇑P P 23 25 34.1 0.0
baz=81
U20A **Newcomb** 80.75 340 ⇑P P 23 25 34.7 +0.5
baz=81
MURC **Murrieta** 80.78 332 ⇑P P 23 25 34.8 +0.4
baz=81
T23A **Casias Ranch,** 80.79 342 ⇓P P 23 25 34.9 +0.4
baz=81
S26A **Kim** 80.80 345 ⇑P P 23 25 34.8 +0.3
baz=81,SNR=14
R30A **Dighton** 80.86 347 ⇓P P 23 25 34.4 -0.3
baz=81,SNR=6.5
SDMD **Soldier's Deli** 80.89 6 eP P 23 25 35.9 +1.2
comp=Z,52nm,1.1s
T22A **Edith** 80.97 342 ⇓P P 23 25 36.1 +0.6
baz=82,SNR=25
NEE2 **Needles Airpor** 80.99 335 ⇑P P 23 25 35.6 +0.2
baz=82
CIS **Catalina Islan** 81.03 331 ⇑P P 23 25 35.9 +0.3
baz=82
S25A **Robets Cordova** 81.03 344 ⇓P P 23 25 36.4 +0.6
baz=82,SNR=14
W13A **Hualapai Mount** 81.07 336 ⇑P P 23 25 36.3 +0.3
baz=82,SNR=6.8
T21A **Navajo Lake** 81.09 341 ⇑P P 23 25 36.6 +0.4
baz=82,SNR=8.8
KSU1 **Kansas State U** 81.12 350 eP P 23 25 37.4 +1.4
comp=Z,43nm,1.0s
KSU1 LR LR
comp=Z,483nm,22.0s
R29A **Marienthal** 81.14 347 ⇑P P 23 25 36.5 +0.3
baz=82,SNR=9.5
R28A **Tribune** 81.18 346 ⇓P P 23 25 36.7 +0.3
baz=82,SNR=9.2
S24A **Houchin Ranch,** 81.18 343 ⇓P P 23 25 37.2 +0.5
baz=82,SNR=18
FMP **Fort Macarthur** 81.27 332 ⇓P P 23 25 37.1 +0.2
baz=82
BBRC **Big Bear Solar** 81.29 333 ⇓P P 23 25 37.3 +0.1
baz=82
R27A **Eads** 81.31 345 ⇓P P 23 25 37.0 -0.1
baz=82,SNR=9.3
GMRC **Granite Mounta** 81.34 334 ⇑P P 23 25 37.9 +0.5
baz=82,SNR=9.3
S23A **Nye Farm, Mont** 81.42 343 ⇓P P 23 25 38.0 +0.1
baz=82
Q31A **Ellis** 81.42 348 ⇓P P 23 25 37.7 +0.1
baz=82,SNR=6.3
R26A **Arlington** 81.45 345 ⇑P P 23 25 38.4 +0.5
baz=82,SNR=18
R25A **Fountain Ranch** 81.47 344 ⇓P P 23 25 38.1 +0.1
baz=82,SNR=7.1
MVL **Millersville** 81.52 6 eP P 23 25 38.5 +0.6
comp=Z,64nm,1.2s
BFSC **Mount Baldy Ra** 81.52 332 ⇓P P 23 25 38.3 -0.1
baz=82,SNR=6.8
Q30A **Quinter** 81.53 347 ⇓P P 23 25 38.3 +0.1
baz=82,SNR=16
Q29A **Oakley** 81.57 347 ⇑P P 23 25 39.0 +0.6
baz=82,SNR=5.2
HEC **Hector,Ludlow** 81.61 334 ⇓P P 23 25 39.8 +1.0
baz=82,SNR=5.6
SFIN **Scholer Farm** 81.64 358 ⇓P P 23 25 37.1 -1.5
baz=82
S22A **4UR Ranch, Cre** 81.65 342 ⇑P P 23 25 39.7 +0.6
baz=82,SNR=31
MWC **Mount Wilson** 81.65 332 eP P 23 25 41.8 +2.7
MWC pmax pmax
comp=Z,39nm,1.4s
MWC **Mount Wilson** 81.65 332 eP P 23 25 41.8 +2.7
comp=Z,39nm,1.4s
R24A **Sanders Place,** 81.73 343 ⇓P P 23 25 40.7 +1.2
baz=82,SNR=16
DECC **Green Verdugo** 81.77 332 ⇓P P 23 25 40.0 +0.4
baz=82
S21A **Coal Bank Pass** 81.79 341 ⇑P P 23 25 40.9 +0.9
baz=82,SNR=28
U15A **North Rim** 81.83 337 ⇓P P 23 25 41.1 +1.0
baz=82,SNR=12
R23A **Moffat** 81.84 343 ⇑P P 23 25 40.8 +0.6
baz=82,SNR=12
RRX **Edison Barstow** 81.88 333 ⇑P P 23 25 40.9 +0.8
baz=82
Q28A **Sharon Springs** 81.89 346 ⇓P P 23 25 40.5 +0.4
baz=82
BLG **Laguna Peak** 81.90 331 ⇑P P 23 25 40.4 +0.2
baz=82
HDIL **Hopedale** 81.90 356 eP P 23 25 41.3 +1.3
comp=Z,120nm,1.3s
HDIL LR LR
comp=Z,489nm,21.0s
P31A **Stockton** 81.92 348 ⇑P P 23 25 40.3 +0.1
baz=82,SNR=6.2
KSCO **Kaye Shedlock'** 81.98 346 ⇓P P 23 25 40.8 +0.1
baz=82
TUQ **Turquoise Moun** 82.03 334 ⇓P P 23 25 41.4 +0.3
baz=82
Q26A **Hugo** 82.07 345 ⇓P P 23 25 41.5 +0.3
baz=83
P30A **Selden** 82.08 347 ⇓P P 23 25 41.3 +0.2
baz=83,SNR=8.3
R22A **Saguache, Gunn** 82.09 342 ⇓P P 23 25 42.2 +0.7
baz=83,SNR=13
S20A **Disappointment** 82.09 341 ⇓P P 23 25 42.4 +1.0
baz=83,SNR=17
UPI **Upington** 82.09 121 eP P 23 25 42.1 +0.4
UPI AMB AMB 23 25 49.5
comp=Z,77nm,1.5s
GSC **Goldstone** 82.20 334 eP P 23 25 43.8 +1.9
GSC pmax pmax
comp=Z,39nm,1.3s
GSC **Goldstone** 82.20 334 eP P 23 25 43.8 +1.9
comp=Z,39nm,1.3s
GSC **Goldstone** 82.20 334 ⇑P P 23 25 41.9 0.0
baz=83
Q25A **Bedland, Calha** 82.20 344 ⇓P P 23 25 42.3 +0.3
baz=83
EDW2 **Edwards Air Fo** 82.22 332 ⇓P P 23 25 42.1 +0.2
baz=83
OSI **Osito Adit** 82.23 332 ⇓P P 23 25 42.0 0.0
baz=83
P29A **Atwood** 82.25 347 ⇓P P 23 25 42.4 +0.4
baz=83
P28A **Saint Francis** 82.37 346 ⇑P P 23 25 43.3 +0.6
baz=83,SNR=6.5
S18A **Hurst Farm, Bl** 82.38 340 ⇑P P 23 25 43.7 +0.8
baz=83,SNR=34
R21A **Cimarron** 82.41 342 ⇑P P 23 25 43.4 +0.4
baz=83
PV01 **Paradox Valley** 82.43 341 eP P 23 25 43.5 +0.3
comp=Z,3μm,1.2s
SBC **Santa Barbara** 82.44 331 ⇑P P 23 25 43.3 +0.3
baz=83
R20A **Redvale** 82.44 341 ⇑P P 23 25 43.6 +0.4
baz=83
Q24A **Divide** 82.44 344 ⇑P P 23 25 44.0 +0.7
baz=83,SNR=8.5

P27A **Ficken Ranch,** 82.50 346 ⇓P P 23 25 43.2 -0.1
baz=83
Q23A **Hartsel** 82.53 343 ⇑P P 23 25 43.6 -0.2
baz=83
SHOC **Shoshone** 82.57 334 ⇑P P 23 25 43.9 +0.2
baz=83
P26A **Davis Ranch, A** 82.65 345 ⇑P P 23 25 44.0 -0.2
baz=83
LRMC **Laurel Mountai** 82.65 333 ⇑P P 23 25 44.3 +0.1
baz=83
O30A **MW Ranch, Wils** 82.67 348 ⇑P P 23 25 43.5 -0.7
baz=83
Q22A **Crested Butte,** 82.73 342 ⇑P P 23 25 45.2 +0.4
baz=83,SNR=7.8
ARVC **Arvin** 82.73 332 ⇓P P 23 25 44.6 +0.1
baz=83
O29A **4D Ranch, Culb** 82.74 347 ⇑P P 23 25 44.3 -0.2
baz=83
PV04 **Paradox Valley** 82.76 341 eP P 23 25 47.4 +2.5
P25A **Willow Gulch B** 82.77 344 ⇓P P 23 25 45.2 +0.4
baz=83,SNR=7.7
Q21A **Lamborn Mesa,** 82.86 342 ⇓P P 23 25 46.1 +0.8
baz=83,SNR=11
PKM **Peak Mountain** 82.88 331 ⇑P P 23 25 46.2 +0.6
baz=83,SNR=8.4
O28A **Krutsinger Ran** 82.91 346 ⇑P P 23 25 45.9 +0.5
baz=83,SNR=8.4
P24A **Kohler Place,** 82.92 344 ⇑P P 23 25 45.9 +0.2
baz=83
ISA **Isabella** 83.09 332 eP P 23 25 49.5 +3.0
ISA pmax pmax
comp=Z,115nm,1.8s
ISA **Isabella** 83.09 332 eP P 23 25 49.5 +3.0
comp=Z,115nm,1.8s
ISA **Isabella** 83.09 332 ⇓P P 23 25 47.0 +0.5
baz=84,SNR=5.5
O27A **Beecher Island** 83.10 346 ⇑P P 23 25 46.8 +0.4
baz=84,SNR=6.7
MPMC **Manual Prospec** 83.11 333 ⇓P P 23 25 47.2 +0.5
baz=84,SNR=7.6
YLE **Yale** 83.14 8 eP P 23 25 46.7 +0.3
comp=Z,144nm,1.0s
Q20A **Ridgley Place,** 83.14 341 ⇑P P 23 25 47.6 +0.8
baz=84,SNR=11
CCUT **Cedar City** 83.18 337 eP P 23 25 49.2 +2.1
comp=Z,57nm,1.5s
HVD **Gariep Dam** 83.21 125 ⇓/P P 23 25 47.9 +0.3
HVD AMB AMB 23 25 55.5
comp=Z,121nm,1.6s
FURC **Furnace Creek,** 83.28 334 ⇓P P 23 25 48.6 +1.3
baz=84,SNR=5.3
N30A **Hueftle Ranch,** 83.28 348 ⇓P P 23 25 47.7 +0.4
baz=84
O26A **Horse Wrangler** 83.30 345 ⇑P P 23 25 47.7 +0.2
baz=84
SMMC **Simmler** 83.32 331 ⇑P P 23 25 48.4 +0.8
baz=84
O25A **Wiggins** 83.33 345 ⇑P P 23 25 48.5 +0.8
baz=84
ISCO **Idaho Springs** 83.34 343 eP P 23 25 50.4 +2.4
ISCO pmax pmax
comp=Z,85nm,1.9s
ISCO MLR MLR
comp=Z,345nm,21.0s
ISCO **Idaho Springs** 83.34 343 eP P 23 25 50.4 +2.4
comp=Z,85nm,1.9s
ISCO LR LR
comp=Z,345nm,21.0s
ISCO **Idaho Springs** 83.34 343 ⇓P P 23 25 48.9 +0.9
baz=84,SNR=7.1
N29A **Votaw Ranch, W** 83.39 347 ⇓P P 23 25 47.8 -0.1
baz=84
P22A **Eagle** 83.40 343 ⇓P P 23 25 48.4 +0.3
baz=84
ERPA **Erie** 83.41 3 eP P 23 25 48.1 +0.3
comp=Z,65nm,1.3s
ERPA LR LR
comp=Z,713nm,22.0s
N28A **Pribbeno Ranch** 83.41 347 ⇓P P 23 25 48.0 0.0
baz=84
VES **Vestal, Richgr** 83.47 332 ⇑P P 23 25 48.6 +0.3
baz=84
P21A **Newcastle** 83.49 342 ⇓P P 23 25 49.1 +0.5
baz=84
SCIA **State Center** 83.53 353 eP P 23 25 50.3 +1.9
comp=Z,511nm,2.5s
SCIA LR LR
comp=Z,340nm,21.0s
O24A **Longmont** 83.54 344 ⇓P P 23 25 48.7 -0.1
baz=84
BGNE **Belgrade** 83.59 349 ⇑P P 23 25 48.7 -0.1
baz=84
CWC **Cottonwood Cre** 83.66 333 ⇓P P 23 25 50.0 +0.5
baz=84
P20A **De Beque** 83.69 341 ⇑P P 23 25 50.0 +0.4
baz=84,SNR=5.1
N27A **Anderson Farm,** 83.70 346 ⇑P P 23 25 50.0 +0.5
baz=84,SNR=8.7
BINY **Binghamton** 83.73 6 eP P 23 25 49.3 -0.2
comp=Z,87nm,1.4s
BINY LR LR
comp=Z,518nm,20.0s
MVU **Marysvale** 83.74 338 eP P 23 25 53.0 +3.0
comp=Z,51nm,1.5s
MVU LR LR
comp=Z,742nm,20.0s
O23A **Lake Granby, G** 83.80 343 ⇑P P 23 25 51.4 +1.1
baz=84,SNR=5.9
Q16A **Castle Valley** 83.84 339 ⇑P P 23 25 51.1 +0.7
baz=84,SNR=12
SRU **San Rafael** 83.85 340 ⇓P P 23 25 50.2 -0.2
baz=84
N26A **Koester Ranch,** 83.85 346 ⇓P P 23 25 50.4 +0.1
baz=84
O22A **Kremmling** 83.89 343 ⇓P P 23 25 51.4 +0.7
baz=84,SNR=12
BRYW **Bryant College** 83.90 9 eP P 23 25 50.6 +0.3
comp=Z,172nm,1.4s
GRAC **Grapevine Rang** 83.93 334 ⇑P P 23 25 51.1 +0.4
baz=84
RCTC **Rector, Farmer** 83.94 332 ⇑P P 23 25 50.7 0.0
baz=84
P19A **Cripple Cowboy** 83.95 341 ⇓P P 23 25 51.6 +0.6
baz=84,SNR=12
M30A **Dale-Ortello V** 83.97 348 ⇓P P 23 25 50.9 +0.1
baz=84
TAU **Tasmania Unive** 83.98 215 PFAKE 23 26 00.0 +8.9
TAU LR LR
comp=Z,2μm,19.0s
N25A **Grover** 84.00 345 ⇑P P 23 25 51.0 -0.1
baz=84
M29A **Burnside Ranch** 84.01 348 ⇓P P 23 25 51.4 +0.4
baz=84,SNR=5.7
M28A **Bar X Bar Ranc** 84.07 347 ⇓P P 23 25 51.6 +0.3
baz=85
MSVF **Nonsavu** 84.12 252 PFAKE 23 26 00.0 +7.7
MSVF LR LR
comp=Z,1μm,20.0s
O21A **Pagoda** 84.15 342 ⇑P P 23 25 52.4 +0.3
baz=85
QUA2 **Belchertown** 84.16 9 eP P 23 25 51.5 -0.1
comp=Z,81nm,1.1s
N24A **Carr** 84.18 344 ⇓P P 23 25 52.5 +0.5
baz=85
O20A **White River Ci** 84.25 342 ⇑P P 23 25 52.5 0.0
baz=85
TIN **Tinemaha** 84.27 333 ⇑P P 23 25 52.7 +0.2
baz=85
M27A **Reverse DX Ran** 84.38 346 ⇑P P 23 25 52.7 -0.3
baz=85
WES **Weston** 84.39 9 eP P 23 25 54.1 +1.3
WES pmax pmax
comp=Z,65nm,1.1s
WES **Weston** 84.39 9 eP P 23 25 54.1 +1.3
comp=Z,65nm,1.1s
M26A **McRoberts Ranc** 84.46 346 ⇑P P 23 25 53.9 +0.6
baz=85
BOSA **Boshof** 84.46 124 eP P 23 25 53.6 -0.4
BOSA AMB AMB 23 26 00.6
comp=Z,125nm,1.4s
BOSA **Boshof** 84.46 124 eP P 23 25 53.4 -0.6
BOSA **Boshof** 84.46 124 P P 23 25 53.1 -0.9
comp=Z,21nm,0.9s,baz=222,slow=4.3,SNR=26
BOSA LR LR 23 58 18.8
comp=Z,1μm,21.4s,baz=226,slow=32
N23A **Red Feather La** 84.46 344 ⇑P P 23 25 54.1 +0.5
baz=85,SNR=10
TRY **Troy** 84.47 8 eP P 23 25 52.6 -0.6
comp=Z,235nm,1.5s
HRV **Adam Dziewonsk** 84.48 9 eP P 23 25 54.3 +1.0
HRV pmax pmax
comp=Z,78nm,1.5s
HRV **Adam Dziewonsk** 84.48 9 eP P 23 25 54.3 +1.0
comp=Z,78nm,1.5s
N22A **Wattenberg Ran** 84.48 343 ⇓P P 23 25 54.3 +0.6
baz=85,SNR=7.7
L29A **Maesberg Ranch** 84.58 348 ⇓P P 23 25 54.6 +0.7
baz=85,SNR=5.1
R11A **Troy Canyon, C** 84.59 336 ⇓P P 23 25 55.1 +0.9
baz=85,SNR=31
M25A **Palm-Egli Farm** 84.60 345 ⇓P P 23 25 54.1 0.0
baz=85
O19A **Miners Draw (B** 84.62 341 ⇓P P 23 25 54.3 +0.1
baz=85
MTUM **Tungsten Hills** 84.65 333 eP P 23 25 57.2 +2.7
N21A **Black Mountain** 84.68 342 ⇓P P 23 25 55.4 +0.7
baz=85,SNR=13
PHWY **Pilot Hill** 84.75 344 eP P 23 25 57.4 +2.3
comp=Z,112nm,1.9s
M24A **Cheyenne** 84.78 345 ⇑P P 23 25 55.8 +0.7
baz=85,SNR=8.4
TPH **Tonopah** 84.86 334 PFAKE 23 26 10.0 +14
TPH LR LR
comp=Z,300nm,22.0s
L27A **T5 Ranch, Ells** 84.91 346 ⇓P P 23 25 55.8 +0.2
baz=85
N20A **Spence Gulch,** 84.92 342 ⇓P P 23 25 56.6 +0.7
baz=85,SNR=18
M23A **Laramie** 84.97 344 ⇓P P 23 25 56.3 +0.3
baz=86
MLAC **Mammoth Lakes** 84.99 333 ⇑P P 23 25 56.3 0.0
baz=86
L26A **Underwood Farm** 85.00 346 ⇑P P 23 25 56.4 +0.3
baz=86
M22A **Cedar Creek Ra** 85.09 343 ⇓P P 23 25 56.7 0.0
baz=86
ACCN **Adirondack Com** 85.11 8 eP P 23 25 57.8 +1.3
comp=Z,59nm,1.1s
SAO **San Andreas Ge** 85.14 331 eP P 23 25 57.6 +0.8
SAO pmax pmax
comp=Z,40nm,1.8s
SAO **San Andreas Ge** 85.14 331 eP P 23 25 57.5 +0.8
comp=Z,40nm,1.8s
K29A **Lazy Trails An** 85.24 348 ⇓P P 23 25 56.8 -0.3
baz=86
DAU **Daniels Canyon** 85.27 340 eP P 23 25 59.2 +1.5
DAU **Daniels Canyon** 85.27 340 eP P 23 25 59.2 +1.5
L25A **Engebretsen Ra** 85.28 345 ⇓P P 23 25 57.3 -0.2
baz=86
K28A **Ten Mile Ranch** 85.36 347 ⇑P P 23 25 57.6 -0.2
baz=86
L24A **Wheatland** 85.36 345 ⇓P P 23 25 57.5 -0.4
baz=86
FFD **Franklin Falls** 85.42 9 eP P 23 25 58.9 +0.9
comp=Z,9.2nm,0.4s
M21A **Separation Pea** 85.45 343 ⇑P P 23 25 57.8 -0.8
baz=86
K27A **Flueckinger Fa** 85.49 347 ⇑P P 23 25 59.0 +0.5
baz=86,SNR=6.3
JLU **Jordanelle** 85.50 339 eP P 23 26 01.1 +2.4
comp=Z,44nm,1.7s
SWZ **Schweizer** 85.51 123 eP P 23 25 59.4 0.0
SWZ AMB AMB 23 26 05.3
comp=Z,83nm,1.9s
M20A **Sweetwater, Wa** 85.53 342 ⇑P P 23 25 59.1 +0.2
baz=86,SNR=6.8
NVAR **Mina Array Bea** 85.53 334 P P 23 25 59.4 +0.4
NVAR **Mina Array Bea** 85.53 334 P P 23 25 59.4 +0.4
comp=Z,7.7nm,1.1s,baz=167,slow=6.1,SNR=29
NVAR LR LR 23 57 32.9
comp=Z,290nm,19.9s,baz=221,slow=31
HNH **Hanover** 85.58 9 eP P 23 26 01.1 +2.4
L23A **Garrett** 85.58 344 ⇓P P 23 25 59.0 -0.1
baz=86,SNR=11
KSD **Kokstad** 85.63 127 eP P 23 26 00.5 +0.7
KSD AMB AMB 23 26 08.0
comp=Z,129nm,1.8s
NCB **Newcomb** 85.64 7 eP P 23 25 59.6 +0.5
comp=Z,28nm,1.1s
NCB LR LR
comp=Z,801nm,22.0s
L22A **Ellis Ranch, M** 85.66 344 ⇑P P 23 25 59.5 0.0
baz=86
K26A **Motz Farm, Whi** 85.66 346 ⇓P P 23 25 59.4 +0.1
baz=86
ECSD **EROS Data Cent** 85.69 351 eP P 23 25 58.5 -0.8
ECSD LR LR
comp=Z,629nm,20.0s
K25A **Mack Ranch, Ha** 85.70 345 ⇑P P 23 25 59.3 -0.3
baz=86
M19A **Rock Springs** 85.77 341 ⇓P P 23 25 59.8 -0.3
baz=86
MDV **Middlebury** 85.77 8 eP P 23 26 00.8 +1.1
L21A **Rawlins** 85.79 343 ⇓P P 23 26 00.1 -0.1
baz=86,SNR=8.2
TSUM **Tsumeb** 85.83 112 eP P 23 26 00.8 -0.2
TSUM **Tsumeb** 85.83 112 eP P 23 26 01.8 +0.8
comp=Z,59nm,1.5s
TSUM LR LR
comp=Z,2μm,20.0s
CMB **Columbia Colle** 85.89 332 eP P 23 26 02.0 +1.5
CMB pmax pmax
comp=Z,120nm,2.4s
CMB **Columbia Colle** 85.89 332 eP P 23 26 02.0 +1.5
comp=Z,120nm,2.4s
K24A **Anderson Ranch** 85.99 345 ⇑P P 23 26 00.9 -0.1
baz=86
J28A **Allard Ranch,** 86.03 348 ⇓P P 23 26 01.3 +0.1
baz=86
L20A **Wamsutter** 86.06 342 ⇑P P 23 26 01.1 -0.4
baz=87
M17A **Scullys Gap (B** 86.11 340 ⇑P P 23 26 01.0 -0.8
baz=87
LBNH **Lisbon** 86.14 9 eP P 23 26 02.1 +0.5
LBNH pmax pmax
comp=Z,95nm,1.8s
LBNH MLR MLR
comp=Z,546nm,19.0s
LBNH **Lisbon** 86.14 9 eP P 23 26 02.1 +0.5
comp=Z,96nm,1.8s
LBNH LR LR
comp=Z,546nm,19.0s
K23A **Bowen Ranch, D** 86.18 344 ⇓P P 23 26 02.0 0.0
baz=87,SNR=7.0
LONY **Lake Ozonia** 86.25 7 eP P 23 26 03.3 +1.2
comp=Z,69nm,1.2s
LONY LR LR
comp=Z,850nm,21.0s
K22A **Casper** 86.27 344 ⇑P P 23 26 02.6 +0.2
baz=87,SNR=16
L18A **Fontenelle, Gr** 86.38 341 ⇓P P 23 26 02.3 -0.8
baz=87
L19A **Farson** 86.38 341 ⇓P P 23 26 03.3 +0.2
baz=87,SNR=7.5
DBIC **Dimbokro** 86.40 78 eP P 23 26 04.1 +0.5
DBIC **Dimbokro** 86.40 78 eP P 23 26 05.1 +1.5
comp=Z,143nm,1.4s
DBIC **Dimbokro** 86.40 78 P P 23 26 05.0 +1.5
comp=Z,32nm,1.2s,baz=207,slow=5.2,SNR=8.1
DBIC LR LR 00 01 03.3
comp=Z,2μm,19.2s,baz=198,slow=33
K21A **Alcova** 86.41 343 ⇑P P 23 26 03.4 +0.3
baz=87,SNR=8.5
J25A **Sunshine Ranch** 86.44 346 ⇑P P 23 26 03.4 +0.2
baz=87,SNR=11
HWUT **Hardware Ranch** 86.47 340 eP P 23 26 04.4 +0.9
comp=Z,249nm,2.1s
HWUT LR LR
comp=Z,518nm,20.0s
J24A **Dixon Ranch, L** 86.54 345 ⇓P P 23 26 04.4 +0.6
baz=87
FRNY **Flat Rock** 86.56 7 eP P 23 26 04.7 +1.1
comp=Z,306nm,2.5s
MSNY **Massena** 86.60 7 eP P 23 26 05.8 +2.1
comp=Z,172nm,0.8s
K20A **Yellowstone Ra** 86.67 342 ⇑P P 23 26 04.4 -0.1
baz=87,SNR=10
BRSD **Miller** 86.68 349 ⇑P P 23 26 03.1 -1.2
baz=87
ELK **Elko** 86.69 337 eP P 23 26 06.7 +2.0
comp=Z,139nm,1.9s
SPMN **St. Paul** 86.78 354 ⇑P P 23 26 03.5 -1.2
baz=87
J23A **Dilts Ranch, B** 86.79 345 ⇑P P 23 26 04.2 -0.8
baz=87
K19A **Absolon Red Bu** 86.95 342 ⇑P P 23 26 05.7 -0.1
baz=88,SNR=10
HVU **Hansel Valley** 86.95 339 eP P 23 26 07.1 +1.3
HVU pmax pmax
comp=Z,144nm,1.9s
HVU **Hansel Valley** 86.95 339 eP P 23 26 07.0 +1.3
comp=Z,144nm,1.9s
PRYS **Parys** 86.97 124 eP P 23 26 06.3 -0.2
PRYS AMB AMB 23 26 13.3
comp=Z,62nm,1.8s
J22A **Midwest** 86.99 344 ⇓P P 23 26 05.3 -0.7
baz=88
BMN **Battle Mountai** 87.00 335 eP P 23 26 08.3 +2.2
BMN MLR MLR
comp=Z,456nm,19.0s
BMN **Battle Mountai** 87.00 335 eP P 23 26 08.3 +2.2
BMN LR LR
comp=Z,456nm,19.0s
I24A **Kuemmerle Ranc** 87.05 345 ⇑P P 23 26 05.9 -0.2
baz=88
BW06 **Boulder Array** 87.06 342 eP P 23 26 05.9 -0.5
comp=Z,81nm,1.9s
BW06 LR LR
comp=Z,323nm,22.0s
PDAR **Pinedale Array** 87.06 342 P P 23 26 06.0 -0.4
PDAR PKKPbc **PKKPdf** 23 43 56.6 +2.2
PDAR **Pinedale Array** 87.06 342 P P 23 26 06.0 -0.4
comp=Z,3.7nm,1.0s,baz=164,slow=5.9,SNR=19
PDAR PKKPbc **PKKPdf** 23 43 56.6 +2.2
comp=Z,0.5nm,0.8s,baz=166,slow=1.5,SNR=2.4
PDAR LR LR 00 00 05.3
comp=Z,347nm,20.0s,baz=154,slow=32
J21A **Lysite** 87.13 343 ⇑P P 23 26 07.1 +0.4
baz=88,SNR=5.7
RSSD **Black Hills** 87.19 346 eP P 23 26 07.1 +0.1
RSSD pmax pmax
comp=Z,30nm,1.0s
RSSD **Black Hills** 87.19 346 eP P 23 26 07.1 +0.1
comp=Z,30nm,1.0s
LBTB **Lobatse** 87.20 121 eP P 23 26 05.7 -1.9
LBTB AMB AMB 23 26 14.8
comp=Z,57nm,1.8s
LBTB **Lobatse** 87.20 121 eP P 23 26 08.0 +0.3
comp=Z,172nm,1.9s
J20A **Shoshoni** 87.28 343 ⇓P P 23 26 07.9 +0.5
baz=88,SNR=5.8
I23A **Meade Ranch, G** 87.31 345 ⇑P P 23 26 06.5 -0.9
baz=88
J19A **Crowheart** 87.41 342 ⇓P P 23 26 07.5 -0.5
baz=88
COWI **Conover** 87.42 356 eP P 23 26 06.8 -1.0
comp=Z,224nm,1.8s
COWI LR LR
comp=Z,548nm,19.0s
AHID **Auburn Hatcher** 87.44 340 eP P 23 26 09.1 +0.9
comp=Z,173nm,1.9s
AHID LR LR
comp=Z,320nm,21.0s
OHCM **Honcut** 87.44 332 eP P 23 26 10.1 +2.1
I22A **9 Mile Ranch,** 87.45 344 ⇓P P 23 26 08.1 -0.1
baz=88,SNR=8.0
BEKR **Beckworth** 87.52 333 eP P 23 26 09.6 +0.9
comp=Z,42nm,1.9s
I21A **Big Trails, Te** 87.54 343 ⇓P P 23 26 08.6 0.0
baz=88,SNR=15
I20A **Worland** 87.85 343 ⇑P P 23 26 10.0 -0.1
baz=88,SNR=11
H23A **Clabaugh Cattl** 87.87 345 ⇓P P 23 26 09.4 -0.8
baz=88
H24A **Dirks Ranch, A** 87.89 346 ⇑P P 23 26 09.3 -0.9
baz=88,SNR=12
ERPM **east rand prop** 87.93 124 eP P 23 26 11.9 +0.7
ERPM AMB AMB 23 26 17.7
comp=Z,60nm,2.3s
I18A **Diamond G Ranc** 88.00 342 ⇑P P 23 26 11.2 +0.2
baz=88,SNR=8.7
SNOW **Snow King Moun** 88.00 341 eP P 23 26 14.0 +3.1
comp=Z,70nm,1.7s
RRI2 **Red Ridge** 88.04 340 eP P 23 26 13.0 +1.9
comp=Z,140nm,1.8s
TPAW **Teton Pass** 88.08 341 eP P 23 26 12.3 +1.0
comp=Z,149nm,1.8s
H22A **Clearmont** 88.09 344 ⇑P P 23 26 10.8 -0.4
baz=89
LOHW **Long Hollow** 88.11 341 eP P 23 26 13.4 +2.0
comp=Z,74nm,1.7s
I19A **Meeteetse** 88.13 342 ⇑P P 23 26 11.2 -0.3
baz=89
H21A **Big Horn, Sher** 88.27 344 ⇑P P 23 26 11.5 -0.6
baz=89
MOOW **Moose Ponds** 88.27 341 eP P 23 26 14.0 +1.8
comp=Z,78nm,2.0s
H20A **Greybull** 88.34 343 ⇓P P 23 26 11.8 -0.6
baz=89
I17A **Pilgrim Ck.** 88.39 341 ⇑P P 23 26 12.4 -0.4
baz=89
SLR **Silverton** 88.39 123 eP P 23 26 10.7 -2.6
SLR AMB AMB 23 26 14.0
comp=Z,46nm,2.4s
G24A **Alzada** 88.42 346 ⇓P P 23 26 12.1 -0.6
baz=89
IMW **Indian Meadow** 88.46 341 eP P 23 26 15.2 +2.1
comp=Z,120nm,1.9s
G23A **Biddle** 88.49 345 ⇑P P 23 26 12.7 -0.2
baz=89,SNR=6.8
KCPM **Cahto Peak** 88.51 331 eP P 23 26 13.8 +0.5
comp=Z,13nm,1.1s
I16A **Newdale** 88.58 341 ⇑P P 23 26 13.5 -0.1
baz=89
G22A **Birney** 88.68 345 ⇓P P 23 26 13.1 -0.8
baz=89
H19A **Powell** 88.73 343 ⇓P P 23 26 14.5 +0.3
baz=89
H17A **Grant Village** 88.84 341 ⇓P P 23 26 14.7 -0.2
baz=89
G21A **Lodge Grass** 88.87 344 ⇓P P 23 26 14.4 -0.4
baz=89
H18A **Shoshone NF, C** 88.89 342 ⇑P P 23 26 15.0 -0.1
baz=89
WDC **Whiskeytown Da** 88.92 332 eP P 23 26 15.7 +0.7
WDC pmax pmax
comp=Z,92nm,1.8s
WDC **Whiskeytown Da** 88.92 332 eP P 23 26 15.7 +0.7
comp=Z,92nm,1.8s
F24A **Ekalaka** 88.93 346 ⇓P P 23 26 14.2 -0.9
baz=89
YFT **Old Faithful** 88.96 341 eP P 23 26 17.0 +1.6
comp=Z,186nm,1.8s
LKWY **Lake** 88.96 342 PFAKE 23 26 30.0 +15
LKWY LR LR
comp=Z,763nm,22.0s
F23A **Volborg** 88.99 345 ⇑P P 23 26 14.4 -1.0
baz=90
HLID **Hailey** 89.05 338 eP P 23 26 17.6 +1.8
comp=Z,109nm,1.7s
HLID LR LR
comp=Z,390nm,20.0s
HLID **Hailey** 89.05 338 ⇓P P 23 26 15.6 -0.2
baz=90
LTIM **Timbered Crate** 89.08 333 P P 23 26 17.2 +1.4
G20A **Bridger** 89.08 343 ⇑P P 23 26 15.4 -0.5
baz=90,SNR=7.7
DZM **Mont Dzumac** 89.13 241 eS S 23 36 59.3 -6.0
comp=Z,608nm,28.4s
DZM eLR LR 23 54 31.3
comp=Z,6μm,29.1s
I14A **Mackay** 89.13 339 ⇑P P 23 26 17.7 +1.5
baz=90,SNR=25
YMR **Madison River** 89.19 341 eP P 23 26 18.5 +2.0
comp=Z,148nm,1.5s
F22A **Rosebud** 89.21 345 ⇓P P 23 26 15.8 -0.6
baz=90
RLMT **Red Lodge** 89.22 342 eP P 23 26 16.9 +0.2
comp=Z,88nm,1.9s
RLMT LR LR
comp=Z,591nm,19.0s
WVOR **Wild Horse Val** 89.27 335 eP P 23 26 18.4 +1.6
WVOR pmax pmax
comp=Z,46nm,1.4s
WVOR MLR MLR
comp=Z,399nm,19.0s
WVOR **Wild Horse Val** 89.27 335 eP P 23 26 18.4 +1.6
comp=Z,46nm,1.4s
WVOR LR LR
comp=Z,399nm,19.0s
H16A **Russell Place,** 89.29 341 ⇑P P 23 26 17.8 +0.9
baz=90,SNR=6.9
CAN **Canberra** 89.30 221 PFAKE 23 26 30.0 +13
CAN LR LR

comp=Z,1µm,21.0s
MFID Camas Ranch 89.31 337 *e*P P **23 26 19.3 +2.4**
comp=Z,100nm,1.9s
MFID Camas Ranch 89.31 337 ⇑P P **23 26 17.3 +0.3**
baz=90,SNR=9.0
FUNA Funafuti 89.39 259 PFAKE 23 26 30.0 +12
FUNA LR LR
comp=Z,9µm,22.0s
EYMN Ely 89.40 355 *e*P P **23 26 17.5 +0.5**
EYMN,comp=Z,44nm,1.4s LR LR
comp=Z,505nm,19.0s
F21A Absaloka Mine, 89.43 344 ⇓P P **23 26 17.4 0.0**
baz=90
QLMT Earthquake Lak 89.46 341 *e*P P 23 26 20.9 +3.2
I12A Atlanta 89.47 338 ⇓P P **23 26 17.4 -0.4**
baz=90
G18A Lazy EL Ranch, 89.47 342 ⇓P P **23 26 16.8 -0.9**
baz=90
E24A Baker 89.60 346 ⇑P P **23 26 17.9 -0.2**
baz=90
KHMM Horse Mountain 89.60 331 *e*P P **23 26 21.4 +3.0**
comp=Z,107nm,2.1s
E23A Ismay 89.72 346 ⇑P P **23 26 18.1 -0.6**
baz=90
G17A Pierce Place, 89.75 342 ⇓P P **23 26 18.1 -0.9**
baz=90
E22A Miles City 89.78 345 ⇓P P **23 26 18.2 -0.8**
baz=90
MCMT McKenzie Canyo 89.81 340 *e*P P **23 26 21.6 +2.2**
comp=Z,56nm,1.8s
F19A Roth Farm, Mol 89.84 343 ⇑P P **23 26 19.2 -0.2**
baz=90,SNR=5.8
GCMT Greycliff 89.95 342 *e*P P **23 26 20.7 +0.8**
comp=Z,59nm,2.1s
YBH Yreka Blue Hor 89.99 332 *e*P P **23 26 21.2 +1.0**
comp=Z,12nm,1.0s
F18A Big Timber 90.06 342 ⇑P P **23 26 20.6 +0.2**
baz=91,SNR=7.6
H12A Diamond D Ranc 90.08 339 ⇑P P **23 26 20.3 -0.4**
baz=91
E21A Keefer Ranch, 90.10 344 ⇑P P **23 26 19.7 -0.8**
baz=91
AGMN Agassiz Nation 90.11 352 *e*P P **23 26 19.7 -0.7**
comp=Z,275nm,3.0s
AGMN LR LR
comp=Z,558nm,21.0s
MDND Maddock 90.11 350 ⇑P P **23 26 19.7 -0.7**
baz=91
D24A Glendive 90.14 346 ⇑P P **23 26 20.6 0.0**
baz=91
KRMB Red Mountain 90.23 331 *e*P P 23 26 24.9 +3.6
comp=Z,51nm,2.1s
DLMT Dillon 90.25 340 *e*P P **23 26 23.6 +2.2**
comp=Z,134nm,1.8s
BOZ Bozeman (W) 90.27 341 *e*P P **23 26 22.7 +1.3**
BOZ pmax pmax
comp=Z,73nm,2.1s
BOZ MLR MLR
comp=Z,305nm,21.0s
BOZ Bozeman (W) 90.27 341 *e*P P **23 26 22.7 +1.3**
comp=Z,73nm,2.1s
BOZ LR LR
comp=Z,305nm,21.0s
F17A Fitzpatrick Pl 90.28 342 ⇓P P **23 26 21.7 +0.2**
baz=91
E20A Meyer Farm, Mu 90.29 344 ⇓P P **23 26 21.4 0.0**
baz=91
D23A Lindsay 90.35 346 ⇑P P **23 26 21.6 -0.1**
baz=91
E19A Rath Farm, Rou 90.39 343 ⇑P P **23 26 21.6 -0.3**
baz=91
F16A Kennard Place, 90.40 341 ⇓P P **23 26 21.5 -0.5**
baz=91
D22A Cohagen 90.51 345 ⇓P P **23 26 21.2 -1.2**
baz=91
C24A Savage 90.55 346 ⇓P P **23 26 21.8 -0.8**
baz=91
D21A La Casta Ranch 90.59 345 ⇑P P **23 26 22.3 -0.5**
baz=91
LRM Limekiln Ridge 90.64 341 *e*P P **23 26 24.9 +1.7**
F15A Butte 90.67 341 ⇓P P **23 26 23.4 0.0**
baz=91
E18A Harlowton 90.74 343 ⇑P P **23 26 23.8 +0.3**
baz=91
G12A Big Creek, Yel 90.75 338 ⇓P P **23 26 23.8 +0.1**
baz=91
D20A Manuel Ranch, 90.85 344 ⇓P P **23 26 23.6 -0.4**
baz=91
HUMO Hull Mountain 90.85 332 *e*P P **23 26 26.1 +2.0**
comp=Z,131nm,2.3s
E17A Martinsdale 90.85 342 ⇓P P **23 26 24.0 -0.2**
baz=91
F14A Wisdom 90.86 340 ⇑P P **23 26 24.6 +0.4**
baz=91
C23A Lambert 90.95 346 ⇓P P **23 26 23.5 -0.9**
baz=92
KBO Bosley Butte 90.95 331 *e*P P **23 26 25.6 +1.0**
comp=Z,103nm,1.7s
BBOR Butler Butte 91.00 333 P P **23 26 25.7 +0.8**
C22A Vida 91.03 345 ⇓P P **23 26 24.3 -0.4**
baz=92
BMO Blue Mountains 91.06 337 *e*P P **23 26 26.4 +1.4**
comp=Z,65nm,2.1s
BMO LR LR
comp=Z,2µm,19.0s
D19A Cripps Ranch, 91.08 343 ⇑P P **23 26 25.1 +0.1**
baz=92
F13A Darby 91.09 339 ⇑P P **23 26 25.1 -0.2**
baz=92
E16A East Helena 91.11 341 ⇑P P **23 26 25.7 +0.4**
baz=92
E15A Deer Lodge 91.25 341 ⇑P P **23 26 26.0 +0.1**
baz=92
D18A Linhart Farms, 91.31 343 ⇓P P **23 26 26.3 +0.2**
baz=92
F12A Elk City 91.31 339 ⇑P P **23 26 26.2 0.0**
baz=92
C21A Desert Coulee 91.34 345 ⇑P P **23 26 25.9 -0.3**
baz=92
C20A Veseth Ranch, 91.41 344 ⇑P P **23 26 26.1 -0.5**
baz=92
DGMT Dagmar 91.42 347 *e*P P **23 26 27.3 +0.8**
comp=Z,46nm,1.1s
DGMT LR LR
comp=Z,562nm,20.0s
DGMT Dagmar 91.42 347 ⇑P P **23 26 26.4 -0.1**
baz=92
E14A Clinton 91.45 340 ⇑P P **23 26 27.9 +0.9**
baz=92
D17A Six Diamond Ra 91.47 342 ⇓P P **23 26 26.6 -0.4**
baz=92
D16A Dana Ranch, Ca 91.55 342 ⇑P P **23 26 27.9 +0.6**
baz=92
KEBM Edson Butte 91.57 332 *e*P P 23 26 31.0 +3.6
comp=Z,72nm,1.4s
B22A Reddig Ranch S 91.58 346 ⇑P P **23 26 26.5 -0.8**
baz=92
C19A Slack Wire Ran 91.65 343 ⇓P P **23 26 27.6 -0.1**
baz=92
E13A Victor 91.66 340 ⇑P P **23 26 27.8 0.0**
baz=92
D15A Lincoln 91.80 341 ⇑P P **23 26 28.4 0.0**
baz=92
A24A Westby 91.83 347 ⇑P P **23 26 27.8 -0.6**
baz=92
CHMT Chamberlain Mo 91.86 340 *e*P P **23 26 31.6 +2.8**
B21A Ellsworth Farm 91.90 345 ⇑P P **23 26 27.7 -1.0**
baz=92
C17A Wharram Farm, 91.93 342 ⇓P P **23 26 27.9 -1.2**
baz=92
MSO Missoula 91.95 340 *e*P P **23 26 31.9 +2.7**
MSO LR LR
comp=Z,270nm,19.0s
MSO Missoula 91.95 340 ⇓P P **23 26 29.7 +0.5**
baz=92
E12A Beaver Dam Sad 92.00 339 ⇓P P **23 26 30.0 +0.6**
baz=92
A23A Redstone 92.01 346 ⇓P P **23 26 27.9 -1.4**
baz=92
ULM Lac du Bonnet 92.04 352 P P **23 26 29.1 -0.2**
ULM Lac du Bonnet 92.04 352 P P **23 26 29.1 -0.2**
comp=Z,2.9nm,0.6s,baz=181,slow=3.9,SNR=7.5
D14A Greenough 92.08 340 ⇑P P **23 26 30.0 +0.2**
baz=93
B20A Solberg Farm, 92.11 344 ⇓P P **23 26 29.3 -0.5**
baz=93
BROR Big Rock Looko 92.15 334 P P **23 26 32.2 +2.2**
SLMT Seeley Lake 92.22 340 *e*P P **23 26 33.0 +2.5**
A22A Carney Farms, 92.23 346 ⇓P P **23 26 29.7 -0.6**
baz=93
B19A Brinkman Farms 92.31 344 ⇓P P **23 26 30.4 -0.3**
baz=93
C16A Fuhringer Ranc 92.32 342 ⇑P P **23 26 31.0 +0.1**
baz=93
D13A Huson 92.33 340 ⇓P P **23 26 30.8 -0.1**
baz=93
A21A Bergtoll Ranch 92.42 345 ⇑P P **23 26 29.9 -1.3**
baz=93
B18A Beardsley Farm 92.43 343 ⇑P P **23 26 30.5 -0.8**
baz=93
C15A Salmond Ranch, 92.50 341 ⇓P P **23 26 31.9 +0.2**
baz=93
A20A Cobblestone Ra 92.51 345 ⇑P P **23 26 30.9 -0.7**
baz=93
D12A Red Ives Fores 92.53 339 ⇓P P **23 26 31.2 -0.6**
baz=93
B17A L&G Farms, Che 92.56 343 ⇑P P **23 26 32.0 +0.1**
baz=93
SWMT Swartz Lake 92.60 340 *e*P P **23 26 34.7 +2.6**
KIP Kipapa 92.67 296 PFAKE 23 26 40.0 +7.1
KIP LR LR
comp=Z,2µm,20.0s
A19A Klindworth Far 92.72 344 ⇓P P **23 26 32.0 -0.6**
baz=93
MPOR Mary's Peak 92.73 333 P P **23 26 34.6 +1.8**
C14A Swan Lake 92.78 340 ⇓P P **23 26 33.3 +0.4**
baz=93
B16A M & M Farms, S 92.89 342 ⇓P P **23 26 33.2 -0.2**
baz=93
JTMT Jette 92.89 340 *e*P P **23 26 35.7 +2.2**
C13A Hot Springs 92.90 340 ⇑P P **23 26 33.3 -0.2**
baz=93
YBMT Yellow Bay 92.93 340 *e*P P **23 26 34.4 +0.8**
comp=Z,46nm,2.1s
A18A Metzger Ranch, 92.95 343 ⇓P P **23 26 32.9 -0.7**
baz=94
B15A Bradely Ranch, 92.99 341 ⇓P P **23 26 33.2 -0.7**
baz=94
BSMT Bassoo Peak 93.12 340 *e*P P **23 26 36.9 +2.3**
BLMT Blacktail Moun 93.16 340 *e*P P 23 26 39.5 +4.7
A17A Triple J Farms 93.16 343 ⇑P P **23 26 33.6 -1.0**
baz=94
C12B Naegeli Ranch, 93.17 339 ⇑P P **23 26 34.7 +0.1**
baz=94
B14A Marquette Ranc 93.21 341 ⇑P P **23 26 34.8 -0.1**
baz=94
A16A West Butte Ran 93.36 342 ⇑P P **23 26 34.4 -1.2**
baz=94
C11A Tepee Creek (N 93.49 339 ⇑P P **23 26 36.4 +0.2**
baz=94
B13A Whitefish 93.52 340 ⇑P P **23 26 36.5 +0.2**
baz=94
A15A Johnson Ranch, 93.65 342 ⇑P P **23 26 36.5 -0.5**
baz=94
A14A Double T Ranch 93.81 341 ⇑P P **23 26 37.7 0.0**
baz=94
B12A Libby 93.89 340 ⇑P P **23 26 37.4 -0.6**
baz=94
WALA Waterton Lakes 94.02 341 *e*P P **23 26 39.6 +1.0**
comp=Z,1.6nm,1.8s
A13A Flathead Natio 94.02 341 ⇓P P **23 26 39.1 +0.5**
baz=94
NEW Newport 94.12 339 *e*P P **23 26 39.9 +0.8**
NEW LR LR
comp=Z,423nm,19.0s
NEW Newport 94.12 339 P P **23 26 39.0 0.0**
comp=Z,1.1nm,0.7s,baz=153,slow=11,SNR=6.1
NEW Newport 94.12 339 ⇑P P **23 26 38.4 -0.6**
baz=95
A12A Yaak River Ran 94.34 340 ⇑P P **23 26 39.7 -0.3**
baz=95
MSKU Masuku 94.68 96 PFAKE 23 26 50.0 +7.5
MSKU LR LR
comp=Z,2.0nm,21.0s
CMLA Cha da Macela 95.35 43 PFAKE 23 27 00.0 +15
CMLA LR LR
comp=Z,1µm,22.0s
NLWA Neilton Lookou 95.37 334 PFAKE 23 27 00.0 +15
NLWA LR LR
comp=Z,409nm,21.0s
TORD Torodi Ar. Bea 95.50 77 P P **23 26 45.0 -1.1**
TORD PP **PP** **23 30 40.5 +3.3**
TORD Torodi Ar. Bea 95.50 77 P P **23 26 45.0 -1.1**
comp=Z,20nm,1.1s,baz=235,slow=3.9,SNR=45
TORD PP **PP** **23 30 40.5 +3.3**
comp=Z,4.3nm,1.1s,baz=262,slow=4.5,SNR=5.3
TORD LR LR 00 10 08.0
comp=Z,1µm,18.2s,baz=235,slow=36
STKA Stephens Creek 95.64 218 P P **23 26 44.6 -2.0**
STKA Stephens Creek 95.64 218 P P **23 26 44.6 -2.0**
comp=Z,4.1nm,1.1s,baz=190,slow=12,SNR=2.6
STKA LR LR 00 04 12.9
comp=Z,2µm,18.4s,baz=152,slow=32
LSZ Lusaka 95.82 116 *e*P P **23 26 50.4 +2.6**
comp=Z,68nm,2.1s
LSZ LR LR
comp=Z,2µm,20.0s
FFC Flin Flon 97.16 350 *e*P P **23 26 52.2 -0.4**
FFC pmax pmax
comp=Z,11nm,1.4s
FFC MLR MLR
comp=Z,462nm,20.0s
FFC Flin Flon 97.16 350 *e*P P **23 26 52.2 -0.4**
comp=Z,11nm,1.4s
FFC LR LR
comp=Z,462nm,20.0s
SCHQ Schefferville 97.18 10 P P **23 26 52.1 -0.6**
SCHQ Schefferville 97.18 10 P P **23 26 52.1 -0.6**
comp=Z,2.7nm,0.9s,baz=215,slow=4.4,SNR=4.6
SCHQ LR LR 00 07 21.8
comp=Z,246nm,21.9s,baz=181,slow=33
TARA Tarawa 100.60 262 PFAKE 23 27 20.0 +11
TARA LR LR
comp=Z,398nm,19.0s
HNR Honiara 102.49 245 PFAKE 23 27 30.0 +12
HNR LR LR
comp=Z,746nm,19.0s
CTAO Charters Tower 102.95 228 PFAKE 23 27 30.0 +10
CTAO LR LR
comp=Z,1µm,21.0s
NWAO Narrogin (SRO) 103.29 198 PKKP **PKKPdf** **23 43 20.2 -0.7**
NWAO LR LR
comp=Z,745nm,19.0s
NWAO Narrogin (SRO) 103.29 198 PKKP **PKKPdf** **23 43 20.2 -0.7**
comp=Z,15nm,1.0s,baz=171,slow=3.5,SNR=3.7
TAM Tamanrasset 104.48 72 PFAKE 23 27 40.0 +14
TAM LR LR
comp=Z,1µm,21.0s
ABPO Ambohimpanom 104.74 133 PFAKE 23 27 40.0 +12
ABPO LR LR
comp=Z,1µm,21.0s
ASAR Alice Springs 106.14 216 PKiKP **PKiKP** **23 31 43.2 -2.4**
ASAR PP **PP** **23 32 00.3 +3.7**
ASAR PKKPab **PKKPab** **23 43 22.9 -2.9**
ASAR Alice Springs 106.14 216 PKiKP **PKiKP** **23 31 43.2 -2.4**
comp=Z,0.6nm,0.9s,baz=150,slow=3.9,SNR=3.3
ASAR PP **PP** **23 32 00.3 +3.7**
comp=Z,0.5nm,0.9s,baz=108,slow=5.9,SNR=4.3
ASAR PKKPab **PKKPab** **23 43 22.9 -2.9**
comp=Z,1.4nm,0.9s,baz=324,slow=4.6,SNR=4.8
YKA Yellowknife Ar 106.60 346 PP PP 23 32 05.6 +5.1
YKA Yellowknife Ar 106.60 346 PP PP 23 32 05.6 +5.1
comp=Z,0.7nm,0.9s,baz=143,slow=7.3,SNR=4.4
MTE Manteigas 107.08 51 PFAKE 23 32 00.0
MTE LR LR
comp=Z,2µm,19.0s
MBAR Mbarara 107.94 107 PFAKE 23 32 00.0
MBAR LR LR
comp=Z,487nm,19.0s
PAB San Pablo 108.43 53 PFAKE 23 32 00.0
PAB LR LR
comp=Z,2µm,22.0s
ESDC Sonseca Array 108.74 53 PP PP 23 32 18.8 +2.1
ESDC Sonseca Array 108.74 53 PP PP 23 32 18.8 +2.1
comp=Z,0.1nm,0.3s,baz=234,slow=4.4,SNR=2.6
WRAB Tennant Creek 109.18 218 PFAKE 23 32 00.0
WRAB LR LR
comp=Z,1µm,20.0s
SKAG Skagway 109.19 335 *e*Pdif **Pdif** **23 27 44.1 -2.0**
MIDW Midway 110.42 290 PFAKE 23 32 10.0
MIDW LR LR
comp=Z,2µm,20.0s
PMG Port Moresby 110.85 235 PFAKE 23 32 10.0
PMG LR LR
comp=Z,1µm,21.0s
SFJD Kangerlussuaq 111.23 13 PFAKE 23 32 10.0
SFJD LR LR
comp=Z,403nm,20.0s
KMBO Kilima Mbogo 112.16 113 PFAKE 23 32 10.0
KMBO LR LR
comp=Z,2µm,20.0s
VAL Valentia 112.97 40 ⇓*i*P Pdif 23 28 14.3 +11
MBWA Marble Bar 113.78 204 PFAKE 23 32 10.0
MBWA LR LR
comp=Z,706nm,21.0s
KDAK Kodiak Island 114.27 327 PFAKE 23 32 10.0 +10
KDAK LR LR
comp=Z,872nm,20.0s
EGAK Eagle 115.01 337 PFAKE 23 32 10.0 +9.2
EGAK LR LR
comp=Z,425nm,21.0s
BORG Borgarnes 116.75 25 PFAKE 23 32 20.0 +16
BORG LR LR
comp=Z,832nm,22.0s
ILAR Eielson Array 116.78 335 PKP **PKPdf** **23 32 02.5 -1.8**
ILAR PKKPbc **PKKPbc** **23 42 31.3 -0.4**
ILAR Eielson Array 116.78 335 PKP **PKPdf** **23 32 02.5 -1.8**
comp=Z,1.2nm,0.8s,baz=165,slow=2.1,SNR=11
ILAR PKKPbc **PKKPbc** **23 42 31.3 -0.4**
comp=Z,0.4nm,0.8s,baz=298,slow=3.2,SNR=3.5
WAKE Wake Island 116.79 273 PFAKE 23 32 20.0 +14
WAKE LR LR
comp=Z,2µm,20.0s
VSL Villasalto 117.01 60 PFAKE 23 32 20.0 +15
VSL LR LR
comp=Z,2µm,22.0s
TRF Thorofare Moun 117.05 333 *e*PKPdf **PKPdf** **23 32 05.9 +0.9**
SSB Saint Sauveur 117.11 52 PFAKE 23 32 20.0 +14
SSB LR LR
comp=Z,1µm,22.0s
COLA College 117.16 335 PFAKE 23 32 20.0 +15
COLA LR LR
comp=Z,350nm,19.0s
SUMG Summit 118.20 14 *e*PKIKP **PKPdf** **23 32 07.8 +0.5**
SUMG Summit 118.20 14 *e*PKPdf **PKPdf** **23 32 07.8 +0.5**
BNI Bardonecchia 118.27 54 PFAKE 23 32 20.0 +12
BNI LR LR
comp=Z,1µm,20.0s
ESK Eskdalemuir 118.34 40 PFAKE 23 32 20.0 +13
ESK LR LR
comp=Z,777nm,20.0s
EKA Eskdalemuir Ar 118.37 40 PKP **PKPdf** **23 32 05.5 -2.0**
EKA Eskdalemuir Ar 118.37 40 PKP **PKPdf** **23 32 05.5 -2.0**
comp=Z,1.3nm,0.7s,baz=280,slow=1.9,SNR=3.4
WDD Wield Dalam 118.49 66 PFAKE 23 32 20.0 +12
WDD LR LR
comp=Z,6µm,20.0s
COLD Coldfoot 119.40 336 *e*PKPdf **PKPdf** **23 32 10.6 +1.4**
VLC Villacollemand 120.08 56 PFAKE 23 32 20.0 +8.7
VLC LR LR
comp=Z,838nm,19.0s
ECH Echery 120.17 51 PFAKE 23 32 20.0 +8.7
ECH LR LR
comp=Z,992nm,19.0s
WLF Walferdange 120.32 49 PFAKE 23 32 20.0 +8.5
WLF LR LR
comp=Z,2µm,19.0s
TUE Stuetta 120.60 53 PFAKE 23 32 20.0 +7.6
TUE LR LR
comp=Z,1µm,21.0s
CEL Celeste 120.68 64 PFAKE 23 32 20.0 +7.4
CEL LR LR
comp=Z,2µm,21.0s
BFO Black Forest 120.91 51 PFAKE 23 32 20.0 +7.3
BFO LR LR
comp=Z,849nm,19.0s
MSEY Mahe Island 121.04 131 PFAKE 23 32 30.0 +16
MSEY LR LR
comp=Z,740nm,19.0s
DAVOX Davos/Dischmat 121.07 53 PKP **PKPdf** **23 32 13.9 +0.6**
DAVOX Davos/Dischmat 121.07 53 PKP **PKPdf** **23 32 13.9 +0.6**
comp=Z,1.9nm,0.7s,baz=344,slow=11,SNR=2.9
AQU L'Aquila 121.09 59 PFAKE 23 32 30.0 +17
AQU LR LR
comp=Z,2µm,20.0s
CUC Castrocucco 121.50 63 PFAKE 23 32 30.0 +16
CUC LR LR
comp=Z,2µm,20.0s
TIP Timpagrande 121.73 64 PFAKE 23 32 30.0 +15
TIP LR LR
comp=Z,4µm,21.0s
VOJS Vojsko 123.16 56 *e*PKPdf **PKPdf** **23 32 16.7 -0.5**
VOJS *e*PP **PP** **23 33 56.7 -1.2**
JAVS Javornik 123.21 56 *e*PKPdf **PKPdf** **23 32 17.2 -0.1**
JAVS *e*PP **PP** **23 33 57.6 -0.5**
GRF Grafenberg Arr 123.23 51 *e*PKPdf **PKPdf** **23 32 18.3 +1.2**
GRF *ep*PKPdf **pPKPdf** **23 32 22.0 -0.6**
GRF Grafenberg Arr 123.23 51 *e*PKIKP **PKPdf** **23 32 18.3 +1.2**
GRF *e* 23 32 22.0
VISS Visnje 123.65 56 *e*PKPdf **PKPdf** **23 32 18.9 +0.9**
VISS *e*PP **PP** **23 34 00.7 -0.3**
BOJS Bojanci 123.77 57 *i* PKPdf **PKPdf** **23 32 18.3 +0.1**
BOJS *e*PP **PP** **23 34 01.5 -0.3**
NKC Novy Kostel 124.18 50 *e*PKIKP **PKPdf** **23 32 19.4 +0.5**
NKC *e* 23 32 24.5
NKC Novy Kostel 124.18 50 *e*PKPdf **PKPdf** **23 32 19.4 +0.5**
NKC *ep*PKP **pPKPdf** **23 32 24.5 +0.1**
NKC AMS AMS 00 23 20.0
comp=Z,900nm,22.8s
GERES GERESS Array B 124.31 52 PKP **PKPdf** **23 32 18.4 -0.9**
GERES GERESS Array B 124.31 52 PKP **PKPdf** **23 32 18.4 -0.9**
comp=Z,2.7nm,0.9s,baz=190,slow=2.3,SNR=12
KHC Kasperske Hory 124.36 52 *e*PKIKP **PKPdf** **23 32 19.6 +0.3**
KHC *e* 23 32 24.4
KHC *e* 23 51 04.9
KHC Kasperske Hory 124.36 52 *e*PKPdf **PKPdf** **23 32 19.6 +0.3**
KHC *ep*PKP **pPKPdf** **23 32 24.4 -0.4**
KHC *e*SS SS 23 51 04.9 +7.4
KHC Kasperske Hory 124.36 52 *e*PKPdf **PKPdf** **23 32 19.2 -0.1**
TIR Tirane 124.85 63 PFAKE 23 32 30.0 +10
TIR LR LR
comp=Z,2µm,20.0s
DAG Danmarks Havn 124.87 15 ⇑*i*PKIKP **PKPdf** **23 32 18.9 -0.5**
DAG pmax pmax
comp=Z,4.0nm,1.0s
DAG Danmarks Havn 124.87 15 ⇑*i*P **PKPdf** **23 32 18.9 -0.5**
comp=Z,4.3nm,1.0s
CLL Collm 124.96 49 ⇓*i*PKIKP **PKPdf** **23 32 21.2 +0.9**
CLL *i* 23 32 25.4
CLL pmax pmax
comp=Z,25nm,1.5s
CLL Collm 124.96 49 ⇓*i*PKPdf **PKPdf** **23 32 21.2 +0.9**
comp=Z,25nm,1.5s
CLL *i* pPKPdf **pPKPdf** **23 32 25.4 -0.4**
CLL *i* 23 32 30.9
CLL *e*PP **PP** **23 34 10.0 +0.3**
CLL *e*PSKS 23 44 06.0
CLL *e*PPS PPS 23 45 36.0
CLL *e* 23 46 48.0
CLL *e*PSS PSS 23 51 24.0
CLL *e*PSPS 23 51 36.0
CLL *e*SSS SSS 23 55 36.0
CLL LmV 00 25 00.0
comp=Z,800nm,19.7s
BEHE Becsehely 125.15 56 ⇓*e* **PKPdf** **23 32 22.0 +1.1**
PRA Prague 125.27 51 PKPdf **PKPdf** **23 32 22.0 +1.1**
PRA AMS AMS 00 24 30.0
PRU Pruhonice 125.30 51 *e*PKIKP **PKPdf** **23 32 21.9 +0.9**
PRU *e* 23 51 16.5
PRU Pruhonice 125.30 51 *e*PKPdf **PKPdf** **23 32 21.9 +0.9**
PRU *e*SS SS 23 51 16.5 +7.4
PRU AMS AMS 00 24 40.0
comp=Z,1µm,22.5s
SOP Sopron 125.53 55 ⇓*e* **PKPdf** **23 32 21.5 0.0**
PVCC Panska Ves 125.54 51 *e*PKIKP **PKPdf** **23 32 22.4 +0.9**
PVCC *e* 23 32 27.8
PVCC Panska Ves 125.54 51 *e*PKPdf **PKPdf** **23 32 22.4 +0.9**
PVCC *ep*PKP **pPKPdf** **23 32 27.8 +0.9**
PVCC AMS AMS 00 24 20.0
comp=Z,1µm,20.5s
TREC Trest 125.56 53 *e*PKIKP **PKPdf** **23 32 22.8 +1.2**
TREC *e* 23 32 27.7
TREC *e* 23 51 34.4
TREC Trest 125.56 53 *e*PKPdf **PKPdf** **23 32 22.8 +1.2**
TREC *ep*PKP **pPKPdf** **23 32 27.7 +0.6**
TREC *ex* x 23 51 34.4

TREC AMS AMS 00 21 50.0
comp=Z,1μm,24.8s
ZST Bratislava 126.08 54 *e*PKIKP **PKPdf 23 32 27.1 +4.5**
ZST Bratislava 126.08 54 *e*PKP **PKPdf 23 32 27.0 +4.5**
PKSM Moragy 126.21 57‖*e* **PKPdf 23 32 23.5 +0.6**
VRAC Vranov 126.23 53 PKP **PKPdf 23 32 21.1 -1.7**
VRAC Vranov 126.23 53 PKP **PKPdf 23 32 21.1 -1.7**
comp=Z,1.6nm,0.6s,baz=97,slow=1.5,SNR=6.5
UPC Upice 126.37 51 *e*PKIKP **PKPdf 23 32 24.0 +0.9**
UPC *e* 23 32 28.4
UPC Upice 126.37 51 *e*PKPdf **PKPdf 23 32 24.0 +0.9**
UPC *ep*PKP **pPKPdf 23 32 28.4 -0.2**
SMOL Smolenice 126.41 54 *e*PKIKP **PKPdf 23 32 25.1 +1.9**
SMOL Smolenice 126.41 54 *e*PKP **PKPdf 23 32 25.1 +1.9**
KONO Kongsberg 126.46 39 PFAKE 23 32 40.0 +17
KONO LR LR
comp=Z,1μm,21.0s
COCO West Island 126.48 181 PFAKE 23 32 40.0 +16
COCO LR LR
comp=Z,2μm,20.0s
DPC Dobruska-Polom 126.49 52 *e*PKIKP **PKPdf 23 32 24.1 +0.7**
DPC *e* 23 32 29.7
DPC Dobruska-Polom 126.49 52 *e*PKPdf **PKPdf 23 32 24.1 +0.7**
DPC *ep*PKP **pPKPdf 23 32 29.7 +0.8**
DPC *e*SS SS 23 51 35.3 +11
KSP Ksiaz 126.67 51 *e*PKIKP **PKPdf 23 32 23.8 +0.2**
KSP *e*SS SS 23 51 46.0 +20
KSP MLR MLR
comp=Z,3μm,21.7s
KSP Ksiaz 126.67 51 *e*PKP **PKPdf 23 32 23.8 +0.2**
DGAR Diego Garcia 126.71 151 PFAKE 23 32 40.0 +15
DGAR LR LR
comp=Z,1μm,21.0s
BUD Budapest 126.97 56‖*e* **PKPdf 23 32 25.0 +0.7**
MORC Moravsky Berou 126.98 53⇑*i*P **PKPdf 23 32 24.6 +0.3**
VYHS Vyhne 127.26 55 *e*PKIKP **PKPdf 23 32 25.1 +0.2**
VYHS Vyhne 127.26 55 *e*PKP **PKPdf 23 32 25.1 +0.2**
OKC Ostrava-Krasne 127.37 53 *e*PKIKP **PKPdf 23 32 25.6 +0.6**
OKC *e* 23 32 32.1
OKC Ostrava-Krasne 127.37 53 *e*PKPdf **PKPdf 23 32 25.6 +0.6**
OKC *ep*PKP **pPKPdf 23 32 32.1 +1.6**
OKC *ex* x 23 51 48.4
OKC AMS AMS 00 28 20.0
comp=Z,500nm,17.5s
NAO01 NORSAR Array S 127.48 38 *e*PKPdf **PKPdf 23 32 25.2 +0.3**
VTS Vitosha 127.64 63‖*i*P **PKPdf 23 32 28.4 +2.4**
PSZ Piszkesteto 127.68 56 *e*PKIKP **PKPdf 23 32 26.1 +0.3**
PSZ MLR MLR
comp=Z,661nm,21.0s
PSZ Piszkesteto 127.68 56 *e*PKPdf **PKPdf 23 32 26.1 +0.3**
PSZ LR LR
comp=Z,661nm,21.0s
PSZ Piszkesteto 127.68 56⇑*i*P PKPdf 23 32 32.0 +6.2
PSZ Piszkesteto 127.68 56‖*e* **PKPdf 23 32 26.5 +0.7**
NB2 NORSAR Subarra127.70 38 PKPdf **PKPdf 23 32 24.8 -0.5**
comp=Z,49nm,1.4s,baz=254,slow=1.9
NB2 NORSAR Subarra127.70 38 PKPdf **PKPdf 23 32 24.8 -0.5**
baz=254,slow=1.9
NOA NORSAR Array B127.70 38 PKP **PKPdf 23 32 24.2 -1.1**
NOA NORSAR Array B127.70 38 PKP **PKPdf 23 32 24.2 -1.1**
comp=Z,3.5nm,1.1s,baz=258,slow=2.1,SNR=4.7
GKP Gorka Klasztor 128.12 48 *e*PKP **PKPdf 23 32 25.7 -0.6**
KECS Kecovo 128.27 55 *e*PKIKP **PKPdf 23 32 27.7 +0.9**
KECS Kecovo 128.27 55 *e*PKP **PKPdf 23 32 27.7 +0.9**
OJC Ojcow 128.50 53 *e*PKIKP **PKPdf 23 32 26.8 -0.3**
OJC Ojcow 128.50 53 *e*PKP **PKPdf 23 32 26.8 -0.3**
NIE Niedzica 128.51 54 *e*PKIKP **PKPdf 23 32 27.7 +0.5**
NIE Niedzica 128.51 54 *e*PKP **PKPdf 23 32 27.7 +0.5**
HFS Hagfors 128.56 39 PKP **PKPdf 23 32 27.1 +0.2**
HFS Hagfors 128.56 39 PKP **PKPdf 23 32 27.1 +0.2**
comp=Z,2.9nm,1.0s,baz=168,slow=7.4,SNR=2.8
KAPI Kappang 128.76 211 PFAKE 23 32 40.0 +11
KAPI LR LR
comp=Z,1μm,21.0s
CRVS Cervenica-Dubn 129.02 55 *e*PKIKP **PKPdf 23 32 26.3 -2.0**
CRVS *e* 23 34 36.3
CRVS Cervenica-Dubn 129.02 55 *e*PKP **PKPdf 23 32 26.2 -2.0**
CRVS *e*PP **PP 23 34 36.3 -0.4**
STHS Stebnicka Huta 129.08 54 *e*PKIKP **PKPdf 23 32 29.7 +1.4**
STHS Stebnicka Huta 129.08 54 *e*PKP **PKPdf 23 32 29.7 +1.4**
GUMO Guam 129.29 251 PFAKE 23 32 40.0 +10
GUMO LR LR
comp=Z,636nm,19.0s
TRPA Tarpa 129.41 56⇑*i*P PKPdf 23 32 35.5 +6.6
TRPA Tarpa 129.41 56‖*e* **PKPdf 23 32 29.3 +0.4**
UZH Uzhgorod 129.44 55 *e*PKIKP **PKPdf 23 32 27.8 -1.1**
KOLS Kolonicke sedl 129.53 55 *e*PKIKP **PKPdf 23 32 30.5 +1.3**
KOLS Kolonicke sedl 129.53 55 *e*PKP **PKPdf 23 32 30.5 +1.3**
ARR Arges 129.70 60‖*i*P **PKPdf 23 32 31.0 +1.3**
VOIR 130.00 60⇑*i*P **PKPdf 23 32 32.5 +2.2**
KWP Kalwaria Pacla 130.05 54 *e*PKIKP **PKPdf 23 32 30.4 +0.3**
KWP MLR MLR
comp=Z,866nm,20.0s
KWP Kalwaria Pacla 130.05 54 *e*PKPdf **PKPdf 23 32 30.4 +0.3**
KWP LR LR
comp=Z,866nm,20.0s
KWP Kalwaria Pacla 130.05 54⇑*i*P **PKPdf 23 32 30.3 +0.2**
KWP Kalwaria Pacla 130.05 54 *e*PKP **PKPdf 23 32 30.0 -0.1**
MLR Muntele Rosu 130.61 61 PKP **PKPdf 23 32 31.0 -0.4**
MLR Muntele Rosu 130.61 61⇑*i*P **PKPdf 23 32 31.1 -0.4**
MLR Muntele Rosu 130.61 61 PKP **PKPdf 23 32 31.0 -0.4**
comp=Z,0.6nm,0.9s,baz=198,slow=6.4,SNR=10
ISP Isparta 130.64 72 PFAKE 23 32 40.0 +8.2
ISP LR LR
comp=Z,1μm,22.0s
BUR08 Bucovina Ar. S 130.90 58 *e*PKPdf **PKPdf 23 32 32.6 +0.6**
BURAR Bucovina Array 130.91 58‖*i*P PKPdf 23 32 15.9 -16
LVV L'vov 130.92 55 *e*PKIKP **PKPdf 23 32 32.4 +0.7**
PLOR Plostina 131.20 60⇑*i*P **PKPdf 23 32 29.7 -2.8**
VRI Vrincioaia 131.25 60⇑*i*P **PKPdf 23 32 32.0 -0.5**
VRI Vrincioaia 131.25 60‖*i*P **SKPbc 23 35 53.0 -3.6**
CSS Prodhromos 131.38 76 *e*PKPdf **PKPdf 23 32 33.7 +0.6**
CSS LR LR
comp=Z,544nm,20.0s
TESR Tescani 131.43 59‖*i*P **PKPdf 23 32 32.5 -0.3**
KBS Kingsbay 131.61 15 PFAKE 23 32 40.0 +7.7
KBS LR LR
comp=Z,373nm,20.0s
SUW Suwalki 131.71 49 *e*PKP **PKPdf 23 32 33.8 +0.7**
CFR Carcaliu 131.93 62⇑*i*P **PKPdf 23 32 33.6 -0.2**
MMAI Mount Meron Ar 131.99 80 PKP **PKPdf 23 32 33.3 -1.1**
MMAI Mount Meron Ar 131.99 80 PKP **PKPdf 23 32 33.3 -1.1**
comp=Z,1.1nm,0.7s,baz=225,slow=1.8,SNR=3.0
SPITS Spitsbergen Ar 132.47 16 PKP **PKPdf 23 32 33.9 0.0**
SPITS Spitsbergen Ar 132.47 16 PKP **PKPdf 23 32 33.9 0.0**
comp=Z,7.1nm,1.0s,baz=275,slow=12,SNR=3.5
KIS Kishinev 133.00 60 *e*PKP **PKPdf 23 32 36.0 +0.2**
KIS *e*SKP 23 36 03.0
KIS Kishinev 133.00 60 *e*PKIKP **PKPdf 23 32 36.0 +0.2**
KIS MLR MLR
comp=Z,1μm,21.0s
KIS MLR MLR
comp=Z,1μm,20.0s
ANTO Ankara 133.10 70 *e*PKIKP **PKPdf 23 32 36.6 +0.3**
ANTO MLR MLR
comp=Z,942nm,21.0s
ANTO Ankara 133.10 70 *e*PKPdf **PKPdf 23 32 36.6 +0.3**
ANTO LR LR
comp=Z,942nm,21.0s
BR131 Keskin Array S 133.64 71 *e*PKPdf **PKPdf 23 32 36.6 -0.8**
BRTR Keskin Array B 133.64 71 PKP **PKPdf 23 32 36.5 -0.9**
BRTR Keskin Array B 133.64 71 PKP **PKPdf 23 32 36.5 -0.9**
comp=Z,1.6nm,0.7s,baz=183,slow=3.5,SNR=9.0
KIEV Kiev 134.35 55 *e*PKIKP **PKPdf 23 32 39.0 +0.8**
KIEV MLR MLR
comp=Z,165nm,19.0s
KIEV Kiev 134.35 55 *e*PKPdf **PKPdf 23 32 39.0 +0.8**
KIEV LR LR
comp=Z,165nm,19.0s
AKASG Malin Array Be 134.36 55 PKIKP **PKPdf 23 32 37.4 -0.8**
AKASG Malin Array Be 134.36 55 PKP **PKPdf 23 32 37.4 -0.8**
AKASG Malin Array Be 134.36 55 PKP **PKPdf 23 32 37.4 -0.8**
comp=Z,0.4nm,0.3s,baz=245,slow=2.4,SNR=5.0
FINES FINESS Array B 134.77 39 PKPpre PKPpre 23 32 33.0
FINES FINESS Array B 134.77 39 PKhKP PKPpre 23 32 33.0
comp=Z,2.4nm,0.9s,baz=147,slow=11,SNR=3.4
ARCES ARCESS Array B 135.04 28 PKP **PKPdf 23 32 39.4 +0.5**
ARCES ARCESS Array B 135.04 28 PKP **PKPdf 23 32 39.4 +0.5**
comp=Z,1.1nm,0.7s,baz=309,slow=5.7,SNR=4.5
ARE0 ARCESS Array S 135.04 28 *e*PKPdf **PKPdf 23 32 39.5 +0.5**
BILL Bilibino 135.04 330⇑*i*PKIKP **PKPdf 23 32 39.6 +0.6**
BILL *i* 23 32 44.7
BILL pmax pmax
comp=Z,30nm,1.6s
KEV Kevo 135.56 28 PFAKE 23 32 50.0 +10
KEV LR LR
comp=Z,782nm,22.0s
DAV Davao City (W) 136.69 226 PFAKE 23 33 00.0 +16
DAV LR LR
comp=Z,881nm,21.0s
PET Petropavlovsk 137.27 308 *e*PKIKP **PKPdf 23 32 42.8 -0.7**
PET *e* 23 35 31.7
PET *e*SS SS 23 53 30.3 -5.0
PET pmax pmax
comp=Z,100nm,4.4s
PET pmax pmax
comp=Z,200nm,4.8s
PET pmax pmax
comp=Z,100nm,8.9s
PET pmax pmax
comp=Z,200nm,9.6s
PET MLR MLR
comp=Z,400nm,20.0s
PET MLR MLR
comp=Z,400nm,19.0s
PETK Petropavlovsk- 137.85 308 PKIKP **PKPdf 23 32 43.8 -0.9**
PETK Petropavlovsk- 137.85 308 PKP **PKPdf 23 32 43.8 -0.9**
PETK Petropavlovsk- 137.85 308 PKP **PKPdf 23 32 43.8 -0.9**
comp=Z,4.0nm,0.9s,baz=103,slow=6.5,SNR=6.5
KSM Kuching 138.00 202 PFAKE 23 33 00.0 +14
KSM LR LR
comp=Z,3μm,21.0s
APA Apatity 138.04 31⇑*i*PKIKP **PKPdf 23 32 45.0 +0.5**
APA pmax pmax
comp=Z,14nm,1.2s
BHD Baghdad 138.77 84 *e*PkP **PKPdf 23 32 43.8 -3.1**
BHD *e*PP PP 23 35 33.5 -5.5
BHD *e*SkkS 23 39 52.0
NAY Al-Naaiem 138.97 91 *e*P **PKPdf 23 32 43.5 -4.0**
NAY AMb AMB 23 32 55.0
comp=Z,11nm,1.6s
RDF Al-Radifah 139.04 92 *e*P **PKPdf 23 32 43.7 -3.9**
RDF AMb AMB 23 32 49.2
comp=Z,24nm,1.5s
SOC Sochi 139.25 68*c i*PKIKP **PKPdf 23 32 46.9 -0.6**
SOC *e* 23 38 56.4
SOC pmax pmax
comp=Z,16nm,1.1s
MIB Mutribah 139.33 91 *e*P **PKPdf 23 32 44.1 -3.9**
MIB AMb AMB 23 32 55.1
comp=Z,25nm,1.6s
OBN Obninsk 139.56 50 *i* PKHKP PKPpre 23 32 40.9
OBN pmax pmax
comp=Z,9.0nm,1.0s
IBDR Badra 139.85 85 *e*PkP **PKPdf 23 32 44.9 -4.0**
IBDR *e*PP PP 23 35 37.1 -8.6
IBDR *e*SKS **SKSdf 23 39 58.0 -0.6**
MOS Moscow 140.21 49 *e*PKIKP **PKPdf 23 32 48.0 -0.8**
KKM Kota Kinabalu 140.25 213 PFAKE 23 33 00.0 +10
KKM LR LR
comp=Z,643nm,20.0s
AKH Akhalkalaki 141.25 72 P PKPpre 23 32 44.1
KIV Kislovodsk 141.42 68 *e*PKHKP PKPpre 23 32 46.9
KIV *e* 23 35 55.4
KIV pmax pmax
comp=Z,22nm,1.1s
KBZ Khabaz 141.51 68 PKIKP **PKPdf 23 32 52.0 +0.4**
KBZ Khabaz 141.51 68 PKP **PKPdf 23 32 52.0 +0.4**
KBZ Khabaz 141.51 68 PKP **PKPdf 23 32 52.0 +0.4**
comp=Z,4.7nm,1.0s,baz=9.8,slow=2.6,SNR=9.4
ONI Oni 141.58 70 P **PKPdf 23 32 53.1 +1.2**
GNI Garni 141.75 75 *e*PKPpre PKPpre 23 32 47.5
GNI *e*PKP **PKPdf 23 32 50.9 -1.5**
GNI LR LR
comp=Z,786nm,21.0s
GNI Garni 141.75 75 PKP **PKPdf 23 32 50.9 -1.5**
comp=Z,2.2nm,0.5s,baz=217,slow=1.5,SNR=4.8
GOF Gofitskoye 141.95 66 *e*PKHKP PKPpre 23 32 31.6
GOF pmax pmax
comp=Z,30nm,0.9s
TBLG Delisi 142.24 72 P PKPpre 23 32 47.1
TBLG Delisi 142.24 72 *e*PKHKP PKPpre 23 32 47.1
DGRG David-gareji 142.61 73 P PKPpre 23 32 49.0
KULM Kulim 143.61 188 *e*PKPdf PKPab 23 32 51.2 -1.5
KULM LR LR
comp=Z,1μm,20.0s
YUK Yuzh-Kuril'sk 143.72 291 *e*PKIKP **PKPdf 23 32 56.7 +1.2**
YUK MLR MLR
comp=Z,305nm,20.0s
MAK Makhachkala 144.55 71 *e*PKHKP PKPpre 23 32 52.7
MAK *e* 23 36 22.7
MAK *e*PPP PPP 23 39 27.9
MAK *e*SS SS 23 54 55.4 -5.5
MAK pmax pmax
comp=Z,847nm,1.6s
TGY Tagaytay City 145.04 226 PKP **PKPbc 23 32 55.9 -2.2**
TGY Tagaytay City 145.04 226 PKP **PKPbc 23 32 55.9 -2.2**
comp=Z,98nm,0.3s,baz=194,slow=12,SNR=2.5
ERM Erimo 145.13 287 PFAKE 23 33 10.0 +12
ERM LR LR
comp=Z,2μm,21.0s
ASAJ Asahikawa 146.03 290 PKP **PKPdf 23 32 58.1 -1.4**
ASAJ *e*PKPdf **PKPbc 23 32 59.5 -0.9**
ASAJ Asahikawa 146.03 290 PKP **PKPdf 23 32 58.1 -1.4**
comp=Z,28nm,0.9s,baz=204,slow=7.3,SNR=8.9
YSS Yuzh-Sakhalins 146.43 295 *e*PKIKP **PKPdf 23 33 00.0 -0.1**
YSS pmax pmax
comp=Z,70nm,1.1s
YSS pmax pmax
comp=Z,800nm,3.0s
YSS MLR MLR
comp=N,500nm,18.0s
YSS MLR MLR
comp=E,600nm,18.0s
YSS MLR MLR
comp=Z,900nm,18.0s
MJAR Matsushiro Arr 147.02 275 PKPbc **PKPdf 23 33 01.1 -0.3**
MJAR Matsushiro Arr 147.02 275 PKPbc **PKPdf 23 33 01.1 -0.3**
comp=Z,12nm,0.9s,baz=156,slow=3.0,SNR=20
MAJO Matsushiro 147.02 275 *e*PKIKP **PKPdf 23 33 01.8 +0.3**
MAJO MLR MLR
comp=Z,462nm,19.0s
MAJO Matsushiro 147.02 275 *e*PKPdf **PKPdf 23 33 01.8 +0.3**
MAJO LR LR
comp=Z,462nm,19.0s
MAT Matsushiro 147.02 275 PKP **PKPdf 23 33 02.0 +0.5**
SOKR Solikamsk 149.93 40*c i*PKIKP **PKPbc 23 33 10.4 +0.2**
SOKR pmax pmax
comp=Z,50nm,0.9s
POO Poona 150.29 134‖*i*P **PKPdf 23 33 09.0 +1.7**
comp=Z,722nm,1.8s
YAK Yakutsk 151.30 327 *e*PKIKP **PKPbc 23 33 11.9 -1.5**
YAK pmax pmax
comp=N,8.0nm,0.9s
YAK pmax pmax
comp=E,13nm,1.0s
YAK pmax pmax
comp=Z,88nm,0.9s
HYB Hyderabad 151.68 143 *i* PKP **PKPbc 23 33 14.0 -1.7**
HYB *e* 23 33 17.0
ARU Arti 151.78 45*d i*PKIKP **PKPdf 23 33 07.2 -1.2**
ARU pmax pmax
comp=Z,28nm,2.5s
TPUB Ta-pu 152.44 236 PKPdf **PKPdf 23 33 11.1 +0.7**
AKTO Aktyubinsk 152.50 58 PKIKP **PKPdf 23 33 09.3 -0.3**
AKTO Aktyubinsk 152.50 58 PKP **PKPdf 23 33 09.3 -0.3**
AKTO Aktyubinsk 152.50 58 PKP **PKPdf 23 33 09.3 -0.3**
comp=Z,0.6nm,0.3s,baz=355,slow=22,SNR=9.9
YHNB Yeheng 152.95 239 PFAKE 23 33 20.0 +1.5
YHNB LR LR
comp=Z,884nm,20.0s
TATO Taipei 153.09 240 PFAKE 23 33 20.0 +1.3
TATO LR LR
comp=Z,618nm,19.0s
USRK Ussuriysk Arra 153.57 288 PKPbc **PKPbc 23 33 17.7 -1.4**
comp=Z,10.0nm,0.9s,baz=142,slow=2.5,SNR=9.4
ABKAR Akbulak array 153.82 61 *e*PKPdf **PKPdf 23 33 12.3 +0.7**
QIZ Qiongzhong 154.56 212 PKPbc **PKPdf 23 33 14.6 +1.0**
QIZ SS SS 23 56 51.2 +0.2
QIZ AMB AMB
comp=Z,190nm,6.6s
QIZ LR LR
comp=N,440nm,15.2s
QIZ LR LR
comp=Z,600nm,25.0s
QIZ Qiongzhong 154.56 212 PFAKE 23 33 20.0 -2.0
QIZ LR LR
comp=Z,558nm,22.0s
QZH Quanzhou 154.91 236 *e*PKPbc **PKPdf 23 33 12.0 -1.9**
QZH PP **PP 23 37 16.0 +2.4**
QZH LR LR
comp=N,3μm,18.0s
QZH LR LR
comp=E,1μm,15.0s
QZH LR LR
comp=Z,1μm,16.2s
KSRS Korea Array 155.04 271 PKP **PKPdf 23 33 12.4 -1.3**
comp=Z,0.5nm,0.5s,baz=149,slow=1.9,SNR=3.7
KSAR Wonju Array Be 155.06 271 PKP **PKPdf 23 33 12.4 -1.3**
MDJ Mudanjiang 155.32 288 PKP **PKPdf 23 33 14.8 +1.0**
MDJ PP **PP 23 37 17.4 +1.1**
MDJ SS SS 23 57 02.3 +1.4
MDJ AMB AMB
comp=Z,190nm,8.4s
MDJ LR LR
comp=N,140nm,29.3s
MDJ LR LR
comp=E,390nm,29.7s
MDJ LR LR
comp=Z,550nm,32.4s
MDJ Mudanjiang 155.32 288 PFAKE 23 33 30.0 -9.2
MDJ LR LR
comp=Z,697nm,20.0s
INCN Inchon 156.02 270 PFAKE 23 33 30.0 -12
INCN LR LR
comp=Z,560nm,20.0s
CMAR Chiang Mai Arr 156.80 187 PKP **PKPdf 23 33 16.1 -0.5**
CMAR PKPab **PKPab 23 33 44.9 -1.1**
CMAR Chiang Mai Arr 156.80 187 PKP **PKPdf 23 33 16.1 -0.5**
comp=Z,0.5nm,0.3s,baz=278,slow=1.1,SNR=5.1
CMAR PKPab **PKPab 23 33 44.9 -1.1**
comp=Z,3.2nm,1.0s,baz=202,slow=4.3,SNR=5.0
CHTO Chiang Mai 157.15 187 *e*PKIKP **PKPdf 23 33 14.6 -2.4**
CHTO MLR MLR
comp=Z,429nm,20.0s
CHTO Chiang Mai 157.15 187 *e*PKPdf **PKPdf 23 33 14.6 -2.4**
CHTO LR LR
comp=Z,429nm,20.0s
SSE Sheshan 157.18 251 PKP **PKPdf 23 33 17.1 +0.4**
SSE PP **PP 23 37 30.5 +4.0**
SSE SS SS 23 57 20.3 -0.5
SSE AMB AMB
comp=Z,95nm,5.3s
SSE LR LR
comp=N,250nm,26.6s
SSE LR LR
comp=E,360nm,26.6s
SSE LR LR
comp=Z,510nm,27.5s
BRVK Borovoye 159.31 48 *e*PKIKP **PKPdf 23 33 17.9 -0.7**
BRVK MLR MLR
comp=Z,1μm,20.0s
BRVK Borovoye 159.31 48 *e*PKPdf **PKPdf 23 33 17.9 -0.7**
BRVK LR LR
comp=Z,1μm,20.0s
NJ2 Nanjing 159.36 250 *e*PKP **PKPdf 23 33 17.4 -1.9**
NJ2 pPKP **pPKPdf 23 33 27.7 +2.9**
NJ2 PKPab **PKPab 23 33 58.4 +1.4**
NJ2 PKS **PKSdf 23 36 49.0 -3.8**
NJ2 PP **PP 23 37 40.0 +1.5**
NJ2 AMB AMB
comp=Z,70nm,8.9s
NJ2 LR LR
comp=N,190nm,26.0s
NJ2 LR LR
comp=E,210nm,27.6s
NJ2 LR LR
comp=Z,270nm,29.3s
BVAR Borovoye Array 159.38 48 PKIKP **PKPdf 23 33 18.1 -0.5**
BVAR 23 33 56.8
BVAR Borovoye Array 159.38 48 PKP **PKPdf 23 33 18.1 -0.5**
BVAR PKPab **PKPab 23 33 56.8 +0.3**
BVAR Borovoye Array 159.38 48 PKP **PKPdf 23 33 18.1 -0.5**
comp=Z,1.5nm,1.0s,baz=325,slow=2.3,SNR=8.3
BVAR PKPab **PKPab 23 33 56.8 +0.3**
comp=Z,2.8nm,0.8s,baz=298,slow=3.2,SNR=5.1
KKAR Karatay Array 161.19 77 *e*PKIKP **PKPdf 23 33 20.3 -0.7**
KKAR Karatay Array 161.19 77 *e*PKPdf **PKPdf 23 33 20.3 -0.7**
WHN Wuhan 161.50 239 PKP **PKPdf 23 33 17.5 -4.2**
WHN PP **PP 23 37 49.0 -0.8**
WHN LR LR
comp=N,860nm,16.9s
WHN LR LR
comp=E,880nm,15.0s
WHN LR LR
comp=Z,2μm,24.5s
HIA Hailar 161.65 303 PFAKE 23 33 30.0 +8.7
HIA LR LR
comp=Z,1μm,20.0s
GYA Guiyang 162.49 214 PKP **PKPdf 23 33 22.8 -0.2**
GYA PKPab **PKPab 23 34 13.2 +2.4**
GYA PKS **PKSdf 23 36 55.0 -1.4**
GYA PP **PP 23 37 58.7 +4.1**
GYA SKKS 23 44 44.3
GYA SS **SS 23 58 18.9 +3.3**
GYA AMB AMB
comp=Z,210nm,8.5s
GYA LR LR
comp=N,470nm,24.0s
GYA LR LR
comp=E,330nm,25.1s
GYA LR LR
comp=Z,410nm,24.7s
KMI Kunming 162.62 201 PKP **PKPdf 23 33 22.4 -0.9**
KMI pPKP **pPKPdf 23 33 26.8 -2.0**
KMI sPKP 23 33 28.6
AML Almayashu 163.45 81 P **PKPdf 23 33 24.8 +1.0**
SNR=6.3
EKS2 Erkin-Say 163.55 79 *e*PKIKP **PKPdf 23 33 24.1 +0.5**
EKS2 *e* 23 34 16.4
EKS2 MLR MLR
comp=Z,1μm,21.0s
EKS2 Erkin-Say 163.55 79 *e*PKPdf **PKPdf 23 33 24.1 +0.5**
EKS2 *e*PKPab **PKPab 23 34 16.4 +1.1**
EKS2 LR LR
comp=Z,1μm,21.0s
EKS2 Erkin-Say 163.55 79 P **PKPdf 23 33 24.8 +1.2**
SNR=5.0
SHL Shillong 163.67 167 *ex* **PKPdf 23 33 23.0 -1.3**
AAK Ala-Archa 164.08 79 *e*PKIKP **PKPdf 23 33 24.3 +0.2**
AAK *e* 23 34 18.3
AAK MLR MLR
comp=Z,957nm,21.0s
AAK Ala-Archa 164.08 79 *e*PKPdf **PKPdf 23 33 24.3 +0.2**
AAK *e*PKPab **PKPab 23 34 18.3 +0.6**
AAK LR LR
comp=Z,957nm,21.0s
AAK Ala-Archa 164.08 79 P PKPdf 23 33 30.0 +5.9
SNR=6.0
USP Ospenovka 164.11 77 P **PKPdf 23 33 24.8 +0.8**
SNR=5.8
FRU Bishkek 164.18 78 *e*PKIKP **PKPdf 23 33 24.0 0.0**
FRU pmax pmax
comp=Z,80nm,2.0s
ENH Enshi 164.26 228 PFAKE 23 33 40.0 +16
ENH LR LR
comp=Z,638nm,19.0s
NVS Novosibirsk 164.32 28⇑*i*PKIKP **PKPdf 23 33 19.8 -3.8**
NVS *e* 23 38 03.5
NVS pmax pmax
comp=E,16nm,1.9s
NVS pmax pmax
comp=Z,51nm,1.9s
BJT Baijiatuao 164.57 271 PFAKE 23 33 40.0 +16
BJT LR LR
comp=Z,639nm,20.0s
KZA Kyzart 164.59 81 P **PKPdf 23 33 26.0 +1.1**
SNR=6.5
KSH Kashi 164.71 91 PKP **PKPdf 23 33 25.1 +0.4**
KSH *e*SKS **SKSdf 23 40 23.1 -5.3**
KSH AMB AMB
comp=Z,600nm,3.9s
KSH LR LR
comp=N,1μm,10.6s
KSH LR LR
comp=E,520nm,9.4s
KSH LR LR
comp=Z,460nm,6.9s
TKM2 Tokmak 2 164.90 78 *e*PKIKP **PKPdf 23 33 24.3 -0.6**
TKM2 *e* 23 34 21.5
TKM2 MLR MLR
comp=Z,1μm,22.0s
TKM2 Tokmak 2 164.90 78 *e*PKPdf **PKPdf 23 33 24.3 -0.6**

TKM2				ePKPab	**PKPab**	**23 34 21.5**	**+0.2**
TKM2				LR	LR		
	comp=Z,1µm,22.0s						
TKM2	**Tokmak 2**	**164.90**	**78**	P	**PKPdf**	**23 33 25.5**	**+0.6**
	SNR=6.8						
KURBB	**Kurchatov Arra**	**164.97**	**47**	PKP	**PKPdf**	**23 33 22.4**	**-1.9**
	comp=Z,7.9nm,1.1s,baz=297,slow=1.2,SNR=37						
KURBB				PKPab	**PKPab**	**23 34 20.6**	**-0.4**
	comp=Z,2.9nm,0.9s,baz=297,slow=4.8,SNR=3.7						
KURBB				PP	**PP**	**23 38 10.9**	**+3.1**
	comp=Z,1.1nm,1.1s,baz=287,slow=6.4,SNR=5.5						
KURK	**Kurchatov**	**164.97**	**47**	PKIKP	**PKPdf**	**23 33 22.4**	**-1.9**
KURK				e		23 33 23.6	
KURK						23 34 20.6	
KURK						23 38 11.0	
KURK				MLR	MLR		
	comp=Z,962nm,20.0s						
KURK	**Kurchatov**	**164.97**	**47**	PKP	**PKPdf**	**23 33 22.4**	**-1.9**
KURK				ePKPdf	**PKPdf**	**23 33 23.6**	**-0.7**
KURK				PKPab	**PKPab**	**23 34 20.6**	**-0.4**
KURK				ePKPab	PKPab	23 34 21.8	+0.8
KURK				PP	**PP**	**23 38 10.9**	**+3.1**
KURK				LR	LR		
	comp=Z,962nm,20.0s						
ULHL	**Ulahol**	**165.34**	**81**	P	**PKPdf**	**23 33 26.3**	**+1.1**
	SNR=6.9						
ZALV	**Zalesovo Beam**	**165.59**	**27**	PKIKP	**PKPdf**	**23 33 22.1**	**-2.7**
ZALV						23 34 23.2	
ZALV						23 38 13.3	
ZALV	**Zalesovo Beam**	**165.59**	**27**	PKP	**PKPdf**	**23 33 22.1**	**-2.7**
ZALV				PKPab	**PKPab**	**23 34 23.2**	**-0.4**
ZALV				PP	**PP**	**23 38 13.3**	**+2.7**
ZALV	**Zalesovo Beam**	**165.59**	**27**	PKP	**PKPdf**	**23 33 22.0**	**-2.7**
	comp=Z,3.3nm,0.9s,baz=241,slow=1.5,SNR=16						
ZALV				PKPab	**PKPab**	**23 34 23.2**	**-0.4**
	comp=Z,3.7nm,1.0s,baz=333,slow=5.0,SNR=4.0						
ZALV				PP	**PP**	**23 38 13.3**	**+2.7**
	comp=Z,0.4nm,0.4s,baz=308,slow=5.1,SNR=3.0						
XAN	**Xi'an**	**167.25**	**238**	PKP	**PKPdf**	**23 33 27.4**	**+0.6**
LSA	**Lhasa**	**167.52**	**160**	PKP	**PKPdf**	**23 33 27.1**	**-0.6**
LSA	**Lhasa**	**167.52**	**160**	PFAKE		23 33 40.0	+12
LSA				LR	LR		
	comp=Z,728nm,22.0s						
CD2	**Chengdu**	**167.61**	**213**	ePKP	**PKPdf**	**23 33 28.2**	**+1.0**
CD2				PKPab	**PKPab**	**23 34 36.6**	**+3.5**
CD2				PP	**PP**	**23 38 25.9**	**+4.7**
CD2				SKS	**SKSdf**	**23 40 29.4**	**-1.0**
CD2				SKKS	**SKKSac**	**23 45 10.7**	**+2.4**
CD2				SS	**SS**	**23 59 11.2**	**+3.5**
CD2				AMB	AMB		
	comp=Z,310nm,9.5s						
CD2				LR	LR		
	comp=N,400nm,26.2s						
CD2				LR	LR		
	comp=Z,510nm,25.0s						
IRK	**Irkutsk**	**167.92**	**335**	ePKIKP	**PKPdf**	**23 33 23.8**	**-2.8**
IRK				pmax	pmax		
	comp=Z,35nm,2.1s						
HHC	**Hu-ho-hao-te**	**168.18**	**272**	ePKP	**PKPdf**	**23 33 30.2**	**+2.9**
HHC				PKS	**PKSdf**	**23 37 02.4**	**+2.5**
HHC				PP	PP	23 38 31.0	+5.7
HHC				SKS	**SKSdf**	**23 40 32.6**	**+2.2**
HHC				SKKS	**SKKSac**	**23 45 17.0**	**+5.7**
HHC				SS	**SS**	**23 59 21.0**	**+5.4**
HHC				AMB	AMB		
	comp=Z,310nm,9.0s						
HHC				LR	LR		
	comp=N,950nm,20.2s						
HHC				LR	LR		
	comp=E,500nm,19.5s						
HHC				LR	LR		
	comp=Z,990nm,20.4s						
TLY	**Talaya**	**168.60**	**335**	i PKIKP	**PKPdf**	**23 33 24.5**	**-2.6**
TLY				e		23 34 37.1	
TLY				e		23 38 26.7	
TLY				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MKAR	**Makanchi Array**	**168.93**	**57**	PKIKP	**PKPdf**	**23 33 25.2**	**-2.3**
MKAR						23 34 38.2	
MKAR						23 38 26.4	
MKAR	**Makanchi Array**	**168.93**	**57**	PKP	**PKPdf**	**23 33 25.1**	**-2.3**
MKAR				PKPab	**PKPab**	**23 34 38.2**	**-0.5**
MKAR				PP	**PP**	**23 38 26.4**	**-2.2**
MKAR	**Makanchi Array**	**168.93**	**57**	PKP	**PKPdf**	**23 33 25.2**	**-2.3**
	comp=Z,2.4nm,1.2s,baz=343,slow=2.0,SNR=12						
MKAR				PKPab	**PKPab**	**23 34 38.2**	**-0.5**
	comp=Z,2.2nm,0.8s,baz=305,slow=4.3,SNR=5.6						
MKAR				PP	**PP**	**23 38 26.4**	**-2.2**
	comp=Z,3.2nm,1.0s,baz=287,slow=8.2,SNR=3.8						
ZAK	**Zakamensk**	**169.83**	**332**	ePKIKP	**PKPdf**	**23 33 25.1**	**-2.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.6s						
ULN	**Ulaanbaatar**	**169.89**	**312**	ePKPdf	**PKPdf**	**23 33 25.2**	**-3.1**
ULN				ePKPab	**PKPab**	**23 34 41.7**	**-1.3**
ULN				LR	LR		
	comp=Z,769nm,21.0s						
SONM	**Songino Array**	**170.27**	**313**	PKP	**PKPdf**	**23 33 25.8**	**-2.6**
SONM				PKPab	**PKPab**	**23 34 44.8**	**+0.1**
SONM				PP	**PP**	**23 38 32.5**	**-2.7**
SONM	**Songino Array**	**170.27**	**313**	PKP	**PKPdf**	**23 33 25.8**	**-2.6**
	comp=Z,0.6nm,0.8s,baz=333,slow=2.3,SNR=5.0						
SONM				PKPab	**PKPab**	**23 34 44.8**	**+0.1**
	comp=Z,2.2nm,0.9s,baz=46,slow=2.5,SNR=7.7						
SONM				PP	**PP**	**23 38 32.5**	**-2.7**
	comp=Z,0.6nm,0.9s,baz=188,slow=5.5,SNR=4.1						
LZH	**Lanzhou**	**171.72**	**231**	⇑PKP	**PKPdf**	**23 33 28.4**	**-1.2**
LZH				pPKP	**pPKPdf**	**23 33 31.6**	**-3.5**
LZH				sPKP		23 33 33.0	
LZH				PKS	**PKSdf**	**23 37 00.3**	**-1.8**
LZH				PP	**PP**	**23 38 44.5**	**+2.0**
LZH				SKS	**SKSdf**	**23 40 27.5**	**-4.8**
LZH				SKKS	**SKKSac**	**23 45 27.7**	**-1.0**
LZH				SS	**SS**	**23 59 47.8**	**-1.9**
LZH				AMB	AMB		
	comp=Z,310nm,8.4s						
LZH				LR	LR		
	comp=N,930nm,18.5s						
LZH				LR	LR		
	comp=E,1µm,19.0s						
LZH				LR	LR		
	comp=Z,1µm,20.5s						
WMQ	**Urumqi**	**173.55**	**67**	PKP	**PKPdf**	**23 33 31.2**	**+1.2**
WMQ				PKPab	**PKPab**	**23 35 00.0**	**+0.6**
WMQ				PKS	**PKSdf**	**23 37 03.0**	**+0.8**
WMQ				PP	**PP**	**23 38 53.0**	**+1.2**
WMQ				SKS	**SKSdf**	**23 40 35.0**	**+2.6**
WMQ				SKKS	**SKKSac**	**23 45 40.0**	**+2.9**
WMQ				AMB	AMB		
	comp=Z,400nm,4.0s						
WMQ				LR	LR		
	comp=N,510nm,23.7s						
WMQ				LR	LR		
	comp=E,520nm,21.0s						
WMQ				LR	LR		
	comp=Z,980nm,30.2s						
GTA	**Gaotai**	**176.31**	**235**	PKP	**PKPdf**	**23 33 29.5**	**-1.5**
GTA				PKPab	**PKPab**	**23 35 13.0**	**+1.2**
GTA				PP	**PP**	**23 39 07.2**	**+2.3**
GTA				SKS	**SKSdf**	**23 40 30.6**	**-2.7**
GTA				SKKS	**SKKSac**	**23 45 52.1**	**+1.7**
GTA				SS	**SS**	**00 00 34.8**	**+0.6**
GTA				AMB	AMB		
	comp=Z,370nm,8.1s						
GTA				LR	LR		
	comp=N,560nm,17.6s						
GTA				LR	LR		
	comp=E,720nm,18.5s						
GTA				LR	LR		
	comp=Z,1µm,20.4s						

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*DDA **10** 23:16:54.9, 39°89N×28°12E, h7km, MD2.7*
*ISCJB **10** 23:16:55.3±0.4, 39°90N±0°03×28°12E±0°04, h10km±6km, Error ellipse: s-maj=5.7km s-min=3.9km az=138.7*
*ISK **10** 23:16:55.0, 39°90N×28°11E, h5km, MD2.4*
*CSEM **10** 23:16:55.5±0.1, 39°90N×28°13E, h10km, MD2.4, Error ellipse: s-maj=2.8km s-min=2.0km az=47.0*
ISC 10 23:16:55.4±0.9**, 39°90N**±0°03×**28°12E**±0°03**, h16**km±8km**, n28,** σ**0.37**/42**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.31**	**216**	ePG	**Pg**	**23 17 01.4**	**-0.6**
BALB				eSG	**Sg**	**23 17 06.6**	**+0.2**
BALB	**Balikesir**	**0.31**	**216**	ePg	**Pg**	**23 17 01.4**	**-0.6**
BALB				eSg	**Sg**	**23 17 06.6**	**+0.2**
GONE	**Gonen-Balikesi**	**0.36**	**295**	ePG	**Pg**	**23 17 02.8**	**-0.1**
GONE				eSG	**Sg**	**23 17 07.8**	**-0.1**
GONE	**Gonen-Balikesi**	**0.36**	**295**	ePg	**Pg**	**23 17 02.8**	**-0.1**
GONE				eSg	**Sg**	**23 17 07.8**	**-0.1**
DURS	**Dursunbey**	**0.40**	**137**	i P	**Pg**	**23 17 03.8**	**+0.2**
DURS				i S	**Sg**	**23 17 09.5**	**+0.3**
DURS	**Dursunbey**	**0.40**	**137**	i P	**Pg**	**23 17 03.8**	**+0.2**
DURS				i S	**Sg**	**23 17 09.5**	**+0.3**
KCTX	**Karacabey (Bur**	**0.41**	**26**	ePG	**Pg**	**23 17 03.3**	**-0.4**
KCTX	**Karacabey (Bur**	**0.41**	**26**	ePg	**Pg**	**23 17 03.3**	**-0.4**
BALY	**Balya**	**0.41**	**248**	i P	**Pg**	**23 17 03.9**	**+0.2**
BALY				i S	**Sg**	**23 17 09.5**	**+0.1**
BALY	**Balya**	**0.41**	**248**	i P	**Pg**	**23 17 03.9**	**+0.2**
BALY				i S	**Sg**	**23 17 09.5**	**+0.1**
BNT	**Bandirma**	**0.48**	**342**	ePG	**Pg**	**23 17 05.0**	**0.0**
BNT				eSG	**Sg**	**23 17 11.9**	**+0.3**
BNT	**Bandirma**	**0.48**	**342**	ePg	**Pg**	**23 17 05.0**	**0.0**
BNT				eSg	**Sg**	**23 17 11.9**	**+0.3**
DST	**Dursunbey**	**0.48**	**127**	ePG	**Pg**	**23 17 05.1**	**+0.1**
DST				eSG	**Sb**	**23 17 12.5**	**0.0**
DST	**Dursunbey**	**0.48**	**127**	ePg	**Pg**	**23 17 05.1**	**+0.1**
DST				eSg	**Sb**	**23 17 12.5**	**0.0**
KRBG	**Karabiga-Canak**	**0.80**	**309**	ePG	**Pb**	**23 17 11.3**	**+0.4**
KRBG	**Karabiga-Canak**	**0.80**	**309**	ePg	**Pb**	**23 17 11.3**	**+0.4**
ARMT	**Armutlu**	**0.88**	**40**	ePG	**Pb**	**23 17 12.1**	**-0.2**
ARMT	**Armutlu**	**0.88**	**40**	ePg	**Pb**	**23 17 12.1**	**-0.2**
DEMI	**Demirci**	**0.97**	**151**	i P	**Pn**	**23 17 14.7**	**+0.3**
DEMI				i S	**Sb**	**23 17 25.4**	**-1.1**
DEMI	**Demirci**	**0.97**	**151**	i P	**Pn**	**23 17 14.7**	**+0.3**
DEMI				i S	**Sb**	**23 17 25.4**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.07**	**318**	ePG	**Pg**	**23 17 16.1**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.07**	**318**	ePg	**Pg**	**23 17 16.1**	**+0.1**
MFT	**Murefte**	**1.09**	**325**	ePN	**Pg**	**23 17 16.6**	**+0.1**
MFT	**Murefte**	**1.09**	**325**	ePn	**Pg**	**23 17 16.6**	**+0.1**
TVSB	**Tavsanli**	**1.13**	**113**	ePN	**Pn**	**23 17 16.9**	**+0.2**
TVSB	**Tavsanli**	**1.13**	**113**	ePn	**Pn**	**23 17 16.9**	**+0.2**
ERIK	**Erikli-Kesan**	**1.45**	**303**	ePN	**Pg**	**23 17 22.8**	**-0.5**
ERIK	**Erikli-Kesan**	**1.45**	**303**	ePn	**Pg**	**23 17 22.8**	**-0.5**

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*NEIC **10** 23:40:44.7, 18°99N×65°12W, h29km, MD3.4(RSPR), After RSPR.*
RSPR 10 23:40:45.6, 18°93N×65°17W, h32km±4km**, MD3.1**/6**, 33C-15D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**0.61**	**160**⇑	eP	Pb	23 40 56.4	-1.6
STVI	**Saint Thomas**	**0.61**	**160**⇓	eP	Pb	23 40 56.4	-1.6
STVI				eS	Sb	23 41 05.2	-1.2
STVI	**Saint Thomas**	**0.61**	**160**⇑	eP	Pb	23 40 56.4	-1.6
STVI	**Saint Thomas**	**0.61**	**160**	eS	Sb	23 41 05.0	-1.4
STVI	**Saint Thomas**	**0.61**	**160**⇓	eP	Pb	23 40 56.4	-1.6
STVI	**Saint Thomas**	**0.61**	**160**⇑	eP	Pb	23 40 56.4	-1.6
STVI	**Saint Thomas**	**0.61**	**160**⇑	eP	Pb	23 40 56.4	-1.6
STVI				eS	Sb	23 41 04.9	-1.5
STVI				eS	Sn	23 41 05.0	-1.8
STVI				eS		23 41 05.2	
STVI	**Saint Thomas**	**0.61**	**160**⇓	eP	Pb	23 40 56.4	-1.6
STVI				eS	Sb	23 41 05.2	-1.2
TBVI	**Tortola**	**0.73**	**134**⇓	iP	Pn	23 40 57.4	-2.4
TBVI				eS	Sb	23 41 07.0	-2.7
TBVI	**Tortola**	**0.73**	**134**⇑	eP	Pn	23 40 57.5	-2.2
TBVI	**Tortola**	**0.73**	**134**⇓	iP	Pn	23 40 57.4	-2.4
TBVI	**Tortola**	**0.73**	**134**⇑	eP	Pn	23 40 57.5	-2.2
TBVI				eS	Sb	23 41 07.4	-2.4
TBVI	**Tortola**	**0.73**	**134**⇓	iP	Pn	23 40 57.4	-2.4
TBVI				eS	Sb	23 41 07.0	-2.7
MTP	**Monte Pirata**	**0.90**	**204**⇑	eP	Pn	23 41 00.8	-1.2
MTP	**Monte Pirata**	**0.90**	**204**⇑	eP	Pn	23 41 00.9	-1.2
MTP	**Monte Pirata**	**0.90**	**204**⇑	eP	Pn	23 41 00.8	-1.2
MTP	**Monte Pirata**	**0.90**	**204**⇑	eP	Pn	23 41 00.9	-1.2
MTP				eS	Sn	23 41 12.7	-1.3
MTP				eS	Sb	23 41 12.8	-1.8
MTP	**Monte Pirata**	**0.90**	**204**⇑	eP	Pn	23 41 00.8	-1.2
MTP				eS	Sn	23 41 12.8	-1.2
CBYP	**Canovanas**	**0.92**	**225**⇓	eP	Pn	23 41 00.5	-1.9
CBYP	**Canovanas**	**0.92**	**225**⇑	eP	Pn	23 41 00.6	-1.8
CBYP	**Canovanas**	**0.92**	**225**⇓	eP	Pn	23 41 00.5	-1.9
CBYP	**Canovanas**	**0.92**	**225**⇑	eP	Pn	23 41 00.6	-1.8
CBYP				eS	Sn	23 41 12.3	-2.3
CBYP				eS	Sb	23 41 12.4	-2.8
CBYP	**Canovanas**	**0.92**	**225**⇓	eP	Pn	23 41 00.5	-1.9
CBYP				eS	Sn	23 41 12.3	-2.3
HUMP	**Col San Antoni**	**1.01**	**220**⇓	eP	Pn	23 41 01.9	-1.7
HUMP	**Col San Antoni**	**1.01**	**220**⇑	eP	Pn	23 41 02.0	-1.6
HUMP	**Col San Antoni**	**1.01**	**220**	eS	Sn	23 41 14.9	-1.8
HUMP	**Col San Antoni**	**1.01**	**220**⇓	eP	Pn	23 41 01.9	-1.7
HUMP	**Col San Antoni**	**1.01**	**220**⇑	eP	Pn	23 41 02.0	-1.6
HUMP				eS	Sn	23 41 14.9	-1.8
HUMP				eS	Sb	23 41 16.6	-1.0
HUMP	**Col San Antoni**	**1.01**	**220**⇓	eP	Pn	23 41 01.9	-1.7
HUMP				eS	Sn	23 41 16.6	-0.1
CPD	**Cerro la Pandu**	**1.13**	**219**⇓	eP	Pn	23 41 03.7	-1.6
CPD	**Cerro la Pandu**	**1.13**	**219**	eS	Sn	23 41 18.1	-1.7
CPD	**Cerro la Pandu**	**1.13**	**219**⇑	eP	Pn	23 41 03.8	-1.5
CPD	**Cerro la Pandu**	**1.13**	**219**⇓	eP	Pn	23 41 03.7	-1.6
CPD	**Cerro la Pandu**	**1.13**	**219**⇑	eP	Pn	23 41 03.8	-1.5
CPD				eS	Sn	23 41 18.1	-1.7
CPD				eS	Sb	23 41 19.4	-1.7
CPD	**Cerro la Pandu**	**1.13**	**219**⇓	eP	Pn	23 41 03.7	-1.6
CPD				eS	Sn	23 41 19.4	-0.3
CDVI	**St. Croix**	**1.23**	**162**⇑	eP	Pn	23 41 05.1	-1.5
CDVI	**St. Croix**	**1.23**	**162**⇑	eP	Pn	23 41 05.8	-0.8
CDVI				eS	Sn	23 41 20.3	-1.8
CDVI	**St. Croix**	**1.23**	**162**⇑	eP	Pn	23 41 05.1	-1.5
CDVI				eS	Sn	23 41 20.3	-1.8
SJG	**San Juan**	**1.23**	**229**⇑	eP	Pn	23 41 05.3	-1.3
SJG				eS	Sn	23 41 21.2	-0.9
SJG	**San Juan**	**1.23**	**229**⇑	eP	Pn	23 41 05.2	-1.4
SJG	**San Juan**	**1.23**	**229**⇑	eP	Pn	23 41 05.1	-1.5
SJG	**San Juan**	**1.23**	**229**⇑	eP	Pn	23 41 05.2	-1.4
SJG	**San Juan**	**1.23**	**229**⇑	eP	Pn	23 41 05.3	-1.3
SJG	**San Juan**	**1.23**	**229**⇑	eP	Pn	23 41 06.0	-0.6
SJG				eS	Sn	23 41 20.2	-2.0
SJG				eS	Sb	23 41 21.2	-2.7
SJG	**San Juan**	**1.23**	**229**⇑	eP	Pn	23 41 05.3	-1.3
SJG				eS	Sn	23 41 21.2	-0.9
CELP	**Cerrillos**	**1.58**	**238**⇑	eP	Pn	23 41 10.3	-1.1
CELP				eS	Sn	23 41 29.5	-1.3
CELP	**Cerrillos**	**1.58**	**238**⇑	eP	Pn	23 41 10.3	-1.1
CELP				eS	Sn	23 41 29.5	-1.3
CELP	**Cerrillos**	**1.58**	**238**⇑	eP	Pn	23 41 10.3	-1.1
CELP				eS	Sn	23 41 29.5	-1.3
AOPR	**Arecibo Observ**	**1.61**	**249**	eS	Sn	23 41 30.6	-0.8
AOPR	**Arecibo Observ**	**1.61**	**249**⇑	eP	Pn	23 41 10.7	-1.1
AOPR	**Arecibo Observ**	**1.61**	**249**	eS	Sn	23 41 29.7	-1.8
AOPR	**Arecibo Observ**	**1.61**	**249**⇑	eP	Pn	23 41 10.7	-1.1
AOPR				eS	Sn	23 41 29.7	-1.8
AOPR				eS	Sb	23 41 30.6	-4.1
AOPR	**Arecibo Observ**	**1.61**	**249**⇑	eP	Pn	23 41 10.7	-1.1
AOPR				eS	Sn	23 41 29.7	-1.8

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*JMA **10** 23:46:16.7±0.3, 37°99N×133°64E, h473km, M3.4*
*ISCJB **10** 23:46:17.3±0.5, 38°28N±0°06×133°48E±0°06, h428km, mb3.1/7, Error ellipse: s-maj=8.5km s-min=6.6km az=165.1*
*IDC **10** 23:46:18.2±1.1, 38°07N×133°39E, h441km±16km, mb2.9/7, mb1 3.0/12, mb1mx2.8/32, mbtmp2.9/12, Error ellipse: s-maj=29.1km s-min=17.3km az=172.0*
ISC 10 23:46:17.6±0.8**, 38°15N**±0°10×**133°61E**±0°07**, h428**km**, n28,** σ**1.88**/32**, mb3.3**/7**, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKSM	**Kasumi**	**2.69**	**161**	P	**P**	**23 47 22.8**	**+2.1**
JKY	**Yasaka**	**2.79**	**154**	P	**P**	**23 47 23.3**	**+1.9**
JHS	**Saijyo**	**3.17**	**187**	P	**P**	**23 47 25.7**	**+1.3**
JWT	**Wachi**	**3.20**	**153**	P	**P**	**23 47 26.8**	**+2.2**
JSD	**Sado**	**3.67**	**90**	P	**P**	**23 47 30.6**	**+2.2**
JNG	**Nsakai**	**3.98**	**115**	P	**P**	**23 47 33.6**	**+2.3**
MJAR	**Matsushiro Arr**	**4.00**	**112**	P	**P**	**23 47 33.6**	**+2.2**
	0.8nm,0.3s,baz=300,slow=9.7,SNR=10						
KSRS	**Korea Array**	**4.56**	**263**	P	**P**	**23 47 36.9**	**+0.4**
	0.4nm,0.3s,baz=85,slow=9.7,SNR=7.2						
JRY	**Ryogami san**	**4.73**	**115**	P	P	23 47 42.5	+4.2
JFT	**Otama**	**5.36**	**95**	P	**P**	**23 47 46.1**	**+1.6**
JNU	**Nakatsue**	**5.49**	**205**	P	**P**	**23 47 45.8**	**-0.1**
	1.3nm,0.3s,baz=37,slow=10.0,SNR=8.0						
JRG	**Rokugo**	**5.63**	**75**	P	**P**	**23 47 48.9**	**+1.8**
JMM	**Marumori**	**5.68**	**91**	P	**P**	**23 47 49.0**	**+1.3**
JMM				eS	**S**	**23 49 02.1**	**+0.8**
JFK	**Kawauchi**	**5.81**	**96**	P	**P**	**23 47 49.6**	**+0.5**
JFK				eS	**S**	**23 49 01.0**	**-2.9**
JMK	**Ichinoseki**	**6.02**	**80**	P	**P**	**23 47 52.4**	**+1.2**
USRK	**Ussuriysk Arra**	**6.17**	**349**	P	**P**	**23 47 55.2**	**+2.6**
	0.3nm,0.3s,baz=174,slow=10,SNR=4.1						
JOT	**Ohata**	**6.57**	**58**	eS	**P**	**23 47 59.6**	**+2.3**
BSO1	**Boso 1**	**6.89**	**118**	P	**P**	**23 48 00.4**	**+0.1**
BSO1				eS	**S**	**23 49 21.9**	**-2.1**
ASAJ	**Asahikawa**	**9.02**	**46**	P	**P**	**23 48 25.4**	**+1.5**
	5.4nm,0.3s,baz=227,slow=12,SNR=14						
JTKR	**Abashiri--Toko**	**9.71**	**50**	P	**P**	**23 48 33.3**	**+1.9**
JTKR				eS	**S**	**23 50 22.0**	**+0.2**
NEM2	**Nemuro 2**	**10.57**	**57**	P	**P**	**23 48 42.5**	**+1.6**
NEM2				eS	**S**	**23 50 35.7**	**-3.5**
MKAR	**Makanchi Array**	**38.23**	**300**	P	**P**	**23 52 58.9**	**-0.1**
	0.2nm,0.4s,baz=89,slow=10,SNR=3.5						
KURBB	**Kurchatov Arra**	**40.39**	**306**	P	**P**	**23 53 14.1**	**-2.2**
	0.2nm,0.4s,baz=91,slow=8.3,SNR=3.0						
ILAR	**Eielson Array**	**51.88**	**32**	P	**P**	**23 54 45.4**	**+1.2**
	0.8nm,0.5s,baz=291,slow=8.7,SNR=8.5						
ARCES	**ARCESS Array B**	**60.68**	**337**	P	**P**	**23 55 45.5**	**+0.1**
	0.5nm,0.4s,baz=68,slow=8.6,SNR=10						
FINES	**FINESS Array B**	**64.83**	**330**	P	**P**	**23 56 10.5**	**-1.9**
	0.8nm,0.7s,baz=59,slow=12,SNR=3.7						
NOA	**NORSAR Array B**	**70.62**	**334**	P	**P**	**23 56 45.7**	**-2.4**
	0.5nm,0.6s,baz=38,slow=6.2,SNR=6.0						
TXAR	**Lajitas Array**	**94.15**	**47**	P	**P**	**23 58 50.5**	**+0.9**
	0.2nm,0.7s,baz=345,slow=3.2,SNR=2.7						

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*ISCJB **11** 00:01:55.5±0.6, 57°71S±0°06×161°5E±0°2, h10km, mb4.2/6, MS4.0/2, Error ellipse: s-maj=15.8km s-min=8.5km az=5.5*
*IDC **11** 00:01:56.1±1.7, 57°73S×161°42E, h0km, mb4.1/5, mb1 4.3/7, mb1mx4.1/16, mbtmp4.2/7, ML3.7/2, MS4.0/3, Ms1 3.9/3, ms1mx3.5/28, Error ellipse: s-maj=68.2km s-min=19.5km az=76.0*
*NEIC **11** 00:01:57.5±0.6, 57°68S×161°34E, h10km, mb4.3/5, Error ellipse: s-maj=14.9km s-min=8.3km az=96.0*
ISC 11 00:01:57.2±0.8**, 57°65S**±0°08×**161°3E**±0°2**, h10**km**, n22,** σ**0.91**/20**, mb4.1**/6**, Macquarie Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCQ	**Macquarie Isla**	**3.42**	**336**	ePn	**Pn**	**00 02 48.8**	**-1.7**
MCQ				eSn	Sn	00 03 22.8	-8.3
ODZ	**Otahua Downs**	**13.89**	**29**	ePn	**Pn**	**00 05 14.0**	**+0.1**
RPZ	**Rata Peaks**	**15.23**	**28**	ePn	**Pn**	**00 05 32.8**	**+0.6**
RPZ	**Rata Peaks**	**15.23**	**28**	Pn	**Pn**	**00 05 31.4**	**-0.8**
	2.3nm,0.3s,baz=212,slow=13,SNR=5.6						
RPZ				LR	LR	00 10 23.5	
	comp=Z,382nm,20.9s,baz=141,slow=33						
TAU	**Tasmania Unive**	**17.20**	**323**	ePn	**P**	**00 05 59.3**	**+0.4**
	25nm,0.6s						
SNZO	**South Karori**	**18.47**	**33**	eP	**Pn**	**00 06 13.8**	**+0.8**
VNDA	**Vanda**	**19.96**	**180**	eP	**P**	**00 06 29.2**	**+0.2**
	10nm,1.0s						
VNDA	**Vanda**	**19.96**	**180**	P	**P**	**00 06 28.2**	**-0.8**
	0.1nm,0.3s,baz=352,slow=12,SNR=9.9						
SBA	**Scott Base**	**20.38**	**177**	eP	**P**	**00 06 33.8**	**+0.3**
	24nm,1.3s						
URZ	**Urewera**	**22.00**	**35**	LR	LR	00 14 40.8	
	comp=Z,338nm,19.2s,baz=210,slow=35						
CASY	**Casey**	**24.68**	**229**	eP	**P**	**00 07 17.7**	**-0.1**
QSPA	**South Pole Qui**	**32.45**	**180**	P	**P**	**00 08 27.4**	**+0.1**
	6.5nm,1.0s,baz=8.0,slow=3.8,SNR=18						
ASAR	**Alice Springs**	**39.27**	**318**	P	**P**	**00 09 27.6**	**+1.7**
ASAR	**Alice Springs**	**39.27**	**318**	P	**P**	**00 09 27.6**	**+1.7**
	3.9nm,0.8s,baz=158,slow=8.3,SNR=24						
MAW	**Mawson**	**41.53**	**215**	LR	LR	00 26 24.4	
	comp=Z,275nm,19.2s,baz=353,slow=35						
WRA	**Warramunga Arr**	**42.55**	**321**	P	**P**	**00 09 53.6**	**+0.7**
WRA	**Warramunga Arr**	**42.55**	**321**	P	**P**	**00 09 53.6**	**+0.7**
	1.7nm,0.8s,baz=163,slow=8.0,SNR=5.1						
WRAB	**Tennant Creek**	**42.55**	**321**	eP	**P**	**00 09 53.9**	**+0.9**
	3.7nm,0.8s						
SNAA	**Sanae**	**50.49**	**186**	eP	**P**	**00 10 53.8**	**-0.9**
	5.6nm,1.1s						
SNAA	**Sanae**	**50.49**	**186**	P	**P**	**00 10 54.4**	**-0.3**
	1.0nm,0.9s,baz=178,slow=12,SNR=5.9						
BOSA	**Boshof**	**86.48**	**218**	eP	**P**	**00 14 40.6**	**+0.4**
BOSA	**Boshof**	**86.48**	**218**	P	**P**	**00 14 40.0**	**-0.1**
	1.4nm,0.8s,baz=143,slow=5.1,SNR=2.4						

IDC 11 00:07:09.0±1.6**, 7°05S**×**123°86E, h0**km**, mb3.3**/1**, mb1 3.6**/4**, mb1mx3.4**/23**, mbtmp3.4**/4**, ML3.5**/3**, Error ellipse: s-maj=129.5km s-min=25.8km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.12**	**171**	Pn	Pn	00 09 49.2	-0.2
	0.1nm,0.3s,baz=353,slow=11,SNR=3.8						
FITZ				Sn	Sn	00 11 39.9	-15
	0.2nm,0.3s,baz=159,slow=17,SNR=3.2						
WRA	**Warramunga Arr**	**16.36**	**143**	Pn	P	00 11 01.8	-1.4
	0.3nm,0.3s,baz=317,slow=12,SNR=3.2						
WRA				Sn	Sn	00 13 57.1	-5.5
	0.3nm,0.3s,baz=317,slow=26,SNR=4.1						
ASAR	**Alice Springs**	**19.14**	**151**	P	P	00 11 33.4	-0.5
	0.1nm,0.3s,baz=328,slow=12,SNR=5.5						
MKAR	**Makanchi Array**	**65.06**	**330**	P	P	00 17 51.3	0.0
	0.1nm,0.5s,baz=131,slow=6.2,SNR=2.6						

BER 11 00:14:32.9±3.7**, 77°18N**×**19°52E, h0**km±26km**, ML1.2**(NAO)**, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**0.91**	**261**	eP	Pg	00 14 44.3	-5.9
HSP				eS	Sg	00 14 52.3	-10
SPA0	**Spitsbergen Ar**	**1.21**	**328**	Pg	Pg	00 14 53.2	-2.9
	baz=150,slow=22						
SPA0				Lg	Lg	00 15 09.2	
KBS	**Kingsbay**	**2.36**	**322**	e	Pn	00 15 14.2	+1.5
KBS				eS	Sn	00 15 41.2	-1.1

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*NEIC **11** 00:15:56.4±2.3, 4°89S×102°90E, h22km±16km, mb5.2/38, Error ellipse: s-maj=7.2km s-min=5.0km az=57.0*
NEIC Felt [III] at Bengkulu and Pagaralam. Also felt at Petaling Jaya, Malaysia and in Singapore.
*MOS **11** 00:15:56.7±1.0, 4°74S×103°06E, h33km, mb5.3/52, MS4.5/7, Error ellipse: s-maj=11.7km s-min=5.6km az=114.6*
*BJI **11** 00:15:59.7, 4°90S×102°80E, h58km, mB5.0/34, mb5.2/48, Ms4.9/41, Ms7 4.6/41*
*AUST **11** 00:16:00.6±0.2, 4°99S×102°77E, h50km, Error ellipse: s-maj=0.8km s-min=0.5km az=227.0*
*ISCJB **11** 00:16:00.9±0.4, 4°88S±0°03×102°91E±0°03, h72km±3km, mb5.0/127, Error ellipse: s-maj=5.8km s-min=2.8km az=137.3*
*DJA **11** 00:16:01.1±0.3, 5°S±2°×10°3E±°, h44km±3km, M5.2/54, mb5.3/54, mB5.6/40, MLv5.6/20, Mw(mB)5.1/40*
*IDC **11** 00:16:02.2±1.1, 4°75S×103°01E, h68km±8km, mb4.7/30, mb1 4.8/31, mb1mx4.7/32, mbtmp4.7/31, MS4.3/10, Ms1 4.3/10, ms1mx4.0/32, Error ellipse: s-maj=13.2km s-min=7.6km az=58.0*
*GCMT **11** 00:16:03.3±0.3, 4°97S×102°83E, h25km, MW5.3, Moment Tensor Solution. s43,c49; s66,c74; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s338.00000°, δ4.00000°, λ112.00000°. NP2: ϕ_s136.00000°, δ86.00000°, λ88.00000°. Principal axes: T 1.3000, Plg49.0000°, Azm45.0000°; N 0.0500, Plg2.0000°, Azm136.0000°; P -1.3600, Plg41.0000°, Azm228.0000°; Data Used: II IU CN G IC. Surface waves: sta= 67, comp= 95, per= 50.*
ISC 11 00:16:01.2±0.3**, 4°91S**±0°03×**102°85E**±0°04**, h64**km±1km**, h64**km**:pP-P, n442,** σ**1.55**/557**, mb5.2**/127**, 20C-4D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.56	11	P	Pn	00 16 13.8	-0.4
MNAI				S	Sn	00 16 23.6	0.0
MNAI	Manna	0.56	11	P	Pn	00 16 13.0	-1.2
	baz=0.7,SNR=1000						
MNAI				S	Sn	00 16 23.1	-0.5
	baz=0.7,SNR=15						
LWLI	Liwa	1.21	95	P	Pn	00 16 21.4	-0.8
LWLI				S	Sn	00 16 36.4	-1.5
KSI	Kapahiang	1.28	348	P	Pn	00 16 23.7	+0.5
KSI				S	Sn	00 16 41.0	+1.5
KASI	Kota Agung	1.75	110	P	Pn	00 16 28.3	-1.0
KASI				S	Sn	00 16 49.5	-1.2
PMBI	Palembang	2.75	44	P	Pn	00 16 43.6	+0.6
PMBI	Palembang	2.75	44	P	Pn	00 16 45.5	+2.5
	baz=2.9,SNR=21						
SBJI	Serang	3.48	110	P	Pn	00 16 52.9	0.0
TNG	Tangerang	3.98	108	P	Pn	00 17 00.6	+0.8
SKJI	Sukabumi	4.23	120	P	Pn	00 17 02.1	-1.1
PPBI	Pangkal Pinang	4.27	50	P	Pn	00 17 05.0	+1.3
RGRI	Rengat	4.56	353	P	Pn	00 17 10.7	+2.9
PPI	Padang Panjang	5.06	331	P	Pn	00 17 14.9	+0.3
	814nm,1.0s,17µm7.9nm						
PPI	Padang Panjang	5.06	331	P	Pn	00 17 16.1	+1.6
	baz=5.1,SNR=26						
LEM	Lembang	5.11	112	P	Pn	00 17 17.5	+2.1
	880nm,0.9s,27µm4.1nm						
LEM	Lembang	5.11	112	P	Pn	00 17 17.7	+2.3
	baz=5.2,SNR=16						
TPI	Tanjungpandan	5.25	66	P	Pn	00 17 17.6	+0.4
	86nm,1.0s,3µm1.6nm						
BKNI	Bangkinang	5.51	341	P	Pn	00 17 22.2	+1.4
	802nm,1.0s,11µm9.2nm						
BKNI	Bangkinang	5.51	341	P	Pn	00 17 22.3	+1.6
	baz=5.6,SNR=15						
CISI	Cisompet, Garu	5.59	118	P	Pn	00 17 20.9	-1.0
	1µm,0.7s,16µm5.1nm						
CISI	Cisompet, Garu	5.59	118	P	Pn	00 17 21.0	-1.0
	baz=5.6,SNR=70						
XMI	Christmas Isla	6.18	153	P	Pn	00 17 23.5	-6.5
	baz=6.2,SNR=4.1						
XMI				S	Sn	00 18 22.7	-17
	baz=6.2,SNR=7.1						
XMIS	Christmas Isla	6.19	154	*e*Pn	Pn	00 17 22.7	-7.4
	525nm,0.4s						
XMIS				*e*Sn	Sn	00 18 26.6	-13
XMIS	Christmas Isla	6.19	154	P	Pn	00 17 22.7	-7.4
	baz=6.2,SNR=28						
XMIS				S	Sn	00 18 25.9	-14
	baz=6.2,SNR=15						
BTDF	Bukit Timah Da	6.30	8	P	Pn	00 17 33.9	+2.3
	baz=6.4,SNR=16						
BTDF				P	Pn	00 17 33.9	+2.3
	baz=6.4,SNR=16						
TGJI	Tegal	6.53	108	P	Pn	00 17 38.7	+3.9
MNSI	Mandailing Nat	6.54	330	P	Pn	00 17 35.0	+0.1
	284nm,0.6s,14µm2.2nm						
MYKOM	Kota Tinggi	6.73	9	P	Pn	00 17 39.4	+1.9
MYKOM	Kota Tinggi	6.73	9	P	Pn	00 17 39.8	+2.3
	178nm,0.8s,3µm0.9nm						
KGM	Kluang	6.90	4	P	Pn	00 17 42.0	+2.2
BJII	Banjamegara	7.23	110	P	Pn	00 17 46.3	+1.9
	125nm,1.2s,2µm0.7nm						
SMRI	Semarang	7.84	106	P	Pn	00 17 55.1	+2.4
	282nm,1.0s,4µm1.7nm						
SMRI	Semarang	7.84	106	P	Pn	00 17 55.5	+2.8
	baz=7.9,SNR=4.3						
YOGI	Yogyakarta	7.94	112	P	Pn	00 17 55.3	+1.3
	461nm,0.9s,6µm1.7nm						
UGM	Wanagama	8.19	112	*e*Pn	Pn	00 17 57.6	+0.1
UGM	Wanagama	8.19	112	P	Pn	00 17 57.9	+0.5
	432nm,0.6s,5µm						
UGM	Wanagama	8.19	112	P	Pn	00 17 57.5	+0.1
	baz=8.2,SNR=62						
FRIM	Kepong	8.19	351	P	Pn	00 17 57.5	+0.1
PCJI	Pacitan	8.89	112	P	Pn	00 18 06.3	-0.7
	190nm,0.9s,3µm						
SJI	Sawahan	9.29	108	P	Pn	00 18 13.7	+1.1
	235nm,0.6s,7µm						
COCO	West Island	9.36	219	*e*P	Pn	00 18 10.4	-3.0
COCO	West Island	9.36	219	*e*Pn	Pn	00 18 10.4	-3.0
COCO				*e*Sn	Sn	00 19 43.0	-14
COCO	West Island	9.36	219	Pn	Pn	00 18 10.8	-2.7
	6µm,0.5s,SNR=38						
COCO	West Island	9.36	219	P	Pn	00 18 11.0	-2.5
	1µm,1.0s,11µm						
PWJI	Pagerwojo	9.42	110	P	Pn	00 18 14.1	-0.1
	168nm,0.7s,3µm						
SNSI	Sinabang, Aceh	9.77	318	P	Pn	00 18 18.3	-0.7
	790nm,0.9s,8µm						
KSM	Kuching	9.79	50	*e*Pn	Pn	00 18 19.9	+0.6
KSM	Kuching	9.79	50	P	Pn	00 18 22.5	+3.2
KSM	Kuching	9.79	50	P	Pn	00 18 21.8	+2.5
	62nm,1.0s,531nm						
KSM	Kuching	9.79	50	P	Pn	00 18 22.4	+3.1
	baz=9.9,SNR=7.4						
KCSI	Kotacane, Aceh	9.80	329	P	Pn	00 18 17.6	-1.8
	65nm,0.8s,1µm						
KTGM	Kuala Trenggan	10.18	2	P	Pn	00 18 26.3	+1.6
KULM	Kulim	10.37	348	*e*Pn	Pn	00 18 29.0	+1.7
KULM	Kulim	10.37	348	P	Pn	00 18 30.3	+3.0
KULM	Kulim	10.37	348	P	Pn	00 18 30.1	+2.8
	54nm,0.8s,854nm						
GMJI	Gumukmas	11.04	108	P	Pn	00 18 37.1	+0.7
	123nm,0.8s,2µm						
BLJI	Banyuglugur	11.04	105	P	Pn	00 18 38.0	+1.5
	192nm,0.5s						
LHMI	Lhok Sumawe	11.67	330	P	Pn	00 18 47.4	+2.3
	baz=12,SNR=3.5						
SBUM	Sibu	11.88	52	P	Pn	00 18 51.5	+3.6
SBUM	Sibu	11.88	52	P	Pn	00 18 50.8	+2.9
	76nm,1.5s,1µm						
BBKI	Banjar Baru	12.04	84	P	P	00 19 02.6	+1.8
MTKI	Muara Teweh, K	12.66	72	P	P	00 19 10.9	+3.3
SRBI	Singaraja	12.68	105	P	P	00 19 04.0	-3.9
BSI	Banda Aceh	12.80	324	P	Pn	00 18 57.1	-3.4
	76nm,0.9s,1µm						
IGBI	Denpasar	12.81	108	P	Pn	00 18 58.4	-2.1
	67nm,0.6s						
BTM	Bintulu	13.02	52	P	P	00 19 08.2	-3.5
KHKI	Kahang-Kahang	13.13	106	P	Pn	00 19 03.1	-1.8
	104nm,0.6s,1µm						
KAPI	Kappang	16.84	91	*e*Pn	Pn	00 19 51.9	-1.0
	119nm,1.5s						
KAPI	Kappang	16.84	91	P	Pn	00 19 52.5	-0.4
	302nm,0.6s,SNR=5.7						
KAPI	Kappang	16.84	91	P	Pn	00 19 52.7	-0.2
	52nm,1.1s,796nm						
KAPI	Kappang	16.84	91	P	Pn	00 19 51.8	-1.2
	3.8nm,0.3s,baz=285,slow=8.0,SNR=14						
SPSI	Sidrap Palu	16.89	87	P	P	00 19 55.2	+0.5
	60nm,1.3s,2µm						
TTSI	Tana Toraja	17.03	84	P	P	00 19 58.1	+1.9
	114nm,1.2s,2µm						
BKSI	Bulukumba	17.21	92	P	Pn	00 19 57.6	+0.1
	104nm,0.8s,1µm						
KKM	Kota Kinabalu	17.22	51	*e*Pn	P	00 19 58.3	-0.1
	134nm,1.5s						
KKM	Kota Kinabalu	17.22	51	P	P	00 19 59.5	+1.1
KKM	Kota Kinabalu	17.22	51	P	P	00 19 59.5	+1.1
	55nm,1.7s,1µm						
KKM	Kota Kinabalu	17.22	51	P	Pn	00 19 57.0	-0.7
	baz=17,SNR=8.9						
CHBT	CHBT	17.56	358	P	P	00 20 02.7	+0.7
	50nm,0.9s,2µm						
TSM	Tawau	17.57	59	P	P	00 20 04.9	+2.7
SDKM	Sandakan	17.75	54	P	P	00 20 06.0	+1.7
KDM	Kudat	18.24	50	P	Pn	00 20 11.7	+1.5
BASI	Baing, Sumba	18.34	108	P	Pn	00 20 12.4	+1.1
	822nm,1.8s,11µm						
MYLDM	Lahad Datu	18.57	58	P	Pn	00 20 16.0	+1.9
MYLDM	Lahad Datu	18.57	58	P	Pn	00 20 16.7	+2.6
	136nm,1.2s,3µm						
MMRI	Maumere	19.60	102	P	P	00 20 24.5	0.0
	139nm,1.3s						
BBSI	Bau Bau	19.65	93	P	Pn	00 20 28.0	+1.1
	67nm,1.1s,3µm						
MRSI	Marisa	19.81	75	P	P	00 20 27.3	+0.6
	180nm,0.6s,2µm						
UBPT	Khong Chiam	20.23	7	P	P	00 20 31.0	-0.3
LUWI	Luwuk	20.26	80	P	P	00 20 32.7	+1.1
	255nm,0.7s,3µm						
LUWI	Luwuk	20.26	80	P	Pn	00 20 33.3	-0.8
	baz=20,SNR=7.3						
MBWA	Marble Bar	23.00	136	*e*P	P	00 21 00.5	-0.4
	49nm,1.3s						
CM31	Chiang Mai Arr	23.54	351	*e*P	P	00 21 05.4	-0.6
	38nm,0.5s						
CMAR	Chiang Mai Arr	23.54	351	P	P	00 21 05.3	-0.6
CMAR				ScP	ScP	00 28 23.7	+0.8
CMAR	Chiang Mai Arr	23.54	351	P	P	00 21 05.3	-0.6
	50nm,0.6s,baz=181,slow=8.9,SNR=202						
CMAR				ScP	ScP	00 28 23.7	+0.8
	2.8nm,0.7s,baz=208,slow=2.5,SNR=8.9						
CMAR				LR	LR	00 31 20.9	
	comp=Z,421nm,19.1s,baz=176,slow=39						
CMMT	Chiang Mai	23.89	351	P	P	00 21 08.7	-0.5
	64nm,0.8s						
CHTO	Chiang Mai	23.89	351	*e*P	P	00 21 08.3	-0.9
CHTO				pmax	pmax		
	comp=Z,39nm,0.7s						
CHTO	Chiang Mai	23.89	351	*e*P	P	00 21 08.3	-0.9
	comp=Z,39nm,0.7s						
CHTO	Chiang Mai	23.89	351	P	P	00 21 08.7	-0.5
	comp=Z,62nm,1.1s,comp=Z,707nm						
NLAI	Namlea	24.24	87	P	P	00 21 15.1	+2.6
	comp=Z,66nm,0.9s,comp=Z,3µm						
QIZ	Qiongzhong	24.77	16	P	P	00 21 19.5	+2.4
QIZ				pP	pP	00 21 34.8	+2.2
QIZ				sP	sP	00 21 41.5	+1.4
QIZ				S	S	00 25 40.0	+4.9
QIZ				pmax	pmax		
	comp=Z,21nm,1.4s						
QIZ				LR	LR		
	comp=N,300nm,29.7s						
QIZ				LR	LR		
	comp=E,260nm,26.2s						
QIZ				LR	LR		
	comp=Z,600nm,24.9s						
DAV	Davao City (W)	25.62	62	LR	LR	00 32 19.3	
	comp=Z,728nm,19.2s,baz=339,slow=38						
GAMI	Galela, Maluku	25.80	76	P	P	00 21 27.0	+0.4
	comp=Z,157nm,0.9s,comp=Z,5µm						
FITZ	Fitzroy Crossi	25.85	122	P	P	00 21 26.7	-0.2
FITZ	Fitzroy Crossi	25.85	122	P	P	00 21 26.7	-0.2
	comp=Z,32nm,0.6s,baz=304,slow=7.0,SNR=111						
FITZ				LR	LR	00 31 27.9	
	comp=Z,435nm,19.4s,baz=303,slow=36						
FITZ	Fitzroy Crossi	25.85	122	P	P	00 21 26.8	-0.2
	baz=26,SNR=57						
TGY	Tagaytay City	26.05	43	LR	LR	00 31 49.3	
	comp=Z,5.0nm,20.3s,baz=88,slow=37						
MEEK	Meekatharra	26.34	147	P	P	00 21 31.8	+0.4
	baz=26,SNR=11						
MEEK				S	S	00 26 33.3	+33
	baz=26,SNR=4.4						
MORW	Morawa	27.08	154	P	P	00 21 39.3	+1.3
	baz=27,SNR=4.6						
KNRA	Kununurra	27.61	115	P	P	00 21 42.0	-0.9
	baz=28,SNR=22						
MTN	Manton Dam	29.01	108	P	P	00 21 56.6	+1.3
	baz=29,SNR=4.5						
FAKI	Fak Fak	29.39	87	P	P	00 21 57.7	-1.1
	baz=30,SNR=6.1						
KMI	Kunming	29.86	360	P	P	00 22 04.2	+1.2
KMI				pP	pP	00 22 19.4	+0.9
KMI				sP	sP	00 22 27.0	+0.9
KMI				S	S	00 26 58.2	+2.5
KMI				pmax	pmax		
	comp=Z,34nm,0.7s						
KMI				pmax	pmax		
	comp=Z,69nm,4.5s						
KMI				LR	LR		
	comp=N,790nm,11.0s						
KMI				LR	LR		
	comp=E,320nm,12.1s						
KMI				LR	LR		
	comp=Z,1µm,13.5s						
KDU	Kakadu	30.25	107	P	P	00 22 04.2	-2.1
	baz=30,SNR=9.8						
NWAO	Narrogin (SRO)	30.94	156	P	P	00 22 12.7	+0.5
NWAO	Narrogin (SRO)	30.94	156	P	P	00 22 12.7	+0.5
	comp=Z,8.2nm,0.9s,baz=316,slow=8.5,SNR=6.3						
NWAO				LR	LR	00 32 18.6	
	comp=Z,457nm,21.6s,baz=340,slow=32						
GYA	Guiyang	31.40	7	P	P	00 22 20.5	+4.0
GYA				pP	pP	00 22 37.3	+5.2
GYA				PcP	PcP	00 25 11.0	+2.1
GYA				S	S	00 27 23.2	+3.5
GYA				ScP	ScP	00 28 45.6	-1.1
GYA				PcS	PcS	00 28 53.2	-0.3
GYA				ScS	ScS	00 32 43.0	-1.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,4.7s						
GYA				LR	LR		
	comp=N,670nm,17.0s						
GYA				LR	LR		
	comp=E,530nm,18.1s						
GYA				LR	LR		
	comp=Z,610nm,17.7s						
KMBL	Kambalda	31.81	148	P	P	00 22 20.7	+0.8
	baz=32,SNR=6.7						
RKGY	Rocky Gully	32.32	158	P	P	00 22 27.4	+3.1
	baz=32,SNR=5.2						
WRA	Warramunga Arr	34.09	119	P	P	00 22 39.2	-0.7
WRA				PcP	PcP	00 25 17.1	+0.7
WRA				S	S	00 27 58.5	-3.0
WRA				ScP	ScP	00 28 56.8	+0.7
WRA	Warramunga Arr	34.09	119	P	P	00 22 39.3	-0.7
	comp=Z,26nm,0.6s,baz=297,slow=9.6,SNR=80						
WRA				PcP	PcP	00 25 17.1	+0.7
	comp=Z,6.7nm,0.6s,baz=302,slow=1.9,SNR=7.0						
WRA				S	S	00 27 58.5	-3.0
	comp=Z,1.4nm,0.7s,baz=294,slow=17,SNR=3.3						
WRA				ScP	ScP	00 28 56.8	+0.7
	comp=Z,3.3nm,0.8s,baz=304,slow=2.6,SNR=7.2						
WRAB	Tennant Creek	34.09	119	*e*P	P	00 22 39.7	-0.3
WRAB				*e**PP	pP	00 22 54.6	-1.1
WRAB				*e*		00 25 17.0	
WRAB				pmax	pmax		
	comp=Z,37nm,0.6s						
WRAB	Tennant Creek	34.09	119	*e*P	P	00 22 39.7	-0.3
	comp=Z,37nm,0.6s						
WRAB				*e*pP	pP	00 22 54.6	-1.1
WRAB				*e*PcP	PcP	00 25 17.0	+0.6
WRAB				*e*ScP	ScP	00 28 55.0	-1.0
WRAB	Tennant Creek	34.09	119	P	P	00 22 39.4	-0.6
	comp=Z,381nm,0.6s,SNR=16						
ODAN	Odare	34.95	335	*e*P	P	00 22 47.8	+0.3
	comp=Z,85nm,0.6s						
FORT	Forrest	35.00	140	P	P	00 22 48.8	+1.2
	baz=35,SNR=7.7						
TAPN	Taplejung	35.25	336	*e*P	P	00 22 50.7	+0.5
	comp=Z,68nm,0.6s						
AS31	Alice Springs	35.26	125	*e*P	P	00 22 50.1	+0.1
AS31				*e*PP	PnPn	00 24 09.1	-0.9
AS31				*e*PcP	PcP	00 25 18.6	-1.2
AS31				*e*S	S	00 28 17.6	-1.9
AS31				*e*ScP	ScP	00 28 59.6	-0.6
ASAR	Alice Springs	35.26	125	P	P	00 22 49.9	-0.1
ASAR				PcP	PcP	00 25 20.6	+0.9
ASAR				S	S	00 28 18.4	-1.1
ASAR				ScP	ScP	00 29 01.2	+1.0
ASAR	Alice Springs	35.26	125	P	P	00 22 49.9	-0.1
	comp=Z,13nm,0.5s,baz=294,slow=7.6,SNR=115						
ASAR				PcP	PcP	00 25 20.6	+0.9
	comp=Z,8.0nm,0.6s,baz=304,slow=2.8,SNR=9.9						
ASAR				S	S	00 28 18.4	-1.1
	comp=Z,2.9nm,0.9s,baz=294,slow=16,SNR=7.4						
ASAR				ScP	ScP	00 29 01.2	+1.0
	comp=Z,8.0nm,0.8s,baz=308,slow=3.5,SNR=17						
ASAR				LR	LR	00 37 06.9	
	comp=Z,360nm,18.3s,baz=300,slow=36						
RAMN	Ramite	35.36	334	*e*P	P	00 22 51.7	+0.6
	comp=Z,50nm,0.6s						
ENH	Enshi	35.56	10	*e*P	P	00 22 52.0	-0.4
	comp=Z,11nm,0.5s						
CD2	Chengdu	35.63	1	*e*P	P	00 22 52.6	-0.5
CD2				pP	pP	00 23 06.8	-2.1
CD2				sP	sP	00 23 13.8	-2.6
CD2				PP	PnPn	00 24 14.7	+0.2
CD2				PcP	PcP	00 25 20.0	-0.7
CD2				S	S	00 28 25.3	+0.3
CD2				sS	sS	00 28 50.1	-1.7
CD2				SS	SnSn	00 30 49.2	-2.6
CD2				ScS	ScS	00 33 02.5	-3.8
CD2				pmax	pmax		
	comp=Z,60nm,0.6s						
CD2				pmax	pmax		
	comp=Z,130nm,11.2s						
CD2				LR	LR		
	comp=N,1µm,19.0s						
CD2				LR	LR		
	comp=E,1µm,17.8s						
CD2				LR	LR		
	comp=Z,1µm,14.5s						
LSA	Lhasa	36.20	343	P	P	00 22 58.1	-0.4
LSA	Lhasa	36.20	343	*e*P	P	00 22 58.6	+0.1
LSA				pmax	pmax		
	comp=Z,12nm,0.6s						
LSA	Lhasa	36.20	343	*e*P	P	00 22 58.5	+0.1
	comp=Z,12nm,0.6s						
PKI	Pulchoki	36.42	333	*e*P	P	00 23 00.3	0.0
	comp=Z,20nm,0.5s						
PKIN	Phulchoki	36.43	333	*e*P	P	00 23 00.3	0.0
	comp=Z,16nm,0.6s						
GUN	Gumba	36.51	334	*e*P	P	00 23 01.4	+0.4
	comp=Z,120nm,0.5s						
DMN	Daman	36.59	333	*e*P	P	00 23 01.8	+0.2
	comp=Z,27nm,0.6s						
KKN	Kakani	36.67	333	*e*P	P	00 23 02.5	+0.3
	comp=Z,58nm,0.6s						
WHN	Wuhan	36.93	17	P	P	00 23 05.0	+0.9
WHN				S	S	00 28 48.1	+3.4
WHN				LR	LR		
	comp=N,830nm,15.2s						
WHN				LR	LR		
	comp=E,700nm,13.3s						
WHN				LR	LR		
	comp=Z,2µm,22.9s						
KOLN	Koldanda	37.43	331	*e*P	P	00 23 09.3	+0.6
	comp=Z,69nm,0.6s						
DANN	Dangsing	37.84	332	*e*P	P	00 23 12.7	+0.5
	comp=Z,86nm,0.5s						
JAY	Jayapura	37.84	88	P	P	00 23 09.3	-2.9
PYUN	Piuthan	38.00	331	*e*P	P	00 23 14.1	+0.6
	comp=Z,52nm,0.4s						
QIS	Mount Isa	38.94	117	P	P	00 23 21.2	-0.1
	baz=39,SNR=8.4						
XAN	Xi'an	39.16	8	P	P	00 23 22.2	-0.8
XAN				pP	pP	00 23 37.3	-1.6
XAN				sP	sP	00 23 43.8	-2.5
XAN				PP	PnPn	00 24 56.5	-0.6
XAN				S	S	00 29 17.5	-1.0
XAN				sS	sS	00 29 41.0	-4.6
XAN				SS	SS	00 32 01.3	-12
XAN				ScS	ScS	00 33 24.2	-2.0
XAN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN				pmax	pmax		
	comp=Z,21nm,5.0s						
XAN				LR	LR		
	comp=N,330nm,18.4s						
XAN				LR	LR		
	comp=E,110nm,13.3s						
XAN				LR	LR		
	comp=Z,180nm,15.4s						
NJ2	Nanjing	39.79	21	*e*P	P	00 23 39.8	+12
NJ2				PP	PnPn	00 25 11.0	+6.5
NJ2				PcP	PcP	00 25 42.0	+8.7
NJ2				ScP	S	00 29 33.0	+5.2
NJ2				S	ScP	00 29 46.0	+29
NJ2				SS	SnSn	00 32 47.0	+15
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,130nm,7.9s						
NJ2				LR	LR		
	comp=N,520nm,22.4s						
NJ2				LR	LR		
	comp=E,510nm,19.0s						
NJ2				LR	LR		
	comp=Z,2µm,22.8s						
LGTI	Lohaghat	40.48	329	*e*PKP	pP	00 23 56.2	+6.3
COEN	Coen	40.72	106	P	P	00 23 34.8	-1.3
	baz=41,SNR=9.1						
LZH	Lanzhou	40.79	1	*e*P	P	00 23 36.9	+0.3
LZH				pP	pP	00 23 51.7	-0.9
LZH				sP	sP	00 23 58.4	-1.6
LZH				PP	PnPn	00 25 15.6	-0.8
LZH				PcP	PcP	00 25 37.8	+1.1
LZH				*e*S	S	00 29 42.0	-1.1
LZH				sS	sS	00 30 07.4	-2.9
LZH				SS	SS	00 32 43.0	-3.4
LZH				pmax	pmax		
	comp=Z,67nm,1.4s						
LZH				pmax	pmax		
	comp=Z,250nm,4.7s						
LZH				LR	LR		
	comp=N,2µm,14.9s						
LZH				LR	LR		
	comp=E,2µm,15.0s						
LZH				LR	LR		
	comp=Z,2µm,17.7s						
NDI	New Delhi	41.52	325	*e*PKP	P	00 23 40.5	-2.0
BBOO	Buckleboo	41.59	136	*e*P	P	00 23 44.0	+0.9
	comp=Z,2µm,1.8s						
BBOO	Buckleboo	41.59	136	P	P	00 23 43.7	+0.7
	baz=42,SNR=7.9						
MTSU	Mount Surprise	42.58	111	P	P	00 23 51.5	+0.2
	baz=43,SNR=52						
SDNR	Sundarnagar	43.82	327	*e*PKP	P	00 24 01.0	-0.1
PMG	Port Moresby	44.16	98	*e*P	P	00 24 03.6	-0.5
	comp=Z,37nm,0.6s						
PMG	Port Moresby	44.16	98	P	P	00 24 09.3	+5.2
GTA	Gaotai	44.19	357	*e*P	P	00 24 04.3	+0.2
GTA				pP	pP	00 24 21.8	+1.5
GTA				sP	sP	00 24 28.6	+1.0
GTA				PcP	PP	00 25 49.2	+1.0
GTA				ScP	ScP	00 29 34.2	-0.3
GTA				S	S	00 30 29.9	-3.0
GTA				sS	sS	00 31 01.7	+1.4
GTA				pmax	pmax		
	comp=Z,20nm,0.7s						
GTA				pmax	pmax		
	comp=Z,120nm,5.2s						
GTA				LR	LR		
	comp=N,570nm,17.1s						
GTA				LR	LR		
	comp=E,760nm,21.4s						
GTA				LR	LR		
	comp=Z,1µm,20.4s						
CTAO	Charters Tower	44.81	114	*e*P	P	00 24 09.8	+0.6
CTAO				pmax	pmax		
	comp=Z,53nm,1.0s						
CTAO	Charters Tower	44.81	114	*e*P	P	00 24 09.8	+0.6
	comp=Z,53nm,1.0s						
QLP	Quilpie	44.98	123	P	P	00 24 11.8	+1.3
	baz=45,SNR=10						
STKA	Stephens Creek	45.10	131	P	P	00 24 12.4	+1.0
STKA	Stephens Creek	45.10	131	P	P	00 24 12.4	+1.0
	comp=Z,52nm,0.5s,baz=306,slow=8.8,SNR=152						
STKA				LR	LR	00 43 40.4	
	comp=Z,414nm,20.2s,baz=292,slow=37						
STKA	Stephens Creek	45.10	131	P	P	00 24 12.1	+0.8
	baz=45,SNR=96						
JNU	Nakatsue	46.23	33	*e*P	P	00 24 19.9	-0.3
	comp=Z,20nm,1.3s						
HHC	Hu-ho-hao-te	46.23	9	*e*P	P	00 24 22.1	+1.9
HHC				pP	pP	00 24 37.9	+1.4
HHC				sP	sP	00 24 44.7	+0.8
HHC				PP	PP	00 26 12.2	+2.4
HHC				S	S	00 31 05.1	+2.8
HHC				sS	sS	00 31 32.3	+2.4
HHC				SS	SS	00 34 24.2	-4.4
HHC				pmax	pmax		
	comp=Z,55nm,0.9s						
HHC				pmax	pmax		
	comp=Z,280nm,5.5s						
HHC				LR	LR		
	comp=N,680nm,16.7s						
HHC				LR	LR		
	comp=E,1µm,16.3s						
HHC				LR	LR		
	comp=Z,1µm,17.2s						
BJI	Beijing	46.38	14	P	P	00 24 21.0	-0.2
BJI				pmax	pmax		
	comp=Z,39nm,0.7s						
BJI				LR	LR		
	comp=N,600nm,19.9s						
BJI				LR	LR		
	comp=E,390nm,21.1s						
BJI				LR	LR		
	comp=Z,510nm,29.8s						
ARPS	Mount Arapiles	47.73	137	P	P	00 24 34.1	+2.2

baz=48,SNR=9.0
CMSA Cobar Meteorol 48.08 129 P **P** 00 24 36.0 +1.3
baz=48,SNR=53
KSAR Wonju Array Be 48.16 27 P **P** 00 24 34.9 -0.2
KSAR ScP **ScP** 00 29 50.7 -0.2
KSRS Korea Array 48.19 27 P **P** 00 24 34.9 -0.4
comp=Z,11nm,0.5s,baz=226,slow=7.9,SNR=28
KSRS ScP **ScP** 00 29 50.7 -0.3
comp=Z,1.8nm,0.7s,baz=207,slow=4.1,SNR=5.2
RMQ Roma 48.77 121 P **P** 00 24 42.5 +2.4
baz=49,SNR=4.2
SNY Shenyang 50.21 20 P **pP** 00 25 05.7 -1.5
SNY pmax pmax
comp=Z,150nm,9.8s
WMQ Urumqi 50.40 346 P **P** 00 24 52.6 +0.4
WMQ pP **pP** 00 25 09.0 +0.3
WMQ sP **sP** 00 25 17.0 +1.0
WMQ PcP **PcP** 00 26 13.0 +3.2
WMQ S **S** 00 32 00.0 -0.9
WMQ sS **sS** 00 32 30.0 +1.2
WMQ ScS **ScS** 00 34 36.0 -1.5
WMQ pmax pmax
comp=Z,23nm,0.6s
WMQ pmax pmax
comp=Z,280nm,3.6s
WMQ LR LR
comp=N,680nm,20.4s
WMQ LR LR
comp=E,810nm,17.5s
WMQ LR LR
comp=Z,990nm,27.0s
EIDS Eidsvold 50.45 119 *e*P **P** 00 24 53.4 +0.5
comp=Z,67nm,1.8s
EIDS Eidsvold 50.45 119 P **P** 00 24 54.4 +1.5
baz=50,SNR=6.6
KBL Kabul 50.55 323 *e*P **P** 00 24 54.0 +0.3
KBL pmax pmax
comp=Z,15nm,0.9s
KBL Kabul 50.55 323 *e*P **P** 00 24 54.0 +0.3
comp=Z,15nm,0.9s
TOO Toolangi 50.65 136 P **P** 00 24 57.1 +2.9
baz=51,SNR=7.2
KSH Kashi 50.69 333 P **P** 00 24 53.1 -1.4
KSH *e*pP **pP** 00 25 08.7 -2.3
KSH *e*sP **sP** 00 25 15.8 -2.5
KSH *e*PcP **PcP** 00 26 11.7 +0.6
KSH *e*PP **PP** 00 26 49.5 -1.7
KSH *e*S S 00 31 57.7 -7.5
KSH *e*sS sS 00 32 26.3 -6.8
KSH pmax pmax
comp=Z,19nm,0.6s
KSH LR LR
comp=N,600nm,13.6s
KSH LR LR
comp=E,380nm,10.6s
KSH LR LR
comp=Z,2μm,22.0s
YNG Young 51.29 131 P **P** 00 25 00.5 +1.5
baz=51,SNR=39
CAN Canberra 52.16 132 *e*P **P** 00 25 04.9 -0.7
CAN *e**PP **pP** 00 25 21.9 -0.3
CAN pmax pmax
comp=Z,23nm,0.8s
CAN Canberra 52.16 132 *e*P **P** 00 25 04.9 -0.7
comp=Z,23nm,0.8s
CAN *e*pP **pP** 00 25 21.9 -0.3
ARMA Armidale 52.41 125 P **P** 00 25 09.9 +2.3
baz=52,SNR=5.3
CN2 Changchun 52.60 21 *e*P **P** 00 25 07.1 -1.4
CN2 *e*pP **pP** 00 25 22.9 -2.2
CN2 *e*sP **sP** 00 25 29.9 -2.5
CN2 *e*S **S** 00 32 30.6 -0.4
CN2 pmax pmax
comp=Z,30nm,1.0s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,400nm,17.0s
CN2 LR LR
comp=E,400nm,17.0s
CN2 LR LR
comp=Z,500nm,19.0s
SONM Songino Array 52.62 3 P **P** 00 25 09.0 +0.3
SONM PcP **PcP** 00 26 18.5 +0.4
SONM ScP **ScP** 00 30 10.2 +0.1
SONM Songino Array 52.62 3 P **P** 00 25 09.0 +0.3
comp=Z,15nm,0.6s,baz=179,slow=7.4,SNR=55
SONM PcP **PcP** 00 26 18.5 +0.4
comp=Z,8.6nm,0.7s,baz=187,slow=4.2,SNR=5.1
SONM ScP **ScP** 00 30 10.2 +0.1
comp=Z,2.3nm,0.6s,baz=187,slow=4.9,SNR=6.4
ULN Ulaanbaatar 52.68 4 *e*P **P** 00 25 09.6 +0.3
comp=Z,13nm,0.9s
ULN Ulaanbaatar 52.68 4 P **P** 00 25 09.5 +0.2
comp=Z,12nm,0.9s
ULHL Ulahol 52.81 335 P **P** 00 25 10.4 0.0
SNR=13
MAJO Matsushiro 52.84 36 *e*P **P** 00 25 09.3 -1.2
MAJO pmax pmax
comp=Z,34nm,1.3s
MAJO Matsushiro 52.84 36 *e*P **P** 00 25 09.2 -1.2
comp=Z,34nm,1.3s
MAT Matsushiro 52.84 36 P **P** 00 25 09.1 -1.4
MAT *e*S S 00 32 25.0 -10
MJAR Matsushiro Arr 52.84 36 P **P** 00 25 08.8 -1.8
MJAR ScP **ScP** 00 30 07.8 -3.4
MJAR Matsushiro Arr 52.84 36 P **P** 00 25 08.8 -1.8
comp=Z,7.5nm,0.5s,baz=212,slow=7.7,SNR=25
MJAR ScP **ScP** 00 30 07.8 -3.4
comp=Z,3.0nm,0.9s,baz=220,slow=4.0,SNR=5.4
MGCD Mangrove Creek 52.95 128 P **P** 00 25 13.3 +1.9
baz=53,SNR=9.7
KZA Kyzart 53.09 334 P **P** 00 25 13.1 +0.4
SNR=19
TKM2 Tokmak 2 53.63 335 *e*P **P** 00 25 16.6 +0.1
TKM2 pmax pmax
comp=Z,27nm,0.6s
TKM2 Tokmak 2 53.63 335 *e*P **P** 00 25 16.6 +0.1
comp=Z,27nm,0.6s
TKM2 Tokmak 2 53.63 335 P **P** 00 25 16.6 +0.1
SNR=49
KBK Karagaybulak 53.69 335 P **P** 00 25 17.6 +0.8
SNR=16
AML Almayashu 53.82 333 P **P** 00 25 18.3 +0.3
SNR=18
AAK Ala-Archa 53.87 334 *e*P **P** 00 25 17.9 -0.2
AAK *e**PP **pP** 00 25 34.5 -0.3
AAK 00 26 24.7
AAK pmax pmax
comp=Z,17nm,0.9s
AAK Ala-Archa 53.87 334 *e*P **P** 00 25 17.9 -0.2
comp=Z,17nm,0.9s
AAK *e*pP **pP** 00 25 34.5 -0.3
AAK PcP **PcP** 00 26 24.7 +1.7
AAK Ala-Archa 53.87 334 P **P** 00 25 18.0 -0.2
comp=Z,3.6nm,0.6s,baz=137,slow=6.8,SNR=7.6
AAK PcP **PcP** 00 26 24.7 +1.7
comp=Z,5.3nm,0.4s,baz=174,slow=9.2,SNR=4.2
EKS2 Erkin-Say 54.20 334 *e*P **P** 00 25 21.0 +0.5
EKS2 pmax pmax
comp=Z,47nm,0.8s
EKS2 Erkin-Say 54.20 334 *e*P **P** 00 25 21.0 +0.5
comp=Z,47nm,0.8s
EKS2 Erkin-Say 54.20 334 P **P** 00 25 21.1 +0.6
SNR=27
USP Ospenovka 54.38 335 P **P** 00 25 21.4 -0.3
SNR=15
MK31 Makanchi Array 54.61 343 *e*P **P** 00 25 22.9 -0.3
MK31 pmax pmax
comp=Z,34nm,0.5s
MKAR Makanchi Array 54.61 343 *e*P **P** 00 25 23.0 -0.2
MKAR S **S** 00 32 57.2 -1.0
MKAR Makanchi Array 54.61 343 *e*P **P** 00 25 23.0 -0.2
MKAR S **S** 00 32 57.1 -1.0
MKAR Makanchi Array 54.61 343 P **P** 00 25 22.9 -0.3
comp=Z,47nm,0.5s,baz=149,slow=8.2,SNR=736
MKAR S **S** 00 32 57.1 -1.0
comp=Z,1.3nm,0.9s,baz=156,slow=14,SNR=5.4
MDJ Mudanjiang 54.84 23 P **P** 00 25 27.2 +2.3
MDJ pmax pmax
comp=Z,6.0nm,0.7s
MDJ pmax pmax
comp=Z,68nm,3.2s
ZAK Zakamensk 55.07 0⇑ *i*P **P** 00 25 26.4 -0.2
ZAK pmax pmax
comp=Z,5.0nm,1.2s
USRK Ussuriysk Arra 55.47 25 P **P** 00 25 28.8 -0.7
comp=Z,18nm,0.5s,baz=212,slow=5.8,SNR=41
KK31 Karatay Array 56.04 332 *e*P **P** 00 25 33.4 -0.2
KK31 pmax pmax
comp=Z,2.0nm,0.4s
KKAR Karatay Array 56.04 332 *e*P **P** 00 25 33.0 -0.6
KKAR Karatay Array 56.04 332 *e*P **P** 00 25 33.0 -0.6
IRK Irkutsk 56.95 1 *e*P **P** 00 25 39.8 -0.1
IRK pmax pmax
comp=Z,42nm,2.2s
KURBB Kurchatov Arra 59.15 342 P **P** 00 25 54.8 -0.4
comp=Z,20nm,0.6s,baz=162,slow=6.3,SNR=152
KURBB PcP **PcP** 00 26 44.1 +0.9
comp=Z,9.7nm,0.6s,baz=156,slow=3.3,SNR=11
KURBB S **S** 00 33 54.3 -3.6
comp=Z,1.5nm,0.8s,baz=160,slow=12,SNR=7.2
KURK Kurchatov 59.21 342 *e*P **P** 00 25 55.3 -0.3
KURK 00 26 44.1
KURK S **S** 00 33 54.3 -4.3
KURK Kurchatov 59.21 342 *e*P **P** 00 25 55.2 -0.3
KURK PcP **PcP** 00 26 44.1 +0.7
KURK S **S** 00 33 54.3 -4.3
KURK Kurchatov 59.21 342 P **P** 00 25 55.7 +0.1
comp=Z,256nm,0.6s,SNR=39
ABKT Ailbek 59.49 320 P **P** 00 25 58.3 +0.3
comp=Z,131nm,0.5s,SNR=9.2
KLR Kul'dur 59.50 22 *e*P P 00 25 53.2 -4.5
KLR pmax pmax
comp=Z,74nm,1.8s
HABR Khabarovsk 60.16 24 *e*P P 00 25 58.6 -3.6
HABR *e**PP pP 00 26 08.7 -10
HABR *e* 00 26 44.8
HABR *e* 00 28 11.0
HABR *e*S **S** 00 34 09.2 -1.7
HABR *e* 00 35 46.4
HABR pmax pmax
comp=E,171nm,2.7s
HABR pmax pmax
comp=N,109nm,2.7s
HABR pmax pmax
comp=Z,182nm,2.7s
HABR MLR MLR
comp=Z,212nm,17.0s
ASAJ Asahikawa 60.48 32 *e*P **P** 00 26 04.4 -0.1
comp=Z,11nm,0.7s
ZALV Zalesovo Beam 60.57 348 P **P** 00 26 04.3 -0.6
ZALV S **S** 00 34 13.1 -2.8
ZALV Zalesovo Beam 60.57 348 P **P** 00 26 04.2 -0.6
ZALV S **S** 00 34 13.1 -2.8
ZALV Zalesovo Beam 60.57 348 P **P** 00 26 04.2 -0.6
comp=Z,45nm,0.5s,baz=166,slow=5.7,SNR=234
ZALV S **S** 00 34 13.1 -2.8
comp=Z,1.2nm,0.6s,baz=159,slow=17,SNR=5.9
KRAR Krasnoyarsk 61.27 354 *e*P **P** 00 26 08.4 -1.2
KRAR pmax pmax
comp=Z,21nm,0.7s
NVS Novosibirsk 61.74 347⇑ *i*P **P** 00 26 10.6 -2.2
NVS *i* 00 26 23.0
NVS *e*S **S** 00 34 26.0 -4.8
NVS *e* 00 35 51.7
NVS pmax pmax
comp=Z,33nm,1.8s
NVS pmax pmax
comp=N,12nm,1.3s
NVS pmax pmax
comp=E,6.0nm,0.7s
NVS smax smax
comp=N,34nm,2.1s
NVS smax smax
comp=E,60nm,2.0s
YSS Yuzh-Sakhalins 62.51 30⇑ *i*P **P** 00 26 18.0 -0.1
YSS *e* 00 26 33.0
YSS pmax pmax
comp=Z,30nm,0.7s
YSS pmax pmax
comp=Z,90nm,1.2s
RAYN Ar Rayn 62.63 300 P **P** 00 26 20.5 +1.0
comp=Z,48nm,0.6s,SNR=10
KBD Kabd 62.84 306 *e*P **P** 00 26 21.7 +1.0
KBD AMb AMB 00 26 25.4
comp=Z,31nm,0.9s
RDF Al-Radifah 62.85 306 *e*P **P** 00 26 21.8 +1.0
RDF AMb AMB 00 26 23.1
comp=Z,59nm,1.1s
UMR Umm Al-Rimmam 62.97 307 *e*P **P** 00 26 22.2 +0.7
UMR AMb AMB 00 26 25.8
comp=Z,57nm,0.8s
NAY Al-Naaiem 63.23 306 *e*P **P** 00 26 24.1 +0.8
NAY AMb AMB 00 26 27.7
comp=Z,22nm,0.7s
MIB Mutribah 63.37 307 *e*P **P** 00 26 25.2 +1.0
MIB AMb AMB 00 26 26.6
comp=Z,45nm,1.0s
DZM Mont Dzumac 63.72 112 *e*P **P** 00 26 26.6 -0.2
comp=Z,7.6nm,0.6s
BVA0 Borovoye Array 63.90 339 *i* P **P** 00 26 26.1 -1.1
BVA0 pmax pmax
comp=Z,20nm,1.0s
BVAR Borovoye Array 63.90 339 P **P** 00 26 26.6 -0.6
BVAR 00 27 03.4
BVAR Borovoye Array 63.90 339 P **P** 00 26 26.6 -0.6
BVAR PcP **PcP** 00 27 03.4 +1.0
BVAR Borovoye Array 63.90 339 P **P** 00 26 26.5 -0.6
comp=Z,15nm,0.6s,baz=129,slow=6.9,SNR=127
BVAR PcP **PcP** 00 27 03.4 +1.0
comp=Z,5.1nm,0.5s,baz=139,slow=5.8,SNR=5.9
BRVK Borovoye 63.96 339 *e*P **P** 00 26 27.0 -0.6
BRVK Borovoye 63.96 339 *e*P **P** 00 26 27.0 -0.6
BRVK Borovoye 63.96 339 P **P** 00 26 27.9 +0.3
comp=Z,117nm,0.7s,SNR=11
CLNS Chul'man 64.12 13 *e*P **P** 00 26 27.3 -1.3
CLNS pmax pmax
comp=Z,12nm,0.6s
CLNS pmax pmax
comp=N,7.0nm,0.7s
AB31 Akbulak array 65.55 331 *i* P **P** 00 26 37.6 -0.4
AB31 pmax pmax
comp=Z,27nm,0.5s
ABKAR Akbulak array 65.55 331 *e*P **P** 00 26 37.9 -0.2
KMBO Kilima Mbogo 65.59 271 *e*P **P** 00 26 37.9 -1.4
comp=Z,11nm,1.1s
KMBO *e*pP **pP** 00 26 58.3 +1.8
KMBO Kilima Mbogo 65.59 271 P **P** 00 26 40.6 +1.2
comp=Z,3.5nm,0.5s,baz=63,slow=8.9,SNR=12
KMBO LR LR 00 48 53.8
comp=Z,276nm,20.8s,baz=91,slow=30
BHD Baghdad 67.04 309 *e*P **P** 00 26 46.5 -1.4
BHD *e*S **S** 00 35 36.8 -0.3
AKTO Aktyubinsk 67.27 331 P **P** 00 26 48.5 -0.5
AKTO Aktyubinsk 67.27 331 P **P** 00 26 48.5 -0.5
AKTO Aktyubinsk 67.27 331 P **P** 00 26 48.5 -0.5
comp=Z,4.8nm,0.3s,baz=134,slow=8.7,SNR=20
MAW Mawson 68.21 195 P **P** 00 26 55.4 +0.7
MAW Mawson 68.21 195 P **P** 00 26 55.4 +0.7
comp=Z,7.4nm,0.9s,baz=25,slow=8.2,SNR=10
MAW LR LR 00 50 39.9
comp=Z,566nm,21.3s,baz=18,slow=30
MAW Mawson 68.21 195 P **P** 00 26 56.4 +1.7
baz=68,SNR=5.3
GNI Garni 69.58 316 *e*P **P** 00 27 02.8 -1.1
comp=Z,13nm,0.8s
DGRG David-gareji 69.72 317 P **P** 00 27 06.4 +1.8
YAK Yakutsk 69.87 13 *e*P **P** 00 27 03.6 -1.3
YAK pmax pmax
comp=Z,35nm,0.8s
YAK pmax pmax
comp=N,20nm,1.4s
YAK pmax pmax
comp=E,15nm,1.4s
TBLG Delisi 70.27 318 *e*P **P** 00 27 09.8 +1.9
TBLG Delisi 70.27 318 P **P** 00 27 09.8 +1.9
SVE Sverdlovsk 70.45 337⇑ *i*P **P** 00 27 09.3 +0.7
SVE pmax pmax
comp=Z,68nm,1.2s
GUDG Gudauri 70.77 318 P **P** 00 27 12.9 +1.7
GOR Gori 70.81 318 P **P** 00 27 12.7 +1.5
AKH Akhalkalaki 70.98 317 P **P** 00 27 13.1 +0.6
ARU Arti 71.00 336*c i*P **P** 00 27 11.8 -0.2
ARU 00 27 34.1
ARU PPP PPP 00 31 27.4
ARU S **S** 00 36 20.9 -2.1
ARU pmax pmax
comp=Z,18nm,1.2s
ARU Arti 71.00 336 P **P** 00 27 11.1 -0.9
comp=Z,92nm,0.5s,SNR=9.8
ONI Oni 71.51 318 P **P** 00 27 15.4 -0.1
KBZ Khabaz 72.36 319 P **P** 00 27 21.5 +1.1
KBZ Khabaz 72.36 319 P **P** 00 27 21.5 +1.1
KBZ Khabaz 72.36 319 P **P** 00 27 21.5 +1.1
comp=Z,7.8nm,0.7s,baz=119,slow=7.8,SNR=32
ASF Jabal al Asfar 72.59 306 P **P** 00 27 23.2 +1.1
ASF Jabal al Asfar 72.59 306 P **P** 00 27 23.2 +1.1
comp=Z,7.1nm,0.9s,baz=350,slow=4.1,SNR=15
KIV Kislovodsk 72.59 319 *e*P **P** 00 27 22.2 +0.2
KIV *e* 00 27 42.3
KIV *e* 00 30 07.3
KIV *e*S **S** 00 36 42.1 +0.1
KIV pmax pmax
comp=Z,6.0nm,0.6s
KIV MLR MLR
comp=Z,200nm,20.0s
EIL Elat 73.48 303 P **P** 00 27 29.1 +1.7
baz=74,SNR=8.9
SOKR Solikamsk 73.82 338 *e*P **P** 00 27 25.5 -3.1
SOKR pmax pmax
comp=Z,10.0nm,0.8s
PETK Petropavlovsk- 73.86 31 P **P** 00 27 27.8 -1.3
PETK Petropavlovsk- 73.86 31 P **P** 00 27 27.8 -1.3
PETK Petropavlovsk- 73.86 31 P **P** 00 27 27.8 -1.3
comp=Z,5.2nm,0.6s,baz=206,slow=7.0,SNR=27
LSZ Lusaka 73.94 256 *e*P **P** 00 27 29.6 -0.9
comp=Z,39nm,1.4s
MMAI Mount Meron Ar 74.04 306 P **P** 00 27 32.7 +2.0
MMAI Mount Meron Ar 74.04 306 P **P** 00 27 32.7 +2.0
comp=Z,2.9nm,0.6s,baz=91,slow=8.6,SNR=8.3
SOC Sochi 74.41 318 *e*P **P** 00 27 33.5 +1.0
SOC *e* 00 27 46.3
SOC pmax pmax
comp=Z,14nm,0.5s
SOC pmax pmax
comp=Z,14nm,0.6s
SYO Syowa Base 76.06 199⇑ *e*P **P** 00 27 40.0 -1.5
CSS Prodhromos 76.24 308 *e*P **P** 00 27 43.4 +0.1
comp=Z,33nm,1.0s
VRHR Novokhopersk 76.33 325 *e*P **P** 00 27 43.2 -0.1
VRHR *e**SP sP 00 27 59.6 -8.3
VRHR *e*S **S** 00 37 19.5 -3.7
VRHR *e**SS **SKSac** 00 37 41.9 -7.1
VRHR pmax pmax
comp=N,3.0nm,0.5s
VRHR pmax pmax
comp=E,10.0nm,0.5s
VRHR pmax pmax
comp=Z,20nm,0.5s
VRHR smax smax
comp=Z,50nm,1.6s
VRHR smax smax
comp=N,420nm,1.7s
VRHR smax smax
comp=E,390nm,1.7s
VRHR MLR MLR
comp=N,180nm,23.0s
VRHR MLR MLR
comp=E,400nm,23.0s
VRHR MLR MLR
comp=Z,500nm,23.0s
ANN Anapa 76.39 318 *e*P P 00 27 37.3 -6.5
ANN *e* 00 27 50.5
ANN pmax pmax
comp=Z,28nm,1.2s
LBTB Lobatse 76.39 246 *e*P **P** 00 27 46.0 +1.5
comp=Z,201nm,2.3s
BOSA Boshof 76.78 242 *e*P **P** 00 27 47.7 +1.1
comp=Z,18nm,0.8s
BOSA Boshof 76.78 242 P **P** 00 27 47.6 +1.1
comp=Z,18nm,0.9s,baz=96,slow=6.3,SNR=25
BOSA LR LR 00 55 01.3
comp=Z,460nm,19.1s,baz=145,slow=30
BR131 Keskin Array S 77.38 312 *e*P **P** 00 27 52.5 +2.8
comp=Z,7.6nm,0.7s
BR131 *e*pP **pP** 00 28 07.4 +0.1
BRTR Keskin Array B 77.38 312 P **P** 00 27 50.2 +0.5
BRTR Keskin Array B 77.38 312 P **P** 00 27 50.2 +0.5
comp=Z,4.8nm,0.6s,baz=129,slow=6.3,SNR=54
VSR Storozhevoye 77.78 325 *e*P **P** 00 27 51.5 0.0
VSR *e**SP sP 00 28 07.8 -8.3
VSR *e*S **S** 00 37 34.9 -4.1
VSR *e**SS **SKSac** 00 37 56.0 -3.6
VSR pmax pmax
comp=N,6.0nm,0.8s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR pmax pmax
comp=Z,30nm,0.8s
VSR smax smax
comp=Z,5.0nm,1.2s
VSR smax smax
comp=N,180nm,2.3s
VSR smax smax
comp=E,160nm,2.3s
VSR MLR MLR
comp=N,130nm,23.0s
VSR MLR MLR
comp=E,280nm,23.0s
VSR MLR MLR
comp=Z,460nm,23.0s
ANTO Ankara 78.04 312 *e*P **P** 00 27 53.8 +0.5
ANTO *e**PP **pP** 00 28 09.0 -1.9
ANTO pmax pmax
comp=Z,12nm,1.1s
ANTO Ankara 78.04 312 *e*P **P** 00 27 53.8 +0.5
comp=Z,12nm,1.1s
ANTO *e*pP **pP** 00 28 09.0 -1.9
TIXI Tiksi 78.29 8 *e*P **P** 00 27 51.5 -2.4
TIXI pmax pmax
comp=Z,5.0nm,0.6s
SIM Simferopol' 78.66 318 *e*P **P** 00 27 58.0 +1.5
SIM pmax pmax
comp=Z,16nm,0.7s
VNDA Vanda 78.78 169 P **P** 00 27 57.1 +0.5
VNDA Vanda 78.78 169 P **P** 00 27 57.1 +0.5
comp=Z,2.9nm,0.7s,baz=314,slow=6.8,SNR=12
MOS Moscow 80.45 329 *e*P P 00 28 02.0 -3.9
MOS *e* 00 28 12.6
MOS *e* 00 31 06.9
MOS *e*S S 00 38 00.0 -7.1
MOS *e* 00 38 22.6
MOS pmax pmax
comp=Z,16nm,0.9s
MOS smax smax
comp=N,400nm,3.0s
SUR Sutherland 80.67 238 *e*P **P** 00 28 10.3 +2.3
comp=N,85nm,1.5s
SUR *e*pP **pP** 00 28 26.2 +0.6
SUR Sutherland 80.67 238 P **P** 00 28 10.3 +2.3
comp=N,175nm,0.6s,SNR=12
OBN Obninsk 80.76 328*c i*P **P** 00 28 08.0 +0.4
OBN *e* 00 28 22.8
OBN *e* 00 38 08.7
OBN pmax pmax
comp=Z,21nm,0.6s
OBN MLR MLR
comp=Z,200nm,20.0s
KLMR Klimovskoe 81.68 334*c i*P **P** 00 28 12.8 +0.4
KLMR pmax pmax
comp=Z,42nm,1.4s
CFR Carcaliu 82.78 317⇑ *i*P **P** 00 28 19.9 +1.4
KIS Kishinev 82.79 318 *e*P **pP** 00 28 35.0 -1.2
KIS MLR MLR
comp=Z,300nm,21.0s
KIS MLR MLR
comp=Z,300nm,20.0s
KIS Kishinev 82.79 318 *e*P **pP** 00 28 35.0 -1.2
KIS LRM MLR 01 09 10.0
comp=Z,300nm,21.0s
AKASG Malin Array Be 83.51 322 P **P** 00 28 22.2 +0.1
AKASG Malin Array Be 83.51 322 P **P** 00 28 22.2 +0.1
AKASG Malin Array Be 83.51 322 P **P** 00 28 22.2 +0.1
comp=Z,3.5nm,0.6s,baz=90,slow=4.8,SNR=10
KIEV Kiev 83.52 322 *e*P **P** 00 28 22.6 +0.4
KIEV pmax pmax
comp=Z,10.0nm,1.2s
KIEV Kiev 83.52 322 *e*P **P** 00 28 22.6 +0.4
comp=Z,9.7nm,1.2s
VRI Vrincioaia 83.91 317⇑ *i*P **P** 00 28 26.5 +2.2
TSUM Tsumeb 83.94 251 *e*P **P** 00 28 26.9 +1.6
comp=Z,25nm,1.3s
PLOR Plostina 83.96 317⇑ *i*P **P** 00 28 26.1 +1.5
TESR Tescani 84.11 318⇑ *i*P **P** 00 28 27.3 +2.0
MLR Muntele Rosu 84.36 316⇓ *i*P **P** 00 28 28.1 +1.3

BILL	Bilibino	84.90	20	eP	P	00 28 27.9	-0.9
BILL				e		00 28 33.1	
BILL				e		00 28 43.5	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
VOIR		84.96	316⇑	iP	P	00 28 27.1	-2.6
ARR	Arges	85.23	316⇑	iP	P	00 28 31.9	+0.8
BURAR	Bucovina Array	85.31	318⇑	iP	P	00 28 33.4	+1.9
BUR08	Bucovina Ar. S	85.33	318	eP	P	00 28 33.1	+1.5
BUR08				epP	pP	00 28 48.1	-1.3
VTS	Vitosha	85.70	313⇑	iP	P	00 28 34.9	+1.3
VAY	Valandovo	85.94	312	eP	P	00 28 35.9	+1.3
JOF	Joensuu	86.06	334	eP	P	00 28 35.4	+0.7
JOF				pmax	pmax		
	comp=Z,10.0nm,0.6s						
JOF	Joensuu	86.06	334	ep	P	00 28 35.4	+0.7
	comp=Z,9.8nm,0.6s						
LVZ	Lovozero	86.49	339	eP	P	00 28 36.3	-0.5
LVZ				pmax	pmax		
	comp=Z,11nm,1.3s						
GZR	Gura Zlata	86.52	316⇑	iP	P	00 28 33.5	-4.0
APA	Apatity	86.81	339⇑	iP	P	00 28 38.0	-0.3
APA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
APA				MLR	MLR		
	comp=Z,300nm,22.0s						
BIA	Bitola	86.82	311	eP	P	00 28 38.2	-0.8
KWP	Kalwaria Pacla	87.35	320	eP	P	00 28 41.7	+0.4
KWP				e		00 32 06.5	
KWP				pmax	pmax		
	comp=Z,23nm,1.1s						
KWP	Kalwaria Pacla	87.35	320	eP	P	00 28 41.7	+0.4
	comp=Z,23nm,1.1s						
KWP				ePP	PP	00 32 06.5	+0.1
KWP	Kalwaria Pacla	87.35	320⇓	iP	P	00 28 43.2	+1.9
KWP	Kalwaria Pacla	87.35	320	eP	P	00 28 42.8	+1.5
KOLS	Kolonicke sedl	87.50	319	eP	P	00 28 44.3	+2.2
KOLS				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KOLS	Kolonicke sedl	87.50	319	eP	P	00 28 44.3	+2.2
SUW	Suwalki	87.89	324	eP	P	00 28 44.7	+1.0
SUW				pmax	pmax		
	comp=Z,42nm,1.0s						
SUW	Suwalki	87.89	324	eP	P	00 28 44.7	+1.0
	comp=Z,42nm,1.0s						
SUW	Suwalki	87.89	324	eP	P	00 28 44.0	+0.2
FIA1	FINESS Array S	88.00	332	eP	P	00 28 44.5	+0.4
FINES	FINESS Array B	88.00	332	P	P	00 28 44.5	+0.4
FINES	FINESS Array B	88.00	332	P	P	00 28 44.5	+0.4
	comp=Z,5.8nm,0.5s,baz=96,slow=7.1,SNR=35						
CRVS	Cervenica-Dubn	88.02	319	eP	P	00 28 47.5	+2.9
CRVS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CRVS	Cervenica-Dubn	88.02	319	eP	P	00 28 47.4	+2.9
KAF	Kangasniemi	88.06	333	eP	P	00 28 45.2	+0.8
KAF				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KAF	Kangasniemi	88.06	333	ep	P	00 28 45.2	+0.8
	comp=Z,10nm,0.6s						
STHS	Stebnicka Huta	88.25	320	eP	P	00 28 47.2	+1.6
STHS				pmax	pmax		
	comp=Z,5.0nm,0.6s						
STHS	Stebnicka Huta	88.25	320	eP	P	00 28 47.2	+1.6
KECS	Kecovo	88.59	319	eP	P	00 28 47.5	+0.3
KECS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KECS	Kecovo	88.59	319	eP	P	00 28 47.5	+0.3
PSZ	Piszkesteto	88.90	318	eP	P	00 28 49.2	+0.4
PSZ	Piszkesteto	88.90	318	eP	P	00 28 49.2	+0.4
PSZ				epP	pP	00 29 13.3	+6.6
PSZ	Piszkesteto	88.90	318⇓	iP	P	00 28 47.9	-0.9
PKSM	Moragy	89.51	316⇑	iP	P	00 28 53.2	+1.6
VYHS	Vyhne	89.68	319	eP	P	00 28 54.9	+2.5
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.3s						
VYHS	Vyhne	89.68	319	eP	P	00 28 54.9	+2.5
KEV	Kevo	89.71	340	eP	P	00 28 52.1	+0.1
KEV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KEV	Kevo	89.71	340	ep	P	00 28 52.1	+0.1
	comp=Z,8.3nm,0.7s						
TIP	Timpagrande	90.04	309	eP	P	00 28 55.2	+0.8
	comp=Z,28nm,1.3s						
TIP				epP	pP	00 29 12.6	+0.3
ARCES	ARCESS Array B	90.16	340	P	P	00 28 54.4	+0.2
ARCES	ARCESS Array B	90.16	340	P	P	00 28 54.4	+0.2
	comp=Z,6.8nm,0.5s,baz=99,slow=6.1,SNR=102						
SNAA	Sanae	90.26	198	eP	P	00 28 56.8	+2.1
SNAA	Sanae	90.26	198	eP	P	00 28 55.7	+1.0
	comp=Z,19nm,1.4s						
OKC	Ostrava-Krasne	90.30	320	eP	P	00 28 56.8	+1.6
OKC				e		00 29 11.0	
OKC	Ostrava-Krasne	90.30	320	eP	P	00 28 56.8	+1.6
OKC				ex	x	00 29 11.0	
CEL	Celeste	90.62	308	eP	P	00 28 59.9	+2.9
	comp=Z,37nm,1.1s						
MORC	Moravsky Berou	90.68	320	eP	P	00 28 58.6	+1.5
MORC				pmax	pmax		
	comp=Z,12nm,1.1s						
MORC	Moravsky Berou	90.68	320	eP	P	00 28 58.6	+1.5
	comp=Z,12nm,1.1s						
MORC	Moravsky Berou	90.68	320⇑	iP	P	00 28 59.7	+2.6
ZST	Bratislava	90.79	318	eP	P	00 28 59.3	+1.8
ZST				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZST	Bratislava	90.79	318	eP	P	00 28 59.3	+1.8
DPC	Dobruska-Polom	91.53	320	eP	P	00 29 03.0	+2.0
DPC				e		00 29 17.5	
DPC	Dobruska-Polom	91.53	320	eP	P	00 29 03.0	+2.0
DPC				ex	x	00 29 17.5	
VNA1	Neumayer--Stat	92.26	198	eP	P	00 29 06.0	+2.1
PRU	Pruhonice	92.64	320	eP	P	00 29 08.0	+2.0
PRU				e		00 29 25.6	
PRU	Pruhonice	92.64	320	eP	P	00 29 08.0	+2.0
PRU				ex	x	00 29 25.6	
AQU	L'Aquila	92.87	312⇓	iP	pP	00 29 28.2	+2.9
BRG	Berggiesshubel	93.08	321	e(P)	pP	00 29 30.5	+4.5
	comp=Z,5.8nm,1.2s						
GERES	GERESS Array B	93.10	319	P	P	00 29 09.2	+0.8
GERES	GERESS Array B	93.10	319	P	P	00 29 09.2	+0.8
	comp=Z,1.0nm,0.6s,baz=104,slow=4.1,SNR=14						
KHC	Kasperske Hory	93.20	319	eP	P	00 29 10.0	+1.3
KHC	Kasperske Hory	93.20	319	eP	P	00 29 10.0	+1.3
NB2	NORSAR Subarra	95.06	331	P	P	00 29 17.1	+0.2
	comp=Z,0.8nm,0.6s,baz=94,slow=5.3						
NOA	NORSAR Array B	95.06	331	P	P	00 29 17.2	+0.2
NOA	NORSAR Array B	95.06	331	P	P	00 29 17.2	+0.2
	comp=Z,1.0nm,0.6s,baz=93,slow=4.6,SNR=7.2						
NOA				LR	LR	01 21 29.8	
	comp=Z,116nm,20.1s,baz=60,slow=41						
LPL	La Plagne	97.77	315	ePP	PP	00 33 27.5	-1.2
	comp=Z,5.0nm,0.8s						
TORD	Torodi Ar. Bea	101.95	282	PKKPbc	PKKPbc	00 45 52.7	-0.6
TORD	Torodi Ar. Bea	101.95	282	PKKPbc	PKKPbc	00 45 52.7	-0.6
	comp=Z,0.3nm,0.5s,baz=308,slow=4.1,SNR=7.0						
ILAR	Eielson Array	102.99	24	P	Pdif	00 29 51.6	-0.8
ILAR	Eielson Array	102.99	24	P	Pdif	00 29 51.6	-0.8
	comp=Z,0.3nm,0.7s,baz=287,slow=3.7,SNR=4.2						
YKA	Yellowknife Ar	116.27	18	PKKP	PS	00 45 26.8	+0.8
YKA	Yellowknife Ar	116.27	18	PKKP	PS	00 45 26.8	+0.8
	comp=Z,0.4nm,0.4s,baz=127,slow=3.9,SNR=4.8						
HUMO	Hull Mountain	124.76	40	ePKPdf	PKPdf	00 34 53.7	-0.4
HUMO				epPKPdf	pPKPdf	00 35 11.2	-1.5
KHMM	Horse Mountain	125.08	42	ePKPdf	PKPdf	00 34 55.1	+0.1
KHMM				epPKPdf	pPKPdf	00 35 13.7	+0.1
HLID	Hailey	129.41	35	ePKPdf	PKPdf	00 35 03.0	-0.1
HLID				epPKPdf	pPKPdf	00 35 21.1	-0.7
SCHQ	Schefferville	129.53	352	PKP	PKPdf	00 35 03.5	+0.6
SCHQ				SKPbc	SKPab	00 38 18.3	-0.4
SCHQ	Schefferville	129.53	352	PKP	PKPdf	00 35 03.5	+0.6
	comp=Z,1.9nm,0.5s,baz=56,slow=3.6,SNR=9.6						
SCHQ				SKPbc	SKPab	00 38 18.3	-0.4
	comp=Z,1.8nm,0.7s,baz=340,slow=2.9,SNR=3.6						
BOZ	Bozeman (W)	129.55	31	ePKIKP	PKPdf	00 35 03.4	+0.1
BOZ	Bozeman (W)	129.55	31	ePKPdf	PKPdf	00 35 03.4	+0.1
BOZ				epPKPdf	pPKPdf	00 35 20.9	-1.0
NVAR	Mina Array Bea	129.93	42	PKP	PKPdf	00 35 05.7	+1.4
NVAR				SKPbc	SKPbc	00 38 22.3	+0.7
NVAR	Mina Array Bea	129.93	42	PKP	PKPdf	00 35 05.7	+1.4
	comp=Z,1.2nm,0.5s,baz=319,slow=2.6,SNR=16						
NVAR				SKPbc	SKPbc	00 38 22.3	+0.7
	comp=Z,2.3nm,0.7s,baz=266,slow=4.7,SNR=16						
RRI2	Red Ridge	131.27	33	ePKPdf	PKPdf	00 35 08.4	+1.5
TPAW	Teton Pass	131.37	33	ePKPdf	PKPdf	00 35 06.7	-0.3
TPAW				epPKPdf	pPKPdf	00 35 23.8	-1.8
ULM	Lac du Bonnet	132.15	16	PKP	PKPdf	00 35 08.4	+0.5
ULM				SKPbc	SKPbc	00 38 27.1	-1.9
ULM	Lac du Bonnet	132.15	16	PKP	PKPdf	00 35 08.4	+0.5
	comp=Z,2.3nm,0.6s,baz=357,slow=3.9,SNR=3.5						
ULM				SKPbc	SKPbc	00 38 27.1	-1.9
	comp=Z,7.8nm,0.5s,baz=337,slow=4.9,SNR=11						
PDAR	Pinedale Array	132.61	32	PKP	PKPdf	00 35 10.0	+0.7
PDAR				SKPbc	SKPbc	00 38 31.2	+0.1
PDAR	Pinedale Array	132.61	32	PKP	PKPdf	00 35 10.0	+0.7
	comp=Z,1.1nm,0.5s,baz=121,slow=3.0,SNR=7.6						
PDAR				SKPbc	SKPbc	00 38 31.2	+0.1
	comp=Z,3.5nm,0.6s,baz=316,slow=2.5,SNR=18						
PFO	Pinyon Flat Ob	133.65	47	SKPbc	SKPab	00 38 36.3	-0.9
PFO	Pinyon Flat Ob	133.65	47	SKPbc	SKPab	00 38 36.3	-0.9
	comp=Z,10nm,1.0s,baz=335,slow=1.7,SNR=6.4						
PLCA	Paso Flores	134.18	187	PKP	PKPdf	00 35 14.1	+1.9
PLCA	Paso Flores	134.18	187	PKP	PKPdf	00 35 14.1	+1.9
	comp=Z,0.6nm,0.5s,baz=145,slow=1.0,SNR=4.6						
RSSD	Black Hills	134.35	27	ePKIKP	PKPdf	00 35 11.9	-0.6
RSSD	Black Hills	134.35	27	ePKPdf	PKPdf	00 35 11.9	-0.6
ECSD	EROS Data Cent	137.69	21	ePKPdf	PKPpre	00 35 08.5	
ECSD				eSKPbc	SKPbc	00 38 45.9	-1.0
MNTX	Cornudas Mount	142.44	41	ePKPdf	PKPdf	00 35 23.6	-3.8
CPUP	Villa Florida	143.48	211	PKP	PKPbc	00 35 27.8	+1.0
CPUP	Villa Florida	143.48	211	PKP	PKPbc	00 35 27.8	+1.0
	comp=Z,1.2nm,0.4s,baz=128,slow=1.9,SNR=9.8						
WMOK	Wichita Mounta	144.20	31	ePKIKP	PKPab	00 35 27.5	-0.8
WMOK	Wichita Mounta	144.20	31	ePKPdf	PKPab	00 35 27.5	-0.8
BDFB	Brasilia	144.66	234	PKP	PKPdf	00 35 32.2	+0.3
BDFB	Brasilia	144.66	234	PKP	PKPdf	00 35 32.2	+0.3
	comp=Z,18nm,0.5s,baz=118,slow=2.9,SNR=52						
TXAR	Lajitas Array	145.08	43	PKP	PKPdf	00 35 32.4	+0.1
TXAR				SKPbc	SKPbc	00 39 06.0	-0.5
TXAR	Lajitas Array	145.08	43	PKP	PKPdf	00 35 32.4	+0.1
	comp=Z,9.6nm,0.5s,baz=267,slow=1.6,SNR=173						
TXAR				SKPbc	SKPbc	00 39 06.0	-0.5
	comp=Z,1.2nm,0.5s,baz=207,slow=3.7,SNR=4.4						
SIUC	Southern Illin	145.54	17	ePKPdf	PKPdf	00 35 32.0	-0.6
LCO	Las Campanas	145.71	190	ePKPdf	PKPdf	00 35 32.5	-1.1
WCI	Wyandotte Cave	145.81	13	ePKP2	PKPdf	00 35 32.7	-0.5
WCI	Wyandotte Cave	145.81	13	ePKPdf	PKPdf	00 35 32.7	-0.5
UALR	University of	147.12	23	ePKPdf	PKPdf	00 35 34.3	-1.1
OXF	Oxford	148.43	20	ePKIKP	PKPdf	00 35 37.4	-0.2
OXF	Oxford	148.43	20	ePKPdf	PKPdf	00 35 37.4	-0.2
TKL	Tuckaleechee C	148.80	10	ePKPdf	PKPdf	00 35 38.1	-0.1
BBSR	BB Station	150.30	338	ePKPdf	PKPdf	00 35 41.3	+0.6
LVC	Limon Verde	151.48	196	ePKPdf	PKPdf	00 35 43.3	+0.2
LVC				ePKPbc	PKiKP	00 35 49.6	-0.1
LPAZ	La Paz	157.12	203	PKPab	PKPab	00 36 23.9	+1.8
LPAZ	La Paz	157.12	203	PKPab	PKPab	00 36 23.9	+1.8
	comp=Z,1.6nm,0.5s,baz=100,slow=2.3,SNR=7.8						

*IDC **11** 00:18:09.7±1.3, 4.°87S×102.°82E, h0km, mb4.4/12, mb1 4.5/12, mb1mx4.2/25, mbtmp4.4/12, MS4.5/2, Ms1 4.5/2, ms1mx3.6/31, Error ellipse: s-maj=46.6km s-min=18.5km az=53.0*

*ISCJB **11** 00:18:15.0±0.8, 4.°9S±0.°1×102.°8E±0.°2, h59km, mb4.5/15, MS4.6/2, Error ellipse: s-maj=26.2km s-min=11.3km az=142.3*

*NEIC **11** 00:18:14.2±1.0, 4.°94S×102.°84E, h35km, mb4.7/3, Error ellipse: s-maj=33.0km s-min=13.4km az=48.0*

ISC 11 00:18:17.4±0.9, 4.°9S±0.°2×102.°9E±0.°2, h59km, n31, σ0.s80/29, mb4.4/15, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	23.49	351	P	P	00 23 21.9	-0.2
CMAR	Chiang Mai Arr	23.49	351	P	P	00 23 21.9	-0.2
	6.4nm,0.6s,baz=180,slow=9.0,SNR=4.8						
CHTO	Chiang Mai	23.84	351	eP	P	00 23 24.2	-1.1
	4.6nm,0.5s						
NWAO	Narrogin (SRO)	30.97	156	eP	P	00 24 23.8	-5.3
WRA	Warramunga Arr	34.08	119	P	P	00 24 56.3	-0.2
WRA	Warramunga Arr	34.08	119	P	P	00 24 56.3	-0.2
	2.4nm,0.7s,baz=294,slow=9.6,SNR=2.3						
WRAB	Tennant Creek	34.08	119	eP	P	00 24 54.6	-2.0
	6.7nm,0.6s						
ASAR	Alice Springs	35.25	125	P	P	00 25 07.2	+0.6
ASAR	Alice Springs	35.25	125	P	P	00 25 07.2	+0.6
	1.5nm,0.4s,baz=306,slow=8.3,SNR=2.2						
STKA	Stephens Creek	45.10	131	P	P	00 26 28.1	0.0
	7.9nm,0.5s,baz=302,slow=9.5,SNR=3.8						
KSAR	Wonju Array Be	48.09	27	P	P	00 26 52.9	+1.7
KSRS	Korea Array	48.12	27	P	P	00 26 52.9	+1.5
	1.2nm,0.5s,baz=226,slow=7.3,SNR=3.6						
MJAR	Matsushiro Arr	52.77	36	P	P	00 27 26.0	-0.7
MJAR	Matsushiro Arr	52.77	36	P	P	00 27 26.0	-0.7
	1.0nm,0.4s,baz=209,slow=7.7,SNR=3.3						
MKAR	Makanchi Array	54.57	343	P	P	00 27 40.1	+0.5
MKAR	Makanchi Array	54.57	343	P	P	00 27 40.1	+0.5
	6.9nm,0.5s,baz=152,slow=8.9,SNR=5.6						
USRK	Ussuriysk Arra	55.40	25	P	P	00 27 45.8	+0.2
	2.1nm,0.5s,baz=222,slow=6.0,SNR=3.2						
KURBB	Kurchatov Arra	59.11	342	P	P	00 28 11.6	0.0
	3.3nm,0.7s,baz=162,slow=6.2,SNR=3.2						
KURK	Kurchatov	59.17	342	eP	P	00 28 10.5	-1.5
	5.7nm,0.7s						
ASAJ	Asahikawa	60.40	32	P	P	00 28 21.2	+0.5
ZALV	Zalesovo Beam	60.52	348	P	P	00 28 21.1	-0.2
ZALV	Zalesovo Beam	60.52	348	P	P	00 28 21.1	-0.2
	5.3nm,0.4s,baz=167,slow=5.7,SNR=6.5						
BVAR	Borovoye Array	63.86	339	P	P	00 28 43.4	-0.3
BVAR	Borovoye Array	63.86	339	P	P	00 28 43.3	-0.3
	3.0nm,0.6s,baz=132,slow=7.9,SNR=6.2						
BHD	Baghdad	67.04	309	eP	P	00 29 04.0	-0.6
BHD				eS	S	00 37 54.5	+0.3
BRTR	Keskin Array B	77.37	312	P	P	00 30 07.0	+0.6
BRTR	Keskin Array B	77.37	312	P	P	00 30 07.0	+0.6
	1.3nm,0.8s,baz=116,slow=6.6,SNR=2.3						
FINES	FINESS Array B	87.97	332	LR	LR	01 16 00.3	
	comp=Z,302nm,18.9s,baz=66,slow=40						
GERES	GERESS Array B	93.09	319	LR	LR	01 18 30.8	
	comp=Z,193nm,21.7s,baz=78,slow=39						
TXAR	Lajitas Array	145.01	43	PKPbc	PKPdf	00 37 49.1	+0.3
TXAR	Lajitas Array	145.01	43	PKPbc	PKPdf	00 37 49.2	+0.3
	1.4nm,0.7s,baz=272,slow=0.5,SNR=4.4						

MAN 11 00:30:17, 10.°03N×126.°07E, h48km, mb4.5, ML3.4, MS3.3, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	Butuan	1.14	203	eP	Pn	00 30 36.1	-0.5
BUTP				eS	Sn	00 30 52.8	+1.7
PLP	Palo	1.55	317⇓	eP	Pn	00 30 42.8	+0.5
PLP				eS	Sn	00 31 02.5	+1.2
BESP	Borongan	1.68	339	eP	Pn	00 30 45.3	+1.3
BUKP	Musuan	2.35	205	eP	Pn	00 30 54.4	+1.1
BUKP				eS	Sn	00 31 25.2	+4.2
CNP	Catarman	2.82	331	eP	Pn	00 31 00.8	+1.2

*DDA **11** 00:36:16.6, 37.°00N×35.°84E, h8km, MD3.0*

*ISCJB **11** 00:36:17.5±0.4, 37.°01N±0.°02×35.°88E±0.°04, h11km±4km, Error ellipse: s-maj=4.7km s-min=4.2km az=174.7*

*ISK **11** 00:36:17.0, 37.°01N×35.°88E, h14km, MD2.9*

*CSEM **11** 00:36:17.2±0.1, 37.°01N×35.°88E, h15km, MD2.9, Error ellipse: s-maj=3.1km s-min=2.8km az=82.0*

ISC 11 00:36:17.5±0.8, 37.°01N±0.°02×35.°87E±0.°02, h16km±6km, n28, σ0.s54/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEYT	Ceyhan	0.10	272	ePG	Pg	00 36 20.7	-0.1
CEYT				eSG	Sg	00 36 23.1	+0.1
CEYT	Ceyhan	0.10	272	ePg	Pg	00 36 20.7	-0.1
CEYT				eSg	Sg	00 36 23.1	+0.1
KOZT	Kozan	0.47	356	ePG	Pg	00 36 27.1	+0.1
KOZT				eSG	Sg	00 36 33.7	+0.3
KOZT	Kozan	0.47	356	ePg	Pg	00 36 27.1	+0.1
KOZT				eSg	Sg	00 36 33.7	+0.3
COBT	Iskenderun	0.58	147	eP	Pg	00 36 28.0	-1.0
COBT				eS	Sb	00 36 37.6	+0.3
COBT	Iskenderun	0.58	147	eP	Pg	00 36 28.0	-1.0
COBT				eS	Sb	00 36 37.6	+0.3
KRTS	Karatas	0.58	223	ePG	Pg	00 36 29.0	0.0
KRTS				eSG	Sb	00 36 37.8	+0.4
KRTS	Karatas	0.58	223	ePg	Pg	00 36 29.0	0.0
KRTS				eSg	Sb	00 36 37.8	+0.4
ANDN	Andirin	0.69	34	eP	Pg	00 36 29.7	-1.3
ANDN				eS	Sb	00 36 40.9	+0.4
ANDN	Andirin	0.69	34	eP	Pg	00 36 29.7	-1.3
ANDN				eS	Sb	00 36 40.9	+0.4
AYKD	Aykdinkavak	0.85	61	eP	Pg	00 36 34.4	+0.3
AYKD				eS	Sg	00 36 46.1	+0.8
HTY	Hatay	0.91	166	ePG	Pb	00 36 35.1	+0.2
HTY	Hatay	0.91	166	ePg	Pb	00 36 35.1	+0.2
GULE	Gulek	0.91	288	eP	Pb	00 36 34.4	-0.7
GULE				eS	Sg	00 36 47.4	+0.1
GULE	Gulek	0.91	288	eP	Pb	00 36 34.4	-0.7
GULE				eS	Sg	00 36 47.4	+0.1
KMRS	Kahramanmaras	0.96	59	ePG	Pb	00 36 35.8	0.0
KMRS	Kahramanmaras	0.96	59	ePg	Pb	00 36 35.8	0.0
YAYL	Yayladag	0.99	169	eP	Pb	00 36 35.5	-0.8
YAYL				eS	Sg	00 36 50.5	+0.9
YAYL	Yayladag	0.99	169	eP	Pb	00 36 35.5	-0.8
YAYL				eS	Sg	00 36 50.5	+0.9
KUZU	Kuzuini	1.00	103	eP	Pb	00 36 36.3	-0.1
KUZU				eS	Sb	00 36 49.0	-0.3
KUZU	Kuzuini	1.00	103	eP	Pb	00 36 36.3	-0.1
KUZU				eS	Sb	00 36 49.0	-0.3
GAZ	Gaziantep	1.09	81	ePG	Pn	00 36 38.3	+0.1
GAZ	Gaziantep	1.09	81	ePg	Pn	00 36 38.3	+0.1
SARI	SarD1z-Kayseri	1.47	17	ePN	Pn	00 36 43.8	+0.3
NIG	Nigde	1.49	318	ePN	Pn	00 36 43.8	0.0
NIG	Nigde	1.49	318	ePn	Pn	00 36 43.8	0.0
BNN	Bunyan	1.84	360	ePN	Pn	00 36 49.1	+0.5
BNN	Bunyan	1.84	360	ePn	Pn	00 36 49.1	+0.5

*ISCJB **11** 00:42:08.7±0.4, 15.°16S±0.°06×71.°82W±0.°06, h124km, mb4.0/10, Error ellipse: s-maj=9.8km s-min=4.9km az=43.4*

*IDC **11** 00:42:08.2±1.6, 15.°22S×71.°78W, h104km±18km, mb4.0/6, mb1 4.0/12, mb1mx3.8/25, mbtmp3.9/12, Error ellipse: s-maj=28.7km s-min=10.8km az=44.0*

*NEIC **11** 00:42:10.1±0.7, 15.°19S×71.°85W, h124km±8km, mb4.3/6, Error ellipse: s-maj=13.4km s-min=8.3km az=56.0*

ISC 11 00:42:09.6±0.5, 15.°19S±0.°06×71.°82W±0.°06, h124km, n40, σ1.s76/48, mb4.2/10, 1D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	Arequipa	1.30	166⇓	iP	Pn	00 42 37.2	+1.8
ARE				i S	Sn	00 42 58.0	+3.0
LPAZ	La Paz	3.71	108	P	Pn	00 43 10.2	+4.1
LPAZ				S	Sn	00 43 50.0	+0.4
LPAZ	La Paz	3.71	108	P	Pn	00 43 10.2	+4.1
	14nm,0.3s,baz=284,slow=11,SNR=274						
LPAZ				S	Sn	00 43 50.0	+0.4
	1.5nm,0.3s,baz=314,slow=17,SNR=3.6						
NNA	Nana	5.83	303	P	Pn	00 43 34.1	+0.3
NNA				S	Sn	00 44 37.4	-2.2
NNA	Nana	5.83	303	P	Pn	00 43 34.1	+0.3
	66nm,0.3s,baz=123,slow=12,SNR=117						
NNA				S	Sn	00 44 37.4	-2.2
	46nm,0.3s,baz=34,slow=18,SNR=7.9						
LVC	Limon Verde	7.88	160	P	Pn	00 44 01.2	-0.5
LVC				S	Sn	00 45 24.0	-5.4
LVC	Limon Verde	7.88	160	P	Pn	00 44 01.2	-0.5
	2.0nm,0.3s,baz=325,slow=9.0,SNR=19						
LVC				S	Sn	00 45 24.0	-5.4
	3.3nm,0.3s,baz=139,slow=20,SNR=27						
ATAH	Atahualpa	10.28	320	P	Pn	00 44 35.4	+1.1
ATAH				S	Sn	00 46 27.4	-0.6
ATAH	Atahualpa	10.28	320	P	Pn	00 44 35.4	+1.1
	0.9nm,0.3s,baz=130,slow=18,SNR=5.5						
ATAH				S	Sn	00 46 27.4	-0.6
	1.1nm,0.3s,baz=59,slow=18,SNR=2.8						
SIV	San Ignacio	10.38	96	P	Pn	00 44 35.2	-0.1
SIV				S	Sn	00 46 41.5	+12
SIV	San Ignacio	10.38	96	P	Pn	00 44 35.2	-0.1
	0.8nm,0.3s,baz=285,slow=13,SNR=35						
SIV				S	Sn	00 46 41.5	+12
	0.6nm,0.3s,baz=30,slow=20,SNR=5.0						
SAML	Samuel	10.48	55	ePn	Pn	00 44 35.4	-1.1
	14nm,0.6s						
SAML				eSn	Sn	00 46 26.8	-5.3
LCO	Las Campanas	13.79	176	ePn	Pn	00 45 18.9	-1.3
CFAA	Coronel Fontan	16.66	169	P	P	00 45 56.9	+0.9
CFAA	Coronel Fontan	16.66	169	P	P	00 45 56.9	+0.9
	0.1nm,0.3s,baz=349,slow=12,SNR=15						
OTAV	Otavalo	16.67	336	ePn	Pn	00 45 56.2	-0.3
	13nm,1.3s						
CPUP	Villa Florida	17.49	132	P	Pn	00 46 06.1	+0.3
CPUP	Villa Florida	17.49	132	P	Pn	00 46 06.1	+0.3
	1.2nm,0.3s,baz=299,slow=13,SNR=26						
BDFB	Brasilia	22.95	94	P	P	00 47 03.1	-0.5
	11nm,0.6s,baz=262,slow=11,SNR=20						
TRQA	Tornquist	24.38	161	eP	P	00 47 16.0	-0.3
	4.5nm,1.0s						
SPB	Sao Paulo	24.45	114	eP	P	00 47 17.4	+0.4
	17nm,0.7s						
TXAR	Lajitas Array	53.90	325	P	P	00 51 21.5	+1.1
TXAR	Lajitas Array	53.90	325	P	P	00 51 21.5	+1.1
	0.1nm,0.4s,baz=140,slow=7.1,SNR=4.6						
DBIC	Dimbokro	69.80	77	P	P	00 53 07.3	+0.1
	3.0nm,0.8s,baz=204,slow=13,SNR=6.0						
QSPA	South Pole Qui	74.96	180	eP	P	00 53 37.7	+0.6
	3.7nm,1.1s						
TORD	Torodi Ar. Bea	77.99	73	P	P	00 53 54.4	-0.5
TORD	Torodi Ar. Bea	77.99	73	P	P	00 53 54.3	-0.5
	1.7nm,0.4s,baz=245,slow=4.8,SNR=57						
ESDC	Sonseca Array	83.38	46	P	P	00 54 24.4	+1.2
ESDC	Sonseca Array	83.38	46	P	P	00 54 24.4	+1.2
	1.9nm,0.6s,baz=257,slow=5.1,SNR=25						
YKA	Yellowknife Ar	84.36	342	P	P	00 54 28.6	+1.1
YKA	Yellowknife Ar	84.36	342	P	P	00 54 28.6	+1.1
	0.3nm,0.5s,baz=130,slow=5.0,SNR=3.4						
BOSA	Boshof	88.88	119	eP	P	00 54 51.2	+0.6
	5.6nm,1.2s						
BOSA	Boshof	88.88	119	P	P	00 54 51.4	+0.8
	2.6nm,0.9s,baz=277,slow=7.3,SNR=5.2						
ABKAR	Akbulak array	128.18	38	ePKPdf	PKPdf	01 01 03.3	+2.1
ZALV	Zalesovo Beam	137.22	20	PKP	PKPdf	01 01 19.6	+1.5
ZALV	Zalesovo Beam	137.22	20	PKP	PKPdf	01 01 19.6	+1.5
	1.0nm,0.5s,baz=241,slow=1.5,SNR=4.6						
MKAR	Makanchi Array	141.81	29	PKP	PKPdf	01 01 25.6	-1.1
MKAR	Makanchi Array	141.81	29	PKP	PKPdf	01 01 25.6	-1.1
	0.4nm,0.7s,baz=311,slow=2.9,SNR=2.7						
SONM	Songino Array	147.42	2	PKPbc	PKPab	01 01 41.1	-0.2
SONM	Songino Array	147.42	2	PKPbc	PKPab	01 01 41.1	-0.2
	2.4nm,0.6s,baz=338,slow=3.4,SNR=9.3						

*CSEM **11** 00:48:57.7±0.1, 39.°19N×41.°34E, h2km, MD3.1, Error ellipse: s-maj=3.4km s-min=3.1km az=23.0*

*ISK **11** 00:48:57.5, 39.°23N×41.°32E, h6km, MD3.1*

*ISCJB **11** 00:48:58.0±0.6, 39.°23N±0.°02×41.°34E±0.°04, h2km±5km, Error ellipse: s-maj=5.1km s-min=3.4km az=22.6*

*DDA **11** 00:48:58.1, 39.°20N×41.°36E, h15km, MD3.0*

ISC 11 00:48:58.2±1.0, 39.°22N±0.°02×41.°34E±0.°03, h10km±9km, n41, σ0.s56/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNGL	BINGOL	0.30	209	i P	Pg	00 49 04.3	-0.1
BNGL				i S	Sg	00 49 09.1	+0.6
BNGB	Bingˆ¶l	0.56	246	ePG	Pg	00 49 08.9	-0.3
BNGB				eSG	Sg	00 49 16.8	+0.3
ERZM	Erzurum	0.68	2	i P	Pg	00 49 11.8	+0.3
ERZM				i S	Sg	00 49 19.9	-0.7
ERZM	Erzurum	0.68	2	i P	Pg	00 49 11.8	+0.3
ERZM				i S	Sg	00 49 19.9	-0.7
EZM	Erzurum	0.68	2	ePG	Pg	00 49 11.2	-0.3
EZM				eSG	Sg	00 49 20.3	-0.3
EZM	Erzurum	0.68	2	ePg	Pg	00 49 11.2	-0.3
EZM				eSg	Sg	00 49 20.3	-0.3
HOMI	Horasan	0.93	28	eP	Pg	00 49 15.9	-0.4
HOMI				eS	Sn	00 49 30.9	-0.3
KOPT	Kop Dagi	1.03	321	eP	Pb	00 49 18.3	0.0
KOPT				eS	Sn	00 49 33.6	0.0
KOPT	Kop Dagi	1.03	321	eP	Pb	00 49 18.3	0.0
KOPT				eS	Sn	00 49 33.6	0.0
BTMT	Batman	1.03	173	ePN	Pn	00 49 18.9	0.0
BTMT	Batman	1.03	173	ePn	Pn	00 49 18.9	0.0
TUTA	Tutak	1.16	81	eP	Pb	00 49 19.9	-0.6
TUTA				eS	Sb	00 49 35.7	0.0
TUTA	Tutak	1.16	81	eP	Pb	00 49 19.9	-0.6
TUTA				eS	Sb	00 49 35.7	0.0
ERZN	Erzincan	1.30	287	ePN	Pn	00 49 22.3	-0.4

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BEST	Besiri	1.33	182	eP	Pb	00 49 23.0	-0.3
BEST				eS	Sg	00 49 41.9	+0.9
AGRB	Hanur-Agry	1.33	74	ePN	Pg	00 49 23.7	-0.1
AGRB	Hanur-Agry	1.33	74	ePn	Pg	00 49 23.7	-0.1
BAYT	Ayd˜–ntepe-Bay	1.49	322	ePN	Pn	00 49 25.7	+0.5
BAYT	Ayd˜–ntepe-Bay	1.49	322	ePn	Pn	00 49 25.7	+0.5
PTK	Pertek	1.55	258	ePN	Pn	00 49 26.2	+0.1
PTK	Pertek	1.55	258	ePn	Pn	00 49 26.2	+0.1
DIY	Diyarbakir	1.58	214	ePN	Pn	00 49 26.7	+0.2
DIY	Diyarbakir	1.58	214	ePn	Pn	00 49 26.7	+0.2
EZC	Erzincan	1.62	290	ePN	Pn	00 49 27.2	+0.1
EZC	Erzincan	1.62	290	ePn	Pn	00 49 27.2	+0.1
DDEM	Demirkent	1.70	11	eP	Pb	00 49 30.1	+0.4
DDEM				eS	Sn	00 49 48.5	-1.5
DDEM	Demirkent	1.70	11	eP	Pb	00 49 30.1	+0.4
DDEM				eS	Sn	00 49 48.5	-1.5
KELT	Kelkit	1.85	301	eP	Pb	00 49 31.7	-0.6
KELT				eS	Sg	00 49 58.5	+0.6
KELT	Kelkit	1.85	301	eP	Pb	00 49 31.7	-0.6
KELT				eS	Sg	00 49 58.5	+0.6
GUMT	Gumushane	1.89	311	ePN	Pn	00 49 31.1	+0.4
GUMT	Gumushane	1.89	311	ePn	Pn	00 49 31.1	+0.4
DAGI	Agillar	1.91	13	eP	Pb	00 49 33.2	0.0
DAGI				eS	Sn	00 49 56.2	+1.1
CLDR	Caldiran	2.01	91	ePN	Pn	00 49 33.2	+0.8
CLDR	Caldiran	2.01	91	ePn	Pn	00 49 33.2	+0.8
ILIC	ilic-Erzincan	2.16	277	ePN	Pn	00 49 34.7	+0.3
ILIC	ilic-Erzincan	2.16	277	ePn	Pn	00 49 34.7	+0.3
BCA	Borcka	2.23	6	ePN	Pn	00 49 36.2	+0.9
BCA	Borcka	2.23	6	ePn	Pn	00 49 36.2	+0.9
ESPY	Espiye-Giresun	2.62	311	ePN	Pn	00 49 41.5	+0.8
ESPY	Espiye-Giresun	2.62	311	ePn	Pn	00 49 41.5	+0.8
BHD	Baghdad	6.43	157	ePn	Pn	00 50 27.0	-5.9
BHD				eSn	Sn	00 51 36.8	-10

IDC 11 00:57:32.2±2.0, 1°.36N×125°.74E, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.6/22, mbtmp4.0/3, Error ellipse: s-maj=181.1km s-min=24.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.79	159	P	P	01 02 35.0	-1.7
	4.8nm,0.6s,baz=336,slow=11,SNR=10						
ASAR	Alice Springs	26.11	163	P	P	01 03 09.3	+1.3
	2.3nm,0.4s,baz=352,slow=9.3,SNR=28						
MKAR	Makanchi Array	58.95	327	P	P	01 07 33.3	-0.2
	0.4nm,0.4s,baz=117,slow=7.6,SNR=6.4						

*NIC **11** 00:59:58.0±0.4, 37°.81N×36°.21E, h20km, ML3.2, MW3.5*
*NSSC **11** 01:00:00.1±5.7, 37°.08N×36°.63E, h0km±19km, MD1.5, ML3.4, Fault plane solution: NP1:ϕ_s14.72000°, δ80.61000°, λ-3.45000°.*
*ISK **11** 01:00:01.7, 36°.88N×36°.78E, h10km, MD3.6*
*ISCJB **11** 01:00:01.7±0.5, 36°.92N±0°.02×36°.74E±0°.02, h1km±4km, Error ellipse: s-maj=3.5km s-min=2.5km az=32.9*
*DDA **11** 01:00:02.0, 36°.93N×36°.77E, h7km, MD3.3*
*CSEM **11** 01:00:02.4±0.1, 36°.90N×36°.77E, h2km, Mw3.5, Error ellipse: s-maj=3.3km s-min=2.4km az=114.0*
ISC 11 01:00:01.2±1.1, 36°.87N±0°.02×36°.79E±0°.02, h3km±10km, n114, σ1s.50/146, 10C-10D, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DRWC	Darouich	0.27	202⇓	eP	Pg	01 00 05.7	-0.6
DRWC	Darouich	0.27	202⇓	eP	Pg	01 00 05.7	-0.6
	SNR=91						
GAZ	Gaziantep	0.45	48	ePG	Pb	01 00 11.3	-0.6
GAZ				eSG	Sb	01 00 17.7	-1.4
GAZ	Gaziantep	0.45	48	ePg	Pb	01 00 11.3	-0.6
GAZ				eSg	Sb	01 00 17.7	-1.4
AYKD	Aykdinkavak	0.54	2	iP	Pg	01 00 12.2	+0.6
AYKD				iS	Sg	01 00 18.9	+0.1
KMRS	Kahramanmaras	0.64	8	ePG	Pb	01 00 14.2	-0.9
KMRS				eSG	Sb	01 00 23.8	-0.7
KMRS	Kahramanmaras	0.64	8	ePg	Pb	01 00 14.2	-0.9
KMRS				eSg	Sb	01 00 23.8	-0.7
GZT	Gaziantep	0.79	52	iP	Pb	01 00 17.6	0.0
GZT				iS	Sb	01 00 28.9	+0.1
ANDN	Andirin	0.79	334	iP	Pg	01 00 16.5	+0.1
ANDN				iS	Sg	01 00 26.3	-0.4
ANDN	Andirin	0.79	334	iP	Pg	01 00 16.5	+0.1
ANDN				iS	Sg	01 00 26.3	-0.4
CEYT	Ceyhan	0.84	280	ePG	Pb	01 00 18.3	-0.2
CEYT	Ceyhan	0.84	280	ePg	Pb	01 00 18.3	-0.2
BTCH	Batrach	0.87	198⇓	eP	Pn	01 00 20.6	+0.1
BTCH				eS	Sn	01 00 33.1	-0.6
BTCH				AML	AML	01 00 34.6	
	comp=E,4μm,0.3s						
BTCH				AML	AML	01 00 36.9	
	comp=N,3μm,0.3s						
BTCH	Batrach	0.87	198⇓	eP	Pn	01 00 20.5	+0.1
	SNR=67						
BTCH				eS	Sn	01 00 33.1	-0.6
	comp=N,3μm,0.3s,SNR=59						
HTY	Hatay	0.91	215	ePG	Pb	01 00 19.8	+0.1
HTY	Hatay	0.91	215	ePg	Pb	01 00 19.8	+0.1
KOZT	Kozan	0.98	309	ePG	Pb	01 00 20.8	-0.1
KOZT	Kozan	0.98	309	ePg	Pb	01 00 20.8	-0.1
SLMH	Al Salmeh	1.13	125⇓	eP	Pn	01 00 24.6	+0.7
SLMH				eS	Sn	01 00 41.0	+1.1
SLMH				AML	AML	01 00 43.0	
	comp=E,1μm,0.5s						
SLMH				AML	AML	01 00 47.5	
	comp=N,2μm,0.5s						
SLMH	Al Salmeh	1.13	125⇓	eP	Pn	01 00 24.6	+0.7
	SNR=57						
SLMH				eS	Sn	01 00 41.0	+1.1
	comp=N,2μm,0.5s,SNR=49						
ARNB	Al Arnab	1.20	213⇑	iP	Pg	01 00 25.6	+1.4
ARNB				eS	Sn	01 00 42.8	+0.9
ARNB				AML	AML	01 00 45.0	
	comp=E,2μm,0.3s						
ARNB				AML	AML	01 00 45.0	
	comp=N,2μm,0.3s						
ARNB	Al Arnab	1.20	213⇑	iP	Pg	01 00 25.6	+1.4
	SNR=57						
ARNB				eS	Sn	01 00 42.8	+0.9
	comp=N,2μm,0.3s,SNR=49						
ATAB	Bozova	1.34	63	iP	Pg	01 00 26.9	-0.1
ATAB				iS	Sg	01 00 44.7	+0.3
ATAB	Bozova	1.34	63	iP	Pg	01 00 26.9	-0.1
ATAB				iS	Sg	01 00 44.7	+0.3
WRDH	Warideh	1.39	193⇑	eP	Pg	01 00 28.5	+0.6
WRDH	Warideh	1.39	193⇑	eP	Pg	01 00 28.5	+0.6
	SNR=57						
SARI	SarD1z-Kayseri	1.56	349	ePN	Pb	01 00 30.2	-0.7
SARI	SarD1z-Kayseri	1.56	349	ePn	Pb	01 00 30.2	-0.7
AKCD	Akcadag	1.68	32	eP	Pb	01 00 32.3	-0.6
AKCD				eS	Sn	01 00 52.5	-1.3
AKCD	Akcadag	1.68	32	eP	Pb	01 00 32.3	-0.6
URFA	Urfa	1.72	70	ePN	Pn	01 00 32.0	-0.2
URFA	Urfa	1.72	70	ePn	Pn	01 00 32.0	-0.2
JHLN	Al Jahlan	1.79	131	eP	Pb	01 00 33.8	-0.9
JHLN				eS	Sg	01 01 00.5	+1.7
JHLN				AML	AML	01 01 01.2	
	comp=N,1μm,0.3s						
JHLN				AML	AML	01 01 02.4	
	comp=E,601nm,0.4s						
JHLN	Al Jahlan	1.79	131	eP	Pb	01 00 33.8	-0.9
	SNR=45						
JHLN				eS	Sg	01 01 00.5	+1.7
	comp=E,601nm,0.4s,SNR=40						
MYA	Malataya	1.95	41	ePN	Pb	01 00 35.7	-1.7
MYA	Malataya	1.95	41	ePn	Pb	01 00 35.7	-1.7
HAWK	Haweek	2.37	188⇑	eP	Pn	01 00 42.7	+1.7
HAWK				eS	Sb	01 01 15.0	+0.9
HAWK				AML	AML	01 01 20.4	
	comp=N,228nm,0.2s						
HAWK				AML	AML	01 01 24.0	
	comp=E,210nm,0.5s						
HAWK	Haweek	2.37	188⇑	eP	Pn	01 00 42.7	+1.7
	SNR=45						
HAWK				eS	Sb	01 01 15.0	+0.9
	comp=E,210nm,0.5s,SNR=40						
EREN	Erenkoy	2.50	239	ePN	Pn	01 00 43.3	+0.5
EREN	Erenkoy	2.50	239	ePn	Pn	01 00 43.3	+0.5
FKH	Fakeheh	2.64	187	eP	Pn	01 00 46.4	+1.6
FKH	Fakeheh	2.64	187	eP	Pn	01 00 46.4	+1.6
HWQ	Hawqa	2.68	195	eP	Pn	01 00 47.5	+2.2
HWQ	Hawqa	2.68	195	eP	Pn	01 00 47.5	+2.2
SFNV	Sufian	2.71	99⇑	eP	Pn	01 00 46.3	+0.6
SFNV				eS	Sb	01 01 24.1	+0.1
SFNV				AML	AML	01 01 34.0	
	comp=N,774nm,0.3s						
SFNV				AML	AML	01 01 35.2	
	comp=E,416nm,0.3s						
SFNV	Sufian	2.71	99⇑	eP	Pn	01 00 46.3	+0.6
	SNR=45						
SFNV				eS	Sb	01 01 24.1	+0.1
	comp=E,416nm,0.3s,SNR=40						
PHNC	Paralimni	2.91	231	⇑P	Pn	01 00 48.8	+0.4
	comp=E,1.3nm,0.6s						
PHNC				S	Sb	01 01 28.5	-1.2
PHNC	Paralimni	2.91	231	⇑P	Pn	01 00 48.8	+0.4
	comp=E,1.3nm,0.6s						
PHNC				S	Sb	01 01 28.5	-1.2
SULT	Sultanhani-AKS	2.92	298	ePN	Pn	01 00 49.5	+0.9
SULT	Sultanhani-AKS	2.92	298	ePn	Pn	01 00 49.5	+0.9
DIY	Diyarbakir	2.92	68	ePN	Pn	01 00 49.8	+1.1
DIY	Diyarbakir	2.92	68	ePn	Pn	01 00 49.8	+1.1
YOZ	Yozgat	3.00	338	ePN	Pn	01 00 50.5	+0.8
YOZ	Yozgat	3.00	338	ePn	Pn	01 00 50.6	+0.8
KBSD	Kabsdagh	3.01	86	eP	Pn	01 00 50.5	+0.7
KBSD				eS	Sb	01 01 30.8	-1.9
KBSD				AML	AML	01 01 39.6	
	comp=E,364nm,0.3s						
KBSD				AML	AML	01 01 43.4	
	comp=N,384nm,0.6s						
KBSD	Kabsdagh	3.01	86	eP	Pn	01 00 50.5	+0.7
	SNR=45						
KBSD				eS	Sb	01 01 30.8	-1.9
	comp=N,348nm,0.3s,SNR=40						
BHL	Bhannes	3.10	198	eP	Pn	01 00 52.9	+1.8
BHL	Bhannes	3.10	198	eP	Pn	01 00 52.9	+1.8
MZRK	Al-Mazaregh	3.29	107	AML	AML	01 01 44.5	
	comp=N,312nm,0.3s						
MZRK				AML	AML	01 01 46.0	
	comp=E,348nm,0.3s						
CSS	Prodhromos	3.39	237	P	Pn	01 00 53.2	-1.8
	comp=E,0.5nm,0.3s						
CSS				S	Sn	01 01 37.7	+1.9
CSS	Prodhromos	3.39	237	ePN	Pn	01 00 56.4	+1.3
CSS	Prodhromos	3.39	237	P	Pn	01 00 53.2	-1.8
	comp=E,0.5nm,0.3s						
CSS	Prodhromos	3.39	237	ePn	Pn	01 00 56.4	+1.3
KAMT	Kaman	3.48	317	ePN	Pn	01 00 57.4	+1.1
KAMT	Kaman	3.48	317	ePn	Pn	01 00 57.4	+1.1
TOTH	TOTAH	3.51	185	eP	Pn	01 00 59.1	+2.4
TOTH				eS	Sb	01 01 44.2	-2.9
TOTH				AML	AML	01 01 57.9	
	comp=N,160nm,0.6s						
TOTH	TOTAH	3.51	185	eP	Pn	01 00 59.1	+2.4
	SNR=45						
TOTH				eS	Sb	01 01 44.2	-2.9
	comp=N,160nm,0.6s,SNR=40						
EZC	Erzincan	3.51	34	ePN	Pn	01 00 58.0	+1.2
EZC	Erzincan	3.51	34	ePn	Pn	01 00 58.0	+1.2
BINT	Bingol	3.55	55	ePn	Pb	01 01 01.0	-3.7
RSDY	Resadiye-TOKAT	3.55	7	ePN	Pn	01 00 58.5	+1.3
RSDY	Resadiye-TOKAT	3.55	7	ePn	Pn	01 00 58.5	+1.3
ERZN	Erzincan	3.56	40	ePN	Pn	01 00 58.8	+1.3
LEF	Lefka	3.61	242	ePN	Pn	01 00 59.7	+1.7
LEF	Lefka	3.61	242	ePn	Pn	01 00 59.7	+1.7
KONT	Konya--Tatoy	3.69	288	ePN	Pn	01 01 00.4	+1.3
KONT	Konya--Tatoy	3.69	288	ePn	Pn	01 01 00.4	+1.3
CORM	Corum	3.71	334	ePN	Pn	01 01 00.8	+1.2
BNGB	Bingˆ¶l	3.73	54	ePN	Pn	01 01 01.0	+1.2
LADK	Ladik-KONYA	3.76	292	ePN	Pn	01 01 01.4	+1.2
LADK	Ladik-KONYA	3.76	292	ePn	Pn	01 01 01.4	+1.2
ALFC	Alevga	3.80	245	P	Pn	01 00 57.9	-2.8
ALFC				S	Sn	01 01 43.6	-2.4
ALFC	Alevga	3.80	245	P	Pn	01 00 57.9	-2.8
ALFC				S	Sn	01 01 43.6	-2.4
AFSR	Af¯ar-Bala (A	3.90	312	ePN	Pn	01 01 03.5	+1.4
AFSR	Af¯ar-Bala (A	3.90	312	ePn	Pn	01 01 03.5	+1.4
ZALF	Zalf	3.96	173⇓	eP	Pn	01 01 04.1	+1.2
ZALF				AML	AML	01 02 09.8	
	comp=N,84nm,0.4s						
ZALF				AML	AML	01 02 14.1	
	comp=E,78nm,0.5s						
ZALF	Zalf	3.96	173⇓	eP	Pn	01 01 04.1	+1.2
	SNR=45						
MMC7	Mount Meron ar	4.01	197	Pn	Pn	01 01 05.0	+1.4
MMA0	Mount Meron ar	4.01	197	Pn	Pn	01 01 05.3	+1.7
AKMC	Akamas	4.06	244	P	Pn	01 01 05.0	+0.8
AKMC	Akamas	4.06	244	P	Pn	01 01 05.0	+0.8
PPCY	Paphos	4.12	243	P	Pn	01 01 05.7	+0.7
PPCY	Paphos	4.12	243	P	Pn	01 01 05.7	+0.7
SALA	Sala	4.15	181⇓	eP	Pn	01 01 07.4	+1.8
SALA				eS	Sb	01 02 02.9	-2.7
SALA				AML	AML	01 02 21.4	
	comp=N,92nm,0.6s						
SALA				AML	AML	01 02 21.5	
	comp=E,9.3nm,0.6s						
SALA	Sala	4.15	181⇓	eP	Pn	01 01 07.4	+1.8
	SNR=45						
GUMT	Gumushane	4.16	30	ePN	Pn	01 01 07.4	+1.7
GUMT	Gumushane	4.16	30	ePn	Pn	01 01 07.4	+1.7
KVT	Kavak	4.24	352	ePN	Pn	01 01 08.3	+1.5
KVT	Kavak	4.24	352	ePn	Pn	01 01 08.3	+1.5
TCHB	Talchebab	4.25	189	eP	Pn	01 01 10.0	+3.2
TCHB				eS	Sb	01 02 02.5	-5.6
TCHB				AML	AML	01 02 20.0	
	comp=N,87nm,0.7s						
TCHB				AML	AML	01 02 29.3	
	comp=E,53nm,0.4s						
ESPY	Espiye-Giresun	4.31	20	ePN	Pn	01 01 09.5	+1.8
ESPY	Espiye-Giresun	4.31	20	ePn	Pn	01 01 09.5	+1.8
ANTO	Ankara	4.34	315	ePN	Pn	01 01 09.8	+1.7
ANTO	Ankara	4.34	315	ePn	Pn	01 01 09.8	+1.7
BAYT	Ayd˜–ntepe-Bay	4.39	36	ePN	Pn	01 01 10.6	+1.7
BAYT	Ayd˜–ntepe-Bay	4.39	36	ePn	Pn	01 01 10.6	+1.7
MMLI	Mount Malkishu	4.56	195	Pn	Pn	01 01 13.7	+2.5
EZM	Erzurum	4.70	48	ePN	Pn	01 01 14.9	+1.7
HMDT	Nahal Hemdat	4.72	193	Pn	Pn	01 01 15.7	+2.4
DIKM	Dikmen	4.92	346	ePN	Pn	01 01 18.0	+2.0
DSI	Dead Sea	5.41	193	Pn	Pn	01 01 25.1	+2.3
KZIT	Kziot	6.27	199	Pn	Pn	01 01 36.7	+2.1
BHD	Baghdad	7.18	118	ePn	Pb	01 02 07.7	+1.1
BHD				eSn	Sg	01 03 47.3	-4.6
BHD				eSg	Sg	01 04 57.3	+65
IBDR	Badra	8.39	114	ePn	Pb	01 02 24.8	-2.2
IBDR				ePb	Pg	01 02 51.6	+10
IBDR				ePg	Pg	01 03 14.8	+33
IBDR				eSn	Sg	01 04 20.9	-9.5
IBDR				eSb	Sb	01 04 49.9	+43
IBDR				eSg	Sg	01 05 18.1	+48

*ISCJB **11** 01:26:10.5±0.5, 38°.10N±0°.02×22°.65E±0°.04, h9km±3km, Error ellipse: s-maj=4.7km s-min=4.1km az=0.1*
*ATH **11** 01:26:10.8, 38°.10N×22°.66E, h12km±5km, MD2.8/8*
*CSEM **11** 01:26:10.1±0.1, 38°.10N×22°.67E, h12km, ML1.2/3, Error ellipse: s-maj=2.2km s-min=2.0km az=76.0*
*THE **11** 01:26:11.1, 38°.10N×22°.65E, h2km±28km, ML1.2/3, Error ellipse: s-maj=28.3km s-min=0.7km az=172.0*
ISC 11 01:26:10.6±0.9, 38°.10N±0°.02×22°.66E±0°.02, h10km±6km, n24, σ0s.51/45, Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
THAL	Thalero	0.06	176	P	Pg	01 26 12.5	-0.2
THAL				S	Sg	01 26 14.1	0.0
THAL	Thalero	0.06	176	P	Pg	01 26 12.5	-0.2
THAL				S	Sg	01 26 14.1	0.0
LTK	Loutraki	0.25	107	P	Pg	01 26 15.6	-0.2
LTK				S	Sg	01 26 20.1	+0.8
LTK	Loutraki	0.25	107	ePG	Pg	01 26 15.5	-0.2
LTK				eSG	Sg	01 26 19.9	+0.6
LTK	Loutraki	0.25	107	ePg	Pg	01 26 15.5	-0.2
LTK				S	Sg	01 26 20.1	+0.8
GUR	Goura	0.30	238	P	Pg	01 26 16.5	0.0
GUR				S	Sg	01 26 20.9	+0.3
GUR	Goura	0.30	238	ePG	Pg	01 26 16.6	0.0
GUR				eSB	Sg	01 26 21.6	+1.0
GUR	Goura	0.30	238	ePg	Pg	01 26 16.6	0.0
GUR				S	Sg	01 26 20.9	+0.3
GUR				eSb	Sg	01 26 21.6	+1.0
DSF	Desfina	0.33	342	P	Pg	01 26 17.0	-0.2
DSF				S	Sg	01 26 22.5	+0.8
DSF	Desfina	0.33	342	P	Pg	01 26 17.0	-0.2
DSF				S	Sg	01 26 22.5	+0.8
KLV	Kalavryta, Ach	0.40	263	ePG	Pg	01 26 18.4	-0.2
KLV				eSB	Sg	01 26 24.9	+1.0
KLV	Kalavryta, Ach	0.40	263	ePg	Pg	01 26 18.4	-0.2
KLV				eSb	Sg	01 26 24.9	+1.0
KALE	Kalithea	0.50	306	ePB	Pb	01 26 21.3	-0.3
KALE	Kalithea	0.50	306	ePb	Pb	01 26 21.3	-0.3
LKR	Lokris	0.61	26	ePB	Pg	01 26 22.9	+0.4
LKR				eSB	Sg	01 26 31.2	+0.6
LKR	Lokris	0.61	26	ePb	Pg	01 26 22.9	+0.4
LKR				eSb	Sg	01 26 31.2	+0.6
EFP	Efpalio	0.68	299	ePB	Pb	01 26 24.3	-0.2
EFP	Efpalio	0.68	299	ePb	Pb	01 26 24.3	-0.2
DID	Didima	0.75	142	ePB	Pb	01 26 25.5	-0.2
DID				eSB	Sb	01 26 35.7	-0.2
DID	Didima	0.75	142	ePb	Pb	01 26 25.5	-0.2
DID				eSb	Sb	01 26 35.7	-0.2
VLX	Vlachokerasia	0.76	197	ePB	Pg	01 26 25.2	0.0
VLX				eSB	Sg	01 26 35.2	+0.1
VLX	Vlachokerasia	0.76	197	ePb	Pg	01 26 25.2	0.0
VLX				eSb	Sg	01 26 35.2	+0.1
AGG	Agios Georgios	0.96	345	ePG	Pg	01 26 28.3	-0.8
AGG				eSB	Sg	01 26 41.8	+0.2
AGG	Agios Georgios	0.96	345	ePg	Pg	01 26 28.3	-0.8
AGG				eSb	Sg	01 26 41.8	+0.2

*NSSC **11** 01:34:55.9±2.5, 55°.37N×162°.94E, h5km±999km*
*BJI **11** 01:34:59.7, 53°.26N×159°.74E, h67km, mB5.0/29, mb5.0/45, Ms4.6/37, Ms7 4.2/34*
*SZGRF **11** 01:35:04.2, 53°.29N×158°.69E, h33km, mb5.9, MS3.7, Near east coast of Kamchatka Peninsula, Russia*
*MOS **11** 01:35:05.5±0.9, 53°.09N×159°.28E, h93km, mb5.5/148, Error ellipse: s-maj=7.0km s-min=3.6km az=95.0*
MOS Felt (III-IV) at Petropavlovsk-Kamchatskiy.
*BGS **11** 01:35:07.9±1.4, 53°.23N×160°.65E, h100km, mb5.3*
*ISCJB **11** 01:35:07.3±0.2, 53°.00N±0°.02×159°.40E±0°.03, h114km±1km, mb5.2/380, Error ellipse: s-maj=3.9km s-min=2.4km az=156.3*
*KRSC **11** 01:35:07.4±0.7, 52°.93N×159°.74E, h98km±38km, ML5.5*
*IDC **11** 01:35:07.9±0.5, 53°.04N×159°.31E, h105km±4km, mb4.9/42, mb1 5.0/43, mb1mx5.0/44, mbtmp4.9/43, MS3.8/22, Ms1 3.8/22, ms1mx3.6/41, Error ellipse: s-maj=10.0km s-min=7.7km az=152.0*
*NEIC **11** 01:35:08.0±0.6, 53°.05N×159°.36E, h104km±5km, mb5.2/186, Error ellipse: s-maj=4.5km s-min=2.3km az=174.0*
NEIC Felt [IV] at Petropavlovsk-Kamchatskiy.
*GCMT **11** 01:35:11.3±0.2, 53°.01N×159°.72E, h105km±2km, MW5.1, Moment Tensor Solution. s47,c64; s93,c156; Moment tensor: Scale 10^{16}Nm; M_{rr}1.64±.17; $M_{\theta\theta}$2.57±.16; $M_{\phi\phi}$-4.21±.15; $M_{r\theta}$4.00±.10; $M_{\theta\phi}$-0.53±.15; $M_{\phi r}$3.08±.10; Best double couple: $M_0$6.30000×10^{16} NP1:ϕ_s147.00000°, δ34.00000°, λ16.00000°. NP2:ϕ_s44.00000°, δ81.00000°, λ123.00000°. Principal axes: T 6.4100, Plg44.0000°, Azm347.0000°; N -0.3000, Plg33.0000°, Azm218.0000°; P -6.1100, Plg28.0000°, Azm108.0000°; Data Used: II IU IC G CN.*
*DJA **11** 01:35:16.5±10.0, 54°N±21°×15°9E±5°4, h181km±77km, M4.8/8, mB5.3/5, mb4.9/8, Mw(mB)4.7/5*
ISC 11 01:35:07.0±0.3, 52°.99N±0°.03×159°.49E±0°.03, h102km±2km, h101km:pP-P, n1447, σ1s.17/1557, mb5.3/390, 450C-197D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NLC	Nalytchevo	0.20	334	PN	Pn	01 35 22.3	+0.9
NLC	Nalytchevo	0.20	334	P	Pn	01 35 22.3	+0.9
SPN	Mys Shipunski	0.34	71	PN	Pn	01 35 21.9	-0.1
SPN	Mys Shipunski	0.34	71	P	Pn	01 35 21.9	-0.1
UGLR	Uglovaya	0.46	299	P	Pn	01 35 24.7	+1.9
SDLR	Sedlovina	0.47	308	eP	Pn	01 35 24.5	+1.6
SMAR	Somma	0.50	304	P	Pn	01 35 24.9	+1.7
PET	Petropavlovsk	0.51	274⇓	iPN	Pn	01 35 24.2	+1.2
PET				eS	Sn	01 35 36.5	+1.5
PET				pmax	pmax		
	comp=Z,63μm,0.5s						
PET				pmax	pmax		
	comp=Z,48μm,0.5s						
PET				smax	smax		
	comp=E,193μm,0.5s						
PET				smax	smax		
	comp=N,176μm,0.4s						
PET	Petropavlovsk	0.51	274	P	Pn	01 35 24.3	+1.2
AVH	Avacha	0.53	302	iP	Pn	01 35 25.5	+2.2
INSR	Institute	0.54	278	P	Pn	01 35 25.1	+1.8
INSR				iS	Sn	01 35 37.3	+1.8
KRER	Koryakskii	0.55	305	P	Pn	01 35 25.7	+2.1
KOK	Koryaka	0.60	301	P	Pn	01 35 25.7	+1.9
RUS	Russkaya	0.82	227	PN	Pn	01 35 26.1	+0.5
RUS	Russkaya	0.82	227	P	Pn	01 35 26.1	+0.5
MTVR	Mutnovka	0.94	238	P	Pn	01 35 28.3	+1.2
GRL	Gorelyy	0.97	244	P	Pn	01 35 29.1	+1.8
KII	Karymskiy	1.05	359	eP	Pn	01 35 29.7	+1.5
PETK	Petropavlovsk-	1.09	277	PN	Pn	01 35 29.8	+1.3
PETK	Petropavlovsk-	1.09	277	P	Pn	01 35 29.8	+1.3
PETK				S	Sn	01 35 48.5	+3.7
PETK	Petropavlovsk-	1.09	277	P	Pn	01 35 29.8	+1.3
	comp=N,4μm,0.3s,baz=97,slow=16						
PETK				S	Sn	01 35 48.5	+3.7
	comp=N,2μm,0.3s,baz=103,slow=20,SNR=12						
ASAK	Asacha	1.15	239	P	Pn	01 35 30.6	+1.4
GNL	Ganaly	1.17	308	P	Pn	01 35 31.5	+2.0
APC	Apacha	1.41	268	iP	Pn	01 35 34.5	+2.2
APC				iS	Sn	01 35 54.3	+2.9
MIPR	Malaya Ipel'ka	1.81	248	eP	Pn	01 35 39.3	+2.1
MIPR				iS	Sn	01 36 02.7	+2.4
MKZ	Mys Kozlova	2.06	39	PN	Pn	01 35 40.5	+0.2
MKZ				S	Sn	01 36 04.8	-0.9
MKZ	Mys Kozlova	2.06	39	eP	Pn	01 35 40.5	+0.2
MKZ				iS	Sn	01 36 04.8	-0.9
ESO	Esso	2.98	351	PN	Pn	01 35 54.4	+2.0
ESO	Esso	2.98	351	eP	Pn	01 35 54.4	+2.0
ESO				iS	Sn	01 36 28.8	+1.3
SKR	Severo-Kuril's	3.12	224⇓	iPN	Pn	01 35 54.5	+0.2
SKR				eS	Sn	01 36 29.0	-1.8
SKR				pmax	pmax		
	comp=N,190nm,0.5s						
SKR				pmax	pmax		
	comp=E,390nm,0.5s						
SKR				pmax	pmax		
	comp=Z,390nm,0.5s						
SKR				pmax	pmax		
	comp=N,1μm,0.8s						
SKR				smax	smax		
	comp=E,6μm,0.2s						
SKR				smax	smax		
	comp=N,12μm,2.0s						
SKR				smax	smax		
	comp=E,11μm,3.0s						
SKR				MLR	MLR		
	comp=Z,4μm,6.0s						
SKR	Severo-Kuril's	3.12	224	eP	Pn	01 35 55.0	+0.7
SKR				iS	Sn	01 36 29.7	-1.1
LGNR	Loginova	3.18	12	eP	Pn	01 35 58.1	+2.7
LGNR				eS	Sn	01 36 34.9	+2.3
CIRR	Tsirk	3.22	13	P	Pn	01 35 58.4	+2.7
KRSR	Krestovskiy	3.29	10	P	Pn	01 35 58.9	+2.2
KRSR				iS	Sn	01 36 37.0	+1.9
KLY	Klyuchi	3.40	11	PN	Pn	01 36 00.7	+2.7
KLY				S	Sn	01 36 39.5	+2.1
KLY	Klyuchi	3.40	11	P	Pn	01 36 00.7	+2.7
KLY				iS	Sn	01 36 39.5	+2.1
BDR	Baidarnaya	3.72	15	P	Pn	01 36 04.7	+2.3
KBG	Krutoberegovo	3.77	28	PN	Pn	01 36 04.0	+1.1
KBG				S	Sn	01 36 46.2	-0.1
KBG	Krutoberegovo	3.77	28	eP	Pn	01 36 04.0	+1.1
KBG				iS	Sn	01 36 46.2	-0.1
SMKR	Semkarok	3.78	17	P	Pn	01 36 05.1	+1.9
SRKR	Sorokina	3.80	14	P	Pn	01 36 05.8	+2.3
BKI	Bering	4.41	57	PN	Pn	01 36 11.3	-0.3
BKI				S	Sn	01 36 56.6	-5.2
BKI	Bering	4.41	57	eP	Pn	01 36 11.3	-0.3
BKI				iS	Sn	01 36 56.6	-5.2
PALN	Palana	6.12	2	eP	Pn	01 36 36.0	+1.3
KUR	Kuril'sk	10.87	229⇓	iPN	Pn	01 37 40.9	+1.6
KUR				iS	Sn	01 39 39.0	+0.2

KUR MLR MLR
comp=E,545nm,18.0s
KUR MLR MLR
comp=Z,489nm,18.0s
UGL Uglegorsk 11.64 257 *e*PN Pn 01 37 54.0 +4.3
UGL pmax pmax
comp=Z,336nm,1.0s
UGL MLR MLR
comp=N,1μm,14.0s
UGL MLR MLR
comp=E,600nm,14.0s
YSS Yuzh-Sakhalins 12.34 247⇑ *i*PN **Pn 01 38 02.0 +3.1**
YSS *e*S **Sn 01 40 20.0 +5.5**
YSS MLR MLR
comp=Z,1μm,12.0s
YSS MLR MLR
comp=N,800nm,13.0s
YSS MLR MLR
comp=E,400nm,13.0s
YUK Yuzh-Kuril'sk 12.71 231 *d i*PN **Pn 01 38 02.3 -1.5**
YUK pmax pmax
comp=Z,202nm,0.6s
YUK pmax pmax
comp=N,53nm,0.6s
YUK pmax pmax
comp=E,77nm,0.6s
YUK MLR MLR
comp=Z,169nm,14.0s
YUK MLR MLR
comp=E,225nm,14.0s
ASAJ Asahikawa 14.25 238 *e*Pn **Pn 01 38 24.5 +0.6**
ASAJ Asahikawa 14.25 238 P **Pn 01 38 24.5 +0.6**
comp=E,7.1nm,0.3s,baz=64,slow=11,SNR=30
BILL Bilibino 15.45 10 *c i*P **Pn 01 38 39.1 +0.2**
BILL pmax pmax
comp=Z,145nm,1.3s
BILL MLR MLR
comp=Z,100nm,13.0s
BILL Bilibino 15.45 10 *e*Pn **Pn 01 38 39.1 +0.2**
comp=Z,121nm,0.8s
ERM Erimo 15.53 232 *e*P **Pn 01 38 36.5 -3.6**
ERM pmax pmax
comp=Z,356nm,1.9s
ERM Erimo 15.53 232 *e*Pn **Pn 01 38 36.5 -3.6**
comp=Z,356nm,1.9s
ERM Erimo 15.53 232 Pn **Pn 01 38 37.3 -2.8**
comp=Z,497nm,0.4s,SNR=11
ATKA Atka Island 15.98 82 *e*Pn **Pn 01 38 46.3 +0.7**
comp=Z,105nm,1.0s
HABR Khabarovsk 16.09 264 *e*P **Pn 01 38 44.6 -2.4**
HABR *e*S **Sn 01 41 42.2 -2.8**
HABR pmax pmax
comp=E,100nm,2.2s
HABR pmax pmax
comp=Z,83nm,1.4s
HABR pmax pmax
comp=N,45nm,1.5s
HABR MLR MLR
comp=Z,232nm,19.0s
KLR Kul'dur 17.77 269 *e*P **P 01 39 04.7 -2.3**
KLR *e*S **Sn 01 42 22.5 -3.0**
KLR pmax pmax
comp=E,85nm,1.8s
KLR pmax pmax
comp=Z,110nm,1.8s
YAK Yakutsk 18.23 311 *e*P **P 01 39 10.3 -1.6**
YAK *e*S **S 01 42 30.1 -4.8**
YAK pmax pmax
comp=Z,361nm,1.1s
YAK pmax pmax
comp=N,99nm,1.1s
YAK pmax pmax
comp=E,232nm,1.3s
YAK smax smax
comp=E,128nm,1.5s
YAK smax smax
comp=N,115nm,1.2s
GAMB Gambell 18.38 43 *e*Pn **Pn 01 39 14.8 +0.1**
comp=N,29nm,0.9s
USRK Ussuriysk Arra 20.10 255 P **P 01 39 31.8 -0.6**
comp=N,8.4nm,0.6s,baz=55,slow=13,SNR=28
USRK LR LR 01 48 59.4
comp=N,195nm,18.3s,baz=53,slow=42
CLNS Chul'man 20.12 295 *e*P **P 01 39 32.5 0.0**
CLNS *e*S **S 01 43 06.7 -6.0**
CLNS pmax pmax
comp=Z,82nm,0.8s
CLNS pmax pmax
comp=N,37nm,0.8s
CLNS pmax pmax
comp=E,59nm,0.8s
CLNS smax smax
comp=E,87nm,1.3s
CLNS smax smax
comp=N,95nm,1.9s
CLNS MLR MLR
comp=Z,213nm,13.0s
CLNS MLR MLR
comp=N,90nm,14.0s
CLNS MLR MLR
comp=E,79nm,15.0s
UNV Unalaska Valle 20.18 74 *e*P **P 01 39 32.8 -0.3**
comp=E,132nm,1.2s
TNA Tin City 20.56 40 *e*P **P 01 39 38.3 +1.2**
comp=E,62nm,0.9s
MDJ Mudanjiang 21.27 259 P **P 01 39 43.4 -1.6**
MDJ pP pP 01 39 58.0 -6.5
MDJ sP sP 01 40 07.1 -10
MDJ S **S 01 43 34.7 -0.7**
MDJ PcP **PcP 01 43 47.1 +1.7**
MDJ sS sS 01 43 59.5 -8.4
MDJ PcS **PcS 01 47 25.2 +1.7**
MDJ ScS **ScS 01 51 01.3 +4.7**
MDJ pmax pmax
comp=Z,76nm,3.9s
MDJ LR LR
comp=N,310nm,13.4s
MDJ LR LR
comp=E,320nm,8.4s
MDJ LR LR
comp=Z,290nm,10.6s
MDJ Mudanjiang 21.27 259 *e*P **P 01 39 46.5 +1.6**
comp=Z,4.9nm,0.5s
MDJ *e* 01 40 08.1
MAJO Matsushiro 22.20 231 *e*P **P 01 39 56.0 +1.2**
MAJO pmax pmax
comp=Z,48nm,0.8s
MAJO Matsushiro 22.20 231 *e*P **P 01 39 56.0 +1.2**
comp=Z,48nm,0.8s
MAT Matsushiro 22.20 231 P **P 01 39 55.9 +1.1**
MAT S **S 01 43 50.2 -2.3**
MJAR Matsushiro Arr 22.20 231 P **P 01 39 55.9 +1.0**
MJAR Matsushiro Arr 22.20 231 P **P 01 39 55.9 +1.0**
comp=Z,9.2nm,0.4s,baz=25,slow=9.8,SNR=31
TIXI Tiksi 23.02 336 *c i*P **P 01 40 01.7 -1.1**
TIXI pmax pmax
comp=Z,512nm,1.2s
CN2 Changchun 24.20 261 *e*P **P 01 40 12.0 -1.8**
CN2 *es*P sP 01 40 38.4 -10
CN2 *e*S **S 01 44 20.6 -4.0**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,300nm,17.0s
CN2 LR LR
comp=E,300nm,17.0s
CN2 LR LR
comp=Z,400nm,18.0s
HIA Hailar 25.00 278 *e*P **P 01 40 20.3 -0.7**
comp=Z,90nm,0.6s
HIA *e* 01 40 44.8
SVW2 Sparrevohn 25.28 53 *e*P **P 01 40 24.8 +1.3**
comp=Z,36nm,1.3s
KSRS Korea Array 26.84 247 P **P 01 40 38.1 +0.4**
comp=Z,7.9nm,0.9s,baz=40,slow=9.2,SNR=15
KSRS PcP **PcP 01 43 58.5 +1.0**
comp=Z,5.2nm,0.9s,baz=19,slow=2.7,SNR=9.1
KSRS LR LR 01 51 18.1
comp=Z,118nm,19.3s,baz=155,slow=36
KSAR Wonju Array Be 26.87 247 P **P 01 40 38.1 +0.1**
KSAR PcP **PcP 01 43 58.5 +0.9**
OHAK Old Harbor 26.90 62 *e*P **P 01 40 38.0 -0.1**
comp=Z,56nm,1.2s
SPU Mount Spurr 26.99 53 *e*P **P 01 40 41.0 +2.1**

KDAK Kodiak Island 27.17 61 P **P 01 40 40.2 -0.2**
KDAK Kodiak Island 27.17 61 P **P 01 40 40.2 -0.2**
comp=Z,10nm,0.8s,baz=286,slow=7.4,SNR=8.8
TRF Thorofare Moun 27.69 48 *e*P **P 01 40 45.1 -0.1**
comp=Z,13nm,0.8s
COLD Coldfoot 27.86 40 *e*P **P 01 40 46.5 0.0**
comp=Z,11nm,0.9s
MCK McKinley 28.29 47 *e*P **P 01 40 50.5 +0.1**
MCK pmax pmax
comp=Z,13nm,0.8s
MCK McKinley 28.29 47 *e*P **P 01 40 50.5 +0.1**
comp=Z,13nm,0.8s
PMR Palmer 28.35 52 *e*P **P 01 40 52.8 +1.9**
PMR pmax pmax
comp=Z,7.0nm,0.7s
PMR Palmer 28.35 52 *e*P **P 01 40 52.8 +1.9**
comp=Z,7.2nm,0.7s
JNU Nakatsue 28.53 237 *e*P **P 01 40 54.1 +1.3**
comp=Z,9.8nm,1.2s
JNU Nakatsue 28.53 237 P **P 01 40 52.2 -0.6**
comp=Z,8.5nm,0.9s,baz=34,slow=7.3,SNR=3.1
SML Sawmill 28.71 51 *e*P **P 01 40 55.2 +1.0**
SML Sawmill 28.71 51 *e*P **P 01 40 55.2 +1.0**
comp=Z,6.9nm,1.0s
COLA College 28.73 45 *e*P **P 01 40 54.6 +0.4**
COLA pmax pmax
comp=Z,17nm,0.7s
COLA College 28.73 45 *e*P **P 01 40 54.5 +0.4**
comp=Z,17nm,0.7s
ILAR Eielson Array 29.14 45 P **P 01 40 57.7 -0.2**
ILAR Eielson Array 29.14 45 P **P 01 40 57.7 -0.2**
comp=Z,18nm,0.8s,baz=265,slow=8.0,SNR=191
ILAR LR LR 01 54 41.3
comp=Z,69nm,18.6s,baz=270,slow=40
DIV Divide 30.02 52 *e*P **P 01 41 07.2 +1.4**
comp=Z,9.1nm,0.8s
DOT Dot Lake 30.46 47 *e*P **P 01 41 08.9 -0.7**
comp=Z,8.9nm,0.7s
EGAK Eagle 31.59 45 *e*P **P 01 41 19.1 -0.3**
comp=Z,32nm,0.7s
BJI Beijing 31.99 264 P **P 01 41 22.5 -0.7**
BJI S **S 01 46 26.8 -0.4**
BJI sS sS 01 46 56.2 -11
BJI pmax pmax
comp=Z,10.0nm,0.6s
BJI LR LR
comp=N,340nm,21.2s
BJI LR LR
comp=E,270nm,15.2s
BJI LR LR
comp=Z,230nm,30.1s
ULN Ulaanbaatar 33.17 283 P **P 01 41 33.4 -0.3**
SNR=11
ULN Ulaanbaatar 33.17 283 *e*P **P 01 41 33.1 -0.5**
comp=Z,23nm,0.9s
ULN Ulaanbaatar 33.17 283 P **P 01 41 33.4 -0.3**
comp=Z,26nm,0.9s,comp=Z,252nm
TLY Talaya 33.42 291 *c i*P **P 01 41 35.6 0.0**
TLY *e* 01 42 00.2
TLY *e* 01 49 29.9
TLY pmax pmax
comp=Z,60nm,1.5s
TLY MLR MLR
comp=Z,162nm,18.7s
PNL Peninsula 33.43 54 *e*P **P 01 41 36.1 +0.5**
comp=Z,28nm,0.7s
SONM Songino Array 33.57 283 P **P 01 41 36.5 -0.6**
SONM PcP **PcP 01 44 15.0 -0.2**
SONM ScP **ScP 01 47 52.5 +2.4**
SONM Songino Array 33.57 283 P **P 01 41 36.5 -0.6**
comp=Z,14nm,0.5s,baz=66,slow=7.6,SNR=58
SONM PcP **PcP 01 44 15.0 -0.2**
comp=Z,9.5nm,0.7s,baz=74,slow=2.0,SNR=14
SONM ScP **ScP 01 47 52.5 +2.4**
comp=Z,3.0nm,1.1s,baz=48,slow=2.1,SNR=5.3
SONM LR LR 01 56 57.0
comp=Z,199nm,19.4s,baz=205,slow=39
INK Inuvik 34.17 38 P **P 01 41 42.6 +0.7**
INK PcP **PcP 01 44 16.6 +0.3**
INK Inuvik 34.17 38 P **P 01 41 42.6 +0.7**
comp=Z,40nm,0.9s,baz=286,slow=7.8,SNR=56
INK PcP **PcP 01 44 16.6 +0.3**
comp=Z,4.4nm,0.6s,baz=311,slow=1.6,SNR=4.5
INK LR LR 01 56 45.2
comp=Z,117nm,20.2s,baz=294,slow=38
ZAK Zakamensk 34.19 289 *e*P **P 01 41 42.1 -0.3**
ZAK *e* 01 42 06.9
ZAK *e* 01 42 17.5
ZAK *e* 01 44 17.1
ZAK pmax pmax
comp=Z,19nm,1.3s
HHC Hu-ho-hao-te 34.28 269 *e*P **P 01 41 40.6 -2.7**
HHC pP pP 01 41 58.9 -7.3
HHC sP sP 01 42 07.8 -10
HHC PP **PnPn 01 42 56.5 -4.4**
HHC S **S 01 46 59.5 -3.3**
HHC sS sS 01 47 30.4 -12
HHC pmax pmax
comp=Z,41nm,0.7s
HHC pmax pmax
comp=Z,130nm,5.9s
HHC LR LR
comp=N,600nm,14.8s
HHC LR LR
comp=E,540nm,12.8s
HHC LR LR
comp=Z,650nm,12.1s
MOY Mondy 34.92 292 *e*P **P 01 41 48.5 -0.2**
MOY pmax pmax
comp=Z,48nm,1.4s
JOW Kunigami 34.95 234 *e*P **P 01 41 50.6 +1.5**
comp=Z,13nm,0.4s
SKAG Skagway 35.46 53 *e*P **P 01 41 55.6 +2.5**
comp=Z,35nm,0.8s
NJ2 Nanjing 35.88 251 *e*P **P 01 41 57.2 +0.3**
NJ2 pP pP 01 42 13.0 -7.0
NJ2 sP sP 01 42 22.0 -10
NJ2 PP **PP 01 43 19.0 -1.3**
NJ2 sS **ScP 01 47 58.0 -0.4**
NJ2 pmax pmax
comp=Z,20nm,0.5s
NJ2 pmax pmax
comp=Z,40nm,6.2s
NJ2 LR LR
comp=N,230nm,13.0s
NJ2 LR LR
comp=E,100nm,11.5s
KRAR Krasnoyarsk 37.46 302 *e*P **P 01 42 09.1 -0.9**
KRAR pmax pmax
comp=Z,62nm,0.7s
DLBC Dease Lake 38.40 53 *e*P **P 01 42 19.0 +1.0**
HVS Khovu-Aksy 39.22 295 *c i*P **P 01 42 24.3 -0.7**
HVS pmax pmax
comp=Z,125nm,1.3s
LZH Lanzhou 41.98 269 *e*P **P 01 42 48.7 +0.8**
LZH pP pP 01 43 04.6 -6.9
LZH sP sP 01 43 14.0 -9.1
LZH PP **PP 01 44 29.0 +2.2**
LZH PcP **PcP 01 44 42.9 +1.6**
LZH *e*S **S 01 48 56.2 -2.8**
LZH sS sS 01 49 27.5 -12
LZH SS SS 01 52 01.6 -7.7
LZH ScS **ScS 01 52 41.1 +1.2**
LZH pmax pmax
comp=Z,54nm,1.4s
LZH pmax pmax
comp=Z,110nm,4.0s
LZH LR LR
comp=N,1μm,11.9s
LZH LR LR
comp=E,1μm,12.0s
LZH LR LR
comp=Z,1μm,13.3s
GTA Gaotai 42.26 276 *e*P **P 01 42 50.1 -0.1**
GTA pP **pP 01 43 09.0 -4.8**
GTA sP sP 01 43 16.4 -8.9
GTA PcP **PcP 01 44 43.1 +1.0**
GTA ScP **ScP 01 48 25.6 +2.5**
GTA PcS **PcS 01 48 32.0 -2.2**
GTA S **S 01 49 06.1 +3.1**
GTA sS sS 01 49 38.4 -5.3
GTA SS **SS 01 52 12.3 -2.4**
GTA ScS **ScS 01 52 41.1 -0.3**
GTA pmax pmax
comp=Z,32nm,1.0s

GTA pmax pmax
comp=Z,150nm,4.8s
GTA LR LR
comp=N,300nm,15.7s
GTA LR LR
comp=E,280nm,26.6s
GTA LR LR
comp=Z,300nm,16.2s
ZALV Zalesovo Beam 42.53 302 P **P 01 42 50.2 -1.7**
ZALV 01 44 41.1
ZALV pmax pmax
comp=Z,16nm,0.7s
ZALV MLR MLR
comp=Z,139nm,19.1s
ZALV Zalesovo Beam 42.53 302 P **P 01 42 50.2 -1.7**
ZALV PcP **PcP 01 44 41.0 -1.5**
ZALV Zalesovo Beam 42.53 302 P **P 01 42 50.2 -1.7**
comp=Z,16nm,0.7s,baz=58,slow=7.4,SNR=75
ZALV PcP **PcP 01 44 41.1 -1.5**
comp=Z,10.0nm,0.9s,baz=76,slow=3.2,SNR=5.9
ZALV LR LR 02 02 14.4
comp=Z,139nm,19.1s,baz=250,slow=38
NVS Novosibirsk 42.87 304⇑ *i*P **P 01 42 52.4 -2.3**
NVS *e* 01 43 18.4
NVS *e* 01 44 32.6
NVS *e*S S 01 49 04.6 -6.8
NVS pmax pmax
comp=E,103nm,1.1s
NVS pmax pmax
comp=Z,191nm,1.1s
NVS pmax pmax
comp=N,42nm,1.0s
NVS smax smax
comp=E,27nm,1.7s
ALE Alert 43.07 7 P **P 01 42 57.0 +1.0**
comp=E,618nm,0.6s,SNR=38
YKA Yellowknife Ar 43.48 42 P **P 01 43 00.2 +0.7**
YKA pP **pP 01 43 23.2 -0.1**
YKA Yellowknife Ar 43.48 42 P **P 01 43 00.2 +0.7**
comp=E,12nm,0.7s,baz=300,slow=8.0,SNR=60
YKA pP **pP 01 43 23.2 -0.1**
comp=E,7.9nm,0.9s,baz=300,slow=8.1,SNR=5.0
KIP Kipapa 45.20 118 *e*P **P 01 43 12.2 -1.5**
KIP pmax pmax
comp=Z,49nm,1.7s
CD2 Chengdu 45.60 264 *e*P **P 01 43 16.2 -0.6**
CD2 pP pP 01 43 34.0 -6.7
CD2 sP sP 01 43 42.3 -10
CD2 PcP **PcP 01 44 54.6 +1.1**
CD2 PP **PP 01 45 03.4 -1.9**
CD2 S **S 01 49 50.4 -1.1**
CD2 sS sS 01 50 21.5 -11
CD2 ScS **ScS 01 53 01.6 -1.0**
CD2 SS SS 01 53 06.9 -10
CD2 pmax pmax
comp=Z,30nm,1.0s
CD2 pmax pmax
comp=Z,100nm,6.8s
CD2 LR LR
comp=N,290nm,19.0s
CD2 LR LR
comp=E,440nm,15.5s
CD2 LR LR
comp=Z,160nm,13.2s
WMQ Urumqi 46.66 289 P **P 01 43 25.1 +0.1**
WMQ pP pP 01 43 43.5 -5.5
WMQ sP sP 01 43 52.0 -8.5
WMQ PP **PP 01 45 14.0 -1.8**
WMQ S **S 01 50 07.0 +0.5**
WMQ sS sS 01 50 39.0 -8.8
WMQ ScS **ScS 01 53 10.0 +0.8**
WMQ pmax pmax
comp=Z,43nm,1.3s
WMQ pmax pmax
comp=Z,190nm,4.6s
WMQ LR LR
comp=N,410nm,16.0s
WMQ LR LR
comp=E,600nm,13.3s
WMQ LR LR
comp=Z,530nm,20.7s
KBS Kingsbay 46.93 352 *c i*P **P 01 43 27.5 +0.9**
KBS pmax pmax
comp=Z,130nm,1.2s
KBS Kingsbay 46.93 352 *e*P **P 01 43 25.5 -1.1**
comp=Z,56nm,0.8s
GYA Guiyang 47.12 257 P **P 01 43 28.9 0.0**
GYA pP pP 01 43 47.6 -5.3
GYA sP sP 01 43 55.4 -9.0
GYA PP **PP 01 45 19.0 -1.4**
GYA ScP **ScP 01 48 46.7 +3.4**
GYA PcS **PcS 01 48 56.1 +1.5**
GYA S **S 01 50 12.3 -1.2**
GYA sS sS 01 50 45.6 -9.3
GYA SS **SS 01 53 35.5 -6.1**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,630nm,17.5s
GYA LR LR
comp=E,510nm,18.0s
GYA LR LR
comp=Z,640nm,17.9s
SPITS Spitsbergen Ar 47.18 350 P **P 01 43 28.7 +0.2**
SPITS Spitsbergen Ar 47.18 350 P **P 01 43 28.7 +0.2**
comp=Z,46nm,0.4s,baz=42,slow=6.1,SNR=480
NLWA Neilton Lookou 47.20 64 *e*P **P 01 43 31.1 +1.9**
comp=Z,24nm,1.0s
KURK Kurchatov 47.48 302 P **P 01 43 30.8 -0.4**
KURK *PP **pP 01 43 56.4 +1.2**
KURK 01 44 59.6
KURK S **S 01 50 14.9 -2.9**
KURK pmax pmax
comp=Z,53nm,0.7s
KURK smax smax
comp=N,2.0nm,1.0s
KURK Kurchatov 47.48 302 P **P 01 43 30.8 -0.4**
KURK pP **pP 01 43 56.4 +1.2**
KURK PcP **PcP 01 44 59.6 -0.1**
KURK S **S 01 50 14.9 -2.9**
KURK Kurchatov 47.48 302 P **P 01 43 29.1 -2.1**
comp=N,677nm,0.7s
CMW Cultus Mountai 47.53 62 P **P 01 43 33.4 +1.7**
KURBB Kurchatov Arra 47.58 302 P **P 01 43 30.8 -1.2**
comp=N,53nm,0.7s,baz=57,slow=7.8,SNR=379
KURBB pP **pP 01 43 56.4 +0.4**
comp=N,13nm,0.7s,baz=55,slow=8.6,SNR=2.9
KURBB PcP **PcP 01 44 59.6 -0.5**
comp=N,6.4nm,0.8s,baz=51,slow=4.0,SNR=4.3
KURBB S **S 01 50 14.9 -4.3**
comp=N,1.7nm,1.0s,baz=62,slow=14,SNR=4.9
MK31 Makanchi Array 47.87 295 *i*P **P 01 43 32.7 -1.6**
MK31 pmax pmax
comp=Z,40nm,0.5s
MKAR Makanchi Array 47.87 295 P **P 01 43 33.0 -1.4**
MKAR pmax pmax
comp=Z,29nm,0.5s
MKAR MLR MLR
comp=Z,63nm,19.5s
MKAR Makanchi Array 47.87 295 P **P 01 43 33.0 -1.4**
MKAR Makanchi Array 47.87 295 P **P 01 43 33.0 -1.4**
comp=Z,29nm,0.5s,baz=57,slow=7.3,SNR=552
MKAR LR LR 02 06 04.5
comp=Z,63nm,19.5s,baz=275,slow=39
RCM Mount Rainier- 48.70 64 P **P 01 43 43.0 +1.9**
LON Longmire 48.71 64 *e*P **P 01 43 41.9 +1.1**
LON pmax pmax
comp=Z,14nm,1.3s
LON Longmire 48.71 64 *e*P **P 01 43 41.9 +1.1**
comp=Z,14nm,1.3s
TBM Table Mountain 49.11 63 P **P 01 43 44.8 +1.0**
RNO Roman Nose 49.42 68 P **P 01 43 48.3 +2.1**
TRW Toppenish Ridg 49.68 64 P **P 01 43 49.9 +1.7**
KEBM Edson Butte 49.74 69 *e*P **P 01 43 47.9 -0.9**
comp=Z,20nm,0.9s
BROR Big Rock Looko 49.91 67 P **P 01 43 51.5 +1.6**
OD2 Odessa Site #2 49.98 61 P **P 01 43 51.0 +0.6**
HAWA Hanford 50.16 63 *e*P **P 01 43 52.4 +0.6**
comp=Z,17nm,1.1s
BVA0 Borovoye Array 50.17 308 *i*P **P 01 43 50.4 -1.3**
BVA0 pmax pmax
comp=Z,23nm,0.7s
BVAR Borovoye Array 50.17 308 P **P 01 43 50.5 -1.3**

BVAR *PP **pP** 01 44 16.1 +0.1
BVAR 01 45 09.2
BVAR pmax pmax
comp=Z,20nm,0.4s
BVAR MLR MLR
comp=Z,147nm,18.4s
BVAR Borovoye Array 50.17 308 P **P** **01 43 50.5 -1.3**
BVAR pP **pP** **01 44 16.1 +0.1**
BVAR PcP **PcP** **01 45 09.2 -0.3**
BVAR Borovoye Array 50.17 308 P **P** **01 43 50.5 -1.3**
comp=Z,20nm,0.4s,baz=61,slow=7.7,SNR=124
BVAR pP **pP** **01 44 16.1 +0.1**
comp=Z,15nm,0.8s,baz=42,slow=7.2,SNR=4.3
BVAR PcP **PcP** **01 45 09.2 -0.3**
comp=Z,4.4nm,0.5s,baz=65,slow=3.6,SNR=3.5
BVAR LR LR 02 09 50.2
comp=Z,147nm,18.4s,baz=68,slow=42
BRVK Borovoye 50.20 308 *eP* **P** **01 43 50.8 -1.1**
BRVK pmax pmax
comp=Z,25nm,0.6s
BRVK Borovoye 50.20 308 *eP* **P** **01 43 50.8 -1.1**
comp=Z,25nm,0.6s
BRVK Borovoye 50.20 308 P **P** **01 43 50.3 -1.6**
comp=Z,255nm,0.5s,SNR=16
NEW Newport 50.27 60 *eP* **P** **01 43 53.5 +0.9**
comp=Z,11nm,0.9s
NEW Newport 50.27 60 ⇑P **P** **01 43 53.2 +0.6**
baz=50,SNR=7.2
KMI Kunming 50.45 259 P **P** **01 43 55.1 +0.7**
KMI S **S** **01 50 59.4 -1.0**
KMI pmax pmax
comp=Z,8.0nm,0.8s
KMI pmax pmax
comp=Z,48nm,3.8s
KMI LR LR
comp=N,160nm,22.8s
KMI LR LR
comp=E,140nm,24.1s
KMI LR LR
comp=Z,120nm,32.5s
DAG Danmarks Havn 50.51 359 ⇑*iP* **P** **01 43 54.1 +0.2**
DAG pmax pmax
comp=Z,81nm,0.8s
DAG Danmarks Havn 50.51 359 ⇑*iP* **P** **01 43 54.1 +0.2**
comp=Z,109nm,0.8s
HUMO Hull Mountain 50.69 69 *eP* **P** **01 43 57.6 +1.8**
comp=Z,30nm,1.4s
VIPM Ingram Point 50.77 65 P **P** **01 43 57.9 +1.3**
VIPM Ingram Point 50.77 65 P **P** **01 43 57.9 +1.3**
KRMB Red Mountain 50.85 70 *eP* **P** **01 43 58.9 +1.7**
comp=Z,4.4nm,0.8s
C11A Tepee Creek (N 50.99 60 ⇑P **P** **01 43 58.7 +0.7**
baz=51
A13A Flathead Natio 51.24 58 ⇑P **P** **01 44 00.8 +0.8**
baz=51
KHMM Horse Mountain 51.38 71 *eP* **P** **01 44 03.5 +2.3**
comp=Z,52nm,1.3s
YBH Yreka Blue Hor 51.40 69 *eP* **P** **01 44 03.7 +2.5**
comp=Z,18nm,0.9s
WALA Waterton Lakes 51.42 57 *eP* **P** **01 44 02.1 +0.7**
comp=Z,0.5nm,0.8s
B13A Whitefish 51.57 58 ⇑P **P** **01 44 03.1 +0.7**
baz=51,SNR=12
A14A Double T Ranch 51.72 57 ⇑P **P** **01 44 03.8 +0.2**
baz=52,SNR=5.9
BSMT Bassoo Peak 51.74 59 *eP* **P** **01 44 05.0 +1.2**
comp=Z,36nm,0.8s
SOKR Solikamsk 51.81 321 *c iP* **P** **01 44 03.3 -0.6**
SOKR *PP **pP** **01 44 30.5 +2.2**
SOKR pmax pmax
comp=Z,50nm,1.4s
SOKR MLR MLR
comp=Z,180nm,13.0s
BLMT Blacktail Moun 51.86 58 *eP* **P** **01 44 05.9 +1.2**
comp=Z,23nm,0.9s
C13A Hot Springs 51.96 59 ⇓P **P** **01 44 06.1 +0.7**
baz=52,SNR=8.5
A15A Johnson Ranch, 52.07 57 ⇓P **P** **01 44 06.1 -0.1**
baz=52
JTMT Jette 52.07 59 *eP* **P** **01 44 07.4 +1.2**
comp=Z,15nm,0.9s
SVE Sverdlovsk 52.10 316 ⇑*iP* **P** **01 44 05.8 -0.3**
SVE *e* 01 46 05.1
SVE pmax pmax
comp=Z,37nm,1.6s
SVE MLR MLR
comp=Z,351nm,20.0s
YBMT Yellow Bay 52.14 58 *eP* **P** **01 44 07.8 +1.2**
comp=Z,10nm,0.8s
B14A Marquette Ranc 52.19 57 ⇓P **P** **01 44 07.5 +0.4**
baz=52,SNR=5.7
KIPM Iron Peak 52.23 72 *eP* **P** **01 44 09.9 +2.5**
comp=Z,72nm,1.9s
WDC Whiskeytown Da 52.25 70 *eP* **P** **01 44 09.5 +2.0**
WDC pmax pmax
comp=Z,16nm,1.0s
WDC Whiskeytown Da 52.25 70 *eP* **P** **01 44 09.5 +2.0**
comp=Z,16nm,1.0s
C14A Swan Lake 52.33 58 ⇑P **P** **01 44 08.8 +0.7**
baz=52
BMO Blue Mountains 52.35 63 *eP* **P** **01 44 09.1 +0.9**
comp=Z,5.7nm,0.8s
SWMT Swartz Lake 52.37 59 *eP* **P** **01 44 09.6 +1.2**
comp=Z,9.0nm,0.9s
D13A Huson 52.40 59 ⇑P **P** **01 44 09.0 +0.4**
baz=52
B15A Bradely Ranch, 52.59 57 ⇓P **P** **01 44 09.9 0.0**
baz=52,SNR=8.8
LVZ Lovozero 52.65 337 *c iP* **P** **01 44 09.3 -0.8**
LVZ pmax pmax
comp=Z,60nm,1.2s
LVZ Lovozero 52.65 337 P **P** **01 44 09.0 -1.1**
comp=Z,332nm,1.3s,SNR=8.0
A16A West Butte Ran 52.66 56 ⇓P **P** **01 44 10.7 +0.2**
baz=52
KEV Kevo 52.80 341 *eP* **P** **01 44 10.5 -0.6**
KEV pmax pmax
comp=Z,25nm,1.0s
KEV Kevo 52.80 341 *ep* **P** **01 44 10.3 -0.7**
KEV Kevo 52.80 341 *eP* **P** **01 44 10.4 -0.6**
comp=Z,25nm,1.0s
SLMT Seeley Lake 52.81 59 *eP* **P** **01 44 12.9 +1.2**
comp=Z,22nm,0.8s
MSO Missoula 52.84 59 *eP* **P** **01 44 12.3 +0.4**
comp=Z,9.6nm,1.1s
MSO Missoula 52.84 59 ⇓P **P** **01 44 12.5 +0.6**
baz=53,SNR=7.4
F12A Elk City 52.86 61 ⇑P **P** **01 44 12.8 +0.7**
baz=53,SNR=10
D14A Greenough 52.90 59 ⇓P **P** **01 44 12.9 +0.5**
baz=53,SNR=17
C15A Salmond Ranch, 52.91 58 ⇑P **P** **01 44 13.2 +0.8**
baz=53,SNR=26
B16A M & M Farms, S 52.95 57 ⇓P **P** **01 44 12.6 0.0**
baz=53,SNR=5.9
HOPS Hopland 53.01 72 *eP* **P** **01 44 15.2 +2.2**
comp=Z,44nm,1.5s
A17A Triple J Farms 53.11 56 ⇓P **P** **01 44 14.0 +0.2**
baz=53,SNR=10.0
CHMT Chamberlain Mo 53.15 59 *eP* **P** **01 44 14.8 +0.6**
comp=Z,4.5nm,0.8s
APA Apatity 53.21 337 ⇑*iP* **P** **01 44 13.7 -0.4**
APA *i* 01 44 37.0
APA *i* 01 44 42.0
APA pmax pmax
comp=Z,64nm,1.3s
APA MLR MLR
comp=Z,300nm,22.0s
WVOR Wild Horse Val 53.22 66 *eP* **P** **01 44 16.3 +1.6**
WVOR pmax pmax
comp=Z,18nm,1.1s
WVOR Wild Horse Val 53.22 66 *eP* **P** **01 44 16.3 +1.6**
comp=Z,18nm,1.1s
ARU Arti 53.23 317 *c iP* **P** **01 44 13.1 -1.3**
ARU *PP **pP** **01 44 39.3 +0.4**
ARU 01 45 19.8
ARU 01 46 10.9
ARU PPP PPP 01 47 20.1
ARU S **S** **01 51 37.5 +0.3**
ARU SS **SS** **01 55 10.6 -6.8**
ARU SSS SSS 01 57 07.5
ARU pmax pmax
comp=Z,68nm,1.7s
ARU MLR MLR
comp=Z,160nm,20.0s
ARU Arti 53.23 317 P **P** **01 44 13.7 -0.7**
comp=Z,344nm,0.4s,SNR=17

G12A Big Creek, Yel 53.23 62 ⇑P **P** **01 44 15.4 +0.5**
baz=53
ARCES ARCESS Array B 53.27 342 P **P** **01 44 14.0 -0.6**
ARCES PcP **PcP** **01 45 21.4 +0.5**
ARCES ARCESS Array B 53.27 342 P **P** **01 44 14.0 -0.6**
comp=Z,47nm,1.0s,baz=40,slow=8.5,SNR=118
ARCES PcP **PcP** **01 45 21.4 +0.5**
comp=Z,4.6nm,0.5s,baz=38,slow=4.6,SNR=4.5
ARCES LR LR 02 09 46.0
comp=Z,70nm,22.0s,baz=27,slow=39
F13A Darby 53.32 61 ⇑P **P** **01 44 15.8 +0.3**
baz=53
C16A Fuhringer Ranc 53.34 57 ⇑P **P** **01 44 16.0 +0.5**
baz=53
E14A Clinton 53.35 59 ⇑P **P** **01 44 16.2 +0.6**
baz=53,SNR=6.4
FFC Flin Flon 53.36 46 *i* P **P** **01 44 16.1 +0.7**
FFC Flin Flon 53.36 46 *eP* **P** **01 44 15.9 +0.6**
comp=Z,14nm,0.8s
FFC Flin Flon 53.36 46 P **P** **01 44 16.3 +0.9**
comp=Z,116nm,0.7s,SNR=11
D15A Lincoln 53.44 58 ⇑P **P** **01 44 17.0 +0.7**
baz=53
B17A L&G Farms, Che 53.49 56 ⇑P **P** **01 44 17.0 +0.5**
baz=53
A18A Metzger Ranch, 53.55 55 ⇓P **P** **01 44 17.2 +0.2**
baz=53
E15A Deer Lodge 53.78 59 ⇑P **P** **01 44 19.6 +0.8**
baz=54,SNR=8.0
F14A Wisdom 53.81 60 ⇑P **P** **01 44 19.6 +0.5**
baz=54
H12A Diamond D Ranc 53.87 62 ⇑P **P** **01 44 19.9 +0.4**
baz=54
B18A Beardsley Farm 53.93 56 ⇓P **P** **01 44 20.4 +0.6**
baz=54,SNR=14
C17A Wharram Farm, 53.94 57 ⇓P **P** **01 44 20.2 +0.3**
baz=54,SNR=17
D16A Dana Ranch, Ca 53.94 58 ⇓P **P** **01 44 20.8 +0.8**
baz=54,SNR=8.7
BEKR Beckworth 53.97 70 *eP* **P** **01 44 21.9 +1.5**
comp=Z,17nm,1.0s
TKM2 Tokmak 2 54.01 295 *eP* **P** **01 44 19.8 -0.8**
TKM2 pmax pmax
comp=Z,45nm,1.3s
TKM2 Tokmak 2 54.01 295 *eP* **P** **01 44 19.8 -0.8**
comp=Z,44nm,1.3s
TKM2 Tokmak 2 54.01 295 P **P** **01 44 19.7 -0.9**
SNR=17
LSA Lhasa 54.07 273 P **P** **01 44 21.6 +0.1**
LSA Lhasa 54.07 273 *eP* **P** **01 44 21.7 +0.2**
LSA pmax pmax
comp=Z,23nm,0.8s
LSA Lhasa 54.07 273 *eP* **P** **01 44 21.7 +0.2**
comp=Z,23nm,0.8s
A19A Klindworth Far 54.09 54 ⇓P **P** **01 44 21.5 +0.6**
baz=54,SNR=8.2
MFID Camas Ranch 54.10 64 *eP* **P** **01 44 22.5 +1.4**
comp=Z,3.7nm,0.7s
MFID Camas Ranch 54.10 64 ⇓P **P** **01 44 22.1 +0.9**
baz=54,SNR=5.6
ULHL Ulahol 54.10 294 P **P** **01 44 21.0 -0.3**
SNR=15
SUMG Summit 54.10 7 ⇑*iP* **P** **01 44 22.0 +0.9**
SUMG pmax pmax
comp=Z,200nm,1.1s
SUMG Summit 54.10 7 *eP* **P** **01 44 21.9 +0.9**
comp=Z,369nm,1.1s
SUMG Summit 54.10 7 ⇑*iP* **P** **01 44 22.0 +0.9**
comp=Z,202nm,1.1s
KTK1 Kautokeino 54.15 342 *eP* **P** **01 44 20.6 -0.3**
KTK1 AMB AMB 01 44 23.4
comp=Z,758nm,1.2s
EGMT Eagleton 54.19 56 *eP* **P** **01 44 22.5 +0.8**
comp=Z,13nm,0.9s
E16A East Helena 54.21 58 ⇓P **P** **01 44 23.1 +1.2**
baz=54
I12A Atlanta 54.22 63 ⇓P **P** **01 44 22.9 +0.8**
baz=54
F15A Butte 54.25 59 ⇓P **P** **01 44 22.9 +0.6**
baz=54,SNR=6.8
LRM Limekiln Ridge 54.28 59 *eP* **P** **01 44 23.4 +0.9**
comp=Z,53nm,0.9s
D17A Six Diamond Ra 54.30 57 ⇑P **P** **01 44 23.2 +0.6**
baz=54,SNR=15
B19A Brinkman Farms 54.31 55 ⇓P **P** **01 44 23.1 +0.6**
baz=54
TRO Tromso 54.36 344 *eP* **P** **01 44 22.0 -0.4**
USP Ospenovka 54.37 296 P **P** **01 44 22.4 -0.6**
SNR=40
CHMS Chumysh 54.41 296 P **P** **01 44 22.7 -0.6**
SNR=14
DLMT Dillon 54.52 60 *eP* **P** **01 44 24.8 +0.7**
comp=Z,12nm,1.2s
A20A Cobblestone Ra 54.52 54 ⇓P **P** **01 44 24.7 +0.6**
baz=54
KBK Karagaybulak 54.54 296 P **P** **01 44 23.9 -0.5**
SNR=15
E17A Martinsdale 54.68 58 ⇓P **P** **01 44 26.6 +1.2**
baz=54,SNR=11
C19A Slack Wire Ran 54.74 56 ⇑P **P** **01 44 26.6 +1.0**
baz=54,SNR=12
MCMT McKenzie Canyo 54.74 61 *eP* **P** **01 44 26.6 +0.7**
comp=Z,2.7nm,0.7s
KZA Kyzart 54.76 295 P **P** **01 44 25.9 -0.4**
SNR=12
HLID Hailey 54.76 63 *eP* **P** **01 44 27.5 +1.5**
comp=Z,10nm,1.2s
HLID Hailey 54.76 63 ⇑P **P** **01 44 26.9 +0.9**
baz=55,SNR=6.0
B20A Solberg Farm, 54.77 55 ⇑P **P** **01 44 26.5 +0.7**
baz=55,SNR=9.9
AAK Ala-Archa 54.80 296 *eP* **P** **01 44 25.6 -0.6**
AAK pmax pmax
comp=Z,116nm,1.4s
AAK Ala-Archa 54.80 296 *eP* **P** **01 44 25.6 -0.6**
comp=Z,116nm,1.4s
AAK Ala-Archa 54.80 296 P **P** **01 44 25.7 -0.6**
SNR=18
AAK Ala-Archa 54.80 296 P **P** **01 44 25.1 -1.1**
comp=Z,209nm,0.8s,SNR=12
BOZ Bozeman (W) 54.83 59 *eP* **P** **01 44 27.8 +1.4**
BOZ pmax pmax
comp=Z,7.0nm,0.8s
BOZ Bozeman (W) 54.83 59 *eP* **P** **01 44 27.8 +1.4**
comp=Z,7.2nm,0.8s
A21A Bergtoll Ranch 54.94 53 ⇓P **P** **01 44 28.0 +1.0**
baz=55
I14A Mackay 55.03 62 ⇑P **P** **01 44 29.2 +1.3**
baz=55,SNR=11
E18A Harlowton 55.09 57 ⇑P **P** **01 44 29.5 +1.3**
baz=55,SNR=8.7
F17A Fitzpatrick Pl 55.16 58 ⇓P **P** **01 44 29.9 +1.2**
baz=55,SNR=5.8
EKS2 Erkin-Say 55.17 296 *eP* **P** **01 44 28.2 -0.7**
EKS2 pmax pmax
comp=Z,96nm,1.3s
EKS2 Erkin-Say 55.17 296 *eP* **P** **01 44 28.2 -0.7**
comp=Z,96nm,1.3s
EKS2 Erkin-Say 55.17 296 P **P** **01 44 28.4 -0.5**
SNR=28
CMB Columbia Colle 55.20 71 *eP* **P** **01 44 31.0 +1.9**
CMB pmax pmax
comp=Z,31nm,1.2s
CMB Columbia Colle 55.20 71 *eP* **P** **01 44 31.0 +1.9**
comp=Z,31nm,1.2s
C20A Veseth Ranch, 55.27 55 ⇓P **P** **01 44 30.4 +1.0**
baz=55,SNR=13
B21A Ellsworth Farm 55.27 54 ⇓P **P** **01 44 30.0 +0.6**
baz=55
BMN Battle Mountai 55.35 67 *eP* **P** **01 44 31.8 +1.6**
BMN pmax pmax
comp=Z,30nm,1.2s
BMN Battle Mountai 55.35 67 *eP* **P** **01 44 31.8 +1.6**
comp=Z,30nm,1.2s
A22A Carney Farms, 55.42 53 ⇓P **P** **01 44 31.2 +0.7**
baz=55,SNR=9.9
SAO San Andreas Ge 55.47 73 *eP* **P** **01 44 30.6 -0.3**
SAO pmax pmax
comp=Z,29nm,1.4s
SAO San Andreas Ge 55.47 73 *eP* **P** **01 44 30.6 -0.3**
comp=Z,29nm,1.4s
QLMT Earthquake Lak 55.48 60 *eP* **P** **01 44 33.0 +1.8**
comp=Z,1.5nm,0.8s
G17A Pierce Place, 55.51 59 ⇑P **P** **01 44 32.5 +1.2**
baz=55
AML Almayashu 55.58 296 P **P** **01 44 31.9 -0.2**
SNR=15
D20A Manuel Ranch, 55.63 56 ⇑P **P** **01 44 33.2 +1.1**
baz=55,SNR=7.7
F18A Big Timber 55.64 58 ⇑P **P** **01 44 33.5 +1.3**
baz=55,SNR=18
C21A Desert Coulee 55.64 55 ⇓P **P** **01 44 33.1 +1.0**
baz=55
H16A Russell Place, 55.67 60 ⇓P **P** **01 44 33.8 +1.3**
baz=56
E19A Rath Farm, Rou 55.73 57 ⇑P **P** **01 44 33.8 +1.1**
baz=56,SNR=8.3
B22A Reddig Ranch S 55.86 54 ⇓P **P** **01 44 34.3 +0.7**
baz=56
A23A Redstone 55.95 52 ⇓P **P** **01 44 35.0 +0.8**
baz=56
JMIC Jan Mayen 56.03 355 P **P** **01 44 35.4 +1.0**
JMIC Jan Mayen 56.03 355 P **P** **01 44 35.4 +1.0**
comp=Z,116nm,0.8s,baz=28,slow=5.0,SNR=10
E20A Meyer Farm, Mu 56.03 56 ⇑P **P** **01 44 36.2 +1.3**
baz=56,SNR=7.6
YFT Old Faithful 56.05 60 *eP* **P** **01 44 38.3 +3.0**
comp=Z,15nm,0.7s
F19A Roth Farm, Mol 56.07 57 ⇑P **P** **01 44 36.4 +1.1**
baz=56
I16A Newdale 56.11 61 ⇓P **P** **01 44 37.1 +1.5**
baz=56,SNR=6.9
KSH Kashi 56.11 292 *eP* **P** **01 44 38.6 +3.0**
KSH *epP* **pP** **01 44 57.5 -2.9**
KSH *esP* sP 01 45 06.1 -5.6
KSH *ePcP* **PcP** **01 45 34.6 +2.2**
KSH *ePP* PP 01 46 46.6 +5.3
KSH *eS* **S** **01 52 18.4 +1.8**
KSH *es*S **sS** **01 52 55.6 -3.4**
KSH pmax pmax
comp=Z,28nm,0.7s
KSH LR LR
comp=N,510nm,4.1s
KSH LR LR
comp=E,440nm,5.2s
KSH LR LR
comp=Z,250nm,5.8s
NVAR Mina Array Bea 56.12 70 P **P** **01 44 37.6 +1.8**
NVAR Mina Array Bea 56.12 70 P **P** **01 44 37.6 +1.8**
comp=Z,14nm,1.0s,baz=301,slow=7.3,SNR=66
G18A Lazy EL Ranch, 56.12 58 ⇑P **P** **01 44 36.6 +1.0**
baz=56
NV11 Mina Array Sit 56.20 70 *eP* **P** **01 44 38.0 +1.7**
D21A La Casta Ranch 56.22 55 ⇓P **P** **01 44 37.3 +1.1**
baz=56,SNR=8.7
ELK Elko 56.23 66 *eP* **P** **01 44 38.4 +1.7**
comp=Z,5.6nm,0.9s
C22A Vida 56.30 54 ⇓P **P** **01 44 37.4 +0.7**
baz=56,SNR=7.1
IMW Indian Meadow 56.38 60 *eP* **P** **01 44 39.5 +1.8**
comp=Z,8.1nm,0.9s
A24A Westby 56.39 52 ⇓P **P** **01 44 38.0 +0.7**
baz=56
RLMT Red Lodge 56.41 58 *eP* **P** **01 44 39.5 +1.7**
comp=Z,26nm,0.9s
H18A Shoshone NF, C 56.51 59 ⇑P **P** **01 44 39.6 +1.1**
baz=56,SNR=6.5
E21A Keefer Ranch, 56.54 56 ⇓P **P** **01 44 40.0 +1.5**
baz=56
UBPT Khong Chiam 56.54 249 P **P** **01 44 40.4 +1.7**
comp=Z,43nm,1.2s
RRI2 Red Ridge 56.56 61 *eP* **P** **01 44 40.9 +2.0**
comp=Z,6.4nm,0.8s
D22A Cohagen 56.56 55 ⇑P **P** **01 44 39.7 +1.0**
baz=56,SNR=8.0
MOOW Moose Ponds 56.58 60 *eP* **P** **01 44 41.0 +1.9**
comp=Z,8.7nm,1.2s
C23A Lambert 56.60 54 ⇑P **P** **01 44 40.0 +1.1**
baz=56,SNR=5.9
DGMT Dagmar 56.61 52 ⇑P **P** **01 44 39.8 +0.9**
baz=56
KK31 Karatay Array 56.62 299 *i* P **P** **01 44 37.9 -1.1**
KK31 pmax pmax
comp=Z,49nm,1.0s
KKAR Karatay Array 56.62 299 *eP* **P** **01 44 38.0 -1.0**
KKAR pmax pmax
comp=Z,28nm,0.8s
KKAR Karatay Array 56.62 299 *eP* **P** **01 44 38.0 -1.0**
comp=Z,28nm,0.8s
TPAW Teton Pass 56.65 61 *eP* **P** **01 44 41.9 +2.2**
comp=Z,19nm,1.2s
LOHW Long Hollow 56.75 60 *eP* **P** **01 44 42.1 +1.9**
comp=Z,16nm,1.1s
SNOW Snow King Moun 56.78 61 *eP* **P** **01 44 43.2 +2.8**
comp=Z,10nm,0.8s
SCO Scoresbysund 56.83 1 ⇑*iP* **P** **01 44 41.0 +0.9**
SCO pmax pmax
comp=Z,25nm,0.9s
SCO Scoresbysund 56.83 1 ⇑*iP* **P** **01 44 41.0 +0.9**
comp=Z,25nm,0.9s
KLMR Klimovskoe 56.86 330 *c iP* **P** **01 44 40.3 -0.1**
KLMR pmax pmax
comp=Z,175nm,1.8s
H19A Powell 56.86 58 ⇑P **P** **01 44 42.3 +1.4**
baz=57
G20A Bridger 56.88 57 ⇑P **P** **01 44 41.9 +0.9**
baz=57,SNR=14
AHID Auburn Hatcher 57.08 61 *eP* **P** **01 44 44.4 +1.8**
comp=Z,61nm,0.6s
I18A Diamond G Ranc 57.10 60 ⇑P **P** **01 44 44.8 +2.0**
baz=57
TIN Tinemaha 57.12 71 ⇓P **P** **01 44 44.7 +2.0**
baz=57
C24A Savage 57.15 53 ⇑P **P** **01 44 44.0 +1.2**
baz=57
E22A Miles City 57.17 55 ⇓P **P** **01 44 43.9 +1.0**
baz=57,SNR=5.4
I19A Meeteetse 57.30 59 ⇑P **P** **01 44 45.3 +1.3**
baz=57
G21A Lodge Grass 57.38 57 ⇑P **P** **01 44 45.5 +1.0**
baz=57
E23A Ismay 57.45 55 ⇑P **P** **01 44 46.0 +1.2**
baz=57,SNR=5.1
F22A Rosebud 57.48 56 ⇑P **P** **01 44 46.2 +1.1**
baz=57
VES Vestal, Richgr 57.48 72 ⇑P **P** **01 44 46.7 +1.5**
baz=57,SNR=5.8
D24A Glendive 57.49 54 ⇓P **P** **01 44 46.7 +1.5**
baz=57
H20A Greybull 57.50 58 ⇑P **P** **01 44 46.0 +0.7**
baz=57
JOF Joensuu 57.51 335 *eP* **P** **01 44 44.7 -0.2**
JOF pmax pmax
comp=Z,42nm,0.7s
JOF Joensuu 57.51 335 *ep* **P** **01 44 44.7 -0.2**
comp=Z,42nm,0.7s
CMMT Chiang Mai 57.53 258 P **P** **01 44 46.9 +1.2**
comp=Z,23nm,1.0s,comp=Z,380nm
CHTO Chiang Mai 57.53 258 *eP* **P** **01 44 45.9 +0.2**
CHTO pmax pmax
comp=Z,14nm,0.8s
CHTO Chiang Mai 57.53 258 *eP* **P** **01 44 45.9 +0.2**
comp=Z,14nm,0.8s
CHTO Chiang Mai 57.53 258 P **P** **01 44 46.5 +0.8**
comp=Z,25nm,1.0s,comp=Z,343nm
AB31 Akbulak array 57.58 310 *i* P **P** **01 44 44.4 -1.3**
AB31 pmax pmax
comp=Z,10.0nm,0.7s
ABKAR Akbulak array 57.58 310 *eP* **P** **01 44 44.4 -1.3**
comp=Z,4.5nm,0.5s
AKTO Aktyubinsk 57.62 312 P **P** **01 44 45.1 -0.9**
AKTO pmax pmax
comp=Z,10.0nm,0.4s
AKTO Aktyubinsk 57.62 312 P **P** **01 44 45.0 -0.9**
AKTO Aktyubinsk 57.62 312 P **P** **01 44 45.0 -0.9**
comp=Z,9.7nm,0.4s,baz=63,slow=9.1,SNR=61
CWC Cottonwood Cre 57.63 71 ⇓P **P** **01 44 47.7 +1.2**
baz=58,SNR=14
HWUT Hardware Ranch 57.63 63 *eP* **P** **01 44 48.2 +1.7**
comp=Z,19nm,0.8s
GRAC Grapevine Rang 57.64 70 ⇓P **P** **01 44 48.2 +1.8**
baz=58,SNR=9.4
R11A Troy Canyon, C 57.71 68 ⇓P **P** **01 44 48.0 +1.0**
baz=58,SNR=20
PKM Peak Mountain 57.72 74 ⇓P **P** **01 44 48.4 +1.3**
baz=58,SNR=9.5
CMAR Chiang Mai Arr 57.80 258 P **P** **01 44 48.2 +0.5**
CMAR ScP **ScP** **01 49 32.1 +2.6**
CMAR Chiang Mai Arr 57.80 258 P **P** **01 44 48.2 +0.5**
comp=Z,7.9nm,0.7s,baz=27,slow=6.7,SNR=32
CMAR ScP **ScP** **01 49 32.1 +2.6**
comp=Z,0.9nm,0.3s,baz=14,slow=4.5,SNR=5.5
CMAR LR LR 02 13 07.8
comp=Z,47nm,18.2s,baz=226,slow=40
I20A Worland 57.80 59 ⇑P **P** **01 44 48.9 +1.4**

baz=58,SNR=11
J19A Crowheart 57.80 60 ⇓P P 01 44 49.1 +1.5
baz=58,SNR=11
G22A Birney 57.85 56 ⇓P P 01 44 48.8 +1.0
baz=58
TAPN Taplejung 57.85 274 *e*P P 01 44 47.7 -0.6
comp=Z,72nm,0.7s
H21A Big Horn, Sher 57.89 57 ⇓P P 01 44 49.2 +1.1
baz=58,SNR=5.6
BW06 Boulder Array 57.89 60 *e*P P 01 44 49.6 +1.4
comp=Z,19nm,0.8s
PDAR Pinedale Array 57.89 60 P P 01 44 49.6 +1.3
PDAR Pinedale Array 57.89 60 P P 01 44 49.6 +1.3
comp=Z,14nm,0.7s,baz=319,slow=2.6,SNR=93
PDAR LR LR 02 06 57.4
comp=Z,79nm,20.6s,baz=247,slow=33
E24A Baker 57.89 54 ⇓P P 01 44 49.0 +1.0
baz=58
F23A Volborg 57.94 55 ⇓P P 01 44 49.5 +1.1
baz=58,SNR=8.1
ISA Isabella 57.95 72 *e*P P 01 44 49.4 +0.8
ISA pmax pmax
comp=Z,11nm,1.0s
ISA Isabella 57.95 72 *e*P P 01 44 49.4 +0.8
comp=Z,11nm,1.0s
ISA Isabella 57.95 72 ⇓P P 01 44 49.1 +0.4
baz=58,SNR=7.7
PBKT Sadao Pong 58.10 254 P P 01 44 50.6 +0.9
comp=Z,9.4nm,0.7s
SFJD Kangerlussuaq 58.20 13 *e*P P 01 44 49.5 -0.1
comp=Z,89nm,1.3s
SFJD Kangerlussuaq 58.20 13⇑ *i*P P 01 44 49.6 -0.1
comp=Z,28nm,1.0s
M17A Scullys Gap (B 58.21 62 ⇑P P 01 44 51.6 +1.1
baz=58,SNR=6.8
K19A Absolon Red Bu 58.22 60 ⇑P P 01 44 51.1 +0.6
baz=58,SNR=6.0
MOR8 Moi Rana 58.23 344 *e*P P 01 44 48.4 -1.6
MOR8 AMB AMB 01 44 50.0
comp=Z,117nm,0.9s
L18A Fontenelle, Gr 58.23 61 ⇓P P 01 44 51.8 +1.2
baz=58
MPMC Manual Prospec 58.24 71 ⇓P P 01 44 52.0 +1.2
baz=58,SNR=16
J20A Shoshoni 58.25 59 ⇑P P 01 44 52.1 +1.5
baz=58
H22A Clearmont 58.26 57 ⇑P P 01 44 51.6 +0.9
baz=58,SNR=5.2
FURC Furnace Creek, 58.31 70 ⇓P P 01 44 52.6 +1.7
baz=58,SNR=7.1
G23A Biddle 58.32 56 ⇓P P 01 44 52.3 +1.3
baz=58
F24A Ekalaka 58.33 55 ⇓P P 01 44 52.2 +1.1
baz=58
I21A Big Trails, Te 58.33 58 ⇓P P 01 44 52.2 +1.0
baz=58,SNR=9.9
ODAN Odare 58.40 274 *e*P P 01 44 51.3 -0.7
comp=Z,42nm,0.7s
L19A Farson 58.46 61 ⇑P P 01 44 53.4 +1.2
baz=58
LRMC Laurel Mountai 58.54 72 ⇓P P 01 44 54.0 +1.3
baz=58
GUN Gumba 58.54 276 *e*P P 01 44 52.3 -0.8
comp=Z,43nm,0.4s
OSI Osito Adit 58.55 73 ⇓P P 01 44 54.5 +1.7
baz=58
J21A Lysite 58.58 59 ⇓P P 01 44 54.4 +1.4
baz=58
K20A Yellowstone Ra 58.60 60 ⇓P P 01 44 53.6 +0.5
baz=58,SNR=8.3
DAU Daniels Canyon 58.64 63 *e*P P 01 44 55.1 +1.5
DAU pmax pmax
comp=Z,9.0nm,0.8s
DAU Daniels Canyon 58.64 63 *e*P P 01 44 55.1 +1.5
comp=Z,8.6nm,0.8s
I22A 9 Mile Ranch, 58.69 58 ⇑P P 01 44 54.9 +1.2
baz=58,SNR=11
G24A Alzada 58.71 55 ⇓P P 01 44 54.5 +0.8
baz=58
BLG Laguna Peak 58.72 74 ⇓P P 01 44 54.7 +0.9
baz=59
EDW2 Edwards Air Fo 58.79 72 ⇓P P 01 44 55.5 +1.1
baz=59,SNR=7.7
RAMN Ramite 58.81 274 *e*P P 01 44 54.2 -0.7
comp=Z,121nm,0.5s
KKN Kakani 58.99 276 *e*P P 01 44 55.7 -0.4
comp=Z,70nm,0.4s
J22A Midwest 59.03 58 ⇑P P 01 44 57.2 +1.1
baz=59,SNR=22
DECC Green Verdugo 59.04 73 ⇑P P 01 44 58.0 +1.9
baz=59
SHOC Shoshone 59.04 70 ⇓P P 01 44 58.0 +1.9
baz=59
H24A Dirks Ranch, A 59.06 56 ⇑P P 01 44 56.8 +0.7
baz=59,SNR=15
L20A Wamsutter 59.06 60 ⇑P P 01 44 57.4 +1.0
baz=59,SNR=5.6
PKI Pulchoki 59.08 276 *e*P P 01 44 56.1 -0.7
comp=Z,77nm,0.7s
PKIN Phulchoki 59.08 276 *e*P P 01 44 56.2 -0.5
comp=Z,39nm,0.7s
ULM Lac du Bonnet 59.16 46 P P 01 44 57.1 +0.5
ULM Lac du Bonnet 59.16 46 P P 01 44 57.1 +0.5
comp=Z,7.3nm,0.5s,baz=314,slow=7.2,SNR=8.6
GSC Goldstone 59.17 71 *e*P P 01 44 58.6 +1.5
GSC pmax pmax
comp=Z,15nm,1.0s
GSC Goldstone 59.17 71 *e*P P 01 44 58.6 +1.5
comp=Z,15nm,1.0s
GSC Goldstone 59.17 71 ⇑P P 01 44 57.9 +0.8
baz=59,SNR=13
K21A Alcova 59.19 59 ⇓P P 01 44 58.0 +0.8
baz=59,SNR=20
MWC Mount Wilson 59.22 73 *e*P P 01 44 58.9 +1.4
MWC pmax pmax
comp=Z,50nm,1.3s
MWC Mount Wilson 59.22 73 *e*P P 01 44 58.9 +1.4
comp=Z,50nm,1.3s
DMN Daman 59.23 276 *e*P P 01 44 57.4 -0.4
comp=Z,77nm,0.5s
ARUT Antelope Range 59.30 67 *e*P P 01 44 59.8 +1.8
ARUT pmax pmax
comp=Z,3.0nm,0.6s
ARUT Antelope Range 59.30 67 *e*P P 01 44 59.8 +1.8
comp=Z,3.5nm,0.6s
KAF Kangasniemi 59.44 337 *e*P P 01 44 58.4 +0.1
KAF pmax pmax
comp=Z,66nm,0.8s
KAF Kangasniemi 59.44 337 *e*p P 01 44 58.4 +0.1
comp=Z,66nm,0.8s
BFSC Mount Baldy Ra 59.44 73 ⇑P P 01 44 59.9 +0.9
baz=59,SNR=7.7
MVU Marysvale 59.47 66 *e*P P 01 45 01.0 +1.7
comp=Z,5.4nm,0.8s
DANN Dangsing 59.50 278 *e*P P 01 44 59.2 -0.4
comp=Z,97nm,0.7s
CCUT Cedar City 59.51 67 *e*P P 01 45 01.1 +1.6
comp=Z,11nm,1.0s
M20A Sweetwater, Wa 59.51 61 ⇑P P 01 45 00.8 +1.3
baz=59,SNR=5.5
K22A Casper 59.55 59 ⇓P P 01 45 00.7 +1.0
baz=59,SNR=6.7
TUQ Turquoise Moun 59.58 71 ⇑P P 01 45 01.1 +1.2
baz=59,SNR=7.6
L21A Rawlins 59.60 60 ⇓P P 01 45 00.9 +0.7
baz=59,SNR=10
I24A Kuemmerle Ranc 59.66 56 ⇑P P 01 45 01.0 +0.7
baz=59
Q16A Castle Valley 59.74 65 ⇓P P 01 45 02.8 +1.7
baz=60
RSSD Black Hills 59.76 56 *e*P P 01 45 02.1 +0.9
RSSD pmax pmax
comp=Z,36nm,0.8s
RSSD Black Hills 59.76 56 *e*P P 01 45 02.1 +0.9
comp=Z,36nm,0.8s
HEC Hector,Ludlow 59.78 71 ⇓P P 01 45 02.3 +1.1
baz=60,SNR=8.6
M21A Separation Pea 59.86 60 ⇓P P 01 45 02.7 +0.8
baz=60,SNR=5.6
O19A Miners Draw (B 59.87 62 ⇓P P 01 45 02.8 +1.0
baz=60,SNR=5.7
K23A Bowen Ranch, D 59.94 58 ⇑P P 01 45 03.0 +0.7
baz=60
N20A Spence Gulch, 59.94 61 ⇑P P 01 45 03.9 +1.4
baz=60,SNR=14
SRU San Rafael 59.96 64 ⇓P P 01 45 04.0 +1.4
baz=60,SNR=23
KOLN Koldanda 60.02 277 *e*P P 01 45 02.4 -0.7
comp=Z,57nm,0.6s
J24A Dixon Ranch, L 60.02 57 ⇑P P 01 45 03.8 +1.0
baz=60
L22A Ellis Ranch, M 60.04 59 ⇓P P 01 45 04.7 +1.6
baz=60,SNR=7.9
FINES FINESS Array B 60.07 336 P P 01 45 02.9 +0.2
FINES FINESS Array B 60.07 336 P P 01 45 02.9 +0.2
comp=Z,68nm,0.9s,baz=46,slow=6.0,SNR=102
FINES LR LR 02 16 37.1
comp=Z,97nm,18.3s,baz=31,slow=42
MURC Murrieta 60.16 73 ⇑P P 01 45 04.7 +0.8
baz=60,SNR=5.2
GMRC Granite Mounta 60.20 71 ⇑P P 01 45 05.3 +1.2
baz=60,SNR=11
CHBT CHBT 60.36 251 P P 01 45 07.1 +1.8
comp=Z,61nm,1.0s,comp=Z,4µm
L23A Garrett 60.36 59 ⇑P P 01 45 05.8 +0.5
baz=60,SNR=9.9
J25A Sunshine Ranch 60.41 56 ⇓P P 01 45 06.0 +0.6
baz=60,SNR=5.3
M22A Cedar Creek Ra 60.41 60 ⇓P P 01 45 06.3 +0.6
baz=60
P19A Cripple Cowboy 60.42 63 ⇑P P 01 45 06.8 +1.0
baz=60,SNR=11
O20A White River Ci 60.45 62 ⇓P P 01 45 06.9 +1.0
baz=60,SNR=7.5
BELC Belle Mtn. Jos 60.56 72 ⇓P P 01 45 07.1 +0.4
baz=60,SNR=6.9
AGMN Agassiz Nation 60.60 48 *e*P P 01 45 07.0 +0.5
comp=Z,11nm,0.8s
O21A Pagoda 60.80 61 ⇓P P 01 45 09.5 +1.1
baz=61,SNR=7.7
M23A Laramie 60.82 59 ⇓P P 01 45 08.8 +0.4
baz=61
P20A De Beque 60.83 62 ⇓P P 01 45 08.9 +0.4
baz=61
U15A North Rim 60.91 67 ⇓P P 01 45 10.5 +1.3
baz=61,SNR=6.8
N22A Wattenberg Ran 60.92 60 ⇓P P 01 45 10.5 +1.4
baz=61,SNR=9.0
IRM Iron Mountain 60.94 71 ⇓P P 01 45 10.2 +1.1
baz=61,SNR=7.5
W13A Hualapai Mount 60.98 69 ⇓P P 01 45 10.6 +1.0
baz=61,SNR=9.6
N23A Red Feather La 61.12 60 ⇑P P 01 45 11.6 +1.1
baz=61,SNR=13
MONP Monument Peak 61.12 73 ⇑P P 01 45 11.8 +1.2
baz=61
BC3 Big Chuckawall 61.13 72 ⇓P P 01 45 11.0 +0.6
baz=61,SNR=7.0
S18A Hurst Farm, Bl 61.27 65 ⇓P P 01 45 12.3 +0.8
baz=61,SNR=18
Q20A Ridgley Place, 61.28 63 ⇑P P 01 45 12.0 +0.6
baz=61,SNR=6.0
M24A Cheyenne 61.28 59 ⇑P P 01 45 12.6 +1.1
baz=61
P21A Newcastle 61.32 62 ⇓P P 01 45 12.9 +1.0
baz=61
O22A Kremmling 61.33 61 ⇓P P 01 45 12.9 +0.9
baz=61
PV04 Paradox Valley 61.35 64 *e*P P 01 45 13.2 +1.2
PDMCI Parker Dam,Lak 61.41 70 ⇑P P 01 45 13.7 +1.5
baz=61
MOS Moscow 61.55 327 *e*P P 01 45 08.6 -4.2
MOS pmax pmax
comp=Z,300nm,1.8s
MOS pmax pmax
comp=Z,141nm,1.2s
Y12C Blythe 61.59 71 ⇑P P 01 45 14.9 +1.4
baz=62
P22A Eagle 61.63 61 ⇑P P 01 45 15.0 +1.1
baz=61,SNR=7.2
J28A Allard Ranch, 61.66 55 ⇓P P 01 45 14.9 +1.0
baz=61,SNR=9.1
M25A Palm-Egli Farm 61.70 58 ⇑P P 01 45 15.6 +1.3
baz=62
N24A Carr 61.72 59 ⇑P P 01 45 15.8 +1.4
baz=62
PV01 Paradox Valley 61.72 63 *e*P P 01 45 16.2 +1.6
comp=Z,640nm,0.8s
Q21A Lamborn Mesa, 61.75 62 ⇑P P 01 45 15.7 +1.0
baz=62
R20A Redvale 61.79 63 ⇓P P 01 45 16.0 +1.0
baz=62
GLA Glamis 61.92 72 ⇑P P 01 45 16.9 +1.1
baz=62,SNR=7.9
BRSD Miller 62.02 53 ⇓P P 01 45 16.5 +0.3
baz=62
Q22A Crested Butte, 62.08 62 ⇑P P 01 45 18.4 +1.3
baz=62,SNR=7.3
WUAZ Wupatki 62.08 67 *e*P P 01 45 18.8 +1.9
comp=Z,14nm,1.0s
WUAZ Wupatki 62.08 67 ⇓P P 01 45 18.7 +1.8
baz=62
ISCO Idaho Springs 62.09 60 *e*P P 01 45 18.4 +1.3
ISCO pmax pmax
comp=Z,14nm,1.0s
ISCO Idaho Springs 62.09 60 *e*P P 01 45 18.4 +1.3
comp=Z,14nm,1.0s
ISCO Idaho Springs 62.09 60 ⇑P P 01 45 18.7 +1.6
baz=62,SNR=20
R21A Cimron 62.10 63 ⇓P P 01 45 18.6 +1.5
baz=62,SNR=7.4
K28A Ten Mile Ranch 62.12 55 ⇑P P 01 45 17.7 +0.7
baz=62
O24A Longmont 62.13 60 ⇑P P 01 45 18.8 +1.6
baz=62
M26A McRoberts Ranc 62.14 57 ⇑P P 01 45 18.4 +1.2
baz=62
Y14A Wickenburg 62.32 70 ⇓P P 01 45 19.4 +1.1
baz=62,SNR=6.4
OBN Obninsk 62.41 327 *c i*P P 01 45 18.1 -0.5
OBN *e**PP **pP** 01 45 43.3 -0.4
OBN *e* 01 45 56.9
OBN *e* 01 47 35.3
OBN pmax pmax
comp=Z,181nm,1.7s
OBN Obninsk 62.41 327 P P 01 45 18.0 -0.5
comp=Z,542nm,0.9s,SNR=11
S21A Coal Bank Pass 62.49 63 ⇑P P 01 45 21.3 +1.6
baz=62,SNR=17
N26A Koester Ranch, 62.57 58 ⇑P P 01 45 21.3 +1.2
baz=62
BORG Borgarnes 62.59 0 *e*P P 01 45 21.3 +1.7
comp=Z,133nm,1.2s
BORG Borgarnes 62.59 0 P P 01 45 21.0 +1.4
comp=Z,506nm,1.0s,SNR=13
BORG Borgarnes 62.59 0 P P 01 45 21.8 +2.2
comp=Z,84nm,1.0s,baz=353,slow=5.9,SNR=23
R22A Saguache, Gunn 62.63 62 ⇓P P 01 45 22.4 +1.7
baz=62,SNR=7.0
P24A Kohler Place, 62.66 60 ⇑P P 01 45 22.0 +1.2
baz=62
MOL Molde 62.68 346 *e*P P 01 45 20.7 +0.5
MOL AMB AMB 01 45 23.5
comp=Z,102nm,1.6s
113A Mohawk Valley, 62.74 71 ⇓P P 01 45 22.3 +1.2
baz=63
Z14A Wintersburg 62.77 70 ⇓P P 01 45 22.6 +1.3
baz=63
EYMN Ely 62.79 46 *e*P P 01 45 21.3 0.0
comp=Z,16nm,0.8s
X16A Lo Mia Camp, P 62.85 68 ⇑P P 01 45 23.6 +1.5
baz=63,SNR=5.8
S22A 4UR Ranch, Cre 62.95 63 ⇑P P 01 45 24.2 +1.4
baz=63,SNR=8.0
DOMB Dombas 62.95 345 *e*P P 01 45 22.7 +0.6
DOMB AMB AMB 01 45 23.4
comp=Z,52nm,0.9s
O26A Horse Wrangler 62.96 58 ⇑P P 01 45 23.2 +0.5
baz=63
U20A Newcomb 63.03 65 ⇓P P 01 45 24.5 +1.3
baz=63
L29A Maesberg Ranch 63.04 55 ⇑P P 01 45 23.2 +0.1
baz=63
P25A Willow Gulch B 63.05 60 ⇑P P 01 45 24.9 +1.5
baz=63,SNR=5.2
M28A Bar X Bar Ranc 63.09 56 ⇓P P 01 45 24.1 +0.6
baz=63
T21A Navajo Lake 63.12 64 ⇓P P 01 45 25.5 +1.6
baz=63
R23A Moffat 63.15 62 ⇓P P 01 45 25.4 +1.3
baz=63
W18A Petrified Fore 63.29 67 ⇑P P 01 45 26.7 +1.7
baz=63
M29A Burnside Ranch 63.40 56 ⇑P P 01 45 26.2 +0.8
baz=63
S23A Nye Farm, Mont 63.42 62 ⇑P P 01 45 27.1 +1.2
baz=63
O27A Beecher Island 63.42 58 ⇑P P 01 45 26.6 +0.9
baz=63,SNR=7.5
T22A Edith 63.44 63 ⇓P P 01 45 27.5 +1.4
baz=63,SNR=11
P26A Davis Ranch, A 63.45 59 ⇑P P 01 45 27.1 +1.2
baz=63
Q25A Bedland, Calha 63.45 60 ⇓P P 01 45 27.2 +1.1
baz=63,SNR=7.5
U21A Nageezi 63.47 64 ⇓P P 01 45 27.5 +1.3
baz=63,SNR=11
V20A Brimhall 63.49 65 ⇓P P 01 45 27.5 +1.3
baz=63
R24A Sanders Place, 63.51 61 ⇑P P 01 45 27.8 +1.4
baz=63,SNR=5.2
N28A Pribbeno Ranch 63.53 57 ⇑P P 01 45 27.3 +1.0
baz=63
NB2 NORSAR Subarra 63.54 343 P P 01 45 25.9 -0.1
comp=Z,56nm,0.8s,baz=25,slow=6.9
NB2 NORSAR Subarra 63.54 343 P P 01 45 25.9 -0.1
baz=25,slow=6.9
NOA NORSAR Array B 63.54 343 P P 01 45 26.1 +0.1
NOA NORSAR Array B 63.54 343 P P 01 45 26.1 +0.1
comp=Z,35nm,0.7s,baz=23,slow=6.7,SNR=207
NOA LR LR 02 19 35.6
comp=Z,42nm,18.4s,baz=25,slow=42
X18A Snowflake 63.60 67 ⇓P P 01 45 28.7 +1.7
baz=63,SNR=7.5
SBUM Sibu 63.66 235 P P 01 45 29.7 +2.3
ECSD EROS Data Cent 63.67 52 *e*P P 01 45 27.2 +0.1
comp=Z,15nm,0.8s
Q26A Hugo 63.83 60 ⇓P P 01 45 29.4 +1.0
baz=64
O28A Krutsinger Ran 63.83 58 ⇓P P 01 45 29.5 +1.1
baz=64
P27A Ficken Ranch, 63.85 59 ⇓P P 01 45 29.2 +0.7
baz=64
S24A Houchin Ranch, 63.89 62 ⇑P P 01 45 30.5 +1.4
baz=64,SNR=6.5
VRHR Novokhopersk 63.89 322 *e*P P 01 45 26.5 -1.9
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.6s
VRHR pmax pmax
comp=Z,110nm,0.6s
VRHR MLR MLR
comp=N,120nm,22.0s
VRHR MLR MLR
comp=E,90nm,22.0s
VRHR MLR MLR
comp=Z,310nm,22.0s
T23A Casias Ranch, 63.89 63 ⇓P P 01 45 30.2 +1.2
baz=64
HFS Hagfors 63.94 342 P P 01 45 28.5 -0.1
HFS Hagfors 63.94 342 P P 01 45 28.5 -0.1
comp=Z,20nm,0.4s,baz=47,slow=6.9,SNR=217
HFS LR LR 02 18 39.6
comp=Z,53nm,20.0s,baz=4.7,slow=41
V21A Milan 63.94 65 ⇑P P 01 45 30.4 +1.1
baz=64,SNR=5.3
U22A Llaves 63.94 64 ⇓P P 01 45 30.5 +1.2
baz=64,SNR=6.3
W20A Ramah 63.97 66 ⇑P P 01 45 30.6 +1.1
baz=64,SNR=10
R25A Fountain Ranch 64.00 61 ⇓P P 01 45 30.5 +0.9
baz=64,SNR=8.5
HYA Hoyanger 64.22 346 *e*P P 01 45 30.8 +0.4
HYA AMB AMB 01 45 32.1
comp=Z,104nm,0.9s
V22A San Miguel Ran 64.25 64 ⇓P P 01 45 32.3 +1.0
baz=64,SNR=5.2
S25A Robets Cordova 64.28 61 ⇑P P 01 45 32.0 +0.5
baz=64,SNR=7.9
SPMN St. Paul 64.30 48 ⇑P P 01 45 31.7 +0.5
baz=64
R26A Arlington 64.33 60 ⇑P P 01 45 32.6 +1.0
baz=64,SNR=21
O29A 4D Ranch, Culb 64.33 57 ⇓P P 01 45 32.3 +0.7
baz=64
U23A El Rito 64.33 63 ⇑P P 01 45 33.3 +1.5
baz=64,SNR=18
X20A Quemado 64.40 66 ⇑P P 01 45 34.0 +1.7
baz=64,SNR=9.7
SUE Sulen 64.53 347 *e*P P 01 45 32.7 +0.3
SUE AMB AMB 01 45 34.1
comp=Z,96nm,1.2s
R27A Eads 64.68 60 ⇓P P 01 45 34.6 +0.7
baz=64,SNR=5.1
T25A Trinidad 64.69 62 ⇑P P 01 45 35.1 +1.0
baz=64,SNR=6.9
VSR Storozhevoye 64.70 323 *e*P P 01 45 33.0 -0.7
VSR *e**PP **pP** 01 45 57.8 -1.2
VSR pmax pmax
comp=N,60nm,0.9s
VSR pmax pmax
comp=E,40nm,0.9s
VSR pmax pmax
comp=Z,100nm,0.9s
TUC Tucson 64.77 69 *e*P P 01 45 36.1 +1.5
TUC Tucson 64.77 69 *e*P P 01 45 36.1 +1.5
comp=Z,3.4nm,0.9s
V23A Ortiz Mt. (NFS 64.77 64 ⇑P P 01 45 36.5 +1.8
baz=65,SNR=11
S26A Kim 64.82 61 ⇓P P 01 45 35.4 +0.5
baz=65
VORD Divnogorie 64.86 323 *e*P P 01 45 34.0 -0.7
VORD pmax pmax
comp=N,70nm,1.1s
VORD pmax pmax
comp=E,40nm,1.1s
VORD pmax pmax
comp=Z,90nm,1.1s
X21A Alamocita Cree 64.86 66 ⇑P P 01 45 37.2 +1.8
baz=65,SNR=24
Y20A Horse Springs, 64.94 67 ⇓P P 01 45 37.6 +1.8
baz=65,SNR=11
IZAR Zarasai 64.98 333 *e*P P 01 45 35.7 +0.3
IZAR AMB AMB 01 45 37.6
comp=Z,40nm,1.3s
ASK Askoy 65.02 346 *e*P P 01 45 35.5 -0.1
ASK AMB AMB 01 45 36.6
comp=Z,144nm,1.1s
P30A Selden 65.05 57 ⇓P P 01 45 36.6 +0.3
baz=65
RUND Rundenannen 65.06 346 *e*P P 01 45 35.9 -0.1
RUND AMB AMB 01 45 36.9
comp=Z,270nm,0.8s
S27A Las Animas 65.08 60 ⇑P P 01 45 37.2 +0.6
baz=65
T26A Comanche Natio 65.09 61 ⇓P P 01 45 37.0 +0.3
baz=65,SNR=9.4
BER Bergen 65.09 346 *e*P P 01 45 35.7 -0.4
BER AMB AMB 01 45 36.9
comp=Z,136nm,1.1s
KONO Kongsberg 65.12 344 *e*P P 01 45 36.9 +0.6
KONO AMB AMB 01 45 39.6
comp=Z,58nm,1.4s
KONO Kongsberg 65.12 344 *e*P P 01 45 36.6 +0.3
KONO pmax pmax
comp=Z,89nm,1.5s
KONO Kongsberg 65.12 344 *e*P P 01 45 36.6 +0.3
comp=Z,89nm,1.5s
R28A Tribune 65.15 59 ⇓P P 01 45 37.9 +1.0
baz=65,SNR=6.7
Q29A Oakley 65.17 58 ⇓P P 01 45 37.5 +0.4
baz=65
ISAL Salakas 65.17 333 *e*P P 01 45 37.0 +0.3
ISAL AMB AMB 01 45 38.9
comp=Z,42nm,1.2s
EGD Espegrend 65.22 346 *e*P P 01 45 36.7 -0.1
EGD AMB AMB 01 45 37.8
comp=Z,110nm,0.9s
ANMO Albuquerque 65.22 64 *e*P P 01 45 38.9 +1.3
comp=Z,7.8nm,0.9s
W23A Werner Place, 65.23 64 ⇑P P 01 45 38.9 +1.2
baz=65
IDID Didziasalis 65.23 332 *e*P P 01 45 37.3 +0.3
IDID AMB AMB 01 45 39.2
comp=Z,54nm,1.1s
IDID *es*P **sP** 01 46 13.6 0.0
U25A Circle Dot Ran 65.24 62 ⇑P P 01 45 38.7 +1.0
baz=65,SNR=8.7
X22A Bernardo 65.25 65 ⇓P P 01 45 39.7 +2.0
baz=65,SNR=5.3
Y21A Point of Rocks 65.25 66 ⇓P P 01 45 39.9 +2.1
baz=65

LAZ Ladron 65.25 65 eP P 01 45 39.8 +2.0
comp=Z,6.0nm,0.9s
V24A Rampart Ranch, 65.28 63 ⇑P P 01 45 39.5 +1.5
baz=65,SNR=15
IIGN Ignalina 65.34 333 eP P 01 45 38.1 +0.3
IIGN AMB AMB 01 45 39.9
comp=Z,75nm,1.1s
IIGN esP sP 01 46 13.5 -0.8
ODD1 Odda 65.35 345 eP P 01 45 36.4 -1.4
ODD1 AMB AMB 01 45 37.6
comp=Z,109nm,1.4s
Z20A Nine Sixteen R 65.41 67 ⇑P P 01 45 40.1 +1.3
baz=65,SNR=11
R29A Marienthal 65.44 58 ⇑P P 01 45 39.0 +0.2
baz=65,SNR=6.9
Q30A Quinter 65.49 57 ⇓P P 01 45 39.3 +0.2
baz=65
P31A Stockton 65.50 57 ⇓P P 01 45 39.1 -0.1
baz=65
V25A Rancho No Teng 65.55 63 ⇑P P 01 45 40.6 +0.9
baz=65,SNR=8.8
NACGM Naroch 65.58 332 eP P 01 45 36.0 -3.3
W24A Lazy 6 Ranch, 65.59 64 ⇑P P 01 45 41.4 +1.4
baz=65,SNR=8.1
U26A Atchley Ranch, 65.60 62 ⇑P P 01 45 40.8 +0.8
baz=65
MICGM Minsk 65.61 331 eP P 01 45 36.0 -3.5
MNK Minsk 65.63 331 eP P 01 45 36.0 -3.6
MNK pmax pmax
comp=Z,560nm,1.0s
T27A Campo 65.64 60 ⇓P P 01 45 41.1 +0.9
baz=65
X23A Hourglass Bar 65.64 65 ⇑P P 01 45 41.8 +1.5
baz=66
S28A Manter 65.67 60 ⇓P P 01 45 41.0 +0.7
baz=66
Y22A Socorro 65.69 66 ⇑P P 01 45 42.0 +1.4
baz=66,SNR=7.4
BNM Barren Site 65.72 65 eP P 01 45 42.8 +1.9
comp=Z,4.1nm,0.8s
Z21A St. Cloud Mine 65.77 67 ⇑P P 01 45 42.8 +1.6
baz=66,SNR=6.2
120A U Bar Ranch, L 65.81 68 ⇑P P 01 45 42.9 +1.5
baz=66,SNR=9.8
BLS5 Blasjo 65.85 345 eP P 01 45 41.4 +0.4
BLS5 AMB AMB 01 45 42.6
comp=Z,43nm,0.7s
Q31A Ellis 65.89 57 ⇓P P 01 45 42.1 +0.5
baz=66
SCHQ Schefferville 65.91 27 P P 01 45 41.2 -0.2
SCHQ Schefferville 65.91 27 P P 01 45 41.2 -0.2
comp=Z,18nm,0.8s,baz=334,slow=8.2,SNR=29
T28A Walsh 65.91 60 ⇑P P 01 45 42.1 +0.2
baz=66,SNR=5.6
R30A Dighton 65.98 58 ⇓P P 01 45 43.1 +0.8
baz=66
V26A Tequesquite Ra 66.02 62 ⇑P P 01 45 42.9 +0.3
baz=66,SNR=5.5
S29A Ulysses 66.05 59 ⇑P P 01 45 43.2 +0.4
baz=66
X24A Lazy VL Ranch, 66.06 64 ⇑P P 01 45 44.4 +1.4
baz=66,SNR=13
U27A Thompson Grove 66.06 61 ⇓P P 01 45 43.3 +0.4
baz=66,SNR=8.9
W25A X Bar L Ranch, 66.10 63 ⇑P P 01 45 44.1 +0.9
baz=66,SNR=17
LRW Lerwick 66.16 350⇑eP P 01 45 43.0 +0.1
LRW AMB AMB 01 45 44.0
comp=Z,66nm,1.1s
LRW Lerwick 66.16 350 P P 01 45 43.0 +0.1
LRW AMB AMB 01 45 44.0
comp=Z,66nm,1.1s
Y23A Lovelace Mesa, 66.20 65 ⇑P P 01 45 45.3 +1.4
baz=66,SNR=21
Z22A Elephant Butte 66.20 66 ⇑P P 01 45 45.4 +1.5
baz=66
319A Douglas 66.32 69 ⇓P P 01 45 46.0 +1.4
baz=66
220A Playas Peak, P 66.35 68 ⇓P P 01 45 46.0 +1.2
baz=66,SNR=7.6
R31A Burdett 66.36 57 ⇑P P 01 45 45.2 +0.5
baz=66
U28A Mallet 66.41 61 ⇓P P 01 45 45.4 +0.3
baz=66
STAV Stavanger 66.43 346 eP P 01 45 46.0 +1.4
STAV AMB AMB 01 45 46.6
comp=Z,68nm,0.7s
X25A Clemmons Ranch 66.51 64 ⇑P P 01 45 47.1 +1.3
baz=66,SNR=11
V27A Dan Oppiter Fa 66.56 61 ⇑P P 01 45 46.7 +0.6
baz=66
W26A Owens Ranch, T 66.57 63 ⇑P P 01 45 47.0 +0.9
baz=66
122A Conniff Cattle 66.60 66 ⇑P P 01 45 48.0 +1.6
baz=66,SNR=5.8
SCIA State Center 66.67 51 eP P 01 45 47.1 +0.5
comp=Z,95nm,0.9s
SNART Snartemo 66.77 345 eP P 01 45 45.8 -1.0
SNART AMB AMB 01 45 46.6
comp=Z,121nm,1.6s
ABKT Ailbek 66.84 303 P P 01 45 47.6 -0.1
comp=Z,171nm,0.6s,SNR=11
Y25A Mesa, Roswell 66.95 64 ⇓P P 01 45 49.5 +0.9
baz=67,SNR=29
X26A CR and CF Fran 66.95 63 ⇓P P 01 45 49.5 +0.9
baz=67,SNR=7.6
W27A Bowe Ranch, En 66.96 62 ⇓P P 01 45 50.0 +1.3
baz=67
222A Williams Famil 66.99 67 ⇓P P 01 45 49.9 +1.0
baz=67,SNR=5.8
Z24A Sheeppen Canyo 67.03 65 ⇓P P 01 45 50.3 +1.1
baz=67,SNR=12
T31A Randall Ranch, 67.19 58 ⇑P P 01 45 50.3 +0.3
baz=67
X27A F and S Farms, 67.26 62 ⇓P P 01 45 51.2 +0.6
baz=67
W28A Vega 67.27 61 ⇓P P 01 45 51.6 +1.0
baz=67
SUW Suwalki 67.35 334 eP P 01 45 50.3 -0.3
SUW pmax pmax
comp=Z,306nm,1.1s
SUW Suwalki 67.35 334 eP P 01 45 50.3 -0.3
comp=Z,306nm,1.1s
SUW Suwalki 67.35 334 i P P 01 45 50.3 -0.3
Y26A Elida 67.42 63 ⇓P P 01 45 52.6 +1.1
baz=67
Z25A Roswell 67.42 65 ⇑P P 01 45 52.6 +1.1
baz=67,SNR=6.4
124A Stringfield Ra 67.45 65 ⇑P P 01 45 52.7 +0.8
baz=67,SNR=9.3
Y27A Causey 67.81 63 ⇓P P 01 45 54.7 +0.7
baz=68,SNR=19
Z26A Caprock 67.83 64 ⇑P P 01 45 55.0 +0.9
baz=68,SNR=20
AMTX Amarillo 67.84 61 eP P 01 45 55.0 +0.9
comp=Z,9.9nm,0.8s
X28A Dimmitt 67.84 62 ⇓P P 01 45 55.1 +0.9
baz=68
224A Cornudas Mount 67.89 66 ⇓P P 01 45 55.5 +1.0
baz=68,SNR=11
125A Gardner Draw, 67.92 65 ⇑P P 01 45 55.8 +1.1
baz=68,SNR=17
MSTX Muleshoe 67.95 63 ⇑P P 01 45 55.2 +0.3
baz=68,SNR=13
V31A Spring Creek L 68.12 59 ⇑P P 01 45 56.5 +0.6
baz=68
COEN Coen 68.14 197 eP P 01 45 56.6 +0.7
comp=Z,38nm,0.9s
X29A Tulia 68.16 62 ⇓P P 01 45 56.5 +0.3
baz=68,SNR=11
Z27A Tatum 68.21 63 ⇑P P 01 45 57.2 +0.7
baz=68,SNR=22
MUD Monsted U'grnd 68.22 343 eP P 01 45 55.8 -0.2
MUD pmax pmax
comp=Z,38nm,0.9s
MUD Monsted U'grnd 68.22 343 i P P 01 45 55.8 -0.2
comp=Z,38nm,0.9s
225A Deer Hill, Car 68.25 65 ⇑P P 01 45 57.7 +0.8
baz=68,SNR=8.9
MNTX Cornudas Mount 68.25 66 eP P 01 45 57.7 +1.1
comp=Z,9.1nm,0.9s
Y28A McKinney Farm, 68.28 62 ⇓P P 01 45 57.7 +0.8
baz=68
126A Clayton Basin, 68.28 64 ⇓P P 01 45 57.6 +0.6
baz=68,SNR=6.2
COP Copenhagen 68.33 341⇑iP P 01 45 57.8 +1.1
COP pmax pmax
comp=Z,77nm,0.8s
COP Copenhagen 68.33 341⇑iP P 01 45 57.8 +1.1
comp=Z,77nm,0.8s
BSD Bornholm Skovb 68.35 339⇑iP P 01 45 57.3 +0.5
BSD pmax pmax
comp=Z,97nm,0.7s
BSD Bornholm Skovb 68.35 339⇑iP P 01 45 57.3 +0.5
comp=Z,97nm,0.7s
324A Moseley Ranch, 68.39 66 ⇓P P 01 45 58.6 +0.9
baz=68
AKASG Malin Array Be 68.51 329 P P 01 45 57.4 -0.5
AKASG pmax pmax
comp=Z,46nm,0.4s
AKASG Malin Array Be 68.51 329 P P 01 45 57.4 -0.5
AKASG Malin Array Be 68.51 329 P P 01 45 57.4 -0.5
comp=Z,46nm,0.4s,baz=28,slow=5.9,SNR=234
AKASG LR LR 02 22 37.3
comp=Z,98nm,18.2s,baz=30,slow=42
W31A Holland Ranch, 68.52 60 ⇑P P 01 45 59.1 +0.8
baz=68
KIEV Kiev 68.52 329 eP P 01 45 57.4 -0.6
KIEV pmax pmax
comp=Z,120nm,0.9s
KIEV Kiev 68.52 329 eP P 01 45 57.4 -0.6
comp=Z,120nm,0.9s
AK02 Malin Array Si 68.56 329 eP P 01 45 57.8 -0.5
X30A Coker Ranch, T 68.60 61 ⇓P P 01 45 59.7 +0.8
baz=68
127A Arkansas Junct 68.62 64 ⇑P P 01 45 59.8 +0.7
baz=68
Y29A Porterfield Fa 68.62 62 ⇑P P 01 45 59.6 +0.5
baz=68,SNR=6.0
226B Tecolote Peak, 68.64 65 ⇓P P 01 45 59.9 +0.7
baz=68,SNR=24
MVH1 Achvaich 68.65 351⇑iP P 01 45 58.6 0.0
MVH1 Achvaich 68.65 351 P P 01 45 58.6 0.0
Z28A Tucker Farm, M 68.68 63 ⇓P P 01 46 00.2 +0.9
baz=68
LLD Lille Linde 68.71 341 iP P 01 45 59.9 +0.9
LLD pmax pmax
comp=Z,260nm,0.9s
LLD Lille Linde 68.71 341 iP P 01 45 59.9 +0.9
comp=Z,261nm,0.9s
325A Bean Ranch, Si 68.73 66 ⇑P P 01 46 00.6 +0.8
baz=69,SNR=10
MCD Coleburn Disti 68.89 350⇑eP P 01 46 00.5 +0.3
MCD Coleburn Disti 68.89 350 P P 01 46 00.5 +0.3
X31A McDonald Ranch 68.93 60 ⇓P P 01 46 01.4 +0.6
baz=69
Y30A Stafford Cattl 69.02 61 ⇑P P 01 46 02.3 +0.8
baz=69
Z29A Hungry Hill Ra 69.06 62 ⇓P P 01 46 02.3 +0.5
baz=69,SNR=8.3
MME1 Meikle Cairn 69.12 350⇑eP P 01 46 01.4 -0.2
MME1 Meikle Cairn 69.12 350 P P 01 46 01.4 -0.2
128A Castleberry Fa 69.13 63 ⇑P P 01 46 03.0 +0.7
baz=69,SNR=10
MDO Dochfour 69.14 351⇑iP P 01 46 01.7 0.0
MDO Dochfour 69.14 351 P P 01 46 01.7 0.0
227A Bennet, Jal 69.16 64 ⇓P P 01 46 03.5 +1.1
baz=69
425A Indio Mountain 69.17 66 ⇓P P 01 46 03.5 +1.0
baz=69,SNR=9.6
KAC Achnashellach 69.17 351⇑iP P 01 46 02.0 +0.1
KAC Achnashellach 69.17 351 P P 01 46 02.0 +0.1
RGN Rugen 69.22 340 eP P 01 46 03.7 +1.5
comp=Z,411nm,0.9s
RGN Rugen 69.22 340 eP P 01 46 03.3 +1.1
comp=Z,443nm,1.0s
KIV Kislovodsk 69.26 316c iP P 01 46 03.1 +0.3
KIV e 01 46 26.9
KIV e 01 48 37.0
KIV pmax pmax
comp=Z,71nm,2.5s
KIV MLR MLR
comp=Z,100nm,17.0s
KIV Kislovodsk 69.26 316 P P 01 46 03.7 +0.9
comp=Z,110nm,0.7s,SNR=6.5
Y31A Rekieta Farm, 69.29 61 ⇑P P 01 46 03.4 +0.3
baz=69
326A Caldwell Ranch 69.32 65 ⇑P P 01 46 04.5 +1.2
baz=69
Z30A Sanderson Ranc 69.35 62 ⇓P P 01 46 03.6 +0.1
baz=69,SNR=14
KBZ Khabaz 69.36 316 P P 01 46 03.2 -0.1
KBZ pmax pmax
comp=Z,23nm,0.9s
KBZ MLR MLR
comp=Z,87nm,18.9s
KBZ Khabaz 69.36 316 P P 01 46 03.2 -0.1
KBZ Khabaz 69.36 316 P P 01 46 03.2 -0.1
comp=Z,23nm,0.9s,baz=48,slow=6.7,SNR=45
KBZ LR LR 02 20 09.4
comp=Z,87nm,18.9s,baz=34,slow=39
KPL Plockton 69.36 351⇑eP P 01 46 02.9 -0.1
KPL AMB AMB 01 46 04.1
comp=Z,41nm,1.0s
KPL Plockton 69.36 351 P P 01 46 02.9 -0.1
KPL AMB AMB 01 46 04.1
comp=Z,41nm,1.0s
129A Stewart Farms, 69.46 63 ⇑P P 01 46 04.9 +0.6
baz=69
228A UT Block 9, Go 69.46 64 ⇓P P 01 46 05.2 +0.9
baz=69
DRUM Mains of Drumt 69.47 350⇑eP P 01 46 03.7 0.0
DRUM AMB AMB 01 46 04.5
comp=Z,84nm,1.5s
DRUM Mains of Drumt 69.47 350 P P 01 46 03.7 0.0
DRUM AMB AMB 01 46 04.5
comp=Z,84nm,1.5s
KSB Sheil Bridge 69.47 351⇑iP P 01 46 03.9 +0.2
KSB Sheil Bridge 69.47 351 P P 01 46 03.9 +0.2
WMOK Wichita Mounta 69.47 59 eP P 01 46 04.6 +0.4
WMOK pmax pmax
comp=Z,22nm,0.9s
WMOK Wichita Mounta 69.47 59 eP P 01 46 04.6 +0.4
comp=Z,22nm,0.9s
GKP Gorka Klasztor 69.53 337 i P P 01 46 04.8 +0.7
HDIL Hopedale 69.56 49 eP P 01 46 04.1 -0.5
comp=Z,32nm,0.8s
Y32A R-V Farms, Ver 69.69 60 ⇓P P 01 46 06.0 +0.5
baz=70
GUDG Gudauri 69.72 314 P P 01 46 05.8 0.0
426A McDonald Obser 69.79 66 ⇑P P 01 46 06.8 +0.4
baz=70,SNR=9.1
Z31A Sharp Cattle R 69.85 61 ⇓P P 01 46 06.6 0.0
baz=70,SNR=10.0
328A Wristen Ranch, 69.91 64 ⇓P P 01 46 07.6 +0.7
baz=70,SNR=26
BEL Belsk 69.95 334 i P P 01 46 07.8 +1.1
130A Snyder 69.97 62 ⇓P P 01 46 07.7 +0.4
baz=70,SNR=6.7
427A Hayter Ranch, 69.99 65 ⇑P P 01 46 08.2 +0.7
baz=70,SNR=7.5
229A Bryant Ranch, 70.00 63 ⇑P P 01 46 08.2 +0.7
baz=70
ELO Logie Almond 70.03 350⇑eP P 01 46 07.2 -0.1
ELO Logie Almond 70.03 350 P P 01 46 07.2 -0.1
ONI Oni 70.05 315 P P 01 46 09.3 +1.6
TUL1 Tulsa 70.09 57 ⇑P P 01 46 07.9 0.0
baz=70,SNR=5.6
DGRG David-gareji 70.15 313 P P 01 46 09.3 +1.0
TBLG Delisi 70.20 314 eP P 01 46 08.8 +0.3
TBLG Delisi 70.20 314 P P 01 46 08.8 +0.3
Z32A Haskell 70.21 61 ⇓P P 01 46 08.8 0.0
baz=70,SNR=11
131A Roby 70.22 62 ⇑P P 01 46 09.3 +0.5
baz=70,SNR=14
GOR Gori 70.27 314 P P 01 46 10.1 +1.2
329A Wagon Wheel Ra 70.28 64 ⇓P P 01 46 10.0 +0.8
baz=70,SNR=16
EAB Aberfoyle 70.37 350⇑iP P 01 46 09.6 +0.3
EAB Aberfoyle 70.37 350 P P 01 46 09.6 +0.3
BSEG Bad Segeberg 70.40 341 eP P 01 46 10.8 +1.3
comp=Z,260nm,1.1s
BSEG Bad Segeberg 70.40 341 eP P 01 46 10.8 +1.3
BSEG pmax pmax
comp=Z,260nm,1.1s
527A Woodward Ranch 70.42 66 ⇑P P 01 46 10.7 +0.5
baz=70,SNR=14
230A Sterling City 70.44 63 ⇑P P 01 46 10.5 +0.3
baz=70,SNR=12
ESY Stoneypath 70.46 349⇑iP P 01 46 10.1 +0.3
ESY Stoneypath 70.46 349 P P 01 46 10.1 +0.3
428A Kincaid Ranch, 70.48 65 ⇓P P 01 46 11.8 +1.3
baz=70,SNR=28
EDI Edinburgh 70.52 350 AMB AMB 01 46 09.2
comp=Z,44nm,1.1s
626A Big Bend Ranch 70.58 67 ⇑P P 01 46 11.9 +0.8
baz=70,SNR=17
EAU Auchinoon 70.62 350⇑eP P 01 46 11.2 +0.4
EAU Auchinoon 70.62 350 P P 01 46 11.2 +0.4
ABTX Abilene, Hawle 70.66 61 ⇑P P 01 46 11.9 +0.5
baz=70,SNR=14
ANN Anapa 70.67 320 eP P 01 46 09.4 -1.9
ANN e 01 46 29.2
ANN e*PP pP 01 46 34.6 -2.4
ANN e 01 46 44.4
ANN e 01 48 47.3
ANN ePPP PPP 01 50 32.8
ANN eS S 01 55 13.0 -4.0
ANN eSS SS 01 59 48.2 -1.4
ANN pmax pmax
comp=Z,62nm,1.2s
SFIN Scholer Farm 70.70 48 ⇓P P 01 46 11.2 -0.3
baz=70
PGBU Glenifferbraes 70.76 351⇑eP P 01 46 12.0 +0.4
PGBU AMB AMB 01 46 13.3
comp=Z,130nm,1.4s
PGBU Glenifferbraes 70.76 351 P P 01 46 12.0 +0.4
PGBU AMB AMB 01 46 13.3
comp=Z,130nm,1.4s
330A Mertzon 70.78 63 ⇓P P 01 46 12.4 +0.2
baz=71,SNR=7.4
SOC Sochi 70.79 318c iP P 01 46 11.5 -0.5
SOC e*SP sP 01 46 47.1 -1.7
SOC i 01 48 49.2
SOC eS S 01 55 16.9 -1.5
SOC e*SS ScS 01 56 14.6 +8.5
SOC pmax pmax
comp=Z,49nm,1.1s
SOC MLR MLR
comp=Z,93nm,12.0s
231A Bronte 70.83 62 ⇓P P 01 46 12.6 +0.1
baz=71,SNR=6.3
528A Cox Ranch, San 70.86 65 ⇑P P 01 46 13.9 +1.1
baz=71,SNR=12
HYB Hyderabad 70.86 274 i P P 01 46 13.0 +0.1
LVV L'vov 70.87 331d iP P 01 46 12.6 +0.2
LVV e 01 48 50.4
429A Davenport Ranc 70.99 64 ⇓P P 01 46 13.9 +0.4
baz=71,SNR=12
AKH Akhalkalaki 71.00 314 P P 01 46 14.4 +0.8
TXAR Lajitas Array 71.01 66 P P 01 46 14.9 +1.1
TXAR Lajitas Array 71.01 66 P P 01 46 14.9 +1.1
comp=Z,16nm,0.7s,baz=308,slow=4.4,SNR=262
RUE Ruedersdorf 71.05 339 eP P 01 46 14.5 +1.1
comp=Z,273nm,1.0s
RUE Ruedersdorf 71.05 339 eP P 01 46 14.6 +1.1
comp=Z,334nm,1.1s
AFI Afiamalu 71.06 150 LR LR 02 11 19.1
comp=Z,160nm,21.6s,baz=134,slow=30
627A Terlingua Ranc 71.07 66 ⇑P P 01 46 15.0 +0.9
baz=71,SNR=18
EKA Eskdalemuir Ar 71.09 350 P P 01 46 14.0 +0.4
EKA Eskdalemuir Ar 71.09 350 P P 01 46 14.0 +0.4
comp=Z,12nm,0.4s,baz=18,slow=5.4,SNR=137
ESK Eskdalemuir 71.11 350 P P 01 46 14.7 +0.9
comp=Z,404nm,1.0s,SNR=15
ESK Eskdalemuir 71.11 350⇑eP P 01 46 13.6 -0.2
ESK AMB AMB 01 46 14.8
comp=Z,70nm,1.1s
ESK Eskdalemuir 71.11 350 P P 01 46 13.6 -0.2
ESK AMB AMB 01 46 14.8
comp=Z,70nm,1.1s
ESK Eskdalemuir 71.11 350 i P P 01 46 14.5 +0.7
ESK Eskdalemuir 71.11 350 eP P 01 46 14.1 +0.3
comp=Z,55nm,1.0s
529A Stev Forest Ra 71.20 65 ⇓P P 01 46 15.7 +0.9
baz=71
430A Baggett Ranch, 71.22 64 ⇓P P 01 46 15.4 +0.4
baz=71,SNR=13
232A Coleman 71.22 62 ⇓P P 01 46 15.2 +0.3
baz=71,SNR=16
ECK Cauldkaine Hil 71.24 350⇑iP P 01 46 15.0 +0.4
ECK Cauldkaine Hil 71.24 350 P P 01 46 15.0 +0.4
331A San Angelo 71.26 63 ⇑P P 01 46 15.6 +0.5
baz=71,SNR=16
628A Black Gap, Mar 71.32 66 ⇑P P 01 46 16.4 +0.8
baz=71,SNR=16
KWP Kalwaria Pacla 71.42 332 eP P 01 46 16.5 +0.8
KWP pmax pmax
comp=Z,451nm,1.0s
KWP Kalwaria Pacla 71.42 332 eP P 01 46 16.5 +0.8
comp=Z,451nm,1.0s
KWP Kalwaria Pacla 71.42 332⇑iP P 01 46 16.6 +0.8
KWP Kalwaria Pacla 71.42 332 i P P 01 46 16.5 +0.8
GNI Garni 71.48 313 P P 01 46 17.3 +0.7
SNR=17
GNI Garni 71.48 313 eP P 01 46 17.2 +0.7
comp=Z,96nm,1.6s
GNI Garni 71.48 313 P P 01 46 17.1 +0.6
comp=Z,8.6nm,0.8s,baz=0.0,slow=4.0,SNR=21
332A Millersview 71.56 62 ⇓P P 01 46 17.5 +0.5
baz=71,SNR=22
431A Sonora 71.64 63 ⇓P P 01 46 17.8 +0.3
baz=72,SNR=16
530A J-C Ranch, Com 71.66 64 ⇓P P 01 46 18.4 +0.8
baz=72,SNR=17
OJC Ojcow 71.68 334 eP P 01 46 18.0 +0.7
OJC Ojcow 71.68 334 eP P 01 46 18.0 +0.7
GAL1 Galloway 71.72 350⇑eP P 01 46 17.2 -0.2
GAL1 AMB AMB 01 46 18.2
comp=Z,61nm,1.1s
GAL1 Galloway 71.72 350 P P 01 46 17.2 -0.2
GAL1 AMB AMB 01 46 18.2
comp=Z,61nm,1.1s
SIM Simferopol' 71.80 322c iP P 01 46 18.0 -0.1
SIM pmax pmax
comp=Z,32nm,0.7s
SIM MLR MLR
comp=Z,250nm,17.7s
NRDL Niedersach Rie 71.81 341 eP P 01 46 18.8 +0.9
comp=Z,94nm,1.0s
KESW Keswick, Cumbr 71.82 349⇑eP P 01 46 18.3 +0.3
KESW AMB AMB 01 46 19.8
comp=Z,131nm,0.9s
KESW Keswick, Cumbr 71.82 349 P P 01 46 18.3 +0.3
KESW AMB AMB 01 46 19.8
comp=Z,131nm,0.9s
SIUC Southern Illin 71.87 51 eP P 01 46 18.8 +0.2
comp=Z,34nm,1.0s
KIS Kishinev 71.88 327⇑iP P 01 46 17.0 -1.5
KIS pmax pmax
comp=Z,360nm,1.4s
KIS Kishinev 71.88 327⇑iP P 01 46 17.0 -1.5
comp=Z,400nm,1.4s
KIS Kishinev 71.88 327⇑iP P 01 46 18.4 -0.1
KIS Kishinev 71.88 327⇓iP P 01 46 18.8 +0.3
432A Menard 71.93 63 ⇓P P 01 46 19.5 +0.3
baz=72,SNR=8.3
KSP Ksiaz 71.99 336⇑iP P 01 46 19.8 +0.6
KSP Ksiaz 71.99 336 i P P 01 46 19.8 +0.6
STHS Stebnicka Huta 72.02 333 eP P 01 46 20.7 +1.3
STHS pmax pmax
comp=Z,90nm,0.8s
STHS Stebnicka Huta 72.02 333 eP P 01 46 20.7 +1.3
STHS ePP PP 01 48 54.0 -5.8
531A Rocksprings 72.08 64 ⇑P P 01 46 20.4 +0.3
baz=72,SNR=13
IAS Iasi 72.12 328⇑iP P 01 46 19.9 0.0
KOLS Kolonicke sedl 72.17 332 eP P 01 46 20.9 +0.6
KOLS pmax pmax
comp=Z,80nm,1.0s
KOLS Kolonicke sedl 72.17 332 eP P 01 46 20.9 +0.6
KOLS ePP PP 01 48 55.4 -5.7
RAC Raciborz 72.22 335 eP P 01 46 21.6 +1.1
JCT Junction City 72.24 63 eP P 01 46 21.4 +0.4
JCT pmax pmax
comp=Z,9.0nm,0.8s
JCT Junction City 72.24 63 eP P 01 46 21.4 +0.4
comp=Z,8.7nm,0.8s
JCT Junction City 72.24 63 ⇑P P 01 46 21.4 +0.4
baz=72,SNR=5.9
NIE Niedzica 72.27 333 eP P 01 46 22.3 +1.4
NIE Niedzica 72.27 333 eP P 01 46 22.3 +1.4
LONY Lake Ozonia 72.28 37 eP P 01 46 20.0 -1.0
comp=Z,5.3nm,0.8s
WHTX Lake Whitney 72.30 60 ⇑P P 01 46 21.7 +0.4
baz=72
ERPA Erie 72.31 42 eP P 01 46 21.4 +0.2
comp=Z,6.6nm,0.5s

CLL Collm 72.32 339 *e*P **P 01 46 21.7 +0.6**
comp=Z,190nm,1.0s
CLL Collm 72.32 339⇑*i*P **P 01 46 21.6 +0.5**
CLL pmax pmax
comp=Z,190nm,1.0s
CLL Collm 72.32 339⇑*i*P **P 01 46 21.6 +0.5**
comp=Z,190nm,1.0s
CLL *e* 01 46 56.0
CLZ Clausthal 72.37 340 *e*P **P 01 46 22.9 +1.5**
comp=Z,245nm,1.1s
CLZ Clausthal 72.37 340 *e*P **P 01 46 22.9 +1.5**
CLZ pmax pmax
comp=Z,245nm,1.1s
UPC Upice 72.37 337 *i*P **P 01 46 22.1 +0.7**
UPC Upice 72.37 337 *i*P **P 01 46 22.1 +0.7**
USIN University of 72.39 50 *e*P **P 01 46 22.2 +0.5**
comp=Z,16nm,0.7s
CRVS Cervenica-Dubn 72.42 332 *e*P **P 01 46 20.2 -1.6**
CRVS pmax pmax
comp=Z,40nm,0.7s
CRVS Cervenica-Dubn 72.42 332 *e*P **P 01 46 20.2 -1.6**
IBBN Ibbenburen 72.43 342 *e*P **P 01 46 22.8 +1.1**
comp=Z,180nm,1.1s
UZH Uzhgorod 72.44 332⇑*i*P **P 01 46 22.4 +0.6**
UZH *e* 01 46 34.0
UZH *e* 01 46 51.5
UZH *i*S **SKiKP 01 55 44.4 -1.9**
DPC Dobruska-Polom 72.44 336 *i*P **P 01 46 22.9 +1.0**
DPC Dobruska-Polom 72.44 336 *i*P **P 01 46 22.9 +1.0**
532A Rocksprings 72.45 63 ⇓P **P 01 46 22.3 0.0**
baz=72,SNR=6.0
OKC Ostrava-Krasne 72.46 335 *i*P **P 01 46 22.7 +0.8**
OKC Ostrava-Krasne 72.46 335 *i*P **P 01 46 22.7 +0.8**
PARMO Parma 72.46 52 *e*P **P 01 46 23.0 +0.8**
BURAR Bucovina Array 72.48 329⇑*i*P **P 01 46 22.5 +0.2**
BRG Berggiesshubel 72.52 338 *i*P **P 01 46 22.8 +0.6**
comp=Z,88nm,1.3s
BRG *e* 01 48 47.7
comp=Z,7.7nm,1.1s
BRG Berggiesshubel 72.52 338 *e*P **P 01 46 22.9 +0.6**
comp=Z,88nm,1.3s
BRG Berggiesshubel 72.52 338 *i*P **P 01 46 22.8 +0.6**
BRG pmax pmax
comp=Z,88nm,1.3s
LEOM Leova 72.53 327⇑*i*P **P 01 46 22.5 +0.1**
631A Perdido Creek 72.65 64 ⇓P **P 01 46 23.7 +0.3**
baz=72,SNR=12
MORC Moravsky Berou 72.67 335 *e*P **P 01 46 23.7 +0.4**
MORC pmax pmax
comp=Z,95nm,0.8s
MORC Moravsky Berou 72.67 335 *e*P **P 01 46 23.7 +0.4**
comp=Z,95nm,0.8s
MORC Moravsky Berou 72.67 335⇑*i*P **P 01 46 24.1 +0.8**
NEUB Neuenburg 72.68 339 *e*P **P 01 46 24.0 +0.8**
comp=Z,225nm,1.6s
PVCC Panska Ves 72.69 337 *i*P **P 01 46 24.1 +0.8**
PVCC Panska Ves 72.69 337 *i*P **P 01 46 24.1 +0.8**
WCI Wyandotte Cave 72.81 49 *e*P **P 01 46 24.2 0.0**
WCI pmax pmax
comp=Z,15nm,0.7s
WCI Wyandotte Cave 72.81 49 *e*P **P 01 46 24.2 0.0**
comp=Z,15nm,0.7s
TRPA Tarpa 72.82 331⇑*i*P **P 01 46 24.9 +0.8**
TRPA Tarpa 72.82 331⇑*e*P **P 01 46 25.1 +1.0**
WTSB Winterswijk 72.93 343 *e*P **P 01 46 25.6 +0.9**
comp=Z,119nm,0.9s
KBI1 Birley Grange 72.95 348⇑*i*P **P 01 46 25.0 +0.2**
KBI1 Birley Grange 72.95 348 P **P 01 46 25.0 +0.2**
BMR Baia Mare 72.95 331⇑*i*P **P 01 46 25.6 +0.7**
632A Uvalde 73.00 64 ⇓P **P 01 46 25.8 +0.3**
baz=73,SNR=11
TESR Tescani 73.01 328⇑*i*P **P 01 46 25.2 -0.1**
KECS Kecovo 73.08 333 *e*P **P 01 46 26.4 +0.8**
KECS pmax pmax
comp=Z,33nm,0.7s
KECS Kecovo 73.08 333 *e*P **P 01 46 26.4 +0.8**
KECS *e*PCP **PcP 01 46 41.9 0.0**
WME Myndd Eilian 73.12 350 *e*P **P 01 46 25.5 -0.3**
WME Myndd Eilian 73.12 350 P **P 01 46 25.5 -0.3**
PRA Prague 73.15 337 P **P 01 46 27.0 +1.0**
PRU Pruhonice 73.20 337 *i*P **P 01 46 27.1 +0.8**
PRU MLR MLR
comp=Z,100nm,24.5s
PRU Pruhonice 73.20 337 *i*P **P 01 46 27.1 +0.8**
PRU AMS AMS 02 19 00.0
comp=Z,100nm,24.5s
WPM1 Penmaenmawr 73.22 350⇑*e*P **P 01 46 26.1 -0.3**
WPM1 Penmaenmawr 73.22 350 P **P 01 46 26.1 -0.3**
MOX Moxa 73.24 339 *e*P **P 01 46 27.5 +0.9**
comp=Z,102nm,1.1s
MOX Moxa 73.24 339 *e*P **P 01 46 27.5 +0.9**
MOX pmax pmax
comp=Z,102nm,1.1s
HALT Halls 73.27 52 *e*P **P 01 46 27.4 +0.5**
PLN Plauen 73.28 339 *e*P **P 01 46 27.7 +0.9**
comp=Z,355nm,1.1s
TANN Tannenbergstha 73.28 339 *e*P **P 01 46 27.7 +0.8**
comp=Z,106nm,1.6s
WERD Werda 73.28 339 *e*P **P 01 46 27.7 +0.9**
comp=Z,91nm,1.1s
VRAC Vranov 73.34 336 P **P 01 46 28.3 +1.2**
VRAC Vranov 73.34 336⇑*i*P **P 01 46 28.4 +1.2**
VRAC Vranov 73.34 336 P **P 01 46 28.3 +1.2**
comp=Z,96nm,0.8s,baz=30,slow=6.7,SNR=180
VRAC LR LR 02 23 06.0
comp=Z,75nm,19.6s,baz=15,slow=39
BUG Bochum--Univer 73.35 342 *e*P **P 01 46 28.0 +0.9**
comp=Z,121nm,1.1s
GUNZ Gunzen 73.35 339 *e*P **P 01 46 28.2 +0.9**
comp=Z,70nm,1.0s
UBBA Unterbreizbach 73.42 340 *e*P **P 01 46 28.6 +1.2**
comp=Z,128nm,1.6s
WERN Wernitzgruen 73.42 339 *e*P **P 01 46 28.6 +1.0**
comp=Z,87nm,0.8s
NKC Novy Kostel 73.45 339 *i*P **P 01 46 28.8 +1.0**
NKC Novy Kostel 73.45 339 *i*P **P 01 46 28.8 +1.0**
TLCR 73.47 326⇓*i*P **P 01 46 28.5 +0.6**
FOEL Foel Wylfa 73.50 349⇑*e*P **P 01 46 28.4 +0.3**
FOEL AMB AMB 01 46 29.2
comp=Z,73nm,1.1s
FOEL Foel Wylfa 73.50 349 P **P 01 46 28.4 +0.3**
FOEL AMB AMB 01 46 29.2
comp=Z,73nm,1.1s
732A Laxson Ranch, 73.51 64 ⇓P **P 01 46 29.8 +1.3**
baz=73,SNR=24
VYHS Vyhne 73.51 334 *e*P **P 01 46 29.3 +1.1**
VYHS *e* 01 49 11.7
VYHS Vyhne 73.51 334 *e*P **P 01 46 29.3 +1.1**
VYHS *e*PP **PP 01 49 11.7 -0.9**
PETR Petresti 73.52 327⇓*i*P **P 01 46 28.9 +0.6**
YRE Yr Eifl 73.55 350⇑*e*P **P 01 46 28.1 -0.1**
YRE Yr Eifl 73.55 350 P **P 01 46 28.1 -0.1**
VRI Vrincioaia 73.56 328⇑*i*P **P 01 46 28.8 +0.3**
LBNH Lisbon 73.57 36 *e*P **P 01 46 29.2 +0.6**
LBNH pmax pmax
comp=Z,17nm,0.9s
LBNH Lisbon 73.57 36 *e*P **P 01 46 29.2 +0.6**
comp=Z,17nm,0.9s
KAD Karad 73.58 277 *i*P **P 01 46 28.4 -0.7**
PLOR Plostina 73.60 328⇑*i*P **P 01 46 29.1 +0.3**
TREC Trest 73.62 336 *i*P **P 01 46 29.6 +0.7**
TREC MLR MLR
comp=Z,100nm,18.6s
TREC Trest 73.62 336 *i*P **P 01 46 29.6 +0.7**
TREC AMS AMS 02 24 50.0
comp=Z,100nm,18.6s
CFR Carcaliu 73.70 326⇑*i*P **P 01 46 29.3 0.0**
CFR Carcaliu 73.70 326⇓*i*P **P 01 46 29.6 +0.3**
PSZ Piszkesteto 73.75 333 *e*P **P 01 46 30.5 +0.8**
PSZ pmax pmax
comp=Z,85nm,0.9s
PSZ Piszkesteto 73.75 333 *e*P **P 01 46 30.5 +0.8**
comp=Z,85nm,0.9s
PSZ Piszkesteto 73.75 333⇓*i*P **P 01 46 30.5 +0.8**
PSZ Piszkesteto 73.75 333⇑*e*P **P 01 46 30.8 +1.1**
MANZ Manzenberg 73.76 339 *e*P **P 01 46 30.4 +0.8**
comp=Z,57nm,1.1s
CJR Cluj-Napoca 73.78 330⇑*i*P **P 01 46 30.9 +1.0**
WVT Waverly 73.80 51 *e*P **P 01 46 30.3 +0.2**
WVT pmax pmax
comp=Z,11nm,0.8s
WVT Waverly 73.80 51 *e*P **P 01 46 30.3 +0.2**
comp=Z,11nm,0.8s
HLM1 Long Mynd 73.83 349⇑*e*P **P 01 46 30.2 +0.3**
HLM1 AMB AMB 01 46 31.1
comp=Z,55nm,1.1s
HLM1 Long Mynd 73.83 349 P **P 01 46 30.2 +0.3**
HLM1 AMB AMB 01 46 31.1
comp=Z,55nm,1.1s
SMOL Smolenice 73.86 335 *e*P **P 01 46 32.1 +1.9**
SMOL Smolenice 73.86 335 *e*P **P 01 46 32.1 +1.9**
ROTZ Rotzenmuhle 73.94 339 *e*P **P 01 46 31.9 +1.2**
comp=Z,74nm,1.0s
DRGR 73.97 331⇑*i*P **P 01 46 31.4 +0.4**
MLR Muntele Rosu 74.14 328 P **P 01 46 33.2 +1.1**
MLR Muntele Rosu 74.14 328⇑*i*P **P 01 46 32.5 +0.4**
MLR Muntele Rosu 74.14 328 P **P 01 46 33.2 +1.1**
comp=Z,23nm,0.7s,baz=345,slow=8.3,SNR=240
HARR Harsova 74.20 326⇓*i*P **P 01 46 32.6 +0.4**
GRF Grafenberg Arr 74.23 339 *e*P **P 01 46 33.6 +1.2**
comp=Z,159nm,1.0s
GRF *e*L L 02 27 39.3
comp=Z,48nm,21.5s
GRF Grafenberg Arr 74.23 339 *e*P **P 01 46 33.6 +1.2**
GRF pmax pmax
comp=Z,159nm,1.0s
GRFO Grafenberg 74.23 339 *e*P **P 01 46 33.4 +1.0**
GRFO pmax pmax
comp=Z,147nm,1.1s
GRFO Grafenberg 74.23 339 *e*P **P 01 46 33.4 +1.0**
comp=Z,147nm,1.1s
KHC Kasperske Hory 74.23 338 *e*P **P 01 46 33.0 +0.6**
KHC Kasperske Hory 74.23 338 *e*P **P 01 46 33.0 +0.6**
KHC *e*x x 01 46 36.5
ZST Bratislava 74.24 335 *e*P **P 01 46 33.0 +0.6**
ZST pmax pmax
comp=Z,54nm,0.9s
ZST Bratislava 74.24 335 *e*P **P 01 46 33.0 +0.6**
HGN Heimansgroeve 74.24 343 *e*P **P 01 46 33.2 +0.8**
comp=Z,164nm,1.1s
TIRR Tirgusor 74.25 326 *e*P **P 01 46 32.6 +0.1**
TIRR pmax pmax
comp=Z,87nm,0.8s
TIRR Tirgusor 74.25 326 *e*P **P 01 46 32.6 +0.1**
comp=Z,87nm,0.8s
BEBN Eben Emael 74.26 343 P **P 01 46 33.3 +0.8**
comp=Z,37nm,1.5s
ISR Istrita 74.28 327⇓*i*P **P 01 46 33.5 +0.7**
TNS Taunus Mts 74.29 341 *e*P **P 01 46 33.7 +0.9**
comp=Z,74nm,0.9s
TNS Taunus Mts 74.29 341 *e*P **P 01 46 33.6 +0.8**
TNS pmax pmax
comp=Z,74nm,0.9s
MCH1 Michaelchurch 74.36 349⇑*e*P **P 01 46 32.8 -0.2**
MCH1 AMB AMB 01 46 34.0
comp=Z,60nm,1.1s
MCH1 Michaelchurch 74.36 349 P **P 01 46 32.8 -0.2**
MCH1 AMB AMB 01 46 34.0
comp=Z,60nm,1.1s
MEM Membach 74.38 343 P **P 01 46 33.4 +0.2**
comp=Z,128nm,1.1s
WET Wettzell 74.38 338 *e*P **P 01 46 34.4 +1.1**
comp=Z,113nm,1.1s
WET Wettzell 74.38 338 *e*P **P 01 46 34.4 +1.1**
WET pmax pmax
comp=Z,113nm,1.1s
BUD Budapest 74.39 333⇑*e*P **P 01 46 34.7 +1.4**
GEC2 GERESS Array S 74.47 337 *e*P **P 01 46 34.5 +0.6**
comp=Z,74nm,1.2s
GEC2 GERESS Array S 74.47 337 *e*P **P 01 46 34.5 +0.6**
GEC2 pmax pmax
comp=Z,74nm,1.2s
GERES GERESS Array B 74.47 337 P **P 01 46 34.5 +0.6**
GERES GERESS Array B 74.47 337 P **P 01 46 34.5 +0.6**
comp=Z,31nm,0.8s,baz=36,slow=5.2,SNR=313
GERES LR LR 02 22 46.2
comp=Z,75nm,19.4s,baz=203,slow=38
AMRR Amara 74.47 327⇓*i*P **P 01 46 34.4 +0.6**
VOIR 74.48 329⇑*i*P **P 01 46 34.9 +0.9**
PKSG 74.64 334⇑*e*P **P 01 46 36.2 +1.4**
ARR Arges 74.67 329⇑*i*P **P 01 46 36.1 +1.0**
BCLA Clavier 74.69 343 P **P 01 46 35.5 +0.6**
comp=Z,54nm,1.5s
SWN1 Swindon 74.69 348⇑*e*P **P 01 46 35.7 +0.7**
SWN1 AMB AMB 01 46 36.4
comp=Z,151nm,1.0s
SWN1 Swindon 74.69 348 P **P 01 46 35.7 +0.7**
SWN1 AMB AMB 01 46 36.4
comp=Z,151nm,1.0s
PKSN Nyarlorinc 74.69 333⇑*e*P **P 01 46 36.7 +1.6**
CSKK Cs˘‡kako 74.71 334⇓*e*P **P 01 46 36.9 +1.8**
DEV Deva 74.74 330⇑*i*P **P 01 46 36.0 +0.7**
PKS7 Kunszentmiklos 74.75 333⇓*e*P **P 01 46 37.1 +1.7**
SULR 74.77 327⇑*i*P **P 01 46 35.5 0.0**
ABH Alteburg 74.79 342⇑*e*P **P 01 46 36.2 +0.6**
CONA Conrad Observa 74.80 336⇑*i*P **P 01 46 37.1 +1.3**
comp=Z,77nm,0.7s,SNR=89
TOD Tromm 74.81 341⇑*e*P **P 01 46 36.6 +0.9**
TOD Tromm 74.81 341⇑*e*P **P 01 46 36.6 +0.9**
WOL Wolverton 74.81 348⇑*e*P **P 01 46 35.8 +0.1**
WOL AMB AMB 01 46 37.0
comp=Z,81nm,0.9s
WOL Wolverton 74.81 348 P **P 01 46 35.8 +0.1**
WOL AMB AMB 01 46 37.0
comp=Z,81nm,0.9s
SOP Sopron 74.85 335⇓*e*P **P 01 46 37.7 +1.7**
PKST T˜˜s 74.86 334⇑*e*P **P 01 46 37.2 +1.1**
LOT Lotru 74.87 329⇑*i*P **P 01 46 36.7 +0.5**
RUP Ruppelstein 75.06 342⇑*e*P **P 01 46 37.9 +0.7**
RUP Ruppelstein 75.06 342⇑*e*P **P 01 46 37.9 +0.7**
GIVF Givet 75.07 343⇑*i*P **P 01 46 37.7 +0.5**
comp=Z,118nm,1.2s
GIVF Givet 75.07 343⇑*i*P **P 01 46 37.7 +0.5**
GIVF pmax pmax
comp=Z,118nm,1.2s
GIVF Givet 75.07 343⇑*i*P **P 01 46 37.7 +0.5**
comp=Z,118nm,1.2s
VAL Valentia 75.09 353⇓*i*P **P 01 46 38.3 +1.1**
CIOR Ciorogarla 75.09 328⇑*i*P **P 01 46 37.9 +0.5**
DOU Dourbes 75.12 344 P **P 01 46 37.8 +0.4**
comp=Z,25nm,1.3s
GZR Gura Zlata 75.22 330⇑*i*P **P 01 46 38.5 +0.3**
BAIF Baives 75.22 344⇑*i*P **P 01 46 38.7 +0.7**
comp=Z,115nm,1.2s
BAIF Baives 75.22 344⇑*i*P **P 01 46 38.7 +0.7**
BAIF pmax pmax
comp=Z,115nm,1.2s
BAIF Baives 75.22 344⇑*i*P **P 01 46 38.7 +0.7**
comp=Z,115nm,1.2s
WLF Walferdange 75.26 342 P **P 01 46 39.7 +1.4**
comp=Z,36nm,1.7s
WLF Walferdange 75.26 342 *e*P **P 01 46 38.7 +0.4**
WLF pmax pmax
comp=Z,47nm,1.3s
WLF Walferdange 75.26 342 *e*P **P 01 46 38.7 +0.4**
comp=Z,47nm,1.3s
MOA Molln 75.27 337 *i*P **P 01 46 39.3 +0.9**
comp=Z,42nm,0.7s,SNR=64
HUMR Humele 75.31 328⇑*i*P **P 01 46 38.7 0.0**
HEX Exmoor 75.37 349⇑*e*P **P 01 46 39.2 +0.3**
HEX Exmoor 75.37 349 P **P 01 46 39.2 +0.3**
PKS9 Tamasi 75.42 333⇓*e*P **P 01 46 40.1 +0.9**
TZTN Tazewell 75.43 48 *e*P **P 01 46 39.7 +0.2**
comp=Z,3.3nm,0.7s
HTL Hartland 75.51 350⇑*e*P **P 01 46 40.2 +0.5**
HTL Hartland 75.51 350 P **P 01 46 40.2 +0.5**
ARSA Arzberg 75.52 336 *i*P **P 01 46 40.9 +1.1**
comp=Z,58nm,0.7s,SNR=52
STU Stuttgart 75.53 340 *e*P **P 01 46 40.6 +0.8**
comp=Z,103nm,1.3s
STU Stuttgart 75.53 340 *e*P **P 01 46 40.6 +0.8**
STU pmax pmax
comp=Z,78nm,1.1s
STU Stuttgart 75.53 340 *e*P **P 01 46 40.6 +0.8**
comp=Z,78nm,1.1s
LANF Langenberg 75.60 341⇑*e*P **P 01 46 41.2 +0.9**
LANF Langenberg 75.60 341⇑*e*P **P 01 46 41.2 +0.9**
LANF Langenberg 75.60 341⇑*e*P **P 01 46 41.2 +0.9**
FUR Furstenfeldbru 75.66 339 *e*P **P 01 46 41.5 +0.9**
comp=Z,111nm,1.1s
FUR Furstenfeldbru 75.66 339 *e*P **P 01 46 41.5 +0.9**
FUR pmax pmax
comp=Z,111nm,1.1s
PKSM Moragy 75.66 333⇑*i*P **P 01 46 41.2 +0.6**
PKSM Moragy 75.66 333⇑*e*P **P 01 46 40.6 0.0**
RJOB Jochberg 75.72 338 *e*P **P 01 46 42.2 +1.2**
comp=Z,52nm,0.9s
MALT Malatya 75.73 316 *e*P P 01 46 48.1 +6.8
MALT pmax pmax
comp=Z,67nm,1.2s
MALT Malatya 75.73 316 *e*P P 01 46 48.1 +6.8
comp=Z,67nm,1.2s
WRAB Tennant Creek 75.82 204 *e*P **P 01 46 42.4 +0.7**
WRAB pmax pmax
comp=Z,13nm,0.8s
WRAB Tennant Creek 75.82 204 *e*P **P 01 46 42.4 +0.7**
comp=Z,13nm,0.8s
WRA Warramunga Arr 75.84 204 P **P 01 46 42.0 +0.2**
WRA pP **pP 01 47 09.5 +1.7**
WRA Warramunga Arr 75.84 204 P **P 01 46 42.0 +0.2**
comp=Z,2.3nm,0.4s,baz=18,slow=6.1,SNR=12
WRA pP **pP 01 47 09.5 +1.7**
comp=Z,8.9nm,0.7s,baz=18,slow=6.2,SNR=7.0
SDMD Soldier's Deli 75.87 42 *e*P **P 01 46 42.0 +0.1**
comp=Z,6.7nm,0.7s
CPCT Cooper Cave 75.89 49 *e*P **P 01 46 42.1 -0.1**
BEHE Becsehely 75.92 334⇑*e*P **P 01 46 43.2 +1.1**
ZIMR 75.97 328⇑*i*P **P 01 46 42.5 +0.1**
DYA Yadsworthy 76.00 349⇑*e*P **P 01 46 42.7 +0.2**
DYA AMB AMB 01 46 43.4
comp=Z,87nm,0.8s
DYA Yadsworthy 76.00 349 P **P 01 46 42.7 +0.2**
DYA AMB AMB 01 46 43.4
comp=Z,87nm,0.8s
TKL Tuckaleechee C 76.06 49 *e*P **P 01 46 43.0 -0.2**
KOGS Kog 76.08 335⇑*i*P **P 01 46 43.5 +0.5**
KOGS Kog 76.08 335⇑*i*P **P 01 46 43.5 +0.5**
BFO Black Forest 76.12 341 *e*P **P 01 46 44.0 +0.7**
comp=Z,58nm,1.0s
BFO Black Forest 76.12 341 *e*P **P 01 46 44.0 +0.7**
BFO pmax pmax
comp=Z,58nm,1.0s
BFO Black Forest 76.12 341 *e*P **P 01 46 43.1 -0.2**
comp=Z,73nm,1.3s
BFO Black Forest 76.12 341 P **P 01 46 44.4 +1.1**
comp=Z,260nm,1.1s,SNR=19
SOKA Soboth 76.17 336⇑*i*P **P 01 46 44.6 +1.0**
comp=Z,89nm,0.9s
PERS Pernice 76.19 336 *i*P **P 01 46 44.7 +1.0**
PERS Pernice 76.19 336 *i*P **P 01 46 44.7 +1.0**
KBA Koelnbreinsper 76.21 337⇑*i*P **P 01 46 45.6 +1.6**
comp=Z,288nm,0.8s,SNR=109
SPAK Spaichingen-Ko 76.25 340⇑*e*P **P 01 46 44.9 +0.9**
CDF Champ du Feu 76.25 341⇑*i*P **P 01 46 44.7 +0.6**
comp=Z,192nm,1.1s
CDF Champ du Feu 76.25 341⇑*i*P **P 01 46 44.7 +0.6**
CDF pmax pmax
comp=Z,192nm,1.1s
CDF Champ du Feu 76.25 341⇑*i*P **P 01 46 44.7 +0.6**
comp=Z,192nm,1.1s
GROS Grobnik 76.26 335⇑*i*P **P 01 46 44.9 +0.8**
GROS Grobnik 76.26 335⇑*i*P **P 01 46 44.9 +0.8**
WATA Walderalm 76.38 338⇑*i*P **P 01 46 45.9 +1.0**
comp=Z,25nm,0.6s,SNR=27
PAGF Fort de Pagny 76.41 342⇑*i*P **P 01 46 45.9 +1.1**
comp=Z,101nm,1.3s
PAGF Fort de Pagny 76.41 342⇑*i*P **P 01 46 45.9 +1.1**
comp=Z,101nm,1.3s
RETA Reutte 76.41 339⇑*i*P **P 01 46 45.8 +0.8**
comp=Z,43nm,0.9s,SNR=21
WTTA Wattenberg 76.43 338⇑*i*P **P 01 46 46.4 +1.1**
comp=Z,173nm,1.4s,SNR=50
LIBD Limburg 76.44 341⇑*e*P **P 01 46 46.2 +1.2**
LIBD Limburg 76.44 341⇑*e*P **P 01 46 46.2 +1.2**
OBKA Obir 76.45 336 *i*P **P 01 46 46.2 +1.0**
comp=Z,148nm,1.2s,SNR=46
ECH Echery 76.46 341 *e*P **P 01 46 45.7 +0.5**
ECH pmax pmax
comp=Z,89nm,1.1s
ECH Echery 76.46 341 *e*P **P 01 46 45.7 +0.5**
comp=Z,89nm,1.1s
ECH Echery 76.46 341⇑*e*P **P 01 46 45.9 +0.7**
BRTR Keskin Array B 76.47 320 P **P 01 46 45.6 +0.1**
BRTR PP **PP 01 49 41.3 +3.4**
BRTR Keskin Array B 76.47 320 P **P 01 46 45.6 +0.1**
comp=Z,27nm,0.7s,baz=40,slow=3.0,SNR=189
BRTR PP **PP 01 49 41.3 +3.4**
comp=Z,3.3nm,0.9s,baz=56,slow=3.1,SNR=3.8
BRTR LR LR 02 24 50.0
comp=Z,50nm,19.0s,baz=4.1,slow=39
MOTA Moosalm 76.47 338⇑*i*P **P 01 46 46.2 +0.7**
comp=Z,63nm,0.9s,SNR=57
MYKA Terra Mystica 76.56 337⇑*i*P **P 01 46 46.3 +0.5**
comp=Z,64nm,1.1s
MEZF Maizieres J'vi 76.58 343⇑*i*P **P 01 46 46.6 +0.8**
comp=Z,320nm,1.4s
MEZF Maizieres J'vi 76.58 343⇑*i*P **P 01 46 46.6 +0.8**
comp=Z,320nm,1.4s
FELD Feldberg im Sc 76.62 341⇑*e*P **P 01 46 46.6 +0.4**
JMB Yambol 76.63 326 P **P 01 46 45.7 -0.5**
ANTO Ankara 76.67 321 *e*P **P 01 46 47.0 +0.4**
ANTO pmax pmax
comp=Z,14nm,0.5s
ANTO Ankara 76.67 321 P **P 01 46 47.4 +0.9**
SNR=24
ANTO Ankara 76.67 321 *e*P **P 01 46 47.0 +0.4**
comp=Z,14nm,0.5s
THEF They Montfort 76.67 342⇑*e*P **P 01 46 46.8 +0.5**
THEF They Montfort 76.67 342⇑*e*P **P 01 46 46.8 +0.5**
THEF They Montfort 76.67 342⇑*e*P **P 01 46 46.8 +0.5**
ABTA Abfaltersbach 76.72 337⇑*i*P **P 01 46 47.3 +0.6**
comp=Z,122nm,1.0s,SNR=63
LRAL Lakeview Retre 76.72 52 *e*P **P 01 46 46.6 -0.3**
comp=Z,57nm,0.6s
DAVA Damuels 76.79 339⇓*i*P **P 01 46 48.0 +0.7**
comp=Z,79nm,1.2s,SNR=22
MOF Molkenrain 76.81 341⇑*e*P **P 01 46 47.9 +0.6**
MOF Molkenrain 76.81 341⇑*e*P **P 01 46 47.9 +0.6**
MOF Molkenrain 76.81 341⇑*e*P **P 01 46 47.9 +0.6**
HAU Haudompre 76.82 342⇑*i*P **P 01 46 47.7 +0.5**
comp=Z,142nm,1.0s
HAU *e*R
comp=Z,87nm,22.2s
HAU Haudompre 76.82 342⇑*i*P **P 01 46 47.7 +0.5**
HAU pmax pmax
comp=Z,142nm,1.0s
HAU Haudompre 76.82 342⇑*i*P **P 01 46 47.7 +0.5**
comp=Z,142nm,1.0s
FETA Feichten 76.86 339 *i*P **P 01 46 48.7 +1.1**
comp=Z,92nm,1.0s,SNR=77
MZRK Al-Mazaregh 76.87 313 *e*P **P 01 46 48.0 +0.3**
SFTF Sexfontaines 76.87 343⇑*i*P **P 01 46 48.1 +0.7**
comp=Z,275nm,1.2s
SFTF Sexfontaines 76.87 343⇑*i*P **P 01 46 48.1 +0.7**
comp=Z,275nm,1.2s
LJU Ljubljana 76.89 336⇑*i*P **P 01 46 48.0 +0.4**
LJU Ljubljana 76.89 336⇑*i*P **P 01 46 48.0 +0.4**
HINF Hinteralfeld 76.90 341⇑*i*P **P 01 46 48.0 +0.3**
comp=Z,64nm,1.0s
HINF Hinteralfeld 76.90 341⇑*i*P **P 01 46 48.0 +0.3**
HINF pmax pmax
comp=Z,64nm,1.0s
HINF Hinteralfeld 76.90 341⇑*i*P **P 01 46 48.0 +0.3**
comp=Z,64nm,1.0s
CADS Cadrg 76.91 336⇑*i*P **P 01 46 47.5 -0.3**
CADS Cadrg 76.91 336⇑*i*P **P 01 46 47.5 -0.3**
SISC Sisak 76.95 334 P **P 01 46 48.7 +0.8**
JSA Saint Aubin 77.02 348⇑*e*P **P 01 46 48.5 +0.4**
JSA AMB AMB 01 46 49.3
comp=Z,84nm,1.0s
JSA Saint Aubin 77.02 348 P **P 01 46 48.5 +0.4**
JSA AMB AMB 01 46 49.3
comp=Z,84nm,1.0s
VOY Vojsko 77.06 336 *e*P **P 01 46 48.3 -0.4**
VOY Vojsko 77.06 336 *e*P **P 01 46 48.3 -0.4**
BBS Basel-Blauen 77.11 341⇑*e*P **P 01 46 49.6 +0.7**
BBS Basel-Blauen 77.11 341⇑*e*P **P 01 46 49.6 +0.7**
BANOM Banah 77.17 296 P **P 01 46 49.3 -0.2**
SNR=8.4
FLN La Foliniere 77.21 347⇑*i*P **P 01 46 49.5 +0.2**
comp=Z,122nm,1.1s
FLN *e*R
comp=Z,71nm,20.5s
FLN La Foliniere 77.21 347⇑*i*P **P 01 46 49.5 +0.2**
FLN pmax pmax
comp=Z,122nm,1.1s
FLN La Foliniere 77.21 347⇑*i*P **P 01 46 49.5 +0.2**
comp=Z,122nm,1.1s
BOJS Bojanci 77.21 335⇑*i*P **P 01 46 49.9 +0.5**
BOJS Bojanci 77.21 335⇑*i*P **P 01 46 49.9 +0.5**
DIVS Divibare 77.22 331 P **P 01 46 49.5 -0.1**
DAVOX Davos/Dischmat 77.28 339 P **P 01 46 51.2 +1.2**
DAVOX Davos/Dischmat 77.28 339 P **P 01 46 51.2 +1.2**
comp=Z,36nm,0.8s,baz=357,slow=4.5,SNR=38

BHD **Baghdad** **77.29 309** *eP* P 01 46 45.1 -4.9
BHD *eS* S 01 56 23.0 -8.5
LDF La Druitiere **77.32 346**⇑*iP* **P** **01 46 50.1 +0.2**
comp=Z,105nm,1.2s
LDF La Druitiere **77.32 346**⇑*iP* **P** **01 46 50.1 +0.2**
LDF pmax pmax
comp=Z,105nm,1.2s
LDF La Druitiere **77.32 346**⇑*iP* **P** **01 46 50.1 +0.2**
comp=Z,105nm,1.2s
LOMF Lomont **77.35 341**⇑*eP* **P** **01 46 50.7 +0.4**
LOMF Lomont **77.35 341**⇑*eP* **P** **01 46 50.7 +0.4**
LOMF Lomont **77.35 341**⇑*eP* **P** **01 46 50.7 +0.4**
PLD Plovdiv **77.57 327** P **P** **01 46 51.4 -0.1**
KMSC Kings Mountain **77.59 47** ⇑P **P** **01 46 51.6 0.0**
baz=77
VTS Vitosha **77.62 329** P **P** **01 46 51.9 +0.1**
VTS Vitosha **77.62 329**⇑*iP* **P** **01 46 52.0 +0.1**
GRR Gorron **77.62 347**⇑*iP* **P** **01 46 52.1 +0.5**
comp=Z,90nm,0.8s
GRR Gorron **77.62 347**⇑*iP* **P** **01 46 52.1 +0.5**
GRR pmax pmax
comp=Z,91nm,0.8s
GRR Gorron **77.62 347**⇑*iP* **P** **01 46 52.1 +0.5**
comp=Z,90nm,0.8s
TUE Stuetta **77.68 339** *eP* **P** **01 46 53.3 +1.1**
comp=Z,63nm,0.9s
DRWC Darouich **77.91 316** *eP* P 01 46 49.3 -4.3
LOR Lormes **77.98 343**⇑*iP* **P** **01 46 54.1 +0.4**
comp=Z,201nm,1.3s
LOR *eR*
comp=Z,66nm,20.5s
LOR Lormes **77.98 343**⇑*iP* **P** **01 46 54.1 +0.4**
comp=Z,201nm,1.3s
SGMF Saint Gilles **77.98 348**⇑*iP* **P** **01 46 54.1 +0.5**
comp=Z,66nm,0.6s
SGMF Saint Gilles **77.98 348**⇑*iP* **P** **01 46 54.1 +0.5**
SGMF pmax pmax
comp=Z,66nm,0.6s
SGMF Saint Gilles **77.98 348**⇑*iP* **P** **01 46 54.1 +0.5**
comp=Z,66nm,0.6s
ROSF Rostrenen **77.99 348**⇑*iP* **P** **01 46 54.2 +0.5**
comp=Z,133nm,1.0s
ROSF Rostrenen **77.99 348**⇑*iP* **P** **01 46 54.2 +0.5**
ROSF pmax pmax
comp=Z,133nm,1.0s
ROSF Rostrenen **77.99 348**⇑*iP* **P** **01 46 54.2 +0.5**
comp=Z,133nm,1.0s
UOSS Wadi Hilu **78.00 295** P **P** **01 46 53.0 -1.1**
comp=Z,333nm,0.7s,SNR=18
PLE Pljevlja **78.10 331**⇑*iP* **P** **01 46 53.9 -0.6**
HATD Hatta, Dubai **78.13 295** P **P** **01 46 54.4 -0.5**
SNR=12
HYF Humbligny **78.19 344** *eP* **P** **01 46 55.7 +0.9**
HYF Humbligny **78.19 344** *eP* **P** **01 46 55.7 +0.9**
NVLJ Novalja **78.19 335** P **P** **01 46 54.6 -0.2**
ALN Alexandroupoli **78.21 326** P **P** **01 46 55.0 0.0**
ALN Alexandroupoli **78.21 326** *eP* **P** **01 46 55.0 0.0**
CABF La Chapelle **78.21 342**⇑*iP* **P** **01 46 55.8 +0.8**
comp=Z,198nm,1.3s
CABF La Chapelle **78.21 342**⇑*iP* **P** **01 46 55.8 +0.8**
CABF pmax pmax
comp=Z,198nm,1.3s
CABF La Chapelle **78.21 342**⇑*iP* **P** **01 46 55.8 +0.8**
comp=Z,198nm,1.3s
SSF Saint Saulge **78.24 343**⇑*iP* **P** **01 46 55.6 +0.5**
comp=Z,69nm,1.2s
SSF Saint Saulge **78.24 343**⇑*iP* **P** **01 46 55.6 +0.5**
SSF pmax pmax
comp=Z,69nm,1.2s
SSF Saint Saulge **78.24 343**⇑*iP* **P** **01 46 55.6 +0.5**
comp=Z,69nm,1.2s
NAZ Nazwa, Dubai **78.26 296** P **P** **01 46 55.0 -0.6**
SNR=6.6
ASHO Ashiyiah **78.28 295** P **P** **01 46 55.3 -0.4**
SNR=8.6
WBK Wadi Bani Khal **78.32 292** P **P** **01 46 57.0 +1.0**
SNR=6.7
UPM Unac-Piva **78.36 332** *eP* **P** **01 46 55.4 -0.6**
OG01 Vacheresse **78.36 341** *eP* **P** **01 46 56.5 +0.6**
OG01 Vacheresse **78.36 341** *eP* **P** **01 46 56.5 +0.6**
IVA Berane **78.37 331** *eP* **P** **01 46 56.4 +0.4**
QUIF Quistinic **78.39 348**⇑*iP* **P** **01 46 56.3 +0.4**
comp=Z,101nm,1.0s
QUIF Quistinic **78.39 348**⇑*iP* **P** **01 46 56.3 +0.4**
QUIF pmax pmax
comp=Z,101nm,1.0s
QUIF Quistinic **78.39 348**⇑*iP* **P** **01 46 56.3 +0.4**
comp=Z,101nm,1.0s
HOQ Hoqain **78.47 294** P **P** **01 46 56.6 -0.1**
SNR=6.3
SMDO Samad **78.48 293** P **P** **01 46 57.2 +0.3**
SNR=5.9
NVR Nevrokopi **78.53 328** P **P** **01 46 57.1 +0.3**
NVR Nevrokopi **78.53 328** *eP* **P** **01 46 57.4 +0.6**
SMF Signal de Mont **78.58 343**⇑*iP* **P** **01 46 57.5 +0.5**
comp=Z,224nm,1.4s
SMF Signal de Mont **78.58 343**⇑*iP* **P** **01 46 57.5 +0.5**
SMF pmax pmax
comp=Z,224nm,1.4s
SMF Signal de Mont **78.58 343**⇑*iP* **P** **01 46 57.5 +0.5**
comp=Z,224nm,1.4s
PVY Plav **78.61 331**⇑*iP* **P** **01 46 57.0 -0.3**
KAVA Kavala **78.63 327** P **P** **01 46 57.5 +0.2**
NKY Niksic **78.69 331**⇑*iP* **P** **01 46 57.5 -0.3**
MIB Mutribah **78.71 305** *eP* **P** **01 46 57.1 -0.8**
MIB AMb AMB 01 46 58.9
comp=Z,122nm,0.8s
BRY Bratogost **78.74 332** *eP* **P** **01 46 57.6 -0.5**
SMTH Samothraki Isl **78.76 326** *eP* **P** **01 46 57.5 -0.6**
SRS Serrai **78.82 328** P **P** **01 46 58.3 -0.1**
BGF Bois d'Agland **78.84 344**⇑*iP* **P** **01 46 59.1 +0.7**
comp=Z,67nm,1.2s
BGF Bois d'Agland **78.84 344**⇑*iP* **P** **01 46 59.1 +0.7**
BGF pmax pmax
comp=Z,67nm,1.2s
BGF Bois d'Agland **78.84 344**⇑*iP* **P** **01 46 59.1 +0.7**
comp=Z,67nm,1.2s
ARNB Al Arnab **78.85 316** *eP* **P** **01 46 58.8 0.0**
OG35 Corcelles **78.85 342**⇑*eP* **P** **01 46 59.1 +0.6**
TTG Podgorica **78.96 331**⇑*iP* **P** **01 46 58.7 -0.4**
VAY Valandovo **78.97 328** P **P** **01 46 58.9 -0.2**
VAY Valandovo **78.97 328** *iP* **P** **01 46 59.0 -0.2**
RSL Roselend **78.99 341**⇑*eP* **P** **01 47 00.6 +1.2**
RSL Roselend **78.99 341**⇑*eP* **P** **01 47 00.6 +1.2**
RSL Roselend **78.99 341**⇑*eP* **P** **01 47 00.6 +1.2**
JMDO Jabal Madar **78.99 292** P **P** **01 46 59.7 +0.1**
SNR=13
STON Ston **79.00 332** P **P** **01 46 58.5 -0.8**
KNT Kendrikon **79.01 328** P **P** **01 46 59.8 +0.4**
KBD Kabd **79.05 304** *eP* **P** **01 46 59.0 -0.8**
ARQ Araqi **79.10 294** P **P** **01 46 59.7 -0.5**
SNR=10.0
LPL La Plagne **79.13 341**⇑*iP* **P** **01 47 01.8 +1.5**
comp=Z,110nm,0.8s
LPL La Plagne **79.13 341**⇑*iP* **P** **01 47 01.8 +1.5**
LPL pmax pmax
comp=Z,110nm,0.8s
LPL La Plagne **79.13 341**⇑*iP* **P** **01 47 01.8 +1.5**
comp=Z,110nm,0.8s
LPG La Plagne **79.15 341**⇑*iP* **P** **01 47 02.0 +1.6**
comp=Z,139nm,0.7s
LPG La Plagne **79.15 341**⇑*iP* **P** **01 47 02.0 +1.6**
LPG pmax pmax
comp=Z,139nm,0.7s
LPG La Plagne **79.15 341**⇑*iP* **P** **01 47 02.0 +1.6**
comp=Z,139nm,0.7s
HCY Herceg Novi **79.17 332**⇑*iP* **P** **01 46 59.8 -0.5**
SOH Sokhos **79.17 328** P **P** **01 47 00.4 +0.1**
SOH Sokhos **79.17 328** *eP* **P** **01 47 00.3 0.0**
BUM Brajici-Budva **79.19 331** *eP* **P** **01 47 00.0 -0.4**
BSY Bisya **79.20 293** P **P** **01 47 00.8 0.0**
SNR=16
TCF Toulx Ste Croi **79.21 344**⇑*iP* **P** **01 47 01.2 +0.8**
comp=Z,69nm,1.1s
TCF Toulx Ste Croi **79.21 344**⇑*iP* **P** **01 47 01.2 +0.8**
TCF pmax pmax
comp=Z,69nm,1.1s
TCF Toulx Ste Croi **79.21 344**⇑*iP* **P** **01 47 01.2 +0.8**
comp=Z,69nm,1.1s
NAY Al-Naaiem **79.21 305** *eP* **P** **01 46 59.7 -1.0**
NAY AMb AMB 01 47 01.2
comp=Z,68nm,1.0s
MFF Saint Martin d **79.27 346**⇑*iP* **P** **01 47 01.5 +0.8**
comp=Z,68nm,0.9s
MFF Saint Martin d **79.27 346**⇑*iP* **P** **01 47 01.5 +0.8**
MFF pmax pmax
comp=Z,68nm,0.9s
MFF Saint Martin d **79.27 346**⇑*iP* **P** **01 47 01.5 +0.8**
comp=Z,68nm,0.9s
AGO Saint Agoulin **79.28 343**⇑*eP* **P** **01 47 02.4 +1.6**
AGO Saint Agoulin **79.28 343**⇑*eP* **P** **01 47 02.4 +1.6**
PHP Peshkopia **79.30 330** P **P** **01 47 00.8 -0.2**
RDF Al-Radifah **79.32 304** *eP* **P** **01 47 00.6 -0.8**
RDF AMb AMB 01 47 02.6
comp=Z,217nm,1.3s
GRG Griva **79.35 328** P **P** **01 47 01.6 +0.3**
GRG Griva **79.35 328** *eP* **P** **01 47 01.7 +0.4**
LIA Limnos Island **79.39 326** P **P** **01 47 01.4 -0.1**
LIA Limnos Island **79.39 326** *eP* **P** **01 47 01.7 +0.2**
ULC Ulcinj **79.40 331**⇑*iP* **P** **01 47 00.9 -0.6**
OUR Ouranopolis **79.40 327** P **P** **01 47 01.3 -0.2**
ASAR Alice Springs **79.52 204** P **P** **01 47 03.0 +0.7**
ASAR pP **pP** **01 47 29.0 +0.6**
ASAR Alice Springs **79.52 204** P **P** **01 47 03.0 +0.7**
comp=Z,2.0nm,0.4s,baz=17,slow=5.1,SNR=27
ASAR pP **pP** **01 47 29.0 +0.6**
comp=Z,8.3nm,0.9s,baz=15,slow=5.6,SNR=6.4
ASAR LR LR 02 20 26.8
comp=Z,61nm,20.7s,baz=95,slow=34
PLG Polygyros **79.54 327** P **P** **01 47 01.9 -0.5**
PLG Polygyros **79.54 327** *eP* **P** **01 47 02.4 0.0**
BNI Bardonecchia **79.59 341** *eP* **P** **01 47 03.8 +1.1**
BNI pmax pmax
comp=Z,20nm,0.7s
BNI Bardonecchia **79.59 341** *eP* **P** **01 47 03.8 +1.1**
comp=Z,20nm,0.7s
PYM Petit Puy Mans **79.60 343**⇑*eP* **P** **01 47 03.9 +1.3**
PYM Petit Puy Mans **79.60 343**⇑*eP* **P** **01 47 03.9 +1.3**
PYM Petit Puy Mans **79.60 343**⇑*eP* **P** **01 47 03.9 +1.3**
PRK Paraskevi **79.60 325** P **P** **01 47 02.2 -0.4**
PRK Paraskevi **79.60 325** *eP* **P** **01 47 02.7 +0.1**
BIA Bitola **79.63 329** *iP* **P** **01 47 02.0 -0.8**
VLC Villacollemand **79.65 338** *eP* **P** **01 47 03.4 +0.5**
comp=Z,56nm,1.0s
TIGA Tifton **79.66 51** ⇑P **P** **01 47 03.4 +0.4**
baz=79
TIR Tirane **79.78 330** *eP* **P** **01 47 03.8 +0.2**
TIR pmax pmax
comp=Z,89nm,1.0s
TIR Tirane **79.78 330** *eP* **P** **01 47 04.0 +0.4**
TIR Tirane **79.78 330** *eP* **P** **01 47 03.8 +0.2**
comp=Z,89nm,1.0s
SSB Saint Sauveur **79.78 342** *eP* **P** **01 47 04.2 +0.6**
SSB pmax pmax
comp=Z,67nm,1.1s
SSB Saint Sauveur **79.78 342** *eP* **P** **01 47 04.2 +0.6**
comp=Z,67nm,1.1s
SSB Saint Sauveur **79.78 342** *eP* **P** **01 47 04.8 +1.2**
HAWK Haweek **79.81 315** *eP* **P** **01 47 04.6 +0.6**
FNA Florina **79.83 329** P **P** **01 47 03.5 -0.4**
FNA Florina **79.83 329** *eP* **P** **01 47 03.9 0.0**
ORIF Oris-en-Rattie **79.88 341**⇑*iP* **P** **01 47 05.6 +1.4**
comp=Z,101nm,1.0s
ORIF *eR*
comp=Z,58nm,22.2s
ORIF Oris-en-Rattie **79.88 341**⇑*iP* **P** **01 47 05.6 +1.4**
ORIF pmax pmax
comp=Z,101nm,1.0s
ORIF Oris-en-Rattie **79.88 341**⇑*iP* **P** **01 47 05.6 +1.4**
comp=Z,101nm,1.0s
MBDF Montbardon **79.88 341**⇑*iP* **P** **01 47 05.2 +0.9**
comp=Z,34nm,0.7s
MBDF Montbardon **79.88 341**⇑*iP* **P** **01 47 05.2 +0.9**
MBDF pmax pmax
comp=Z,35nm,0.7s
MBDF Montbardon **79.88 341**⇑*iP* **P** **01 47 05.2 +0.9**
comp=Z,34nm,0.7s
FRNF Fournols **80.03 344** *eP* **P** **01 47 06.4 +1.5**
LBL Lubilhac **80.06 343** *eP* **P** **01 47 06.6 +1.5**
LBL Lubilhac **80.06 343** *eP* **P** **01 47 06.6 +1.5**
LBL Lubilhac **80.06 343** *eP* **P** **01 47 06.6 +1.5**
VIVF Saint-Julien-l **80.16 342**⇑*iP* **P** **01 47 06.9 +1.3**
comp=Z,121nm,1.1s
VIVF Saint-Julien-l **80.16 342**⇑*iP* **P** **01 47 06.9 +1.3**
VIVF pmax pmax
comp=Z,121nm,1.1s
VIVF Saint-Julien-l **80.16 342**⇑*iP* **P** **01 47 06.9 +1.3**
comp=Z,121nm,1.1s
NEST Nestorio **80.27 329** P **P** **01 47 06.1 -0.3**
RJF Les Rejaudoux **80.28 344**⇑*iP* **P** **01 47 07.0 +0.8**
comp=Z,38nm,0.8s
RJF *eR*
comp=Z,108nm,18.5s
RJF Les Rejaudoux **80.28 344**⇑*iP* **P** **01 47 07.0 +0.8**
RJF pmax pmax
comp=Z,38nm,0.8s
RJF Les Rejaudoux **80.28 344**⇑*iP* **P** **01 47 07.0 +0.8**
comp=Z,38nm,0.8s
OG26 St.-Nazaire-De **80.31 342** *eP* **P** **01 47 08.3 +1.8**
PHNC Paralimni **80.39 317** P **P** **01 47 06.2 -0.8**
comp=Z,0.6nm,0.7s
SAOF Saorge **80.43 340** *eP* **P** **01 47 07.4 +0.3**
SAOF Saorge **80.43 340** *eP* **P** **01 47 07.4 +0.3**
SAOF Saorge **80.43 340** *eP* **P** **01 47 07.4 +0.3**
CHOS Chios island **80.45 325** *eP* **P** **01 47 07.2 -0.1**
TOUF Mont Tournerai **80.47 340** *eP* **P** **01 47 08.0 +0.5**
TOUF Mont Tournerai **80.47 340** *eP* **P** **01 47 08.0 +0.5**
TOUF Mont Tournerai **80.47 340** *eP* **P** **01 47 08.0 +0.5**
AOS Alonnisos **80.49 327** P **P** **01 47 06.9 -0.5**
AOS Alonnisos **80.49 327** *eP* **P** **01 47 07.0 -0.5**
XOR Xorichti **80.54 327** P **P** **01 47 06.6 -1.1**
CAF Calviac **80.56 344**⇑*iP* **P** **01 47 09.1 +1.4**
comp=Z,136nm,1.2s
CAF Calviac **80.56 344**⇑*iP* **P** **01 47 09.1 +1.4**
CAF pmax pmax
comp=Z,136nm,1.2s
CAF Calviac **80.56 344**⇑*iP* **P** **01 47 09.1 +1.4**
comp=Z,136nm,1.2s
MAMC Mammari **80.58 318** P **P** **01 47 06.5 -1.5**
SBF Sospel **80.58 340**⇑*iP* **P** **01 47 09.2 +1.3**
comp=Z,91nm,1.0s
SBF Sospel **80.58 340**⇑*iP* **P** **01 47 09.2 +1.3**
SBF pmax pmax
comp=Z,91nm,1.0s
SBF Sospel **80.58 340**⇑*iP* **P** **01 47 09.2 +1.3**
comp=Z,91nm,1.0s
NEO Neokhori **80.58 327** P **P** **01 47 07.0 -1.0**
NEO Neokhori **80.58 327** *eP* **P** **01 47 07.7 -0.3**
MVIF Mont Vial **80.60 340** *eP* **P** **01 47 08.6 +0.5**
MVIF Mont Vial **80.60 340** *eP* **P** **01 47 08.6 +0.5**
MVIF Mont Vial **80.60 340** *eP* **P** **01 47 08.6 +0.5**
SKIA Skiathos **80.63 327** P **P** **01 47 07.3 -0.9**
AQU L'Aquila **80.63 335** *eP* **P** **01 47 09.2 +0.9**
comp=Z,93nm,1.1s
AQU L'Aquila **80.63 335**⇑*iP* **P** **01 47 09.1 +0.9**
REVF Revere **80.71 340**⇑*eP* **P** **01 47 09.1 +0.5**
REVF Revere **80.71 340**⇑*eP* **P** **01 47 09.1 +0.5**
REVF Revere **80.71 340**⇑*eP* **P** **01 47 09.1 +0.5**
CSS Prodhromos **80.71 318** P **P** **01 47 07.5 -1.2**
comp=Z,0.8nm,1.1s
CSS Prodhromos **80.71 318** P **P** **01 47 08.4 -0.3**
CSS Prodhromos **80.71 318** *eP* **P** **01 47 08.3 -0.3**
comp=Z,65nm,0.8s
THL Klokotos Trika **80.74 328** *eP* **P** **01 47 06.8 -1.9**
LFF La Frestale **80.76 345**⇑*iP* **P** **01 47 09.9 +1.2**
comp=Z,136nm,1.1s
LFF La Frestale **80.76 345**⇑*iP* **P** **01 47 09.9 +1.2**
LFF pmax pmax
comp=Z,136nm,1.1s
LFF La Frestale **80.76 345**⇑*iP* **P** **01 47 09.9 +1.2**
comp=Z,136nm,1.1s
SMG Samos **80.78 324** *eP* **P** **01 47 08.4 -0.6**
ZALF Zalf **80.78 314** *eP* **P** **01 47 08.9 -0.2**
TOTH TOTAH **80.80 315** *eP* **P** **01 47 09.2 0.0**
ALFC Alevga **80.84 318** P **P** **01 47 08.1 -1.3**
comp=Z,1.5nm,0.7s
SMRF Simiane la Rot **80.84 341**⇑*iP* **P** **01 47 10.5 +1.2**
comp=Z,35nm,0.9s
SMRF Simiane la Rot **80.84 341**⇑*iP* **P** **01 47 10.5 +1.2**
comp=Z,35nm,0.9s
SMIA Simia **80.97 327** P **P** **01 47 09.2 -0.8**
MRKA Markates **81.00 327** P **P** **01 47 09.6 -0.6**
JAN Janina **81.02 329** P **P** **01 47 10.7 +0.4**
JAN Janina **81.02 329** *eP* **P** **01 47 11.2 +0.9**
FRF La Foret Royal **81.03 340**⇑*iP* **P** **01 47 10.6 +0.4**
comp=Z,34nm,1.0s
FRF La Foret Royal **81.03 340**⇑*iP* **P** **01 47 10.6 +0.4**
FRF pmax pmax
comp=Z,34nm,1.0s
FRF La Foret Royal **81.03 340**⇑*iP* **P** **01 47 10.6 +0.4**
comp=Z,34nm,1.0s
AKMC Akamas **81.06 319** P **P** **01 47 08.3 -2.3**
LASF Ste Croix **81.07 342**⇑*iP* **P** **01 47 11.9 +1.4**
comp=Z,57nm,1.1s
LASF Ste Croix **81.07 342**⇑*iP* **P** **01 47 11.9 +1.4**
comp=Z,57nm,1.1s
AGG Agios Georgios **81.13 328** P **P** **01 47 09.3 -1.6**
AGG Agios Georgios **81.13 328** *eP* **P** **01 47 09.4 -1.5**
PPCY Paphos **81.18 318** P **P** **01 47 09.3 -1.8**
MAKR Makrakomi, Fth **81.20 328** P **P** **01 47 10.2 -1.1**
ATAL Atalanti **81.20 327** P **P** **01 47 10.1 -1.1**
SALA Sala **81.22 314** *eP* **P** **01 47 11.8 +0.1**
LKR Lokris **81.25 327** P **P** **01 47 10.2 -1.2**
LKR Lokris **81.25 327** *eP* **P** **01 47 10.3 -1.2**
LMR La Mourre **81.27 340**⇑*iP* **P** **01 47 12.1 +0.6**
comp=Z,69nm,1.1s
LMR La Mourre **81.27 340**⇑*iP* **P** **01 47 12.1 +0.6**
LMR pmax pmax
comp=Z,69nm,1.1s
LMR La Mourre **81.27 340**⇑*iP* **P** **01 47 12.1 +0.6**
comp=Z,69nm,1.1s
KEK Kerkira **81.30 330** P **P** **01 47 11.3 -0.4**
KEK Kerkira **81.30 330** *eP* **P** **01 47 11.8 +0.1**
IGT Igoumenitsa **81.30 329** P **P** **01 47 11.1 -0.6**
PGF Pioggiola **81.50 338**⇑*iP* **P** **01 47 13.1 +0.3**
comp=Z,36nm,0.6s
PGF Pioggiola **81.50 338**⇑*iP* **P** **01 47 13.1 +0.3**
PGF pmax pmax
comp=Z,36nm,0.6s
PGF Pioggiola **81.50 338**⇑*iP* **P** **01 47 13.1 +0.3**
comp=Z,36nm,0.6s
PTL Penteli **81.50 326** P **P** **01 47 11.6 -1.3**
PTL Penteli **81.50 326** *eP* **P** **01 47 11.6 -1.3**
MMAI Mount Meron Ar **81.53 315** P **P** **01 47 13.6 +0.4**
MMAI Mount Meron Ar **81.53 315** P **P** **01 47 13.6 +0.4**
comp=Z,38nm,0.5s,baz=36,slow=6.9,SNR=108
ASF Jabal al Asfar **81.61 314** P **P** **01 47 14.0 +0.4**
ASF Jabal al Asfar **81.61 314** P **P** **01 47 14.0 +0.4**
comp=Z,49nm,0.9s,baz=14,slow=4.2,SNR=69
DSF Desfina **81.62 327** P **P** **01 47 11.6 -1.9**
NIS1 Nisyros Isl. **81.64 323** *eP* **P** **01 47 12.1 -1.5**
KALE Kalithea **81.77 327** P **P** **01 47 12.9 -1.4**
KALE Kalithea **81.77 327** *eP* **P** **01 47 12.9 -1.4**
EFP Efpalio **81.81 328** *eP* **P** **01 47 14.1 -0.3**
TRIZ Trizonia **81.81 327** *eP* **P** **01 47 11.9 -2.5**
LTK Loutraki **81.83 327** P **P** **01 47 12.5 -2.1**
LTK Loutraki **81.83 327** *eP* **P** **01 47 13.1 -1.5**
LKD2 Lefkada island **81.88 329** P **P** **01 47 14.3 -0.5**
LKD2 Lefkada island **81.88 329** *eP* **P** **01 47 14.6 -0.2**
NAIG Nisos Aigina **81.89 326** *eP* **P** **01 47 13.2 -1.7**
LAKA Lakka **81.95 328** P **P** **01 47 14.4 -0.8**
LAKA Lakka **81.95 328** *eP* **P** **01 47 14.8 -0.4**
MTLF Montolieu **82.07 343**⇑*iP* **P** **01 47 17.1 +1.4**
comp=Z,87nm,1.0s
MTLF Montolieu **82.07 343**⇑*iP* **P** **01 47 17.1 +1.4**
MTLF pmax pmax
comp=Z,87nm,1.0s
MTLF Montolieu **82.07 343**⇑*iP* **P** **01 47 17.1 +1.4**
comp=Z,87nm,1.0s
KLV Kalavryta, Ach **82.08 327** *eP* **P** **01 47 15.1 -0.8**
GUR Goura **82.11 327** P **P** **01 47 14.4 -1.8**
GUR Goura **82.11 327** *eP* **P** **01 47 15.1 -1.1**
CUC Castrocucco **82.20 333** *eP* **P** **01 47 16.0 -0.5**
comp=Z,14nm,0.9s
DID Didima **82.20 326** P **P** **01 47 14.0 -2.6**
DID Didima **82.20 326** *eP* **P** **01 47 14.2 -2.4**
RLS Riolos of Patr **82.29 328** P **P** **01 47 16.4 -0.5**
RLS Riolos of Patr **82.29 328** *eP* **P** **01 47 17.3 +0.4**
LRDF Laroque-de-Fa **82.41 343** *eP* **P** **01 47 19.3 +1.8**
VLS Valsamata **82.46 328** P **P** **01 47 17.1 -0.7**
VLS Valsamata **82.46 328** *eP* **P** **01 47 17.7 -0.1**
KARP Karpathos **82.58 323** *eP* **P** **01 47 17.1 -1.5**
VLX Vlachokerasia **82.61 327** P **P** **01 47 17.2 -1.6**
VLX Vlachokerasia **82.61 327** *eP* **P** **01 47 17.9 -0.9**
MLS Moulis **82.63 344** *eP* **P** **01 47 20.1 +1.4**
EPF Esparros **82.68 345**⇑*iP* **P** **01 47 19.6 +0.6**
comp=Z,63nm,0.9s
EPF Esparros **82.68 345**⇑*iP* **P** **01 47 19.6 +0.6**
EPF pmax pmax
comp=Z,63nm,0.9s
EPF Esparros **82.68 345**⇑*iP* **P** **01 47 19.6 +0.6**
comp=Z,63nm,0.9s
AMT Artemida-Makis **82.69 327** *eP* **P** **01 47 18.5 -0.6**
TIP Timpagrande **82.69 332** *eP* **P** **01 47 19.6 +0.5**
comp=Z,89nm,1.3s
CARF Carcanieres **82.70 343** *eP* **P** **01 47 20.4 +1.3**
FILF Fillols **82.77 343** *eP* **P** **01 47 20.7 +1.2**
SJAF Saint Jean de **82.78 343**⇑*eP* **P** **01 47 20.7 +1.2**
SJAF Saint Jean de **82.78 343**⇑*eP* **P** **01 47 20.7 +1.2**
SJPF Ste Jean **82.84 346**⇑*iP* **P** **01 47 20.5 +0.7**
comp=Z,45nm,0.6s
SJPF Ste Jean **82.84 346**⇑*iP* **P** **01 47 20.5 +0.7**
SJPF pmax pmax
comp=Z,45nm,0.6s
SJPF Ste Jean **82.84 346**⇑*iP* **P** **01 47 20.5 +0.7**
comp=Z,45nm,0.6s
VIEF Viey **82.88 345**⇑*eP* **P** **01 47 21.8 +1.8**
VIEF Viey **82.88 345**⇑*eP* **P** **01 47 21.8 +1.8**
RESF Ens **82.90 345** *eP* **P** **01 47 22.1 +1.9**
ITM Ithomi **82.94 327** P **P** **01 47 19.1 -1.2**
ITM Ithomi **82.94 327** *eP* **P** **01 47 19.5 -0.8**
ETSF Etsaut **82.95 345**⇑*iP* **P** **01 47 21.9 +1.5**
comp=Z,81nm,0.7s
ETSF Etsaut **82.95 345**⇑*iP* **P** **01 47 21.9 +1.5**
ETSF pmax pmax
comp=Z,81nm,0.7s
ETSF Etsaut **82.95 345**⇑*iP* **P** **01 47 21.9 +1.5**
comp=Z,81nm,0.7s
VALF Valcebollere **83.02 343**⇑*eP* **P** **01 47 22.5 +1.6**
VALF Valcebollere **83.02 343**⇑*eP* **P** **01 47 22.5 +1.6**
VLI Veliai **83.02 326** *eP* **P** **01 47 18.8 -2.0**
DYR Agios Nikonas **83.18 327** P **P** **01 47 20.4 -1.2**
DYR Agios Nikonas **83.18 327** *eP* **P** **01 47 20.9 -0.7**
PYL PYLOS **83.26 327** *eP* **P** **01 47 20.5 -1.5**
KYTH Kithira **83.38 326** P **P** **01 47 21.7 -1.0**
KYTH Kithira **83.38 326** *eP* **P** **01 47 21.5 -1.2**
NPS Neapolis **83.40 324** *eP* **P** **01 47 20.8 -2.0**
LAST Lasithi **83.54 324** *eP* **P** **01 47 22.5 -1.1**
IDI Anoyia **83.64 324** *eP* **P** **01 47 22.0 -2.0**
comp=Z,19nm,0.6s
VAM Vamos **83.77 325** *eP* **P** **01 47 24.0 -0.6**
CEL Celeste **83.79 332** *eP* **P** **01 47 23.5 -1.2**
comp=Z,20nm,0.8s
RAYN Ar Rayn **84.81 303** P **P** **01 47 29.5 -0.6**
comp=Z,424nm,0.6s,SNR=53
PBRG Braganca **84.83 350** *eP* **P** **01 47 30.7 +0.7**
comp=Z,35nm,1.7s
POLO Lamas de Olo **85.37 350** *eP* **P** **01 47 33.4 +0.7**
comp=Z,21nm,1.4s
PVRL Vila Real **85.46 350** *eP* **P** **01 47 34.2 +1.1**
comp=Z,62nm,0.8s
MVO Moncorvo **85.50 350** *eP* **P** **01 47 34.1 +0.8**
comp=Z,50nm,1.5s
PTO Porto **85.68 351** *eP* **P** **01 47 35.4 +1.3**
STKA Stephens Creek **85.94 195** P **P** **01 47 35.6 +0.4**
STKA pP **pP** **01 48 02.3 +0.5**
STKA Stephens Creek **85.94 195** P **P** **01 47 35.6 +0.4**
comp=Z,6.3nm,1.2s,baz=274,slow=3.8,SNR=6.0
STKA pP **pP** **01 48 02.3 +0.5**
comp=Z,4.7nm,0.9s,baz=10,slow=4.2,SNR=3.4
PVIS Viseu **86.03 350** *eP* **P** **01 47 36.9 +1.0**
comp=Z,33nm,0.8s
MTE Manteigas **86.31 350** *eP* **P** **01 47 38.0 +0.7**
comp=Z,46nm,0.9s
MTE Manteigas **86.31 350** *eP* **P** **01 47 36.8 -0.5**
comp=Z,34nm,0.8s
ESDC Sonseca Array **86.60 347** P **P** **01 47 38.7 0.0**
ESDC pP **pP** **01 48 06.5 +1.1**
ESDC Sonseca Array **86.60 347** P **P** **01 47 38.7 0.0**
comp=Z,20nm,0.8s,baz=0.5,slow=5.0,SNR=76
ESDC pP **pP** **01 48 06.5 +1.1**
comp=Z,3.9nm,0.6s,baz=1.2,slow=5.4,SNR=2.7
PAB San Pablo **86.78 348** *eP* **P** **01 47 39.6 -0.1**
PAB pmax pmax
comp=Z,11nm,0.8s
PAB San Pablo **86.78 348** *eP* **P** **01 47 39.6 -0.1**
comp=Z,11nm,0.8s
PCBR Castelo Branco **86.86 350** *eP* **P** **01 47 40.4 +0.5**
comp=Z,29nm,1.2s
PTOM Tomar **87.17 351** *eP* **P** **01 47 41.7 +0.3**
comp=Z,27nm,2.2s
PMRV Marv??o **87.25 350** *eP* **P** **01 47 42.5 +0.6**
comp=Z,12nm,1.1s

CMAH	**Djebel Manchou**	**87.51**	**338**	P	**P**	**01 47 42.6**	**-0.6**
PMTG	**Montargil**	**87.70**	**350**	*e*P	**P**	**01 47 43.1**	**-0.8**
	comp=Z,27nm,1.5s						
PESTR	**Estremoz**	**87.83**	**350**	*e*P	**P**	**01 47 44.5**	**-0.1**
	comp=Z,14nm,1.3s						
KEST	**Kesra**	**87.91**	**336**	P	**P**	**01 47 45.3**	**+0.2**
KEST	**Kesra**	**87.91**	**336**	P	**P**	**01 47 45.3**	**+0.2**
	comp=Z,12nm,0.9s,baz=255,slow=0.7,SNR=36						
KEST				LR	LR	02 35 53.1	
	comp=Z,35nm,18.8s,baz=188,slow=42						
EVO	**Evora**	**88.21**	**350**	*e*P	**P**	**01 47 46.4**	**0.0**
	comp=Z,28nm,1.2s						
EVO				*e*R			
	comp=Z,75nm,19.8s						
EVOP	**Sao Brissos**	**88.22**	**350**	*e*P	**P**	**01 47 46.4**	**0.0**
EVOP				pmax	pmax		
	comp=Z,28nm,1.2s						
EVOP	**Sao Brissos**	**88.22**	**350**	*e*P	**P**	**01 47 46.4**	**0.0**
	comp=Z,28nm,1.2s						
PBAR	**Barrancos**	**88.46**	**349**	*e*P	**P**	**01 47 47.6**	**0.0**
PCVE	**Castro Verde**	**89.10**	**350**	*e*P	**P**	**01 47 50.5**	**-0.1**
	comp=Z,35nm,1.7s						
PFVI	**Vila Bisbo**	**89.67**	**351**	*e*P	**P**	**01 47 53.3**	**0.0**
	comp=Z,45nm,1.6s						
TORD	**Torodi Ar. Bea**	**111.42**	**337**	Pdif	**Pdif**	**01 49 32.0**	**+0.5**
TORD				PKiKP	**PKiKP**	**01 53 28.9**	**-0.3**
TORD	**Torodi Ar. Bea**	**111.42**	**337**	Pdiff	**Pdif**	**01 49 32.0**	**+0.5**
	comp=Z,1.0nm,1.2s,baz=9.1,slow=5.6,SNR=3.2						
TORD				PKiKP	**PKiKP**	**01 53 28.9**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=11,slow=2.4,SNR=26						
DBIC	**Dimbokro**	**119.10**	**342**	PKP	**PKPdf**	**01 53 43.5**	**-0.5**
DBIC	**Dimbokro**	**119.10**	**342**	PKP	**PKPdf**	**01 53 43.5**	**-0.5**
	comp=Z,8.1nm,0.7s,baz=11,slow=2.8,SNR=14						
LIC	**Lamto**	**119.57**	**342**	*e*PKIKP	**PKPdf**	**01 53 45.0**	**+0.1**
	comp=Z,14nm,0.7s						
LIC	**Lamto**	**119.57**	**342**	*e*PKPdf	**PKPdf**	**01 53 45.0**	**+0.1**
LPAZ	**La Paz**	**127.83**	**64**	PKP	**PKPdf**	**01 54 01.6**	**+0.3**
LPAZ	**La Paz**	**127.83**	**64**	PKP	**PKPdf**	**01 54 01.6**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=356,slow=1.9,SNR=7.4						
VNDA	**Vanda**	**130.25**	**179**	PKP	**PKPdf**	**01 54 04.0**	**+0.6**
VNDA	**Vanda**	**130.25**	**179**	PKP	**PKPdf**	**01 54 04.0**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=18,slow=3.2,SNR=6.1						
TSUM	**Tsumeb**	**135.24**	**304**	*e*PKPdf	**PKPdf**	**01 54 15.6**	**+0.9**
BOSA	**Boshof**	**138.62**	**288**	PKPpre	PKPpre	01 54 14.3	
BOSA				PKP	**PKPdf**	**01 54 20.0**	**-0.6**
BOSA	**Boshof**	**138.62**	**288**	PKhKP	PKPpre	01 54 14.3	
	comp=Z,2.4nm,0.7s,baz=26,slow=13,SNR=8.0						
BOSA				PKP	**PKPdf**	**01 54 20.0**	**-0.6**
	comp=Z,5.5nm,0.6s,baz=43,slow=1.5,SNR=12						
CPUP	**Villa Florida**	**141.79**	**60**	PKP	**PKPdf**	**01 54 24.8**	**-1.4**
CPUP	**Villa Florida**	**141.79**	**60**	PKP	**PKPdf**	**01 54 24.8**	**-1.4**
	comp=Z,1.3nm,0.7s,baz=135,slow=2.9,SNR=4.2						
SUR	**Sutherland**	**143.97**	**288**	PKP	**PKPdf**	**01 54 29.6**	**-0.6**
SUR	**Sutherland**	**143.97**	**288**	PKP	**PKPdf**	**01 54 29.6**	**-0.6**
	comp=Z,3.6nm,0.5s,baz=29,slow=2.9,SNR=6.2						
PLCA	**Paso Flores**	**144.37**	**90**	PKP	PKPbc	01 54 29.4	+0.1
PLCA	**Paso Flores**	**144.37**	**90**	PKP	PKPbc	01 54 29.4	+0.1
	comp=Z,21nm,1.0s,baz=272,slow=3.2,SNR=14						
CAM4	**Nova Friburgo**	**145.08**	**37**⇑	*i*P	**PKPbc**	**01 54 32.1**	**-0.1**
CAM4				*i*		01 54 37.7	
CAM4				*i*		01 54 40.3	
CAM4				*i*		01 54 54.6	
CAM4				*i*		01 55 01.1	
CAM4				*i*		01 55 05.5	
CAM4				*i*		01 55 09.9	
CAM4				*i*		01 57 14.4	
CAM4				*i*		01 57 25.6	
CAM4				*i*		01 57 45.6	
CAM4				*i*		01 57 56.0	
TRQA	**Tornquist**	**147.84**	**79**	*e*PKPbc	**PKPbc**	**01 54 39.9**	**+0.4**
SYO	**Syowa Base**	**148.39**	**217**⇓	*e*PKPdf	**PKPdf**	**01 54 36.0**	**-0.2**
SNAA	**Sanae**	**159.70**	**196**	*e*PKP	**PKPab**	**01 55 30.5**	**-1.0**
SNAA	**Sanae**	**159.70**	**196**	PKP	**PKPdf**	**01 54 53.8**	**+1.7**
SNAA				PKPab	**PKPab**	**01 55 30.8**	**-0.8**
SNAA	**Sanae**	**159.70**	**196**	PKP	**PKPdf**	**01 54 53.8**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=114,slow=12,SNR=4.1						
SNAA				PKPab	**PKPab**	**01 55 30.8**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=154,slow=6.6,SNR=4.0						

*CSEM **11** 01:50:51.4, 45°.98N×15°.59E, h0km, ML0.2, After LJU*

LJU 11 01:50:51.4, 45°.98N×15°.59E, h8km, ML0.2, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GOLS	**Golise**	**0.04**	**33**	*i* Pg	Pg	01 50 53.1	0.0
GOLS				*i* Sg	Sg	01 50 54.4	0.0
GOLS							
	comp=Z,10.0nm,0.1s						
GOLS	**Golise**	**0.04**	**33**	*i* Pg	Pg	01 50 53.1	0.0
GOLS				*i* Sg	Sg	01 50 54.4	+0.1
	comp=Z,10.0nm,0.1s						
GCIS	**Gornji Cirnik**	**0.11**	**168**	*i* Pg	Pg	01 50 54.3	+0.3
GCIS				*i* Sg	Sg	01 50 56.0	+0.2
GCIS							
	comp=Z,6.0nm,0.1s						
GCIS	**Gornji Cirnik**	**0.11**	**168**	*i* Pg	Pg	01 50 54.3	+0.3
GCIS				*i* Sg	Sg	01 50 56.0	+0.2
	comp=Z,6.0nm,0.1s						
CRES	**Cresnjev**	**0.18**	**212**	*i* Pg	Pg	01 50 55.1	-0.1
CRES				*i* Sg	Sg	01 50 58.0	+0.3
CRES							
	comp=Z,1.0nm,0.1s						
CRES	**Cresnjev**	**0.18**	**212**	*i* Pg	Pg	01 50 55.1	0.0
CRES				*i* Sg	Sg	01 50 58.0	+0.3
	comp=Z,1.0nm,0.1s						
DOBS	**Dobrina**	**0.19**	**333**	*i* Pg	Pg	01 50 55.5	+0.1
DOBS	**Dobrina**	**0.19**	**333**	*i* Pg	Pg	01 50 55.5	+0.1
LEGS	**Legarje**	**0.19**	**262**	*i* Pg	Pg	01 50 55.5	0.0
LEGS				*i* Sg	Sg	01 50 58.5	+0.4
LEGS	**Legarje**	**0.19**	**262**	*i* Pg	Pg	01 50 55.5	+0.1
LEGS				*i* Sg	Sg	01 50 58.5	+0.4

IDC 11 01:58:18.1±2.2**, 7°.97S×68°.35E, h0km, mb3.5**/3**, mb1 3.6**/3**, mb1mx3.3**/26**, mbtmp3.5**/3**, MS3.1**/1**, Ms1 3.3**/1**, ms1mx2.6**/33**, Error ellipse: s-maj=94.9km s-min=33.8km az=47.0, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**40.01**	**49**	LR	LR	02 22 10.4	
	comp=Z,26nm,18.9s,baz=190,slow=36						
MKAR	**Makanchi Array**	**55.92**	**12**	P	P	02 07 57.8	-0.1
	0.4nm,0.7s,baz=192,slow=7.6,SNR=6.1						
BRTR	**Keskin Array B**	**57.30**	**329**	P	P	02 08 07.2	-0.8
	0.3nm,0.5s,baz=140,slow=9.2,SNR=3.3						
ASAR	**Alice Springs**	**64.48**	**112**	P	P	02 08 56.5	-0.6
	0.2nm,0.5s,baz=281,slow=5.6,SNR=4.7						
PDAR	**Pinedale Array**	**145.30**	**357**	PKPbc	PKPbc	02 17 57.5	-0.7
	0.4nm,0.5s,baz=108,slow=2.9,SNR=3.2						
NVAR	**Mina Array Bea**	**149.09**	**10**	PKPbc	PKPbc	02 18 09.9	+0.8
	0.7nm,0.8s,baz=288,slow=1.6,SNR=7.3						

*ISK **11** 02:00:54.8, 39°.31N×27°.89E, h5km, MD3.1*
*DDA **11** 02:00:55.8, 39°.30N×27°.94E, h8km, MD3.0*
*CSEM **11** 02:00:56.0±0.1, 39°.30N×27°.90E, h2km, MD3.1, Error ellipse: s-maj=2.4km s-min=2.2km az=73.0*

ISC 11 02:00:56.0±1.1**, 39°.29N**±0°.02×**27°.90E**±0°.02**, h6**km±10km**, n91,** σ**0.s59**/112**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.35**	**358**	*e*PG	**Pg**	**02 01 02.6**	**-0.2**
BALB				*e*SG	**Sg**	**02 01 08.4**	**+1.0**
AKHS	**Akhisar**	**0.42**	**189**	*i* P	**Pg**	**02 01 04.0**	**-0.1**
AKHS				*i* S	**Sb**	**02 01 11.3**	**-1.2**
AKHS	**Akhisar**	**0.42**	**189**	*i* P	**Pg**	**02 01 04.0**	**-0.1**
AKHS				*i* S	**Sb**	**02 01 11.3**	**-1.2**
BALY	**Balya**	**0.50**	**335**	*i* P	**Pg**	**02 01 05.4**	**-0.2**
BALY				*i* S	**Sg**	**02 01 13.3**	**+1.2**
BALY	**Balya**	**0.50**	**335**	*i* P	**Pg**	**02 01 05.4**	**-0.2**
BALY				*i* S	**Sg**	**02 01 13.3**	**+1.2**
DURS	**Dursunbey**	**0.54**	**55**	*i* P	**Pg**	**02 01 05.5**	**-1.0**
DURS				*i* S	**Sg**	**02 01 13.8**	**+0.2**
DURS	**Dursunbey**	**0.54**	**55**	*i* P	**Pg**	**02 01 05.5**	**-1.0**
DST	**Dursunbey**	**0.64**	**61**	*e*PG	**Pg**	**02 01 08.3**	**-0.1**
DST	**Dursunbey**	**0.64**	**61**	*e*Pg	**Pg**	**02 01 08.3**	**-0.1**
DEMI	**Demirci**	**0.68**	**111**	*i* P	**Pg**	**02 01 08.5**	**-0.7**
DEMI				*i* S	**Sg**	**02 01 18.4**	**+0.3**
DEMI	**Demirci**	**0.68**	**111**	*i* P	**Pg**	**02 01 08.5**	**-0.7**
GONE	**Gonen-Balikesi**	**0.77**	**348**	*e*PG	**Pg**	**02 01 10.3**	**-0.5**
GONE				*e*SG	**Sb**	**02 01 21.7**	**-0.9**
AYVA	**Ayvalik**	**0.94**	**271**	*i* P	**Pn**	**02 01 15.1**	**-0.6**
AYVA				*i* S	**Sn**	**02 01 29.8**	**+0.3**
AYVA	**Ayvalik**	**0.94**	**271**	*i* P	**Pn**	**02 01 15.1**	**-0.6**
AYVA				*i* S	**Sn**	**02 01 29.8**	**+0.3**
MANT	**Manisa**	**0.95**	**147**	*i* P	**Pg**	**02 01 14.4**	**+0.1**
MANT				*i* S	**Sg**	**02 01 26.4**	**-0.3**
MANT	**Manisa**	**0.95**	**147**	*i* P	**Pg**	**02 01 14.4**	**+0.1**
MANT				*i* S	**Sg**	**02 01 26.4**	**-0.3**
IZM	**Izmir**	**1.02**	**209**	*e*PG	**Pb**	**02 01 16.3**	**+0.1**
IZM	**Izmir**	**1.02**	**209**	*e*Pg	**Pb**	**02 01 16.3**	**+0.1**
KCTX	**Karacabey (Bur**	**1.03**	**20**	*e*PG	**Pg**	**02 01 15.3**	**-0.6**
KCTX	**Karacabey (Bur**	**1.03**	**20**	*e*Pg	**Pg**	**02 01 15.3**	**-0.6**
BNT	**Bandirma**	**1.06**	**1**	*e*PG	**Pg**	**02 01 16.2**	**-0.2**
BNT	**Bandirma**	**1.06**	**1**	*e*Pg	**Pg**	**02 01 16.2**	**-0.2**
ORLT	**Orhaneli**	**1.08**	**45**	*e*PG	**Pg**	**02 01 16.6**	**-0.2**
ORLT	**Orhaneli**	**1.08**	**45**	*e*Pg	**Pg**	**02 01 16.6**	**-0.2**
BLCB	**Balcova**	**1.12**	**217**	*e*PN	**Pg**	**02 01 17.6**	**0.0**
BLCB	**Balcova**	**1.12**	**217**	*e*Pn	**Pg**	**02 01 17.6**	**0.0**
KRBG	**Karabiga-Canak**	**1.19**	**337**	*e*PN	**Pg**	**02 01 18.1**	**-0.8**
KRBG	**Karabiga-Canak**	**1.19**	**337**	*e*Pn	**Pg**	**02 01 18.1**	**-0.8**
TVSB	**Tavsanli**	**1.22**	**82**	*e*PN	**Pg**	**02 01 19.2**	**-0.3**
TVSB	**Tavsanli**	**1.22**	**82**	*e*Pn	**Pg**	**02 01 19.2**	**-0.3**
GDZ	**Gediz**	**1.25**	**99**	*i* P	**Pg**	**02 01 19.2**	**-0.8**
GDZ				*i* S	**Sg**	**02 01 35.6**	**-0.6**
GDZ	**Gediz**	**1.25**	**99**	*i* P	**Pg**	**02 01 19.2**	**-0.8**
ULDT	**Uludag**	**1.28**	**48**	*i* P	**Pb**	**02 01 20.7**	**0.0**
ULDT				*i* S	**Sb**	**02 01 37.6**	**+0.1**
ULDT	**Uludag**	**1.28**	**48**	*i* P	**Pb**	**02 01 20.7**	**0.0**
ULDT				*i* S	**Sb**	**02 01 37.6**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.32**	**35**	*e*PN	**Pb**	**02 01 20.9**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.32**	**35**	*e*Pn	**Pb**	**02 01 20.9**	**-0.3**
EZN	**Ezine**	**1.33**	**294**	*e*PN	**Pb**	**02 01 21.1**	**-0.2**
EZN	**Ezine**	**1.33**	**294**	*e*Pn	**Pb**	**02 01 21.1**	**-0.2**
LPK	**Lapseki**	**1.39**	**321**	*e*PN	**Pb**	**02 01 22.2**	**-0.2**
LPK	**Lapseki**	**1.39**	**321**	*e*Pn	**Pb**	**02 01 22.3**	**-0.2**
ARMT	**Armutlu**	**1.47**	**30**	*e*PN	**Pn**	**02 01 23.3**	**+0.1**
ARMT	**Armutlu**	**1.47**	**30**	*e*Pn	**Pn**	**02 01 23.3**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.50**	**339**	*e*PN	**Pn**	**02 01 23.6**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.50**	**339**	*e*Pn	**Pn**	**02 01 23.6**	**0.0**
SART	**Tekirdag**	**1.50**	**339**	*i* P	**Pb**	**02 01 24.0**	**-0.4**
SART				*i* S	**Sg**	**02 01 45.4**	**+1.2**
SART	**Tekirdag**	**1.50**	**339**	*i* P	**Pb**	**02 01 24.0**	**-0.4**
SART				*i* S	**Sg**	**02 01 45.4**	**+1.2**
BOZC	**Bozcaada**	**1.53**	**292**	*i* P	**Pn**	**02 01 23.8**	**-0.1**
BOZC				*i* S	**Sg**	**02 01 44.7**	**-0.4**
KHAL	**Karahalli**	**1.55**	**126**	*i* P	**Pb**	**02 01 25.4**	**+0.2**
KHAL				*i* S	**Sg**	**02 01 46.5**	**+0.7**
KHAL	**Karahalli**	**1.55**	**126**	*i* P	**Pb**	**02 01 25.4**	**+0.2**
KHAL				*i* S	**Sg**	**02 01 46.5**	**+0.7**
GELI	**Tayfur-Gelibol**	**1.56**	**316**	*e*PN	**Pn**	**02 01 24.4**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.56**	**316**	*e*Pn	**Pn**	**02 01 24.5**	**+0.2**
MFT	**Murefte**	**1.57**	**343**	*e*PN	**Pn**	**02 01 24.7**	**+0.2**
MFT	**Murefte**	**1.57**	**343**	*e*Pn	**Pn**	**02 01 24.7**	**+0.2**
YLV	**Yalova**	**1.71**	**41**	*e*PN	**Pn**	**02 01 26.8**	**+0.4**
YLV	**Yalova**	**1.71**	**41**	*e*Pn	**Pn**	**02 01 26.8**	**+0.4**
ALT	**Altintas**	**1.74**	**97**	*e*PN	**Pn**	**02 01 27.5**	**+0.6**
ALT	**Altintas**	**1.74**	**97**	*e*Pn	**Pn**	**02 01 27.5**	**+0.6**
ERIK	**Erikli-Kesan**	**1.74**	**323**	*e*PN	**Pn**	**02 01 27.1**	**+0.3**
ERIK	**Erikli-Kesan**	**1.74**	**323**	*e*Pn	**Pn**	**02 01 27.1**	**+0.3**
ADVT	**Abdulvahap**	**1.82**	**51**	*e*PN	**Pn**	**02 01 28.4**	**+0.5**
ADVT	**Abdulvahap**	**1.82**	**51**	*e*Pn	**Pn**	**02 01 28.4**	**+0.5**
BUY	**Buyukada**	**1.82**	**31**	*e*PN	**Pn**	**02 01 28.2**	**+0.3**
BUY	**Buyukada**	**1.82**	**31**	*e*Pn	**Pn**	**02 01 28.2**	**+0.3**
SLVT	**Silivri**	**1.95**	**7**	*e*PN	**Pn**	**02 01 30.0**	**+0.3**
SLVT	**Silivri**	**1.95**	**7**	*e*Pn	**Pn**	**02 01 30.0**	**+0.3**
ENEZ	**Enez**	**1.97**	**318**	*e*PN	**Pn**	**02 01 30.3**	**+0.3**
ENEZ	**Enez**	**1.97**	**318**	*e*Pn	**Pn**	**02 01 30.3**	**+0.3**
ISK	**Istanbul-Kandi**	**1.98**	**26**	*e*PN	**Pn**	**02 01 30.5**	**+0.3**
ISK	**Istanbul-Kandi**	**1.98**	**26**	*e*Pn	**Pn**	**02 01 30.5**	**+0.3**
MLSB	**Milas**	**2.00**	**183**	*e*PN	**Pn**	**02 01 31.2**	**+0.8**
MLSB	**Milas**	**2.00**	**183**	*e*Pn	**Pn**	**02 01 31.2**	**+0.8**
CTKS	**Kestanelik-??a**	**2.00**	**13**	*e*PN	**Pn**	**02 01 30.9**	**+0.5**
CTKS	**Kestanelik-??a**	**2.00**	**13**	*e*Pn	**Pn**	**02 01 30.9**	**+0.5**
BGKT	**Bogazkoy**	**2.00**	**19**	*e*PN	**Pn**	**02 01 31.0**	**+0.6**
BGKT	**Bogazkoy**	**2.00**	**19**	*e*Pn	**Pn**	**02 01 31.0**	**+0.6**
BORA	**Eskisehir**	**2.06**	**73**	*i* P	**Pb**	**02 01 32.9**	**-1.1**
BORA				*i* S	**Sg**	**02 02 02.2**	**-0.1**
BORA	**Eskisehir**	**2.06**	**73**	*i* P	**Pb**	**02 01 32.9**	**-1.1**
KLYT	**Kilyos**	**2.15**	**24**	*e*PN	**Pn**	**02 01 32.9**	**+0.5**
KLYT	**Kilyos**	**2.15**	**24**	*e*Pn	**Pn**	**02 01 32.9**	**+0.5**
CTYL	**Yal??k??y-??at**	**2.20**	**8**	*e*PN	**Pn**	**02 01 33.9**	**+0.7**
CTYL	**Yal??k??y-??at**	**2.20**	**8**	*e*Pn	**Pn**	**02 01 33.9**	**+0.7**
ESKT	**Eskisehir**	**2.30**	**83**	*e*PN	**Pn**	**02 01 35.5**	**+0.9**
ESKT	**Eskisehir**	**2.30**	**83**	*e*Pn	**Pn**	**02 01 35.5**	**+0.9**
GULT	**Gulveren**	**2.31**	**60**	*e*PN	**Pn**	**02 01 35.5**	**+0.7**
GULT	**Gulveren**	**2.31**	**60**	*e*Pn	**Pn**	**02 01 35.5**	**+0.7**
EDRB	**Edirne**	**2.70**	**341**	*e*PN	**Pn**	**02 01 40.7**	**+0.7**
EDRB	**Edirne**	**2.70**	**341**	*e*Pn	**Pn**	**02 01 40.7**	**+0.7**
MDUB	**Mudurnu**	**2.80**	**64**	*e*PN	**Pn**	**02 01 42.5**	**+1.0**
MDUB	**Mudurnu**	**2.80**	**64**	*e*Pn	**Pn**	**02 01 42.5**	**+1.0**
SVRH	**Sivrihisar-ESK**	**2.81**	**86**	*e*PN	**Pn**	**02 01 43.0**	**+1.3**
SVRH	**Sivrihisar-ESK**	**2.81**	**86**	*e*Pn	**Pn**	**02 01 43.0**	**+1.3**

*ATH **11** 02:02:08.6, 36°.44N×21°.77E, h5km±3km, MD3.5/24, ML2.8*
*THE **11** 02:02:10.0, 36°.47N×21°.80E, h0km±4km, ML2.7/2, Error ellipse: s-maj=5.1km s-min=1.1km az=212.0*
*CSEM **11** 02:02:11.3±0.6, 36°.53N×21°.87E, h2km, ML3.0, Error ellipse: s-maj=11.0km s-min=6.5km az=44.0*

ISC 11 02:02:09.9±1.6**, 36°.47N**±0°.05×**21°.78E**±0°.04**, h2**km±11km**, n65,** σ**0.s73**/86**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.42**	**356**	P	**Pg**	**02 02 17.7**	**-0.3**
PYL				S	**Sg**	**02 02 24.4**	**+0.8**
PYL	**PYLOS**	**0.42**	**356**	*e*PB	**Pg**	**02 02 17.4**	**-0.6**
PYL				*e*SB	**Sg**	**02 02 24.6**	**+1.0**
PYL	**PYLOS**	**0.42**	**356**	*e*Pb	**Pg**	**02 02 17.4**	**-0.6**
PYL	**PYLOS**	**0.42**	**356**	P	**Pg**	**02 02 17.7**	**-0.3**
DYR	**Agios Nikonas**	**0.53**	**57**	P	**Pg**	**02 02 19.4**	**-0.6**
DYR				S	**Sg**	**02 02 28.1**	**+1.1**
DYR	**Agios Nikonas**	**0.53**	**57**	*e*PB	**Pg**	**02 02 19.5**	**-0.6**
DYR				*e*SB	**Sg**	**02 02 27.6**	**+0.6**
DYR	**Agios Nikonas**	**0.53**	**57**	*e*Pb	**Pg**	**02 02 19.5**	**-0.6**
DYR				*e*Sb	**Sg**	**02 02 27.6**	**+0.6**
DYR				S	**Sg**	**02 02 28.1**	**+1.1**
ITM	**Ithomi**	**0.71**	**9**	P	**Pg**	**02 02 23.5**	**-0.1**
ITM				S	**Sb**	**02 02 34.7**	**-0.7**
ITM	**Ithomi**	**0.71**	**9**	*e*PB	**Pg**	**02 02 23.3**	**-0.3**
ITM				*e*SB	**Sg**	**02 02 34.2**	**+1.3**
ITM	**Ithomi**	**0.71**	**9**	P	**Pg**	**02 02 23.5**	**-0.1**
ITM				*e*Sb	**Sg**	**02 02 34.2**	**+1.3**
VLI	**Veliai**	**0.96**	**75**	P	**Pg**	**02 02 28.0**	**-0.3**
VLI				S	**Sg**	**02 02 41.6**	**+0.8**
VLI	**Veliai**	**0.96**	**75**	*e*PN	**Pg**	**02 02 28.0**	**-0.3**
VLI				*e*SB	**Sg**	**02 02 40.8**	**0.0**
VLI	**Veliai**	**0.96**	**75**	P	**Pg**	**02 02 28.0**	**-0.3**
VLI				S	**Sg**	**02 02 40.6**	**-0.2**
VLX	**Vlachokerasia**	**1.02**	**28**	P	**Pg**	**02 02 28.8**	**-0.6**
VLX				S	**Sb**	**02 02 44.1**	**0.0**
VLX	**Vlachokerasia**	**1.02**	**28**	*e*PN	**Pg**	**02 02 28.8**	**-0.6**
VLX				*e*SB	**Sb**	**02 02 43.9**	**-0.2**
VLX	**Vlachokerasia**	**1.02**	**28**	P	**Pg**	**02 02 28.8**	**-0.6**
VLX				S	**Sg**	**02 02 42.3**	**-0.3**
VLX				*e*Sb	**Sb**	**02 02 43.9**	**-0.2**
KYTH	**Kithira**	**1.03**	**100**	P	**Pg**	**02 02 29.0**	**-0.7**
KYTH	**Kithira**	**1.03**	**100**	*e*PN	**Pg**	**02 02 29.0**	**-0.7**
KYTH	**Kithira**	**1.03**	**100**	P	**Pg**	**02 02 29.0**	**-0.7**
AMT	**Artemida-Makis**	**1.06**	**357**	*e*PN	**Pg**	**02 02 29.3**	**-0.9**
AMT				*e*SB	**Sg**	**02 02 44.1**	**+0.1**
AMT	**Artemida-Makis**	**1.06**	**357**	P	**Pg**	**02 02 29.3**	**-0.9**
AMT				*e*Sb	**Sg**	**02 02 44.1**	**+0.1**
AMT				S	**Sb**	**02 02 45.0**	**-0.3**
GUR	**Goura**	**1.53**	**17**	P	**Pn**	**02 02 37.7**	**-0.6**
GUR	**Goura**	**1.53**	**17**	*e*PG	**Pn**	**02 02 37.9**	**-0.4**
GUR				*e*SB	**Sg**	**02 02 59.6**	**+0.6**
GUR	**Goura**	**1.53**	**17**	*e*Sb	**Sg**	**02 02 59.6**	**+0.6**
GUR	**Goura**	**1.53**	**17**	P	**Pn**	**02 02 37.6**	**-0.7**
GUR	**Goura**	**1.53**	**17**	*e*Pg	**Pn**	**02 02 37.9**	**-0.4**
GUR				S	**Sn**	**02 02 58.6**	**-0.2**
DID	**Didima**	**1.56**	**48**	P	**Pn**	**02 02 38.7**	**+0.1**
DID	**Didima**	**1.56**	**48**	*e*PB	**Pn**	**02 02 38.7**	**+0.1**
DID	**Didima**	**1.56**	**48**	*e*Pb	**Pn**	**02 02 38.7**	**+0.1**
KLV	**Kalavryta, Ach**	**1.60**	**11**	*e*PG	**Pn**	**02 02 38.8**	**-0.4**
KLV	**Kalavryta, Ach**	**1.60**	**11**	*e*Pg	**Pn**	**02 02 38.8**	**-0.4**
RLS	**Riolos of Patr**	**1.60**	**351**	P	**Pn**	**02 02 38.9**	**-0.3**
RLS	**Riolos of Patr**	**1.60**	**351**	*e*PG	**Pn**	**02 02 38.9**	**-0.3**
RLS	**Riolos of Patr**	**1.60**	**351**	P	**Pn**	**02 02 38.8**	**-0.4**
LAKA	**Lakka**	**1.77**	**5**	P	**Pn**	**02 02 41.9**	**+0.3**
LAKA	**Lakka**	**1.77**	**5**	*e*PG	**Pn**	**02 02 42.2**	**+0.6**
LAKA	**Lakka**	**1.77**	**5**	P	**Pn**	**02 02 41.9**	**+0.3**
LAKA	**Lakka**	**1.77**	**5**	*e*Pg	**Pn**	**02 02 42.2**	**+0.6**
LTK	**Loutraki**	**1.81**	**31**	*e*PG	**Pb**	**02 02 43.0**	**-0.8**
LTK	**Loutraki**	**1.81**	**31**	P	**Pn**	**02 02 42.3**	**+0.2**
LTK	**Loutraki**	**1.81**	**31**	*e*Pg	**Pb**	**02 02 43.0**	**-0.8**
NAIG	**Nisos Aigina**	**1.87**	**46**	*e*PN	**Pb**	**02 02 44.7**	**-0.1**
NAIG	**Nisos Aigina**	**1.87**	**46**	*e*Pn	**Pb**	**02 02 44.7**	**-0.1**
TRIZ	**Trizonia**	**1.90**	**7**	*e*PN	**Pb**	**02 02 45.0**	**-0.3**
TRIZ	**Trizonia**	**1.90**	**7**	*e*Pn	**Pb**	**02 02 45.0**	**-0.3**
KALE	**Kalithea**	**1.94**	**8**	*e*PN	**Pb**	**02 02 45.6**	**-0.3**
KALE	**Kalithea**	**1.94**	**8**	*e*Pn	**Pb**	**02 02 45.6**	**-0.3**
VLS	**Valsamata**	**1.95**	**331**	*e*PN	**Pb**	**02 02 46.5**	**+0.4**
VLS	**Valsamata**	**1.95**	**331**	*e*Pn	**Pb**	**02 02 46.5**	**+0.4**
EFP	**Efpalio**	**1.95**	**3**	*e*PN	**Pb**	**02 02 46.3**	**+0.1**
EFP	**Efpalio**	**1.95**	**3**	*e*Pn	**Pb**	**02 02 46.3**	**+0.1**
ATH	**Athens Observa**	**2.15**	**45**	*e*PN	**Pn**	**02 02 47.9**	**+1.2**
ATH	**Athens Observa**	**2.15**	**45**	*e*Pn	**Pn**	**02 02 47.9**	**+1.2**
VAM	**Vamos**	**2.23**	**118**	*e*PN	**Pn**	**02 02 48.4**	**+0.5**
VAM	**Vamos**	**2.23**	**118**	*e*Pn	**Pn**	**02 02 48.4**	**+0.5**
PTL	**Penteli**	**2.29**	**46**	*e*PN	**Pn**	**02 02 50.0**	**+1.3**
PTL	**Penteli**	**2.29**	**46**	*e*Pn	**Pn**	**02 02 50.0**	**+1.3**
EVR	**Evrytania**	**2.44**	**1**	*e*PN	**Pb**	**02 02 53.3**	**-1.2**
EVR	**Evrytania**	**2.44**	**1**	*e*Pn	**Pb**	**02 02 53.3**	**-1.2**
AGG	**Agios Georgios**	**2.58**	**10**	*e*PN	**Pn**	**02 02 54.6**	**+1.9**
AGG	**Agios Georgios**	**2.58**	**10**	*e*Pn	**Pn**	**02 02 54.6**	**+1.9**
NEO	**Neokhori**	**3.05**	**22**	*e*PB	**Pn**	**02 03 00.4**	**+1.2**
NEO	**Neokhori**	**3.05**	**22**	*e*Pb	**Pn**	**02 03 00.4**	**+1.2**
THL	**Klokotos Trika**	**3.09**	**3**	*e*PB	**Pn**	**02 03 00.5**	**+0.8**
THL	**Klokotos Trika**	**3.09**	**3**	*e*Pb	**Pn**	**02 03 00.5**	**+0.8**

*ISCJB **11** 02:13:57.1±0.5, 39°.09N±0°.02×23°.35E±0°.04, h12km±4km, Error ellipse: s-maj=4.8km s-min=4.0km az=28.6*
*THE **11** 02:13:57.4, 39°.09N×23°.34E, h10km±2km, ML1.1/2, Error ellipse: s-maj=2.2km s-min=0.4km az=23.0*
*ATH **11** 02:13:57.4, 39°.09N×23°.34E, h9km±5km, MD2.8/5*
*CSEM **11** 02:13:57.0±0.0, 39°.11N×23°.34E, h10km, ML1.1/2, Error ellipse: s-maj=1.1km s-min=0.9km az=114.0*

ISC 11 02:13:57.3±1.0**, 39°.10N**±0°.02×**23°.34E**±0°.02**, h13**km±6km**, n22,** σ**0.s23**/42**, 1C, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKIA	**Skiathos**	**0.12**	**54**	P	**Pg**	**02 14 00.5**	**-0.1**
SKIA				S	**Sg**	**02 14 02.7**	**-0.2**
SKIA	**Skiathos**	**0.12**	**54**	P	**Pg**	**02 14 00.5**	**-0.1**
SKIA				S	**Sg**	**02 14 02.7**	**-0.2**
NEO	**Neokhori**	**0.23**	**336**	P	**Pg**	**02 14 02.3**	**0.0**
NEO				S	**Sg**	**02 14 05.6**	**-0.1**
NEO	**Neokhori**	**0.23**	**336**⇑	*i*PG	**Pg**	**02 14 02.4**	**+0.1**
NEO				*e*SG	**Sg**	**02 14 05.8**	**+0.1**
NEO	**Neokhori**	**0.23**	**336**	P	**Pg**	**02 14 02.3**	**0.0**
NEO				S	**Sg**	**02 14 05.6**	**-0.1**
SMIA	**Simia**	**0.24**	**206**	P	**Pg**	**02 14 02.5**	**0.0**
SMIA				S	**Sg**	**02 14 06.0**	**0.0**
SMIA	**Simia**	**0.24**	**206**	P	**Pg**	**02 14 02.5**	**0.0**
SMIA				S	**Sg**	**02 14 06.0**	**0.0**
XOR	**Xorichti**	**0.29**	**336**	P	**Pg**	**02 14 03.3**	**-0.2**
XOR				S	**Sg**	**02 14 07.7**	**+0.1**
XOR	**Xorichti**	**0.29**	**336**	P	**Pg**	**02 14 03.3**	**-0.2**
XOR				S	**Sg**	**02 14 07.7**	**+0.1**
AOS	**Alonnisos**	**0.42**	**80**	P	**Pg**	**02 14 05.4**	**-0.4**
AOS				S	**Sg**	**02 14 11.4**	**-0.1**
AOS	**Alonnisos**	**0.42**	**80**	*e*PB	**Pg**	**02 14 05.4**	**-0.4**
AOS				*e*SB	**Sg**	**02 14 11.6**	**+0.1**
AOS	**Alonnisos**	**0.42**	**80**	P	**Pg**	**02 14 05.4**	**-0.4**
AOS				S	**Sg**	**02 14 11.4**	**-0.1**
MRKA	**Markates**	**0.43**	**154**	P	**Pg**	**02 14 05.8**	**-0.2**
MRKA				S	**Sg**	**02 14 12.2**	**+0.4**
MRKA	**Markates**	**0.43**	**154**	P	**Pg**	**02 14 05.8**	**-0.2**
MRKA				S	**Sg**	**02 14 12.2**	**+0.4**
ATAL	**Atalanti**	**0.48**	**212**	P	**Pg**	**02 14 06.7**	**0.0**
ATAL				S	**Sg**	**02 14 12.8**	**-0.3**
ATAL	**Atalanti**	**0.48**	**212**	P	**Pg**	**02 14 06.7**	**0.0**
ATAL				S	**Sg**	**02 14 12.8**	**-0.3**
LKR	**Lokris**	**0.52**	**211**	*e*PB	**Pg**	**02 14 07.4**	**-0.2**
LKR				*e*SB	**Sg**	**02 14 14.3**	**-0.2**
LKR	**Lokris**	**0.52**	**211**	*e*Pb	**Pg**	**02 14 07.4**	**-0.2**
LKR				*e*Sb	**Sg**	**02 14 14.3**	**-0.2**
AGG	**Agios Georgios**	**0.79**	**265**	*e*PG	**Pg**	**02 14 12.2**	**-0.5**
AGG				*e*SB	**Sb**	**02 14 23.9**	**+0.3**
AGG	**Agios Georgios**	**0.79**	**265**	*e*Pg	**Pg**	**02 14 12.2**	**-0.5**
AGG				*e*Sb	**Sb**	**02 14 23.9**	**+0.3**
PLG	**Polygyros**	**1.28**	**3**	*e*PB	**Pn**	**02 14 21.1**	**+0.2**
PLG	**Polygyros**	**1.28**	**3**	*e*Pb	**Pn**	**02 14 21.1**	**+0.2**

*ISCJB **11** 02:20:55.8±0.5, 6°.85N±0°.05×72°.90W±0°.06, h173km±5km, mb3.4/7, Error ellipse: s-maj=11.0km s-min=6.2km az=39.2*
*IDC **11** 02:20:56.4±1.9, 6°.74N×72°.97W, h166km±18km, mb3.2/7, mb1 3.4/8, mb1mx3.2/24, mbtmp3.3/8, Error ellipse: s-maj=27.2km s-min=15.7km az=60.0*
*FUNV **11** 02:20:56.4, 6°.75N×73°.10W, h168km, MW4.1*

ISC 11 02:20:56.6±0.9**, 6°.85N**±0°.06×**72°.93W**±0°.07**, h168**km±7km**, n26,** σ**1.s28**/37**, mb3.5**/7**, 3C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.18**	**31**⇓	*i*P	**Pn**	**02 21 25.6**	**+0.6**
CAPV				*e*S	**Sn**	**02 21 46.5**	**-0.3**
ROSC	**El Rosal**	**2.42**	**215**	P	**Pn**	**02 21 37.0**	**-1.1**
	52nm,0.3s,baz=16,slow=3.0,SNR=134						
ROSC				S	**Sn**	**02 22 07.9**	**-2.4**
	144nm,0.3s,baz=83,slow=17,SNR=16						
SOCV	**Socops**	**2.50**	**55**⇑	*e*P	**Pn**	**02 21 39.6**	**+0.9**
SOCV				*e*S	**Sn**	**02 22 11.4**	**-0.1**
VIGV	**El Vigia**	**2.52**	**38**⇑	*i*P	**Pn**	**02 21 40.0**	**+1.1**
VIGV				*e*S	**Sn**	**02 22 12.1**	**+0.3**
ELOV	**Elorza**	**3.43**	**87**	*e*P	**Pn**	**02 21 51.6**	**+1.5**
ELOV				*e*S	**Sn**	**02 22 31.7**	**0.0**
QARV	**Quebrada Arrib**	**4.10**	**35**	*e*S	**Sn**	**02 22 46.3**	**-0.9**
SANV	**Sanarito**	**4.27**	**52**	*e*P	**Pn**	**02 22 01.8**	**+0.7**
SANV				*e*S	**Sn**	**02 22 50.3**	**-1.0**
CURV	**Curarigua**	**4.30**	**43**	*e*P	**Pn**	**02 22 02.2**	**+0.8**
CURV				*e*S	**Sn**	**02 22 50.2**	**-1.8**
DABV	**Dabajuro**	**4.64**	**29**	*e*P	**Pn**	**02 22 06.2**	**+0.5**
TEPV	**Terepaima**	**4.83**	**50**	*e*P	**Pn**	**02 22 09.1**	**+0.9**
TEPV				*e*S	**Sn**	**02 23 02.3**	**-1.8**
SIQV	**Siquisique**	**4.88**	**39**	*e*P	**Pn**	**02 22 09.2**	**+0.4**
SIQV				*e*S	**Sn**	**02 23 03.1**	**-2.3**
BAUV	**El Baul**	**5.27**	**66**⇑	*i*P	**Pn**	**02 22 13.5**	**-0.4**
BAUV				*e*S	**Sn**	**02 23 11.8**	**-2.8**
MAPV	**Macapo**	**5.33**	**56**	*e*P	**Pn**	**02 22 15.3**	**+0.6**
MONV	**Montecano**	**5.85**	**30**	*e*P	**Pn**	**02 22 21.4**	**-0.2**
MONV				*e*S	**Sn**	**02 23 25.1**	**-3.2**
TURV	**Turiamo**	**6.18**	**54**	*e*P	**Pn**	**02 22 26.0**	**+0.2**
MERV	**Las Mercedes**	**6.99**	**70**	*e*P	**Pn**	**02 22 36.1**	**-0.6**
CUPV	**Cœpira**	**7.75**	**65**	*e*P	**Pn**	**02 22 46.5**	**-0.3**
LPAZ	**La Paz**	**23.48**	**168**	P	**P**	**02 25 51.8**	**-0.1**
	0.5nm,0.3s,baz=344,slow=12,SNR=5.1						
SIV	**San Ignacio**	**25.55**	**153**	P	**P**	**02 26 08.6**	**-1.5**
	0.4nm,0.7s,baz=342,slow=9.6,SNR=4.5						
BDFB	**Brasilia**	**33.30**	**132**	P	**P**	**02 27 19.8**	**+1.1**
	1.8nm,0.6s,baz=286,slow=13,SNR=3.4						
TXAR	**Lajitas Array**	**36.58**	**312**	P	**P**	**02 27 47.3**	**+0.7**
	0.3nm,0.9s,baz=114,slow=9.0,SNR=2.7						
SCHQ	**Schefferville**	**48.10**	**5**	P	**P**	**02 29 20.5**	**+1.4**
	1.1nm,0.5s,baz=162,slow=9.6,SNR=4.5						
YKA	**Yellowknife Ar**	**63.30**	**340**	P	**P**	**02 31 07.6**	**+0.4**
	0.7nm,0.5s,baz=135,slow=6.4,SNR=6.4						
TORD	**Torodi Ar. Bea**	**73.55**	**78**	P	**P**	**02 32 11.2**	**-0.5**
	0.3nm,0.8s,baz=283,slow=6.7,SNR=5.7						
ASAR	**Alice Springs**	**149.28**	**234**	PKPbc	**PKPbc**	**02 40 25.7**	**-0.6**
	1.0nm,0.5s,baz=123,slow=3.3,SNR=11						
WRA	**Warramunga Arr**	**150.51**	**241**	PKPbc	**PKPbc**	**02 40 28.8**	**-0.6**
	0.6nm,0.4s,baz=107,slow=2.6,SNR=6.6						

IDC 11 02:30:34.7±0.8**, 14°.10N×145°.25E, h0km, mb3.7**/7**, mb1 4.1**/7**, mb1mx3.8**/24**, mbtmp3.8**/7**, Error ellipse: s-maj=36.2km s-min=20.9km az=98.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**23.22**	**345**	P	P	02 35 45.0	+1.5
	1.8nm,0.7s,baz=169,slow=7.2,SNR=4.5						

WRA	**Warramunga Arr**	**35.49**	**198**	P	P	02 37 33.7	+0.4
	1.6nm,0.7s,baz=17,slow=8.9,SNR=6.2						
ASAR	**Alice Springs**	**39.14**	**197**	P	P	02 38 03.8	-0.5
	0.3nm,0.4s,baz=17,slow=9.9,SNR=4.5						
MKAR	**Makanchi Array**	**61.38**	**316**	P	P	02 40 52.0	-0.6
	0.4nm,0.4s,baz=90,slow=8.3,SNR=10.0						
ILAR	**Eielson Array**	**67.95**	**25**	P	P	02 41 33.4	-1.7
	0.3nm,0.4s,baz=248,slow=6.7,SNR=4.2						
YKA	**Yellowknife Ar**	**82.23**	**27**	P	P	02 42 58.3	+0.7
	0.2nm,0.5s,baz=279,slow=4.6,SNR=2.6						
NVAR	**Mina Array Bea**	**86.31**	**51**	P	P	02 43 19.4	+0.2
	1.2nm,0.7s,baz=274,slow=5.3,SNR=11						
LVC	**Limon Verde**	**146.55**	**110**	PKPbc	PKPbc	02 50 19.2	0.0
	2.2nm,0.7s,baz=198,slow=3.2,SNR=3.2						
LPAZ	**La Paz**	**147.73**	**98**	PKPbc	PKPbc	02 50 22.0	-1.2
	0.7nm,0.7s,baz=252,slow=4.7,SNR=3.1						

*NIED **11** 02:50:00, 35.°50N×141.°40E, h32km, Mw4.5 Best double couple: M0 6.82000×10^15 NP1: φs 98.00000°, δ54.00000°, λ-91.00000°. NP2: φs 280.00000°, δ36.00000°, λ-89.00000°.*

*BJI **11** 02:50:11.9, 35.°54N×141.°65E, h40km, mB4.6/11, mb4.6/18, Ms4.1/12, Ms7 3.9/13*

*MOS **11** 02:50:15.4±1.0, 35.°55N×141.°01E, h33km, mb4.7/47, Error ellipse: s-maj=10.4km s-min=5.9km az=101.3*

*JMA **11** 02:50:15.4±0.1, 35.°53N×141.°28E, h38km±1km, M4.5*

JMA Felt I J1.

*ISCJB **11** 02:50:16.6±0.5, 35.°50N±0.°03×141.°14E±0.°04, h45km±3km, mb4.5/79, MS3.7/18, Error ellipse: s-maj=5.9km s-min=5.0km az=31.9*

*NEIC **11** 02:50:17.7±0.7, 35.°52N×141.°06E, h39km±6km, mb4.4/24, Error ellipse: s-maj=6.5km s-min=4.4km az=139.0*

NEIC Recorded [1 JMA] in Chiba.

*IDC **11** 02:50:18.0±1.5, 35.°53N×141.°04E, h42km±15km, mb4.1/25, mb1 4.3/31, mb1mx4.2/36, mbtmp4.1/31, ML3.6/5, MS3.7/13, Ms1 3.8/13, ms1mx3.6/39, Error ellipse: s-maj=14.2km s-min=9.0km az=95.0*

ISC 11 02:50:17.0±0.5**, 35.°51N**±0.°04×**141.°18E**±0.°04**, h35**km±2km**, h35km:pP-P, n306,** σ1.s08/328**, mb4.5**/79**, MS3.7**/18**, 61C-83D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.33**	**307**	⇑P	**Pb**	**02 50 24.4**	**-0.9**
CHOJ				S	**Sb**	**02 50 30.8**	**-0.1**
JCN	**Nagara**	**0.81**	**264**	⇓P	**Pb**	**02 50 32.9**	**+0.2**
BSO4	**Boso 4**	**0.86**	**234**	⇑P	**Pn**	**02 50 32.6**	**0.0**
BSO1	**Boso 1**	**0.87**	**191**	P	**Pn**	**02 50 32.1**	**-0.1**
BSO3	**Boso 3**	**0.89**	**218**	⇑P	**Pn**	**02 50 32.8**	**0.0**
JYT	**Yasato**	**1.08**	**312**	P	**Pn**	**02 50 35.1**	**-0.5**
JIM2	**Oshima 3**	**1.64**	**242**	P	**Pn**	**02 50 42.7**	**-0.7**
JIM2				*e*S	**Sn**	**02 51 03.3**	**+0.1**
JAG	**Ashikaga**	**1.68**	**304**	⇓P	**Pn**	**02 50 44.0**	**+0.1**
JOD2	**Odawara 2**	**1.73**	**263**	⇑P	**Pn**	**02 50 44.5**	**-0.1**
JOD2				*e*S	**Sn**	**02 51 07.6**	**+2.1**
JFK	**Kawauchi**	**1.87**	**352**	P	**Pn**	**02 50 46.6**	**0.0**
JRY	**Ryogami san**	**1.92**	**286**	⇓P	**Pn**	**02 50 48.4**	**+1.1**
MJAR	**Matsushiro Arr**	**2.62**	**294**	P	**Pn**	**02 50 57.6**	**+0.8**
MJAR	**Matsushiro Arr**	**2.62**	**294**	P	**Pn**	**02 50 57.7**	**+0.8**
	21nm,0.3s,baz=100,slow=12,SNR=53						
MJAR				LR	LR	02 52 12.5	
	comp=Z,2μm,18.4s,baz=110,slow=46						
MAJO	**Matsushiro**	**2.62**	**294**	*e*P	**Pn**	**02 50 58.2**	**+1.3**
MAJO	**Matsushiro**	**2.62**	**294**	*e*Pn	**Pn**	**02 50 58.2**	**+1.3**
MAT	**Matsushiro**	**2.62**	**294**	P	**Pn**	**02 50 58.0**	**+1.1**
MAT				*e*S	**Sn**	**02 51 30.1**	**+2.5**
JHJ	**Hachijo jima 2**	**2.65**	**206**	P	**Pn**	**02 50 57.6**	**+0.4**
	48nm,0.3s,baz=201,slow=11,SNR=18						
JHJ				S	**Sn**	**02 51 28.5**	**+0.4**
	110nm,0.3s,baz=66,slow=22,SNR=7.0						
ERM	**Erimo**	**6.68**	**13**	*e*P	**Pn**	**02 51 52.2**	**-0.4**
ERM				*e*S	**Sn**	**02 53 05.8**	**-1.6**
ERM	**Erimo**	**6.68**	**13**	*e*Pn	**Pn**	**02 51 52.2**	**-0.4**
ERM				*e*S	**Sn**	**02 53 05.8**	**-1.6**
ASAJ	**Asahikawa**	**8.67**	**7**	*e*Pn	**Pn**	**02 52 19.4**	**-0.5**
	34nm,1.4s						
ASAJ				*e*S	**Sn**	**02 53 52.6**	**-3.8**
ASAJ	**Asahikawa**	**8.67**	**7**	P	**Pn**	**02 52 19.2**	**-0.6**
	3.1nm,0.3s,baz=184,slow=13,SNR=5.8						
ASAJ				S	**Sn**	**02 53 52.9**	**-3.5**
	1.3nm,0.3s,baz=24,slow=20,SNR=3.2						
ASAJ				LR	LR	02 56 50.6	
	comp=Z,572nm,19.0s,baz=249,slow=45						
JNU	**Nakatsue**	**8.85**	**257**	P	**Pn**	**02 52 21.9**	**-0.6**
JNU	**Nakatsue**	**8.85**	**257**	P	**Pn**	**02 52 21.9**	**-0.6**
	0.1nm,0.3s,baz=2.2,slow=17,SNR=1.4						
KSRS	**Korea Array**	**10.85**	**284**	P	**Pn**	**02 52 48.1**	**-1.7**
	0.2nm,0.3s,baz=102,slow=11,SNR=3.3						
KSRS				LR	LR	02 57 09.6	
	comp=Z,550nm,20.2s,baz=116,slow=38						
KSAR	**Wonju Array Be**	**10.88**	**284**	P	**Pn**	**02 52 48.1**	**-2.1**
KUR	**Kuril'sk**	**10.97**	**26**	⇓*i*P	Pn	02 52 58.0	+6.7
KUR				*i* S	Sn	02 54 59.6	+6.9
KUR				pmax	pmax		
	comp=E,21nm,1.1s						
KUR				pmax	pmax		
	comp=Z,12nm,1.1s						
KUR				pmax	pmax		
	comp=N,15nm,0.1s						
KUR				MLR	MLR		
	comp=N,595nm,22.0s						
KUR				MLR	MLR		
	comp=E,1μm,22.0s						
KUR				MLR	MLR		
	comp=Z,628nm,22.0s						
USRK	**Ussuriysk Arra**	**11.19**	**324**	P	**Pn**	**02 52 54.4**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=131,slow=11,SNR=6.8						
USRK				LR	LR	02 57 02.9	
	comp=Z,487nm,19.3s,baz=112,slow=36						
YSS	**Yuzh-Sakhalins**	**11.50**	**5**	*e*P	**Pn**	**02 52 57.3**	**-1.3**
YSS				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS				MLR	MLR		
	comp=N,400nm,18.0s						
HABR	**Khabarovsk**	**13.73**	**343**	*e*P	P	02 53 34.1	-3.1
HABR				*e*		02 55 57.6	
HABR				pmax	pmax		
	comp=Z,93nm,2.5s						
HABR				pmax	pmax		
	comp=N,40nm,2.5s						
HABR				pmax	pmax		
	comp=E,50nm,1.7s						
HABR				MLR	MLR		
	comp=Z,343nm,16.0s						
CN2	**Changchun**	**14.66**	**309**	*e*P	**Pn**	**02 53 44.0**	**+2.2**
CN2				*e*pP	P	02 53 51.5	+3.9
CN2				*e*S	**Sn**	**02 56 25.5**	**+2.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,400nm,13.0s						
CN2				LR	LR		
	comp=E,300nm,13.0s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
PETK	**Petropavlovsk-**	**21.11**	**28**	P	**P**	**02 54 59.7**	**+1.3**
PETK				pmax	pmax		
	comp=Z,19nm,0.9s						
PETK				MLR	MLR		
	comp=Z,109nm,21.1s						
PETK	**Petropavlovsk-**	**21.11**	**28**	P	**P**	**02 54 59.7**	**+1.3**
PETK	**Petropavlovsk-**	**21.11**	**28**	P	**P**	**02 54 59.7**	**+1.3**
	comp=Z,18nm,0.9s,baz=208,slow=9.0,SNR=21						
PETK				LR	LR	03 03 14.1	
	comp=Z,109nm,21.1s,baz=220,slow=37						
PET	**Petropavlovsk**	**21.42**	**30**	*e*P	**P**	**02 55 02.4**	**+0.7**
PET				pmax	pmax		
	comp=Z,31nm,1.2s						
PET				MLR	MLR		
	comp=Z,300nm,22.0s						
WHN	**Wuhan**	**23.00**	**265**	*e*P	**P**	**02 55 15.5**	**-3.3**
WHN				S	S	02 59 20.0	-6.9
WHN				LR	LR		
	comp=Z,630nm,18.8s						
HHC	**Hu-ho-hao-te**	**23.82**	**292**	*e*P	**P**	**02 55 23.4**	**-3.5**
HHC				pP	**pP**	**02 55 35.0**	**-1.7**
HHC				sP	**sP**	**02 55 40.5**	**-0.4**
HHC				PP	**PnPn**	**02 55 58.0**	**+2.6**
HHC				S	**S**	**02 59 35.0**	**-5.4**
HHC				sS	**sS**	**02 59 51.9**	**-4.9**
HHC				pmax	pmax		
	comp=Z,46nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,6.2s						
HHC				LR	LR		
	comp=N,340nm,13.7s						
HHC				LR	LR		
	comp=E,710nm,15.5s						
HHC				LR	LR		
	comp=Z,370nm,14.3s						
CLNS	**Chul'man**	**24.01**	**338**	*e*P	**P**	**02 55 27.1**	**-1.3**
CLNS				pmax	pmax		
	comp=Z,14nm,0.8s						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.7s						
CLNS				pmax	pmax		
	comp=E,9.0nm,1.1s						
CLNS				MLR	MLR		
	comp=Z,152nm,17.0s						
CLNS				MLR	MLR		
	comp=N,112nm,15.0s						
CLNS				MLR	MLR		
	comp=E,113nm,15.0s						
XAN	**Xi'an**	**26.48**	**276**	P	**P**	**02 55 51.0**	**0.0**
XAN				pP	**pP**	**02 56 02.2**	**+1.2**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,13nm,4.6s						
XAN				LR	LR		
	comp=N,140nm,19.4s						
XAN				LR	LR		
	comp=E,67nm,19.4s						
XAN				LR	LR		
	comp=Z,67nm,19.4s						
YAK	**Yakutsk**	**27.52**	**348**	*e*P	**P**	**02 55 58.3**	**-1.7**
YAK				pmax	pmax		
	comp=Z,22nm,1.1s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=N,24nm,1.3s						
TGY	**Tagaytay City**	**28.03**	**226**	LR	LR	03 05 05.6	
	comp=N,4.5nm,19.5s,baz=267,slow=32						
SONM	**Songino Array**	**28.51**	**306**	P	**P**	**02 56 08.2**	**-1.0**
SONM	**Songino Array**	**28.51**	**306**	P	**P**	**02 56 08.2**	**-1.0**
	comp=N,1.7nm,0.7s,baz=107,slow=9.3,SNR=8.1						
SONM				LR	LR	03 07 21.8	
	comp=N,135nm,21.6s,baz=70,slow=36						
LZH	**Lanzhou**	**30.17**	**282**	*e*P	**P**	**02 56 23.0**	**-1.1**
LZH				pP	**pP**	**02 56 32.0**	**-2.1**
LZH				sP	**sP**	**02 56 36.0**	**-2.3**
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
GYA	**Guiyang**	**30.81**	**263**	*e*P	**P**	**02 56 31.0**	**+1.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZAK	**Zakamensk**	**31.09**	**310**	*e*P	**P**	**02 56 32.1**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TLY	**Talaya**	**31.21**	**313**	*e*P	**P**	**02 56 34.1**	**+1.2**
TLY				pmax	pmax		
	comp=Z,7.0nm,1.8s						
TLY				MLR	MLR		
	comp=Z,101nm,17.7s						
CD2	**Chengdu**	**31.52**	**272**	*e*P	**P**	**02 56 35.8**	**-0.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,30nm,6.2s						
BILL	**Bilibino**	**35.54**	**16**	⇑*i*P	**P**	**02 57 10.5**	**+0.1**
BILL				*e*		02 57 23.8	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TIXI	**Tiksi**	**36.78**	**354**	*d i*P	**P**	**02 57 20.7**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HVS	**Khovu-Aksy**	**37.21**	**310**	*c i*P	**P**	**02 57 25.6**	**+0.7**
HVS				pmax	pmax		
	comp=Z,43nm,1.2s						
WMQ	**Urumqi**	**41.38**	**298**	*e*P	**P**	**02 57 59.6**	**-0.2**
WMQ				pP	**pP**	**02 58 12.5**	**+2.5**
WMQ				sP	**sP**	**02 58 17.0**	**+2.8**
WMQ				PP	**PnPn**	**02 59 39.0**	**-1.4**
WMQ				*e*S	**S**	**03 04 11.0**	**-1.2**
WMQ				sS	**sS**	**03 04 33.0**	**+4.0**
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,73nm,4.2s						
WMQ				LR	LR		
	comp=N,170nm,26.0s						
WMQ				LR	LR		
	comp=E,140nm,22.0s						
WMQ				LR	LR		
	comp=Z,160nm,24.2s						
ZALV	**Zalesovo Beam**	**42.82**	**314**	*i* P	**P**	**02 58 11.1**	**-0.2**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZALV	**Zalesovo Beam**	**42.82**	**314**	P	**P**	**02 58 10.7**	**-0.5**
ZALV	**Zalesovo Beam**	**42.82**	**314**	P	**P**	**02 58 10.7**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=93,slow=7.5,SNR=11						
ZALV				LR	LR	03 16 05.1	
	comp=Z,52nm,19.3s,baz=250,slow=36						
NVS	**Novosibirsk**	**43.77**	**315**	*e*P	**P**	**02 58 16.7**	**-2.2**
NVS				pmax	pmax		
	comp=Z,14nm,1.5s						
NVS				pmax	pmax		
	comp=E,11nm,1.4s						
MKAR	**Makanchi Array**	**44.79**	**303**	P	**P**	**02 58 26.6**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,79nm,18.3s						
MKAR	**Makanchi Array**	**44.79**	**303**	P	**P**	**02 58 26.6**	**-0.6**
MKAR	**Makanchi Array**	**44.79**	**303**	P	**P**	**02 58 26.6**	**-0.6**
	comp=Z,2.0nm,0.6s,baz=85,slow=9.7,SNR=26						
MKAR				LR	LR	03 17 57.3	
	comp=Z,79nm,18.3s,baz=271,slow=37						
KAPI	**Kappang**	**45.06**	**211**	LR	LR	03 14 56.8	
	comp=Z,60nm,19.4s,baz=311,slow=33						
KURK	**Kurchatov**	**46.74**	**309**	*d i*P	**P**	**02 58 41.8**	**-0.7**
KURK				pmax	pmax		
	comp=Z,21nm,1.7s						
KURK	**Kurchatov**	**46.74**	**309**	*e*P	**P**	**02 58 41.6**	**-0.9**
	comp=Z,31nm,1.3s						
RSO	**Redoubt South**	**48.22**	**37**	*e*P	**P**	**02 58 55.3**	**+1.1**
	comp=Z,27nm,0.9s						
KDAK	**Kodiak Island**	**48.36**	**41**	P	**P**	**02 58 55.4**	**+0.4**
KDAK	**Kodiak Island**	**48.36**	**41**	P	**P**	**02 58 55.4**	**+0.4**
	comp=Z,9.2nm,0.7s,baz=257,slow=7.6,SNR=7.6						
PMR	**Palmer**	**49.96**	**36**	*e*P	**P**	**02 59 07.3**	**+0.1**
PMR				pmax	pmax		
	comp=Z,11nm,1.3s						
PMR	**Palmer**	**49.96**	**36**	*e*P	**P**	**02 59 07.3**	**+0.1**
	comp=Z,11nm,1.3s						
COLA	**College**	**50.47**	**32**	*e*P	**P**	**02 59 12.5**	**+1.5**
COLA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
COLA	**College**	**50.47**	**32**	*e*P	**P**	**02 59 12.5**	**+1.5**
	comp=Z,6.2nm,0.9s						
ILAR	**Eielson Array**	**50.88**	**32**	P	**P**	**02 59 14.1**	**-0.1**
ILAR	**Eielson Array**	**50.88**	**32**	P	**P**	**02 59 14.1**	**-0.1**
	comp=Z,4.8nm,0.8s,baz=267,slow=6.3,SNR=40						
BRVK	**Borovoye**	**51.53**	**313**	*e*P	**P**	**02 59 19.1**	**0.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
EGAK	**Eagle**	**53.33**	**31**	*e*P	**P**	**02 59 32.6**	**+0.2**
	comp=Z,3.8nm,0.9s						
KKAR	**Karatay Array**	**53.74**	**301**	*e*P	**P**	**02 59 35.0**	**-0.7**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KKAR	**Karatay Array**	**53.74**	**301**	*e*P	**P**	**02 59 35.0**	**-0.7**
	comp=Z,1.1nm,0.5s						
FITZ	**Fitzroy Crossi**	**55.32**	**198**	P	**P**	**02 59 47.4**	**+0.2**
FITZ	**Fitzroy Crossi**	**55.32**	**198**	P	**P**	**02 59 47.4**	**+0.2**
	comp=Z,12nm,1.3s,baz=18,slow=7.4,SNR=7.2						
WRAB	**Tennant Creek**	**55.52**	**188**	*e*P	**P**	**02 59 48.0**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,16nm,1.2s						
WRAB	**Tennant Creek**	**55.52**	**188**	*e*P	**P**	**02 59 48.0**	**-0.7**
	comp=Z,16nm,1.2s						
WRA	**Warramunga Arr**	**55.52**	**188**	P	**P**	**02 59 48.3**	**-0.5**
WRA	**Warramunga Arr**	**55.52**	**188**	P	**P**	**02 59 48.3**	**-0.5**
	comp=Z,7.2nm,0.8s,baz=5.2,slow=7.6,SNR=24						
INK	**Inuvik**	**55.83**	**27**	P	**P**	**02 59 51.0**	**+0.6**
INK	**Inuvik**	**55.83**	**27**	P	**P**	**02 59 51.0**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=251,slow=6.3,SNR=5.7						
SVE	**Sverdlovsk**	**56.17**	**319**	*e*P	**P**	**02 59 53.3**	**+0.3**
SVE				pmax	pmax		
	comp=Z,11nm,1.2s						
ARU	**Arti**	**57.39**	**319**	*d i*P	**P**	**03 00 01.2**	**-0.4**
ARU						03 00 54.7	
ARU						03 02 06.9	
ARU				S	**S**	**03 07 57.1**	**+1.3**
ARU				SS	SS	03 11 38.2	-6.8
ARU				SSS	SSS	03 14 07.1	
ARU				pmax	pmax		
	comp=Z,12nm,1.0s						
ABKAR	**Akbulak array**	**58.79**	**311**	*e*P	**P**	**03 00 10.8**	**-0.7**
	comp=Z,3.4nm,0.7s						
ASAR	**Alice Springs**	**59.25**	**188**	P	**P**	**03 00 15.0**	**0.0**
ASAR	**Alice Springs**	**59.25**	**188**	P	**P**	**03 00 15.0**	**0.0**
	comp=Z,2.3nm,0.9s,baz=0.7,slow=7.9,SNR=14						
ASAR				LR	LR	03 26 31.0	
	comp=Z,67nm,18.2s,baz=257,slow=37						
MBWA	**Marble Bar**	**59.91**	**203**	*e*P	**P**	**03 00 20.0**	**+0.5**
	comp=Z,2.8nm,0.4s						
YKA	**Yellowknife Ar**	**65.22**	**30**	P	**P**	**03 00 54.6**	**+0.1**
YKA	**Yellowknife Ar**	**65.22**	**30**	P	**P**	**03 00 54.6**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=299,slow=6.7,SNR=14						
ARCES	**ARCESS Array B**	**65.36**	**340**	P	**P**	**03 00 54.6**	**-0.7**
ARCES	**ARCESS Array B**	**65.36**	**340**	P	**P**	**03 00 54.6**	**-0.7**
	comp=Z,2.0nm,0.7s,baz=58,slow=8.6,SNR=12						
ARCES				LR	LR	03 33 43.6	
	comp=Z,75nm,18.7s,baz=38,slow=40						
STKA	**Stephens Creek**	**67.03**	**180**	P	**P**	**03 01 06.7**	**+0.3**
STKA	**Stephens Creek**	**67.03**	**180**	P	**P**	**03 01 06.7**	**+0.3**
	comp=Z,4.5nm,0.8s,baz=0.6,slow=7.7,SNR=5.9						
JOF	**Joensuu**	**67.22**	**332**	*e*P	**P**	**03 01 06.9**	**-0.4**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.4s						
JOF	**Joensuu**	**67.22**	**332**	*e*p	**P**	**03 01 06.9**	**-0.4**
	comp=Z,2.3nm,0.4s						
DAG	**Danmarks Havn**	**67.28**	**355**	⇓*i*P	**P**	**03 01 07.2**	**-0.3**
DAG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DAG	**Danmarks Havn**	**67.28**	**355**	⇓*i*P	**P**	**03 01 07.2**	**-0.3**
	comp=Z,4.5nm,0.9s						
OBN	**Obninsk**	**69.21**	**324**	*e*P	**P**	**03 01 19.4**	**-0.5**
OBN				*e*		03 01 42.4	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KAF	**Kangasniemi**	**69.58**	**333**	*e*P	**P**	**03 01 21.9**	**-0.2**
KAF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KAF	**Kangasniemi**	**69.58**	**333**	*e*p	**P**	**03 01 21.9**	**-0.2**
	comp=Z,2.2nm,0.5s						
VSR	**Storozhevoye**	**69.96**	**319**	*e*P	**P**	**03 01 24.0**	**-0.6**
VSR				pmax	pmax		
	comp=N,10.0nm,1.4s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.4s						
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
FINES	**FINESS Array B**	**70.08**	**332**	P	**P**	**03 01 24.8**	**-0.3**
FINES	**FINESS Array B**	**70.08**	**332**	P	**P**	**03 01 24.8**	**-0.3**
	comp=Z,6.0nm,0.8s,baz=87,slow=7.4,SNR=11						
NEW	**Newport**	**71.36**	**44**	P	**P**	**03 01 33.9**	**+0.6**
NEW	**Newport**	**71.36**	**44**	P	**P**	**03 01 33.9**	**+0.6**
	comp=Z,1.6nm,0.6s,baz=315,slow=8.6,SNR=5.5						
NEW	**Newport**	**71.36**	**44**	⇑P	**P**	**03 01 33.9**	**+0.6**
	baz=71						
YBH	**Yreka Blue Hor**	**71.43**	**52**	P	**P**	**03 01 34.9**	**+1.0**
YBH	**Yreka Blue Hor**	**71.43**	**52**	P	**P**	**03 01 34.9**	**+1.0**
	comp=Z,2.0nm,0.8s,baz=18,slow=6.4,SNR=4.2						
KBZ	**Khabaz**	**71.76**	**311**	P	**P**	**03 01 35.7**	**0.0**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KBZ	**Khabaz**	**71.76**	**311**	P	**P**	**03 01 35.6**	**0.0**
KBZ	**Khabaz**	**71.76**	**311**	P	**P**	**03 01 35.6**	**0.0**
	comp=Z,3.3nm,0.9s,baz=34,slow=3.6,SNR=7.7						
KIV	**Kislovodsk**	**71.77**	**311**	*c i*P	**P**	**03 01 36.4**	**+0.5**
KIV				*e**PP	**pP**	**03 01 46.2**	**-0.5**
KIV				*e*		03 01 55.1	
KIV				pmax	pmax		
	comp=Z,22nm,1.7s						
C11A	**Tepee Creek (N**	**72.08**	**44**	⇓P	**P**	**03 01 38.3**	**+0.6**
	baz=72						
SUMG	**Summit**	**72.21**	**360**	*i* P	**P**	**03 01 39.4**	**+1.0**
SUMG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SUMG	**Summit**	**72.21**	**360**	*e*P	**P**	**03 01 39.4**	**+1.0**
	comp=Z,13nm,1.0s						
SUMG	**Summit**	**72.21**	**360**	*i* P	**P**	**03 01 39.4**	**+1.0**
	comp=Z,8.5nm,1.1s						
B13A	**Whitefish**	**72.78**	**43**	⇑P	**P**	**03 01 42.5**	**+0.7**
	baz=73,SNR=5.5						
A14A	**Double T Ranch**	**73.01**	**42**	⇓P	**P**	**03 01 44.3**	**+1.0**
	baz=73						
D12A	**Red Ives Fores**	**73.02**	**44**	⇓P	**P**	**03 01 44.6**	**+1.3**
	baz=73						
C13A	**Hot Springs**	**73.11**	**43**	⇑P	**P**	**03 01 44.8**	**+1.0**
	baz=73						
JTMT	**Jette**	**73.23**	**43**	*e*P	**P**	**03 01 45.6**	**+1.0**
	comp=Z,1.9nm,0.9s						
YBMT	**Yellow Bay**	**73.32**	**43**	*e*P	**P**	**03 01 46.3**	**+1.2**
	comp=Z,1.4nm,0.9s						
A15A	**Johnson Ranch,**	**73.38**	**41**	⇓P	**P**	**03 01 45.9**	**+0.5**
	baz=73						
D13A	**Huson**	**73.50**	**44**	⇓P	**P**	**03 01 46.6**	**+0.5**
	baz=73						
C14A	**Swan Lake**	**73.52**	**43**	⇑P	**P**	**03 01 46.9**	**+0.7**
	baz=73						
SWMT	**Swartz Lake**	**73.53**	**43**	*e*P	**P**	**03 01 47.2**	**+0.9**
	comp=Z,5.0nm,1.1s						
F12A	**Elk City**	**73.81**	**45**	⇑P	**P**	**03 01 49.1**	**+1.1**
	baz=74,SNR=7.8						
B15A	**Bradely Ranch,**	**73.86**	**42**	⇓P	**P**	**03 01 48.8**	**+0.6**
	baz=74,SNR=7.4						
BEKR	**Beckworth**	**73.93**	**52**	*e*P	**P**	**03 01 49.7**	**+0.8**
	comp=Z,2.0nm,0.9s						
MSO	**Missoula**	**73.94**	**44**	*e*P	**P**	**03 01 48.2**	**-0.5**
	comp=Z,2.4nm,1.2s						
MSO	**Missoula**	**73.94**	**44**	⇑P	**P**	**03 01 49.4**	**+0.7**
	baz=74						
A16A	**West Butte Ran**	**74.01**	**41**	⇑P	**P**	**03 01 49.9**	**+0.8**
	baz=74						
D14A	**Greenough**	**74.05**	**43**	⇓P	**P**	**03 01 49.8**	**+0.4**
	baz=74,SNR=5.0						
C15A	**Salmond Ranch,**	**74.14**	**42**	⇓P	**P**	**03 01 51.0**	**+1.1**
	baz=74,SNR=8.3						
B16A	**M & M Farms, S**	**74.26**	**41**	⇓P	**P**	**03 01 51.4**	**+0.8**
	baz=74						
ANN	**Anapa**	**74.46**	**314**	*e**PP	P	03 01 48.4	-3.2
ANN				*e*		03 01 56.4	
ANN				pmax	pmax		
	comp=Z,32nm,1.1s						
A17A	**Triple J Farms**	**74.49**	**41**	⇑P	**P**	**03 01 52.4**	**+0.6**
	baz=74						
C16A	**Fuhringer Ranc**	**74.60**	**42**	⇑P	**P**	**03 01 53.2**	**+0.7**
	baz=74						
D15A	**Lincoln**	**74.62**	**43**	⇑P	**P**	**03 01 53.0**	**+0.2**
	baz=74						
H12A	**Diamond D Ranc**	**74.72**	**46**	⇓P	**P**	**03 01 53.8**	**+0.4**
	baz=74						
B17A	**L&G Farms, Che**	**74.82**	**41**	⇓P	**P**	**03 01 54.6**	**+0.9**
	baz=75,SNR=5.1						
E15A	**Deer Lodge**	**74.91**	**43**	⇓P	**P**	**03 01 55.1**	**+0.6**
	baz=75						
A18A	**Metzger Ranch,**	**74.95**	**40**	⇓P	**P**	**03 01 55.3**	**+0.8**
	baz=75						
I12A	**Atlanta**	**74.99**	**47**	⇓P	**P**	**03 01 55.7**	**+0.7**
	baz=75						
FFC	**Flin Flon**	**75.09**	**32**	*i* P	**P**	**03 01 55.6**	**+0.5**
FFC	**Flin Flon**	**75.09**	**32**	*e*P	**P**	**03 01 55.3**	**+0.2**
	comp=Z,8.0nm,1.1s						
D16A	**Dana Ranch, Ca**	**75.16**	**43**	⇓P	**P**	**03 01 56.4**	**+0.6**
	baz=75,SNR=5.3						
B18A	**Beardsley Farm**	**75.31**	**41**	⇑P	**P**	**03 01 57.5**	**+0.9**
	baz=75,SNR=9.6						
F15A	**Butte**	**75.34**	**44**	⇑P	**P**	**03 01 57.9**	**+1.0**
	baz=75,SNR=9.1						
LRM	**Limekiln Ridge**	**75.37**	**44**	*e*P	**P**	**03 01 58.1**	**+0.9**
	comp=Z,50nm,0.8s						
AKASG	**Malin Array Be**	**75.39**	**322**	*c e*P	**P**	**03 01 56.2**	**-0.7**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**75.39**	**322**	P	**P**	**03 01 55.9**	**-1.0**
AKASG	**Malin Array Be**	**75.39**	**322**	P	**P**	**03 01 55.9**	**-1.0**
	comp=Z,2.2nm,0.6s,baz=48,slow=5.6,SNR=11						
KIEV	**Kiev**	**75.40**	**322**	*e*P	**P**	**03 01 56.6**	**-0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KIEV	**Kiev**	**75.40**	**322**	*e*P	**P**	**03 01 56.6**	**-0.3**
	comp=Z,2.2nm,0.6s						
NB2	**NORSAR Subarra**	**75.52**	**337**	P	**P**	**03 01 57.1**	**-0.4**
	comp=Z,7.3nm,1.0s,baz=41,slow=5.9						
NOA	**NORSAR Array B**	**75.52**	**337**	P	**P**	**03 01 57.5**	**-0.1**
NOA	**NORSAR Array B**	**75.52**	**337**	P	**P**	**03 01 57.5**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=39,slow=5.8,SNR=12						
NOA				LR	LR	03 38 06.4	
	comp=Z,124nm,19.6s,baz=5.0,slow=38						
A19A	**Klindworth Far**	**75.53**	**40**	⇓P	**P**	**03 01 58.6**	**+0.8**
	baz=75						
HLID	**Hailey**	**75.55**	**47**	⇑P	**P**	**03 01 58.8**	**+0.6**
	baz=75						
DLMT	**Dillon**	**75.56**	**44**	*e*P	**P**	**03 01 59.1**	**+0.9**
	comp=Z,3.9nm,1.1s						
D17A	**Six Diamond Ra**	**75.56**	**42**	⇓P	**P**	**03 01 58.3**	**+0.1**
	baz=75						
B19A	**Brinkman Farms**	**75.71**	**40**	⇓P	**P**	**03 01 59.3**	**+0.5**
	baz=76,SNR=6.0						
F16A	**Kennard Place,**	**75.86**	**44**	⇓P	**P**	**03 02 00.5**	**+0.7**
	baz=76						
E17A	**Martinsdale**	**75.88**	**43**	⇓P	**P**	**03 02 00.7**	**+0.7**
	baz=76						
I14A	**Mackay**	**75.90**	**46**	⇑P	**P**	**03 02 01.7**	**+1.4**
	baz=76						
BOZ	**Bozeman (W)**	**75.94**	**44**	*e*P	**P**	**03 02 01.4**	**+1.1**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BOZ	**Bozeman (W)**	**75.94**	**44**	*e*P	**P**	**03 02 01.4**	**+1.1**
	comp=Z,2.4nm,0.9s						
NVAR	**Mina Array Bea**	**76.06**	**53**	P	**P**	**03 02 02.5**	**+1.3**
NVAR	**Mina Array Bea**	**76.06**	**53**	P	**P**	**03 02 02.5**	**+1.3**
	comp=Z,2.9nm,0.8s,baz=293,slow=5.9,SNR=24						
C19A	**Slack Wire Ran**	**76.09**	**41**	⇑P	**P**	**03 02 02.0**	**+0.9**
	baz=76,SNR=10						
B20A	**Solberg Farm,**	**76.20**	**40**	⇑P	**P**	**03 02 02.6**	**+1.0**
	baz=76						
F17A	**Fitzpatrick Pl**	**76.33**	**43**	⇓P	**P**	**03 02 03.4**	**+0.9**
	baz=76						
E18A	**Harlowton**	**76.34**	**42**	⇑P	**P**	**03 02 03.5**	**+0.9**
	baz=76						
C20A	**Veseth Ranch,**	**76.66**	**40**	⇑P	**P**	**03 02 05.2**	**+1.0**
	baz=76						
F18A	**Big Timber**	**76.85**	**43**	⇓P	**P**	**03 02 06.0**	**+0.5**
	baz=77						
A22A	**Carney Farms,**	**76.94**	**39**	⇑P	**P**	**03 02 06.0**	**+0.1**
	baz=77,SNR=5.9						
D20A	**Manuel Ranch,**	**76.98**	**41**	⇑P	**P**	**03 02 07.0**	**+0.9**
	baz=77,SNR=5.2						
E19A	**Rath Farm, Rou**	**77.02**	**42**	⇑P	**P**	**03 02 07.4**	**+1.0**
	baz=77,SNR=7.9						
I16A	**Newdale**	**77.08**	**45**	⇓P	**P**	**03 02 08.9**	**+2.1**
	baz=77						
H17A	**Grant Village**	**77.29**	**44**	⇓P	**P**	**03 02 10.1**	**+2.0**
	baz=77						
F19A	**Roth Farm, Mol**	**77.31**	**42**	⇓P	**P**	**03 02 09.3**	**+1.3**
	baz=77						
E20A	**Meyer Farm, Mu**	**77.35**	**41**	⇓P	**P**	**03 02 09.2**	**+1.0**
	baz=77,SNR=5.3						
H18A	**Shoshone NF, C**	**77.63**	**44**	⇓P	**P**	**03 02 11.0**	**+1.0**
	baz=77						
R11A	**Troy Canyon, C**	**77.85**	**52**	⇓P	**P**	**03 02 11.7**	**+0.4**
	baz=78						
D22A	**Cohagen**	**77.98**	**40**	⇑P	**P**	**03 02 12.7**	**+1.1**
	baz=78						
C23A	**Lambert**	**78.08**	**39**	⇓P	**P**	**03 02 12.8**	**+0.6**
	baz=78						
D23A	**Lindsay**	**78.47**	**40**	⇓P	**P**	**03 02 15.3**	**+0.9**
	baz=78						
F22A	**Rosebud**	**78.82**	**41**	⇑P	**P**	**03 02 17.3**	**+0.9**
	baz=79						
J19A	**Crowheart**	**78.85**	**44**	⇓P	**P**	**03 02 17.8**	**+1.1**
	baz=79						
PDAR	**Pinedale Array**	**78.87**	**45**	P	**P**	**03 02 16.8**	**-0.1**
PDAR	**Pinedale Array**	**78.87**	**45**	P	**P**	**03 02 16.8**	**-0.1**
	comp=Z,1.2nm,0.6s,baz=291,slow=2.5,SNR=11						
M17A	**Scullys Gap (B**	**79.02**	**47**	⇑P	**P**	**03 02 17.9**	**+0.1**
	baz=79						
KWP	**Kalwaria Pacla**	**79.26**	**324**	*e*P	**P**	**03 02 18.9**	**+0.3**
KWP				pmax	pmax		
	comp=Z,19nm,1.1s						
KWP	**Kalwaria Pacla**	**79.26**	**324**	*e*P	**P**	**03 02 18.9**	**+0.3**
	comp=Z,19nm,1.1s						
F23A	**Volborg**	**79.31**	**41**	⇑P	**P**	**03 02 19.7**	**+0.7**
	baz=79						
E24A	**Baker**	**79.34**	**40**	⇑P	**P**	**03 02 19.6**	**+0.4**
	baz=79						
J20A	**Shoshoni**	**79.35**	**44**	⇓P	**P**	**03 02 20.1**	**+0.7**
	baz=79						
BRTR	**Keskin Array B**	**79.72**	**312**	P	**P**	**03 02 21.7**	**+0.2**
BRTR	**Keskin Array B**	**79.72**	**312**	P	**P**	**03 02 21.7**	**+0.2**
	comp=Z,2.5nm,1.0s,baz=98,slow=4.4,SNR=10						
GMRC	**Granite Mounta**	**79.89**	**55**	⇓P	**P**	**03 02 23.5**	**+1.0**
	baz=80						
PFO	**Pinyon Flat Ob**	**80.05**	**56**	⇓P	**P**	**03 02 24.2**	**+0.9**
	baz=80						
BELC	**Belle Mtn. Jos**	**80.13**	**55**	⇓P	**P**	**03 02 24.4**	**+0.6**
	baz=80						
J22A	**Midwest**	**80.21**	**43**	⇓P	**P**	**03 02 24.9**	**+0.8**
	baz=80						
K21A	**Alcova**	**80.28**	**44**	⇑P	**P**	**03 02 25.3**	**+0.8**
	baz=80						
H24A	**Dirks Ranch, A**	**80.40**	**41**	⇑P	**P**	**03 02 25.0**	**0.0**
	baz=80						
MONP	**Monument Peak**	**80.50**	**56**	⇑P	**P**	**03 02 26.5**	**+0.6**
	baz=80						
SRU	**San Rafael**	**80.56**	**48**	⇑P	**P**	**03 02 26.7**	**+0.6**
	baz=80						
BC3	**Big Chuckawall**	**80.70**	**55**	⇑P	**P**	**03 02 28.0**	**+1.1**
	baz=81						
N20A	**Spence Gulch,**	**80.84**	**46**	⇓P	**P**	**03 02 28.3**	**+0.7**
	baz=81						
M21A	**Separation Pea**	**80.87**	**45**	⇓P	**P**	**03 02 28.3**	**+0.6**
	baz=81						
W13A	**Hualapai Mount**	**80.88**	**53**	⇓P	**P**	**03 02 28.6**	**+0.7**
	baz=81						
U15A	**North Rim**	**81.10**	**52**	⇑P	**P**	**03 02 30.0**	**+0.9**
	baz=81						
L22A	**Ellis Ranch, M**	**81.13**	**44**	⇓P	**P**	**03 02 30.0**	**+0.9**
	baz=81						
P19A	**Cripple Cowboy**	**81.17**	**47**	⇓P	**P**	**03 02 30.1**	**+0.7**
	baz=81						
Y12C	**Blythe**	**81.26**	**55**	⇓P	**P**	**03 02 31.0**	**+1.3**
	baz=81						
O20A	**White River Ci**	**81.29**	**47**	⇓P	**P**	**03 02 30.8**	**+0.8**
	baz=81						
N21A	**Black Mountain**	**81.32**	**46**	⇑P	**P**	**03 02 30.9**	**+0.7**
	baz=81						
GLA	**Glamis**	**81.48**	**55**	⇓P	**P**	**03 02 32.1**	**+1.2**
	baz=81						
L23A	**Garrett**	**81.49**	**44**	⇓P	**P**	**03 02 31.2**	**+0.2**
	baz=81						
MORC	**Moravsky Berou**	**81.53**	**327**	*e*P	**P**	**03 02 30.8**	**-0.1**
MORC				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MORC	**Moravsky Berou**	**81.53**	**327**	*e*P	**P**	**03 02 30.8**	**-0.1**
	comp=Z,1.2nm,0.9s						
DPC	**Dobruska-Polom**	**81.65**	**328**	*e*P	**P**	**03 02 32.0**	**+0.5**
DPC	**Dobruska-Polom**	**81.65**	**328**	*e*P	**P**	**03 02 32.0**	**+0.5**
UPC	**Upice**	**81.67**	**328**	*e*P	**P**	**03 02 32.6**	**+1.1**
UPC	**Upice**	**81.67**	**328**	*e*P	**P**	**03 02 32.6**	**+1.1**
S18A	**Hurst Farm, Bl**	**81.77**	**49**	⇑P	**P**	**03 02 33.2**	**+0.6**
	baz=82						
N23A	**Red Feather La**	**82.14**	**45**	⇓P	**P**	**03 02 35.0**	**+0.4**
	baz=82						
P21A	**Newcastle**	**82.15**	**47**	⇑P	**P**	**03 02 34.9**	**+0.4**
	baz=82						
WUAZ	**Wupatki**	**82.25**	**52**	⇓P	**P**	**03 02 35.9**	**+0.9**
	baz=82						
BRG	**Berggiesshubel**	**82.27**	**329**	*e*P	**P**	**03 02 34.3**	**-0.4**
	comp=Z,5.5nm,1.2s						
BRG	**Berggiesshubel**	**82.27**	**329**	*e*P	**P**	**03 02 34.3**	**-0.4**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
O22A	**Kremmling**	**82.27**	**46**	⇑P	**P**	**03 02 36.1**	**+0.9**
	baz=82						
CLL	**Collm**	**82.33**	**330**	*i* P	**P**	**03 02 34.5**	**-0.4**
CLL				*i*		03 02 42.5	
CLL				pmax	pmax		
	comp=Z,15nm,1.3s						
CLL	**Collm**	**82.33**	**330**	*i* P	**P**	**03 02 34.5**	**-0.4**
	comp=Z,15nm,1.3s						
CLL				*e*PcP	**PcP**	**03 02 41.0**	**+0.9**
CLL				*i* pP	**pP**	**03 02 45.8**	**-0.1**
R20A	**Redvale**	**82.44**	**48**	⇑P	**P**	**03 02 37.1**	**+1.0**
	baz=82						
PRU	**Pruhonice**	**82.69**	**329**	*e*P	**P**	**03 02 37.3**	**+0.5**
PRU				MLR	MLR		
	comp=Z,100nm,10.7s						
PRU	**Pruhonice**	**82.69**	**329**	*e*P	**P**	**03 02 37.3**	**+0.5**
PRU				AMS	AMS	03 42 40.0	
	comp=Z,100nm,10.7s						
X16A	**Lo Mia Camp, P**	**82.88**	**53**	⇑P	**P**	**03 02 39.5**	**+1.1**
	baz=83						
Q22A	**Crested Butte,**	**82.90**	**47**	⇓P	**P**	**03 02 39.7**	**+1.1**
	baz=83						
S21A	**Coal Bank Pass**	**83.14**	**48**	⇑P	**P**	**03 02 41.0**	**+1.1**
	baz=83						
NKC	**Novy Kostel**	**83.38**	**330**	*e*P	**P**	**03 02 41.3**	**+0.8**
NKC	**Novy Kostel**	**83.38**	**330**	*e*P	**P**	**03 02 41.3**	**+0.8**
KHC	**Kasperske Hory**	**83.74**	**328**	*e*P	**P**	**03 02 42.5**	**+0.1**
KHC	**Kasperske Hory**	**83.74**	**328**	*e*P	**P**	**03 02 42.5**	**+0.1**
GERES	**GERESS Array B**	**83.91**	**328**	P	**P**	**03 02 42.9**	**-0.5**
GERES	**GERESS Array B**	**83.91**	**328**	P	**P**	**03 02 42.9**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=42,slow=4.5,SNR=10						
GERES				LR	LR	03 44 12.0	
	comp=Z,64nm,19.8s,baz=286,slow=39						
U21A	**Nageezi**	**84.01**	**49**	⇓P	**P**	**03 02 45.5**	**+1.2**
	baz=84						
GRF	**Grafenberg Arr**	**84.30**	**330**	*e*P	**P**	**03 02 45.6**	**+0.4**
	comp=Z,13nm,1.4s						
GRF	**Grafenberg Arr**	**84.30**	**330**	*e*P	**P**	**03 02 45.6**	**+0.4**
GRF				pmax	pmax		
	comp=Z,13nm,1.4s						
EYMN	**Ely**	**84.52**	**32**	*e*P	**P**	**03 02 46.1**	**-0.3**
	comp=Z,2.0nm,0.9s						
TUC	**Tucson**	**84.62**	**54**	*e*P	**P**	**03 02 47.9**	**+0.7**
TUC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TUC	**Tucson**	**84.62**	**54**	*e*P	**P**	**03 02 47.9**	**+0.7**
	comp=Z,1.6nm,0.8s						
S24A	**Houchin Ranch,**	**84.70**	**47**	⇓P	**P**	**03 02 48.9**	**+1.1**
	baz=84						
V22A	**San Miguel Ran**	**84.81**	**49**	⇓P	**P**	**03 02 48.6**	**+0.3**
	baz=85						
U23A	**El Rito**	**84.97**	**48**	⇓P	**P**	**03 02 51.0**	**+1.9**
	baz=85						
Y20A	**Horse Springs,**	**85.17**	**51**	⇓P	**P**	**03 02 51.2**	**+1.0**
	baz=85						
X21A	**Alamocita Cree**	**85.21**	**51**	⇑P	**P**	**03 02 51.1**	**+0.7**
	baz=85						
ECSD	**EROS Data Cent**	**85.23**	**38**	*e*P	**P**	**03 02 49.9**	**-0.1**
	comp=Z,1.2nm,0.7s						
R26A	**Arlington**	**85.31**	**46**	⇓P	**P**	**03 02 51.0**	**+0.4**
	baz=85						
T25A	**Trinidad**	**85.52**	**47**	⇓P	**P**	**03 02 52.7**	**+1.0**
	baz=85						
Z20A	**Nine Sixteen R**	**85.55**	**52**	⇑P	**P**	**03 02 53.2**	**+1.3**
	baz=85						
ANMO	**Albuquerque**	**85.71**	**50**	*e*P	**P**	**03 02 54.3**	**+1.5**
	comp=Z,1.8nm,0.9s						
120A	**U Bar Ranch, L**	**85.88**	**53**	⇓P	**P**	**03 02 54.7**	**+1.1**
	baz=86						
T26A	**Comanche Natio**	**85.98**	**46**	⇑P	**P**	**03 02 54.8**	**+0.7**
	baz=86						
U25A	**Circle Dot Ran**	**86.01**	**47**	⇑P	**P**	**03 02 55.2**	**+1.0**
	baz=86						
Z21A	**St. Cloud Mine**	**86.01**	**52**	⇓P	**P**	**03 02 55.3**	**+1.0**
	baz=86						
Y22A	**Socorro**	**86.05**	**51**	⇑P	**P**	**03 02 55.3**	**+0.8**
	baz=86						
W24A	**Lazy 6 Ranch,**	**86.19**	**49**	⇑P	**P**	**03 02 55.9**	**+0.8**
	baz=86						
R28A	**Tribune**	**86.22**	**45**	⇑P	**P**	**03 02 55.9**	**+0.8**
	baz=86						
V25A	**Rancho No Teng**	**86.26**	**48**	⇓P	**P**	**03 02 56.4**	**+0.9**
	baz=86						
Z22A	**Elephant Butte**	**86.50**	**51**	⇓P	**P**	**03 02 57.5**	**+0.8**
	baz=86						
R29A	**Marienthal**	**86.55**	**44**	⇓P	**P**	**03 02 57.9**	**+1.2**
	baz=86						
S28A	**Manter**	**86.69**	**45**	⇓P	**P**	**03 02 58.5**	**+1.1**
	baz=86						
W25A	**X Bar L Ranch,**	**86.76**	**48**	⇓P	**P**	**03 02 58.8**	**+0.9**
	baz=87						
V26A	**Tequesquite Ra**	**86.79**	**48**	⇓P	**P**	**03 02 58.9**	**+0.9**
	baz=87						
SCHQ	**Schefferville**	**86.85**	**16**	P	**P**	**03 02 58.0**	**+0.3**
SCHQ	**Schefferville**	**86.85**	**16**	P	**P**	**03 02 58.0**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=333,slow=5.5,SNR=8.2						
Y25A	**Mesa, Roswell**	**87.48**	**49**	⇓P	**P**	**03 03 02.2**	**+0.8**
	baz=87						
W27A	**Bowe Ranch, En**	**87.72**	**48**	⇑P	**P**	**03 03 03.8**	**+1.3**
	baz=88						
224A	**Cornudas Mount**	**88.19**	**51**	⇑P	**P**	**03 03 05.6**	**+0.8**
	baz=88						
Z26A	**Caprock**	**88.36**	**50**	⇑P	**P**	**03 03 06.7**	**+1.1**
	baz=88						
426A	**McDonald Obser**	**90.07**	**51**	⇓P	**P**	**03 03 14.5**	**+0.7**
	baz=90						
Z30A	**Sanderson Ranc**	**90.10**	**48**	⇓P	**P**	**03 03 15.0**	**+1.4**
	baz=90						
526A	**Mary Lane Ranc**	**90.44**	**52**	⇓P	**P**	**03 03 16.3**	**+0.9**
	baz=90						
626A	**Big Bend Ranch**	**90.75**	**52**	⇓P	**P**	**03 03 17.9**	**+1.1**
	baz=91						
329A	**Wagon Wheel Ra**	**90.81**	**50**	⇓P	**P**	**03 03 18.1**	**+1.1**
	baz=91						
131A	**Roby**	**90.97**	**48**	⇑P	**P**	**03 03 18.9**	**+1.3**
	baz=91						
Z32A	**Haskell**	**91.08**	**47**	⇑P	**P**	**03 03 19.0**	**+0.9**
	baz=91						
TXAR	**Lajitas Array**	**91.20**	**52**	P	**P**	**03 03 19.6**	**+0.8**
TXAR	**Lajitas Array**	**91.20**	**52**	P	**P**	**03 03 19.6**	**+0.8**
	comp=Z,1.4nm,0.9s,baz=303,slow=4.2,SNR=15						
528A	**Cox Ranch, San**	**91.20**	**51**	⇓P	**P**	**03 03 19.7**	**+0.8**
	baz=91						
627A	**Terlingua Ranc**	**91.30**	**52**	⇑P	**P**	**03 03 20.2**	**+0.8**
	baz=91						
TUL1	**Tulsa**	**91.34**	**43**	⇓P	**P**	**03 03 19.9**	**+0.6**
	baz=91						
ABTX	**Abilene, Hawle**	**91.45**	**47**	⇓P	**P**	**03 03 21.2**	**+1.3**
	baz=91						
332A	**Millersview**	**92.26**	**48**	⇓P	**P**	**03 03 24.3**	**+0.6**
	baz=92						
531A	**Rocksprings**	**92.61**	**50**	⇓P	**P**	**03 03 26.0**	**+0.6**
	baz=92						
532A	**Rocksprings**	**93.04**	**49**	⇑P	**P**	**03 03 27.9**	**+0.6**
	baz=93						
TORD	**Torodi Ar. Bea**	**118.27**	**314**	PKP	**PKPdf**	**03 09 00.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**118.27**	**314**	PKP	**PKPdf**	**03 09 00.8**	**-0.3**
	comp=Z,0.4nm,0.9s,baz=37,slow=1.9,SNR=3.3						
SAML	**Samuel**	**145.45**	**46**	*e*PKPdf	**PKPbc**	**03 09 51.9**	**0.0**
LPAZ	**La Paz**	**147.61**	**61**	PKPbc	**PKPbc**	**03 09 59.9**	**+0.9**
LPAZ	**La Paz**	**147.61**	**61**	PKPbc	**PKPbc**	**03 09 59.9**	**+0.9**
	comp=Z,3.2nm,0.8s,baz=315,slow=1.4,SNR=20						
CFAA	**Coronel Fontan**	**155.22**	**89**	PKPab	**PKPab**	**03 10 32.4**	**+0.7**
CFAA	**Coronel Fontan**	**155.22**	**89**	PKPab	**PKPab**	**03 10 32.4**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=206,slow=4.3,SNR=3.7						

NNC 11 02:53:00.6±7.0**, 35°.90N×68°.42E, h0**^{km}**, mb3.6, mpv3.4, 5C-1D, Error ellipse: s-maj=67.6km s-min=51.2km az=131.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**7.38**	**12**	⇑Pn	Pn	02 54 51.7	+2.1
	0.6nm,0.3s,baz=198,slow=14,SNR=9.3						
KK31				⇑Sn	Sn	02 56 16.1	+2.1
	1.0nm,0.4s,baz=207,slow=27,SNR=4.1						
KK31				⇓Lg	Lg	02 56 55.7	
	3.9nm,0.7s,baz=193,slow=28,SNR=5.3						
TKM2	**Tokmak 2**	**8.95**	**36**	⇑Pn	Pn	02 55 11.9	+0.5
	1.3nm,0.6s						
TKM2				⇑Sn	Sn	02 56 51.4	-1.6
	1.2nm,0.6s						
AB31	**Akbulak array**	**14.72**	**338**	⇑P	Pn	02 56 25.8	-4.2
	0.4nm,0.5s,baz=158,slow=12,SNR=4.1						

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*AUST **11** 03:00:16.9, 8°.99S×119°.47E, h0^{km}*
*ISCJB **11** 03:00:19.9±0.4, 9°.19S±0°.04×119°.18E±0°.03, h100^{km}±5^{km}, mb3.6/3, Error ellipse: s-maj=6.4km s-min=5.0km az=20.9*
*IDC **11** 03:00:20.1±4.8, 9°.09S×119°.01E, h74^{km}±43^{km}, mb3.4/4, mb1 3.6/7, mb1mx3.4/24, mbtmp3.5/7, ML3.9/3, Error ellipse: s-maj=71.1km s-min=14.3km az=73.0*
*DJA **11** 03:00:22.1±0.6, 9°S±4°×11°9E±°, h32^{km}±9^{km}, M4.4/8, MLv4.4/8*
ISC 11 03:00:20.9±0.8**, 9°.18S**±0°.05×**119°.18E**±0°.04**, h89**^{km}±9^{km}**, n28, σ2s.34**/33**, mb3.8**/3**, Sumba region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**0.50**	**155**	P	**Pn**	**03 00 35.7**	**0.0**
WBSI				S	**Sn**	**03 00 45.8**	**-0.8**
WSI	**Waingapu**	**1.21**	**114**	P	**Pn**	**03 00 44.6**	**+1.6**
WSI	**Waingapu**	**1.21**	**114**	S	Sn	03 00 46.0	-14
	baz=1.1,SNR=15						
BASI	**Baing, Sumba**	**1.72**	**127**	P	**Pn**	**03 00 52.1**	**+2.6**
MMRI	**Maumere**	**3.07**	**80**	P	Pn	03 01 11.5	+4.1
MMRI				S	**Sn**	**03 01 48.6**	**+5.3**
BSSI	**Bau Bau, Buton**	**3.29**	**23**	P	**Pn**	**03 01 11.8**	**+1.4**
BSSI				S	**Sn**	**03 01 49.6**	**+1.1**
BKSI	**Bulukumba**	**3.95**	**14**	P	**Pn**	**03 01 20.6**	**+1.3**
BKSI				S	**Sn**	**03 02 04.0**	**-0.5**
IGBI	**Denpasar**	**4.00**	**275**	P	**Pn**	**03 01 20.7**	**+0.7**
IGBI				S	**Sn**	**03 02 05.4**	**-0.4**
KAPI	**Kappang**	**4.18**	**8**	P	**Pn**	**03 01 22.6**	**+0.2**
	5.4nm,0.3s,baz=181,slow=10,SNR=8.5						
KAPI				S	**Sn**	**03 02 07.7**	**-2.4**
	19nm,0.3s,baz=195,slow=24,SNR=39						
JAGI	**Jajag, Banyuwa**	**5.02**	**278**	P	**Pn**	**03 01 32.6**	**-1.2**
JAGI				S	**Sn**	**03 02 33.4**	**+2.8**
JAGI	**Jajag, Banyuwa**	**5.02**	**278**	P	**Pn**	**03 01 32.3**	**-1.5**
	baz=5.3,SNR=23						
GMJI	**Gumukmas**	**5.74**	**279**	S	**Sn**	**03 02 49.3**	**+1.1**
PWJI	**Pagerwojo**	**7.38**	**278**	S	**Sn**	**03 03 30.1**	**+1.8**
LUWI	**Luwuk**	**8.84**	**24**	P	**Pn**	**03 02 25.1**	**-0.9**
	baz=8.6,SNR=3.4						
FITZ	**Fitzroy Crossi**	**10.86**	**145**	P	**Pn**	**03 02 53.6**	**+0.1**
	0.9nm,0.3s,baz=333,slow=12,SNR=24						
FITZ				S	**Sn**	**03 04 48.4**	**-4.7**
	1.5nm,0.3s,baz=165,slow=20,SNR=17						
FITZ	**Fitzroy Crossi**	**10.86**	**145**	P	**Pn**	**03 02 53.7**	**+0.2**
	baz=11,SNR=13						
FITZ				S	**Sn**	**03 04 47.8**	**-5.3**
	baz=11,SNR=4.2						
KNRA	**Kununurra**	**11.37**	**126**	P	**Pn**	**03 03 01.0**	**+0.7**
	baz=11,SNR=14						
KNRA				S	Sn	03 04 57.7	-7.7
	baz=11,SNR=3.7						
MTN	**Manton Dam**	**12.29**	**108**	P	**Pn**	**03 03 12.5**	**-0.2**
	baz=12,SNR=17						
MTN				S	**Sn**	**03 05 24.0**	**-3.9**
	baz=12,SNR=4.4						
KDU	**Kakadu**	**13.51**	**106**	P	**Pn**	**03 03 29.3**	**+0.3**
	baz=13,SNR=7.2						
PMBI	**Palembang**	**15.61**	**293**	P	Pn	03 03 50.9	-5.1
	baz=16,SNR=4.5						
MNAI	**Manna**	**16.80**	**285**	P	P	03 04 17.7	+6.1
	baz=17,SNR=5.3						
MEEK	**Meekatharra**	**17.37**	**182**	P	**P**	**03 04 22.1**	**+4.4**
	baz=18,SNR=8.7						
MEEK				S	Sn	03 07 17.4	-14
	baz=18,SNR=15						
WRA	**Warramunga Arr**	**18.14**	**128**	P	**Pn**	**03 04 28.6**	**+1.5**
	0.3nm,0.3s,baz=304,slow=12,SNR=6.3						
WRA				S	S	03 07 40.8	-8.3
	0.2nm,0.3s,baz=310,slow=24,SNR=2.9						
MORW	**Morawa**	**20.00**	**188**	P	Pn	03 04 58.7	+10
	baz=20,SNR=4.8						
MORW				S	S	03 08 18.2	-8.4
	baz=20,SNR=7.7						
ASAR	**Alice Springs**	**20.14**	**137**	P	Pn	03 04 51.1	+0.3
	1.2nm,0.5s,baz=314,slow=9.7,SNR=19						
ASAR				S	**S**	**03 08 27.6**	**-2.0**
	0.6nm,0.7s,baz=308,slow=21,SNR=2.8						
SONM	**Songino Array**	**57.89**	**350**	P	**P**	**03 10 04.0**	**+0.4**
	0.6nm,0.6s,baz=165,slow=6.0,SNR=3.3						
MKAR	**Makanchi Array**	**64.70**	**333**	P	**P**	**03 10 49.1**	**-0.4**
	0.3nm,0.6s,baz=154,slow=7.0,SNR=4.1						
ZALV	**Zalesovo Beam**	**69.27**	**339**	P	**P**	**03 11 18.0**	**-0.3**
	0.5nm,0.3s,baz=137,slow=6.9,SNR=3.5						

GUC 11 03:10:55.8±0.8**, 35°.94S×71°.79W, h68**^{km}±5^{km}**, MD3.7, ML3.3, 2C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.55**	**13**	⇓*i*P	Pn	03 11 09.1	+0.1
TALC				*i* S	Sn	03 11 19.0	+0.4
TALC				AML	AML	03 11 19.6	
	comp=E,16μm,0.1s						
CCHI	**Chillan**	**0.70**	**199**	⇓*i*P	Pn	03 11 10.6	0.0
CCHI				*i* S	Sn	03 11 22.1	+0.6
CCHI				AML	AML	03 11 23.3	
	comp=N,447nm,0.2s						
COCH	**Cobquecura**	**0.83**	**256**	⇑*i*P	Pn	03 11 12.4	+0.3
COCH				*i* S	Sn	03 11 24.8	+0.6
COCH				AML	AML	03 11 28.0	
	comp=N,428nm,0.6s						
LNV	**Longovilo**	**2.00**	**9**	*e*P	Pn	03 11 28.0	+0.6
LNV				*i* S	Sn	03 11 52.3	+0.8
CACH	**El Canelo**	**2.06**	**29**	⇑*i*P	Pn	03 11 28.7	+0.2
CACH				*i* S	Sn	03 11 54.2	+0.9
LMEL	**Las Melosas**	**2.46**	**32**	*e*P	Pn	03 11 35.0	+1.1
LMEL				*i* S	Sn	03 12 04.1	+1.1
LMEL				AML	AML	03 12 15.5	
	comp=N,119nm,0.6s						
CLCH	**Cerro Calan**	**2.74**	**22**	*i* S	Sn	03 12 09.9	+0.3
CLCH				AML	AML	03 12 16.9	
	comp=E,118nm,0.3s						
PEL	**Peldehue**	**2.93**	**18**	*e*P	Pn	03 11 40.7	+0.5
PEL				*i* S	Sn	03 12 15.0	+0.7
PEL				AML	AML	03 12 26.3	
	comp=E,134nm,0.4s						
ROCH	**El Roble**	**3.03**	**12**	*e*P	Pn	03 11 41.9	+0.2
ROCH				*e*S	Sn	03 12 17.9	+0.9
ROCH				AML	AML	03 12 26.3	
	comp=N,92nm,0.4s						

MEX 11 03:15:46.4±0.4**, 16°.72N×99°.66W, h10**^{km}±3^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.25**	**308**	*i* P	Pg	03 15 52.0	+0.5
ACX				*e*S	Sg	03 15 56.5	+1.5
ACP2	**Acapulco**	**0.27**	**306**	*e*P	Pg	03 15 51.3	-0.7
ACP2				*i* S	Sg	03 15 56.0	+0.3
CAIG	**El Cayaco**	**0.67**	**300**	*i* P	Pg	03 15 57.6	-1.8
CAIG				*e*S	Sg	03 16 07.1	-1.2
MEIG	**Mezcala**	**1.21**	**2**	*i* P	Pn	03 16 05.3	-4.1
MEIG				*e*S	Sb	03 16 20.7	-4.5
PNIG	**Pinotepa**	**1.50**	**102**	*i* P	Pn	03 16 10.5	-2.9
PNIG				*e*S	Sn	03 16 28.3	-4.7
PLIG	**Platanillo**	**1.67**	**5**	*i* P	Pn	03 16 12.5	-3.4
PLIG				*i* S	Sn	03 16 33.0	-4.6
ARIG	**Puente Sto Nin**	**1.69**	**337**	*i* P	Pn	03 16 13.2	-2.9
ARIG				*e*S	Sn	03 16 33.4	-4.4
YAIG	**Yautepec**	**2.21**	**15**	*i* P	Pn	03 16 19.3	-4.0
YAIG				*i* S	Sn	03 16 46.2	-4.7

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*IDC **11** 03:17:15.9±3.2, 13°.06N×93°.26E, h24^{km}±20^{km}, mb4.0/18, mb1 4.1/19, mb1mx4.0/27, mbtmp4.0/19, ML4.9/1, MS3.6/7, Ms1 3.6/7, ms1mx3.2/49, Error ellipse: s-maj=18.4km s-min=12.4km az=62.0*
*ISCJB **11** 03:17:16.3±0.3, 13°.18N±0°.04×93°.22E±0°.04, h32^{km}, mb4.3/27, MS3.8/8, Error ellipse: s-maj=5.9km s-min=4.7km az=142.8*
*BJI **11** 03:17:16.4, 12°.94N×93°.19E, h50^{km}, mB4.8/6, mb4.5/13, Ms4.5/2, Ms7 4.0/4*
*NEIC **11** 03:17:19.4±1.5, 13°.07N×93°.30E, h52^{km}±13^{km}, mb4.4/5, Error ellipse: s-maj=13.0km s-min=7.5km az=55.0*
*DJA **11** 03:17:28.5±1.6, 13°N±5°×9°4E±1°6, h93^{km}±61^{km}, M4.8/5, mB4.8/3, mb4.6/5, MLv4.9/2, Mw(mB)4.1/3*
ISC 11 03:17:18.1±0.6**, 13°.07N**±0°.08×**93°.22E**±0°.05**, h32**^{km}**, n90, σ1s.59**/90**, mb4.2**/27**, MS3.7**/8**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DGPR	**DIGLIPUR**	**0.30**	**290**	*e*PKP	**Pb**	**03 17 27.4**	**+1.7**
DGPR				*e*S	**Sn**	**03 17 34.6**	**+3.0**
DGPR				AML	AML	03 17 36.5	
	comp=N,39μm,0.5s						
DGPR				AML	AML	03 17 37.5	
	comp=E,35μm,0.5s						
PBA	**Port Blair**	**1.48**	**198**	*e*PKP	Pn	03 17 45.1	+2.6
PBA				*e*S	Sn	03 18 03.8	+2.9
PBA				AML	AML	03 18 13.5	
	comp=N,4μm,0.4s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PBA				AML	AML	03 18 15.5	
	comp=E,6µm,0.4s						
PHET	**Kaeng Krachan**	**6.25**	**91**	P	**Pn**	**03 18 51.1**	**+2.9**
	comp=E,387nm,0.7s,comp=E,3µmcomp=E,1.3nm						
CM31	**Chiang Mai Arr**	**7.68**	**45**	*e*Pn	**Pn**	**03 19 09.0**	**+1.1**
	comp=E,40nm,0.6s						
CM31				*e*S	**Sn**	**03 20 33.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**7.68**	**45**	Pn	**Pn**	**03 19 07.7**	**-0.2**
CMAR				Sn	**Sn**	**03 20 31.3**	**-2.5**
CMAR	**Chiang Mai Arr**	**7.68**	**45**	Pn	**Pn**	**03 19 07.7**	**-0.2**
	comp=E,4.8nm,0.3s,baz=237,slow=15,SNR=104						
CMAR				Sn	**Sn**	**03 20 31.3**	**-2.5**
	baz=238,slow=17,SNR=2.7						
CMAR				LR	LR	03 22 30.0	
	comp=E,357nm,20.0s,baz=5.2,slow=41						
CHTO	**Chiang Mai**	**7.93**	**43**	*e*Pn	**Pn**	**03 19 11.8**	**+0.5**
	comp=E,36nm,0.8s						
CHTO				*e*S	**Sn**	**03 20 40.3**	**+0.3**
CHTO	**Chiang Mai**	**7.93**	**43**	P	**Pn**	**03 19 12.2**	**+0.9**
	comp=E,63nm,1.2s,comp=E,580nmcomp=E,0.2nm						
CMMT	**Chiang Mai**	**7.93**	**43**	P	**Pn**	**03 19 12.3**	**+1.0**
	comp=E,58nm,1.2s,comp=E,590nm						
PBKT	**Sadao Pong**	**8.27**	**64**	P	**Pn**	**03 19 18.0**	**+2.2**
	comp=E,58nm,0.8s						
KCSI	**Kotacane, Aceh**	**10.51**	**154**	P	Pn	03 19 55.9	+9.3
VIS	**Vishakhapatnam**	**10.59**	**297**	*e*PKP	**Pn**	**03 19 47.1**	**-0.7**
VIS				*e*x	x	03 21 34.9	
VIS				AML	AML	03 21 40.3	
	comp=E,205nm,0.3s						
VIS				AML	AML	03 21 40.4	
	comp=N,318nm,0.3s						
SHL	**Shillong**	**12.49**	**354**	*e*PKP	**Pn**	**03 20 12.9**	**-0.9**
SHL				*e*x	x	03 22 22.5	
BOK	**Bokaro**	**12.73**	**328**	*e*PKP	**Pn**	**03 20 16.4**	**-0.5**
ODAN	**Odare**	**14.76**	**339**	*e*P	Pn	03 20 42.6	-2.3
	comp=N,23nm,0.3s						
KMI	**Kunming**	**14.98**	**35**	P	**Pn**	**03 20 50.6**	**+2.8**
KMI				pP	**P**	**03 20 54.6**	**+1.6**
KMI				pmax	pmax		
	comp=Z,24nm,1.2s						
TAPN	**Taplejung**	**15.11**	**341**	*e*P	**Pn**	**03 20 46.6**	**-3.0**
	comp=Z,43nm,0.8s						
RAMN	**Ramite**	**15.13**	**337**	*e*P	**Pn**	**03 20 48.4**	**-1.5**
	comp=Z,27nm,0.4s						
NGP	**Nagpur**	**15.73**	**303**	*e*PKP	**Pn**	**03 20 57.3**	**-0.2**
JBP	**Jabalpur**	**16.08**	**310**	*e*PKP	**Pn**	**03 21 04.1**	**+2.2**
JBP				*e*x	x	03 23 48.2	
PKI	**Pulchoki**	**16.17**	**334**	*e*P	**Pn**	**03 21 02.4**	**-0.9**
	comp=Z,24nm,0.5s						
PKIN	**Phulchoki**	**16.18**	**334**	*e*P	**Pn**	**03 21 02.1**	**-1.3**
	comp=Z,33nm,0.6s						
GUN	**Gumba**	**16.27**	**336**	*e*P	**Pn**	**03 21 02.8**	**-1.9**
	comp=Z,27nm,0.7s						
DMN	**Daman**	**16.33**	**334**	*e*P	**Pn**	**03 21 04.5**	**-0.8**
	comp=Z,56nm,1.0s						
LSA	**Lhasa**	**16.66**	**354**	P	**P**	**03 21 12.0**	**+0.2**
LSA	**Lhasa**	**16.66**	**354**	*e*Pn	**Pn**	**03 21 09.4**	**-0.3**
	comp=Z,11nm,0.8s						
KOLN	**Koldanda**	**17.16**	**330**	*e*P	**Pn**	**03 21 15.5**	**-0.3**
	comp=Z,18nm,0.4s						
DANN	**Dangsing**	**17.57**	**331**	*e*P	**Pn**	**03 21 19.5**	**-1.4**
	comp=Z,18nm,0.5s						
BHPL	**Bhopal**	**18.08**	**306**	*e*PKP	**Pn**	**03 21 27.9**	**+1.0**
ENH	**Enshi**	**22.79**	**39**	*e*P	**P**	**03 22 16.4**	**-1.7**
	comp=Z,42nm,0.9s						
SMLA	**Simla**	**23.27**	**323**	*e*PKP	**P**	**03 22 23.4**	**+0.4**
LZH	**Lanzhou**	**24.83**	**21**	*e*P	**P**	**03 22 38.6**	**+0.9**
LZH				pP	**pP**	**03 22 50.3**	**+3.3**
LZH				sP	**sP**	**03 22 55.9**	**+5.0**
LZH				pmax	pmax		
	comp=Z,86nm,1.3s						
LZH				LR	LR		
	comp=N,1µm,13.4s						
LZH				LR	LR		
	comp=E,1µm,12.6s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
XAN	**Xi'an**	**25.29**	**32**	P	**P**	**03 22 39.7**	**-2.1**
XAN				S	S	03 26 53.1	-13
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WHN	**Wuhan**	**26.13**	**45**	P	**P**	**03 22 50.2**	**+0.8**
WHN				S	**S**	**03 27 24.0**	**+4.9**
WHN				LR	LR		
	comp=Z,450nm,17.4s						
GTA	**Gaotai**	**26.87**	**11**	*e*P	**P**	**03 22 56.9**	**+0.7**
GTA				pmax	pmax		
	comp=Z,13nm,1.2s						
KSH	**Kashi**	**30.42**	**333**	P	**P**	**03 23 26.1**	**-1.7**
KSH				pmax	pmax		
	comp=Z,140nm,5.3s						
MKAR	**Makanchi Array**	**34.85**	**347**	P	**P**	**03 24 05.7**	**-0.6**
MKAR				PcP	**PcP**	**03 26 37.8**	**-1.1**
MKAR	**Makanchi Array**	**34.85**	**347**	P	**P**	**03 24 05.7**	**-0.6**
	comp=Z,3.5nm,0.7s,baz=166,slow=7.7,SNR=37						
MKAR				PcP	**PcP**	**03 26 37.8**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=202,slow=2.9,SNR=4.6						
SONM	**Songino Array**	**36.36**	**15**	P	**P**	**03 24 19.0**	**-0.4**
SONM	**Songino Array**	**36.36**	**15**	P	**P**	**03 24 19.0**	**-0.4**
	comp=Z,4.4nm,0.9s,baz=198,slow=9.1,SNR=22						
SONM				LR	LR	03 41 24.0	
	comp=Z,145nm,21.2s,baz=160,slow=40						
KSAR	**Wonju Array Be**	**39.29**	**46**	P	P	03 24 42.6	-1.5
KSRS	**Korea Array**	**39.32**	**46**	P	P	03 24 42.6	-1.7
	comp=Z,3.0nm,0.6s,baz=238,slow=8.3,SNR=12						
KSRS				LR	LR	03 43 14.2	
	comp=Z,107nm,18.5s,baz=329,slow=40						
KURK	**Kurchatov**	**39.38**	**345**	*e*P	**P**	**03 24 43.8**	**-0.8**
	comp=Z,9.5nm,1.2s						
JNU	**Nakatsue**	**39.69**	**53**	LR	LR	03 43 41.6	
	comp=Z,80nm,18.7s,baz=257,slow=40						
ZALV	**Zalesovo Beam**	**41.31**	**352**	P	**P**	**03 24 59.8**	**-0.8**
ZALV	**Zalesovo Beam**	**41.31**	**352**	P	**P**	**03 24 59.8**	**-0.8**
	comp=Z,5.0nm,0.4s,baz=178,slow=8.5,SNR=26						
ZALV				LR	LR	03 43 04.8	
	comp=Z,36nm,20.8s,baz=339,slow=38						
FITZ	**Fitzroy Crossi**	**44.53**	**133**	P	P	03 25 24.8	-2.3
FITZ				PcP	**PcP**	**03 27 09.6**	**-0.5**
FITZ	**Fitzroy Crossi**	**44.53**	**133**	P	P	03 25 24.8	-2.3
	comp=Z,1.8nm,0.8s,baz=316,slow=9.8,SNR=5.3						
FITZ				PcP	**PcP**	**03 27 09.6**	**-0.5**
	comp=Z,2.3nm,0.6s,baz=202,slow=5.4,SNR=2.6						
ABKAR	**Akbulak array**	**45.29**	**330**	*e*P	**P**	**03 25 32.6**	**-0.1**
	comp=Z,1.7nm,0.5s						
USRK	**Ussuriysk Arra**	**45.38**	**39**	LR	LR	03 46 27.3	
	comp=Z,81nm,18.8s,baz=123,slow=39						
MJAR	**Matsushiro Arr**	**46.51**	**52**	PcP	**PcP**	**03 27 15.1**	**-1.6**
MJAR	**Matsushiro Arr**	**46.51**	**52**	PcP	**PcP**	**03 27 15.1**	**-1.6**
	comp=Z,1.6nm,0.5s,baz=225,slow=2.5,SNR=6.3						
MJAR				LR	LR	03 47 49.3	
	comp=Z,67nm,19.3s,baz=280,slow=39						
WRA	**Warramunga Arr**	**52.10**	**128**	P	P	03 26 23.4	-2.1
WRA				PcP	**PcP**	**03 27 35.5**	**-1.8**
WRA	**Warramunga Arr**	**52.10**	**128**	P	P	03 26 23.4	-2.1
	comp=Z,1.3nm,0.5s,baz=308,slow=7.9,SNR=16						
WRA				PcP	**PcP**	**03 27 35.5**	**-1.8**
	comp=Z,1.2nm,0.6s,baz=319,slow=3.2,SNR=8.6						
ASAR	**Alice Springs**	**54.00**	**132**	P	P	03 26 37.3	-2.3
ASAR				PcP	**PcP**	**03 27 43.1**	**-1.4**
ASAR	**Alice Springs**	**54.00**	**132**	P	P	03 26 37.3	-2.3
	comp=Z,0.6nm,0.6s,baz=310,slow=7.1,SNR=13						
ASAR				PcP	**PcP**	**03 27 43.1**	**-1.4**
	comp=Z,0.6nm,0.8s,baz=311,slow=4.2,SNR=5.2						
BRTR	**Keskin Array B**	**58.42**	**309**	P	**P**	**03 27 09.9**	**-1.2**
BRTR	**Keskin Array B**	**58.42**	**309**	P	**P**	**03 27 09.9**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=124,slow=7.4,SNR=6.0						
STKA	**Stephens Creek**	**64.37**	**135**	P	P	03 27 50.1	-1.1
STKA	**Stephens Creek**	**64.37**	**135**	P	P	03 27 50.1	-1.1
	comp=Z,1.0nm,0.7s,baz=297,slow=6.8,SNR=3.0						
JOF	**Joensuu**	**65.80**	**334**	*e*p	**P**	**03 27 59.1**	**-0.8**
	comp=Z,3.1nm,0.6s						
FINES	**FINESS Array B**	**67.73**	**331**	P	**P**	**03 28 10.9**	**-1.3**
FINES	**FINESS Array B**	**67.73**	**331**	P	**P**	**03 28 10.9**	**-1.3**
	comp=Z,3.9nm,0.8s,baz=79,slow=7.2,SNR=10						
ARCES	**ARCESS Array B**	**70.10**	**340**	P	**P**	**03 28 26.0**	**-0.9**
ARCES	**ARCESS Array B**	**70.10**	**340**	P	**P**	**03 28 26.0**	**-0.9**
	comp=Z,1.1nm,0.4s,baz=96,slow=6.6,SNR=31						
GERES	**GERESS Array B**	**73.39**	**317**	P	**P**	**03 28 46.4**	**-0.7**
GERES	**GERESS Array B**	**73.39**	**317**	P	**P**	**03 28 46.4**	**-0.7**
	comp=Z,1.0nm,0.6s,baz=88,slow=5.5,SNR=15						
NB2	**NORSAR Subarra**	**74.79**	**330**	P	P	03 28 53.4	-1.6
	comp=Z,1.0nm,0.5s,baz=91,slow=5.3						
NOA	**NORSAR Array B**	**74.79**	**330**	P	P	03 28 53.2	-1.8
NOA	**NORSAR Array B**	**74.79**	**330**	P	P	03 28 53.2	-1.8
	comp=Z,1.5nm,0.6s,baz=90,slow=5.7,SNR=10						
BOSA	**Boshof**	**77.62**	**237**	P	**P**	**03 29 10.9**	**-0.9**
BOSA	**Boshof**	**77.62**	**237**	P	**P**	**03 29 10.9**	**-0.9**
	comp=Z,2.3nm,0.7s,baz=86,slow=3.5,SNR=8.0						
CDF	**Champ du Feu**	**77.67**	**317**	*e*P	**P**	**03 29 10.4**	**-1.3**
LPG	**La Plagne**	**78.34**	**314**	*e*P	P	03 29 14.2	-1.6
LPL	**La Plagne**	**78.36**	**314**	*e*P	**P**	**03 29 14.4**	**-1.3**
	comp=Z,44nm,1.5s						
MAW	**Mawson**	**83.42**	**191**	P	**P**	**03 29 42.4**	**+0.6**
MAW	**Mawson**	**83.42**	**191**	P	**P**	**03 29 42.4**	**+0.6**
	comp=Z,0.9nm,0.4s,baz=8.1,slow=7.1,SNR=5.3						
ESDC	**Sonseca Array**	**87.19**	**310**	P	**P**	**03 30 00.7**	**-0.9**
ESDC	**Sonseca Array**	**87.19**	**310**	P	**P**	**03 30 00.7**	**-0.9**
	comp=Z,0.7nm,0.6s,baz=79,slow=5.0,SNR=5.2						
TORD	**Torodi Ar. Bea**	**88.53**	**283**	P	**P**	**03 30 07.6**	**-0.7**
TORD	**Torodi Ar. Bea**	**88.53**	**283**	P	**P**	**03 30 07.6**	**-0.7**
	comp=Z,1.3nm,1.0s,baz=96,slow=4.0,SNR=7.4						
MCK	**McKinley**	**90.07**	**23**	*e*P	**P**	**03 30 14.1**	**-0.6**
	comp=Z,1.8nm,0.5s						
ILAR	**Eielson Array**	**90.29**	**22**	P	**P**	**03 30 14.3**	**-1.3**
ILAR	**Eielson Array**	**90.29**	**22**	P	**P**	**03 30 14.3**	**-1.3**
	comp=Z,0.6nm,0.6s,baz=300,slow=5.4,SNR=9.6						
NVAR	**Mina Array Bea**	**120.88**	**29**	PKP	**PKPdf**	**03 36 07.8**	**-0.2**
NVAR	**Mina Array Bea**	**120.88**	**29**	PKP	**PKPdf**	**03 36 07.7**	**-0.2**
	comp=Z,0.7nm,0.6s,baz=329,slow=3.2,SNR=6.9						
TXAR	**Lajitas Array**	**134.80**	**21**	PKP	**PKPdf**	**03 36 34.5**	**-0.1**
TXAR				SKPbc	**SKPbc**	**03 40 01.5**	**-1.1**
TXAR	**Lajitas Array**	**134.80**	**21**	PKP	**PKPdf**	**03 36 34.5**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=191,slow=0.9,SNR=7.5						
TXAR				SKPbc	**SKPbc**	**03 40 01.5**	**-1.1**
	comp=Z,1.1nm,1.1s,baz=62,slow=2.1,SNR=6.7						
PLCA	**Paso Flores**	**148.99**	**204**	PKPbc	**PKPdf**	**03 37 02.5**	**+3.3**
PLCA	**Paso Flores**	**148.99**	**204**	PKPbc	**PKPdf**	**03 37 02.5**	**+3.3**
	comp=Z,0.5nm,0.4s,baz=151,slow=2.3,SNR=4.0						

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*IDC **11** 03:31:51.4±1.4, 34°.86N×25°.40E, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.3/26, mbtmp3.6/4, Error ellipse: s-maj=63.5km s-min=24.0km az=138.0*
*ATH **11** 03:31:54.3, 34°.52N×25°.67E, h23km±1km, MD3.2/7*
*ISCJB **11** 03:31:55.3±1.2, 34°.59N±0°.06×25°.74E±0°.04, h24km±8km, mb3.5/4, Error ellipse: s-maj=10.6km s-min=5.3km az=173.7*
*CSEM **11** 03:31:56.2±0.9, 34°.64N×25°.67E, h17km±4km, MD3.2, Error ellipse: s-maj=16.2km s-min=7.0km az=176.0*
ISC 11 03:31:56.0±1.5**, 34°.57N**±0°.07×**25°.69E**±0°.03**, h27**km±11km**, n34,** σ**1s.21**/50**, mb3.5**/4**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LAST	**Lasithi**	**0.61**	**344**	*e*PB	**Pb**	**03 32 06.9**	**-1.3**
LAST				*e*SN	**Sb**	**03 32 16.5**	**0.0**
LAST	**Lasithi**	**0.61**	**344**	*e*Pb	**Pb**	**03 32 06.9**	**-1.3**
LAST				*e*Sn	**Sb**	**03 32 16.5**	**0.0**
NPS	**Neapolis**	**0.69**	**355**	*e*PB	**Pb**	**03 32 08.2**	**-1.3**
NPS				*e*SN	**Sn**	**03 32 19.2**	**-0.7**
NPS	**Neapolis**	**0.69**	**355**	*e*Pb	**Pb**	**03 32 08.2**	**-1.3**
NPS				*e*Sn	**Sn**	**03 32 19.2**	**-0.7**
ZKR	**Zakros**	**0.69**	**39**	*e*PN	**Pb**	**03 32 09.1**	**-0.4**
ZKR				*e*SN	**Sn**	**03 32 19.7**	**-0.3**
ZKR	**Zakros**	**0.69**	**39**	*e*Pn	**Pb**	**03 32 09.1**	**-0.4**
ZKR				*e*Sn	**Sn**	**03 32 19.7**	**-0.3**
SIVA	**Sivas**	**0.84**	**302**	*e*PN	**Pb**	**03 32 11.3**	**-0.8**
SIVA				*e*SN	**Sb**	**03 32 23.2**	**+0.2**
SIVA	**Sivas**	**0.84**	**302**	*e*Pn	**Pb**	**03 32 11.3**	**-0.8**
SIVA				*e*Sn	**Sb**	**03 32 23.2**	**+0.2**
GVD	**Gavdhos**	**1.34**	**282**	*e*PN	**Pn**	**03 32 19.7**	**+0.7**
GVD				*e*SN	**Sb**	**03 32 39.2**	**+1.9**
GVD	**Gavdhos**	**1.34**	**282**	*e*Pn	**Pn**	**03 32 19.7**	**+0.7**
GVD				*e*Sn	**Sb**	**03 32 39.2**	**+1.9**
VAM	**Vamos**	**1.48**	**305**	*e*PN	**Pb**	**03 32 22.5**	**-0.3**
VAM				*e*SN	**Sb**	**03 32 42.5**	**+1.4**
VAM	**Vamos**	**1.48**	**305**	*e*Pn	**Pb**	**03 32 22.5**	**-0.3**
KARP	**Karpathos**	**1.55**	**51**	*e*PN	**Pb**	**03 32 23.5**	**-0.6**
KARP				*e*SN	**Sb**	**03 32 44.2**	**+0.9**
KARP	**Karpathos**	**1.55**	**51**	*e*Pn	**Pb**	**03 32 23.5**	**-0.6**
KARP				*e*Sn	**Sb**	**03 32 44.2**	**+0.9**
APE	**Apeiranthos**	**2.49**	**357**	*e*PB	**Pn**	**03 32 37.5**	**+2.7**
APE	**Apeiranthos**	**2.49**	**357**	*e*Pb	**Pn**	**03 32 37.5**	**+2.7**
ARG	**Arkhangelos**	**2.58**	**50**	*e*PN	**Pn**	**03 32 37.3**	**+1.3**
ARG	**Arkhangelos**	**2.58**	**50**	*e*Pn	**Pn**	**03 32 37.3**	**+1.3**
KYTH	**Kithira**	**2.75**	**309**	*e*PN	**Pn**	**03 32 39.4**	**+1.0**
KYTH	**Kithira**	**2.75**	**309**	*e*Pn	**Pn**	**03 32 39.4**	**+1.0**
VLI	**Veliai**	**3.10**	**314**	*e*PN	**Pn**	**03 32 44.0**	**+0.9**
VLI	**Veliai**	**3.10**	**314**	*e*Pn	**Pn**	**03 32 44.0**	**+0.9**
DYR	**Agios Nikonas**	**3.50**	**310**	*e*PN	**Pn**	**03 32 49.5**	**+0.9**
DYR	**Agios Nikonas**	**3.50**	**310**	*e*Pn	**Pn**	**03 32 49.5**	**+0.9**
AYDN	**Tasoluk**	**3.56**	**29**	*i* P	**Pn**	**03 32 52.1**	**+2.6**
AYDN				*i* S	**Sn**	**03 33 29.0**	**-1.6**
AYDN	**Tasoluk**	**3.56**	**29**	*i* P	**Pn**	**03 32 52.1**	**+2.6**
AYDN				*i* S	**Sn**	**03 33 29.0**	**-1.6**
AKAS	**Kas**	**3.60**	**62**	*i* P	**Pn**	**03 32 50.7**	**+0.5**
AKAS				*i* S	**Sn**	**03 33 31.8**	**-0.1**
AKAS	**Kas**	**3.60**	**62**	*i* P	**Pn**	**03 32 50.7**	**+0.5**
AKAS				*i* S	**Sn**	**03 33 31.8**	**-0.1**
KHAL	**Karahalli**	**4.87**	**38**	*i* P	**Pn**	**03 33 08.5**	**+0.9**
KHAL	**Karahalli**	**4.87**	**38**	*i* P	**Pn**	**03 33 08.5**	**+0.9**
TORD	**Torodi Ar. Bea**	**30.45**	**231**	P	**P**	**03 38 05.9**	**-0.6**
	0.2nm,0.3s,baz=32,slow=8.9,SNR=21						
ARCES	**ARCESS Array B**	**35.01**	**360**	P	P	03 38 42.8	-3.0
	0.7nm,0.7s,baz=190,slow=8.2,SNR=3.6						
KURBB	**Kurchatov Arra**	**41.16**	**50**	P	**P**	**03 39 36.9**	**-0.9**
	0.3nm,0.5s,baz=276,slow=8.7,SNR=4.9						
MKAR	**Makanchi Array**	**43.74**	**56**	P	**P**	**03 39 58.8**	**-0.1**
	0.6nm,0.5s,baz=279,slow=6.2,SNR=12						

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*ISCJB **11** 03:36:41.8±0.7, 36°.98N±0°.04×28°.30E±0°.05, h7km±13km, Error ellipse: s-maj=7.5km s-min=4.9km az=39.5*
*ISK **11** 03:36:41.5, 37°.00N×28°.29E, h13km, MD2.2*
*DDA **11** 03:36:41.2, 36°.89N×28°.01E, h7km, MD2.6*
*CSEM **11** 03:36:42.1±0.2, 36°.98N×28°.30E, h2km, MD2.2, Error ellipse: s-maj=6.0km s-min=4.2km az=33.0*
ISC 11 03:36:41.2±0.9**, 36°.98N**±0°.05×**28°.32E**±0°.03**, h13**km±7km**, n14,** σ**0s.38**/24**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.16**	**350**	*e*PG	**Pg**	**03 36 45.3**	**+0.2**
YER				*e*SG	**Sg**	**03 36 47.9**	**+0.1**
YER	**Yerkesik**	**0.16**	**350**	*e*Pg	**Pg**	**03 36 45.3**	**+0.2**
YER				*e*Sg	**Sg**	**03 36 47.9**	**+0.1**
TURN	**Turunc**	**0.25**	**114**	*i* P	**Pg**	**03 36 46.2**	**-0.3**
TURN				*i* S	**Sg**	**03 36 49.8**	**-0.3**
TURN	**Turunc**	**0.25**	**114**	*i* P	**Pg**	**03 36 46.2**	**-0.3**
TURN				*i* S	**Sg**	**03 36 49.8**	**-0.3**
DALY	**Dalyan (Mu˜la**	**0.31**	**120**	*e*PG	**Pb**	**03 36 48.8**	**+0.2**
DALY				*e*SG	**Sb**	**03 36 54.6**	**+0.9**
DALY	**Dalyan (Mu˜la**	**0.31**	**120**	*e*Pg	**Pb**	**03 36 48.8**	**+0.2**
DALY				*e*Sg	**Sb**	**03 36 54.6**	**+0.9**
MLSB	**Milas**	**0.54**	**307**	*e*PG	**Pg**	**03 36 51.9**	**+0.1**
MLSB	**Milas**	**0.54**	**307**	*e*Pg	**Pg**	**03 36 51.9**	**+0.1**
DAT	**Datca**	**0.64**	**248**	*e*PG	**Pb**	**03 36 54.4**	**+0.1**
DAT				*e*SG	**Sb**	**03 37 03.5**	**+0.3**
DAT	**Datca**	**0.64**	**248**	*e*Pg	**Pb**	**03 36 54.4**	**+0.1**
DAT				*e*Sg	**Sb**	**03 37 03.5**	**+0.3**
AYDN	**Tasoluk**	**0.77**	**333**	*i* P	**Pn**	**03 36 57.4**	**-0.4**
AYDN				*i* S	**Sb**	**03 37 06.7**	**-0.1**
AYDN	**Tasoluk**	**0.77**	**333**	*i* P	**Pn**	**03 36 57.4**	**-0.4**
AYDN				*i* S	**Sb**	**03 37 06.7**	**-0.1**
BODT	**Bodrum**	**0.81**	**276**	*e*PG	**Pb**	**03 36 57.2**	**+0.1**
BODT	**Bodrum**	**0.81**	**276**	*e*Pg	**Pb**	**03 36 57.2**	**+0.1**

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*MOS **11** 03:37:43.4±0.9, 24°.00S×176°.86W, h36km, mb5.3/24, MS4.5/5, Error ellipse: s-maj=11.7km s-min=8.9km az=47.1*
*DJA **11** 03:37:47.6±1.4, 24°S±7°×17°7W±°, h49km±16km, M5.8/23, mB6.2/6, mb5.6/23, Mw(mB)5.9/6*
*AUST **11** 03:37:48.3±0.7, 24°.01S×176°.57W, h77km, Error ellipse: s-maj=1.3km s-min=0.9km az=288.0*
*IDC **11** 03:37:49.5±1.7, 24°.08S×176°.78W, h81km±14km, mb4.6/24, mb1 4.7/26, mb1mx4.7/26, mbtmp4.6/26, MS4.2/21, Ms1 4.2/21, ms1mx4.1/29, Error ellipse: s-maj=13.4km s-min=11.4km az=117.0*
*ISCJB **11** 03:37:50.1±0.2, 24°.50S±0°.03×176°.79W±0°.04, h106km, mb5.0/89, Error ellipse: s-maj=5.5km s-min=3.7km az=30.7*
*NEIC **11** 03:37:52.1±0.2, 24°.20S×176°.87W, mb5.0/53, Error ellipse: s-maj=7.4km s-min=4.4km az=139.0*
*BJI **11** 03:37:54.6, 23°.68S×177°.25W, h110km, mB5.3/21, mb5.1/27*
*GCMT **11** 03:37:55.4±0.1, 24°.19S×176°.40W, h119km, MW5.5, Moment Tensor Solution. s95,c175; s99,c227; Moment tensor: Scale 10^{17}Nm; M_{rr}0.84±.02; $M_{\theta\theta}$-2.08±.03; $M_{\phi\phi}$1.25±.03; $M_{r\theta}$-0.10±.02; $M_{\theta\phi}$0.23±.03; $M_{\phi r}$1.22±.02; Best double couple: $M_0$2.20000×10^{17} NP1:ϕ_s57.00000°, δ60.00000°, λ28.00000°. NP2:ϕ_s312.00000°, δ66.00000°, λ146.00000°. Principal axes: T 2.2800, Plg40.0000°, Azm272.0000°; N -0.1700, Plg50.0000°, Azm100.0000°; P -2.1100, Plg4.0000°, Azm5.0000°; Data Used: II IU IC G CN. Surface waves from 114 sta.*
ISC 11 03:37:52.3±0.3**, 24°.27S**±0°.04×**176°.75W**±0°.05**, h110**km±2km**, h110**km**:pP-P, n700,** σ**1s.24**/736**, mb4.9**/88**, 129C-135D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.07**	**192**	*e*Pn	**Pn**	**03 39 07.0**	**+0.9**
RAO				S	**Sn**	**03 40 05.1**	**+1.6**
RAO				*e*S		03 40 06.6	
RAO	**Raoul Island**	**5.07**	**192**	P	**Pn**	**03 39 06.9**	**+0.9**
	966nm,0.3s,baz=312,slow=11,SNR=23						
RAO				S	**Sn**	**03 40 05.1**	**+1.6**
	703nm,0.3s,baz=52,slow=19,SNR=13						
RAO				LR	LR	03 40 39.8	
	comp=Z,951nm,19.6s,baz=342,slow=32						
MSVF	**Nonsavu**	**8.12**	**322**	Pn	**Pn**	**03 39 50.0**	**+2.5**
	1µm,0.8s,SNR=28						
MSVF	**Nonsavu**	**8.12**	**322**	*e*P	**Pn**	**03 39 49.6**	**+2.1**
MSVF	**Nonsavu**	**8.12**	**322**	*e*Pn	**Pn**	**03 39 49.6**	**+2.1**
MSVF				*e*S	**Sn**	**03 41 21.6**	**+4.0**
NIUE	**Niue**	**8.18**	**52**	P	Pn	03 39 41.3	-6.9
	baz=7.9,SNR=60						
NIUE				S	Sn	03 41 01.1	-18
	baz=7.9,SNR=21						
AFI	**Afiamalu**	**11.32**	**25**	*e*Pn	Pn	03 40 21.7	-9.2
AFI				*e*S	Sn	03 42 17.9	-18
AFI	**Afiamalu**	**11.32**	**25**	P	Pn	03 40 22.1	-8.8
	81nm,0.3s,baz=38,slow=0.9,SNR=53						
AFI				S	Sn	03 42 16.8	-19
	95nm,0.3s,baz=41,slow=19,SNR=8.4						
NFK	**Norfolk Island**	**14.49**	**248**	P	P	03 41 21.5	+5.8
	baz=15,SNR=4.2						
MWZ	**Matawai**	**14.85**	**198**	*e*PN	Pn	03 41 07.6	-8.9
URZ	**Urewera**	**14.90**	**199**	*e*Pn	**Pn**	**03 41 17.1**	**0.0**
URZ				*e*S	Sn	03 43 49.2	-12
URZ	**Urewera**	**14.90**	**199**	P	**Pn**	**03 41 17.5**	**+0.4**
	9.3nm,0.3s,baz=5.8,slow=4.3,SNR=20						
URZ				S	Sn	03 43 49.7	-12
	14nm,0.3s,baz=301,slow=22,SNR=9.9						
KNZ	**Kokohu**	**15.45**	**197**	PN	Pn	03 41 16.2	-7.9
RAHZ	**Arahi**	**15.51**	**198**	SN	Sn	03 44 01.6	-15
DZM	**Mont Dzumac**	**15.62**	**275**	*e*P	**P**	**03 41 29.4**	**+1.2**
DZM	**Mont Dzumac**	**15.62**	**275**	*e*Pn	**P**	**03 41 30.5**	**+2.3**
	464nm,1.2s						
DZM	**Mont Dzumac**	**15.62**	**275**	P	**P**	**03 41 30.7**	**+2.5**
	3.3nm,0.3s,baz=94,slow=15,SNR=52						
NOUC	**Port Laguerre**	**15.74**	**274**	*e*P	P	03 41 34.7	+5.2
NMHZ	**Naumai**	**15.76**	**199**	PN	**Pn**	**03 41 27.1**	**-1.0**
BKZ	**Black Stump Fm**	**15.92**	**199**	PN	Pn	03 41 23.2	-6.8
RAR	**Rarotonga**	**15.95**	**82**	*e*Pn	**Pn**	**03 41 27.2**	**-3.2**
	220nm,1.0s						
RAR				*e*S	Sn	03 44 10.3	-17
RAR				TT		03 57 33.8	
RAR	**Rarotonga**	**15.95**	**82**	P	**Pn**	**03 41 28.0**	**-2.4**
	7.8nm,0.3s,baz=270,slow=7.3,SNR=19						
RAR				S	Sn	03 44 08.9	-18
	14nm,0.3s,baz=90,slow=18,SNR=8.3						
RAR				T	T	03 57 33.8	
	132nm,0.3s,baz=270,slow=5.7,SNR=4.0						
FWVZ	**Far West T-bar**	**16.30**	**202**	PN	Pn	03 41 27.6	-7.3
WHVZ	**Whangaehu Hut**	**16.31**	**202**	PN	**Pn**	**03 41 32.3**	**-2.7**
BHHZ	**Black Hill Sta**	**16.35**	**200**	PN	Pn	03 41 28.8	-6.5
WNVZ	**Wahianoa**	**16.35**	**202**	PN	**Pn**	**03 41 32.8**	**-2.7**
KAHZ	**Kahuranaki**	**16.39**	**198**	PN	Pn	03 41 27.2	-8.6
PXZ	**Pawanui**	**16.61**	**197**	PN	**Pn**	**03 41 35.2**	**-3.3**
PXZ				SN	Sn	03 44 23.7	-19
PNHZ	**Pukenui**	**16.70**	**199**	PN	Pn	03 41 31.6	-7.9
PRHZ	**Porangahau**	**16.90**	**198**	PN	**Pn**	**03 41 37.3**	**-4.6**
TSZ	**Takapari Road**	**16.90**	**200**	PN	Pn	03 41 36.4	-5.7
DVHZ	**Dannevirke**	**17.06**	**199**	PN	**Pn**	**03 41 40.5**	**-3.4**
POWZ	**Post Office Ro**	**17.27**	**200**	SN	Sn	03 44 41.2	-18
BFZ	**Birch Farm**	**17.39**	**198**	PN	P	03 41 42.6	-5.0
MRZ	**Mangatainoka R**	**17.57**	**200**	*e*PN	P	03 41 42.1	-7.5
TIWZ	**Tintock**	**17.58**	**199**	PN	**P**	**03 41 45.4**	**-4.4**
HOWZ	**Holdsworth Sta**	**17.80**	**200**	PN	P	03 41 44.6	-7.6
OGWZ	**Otaki Gorge**	**17.84**	**200**	PN	P	03 41 44.5	-8.1
MTW	**Mount Morrison**	**18.05**	**199**	PN	P	03 41 49.1	-5.8
TRWZ	**Traveller**	**18.21**	**198**	SN	S	03 45 00.6	-19
SNZO	**South Karori**	**18.43**	**201**	*e*P	**P**	**03 41 56.9**	**-2.1**
	21nm,0.8s						
SNZO				*e*S	S	03 45 08.7	-15
TCW	**Tory Channel**	**18.49**	**202**	PN	P	03 41 54.2	-5.4
PLWZ	**Palliser**	**18.50**	**199**	PN	**P**	**03 41 56.5**	**-3.3**
TUWZ	**Tuamarina**	**18.80**	**202**	PN	**P**	**03 41 58.4**	**-4.6**
NNZ	**Nelson**	**18.81**	**204**	PN	**P**	**03 41 59.8**	**-3.3**
CTZ	**Chatham Island**	**19.42**	**180**	PN	**Pn**	**03 42 15.5**	**+3.5**
THZ	**Tophouse**	**19.46**	**204**	PN	**P**	**03 42 06.3**	**-4.0**
KHZ	**Kahutara**	**19.81**	**202**	*e*P	**P**	**03 42 10.1**	**-3.9**
	50nm,0.7s						
KHZ				*e*S	S	03 45 36.6	-14
KHZ	**Kahutara**	**19.81**	**202**	PN	**P**	**03 42 09.8**	**-4.2**
LTZ	**Lake Taylor**	**20.58**	**204**	PN	**P**	**03 42 20.8**	**-1.6**
OXZ	**Oxford**	**21.13**	**203**	SN	S	03 46 02.4	-15
MQZ	**McQueen's Vall**	**21.25**	**202**	SN	S	03 46 06.3	-13
WVZ	**Waitaha Valley**	**21.41**	**206**	PN	**P**	**03 42 30.8**	**-0.4**
RPZ	**Rata Peaks**	**21.83**	**204**	*e*P	**P**	**03 42 35.6**	**-0.1**
	292nm,2.3s						
RPZ				*e*S	S	03 46 21.7	-8.5
RPZ	**Rata Peaks**	**21.83**	**204**	P	**P**	**03 42 36.6**	**+0.9**
	10nm,0.5s,baz=82,slow=7.1,SNR=11						
RPZ				S	S	03 46 19.4	-11
	40nm,0.6s,baz=353,slow=19,SNR=10						
RPZ				LR	LR	03 51 12.0	
	comp=Z,956nm,19.4s,baz=30,slow=36						
FOZ	**Fox Glacier**	**22.24**	**207**	PN	**P**	**03 42 38.7**	**-1.2**
LHI	**Lord Howe Isla**	**22.54**	**246**	P	**P**	**03 42 47.3**	**+4.1**
	baz=23,SNR=6.4						
LBZ	**Lake Benmore**	**22.73**	**205**	PN	**P**	**03 42 44.2**	**-0.7**
WHZ	**Wether Hill Ro**	**24.86**	**206**	*e*P	**P**	**03 43 06.1**	**+1.6**
	515nm,2.6s						
WHZ	**Wether Hill Ro**	**24.86**	**206**	PN	**P**	**03 43 04.7**	**+0.3**
PPT	**Papeete**	**26.21**	**80**	LR	LR	03 51 43.1	
	comp=Z,2µm,19.0s,baz=246,slow=32						
PPT				T	T	04 10 44.8	
	91nm,0.4s,baz=81,slow=18,SNR=4.3						
HNR	**Honiara**	**26.68**	**300**	LR	LR	03 51 13.8	
	comp=Z,496nm,18.9s,baz=132,slow=30						
ARMA	**Armidale**	**28.69**	**251**	*e*P	**P**	**03 43 41.0**	**+1.9**
	58nm,0.8s						
ARMA	**Armidale**	**28.69**	**251**	P	**P**	**03 43 41.7**	**+2.6**
	baz=29,SNR=22						
EIDS	**Eidsvold**	**29.19**	**261**	*e*P	**P**	**03 43 44.1**	**+0.7**
	25nm,0.8s						
EIDS	**Eidsvold**	**29.19**	**261**	P	**P**	**03 43 44.6**	**+1.2**
	baz=29,SNR=9.2						
MGCD	**Mangrove Creek**	**29.47**	**245**	P	P	03 43 48.7	+2.9
	baz=30,SNR=11						
RMQ	**Roma**	**31.19**	**259**	P	**P**	**03 44 03.2**	**+2.1**
	baz=31,SNR=49						
CNB	**Canberra Magne**	**31.26**	**241**	P	**P**	**03 44 03.9**	**+2.1**
	baz=32,SNR=9.4						
MILA	**Mila**	**31.81**	**238**	P	**P**	**03 44 09.0**	**+2.5**
	baz=32,SNR=7.0						
YNG	**Young**	**31.87**	**244**	P	**P**	**03 44 09.2**	**+2.2**
	baz=32,SNR=13						
CMSA	**Cobar Meteorol**	**33.85**	**249**	P	**P**	**03 44 25.6**	**+1.3**
	baz=34,SNR=61						
CTA	**Charters Tower**	**34.45**	**270**	P	**P**	**03 44 30.1**	**+0.6**
CTA	**Charters Tower**	**34.45**	**270**	P	**P**	**03 44 30.1**	**+0.6**
	88nm,0.6s,baz=98,slow=11,SNR=118						
CTAO	**Charters Tower**	**34.45**	**270**	*e*P	**P**	**03 44 30.2**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,112nm,0.8s						
CTAO	**Charters Tower**	**34.45**	**270**	*e*P	**P**	**03 44 30.2**	**+0.6**
	comp=Z,112nm,0.8s						
TOO	**Toolangi**	**34.77**	**239**	P	**P**	**03 44 33.5**	**+1.3**
	baz=35,SNR=6.2						
MOO	**Moorlands**	**34.82**	**230**	P	**P**	**03 44 35.0**	**+2.5**
	baz=35,SNR=3.7						
QLP	**Quilpie**	**35.23**	**258**	P	**P**	**03 44 37.0**	**+0.8**
	baz=35,SNR=19						

MTSU **Mount Surprise** 36.73 272 P P 03 44 49.6 +0.5
baz=37,SNR=75
STKA **Stephens Creek** 37.35 249 P P 03 44 55.0 +0.7
STKA PcP PcP 03 47 12.5 +1.3
STKA **Stephens Creek** 37.35 249 P P 03 44 55.0 +0.7
comp=Z,23nm,0.6s,baz=91,slow=9.1,SNR=96
STKA PcP PcP 03 47 12.5 +1.3
comp=Z,6.4nm,0.6s,baz=172,slow=7.1,SNR=4.0
STKA LR LR 03 58 43.0
comp=Z,902nm,18.8s,baz=82,slow=34
STKA **Stephens Creek** 37.35 249 P P 03 44 55.4 +1.1
baz=38,SNR=58
PMG **Port Moresby** 37.44 287 eP P 03 44 54.9 -0.2
comp=Z,139nm,0.9s
PMG **Port Moresby** 37.44 287 P P 03 44 55.3 +0.2
comp=Z,159nm,0.8s
PMG **Port Moresby** 37.44 287 P P 03 44 54.7 -0.4
comp=Z,137nm,0.8s,baz=134,slow=6.1,SNR=20
PMG LR LR 03 56 50.6
comp=Z,365nm,18.4s,baz=250,slow=30
ARPS **Mount Arapiles** 37.52 241 P P 03 44 56.5 +0.9
baz=38,SNR=10
COEN **Coen** 39.11 278 eP P 03 45 08.9 -0.2
comp=Z,326nm,1.2s
COEN **Coen** 39.11 278 P P 03 45 09.8 +0.7
baz=39,SNR=6.9
QIS **Mount Isa** 40.40 266 P P 03 45 20.2 +0.3
baz=40,SNR=7.7
BBOO **Buckleboo** 42.04 247 eP P 03 45 32.8 -0.3
comp=Z,379nm,0.9s
BBOO **Buckleboo** 42.04 247 P P 03 45 33.0 -0.1
baz=42,SNR=19
ASAR **Alice Springs** 44.91 260 P P 03 45 55.2 -1.0
ASAR PcP PcP 03 47 36.5 +0.5
ASAR ScP ScP 03 51 21.1 +2.8
ASAR S S 03 52 23.5 -2.7
ASAR **Alice Springs** 44.91 260 P P 03 45 55.2 -1.0
comp=Z,16nm,0.7s,baz=105,slow=7.1,SNR=90
ASAR PcP PcP 03 47 36.5 +0.5
comp=Z,5.0nm,0.8s,baz=110,slow=4.9,SNR=3.7
ASAR ScP ScP 03 51 21.1 +2.8
comp=Z,2.1nm,0.8s,baz=104,slow=3.9,SNR=5.0
ASAR S S 03 52 23.5 -2.7
comp=Z,1.7nm,0.8s,baz=101,slow=15,SNR=5.9
ASAR LR LR 04 03 30.2
comp=Z,534nm,18.6s,baz=100,slow=34
WRAB **Tennant Creek** 45.34 265 eP P 03 45 58.3 -1.4
WRAB pmax pmax
comp=Z,33nm,0.7s
WRAB **Tennant Creek** 45.34 265 eP P 03 45 58.2 -1.4
comp=Z,33nm,0.7s
WRAB **Tennant Creek** 45.34 265 P P 03 45 58.0 -1.7
comp=Z,312nm,0.5s,SNR=35
WRA **Warramunga Arr** 45.35 265 P P 03 45 58.3 -1.4
WRA PcP PcP 03 47 37.7 +0.2
WRA ScP ScP 03 51 24.6 +4.4
WRA S S 03 52 29.7 -2.8
WRA **Warramunga Arr** 45.35 265 P P 03 45 58.3 -1.4
comp=Z,37nm,0.6s,baz=103,slow=8.2,SNR=13
WRA PcP PcP 03 47 37.7 +0.2
comp=Z,9.2nm,0.9s,baz=105,slow=3.5,SNR=6.9
WRA ScP ScP 03 51 24.6 +4.4
comp=Z,1.5nm,0.7s,baz=100,slow=3.7,SNR=3.9
WRA S S 03 52 29.7 -2.8
comp=Z,1.3nm,0.7s,baz=97,slow=13,SNR=5.2
WRA LR LR 04 03 30.7
comp=Z,241nm,19.4s,baz=95,slow=34
JAY **Jayapura** 46.41 291 P P 03 46 07.1 -1.0
comp=Z,38nm,0.8s,comp=Z,5µm
KIP **Kipapa** 48.94 23 eP P 03 46 27.3 -0.1
KIP pmax pmax
comp=Z,26nm,1.0s
FORT **Forrest** 48.97 250 eP P 03 46 26.5 -1.2
comp=Z,136nm,0.7s
FORT **Forrest** 48.97 250 P P 03 46 26.9 -0.9
baz=49,SNR=27
KDU **Kakadu** 49.28 274 P P 03 46 28.8 -1.4
baz=49,SNR=29
MTN **Manton Dam** 50.45 273 P P 03 46 38.3 -0.7
baz=51,SNR=14
SRPI **Serui, Papua** 50.57 289 P P 03 46 39.3 -0.7
comp=Z,132nm,0.7s
BAKI **Biak** 51.02 289 P P 03 46 42.8 -0.6
comp=Z,159nm,1.3s
KNRA **Kununurra** 51.66 269 P P 03 46 47.6 -0.5
baz=52,SNR=18
FAKI **Fak Fak** 53.54 285 P P 03 47 00.7 -1.3
baz=54,SNR=3.7
FITZ **Fitzroy Crossi** 53.76 265 eP P 03 47 02.6 -1.0
comp=Z,36nm,0.8s
FITZ **Fitzroy Crossi** 53.76 265 P P 03 47 03.6 0.0
comp=Z,36nm,0.7s,baz=176,slow=4.6,SNR=63
FITZ **Fitzroy Crossi** 53.76 265 P P 03 47 03.2 -0.4
baz=54,SNR=44
KMBL **Kambalda** 54.14 248 P P 03 47 05.3 -1.0
baz=54,SNR=10.0
SBA **Scott Base** 54.21 184 eP P 03 47 10.1 +4.1
SBA pmax pmax
comp=Z,33nm,1.0s
SBA **Scott Base** 54.21 184 eP P 03 47 10.1 +4.1
comp=Z,33nm,1.0s
VNDA **Vanda** 54.28 186 eP P 03 47 09.7 +3.1
comp=Z,8.3nm,0.8s
VNDA **Vanda** 54.28 186 P P 03 47 09.6 +3.1
comp=Z,5.5nm,0.9s,baz=0.6,slow=7.7,SNR=19
SWI **Sorong** 55.39 287 P P 03 47 14.5 -0.9
comp=Z,190nm,0.7s,comp=Z,5µm
SWI **Sorong** 55.39 287 P P 03 47 14.4 -0.9
baz=56,SNR=3.3
MSAI **Masohi** 56.29 283 P P 03 47 23.9 +2.1
comp=Z,25nm,0.6s,comp=Z,1µm
KLBR **Kellerberrin** 57.59 247 P P 03 47 30.1 -0.7
baz=58,SNR=67
NWAO **Narrogin (SRO)** 57.79 245 eP P 03 47 32.5 +0.3
NWAO **Narrogin (SRO)** 57.79 245 P P 03 47 32.4 +0.2
comp=Z,12nm,0.7s,baz=110,slow=8.1,SNR=7.6
MEEK **Meekatharra** 57.85 253 P P 03 47 31.9 -0.9
baz=58,SNR=12
MBWA **Marble Bar** 58.23 259 eP P 03 47 34.4 -1.1
comp=Z,29nm,0.8s
MORW **Morawa** 59.54 249 P P 03 47 43.5 -0.9
baz=60,SNR=28
CASY **Casey** 61.09 206 eP P 03 47 55.1 +0.9
comp=Z,32nm,0.9s
DAV **Davao City (W)** 64.25 291 LR LR 04 14 02.8
comp=Z,105nm,21.4s,baz=75,slow=34
QSPA **South Pole Qui** 65.82 180 eP P 03 48 27.5 +1.9
comp=Z,23nm,0.8s
MIR **Mirnyy** 68.10 206 eP P 03 48 42.0 +2.2
MIR e 03 48 50.0
MIR e 03 49 09.0
MIR pmax pmax
comp=Z,72nm,1.8s
UGM **Wanagama** 71.08 270 P P 03 48 58.5 -0.6
baz=71,SNR=4.1
KKM **Kota Kinabalu** 71.86 286 eP P 03 49 03.3 -0.5
comp=Z,13nm,0.7s
MJAR **Matsushiro Arr** 73.92 324 P P 03 49 14.3 -1.1
MJAR **Matsushiro Arr** 73.92 324 P P 03 49 14.3 -1.1
comp=Z,7.7nm,0.7s,baz=156,slow=5.7,SNR=19
MJAR LR LR 04 18 46.5
comp=Z,144nm,19.7s,baz=90,slow=33
MAT **Matsushiro** 73.92 324 P P 03 49 14.2 -1.2
MAT S SKiKP 03 58 33.4 +0.1
XMIS **Christmas Isla** 74.54 265 eP P 03 49 19.6 0.0
comp=Z,195nm,0.7s
XMIS **Christmas Isla** 74.54 265 P P 03 49 19.5 0.0
baz=75,SNR=3.4
KSM **Kuching** 75.10 279 eP P 03 49 22.2 -0.5
comp=Z,25nm,0.7s
KSM **Kuching** 75.10 279 P P 03 49 23.0 +0.3
KSM **Kuching** 75.10 279 P P 03 49 22.4 -0.4
baz=75,SNR=7.5
JNU **Nakatsue** 75.80 317 P P 03 49 27.1 +0.7
JNU **Nakatsue** 75.80 317 P P 03 49 27.1 +0.7
comp=Z,14nm,0.9s,baz=24,slow=5.1,SNR=5.5
YUK **Yuzh-Kuril'sk** 76.12 333 dP P 03 49 26.1 -1.7
YUK i PPP PPP 03 54 07.8
YUK i 03 59 32.3
TPUB **Ta-pu** 76.99 303 eP P 03 49 31.4 -1.9
comp=Z,37nm,0.7s
SSLB **Suanglung** 77.02 304 eP P 03 49 31.7 -1.7
comp=Z,19nm,0.6s
ASAJ **Asahikawa** 77.58 331 P P 03 49 37.1 +1.1
ASAJ **Asahikawa** 77.58 331 P P 03 49 37.1 +1.1
comp=Z,15nm,0.8s,baz=156,slow=10.0,SNR=7.3
MAW **Mawson** 78.43 200 eP P 03 49 41.9 +1.4
comp=Z,19nm,1.5s
MAW **Mawson** 78.43 200 P P 03 49 42.3 +1.8
comp=Z,10nm,0.6s,baz=144,slow=6.9,SNR=36
MAW LR LR 04 24 28.5
comp=Z,158nm,21.3s,baz=103,slow=36
MAW **Mawson** 78.43 200 P P 03 49 42.2 +1.7
baz=78,SNR=25
PKM **Peak Mountain** 79.83 44 ⇓P P 03 49 49.0 +0.2
baz=80
SAO **San Andreas Ge** 80.00 42 eP P 03 49 50.7 +1.3
SAO **San Andreas Ge** 80.00 42 eP P 03 49 50.7 +1.3
SAO epP pP 03 50 18.0 +0.3
PETK **Petropavlovsk-** 80.19 345 P P 03 49 50.0 -0.1
PETK **Petropavlovsk-** 80.19 345 P P 03 49 50.0 -0.1
PETK **Petropavlovsk-** 80.19 345 P P 03 49 49.9 -0.1
comp=Z,16nm,0.7s,baz=149,slow=6.6,SNR=61
PETK LR LR 04 20 23.8
comp=Z,110nm,20.7s,baz=154,slow=32
KSRS **Korea Array** 80.47 318 P P 03 49 52.1 +0.2
comp=Z,2.4nm,0.7s,baz=129,slow=5.8,SNR=5.2
KSRS LR LR 04 21 14.6
comp=Z,169nm,20.7s,baz=133,slow=32
KSAR **Wonju Array Be** 80.48 318 P P 03 49 52.1 +0.1
MURC **Murrieta** 80.74 47 ⇑P P 03 49 53.5 0.0
baz=81
BFSC **Mount Baldy Ra** 80.82 46 ⇓P P 03 49 54.4 +0.4
baz=81
MONP **Monument Peak** 80.84 48 ⇑P P 03 49 54.5 +0.2
baz=81
VES **Vestal, Richgr** 80.89 44 ⇓P P 03 49 54.9 +0.7
baz=81
ISA **Isabella** 81.16 45 eP P 03 49 56.4 +0.6
ISA **Isabella** 81.16 45 eP P 03 49 56.4 +0.6
ISA epP pP 03 50 23.6 -0.5
ISA **Isabella** 81.16 45 ⇓P P 03 49 56.3 +0.5
baz=81
CMB **Columbia Colle** 81.46 42 eP P 03 49 58.1 +0.8
CMB **Columbia Colle** 81.46 42 eP P 03 49 58.1 +0.8
CMB epP pP 03 50 25.4 -0.3
LRMC **Laurel Mountai** 81.56 45 ⇓P P 03 49 58.7 +0.8
baz=82
BELC **Belle Mtn. Jos** 81.78 47 ⇑P P 03 49 59.8 +0.7
baz=82,SNR=6.7
WDC **Whiskeytown Da** 81.85 39 P P 03 49 59.1 -0.1
WDC pmax pmax
comp=Z,14nm,1.2s
WDC **Whiskeytown Da** 81.85 39 P P 03 49 59.1 -0.1
comp=Z,14nm,1.2s
WDC epP pP 03 50 27.6 +0.1
BC3 **Big Chuckawall** 81.94 48 ⇓P P 03 50 01.2 +1.2
baz=82
GLA **Glamis** 82.01 48 eP P 03 50 01.8 +1.5
GLA pmax pmax
comp=Z,35nm,1.3s
GLA **Glamis** 82.01 48 eP P 03 50 01.8 +1.5
comp=Z,35nm,1.3s
GLA epP pP 03 50 29.6 +0.9
GLA **Glamis** 82.01 48 ⇓P P 03 50 01.6 +1.3
baz=82
GSC **Goldstone** 82.02 46 eP P 03 50 01.3 +1.0
GSC **Goldstone** 82.02 46 eP P 03 50 01.3 +1.0
GSC epP pP 03 50 28.6 -0.1
GSC **Goldstone** 82.02 46 ⇑P P 03 50 01.5 +1.2
baz=82
MPMC **Manual Prospec** 82.04 45 ⇑P P 03 50 01.7 +1.2
baz=82
HEC **Hector,Ludlow** 82.05 46 ⇓P P 03 50 01.1 +0.6
baz=82
IRM **Iron Mountain** 82.44 47 ⇑P P 03 50 03.4 +0.9
baz=83,SNR=5.9
GMRC **Granite Mounta** 82.47 47 ⇑P P 03 50 03.5 +0.8
baz=83,SNR=6.7
YBH **Yreka Blue Hor** 82.52 38 eP P 03 50 04.0 +1.2
comp=Z,8.7nm,1.4s
YBH epP pP 03 50 30.9 -0.3
YBH **Yreka Blue Hor** 82.52 38 P P 03 50 03.8 +1.0
comp=Z,1.9nm,0.7s,baz=214,slow=2.0,SNR=6.8
113A **Mohawk Valley,** 82.58 49 ⇓P P 03 50 04.1 +0.9
baz=83
Y12C **Blythe** 82.62 48 ⇑P P 03 50 04.0 +0.6
baz=83
BEKR **Beckworth** 82.65 40 eP P 03 50 04.4 +0.7
comp=Z,1.7nm,0.8s
BEKR epP pP 03 50 31.7 -0.4
GRAC **Grapevine Rang** 82.69 44 ⇑P P 03 50 04.8 +1.1
baz=83
FURC **Furnace Creek,** 82.69 45 ⇓P P 03 50 04.8 +1.2
baz=83
USRK **Ussuriysk Arra** 82.72 326 P P 03 50 04.8 +1.2
comp=Z,8.5nm,0.6s,baz=119,slow=3.9,SNR=20
USRK LR LR 04 22 23.4
comp=Z,156nm,20.7s,baz=131,slow=32
SHOC **Shoshone** 82.72 45 ⇑P P 03 50 05.0 +1.1
baz=83
HUMO **Hull Mountain** 82.97 37 eP P 03 50 05.9 +0.8
comp=Z,5.9nm,1.2s
HUMO epP pP 03 50 33.4 0.0
NVAR **Mina Array Bea** 82.98 42 P P 03 50 05.4 0.0
NVAR **Mina Array Bea** 82.98 42 P P 03 50 05.4 0.0
comp=Z,2.1nm,0.6s,baz=222,slow=8.3,SNR=20
NVAR LR LR 04 19 37.8
comp=Z,124nm,19.2s,baz=119,slow=30
LDFC **Landfair** 83.00 47 eP P 03 50 06.9 +1.4
comp=Z,58nm,1.2s
LDFC epP pP 03 50 34.7 +0.8
NV11 **Mina Array Sit** 83.08 42 eP P 03 50 05.8 -0.1
NV11 epP pP 03 50 33.9 -0.3
PDMCI **Parker Dam,Lak** 83.20 48 ⇓P P 03 50 07.3 +1.0
baz=83
SYO **Syowa Base** 83.32 192 eP P 03 50 05.4 -1.0
SYO **Syowa Base** 83.32 192 ePcP PcP 03 50 09.9 -0.7
Z14A **Wintersburg** 83.48 49 ⇑P P 03 50 09.0 +1.1
baz=84
Y14A **Wickenburg** 83.77 49 ⇓P P 03 50 10.2 +0.8
baz=84,SNR=12
W13A **Hualapai Mount** 83.83 47 ⇑P P 03 50 10.8 +0.9
baz=84,SNR=7.9
SNAA **Sanae** 84.23 178 eP P 03 50 11.9 +0.8
SNAA **Sanae** 84.23 178 eP P 03 50 11.6 +0.5
comp=Z,17nm,0.8s
MDJ **Mudanjiang** 84.25 325 P P 03 50 13.2 +1.7
MDJ pmax pmax
comp=Z,12nm,0.8s
MDJ pmax pmax
comp=Z,200nm,5.5s
HABR **Khabarovsk** 84.28 330 eP P 03 50 09.9 -1.6
HABR e 03 53 24.2
HABR i 03 55 24.5
HABR eSS SS 04 05 56.7 -3.7
HABR eSSS SSS 04 09 26.3
HABR pmax pmax
comp=E,213nm,3.4s
HABR pmax pmax
comp=Z,224nm,3.4s
HABR pmax pmax
comp=N,202nm,3.4s
HABR MLR MLR
comp=Z,188nm,19.0s
TUC **Tucson** 84.41 51 eP P 03 50 14.3 +1.6
TUC pmax pmax
comp=Z,98nm,1.1s
TUC **Tucson** 84.41 51 eP P 03 50 14.3 +1.6
comp=Z,98nm,1.1s
TUC epP pP 03 50 41.6 +0.4
R11A **Troy Canyon, C** 84.63 44 ⇓P P 03 50 14.8 +1.0
baz=85
BMN **Battle Mountai** 84.88 41 eP P 03 50 15.8 +0.9
BMN pmax pmax
comp=Z,16nm,1.2s
BMN **Battle Mountai** 84.88 41 eP P 03 50 15.8 +0.9
comp=Z,16nm,1.2s
BMN epP pP 03 50 43.5 0.0
319A **Douglas** 84.98 52 ⇓P P 03 50 17.0 +1.4
baz=85
VNA1 **Neumayer--Stat** 84.99 176 eP P 03 50 16.4 +1.5
X16A **Lo Mia Camp, P** 85.11 49 ⇓P P 03 50 17.5 +1.2
baz=85,SNR=12
WVOR **Wild Horse Val** 85.29 39 eP P 03 50 17.2 +0.3
WVOR pmax pmax
comp=Z,15nm,1.0s
WVOR **Wild Horse Val** 85.29 39 eP P 03 50 17.2 +0.3
comp=Z,15nm,1.0s
WVOR epP pP 03 50 44.7 -0.7
KULM **Kulim** 85.44 278 eP P 03 50 18.4 +0.2
comp=Z,11nm,0.7s
320A **Kipp Ranch, An** 85.51 53 ⇑P P 03 50 19.6 +1.3
baz=86
CCUT **Cedar City** 85.59 45 eP P 03 50 19.7 +1.1
comp=Z,19nm,1.2s
CCUT epP pP 03 50 46.4 -0.9
U15A **North Rim** 85.66 47 ⇓P P 03 50 20.2 +1.2
baz=86
WUAZ **Wupatki** 85.76 48 eP P 03 50 20.5 +1.0
comp=Z,3.1nm,0.8s
WUAZ epP pP 03 50 47.4 -0.6
WUAZ **Wupatki** 85.76 48 ⇓P P 03 50 20.8 +1.3
baz=86
220A **Playas Peak, P** 85.81 52 ⇑P P 03 50 21.1 +1.3
baz=86
PLCA **Paso Flores** 85.86 133 P P 03 50 21.4 +1.5
PLCA **Paso Flores** 85.86 133 P P 03 50 21.4 +1.5
comp=Z,2.5nm,0.8s,baz=205,slow=7.4,SNR=5.6
PLCA LR LR 04 17 54.2
comp=Z,231nm,21.2s,baz=236,slow=28
CN2 **Changchun** 85.98 322 eP P 03 50 20.8 +0.7
CN2 epP pP 03 50 48.8 +0.1
CN2 eS S 04 00 43.8 -0.9
CN2 pmax pmax
comp=Z,20nm,1.2s
CN2 pmax pmax
comp=Z,200nm,3.0s
120A **U Bar Ranch, L** 86.07 52 ⇓P P 03 50 22.0 +0.9
baz=86
X18A **Snowflake** 86.20 50 ⇑P P 03 50 22.6 +1.0
baz=86,SNR=5.4
ELK **Elko** 86.27 42 eP P 03 50 20.9 -1.0
comp=Z,0.6nm,0.6s
ELK epP pP 03 50 49.5 -1.0
KLR **Kul'dur** 86.34 329 eP P 03 50 18.3 -3.5
Z20A **Nine Sixteen R** 86.40 51 ⇓P P 03 50 24.0 +1.3
baz=87,SNR=10
Y20A **Horse Springs,** 86.97 51 ⇑P P 03 50 26.6 +1.1
baz=87,SNR=12
Z21A **St. Cloud Mine** 87.16 52 ⇓P P 03 50 27.6 +1.2
baz=87,SNR=9.5
X20A **Quemado** 87.22 50 ⇑P P 03 50 28.3 +1.6
baz=87
122A **Conniff Cattle** 87.33 52 ⇓P P 03 50 28.8 +1.7
baz=88
MFID **Camas Ranch** 87.52 40 epP pP 03 50 56.1 -0.3
MFID **Camas Ranch** 87.52 40 ⇑P P 03 50 28.6 +0.9
baz=88
Y21A **Point of Rocks** 87.52 51 ⇑P P 03 50 29.3 +1.2
baz=88,SNR=9.4
W20A **Ramah** 87.53 50 ⇓P P 03 50 29.0 +0.9
baz=88,SNR=11
X21A **Alamocita Cree** 87.67 51 ⇓P P 03 50 29.8 +0.9
baz=88,SNR=8.0
Q16A **Castle Valley** 87.78 45 ⇑P P 03 50 30.0 +0.7
baz=88
324A **Moseley Ranch,** 87.80 54 ⇑P P 03 50 29.8 +0.3
baz=88,SNR=6.5
425A **Indio Mountain** 87.84 55 ⇑P P 03 50 30.3 +0.7
baz=88,SNR=6.8
626A **Big Bend Ranch** 87.88 56 ⇓P P 03 50 29.7 0.0
baz=88
V20A **Brimhall** 87.91 49 ⇓P P 03 50 30.5 +0.6
baz=88
Y22A **Socorro** 87.99 51 ⇓P P 03 50 31.2 +0.9
baz=88,SNR=5.9
MNTX **Cornudas Mount** 88.00 54 eP P 03 50 30.9 +0.7
comp=Z,25nm,1.3s
MNTX epP pP 03 50 58.9 0.0
224A **Cornudas Mount** 88.09 54 ⇓P P 03 50 31.9 +1.1
baz=88
LAZ **Ladron** 88.10 51 eP P 03 50 32.3 +1.5
LAZ epP pP 03 50 59.3 -0.3
TXAR **Lajitas Array** 88.12 57 P P 03 50 31.2 +0.3
TXAR PKKPbc PKKPbc 04 08 24.4 +8.7
TXAR **Lajitas Array** 88.12 57 P P 03 50 31.2 +0.3
comp=Z,1.3nm,1.0s,baz=210,slow=7.2,SNR=11
TXAR PKKPbc PKKPbc 04 08 24.4 +8.7
comp=Z,0.3nm,0.7s,baz=102,slow=3.3,SNR=4.8
TXAR LR LR 04 25 13.9
comp=Z,107nm,18.9s,baz=175,slow=32
325A **Bean Ranch, Si** 88.14 54 ⇓P P 03 50 31.5 +0.4
baz=88,SNR=6.3
I12A **Atlanta** 88.15 40 ⇑P P 03 50 31.6 +0.7
baz=88
526A **Mary Lane Ranc** 88.16 56 ⇑P P 03 50 31.2 0.0
baz=88
Z23A **Rita Site, Whi** 88.17 52 ⇓P P 03 50 31.6 +0.5
baz=88
U20A **Newcomb** 88.17 49 ⇓P P 03 50 31.6 +0.4
baz=88
X22A **Bernardo** 88.25 51 ⇑P P 03 50 32.5 +1.0
baz=88
SRU **San Rafael** 88.31 45 ⇓P P 03 50 32.5 +0.7
baz=88
BNM **Barren Site** 88.34 51 eP P 03 50 33.3 +1.2
BNM epP pP 03 51 00.8 0.0
627A **Terlingua Ranc** 88.39 57 ⇑P P 03 50 32.6 +0.3
baz=89
PMR **Palmer** 88.41 13 eP P 03 50 31.6 +0.3
PMR pmax pmax
comp=Z,10.0nm,1.2s
PMR **Palmer** 88.41 13 eP P 03 50 31.6 +0.3
comp=Z,9.8nm,1.2s
LPM **Los Pinos Moun** 88.42 51 eP P 03 50 31.8 -0.5
LPM epP pP 03 51 00.9 -0.2
HLID **Hailey** 88.43 40 eP P 03 50 32.9 +0.7
comp=Z,3.9nm,1.1s
HLID **Hailey** 88.43 40 ⇑P P 03 50 32.8 +0.6
baz=89
124A **Stringfield Ra** 88.45 53 ⇑P P 03 50 33.1 +0.5
baz=89,SNR=5.8
426A **McDonald Obser** 88.50 55 ⇑P P 03 50 32.8 0.0
baz=89
527A **Woodward Ranch** 88.56 56 ⇑P P 03 50 33.2 +0.2
baz=89
Y23A **Lovelace Mesa,** 88.64 52 ⇑P P 03 50 34.3 +1.0
baz=89,SNR=7.4
H12A **Diamond D Ranc** 88.76 39 ⇓P P 03 50 34.2 +0.5
baz=89
628A **Black Gap, Mar** 88.79 57 ⇓P P 03 50 34.0 0.0
baz=89
U21A **Nageezi** 88.79 49 ⇓P P 03 50 33.8 -0.3
baz=89
Z24A **Sheeppen Canyo** 88.83 53 ⇑P P 03 50 35.4 +1.0
baz=89,SNR=6.2
G12A **Big Creek, Yel** 88.83 38 ⇓P P 03 50 34.5 +0.5
baz=89
ANMO **Albuquerque** 88.86 51 eP P 03 50 35.4 +0.9
comp=Z,8.1nm,1.0s
ANMO epP pP 03 51 03.0 -0.2
X23A **Hourglass Bar** 88.87 51 ⇓P P 03 50 34.9 +0.4
baz=89
PV10 **Paradox Valley** 88.89 47 eP P 03 50 34.4 -0.2
comp=Z,14nm,0.2s
PV10 epP pP 03 51 03.1 -0.2
125A **Gardner Draw,** 89.01 53 ⇓P P 03 50 35.8 +0.8
baz=89
427A **Heyter Ranch,** 89.06 55 ⇑P P 03 50 35.3 0.0
baz=89
Y24A **Capitan** 89.08 52 ⇑P P 03 50 36.1 +0.7
baz=89,SNR=19
226B **Tecolote Peak,** 89.09 54 ⇓P P 03 50 35.3 -0.1
baz=89
ENH **Enshi** 89.10 304 eP P 03 50 34.7 -0.7
comp=Z,10nm,0.6s
T21A **Navajo Lake** 89.17 48 ⇑P P 03 50 35.8 0.0
baz=89
528A **Cox Ranch, San** 89.19 56 ⇓P P 03 50 36.2 +0.2
baz=89
I14A **Mackay** 89.21 40 ⇑P P 03 50 35.9 +0.1
baz=89
F12A **Elk City** 89.25 38 ⇑P P 03 50 36.3 +0.5
baz=90,SNR=12
Z25A **Roswell** 89.27 53 ⇓P P 03 50 37.4 +1.1
baz=90,SNR=7.2
U22A **Llaves** 89.32 49 ⇑P P 03 50 37.4 +0.8
baz=90
S21A **Coal Bank Pass** 89.34 48 ⇑P P 03 50 37.5 +0.8
baz=90
BJI **Beijing** 89.37 315 P P 03 50 37.8 +1.4
BJI SKS SKSac 04 00 56.7 +0.4
BJI S S 04 01 19.3 +2.1
BJI pmax pmax
comp=Z,16nm,0.6s
BJI pmax pmax
comp=Z,190nm,3.9s
BJI LR LR
comp=N,130nm,16.7s

BJI LR LR
comp=E,140nm,22.2s
BJI LR LR
comp=Z,140nm,28.4s
V23A Ortiz Mt. (NFS 89.46 50 ⇓P P 03 50 38.3 +1.1
baz=90
126A Clayton Basin, 89.47 54 ⇓P P 03 50 37.7 +0.5
baz=90
GYA Guiyang 89.51 299 P P 03 50 38.0 +0.5
GYA pP **pP** 03 51 07.4 +1.1
GYA sP **sP** 03 51 19.8 +1.8
GYA PP **PP** 03 54 12.7 +2.0
GYA SKS **SKSac** 04 00 56.3 -1.8
GYA S **S** 04 01 17.5 -1.8
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.2s
P19A Cripple Cowboy 89.60 46 ⇑P P 03 50 38.1 +0.3
baz=90
529A Stev Forest Ra 89.61 57 ⇓P P 03 50 38.0 +0.1
baz=90
Y25A Mesa, Roswell 89.61 52 ⇓P P 03 50 38.5 +0.6
baz=90,SNR=8.5
T22A Edith 89.61 49 ⇑P P 03 50 38.2 +0.2
baz=90
Q20A Ridgley Place, 89.69 46 ⇓P P 03 50 38.3 +0.1
baz=90
W24A Lazy 6 Ranch, 89.74 51 ⇓P P 03 50 38.9 +0.3
baz=90,SNR=6.9
NEW Newport 89.75 35 ⇓P P 03 50 38.2 +0.1
baz=90
U23A El Rito 89.75 50 ⇓P P 03 50 38.4 -0.2
baz=90
F13A Darby 89.79 38 ⇑P P 03 50 38.4 -0.1
baz=90
Z26A Caprock 89.81 53 ⇑P P 03 50 39.3 +0.5
baz=90,SNR=5.1
TRF Thorofare Moun 89.88 12 *e*P P 03 50 37.5 -1.0
comp=Z,12nm,0.7s
P20A De Beque 89.91 46 ⇓P P 03 50 39.2 0.0
baz=90
C11A Tepee Creek (N 89.95 36 ⇓P P 03 50 39.2 +0.2
baz=90
D12A Red Ives Fores 89.97 37 ⇓P P 03 50 39.3 +0.2
baz=90
127A Arkansas Junct 89.97 54 ⇑P P 03 50 39.5 -0.1
baz=90
MCMT McKenzie Canyo 90.08 40 *e*P P 03 50 40.9 +1.0
MCMT *ep*P **pP** 03 51 08.8 +0.1
429A Davenport Ranc 90.09 56 ⇓P P 03 50 40.1 0.0
baz=90
V24A Rampart Ranch, 90.09 50 ⇓P P 03 50 41.1 +0.9
baz=90,SNR=5.8
RRI2 Red Ridge 90.15 42 *e*P P 03 50 41.2 +0.8
comp=Z,8.0nm,1.2s
T23A Casias Ranch, 90.22 49 ⇑P P 03 50 41.1 +0.3
baz=90
Y26A Elida 90.24 53 ⇓P P 03 50 40.7 -0.1
baz=90
C12B Naegeli Ranch, 90.30 36 ⇑P P 03 50 41.3 +0.7
baz=90
R22A Saguache, Gunn 90.34 48 ⇑P P 03 50 41.8 +0.4
baz=91
O20A White River Ci 90.34 46 ⇑P P 03 50 41.4 +0.2
baz=91
I16A Newdale 90.35 41 ⇑P P 03 50 41.3 +0.2
baz=91
Z27A Tatum 90.39 53 ⇓P P 03 50 41.9 +0.4
baz=91
MCK McKinley 90.39 12 *e*P P 03 50 40.3 -0.3
MCK pmax pmax
comp=Z,7.0nm,1.0s
MCK McKinley 90.39 12 *e*P P 03 50 40.3 -0.3
comp=Z,7.1nm,1.0s
W25A X Bar L Ranch, 90.42 51 ⇓P P 03 50 41.9 +0.3
baz=91,SNR=11
329A Wagon Wheel Ra 90.43 56 ⇑P P 03 50 41.8 +0.1
baz=91
TPAW Teton Pass 90.46 42 *e*P P 03 50 42.7 +1.0
TPAW *ep*P **pP** 03 51 11.6 +1.0
D13A Huson 90.48 37 ⇓P P 03 50 42.3 +0.8
baz=91
DLMT Dillon 90.53 39 *e*P P 03 50 42.5 +0.6
comp=Z,2.2nm,0.8s
DLMT *ep*P **pP** 03 51 12.9 +2.2
631A Perdido Creek 90.53 58 ⇓P P 03 50 42.2 0.0
baz=91
X26A CR and CF Fran 90.56 52 ⇑P P 03 50 42.6 +0.4
baz=91
Q22A Crested Butte, 90.56 47 ⇓P P 03 50 42.3 -0.1
baz=91
128A Castleberry Fa 90.59 54 ⇓P P 03 50 42.1 -0.4
baz=91
V25A Rancho No Teng 90.61 51 ⇑P P 03 50 43.3 +0.7
baz=91,SNR=6.1
MSO Missoula 90.62 38 *e*P P 03 50 41.6 -0.6
comp=Z,0.9nm,0.9s
MSO *ep*P **pP** 03 51 10.2 -0.8
E14A Clinton 90.63 38 ⇓P P 03 50 42.1 -0.2
baz=91
L19A Farson 90.68 43 ⇓P P 03 50 42.4 -0.4
baz=91
IMW Indian Meadow 90.69 41 *e*P P 03 50 43.5 +0.7
comp=Z,6.9nm,1.2s
IMW *ep*P **pP** 03 51 10.6 -1.1
732A Laxson Ranch, 90.69 59 ⇓P P 03 50 41.8 -1.1
baz=91
Y27A Causey 90.70 53 ⇑P P 03 50 43.4 +0.5
baz=91,SNR=6.7
N20A Spence Gulch, 90.70 45 ⇑P P 03 50 42.6 -0.3
baz=91
MOOW Moose Ponds 90.72 41 *e*P P 03 50 44.0 +1.1
comp=Z,2.0nm,1.0s
LOHW Long Hollow 90.73 42 *e*P P 03 50 43.6 +0.6
comp=Z,6.3nm,1.3s
W26A Owens Ranch, T 90.85 52 ⇑P P 03 50 43.4 -0.2
baz=91
F15A Butte 90.87 39 ⇓P P 03 50 43.7 +0.2
baz=91
531A Rocksprings 90.91 57 ⇓P P 03 50 43.6 -0.3
baz=91
PDAR Pinedale Array 90.91 43 P P 03 50 43.5 -0.3
PDAR Pinedale Array 90.91 43 P P 03 50 43.5 -0.3
comp=Z,2.3nm,0.9s,baz=210,slow=3.1,SNR=13
PDAR LR LR 04 30 19.8
comp=Z,76nm,18.1s,baz=49,slow=35
QLMT Earthquake Lak 90.92 40 *e*P P 03 50 44.1 +0.4
QLMT *ep*P **pP** 03 51 13.1 +0.5
R23A Moffat 90.95 48 ⇓P P 03 50 44.2 0.0
baz=91
H16A Russell Place, 90.95 40 ⇑P P 03 50 45.2 +1.3
baz=91,SNR=6.1
Z28A Tucker Farm, M 90.98 54 ⇓P P 03 50 44.7 +0.5
baz=91
330A Mertzon 91.00 56 ⇑P P 03 50 44.4 +0.1
baz=91
D14A Greenough 91.00 38 ⇑P P 03 50 44.1 +0.1
baz=91
MSTX Muleshoe 91.03 53 ⇑P P 03 50 44.8 +0.4
baz=91
U25A Circle Dot Ran 91.04 50 ⇑P P 03 50 44.4 -0.2
baz=91
P22A Eagle 91.04 47 ⇑P P 03 50 44.3 -0.2
baz=91
CHMT Chamberlain Mo 91.05 38 *e*P P 03 50 43.9 -0.5
CHMT *ep*P **pP** 03 51 12.5 -0.7
129A Stewart Farms, 91.06 55 ⇓P P 03 50 44.6 0.0
baz=91
S24A Houchin Ranch, 91.09 49 ⇓P P 03 50 45.3 +0.4
baz=91
431A Sonora 91.10 57 ⇓P P 03 50 45.0 +0.2
baz=91
YMR Madison River 91.10 41 *ep*P pP 03 51 15.2 +1.7
SLMT Seeley Lake 91.11 37 *e*P P 03 50 44.9 +0.3
comp=Z,5.5nm,1.6s
SLMT *ep*P **pP** 03 51 11.9 -1.5
E15A Deer Lodge 91.11 38 ⇑P P 03 50 45.1 +0.5
baz=91
X27A F and S Farms, 91.12 52 ⇓P P 03 50 45.2 +0.4
baz=91
N21A Black Mountain 91.14 45 ⇑P P 03 50 45.5 +0.5
baz=91
H17A Grant Village 91.18 41 ⇓P P 03 50 45.7 +0.6
baz=91
632A Uvalde 91.19 58 ⇓P P 03 50 45.2 0.0
baz=91

B13A Whitefish 91.23 36 ⇑P P 03 50 45.0 +0.1
baz=92
BOZ Bozeman (W) 91.25 40 *e*P P 03 50 45.3 0.0
BOZ pmax pmax
comp=Z,5.0nm,0.9s
BOZ Bozeman (W) 91.25 40 *e*P P 03 50 45.3 0.0
comp=Z,4.9nm,0.9s
BOZ *ep*P **pP** 03 51 12.5 -1.5
I18A Diamond G Ranc 91.26 42 ⇓P P 03 50 45.4 0.0
baz=92
L20A Wamsutter 91.27 44 ⇑P P 03 50 45.3 -0.2
baz=92
C14A Swan Lake 91.27 37 ⇑P P 03 50 45.2 0.0
baz=92
230A Sterling City 91.27 56 ⇑P P 03 50 45.7 +0.1
baz=92
DOT Dot Lake 91.32 14 *e*P P 03 50 46.3 +1.3
DOT *ep*P pP 03 51 22.6 +8.9
XAN Xi'an 91.32 307 P P 03 50 46.4 +0.7
XAN pP **pP** 03 51 15.4 +0.9
XAN sP **sP** 03 51 27.2 +1.0
XAN SKS **SKSac** 04 01 05.8 -2.2
XAN S **S** 04 01 33.4 -2.1
XAN sS **sS** 04 02 26.6 +1.4
XAN pmax pmax
comp=Z,4.0nm,0.8s
XAN pmax pmax
comp=Z,33nm,6.7s
XAN LR LR
comp=N,43nm,16.4s
XAN LR LR
comp=E,32nm,19.4s
XAN LR LR
comp=Z,46nm,19.4s
W27A Bowe Ranch, En 91.34 52 ⇑P P 03 50 45.8 -0.1
baz=92
532A Rocksprings 91.38 58 ⇑P P 03 50 45.9 -0.2
baz=92
T25A Trinidad 91.40 50 ⇑P P 03 50 45.8 -0.4
baz=92
R24A Sanders Place, 91.46 48 ⇓P P 03 50 46.2 -0.3
baz=92
O22A Kremmling 91.47 46 ⇓P P 03 50 46.9 +0.3
baz=92,SNR=6.9
Z29A Hungry Hill Ra 91.47 54 ⇑P P 03 50 46.0 -0.5
baz=92
J19A Crowheart 91.49 43 ⇑P P 03 50 46.9 +0.4
baz=92,SNR=5.6
U26A Atchley Ranch, 91.50 51 ⇓P P 03 50 46.8 +0.1
baz=92
331A San Angelo 91.52 56 ⇓P P 03 50 46.7 0.0
baz=92
D15A Lincoln 91.53 38 ⇓P P 03 50 46.7 +0.2
baz=92
K20A Yellowstone Ra 91.61 43 ⇑P P 03 50 46.9 -0.1
baz=92
S25A Robets Cordova 91.64 49 ⇑P P 03 50 47.3 0.0
baz=92
M21A Separation Pea 91.68 45 ⇓P P 03 50 47.7 +0.3
baz=92
X28A Dimmitt 91.71 53 ⇓P P 03 50 47.7 +0.1
baz=92
130A Snyder 91.71 55 ⇑P P 03 50 47.9 +0.3
baz=92
ILAR Eielson Array 91.72 12 P P 03 50 46.2 -0.6
ILAR Eielson Array 91.72 12 P P 03 50 46.2 -0.6
comp=Z,1.2nm,0.8s,baz=222,slow=5.6,SNR=12
E16A East Helena 91.73 39 ⇓P P 03 50 47.9 +0.5
baz=92
Y29A Porterfield Fa 91.78 54 ⇑P P 03 50 48.2 +0.3
baz=92
432A Menard 91.81 57 ⇑P P 03 50 48.0 0.0
baz=92
N22A Wattenberg Ran 91.86 46 ⇑P P 03 50 48.3 0.0
baz=92
B14A Marquette Ranc 91.87 37 ⇓P P 03 50 48.0 -0.1
baz=92
H18A Shoshone NF, C 91.88 41 ⇓P P 03 50 48.5 +0.2
baz=92
231A Bronte 91.89 56 ⇑P P 03 50 48.3 -0.1
baz=92
ISCO Idaho Springs 91.90 47 ⇑P P 03 50 49.0 +0.4
baz=92
C15A Salmond Ranch, 91.90 37 ⇓P P 03 50 48.6 +0.4
baz=92
O23A Lake Granby, G 91.91 46 ⇓P P 03 50 48.9 +0.3
baz=92
Z30A Sanderson Ranc 91.91 54 ⇓P P 03 50 48.8 +0.3
baz=92
WALA Waterton Lakes 91.93 36 *ep*P pP 03 51 18.7 +1.6
I19A Meeteetse 91.94 42 ⇑P P 03 50 48.7 +0.1
baz=92
F17A Fitzpatrick Pl 91.96 40 ⇓P P 03 50 48.8 +0.2
baz=92
T26A Comanche Natio 91.98 50 ⇓P P 03 50 48.3 -0.7
baz=92
X29A Ilia 92.03 53 ⇑P P 03 50 48.6 -0.5
baz=92
D16A Dana Ranch, Ca 92.08 38 ⇓P P 03 50 49.3 +0.3
baz=92
KMI Kunming 92.08 297 P P 03 50 49.9 +0.3
KMI pmax pmax
comp=Z,9.0nm,0.8s
332A Millersview 92.08 57 ⇓P P 03 50 49.0 -0.2
baz=92
J20A Shoshoni 92.14 43 ⇓P P 03 50 49.2 -0.2
baz=92
A14A Double T Ranch 92.15 36 ⇑P P 03 50 49.0 -0.3
baz=92
131A Roby 92.18 55 ⇑P P 03 50 49.6 -0.1
baz=92
V28A Channing 92.27 52 ⇓P P 03 50 50.2 0.0
baz=92
H19A Powell 92.29 41 ⇑P P 03 50 50.3 +0.2
baz=92
K21A Alcova 92.29 44 ⇓P P 03 50 50.4 +0.2
baz=92
S26A Kim 92.29 50 ⇑P P 03 50 49.8 -0.5
baz=92
G18A Lazy EL Ranch, 92.29 41 ⇑P P 03 50 50.4 +0.3
baz=92
Y30A Stafford Cattl 92.36 54 ⇑P P 03 50 50.8 +0.3
baz=93
232A Coleman 92.38 56 ⇓P P 03 50 50.9 +0.3
baz=93
W29A Amraillo 92.39 52 ⇓P P 03 50 50.8 +0.1
baz=93
C16A Fuhringer Ranc 92.40 38 ⇓P P 03 50 51.0 +0.6
baz=93
I20A Worland 92.43 42 ⇑P P 03 50 51.2 +0.5
baz=93
CMAR Chiang Mai Arr 92.45 289 P P 03 50 52.6 +1.4
CMAR Chiang Mai Arr 92.45 289 P P 03 50 52.6 +1.4
comp=Z,4.6nm,0.7s,baz=116,slow=3.7,SNR=21
CMAR LR LR 04 32 12.8
comp=Z,89nm,19.7s,baz=31,slow=35
GCMT Greycliff 92.48 40 *e*P P 03 50 51.7 +0.7
GCMT *ep*P **pP** 03 51 19.2 -0.5
L22A Ellis Ranch, M 92.50 45 ⇓P P 03 50 51.5 +0.3
baz=93
F18A Big Timber 92.52 40 ⇓P P 03 50 51.8 +0.8
baz=93
A15A Johnson Ranch, 92.52 36 ⇓P P 03 50 51.6 +0.6
baz=93
J21A Lysite 92.53 43 ⇑P P 03 50 51.6 +0.4
baz=93,SNR=6.2
CHTO Chiang Mai 92.60 289 *e*P P 03 50 52.9 +1.0
CHTO pmax pmax
comp=Z,8.0nm,0.8s
CHTO Chiang Mai 92.60 289 *e*P P 03 50 52.9 +1.0
comp=Z,8.4nm,0.8s
R26A Arlington 92.63 49 ⇓P P 03 50 52.2 +0.4
baz=93
D17A Six Diamond Ra 92.63 39 ⇑P P 03 50 52.1 +0.5
baz=93
Z31A Sharp Cattle R 92.66 55 ⇑P P 03 50 52.1 +0.2
baz=93
ABTX Abilene, Hawle 92.72 55 ⇓P P 03 50 52.3 +0.2
baz=93
K22A Casper 92.75 44 ⇓P P 03 50 52.2 -0.1
baz=93
E18A Harlowton 92.76 39 ⇓P P 03 50 52.3 +0.1
baz=93
B16A M & M Farms, S 92.76 37 ⇓P P 03 50 52.3 +0.2
baz=93
H20A Greybull 92.79 42 ⇑P P 03 50 52.3 0.0
baz=93

HHC Hu-ho-hao-te 92.80 314 *e*P P 03 50 51.2 -1.3
HHC pP **pP** 03 51 20.4 -0.9
HHC PP **PP** 03 54 36.7 +0.2
HHC SKS **SKSac** 04 01 12.3 -3.8
HHC S **S** 04 01 43.5 -5.0
HHC sS **sS** 04 02 34.2 -4.2
HHC pmax pmax
comp=Z,25nm,0.6s
HHC pmax pmax
comp=Z,350nm,5.0s
HHC LR LR
comp=N,290nm,17.5s
HHC LR LR
comp=E,810nm,18.8s
HHC LR LR
comp=Z,400nm,18.6s
C17A Wharram Farm, 92.86 38 ⇓P P 03 50 52.5 0.0
baz=93
Y31A Rekieta Farm, 92.86 54 ⇓P P 03 50 52.4 -0.4
baz=93
I21A Big Trails, Te 92.87 43 ⇑P P 03 50 52.2 -0.6
baz=93
BILL Bilibino 92.89 354 *e*P P 03 50 52.2 +0.1
BILL *e*PS **PS** 04 03 14.3 -0.5
BILL *e*SS SS 04 08 03.2 -1.6
BILL pmax pmax
comp=Z,6.0nm,1.3s
N24A Carr 92.90 46 ⇓P P 03 50 52.5 -0.6
baz=93
EGAK Eagle 92.94 14 *e*P P 03 50 53.3 +0.9
comp=Z,1.9nm,0.8s
F19A Roth Farm, Mol 92.94 40 ⇓P P 03 50 53.3 +0.3
baz=93
L23A Garrett 93.01 45 ⇑P P 03 50 53.8 +0.3
baz=93
R27A Eads 93.07 49 ⇓P P 03 50 53.0 -0.8
baz=93
A16A West Butte Ran 93.12 37 ⇓P P 03 50 53.2 -0.6
baz=93
Z32A Haskell 93.15 55 ⇓P P 03 50 53.3 -0.8
baz=93
J22A Midwest 93.17 43 ⇓P P 03 50 53.5 -0.7
baz=93
E19A Rath Farm, Rou 93.36 40 ⇑P P 03 50 54.2 -0.7
baz=94
I22A 9 Mile Ranch, 93.41 43 ⇓P P 03 50 54.7 -0.6
baz=94
Y32A R-V Farms, Ver 93.49 54 ⇑P P 03 50 55.5 -0.2
baz=94
A17A Triple J Farms 93.61 37 ⇑P P 03 50 56.1 +0.1
baz=94
CD2 Chengdu 93.78 302 *e*P P 03 50 56.6 -0.5
CD2 pP **pP** 03 51 25.3 -0.7
CD2 sP **sP** 03 51 37.1 -0.5
CD2 PP **PP** 03 54 45.7 +1.4
CD2 SKS **SKSac** 04 01 19.5 -2.3
CD2 S **S** 04 01 53.4 -4.1
CD2 sS **sS** 04 02 43.6 -3.8
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 pmax pmax
comp=Z,230nm,6.8s
CD2 LR LR
comp=N,120nm,14.2s
CD2 LR LR
comp=Z,130nm,17.8s
R28A Tribune 93.78 50 ⇑P P 03 50 57.5 +0.4
baz=94
H22A Clearmont 93.85 42 ⇑P P 03 50 58.0 +0.8
baz=94
C19A Slack Wire Ran 93.88 39 ⇑P P 03 50 58.7 +1.4
baz=94
K26A Motz Farm, Whi 94.92 45 ⇑P P 03 51 03.4 +1.2
baz=95
H24A Dirks Ranch, A 95.04 43 ⇑P P 03 51 03.6 +0.9
baz=95
RSSD Black Hills 95.06 44 *e*P P 03 51 02.9 0.0
RSSD pmax pmax
comp=Z,4.0nm,0.8s
RSSD Black Hills 95.06 44 *e*P P 03 51 02.9 0.0
comp=Z,3.8nm,0.8s
Q30A Quinter 95.18 50 ⇓P P 03 51 05.6 +2.2
baz=95
LZH Lanzhou 95.96 307 *e*P P 03 51 02.6 -4.5
LZH pP pP 03 51 31.4 -4.6
LZH sP sP 03 51 43.0 -4.7
LZH Lanzhou 95.96 307 SS SS 04 08 44.3 -6.0
LZH pmax pmax
comp=Z,12nm,1.0s
LZH pmax pmax
comp=Z,64nm,4.0s
SONM Songino Array 99.34 318 P **Pdif** 03 51 21.8 -0.2
SONM Songino Array 99.34 318 P **Pdif** 03 51 21.8 -0.2
comp=Z,0.5nm,0.4s,baz=104,slow=6.1,SNR=4.2
SONM LR LR 04 36 23.6
comp=Z,63nm,18.1s,baz=124,slow=35
YKA Yellowknife Ar 99.44 25 PKKPbc PKKPbc 04 07 45.1 -1.9
YKA Yellowknife Ar 99.44 25 PKKPbc PKKPbc 04 07 45.1 -1.9
comp=Z,0.5nm,0.6s,baz=44,slow=2.4,SNR=4.8
LPAZ La Paz 99.55 113 PKKPbc PKKPbc 04 07 45.2 -0.2
LPAZ La Paz 99.55 113 PKKPbc PKKPbc 04 07 45.2 -0.2
comp=Z,1.0nm,0.7s,baz=108,slow=3.6,SNR=5.7
LPAZ LR LR 04 31 29.4
comp=Z,69nm,18.2s,baz=245,slow=32
MKAR Makanchi Array 114.60 312 PKIKP PKPdf 03 56 18.2 -1.2
MKAR 04 06 58.1
MKAR Makanchi Array 114.60 312 PKP PKPdf 03 56 18.2 -1.2
MKAR PKKPbc **PKKPbc** 04 06 58.1 -0.8
MKAR Makanchi Array 114.60 312 PKP PKPdf 03 56 18.2 -1.2
comp=Z,1.5nm,0.8s,baz=135,slow=0.6,SNR=11
MKAR PKKPbc **PKKPbc** 04 06 58.1 -0.8
comp=Z,0.4nm,0.7s,baz=277,slow=1.9,SNR=4.5
KURK Kurchatov 117.52 316 *e*PKIKP **PKPdf** 03 56 23.6 -1.2
KURK 03 57 40.3
KURK Kurchatov 117.52 316 *e*PKPdf **PKPdf** 03 56 23.6 -1.2
KURK PKP **PKiKP** 03 56 23.9 -1.0
KURK PP **PP** 03 57 40.2 +1.5
KURBB Kurchatov Arra 117.57 316 PKP **PKPdf** 03 56 23.9 -1.1
comp=Z,2.0nm,0.7s,baz=101,slow=1.8,SNR=12
KURBB PP **PP** 03 57 40.2 +1.2
comp=Z,0.4nm,0.3s,baz=102,slow=7.3,SNR=4.5
KSH Kashi 117.95 303 *e*PKP **PKPdf** 03 56 28.9 +2.7
KSH *es*PKP 03 57 06.2
KSH *e*SKS **SKSdf** 04 03 29.1 +0.8
KSH *e*SKKS **SKKSac** 04 04 29.7 -2.2
KSH AMB AMB
comp=Z,150nm,4.6s
KSH LR LR
comp=N,230nm,4.7s
KSH LR LR
comp=E,160nm,5.7s
KSH LR LR
comp=Z,220nm,6.5s
TKM2 Tokmak 2 118.73 307 *e*PKIKP **PKPdf** 03 56 27.2 -0.5
TKM2 Tokmak 2 118.73 307 *e*PKPdf **PKPdf** 03 56 27.2 -0.5
EKS2 Erkin-Say 120.03 307 *e*PKIKP **PKPdf** 03 56 30.1 0.0
EKS2 Erkin-Say 120.03 307 *e*PKPdf **PKPdf** 03 56 30.1 0.0
KKAR Karatay Array 122.46 307 *e*PKIKP **PKPdf** 03 56 34.5 -0.2
KKAR Karatay Array 122.46 307 *e*PKPdf **PKPdf** 03 56 34.5 -0.2
BVAR Borovoye Array 122.68 319 PKIKP **PKPdf** 03 56 34.1 -0.6
BVAR Borovoye Array 122.68 319 PKP **PKPdf** 03 56 34.1 -0.6
BVAR Borovoye Array 122.68 319 PKP **PKPdf** 03 56 34.1 -0.6
comp=Z,2.3nm,0.4s,baz=105,slow=1.6,SNR=20
BRVK Borovoye 122.74 319 *e*PKIKP **PKPdf** 03 56 34.5 -0.3
BRVK Borovoye 122.74 319 *e*PKPdf **PKPdf** 03 56 34.5 -0.3
BOSA Boshof 123.32 203 PKP **PKPdf** 03 56 38.6 +1.6
BOSA Boshof 123.32 203 PKP **PKPdf** 03 56 38.6 +1.6
comp=Z,2.8nm,0.7s,baz=92,slow=0.5,SNR=8.5
SPITS Spitsbergen Ar 125.68 357 PKP **PKPdf** 03 56 39.6 -0.2
SPITS Spitsbergen Ar 125.68 357 PKP **PKPdf** 03 56 39.6 -0.2
comp=Z,5.2nm,0.7s,baz=4.8,slow=4.7,SNR=8.8
SOKR Solikamsk 128.89 328 *e*PKIKP **PKPdf** 03 56 46.7 +0.4
SOKR pmax pmax
comp=Z,10.0nm,1.0s
ARU Arti 128.94 324 *i* PKIKP **PKPdf** 03 56 46.8 +0.2
ARU 03 58 53.3
ABKAR Akbulak array 129.58 315 *e*PKPdf **PKPdf** 03 56 48.1 +0.1
AKTO Aktyubinsk 130.62 317 PKIKP **PKPdf** 03 56 50.5 +0.5
AKTO Aktyubinsk 130.62 317 PKP **PKPdf** 03 56 50.5 +0.5
AKTO Aktyubinsk 130.62 317 PKP **PKPdf** 03 56 50.5 +0.5
comp=Z,3.1nm,0.7s,baz=84,slow=2.0,SNR=9.0
JMIC Jan Mayen 132.76 5 PKP **PKPdf** 03 56 52.1 -1.3
JMIC Jan Mayen 132.76 5 PKP **PKPdf** 03 56 52.1 -1.3
comp=Z,51nm,1.1s,baz=155,slow=12,SNR=3.1
ARCES ARCESS Array B 132.82 350 PKP **PKPdf** 03 56 53.1 -0.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ARCES				SKPbc	**SKPab**	**04 00 13.9**	**+1.3**
ARCES	**ARCESS Array B**	**132.82**	**350**	PKP	**PKPdf**	**03 56 53.1**	**-0.5**
	comp=Z,2.7nm,0.6s,baz=48,slow=1.3,SNR=15						
ARCES				SKPbc	**SKPab**	**04 00 13.9**	**+1.3**
	comp=Z,3.8nm,1.0s,baz=104,slow=3.8,SNR=7.5						
KLMR	**Klimovskoe**	**135.78**	**335**	*e*PKIKP	**PKPdf**	**03 56 58.7**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
FINES	**FINESS Array B**	**139.70**	**343**	PKPpre	PKPpre	03 57 00.5	
FINES	**FINESS Array B**	**139.70**	**343**	PKhKP	PKPpre	03 57 00.5	
	comp=Z,1.2nm,0.4s,baz=29,slow=4.4,SNR=8.0						
OBN	**Obninsk**	**140.60**	**330**	*e*PKIKP	**PKPdf**	**03 57 07.2**	**-1.1**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s						
DGRG	**David-gareji**	**141.12**	**307**	P	**PKPdf**	**03 57 06.3**	**-3.5**
TBLG	**Delisi**	**141.52**	**307**	*e*PKHKP	PKPpre	03 57 03.3	
TBLG	**Delisi**	**141.52**	**307**	P	PKPpre	03 57 03.3	
GUDG	**Gudauri**	**141.53**	**308**	P	**PKPdf**	**03 57 09.9**	**-0.9**
KZR	**Kazreti**	**141.84**	**307**	P	**PKPdf**	**03 57 09.1**	**-2.0**
GNI	**Garni**	**141.86**	**305**	*e*PKPdf	**PKPdf**	**03 57 11.4**	**0.0**
GOR	**Gori**	**141.91**	**308**	P	**PKPdf**	**03 57 06.2**	**-5.0**
ONI	**Oni**	**142.22**	**309**	P	**PKPdf**	**03 57 08.7**	**-3.1**
KBZ	**Khabaz**	**142.28**	**311**	PKHKP	PKPpre	03 57 07.1	
KBZ	**Khabaz**	**142.28**	**311**	PKPpre	PKPpre	03 57 07.1	
KBZ	**Khabaz**	**142.28**	**311**	PKhKP	PKPpre	03 57 07.1	
	comp=Z,1.7nm,0.7s,baz=132,slow=5.6,SNR=5.3						
KIV	**Kislovodsk**	**142.35**	**311**	*e*PKHKP	PKPpre	03 57 07.7	
KIV				*e*		04 00 23.4	
KIV				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KIV				MLR	MLR		
	comp=Z,100nm,20.0s						
AKH	**Akhalkalaki**	**142.50**	**307**	P	PKPpre	03 57 03.2	
NB2	**NORSAR Subarra**	**142.84**	**354**	PKP	PKPpre	03 57 08.9	
	comp=Z,0.8nm,0.4s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**142.84**	**354**	PKPpre	PKPpre	03 57 08.2	
NOA	**NORSAR Array B**	**142.84**	**354**	PKhKP	PKPpre	03 57 08.2	
	comp=Z,1.9nm,0.7s,baz=12,slow=4.1,SNR=12						
HAKT	**HAKKARI**	**143.13**	**301**	*i* P	PKPbc	03 57 11.8	+0.7
HFS	**Hagfors**	**143.43**	**351**	PKPpre	PKPpre	03 57 10.2	
HFS	**Hagfors**	**143.43**	**351**	PKhKP	PKPpre	03 57 10.2	
	comp=Z,9.5nm,0.6s,baz=64,slow=3.4,SNR=31						
DAGI	**Agillar**	**143.74**	**307**	*i* P	PKPbc	03 57 12.2	-0.2
DBOC	**Borcka**	**143.84**	**308**	*i* P	PKPbc	03 57 12.7	0.0
SOC	**Sochi**	**144.51**	**312**	*e*PKIKP	**PKPab**	**03 57 13.8**	**-0.5**
SOC				pmax	pmax		
	comp=Z,34nm,0.8s						
SOC				pmax	pmax		
	comp=Z,21nm,1.0s						
BNGL	**BINGOL**	**144.83**	**304**	*i* P	**PKPdf**	**03 57 17.2**	**+0.5**
BEST	**Besiri**	**144.97**	**302**	*i* P	**PKPdf**	**03 57 17.4**	**+0.6**
KOPT	**Kop Dagi**	**145.06**	**306**	*i* P	**PKPdf**	**03 57 18.1**	**+0.9**
ANN	**Anapa**	**145.54**	**315**	*i* PKHKP	PKPpre	03 57 09.1	
ANN				pmax	pmax		
	comp=Z,33nm,1.0s						
KELT	**Kelkit**	**145.94**	**306**	*i* P	**PKPab**	**03 57 20.5**	**+0.4**
ELZG	**Elazig**	**146.59**	**304**	*i* P	**PKPab**	**03 57 23.1**	**+0.5**
SUSE	**Susehri**	**146.69**	**307**	*i* P	**PKPab**	**03 57 22.3**	**-0.7**
KEMA	**Kemaliye**	**146.75**	**305**	*i* P	**PKPab**	**03 57 22.6**	**-0.5**
SUW	**Suwalki**	**146.76**	**338**	*e*PKP2	**PKPbc**	**03 57 20.8**	**-0.2**
SUW	**Suwalki**	**146.76**	**338**	*e*PKPbc	**PKPbc**	**03 57 20.8**	**-0.2**
SUW	**Suwalki**	**146.76**	**338**	*e*PKP	**PKPbc**	**03 57 21.0**	**0.0**
AKASG	**Malin Array Be**	**146.85**	**329**	PKP2	**PKPbc**	**03 57 20.8**	**-0.6**
AKASG	**Malin Array Be**	**146.85**	**329**	PKPbc	**PKPbc**	**03 57 20.8**	**-0.6**
AKASG	**Malin Array Be**	**146.85**	**329**	PKPbc	**PKPbc**	**03 57 20.8**	**-0.6**
	comp=Z,23nm,0.6s,baz=43,slow=4.1,SNR=61						
KIEV	**Kiev**	**146.86**	**329**	*e*PKP2	**PKPbc**	**03 57 20.9**	**-0.6**
KIEV	**Kiev**	**146.86**	**329**	*e*PKPbc	**PKPbc**	**03 57 20.9**	**-0.6**
ATAB	**Bozova**	**147.37**	**302**	*i* P	**PKPab**	**03 57 24.4**	**-1.2**
AKCD	**Akcadag**	**147.44**	**304**	*i* P	**PKPbc**	**03 57 24.5**	**+0.8**
MUD	**Monsted U'grnd**	**147.56**	**354**	*e*PKP2	**PKPbc**	**03 57 24.3**	**+1.1**
MUD				pmax	pmax		
	comp=Z,13nm,0.7s						
MUD	**Monsted U'grnd**	**147.56**	**354**	*i* P	**PKPbc**	**03 57 24.3**	**+1.1**
	comp=Z,13nm,0.7s						
SIM	**Simferopol'**	**147.58**	**317**	*e*PKP2	**PKPbc**	**03 57 24.0**	**+0.4**
SIM				pmax	pmax		
	comp=Z,43nm,0.9s						
SIM				MLR	MLR		
	comp=Z,170nm,22.4s						
GZT	**Gaziantep**	**147.96**	**302**	*i* P	**PKPbc**	**03 57 25.7**	**+0.5**
BSD	**Bornholm Skovb**	**148.00**	**347**	*i* PKP2	**PKPbc**	**03 57 24.2**	**-0.2**
BSD				pmax	pmax		
	comp=Z,15nm,0.9s						
BSD	**Bornholm Skovb**	**148.00**	**347**	*i* P	**PKPbc**	**03 57 24.2**	**-0.2**
	comp=Z,15nm,0.9s						
BSD				*i*		03 57 52.9	
KUZU	**Kuzuini**	**148.48**	**301**	*i* P	**PKPbc**	**03 57 27.4**	**+1.0**
PINB	**Pinarbasi**	**148.48**	**305**	*i* P	**PKPbc**	**03 57 27.3**	**+0.7**
AYKD	**Aykdinkavak**	**148.53**	**303**	*i* P	**PKPbc**	**03 57 26.7**	**+0.3**
EKA	**Eskdalemuir Ar**	**148.61**	**7**	PKPbc	**PKPbc**	**03 57 25.4**	**-0.7**
EKA	**Eskdalemuir Ar**	**148.61**	**7**	PKPbc	**PKPbc**	**03 57 25.4**	**-0.7**
	comp=Z,3.2nm,0.6s,baz=316,slow=2.3,SNR=13						
ESK	**Eskdalemuir**	**148.62**	**7**	*i* PKP2	**PKPbc**	**03 57 26.5**	**+0.5**
DRWC	**Darouich**	**148.83**	**301**	*e*P	**PKPdf**	**03 57 22.8**	**-0.5**
ANDN	**Andirin**	**148.84**	**303**	*i* P	**PKPbc**	**03 57 28.1**	**+0.7**
ZALF	**Zalf**	**148.97**	**294**	*e*P	**PKPbc**	**03 57 26.4**	**-1.3**
KFRA	**Kufra**	**149.03**	**298**	*e*P	**PKPdf**	**03 57 22.7**	**-0.9**
GKP	**Gorka Klasztor**	**149.17**	**344**	*e*PKP	**PKPbc**	**03 57 27.7**	**+0.2**
COBT	**Iskenderun**	**149.18**	**301**	*i* P	**PKPbc**	**03 57 29.4**	**+1.1**
WRDH	**Warideh**	**149.28**	**299**	*e*P	**PKPdf**	**03 57 21.3**	**-2.7**
BEL	**Belsk**	**149.37**	**338**	*e*PKP	**PKPbc**	**03 57 28.6**	**+0.6**
HAWK	**Haweek**	**149.48**	**297**	*e*P	**PKPbc**	**03 57 30.2**	**+1.2**
KIS	**Kishinev**	**149.49**	**324**	*e*PKIKP	**PKPbc**	**03 57 27.0**	**-1.5**
KIS	**Kishinev**	**149.49**	**324**	*e*PKP	**PKPbc**	**03 57 27.0**	**-1.5**
SALA	**Sala**	**149.50**	**294**	*e*P	**PKPbc**	**03 57 27.2**	**-2.1**
ARNB	**Al Arnab**	**149.56**	**300**	*e*P	**PKPbc**	**03 57 27.6**	**-1.5**
ILGA	**Ilgaz**	**149.58**	**311**	*i* P	**PKPbc**	**03 57 30.1**	**+0.9**
YURE	**YUREGIR**	**149.59**	**302**	*i* P	**PKPbc**	**03 57 30.3**	**+1.2**
AVNT	**Avonos**	**149.60**	**306**	*i* P	**PKPbc**	**03 57 29.6**	**+0.4**
BALT	**Daday**	**149.61**	**312**	*i* P	**PKPbc**	**03 57 29.9**	**+0.7**
TOTH	**TOTAH**	**149.66**	**295**	*e*P	**PKPbc**	**03 57 27.2**	**-2.2**
LVV	**L'vov**	**149.78**	**333**	d *i*PKP2	**PKPbc**	**03 57 29.2**	**+0.1**
BRBR	**Barbar**	**150.05**	**295**	*e*P	**PKPbc**	**03 57 30.0**	**-0.6**
GULE	**Gulek**	**150.12**	**303**	*i* P	**PKPbc**	**03 57 31.3**	**+0.8**
BRTR	**Keskin Array B**	**150.16**	**308**	PKP	**PKPdf**	**03 57 24.0**	**-1.4**
BRTR				PKPbc	**PKPbc**	**03 57 30.1**	**-0.5**
BRTR	**Keskin Array B**	**150.16**	**308**	PKP	**PKPdf**	**03 57 24.0**	**-1.4**
	comp=Z,0.9nm,0.8s,baz=150,slow=2.7,SNR=8.3						
BRTR				PKPbc	**PKPbc**	**03 57 30.1**	**-0.5**
	comp=Z,9.6nm,0.7s,baz=142,slow=4.5,SNR=50						
KWP	**Kalwaria Pacla**	**150.47**	**334**	*e*PKIKP	**PKPbc**	**03 57 31.1**	**+0.3**
KWP	**Kalwaria Pacla**	**150.47**	**334**	*e*PKPbc	**PKPbc**	**03 57 31.1**	**+0.3**
KWP	**Kalwaria Pacla**	**150.47**	**334**	⇓*i*P	PKPdf	03 57 17.1	-8.3
KWP	**Kalwaria Pacla**	**150.47**	**334**	*e*PKP	**PKPbc**	**03 57 30.9**	**+0.1**
BBAL	**Bala**	**150.59**	**308**	*i* P	**PKPbc**	**03 57 33.1**	**+1.5**
TLCR		**150.60**	**322**	⇓PKIKP	**PKPdf**	**03 57 25.0**	**-0.7**
TLCR		**150.60**	**322**	⇓*i*P	**PKPdf**	**03 57 25.0**	**-0.7**
ANTO	**Ankara**	**150.70**	**309**	*e*PKIKP	**PKPbc**	**03 57 32.5**	**+0.8**
ANTO	**Ankara**	**150.70**	**309**	*e*PKPbc	**PKPbc**	**03 57 32.5**	**+0.8**
TESR	**Tescani**	**150.94**	**326**	⇑*i*P	**PKPbc**	**03 57 31.8**	**-0.2**
OJC	**Ojcow**	**151.07**	**338**	*e*PKIKP	**PKPdf**	**03 57 27.9**	**+1.6**
OJC				*e*		03 57 38.6	
OJC	**Ojcow**	**151.07**	**338**	*e*PKPdf	**PKPdf**	**03 57 27.9**	**+1.6**
OJC				*e*PKiKP	**PKPbc**	**03 57 32.3**	**+0.1**
OJC				*e*PKPab	**PKPab**	**03 57 38.6**	**-1.5**
KOLS	**Kolonicke sedl**	**151.19**	**334**	*e*PKIKP	**PKPdf**	**03 57 27.7**	**+1.2**
KOLS				*e*		03 57 33.0	
KOLS	**Kolonicke sedl**	**151.19**	**334**	*e*PKP	**PKPdf**	**03 57 27.7**	**+1.2**
KOLS				*e*		03 57 33.0	
STHS	**Stebnicka Huta**	**151.21**	**335**	*e*PKIKP	**PKPbc**	**03 57 33.2**	**+0.7**
STHS	**Stebnicka Huta**	**151.21**	**335**	*e*PKP	**PKPbc**	**03 57 33.2**	**+0.7**
TIRR	**Tirgusor**	**151.26**	**321**	*e*PKIKP	**PKPbc**	**03 57 32.8**	**0.0**
TIRR	**Tirgusor**	**151.26**	**321**	*e*PKPbc	**PKPbc**	**03 57 32.8**	**0.0**
VRI	**Vrincioaia**	**151.32**	**325**	⇑PKIKP	**PKPdf**	**03 57 23.4**	**-3.4**
VRI	**Vrincioaia**	**151.32**	**325**	⇑*i*P	**PKPdf**	**03 57 23.4**	**-3.4**
PLOR	**Plostina**	**151.37**	**325**	⇓PKIKP	**PKPbc**	**03 57 33.2**	**+0.1**
PLOR	**Plostina**	**151.37**	**325**	⇓*i*P	**PKPbc**	**03 57 33.2**	**+0.1**
HARR	**Harsova**	**151.40**	**322**	⇓PKIKP	**PKPdf**	**03 57 23.4**	**-3.5**
HARR	**Harsova**	**151.40**	**322**	⇓*i*P	**PKPdf**	**03 57 23.4**	**-3.5**
UZH	**Uzhgorod**	**151.42**	**333**	⇑*i*PKIKP	**PKPdf**	**03 57 27.2**	**+0.4**
UZH				*e*		03 57 32.8	
MANR	**Mangalia**	**151.54**	**319**	⇑*i*P	**PKPdf**	**03 57 23.4**	**-3.7**
CRVS	**Cervenica-Dubn**	**151.54**	**334**	*e*PKIKP	**PKPdf**	**03 57 25.2**	**-1.8**
CRVS				*e*		03 57 31.6	
CRVS	**Cervenica-Dubn**	**151.54**	**334**	*e*PKP	**PKPdf**	**03 57 25.2**	**-1.8**
CRVS				*e*		03 57 31.6	
NIE	**Niedzica**	**151.56**	**336**	*i* PKIKP	**PKPbc**	**03 57 34.4**	**+1.0**
NIE	**Niedzica**	**151.56**	**336**	*e*PKiKP	**PKPbc**	**03 57 34.4**	**+1.0**
KSP	**Ksiaz**	**151.62**	**342**	*e*PKIKP	**PKPdf**	**03 57 28.0**	**+0.9**
KSP				*e*		03 57 33.8	
KSP	**Ksiaz**	**151.62**	**342**	*e*PKP	**PKPbc**	**03 57 33.9**	**+0.5**
KDHN	**Kadinhani**	**151.70**	**307**	*i* P	**PKPbc**	**03 57 33.9**	**-0.3**
TRPA	**Tarpa**	**151.71**	**332**	*e*	**PKPbc**	**03 57 33.0**	**-0.7**
TRPA				*e*PKPdf	**PKPab**	**03 57 43.8**	**+1.0**
ERMK	**Ermenek**	**151.73**	**303**	*i* P	**PKPbc**	**03 57 35.0**	**+0.6**
CSS	**Prodhromos**	**151.86**	**299**	*e*PKPbc	**PKPbc**	**03 57 34.6**	**+0.1**
DOPR	**Dopca**	**151.95**	**326**	⇓*i*P	**PKPdf**	**03 57 22.6**	**-5.2**
OKC	**Ostrava-Krasne**	**151.95**	**339**	*e*PKIKP	**PKPbc**	**03 57 34.9**	**+0.7**
OKC	**Ostrava-Krasne**	**151.95**	**339**	⇑*e*PKP	**PKPbc**	**03 57 34.9**	**+0.7**
OKC				*e*SS	SS	04 20 29.6	-3.4
CLL	**Collm**	**151.98**	**347**	⇑*i*PKIKP	**PKPbc**	**03 57 34.4**	**+0.2**
CLL				pmax	pmax		
	comp=Z,55nm,1.6s						
CLL	**Collm**	**151.98**	**347**	⇑*i*PKPbc	**PKPbc**	**03 57 34.4**	**+0.2**
	comp=Z,55nm,1.6s						
CLL				*i* pPKPbc	**pPKPbc**	**03 58 04.7**	**+0.6**
MLR	**Muntele Rosu**	**151.98**	**325**	PKPbc	**PKPbc**	**03 57 34.0**	**-0.6**
MLR	**Muntele Rosu**	**151.98**	**325**	⇑*i*P	**PKPdf**	**03 57 25.6**	**-2.4**
MLR	**Muntele Rosu**	**151.98**	**325**	PKPbc	**PKPbc**	**03 57 34.0**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=169,slow=2.0,SNR=11						
UPC	**Upice**	**152.00**	**343**	*e*PKIKP	**PKPdf**	**03 57 27.9**	**+0.2**
UPC				*e*		03 57 34.8	
UPC				*e*		03 57 43.4	
UPC	**Upice**	**152.00**	**343**	*e*PKPDF	**PKPdf**	**03 57 27.9**	**+0.2**
UPC				⇑*e*PKP	**PKiKP**	**03 57 34.8**	**+0.2**
UPC				*e*PKPAB	**PKPab**	**03 57 43.4**	**-0.6**
DPC	**Dobruska-Polom**	**152.05**	**342**	*e*PKIKP	**PKPdf**	**03 57 28.1**	**+0.3**
DPC				*e*		03 57 35.3	
DPC				*e*		03 57 45.2	
DPC	**Dobruska-Polom**	**152.05**	**342**	*e*PKPDF	**PKPdf**	**03 57 28.1**	**+0.3**
DPC				⇑*e*PKP	**PKiKP**	**03 57 35.3**	**+0.5**
DPC				*e*PKPAB	**PKPab**	**03 57 45.2**	**+0.9**
BRG	**Berggiesshubel**	**152.18**	**345**	*e*PKP	**PKPdf**	**03 57 28.6**	**+0.7**
	comp=Z,17nm,1.9s						
BRG				*e*		03 57 34.9	
	comp=Z,17nm,0.8s						
BRG				*e*pPKP	pPKPdf	03 58 05.6	+7.6
	comp=Z,15nm,1.1s						
BRG							
	comp=N,229nm,27.5s						
BRG							
	comp=E,103nm,23.0s						
BRG							
	comp=Z,186nm,34.3s						
BRG	**Berggiesshubel**	**152.18**	**345**	*e*PKIKP	**PKPdf**	**03 57 28.6**	**+0.7**
BRG				*e*		03 57 34.9	
BRG				pmax	pmax		
	comp=Z,17nm,1.9s						
BRG				pmax	pmax		
	comp=Z,17nm,0.8s						
BRG				pmax	pmax		
	comp=Z,15nm,1.1s						
BRG				MLR	MLR		
	comp=N,229nm,27.5s						
BRG				MLR	MLR		
	comp=E,103nm,23.0s						
BRG				MLR	MLR		
	comp=Z,186nm,34.3s						
MORC	**Moravsky Berou**	**152.20**	**340**	*e*PKIKP	**PKPbc**	**03 57 34.4**	**-0.4**
MORC	**Moravsky Berou**	**152.20**	**340**	*e*PKPbc	**PKPbc**	**03 57 34.4**	**-0.4**
MORC	**Moravsky Berou**	**152.20**	**340**	⇑*i*P	**PKPdf**	**03 57 23.5**	**-4.5**
SEYT	**Eskypehyr**	**152.21**	**310**	*i* P	**PKPbc**	**03 57 35.2**	**0.0**
KECS	**Kecovo**	**152.26**	**335**	*e*PKIKP	**PKPbc**	**03 57 35.7**	**+0.8**
KECS	**Kecovo**	**152.26**	**335**	*e*PKP	**PKPbc**	**03 57 35.7**	**+0.8**
CJR	**Cluj-Napoca**	**152.30**	**329**	⇓*i*P	PKPdf	03 57 21.5	-6.8
GAZI	**Gazipasa**	**152.31**	**302**	*i* P	**PKPbc**	**03 57 34.6**	**-0.9**
BORA	**Eskisehir**	**152.33**	**311**	*i* P	**PKPbc**	**03 57 36.2**	**+0.7**
PVCC	**Panska Ves**	**152.35**	**344**	*e*PKIKP	**PKPbc**	**03 57 35.9**	**+0.8**
PVCC	**Panska Ves**	**152.35**	**344**	⇑*e*PKP	**PKPbc**	**03 57 35.9**	**+0.8**
VOIR		**152.49**	**326**	⇑PKIKP	**PKPdf**	**03 57 30.5**	**+1.9**
VOIR		**152.49**	**326**	⇑*i*P	**PKPdf**	**03 57 30.5**	**+1.9**
DRGR		**152.65**	**330**	⇓PKIKP	PKPdf	03 57 19.1	-10
DRGR		**152.65**	**330**	⇓*i*P	PKPdf	03 57 19.1	-10
ARR	**Arges**	**152.75**	**326**	⇓*i*P	**PKPbc**	**03 57 37.6**	**+1.4**
PRA	**Prague**	**152.81**	**344**	⇑PKP	**PKPbc**	**03 57 37.0**	**+0.9**
PRU	**Pruhonice**	**152.86**	**344**	*e*PKIKP	**PKPbc**	**03 57 36.9**	**+0.7**
PRU				*e*		04 20 41.6	
PRU	**Pruhonice**	**152.86**	**344**	⇑*e*PKP	**PKPbc**	**03 57 36.9**	**+0.7**
PRU				*e*SS	SS	04 20 41.6	-1.2
VYHS	**Vyhne**	**152.87**	**337**	*e*PKIKP	**PKPbc**	**03 57 35.8**	**-0.5**
VYHS	**Vyhne**	**152.87**	**337**	*e*PKP	**PKPbc**	**03 57 35.8**	**-0.5**
VRAC	**Vranov**	**152.90**	**341**	PKPbc	**PKPbc**	**03 57 36.8**	**+0.4**
VRAC	**Vranov**	**152.90**	**341**	PKPbc	**PKPbc**	**03 57 36.8**	**+0.4**
	comp=Z,4.2nm,0.3s,baz=289,slow=18,SNR=3.3						
PSZ	**Piszkesteto**	**152.95**	**335**	⇓PKIKP	**PKPbc**	**03 57 35.5**	**-1.1**
PSZ	**Piszkesteto**	**152.95**	**335**	*e*PKPab	**PKPab**	**03 57 48.3**	**+0.1**
PSZ	**Piszkesteto**	**152.95**	**335**	⇓*i*P	**PKPbc**	**03 57 35.5**	**-1.1**
PSZ	**Piszkesteto**	**152.95**	**335**	*e*PKPdf	**PKPdf**	**03 57 30.2**	**+1.0**
PSZ				*e*PKPdf	**PKPab**	**03 57 48.5**	**+0.3**
NKC	**Novy Kostel**	**153.11**	**347**	*e*PKIKP	**PKPbc**	**03 57 37.5**	**+0.7**
NKC	**Novy Kostel**	**153.11**	**347**	⇑*e*PKP	**PKPbc**	**03 57 37.5**	**+0.7**
LOT	**Lotru**	**153.13**	**327**	⇑*i*P	**PKPdf**	**03 57 30.6**	**+1.0**
GZR	**Gura Zlata**	**153.66**	**328**	⇑PKIKP	**PKPdf**	**03 57 30.5**	**+0.2**
GZR	**Gura Zlata**	**153.66**	**328**	⇑*i*P	**PKPdf**	**03 57 30.5**	**+0.2**
KHAL	**Karahalli**	**153.66**	**308**	*i* P	**PKPbc**	**03 57 38.2**	**-0.3**
ZST	**Bratislava**	**153.72**	**339**	*e*PKIKP	**PKPbc**	**03 57 39.0**	**+0.9**
ZST	**Bratislava**	**153.72**	**339**	*e*PKP	**PKPbc**	**03 57 39.0**	**+0.9**
KHC	**Kasperske Hory**	**153.89**	**344**	*e*PKIKP	**PKPdf**	**03 57 30.5**	**0.0**
KHC				*e*		03 57 38.5	
KHC	**Kasperske Hory**	**153.89**	**344**	*e*PKPDF	**PKPdf**	**03 57 30.5**	**0.0**
KHC				⇑*e*PKP	**PKiKP**	**03 57 38.5**	**-0.1**
KHC				*e*PKPAB	**PKPab**	**03 57 54.0**	**+2.0**
GERES	**GERESS Array B**	**154.13**	**344**	PKP	**PKPdf**	**03 57 31.1**	**+0.1**
GERES				PKPbc	**PKPbc**	**03 57 38.9**	**-0.2**
GERES	**GERESS Array B**	**154.13**	**344**	PKP	**PKPdf**	**03 57 31.1**	**+0.1**
	comp=Z,0.9nm,0.7s,baz=11,slow=1.0,SNR=10						
GERES				PKPbc	**PKPbc**	**03 57 38.9**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=11,slow=2.1,SNR=9.0						
BALY	**Balya**	**154.33**	**313**	*i* P	**PKPbc**	**03 57 39.1**	**-0.7**
SOP	**Sopron**	**154.35**	**339**	*e*	**PKPbc**	**03 57 38.7**	**-0.8**
SOP				*e*		03 57 55.2	
CONA	**Conrad Observa**	**154.35**	**340**	⇑*i*PKPdf	**PKPdf**	**03 57 31.5**	**+0.2**
	comp=Z,12nm,1.7s						
AKAS	**Kas**	**154.39**	**304**	*i* P	**PKPbc**	**03 57 39.3**	**-0.8**
MPEP	**Malo Peshtene**	**154.58**	**324**	*e*P	**PKPab**	**03 57 55.4**	**+0.2**
PKSM	**Moragy**	**154.84**	**334**	⇑*i*P	PKPdf	03 57 21.4	-10
PKSM	**Moragy**	**154.84**	**334**	*e*	**PKPdf**	**03 57 31.3**	**-0.5**
PKSM				*e*		03 57 55.9	
RZN	**Rozhen**	**155.09**	**319**	*e*P	**PKPab**	**03 57 57.9**	**+0.3**
VTS	**Vitosha**	**155.38**	**323**	⇓PKIKP	PKPdf	03 57 43.4	+10
VTS	**Vitosha**	**155.38**	**323**	*e*P	**PKPab**	**03 57 59.0**	**+0.2**
VTS	**Vitosha**	**155.38**	**323**	⇓*i*P	PKPdf	03 57 43.4	+10
SOKA	**Soboth**	**155.72**	**340**	⇓*i*PKPdf	**PKPdf**	**03 57 31.2**	**-2.0**
	comp=Z,4.5nm,1.4s						
MMB	**Musomiste**	**155.74**	**320**	*e*P	**PKPab**	**03 58 00.0**	**-0.2**
PERS	**Pernice**	**155.74**	**340**	*e*PKPab	**PKPab**	**03 58 01.0**	**+1.0**
KKB	**Krupnik**	**155.93**	**322**	*e*P	**PKPab**	**03 58 01.0**	**0.0**
GCIS	**Gornji Cirnik**	**156.25**	**338**	*e*PKPdf	**PKPdf**	**03 57 33.9**	**+0.2**
GCIS				*i* PKPab	**PKPab**	**03 58 03.0**	**+0.8**
FETA	**Feichten**	**156.52**	**347**	⇑*i*PKPdf	**PKPdf**	**03 57 35.0**	**+0.7**
	comp=Z,6.6nm,1.4s						
VAY	**Valandovo**	**156.57**	**321**	*e*PKP	**PKPab**	**03 58 04.0**	**+0.3**
SKO	**Skopje**	**156.77**	**324**	*e*PKP	**PKPab**	**03 58 04.2**	**-0.4**
BIA	**Bitola**	**157.48**	**322**	*e*PKP	**PKPab**	**03 58 07.7**	**0.0**
ESDC	**Sonseca Array**	**163.47**	**20**	PKP	**PKPdf**	**03 57 42.2**	**0.0**
ESDC				PKPab	**PKPab**	**03 58 34.7**	**+0.8**
ESDC	**Sonseca Array**	**163.47**	**20**	PKP	**PKPdf**	**03 57 42.2**	**0.0**
	comp=Z,0.1nm,0.3s,baz=328,slow=3.9,SNR=4.0						
ESDC				PKPab	**PKPab**	**03 58 34.7**	**+0.8**
	comp=Z,0.1nm,0.2s,baz=336,slow=2.8,SNR=3.1						
KEST	**Kesra**	**167.42**	**337**	PKPab	**PKPab**	**03 58 51.4**	**0.0**
KEST	**Kesra**	**167.42**	**337**	PKPab	**PKPab**	**03 58 51.4**	**0.0**
	comp=Z,2.5nm,0.8s,baz=166,slow=4.7,SNR=10						
TORD	**Torodi Ar. Bea**	**168.84**	**172**	PKP	**PKPdf**	**03 57 46.1**	**-0.9**
TORD				PKPab	**PKPab**	**03 58 58.9**	**+1.0**
TORD	**Torodi Ar. Bea**	**168.84**	**172**	PKP	**PKPdf**	**03 57 46.1**	**-0.9**
	comp=Z,0.8nm,0.6s,baz=208,slow=0.8,SNR=10						
TORD				PKPab	**PKPab**	**03 58 58.9**	**+1.0**
	comp=Z,3.7nm,0.8s,baz=177,slow=5.2,SNR=12						

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*ISCJB **11** 03:56:34.8±0.5, 20°.10S±0°.04×69°.9W±0°.1, h62km±5km, mb4.0/2, Error ellipse: s-maj=19.0km s-min=4.7km az=164.1*

*NEIC **11** 03:56:34.9, 20°.16S×69°.99W, h53km, MG4.0(GUC), After GUC.*

NEIC Felt [III] at Alto Hospicio and Huara; [II] at Camina, Iquique and Pica.

*GUC **11** 03:56:34.9±0.8, 20°.16S×69°.99W, h53km±4km, ML4.0*

*IDC **11** 03:56:40.1±2.4, 20°.23S×69°.66W, h93km±20km, mb3.7/2, mb1 3.9/5, mb1mx3.4/20, mbtmp3.7/5, Error ellipse: s-maj=43.9km s-min=15.8km az=94.0*

ISC 11 03:56:35.3±0.9**, 20°.12S**±0°.05×**70°.0W**±0°.1**, h49**km±6km**, n23, σ1s.52**/37**, 10C, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HMBC	**Humberstone**	**0.19**	**145**	⇑*i*P	**Pn**	**03 56 43.9**	**+0.2**
HMBC				*i* S	**Sn**	**03 56 50.0**	**+0.3**
HMBC	**Humberstone**	**0.19**	**145**	⇑*i*P	**Pn**	**03 56 43.9**	**+0.2**
HMBC				*i* S	**Sn**	**03 56 50.0**	**+0.3**
HMBC				AML	AML	03 56 50.4	
	comp=E,18μm,0.5s						
PSGC	**Pisagua**	**0.53**	**348**	⇑*i*P	**Pn**	**03 56 47.6**	**+0.5**
PSGC				S	**Sn**	**03 56 56.2**	**+0.7**
PSGC	**Pisagua**	**0.53**	**348**	⇑*i*P	**Pn**	**03 56 47.6**	**+0.5**
PSGC				*i* S	**Sn**	**03 56 56.2**	**+0.7**
PSGC				AML	AML	03 56 56.7	
	comp=N,16μm,0.2s						
PB01	**Plate Boundary**	**1.04**	**152**	⇑*i*P	**Pn**	**03 56 53.4**	**-0.2**
PB01				*i* S	**Sn**	**03 57 07.0**	**-0.1**
PB01	**Plate Boundary**	**1.04**	**152**	⇑*i*P	**Pn**	**03 56 53.4**	**-0.2**
PB01				*i* S	**Sn**	**03 57 07.0**	**-0.1**
PB01				AML	AML	03 57 07.3	
	comp=E,4μm,0.3s						
ARCH	**Arica**	**1.64**	**350**	*e*P	**Pn**	**03 57 02.8**	**+1.0**
ARCH				*i* S	**Sn**	**03 57 23.4**	**+1.6**
ARCH	**Arica**	**1.64**	**350**	*e*P	**Pn**	**03 57 02.8**	**+1.0**
ARCH				*i* S	**Sn**	**03 57 23.4**	**+1.6**
ARCH				AML	AML	03 57 29.6	
	comp=E,3μm,0.3s						
PB09	**Plate Boundary**	**1.81**	**157**	⇑*i*P	**Pn**	**03 57 05.5**	**+1.3**
PB09				*i* S	**Sn**	**03 57 27.9**	**+1.7**
PB09	**Plate Boundary**	**1.81**	**157**	⇑*i*P	**Pn**	**03 57 05.5**	**+1.3**
PB09				*i* S	**Sn**	**03 57 27.9**	**+1.7**
PB09				AML	AML	03 57 37.3	
	comp=N,8μm,0.6s						
PB06	**Plate Boundary**	**2.60**	**171**	⇑*i*P	**Pn**	**03 57 15.1**	**0.0**
PB06				*i* S	**Sn**	**03 57 46.1**	**+0.4**
PB06	**Plate Boundary**	**2.60**	**171**	⇑*i*P	**Pn**	**03 57 15.1**	**0.0**
PB06				*i* S	**Sn**	**03 57 46.1**	**+0.4**
PB06				AML	AML	03 57 56.9	
	comp=N,480nm,0.4s						
LVC	**Limon Verde**	**2.68**	**158**	*e*Pn	**Pn**	**03 57 18.0**	**+1.8**
LVC				*e*S	**Sn**	**03 57 52.8**	**+5.1**
LVC	**Limon Verde**	**2.68**	**158**	P	**Pn**	**03 57 18.0**	**+1.8**
	comp=N,30nm,0.3s,baz=334,slow=11,SNR=144						
LVC				S	**Sn**	**03 57 51.5**	**+3.8**
	comp=N,43nm,0.3s,baz=310,slow=17,SNR=25						
ARE	**Arequipa**	**3.90**	**339**	*e*P	**Pn**	**03 57 35.0**	**+1.9**
ARE				*e*S	**Sn**	**03 58 18.0**	**+0.2**
LPAZ	**La Paz**	**4.21**	**25**	P	Pn	03 57 41.8	+4.2
	comp=N,2.9nm,0.3s,baz=180,slow=14,SNR=72						
SIV	**San Ignacio**	**9.43**	**66**	P	**Pn**	**03 58 48.5**	**-0.2**
	comp=N,1.9nm,0.3s,baz=267,slow=10,SNR=42						
SAML	**Samuel**	**12.91**	**32**	Pn	**Pn**	**03 59 37.0**	**+0.8**
TRQA	**Tornquist**	**19.18**	**160**	*e*P	**P**	**04 00 54.2**	**-0.7**
	comp=N,2.8nm,1.1s						
TORD	**Torodi Ar. Bea**	**77.87**	**71**	P	**P**	**04 08 26.3**	**-2.0**
	comp=N,1.2nm,0.6s,baz=252,slow=5.5,SNR=42						
YKA	**Yellowknife Ar**	**89.55**	**341**	P	**P**	**04 09 26.2**	**-0.8**
	comp=N,0.7nm,0.8s,baz=138,slow=5.4,SNR=4.7						
MKAR	**Makanchi Array**	**145.09**	**34**	PKPbc	**PKPdf**	**04 16 06.6**	**-0.7**
	comp=N,1.2nm,0.6s,baz=316,slow=3.2,SNR=19						
SONM	**Songino Array**	**152.20**	**5**	PKPbc	**PKPbc**	**04 16 25.3**	**-0.4**
	comp=N,0.6nm,0.5s,baz=338,slow=1.6,SNR=2.9						

IDC 11 04:01:28.3±2.2**, 5°.69S**×**130°.63E, h0**km**, mb3.5**/1**, mb1 4.0**/4**, mb1mx3.6**/19**, mbtmp3.8**/4**, ML3.8**/3**, Error ellipse: s-maj=94.4km s-min=27.8km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.26**	**201**	Pn	Pn	04 04 38.1	+0.1
	0.2nm,0.3s,baz=27,slow=12,SNR=16						
FITZ				Sn	Sn	04 06 53.5	-13
	0.1nm,0.3s,baz=336,slow=20,SNR=3.0						
WRA	**Warramunga Arr**	**14.62**	**166**	Pn	Pn	04 04 54.5	-2.0
	0.5nm,0.3s,baz=349,slow=13,SNR=7.8						
WRA				Sn	Sn	04 07 28.5	-11
	0.5nm,0.3s,baz=338,slow=22,SNR=5.7						
ASAR	**Alice Springs**	**18.15**	**170**	P	P	04 05 42.7	+0.3
	0.4nm,0.3s,baz=351,slow=10,SNR=25						
ASAR				S	Sn	04 08 55.8	-9.4
	0.1nm,0.3s,baz=360,slow=29,SNR=4.1						
MKAR	**Makanchi Array**	**67.48**	**326**	P	P	04 12 26.2	0.0
	0.2nm,0.4s,baz=121,slow=5.6,SNR=4.0						

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*ISCJB **11** 04:05:46.6±0.3, 42°.61N±0°.02×2°.30E±0°.03, h5km±3km, Error ellipse: s-maj=3.4km s-min=2.8km az=136.6*

*CSEM **11** 04:05:47.6±0.1, 42°.58N×2°.32E, h10km, ML2.4/12, Error ellipse: s-maj=2.2km s-min=1.7km az=137.0*

*LDG **11** 04:05:48.5±0.1, 42°.57N×2°.32E, h3km, Md2.6/1, Ml2.4/8, Error ellipse: s-maj=1.4km s-min=1.1km az=139.0*

*STR **11** 04:05:48.0±0.1, 42°.55N×2°.31E, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*MDD **11** 04:05:48.8±0.2, 42°.57N×2°.31E, h0km, mbLg1.9/12, Error ellipse: s-maj=2.4km s-min=1.6km az=172.0*

ISC 11 04:05:48.1±1.0**, 42°.57N**±0°.02×**2°.33E**±0°.02**, h6**km±8km**, n70, σ1s.12**/95**, 2C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FILF	**Fillols**	**0.17**	**92**	Pg	**Pg**	**04 05 50.3**	**-1.3**
FILF				Sg	**Sg**	**04 05 51.5**	**-2.3**
FILF	**Fillols**	**0.17**	**92**	Pg	**Pg**	**04 05 50.3**	**-1.3**
FILF				Lg	Lg	04 05 51.6	
CARF	**Carcanieres**	**0.22**	**312**	Pg	**Pg**	**04 05 52.7**	**+0.1**
CARF				Sg	**Sg**	**04 05 55.9**	**+0.3**
CARF	**Carcanieres**	**0.22**	**312**	Pg	**Pg**	**04 05 52.7**	**+0.1**
CARF				Lg	Lg	04 05 55.9	
CLLI	**Llivia**	**0.28**	**252**	⇑Pg	**Pg**	**04 05 53.7**	**+0.1**
	2.8nm,0.0s,SNR=18						
CLLI				Lg	Lg	04 05 57.1	
	10nm,0.1s,SNR=7.9						
CLLI	**Llivia**	**0.28**	**252**	Pg	**Pg**	**04 05 53.7**	**+0.1**
	2.8nm,0.0s,SNR=18						
CLLI				Lg	Lg	04 05 57.1	
	10nm,0.1s,SNR=7.9						
VALF	**Valcebollere**	**0.28**	**235**	Pg	**Pg**	**04 05 53.9**	**+0.1**
VALF				Sg	**Sg**	**04 05 57.5**	**0.0**
VALF	**Valcebollere**	**0.28**	**235**	Pg	**Pg**	**04 05 53.8**	**0.0**
VALF				Lg	Lg	04 05 57.5	
LRDF	**Laroque-de-Fa**	**0.40**	**22**	Pg	**Pg**	**04 05 56.4**	**+0.5**
LRDF				Sg	**Sg**	**04 06 02.4**	**+1.2**
LRDF	**Laroque-de-Fa**	**0.40**	**22**	Pg	**Pg**	**04 05 56.4**	**+0.5**
LRDF				Lg	Lg	04 06 02.3	
SJAF	**Saint Jean de**	**0.41**	**101**	Pg	**Pg**	**04 05 56.5**	**+0.3**
SJAF				Sg	**Sg**	**04 06 02.2**	**+0.6**
SJAF	**Saint Jean de**	**0.41**	**101**	Pg	**Pg**	**04 05 56.5**	**+0.3**
SJAF				Sg	**Sg**	**04 06 02.2**	**+0.6**
EJON	**La Jonquera**	**0.43**	**106**	⇑Pg	**Pg**	**04 05 57.0**	**+0.6**
	2.0nm,0.1s,SNR=18						
EJON				Lg	Lg	04 06 02.8	
	8.4nm,0.1s,SNR=23						
EJON	**La Jonquera**	**0.43**	**106**	Pg	**Pg**	**04 05 57.0**	**+0.6**
	2.0nm,0.1s,SNR=18						
EJON				Lg	Lg	04 06 02.8	
	8.4nm,0.1s,SNR=23						
GRBF	**Gourbit**	**0.65**	**295**	Lg	Lg	04 06 09.5	
MTLF	**Montolieu**	**0.78**	**354**	*e*Pg	**Pg**	**04 06 03.3**	**+0.2**
MTLF	**Montolieu**	**0.78**	**354**	*e*Pn	**Pb**	**04 06 04.7**	**+0.6**
MTLF				*e*Sg	**Sg**	**04 06 13.3**	**+0.1**
MTLF				*e*Sn	**Sb**	**04 06 16.2**	**+1.2**
	24nm,0.2s						
MTLF	**Montolieu**	**0.78**	**354**	Pg	**Pg**	**04 06 03.3**	**+0.2**
MTLF	**Montolieu**	**0.78**	**354**	*e*Pn	**Pb**	**04 06 04.7**	**+0.6**
MTLF				Lg	Lg	04 06 13.3	
MTLF				*e*Sn	**Sb**	**04 06 16.2**	**+1.2**
	12nm,0.2s						
CFON	**Fontmartina**	**0.81**	**174**	Pg	**Pg**	**04 06 03.7**	**0.0**
	1.6nm,0.0s,SNR=24						
CFON				Lg	Lg	04 06 15.1	
	8.0nm,0.1s,SNR=13						
CFON	**Fontmartina**	**0.81**	**174**	Pg	**Pg**	**04 06 03.7**	**0.0**
	1.6nm,0.0s,SNR=24						
CFON				Lg	Lg	04 06 15.1	
	8.0nm,0.1s,SNR=13						
EMIR	**Miracle**	**0.89**	**223**	Pg	**Pg**	**04 06 05.0**	**-0.1**
	1.4nm,0.1s,SNR=12						
EMIR				Lg	Lg	04 06 17.6	

	5.3nm,0.1s						
EMIR	Miracle	0.89	223	Pg	Pg	04 06 05.0	-0.1
	1.4nm,0.1s,SNR=12						
EMIR				Lg	Lg	04 06 17.6	
	5.3nm,0.1s						
CSOR	Sort	0.91	258	Pg	Pg	04 06 05.0	-0.6
	1.3nm,0.1s,SNR=17						
CSOR				Lg	Lg	04 06 17.1	
	4.4nm,0.1s						
CSOR	Sort	0.91	258	Pg	Pg	04 06 05.0	-0.6
	1.3nm,0.1s,SNR=17						
CSOR				Lg	Lg	04 06 17.1	
	4.4nm,0.1s						
MELF	Melles	1.20	285	Lg	Lg	04 06 25.4	
RESF	Ens	1.49	280	Lg	Lg	04 06 36.5	
EPOB	Poblet	1.53	218	Pg	Pn	04 06 16.9	+0.8
	4.6nm,0.5s,SNR=18						
EPOB				Sn	Sn	04 06 35.7	-0.7
	SNR=7.9						
EPOB				Lg	Lg	04 06 36.9	
	4.2nm,0.1s						
EPOB	Poblet	1.53	218	Pg	Pn	04 06 16.9	+0.8
	4.6nm,0.5s,SNR=18						
EPOB				Sn	Sn	04 06 35.7	-0.7
	SNR=7.9						
EPOB				Lg	Lg	04 06 36.9	
	4.2nm,0.1s						
EPF	Esparros	1.54	288	ePg	Pn	04 06 16.9	+0.7
EPF				eSn	Sn	04 06 34.0	-2.6
EPF				eSg	Sb	04 06 37.0	+0.1
	3.0nm,0.2s						
EPF	Esparros	1.54	288	Pg	Pn	04 06 16.9	+0.7
EPF				eSn	Sn	04 06 34.0	-2.6
EPF				eSg	Sb	04 06 37.0	+0.1
	1.5nm,0.2s						
VIEF	Viey	1.73	281	Lg	Lg	04 06 42.5	
LASF	Ste Croix	1.88	36	ePn	Pn	04 06 19.6	-1.2
LASF	Ste Croix	1.88	36	ePg	Pb	04 06 23.5	+0.7
LASF				eSg	Sb	04 06 47.7	+1.1
	3.2nm,0.2s						
LASF	Ste Croix	1.88	36	ePn	Pn	04 06 19.6	-1.2
LASF	Ste Croix	1.88	36	Pg	Pb	04 06 23.5	+0.7
LASF				eSg	Sb	04 06 47.7	+1.1
	1.6nm,0.2s						
ETSF	Etsaut	2.16	280	eP	Pn	04 06 25.6	+0.9
ETSF	Etsaut	2.16	280	ePg	Pb	04 06 28.7	+1.1
ETSF				eSg	Sb	04 06 56.3	+1.6
	7.2nm,0.4s						
ETSF	Etsaut	2.16	280	eP	Pn	04 06 25.6	+0.9
ETSF	Etsaut	2.16	280	Pg	Pb	04 06 28.7	+1.1
ETSF				eSg	Sb	04 06 56.3	+1.6
	3.6nm,0.4s						
ERTA	Horta de San J	2.20	224	Pg	Pb	04 06 28.7	+0.4
	0.0nm,0.0s,SNR=7.9						
ERTA				Sn	Sn	04 06 52.0	-0.8
	0.6nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	04 06 56.4	
	0.8nm,0.1s,SNR=7.9						
ERTA	Horta de San J	2.20	224	Pg	Pb	04 06 28.7	+0.4
	SNR=7.9						
ERTA				Sn	Sn	04 06 52.0	-0.8
	0.6nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	04 06 56.4	
	0.8nm,0.1s,SNR=7.9						
ESAC	San Caprasio	2.25	249	Pg	Pb	04 06 29.3	+0.1
	0.7nm,0.1s,SNR=7.9						
ESAC				Sn	Sn	04 06 54.3	+0.2
	0.8nm,0.1s,SNR=7.9						
ESAC				Lg	Lg	04 07 00.1	
	8.6nm,0.2s,SNR=6.3						
ESAC	San Caprasio	2.25	249	Pg	Pb	04 06 29.3	+0.1
	0.7nm,0.1s,SNR=7.9						
ESAC				Sn	Sn	04 06 54.3	+0.2
	0.8nm,0.1s,SNR=7.9						
ESAC				Lg	Lg	04 07 00.1	
	8.6nm,0.2s,SNR=6.3						
CAF	Calviac	2.37	355	ePn	Pn	04 06 26.3	-1.3
CAF	Calviac	2.37	355	eP	Pn	04 06 29.0	+1.4
CAF	Calviac	2.37	355	ePg	Pb	04 06 32.5	+1.3
CAF				eSg	Sg	04 07 03.4	-0.8
	4.4nm,0.2s						
CAF	Calviac	2.37	355	Pn	Pn	04 06 26.3	-1.3
CAF	Calviac	2.37	355	eP	Pn	04 06 29.0	+1.4
CAF	Calviac	2.37	355	Pg	Pb	04 06 32.5	+1.3
CAF				eSg	Sg	04 07 03.4	-0.8
	2.2nm,0.2s						
LFF	La Frestale	2.64	335	ePn	Pn	04 06 29.6	-1.7
LFF	La Frestale	2.64	335	ePg	Pb	04 06 37.3	+1.5
LFF				eSg	Sg	04 07 11.7	-1.2
	5.5nm,0.3s						
LFF	La Frestale	2.64	335	Pn	Pn	04 06 29.6	-1.7
LFF	La Frestale	2.64	335	Pg	Pb	04 06 37.3	+1.5
LFF				eSg	Sg	04 07 11.7	-1.2
	2.8nm,0.3s						
IELO	Elcoad	2.65	277	Pg	Pg	04 06 37.8	-1.0
	0.0nm,0.1s,SNR=7.9						
IELO				Lg	Lg	04 07 12.3	
	0.4nm,0.2s,SNR=7.9						
IELO	Elcoad	2.65	277	Pg	Pg	04 06 37.8	-1.0
	SNR=7.9						
IELO				Lg	Lg	04 07 12.3	
	0.4nm,0.2s,SNR=7.9						
IEPA	Eparoz	2.66	276	Pg	Pg	04 06 40.0	+0.8
	0.0nm,0.0s,SNR=4.0						
IEPA				Lg	Lg	04 07 14.2	
	0.0nm,0.1s,SNR=7.9						
IEPA	Eparoz	2.66	276	Pg	Pg	04 06 40.0	+0.8
	SNR=4.0						
IEPA				Lg	Lg	04 07 14.2	
	SNR=7.9						
SJPF	Ste Jean	2.67	283	eSg	Sg	04 07 12.5	-1.5
	2.1nm,0.4s						
SJPF	Ste Jean	2.67	283	eSg	Sg	04 07 12.5	-1.5
	1.0nm,0.4s						
RJF	Les Rejaudoux	2.80	348	ePg	Pb	04 06 40.3	+1.7
RJF				eSg	Sg	04 07 16.8	-1.3
	4.7nm,0.2s						
RJF	Les Rejaudoux	2.80	348	Pg	Pb	04 06 40.3	+1.7
RJF				eSg	Sg	04 07 16.8	-1.3
	2.3nm,0.2s						
IZUN	Zunzarren	2.81	277	Lg	Lg	04 07 17.8	
	0.4nm,0.0s,SNR=7.9						
IZUN	Zunzarren	2.81	277	Lg	Lg	04 07 17.8	
	0.4nm,0.0s,SNR=7.9						
VIVF	Saint-Julien-l	2.85	36	ePn	Pn	04 06 33.1	-1.1
VIVF	Saint-Julien-l	2.85	36	ePg	Pb	04 06 41.6	+2.1
VIVF				eSg	Sg	04 07 18.4	-1.3
	2.3nm,0.3s						
VIVF	Saint-Julien-l	2.85	36	Pn	Pn	04 06 33.1	-1.1
VIVF	Saint-Julien-l	2.85	36	Pg	Pb	04 06 41.6	+2.1
VIVF				eSg	Sg	04 07 18.4	-1.3
	1.1nm,0.3s						
VIVF				Lg	Lg	04 07 18.4	
	0.6nm,0.3s						
ETOR	Torete	3.72	243	Sn	Sn	04 07 28.5	-1.9
	0.2nm,0.1s,SNR=7.9						
ETOR				Lg	Lg	04 07 47.9	
	1.1nm,0.0s,SNR=7.9						
ETOR	Torete	3.72	243	Sn	Sn	04 07 28.5	-1.9
	0.2nm,0.1s,SNR=7.9						
ETOR				Lg	Lg	04 07 47.9	
	1.1nm,0.0s,SNR=7.9						

IDC 11 04:21:12.4±2.1, 20°.84S×69°.10W, h111km±18km, mb3.7/2, mb1 3.4/3, mb1mx3.2/17, mbtmp3.4/3, Error ellipse: s-maj=53.1km s-min=19.4km az=92.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	1.77	174	P	Pn	04 21 42.6	-0.3
	6.0nm,0.3s,baz=355,slow=6.4,SNR=56						
LVC				S	Sn	04 22 06.2	+0.1
	38nm,0.3s,baz=112,slow=19,SNR=31						
LPAZ	La Paz	4.62	12	P	Pn	04 22 20.8	-0.2
	0.4nm,0.3s,baz=214,slow=6.9,SNR=16						
LPAZ				S	Sn	04 23 02.5	-12
	0.6nm,0.3s,baz=203,slow=14,SNR=4.3						
SIV	San Ignacio	9.02	59	P	Pn	04 23 14.8	-5.0
	1.0nm,0.3s,baz=262,slow=10,SNR=18						
BDFB	Brasilia	20.68	79	P	P	04 25 43.9	0.0
	1.6nm,0.3s,baz=246,slow=11,SNR=4.2						
TORD	Torodi Ar. Bea	77.31	71	P	P	04 32 55.2	-0.1
	0.9nm,0.4s,baz=256,slow=5.3,SNR=22						
TORD				pP	pP	04 33 22.2	-1.3
	0.6nm,0.7s,baz=254,slow=5.4,SNR=3.1						
MKAR	Makanchi Array	145.21	35	PKPbc	PKPbc	04 40 36.3	-0.6
	0.2nm,0.6s,baz=336,slow=3.2,SNR=3.2						

MEX 11 04:38:21.7±0.4, 16°.89N×99°.59W, h27km±9km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.26	266	iP	Pb	04 38 27.9	-0.5
ACX				iS	Sb	04 38 32.8	-0.1
CAIG	El Cayaco	0.67	284	iP	Pb	04 38 32.7	-2.2
CAIG				iS	Sb	04 38 41.1	-2.7
MEIG	Mezcala	1.03	358	iP	Pn	04 38 37.6	-2.9
MEIG				iS	Sn	04 38 50.6	-3.7
PNIG	Pinotepa	1.48	109	iP	Pn	04 38 43.8	-2.8
PNIG				eS	Sn	04 39 02.2	-3.1
PLIG	Platanillo	1.50	3	iP	Pn	04 38 44.8	-2.2
PLIG				iS	Sn	04 39 02.7	-3.1
ARIG	Puente Sto Nin	1.56	332	iP	Pn	04 38 45.7	-2.1
ARIG				iS	Sn	04 39 03.7	-3.5
ZIIG	Zihuatanejo	1.93	292	iP	Pn	04 38 50.1	-2.7
ZIIG				iS	Sn	04 39 14.0	-2.2
YAIG	Yautepec	2.02	14	eP	Pn	04 38 52.5	-1.8
YAIG				eS	Sn	04 39 16.0	-2.9

NEIC 11 05:05:15.8, 19°.03N×66°.96W, h14km, MD3.3(RSPR), After RSPR.
RSPR 11 05:05:15.8, 19°.03N×66°.96W, h14km±1km, MD3.2/18, 11C-21D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AGPR	Aguadilla, PR	0.57	194	⇓iP	Pg	05 05 26.3	-0.8
AGPR	Aguadilla, PR	0.57	194	eS	Sg	05 05 34.4	-0.3
AGPR	Aguadilla, PR	0.57	194	⇓iP	Pg	05 05 26.3	-0.8
AGPR				eS	Sg	05 05 34.4	-0.3
AOPR	Arecibo Observ	0.70	164	⇓eP	Pg	05 05 28.3	-1.4
AOPR	Arecibo Observ	0.70	164	⇑eP	Pg	05 05 28.3	-1.3
AOPR	Arecibo Observ	0.70	164	⇓eP	Pg	05 05 28.3	-1.4
AOPR				eS	Sg	05 05 38.0	-0.9
LRS	Lares	0.74	171	⇓iP	Pg	05 05 28.6	-1.7
LRS	Lares	0.74	171	⇓iP	Pg	05 05 28.6	-1.7
LRS				eSg	Sg	05 05 37.5	-2.6
MPR	Mayaguez	0.83	192	⇓eP	Pg	05 05 29.7	-2.2
MPR	Mayaguez	0.83	192	eS	Sg	05 05 40.7	-2.1
MPR	Mayaguez	0.83	192	⇓eP	Pg	05 05 29.7	-2.2
MPR				eS	Sg	05 05 40.7	-2.1
LSP	Las Mesas	0.85	188	⇑iP	Pg	05 05 30.3	-2.2
LSP	Las Mesas	0.85	188	i Pu	Pg	05 05 30.3	-2.2
LSP				eSg	Sg	05 05 40.6	-3.1
CELP	Cerrillos	1.01	159	⇑eP	Pb	05 05 33.0	-2.2
CELP	Cerrillos	1.01	159	⇑eP	Pb	05 05 33.0	-2.2
CRPR	Cabo Rojo, PR	1.02	188	⇓iP	Pb	05 05 32.9	-2.4
CRPR	Cabo Rojo, PR	1.02	188	eS	Sb	05 05 45.9	-2.7
CRPR	Cabo Rojo, PR	1.02	188	⇓iP	Pb	05 05 32.9	-2.4
CRPR				eS	Sb	05 05 45.9	-2.7
OBIP	Obispado Ponce	1.03	161	⇓eP	Pb	05 05 33.0	-2.5
OBIP	Obispado Ponce	1.03	161	eS	Sb	05 05 46.9	-2.1
OBIP	Obispado Ponce	1.03	161	⇓eP	Pb	05 05 33.0	-2.5
OBIP				eS	Sb	05 05 46.9	-2.1
GBPR	Guanica, Bosqu	1.05	176	⇑eP	Pb	05 05 33.7	-2.0
GBPR	Guanica, Bosqu	1.05	176	⇑eP	Pb	05 05 33.7	-2.0
SJG	San Juan	1.19	140	⇑eP	Pn	05 05 35.5	-2.5
SJG	San Juan	1.19	140	eS	Sb	05 05 50.5	-3.0
SJG	San Juan	1.19	140	⇑eP	Pn	05 05 35.0	-3.1
SJG	San Juan	1.19	140	⇑eP	Pn	05 05 35.5	-2.5
SJG				eS	Sb	05 05 50.5	-3.0
CBYP	Canovanas	1.29	125	⇓eP	Pn	05 05 36.4	-3.1
CBYP	Canovanas	1.29	125	eS	Sb	05 05 52.2	-4.2
CBYP	Canovanas	1.29	125	⇓eP	Pn	05 05 36.4	-3.1
CBYP				eS	Sb	05 05 52.2	-4.2
HUMP	Col San Antoni	1.37	130	⇓eP	Pn	05 05 37.7	-2.9
HUMP	Col San Antoni	1.37	130	⇑eP	Pn	05 05 37.9	-2.7
HUMP	Col San Antoni	1.37	130	⇑eP	Pn	05 05 37.9	-2.7
HUMP				eS	Sn	05 05 54.3	-4.2
HUMP				eS	Sb	05 05 54.4	-4.3
MTP	Monte Pirata	1.62	124	⇓eP	Pn	05 05 41.2	-2.9
MTP	Monte Pirata	1.62	124	eS	Sn	05 06 00.7	-4.1
MTP	Monte Pirata	1.62	124	⇓eP	Pn	05 05 41.2	-2.9
MTP				eS	Sn	05 06 00.7	-4.1
STVI	Saint Thomas	2.02	109	⇓eP	Pn	05 05 46.6	-2.8
STVI	Saint Thomas	2.02	109	eS	Sn	05 06 11.0	-3.5
STVI	Saint Thomas	2.02	109	⇓eP	Pn	05 05 46.6	-2.8
STVI				eS	Sn	05 06 11.0	-3.5
SMN1	Samana, DR	2.19	275	⇑eP	Pn	05 05 48.7	-3.2
SMN1				eS	Sn	05 06 15.4	-3.5
DR12	Loma Pena Alta	2.30	265	⇓eP	Pn	05 05 50.7	-2.8
DR12	Loma Pena Alta	2.30	265	⇓eP	Pn	05 05 50.7	-2.8
SDDR	Presa de Saban	4.09	270	ePn	Pn	05 06 15.7	-2.4
SDDR				eSn	Sn	05 07 01.5	-4.4

IDC 11 05:09:22.9±9.0, 24°.63S×175°.36W, h56km±78km, mb3.4/6, mb1 3.8/7, mb1mx3.6/19, mbtmp3.5/7, ML4.0/1, MS3.6/1, Ms1 3.5/1, ms1mx2.3/10, Error ellipse: s-maj=41.3km s-min=29.6km az=164.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	11.19	18	S	Sn	05 13 50.3	-14
	2.1nm,0.3s,baz=120,slow=20,SNR=2.9						
URZ	Urewera	15.02	203	P	Pn	05 12 52.6	+0.8
	0.6nm,0.3s,baz=34,slow=7.3,SNR=3.2						
URZ				S	Sn	05 15 17.6	-19
	0.3nm,0.3s,baz=108,slow=20,SNR=2.9						
DZM	Mont Dzumac	16.91	275	P	P	05 13 21.7	+4.5
	0.1nm,0.3s,baz=97,slow=18,SNR=3.8						
STKA	Stephens Creek	38.41	249	LR	LR	05 29 03.2	
	comp=Z,82nm,18.7s,baz=242,slow=31						
ASAR	Alice Springs	46.09	260	P	P	05 17 42.0	+0.2
	0.5nm,0.8s,baz=99,slow=6.6,SNR=4.2						
WRA	Warramunga Arr	46.58	265	P	P	05 17 44.8	-0.8
	0.3nm,0.6s,baz=102,slow=8.2,SNR=3.7						
VNDA	Vanda	54.05	186	P	P	05 18 41.0	-0.2
	1.0nm,0.9s,baz=348,slow=5.3,SNR=5.2						
NVAR	Mina Array Bea	82.40	42	P	P	05 21 39.7	+0.4
	0.6nm,0.7s,baz=220,slow=8.1,SNR=6.5						
NVAR				pP	pP	05 21 51.6	-3.5
	0.9nm,0.8s,baz=221,slow=10,SNR=5.2						
TXAR	Lajitas Array	87.27	56	P	P	05 22 03.3	-0.5
	0.6nm,1.1s,baz=230,slow=6.9,SNR=3.9						
TXAR				pP	pP	05 22 14.9	-4.8
	0.6nm,1.0s,baz=193,slow=5.1,SNR=3.7						
ILAR	Eielson Array	91.81	12	P	P	05 22 23.8	-0.4
	0.4nm,0.7s,baz=218,slow=5.7,SNR=5.2						
ZALV	Zalesovo Beam	115.22	320	PKP	PKPdf	05 27 57.2	-0.5
	0.7nm,0.7s,baz=116,slow=3.4,SNR=2.5						
MKAR	Makanchi Array	115.78	312	PKP	PKPdf	05 27 58.7	-0.3
	0.4nm,0.8s,baz=95,slow=3.0,SNR=3.1						
BVAR	Borovoye Array	123.79	318	PKP	PKPdf	05 28 14.6	+0.4
	0.5nm,0.4s,baz=94,slow=4.6,SNR=3.2						
ARCES	ARCESS Array B	133.40	350	PKP	PKPdf	05 28 30.1	-1.9
	1.2nm,0.8s,baz=116,slow=4.2,SNR=3.6						
AKASG	Malin Array Be	147.79	330	PKPbc	PKPbc	05 29 01.4	+0.1
	0.8nm,0.4s,baz=45,slow=3.7,SNR=5.6						
BRTR	Keskin Array B	151.37	309	PKPbc	PKPbc	05 29 10.8	0.0
	0.9nm,0.7s,baz=169,slow=4.6,SNR=4.7						

ISK 11 05:10:51.6, 38°.43N×38°.99E, h8km, MD3.0
DDA 11 05:10:51.2, 38°.45N×38°.99E, h21km, MD3.1
CSEM 11 05:10:51.9±0.2, 38°.42N×39°.02E, h8km±1km, MD3.1, Error ellipse: s-maj=4.4km s-min=3.4km az=140.0
ISCJB 11 05:10:52.5±0.4, 38°.46N±0°.04×38°.96E±0°.03, h11km±4km, Error ellipse: s-maj=6.1km s-min=3.9km az=160.9
ISC 11 05:10:52.5±0.8, 38°.43N±0°.03×38°.98E±0°.02, h13km±5km, n37, σ0s.66/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.06	2	iP	Pg	05 10 55.2	-0.2
ELZG				iS	Sg	05 10 57.7	+0.3
ELZG				iS	Sg	05 10 57.7	+0.3
ELZG	Elazig	0.06	2	iP	Pg	05 10 55.2	-0.2
ELZG				iS	Sg	05 10 57.7	+0.3
MYA	Malataya	0.45	256	ePG	Pg	05 11 01.1	-0.3
MYA				eSG	Sg	05 11 07.9	+0.4
MYA	Malataya	0.45	256	ePg	Pg	05 11 01.1	-0.3
MYA				eSg	Sg	05 11 07.9	+0.4
PTK	Pertek	0.56	35	ePG	Pg	05 11 03.1	-0.4
PTK				eSG	Sg	05 11 11.2	+0.2
PTK	Pertek	0.56	35	ePg	Pg	05 11 03.1	-0.4
PTK				eSg	Sg	05 11 11.2	+0.2
AKCD	Akcadag	0.84	261	iP	Pg	05 11 07.7	-1.1
AKCD				iS	Sb	05 11 20.3	0.0
AKCD	Akcadag	0.84	261	iP	Pg	05 11 07.7	-1.1
AKCD				iS	Sb	05 11 20.3	0.0
URFA	Urfa	1.00	187	ePG	Pb	05 11 11.1	-0.6
URFA	Urfa	1.00	187	ePg	Pb	05 11 11.1	-0.6
DIYA	Diyarbakir	1.03	119	iP	Pb	05 11 11.4	-0.8
DIYA				iS	Sn	05 11 27.0	0.0
DIYA	Diyarbakir	1.03	119	iP	Pb	05 11 11.4	-0.8
ILIC	ilic-Erzincan	1.07	343	ePG	Pb	05 11 12.0	-0.8
ILIC	ilic-Erzincan	1.07	343	ePg	Pb	05 11 12.0	-0.8
ATAB	Bozova	1.10	210	iP	Pn	05 11 13.6	0.0
ATAB				iS	Sb	05 11 28.1	+0.4
ATAB	Bozova	1.10	210	iP	Pn	05 11 13.6	0.0
ATAB				iS	Sb	05 11 28.1	+0.4
DIY	Diyarbakir	1.12	118	ePN	Pb	05 11 13.2	-0.5
DIY	Diyarbakir	1.12	118	ePn	Pb	05 11 13.2	-0.5
DARE	Darende-Malaty	1.18	277	ePN	Pb	05 11 14.7	-0.1
DARE	Darende-Malaty	1.18	277	ePn	Pb	05 11 14.7	-0.1
BINT	Bingol	1.26	69	ePn	Pg	05 11 18.6	+1.9
ERZN	Erzincan	1.29	26	ePN	Pb	05 11 16.2	-0.4
EZC	Erzincan	1.35	12	ePN	Pn	05 11 17.0	-0.1
EZC	Erzincan	1.35	12	ePn	Pn	05 11 17.0	-0.1
BNGB	Bingˆ¶l	1.44	67	ePN	Pb	05 11 18.6	-0.6
MARD	Mardin	1.81	128	iP	Pn	05 11 23.6	+0.2
MARD				iS	Sb	05 11 48.4	+0.4
BEST	Besiri	1.88	106	iP	Pn	05 11 25.0	+0.6
BEST				iS	Sb	05 11 50.1	-0.1
KMRS	Kahramanmaras	1.89	241	ePN	Pn	05 11 25.2	+0.8
KMRS	Kahramanmaras	1.89	241	ePn	Pn	05 11 25.2	+0.8
BTMT	Batman	1.99	96	ePN	Pn	05 11 24.6	-1.2
BTMT	Batman	1.99	96	ePn	Pn	05 11 24.6	-1.2
SARI	SarD1z-Kayseri	2.01	270	ePN	Pn	05 11 27.0	+0.8
SARI	SarD1z-Kayseri	2.01	270	ePn	Pn	05 11 27.0	+0.8
GUMT	Gumushane	2.06	11	ePN	Pn	05 11 27.4	+0.5
GUMT	Gumushane	2.06	11	ePn	Pn	05 11 27.4	+0.5
KOZT	Kozan	2.67	250	ePN	Pn	05 11 36.1	+1.0
KOZT	Kozan	2.67	250	ePn	Pn	05 11 36.1	+1.0

DJA 11 05:23:59.8±1.3, 6°S±9°×10°4E±°, h25km±18km, M4.0/4, MLv4.0/4, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	Kota Agung	1.01	47	P	Pn	05 24 17.6	-0.8
KASI				S	Sb	05 24 30.9	-0.6
LWLI	Liwa	1.23	14	P	Pn	05 24 20.7	-0.9
LWLI				S	Sb	05 24 37.9	-0.2
MNAI	Manna	2.01	337	P	Pn	05 24 32.5	+0.3
MNAI				S	Sn	05 24 57.4	+0.8
KSI	Kapahiang	2.80	335	P	Pn	05 24 43.6	+0.4

IDC 11 05:37:47.9±1.0, 31°.55N×104°.34E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/29, mbtmp3.7/7, ML3.0/1, Error ellipse: s-maj=42.0km s-min=18.2km az=56.0
BJI 11 05:37:49.1, 31°.74N×104°.21E, h10km, ML3.7/13, Ms3.2/3
ISC 11 05:37:49.6±0.8, 31°.50N±0°.05×104°.33E±0°.06, h9km, n11, σ1s.67/20, mb3.6/5, 1D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.76	220	⇓iPg	Pb	05 38 05.8	+0.7
CD2				Sg	Sn	05 38 20.3	+2.0
CD2				smax	smax		
	comp=N,2μm,0.9s						
CD2				smax	smax		
	comp=E,1μm,0.9s						
LZH	Lanzhou	4.59	355	ePn	Pn	05 38 58.8	-0.6
LZH				Pg	Pb	05 39 10.0	-0.5
LZH				Sn	Sn	05 39 54.1	+1.2
LZH				Sg	Sb	05 40 08.8	+2.9
LZH				smax	smax		
	comp=N,130nm,1.0s						
LZH				smax	smax		
	comp=E,84nm,0.8s						
LZH				LR	LR		
	comp=N,140nm,6.1s						
LZH				LR	LR		
	comp=E,350nm,7.4s						
XAN	Xi'an	4.63	56	Pn	Pn	05 38 57.6	-2.2
XAN				Pg	Pb	05 39 12.5	+1.5
XAN				Sn	Sn	05 39 46.4	-7.2
XAN				Sg	Sb	05 40 09.8	+3.0
XAN				smax	smax		
	comp=N,190nm,0.6s						
XAN				smax	smax		
	comp=E,120nm,0.8s						
XAN				LR	LR		
	comp=N,200nm,6.4s						
XAN				LR	LR		
	comp=E,35nm,3.6s						
HHC	Hu-ho-hao-te	11.01	30	eP	Pn	05 40 25.4	-1.9
HHC				PP	PnPn	05 40 33.8	-1.3
HHC				S	Sn	05 42 30.5	-0.1
HHC				SS	SnSn	05 42 43.9	+1.2
SONM	Songino Array	16.39	5	Pn	Pn	05 41 39.5	-0.4
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=2.4						
KSRS	Korea Array	20.32	67	P	P	05 42 24.3	-1.6
	comp=E,2.1nm,0.7s,baz=251,slow=9.9,SNR=7.3						
MKAR	Makanchi Array	22.81	318	P	P	05 42 50.1	-2.6
	comp=E,0.6nm,0.7s,baz=122,slow=12,SNR=7.6						
ZALV	Zalesovo Beam	26.45	334	P	P	05 43 26.6	0.0
	comp=E,0.4nm,0.4s,baz=123,slow=10,SNR=3.8						
KURBB	Kurchatov Arra	27.04	322	P	P	05 43 32.5	+0.5
	comp=E,0.3nm,0.2s,baz=134,slow=9.3,SNR=3.9						
WRA	Warramunga Arr	58.70	147	P	P	05 47 47.5	-0.3
	comp=E,2.2nm,0.6s,baz=340,slow=7.8,SNR=36						
ASAR	Alice Springs	61.73	149	P	P	05 48 08.7	+0.2
	comp=E,0.6nm,0.5s,baz=336,slow=6.8,SNR=7.8						

IDC 11 05:42:16.2±1.2, 35°.79N×0°.51E, h0km, mb3.7/6, mb1 3.8/10, mb1mx3.6/35, mbtmp3.7/10, ML3.7/4, MS3.2/3, Ms1 3.2/3, ms1mx2.5/45, Error ellipse: s-maj=29.8km s-min=21.2km az=134.0
PDA 11 05:42:17.1±1.2, 35°.55N×0°.68E, h31km, ML2.8, Error ellipse: s-maj=6.1km s-min=3.6km az=128.0
CSEM 11 05:42:17.8±0.2, 35°.70N×0°.55E, h20km, mb4.4/20, Error ellipse: s-maj=4.7km s-min=2.9km az=178.0
CRAAG 11 05:42:17.1, 35°.76N×0°.56E, Ml4.7
INMG 11 05:42:17.1±1.2, 35°.55N×0°.68E, h31km, ML2.8, Error ellipse: s-maj=6.1km s-min=3.6km az=128.0
ISCJB 11 05:42:17.3±0.5, 35°.76N±0°.02×0°.48E±0°.02, h30km±5km, mb3.7/6, MS3.4/2, Error ellipse: s-maj=4.2km s-min=2.9km az=167.4
LDG 11 05:42:18.9±0.3, 35°.55N×0°.65E, h25km, Ml3.2/4, Error ellipse: s-maj=6.6km s-min=3.3km az=142.0
MDD 11 05:42:18.3±0.4, 35°.71N×0°.56E, h12km±6km, mb4.4/20, Error ellipse: s-maj=6.0km s-min=3.5km az=162.0
CNRM 11 05:42:25.7, 35°.45N×0°.43E, h35km, MD4.2
ISC 11 05:42:18.2±0.7, 35°.74N±0°.03×0°.51E±0°.03, h20km±3km, n209, σ1s.56/268, mb3.8/6, 1D, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJBR	Djebel Berber	0.20	221	P	Pb	05 42 23.0	-0.9
OJBR	Djebel Berber	0.20	221	P	Pb	05 42 23.0	-0.9
OJBR	Djebel Berber	0.20	221	P	Pb	05 42 23.0	-0.9
OJGS	Djebel Guires	0.30	139	P	Pb	05 42 24.0	-1.0
OJGS	Djebel Guires	0.30	139	P	Pb	05 42 24.0	-1.0
OJGS	Djebel Guires	0.30	139	P	Pb	05 42 24.0	-1.0
EANR	'Ain N'Sour	0.53	66	P	Pb	05 42 27.2	-1.6
EANR	'Ain N'Sour	0.53	66	P	Pb	05 42 27.2	-1.6
EANR	'Ain N'Sour	0.53	66	P	Pb	05 42 27.2	-1.6
ETRT	Tiaret	0.73	118	P	Pb	05 42 30.7	-1.6
ETRT	Tiaret	0.73	118	P	Pb	05 42 30.7	-1.6
ETRT	Tiaret	0.73	118	P	Pb	05 42 30.7	-1.6
ECHF	Ech Chlef	0.80	58	P	Pb	05 42 31.8	-1.5
ECHF	Ech Chlef	0.80	58	P	Pb	05 42 31.8	-1.5
ECHA	Ech Chlef	0.81	59	P	Pb	05 42 31.8	-1.7
ECHA	Ech Chlef	0.81	59	P	Pb	05 42 31.8	-1.7
USTO	Oran	0.86	270	P	Pn	05 42 36.0	+0.9
USTO	Oran	0.86	270	P	Pn	05 42 36.0	+0.9
EBNR	Beni Rached	1.00	56	P	Pb	05 42 35.0	-1.8
EBNR	Beni Rached	1.00	56	P	Pb	05 42 35.0	-1.8
OLHC	Oulhaca	1.65	253	P	Pn	05 42 26.0	-20

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
OLHC	Oulhaca	1.65	253	P	Pn	05 42 26.0	-20
EMHD	Djebel Mahouad	2.04	76	P	Pn	05 42 50.0	-1.4
EMHD	Djebel Mahouad	2.04	76	P	Pn	05 42 50.0	-1.4
EMHD	Djebel Mahouad	2.04	76	P	Pn	05 42 50.0	-1.4
ADJB	Djebel Djouab	2.42	79	P	Pn	05 42 55.8	-0.8
ADJB	Djebel Djouab	2.42	79	P	Pn	05 42 55.8	-0.8
ADJB	Djebel Djouab	2.42	79	P	Pn	05 42 55.8	-0.8
ENIJ	Nijar	2.52	300	P	Pn	05 42 57.1	-0.8
	30nm,0.3s,SNR=7.9						
ENIJ				S	Sn	05 43 27.3	-0.6
	26nm,0.2s,SNR=7.9						
ENIJ	Nijar	2.52	300	P	Pn	05 42 57.1	-0.8
	30nm,0.3s,SNR=7.9						
ENIJ				S	Sn	05 43 27.3	-0.6
	26nm,0.2s,SNR=7.9						
EMUR	La Murta	2.53	327	P	Pn	05 42 57.0	-1.1
	16nm,0.2s,SNR=7.9						
EMUR				S	Sn	05 43 26.1	-2.2
	31nm,0.2s,SNR=7.9						
EMUR	La Murta	2.53	327	P	Pn	05 42 57.0	-1.1
	16nm,0.2s,SNR=7.9						
MELI	Melilla	2.84	262	P	Pn	05 43 00.4	-1.9
	17nm,0.2s,SNR=4.0						
MELI	Melilla	2.84	262	P	Pn	05 43 00.4	-1.9
	17nm,0.2s,SNR=4.0						
EMLI	Melilla	2.85	262	P	Pn	05 43 01.1	-1.4
	25nm,0.1s,SNR=4.0						
EMEL	Melilla	2.86	262	P	Pn	05 43 01.1	-1.5
	25nm,0.1s,SNR=4.0						
EMEL				S	Sn	05 43 34.5	-1.9
	131nm,1.0s,SNR=5.4						
EALB	Alboran	2.88	275	P	Pn	05 43 02.7	-0.2
	2.9nm,0.1s,SNR=18						
EALB				S	Sn	05 43 36.9	-0.1
	28nm,0.4s						
EALB	Alboran	2.88	275	P	Pn	05 43 02.7	-0.2
	2.9nm,0.1s,SNR=18						
EALB				S	Sn	05 43 36.9	-0.1
	28nm,0.4s						
EBER	Berja	2.98	294	P	Pn	05 43 03.6	-0.8
	79nm,0.2s,SNR=203						
EBER				S	Sn	05 43 39.8	+0.2
	70nm,0.5s,SNR=4.7						
EBER	Berja	2.98	294	P	Pn	05 43 03.6	-0.8
	79nm,0.2s,SNR=203						
EBER				S	Sn	05 43 39.8	+0.2
	70nm,0.5s,SNR=4.7						
EBEN	Beniarda	3.02	349	P	Pn	05 43 04.9	0.0
	2.8nm,0.2s,SNR=16						
EBEN				S	Sn	05 43 40.3	-0.1
	38nm,0.5s,SNR=6.3						
EBEN	Beniarda	3.02	349	P	Pn	05 43 04.9	0.0
	2.8nm,0.2s,SNR=16						
EBEN				S	Sn	05 43 40.3	-0.1
	38nm,0.5s,SNR=6.3						
EHUE	Huescar	3.24	311	P	Pn	05 43 08.9	+1.0
	19nm,0.2s,SNR=7.9						
EHUE				S	Sn	05 43 45.7	-0.3
	SNR=7.9						
EHUE	Huescar	3.24	311	P	Pn	05 43 08.9	+1.0
	19nm,0.2s,SNR=7.9						
EHUE				S	Sn	05 43 45.7	-0.3
	SNR=7.9						
ETOB	Tobarra	3.33	331	P	Pn	05 43 09.6	+0.4
	10nm,0.1s,SNR=39						
ETOB				S	Sn	05 43 46.6	-1.7
	19nm,0.2s,SNR=5.1						
ETOB	Tobarra	3.33	331	P	Pn	05 43 09.6	+0.4
	10nm,0.1s,SNR=39						
ETOB				S	Sn	05 43 46.6	-1.7
	19nm,0.2s,SNR=5.1						
EIBI	Ibiza	3.35	11	P	Pn	05 43 09.9	+0.5
	11nm,0.2s,SNR=19						
EIBI				S	Sn	05 43 46.8	-1.8
	81nm,0.8s						
EIBI	Ibiza	3.35	11	P	Pn	05 43 09.9	+0.5
	11nm,0.2s,SNR=19						
EIBI				S	Sn	05 43 46.8	-1.8
	81nm,0.8s						
EQUE	Quentar	3.50	296	P	Pn	05 43 12.3	+0.8
	30nm,0.4s,SNR=65						
EQUE				S	Sn	05 43 52.3	-0.1
	11nm,0.4s						
EQUE	Quentar	3.50	296	P	Pn	05 43 12.3	+0.8
	30nm,0.4s,SNR=65						
EQUE				S	Sn	05 43 52.3	-0.1
	11nm,0.4s						
EQES	Quesada	3.54	307	⇓P	Pn	05 43 13.5	+1.5
	55nm,0.2s,SNR=18						
EQES				S	Sn	05 43 54.5	+1.2
	54nm,0.3s,SNR=6.0						
EQES	Quesada	3.54	307	P	Pn	05 43 13.5	+1.5
	55nm,0.2s,SNR=18						
EQES				S	Sn	05 43 54.5	+1.2
	54nm,0.3s,SNR=6.0						
ECOG	Cogollos-Vega	3.62	296	P	Pn	05 43 14.9	+1.7
	29nm,0.3s,SNR=18						
ECOG				S	Sn	05 43 56.4	+0.9
	33nm,0.5s						
ECOG	Cogollos-Vega	3.62	296	P	Pn	05 43 14.9	+1.7
	29nm,0.3s,SNR=18						
ECOG				S	Sn	05 43 56.4	+0.9
	33nm,0.5s						
ERON	Agron	3.71	291	P	Pn	05 43 13.8	-0.6
	22nm,0.3s,SNR=7.9						
ERON	Agron	3.71	291	P	Pn	05 43 13.8	-0.6
	22nm,0.3s,SNR=7.9						
EVIA	Vianos	3.77	321	P	Pn	05 43 16.0	+0.9
	33nm,0.2s,SNR=29						
EVIA				S	Sn	05 44 00.1	+1.2
	151nm,0.5s,SNR=12						
EVIA	Vianos	3.77	321	P	Pn	05 43 16.0	+0.9
	33nm,0.2s,SNR=29						
EVIA				S	Sn	05 44 00.1	+1.2
	151nm,0.5s,SNR=12						
SET	Setif	4.00	82	P	Pb	05 43 34.0	+6.1
SET	Setif	4.00	82	P	Pb	05 43 34.0	+6.1
ELOJ	Sierra Loja	4.01	292	P	Pn	05 43 20.0	+1.4
	4.0nm,0.1s,SNR=7.9						
ELOJ	Sierra Loja	4.01	292	P	Pn	05 43 20.0	+1.4
	4.0nm,0.1s,SNR=7.9						
ECHE	Chera	4.02	344	P	Pn	05 43 19.7	+1.1
	5.6nm,0.2s,SNR=4.9						
ECHE				S	Sn	05 44 05.2	+0.1
	27nm,0.6s,SNR=5.0						
ECHE	Chera	4.02	344	P	Pn	05 43 19.7	+1.1
	5.6nm,0.2s,SNR=4.9						
ECHE				S	Sn	05 44 05.2	+0.1
	27nm,0.6s,SNR=5.0						
CKHR	Kef el Ahmar	4.07	85	P	Pb	05 43 36.2	+6.9
CKHR	Kef el Ahmar	4.07	85	P	Pb	05 43 36.2	+6.9
ELUQ	Luque	4.25	297	P	Pn	05 43 23.6	+1.8
	5.2nm,0.2s,SNR=7.9						
ELUQ	Luque	4.25	297	P	Pn	05 43 23.6	+1.8
	5.2nm,0.2s,SNR=7.9						
EMIJ	Mijas	4.35	282	P	Pn	05 43 22.6	-0.6
	3.3nm,0.1s,SNR=7.9						
EMIJ				S	Sn	05 44 10.1	-3.2
	13nm,0.4s,SNR=7.9						
EMIJ	Mijas	4.35	282	P	Pn	05 43 22.6	-0.6
	3.3nm,0.1s,SNR=7.9						
DFRA	Djebel Bou Aff	4.42	78	P	Pb	05 43 31.4	-3.8
DFRA	Djebel Bou Aff	4.42	78	P	Pb	05 43 31.4	-3.8
ETOS	Mallorca	4.42	24	P	Pn	05 43 22.1	-2.0
	0.7nm,0.1s,SNR=5.5						
ETOS				S	Sn	05 44 12.9	-2.1
	6.2nm,0.3s						
ETOS	Mallorca	4.42	24	P	Pn	05 43 22.1	-2.0
	0.7nm,0.1s,SNR=5.5						
ETOS				S	Sn	05 44 12.9	-2.1
	6.2nm,0.3s						
EMOS	Mosqueruela	4.69	351	P	Pn	05 43 29.0	+1.1
	1.3nm,0.1s,SNR=13						
EMOS				S	Sn	05 44 19.4	-2.2
	21nm,0.5s						
EMOS	Mosqueruela	4.69	351	P	Pn	05 43 29.0	+1.1
	1.3nm,0.1s,SNR=13						
EADA	Adamuz	4.74	302	P	Pn	05 43 28.5	0.0
	0.7nm,0.2s,SNR=4.9						
EADA				S	Sn	05 44 21.2	-1.7
	20nm,0.5s						
EADA	Adamuz	4.74	302	P	Pn	05 43 28.5	0.0
	0.7nm,0.2s,SNR=4.9						
CTEI	Djebel Teioual	4.80	84	P	Pn	05 43 30.1	+0.7
CTEI	Djebel Teioual	4.80	84	P	Pn	05 43 30.1	+0.7
CTEI	Djebel Teioual	4.80	84	P	Pn	05 43 30.1	+0.7
TGT	Taghat	4.86	252	P	Pn	05 43 34.0	+3.8
TGT				S	Sn	05 44 24.0	-2.0
TGT	Taghat	4.86	252	eP	Pn	05 43 34.0	+3.8
TGT				eS	Sn	05 44 24.0	-2.0
CASM	Ain Smara	4.88	82	P	Pn	05 43 30.0	-0.4
CASM	Ain Smara	4.88	82	P	Pn	05 43 30.0	-0.4
CASM	Ain Smara	4.88	82	P	Pn	05 43 30.0	-0.4
MDT	Midelt	5.14	237	Pn	Pn	05 43 35.2	+1.1
	0.7nm,0.3s,baz=343,slow=13,SNR=34						
MDT				Lg	Lg	05 45 06.7	
	0.9nm,0.3s,baz=5.6,slow=10.0,SNR=3.6						
MDT				LR	LR	05 45 46.4	
	comp=Z,118nm,19.4s,baz=26,slow=41						
ERTA	Horta de San J	5.21	359	P	Pn	05 43 36.7	+1.7
	1.0nm,0.1s,SNR=7.9						
ERTA				S	Sn	05 44 31.3	-3.3
	16nm,0.4s,SNR=4.9						
ERTA	Horta de San J	5.21	359	P	Pn	05 43 36.7	+1.7
	1.0nm,0.1s,SNR=7.9						
MIF	Mishlifen	5.27	246	P	Pn	05 43 38.0	+2.0
MIF				S	Sn	05 44 33.0	-3.2
MIF	Mishlifen	5.27	246	P	Pn	05 43 38.0	+2.0
MIF				i S	Sn	05 44 33.0	-3.2
ESDC	Sonseca Array	5.29	319	P	Pn	05 43 36.7	+0.6
	4.5nm,0.2s,baz=137,slow=13,SNR=34						
ESDC				S	Sn	05 44 35.2	-1.3
	7.7nm,0.6s,baz=136,slow=23,SNR=6.1						
ESDC	Sonseca Array	5.29	319	Pn	Pn	05 43 36.8	+0.6
	5.7nm,0.3s,baz=134,slow=13,SNR=31						
ESDC				Sn	Sn	05 44 35.1	-1.3
	2.4nm,0.3s,baz=128,slow=24,SNR=5.0						
ESDC	Sonseca Array	5.29	319	P	Pn	05 43 36.7	+0.6
	4.5nm,0.2s,baz=137,slow=13,SNR=34						
ESDC				S	Sn	05 44 35.2	-1.3
	7.7nm,0.6s,baz=136,slow=23,SNR=6.1						
CZD	Col de Zad	5.32	241	P	Pn	05 43 40.0	+3.3
CZD				S	Sn	05 44 35.0	-2.6
CZD	Col de Zad	5.32	241	eP	Pn	05 43 40.0	+3.3
CZD				i S	Sn	05 44 35.0	-2.6
ETOR	Torete	5.46	339	P	Pn	05 43 40.2	+1.8
	SNR=7.9						
ETOR				S	Sn	05 44 39.8	-0.9
	8.5nm,0.4s,SNR=7.9						
ETOR	Torete	5.46	339	P	Pn	05 43 40.2	+1.8
	SNR=7.9						
ETOR				S	Sn	05 44 39.8	-0.9
	8.5nm,0.4s,SNR=7.9						
ZFT	Errachidia	5.47	229	P	Pn	05 43 41.0	+2.3
ZFT				S	Sn	05 44 37.0	-4.2
ZFT	Errachidia	5.47	229	P	Pn	05 43 41.0	+2.3
EPOB	Poblet	5.63	4	P	Pn	05 43 41.6	+0.9
	0.5nm,0.1s,SNR=7.7						
EPOB				S	Sn	05 44 40.9	-3.9
	2.8nm,0.2s						
EPOB	Poblet	5.63	4	P	Pn	05 43 41.6	+0.9
	0.5nm,0.1s,SNR=7.7						
CMAH	Djebel Manchou	5.66	79	P	Pn	05 43 40.3	-0.9
CMAH	Djebel Manchou	5.66	79	P	Pn	05 43 40.3	-0.9
CMAH	Djebel Manchou	5.66	79	P	Pn	05 43 40.3	-0.9
ABSA	Djebel Ababsia	5.68	83	P	Pn	05 43 41.3	-0.1
ABSA	Djebel Ababsia	5.68	83	P	Pn	05 43 41.3	-0.1
CABS	Djebel Ababsia	5.68	83	P	Pn	05 43 41.3	-0.1
CABS	Djebel Ababsia	5.68	83	P	Pn	05 43 41.3	-0.1
ESAC	San Caprasio	6.03	353	P	Pn	05 43 53.6	+7.4
	7.5nm,0.3s,SNR=7.9						
ESAC				S	Sn	05 44 57.7	+3.2
	35nm,0.7s,SNR=7.9						
EMIN	Mina Concepcio	6.11	291	P	Pn	05 43 46.5	-0.8
	0.8nm,0.1s,SNR=14						
EMIN				S	Sn	05 44 54.3	-2.2
	1.5nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	6.11	291	P	Pn	05 43 46.5	-0.8
	0.8nm,0.1s,SNR=14						
GUD	Guadarrama	6.12	325	P	Pn	05 43 49.2	+1.7
	4.0nm,0.2s,SNR=20						
GUD				S	Sn	05 44 55.4	-1.6
	5.4nm,0.4s						
GUD	Guadarrama	6.12	325	P	Pn	05 43 49.2	+1.7
	4.0nm,0.2s,SNR=20						
GUD				S	Sn	05 44 55.4	-1.6
	5.4nm,0.4s						
CFON	Fontmartina	6.20	13	P	Pn	05 43 48.6	0.0
	1.2nm,0.1s,SNR=5.6						
CFON				S	Sn	05 44 55.6	-3.4
	3.4nm,0.2s						
CFON	Fontmartina	6.20	13	P	Pn	05 43 48.6	0.0
	1.2nm,0.1s,SNR=5.6						
EMIR	Miracle	6.22	7	P	Pn	05 43 50.1	+1.3
	3.4nm,0.2s,SNR=7.9						
EMIR				S	Sn	05 44 56.4	-2.9
	3.9nm,0.3s,SNR=7.9						
EMIR	Miracle	6.22	7	P	Pn	05 43 50.1	+1.3
	3.4nm,0.2s,SNR=7.9						
KIB	El Ksiba	6.28	242	P	Pn	05 43 55.0	+5.4
KIB				S	Sn	05 44 59.0	-1.8
PBAR	Barrancos	6.51	294	ePn	Pn	05 43 52.8	0.0
PBAR				eSn	Sn	05 45 03.5	-3.0
PBAR	Barrancos	6.51	294	P	Pn	05 43 52.8	0.0
PBAR				S	Sn	05 45 03.5	-3.0
PBAR	Barrancos	6.51	294	P	Pn	05 43 52.8	0.0
CSOR	Sort	6.65	4	P	Pn	05 43 55.6	+0.9
	0.5nm,0.2s,SNR=7.5						
CSOR				S	Sn	05 45 06.2	-3.8
	2.9nm,0.4s						
CSOR	Sort	6.65	4	P	Pn	05 43 55.6	+0.9
	0.5nm,0.2s,SNR=7.5						
EGRO	El Granado	6.67	288	P	Pn	05 43 54.9	0.0
	0.8nm,0.2s,SNR=7.9						
EGRO	El Granado	6.67	288	P	Pn	05 43 54.9	0.0
	0.8nm,0.2s,SNR=7.9						
EBAD	Badajoz	6.71	299	P	Pn	05 43 56.2	+0.7
	1.5nm,0.2s,SNR=11						
EBAD				S	Sn	05 45 08.0	-3.3
	3.5nm,0.3s,SNR=6.6						
EBAD	Badajoz	6.71	299	P	Pn	05 43 56.2	+0.7
	1.5nm,0.2s,SNR=11						
EPLA	Plasencia	6.77	312	P	Pn	05 43 57.4	+1.1
	1.1nm,0.3s,SNR=8.3						
EPLA				S	Sn	05 45 10.9	-1.8
	1.1nm,0.2s,SNR=7.9						
EPLA	Plasencia	6.77	312	P	Pn	05 43 57.4	+1.1
	1.1nm,0.3s,SNR=8.3						
PVAQ	Vaqueiros	6.83	287	ePn	Pn	05 43 56.5	-0.6
PVAQ				eSn	Sn	05 45 10.9	-3.2
PVAQ				A	A	05 45 15.7	
	2.4nm,0.6s						
PVAQ	Vaqueiros	6.83	287	P	Pn	05 43 56.5	-0.6
PVAQ				S	Sn	05 45 10.9	-3.2
	2.4nm,0.6s						
PVAQ	Vaqueiros	6.83	287	P	Pn	05 43 56.5	-0.6
PBDV	Barranco-do-Ve	6.96	285	ePn	Pn	05 43 59.4	+0.4
PBDV				A	A	05 45 31.4	
	3.8nm,0.3s						
PBDV	Barranco-do-Ve	6.96	285	P	Pn	05 43 59.4	+0.4
PBDV	Barranco-do-Ve	6.96	285	P	Pn	05 43 59.4	+0.4
PBEJ	Beja	7.09	291	ePn	Pn	05 44 00.8	+0.1
PBEJ	Beja	7.09	291	P	Pn	05 44 00.8	+0.1
PBEJ	Beja	7.09	291	P	Pn	05 44 00.8	+0.1
PCVE	Castro Verde	7.12	288	ePn	Pn	05 44 01.3	+0.1
PCVE				eSn	Sn	05 45 20.6	-0.9
PCVE	Castro Verde	7.12	288	P	Pn	05 44 01.3	+0.1
PCVE				S	Sn	05 45 20.6	-0.9
PCVE	Castro Verde	7.12	288	P	Pn	05 44 01.3	+0.1
PCVE				S	Sn	05 45 20.6	-0.9
PESTR	Estremoz	7.17	298	ePn	Pn	05 44 02.3	+0.5
PESTR	Estremoz	7.17	298	P	Pn	05 44 02.3	+0.5
PESTR	Estremoz	7.17	298	P	Pn	05 44 02.3	+0.5
KEST	Kesra	7.19	87	Pn	Pn	05 44 03.5	+1.4
	0.2nm,0.3s,baz=246,slow=3.2,SNR=11						
KEST				Sn	Sn	05 45 31.9	+8.6
	0.1nm,0.3s,baz=170,slow=18,SNR=1.9						
ETSF	Etsaut	7.20	354	ePn	Pn	05 44 02.3	0.0
ETSF				eSn	Sn	05 45 20.9	-2.6
	2.5nm,0.5s						
ETSF	Etsaut	7.20	354	P	Pn	05 44 02.3	0.0
PMRV	Marv??o	7.27	303	ePn	Pn	05 44 04.0	+0.7
PMRV				eSn	Sn	05 45 19.7	-5.5
PMRV				A	A	05 45 53.4	
	5.4nm,0.7s						
PMRV	Marv??o	7.27	303	P	Pn	05 44 04.0	+0.7
PMRV				S	Sn	05 45 19.7	-5.5
	5.4nm,0.7s						
PMRV	Marv??o	7.27	303	P	Pn	05 44 04.0	+0.7
EPF	Esparros	7.29	359	ePn	Pn	05 44 03.4	-0.1
EPF				eSn	Sn	05 45 22.4	-3.2
	2.3nm,0.4s						
EPF	Esparros	7.29	359	P	Pn	05 44 03.4	-0.1
EVO	Evora	7.36	295	ePn	Pn	05 44 05.1	+0.7
EVO				eSn	Sn	05 45 23.9	-3.3
	15nm,0.8s						
EVOP	Sao Brissos	7.44	295	ePn	Pn	05 44 05.1	-0.3
SJPF	Ste Jean	7.49	350	ePn	Pn	05 44 08.0	+1.8
SJPF				eSn	Sn	05 45 27.5	-3.0
	1.7nm,0.4s						
SJPF	Ste Jean	7.49	350	P	Pn	05 44 08.0	+1.8
PCBR	Castelo Branco	7.53	305	ePn	Pn	05 44 07.2	+0.4
PCBR	Castelo Branco	7.53	305	P	Pn	05 44 07.2	+0.4
PCBR	Castelo Branco	7.53	305	P	Pn	05 44 07.2	+0.4
PNCL	Nicolau / Gran	7.62	291	ePn	Pn	05 44 08.0	+0.1
PNCL	Nicolau / Gran	7.62	291	ePn	Pn	05 44 08.0	+0.1
EALK	Alkurruntz	7.63	349	P	Pn	05 44 08.3	+0.2
	6.6nm,0.5s,SNR=7.9						
EALK				S	Sn	05 45 30.5	-3.5
	53nm,1.5s,SNR=7.9						
EALK	Alkurruntz	7.63	349	P	Pn	05 44 08.3	+0.2
	6.6nm,0.5s,SNR=7.9						
PFVI	Vila Bisbo	7.65	283	ePn	Pn	05 44 08.8	+0.4
PFVI	Vila Bisbo	7.65	283	ePn	Pn	05 44 08.8	+0.4
PMTG	Montargil	7.71	298	ePn	Pn	05 44 09.8	+0.7
PMTG				eSn	Sn	05 45 33.3	-2.5
PMTG				A	A	05 45 35.4	
	2.7nm,0.5s						
PMTG	Montargil	7.71	298	ePn	Pn	05 44 09.8	+0.7
MTE	Manteigas	7.87	309	ePn	Pn	05 44 12.8	+1.3
MTE				eSn	Sn	05 45 39.8	-0.2
MTE				A	A	05 46 19.8	
	6.9nm,0.8s						
MTE	Manteigas	7.87	309	P	Pn	05 44 12.8	+1.3
MTE				S	Sn	05 45 39.8	-0.2
	3.5nm,0.8s						
MTE	Manteigas	7.87	309	P	Pn	05 44 12.8	+1.3
MTE				eSn	Sn	05 45 39.8	-0.2
	6.9nm,0.8s						
MVO	Moncorvo	8.02	315	ePn	Pn	05 44 14.7	+1.2
MVO				eSn	Sn	05 45 42.0	-1.6
MVO	Moncorvo	8.02	315	P	Pn	05 44 14.9	+1.4
	6.3nm,0.5s,SNR=13						
MVO				S	Sn	05 45 39.0	-4.6
	2.4nm,0.3s,SNR=7.9						
MVO	Moncorvo	8.02	315	ePn	Pn	05 44 14.7	+1.2
PTOM	Tomar	8.06	301	ePn	Pn	05 44 14.4	+0.4
PTOM	Tomar	8.06	301	P	Pn	05 44 14.4	+0.4
PTOM	Tomar	8.06	301	P	Pn	05 44 14.4	+0.4
ELAN	Lanestosa	8.08	339	P	Pn	05 44 15.9	+1.6
	3.5nm,0.4s,SNR=8.1						
ELAN				S	Sn	05 45 42.0	-2.9
	1.0nm,0.3s,SNR=7.9						
ELAN	Lanestosa	8.08	339	P	Pn	05 44 15.9	+1.6
	3.5nm,0.4s,SNR=8.1						
PVIS	Viseu	8.27	309	ePn	Pn	05 44 17.9	+0.9
PVIS	Viseu	8.27	309	P	Pn	05 44 17.9	+0.9
PVIS	Viseu	8.27	309	P	Pn	05 44 17.9	+0.9
PBRG	Braganca	8.29	319	ePn	Pn	05 44 18.7	+1.5
PBRG	Braganca	8.29	319	P	Pn	05 44 18.7	+1.5
PBRG	Braganca	8.29	319	P	Pn	05 44 18.7	+1.5
ECAL	Calabor	8.38	320	P	Pn	05 44 19.3	+0.8
	28nm,0.5s,SNR=23						
ECAL	Calabor	8.38	320	P	Pn	05 44 19.3	+0.8
	28nm,0.5s,SNR=23						
PMAFR	Mafra	8.43	295	ePn	Pn	05 44 18.1	-1.0
PMAFR	Mafra	8.43	295	ePn	Pn	05 44 18.1	-1.0
PVRL	Vila Real	8.49	313	ePn	Pn	05 44 21.6	+1.6
PVRL	Vila Real	8.49	313	P	Pn	05 44 21.6	+1.6
PVRL	Vila Real	8.49	313	P	Pn	05 44 21.6	+1.6
POLO	Lamas de Olo	8.60	313	ePn	Pn	05 44 22.7	+1.2
POLO	Lamas de Olo	8.60	313	ePn	Pn	05 44 22.7	+1.2
EARI	Arriondas	8.75	331	P	Pn	05 44 24.6	+1.1
	0.9nm,0.2s,SNR=37						
EARI	Arriondas	8.75	331	P	Pn	05 44 24.6	+1.1
	0.9nm,0.2s,SNR=37						
ELOB	Lobios	9.06	315	P	Pn	05 44 28.8	+0.9
	0.8nm,0.2s,SNR=7.7						
ELOB				S	Sn	05 46 05.6	-3.7
	5.5nm,0.6s,SNR=7.9						
ELOB	Lobios	9.06	315	P	Pn	05 44 28.8	+0.9
	0.8nm,0.2s,SNR=7.7						
GERES	GERESS Array B	16.30	32	Pn	P	05 46 08.1	-0.6
	0.1nm,0.3s,baz=210,slow=11,SNR=6.6						
CMLA	Cha da Macela	20.94	283	eS	S	05 50 39.6	-12
CMLA				A	A	05 50 41.0	
	24nm,0.2s						
PSET	Sete Cidades	21.09	283	eS	S	05 50 44.6	-11
PSET				A	A	05 50 45.5	
	13nm,0.1s						
MLR	Muntele Rosu	21.55	55	P	P	05 47 07.5	+1.2
	0.4nm,0.6s,baz=238,slow=13,SNR=3.0						
TORD	Torodi Ar. Bea	22.52	177	P	P	05 47 18.5	+1.9
	1.2nm,0.9s,baz=358,slow=8.0,SNR=6.5						
BRTR	Keskin Array B	26.42	71	P	P	05 47 54.9	+1.4
	0.2nm,0.3s,baz=259,slow=5.4,SNR=3.1						
EIL	Elat	29.51	92	LR	LR	06 01 57.5	
	comp=Z,37nm,19.4s,baz=279,slow=40						
KMBO	Kilima Mbogo	50.17	129	LR	LR	06 13 12.1	
	comp=Z,68nm,18.6s,baz=277,slow=37						
KURBB	Kurchatov Arra	56.23	49	P	P	05 51 57.2	+0.5
	2.6nm,0.8s,baz=291,slow=7.8,SNR=12						
ZALV	Zalesovo Beam	58.89	43	P	P	05 52 16.2	+0.8
	1.0nm,0.4s,baz=302,slow=6.5,SNR=3.1						
MKAR	Makanchi Array	59.84	52	P	P	05 52 22.3	+0.2
	0.6nm,0.3s,baz=287,slow=5.9,SNR=2.6						

*IDC **11** 05:50:15.2±0.6, 3.°32N×84.°09W, h0km, mb4.1/16, mb1 4.3/18, mb1mx4.2/27, mbtmp4.1/18, ML3.7/2, MS4.0/22, Ms1 4.0/22, ms1mx4.0/26, Error ellipse: s-maj=29.0km s-min=11.4km az=66.0*

*NEIC **11** 05:50:16.4±0.2, 3.°17N×84.°24W, h10km, mb4.7/65, Error ellipse: s-maj=6.0km s-min=4.0km az=224.0*

*BJI **11** 05:50:16.2, 3.°10N×84.°30W, h10km, mB5.2/4*

*CASC **11** 05:50:18.2±1.7, 3.°21N×84.°11W, h34km±525km, MD4.3, mb4.7(NEIC)*

*ISCJB **11** 05:50:18.7±0.3, 3.°30N±0.°03×84.°22W±0.°04, h33km, mb4.5/82, MS4.0/20, Error ellipse: s-maj=6.4km s-min=4.2km az=163.5*

*GCMT **11** 05:50:20.6±0.3, 3.°13N×84.°28W, h18km±1km, MW4.9, Moment Tensor Solution. s28,c36; s70,c100; Moment tensor: Scale 10^{16}Nm; M_{rr}-1.00±.13; $M_{\theta\theta}$0.99±.11; $M_{\phi\phi}$0.01±.13; $M_{r\theta}$0.10±.24; $M_{\theta\phi}$2.90±.10; $M_{\phi r}$0.41±.27; Best double couple: $M_0$3.00000×10^{16} NP1:ϕ_s95.00000°, δ80.00000°, λ-4.00000°. NP2:ϕ_s185.00000°, δ86.00000°, λ-170.00000°. Principal axes: T 3.4700, Plg4.0000°, Azm320.0000°; N -0.9900, Plg80.0000°, Azm205.0000°; P -2.4800, Plg9.0000°, Azm50.0000°; Data Used: IU IC II CN G.*

ISC 11 05:50:21.1±0.4, **3.°25N**±0.°05×**84.°22W**±0.°08, **h42**km, **n494**, σ**0.s81**/495, **mb4.5**/82, **MS4.0**/20, **161C-162D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	Cerro Adams	5.47	11	eP	Pn	05 51 37.3	-2.9
ACR				eS	Sn	05 52 40.7	-1.3
BRU2	Volcan	5.72	15	eP	Pn	05 51 41.7	-2.0
BRU2				eS	Sn	05 52 48.8	+0.7
QCR	Quepos	6.14	0	eP	Pn	05 51 46.1	-3.2
BUS	Buena Vista	6.29	4	eP	Pn	05 51 50.4	-1.3
OTAV	Otavalo	6.49	117	ePn	Pn	05 51 51.5	-3.1
URSC	Urasca	6.56	4	eP	Pn	05 51 54.5	-0.7
JCR	Jicaral	6.62	352	⇓eP	Pn	05 51 54.5	-1.4
SJS	Escuela Geolog	6.65	1	eP	Pn	05 51 55.1	-1.4
CGA2	Cerro Gallo 2	6.73	358	eP	Pn	05 51 55.8	-1.8
CGA2				eP	Pn	05 51 56.5	-1.1
VCR	Vista de Mar	6.98	348	eP	Pn	05 51 59.2	-1.7
JTS	JuntasAbangare	7.04	354	ePn	Pn	05 52 00.7	-1.0
JTS				Sn	Sn	05 53 17.9	-2.6
CHPA	Chiripa	7.18	355	i P	Pn	05 52 03.9	+0.1
CEDE	Laguna Cedeˆ–o	7.21	356	i P	Pn	05 52 04.2	+0.1
BCIP	Isla Barro Col	7.32	36	eP	Pn	05 52 11.0	+5.5
BCIP				eS	Sn	05 53 48.5	+21
BCIP	Isla Barro Col	7.32	36	ePn	Pn	05 52 06.7	+1.2
AMAS	Alto Masis	7.36	354	i P	Pn	05 52 06.0	-0.1
CUI	Cuipilapa	7.42	353	i P	Pn	05 52 06.9	-0.1
COLC	Colonia	7.44	352	i P	Pn	05 52 06.9	-0.2
NY14	Universidad de	7.47	350	i P	Pn	05 52 06.7	-0.9
LIM1	Limonal	7.47	352	i P	Pn	05 52 07.2	-0.5
MESS	Mesas	7.51	353	i P	Pn	05 52 08.0	-0.2
GPS3	Bodega del ICE	7.55	351	i P	Pn	05 52 08.3	-0.4

LAPC **Finca la Perla** 7.57 351 *i* P Pn 05 52 07.6 -1.4
BUEV **Buena Vista** 7.60 351 *i* P Pn 05 52 09.0 -0.4
GB1A **Borinquen Arri** 7.62 351 *i* P Pn 05 52 08.7 -0.9
GB1A *i* S Sn 05 53 34.3 -0.5
GBS2 **Las Lilas** 7.64 351 *i* P Pn 05 52 09.3 -0.6
ROSC **El Rosal** 9.99 80 Pn Pn 05 52 45.0 +2.5
ROSC **El Rosal** 9.99 80 Pn Pn 05 52 45.0 +2.5
0.7nm,0.3s,baz=266,slow=19,SNR=20
ATAH **Atahualpa** 11.84 151 Pn Pn 05 53 07.5 -0.3
ATAH **Atahualpa** 11.84 151 Pn Pn 05 53 07.5 -0.3
0.4nm,0.3s,baz=18,slow=6.4,SNR=3.0
NNA **Nana** 16.82 154 LR LR 05 59 44.5
comp=Z,213nm,20.6s,baz=314,slow=34
TEIG **Tepich** 17.34 347 *e*Pn Pn 05 54 19.6 -0.5
TEIG **Tepich** 17.34 347 P Pn 05 54 18.7 -1.4
0.3nm,0.3s,baz=162,slow=15,SNR=3.9
TEIG LR LR 06 00 30.1
comp=Z,752nm,19.3s,baz=12,slow=36
SDDR **Presa de Saban** 20.11 38 *e*P Pn 05 54 54.3 +0.6
284nm,2.3s
CRPR **Cabo Rojo, PR** 22.28 48 *e*P P 05 55 15.1 +0.3
62nm,0.9s
OBIP **Obispado Ponce** 22.67 48 *e*P P 05 55 20.0 +0.9
87nm,1.3s
AOPR **Arecibo Observ** 22.75 47 *e*P P 05 55 20.5 +0.6
68nm,1.0s
SJG **San Juan** 23.06 49 *e*P P 05 55 23.1 0.0
86nm,1.5s
CPD **Cerro la Pandu** 23.19 49 *e*P P 05 55 24.5 +0.1
130nm,1.7s
CBYP **Canovanas** 23.38 49 *e*P P 05 55 25.8 -0.5
62nm,1.4s
MTP **Monte Pirata** 23.50 50 *e*P P 05 55 27.1 -0.3
36nm,1.1s
CDVI **St. Croix** 23.91 52 *e*P P 05 55 31.6 +0.4
48nm,0.5s
SAML **Samuel** 24.22 120 *e*P P 05 55 32.6 -1.5
58nm,1.9s
LPAZ **La Paz** 25.09 141 *e*P P 05 55 42.1 -0.6
20nm,1.7s
LPAZ **La Paz** 25.09 141 P P 05 55 42.4 -0.3
1.7nm,0.8s,baz=312,slow=8.2,SNR=7.6
732A **Laxson Ranch,** 29.45 331 ⇑P P 05 56 21.1 +0.1
baz=30
LVC **Limon Verde** 29.73 151 LR LR 06 08 37.8
comp=Z,150nm,20.6s,baz=313,slow=37
LRAL **Lakeview Retre** 29.75 355 *e*P P 05 56 23.8 +0.2
15nm,0.9s
SIV **San Ignacio** 29.82 131 P P 05 56 23.8 -0.7
SIV **San Ignacio** 29.82 131 P P 05 56 23.8 -0.7
0.5nm,0.5s,baz=343,slow=11,SNR=3.0
SIV LR LR 06 08 28.2
comp=Z,951nm,20.4s,slow=37
632A **Uvalde** 30.01 332 ⇑P P 05 56 26.4 +0.4
baz=30,SNR=5.7
631A **Perdido Creek** 30.31 331 ⇓P P 05 56 28.6 0.0
baz=30
532A **Rocksprings** 30.59 333 ⇑P P 05 56 31.9 +0.7
baz=31,SNR=11
JCT **Junction City** 30.84 333 *e*P P 05 56 33.9 +0.5
17nm,1.3s
JCT **Junction City** 30.84 333 ⇑P P 05 56 33.8 +0.5
baz=31
531A **Rocksprings** 30.92 332 ⇓P P 05 56 34.3 +0.2
baz=31
432A **Menard** 31.17 334 ⇓P P 05 56 36.8 +0.5
baz=31
WHTX **Lake Whitney** 31.19 338 ⇑P P 05 56 36.6 +0.3
baz=31
530A **J-C Ranch, Com** 31.29 331 ⇑P P 05 56 37.8 +0.5
baz=32,SNR=8.0
431A **Sonora** 31.38 332 ⇑P P 05 56 38.9 +0.8
baz=32,SNR=30
628A **Black Gap, Mar** 31.55 328 ⇓P P 05 56 40.4 +0.8
baz=32
332A **Millersview** 31.58 334 ⇑P P 05 56 40.6 +0.8
baz=32,SNR=62
529A **Stev Forest Ra** 31.71 329 ⇑P P 05 56 41.4 +0.4
baz=32
430A **Baggett Ranch,** 31.76 331 ⇑P P 05 56 41.9 +0.4
baz=32,SNR=6.3
PLAL **Pickwick Lake** 31.78 354 *e*P P 05 56 41.4 -0.2
8.0nm,1.2s
627A **Terlingua Ranc** 31.79 327 ⇓P P 05 56 42.0 +0.2
baz=32
331A **San Angelo** 31.82 333 ⇓P P 05 56 42.6 +0.6
baz=32,SNR=13
TXAR **Lajitas Array** 31.85 327 P P 05 56 42.7 +0.3
TXAR PcP PcP 05 59 35.1 +2.5
TXAR **Lajitas Array** 31.85 327 P P 05 56 42.7 +0.3
0.7nm,0.7s,baz=154,slow=11,SNR=13
TXAR PcP PcP 05 59 35.1 +2.5
0.4nm,0.9s,baz=160,slow=2.9,SNR=3.8
TXAR LR LR 06 08 42.3
comp=Z,183nm,21.1s,baz=5.0,slow=35
KMSC **Kings Mountain** 31.85 4 ⇓P P 05 56 43.0 +0.9
baz=32,SNR=6.8
429A **Davenport Ranc** 31.95 330 ⇑P P 05 56 43.1 -0.1
baz=32
232A **Coleman** 31.98 335 ⇓P P 05 56 43.7 +0.4
baz=32,SNR=26
528A **Cox Ranch, San** 32.03 329 ⇑P P 05 56 43.9 0.0
baz=32
CPCT **Cooper Cave** 32.05 360 *e*P P 05 56 44.2 +0.4
330A **Mertzon** 32.25 332 ⇓P P 05 56 45.9 +0.1
baz=32
TKL **Tuckaleechee C** 32.26 1 P P 05 56 45.4 -0.3
TKL **Tuckaleechee C** 32.26 1 P P 05 56 45.4 -0.3
8.2nm,0.9s,baz=172,slow=10,SNR=15
UALR **University of** 32.27 347 *e*P P 05 56 45.5 -0.3
29nm,1.5s
626A **Big Bend Ranch** 32.27 326 ⇑P P 05 56 46.4 +0.3
baz=32,SNR=5.1
231A **Bronte** 32.31 334 ⇓P P 05 56 46.4 +0.1
baz=32
527A **Woodward Ranch** 32.45 328 ⇓P P 05 56 47.9 +0.2
baz=33,SNR=5.9
ABTX **Abilene, Hawle** 32.61 335 ⇓P P 05 56 49.3 +0.4
baz=33,SNR=15
230A **Sterling City** 32.62 333 ⇓P P 05 56 49.2 +0.2
baz=33
526A **Mary Lane Ranc** 32.64 327 ⇓P P 05 56 49.1 -0.3
baz=33
329A **Wagon Wheel Ra** 32.70 331 ⇑P P 05 56 50.1 +0.3
baz=33
WVT **Waverly** 32.89 355 *e*P P 05 56 50.3 -0.9
8.6nm,1.0s
427A **Hayter Ranch,** 32.90 329 ⇓P P 05 56 51.3 -0.2
baz=33
131A **Roby** 32.97 334 ⇓P P 05 56 52.4 +0.3
baz=33
328A **Wristen Ranch,** 33.02 330 ⇓P P 05 56 52.5 0.0
baz=33
426A **McDonald Obser** 33.08 328 ⇑P P 05 56 53.5 +0.2
baz=33
Z32A **Haskell** 33.14 336 ⇑P P 05 56 53.9 +0.4
baz=33,SNR=19
TZTN **Tazewell** 33.14 1 *e*P P 05 56 52.8 -0.7
13nm,1.0s
130A **Snyder** 33.16 334 ⇑P P 05 56 53.9 +0.2
baz=33
Z31A **Sharp Cattle R** 33.42 335 ⇓P P 05 56 56.3 +0.3
baz=34,SNR=15
326A **Caldwell Ranch** 33.56 328 ⇑P P 05 56 57.3 0.0
baz=34
129A **Stewart Farms,** 33.59 332 ⇑P P 05 56 57.4 -0.1
baz=34,SNR=8.9
425A **Indio Mountain** 33.69 327 ⇑P P 05 56 58.7 +0.2
baz=34,SNR=17
Y32A **R-V Farms, Ver** 33.73 337 ⇓P P 05 56 59.0 +0.3
baz=34,SNR=15
227A **Bennet, Jal** 33.77 330 ⇓P P 05 56 59.3 +0.2
baz=34
Z30A **Sanderson Ranc** 33.81 334 ⇑P P 05 56 59.7 +0.3
baz=34
128A **Castleberry Fa** 33.87 332 ⇓P P 05 57 00.2 +0.2
baz=34
BLA **Blacksburg** 33.98 5 *e*P P 05 57 01.2 +0.4
11nm,1.0s
Y31A **Rekieta Farm,** 34.03 336 ⇓P P 05 57 01.8 +0.6
baz=34,SNR=16
Z29A **Hungry Hill Ra** 34.05 333 ⇑P P 05 57 01.3 -0.2
baz=34,SNR=14
325A **Bean Ranch, Si** 34.13 327 ⇑P P 05 57 02.4 0.0
baz=34,SNR=9.8
WMOK **Wichita Mounta** 34.13 338 *e*P P 05 57 02.1 0.0
7.3nm,1.1s
WMOK *e*PP PP 05 58 20.2 +0.2

Y30A **Stafford Cattl** 34.22 335 ⇑P P 05 57 03.4 +0.5
baz=34
TUL1 **Tulsa** 34.22 343 ⇓P P 05 57 02.7 -0.1
baz=34
226B **Tecolote Peak,** 34.26 329 ⇓P P 05 57 04.0 +0.6
baz=34,SNR=7.0
127A **Arkansas Junct** 34.34 331 ⇓P P 05 57 03.9 -0.2
baz=34
Z28A **Tucker Farm, M** 34.38 332 ⇑P P 05 57 04.2 -0.2
baz=35
324A **Moseley Ranch,** 34.47 327 ⇑P P 05 57 05.1 -0.1
baz=35,SNR=14
X31A **McDonald Ranch** 34.50 337 ⇓P P 05 57 05.6 +0.3
baz=35
MNTX **Cornudas Mount** 34.61 327 *e*P P 05 57 06.3 0.0
4.2nm,0.8s
SIUC **Southern Illin** 34.61 353 *e*P P 05 57 06.2 0.0
19nm,1.0s
225A **Deer Hill, Car** 34.63 328 ⇓P P 05 57 07.3 +0.6
baz=35,SNR=7.4
126A **Clayton Basin,** 34.64 330 ⇓P P 05 57 06.6 -0.1
baz=35
X30A **Coker Ranch, T** 34.70 335 ⇑P P 05 57 07.7 +0.6
baz=35,SNR=18
JSRW **J. Sargeant Re** 34.77 9 *e*P P 05 57 06.9 -0.7
Z27A **Tatum** 34.79 331 ⇓P P 05 57 08.0 +0.1
baz=35
WCI **Wyandotte Cave** 34.87 357 *e*P P 05 57 08.1 -0.4
14nm,1.2s
224A **Cornudas Mount** 34.98 327 ⇓P P 05 57 09.6 0.0
baz=35,SNR=8.5
125A **Gardner Draw,** 34.98 329 ⇑P P 05 57 09.8 +0.2
baz=35,SNR=6.5
X29A **Tulia** 35.05 334 ⇓P P 05 57 10.2 +0.1
baz=35
MSTX **Muleshoe** 35.12 333 ⇓P P 05 57 11.1 +0.2
baz=35
Z26A **Caprock** 35.13 331 ⇓P P 05 57 11.2 +0.3
baz=35,SNR=6.1
Y27A **Causey** 35.23 332 ⇑P P 05 57 11.5 -0.3
baz=35
X28A **Dimmitt** 35.33 334 ⇓P P 05 57 12.6 +0.1
baz=36
AMTX **Amarillo** 35.41 335 *e*P P 05 57 13.8 +0.6
11nm,0.8s
124A **Stringfield Ra** 35.42 328 ⇑P P 05 57 14.3 +0.7
baz=36,SNR=11
V31A **Spring Creek L** 35.45 338 ⇑P P 05 57 14.0 +0.5
baz=36,SNR=9.5
OLIL **Olney** 35.50 355 *e*P P 05 57 13.5 -0.3
18nm,0.8s
Z25A **Roswell** 35.50 330 ⇓P P 05 57 14.6 +0.6
baz=36,SNR=8.7
W29A **Amarillo** 35.60 335 ⇓P P 05 57 15.1 +0.2
baz=36
BLO **Bloomington** 35.82 357 *e*P P 05 57 16.0 -0.6
12nm,0.8s
X27A **F and S Farms,** 35.84 333 ⇓P P 05 57 17.5 +0.5
baz=36
Z24A **Sheeppen Canyo** 35.87 329 ⇑P P 05 57 18.1 +0.8
baz=36,SNR=8.4
U31A **Nine Bar Ranch** 35.98 338 ⇓P P 05 57 18.9 +0.8
baz=36
Y25A **Mesa, Roswell** 36.00 330 ⇑P P 05 57 19.2 +0.8
baz=36,SNR=8.7
X26A **CR and CF Fran** 36.09 332 ⇓P P 05 57 19.6 +0.5
baz=36
320A **Kipp Ranch, An** 36.13 323 ⇓P P 05 57 20.6 +1.0
baz=36,SNR=7.0
W27A **Bowe Ranch, En** 36.17 333 ⇓P P 05 57 20.1 +0.4
baz=36,SNR=9.7
Z23A **Rita Site, Whi** 36.27 328 ⇑P P 05 57 21.7 +1.0
baz=36
Y24A **Capitan** 36.38 330 ⇓P P 05 57 22.2 +0.6
baz=37,SNR=10
V28A **Channing** 36.38 335 ⇓P P 05 57 22.1 +0.5
baz=37
U30A **WK&E Inc. Balk** 36.42 337 ⇑P P 05 57 22.5 +0.7
baz=37,SNR=7.3
X25A **Clemmons Ranch** 36.47 331 ⇑P P 05 57 22.7 +0.3
baz=37
220A **Playas Peak, P** 36.54 324 ⇑P P 05 57 24.0 +0.9
baz=37,SNR=6.1
T31A **Randall Ranch,** 36.56 339 ⇓P P 05 57 23.5 +0.5
baz=37
121A **Cookes Peak, D** 36.57 325 ⇑P P 05 57 24.9 +1.5
baz=37,SNR=5.9
319A **Douglas** 36.61 323 ⇑P P 05 57 24.3 +0.6
baz=37
Z22A **Elephant Butte** 36.66 327 ⇓P P 05 57 25.2 +1.2
baz=37,SNR=14
Y23A **Lovelace Mesa,** 36.70 329 ⇑P P 05 57 25.5 +1.1
baz=37,SNR=46
T30A **Plains** 36.84 338 ⇑P P 05 57 26.5 +1.1
baz=37
X24A **Lazy VL Ranch,** 36.88 330 ⇓P P 05 57 26.6 +0.6
baz=37,SNR=7.8
W25A **X Bar L Ranch,** 36.94 332 ⇑P P 05 57 27.3 +0.9
baz=37,SNR=17
SFIN **Scholer Farm** 37.06 356 ⇓P P 05 57 25.6 -1.5
baz=37
120A **U Bar Ranch, L** 37.06 325 ⇓P P 05 57 28.2 +0.7
baz=37
Z21A **St. Cloud Mine** 37.09 326 ⇓P P 05 57 28.9 +1.2
baz=37,SNR=7.7
V26A **Tequesquite Ra** 37.10 333 ⇓P P 05 57 28.8 +1.0
baz=37,SNR=14
BNM **Barren Site** 37.17 328 *e*P P 05 57 29.8 +1.3
Y22A **Socorro** 37.18 328 ⇑P P 05 57 29.9 +1.4
baz=37,SNR=13
U27A **Thompson Grove** 37.21 335 ⇓P P 05 57 29.3 +0.7
baz=37
T29A **Hugoton** 37.22 337 ⇑P P 05 57 29.3 +0.7
baz=37,SNR=6.3
X23A **Hourglass Bar** 37.27 329 ⇓P P 05 57 29.4 0.0
baz=38
S30A **Montezuma** 37.33 339 ⇓P P 05 57 30.1 +0.6
baz=38,SNR=6.3
W24A **Lazy 6 Ranch,** 37.39 331 ⇑P P 05 57 31.1 +0.9
baz=38,SNR=16
KSU1 **Kansas State U** 37.43 344 *e*P P 05 57 30.9 +0.6
16nm,0.7s
Z20A **Nine Sixteen R** 37.46 325 ⇓P P 05 57 32.2 +1.3
baz=38,SNR=9.1
T28A **Walsh** 37.51 336 ⇓P P 05 57 31.1 0.0
baz=38
V25A **Rancho No Teng** 37.52 332 ⇓P P 05 57 32.2 +0.8
baz=38,SNR=23
S29A **Ulysses** 37.56 338 ⇑P P 05 57 32.4 +0.9
baz=38,SNR=10
R31A **Burdett** 37.58 340 ⇑P P 05 57 32.2 +0.6
baz=38,SNR=8.0
U26A **Atchley Ranch,** 37.58 334 ⇑P P 05 57 32.7 +0.8
baz=38,SNR=18
Y21A **Point of Rocks** 37.61 327 ⇓P P 05 57 33.8 +1.5
baz=38,SNR=10
LAZ **Ladron** 37.63 328 *e*P P 05 57 33.6 +1.3
ANMO **Albuquerque** 37.70 329 *e*P P 05 57 33.6 +0.7
7.7nm,0.9s
T27A **Campo** 37.71 335 ⇑P P 05 57 33.2 +0.4
baz=38
W23A **Werner Place,** 37.71 330 ⇑P P 05 57 34.3 +1.3
baz=38,SNR=17
V24A **Rampart Ranch,** 37.74 331 ⇓P P 05 57 33.9 +0.6
baz=38,SNR=12
S28A **Manter** 37.83 337 ⇑P P 05 57 34.1 +0.2
baz=38,SNR=6.2
R30A **Dighton** 37.84 339 ⇑P P 05 57 34.7 +0.9
baz=38,SNR=14
CFAA **Coronel Fontan** 37.85 157 P P 05 57 33.8 -0.1
CFAA **Coronel Fontan** 37.85 157 P P 05 57 33.8 -0.1
0.2nm,0.6s,baz=331,slow=8.5,SNR=5.2
U25A **Circle Dot Ran** 37.88 333 ⇑P P 05 57 34.9 +0.4
baz=38
Y20A **Horse Springs,** 37.92 326 ⇑P P 05 57 36.2 +1.3
baz=38,SNR=11
X21A **Alamocita Cree** 38.01 328 ⇑P P 05 57 37.0 +1.4
baz=38,SNR=9.6
W22A **Albuquerque** 38.01 329 ⇓P P 05 57 36.9 +1.4
baz=38,SNR=5.3
T26A **Comanche Natio** 38.17 335 ⇑P P 05 57 37.6 +0.7
baz=38
TUC **Tucson** 38.18 322 *e*P P 05 57 35.9 -1.0
172nm,2.6s
Q31A **Ellis** 38.18 341 ⇓P P 05 57 37.6 +0.9
baz=38
V23A **Ortiz Mt. (NFS** 38.19 331 ⇓P P 05 57 38.6 +1.5
baz=38,SNR=7.2

R29A **Marienthal** 38.27 338 ⇓P P 05 57 38.3 +0.8
baz=38
Q30A **Quinter** 38.44 340 ⇑P P 05 57 39.6 +0.7
baz=39,SNR=12
R28A **Tribune** 38.45 338 ⇓P P 05 57 39.7 +0.6
baz=39,SNR=14
X20A **Quemado** 38.46 327 ⇓P P 05 57 40.9 +1.5
baz=39,SNR=7.3
S26A **Kim** 38.50 335 ⇓P P 05 57 40.5 +1.0
baz=39,SNR=7.2
T25A **Trinidad** 38.50 334 ⇑P P 05 57 40.9 +1.3
baz=39,SNR=12
Q29A **Oakley** 38.63 339 ⇓P P 05 57 41.1 +0.6
baz=39,SNR=9.5
P31A **Stockton** 38.65 341 ⇑P P 05 57 41.4 +0.8
baz=39,SNR=8.6
U23A **El Rito** 38.66 331 ⇑P P 05 57 42.3 +1.3
baz=39,SNR=23
V22A **San Miguel Ran** 38.69 330 ⇑P P 05 57 42.3 +1.0
baz=39
R27A **Eads** 38.79 336 ⇓P P 05 57 42.4 +0.4
baz=39
W20A **Ramah** 38.90 328 ⇓P P 05 57 44.3 +1.2
baz=39,SNR=11
S25A **Robets Cordova** 38.94 334 ⇓P P 05 57 44.3 +1.0
baz=39,SNR=7.3
P30A **Selden** 38.95 340 ⇑P P 05 57 44.2 +1.0
baz=39,SNR=12
V21A **Milan** 38.97 329 ⇑P P 05 57 44.3 +0.7
baz=39
U22A **Llaves** 39.02 330 ⇑P P 05 57 45.3 +1.3
baz=39,SNR=15
R26A **Arlington** 39.07 336 ⇑P P 05 57 45.4 +1.1
baz=39,SNR=7.9
Q28A **Sharon Springs** 39.09 338 ⇑P P 05 57 45.4 +1.0
baz=39
T23A **Casias Ranch,** 39.16 332 ⇓P P 05 57 46.2 +1.0
baz=39,SNR=16
P29A **Atwood** 39.24 339 ⇑P P 05 57 46.5 +0.8
baz=40,SNR=10
CPUP **Villa Florida** 39.26 140 P P 05 57 44.8 -1.0
CPUP **Villa Florida** 39.26 140 P P 05 57 44.8 -1.0
0.4nm,0.5s,baz=13,slow=8.5,SNR=3.4
CPUP LR LR 06 15 44.4
comp=Z,340nm,20.8s,baz=306,slow=39
X18A **Snowflake** 39.26 325 ⇑P P 05 57 47.0 +1.0
baz=39,SNR=8.4
S24A **Houchin Ranch,** 39.27 333 ⇑P P 05 57 47.4 +1.2
baz=40,SNR=6.3
R25A **Fountain Ranch** 39.29 335 ⇓P P 05 57 47.2 +1.1
baz=40
KSCO **Kaye Shedlock'** 39.35 337 ⇓P P 05 57 47.5 +0.9
baz=40
V20A **Brimhall** 39.40 328 ⇓P P 05 57 47.8 +0.7
baz=40
O30A **MW Ranch, Wils** 39.46 341 ⇑P P 05 57 48.1 +0.7
baz=40,SNR=6.2
U21A **Nageezi** 39.46 330 ⇓P P 05 57 48.8 +1.0
baz=40
BINY **Binghamton** 39.48 10 *e*P P 05 57 47.8 +0.3
18nm,1.3s
T22A **Edith** 39.55 331 ⇑P P 05 57 49.6 +1.1
baz=40
W18A **Petrified Fore** 39.57 326 ⇑P P 05 57 49.3 +0.7
baz=40
Q26A **Hugo** 39.63 336 ⇓P P 05 57 50.0 +1.1
baz=40,SNR=8.4
O29A **4D Ranch, Culb** 39.66 340 ⇓P P 05 57 50.5 +1.4
baz=40
R24A **Sanders Place,** 39.71 334 ⇑P P 05 57 50.8 +1.0
baz=40
P27A **Ficken Ranch,** 39.80 338 ⇑P P 05 57 51.2 +0.9
baz=40,SNR=9.8
T21A **Navajo Lake** 39.84 330 ⇓P P 05 57 51.5 +0.6
baz=40
JFWS **Jewell Farm** 39.86 353 *e*P P 05 57 49.7 -0.9
9.8nm,1.1s
U20A **Newcomb** 39.86 329 ⇑P P 05 57 52.1 +1.1
baz=40,SNR=7.1
Q25A **Bedland, Calha** 39.92 335 ⇓P P 05 57 52.2 +0.7
baz=40,SNR=14
R23A **Moffat** 40.00 333 ⇑P P 05 57 53.1 +0.9
baz=40
BGNE **Belgrade** 40.01 344 ⇓P P 05 57 52.2 +0.3
baz=40
X16A **Lo Mia Camp, P** 40.04 324 ⇑P P 05 57 53.4 +0.9
baz=40,SNR=7.4
S22A **4UR Ranch, Cre** 40.10 332 ⇓P P 05 57 53.9 +0.8
baz=40,SNR=9.4
P26A **Davis Ranch, A** 40.10 337 ⇑P P 05 57 53.8 +0.9
baz=40,SNR=5.4
O27A **Beecher Island** 40.32 338 ⇑P P 05 57 55.6 +1.0
baz=40
P25A **Willow Gulch B** 40.39 336 ⇑P P 05 57 56.1 +0.7
baz=41,SNR=7.5
N28A **Pribbeno Ranch** 40.42 340 ⇑P P 05 57 56.5 +1.0
baz=41
BDFB **Brasilia** 40.44 119 LR LR 06 16 40.7
comp=Z,268nm,18.3s,baz=182,slow=39
R22A **Saguache, Gunn** 40.46 332 ⇓P P 05 57 56.8 +0.8
baz=41,SNR=6.4
S21A **Coal Bank Pass** 40.50 331 ⇑P P 05 57 56.9 +0.5
baz=41,SNR=7.5
M30A **Dale-Ortello V** 40.63 342 ⇑P P 05 57 58.5 +1.4
baz=41
Y14A **Wickenburg** 40.65 322 ⇑P P 05 57 57.7 +0.3
baz=41
O26A **Horse Wrangler** 40.68 337 ⇓P P 05 57 58.5 +0.9
baz=41
P24A **Kohler Place,** 40.70 335 ⇑P P 05 57 59.1 +1.2
baz=41
WUAZ **Wupatki** 40.78 325 *e*P P 05 58 00.2 +1.6
15nm,1.0s
WUAZ **Wupatki** 40.78 325 ⇑P P 05 57 59.4 +0.9
baz=41,SNR=8.0
M29A **Burnside Ranch** 40.81 341 ⇑P P 05 57 59.5 +0.9
baz=41
N27A **Anderson Farm,** 40.88 339 ⇑P P 05 57 60.0 +0.7
baz=41,SNR=6.2
O25A **Wiggins** 40.88 336 ⇑P P 05 57 59.8 +0.5
baz=41
Q22A **Crested Butte,** 41.04 333 ⇑P P 05 58 01.6 +0.8
baz=41,SNR=14
N26A **Koester Ranch,** 41.15 338 ⇑P P 05 58 02.3 +0.8
baz=41
R20A **Redvale** 41.20 331 ⇓P P 05 58 02.8 +0.8
baz=41,SNR=7.2
ISCO **Idaho Springs** 41.23 335 *e*P P 05 58 03.2 +0.8
3.4nm,0.9s
ISCO **Idaho Springs** 41.23 335 ⇓P P 05 58 03.2 +0.8
baz=41,SNR=6.1
PV01 **Paradox Valley** 41.25 330 *e*P P 05 58 03.7 +1.2
P22A **Eagle** 41.56 333 ⇓P P 05 58 05.6 +0.5
baz=42
SADO **Sadowa** 41.59 5 P P 05 58 03.9 -1.0
SADO **Sadowa** 41.59 5 P P 05 58 03.9 -1.0
3.4nm,0.9s,baz=218,slow=8.8,SNR=6.1
PV04 **Paradox Valley** 41.62 330 *e*P P 05 58 06.1 +0.7
S18A **Hurst Farm, Bl** 41.63 329 ⇑P P 05 58 05.9 +0.3
baz=42,SNR=7.1
PV10 **Paradox Valley** 41.67 330 *e*P P 05 58 04.5 -1.4
O23A **Lake Granby, G** 41.71 335 ⇑P P 05 58 07.0 +0.7
baz=42
ECSD **EROS Data Cent** 41.79 346 *e*P P 05 58 05.9 -0.7
19nm,1.0s
P21A **Newcastle** 41.82 333 ⇑P P 05 58 08.1 +1.0
baz=42,SNR=20
K29A **Lazy Trails An** 41.88 342 ⇓P P 05 58 08.7 +1.3
baz=42
O22A **Kremmling** 41.94 334 ⇓P P 05 58 08.5 +0.4
baz=42,SNR=6.8
U15A **North Rim** 41.95 325 ⇑P P 05 58 09.5 +1.2
baz=42,SNR=15
W13A **Hualapai Mount** 41.97 323 ⇑P P 05 58 09.2 +0.8
baz=42,SNR=6.5
BC3 **Big Chuckawall** 42.01 320 ⇓P P 05 58 09.3 +0.7
baz=42
IRM **Iron Mountain** 42.13 321 ⇓P P 05 58 10.4 +0.8
baz=42
K28A **Ten Mile Ranch** 42.17 341 ⇓P P 05 58 10.9 +1.1
baz=42
N23A **Red Feather La** 42.29 335 ⇑P P 05 58 11.6 +0.7
baz=42,SNR=7.1
M24A **Cheyenne** 42.32 337 ⇓P P 05 58 12.3 +1.2
baz=42
O21A **Pagoda** 42.39 333 ⇓P P 05 58 12.7 +0.9
baz=43
N22A **Wattenberg Ran** 42.42 335 ⇓P P 05 58 13.2 +1.1

baz=43
PHWY **Pilot Hill** 42.43 336 *e*P P 05 58 12.8 +0.6
8.3nm,1.3s
BELC **Belle Mtn. Jos** 42.58 320 ⇑P P 05 58 13.8 +0.6
baz=43
P19A **Cripple Cowboy** 42.62 331 ⇑P P 05 58 13.9 +0.2
baz=43,SNR=6.3
PFO **Pinyon Flat Ob** 42.63 319 LR LR 06 14 34.0
comp=Z,226nm,21.7s,baz=309,slow=34
O20A **White River Ci** 42.67 333 ⇓P P 05 58 14.7 +0.6
baz=43
M23A **Laramie** 42.68 336 ⇑P P 05 58 14.9 +0.8
baz=43
J28A **Allard Ranch,** 42.77 342 ⇑P P 05 58 15.6 +1.0
baz=43
K26A **Motz Farm, Whi** 42.77 339 ⇑P P 05 58 15.8 +1.1
baz=43
N21A **Black Mountain** 42.85 334 ⇑P P 05 58 16.6 +1.0
baz=43,SNR=8.9
GMRC **Granite Mounta** 42.85 321 ⇑P P 05 58 16.2 +0.7
baz=43
K25A **Mack Ranch, Ha** 42.94 339 ⇓P P 05 58 17.3 +1.2
baz=43
SRU **San Rafael** 42.98 330 ⇑P P 05 58 16.7 +0.2
baz=43,SNR=10
M22A **Cedar Creek Ra** 42.98 335 ⇑P P 05 58 17.6 +1.0
baz=43
Q16A **Castle Valley** 43.16 329 ⇑P P 05 58 18.5 +0.5
baz=43,SNR=6.3
L23A **Garrett** 43.21 337 ⇓P P 05 58 18.9 +0.4
baz=43,SNR=12
O19A **Miners Draw (B** 43.21 332 ⇓P P 05 58 19.1 +0.8
baz=43
N20A **Spence Gulch,** 43.24 333 ⇑P P 05 58 19.1 +0.5
baz=43,SNR=8.0
CCUT **Cedar City** 43.35 326 *e*P P 05 58 20.8 +1.2
8.4nm,1.1s
MVU **Marysvale** 43.40 328 *e*P P 05 58 20.9 +0.8
5.0nm,0.9s
L22A **Ellis Ranch, M** 43.44 336 ⇓P P 05 58 21.0 +0.8
baz=44,SNR=5.6
TUQ **Turquoise Moun** 43.44 321 ⇓P P 05 58 20.6 +0.3
baz=44
M21A **Separation Pea** 43.48 335 ⇑P P 05 58 21.4 +0.9
baz=44
ARUT **Antelope Range** 43.56 326 *e*P P 05 58 22.4 +1.1
9.2nm,1.0s
J25A **Sunshine Ranch** 43.60 339 ⇑P P 05 58 22.4 +1.1
baz=44
K23A **Bowen Ranch, D** 43.72 337 ⇓P P 05 58 23.3 +0.9
baz=44
M20A **Sweetwater, Wa** 43.74 334 ⇑P P 05 58 23.3 +0.6
baz=44
L21A **Rawlins** 43.77 335 ⇓P P 05 58 23.1 +0.2
baz=44,SNR=6.6
CIS **Catalina Islan** 43.81 317 ⇓P P 05 58 23.7 +0.6
baz=44
GSC **Goldstone** 43.91 321 *e*P P 05 58 25.2 +1.3
6.3nm,1.3s
GSC **Goldstone** 43.91 321 ⇓P P 05 58 24.3 +0.3
baz=44
K22A **Casper** 43.99 336 ⇑P P 05 58 24.9 +0.3
baz=44,SNR=5.9
L20A **Wamsutter** 44.22 334 ⇑P P 05 58 26.9 +0.3
baz=44
K21A **Alcova** 44.27 336 ⇑P P 05 58 26.9 0.0
baz=44,SNR=5.8
RSSD **Black Hills** 44.32 340 *e*P P 05 58 27.8 +0.6
7.7nm,1.0s
DAU **Daniels Canyon** 44.33 330 *e*P P 05 58 27.8 +0.3
EDW2 **Edwards Air Fo** 44.41 319 ⇑P P 05 58 27.7 -0.2
baz=44
JLU **Jordanelle** 44.57 330 *e*P P 05 58 29.6 +0.2
10nm,1.2s
J22A **Midwest** 44.61 337 ⇓P P 05 58 29.7 +0.1
baz=45,SNR=7.2
FURC **Furnace Creek,** 44.69 322 ⇓P P 05 58 29.9 -0.1
baz=45
L19A **Farson** 44.75 333 ⇓P P 05 58 30.7 0.0
baz=45
K20A **Yellowstone Ra** 44.75 335 ⇑P P 05 58 30.6 -0.1
baz=45,SNR=21
MPMC **Manual Prospec** 44.82 321 ⇑P P 05 58 30.7 -0.7
baz=45
M17A **Scullys Gap (B** 44.86 332 ⇑P P 05 58 31.3 -0.3
baz=45,SNR=14
J21A **Lysite** 44.95 336 ⇑P P 05 58 32.9 +0.7
baz=45
DUG **Dugway** 44.96 329 *e*P P 05 58 33.0 +0.7
4.8nm,1.0s
EYMN **Ely** 44.97 353 *e*P P 05 58 31.4 -0.7
11nm,1.6s
I22A **9 Mile Ranch,** 45.02 337 ⇓P P 05 58 33.1 +0.3
baz=45,SNR=5.6
H24A **Dirks Ranch, A** 45.04 340 ⇑P P 05 58 33.0 +0.1
baz=45,SNR=7.5
K19A **Absolon Red Bu** 45.10 334 ⇑P P 05 58 33.4 -0.2
baz=45,SNR=12
R11A **Troy Canyon, C** 45.17 325 ⇓P P 05 58 34.8 +0.7
baz=45,SNR=9.8
J20A **Shoshoni** 45.21 335 ⇑P P 05 58 34.7 +0.4
baz=45
I21A **Big Trails, Te** 45.27 336 ⇓P P 05 58 35.2 +0.4
baz=46
GRAC **Grapevine Rang** 45.34 322 ⇑P P 05 58 36.1 +0.8
baz=46,SNR=6.3
BW06 **Boulder Array** 45.37 334 *e*P P 05 58 35.3 -0.4
3.9nm,0.9s
PDAR **Pinedale Array** 45.37 334 P P 05 58 35.3 -0.4
PDAR PcP PcP 06 00 14.8 +0.2
PDAR **Pinedale Array** 45.37 334 P P 05 58 35.3 -0.4
4.1nm,0.9s,baz=126,slow=9.3,SNR=21
PDAR PcP PcP 06 00 14.8 +0.2
0.3nm,0.3s,baz=142,slow=4.6,SNR=2.3
PDAR LR LR 06 18 43.3
comp=Z,358nm,19.5s,baz=150,slow=38
HWUT **Hardware Ranch** 45.39 331 *e*P P 05 58 35.9 +0.1
16nm,0.8s
G24A **Alzada** 45.50 340 ⇓P P 05 58 37.2 +0.7
baz=46
PLCA **Paso Flores** 45.52 165 P P 05 58 36.8 +0.1
PLCA **Paso Flores** 45.52 165 P P 05 58 36.8 +0.1
1.8nm,1.0s,baz=307,slow=10.0,SNR=2.8
PLCA LR LR 06 13 42.2
comp=Z,138nm,20.6s,baz=358,slow=31
J19A **Crowheart** 45.55 335 ⇑P P 05 58 37.4 +0.4
baz=46
H22A **Clearmont** 45.56 338 ⇑P P 05 58 37.6 +0.6
baz=46
VES **Vestal, Richgr** 45.70 320 ⇑P P 05 58 37.9 -0.3
baz=46
I20A **Worland** 45.72 336 ⇑P P 05 58 38.5 +0.2
baz=46,SNR=13
G23A **Biddle** 45.73 339 ⇓P P 05 58 38.9 +0.6
baz=46
F24A **Ekalaka** 45.97 340 ⇓P P 05 58 40.2 0.0
baz=46,SNR=7.6
AGMN **Agassiz Nation** 45.99 349 *e*P P 05 58 39.9 -0.3
22nm,0.8s
AHID **Auburn Hatcher** 46.07 332 *e*P P 05 58 40.3 -0.8
10.0nm,1.3s
G22A **Birney** 46.08 338 ⇑P P 05 58 41.3 +0.3
baz=46
HVU **Hansel Valley** 46.11 330 *e*P P 05 58 41.6 +0.1
8.6nm,0.9s
H20A **Greybull** 46.12 336 ⇑P P 05 58 41.5 +0.1
baz=46
I19A **Meeteetse** 46.15 335 ⇑P P 05 58 41.6 -0.2
baz=46
F23A **Volborg** 46.19 339 ⇑P P 05 58 42.0 +0.1
baz=46,SNR=14
I18A **Diamond G Ranc** 46.23 334 ⇓P P 05 58 42.2 -0.3
baz=46
MDND **Maddock** 46.37 346 ⇓P P 05 58 43.5 +0.3
baz=47,SNR=12
G21A **Lodge Grass** 46.42 338 ⇓P P 05 58 43.6 -0.2
baz=47
SNOW **Snow King Moun** 46.45 333 *e*P P 05 58 44.3 0.0
13nm,1.1s
LOHW **Long Hollow** 46.51 334 *e*P P 05 58 44.6 0.0
3.3nm,0.8s
F22A **Rosebud** 46.54 339 ⇓P P 05 58 44.3 -0.3
baz=47
TPAW **Teton Pass** 46.56 333 *e*P P 05 58 45.0 -0.2
8.2nm,1.0s
RRI2 **Red Ridge** 46.62 333 *e*P P 05 58 45.5 -0.1
9.9nm,0.8s
ELK **Elko** 46.63 327 *e*P P 05 58 45.8 +0.2
4.7nm,0.8s
MOOW **Moose Ponds** 46.68 334 *e*P P 05 58 45.7 -0.3
5.4nm,1.3s
G20A **Bridger** 46.81 337 ⇑P P 05 58 46.1 -0.8
baz=47,SNR=7.3
NVAR **Mina Array Bea** 46.82 323 P P 05 58 47.9 +0.7
NVAR **Mina Array Bea** 46.82 323 P P 05 58 47.9 +0.7
4.3nm,0.8s,baz=134,slow=7.1,SNR=32
NVAR LR LR 06 18 56.6
comp=Z,200nm,18.6s,baz=260,slow=37
E23A **Ismay** 46.83 340 ⇓P P 05 58 47.5 +0.6
baz=47
IMW **Indian Meadow** 46.88 334 *e*P P 05 58 47.3 -0.3
2.7nm,0.8s
F21A **Absaloka Mine,** 46.90 338 ⇓P P 05 58 47.6 +0.2
baz=47
H18A **Shoshone NF, C** 46.95 335 ⇑P P 05 58 48.3 +0.2
baz=47
E22A **Miles City** 47.00 340 ⇓P P 05 58 48.2 0.0
baz=47
D24A **Glendive** 47.05 341 ⇑P P 05 58 49.1 +0.6
baz=47
I16A **Newdale** 47.11 333 ⇓P P 05 58 49.7 +0.4
baz=47
RLMT **Red Lodge** 47.15 336 *e*P P 05 58 49.1 -0.5
4.3nm,1.0s
D23A **Linsay** 47.38 341 ⇓P P 05 58 51.6 +0.4
baz=48
G18A **Lazy EL Ranch,** 47.43 336 ⇓P P 05 58 51.6 -0.1
baz=48
C24A **Savage** 47.45 341 ⇓P P 05 58 52.2 +0.6
baz=48
E21A **Keefer Ranch,** 47.49 339 ⇑P P 05 58 52.1 +0.1
baz=48
F19A **Roth Farm, Mol** 47.62 337 ⇑P P 05 58 52.9 -0.2
baz=48
H16A **Russell Place,** 47.65 334 ⇓P P 05 58 53.2 -0.4
baz=48
D22A **Cohagen** 47.69 340 ⇓P P 05 58 53.9 +0.3
baz=48,SNR=7.0
QLMT **Earthquake Lak** 47.83 334 *e*P P 05 58 56.0 +1.1
E20A **Meyer Farm, Mu** 47.85 338 ⇓P P 05 58 54.9 +0.1
baz=48,SNR=8.5
GCMT **Greycliff** 47.86 336 *e*P P 05 58 54.8 -0.2
ULM **Lac du Bonnet** 47.87 350 P P 05 58 54.2 -0.6
ULM **Lac du Bonnet** 47.87 350 P P 05 58 54.2 -0.6
32nm,1.0s,baz=166,slow=9.4,SNR=19
D21A **La Casta Ranch** 47.91 339 ⇑P P 05 58 55.7 +0.5
baz=48
G17A **Pierce Place,** 47.92 335 ⇓P P 05 58 56.6 +1.1
baz=48,SNR=13
C23A **Lambert** 47.93 341 ⇓P P 05 58 55.8 +0.4
baz=48
F18A **Big Timber** 47.97 336 ⇑P P 05 58 56.0 +0.2
baz=48,SNR=15
I14A **Mackay** 48.06 332 ⇓P P 05 58 57.2 +0.6
baz=48,SNR=16
E19A **Rath Farm, Rou** 48.06 337 ⇑P P 05 58 56.4 -0.1
baz=48,SNR=8.1
C22A **Vida** 48.11 340 ⇑P P 05 58 57.3 +0.5
baz=48
HLID **Hailey** 48.25 331 *e*P P 05 58 58.6 +0.5
5.0nm,1.1s
HLID **Hailey** 48.25 331 ⇓P P 05 58 58.4 +0.3
baz=48,SNR=9.1
D20A **Manuel Ranch,** 48.34 338 ⇑P P 05 58 58.8 +0.2
baz=48,SNR=11
F17A **Fitzpatrick Pl** 48.36 335 ⇓P P 05 58 59.0 +0.1
baz=49
A24A **Westby** 48.55 343 ⇓P P 05 59 00.7 +0.5
baz=49
BOZ **Bozeman (W)** 48.56 334 *e*P P 05 59 00.1 -0.4
5.9nm,1.0s
E18A **Harlowton** 48.59 336 ⇑P P 05 59 00.8 +0.2
baz=49
C21A **Desert Coulee** 48.59 340 ⇑P P 05 59 00.8 +0.3
baz=49
F16A **Kennard Place,** 48.67 335 ⇓P P 05 59 01.4 +0.1
baz=49
D19A **Cripps Ranch,** 48.68 338 ⇓P P 05 59 01.4 +0.1
baz=49,SNR=13
DLMT **Dillon** 48.76 334 *e*P P 05 59 01.9 -0.1
6.8nm,1.4s
I12A **Atlanta** 48.77 330 ⇓P P 05 59 02.3 +0.2
baz=49
C20A **Veseth Ranch,** 48.82 339 ⇓P P 05 59 02.6 +0.4
baz=49
MFID **Camas Ranch** 48.84 330 *e*P P 05 59 02.5 -0.2
6.2nm,1.0s
MFID **Camas Ranch** 48.84 330 ⇓P P 05 59 02.4 -0.2
baz=49
A23A **Redstone** 48.85 342 ⇑P P 05 59 02.5 0.0
baz=49
E17A **Martinsdale** 48.89 336 ⇓P P 05 59 02.9 0.0
baz=49
D18A **Linhart Farms,** 49.06 337 ⇓P P 05 59 04.3 +0.1
baz=49,SNR=5.8
F15A **Butte** 49.09 334 ⇑P P 05 59 04.3 -0.2
baz=49
H12A **Diamond D Ranc** 49.19 331 ⇓P P 05 59 05.1 -0.2
baz=49
A22A **Carney Farms,** 49.21 341 ⇓P P 05 59 05.7 +0.5
baz=49,SNR=7.4
C19A **Slack Wire Ran** 49.22 338 ⇓P P 05 59 05.4 +0.1
baz=49,SNR=14
E16A **East Helena** 49.28 335 ⇑P P 05 59 06.2 +0.2
baz=50
D17A **Six Diamond Ra** 49.38 336 ⇑P P 05 59 06.6 0.0
baz=50,SNR=6.4
B20A **Solberg Farm,** 49.44 339 ⇓P P 05 59 07.1 +0.1
baz=50,SNR=6.2
A21A **Bergtoll Ranch** 49.54 340 ⇓P P 05 59 08.0 +0.3
baz=50,SNR=5.5
E15A **Deer Lodge** 49.61 334 ⇑P P 05 59 08.4 0.0
baz=50
D16A **Dana Ranch, Ca** 49.63 336 ⇑P P 05 59 08.6 0.0
baz=50,SNR=9.8
WVOR **Wild Horse Val** 49.64 327 *e*P P 05 59 08.9 +0.1
17nm,1.2s
EGMT **Eagleton** 49.73 338 *e*P P 05 59 08.9 -0.3
8.1nm,1.0s
A20A **Cobblestone Ra** 49.78 340 ⇑P P 05 59 09.9 +0.3
baz=50
B19A **Brinkman Farms** 49.78 339 ⇓P P 05 59 09.7 +0.1
baz=50,SNR=6.6
C17A **Wharram Farm,** 49.80 337 ⇑P P 05 59 10.0 +0.2
baz=50
G12A **Big Creek, Yel** 49.84 331 ⇑P P 05 59 10.1 -0.2
baz=50
F13A **Darby** 49.87 333 ⇓P P 05 59 10.1 -0.3
baz=50
E14A **Clinton** 49.98 334 ⇓P P 05 59 11.3 0.0
baz=50
B18A **Beardsley Farm** 50.04 338 ⇑P P 05 59 11.6 0.0
baz=50,SNR=6.3
D15A **Lincoln** 50.04 335 ⇓P P 05 59 11.4 -0.4
baz=50
A19A **Kinsworth Far** 50.11 339 ⇑P P 05 59 12.2 +0.1
baz=50
F12A **Elk City** 50.28 332 ⇓P P 05 59 13.2 -0.3
baz=50
E13A **Victor** 50.30 333 ⇓P P 05 59 13.4 -0.3
baz=50,SNR=5.7
C16A **Fuhringer Ranc** 50.33 336 ⇑P P 05 59 13.8 0.0
baz=50
B17A **L&G Farms, Che** 50.35 337 ⇓P P 05 59 14.4 +0.5
baz=50
MSO **Missoula** 50.49 334 P P 05 59 15.4 +0.3
baz=51
D14A **Greenough** 50.49 334 ⇑P P 05 59 15.2 +0.1
baz=51
A18A **Metzger Ranch,** 50.50 338 ⇓P P 05 59 15.3 +0.2
baz=51
BMO **Blue Mountains** 50.62 330 *e*P P 05 59 14.9 -1.1
4.7nm,1.2s
C15A **Salmond Ranch,** 50.66 335 ⇓P P 05 59 17.0 +0.7
baz=51
E12A **Beaver Dam Sad** 50.91 332 ⇑P P 05 59 17.7 -0.6
baz=51
D13A **Huson** 50.92 334 ⇑P P 05 59 18.2 -0.1
baz=51
B15A **Bradely Ranch,** 51.06 336 ⇓P P 05 59 19.4 +0.1
baz=51
A16A **West Butte Ran** 51.19 337 ⇓P P 05 59 20.5 +0.2
baz=51
D12A **Red Ives Fores** 51.29 333 ⇓P P 05 59 20.8 -0.3
baz=52
JTMT **Jette** 51.34 334 *e*P P 05 59 21.9 +0.4
B14A **Marquette Ranc** 51.39 336 ⇑P P 05 59 22.3 +0.5
baz=52
C13A **Hot Springs** 51.42 334 ⇑P P 05 59 22.0 0.0
baz=52
YBH **Yreka Blue Hor** 51.52 323 *e*P P 05 59 21.6 -1.4
1.8nm,0.7s
YBH **Yreka Blue Hor** 51.52 323 LR LR 06 20 18.9
comp=Z,172nm,20.7s,baz=144,slow=35
KHMM **Horse Mountain** 51.63 322 *e*P P 05 59 24.6 +0.8
BSMT **Bassoo Peak** 51.64 334 *e*P P 05 59 23.9 0.0
A15A **Johnson Ranch,** 51.66 336 ⇓P P 05 59 23.7 -0.1
baz=52,SNR=8.5
C12B **Naegeli Ranch,** 51.84 334 ⇓P P 05 59 25.3 +0.2
baz=52,SNR=5.3
B13A **Whitefish** 51.91 335 ⇑P P 05 59 25.8 +0.2
baz=52,SNR=6.4
A14A **Double T Ranch** 51.94 336 ⇓P P 05 59 26.0 +0.1
baz=52
WALA **Waterton Lakes** 52.20 336 *e*P P 05 59 28.1 +0.3
0.2nm,1.0s
A13A **Flathead Natio** 52.31 335 ⇓P P 05 59 28.8 +0.2
baz=52
NEW **Newport** 52.99 333 *e*P P 05 59 34.7 +1.1
NEW **Newport** 52.99 333 ⇓P P 05 59 33.5 -0.1
baz=53
SCHQ **Schefferville** 53.34 12 P P 05 59 36.4 +0.4
SCHQ **Schefferville** 53.34 12 P P 05 59 36.4 +0.4
4.5nm,1.0s,baz=220,slow=6.3,SNR=4.0
SCHQ LR LR 06 23 17.8
comp=Z,140nm,20.1s,baz=69,slow=37
YKA **Yellowknife Ar** 63.28 345 P P 06 00 44.2 -1.0
YKA **Yellowknife Ar** 63.28 345 P P 06 00 44.2 -1.0
1.8nm,0.9s,baz=138,slow=6.9,SNR=16
PPT **Papeete** 67.65 250 LR LR 06 23 00.4
comp=Z,237nm,20.4s,baz=124,slow=29
PPT2 **Papeete2** 67.66 250 *e*LR LR 06 22 12.3
334nm,26.0s
TBI **Tubuai** 68.77 244 *e*LR LR 06 22 51.1
249nm,23.8s
SUMG **Summit** 74.72 13 *e*P P 06 01 57.1 +0.5
12nm,1.1s
ILAR **Eielson Array** 75.68 337 P P 06 02 01.6 -0.2
ILAR PP PP 06 04 52.6 +0.8
ILAR **Eielson Array** 75.68 337 P P 06 02 01.6 -0.2
2.1nm,0.9s,baz=118,slow=3.8,SNR=19
ILAR PP PP 06 04 52.6 +0.8
0.5nm,0.9s,baz=122,slow=8.6,SNR=5.4
ILAR LR LR 06 36 47.4
comp=Z,154nm,19.4s,baz=278,slow=37
COLD **Coldfoot** 77.88 339 *e*P P 06 02 15.0 +0.9
1.8nm,0.8s
DBIC **Dimbokro** 79.07 84 LR LR 06 33 46.4
comp=Z,64nm,18.1s,baz=215,slow=33
ESDC **Sonseca Array** 80.43 50 P P 06 02 29.1 +0.3
ESDC **Sonseca Array** 80.43 50 P P 06 02 29.1 +0.3
0.2nm,0.2s,baz=288,slow=5.1,SNR=5.0
ESDC LR LR 06 31 19.4
comp=Z,51nm,21.5s,baz=150,slow=31
EKA **Eskdalemuir Ar** 82.25 35 P P 06 02 36.7 -1.3
EKA **Eskdalemuir Ar** 82.25 35 P P 06 02 36.7 -1.3
2.8nm,0.8s,baz=262,slow=5.0,SNR=5.5
TORD **Torodi Ar. Bea** 85.29 77 P P 06 02 54.0 -0.4
TORD **Torodi Ar. Bea** 85.29 77 P P 06 02 54.0 -0.4
0.6nm,0.9s,baz=289,slow=5.3,SNR=3.1
TORD LR LR 06 37 40.3
comp=Z,48nm,18.7s,baz=85,slow=33
NOA **NORSAR Array B** 89.82 29 LR LR 06 38 24.0
comp=Z,19nm,18.8s,baz=90,slow=32
GERES **GERESS Array B** 92.79 41 LR LR 06 38 17.9
comp=Z,44nm,19.3s,baz=287,slow=31
QSPA **South Pole Qui** 93.27 180 P P 06 03 31.8 +0.6
QSPA **South Pole Qui** 93.27 180 P P 06 03 31.7 +0.6
1.4nm,0.9s,baz=139,slow=2.9,SNR=6.3
FINES **FINESS Array B** 96.72 27 LR LR 06 40 40.7
comp=Z,45nm,21.1s,baz=194,slow=31
VNDA **Vanda** 98.22 192 LR LR 06 44 31.2
comp=Z,90nm,18.2s,baz=117,slow=33
DZM **Mont Dumac** 109.13 248 *e*LR LR 06 41 38.6
83nm,28.8s
CN2 **Changchun** 126.11 334 *e*PKP PKPdf 06 09 20.3 +1.1
HHC **Hu-ho-hao-te** 133.81 343 *e*PKP PKPdf 06 09 33.0 -1.1
HHC PP PP 06 12 06.8 +4.4
HHC PKS PKSdf 06 13 07.9 -2.6
HHC SKS SKSdf 06 16 42.3 0.0
HHC SKKS SKKSac 06 18 58.0 +1.9
HHC SS SS 06 29 53.7 +7.9
HHC AMB AMB
comp=Z,91nm,9.7s
ASAR **Alice Springs** 137.96 238 PKP PKPdf 06 09 42.4 +0.3
ASAR **Alice Springs** 137.96 238 PKP PKPdf 06 09 42.4 +0.3
comp=Z,5nm,0.7s,baz=125,slow=2.6,SNR=3.8
WRA **Warramunga Arr** 138.90 243 PKP PKPdf 06 09 42.9 -1.1
WRA **Warramunga Arr** 138.90 243 PKP PKPdf 06 09 42.9 -1.1
comp=Z,0.8nm,0.8s,baz=102,slow=2.3,SNR=5.2
LZH **Lanzhou** 140.15 350 *e*PKP PKPdf 06 09 42.2 -3.8
LZH sPKP 06 09 52.5
FITZ **Fitzroy Crossi** 147.24 241 PKPbc PKPbc 06 10 01.1 +0.2
FITZ **Fitzroy Crossi** 147.24 241 PKPbc PKPbc 06 10 01.1 +0.2
comp=Z,3.8nm,1.1s,baz=225,slow=1.4,SNR=3.9
GYA **Guiyang** 148.65 341 *e*PKPbc PKPdf 06 09 59.2 -1.8
GYA PKPab PKiKP 06 10 07.3 +1.1
GYA PKS PP 06 13 32.8 -0.2
GYA PP PP 06 13 35.8 +2.8
GYA AMB AMB
comp=Z,80nm,7.9s

IDC 11 05:56:41.9±27.0**, 19°28S**×**173°58W, h0**km**, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.7**/21**, mbtmp3.9**/4**, Error ellipse: s-maj=494.5km s-min=164.7km az=73.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	37.77	262	P	P	06 04 00.7	+0.8
	1.8nm,0.4s,baz=90,slow=6.1,SNR=2.6						
STKA	**Stephens Creek**	42.06	244	P	P	06 04 35.7	+0.2
	1.9nm,0.8s,baz=84,slow=9.2,SNR=2.9						
ASAR	**Alice Springs**	48.85	255	P	P	06 05 29.0	-0.6
	0.7nm,0.5s,baz=99,slow=7.9,SNR=11						
WRA	**Warramunga Arr**	48.90	260	P	P	06 05 29.4	-0.6
	0.3nm,0.3s,baz=97,slow=7.7,SNR=16						

IDC 11 06:03:05.0±31.0**, 19°99S**×**179°49W, h0**km**, mb4.0**/4**, mb1 4.2**/4**, mb1mx3.7**/19**, mbtmp4.0**/4**, Error ellipse: s-maj=573.3km s-min=140.2km az=86.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	36.76	243	P	P	06 10 13.4	-1.0
	1.4nm,0.5s,baz=106,slow=14,SNR=3.8						
ASAR	**Alice Springs**	43.27	256	P	P	06 11 08.7	0.0
	2.0nm,0.8s,baz=99,slow=8.1,SNR=14						
WRA	**Warramunga Arr**	43.28	262	P	P	06 11 09.4	+0.6
	0.6nm,0.3s,baz=95,slow=7.8,SNR=18						
FITZ	**Fitzroy Crossi**	51.71	262	P	P	06 12 14.0	-0.3
	2.3nm,0.8s,baz=80,slow=12,SNR=3.1						

*ISCJB **11** 06:05:48.4±0.6, 47°.82N±0°.05×67°.57E±0°.06, h10km, mb3.4/3, Error ellipse: s-maj=7.4km s-min=5.6km az=34.0*
*NNC **11** 06:05:49.6±0.6, 47°.91N×67°.40E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=6.3km s-min=6.0km az=75.0*
*IDC **11** 06:05:50.4±0.7, 47°.84N×67°.61E, h0km, mb3.6/3, mb1 3.7/10, mb1mx3.4/33, mbtmp3.5/10, ML3.2/7, MS2.8/2, Ms1 2.8/2, ms1mx2.2/36, Error ellipse: s-maj=10.8km s-min=7.3km az=17.0*

ISC 11 06:05:51.7±0.7**, 47°.86N**±0°.06×**67°.57E**±0°.05**, h10**km**, n19, σ1s87/26, mb3.3/3, 8C-11D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	5.18	155	Pn	Pn	06 07 09.7	+0.3
	0.4nm,0.5s,baz=346,slow=18,SNR=7.5						
KK31				⇑Pg	Pb	06 07 25.1	+2.6
	2.6nm,0.5s,baz=332,slow=19,SNR=7.8						
KK31				⇑Lg	Lg	06 08 40.9	
	11nm,0.6s,baz=338,slow=27,SNR=4.2						
ZRNK	**Zerenda**	5.18	10	⇑Pn	Pn	06 07 08.8	-0.5
	3.6nm,0.7s						
ZRNK				⇓Pg	Pb	06 07 23.7	+1.2
	28nm,1.4s						
ZRNK				⇓Lg	Lg	06 08 31.2	
	51nm,0.9s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
AB31	**Akbulak array**	**5.25**	**288**	Pn	Pn	06 07 07.4	-2.9
	1.1nm,0.6s,baz=102,slow=13,SNR=20						
AB31				⇓Pg	**Pb**	**06 07 23.5**	**-0.1**
	12nm,0.7s,baz=106,slow=14,SNR=33						
AB31				⇑Lg	Lg	06 08 29.0	
	7.2nm,0.6s,baz=104,slow=28,SNR=5.6						
VOSK	**Vostochnaya**	**5.34**	**23**	⇑Pn	**Pn**	**06 07 11.2**	**-0.3**
	4.0nm,0.7s						
VOSK				⇑Pg	**Pb**	**06 07 27.2**	**+2.1**
	9.9nm,1.0s						
VOSK				⇓Lg	Lg	06 08 35.8	
	62nm,0.9s						
BVA0	**Borovoye Array**	**5.48**	**18**	Pn	**Pn**	**06 07 13.2**	**-0.1**
	4.7nm,0.7s,baz=223,slow=42,SNR=20						
BVA0				⇓Pg	**Pb**	**06 07 30.0**	**+2.5**
	15nm,0.9s,baz=188,slow=15,SNR=6.5						
BVA0				⇓Lg	Lg	06 08 41.5	
	14nm,0.7s,baz=187,slow=31,SNR=6.7						
BVAR	**Borovoye Array**	**5.48**	**18**	Pn	**Pn**	**06 07 12.5**	**-0.9**
	0.8nm,0.3s,baz=198,slow=14,SNR=19						
BVAR				Sn	**Sn**	**06 08 17.7**	**+1.2**
	1.4nm,0.3s,baz=198,slow=22,SNR=5.0						
BVAR				Lg	Lg	06 08 37.5	
	2.1nm,0.3s,baz=198,slow=32,SNR=6.9						
AKTO	**Aktyubinsk**	**6.78**	**296**	⇓Pn	Pn	06 07 28.1	-3.1
	0.9nm,0.8s						
AKTO				⇑Pg	**Pb**	**06 07 49.4**	**-0.2**
	2.0nm,0.8s						
AKTO				⇓Lg	Lg	06 09 24.4	
	4.3nm,0.7s						
AKTO	**Aktyubinsk**	**6.78**	**296**	Pn	**Pn**	**06 07 31.4**	**+0.2**
	0.2nm,0.3s,baz=95,slow=21,SNR=5.9						
AKTO				Sn	**Sn**	**06 08 47.8**	**-0.6**
	0.4nm,0.3s,baz=22,slow=19,SNR=4.6						
AKTO				Lg	Lg	06 09 24.2	
	0.7nm,0.3s,baz=232,slow=19,SNR=6.0						
AKTO				LR	LR	06 10 19.8	
	comp=Z,76nm,20.2s,baz=334,slow=40						
AAK	**Ala-Archa**	**7.15**	**134**	Pn	**Pn**	**06 07 36.7**	**+0.2**
	0.6nm,0.3s,baz=220,slow=9.9,SNR=4.0						
AAK				Sn	**Sn**	**06 08 55.6**	**-2.3**
	0.3nm,0.3s,baz=218,slow=12,SNR=2.6						
AAK				Lg	Lg	06 09 37.0	
	0.6nm,0.3s,baz=56,slow=20,SNR=5.1						
KURBB	**Kurchatov Arra**	**7.69**	**65**	Pn	**Pn**	**06 07 42.3**	**-1.4**
	0.0nm,0.3s,baz=255,slow=13,SNR=11						
KURBB				Sn	**Sn**	**06 09 05.3**	**-5.5**
	0.0nm,0.3s,baz=257,slow=16,SNR=4.2						
KURBB				Lg	Lg	06 09 52.8	
	0.2nm,0.3s,baz=268,slow=30,SNR=11						
KUR14	**Kurchatov Arra**	**7.73**	**65**	⇑Lg	Lg	06 09 56.2	
	5.5nm,0.8s						
KURK	**Kurchatov**	**7.77**	**64**	⇓Lg	Lg	06 09 56.3	
	19nm,0.8s						
MK31	**Makanchi Array**	**10.06**	**91**	⇓Pn	**Pn**	**06 08 15.6**	**-0.5**
	1.1nm,0.7s,baz=277,slow=9.4,SNR=16						
MK31				⇓Lg	Lg	06 11 06.2	
	30nm,0.9s						
MKAR	**Makanchi Array**	**10.06**	**91**	Pn	**Pn**	**06 08 14.3**	**-1.8**
	0.2nm,0.3s,baz=274,slow=9.2,SNR=17						
MKAR				Sn	**Sn**	**06 10 05.5**	**-3.5**
	0.2nm,0.3s,baz=274,slow=20,SNR=5.7						
MKAR				Lg	Lg	06 11 07.5	
	0.3nm,0.3s,baz=273,slow=22,SNR=14						
ZALV	**Zalesovo Beam**	**12.46**	**54**	Pn	**Pn**	**06 08 48.0**	**-1.0**
	0.1nm,0.3s,baz=249,slow=12,SNR=3.6						
ZALV				LR	LR	06 14 01.2	
	comp=Z,35nm,19.5s,baz=72,slow=39						
KBZ	**Khabaz**	**17.67**	**266**	Pn	**Pn**	**06 09 56.5**	**-1.2**
	0.1nm,0.3s,baz=69,slow=13,SNR=5.8						
BRTR	**Keskin Array B**	**25.64**	**264**	P	**P**	**06 11 22.9**	**+1.3**
	0.4nm,0.6s,baz=74,slow=12,SNR=3.2						
ILAR	**Eielson Array**	**64.54**	**16**	P	**P**	**06 16 28.6**	**+0.2**
	0.1nm,0.6s,baz=334,slow=6.0,SNR=5.9						
WRA	**Warramunga Arr**	**90.04**	**120**	P	**P**	**06 18 51.8**	**+0.2**
	0.7nm,1.0s,baz=323,slow=4.0,SNR=5.5						

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*MOS **11** 06:50:43.6±1.2, 43°.94N×147°.13E, h65km, mb4.4/28, Error ellipse: s-maj=9.1km s-min=7.0km az=64.9*
MOS Felt (IV) at Malokuril'skoye,(II) at Yuzhno-Kuril'sk.
*ISCJB **11** 06:50:44.2±0.5, 43°.93N±0°.04×147°.19E±0°.05, h67km±4km, mb4.2/45, Error ellipse: s-maj=8.2km s-min=3.8km az=142.8*
*BJI **11** 06:50:44.8, 43°.62N×146°.96E, h58km, mB4.8/10, mb4.7/16, Ms4.3/7, Ms7 3.8/6*
*IDC **11** 06:50:44.6±0.7, 43°.96N×147°.22E, h56km±5km, mb3.8/21, mb1 4.1/26, mb1mx4.0/32, mbtmp3.9/26, MS3.3/8, Ms1 3.3/8, ms1mx3.0/35, Error ellipse: s-maj=14.6km s-min=11.5km az=150.0*
*JMA **11** 06:50:44.6±0.2, 43°.77N×147°.21E, h39km, M4.7*
JMA Felt II J1.
*NEIC **11** 06:50:45.5±0.3, 43°.93N×147°.18E, mb4.4/16, Error ellipse: s-maj=9.6km s-min=4.8km az=151.0*
NEIC Felt [IV] on Shikotan and [II] at Yuzhno-Kuril'sk. Recorded [2 JMA] in eastern Hokkaido.
*SKHL **11** 06:50:45.4±0.4, 43°.89N×147°.22E, h68km±4km, mb5.1/4*
SKHL Felt (IV) at Malokurilskoe, (II) at Yushno-Kurilsk.
*NIED **11** 06:51:00, 43°.80N×147°.20E, h62km, Mw4.4 Best double couple: $M_0$4.70000×10^15 NP1:ϕ_s240.00000°, δ80.00000°, λ145.00000°. NP2:ϕ_s337.00000°, δ55.00000°, λ12.00000°.*

ISC 11 06:50:45.5±0.4**, 43°.96N**±0°.05×**147°.17E**±0°.04**, h64**km±2km**, h63**km**:pP-P, n143,** σ1s.**40**/192**, mb4.2**/45**, 6C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YUK	**Yuzh-Kuril'sk**	**0.94**	**275**	*d i*PN	**Pn**	**06 51 02.3**	**-0.6**
YUK				*i* S	**Sn**	**06 51 14.8**	**-1.1**
YUK				pmax	pmax		
	comp=N,346nm,0.1s						
YUK				pmax	pmax		
	comp=E,479nm,0.1s						
YUK				pmax	pmax		
	comp=Z,2µm,0.2s						
YUK				smax	smax		
	comp=N,9µm,0.2s						
YUK				smax	smax		
	comp=E,3µm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.94**	**275**	⇓*i*P	**Pn**	**06 51 02.4**	**-0.5**
YUK				AMB	AMB	06 51 02.9	
	comp=E,350nm,0.2s						
YUK				AMB	AMB	06 51 02.9	
	comp=E,480nm,0.2s						
YUK				AMB	AMB	06 51 02.9	
	comp=E,2µm,0.2s						
YUK				*i* S	**Sn**	**06 51 14.8**	**-1.1**
YUK				A	A	06 51 17.3	
	comp=E,9µm,0.2s						
YUK				A	A	06 51 17.3	
	comp=E,3µm,0.2s						
NEM2	**Nemuro 2**	**1.19**	**241**	P	**Pn**	**06 51 04.7**	**-1.4**
NEM2				*e*S	**Sn**	**06 51 19.5**	**-2.0**
KUR	**Kuril'sk**	**1.37**	**21**	*c i*PN	**Pn**	**06 51 08.6**	**+0.1**
KUR				*i* S	**Sn**	**06 51 26.2**	**+0.5**
KUR				pmax	pmax		
	comp=Z,826nm,1.0s						
KUR				pmax	pmax		
	comp=N,205nm,0.5s						
KUR				pmax	pmax		
	comp=E,453nm,0.1s						
KUR				smax	smax		
	comp=N,2µm,0.2s						
KUR				smax	smax		
	comp=E,2µm,0.2s						
KUR	**Kuril'sk**	**1.37**	**21**	⇑*i*P	**Pn**	**06 51 08.6**	**+0.1**
KUR				AMB	AMB	06 51 10.0	
	comp=E,4µm,1.0s						
KUR				*i* S	**Sn**	**06 51 26.3**	**+0.5**
KUR				A	A	06 51 26.8	
	comp=E,8µm,2.0s						
KUR				A	A	06 51 26.8	
	comp=E,5µm,1.8s						
KUR				A	A	06 51 28.6	
	comp=E,3µm,0.3s						
KUR				A	A	06 51 28.6	
	comp=E,3µm,0.3s						
JRA	**Rausu**	**1.48**	**270**	P	**Pn**	**06 51 10.1**	**+0.2**
JRA				*e*S	**Sn**	**06 51 28.8**	**+0.5**
JNK	**Nakash**	**1.81**	**259**	P	**Pn**	**06 51 14.1**	**-0.3**
JNK				*e*S	**Sn**	**06 51 35.9**	**-0.5**
JAK	**Akkeshi**	**2.04**	**243**	P	**Pn**	**06 51 16.5**	**-1.0**
JAK				*e*S	**Sn**	**06 51 40.0**	**-1.9**
JTKR	**Abashiri--Toko**	**2.35**	**271**	P	**Pn**	**06 51 22.5**	**+0.8**
JAR	**Ashorobuto**	**2.55**	**256**	P	**Pn**	**06 51 25.2**	**+0.7**
JAR				*e*S	**Sn**	**06 51 55.0**	**+0.6**
JOB	**Onbets**	**2.65**	**248**	P	**Pn**	**06 51 25.8**	**+0.1**
JOB				*e*S	**Sn**	**06 51 55.6**	**-1.1**
JMP	**Maruseppu**	**2.75**	**272**	P	**Pn**	**06 51 28.3**	**+1.1**
JCH	**Churui**	**3.08**	**246**	P	**Pn**	**06 51 31.0**	**-0.7**
JCH				*e*S	**Sn**	**06 52 06.3**	**-1.1**
JKK2	**Kamakawa 2**	**3.19**	**270**	P	**Pn**	**06 51 34.6**	**+1.4**
ASAJ	**Asahikawa**	**3.30**	**274**	*e*Pn	**Pn**	**06 51 36.3**	**+1.6**
ASAJ				S	Sn	06 52 23.2	+11
ASAJ	**Asahikawa**	**3.30**	**274**	P	**Pn**	**06 51 36.5**	**+1.9**
ASAJ	**Asahikawa**	**3.30**	**274**	P	**Pn**	**06 51 36.2**	**+1.6**
	comp=E,44nm,0.3s,baz=84,slow=12,SNR=34						
ASAJ				S	Sn	06 52 23.2	+11
	comp=E,33nm,0.3s,baz=223,slow=22,SNR=8.7						
ASAJ				LR	LR	06 53 02.3	
	comp=E,465nm,20.8s,baz=128,slow=41						
JFR	**Furan**	**3.42**	**258**	P	**Pn**	**06 51 37.9**	**+1.6**
JFR				*e*S	**Sn**	**06 52 16.6**	**+1.0**
JSE	**Soyaes**	**3.43**	**289**	P	**Pn**	**06 51 37.7**	**+1.3**
JEM	**Erimo**	**3.52**	**238**	P	**Pn**	**06 51 39.2**	**+1.5**
JEM				*e*S	**Sn**	**06 52 19.5**	**+1.4**
ERM	**Erimo**	**3.52**	**238**	*ce*PN	**Pn**	**06 51 38.2**	**+0.5**
ERM				pmax	pmax		
	comp=Z,174nm,1.0s						
ERM	**Erimo**	**3.52**	**238**	*e*Pn	**Pn**	**06 51 39.5**	**+1.8**
JNBK	**Urakawa-nobuka**	**3.64**	**244**	P	**Pn**	**06 51 38.9**	**-0.4**
JNBK				*e*S	**Sn**	**06 52 20.0**	**-1.0**
YSS	**Yuzh-Sakhalins**	**4.31**	**316**	⇓*i*P	**Pn**	**06 51 50.6**	**+2.1**
YSS				AMB	AMB	06 51 51.0	
	comp=Z,90nm,0.6s						
YSS				*e*S	**Sn**	**06 52 36.0**	**-1.5**
YSS				A	A	06 52 42.8	
	comp=Z,170nm,0.8s						
YSS				AMS	AMS	06 53 40.0	
	comp=Z,300nm,14.0s						
SKR	**Severo-Kuril's**	**9.06**	**39**	*e*PN	**Pn**	**06 52 54.0**	**+0.6**
SKR				S	Sn	06 54 45.5	+12
SKR				pmax	pmax		
	comp=N,50nm,0.6s						
SKR				pmax	pmax		
	comp=E,50nm,0.6s						
SKR				pmax	pmax		
	comp=Z,50nm,0.6s						
SKR				smax	smax		
	comp=N,50nm,0.5s						
SKR				smax	smax		
	comp=E,40nm,0.5s						
SKR				MLR	MLR		
	comp=Z,400nm,14.0s						
SKR	**Severo-Kuril's**	**9.06**	**39**	*e*P	**Pn**	**06 52 54.0**	**+0.6**
SKR				AMB	AMB	06 52 59.0	
	comp=Z,50nm,0.6s						
SKR				A	A	06 55 09.5	
	comp=Z,50nm,0.5s						
SKR				A	A	06 55 09.5	
	comp=Z,40nm,0.5s						
SKR				AMS	AMS	06 56 24.0	
	comp=Z,400nm,14.0s						
HABR	**Khabarovsk**	**9.53**	**303**	PN	**Pn**	**06 52 58.1**	**-1.7**
HABR				pmax	pmax		
	comp=E,177nm,2.5s						
HABR				pmax	pmax		
	comp=Z,128nm,1.8s						
HABR				pmax	pmax		
	comp=N,111nm,2.1s						
HABR				MLR	MLR		
	comp=Z,228nm,19.0s						
MJAR	**Matsushiro Arr**	**10.08**	**226**	P	**Pn**	**06 53 05.3**	**-2.2**
MJAR	**Matsushiro Arr**	**10.08**	**226**	P	**Pn**	**06 53 05.3**	**-2.2**
	comp=Z,1.7nm,0.3s,baz=27,slow=13,SNR=28						
MJAR				LR	LR	06 57 34.8	
	comp=Z,61nm,19.6s,baz=55,slow=41						
MAJO	**Matsushiro**	**10.08**	**226**	*e*PN	**Pn**	**06 53 05.7**	**-1.7**
MAJO	**Matsushiro**	**10.08**	**226**	*e*Pn	**Pn**	**06 53 05.7**	**-1.7**
MAT	**Matsushiro**	**10.08**	**226**	P	**Pn**	**06 53 05.7**	**-1.7**
MAT				S	**Sn**	**06 55 01.8**	**+2.9**
USRK	**Ussuriysk Arra**	**10.92**	**277**	P	**Pn**	**06 53 21.4**	**+2.7**
	comp=Z,0.4nm,0.3s,baz=96,slow=12,SNR=14						
USRK				LR	LR	06 57 38.0	
	comp=Z,123nm,18.5s,baz=342,slow=38						
PETK	**Petropavlovsk-**	**11.50**	**34**	PN	**Pn**	**06 53 26.0**	**-0.7**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**11.50**	**34**	P	**Pn**	**06 53 26.0**	**-0.7**
PETK	**Petropavlovsk-**	**11.50**	**34**	P	**Pn**	**06 53 26.0**	**-0.7**
	comp=Z,0.7nm,0.3s,baz=205,slow=14,SNR=13						
KLR	**Kul'dur**	**11.84**	**302**	*e*PN	**Pn**	**06 53 31.8**	**+0.5**
KLR				pmax	pmax		
	comp=E,38nm,1.4s						
KLR				pmax	pmax		
	comp=Z,45nm,1.4s						
KLR				MLR	MLR		
	comp=Z,700nm,12.0s						
MDJ	**Mudanjiang**	**12.62**	**279**	P	**Pn**	**06 53 42.1**	**+0.2**
MDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,43nm,3.4s						
MDJ	**Mudanjiang**	**12.62**	**279**	*e*Pn	**Pn**	**06 53 44.2**	**+2.3**
CN2	**Changchun**	**15.66**	**277**	*e*P	**Pn**	**06 54 17.8**	**-4.3**
KSRS	**Korea Array**	**15.96**	**253**	P	**Pn**	**06 54 25.5**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=58,slow=12,SNR=14						
KSRS				LR	LR	07 00 54.9	
	comp=Z,35nm,20.0s,baz=50,slow=38						
KSAR	**Wonju Array Be**	**15.99**	**253**	P	**Pn**	**06 54 25.5**	**-0.8**
JNU	**Nakatsue**	**16.68**	**235**	P	**Pn**	**06 54 35.5**	**+0.4**
JNU	**Nakatsue**	**16.68**	**235**	P	**Pn**	**06 54 35.5**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=45,slow=4.3,SNR=2.8						
FX1	**Attu Island--F**	**19.34**	**53**	*e*P	**P**	**06 55 05.1**	**-0.3**
BILL	**Bilibino**	**26.16**	**16**	*e*P	**P**	**06 56 12.9**	**-0.4**
BILL				*e*		06 59 32.6	
BILL				pmax	pmax		
	comp=Z,8.0nm,1.8s						
HHC	**Hu-ho-hao-te**	**26.35**	**276**	*e*P	**P**	**06 56 15.9**	**+0.4**
HHC				pP	**pP**	**06 56 30.8**	**-0.1**
HHC				sP	**sP**	**06 56 37.8**	**-0.6**
HHC				PP	**PnPn**	**06 57 00.0**	**+2.1**
HHC				S	**S**	**07 00 43.3**	**-0.6**
HHC				sS	**sS**	**07 01 08.4**	**-2.0**
HHC				SS	**SnSn**	**07 01 57.7**	**+8.0**
HHC				pmax	pmax		
	comp=Z,42nm,0.8s						
HHC				pmax	pmax		
	comp=Z,170nm,6.5s						
HHC				LR	LR		
	comp=N,310nm,16.7s						
HHC				LR	LR		
	comp=E,770nm,14.5s						
HHC				LR	LR		
	comp=Z,220nm,14.9s						
ULN	**Ulaanbaatar**	**27.96**	**292**	P	**P**	**06 56 30.2**	**+0.3**
	comp=Z,1.7nm,0.4s						
SONM	**Songino Array**	**28.40**	**292**	P	**P**	**06 56 34.1**	**+0.3**
SONM	**Songino Array**	**28.40**	**292**	P	**P**	**06 56 34.1**	**+0.3**
	comp=Z,1.5nm,0.6s,baz=82,slow=8.2,SNR=11						
SONM				LR	LR	07 09 14.4	
	comp=Z,118nm,18.2s,baz=274,slow=39						
TLY	**Talaya**	**29.85**	**301**	*e*P	P	06 56 40.2	-6.3
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,74nm,17.1s						
ZAK	**Zakamensk**	**30.16**	**298**	*e*P	**P**	**06 56 46.7**	**-2.7**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.8s						
CD2	**Chengdu**	**36.44**	**264**	*e*P	**P**	**06 57 44.6**	**+0.5**
CD2				pP	**pP**	**06 58 01.1**	**+1.2**
CD2				sP	**sP**	**06 58 09.1**	**+1.8**
CD2				PP	**PnPn**	**06 59 09.8**	**+1.7**
CD2				S	**S**	**07 03 20.5**	**-0.7**
CD2				sS	**sS**	**07 03 48.7**	**+0.6**
CD2				SS	**SnSn**	**07 05 48.7**	**-6.1**
CD2				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2				pmax	pmax		
	comp=Z,50nm,4.8s						
CD2				LR	LR		
	comp=N,100nm,10.7s						
CD2				LR	LR		
	comp=Z,80nm,13.2s						
GYA	**Guiyang**	**36.98**	**255**	*e*P	**P**	**06 57 49.5**	**+0.7**
GYA				pP	**pP**	**06 58 06.3**	**+1.7**
GYA				sP	**sP**	**06 58 14.0**	**+1.9**
GYA				PP	**PnPn**	**06 59 16.2**	**+1.3**
GYA				S	**S**	**07 03 29.8**	**+0.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TRF	**Thorofare Moun**	**39.87**	**38**	*e*P	**P**	**06 58 13.1**	**+0.4**
	comp=Z,22nm,1.9s						
RC01	**Rabbit Creek A**	**40.24**	**42**	*e*P	P	06 58 07.5	-8.0
	comp=Z,10.0nm,0.9s						
PMR	**Palmer**	**40.49**	**41**	*e*P	**P**	**06 58 16.4**	**-1.2**
PMR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PMR	**Palmer**	**40.49**	**41**	*e*P	**P**	**06 58 16.4**	**-1.2**
	comp=Z,4.1nm,1.0s						
SML	**Sawmill**	**40.85**	**41**	*e*P	**P**	**06 58 21.6**	**+1.0**
SML				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SML	**Sawmill**	**40.85**	**41**	*e*P	**P**	**06 58 21.6**	**+1.0**
	comp=Z,4.6nm,0.8s						
ZALV	**Zalesovo Beam**	**40.88**	**307**	P	**P**	**06 58 21.0**	**+0.1**
ZALV						07 00 21.7	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**40.88**	**307**	P	**P**	**06 58 21.0**	**+0.1**
ZALV				PcP	**PcP**	**07 00 21.7**	**+1.4**
ZALV	**Zalesovo Beam**	**40.88**	**307**	P	**P**	**06 58 21.0**	**+0.1**
	comp=Z,0.9nm,0.5s,baz=57,slow=5.3,SNR=3.3						
ZALV				PcP	**PcP**	**07 00 21.7**	**+1.4**
	comp=Z,1.4nm,0.5s,baz=94,slow=2.5,SNR=4.5						
ZALV				LR	LR	07 14 03.4	
	comp=Z,47nm,20.9s,baz=71,slow=34						
COLA	**College**	**40.90**	**36**	*e*P	**P**	**06 58 21.1**	**+0.3**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
COLA	**College**	**40.90**	**36**	*e*P	**P**	**06 58 21.1**	**+0.3**
	comp=Z,5.5nm,0.9s						
ILAR	**Eielson Array**	**41.31**	**36**	P	**P**	**06 58 23.8**	**-0.5**
ILAR	**Eielson Array**	**41.31**	**36**	P	**P**	**06 58 23.8**	**-0.5**
	comp=Z,2.1nm,0.8s,baz=271,slow=6.7,SNR=23						
WMQ	**Urumqi**	**42.03**	**291**	*e*P	**P**	**06 58 33.0**	**+2.5**
WMQ				LR	LR		
	comp=Z,120nm,22.0s						
EGAK	**Eagle**	**43.76**	**36**	*e*P	**P**	**06 58 44.3**	**+0.2**
	comp=Z,29nm,2.1s						
MKAR	**Makanchi Array**	**44.50**	**297**	*ce*P	**P**	**06 58 51.0**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**44.50**	**297**	P	**P**	**06 58 50.3**	**0.0**
MKAR				PcP	**PP**	**07 00 34.6**	**-0.4**
MKAR	**Makanchi Array**	**44.50**	**297**	P	**P**	**06 58 50.3**	**0.0**
	comp=Z,1.4nm,0.6s,baz=78,slow=7.9,SNR=15						
MKAR				PcP	**PP**	**07 00 34.6**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=63,slow=2.5,SNR=2.7						
KURK	**Kurchatov**	**45.42**	**304**	*ce*P	**P**	**06 58 55.4**	**-2.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KURK	**Kurchatov**	**45.42**	**304**	*e*P	**P**	**06 58 57.1**	**-0.4**
	comp=Z,3.3nm,0.7s						
CMAR	**Chiang Mai Arr**	**47.60**	**253**	P	**P**	**06 59 16.9**	**+1.9**
CMAR	**Chiang Mai Arr**	**47.60**	**253**	P	**P**	**06 59 16.9**	**+1.9**
	comp=Z,1.1nm,0.3s,baz=32,slow=8.6,SNR=7.5						
TKM2	**Tokmak 2**	**50.43**	**295**	*e*P	**P**	**06 59 37.1**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TKM2	**Tokmak 2**	**50.43**	**295**	*e*P	**P**	**06 59 37.1**	**+0.5**
	comp=Z,5.1nm,1.1s						
AAK	**Ala-Archa**	**51.28**	**295**	P	**P**	**06 59 44.9**	**+1.9**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AAK	**Ala-Archa**	**51.28**	**295**	P	**P**	**06 59 44.9**	**+1.9**
AAK	**Ala-Archa**	**51.28**	**295**	P	**P**	**06 59 44.9**	**+1.9**
	comp=Z,2.2nm,0.5s,baz=150,slow=3.1,SNR=3.7						
KKAR	**Karatay Array**	**53.63**	**298**	*e*P	**P**	**06 59 58.8**	**-1.3**
KKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KKAR	**Karatay Array**	**53.63**	**298**	*e*P	**P**	**06 59 58.8**	**-1.3**
	comp=Z,0.9nm,0.4s						
YKA	**Yellowknife Ar**	**55.62**	**34**	P	**P**	**07 00 14.3**	**+0.1**
YKA				pP	**pP**	**07 00 29.1**	**-1.9**
YKA	**Yellowknife Ar**	**55.62**	**34**	P	**P**	**07 00 14.3**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=300,slow=6.8,SNR=8.7						
YKA				pP	**pP**	**07 00 29.0**	**-1.9**
	comp=Z,1.7nm,0.8s,baz=302,slow=7.0,SNR=8.4						
ABKAR	**Akbulak array**	**56.94**	**309**	*e*P	**P**	**07 00 23.6**	**-0.2**
	comp=Z,2.1nm,0.3s						
ABKAR				*e*pP	**pP**	**07 00 41.0**	**+0.4**
AKTO	**Aktyubinsk**	**57.41**	**311**	P	**P**	**07 00 25.9**	**-1.3**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	**57.41**	**311**	P	**P**	**07 00 25.9**	**-1.3**
AKTO	**Aktyubinsk**	**57.41**	**311**	P	**P**	**07 00 25.9**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=359,slow=7.7,SNR=3.0						
ARCES	**ARCESS Array B**	**59.06**	**340**	LR	LR	07 28 37.2	
	comp=Z,24nm,19.2s,baz=105,slow=38						
SWMT	**Swartz Lake**	**64.32**	**48**	*e*P	**P**	**07 01 15.2**	**+1.0**
SWMT				*e*pP	**pP**	**07 01 33.3**	**+2.0**
SWMT				*e*sP	**sP**	**07 01 40.8**	**+2.4**
WRA	**Warramunga Arr**	**64.67**	**193**	P	**P**	**07 01 15.5**	**-1.0**
WRA	**Warramunga Arr**	**64.67**	**193**	P	**P**	**07 01 15.5**	**-1.0**
	comp=Z,4.3nm,1.0s,baz=11,slow=6.7,SNR=14						
FINES	**FINESS Array B**	**64.69**	**333**	P	**P**	**07 01 15.2**	**-1.0**
FINES	**FINESS Array B**	**64.69**	**333**	P	**P**	**07 01 15.2**	**-1.0**
	comp=Z,1.6nm,0.5s,baz=46,slow=9.9,SNR=6.0						
SLMT	**Seeley Lake**	**64.76**	**48**	*e*P	**P**	**07 01 17.9**	**+0.8**
FFC	**Flin Flon**	**65.53**	**37**	*e*P	**P**	**07 01 22.1**	**+0.4**
FFC				*e**PP	**pP**	**07 01 39.5**	**+0.6**
FFC	**Flin Flon**	**65.53**	**37**	*e*P	**P**	**07 01 22.1**	**+0.4**
FFC				*e*pP	**pP**	**07 01 39.5**	**+0.6**
LRM	**Limekiln Ridge**	**66.21**	**49**	*e*P	**P**	**07 01 27.0**	**+0.4**
LRM				*e*pP	**pP**	**07 01 45.2**	**+1.4**
BOZ	**Bozeman (W)**	**66.76**	**48**	*e*P	**P**	**07 01 30.7**	**+0.7**
BOZ				*e**PP	**pP**	**07 01 48.5**	**+1.3**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BOZ	**Bozeman (W)**	**66.76**	**48**	*e*P	**P**	**07 01 30.7**	**+0.7**
	comp=Z,2.0nm,0.7s						
BOZ				*e*pP	**pP**	**07 01 48.5**	**+1.3**
NVAR	**Mina Array Bea**	**67.46**	**58**	P	**P**	**07 01 35.1**	**+0.4**
NVAR	**Mina Array Bea**	**67.46**	**58**	P	**P**	**07 01 35.1**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=294,slow=6.8,SNR=20						
ASAR	**Alice Springs**	**68.38**	**193**	P	**P**	**07 01 40.2**	**0.0**
ASAR	**Alice Springs**	**68.38**	**193**	P	**P**	**07 01 40.2**	**0.0**
	comp=Z,1.8nm,0.8s,baz=12,slow=5.7,SNR=16						
RRI2	**Red Ridge**	**68.41**	**50**	*e*P	**P**	**07 01 41.4**	**+0.7**
	comp=Z,4.9nm,0.8s						
MOOW	**Moose Ponds**	**68.47**	**50**	*e*P	**P**	**07 01 42.4**	**+1.5**
	comp=Z,1.6nm,0.8s						
TPAW	**Teton Pass**	**68.52**	**50**	*e*P	**P**	**07 01 42.6**	**+1.3**
	comp=Z,3.3nm,0.9s						
NB2	**NORSAR Subarra**	**69.41**	**339**	P	**P**	**07 01 45.7**	**-0.6**
	comp=Z,0.6nm,0.4s,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**69.41**	**339**	P	**P**	**07 01 45.6**	**-0.6**
NOA				sP	**sP**	**07 02 08.1**	**-2.5**
NOA	**NORSAR Array B**	**69.41**	**339**	P	**P**	**07 01 45.6**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=34,slow=6.2,SNR=4.3						
NOA				sP	**sP**	**07 02 08.1**	**-2.5**
	comp=Z,1.1nm,0.8s,baz=33,slow=6.2,SNR=3.1						
DUG	**Dugway**	**69.61**	**54**	*e*P	**P**	**07 01 48.5**	**+0.5**
DUG				*e*		07 02 06.8	
DUG				pmax	pmax		
	comp=Z,77nm,1.2s						
DUG	**Dugway**	**69.61**	**54**	*e*P	**P**	**07 01 48.5**	**+0.5**
	comp=Z,77nm,1.2s						
DUG				*e*		07 02 06.8	
KIV	**Kislovodsk**	**69.63**	**312**	⇓*e*P	**P**	**07 01 47.9**	**-0.1**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBZ	**Khabaz**	**69.67**	**311**	P	**P**	**07 01 48.4**	**+0.4**
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KBZ				MLR	MLR		
	comp=Z,59nm,19.7s						
KBZ	**Khabaz**	**69.67**	**311**	P	**P**	**07 01 48.4**	**+0.4**
KBZ	**Khabaz**	**69.67**	**311**	P	**P**	**07 01 48.4**	**+0.4**
	comp=Z,3.8nm,0.7s,baz=36,slow=7.8,SNR=11						
KBZ				LR	LR	07 37 05.4	
	comp=Z,59nm,19.7s,baz=266,slow=40						
PDAR	**Pinedale Array**	**69.77**	**50**	P	**P**	**07 01 49.1**	**+0.1**
PDAR				pP	**pP**	**07 02 07.2**	**+0.9**
PDAR	**Pinedale Array**	**69.77**	**50**	P	**P**	**07 01 49.1**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=272,slow=3.2,SNR=9.3						
PDAR				pP	**pP**	**07 02 07.2**	**+0.9**
	comp=Z,1.3nm,0.7s,baz=259,slow=3.0,SNR=5.0						
AKASG	**Malin Array Be**	**71.42**	**324**	*ce*P	**P**	**07 01 58.9**	**+0.3**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	Malin Array Be	71.42	324	P	P	07 01 57.9	-0.6
AKASG	Malin Array Be	71.42	324	P	P	07 01 57.9	-0.6
	comp=Z,2.7nm,0.6s,baz=37,slow=6.0,SNR=8.5						
KIEV	Kiev	71.43	324	eP	P	07 01 58.3	-0.3
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIEV	Kiev	71.43	324	eP	P	07 01 58.3	-0.3
	comp=Z,3.7nm,0.7s						
PV10	Paradox Valley	73.00	53	eP	P	07 02 09.7	+1.1
BUR08	Bucovina Ar. S	75.46	324	eP	P	07 02 22.4	-0.1
STKA	Stephens Creek	75.64	185	P	P	07 02 23.7	+0.4
STKA	Stephens Creek	75.64	185	P	P	07 02 23.7	+0.4
	comp=Z,0.9nm,0.7s,baz=267,slow=22,SNR=4.1						
MLR	Muntele Rosu	76.80	322	P	P	07 02 31.5	+1.3
MLR	Muntele Rosu	76.80	322	P	P	07 02 31.5	+1.3
	comp=Z,0.6nm,0.7s,baz=321,slow=13,SNR=4.3						
CLL	Collm	77.14	332	eP	P	07 02 31.0	-0.8
CLL	Collm	77.14	332	eP	P	07 02 31.0	-0.8
BRTR	Keskin Array B	77.41	314	P	P	07 02 33.9	+0.1
BRTR	Keskin Array B	77.41	314	P	P	07 02 33.9	+0.1
	comp=Z,1.0nm,0.7s,baz=71,slow=4.5,SNR=5.3						
GERES	GERESS Array B	78.98	331	P	P	07 02 41.2	-1.0
GERES	GERESS Array B	78.98	331	P	P	07 02 41.2	-1.0
	comp=Z,0.4nm,0.6s,baz=44,slow=7.8,SNR=3.9						
TXAR	Lajitas Array	82.52	56	P	P	07 03 01.9	+0.5
TXAR				pP	pP	07 03 17.3	-1.8
TXAR	Lajitas Array	82.52	56	P	P	07 03 01.9	+0.5
	comp=Z,1.6nm,0.8s,baz=307,slow=4.1,SNR=16						
TXAR				pP	pP	07 03 17.3	-1.8
	comp=Z,1.5nm,0.6s,baz=296,slow=5.0,SNR=8.5						
TORD	Torodi Ar. Bea	115.04	322	PKP	PKPdf	07 09 18.3	-1.3
TORD	Torodi Ar. Bea	115.04	322	PKP	PKPdf	07 09 18.3	-1.3
	comp=Z,0.5nm,1.1s,baz=15,slow=1.6,SNR=2.8						
SNAA	Sanae	148.66	198	ePKP	PKPbc	07 10 24.3	+0.3
BDFB	Brasilia	148.96	29	PKPbc	PKPbc	07 10 26.1	-0.4
BDFB	Brasilia	148.96	29	PKPbc	PKPbc	07 10 26.1	-0.4
	comp=Z,0.8nm,0.4s,baz=233,slow=5.1,SNR=3.6						

FUNV 11 06:56:11.6, 6°.59N×72°.54W, h15km, MW3.5, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CAPV	Capacho	1.29	10	⇑eP	Pb	06 56 35.9	0.0
CAPV				eS	Sb	06 56 51.6	-0.8
SOCV	Socops	2.37	45	eP	Pn	06 56 48.4	-1.7
VIGV	El Vigia	2.52	28	eP	Pn	06 56 51.8	-0.3
VIGV				eS	Sn	06 57 20.6	-2.1
ELOV	Elorza	3.07	82	eP	Pn	06 56 58.4	-1.2
ELOV				eS	Sn	06 57 33.7	-2.3
QARV	Quebrada Arrib	4.11	29	eP	Pn	06 57 12.9	-1.1
SANV	Sanarito	4.15	46	eP	Pn	06 57 13.0	-1.6
CURV	Curarigua	4.25	37	eP	Pn	06 57 14.7	-1.3
CURV				eS	Sn	06 58 01.9	-3.6

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*ISCJB **11** 07:04:49.5±0.3, 42°.32N±0°.02×13°.39E±0°.03, h14km±2km, Error ellipse: s-maj=3.7km s-min=2.9km az=136.8*
*ROM **11** 07:04:49.9±0.1, 42°.33N×13°.44E, h10km, Md3.2/20, Ml3.3/21, Error ellipse: s-maj=1.0km s-min=0.7km az=54.0*
*CSEM **11** 07:04:50.2±0.1, 42°.32N×13°.39E, h5km, ML3.7/9, Error ellipse: s-maj=3.3km s-min=2.4km az=52.0*
*LDG **11** 07:04:52.5±0.2, 42°.35N×13°.36E, h2km, Ml3.1/6, Error ellipse: s-maj=9.0km s-min=5.3km az=42.0*
*BEO **11** 07:05:02.8, 42°.97N×14°.39E*
ISC 11 07:04:49.9±0.8, **42°.33N**±0°.02×**13°.41E**±0°.02, **h13**km±4km, **n99**, σ**1s18**/120, **2C-1D, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.03	354	Pg	Pg	07 04 52.1	-0.2
AQU				Sg	Sg	07 04 53.2	-0.8
	5µm,0.6s						
AQU	L'Aquila	0.03	354	Pg	Pg	07 04 52.1	-0.2
AQU				Sg	Sg	07 04 53.2	-0.8
	5µm,0.6s						
FAGN	Fagnano	0.14	114	Pg	Pg	07 04 53.6	+0.1
FAGN				Sg	Sg	07 04 56.3	+0.2
	55µm,0.5s						
FAGN	Fagnano	0.14	114	Pg	Pg	07 04 53.6	+0.1
FAGN				Sg	Sg	07 04 56.3	+0.2
	55µm,0.5s						
CAMP	Campotosto	0.21	1	Pg	Pg	07 04 54.9	+0.3
CAMP				Sg	Sg	07 04 58.4	+0.6
	6µm,0.5s						
CAMP	Campotosto	0.21	1	Pg	Pg	07 04 54.9	+0.3
CAMP				Sg	Sg	07 04 58.4	+0.6
	6µm,0.5s						
FIAM	Fiamignano	0.22	255	Pg	Pb	07 04 55.7	-0.2
FIAM				Sg	Sb	07 04 59.9	0.0
	4µm,0.6s						
FIAM	Fiamignano	0.22	255	Pg	Pb	07 04 55.7	-0.2
FIAM				Sg	Sb	07 04 59.9	0.0
	4µm,0.6s						
PTQR	Pietraquaria	0.30	181	Pg	Pg	07 04 56.7	+0.5
PTQR	Pietraquaria	0.30	181	Pg	Pg	07 04 56.7	+0.5
VCEL	Villa Celiera	0.33	78	Pg	Pg	07 04 56.7	0.0
VCEL				Sg	Sg	07 05 01.7	+0.5
	10µm,0.5s						
VCEL	Villa Celiera	0.33	78	Pg	Pg	07 04 56.7	0.0
VCEL				Sg	Sg	07 05 01.7	+0.5
	10µm,0.5s						
TERO	Teramo	0.33	26	Pg	Pg	07 04 56.5	-0.2
TERO				Sg	Sg	07 05 01.4	+0.2
	4µm,0.3s						
TERO	Teramo	0.33	26	Pg	Pg	07 04 56.5	-0.2
TERO				Sg	Sg	07 05 01.4	+0.2
	4µm,0.3s						
LNSS	Leonessa	0.39	316	Pg	Pg	07 04 58.3	+0.6
	2µm,0.5s						
LNSS	Leonessa	0.39	316	Pg	Pg	07 04 58.3	+0.6
	2µm,0.5s						
VVLD	Villa Vallelon	0.48	160	Pg	Pg	07 04 59.4	-0.1
VVLD				Sg	Sg	07 05 06.6	+0.7
	2µm,0.6s						
VVLD	Villa Vallelon	0.48	160	Pg	Pg	07 04 59.4	-0.1
VVLD				Sg	Sg	07 05 06.6	+0.7
	2µm,0.6s						
INTR	Introdacqua	0.49	130	Pg	Pg	07 04 59.5	0.0
INTR				Sg	Sg	07 05 06.8	+0.8
	4µm,0.3s						
INTR	Introdacqua	0.49	130	Pg	Pg	07 04 59.5	0.0
INTR				Sg	Sg	07 05 06.8	+0.8
	4µm,0.3s						
CERT	Cerreto	0.49	220	Pg	Pg	07 05 00.1	+0.5
	3µm,0.5s						
CERT	Cerreto	0.49	220	Pg	Pg	07 05 00.1	+0.5
	3µm,0.5s						
NRCA	Norcia	0.55	337	Pg	Pg	07 05 00.8	0.0
NRCA				Sg	Sb	07 05 09.4	0.0
	810nm,0.1s						
NRCA	Norcia	0.55	337	Pg	Pg	07 05 00.8	0.0
NRCA				Sg	Sb	07 05 09.4	0.0
	810nm,0.1s						
MTCE	Montecelio	0.58	239	Pg	Pg	07 05 01.7	+0.4
	1µm,0.5s						
MTCE	Montecelio	0.58	239	Pg	Pg	07 05 01.7	+0.4
	1µm,0.5s						
POFI	Posta Fibreno	0.65	159	Pg	Pg	07 05 01.9	-0.7
POFI	Posta Fibreno	0.65	159	Pg	Pg	07 05 01.9	-0.7
SDI	San Donato	0.69	154	Pg	Pg	07 05 02.8	-0.5
SDI	San Donato	0.69	154	Pg	Pg	07 05 02.8	-0.5
FDMO	Fiordimonte	0.75	342	Pg	Pg	07 05 04.2	-0.3
	532nm,0.7s						
FDMO	Fiordimonte	0.75	342	Pg	Pg	07 05 04.2	-0.3
	532nm,0.7s						
CESI	CESI - Serrava	0.77	332	Pg	Pg	07 05 04.9	0.0
	198nm,0.4s						
CESI	CESI - Serrava	0.77	332	Pg	Pg	07 05 04.9	0.0
	198nm,0.4s						
GUMA	Gualdo di Mace	0.83	28	Pg	Pg	07 05 04.5	-1.6
	3µm,0.5s						
GUMA	Gualdo di Mace	0.83	28	Pg	Pg	07 05 04.5	-1.6
	3µm,0.5s						
RNI2	Rionero Sannit	0.84	138	Pg	Pg	07 05 05.7	-0.4
	1µm,0.5s						
RNI2	Rionero Sannit	0.84	138	Pg	Pg	07 05 05.7	-0.4
	1µm,0.5s						
CERA	Filignano	0.86	148	Pg	Pg	07 05 05.6	-1.0
	968nm,0.5s						
CERA	Filignano	0.86	148	Pg	Pg	07 05 05.6	-1.0
	968nm,0.5s						
MIDA	Miranda	0.93	137	Pg	Pb	07 05 06.9	-1.1
	721nm,0.5s						
MIDA	Miranda	0.93	137	Pg	Pb	07 05 06.9	-1.1
	721nm,0.5s						
SNTG	Esanatoglia	0.99	340	Pg	Pb	07 05 08.5	-0.5
	500nm,0.9s						
SNTG	Esanatoglia	0.99	340	Pg	Pb	07 05 08.5	-0.5
	500nm,0.9s						
TRIV	Trivento	1.02	123	Pg	Pb	07 05 09.2	-0.3
	349nm,0.8s						
TRIV	Trivento	1.02	123	Pg	Pb	07 05 09.2	-0.3
	349nm,0.8s						
CING	Cingoli	1.06	352	Pg	Pb	07 05 10.0	-0.2
	364nm,0.4s						
CING	Cingoli	1.06	352	Pg	Pb	07 05 10.0	-0.2
	364nm,0.4s						
VAGA	Valle Agricola	1.10	146	Pg	Pb	07 05 10.6	-0.3
	370nm,0.6s						
VAGA	Valle Agricola	1.10	146	Pg	Pb	07 05 10.6	-0.3
	370nm,0.6s						
BSSO	Busso	1.18	131	Pg	Pn	07 05 11.8	-0.5
	304nm,0.7s						
BSSO	Busso	1.18	131	Pg	Pn	07 05 11.8	-0.5
	304nm,0.7s						
NVLJ	Novalja	2.48	25	ePn	Pn	07 05 31.4	+1.3
NVLJ				Sn	Sn	07 06 01.6	+1.5
NVLJ	Novalja	2.48	25	ePn	Pn	07 05 31.3	+1.3
NVLJ				Sn	Sn	07 06 01.6	+1.5
MAIM	Mastiano	2.66	308	P	Pn	07 05 33.6	+1.1
STON	Ston	3.22	79	ePn	Pn	07 05 41.5	+1.4
STON				Sn	Sn	07 06 18.6	+0.2
STON	Ston	3.22	79	ePn	Pn	07 05 41.5	+1.4
STON				Sn	Sn	07 06 18.5	+0.2
PGF	Pioggiola	3.27	275	ePn	Pn	07 05 42.6	+1.6
PGF				eSn	Sn	07 06 19.5	-0.3
	6.5nm,0.5s						
PGF	Pioggiola	3.27	275	ePn	Pn	07 05 42.6	+1.6
PGF				eSn	Sn	07 06 19.5	-0.3
	3.2nm,0.5s						
VOY	Vojsko	3.72	5	ePn	Pn	07 05 50.8	+3.6
VOY				e		07 05 53.2	
VOY				e		07 06 03.9	
VOY				e		07 06 33.4	
OBKA	Obir	4.26	11	⇑iPn	Pn	07 05 56.1	+1.5
OBKA	Obir	4.26	11	Pn	Pn	07 05 56.1	+1.5
PDG	Podgorica	4.33	87	ePn	Pn	07 05 57.8	+2.3
PDG	Podgorica	4.33	87	ePn	Pn	07 05 57.8	+2.3
ABTA	Abfaltersbach	4.47	352	⇓iPn	Pn	07 05 59.2	+1.8
ABTA	Abfaltersbach	4.47	352	Pn	Pn	07 05 59.2	+1.8
SBF	Sospel	4.63	291	eSn	Sn	07 06 51.4	-2.0
	4.6nm,0.2s						
SBF	Sospel	4.63	291	eSn	Sn	07 06 51.4	-2.0
	2.3nm,0.2s						
BBLS	Lazići	4.66	69	ePn	Pn	07 06 02.5	+2.5
BBLS	Lazići	4.66	69	ePn	Pn	07 06 02.5	+2.5
PUK	Puka	4.83	91	ePN	Pn	07 06 05.7	+3.3
PUK	Puka	4.83	91	ePn	Pn	07 06 05.7	+3.3
BCI	Bajram Curri	4.94	87	ePN	Pn	07 06 07.3	+3.4
BCI	Bajram Curri	4.94	87	ePn	Pn	07 06 07.3	+3.4
FRF	La Foret Royal	5.11	286	ePn	Pn	07 06 06.8	+0.6
FRF	La Foret Royal	5.11	286	ePn	Pn	07 06 06.8	+0.6
DIVS	Divibare	5.13	68	ePn	Pn	07 06 06.8	+0.3
ARSA	Arzberg	5.15	16	ePn	Pn	07 06 08.6	+1.8
ARSA	Arzberg	5.15	16	ePn	Pn	07 06 08.6	+1.8
LMR	La Mourre	5.17	284	ePn	Pn	07 06 07.8	+0.8
LMR				eSn	Sn	07 07 04.7	-1.8
	4.7nm,0.3s						
LMR	La Mourre	5.17	284	ePn	Pn	07 06 07.8	+0.8
LMR				eSn	Sn	07 07 04.7	-1.8
	2.3nm,0.3s						
PHP	Peshkopia	5.28	95	ePN	Pn	07 06 12.0	+3.4
PHP	Peshkopia	5.28	95	ePn	Pn	07 06 12.0	+3.4
MBDF	Montbardon	5.39	299	ePn	Pn	07 06 11.0	+0.9
MBDF	Montbardon	5.39	299	ePn	Pn	07 06 11.0	+0.9
GRUS	Gruza	5.57	71	ePn	Pn	07 06 13.8	+1.2
GRUS	Gruza	5.57	71	ePn	Pn	07 06 13.8	+1.2
SELS	Selova	5.75	78	ePn	Pn	07 06 16.2	+1.2
PKST	Tˆ's	5.93	32	⇑epg	Pb	07 06 39.0	+5.9
PKST				esg	Pg	07 06 42.2	-1.2
BARS	Barje	6.23	83	ePn	Pn	07 06 23.7	+2.1
KHC	Kasperske Hory	6.81	1	eP	Pn	07 06 31.0	+1.5
KHC				ex	x	07 07 48.0	
KHC	Kasperske Hory	6.81	1	P	Pn	07 06 31.0	+1.5
HINF	Hinteralfeld	7.18	322	eSn	Sn	07 07 52.0	-4.2
	1.6nm,0.3s						
LASF	Ste Croix	7.19	287	ePn	Pn	07 06 35.2	+0.4
LASF	Ste Croix	7.19	287	ePn	Pn	07 06 35.2	+0.4
CDF	Champ du Feu	7.46	327	ePn	Pn	07 06 39.3	+0.8
CDF				eSn	Sn	07 07 59.3	-3.7
	1.9nm,0.3s						
CDF	Champ du Feu	7.46	327	ePn	Pn	07 06 39.3	+0.8
HAU	Haudompre	7.55	321	ePn	Pn	07 06 40.2	+0.4
HAU				eSn	Sn	07 08 01.1	-4.2
	4.0nm,0.4s						
HAU	Haudompre	7.55	321	ePn	Pn	07 06 40.2	+0.4

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*NEIC **11** 07:06:48.0±1.2, 17°.85S×174°.99W, h213km±10km, mb4.0/3, Error ellipse: s-maj=26.7km s-min=9.4km az=150.0*
*IDC **11** 07:06:47.0±3.1, 17°.54S×175°.27W, h190km±20km, mb4.0/4, mb1 4.1/6, mb1mx3.5/21, mbtmp4.0/6, Error ellipse: s-maj=133.3km s-min=15.7km az=141.0*
*ISCJB **11** 07:06:48.4±0.5, 17°.6S±0°.1×174°.85W±0°.09, h256km, mb3.9/7, Error ellipse: s-maj=18.0km s-min=7.9km az=148.3*
*AUST **11** 07:06:51.5±10.0, 17°.58S×174°.33W, h299km, Error ellipse: s-maj=5.1km s-min=2.1km az=260.0*
ISC 11 07:06:49.3±0.7, **17°.6S**±0°.1×**174°.78W**±0°.10, **h256**km, **n31**, σ**1s31**/31, **mb3.9**/7, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	4.68	39	P	Pn	07 08 02.3	+0.8
AFI				S	S	07 08 57.2	-1.9
AFI	Afiamalu	4.68	39	P	Pn	07 08 02.3	+0.8
	31nm,0.3s,baz=154,slow=3.0,SNR=47						
AFI				S	S	07 08 57.2	-1.9
	57nm,0.3s,baz=39,slow=23,SNR=10						
NIUE	Niue	4.84	108	P	Pn	07 08 02.5	-0.8
	baz=4.4,SNR=4.2						
MSVF	Nonsavu	6.83	268	ePn	Pn	07 08 24.1	-4.0
DZM	Mont Dzumac	18.21	253	P	P	07 10 43.1	-0.9
DZM				ePn	Pn	07 10 43.4	-3.8
DZM	Mont Dzumac	18.21	253	P	P	07 10 43.1	-0.9
	0.2nm,0.3s,baz=81,slow=17,SNR=5.8						
CMSA	Cobar Meteorol	38.31	241	P	P	07 13 45.9	+0.2
	baz=39,SNR=6.8						
QLP	Quilpie	38.87	249	P	P	07 13 50.4	0.0
	baz=39,SNR=5.7						
STKA	Stephens Creek	41.81	242	P	P	07 14 14.8	+0.5
STKA	Stephens Creek	41.81	242	P	P	07 14 14.8	+0.5
	2.3nm,0.4s,baz=88,slow=13,SNR=7.3						
STKA	Stephens Creek	41.81	242	P	P	07 14 15.1	+0.8
	baz=42,SNR=4.5						
WRAB	Tennant Creek	48.07	259	eP	P	07 15 04.3	+0.6
	3.0nm,0.3s						
WRA	Warramunga Arr	48.08	259	P	P	07 15 04.1	+0.3
WRA	Warramunga Arr	48.08	259	P	P	07 15 04.1	+0.3
	3.8nm,0.4s,baz=97,slow=7.8,SNR=79						
AS31	Alice Springs	48.20	254	eP	P	07 15 04.7	0.0
ASAR	Alice Springs	48.20	254	P	P	07 15 05.0	+0.3
ASAR	Alice Springs	48.20	254	P	P	07 15 05.0	+0.3
	36nm,0.6s,baz=90,slow=8.1,SNR=475						
KDU	Kakadu	51.02	268	P	P	07 15 26.8	+0.9
	baz=51,SNR=5.4						
MTN	Manton Dam	52.26	267	P	P	07 15 36.0	+1.0
	baz=53,SNR=4.8						
KNRA	Kununurra	53.96	263	P	P	07 15 48.3	+1.0
	baz=54,SNR=4.2						
FITZ	Fitzroy Crossi	56.48	260	eP	P	07 16 06.9	+1.5
	1.9nm,0.5s						
FITZ	Fitzroy Crossi	56.48	260	P	P	07 16 06.6	+1.3
	baz=57,SNR=6.5						
MEEK	Meekatharra	61.77	249	P	P	07 16 41.5	+0.1
	baz=62,SNR=3.4						
QSPA	South Pole Qui	72.45	180	eP	P	07 17 49.9	+2.1
	1.1nm,0.7s						
ILAR	Eielson Array	84.86	12	P	P	07 19 00.6	+5.7
ILAR	Eielson Array	84.86	12	P	P	07 19 00.6	+5.7
	0.3nm,0.5s,baz=224,slow=5.7,SNR=13						
PPI	Padang Panjang	84.92	271	P	P	07 18 54.9	-1.5
	baz=85,SNR=3.0						
BRTR	Keskin Array B	146.96	318	PKPbc	PKPab	07 26 06.1	+1.9
BRTR	Keskin Array B	146.96	318	PKPbc	PKPab	07 26 06.1	+1.9
	1.1nm,0.6s,baz=124,slow=2.2,SNR=4.8						
GERES	GERESS Array B	148.09	349	PKPbc	PKPab	07 26 08.8	+0.5
GERES	GERESS Array B	148.09	349	PKPbc	PKPab	07 26 08.8	+0.5
	0.3nm,0.6s,baz=22,slow=3.6,SNR=3.6						

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*ISCJB **11** 07:09:06.5±0.4, 32°.76S±0°.06×179°.7W±0°.2, h33km, mb4.0/3, Error ellipse: s-maj=19.7km s-min=4.0km az=21.9*
*IDC **11** 07:09:10.9±1.6, 32°.80S×179°.33W, h81km±20km, mb3.8/2, mb1 4.2/5, mb1mx3.7/20, mbtmp4.1/5, Error ellipse: s-maj=40.7km s-min=11.3km az=112.0*
*NEIC **11** 07:09:11.0±0.9, 32°.80S×179°.34W, h81km±11km, mb4.3/1, Error ellipse: s-maj=23.5km s-min=8.6km az=117.0*
ISC 11 07:09:09.0±0.8, **32°.64S**±0°.09×**179°.8W**±0°.2, **h35**km, **n58**, σ**2s06**/55, **mb4.2**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	3.74	26	ePn	Pn	07 10 06.3	+2.1
RAO				eSn	Sn	07 10 47.4	+0.4
RAO	Raoul Island	3.74	26	P	Pn	07 10 05.6	+1.4
	58nm,0.3s,baz=198,slow=20,SNR=3.9						
RAO				S	Sn	07 10 50.0	+3.1
	90nm,0.3s,baz=60,slow=20,SNR=2.8						
PUZ	Puketiti	5.65	196	PN	Pn	07 10 32.3	+1.8
CNGZ	Carnagh Statio	6.06	195	PN	Pn	07 10 38.0	+1.9
MARZ	Manawahe	6.07	208	PN	Pn	07 10 40.6	+4.3
MWZ	Matawai	6.09	200	PN	Pn	07 10 38.3	+1.7
MWZ				SN	Sn	07 11 49.7	+4.6
URZ	Urewera	6.16	204	ePn	Pn	07 10 39.9	+2.5
URZ				eSn	Sn	07 11 48.4	+1.8
URZ	Urewera	6.16	204	PN	Pn	07 10 39.9	+2.5
URZ	Urewera	6.16	204	P	Pn	07 10 39.7	+2.3
	4.5nm,0.3s,baz=99,slow=18,SNR=82						
URZ				S	Sn	07 11 49.1	+2.5
	7.4nm,0.3s,baz=97,slow=22,SNR=17						
PRGZ	Paritu Road	6.55	196	PN	Pn	07 10 43.8	+0.9
KNZ	Kokohu	6.69	197	PN	Pn	07 10 44.6	-0.2
ALRZ	Allen Road	6.70	207	PN	Pn	07 10 48.4	+3.4
RAHZ	Arahi	6.76	201	PN	Pn	07 10 47.3	+1.5
MHGZ	Mahia Peninsul	6.76	196	PN	Pn	07 10 46.1	+0.3
NMHZ	Naumai	7.01	202	PN	Pn	07 10 50.6	+1.3
BKZ	Black Stump Fm	7.18	204	PN	Pn	07 10 50.1	-1.5
MCHZ	McNeill Hill	7.37	202	PN	Pn	07 10 55.0	+1.0
FWVZ	Far West T-bar	7.61	209	PN	Pn	07 10 59.6	+2.0
WHVZ	Whangaehu Hut	7.62	208	PN	Pn	07 10 59.5	+1.8
BHHZ	Black Hill Sta	7.62	205	PN	Pn	07 10 58.3	+0.7
KAHZ	Kahuranaki	7.63	200	PN	Pn	07 10 57.6	-0.1
WNVZ	Wahianoa	7.65	208	PN	Pn	07 11 00.7	+2.5
PXZ	Pawanui	7.86	199	PN	Pn	07 10 59.4	-1.4
PNHZ	Pukenui	7.95	203	PN	Pn	07 11 01.3	-0.8
WPHZ	Waipukurau	8.01	201	PN	Pn	07 11 00.8	-2.1
TSZ	Takapari Road	8.16	204	PN	Pn	07 11 03.6	-1.4
DVHZ	Dannevirke	8.31	202	PN	Pn	07 11 05.5	-1.5
ANWZ	Angora Road	8.37	200	PN	Pn	07 11 06.6	-1.2
POWZ	Post Office Ro	8.53	204	PN	Pn	07 11 09.2	-0.7
PRWZ	Pori Road	8.61	202	PN	Pn	07 11 10.6	-0.4
BFZ	Birch Farm	8.64	201	PN	Pn	07 11 09.5	-2.0
MRZ	Mangatainoka R	8.83	204	PN	Pn	07 11 11.9	-2.3
TIWZ	Tintock	8.84	202	PN	Pn	07 11 12.8	-1.4
HOWZ	Holdsworth Sta	9.06	203	PN	Pn	07 11 14.1	-3.3
OGWZ	Otaki Gorge	9.11	205	PN	Pn	07 11 15.7	-2.2
KIW	Kapiti Island	9.25	206	PN	Pn	07 11 17.7	-2.1
MTW	Mount Morrison	9.30	203	PN	Pn	07 11 17.4	-3.2
CAW	Cannon Point	9.40	205	PN	Pn	07 11 19.4	-2.6
MSWZ	Moikau Station	9.62	203	PN	Pn	07 11 21.6	-3.3
SNZO	South Karori	9.71	205	PN	Pn	07 11 22.8	-3.4
PLWZ	Palliser	9.76	203	PN	Pn	07 11 23.3	-3.6
TCW	Tory Channel	9.79	207	PN	Pn	07 11 24.4	-2.8
TUWZ	Tuamarina	10.11	208	PN	Pn	07 11 28.8	-2.7
NNZ	Nelson	10.16	211	PN	Pn	07 11 30.8	-1.5
THZ	Tophouse	10.81	211	PN	Pn	07 11 38.5	-2.8
KHZ	Kahutara	11.11	207	PN	Pn	07 11 42.7	-2.6
OXZ	Oxford	12.46	209	PN	Pn	07 11 58.5	-5.3
RPZ	Rata Peaks	13.19	210	ePn	Pn	07 12 15.3	+1.5
RPZ	Rata Peaks	13.19	210	P	Pn	07 12 14.3	+0.5
	0.7nm,0.3s,baz=149,slow=18,SNR=4.5						
RPZ				S	Sn	07 14 28.3	-11
	0.6nm,0.3s,baz=29,slow=18,SNR=8.4						
AFI	Afiamalu	20.03	23	eP	P	07 13 37.6	-1.4
ASAR	Alice Springs	41.55	270	P	P	07 16 53.2	-0.1
ASAR	Alice Springs	41.55	270	P	P	07 16 53.2	-0.1
	1.2nm,0.6s,baz=105,slow=7.4,SNR=4.2						
WRAB	Tennant Creek	42.74	276	eP	P	07 17 03.7	+0.6
	1.9nm,0.4s						
WRA	Warramunga Arr	42.74	276	P	P	07 17 03.5	+0.3
WRA	Warramunga Arr	42.74	276	P	P	07 17 03.5	+0.3
	2.4nm,0.5s,baz=114,slow=8.0,SNR=11						
KURK	Kurchatov	121.49	313	ePKPdf	PKPdf	07 27 56.0	-2.2
TORD	Torodi Ar. Bea	160.55	184	PKPab	PKPab	07 29 42.3	-4.6
TORD	Torodi Ar. Bea	160.55	184	PKPab	PKPab	07 29 42.3	-4.6
	0.6nm,1.0s,baz=178,slow=3.5,SNR=2.7						

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*IDC **11** 07:39:24.7±1.1, 32°.38N×105°.39E, h0km, mb3.5/5, mb1 3.8/5, mb1mx3.5/27, mbtmp3.6/5, Error ellipse: s-maj=69.3km s-min=21.4km az=57.0*
*ISCJB **11** 07:39:25.4±0.6, 32°.25N±0°.05×105°.26E±0°.08, h15km, mb3.5/5, Error ellipse: s-maj=10.4km s-min=6.1km az=23.0*
*BJI **11** 07:39:27.2, 32°.32N×105°.02E, h17km, ML3.6/12*
ISC 11 07:39:27.5±0.7, **32°.25N**±0°.05×**105°.17E**±0°.06, **h15**km, **n11**, σ**1s23**/18, **mb3.5**/5, **Sichuan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CD2	Chengdu	1.79	222	Pn	Pn	07 39 58.1	+0.1
CD2				Pg	Pg	07 40 02.2	+0.2
CD2				Sn	Sn	07 40 20.8	+0.3
CD2				Sg	Sb	07 40 24.0	+1.6
CD2				smax	smax		
	comp=N,3µm,0.8s						
CD2				smax	smax		
	comp=E,3µm,0.7s						
XAN	Xi'an	3.62	59	Pg	Pg	07 40 36.4	-0.6
XAN				Sg	Sb	07 41 18.2	+3.1
XAN				smax	smax		
	comp=N,110nm,0.7s						
XAN				smax	smax		
	comp=E,54nm,0.9s						
LZH	Lanzhou	3.98	344	ePn	Pn	07 40 29.7	+1.5
LZH				Pg	Pb	07 40 37.1	-0.4
LZH				Sn	Sn	07 41 14.1	-0.7
LZH				Sg	Sb	07 41 27.4	+1.8
LZH				smax	smax		
	comp=N,90nm,0.5s						
LZH				smax	smax		
	comp=E,150nm,0.8s						
GTA	Gaotai	8.36	330	eP	Pn	07 41 29.2	+0.9
GTA				pP	pP	07 41 34.4	
GTA				sP	sP	07 41 36.3	
CMAR	Chiang Mai Arr	14.83	204	Pn	P	07 43 02.9	+0.3
	comp=E,0.4nm,0.3s,baz=12,slow=9.2,SNR=4.6						
SONM	Songino Array	15.60	3	Pn	P	07 43 09.8	-1.3
	comp=E,0.1nm,0.3s,baz=185,slow=12,SNR=2.3						
MKAR	Makanchi Array	22.75	316	P	P	07 44 28.7	-0.3
	comp=E,0.9nm,0.7s,baz=108,slow=9.3,SNR=8.0						
KURBB	Kurchatov Arra	26.90	321	P	P	07 45 07.2	-0.6
	comp=E,0.3nm,0.3s,baz=115,slow=7.1,SNR=5.9						
WRA	Warramunga Arr	58.93	148	P	P	07 49 26.1	-0.2
	comp=E,0.8nm,0.7s,baz=341,slow=7.6,SNR=6.1						
ASAR	Alice Springs	62.01	150	P	P	07 49 46.8	-0.5
	comp=E,0.3nm,0.6s,baz=338,slow=7.5,SNR=5.8						
YKA	Yellowknife Ar	80.33	18	P	P	07 51 36.7	-1.0
	comp=E,0.3nm,0.5s,baz=325,slow=5.3,SNR=6.8						

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*DDA **11** 08:07:42.7, 40°.02N×36°.46E, h11km, MD2.8*
*ISK **11** 08:07:43.0, 40°.08N×36°.41E, h9km, MD2.8*
*CSEM **11** 08:07:43.3±0.2, 40°.04N×36°.42E, h2km, MD2.8, Error ellipse: s-maj=5.8km s-min=4.6km az=151.0*
ISC 11 08:07:43.2±0.9, **40°.06N**±0°.03×**36°.45E**±0°.02, **h12**km±9km, **n32**, σ**0s61**/50, **Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
TOKA	Tokat	0.26	5	iP	Pg	08 07 43.4	-5.3
TOKA				iS	Sb	08 07 53.7	-0.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
TOKT	Tokat	0.27	16	*e*PG	Pg	08 07 48.6	-0.2
TOKT				*e*SG	Sg	08 07 52.5	0.0
TOKT	Tokat	0.27	16	*e*Pg	Pg	08 07 48.6	-0.2
TOKT				*e*Sg	Sg	08 07 52.5	0.0
RSDY	Resadiye-TOKAT	0.75	63	*e*PG	Pb	08 07 58.3	0.0
RSDY				*e*SG	Sb	08 08 09.4	+0.9
RSDY	Resadiye-TOKAT	0.75	63	*e*Pg	Pb	08 07 58.3	0.0
RSDY				*e*Sg	Sb	08 08 09.5	+0.9
YOZ	Yozgat	0.96	244	*e*PG	Pg	08 08 01.2	-0.6
YOZ				*e*SG	Sn	08 08 15.8	-0.7
YOZ	Yozgat	0.96	244	*e*Pg	Pg	08 08 01.2	-0.6
YOZ				*e*Sg	Sn	08 08 15.8	-0.7
KVT	Kavak	1.06	343	*e*PG	Pb	08 08 03.3	-0.2
KVT	Kavak	1.06	343	*e*Pg	Pb	08 08 03.3	-0.2
BNN	Bunyan	1.29	201	*e*PN	Pb	08 08 07.6	0.0
BNN	Bunyan	1.29	201	*e*Pn	Pb	08 08 07.6	0.0
SUSE	Susehri	1.35	83	*i* P	Pn	08 08 07.4	-0.7
SUSE				*i* S	Sg	08 08 28.3	+1.5
SUSE	Susehri	1.35	83	*i* P	Pn	08 08 07.4	-0.7
SUSE				*i* S	Sg	08 08 28.3	+1.5
CTKT	Corum	1.38	294	*i* P	Pg	08 08 10.4	+0.6
CTKT	Corum	1.38	294	*i* P	Pg	08 08 10.4	+0.6
PINB	Pinarbasi	1.39	181	*i* P	Pn	08 08 08.3	-0.3
PINB				*i* S	Sn	08 08 26.9	-0.1
PINB	Pinarbasi	1.39	181	*i* P	Pn	08 08 08.3	-0.3
PINB				*i* S	Sn	08 08 26.9	-0.1
CORM	Corum	1.40	275	*e*PN	Pg	08 08 09.7	-0.3
CORM	Corum	1.40	275	*e*Pn	Pg	08 08 09.7	-0.3
SARI	SarD1z-Kayseri	1.65	181	*e*PN	Pb	08 08 13.2	-0.5
CDAG	Cicekdag	1.66	255	*i* P	Pb	08 08 13.3	-0.4
CDAG				*i* S	Sg	08 08 36.9	+0.5
CDAG	Cicekdag	1.66	255	*i* P	Pb	08 08 13.3	-0.4
DARE	Darende-Malaty	1.69	151	*e*PN	Pb	08 08 13.9	-0.4
DARE	Darende-Malaty	1.69	151	*e*Pn	Pb	08 08 14.0	-0.4
KEMA	Kemaliye	1.77	116	*i* P	Pb	08 08 15.1	-0.5
KEMA				*i* S	Sg	08 08 40.0	-0.1
KEMA	Kemaliye	1.77	116	*i* P	Pb	08 08 15.1	-0.5
KEMA				*i* S	Sg	08 08 40.0	-0.1
AVNT	Avonos	1.78	224	*i* P	Pn	08 08 14.7	+0.8
AVNT				*i* S	Sg	08 08 40.7	+0.3
AVNT	Avonos	1.78	224	*i* P	Pn	08 08 14.7	+0.8
AVNT				*i* S	Sg	08 08 40.7	+0.3
AKCD	Akcadag	2.10	146	*i* P	Pn	08 08 18.5	+0.1
AKCD				*i* S	Sg	08 08 51.6	+0.7
AKCD	Akcadag	2.10	146	*i* P	Pn	08 08 18.5	+0.1
KELT	Kelkit	2.16	87	*i* P	Pb	08 08 21.3	-1.0
KELT				*i* S	Sb	08 08 49.8	+0.7
KELT	Kelkit	2.16	87	*i* P	Pb	08 08 21.3	-1.0
KELT				*i* S	Sb	08 08 49.8	+0.7

*ISCJB **11** 08:08:05.7±0.6, 23°.66S±0°.08×179°.8W±0°.1, h518km, mb3.9/9, Error ellipse: s-maj=13.0km s-min=10.3km az=29.0*
*AUST **11** 08:08:11.3, 23°.62S×179°.63W, h600km*
*IDC **11** 08:08:11.1±4.4, 23°.81S×179°.95W, h564km±47km, mb3.3/9, mb1 3.6/9, mb1mx3.3/20, mbtmp3.3/9, Error ellipse: s-maj=28.6km s-min=19.6km az=37.0*
ISC 11 08:08:06.8±0.7**, 23°.8S**±0°.1**×179°.8W**±0°.1**, h518km, n39, σ0s.95**/35**, mb3.9**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NFK	Norfolk Island	12.16	242	S	S	08 12 44.0	-15
	baz=12,SNR=4.3						
AFI	Afiamalu	12.41	39	P	P	08 10 47.1	-2.7
	5.4nm,0.3s,baz=266,slow=20,SNR=5.3						
URZ	Urewera	14.68	190	P	P	08 11 10.4	-2.7
	2.3nm,0.3s,baz=293,slow=1.7,SNR=10						
URZ				S	S	08 13 45.6	-1.3
	1.5nm,0.3s,baz=105,slow=22,SNR=9.3						
RPZ	Rata Peaks	21.26	198	P	P	08 12 16.2	+0.5
	5.7nm,0.7s,baz=118,slow=23,SNR=6.5						
ARMA	Armidale	26.23	249	P	P	08 13 01.9	+1.7
	baz=26,SNR=5.4						
EIDS	Eidsvold	26.50	261	P	P	08 13 03.2	+0.7
	baz=27,SNR=5.6						
MGCD	Mangrove Creek	27.16	243	P	P	08 13 10.0	+1.8
	baz=27,SNR=5.7						
CMSA	Cobar Meteorol	31.42	248	P	P	08 13 45.9	+0.7
	baz=32,SNR=6.7						
CTA	Charters Tower	31.64	270	P	P	08 13 48.0	+0.7
	10nm,0.4s,baz=95,slow=11,SNR=19						
TOO	Toolangi	32.66	237	P	P	08 13 56.5	+0.7
	baz=33,SNR=7.5						
MTSU	Mount Surprise	33.90	273	P	P	08 14 07.4	+0.8
	baz=34,SNR=6.7						
STKA	Stephens Creek	34.93	248	P	P	08 14 15.6	+0.6
	1.5nm,0.5s,baz=190,slow=18,SNR=5.9						
BBOO	Buckleboo	39.65	247	P	P	08 14 53.2	-0.4
	baz=40,SNR=9.1						
ASAR	Alice Springs	42.22	260	P	P	08 15 14.2	-0.1
	5.0nm,0.6s,baz=97,slow=7.6,SNR=59						
ASAR				PcP	PcP	08 16 55.7	-0.9
	0.4nm,0.6s,baz=77,slow=4.2,SNR=3.4						
WRA	Warramunga Arr	42.58	266	P	P	08 15 16.6	-0.6
	5.7nm,0.4s,baz=96,slow=8.4,SNR=302						
WRA				PcP	PcP	08 16 56.9	-0.9
	1.1nm,0.9s,baz=110,slow=3.7,SNR=4.7						
KDU	Kakadu	46.45	275	P	P	08 15 46.4	-0.6
	baz=47,SNR=4.2						
FORT	Forrest	46.51	249	P	P	08 15 46.7	-0.6
	baz=47,SNR=11						
MTN	Manton Dam	47.62	274	P	P	08 15 55.2	-0.6
	baz=48,SNR=4.2						
KNRA	Kununurra	48.86	270	P	P	08 16 04.8	-0.3
	baz=49,SNR=4.6						
FITZ	Fitzroy Crossi	51.01	265	P	P	08 16 21.5	+0.6
	2.8nm,0.5s,baz=117,slow=21,SNR=13						
FITZ	Fitzroy Crossi	51.01	265	P	P	08 16 21.1	+0.3
	baz=51,SNR=7.2						
VNDA	Vanda	54.52	185	P	P	08 16 46.1	+1.1
	0.7nm,0.6s,baz=334,slow=8.0,SNR=4.9						
MEEK	Meekatharra	55.31	253	P	P	08 16 51.0	-0.5
	baz=55,SNR=4.4						
MORW	Morawa	57.08	250	P	P	08 17 03.4	-0.2
	baz=57,SNR=5.7						
WSI	Waingapu	58.66	273	S	S	08 24 33.6	-5.9
	baz=59,SNR=11						
LUWI	Luwuk	59.96	283	P	pP	08 19 10.4	+3.7
	baz=25,SNR=3.1						
PMBI	Palembang	75.48	273	S	S	08 27 50.6	-6.3
	baz=43,SNR=3.9						
NVAR	Mina Array Bea	84.54	44	P	P	08 19 45.8	+0.4
	0.2nm,0.5s,baz=226,slow=8.7,SNR=3.7						
TXAR	Lajitas Array	90.22	58	P	P	08 20 13.2	+1.0
	0.7nm,0.6s,baz=213,slow=6.5,SNR=7.8						
MKAR	Makanchi Array	112.19	313	PKiKP	PKiKP	08 25 41.6	-1.6
	0.4nm,0.6s,baz=265,slow=0.9,SNR=3.8						
KURBB	Kurchatov Arra	115.27	316	PKP	PKPdf	08 25 48.2	-0.8
	0.5nm,0.6s,baz=87,slow=1.6,SNR=5.5						
ARCES	ARCESS Array B	131.80	348	PKP	PKPdf	08 26 19.4	-0.7
	0.8nm,0.6s,baz=48,slow=1.8,SNR=10.0						
HFS	Hagfors	142.46	349	PKhKP	PKPpre	08 26 35.6	
	2.7nm,0.4s,baz=58,slow=3.7,SNR=26						
AKASG	Malin Array Be	144.96	327	PKP	PKPdf	08 26 44.2	-0.3
	0.9nm,0.3s,baz=43,slow=3.7,SNR=5.4						
BRTR	Keskin Array B	147.64	307	PKPbc	PKPdf	08 26 51.8	+2.2
	1.0nm,0.6s,baz=123,slow=4.6,SNR=4.7						
EKA	Eskdalemuir Ar	148.38	4	PKPbc	PKPbc	08 26 53.8	-0.5
	0.4nm,0.3s,baz=354,slow=1.7,SNR=3.7						
CLL	Collm	150.78	343	*i* (P)	PKPbc	08 26 59.7	-0.4
	comp=Z,6.0nm,0.7s						
GERES	GERESS Array B	152.80	340	PKPbc	PKPbc	08 27 03.6	-1.2
	comp=Z,0.1nm,0.3s,baz=127,slow=3.5,SNR=3.7						
TORD	Torodi Ar. Bea	169.33	188	PKPab	PKPab	08 28 30.3	-0.8
	comp=Z,0.7nm,0.7s,baz=166,slow=4.7,SNR=6.9						

MAN 11 08:09:18, 12°.03N×124°.15E, h14km, mb4.6, ML3.4, MS3.4, Samar

*ISCJB **11** 08:14:06.7±0.5, 5°.57S±0°.05×147°.71E±0°.07, h77km, mb4.1/14, Error ellipse: s-maj=10.5km s-min=6.6km az=15.4*
*AUST **11** 08:14:11.8, 5°.76S×147°.60E, h100km*
*IDC **11** 08:14:12.0±1.6, 5°.77S×147°.65E, h115km±14km, mb4.0/12, mb1 4.2/14, mb1mx4.0/21, mbtmp4.0/14, MS3.4/1, Ms1 3.4/1, ms1mx2.5/29, Error ellipse: s-maj=17.9km s-min=9.5km az=113.0*
*NEIC **11** 08:14:12.3±1.3, 5°.69S×147°.69E, h117km±11km, mb4.7/5, Error ellipse: s-maj=11.0km s-min=8.9km az=70.0*
ISC 11 08:14:08.9±0.6**, 5°.65S**±0°.07**×147°.61E**±0°.10**, h77km, n52, σ1s.77**/54**, mb4.1**/14**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.76	187	P	Pn	08 15 07.9	+3.3
PMG				S	Sn	08 15 48.7	+0.9
PMG				*e*Sn	Sn	08 15 49.0	+1.3
PMG	Port Moresby	3.76	187	P	Pn	08 15 07.9	+3.3
	16nm,0.3s,baz=18,slow=6.2,SNR=31						
PMG				S	Sn	08 15 48.7	+0.9
	59nm,0.3s,baz=236,slow=23,SNR=18						
RABL	Rabaul	4.76	73	P	Pn	08 15 23.6	+5.3
	baz=4.8,SNR=8.5						
COEN	Coen	9.34	208	*e*Pn	Pn	08 16 23.8	+2.9
	197nm,0.9s						
COEN	Coen	9.34	208	P	Pn	08 16 23.8	+2.9
	baz=9.3,SNR=18						
COEN				S	Sn	08 18 02.0	-2.3
	baz=9.3,SNR=6.9						
KDU	Kakadu	16.49	244	P	Pn	08 17 56.4	+0.8
	baz=16,SNR=26						
QIS	Mount Isa	16.74	207	P	P	08 17 59.8	+0.1
	baz=17,SNR=6.5						
MTN	Manton Dam	17.76	245	P	Pn	08 18 12.2	+1.0
	baz=18,SNR=6.1						
WRAB	Tennant Creek	19.18	221	*e*P	P	08 18 27.3	+0.7
	48nm,0.8s						
WRA	Warramunga Arr	19.20	221	P	P	08 18 27.2	+0.4
WRA				S	S	08 21 56.0	-4.4
WRA	Warramunga Arr	19.20	221	P	P	08 18 27.2	+0.4
	2.5nm,0.3s,baz=44,slow=11,SNR=88						
WRA				S	S	08 21 56.0	-4.4
	0.3nm,0.3s,baz=54,slow=20,SNR=4.8						
EIDS	Eidsvold	19.89	171	*e*P	P	08 18 35.2	+1.0
	19nm,1.0s						
EIDS	Eidsvold	19.89	171	P	P	08 18 35.2	+1.0
	baz=20,SNR=7.7						
RMQ	Roma	20.75	177	P	P	08 18 45.0	+1.4
	baz=21,SNR=11						
KNRA	Kununurra	21.01	240	P	P	08 18 46.6	+0.2
	baz=21,SNR=16						
QLP	Quilpie	21.07	188	P	P	08 18 47.6	+0.7
	baz=21,SNR=14						
AS31	Alice Springs	22.25	215	*e*P	P	08 19 00.1	+0.4
ASAR	Alice Springs	22.25	215	P	P	08 19 00.0	+0.3
ASAR				pP	pP	08 19 17.6	+2.1
ASAR				S	S	08 22 57.2	-2.7
ASAR	Alice Springs	22.25	215	P	P	08 19 00.0	+0.3
	8.2nm,0.5s,baz=49,slow=8.8,SNR=140						
ASAR				pP	pP	08 19 17.6	+2.1
	11nm,0.7s,baz=43,slow=14,SNR=14						
ASAR				S	S	08 22 57.2	-2.7
	8.2nm,0.9s,baz=31,slow=24,SNR=16						
DZM	Mont Dzumac	24.46	134	P	P	08 19 19.6	-1.4
DZM	Mont Dzumac	24.46	134	P	P	08 19 19.6	-1.4
	8.6nm,0.6s,baz=88,slow=22,SNR=16						
FITZ	Fitzroy Crossi	24.77	238	*e*P	P	08 19 24.0	+0.3
	49nm,0.8s						
FITZ	Fitzroy Crossi	24.77	238	P	P	08 19 23.8	+0.1
	45nm,0.7s,baz=61,slow=8.5,SNR=77						
FITZ				LR	LR	08 30 04.3	
	comp=Z,84nm,19.7s,baz=123,slow=38						
FITZ	Fitzroy Crossi	24.77	238	P	P	08 19 23.9	+0.3
	baz=25,SNR=33						
STKA	Stephens Creek	26.70	191	P	P	08 19 40.4	-0.6
STKA	Stephens Creek	26.70	191	P	P	08 19 40.4	-0.6
	1.2nm,0.6s,baz=356,slow=12,SNR=4.1						
MEEK	Meekatharra	34.64	230	P	P	08 20 51.2	+0.1
	baz=35,SNR=15						
MORW	Morawa	37.86	228	P	P	08 21 18.4	-0.1
	baz=38,SNR=3.7						
URZ	Urewera	42.08	145	*e*P	P	08 21 52.2	-1.2
	4.7nm,0.5s						
RPZ	Rata Peaks	43.17	155	*e*P	P	08 22 01.4	-0.7
	12nm,0.8s						
RPZ	Rata Peaks	43.17	155	P	P	08 22 00.9	-1.1
	10nm,0.7s,baz=258,slow=8.9,SNR=5.5						
PETK	Petropavlovsk-	59.15	7	P	P	08 24 01.9	+0.4
PETK	Petropavlovsk-	59.15	7	P	P	08 24 01.9	+0.4
	0.9nm,0.6s,baz=182,slow=8.6,SNR=3.8						
SONM	Songino Array	64.40	331	P	P	08 24 37.6	+0.6
SONM	Songino Array	64.40	331	P	P	08 24 37.6	+0.6
	1.2nm,0.7s,baz=142,slow=7.0,SNR=6.9						
VNDA	Vanda	72.23	177	P	P	08 25 24.1	-1.2
VNDA	Vanda	72.23	177	P	P	08 25 24.1	-1.2
	2.3nm,0.7s,baz=327,slow=6.4,SNR=15						
MK31	Makanchi Array	77.61	320	*e*P	P	08 25 56.1	-0.8
MKAR	Makanchi Array	77.61	320	P	P	08 25 56.1	-0.9
MKAR	Makanchi Array	77.61	320	P	P	08 25 56.1	-0.9
	0.5nm,0.5s,baz=102,slow=7.9,SNR=6.1						
ZALV	Zalesovo Beam	79.04	328	P	P	08 26 03.1	-1.4
ZALV	Zalesovo Beam	79.04	328	P	P	08 26 03.1	-1.4
	0.9nm,0.4s,baz=115,slow=6.7,SNR=5.2						
KURK	Kurchatov	81.29	323	*e*P	P	08 26 16.2	-0.5
	0.5nm,0.5s						
ILAR	Eielson Array	84.92	23	P	P	08 26 32.8	-2.4
ILAR	Eielson Array	84.92	23	P	P	08 26 32.8	-2.4
	1.3nm,0.6s,baz=249,slow=5.0,SNR=29						
YKA	Yellowknife Ar	98.58	28	P	P	08 27 38.0	-0.9
YKA	Yellowknife Ar	98.58	28	P	P	08 27 38.0	-0.9
	0.3nm,0.7s,baz=261,slow=4.2,SNR=3.7						
TORD	Torodi Ar. Bea	145.59	285	PKPbc	PKPdf	08 33 38.1	-1.3
TORD				pPKPbc	pPKPbc	08 34 05.1	+3.7
TORD	Torodi Ar. Bea	145.59	285	PKPbc	PKPdf	08 33 38.1	-1.3
	1.1nm,0.6s,baz=55,slow=3.0,SNR=13						
TORD				pPKPbc	pPKPbc	08 34 05.1	+3.7
	0.8nm,1.0s,baz=61,slow=2.2,SNR=2.7						
SAML	Samuel	146.05	115	*e*PKPdf	PKPdf	08 33 38.4	-1.9
BDFB	Brasilia	153.79	144	PKPbc	PKPdf	08 33 57.2	+4.6
BDFB	Brasilia	153.79	144	PKPbc	PKPdf	08 33 57.2	+4.6
	1.4nm,0.5s,baz=209,slow=21,SNR=4.1						

*CRAAG **11** 08:26:09.3, 35°.92N×0°.49E, Ml4.2*
*IDC **11** 08:26:09.6±1.3, 35°.87N×0°.51E, h0km, mb3.5/3, mb1 3.5/7, mb1mx3.3/34, mbtmp3.4/7, ML3.5/4, MS3.5/1, Ms1 3.5/1, ms1mx2.2/39, Error ellipse: s-maj=26.9km s-min=22.9km az=132.0*
*ISCJB **11** 08:26:12.3±0.4, 35°.79N±0°.03×0°.54E±0°.03, h38km±8km, mb3.6/3, MS3.5/1, Error ellipse: s-maj=5.1km s-min=3.7km az=11.3*
*MDD **11** 08:26:12.7±0.5, 35°.85N×0°.49E, h0km, mb4.0/13, Error ellipse: s-maj=6.5km s-min=4.1km az=26.0*
*CSEM **11** 08:26:12.4±0.2, 35°.77N×0°.59E, h20km, mb4.0/13, Error ellipse: s-maj=6.1km s-min=3.9km az=5.0*
*PDA **11** 08:26:13.9±1.0, 35°.69N×0°.51E, h31km, ML2.6, Error ellipse: s-maj=5.1km s-min=3.2km az=127.0*
*INMG **11** 08:26:13.9±1.0, 35°.69N×0°.51E, h31km, ML2.6, Error ellipse: s-maj=5.1km s-min=3.2km az=127.0*
ISC 11 08:26:13.1±1.2**, 35°.74N**±0°.03**×0°.59E**±0°.03**, h33km**±3km**, n116, σ1s.35**/126**, mb3.8**/3**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJBR	Djebel Berber	0.25	232	P	Pb	08 26 20.0	-0.3
OJBR	Djebel Berber	0.25	232	P	Pb	08 26 20.0	-0.3
OJBR	Djebel Berber	0.25	232	P	Pb	08 26 20.0	-0.3
OJGS	Djebel Guires	0.27	150	P	Pn	08 26 21.0	+0.6
OJGS	Djebel Guires	0.27	150	P	Pn	08 26 21.0	+0.6
OJGS	Djebel Guires	0.27	150	P	Pn	08 26 21.0	+0.6
EANR	'Ain N'Sour	0.47	63	P	Pb	08 26 20.8	-2.5
EANR	'Ain N'Sour	0.47	63	P	Pb	08 26 20.8	-2.5
EANR	'Ain N'Sour	0.47	63	P	Pb	08 26 20.8	-2.5
ETRT	Tiaret	0.68	120	P	Pb	08 26 24.8	-1.8
ETRT	Tiaret	0.68	120	P	Pb	08 26 24.8	-1.8
ETRT	Tiaret	0.68	120	P	Pb	08 26 24.8	-1.8
ODJA	Bouhanifia	0.72	236	P	Pb	08 26 19.0	-8.3
ODJA	Bouhanifia	0.72	236	P	Pb	08 26 19.0	-8.3
ODJA	Bouhanifia	0.72	236	P	Pb	08 26 19.0	-8.3
ECHF	Ech Chlef	0.74	55	P	Pb	08 26 25.5	-2.2
ECHF	Ech Chlef	0.74	55	P	Pb	08 26 25.5	-2.2
ECHA	Ech Chlef	0.76	57	P	Pb	08 26 25.5	-2.4
ECHA	Ech Chlef	0.76	57	P	Pb	08 26 25.5	-2.4
USTO	Oran	0.92	270	P	Pn	08 26 30.0	+0.3
USTO	Oran	0.92	270	P	Pn	08 26 30.0	+0.3
EBNR	Beni Rached	0.95	54	P	Pb	08 26 29.1	-2.0
EBNR	Beni Rached	0.95	54	P	Pb	08 26 29.1	-2.0
OLHC	Oulhaca	1.71	254	P	Pn	08 26 23.0	-18
OLHC	Oulhaca	1.71	254	P	Pn	08 26 23.0	-18
OLHC	Oulhaca	1.71	254	P	Pn	08 26 23.0	-18
EMHD	Djebel Mahouad	1.98	76	P	Pn	08 26 44.2	-0.1
EMHD	Djebel Mahouad	1.98	76	P	Pn	08 26 44.2	-0.1
EMHD	Djebel Mahouad	1.98	76	P	Pn	08 26 44.2	-0.1
EMUR	La Murta	2.56	326	P	Pn	08 26 53.0	+0.7
	4.5nm,0.3s,SNR=7.4						
EMUR				S	Sn	08 27 21.3	-1.1
	24nm,0.5s						
EMUR	La Murta	2.56	326	P	Pn	08 26 53.0	+0.7
	4.5nm,0.3s,SNR=7.4						
EMUR				S	Sn	08 27 21.3	-1.1
	24nm,0.5s						
ENIJ	Nijar	2.57	300	P	Pn	08 26 51.4	-1.0
	15nm,0.4s,SNR=7.9						
ENIJ				S	Sn	08 27 20.5	-2.0
	25nm,0.4s,SNR=7.9						
ENIJ	Nijar	2.57	300	P	Pn	08 26 51.4	-1.0
	15nm,0.4s,SNR=7.9						
ENIJ				S	Sn	08 27 20.5	-2.0
	25nm,0.4s,SNR=7.9						
EALB	Alboran	2.95	275	P	Pn	08 26 56.7	-0.8
	4.1nm,0.3s,SNR=8.2						
EALB				S	Sn	08 27 31.0	-0.8
	16nm,0.3s,SNR=4.6						
EALB	Alboran	2.95	275	P	Pn	08 26 56.7	-0.8
	4.1nm,0.3s,SNR=8.2						
EALB				S	Sn	08 27 31.0	-0.8
	16nm,0.3s,SNR=4.6						
EBEN	Beniarda	3.03	348	P	Pn	08 27 00.2	+1.4
	1.4nm,0.2s,SNR=7.6						
EBEN				S	Sn	08 27 33.6	-0.4
	9.6nm,0.8s						
EBEN	Beniarda	3.03	348	P	Pn	08 27 00.2	+1.4
	1.4nm,0.2s,SNR=7.6						
EBEN				S	Sn	08 27 33.6	-0.4
	9.6nm,0.8s						
EBER	Berja	3.04	293	P	Pn	08 26 58.2	-0.7
	8.8nm,0.2s,SNR=29						
EBER				S	Sn	08 27 32.9	-1.3
	48nm,0.5s						
EBER	Berja	3.04	293	P	Pn	08 26 58.2	-0.7
	8.8nm,0.2s,SNR=29						
EBER				S	Sn	08 27 32.9	-1.3
	48nm,0.5s						
EHUE	Huescar	3.29	310	P	Pn	08 27 02.8	+0.5
	4.9nm,0.2s,SNR=7.9						
EHUE				S	Sn	08 27 38.2	-2.2
	5.8nm,0.2s,SNR=7.9						
EHUE	Huescar	3.29	310	P	Pn	08 27 02.8	+0.5
	4.9nm,0.2s,SNR=7.9						
EHUE				S	Sn	08 27 38.2	-2.2
	5.8nm,0.2s,SNR=7.9						
EIBI	Ibiza	3.34	10	P	Pn	08 27 03.9	+0.9
	2.0nm,0.2s,SNR=9.1						
EIBI				S	Sn	08 27 42.4	+0.9
	26nm,0.5s						
EIBI	Ibiza	3.34	10	P	Pn	08 27 03.9	+0.9
	2.0nm,0.2s,SNR=9.1						
EIBI				S	Sn	08 27 42.4	+0.9
	26nm,0.5s						
ETOB	Tobarra	3.37	330	P	Pn	08 27 04.2	+0.8
	7.1nm,0.4s,SNR=9.3						
ETOB				S	Sn	08 27 41.4	-0.8
	13nm,0.7s,SNR=5.9						
ETOB	Tobarra	3.37	330	P	Pn	08 27 04.2	+0.8
	7.1nm,0.4s,SNR=9.3						
ETOB				S	Sn	08 27 41.4	-0.8
	13nm,0.7s,SNR=5.9						
EQUE	Quentar	3.56	296	P	Pn	08 27 07.0	+0.9
	14nm,0.3s,SNR=23						
EQUE				S	Sn	08 27 44.6	-2.5
	6.2nm,0.5s						
EQUE	Quentar	3.56	296	P	Pn	08 27 07.0	+0.9
	14nm,0.3s,SNR=23						
EQUE				S	Sn	08 27 44.6	-2.5
	6.2nm,0.5s						
EQES	Quesada	3.59	306	P	Pn	08 27 07.7	+1.2
	38nm,0.3s,SNR=62						
EQES				S	Sn	08 27 47.8	+0.1
	30nm,0.2s						
EQES	Quesada	3.59	306	P	Pn	08 27 07.7	+1.2
	38nm,0.3s,SNR=62						
EQES				S	Sn	08 27 47.8	+0.1
	30nm,0.2s						
ECOG	Cogollos-Vega	3.68	296	P	Pn	08 27 09.9	+2.2
	5.5nm,0.3s,SNR=7.9						
ECOG	Cogollos-Vega	3.68	296	P	Pn	08 27 09.9	+2.2
	5.5nm,0.3s,SNR=7.9						
ERON	Agron	3.77	291	P	Pn	08 27 08.9	-0.1
	6.7nm,0.5s,SNR=7.9						
ERON				S	Sn	08 27 48.8	-3.4
	6.5nm,0.4s,SNR=7.9						
ERON	Agron	3.77	291	P	Pn	08 27 08.9	-0.1
	6.7nm,0.5s,SNR=7.9						
ERON				S	Sn	08 27 48.8	-3.4
	6.5nm,0.4s,SNR=7.9						
EVIA	Vianos	3.81	321	P	Pn	08 27 09.9	+0.5
	13nm,0.2s,SNR=6.8						
EVIA				S	Sn	08 27 52.2	-0.9
	53nm,0.4s,SNR=13						
EVIA	Vianos	3.81	321	P	Pn	08 27 09.9	+0.5
	13nm,0.2s,SNR=6.8						
EVIA				S	Sn	08 27 52.2	-0.9
	53nm,0.4s,SNR=13						
SET	Setif	3.93	82	P	Pb	08 27 30.0	+8.3
SET	Setif	3.93	82	P	Pb	08 27 30.0	+8.3
SET	Setif	3.93	82	P	Pb	08 27 30.0	+8.3
CKHR	Kef el Ahmar	4.01	85	P	Pb	08 27 31.6	+8.5
CKHR	Kef el Ahmar	4.01	85	P	Pb	08 27 31.6	+8.5
CKHR	Kef el Ahmar	4.01	85	P	Pb	08 27 31.6	+8.5
ECHE	Chera	4.04	343	P	Pn	08 27 15.6	+3.0
	4.5nm,0.4s,SNR=7.9						
ECHE				S	Sn	08 27 57.8	-1.1
	15nm,0.6s,SNR=7.9						
ECHE	Chera	4.04	343	P	Pn	08 27 15.6	+3.0
	4.5nm,0.4s,SNR=7.9						
ECHE				S	Sn	08 27 57.8	-1.1
	15nm,0.6s,SNR=7.9						
ELOJ	Sierra Loja	4.07	292	P	Pn	08 27 15.5	+2.4
	1.8nm,0.1s,SNR=9.2						
ELOJ	Sierra Loja	4.07	292	P	Pn	08 27 15.5	+2.4
	1.8nm,0.1s,SNR=9.2						
DFRA	Djebel Bou Aff	4.36	78	P	Pb	08 27 33.7	+4.7
DFRA	Djebel Bou Aff	4.36	78	P	Pb	08 27 33.7	+4.7
DFRA	Djebel Bou Aff	4.36	78	P	Pb	08 27 33.7	+4.7
ETOS	Mallorca	4.40	23	P	Pn	08 27 18.5	+1.0
	0.3nm,0.1s,SNR=7.9						
ETOS				S	Sn	08 28 06.8	-0.7
	2.8nm,0.6s,SNR=7.9						
ETOS	Mallorca	4.40	23	P	Pn	08 27 18.5	+1.0
	0.3nm,0.1s,SNR=7.9						
ETOS				S	Sn	08 28 06.8	-0.7
	2.8nm,0.6s,SNR=7.9						
EMOS	Mosqueruela	4.70	350	P	Pn	08 27 23.4	+1.7
	2.0nm,0.3s,SNR=7.9						
EMOS				S	Sn	08 28 14.0	-1.2
	2.8nm,0.5s,SNR=7.9						
EMOS	Mosqueruela	4.70	350	P	Pn	08 27 23.4	+1.7
	2.0nm,0.3s,SNR=7.9						
EMOS				S	Sn	08 28 14.0	-1.2
	2.8nm,0.5s,SNR=7.9						
EADA	Adamuz	4.79	302	P	Pn	08 27 22.5	-0.5
	0.9nm,0.3s,SNR=4.6						
EADA				S	Sn	08 28 16.0	-1.4
	2.8nm,0.3s,SNR=7.9						
EADA	Adamuz	4.79	302	P	Pn	08 27 22.5	-0.5
	0.9nm,0.3s,SNR=4.6						
EADA				S	Sn	08 28 16.0	-1.4
	2.8nm,0.3s,SNR=7.9						
MDT	Midelt	5.20	237	Pn	Pn	08 27 29.9	+1.3
	0.3nm,0.3s,baz=45,slow=18,SNR=9.0						
MDT				Lg	Lg	08 28 59.8	
	0.4nm,0.3s,baz=348,slow=19,SNR=2.6						
MIF	Mishlifen	5.33	246	P	Pb	08 28 05.0	+20
MIF	Mishlifen	5.33	246	P	Pb	08 28 05.0	+20
ESDC	Sonseca Array	5.33	319	P	Pn	08 27 30.5	+0.1
	2.1nm,0.5s,baz=136,slow=13,SNR=7.3						
ESDC				S	Sn	08 28 28.6	-2.2
	1.9nm,0.5s,baz=134,slow=23,SNR=4.0						
ESDC	Sonseca Array	5.33	319	Pn	Pn	08 27 29.0	-1.4
	2.8nm,0.3s,baz=136,slow=13,SNR=10						
ESDC				Sn	Sn	08 28 29.5	-1.2
	1.9nm,0.3s,baz=135,slow=25,SNR=6.1						
ESDC	Sonseca Array	5.33	319	P	Pn	08 27 30.5	+0.1
	2.1nm,0.5s,baz=136,slow=13,SNR=7.3						
ESDC				S	Sn	08 28 28.6	-2.2
	1.9nm,0.5s,baz=134,slow=23,SNR=4.0						
CZD	Col de Zad	5.38	242	P	Pb	08 28 06.0	+20
CZD	Col de Zad	5.38	242	P	Pb	08 28 06.0	+20
ZFT	Errachidia	5.52	229	P	Pb	08 28 03.0	+14

ZFT	Errachidia	5.52	229	P	Pb	08 28 03.0	+14
CMAH	Djebel Manchou	5.60	79	P	Pn	08 27 34.1	0.0
CMAH	Djebel Manchou	5.60	79	P	Pn	08 27 34.1	0.0
CMAH	Djebel Manchou	5.60	79	P	Pn	08 27 34.1	0.0
EPOB	Poblet	5.62	4	P	Pn	08 27 38.2	+3.8
	3.3nm,0.4s,SNR=7.9						
EPOB				S	Sn	08 28 38.1	+0.3
	0.3nm,0.2s,SNR=7.9						
EPOB	Poblet	5.62	4	P	Pn	08 27 38.2	+3.8
	3.3nm,0.4s,SNR=7.9						
EPOB				S	Sn	08 28 38.1	+0.3
	0.3nm,0.2s,SNR=7.9						
GUD	Guadarrama	6.16	324	P	Pn	08 27 43.2	+1.4
	4.8nm,0.5s,SNR=6.4						
GUD	Guadarrama	6.16	324	P	Pn	08 27 43.2	+1.4
	4.8nm,0.5s,SNR=6.4						
EMIN	Mina Concepcio	6.17	291	P	Pn	08 27 42.2	+0.3
	0.5nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	6.17	291	P	Pn	08 27 42.2	+0.3
	0.5nm,0.2s,SNR=7.9						
EGRO	El Granado	6.73	288	P	Pn	08 27 49.9	+0.4
	0.9nm,0.3s,SNR=7.9						
EGRO	El Granado	6.73	288	P	Pn	08 27 49.9	+0.4
	0.9nm,0.3s,SNR=7.9						
EBAD	Badajoz	6.77	299	P	Pn	08 27 50.3	+0.2
	0.2nm,0.3s,SNR=7.9						
EBAD	Badajoz	6.77	299	P	Pn	08 27 50.3	+0.2
	0.2nm,0.3s,SNR=7.9						
EPLA	Plasencia	6.81	311	P	Pn	08 27 51.2	+0.5
	3.4nm,0.5s,SNR=7.9						
EPLA	Plasencia	6.81	311	P	Pn	08 27 51.2	+0.5
	3.4nm,0.5s,SNR=7.9						
PVAQ	Vaqueiros	6.89	286	ePn	Pn	08 27 52.2	+0.5
PVAQ	Vaqueiros	6.89	286	P	Pn	08 27 52.2	+0.5
PVAQ	Vaqueiros	6.89	286	P	Pn	08 27 52.2	+0.5
KEST	Kesra	7.13	87	Pn	Pn	08 27 57.5	+2.4
	0.1nm,0.3s,baz=168,slow=1.5,SNR=4.9						
PCBR	Castelo Branco	7.58	305	ePn	Pn	08 28 01.5	+0.3
PCBR				eSn	Sn	08 29 21.5	-4.5
PCBR				A	A	08 29 26.8	
	3.3nm,0.4s						
PCBR	Castelo Branco	7.58	305	ePn	Pn	08 28 01.5	+0.3
PNCL	Nicolau / Gran	7.67	291	ePn	Pn	08 28 03.3	+0.8
PNCL	Nicolau / Gran	7.67	291	ePn	Pn	08 28 03.3	+0.8
MVO	Moncorvo	8.06	315	ePn	Pn	08 28 08.2	+0.3
MVO	Moncorvo	8.06	315	P	Pn	08 28 08.6	+0.7
	3.8nm,0.6s,SNR=5.8						
MVO	Moncorvo	8.06	315	ePn	Pn	08 28 08.2	+0.3
MVO	Moncorvo	8.06	315	P	Pn	08 28 08.6	+0.7
	3.8nm,0.6s,SNR=5.8						
GERES	GERESS Array B	16.27	32	Pn	Pn	08 29 59.2	+0.2
	0.1nm,0.3s,baz=214,slow=14,SNR=4.4						
TORD	Torodi Ar. Bea	22.51	177	P	P	08 31 11.8	+1.8
	0.6nm,0.8s,baz=348,slow=9.5,SNR=3.7						
AAK	Ala-Archa	56.03	59	LR	LR	09 04 51.8	
	comp=Z,35nm,18.2s,baz=26,slow=42						
KURBB	Kurchatov Arra	56.19	49	P	P	08 35 50.0	+0.5
	0.8nm,0.5s,baz=289,slow=8.0,SNR=6.8						
MKAR	Makanchi Array	59.79	52	P	P	08 36 16.4	+1.5
	0.4nm,0.5s,baz=286,slow=5.9,SNR=8.1						

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*NEIC **11** 08:51:38.3±1.6, 24°.17N×120°.86E, h10km, ML4.0(TAP), Error ellipse: s-maj=21.1km s-min=7.5km az=118.0*
NEIC Recorded [3 TAP] in T'ai-chung; [2 TAP] in Chang-hua and Nan-t'ou; [1 TAP] in Miao-li and Yun-lin.
*TAP **11** 08:51:38.7, 24°.17N×120°.90E, h34km, ML3.5, B*
*ISCJB **11** 08:51:39.2±0.3, 24°.20N±0°.02×120°.89E±0°.02, h34km±5km, Error ellipse: s-maj=3.6km s-min=2.0km az=31.9*
ISC 11 08:51:39.2±0.9**, 24°.19N**±0°.02×**120°.90E**±0°.02**, h32**km±7km**, n53,** σ0s.69/96**, 8C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWQ1	Liyutan	0.19	324	⇑iP	Pn	08 51 45.6	-0.3
	baz=328						
TWQ1				i S	Sb	08 51 50.7	+0.6
	baz=328						
TCU	Taichung	0.21	258	⇑iP	Pn	08 51 45.8	-0.3
	baz=262						
TCU				S	Sb	08 51 51.0	+0.7
	baz=262						
NSY	Sanyi	0.26	331	⇑iP	Pn	08 51 46.6	-0.2
	baz=334						
NSY				S	Sn	08 51 52.5	+0.8
	baz=334						
TWT	Tachien	0.26	76	⇓iP	Pn	08 51 46.5	-0.5
	baz=67						
TWT				i S	Sn	08 51 51.4	-0.6
	baz=67						
TYC	Yuchr	0.29	188	⇓iP	Pn	08 51 46.6	-0.6
	baz=181						
TYC				S	Sn	08 51 52.2	-0.2
	baz=181						
SMLT	Sun Moon Lake	0.31	180	⇓P	Pb	08 51 46.9	-0.1
	baz=179						
SMLT				eS	Sn	08 51 52.5	-0.5
	baz=179						
WHF	Hehuan Shan	0.34	98	⇑iP	Pb	08 51 48.1	+0.3
	baz=94						
WHF				i S	Sn	08 51 54.2	0.0
	baz=94						
WNT	Mingjian	0.37	212	⇓P	Pb	08 51 47.5	-0.2
	baz=220						
WNT				eS	Sn	08 51 54.2	-0.1
	baz=220						
SSLB	Suanglung	0.40	173	ePg	Pb	08 51 47.0	-1.4
SSLB				eSg	Sb	08 51 53.9	-0.7
NSTT	Nanjuang	0.45	12	⇓iP	Pb	08 51 48.8	-0.2
	baz=12						
NSTT				S	Sb	08 51 55.8	+0.1
	baz=12						
NNS	Nan Shan	0.50	60	⇓iP	Pb	08 51 49.5	-0.3
	baz=56						
NNS				eS	Sb	08 51 56.5	-0.7
	baz=56						
WGK	Gukeng	0.59	212	⇓P	Pn	08 51 50.7	-0.6
	baz=213						
WGK				eS	Sn	08 51 60.0	+0.1
	baz=213						
HSN	Hsinchu	0.61	6	eP	Pn	08 51 51.8	+0.1
	baz=18						
HSN				eS	Sn	08 52 01.2	+0.8
	baz=18						
ESL	Shilin	0.62	127	⇑P	Pn	08 51 51.5	-0.2
	baz=126						
ESL				eS	Sn	08 52 00.1	-0.4
	baz=126						
CHN5	Tsauling	0.62	199	⇑iP	Pn	08 51 51.1	-0.8
	baz=200						
CHN5				i S	Sn	08 52 00.4	-0.4
	baz=200						
NACB	Ninganchiao	0.64	91	ePg	Pn	08 51 51.0	-0.9
NACB				eSg	Sn	08 52 00.2	-0.8
NSK	Sanguang	0.64	41	⇓P	Pn	08 51 51.7	-0.4
	baz=33						
NSK				eS	Sn	08 52 00.7	-0.5
	baz=33						
YHNB	Yeheng	0.65	42	ePg	Pn	08 51 51.6	-0.6
YHNB				eSg	Sn	08 52 01.3	-0.1
TWD	Chiawan	0.65	100	P	Pn	08 51 51.8	-0.3
	baz=89						
TWD				eS	Sn	08 52 00.6	-0.7
	baz=89						
WTCT	Ta-ch'eng	0.65	240	P	Pn	08 51 51.2	-1.0
	baz=242						
WTCT				S	Sn	08 52 00.8	-0.6
	baz=242						
HWA	Hwalien	0.68	108	eP	Pn	08 51 52.5	0.0
	baz=106						
HWA				eS	Sn	08 52 02.5	+0.5
	baz=106						
ALS	Alishan	0.68	187	⇓iP	Pn	08 51 52.4	-0.5
	baz=188						
ALS				eS	Sn	08 52 02.4	-0.1
	baz=188						
YUS	Yu-Shan	0.70	176	⇓P	Pn	08 51 52.9	-0.5
	baz=176						
YUS				S	Sn	08 52 03.0	-0.3
	baz=176						
ENTT	Nioudou	0.76	54	P	Pn	08 51 53.6	0.0
	baz=45						
ENTT				eS	Sn	08 52 03.1	-0.8
	baz=45						
CHN2	Minshiung	0.76	211	eP	Pn	08 51 53.1	-0.5
	baz=213						
CHN2				S	Sn	08 52 04.7	+0.6
	baz=213						
EHY	Hungye	0.78	150	⇑iP	Pn	08 51 54.1	+0.1
	baz=150						
EHY				eS	Sn	08 52 04.8	+0.1
	baz=150						
ENA	Nanau	0.80	73	eP	Pn	08 51 54.2	-0.1
	baz=71						
ENA				eS	Sn	08 52 05.4	+0.3
	baz=71						
CHY	Chiayi	0.81	212	eP	Pn	08 51 53.9	-0.6
	baz=214						
CHY				eS	Sn	08 52 05.3	0.0
	baz=214						
NCU	National Centr	0.82	19	eP	Pn	08 51 54.4	-0.1
	baz=17						
NCU				eS	Sn	08 52 04.7	-0.8
	baz=17						
WSF	Szhu	0.83	229	eP	Pn	08 51 53.6	-1.0
	baz=231						
WSF				eS	Sn	08 52 05.5	-0.2
	baz=231						
YULB	Yu-li	0.87	155	ePg	Pn	08 51 54.6	-0.7
YULB				eSg	Sn	08 52 07.4	+0.5
TWE	Neicheng	0.88	53	P	Pn	08 51 55.8	+0.5
	baz=52						
TWE				eS	Sn	08 52 08.0	+1.0
	baz=52						
CHN4	Tsaushan	0.88	199	⇓P	Pn	08 51 55.0	-0.3
	baz=201						
CHN4				eS	Sn	08 52 07.6	+0.5
	baz=201						
TWF1	Yuli	0.91	156	⇑P	Pn	08 51 56.1	+0.3
	baz=156						
TWF1				eS	Sn	08 52 08.1	+0.3
	baz=156						
TPUB	Ta-pu	0.92	196	ePg	Pn	08 51 55.1	-0.9
TPUB				eSg	Sn	08 52 09.9	+1.8
TWC	Suao	0.96	64	eP	Pn	08 51 57.0	+0.5
	baz=71						
TWC				eS	Sn	08 52 09.8	+0.8
	baz=71						
WTP	Ta-pu	0.98	196	⇓iP	Pn	08 51 56.2	-0.5
	baz=206						
WTP				eS	Sn	08 52 09.8	+0.3
	baz=206						
TWK	Hsinying	0.99	202	eP	Pn	08 51 56.4	-0.6
	baz=204						
TWK				eS	Sn	08 52 10.0	+0.1
	baz=204						
ELDTW	Lidau	1.00	174	eP	Pn	08 51 56.9	-0.2
	baz=174						
ELDTW				eS	Sn	08 52 09.7	-0.5
	baz=174						
TWS1	Kuangyinshan	1.02	27	eP	Pn	08 51 57.1	-0.1
	baz=24						
TWS1				eS	Sn	08 52 10.9	+0.4
	baz=24						
CHN8	Yiju	1.05	217	eP	Pn	08 51 57.1	-0.6
	baz=219						
CHN8				eS	Sn	08 52 11.6	+0.4
	baz=219						
CHN1	Nanshi	1.06	199	⇓P	Pn	08 51 57.3	-0.5
	baz=212						
CHN1				eS	Sn	08 52 11.9	+0.4
	baz=212						
CHKT	Chengkung	1.17	158	eP	Pn	08 51 59.2	0.0
	baz=157						
CHKT				eS	Sn	08 52 16.4	+2.3
	baz=157						
NWF	Wu-fen Shan	1.19	42	eP	Pn	08 52 00.1	+0.5
	baz=52						
NWF				eS	Sn	08 52 15.2	+0.4
	baz=52						
TWY	Chenhua	1.25	30	eP	Pn	08 52 00.2	-0.3
	baz=27						
TWB1	Santiao Chiao	1.28	50	P	Pn	08 52 01.0	+0.2
	baz=32						
TWB1				eS	Sn	08 52 16.7	-0.2
	baz=32						
TWG	Pinlang	1.37	173	eP	Pn	08 52 03.6	+1.5
	baz=163						
TWG	Pinlang	1.37	173	ePn	Pn	08 52 03.4	+1.2
TWG				eSn	Sn	08 52 21.9	+2.7
PNG	Penghu	1.38	244	eP	Pn	08 52 00.8	-1.3
	baz=245						
TWM1	Shoushan	1.43	198	eP	Pn	08 52 04.3	+1.4
	baz=201						
WDGT	Dungji	1.47	231	eP	Pn	08 52 01.8	-1.6
	baz=222						
SCZT	Fangliau	1.83	188	eP	Pn	08 52 09.0	+0.6
	baz=191						
KNM	Kinmen	2.26	276	eP	Pn	08 52 14.3	0.0
	baz=276						

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*IDC **11** 08:55:01.6±0.4, 24°.95S×13°.66W, h0km, mb4.5/30, mb1 4.6/30, mb1mx4.6/33, mbtmp4.5/30, MS4.5/33, Ms1 4.5/33, ms1mx4.5/36, Error ellipse: s-maj=14.2km s-min=10.4km az=169.0*
*ISCJB **11** 08:55:02.3±0.3, 24°.96S±0°.05×13°.63W±0°.06, h14km, mb4.7/50, MS4.5/40, Error ellipse: s-maj=8.5km s-min=7.0km az=139.3*
*NEIC **11** 08:55:03.6±0.2, 24°.97S×13°.62W, h10km, mb5.0/31, Error ellipse: s-maj=8.2km s-min=6.3km az=147.0*
*BJI **11** 08:55:03.7, 25°.10S×13°.60W, h10km, mB5.7/9, Ms5.2/8, Ms7 4.8/8*
*GCMT **11** 08:55:07.8±0.1, 24°.97S×13°.59W, h12km, MW5.3, Moment Tensor Solution. s72,c109; s99,c185; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.10000×10^{17} NP1:ϕ_s257.00000°, δ79.00000°, λ-3.00000°. NP2:ϕ_s348.00000°, δ87.00000°, λ-169.00000°. Principal axes: T 1.1900, Plg5.0000°, Azm122.0000°; N -0.1800, Plg79.0000°, Azm4.0000°; P -1.0100, Plg10.0000°, Azm213.0000°; Data Used: II IU IC G CN. Surface waves from 101 sta.*
ISC 11 08:55:04.1±0.3**, 24°.97S**±0°.08×**13°.70W**±0°.06**, h14**km**, n157,** σ1s.29/151**, mb4.8**/50**, MS4.6**/41**, 4C-3D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHEL	Horse Pasture	11.66	41	ePn	Pn	08 57 46.7	-3.5
RCBR	Riachuelo	28.55	308	eP	P	09 01 00.4	+0.6
	20nm,0.8s						
RCBR	Riachuelo	28.55	308	P	P	09 00 58.6	-1.2
	18nm,0.7s,baz=126,slow=8.0,SNR=11						
RCBR				LR	LR	09 09 19.1	
	comp=Z,1μm,21.6s,baz=121,slow=30						
TSUM	Tsumeb	29.51	85	eP	P	09 01 06.8	-1.6
	18nm,1.3s						
TSUM	Tsumeb	29.51	85	P	P	09 01 07.0	-1.4
	5.6nm,0.7s,baz=252,slow=9.6,SNR=22						
TSUM				LR	LR	09 10 05.9	
	comp=Z,1μm,21.2s,baz=250,slow=31						
SUR	Sutherland	31.07	112	eP	P	09 01 22.0	-0.1
	549nm,3.0s						
SUR	Sutherland	31.07	112	P	P	09 01 21.4	-0.7
	16nm,0.9s,baz=240,slow=4.3,SNR=7.9						
SUR				LR	LR	09 10 46.9	
	comp=Z,2μm,21.4s,baz=97,slow=30						
LIC	Lamto	32.14	16	eP	P	09 01 30.9	-0.4
	36nm,1.2s						
LIC	Lamto	32.14	16	eP	P	09 01 30.9	-0.4
	36nm,1.2s						
DBIC	Dimbokro	32.61	16	P	P	09 01 33.3	-2.2
DBIC	Dimbokro	32.61	16	P	P	09 01 33.3	-2.2
	12nm,1.0s,baz=148,slow=4.5,SNR=4.3						
DBIC				LR	LR	09 11 36.4	
	comp=Z,1μm,19.2s,baz=176,slow=30						
BDFB	Brasilia	33.41	280	P	P	09 01 42.8	0.0
BDFB	Brasilia	33.41	280	P	P	09 01 42.8	0.0
	19nm,0.7s,baz=108,slow=7.2,SNR=42						
BDFB				LR	LR	09 13 25.5	
	comp=Z,2μm,18.4s,baz=258,slow=33						
BOSA	Boshof	34.86	105	eP	P	09 01 53.8	-1.4
	35nm,0.9s						
BOSA	Boshof	34.86	105	P	P	09 01 53.6	-1.6
	34nm,1.0s,baz=269,slow=7.8,SNR=31						
BOSA				LR	LR	09 13 52.2	
	comp=Z,1μm,18.4s,baz=270,slow=32						
LBTB	Lobatse	35.53	99	eP	P	09 01 59.3	-1.7
	31nm,0.8s						
LBTB	Lobatse	35.53	99	P	P	09 01 59.3	-1.7
	29nm,0.8s,baz=268,slow=8.7,SNR=37						
CPUP	Villa Florida	39.21	258	P	P	09 02 33.0	+0.9
CPUP	Villa Florida	39.21	258	P	P	09 02 33.0	+0.9
	5.7nm,0.8s,baz=78,slow=8.8,SNR=20						
CPUP				LR	LR	09 15 24.7	
	comp=Z,661nm,19.9s,baz=87,slow=31						
LSZ	Lusaka	40.36	84	eP	P	09 02 42.0	+0.2
	3.3nm,0.6s						
LSZ	Lusaka	40.36	84	P	P	09 02 40.9	-1.0
	3.5nm,0.9s,baz=312,slow=9.6,SNR=4.6						
TORD	Torodi Ar. Bea	40.76	23	P	P	09 02 43.8	-1.1
TORD	Torodi Ar. Bea	40.76	23	P	P	09 02 43.8	-1.1
	16nm,0.9s,baz=199,slow=8.7,SNR=47						
TORD				LR	LR	09 16 12.8	
	comp=Z,1μm,20.8s,baz=200,slow=31						
TRQA	Tornquist	42.73	240	eP	P	09 03 02.1	+1.1
	17nm,1.1s						
SIV	San Ignacio	45.08	272	P	P	09 03 20.0	-0.1
SIV	San Ignacio	45.08	272	P	P	09 03 20.0	-0.1
	9.9nm,0.8s,baz=112,slow=9.6,SNR=44						
SIV				LR	LR	09 18 53.1	
	comp=Z,861nm,19.1s,slow=32						
VNA1	Neumayer--Stat	45.81	177	eP	P	09 03 27.0	+1.9
SNAA	Sanae	47.13	175	eP	P	09 03 35.3	-0.3
SNAA	Sanae	47.13	175	eP	P	09 03 34.9	-0.6
	15nm,1.2s						
SNAA	Sanae	47.13	175	P	P	09 03 34.9	-0.6
	1.9nm,0.9s,baz=339,slow=7.2,SNR=19						
SNAA				LR	LR	09 19 32.7	
	comp=Z,51nm,20.3s,baz=12,slow=31						
CFAA	Coronel Fontan	48.07	249	P	P	09 03 43.1	-0.3
CFAA	Coronel Fontan	48.07	249	P	P	09 03 43.1	-0.3
	0.7nm,0.8s,baz=73,slow=7.4,SNR=14						
CFAA				LR	LR	09 21 01.6	
	comp=Z,41nm,21.3s,baz=281,slow=32						
PLCA	Paso Flores	49.45	237	eP	P	09 03 55.9	+1.9
	7.4nm,0.7s						
PLCA	Paso Flores	49.45	237	P	P	09 03 54.7	+0.7
	6.2nm,0.8s,baz=114,slow=7.3,SNR=8.4						
PLCA				LR	LR	09 20 43.5	
	comp=Z,633nm,18.4s,baz=96,slow=31						
SAML	Samuel	49.65	280	eP	P	09 03 55.3	-0.4
	33nm,0.9s						
USHA	Ushuaia	49.78	218	LR	LR	09 22 16.0	
	comp=Z,778nm,19.4s,baz=68,slow=33						
LVC	Limon Verde	50.28	261	eP	P	09 04 00.4	-0.3
	12nm,1.1s						
LVC	Limon Verde	50.28	261	P	P	09 03 59.5	-1.2
	4.3nm,0.6s,baz=108,slow=8.1,SNR=8.2						
TAM	Tamanrasset	51.02	23	eP	P	09 04 07.3	+1.3
	2.4nm,0.9s						
PMSA	Palmer Station	51.13	205	LR	LR	09 21 16.7	
	comp=Z,651nm,19.3s,baz=234,slow=31						
LPAZ	La Paz	51.39	269	eP	P	09 04 09.1	-0.5
	11nm,0.9s						
LPAZ	La Paz	51.39	269	P	P	09 04 09.0	-0.5
	9.4nm,0.8s,baz=109,slow=5.9,SNR=33						
LPAZ				LR	LR	09 23 31.5	
	comp=Z,723nm,21.2s,baz=109,slow=33						
SYO	Syowa Base	54.05	159	⇑eP	P	09 04 27.0	-0.7
ARE	Arequipa	54.38	267	eP	P	09 04 32.0	+0.7
KMBO	Kilima Mbogo	54.56	72	LR	LR	09 25 29.6	
	comp=Z,457nm,18.2s,baz=255,slow=34						
MDT	Midelt	58.12	9	P	P	09 04 57.6	+0.2
MDT	Midelt	58.12	9	P	P	09 04 57.6	+0.2
	3.9nm,1.0s,baz=203,slow=8.2,SNR=4.0						
MDT				LR	LR	09 26 30.9	
	comp=Z,796nm,21.9s,baz=190,slow=32						
NNA	Nana	60.80	270	P	P	09 05 15.4	-0.9
NNA	Nana	60.80	270	P	P	09 05 15.4	-0.9
	12nm,0.7s,baz=182,slow=2.9,SNR=9.3						
MAW	Mawson	62.06	155	P	P	09 05 23.8	0.0
MAW	Mawson	62.06	155	P	P	09 05 23.8	0.0
	14nm,1.1s,baz=267,slow=9.1,SNR=5.0						
MAW				LR	LR	09 25 16.2	
	comp=Z,657nm,18.7s,baz=280,slow=29						
PSMN	Pico do Norte,	62.57	350	eT	T	10 12 41.2	
PSMA	Santa Maria	62.57	350	eT	T	10 12 40.4	
EVOP	Sao Brissos	63.38	5	eP	P	09 05 33.3	+0.4
	17nm,1.0s						
EVO	Evora	63.40	5	eP	P	09 05 33.3	+0.3
	17nm,1.0s						
ATAH	Atahualpa	64.10	274	LR	LR	09 34 15.1	
	comp=Z,765nm,19.2s,baz=310,slow=37						
KEST	Kesra	64.19	21	eP	P	09 05 39.7	+1.3
KEST	Kesra	64.19	21	P	P	09 05 38.3	-0.1
	3.6nm,1.0s,baz=190,slow=6.3,SNR=7.8						
KEST				LR	LR	09 31 43.3	
	comp=Z,230nm,20.2s,baz=170,slow=34						
ESDC	Sonseca Array	64.95	8	P	P	09 05 43.0	-0.3
ESDC	Sonseca Array	64.95	8	P	P	09 05 43.0	-0.3
	0.2nm,0.2s,baz=190,slow=6.5,SNR=3.1						
ESDC				LR	LR	09 32 41.5	
	comp=Z,188nm,19.1s,baz=200,slow=35						
QSPA	South Pole Qui	65.24	180	eP	P	09 05 46.2	+1.1
	25nm,1.0s						
ROSC	El Rosal	65.91	288	P	P	09 05 49.0	-1.5
ROSC	El Rosal	65.91	288	P	P	09 05 49.0	-1.5
	3.6nm,0.4s,baz=90,slow=20,SNR=2.5						
ROSC				LR	LR	09 32 51.0	
	comp=Z,1μm,19.4s,baz=195,slow=34						
CELP	Cerrillos	66.95	304	eP	P	09 05 56.8	+0.2
ETSF	Etsaut	68.61	10	eP	P	09 06 06.3	-0.3
	7.9nm,0.8s						
ETSF	Etsaut	68.61	10	eP	P	09 06 06.3	-0.3
	7.9nm,0.8s						
SJPF	Ste Jean	68.72	10	eP	P	09 06 07.7	+0.5
	19nm,0.9s						
SJPF	Ste Jean	68.72	10	eP	P	09 06 07.7	+0.5
	19nm,0.9s						
EPF	Esparros	68.89	11	eP	P	09 06 08.2	-0.1
EPF	Esparros	68.89	11	eP	P	09 06 08.2	-0.1
LFF	La Frestale	70.81	11	eP	P	09 06 20.6	+0.6
LFF	La Frestale	70.81	11	eP	P	09 06 20.6	+0.6
CAF	Calviac	71.04	12	eP	P	09 06 22.0	+0.6
CAF	Calviac	71.04	12	eP	P	09 06 22.0	+0.6
VIVF	Saint-Julien-l	71.49	14	eP	P	09 06 24.4	+0.2
VIVF	Saint-Julien-l	71.49	14	eP	P	09 06 24.4	+0.2
ORIF	Oris-en-Rattie	71.82	15	eP	P	09 06 26.5	+0.3
	12nm,0.8s						
ORIF	Oris-en-Rattie	71.82	15	eP	P	09 06 26.5	+0.3
	12nm,0.8s						
MBDF	Montbardon	71.84	15	eP	P	09 06 27.1	+0.6
	56nm,1.4s						
MBDF	Montbardon	71.84	15	eP	P	09 06 27.1	+0.6
	56nm,1.4s						
TCF	Toulx Ste Croi	72.38	12	eP	P	09 06 29.4	-0.1
TCF	Toulx Ste Croi	72.38	12	eP	P	09 06 29.4	-0.1
LPL	La Plagne	72.58	15	eP	P	09 06 31.2	+0.3
	22nm,0.8s						
LPL	La Plagne	72.58	15	eP	P	09 06 31.2	+0.3
	22nm,0.8s						
SSF	Saint Saulge	73.36	12	eP	P	09 06 35.2	-0.1
SSF	Saint Saulge	73.36	12	eP	P	09 06 35.2	-0.1
CABF	La Chapelle	73.47	14	eP	P	09 06 37.4	+1.4
	39nm,1.1s						
CABF	La Chapelle	73.47	14	eP	P	09 06 37.4	+1.4
	39nm,1.1s						
LOR	Lormes	73.63	12	eP	P	09 06 36.8	-0.1
LOR	Lormes	73.63	12	eP	P	09 06 36.8	-0.1
TUE	Stuetta	74.11	16	eP	P	09 06 39.5	-0.4
	25nm,1.4s						
ASF	Jabal al Asfar	74.57	43	LR	LR	09 35 33.7	
	comp=Z,201nm,21.6s,baz=83,slow=33						
BFO	Black Forest	75.60	15	eP	P	09 06 50.4	+2.1
	10nm,1.0s						
GERES	GERESS Array B	77.46	18	P	P	09 06 58.5	-0.5
GERES	GERESS Array B	77.46	18	P	P	09 06 58.5	-0.5
	0.5nm,0.6s,baz=226,slow=6.7,SNR=3.4						
GERES				LR	LR	09 41 51.3	
	comp=Z,218nm,18.1s,baz=98,slow=36						
VNDA	Vanda	77.70	179	eP	P	09 07 00.6	+0.7
	11nm,1.3s						
VNDA	Vanda	77.70	179	P	P	09 07 00.6	+0.7
	2.5nm,1.0s,baz=211,slow=4.8,SNR=2.8						
VNDA				LR	LR	09 38 43.4	
	comp=Z,228nm,18.1s,baz=179,slow=34						
ZST	Bratislava	77.91	21	eP	P	09 07 00.8	-0.5
BR131	Keskin Array S	78.05	35	eP	P	09 07 02.8	+0.3
	2.4nm,0.8s						
BRTR	Keskin Array B	78.05	35	P	P	09 07 02.8	+0.3
BRTR	Keskin Array B	78.05	35	P	P	09 07 02.8	+0.3
	1.6nm,0.8s,baz=188,slow=6.2,SNR=8.9						
BRTR				LR	LR	09 39 15.7	
	comp=Z,63nm,21.7s,baz=99,slow=34						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PSZ	Piszkesteto	78.59	22⇓	iP	P	09 07 04.7	-0.5
DRGR		78.65	25⇑	iP	P	09 07 13.1	+7.6
VRAC	Vranov	78.73	20⇑	iP	P	09 06 55.5	-10
VYHS	Vyhne	78.73	21	eP	P	09 07 05.4	-0.4
MLR	Muntele Rosu	78.86	27	P	P	09 07 06.4	-0.4
MLR	Muntele Rosu	78.86	27⇑	iP	P	09 07 06.2	-0.6
MLR	Muntele Rosu	78.86	27	P	P	09 07 06.4	-0.4
	1.0nm,0.8s,baz=132,slow=3.7,SNR=6.1						
VRI	Vrincioaia	79.49	27⇓	iP	P	09 07 16.5	+6.4
CFR	Carcaliu	79.55	29⇓	iP	P	09 07 10.8	+0.5
CRVS	Cervenica-Dubn	79.97	23	eP	P	09 07 09.7	-2.9
KOLS	Kolonicke sedl	80.29	23	ePCP	PcP	09 07 21.3	-0.1
AKASG	Malin Array Be	84.34	26	P	P	09 07 34.2	-1.2
AKASG	Malin Array Be	84.34	26	P	P	09 07 34.2	-1.2
	4.2nm,0.7s,baz=224,slow=4.8,SNR=6.0						
AKASG				LR	LR	09 45 49.5	
	comp=Z,164nm,18.3s,baz=230,slow=36						
TEIG	Tepich	85.28	295	LR	LR	09 43 47.7	
	comp=Z,407nm,20.9s,baz=151,slow=34						
KBZ	Khabaz	85.81	37	LR	LR	09 48 23.4	
	comp=Z,92nm,20.3s,baz=225,slow=37						
NB2	NORSAR Subarra	88.06	12	P	P	09 07 58.1	+4.5
	comp=Z,0.7nm,0.6s,baz=204,slow=4.8						
NOA	NORSAR Array B	88.06	12	P	P	09 07 54.6	+1.0
NOA	NORSAR Array B	88.06	12	P	P	09 07 54.6	+1.0
	comp=Z,1.6nm,0.8s,baz=201,slow=4.3,SNR=4.9						
NOA				LR	LR	09 48 42.2	
	comp=Z,111nm,18.4s,baz=200,slow=37						
BLA	Blacksburg	88.08	313	eP	P	09 07 56.1	+1.8
	comp=Z,17nm,1.0s						
BINY	Binghamton	88.13	319	eP	P	09 07 56.0	+1.6
	comp=Z,12nm,1.0s						
TKL	Tuckaleechee C	89.53	310	LR	LR	09 41 32.8	
	comp=Z,123nm,20.7s,baz=280,slow=31						
TZTN	Tazewell	89.84	311	eP	P	09 08 03.4	+0.8
	comp=Z,1.7nm,0.6s						
SCHQ	Schefferville	91.57	332	P	P	09 08 09.9	-0.2
SCHQ	Schefferville	91.57	332	P	P	09 08 09.9	-0.2
	comp=Z,1.9nm,0.6s,baz=265,slow=4.3,SNR=4.7						
SCHQ				LR	LR	09 41 58.7	
	comp=Z,582nm,21.8s,baz=13,slow=31						
FINES	FINESS Array B	91.90	18	P	P	09 08 11.9	+0.5
FINES	FINESS Array B	91.90	18	P	P	09 08 11.9	+0.5
	comp=Z,2.8nm,0.7s,baz=174,slow=8.8,SNR=4.5						
FINES				LR	LR	09 47 59.5	
	comp=Z,261nm,21.2s,baz=65,slow=35						
WVT	Waverly	92.61	309	eP	P	09 08 18.8	+3.4
	comp=Z,2.8nm,0.8s						
SIUC	Southern Illin	94.35	310	eP	P	09 08 23.9	+0.6
	comp=Z,12nm,0.8s						
JMIC	Jan Mayen	95.77	2	LR	LR	09 45 36.8	
	comp=Z,138nm,21.2s,baz=191,slow=32						
ARCES	ARCESS Array B	98.38	13	LR	LR	09 52 33.1	
	comp=Z,169nm,18.5s,baz=83,slow=35						
TXAR	Lajitas Array	101.78	297	PP	PP	09 13 06.8	-1.6
TXAR	Lajitas Array	101.78	297	PP	PP	09 13 06.8	-1.6
	comp=Z,0.7nm,1.0s,baz=128,slow=8.1,SNR=4.6						
WMQ	Urumqi	114.80	51	ePKP	PKPdf	09 13 45.0	+0.6
WMQ				ePP	PP	09 14 48.0	+5.0
WMQ				SKKS		09 21 42.0	
WMQ				AMB	AMB		
	comp=Z,87nm,4.4s						
WMQ				LR	LR		
	comp=N,250nm,24.5s						
WMQ				LR	LR		
	comp=E,420nm,29.4s						
WMQ				LR	LR		
	comp=Z,280nm,29.4s						
ASAR	Alice Springs	122.35	144	PKP	PKPdf	09 13 58.6	-1.0
ASAR	Alice Springs	122.35	144	PKP	PKPdf	09 13 58.6	-1.0
	comp=Z,0.7nm,0.7s,baz=202,slow=2.0,SNR=5.8						
KMI	Kunming	122.93	75	PKP	PKPdf	09 14 02.1	+1.3
KMI				sPKP		09 14 05.7	
KMI				SS	SS	09 32 21.0	-3.1
KMI				LR	LR		
	comp=N,73nm,19.4s						
KMI				LR	LR		
	comp=E,150nm,18.0s						
KMI				LR	LR		
	comp=Z,110nm,18.0s						
CD2	Chengdu	125.05	69	ePKP	PKPdf	09 14 03.6	-0.8
CD2				PP	PP	09 15 56.8	+3.0
CD2				PKS	PKSdf	09 17 38.9	-2.3
CD2				SKS	SKSdf	09 21 13.0	-3.2
CD2				SKKS	SKKSac	09 22 47.6	-4.1
CD2				SS	SS	09 32 50.3	0.0
CD2				AMB	AMB		
	comp=Z,90nm,8.2s						
CD2				LR	LR		
	comp=N,150nm,20.2s						
CD2				LR	LR		
	comp=E,170nm,16.7s						
CD2				LR	LR		
	comp=Z,160nm,15.6s						
WRA	Warramunga Arr	125.59	142	PKP	PKPdf	09 14 07.1	+1.3
WRA	Warramunga Arr	125.59	142	PKP	PKPdf	09 14 07.1	+1.3
	comp=Z,0.6nm,0.6s,baz=240,slow=1.8,SNR=4.5						
WRAB	Tennant Creek	125.61	142	ePKPdf	PKPdf	09 14 07.3	+1.5
LZH	Lanzhou	125.89	62	ePKP	PKPdf	09 14 01.5	-4.5
LZH				sPKP		09 14 13.5	
GYA	Guiyang	126.68	75	ePdif	Pdif	09 10 47.6	-0.4
GYA				PKP	PKPdf	09 14 07.3	-0.5
GYA				PP	PP	09 16 07.5	+2.7
GYA				PKS	PKSdf	09 17 42.8	-1.8
GYA				SKKS		09 22 58.9	
GYA				SS	SS	09 33 12.0	+1.0
GYA				AMB	AMB		
	comp=Z,120nm,7.6s						
GYA				LR	LR		
	comp=N,150nm,22.5s						
GYA				LR	LR		
	comp=E,120nm,21.0s						
GYA				LR	LR		
	comp=Z,140nm,23.9s						
SONM	Songino Array	128.09	48	PKP	PKPdf	09 14 10.7	+0.9
SONM	Songino Array	128.09	48	PKP	PKPdf	09 14 10.7	+0.9
	comp=Z,1.9nm,1.2s,baz=259,slow=1.4,SNR=5.5						
ILAR	Eielson Array	130.21	336	PKP	PKPdf	09 14 13.2	+0.1
ILAR	Eielson Array	130.21	336	PKP	PKPdf	09 14 13.2	+0.1
	comp=Z,0.9nm,0.8s,baz=329,slow=1.0,SNR=12						
HHC	Hu-ho-hao-te	132.15	57	ePKP	PKPdf	09 14 17.2	-0.5
HHC				PP	PP	09 16 43.3	+3.2
HHC				PKS	PKSdf	09 17 51.7	-2.5
HHC				SKS	SKSdf	09 21 26.5	-2.4
HHC				SKKS	SKKSac	09 23 34.6	-1.2
HHC				SS	SS	09 34 21.1	+3.4
HHC				AMB	AMB		
	comp=Z,100nm,8.7s						
HHC				LR	LR		
	comp=N,270nm,20.8s						
HHC				LR	LR		
	comp=E,380nm,19.8s						
HHC				LR	LR		
	comp=Z,270nm,21.6s						
BJI	Beijing	135.71	58	PKP	PKPdf	09 14 24.0	-0.2
BJI				LR	LR		
	comp=N,120nm,9.3s						
BJI				LR	LR		
	comp=E,220nm,21.4s						
BJI				LR	LR		
	comp=Z,130nm,29.2s						
CN2	Changchun	141.88	50	ePKP	PKPdf	09 14 38.0	+2.6
KSAR	Wonju Array Be	145.10	60	PKPbc	PKPbc	09 14 39.7	-1.1
KSRS	Korea Array	145.13	60	PKPbc	PKPbc	09 14 39.7	-1.2
	comp=Z,6.1nm,0.8s,baz=271,slow=2.6,SNR=16						
USRK	Ussuriysk Arra	146.20	47	PKPbc	PKPdf	09 14 43.0	0.0
	comp=Z,1.9nm,0.7s,baz=284,slow=2.9,SNR=4.8						
PETK	Petropavlovsk-	151.16	11	PKPbc	PKPbc	09 14 56.2	-0.4
PETK	Petropavlovsk-	151.16	11	PKPbc	PKPbc	09 14 56.2	-0.4
	comp=Z,4.0nm,0.7s,baz=88,slow=4.6,SNR=9.9						
MJAR	Matsushiro Arr	153.34	58	PKPbc	PKPbc	09 15 02.6	+0.5
MJAR	Matsushiro Arr	153.34	58	PKPbc	PKPbc	09 15 02.6	+0.5
	comp=Z,2.2nm,0.8s,baz=297,slow=1.7,SNR=6.6						

MAN 11 08:59:17,18°.89N×120°.75E,h23km,mb3.7,ML2.4,MS1.9, 1D,Luzon

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.58	192⇓	iP	Pn	08 59 29.8	-0.1
PIP				eS	Sn	08 59 37.6	-1.0
APYP	Conner	1.12	155	eP	Pn	08 59 37.6	+0.2
APYP				eS	Sn	08 59 53.4	+1.3
ABRA	Dolores	1.24	182	eP	Pn	08 59 39.0	+0.2
ABRA				eS	Sb	08 59 55.8	+0.6

ISK 11 09:16:04.8,37°.87N×28°.92E,h20km,MD2.7
ISCJB 11 09:16:05.6±0.6,37°.94N±0°.03×29°.09E±0°.06,h7km±7km, Error ellipse: s-maj=8.6km s-min=5.3km az=177.3
DDA 11 09:16:05.4,37°.93N×29°.08E,h11km,MD2.7
CSEM 11 09:16:05.4±0.1,37°.93N×29°.07E,h10km,MD2.7,Error ellipse: s-maj=4.6km s-min=2.6km az=89.0
ISC 11 09:16:05.6±0.9,37°.93N±0°.03×29°.07E±0°.04,h12km±9km, n18,σ0s25/30,Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.18	190	ePG	Pg	09 16 09.5	-0.1
DENT				eSG	Sg	09 16 12.9	+0.5
DENT	Denizli	0.18	190	ePg	Pg	09 16 09.5	-0.1
DENT				eSg	Sg	09 16 12.9	+0.5
DNZL	Cakiroluk	0.24	185	iP	Pg	09 16 10.5	-0.3
DNZL				iS	Sg	09 16 14.3	0.0
DNZL	Cakiroluk	0.24	185	iP	Pg	09 16 10.5	-0.3
DNZL				iS	Sg	09 16 14.3	0.0
KHAL	Karahalli	0.55	37	iP	Pg	09 16 16.5	+0.1
KHAL				iS	Sg	09 16 23.5	-0.2
KHAL	Karahalli	0.55	37	iP	Pg	09 16 16.5	+0.1
KHAL				iS	Sg	09 16 23.5	-0.2
KULA	Kula-Manisa	0.67	331	ePG	Pg	09 16 18.6	0.0
KULA				eSG	Sb	09 16 28.6	+0.1
KULA	Kula-Manisa	0.67	331	ePg	Pg	09 16 18.6	0.0
KULA				eSg	Sb	09 16 28.6	+0.1
MANT	Manisa	0.69	324	iP	Pg	09 16 19.0	0.0
MANT				iS	Sg	09 16 28.1	0.0
MANT	Manisa	0.69	324	iP	Pg	09 16 19.0	0.0
MANT				iS	Sg	09 16 28.1	0.0
DEMI	Demirci	1.15	346	iP	Pb	09 16 26.9	-0.4
DEMI				iS	Sn	09 16 43.3	+0.2
DEMI	Demirci	1.15	346	iP	Pb	09 16 26.9	-0.4
DEMI				iS	Sn	09 16 43.3	+0.2
GDZ	Gediz	1.20	15	iS	Sb	09 16 43.5	-0.4
GDZ	Gediz	1.20	15	iS	Sb	09 16 43.5	-0.4
ALT	Altintas	1.39	36	ePN	Pb	09 16 31.5	0.0
ALT	Altintas	1.39	36	ePn	Pb	09 16 31.5	0.0
TVSB	Tavsanli	1.55	11	ePN	Pn	09 16 33.3	+0.3
TVSB	Tavsanli	1.55	11	ePn	Pn	09 16 33.3	+0.3

IDC 11 09:17:18.6±1.5,0°.65N×125°.41E,h0km,mb3.3/4, mb1 3.5/4,mb1mx3.4/23,mbtmp3.4/4,Error ellipse: s-maj=164.7km s-min=21.6km az=65.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.26	157	P	P	09 22 16.8	-0.6
	0.5nm,0.4s,baz=335,slow=11,SNR=13						
ASAR	Alice Springs	25.54	162	P	P	09 22 49.7	+0.5
	0.5nm,0.5s,baz=350,slow=15,SNR=7.0						
MKAR	Makanchi Array	59.36	327	P	P	09 27 23.1	+0.4
	0.2nm,0.4s,baz=125,slow=6.5,SNR=6.4						
KURBB	Kurchatov Arra	63.64	329	P	P	09 27 51.0	-0.5
	0.4nm,0.3s,baz=135,slow=6.6,SNR=5.0						

IDC 11 09:49:27.1±3.0,22°.74N×11°.71W,h0km,mb3.6/1, mb1 3.5/2,mb1mx3.1/26,mbtmp3.5/2,ML3.0/1,Error ellipse: s-maj=106.8km s-min=49.3km az=55.0, Mauritania

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MDT	Midelt	11.84	30	Lg	Lg	09 55 42.0	
	0.2nm,0.3s,baz=306,slow=14,SNR=3.5						
TORD	Torodi Ar. Bea	15.91	125	Pn	Pn	09 53 13.7	+1.2
	0.1nm,0.3s,baz=311,slow=13,SNR=4.3						
TORD				Sn	Sn	09 56 08.1	-1.6
	0.0nm,0.3s,baz=304,slow=22,SNR=2.8						
MKAR	Makanchi Array	76.41	45	P	P	10 01 18.6	0.0
	0.3nm,0.5s,baz=289,slow=4.9,SNR=4.9						
WRA	Warramunga Arr	148.29	91	PKPbc	PKPbc	10 09 15.2	-0.9
	0.4nm,0.7s,baz=283,slow=2.5,SNR=4.9						
ASAR	Alice Springs	148.42	99	PKPbc	PKPbc	10 09 15.9	-0.4
	0.2nm,0.7s,baz=306,slow=1.3,SNR=6.6						

IDC 11 10:00:56.7±15.0,19°.09N×65°.89W,h0km,mb3.6/5, mb1 4.0/5,mb1mx3.6/26,mbtmp3.6/5,Error ellipse: s-maj=333.8km s-min=68.0km az=152.0
ISCJB 11 10:01:02.2±0.6,19°.56N±0°.04×66°.35W±0°.04,h19km, mb3.6/5,Error ellipse: s-maj=7.1km s-min=4.6km az=137.4
NEIC 11 10:01:04.6,19°.57N×66°.34W,h11km,MD3.4(RSPR), After RSPR.
RSPR 11 10:01:04.6,19°.57N×66°.34W,h11km±4km,MD3.4/17
ISC 11 10:01:03.8±0.8,19°.49N±0°.05×66°.34W±0°.04,h19km,n42, σ0s62/51,mb3.6/5,24C-9D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AOPR	Arecibo Observ	1.20	199⇑	eP	Pn	10 01 24.9	-0.8
AOPR	Arecibo Observ	1.20	199⇓	eP	Pn	10 01 25.1	-0.5
AOPR	Arecibo Observ	1.20	199	eS	Sn	10 01 41.5	+0.1
AOPR	Arecibo Observ	1.20	199⇑	eP	Pn	10 01 24.9	-0.8
AOPR			⇓	eP	Pn	10 01 25.1	-0.5
AOPR				eS	Sn	10 01 41.5	+0.1
AGPR	Aguadilla, PR	1.25	216⇑	eP	Pn	10 01 25.5	-0.8
AGPR	Aguadilla, PR	1.25	216⇑	eP	Pn	10 01 25.5	-0.8
LRS	Lares	1.28	202⇓	eP	Pn	10 01 26.7	-0.1
LRS	Lares	1.28	202⇓	eP	Pn	10 01 26.7	-0.1
SJG	San Juan	1.38	172⇑	eP	Pn	10 01 27.6	-0.5
SJG	San Juan	1.38	172	eS	Sb	10 01 46.6	+0.3
SJG	San Juan	1.38	172⇓	eP	Pn	10 01 28.0	0.0
SJG	San Juan	1.38	172⇑	eP	Pn	10 01 27.6	-0.5
SJG			⇓	eP	Pn	10 01 28.0	0.0
SJG				eS	Sb	10 01 46.6	+0.3
HUMP	Col San Antoni	1.42	161⇑	eP	Pn	10 01 28.1	-0.5
HUMP	Col San Antoni	1.42	161	eS	Sn	10 01 46.2	-0.5
HUMP	Col San Antoni	1.42	161⇑	eP	Pn	10 01 28.1	-0.5
HUMP				eS	Sn	10 01 46.2	-0.5
CELP	Cerrillos	1.43	189⇓	eP	Pn	10 01 28.4	-0.3
CELP	Cerrillos	1.43	189⇓	eP	Pn	10 01 28.4	-0.3
OBIP	Obispado Ponce	1.46	190⇑	eP	Pn	10 01 29.0	-0.2
OBIP	Obispado Ponce	1.46	190	eS	Sn	10 01 47.9	+0.1
OBIP	Obispado Ponce	1.46	190⇑	eP	Pn	10 01 29.0	-0.2
OBIP				eS	Sn	10 01 47.9	+0.1
LSP	Las Mesas	1.48	208⇑	eP	Pn	10 01 29.3	-0.3
LSP	Las Mesas	1.48	208⇑	eP	Pn	10 01 29.3	-0.3
CPD	Cerro la Pandu	1.50	164⇑	eP	Pn	10 01 29.1	-0.6
CPD	Cerro la Pandu	1.50	164⇑	eP	Pn	10 01 29.1	-0.6
MTP	Monte Pirata	1.57	152⇑	eP	Pn	10 01 30.1	-0.6
MTP	Monte Pirata	1.57	152⇑	eP	Pn	10 01 30.1	-0.6
GBPR	Guanica, Bosqu	1.59	199⇑	eP	Pn	10 01 31.3	+0.4
GBPR	Guanica, Bosqu	1.59	199⇑	eP	Pn	10 01 31.3	+0.4
CRPR	Cabo Rojo, PR	1.65	206⇑	eP	Pn	10 01 31.9	+0.2
CRPR	Cabo Rojo, PR	1.65	206⇑	eP	Pn	10 01 31.9	+0.2
STVI	Saint Thomas	1.73	131⇑	eP	Pn	10 01 33.2	+0.3
STVI	Saint Thomas	1.73	131	eS	Sn	10 01 54.3	-0.3
STVI	Saint Thomas	1.73	131⇑	eP	Pn	10 01 33.2	+0.3
STVI				eS	Sn	10 01 54.3	-0.3
SMN1	Samana, DR	2.78	264⇓	eP	Pn	10 01 46.2	-1.2
SMN1				eS	Sn	10 02 18.3	-2.3
DR12	Loma Pena Alta	2.96	257⇑	eP	Pn	10 01 49.5	-0.3
DR12	Loma Pena Alta	2.96	257⇑	eP	Pn	10 01 49.5	-0.3
SDDR	Presa de Saban	4.70	265	ePn	Pn	10 02 14.7	+0.9
SDDR				eSn	Sn	10 03 09.5	+1.6
TXAR	Lajitas Array	35.24	293	P	P	10 07 58.3	+0.9
	0.3nm,0.6s,baz=101,slow=9.8,SNR=7.3						
NVAR	Mina Array Bea	48.56	304	P	P	10 09 46.1	-0.2
	0.2nm,0.4s,baz=101,slow=9.3,SNR=2.7						
NEW	Newport	49.81	317	P	P	10 09 55.6	+0.2
	1.6nm,0.8s,baz=128,slow=11,SNR=5.8						
YKA	Yellowknife Ar	54.17	335	P	P	10 10 27.3	-0.3
	0.4nm,0.7s,baz=111,slow=7.1,SNR=3.9						
ILAR	Eielson Array	68.53	333	P	P	10 12 04.5	-0.2
	0.5nm,0.8s,baz=100,slow=4.0,SNR=7.8						

IDC 11 10:06:28.6±11.0,17°.48S×179°.03W,h517km±139km, mb2.6/6,mb1 3.0/6,mb1mx2.8/19,mbtmp2.6/6,Error ellipse: s-maj=97.9km s-min=34.7km az=162.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.32	241	P	P	10 13 04.4	-0.5
	1.0nm,0.5s,baz=90,slow=13,SNR=2.8						
WRA	Warramunga Arr	44.13	259	P	P	10 13 51.1	-0.1
	0.7nm,1.1s,baz=83,slow=7.0,SNR=4.1						
ASAR	Alice Springs	44.34	254	P	P	10 13 52.9	0.0
	0.9nm,0.5s,baz=89,slow=8.4,SNR=18						
NVAR	Mina Array Bea	79.53	44	P	P	10 17 42.5	+0.6
	0.3nm,0.7s,baz=233,slow=8.8,SNR=3.3						
ILAR	Eielson Array	85.61	13	P	P	10 18 10.8	-0.9
	0.1nm,0.4s,baz=223,slow=4.9,SNR=5.0						
TXAR	Lajitas Array	86.27	58	P	P	10 18 15.4	-0.4
	0.1nm,0.7s,baz=231,slow=5.7,SNR=2.3						
GERES	GERESS Array B	147.04	344	PKPbc	PKPbc	10 25 12.8	-0.5
	0.3nm,0.5s,baz=353,slow=3.4,SNR=2.4						

IDC 11 10:18:25.2±2.0,1°.09N×126°.23E,h0km,mb3.4/3, mb1 3.7/3,mb1mx3.4/21,mbtmp3.5/3,Error ellipse: s-maj=173.9km s-min=24.7km az=65.0
ISCJB 11 10:18:34.1±0.6,0°.79N±0°.07×125°.93E±0°.04,h83km±9km, mb3.4/3,Error ellipse: s-maj=12.5km s-min=6.5km az=11.8
DJA 11 10:18:34.1±0.9,1°N±4°×12°6E±°,h21km±13km,M3.6/5, MLv3.6/5
ISC 11 10:18:34.9±1.0,0°.77N±0°.08×125°.93E±0°.04,h74km±14km, n8,σ1s28/13,mb3.4/3,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MNI	Manado	1.28	302	P	Pn	10 18 56.2	-0.9
MNI				S	Sn	10 19 13.6	-0.2
TNTI	Ternate	1.44	90	P	Pn	10 18 58.6	-0.5
TNTI				S	Sn	10 19 16.7	-0.7
KMSI	Cibinong	1.96	264	P	Pn	10 19 06.0	0.0
KMSI				S	Sn	10 19 32.0	+2.2
LBMI	Labuha	2.10	132	P	Pn	10 19 07.6	-0.4
LBMI				S	Sn	10 19 33.7	+0.4
GAMI	Galela, Maluku	2.14	60	P	Pn	10 19 09.1	+0.6
GAMI				S	Sn	10 19 35.9	+1.8
WRA	Warramunga Arr	22.17	159	P	P	10 23 24.1	-1.0
	0.4nm,0.3s,baz=338,slow=11,SNR=26						
ASAR	Alice Springs	25.50	163	P	P	10 23 58.1	+1.6
	0.5nm,0.3s,baz=343,slow=11,SNR=15						
MKAR	Makanchi Array	59.55	327	P	P	10 28 29.9	-0.9
	0.2nm,0.4s,baz=123,slow=7.1,SNR=7.0						

IDC 11 10:20:02.9±1.3,37°.85N×144°.90E,h0km,mb3.3/3, mb1 3.7/5,mb1mx3.4/26,mbtmp3.5/5,ML3.6/2,MS3.2/2, Ms1 3.3/2,ms1mx2.7/22,Error ellipse: s-maj=42.6km s-min=23.6km az=132.0
ISCJB 11 10:20:04.4±0.7,38°.01N±0°.04×144°.81E±0°.05,h26km, mb3.4/3,MS3.8/1,Error ellipse: s-maj=6.3km s-min=5.9km az=4.2
JMA 11 10:20:07.6±0.2,38°.03N×144°.65E,h40km,M3.6
ISC 11 10:20:06.2±1.2,38°.08N±0°.06×144°.81E±0°.08,h26km,n22, σ1s79/36,mb3.5/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.66	293	P	Pn	10 20 48.2	+0.9
OFUJ				eS	Sn	10 21 18.2	-0.5
JIO	Ouri	2.75	279	P	Pn	10 20 49.3	+0.7
JIO				S	Sn	10 21 19.8	-1.2
MIYJ	Miyakonagasawa	2.78	304	P	Pn	10 20 49.7	+0.8
MIYJ				eS	Sn	10 21 20.6	-1.0
JMK	Ichinoseki	2.95	288	P	Pn	10 20 52.2	+0.9
JMK				eS	Sn	10 21 25.3	-0.6
JOU	Okura	3.28	276	P	Pn	10 20 56.8	+0.9
JOU				eS	Sn	10 21 33.6	-0.4
JRG	Rokugo	3.52	293	S	Sn	10 21 41.3	+1.3
JFT	Otama	3.59	262	P	Pn	10 21 01.1	+1.0
JFT				S	Sn	10 21 40.8	-0.8
JYK	Kaneyama	3.59	285	P	Pn	10 21 02.1	+1.9
JYK				eS	Sn	10 21 42.6	+0.9
JAH	Hinai	3.87	304	P	Pn	10 21 06.3	+2.3
JAH				eS	Sn	10 21 50.3	+1.7
JTM	Tenmabayashi	3.97	314	eS	Sn	10 21 50.2	-0.7
BSO1	Boso 1	4.61	223	P	Pn	10 21 12.4	-1.2
BSO1				S	Sn	10 22 03.4	-2.6
JCH	Churui	4.67	347	P	Pn	10 21 15.6	+0.7
JCH				eS	Sn	10 22 05.5	-2.7
JRY	Ryogami san	5.15	248	P	Pn	10 21 21.3	-0.4
JRY				eS	Sn	10 22 16.1	-4.2
NEM2	Nemuro 2	5.33	7	P	Pn	10 21 22.8	-1.2
NEM2				eS	Sn	10 22 20.3	-4.3
MJAR	Matsushiro Arr	5.48	256	Pn	Pn	10 21 27.4	+1.3
	1.4nm,0.3s,baz=80,slow=15,SNR=10						
MJAR				Sn	Sn	10 22 28.0	-0.4
	0.4nm,0.3s,baz=90,slow=26,SNR=3.3						
MAT	Matsushiro	5.48	256	P	Pn	10 21 27.6	+1.4
MAT				eS	Sn	10 22 29.5	+1.1
JTKR	Abashiri--Toko	5.93	354	P	Pn	10 21 32.9	+0.7
JTKR				eS	Sn	10 22 35.7	-3.6
ASAJ	Asahikawa	6.26	345	LR	LR	10 24 53.7	
	comp=Z,52nm,21.6s,baz=328,slow=45						
JHJ	Hachijo jima 2	6.42	221	Pn	Pn	10 21 36.2	-2.8
	4.5nm,0.3s,baz=66,slow=20,SNR=4.4						
ILAR	Eielson Array	47.16	33	P	P	10 28 37.5	+1.5
	0.2nm,0.7s,baz=257,slow=6.4,SNR=4.7						
ILAR				LR	LR	10 49 41.4	
	comp=Z,87nm,18.5s,baz=331,slow=38						
WRA	Warramunga Arr	58.54	192	P	P	10 30 00.1	-0.3
	0.3nm,0.5s,baz=11,slow=7.0,SNR=4.3						
ASAR	Alice Springs	62.26	191	P	P	10 30 24.9	-0.9
	0.4nm,1.0s,baz=7.8,slow=7.5,SNR=3.1						

ISCJB 11 10:52:02.2±0.5,37°.68N±0°.02×21°.14E±0°.03,h2km±3km, mb3.8/11,MS2.6/1,Error ellipse: s-maj=4.2km s-min=3.0km az=140.4
IDC 11 10:52:02.6±0.9,37°.54N×21°.26E,h0km,mb4.0/11, mb1 3.8/15,mb1mx3.7/34,mbtmp3.8/15,ML3.8/2,MS2.8/2, Ms1 2.9/2,ms1mx2.3/49,Error ellipse: s-maj=20.7km s-min=14.8km az=135.0
THE 11 10:52:03.6,37°.72N×21°.18E,h0km±1km,ML3.7/6,Error ellipse: s-maj=1.3km s-min=0.4km az=246.0
ATH 11 10:52:03.2,37°.70N×21°.17E,h4km±4km,ML3.6
CSEM 11 10:52:03.2±0.2,37°.70N×21°.17E,h2km,ML3.6,Error ellipse: s-maj=3.8km s-min=2.3km az=52.0
BEO 11 10:52:32.5,39°.77N×20°.45E,h0km
ISC 11 10:52:03.8±1.1,37°.71N±0°.02×21°.17E±0°.02,h6km±8km, n96,σ0s95/118,mb4.0/11,Southern Greece

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RLS	Riolos of Patr	0.42	34	P	Pg	10 52 11.3	-0.6
RLS				S	Sg	10 52 17.9	+0.5
RLS	Riolos of Patr	0.42	34	ePG	Pg	10 52 11.4	-0.5
RLS	Riolos of Patr	0.42	34	P	Pg	10 52 11.3	-0.6
RLS				S	Sg	10 52 16.8	-0.6
AMT	Artemida-Makis	0.47	112	P	Pg	10 52 12.7	-0.1
AMT				S	Sg	10 52 18.5	-0.4
KFL	Anninata	0.50	323	P	Pg	10 52 13.6	+0.2
KFL				S	Sg	10 52 20.8	+0.8
KFL	Anninata	0.50	323	P	Pg	10 52 13.6	+0.2
KFL				S	Sg	10 52 20.8	+0.8
AXS	Araxos	0.51	19	P	Pg	10 52 13.2	-0.5
AXS				S	Sg	10 52 20.4	0.0
AXS	Araxos	0.51	19	P	Pg	10 52 13.2	-0.5
AXS				S	Sg	10 52 20.4	0.0
VLS	Valsamata	0.65	316	P	Pg	10 52 16.2	-0.2
VLS	Valsamata	0.65	316	ePG	Pg	10 52 16.0	-0.4
VLS	Valsamata	0.65	316	P	Pg	10 52 16.2	-0.2
VLS				S	Sg	10 52 25.5	+0.6
UPR	University Cam	0.75	40	P	Pg	10 52 17.9	-0.4
ITM	Ithomi	0.80	131	P	Pg	10 52 18.8	-0.5
ITM				S	Sb	10 52 30.6	-0.7
ITM	Ithomi	0.80	131	ePB	Pg	10 52 18.8	-0.5
ITM	Ithomi	0.80	131	P	Pg	10 52 18.7	-0.5
ITM				S	Sb	10 52 30.6	-0.7
LAKA	Lakka	0.83	50	P	Pg	10 52 19.2	-0.6
LAKA				S	Sg	10 52 31.1	+0.6
LAKA	Lakka	0.83	50	ePG	Pg	10 52 18.9	-0.9
LAKA	Lakka	0.83	50	ePg	Pg	10 52 18.9	-0.9
LAKA	Lakka	0.83	50	P	Pg	10 52 19.2	-0.6
LAKA				S	Sg	10 52 30.9	+0.4
KLV	Kalavryta, Ach	0.84	67	ePG	Pg	10 52 19.0	-1.0

KLV	**Kalavryta, Ach**	**0.84**	**67**	ePg	**Pg**	**10 52 19.0**	**-1.0**
EFP	**Efpalio**	**0.92**	**39**	P	**Pg**	**10 52 20.7**	**-0.8**
EFP				S	**Sb**	**10 52 34.3**	**-0.4**
EFP	**Efpalio**	**0.92**	**39**	P	**Pg**	**10 52 20.7**	**-0.8**
EFP				S	**Sb**	**10 52 34.3**	**-0.4**
PYL	**PYLOS**	**0.93**	**150**	P	**Pg**	**10 52 20.7**	**-1.0**
PYL	**PYLOS**	**0.93**	**150**	ePB	**Pg**	**10 52 20.7**	**-1.0**
PYL	**PYLOS**	**0.93**	**150**	P	**Pg**	**10 52 20.7**	**-1.0**
GUR	**Goura**	**0.96**	**76**	P	**Pg**	**10 52 21.1**	**-1.1**
GUR				S	**Sb**	**10 52 35.2**	**-0.6**
GUR	**Goura**	**0.96**	**76**	ePB	**Pg**	**10 52 21.1**	**-1.1**
GUR	**Goura**	**0.96**	**76**	P	**Pg**	**10 52 21.1**	**-1.1**
GUR				S	**Sg**	**10 52 34.8**	**+0.2**
TRIZ	**Trizonia**	**0.97**	**47**	P	**Pg**	**10 52 21.7**	**-0.7**
TRIZ	**Trizonia**	**0.97**	**47**	ePG	**Pg**	**10 52 21.6**	**-0.8**
TRIZ	**Trizonia**	**0.97**	**47**	ePg	**Pg**	**10 52 21.6**	**-0.8**
TRIZ				S	**Sb**	**10 52 35.8**	**-0.2**
VLX	**Vlachokerasia**	**1.02**	**109**	P	**Pg**	**10 52 22.9**	**-0.4**
VLX				S	**Sb**	**10 52 37.6**	**-0.1**
VLX	**Vlachokerasia**	**1.02**	**109**	ePG	**Pg**	**10 52 23.0**	**-0.4**
VLX	**Vlachokerasia**	**1.02**	**109**	P	**Pg**	**10 52 22.4**	**-1.0**
VLX	**Vlachokerasia**	**1.02**	**109**	ePg	**Pg**	**10 52 23.0**	**-0.4**
VLX				S	**Sb**	**10 52 37.6**	**-0.1**
KALE	**Kalithea**	**1.02**	**48**	P	**Pg**	**10 52 22.8**	**-0.7**
KALE	**Kalithea**	**1.02**	**48**	ePG	**Pg**	**10 52 22.6**	**-0.9**
KALE	**Kalithea**	**1.02**	**48**	P	**Pg**	**10 52 22.8**	**-0.7**
KALE				S	**Sg**	**10 52 37.0**	**+0.2**
LKD2	**Lefkada island**	**1.15**	**340**	P	**Pg**	**10 52 24.8**	**-1.1**
LKD2				S	**Sb**	**10 52 41.4**	**+0.1**
LKD2	**Lefkada island**	**1.15**	**340**	ePG	**Pg**	**10 52 24.6**	**-1.3**
LKD2				eSB	**Sb**	**10 52 41.5**	**+0.1**
LKD2	**Lefkada island**	**1.15**	**340**	P	**Pg**	**10 52 24.8**	**-1.1**
LKD2				S	**Sb**	**10 52 41.4**	**+0.1**
THAL	**Thalero**	**1.23**	**74**	P	**Pg**	**10 52 27.0**	**-0.3**
THAL	**Thalero**	**1.23**	**74**	P	**Pg**	**10 52 27.0**	**-0.3**
DSF	**Desfina**	**1.28**	**56**	P	**Pg**	**10 52 26.9**	**-1.5**
DSF				S	**Sn**	**10 52 46.2**	**+0.4**
DSF	**Desfina**	**1.28**	**56**	P	**Pg**	**10 52 26.9**	**-1.5**
DSF				S	**Sn**	**10 52 46.1**	**+0.3**
EVR	**Evrytania**	**1.30**	**23**	P	**Pg**	**10 52 28.1**	**-0.7**
EVR				S	**Sn**	**10 52 46.8**	**+0.3**
EVR	**Evrytania**	**1.30**	**23**	P	**Pg**	**10 52 28.1**	**-0.7**
EVR				S	**Sn**	**10 52 46.8**	**+0.3**
DYR	**Agios Nikonas**	**1.33**	**135**	P	**Pn**	**10 52 28.9**	**0.0**
DYR				S	**Sn**	**10 52 48.1**	**+1.2**
DYR	**Agios Nikonas**	**1.33**	**135**	P	**Pg**	**10 52 28.8**	**-0.5**
DYR				S	**Sn**	**10 52 48.1**	**+1.2**
LTK	**Loutraki**	**1.46**	**77**	P	**Pn**	**10 52 30.1**	**-0.6**
LTK	**Loutraki**	**1.46**	**77**	P	**Pn**	**10 52 30.1**	**-0.6**
DID	**Didima**	**1.66**	**96**	P	**Pb**	**10 52 34.4**	**-0.3**
VLI	**Veliai**	**1.73**	**125**	ePB	**Pg**	**10 52 36.1**	**-0.8**
VLI	**Veliai**	**1.73**	**125**	ePb	**Pg**	**10 52 36.1**	**-0.8**
ATH	**Athens Observa**	**2.03**	**82**	ePG	**Pg**	**10 52 41.7**	**-1.1**
ATH	**Athens Observa**	**2.03**	**82**	ePg	**Pg**	**10 52 41.7**	**-1.1**
KYTH	**Kithira**	**2.07**	**133**	ePG	**Pb**	**10 52 41.9**	**+0.1**
KYTH	**Kithira**	**2.07**	**133**	ePg	**Pb**	**10 52 41.9**	**+0.1**
ANKY	**Antikythira Is**	**2.51**	**136**	ePB	**Pn**	**10 52 46.7**	**+1.5**
ANKY	**Antikythira Is**	**2.51**	**136**	ePb	**Pn**	**10 52 46.7**	**+1.5**
VAY	**Valandovo**	**3.77**	**16**	ePn	**Pb**	**10 53 12.1**	**+1.4**
VAY				eSg	**Sb**	**10 53 55.9**	**-0.6**
MMB	**Musomiste**	**4.35**	**26**	eP	Pn	10 53 14.0	+3.5
MMB	**Musomiste**	**4.35**	**26**	eP	Pn	10 53 14.0	+3.5
KKB	**Krupnik**	**4.41**	**19**	eP	Pn	10 53 15.5	+4.3
KKB	**Krupnik**	**4.41**	**19**	eP	Pn	10 53 15.5	+4.3
RZN	**Rozhen**	**4.82**	**33**	eP	**Pn**	**10 53 18.3**	**+1.2**
RZN	**Rozhen**	**4.82**	**33**	eP	**Pn**	**10 53 18.3**	**+1.2**
VTS	**Vitosha**	**5.12**	**17**	eP	Pn	10 53 26.6	+5.4
BARS	**Barje**	**5.12**	**5**	ePn	**Pn**	**10 53 22.7**	**+1.6**
BARS	**Barje**	**5.12**	**5**	ePn	**Pn**	**10 53 22.7**	**+1.6**
ZAPS	**Zavoj**	**5.67**	**11**	ePn	Pn	10 53 34.0	+5.4
STON	**Ston**	**5.80**	**334**	ePn	**Pn**	**10 53 28.1**	**-2.2**
STON				Sn	**Sn**	**10 54 32.2**	**-4.8**
STON	**Ston**	**5.80**	**334**	ePn	**Pn**	**10 53 28.1**	**-2.2**
GRUS	**Gruza**	**6.18**	**357**	ePn	**Pn**	**10 53 36.1**	**+0.5**
GRUS	**Gruza**	**6.18**	**357**	ePn	**Pn**	**10 53 36.1**	**+0.5**
DIVS	**Divibare**	**6.44**	**352**	ePn	**Pn**	**10 53 39.6**	**+0.3**
DIVS	**Divibare**	**6.44**	**352**	ePn	**Pn**	**10 53 39.6**	**+0.3**
MLR	**Muntele Rosu**	**8.55**	**23**	Pn	Pn	10 54 12.6	+4.3
	0.1nm,0.3s,baz=195,slow=12,SNR=2.5						
BRTR	**Keskin Array B**	**9.95**	**75**	Pn	**Pn**	**10 54 27.9**	**+0.4**
	baz=252,slow=9.7,SNR=2.0						
DAVOX	**Davos/Dischmat**	**12.32**	**321**	LR	LR	11 00 27.1	
	comp=Z,52nm,19.1s,baz=264,slow=40						
GERES	**GERESS Array B**	**12.38**	**336**	Pn	Pn	10 55 06.0	+5.4
	baz=155,slow=13,SNR=2.0						
ESDC	**Sonseca Array**	**19.70**	**284**	P	**Pn**	**10 56 34.6**	**-0.6**
	0.3nm,0.3s,baz=79,slow=12,SNR=4.1						
HFS	**Hagfors**	**22.94**	**350**	P	**P**	**10 57 09.2**	**+0.7**
	1.7nm,0.6s,baz=163,slow=11,SNR=9.5						
FINES	**FINESS Array B**	**23.95**	**6**	P	**P**	**10 57 18.1**	**-0.4**
	0.6nm,0.4s,baz=187,slow=9.8,SNR=5.1						
EKA	**Eskdalemuir Ar**	**24.10**	**325**	P	**P**	**10 57 20.1**	**0.0**
	0.5nm,0.6s,baz=114,slow=8.6,SNR=3.3						
NB2	**NORSAR Subarra**	**24.18**	**348**	P	**P**	**10 57 20.8**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=160,slow=9.3						
NB2	**NORSAR Subarra**	**24.18**	**348**	P	**P**	**10 57 20.8**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=160,slow=9.1,SNR=3.9						
NOA	**NORSAR Array B**	**24.18**	**348**	P	**P**	**10 57 21.8**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=159,slow=8.6,SNR=4.2						
NOA				LR	LR	11 07 32.4	
	comp=Z,18nm,19.5s,baz=0.0,slow=38						
AKTO	**Aktyubinsk**	**29.06**	**52**	P	**P**	**10 58 06.0**	**+1.3**
	comp=Z,1.3nm,0.4s,baz=269,slow=9.8,SNR=7.3						
TORD	**Torodi Ar. Bea**	**30.00**	**221**	P	**P**	**10 58 12.9**	**-0.5**
	comp=Z,1.6nm,0.5s,baz=31,slow=9.5,SNR=14						
ARCES	**ARCESS Array B**	**31.97**	**3**	P	**P**	**10 58 32.3**	**+2.1**
	comp=Z,1.1nm,0.8s,baz=187,slow=9.4,SNR=4.9						
BVAR	**Borovoye Array**	**37.03**	**49**	P	**P**	**10 59 14.9**	**+0.7**
	comp=Z,1.7nm,0.5s,baz=263,slow=6.6,SNR=9.7						
DBIC	**Dimbokro**	**38.90**	**224**	P	**P**	**10 59 29.4**	**-0.9**
	comp=Z,4.3nm,0.7s,baz=17,slow=18,SNR=2.7						
MKAR	**Makanchi Array**	**45.11**	**58**	P	**P**	**11 00 19.8**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=280,slow=8.4,SNR=19						
ZALV	**Zalesovo Beam**	**45.62**	**48**	P	**P**	**11 00 23.3**	**-1.4**
	comp=Z,3.8nm,0.5s,baz=274,slow=8.1,SNR=14						

*ISCJB **11** 11:14:49.3±1.0, 61°.09N±0°.04×29°.00E±0°.09, h0km, Error ellipse: s-maj=7.5km s-min=4.9km az=136.8*
*HEL **11** 11:14:51.4±0.9, 60°.92N×29°.13E, h0km, ML1.7, Explosion*
*CSEM **11** 11:14:52.6±0.4, 61°.00N×28°.78E, h1km, ML1.7, Error ellipse: s-maj=8.2km s-min=5.5km az=135.0, Mining explosion.*
*NAO **11** 11:14:53.7±2.2, 61°.09N×28°.92E, ML2.0*
*IDC **11** 11:14:54.1±2.0, 61°.08N×28°.93E, h0km, mb1 3.0/3, mb1mx2.8/27, mbtmp2.9/3, ML2.7/3, Error ellipse: s-maj=19.6km s-min=12.8km az=140.0*
ISC 11 11:14:50.8±1.2**, 61°.00N**±0°.05×**28°.97E**±0°.06**, h0**km**, n22, σ1s.11**/31**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	**Virojoki**	**0.83**	**237**	PG	**Pg**	**11 15 06.7**	**-0.1**
VJF				SG	**Sg**	**11 15 18.5**	**+0.9**
VJF				RG	Rg	11 15 23.2	
VJF	**Virojoki**	**0.83**	**237**	Pg	**Pg**	**11 15 06.7**	**-0.1**
VJF				Sg	**Sg**	**11 15 18.5**	**+0.9**
FIA0	**FINESS Array S**	**1.47**	**289**	Pg	**Pn**	**11 15 18.6**	**+0.1**
	baz=113,slow=18						
FIA0				Lg	Lg	11 15 39.0	
	baz=103,slow=37						
FIA0				Rg	Rg	11 15 46.4	
	baz=116,slow=37						
FIA0	**FINESS Array S**	**1.47**	**289**	PG	**Pn**	**11 15 18.5**	**0.0**
	baz=111						
FIA0				SG	**Sn**	**11 15 38.6**	**+0.2**
FIA0				MSG		11 15 38.6	
	comp=Z,6.4nm,0.3s						
FIA0				RG	Rg	11 15 46.7	
FIA0	**FINESS Array S**	**1.47**	**289**	Pg	**Pn**	**11 15 18.6**	**+0.1**
	baz=113,slow=16,SNR=2.1						
FIA0				Sg	**Sn**	**11 15 38.6**	**+0.2**
FIA0				Lg	Lg	11 15 39.0	
	baz=103,slow=30,SNR=6.2						
FINES	**FINESS Array B**	**1.47**	**289**	Pg	**Pn**	**11 15 18.1**	**-0.4**
	comp=Z,0.8nm,0.3s,baz=103,slow=17,SNR=17						
FINES				Lg	Lg	11 15 38.9	
	comp=Z,1.9nm,0.3s,baz=106,slow=30,SNR=3.6						
KAF	**Kangasniemi**	**1.69**	**312**	PN	**Pg**	**11 15 23.6**	**+0.3**
KAF				SG	**Sg**	**11 15 45.6**	**+0.4**
KAF	**Kangasniemi**	**1.69**	**312**	Pn	**Pg**	**11 15 23.5**	**+0.3**
KAF				Sg	**Sg**	**11 15 45.6**	**+0.4**
JOF	**Joensuu**	**2.22**	**29**	PN	**Pb**	**11 15 31.6**	**-0.2**
	baz=202						
JOF				SG	**Sb**	**11 15 59.8**	**0.0**
JOF				MSG		11 15 59.8	
	comp=Z,3.5nm,0.4s						
JOF	**Joensuu**	**2.22**	**29**	Pn	**Pb**	**11 15 31.5**	**-0.2**
MEF	**Metsahovi**	**2.39**	**253**	PN	**Pn**	**11 15 32.6**	**+1.4**
MEF				SG	**Sb**	**11 16 04.1**	**-0.5**
MEF				MSG		11 16 04.1	
	comp=Z,1.8nm,0.2s						
MEF	**Metsahovi**	**2.39**	**253**	Pn	**Pn**	**11 15 32.5**	**+1.4**
MEF				Sg	**Sb**	**11 16 04.1**	**-0.5**
RAF	**Rauma**	**3.51**	**274**	SG	**Sg**	**11 16 45.0**	**+1.6**
RAF				MSG		11 16 45.0	
	comp=Z,2.5nm,0.4s						
VAF	**Ylistaro**	**3.61**	**307**	SG	**Sg**	**11 16 46.5**	**0.0**
VAF	**Ylistaro**	**3.61**	**307**	Sg	**Sg**	**11 16 46.5**	**0.0**
HFS	**Hagfors**	**7.58**	**270**	Sn	**Sn**	**11 18 05.8**	**-3.0**
	baz=78,slow=28						
HFS				Lg	Lg	11 18 44.9	
	baz=67,slow=28						
HFS	**Hagfors**	**7.58**	**270**	Pn	**Pn**	**11 16 44.0**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=106,slow=15,SNR=2.7						
HFS				Lg	Lg	11 18 45.9	
	comp=Z,0.2nm,0.3s,baz=74,slow=27,SNR=3.7						
HFS	**Hagfors**	**7.58**	**270**	Sn	**Sn**	**11 18 05.8**	**-3.0**
	baz=78,slow=28,SNR=3.9						
HFS				Lg	Lg	11 18 44.9	
	baz=67,slow=28,SNR=4.1						
NOA	**NORSAR Array B**	**8.62**	**278**	Pn	**Pn**	**11 16 58.5**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=73,slow=14,SNR=2.2						
ARA0	**ARCESS Array S**	**8.69**	**352**	Pn	**Pn**	**11 16 58.0**	**+0.4**
	baz=166,slow=16						
ARA0				Sn	Sn	11 18 30.0	-6.1
	baz=173,slow=28						
ARA0				Lg	Lg	11 19 17.6	
	baz=166,slow=37						
ARA0	**ARCESS Array S**	**8.69**	**352**	Pn	**Pn**	**11 16 58.0**	**+0.4**
	baz=166,slow=14,SNR=4.2						
ARA0				Lg	Lg	11 19 17.5	
	baz=166,slow=29,SNR=4.8						
ARCES	**ARCESS Array B**	**8.69**	**352**	Pn	**Pn**	**11 16 57.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=173,slow=11,SNR=12						
ARCES				Lg	Lg	11 19 21.2	
	comp=Z,0.1nm,0.3s,baz=164,slow=26,SNR=8.2						

*IDC **11** 11:44:13.9±1.2, 49°.60N×155°.85E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.3/27, mbtmp3.3/5, ML3.0/1, MS3.2/2, Ms1 3.2/2, ms1mx2.6/21, Error ellipse: s-maj=38.0km s-min=25.9km az=127.0*
*MOS **11** 11:44:14.2±2.8, 49°.37N×155°.86E, h13km, mb4.2/1, Error ellipse: s-maj=65.4km s-min=16.5km az=79.2*
*ISCJB **11** 11:44:21.2±1.4, 49°.71N±0°.10×156°.1E±0°.2, h69km±12km, mb3.2/4, Error ellipse: s-maj=20.3km s-min=11.4km az=43.8*
*KRSC **11** 11:44:21.2±0.9, 49°.80N×156°.61E, h5km±5km, ML4.0*
ISC 11 11:44:20.1±3.3**, 49°.6N**±0°.2×**156°.1E**±0°.1**, h42**km±29km**, n25, σ1s.71**/32**, mb3.4**/4**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.11**	**360**	⇓iPN	**Pn**	**11 44 38.5**	**-0.6**
SKR				eS	**Sn**	**11 44 52.0**	**-1.1**
SKR				pmax	pmax		
	comp=N,160nm,0.5s						
SKR				pmax	pmax		
	comp=E,120nm,0.5s						
SKR				pmax	pmax		
	comp=Z,120nm,0.5s						
SKR				smax	smax		
	comp=E,1μm,0.3s						
SKR				smax	smax		
	comp=N,3μm,0.2s						
SKR				smax	smax		
	comp=E,1μm,2.0s						
SKR	**Severo-Kuril's**	**1.11**	**360**	eP	**Pn**	**11 44 39.3**	**+0.2**
SKR				eS	**Sn**	**11 44 52.5**	**-0.6**
PAU	**Pauzhetka**	**1.94**	**13**	eP	**Pn**	**11 44 51.4**	**+0.9**
PAU				eS	**Sn**	**11 45 13.5**	**-0.2**
MIPR	**Malaya Ipel'ka**	**2.73**	**8**	eP	**Pn**	**11 45 02.3**	**+0.9**
MIPR				eS	**Sn**	**11 45 32.7**	**-0.5**
ASAK	**Asacha**	**3.02**	**21**	eP	**Pn**	**11 45 07.2**	**+1.7**
ASAK				eS	**Sn**	**11 45 41.5**	**+1.0**
MTVR	**Mutnovka**	**3.19**	**23**	eP	**Pn**	**11 45 09.5**	**+1.7**
MTVR				eS	**Sn**	**11 45 44.3**	**-0.2**
RUS	**Russkaya**	**3.23**	**27**	eP	**Pn**	**11 45 08.7**	**+0.5**
RUS				eS	**Sn**	**11 45 42.6**	**-2.8**
APC	**Apacha**	**3.41**	**11**	eP	**Pn**	**11 45 12.6**	**+1.9**
PETK	**Petropavlovsk-**	**3.67**	**15**	PN	**Pn**	**11 45 13.4**	**-0.9**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**3.67**	**15**	Pn	**Pn**	**11 45 13.3**	**-0.9**
	comp=Z,1.1nm,0.3s,baz=181,slow=13,SNR=18						
PET	**Petropavlovsk**	**3.80**	**24**	ePN	Pn	11 45 21.9	+5.9
PET	**Petropavlovsk**	**3.80**	**24**	S	**Sn**	**11 45 58.8**	**-0.6**
NLC	**Nalytchevo**	**4.13**	**28**	P	**Pn**	**11 45 20.7**	**+0.2**
NLC				S	**Sn**	**11 46 03.8**	**-3.6**
GNL	**Ganaly**	**4.28**	**15**	eP	Pn	11 45 26.8	+4.1
GNL				eS	**Sn**	**11 46 15.0**	**+3.7**
SPN	**Mys Shipunski**	**4.29**	**33**	eP	**Pn**	**11 45 24.0**	**+1.3**
SPN				eS	**Sn**	**11 46 10.2**	**-1.3**
MKZ	**Mys Kozlova**	**6.07**	**33**	eP	**Pn**	**11 45 47.6**	**+0.5**
MKZ				S	**Sn**	**11 46 52.3**	**-2.8**
TUMR	**Tumrok**	**6.22**	**22**	P	**Pn**	**11 45 51.7**	**+2.4**
KMNR	**Kamenistaya**	**6.67**	**20**	P	**Pn**	**11 45 58.6**	**+3.1**
ILAR	**Eielson Array**	**33.09**	**41**	P	**P**	**11 50 51.2**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=263,slow=6.2,SNR=4.3						
MKAR	**Makanchi Array**	**47.46**	**296**	LR	LR	12 12 06.0	
	comp=Z,20nm,20.7s,baz=259,slow=35						
KURK	**Kurchatov**	**47.50**	**303**	P	**P**	**11 52 49.8**	**-0.8**
KURBB	**Kurchatov Arra**	**47.60**	**303**	P	**P**	**11 52 49.8**	**-1.6**
	comp=Z,0.2nm,0.3s,baz=65,slow=7.4,SNR=2.6						
AAK	**Ala-Archa**	**54.39**	**296**	LR	LR	12 16 05.3	
	comp=Z,33nm,18.2s,baz=356,slow=35						
WRA	**Warramunga Arr**	**71.86**	**202**	P	**P**	**11 55 38.5**	**0.0**
	comp=Z,0.2nm,0.8s,baz=13,slow=6.8,SNR=2.9						
TXAR	**Lajitas Array**	**74.38**	**63**	P	**P**	**11 55 54.5**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=301,slow=4.2,SNR=5.1						

*CSEM **11** 11:53:51.0, 37°.71N×21°.10E, h12km, MD3.1, After ATH*
ATH 11 11:53:51.0, 37°.71N×**21°.10E, h12**km±1km**, MD3.1**/12**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.45**	**40**	ePB	Pg	11 54 00.0	+0.1
RLS				eSB	Sg	11 54 06.3	+0.3
RLS	**Riolos of Patr**	**0.45**	**40**	ePb	Pg	11 54 00.0	+0.1
RLS				eSb	Sg	11 54 06.3	+0.3
VLS	**Valsamata**	**0.62**	**319**	ePB	Pg	11 54 03.2	+0.1
VLS				eSB	Sb	11 54 12.0	-0.4
VLS	**Valsamata**	**0.62**	**319**	ePb	Pg	11 54 03.2	+0.1
VLS				eSb	Sb	11 54 12.0	-0.4
ITM	**Ithomi**	**0.84**	**129**	ePB	Pg	11 54 07.1	-0.3
ITM				eSB	Sg	11 54 18.5	0.0
ITM	**Ithomi**	**0.84**	**129**	ePb	Pg	11 54 07.1	-0.3
ITM				eSb	Sg	11 54 18.5	0.0
LAKA	**Lakka**	**0.87**	**52**	ePB	Pg	11 54 08.0	0.0
LAKA				eSB	Sb	11 54 19.9	0.0
LAKA	**Lakka**	**0.87**	**52**	ePb	Pg	11 54 08.0	0.0
LAKA				eSb	Sb	11 54 19.9	0.0
KLV	**Kalavryta, Ach**	**0.90**	**68**	ePG	Pg	11 54 07.7	-0.7
KLV				eSB	Sb	11 54 20.6	0.0
KLV	**Kalavryta, Ach**	**0.90**	**68**	ePg	Pg	11 54 07.7	-0.7
KLV				eSb	Sb	11 54 20.6	0.0
EFP	**Efpalio**	**0.96**	**41**	ePB	Pg	11 54 09.4	-0.1
EFP				eSB	Sb	11 54 22.3	+0.1
EFP	**Efpalio**	**0.96**	**41**	ePb	Pg	11 54 09.4	-0.1
EFP				eSb	Sb	11 54 22.3	+0.1
PYL	**PYLOS**	**0.96**	**148**	ePG	Pg	11 54 08.9	-0.7
PYL				eSB	Sb	11 54 22.9	+0.6
PYL	**PYLOS**	**0.96**	**148**	ePg	Pg	11 54 08.9	-0.7
PYL				eSb	Sb	11 54 22.9	+0.6
GUR	**Goura**	**1.01**	**77**	ePG	Pb	11 54 09.8	-0.8
GUR				eSB	Sb	11 54 24.4	+0.5
GUR	**Goura**	**1.01**	**77**	ePg	Pb	11 54 09.8	-0.8
GUR				eSb	Sb	11 54 24.4	+0.5
TRIZ	**Trizonia**	**1.01**	**49**	ePN	Pn	11 54 10.8	-0.2
TRIZ				eSB	Sb	11 54 23.7	+0.1
TRIZ	**Trizonia**	**1.01**	**49**	ePn	Pn	11 54 10.8	-0.2
TRIZ				eSb	Sb	11 54 23.7	+0.1
KALE	**Kalithea**	**1.07**	**50**	ePG	Pb	11 54 10.8	-0.7
KALE				eSB	Sn	11 54 26.2	-0.5
KALE	**Kalithea**	**1.07**	**50**	ePg	Pb	11 54 10.8	-0.7
KALE				eSb	Sn	11 54 26.2	-0.5
VLX	**Vlachokerasia**	**1.07**	**108**	ePN	Pb	11 54 11.7	+0.1
VLX				eSB	Sg	11 54 26.4	+0.5
VLX	**Vlachokerasia**	**1.07**	**108**	ePn	Pb	11 54 11.7	+0.1
VLX				eSb	Sg	11 54 26.4	+0.5
EVR	**Evrytania**	**1.33**	**25**	ePG	Pb	11 54 15.8	-0.2
EVR	**Evrytania**	**1.33**	**25**	ePg	Pb	11 54 15.8	-0.2
DYR	**Agios Nikonas**	**1.36**	**133**	ePG	Pb	11 54 16.6	+0.1
DYR				eSB	Sg	11 54 35.4	+0.3
DYR	**Agios Nikonas**	**1.36**	**133**	ePg	Pb	11 54 16.6	+0.1
DYR				eSb	Sg	11 54 35.4	+0.3
LTK	**Loutraki**	**1.51**	**77**	ePB	Pb	11 54 19.4	+0.4
LTK	**Loutraki**	**1.51**	**77**	ePb	Pb	11 54 19.4	+0.4
AGG	**Agios Georgios**	**1.63**	**36**	ePB	Pb	11 54 21.7	+0.6
AGG	**Agios Georgios**	**1.63**	**36**	ePb	Pb	11 54 21.7	+0.6
DID	**Didima**	**1.71**	**96**	ePG	Pb	11 54 22.9	+0.5
DID	**Didima**	**1.71**	**96**	ePg	Pb	11 54 22.9	+0.5

*ISK **11** 11:55:14.5, 37°.29N×28°.25E, h6km, MD2.6*
*ISCJB **11** 11:55:15.4±0.5, 37°.27N±0°.05×28°.24E±0°.05, h4km±9km, Error ellipse: s-maj=9.6km s-min=4.2km az=41.7*
*CSEM **11** 11:55:15.5±0.2, 37°.26N×28°.23E, h8km, MD2.6, Error ellipse: s-maj=5.3km s-min=3.9km az=35.0*
*DDA **11** 11:55:15.2, 37°.25N×28°.21E, h7km, MD2.8*
ISC 11 11:55:15.6±1.0**, 37°.25N**±0°.03×**28°.22E**±0°.02**, h7**km±9km**, n24, σ1s.29**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.13**	**155**	ePG	**Pg**	**11 55 17.8**	**-0.5**
YER				eSG	**Sg**	**11 55 20.6**	**+0.4**
YER	**Yerkesik**	**0.13**	**155**	ePg	**Pg**	**11 55 17.8**	**-0.5**
YER				eSg	**Sg**	**11 55 20.6**	**+0.4**
MLSB	**Milas**	**0.35**	**278**	ePG	**Pg**	**11 55 21.9**	**-0.7**
MLSB				eSG	**Sg**	**11 55 28.5**	**+1.3**
MLSB	**Milas**	**0.35**	**278**	ePg	**Pg**	**11 55 21.9**	**-0.7**
MLSB				eSg	**Sg**	**11 55 28.5**	**+1.3**
TURN	**Turunc**	**0.49**	**140**	i P	**Pg**	**11 55 23.9**	**-1.1**
TURN				i S	**Sg**	**11 55 31.6**	**+0.2**
TURN	**Turunc**	**0.49**	**140**	i P	**Pg**	**11 55 23.9**	**-1.1**
TURN				i S	**Sg**	**11 55 31.6**	**+0.2**
AYDN	**Tasoluk**	**0.49**	**327**	i P	**Pg**	**11 55 25.2**	**+0.1**
AYDN				i S	**Sg**	**11 55 32.4**	**+0.9**
AYDN	**Tasoluk**	**0.49**	**327**	i P	**Pg**	**11 55 25.2**	**+0.1**
AYDN				i S	**Sg**	**11 55 32.4**	**+0.9**
DALY	**Dalyan (Mu˜la**	**0.56**	**141**	ePG	**Pg**	**11 55 26.1**	**-0.2**
DALY				eSG	**Sb**	**11 55 35.3**	**-0.6**
DALY	**Dalyan (Mu˜la**	**0.56**	**141**	ePg	**Pg**	**11 55 26.1**	**-0.2**
DALY				eSg	**Sb**	**11 55 35.3**	**-0.6**
DAT	**Datca**	**0.73**	**225**	ePG	**Pb**	**11 55 30.9**	**+0.1**
DAT	**Datca**	**0.73**	**225**	ePg	**Pb**	**11 55 30.9**	**+0.2**
BODT	**Bodrum**	**0.75**	**256**	ePG	**Pg**	**11 55 30.4**	**+0.4**
BODT	**Bodrum**	**0.75**	**256**	ePg	**Pg**	**11 55 30.4**	**+0.4**
DNZL	**Cakiroluk**	**0.79**	**56**	i P	**Pg**	**11 55 30.9**	**0.0**
DNZL				i S	**Sg**	**11 55 42.3**	**+1.0**
DNZL	**Cakiroluk**	**0.79**	**56**	i P	**Pg**	**11 55 30.9**	**0.0**
DNZL				i S	**Sg**	**11 55 42.3**	**+1.0**
FETY	**Fethiye**	**0.93**	**131**	ePG	**Pg**	**11 55 32.8**	**-0.7**
FETY	**Fethiye**	**0.93**	**131**	ePg	**Pg**	**11 55 32.8**	**-0.7**
KULA	**Kula-Manisa**	**1.31**	**15**	ePN	**Pn**	**11 55 39.1**	**-1.4**
KULA	**Kula-Manisa**	**1.31**	**15**	ePn	**Pn**	**11 55 39.1**	**-1.4**
ELL	**Elmali**	**1.45**	**110**	ePN	**Pn**	**11 55 41.8**	**-0.6**
ELL	**Elmali**	**1.45**	**110**	ePn	**Pn**	**11 55 41.8**	**-0.6**
AKAS	**Kas**	**1.51**	**132**	i P	**Pb**	**11 55 44.4**	**+0.3**
AKAS				i S	**Sg**	**11 56 08.5**	**+4.4**
AKAS	**Kas**	**1.51**	**132**	i P	**Pb**	**11 55 44.4**	**+0.3**
AKAS				i S	**Sg**	**11 56 08.5**	**+4.4**

IDC 11 11:55:27.5±1.0**, 24°.22S**×**176°.72W, h111**km±6km**, mb3.7**/8**, mb1 4.0**/9**, mb1mx3.8**/19**, mbtmp3.7**/9**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx2.9**/29**, Error ellipse: s-maj=41.2km s-min=16.4km az=153.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**11.27**	**25**	P	Pn	11 57 56.9	-8.5
	11nm,0.3s,baz=289,slow=22,SNR=12						
DZM	**Mont Dzumac**	**15.63**	**274**	P	P	11 59 03.3	-0.4
	0.1nm,0.3s,baz=62,slow=16,SNR=2.5						
DZM				LR	LR	12 03 15.6	
	comp=Z,97nm,20.0s,baz=60,slow=30						
RAR	**Rarotonga**	**15.92**	**83**	LR	LR	12 04 08.1	
	comp=Z,106nm,19.5s,baz=270,slow=33						
STKA	**Stephens Creek**	**37.39**	**249**	P	P	12 02 29.8	+0.1
	4.9nm,0.8s,baz=98,slow=12,SNR=7.6						
ASAR	**Alice Springs**	**44.94**	**260**	P	P	12 03 30.9	-0.7
	3.2nm,0.8s,baz=97,slow=8.3,SNR=21						
WRA	**Warramunga Arr**	**45.37**	**265**	P	P	12 03 33.7	-1.4
	2.9nm,0.8s,baz=97,slow=8.5,SNR=32						
WRA				pP	pP	12 04 02.0	+1.2
	0.7nm,0.6s,baz=102,slow=8.0,SNR=2.0						
PETK	**Petropavlovsk-**	**80.15**	**345**	P	P	12 07 25.3	+0.2
	1.7nm,0.7s,baz=141,slow=9.6,SNR=6.8						
NVAR	**Mina Array Bea**	**82.93**	**42**	P	P	12 07 39.9	-0.4
	0.5nm,0.6s,baz=231,slow=5.7,SNR=5.8						
NVAR				pP	pP	12 08 08.8	0.0
	1.5nm,1.0s,baz=228,slow=9.1,SNR=5.7						
TXAR	**Lajitas Array**	**88.08**	**57**	pP	pP	12 08 34.7	0.0
	1.3nm,1.1s,baz=220,slow=5.5,SNR=6.7						
PDAR	**Pinedale Array**	**90.86**	**43**	P	P	12 08 18.0	-0.8
	0.4nm,0.7s,baz=235,slow=3.2,SNR=3.2						
PDAR				pP	pP	12 08 47.0	-0.7
	0.5nm,0.9s,baz=225,slow=8.2,SNR=2.5						
ILAR	**Eielson Array**	**91.67**	**12**	P	P	12 08 22.4	+0.7
	0.2nm,0.8s,baz=232,slow=4.4,SNR=3.3						
ILAR				pP	pP	12 08 50.2	-0.4
	0.3nm,0.9s,baz=233,slow=5.7,SNR=3.4						
CMAR	**Chiang Mai Arr**	**92.46**	**289**	P	P	12 08 27.4	+1.0
	0.8nm,0.8s,baz=114,slow=5.2,SNR=4.8						
AKASG	**Malin Array Be**	**146.82**	**329**	PKPbc	PKPbc	12 14 55.9	-0.6
	2.2nm,0.6s,baz=45,slow=4.1,SNR=6.5						
BRTR	**Keskin Array B**	**150.14**	**308**	PKPbc	PKPbc	12 15 05.8	+0.1
	1.3nm,0.7s,baz=98,slow=1.9,SNR=8.5						
TORD	**Torodi Ar. Bea**	**168.88**	**172**	PKPab	PKPab	12 16 33.6	+0.3
	1.0nm,0.9s,baz=157,slow=2.3,SNR=4.7						

*ISCJB **11** 11:58:16.6±0.5, 39°.45N±0°.03×28°.12E±0°.03, h0km, Error ellipse: s-maj=4.7km s-min=2.9km az=35.0*
*CSEM **11** 11:58:16.6±0.2, 39°.44N×28°.12E, h1km, MD2.8, Error ellipse: s-maj=3.9km s-min=2.5km az=33.0*
*DDA **11** 11:58:16.9, 39°.50N×28°.15E, h8km, MD2.8*
*ISK **11** 11:58:16.3, 39°.41N×28°.11E, h6km, MD2.9*
ISC 11 11:58:16.2±0.8**, 39°.44N**±0°.03×**28°.09E**±0°.02**, h0**km**, n40, σ0s.68**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.26**	**321**	ePG	**Pg**	**11 58 22.5**	**+1.3**
BALB				eSG	**Sb**	**11 58 27.5**	**-1.3**
BALB	**Balikesir**	**0.26**	**321**	ePg	**Pg**	**11 58 22.5**	**+1.3**
BALB				eSg	**Sb**	**11 58 27.5**	**-1.3**
DURS	**Dursunbey**	**0.34**	**61**	i P	**Pg**	**11 58 22.6**	**-0.1**
DURS				i S	**Sg**	**11 58 27.5**	**+0.4**
DURS	**Dursunbey**	**0.34**	**61**	i P	**Pg**	**11 58 22.6**	**-0.1**
DURS				i S	**Sg**	**11 58 27.5**	**+0.4**
DST	**Dursunbey**	**0.44**	**68**	ePG	**Pg**	**11 58 24.7**	**0.0**
DST				eSG	**Sg**	**11 58 32.0**	**+1.6**
DST	**Dursunbey**	**0.44**	**68**	ePg	**Pg**	**11 58 24.7**	**0.0**
DST				eSg	**Sg**	**11 58 32.0**	**+1.6**
BALY	**Balya**	**0.47**	**309**	i P	**Pg**	**11 58 26.2**	**+0.9**
BALY				i S	**Sb**	**11 58 33.9**	**-1.2**
BALY	**Balya**	**0.47**	**309**	i P	**Pg**	**11 58 26.2**	**+0.9**
BALY				i S	**Sb**	**11 58 33.9**	**-1.2**
DEMI	**Demirci**	**0.63**	**129**	i P	**Pg**	**11 58 28.7**	**+0.5**
DEMI				i S	**Sg**	**11 58 37.0**	**+0.6**
DEMI	**Demirci**	**0.63**	**129**	i P	**Pg**	**11 58 28.7**	**+0.5**
DEMI				i S	**Sg**	**11 58 37.0**	**+0.6**
GONE	**Gonen-Balikesi**	**0.68**	**333**	ePG	**Pg**	**11 58 29.9**	**+0.6**
GONE				eSG	**Sb**	**11 58 40.7**	**-0.3**
GONE	**Gonen-Balikesi**	**0.68**	**333**	ePg	**Pg**	**11 58 29.9**	**+0.6**
GONE				eSg	**Sb**	**11 58 40.7**	**-0.3**
ORLT	**Orhaneli**	**0.87**	**45**	ePG	**Pg**	**11 58 32.9**	**0.0**
ORLT	**Orhaneli**	**0.87**	**45**	ePg	**Pg**	**11 58 32.9**	**0.0**
MANT	**Manisa**	**1.01**	**159**	i P	**Pb**	**11 58 36.8**	**0.0**
MANT				i S	**Sn**	**11 58 52.9**	**-0.1**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MANT	Manisa	1.01	159	*i* P	Pb	11 58 36.8	0.0
KULA	Kula-Manisa	1.02	154	*e*PG	Pg	11 58 35.7	-0.2
KULA	Kula-Manisa	1.02	154	*e*Pg	Pg	11 58 35.7	-0.2
TVSB	Tavsanli	1.06	89	*e*PG	Pb	11 58 37.7	+0.2
TVSB	Tavsanli	1.06	89	*e*Pg	Pb	11 58 37.7	+0.2
ULDT	Uludag	1.07	49	*e*P	Pg	11 58 36.3	-0.4
ULDT				*i* S	Sg	11 58 51.4	+0.9
ULDT	Uludag	1.07	49	*e*P	Pg	11 58 36.3	-0.4
ULDT				*i* S	Sg	11 58 51.4	+0.9
MDNY	Mudanya-Bursa	1.11	33	*e*PN	Pb	11 58 38.3	0.0
MDNY	Mudanya-Bursa	1.11	33	*e*Pn	Pb	11 58 38.3	0.0
KRBG	Karabiga-Canak	1.13	328	*e*PN	Pn	11 58 39.4	+0.1
KRBG	Karabiga-Canak	1.13	328	*e*Pn	Pn	11 58 39.4	+0.1
ARMT	Armutlu	1.27	27	*e*PN	Pn	11 58 41.5	+0.2
ARMT	Armutlu	1.27	27	*e*Pn	Pn	11 58 41.5	+0.2
EZN	Ezine	1.42	286	*e*PN	Pn	11 58 43.3	0.0
EZN	Ezine	1.42	286	*e*Pn	Pn	11 58 43.3	0.0
SART	Tekirdag	1.43	331	*i* P	Pn	11 58 42.7	-0.8
SART				*e*S	Sg	11 59 01.1	-1.1
SART	Tekirdag	1.43	331	*i* P	Pn	11 58 42.7	-0.8
SART				*e*S	Sg	11 59 01.1	-1.1
YLV	Yalova	1.49	41	*e*PN	Pn	11 58 44.7	+0.3
YLV	Yalova	1.49	41	*e*Pn	Pn	11 58 44.7	+0.3
GELI	Tayfur-Gelibol	1.57	308	*e*PN	Pn	11 58 45.7	+0.3
GELI	Tayfur-Gelibol	1.57	308	*e*Pn	Pn	11 58 45.7	+0.3
ADVT	Abdulvahap	1.61	51	*e*PN	Pn	11 58 46.0	+0.1
ADVT	Abdulvahap	1.61	51	*e*Pn	Pn	11 58 46.0	+0.1
ALT	Altintas	1.61	103	*e*PN	Pn	11 58 46.0	-0.1
ALT	Altintas	1.61	103	*e*Pn	Pn	11 58 46.0	-0.1

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*ISCJB **11** 12:03:40.6±0.9, 35.°85N±0.°04×28.°29E±0.°05, h32km±6km, Error ellipse: s-maj=9.2km s-min=4.1km az=139.3*
*ISK **11** 12:03:41.1, 35.°98N×28.°38E, h10km, MD2.8*
*DDA **11** 12:03:41.8, 35.°99N×28.°29E, h51km, MD3.2*
*ATH **11** 12:03:42.8, 36.°01N×27.°92E, h26km, MD3.3/6*
*CSEM **11** 12:03:42.8, 36.°01N×27.°92E, h26km, MD3.3, After ATH*
ISC 11 12:03:40.6±1.3**, 35.°88N**±0.°05×**28.°31E**±0.°04**, h29**km±9km**, n48,** σ1.s**47**/60**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARG	Arkhangelos	0.37	336	*e*PB	Pb	12 03 49.5	+0.5
ARG				*e*SB	Sb	12 03 54.5	-0.2
ARG	Arkhangelos	0.37	336	*e*Pb	Pb	12 03 49.5	+0.5
ARG				*e*Sb	Sb	12 03 54.5	-0.2
DALY	Dalyan (Mu˜la	0.97	16	*e*PG	Pb	12 03 58.0	-1.0
DALY				*e*SG	Sn	12 04 10.6	-0.5
DALY	Dalyan (Mu˜la	0.97	16	*e*Pg	Pb	12 03 58.0	-1.0
DALY				*e*Sg	Sn	12 04 10.6	-0.5
FETY	Fethiye	0.98	39	*e*PG	Pb	12 03 57.9	-1.1
FETY	Fethiye	0.98	39	*e*Pg	Pb	12 03 57.9	-1.1
KARP	Karpathos	0.99	251	*e*PN	Pn	12 03 58.2	-0.4
KARP				*e*SN	Sb	12 04 08.9	-3.1
KARP	Karpathos	0.99	251	*e*Pn	Pn	12 03 58.2	-0.4
KARP				*e*Sn	Sb	12 04 08.9	-3.1
TURN	Turunc	1.02	13	*i* P	Pb	12 03 57.8	-1.9
TURN				*i* S	Sb	12 04 10.9	-1.8
TURN	Turunc	1.02	13	*i* P	Pb	12 03 57.8	-1.9
TURN				*i* S	Sb	12 04 10.9	-1.8
DAT	Datca	1.03	325	*e*PG	Pb	12 04 00.6	+0.6
DAT				*e*SG	Sn	12 04 14.3	+1.5
DAT	Datca	1.03	325	*e*Pg	Pb	12 04 00.6	+0.6
DAT				*e*Sg	Sn	12 04 14.3	+1.5
KSL	Kastellorizon	1.07	75	*e*PN	Pb	12 04 08.0	+7.5
KSL	Kastellorizon	1.07	75	*e*Pn	Pb	12 04 08.0	+7.5
NIS1	Nisyros Isl.	1.17	308	*e*PN	Pn	12 03 59.0	-2.0
NIS1				*e*SN	Sn	12 04 11.0	-4.9
NIS1	Nisyros Isl.	1.17	308	*e*Pn	Pn	12 03 59.0	-2.0
NIS1				*e*Sn	Sn	12 04 11.0	-4.9
YER	Yerkesik	1.25	359	*e*PN	Pb	12 04 04.3	+0.6
YER	Yerkesik	1.25	359	*e*Pn	Pb	12 04 04.3	+0.6
BODT	Bodrum	1.43	326	*e*PN	Pb	12 04 06.9	+0.3
BODT	Bodrum	1.43	326	*e*Pn	Pb	12 04 06.9	+0.3
MLSB	Milas	1.48	343	*e*PN	Pb	12 04 07.3	-0.2
MLSB	Milas	1.48	343	*e*Pn	Pb	12 04 07.3	-0.2
ELL	Elmali	1.55	56	*e*PN	Pn	12 04 08.0	+1.6
ELL	Elmali	1.55	56	*e*Pn	Pn	12 04 08.0	+1.6
GLHS	Glhisar (BURDU	1.59	37	*e*PN	Pn	12 04 08.4	+1.5
GLHS	Glhisar (BURDU	1.59	37	*e*Pn	Pn	12 04 08.4	+1.5
GOLH	Golhisar	1.69	36	*i* P	Pn	12 04 10.0	+1.8
GOLH				*i* S	Sn	12 04 30.1	+1.2
GOLH	Golhisar	1.69	36	*i* P	Pn	12 04 10.0	+1.8
GOLH				*i* S	Sn	12 04 30.1	+1.2
AYDN	Tasoluk	1.81	349	*i* P	Pb	12 04 13.6	+0.5
AYDN				*i* S	Sn	12 04 32.2	+0.4
AYDN	Tasoluk	1.81	349	*i* P	Pb	12 04 13.6	+0.5
AYDN				*i* S	Sn	12 04 32.3	+0.4
ZKR	Zakros	1.87	246	*e*PN	Pn	12 04 12.1	+1.4
ZKR				*e*SN	Sn	12 04 33.1	-0.2
ZKR	Zakros	1.87	246	*e*Pn	Pn	12 04 12.1	+1.4
ZKR				*e*Sn	Sn	12 04 33.1	-0.2
DNZL	Cakiroluk	1.90	18	*i* P	Pn	12 04 10.7	-0.5
DNZL	Cakiroluk	1.90	18	*i* P	Pn	12 04 10.7	-0.5
NPS	Neapolis	2.29	255	*e*PN	Pn	12 04 17.1	+0.7
NPS				*e*SN	Sn	12 04 42.3	-1.2
NPS	Neapolis	2.29	255	*e*Pn	Pn	12 04 17.1	+0.7
NPS				*e*Sn	Sn	12 04 42.3	-1.2
LAST	Lasithi	2.42	254	*e*PN	Pn	12 04 19.4	+1.1
LAST				*e*SN	Sn	12 04 45.9	-1.1
LAST	Lasithi	2.42	254	*e*Pn	Pn	12 04 19.4	+1.1
LAST				*e*Sn	Sn	12 04 45.9	-1.1
IDI	Anoyia	2.85	259	*e*PN	Pn	12 04 25.1	+0.9
IDI	Anoyia	2.85	259	*e*Pn	Pn	12 04 25.1	+0.9
SIVA	Sivas	2.98	254	*e*PN	Pn	12 04 27.4	+1.4
SIVA	Sivas	2.98	254	*e*Pn	Pn	12 04 27.4	+1.4
GAZI	Gazipasa	3.26	83	*i* P	Pn	12 04 29.0	-0.8
GAZI				*i* S	Sn	12 05 02.1	-5.6
GAZI	Gazipasa	3.26	83	*i* P	Pn	12 04 29.0	-0.8
GAZI				*i* S	Sn	12 05 02.1	-5.6
PRK	Paraskevi	3.73	335	*e*PN	Pn	12 04 38.1	+1.9
PRK	Paraskevi	3.73	335	*e*Pn	Pn	12 04 38.1	+1.9
KYTH	Kithira	4.29	277	*e*PN	Pn	12 04 44.9	+0.9
KYTH	Kithira	4.29	277	*e*Pn	Pn	12 04 44.9	+0.9

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*ISCJB **11** 12:08:15.5±0.3, 22.°39S±0.°07×177.°00W±0.°07, h179km, mb4.5/32, Error ellipse: s-maj=12.0km s-min=6.2km az=142.3*
*AUST **11** 12:08:16.5, 22.°36S×176.°48W, h200km*
*IDC **11** 12:08:16.3±2.0, 22.°17S×177.°18W, h169km±16km, mb4.0/11, mb1 4.2/12, mb1mx4.0/19, mbtmp4.0/12, Error ellipse: s-maj=22.2km s-min=13.7km az=134.0*
*NEIC **11** 12:08:17.4±1.5, 22.°41S×176.°93W, h186km±12km, mb4.8/21, Error ellipse: s-maj=14.4km s-min=8.7km az=131.0*
ISC 11 12:08:17.0±0.4**, 22.°31S**±0.°09×**176.°97W**±0.°08**, h179**km**, n117,** σ1.s**13**/125**, mb4.7**/32**, 11C-6D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSVF	Nonsavu	6.53	313	*e*Pn	Pn	12 09 55.4	+4.4
NIUE	Niue	7.33	65	P	Pn	12 09 60.0	-1.5
	baz=7.0,SNR=23						
NIUE				S	Sn	12 11 14.2	-10
	baz=7.0,SNR=13						
AFI	Afiamalu	9.70	31	P	Pn	12 10 31.1	-1.7
AFI				S	Sn	12 12 09.5	-12
AFI	Afiamalu	9.70	31	P	Pn	12 10 31.1	-1.7
	6.1nm,0.3s,baz=242,slow=23,SNR=6.2						
AFI				S	Sn	12 12 09.5	-12
	14nm,0.3s,baz=57,slow=23,SNR=5.0						
DZM	Mont Dzumac	15.37	268	*e*P	P	12 11 48.1	+2.7
DZM	Mont Dzumac	15.37	268	*e*Pn	P	12 11 45.5	+0.1
	65nm,1.0s						
DZM	Mont Dzumac	15.37	268	P	P	12 11 47.6	+2.1
	1.1nm,0.3s,baz=83,slow=16,SNR=21						
URZ	Urewera	16.69	196	*e*P	P	12 11 57.5	-2.3
URZ				S	S	12 14 50.3	-14
URZ				*e*Sn	Sn	12 14 52.9	-15
URZ	Urewera	16.69	196	P	P	12 11 56.6	-3.2
	2.8nm,0.3s,baz=87,slow=23,SNR=17						
URZ				S	S	12 14 50.3	-14
	4.1nm,0.3s,baz=41,slow=21,SNR=11						
RPZ	Rata Peaks	23.54	202	*e*P	P	12 13 09.0	-2.0
RPZ	Rata Peaks	23.54	202	P	P	12 13 08.3	-2.7
	6.4nm,0.3s,baz=120,slow=17,SNR=16						
ARMA	Armidale	29.20	247	P	P	12 14 03.1	+1.1
	baz=30,SNR=8.1						
EIDS	Eidsvold	29.35	258	*e*P	P	12 14 03.3	+0.1
	9.1nm,0.8s						
EIDS	Eidsvold	29.35	258	P	P	12 14 03.9	+0.7
	baz=30,SNR=4.2						
MGCD	Mangrove Creek	30.16	242	P	P	12 14 11.1	+0.8
	baz=30,SNR=7.5						
RMQ	Roma	31.43	255	P	P	12 14 23.0	+1.4
	baz=32,SNR=12						
YNG	Young	32.60	241	P	P	12 14 32.8	+1.1
	baz=33,SNR=5.7						
CTAO	Charters Tower	34.31	267	*e*P	P	12 14 47.2	+0.6
	38nm,0.6s						
CMSA	Cobar Meteorol	34.40	246	P	P	12 14 46.9	-0.4
	baz=35,SNR=28						
QLP	Quilpie	35.48	255	P	P	12 14 56.7	+0.2
	baz=36,SNR=19						
TOO	Toolangi	35.65	236	P	P	12 14 57.3	-0.6
	baz=36,SNR=5.7						
MTSU	Mount Surprise	36.50	269	P	P	12 15 06.0	+0.7
	baz=37,SNR=29						
PMG	Port Moresby	36.71	285	*e*P	P	12 15 07.5	+0.5
	49nm,1.0s						
STKA	Stephens Creek	37.91	246	P	P	12 15 16.4	-0.7
	11nm,0.5s,baz=91,slow=9.2,SNR=22						
STKA	Stephens Creek	37.91	246	P	P	12 15 16.8	-0.3
	baz=38,SNR=22						
COEN	Coen	38.69	275	*e*P	P	12 15 25.2	+1.5
	228nm,1.0s						
COEN	Coen	38.69	275	P	P	12 15 25.6	+1.9
	baz=39,SNR=5.5						
QIS	Mount Isa	40.36	264	P	P	12 15 37.6	0.0
	baz=41,SNR=6.5						
BBOO	Buckleboo	42.64	245	P	P	12 15 54.5	-1.4
	baz=43,SNR=4.9						
AS31	Alice Springs	45.07	258	*e*P	P	12 16 14.5	-0.9
ASAR	Alice Springs	45.07	258	P	P	12 16 14.6	-0.9
ASAR				PcP	PcP	12 17 53.0	-0.1
ASAR				ScP	ScP	12 21 29.0	+0.2
ASAR	Alice Springs	45.07	258	P	P	12 16 14.6	-0.9
	24nm,0.7s,baz=98,slow=7.4,SNR=220						
ASAR				PcP	PcP	12 17 53.0	-0.1
	3.0nm,0.7s,baz=101,slow=3.8,SNR=6.3						
ASAR				ScP	ScP	12 21 29.0	+0.2
	0.7nm,0.8s,baz=101,slow=4.9,SNR=3.7						
WRAB	Tennant Creek	45.32	264	*e*P	P	12 16 16.1	-1.3
	28nm,0.9s						
WRA	Warramunga Arr	45.33	264	P	P	12 16 16.1	-1.3
WRA	Warramunga Arr	45.33	264	P	P	12 16 16.1	-1.3
	18nm,0.7s,baz=96,slow=8.4,SNR=156						
KDU	Kakadu	48.97	272	P	P	12 16 44.7	-0.9
	baz=49,SNR=16						
FORT	Forrest	49.49	248	*e*P	P	12 16 47.9	-1.5
	63nm,0.7s						
FORT	Forrest	49.49	248	P	P	12 16 47.9	-1.5
	baz=50,SNR=32						
MTN	Manton Dam	50.16	272	P	P	12 16 53.9	-0.7
	baz=51,SNR=4.3						
KNRA	Kununurra	51.52	267	P	P	12 17 04.1	-0.6
	baz=52,SNR=26						
FITZ	Fitzroy Crossi	53.76	263	*e*P	P	12 17 21.4	+0.2
	16nm,0.7s						
FITZ	Fitzroy Crossi	53.76	263	P	P	12 17 20.7	-0.5
	baz=54,SNR=26						
SWI	Sorong	54.65	286	P	P	12 17 27.8	+0.1
	baz=55,SNR=5.4						
SBA	Scott Base	56.14	184	*e*P	P	12 17 40.0	+2.7
	70nm,2.5s						
VNDA	Vanda	56.20	185	P	P	12 17 39.3	+1.5
VNDA	Vanda	56.20	185	P	P	12 17 39.3	+1.5
	0.5nm,0.5s,baz=356,slow=6.7,SNR=3.6						
KLBR	Kellerberrin	58.18	246	P	P	12 17 51.2	-1.2
	baz=58,SNR=11						
MEEK	Meekatharra	58.25	252	P	P	12 17 51.9	-1.1
	baz=59,SNR=5.8						
MORW	Morawa	60.05	248	P	P	12 18 04.3	-1.0
	baz=60,SNR=8.3						
CASY	Casey	62.75	206	*e*P	P	12 18 22.7	0.0
	14nm,0.9s						
QSPA	South Pole Qui	67.77	180	*e*P	P	12 18 55.9	+0.7
	9.9nm,1.0s						
PETK	Petropavlovsk-	78.26	345	P	P	12 19 56.0	-0.6
PETK	Petropavlovsk-	78.26	345	P	P	12 19 56.0	-0.6
	0.3nm,0.5s,baz=134,slow=8.4,SNR=3.8						
MAW	Mawson	80.19	200	P	P	12 20 07.6	+0.6
MAW	Mawson	80.19	200	P	P	12 20 07.6	+0.6
	4.6nm,0.6s,baz=135,slow=9.4,SNR=16						
MAW	Mawson	80.19	200	P	P	12 20 07.7	+0.8
	baz=80,SNR=11						
NVAR	Mina Array Bea	81.68	43	P	P	12 20 17.4	+1.8
NVAR				pP	pP	12 21 04.8	+5.3
NVAR	Mina Array Bea	81.68	43	P	P	12 20 17.4	+1.8
	0.4nm,0.6s,baz=214,slow=7.2,SNR=4.0						
NVAR				pP	pP	12 21 04.8	+5.3
	0.5nm,0.6s,baz=229,slow=6.8,SNR=3.0						
ARUT	Antelope Range	84.45	45	*e*P	P	12 20 29.6	-0.1
	1.0nm,0.5s						
PMR	Palmer	86.55	13	*e*P	P	12 20 39.2	-0.1
	25nm,1.5s						
TXAR	Lajitas Array	87.22	57	P	P	12 20 45.9	+2.4
TXAR				pP	pP	12 21 33.1	+5.2
TXAR	Lajitas Array	87.22	57	P	P	12 20 45.9	+2.4
	0.5nm,0.8s,baz=219,slow=9.7,SNR=7.0						
TXAR				pP	pP	12 21 33.1	+5.2
	0.9nm,0.9s,baz=216,slow=6.2,SNR=5.7						
TRF	Thorofare Moun	88.02	12	*e*P	P	12 20 46.1	-0.4
	20nm,0.7s						
MCK	McKinley	88.53	12	*e*P	P	12 20 49.5	+0.8
	15nm,1.0s						
PAX	Paxson	88.57	14	*e*P	P	12 20 50.0	+1.0
	3.0nm,0.8s						
MENT	Mentasta	88.94	15	*e*P	P	12 20 50.3	-0.3
DOT	Dot Lake	89.47	14	*e*P	P	12 20 54.4	+1.2
	5.4nm,0.9s						
COLA	College	89.77	12	*e*P	P	12 20 54.2	-0.2
	13nm,0.7s						
ILAR	Eielson Array	89.86	12	P	P	12 20 55.0	+0.2
ILAR	Eielson Array	89.86	12	P	P	12 20 55.0	+0.2
	3.6nm,0.8s,baz=226,slow=6.0,SNR=58						
BOZ	Bozeman (W)	89.88	40	*e*P	P	12 20 54.5	-1.1
	2.4nm,1.1s						
EGAK	Eagle	91.10	15	*e*P	P	12 21 02.0	+1.4
	10nm,1.1s						
COLD	Coldfoot	91.48	10	*e*P	P	12 21 03.9	+1.5
	4.7nm,1.0s						
CMAR	Chiang Mai Arr	91.62	289	P	P	12 21 04.8	+0.6
CMAR	Chiang Mai Arr	91.62	289	P	P	12 21 04.8	+0.6
	3.1nm,1.0s,baz=138,slow=3.4,SNR=12						
YKA	Yellowknife Ar	97.75	25	P	P	12 21 31.0	-0.1
YKA	Yellowknife Ar	97.75	25	P	P	12 21 31.0	-0.1
	0.3nm,0.8s,baz=243,slow=4.4,SNR=6.6						
MKAR	Makanchi Array	113.13	313	*e*Pdif	Pdif	12 22 39.0	-1.0
MKAR				PKiKP	PKiKP	12 26 31.9	-1.1
MKAR	Makanchi Array	113.13	313	PKiKP	PKiKP	12 26 31.9	-1.1
	0.8nm,0.7s,baz=58,slow=1.3,SNR=8.8						
BVAR	Borovoye Array	121.08	319	PKP	PKPdf	12 26 47.5	-0.5
BVAR	Borovoye Array	121.08	319	PKP	PKPdf	12 26 47.5	-0.5
	2.6nm,0.5s,baz=90,slow=1.9,SNR=12						
ABKAR	Akbulak array	128.05	316	*e*PKPdf	PKPdf	12 27 00.8	-0.7
AKTO	Aktyubinsk	129.05	318	PKP	PKPdf	12 27 02.6	-0.7
AKTO	Aktyubinsk	129.05	318	PKP	PKPdf	12 27 02.6	-0.7
	1.9nm,0.5s,baz=95,slow=4.8,SNR=8.0						
ARCES	ARCESS Array B	130.87	350	PKP	PKPdf	12 27 05.9	-0.3
ARCES				SKPbc	SKPab	12 30 13.9	-0.1
ARCES	ARCESS Array B	130.87	350	PKP	PKPdf	12 27 05.9	-0.3
	1.4nm,0.6s,baz=82,slow=1.7,SNR=10						
ARCES				SKPbc	SKPab	12 30 13.9	-0.1
	3.3nm,0.8s,baz=12,slow=6.2,SNR=7.0						
SUW	Suwalki	144.86	339	*e*PKPdf	PKPbc	12 27 31.2	-0.6
AKASG	Malin Array Be	145.06	331	PKP	PKPbc	12 27 31.7	-0.8
AKASG	Malin Array Be	145.06	331	PKP	PKPbc	12 27 31.7	-0.8
	3.0nm,0.5s,baz=44,slow=4.1,SNR=12						
KIEV	Kiev	145.07	331	*e*PKPdf	PKPbc	12 27 31.0	-1.5
KWP	Kalwaria Pacla	148.62	335	⇑*i*P	PKPbc	12 27 43.2	+0.5
BRTR	Keskin Array B	148.75	311	PKPbc	PKPbc	12 27 43.1	-0.4
BRTR	Keskin Array B	148.75	311	PKPbc	PKPbc	12 27 43.1	-0.4
	3.1nm,0.8s,baz=123,slow=4.6,SNR=13						
BURAR	Bucovina Array	149.10	330	⇑*i*P	PKPbc	12 27 45.2	+1.1
TESR	Tescani	149.20	327	⇓*i*P	PKPbc	12 27 44.2	0.0
CFR	Carcaliu	149.31	324	⇑*i*P	PKPbc	12 27 44.6	+0.1
CRVS	Cervenica-Dubn	149.69	336	*e*PKP	PKPbc	12 27 43.8	-1.5
HARR	Harsova	149.73	323	⇓*i*P	PKPbc	12 27 46.2	+0.7
TRPA	Tarpa	149.88	334	⇓*i*P	PKPbc	12 27 46.0	+0.2
CLL	Collm	150.03	347	*i* PKPbc	PKPbc	12 27 46.2	+0.2
	comp=Z,19nm,1.1s						
CLL				*e*PKPab	PKPab	12 27 54.0	+1.6
	comp=Z,5.0nm,0.6s						
UPC	Upice	150.07	343	⇑*e*PKP	PKPbc	12 27 46.8	+0.6
DPC	Dobruska-Polom	150.13	343	⇑*e*PKP	PKPbc	12 27 47.2	+0.8
DOPR	Dopca	150.21	328	⇑*i*P	PKPbc	12 27 47.8	+1.1
MLR	Muntele Rosu	150.26	326	⇓*i*P	PKPbc	12 27 46.4	-0.6
MORC	Moravsky Berou	150.29	341	⇓*i*P	PKPbc	12 27 47.2	+0.4
KECS	Kecovo	150.41	336	*e*PKP	PKPbc	12 27 47.4	+0.4
PVCC	Panska Ves	150.42	345	⇑*e*PKP	PKPbc	12 27 47.8	+0.8
VOIR		150.75	327	⇑*i*P	PKPbc	12 27 48.7	+0.6
DRGR		150.85	332	⇑*i*P	PKPbc	12 27 48.4	+0.1
PRU	Pruhonice	150.93	345	⇑*e*PKP	PKPbc	12 27 47.7	-0.5
VYHS	Vyhne	150.99	338	*e*PKP	PKPbc	12 27 48.7	+0.3
ARR	Arges	151.00	328	⇓*i*P	PKPbc	12 27 50.1	+1.4
KHC	Kasperske Hory	151.96	345	⇑*e*PKP	PKPbc	12 27 50.5	-0.2
GERES	GERESS Array B	152.19	345	PKPbc	PKPbc	12 27 50.4	-0.9
GERES	GERESS Array B	152.19	345	PKPbc	PKPbc	12 27 50.4	-0.9
	comp=Z,3.1nm,0.8s,baz=94,slow=4.0,SNR=13						
TORD	Torodi Ar. Bea	170.80	172	PKP	PKPdf	12 28 02.6	-1.8
TORD				PKPab	PKPab	12 29 23.9	+0.6
TORD	Torodi Ar. Bea	170.80	172	PKP	PKPdf	12 28 02.6	-1.8
	comp=Z,1.4nm,0.8s,baz=298,slow=1.2,SNR=7.2						
TORD				PKPab	PKPab	12 29 23.9	+0.6
	comp=Z,1.1nm,0.7s,baz=183,slow=4.8,SNR=4.5						

IDC 11 12:09:07.8±1.6**, 16.°90S**×**68.°93W, h204**km±7km**, mb3.1**/1**, mb1 3.0**/2**, mb1mx2.8**/20**, mbtmp3.0**/2**, Error ellipse: s-maj=57.4km s-min=14.5km az=103.0, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	0.98	52	P	Pn	12 09 38.6	0.0
	23nm,0.3s,baz=283,slow=6.7,SNR=480						
LPAZ				S	S	12 10 02.8	+0.4
	4.3nm,0.3s,baz=25,slow=12,SNR=18						
LVC	Limon Verde	5.68	180	P	Pn	12 10 32.3	+0.9
	0.7nm,0.3s,baz=339,slow=7.5,SNR=14						
LVC				S	S	12 11 37.0	-0.2
	1.8nm,0.3s,baz=299,slow=22,SNR=14						
TORD	Torodi Ar. Bea	75.87	71	P	P	12 20 32.4	+0.1
	0.2nm,0.3s,baz=256,slow=5.1,SNR=7.3						
WRA	Warramunga Arr	136.84	213	PKP	PKPdf	12 28 07.3	+0.4
	0.3nm,1.0s,baz=137,slow=1.5,SNR=8.6						
SONM	Songino Array	148.91	6	PKPbc	PKPbc	12 28 30.7	-0.9
	0.5nm,0.6s,baz=342,slow=3.3,SNR=3.2						

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*IDC **11** 12:10:34.7±1.0, 43.°51N×83.°23E, h0km, mb3.6/4, mb1 3.7/9, mb1mx3.5/32, mbtmp3.6/9, ML3.6/5, MS2.9/1, Ms1 2.9/1, ms1mx2.3/34, Error ellipse: s-maj=27.9km s-min=10.9km az=68.0*
*NNC **11** 12:10:38.0±5.5, 43.°84N×83.°82E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=44.9km s-min=30.6km az=133.0*
*BJI **11** 12:10:39.0, 43.°60N×83.°29E, h16km, ML3.4/8*
ISC 11 12:10:36.1±1.1**, 43.°65N**±0.°09×**83.°32E**±0.°07**, h10**km**, n15,** σ1.s**43**/20**, mb3.6**/4**, 5C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	3.18	85	Pn	Pb	12 11 31.4	-1.3
WMQ				Sn	Sb	12 12 11.6	+0.1
WMQ				smax	smax		
	comp=N,160nm,0.4s						
WMQ				smax	smax		
	comp=E,110nm,0.7s						
MK31	Makanchi Array	3.22	347	Pn	Pb	12 11 31.0	-2.4
	comp=E,0.5nm,0.2s,baz=154,slow=14,SNR=300						
MK31				Pg	Pg	12 11 38.0	+0.2
	comp=E,7.4nm,0.3s,baz=158,slow=16,SNR=24						
MK31				⇑Lg	Lg	12 12 19.9	
	comp=E,29nm,0.3s,baz=156,slow=27,SNR=11						
MKAR	Makanchi Array	3.22	347	Pn	Pb	12 11 31.2	-2.2
	comp=E,1.2nm,0.3s,baz=172,slow=14,SNR=56						
MKAR				Pg	Pg	12 11 36.8	-1.0
	comp=E,5.6nm,0.3s,baz=160,slow=17,SNR=40						
MKAR				Lg	Lg	12 12 20.6	
	comp=E,64nm,0.3s,baz=166,slow=31,SNR=20						
TKM2	Tokmak 2	5.68	265	⇑Pn	Pn	12 12 07.6	+6.8
	comp=E,6.7nm,0.8s						
TKM2				⇑Lg	Lg	12 13 47.4	
	comp=E,14nm,0.6s						
AAK	Ala-Archa	6.53	264	Lg	Lg	12 13 58.2	
	comp=E,0.5nm,0.3s,baz=299,slow=18,SNR=2.2						
KUR14	Kurchatov Arra	7.67	337	⇑Pn	Pn	12 12 29.1	+1.2
	comp=E,0.6nm,0.5s,baz=153,slow=12						
KUR14				⇓Sn	Sn	12 13 56.0	+1.2
	comp=E,2.1nm,0.6s,baz=159,slow=21						
KUR14				⇓Lg	Lg	12 14 41.2	
	comp=E,7.5nm,0.7s						
KURBB	Kurchatov Arra	7.70	337	Pn	Pn	12 12 30.6	+2.5
	comp=E,0.2nm,0.3s,baz=164,slow=13,SNR=8.3						
KURBB				Sn	Sn	12 13 56.7	+1.4
	comp=E,0.6nm,0.3s,baz=159,slow=21,SNR=8.5						
KURBB				Lg	Lg	12 14 40.6	
	comp=E,0.6nm,0.3s,baz=153,slow=32,SNR=7.6						
KURK	Kurchatov	7.75	337	⇓Pn	Pn	12 12 28.7	-0.2
	comp=E,2.1nm,0.7s						
KURK				⇓Sn	Sn	12 13 57.7	+0.9
	comp=E,5.6nm,0.6s						
KURK				⇑Lg	Lg	12 14 44.2	
	comp=E,27nm,0.6s						
ZALV	Zalesovo Beam	10.35	5	Pn	Pn	12 13 06.8	+2.3
	comp=E,1.2nm,0.3s,baz=185,slow=16,SNR=4.8						
ZALV				Sn	Sn	12 15 00.4	-0.1
	comp=E,1.9nm,0.3s,baz=172,slow=26,SNR=6.9						
ZALV				Lg	Lg	12 16 06.8	
	comp=E,0.5nm,0.3s,baz=183,slow=28,SNR=6.1						
BVAR	Borovoye Array	12.70	322	Pn	Pn	12 13 38.2	+1.5
	comp=E,0.3nm,0.3s,baz=95,slow=9.0,SNR=2.9						
BVAR				Lg	Lg	12 17 19.4	
	comp=E,0.3nm,0.3s,baz=125,slow=25,SNR=4.2						
BVAR				LR	LR	12 18 35.7	
	comp=E,48nm,19.2s,baz=252,slow=38						
SONM	Songino Array	16.62	67	Pn	P	12 14 31.4	-0.4
	comp=E,0.4nm,0.3s,baz=262,slow=12,SNR=5.6						
YKA	Yellowknife Ar	73.23	9	P	P	12 22 07.7	+0.8
	comp=E,0.3nm,0.6s,baz=339,slow=5.9,SNR=4.1						
TORD	Torodi Ar. Bea	75.02	274	P	P	12 22 17.4	-0.6
	comp=E,0.4nm,0.5s,baz=38,slow=5.1,SNR=10						
WRA	Warramunga Arr	78.68	132	P	P	12 22 38.4	-0.1
	comp=E,0.5nm,0.5s,baz=333,slow=5.5,SNR=6.4						
ASAR	Alice Springs	81.49	134	P	P	12 22 53.5	-0.1
	comp=E,0.3nm,0.7s,baz=325,slow=3.4,SNR=4.9						

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*GUC **11** 12:30:22.5±0.6, 42.°85S×72.°60W, h2km±20km, ML3.4*
*NEIC **11** 12:30:22.5, 42.°85S×72.°60W, h2km, mb4.2/4, After GUC.*
*ISCJB **11** 12:30:23.5±0.6, 42.°83S±0.°04×72.°52W±0.°09, h10km, mb3.9/10, Error ellipse: s-maj=10.2km s-min=4.8km az=161.4*
*IDC **11** 12:30:23.5±0.7, 42.°86S×72.°43W, h0km, mb3.9/11, mb1 4.2/12, mb1mx4.1/22, mbtmp3.9/12, ML3.8/1, Error ellipse: s-maj=28.1km s-min=12.8km az=111.0*
ISC 11 12:30:24.7±0.6**, 42.°81S**±0.°04×**72.°50W**±0.°07**, h10**km**, n38,** σ0.s**95**/42**, mb4.0**/10**, 1C-2D, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUNY	Huinay	0.43	8	*e*P	Pg	12 30 31.9	-1.2
HUNY				*i* S	Sg	12 30 39.2	+0.4
HUNY	Huinay	0.43	8	*e*P	Pg	12 30 31.9	-1.2
HUNY				*i* S	Sg	12 30 39.2	+0.4
HUNY				AML	AML	12 30 49.0	
	comp=E,2µm,0.5s						
FUTA	Futaleufœ	0.61	129	⇓*i*P	Pg	12 30 35.3	-1.2
FUTA				*i* S	Sg	12 30 44.4	-0.1
FUTA	Futaleufœ	0.61	129	⇓*i*P	Pg	12 30 35.3	-1.2
FUTA				*i* S	Sg	12 30 44.4	-0.1
FUTA				AML	AML	12 30 46.4	
	comp=N,1µm,0.5s						
CNTO	Contao	1.02	351	⇑*i*P	Pg	12 30 42.4	-1.8
CNTO				*i* S	Sb	12 30 57.2	-0.5
CNTO				AML	AML	12 31 01.3	
	comp=E,3µm,0.6s						
PLCA	Paso Flores	2.53	36	*e*Pn	Pn	12 31 07.0	+1.0
PLCA				Pg	Pb	12 31 09.6	-0.6
PLCA				*e*Sn	Sb	12 31 43.4	+1.9
PLCA				Lg	Lg	12 31 44.5	
PLCA	Paso Flores	2.53	36	Pn	Pn	12 31 06.5	+0.6
	comp=E,4.8nm,0.3s,baz=190,slow=14,SNR=86						
PLCA				Pg	Pb	12 31 09.6	-0.6
	comp=E,5.2nm,0.3s,baz=218,slow=17,SNR=82						
PLCA				Lg	Lg	12 31 44.5	
	comp=E,37nm,0.3s,baz=123,slow=8.6,SNR=22						
COYC	Coyhaique	2.78	174	AML	AML	12 31 56.1	

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=E,109nm,1.1s						
LVC	Limon Verde	20.36	10	P	Pn	12 35 02.7	-0.9
LVC	Limon Verde	20.36	10	P	Pn	12 35 02.7	-0.9
	comp=E,4.5nm,0.8s,baz=192,slow=8.2,SNR=4.5						
CPUP	Villa Florida	20.59	42	P	Pn	12 35 05.4	-0.6
CPUP	Villa Florida	20.59	42	P	Pn	12 35 05.4	-0.6
	comp=E,0.8nm,0.4s,baz=201,slow=5.2,SNR=5.4						
LPAZ	La Paz	26.69	9	eP	P	12 36 05.0	+0.3
	comp=E,1.1nm,0.7s						
LPAZ	La Paz	26.69	9	P	P	12 36 06.7	+2.0
	comp=E,0.9nm,0.7s,baz=138,slow=4.0,SNR=5.0						
SIV	San Ignacio	28.46	24	P	P	12 36 19.2	-0.7
SIV	San Ignacio	28.46	24	P	P	12 36 19.2	-0.7
	comp=E,0.6nm,0.4s,baz=257,slow=17,SNR=4.4						
SNAA	Sanae	43.68	155	P	P	12 38 29.2	0.0
SNAA	Sanae	43.68	155	P	P	12 38 29.2	0.0
	comp=E,3.5nm,1.3s,baz=249,slow=5.0,SNR=4.4						
QSPA	South Pole Qui	47.44	180	eP	P	12 38 58.6	-0.6
	comp=E,10nm,1.1s						
QSPA	South Pole Qui	47.44	180	P	P	12 38 58.8	-0.4
	comp=E,5.3nm,1.0s,baz=148,slow=6.4,SNR=8.3						
VNDA	Vanda	55.42	192	P	P	12 39 59.6	+1.1
VNDA	Vanda	55.42	192	P	P	12 39 59.6	+1.1
	comp=E,1.8nm,1.1s,baz=134,slow=6.4,SNR=4.6						
TXAR	Lajitas Array	77.30	332	P	P	12 42 19.7	+0.4
TXAR	Lajitas Array	77.30	332	P	P	12 42 19.7	+0.4
	comp=E,1.1nm,0.9s,baz=143,slow=11,SNR=6.9						
WMOK	Wichita Mounta	80.83	338	eP	P	12 42 38.4	0.0
	comp=E,2.3nm,1.0s						
ANMO	Albuquerque	83.38	332	eP	P	12 42 53.1	+1.1
	comp=E,2.0nm,1.0s						
ANMO	Albuquerque	83.38	332	P	P	12 42 53.0	+1.0
	comp=E,0.8nm,0.8s,baz=151,slow=7.4,SNR=5.9						
NVAR	Mina Array Bea	90.93	326	P	P	12 43 30.2	+1.6
NVAR	Mina Array Bea	90.93	326	P	P	12 43 30.2	+1.6
	comp=E,0.1nm,0.3s,baz=131,slow=6.1,SNR=3.7						
PDAR	Pinedale Array	91.47	334	P	P	12 43 31.1	+0.1
PDAR	Pinedale Array	91.47	334	P	P	12 43 31.1	+0.1
	comp=E,0.7nm,0.8s,baz=141,slow=5.0,SNR=4.8						
ILAR	Eielson Array	121.79	331	PKP	PKPdf	12 49 17.9	+0.1
ILAR	Eielson Array	121.79	331	PKP	PKPdf	12 49 17.9	+0.1
	comp=E,0.4nm,0.8s,baz=172,slow=1.7,SNR=5.3						
AKTO	Aktyubinsk	145.72	60	PKPbc	PKPbc	12 50 02.2	-0.8
AKTO	Aktyubinsk	145.72	60	PKPbc	PKPbc	12 50 02.2	-0.8
	comp=E,2.8nm,0.9s,baz=338,slow=0.7,SNR=8.6						
ABKAR	Akbulak array	146.81	62	ePKPdf	PKPdf	12 50 03.9	-0.6
ABKAR				ePKPbc	PKPbc	12 50 05.5	-0.8
MKAR	Makanchi Array	161.70	69	PKPab	PKPab	12 51 09.9	-0.8
MKAR	Makanchi Array	161.70	69	PKPab	PKPab	12 51 09.9	-0.8
	comp=E,0.4nm,0.8s,baz=271,slow=5.5,SNR=5.4						

*THR **11** 12:38:20.7±1.3, 29°.82N×57°.69E, h14km±10km, ML3.5*
*CSEM **11** 12:38:20.7±0.3, 29°.88N×57°.73E, h2km, ML3.7, Error ellipse: s-maj=9.6km s-min=6.4km az=1.0*
*TEH **11** 12:38:22.5, 30°.12N×57°.68E, h21km, ML3.7*
*IDC **11** 12:38:25.0±6.5, 30°.53N×57°.69E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.2/28, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=125.2km s-min=36.7km az=176.0*
ISC 11 12:38:20.5±2.2**, 29°.89N**±0°.06×**57°.70E**±0°.03**, h1**km±17km**, n24, σ1s17**/33**, mb3.3**/3**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRBR	Kerman	0.82	276	ePg	Pb	12 38 36.2	-1.6
KRBR	Kerman	0.82	276	ePg	Pb	12 38 36.2	-1.6
IBAF	Bafgh	2.50	313	ePn	Pn	12 39 03.0	+0.5
IBAF				eSg	Sg	12 39 40.5	-0.3
IBAF				e		12 39 51.0	
	comp=Z,4μm,0.3s						
IBAF	Bafgh	2.50	313	ePn	Pn	12 39 03.0	+0.5
ZHSF	Zahedan	2.69	95	ePn	Pn	12 39 06.4	+1.4
ZHSF				eSg	Sb	12 39 44.4	+1.4
ZHSF	Zahedan	2.69	95	ePn	Pn	12 39 06.4	+1.4
ZHSF				eSg	Sb	12 39 44.4	+1.4
BNDS	Bandar-Abbas	2.83	209	ePn	Pn	12 39 06.6	-0.4
BNDS				AML	AML	12 39 56.0	
	comp=E,166nm,0.5s						
BNDS				AML	AML	12 40 03.9	
	comp=N,137nm,0.6s						
BNDS	Bandar-Abbas	2.83	209	ePn	Pn	12 39 06.6	-0.4
IMEH	Mehriz	3.05	300	ePn	Pn	12 39 11.3	+1.1
IMEH				eSg	Sg	12 39 59.3	+0.7
IMEH				e		12 40 03.0	
	comp=Z,2μm,0.3s						
IMEH	Mehriz	3.05	300	ePn	Pn	12 39 11.3	+1.1
IMEH				eSg	Sg	12 39 59.3	+0.7
ITEG	Tejag	3.12	16	ePn	Pn	12 39 10.4	-0.7
ITEG				e		12 40 07.0	
	comp=Z,2μm,0.2s						
ITEG	Tejag	3.12	16	ePn	Pn	12 39 10.4	-0.7
IDAH	Dahanechah	3.39	33	ePn	Pn	12 39 14.6	-0.2
IDAH				eSg	Sg	12 40 09.3	-0.1
IDAH				e		12 40 23.0	
	comp=Z,1μm,0.2s						
IDAH	Dahanechah	3.39	33	ePn	Pn	12 39 14.6	-0.2
IDAH				eSg	Sg	12 40 09.3	-0.1
ICHK	Chekchek	3.67	310	ePn	Pn	12 39 19.4	+0.7
ICHK				e		12 40 22.2	
	comp=Z,2μm,0.3s						
ICHK	Chekchek	3.67	310	ePn	Pn	12 39 19.4	+0.7
TABS	Tabas	3.78	353	ePn	Pn	12 39 21.2	+1.2
TABS				Sn	Sb	12 40 05.8	-8.6
TABS				AML	AML	12 40 27.9	
	comp=N,135nm,0.7s						
TABS				AML	AML	12 40 31.2	
	comp=E,74nm,0.7s						
TABS	Tabas	3.78	353	ePn	Pn	12 39 21.2	+1.2
ISAD	Sadrabad	4.00	301	ePn	Pn	12 39 24.4	+1.2
ISAD				eSg	Sg	12 40 30.5	+1.5
ISAD				e		12 40 50.6	
	comp=Z,952nm,0.3s						
ISAD	Sadrabad	4.00	301	ePn	Pn	12 39 24.4	+1.2
ISAD				eSg	Sg	12 40 30.5	+1.5
AKTO	Aktyubinsk	20.52	1	P	P	12 42 57.2	-2.8
	comp=Z,0.2nm,0.3s,baz=190,slow=11,SNR=3.3						
BRTR	Keskin Array B	22.00	303	P	P	12 43 17.1	+0.8
	comp=Z,0.9nm,0.8s,baz=113,slow=8.5,SNR=5.0						
MKAR	Makanchi Array	25.46	42	P	P	12 43 49.3	-0.7
	comp=Z,0.3nm,0.6s,baz=236,slow=8.9,SNR=4.1						
ZALV	Zalesovo Beam	31.03	32	P	P	12 44 40.7	+1.0
	comp=Z,0.4nm,0.5s,baz=218,slow=9.1,SNR=2.9						

*CSEM **11** 12:47:24.9, 38°.41N×22°.01E, h11km, MD2.9, After ATH*
ATH 11 12:47:24.9, 38°.41N×22°.01E, h11km, MD2.9/5**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.07	132	ePG	Pg	12 47 27.2	0.0
TRIZ				eSG	Sg	12 47 28.8	-0.1
TRIZ	Trizonia	0.07	132	ePg	Pg	12 47 27.2	0.0
TRIZ				eSg	Sg	12 47 28.8	-0.1
EFP	Efpalio	0.08	282	ePG	Pg	12 47 27.5	+0.1
EFP				eSG	Sg	12 47 29.4	+0.2
EFP	Efpalio	0.08	282	ePg	Pg	12 47 27.5	+0.1
EFP				eSg	Sg	12 47 29.4	+0.2
KALE	Kalithea	0.10	100	ePG	Pg	12 47 27.8	0.0
KALE				eSG	Sg	12 47 29.8	0.0
KALE	Kalithea	0.10	100	ePg	Pg	12 47 27.8	0.0
KALE				eSg	Sg	12 47 29.8	0.0
LAKA	Lakka	0.17	188	ePG	Pg	12 47 28.7	-0.1
LAKA				eSG	Sg	12 47 31.6	+0.2
LAKA	Lakka	0.17	188	ePg	Pg	12 47 28.7	-0.1
LAKA				eSg	Sg	12 47 31.6	+0.2
KLV	Kalavryta, Ach	0.38	163	ePB	Pg	12 47 32.2	-0.4
KLV				eSB	Sg	12 47 37.9	+0.1
KLV	Kalavryta, Ach	0.38	163	ePb	Pg	12 47 32.2	-0.4
KLV				eSb	Sg	12 47 37.9	+0.1

*ISCJB **11** 12:55:54.2±0.4, 23°.51N±0°.02×121°.77E±0°.02, h25km±3km, Error ellipse: s-maj=3.9km s-min=2.7km az=137.7*
*TAP **11** 12:55:54.4, 23°.53N×121°.72E, h30km, ML3.2, D*
*JMA **11** 12:55:55.9±0.2, 23°.58N×121°.78E, h55km, M2.6*
ISC 11 12:55:54.5±1.0**, 23°.52N**±0°.02×**121°.73E**±0°.03**, h29**km±9km**, n42, σ0s69**/78**, 7C-4D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEGC	Jichi Village	0.26	318	P	Pn	12 56 02.0	-0.3
	baz=317						
TEGC				S	Sn	12 56 07.1	-0.2
	baz=317						
EHY	Hungye	0.37	268	⇑iP	Pb	12 56 03.3	+0.3
	baz=265						
EHY				iS	Sb	12 56 09.1	+0.4
	baz=265						
ESL	Shilin	0.40	317	⇑iP	Pb	12 56 03.2	-0.1
	baz=317						
ESL				S	Sb	12 56 09.1	-0.3
	baz=317						
TWF1	Yuli	0.43	248	⇑iP	Pb	12 56 04.3	+0.5
	baz=244						
TWF1				iS	Sn	12 56 11.0	-0.6
	baz=244						
HWA	Hwalien	0.47	346	P	Pb	12 56 04.7	+0.2
	baz=347						
HWA				S	Sn	12 56 12.3	-0.3
	baz=347						
CHKT	Chengkung	0.53	219	⇓iP	Pb	12 56 05.0	-0.4
	baz=216						
CHKT				iS	Sb	12 56 12.4	-0.5
	baz=216						
TWD	Chiawan	0.57	348	⇓iP	Pb	12 56 05.8	-0.3
	baz=349						
TWD				iS	Sb	12 56 13.7	-0.3
	baz=349						
YUS	Yu-Shan	0.71	268	⇑iP	Pb	12 56 08.8	+0.1
	baz=266						
YUS				S	Sb	12 56 18.0	-0.5
	baz=266						
ELDTW	Lidau	0.73	244	⇓iP	Pb	12 56 08.0	-0.8
	baz=241						
WHF	Hehuan Shan	0.76	326	⇑iP	Pb	12 56 08.6	-0.8
	baz=326						
WHF				S	Sb	12 56 18.4	-1.1
	baz=326						
SMLT	Sun Moon Lake	0.84	296	⇑iP	Pb	12 56 10.3	-0.4
	baz=295						
SMLT				S	Sb	12 56 21.8	+0.1
	baz=295						
ALS	Alishan	0.85	270	P	Pb	12 56 11.0	+0.1
	baz=268						
ALS				S	Sb	12 56 21.6	-0.5
	baz=268						
TYC	Yuchr	0.89	296	eP	Pn	12 56 10.7	-0.3
	baz=295						
TYC				eS	Sb	12 56 22.9	+0.1
	baz=295						
TWT	Tachien	0.89	325	eP	Pn	12 56 11.4	+0.3
	baz=324						
TWT				eS	Sb	12 56 21.8	-1.3
	baz=324						
ENA	Nanau	0.91	1	⇓iP	Pn	12 56 10.8	-0.4
	baz=1.0						
ENA				S	Sb	12 56 22.6	-0.8
	baz=1.0						
TWG	Pinlang	0.92	221	eP	Pn	12 56 10.3	-1.2
	baz=219						
TWG				eS	Sb	12 56 21.8	-2.0
	baz=219						
CHN5	Tsauling	0.97	275	⇑iP	Pb	12 56 13.0	+0.2
	baz=273						
CHN5				S	Sn	12 56 26.2	+1.3
	baz=273						
NNS	Nan Shan	0.97	341	P	Pn	12 56 12.2	-0.1
	baz=341						
NNS				S	Sb	12 56 24.0	-1.4
	baz=341						
WNT	Mingjian	1.02	291	eP	Pb	12 56 14.0	+0.4
	baz=290						
WNT				eS	Sb	12 56 27.5	+0.8
	baz=290						
CHN4	Tsaushan	1.06	261	P	Pb	12 56 14.6	+0.4
	baz=260						
CHN4				S	Sb	12 56 28.5	+0.9
	baz=260						
WTP	Ta-pu	1.06	255	P	Pb	12 56 14.1	-0.2
	baz=254						
WTP				S	Sb	12 56 28.4	+0.6
	baz=254						
WGK	Gukeng	1.08	279	eP	Pb	12 56 14.4	-0.2
	baz=278						
WGK				eS	Sb	12 56 29.0	+0.5
	baz=278						
TWC	Suao	1.09	6	P	Pn	12 56 14.1	+0.3
	baz=6.0						
TWC				eS	Sn	12 56 27.7	-0.2
	baz=6.0						
ENTT	Nioudou	1.13	352	eP	Pn	12 56 14.8	+0.5
	baz=353						
ENTT				eS	Sb	12 56 29.3	-0.4
	baz=353						
TCU	Taichung	1.15	303	eP	Pb	12 56 16.1	+0.4
	baz=302						
TCU				eS	Sb	12 56 31.6	+1.3
	baz=302						
CHN1	Nanshi	1.15	254	P	Pb	12 56 15.9	+0.1
	baz=252						
CHN1				eS	Sb	12 56 31.9	+1.5
	baz=252						
ECL	Taimali	1.16	218	eP	Pn	12 56 13.7	-1.0
	baz=216						
TWK	Hsinying	1.17	258	eP	Pb	12 56 16.0	-0.1
	baz=256						
TWK				eS	Sb	12 56 31.0	+0.1
	baz=256						
TWE	Neicheng	1.20	357	eP	Pn	12 56 15.5	+0.3
	baz=358						
TWE				eS	Sn	12 56 30.6	+0.1
	baz=358						
NSK	Sanguang	1.20	344	eP	Pn	12 56 15.8	+0.4
	baz=344						
NSK				eS	Sn	12 56 30.1	-0.7
	baz=344						
TWQ1	Liyutan	1.20	314	eP	Pb	12 56 17.0	+0.3
	baz=313						
NSY	Sanyi	1.26	315	eP	Pb	12 56 17.4	-0.3
	baz=315						
NSTT	Nanjuang	1.29	329	eP	Pb	12 56 18.2	0.0
	baz=329						
NSTT				eS	Sn	12 56 33.5	+0.6
	baz=329						
YOJ	Yonaguni jima	1.50	51	P	Pn	12 56 20.0	+0.6
YOJ				eS	Sn	12 56 38.0	0.0
SCZT	Fangliau	1.53	222	eP	Pb	12 56 22.3	+0.1
	baz=221						
NWF	Wu-fen Shan	1.55	2	eP	Pb	12 56 21.9	-0.6
	baz=2.0						
NWF				eS	Sb	12 56 40.8	-1.0
	baz=2.0						
HATJ	Hateruma jima	1.98	74	S	Sn	12 56 49.5	-0.2
PNG	Penghu	2.00	272	eP	Pn	12 56 27.2	+1.0
	baz=270						
PNG				eS	Sn	12 56 49.8	-0.5
	baz=270						
IRIF	Iriomote-Funau	2.00	66	P	Pn	12 56 27.3	+1.0
IRIF				S	Sn	12 56 50.9	+0.5
JKRS	Kuro-shima	2.21	71	P	Pn	12 56 30.3	+1.2
JKRS				S	Sn	12 56 55.7	+0.3
JIJ	Ishigaki jima	2.36	69	P	Pn	12 56 32.4	+1.1
JIJ				S	Sn	12 56 58.4	-0.9
JTJ	Tarama	2.94	67	P	Pn	12 56 40.3	+1.1
JTJ				eS	Sn	12 57 13.6	+0.1

*CSEM **11** 13:03:41.8±0.2, 40°.94N×26°.10E, h19km, MD2.4, Error ellipse: s-maj=3.5km s-min=2.4km az=79.0*
ISK 11 13:03:41.9, 40°.93N×26°.13E, h18km, MD2.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENEZ	Enez	0.19	175	ePG	Pg	13 03 46.7	0.0
ENEZ				eSG	Sg	13 03 50.9	+1.0
ENEZ	Enez	0.19	175	ePg	Pg	13 03 46.7	0.0
ENEZ				eSg	Sg	13 03 50.9	+0.9
ERIK	Erikli-Kesan	0.39	131	ePG	Pb	13 03 50.5	+0.2
ERIK				eSG	Sb	13 03 56.3	+0.4
ERIK	Erikli-Kesan	0.39	131	ePg	Pb	13 03 50.5	+0.2
ERIK				eSg	Sb	13 03 56.3	+0.4
GELI	Tayfur-Gelibol	0.59	153	ePG	Pb	13 03 54.0	+0.3
GELI				eSG	Sb	13 04 02.7	+1.0
GELI	Tayfur-Gelibol	0.59	153	ePg	Pb	13 03 54.0	+0.3
GELI				eSg	Sb	13 04 02.7	+1.1
RKY	Sarkoy-Tekirda	0.83	106	ePG	Pg	13 03 58.4	+0.2
RKY	Sarkoy-Tekirda	0.83	106	ePg	Pg	13 03 58.4	+0.2
SART	Tekirdag	0.83	106	iP	Pg	13 03 58.2	-0.1
SART				iS	Sb	13 04 08.9	0.0
SART	Tekirdag	0.83	106	iP	Pg	13 03 58.2	-0.1
SART				iS	Sb	13 04 08.9	0.0
MFT	Murefte	0.89	99	ePG	Pn	13 03 59.6	0.0
MFT	Murefte	0.89	99	ePg	Pn	13 03 59.6	0.0
EDRB	Edirne	1.03	27	ePG	Pg	13 04 01.8	-0.1
EDRB	Edirne	1.03	27	ePg	Pg	13 04 01.8	-0.1
KRBG	Karabiga-Canak	1.04	121	ePG	Pg	13 04 02.3	+0.3
KRBG	Karabiga-Canak	1.04	121	ePg	Pg	13 04 02.3	+0.3

*ISCJB **11** 13:14:47.0±0.6, 35°.81N±0°.03×139°.25E±0°.07, h72km±5km, mb3.4/3, Error ellipse: s-maj=9.3km s-min=5.5km az=176.3*
*JMA **11** 13:14:48.3, 35°.80N×139°.23E, h62km±1km, M3.2 Broadband fault plane solution: P waves. NP1: φs221.00000°, δ67.00000°, λ68.00000°. NP2: φs86.00000°, δ31.00000°, λ131.00000°. Principal axes: T Plg62.0000°, Azm97.0000°; N Plg20.0000°, Azm230.0000°; P Plg19.0000°, Azm327.0000°;*
JMA Felt I J1.
*IDC **11** 13:14:49.3±1.0, 35°.70N×138°.94E, h75km±8km, mb3.1/3, mb1 3.5/4, mb1mx3.1/26, mbtmp3.4/4 Error ellipse: s-maj=32.7km s-min=7.4km az=66.0*
ISC 11 13:14:47.8±1.0**, 35°.81N**±0°.04×**139°.24E**±0°.06**, h63**km±7km**, n15, σ0s83**/26**, mb3.3**/3**, 5C-2D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHU	Hanno	0.05	40	⇑P	Pn	13 14 57.6	+0.4
JHU				S	Sn	13 15 04.2	+0.3
JRY	Ryogami san	0.34	307	⇑P	Pn	13 14 59.0	+0.4
JRY				S	Sn	13 15 07.0	+0.5
JOD2	Odawara 2	0.56	193	⇓P	Pn	13 15 00.3	-0.4
JOD2				S	Sn	13 15 09.4	-0.7
JAG	Ashikaga	0.64	16	⇑P	Pn	13 15 02.0	+0.4
JAG				S	Sn	13 15 12.0	+0.4
JYN	Shimob	0.65	241	⇑P	Pn	13 15 01.7	0.0
JYN				S	Sn	13 15 11.7	-0.2
JKT	Katashina	0.95	0	⇓P	Pn	13 15 05.8	+0.3
JKT				S	Sn	13 15 19.4	+0.8
JIM2	Oshima 3	1.10	172	P	Pn	13 15 07.3	0.0
MJAR	Matsushiro Arr	1.11	312	P	Pn	13 15 07.6	+0.2
	42nm,0.3s,baz=144,slow=11,SNR=470						
MJAR				S	Sn	13 15 22.6	+0.6
	62nm,0.3s,baz=147,slow=20,SNR=24						
MAT	Matsushiro	1.11	312	P	Pn	13 15 08.0	+0.6
MAT				S	Sn	13 15 22.7	+0.7
MAT	Matsushiro	1.11	312	P	Pn	13 15 08.2	+0.8
MAT				S	Sn	13 15 22.8	+0.7
SHZ3	Shizuoka 3	1.12	229	⇑P	Pn	13 15 08.5	+0.9
SHZ3				S	Sn	13 15 23.8	+1.4
JHJ	Hachijo jima 2	2.72	170	P	Pn	13 15 31.0	+1.8
	198nm,0.3s,baz=315,slow=16,SNR=88						
JHJ				S	Sn	13 16 02.4	+1.4
	52nm,0.3s,baz=73,slow=24,SNR=10						
MKAR	Makanchi Array	43.30	303	P	P	13 22 42.6	-0.7
	0.2nm,0.6s,baz=90,slow=11,SNR=3.3						
WRA	Warramunga Arr	55.64	186	P	P	13 24 16.1	-1.3
	1.0nm,0.7s,baz=2.1,slow=7.6,SNR=16						
ASAR	Alice Springs	59.37	186	P	P	13 24 43.2	-0.3
	0.1nm,0.4s,baz=18,slow=13,SNR=4.8						

IDC 11 13:15:02.3±4.0**, 11°.99S×165°.87E, h0km, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.6**/19**, mbtmp3.6**/4**, MS3.5**/1**, Ms1 3.4**/1**, ms1mx2.6**/32**, Error ellipse: s-maj=170.5km s-min=31.8km az=138.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	29.85	225	LR	LR	13 32 17.1	
	comp=Z,83nm,18.8s,baz=25,slow=35						
WRA	Warramunga Arr	31.29	251	P	P	13 21 23.4	-1.0
	0.5nm,0.8s,baz=86,slow=9.7,SNR=3.1						
ASAR	Alice Springs	32.49	245	P	P	13 21 35.8	+0.8
	0.9nm,0.7s,baz=68,slow=9.9,SNR=13						
ILAR	Eielson Array	84.36	18	P	P	13 27 35.9	-0.2
	0.2nm,0.6s,baz=212,slow=3.2,SNR=5.8						
MKAR	Makanchi Array	94.29	317	P	P	13 28 23.9	+0.2
	0.3nm,0.6s,baz=94,slow=5.1,SNR=4.6						

IDC 11 13:41:58.0±1.1**, 17°.22N×85°.33W, h0km, mb4.0**/13**, mb1 4.2**/14**, mb1mx4.0**/29**, mbtmp4.0**/14**, ML4.6**/1**, MS3.2**/7**, Ms1 3.3**/7**, ms1mx3.1**/30**, Error ellipse: s-maj=32.3km s-min=18.3km az=42.0, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEIG	Tepich	4.09	317	Pn	Pn	13 43 01.1	-0.8
	33nm,0.3s,baz=332,slow=2.8,SNR=349						
TEIG				Sn	Sn	13 43 44.5	-6.1
	29nm,0.3s,baz=50,slow=19,SNR=14						
ROSC	El Rosal	16.34	137	LR	LR	13 52 16.3	
	comp=Z,100nm,21.3s,baz=194,slow=38						
TKL	Tuckaleechee C	18.42	4	S	Sn	13 49 33.6	-7.8
	0.3nm,0.3s,baz=98,slow=9.5,SNR=3.8						
TKL				LR	LR	13 53 11.2	
	comp=Z,75nm,21.7s,baz=279,slow=36						
TXAR	Lajitas Array	20.68	309	P	P	13 46 39.5	-0.3
	5.8nm,0.9s,baz=133,slow=7.8,SNR=48						
TXAR				LR	LR	13 57 33.9	
	comp=Z,50nm,19.7s,baz=180,slow=45						
ANMO	Albuquerque	25.83	317	P	P	13 47 30.5	-0.9
	1.3nm,0.9s,baz=150,slow=16,SNR=3.4						
ANMO				LR	LR	14 00 26.7	
	comp=Z,32nm,21.8s,baz=53,slow=43						
SADO	Sadowa	27.96	9	P	P	13 47 49.8	-0.4
	1.8nm,0.5s,baz=236,slow=7.3,SNR=2.4						
SADO				LR	LR	13 58 45.9	
	comp=Z,83nm,19.1s,baz=228,slow=36						
PFO	Pinyon Flat Ob	32.34	306	LR	LR	14 03 15.4	
	comp=Z,45nm,18.1s,baz=316,slow=40						
NVAR	Mina Array Bea	35.73	313	P	P	13 48 59.7	+0.9
	0.8nm,0.8s,baz=124,slow=8.7,SNR=7.7						
LPAZ	La Paz	37.36	152	LR	LR	14 04 22.4	
	comp=Z,61nm,18.8s,baz=311,slow=36						
SCHQ	Schefferville	40.15	17	P	P	13 49 35.8	+0.1
	2.9nm,0.9s,baz=217,slow=10,SNR=2.8						
SIV	San Ignacio	40.75	143	P	P	13 49 40.7	-0.3
	6.1nm,0.9s,baz=327,slow=9.6,SNR=18						
FRB	Frobisher Bay	47.90	10	P	P	13 50 37.1	-0.5
	1.7nm,0.8s,baz=238,slow=18,SNR=3.1						
YKA	Yellowknife Ar	49.64	343	P	P	13 50 50.1	-0.9
	0.2nm,0.5s,baz=138,slow=7.1,SNR=4.5						
DLBC	Dease Lake	52.59	332	P	P	13 51 13.8	+0.3
	1.8nm,0.4s,baz=333,slow=24,SNR=4.0						
ILAR	Eielson Array	62.56	335	P	P	13 52 23.9	+0.4
	2.1nm,0.9s,baz=114,slow=5.1,SNR=24						
ESDC	Sonseca Array	72.67	53	P	P	13 53 28.1	+0.2
	0.2nm,0.3s,baz=325,slow=11,SNR=3.7						
GERES	GERESS Array B	83.01	41	P	P	13 54 24.9	-0.5
	0.1nm,0.3s,baz=316,slow=4.1,SNR=2.2						
FINES	FINESS Array B	84.81	27	P	P	13 54 35.2	+1.0
	1.4nm,0.8s,baz=249,slow=7.3,SNR=2.0						
CMAR	Chiang Mai Arr	144.30	353	PKP	PKPbc	14 01 35.5	+0.4
	1.0nm,0.8s,baz=350,slow=3.4,SNR=3.1						

*BJI **11** 13:49:27.9, 50°.80N×179°.70E, h61km, mB5.2/12, mb4.7/19, Ms4.8/8, Ms7 4.5/8*
*MOS **11** 13:49:29.5±1.0, 51°.39N×179°.85W, h33km, mb4.5/32, Error ellipse: s-maj=12.7km s-min=8.2km az=59.8*
*NEIC **11** 13:49:30.1, 51°.11N×179°.88W, h16km, mb4.6/51, ML4.6(AEIC), After AEIC.*
*ISCJB **11** 13:49:32.0±0.5, 51°.29N±0°.06×179°.89W±0°.03, h60km±3km, mb4.4/88, MS4.0/27, Error ellipse: s-maj=10.3km s-min=3.6km az=0.6*
*IDC **11** 13:49:33.5±0.8, 51°.37N×179°.94W, h54km±6km, mb3.8/27, mb1 4.0/28, mb1mx3.9/37, mbtmp3.8/28, MS3.9/24, Ms1 3.9/24, ms1mx3.7/41, Error ellipse: s-maj=17.2km s-min=9.7km az=166.0*
ISC 11 13:49:32.7±0.5**, 51°.24N**±0°.08×**179°.94W**±0°.03**, h50**km±3km**, h49km:pP-P, n486, σ0s98**/493**, mb4.5**/88**, MS3.9**/27**, 125C-129D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMKA	Amchitka	0.49	286	P	Pn	13 49 41.6	-2.3
AMKA				S	Sn	13 49 49.6	-2.2
CESW	Semis' Southwe	0.73	335	P	Pn	13 49 46.4	-0.4

GAKI Gareloi-Kavalg 0.78 66 P Pn 13 49 45.3 -2.1
CETU Semis' Tuman 0.81 334 P Pn 13 49 47.7 -0.1
CEAP Semis' Anvil P 0.82 339 P Pn 13 49 48.0 0.0
GALAA Gareloi Lava P 0.90 54 P Pn 13 49 47.9 -1.1
GAEA Gareloi East 0.92 54 P Pn 13 49 48.2 -1.2
GANE Gareloi Northe 0.93 51 P Pn 13 49 48.2 -1.3
LSSE Little Sitkin 1.16 307 P Pn 13 49 52.7 +0.1
LSSA Little Sitkin 1.20 307 P Pn 13 49 53.1 0.0
LSNW Little Sitkin 1.21 308 P Pn 13 49 53.1 -0.1
TANO Tanaga North 1.32 59 P Pn 13 49 53.9 -0.9
TASE Tanaga Southea 1.33 63 P Pn 13 49 53.8 -1.1
TAFP Tanaga Falls P 1.39 61 P Pn 13 49 54.7 -1.0
TAPA Tanaga Point A 1.45 66 P Pn 13 49 55.4 -1.2
KIKV Kanaga Island 1.84 69 P Pn 13 50 01.1 -0.8
KINC Kanaga Island 1.89 67 P Pn 13 50 01.8 -0.7
KIRH Kanaga Island 1.90 69 P Pn 13 50 02.0 -0.6
GSCK Great Sitkin C 2.48 70 P Pn 13 50 10.1 -0.5
GSTD Great Sitkin T 2.50 70 P Pn 13 50 10.9 -0.1
GSTD S Sn 13 50 42.1 +1.8
GSMY Great Sitkin M 2.55 70 P Pn 13 50 11.0 -0.6
GSTR Great Sitkin T 2.56 69 P Pn 13 50 11.9 +0.1
ATKA Atka Island 3.70 73 P Pn 13 50 26.9 -0.4
ATKA S Sn 13 51 11.5 +1.9
KOWE Korovin West 3.71 70 P Pn 13 50 28.2 +0.8
KOKL Mount Kliuchef 3.73 71 P Pn 13 50 28.4 +0.6
KOFP Korovin Flat P 3.78 72 P Pn 13 50 29.2 +0.8
SMY Shemya 3.97 294 P Pn 13 50 32.6 +1.6
SMY S Sn 13 51 22.4 +6.2
SMY Shemya 3.97 294 P Pn 13 50 32.6 +1.6
SMY S Sn 13 51 22.4 +6.2
NIKH Nikolski High 7.05 71 P Pn 13 51 14.9 +1.7
OKSP Okmok Steeple 7.43 70 P Pn 13 51 20.7 +2.3
OKTU Okmok Mt. Tuli 7.61 69 P Pn 13 51 22.5 +1.6
OKFG Magazine Ridge 7.69 69 P Pn 13 51 23.4 +1.4
SPIA Saint Paul Isl 8.22 40 P Pn 13 51 32.3 +3.1
MCIR Makushin Cirqu 8.40 66 P Pn 13 51 32.7 +1.0
MTBL Makushin Table 8.52 66 P Pn 13 51 35.0 +1.6
UNV Unalaska Valle 8.60 67 eP Pn 13 51 32.7 -1.7
AKGG Akutan Green G 8.97 65 P Pn 13 51 41.5 +2.0
AKUT Akutan 9.08 66 eP Pn 13 51 41.9 +0.9
FALS False Pass 10.59 64 eP Pn 13 52 01.7 +0.2
GAMB Gambell 13.31 16 eP Pn 13 52 40.5 +1.9
14nm,0.5s
PETK Petropavlovsk- 13.84 286 P Pn 13 52 47.0 +1.1
PETK MLR MLR
comp=Z,189nm,21.9s
PETK Petropavlovsk- 13.84 286 P Pn 13 52 47.0 +1.1
PETK Petropavlovsk- 13.84 286 P Pn 13 52 47.0 +1.1
comp=Z,0.1nm,0.3s,baz=89,slow=16,SNR=2.8
PETK LR LR 13 57 50.7
comp=Z,189nm,21.9s,baz=98,slow=36
OHAK Old Harbor 16.63 59 eP Pn 13 53 18.7 -3.3
SVW2 Sparrevohn 16.67 44 eP P 13 53 25.0 +0.7
comp=Z,55nm,1.4s
KDAK Kodiak Island 17.10 57 eP Pn 13 53 24.4 -3.5
comp=Z,14nm,0.5s
KDAK Kodiak Island 17.10 57 P Pn 13 53 24.6 -3.3
comp=Z,4.0nm,0.3s,baz=254,slow=7.5,SNR=36
KDAK LR LR 14 00 14.8
comp=Z,386nm,21.9s,baz=252,slow=38
RSO Redoubt South 17.71 48 eP Pn 13 53 35.6 -0.1
BILL Bilibino 18.15 343 eP Pn 13 53 43.0 +2.3
BILL pmax pmax
comp=Z,35nm,1.7s
BILL MLR MLR
comp=Z,100nm,19.0s
BILL Bilibino 18.15 343 eP Pn 13 53 40.6 -0.1
comp=Z,18nm,1.1s
SPU Mount Spurr 18.28 46 eP Pn 13 53 43.9 +1.4
RC01 Rabbit Creek A 19.32 48 eP Pn 13 53 54.1 -0.6
PMR Palmer 19.74 46 eP P 13 53 57.1 -0.9
PMR Palmer 19.74 46 eP P 13 53 57.1 -0.9
TRF Thorofare Moun 19.91 41 eP P 13 53 59.0 -1.0
SML Sawmill 20.17 46 eP P 13 54 01.2 -1.5
SML Sawmill 20.17 46 eP P 13 54 01.2 -1.5
MCK McKinley 20.57 41 eP P 13 54 06.0 -1.0
MCK McKinley 20.57 41 eP P 13 54 06.0 -1.0
DIV Divide 21.19 49 eP P 13 54 12.6 -1.1
COLA College 21.46 38 eP P 13 54 16.2 -0.3
COLA College 21.46 38 eP P 13 54 16.1 -0.3
RAGM Ragged Mountai 21.58 51 eP P 13 54 19.1 +1.2
comp=Z,41nm,1.4s
COLD Coldfoot 21.74 31 eP P 13 54 19.1 -0.5
PAX Paxson 21.79 44 eP P 13 54 19.1 -1.0
PAX pmax pmax
comp=Z,146nm,2.5s
PAX Paxson 21.79 44 eP P 13 54 19.1 -1.0
comp=Z,146nm,2.5s
ILAR Eielson Array 21.80 39 P P 13 54 17.9 -2.2
ILAR ScP ScP 14 01 51.7 +0.6
ILAR Eielson Array 21.80 39 P P 13 54 17.9 -2.2
comp=Z,1.3nm,0.5s,baz=236,slow=8.8,SNR=21
ILAR ScP ScP 14 01 51.7 +0.6
comp=Z,0.4nm,0.6s,baz=284,slow=3.6,SNR=11
ILAR LR LR 14 03 54.7
comp=Z,264nm,18.8s,baz=26,slow=40
MENT Mentasta 22.55 45 eP P 13 54 26.1 -2.2
DOT Dot Lake 22.59 43 eP P 13 54 26.8 -1.9
EGAK Eagle 24.12 41 eP P 13 54 42.2 -1.3
comp=Z,43nm,1.3s
PNL Peninsula 24.14 54 eP P 13 54 41.6 -2.2
comp=Z,22nm,1.0s
INK Inuvik 27.98 35 P P 13 55 16.4 -1.8
INK Inuvik 27.98 35 P P 13 55 16.4 -1.8
comp=Z,1.2nm,0.5s,baz=258,slow=6.2,SNR=5.0
INK LR LR 14 06 23.7
comp=Z,276nm,21.4s,baz=251,slow=36
DLBC Dease Lake 29.03 56 LR LR 14 06 48.3
comp=Z,483nm,20.8s,baz=308,slow=36
KLR Kul'dur 30.53 285 eP P 13 55 38.6 -2.4
USRK Ussuriysk Arra 32.60 277 P P 13 55 58.6 -0.7
comp=Z,1.0nm,0.6s,baz=76,slow=7.3,SNR=4.3
USRK LR LR 14 07 04.1
comp=Z,162nm,21.9s,baz=34,slow=32
MJAR Matsushiro Arr 33.05 260 P P 13 56 03.4 0.0
MJAR Matsushiro Arr 33.05 260 P P 13 56 03.4 0.0
comp=Z,0.5nm,0.4s,baz=224,slow=43,SNR=3.6
MJAR LR LR 14 07 22.6
comp=Z,200nm,21.8s,baz=70,slow=32
MDJ Mudanjiang 33.88 279 P P 13 56 04.8 -5.6
MDJ pmax pmax
comp=Z,5.0nm,1.4s
MDJ pmax pmax
comp=Z,120nm,3.8s
YKW3 Yellowknife Ar 35.83 46 eP P 13 56 25.4 -1.5
comp=Z,0.2nm,1.0s
YKA Yellowknife Ar 35.84 46 P P 13 56 26.2 -0.9
YKA PcP PcP 13 58 54.0 +0.7
YKA Yellowknife Ar 35.84 46 P P 13 56 26.2 -0.9
comp=Z,2.8nm,0.5s,baz=280,slow=8.0,SNR=32
YKA PcP PcP 13 58 54.0 +0.7
comp=Z,0.7nm,0.6s,baz=291,slow=3.3,SNR=7.3
CN2 Changchun 36.87 280 eP P 13 56 31.1 -5.0
LON Longmire 37.54 73 eP P 13 56 40.1 -1.8
LON pmax pmax
comp=Z,5.0nm,0.8s
LON Longmire 37.54 73 eP P 13 56 40.0 -1.8
comp=Z,4.9nm,0.8s
VFP Flag Point 38.46 75 P P 13 56 50.4 +0.7
FRIS Frissel Point 38.65 77 P P 13 56 52.5 +1.2
IRO Indian Ridge 38.66 78 P P 13 56 51.7 +0.3
KSRS Korea Array 38.92 270 P P 13 56 54.6 +1.2
comp=Z,1.1nm,0.7s,baz=51,slow=7.6,SNR=3.3
KSRS LR LR 14 12 14.4
comp=Z,61nm,19.4s,baz=62,slow=35
KSAR Wonju Array Be 38.95 270 P P 13 56 54.6 +0.9
HUMO Hull Mountain 38.98 80 eP P 13 56 53.5 -0.4
comp=Z,3.8nm,0.9s
BBOR Butler Butte 38.99 79 P P 13 56 55.9 +1.7
HAWA Hanford 39.09 73 eP P 13 56 54.9 +0.2
comp=Z,25nm,1.1s
VIPM Ingram Point 39.40 76 P P 13 56 58.3 +0.7
VIPM Ingram Point 39.40 76 P P 13 56 58.3 +0.7
NEW Newport 39.60 69 eP P 13 56 58.4 -0.7
comp=Z,7.1nm,0.6s
NEW Newport 39.60 69 P P 13 56 59.2 +0.1
comp=Z,6.3nm,0.5s,baz=306,slow=6.8,SNR=19
NEW Newport 39.60 69 ⇑P P 13 56 59.1 +0.1
baz=40,SNR=11
YBH Yreka Blue Hor 39.61 81 eP P 13 56 60.0 +0.7
comp=Z,4.6nm,0.8s
YBH Yreka Blue Hor 39.61 81 P P 13 57 00.8 +1.5
comp=Z,4.5nm,0.8s,baz=291,slow=5.0,SNR=11
JNU Nakatsue 39.84 262 LR LR 14 12 36.3
comp=Z,202nm,18.6s,baz=251,slow=35
RES Resolute Bay 40.16 24 LR LR 14 14 01.3
comp=Z,197nm,21.3s,baz=293,slow=37
C11A Tepee Creek (N 40.32 69 ⇓P P 13 57 04.4 -0.6
baz=40
B12A Libby 40.40 68 ⇑P P 13 57 05.5 -0.2
baz=40
C12B Nagaeli Ranch, 40.84 69 ⇑P P 13 57 09.1 -0.2
baz=41
LBCM Butte Creek Ri 40.96 81 P P 13 57 11.8 +1.2
WALA Waterton Lakes 41.08 66 eP P 13 57 08.2 -3.2
comp=Z,0.3nm,1.0s
B13A Whitefish 41.10 67 ⇑P P 13 57 10.9 -0.6
baz=41
BSMT Bassoo Peak 41.17 68 eP P 13 57 10.6 -1.6
comp=Z,7.2nm,0.7s
BMO Blue Mountains 41.22 73 eP P 13 57 11.6 -0.9
comp=Z,23nm,1.7s
BLMT Blacktail Moun 41.34 68 eP P 13 57 12.1 -1.5
comp=Z,10.0nm,0.6s
C13A Hot Springs 41.38 68 ⇑P P 13 57 13.6 -0.2
baz=41,SNR=8.7
A14A Double T Ranch 41.41 66 ⇑P P 13 57 13.9 -0.1
baz=41,SNR=13
E12A Beaver Dam Sad 41.44 70 ⇑P P 13 57 13.8 -0.6
baz=41,SNR=13
WVOR Wild Horse Val 41.73 77 eP P 13 57 16.3 -0.5
WVOR pmax pmax
comp=Z,12nm,1.1s
WVOR Wild Horse Val 41.73 77 eP P 13 57 16.3 -0.5
comp=Z,12nm,1.1s
D13A Huson 41.75 69 ⇓P P 13 57 15.9 -0.9
baz=42,SNR=6.9
B14A Marquette Ranc 41.80 67 ⇓P P 13 57 17.1 -0.2
baz=42,SNR=6.0
A15A Johnson Ranch, 41.80 66 ⇑P P 13 57 16.4 -0.9
baz=42,SNR=5.6
F12A Elk City 41.97 71 ⇑P P 13 57 18.5 -0.2
baz=42,SNR=29
BEKR Beckworth 42.14 82 eP P 13 57 19.8 -0.5
comp=Z,3.4nm,1.2s
MSO Missoula 42.19 69 ⇓P P 13 57 20.1 -0.3
baz=42,SNR=5.8
B15A Bradely Ranch, 42.23 66 ⇓P P 13 57 19.6 -1.1
baz=42,SNR=11
SLMT Seeley Lake 42.24 68 eP P 13 57 19.4 -1.5
comp=Z,7.5nm,0.7s
E13A Victor 42.24 70 ⇑P P 13 57 20.2 -0.7
baz=42
D14A Greenough 42.31 69 ⇑P P 13 57 20.8 -0.7
baz=42,SNR=14
C15A Salmond Ranch, 42.48 67 ⇑P P 13 57 22.3 -0.6
baz=42,SNR=38
F13A Darby 42.50 71 ⇑P P 13 57 22.4 -0.6
baz=42,SNR=11
E14A Clinton 42.67 69 ⇑P P 13 57 23.6 -0.7
baz=42
H12A Diamond D Ranc 42.86 72 ⇑P P 13 57 25.5 -0.4
baz=43,SNR=6.6
MFID Camas Ranch 42.90 74 eP P 13 57 23.1 -3.2
comp=Z,2.3nm,0.6s
MFID Camas Ranch 42.90 74 ⇓P P 13 57 26.1 -0.1
baz=43
D15A Lincoln 42.91 68 ⇓P P 13 57 25.7 -0.6
baz=43,SNR=5.5
C16A Fuhringer Ranc 42.96 67 ⇑P P 13 57 26.2 -0.5
baz=43,SNR=11
A17A Triple J Farms 42.98 65 ⇑P P 13 57 25.8 -0.9
baz=43,SNR=8.9
F14A Wisdom 43.06 70 ⇓P P 13 57 26.9 -0.7
baz=43,SNR=5.3
E15A Deer Lodge 43.16 69 ⇓P P 13 57 27.5 -0.8
baz=43,SNR=12
B17A L&G Farms, Che 43.25 66 ⇑P P 13 57 28.2 -0.8
baz=43,SNR=9.0
D16A Dana Ranch, Ca 43.48 68 ⇑P P 13 57 30.1 -0.8
baz=43,SNR=7.6
F15A Butte 43.56 70 ⇓P P 13 57 30.7 -0.9
baz=43,SNR=7.1
LRM Limekiln Ridge 43.60 70 eP P 13 57 29.9 -2.1
comp=Z,22nm,0.6s
C17A Wharram Farm, 43.62 66 ⇑P P 13 57 31.1 -0.9
baz=44,SNR=7.9
E16A East Helena 43.67 68 ⇓P P 13 57 31.9 -0.6
baz=44
HLID Hailey 43.67 73 eP P 13 57 32.2 -0.4
comp=Z,17nm,1.3s
HLID Hailey 43.67 73 ⇓P P 13 57 32.1 -0.5
baz=44,SNR=14
DLMT Dillon 43.76 70 eP P 13 57 30.5 -2.7
comp=Z,2.5nm,0.6s
B18A Beardsley Farm 43.78 65 ⇓P P 13 57 32.2 -1.1
baz=44,SNR=5.7
MCMT McKenzie Canyo 43.90 71 eP P 13 57 32.2 -2.3
D17A Six Diamond Ra 43.91 67 ⇓P P 13 57 33.7 -0.7
baz=44,SNR=11
EGMT Eagleton 43.99 65 eP P 13 57 33.7 -1.3
comp=Z,11nm,1.1s
I14A Mackay 44.04 72 ⇓P P 13 57 35.1 -0.5
baz=44,SNR=12
A19A Kildworth Far 44.09 64 ⇓P P 13 57 35.2 -0.6
baz=44
F16A Kennard Place, 44.10 69 ⇑P P 13 57 35.6 -0.3
baz=44,SNR=11
BOZ Bozeman (W) 44.17 69 eP P 13 57 34.0 -2.5
BOZ pmax pmax
comp=Z,13nm,0.6s
BOZ Bozeman (W) 44.17 69 eP P 13 57 34.0 -2.5
comp=Z,13nm,0.6s
E17A Martinsdale 44.18 68 ⇓P P 13 57 36.4 -0.3
baz=44,SNR=11
B19A Brinkman Farms 44.23 64 ⇓P P 13 57 36.0 -0.8
baz=44,SNR=7.3
NVAR Mina Array Bea 44.28 82 P P 13 57 38.5 +0.9
NVAR Mina Array Bea 44.28 82 P P 13 57 38.5 +0.9
comp=Z,1.6nm,0.7s,baz=293,slow=8.5,SNR=13
NVAR LR LR 14 14 24.7
comp=Z,107nm,19.0s,baz=330,slow=34
C19A Slack Wire Ran 44.55 65 ⇑P P 13 57 39.0 -0.3
baz=44,SNR=18
F17A Fitzpatrick Pl 44.60 68 ⇑P P 13 57 39.5 -0.5
baz=44,SNR=6.2
E18A Harlowton 44.68 67 ⇓P P 13 57 40.4 -0.1
baz=44,SNR=26
QLMT Earthquake Lak 44.74 70 eP P 13 57 40.2 -1.0
comp=Z,0.6nm,0.5s
B20A Solberg Farm, 44.76 64 ⇓P P 13 57 40.4 -0.7
baz=45,SNR=6.4
ELK Elko 44.79 77 eP P 13 57 40.3 -1.3
comp=Z,5.6nm,1.0s
G17A Pierce Place, 44.88 69 ⇓P P 13 57 41.6 -0.5
baz=45
H16A Russell Place, 44.92 70 ⇓P P 13 57 42.0 -0.6
baz=45,SNR=30
F18A Big Timber 45.15 68 ⇓P P 13 57 43.9 -0.4
baz=45,SNR=9.3
C20A Veseth Ranch, 45.15 65 ⇓P P 13 57 44.0 -0.2
baz=45,SNR=5.4
I16A Newdale 45.24 71 ⇑P P 13 57 44.7 -0.4
baz=45
YFT Old Faithful 45.31 70 eP P 13 57 43.4 -2.3
comp=Z,11nm,0.7s
B21A Ellsworth Farm 45.33 64 ⇓P P 13 57 45.4 -0.1
baz=45
E19A Rath Farm, Rou 45.39 67 ⇓P P 13 57 46.0 -0.1
baz=45,SNR=6.3
D20A Manuel Ranch, 45.42 66 ⇑P P 13 57 45.8 -0.5
baz=45
TLY Talaya 45.53 302 eP pP 13 58 03.1 +2.8
TLY eS S 14 04 38.0 +13
TLY pmax pmax
comp=Z,3.0nm,0.7s
TLY MLR MLR
comp=Z,148nm,20.5s
IMW Indian Meadow 45.56 71 eP P 13 57 47.6 -0.1
comp=Z,12nm,1.0s
G18A Lazy EL Ranch, 45.57 69 ⇑P P 13 57 47.3 -0.4
baz=45
C21A Desert Coulee 45.61 64 ⇓P P 13 57 47.7 0.0
baz=45
F19A Roth Farm, Mol 45.63 68 ⇑P P 13 57 47.8 -0.3
baz=46,SNR=9.2
A22A Carney Farms, 45.64 62 ⇓P P 13 57 47.4 -0.6
baz=46
RRI2 Red Ridge 45.65 72 eP P 13 57 48.2 -0.2
comp=Z,20nm,1.3s
HVU Hansel Valley 45.68 74 eP P 13 57 48.7 +0.2
HVU pmax pmax
comp=Z,6.0nm,0.6s
HVU Hansel Valley 45.68 74 eP P 13 57 48.7 +0.2
comp=Z,5.5nm,0.6s
E20A Meyer Farm, Mu 45.74 66 ⇑P P 13 57 48.5 -0.4
baz=46,SNR=7.0
MOOW Moose Ponds 45.76 71 eP P 13 57 47.2 -2.0
comp=Z,9.1nm,1.3s
TPAW Teton Pass 45.78 71 eP P 13 57 48.6 -0.9
comp=Z,4.9nm,0.6s
RLMT Red Lodge 45.85 69 eP P 13 57 49.4 -0.5
comp=Z,36nm,1.1s
H18A Shoshone NF, C 45.87 69 ⇓P P 13 57 50.1 0.0
baz=46,SNR=9.8
LOHW Long Hollow 45.92 71 eP P 13 57 50.4 -0.1
comp=Z,3.7nm,0.7s
B22A Reddig Ranch S 45.97 63 ⇓P P 13 57 50.5 -0.2
baz=46
R11A Troy Canyon, C 46.02 80 ⇑P P 13 57 51.3 0.0
baz=46,SNR=12
SONM Songino Array 46.06 296 P P 13 57 51.9 +0.5
SONM Songino Array 46.06 296 P P 13 57 51.9 +0.5
comp=Z,0.8nm,0.5s,baz=68,slow=8.7,SNR=5.8
SONM LR LR 14 17 40.0
comp=Z,125nm,20.7s,baz=76,slow=37
MPMC Manual Prospec 46.26 84 ⇑P P 13 57 52.8 -0.4
baz=46
H19A Powell 46.27 69 ⇓P P 13 57 53.2 0.0
baz=46,SNR=14
G20A Bridger 46.41 68 ⇓P P 13 57 53.5 -0.7
baz=46,SNR=21
D22A Cohagen 46.50 65 ⇑P P 13 57 54.5 -0.3
baz=46,SNR=7.2
HWUT Hardware Ranch 46.51 74 eP P 13 57 54.7 -0.4
comp=Z,5.8nm,0.9s
HWUT e pP 13 58 07.0 -1.5
I19A Meeteetse 46.63 70 ⇓P P 13 57 55.7 -0.3
baz=46
C23A Lambert 46.70 63 ⇓P P 13 57 55.9 -0.4
baz=46
F21A Absaloka Mine, 46.70 67 ⇓P P 13 57 55.9 -0.5
baz=46
A24A Westby 46.74 61 ⇓P P 13 57 56.0 -0.6
baz=47,SNR=6.2
H20A Greybull 46.95 69 ⇑P P 13 57 58.2 -0.3
baz=47
G21A Lodge Grass 46.99 67 ⇑P P 13 57 58.1 -0.7
baz=47
E22A Miles City 47.03 65 ⇑P P 13 57 58.6 -0.3
baz=47
BW06 Boulder Array 47.03 71 eP P 13 57 59.0 -0.3
comp=Z,36nm,1.1s
HHC Hu-ho-hao-te 47.03 285 eP P 13 57 51.2 -7.9
HHC pP pP 13 58 06.9 -5.6
HHC sP sP 13 58 13.3 -4.9
HHC PP PP 13 59 41.3 -8.6
HHC S S 14 04 36.0 -11
HHC sS sS 14 05 02.4 -7.2
HHC SS ScS 14 07 55.4 +6.6
HHC pmax pmax
comp=Z,43nm,0.7s
HHC pmax pmax
comp=Z,240nm,4.7s
HHC LR LR
comp=N,340nm,16.2s
HHC LR LR
comp=E,490nm,15.9s
HHC LR LR
comp=Z,220nm,16.4s
PDAR Pinedale Array 47.03 71 P P 13 57 59.1 -0.2
PDAR Pinedale Array 47.03 71 P P 13 57 59.1 -0.2
comp=Z,14nm,0.6s,baz=306,slow=5.0,SNR=94
PDAR LR LR 14 15 29.2
comp=Z,124nm,19.1s,baz=328,slow=33
D23A Lindsay 47.04 64 ⇓P P 13 57 58.8 -0.2
baz=47
J19A Crowheart 47.04 71 ⇓P P 13 57 59.2 0.0
baz=47,SNR=11
M17A Scullys Gap (B 47.13 74 ⇑P P 13 58 00.2 +0.1
baz=47,SNR=8.7
GSC Goldstone 47.18 84 eP P 13 58 00.1 -0.2
GSC pmax pmax
comp=Z,4.0nm,0.7s
GSC Goldstone 47.18 84 eP P 13 58 00.1 -0.2
comp=Z,3.7nm,0.7s
I20A Worland 47.19 69 ⇑P P 13 58 00.2 -0.1
baz=47
F22A Rosebud 47.23 66 ⇓P P 13 58 00.4 -0.1
baz=47
C24A Savage 47.28 63 ⇑P P 13 58 00.7 -0.1
baz=47
BFSC Mount Baldy Ra 47.33 86 ⇓P P 13 58 01.2 -0.4
baz=47
E23A Ismay 47.36 65 ⇑P P 13 58 01.6 +0.1
baz=47
DAU Daniels Canyon 47.42 75 eP P 13 58 02.2 -0.1
DAU pmax pmax
comp=Z,9.0nm,1.0s
DAU Daniels Canyon 47.42 75 eP P 13 58 02.2 -0.1
comp=Z,8.9nm,1.0s
K19A Absolon Red Bu 47.42 71 ⇓P P 13 58 01.8 -0.4
baz=47,SNR=17
H21A Big Horn, Sher 47.43 68 ⇑P P 13 58 02.4 +0.2
baz=47
G22A Birney 47.53 67 ⇓P P 13 58 02.7 -0.1
baz=47
L19A Farson 47.55 72 ⇑P P 13 58 03.4 +0.1
baz=47
J20A Shoshoni 47.56 70 ⇑P P 13 58 03.1 -0.1
baz=47,SNR=15
D24A Glendive 47.57 64 ⇑P P 13 58 03.3 +0.2
baz=47
F23A Volborg 47.75 66 ⇓P P 13 58 03.8 -0.7
baz=48,SNR=6.1
I21A Big Trails, Te 47.76 69 ⇑P P 13 58 04.2 -0.6
baz=48,SNR=16
K20A Yellowstone Ra 47.82 71 ⇑P P 13 58 04.3 -1.0
baz=48,SNR=13
H22A Clearmont 47.85 68 ⇓P P 13 58 05.1 -0.3
baz=48
E24A Baker 47.89 64 ⇑P P 13 58 05.7 +0.1
baz=48
J21A Lysite 47.95 70 ⇓P P 13 58 06.1 -0.2
baz=48
MVU Marysvale 48.00 78 eP P 13 58 06.9 0.0
comp=Z,4.1nm,0.9s
G23A Biddle 48.06 66 ⇓P P 13 58 06.7 -0.2
baz=48
NJ2 Nanjing 48.10 271 eP P 13 58 08.0 +0.7
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
I22A 9 Mile Ranch, 48.19 68 ⇑P P 13 58 07.7 -0.3
baz=48,SNR=11
L20A Wamsutter 48.21 72 ⇑P P 13 58 08.3 -0.1
baz=48
J22A Midwest 48.47 69 ⇓P P 13 58 09.8 -0.5
baz=48,SNR=22
K21A Alcova 48.48 70 ⇑P P 13 58 09.7 -0.7
baz=48,SNR=11
M20A Sweetwater, Wa 48.61 72 ⇑P P 13 58 10.9 -0.6
baz=48
SRU San Rafael 48.66 76 ⇑P P 13 58 11.6 -0.2
baz=48,SNR=9.6
O19A Miners Draw (B 48.78 74 ⇓P P 13 58 12.6 -0.1
baz=49,SNR=10
H24A Dirks Ranch, A 48.80 66 ⇑P P 13 58 12.1 -0.6
baz=49
L21A Rawlins 48.81 71 ⇑P P 13 58 12.7 -0.3
baz=49,SNR=19
K22A Casper 48.90 70 ⇓P P 13 58 13.3 -0.3
baz=49,SNR=5.2
N20A Spence Gulch, 48.97 73 ⇑P P 13 58 14.2 0.0
baz=49,SNR=8.6
M21A Separation Pea 49.03 71 ⇑P P 13 58 14.1 -0.6
baz=49,SNR=7.9
BC3 Big Chuckawall 49.09 85 ⇑P P 13 58 14.7 -0.4
baz=49
W13A Hualapai Mount 49.13 82 ⇓P P 13 58 15.2 -0.3
baz=49
U15A North Rim 49.26 80 ⇓P P 13 58 16.3 -0.2
baz=49,SNR=10.0
P19A Cripple Cowboy 49.27 74 ⇓P P 13 58 16.7 +0.1
baz=49,SNR=11
L22A Ellis Ranch, M 49.33 70 ⇓P P 13 58 17.1 +0.2
baz=49,SNR=5.2
K23A Bowen Ranch, D 49.37 69 ⇑P P 13 58 16.8 -0.4
baz=49
O20A White River Ci 49.41 73 ⇓P P 13 58 17.2 -0.3
baz=49,SNR=6.3

N21A Black Mountain 49.46 72 ⇓P P 13 58 17.5 -0.5
baz=49,SNR=5.6
PDMCI Parker Dam,Lak 49.49 83 ⇓P P 13 58 18.2 +0.2
baz=49
M22A Cedar Creek Ra 49.62 71 ⇓P P 13 58 19.2 0.0
baz=49
L23A Garrett 49.71 70 ⇑P P 13 58 19.8 -0.1
baz=50
P20A De Beque 49.71 74 ⇑P P 13 58 19.8 -0.1
baz=50
O21A Pagoda 49.82 73 ⇓P P 13 58 20.3 -0.5
baz=50
S18A Hurst Farm, Bl 49.87 77 ⇓P P 13 58 20.9 -0.3
baz=50
N22A Wattenberg Ran 50.07 72 ⇓P P 13 58 22.2 -0.4
baz=50,SNR=6.7
M23A Laramie 50.09 71 ⇑P P 13 58 22.3 -0.5
baz=50
PV04 Paradox Valley 50.09 76 *e*P P 13 58 22.1 -0.7
Q20A Ridgley Place, 50.11 75 ⇓P P 13 58 22.6 -0.3
baz=50
L24A Wheatland 50.21 69 ⇑P P 13 58 23.4 -0.1
baz=50
P21A Newcastle 50.27 74 ⇑P P 13 58 23.7 -0.4
baz=50
N23A Red Feather La 50.32 71 ⇑P P 13 58 24.4 -0.1
baz=50,SNR=8.4
ULM Lac du Bonnet 50.36 56 LR LR 14 19 54.3
comp=Z,183nm,20.4s,baz=302,slow=36
O22A Kremmling 50.41 72 ⇓P P 13 58 25.0 -0.3
baz=50,SNR=5.9
WUAZ Wupatki 50.42 80 *e*P P 13 58 22.3 -2.9
comp=Z,3.7nm,0.7s
WUAZ Wupatki 50.42 80 ⇓P P 13 58 24.6 -0.6
baz=50
Y14A Wickenburg 50.44 83 ⇑P P 13 58 24.9 -0.3
baz=50
SPITS Spitsbergen Ar 50.46 356 P P 13 58 24.8 0.0
SPITS pP **pP** 13 58 38.3 0.0
SPITS Spitsbergen Ar 50.46 356 P P 13 58 24.8 0.0
comp=Z,2.1nm,0.5s,baz=34,slow=6.1,SNR=16
SPITS pP **pP** 13 58 38.3 0.0
comp=Z,2.7nm,0.5s,baz=3.4,slow=4.2,SNR=4.4
SPITS LR LR 14 18 50.5
comp=Z,123nm,21.3s,baz=25,slow=35
M24A Cheyenne 50.62 70 ⇑P P 13 58 26.3 -0.4
baz=50
P22A Eagle 50.64 73 ⇓P P 13 58 26.8 -0.1
baz=50
O23A Lake Granby, G 50.76 72 ⇑P P 13 58 28.2 +0.3
baz=51,SNR=8.6
S20A Disappointment 50.78 76 ⇓P P 13 58 27.9 -0.2
baz=51,SNR=6.2
R21A Cimarron 50.93 75 ⇑P P 13 58 29.2 0.0
baz=51
N24A Carr 50.99 71 ⇑P P 13 58 29.7 +0.2
baz=51
X16A Lo Mia Camp, P 51.10 81 ⇑P P 13 58 30.0 -0.3
baz=51
ISCO Idaho Springs 51.20 72 *e*P P 13 58 30.7 -0.5
ISCO pmax pmax
comp=Z,16nm,1.5s
ISCO Idaho Springs 51.20 72 *e*P P 13 58 30.7 -0.5
comp=Z,16nm,1.5s
ISCO Idaho Springs 51.20 72 ⇓P P 13 58 31.1 -0.1
baz=51,SNR=8.2
S21A Coal Bank Pass 51.24 76 ⇑P P 13 58 31.2 -0.3
baz=51,SNR=5.9
N25A Grover 51.47 70 ⇑P P 13 58 33.5 +0.5
baz=51
R22A Saguache, Gunn 51.50 74 ⇑P P 13 58 33.6 0.0
baz=51
J28A Allard Ranch, 51.51 66 ⇓P P 13 58 33.5 +0.3
baz=51
S22A 4UR Ranch, Cre 51.77 75 ⇓P P 13 58 34.9 -0.6
baz=52,SNR=5.5
T21A Navajo Lake 51.83 76 ⇑P P 13 58 36.0 +0.2
baz=52
WHN Wuhan 51.95 273 *e*P P 13 58 38.5 +2.0
V20A Brimhall 52.03 78 ⇑P P 13 58 37.5 +0.2
baz=52
R23A Moffat 52.09 74 ⇑P P 13 58 37.9 +0.1
baz=52
U21A Nageezi 52.12 77 ⇓P P 13 58 37.9 -0.1
baz=52,SNR=8.0
T22A Edith 52.20 76 ⇑P P 13 58 38.6 0.0
baz=52,SNR=9.4
P25A Willow Gulch B 52.24 72 ⇑P P 13 58 38.9 +0.1
baz=52
O26A Horse Wrangler 52.29 70 ⇓P P 13 58 39.2 +0.1
baz=52
N27A Anderson Farm, 52.39 69 ⇓P P 13 58 40.3 +0.5
baz=52
Q25A Bedland, Calha 52.58 72 ⇑P P 13 58 41.6 +0.2
baz=52
U22A Llaves 52.64 76 ⇑P P 13 58 42.5 +0.6
baz=52
P26A Davis Ranch, A 52.70 71 ⇑P P 13 58 42.5 +0.3
baz=52,SNR=7.3
O27A Beecher Island 52.81 70 ⇑P P 13 58 43.2 +0.2
baz=53
S24A Houchin Ranch, 52.82 74 ⇑P P 13 58 43.3 +0.1
baz=53
X20A Quemado 52.84 79 ⇓P P 13 58 43.6 +0.3
baz=53
V22A San Miguel Ran 52.91 77 ⇑P P 13 58 43.9 0.0
baz=53
Q26A Hugo 53.01 72 ⇓P P 13 58 44.5 0.0
baz=53
N28A Pribbeno Ranch 53.05 69 ⇓P P 13 58 45.2 +0.5
baz=53
R25A Fountain Ranch 53.05 73 ⇓P P 13 58 44.9 +0.2
baz=53
O28A Krutsinger Ran 53.27 69 ⇓P P 13 58 45.9 -0.4
baz=53
S25A Robets Cordova 53.27 73 ⇓P P 13 58 46.3 -0.1
baz=53,SNR=6.6
Y20A Horse Springs, 53.33 80 ⇓P P 13 58 46.3 -0.7
baz=53
X21A Alamocita Cree 53.34 79 ⇑P P 13 58 47.2 +0.1
baz=53,SNR=11
R26A Arlington 53.45 72 ⇓P P 13 58 47.4 -0.3
baz=53
V23A Ortiz Mt. (NFS 53.46 76 ⇑P P 13 58 47.7 -0.2
baz=53
KSCO Kaye Shedlock' 53.48 71 ⇓P P 13 58 48.2 +0.3
baz=53
FRB Frobisher Bay 53.52 31 P P 13 58 46.8 -0.8
FRB Frobisher Bay 53.52 31 P P 13 58 46.8 -0.8
comp=Z,2.6nm,0.4s,baz=332,slow=8.3,SNR=9.2
ZALV Zalesovo Beam 53.60 313 LR LR 14 23 12.1
comp=Z,52nm,18.6s,baz=70,slow=38
T25A Trinidad 53.63 74 ⇑P P 13 58 49.2 +0.1
baz=54,SNR=5.5
Y21A Point of Rocks 53.70 79 ⇓P P 13 58 50.0 +0.3
baz=54
Z20A Nine Sixteen R 53.73 80 ⇑P P 13 58 50.1 +0.2
baz=54
LAZ Ladron 53.77 78 *e*P P 13 58 50.1 0.0
comp=Z,1.2nm,0.8s
X22A Bernardo 53.78 78 ⇑P P 13 58 50.5 +0.4
baz=54
ANMO Albuquerque 53.83 77 P P 13 58 51.5 +1.0
ANMO Albuquerque 53.83 77 P P 13 58 51.5 +1.0
comp=Z,1.5nm,0.8s,baz=328,slow=9.3,SNR=4.0
O29A 4D Ranch, Culb 53.84 69 ⇑P P 13 58 50.4 -0.1
baz=54,SNR=7.0
R27A Eads 53.85 72 ⇑P P 13 58 50.4 -0.2
baz=54,SNR=7.4
W23A Werner Place, 53.87 77 ⇑P P 13 58 50.6 -0.3
baz=54
S26A Kim 53.88 73 ⇓P P 13 58 50.6 -0.2
baz=54
Q28A Sharon Springs 53.92 70 ⇓P P 13 58 51.4 +0.4
baz=54
V24A Rampart Ranch, 54.03 76 ⇑P P 13 58 52.4 +0.3
baz=54
EYMN Ely 54.04 56 *e*P P 13 58 49.8 -2.0
comp=Z,3.9nm,0.8s
120A U Bar Ranch, L 54.09 81 ⇑P P 13 58 52.8 +0.4
baz=54
T26A Comanche Natio 54.10 73 ⇑P P 13 58 52.2 -0.3
baz=54
P29A Atwood 54.10 69 ⇑P P 13 58 52.4 0.0
baz=54,SNR=6.7
U25A Circle Dot Ran 54.11 75 ⇓P P 13 58 52.6 0.0
baz=54
S27A Las Animas 54.18 72 ⇓P P 13 58 53.2 +0.2
baz=54
O30A MW Ranch, Wils 54.24 68 ⇓P P 13 58 53.8 +0.4
baz=54
BNM Barren Site 54.25 78 *e*P P 13 58 53.4 -0.3
comp=Z,9.8nm,1.5s
W24A Lazy 6 Ranch, 54.29 76 ⇑P P 13 58 54.1 +0.1
baz=54
V25A Rancho No Teng 54.36 75 ⇓P P 13 58 54.5 +0.1
baz=54
U26A Atchley Ranch, 54.52 74 ⇓P P 13 58 55.8 +0.2
baz=54
Q29A Oakley 54.54 70 ⇓P P 13 58 55.6 0.0
baz=54
P30A Selden 54.54 69 ⇓P P 13 58 55.6 +0.1
baz=54,SNR=5.8
220A Playas Peak, P 54.59 82 ⇓P P 13 58 56.1 0.0
baz=54
121A Cookes Peak, D 54.62 80 ⇓P P 13 58 56.2 -0.1
baz=54
Z22A Elephant Butte 54.64 79 ⇓P P 13 58 56.4 -0.1
baz=54
X24A Lazy VL Ranch, 54.71 77 ⇓P P 13 58 57.3 +0.3
baz=54
R29A Marienthal 54.75 71 ⇓P P 13 58 57.2 +0.2
baz=55
Y23A Lovelace Mesa, 54.75 78 ⇑P P 13 58 57.5 +0.2
baz=55
S28A Manter 54.84 72 ⇓P P 13 58 58.2 +0.4
baz=55
W25A X Bar L Ranch, 54.87 76 ⇑P P 13 58 58.6 +0.5
baz=55
V26A Tequesquite Ra 54.89 75 ⇓P P 13 58 58.5 +0.3
baz=55
GTA Gaotai 54.95 291 *e*P P 13 58 59.8 +1.2
GTA pP **pP** 13 59 11.0 -1.2
GTA sP **sP** 13 59 15.0 -2.9
GTA pmax pmax
comp=Z,2.0nm,0.8s
T28A Walsh 55.02 72 ⇓P P 13 58 58.9 -0.3
baz=55
P31A Stockton 55.06 69 ⇑P P 13 58 59.4 +0.1
baz=55
Y24A Capitan 55.13 78 ⇑P P 13 59 00.0 0.0
baz=55,SNR=8.4
R30A Dighton 55.35 70 ⇓P P 13 59 01.5 +0.1
baz=55,SNR=10
W26A Owens Ranch, T 55.37 75 ⇓P P 13 59 01.8 +0.1
baz=55
Q31A Ellis 55.39 69 ⇓P P 13 59 01.8 +0.1
baz=55
Z24A Sheeppen Canyo 55.58 78 ⇑P P 13 59 03.1 -0.1
baz=55
Y25A Mesa, Roswell 55.59 77 ⇓P P 13 59 03.6 +0.3
baz=55
S30A Montezuma 55.66 71 ⇑P P 13 59 04.2 +0.6
baz=55
X26A CR and CF Fran 55.71 76 ⇓P P 13 59 04.2 +0.1
baz=56
R31A Burdett 55.79 70 ⇑P P 13 59 04.5 0.0
baz=56
124A Stringfield Ra 55.95 79 ⇑P P 13 59 05.9 -0.1
baz=56
Z25A Roswell 56.01 78 ⇑P P 13 59 06.4 +0.1
baz=56
Y26A Elida 56.12 76 ⇑P P 13 59 07.2 +0.1
baz=56
V29A Stinnett 56.21 73 ⇑P P 13 59 06.5 -1.1
baz=56
224A Cornudas Mount 56.34 79 ⇑P P 13 59 09.1 +0.4
baz=56
Z26A Caprock 56.47 77 ⇓P P 13 59 09.8 +0.2
baz=56
125A Gardner Draw, 56.47 78 ⇓P P 13 59 09.8 +0.2
baz=56
T31A Randall Ranch, 56.49 71 ⇓P P 13 59 09.8 +0.2
baz=56
Y27A Causey 56.55 76 ⇑P P 13 59 10.2 +0.1
baz=56
W29A Amraillo 56.64 74 ⇓P P 13 59 10.7 0.0
baz=56
MNTX Cornudas Mount 56.68 80 *e*P P 13 59 09.9 -1.0
comp=Z,3.8nm,1.2s
MSTX Muleshoe 56.73 76 ⇑P P 13 59 11.4 0.0
baz=57
Z27A Tatum 56.91 77 ⇑P P 13 59 12.6 0.0
baz=57
325A Bean Ranch, Si 57.16 79 ⇑P P 13 59 14.6 0.0
baz=57
226B Tecolote Peak, 57.17 78 ⇑P P 13 59 14.8 +0.3
baz=57
V31A Spring Creek L 57.28 72 ⇓P P 13 59 15.3 +0.1
baz=57
425A Indio Mountain 57.55 80 ⇑P P 13 59 17.3 0.0
baz=57
X30A Coker Ranch, T 57.56 74 ⇓P P 13 59 17.3 +0.1
baz=57
W31A Holland Ranch, 57.62 73 ⇓P P 13 59 18.2 +0.6
baz=57
326A Caldwell Ranch 57.81 79 ⇓P P 13 59 19.0 0.0
baz=58
Y30A Stafford Cattl 57.94 75 ⇓P P 13 59 19.9 +0.1
baz=58
ARCES ARCESS Array B 58.10 350 P P 13 59 20.1 -0.3
ARCES ARCESS Array B 58.10 350 P P 13 59 20.1 -0.3
comp=Z,1.3nm,0.5s,baz=30,slow=9.8,SNR=5.8
ARCES LR LR 14 25 50.7
comp=Z,107nm,18.1s,baz=261,slow=38
129A Stewart Farms, 58.20 76 ⇓P P 13 59 21.5 -0.2
baz=58
Z30A Sanderson Ranc 58.20 75 ⇓P P 13 59 21.4 -0.3
baz=58
426A McDonald Obser 58.23 79 ⇓P P 13 59 21.7 -0.4
baz=58
CD2 Chengdu 58.30 281 *e*P P 13 59 17.1 -5.3
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,80nm,4.8s
328A Wristen Ranch, 58.48 78 ⇑P P 13 59 23.8 +0.1
baz=58
427A Hayter Ranch, 58.49 79 ⇑P P 13 59 23.4 -0.3
baz=58
KURK Kurchatov 58.59 313 *e*P P 13 59 24.1 +0.1
KURK pmax pmax
comp=Z,4.0nm,1.2s
526A Mary Lane Ranc 58.61 80 ⇑P P 13 59 24.2 -0.5
baz=58
WMOK Wichita Mounta 58.62 72 *e*P P 13 59 23.7 -0.9
WMOK pmax pmax
comp=Z,3.0nm,0.7s
WMOK Wichita Mounta 58.62 72 *e*P P 13 59 23.7 -0.9
comp=Z,2.9nm,0.7s
Y32A R-V Farms, Ver 58.73 73 ⇓P P 13 59 25.2 -0.1
baz=58,SNR=5.9
WMQ Urumqi 58.81 302 *e*P P 13 59 24.9 -0.9
WMQ pP **pP** 13 59 40.0 +0.5
WMQ sP **sP** 13 59 47.5 +2.3
WMQ PcP **PcP** 14 00 14.0 -0.9
WMQ *e*S **S** 14 07 25.0 -2.4
WMQ ScS **ScS** 14 09 05.0 -6.2
WMQ pmax pmax
comp=Z,7.0nm,0.6s
WMQ pmax pmax
comp=Z,130nm,4.5s
WMQ LR LR
comp=N,470nm,14.6s
WMQ LR LR
comp=E,260nm,16.8s
WMQ LR LR
comp=Z,360nm,23.2s
626A Big Bend Ranch 58.94 80 ⇑P P 13 59 26.4 -0.6
baz=59
230A Sterling City 59.17 76 ⇓P P 13 59 28.3 -0.1
baz=59
Z32A Haskell 59.19 74 ⇑P P 13 59 28.1 -0.3
baz=59
528A Cox Ranch, San 59.35 79 ⇓P P 13 59 29.5 -0.2
baz=59
TXAR Lajitas Array 59.38 80 P P 13 59 28.9 -1.0
TXAR Lajitas Array 59.38 80 P P 13 59 28.9 -1.0
comp=Z,1.0nm,0.5s,baz=307,slow=4.6,SNR=12
TXAR LR LR 14 23 55.5
comp=Z,54nm,18.4s,baz=175,slow=35
627A Terlingua Ranc 59.47 80 ⇓P P 13 59 30.7 +0.1
baz=59
MKAR Makanchi Array 59.55 308 P P 13 59 31.0 +0.1
MKAR *PP **pP** 13 59 45.5 +0.9
MKAR pmax pmax
comp=Z,2.0nm,0.4s
MKAR pmax pmax
comp=Z,3.0nm,0.6s
MKAR Makanchi Array 59.55 308 P P 13 59 30.9 +0.1
MKAR pP **pP** 13 59 45.5 +0.9
MKAR Makanchi Array 59.55 308 P P 13 59 30.9 +0.1
comp=Z,1.9nm,0.4s,baz=50,slow=6.2,SNR=32
MKAR pP **pP** 13 59 45.5 +0.9
comp=Z,3.1nm,0.6s,baz=56,slow=7.1,SNR=11
ABTX Abilene, Hawle 59.56 75 ⇓P P 13 59 31.2 +0.2
baz=59
429A Davenport Ranc 59.58 78 ⇑P P 13 59 31.2 0.0
baz=59
TUL1 Tulsa 59.59 69 ⇑P P 13 59 31.3 +0.1
baz=59
GYA Guiyang 59.62 275 *e*P P 13 59 27.0 -4.7
GYA pmax pmax
comp=Z,10.0nm,1.0s
529A Stev Forest Ra 59.72 79 ⇓P P 13 59 31.5 -0.7
baz=60
628A Black Gap, Mar 59.76 80 ⇓P P 13 59 32.1 -0.4
baz=60,SNR=6.2
430A Baggett Ranch, 59.87 77 ⇓P P 13 59 33.0 -0.2
baz=60
331A San Angelo 60.00 76 ⇓P P 13 59 33.9 -0.2
baz=60
232A Coleman 60.07 75 ⇑P P 13 59 34.2 -0.3
baz=60
530A J-C Ranch, Com 60.25 78 ⇑P P 13 59 35.6 -0.2
baz=60,SNR=8.4
431A Sonora 60.32 77 ⇓P P 13 59 35.9 -0.5
baz=60
332A Millersview 60.36 76 ⇓P P 13 59 36.3 -0.3
baz=60
SCHQ Schefferville 60.55 38 P P 13 59 36.5 -1.1
SCHQ Schefferville 60.55 38 P P 13 59 36.5 -1.1
comp=Z,2.7nm,0.5s,baz=308,slow=6.8,SNR=9.4
SCHQ LR LR 14 27 20.9
comp=Z,203nm,19.5s,baz=293,slow=38
432A Menard 60.69 76 ⇑P P 13 59 38.4 -0.5
baz=60
531A Rocksprings 60.73 77 ⇑P P 13 59 38.8 -0.3
baz=61
631A Perdido Creek 61.24 78 ⇓P P 13 59 42.0 -0.5
baz=61
WHTX Lake Whitney 61.32 74 ⇑P P 13 59 43.2 +0.1
baz=61
SFIN Scholer Farm 61.44 60 ⇓P P 13 59 43.1 -0.7
baz=61
HNR Honiara 62.88 202 LR LR 14 21 16.8
comp=Z,131nm,20.0s,baz=201,slow=30
KMI Kunming 63.03 277 P P 13 59 51.2 -3.7
KMI pP pP 14 00 06.2 -2.5
KMI sP sP 14 00 12.0 -2.3
KMI S S 14 08 13.2 -8.7
KMI pmax pmax
comp=Z,5.0nm,1.2s
KMI pmax pmax
comp=Z,41nm,3.1s
KMI LR LR
comp=N,68nm,17.1s
KMI LR LR
comp=E,100nm,22.1s
KMI LR LR
comp=Z,87nm,21.1s
FINES FINESS Array B 65.75 347 P P 14 00 10.6 -1.2
FINES FINESS Array B 65.75 347 P P 14 00 10.6 -1.2
comp=Z,1.3nm,0.5s,baz=0.8,slow=14,SNR=5.6
TKL Tuckaleechee C 66.65 62 P P 14 00 18.4 +0.4
TKL Tuckaleechee C 66.65 62 P P 14 00 18.4 +0.4
comp=Z,1.1nm,0.4s,baz=259,slow=3.9,SNR=4.0
EKS2 Erkin-Say 66.72 310 *e*P P 14 00 19.4 +0.9
EKS2 pmax pmax
comp=Z,4.0nm,0.7s
EKS2 Erkin-Say 66.72 310 *e*P P 14 00 19.4 +0.9
comp=Z,3.5nm,0.7s
AKTO Aktyubinsk 67.38 324 P P 14 00 22.6 +0.2
AKTO pmax pmax
comp=Z,1.0nm,0.4s
AKTO Aktyubinsk 67.38 324 P P 14 00 22.6 +0.2
AKTO Aktyubinsk 67.38 324 P P 14 00 22.6 +0.2
comp=Z,0.7nm,0.4s,baz=52,slow=12,SNR=3.6
NB2 NORSAR Subarra 67.71 354 P P 14 00 23.8 -0.6
comp=Z,6.6nm,1.2s,baz=8.1,slow=6.5
NOA NORSAR Array B 67.71 354 P P 14 00 23.7 -0.7
NOA NORSAR Array B 67.71 354 P P 14 00 23.7 -0.7
comp=Z,2.2nm,0.8s,baz=8.4,slow=6.4,SNR=7.5
KSH Kashi 68.00 306 *e*P P 14 00 31.4 +4.8
KSH *ep*P pP 14 00 47.8 +7.2
KSH *es*P sP 14 00 52.9 +6.7
KSH *e*PcP **PcP** 14 00 55.0 +2.4
KSH *e*S S 14 09 29.2 +7.1
KSH pmax pmax
comp=Z,25nm,1.2s
KSH pmax pmax
comp=Z,81nm,2.7s
KSH LR LR
comp=N,240nm,5.5s
KSH LR LR
comp=E,150nm,4.4s
KSH LR LR
comp=Z,280nm,4.9s
OBN Obninsk 69.74 339 P P 14 00 37.1 +0.2
OBN pmax pmax
comp=Z,4.0nm,0.7s
OBN MLR MLR
comp=Z,100nm,24.0s
CMAR Chiang Mai Arr 70.31 275 P P 14 00 41.4 +0.3
CMAR pP **pP** 14 00 56.7 +1.6
CMAR Chiang Mai Arr 70.31 275 P P 14 00 41.4 +0.3
comp=Z,0.8nm,0.8s,baz=27,slow=7.2,SNR=5.4
CMAR pP **pP** 14 00 56.7 +1.6
comp=Z,1.0nm,0.7s,baz=28,slow=6.5,SNR=4.2
DPC Dobruska-Polom 77.84 349 *e*P P 14 01 24.7 +0.1
DPC *e* 14 01 41.5
DPC Dobruska-Polom 77.84 349 *e*P P 14 01 24.7 +0.1
DPC *ex* x 14 01 41.5
KBZ Khabaz 78.37 330 LR LR 14 41 17.5
comp=Z,74nm,19.8s,baz=223,slow=40
GERES GERESS Array B 79.61 351 P P 14 01 33.6 -0.8
GERES GERESS Array B 79.61 351 P P 14 01 33.6 -0.8
comp=Z,0.6nm,0.5s,baz=28,slow=6.0,SNR=9.2
GERES LR LR 14 41 03.5
comp=Z,75nm,20.4s,baz=301,slow=39
LDF La Druitiere 80.54 0 *e*P P 14 01 38.7 -0.6
comp=Z,6.1nm,0.4s
LDF La Druitiere 80.54 0 *e*P P 14 01 38.7 -0.6
LDF pmax pmax
comp=Z,6.0nm,0.4s
LDF La Druitiere 80.54 0 *e*P P 14 01 38.7 -0.6
comp=Z,6.1nm,0.4s
GRR Gorron 80.75 1 *e*P P 14 01 40.1 -0.3
comp=Z,8.2nm,0.7s
GRR Gorron 80.75 1 *e*P P 14 01 40.1 -0.3
GRR pmax pmax
comp=Z,8.0nm,0.7s
GRR Gorron 80.75 1 *e*P P 14 01 40.1 -0.3
comp=Z,8.2nm,0.7s
ROSF Rostrenen 80.76 2 *e*P P 14 01 40.3 -0.1
ROSF Rostrenen 80.76 2 *e*P P 14 01 40.3 -0.1
ROSF Rostrenen 80.76 2 *e*P P 14 01 40.3 -0.1
SGMF Saint Gilles 80.86 2 *e*P P 14 01 41.4 +0.4
comp=Z,7.4nm,0.5s
SGMF Saint Gilles 80.86 2 *e*P P 14 01 41.4 +0.4
SGMF pmax pmax
comp=Z,7.0nm,0.5s
SGMF Saint Gilles 80.86 2 *e*P P 14 01 41.4 +0.4
comp=Z,7.4nm,0.5s
WRA Warramunga Arr 81.42 223 P P 14 01 43.4 -0.8
WRA Warramunga Arr 81.42 223 P P 14 01 43.4 -0.8
comp=Z,0.9nm,0.9s,baz=32,slow=6.0,SNR=4.6
SMF Signal de Mont 82.44 357 *e*P P 14 01 49.5 +0.1
comp=Z,4.7nm,0.6s
SMF Signal de Mont 82.44 357 *e*P P 14 01 49.5 +0.1
SMF pmax pmax
comp=Z,5.0nm,0.6s
SMF Signal de Mont 82.44 357 *e*P P 14 01 49.5 +0.1
comp=Z,4.7nm,0.6s
FITZ Fitzroy Crossi 83.82 231 P P 14 01 56.7 +0.1
FITZ Fitzroy Crossi 83.82 231 P P 14 01 56.7 +0.1
comp=Z,2.0nm,0.5s,baz=42,slow=4.8,SNR=13
BRTR Keskin Array B 84.77 335 P P 14 02 01.6 0.0
BRTR Keskin Array B 84.77 335 P P 14 02 01.6 0.0
comp=Z,0.6nm,0.7s,baz=111,slow=6.8,SNR=3.8
BRTR LR LR 14 47 29.1
comp=Z,36nm,19.0s,baz=270,slow=41

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	84.90	222	P	P	14 02 02.9	+0.7
ASAR	Alice Springs	84.90	222	P	P	14 02 02.9	+0.7
	comp=Z,0.5nm,0.6s,baz=26,slow=5.5,SNR=10						
RPZ	Rata Peaks	94.90	187	LR	LR	14 40 17.7	
	comp=Z,238nm,18.3s,baz=215,slow=32						
TORD	Torodi Ar. Bea	115.87	358	PKP	PKPdf	14 08 09.3	-0.7
TORD	Torodi Ar. Bea	115.87	358	PKP	PKPdf	14 08 09.3	-0.7
	comp=Z,0.2nm,0.5s,baz=337,slow=1.9,SNR=4.3						
PLCA	Paso Flores	131.62	107	PKP	PKPdf	14 08 40.4	+1.0
PLCA	Paso Flores	131.62	107	PKP	PKPdf	14 08 40.4	+1.0
	comp=Z,1.4nm,0.8s,baz=281,slow=5.7,SNR=3.2						
LBTB	Lobatse	147.31	314	ePKPab	PKPab	14 09 12.1	-0.5
BOSA	Boshof	150.53	310	PKPbc	PKPbc	14 09 18.6	-0.1
BOSA	Boshof	150.53	310	PKPbc	PKPbc	14 09 18.6	-0.1
	comp=Z,1.2nm,0.5s,baz=289,slow=17,SNR=6.3						

IDC 11 13:59:29.6±8.6**, 3°.42N×122°.75E, h518**km±113km**, mb3.2**/5**, mb1 3.4**/5**, mb1mx2.9**/25**, mbtmp3.2**/5**, Error ellipse: s-maj=108.7km s-min=23.9km az=59.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.57	173	P	P	14 03 41.0	-0.5
	1.3nm,0.5s,baz=5.0,slow=8.7,SNR=7.5						
WRA	Warramunga Arr	25.86	154	P	P	14 04 19.2	-0.6
	2.3nm,0.3s,baz=336,slow=9.6,SNR=44						
ASAR	Alice Springs	29.03	159	P	P	14 04 47.9	+0.3
	1.2nm,0.4s,baz=336,slow=7.8,SNR=73						
STKA	Stephens Creek	39.41	154	P	P	14 06 15.0	+0.4
	7.1nm,1.1s,baz=328,slow=8.9,SNR=8.8						
MKAR	Makanchi Array	55.61	327	P	P	14 08 16.1	+0.1
	1.0nm,0.3s,baz=122,slow=8.5,SNR=16						
MKAR				PcP	PcP	14 09 07.1	-1.0
	0.2nm,0.7s,baz=131,slow=4.5,SNR=3.9						

ISK 11 14:08:01.3, 38°.28N×38°.73E, h7km, MD2.6
DDA 11 14:08:02.2, 38°.35N×38°.69E, h7km, MD2.8
CSEM 11 14:08:02.1±0.3, 38°.28N×38°.73E, h2km, MD2.6, Error ellipse: s-maj=10.8km s-min=5.9km az=168.0
ISC 11 14:08:02.1±1.1**, 38°.29N**±0°.04×**38°.73E**±0°.03**, h9**km±12km**, n13, σ0s.54**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MYA	Malataya	0.24	280	ePG	Pg	14 08 06.9	-0.1
MYA				eSG	Sg	14 08 10.4	+0.1
MYA	Malataya	0.24	280	ePg	Pg	14 08 06.9	-0.1
MYA				eSg	Sg	14 08 10.4	+0.1
ELZG	Elazig	0.29	44	i Pg	Pg	14 08 08.2	+0.1
ELZG				i Sg	Sg	14 08 12.4	+0.3
SVRC	Sivrice-ELAZID	0.47	78	ePG	Pg	14 08 10.3	-0.9
SVRC				eSG	Sg	14 08 18.0	+0.6
SVRC	Sivrice-ELAZID	0.47	78	ePg	Pg	14 08 10.3	-0.9
SVRC				eSg	Sg	14 08 18.0	+0.6
AKCD	Akcadag	0.63	271	eP	Pg	14 08 14.2	-0.2
AKCD				eS	Sg	14 08 22.8	+0.2
AKCD	Akcadag	0.63	271	eP	Pg	14 08 14.2	-0.2
AKCD				eS	Sg	14 08 22.8	+0.2
PTK	Pertek	0.80	41	ePG	Pg	14 08 16.9	-0.7
PTK				eSG	Sb	14 08 29.1	-0.3
PTK	Pertek	0.80	41	ePg	Pg	14 08 16.9	-0.7
PTK				eSg	Sb	14 08 29.1	-0.3
URFA	Urfa	0.85	175	ePG	Pg	14 08 18.2	-0.2
URFA	Urfa	0.85	175	ePg	Pg	14 08 18.2	-0.2
BINT	Bingol	1.50	66	ePn	Pg	14 08 32.1	+1.1
BNGB	Bingˆ¶l	1.69	65	ePN	Pn	14 08 32.1	+0.2

ISCJB 11 14:17:50.3±0.4, 23°.14N±0°.02×121°.51E±0°.03, h18km±6km, Error ellipse: s-maj=4.2km s-min=3.6km az=10.7
TAP 11 14:17:51.0, 23°.19N×121°.39E, h19km, ML3.2, C
JMA 11 14:17:51.3±0.5, 23°.08N×121°.50E, h67km
ISC 11 14:17:50.6±0.9**, 23°.16N**±0°.02×**121°.46E**±0°.03**, h19**km±2km**, n46, σ0s.93**/74**, 9C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHKT	Chengkung	0.10	237	⇓iP	Pg	14 17 55.1	+0.6
	baz=189						
CHKT				i S	Sg	14 17 58.0	+0.9
	baz=189						
TWF1	Yuli	0.25	322	⇑iP	Pb	14 17 56.2	0.0
	baz=332						
TWF1				S	Sb	14 18 00.2	+0.3
	baz=332						
EHY	Hungye	0.37	340	⇑iP	Pg	14 17 58.2	-0.2
	baz=336						
EHY				eS	Sg	14 18 03.3	-0.5
	baz=336						
ELDTW	Lidau	0.41	275	⇑iP	Pg	14 17 58.1	-1.1
	baz=270						
ELDTW				S	Sg	14 18 02.9	-2.1
	baz=270						
TWG	Pinlang	0.49	227	⇑iP	Pg	14 18 00.1	-0.5
	baz=231						
TWG				S	Sg	14 18 06.9	-0.4
	baz=231						
TTN	Taitung	0.49	216	eP	Pb	14 18 01.5	+0.8
	baz=223						
TTN				eS	Sn	14 18 10.7	+0.1
	baz=223						
YUS	Yu-Shan	0.57	305	⇑iP	Pb	14 18 01.4	-0.8
	baz=300						
YUS				eS	Sb	14 18 08.0	-2.1
	baz=300						
ESL	Shilin	0.65	358	P	Pb	14 18 03.6	+0.3
	baz=352						
ESL				eS	Sg	14 18 12.8	+0.5
	baz=352						
ALS	Alishan	0.70	300	i P	Pb	14 18 03.6	-0.6
	baz=293						
ALS				eS	Sb	14 18 12.2	-1.4
	baz=293						
ECL	Taimali	0.73	220	eP	Pb	14 18 03.5	-1.1
	baz=216						
WTP	Ta-pu	0.79	277	⇑iP	Pb	14 18 05.3	-0.4
	baz=274						
WTP				i S	Sb	14 18 15.5	-0.4
	baz=274						
CHN4	Tsaushan	0.82	284	⇑iP	Pb	14 18 06.0	-0.2
	baz=282						
CHN4				S	Sg	14 18 17.5	-0.1
	baz=282						
CHN5	Tsauling	0.84	301	⇑iP	Pb	14 18 06.5	-0.1
	baz=301						
CHN5				S	Sn	14 18 19.3	-0.1
	baz=301						
CHN1	Nanshi	0.86	272	⇑iP	Pb	14 18 06.9	0.0
	baz=270						
CHN1				S	Sg	14 18 18.9	+0.1
	baz=270						
SMLT	Sun Moon Lake	0.89	325	eP	Pb	14 18 07.0	-0.5
	baz=331						
SMLT				eS	Sb	14 18 17.9	-1.0
	baz=331						
TWK	Hsinying	0.90	277	P	Pb	14 18 07.2	-0.4
	baz=275						
TWK				S	Sg	14 18 20.0	-0.2
	baz=275						
TWD	Chiawan	0.93	8	eP	Pn	14 18 08.7	+0.1
	baz=359						
TWD				eS	Sn	14 18 22.2	+0.9
	baz=359						
TYC	Yuchr	0.93	323	eP	Pb	14 18 08.1	0.0
	baz=336						
TYC				eS	Sg	14 18 21.1	+0.2
	baz=336						
EAST	Anshuo	0.96	216	eP	Pb	14 18 07.1	-1.5
	baz=216						
WGK	Gukeng	0.98	303	eP	Pn	14 18 09.3	0.0
	baz=302						
WGK				eS	Sg	14 18 22.8	+0.2
	baz=302						
SGLT	Jiouru	0.99	245	eP	Pg	14 18 11.8	+1.9
	baz=243						
WHF	Hehuan Shan	1.00	350	eP	Pb	14 18 09.1	-0.4
	baz=2.0						
CHY	Chiayi	1.01	290	eP	Pb	14 18 09.2	-0.3
	baz=289						
CHY				eS	Sb	14 18 23.1	+0.7
	baz=289						
WNT	Mingjian	1.01	315	eP	Pn	14 18 10.0	+0.3
	baz=315						
WNT				eS	Sg	14 18 23.8	+0.2
	baz=315						
CHN3	Shinhua	1.01	266	eP	Pn	14 18 09.9	+0.1
	baz=272						
CHN3				S	Sg	14 18 26.1	+2.4
	baz=272						
TWM1	Shoushan	1.01	251	eP	Pg	14 18 10.5	+0.2
	baz=250						
TWM1				eS	Sg	14 18 27.8	+4.1
	baz=250						
SCZT	Fangliau	1.10	225	P	Pn	14 18 11.1	+0.1
	baz=222						
LAY	Lan-yu	1.12	176	eP	Pn	14 18 10.1	-1.1
	baz=157						
CHN8	Yiju	1.17	280	eP	Pb	14 18 12.1	0.0
	baz=279						
CHN8				S	Sg	14 18 28.5	0.0
	baz=279						
SCLT	Jiali	1.17	271	eS	Sg	14 18 29.8	+1.3
	baz=270						
WSF	Szhu	1.23	293	eS	Sn	14 18 29.3	+0.3
	baz=292						
NNS	Nan Shan	1.28	356	eP	Pb	14 18 14.8	+0.6
	baz=8.0						
ENA	Nanau	1.29	11	eP	Pn	14 18 12.4	-1.1
	baz=358						
WTCT	Ta-ch’eng	1.29	303	eS	Sg	14 18 31.7	-0.8
	baz=302						
TWQ1	Liyutan	1.34	332	eP	Pb	14 18 16.0	+0.9
	baz=331						
TWQ1				eS	Sg	14 18 34.3	+0.1
	baz=331						
TWK1	Hengchun	1.35	207	eP	Pg	14 18 16.8	0.0
	baz=189						
NSY	Sanyi	1.41	333	eP	Pn	14 18 15.5	+0.3
	baz=332						
NSY				eS	Sg	14 18 35.9	-0.3
	baz=332						
ENTT	Nioudou	1.48	4	eP	Pb	14 18 17.2	-0.3
	baz=2.0						
NSK	Sanguang	1.52	356	eP	Pn	14 18 17.4	+0.7
	baz=9.0						
TWE	Neicheng	1.57	7	eP	Pn	14 18 18.2	+0.8
	baz=5.0						
YOJ	Yonaguni jima	1.92	47	P	Pn	14 18 22.8	+0.5
HATJ	Hateruma jima	2.33	67	eS	Sn	14 18 55.1	-0.8
IRIF	Iriomote-Funau	2.39	60	eS	Sn	14 18 57.8	+0.4
JKRS	Kuro-shima	2.57	65	P	Pn	14 18 31.7	+0.5
JKRS				eS	Sn	14 19 02.1	+0.2
JIJ	Ishigaki jima	2.73	63	P	Pn	14 18 33.6	+0.2
JIJ				eS	Sn	14 19 04.9	-1.1
JTJ	Tarama	3.31	63	P	Pn	14 18 41.8	+0.4
JTJ				eS	Sn	14 19 20.9	+0.7

ISCJB 11 14:28:53.3±0.6, 37°.46N±0°.03×22°.30E±0°.05, h8km±5km, Error ellipse: s-maj=6.6km s-min=4.7km az=10.1
ATH 11 14:28:53.2, 37°.50N×22°.32E, h5km, MD3.0/4
THE 11 14:28:53.7, 37°.45N×22°.31E, h7km±1km, ML2.3/2, Error ellipse: s-maj=1.7km s-min=0.3km az=127.0
CSEM 11 14:28:53.5±0.2, 37°.48N×22°.30E, h2km, ML2.3/2, Error ellipse: s-maj=4.4km s-min=3.2km az=102.0
ISC 11 14:28:53.0±1.0**, 37°.48N**±0°.03×**22°.31E**±0°.03**, h8**km±9km**, n22, σ0s.50**/34**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLX	Vlachokerasia	0.12	153	P	Pg	14 28 55.8	0.0
VLX				S	Sg	14 28 57.7	0.0
VLX	Vlachokerasia	0.12	153	P	Pg	14 28 55.8	0.0
VLX				S	Sg	14 28 57.7	0.0
ITM	Ithomi	0.43	226	ePB	Pg	14 29 01.9	+0.6
ITM				eSB	Sb	14 29 08.9	-0.5
ITM	Ithomi	0.43	226	ePb	Pg	14 29 01.9	+0.6
ITM				eSb	Sb	14 29 08.9	-0.5
GUR	Goura	0.46	3	P	Pb	14 29 03.0	-0.5
GUR				S	Sb	14 29 10.2	-0.3
GUR	Goura	0.46	3	P	Pb	14 29 03.0	-0.5
GUR				S	Sb	14 29 10.2	-0.3
DYR	Agios Nikonas	0.71	178	P	Pg	14 29 06.5	-0.3
DYR				S	Sb	14 29 17.2	-0.6
DYR	Agios Nikonas	0.71	178	P	Pg	14 29 06.5	-0.3
DYR				S	Sb	14 29 17.2	-0.6
PYL	PYLOS	0.74	218	P	Pg	14 29 07.4	+0.2
PYL				S	Sg	14 29 17.6	+0.8
PYL	PYLOS	0.74	218	P	Pg	14 29 07.4	+0.2
PYL				S	Sg	14 29 17.6	+0.8
DID	Didima	0.74	88	P	Pg	14 29 07.7	+0.4
DID				S	Sb	14 29 18.2	-0.3
DID	Didima	0.74	88	P	Pg	14 29 07.7	+0.4
DID				S	Sb	14 29 18.2	-0.3
LTK	Loutraki	0.75	44	P	Pg	14 29 07.9	+0.3
LTK	Loutraki	0.75	44	P	Pg	14 29 07.9	+0.3
LAKA	Lakka	0.80	341	P	Pb	14 29 09.2	-0.1
LAKA	Lakka	0.80	341	P	Pb	14 29 09.2	-0.1
RLS	Riolos of Patr	0.88	311	ePB	Pg	14 29 10.2	+0.2
RLS	Riolos of Patr	0.88	311	ePb	Pg	14 29 10.2	+0.2
VLI	Veliai	0.91	146	ePG	Pg	14 29 10.7	+0.2
VLI	Veliai	0.91	146	ePg	Pg	14 29 10.7	+0.2
KYTH	Kithira	1.33	154	ePB	Pg	14 29 19.7	+1.1
KYTH	Kithira	1.33	154	ePb	Pg	14 29 19.7	+1.1

MOS 11 14:29:03.3±1.4, 8°.04S×130°.38E, h33km, mb5.5/20, Error ellipse: s-maj=15.4km s-min=6.2km az=114.0
NEIC 11 14:29:04.8±0.3, 8°.05S×130°.29E, mb5.0/20, Error ellipse: s-maj=10.3km s-min=6.3km az=67.0
IDC 11 14:29:04.4±4.0, 7°.82S×130°.36E, h19km±24km, mb4.7/17, mb1 4.6/20, mb1mx4.6/24, mbtmp4.6/20, ML3.7/3, MS4.0/10, Ms1 4.0/10, ms1mx3.5/29, Error ellipse: s-maj=20.6km s-min=11.0km az=75.0
ISCJB 11 14:29:05.2±0.6, 7°.92S±0°.03×130°.49E±0°.04, h47km±5km, mb5.0/71, MS4.1/14, Error ellipse: s-maj=6.1km s-min=4.4km az=162.0
AUST 11 14:29:05.6±0.8, 7°.95S×130°.49E, h30km, Error ellipse: s-maj=0.7km s-min=0.5km az=242.0
DJA 11 14:29:07.5±0.3, 8°S±2°×13°1E±°, h51km±5km, M4.8/34, mB5.2/18, mb5.1/34, MLv5.2/7, Mw(mB)4.6/18
BJI 11 14:29:10.7, 7°.26S×130°.25E, h71km, mB5.2/24, mb5.0/44, Ms4.9/14, Ms7 4.5/16
ISC 11 14:29:04.7±0.4**, 7°.99S**±0°.04×**130°.43E**±0°.05**, h31**km±2km**, h30**km**:pP-P, n233, σ1s.75**/242**, mb5.1**/71**, MS4.3**/14**, 5C-5D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	4.81	332	P	Pn	14 30 17.9	+2.8
AAI	Ambon	4.81	332	P	Pn	14 30 17.9	+2.8
	baz=4.8,SNR=11						
MSAI	Masohi	4.84	342	P	Pn	14 30 18.9	+3.3
MTN	Manton Dam	4.88	172	P	Pn	14 30 18.4	+2.4
	baz=4.9,SNR=109						
KDU	Kakadu	5.08	157	P	Pn	14 30 21.1	+2.3
	baz=5.1,SNR=1000						
FAKI	Fak Fak	5.35	20	P	Pn	14 30 22.3	-0.1
	252nm,0.7s,3µm1.1nm						
FAKI				S	Sn	14 31 18.1	-5.0
	252nm,0.7s,3µm1.1nm						
FAKI	Fak Fak	5.35	20	P	Pn	14 30 22.4	-0.1
	baz=5.3,SNR=22						
FAKI				S	Sn	14 31 19.7	-3.4
	baz=5.3,SNR=5.7						
SWI	Sorong	7.12	7	P	Pn	14 30 46.4	-0.5
	102nm,0.7s,4µm1.1nm						
SWI				S	Sn	14 32 00.1	-6.7
	102nm,0.7s,4µm1.1nm						
SWI	Sorong	7.12	7	P	Pn	14 30 46.4	-0.5
	baz=7.1,SNR=25						
RKPI	Ransiki, Papua	7.43	30	P	Pn	14 30 52.4	+1.2
	276nm,0.8s,2.0nm						
KNRA	Kununurra	7.82	192	P	Pn	14 30 57.7	+1.3
	baz=7.9,SNR=319						
KNRA				S	Sn	14 32 26.8	+2.9
	baz=7.9,SNR=4.0						
LBMI	Labuha	7.86	338	P	Pn	14 31 00.8	+3.8
	206nm,1.0s,3µm0.7nm						
MMRI	Maumere	8.13	265	P	Pn	14 31 03.3	+2.5
	126nm,0.9s,2µm						
BBSI	Bau Bau	8.19	287	P	Pn	14 31 06.6	+5.0
	149nm,1.0s,1µm						
TNTI	Ternate	9.22	341	P	Pn	14 31 15.7	0.0
	111nm,0.9s						
BASI	Baing, Sumba	9.98	256	P	Pn	14 31 29.8	+3.7
	278nm,0.8s						
WSI	Waingapu	10.15	260	P	Pn	14 31 34.1	+5.6
	393nm,0.5s,7µm						
WSI				S	Sn	14 33 20.4	-1.0
	393nm,0.5s,7µm						
WSI	Waingapu	10.15	260	P	Pn	14 31 35.5	+7.1
	baz=10,SNR=5.9						
WSI				S	Sn	14 33 20.8	-0.6
	baz=10,SNR=5.3						
LUWI	Luwuk	10.29	312	P	Pn	14 31 36.7	+6.4
	163nm,0.9s,1µm						
LUWI	Luwuk	10.29	312	P	Pn	14 31 36.9	+6.6
	baz=10,SNR=9.5						
SKSI	Soroako, Sulaw	10.55	300	P	Pn	14 31 40.6	+6.6
	37nm,1.1s,355nm						
BKSI	Bulukumba	10.58	284	P	Pn	14 31 38.9	+4.6
	39nm,1.2s,542nm						
KMSI	Cibinong	10.66	323	P	Pn	14 31 40.7	+5.3
	369nm,1.1s,3µm						
MNI	Manado	10.90	329	P	Pn	14 31 41.5	+2.8
	137nm,0.9s						
KAPI	Kappang	11.01	285	ePn	Pn	14 31 36.9	-3.4
KAPI	Kappang	11.01	285	P	Pn	14 31 42.7	+2.4
	30nm,1.6s						
KAPI	Kappang	11.01	285	Pn	Pn	14 31 40.3	0.0
	0.6nm,0.3s,baz=97,slow=11,SNR=2.0						
KAPI				LR	LR	14 35 58.0	
	comp=Z,308nm,21.3s,baz=122,slow=38						
WBSI	Waikabubak, Su	11.04	261	P	Pn	14 31 44.1	+3.5
	270nm,0.8s,2µm						
FITZ	Fitzroy Crossi	11.09	204	ePn	Pn	14 31 40.5	-0.8
FITZ				Sn	Sn	14 33 38.6	-5.6
FITZ				Lg	Lg	14 35 13.1	
FITZ	Fitzroy Crossi	11.09	204	Pn	Pn	14 31 40.5	-0.8
	25nm,0.3s,baz=32,slow=11,SNR=357						
FITZ				Sn	Sn	14 33 38.6	-5.6
	18nm,0.3s,baz=107,slow=22,SNR=8.0						
FITZ				Lg	Lg	14 35 13.1	
	baz=347,slow=14,SNR=1.4						
FITZ				LR	LR	14 36 48.3	
	comp=Z,311nm,20.2s,baz=32,slow=41						
FITZ	Fitzroy Crossi	11.09	204	P	Pn	14 31 40.3	-0.9
	baz=11,SNR=516						
FITZ				S	Sn	14 33 39.4	-4.8
	baz=11,SNR=8.0						
SPSI	Sidrap Palu	11.33	290	P	Pn	14 31 48.9	+4.3
	50nm,0.7s,621nm						
TTSI	Tana Toraja	11.65	294	P	Pn	14 31 57.4	+8.5
MRSI	Marisa	11.93	314	P	Pn	14 31 57.7	+4.9
	154nm,1.1s,1µm						
WRAB	Tennant Creek	12.47	163	eP	Pn	14 31 57.8	-2.4
WRAB	Tennant Creek	12.47	163	ePn	Pn	14 31 57.8	-2.4
WRAB	Tennant Creek	12.47	163	Pn	Pn	14 31 58.1	-2.1
	267nm,0.5s,SNR=36						
WRA	Warramunga Arr	12.47	163	Pn	Pn	14 31 58.1	-2.2
WRA				Sn	Sn	14 34 11.6	-6.7
WRA				Lg	Lg	14 35 42.7	
WRA	Warramunga Arr	12.47	163	Pn	Pn	14 31 58.1	-2.2
	6.9nm,0.3s,baz=348,slow=13,SNR=146						
WRA				Sn	Sn	14 34 11.6	-6.7
	8.9nm,0.3s,baz=343,slow=22,SNR=7.5						
WRA				Lg	Lg	14 35 42.7	
	baz=325,slow=36,SNR=2.9						
COEN	Coen	13.84	116	ePn	Pn	14 32 18.4	-0.5
COEN	Coen	13.84	116	P	Pn	14 32 18.5	-0.4
	baz=14,SNR=18						
QIS	Mount Isa	15.33	146	P	Pn	14 32 37.0	-2.0
	baz=15,SNR=22						
ASAR	Alice Springs	15.94	168	Pn	Pn	14 32 44.0	-2.9
ASAR				Sn	Sn	14 35 36.8	-6.1
ASAR				Lg	Lg	14 37 29.8	
ASAR				ScP	ScP	14 41 16.9	+0.5
ASAR	Alice Springs	15.94	168	Pn	Pn	14 32 44.0	-2.9
	2.1nm,0.3s,baz=342,slow=8.7,SNR=148						
ASAR				Sn	Sn	14 35 36.8	-6.1
	2.3nm,0.3s,baz=0.8,slow=28,SNR=6.3						
ASAR				Lg	Lg	14 37 29.8	
	0.5nm,0.3s,baz=344,slow=29,SNR=4.4						
ASAR				LR	LR	14 39 38.8	
	comp=Z,708nm,18.9s,baz=337,slow=39						
ASAR				ScP	ScP	14 41 16.9	+0.5
	0.3nm,0.3s,baz=336,slow=1.3,SNR=4.5						
JAGI	Jajag, Banyuwa	16.12	267	P	Pn	14 32 49.1	-0.1
	45nm,0.6s						
JAGI	Jajag, Banyuwa	16.12	267	P	Pn	14 32 47.7	-1.6
	baz=16,SNR=24						
JAGI				S	Sn	14 35 53.1	+5.9
	baz=16,SNR=3.3						
CTBH	Cotabato--PC H	16.32	338	⇓iP	P	14 32 54.8	+0.4
PMG	Port Moresby	16.60	96	Pn	P	14 32 56.8	-0.8
PMG	Port Moresby	16.60	96	Pn	P	14 32 56.8	-0.8
	0.8nm,0.3s,baz=330,slow=20,SNR=3.8						
MBWA	Marble Bar	16.68	217	ePn	Pn	14 32 52.9	-3.4
	52nm,0.6s						
MTSU	Mount Surprise	16.86	128	P	Pn	14 32 59.2	+0.6
	baz=17,SNR=41						
TSM	Tawau	17.49	314	P	P	14 33 09.9	+2.5
MYLDM	Lahad Datu	17.68	317	P	P	14 33 12.1	+2.5
MYLDM	Lahad Datu	17.68	317	P	P	14 33 12.3	+2.8
	40nm,1.2s,715nm						
PWJI	Pagerwojo	18.45	269	P	P	14 33 17.8	-0.2
	73nm,0.7s						
SDKM	Sandakan	18.91	315	P	Pn	14 33 25.1	+1.3
PCJI	Pacitan	19.07	268	P	P	14 33 22.0	-2.8
PBKI	Pangkalan Bun	19.40	285	P	Pn	14 33 30.9	+1.2
	439nm,0.9s,4µm						
CTA	Charters Tower	19.48	130	P	Pn	14 33 31.7	+1.0
CTA				Lg	Lg	14 39 28.2	
CTA	Charters Tower	19.48	130	P	Pn	14 33 31.7	+1.0
	0.2nm,0.3s,baz=309,slow=15,SNR=3.6						
CTA				Lg	Lg	14 39 28.2	
	0.5nm,0.3s,baz=39,slow=23,SNR=3.2						
CTAO	Charters Tower	19.48	130	eP	P	14 33 29.2	-0.1
CTAO				pmax	pmax		
	comp=Z,11nm,0.8s						
CTAO	Charters Tower	19.48	130	eP	P	14 33 29.2	-0.1
	comp=Z,11nm,0.8s						
UGM	Wanagama	19.72	269	P	P	14 33 32.1	+0.1
	baz=20,SNR=7.4						
KKM	Kota Kinabalu	19.88	314	eP	P	14 33 32.5	-1.3
	comp=Z,42nm,0.9s						
KKM	Kota Kinabalu	19.88	314	P	Pn	14 33 35.8	+0.3
KKM	Kota Kinabalu	19.88	314	P	P	14 33 33.7	-0.1
	comp=Z,60nm,0.9s,comp=Z,616nm						
KKM	Kota Kinabalu	19.88	314	P	P	14 33 34.2	+0.4
	baz=20,SNR=9.0						
BTM	Bintulu	20.57	302	P	Pn	14 33 43.4	-0.1
SBUM	Sibu	20.91	299	P	P	14 33 46.3	+1.4
SBUM	Sibu	20.91	299	P	P	14 33 46.1	+1.2
	comp=Z,48nm,1.0s,comp=Z,348nm						
MEEK	Meekatharra	21.68	210	P	P	14 33 55.3	+2.2
	baz=22,SNR=13						
KSM	Kuching	22.16	294	eP	P	14 33 55.3	-3.0
	comp=Z,18nm,0.7s						
KSM	Kuching	22.16	294	P	P	14 33 59.8	+1.5
KSM	Kuching	22.16	294	P	P	14 33 58.4	+0.1
	comp=Z,28nm,0.8s,comp=Z,281nm						
KSM	Kuching	22.16	294	P	P	14 33 58.1	-0.2
	baz=22,SNR=3.9						
CISI	Cisompet, Garu	22.41	270	P	P	14 33 59.7	-1.4
	comp=Z,71nm,0.7s						
CISI	Cisompet, Garu	22.41	270	P	P	14 34 00.5	-0.6
	baz=22,SNR=6.0						
LEM	Lembang	22.65	271	P	P	14 34 03.9	+0.1
	comp=Z,31nm,1.2s						
QLP	Quilpie	22.67	146	P	P	14 34 07.3	+3.7
	baz=23,SNR=25						
FORT	Forrest	22.79	185	eP	P	14 34 02.4	-2.4
	comp=Z,79nm,0.7s						
FORT				epP	pP	14 34 11.7	-1.4
FORT	Forrest	22.79	185	P	P	14 34 08.2	+3.4
	baz=23,SNR=17						
TGY	Tagaytay City	23.88	337	P	P	14 34 15.2	-0.6
TGY	Tagaytay City	23.88	337	P	P	14 34 15.2	-0.6
	comp=Z,91nm,0.6s,baz=111,slow=8.2,SNR=5.4						
KMBL	Kambalda	24.59	198	P	P	14 34 24.6	+2.4
	baz=25,SNR=12						
MORW	Morawa	24.97	211	P	P	14 34 27.9	+2.3
	baz=25,SNR=16						
MORW				S	S	14 39 03.3	+16
	baz=25,SNR=4.2						
BBOO	Buckleboo	25.25	169	eP	P	14 34 26.3	-1.9
	comp=Z,1µm,1.4s						
BBOO	Buckleboo	25.25	169	P	P	14 34 30.4	+2.3
	baz=25,SNR=17						
STKA	Stephens Creek	25.95	158	P	P	14 34 36.9	+2.4
STKA	Stephens Creek	25.95	158	P	P	14 34 36.9	+2.4

comp=Z,21nm,0.8s,baz=322,slow=8.2,SNR=32
STKA S S 14 39 16.4 +13
comp=Z,6.2nm,0.9s,baz=339,slow=17,SNR=3.0
STKA Lg Lg 14 43 08.6
comp=Z,6.1nm,1.1s,baz=53,slow=20,SNR=1.3
STKA LR LR 14 45 58.0
comp=Z,651nm,18.2s,baz=254,slow=39
STKA Stephens Creek 25.95 158 P **P** **14 34 37.1 +2.6**
baz=26,SNR=20
KLBR Kellerberrin 26.29 205 P **P** **14 34 40.4 +2.8**
baz=26,SNR=9.6
CMSA Cobar Meteorol 27.41 151 P **P** **14 34 50.9 +3.2**
baz=28,SNR=17
NWAO Narrogin (SRO) 27.67 204 P **P** **14 34 51.0 +1.0**
NWAO Narrogin (SRO) 27.67 204 P **P** **14 34 51.0 +1.0**
comp=Z,30nm,1.1s,baz=24,slow=4.4,SNR=8.7
NWAO LR LR 14 47 16.2
comp=Z,241nm,19.2s,baz=119,slow=39
HNR Honiara 29.21 95 LR LR 14 45 54.8
comp=Z,124nm,19.7s,baz=127,slow=34
ARMA Armidale 29.86 141 *e*P P 14 35 05.0 -4.7
comp=Z,114nm,2.0s
ARPS Mount Arapiles 30.48 162 P P 14 35 18.4 +3.5
baz=31,SNR=26
YNG Young 30.98 150 P P 14 35 23.0 +3.6
baz=31,SNR=11
TOO Toolangi 32.46 157 P P 14 35 36.8 +4.4
baz=33,SNR=10
MOO Moorlands 37.37 159 P P 14 36 19.0 +4.4
baz=38,SNR=3.3
CMAR Chiang Mai Arr 40.69 310 P **P** **14 36 42.4 -0.4**
CMAR PcP **PcP** **14 38 46.2 +2.1**
CMAR ScP **ScP** **14 42 32.5 +0.8**
CMAR Chiang Mai Arr 40.69 310 P **P** **14 36 42.4 -0.4**
comp=Z,3.4nm,0.7s,baz=139,slow=7.6,SNR=28
CMAR PcP **PcP** **14 38 46.2 +2.1**
comp=Z,2.9nm,0.9s,baz=168,slow=2.9,SNR=8.0
CMAR ScP **ScP** **14 42 32.5 +0.8**
comp=Z,1.7nm,1.1s,baz=139,slow=4.1,SNR=5.2
JNU Nakatsue 40.88 1 P **P** **14 36 43.3 -0.8**
JNU Nakatsue 40.88 1 P **P** **14 36 43.3 -0.8**
comp=Z,13nm,0.9s,baz=249,slow=12,SNR=4.7
CHTO Chiang Mai 40.91 311 *e*P **P** **14 36 42.6 -1.9**
CHTO *e**PP **pP** **14 36 53.2 -0.4**
CHTO pmax pmax
comp=Z,7.0nm,0.8s
CHTO Chiang Mai 40.91 311 *e*P **P** **14 36 42.5 -1.9**
comp=Z,7.3nm,0.8s
CHTO *e*pP **pP** **14 36 53.2 -0.4**
GYA Guiyang 41.29 327 P P 14 36 43.5 -4.2
GYA pP pP 14 37 02.7 +5.9
GYA sP sP 14 37 12.5 +12
GYA PP **PP** **14 38 22.0 -1.4**
GYA S S 14 42 51.6 -8.5
GYA SS SS 14 45 51.1 -13
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,550nm,17.8s
GYA LR LR
comp=E,420nm,18.4s
GYA LR LR
comp=Z,540nm,18.2s
WHN Wuhan 41.30 339 ⇓P **P** **14 36 47.7 +0.2**
NJ2 Nanjing 41.32 345 *e*P P 14 36 43.1 -4.6
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
KMI Kunming 42.55 321 P P 14 36 54.9 -3.2
KMI pP pP 14 37 12.2 +4.9
KMI sP sP 14 37 20.4 +9.5
KMI pmax pmax
comp=Z,10.0nm,1.3s
ENH Enshi 43.03 333 *e*P **P** **14 36 59.6 -2.2**
comp=Z,15nm,0.8s
ENH *e*pP **pP** **14 37 10.4 -0.4**
MJAR Matsushiro Arr 44.89 9 P **P** **14 37 15.5 -1.0**
MJAR Matsushiro Arr 44.89 9 P **P** **14 37 15.5 -1.0**
comp=Z,16nm,0.7s,baz=186,slow=9.5,SNR=43
MAJO Matsushiro 44.89 9 *e*P **P** **14 37 14.8 -1.7**
MAJO *e**PP **pP** **14 37 26.6 +0.9**
MAJO Matsushiro 44.89 9 *e*P **P** **14 37 14.8 -1.7**
MAJO *e*pP **pP** **14 37 26.6 +0.9**
MAT Matsushiro 44.89 9 P **P** **14 37 15.6 -0.9**
KSAR Wonju Array Be 45.25 357 P **P** **14 37 19.2 -0.1**
KSAR PcP **PcP** **14 39 00.1 +1.1**
KSRS Korea Array 45.26 357 P **P** **14 37 19.2 -0.1**
comp=Z,2.9nm,0.7s,baz=174,slow=8.8,SNR=9.7
KSRS PcP **PcP** **14 39 00.1 +1.0**
comp=Z,2.1nm,0.7s,baz=178,slow=3.2,SNR=5.3
KSRS LR LR 14 54 50.7
comp=Z,76nm,21.8s,baz=54,slow=34
CD2 Chengdu 46.36 328 *e*P P 14 37 24.5 -3.8
CD2 pP pP 14 37 44.5 +7.0
CD2 sP sP 14 37 54.2 +13
CD2 PcP **PcP** **14 38 58.2 -4.9**
CD2 PP **PP** **14 39 15.2 -2.4**
CD2 S S 14 44 05.9 -8.0
CD2 ScS ScS 14 47 08.8 -13
CD2 SS SS 14 47 25.5 -15
CD2 pmax pmax
comp=Z,10.0nm,0.9s
CD2 pmax pmax
comp=Z,70nm,4.8s
CD2 LR LR
comp=E,300nm,16.6s
CD2 LR LR
comp=Z,140nm,15.5s
XAN Xi'an 46.51 335 P **P** **14 37 27.8 -1.6**
XAN pP pP 14 37 46.2 +7.6
XAN pmax pmax
comp=Z,9.0nm,0.7s
BJT Baijiatuau 49.55 346 *e*P **P** **14 37 51.7 -1.1**
comp=Z,44nm,0.6s
BJT *e*pP **pP** **14 38 01.5 -0.5**
BJT *e*sP **sP** **14 38 06.0 +0.3**
BJI Beijing 49.57 346 P **P** **14 37 52.2 -0.7**
BJI pmax pmax
comp=Z,61nm,0.6s
RPZ Rata Peaks 50.20 142 P P 14 38 01.1 +3.3
RPZ Rata Peaks 50.20 142 P P 14 38 01.1 +3.3
comp=Z,12nm,0.8s,baz=0.0,slow=0.0,SNR=2.6
LZH Lanzhou 50.47 332 *e*P **P** **14 37 59.2 -0.8**
LZH pP pP 14 38 19.0 +10
LZH sP sP 14 38 27.3 +14
LZH pmax pmax
comp=Z,15nm,1.0s
LZH LR LR
comp=N,170nm,13.7s
LZH LR LR
comp=E,520nm,13.9s
LZH LR LR
comp=Z,380nm,14.9s
HHC Hu-ho-hao-te 51.61 342 *e*P P 14 38 04.4 -4.0
HHC pP pP 14 38 28.0 +10
HHC PP **PP** **14 40 05.0 -1.2**
HHC S S 14 45 19.4 -8.1
HHC pmax pmax
comp=Z,28nm,0.9s
HHC pmax pmax
comp=Z,200nm,5.3s
HHC LR LR
comp=N,310nm,17.9s
HHC LR LR
comp=E,310nm,16.3s
HHC LR LR
comp=Z,180nm,15.5s
CN2 Changchun 51.74 355 *e*P P 14 38 05.5 -3.7
CN2 *e*pP pP 14 38 29.0 +10
CN2 *e*S S 14 45 19.8 -9.2
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,13.0s
CN2 LR LR
comp=E,200nm,13.0s
CN2 LR LR
comp=Z,300nm,15.0s
USRK Ussuriysk Arra 51.96 1 P **P** **14 38 11.1 +0.3**
comp=Z,6.1nm,0.7s,baz=182,slow=6.7,SNR=15
MDJ Mudanjiang 52.36 359 P P 14 38 09.3 -4.5
MDJ pP pP 14 38 29.2 +6.1
MDJ sP sP 14 38 38.5 +12
MDJ PP **PP** **14 40 09.1 -3.7**
MDJ PcS PcS 14 43 17.0 -5.8
MDJ S S 14 45 30.8 -6.7
MDJ ScS ScS 14 47 51.2 -10
MDJ pmax pmax
comp=Z,15nm,1.3s
MDJ pmax pmax
comp=Z,240nm,3.7s
MDJ Mudanjiang 52.36 359 *e*P **P** **14 38 13.6 -0.2**
comp=Z,19nm,1.0s
ASAJ Asahikawa 53.01 11 P **P** **14 38 19.3 +0.7**
ASAJ Asahikawa 53.01 11 P **P** **14 38 19.3 +0.7**
comp=Z,9.0nm,0.9s,baz=166,slow=22,SNR=8.3
ODAN Odare 54.22 311 *e*P **P** **14 38 27.6 -0.6**
comp=Z,24nm,0.8s
TAPN Taplejung 54.26 312 *e*P **P** **14 38 27.8 -0.7**
comp=Z,15nm,0.5s
RAMN Ramite 54.86 311 *e*P **P** **14 38 32.2 -0.6**
comp=Z,38nm,0.7s
GTA Gaotai 55.04 331 *e*P **P** **14 38 33.8 +0.1**
GTA pP pP 14 38 52.9 +10
GTA sP sP 14 39 02.7 +16
GTA pmax pmax
comp=Z,9.0nm,0.7s
GUN Gumba 55.92 311 *e*P **P** **14 38 40.0 -0.6**
comp=Z,24nm,0.6s
PKI Pulchoki 56.09 311 *e*P **P** **14 38 41.0 -0.7**
comp=Z,12nm,0.6s
KKN Kakani 56.30 311 *e*P **P** **14 38 42.6 -0.5**
comp=Z,14nm,0.7s
DMN Daman 56.34 311 *e*P **P** **14 38 42.9 -0.5**
comp=Z,28nm,1.0s
KLR Kul'dur 56.98 1 *e*P P 14 38 43.0 -4.3
KOLN Koldanda 57.56 310 *e*P **P** **14 38 51.7 -0.3**
comp=Z,25nm,0.8s
DANN Dangsing 57.74 311 *e*P **P** **14 38 52.7 -0.7**
comp=Z,20nm,0.8s
ULN Ulaanbaatar 59.33 342 *e*P **P** **14 39 03.9 0.0**
comp=Z,11nm,0.6s
SONM Songino Array 59.51 341 P **P** **14 39 05.7 +0.6**
SONM PcP **PcP** **14 39 53.1 +0.7**
SONM Songino Array 59.51 341 P **P** **14 39 05.7 +0.6**
comp=Z,3.6nm,0.6s,baz=154,slow=6.0,SNR=17
SONM PcP **PcP** **14 39 53.1 +0.7**
comp=Z,1.8nm,0.8s,baz=144,slow=5.4,SNR=3.8
ZAK Zakamensk 62.73 341 *e*P **P** **14 39 26.2 -0.7**
ZAK *e* 14 40 06.0
ZAK pmax pmax
comp=Z,3.0nm,1.2s
TLY Talaya 63.74 342 *e*P **P** **14 39 35.3 +1.9**
TLY *e*S S 14 48 36.7 +31
TLY pmax pmax
comp=Z,7.0nm,0.9s
TLY MLR MLR
comp=Z,34nm,14.3s
IRK Irkutsk 64.04 342 *e*P **P** **14 39 35.5 +0.1**
IRK pmax pmax
comp=Z,21nm,1.0s
WMQ Urumqi 64.45 327 *e*P **P** **14 39 35.8 -2.5**
WMQ pP pP 14 39 55.0 +7.1
WMQ pmax pmax
comp=Z,21nm,0.8s
WMQ pmax pmax
comp=Z,110nm,5.0s
WMQ LR LR
comp=Z,120nm,29.2s
MOY Mondy 64.58 340 *e*P **P** **14 39 40.6 +1.5**
PETK Petropavlovsk- 65.12 18 P **P** **14 39 43.9 +1.4**
PETK Petropavlovsk- 65.12 18 P **P** **14 39 43.9 +1.4**
PETK Petropavlovsk- 65.12 18 P **P** **14 39 43.9 +1.4**
comp=Z,7.8nm,0.8s,baz=190,slow=6.5,SNR=28
HVS Khovu-Aksy 66.86 336 *d* iP **P** **14 39 55.0 +1.2**
HVS pmax pmax
comp=Z,98nm,0.9s
KSH Kashi 69.03 318 *e*P **P** **14 40 09.6 +1.9**
KSH *e*PcP **PcP** **14 40 30.6 -1.2**
KSH *e*S **S** **14 49 10.3 -0.7**
KSH *e*SKS **SKiKP** **14 49 57.5 +0.6**
KSH pmax pmax
comp=Z,18nm,0.7s
KSH pmax pmax
comp=Z,190nm,5.5s
KSH LR LR
comp=N,270nm,5.2s
KSH LR LR
comp=E,180nm,5.1s
KSH LR LR
comp=Z,210nm,6.6s
MK31 Makanchi Array 69.28 327 *e*P **P** **14 40 09.6 +0.6**
MK31 pmax pmax
comp=Z,27nm,0.5s
MKAR Makanchi Array 69.28 327 P **P** **14 40 09.7 +0.7**
MKAR Makanchi Array 69.28 327 P **P** **14 40 09.7 +0.7**
MKAR Makanchi Array 69.28 327 P **P** **14 40 09.7 +0.7**
comp=Z,42nm,0.5s,baz=122,slow=7.9,SNR=563
YAK Yakutsk 69.81 360 *e*P **P** **14 40 12.2 +0.4**
YAK pmax pmax
comp=Z,45nm,0.9s
YAK pmax pmax
comp=N,14nm,1.1s
YAK pmax pmax
comp=E,4.0nm,1.0s
KZA Kyzart 70.80 320 P **P** **14 40 20.9 +2.0**
SNR=26
TKM2 Tokmak 2 71.01 321 *i* P **P** **14 40 21.1 +1.2**
TKM2 Tokmak 2 71.01 321 *e*P **P** **14 40 18.9 -1.0**
comp=E,19nm,0.7s
TKM2 Tokmak 2 71.01 321 P **P** **14 40 21.2 +1.2**
SNR=16
KBK Karagaybulak 71.29 320 P **P** **14 40 23.5 +1.9**
SNR=8.8
VNDA Vanda 71.42 173 P **P** **14 40 23.9 +2.3**
VNDA Vanda 71.42 173 P **P** **14 40 23.9 +2.3**
comp=E,0.7nm,0.4s,baz=305,slow=6.4,SNR=8.9
VNDA LR LR 15 12 57.5
comp=E,155nm,18.3s,baz=290,slow=37
AAK Ala-Archa 71.56 320 *e*P **P** **14 40 22.9 -0.4**
AAK *e**PP **pP** **14 40 32.8 0.0**
AAK pmax pmax
comp=Z,13nm,0.6s
AAK Ala-Archa 71.56 320 *e*P **P** **14 40 22.9 -0.4**
comp=Z,14nm,0.6s
AAK *e*pP **pP** **14 40 32.8 0.0**
AAK Ala-Archa 71.56 320 P **P** **14 40 24.9 +1.6**
SNR=11
AAK Ala-Archa 71.56 320 P **P** **14 40 24.5 +1.3**
comp=Z,135nm,0.6s,SNR=5.9
CHMS Chumyshi 71.58 320 P **P** **14 40 24.6 +1.4**
SNR=6.0
AML Almayashu 71.83 319 P **P** **14 40 26.7 +1.6**
SNR=28
USP Ospenovka 71.88 320 P **P** **14 40 26.3 +1.4**
SNR=12
EKS2 Erkin-Say 72.04 320 *e*P **P** **14 40 25.9 -0.1**
EKS2 *e**PP **pP** **14 40 35.3 -0.4**
EKS2 *e**SP **sP** **14 40 40.0 +0.8**
EKS2 pmax pmax
comp=Z,16nm,0.7s
EKS2 Erkin-Say 72.04 320 *e*P **P** **14 40 25.9 -0.1**
comp=Z,16nm,0.7s
EKS2 *e*pP **pP** **14 40 35.3 -0.4**
EKS2 *e*sP **sP** **14 40 40.0 +0.8**
EKS2 Erkin-Say 72.04 320 P **P** **14 40 27.5 +1.5**
SNR=21
ZALV Zalesovo Beam 72.65 334 P **P** **14 40 29.4 +0.2**
ZALV Zalesovo Beam 72.65 334 P **P** **14 40 29.4 +0.2**
ZALV Zalesovo Beam 72.65 334 P **P** **14 40 29.4 +0.2**
comp=Z,24nm,0.7s,baz=115,slow=4.6,SNR=46
KURK Kurchatov 73.58 329 *c* iP **P** **14 40 35.3 +0.5**
KURK pmax pmax
comp=Z,44nm,1.2s
KURK Kurchatov 73.58 329 *e*P **P** **14 40 33.9 -0.9**
comp=Z,33nm,0.9s
KURK Kurchatov 73.58 329 P **P** **14 40 35.3 +0.5**
comp=Z,201nm,1.0s,SNR=17
NVS Novosibirsk 73.94 334 ⇑iP **P** **14 40 35.4 -1.4**
NVS *e* 14 40 45.2
NVS *e* 14 43 24.0
NVS *e*S **SKiKP** **14 50 02.0 -1.5**
NVS pmax pmax
comp=Z,25nm,0.9s
NVS pmax pmax
comp=N,11nm,0.8s
NVS pmax pmax
comp=E,23nm,1.3s
NVS pmax pmax
comp=Z,28nm,3.1s
NVS pmax pmax
comp=N,5.0nm,1.8s
NVS pmax pmax
comp=E,8.0nm,1.8s
NVS smax smax
comp=N,20nm,2.2s
NVS smax smax
comp=E,16nm,2.0s
MAW Mawson 74.20 202 P **P** **14 40 40.7 +2.5**
comp=E,3.9nm,0.8s,baz=63,slow=13,SNR=4.8
MAW LR LR 15 08 19.9
comp=E,191nm,20.7s,baz=176,slow=32
KK31 Karatay Array 74.36 319 *i* P **P** **14 40 40.0 +0.4**
KK31 pmax pmax
comp=Z,5.0nm,0.9s
VOSK Vostochnaya 78.66 328 P **P** **14 41 03.7 0.0**
VOSK pmax pmax
comp=Z,18nm,0.6s
BVA0 Borovoye Array 79.12 328 *i* P **P** **14 41 06.6 +0.4**
BVA0 pmax pmax
comp=Z,32nm,1.0s
BRVK Borovoye 79.19 328 *c* iP **P** **14 41 07.2 +0.6**
BRVK pmax pmax
comp=Z,41nm,1.0s
BRVK Borovoye 79.19 328 *e*P **P** **14 41 06.3 -0.3**
comp=Z,33nm,0.8s
BRVK Borovoye 79.19 328 P **P** **14 41 07.4 +0.8**
comp=Z,229nm,0.8s,SNR=12
TIXI Tiksi 79.47 359 *d* iP **P** **14 41 08.3 +0.6**
TIXI pmax pmax
comp=Z,9.0nm,0.6s
ZRNK Zerenda 79.82 327 P **P** **14 41 10.4 +0.4**
ZRNK pmax pmax
comp=Z,35nm,0.8s
BILL Bilibino 79.97 13 *e*P **P** **14 41 12.7 +2.2**
BILL *e* 14 41 28.1
BILL pmax pmax
comp=Z,11nm,1.1s
AB31 Akbulak array 83.54 322 *i* P **P** **14 41 30.1 +0.3**
AB31 pmax pmax
comp=Z,8.0nm,0.6s
ABKAR Akbulak array 83.54 322 *e*P **P** **14 41 29.2 -0.6**
comp=Z,11nm,0.7s
SVE Sverdlovsk 85.83 329 ⇓*i* P **P** **14 41 42.0 +0.9**
SVE pmax pmax
comp=Z,39nm,0.8s
ARU Arti 86.76 328 *c* iP **P** **14 41 46.3 +0.6**
ARU 14 45 10.8
ARU S **SKSac** **14 52 07.7 -2.6**
ARU pmax pmax
comp=Z,28nm,1.0s
RAYN Ar Rayn 88.53 294 P **P** **14 41 56.4 +1.3**
comp=Z,70nm,1.2s,SNR=6.5
SOKR Solikamsk 88.67 331 *e*P **P** **14 41 53.8 -0.9**
SOKR pmax pmax
comp=Z,10.0nm,0.6s
KMBO Kilima Mbogo 92.99 268 LR LR 15 20 09.9
comp=Z,140nm,20.1s,baz=96,slow=33
COLD Coldfoot 93.21 23 *e*P **P** **14 42 15.3 -0.5**
comp=Z,3.1nm,0.9s
ILAR Eielson Array 94.05 25 P **P** **14 42 19.2 -0.5**
ILAR Eielson Array 94.05 25 P **P** **14 42 19.2 -0.5**
comp=Z,2.5nm,0.8s,baz=278,slow=4.3,SNR=19
DOT Dot Lake 95.10 27 *e*P **P** **14 42 23.7 -0.9**
comp=Z,3.0nm,0.7s
VRHR Novokhopersk 95.40 321 *e*P **P** **14 42 24.9 -1.2**
VRHR pmax pmax
comp=Z,10.0nm,1.1s
VRHR pmax pmax
comp=N,8.0nm,0.6s
VRHR pmax pmax
comp=E,6.0nm,0.6s
SOC Sochi 95.96 313 *e*P P 14 42 23.5 -5.4
EGAK Eagle 96.48 26 *e*P **P** **14 42 30.2 -0.6**
comp=E,4.1nm,0.9s
VORD Divnogorie 96.86 320 *e*P **P** **14 42 32.7 -0.1**
VORD pmax pmax
comp=Z,10.0nm,1.1s
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,1.1s
VSR Storozhevoye 96.95 321 *e*P **P** **14 42 32.8 -0.4**
VSR pmax pmax
comp=Z,10.0nm,1.3s
VSR pmax pmax
comp=N,6.0nm,0.6s
VSR pmax pmax
comp=E,5.0nm,0.6s
OBN Obninsk 98.70 325 ⇑*i* P Pdif 14 42 41.1 +0.1
OBN pmax pmax
comp=Z,7.0nm,0.9s
BRTR Keskin Array B 100.27 309 P **Pdif** **14 42 49.1 +0.6**
BRTR Keskin Array B 100.27 309 P **Pdif** **14 42 49.1 +0.6**
comp=Z,0.5nm,0.8s,baz=165,slow=2.4,SNR=3.7
ARCES ARCESS Array B 102.64 340 P **Pdif** **14 42 58.5 +0.2**
ARCES ARCESS Array B 102.64 340 P **Pdif** **14 42 58.5 +0.2**
comp=Z,1.7nm,0.7s,baz=64,slow=5.6,SNR=3.6
YKA Yellowknife Ar 108.44 26 PKiKP **PKiKP** **14 47 31.2 +1.3**
YKA Yellowknife Ar 108.44 26 PKiKP **PKiKP** **14 47 31.2 +1.3**
comp=Z,0.3nm,0.6s,baz=305,slow=1.8,SNR=4.3
GERES GERESS Array B 113.45 320 PKiKP **PKiKP** **14 47 40.9 +1.0**
GERES GERESS Array B 113.45 320 PKiKP **PKiKP** **14 47 40.9 +1.0**
comp=Z,0.8nm,0.6s,baz=50,slow=2.1,SNR=6.1
PDAR Pinedale Array 117.27 46 PKP **PKPdf** **14 47 48.5 +0.8**
PDAR Pinedale Array 117.27 46 PKP **PKPdf** **14 47 48.5 +0.8**
comp=Z,0.3nm,0.5s,baz=252,slow=0.5,SNR=3.7
ULM Lac du Bonnet 123.03 34 PKP **PKPdf** **14 47 58.4 +0.2**
ULM Lac du Bonnet 123.03 34 PKP **PKPdf** **14 47 58.4 +0.2**
comp=Z,1.9nm,0.4s,baz=229,slow=2.9,SNR=3.6
MNTX Cornudas Mount 123.13 57 *e*PKPdf **PKPdf** **14 47 57.7 -1.2**
TORD Torodi Ar. Bea 129.41 280 PKP **PKPdf** **14 48 12.6 +1.2**
TORD SKPbc SKPab 14 51 30.6 +0.3
TORD Torodi Ar. Bea 129.41 280 PKP **PKPdf** **14 48 12.6 +1.2**
comp=Z,2.6nm,0.8s,baz=73,slow=1.9,SNR=14
TORD SKPbc SKPab 14 51 30.6 +0.3
comp=Z,3.3nm,0.9s,baz=80,slow=2.8,SNR=11
DBIC Dimbokro 135.65 271 PKP **PKPdf** **14 48 24.4 +1.3**
DBIC Dimbokro 135.65 271 PKP **PKPdf** **14 48 24.4 +1.3**
comp=Z,1.4nm,0.4s,baz=171,slow=9.6,SNR=3.0
SDMD Soldier's Deli 140.29 34 *e*PKPdf **PKPdf** **14 48 28.8 -2.2**
CPUP Villa Florida 145.07 168 PKPbc **PKPdf** **14 48 42.0 +2.1**
comp=Z,5.6nm,0.8s,baz=154,slow=4.2,SNR=12
LPAZ La Paz 149.68 143 PKPbc **PKPbc** **14 48 54.9 +1.7**
LPAZ La Paz 149.68 143 PKPbc **PKPbc** **14 48 54.9 +1.7**
comp=Z,3.1nm,0.7s,baz=143,slow=3.4,SNR=13

NSSC ***11*** *14:30:07.7±2.0,38°.85N×39°.05E,h39km±999km, ML3.2*
ISK ***11*** *14:30:09.7,38°.36N×38°.95E,h5km,MD3.4*
ISCJB ***11*** *14:30:10.4±0.5,38°.35N±0°.02×38°.94E±0°.02,h6km±4km, Error ellipse: s-maj=3.8km s-min=3.1km az=170.7*
DDA ***11*** *14:30:10.2,38°.34N×38°.95E,h7km,MD3.4*
CSEM ***11*** *14:30:10.4±0.1,38°.36N×38°.95E,h2km,MD3.4, Error ellipse: s-maj=3.5km s-min=3.0km az=174.0*

ISC 11 14:30:10.5±0.9,**38°.35N**±0°.02×**38°.96E**±0°.02,**h10**km±7km,
n78,σ0:**88**/102,**Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.15**	**7**	*i* Pg		**Pg**	**14 30 14.3**	**+0.3**
ELZG				*i* Sg		**Sg**	**14 30 17.1**	**+0.6**
SVRC	**Sivrice-ELAZID**	**0.28**	**83**	PG		**Pg**	**14 30 15.7**	**-0.5**
SVRC				*e*SG		**Sg**	**14 30 20.4**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.28**	**83**	*i* Pg		**Pg**	**14 30 15.7**	**-0.5**
SVRC				*e*Sg		**Sg**	**14 30 20.4**	**+0.5**
MYA	**Malataya**	**0.42**	**268**	PG		**Pg**	**14 30 18.5**	**-0.3**
MYA				SG		**Sg**	**14 30 24.4**	**+0.1**
MYA	**Malataya**	**0.42**	**268**	*i* Pg		**Pg**	**14 30 18.5**	**-0.3**
MYA				*i* Sg		**Sg**	**14 30 24.4**	**+0.1**
PTK	**Pertek**	**0.64**	**32**	*e*PG		**Pg**	**14 30 22.4**	**-0.6**
PTK				*e*SG		**Sg**	**14 30 31.8**	**+0.3**
PTK	**Pertek**	**0.64**	**32**	*e*Pg		**Pg**	**14 30 22.4**	**-0.6**
PTK				*e*Sg		**Sg**	**14 30 31.8**	**+0.3**
AKCD	**Akcadag**	**0.82**	**267**	*i* P		**Pg**	**14 30 25.6**	**-0.6**
AKCD				*i* S		**Sg**	**14 30 37.1**	**+0.2**
AKCD	**Akcadag**	**0.82**	**267**	*i* P		**Pg**	**14 30 25.6**	**-0.6**
AKCD				*i* S		**Sg**	**14 30 37.1**	**+0.2**
URFA	**Urfa**	**0.91**	**187**	*e*PG		**Pg**	**14 30 27.9**	**-0.1**
URFA	**Urfa**	**0.91**	**187**	*e*Pg		**Pg**	**14 30 27.9**	**-0.1**
KEMA	**Kemaliye**	**0.99**	**339**	*i* P		**Pg**	**14 30 28.9**	**-0.7**
KEMA				*i* S		**Sb**	**14 30 43.4**	**+0.4**

KEMA	**Kemaliye**	**0.99**	**339**	*i* P	**Pg**	**14 30 28.9**	**-0.7**
KEMA				*i* S	**Sb**	**14 30 43.4**	**+0.4**
DIYA	**Diyarbakir**	**1.01**	**114**	*i* P	**Pn**	**14 30 30.5**	**-0.2**
DIYA				*i* S	**Sn**	**14 30 44.2**	**-0.8**
DIYA	**Diyarbakir**	**1.01**	**114**	*i* P	**Pn**	**14 30 30.5**	**-0.2**
DIYA				*i* S	**Sn**	**14 30 44.2**	**-0.8**
ATAB	**Bozova**	**1.02**	**211**	*e*P	**Pg**	**14 30 30.3**	**+0.2**
ATAB				*e*S	**Sb**	**14 30 44.1**	**+0.4**
ATAB	**Bozova**	**1.02**	**211**	*e*P	**Pg**	**14 30 30.3**	**+0.2**
ATAB				*e*S	**Sb**	**14 30 44.1**	**+0.4**
DIY	**Diyarbakir**	**1.10**	**114**	*e*PN	**Pg**	**14 30 31.1**	**-0.4**
DIY	**Diyarbakir**	**1.10**	**114**	*e*Pn	**Pg**	**14 30 31.1**	**-0.4**
ILIC	**ilic-Erzincan**	**1.15**	**345**	*e*PN	**Pg**	**14 30 31.8**	**-0.8**
ILIC	**ilic-Erzincan**	**1.15**	**345**	*e*Pn	**Pg**	**14 30 31.8**	**-0.8**
DARE	**Darende-Malaty**	**1.18**	**281**	*e*PN	**Pb**	**14 30 31.7**	**-1.3**
DARE	**Darende-Malaty**	**1.18**	**281**	*e*Pn	**Pb**	**14 30 31.7**	**-1.3**
BINT	**Bingol**	**1.31**	**66**	*e*Pn	**Pg**	**14 30 37.8**	**+2.1**
ERZN	**Erzincan**	**1.38**	**25**	*e*PN	**Pn**	**14 30 35.8**	**-0.1**
EZC	**Erzincan**	**1.44**	**12**	*e*PN	**Pn**	**14 30 37.0**	**+0.2**
EZC	**Erzincan**	**1.44**	**12**	*e*Pn	**Pn**	**14 30 37.0**	**+0.2**
BNGB	**Bingˆ¶l**	**1.49**	**64**	*e*PN	**Pn**	**14 30 37.8**	**+0.3**
GAZ	**Gaziantep**	**1.81**	**230**	*e*PN	**Pn**	**14 30 42.6**	**+0.8**
GAZ	**Gaziantep**	**1.81**	**230**	*e*Pn	**Pn**	**14 30 42.7**	**+0.8**
KMRS	**Kahramanmaras**	**1.83**	**243**	*e*PN	**Pn**	**14 30 42.5**	**+0.5**
KMRS	**Kahramanmaras**	**1.83**	**243**	*e*Pn	**Pn**	**14 30 42.5**	**+0.5**
KBSD	**Kabsdagh**	**1.84**	**136**	*e*P	**Pn**	**14 30 43.2**	**+1.1**
KBSD				*e*S	**Sn**	**14 31 05.8**	**+0.3**
KBSD				AML	AML	14 31 12.6	
KBSD				AML	AML	14 31 13.0	
KBSD	**Kabsdagh**	**1.84**	**136**	*e*P	**Pn**	**14 30 43.2**	**+1.1**
	SNR=45						
KBSD				*e*S	**Sn**	**14 31 05.8**	**+0.3**
	SNR=40						
BEST	**Besiri**	**1.88**	**103**	*e*P	**Pn**	**14 30 43.8**	**+1.1**
BEST				*e*S	**Sb**	**14 31 09.2**	**+0.7**
BTMT	**Batman**	**2.00**	**94**	*e*PN	**Pn**	**14 30 43.1**	**-1.3**
BTMT	**Batman**	**2.00**	**94**	*e*Pn	**Pn**	**14 30 43.1**	**-1.3**
SARI	**SarD1z-Kayseri**	**2.00**	**273**	*e*PN	**Pn**	**14 30 45.1**	**+0.6**
SARI	**SarD1z-Kayseri**	**2.00**	**273**	*e*Pn	**Pn**	**14 30 45.1**	**+0.6**
SFNV	**Sufian**	**2.13**	**154**	*e*P	**Pn**	**14 30 47.4**	**+1.2**
SFNV				*e*S	**Sb**	**14 31 15.1**	**-0.6**
SFNV				AML	AML	14 31 24.2	
	comp=N,271nm,0.4s						
SFNV				AML	AML	14 31 25.4	
SFNV	**Sufian**	**2.13**	**154**	*e*P	**Pn**	**14 30 47.4**	**+1.2**
	SNR=45						
SFNV				*e*S	**Sb**	**14 31 15.1**	**-0.6**
	comp=N,271nm,0.4s,SNR=40						
GUMT	**Gumushane**	**2.15**	**11**	*e*PN	**Pn**	**14 30 47.1**	**+0.6**
GUMT	**Gumushane**	**2.15**	**11**	*e*Pn	**Pn**	**14 30 47.1**	**+0.6**
ANDN	**Andirin**	**2.20**	**251**	*e*P	**Pn**	**14 30 48.1**	**+0.9**
ANDN				*e*S	**Sb**	**14 31 19.3**	**+1.4**
ANDN	**Andirin**	**2.20**	**251**	*e*P	**Pn**	**14 30 48.1**	**+0.9**
ANDN				*e*S	**Sb**	**14 31 19.3**	**+1.4**
BAYT	**Ayd˜–ntepe-Bay**	**2.24**	**24**	*e*PN	**Pn**	**14 30 48.4**	**+0.6**
BAYT	**Ayd˜–ntepe-Bay**	**2.24**	**24**	*e*Pn	**Pn**	**14 30 48.4**	**+0.6**
RSDY	**Resadiye-TOKAT**	**2.41**	**329**	*e*PN	**Pn**	**14 30 50.8**	**+0.8**
RSDY	**Resadiye-TOKAT**	**2.41**	**329**	*e*Pn	**Pn**	**14 30 50.8**	**+0.8**
MNKR	**ALMNKUR**	**2.41**	**174**	*e*P	**Pb**	**14 30 52.2**	**-1.7**
MNKR	**ALMNKUR**	**2.41**	**174**	*e*P	**Pb**	**14 30 52.2**	**-1.7**
	SNR=45						
EZM	**Erzurum**	**2.43**	**49**	*e*PN	**Pn**	**14 30 51.4**	**+0.9**
BNN	**Bunyan**	**2.49**	**283**	*e*PN	**Pn**	**14 30 51.7**	**+0.5**
BNN	**Bunyan**	**2.49**	**283**	*e*Pn	**Pn**	**14 30 51.7**	**+0.5**
ESPY	**Espiye-Giresun**	**2.58**	**356**	*e*PN	**Pn**	**14 30 53.1**	**+0.9**
ESPY	**Espiye-Giresun**	**2.58**	**356**	*e*Pn	**Pn**	**14 30 53.1**	**+0.9**
KOZT	**Kozan**	**2.62**	**252**	*e*PN	**Pn**	**14 30 53.9**	**+1.0**
KOZT	**Kozan**	**2.62**	**252**	*e*Pn	**Pn**	**14 30 53.9**	**+1.0**
JHLN	**Al Jahlan**	**2.70**	**189**	*e*P	**Pn**	**14 30 54.6**	**+0.7**
JHLN				AML	AML	14 31 04.1	
	comp=E,144nm,0.5s						
JHLN				*e*S	**Sb**	**14 31 32.3**	**+0.2**
JHLN				AML	AML	14 31 46.3	
	comp=N,128nm,0.6s						
JHLN	**Al Jahlan**	**2.70**	**189**	*e*P	**Pn**	**14 30 54.7**	**+0.7**
	SNR=45						
JHLN				*e*S	**Sb**	**14 31 32.3**	**+0.2**
	comp=N,128nm,0.6s,SNR=40						
TOKT	**Tokat**	**2.72**	**317**	*e*PN	**Pn**	**14 30 55.0**	**+0.8**
TOKT	**Tokat**	**2.72**	**317**	*e*Pn	**Pn**	**14 30 55.1**	**+0.8**
YOZ	**Yozgat**	**3.12**	**296**	*e*PN	**Pn**	**14 31 00.7**	**+0.9**
YOZ	**Yozgat**	**3.12**	**296**	*e*Pn	**Pn**	**14 31 00.7**	**+0.9**
HTY	**Hatay**	**3.16**	**226**	*e*PN	**Pn**	**14 31 01.1**	**+0.8**
HTY	**Hatay**	**3.16**	**226**	*e*Pn	**Pn**	**14 31 01.1**	**+0.8**
AGRB	**Hanur-Agry**	**3.38**	**67**	*e*PN	**Pn**	**14 31 04.5**	**+1.1**
AGRB	**Hanur-Agry**	**3.38**	**67**	*e*Pn	**Pn**	**14 31 04.5**	**+1.1**
NIG	**Nigde**	**3.43**	**267**	*e*PN	**Pn**	**14 31 05.3**	**+1.0**
NIG	**Nigde**	**3.43**	**267**	*e*Pn	**Pn**	**14 31 05.3**	**+1.0**
BCA	**Borcka**	**3.71**	**33**	*e*PN	**Pn**	**14 31 09.2**	**+1.3**
BCA	**Borcka**	**3.71**	**33**	*e*Pn	**Pn**	**14 31 09.2**	**+1.3**
CORM	**Corum**	**3.83**	**300**	*e*PN	**Pn**	**14 31 10.7**	**+1.1**
CORM	**Corum**	**3.83**	**300**	*e*Pn	**Pn**	**14 31 10.7**	**+1.1**
CUKT	**Cukurca**	**3.84**	**105**	*e*PN	**Pn**	**14 31 11.5**	**+1.7**
CUKT	**Cukurca**	**3.84**	**105**	*e*Pn	**Pn**	**14 31 11.5**	**+1.7**
HKR	**Hakkari**	**3.86**	**100**	*e*PN	**Pn**	**14 31 11.7**	**+1.7**
HKR	**Hakkari**	**3.86**	**100**	*e*Pn	**Pn**	**14 31 11.7**	**+1.7**

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*ISCJB **11** 14:38:51.2±0.6, 6°.95S±0°.07×125°.14E±0°.08, h543km, mb3.8/6, Error ellipse: s-maj=12.1km s-min=8.5km az=147.5*

*DJA **11** 14:38:51.4±0.8, 7°S±8°×12°5E±1°1, h517km±31km, M4.2/9, mB4.6/4, mb4.2/9, MLv4.3/8, Mw(mB)3.8/4*

*IDC **11** 14:38:52.4±1.5, 6°.95S×125°.12E, h543km±20km, mb3.2/6, mb1 3.4/10, mb1mx3.1/25, mbtmp3.2/10, Error ellipse: s-maj=34.7km s-min=13.7km az=65.0*

ISC 11 14:38:52.4±0.8**, 7°.02S**±0°.08×**125°.1E**±0°.1**, h543**km**, n19,** σ**0ˢ.89**/20**, mb3.9**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMRI	**Maumere**	**3.24**	**240**	P	**P**	**14 40 06.9**	**-1.5**
BKSI	**Bulukumba**	**5.21**	**289**	P	**P**	**14 40 24.1**	**+0.5**
	29nm,0.6s,0.1nm						
WSI	**Waingapu**	**5.41**	**241**	P	**P**	**14 40 25.6**	**+0.2**
	223nm,0.7s,7µm2.0nm						
WSI				S	**S**	**14 41 40.0**	**-1.3**
	223nm,0.7s,7µm2.0nm						
BASI	**Baing, Sumba**	**5.47**	**234**	P	**P**	**14 40 26.3**	**+0.4**
	167nm,1.1s,0.8nm						
KAPI	**Kappang**	**5.66**	**290**	P	**P**	**14 40 28.3**	**+0.7**
	30nm,0.9s,0.1nm						
KAPI	**Kappang**	**5.66**	**290**	P	**P**	**14 40 27.6**	**0.0**
	3.8nm,0.3s,baz=141,slow=6.5,SNR=4.5						
SKSI	**Soroako, Sulaw**	**5.81**	**320**	P	**P**	**14 40 29.8**	**+0.7**
	73nm,0.7s,609nm0.3nm						
SPSI	**Sidrap Palu**	**6.09**	**300**	P	**P**	**14 40 31.4**	**-0.1**
	35nm,0.7s,0.1nm						
TTSI	**Tana Toraja**	**6.56**	**307**	P	**P**	**14 40 36.7**	**+0.8**
	20nm,0.9s,0.1nm						
MRSI	**Marisa**	**8.07**	**337**	P	P	14 40 47.4	-3.3
	25nm,0.7s,417nm						
FITZ	**Fitzroy Crossi**	**11.03**	**177**	P	**P**	**14 41 21.5**	**+0.7**
	0.4nm,0.3s,baz=3.1,slow=9.2,SNR=6.4						
WRA	**Warramunga Arr**	**15.68**	**146**	P	**P**	**14 42 07.7**	**-1.3**
	2.1nm,0.3s,baz=330,slow=9.6,SNR=26						
ASAR	**Alice Springs**	**18.60**	**154**	P	**P**	**14 42 36.9**	**+0.7**
	2.1nm,0.3s,baz=339,slow=9.9,SNR=20						
ASAR				ScP	**ScP**	**14 49 21.1**	**-0.6**
	0.0nm,0.3s,baz=350,slow=2.2,SNR=4.2						
CTA	**Charters Tower**	**24.30**	**124**	P	**P**	**14 43 27.1**	**-0.4**
	7.4nm,1.1s,baz=299,slow=10,SNR=2.2						
NWAO	**Narrogin (SRO)**	**26.79**	**195**	P	**P**	**14 43 50.6**	**+1.4**
	12nm,1.0s,baz=4.4,slow=13,SNR=2.1						
STKA	**Stephens Creek**	**29.14**	**150**	P	**P**	**14 44 10.0**	**+0.2**
	8.4nm,0.8s,baz=316,slow=11,SNR=6.6						
KSRS	**Korea Array**	**44.32**	**3**	P	**P**	**14 46 14.9**	**+0.7**
	1.3nm,0.9s,baz=174,slow=6.1,SNR=3.6						
SONM	**Songino Array**	**57.05**	**345**	P	**P**	**14 47 45.9**	**-1.1**
	0.2nm,0.3s,baz=149,slow=6.4,SNR=1.9						
MKAR	**Makanchi Array**	**65.65**	**329**	P	**P**	**14 48 42.4**	**-0.7**
	0.5nm,0.5s,baz=131,slow=7.7,SNR=5.3						

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*IDC **11** 14:48:58.2±0.4, 1°.71N×97°.12E, h0km, mb4.6/30, mb1 4.7/31, mb1mx4.7/33, mbtmp4.6/31, ML4.7/1, MS4.0/14, Ms1 4.1/14, ms1mx3.7/38, Error ellipse: s-maj=14.2km s-min=10.5km az=52.0*

*BJI **11** 14:49:01.8, 1°.58N×97°.17E, h48km, mB5.0/32, mb5.2/56, Ms4.7/45, Ms7 4.6/40*

*ISCJB **11** 14:49:02.6±0.5, 1°.72N±0°.03×97°.10E±0°.03, h42km±4km, mb4.8/82, MS4.3/27, Error ellipse: s-maj=5.9km s-min=4.3km az=34.3*

*NEIC **11** 14:49:03.8±0.2, 1°.76N×97°.19E, mb4.9/28, Error ellipse: s-maj=5.2km s-min=4.1km az=42.0*

NEIC Felt at Gunungsitoli.

*DJA **11** 14:49:03.8±0.9, 2°N±4°×9°7E±°, h35km±12km, M4.8/13, mB5.0/6, mb4.9/13, MLv5.0/10, Mw(mB)4.3/6*

ISC 11 14:49:03.8±0.3**, 1°.70N**±0°.04×**97°.06E**±0°.04**, h41**km±2km**, h40**km**:pP-P, n235,** σ**1ˢ.51**/321**, mb4.9**/81**, MS4.3**/28**, 7C-2D, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**1.02**	**314**	P	**Pn**	**14 49 20.5**	**-1.2**
KCSI	**Kotacane, Aceh**	**1.95**	**21**	P	**Pn**	**14 49 34.6**	**+0.2**
KCSI				S	Sn	14 50 07.2	+10
TSI	**Tuntungan**	**2.34**	**40**	P	**Pn**	**14 49 40.8**	**+1.0**
MNSI	**Mandailing Nat**	**2.67**	**110**	P	**Pn**	**14 49 44.8**	**+0.4**
PPI	**Padang Panjang**	**3.96**	**123**	P	**Pn**	**14 50 02.5**	**+0.4**
BSI	**Banda Aceh**	**4.17**	**335**	P	**Pn**	**14 50 02.8**	**-2.2**
BSI				S	**Sn**	**14 50 49.6**	**-2.9**
BKNI	**Bangkinang**	**4.20**	**109**	P	**Pn**	**14 50 06.6**	**+1.2**
FRIM	**Kepong**	**4.81**	**71**	P	**Pn**	**14 50 14.2**	**+0.5**
IPM	**Ipoh**	**4.83**	**55**	*e*Pn	**Pn**	**14 50 14.2**	**+0.2**
IPM	**Ipoh**	**4.83**	**55**	P	**Pn**	**14 50 14.7**	**+0.6**
IPM	**Ipoh**	**4.83**	**55**	P	**Pn**	**14 50 14.5**	**+0.5**
KULM	**Kulim**	**5.05**	**45**	*e*Pn	**Pn**	**14 50 17.0**	**-0.2**
KULM	**Kulim**	**5.05**	**45**	P	**Pn**	**14 50 17.4**	**+0.2**
KULM	**Kulim**	**5.05**	**45**	P	**Pn**	**14 50 17.3**	**+0.2**
	306nm,1.0s,2µm0.9nm						
CMBY	**CAMPBELL BAY**	**6.13**	**329**	*e*PKP	**Pn**	**14 50 32.4**	**+0.4**
CMBY				AMB	AMB	14 51 46.5	
	comp=Z,131nm,0.5s						
KGM	**Kluang**	**6.26**	**87**	P	**Pn**	**14 50 34.9**	**+1.2**
MYKOM	**Kota Tinggi**	**6.78**	**89**	P	**Pn**	**14 50 42.0**	**+1.1**
MYKOM	**Kota Tinggi**	**6.78**	**89**	P	**Pn**	**14 50 42.0**	**+1.1**
	comp=Z,79nm,1.0s,comp=Z,710nmcomp=Z,0.3nm						
KTGM	**Kuala Trenggan**	**7.05**	**59**	P	**Pn**	**14 50 45.1**	**+0.6**
KSI	**Kapahiang**	**7.67**	**134**	P	**Pn**	**14 50 55.6**	**+2.5**
	comp=Z,129nm,0.8s,comp=Z,1.7nm						
LWLI	**Liwa**	**9.66**	**134**	P	Pn	14 51 30.9	+10
KASI	**Kota Agung**	**10.32**	**134**	P	Pn	14 51 37.9	+8.4
CHBT	**CHBT**	**12.16**	**25**	P	**P**	**14 52 07.4**	**+1.0**
KSM	**Kuching**	**13.24**	**91**	*e*Pn	**Pn**	**14 52 08.0**	**-1.4**
KSM	**Kuching**	**13.24**	**91**	P	Pn	14 52 13.8	+4.4
	comp=Z,54nm,1.0s,comp=Z,522nm						
KSM	**Kuching**	**13.24**	**91**	P	**P**	**14 52 20.9**	**+2.4**
	comp=Z,54nm,1.0s,comp=Z,522nm						
STKI	**Sintang**	**14.50**	**96**	P	**Pn**	**14 52 28.3**	**+1.7**
	comp=Z,114nm,0.8s,comp=Z,16µm						
XMIS	**Christmas Isla**	**14.81**	**145**	*e*Pn	**Pn**	**14 52 29.9**	**-0.8**
SBUM	**Sibu**	**15.16**	**87**	P	**Pn**	**14 52 36.4**	**+1.0**
SBUM	**Sibu**	**15.16**	**87**	P	**Pn**	**14 52 35.7**	**+0.3**
	comp=Z,31nm,1.4s,comp=Z,383nm						
PBKT	**Sadao Pong**	**15.27**	**14**	P	**Pn**	**14 52 35.2**	**-1.5**
	comp=Z,39nm,0.7s						
UBPT	**Khong Chiam**	**15.84**	**31**	P	**P**	**14 52 45.8**	**-1.6**
	comp=Z,86nm,1.1s						
BTM	**Bintulu**	**16.07**	**84**	P	**P**	**14 52 48.7**	**-1.3**
UGM	**Wanagama**	**16.47**	**126**	*e*Pn	**Pn**	**14 52 49.7**	**-2.5**
	comp=Z,72nm,1.2s						
CMAR	**Chiang Mai Arr**	**16.76**	**6**	Pn	**Pn**	**14 52 54.5**	**-1.2**
CMAR				PcP	**PcP**	**14 57 44.1**	**+1.1**
CMAR				Lg	Lg	14 57 57.4	
CMAR	**Chiang Mai Arr**	**16.76**	**6**	Pn	**Pn**	**14 52 54.5**	**-1.2**
	comp=Z,1.0nm,0.3s,baz=192,slow=12,SNR=27						
CMAR				PcP	**PcP**	**14 57 44.1**	**+1.1**
	baz=236,slow=1.6,SNR=4.9						
CMAR				Lg	Lg	14 57 57.4	
	baz=169,slow=31,SNR=3.3						
CMAR				LR	LR	15 00 33.8	
	comp=Z,844nm,19.2s,baz=188,slow=42						
CHTO	**Chiang Mai**	**17.11**	**6**	*e*Pn	**Pn**	**14 52 57.8**	**-2.3**
	comp=Z,25nm,1.3s						
CHTO	**Chiang Mai**	**17.11**	**6**	P	**Pn**	**14 52 58.8**	**-1.3**
	comp=Z,15nm,1.4s						
CMMT	**Chiang Mai**	**17.11**	**6**	P	**Pn**	**14 52 58.5**	**-1.6**
	comp=Z,16nm,1.1s						
PALK	**Pallekele**	**17.22**	**289**	*e*Pn	**P**	**14 53 02.6**	**-0.1**
	comp=Z,141nm,1.9s						
KKM	**Kota Kinabalu**	**19.59**	**77**	*e*P	**P**	**14 53 26.8**	**-2.1**
	comp=Z,38nm,0.9s						
KKM	**Kota Kinabalu**	**19.59**	**77**	P	**P**	**14 53 29.2**	**+0.3**
KKM	**Kota Kinabalu**	**19.59**	**77**	P	**P**	**14 53 28.0**	**-0.8**
	comp=Z,49nm,1.0s,comp=Z,421nm						
MDRS	**Chennai**	**20.12**	**305**	*e*PKP	**P**	**14 53 33.5**	**-1.0**
KDM	**Kudat**	**20.38**	**75**	P	Pn	14 53 38.5	-1.1
SDKM	**Sandakan**	**20.46**	**78**	P	**P**	**14 53 38.9**	**+0.6**
VIS	**Vishakhapatnam**	**20.87**	**321**	*e*PKP	**P**	**14 53 43.2**	**+0.6**
TSM	**Tawau**	**20.94**	**82**	P	**P**	**14 53 43.2**	**-0.2**
KHKI	**Kahang-Kahang**	**21.02**	**119**	P	P	14 53 49.8	+5.6
QIZ	**Qiongzhong**	**21.30**	**35**	P	**P**	**14 53 47.7**	**+0.5**
QIZ				sP	**sP**	**14 54 02.7**	**+0.3**
QIZ				S	**S**	**14 57 42.5**	**+0.8**
QIZ				pmax	pmax		
	comp=Z,34nm,1.0s						
QIZ				LR	LR		
	comp=N,600nm,20.5s						
QIZ				LR	LR		
	comp=Z,620nm,14.8s						
MYLDM	**Lahad Datu**	**21.67**	**80**	P	**P**	**14 53 52.9**	**+1.6**
KAPI	**Kappang**	**23.62**	**107**	*e*P	**P**	**14 54 09.6**	**-1.9**
	comp=Z,32nm,0.9s						
KAPI	**Kappang**	**23.62**	**107**	P	**P**	**14 54 10.3**	**-1.2**
	comp=Z,27nm,0.9s,baz=295,slow=13,SNR=14						
KMI	**Kunming**	**23.93**	**13**	P	**P**	**14 54 14.8**	**+0.3**
KMI				pP	**pP**	**14 54 23.4**	**-2.0**
KMI				S	**S**	**14 58 26.1**	**-2.4**
KMI				sS	sS	14 58 40.7	-6.1
KMI				pmax	pmax		
	comp=Z,23nm,0.9s						
KMI				pmax	pmax		
	comp=Z,160nm,3.9s						
KMI				LR	LR		
	comp=N,1µm,15.4s						
KMI				LR	LR		
	comp=E,720nm,13.3s						
KMI				LR	LR		
	comp=Z,1µm,15.4s						
HYB	**Hyderabad**	**23.98**	**312**	*i* P	**P**	**14 54 16.0**	**+1.2**
HYB	**Hyderabad**	**23.98**	**312**	*e*PKP	**P**	**14 54 15.6**	**+0.7**
HYB				AMB	AMB	14 54 18.6	
	comp=Z,14nm,0.4s						
SHL	**Shillong**	**24.25**	**349**	*e*PKP	**P**	**14 54 17.0**	**-0.4**
SHL				*e*S	**S**	**14 58 36.0**	**+2.4**
BOK	**Bokaro**	**24.49**	**335**	*e*PKP	**P**	**14 54 19.5**	**+0.1**
NGP	**Nagpur**	**26.12**	**319**	*e*PKP	**P**	**14 54 34.2**	**-0.1**
NGP				AMB	AMB	14 55 12.5	
	comp=Z,19nm,1.1s						
GYA	**Guiyang**	**26.29**	**20**	P	**P**	**14 54 36.2**	**+0.3**
GYA				pP	**pP**	**14 54 48.3**	**+1.4**
GYA				sP	**sP**	**14 54 52.7**	**+0.9**
GYA				PP	**PnPn**	**14 55 21.2**	**+4.8**
GYA				PcP	**PcP**	**14 58 02.0**	**+0.4**
GYA				S	**S**	**14 59 04.3**	**-1.7**
GYA				sS	**sS**	**14 59 26.4**	**+1.8**
GYA				SS	**SnSn**	**15 00 15.6**	**+7.1**
GYA				ScP	**ScP**	**15 01 33.4**	**-5.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.7s						
GYA				LR	LR		
	comp=N,580nm,15.6s						
GYA				LR	LR		
	comp=E,450nm,16.0s						
GYA				LR	LR		
	comp=Z,560nm,15.7s						
TGY	**Tagaytay City**	**26.62**	**61**	P	**P**	**14 54 38.4**	**-0.5**
TGY	**Tagaytay City**	**26.62**	**61**	P	**P**	**14 54 38.4**	**-0.5**
	comp=Z,123nm,0.3s,baz=162,slow=9.6,SNR=2.7						
ODAN	**Odare**	**26.69**	**340**	*e*P	**P**	**14 54 40.3**	**+0.7**
	comp=Z,105nm,1.0s						
TAPN	**Taplejung**	**27.04**	**341**	*e*P	**P**	**14 54 43.9**	**+1.1**
	comp=Z,119nm,0.9s						
RAMN	**Ramite**	**27.04**	**339**	*e*P	**P**	**14 54 44.3**	**+1.5**
	comp=Z,61nm,1.0s						
PKI	**Pulchoki**	**28.05**	**338**	*e*P	**P**	**14 54 52.6**	**+0.8**
	comp=Z,42nm,0.9s						
GUN	**Gumba**	**28.18**	**339**	*e*P	**P**	**14 54 54.0**	**+1.0**
	comp=Z,54nm,0.7s						
DMN	**Daman**	**28.20**	**337**	*e*P	**P**	**14 54 53.8**	**+0.7**
KKN	**Kakani**	**28.29**	**338**	*e*P	**P**	**14 54 54.8**	**+0.9**
	comp=Z,43nm,1.0s						
LSA	**Lhasa**	**28.41**	**349**	P	**P**	**14 54 55.4**	**+0.2**
LSA	**Lhasa**	**28.41**	**349**	*e*P	**P**	**14 54 53.9**	**-1.3**
	comp=Z,28nm,0.9s						
BHPL	**Bhopal**	**28.66**	**320**	*e*PKP	**P**	**14 54 57.2**	**+0.1**
KOLN	**Koldanda**	**28.95**	**335**	*e*P	**P**	**14 55 01.0**	**+1.2**
	comp=Z,31nm,0.7s						
DANN	**Dangsing**	**29.39**	**336**	*e*P	**P**	**14 55 04.7**	**+0.9**
	comp=Z,50nm,1.0s						
CD2	**Chengdu**	**29.74**	**12**	*e*P	**P**	**14 55 06.2**	**-0.3**
CD2				pP	**pP**	**14 55 18.4**	**+0.8**
CD2				sP	**sP**	**14 55 24.1**	**+1.6**
CD2				PP	**PnPn**	**14 56 04.5**	**+1.3**
CD2				S	**S**	**14 59 58.8**	**-1.3**
CD2				sS	**sS**	**15 00 19.4**	**+0.8**
CD2				SS	**SnSn**	**15 01 36.8**	**+4.4**
CD2				pmax	pmax		
	comp=Z,40nm,0.9s						
CD2				pmax	pmax		
	comp=Z,100nm,6.0s						
CD2				LR	LR		
	comp=N,670nm,15.5s						
CD2				LR	LR		
	comp=E,970nm,15.5s						
CD2				LR	LR		
	comp=Z,610nm,17.8s						
ENH	**Enshi**	**30.77**	**21**	*e*P	**P**	**14 55 13.2**	**-2.4**
	comp=Z,60nm,1.0s						
QZH	**Quanzhou**	**31.08**	**40**	*e*P	P	14 55 22.6	+4.2
QZH				*e*S	**S**	**15 00 26.5**	**+5.4**
QZH				LR	LR		
	comp=N,2µm,9.9s						
QZH				LR	LR		
	comp=E,2µm,17.0s						
QZH				LR	LR		
	comp=Z,2µm,14.8s						
TPUB	**Ta-pu**	**31.36**	**45**	*e*P	**P**	**14 55 19.7**	**-1.2**
	comp=Z,59nm,1.1s						
TWG	**Pinlang**	**31.37**	**46**	*e*P	**P**	**14 55 18.5**	**-2.5**
TWG				*e*pP	**pP**	**14 55 30.3**	**-1.9**
TWG				*e*sP	**sP**	**14 55 35.1**	**-2.0**
WHN	**Wuhan**	**33.04**	**28**	⇓*i*P	**P**	**14 55 35.8**	**+0.3**
WHN				S	S	15 00 58.4	+6.8
WHN				LR	LR		
	comp=N,1µm,13.4s						
WHN				LR	LR		
	comp=E,2µm,17.4s						
WHN				LR	LR		
	comp=Z,2µm,16.9s						
XAN	**Xi'an**	**34.03**	**18**	P	**P**	**14 55 43.1**	**-1.1**
XAN				pP	**pP**	**14 55 55.2**	**-0.2**
XAN				pmax	pmax		
	comp=Z,22nm,0.9s						
XAN				pmax	pmax		
	comp=Z,26nm,5.7s						
XAN				LR	LR		
	comp=N,530nm,16.4s						
XAN				LR	LR		
	comp=E,170nm,14.3s						
XAN				LR	LR		
	comp=Z,310nm,16.4s						
FITZ	**Fitzroy Crossi**	**34.33**	**126**	P	**P**	**14 55 46.0**	**-0.9**
FITZ	**Fitzroy Crossi**	**34.33**	**126**	P	**P**	**14 55 46.0**	**-0.9**
	comp=Z,5.4nm,0.8s,baz=291,slow=5.1,SNR=7.4						
LZH	**Lanzhou**	**34.79**	**10**	*e*P	**P**	**14 55 50.7**	**-0.2**
LZH				pP	**pP**	**14 56 00.7**	**-1.4**
LZH				sP	**sP**	**14 56 06.2**	**-0.7**
LZH				PP	**PP**	**14 57 11.2**	**+0.9**
LZH				PcP	**PcP**	**14 58 20.7**	**-3.0**
LZH				SS	**SnSn**	**15 03 36.3**	**+1.2**
LZH				pmax	pmax		
	comp=Z,86nm,1.2s						
LZH				pmax	pmax		
	comp=Z,410nm,5.1s						
LZH				LR	LR		
	comp=N,1µm,13.7s						
LZH				LR	LR		
	comp=E,2µm,13.9s						
LZH				LR	LR		
	comp=Z,2µm,14.6s						
SMLA	**Simla**	**34.80**	**329**	*e*PKP	**P**	**14 55 50.8**	**0.0**
SMLA				AMB	AMB	14 55 51.9	
	comp=Z,21nm,0.5s						
SDNR	**Sundarnagar**	**35.20**	**329**	*e*PKP	**P**	**14 55 55.0**	**+0.7**
DHRM	**DHARAMSHALA**	**36.14**	**329**	*e*PKP	**P**	**14 56 02.5**	**-0.1**
NJ2	**Nanjing**	**36.52**	**32**	*e*P	**P**	**14 56 06.1**	**+0.6**
NJ2				pP	**pP**	**14 56 17.0**	**+0.2**
NJ2				sP	**sP**	**14 56 22.1**	**+0.5**
NJ2				PP	**PP**	**14 57 30.3**	**+1.1**
NJ2				S	**S**	**15 01 47.0**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,80nm,4.4s						
NJ2				LR	LR		
	comp=N,660nm,14.2s						
NJ2				LR	LR		
	comp=E,600nm,16.3s						
SSE	**Sheshan**	**37.09**	**36**	P	**P**	**14 56 09.3**	**-1.1**
SSE				S	**S**	**15 01 56.0**	**+2.1**
SSE				pmax	pmax		
	comp=Z,60nm,0.7s						
SSE				pmax	pmax		
	comp=Z,43nm,3.6s						
SSE				LR	LR		
	comp=N,400nm,16.8s						
SSE				LR	LR		
	comp=E,180nm,16.8s						
SSE				LR	LR		
	comp=Z,550nm,17.1s						
GTA	**Gaotai**	**37.62**	**3**	⇑P	**P**	**14 56 14.9**	**-0.1**
GTA				pP	**pP**	**14 56 28.2**	**+1.9**
GTA				sP	**sP**	**14 56 33.5**	**+2.4**
GTA				PP	**PnPn**	**14 57 43.0**	**+0.4**
GTA				PcP	**PcP**	**14 58 33.1**	**+1.0**
GTA				S	**S**	**15 02 01.4**	**-0.6**
GTA				sS	**sS**	**15 02 21.4**	**+0.6**
GTA				SS	**SnSn**	**15 04 34.9**	**-8.5**
GTA				pmax	pmax		
	comp=Z,34nm,1.0s						
GTA				pmax	pmax		
	comp=Z,96nm,3.8s						
GTA				LR	LR		
	comp=N,320nm,13.3s						
GTA				LR	LR		
	comp=E,330nm,15.7s						
GTA				LR	LR		
	comp=Z,290nm,14.7s						
HHC	**Hu-ho-hao-te**	**41.12**	**17**	*e*P	**P**	**14 56 43.9**	**-0.2**
HHC				pP	**pP**	**14 56 56.5**	**+1.0**
HHC				sP	**sP**	**14 57 01.7**	**+1.3**
HHC				PP	**PnPn**	**14 58 22.2**	**-2.1**
HHC				S	**S**	**15 02 54.3**	**-0.3**
HHC				sS	**sS**	**15 03 14.2**	**+0.7**
HHC				SS	**SS**	**15 05 53.0**	**-5.4**
HHC				pmax	pmax		
	comp=Z,71nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,5.9s						
HHC				LR	LR		
	comp=N,2µm,14.4s						
HHC				LR	LR		
	comp=E,610nm,12.2s						
HHC				LR	LR		
	comp=Z,1µm,14.6s						
BJT	**Baijiatuau**	**41.91**	**22**	*e*P	**P**	**14 56 49.1**	**-1.3**
	comp=Z,55nm,0.7s						
BJT				*e*pP	**pP**	**14 57 00.5**	**-1.4**
BJI	**Beijing**	**41.93**	**22**	P	**P**	**14 56 51.4**	**+0.8**
BJI				pP	**pP**	**14 57 02.4**	**+0.4**
BJI				S	**S**	**15 03 08.1**	**+1.8**
BJI				sS	**sS**	**15 03 28.0**	**+2.8**
BJI				pmax	pmax		
	comp=Z,120nm,0.9s						
BJI				LR	LR		
	comp=N,280nm,14.6s						
BJI				LR	LR		
	comp=E,460nm,18.1s						
BJI				LR	LR		
	comp=Z,190nm,16.6s						
KSH	**Kashi**	**42.27**	**336**	P	**P**	**14 56 52.7**	**-0.8**
KSH				*e*pP	**pP**	**14 57 04.9**	**-0.1**
KSH				*e*sP	**sP**	**14 57 09.6**	**-0.2**
KSH				*e*PP	**PP**	**14 58 33.5**	**+1.5**
KSH				*e*PcP	**PcP**	**14 58 47.6**	**+0.7**
KSH				*e*S	**S**	**15 03 07.7**	**-3.8**

KSH				*e*sS	**sS**	**15 03 28.6**	**-1.9**
KSH				pmax	pmax		
	comp=Z,27nm,0.6s						
KSH				LR	LR		
	comp=N,250nm,6.4s						
KSH				LR	LR		
	comp=E,230nm,6.3s						
KSH				LR	LR		
	comp=Z,210nm,5.5s						
WRA	**Warramunga Arr**	**42.41**	**122**	P	**P**	**14 56 54.0**	**-1.0**
WRA	**Warramunga Arr**	**42.41**	**122**	P	**P**	**14 56 54.0**	**-1.0**
	comp=Z,6.8nm,0.9s,baz=302,slow=9.2,SNR=25						
WRAB	**Tennant Creek**	**42.42**	**122**	*e*P	**P**	**14 56 52.8**	**-2.1**
	comp=Z,7.4nm,0.9s						
WRAB				*e*pP	**pP**	**14 57 04.8**	**-1.5**
WRAB				*e*sP	**sP**	**14 57 10.1**	**-1.1**
WMQ	**Urumqi**	**42.76**	**350**	*e*P	**P**	**14 56 59.0**	**+1.6**
WMQ				pP	**pP**	**14 57 11.5**	**+2.6**
WMQ				sP	**sP**	**14 57 17.0**	**+3.3**
WMQ				PP	**PP**	**14 58 42.0**	**+4.8**
WMQ				*e*S	S	15 03 26.0	+7.4
WMQ				sS	**sS**	**15 03 41.0**	**+3.4**
WMQ				pmax	pmax		
	comp=Z,22nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.5s						
WMQ				LR	LR		
	comp=N,380nm,19.3s						
WMQ				LR	LR		
	comp=E,560nm,26.0s						
WMQ				LR	LR		
	comp=Z,460nm,24.0s						
ASAR	**Alice Springs**	**43.80**	**127**	P	**P**	**14 57 06.0**	**-0.2**
ASAR				PcP	**PcP**	**14 58 53.1**	**+0.8**
ASAR	**Alice Springs**	**43.80**	**127**	P	**P**	**14 57 06.0**	**-0.2**
	comp=Z,6.5nm,1.0s,baz=304,slow=7.6,SNR=30						
ASAR				PcP	**PcP**	**14 58 53.1**	**+0.8**
	comp=Z,1.0nm,0.8s,baz=309,slow=4.5,SNR=3.8						
ASAR				LR	LR	15 18 10.5	
	comp=Z,225nm,19.6s,baz=167,slow=40						
AS31	**Alice Springs**	**43.80**	**127**	*e*P	**P**	**14 57 05.2**	**-1.0**
AS31				*e*pP	**pP**	**14 57 16.6**	**-1.0**
AS31				*e*sP	**sP**	**14 57 20.8**	**-1.6**
ULHL	**Ulahol**	**44.49**	**338**	P	**P**	**14 57 12.8**	**+1.3**
	SNR=11						
JNU	**Nakatsue**	**44.53**	**42**	*e*P	**P**	**14 57 10.2**	**-1.6**
	comp=Z,15nm,1.0s						
JNU				*e*pP	**pP**	**14 57 22.2**	**-1.1**
JNU				*e*sP	**sP**	**14 57 26.5**	**-1.6**
JNU	**Nakatsue**	**44.53**	**42**	P	**P**	**14 57 11.2**	**-0.6**
	comp=Z,29nm,0.9s,baz=215,slow=0.9,SNR=6.0						
KZA	**Kyzart**	**44.72**	**337**	P	**P**	**14 57 15.0**	**+1.4**
	SNR=10						
UCH	**Uchtor**	**45.14**	**336**	P	**P**	**14 57 18.9**	**+1.9**
	SNR=5.3						
TKM2	**Tokmak 2**	**45.31**	**338**	*e*P	**P**	**14 57 18.2**	**+0.2**
	comp=Z,35nm,1.1s						
TKM2				*e*pP	**pP**	**14 57 29.0**	**-0.5**
TKM2				*e*sP	**sP**	**14 57 34.2**	**-0.2**
TKM2	**Tokmak 2**	**45.31**	**338**	P	**P**	**14 57 19.5**	**+1.5**
	SNR=12						
KBK	**Karagaybulak**	**45.33**	**337**	P	**P**	**14 57 20.1**	**+1.9**
	SNR=27						
AML	**Almayashu**	**45.40**	**336**	P	**P**	**14 57 20.6**	**+1.6**
	SNR=21						
KSAR	**Wonju Array Be**	**45.49**	**35**	P	**P**	**14 57 19.1**	**-0.2**
AAK	**Ala-Archa**	**45.49**	**337**	*e*P	**P**	**14 57 18.6**	**-0.8**
	comp=Z,9.3nm,0.8s						
AAK				*e*pP	**pP**	**14 57 30.5**	**-0.5**
AAK				PcP	**PcP**	**14 58 59.2**	**+1.3**
AAK	**Ala-Archa**	**45.49**	**337**	P	**P**	**14 57 20.7**	**+1.2**
	comp=Z,10nm,0.9s,baz=137,slow=4.3,SNR=12						
AAK				PcP	**PcP**	**14 58 59.2**	**+1.3**
	comp=Z,1.5nm,0.4s,baz=217,slow=5.4,SNR=3.8						
KSRS	**Korea Array**	**45.52**	**35**	P	**P**	**14 57 19.1**	**-0.4**
	comp=Z,23nm,0.8s,baz=224,slow=8.9,SNR=23						
CHMS	**Chumysh**	**45.70**	**337**	P	**P**	**14 57 22.0**	**+1.1**
	SNR=8.1						
EKS2	**Erkin-Say**	**45.80**	**336**	*e*P	**P**	**14 57 22.9**	**+1.0**
	comp=Z,18nm,0.8s						
EKS2				*e*pP	**pP**	**14 57 32.3**	**-1.1**
EKS2	**Erkin-Say**	**45.80**	**336**	P	**P**	**14 57 23.3**	**+1.4**
	SNR=23						
USP	**Ospenovka**	**46.02**	**337**	P	**P**	**14 57 24.8**	**+1.3**
	SNR=35						
SONM	**Songino Array**	**46.66**	**9**	P	**P**	**14 57 29.1**	**+0.6**
SONM				PcP	**PcP**	**14 59 02.3**	**+0.5**
SONM	**Songino Array**	**46.66**	**9**	P	**P**	**14 57 29.1**	**+0.6**
	comp=Z,16nm,0.7s,baz=189,slow=8.7,SNR=89						
SONM				PcP	**PcP**	**14 59 02.3**	**+0.5**
	comp=Z,3.9nm,0.8s,baz=212,slow=2.6,SNR=3.8						
MKAR	**Makanchi Array**	**46.73**	**346**	*e*P	**P**	**14 57 29.6**	**+0.6**
MKAR	**Makanchi Array**	**46.73**	**346**	P	**P**	**14 57 29.6**	**+0.6**
	comp=Z,57nm,0.8s,baz=160,slow=7.7,SNR=401						
MKAR				LR	LR	15 20 57.4	
	comp=Z,175nm,21.1s,baz=162,slow=41						
ULN	**Ulaanbaatar**	**46.80**	**9**	*e*P	**P**	**14 57 28.4**	**-1.2**
	comp=Z,11nm,0.7s						
ULN				*e*pP	**pP**	**14 57 39.7**	**-1.5**
KKAR	**Karatay Array**	**47.55**	**334**	*e*P	**P**	**14 57 35.3**	**-0.1**
CN2	**Changchun**	**48.93**	**27**	*e*P	**P**	**14 57 46.0**	**0.0**
CN2				*e*pP	**pP**	**14 57 58.4**	**+0.8**
CN2				*e*S	**S**	**15 04 46.0**	**-1.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=N,500nm,15.0s						
CN2				LR	LR		
	comp=E,500nm,15.0s						
CN2				LR	LR		
	comp=Z,500nm,15.0s						
HIA	**Hailar**	**51.22**	**19**	*e*P	**P**	**14 58 02.1**	**-1.2**
	comp=Z,22nm,0.9s						
HIA				*e*pP	**pP**	**14 58 13.3**	**-1.7**
KURBB	**Kurchatov Arra**	**51.22**	**345**	P	**P**	**14 58 04.0**	**+0.7**
	comp=Z,20nm,0.8s,baz=168,slow=7.1,SNR=159						
KURBB				PcP	**PcP**	**14 59 18.9**	**+0.8**
	comp=Z,3.6nm,0.8s,baz=152,slow=2.4,SNR=4.8						
KURK	**Kurchatov**	**51.28**	**345**	*e*P	**P**	**14 58 03.9**	**+0.2**
	comp=Z,45nm,1.0s						
KURK				PcP	**PcP**	**14 59 18.9**	**+0.6**
MAJO	**Matsushiro**	**51.42**	**43**	*e*P	**P**	**14 58 03.8**	**-1.2**
	comp=Z,18nm,0.8s						
MAT	**Matsushiro**	**51.42**	**43**	P	**P**	**14 58 04.2**	**-0.8**
MAT				S	**S**	**15 05 20.0**	**-2.1**
MJAR	**Matsushiro Arr**	**51.42**	**43**	P	**P**	**14 58 04.5**	**-0.5**
MJAR	**Matsushiro Arr**	**51.42**	**43**	P	**P**	**14 58 04.5**	**-0.5**
	comp=Z,14nm,1.0s,baz=215,slow=6.0,SNR=32						
MDJ	**Mudanjiang**	**51.50**	**29**	*e*P	**P**	**14 58 03.3**	**-2.2**
	comp=Z,13nm,0.9s						
MDJ				*e*pP	**pP**	**14 58 15.6**	**-1.6**
MDJ				*e*sP	**sP**	**14 58 20.8**	**-1.1**
USRK	**Ussuriysk Arra**	**52.42**	**31**	P	**P**	**14 58 12.7**	**+0.4**
	comp=Z,36nm,1.0s,baz=233,slow=4.0,SNR=28						
CTA	**Charters Tower**	**52.85**	**117**	P	**P**	**14 58 15.9**	**0.0**
CTA	**Charters Tower**	**52.85**	**117**	P	**P**	**14 58 15.9**	**0.0**
	comp=Z,16nm,1.0s,baz=306,slow=8.2,SNR=7.0						
OPO	**Ambohidratompo**	**53.01**	**245**	LR	LR	15 17 14.2	
	comp=Z,194nm,20.0s,baz=266,slow=32						
ZALV	**Zalesovo Beam**	**53.05**	**351**	P	**P**	**14 58 17.4**	**+0.6**
ZALV	**Zalesovo Beam**	**53.05**	**351**	P	**P**	**14 58 17.4**	**+0.6**
	comp=Z,93nm,0.9s,baz=174,slow=6.0,SNR=158						
ZALV				LR	LR	15 26 29.9	
	comp=Z,151nm,19.1s,baz=70,slow=42						
STKA	**Stephens Creek**	**53.79**	**132**	P	**P**	**14 58 23.4**	**+0.8**
STKA	**Stephens Creek**	**53.79**	**132**	P	**P**	**14 58 23.4**	**+0.8**
	comp=Z,11nm,0.9s,baz=307,slow=8.1,SNR=12						
RDF	**Al-Radifah**	**54.33**	**305**	*e*P	**P**	**14 58 27.4**	**+0.7**
RDF				AMb	AMB	14 58 41.2	
	comp=Z,32nm,1.1s						
RAYN	**Ar Rayn**	**54.40**	**298**	*e*P	**P**	**14 58 27.0**	**-0.3**
	comp=Z,7.2nm,0.8s						
NAY	**Al-Naaiem**	**54.70**	**305**	*e*P	**P**	**14 58 30.1**	**+0.8**
NAY				AMb	AMB	14 58 30.9	
	comp=Z,9.3nm,1.1s						
MIB	**Mutribah**	**54.82**	**306**	*e*P	**P**	**14 58 31.2**	**+1.1**
MIB				AMb	AMB	14 58 32.1	
	comp=Z,36nm,0.9s						
BVAR	**Borovoye Array**	**55.74**	**341**	P	**P**	**14 58 36.3**	**0.0**
BVAR	**Borovoye Array**	**55.74**	**341**	P	**P**	**14 58 36.3**	**0.0**
	comp=Z,14nm,0.7s,baz=145,slow=8.2,SNR=80						
BRVK	**Borovoye**	**55.80**	**341**	*e*P	**P**	**14 58 36.8**	**0.0**
	comp=Z,14nm,0.8s						
BRVK				*e*pP	**pP**	**14 58 48.2**	**-0.3**
EIDS	**Eidsvold**	**58.75**	**121**	*e*P	**P**	**14 58 59.1**	**+1.0**
	comp=Z,16nm,0.9s						
KMBO	**Kilima Mbogo**	**59.87**	**268**	P	**P**	**14 59 07.2**	**+0.9**
KMBO	**Kilima Mbogo**	**59.87**	**268**	P	**P**	**14 59 07.2**	**+0.9**
	comp=Z,0.6nm,0.3s,baz=66,slow=20,SNR=3.1						
KBZ	**Khabaz**	**63.61**	**319**	P	**P**	**14 59 31.1**	**+0.5**
KBZ	**Khabaz**	**63.61**	**319**	P	**P**	**14 59 31.1**	**+0.5**
	comp=Z,8.3nm,0.8s,baz=118,slow=5.9,SNR=22						
BRTR	**Keskin Array B**	**68.68**	**312**	P	**P**	**15 00 03.0**	**-0.5**
BRTR	**Keskin Array B**	**68.68**	**312**	P	**P**	**15 00 03.0**	**-0.5**
	comp=Z,4.9nm,0.8s,baz=131,slow=7.3,SNR=34						
PETK	**Petropavlovsk-**	**71.40**	**34**	P	**P**	**15 00 19.6**	**-0.2**
PETK	**Petropavlovsk-**	**71.40**	**34**	P	**P**	**15 00 19.6**	**-0.2**
	comp=Z,3.4nm,0.7s,baz=210,slow=5.1,SNR=9.8						
PETK				LR	LR	15 35 43.0	
	comp=Z,55nm,18.4s,baz=237,slow=39						
MAW	**Mawson**	**73.16**	**193**	P	**P**	**15 00 30.6**	**+0.7**
MAW	**Mawson**	**73.16**	**193**	P	**P**	**15 00 30.6**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=34,slow=9.5,SNR=2.7						
MAW				LR	LR	15 26 16.6	
	comp=Z,284nm,18.6s,baz=175,slow=31						
TIRR	**Tirgusor**	**73.67**	**316**	*e*P	**P**	**15 00 32.6**	**-0.8**
	comp=Z,11nm,0.8s						
LBTB	**Lobatse**	**73.98**	**244**	P	**P**	**15 00 36.9**	**+1.1**
LBTB	**Lobatse**	**73.98**	**244**	P	**P**	**15 00 36.9**	**+1.1**
	comp=Z,1.6nm,0.8s,baz=122,slow=6.6,SNR=3.7						
LBTB				LR	LR	15 28 30.3	
	comp=Z,255nm,19.1s,baz=117,slow=32						
CFR	**Carcaliu**	**74.04**	**317**	⇑*i*P	**P**	**15 00 35.8**	**+0.2**
AKASG	**Malin Array Be**	**74.78**	**322**	P	**P**	**15 00 39.6**	**-0.1**
AKASG	**Malin Array Be**	**74.78**	**322**	P	**P**	**15 00 39.6**	**-0.1**
	comp=Z,5.1nm,0.7s,baz=106,slow=4.2,SNR=18						
KIEV	**Kiev**	**74.79**	**322**	*e*P	**P**	**15 00 39.7**	**-0.2**
BOSA	**Boshof**	**74.91**	**240**	LR	LR	15 32 13.3	
	comp=Z,157nm,18.5s,baz=275,slow=35						
BURAR	**Bucovina Array**	**76.56**	**319**	⇑*i*P	**P**	**15 00 51.5**	**+1.3**
BUR08	**Bucovina Ar. S**	**76.58**	**319**	*e*P	**P**	**15 00 49.7**	**-0.6**
VTS	**Vitosha**	**76.99**	**313**	⇓*i*P	**P**	**15 00 53.1**	**+0.3**
JOF	**Joensuu**	**77.64**	**335**	*e*p	**P**	**15 00 56.6**	**+0.8**
	comp=Z,8.3nm,0.9s						
DRGR		**78.08**	**317**	⇑*i*P	**P**	**15 00 59.7**	**+1.0**
TRPA	**Tarpa**	**78.43**	**319**	⇑*i*P	**P**	**15 01 01.0**	**+0.5**
KOLS	**Kolonicke sedl**	**78.75**	**320**	*e*P	**P**	**15 01 03.5**	**+1.2**
SUW	**Suwalki**	**79.19**	**325**	*e*P	**P**	**15 01 04.7**	**+0.2**
CRVS	**Cervenica-Dubn**	**79.27**	**319**	*e*P	**P**	**15 01 05.1**	**0.0**
FINES	**FINESS Array B**	**79.50**	**332**	P	**P**	**15 01 06.2**	**+0.2**
FINES	**FINESS Array B**	**79.50**	**332**	P	**P**	**15 01 06.2**	**+0.2**
	comp=Z,6.2nm,0.8s,baz=98,slow=7.9,SNR=11						
FINES				LR	LR	15 43 12.6	
	comp=Z,70nm,18.7s,baz=76,slow=41						
KAF	**Kangasniemi**	**79.58**	**333**	*e*p	**P**	**15 01 06.5**	**0.0**
	comp=Z,9.3nm,0.7s						
PSZ	**Piszkesteto**	**80.15**	**318**	*e*P	**P**	**15 01 10.2**	**+0.2**
	comp=Z,7.7nm,0.8s						
OJC	**Ojcow**	**80.56**	**321**	*e*P	**P**	**15 01 12.8**	**+0.8**
	comp=Z,5.3nm,0.8s						
TSUM	**Tsumeb**	**80.63**	**250**	P	**P**	**15 01 14.7**	**+1.5**
TSUM	**Tsumeb**	**80.63**	**250**	P	**P**	**15 01 14.7**	**+1.5**
	comp=Z,0.9nm,0.3s,baz=110,slow=6.1,SNR=4.5						
BILL	**Bilibino**	**80.75**	**21**	*e*P	**P**	**15 01 11.7**	**-1.0**
	comp=Z,2.1nm,0.8s						
PKSM	**Moragy**	**80.77**	**316**	⇑*i*P	**P**	**15 01 13.7**	**+0.5**
KEV	**Kevo**	**81.59**	**341**	*e*p	**P**	**15 01 17.7**	**+0.6**
MORC	**Moravsky Berou**	**81.94**	**320**	*e*P	**P**	**15 01 18.4**	**-1.0**
	comp=Z,4.5nm,0.9s						
MORC	**Moravsky Berou**	**81.94**	**320**	⇑*i*P	**P**	**15 01 19.8**	**+0.4**
ARCES	**ARCESS Array B**	**82.02**	**340**	P	**P**	**15 01 20.0**	**+0.6**
ARCES	**ARCESS Array B**	**82.02**	**340**	P	**P**	**15 01 20.0**	**+0.6**
	comp=Z,8.6nm,0.8s,baz=90,slow=5.2,SNR=20						
ARCES				LR	LR	15 42 05.4	
	comp=Z,103nm,21.0s,baz=93,slow=39						
DPC	**Dobruska-Polom**	**82.78**	**320**	*e*P	**P**	**15 01 25.0**	**+1.2**
DPC				*e*pP	**pP**	**15 01 33.5**	**-2.7**
GOLS	**Golise**	**82.83**	**316**	*i* P	**P**	**15 01 24.9**	**+0.7**
UPC	**Upice**	**83.00**	**321**	*e*P	**P**	**15 01 26.1**	**+1.2**
BOJS	**Bojanci**	**83.05**	**315**	*i* P	**P**	**15 01 25.7**	**+0.5**
PDKS	**Podkum**	**83.27**	**316**	*e*P	**P**	**15 01 27.1**	**+0.6**
PRU	**Pruhonice**	**83.89**	**320**	*e*P	**P**	**15 01 30.3**	**+0.8**
PRU				*e*pP	**pP**	**15 01 39.6**	**-2.2**
BRG	**Berggiesshubel**	**84.34**	**321**	*e*P	**P**	**15 01 32.5**	**+0.7**
	comp=Z,4.6nm,0.9s						
BRG				*e*		15 01 42.2	
	comp=Z,8.7nm,1.5s						
GERES	**GERESS Array B**	**84.35**	**319**	P	**P**	**15 01 32.4**	**+0.4**
GERES	**GERESS Array B**	**84.35**	**319**	P	**P**	**15 01 32.4**	**+0.4**
	comp=Z,4.2nm,0.9s,baz=96,slow=5.4,SNR=19						
GERES				LR	LR	15 42 22.4	
	comp=Z,46nm,20.1s,baz=300,slow=38						
KHC	**Kasperske Hory**	**84.45**	**319**	*e*P	**P**	**15 01 30.5**	**-1.9**
KHC				*e*pP	**pP**	**15 01 41.0**	**-3.8**
CLL	**Collm**	**84.96**	**321**	*e*P	**P**	**15 01 35.0**	**+0.1**
	comp=Z,6.0nm,1.2s						
CLL				*e*pP	**pP**	**15 01 45.0**	**-2.2**
VNDA	**Vanda**	**86.34**	**169**	P	**P**	**15 01 41.6**	**+0.4**
VNDA	**Vanda**	**86.34**	**169**	P	**P**	**15 01 41.6**	**+0.4**
	comp=Z,0.4nm,0.9s,baz=236,slow=7.3,SNR=2.3						
NB2	**NORSAR Subarra**	**86.51**	**331**	P	**P**	**15 01 42.3**	**-0.1**
	comp=Z,6.9nm,0.9s,baz=96,slow=4.8						
NOA	**NORSAR Array B**	**86.51**	**331**	P	**P**	**15 01 42.7**	**+0.3**
NOA	**NORSAR Array B**	**86.51**	**331**	P	**P**	**15 01 42.7**	**+0.3**
	comp=Z,4.3nm,0.8s,baz=94,slow=5.0,SNR=15						
NOA				LR	LR	15 47 58.0	
	comp=Z,43nm,20.0s,baz=55,slow=41						
KEST	**Kesra**	**87.16**	**306**	P	**P**	**15 01 47.5**	**+1.3**
KEST	**Kesra**	**87.16**	**306**	P	**P**	**15 01 47.5**	**+1.3**
	comp=Z,1.1nm,0.8s,baz=84,slow=9.2,SNR=3.3						
KEST				LR	LR	15 44 36.9	
	comp=Z,31nm,19.5s,baz=221,slow=38						
LPG	**La Plagne**	**89.02**	**315**	*e*P	P	15 01 49.3	-5.8
	comp=Z,20nm,1.0s						
LPL	**La Plagne**	**89.03**	**315**	*e*P	P	15 01 49.3	-5.8
	comp=Z,22nm,1.1s						
SMF	**Signal de Mont**	**91.00**	**317**	*e*P	P	15 01 58.9	-5.0
	comp=Z,15nm,1.0s						
AVF	**Avril sur Loir**	**91.32**	**317**	*e*P	P	15 02 00.7	-4.7
	comp=Z,29nm,1.4s						
AVF	**Avril sur Loir**	**91.32**	**317**	*e*P	P	15 02 00.7	-4.7
	comp=Z,29nm,1.4s						
QSPA	**South Pole Qui**	**91.64**	**180**	P	**P**	**15 02 07.0**	**+0.4**
QSPA	**South Pole Qui**	**91.64**	**180**	P	**P**	**15 02 07.0**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=25,slow=5.5,SNR=2.6						
TORD	**Torodi Ar. Bea**	**94.84**	**283**	P	**P**	**15 02 22.8**	**+0.5**
TORD				PKKPbc	**PKKPdf**	**15 19 18.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**94.84**	**283**	P	**P**	**15 02 22.8**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=95,slow=4.5,SNR=2.7						
TORD				PKKPbc	**PKKPdf**	**15 19 18.7**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=242,slow=3.2,SNR=4.1						
ILAR	**Eielson Array**	**99.30**	**23**	P	**Pdif**	**15 02 41.4**	**0.0**
ILAR				PP	PP	15 06 36.1	-8.2
ILAR	**Eielson Array**	**99.30**	**23**	P	**Pdif**	**15 02 41.4**	**0.0**
	comp=Z,0.4nm,0.9s,baz=303,slow=5.0,SNR=4.1						
ILAR				PP	PP	15 06 36.1	-8.2
	comp=Z,0.4nm,0.8s,baz=292,slow=7.2,SNR=5.1						
YKA	**Yellowknife Ar**	**111.65**	**15**	PKiKP	**PKiKP**	**15 07 33.8**	**0.0**
YKA				PP	**PP**	**15 08 13.0**	**-2.3**
YKA				PKKPbc	**PKKPbc**	**15 18 27.4**	**-2.8**
YKA	**Yellowknife Ar**	**111.65**	**15**	PKiKP	**PKiKP**	**15 07 33.8**	**0.0**
	comp=Z,0.1nm,0.4s,baz=299,slow=2.5,SNR=2.8						
YKA				PP	**PP**	**15 08 13.0**	**-2.3**
	comp=Z,1.7nm,1.0s,baz=332,slow=7.0,SNR=5.2						
YKA				PKKPbc	**PKKPbc**	**15 18 27.4**	**-2.8**
	comp=Z,0.2nm,0.4s,baz=43,slow=4.2,SNR=3.8						
ULM	**Lac du Bonnet**	**127.07**	**10**	PKP	**PKPdf**	**15 08 03.0**	**-0.7**
ULM	**Lac du Bonnet**	**127.07**	**10**	PKP	**PKPdf**	**15 08 03.0**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=19,slow=5.9,SNR=3.3						
NVAR	**Mina Array Bea**	**128.46**	**35**	PKP	**PKPdf**	**15 08 07.8**	**+0.7**
NVAR	**Mina Array Bea**	**128.46**	**35**	PKP	**PKPdf**	**15 08 07.8**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=298,slow=1.7,SNR=6.2						
PDAR	**Pinedale Array**	**129.65**	**25**	PKP	**PKPdf**	**15 08 09.4**	**+0.2**
PDAR				PP	**PP**	**15 10 19.8**	**+0.8**
PDAR	**Pinedale Array**	**129.65**	**25**	PKP	**PKPdf**	**15 08 09.4**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=231,slow=0.9,SNR=4.5						
PDAR				PP	**PP**	**15 10 19.8**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=315,slow=0.8,SNR=3.6						
RCBR	**Riachuelo**	**132.90**	**264**	PKP	**PKPdf**	**15 08 15.6**	**-0.4**
RCBR	**Riachuelo**	**132.90**	**264**	PKP	**PKPdf**	**15 08 15.6**	**-0.4**
	comp=Z,7.3nm,0.9s,baz=146,slow=3.6,SNR=2.1						
TXAR	**Lajitas Array**	**143.32**	**31**	PKPpre	PKPpre	15 08 30.8	
TXAR	**Lajitas Array**	**143.32**	**31**	PKhKP	PKPpre	15 08 30.8	
	comp=Z,0.2nm,0.3s,baz=255,slow=3.4,SNR=4.2						
CPUP	**Villa Florida**	**145.28**	**223**	PKPbc	**PKPdf**	**15 08 38.5**	**+0.4**
CPUP	**Villa Florida**	**145.28**	**223**	PKPbc	**PKPdf**	**15 08 38.5**	**+0.4**
	comp=Z,5.0nm,0.7s,baz=52,slow=3.5,SNR=17						
CFAA	**Coronel Fontan**	**147.17**	**204**	PKPbc	**PKPbc**	**15 08 44.1**	**+0.7**
CFAA	**Coronel Fontan**	**147.17**	**204**	PKPbc	**PKPbc**	**15 08 44.1**	**+0.7**
	comp=Z,0.2nm,0.6s,baz=135,slow=1.4,SNR=4.4						

ISK ***11*** *14:53:29.4, 38.°67N×35.°80E, h11km, MD3.1*
DDA ***11*** *14:53:30.2, 38.°61N×35.°82E, h7km, MD2.9*
CSEM ***11*** *14:53:30.1±0.1, 38.°69N×35.°83E, h12km, MD3.1, Error ellipse: s-maj=3.8km s-min=2.5km az=55.0*
ISC 11 14:53:30.7±0.9**, 38.°71N**±0.°04×**35.°85E**±0.°04**, h12**km±7km**, n22, σ1.ˢ05**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.14**	**358**	PG	**Pg**	**14 53 34.0**	**-0.2**
BNN				*e*SG	**Sg**	**14 53 37.4**	**+0.6**
BNN	**Bunyan**	**0.14**	**358**	*i* Pg	**Pg**	**14 53 34.0**	**-0.2**
BNN				*e*Sg	**Sg**	**14 53 37.4**	**+0.6**
PINB	**Pinarbasi**	**0.43**	**95**	*i* P	**Pg**	**14 53 39.0**	**-0.4**
PINB				*i* S	**Sb**	**14 53 46.8**	**-0.1**
PINB	**Pinarbasi**	**0.43**	**95**	*i* P	**Pg**	**14 53 39.0**	**-0.4**
PINB				*i* S	**Sb**	**14 53 46.8**	**-0.1**
SARI	**SarD1z-Kayseri**	**0.54**	**124**	*e*PG	**Pg**	**14 53 40.2**	**-1.1**
SARI				*e*SG	**Sb**	**14 53 49.3**	**-0.6**
YOZ	**Yozgat**	**1.01**	**336**	*e*PG	**Pb**	**14 53 50.1**	**-0.1**
YOZ				*e*SG	**Sb**	**14 54 04.0**	**+0.5**
YOZ	**Yozgat**	**1.01**	**336**	*e*Pg	**Pb**	**14 53 50.1**	**-0.1**
YOZ				*e*Sg	**Sb**	**14 54 04.0**	**+0.5**
ANDN	**Andirin**	**1.20**	**161**	*e*P	**Pn**	**14 53 55.5**	**+2.2**
ANDN				*e*S	**Sn**	**14 54 13.5**	**+4.0**
ANDN	**Andirin**	**1.20**	**161**	*e*P	**Pn**	**14 53 55.5**	**+2.2**
KOZT	**Kozan**	**1.23**	**181**	*e*PN	**Pn**	**14 53 53.1**	**-0.6**
KOZT				*e*SN	**Sn**	**14 54 09.5**	**-0.7**
KOZT	**Kozan**	**1.23**	**181**	*e*Pn	**Pn**	**14 53 53.1**	**-0.6**
KOZT				*e*Sn	**Sn**	**14 54 09.5**	**-0.7**
KMRS	**Kahramanmaras**	**1.46**	**145**	*e*PN	**Pn**	**14 53 56.2**	**-0.6**
KMRS	**Kahramanmaras**	**1.46**	**145**	*e*Pn	**Pn**	**14 53 56.2**	**-0.6**
AYKD	**Aykdinkavak**	**1.50**	**150**	*e*P	**Pb**	**14 53 57.6**	**-0.8**
AYKD				*e*S	**Sg**	**14 54 19.5**	**+0.5**
AKCD	**Akcadag**	**1.68**	**104**	*e*P	**Pg**	**14 54 02.7**	**-0.2**
AKCD				*e*S	**Sg**	**14 54 24.7**	**0.0**
AKCD	**Akcadag**	**1.68**	**104**	*e*P	**Pg**	**14 54 02.7**	**-0.2**
AKCD				*e*S	**Sg**	**14 54 24.7**	**0.0**
CORM	**Corum**	**1.74**	**328**	*e*PN	**Pn**	**14 54 00.2**	**-0.6**
CORM	**Corum**	**1.74**	**328**	*e*Pn	**Pn**	**14 54 00.2**	**-0.6**
KAMT	**Kaman**	**1.79**	**292**	*e*PN	**Pn**	**14 54 01.0**	**-0.4**
KAMT	**Kaman**	**1.79**	**292**	*e*Pn	**Pn**	**14 54 01.0**	**-0.4**
ILIC	**ilic-Erzincan**	**2.24**	**70**	*e*PN	**Pn**	**14 54 07.5**	**-0.2**
ILIC	**ilic-Erzincan**	**2.24**	**70**	*e*Pn	**Pn**	**14 54 07.5**	**-0.2**

CSEM ***11*** *14:53:58.9, 38.°40N×21.°82E, h17km, MD2.8, After ATH*
ATH 11 14:53:58.9, 38.°40N×21.°82E, h17km±1km**, MD2.8**/10**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.07**	**68**	*e*PB	Pg	14 54 02.3	+0.1
EFP				*e*SB	Sg	14 54 04.6	+0.2
EFP	**Efpalio**	**0.07**	**68**	*e*Pb	Pg	14 54 02.3	+0.1
EFP				*e*Sb	Sg	14 54 04.6	+0.2
TRIZ	**Trizonia**	**0.20**	**100**	*e*PB	Pb	14 54 04.0	-0.1
TRIZ				*e*SB	Sb	14 54 07.6	0.0
TRIZ	**Trizonia**	**0.20**	**100**	*e*Pb	Pb	14 54 04.0	-0.1
TRIZ				*e*Sb	Sb	14 54 07.6	0.0
LAKA	**Lakka**	**0.20**	**142**	*e*PB	Pg	14 54 03.2	-0.6
LAKA	**Lakka**	**0.20**	**142**	*e*Pb	Pg	14 54 03.2	-0.6
KALE	**Kalithea**	**0.25**	**92**	*e*PB	Pb	14 54 04.9	-0.2
KALE				*e*SB	Sb	14 54 09.1	-0.2
KALE	**Kalithea**	**0.25**	**92**	*e*Pb	Pb	14 54 04.9	-0.2
KALE				*e*Sb	Sb	14 54 09.1	-0.2
KLV	**Kalavryta, Ach**	**0.44**	**144**	*e*PB	Pg	14 54 07.3	-0.7
KLV	**Kalavryta, Ach**	**0.44**	**144**	*e*Pb	Pg	14 54 07.3	-0.7
RLS	**Riolos of Patr**	**0.44**	**219**	*e*PB	Pg	14 54 07.8	0.0
RLS				*e*SB	Sb	14 54 14.4	-0.1
RLS	**Riolos of Patr**	**0.44**	**219**	*e*Pb	Pg	14 54 07.8	0.0
RLS				*e*Sb	Sb	14 54 14.4	-0.1
EVR	**Evrytania**	**0.52**	**359**	*e*PN	Pg	14 54 09.1	-0.3
EVR	**Evrytania**	**0.52**	**359**	*e*Pn	Pg	14 54 09.1	-0.3
GUR	**Goura**	**0.62**	**138**	*e*PN	Pg	14 54 11.0	-0.3
GUR				*e*SN	Sg	14 54 19.3	-0.4
GUR	**Goura**	**0.62**	**138**	*e*Pn	Pg	14 54 11.0	-0.3
GUR				*e*Sn	Sg	14 54 19.3	-0.4
AMT	**Artemida-Makis**	**0.87**	**186**	*e*PN	Pb	14 54 14.4	-1.2
AMT	**Artemida-Makis**	**0.87**	**186**	*e*Pn	Pb	14 54 14.4	-1.2
DID	**Didima**	**1.43**	**128**	*e*PN	Pg	14 54 26.2	-0.4
DID				*e*SN	Sg	14 54 46.0	+0.7
DID	**Didima**	**1.43**	**128**	*e*Pn	Pg	14 54 26.2	-0.4
DID				*e*Sn	Sg	14 54 46.0	+0.7

CSEM ***11*** *14:56:06.4, 41.°62N×34.°87E, h8km, MD2.8, After ISK*
ISK 11 14:56:06.4, 41.°62N×34.°87E, h8km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BYBT	**Boyabat**	**0.17**	**206**	*e*PG	Pg	14 56 10.2	+0.3
BYBT				*e*SG	Sg	14 56 13.7	+1.4
BYBT	**Boyabat**	**0.17**	**206**	*e*Pg	Pg	14 56 10.3	+0.3
BYBT				*e*Sg	Sg	14 56 13.7	+1.3
DIKM	**Dikmen**	**0.29**	**85**	*e*PG	Pg	14 56 12.2	-0.1
DIKM				*e*SG	Sb	14 56 18.1	-0.9
DIKM	**Dikmen**	**0.29**	**85**	*e*Pg	Pg	14 56 12.2	-0.1
DIKM				*e*Sg	Sb	14 56 18.1	-0.9
BZK	**Bozkurt**	**0.73**	**298**	*e*PG	Pb	14 56 21.0	-0.4
BZK				*e*SG	Sb	14 56 31.5	+0.1
BZK	**Bozkurt**	**0.73**	**298**	*e*Pg	Pb	14 56 21.0	-0.3
BZK				*e*Sg	Sb	14 56 31.5	0.0
TOS	**Tosya**	**0.86**	**228**	*e*PG	Pb	14 56 23.6	-0.2
TOS	**Tosya**	**0.86**	**228**	*e*Pg	Pb	14 56 23.6	-0.2
KVT	**Kavak**	**1.04**	**121**	*e*PG	Pg	14 56 26.3	-0.1
KVT	**Kavak**	**1.04**	**121**	*e*Pg	Pg	14 56 26.3	-0.2
CORM	**Corum**	**1.45**	**187**	*e*PN	Pb	14 56 33.8	-0.1
CORM	**Corum**	**1.45**	**187**	*e*Pn	Pb	14 56 33.8	-0.1
SAFT	**Safranbolu**	**1.68**	**258**	*e*PN	Pb	14 56 37.2	-0.5
SAFT	**Safranbolu**	**1.68**	**258**	*e*Pn	Pb	14 56 37.2	-0.5
TOKT	**Tokat**	**1.82**	**135**	*e*PN	Pn	14 56 38.6	+0.5
TOKT	**Tokat**	**1.82**	**135**	*e*Pn	Pn	14 56 38.6	+0.5
YOZ	**Yozgat**	**2.01**	**170**	*e*PN	Pn	14 56 41.6	+0.8
YOZ	**Yozgat**	**2.01**	**170**	*e*Pn	Pn	14 56 41.7	+0.9

IDC 11 15:04:23.2±2.1**, 6.°38S×129.°81E, h0**km**, mb3.3**/1**, mb1 3.6**/4**, mb1mx3.4**/20**, mbtmp3.4**/4**, ML3.4**/3**, Error ellipse: s-maj=90.8km s-min=27.6km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.34**	**199**	Pn	Pn	15 07 20.6	+0.3
	0.2nm,0.3s,baz=18,slow=12,SNR=12						
WRA	**Warramunga Arr**	**14.18**	**162**	Pn	Pn	15 07 45.1	-0.4
	0.2nm,0.3s,baz=344,slow=13,SNR=10.0						
WRA				Sn	Sn	15 10 11.8	-12
	0.3nm,0.3s,baz=346,slow=24,SNR=6.9						
ASAR	**Alice Springs**	**17.63**	**168**	P	Pn	15 08 30.4	-0.1
	0.1nm,0.3s,baz=351,slow=11,SNR=14						
ASAR				S	Sn	15 11 36.7	-11
	0.1nm,0.3s,baz=343,slow=25,SNR=4.3						
MKAR	**Makanchi Array**	**67.61**	**327**	P	P	15 15 21.9	0.0
	0.1nm,0.4s,baz=127,slow=6.5,SNR=3.1						

CSEM ***11*** *15:32:02.6±0.3, 38.°73N×39.°49E, h24km±2km, MD2.4, Error ellipse: s-maj=8.8km s-min=4.3km az=96.0*
ISCJB ***11*** *15:32:03.6±1.3, 38.°73N±0.°04×39.°44E±0.°09, h24km±11km, Error ellipse: s-maj=11.8km s-min=6.3km az=6.1*
ISK ***11*** *15:32:03.3, 38.°74N×39.°32E, h21km, MD2.4*
DDA ***11*** *15:32:04.8, 38.°76N×39.°27E, h5km, MD2.8*
ISC 11 15:32:03.5±1.2**, 38.°74N**±0.°03×**39.°43E**±0.°06**, h19**km±2km**, n12, σ0.ˢ54**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.16**	**349**	PG	**Pg**	**15 32 08.2**	**-0.1**
PTK				*e*SG	**Sg**	**15 32 12.2**	**+0.8**
PTK	**Pertek**	**0.16**	**349**	*i* Pg	**Pg**	**15 32 08.2**	**-0.1**
PTK				*e*Sg	**Sg**	**15 32 12.2**	**+0.8**
SVRC	**Sivrice-ELAZID**	**0.37**	**195**	*e*PG	**Pg**	**15 32 11.4**	**0.0**
SVRC				*e*SG	**Sb**	**15 32 17.7**	**+0.5**
SVRC	**Sivrice-ELAZID**	**0.37**	**195**	*e*Pg	**Pg**	**15 32 11.4**	**0.0**
SVRC				*e*Sg	**Sb**	**15 32 17.7**	**+0.5**
ELZG	**Elazig**	**0.42**	**236**	*i* P	**Pg**	**15 32 11.9**	**-0.5**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ELZG				eS	Sg	15 32 18.2	-0.1
ELZG	Elazig	0.42	236	i P	Pg	15 32 11.9	-0.5
ELZG				eS	Sg	15 32 18.2	-0.1
ERZN	Erzincan	0.88	15	ePG	Pn	15 32 21.3	+0.2
KEMA	Kemaliye	0.91	306	eP	Pb	15 32 20.8	+0.1
KEMA				eS	Sb	15 32 32.9	+0.5
KEMA	Kemaliye	0.91	306	eP	Pb	15 32 20.8	+0.1
KEMA				eS	Sb	15 32 32.9	+0.5
ILIC	ilic-Erzincan	0.98	317	ePG	Pb	15 32 21.5	-0.5
ILIC				eSG	Sb	15 32 34.7	0.0
ILIC	ilic-Erzincan	0.98	317	ePg	Pb	15 32 21.5	-0.5
ILIC				eSg	Sb	15 32 34.7	0.0
EZC	Erzincan	1.02	357	ePg	Pb	15 32 21.3	-1.3

IDC 11 15:34:32.2±1.3, 54°.59N×35°.26W, h0km, mb3.4/7, mb1 3.6/7, mb1mx3.4/32, mbtmp3.4/7, Error ellipse: s-maj=44.1km s-min=22.9km az=27.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	25.72	113	P	P	15 40 05.1	+0.9
	0.3nm,0.3s,baz=313,slow=9.9,SNR=5.0						
YKA	Yellowknife Ar	39.63	314	P	P	15 42 05.1	+0.1
	0.1nm,0.5s,baz=66,slow=9.5,SNR=3.1						
BRTR	Keskin Array B	47.22	79	P	P	15 43 07.5	+0.8
	0.7nm,0.7s,baz=324,slow=6.1,SNR=5.8						
PDAR	Pinedale Array	48.23	288	P	P	15 43 14.8	+0.1
	0.3nm,0.5s,baz=84,slow=8.3,SNR=2.8						
TORD	Torodi Ar. Bea	50.45	131	P	P	15 43 30.1	-1.4
	0.8nm,1.0s,baz=320,slow=8.1,SNR=3.3						
MKAR	Makanchi Array	66.05	42	P	P	15 45 19.6	-0.9
	0.5nm,0.6s,baz=335,slow=6.1,SNR=9.0						
SONM	Songino Array	72.94	26	P	P	15 46 03.3	+0.1
	0.2nm,0.4s,baz=327,slow=7.2,SNR=2.4						
ASAR	Alice Springs	148.07	19	PKPbc	PKPbc	15 54 19.1	-0.4
	0.9nm,0.6s,baz=354,slow=2.4,SNR=14						

ISK 11 15:40:56.9, 38°.32N×38°.96E, h23km, MD2.7
ISCJB 11 15:40:57.2±0.7, 38°.29N±0°.05×39°.01E±0°.04, h27km±4km, Error ellipse: s-maj=8.7km s-min=5.5km az=161.5
CSEM 11 15:40:57.4±0.2, 38°.28N×39°.05E, h30km, MD2.7, Error ellipse: s-maj=6.8km s-min=5.4km az=159.0
DDA 11 15:40:58.4, 38°.34N×38°.93E, h7km, MD2.8
ISC 11 15:40:57.0±1.4, 38°.31N±0°.04×38°.98E±0°.03, h16km±10km, n22, σ0s.96/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	Elazig	0.19	1	i Pg	Pb	15 41 02.6	+0.4
ELZG				i Sg	Sg	15 41 05.1	+0.2
SVRC	Sivrice-ELAZID	0.27	74	ePG	Pb	15 41 04.0	+0.4
SVRC				eSG	Sb	15 41 08.9	+0.9
SVRC	Sivrice-ELAZID	0.27	74	ePg	Pb	15 41 04.0	+0.4
SVRC				eSg	Sb	15 41 08.9	+0.9
MYA	Malataya	0.44	273	ePG	Pb	15 41 06.6	+0.3
MYA				eSG	Sb	15 41 12.4	-0.3
MYA	Malataya	0.44	273	ePg	Pb	15 41 06.6	+0.3
PTK	Pertek	0.67	29	ePG	Pb	15 41 11.0	+0.6
PTK				eSG	Sb	15 41 20.6	+1.1
PTK	Pertek	0.67	29	ePg	Pb	15 41 11.0	+0.6
PTK				eSg	Sb	15 41 20.6	+1.1
AKCD	Akcadag	0.83	270	eP	Pn	15 41 14.0	-0.2
AKCD				eS	Sb	15 41 25.0	+0.9
AKCD	Akcadag	0.83	270	eP	Pn	15 41 14.0	-0.2
AKCD				eS	Sb	15 41 25.0	+0.9
URFA	Urfa	0.87	188	ePG	Pb	15 41 14.5	+0.7
URFA	Urfa	0.87	188	ePg	Pb	15 41 14.5	+0.7
KEMA	Kemaliye	1.03	339	eP	Pn	15 41 16.9	0.0
KEMA				eS	Sn	15 41 31.6	+0.5
KEMA	Kemaliye	1.03	339	eP	Pn	15 41 16.9	0.0
KEMA				eS	Sn	15 41 31.6	+0.5
ILIC	ilic-Erzincan	1.19	344	ePN	Pb	15 41 18.4	-0.8
ILIC	ilic-Erzincan	1.19	344	ePn	Pb	15 41 18.4	-0.8
DARE	Darende-Malaty	1.20	283	ePN	Pb	15 41 18.6	-0.9
DARE	Darende-Malaty	1.20	283	ePn	Pb	15 41 18.6	-0.9
ERZN	Erzincan	1.40	24	ePN	Pn	15 41 21.6	-0.5
EZC	Erzincan	1.47	11	ePn	Pn	15 41 21.6	-1.4
BNGB	Bingˆ¶l	1.50	62	ePN	Pn	15 41 22.5	-0.8
BTMT	Batman	1.98	93	ePN	Pn	15 41 27.5	-2.4
BTMT	Batman	1.98	93	ePn	Pn	15 41 27.5	-2.4

IDC 11 15:54:01.2±1.3, 54°.50N×35°.25W, h0km, mb3.6/8, mb1 3.7/8, mb1mx3.5/32, mbtmp3.6/8, MS3.2/5, Ms1 3.2/5, ms1mx2.8/42, Error ellipse: s-maj=40.4km s-min=23.7km az=30.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	Borgarnes	12.43	29	LR	LR	16 00 25.0	
	comp=Z,98nm,20.4s,baz=145,slow=31						
NOA	NORSAR Array B	25.16	56	LR	LR	16 06 45.1	
	comp=Z,28nm,21.7s,baz=280,slow=30						
ESDC	Sonseca Array	25.68	112	P	P	15 59 32.7	-0.1
	0.2nm,0.3s,baz=311,slow=10,SNR=4.5						
HFS	Hagfors	26.50	58	LR	LR	16 08 56.1	
	comp=Z,43nm,18.0s,baz=279,slow=34						
DAVOX	Davos/Dischmat	29.21	86	LR	LR	16 11 32.3	
	comp=Z,74nm,18.8s,baz=262,slow=36						
GERES	GERESS Array B	30.37	80	LR	LR	16 11 54.0	
	comp=Z,45nm,18.2s,baz=314,slow=35						
BRTR	Keskin Array B	47.23	79	P	P	16 02 36.5	+0.6
	0.7nm,0.7s,baz=316,slow=5.2,SNR=4.9						
PDAR	Pinedale Array	48.26	288	P	P	16 02 44.5	+0.5
	0.4nm,0.8s,baz=84,slow=4.6,SNR=3.7						
ILAR	Eielson Array	50.08	329	P	P	16 02 56.3	-0.9
	0.3nm,0.8s,baz=47,slow=6.6,SNR=3.2						
TORD	Torodi Ar. Bea	50.38	131	P	P	16 02 59.3	-0.7
	0.8nm,0.9s,baz=329,slow=5.0,SNR=3.4						
ZALV	Zalesovo Beam	61.16	36	P	P	16 04 17.8	+0.8
	0.4nm,0.5s,baz=299,slow=9.2,SNR=2.4						
MKAR	Makanchi Array	66.12	42	P	P	16 04 49.5	-0.4
	0.6nm,0.6s,baz=335,slow=5.8,SNR=10.0						
SONM	Songino Array	73.02	26	P	P	16 05 32.1	-0.5
	0.4nm,0.5s,baz=316,slow=6.0,SNR=3.1						
ASAR	Alice Springs	148.16	19	PKPbc	PKPbc	16 13 48.2	-0.5
	0.9nm,0.7s,baz=352,slow=2.4,SNR=16						

IDC 11 15:58:57.0±1.9, 18°.82S×167°.45E, h0km, mb3.6/4, mb1 3.8/5, mb1mx3.6/18, mbtmp3.5/5, Error ellipse: s-maj=49.7km s-min=27.2km az=118.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.37	196	Pn	Pn	15 59 49.4	-1.5
	baz=0.0,slow=0.0						
DZM				Sn	Sn	16 00 30.7	-1.1
	baz=52,slow=19						
STKA	Stephens Creek	26.65	236	P	P	16 04 38.7	+1.0
	1.6nm,0.9s,baz=81,slow=13,SNR=2.9						
WRA	Warramunga Arr	31.23	262	P	P	16 05 17.8	-0.7
	0.1nm,0.4s,baz=86,slow=8.1,SNR=3.6						
ASAR	Alice Springs	31.59	255	P	P	16 05 21.8	+0.1
	0.6nm,0.7s,baz=83,slow=8.6,SNR=7.2						
ILAR	Eielson Array	90.35	18	P	P	16 11 59.7	+0.1
	0.2nm,0.6s,baz=208,slow=3.6,SNR=2.7						

WEL 11 16:19:41.1±0.6, 37°.98S×176°.34E, h155km±4km, ML3.7/9, 11C-2D, Error ellipse: s-maj=3.4km s-min=2.1km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MARZ	Manawahe	0.27	91	PN	Pn	16 20 02.1	-0.1
RRRZ	Republican Roa	0.38	159	PN	Pn	16 20 02.6	0.0
PRRZ	Plateau Road	0.52	175	PN	Pn	16 20 03.3	+0.1
ALRZ	Allen Road	0.58	180	PN	Pn	16 20 03.8	+0.3
URZ	Urewera	0.67	115	PN	Pn	16 20 03.4	-0.6
URZ				SN	Sn	16 20 20.8	-0.6
URZ				AML	AML	16 20 23.4	
MWZ	Matawai	1.00	111	PN	Pn	16 20 06.3	-0.2
MWZ				SN	Sn	16 20 25.3	-0.6
MWZ				AML	AML	16 20 26.4	
MWZ				AML	AML	16 20 26.6	
MWZ				AML	AML	16 20 27.9	
RAHZ	Arahi	1.10	148	PN	Pn	16 20 07.6	+0.3
NMHZ	Naumai	1.17	162	PN	Pn	16 20 08.6	+0.6
BKZ	Black Stump Fm	1.19	174	⇑PN	Pn	16 20 07.9	-0.2
HIZ	Hauiti	1.28	245	⇑PN	Pn	16 20 08.9	+0.1
OTVZ	Oturere	1.29	204	⇑PN	Pn	16 20 09.5	+0.3
WPVZ	Whakapapa	1.37	207	PN	Pn	16 20 09.9	0.0
FWVZ	Far West T-bar	1.41	206	PN	Pn	16 20 10.3	-0.1
WNVZ	Wahianoa	1.46	203	PN	Pn	16 20 10.7	-0.2
KNZ	Kokohu	1.47	135	PN	Pn	16 20 10.6	-0.2
MCHZ	McNeill Hill	1.48	169	PN	Pn	16 20 11.3	+0.4
MOVZ	Moawhango	1.49	198	PN	Pn	16 20 10.5	-0.6
BHHZ	Black Hill Sta	1.52	188	⇑PN	Pn	16 20 10.9	-0.5
PUZ	Puketiti	1.52	94	PN	Pn	16 20 10.3	-1.0
PRGZ	Paritu Road	1.54	128	PN	Pn	16 20 11.4	0.0
CNGZ	Carnagh Statio	1.56	109	PN	Pn	16 20 11.9	+0.3
MTVZ	Mangateitei	1.56	206	PN	Pn	16 20 11.5	-0.3
MHGZ	Mahia Peninsul	1.70	134	PN	Pn	16 20 13.2	0.0
CKHZ	Cape Kidnapper	1.77	161	PN	Pn	16 20 13.9	-0.1
KAHZ	Kahuranaki	1.86	167	⇑PN	Pn	16 20 14.8	-0.1
PNHZ	Pukenui	1.93	183	PN	Pn	16 20 15.1	-0.8
WAZ	Wanganui	2.06	210	PN	Pn	16 20 16.6	-0.6
WPHZ	Waipukurau	2.08	178	PN	Pn	16 20 16.5	-1.0
PXZ	Pawanui	2.09	169	⇑PN	Pn	16 20 16.9	-0.6
TSZ	Takapari Road	2.09	188	⇑PN	Pn	16 20 16.6	-1.1
PRHZ	Porangahau	2.29	174	⇑PN	Pn	16 20 19.0	-1.0
DVHZ	Dannevirke	2.32	183	⇑PN	Pn	16 20 18.8	-1.5
POWZ	Post Office Ro	2.45	190	PN	Pn	16 20 20.2	-1.6
BFZ	Birch Farm	2.69	181	⇓PN	Pn	16 20 23.1	-1.7
MRZ	Mangatainoka R	2.74	192	⇑PN	Pn	16 20 23.3	-2.1
MRZ				AML	AML	16 20 58.8	
MRZ				AML	AML	16 20 59.0	
TIWZ	Tintock	2.81	187	PN	Pn	16 20 24.4	-2.0
OGWZ	Otaki Gorge	2.97	197	PN	Pn	16 20 26.0	-2.3
HOWZ	Holdsworth Sta	2.98	192	⇑PN	Pn	16 20 25.9	-2.6
KIW	Kapiti Island	3.08	201	PN	Pn	16 20 27.0	-2.7
TMWZ	Te Maipa	3.14	186	PN	Pn	16 20 28.0	-2.5
MTW	Mount Morrison	3.24	191	PN	Pn	16 20 28.7	-3.0
MTW				AML	AML	16 21 10.6	
CAW	Cannon Point	3.27	197	⇓PN	Pn	16 20 29.3	-2.8
CAW				AML	AML	16 21 09.3	
CAW				AML	AML	16 21 10.2	
DUWZ	D'Urville Isla	3.38	213	PN	Pn	16 20 30.7	-2.8
TRWZ	Traveller	3.45	188	PN	Pn	16 20 31.4	-2.9
WEL	Wellington	3.51	200	PN	Pn	16 20 32.2	-2.9
MSWZ	Moikau Station	3.53	193	PN	Pn	16 20 32.0	-3.4
MSWZ				AML	AML	16 21 13.1	
MSWZ				AML	AML	16 21 14.8	
SNZO	South Karori	3.55	200	PN	Pn	16 20 32.3	-3.3
TCW	Tory Channel	3.60	206	PN	Pn	16 20 33.1	-3.1
TCW				AML	AML	16 21 17.3	
BHW	Baring Head	3.60	198	PN	Pn	16 20 32.9	-3.4
BHW				AML	AML	16 21 15.9	
PLWZ	Palliser	3.68	193	PN	Pn	16 20 33.8	-3.5
TUWZ	Tuamarina	3.91	207	PN	Pn	16 20 36.6	-3.6
TUWZ				AML	AML	16 21 22.9	
TUWZ				AML	AML	16 21 23.4	
NNZ	Nelson	3.96	214	PN	Pn	16 20 37.3	-3.6
BSWZ	Blackbirch Sta	4.18	206	PN	Pn	16 20 40.4	-3.4
THZ	Tophouse	4.61	214	PN	Pn	16 20 45.2	-4.3
KHZ	Kahutara	4.92	205	PN	Pn	16 20 49.5	-4.0
LTZ	Lake Taylor	5.71	212	PN	Pn	16 20 59.3	-4.7
ODZ	Otahua Downs	8.24	209	PN	Pn	16 21 31.9	-5.8

IDC 11 16:24:55.1±9.1, 15°.95S×167°.31E, h135km±102km, mb3.7/4, mb1 3.8/5, mb1mx3.4/21, mbtmp3.7/5, ML4.5/1, MS3.8/2, Ms1 3.8/2, ms1mx2.8/33, Error ellipse: s-maj=210.7km s-min=63.8km az=90.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.15	188	eP	Pn	16 26 23.4	-0.3
DZM				eS	Sn	16 27 33.0	0.0
DZM	Mont Dzumac	6.15	188	P	Pn	16 26 23.7	0.0
	10nm,0.3s,baz=43,slow=19,SNR=54						
DZM				S	Sn	16 27 33.4	+0.3
	2.4nm,0.3s,baz=319,slow=19,SNR=4.3						
AFI	Afiamalu	20.31	87	LR	LR	16 35 21.2	
	comp=Z,125nm,18.3s,baz=142,slow=31						
STKA	Stephens Creek	28.25	231	P	P	16 30 35.6	+0.1
	2.6nm,0.8s,baz=69,slow=13,SNR=5.3						
WRA	Warramunga Arr	31.59	258	P	P	16 31 04.7	-0.5
	0.6nm,0.7s,baz=90,slow=9.1,SNR=6.8						
ASAR	Alice Springs	32.30	251	P	P	16 31 11.6	+0.2
	1.8nm,0.6s,baz=81,slow=8.5,SNR=26						
FITZ	Fitzroy Crossi	39.85	261	P	P	16 32 15.5	-0.1
	2.8nm,0.7s,baz=97,slow=11,SNR=3.8						
MAW	Mawson	80.78	202	LR	LR	17 05 01.1	
	comp=Z,136nm,21.7s,baz=118,slow=30						

ISCJB 11 16:36:19.1±0.7, 19°.19N±0°.05×121°.09E±0°.09, h39km, mb3.4/5, MS3.1/4, Error ellipse: s-maj=11.9km s-min=7.0km az=0.2
MAN 11 16:36:19, 18°.93N×121°.18E, h1km, mb4.8, ML3.7, MS3.8
IDC 11 16:36:21.2±0.8, 18°.96N×121°.31E, h59km±7km, mb3.2/6, mb1 3.5/6, mb1mx3.2/24, mbtmp3.2/6, MS3.2/4, Ms1 3.2/4, ms1mx2.9/17, Error ellipse: s-maj=30.0km s-min=16.4km az=83.0
ISC 11 16:36:21.6±0.9, 19°.13N±0°.07×121°.07E±0°.08, h39km, n23, σ1s.85/20, mb3.5/5, MS3.2/4, 1C-3D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PIP	Pasuquin	0.90	208	⇓iP	Pn	16 36 35.0	-2.8
PIP				eS	Sn	16 37 02.9	+13
APYP	Conner	1.27	172	eP	Pn	16 36 40.9	-1.8
APYP				eS	Sn	16 36 57.9	-0.7
SGCP	Mt. Cagua	1.28	133	eP	Pn	16 36 40.9	-2.0
SIPP	Brgy, Tapao	1.33	206	⇓eP	Pn	16 36 43.6	0.0
SIPP				i S	Sn	16 37 04.0	+4.0
ABRA	Dolores	1.51	193	eP	Pn	16 36 44.6	-1.5
ABRA				eS	Sn	16 37 04.3	-0.1
CVP	Callao Caves	1.58	153	⇑iP	Pn	16 36 46.1	-1.0
CVP				i S	Sn	16 37 21.9	+16
CAUP	Cauayan	2.29	162	eP	Pn	16 36 58.1	+1.4
PALP	Palanan	2.42	148	eP	Pn	16 36 58.5	-0.2
PALP	Palanan	2.42	148	⇓eP	Pn	16 36 58.5	-0.2
PALP				i S	Sn	16 37 14.1	-13
BOLP	Bolinao	2.94	202	eP	Pn	16 37 04.4	-1.4
BALP	Baler	3.40	172	eP	Pn	16 37 12.2	+0.1
SCZP	Santa Cruz	3.51	199	eP	Pn	16 37 18.0	+4.4
KSRS	Korea Array	19.22	17	P	Pn	16 40 44.8	+1.3
	0.2nm,0.3s,baz=197,slow=11,SNR=2.9						
CMAR	Chiang Mai Arr	20.96	272	P	P	16 41 01.4	+0.1
	0.5nm,0.9s,baz=78,slow=9.3,SNR=3.9						
MJAR	Matsushiro Arr	22.98	37	LR	LR	16 49 45.4	
	comp=Z,50nm,19.6s,baz=270,slow=35						
USRK	Ussuriysk Arra	26.63	18	LR	LR	16 53 41.5	
	comp=Z,56nm,20.7s,baz=271,slow=39						
SONM	Songino Array	31.03	341	LR	LR	16 56 29.3	
	comp=Z,61nm,18.6s,baz=72,slow=39						
WRA	Warramunga Arr	40.95	161	P	P	16 43 55.2	-5.3
	0.3nm,0.5s,baz=334,slow=10,SNR=9.9						
WRA				pP	pP	16 44 10.5	-1.2
	0.2nm,0.3s,baz=346,slow=8.9,SNR=3.7						
WRA				PcP	PcP	16 45 58.7	-1.8
	0.3nm,0.7s,baz=346,slow=3.4,SNR=6.1						
MKAR	Makanchi Array	42.01	320	P	P	16 44 09.4	+0.3
	0.2nm,0.6s,baz=112,slow=9.2,SNR=3.1						
PETK	Petropavlovsk-	44.17	31	P	P	16 44 24.2	-2.3
	0.5nm,0.6s,baz=207,slow=2.9,SNR=2.9						
PETK				pP	pP	16 44 40.7	+3.0
	0.3nm,0.4s,baz=235,slow=5.1,SNR=2.4						
ASAR	Alice Springs	44.34	163	P	P	16 44 23.9	-4.2
	0.4nm,0.4s,baz=344,slow=6.8,SNR=18						
ASAR				pP	pP	16 44 40.1	+0.9
	0.8nm,0.5s,baz=344,slow=7.0,SNR=5.8						
ZALV	Zalesovo Beam	44.49	330	LR	LR	17 04 18.1	
	comp=Z,30nm,18.9s,baz=70,slow=38						
YKA	Yellowknife Ar	87.66	23	P	P	16 49 02.1	-3.6
	0.5nm,0.5s,baz=316,slow=4.6,SNR=6.3						
YKA				pP	pP	16 49 18.9	+1.2
	0.5nm,0.5s,baz=312,slow=4.7,SNR=5.3						

ISCJB 11 16:40:42.6±0.4, 3°.16S±0°.06×80°.48W±0°.09, h33km, mb3.9/18, MS3.7/5, Error ellipse: s-maj=14.5km s-min=5.1km az=148.8
IDC 11 16:40:47.5±3.0, 3°.29S×80°.47W, h67km±31km, mb3.4/11, mb1 3.7/14, mb1mx3.7/23, mbtmp3.5/14, ML3.8/3, MS3.7/7, Ms1 3.7/7, ms1mx3.3/25, Error ellipse: s-maj=42.9km s-min=15.7km az=58.0
NEIC 11 16:40:48.4±1.1, 3°.32S×80°.49W, h77km±10km, mb4.3/7, Error ellipse: s-maj=15.6km s-min=6.3km az=70.0
ISC 11 16:40:44.3±0.5, 3°.15S±0°.08×80°.4W±0°.1, h35km, n48, σ1s.46/48, mb3.9/18, MS3.7/5, Peru-Ecuador border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OTAV	Otavalo	3.91	31	ePn	Pn	16 41 48.0	+5.7
ATAH	Atahualpa	4.45	153	P	Pn	16 41 51.0	+1.2
ATAH				S	Sn	16 42 41.7	+1.1
ATAH				Lg	Lg	16 42 59.3	
ATAH	Atahualpa	4.45	153	P	Pn	16 41 51.0	+1.2
	3.9nm,0.3s,baz=336,slow=7.1,SNR=20						
ATAH				S	Sn	16 42 41.7	+1.1
	8.0nm,0.3s,baz=347,slow=17,SNR=4.6						
ATAH				Lg	Lg	16 42 59.3	
	17nm,0.3s,baz=108,slow=20,SNR=5.6						
ATAH				LR	LR	16 43 30.1	
	comp=Z,504nm,18.4s,baz=185,slow=37						
NNA	Nana	9.47	158	P	Pn	16 43 00.5	+2.1
NNA				S	Sn	16 44 46.3	+2.5
NNA				eSn	Sn	16 44 52.6	+8.7
NNA				Lg	Lg	16 45 30.3	
NNA	Nana	9.47	158	P	Pn	16 43 00.5	+2.1
	1.8nm,0.3s,baz=338,slow=16,SNR=1.9						
NNA				S	Sn	16 44 46.3	+2.5
	0.5nm,0.3s,baz=328,slow=19,SNR=1.9						
NNA				Lg	Lg	16 45 30.3	
	2.7nm,0.3s,baz=314,slow=12,SNR=10						
LPAZ	La Paz	17.81	138	P	Pn	16 44 51.0	+0.9
LPAZ	La Paz	17.81	138	P	Pn	16 44 51.0	+0.9
	0.1nm,0.3s,baz=339,slow=16,SNR=3.8						
LPAZ				LR	LR	16 53 00.0	
	comp=Z,382nm,18.6s,baz=317,slow=41						
SAML	Samuel	18.10	109	ePn	P	16 44 54.8	+1.5
	18nm,1.0s						
SAML				eSn	Sn	16 48 11.1	-3.1
LVC	Limon Verde	22.34	151	P	P	16 45 40.1	+0.5
LVC	Limon Verde	22.34	151	P	P	16 45 40.1	+0.5
	5.3nm,1.1s,baz=310,slow=7.9,SNR=4.2						
SIV	San Ignacio	22.94	125	P	P	16 45 44.0	-1.7
SIV	San Ignacio	22.94	125	P	P	16 45 44.0	-1.7
	1.0nm,0.7s,baz=318,slow=16,SNR=2.6						
CPUP	Villa Florida	31.98	138	P	P	16 47 06.8	-0.5
CPUP	Villa Florida	31.98	138	P	P	16 47 06.8	-0.5
	0.3nm,0.3s,baz=262,slow=7.1,SNR=2.9						
BDFB	Brasilia	34.25	113	LR	LR	17 03 20.8	
	comp=Z,144nm,19.4s,baz=32,slow=40						
PLCA	Paso Flores	38.46	168	P	P	16 48 00.6	-2.4
PLCA	Paso Flores	38.46	168	P	P	16 48 00.6	-2.4
	0.4nm,0.4s,baz=316,slow=12,SNR=3.1						
TKL	Tuckaleechee C	38.73	356	LR	LR	17 03 47.1	
	comp=Z,79nm,21.3s,baz=107,slow=36						
TXAR	Lajitas Array	39.23	327	P	P	16 48 09.3	-0.3
TXAR	Lajitas Array	39.23	327	P	P	16 48 09.3	-0.3
	0.1nm,0.4s,baz=146,slow=9.8,SNR=3.1						
SADO	Sadowa	47.72	1	LR	LR	17 08 53.5	
	comp=Z,50nm,21.8s,baz=253,slow=35						
PDAR	Pinedale Array	52.74	333	P	P	16 49 56.9	+0.8
PDAR	Pinedale Array	52.74	333	P	P	16 49 56.9	+0.8
	1.6nm,0.8s,baz=132,slow=8.7,SNR=12						
HWUT	Hardware Ranch	52.78	331	eP	P	16 49 57.1	+0.8
	2.7nm,0.9s						
AGMN	Agassiz Nation	52.98	347	eP	P	16 49 58.7	+1.3
	4.5nm,0.6s						
RRI2	Red Ridge	54.00	332	P	P	16 50 06.0	+0.7
	2.0nm,0.8s						
NVAR	Mina Array Bea	54.17	324	P	P	16 50 08.1	+1.5
NVAR	Mina Array Bea	54.17	324	P	P	16 50 08.1	+1.5
	0.7nm,0.6s,baz=130,slow=7.7,SNR=6.3						
ULM	Lac du Bonnet	54.83	348	P	P	16 50 11.3	+0.4
ULM	Lac du Bonnet	54.83	348	P	P	16 50 11.3	+0.4
	10nm,0.7s,baz=161,slow=6.1,SNR=7.7						
HLID	Hailey	55.63	331	eP	P	16 50 18.0	+1.0
	0.6nm,0.6s						
SCHQ	Schefferville	58.87	9	P	P	16 50 40.2	+0.7
SCHQ	Schefferville	58.87	9	P	P	16 50 40.2	+0.7
	1.5nm,0.7s,baz=119,slow=14,SNR=2.6						
NEW	Newport	60.37	333	LR	LR	17 17 54.1	
	comp=Z,63nm,20.1s,baz=104,slow=37						
YKA	Yellowknife Ar	70.41	344	P	P	16 51 54.8	+0.1
YKA	Yellowknife Ar	70.41	344	P	P	16 51 54.7	+0.1
	0.6nm,0.7s,baz=136,slow=6.1,SNR=8.9						
SUMG	Summit	80.12	12	eP	P	16 52 51.8	+1.0
	3.0nm,0.7s						
ILAR	Eielson Array	83.01	337	P	P	16 53 05.5	-0.2
ILAR	Eielson Array	83.01	337	P	P	16 53 05.5	-0.2
	0.7nm,0.8s,baz=135,slow=3.3,SNR=4.5						
TORD	Torodi Ar. Bea	83.07	76	P	P	16 53 07.7	+0.6
TORD	Torodi Ar. Bea	83.07	76	P	P	16 53 07.7	+0.6
	0.7nm,0.7s,baz=268,slow=5.3,SNR=5.8						
TORD				LR	LR	17 31 49.1	
	comp=Z,67nm,18.5s,baz=210,slow=37						
SNAA	Sanae	83.13	162	eP	P	16 53 04.4	-2.0
QSPA	South Pole Qui	86.92	180	eP	P	16 53 24.3	-1.2
	1.8nm,0.8s						
ASAR	Alice Springs	137.23	230	PKP	PKPdf	17 00 03.5	-1.4
ASAR	Alice Springs	137.23	230	PKP	PKPdf	17 00 03.5	-1.4
	0.8nm,1.0s,baz=123,slow=2.4,SNR=5.5						
WRAB	Tennant Creek	138.85	235	ePKPdf	PKPdf	17 00 04.3	-3.6
WRA	Warramunga Arr	138.85	235	PKP	PKPdf	17 00 07.0	-1.0
WRA	Warramunga Arr	138.85	235	PKP	PKPdf	17 00 07.0	-1.0
	0.7nm,0.7s,baz=114,slow=2.1,SNR=7.8						

IDC 11 17:02:11.1±3.1, 6°.34S×149°.93E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.5/19, mbtmp3.8/4, ML2.8/1, Error ellipse: s-maj=100.7km s-min=39.0km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.10	222	Pn	Pn	17 03 16.1	+1.1
	4.3nm,0.3s,baz=46,slow=6.4,SNR=20						
PMG				Sn	Sn	17 04 00.1	-3.7
	32nm,0.3s,baz=327,slow=17,SNR=18						
WRA	Warramunga Arr	20.30	227	P	P	17 06 48.5	-0.3
	1.2nm,0.4s,baz=53,slow=11,SNR=29						
ASAR	Alice Springs	23.11	220	P	P	17 07 18.6	-0.4
	0.6nm,0.6s,baz=53,slow=9.1,SNR=12						
FITZ	Fitzroy Crossi	26.42	242	P	P	17 07 49.1	-0.6
	2.3nm,0.6s,baz=47,slow=12,SNR=11						
TORD	Torodi Ar. Bea	148.00	285	PKPbc	PKPbc	17 21 59.6	-0.1
	0.7nm,0.4s,baz=67,slow=2.5,SNR=17						

IDC 11 17:05:58.3±0.6, 2°.76S×141°.53E, h0km, mb4.0/15, mb1 4.2/17, mb1mx4.2/22, mbtmp4.1/17, ML4.8/2, MS3.5/6, Ms1 3.5/6, ms1mx3.0/26, Error ellipse: s-maj=18.2km s-min=10.6km az=103.0
NEIC 11 17:06:00.8±6.3, 2°.74S×141°.52E, h15km±39km, mb4.5/11, Error ellipse: s-maj=12.0km s-min=11.1km az=75.0
ISCJB 11 17:06:01.1±0.4, 2°.76S±0°.05×141°.46E±0°.07, h29km, mb4.1/24, MS3.4/6, Error ellipse: s-maj=9.8km s-min=6.5km az=178.6
AUST 11 17:06:04.3, 3°.41S×141°.53E, h0km
ISC 11 17:06:02.9±0.4, 2°.71S±0°.06×141°.53E±0°.07, h29km, n71, σ1s.28/69, mb4.1/24, MS3.4/6, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	8.69	140	Pn	Pn	17 08 07.3	+0.5
PMG	Port Moresby	8.69	140	Pn	Pn	17 08 07.3	+0.5
	0.4nm,0.3s,baz=283,slow=14,SNR=2.1						
FAKI	Fak Fak	9.27	268	P	Pn	17 08 14.0	-0.7
	baz=9.3,SNR=3.3						
SWI	Sorong	10.43	280	P	Pn	17 08 38.6	+8.0
	baz=11,SNR=6.3						
KDU	Kakadu	13.37	222	P	Pn	17 09 08.3	-2.5
	baz=13,SNR=38						
MTN	Manton Dam	14.40	225	P	Pn	17 09 22.0	-2.8
	baz=14,SNR=15						
QIS	Mount Isa	17.84	186	P	Pn	17 10 09.1	0.0
	baz=17,SNR=9.5						
KNRA	Kununurra	18.01	224	P	Pn	17 10 11.2	0.0
	baz=18,SNR=16						
WRAB	Tennant Creek	18.50	202	ePn	P	17 10 15.6	-1.3
	16nm,0.8s						
WRA	Warramunga Arr	18.52	202	P	P	17 10 16.1	-1.1
WRA				S	Sn	17 13 34.4	-9.3
WRA	Warramunga Arr	18.52	202	P	P	17 10 16.1	-1.1
	1.3nm,0.3s,baz=21,slow=12,SNR=44						
WRA				S	Sn	17 13 34.4	-9.3
	0.1nm,0.3s,baz=26,slow=22,SNR=3.2						

HNR	Honiara	19.48	111	eP	P	17 10 27.1	-0.6
	94nm,0.6s						
HNR	Honiara	19.48	111	P	P	17 10 25.6	-2.2
	15nm,0.3s,baz=315,slow=3.8,SNR=11						
FITZ	Fitzroy Crossi	21.84	224	P	P	17 10 51.6	-1.6
FITZ				S	S	17 14 54.2	+0.9
FITZ	Fitzroy Crossi	21.84	224	P	P	17 10 51.6	-1.6
	5.6nm,0.8s,baz=70,slow=11,SNR=8.3						
FITZ				S	S	17 14 54.2	+0.9
	4.3nm,0.7s,baz=147,slow=13,SNR=4.3						
FITZ				LR	LR	17 19 53.2	
	comp=Z,165nm,18.0s,baz=334,slow=38						
FITZ	Fitzroy Crossi	21.84	224	P	P	17 10 51.7	-1.5
	baz=21,SNR=9.2						
AS31	Alice Springs	22.10	199	eP	P	17 10 55.1	-1.0
ASAR	Alice Springs	22.11	199	P	P	17 10 55.1	-1.0
ASAR				S	S	17 15 00.8	+2.4
ASAR	Alice Springs	22.11	199	P	P	17 10 55.1	-1.0
	1.7nm,0.5s,baz=27,slow=11,SNR=28						
ASAR				S	S	17 15 00.8	+2.4
	0.4nm,0.8s,baz=43,slow=28,SNR=3.3						
ASAR				LR	LR	17 20 08.8	
	comp=Z,139nm,18.6s,baz=15,slow=39						
QLP	Quilpie	23.88	174	P	P	17 11 14.9	+0.8
	baz=23,SNR=8.0						
EIDS	Eidsvold	24.34	159	eP	P	17 11 20.4	+2.1
	12nm,0.8s						
EIDS	Eidsvold	24.34	159	P	P	17 11 20.3	+2.0
	baz=24,SNR=3.1						
RMQ	Roma	24.64	164	P	P	17 11 22.6	+1.5
	baz=24,SNR=22						
KKM	Kota Kinabalu	26.73	289	eP	P	17 11 46.1	+5.8
	11nm,0.9s						
KKM	Kota Kinabalu	26.73	289	P	P	17 11 47.7	+7.4
	baz=27,SNR=6.1						
MBWA	Marble Bar	28.05	227	P	P	17 11 50.9	-1.1
CMSA	Cobar Meteorol	28.95	173	P	P	17 12 01.7	+1.9
	baz=28,SNR=10						
STKA	Stephens Creek	29.02	180	eP	P	17 11 59.7	-0.7
STKA	Stephens Creek	29.02	180	P	P	17 11 59.7	-0.7
	1.6nm,0.6s,baz=23,slow=18,SNR=6.2						
STKA	Stephens Creek	29.02	180	P	P	17 12 00.1	-0.4
	baz=28,SNR=4.6						
DZM	Mont Dzumac	30.92	130	P	P	17 12 17.2	-0.3
DZM	Mont Dzumac	30.92	130	P	P	17 12 17.2	-0.3
	14nm,0.9s,baz=21,slow=11,SNR=4.8						
KSM	Kuching	31.49	277	P	P	17 12 18.6	-3.9
MORW	Morawa	35.71	220	P	P	17 13 02.0	+2.9
	baz=35,SNR=3.1						
MJAR	Matsushiro Arr	39.17	356	P	P	17 13 27.1	-1.2
MJAR	Matsushiro Arr	39.17	356	P	P	17 13 27.1	-1.2
	1.6nm,0.9s,baz=191,slow=9.3,SNR=2.9						
MJAR				LR	LR	17 29 20.8	
	comp=Z,52nm,19.1s,baz=105,slow=36						
BKNI	Bangkinang	40.59	274	S	S	17 20 20.2	+32
	baz=41,SNR=3.8						
KSRS	Korea Array	41.91	344	LR	LR	17 29 01.4	
	comp=Z,30nm,18.4s,baz=155,slow=33						
CMAR	Chiang Mai Arr	46.90	298	P	P	17 14 31.1	0.0
CMAR	Chiang Mai Arr	46.90	298	P	P	17 14 31.1	0.0
	0.7nm,0.5s,baz=116,slow=6.3,SNR=4.3						
USRK	Ussuriysk Arra	47.47	351	P	P	17 14 36.6	+1.5
	1.7nm,0.9s,baz=223,slow=6.3,SNR=3.0						
USRK				LR	LR	17 31 05.2	
	comp=Z,53nm,20.8s,baz=152,slow=32						
PETK	Petropavlovsk-	57.25	12	P	P	17 15 47.4	-0.2
PETK	Petropavlovsk-	57.25	12	P	P	17 15 47.4	-0.2
	1.3nm,0.9s,baz=152,slow=8.6,SNR=4.7						
PETK				LR	LR	17 39 04.0	
	comp=Z,27nm,18.2s,baz=319,slow=35						
SONM	Songino Array	58.95	333	P	P	17 16 01.0	+1.2
SONM	Songino Array	58.95	333	P	P	17 16 01.0	+1.2
	0.4nm,0.9s,baz=130,slow=5.8,SNR=2.4						
MK31	Makanchi Array	71.52	322	eP	P	17 17 21.0	-0.2
MKAR	Makanchi Array	71.52	322	P	P	17 17 21.9	+0.7
MKAR	Makanchi Array	71.52	322	P	P	17 17 21.9	+0.7
	1.1nm,0.7s,baz=104,slow=7.4,SNR=13						
ZALV	Zalesovo Beam	73.37	329	P	P	17 17 31.8	-0.2
ZALV	Zalesovo Beam	73.37	329	P	P	17 17 31.8	-0.2
	0.9nm,0.6s,baz=100,slow=6.0,SNR=6.3						
TKM2	Tokmak 2	74.49	316	eP	P	17 17 40.7	+1.6
	3.0nm,0.8s						
KURK	Kurchatov	75.35	324	eP	P	17 17 44.2	+0.7
	4.5nm,1.0s						
VNDA	Vanda	75.55	176	P	P	17 17 43.8	-0.5
VNDA	Vanda	75.55	176	P	P	17 17 43.8	-0.5
	1.2nm,0.7s,baz=321,slow=9.2,SNR=6.3						
EKS2	Erkin-Say	75.68	315	eP	P	17 17 48.5	+2.7
	2.4nm,0.8s						
BVAR	Borovoye Array	80.93	325	P	P	17 18 15.2	+0.7
BVAR	Borovoye Array	80.93	325	P	P	17 18 15.2	+0.7
	1.8nm,0.6s,baz=106,slow=11,SNR=11						
BRVK	Borovoye	81.00	325	P	P	17 18 10.1	-4.8
	5.6nm,0.8s						
ILAR	Eielson Array	84.67	24	P	P	17 18 32.2	-1.5
ILAR	Eielson Array	84.67	24	P	P	17 18 32.2	-1.5
	0.7nm,0.6s,baz=247,slow=5.0,SNR=6.2						
ABKAR	Akbulak array	86.54	320	eP	P	17 18 45.1	+1.8
	1.5nm,0.8s						
EGAK	Eagle	87.04	25	eP	P	17 18 43.3	-2.1
	2.5nm,1.0s						
QSPA	South Pole Qui	87.24	180	eP	P	17 18 46.5	0.0
	6.3nm,1.0s						
YKA	Yellowknife Ar	98.78	27	P	P	17 19 39.4	-0.3
YKA	Yellowknife Ar	98.78	27	P	P	17 19 39.4	-0.3
	0.1nm,0.4s,baz=278,slow=4.3,SNR=3.1						
TORD	Torodi Ar. Bea	138.96	287	PKP	PKPdf	17 25 28.3	+0.6
TORD	Torodi Ar. Bea	138.96	287	PKP	PKPdf	17 25 28.3	+0.6
	0.6nm,0.8s,baz=24,slow=2.3,SNR=2.3						
LPAZ	La Paz	145.14	124	ePKPdf	PKPdf	17 25 39.6	+0.1
LPAZ				PKPbc	PKPdf	17 25 40.1	+0.6
LPAZ	La Paz	145.14	124	PKPbc	PKPdf	17 25 40.1	+0.6
	1.5nm,0.6s,baz=214,slow=1.2,SNR=6.8						
SIV	San Ignacio	150.94	130	PKPbc	PKPbc	17 25 53.6	-0.4
SIV	San Ignacio	150.94	130	PKPbc	PKPbc	17 25 53.6	-0.4
	0.4nm,0.4s,baz=212,slow=13,SNR=2.9						

*VIE **11** 17:17:40.6±0.8,43°.63N×16°.51E,h8km,mb2.3/2,ML2.2/2, Error ellipse: s-maj=10.9km s-min=6.1km az=68.0 13 km NNE of Split*
*ROM **11** 17:17:43.2±0.1,43°.82N×16°.49E,h10km,Ml2.5/2,Error ellipse: s-maj=4.7km s-min=0.5km az=135.0*
*BEO **11** 17:17:44.8±1.5,43°.95N×16°.27E,h10km±7km,ML2.4/3*
*CSEM **11** 17:17:45.3±0.3,43°.92N×16°.35E,h15km,ML2.4,Error ellipse: s-maj=9.4km s-min=5.8km az=163.0*
ISC 11 17:17:45.6±1.6,**43°.90N**±0°.04×**16°.39E**±0°.03,**h16**km±13km, **n29,**σ**1**^{s}**58**/43**,3C-1D,Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	Banja Luka	1.02	34	Pn	Pb	17 18 03.0	-1.9
BLY				Sn	Sb	17 18 17.2	-0.9
BLY	Banja Luka	1.02	34	Pn	Pb	17 18 03.0	-1.9
BLY				Sn	Sb	17 18 17.2	-0.9
BLY				iSg	Sn	17 18 18.7	-0.6
NVLJ	Novalja	1.27	302	ePn	Pn	17 18 07.3	-1.4
NVLJ				Sn	Sg	17 18 28.6	+1.7
NVLJ	Novalja	1.27	302	ePn	Pn	17 18 07.3	-1.4
NVLJ				Sn	Sg	17 18 28.5	+1.7
STON	Ston	1.41	137	ePn	Pn	17 18 07.2	-3.4
STON				Sn	Sb	17 18 28.8	-0.4
STON	Ston	1.41	137	ePn	Pn	17 18 07.2	-3.4
STON				Sn	Sb	17 18 28.7	-0.4
BBLS	Lazići	2.18	90	ePn	Pn	17 18 21.4	+0.1
BBLS				eSn	Sb	17 18 49.6	-2.0
BBLS	Lazići	2.18	90	ePn	Pn	17 18 21.4	+0.1
BBLS				eSn	Sb	17 18 49.6	-2.0
SNTG	Esanatoglia	2.59	257	Pn	Pn	17 18 26.4	-0.4
	5.0nm,0.3s						
SNTG	Esanatoglia	2.59	257	Pn	Pn	17 18 26.4	-0.4
	5.0nm,0.3s						
DIVS	Divibare	2.61	84	ePn	Pn	17 18 28.8	+1.6
DIVS				eSg	Sg	17 19 10.9	+1.4
DIVS	Divibare	2.61	84	ePn	Pn	17 18 28.8	+1.6
DIVS				eSg	Sg	17 19 10.9	+1.4
NRCA	Norcia	2.61	247	Pn	Pn	17 18 26.5	-0.8
	3.0nm,0.4s						
NRCA	Norcia	2.61	247	Pn	Pn	17 18 26.5	-0.8
	3.0nm,0.4s						
CESI	CESI - Serrava	2.69	252	Pn	Pn	17 18 27.7	-0.6
CESI	CESI - Serrava	2.69	252	Pn	Pn	17 18 27.7	-0.6
LNSS	Leonessa	2.77	243	Pn	Pn	17 18 28.6	-0.8
	43nm,1.3s						
LNSS	Leonessa	2.77	243	Pn	Pn	17 18 28.6	-0.8
	43nm,1.3s						
VOY	Vojsko	2.77	321	ePn	Pn	17 18 30.8	+1.4
VOY				eSn	Sn	17 19 05.0	+2.5
VOY	Vojsko	2.77	321	Pn	Pn	17 18 30.8	+1.4
VOY				eSn	Sn	17 19 05.0	+2.5
PIEI	Pieia	2.82	264	Pn	Pn	17 18 29.8	-0.2
	13nm,0.4s						
PIEI	Pieia	2.82	264	Pn	Pn	17 18 29.8	-0.2
	13nm,0.4s						
MURB	Monte Urbino	2.88	258	Pn	Pn	17 18 30.7	-0.2
MURB	Monte Urbino	2.88	258	Pn	Pn	17 18 30.7	-0.2
OBKA	Obir	2.91	334	⇑iPn	Pn	17 18 31.0	-0.4
OBKA				⇑iSn	Sn	17 19 09.7	+3.6
OBKA	Obir	2.91	334	Pn	Pn	17 18 31.0	-0.4
OBKA				Sn	Sn	17 19 09.7	+3.6
ARSA	Arzberg	3.40	350	⇑iPn	Pn	17 18 37.8	-0.2
ARSA				⇓iSn	Sb	17 19 22.9	-3.7
ARSA	Arzberg	3.40	350	ePn	Pn	17 18 37.9	-0.2
ARSA	Arzberg	3.40	350	ePn	Pn	17 18 37.9	-0.2

*TAP **11** 17:20:25.6,24°.68N×122°.58E,h117km,ML3.4,C*
*ISCJB **11** 17:20:26.2±0.7,24°.63N±0°.04×122°.65E±0°.02, h104km±6km,Error ellipse: s-maj=6.5km s-min=3.3km az=171.2*
*JMA **11** 17:20:26.4±0.2,24°.82N×122°.69E,h101km±3km,M1.9*
ISC 11 17:20:26.3±1.6,**24°.64N**±0°.06×**122°.65E**±0°.03, **h106**km±11km**,n34,**σ**0**^{s}**68**/64**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.38	119	P	Pn	17 20 42.0	+0.1
YOJ				eS	Sn	17 20 53.9	+0.2
TWB1	Santiao Chiao	0.70	301	eP	Pn	17 20 44.2	0.0
	baz=302						
TWB1				eS	Sn	17 20 58.1	+0.3
	baz=302						
TWC	Suao	0.73	268	P	Pn	17 20 44.2	-0.3
	baz=263						
TWC				S	Sn	17 20 57.6	-0.6
	baz=263						
ENA	Nanau	0.85	256	P	Pn	17 20 45.7	0.0
	baz=250						
ENA				eS	Sn	17 21 00.9	+0.6
	baz=250						
NWF	Wu-fen Shan	0.90	299	eP	Pn	17 20 46.2	0.0
	baz=292						
NWF				eS	Sn	17 21 01.4	+0.2
	baz=292						
TWE	Neicheng	0.90	275	P	Pn	17 20 46.1	0.0
	baz=276						
TWE				S	Sn	17 21 00.9	-0.1
	baz=276						
ENTT	Nioudou	0.99	270	P	Pn	17 20 47.3	+0.3
	baz=269						
ENTT				S	Sn	17 21 03.5	+0.9
	baz=269						
IRIF	Iriomote-Funau	1.03	107	P	Pn	17 20 47.6	+0.1
IRIF				eS	Sn	17 21 03.3	-0.1
TWD	Chiawan	1.11	240	eP	Pn	17 20 49.0	+0.6
	baz=234						
TWD				S	Sn	17 21 04.8	-0.2
	baz=234						
NSK	Sanguang	1.18	272	P	Pn	17 20 49.3	+0.2
	baz=265						
NSK				S	Sn	17 21 06.1	-0.3
	baz=265						
NNS	Nan Shan	1.18	260	P	Pn	17 20 49.3	0.0
	baz=255						
NNS				eS	Sn	17 21 06.0	-0.6
	baz=255						
HATJ	Hateruma jima	1.20	119	S	Sn	17 21 07.8	+1.0
TWS1	Kuangyinshan	1.21	292	eP	Pn	17 20 49.6	+0.2
	baz=292						
TWS1				eS	Sn	17 21 06.4	-0.5
	baz=292						
JKRS	Kuro-shima	1.30	108	P	Pn	17 20 51.1	+0.6
JKRS				S	Sn	17 21 09.4	+0.5
WHF	Hehuan Shan	1.36	249	P	Pn	17 20 51.7	+0.1
	baz=247						
WHF				S	Sn	17 21 10.1	-0.6
	baz=247						
ESL	Shilin	1.38	234	eP	Pn	17 20 50.9	-0.5
	baz=227						
ESL				eS	Sn	17 21 09.4	-1.2
	baz=227						
JIJ	Ishigaki jima	1.39	101	P	Pn	17 20 51.5	0.0
JIJ				S	Sn	17 21 09.9	-0.7
TWT	Tachien	1.40	254	eP	Pn	17 20 52.1	+0.3
	baz=248						
TWT				S	Sn	17 21 11.3	+0.2
	baz=248						
NSTT	Nanjuang	1.50	270	eP	Pn	17 20 51.6	-1.2
	baz=269						
NSTT				eS	Sn	17 21 12.7	-0.3
	baz=269						
EHY	Hungye	1.66	227	eP	Pn	17 20 54.7	-0.1
	baz=225						
EHY				eS	Sn	17 21 15.1	-1.4
	baz=225						
SMLT	Sun Moon Lake	1.77	245	eP	Pn	17 20 57.3	+1.0
	baz=240						
SMLT				eS	Sn	17 21 18.7	-0.4
	baz=240						
TWF1	Yuli	1.78	224	eP	Pn	17 20 55.6	-0.8
	baz=231						
TWF1				eS	Sn	17 21 18.5	-0.8
	baz=231						
TYC	Yuchr	1.79	246	P	Pn	17 20 57.3	+0.9
	baz=243						
TYC				eS	Sn	17 21 19.8	+0.3
	baz=243						
JTJ	Tarama	1.87	90	P	Pn	17 20 57.5	+0.1
JTJ				eS	Sn	17 21 20.9	-0.2
YUS	Yu-Shan	1.93	234	eP	Pn	17 20 59.1	+0.4
	baz=229						
YUS				eS	Sn	17 21 22.8	-0.5
	baz=229						
CHKT	Chengkung	1.93	218	eP	Pn	17 20 58.6	+0.4
	baz=210						
CHKT				eS	Sn	17 21 21.0	-1.7
	baz=210						
ALS	Alishan	2.03	237	eP	Pn	17 21 00.5	+0.8
	baz=230						
ALS				eS	Sn	17 21 25.9	+0.6
	baz=230						
CHN5	Tsauling	2.08	240	eP	Pn	17 21 00.9	+0.7
	baz=230						
CHN5				eS	Sn	17 21 27.1	+0.9
	baz=230						
ELDTW	Lidau	2.08	226	eS	Sn	17 21 25.4	-0.8
	baz=224						
CHN4	Tsaushan	2.28	236	eP	Pn	17 21 03.4	+0.7
	baz=235						
CHN4				eS	Sn	17 21 31.7	+1.1
	baz=235						
TWG	Pinlang	2.32	219	eS	Sn	17 21 30.0	-1.6
	baz=217						
WTP	Ta-pu	2.32	234	eP	Pn	17 21 04.0	+0.7
	baz=232						
WTP				eS	Sn	17 21 33.1	+1.4
	baz=232						
CHN1	Nanshi	2.42	234	eP	Pn	17 21 05.2	+0.6
	baz=232						
CHN1				eS	Sn	17 21 34.4	+0.4
	baz=232						
JKE	Kume jima 2	4.10	65	P	Pn	17 21 26.3	-0.5

IDC 11 17:24:43.2±3.6**,20°.49S**×**68°.72E,h0**km**,mb3.6**/4**, mb1 3.8**/4**,mb1mx3.5**/25**,mbtmp3.6**/4**,Error ellipse: s-maj=140.5km s-min=30.8km az=43.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	60.02	106	P	P	17 34 52.1	-0.1
	0.6nm,0.6s,baz=267,slow=7.1,SNR=6.8						
WRA	Warramunga Arr	61.17	102	P	P	17 35 00.1	0.0
	0.8nm,0.8s,baz=259,slow=6.3,SNR=4.9						
MKAR	Makanchi Array	68.08	10	P	P	17 35 44.6	0.0
	0.4nm,0.8s,baz=190,slow=5.6,SNR=4.3						
BRTR	Keskin Array B	68.28	331	P	P	17 35 46.1	0.0
	0.4nm,0.6s,baz=145,slow=5.3,SNR=3.9						

*ATH **11** 17:46:20.6,36°.97N×26°.77E,h35km±1km,MD3.1/9*
*CSEM **11** 17:46:21.3±0.1,36°.98N×26°.71E,h12km,MD3.1,Error ellipse: s-maj=3.5km s-min=3.0km az=164.0*
*ISK **11** 17:46:21.0,36°.99N×26°.75E,h5km,MD3.1*
*ISCJB **11** 17:46:21.1±0.6,36°.97N±0°.02×26°.73E±0°.03,h13km±4km, Error ellipse: s-maj=4.0km s-min=3.4km az=147.9*
*DDA **11** 17:46:21.0,36°.97N×26°.83E,h5km,MD3.1*
*THE **11** 17:46:22.0,37°.02N×26°.78E,h13km±2km,ML2.7/2,Error ellipse: s-maj=3.2km s-min=0.9km az=82.0*
ISC 11 17:46:21.3±1.0**,36°.95N**±0°.02×**26°.77E**±0°.02**,h18**km±7km**, n66,**σ**0**^{s}**92**/99**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	Bodrum	0.45	76	ePG	Pg	17 46 30.5	+0.1
BODT				eSG	Sb	17 46 37.3	+0.2
BODT	Bodrum	0.45	76	ePg	Pg	17 46 30.5	+0.1
BODT				eSg	Sb	17 46 37.3	+0.2
NIS1	Nisyros Isl.	0.48	136	P	Pb	17 46 31.8	+0.6
NIS1				S	Sn	17 46 40.5	-0.8
NIS1	Nisyros Isl.	0.48	136	ePB	Pb	17 46 31.9	+0.7
NIS1				eSB	Sb	17 46 39.0	+1.0
NIS1	Nisyros Isl.	0.48	136	P	Pb	17 46 31.8	+0.6
NIS1				eSb	Sb	17 46 39.0	+1.0
NIS1				S	Sn	17 46 40.5	-0.8
DAT	Datca	0.69	109	ePG	Pb	17 46 35.2	+0.4
DAT				eSG	Sb	17 46 44.9	+0.8
DAT	Datca	0.69	109	ePg	Pb	17 46 35.3	+0.4
DAT				eSg	Sb	17 46 44.9	+0.8
SMG	Samos	0.76	4	P	Pg	17 46 35.2	-0.9
SMG				S	Sg	17 46 45.2	-1.0
SMG	Samos	0.76	4	ePN	Pg	17 46 35.4	-0.7
SMG				eSN	Sg	17 46 45.9	-0.3
SMG	Samos	0.76	4	P	Pg	17 46 35.2	-0.9
SMG				S	Sg	17 46 45.2	-1.0
GCAM	G?zelcaml?	0.83	26	iP	Pb	17 46 37.2	-0.1
GCAM				iS	Sn	17 46 49.5	-0.5
GCAM	G?zelcaml?	0.83	26	iP	Pb	17 46 37.2	-0.1
GCAM				iS	Sn	17 46 49.5	-0.5
MLSB	Milas	0.88	67	ePG	Pb	17 46 38.0	0.0
MLSB				eSG	Sn	17 46 50.9	-0.2
MLSB	Milas	0.88	67	ePg	Pb	17 46 38.0	0.0
MLSB				eSg	Sn	17 46 50.9	-0.2
APE	Apeiranthos	0.99	277	ePG	Pb	17 46 40.5	+0.5
APE	Apeiranthos	0.99	277	P	Pb	17 46 39.6	-0.4
APE				S	Sn	17 46 54.5	+0.5
APE	Apeiranthos	0.99	277	ePN	Pb	17 46 39.7	-0.3
APE				eSN	Sg	17 46 53.8	+0.1
APE	Apeiranthos	0.99	277	ePn	Pb	17 46 39.7	-0.3
APE	Apeiranthos	0.99	277	ePg	Pb	17 46 40.5	+0.5
APE				eSn	Sg	17 46 53.8	+0.1
APE				S	Sn	17 46 54.5	+0.5
AYDN	Tasoluk	1.14	51	iP	Pn	17 46 42.8	+0.4
AYDN				iS	Sg	17 46 58.3	+0.1
AYDN	Tasoluk	1.14	51	iP	Pn	17 46 42.8	+0.4
AYDN				iS	Sg	17 46 58.3	+0.1
THR2	Thira island,	1.18	245	P	Pg	17 46 44.0	-0.1
THR2	Thira island,	1.18	245	P	Pg	17 46 44.0	-0.1
THR1	Thera Island	1.20	241	P	Pg	17 46 44.4	-0.1
THR1				S	Sg	17 47 00.3	+0.1
THR1	Thera Island	1.20	241	P	Pg	17 46 44.4	-0.1
THR1				S	Sg	17 47 00.3	+0.1
THR3	Thira Island,	1.22	244	P	Pg	17 46 44.8	-0.1
THR3	Thira Island,	1.22	244	P	Pg	17 46 44.8	-0.1
YER	Yerkesik	1.23	81	ePN	Pg	17 46 44.9	-0.1
YER	Yerkesik	1.23	81	ePn	Pg	17 46 44.9	-0.1
ARG	Arkhangelos	1.32	123	P	Pb	17 46 45.5	0.0
ARG	Arkhangelos	1.32	123	ePN	Pb	17 46 45.5	0.0
ARG				eSN	Sn	17 47 01.8	-0.2
ARG	Arkhangelos	1.32	123	P	Pb	17 46 45.5	0.0
ARG				eSn	Sn	17 47 01.8	-0.2
KARP	Karpathos	1.44	167	P	Pn	17 46 46.7	+0.2
KARP	Karpathos	1.44	167	ePN	Pn	17 46 46.5	0.0
KARP	Karpathos	1.44	167	P	Pn	17 46 46.7	+0.2
BLCB	Balcova	1.45	9	ePN	Pb	17 46 47.5	-0.2
BLCB	Balcova	1.45	9	ePn	Pb	17 46 47.5	-0.2
TURN	Turunc	1.48	93	iP	Pn	17 46 43.8	-3.1
TURN				iS	Sn	17 47 01.0	-4.8
TURN	Turunc	1.48	93	iP	Pn	17 46 43.8	-3.1
IZM	Izmir	1.50	15	ePN	Pb	17 46 48.4	-0.2
IZM	Izmir	1.50	15	ePn	Pb	17 46 48.4	-0.2
DALY	Dalyan (Mu˜la	1.52	95	ePN	Pg	17 46 50.0	-0.5
DALY	Dalyan (Mu˜la	1.52	95	ePn	Pg	17 46 50.0	-0.5
CHOS	Chios island	1.54	339	P	Pn	17 46 47.2	-0.7
CHOS				S	Sn	17 47 06.4	-1.1
CHOS	Chios island	1.54	339	ePN	Pn	17 46 47.6	-0.3
CHOS	Chios island	1.54	339	P	Pn	17 46 47.2	-0.7
CHOS	Chios island	1.54	339	ePn	Pn	17 46 47.6	-0.3
CHOS				S	Sn	17 47 06.4	-1.1
FETY	Fethiye	1.89	99	ePN	Pb	17 46 55.4	+0.2
FETY	Fethiye	1.89	99	ePn	Pb	17 46 55.4	+0.2
DENT	Denizli	1.98	65	ePN	Pb	17 46 55.8	-1.0
DENT	Denizli	1.98	65	ePn	Pb	17 46 55.8	-1.0
LAST	Lasithi	2.07	211	ePN	Pn	17 46 54.4	-0.8
LAST				eSN	Sn	17 47 20.5	-0.1
LAST	Lasithi	2.07	211	ePn	Pn	17 46 54.4	-0.8
LAST				eSn	Sn	17 47 20.5	-0.1
AKHS	Akhisar	2.10	23	iP	Pg	17 47 02.3	+0.9
AKHS				iS	Sg	17 47 31.9	+3.2
KULA	Kula-Manisa	2.17	43	ePN	Pn	17 46 58.3	+1.7
KULA	Kula-Manisa	2.17	43	ePn	Pn	17 46 58.3	+1.7
MRMA	Marmari	2.19	301	P	Pn	17 46 57.1	+0.2
MRMA	Marmari	2.19	301	P	Pn	17 46 57.1	+0.2
IDI	Anoyia	2.25	223	ePN	Pn	17 46 57.5	-0.2
IDI				eSN	Sn	17 47 24.6	-0.4
IDI	Anoyia	2.25	223	ePn	Pn	17 46 57.5	-0.2
IDI				eSn	Sn	17 47 24.6	-0.4
AKAS	Kas	2.40	107	iP	Pg	17 47 06.1	-1.2
AKAS				iS	Sg	17 47 38.5	+0.1
ELL	Elmali	2.53	94	ePN	Pb	17 47 04.5	-1.7
ELL	Elmali	2.53	94	ePn	Pb	17 47 04.5	-1.7
BALY	Balya	2.86	13	iP	Pg	17 47 16.3	+0.1
BALY				iS	Sg	17 47 56.6	+3.3
ALN	Alexandroupoli	3.98	352	ePN	Pn	17 47 21.5	+0.1
ALN	Alexandroupoli	3.98	352	ePn	Pn	17 47 21.5	+0.1

*LDG **11** 17:59:19.0±0.1,41°.96N×82°.84E,h10km,Mb4.7/24, Ms2.4/1,Error ellipse: s-maj=5.9km s-min=5.3km az=124.0*
*NNC **11** 17:59:20.8±2.0,42°.09N×83°.15E,h0km,mb4.7,mpv4.5, Error ellipse: s-maj=19.3km s-min=11.5km az=123.0*
*IDC **11** 17:59:20.3±0.5,42°.14N×83°.01E,h0km,mb4.3/26, mb1 4.4/33,mb1mx4.4/38,mbtmp4.3/33,ML4.1/7,MS3.2/4, Ms1 3.2/4,ms1mx2.7/39,Error ellipse: s-maj=12.0km s-min=8.9km az=35.0*
*ISCJB **11** 17:59:20.0±0.2,42°.14N±0°.03×83°.01E±0°.03,h10km, mb4.5/86,MS3.8/8,Error ellipse: s-maj=4.0km s-min=3.0km az=36.7*
*BJI **11** 17:59:22.5,42°.09N×82°.91E,h19km,mB4.7/7,mb4.4/15, ML4.5/10,Ms4.1/10,Ms7 3.8/10*
*MOS **11** 17:59:23.9±0.9,42°.24N×82°.99E,h35km,mb4.8/48,Error ellipse: s-maj=6.8km s-min=4.2km az=129.4*
*SZGRF **11** 17:59:24.2,42°.39N×83°.82E,h33km,mb4.6,Northern Xinjiang, China*
*NEIC **11** 17:59:25.9±0.5,42°.21N×82°.95E,h36km±4km,mb4.8/40, Error ellipse: s-maj=5.1km s-min=3.4km az=193.0*
ISC 11 17:59:21.8±0.3**,42°.18N**±0°.04×**83°.00E**±0°.03**,h10**km**,n325,** σ**1**^{s}**20**/335**,mb4.6**/86**,MS3.9**/8**,59C-16D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	Urumqi	3.82	63	Pn	Pn	18 00 24.3	+3.6
WMQ				Sn	Sb	18 01 11.8	-3.7
WMQ				smax	smax		
	comp=N,730nm,0.7s						
WMQ				smax	smax		
	comp=E,2µm,0.9s						
WMQ				LR	LR		
	comp=N,2µm,4.0s						
WMQ				LR	LR		
	comp=E,940nm,5.0s						
KNDC	Almaty	4.57	285	⇓Pn	Pn	18 00 33.8	+2.9
KNDC				⇓Lg	Lg	18 01 53.5	
AAA	Alma-Ata	4.59	286	ePN	Pg	18 00 47.1	-2.6
AAA				pmax	pmax		
	comp=Z,548nm,1.1s						

MK31 Makanchi Array 4.64 354 ⇓Pn **Pn 18 00 34.6 +2.6**
comp=Z,40nm,0.8s,baz=188,slow=14,SNR=1031
MK31 ⇑Pg **Pg 18 00 48.2 -2.5**
comp=Z,131nm,0.6s,baz=171,slow=16,SNR=14
MK31 ⇑Lg Lg 18 01 52.8
comp=Z,506nm,0.7s,baz=175,slow=27,SNR=8.7
MK31 Makanchi Array 4.64 354 *e*PN **Pn 18 00 34.9 +2.9**
MK31 Makanchi Array 4.64 354 *e*Pn **Pn 18 00 34.9 +2.9**
MKAR Makanchi Array 4.64 354 PN **Pn 18 00 35.1 +3.1**
MKAR pmax pmax
comp=Z,8.0nm,0.3s
MKAR pmax pmax
comp=Z,43nm,0.3s
MKAR MLR MLR
comp=Z,305nm,21.5s
MKAR Makanchi Array 4.64 354 Pn **Pn 18 00 35.1 +3.1**
MKAR Pg **Pg 18 00 47.8 -2.9**
MKAR Lg Lg 18 01 50.4
MKAR Makanchi Array 4.64 354 Pn **Pn 18 00 35.1 +3.1**
comp=Z,7.8nm,0.3s,baz=186,slow=12,SNR=236
MKAR Pg **Pg 18 00 47.8 -2.9**
comp=Z,43nm,0.3s,baz=169,slow=16,SNR=66
MKAR Lg Lg 18 01 50.4
comp=Z,57nm,0.3s,baz=174,slow=27,SNR=9.8
MKAR LR LR 18 02 35.4
comp=Z,305nm,21.5s,baz=124,slow=42
ULHL Ulahol 5.02 273 *i* PN **Pn 18 00 38.2 +0.9**
ULHL Ulahol 5.02 273 P **Pn 18 00 38.2 +0.9**
SNR=22
TKM2 Tokmak 2 5.52 280 ⇑Pn **Pn 18 00 46.1 +1.9**
comp=Z,17nm,0.4s
TKM2 ⇓Lg Lg 18 02 17.2
comp=Z,150nm,0.6s
TKM2 Tokmak 2 5.52 280 *i* PN **Pn 18 00 46.1 +1.9**
TKM2 Tokmak 2 5.52 280 *e*Pn **Pn 18 00 45.7 +1.5**
comp=Z,5.2nm,0.3s
TKM2 Tokmak 2 5.52 280 P **Pn 18 00 46.1 +1.9**
SNR=56
KZA Kyzart 5.76 272 *i* PN **Pn 18 00 49.3 +1.5**
KZA Kyzart 5.76 272 P **Pn 18 00 49.3 +1.5**
SNR=41
KSH Kashi 5.95 246 Pn Pn 18 00 57.7 +7.6
KSH Sn Sb 18 02 08.6 -8.5
KSH smax smax
comp=N,440nm,1.0s
KSH smax smax
comp=E,360nm,0.9s
KBK Karagaybulak 5.98 277 *i* PN **Pn 18 00 52.1 +1.6**
KBK Karagaybulak 5.98 277 P **Pn 18 00 52.1 +1.6**
SNR=52
AAK Ala-Archa 6.31 277 *e*PN **Pn 18 00 56.0 +1.0**
AAK pmax pmax
comp=Z,40nm,0.5s
AAK Ala-Archa 6.31 277 *e*Pn **Pn 18 00 56.0 +1.0**
comp=Z,40nm,0.5s
AAK Pg **Pb 18 01 13.3 +1.5**
AAK Lg Lg 18 02 41.6
AAK Ala-Archa 6.31 277 P **Pn 18 00 56.4 +1.3**
SNR=8.2
AAK Ala-Archa 6.31 277 Pn **Pn 18 00 56.1 +1.1**
comp=Z,2.3nm,0.3s,baz=112,slow=8.8,SNR=11
AAK Pg **Pb 18 01 13.3 +1.5**
comp=Z,8.8nm,0.3s,baz=111,slow=9.1,SNR=13
AAK Lg Lg 18 02 41.6
comp=Z,10nm,0.3s,baz=139,slow=20,SNR=3.8
USP Ospenovka 6.35 283 *i* PN **Pn 18 00 57.4 +1.9**
USP Ospenovka 6.35 283 P **Pn 18 00 57.5 +1.9**
SNR=8.0
EKS2 Erkin-Say 6.84 277 *e*PN **Pn 18 01 02.5 +0.2**
EKS2 pmax pmax
comp=Z,79nm,0.7s
EKS2 Erkin-Say 6.84 277 *e*Pn **Pn 18 01 02.5 +0.2**
comp=Z,79nm,0.7s
EKS2 Erkin-Say 6.84 277 P **Pn 18 01 03.5 +1.2**
SNR=9.5
KUR14 Kurchatov Arra 8.97 342 ⇓Pn **Pn 18 01 32.3 +1.0**
comp=Z,9.0nm,0.6s
KUR14 ⇑Sn **Sn 18 03 14.2 +1.9**
comp=Z,45nm,1.0s
KUR14 ⇓Lg Lg 18 04 06.7
comp=Z,78nm,1.0s
KURBB Kurchatov Arra 8.99 341 Pn **Pn 18 01 32.4 +0.8**
comp=Z,0.6nm,0.3s,baz=168,slow=13,SNR=87
KURBB Sn **Sn 18 03 07.5 -5.4**
comp=Z,0.4nm,0.3s,baz=170,slow=18,SNR=4.2
KURBB Lg Lg 18 04 04.9
comp=Z,1.3nm,0.3s,baz=173,slow=32,SNR=6.0
KURK Kurchatov 9.06 342 ⇑Pn **Pn 18 01 34.0 +1.5**
comp=Z,25nm,0.6s
KURK ⇑Sn Sn 18 03 22.9 +8.5
comp=Z,56nm,0.7s
KURK ⇑Lg Lg 18 04 13.1
comp=Z,411nm,1.1s
KURK Kurchatov 9.06 342 *e*P **Pn 18 01 32.6 +0.1**
KURK 18 03 07.5
KURK pmax pmax
comp=Z,24nm,0.5s
KURK Kurchatov 9.06 342 *e*P **Pn 18 01 32.5 +0.1**
comp=Z,24nm,0.5s
KURK Sn Sn 18 03 07.5 -7.0
KURK Lg Lg 18 04 04.9
KK31 Karatay Array 9.25 280 ⇑Pn **Pn 18 01 37.6 +2.4**
comp=Z,2.9nm,0.8s,baz=87,slow=13,SNR=9.6
KK31 ⇑Pg 18 02 14.4
comp=Z,8.9nm,0.6s,baz=81,slow=15,SNR=15
KK31 ⇓Lg Lg 18 04 21.7
comp=Z,22nm,0.6s,baz=83,slow=29,SNR=4.6
KKAR Karatay Array 9.25 280 *e*P **Pn 18 01 36.1 +0.9**
KKAR pmax pmax
comp=Z,10.0nm,0.5s
KKAR Karatay Array 9.25 280 *e*P **Pn 18 01 36.1 +0.9**
comp=Z,9.9nm,0.5s
THN Thein Dam 11.32 213 *ex* Pn 18 01 58.4 -5.1
THN *ex* x 18 04 02.0
CHCP Chirah Chowk 11.46 225 P **Pn 18 02 05.5 0.0**
HVS Khovu-Aksy 11.58 36 ⇓*i*P **Pn 18 02 08.8 +1.7**
ZALV Zalesovo Beam 11.84 5 P **Pn 18 02 10.6 0.0**
ZALV 18 04 23.3
ZALV pmax pmax
comp=Z,3.0nm,0.3s
ZALV MLR MLR
comp=Z,133nm,20.5s
ZALV Zalesovo Beam 11.84 5 Pn **Pn 18 02 10.6 0.0**
ZALV Sn **Sn 18 04 23.3 +0.7**
ZALV Lg Lg 18 05 37.1
ZALV Zalesovo Beam 11.84 5 Pn **Pn 18 02 10.6 0.0**
comp=Z,2.6nm,0.3s,baz=188,slow=13,SNR=77
ZALV Sn **Sn 18 04 23.3 +0.7**
comp=Z,0.3nm,0.3s,baz=196,slow=20,SNR=3.3
ZALV Lg Lg 18 05 37.1
baz=198,slow=26,SNR=2.6
ZALV LR LR 18 06 56.8
comp=Z,133nm,20.5s,baz=250,slow=38
CEP Cherat 12.08 230 P **Pn 18 02 12.9 -1.1**
CEP S Sn 18 04 21.0 -7.8
NVS Novosibirsk 12.67 1 *i* P **Pn 18 02 21.5 -0.4**
NVS *e* 18 04 42.9
GTA Gaotai 13.04 97 *e*P **Pn 18 02 25.9 -1.3**
GTA PP **P 18 02 37.0 -0.7**
GTA S **Sn 18 04 51.1 -1.2**
GTA pmax pmax
comp=Z,3.0nm,1.1s
GTA pmax pmax
comp=Z,75nm,4.3s
GTA LR LR
comp=N,290nm,7.6s
GTA LR LR
comp=E,390nm,8.6s
GTA LR LR
comp=Z,390nm,8.5s
VOSK Vostochnaya 13.30 327 ⇓Pn **Pn 18 02 31.7 +1.2**
comp=Z,16nm,1.0s
VOSK ⇑Sn Sn 18 05 05.4 +7.1
comp=Z,15nm,0.9s
VOSK ⇑Lg Lg 18 06 28.6
comp=Z,63nm,1.0s
BVA0 Borovoye Array 13.76 326 ⇑Pn **Pn 18 02 38.6 +1.8**
comp=Z,16nm,0.9s,baz=132,slow=12,SNR=3.9
BVA0 ⇑Lg Lg 18 06 37.0
comp=Z,74nm,1.1s,baz=128,slow=26,SNR=3.9
BVAR Borovoye Array 13.76 326 P **Pn 18 02 36.9 0.0**
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BVAR MLR MLR
comp=Z,91nm,21.0s
BVAR Borovoye Array 13.76 326 Pn **Pn 18 02 36.9 0.0**
BVAR Lg Lg 18 06 36.0
BVAR Borovoye Array 13.76 326 Pn **Pn 18 02 36.9 0.0**
comp=Z,1.5nm,0.3s,baz=144,slow=13,SNR=21
BVAR Lg Lg 18 06 36.0
comp=Z,0.6nm,0.3s,baz=134,slow=25,SNR=4.4
BVAR LR LR 18 08 19.4
comp=Z,91nm,21.0s,baz=15,slow=39
DANN Dangsing 13.81 177 *e*P **Pn 18 02 35.1 -2.8**
comp=Z,22nm,0.6s
BRVK Borovoye 13.83 326 *ce*P **Pn 18 02 37.8 0.0**
BRVK pmax pmax
comp=Z,20nm,1.7s
BRVK Borovoye 13.83 326 *e*P **Pn 18 02 37.2 -0.5**
comp=Z,29nm,0.9s
PYUN Piuthan 14.05 180 *e*P Pn 18 02 36.7 -4.3
comp=Z,94nm,0.9s
LSA Lhasa 14.08 150 P **Pn 18 02 44.5 +2.7**
LSA Lhasa 14.08 150 *e*P Pn 18 02 45.0 +3.2
LSA pmax pmax
comp=Z,14nm,0.8s
LSA Lhasa 14.08 150 *e*P Pn 18 02 45.0 +3.2
comp=Z,14nm,0.8s
ZRNK Zerenda 14.30 324 ⇓Pn **Pn 18 02 44.8 +0.6**
comp=Z,17nm,1.0s
ZRNK ⇑Sn **Sn 18 05 23.6 +0.8**
comp=Z,9.3nm,0.8s
ZRNK ⇑Lg Lg 18 07 02.1
comp=Z,46nm,1.2s
KOLN Koldanda 14.38 178 *e*P Pn 18 02 42.3 -3.4
comp=Z,35nm,0.8s
GUN Gumba 14.43 170 *e*P **Pn 18 02 45.5 -0.9**
comp=Z,101nm,1.0s
KKN Kakani 14.47 172 *e*P **Pn 18 02 45.8 -1.1**
comp=Z,103nm,0.8s
DMN Daman 14.64 173 *e*P **Pn 18 02 47.2 -2.0**
comp=Z,47nm,1.0s
PKIN Phulchoki 14.70 172 *e*P **Pn 18 02 48.4 -1.6**
comp=Z,56nm,0.6s
PKI Pulchoki 14.71 172 *e*P **Pn 18 02 48.8 -1.4**
comp=Z,67nm,0.7s
TAPN Taplejung 15.29 164 *e*P **Pn 18 02 57.1 -0.8**
comp=Z,51nm,0.6s
RAMN Ramite 15.48 168 *e*P **Pn 18 02 58.3 -2.1**
comp=Z,56nm,0.6s
MOY Mondy 15.49 46 *e*P P 18 03 09.8 +5.0
ODAN Odare 15.70 165 *e*P **Pn 18 03 01.4 -1.9**
comp=Z,85nm,0.5s
ZAK Zakamensk 16.21 53 *e*P **Pn 18 03 09.4 -0.2**
ZAK pmax pmax
comp=Z,4.0nm,1.4s
LZH Lanzhou 17.26 104 *e*P **P 18 03 24.3 -0.3**
LZH pP **pP 18 03 27.9 +0.5**
LZH sP **sP 18 03 30.6 +1.9**
LZH *e*S **Sn 18 06 35.1 -0.1**
LZH sS **S 18 06 41.0 -3.3**
LZH SS **SnSn 18 06 54.5 +6.2**
LZH pmax pmax
comp=Z,15nm,1.0s
LZH pmax pmax
comp=Z,67nm,4.0s
LZH LR LR
comp=N,210nm,12.1s
LZH LR LR
comp=E,140nm,10.4s
LZH LR LR
comp=Z,440nm,13.7s
SONM Songino Array 17.45 63 P **P 18 03 26.3 -0.3**
SONM Lg Lg 18 08 35.8
SONM Songino Array 17.45 63 P **P 18 03 26.3 -0.3**
comp=Z,0.3nm,0.3s,baz=257,slow=13,SNR=13
SONM Lg Lg 18 08 35.8
comp=Z,0.1nm,0.3s,baz=276,slow=30,SNR=2.5
AB31 Akbulak array 17.55 302 ⇑P **Pn 18 03 25.5 -0.8**
comp=Z,13nm,0.8s,baz=103,slow=11,SNR=8.4
ABKAR Akbulak array 17.55 302 *e*P **Pn 18 03 25.2 -1.1**
comp=Z,6.4nm,0.6s
ULN Ulaanbaatar 17.90 63 *e*P **P 18 03 31.5 0.0**
comp=Z,6.1nm,0.9s
SHL Shillong 18.12 153 *ex* **Pn 18 03 34.0 +0.3**
SHL *ex* x 18 07 13.0
AKTO Aktyubinsk 19.06 304 ⇑P **Pn 18 03 45.5 +0.6**
comp=Z,8.4nm,0.7s
AKTO Aktyubinsk 19.06 304 P **Pn 18 03 45.8 +0.9**
AKTO S **Sn 18 07 17.7 -0.6**
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO Aktyubinsk 19.06 304 P **Pn 18 03 45.8 +0.9**
AKTO S **Sn 18 07 17.6 -0.6**
AKTO Lg Lg 18 09 25.7
AKTO Aktyubinsk 19.06 304 P **Pn 18 03 45.8 +0.9**
comp=Z,0.6nm,0.3s,baz=106,slow=12,SNR=16
AKTO S **Sn 18 07 17.6 -0.6**
comp=Z,0.1nm,0.3s,baz=53,slow=11,SNR=3.2
AKTO Lg Lg 18 09 25.7
comp=Z,0.1nm,0.3s,baz=204,slow=17,SNR=3.1
SVE Sverdlovsk 20.50 323 ⇓*i*P Pn 18 04 01.1 -0.7
SVE *e*S Sn 18 07 51.0 -1.7
SVE pmax pmax
comp=Z,25nm,1.1s
SVE MLR MLR
comp=Z,288nm,10.0s
ARU Arti 21.22 321 *c i*P **P 18 04 07.8 +0.3**
ARU 18 04 26.3
ARU PPP PPP 18 04 38.3
ARU S **S 18 08 03.0 -0.2**
ARU SS **SnSn 18 08 28.1 +3.1**
ARU SSS SSS 18 08 39.5
ARU pmax pmax
comp=Z,12nm,0.7s
ARU MLR MLR
comp=Z,107nm,12.0s
XAN Xi'an 21.90 103 P **P 18 04 15.9 +0.9**
XAN pP pP 18 04 28.7 +11
XAN pmax pmax
comp=Z,3.0nm,1.2s
XAN LR LR
comp=N,72nm,9.0s
XAN LR LR
comp=Z,43nm,11.2s
KMI Kunming 23.56 130 P **P 18 04 35.6 +2.9**
KMI pmax pmax
comp=Z,12nm,0.8s
SOKR Solikamsk 23.75 326 *d i*P **P 18 04 35.5 +1.5**
SOKR pmax pmax
comp=Z,10.0nm,0.8s
ENH Enshi 24.35 111 *e*P **P 18 04 41.0 +1.1**
comp=Z,5.9nm,0.6s
CHTO Chiang Mai 26.95 145 *e*P **P 18 05 05.1 +1.7**
CHTO pmax pmax
comp=Z,11nm,0.8s
CHTO Chiang Mai 26.95 145 *e*P **P 18 05 05.1 +1.7**
comp=Z,11nm,0.8s
CMAR Chiang Mai Arr 27.26 145 P **P 18 05 07.0 +0.8**
CMAR Chiang Mai Arr 27.26 145 P **P 18 05 07.0 +0.8**
comp=Z,8.6nm,0.7s,baz=323,slow=9.2,SNR=41
GNI Garni 28.71 279 P **P 18 05 20.5 +1.2**
GNI Garni 28.71 279 P **P 18 05 20.5 +1.2**
comp=Z,1.8nm,0.4s,baz=126,slow=14,SNR=3.4
KBZ Khabaz 29.20 287 P **P 18 05 23.5 +0.2**
KBZ pmax pmax
comp=Z,2.0nm,0.7s
KBZ MLR MLR
comp=Z,40nm,18.4s
KBZ Khabaz 29.20 287 P **P 18 05 23.5 +0.2**
KBZ Khabaz 29.20 287 P **P 18 05 23.5 +0.2**
comp=Z,2.1nm,0.7s,baz=45,slow=2.5,SNR=5.3
KBZ LR LR 18 17 19.1
comp=Z,40nm,18.4s,baz=318,slow=37
KIV Kislovodsk 29.30 287 P **P 18 05 25.7 +1.3**
KIV *e* 18 05 37.4
KIV *e* 18 06 16.2
KIV *e*SS SS 18 11 44.7 -37
KIV pmax pmax
comp=Z,1.0nm,0.7s
VRHR Novokhopersk 29.43 302 *e*P **P 18 05 25.3 0.0**
VRHR pmax pmax
comp=N,7.0nm,0.7s
VRHR pmax pmax
comp=E,10.0nm,0.7s
VRHR pmax pmax
comp=Z,10.0nm,0.7s
IBDR Badra 30.52 265 *e*P P 18 05 41.1 +6.0
IBDR *e*S S 18 10 43.1 +6.6
VORD Divnogorie 30.91 302 *e*P **P 18 05 38.1 -0.2**
VORD pmax pmax
comp=N,8.0nm,0.6s
VORD pmax pmax
comp=E,7.0nm,0.6s
VORD pmax pmax
comp=Z,9.0nm,0.6s
VSR Storozhevoye 30.98 302 *e*P **P 18 05 38.7 -0.3**
VSR pmax pmax
comp=N,4.0nm,1.1s
VSR pmax pmax
comp=E,10.0nm,1.1s
VSR pmax pmax
comp=Z,10.0nm,1.1s
BHD Baghdad 31.59 266 *e*P P 18 05 37.5 -7.1
BHD *e*S S 18 10 38.0 -15
KLMR Klimovskoe 32.08 321 P **P 18 05 47.8 -0.7**
KLMR pmax pmax
comp=Z,19nm,1.3s
OBN Obninsk 32.66 310 ⇑*i*P **P 18 05 55.8 +2.1**
OBN *e**PP pP 18 06 04.1 +7.3
OBN *e*SS SS 18 13 02.3 -27
OBN pmax pmax
comp=Z,5.0nm,0.6s
ANN Anapa 32.83 290 *e*P **P 18 05 53.5 -1.8**
ANN *e*S **S 18 11 08.1 -4.3**
ANN *e*SS **SnSn 18 13 04.0 -4.5**
ANN pmax pmax
comp=Z,24nm,1.1s
YAK Yakutsk 33.87 38 *e*P **P 18 06 04.2 +0.1**
KLR Kul'dur 34.27 61 *e*P **P 18 06 05.6 -2.2**
KSAR Wonju Array Be 34.50 83 P **P 18 06 09.6 -0.3**
KSRS Korea Array 34.52 83 P **P 18 06 09.6 -0.5**
comp=Z,1.4nm,0.7s,baz=278,slow=9.1,SNR=4.9
SIM Simferopol' 35.10 292 *e*P **P 18 06 16.0 +0.9**
SIM pmax pmax
comp=Z,10.0nm,0.6s
SIM MLR MLR
comp=Z,160nm,16.4s
JOF Joensuu 36.32 323 *e*P **P 18 06 26.7 +1.4**
JOF pmax pmax
comp=Z,8.0nm,0.5s
JOF Joensuu 36.32 323 *ep* **P 18 06 26.7 +1.4**
comp=Z,7.9nm,0.5s
BR131 Keskin Array S 36.95 283 *e*P **P 18 06 31.7 +0.6**
comp=Z,2.4nm,0.5s
BRTR Keskin Array B 36.95 283 P **P 18 06 31.8 +0.6**
BRTR Keskin Array B 36.95 283 P **P 18 06 31.8 +0.6**
comp=Z,3.4nm,0.6s,baz=96,slow=8.9,SNR=26
TIXI Tiksi 37.02 22 *ce*P **P 18 06 31.4 +0.3**
TIXI pmax pmax
comp=Z,5.0nm,1.0s
AKASG Malin Array Be 37.29 302 P **P 18 06 33.3 -0.4**
AKASG pmax pmax
comp=Z,5.0nm,0.8s
AKASG Malin Array Be 37.29 302 P **P 18 06 33.2 -0.4**
AKASG Malin Array Be 37.29 302 P **P 18 06 33.2 -0.4**
comp=Z,5.2nm,0.8s,baz=69,slow=8.8,SNR=4.6
AK01 Malin Array Si 37.30 302 *e*P **P 18 06 33.7 -0.1**
KIEV Kiev 37.30 302 *e*P **P 18 06 33.3 -0.4**
KIEV pmax pmax
comp=Z,6.0nm,0.8s
KIEV Kiev 37.30 302 *e*P **P 18 06 33.3 -0.4**
comp=Z,5.9nm,0.8s
AK02 Malin Array Si 37.30 302 *e*P **P 18 06 33.8 -0.1**
KAF Kangasniemi 38.53 321 *e*P **P 18 06 44.7 +0.7**
KAF pmax pmax
comp=Z,3.0nm,0.6s
KAF Kangasniemi 38.53 321 *ep* **P 18 06 44.7 +0.7**
comp=Z,2.9nm,0.6s
FINES FINESS Array B 38.59 320 P **P 18 06 44.9 +0.3**
FINES FINESS Array B 38.59 320 P **P 18 06 44.9 +0.3**
comp=Z,3.8nm,0.6s,baz=95,slow=8.2,SNR=14
CFR Carcaliu 39.15 294 ⇑*i*P **P 18 06 50.1 +0.7**
KEV Kevo 39.48 333 *e*P **P 18 06 52.2 +0.3**
KEV Kevo 39.48 333 *ep* **P 18 06 52.2 +0.3**
ISP Isparta 39.91 282 *e*P **P 18 06 56.0 -0.1**
ISP pmax pmax
comp=Z,9.0nm,0.8s
ISP Isparta 39.91 282 *e*P **P 18 06 56.0 -0.1**
comp=Z,8.9nm,0.8s
ISP Isparta 39.91 282 ⇑*i*P **P 18 06 56.9 +0.9**
VRI Vrincioaia 39.92 295 ⇑*i*P **P 18 06 56.9 +1.0**
ARCES ARCESS Array B 39.94 332 P **P 18 06 56.7 +0.9**
ARCES ARCESS Array B 39.94 332 P **P 18 06 56.7 +0.9**
comp=Z,2.7nm,0.5s,baz=87,slow=9.0,SNR=22
PLOR Plostina 39.98 295 ⇑*i*P **P 18 06 57.3 +0.9**
ISR Istrita 40.25 294 ⇑*i*P **P 18 07 00.3 +1.6**
EIL Elat 40.37 268 P **P 18 07 01.2 +1.5**
EIL Elat 40.37 268 P **P 18 07 01.2 +1.5**
comp=Z,5.6nm,0.8s,baz=20,slow=7.1,SNR=6.3
BUR08 Bucovina Ar. S 40.48 298 *e*P **P 18 07 00.7 +0.1**
MLR Muntele Rosu 40.55 295 ⇓*i*P **P 18 07 02.7 +1.4**
VOIR 41.17 295 ⇑*i*P **P 18 07 07.4 +1.1**
KOLS Kolonicke sedl 42.05 301 *e*P **P 18 07 15.0 +1.6**
KOLS Kolonicke sedl 42.05 301 *e*P **P 18 07 15.0 +1.6**
TRPA Tarpa 42.08 300 ⇓*i*P **P 18 07 14.4 +0.8**
DRGR 42.34 298 ⇑*i*P **P 18 07 16.5 +0.6**
MJAR Matsushiro Arr 42.43 79 P **P 18 07 16.0 -0.6**
MJAR Matsushiro Arr 42.43 79 P **P 18 07 16.0 -0.6**
comp=Z,1.7nm,0.7s,baz=290,slow=10,SNR=5.8
NIE Niedzica 43.17 302 *e*P **P 18 07 24.2 +1.7**
NIE Niedzica 43.17 302 *e*P **P 18 07 24.2 +1.7**
OJC Ojcow 43.28 303 *e*P **P 18 07 23.7 +0.3**
OJC Ojcow 43.28 303 *e*P **P 18 07 23.7 +0.3**
KECS Kecovo 43.31 301 *e*P **P 18 07 24.5 +0.9**
KECS Kecovo 43.31 301 *e*P **P 18 07 24.5 +0.9**
SPITS Spitsbergen Ar 44.33 344 P **P 18 07 32.8 +1.3**
SPITS Spitsbergen Ar 44.33 344 P **P 18 07 32.8 +1.3**
comp=Z,1.6nm,0.6s,baz=104,slow=10,SNR=7.3
OKC Ostrava-Krasne 44.41 303 AMS AMS 18 37 20.0
comp=Z,200nm,13.3s
MORC Moravsky Berou 44.80 303 *e*P **P 18 07 35.5 -0.2**
MORC pmax pmax
comp=Z,4.0nm,0.8s
MORC Moravsky Berou 44.80 303 *e*P **P 18 07 35.5 -0.2**
comp=Z,3.5nm,0.8s
MORC Moravsky Berou 44.80 303 ⇑*i*P **P 18 07 35.9 +0.2**
DPC Dobruska-Polom 45.40 304 *e*P **P 18 07 41.6 +1.2**
DPC Dobruska-Polom 45.40 304 *e*P **P 18 07 41.6 +1.2**
UPC Upice 45.54 305 *e*P **P 18 07 42.6 +1.2**
UPC Upice 45.54 305 *e*P **P 18 07 42.6 +1.2**
NB2 NORSAR Subarra 45.77 320 P **P 18 07 43.1 -0.1**
comp=Z,6.7nm,0.6s,baz=80,slow=8.6
NOA NORSAR Array B 45.77 320 P **P 18 07 43.0 -0.1**
NOA NORSAR Array B 45.77 320 P **P 18 07 43.0 -0.1**
comp=Z,5.1nm,0.5s,baz=81,slow=8.0,SNR=28
NAO01 NORSAR Array S 45.97 320 *e*P **P 18 07 44.6 0.0**
comp=Z,6.6nm,0.6s
TREC Trest 46.23 303 AMS AMS 18 37 10.0
comp=Z,300nm,13.4s
PVCC Panska Ves 46.42 305 *e*P **P 18 07 49.0 +0.7**
PVCC Panska Ves 46.42 305 *e*P **P 18 07 49.0 +0.7**
PRU Pruhonice 46.60 304 *e*P **P 18 07 50.6 +0.8**
PRU MLR MLR
comp=Z,300nm,14.3s
PRU Pruhonice 46.60 304 *e*P **P 18 07 50.6 +0.8**
PRU AMS AMS 18 36 00.0
comp=Z,300nm,14.3s
CLL Collm 47.13 306 *i* P **P 18 07 54.0 +0.1**
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL Collm 47.13 306 *i* P **P 18 07 54.0 +0.1**
comp=Z,7.0nm,0.8s
PERS Pernice 47.34 300 *e*P **P 18 07 56.0 +0.3**
GERES GERESS Array B 47.48 303 P **P 18 07 57.6 +0.8**
GERES GERESS Array B 47.48 303 P **P 18 07 57.6 +0.8**
comp=Z,2.0nm,0.8s,baz=67,slow=7.8,SNR=11
BOJS Bojanci 47.66 298 *i* P **P 18 07 58.8 +0.7**
GRF Grafenberg Arr 48.73 305 *e*P **P 18 08 07.5 +1.2**
comp=Z,7.0nm,1.0s
GRF Grafenberg Arr 48.73 305 *e*P **P 18 08 07.5 +1.2**
GRF pmax pmax
comp=Z,7.0nm,1.0s
BILL Bilibino 49.26 30 *c i*P **P 18 08 11.1 +1.0**
BILL *e*SS SS 18 18 47.7 +1.1
BILL pmax pmax
comp=Z,4.0nm,0.8s
BILL Bilibino 49.26 30 *e*P **P 18 08 10.9 +0.7**
comp=Z,4.2nm,0.8s
PETK Petropavlovsk- 49.31 50 P **P 18 08 11.4 +0.7**
PETK pmax pmax
comp=Z,4.0nm,0.9s
PETK Petropavlovsk- 49.31 50 P **P 18 08 11.4 +0.7**
PETK Petropavlovsk- 49.31 50 P **P 18 08 11.4 +0.7**
comp=Z,3.7nm,0.9s,baz=298,slow=3.2,SNR=7.8
WTTA Wattenberg 49.34 302 ⇑*i*P **P 18 08 11.6 +0.4**

	comp=Z,8.0nm,0.6s						
WATA	Walderalm	49.35	302	⇓iP	P	18 08 11.5	+0.2
	comp=Z,4.6nm,0.5s						
MOTA	Moosalm	49.64	302	⇑iP	P	18 08 13.8	+0.3
	comp=Z,7.7nm,0.7s						
FETA	Feichten	50.00	302	⇓iP	P	18 08 16.4	+0.1
	comp=Z,10nm,1.3s						
CDF	Champ du Feu	51.61	305	eP	P	18 08 27.7	-0.6
	comp=Z,6.2nm,0.8s						
CDF	Champ du Feu	51.61	305	eP	P	18 08 27.7	-0.6
CDF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CDF	Champ du Feu	51.61	305	eP	P	18 08 27.7	-0.6
	comp=Z,6.2nm,0.8s						
HINF	Hinteralfeld	52.11	304	eP	P	18 08 30.7	-1.3
	comp=Z,9.9nm,0.9s						
HINF	Hinteralfeld	52.11	304	eP	P	18 08 30.7	-1.3
HINF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HINF	Hinteralfeld	52.11	304	eP	P	18 08 30.7	-1.3
	comp=Z,9.9nm,0.9s						
MEZF	Maizieres J'vi	52.93	305	eP	P	18 08 37.5	-0.5
	comp=Z,18nm,0.8s						
MEZF	Maizieres J'vi	52.93	305	eP	P	18 08 37.5	-0.5
	comp=Z,18nm,0.8s						
CABF	La Chapelle	53.08	303	eP	P	18 08 39.1	-0.2
CABF	La Chapelle	53.08	303	eP	P	18 08 39.1	-0.2
CABF	La Chapelle	53.08	303	eP	P	18 08 39.1	-0.2
LPG	La Plagne	53.14	301	⇑iP	P	18 08 40.7	+0.8
	comp=Z,29nm,0.7s						
LPG	La Plagne	53.14	301	⇑iP	P	18 08 40.7	+0.8
LPG				pmax	pmax		
	comp=Z,29nm,0.7s						
LPG	La Plagne	53.14	301	⇑iP	P	18 08 40.7	+0.8
	comp=Z,29nm,0.7s						
LPL	La Plagne	53.15	301	⇑iP	P	18 08 40.6	+0.7
	comp=Z,35nm,0.6s						
LPL	La Plagne	53.15	301	⇑iP	P	18 08 40.6	+0.7
LPL				pmax	pmax		
	comp=Z,35nm,0.6s						
LPL	La Plagne	53.15	301	⇑iP	P	18 08 40.6	+0.7
	comp=Z,35nm,0.6s						
BNI	Bardonecchia	53.38	301	eP	P	18 08 41.6	+0.1
BNI				pmax	pmax		
	comp=Z,14nm,1.0s						
BNI	Bardonecchia	53.38	301	eP	P	18 08 41.6	+0.1
	comp=Z,14nm,1.0s						
SBF	Sospel	53.42	299	eP	P	18 08 42.0	+0.3
	comp=Z,50nm,0.8s						
SBF	Sospel	53.42	299	eP	P	18 08 42.0	+0.3
SBF				pmax	pmax		
	comp=Z,50nm,0.8s						
SBF	Sospel	53.42	299	eP	P	18 08 42.0	+0.3
	comp=Z,50nm,0.8s						
MBDF	Montbardon	53.47	300	eP	P	18 08 41.8	-0.4
	comp=Z,25nm,0.9s						
MBDF	Montbardon	53.47	300	eP	P	18 08 41.8	-0.4
MBDF				pmax	pmax		
	comp=Z,25nm,0.9s						
MBDF	Montbardon	53.47	300	eP	P	18 08 41.8	-0.4
	comp=Z,25nm,0.9s						
ORIF	Oris-en-Rattie	53.95	301	⇑iP	P	18 08 45.5	-0.1
	comp=Z,17nm,0.6s						
ORIF	Oris-en-Rattie	53.95	301	⇑iP	P	18 08 45.5	-0.1
ORIF				pmax	pmax		
	comp=Z,17nm,0.6s						
ORIF	Oris-en-Rattie	53.95	301	⇑iP	P	18 08 45.5	-0.1
	comp=Z,17nm,0.6s						
FRF	La Foret Royal	54.06	299	eP	P	18 08 46.2	-0.2
	comp=Z,12nm,0.8s						
FRF	La Foret Royal	54.06	299	eP	P	18 08 46.2	-0.2
FRF				pmax	pmax		
	comp=Z,13nm,0.8s						
FRF	La Foret Royal	54.06	299	eP	P	18 08 46.2	-0.2
	comp=Z,12nm,0.8s						
LOR	Lormes	54.18	304	eP	P	18 08 46.7	-0.5
LOR	Lormes	54.18	304	eP	P	18 08 46.7	-0.5
SMF	Signal de Mont	54.47	304	⇑iP	P	18 08 49.1	-0.2
	comp=Z,9.3nm,0.7s						
SMF	Signal de Mont	54.47	304	⇑iP	P	18 08 49.1	-0.2
SMF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SMF	Signal de Mont	54.47	304	⇑iP	P	18 08 49.1	-0.2
	comp=Z,9.3nm,0.7s						
SSF	Saint Saulge	54.49	304	eP	P	18 08 48.9	-0.5
SSF	Saint Saulge	54.49	304	eP	P	18 08 48.9	-0.5
SSF	Saint Saulge	54.49	304	eP	P	18 08 48.9	-0.5
SMRF	Simiane la Rot	54.57	300	eP	P	18 08 50.0	-0.1
SMRF	Simiane la Rot	54.57	300	eP	P	18 08 50.0	-0.1
AVF	Avril sur Loir	54.70	304	eP	P	18 08 50.8	-0.1
	comp=Z,20nm,0.9s						
AVF	Avril sur Loir	54.70	304	eP	P	18 08 50.8	-0.1
AVF				pmax	pmax		
	comp=Z,21nm,0.9s						
AVF	Avril sur Loir	54.70	304	eP	P	18 08 50.8	-0.1
	comp=Z,20nm,0.9s						
VIVF	Saint-Julien-l	54.74	301	eP	P	18 08 51.5	+0.1
	comp=Z,11nm,0.6s						
VIVF	Saint-Julien-l	54.74	301	eP	P	18 08 51.5	+0.1
VIVF				pmax	pmax		
	comp=Z,11nm,0.6s						
VIVF	Saint-Julien-l	54.74	301	eP	P	18 08 51.5	+0.1
	comp=Z,11nm,0.6s						
BGF	Bois d'Agland	55.12	304	eP	P	18 08 53.8	-0.2
BGF	Bois d'Agland	55.12	304	eP	P	18 08 53.8	-0.2
BGF	Bois d'Agland	55.12	304	eP	P	18 08 53.8	-0.2
LASF	Ste Croix	55.62	301	eP	P	18 08 58.1	+0.4
	comp=Z,20nm,0.9s						
LASF	Ste Croix	55.62	301	eP	P	18 08 58.1	+0.4
	comp=Z,20nm,0.9s						
TCF	Toulx Ste Croi	55.63	304	⇑iP	P	18 08 57.9	+0.2
	comp=Z,8.2nm,0.7s						
TCF	Toulx Ste Croi	55.63	304	⇑iP	P	18 08 57.9	+0.2
TCF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
TCF	Toulx Ste Croi	55.63	304	⇑iP	P	18 08 57.9	+0.2
	comp=Z,8.2nm,0.7s						
LDF	La Druitiere	55.99	307	eP	P	18 08 59.8	-0.4
LDF	La Druitiere	55.99	307	eP	P	18 08 59.8	-0.4
LDF	La Druitiere	55.99	307	eP	P	18 08 59.8	-0.4
KEST	Kesra	56.00	290	P	P	18 09 00.2	-0.4
KEST	Kesra	56.00	290	P	P	18 09 00.2	-0.4
	comp=Z,0.7nm,0.6s,baz=32,slow=15,SNR=2.2						
FLN	La Foliniere	56.12	308	eP	P	18 09 00.7	-0.5
	comp=Z,13nm,0.9s						
FLN	La Foliniere	56.12	308	eP	P	18 09 00.7	-0.5
FLN				pmax	pmax		
	comp=Z,13nm,0.9s						
FLN	La Foliniere	56.12	308	eP	P	18 09 00.7	-0.5
	comp=Z,13nm,0.9s						
CAF	Calviac	56.36	303	eP	P	18 09 03.3	+0.4
	comp=Z,11nm,1.1s						
CAF	Calviac	56.36	303	eP	P	18 09 03.3	+0.4
CAF				pmax	pmax		
	comp=Z,11nm,1.1s						
CAF	Calviac	56.36	303	eP	P	18 09 03.3	+0.4
	comp=Z,11nm,1.1s						
GRR	Gorron	56.52	307	eP	P	18 09 03.7	-0.3
GRR	Gorron	56.52	307	eP	P	18 09 03.7	-0.3
GRR	Gorron	56.52	307	eP	P	18 09 03.7	-0.3
RJF	Les Rejaudoux	56.52	303	⇑iP	P	18 09 04.7	+0.6
	comp=Z,10nm,0.7s						
RJF	Les Rejaudoux	56.52	303	⇑iP	P	18 09 04.7	+0.6
RJF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
RJF	Les Rejaudoux	56.52	303	⇑iP	P	18 09 04.7	+0.6
	comp=Z,10nm,0.7s						
MTLF	Montolieu	57.02	301	⇑iP	P	18 09 07.9	+0.3
	comp=Z,7.3nm,0.8s						
MTLF	Montolieu	57.02	301	⇑iP	P	18 09 07.9	+0.3
MTLF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MTLF	Montolieu	57.02	301	⇑iP	P	18 09 07.9	+0.3
	comp=Z,7.3nm,0.8s						
LFF	La Frestale	57.18	303	⇑iP	P	18 09 09.4	+0.7
	comp=Z,18nm,0.6s						
LFF	La Frestale	57.18	303	⇑iP	P	18 09 09.4	+0.7
LFF				pmax	pmax		
	comp=Z,18nm,0.6s						
LFF	La Frestale	57.18	303	⇑iP	P	18 09 09.4	+0.7
	comp=Z,18nm,0.6s						
SGMF	Saint Gilles	57.58	308	eP	P	18 09 10.8	-0.7
SGMF	Saint Gilles	57.58	308	eP	P	18 09 10.8	-0.7
SGMF	Saint Gilles	57.58	308	eP	P	18 09 10.8	-0.7
ROSF	Rostrenen	57.96	308	eP	P	18 09 14.1	-0.1
	comp=Z,6.9nm,0.6s						
ROSF	Rostrenen	57.96	308	eP	P	18 09 14.1	-0.1
ROSF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ROSF	Rostrenen	57.96	308	eP	P	18 09 14.1	-0.1
	comp=Z,6.9nm,0.6s						
QUIF	Quistinic	58.10	308	eP	P	18 09 15.0	-0.1
QUIF	Quistinic	58.10	308	eP	P	18 09 15.0	-0.1
QUIF	Quistinic	58.10	308	eP	P	18 09 15.0	-0.1
EPF	Esparros	58.37	301	eP	P	18 09 16.7	-0.5
	comp=Z,5.2nm,0.7s						
EPF	Esparros	58.37	301	eP	P	18 09 16.7	-0.5
EPF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
EPF	Esparros	58.37	301	eP	P	18 09 16.7	-0.5
	comp=Z,5.2nm,0.7s						
ETSF	Etsaut	59.00	302	⇑iP	P	18 09 22.1	+0.5
	comp=Z,17nm,1.0s						
ETSF	Etsaut	59.00	302	⇑iP	P	18 09 22.1	+0.5
ETSF				pmax	pmax		
	comp=Z,17nm,1.0s						
ETSF	Etsaut	59.00	302	⇑iP	P	18 09 22.1	+0.5
	comp=Z,17nm,1.0s						
SJPF	Ste Jean	59.31	302	eP	P	18 09 23.4	-0.3
SJPF	Ste Jean	59.31	302	eP	P	18 09 23.4	-0.3
SJPF	Ste Jean	59.31	302	eP	P	18 09 23.4	-0.3
ESDC	Sonseca Array	62.88	300	P	P	18 09 48.0	-0.1
ESDC	Sonseca Array	62.88	300	P	P	18 09 48.0	-0.1
	comp=Z,1.8nm,0.5s,baz=55,slow=6.3,SNR=14						
COLD	Coldfoot	63.71	20	eP	P	18 09 53.1	+0.1
	comp=Z,4.8nm,0.8s						
ILAR	Eielson Array	66.47	21	P	P	18 10 10.9	-0.1
ILAR				PP	PP	18 12 26.9	-10
ILAR	Eielson Array	66.47	21	P	P	18 10 10.9	-0.1
	comp=Z,2.7nm,0.9s,baz=312,slow=5.6,SNR=16						
ILAR				PP	PP	18 12 26.9	-10
	comp=Z,0.4nm,0.9s,baz=311,slow=7.0,SNR=2.5						
EGAK	Eagle	67.92	19	eP	P	18 10 20.6	+0.5
SML	Sawmill	68.40	24	eP	P	18 10 23.5	+0.2
SML				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SML	Sawmill	68.40	24	eP	P	18 10 23.5	+0.2
	comp=Z,1.7nm,0.9s						
FITZ	Fitzroy Crossi	71.73	137	P	P	18 10 44.9	+0.8
FITZ	Fitzroy Crossi	71.73	137	P	P	18 10 44.9	+0.8
	comp=Z,1.8nm,0.9s,baz=304,slow=15,SNR=2.8						
YKW3	Yellowknife Ar	74.65	8	eP	P	18 11 00.3	-0.6
	comp=Z,0.1nm,0.9s						
YKA	Yellowknife Ar	74.72	8	P	P	18 11 01.2	-0.1
YKA				PP	PP	18 13 41.4	-6.2
YKA	Yellowknife Ar	74.72	8	P	P	18 11 01.2	-0.1
	comp=Z,4.7nm,0.8s,baz=343,slow=5.6,SNR=36						
YKA				PP	PP	18 13 41.3	-6.2
	comp=Z,0.4nm,0.8s,baz=340,slow=6.6,SNR=3.1						
TORD	Torodi Ar. Bea	74.89	274	P	P	18 11 02.0	-1.0
TORD	Torodi Ar. Bea	74.89	274	P	P	18 11 02.0	-1.0
	comp=Z,2.4nm,0.9s,baz=40,slow=5.7,SNR=13						
WRA	Warramunga Arr	77.88	131	P	P	18 11 19.2	-0.6
WRA	Warramunga Arr	77.88	131	P	P	18 11 19.2	-0.6
	comp=Z,2.6nm,0.9s,baz=332,slow=5.4,SNR=12						
SCHQ	Schefferville	79.99	343	P	P	18 11 30.2	-0.8
SCHQ	Schefferville	79.99	343	P	P	18 11 30.2	-0.8
	comp=Z,2.7nm,0.9s,baz=360,slow=5.3,SNR=4.0						
ASAR	Alice Springs	80.63	134	P	P	18 11 34.7	-0.1
ASAR	Alice Springs	80.63	134	P	P	18 11 34.7	-0.1
	comp=Z,1.1nm,0.6s,baz=322,slow=5.4,SNR=16						
FFC	Flin Flon	83.38	3	iP	P	18 11 49.1	+0.3
FFC	Flin Flon	83.38	3	eP	P	18 11 48.7	-0.1
	comp=Z,7.0nm,0.8s						
BSMT	Bassoo Peak	88.98	12	eP	P	18 12 17.5	+0.7
	comp=Z,5.7nm,0.9s						
EGMT	Eagleton	89.47	9	eP	P	18 12 18.8	-0.2
	comp=Z,5.0nm,0.8s						
SLMT	Seeley Lake	89.77	11	eP	P	18 12 20.9	+0.4
	comp=Z,4.0nm,0.9s						
EYMN	Ely	90.13	356	eP	P	18 12 21.5	-0.4
	comp=Z,3.5nm,0.9s						
STKA	Stephens Creek	91.26	133	P	P	18 12 26.9	-0.3
STKA	Stephens Creek	91.26	133	P	P	18 12 26.9	-0.3
	comp=Z,4.0nm,1.1s,baz=324,slow=19,SNR=2.5						
DLMT	Dillon	91.74	11	eP	P	18 12 32.1	+2.4
MCMT	McKenzie Canyo	92.22	11	eP	P	18 12 32.9	+0.8
	comp=Z,1.3nm,0.9s						
IMW	Indian Meadow	93.40	10	eP	P	18 12 38.5	+1.0
PDAR	Pinedale Array	94.69	9	P	P	18 12 43.3	-0.1
PDAR	Pinedale Array	94.69	9	P	P	18 12 43.3	-0.1
	comp=Z,0.7nm,0.9s,baz=357,slow=1.8,SNR=3.6						
NVAR	Mina Array Bea	97.46	17	P	P	18 12 56.0	0.0
NVAR	Mina Array Bea	97.46	17	P	P	18 12 56.0	0.0
	comp=Z,0.6nm,0.8s,baz=5.7,slow=3.0,SNR=4.7						
LPAZ	La Paz	144.25	307	PKPpre	PKPpre	18 18 53.2	
LPAZ	La Paz	144.25	307	PKhKP	PKPpre	18 18 53.2	
	comp=Z,0.6nm,0.5s,baz=46,slow=18,SNR=2.1						

IDC 11 18:17:05.4±1.0**,54°.71N**×**35°.02W,h0**km**,mb3.8**/12**, mb1 3.9**/15**,mb1mx3.7**/38**,mbtmp3.8**/15**,ML3.2**/3**, MS3.9**/27**,Ms1 3.9**/27**,ms1mx3.7**/44**,Error ellipse: s-maj=30.9km s-min=15.2km az=21.0,Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	Borgarnes	12.17	29	LR	LR	18 23 29.1	
	comp=Z,588nm,21.9s,baz=188,slow=32						
SFJD	Kangerlussuaq	14.41	335	LR	LR	18 25 04.5	
	comp=Z,323nm,18.8s,baz=164,slow=33						
EKA	Eskdalemuir Ar	18.20	75	P	P	18 21 19.8	+0.3
	baz=215,slow=16,SNR=3.3						
SCHQ	Schefferville	18.28	283	P	Pn	18 21 19.4	-0.8
	0.2nm,0.3s,baz=94,slow=11,SNR=5.0						
SCHQ				LR	LR	18 26 58.5	
	comp=Z,267nm,21.7s,baz=243,slow=32						
FRB	Frobisher Bay	19.16	312	P	P	18 21 29.9	-0.2
	0.3nm,0.3s,baz=60,slow=15,SNR=3.6						
FRB				LR	LR	18 27 20.0	
	comp=Z,276nm,19.7s,baz=94,slow=32						
JMIC	Jan Mayen	20.01	25	LR	LR	18 27 16.6	
	comp=Z,298nm,21.3s,baz=39,slow=30						
NOA	NORSAR Array B	24.93	56	LR	LR	18 30 48.2	
	comp=Z,132nm,20.4s,baz=275,slow=33						
ESDC	Sonseca Array	25.64	113	P	P	18 22 36.4	-0.2
	1.9nm,0.8s,baz=314,slow=8.2,SNR=7.4						
ESDC				LR	LR	18 31 05.9	
	comp=Z,164nm,18.0s,baz=310,slow=33						
HFS	Hagfors	26.27	58	LR	LR	18 31 38.4	
	comp=Z,196nm,20.1s,baz=253,slow=33						
DAVOX	Davos/Dischmat	29.06	87	LR	LR	18 34 17.2	
	comp=Z,533nm,18.9s,baz=267,slow=36						
SADO	Sadowa	29.74	269	LR	LR	18 34 01.9	
	comp=Z,448nm,19.2s,baz=187,slow=34						
GERES	GERESS Array B	30.20	81	LR	LR	18 35 13.0	
	comp=Z,197nm,18.0s,baz=110,slow=36						
ARCES	ARCESS Array B	30.36	37	LR	LR	18 33 13.6	
	comp=Z,111nm,18.4s,baz=161,slow=32						
FINES	FINESS Array B	31.89	53	LR	LR	18 36 12.9	
	comp=Z,109nm,18.0s,baz=265,slow=36						
KEST	Kesra	35.80	103	P	P	18 24 08.0	+1.7
	0.6nm,0.6s,baz=165,slow=3.1,SNR=3.2						
ULM	Lac du Bonnet	36.31	289	LR	LR	18 37 40.5	
	comp=Z,249nm,18.8s,baz=62,slow=34						
YKA	Yellowknife Ar	39.65	314	P	P	18 24 39.1	+0.7
	0.3nm,0.7s,baz=75,slow=7.9,SNR=3.5						
BRTR	Keskin Array B	47.05	79	P	P	18 25 39.6	+1.0
	0.7nm,0.6s,baz=312,slow=6.2,SNR=6.5						
BRTR				LR	LR	18 46 50.2	
	comp=Z,84nm,18.8s,baz=302,slow=38						
PDAR	Pinedale Array	48.33	288	P	P	18 25 50.4	+1.7
	0.2nm,0.3s,baz=76,slow=7.8,SNR=4.0						
PDAR				LR	LR	18 45 05.6	
	comp=Z,240nm,19.9s,baz=65,slow=35						
KBZ	Khabaz	49.53	69	LR	LR	18 46 53.7	
	comp=Z,125nm,18.8s,baz=130,slow=36						
ILAR	Eielson Array	49.97	329	P	P	18 25 58.8	-1.9
	0.4nm,0.8s,baz=29,slow=6.7,SNR=4.9						
ILAR				LR	LR	18 46 58.0	
	comp=Z,139nm,18.3s,baz=104,slow=36						
TORD	Torodi Ar. Bea	50.42	131	P	P	18 26 02.5	-2.1
	2.6nm,1.1s,baz=330,slow=7.5,SNR=5.2						
AKTO	Aktyubinsk	52.66	53	P	P	18 26 19.8	-1.2
	1.2nm,0.6s,baz=311,slow=6.8,SNR=6.9						
DBIC	Dimbokro	53.68	142	LR	LR	18 46 12.0	
	comp=Z,164nm,18.9s,baz=46,slow=32						
TXAR	Lajitas Array	54.45	272	LR	LR	18 49 02.6	
	comp=Z,197nm,18.0s,baz=0.0,slow=35						
NVAR	Mina Array Bea	56.12	290	LR	LR	18 49 46.8	
	comp=Z,212nm,19.8s,baz=308,slow=35						
BVAR	Borovoye Array	56.22	44	P	P	18 26 46.9	0.0
	0.7nm,0.7s,baz=309,slow=7.1,SNR=7.0						
ZALV	Zalesovo Beam	60.90	36	LR	LR	18 53 15.9	
	comp=Z,40nm,18.9s,baz=70,slow=36						
KURBB	Kurchatov Arra	61.30	42	P	P	18 27 21.9	-0.3
	1.2nm,0.6s,baz=325,slow=7.2,SNR=6.7						
MKAR	Makanchi Array	65.87	42	P	P	18 27 52.2	-0.3
	0.8nm,0.6s,baz=333,slow=5.9,SNR=8.8						
PETK	Petropavlovsk-	72.03	352	LR	LR	19 01 47.1	
	comp=Z,39nm,18.1s,baz=156,slow=37						
SONM	Songino Array	72.77	26	P	P	18 28 36.1	+0.7
	0.9nm,0.7s,baz=336,slow=7.0,SNR=4.8						
SONM				LR	LR	19 04 43.9	
	comp=Z,48nm,19.8s,baz=252,slow=39						
ASAJ	Asahikawa	81.52	2	LR	LR	19 03 30.4	
	comp=Z,31nm,19.9s,baz=355,slow=34						
KSRS	Korea Array	87.03	14	LR	LR	19 09 25.7	
	comp=Z,15nm,18.8s,baz=255,slow=36						
BOSA	Boshof	97.76	130	LR	LR	19 13 07.7	
	comp=Z,165nm,18.5s,baz=342,slow=34						
ASAR	Alice Springs	147.91	19	PKPbc	PKPbc	18 36 51.0	-1.3
	1.5nm,0.6s,baz=349,slow=2.3,SNR=28						

IDC ***11*** *18:50:21.6±1.0, 54°.42N×162°.82W, h0km, mb3.8/7, mb1 4.1/11, mb1mx3.8/31, mbtmp3.8/11, ML4.1/4, Error ellipse: s-maj=27.3km s-min=14.8km az=167.0*

ISCJB ***11*** *18:50:29.8±0.4, 54°.79N±0°.08×162°.47W±0°.08, h79km±3km, mb3.8/8, Error ellipse: s-maj=14.5km s-min=2.9km az=152.1*

NEIC ***11*** *18:50:30.7, 54°.49N×162°.27W, h25km, ML4.1(AEIC), After AEIC.*

NEIC Felt [III] at King Cove.

ISC 11 18:50:30.6±0.9**,54°.7N**±0°.1×**162°.45W**±0°.05**,h67**km±8km**, n84,**σ1**?10**/91**,mb3.7**/8**,Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	Deer Island	0.26	24	P	Pn	18 50 40.6	-0.6
DT1	Dutton Round H	0.39	14	P	Pn	18 50 41.7	-0.4
DOL	Dolgoi Island	0.54	38	P	Pn	18 50 43.2	-0.4
FALS	False Pass	0.57	283	P	Pn	18 50 43.8	-0.1
FALS				S	Sn	18 50 53.9	+0.4
HAG	Hague Volcano	0.67	28	P	Pn	18 50 45.4	+0.5
PS4A	Pavlof South-4	0.71	29	P	Pn	18 50 45.7	+0.3
PVV	Pavlof Volcano	0.75	30	P	Pn	18 50 46.1	+0.3
PS1A	Pavlof South-1	0.80	30	P	Pn	18 50 47.0	+0.5
SSLW	Shishaldin Wes	0.97	273	P	Pn	18 50 48.6	+0.1
SSBA	Shishaldin	0.97	273	P	Pn	18 50 48.8	+0.2
SSBA				S	Sn	18 51 03.6	+1.6
SDPT	Sand Point	1.29	60	ePn	Pn	18 50 52.3	-0.4
SDPT				S	Sn	18 51 08.9	-0.3
AKUT	Akutan	2.03	254	ePn	Pn	18 51 02.8	+0.3
AKUT				S	Sn	18 51 28.0	+1.2
AKLV	Akutan Long Va	2.13	256	P	Pn	18 51 04.0	+0.1
VNSW	Veniaminof 7	2.13	50	P	Pn	18 51 04.9	+1.0
AKGG	Akutan Green G	2.14	257	P	Pn	18 51 04.3	+0.4
VNWF	Veniaminof 8	2.18	48	P	Pn	18 51 06.3	+1.7
AKRB	Akutan Reef Bi	2.20	256	P	Pn	18 51 05.3	+0.5
VNFG	Veniaminof 2	2.27	45	P	Pn	18 51 07.4	+1.6
VNHG	Veniaminof 1	2.39	50	P	Pn	18 51 09.0	+1.4
UNV	Unalaska Valle	2.54	251	P	Pn	18 51 09.3	0.0
UNV				S	Sn	18 51 40.4	+1.3
MTBL	Makushin Table	2.59	255	P	Pn	18 51 10.5	+0.3
MSW	Makushin Switc	2.67	254	P	Pn	18 51 11.3	+0.1
MSW				S	Sn	18 51 43.3	+0.9
MCIR	Makushin Cirqu	2.72	255	P	Pn	18 51 12.5	+0.6
CHGN	Chignik	2.78	54	P	Pn	18 51 13.1	+0.4
ANPB	Aniakchak Plen	3.14	47	P	Pn	18 51 18.3	+0.6
ANPK	Aniakchak Peak	3.23	47	P	Pn	18 51 19.4	+0.5
ANNW	Aniakchak Nort	3.27	45	P	Pn	18 51 20.9	+1.4
ANNE	Aniakchak Nort	3.31	47	P	Pn	18 51 20.5	+0.6
OKFG	Magazine Ridge	3.48	250	P	Pn	18 51 22.7	+0.4
OKCE	Okmok Cone E	3.61	251	P	Pn	18 51 24.7	+0.7
OKSP	Okmok Steeple	3.75	249	P	Pn	18 51 26.6	+0.6
NIKH	Nikolski High	4.18	248	P	Pn	18 51 31.9	+0.1
KELA	Mount Kelaz	5.25	42	P	Pn	18 51 47.8	+1.4
KABU	Katmai Buttres	5.32	45	P	Pn	18 51 48.7	+1.2
KABR	Katmai Barrier	5.37	48	P	Pn	18 51 49.3	+1.2
KAWH	Katmai	5.59	46	P	Pn	18 51 51.8	+0.7
OHAK	Old Harbor	5.72	60	P	Pn	18 51 51.5	-1.2
KDAK	Kodiak Island	6.29	57	Pn	Pn	18 51 59.2	-1.3
KDAK				Sn	Sn	18 53 11.3	+0.3
KDAK	Kodiak Island	6.29	57	Pn	Pn	18 51 59.2	-1.3
	9.1nm,0.3s,baz=234,slow=6.7,SNR=24						
KDAK				Sn	Sn	18 53 11.3	+0.3
	4.5nm,0.3s,baz=324,slow=24,SNR=5.8						
OPT	Oil Point	7.03	42	P	Pn	18 52 11.8	+1.1
SVW2	Sparrevohn	7.36	27	P	Pn	18 52 15.0	-0.2
KOFP	Korovin Flat P	7.37	255	P	Pn	18 52 14.8	-0.7
RDWB	Redoubt West	7.74	38	P	Pn	18 52 21.7	+1.2
RSO	Redoubt South	7.75	38	ePn	Pn	18 52 22.4	+1.6
	206nm,0.7s						
CKL	Chakachamna La	8.41	36	P	Pn	18 52 31.6	+1.9
SPU	Mount Spurr	8.50	36	P	Pn	18 52 32.0	+1.2
GSMY	Great Sitkin M	8.57	257	P	Pn	18 52 31.9	+0.1
STLK	Strandline Lak	8.80	35	P	Pn	18 52 36.2	+1.2
TT01	Tatalina	8.85	19	P	Pn	18 52 36.0	+0.5
SUA	Susitna One	9.15	38	P	Pn	18 52 40.1	+0.3
RC01	Rabbit Creek A	9.28	42	ePn	Pn	18 52 41.5	0.0
SML	Sawmill	10.26	41	eP	Pn	18 52 53.5	-1.3
	2.4nm,0.6s						
TRF	Thorofare Moun	10.73	31	eP	Pn	18 53 01.7	+0.4
	21nm,0.9s						
DIV	Divide	10.92	47	eP	Pn	18 53 01.9	-2.0
	17nm,0.3s						
MCK	McKinley	11.35	32	eP	Pn	18 53 14.6	+5.0
	24nm,1.1s						
AMKA	Amchitka	11.48	260	eP	Pn	18 53 11.8	+0.4
	44nm,0.6s						
PAX	Paxson	12.03	40	eP	Pn	18 53 17.6	-1.3
	8.4nm,0.5s						
MENT	Mentasta	12.67	42	eP	Pn	18 53 25.6	-2.1
ILAR	Eielson Array	12.72	31	Pn	Pn	18 53 26.4	-1.9
ILAR	Eielson Array	12.72	31	Pn	Pn	18 53 26.4	-1.9
	0.5nm,0.3s,baz=224,slow=12,SNR=12						
DOT	Dot Lake	12.94	39	eP	Pn	18 53 29.9	-1.4
	5.3nm,0.6s						
PNL	Peninsula	13.40	59	eP	Pn	18 53 35.8	-1.8
	27nm,0.5s						
COLD	Coldfoot	13.83	20	eP	Pn	18 53 44.6	+1.4
	7.0nm,0.9s						
EGAK	Eagle	14.62	38	eP	Pn	18 53 51.6	-2.0
	3.2nm,0.5s						
DLBC	Dease Lake	18.13	65	P	Pn	18 54 39.1	+1.5
DLBC	Dease Lake	18.13	65	P	Pn	18 54 39.1	+1.5
	0.2nm,0.3s,baz=247,slow=20,SNR=3.3						
INK	Inuvik	19.10	33	P	Pn	18 54 48.5	-0.5
INK	Inuvik	19.10	33	P	Pn	18 54 48.5	-0.5
	0.3nm,0.3s,baz=232,slow=14,SNR=6.6						
PETK	Petropavlovsk-	23.31	283	P	P	18 55 31.1	-1.5
PETK	Petropavlovsk-	23.31	283	P	P	18 55 31.1	-1.5
	4.0nm,0.4s,baz=90,slow=12,SNR=30						
YKA	Yellowknife Ar	25.55	53	P	P	18 55 53.2	+0.5
YKA	Yellowknife Ar	25.55	53	P	P	18 55 53.2	+0.5
	1.3nm,0.4s,baz=275,slow=9.0,SNR=11						
NVAR	Mina Array Bea	33.78	100	P	P	18 57 07.8	+1.7
NVAR	Mina Array Bea	33.78	100	P	P	18 57 07.8	+1.7
	0.5nm,0.6s,baz=320,slow=5.4,SNR=5.7						
TXAR	Lajitas Array	48.73	97	P	P	18 59 09.6	+1.2
TXAR	Lajitas Array	48.73	97	P	P	18 59 09.6	+1.2
	0.3nm,0.5s,baz=328,slow=4.6,SNR=3.7						
SONM	Songino Array	53.55	303	P	P	18 59 43.9	-0.5
SONM	Songino Array	53.55	303	P	P	18 59 43.9	-0.5
	0.5nm,0.6s,baz=53,slow=5.6,SNR=2.9						
MKAR	Makanchi Array	65.05	317	P	P	19 01 03.8	+0.3
MKAR	Makanchi Array	65.05	317	P	P	19 01 03.8	+0.3
	2.6nm,0.3s,baz=43,slow=6.7,SNR=61						
CMAR	Chiang Mai Arr	79.98	288	P	P	19 02 31.3	-1.3
CMAR	Chiang Mai Arr	79.98	288	P	P	19 02 31.3	-1.3
	1.2nm,0.8s,baz=16,slow=4.9,SNR=9.5						
ASAR	Alice Springs	95.11	236	P	P	19 03 44.1	-1.9
ASAR	Alice Springs	95.11	236	P	P	19 03 44.1	-1.9
	0.2nm,0.8s,baz=16,slow=4.5,SNR=3.3						

ISCJB ***11*** *19:38:25.7±0.9, 17°.7S±0°.2×178°.6W±0°.2, h547km, mb4.0/12, Error ellipse: s-maj=33.6km s-min=11.5km az=146.3*

IDC ***11*** *19:38:29.5±5.0, 17°.75S×178°.58W, h579km±58km, mb3.5/12, mb1 3.7/13, mb1mx3.5/23, mbtmp3.5/13, Error ellipse: s-maj=43.8km s-min=24.4km az=145.0*

AUST ***11*** *19:38:41.8, 17°.67S×179°.93E, h600km*

ISC 11 19:38:26.5±1.1,17°.7S±0°.3×178°.5W±0°.2,h547km,n30, σ0.s84/29,mb3.7/12,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.83	251	P	P	19 41 36.1	+1.7
	1.5nm,0.3s,baz=78,slow=16,SNR=15						
ARMA	Armidale	29.98	240	P	P	19 43 51.9	+0.7
	baz=29,SNR=5.9						
RMQ	Roma	31.52	248	P	P	19 44 05.0	+0.7
	baz=30,SNR=7.2						
RABL	Rabaul	31.74	292	S	S	19 48 51.7	+14
	baz=30,SNR=3.5						
CTA	Charters Tower	33.42	260	P	P	19 44 20.6	+0.1
	7.6nm,0.6s,baz=76,slow=11,SNR=7.9						
PMG	Port Moresby	34.37	279	P	P	19 44 30.0	+1.5
	24nm,0.8s,baz=106,slow=5.4,SNR=5.5						
CMSA	Cobar Meteorol	35.19	240	P	P	19 44 35.2	0.0
	baz=34,SNR=23						
MTSU	Mount Surprise	35.37	263	P	P	19 44 37.0	+0.1
	baz=34,SNR=7.2						
QLP	Quilpie	35.55	249	P	P	19 44 37.9	-0.2
	baz=34,SNR=35						
COEN	Coen	37.05	270	P	P	19 44 51.7	+1.0
	baz=36,SNR=11						
STKA	Stephens Creek	38.67	241	P	P	19 45 03.9	+0.3
	7.5nm,0.5s,baz=91,slow=8.7,SNR=27						
STKA	Stephens Creek	38.67	241	P	P	19 45 04.0	+0.3
	baz=37,SNR=11						
BBOO	Buckleboo	43.45	241	P	P	19 45 41.1	-0.4
	baz=42,SNR=13						
WRA	Warramunga Arr	44.61	259	P	P	19 45 49.5	-1.2
	6.5nm,0.5s,baz=94,slow=7.1,SNR=170						
ASAR	Alice Springs	44.79	254	P	P	19 45 51.6	-0.4
	48nm,0.7s,baz=88,slow=8.5,SNR=714						
KDU	Kakadu	47.50	269	P	P	19 46 12.4	-0.4
	baz=46,SNR=15						
MTN	Manton Dam	48.75	268	P	P	19 46 21.4	-0.6
	baz=47,SNR=3.9						
KNRA	Kununurra	50.45	264	P	P	19 46 33.8	-0.7
	baz=49,SNR=10						
FITZ	Fitzroy Crossi	53.00	260	P	P	19 46 52.6	-0.3
	1.1nm,0.3s,baz=122,slow=8.2,SNR=16						
FITZ	Fitzroy Crossi	53.00	260	P	P	19 46 52.6	-0.3
	baz=52,SNR=8.9						
MEEK	Meekatharra	58.45	249	P	P	19 47 29.0	-1.5
	baz=57,SNR=6.1						
UGM	Wanagama	69.59	268	P	P	19 48 40.2	-1.4
	baz=68,SNR=3.9						
PETK	Petropavlovsk-	73.48	345	P	P	19 49 03.3	0.0
	1.3nm,0.6s,baz=136,slow=9.1,SNR=4.7						
ILAR	Eielson Array	85.72	13	P	P	19 50 06.7	-0.7
	0.6nm,0.4s,baz=222,slow=5.5,SNR=5.8						
TXAR	Lajitas Array	85.94	58	P	P	19 50 10.9	+1.5
	1.1nm,0.8s,baz=226,slow=4.7,SNR=4.9						
PDAR	Pinedale Array	87.26	43	P	P	19 50 15.8	+0.3
	0.9nm,0.6s,baz=232,slow=3.6,SNR=7.3						
CMAR	Chiang Mai Arr	88.77	290	P	P	19 50 23.7	+0.9
	0.3nm,0.3s,baz=103,slow=2.9,SNR=4.3						
YKA	Yellowknife Ar	94.19	25	P	P	19 50 46.3	-0.4
	0.1nm,0.4s,baz=237,slow=3.3,SNR=3.8						
BRTR	Keskin Array B	144.61	315	PKP	PKPdf	19 57 01.1	-0.4
	0.4nm,0.5s,baz=106,slow=5.1,SNR=4.0						
GERES	GERESS Array B	147.42	345	PKPbc	PKPbc	19 57 08.6	-0.6
	0.6nm,0.6s,baz=40,slow=2.3,SNR=6.0						

*ISCJB **11** 20:06:27.2±0.5,72°.71N±0°.05×4°.8E±0°.2,h10km,mb3.4/7, MS3.3/11,Error ellipse: s-maj=8.6km s-min=6.5km az=154.8*
*NAO **11** 20:06:27.8±1.7,72°.62N×4°.62E,ML3.5*
*CSEM **11** 20:06:28.3±0.2,72°.70N×4°.33E,h10km,ML2.3,Error ellipse: s-maj=6.6km s-min=4.9km az=76.0*
*IDC **11** 20:06:28.6±0.8,72°.75N×4°.34E,h0km,mb3.5/7, mb1 3.8/12,mb1mx3.5/31,mbtmp3.6/12,ML3.5/5,MS3.3/18, Ms1 3.3/18,ms1mx3.2/37,Error ellipse: s-maj=21.0km s-min=14.0km az=51.0*
*BER **11** 20:06:31.2±2.9,72°.74N×4°.20E,h15km±34km,MD2.5, ML2.3,ML3.5(NAO)*
ISC 11 20:06:30.0±0.7,72°.71N±0°.06×5°.15E±0°.08,h10km,n67, σ1.s77/58,mb3.5/7,MS3.1/11,Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO	Bjornoya	4.36	59	eP	Pn	20 07 36.0	-0.2
BJO	Bjornoya	4.36	59	eP	Pn	20 07 36.0	-0.2
	SNR=53						
JMIC	Jan Mayen	4.61	255	Pn	Pn	20 07 34.1	-5.4
JMIC	Jan Mayen	4.61	255	eP	Pn	20 07 34.1	-5.4
JMIC	Jan Mayen	4.61	255	Pn	Pn	20 07 34.6	-4.9
	3.5nm,0.3s,baz=101,slow=8.6,SNR=6.2						
JMIC				LR	LR	20 08 58.6	
	comp=Z,296nm,18.7s,baz=213,slow=34						
JMIC	Jan Mayen	4.61	255	eP	Pn	20 07 34.1	-5.4
	SNR=53						
LOF	Lofoten	5.39	144	eP	Sn	20 08 58.6	+6.3
LOF				AML	AML	20 10 03.0	
	comp=Z,7.3nm,0.6s						
TRO	Tromso	5.42	118	eP	Pn	20 07 52.6	+1.9
TRO				AML	AML	20 08 53.8	
	comp=Z,7.4nm,0.5s						
TRO	Tromso	5.42	118	eP	Pn	20 07 52.6	+1.9
	SNR=53						
STEI	Steigen	5.88	140	eP	Pn	20 07 59.1	+2.1
SPA0	Spitsbergen Ar	6.17	22	Pn	Pn	20 08 00.9	-0.1
	baz=212,slow=18						
SPA0	Spitsbergen Ar	6.17	22	Pn	Pn	20 08 00.9	-0.1
	baz=212,slow=18						
SPA0	Spitsbergen Ar	6.17	22	Pn	Pn	20 08 00.9	-0.1
	baz=212,slow=17,SNR=55						
SPITS	Spitsbergen Ar	6.17	22	Pn	Pn	20 08 00.7	-0.3
	baz=207,slow=18,SNR=24						
SPITS				Sn	Sn	20 08 54.8	-17
	baz=302,slow=4.8,SNR=2.5						
SPITS				LR	LR	20 10 00.8	
	comp=Z,108nm,18.8s,baz=300,slow=34						
KIF	Kilpisjarvi	6.33	118	eP	Pn	20 08 04.8	+1.5
KIF	Kilpisjarvi	6.33	118	eP	Pn	20 08 04.8	+1.5
	SNR=51						
KBS	Kingsbay	6.46	12	Pn	Pn	20 08 04.8	-0.2
KBS	Kingsbay	6.46	12	eP	Pn	20 08 05.2	+0.2
KBS				e		20 08 24.1	
KBS	Kingsbay	6.46	12	Pn	Pn	20 08 04.8	-0.2
KBS	Kingsbay	6.46	12	eP	Pn	20 08 05.2	+0.2
	SNR=51						
STOK	Stokkvaagen	6.97	153	eP	Pn	20 08 12.3	+0.4
STOK				AML	AML	20 09 32.1	
	comp=N,4.0nm,0.5s						
KTK1	Kautokeino	6.99	113	eP	Pn	20 08 14.6	+2.4
KTK1	Kautokeino	6.99	113	eP	Pn	20 08 14.6	+2.4
	SNR=51						
ARA0	ARCESS Array S	7.30	106	Pn	Pn	20 08 18.3	+1.7
	baz=305,slow=12						
ARA0				Sn	Sn	20 09 35.7	-3.7
	baz=298,slow=22						
ARA0	ARCESS Array S	7.30	106	P	Pn	20 08 18.3	+1.7
	baz=305,slow=12						
ARA0				S	Sn	20 09 35.7	-3.7
	baz=298,slow=22						
ARA0	ARCESS Array S	7.30	106	P	Pn	20 08 18.3	+1.7
	baz=305,slow=12,SNR=51						
ARCES	ARCESS Array B	7.30	106	Pn	Pn	20 08 18.2	+1.6
	comp=N,1.0nm,0.3s,baz=305,slow=11,SNR=22						
ARCES				Sn	Sn	20 09 38.0	-1.4
	comp=N,0.2nm,0.3s,baz=296,slow=20,SNR=2.2						
ARCES				LR	LR	20 11 33.0	
	comp=N,121nm,18.6s,baz=232,slow=40						
ARE0	ARCESS Array S	7.30	106	eP	Pn	20 08 18.6	+2.0
ARE0	ARCESS Array S	7.30	106	eP	Pn	20 08 18.6	+2.0
	SNR=51						
MOR8	Moi Rana	7.32	149	eP	Pn	20 08 17.5	+0.6
MOR8				eS	Sn	20 09 34.1	-5.8
MOR8				AML	AML	20 09 47.0	
	comp=Z,7.2nm,0.5s						
MOR8	Moi Rana	7.32	149	eP	Pn	20 08 17.5	+0.6
	SNR=51						
HEF	Hetta	7.51	116	eP	Pn	20 08 21.2	+1.9
HEF	Hetta	7.51	116	eP	Pn	20 08 21.2	+1.9
	SNR=51						
KEV	Kevo	7.62	102	eP	Pn	20 08 21.7	+0.9
KEV	Kevo	7.62	102	eP	Pn	20 08 21.7	+0.9
	SNR=51						
APA0	Apatity Array	10.66	105	Pn	Pn	20 09 01.8	-0.7
	baz=326,slow=16						
APA0	Apatity Array	10.66	105	P	Pn	20 09 01.8	-0.7
	baz=326,slow=16						
NB2	NORSAR Subarra	11.95	166	Pn	Pn	20 09 19.8	-0.4
NB2	NORSAR Subarra	11.95	166	Pn	Pn	20 09 19.8	-0.4
NB2	NORSAR Subarra	11.95	166	Pn	Pn	20 09 19.8	-0.4
	SNR=55						
NOA	NORSAR Array B	11.95	166	Pn	Pn	20 09 19.5	-0.7
	comp=Z,0.2nm,0.3s,baz=226,slow=22,SNR=3.5						
NOA				Sn	Sn	20 11 32.5	-0.9
	comp=Z,0.1nm,0.3s,baz=36,slow=6.7,SNR=3.7						
NOA				LR	LR	20 13 44.4	
	comp=Z,84nm,20.8s,baz=345,slow=36						
HFS	Hagfors	13.06	161	Pn	Pn	20 09 35.5	+0.2
HFS	Hagfors	13.06	161	Pn	Pn	20 09 35.5	+0.2
HFS	Hagfors	13.06	161	Pn	Pn	20 09 35.3	+0.1
	comp=Z,0.5nm,0.3s,baz=359,slow=13,SNR=21						
HFS				Sn	Sn	20 11 55.7	-4.6
	comp=Z,0.1nm,0.3s,baz=352,slow=21,SNR=4.2						
HFS				LR	LR	20 14 19.0	
	comp=Z,157nm,19.4s,baz=156,slow=36						
HFS	Hagfors	13.06	161	Pn	Pn	20 09 35.5	+0.2
	SNR=55						
FIA0	FINESS Array S	13.81	134	Pn	Pn	20 09 45.9	+0.4
	baz=333,slow=12						
FIA0	FINESS Array S	13.81	134	Pn	Pn	20 09 45.9	+0.4
	baz=333,slow=12						
FIA0	FINESS Array S	13.81	134	Pn	Pn	20 09 45.9	+0.4
	baz=333,slow=12,SNR=55						
FINES	FINESS Array B	13.81	134	Pn	Pn	20 09 46.1	+0.6
	comp=Z,0.2nm,0.3s,baz=352,slow=8.5,SNR=5.5						
FINES				LR	LR	20 14 48.6	
	comp=Z,221nm,19.5s,baz=321,slow=36						
EKA	Eskdalemuir Ar	17.79	196	P	P	20 10 38.2	+0.2
	baz=12,slow=12,SNR=3.5						
SFJD	Kangerlussuaq	19.34	281	LR	LR	20 17 11.2	
	comp=Z,161nm,19.8s,baz=332,slow=34						
VRAC	Vranov	24.03	161	LR	LR	20 21 07.9	
	comp=Z,65nm,19.6s,baz=59,slow=36						
GERES	GERESS Array B	24.25	166	P	P	20 11 48.7	+1.8
	comp=Z,0.8nm,0.7s,baz=1.4,slow=5.3,SNR=6.2						
GERES				LR	LR	20 19 50.0	
	comp=Z,38nm,20.1s,baz=286,slow=33						
AKASG	Malin Array Be	24.48	141	P	P	20 11 52.1	+3.3
	comp=Z,0.3nm,0.3s,baz=344,slow=10.0,SNR=4.6						
RES	Resolute Bay	25.04	322	LR	LR	20 21 34.3	
	comp=Z,80nm,20.5s,baz=183,slow=36						
DAVOX	Davos/Dischmat	26.10	173	LR	LR	20 22 12.4	
	comp=Z,62nm,20.7s,baz=266,slow=36						
MLR	Muntele Rosu	28.96	149	LR	LR	20 24 20.7	
	comp=Z,35nm,19.5s,baz=4.5,slow=37						
KBZ	Khabaz	34.03	128	LR	LR	20 27 23.9	
	comp=Z,134nm,19.2s,baz=38,slow=37						
BRTR	Keskin Array B	35.89	141	P	P	20 13 32.6	+2.7
	comp=Z,0.7nm,0.8s,baz=340,slow=6.8,SNR=4.9						
ZALV	Zalesovo Beam	36.74	76	LR	LR	20 31 46.8	
	comp=Z,32nm,18.5s,baz=160,slow=41						
YKA	Yellowknife Ar	39.08	320	P	P	20 13 55.1	-1.5
	comp=Z,0.2nm,0.6s,baz=18,slow=8.4,SNR=4.3						
ILAR	Eielson Array	41.50	342	P	P	20 14 15.6	-1.0
	comp=Z,0.9nm,0.8s,baz=13,slow=5.9,SNR=9.2						
MKAR	Makanchi Array	42.35	84	LR	LR	20 34 18.0	
	comp=Z,40nm,18.0s,baz=355,slow=39						
ULM	Lac du Bonnet	45.98	299	LR	LR	20 33 24.2	
	comp=Z,91nm,18.6s,baz=342,slow=35						
TORD	Torodi Ar. Bea	59.57	184	P	P	20 16 33.4	-0.1
	comp=Z,0.7nm,0.6s,baz=2.8,slow=7.1,SNR=9.4						
KSRS	Korea Array	63.32	48	LR	LR	20 45 44.4	
	comp=Z,13nm,18.2s,baz=320,slow=37						
TXAR	Lajitas Array	67.61	297	P	P	20 17 25.0	-1.6
	comp=Z,0.2nm,0.5s,baz=23,slow=6.8,SNR=3.6						
TXAR				LR	LR	20 46 42.5	
	comp=Z,48nm,20.5s,baz=350,slow=36						

*CSEM **11** 20:19:20.5±0.3,37°.15N×21°.77E,h2km,MD3.3,Error ellipse: s-maj=7.3km s-min=3.3km az=66.0*
*THE **11** 20:19:20.6,37°.16N×21°.79E,h0km±2km,ML2.3/3,Error ellipse: s-maj=2.5km s-min=0.6km az=289.0*
*ATH **11** 20:19:21.3,37°.16N×21°.81E,h5km±4km,MD3.3/7*
ISC 11 20:19:21.0±1.0,37°.15N±0°.02×21°.82E±0°.04,h8km±6km, n25,σ0.s64/43,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ITM	Ithomi	0.09	68	P	Pg	20 19 23.1	-0.2
ITM	Ithomi	0.09	68	ePG	Pg	20 19 23.1	-0.2
ITM				eSG	Sg	20 19 25.2	+0.3
ITM	Ithomi	0.09	68	P	Pg	20 19 23.1	-0.2
ITM				eSg	Sg	20 19 25.2	+0.3
PYL	PYLOS	0.26	194	P	Pg	20 19 25.9	-0.3
PYL				S	Sg	20 19 29.5	-0.1
VLX	Vlachokerasia	0.50	63	P	Pg	20 19 30.4	-0.3
VLX				S	Sg	20 19 38.3	+1.1
DYR	Agios Nikonas	0.56	133	P	Pg	20 19 31.6	-0.3
DYR				S	Sb	20 19 41.0	-0.3
DYR	Agios Nikonas	0.56	133	P	Pg	20 19 31.6	-0.3
DYR				S	Sb	20 19 41.0	-0.3
GUR	Goura	0.89	27	P	Pg	20 19 37.1	-1.1
GUR				S	Sg	20 19 50.6	+0.8
GUR	Goura	0.89	27	P	Pg	20 19 37.1	-1.1
GUR				S	Sg	20 19 50.6	+0.8
KLV	Kalavryta, Ach	0.93	16	ePG	Pg	20 19 38.7	-0.3
KLV				eSB	Sb	20 19 52.0	-0.1
KLV	Kalavryta, Ach	0.93	16	ePg	Pg	20 19 38.7	-0.3
KLV				eSb	Sb	20 19 52.0	-0.1
RLS	Riolos of Patr	0.95	343	ePB	Pg	20 19 39.5	+0.1
RLS				eSB	Sb	20 19 53.5	+0.9
RLS	Riolos of Patr	0.95	343	ePb	Pg	20 19 39.5	+0.1
RLS				eSb	Sb	20 19 53.5	+0.9
VLI	Veliai	0.99	115	P	Pg	20 19 39.8	-0.2
VLI				S	Sb	20 19 54.4	+0.8
VLI	Veliai	0.99	115	ePG	Pg	20 19 39.8	-0.2
VLI				eSB	Sn	20 19 55.3	-0.1
VLI	Veliai	0.99	115	ePg	Pg	20 19 39.8	-0.2
VLI				S	Sb	20 19 54.4	+0.8
VLI				eSb	Sn	20 19 55.3	-0.1
LAKA	Lakka	1.10	6	ePG	Pg	20 19 41.8	-0.3
LAKA				eSB	Sn	20 19 57.7	-0.5
LAKA	Lakka	1.10	6	ePg	Pg	20 19 41.8	-0.3
LAKA				eSb	Sn	20 19 57.7	-0.5
TRIZ	Trizonia	1.23	9	ePB	Pg	20 19 45.8	+1.1
TRIZ	Trizonia	1.23	9	ePb	Pg	20 19 45.8	+1.1
KALE	Kalithea	1.27	11	ePN	Pn	20 19 44.2	-0.9
KALE	Kalithea	1.27	11	ePn	Pn	20 19 44.2	-0.9
KYTH	Kithira	1.30	131	P	Pb	20 19 46.0	+0.2
KYTH	Kithira	1.30	131	ePB	Pg	20 19 47.1	+1.1
KYTH	Kithira	1.30	131	ePb	Pg	20 19 47.1	+1.1

*IDC **11** 20:43:44.2±1.1,22°.73S×171°.36E,h0km,mb4.2/6, mb1 4.5/7,mb1mx4.1/19,mbtmp4.3/7,ML4.1/1,MS3.7/8, Ms1 3.7/8,ms1mx3.4/29,Error ellipse: s-maj=34.6km s-min=24.6km az=170.0*
*ISCJB **11** 20:43:49.4±0.5,22°.86S±0°.10×171°.24E±0°.05,h49km, mb4.5/11,MS3.8/7,Error ellipse: s-maj=14.3km s-min=6.6km az=3.4*
*NEIC **11** 20:43:51.3±1.4,22°.80S×171°.21E,h52km±12km,mb4.6/6, Error ellipse: s-maj=20.3km s-min=9.8km az=161.0*
*NOU **11** 20:43:54.2±0.3,18°.21S×168°.39E,h30km,ML2.2*
ISC 11 20:43:51.1±0.6,22°.9S±0°.1×171°.25E±0°.07,h49km,n59, σ0.s92/51,mb4.5/11,MS3.7/7,8C-5D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.10	279	eS	Sn	20 45 39.4	+1.5
BAYA				AMP		20 45 53.0	
	comp=Z,10nm,4.3s						
LASL	Noumea	4.40	277	eS	Sn	20 45 43.9	-1.5
DZM	Mont Dzumac	4.51	279	eP	Pn	20 44 56.0	-1.1
DZM	Mont Dzumac	4.51	279	Pn	Pn	20 44 56.2	-0.9
DZM				Sn	Sn	20 45 50.4	+2.1
DZM	Mont Dzumac	4.51	279	Pn	Pn	20 44 56.2	-0.9
	comp=Z,8.0nm,0.3s,baz=100,slow=18,SNR=55						
DZM				Sn	Sn	20 45 50.4	+2.1
	comp=Z,10.0nm,0.3s,baz=110,slow=17,SNR=7.1						
MSVF	Nonsavu	8.16	53	ePn	Pn	20 45 47.8	+0.7
	comp=Z,120nm,1.4s						
URZ	Urewera	16.16	163	LR	LR	20 52 40.4	
	comp=Z,214nm,18.3s,baz=336,slow=33						
ARMA	Armidale	19.08	243	P	P	20 48 08.8	-1.0
RPZ	Rata Peaks	20.82	180	P	P	20 48 28.9	+0.5
	comp=Z,17nm,0.9s,baz=14,slow=14,SNR=3.1						
RPZ				LR	LR	20 55 08.7	
	comp=Z,342nm,20.2s,baz=33,slow=33						
CTAO	Charters Tower	23.42	272	eP	P	20 48 55.4	-0.7
STKA	Stephens Creek	27.76	245	LR	LR	20 59 17.2	
	comp=Z,128nm,18.8s,baz=212,slow=33						
COEN	Coen	28.03	283	P	P	20 49 37.5	-0.3
ASAR	Alice Springs	34.26	261	P	P	20 50 32.9	+0.1
ASAR	Alice Springs	34.26	261	P	P	20 50 32.9	+0.1
	comp=Z,2.3nm,0.9s,baz=95,slow=8.4,SNR=16						
WRAB	Tennant Creek	34.43	268	eP	P	20 50 34.0	-0.2
	comp=Z,2.9nm,0.7s						
WRA	Warramunga Arr	34.43	268	P	P	20 50 33.4	-0.9
WRA	Warramunga Arr	34.43	268	P	P	20 50 33.4	-0.9
	comp=Z,0.7nm,0.4s,baz=97,slow=8.4,SNR=16						
FITZ	Fitzroy Crossi	42.86	268	eP	P	20 51 45.9	+1.0
	comp=Z,4.4nm,0.6s						
MJAR	Matsushiro Arr	66.80	331	LR	LR	21 22 35.9	
	comp=Z,23nm,19.0s,baz=95,slow=35						
QSPA	South Pole Qui	67.23	180	eP	P	20 54 39.8	-0.4
	comp=Z,10nm,1.1s						
PETK	Petropavlovsk-	76.55	352	LR	LR	21 25 46.6	
	comp=Z,27nm,18.3s,baz=323,slow=33						
CMAR	Chiang Mai Arr	81.69	294	P	P	20 56 06.7	+1.9
CMAR	Chiang Mai Arr	81.69	294	P	P	20 56 06.7	+1.9
	comp=Z,2.9nm,0.8s,baz=135,slow=4.0,SNR=13						
SNAA	Sanae	85.65	182	eP	P	20 56 25.2	+1.0
	comp=Z,30nm,1.9s						
HUMO	Hull Mountain	88.92	42	eP	P	20 56 39.8	-0.5
	comp=Z,7.0nm,1.4s						
NVAR	Mina Array Bea	89.80	48	P	P	20 56 44.2	-0.5
NVAR	Mina Array Bea	89.80	48	P	P	20 56 44.2	-0.5
	comp=Z,1.8nm,0.7s,baz=228,slow=8.1,SNR=16						
NVAR				LR	LR	21 30 10.7	
	comp=Z,61nm,19.3s,baz=44,slow=31						
ULN	Ulaanbaatar	90.86	323	eP	P	20 56 48.2	-1.3
	comp=Z,0.9nm,0.4s						
SONM	Songino Array	91.21	322	P	P	20 56 50.6	-0.5
SONM	Songino Array	91.21	322	P	P	20 56 50.6	-0.5
	comp=Z,2.2nm,1.1s,baz=147,slow=3.9,SNR=7.7						
ILAR	Eielson Array	93.12	17	LR	LR	21 35 48.1	
	comp=Z,65nm,18.8s,baz=38,slow=34						
TXAR	Lajitas Array	96.84	61	LR	LR	21 34 22.2	
	comp=Z,46nm,19.6s,baz=180,slow=31						
VRI	Vrincioaia	143.23	317	⇑iP	PKPab	21 03 16.2	+0.5
BUR08	Bucovina Ar. S	143.31	321	PKPdf	PKPbc	21 03 18.0	+0.7
MLR	Muntele Rosu	143.89	317	⇑iP	PKPbc	21 03 18.8	-0.2
SECR		144.02	316	⇓iP	PKPdf	21 03 20.6	-0.7
KOLS	Kolonicke sedl	144.25	324	ePKP	PKPbc	21 03 19.6	-0.2
VOIR		144.48	318	⇑iP	PKPdf	21 03 22.0	-0.1
DRGR		145.20	321	⇓iP	PKPdf	21 03 23.8	+0.5
KECS	Kecovo	145.47	325	ePKP	PKPab	21 03 23.8	-0.2
OKC	Ostrava-Krasne	145.78	329	ePKP	PKPdf	21 03 24.2	+0.1
GZR	Gura Zlata	145.89	319	⇓iP	PKPbc	21 03 25.3	0.0
MORC	Moravsky Berou	146.11	329	⇑iP	PKPbc	21 03 25.9	+0.2
DPC	Dobruska-Polom	146.28	331	ePKP	PKPbc	21 03 26.3	+0.1
UPC	Upice	146.30	331	ePKP	PKPbc	21 03 26.3	+0.1
VYHS	Vyhne	146.32	326	ePKP	PKPbc	21 03 25.8	-0.6
VRAC	Vranov	146.88	329	⇑iP	PKPab	21 03 28.6	-0.8
VTS	Vitosha	146.96	314	⇑iP	PKPbc	21 03 29.1	+0.5
PRU	Pruhonice	147.33	332	ePKP	PKPbc	21 03 29.0	-0.2
PKSM	Moragy	147.84	323	⇑iP	PKPbc	21 03 30.2	-0.5
NKC	Novy Kostel	148.02	334	ePKP	PKPbc	21 03 30.7	-0.4
KHC	Kasperske Hory	148.38	332	ePKP	PKPbc	21 03 31.0	-1.1
GERES	GERESS Array B	148.54	331	PKPbc	PKPbc	21 03 31.8	-0.8
GERES	GERESS Array B	148.54	331	PKPbc	PKPbc	21 03 31.8	-0.8
	comp=Z,2.5nm,0.8s,baz=56,slow=3.4,SNR=18						
SOKA	Soboth	149.45	327	⇑iPKPbc	PKPbc	21 03 34.1	-0.8
	comp=Z,6.4nm,1.2s						
WTTA	Wattenberg	150.65	331	⇓iPKPbc	PKPbc	21 03 37.3	-0.6
	comp=Z,7.3nm,0.8s						
MOTA	Moosalm	150.82	332	⇓iPKPbc	PKPbc	21 03 37.0	-1.3
	comp=Z,3.5nm,0.6s						
TORD	Torodi Ar. Bea	166.16	228	PKPab	PKPab	21 04 53.2	+0.8
TORD	Torodi Ar. Bea	166.16	228	PKPab	PKPab	21 04 53.2	+0.8
	comp=Z,0.7nm,1.0s,baz=148,slow=5.6,SNR=3.1						

MAN 11 21:01:46,9°.23N×126°.13E,h25km,mb4.4,ML3.2,MS3.1, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.56	243	eP	Pb	21 01 57.7	+0.5
BUTP				eS	Sn	21 02 07.9	+1.0
MSLP	Maasin	1.54	306	eP	Pn	21 02 12.5	+0.6
MSLP				eS	Sb	21 02 33.7	+0.7
BUKP	Musuan	1.70	218	eP	Pn	21 02 14.7	+0.5
BUKP				eS	Sn	21 02 36.0	+0.8
PLP	Palo	2.23	330	⇓eP	Pn	21 02 21.4	0.0
PLP				eS	Sn	21 02 49.3	+1.0
TBP	Tagbilaran	2.28	282	eP	Pn	21 02 22.5	+0.4
TBP				eS	Sn	21 02 50.4	+1.0

*DDA **11** 21:04:52.6,37°.53N×35°.69E,h7km,MD2.8*
*CSEM **11** 21:04:52.6±0.6,37°.59N×35°.73E,h20km,MD2.6,Error ellipse: s-maj=19.8km s-min=12.9km az=175.0*
*ISCJB **11** 21:04:53.2±0.6,37°.51N±0°.05×35°.71E±0°.04,h13km±5km, Error ellipse: s-maj=7.8km s-min=4.8km az=179.4*
*ISK **11** 21:04:53.5,37°.52N×35°.71E,h8km,MD2.6*
ISC 11 21:04:53.2±0.9,37°.50N±0°.06×35°.71E±0°.03,h14km±6km, n14,σ0.s49/26,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	Kozan	0.09	101	ePG	Pg	21 04 56.2	-0.1
KOZT				eSG	Sg	21 04 58.3	-0.1
KOZT	Kozan	0.09	101	ePg	Pg	21 04 56.2	-0.1
KOZT				eSg	Sg	21 04 58.3	-0.1
CEYT	Ceyhan	0.49	176	ePG	Pb	21 05 04.2	+0.7
CEYT	Ceyhan	0.49	176	ePg	Pb	21 05 04.2	+0.7
ANDN	Andirin	0.51	81	i P	Pg	21 05 02.7	-0.6
ANDN				i S	Sb	21 05 10.9	-0.4
ANDN	Andirin	0.51	81	i P	Pg	21 05 02.7	-0.6
ANDN				i S	Sb	21 05 10.9	-0.4
GULE	Gulek	0.77	254	i P	Pg	21 05 07.4	-0.9
GULE				i S	Sg	21 05 18.7	+0.2
GULE	Gulek	0.77	254	i P	Pg	21 05 07.4	-0.9
GULE				i S	Sg	21 05 18.7	+0.2
KMRS	Kahramanmaras	0.95	89	ePG	Pn	21 05 11.9	-0.1
KMRS				eSG	Sn	21 05 25.4	0.0
KMRS	Kahramanmaras	0.95	89	ePg	Pn	21 05 12.0	-0.1
KMRS				eSg	Sn	21 05 25.4	0.0
NIG	Nigde	1.06	305	ePG	Pn	21 05 14.1	+0.2
NIG				eSG	Sn	21 05 28.7	+0.1
NIG	Nigde	1.06	305	ePg	Pn	21 05 14.1	+0.2
NIG				eSg	Sn	21 05 28.7	+0.1
SARI	SarD1z-Kayseri	1.07	31	ePG	Pn	21 05 13.7	-0.2
SARI				eSG	Sn	21 05 29.4	+0.8
SARI	SarD1z-Kayseri	1.07	31	ePg	Pn	21 05 13.7	-0.2
SARI				eSg	Sn	21 05 29.4	+0.8

*IDC **11** 21:26:01.1±2.6,28°.60N×51°.60E,h0km,mb3.5/4, mb1 3.5/5,mb1mx3.3/27,mbtmp3.5/5,ML3.1/1,Error ellipse: s-maj=63.8km s-min=29.2km az=158.0*
*KISR **11** 21:26:01.7±0.3,28°.63N×51°.49E,h11km±327km,ML2.9*
*ISCJB **11** 21:26:02.5±1.3,28°.6N±0°.1×51°.70E±0°.06,h24km,mb3.5/4, Error ellipse: s-maj=19.0km s-min=7.1km az=166.8*
*CSEM **11** 21:26:03.4±0.3,28°.71N×51°.59E,h2km,ML2.9,Error ellipse: s-maj=10.4km s-min=5.8km az=172.0*
ISC 11 21:26:05.4±1.0,28°.7N±0°.1×51°.62E±0°.05,h24km,n15, σ1.s05/21,mb3.6/4,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	1.26	107	eSg	Sn	21 26 46.2	+2.2
RDF	Al-Radifah	3.58	275	eP	Pn	21 26 59.1	-0.4
RDF				eS	Sn	21 27 42.2	+1.2
RDF				AML	AML	21 27 50.8	
	comp=Z,19nm,0.4s						
RDF	Al-Radifah	3.58	275	eP	Pn	21 26 59.1	-0.4
RDF				eS	Sn	21 27 42.2	+1.2
	comp=Z,19nm,0.4s						
NAY	Al-Naaiem	3.88	280	eP	Pn	21 27 03.5	-0.1
NAY				eS	Sn	21 27 49.8	+1.4
NAY				AML	AML	21 28 00.1	
	comp=Z,9.7nm,0.5s						
NAY	Al-Naaiem	3.88	280	eP	Pn	21 27 03.5	-0.1
NAY				eS	Sn	21 27 49.8	+1.4
	comp=Z,9.7nm,0.5s						
MIB	Mutribah	3.91	288	eP	Pn	21 27 04.0	+0.1
MIB				eS	Sn	21 27 50.6	+1.5
MIB				AML	AML	21 28 00.1	

	comp=Z,35nm,0.5s						
MIB	**Mutribah**	**3.91**	**288**	*e*P	**Pn**	**21 27 04.0**	**+0.1**
MIB				*e*S	**Sn**	**21 27 50.6**	**+1.5**
	comp=Z,35nm,0.5s						
NASN	**Na'in**	**4.24**	**14**	*e*Pn	**Pn**	**21 27 08.2**	**-0.7**
KHMZ	**Khomeyn**	**5.25**	**345**	*e*Pn	**Pn**	**21 27 23.3**	**+0.7**
ASAO	**Ashtian**	**6.02**	**347**	*e*Pn	**Pn**	**21 27 33.6**	**+0.4**
BRTR	**Keskin Array B**	**18.48**	**311**	P	**Pn**	**21 30 19.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=141,slow=12,SNR=4.4						
MKAR	**Makanchi Array**	**30.00**	**45**	P	**P**	**21 32 12.4**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=235,slow=8.4,SNR=4.1						
ZALV	**Zalesovo Beam**	**34.96**	**34**	P	**P**	**21 32 54.8**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=232,slow=8.9,SNR=3.0						
FINES	**FINESS Array B**	**36.91**	**340**	P	**P**	**21 33 11.4**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=153,slow=11,SNR=3.4						
TORD	**Torodi Ar. Bea**	**48.78**	**262**	P	**P**	**21 34 47.9**	**-0.9**
	comp=Z,0.4nm,0.7s,baz=70,slow=7.4,SNR=4.4						

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*ISCJB **11** 21:31:56.3±0.4, 41°47N±0°03×141°47E±0°06, h91km±3km, mb3.7/14, Error ellipse: s-maj=7.4km s-min=4.8km az=20.1*
*MOS **11** 21:31:57.4±0.9, 41°49N×141°56E, h107km, mb3.8/8, Error ellipse: s-maj=19.3km s-min=12.0km az=71.0*
*JMA **11** 21:31:57.4±0.1, 41°46N×141°49E, h79km±1km, M3.6*
JMA Felt II J1.
*IDC **11** 21:31:58.4±1.4, 41°50N×141°49E, h98km±12km, mb3.5/13, mb1 3.6/17, mb1mx3.5/31, mbtmp3.4/17, Error ellipse: s-maj=17.6km s-min=10.7km az=121.0*
*NIED **11** 21:32:00, 41°40N×141°50E, h68km, Mw3.8 Best double couple: $M_0$4.90000×10^{14} NP1:ϕ_s96.00000°, δ51.00000°, λ-72.00000°. NP2:ϕ_s248.00000°, δ42.00000°, λ-111.00000°.*

ISC 11 21:31:57.1±0.7**, 41°47N**±0°04×**141°50E**±0°05**, h82**km±6km**, n39,** σ1s**01**/51**, mb3.8**/14**, 4C-7D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.35**	**256**	⇓P	**Pn**	**21 32 09.7**	**-0.2**
JOT				S	**Sn**	**21 32 19.4**	**0.0**
JKB	**Kayabe**	**0.55**	**320**	⇓P	**Pn**	**21 32 11.4**	**-0.1**
JKB				S	**Sn**	**21 32 22.3**	**+0.2**
JTM	**Tenmabayashi**	**0.75**	**206**	⇓P	**Pn**	**21 32 13.5**	**0.0**
JTM				S	**Sn**	**21 32 25.4**	**-0.3**
JSR	**Shiriuchi**	**0.82**	**275**	⇓P	**Pn**	**21 32 14.1**	**-0.1**
JSR				S	**Sn**	**21 32 26.5**	**-0.4**
JNB	**Noboribetsu**	**1.06**	**341**	⇑P	**Pn**	**21 32 17.1**	**+0.1**
JNB				S	**Sn**	**21 32 31.9**	**0.0**
JYM2	**Yakumo 2**	**1.07**	**308**	⇓P	**Pn**	**21 32 17.4**	**+0.3**
JYM2				S	**Sn**	**21 32 32.4**	**+0.4**
JANG	**Nango**	**1.09**	**179**	⇑P	**Pn**	**21 32 17.0**	**-0.4**
JNBK	**Urakawa-nobuka**	**1.24**	**49**	P	**Pn**	**21 32 19.5**	**+0.3**
JEM	**Erimo**	**1.36**	**66**	P	**Pn**	**21 32 21.8**	**+1.2**
JEW	**Eniwo**	**1.37**	**358**	P	**Pn**	**21 32 21.8**	**+0.9**
JEW				*e*S	**Sn**	**21 32 39.4**	**+0.6**
JIW	**Iwasaki**	**1.43**	**233**	⇓P	**Pn**	**21 32 21.8**	**+0.2**
JIW				S	**Sn**	**21 32 40.5**	**+0.4**
JAH	**Hinai**	**1.44**	**208**	⇑P	**Pn**	**21 32 22.3**	**+0.6**
JAH				S	**Sn**	**21 32 40.8**	**+0.6**
JOSM	**Okushiri--Mats**	**1.64**	**293**	⇓P	**Pn**	**21 32 23.9**	**-0.3**
JOSM				S	**Sn**	**21 32 44.1**	**-0.7**
ASAJ	**Asahikawa**	**2.77**	**17**	P	**Pn**	**21 32 41.0**	**+1.7**
	8.1nm,0.3s,baz=219,slow=12,SNR=69						
ASAJ				S	**Sn**	**21 33 13.4**	**+1.6**
	12nm,0.3s,baz=152,slow=32,SNR=12						
YUK	**Yuzh-Kuril'sk**	**4.11**	**50***c*	*i*P	**Pn**	**21 32 57.8**	**+0.3**
YUK				*i* S	**Sn**	**21 33 41.8**	**-2.5**
YUK				pmax	pmax		
	comp=Z,53nm,0.3s						
YUK				pmax	pmax		
	comp=E,13nm,0.1s						
YUK				pmax	pmax		
	comp=N,23nm,0.3s						
YUK				smax	smax		
	comp=N,155nm,0.6s						
YUK				smax	smax		
	comp=E,116nm,0.6s						
MAT	**Matsushiro**	**5.54**	**209**	P	**Pn**	**21 33 19.5**	**+2.4**
MAT				*e*S	Sn	21 34 25.9	+6.4
MJAR	**Matsushiro Arr**	**5.54**	**209**	P	**Pn**	**21 33 19.9**	**+2.8**
	comp=E,1.5nm,0.3s,baz=21,slow=14,SNR=18						
USRK	**Ussuriysk Arra**	**7.50**	**295**	P	**Pn**	**21 33 44.3**	**+0.6**
	comp=E,0.3nm,0.3s,baz=108,slow=14,SNR=6.8						
JHJ	**Hachijo jima 2**	**8.44**	**190**	P	Pn	21 33 53.6	-3.0
	comp=E,3.8nm,0.3s,baz=24,slow=12,SNR=3.2						
JHJ				S	Sn	21 35 19.8	-10
	comp=E,3.5nm,0.3s,baz=46,slow=18,SNR=1.8						
KSRS	**Korea Array**	**11.23**	**254**	P	**Pn**	**21 34 36.8**	**+2.2**
	baz=64,slow=14,SNR=3.1						
ZALV	**Zalesovo Beam**	**39.09**	**308**	P	**P**	**21 39 15.6**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**39.09**	**308**	P	**P**	**21 39 15.6**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=79,slow=7.8,SNR=2.8						
MKAR	**Makanchi Array**	**41.96**	**298**	P	**P**	**21 39 39.4**	**-0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**41.96**	**298**	P	**P**	**21 39 39.4**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=81,slow=7.7,SNR=7.8						
CMAR	**Chiang Mai Arr**	**42.86**	**251**	P	**P**	**21 39 48.0**	**+0.8**
	comp=Z,0.2nm,0.4s,baz=38,slow=6.5,SNR=3.0						
KURK	**Kurchatov**	**43.37**	**305**	P	**P**	**21 39 50.9**	**-0.1**
KURK						21 41 35.8	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**43.44**	**304**	P	**P**	**21 39 50.9**	**-0.7**
	comp=Z,0.5nm,0.3s,baz=78,slow=8.7,SNR=8.8						
KURBB				PcP	**PP**	**21 41 35.8**	**+1.9**
	comp=Z,0.1nm,0.3s,baz=91,slow=3.3,SNR=4.5						
ILAR	**Eielson Array**	**45.76**	**35**	P	**P**	**21 40 10.5**	**+0.6**
	comp=Z,1.7nm,0.9s,baz=267,slow=6.4,SNR=12						
BVAR	**Borovoye Array**	**47.73**	**309**	P	**P**	**21 40 25.3**	**-0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**47.73**	**309**	P	**P**	**21 40 25.3**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=79,slow=9.6,SNR=3.8						
INK	**Inuvik**	**50.44**	**29**	P	**P**	**21 40 45.8**	**0.0**
	comp=Z,1.6nm,0.4s,baz=283,slow=7.6,SNR=8.0						
YKA	**Yellowknife Ar**	**59.97**	**31**	P	**P**	**21 41 52.8**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=299,slow=6.3,SNR=4.4						
WRA	**Warramunga Arr**	**61.45**	**188**	P	**P**	**21 42 03.9**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=7.8,slow=7.7,SNR=22						
FINES	**FINESS Array B**	**64.94**	**331**	P	**P**	**21 42 26.7**	**-0.9**
	comp=Z,1.2nm,0.7s,baz=32,slow=11,SNR=3.8						
ASAR	**Alice Springs**	**65.18**	**188**	P	**P**	**21 42 29.0**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=5.5,slow=6.5,SNR=6.8						
AKASG	**Malin Array Be**	**70.86**	**321**	P	**P**	**21 43 03.8**	**-1.0**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**70.86**	**321**	P	**P**	**21 43 03.8**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=43,slow=6.7,SNR=2.6						
PDAR	**Pinedale Array**	**74.53**	**46**	P	**P**	**21 43 27.1**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=265,slow=3.3,SNR=6.1						
SNAA	**Sanae**	**144.98**	**199**	PKPbc	**PKPbc**	**21 51 22.6**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=22,slow=1.2,SNR=6.3						

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*ISCJB **11** 21:35:03.9±0.4, 41°05N±0°03×116°50W±0°04, h0km, Error ellipse: s-maj=4.8km s-min=3.6km az=135.6*
*NEIC **11** 21:35:04.7±0.4, 41°01N×116°52W, h0km, ML2.5, Error ellipse: s-maj=6.6km s-min=5.2km az=140.0, Suspected Mining explosion.*
NEIC 55 km [35 miles] NE of Battle Mountain.
*IDC **11** 21:35:05.4±1.8, 41°05N×116°43W, h0km, mb1 3.1/3, mb1mx3.0/28, mbtmp2.6/3, ML3.0/2, Error ellipse: s-maj=25.6km s-min=7.2km az=144.0*

ISC 11 21:35:04.6±0.8**, 41°07N**±0°03×**116°47W**±0°03**, h0**km**, n26,** σ1s**27**/37**, Nevada**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BMN	**Battle Mountai**	**0.85**	**222**	*e*Pg	**Pg**	**21 35 20.7**	**-0.2**
BMN				*e*Sg	**Sg**	**21 35 32.6**	**+0.6**
ELK	**Elko**	**0.99**	**109**	Pg	**Pg**	**21 35 22.9**	**-0.5**
ELK				Lg	Lg	21 35 38.9	
ELK	**Elko**	**0.99**	**109**	Pg	**Pg**	**21 35 22.9**	**-0.5**
	baz=288,slow=18						
ELK				Lg	Lg	21 35 38.9	
	baz=211,slow=19						
WVOR	**Wild Horse Val**	**2.12**	**311**	*e*Pn	**Pn**	**21 35 41.3**	**-0.1**
WVOR				*e*Sn	**Sn**	**21 36 08.5**	**0.0**
MFID	**Camas Ranch**	**2.39**	**11**	*e*Pn	**Pn**	**21 35 47.4**	**+2.2**
MFID				*e*Sn	**Sb**	**21 36 20.0**	**+1.3**
HVU	**Hansel Valley**	**2.87**	**74**	*e*Pn	**Pn**	**21 35 52.1**	**+0.4**
HVU				*e*Sn	**Sn**	**21 36 23.0**	**-4.0**
DUG	**Dugway**	**2.92**	**106**	*e*Pn	**Pn**	**21 35 52.0**	**-0.4**
DUG				*e*Sn	**Sn**	**21 36 30.0**	**+1.8**
HLID	**Hailey**	**2.92**	**31**	*e*Pn	**Pn**	**21 35 53.9**	**+1.5**
HLID				*e*Sg	**Sg**	**21 36 37.8**	**-0.7**
NV11	**Mina Array Sit**	**2.94**	**207**	*e*Pn	**Pn**	**21 35 51.3**	**-1.3**
NV11				*e*Sg	**Sg**	**21 36 40.1**	**+1.3**
NVAR	**Mina Array Bea**	**2.99**	**209**	Pn	**Pn**	**21 35 52.1**	**-1.3**
NVAR				Pg	**Pg**	**21 36 01.2**	**-0.7**
NVAR				Lg	Lg	21 36 41.0	
NVAR	**Mina Array Bea**	**2.99**	**209**	Pn	**Pn**	**21 35 52.1**	**-1.3**
	0.5nm,0.3s,baz=26,slow=12,SNR=41						
NVAR				Pg	**Pg**	**21 36 01.2**	**-0.7**
	3.0nm,0.3s,baz=30,slow=17,SNR=50						
NVAR				Lg	Lg	21 36 41.0	
	1.4nm,0.3s,baz=214,slow=27,SNR=6.5						
BEKR	**Beckworth**	**3.20**	**249**	*e*Pn	**Pn**	**21 35 55.2**	**-1.0**
BEKR				*e*Sn	**Sn**	**21 36 36.5**	**+1.3**
HWUT	**Hardware Ranch**	**3.73**	**80**	*e*Pn	**Pn**	**21 36 05.7**	**+2.1**
BMO	**Blue Mountains**	**3.83**	**351**	*e*Pn	**Pn**	**21 36 05.0**	**+0.1**
BMO				*e*Sn	**Sn**	**21 36 51.2**	**+0.5**
ARUT	**Antelope Range**	**4.03**	**143**	*e*Pn	**Pn**	**21 36 07.9**	**+0.2**
MSU	**Marysvale**	**4.18**	**126**	*e*Pn	**Pn**	**21 36 09.7**	**0.0**
MCMT	**McKenzie Canyo**	**4.60**	**34**	*e*Pn	**Pn**	**21 36 14.9**	**-0.8**
TPAW	**Teton Pass**	**4.76**	**58**	*e*Pn	Pb	21 36 24.0	-5.0
SNOW	**Snow King Moun**	**4.87**	**59**	*e*Pn	**Pn**	**21 36 20.1**	**+0.8**
SNOW				*e*Sg	**Sg**	**21 37 40.1**	**-0.9**
MOOW	**Moose Ponds**	**5.01**	**56**	*e*Pn	**Pn**	**21 36 22.8**	**+1.5**
	2.9nm,0.8s						
LOHW	**Long Hollow**	**5.04**	**58**	*e*Pn	Pn	21 36 26.3	+4.8
	4.9nm,0.9s						
DLMT	**Dillon**	**5.14**	**32**	*e*Pg	**Pg**	**21 36 41.3**	**-1.8**
	3.9nm,0.9s						
DLMT				*e*Sg	**Sg**	**21 37 49.2**	**-0.5**
PDAR	**Pinedale Array**	**5.43**	**69**	Pn	Pn	21 36 30.1	+3.2
PDAR				Pg	**Pg**	**21 36 47.5**	**-1.0**
PDAR				Lg	Lg	21 37 59.9	
PDAR	**Pinedale Array**	**5.43**	**69**	Pn	Pn	21 36 30.1	+3.2
	baz=258,slow=12,SNR=2.8						
PDAR				Pg	**Pg**	**21 36 47.5**	**-1.0**
	baz=248,slow=16,SNR=4.5						
PDAR				Lg	Lg	21 37 59.8	
	0.1nm,0.3s,baz=236,slow=28,SNR=2.5						
TXAR	**Lajitas Array**	**15.68**	**134**	Pn	**P**	**21 38 50.8**	**-0.4**
TXAR	**Lajitas Array**	**15.68**	**134**	Pn	**P**	**21 38 50.8**	**-0.4**
	0.0nm,0.3s,baz=325,slow=5.5,SNR=2.5						

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*IDC **11** 21:37:31.3±0.9, 30°75N×83°73E, h0km, mb3.8/14, mb1 4.0/15, mb1mx3.8/30, mbtmp3.8/15, ML3.5/1, MS3.5/12, Ms1 3.5/12, ms1mx3.3/39, Error ellipse: s-maj=27.4km s-min=17.8km az=50.0*
*ISCJB **11** 21:37:32.0±0.4, 30°71N±0°04×83°53E±0°04, h18km, mb3.8/15, MS3.5/11, Error ellipse: s-maj=6.1km s-min=5.0km az=16.1*
*NEIC **11** 21:37:33.2±0.6, 30°79N×83°49E, h10km, mb4.1/4, Error ellipse: s-maj=13.4km s-min=7.8km az=220.0*
*NDI **11** 21:37:36.3±2.9, 30°44N×83°46E, h10km, ML3.8, mb4.1(NEIC)*
*BJI **11** 21:37:36.0, 31°61N×83°88E, h5km, mB4.4/1, mb4.3/3, Ms4.1/2, Ms7 3.7/2*

ISC 11 21:37:33.8±0.4**, 30°71N**±0°05×**83°58E**±0°04**, h18**km**, n66,** σ1s**70**/66**, mb3.8**/15**, MS3.5**/11**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTH	**Pithoragarh**	**3.13**	**249**	*e*PKP3	Pn	21 38 19.1	-3.3
PTH				*e*4	**Sb**	**21 39 06.9**	**-0.1**
LGTI	**Lohaghat**	**3.15**	**247**	*e*4	x	21 38 49.5	
DDI	**Dehra Dun**	**4.78**	**267**	*e*PKP	**Pn**	**21 38 47.3**	**+2.3**
DDI				*e*S	**Sn**	**21 39 37.5**	**-2.5**
DDI				AML	AML	21 40 38.5	
	comp=N,208nm,0.9s						
DDI				AML	AML	21 40 40.6	
	comp=E,204nm,0.5s						
SMLA	**Simla**	**5.53**	**276**	*e*PKP	Pn	21 38 57.4	+2.3
SMLA				*e*S	**Sn**	**21 39 58.8**	**+0.5**
NDI	**New Delhi**	**5.89**	**252**	*e*PKP	**Pn**	**21 39 00.0**	**-0.2**
DHRM	**DHARAMSHALA**	**6.41**	**286**	*e*PKP	**Pn**	**21 39 09.4**	**+1.9**
DHRM				*e*x	**Sn**	**21 40 16.2**	**-4.1**
LSA	**Lhasa**	**6.63**	**97**	Pn	Pn	21 39 14.1	+3.4
LSA	**Lhasa**	**6.63**	**97**	*e*Pn	Pn	21 39 14.1	+3.4
	comp=E,40nm,1.0s						
BOK	**Bokaro**	**7.18**	**163**	*e*PKP	**Pn**	**21 39 19.0**	**+1.1**
BOK				*e*x	**Sg**	**21 41 25.5**	**+1.2**
SHL	**Shillong**	**8.94**	**123**	*e*PKP	**Pn**	**21 39 44.0**	**+1.8**
SHL				*e*x	**Sn**	**21 41 18.3**	**-4.3**
SHL				AML	AML	21 42 31.3	
	comp=N,42nm,0.0s						
SHL				AML	AML	21 42 31.3	
	comp=E,42nm,0.1s						
BHPL	**Bhopal**	**9.24**	**218**	*e*PKP	**Pn**	**21 39 46.4**	**+0.1**
BHPL				*e*x	**Sn**	**21 41 28.6**	**-1.2**
NGP	**Nagpur**	**10.35**	**204**	*e*PKP	**Pn**	**21 40 00.5**	**-0.9**
NGP				AMB	AMB	21 40 01.5	
	comp=Z,11nm,3.7s						
NGP				*e*x	**Sn**	**21 41 57.3**	**+0.2**
KBL	**Kabul**	**12.84**	**291**	*e*Pn	**Pn**	**21 40 32.8**	**-2.7**
	comp=Z,15nm,1.0s						
KBL				*e*Sn	**Sn**	**21 42 59.6**	**+1.6**
TKM2	**Tokmak 2**	**13.76**	**335**	*e*Pn	**Pn**	**21 40 45.9**	**-2.1**
	comp=Z,2.3nm,0.7s						
AAK	**Ala-Archa**	**13.95**	**331**	Pn	**Pn**	**21 40 49.4**	**-1.2**
	comp=Z,5.4nm,0.9s						
AAK	**Ala-Archa**	**13.95**	**331**	Pn	**Pn**	**21 40 52.7**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=180,slow=13,SNR=3.0						
AAK				LR	LR	21 46 41.1	
	comp=Z,250nm,18.7s,baz=128,slow=39						
HYB	**Hyderabad**	**14.00**	**200**	*i* P	**Pn**	**21 40 52.0**	**+0.6**
HYB	**Hyderabad**	**14.00**	**200**	*e*PKP	**Pn**	**21 40 50.4**	**-1.0**
EKS2	**Erkin-Say**	**14.28**	**329**	*e*Pn	**Pn**	**21 40 54.3**	**-0.8**
	comp=Z,4.0nm,0.8s						
GTA	**Gaotai**	**15.86**	**52**	*e*P	**P**	**21 41 21.8**	**+1.9**
GTA				pP	**pP**	**21 41 26.2**	**+1.3**
GTA				sP	**sP**	**21 41 29.1**	**+1.8**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	**Makanchi Array**	**16.09**	**357**	*e*Pn	**Pn**	**21 41 18.6**	**-0.5**
MKAR	**Makanchi Array**	**16.09**	**357**	Pn	**Pn**	**21 41 18.9**	**-0.1**
MKAR	**Makanchi Array**	**16.09**	**357**	Pn	**Pn**	**21 41 18.9**	**-0.1**
	comp=Z,0.3nm,0.3s,baz=179,slow=12,SNR=12						
MKAR				LR	LR	21 48 24.3	
	comp=Z,131nm,18.8s,baz=173,slow=41						
KKAR	**Karatay Array**	**16.17**	**324**	*e*Pn	Pn	21 41 15.0	-5.1
	comp=Z,4.5nm,1.0s						
LZH	**Lanzhou**	**17.74**	**67**	*e*P	Pn	21 41 34.0	-6.0
LZH				pP	**P**	**21 41 38.5**	**-2.3**
LZH				sP	sP	21 41 42.0	-6.2
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
CHTO	**Chiang Mai**	**18.27**	**127**	*e*Pn	**Pn**	**21 41 43.0**	**-3.5**
CMAR	**Chiang Mai Arr**	**18.52**	**128**	P	**Pn**	**21 41 51.8**	**+2.3**
CMAR	**Chiang Mai Arr**	**18.52**	**128**	P	**Pn**	**21 41 51.8**	**+2.3**
	comp=Z,0.1nm,0.3s,baz=308,slow=10,SNR=11						
KURBB	**Kurchatov Arra**	**20.25**	**351**	P	**P**	**21 42 06.8**	**-1.1**
	comp=Z,5.9nm,0.7s,baz=171,slow=11,SNR=52						
KURK	**Kurchatov**	**20.33**	**351**	*e*P	**P**	**21 42 07.5**	**-1.3**
	comp=Z,14nm,0.9s						
ZALV	**Zalesovo Beam**	**23.24**	**2**	P	**P**	**21 42 40.3**	**+0.4**
ZALV	**Zalesovo Beam**	**23.24**	**2**	P	**P**	**21 42 40.3**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=195,slow=11,SNR=12						
ZALV				LR	LR	21 52 12.8	
	comp=Z,30nm,18.6s,baz=69,slow=38						
BVAR	**Borovoye Array**	**24.29**	**340**	P	**P**	**21 42 50.6**	**+0.6**
BVAR	**Borovoye Array**	**24.29**	**340**	P	**P**	**21 42 50.6**	**+0.6**
	comp=Z,1.4nm,0.6s,baz=152,slow=10,SNR=5.8						
SONM	**Songino Array**	**24.44**	**39**	P	**P**	**21 42 51.4**	**-0.2**
SONM	**Songino Array**	**24.44**	**39**	P	**P**	**21 42 51.4**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=224,slow=11,SNR=12						
HHC	**Hu-ho-hao-te**	**24.76**	**58**	*e*P	**P**	**21 42 52.1**	**-2.4**
HHC				PP	**PnPn**	**21 43 26.1**	**-0.6**
HHC				PcP	PcP	21 46 36.0	+5.1
HHC				S	S	21 47 06.9	-9.1
HHC				SS	**SnSn**	**21 47 56.8**	**-6.1**
HHC				LR	LR		
	comp=N,380nm,12.2s						
HHC				LR	LR		
	comp=E,290nm,12.4s						
HHC				LR	LR		
	comp=Z,240nm,13.5s						
ULN	**Ulaanbaatar**	**24.82**	**40**	*e*P	**P**	**21 42 54.7**	**-0.3**
	comp=Z,6.4nm,1.1s						
ABKAR	**Akbulak array**	**25.73**	**323**	*e*P	**P**	**21 43 02.2**	**-0.9**
	comp=Z,2.5nm,0.7s						
AKTO	**Aktyubinsk**	**27.44**	**323**	LR	LR	21 55 19.5	
	comp=Z,84nm,18.1s,baz=299,slow=39						
KBZ	**Khabaz**	**34.57**	**304**	P	**P**	**21 44 21.4**	**+0.1**
KBZ	**Khabaz**	**34.57**	**304**	P	**P**	**21 44 21.4**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=102,slow=9.3,SNR=1.9						
KSRS	**Korea Array**	**37.07**	**67**	LR	LR	22 01 29.7	
	comp=Z,28nm,18.7s,baz=282,slow=39						
USRK	**Ussuriysk Arra**	**40.17**	**57**	LR	LR	22 01 49.5	
	comp=Z,49nm,20.7s,baz=250,slow=36						
BRTR	**Keskin Array B**	**41.33**	**297**	P	**P**	**21 45 19.7**	**+1.1**
BRTR	**Keskin Array B**	**41.33**	**297**	P	**P**	**21 45 19.7**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=99,slow=8.9,SNR=4.0						
MJAR	**Matsushiro Arr**	**45.35**	**67**	LR	LR	22 05 31.0	
	comp=Z,35nm,20.8s,baz=280,slow=37						
FINES	**FINESS Array B**	**48.09**	**327**	P	**P**	**21 46 11.6**	**-0.4**
FINES	**FINESS Array B**	**48.09**	**327**	P	**P**	**21 46 11.6**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=111,slow=10,SNR=5.8						
ARCES	**ARCESS Array B**	**50.52**	**337**	P	**P**	**21 46 31.6**	**+1.0**
ARCES	**ARCESS Array B**	**50.52**	**337**	P	**P**	**21 46 31.6**	**+1.0**
	comp=Z,2.0nm,0.7s,baz=78,slow=8.4,SNR=5.7						
ARCES				LR	LR	22 10 42.0	
	comp=Z,39nm,18.2s,baz=147,slow=39						
HFS	**Hagfors**	**53.98**	**324**	LR	LR	22 10 55.0	
	comp=Z,49nm,19.3s,baz=77,slow=37						
NOA	**NORSAR Array B**	**55.19**	**326**	P	**P**	**21 47 05.2**	**0.0**
NOA	**NORSAR Array B**	**55.19**	**326**	P	**P**	**21 47 05.2**	**0.0**
	comp=Z,0.4nm,0.7s,baz=87,slow=8.5,SNR=3.0						
NOA				LR	LR	22 12 16.6	
	comp=Z,35nm,18.1s,baz=75,slow=38						
WRA	**Warramunga Arr**	**70.11**	**129**	P	**P**	**21 48 45.4**	**+0.2**
WRA	**Warramunga Arr**	**70.11**	**129**	P	**P**	**21 48 45.4**	**+0.2**
	comp=Z,1.5nm,0.6s,baz=323,slow=6.3,SNR=15						
ASAR	**Alice Springs**	**72.46**	**132**	P	**P**	**21 48 59.2**	**-0.2**
ASAR	**Alice Springs**	**72.46**	**132**	P	**P**	**21 48 59.2**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=330,slow=5.4,SNR=3.1						
MDT	**Midelt**	**72.73**	**298**	LR	LR	22 30 03.9	
	comp=Z,103nm,18.5s,baz=177,slow=43						
TORD	**Torodi Ar. Bea**	**76.51**	**277**	P	**P**	**21 49 25.4**	**+2.2**
TORD	**Torodi Ar. Bea**	**76.51**	**277**	P	**P**	**21 49 25.4**	**+2.2**
	comp=Z,0.5nm,0.8s,baz=45,slow=4.5,SNR=4.2						
ILAR	**Eielson Array**	**77.05**	**20**	P	**P**	**21 49 24.2**	**-1.1**
ILAR	**Eielson Array**	**77.05**	**20**	P	**P**	**21 49 24.2**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=302,slow=4.1,SNR=3.8						
KDAK	**Kodiak Island**	**80.09**	**27**	LR	LR	22 32 51.5	
	comp=Z,83nm,18.1s,baz=277,slow=42						
YKA	**Yellowknife Ar**	**85.98**	**8**	P	**P**	**21 50 12.8**	**+0.2**
YKA	**Yellowknife Ar**	**85.98**	**8**	P	**P**	**21 50 12.8**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=338,slow=4.7,SNR=5.9						

IGQ 11 21:38:56.2, 3°12S×79°09W, h49km±22km**, Mb4.1, Ms3.9, 5C-3D, Error ellipse: s-maj=12.3km s-min=2.0km az=1.8, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGUA	**Igualata**	**1.68**	**16**	P	Pn	21 39 24.9	+1.0
BMAS	**Trigal station**	**1.72**	**21**	⇑S	Sn	21 39 45.6	+0.3
BMAS	**Trigal station**	**1.72**	**21**	⇑P	Pn	21 39 25.2	+1.0
ARRY	**Arrayan**	**1.72**	**22**	⇑S	Sn	21 39 45.3	-0.2
ARRY	**Arrayan**	**1.72**	**22**	⇑P	Pn	21 39 25.1	+0.8
PAT1	**Patacocha**	**1.73**	**22**	⇓P	Pn	21 39 25.6	+1.0
BPAT	**Tungurahua Vol**	**1.73**	**22**	P	Pn	21 39 25.6	+1.0
BIL2	**Estacion Bilba**	**1.75**	**20**	S	Sn	21 39 47.6	+1.5
BIL2	**Estacion Bilba**	**1.75**	**20**	P	Pn	21 39 26.0	+1.3
BBIL	**Ulba Tungurahu**	**1.77**	**20**	⇑P	Pn	21 39 25.9	+1.1
ULBA	**Ulba**	**1.79**	**22**	S	Sn	21 39 48.6	+1.4
ULBA	**Ulba**	**1.79**	**22**	P	Pn	21 39 26.6	+1.3
JUI6	**Juive**	**1.79**	**20**	⇓S	Sn	21 39 46.6	-0.5
JUI6	**Juive**	**1.79**	**20**	⇓P	Pn	21 39 26.4	+1.2
BULB	**Ulba Tungurahu**	**1.81**	**22**	P	Pn	21 39 26.5	+1.1
BRUN	**Tungurahua Vol**	**1.82**	**22**	S	Sn	21 39 48.0	+0.2
BRUN	**Tungurahua Vol**	**1.82**	**22**	P	Pn	21 39 26.5	+1.0
RUN5	**Runtun**	**1.82**	**22**	P	Pn	21 39 26.6	+1.0
PISA	**Pisayambo**	**2.17**	**19**	P	Pn	21 39 31.7	+1.2
BMOR	**Cotopaxi Volca**	**2.46**	**15**	P	Pn	21 39 35.3	+0.8
MOV1	**Cotopaxi Vol s**	**2.48**	**15**	P	Pn	21 39 35.9	+0.9
CAMI	**Rancho Maria**	**2.50**	**14**	P	Pn	21 39 36.4	+1.4
BNAS	**Cotopaxi Volca**	**2.51**	**14**	P	Pn	21 39 36.1	+0.9
BREF	**Cotopaxi Volca**	**2.52**	**15**	P	Pn	21 39 37.5	+1.9
BTAM	**Cotopaxi Volca**	**2.52**	**16**	P	Pn	21 39 37.0	+1.5
VC1	**Cotopaxi 1**	**2.56**	**16**	P	Pn	21 39 37.2	+1.3

MAN 11 21:41:09, 17°91N×120°29E, h37km**, mb4.1, ML2.9, MS2.6, 2C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIPP	**Brgy, Tapao**	**0.17**	**84**	⇑*i*P	Pn	21 41 17.8	-1.7
SIPP				*i* S	Sn	21 41 23.8	-6.1
ABRA	**Dolores**	**0.48**	**122**	*e*P	Pn	21 41 20.5	+1.2
ABRA				*e*S	Sn	21 41 29.5	+3.0
PIP	**Pasuquin**	**0.52**	**37**	⇑*i*P	Pn	21 41 21.2	+1.2
APYP	**Conner**	**0.91**	**93**	*e*P	Pn	21 41 25.5	+0.2
APYP				*e*S	Sn	21 41 37.6	+0.4

IDC 11 21:42:18.8±5.6**, 12°40S×170°20E, h0**km**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.6**/19**, mbtmp3.7**/3**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.7**/22**, Error ellipse: s-maj=271.9km s-min=34.2km az=140.0, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**10.49**	**285**	LR	LR	21 48 24.1	
	comp=Z,68nm,18.5s,baz=127,slow=35						
WRA	**Warramunga Arr**	**35.20**	**253**	P	P	21 49 15.8	+0.8
	0.3nm,0.6s,baz=83,slow=8.6,SNR=6.3						
ASAR	**Alice Springs**	**36.19**	**247**	P	P	21 49 22.7	-0.8
	0.9nm,0.4s,baz=75,slow=9.3,SNR=18						
ILAR	**Eielson Array**	**83.46**	**17**	P	P	21 54 47.9	0.0
	0.4nm,0.6s,baz=208,slow=3.7,SNR=4.6						

DDA 11 22:08:27.3, 38°21N×38°61E, h13km**, MD2.4, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ELZG	**Elazig**	**0.41**	**46**	*i* P	Pg	22 08 35.9	+0.1
ELZG				*i* S	Sg	22 08 41.8	+0.2
AKCD	**Akcadag**	**0.54**	**279**	*i* P	Pg	22 08 38.2	0.0
AKCD				*i* S	Sg	22 08 46.1	+0.5

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*IDC **11** 22:09:46.0±1.1, 34°23N×25°90E, h0km, mb3.8/7, mb1 3.7/10, mb1mx3.6/28, mbtmp3.7/10, ML3.6/3, Error ellipse: s-maj=23.9km s-min=20.9km az=169.0*
*ISCJB **11** 22:09:49.7±0.4, 34°06N±0°03×25°93E±0°04, h56km±7km, mb3.7/7, Error ellipse: s-maj=6.1km s-min=5.3km az=41.8*
*CSEM **11** 22:09:50.9±0.2, 34°10N×25°81E, h80km, ML2.8/1, Error ellipse: s-maj=6.7km s-min=5.7km az=58.0*
*HLW **11** 22:09:52.1, 33°96N×26°08E, h26km±7km, Md3.4, Ml3.4*
*ATH **11** 22:09:52.0, 34°28N×25°76E, h88km±3km*
*ISK **11** 22:09:54.8, 34°80N×26°08E, h5km, ML3.0*
*THE **11** 22:09:55.2, 34°40N×25°70E, h86km±6km, ML2.8/1, Error ellipse: s-maj=8.6km s-min=1.5km az=355.0*
*DDA **11** 22:10:02.4, 34°67N×26°65E, h40km, MD3.3*

ISC 11 22:09:50.5±0.8**, 34°02N**±0°04×**25°82E**±0°04**, h60**km±11km**, n92,** σ1s**67**/106**, mb3.7**/7**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZKR	**Zakros**	**1.14**	**17**	P	**Pn**	**22 10 11.0**	**+0.6**
ZKR				S	**Sn**	**22 10 24.9**	**-0.3**
ZKR	**Zakros**	**1.14**	**17**	*e*P	**Pn**	**22 10 11.0**	**+0.6**
ZKR				*e*S	**Sn**	**22 10 25.7**	**+0.5**
ZKR	**Zakros**	**1.14**	**17**	P	**Pn**	**22 10 11.0**	**+0.6**
ZKR				*e*S	**Sn**	**22 10 25.7**	**+0.5**
LAST	**Lasithi**	**1.17**	**346**	P	**Pn**	**22 10 10.8**	**0.0**
LAST				S	**Sn**	**22 10 24.1**	**-1.9**
LAST	**Lasithi**	**1.17**	**346**	*e*P	**Pn**	**22 10 10.8**	**0.0**
LAST	**Lasithi**	**1.17**	**346**	P	**Pn**	**22 10 10.8**	**0.0**
LAST				S	**Sn**	**22 10 24.1**	**-1.9**
NPS	**Neapolis**	**1.25**	**352**	P	**Pn**	**22 10 12.0**	**+0.2**
NPS	**Neapolis**	**1.25**	**352**	*e*P	**Pn**	**22 10 12.1**	**+0.2**
NPS	**Neapolis**	**1.25**	**352**	P	**Pn**	**22 10 12.0**	**+0.2**
SIVA	**Sivas**	**1.29**	**320**	P	**Pn**	**22 10 12.9**	**+0.5**
SIVA				S	**Sn**	**22 10 27.2**	**-1.6**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SIVA	Sivas	1.29	320	eP	Pn	22 10 12.9	+0.5
SIVA	Sivas	1.29	320	P	Pn	22 10 12.9	+0.5
SIVA				S	Sn	22 10 27.2	-1.6
IDI	Anoyia	1.48	329	eP	Pn	22 10 15.6	+0.7
IDI	Anoyia	1.48	329	eP	Pn	22 10 15.6	+0.7
KARP	Karpathos	1.88	36	P	Pn	22 10 21.7	+1.4
KARP				S	Sn	22 10 42.7	-0.4
KARP	Karpathos	1.88	36	eP	Pn	22 10 21.8	+1.4
KARP				eS	Sn	22 10 42.6	-0.5
KARP	Karpathos	1.88	36	P	Pn	22 10 21.7	+1.4
KARP				S	Sn	22 10 42.7	-0.4
VAM	Vamos	1.92	317	P	Pn	22 10 22.0	+1.2
VAM				S	Sn	22 10 40.3	-3.6
VAM	Vamos	1.92	317	eP	Pn	22 10 22.1	+1.2
VAM	Vamos	1.92	317	P	Pn	22 10 22.0	+1.2
VAM				S	Sn	22 10 40.3	-3.6
THR3	Thira Island,	2.41	352	P	Pn	22 10 26.9	-0.5
THR3	Thira Island,	2.41	352	P	Pn	22 10 26.9	-0.5
THR2	Thira island,	2.44	353	P	Pn	22 10 27.0	-0.9
THR2	Thira island,	2.44	353	P	Pn	22 10 27.0	-0.9
SLUM		2.57	192	AMP		22 11 00.0	
	comp=N,100μm,0.3s,logA/T=5.5,baz=197						
SLUM		2.57	192	P	Pn	22 10 31.8	+2.1
ANKY	Antikythira Is	2.77	312	eP	Pn	22 10 33.5	+1.1
ANKY	Antikythira Is	2.77	312	eP	Pn	22 10 33.5	+1.1
ARG	Arkhangelos	2.90	40	P	Pn	22 10 35.9	+1.8
ARG	Arkhangelos	2.90	40	eP	Pn	22 10 35.8	+1.7
ARG	Arkhangelos	2.90	40	P	Pn	22 10 35.9	+1.8
APE	Apeiranthos	3.05	356	ePN	Pn	22 10 35.4	-0.9
APE				eSN	Sn	22 11 05.8	-5.8
APE	Apeiranthos	3.05	356	eP	Pn	22 10 35.8	-0.5
APE				eS	Sn	22 11 08.9	-2.7
APE	Apeiranthos	3.05	356	ePn	Pn	22 10 35.4	-0.9
APE	Apeiranthos	3.05	356	eP	Pn	22 10 35.8	-0.5
APE				eSn	Sn	22 11 05.8	-5.8
APE				eS		22 11 08.9	
DAT	Datca	3.06	28	ePN	Pn	22 10 35.1	-1.4
DAT				eSN	Sn	22 11 04.5	-7.5
DAT	Datca	3.06	28	ePn	Pn	22 10 35.1	-1.4
KYTH	Kithira	3.20	315	P	Pn	22 10 38.7	+0.4
KYTH	Kithira	3.20	315	eP	Pn	22 10 38.8	+0.4
KYTH	Kithira	3.20	315	P	Pn	22 10 38.7	+0.4
BODT	Bodrum	3.27	21	ePN	Pn	22 10 37.6	-1.7
BODT	Bodrum	3.27	21	ePn	Pn	22 10 37.6	-1.7
VLI	Veliai	3.57	320	eP	Pn	22 10 43.0	-0.4
VLI				eS	Sn	22 11 21.5	-2.9
VLI	Veliai	3.57	320	eP	Pn	22 10 43.0	-0.4
VLI				eS	Sn	22 11 21.5	-2.9
DALY	Dalyan (Mu˜la	3.63	39	ePN	Pn	22 10 44.1	0.0
DALY	Dalyan (Mu˜la	3.63	39	ePn	Pn	22 10 44.1	0.0
MLSB	Milas	3.64	25	ePN	Pn	22 10 42.9	-1.4
MLSB	Milas	3.64	25	ePn	Pn	22 10 42.9	-1.4
YER	Yerkesik	3.70	32	ePN	Pn	22 10 44.4	-0.8
YER	Yerkesik	3.70	32	ePn	Pn	22 10 44.4	-0.8
FETY	Fethiye	3.73	45	ePN	Pn	22 10 45.9	+0.3
FETY	Fethiye	3.73	45	ePn	Pn	22 10 45.9	+0.3
AKAS	Kas	3.81	54	iP	Pn	22 10 47.1	+0.3
AKAS				eS	Sn	22 11 26.3	-4.1
AKAS	Kas	3.81	54	iP	Pn	22 10 47.1	+0.3
AKAS				eS	Sn	22 11 26.3	-4.1
ELL	Elmali	4.31	50	ePN	Pn	22 10 54.8	+1.2
ELL	Elmali	4.31	50	ePn	Pn	22 10 54.8	+1.2
GLHS	Glhisar (BURDU	4.33	43	ePN	Pn	22 10 54.4	+0.5
GLHS	Glhisar (BURDU	4.33	43	ePn	Pn	22 10 54.4	+0.5
BLCB	Balcova	4.47	12	ePN	Pn	22 10 54.4	-1.2
BLCB	Balcova	4.47	12	ePn	Pn	22 10 54.4	-1.2
KORT	Korkueli	4.75	50	eP	Pn	22 11 01.0	+1.4
KORT				eS	Sn	22 11 47.0	-6.3
KORT	Korkueli	4.75	50	eP	Pn	22 11 01.0	+1.4
SWA2		4.77	184	P	Pn	22 11 01.7	+1.8
	baz=187						
SWA2				AMP		22 11 00.0	
	comp=N,60μm,0.2s,logA/T=5.4,baz=187						
SWA2		4.77	184	P	Pn	22 11 01.7	+1.8
ANTB	Antalya	4.88	53	ePN	Pn	22 11 03.5	+2.2
ANTB	Antalya	4.88	53	ePn	Pn	22 11 03.5	+2.2
BCK	Bucak	5.18	47	ePN	Pn	22 11 06.8	+1.3
BCK	Bucak	5.18	47	ePn	Pn	22 11 06.8	+1.3
KHAL	Karahalli	5.26	33	eP	Pn	22 11 04.0	-2.6
KHAL				eS	Sn	22 11 55.7	-10
KHAL	Karahalli	5.26	33	eP	Pn	22 11 04.0	-2.6
GAZI	Gazipasa	5.77	66	iP	Pn	22 11 12.3	-1.1
GAZI				iS	Sn	22 12 09.6	-8.7
GAZI	Gazipasa	5.77	66	iP	Pn	22 11 12.3	-1.1
AYT	Al ‘Ayyat	6.25	132	P	Pn	22 11 20.2	0.0
	baz=133						
AYT	Al ‘Ayyat	6.25	132	P	Pn	22 11 20.2	0.0
AWBH		6.27	154	P	Pn	22 11 21.2	+0.9
	baz=155						
AWBH		6.27	154	P	Pn	22 11 21.2	+0.9
ERMK	Ermenek	6.36	64	eP	Pn	22 11 20.7	-1.1
ERMK				eS	Sn	22 12 17.2	-16
ERMK	Ermenek	6.36	64	eP	Pn	22 11 20.7	-1.1
GLL	Jalalah	6.69	130	P	Pn	22 11 26.4	+0.2
	baz=130						
GLL	Jalalah	6.69	130	P	Pn	22 11 26.4	+0.2
MMAI	Mount Meron Ar	8.07	94	Pn	Pn	22 11 43.9	-1.2
	comp=N,0.8nm,0.3s,baz=271,slow=11,SNR=7.3						
MMAI				Sn	Sn	22 13 11.4	-3.4
	comp=N,3.0nm,0.3s,baz=266,slow=23,SNR=8.2						
BRTR	Keskin Array B	8.46	45	Pn	Pn	22 11 46.6	-3.9
	comp=N,0.0nm,0.3s,baz=235,slow=12,SNR=2.4						
EIL	Elat	8.90	117	Pn	Pn	22 11 55.0	-1.4
	comp=N,0.7nm,0.3s,baz=302,slow=9.5,SNR=19						
EIL				Sn	Sn	22 13 29.4	-5.7
	comp=N,1.0nm,0.3s,baz=92,slow=15,SNR=8.2						
STON	Ston	10.88	327	ePn	Pn	22 12 18.6	-4.7
STON				Sn	Sn	22 14 11.2	-12
GERES	GERESS Array B	17.34	332	P	P	22 13 49.1	+0.2
	comp=N,0.1nm,0.3s,baz=140,slow=14,SNR=3.4						
HFS	Hagfors	27.30	347	P	P	22 15 30.3	+1.1
	comp=N,0.4nm,0.3s,baz=158,slow=9.4,SNR=1.8						
FINES	FINESS Array B	27.44	0	P	P	22 15 30.9	+0.6
	comp=N,0.8nm,0.3s,baz=154,slow=11,SNR=9.6						
TORD	Torodi Ar. Bea	30.20	232	P	P	22 15 59.9	+4.6
	comp=N,0.2nm,0.3s,baz=36,slow=9.0,SNR=13						
ARCES	ARCESS Array B	35.57	360	P	P	22 16 42.0	+0.4
	comp=N,0.8nm,0.6s,baz=177,slow=8.0,SNR=8.5						
MKAR	Makanchi Array	43.96	56	P	P	22 17 54.5	+2.9
	comp=N,0.3nm,0.6s,baz=273,slow=6.6,SNR=6.2						
ZALV	Zalesovo Beam	45.41	45	P	P	22 18 05.0	+2.1
	comp=N,1.1nm,0.4s,baz=268,slow=8.4,SNR=5.8						
SCHQ	Schefferville	64.40	320	P	P	22 20 23.1	+3.0
	comp=N,0.8nm,0.3s,baz=57,slow=7.5,SNR=6.7						

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*MDD **11** 22:14:35.9±2.7, 39.°52N×16.°24W, h0km, mb4.1/6, Error ellipse: s-maj=23.1km s-min=17.6km az=54.0*
*INMG **11** 22:14:38.2±1.4, 39.°49N×16.°63W, h10km, ML2.5, Error ellipse: s-maj=11.2km s-min=7.2km az=83.0*
*PDA **11** 22:14:38.2±1.4, 39.°49N×16.°63W, h10km, ML2.5, Error ellipse: s-maj=11.2km s-min=7.2km az=83.0*
*CSEM **11** 22:14:40.7±0.5, 39.°56N×15.°74W, h10km, ML2.9/5, Error ellipse: s-maj=8.3km s-min=6.7km az=54.0*
ISC 11 22:14:37.0±3.6, **39.°53N**±0.°06×**16.°0W**±0.°2, **h10**km, **n74**, σ1.°51/97, **North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMAFR	Mafra	5.25	94	eSn	Sn	22 16 56.9	+0.8
PMAFR	Mafra	5.25	94	S	Sn	22 16 56.8	+0.7
	6.1nm,0.2s,SNR=5.7						
PMAFR	Mafra	5.25	94	S	Sn	22 16 56.8	+0.7
	6.1nm,0.2s,SNR=5.7						
PTOM	Tomar	5.87	87	eSn	Sn	22 17 11.8	+0.5
PTOM				A	A	22 17 13.8	
	3.0nm,0.4s						
PTOM	Tomar	5.87	87	S	Sn	22 17 11.8	+0.5
	1.5nm,0.4s						
PTOM	Tomar	5.87	87	S	Sn	22 17 11.8	+0.5
	1.5nm,0.4s						
PNCL	Nicolau / Gran	6.01	101	ePn	Pn	22 16 08.4	+2.5
PNCL				eSn	Sn	22 17 13.2	-1.5
PNCL				A	A	22 17 22.9	
	3.5nm,0.7s						
PNCL	Nicolau / Gran	6.01	101	ePn	Pn	22 16 08.4	+2.5
PNCL				eSn	Sn	22 17 13.2	-1.5
	3.5nm,0.7s						
PTEO	Sao Teotonio	6.04	107	ePn	Pn	22 16 07.9	+1.5
PTEO				eSn	Sn	22 17 14.2	-1.4
PTEO				A	A	22 17 22.0	
	6.6nm,0.6s						
PTEO	Sao Teotonio	6.04	107	P	Pn	22 16 07.9	+1.5
PTEO				S	Sn	22 17 14.2	-1.4
	3.3nm,0.6s						
PTEO	Sao Teotonio	6.04	107	P	Pn	22 16 07.9	+1.5
PTEO				S	Sn	22 17 14.2	-1.4
	3.3nm,0.6s						
MOE	Montemor	6.04	97	eSn	Sn	22 17 15.1	-0.6
MOE	Montemor	6.04	97	S	Sn	22 17 15.1	-0.6
MOE	Montemor	6.04	97	S	Sn	22 17 15.1	-0.6
PMTG	Montargil	6.05	92	eSn	Sn	22 17 17.0	+1.2
PMTG				A	A	22 17 17.7	
	1.9nm,0.8s						
PMTG	Montargil	6.05	92	eSn	Sn	22 17 17.0	+1.2
	1.9nm,0.8s						
PFVI	Vila Bisbo	6.13	111	ePn	Pn	22 16 08.4	+0.8
PFVI				eSn	Sn	22 17 15.3	-2.5
PFVI				A	A	22 17 22.6	
	5.0nm,0.7s						
PFVI	Vila Bisbo	6.13	111	P	Pn	22 16 08.1	+0.5
	0.4nm,0.0s,SNR=4.0						
PFVI				S	Sn	22 17 15.0	-2.8
	2.1nm,0.3s,SNR=7.9						
PFVI	Vila Bisbo	6.13	111	P	Pn	22 16 08.1	+0.5
	0.4nm,0.0s,SNR=4.0						
PFVI	Vila Bisbo	6.13	111	ePn	Pn	22 16 08.4	+0.8
PFVI				S	Sn	22 17 15.0	-2.8
	2.1nm,0.3s,SNR=7.9						
PFVI				eSn	Sn	22 17 15.3	-2.5
	5.0nm,0.7s						
EMAZ	Mazaricos	6.30	55	P	Pn	22 16 10.1	+0.2
	0.9nm,0.1s,SNR=7.5						
EMAZ				S	Sn	22 17 20.5	-1.5
	0.7nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.30	55	P	Pn	22 16 10.1	+0.2
	0.9nm,0.1s,SNR=7.5						
EMAZ				S	Sn	22 17 20.5	-1.5
	0.7nm,0.1s,SNR=7.9						
PVIS	Viseu	6.33	77	eSn	Sn	22 17 22.4	-0.3
PVIS				A	A	22 17 25.7	
	2.6nm,0.3s						
PVIS	Viseu	6.33	77	S	Sn	22 17 22.4	-0.3
	1.3nm,0.3s						
PVIS	Viseu	6.33	77	S	Sn	22 17 22.4	-0.3
	1.3nm,0.3s						
ELOB	Lobios	6.47	66	P	Pn	22 16 13.3	+1.0
	0.5nm,0.1s,SNR=7.9						
ELOB				S	Sn	22 17 24.5	-1.8
	2.7nm,0.2s,SNR=7.9						
ELOB	Lobios	6.47	66	P	Pn	22 16 13.4	+1.0
	0.5nm,0.1s,SNR=7.9						
ELOB				S	Sn	22 17 24.5	-1.8
	2.7nm,0.2s,SNR=7.9						
PCVE	Castro Verde	6.52	104	ePn	Pn	22 16 14.5	+1.5
PCVE				eSn	Sn	22 17 26.2	-1.2
PCVE				A	A	22 17 35.5	
	1.6nm,0.4s						
PCVE	Castro Verde	6.52	104	P	Pn	22 16 14.5	+1.5
PCVE				S	Sn	22 17 26.2	-1.2
	1.6nm,0.4s						
PCVE	Castro Verde	6.52	104	P	Pn	22 16 14.5	+1.5
PCVE				S	Sn	22 17 26.2	-1.2
	1.6nm,0.4s						
POLO	Lamas de Olo	6.53	71	eSn	Sn	22 17 27.1	-0.6
POLO				A	A	22 17 29.2	
	0.4nm,0.4s						
POLO	Lamas de Olo	6.53	71	eSn	Sn	22 17 27.1	-0.6
	0.4nm,0.4s						
PBEJ	Beja	6.53	101	eSn	Sn	22 17 27.0	-0.7
PBEJ				A	A	22 17 31.9	
	1.1nm,0.1s						
PBEJ	Beja	6.53	101	S	Sn	22 17 27.0	-0.7
	0.6nm,0.1s						
PBEJ	Beja	6.53	101	S	Sn	22 17 27.0	-0.7
	0.6nm,0.1s						
STS	Santiago	6.54	57	P	Pn	22 16 14.3	+1.0
	2.9nm,0.2s,SNR=4.0						
STS	Santiago	6.54	57	P	Pn	22 16 14.3	+1.0
	2.9nm,0.2s,SNR=4.0						
PESTR	Estremoz	6.57	93	eSn	Sn	22 17 27.9	-0.7
PESTR				A	A	22 17 34.0	
	1.1nm,0.8s						
PESTR	Estremoz	6.57	93	S	Sn	22 17 27.9	-0.7
	0.6nm,0.8s						
PESTR	Estremoz	6.57	93	S	Sn	22 17 27.9	-0.7
	0.6nm,0.8s						
PCBR	Castelo Branco	6.58	85	eSn	Sn	22 17 29.0	+0.1
PCBR				A	A	22 17 33.2	
	1.5nm,0.3s						
PCBR	Castelo Branco	6.58	85	S	Sn	22 17 29.0	+0.1
	0.8nm,0.3s						
PCBR	Castelo Branco	6.58	85	S	Sn	22 17 29.0	+0.1
	0.8nm,0.3s						
PMRV	Marv??o	6.66	88	eSn	Sn	22 17 30.6	-0.3
PMRV				A	A	22 17 38.5	
	1.5nm,0.5s						
PMRV	Marv??o	6.66	88	S	Sn	22 17 30.6	-0.3
	1.5nm,0.5s						
PMRV	Marv??o	6.66	88	S	Sn	22 17 30.6	-0.3
	1.5nm,0.5s						
PVAQ	Vaqueiros	6.84	105	ePn	Pn	22 16 19.2	+1.8
PVAQ				eSn	Sn	22 17 33.2	-2.1
PVAQ				A	A	22 17 40.7	
	2.0nm,0.8s						
PVAQ	Vaqueiros	6.84	105	P	Pn	22 16 19.2	+1.8
PVAQ				S	Sn	22 17 33.2	-2.1
	2.0nm,0.8s						
PVAQ	Vaqueiros	6.84	105	P	Pn	22 16 19.2	+1.8
PVAQ				S	Sn	22 17 33.2	-2.1
	2.0nm,0.8s						
EGRO	El Granado	6.97	104	S	Sn	22 17 36.1	-2.4
	1.6nm,0.2s,SNR=7.9						
EGRO	El Granado	6.97	104	S	Sn	22 17 36.1	-2.4
	1.6nm,0.2s,SNR=7.9						
EBAD	Badajoz	7.03	93	S	Sn	22 17 39.4	-0.6
	0.6nm,0.1s,SNR=5.6						
EBAD	Badajoz	7.03	93	S	Sn	22 17 39.4	-0.6
	0.6nm,0.1s,SNR=5.6						
MVO	Moncorvo	7.05	74	eSn	Sn	22 17 39.2	-1.2
MVO				A	A	22 17 40.3	
	1.5nm,0.3s						
MVO	Moncorvo	7.05	74	S	Sn	22 17 38.5	-1.9
	1.5nm,0.2s,SNR=7.9						
MVO	Moncorvo	7.05	74	S	Sn	22 17 38.5	-1.9
	1.5nm,0.2s,SNR=7.9						
MVO				eSn	Sn	22 17 39.2	-1.2
	1.5nm,0.3s						
PBAR	Barrancos	7.13	98	eSn	Sn	22 17 40.3	-2.0
PBAR				A	A	22 17 49.3	
	1.1nm,0.5s						
PBAR	Barrancos	7.13	98	S	Sn	22 17 40.3	-2.0
	1.1nm,0.5s						
PBAR	Barrancos	7.13	98	S	Sn	22 17 40.3	-2.0
	1.1nm,0.5s						
PBRG	Braganca	7.40	69	eSn	Sn	22 17 48.0	-1.1
PBRG				A	A	22 17 55.7	
	1.4nm,0.3s						
PBRG	Braganca	7.40	69	S	Sn	22 17 48.0	-1.1
	0.7nm,0.3s						
PBRG	Braganca	7.40	69	S	Sn	22 17 48.0	-1.1
	0.7nm,0.3s						
ECAL	Calabor	7.44	68	P	Pn	22 16 27.1	+1.5
	0.6nm,0.1s,SNR=7.9						
ECAL				S	Sn	22 17 48.2	-1.9
	2.5nm,0.3s,SNR=7.9						
ECAL	Calabor	7.44	68	P	Pn	22 16 27.1	+1.5
	0.6nm,0.1s,SNR=7.9						
ECAL				S	Sn	22 17 48.2	-1.9
	2.5nm,0.3s,SNR=7.9						
EMIN	Mina Concepcio	7.51	101	S	Sn	22 17 48.7	-3.1
	0.7nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	7.51	101	S	Sn	22 17 48.7	-3.1
	0.7nm,0.2s,SNR=7.9						
EPON	Pontenova	7.66	57	P	Pn	22 16 29.2	+0.6
	0.2nm,0.1s,SNR=7.9						
EPON				S	Sn	22 17 52.0	-3.3
	0.5nm,0.2s,SNR=7.9						
EPON	Pontenova	7.66	57	P	Pn	22 16 29.2	+0.6
	0.2nm,0.1s,SNR=7.9						
EPLA	Plasencia	7.66	83	S	Sn	22 17 54.0	-1.5
	0.9nm,0.3s,SNR=7.9						
EPLA	Plasencia	7.66	83	S	Sn	22 17 54.0	-1.5
	0.9nm,0.3s,SNR=7.9						
EARI	Arriondas	8.94	62	P	Pn	22 16 48.1	+1.9
	0.6nm,0.2s,SNR=9.0						
EARI	Arriondas	8.94	62	P	Pn	22 16 48.1	+1.9
	0.6nm,0.2s,SNR=9.0						
EADA	Adamuz	9.02	95	S	Sn	22 18 27.4	-1.5
	0.2nm,0.2s,SNR=7.9						
EADA	Adamuz	9.02	95	S	Sn	22 18 27.4	-1.5
	0.2nm,0.2s,SNR=7.9						

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*THE **11** 22:22:38.9, 37.°90N×21.°08E, h0km±2km, ML3.7/7, Error ellipse: s-maj=2.8km s-min=0.9km az=231.0*
*ATH **11** 22:22:38.3, 37.°87N×21.°07E, h13km±2km, MD3.2/20, ML3.8*
*CSEM **11** 22:22:38.6±0.2, 37.°88N×21.°08E, h2km, ML3.7/7, Error ellipse: s-maj=4.2km s-min=2.7km az=41.0*
*IDC **11** 22:22:43.9±2.6, 37.°86N×20.°95E, h63km±27km, mb3.3/6, mb1 3.3/10, mb1mx3.2/32, mbtmp3.2/10, ML3.1/3, MS3.0/3, Ms1 3.0/3, ms1mx2.6/27, Error ellipse: s-maj=26.9km s-min=16.6km az=151.0*
ISC 11 22:22:38.7±0.9, **37.°88N**±0.°02×**21.°07E**±0.°02, **h14**km±6km, **n160**, σ1.°**21**/190, **mb3.7**/6, **Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KFL	Anninata	0.32	317	P	Pg	22 22 45.3	-0.1
KFL	Anninata	0.32	317	P	Pg	22 22 45.0	-0.4
KFL				S	Sg	22 22 49.6	-0.3
RLS	Riolos of Patr	0.36	60	P	Pg	22 22 45.9	-0.1
RLS	Riolos of Patr	0.36	60	ePB	Pg	22 22 46.0	-0.1
RLS				eSB	Sb	22 22 52.1	-0.4
RLS	Riolos of Patr	0.36	60	ePb	Pg	22 22 46.0	-0.1
RLS				S	Sg	22 22 50.7	-0.4
RLS				eSb	Sb	22 22 52.1	-0.4
VLS	Valsamata	0.48	309	P	Pg	22 22 47.7	-0.6
VLS				S	Sg	22 22 55.4	+0.7
VLS	Valsamata	0.48	309	ePB	Pg	22 22 47.9	-0.4
VLS				eSB	Sg	22 22 55.5	+0.7
VLS	Valsamata	0.48	309	P	Pg	22 22 47.7	-0.6
VLS				S	Sg	22 22 54.3	-0.5
VLS				eSb	Sg	22 22 55.5	+0.7
AMT	Artemida-Makis	0.61	124	P	Pg	22 22 50.0	-0.7
AMT				S	Sb	22 22 59.7	0.0
UPR	University Cam	0.70	54	P	Pg	22 22 51.7	-0.6
UPR				S	Sg	22 23 01.5	0.0
LAKA	Lakka	0.81	63	P	Pg	22 22 53.0	-1.3
LAKA	Lakka	0.81	63	ePG	Pg	22 22 53.5	-0.8
LAKA				eSB	Sb	22 23 05.8	+0.5
LAKA	Lakka	0.81	63	P	Pg	22 22 53.0	-1.3
LAKA	Lakka	0.81	63	ePg	Pg	22 22 53.5	-0.8
LAKA				eSb	Sb	22 23 05.8	+0.5
EFP	Efpalio	0.86	50	P	Pg	22 22 54.1	-1.3
EFP				S	Sb	22 23 07.6	+0.8
EFP	Efpalio	0.86	50	P	Pg	22 22 54.1	-1.3
EFP				S	Sb	22 23 07.6	+0.8
KLV	Kalavryta, Ach	0.87	79	ePB	Pg	22 22 54.2	-1.4
KLV	Kalavryta, Ach	0.87	79	ePb	Pg	22 22 54.2	-1.4
TRIZ	Trizonia	0.93	58	P	Pg	22 22 55.1	-1.6
TRIZ	Trizonia	0.93	58	ePB	Pg	22 22 55.4	-1.3
TRIZ				eSB	Sn	22 23 10.2	-0.3
TRIZ	Trizonia	0.93	58	ePb	Pg	22 22 55.4	-1.3
TRIZ				S	Sb	22 23 09.0	+0.2
TRIZ				eSb	Sn	22 23 10.2	-0.3
LKD2	Lefkada island	0.97	341	P	Pg	22 22 55.9	-1.5
LKD2	Lefkada island	0.97	341	ePG	Pg	22 22 56.1	-1.3
LKD2				eSB	Sb	22 23 11.0	+1.0
LKD2	Lefkada island	0.97	341	ePg	Pg	22 22 56.1	-1.3
LKD2				S	Sg	22 23 09.2	-0.9
LKD2				eSb	Sb	22 23 11.0	+1.0
ITM	Ithomi	0.97	135	P	Pg	22 22 56.6	-0.9
ITM				S	Sn	22 23 11.5	-0.1
ITM	Ithomi	0.97	135	ePB	Pg	22 22 56.6	-0.9
ITM	Ithomi	0.97	135	P	Pg	22 22 56.6	-0.9
ITM				S	Sb	22 23 10.5	+0.5
KALE	Kalithea	0.99	58	P	Pg	22 22 56.1	-1.7
KALE	Kalithea	0.99	58	ePB	Pg	22 22 56.4	-1.4
KALE				eSB	Sb	22 23 11.6	+1.0
KALE	Kalithea	0.99	58	P	Pg	22 22 56.1	-1.7
KALE	Kalithea	0.99	58	ePb	Pg	22 22 56.4	-1.4
KALE				eSb	Sb	22 23 11.6	+1.0
GUR	Goura	1.01	86	P	Pg	22 22 56.6	-1.6
GUR				S	Sn	22 23 12.9	+0.3
GUR	Goura	1.01	86	P	Pg	22 22 56.6	-1.6
GUR				S	Sn	22 23 12.9	+0.3
PYL	PYLOS	1.11	151	P	Pg	22 22 58.6	-1.6
PYL	PYLOS	1.11	151	P	Pg	22 22 58.6	-1.6
PYL				S	Sb	22 23 14.6	+0.5
VLX	Vlachokerasia	1.16	115	P	Pg	22 23 00.3	-0.7
VLX				S	Sn	22 23 17.6	+1.4
VLX	Vlachokerasia	1.16	115	P	Pg	22 23 00.4	-0.6
VLX				S	Sn	22 23 16.6	+0.4
EVR	Evrytania	1.19	29	P	Pb	22 23 00.2	-0.9
EVR				S	Sn	22 23 18.2	+1.1
EVR	Evrytania	1.19	29	ePN	Pb	22 23 00.1	-1.0
EVR	Evrytania	1.19	29	P	Pb	22 23 00.2	-0.9
EVR				S	Sn	22 23 18.2	+1.1
DSF	Desfina	1.27	65	P	Pn	22 23 00.2	-1.9
DSF				S	Sn	22 23 20.5	+1.6
THAL	Thalero	1.27	82	P	Pn	22 23 01.5	-0.5
THAL	Thalero	1.27	82	P	Pn	22 23 01.5	-0.5
MAKR	Makrakomi, Fth	1.41	36	P	Pn	22 23 04.5	+0.5
MAKR	Makrakomi, Fth	1.41	36	P	Pn	22 23 04.5	+0.5
ACOR	Acrocorinthos	1.42	89	P	Pb	22 23 05.4	+0.4
ACOR	Acrocorinthos	1.42	89	P	Pb	22 23 05.4	+0.4
DYR	Agios Nikonas	1.50	137	P	Pn	22 23 05.7	+0.5
DYR				S	Sb	22 23 25.8	+0.6
LTK	Loutraki	1.51	84	P	Pn	22 23 05.7	+0.4
LTK				S	Sg	22 23 27.9	+0.6
LTK	Loutraki	1.51	84	P	Pn	22 23 05.7	+0.4
LTK				S	Sg	22 23 27.9	+0.6
AGG	Agios Georgios	1.51	40	P	Pn	22 23 05.2	-0.2
AGG	Agios Georgios	1.51	40	ePG	Pb	22 23 06.3	-0.3
AGG	Agios Georgios	1.51	40	P	Pn	22 23 05.6	+0.2
AGG	Agios Georgios	1.51	40	ePg	Pb	22 23 06.3	-0.3
AGG				S	Sg	22 23 27.2	-0.3
AXAR	Agios Charalam	1.54	54	P	Pn	22 23 05.7	0.0
AXAR	Agios Charalam	1.54	54	P	Pn	22 23 05.7	0.0
LKR	Lokris	1.71	62	P	Pn	22 23 08.7	+0.7
LKR				S	Sb	22 23 32.2	+1.1
LKR	Lokris	1.71	62	ePN	Pn	22 23 08.9	+0.9
LKR	Lokris	1.71	62	ePn	Pn	22 23 08.9	+0.9
LKR				S	Sb	22 23 32.2	+1.1
ATAL	Atalanti	1.74	61	P	Pn	22 23 09.5	+1.0
ATAL	Atalanti	1.74	61	P	Pn	22 23 09.5	+1.0
DIDY	Didyma	1.75	103	P	Pb	22 23 10.3	-0.3
DIDY	Didyma	1.75	103	P	Pb	22 23 10.3	-0.3
IGT	Igoumenitsa	1.75	341	P	Pn	22 23 09.2	+0.5
IGT	Igoumenitsa	1.75	341	P	Pn	22 23 09.2	+0.5
DID	Didima	1.76	101	S	Sg	22 23 34.9	-0.4
VIL2	Platees	1.77	78	P	Pb	22 23 10.3	-0.6
JAN	Janina	1.79	355	P	Pb	22 23 10.9	-0.4
JAN	Janina	1.79	355	ePN	Pb	22 23 11.1	-0.2
JAN	Janina	1.79	355	P	Pb	22 23 10.9	-0.4
THL	Klokotos Trika	1.84	23	P	Pb	22 23 11.7	-0.5
THL				S	Sb	22 23 35.3	+0.2
THL	Klokotos Trika	1.84	23	ePN	Pb	22 23 12.1	-0.1
THL	Klokotos Trika	1.84	23	P	Pb	22 23 11.7	-0.5
THL	Klokotos Trika	1.84	23	ePn	Pb	22 23 12.1	-0.1
THL				S	Sb	22 23 35.3	+0.2
VLI	Veliai	1.88	127	P	Pb	22 23 12.9	0.0
VLI	Veliai	1.88	127	ePN	Pb	22 23 12.7	-0.2
VLI	Veliai	1.88	127	ePn	Pb	22 23 12.7	-0.2
NAIG	Nisos Aigina	1.92	93	ePN	Pb	22 23 12.9	-0.6
NAIG	Nisos Aigina	1.92	93	ePn	Pb	22 23 12.9	-0.6
SMIA	Simia	1.96	59	P	Pn	22 23 12.7	+1.2
SMIA	Simia	1.96	59	P	Pn	22 23 12.7	+1.2
KEK	Kerkira	2.09	332	ePN	Pn	22 23 15.0	+1.7
KEK	Kerkira	2.09	332	ePn	Pn	22 23 15.0	+1.7
ATH	Athens Observa	2.10	87	P	Pb	22 23 15.4	-1.1
ATH	Athens Observa	2.10	87	ePN	Pb	22 23 15.4	-1.1
ATH	Athens Observa	2.10	87	P	Pb	22 23 15.4	-1.1
MRKA	Markates	2.15	67	P	Pn	22 23 15.6	+1.5
MRKA	Markates	2.15	67	P	Pn	22 23 15.6	+1.5
ATHU	Athens Univers	2.15	87	P	Pb	22 23 16.1	-1.3
ATHU	Athens Univers	2.15	87	P	Pb	22 23 16.1	-1.3
SRN	Sarande	2.17	338	ePN	Pb	22 23 18.7	+1.0
SRN	Sarande	2.17	338	ePn	Pb	22 23 18.7	+1.0
NEO	Neokhori	2.21	49	P	Pn	22 23 16.9	+1.9
NEO	Neokhori	2.21	49	ePN	Pn	22 23 16.6	+1.6
NEO	Neokhori	2.21	49	ePn	Pn	22 23 16.6	+1.6
NEO	Neokhori	2.21	49	P	Pn	22 23 16.9	+1.9
PTL	Penteli	2.22	85	P	Pn	22 23 16.8	+1.7
PTL	Penteli	2.22	85	P	Pn	22 23 16.8	+1.7
XOR	Xorichti	2.23	47	P	Pn	22 23 17.0	+1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
XOR	Xorichti	2.23	47	P	Pn	22 23 17.0	+1.7
KYTH	Kithira	2.24	135	P	Pb	22 23 18.2	-0.7
KYTH	Kithira	2.24	135	ePN	Pb	22 23 18.3	-0.7
KYTH	Kithira	2.24	135	P	Pb	22 23 18.2	-0.7
SKIA	Skiathos	2.28	55	P	Pb	22 23 18.1	-1.5
SKIA	Skiathos	2.28	55	P	Pb	22 23 18.1	-1.5
AOS	Alonnisos	2.56	59	P	Pn	22 23 20.9	+1.2
AOS	Alonnisos	2.56	59	P	Pn	22 23 20.9	+1.2
MRMA	Marmari	2.62	85	P	Pn	22 23 22.3	+1.7
MRMA	Marmari	2.62	85	P	Pn	22 23 22.3	+1.7
ANKY	Antikythira Is	2.69	138	ePB	Pn	22 23 23.5	+2.0
ANKY	Antikythira Is	2.69	138	ePb	Pn	22 23 23.5	+2.0
KBN	Korca	2.75	356	ePN	Pn	22 23 19.7	-2.8
KBN	Korca	2.75	356	ePn	Pn	22 23 19.7	-2.8
VLO	Vlora	2.86	335	ePN	Pn	22 23 25.0	+1.1
VLO	Vlora	2.86	335	ePn	Pn	22 23 25.0	+1.1
FNA	Florina	2.92	5	P	Pn	22 23 26.0	+1.3
FNA	Florina	2.92	5	P	Pn	22 23 26.0	+1.3
PLG	Polygyros	3.10	36	P	Pn	22 23 29.3	+2.0
PLG	Polygyros	3.10	36	P	Pn	22 23 29.3	+2.0
BIA	Bitola	3.15	4	ePn	Pb	22 23 34.0	-0.5
GRG	Griva	3.25	18	P	Pn	22 23 30.3	+1.1
GRG	Griva	3.25	18	P	Pn	22 23 30.3	+1.1
KNT	Kendrikon	3.57	23	P	Pn	22 23 35.4	+1.7
KNT	Kendrikon	3.57	23	P	Pn	22 23 35.4	+1.7
TIR	Tirane	3.59	345	ePN	Pn	22 23 32.7	-1.2
TIR	Tirane	3.59	345	ePn	Pn	22 23 32.7	-1.2
VAY	Valandovo	3.63	18	ePn	Pb	22 23 41.3	-1.4
PHP	Peshkopia	3.84	353	ePN	Pn	22 23 40.7	+3.3
PHP	Peshkopia	3.84	353	ePn	Pn	22 23 40.7	+3.3
CHOS	Chios island	3.96	81	P	Pn	22 23 41.3	+2.2
CHOS	Chios island	3.96	81	P	Pn	22 23 41.3	+2.2
MMB	Musomiste	4.24	28	eP	Pn	22 23 47.9	+5.0
MMB	Musomiste	4.24	28	eP	Pn	22 23 47.9	+5.0
PUK	Puka	4.26	348	ePN	Pn	22 23 43.7	+0.5
PUK	Puka	4.26	348	ePn	Pn	22 23 43.7	+0.5
KKB	Krupnik	4.28	21	eP	Pb	22 23 50.0	-3.7
KKB	Krupnik	4.28	21	eP	Pb	22 23 50.0	-3.7
BCI	Bajram Curri	4.55	351	ePN	Pn	22 23 48.4	+1.2
BCI	Bajram Curri	4.55	351	ePn	Pn	22 23 48.4	+1.2
RZN	Rozhen	4.73	35	eP	Pn	22 23 53.4	+3.6
RZN	Rozhen	4.73	35	eP	Pn	22 23 53.4	+3.6
VTS	Vitosha	4.99	18	eP	Pb	22 24 05.9	0.0
STON	Ston	5.62	334	ePn	Pn	22 24 00.1	-1.6
STON				Sn	Sn	22 25 01.8	-4.2
BBLS	Lazići	6.12	349	ePn	Pn	22 24 10.2	+1.5
NVLJ	Novalja	8.15	327	ePn	Pn	22 24 36.1	-0.5
NVLJ				Sn	Sn	22 26 04.1	-4.3
NVLJ	Novalja	8.15	327	ePn	Pn	22 24 36.0	-0.5
MLR	Muntele Rosu	8.44	24	P	Pn	22 24 45.8	+5.2
	baz=205,slow=14						
KEST	Kesra	9.64	261	P	Pn	22 24 58.1	+1.0
	0.1nm,0.3s,baz=67,slow=15,SNR=5.7						
KEST				S	Sn	22 26 44.0	-1.3
	0.0nm,0.3s,baz=53,slow=20,SNR=2.1						
BRTR	Keskin Array B	9.98	75	P	Pn	22 25 06.2	+4.3
	0.1nm,0.3s,baz=261,slow=14,SNR=6.4						
DAVOX	Davos/Dischmat	12.14	321	LR	LR	22 30 45.5	
	comp=Z,91nm,18.6s,baz=86,slow=40						
GERES	GERESS Array B	12.20	336	P	Pn	22 25 33.8	+1.8
	0.1nm,0.3s,baz=166,slow=12,SNR=3.0						
GERES				LR	LR	22 30 54.9	
	comp=Z,70nm,19.3s,baz=313,slow=40						
EIL	Elat	14.14	121	P	P	22 26 05.3	-0.8
	0.2nm,0.3s,baz=341,slow=9.3,SNR=4.9						
HFS	Hagfors	22.77	350	P	P	22 27 39.6	-0.8
	1.8nm,0.8s,baz=146,slow=8.7,SNR=4.8						
HFS				LR	LR	22 36 42.5	
	comp=Z,31nm,21.1s,baz=30,slow=37						
EKA	Eskdalemuir Ar	23.93	325	P	P	22 27 53.0	+1.0
	0.4nm,0.5s,baz=134,slow=9.9,SNR=3.1						
NB2	NORSAR Subarra	24.00	348	P	P	22 27 56.6	+3.9
	comp=Z,0.9nm,0.8s,baz=160,slow=9.3						
NB2	NORSAR Subarra	24.00	348	P	P	22 27 56.6	+3.9
	comp=Z,0.9nm,0.8s,baz=160,slow=9.1,SNR=4.0						
NOA	NORSAR Array B	24.00	348	P	P	22 27 52.5	-0.2
	comp=Z,1.0nm,0.9s,baz=169,slow=10,SNR=2.7						
TORD	Torodi Ar. Bea	30.07	220	P	P	22 28 47.1	-0.5
	comp=Z,0.7nm,0.6s,baz=35,slow=9.8,SNR=5.3						
MKAR	Makanchi Array	45.09	58	P	P	22 30 53.8	-0.5
	comp=Z,0.6nm,0.5s,baz=278,slow=6.9,SNR=9.2						
ZALV	Zalesovo Beam	45.57	48	P	P	22 30 57.5	-0.4
	comp=Z,1.2nm,0.5s,baz=283,slow=8.4,SNR=6.0						

*IDC **11** 22:24:02.3±2.7, 51°.80N×175°.91E, h0km, mb3.5/5, mb1 3.9/6, mb1mx3.5/29, mbtmp3.6/6, ML4.2/1, Error ellipse: s-maj=70.7km s-min=26.3km az=180.0*

*NEIC **11** 22:24:07.3, 51°.70N×176°.09E, h13km, ML3.8(AEIC), After AEIC.*

ISC 11 22:24:06.1±1.4**, 51°.6N**±0°.2×**175°.97E**±0°.07**, h25km, n32, σ1s.44**/36**, mb3.7**/5**, Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SMY	Shemya	1.58	314	P	Pb	22 24 34.8	+0.1
SMY				S	Sb	22 24 55.8	+1.6
LSSA	Little Sitkin	1.61	78	P	Pn	22 24 33.6	+0.7
LSNW	Little Sitkin	1.61	77	P	Pn	22 24 33.7	+0.7
LSSE	Little Sitkin	1.64	79	P	Pb	22 24 34.3	-1.3
LSPA	Little Sitkin	1.65	78	P	Pn	22 24 34.0	+0.6
LSPA				S	Sb	22 24 56.3	+0.2
AMKA	Amchitka	2.10	96	P	Pn	22 24 41.2	+1.6
AMKA				S	Sn	22 25 06.4	+1.5
CETU	Semis' Tuman	2.21	80	P	Pn	22 24 42.4	+1.3
CESW	Semis' Southwe	2.25	82	P	Pn	22 24 42.5	+0.8
CEAP	Semis' Anvil P	2.27	80	P	Pn	22 24 43.3	+1.4
CERAA	Semis' Rag'd T	2.32	82	P	Pn	22 24 43.8	+1.2
GANE	Gareloi Northe	3.27	85	P	Pn	22 24 57.0	+1.3
GALAA	Gareloi Lava P	3.27	86	P	Pn	22 24 57.3	+1.6
TASE	Tanaga Southea	3.73	85	P	Pn	22 25 03.6	+1.5
TAFP	Tanaga Falls P	3.76	84	P	Pn	22 25 03.6	+1.1
TAFP				S	Sn	22 25 48.0	+2.0
TAPA	Tanaga Point A	3.87	85	P	Pn	22 25 06.6	+2.6
KIKV	Kanaga Island	4.27	84	P	Pn	22 25 11.3	+1.9
ETKA	Kagalaska Isla	4.74	84	P	Pn	22 25 17.4	+1.5
GSMY	Great Sitkin M	4.96	82	P	Pn	22 25 21.3	+2.4
ATKA	Atka Island	6.11	81	P	Pn	22 25 36.0	+1.4
NIKH	Nikolski High	9.39	76	P	Pn	22 26 22.4	+2.7
KDAK	Kodiak Island	19.05	59	P	P	22 28 24.2	-1.9
KDAK	Kodiak Island	19.05	59	P	P	22 28 24.2	-1.9
	0.8nm,0.3s,baz=294,slow=10.0,SNR=5.4						
ILAR	Eielson Array	23.14	41	P	P	22 29 09.0	-1.0
ILAR	Eielson Array	23.14	41	P	P	22 29 09.0	-1.0
	1.1nm,0.5s,baz=247,slow=8.0,SNR=11						
YKA	Yellowknife Ar	37.40	46	P	P	22 31 16.0	-0.5
YKA	Yellowknife Ar	37.40	46	P	P	22 31 16.0	-0.5
	0.8nm,0.7s,baz=286,slow=8.0,SNR=6.3						
MKAR	Makanchi Array	57.26	305	P	P	22 33 50.4	-0.8
MKAR	Makanchi Array	57.26	305	P	P	22 33 50.4	-0.8
	0.1nm,0.3s,baz=48,slow=7.9,SNR=3.4						
TXAR	Lajitas Array	61.82	78	P	P	22 34 23.2	+0.3
TXAR	Lajitas Array	61.82	78	P	P	22 34 23.2	+0.3
	0.3nm,0.5s,baz=297,slow=4.6,SNR=4.7						
FINES	FINESS Array B	64.73	345	P	P	22 34 40.6	-1.0
FINES	FINESS Array B	64.73	345	P	P	22 34 40.6	-1.0
	0.3nm,0.4s,baz=46,slow=9.9,SNR=3.9						

*IDC **11** 22:35:19.1±1.4, 3°.94S×142°.27E, h0km, mb3.9/6, mb1 4.2/7, mb1mx4.0/19, mbtmp4.0/7, ML4.7/1, Error ellipse: s-maj=53.3km s-min=20.2km az=93.0*

*AUST **11** 22:35:23.4, 2°.92S×141°.02E, h60km*

*ISCJB **11** 22:35:26.3±0.8, 3°.95S±0°.08×141°.7E±0°.1, h54km, mb3.9/6, Error ellipse: s-maj=19.5km s-min=9.2km az=25.3*

ISC 11 22:35:28.1±0.9**, 4°.00S**±0°.10×**141°.7E**±0°.1**, h54km, n15, σ1s.63**/19**, mb3.8**/5**, New Guinea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDU	Kakadu	12.53	226	P	Pn	22 38 25.3	+1.6
	baz=13,SNR=54						
MTN	Manton Dam	13.62	229	P	P	22 38 42.1	-3.8
	baz=14,SNR=6.3						
MTN				S	Sn	22 41 07.1	-1.4
	baz=14,SNR=4.0						
KNRA	Kununurra	17.19	227	P	P	22 39 27.1	+1.5
	baz=18,SNR=12						
KNRA				S	Sn	22 42 33.1	-2.1
	baz=18,SNR=4.0						
WRA	Warramunga Arr	17.38	204	P	P	22 39 27.0	-0.7
	2.7nm,0.3s,baz=24,slow=12,SNR=54						
WRA				S	Sn	22 42 36.5	-3.2
	0.2nm,0.3s,baz=31,slow=26,SNR=3.1						
ASAR	Alice Springs	20.93	200	P	P	22 40 07.0	+0.4
	5.6nm,0.6s,baz=28,slow=11,SNR=45						
ASAR				S	Sn	22 44 01.8	-3.7
	1.3nm,1.0s,baz=14,slow=27,SNR=3.2						
FITZ	Fitzroy Crossi	21.03	227	P	P	22 40 09.5	+1.9
	5.4nm,0.4s,baz=51,slow=9.6,SNR=21						
FITZ				S	S	22 43 57.3	-1.7
	2.9nm,0.6s,baz=100,slow=17,SNR=2.4						
FITZ	Fitzroy Crossi	21.03	227	P	P	22 40 09.5	+1.9
	baz=21,SNR=20						
FITZ				S	S	22 43 58.6	-0.3
	baz=21,SNR=4.3						
EIDS	Eidsvold	23.09	158	P	P	22 40 31.1	+1.7
	baz=24,SNR=9.3						
MEEK	Meekatharra	31.51	222	P	P	22 41 45.7	+0.5
	baz=32,SNR=5.1						
MORW	Morawa	34.82	222	P	P	22 42 14.6	+0.6
	baz=35,SNR=7.0						
USRK	Ussuriysk Arra	48.77	351	P	P	22 44 05.5	-2.0
	1.5nm,0.7s,baz=176,slow=5.9,SNR=4.3						
SONM	Songino Array	60.17	333	P	P	22 45 30.7	+0.2
	0.4nm,0.5s,baz=151,slow=8.7,SNR=3.4						
MKAR	Makanchi Array	72.62	322	P	P	22 46 50.5	+0.5
	0.7nm,0.6s,baz=104,slow=7.6,SNR=11						
VNDA	Vanda	74.25	176	P	P	22 46 57.8	-1.2
	0.4nm,0.7s,baz=306,slow=6.5,SNR=4.9						
LPAZ	La Paz	144.30	125	PKP	PKPab	22 54 57.2	-0.7
	1.1nm,0.8s,baz=214,slow=3.6,SNR=4.9						

*KRSC **11** 22:40:17.5±1.2, 53°.90N×169°.52E, h21km±20km, ML4.2*

*IDC **11** 22:40:23.5±1.7, 54°.98N×168°.89E, h0km, mb3.7/5, mb1 4.1/6, mb1mx3.6/28, mbtmp3.7/6, ML3.2/1, Error ellipse: s-maj=86.4km s-min=25.4km az=163.0*

*MOS **11** 22:40:24.1±1.4, 54°.32N×169°.00E, h35km, mb4.0/1, Error ellipse: s-maj=33.8km s-min=18.6km az=168.3*

ISC 11 22:40:25.0±0.9**, 54°.4N**±0°.1×**169°.09E**±0°.06**, h20km, n23, σ1s.36**/36**, mb3.7**/5**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BKI	Bering	1.99	296	PN	Pn	22 40 56.1	-1.4
BKI				S	Sb	22 41 24.4	-0.4
BKI	Bering	1.99	296	eP	Pn	22 40 56.1	-1.4
BKI				i S	Sb	22 41 24.4	-0.4
MKZ	Mys Kozlova	4.30	275	PN	Pn	22 41 28.9	-0.3
MKZ				S	Sn	22 42 19.8	+1.1
MKZ	Mys Kozlova	4.30	275	eP	Pn	22 41 28.9	-0.3
MKZ				i S	Sn	22 42 19.8	+1.1
SPN	Mys Shipunski	5.53	260	PN	Pn	22 41 45.0	-1.1
SPN	Mys Shipunski	5.53	260	eP	Pn	22 41 45.0	-1.1
SPN				i S	Sn	22 42 47.8	-1.3
NLC	Nalytchevo	5.90	262	PN	Pn	22 41 50.4	-0.8
NLC	Nalytchevo	5.90	262	eP	Pn	22 41 50.4	-0.8
NLC				i S	Sn	22 42 57.6	-0.6
SDLR	Sedlovina	6.14	264	eP	Pn	22 41 54.4	-0.3
SDLR				i S	Sn	22 43 05.6	+1.3
UGLR	Uglovaya	6.20	263	eP	Pn	22 41 54.9	-0.5
UGLR				i S	Sn	22 43 06.4	+0.8
KOK	Koryaka	6.29	264	eP	Pn	22 41 55.8	-0.8
KOK				i S	Sn	22 43 08.5	+0.7
GNL	Ganaly	6.61	269	eP	Pn	22 42 01.4	+0.4
GNL				i S	Sn	22 43 18.6	+2.9
RUS	Russkaya	6.62	257	PN	Pn	22 41 59.4	-1.6
RUS	Russkaya	6.62	257	eP	Pn	22 41 59.4	-1.6
MTVR	Mutnovka	6.79	258	eP	Pn	22 42 02.5	-1.0
MTVR				i S	Sn	22 43 18.8	-1.4
PETK	Petropavlovsk-	6.88	264	PN	Pn	22 42 04.6	0.0
PETK						22 43 25.6	
PETK				smax	smax		
	comp=N,1.0nm,0.3s						
PETK	Petropavlovsk-	6.88	264	Pn	Pn	22 42 04.6	0.0
	comp=N,0.4nm,0.3s,baz=76,slow=18,SNR=6.9						
PETK				Sn	Sn	22 43 25.6	+3.3
	comp=N,0.5nm,0.3s,baz=92,slow=20,SNR=1.4						
ASAK	Asacha	6.99	258	eP	Pn	22 42 05.8	-0.4
ASAK				i S	Sn	22 43 24.6	-0.4
ILAR	Eielson Array	24.07	47	P	P	22 45 35.2	-3.4
	comp=N,1.0nm,0.6s,baz=253,slow=9.3,SNR=5.1						
YKA	Yellowknife Ar	38.50	46	P	P	22 47 45.6	+0.3
	comp=N,0.5nm,0.6s,baz=293,slow=8.0,SNR=3.2						
NVAR	Mina Array Bea	50.26	77	P	P	22 49 20.9	+1.0
	comp=N,0.6nm,0.7s,baz=297,slow=8.8,SNR=4.4						
PDAR	Pinedale Array	52.16	67	P	P	22 49 35.5	+1.3
	comp=N,0.7nm,0.7s,baz=319,slow=4.3,SNR=4.9						
TXAR	Lajitas Array	65.17	74	P	P	22 51 05.8	+1.1
	comp=N,0.5nm,0.5s,baz=320,slow=5.2,SNR=5.9						

*CRAAG **11** 23:03:04.5, 36°.40N×2°.41E, Ml2.1*

*MDD **11** 23:03:05.1±1.6, 36°.41N×2°.26E, h19km±15km, mb2.7/2, Error ellipse: s-maj=20.9km s-min=11.2km az=37.0, PROXIMO SIN SOLUCION*

*CSEM **11** 23:03:05.0±0.5, 36°.57N×2°.33E, h20km, mb2.7/2, Error ellipse: s-maj=25.5km s-min=11.5km az=14.0*

ISC 11 23:03:04.1±1.1**, 36°.68N**±0°.07×**2°.33E**±0°.04**, h18km, n19, σ1s.11**/21**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ABA	Alger-Bouzarea	0.58	77	P	Pn	23 03 18.7	+1.2
ABA	Alger-Bouzarea	0.58	77	P	Pn	23 03 18.7	+1.2
ABA	Alger-Bouzarea	0.58	77	P	Pn	23 03 18.7	+1.2
EMHD	Djebel Mahouad	0.69	133	P	Pb	23 03 16.2	-1.5
EMHD	Djebel Mahouad	0.69	133	P	Pb	23 03 16.2	-1.5
EMHD	Djebel Mahouad	0.69	133	P	Pb	23 03 16.2	-1.5
EBNR	Beni Rached	0.75	239	P	Pn	23 03 20.2	+0.4
EBNR	Beni Rached	0.75	239	P	Pn	23 03 20.2	+0.4
ADJB	Djebel Djouab	1.03	120	P	Pb	23 03 22.8	-0.7
ADJB	Djebel Djouab	1.03	120	P	Pb	23 03 22.8	-0.7
ADJB	Djebel Djouab	1.03	120	P	Pb	23 03 22.8	-0.7
EBEN	Beniarda	2.86	316	S	Sn	23 04 18.9	-4.0
	0.2nm,0.2s,SNR=7.9						
EBEN	Beniarda	2.86	316	S	Sn	23 04 18.9	-4.0
	0.2nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.65	304	P	Pn	23 04 00.4	+0.7
	0.1nm,0.1s,SNR=7.9						
ETOB				S	Sn	23 04 42.2	-0.1
	0.5nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.65	304	P	Pn	23 04 00.4	+0.7
	0.1nm,0.1s,SNR=7.9						
ETOB				S	Sn	23 04 42.2	-0.1
	0.5nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.29	330	P	Pn	23 04 07.6	-0.9
	0.2nm,0.1s,SNR=7.9						
EMOS				S	Sn	23 04 53.9	-4.3
	0.3nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	4.29	330	P	Pn	23 04 07.6	-0.9
	0.2nm,0.1s,SNR=7.9						
EMOS				S	Sn	23 04 53.9	-4.3
	0.3nm,0.2s,SNR=7.9						
EQES	Quesada	4.45	286	P	Pn	23 04 12.3	+1.5
	0.1nm,0.2s,SNR=7.9						
EQES				S	Sn	23 05 03.3	+1.1
	0.3nm,0.2s,SNR=7.9						
EQES	Quesada	4.45	286	P	Pn	23 04 12.3	+1.5
	0.1nm,0.2s,SNR=7.9						
EQES				S	Sn	23 05 03.3	+1.1
	0.3nm,0.2s,SNR=7.9						

*IDC **11** 23:26:54.5±2.6, 51°.77N×176°.44E, h0km, mb3.2/4, mb1 3.6/4, mb1mx3.4/28, mbtmp3.2/4, MS3.5/1, Ms1 3.5/1, ms1mx2.2/18, Error ellipse: s-maj=76.2km s-min=30.9km az=177.0*

*ISCJB **11** 23:26:57.9±1.1, 51°.8N±0°.2×176°.53E±0°.09, h31km, mb3.2/4, MS3.5/1, Error ellipse: s-maj=24.7km s-min=5.1km az=14.9*

*NEIC **11** 23:26:58.4, 51°.66N×176°.52E, h13km, ML3.4(AEIC), After AEIC.*

ISC 11 23:26:59.2±1.4**, 51°.8N**±0°.2×**176°.54E**±0°.06**, h31km, n23, σ0s.62**/27**, mb3.3**/4**, Rat Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LSSA	Little Sitkin	1.24	81	P	Pn	23 27 19.6	-0.8
LSNW	Little Sitkin	1.24	80	P	Pn	23 27 19.6	-0.8
LSSE	Little Sitkin	1.27	81	P	Pn	23 27 20.0	-0.8
LSPA	Little Sitkin	1.28	80	P	Pn	23 27 19.7	-1.2
LSPA				S	Sb	23 27 38.2	-0.4
AMKA	Amchitka	1.77	101	P	Pn	23 27 26.4	-1.2
AMKA				S	Sn	23 27 50.0	+1.0
SMY	Shemya	1.79	304	P	Pn	23 27 27.8	0.0
SMY				S	Sn	23 27 49.7	+0.3
CETU	Semis' Tuman	1.84	82	P	Pn	23 27 28.9	+0.2
CESW	Semis' Southwe	1.88	85	P	Pn	23 27 28.9	-0.3
CEAP	Semis' Anvil P	1.90	82	P	Pn	23 27 29.5	+0.1
CERAA	Semis' Rag'd T	1.96	85	P	Pn	23 27 30.1	-0.2
GANE	Gareloi Northe	2.91	87	P	Pn	23 27 43.4	+0.1
TASE	Tanaga Southea	3.37	87	P	Pn	23 27 50.0	+0.4
TAFP	Tanaga Falls P	3.40	86	P	Pn	23 27 50.2	+0.1
TAFP				S	Sn	23 28 29.1	-0.2
TAPA	Tanaga Point A	3.51	87	P	Pn	23 27 51.7	+0.2
KIKV	Kanaga Island	3.91	86	P	Pn	23 27 57.2	+0.2
KINC	Kanaga Island	3.93	85	P	Pn	23 27 57.7	+0.4
GSMY	Great Sitkin M	4.59	84	P	Pn	23 28 06.9	+0.5
ATKA	Atka Island	5.74	82	P	Pn	23 28 22.6	+0.4
ATKA				S	Sn	23 29 27.3	+0.4
ILAR	Eielson Array	22.82	41	P	P	23 31 59.1	0.0
	0.8nm,0.8s,baz=240,slow=9.4,SNR=6.5						
YKA	Yellowknife Ar	37.07	46	P	P	23 34 05.4	-0.5
	0.2nm,0.4s,baz=280,slow=9.5,SNR=4.2						
NVAR	Mina Array Bea	46.37	80	LR	LR	23 51 46.6	
	comp=Z,56nm,21.5s,baz=224,slow=32						
MKAR	Makanchi Array	57.48	306	P	P	23 36 44.2	-0.7
	0.1nm,0.4s,baz=53,slow=7.3,SNR=3.9						
TXAR	Lajitas Array	61.45	78	P	P	23 37 13.8	+1.2
	0.1nm,0.4s,baz=314,slow=4.7,SNR=4.6						

IDC 11 23:33:52.4±1.4**, 2°.87S×146°.17E, h0km, mb4.1**/9**, mb1 4.3**/9**, mb1mx4.1**/18**, mbtmp4.1**/9**, MS3.6**/7**, Ms1 3.6**/7**, ms1mx3.2**/23**, Error ellipse: s-maj=46.3km s-min=19.9km az=109.0, Admiralty Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	6.57	171	Pn	Pn	23 35 35.5	+5.1
	1.2nm,0.3s,baz=321,slow=15,SNR=5.6						
WRA	Warramunga Arr	20.53	213	P	P	23 38 32.7	+0.1
	12nm,0.7s,baz=34,slow=12,SNR=97						
ASAR	Alice Springs	23.84	209	P	P	23 39 08.3	+0.8
	3.5nm,0.6s,baz=39,slow=8.1,SNR=55						
FITZ	Fitzroy Crossi	25.18	232	P	P	23 39 18.7	-1.1
	2.9nm,0.6s,baz=31,slow=8.3,SNR=8.0						
FITZ				LR	LR	23 49 58.4	
	comp=Z,87nm,18.2s,baz=54,slow=38						
DZM	Mont Dzumac	27.43	136	LR	LR	23 47 43.5	
	comp=Z,90nm,18.8s,baz=220,slow=30						
STKA	Stephens Creek	29.18	188	LR	LR	23 52 48.2	
	comp=Z,173nm,18.5s,baz=18,slow=39						
KSRS	Korea Array	43.55	339	LR	LR	23 56 44.9	
	comp=Z,57nm,19.4s,baz=352,slow=32						
USRK	Ussuriysk Arra	48.55	346	P	P	23 42 37.8	+0.4
	2.0nm,0.8s,baz=188,slow=7.5,SNR=2.0						
CMAR	Chiang Mai Arr	51.09	296	P	P	23 42 57.9	+0.7
	1.7nm,0.7s,baz=119,slow=5.6,SNR=8.0						
SONM	Songino Array	61.28	331	P	P	23 44 10.8	+1.0
	0.6nm,0.5s,baz=130,slow=5.8,SNR=4.9						
SONM				LR	LR	00 07 30.7	
	comp=Z,53nm,20.8s,baz=83,slow=33						
MKAR	Makanchi Array	74.57	320	P	P	23 45 31.7	-1.6
	0.9nm,0.8s,baz=100,slow=6.4,SNR=6.7						
MKAR				LR	LR	00 16 11.0	
	comp=Z,29nm,21.8s,baz=176,slow=34						
ZALV	Zalesovo Beam	75.94	328	LR	LR	00 17 04.4	
	comp=Z,40nm,19.1s,baz=76,slow=34						
ILAR	Eielson Array	82.95	23	P	P	23 46 18.1	-0.9
	1.2nm,0.9s,baz=252,slow=5.1,SNR=4.7						
YKA	Yellowknife Ar	96.80	27	P	P	23 47 25.7	+0.7
	0.4nm,0.6s,baz=297,slow=5.4,SNR=2.6						
TORD	Torodi Ar. Bea	143.42	288	PKP	PKPdf	23 53 30.6	+0.5
	0.6nm,0.8s,baz=68,slow=2.5,SNR=7.5						

*CSEM **11** 23:34:37.1, 42°.66N×12°.73E, h7km, MD1.9/6, After ROM*

ROM 11 23:34:37.1±0.1**, 42°.66N×12°.73E, h7km**±1km**, Md1.9**/6**, Ml1.2**/3**, Error ellipse: s-maj=1.2km s-min=0.7km az=176.0, Central Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CESX	Cesi	0.12	246	Pg	Pg	23 34 40.4	+0.6
CESX				Sg	Sg	23 34 42.3	+0.7
	94nm,0.4s						
CESX	Cesi	0.12	246	Pg	Pg	23 34 40.4	+0.6
CESX				Sg	Sg	23 34 42.3	+0.7
	94nm,0.4s						
LNSS	Leonessa	0.24	104	Pg	Pg	23 34 42.5	+0.5
LNSS				Sg	Sg	23 34 46.7	+1.4
	45nm,0.2s						
LNSS	Leonessa	0.24	104	Pg	Pg	23 34 42.5	+0.5
LNSS				Sg	Sg	23 34 46.7	+1.4
	45nm,0.2s						
MNS	Montasola	0.28	188	Pg	Pg	23 34 43.4	+0.7
MNS				Sg	Sb	23 34 48.0	-1.4
	20nm,0.5s						
MNS	Montasola	0.28	188	Pg	Pg	23 34 43.4	+0.7
MNS				Sg	Sb	23 34 48.0	-1.4
	20nm,0.5s						
NRCA	Norcia	0.33	58	Pg	Pg	23 34 44.5	+0.7
	3.0nm,0.4s						
NRCA	Norcia	0.33	58	Pg	Pg	23 34 44.5	+0.7
	3.0nm,0.4s						
CESI	CESI - Serrava	0.37	20	Pg	Pb	23 34 45.3	-0.8
CESI				Sg	Sb	23 34 51.6	-0.5
CESI	CESI - Serrava	0.37	20	Pg	Pb	23 34 45.3	-0.8
CESI				Sg	Sb	23 34 51.6	-0.5
FDMO	Fiordimonte	0.46	35	Pg	Pg	23 34 46.8	+0.7
FDMO	Fiordimonte	0.46	35	Pg	Pg	23 34 46.8	+0.7

IDC 11 23:51:24.0±1.6**, 1°.75N×125°.36E, h0km, mb3.5**/3**, mb1 3.8**/4**, mb1mx3.5**/24**, mbtmp3.6**/4**, ML3.6**/1**, Error ellipse: s-maj=121.7km s-min=24.9km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.73	179	P	P	23 55 56.1	+0.7
	0.1nm,0.3s,baz=6.6,slow=12,SNR=4.3						
WRA	Warramunga Arr	23.29	158	P	P	23 56 33.6	0.0
	1.4nm,0.6s,baz=335,slow=11,SNR=18						
ASAR	Alice Springs	26.59	162	P	P	23 57 04.6	+0.4
	0.4nm,0.3s,baz=342,slow=11,SNR=9.0						
ASAR				PcP	PcP	00 00 27.4	-1.4
	0.6nm,0.8s,baz=349,slow=2.8,SNR=4.7						
MKAR	Makanchi Array	58.42	327	P	P	00 01 21.6	+0.1
	0.2nm,0.3s,baz=120,slow=8.3,SNR=4.4						

*ISCJB **12** 00:05:42.9±0.5, 43°.50N±0°.02×17°.30E±0°.02, h1km±3km, Error ellipse: s-maj=3.6km s-min=1.9km az=44.6*

*SZGRF **12** 00:05:42.0, 43°.01N×17°.47E, h10km, Northwestern Balkan Peninsula*

*VIE **12** 00:05:44.4±0.3, 43°.49N×17°.47E, h10km, mb3.1/11, ML3.2/10, Ms3.2/1, Error ellipse: s-maj=4.2km s-min=2.4km az=69.0 81 km E of Split*

*THE **12** 00:05:44.0, 43°.59N×16°.99E, h36km±32km, ML3.3/2, Error ellipse: s-maj=32.8km s-min=2.1km az=1.0*

*CSEM **12** 00:05:44.4±0.1, 43°.47N×17°.30E, h2km, ML3.5/8, Ms3.2, Error ellipse: s-maj=4.2km s-min=2.3km az=39.0*

*PDG **12** 00:05:44.1±0.6, 43°.46N×17°.35E, h8km±1km, ML3.5/8, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*

*LDG **12** 00:05:44.4±0.1, 43°.48N×17°.36E, h10km, Ml3.3/5, Error ellipse: s-maj=3.4km s-min=2.8km az=104.0*

*PRU **12** 00:05:45.5, 43°.57N×17°.49E, h0km*

*BEO **12** 00:05:45.7±0.6, 43°.49N×17°.39E, h6km±4km, ML3.2/7*

*TIR **12** 00:05:53.4±3.0, 43°.48N×17°.73E, h0km±808km*

ISC 12 00:05:44.0±1.1**, 43°.45N**±0°.02×**17°.34E**±0°.02**, h7km**±9km**, n155, σ1s.63**/235**, 30C-30D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STON	Ston	0.64	156	i Pg	Pg	00 05 55.3	-0.9
STON				Sg	Sg	00 06 05.5	+1.0
BRY	Bratogost	1.03	122⇑	i Pg	Pg	00 06 02.6	-1.2
BRY				eSg	Sn	00 06 19.2	-0.7
UPM	Unac-Piva	1.17	102⇓	i Pg	Pb	00 06 05.5	-1.2
UPM				eSg	Sn	00 06 24.4	+1.1
BLY	Banja Luka	1.30	355	ePg	Pg	00 06 08.8	-0.2
BLY				i Sg	Sg	00 06 27.7	+1.8
BLY	Banja Luka	1.30	355	ePg	Pg	00 06 08.8	-0.2

BLY				i Sg	Sg	00 06 27.7	+1.8
HCY	**Herceg Novi**	**1.31**	**140**	⇑iPg	**Pn**	**00 06 07.1**	**-1.7**
HCY				eSg	**Sg**	**00 06 28.4**	**+2.2**
NKY	**Niksic**	**1.37**	**117**	⇓iPg	**Pb**	**00 06 09.8**	**-0.2**
NKY				eSg	**Sg**	**00 06 31.0**	**+3.1**
NKY	**Niksic**	**1.37**	**117**	⇓iPg	**Pb**	**00 06 09.8**	**-0.2**
NKY				eSg	**Sg**	**00 06 31.0**	**+3.1**
PLE	**Pljevlja**	**1.50**	**94**	⇑iPg	**Pg**	**00 06 12.5**	**-0.2**
PLE				eSg	**Sg**	**00 06 34.9**	**+2.8**
PLE	**Pljevlja**	**1.50**	**94**	⇑iPg	**Pg**	**00 06 12.5**	**-0.2**
PLE				eSg	**Sg**	**00 06 34.9**	**+2.8**
BBLS	**Lazići**	**1.55**	**74**	ePn	**Pb**	**00 06 12.6**	**-0.6**
BBLS	**Lazići**	**1.55**	**74**	⇑iPg	**Pb**	**00 06 12.9**	**-0.3**
BBLS				eSn	**Sg**	**00 06 33.3**	**-0.6**
BBLS	**Lazići**	**1.55**	**74**	ePn	**Pb**	**00 06 12.6**	**-0.6**
BBLS	**Lazići**	**1.55**	**74**	⇑iPg	**Pb**	**00 06 12.9**	**-0.3**
BBLS				eSn	**Sg**	**00 06 33.3**	**-0.6**
BUM	**Brajici-Budva**	**1.62**	**135**	⇓iPn	**Pn**	**00 06 13.1**	**0.0**
BUM				eSn	**Sg**	**00 06 37.0**	**+1.0**
BUM	**Brajici-Budva**	**1.62**	**135**	⇓iPn	**Pn**	**00 06 13.1**	**0.0**
BUM				eSn	**Sg**	**00 06 37.0**	**+1.0**
PDG	**Podgorica**	**1.74**	**125**	P	**Pb**	**00 06 16.1**	**-0.1**
PDG	**Podgorica**	**1.74**	**125**	ePn	**Pb**	**00 06 16.3**	**+0.1**
PDG	**Podgorica**	**1.74**	**125**	ePn	**Pb**	**00 06 16.3**	**+0.1**
PDG				eSn	**Sg**	**00 06 40.2**	**+0.4**
TTG	**Podgorica**	**1.74**	**125**	⇑iPn	**Pb**	**00 06 15.9**	**-0.3**
TTG				eSn	**Sg**	**00 06 40.2**	**+0.4**
TEKS	**Tekeris**	**1.92**	**54**	ePn	**Pb**	**00 06 18.8**	**-0.6**
TEKS	**Tekeris**	**1.92**	**54**	ePn	**Pb**	**00 06 18.8**	**-0.6**
SJES	**Sjenica**	**1.93**	**95**	ePn	**Pb**	**00 06 19.1**	**-0.5**
BEY	**Berane**	**1.95**	**106**	ePn	**Pb**	**00 06 19.5**	**-0.5**
BEY				eSn	**Sg**	**00 06 45.9**	**-0.9**
IVA	**Berane**	**1.95**	**106**	ePn	**Pb**	**00 06 19.5**	**-0.5**
IVA				eSn	**Sg**	**00 06 45.9**	**-0.9**
DIVS	**Divibare**	**2.02**	**70**	P	**Pn**	**00 06 18.8**	**+0.1**
DIVS	**Divibare**	**2.02**	**70**	ePn	**Pn**	**00 06 18.8**	**+0.1**
DIVS				eSn	**Sn**	**00 06 44.5**	**+0.2**
DIVS	**Divibare**	**2.02**	**70**	P	**Pn**	**00 06 18.8**	**+0.1**
DIVS				eSn	**Sn**	**00 06 44.5**	**+0.2**
MS1	**Monte Sant'Ang**	**2.03**	**211**	ePn	**Pb**	**00 06 21.8**	**+0.5**
MS1				eSn	**Sb**	**00 06 48.4**	**+1.6**
ULC	**Ulcinj**	**2.04**	**136**	⇓iPn	**Pb**	**00 06 20.2**	**-1.3**
ULC				eSn	**Sb**	**00 06 47.5**	**+0.4**
ULC	**Ulcinj**	**2.04**	**136**	⇓iPn	**Pb**	**00 06 20.2**	**-1.3**
ULC				eSn	**Sb**	**00 06 47.5**	**+0.4**
PVY	**Plav**	**2.10**	**113**	⇓iPn	**Pn**	**00 06 20.4**	**+0.6**
PVY				eSn	**Sb**	**00 06 49.6**	**+0.7**
NVLJ	**Novalja**	**2.10**	**303**	i Pn	**Pb**	**00 06 21.7**	**-0.8**
NVLJ				Sn	**Sb**	**00 06 49.4**	**+0.6**
NVLJ	**Novalja**	**2.10**	**303**	i Pn	**Pb**	**00 06 21.7**	**-0.8**
NVLJ				Sn	**Sb**	**00 06 49.4**	**+0.6**
SISC	**Sisak**	**2.13**	**341**	ePn	**Pn**	**00 06 20.6**	**+0.5**
SISC				Sn	**Sb**	**00 06 49.5**	**-0.3**
SISC	**Sisak**	**2.13**	**341**	ePn	**Pn**	**00 06 20.6**	**+0.5**
SISC				Sn	**Sb**	**00 06 49.4**	**-0.3**
BCI	**Bajram Curri**	**2.28**	**118**	ePN	**Pb**	**00 06 25.4**	**-0.1**
BCI				i SN	**Sn**	**00 06 45.8**	**-4.6**
BCI	**Bajram Curri**	**2.28**	**118**	ePn	**Pb**	**00 06 25.4**	**-0.1**
	SNR=4.0						
PUK	**Puka**	**2.35**	**126**	ePN	**Pb**	**00 06 26.0**	**-0.7**
PUK				i SN	**Sn**	**00 06 51.4**	**-0.9**
PUK	**Puka**	**2.35**	**126**	ePn	**Pb**	**00 06 26.0**	**-0.7**
	SNR=4.0						
PUK				i Sn	**Sn**	**00 06 51.4**	**-0.9**
	SNR=4.0						
BAI	**Bari**	**2.37**	**189**	ePn	**Pn**	**00 06 23.0**	**-0.3**
BAI				eSn	**Sn**	**00 06 51.4**	**-1.2**
GRUS	**Gruza**	**2.48**	**79**	ePn	**Pn**	**00 06 25.7**	**+0.7**
GRUS				eSn	**Sn**	**00 06 56.9**	**+1.3**
GRUS	**Gruza**	**2.48**	**79**	ePn	**Pn**	**00 06 25.7**	**+0.7**
GRUS				eSn	**Sn**	**00 06 56.9**	**+1.3**
CRES	**Cresnjev**	**2.73**	**331**	i Pn	**Pn**	**00 06 29.7**	**+1.4**
CRES				eSn	**Sb**	**00 07 04.2**	**-2.7**
CRES							
	comp=Z,108nm,0.7s						
CRES	**Cresnjev**	**2.73**	**331**	i Pn	**Pn**	**00 06 29.7**	**+1.4**
CRES				eSn	**Sb**	**00 07 04.2**	**-2.7**
	comp=Z,108nm,0.7s						
SELS	**Selova**	**2.76**	**94**	ePn	**Pn**	**00 06 30.5**	**+1.7**
SELS	**Selova**	**2.76**	**94**	ePn	**Pn**	**00 06 30.5**	**+1.7**
TIR	**Tirane**	**2.81**	**138**	ePN	**Pg**	**00 06 36.5**	**-1.4**
GOLS	**Golise**	**2.84**	**335**	ePn	**Pn**	**00 06 30.9**	**+1.1**
GOLS	**Golise**	**2.84**	**335**	ePn	**Pn**	**00 06 30.9**	**+1.1**
CESS	**Cesta pri Krsk**	**2.85**	**333**	i Pn	**Pn**	**00 06 31.6**	**+1.5**
CESS	**Cesta pri Krsk**	**2.85**	**333**	i Pn	**Pn**	**00 06 31.6**	**+1.5**
PHP	**Peshkopia**	**2.89**	**127**	ePN	**Pb**	**00 06 33.2**	**-2.8**
PHP				i SN	**Sn**	**00 07 07.1**	**+1.5**
PHP	**Peshkopia**	**2.89**	**127**	P	**Pn**	**00 06 32.3**	**+1.7**
PHP	**Peshkopia**	**2.89**	**127**	P	**Pn**	**00 06 32.3**	**+1.7**
PHP	**Peshkopia**	**2.89**	**127**	ePn	**Pb**	**00 06 33.2**	**-2.8**
	SNR=4.0						
PHP				i Sn	**Sn**	**00 07 07.1**	**+1.5**
	SNR=4.0						
PKSM	**Moragy**	**2.91**	**18**	⇓iP	**Pn**	**00 06 30.1**	**-0.7**
PKSM	**Moragy**	**2.91**	**18**	⇓epn	**Pn**	**00 06 29.8**	**-1.0**
PKSM				esn	**Sn**	**00 07 04.9**	**-1.1**
PKSM	**Moragy**	**2.91**	**18**	⇓iP	**Pn**	**00 06 30.1**	**-0.7**
BEHE	**Becsehely**	**3.04**	**353**	e	**Pn**	**00 06 33.3**	**+0.6**
AQU	**L'Aquila**	**3.10**	**251**	⇑iP	**Pn**	**00 06 34.1**	**+0.7**
AQU	**L'Aquila**	**3.10**	**251**	⇑iP	**Pn**	**00 06 34.1**	**+0.7**
AQU				S	**Sn**	**00 07 10.5**	**-0.2**
SKDS	**Skadanscina**	**3.17**	**312**	i Pn	**Pn**	**00 06 35.5**	**+1.1**
SKDS	**Skadanscina**	**3.17**	**312**	i Pn	**Pn**	**00 06 35.5**	**+1.1**
PKS9	**Tamasi**	**3.21**	**12**	epn	**Pn**	**00 06 34.1**	**-0.7**
PKS9				eSn	Sg	00 07 33.1	+6.2
PKS2	**Kecel**	**3.32**	**23**	epn	**Pb**	**00 06 44.7**	**+1.5**
BARS	**Barje**	**3.33**	**99**	ePn	**Pn**	**00 06 38.7**	**+2.1**
BARS	**Barje**	**3.33**	**99**	ePn	**Pn**	**00 06 38.7**	**+2.1**
VOY	**Vojsko**	**3.56**	**318**	ePn	**Pn**	**00 06 41.4**	**+1.5**
VOY				eSn	**Sn**	**00 07 24.7**	**+2.4**
VOY	**Vojsko**	**3.56**	**318**	ePn	**Pn**	**00 06 41.4**	**+1.5**
VOY				eSn	**Sn**	**00 07 24.7**	**+2.4**
SOKA	**Soboth**	**3.62**	**334**	⇑iPn	**Pn**	**00 06 41.2**	**+0.6**
SOKA				⇓iSn	**Sn**	**00 07 23.2**	**-0.4**
SOKA	**Soboth**	**3.62**	**334**	Pn	**Pn**	**00 06 41.2**	**+0.6**
SOKA				Sn	**Sn**	**00 07 23.2**	**-0.4**
OBKA	**Obir**	**3.64**	**328**	⇑iPn	**Pn**	**00 06 41.7**	**+0.7**
OBKA				⇑iSn	**Sn**	**00 07 25.6**	**+1.3**
OBKA	**Obir**	**3.64**	**328**	Pn	**Pn**	**00 06 41.7**	**+0.7**
OBKA				Sn	**Sn**	**00 07 25.6**	**+1.3**
KBN	**Korca**	**3.82**	**137**	ePN	**Pb**	**00 06 53.0**	**+1.2**
PKS7	**Kunszentmiklos**	**3.82**	**19**	epn	**Pn**	**00 06 41.6**	**-1.6**
PKST	**Tˆ's**	**3.84**	**7**	⇑epn	**Pn**	**00 06 43.5**	**-0.1**
PKST				eSn	**Sn**	**00 07 28.1**	**-0.9**
PKSG		**4.01**	**10**	⇑epn	**Pn**	**00 06 45.8**	**-0.1**
PKSG				eSn	**Sn**	**00 07 34.0**	**+0.9**
ARSA	**Arzberg**	**4.01**	**342**	⇑iPn	**Pn**	**00 06 46.3**	**+0.3**
	SNR=14						
ARSA				⇑iSn	**Sn**	**00 07 32.4**	**-0.8**
ARSA	**Arzberg**	**4.01**	**342**	⇑iPn	**Pn**	**00 06 46.4**	**+0.5**
ARSA	**Arzberg**	**4.01**	**342**	⇑iPn	**Pn**	**00 06 46.4**	**+0.5**
ARSA				Sn	**Sn**	**00 07 32.4**	**-0.8**
FNA	**Florina**	**4.01**	**130**	P	**Pn**	**00 06 47.5**	**+1.5**
FNA				S	**Sn**	**00 07 37.5**	**+4.2**
FNA	**Florina**	**4.01**	**130**	P	**Pn**	**00 06 47.5**	**+1.5**
FNA				S	**Sn**	**00 07 37.5**	**+4.2**
NEST	**Nestorio**	**4.10**	**136**	P	**Pn**	**00 06 49.0**	**+1.7**
NEST				S	**Sn**	**00 07 39.4**	**+3.7**
NEST	**Nestorio**	**4.10**	**136**	P	**Pn**	**00 06 49.0**	**+1.7**
NEST				S	**Sn**	**00 07 39.4**	**+3.7**
MYKA	**Terra Mystica**	**4.12**	**322**	⇓iPn	**Pn**	**00 06 47.8**	**+0.3**
MYKA				⇓iSn	**Sn**	**00 07 37.4**	**+1.4**
MYKA	**Terra Mystica**	**4.12**	**322**	Pn	**Pn**	**00 06 47.8**	**+0.3**
MYKA				Sn	**Sn**	**00 07 37.4**	**+1.4**
KEK	**Kerkira**	**4.17**	**153**	P	**Pn**	**00 06 48.5**	**+0.5**
KEK	**Kerkira**	**4.17**	**153**	P	**Pn**	**00 06 48.5**	**+0.5**
SOP	**Sopron**	**4.27**	**353**	⇓e	**Pn**	**00 06 51.1**	**+1.7**
TIP	**Timpagrande**	**4.29**	**186**	P	**Pn**	**00 06 49.8**	**-0.1**
TIP	**Timpagrande**	**4.29**	**186**	P	**Pn**	**00 06 49.8**	**-0.1**
GZR	**Gura Zlata**	**4.35**	**62**	⇑iP	**Pn**	**00 06 51.6**	**+1.0**
GZR	**Gura Zlata**	**4.35**	**62**	⇑iP	**Pn**	**00 06 51.6**	**+1.0**
GZR				S	**Sn**	**00 07 39.8**	**-1.8**
VTS	**Vitosha**	**4.38**	**99**	⇓iP	**Pn**	**00 06 53.9**	**+2.7**
VTS	**Vitosha**	**4.38**	**99**	⇓iP	**Pn**	**00 06 53.9**	**+2.7**
VTS				S	**Sn**	**00 07 45.0**	**+2.4**
GRG	**Griva**	**4.51**	**122**	P	**Pn**	**00 06 54.6**	**+1.8**
GRG				S	**Sn**	**00 07 49.8**	**+4.3**
GRG	**Griva**	**4.51**	**122**	P	**Pn**	**00 06 54.6**	**+1.8**
GRG				S	**Sn**	**00 07 49.8**	**+4.3**
CONA	**Conrad Observa**	**4.60**	**347**	⇑iPn	**Pn**	**00 06 54.0**	**0.0**
	SNR=20						
CONA				⇓iSn	**Sn**	**00 07 46.8**	**-0.9**
CONA	**Conrad Observa**	**4.60**	**347**	Pn	**Pn**	**00 06 54.0**	**0.0**
	SNR=20						
CONA				Sn	**Sn**	**00 07 46.8**	**-0.9**
KNT	**Kendrikon**	**4.71**	**117**	P	**Pn**	**00 06 57.1**	**+1.5**
KNT				S	**Sn**	**00 07 55.4**	**+4.9**
KNT	**Kendrikon**	**4.71**	**117**	P	**Pn**	**00 06 57.1**	**+1.5**
KNT				S	**Sn**	**00 07 55.4**	**+4.9**
ABTA	**Abfaltersbach**	**4.75**	**316**	⇓iPn	**Pn**	**00 06 56.5**	**+0.3**
ABTA				⇓iSn	**Sn**	**00 07 52.8**	**+1.3**
ABTA	**Abfaltersbach**	**4.75**	**316**	Pn	**Pn**	**00 06 56.5**	**+0.3**
ABTA				Sn	**Sn**	**00 07 52.8**	**+1.3**
PSZ	**Piszkesteto**	**4.81**	**21**	⇓iP	**Pn**	**00 06 56.5**	**-0.5**
PSZ	**Piszkesteto**	**4.81**	**21**	⇓epn	**Pn**	**00 06 56.4**	**-0.5**
PSZ	**Piszkesteto**	**4.81**	**21**	⇓iP	**Pn**	**00 06 56.5**	**-0.5**
MOA	**Molln**	**4.90**	**335**	⇓iPn	**Pn**	**00 06 59.7**	**+1.5**
	SNR=36						
MOA				⇑iSn	**Sn**	**00 07 56.2**	**+1.1**
MOA	**Molln**	**4.90**	**335**	Pn	**Pn**	**00 06 59.7**	**+1.5**
	SNR=36						
MOA				Sn	**Sn**	**00 07 56.2**	**+1.1**
LOT	**Lotru**	**5.01**	**64**	⇑iP	**Pn**	**00 07 01.2**	**+1.4**
LOT	**Lotru**	**5.01**	**64**	⇑iP	**Pn**	**00 07 01.2**	**+1.4**
LOT				S	**Sn**	**00 07 59.3**	**+1.2**
DRGR		**5.06**	**47**	⇓iP	**Pn**	**00 07 02.0**	**+1.6**
DRGR		**5.06**	**47**	⇓iP	**Pn**	**00 07 02.0**	**+1.6**
DRGR				S	**Sn**	**00 07 57.6**	**-1.5**
SRS	**Serrai**	**5.19**	**115**	P	**Pn**	**00 07 03.9**	**+1.8**
SRS	**Serrai**	**5.19**	**115**	P	**Pn**	**00 07 03.9**	**+1.8**
WTTA	**Wattenberg**	**5.54**	**315**	⇓iPn	**Pn**	**00 07 07.6**	**+0.5**
WTTA				⇑iSn	**Sn**	**00 08 12.2**	**+1.1**
WTTA	**Wattenberg**	**5.54**	**315**	Pn	**Pn**	**00 07 07.6**	**+0.5**
WTTA				Sn	**Sn**	**00 08 12.2**	**+1.1**
ARR	**Arges**	**5.56**	**67**	⇑iP	**Pn**	**00 07 09.3**	**+2.0**
ARR	**Arges**	**5.56**	**67**	⇑iP	**Pn**	**00 07 09.3**	**+2.0**
WATA	**Walderalm**	**5.62**	**316**	⇓iPn	**Pn**	**00 07 08.6**	**+0.5**
	SNR=6.1						
WATA				⇓iSn	**Sn**	**00 08 14.3**	**+1.3**
WATA	**Walderalm**	**5.62**	**316**	Pn	**Pn**	**00 07 08.6**	**+0.5**
	SNR=6.1						
WATA				Sn	**Sn**	**00 08 14.3**	**+1.3**
MOTA	**Moosalm**	**5.87**	**314**	⇓iPn	**Pn**	**00 07 12.4**	**+0.8**
	SNR=5.7						
MOTA				⇑iSn	**Sn**	**00 08 21.5**	**+2.3**
MOTA	**Moosalm**	**5.87**	**314**	Pn	**Pn**	**00 07 12.4**	**+0.8**
	SNR=5.7						
MOTA				Sn	**Sn**	**00 08 21.5**	**+2.3**
VRAC	**Vranov**	**5.88**	**355**	⇑iP	**Pn**	**00 07 12.4**	**+0.8**
VRAC	**Vranov**	**5.88**	**355**	⇑iP	**Pn**	**00 07 12.4**	**+0.8**
VRAC				S	**Sn**	**00 08 19.8**	**+0.5**
GEC2	**GERESS Array S**	**5.96**	**336**	ePn	**Pn**	**00 07 13.9**	**+1.2**
GEC2				eSn	**Sn**	**00 08 21.8**	**+0.5**
PGF	**Pioggiola**	**6.18**	**264**	ePn	**Pn**	**00 07 13.4**	**-2.5**
KHC	**Kasperske Hory**	**6.25**	**337**	ePN	**Pn**	**00 07 18.5**	**+1.8**
KHC				ex	x	00 07 26.5	
KHC				eSN	**Sn**	**00 08 28.0**	**-0.4**
KHC	**Kasperske Hory**	**6.25**	**337**	Pn	**Pn**	**00 07 18.5**	**+1.8**
KHC				Sn	**Sn**	**00 08 28.0**	**-0.4**
MORC	**Moravsky Berou**	**6.33**	**1**	eSn	**Sn**	**00 08 28.8**	**-1.6**
OKC	**Ostrava-Krasne**	**6.41**	**5**	ePN	**Pn**	**00 07 18.6**	**-0.3**
OKC	**Ostrava-Krasne**	**6.41**	**5**	Pn	**Pn**	**00 07 18.6**	**-0.3**
WET	**Wettzell**	**6.48**	**333**	ePn	**Pn**	**00 07 21.3**	**+1.5**
WET				eSn	**Sn**	**00 08 32.6**	**-1.4**
DPC	**Dobruska-Polom**	**6.94**	**355**	eSN	**Sn**	**00 08 42.4**	**-2.9**
SBF	**Sospel**	**7.20**	**277**	eP	**Pn**	**00 07 32.3**	**+2.5**
SBF	**Sospel**	**7.20**	**277**	eP	**Pn**	**00 07 32.3**	**+2.5**
FRF	**La Foret Royal**	**7.78**	**274**	ePn	**Pn**	**00 07 36.2**	**-1.5**
FRF	**La Foret Royal**	**7.78**	**274**	ePn	**Pn**	**00 07 36.2**	**-1.5**
LPG	**La Plagne**	**7.85**	**289**	eSn	Sn	00 08 59.9	-8.2
	comp=Z,3.9nm,0.5s						
LPL	**La Plagne**	**7.86**	**289**	ePn	**Pn**	**00 07 37.4**	**-1.6**
LPL				eSn	Sn	00 08 59.2	-9.2
	comp=Z,3.8nm,0.3s						
LPL	**La Plagne**	**7.86**	**289**	ePn	**Pn**	**00 07 37.4**	**-1.6**
LMR	**La Mourre**	**7.89**	**273**	ePn	**Pn**	**00 07 37.3**	**-1.9**
LMR	**La Mourre**	**7.89**	**273**	ePn	**Pn**	**00 07 37.3**	**-1.9**
BFO	**Black Forest**	**7.96**	**311**	ePn	**Pn**	**00 07 40.1**	**0.0**
BFO				eSn	**Sn**	**00 09 06.0**	**-4.4**
MOX	**Moxa**	**8.19**	**334**	ePn	**Pn**	**00 07 44.1**	**+0.8**
ORIF	**Oris-en-Rattie**	**8.37**	**284**	ePn	**Pn**	**00 07 44.4**	**-1.4**
ORIF	**Oris-en-Rattie**	**8.37**	**284**	ePn	**Pn**	**00 07 44.4**	**-1.4**
HINF	**Hinteralfeld**	**8.55**	**304**	ePn	**Pn**	**00 07 45.2**	**-3.0**
HINF				eSn	Sn	00 09 15.5	-9.4
	comp=Z,2.5nm,0.5s						
CABF	**La Chapelle**	**8.57**	**296**	ePn	Pn	00 07 45.4	-3.3
CDF	**Champ du Feu**	**8.59**	**309**	ePn	**Pn**	**00 07 46.2**	**-2.7**
CDF				eSn	Sn	00 09 17.1	-8.9
	comp=Z,0.7nm,0.3s						
HAU	**Haudompre**	**8.94**	**304**	ePn	**Pn**	**00 07 50.8**	**-2.7**
HAU				eSn	Sn	00 09 25.8	-8.6
	comp=Z,4.2nm,0.5s						
VIVF	**Saint-Julien-l**	**9.22**	**283**	ePn	**Pn**	**00 07 54.4**	**-3.0**
SMF	**Signal de Mont**	**10.07**	**293**	ePn	**Pn**	**00 08 06.6**	**-2.5**
BGF	**Bois d'Agland**	**10.72**	**292**	ePn	**Pn**	**00 08 15.0**	**-3.0**
CAF	**Calviac**	**11.07**	**283**	ePn	**Pn**	**00 08 20.0**	**-2.8**

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*MDD **12** 00:11:48.0±1.5, 36°.67N×2°.49E, h62km±28km, mb2.5/5, Error ellipse: s-maj=14.1km s-min=10.9km az=54.0*
*CSEM **12** 00:11:48.0±0.4, 36°.78N×2°.46E, h40km, mb2.5/5, Error ellipse: s-maj=13.6km s-min=8.3km az=34.0*
*CRAAG **12** 00:11:54.2, 36°.36N×2°.82E, Ml2.3*
ISC 12 00:11:46.8±1.7**, 36°.82N**±0°.08×**2°.47E**±0°.04**, h24**km±21km**,**
n25, σ1**ş42**/35**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABA	**Alger-Bouzarea**	**0.45**	**92**	P	**Pn**	**00 11 59.9**	**+2.1**
ABA	**Alger-Bouzarea**	**0.45**	**92**	P	**Pn**	**00 11 59.9**	**+2.1**
ABA	**Alger-Bouzarea**	**0.45**	**92**	P	**Pn**	**00 11 59.9**	**+2.1**
EMHD	**Djebel Mahouad**	**0.73**	**148**	P	**Pb**	**00 11 59.0**	**-1.9**
EMHD	**Djebel Mahouad**	**0.73**	**148**	P	**Pb**	**00 11 59.0**	**-1.9**
EMHD	**Djebel Mahouad**	**0.73**	**148**	P	**Pb**	**00 11 59.0**	**-1.9**
EBNR	**Beni Rached**	**0.93**	**236**	P	**Pb**	**00 12 05.0**	**+0.8**
EBNR	**Beni Rached**	**0.93**	**236**	P	**Pb**	**00 12 05.0**	**+0.8**
ADJB	**Djebel Djouab**	**1.02**	**130**	P	**Pb**	**00 12 06.0**	**+0.2**
ADJB	**Djebel Djouab**	**1.02**	**130**	P	**Pb**	**00 12 06.0**	**+0.2**
ADJB	**Djebel Djouab**	**1.02**	**130**	P	**Pb**	**00 12 06.0**	**+0.2**
EBEN	**Beniarda**	**2.85**	**312**	P	**Pn**	**00 12 32.9**	**+2.1**
	0.0nm,0.1s,SNR=7.9						
EBEN				S	**Sn**	**00 13 03.2**	**-1.2**
	0.4nm,0.1s,SNR=7.9						
EBEN	**Beniarda**	**2.85**	**312**	P	**Pn**	**00 12 32.9**	**+2.1**
	SNR=7.9						
EBEN				S	**Sn**	**00 13 03.2**	**-1.2**
	0.4nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**2.96**	**5**	P	**Pn**	**00 12 32.6**	**+0.3**
	0.0nm,0.0s,SNR=7.9						
ETOS				S	**Sn**	**00 13 06.2**	**-0.8**
	0.2nm,0.1s,SNR=7.9						
ETOS	**Mallorca**	**2.96**	**5**	P	**Pn**	**00 12 32.6**	**+0.3**
	SNR=7.9						
ETOS				S	**Sn**	**00 13 06.2**	**-0.8**
	0.2nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**3.13**	**290**	S	**Sn**	**00 13 09.2**	**-2.1**
	0.1nm,0.2s,SNR=7.9						
EMUR	**La Murta**	**3.13**	**290**	S	**Sn**	**00 13 09.2**	**-2.1**
	0.1nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**3.67**	**301**	P	**Pn**	**00 12 43.0**	**+0.9**
	0.2nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**00 13 24.3**	**-0.4**
	1.5nm,0.2s,SNR=4.6						
ETOB	**Tobarra**	**3.67**	**301**	P	**Pn**	**00 12 43.0**	**+0.9**
	0.2nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**00 13 24.3**	**-0.4**
	1.5nm,0.2s,SNR=4.6						
EHUE	**Huescar**	**4.16**	**285**	S	**Sn**	**00 13 35.5**	**-1.2**
	0.3nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**4.16**	**285**	S	**Sn**	**00 13 35.5**	**-1.2**
	0.3nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.23**	**328**	P	**Pn**	**00 12 50.8**	**+1.0**
	0.5nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**00 13 37.4**	**-1.1**
	1.1nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.23**	**328**	P	**Pn**	**00 12 50.8**	**+1.0**
	0.5nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**00 13 37.4**	**-1.1**
	1.1nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.53**	**284**	P	**Pn**	**00 12 54.9**	**+1.0**
	0.1nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**00 13 44.6**	**-1.3**
	0.1nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.53**	**284**	P	**Pn**	**00 12 54.9**	**+1.0**
	0.1nm,0.1s,SNR=7.9						
EQES				S	**Sn**	**00 13 44.6**	**-1.3**
	0.1nm,0.2s,SNR=7.9						

DJA 12 00:13:20.0±1.0**, 9°S**±7°×**11°1E**±°**, h28**km±9km**, M3.6**/6**,**
MLv3.6/6**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.70**	**360**	P	Pb	00 13 33.4	-0.3
PWJI	**Pagerwojo**	**1.07**	**35**	P	Pn	00 13 38.7	-0.4
PWJI				S	Sn	00 13 52.7	-0.3
UGM	**Wanagama**	**1.18**	**326**	P	Pn	00 13 40.6	-0.1
UGM				S	Sn	00 13 56.1	+0.3
SJI	**Sawahan**	**1.29**	**27**	P	Pn	00 13 42.3	-0.1
YOGI	**Yogyakarta**	**1.39**	**321**	P	Pn	00 13 43.1	-0.4
YOGI				S	Sn	00 14 01.0	0.0
GMJI	**Gumukmas**	**2.32**	**75**	P	Pn	00 13 56.4	0.0

IDC 12 00:16:28.2±7.2**, 35°.17S**×**78°.86E, h0**km**, mb3.8**/3**,**
mb1 4.0/3**, mb1mx3.6**/21**, mbtmp3.8**/3**, MS3.8**/1**, Ms1 3.8**/1**,**
ms1mx2.8/33**, Error ellipse: s-maj=353.1km**
s-min=35.8km az=22.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**48.75**	**92**	P	P	00 25 14.9	-0.1
	0.6nm,1.0s,baz=242,slow=7.0,SNR=5.7						
ASAR				LR	LR	00 45 19.5	
	comp=Z,86nm,18.1s,baz=83,slow=36						
WRA	**Warramunga Arr**	**50.86**	**88**	P	P	00 25 31.0	-0.1
	1.5nm,0.8s,baz=240,slow=7.5,SNR=10						
BRTR	**Keskin Array B**	**85.41**	**327**	P	P	00 29 07.5	-0.1
	0.5nm,0.7s,baz=149,slow=3.4,SNR=3.2						

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*ATH **12** 00:31:18.3, 35°.32N×28°.06E, h40km±6km, MD3.2/8*
*DDA **12** 00:31:18.6, 35°.45N×27°.98E, h28km, MD3.2*
*CSEM **12** 00:31:18.0±0.2, 35°.25N×28°.09E, h30km, MD3.2, Error ellipse: s-maj=5.6km s-min=4.4km az=87.0*
*ISK **12** 00:31:23.5, 35°.86N×27°.98E, h23km, MD3.2*
ISC 12 00:31:17.2±1.5**, 35°.28N**±0°.04×**28°.13E**±0°.03**, h32**km±15km**,**
n73, σ1**ş35**/87**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.84**	**289**	eP	**Pn**	**00 31 33.4**	**+0.5**
KARP				eS	**Sn**	**00 31 45.1**	**+1.0**
KARP	**Karpathos**	**0.84**	**289**	eP	**Pn**	**00 31 33.4**	**+0.5**
KARP				eS	**Sn**	**00 31 45.1**	**+1.0**
ARG	**Arkhangelos**	**0.93**	**360**	eP	**Pb**	**00 31 36.1**	**+1.1**
ARG				eS	**Sn**	**00 31 48.7**	**+2.2**
ARG	**Arkhangelos**	**0.93**	**360**	eP	**Pb**	**00 31 36.1**	**+1.1**
ARG				eS	**Sn**	**00 31 48.7**	**+2.2**
DAT	**Datca**	**1.51**	**343**	ePG	**Pn**	**00 31 42.2**	**-0.1**
DAT				eSG	Sn	00 31 54.2	-6.8
DAT	**Datca**	**1.51**	**343**	ePg	**Pn**	**00 31 42.2**	**-0.1**
NIS1	**Nisyros Isl.**	**1.53**	**330**	eP	**Pb**	**00 31 44.6**	**-0.4**
NIS1	**Nisyros Isl.**	**1.53**	**330**	eP	**Pb**	**00 31 44.6**	**-0.4**
AKAS	**Kas**	**1.53**	**51**	i P	**Pb**	**00 31 44.7**	**-0.4**
AKAS				i S	**Sn**	**00 31 59.9**	**-1.5**
AKAS	**Kas**	**1.53**	**51**	i P	**Pb**	**00 31 44.7**	**-0.4**
AKAS				i S	**Sn**	**00 31 59.9**	**-1.5**
FETY	**Fethiye**	**1.56**	**29**	ePN	**Pb**	**00 31 45.0**	**-0.5**
FETY	**Fethiye**	**1.56**	**29**	ePn	**Pb**	**00 31 45.0**	**-0.5**
ZKR	**Zakros**	**1.58**	**265**	eP	**Pb**	**00 31 44.6**	**-1.2**
ZKR	**Zakros**	**1.58**	**265**	eP	**Pb**	**00 31 44.6**	**-1.2**
DALY	**Dalyan (Mu˜la**	**1.59**	**15**	ePN	**Pn**	**00 31 44.3**	**+1.1**
DALY	**Dalyan (Mu˜la**	**1.59**	**15**	ePn	**Pn**	**00 31 44.3**	**+1.1**
TURN	**Turunc**	**1.64**	**13**	i P	**Pn**	**00 31 44.1**	**+0.3**
TURN				eS	**Sn**	**00 32 02.2**	**-1.5**
TURN	**Turunc**	**1.64**	**13**	i P	**Pn**	**00 31 44.1**	**+0.3**
TURN				eS	**Sn**	**00 32 02.2**	**-1.5**
YER	**Yerkesik**	**1.85**	**4**	ePN	**Pn**	**00 31 47.1**	**+0.2**
YER	**Yerkesik**	**1.85**	**4**	ePn	**Pn**	**00 31 47.1**	**+0.2**
BODT	**Bodrum**	**1.90**	**340**	ePN	**Pn**	**00 31 46.8**	**-0.6**
BODT	**Bodrum**	**1.90**	**340**	ePn	**Pn**	**00 31 46.8**	**-0.6**
MLSB	**Milas**	**2.03**	**352**	ePN	**Pn**	**00 31 48.9**	**-0.4**
MLSB	**Milas**	**2.03**	**352**	ePn	**Pn**	**00 31 48.9**	**-0.4**
ELL	**Elmali**	**2.06**	**44**	ePN	**Pb**	**00 31 53.1**	**-0.9**
ELL	**Elmali**	**2.06**	**44**	ePn	**Pb**	**00 31 53.1**	**-0.9**
NPS	**Neapolis**	**2.06**	**270**	eP	**Pn**	**00 31 51.6**	**+1.9**
NPS	**Neapolis**	**2.06**	**270**	eP	**Pn**	**00 31 51.6**	**+1.9**
GLHS	**Glhisar (BURDU**	**2.17**	**30**	ePN	**Pb**	**00 31 54.2**	**-1.8**
GLHS	**Glhisar (BURDU**	**2.17**	**30**	ePn	**Pb**	**00 31 54.2**	**-1.8**
LAST	**Lasithi**	**2.17**	**268**	eP	**Pn**	**00 31 53.1**	**+1.8**
LAST	**Lasithi**	**2.17**	**268**	eP	**Pn**	**00 31 53.1**	**+1.8**
GOLH	**Golhisar**	**2.27**	**30**	i P	**Pb**	**00 31 55.9**	**-1.7**
GOLH				eS	**Sn**	**00 32 21.2**	**+1.6**
GOLH	**Golhisar**	**2.27**	**30**	i P	**Pb**	**00 31 55.9**	**-1.7**
GOLH				eS	**Sn**	**00 32 21.2**	**+1.6**
AYDN	**Tasoluk**	**2.38**	**355**	i P	**Pn**	**00 31 55.4**	**+1.2**
AYDN				eS	**Sn**	**00 32 19.9**	**-2.5**
AYDN	**Tasoluk**	**2.38**	**355**	i P	**Pn**	**00 31 55.4**	**+1.2**
AYDN				eS	**Sn**	**00 32 19.9**	**-2.5**
KORT	**Korkueli**	**2.48**	**46**	i P	**Pn**	**00 31 58.3**	**+2.7**
KORT				eS	**Sn**	**00 32 27.6**	**+2.7**
KORT	**Korkueli**	**2.48**	**46**	i P	**Pn**	**00 31 58.3**	**+2.7**
KORT				eS	**Sn**	**00 32 27.6**	**+2.7**
GCAM	**G?zelcaml?**	**2.52**	**344**	i P	**Pn**	**00 31 56.6**	**+0.6**
GCAM				eS	Sn	00 32 20.3	-5.3
GCAM	**G?zelcaml?**	**2.52**	**344**	i P	**Pn**	**00 31 56.6**	**+0.6**
DENT	**Denizli**	**2.57**	**16**	ePN	**Pn**	**00 31 58.3**	**+1.5**
DENT	**Denizli**	**2.57**	**16**	ePn	**Pn**	**00 31 58.3**	**+1.5**
ANTB	**Antalya**	**2.60**	**51**	ePN	**Pb**	**00 32 02.6**	**-0.6**
ANTB	**Antalya**	**2.60**	**51**	ePn	**Pb**	**00 32 02.6**	**-0.6**
SMG	**Samos**	**2.64**	**337**	eP	**Pn**	**00 31 58.2**	**+0.6**
SMG	**Samos**	**2.64**	**337**	eP	**Pn**	**00 31 58.2**	**+0.6**
APE	**Apeiranthos**	**2.76**	**311**	ePN	**Pn**	**00 32 01.1**	**+1.8**
APE	**Apeiranthos**	**2.76**	**311**	eP	**Pn**	**00 31 59.4**	**+0.1**
APE	**Apeiranthos**	**2.76**	**311**	eP	**Pn**	**00 31 59.4**	**+0.1**
APE	**Apeiranthos**	**2.76**	**311**	ePn	**Pn**	**00 32 01.1**	**+1.8**
BCK	**Bucak**	**2.94**	**42**	ePN	**Pb**	**00 32 06.2**	**-2.9**
BCK	**Bucak**	**2.94**	**42**	ePn	**Pb**	**00 32 06.2**	**-2.9**
BLCB	**Balcova**	**3.22**	**345**	ePN	**Pn**	**00 32 05.8**	**+0.2**
BLCB	**Balcova**	**3.22**	**345**	ePn	**Pn**	**00 32 05.8**	**+0.2**
KULA	**Kula-Manisa**	**3.26**	**7**	ePN	**Pn**	**00 32 07.0**	**+0.8**
KULA	**Kula-Manisa**	**3.26**	**7**	ePn	**Pn**	**00 32 07.0**	**+0.8**
KHAL	**Karahalli**	**3.27**	**19**	eP	**Pn**	**00 32 07.1**	**+0.7**
KHAL				eS	**Sn**	**00 32 42.8**	**-1.5**
KHAL	**Karahalli**	**3.27**	**19**	eP	**Pn**	**00 32 07.1**	**+0.7**
KHAL				eS	**Sn**	**00 32 42.8**	**-1.5**
GAZI	**Gazipasa**	**3.53**	**73**	i P	**Pn**	**00 32 11.5**	**+1.5**
GAZI				eS	Sn	00 32 42.2	-8.4
GAZI	**Gazipasa**	**3.53**	**73**	i P	**Pn**	**00 32 11.5**	**+1.5**
DEMI	**Demirci**	**3.79**	**7**	i P	**Pn**	**00 32 14.1**	**+0.6**
DEMI				eS	Sn	00 32 51.7	-5.3
DEMI	**Demirci**	**3.79**	**7**	i P	**Pn**	**00 32 14.1**	**+0.6**
ERMK	**Ermenek**	**4.11**	**69**	i P	Pn	00 32 21.7	+3.7
ERMK				eS	Sn	00 32 52.0	-13
ERMK	**Ermenek**	**4.11**	**69**	i P	Pn	00 32 21.7	+3.7
SLUM		**4.50**	**214**	P	**Pn**	**00 32 23.9**	**+0.7**
AMAG	**Maghara**	**6.29**	**136**	P	**Pn**	**00 32 47.9**	**0.0**
HSAF	**As Saff**	**6.34**	**152**	P	**Pn**	**00 32 48.7**	**+0.1**
RSH		**6.37**	**131**	P	**Pn**	**00 32 49.1**	**+0.2**
SWA2		**6.43**	**201**	P	**Pn**	**00 32 50.2**	**+0.5**
GLL	**Jalalah**	**6.44**	**151**	P	**Pn**	**00 32 50.0**	**+0.1**
AWBH		**6.97**	**174**	P	**Pn**	**00 32 57.4**	**+0.2**
HFRF	**Wahat Farafira**	**8.11**	**179**	P	**Pn**	**00 33 12.9**	**+0.1**
HKAT	**Jabal Katrina**	**8.38**	**142**	P	**Pn**	**00 33 17.0**	**+0.3**

TRN 12 00:36:11.5, 16°.76N×**61°.98W, h106**km**, MD3.2, M3.8**(FDF)**,**
5C-4D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBRY		**0.18**	**250**	⇓iP	Pn	00 36 27.5	+1.1
MBRY				i S	Sn	00 36 38.7	+1.2
MBWH		**0.20**	**264**	⇑iP	Pn	00 36 27.3	+0.9
MBWH				i S	Sn	00 36 38.8	+1.1
MLYT	**Lee's Yard**	**0.21**	**258**	⇓iP	Pn	00 36 27.6	+1.2
MLYT	**Lee's Yard**	**0.21**	**258**	⇑iP	Pn	00 36 28.0	+1.6
MLYT				i S	Sn	00 36 39.2	+1.6
MLYT				i S		00 36 39.4	
MBGB		**0.24**	**263**	⇑iP	Pn	00 36 27.6	+1.1
MBGB				i S	Sn	00 36 39.2	+1.4
BPA	**Boggy Peak**	**0.30**	**23**	eP	Pn	00 36 28.7	+1.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
BPA				eS	Sn	00 36 40.0	+1.6
SEG	Port Louis	0.58	128	⇓eP	Pn	00 36 29.5	+1.0
NEV	Hard Times	0.68	303	eP	Pn	00 36 31.0	+1.7
NEV				eS	Sn	00 36 45.1	+2.5
BCG	Bois Riant Cap	0.76	153	eP	Pn	00 36 31.0	+1.0
SCG	Saint Claude	0.78	158	eP	Pn	00 36 31.5	+1.1
DOG	Dongo Capester	0.81	154	eP	Pn	00 36 31.6	+1.1
PHG	Guadaloupe-2	0.81	156	eP	Pn	00 36 31.7	+1.1
SFG	Saint Francois	0.91	124	⇑iP	Pn	00 36 32.4	+1.0
SKI	Saint Kitts	0.92	308	⇑iP	Pn	00 36 32.4	+0.8
SKI				eS	Sn	00 36 47.9	+1.2
TBG	Guadaloupe-3	0.96	160	eP	Pn	00 36 32.8	+0.9
DEG	La Desirade	0.99	117	eP	Pn	00 36 32.9	+0.5
MGG	Marie-Galante	1.05	143	⇓iP	Pn	00 36 34.1	+1.1
DVCT	Vielle Casse P	1.27	154	eP	Pn	00 36 38.0	+2.7
DVCT				eS	Sn	00 36 56.0	+2.7
FDF	Fort de France	2.17	158	eP	Pn	00 36 38.3	-8.3
FDF				eS	Sn	00 37 14.2	+0.8
MVM	Montagne Vaucl	2.43	154	eP	Pn	00 36 50.5	+0.5

MEX 12 00:38:10.9±0.9, 16°57N×99°56W, h2km±13km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.83	305	i P	Pg	00 38 24.8	-2.1
CAIG				eS	Sg	00 38 37.7	+0.1
MEIG	Mezcala	1.35	358	i P	Pn	00 38 32.7	-4.2
MEIG				eS	Sg	00 38 50.6	-4.1
PNIG	Pinotepa	1.39	97	i P	Pn	00 38 33.9	-3.4
PNIG				eS	Sg	00 38 50.2	-5.3
PLIG	Platanillo	1.82	2	i P	Pn	00 38 39.8	-3.5
PLIG				i S	Sn	00 39 02.1	-5.0
ARIG	Puente Sto Nin	1.86	336	i P	Pn	00 38 41.0	-2.9
ARIG				i S	Sn	00 39 02.5	-5.6
ZIIG	Zihuatanejo	2.10	300	i P	Pn	00 38 44.0	-3.0
ZIIG				i S	Sn	00 39 09.0	-4.7
YAIG	Yautepec	2.33	12	i P	Pn	00 38 47.2	-3.3
YAIG				i S	Sn	00 39 14.6	-5.3

*ISCJB **12** 00:48:54.8±0.5, 2°00N±0°06×99°21E±0°06, h138km, mb4.1/11, Error ellipse: s-maj=10.4km s-min=5.6km az=41.4*
*DJA **12** 00:48:55.8±0.5, 2°N±4°×9°9E±°, h153km±10km, M4.4/10, mb4.8/1, mB5.4/1, MLv4.2/10, Mw(mB)4.9/1*
*IDC **12** 00:48:55.5±2.7, 1°93N×99°30E, h150km±22km, mb3.9/11, mb1 4.0/12, mb1mx3.7/27, mbtmp3.9/12, Error ellipse: s-maj=37.3km s-min=11.9km az=52.0*
ISC 12 00:48:55.0±0.6, 1°97N±0°05×99°22E±0°05, h138km, n38, σ1s67/42, mb4.3/14, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNSI	Mandailing Nat	1.22	163	P	Pn	00 49 23.3	+2.5
TSI	Tuntungan	1.66	337	P	Pn	00 49 29.5	+4.0
TSI				S	Sn	00 49 52.1	+3.3
KCSI	Kotacane, Aceh	2.12	317	P	Pn	00 49 32.2	+1.3
KCSI				S	Sn	00 49 58.9	+0.5
BKNI	Bangkinang	2.44	132	P	Pn	00 49 36.7	+1.8
PPI	Padang Panjang	2.68	154	P	Pn	00 49 39.8	+1.9
FRIM	Kepong	2.71	62	P	Pn	00 49 40.2	+1.9
SNSI	Sinabang, Aceh	2.93	279	P	Pn	00 49 43.1	+2.1
IPM	Ipoh	3.08	36	P	Pn	00 49 45.4	+2.4
IPM	Ipoh	3.08	36	P	Pn	00 49 45.3	+2.3
KULM	Kulim	3.59	23	P	Pn	00 49 50.4	+0.7
KULM	Kulim	3.59	23	P	Pn	00 49 50.7	+1.1
KULM	Kulim	3.59	23	P	Pn	00 49 49.1	-0.6
LHMI	Lhok Sumawe	3.96	325	P	Pn	00 49 55.8	+1.4
LHMI				S	Sn	00 50 40.8	+0.3
MYKOM	Kota Tinggi	4.63	92	P	Pn	00 50 10.1	+6.8
BSI	Banda Aceh	5.26	312	P	Pn	00 50 12.1	+0.4
BTM	Bintulu	13.90	85	P	P	00 52 10.9	+0.9
CMAR	Chiang Mai Arr	16.39	359	P	Pn	00 52 36.9	-0.4
	1.1nm,0.3s,baz=188,slow=12,SNR=26						
KKM	Kota Kinabalu	17.43	76	P	Pn	00 52 54.4	+4.4
KDM	Kudat	18.23	74	P	Pn	00 52 59.8	+0.4
SDKM	Sandakan	18.30	78	P	Pn	00 53 01.1	+0.9
MYLDM	Lahad Datu	19.50	80	P	Pn	00 53 17.3	+3.0
KAPI	Kappang	21.65	109	P	P	00 53 33.1	-1.6
	9.5nm,0.7s,baz=297,slow=11,SNR=5.7						
WRA	Warramunga Arr	40.75	124	P	P	00 56 21.4	-1.4
	11nm,0.5s,baz=302,slow=9.1,SNR=105						
WRA				PcP	PcP	00 58 20.2	-1.4
	0.5nm,0.4s,baz=316,slow=2.5,SNR=5.6						
ASAR	Alice Springs	42.27	129	P	P	00 56 33.5	-1.7
	2.6nm,0.4s,baz=299,slow=7.7,SNR=37						
SONM	Songino Array	46.11	7	P	P	00 57 05.0	-0.5
	0.5nm,0.3s,baz=190,slow=7.3,SNR=5.1						
MKAR	Makanchi Array	47.02	344	P	P	00 57 11.9	-0.6
	5.3nm,0.5s,baz=155,slow=8.8,SNR=106						
STKA	Stephens Creek	52.39	134	P	P	00 57 52.0	-1.3
	3.8nm,1.0s,baz=315,slow=8.6,SNR=2.4						
ZALV	Zalesovo Beam	53.15	349	P	P	00 57 57.9	-0.6
	10nm,0.5s,baz=179,slow=6.4,SNR=20						
RDF	Al-Radifah	55.96	304	eP	pP	00 58 54.1	+2.5
RDF				AMb	AMB	00 58 55.7	
	comp=Z,12nm,0.6s						
NAY	Al-Naaiem	56.32	304	eP	pP	00 58 55.9	+1.6
NAY				AMb	AMB	00 58 57.7	
	comp=Z,5.3nm,0.9s						
MIB	Mutribah	56.42	305	eP	pP	00 58 57.0	+2.0
MIB				AMb	AMB	00 58 58.1	
	comp=Z,21nm,0.7s						
KBZ	Khabaz	64.83	318	P	P	00 59 19.6	+0.4
	comp=Z,2.9nm,0.7s,baz=119,slow=5.2,SNR=5.3						
BRTR	Keskin Array B	70.10	312	P	P	00 59 51.7	-1.0
	comp=Z,0.4nm,0.6s,baz=120,slow=5.8,SNR=2.8						
BRTR				pP	pP	01 00 27.4	+0.9
	comp=Z,1.5nm,0.7s,baz=136,slow=5.9,SNR=10						
FINES	FINESS Array B	80.26	332	P	P	01 00 49.7	-0.5
	comp=Z,0.6nm,0.3s,baz=108,slow=6.2,SNR=6.6						
FINES				pP	pP	01 01 26.6	+1.8
	comp=Z,0.9nm,0.5s,baz=88,slow=6.5,SNR=4.0						
ARCES	ARCESS Array B	82.50	340	P	P	01 01 02.0	+0.1
	comp=Z,0.9nm,0.8s,baz=98,slow=6.5,SNR=3.7						
NVAR	Mina Array Bea	126.97	37	PKP	PKPdf	01 07 43.0	-0.5
	comp=Z,0.4nm,0.7s,baz=252,slow=1.8,SNR=3.2						
TXAR	Lajitas Array	141.94	33	PKhKP	PKPpre	01 08 05.5	
	comp=Z,0.1nm,0.3s,baz=115,slow=1.0,SNR=4.6						
TXAR				PKP	PKPdf	01 08 11.2	-0.2
	comp=Z,0.3nm,0.5s,baz=178,slow=0.3,SNR=6.3						
TXAR				SKPbc	SKPbc	01 11 32.9	-3.4
	comp=Z,0.4nm,0.8s,baz=290,slow=2.6,SNR=4.7						
BDFB	Brasilia	144.97	245	PKPbc	PKPbc	01 08 14.5	-2.1
	comp=Z,0.7nm,0.3s,baz=0.0,slow=2.0,SNR=3.2						

*NSSP **12** 00:57:10.5, 41°30N×46°83E, h10km, Ms2.7*
*TIF **12** 00:57:12.1, 41°34N×46°98E, h17km±3km*
*MOS **12** 00:57:12.2±0.9, 41°20N×47°08E, h19km, mb4.0/1, Error ellipse: s-maj=16.8km s-min=7.4km az=87.2*
*CSEM **12** 00:57:13.1±0.2, 41°35N×47°00E, h2km, mb4.0, Error ellipse: s-maj=5.0km s-min=3.6km az=114.0*
ISC 12 00:57:13.8±1.0, 41°33N±0°02×47°08E±0°02, h13km±9km, n51, σ1s13/90, 6C-7D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKT	Akhty	0.51	73	⇑iPG	Pg	00 57 23.0	-0.9
AKT				i S	Sg	00 57 31.0	+0.3
AKT				pmax	pmax		
	comp=Z,325nm,0.1s						
AKT	Akhty	0.51	73	i Pg	Pg	00 57 23.0	-0.9
	comp=Z,325nm,0.1s						
AKT				i Sg	Sg	00 57 31.0	+0.3
KMKR	Kumukh	0.80	1	ePG	Pg	00 57 28.0	-1.3
KMKR				eS	Sg	00 57 40.0	+0.2
KMKR				pmax	pmax		
	comp=Z,303nm,0.1s						
KMKR	Kumukh	0.80	1	ePg	Pg	00 57 28.0	-1.3
	comp=Z,303nm,0.1s						
KMKR				eSg	Sg	00 57 40.0	+0.2
KSMR	Kasumkent	0.83	71	ePG	Pg	00 57 29.5	-0.5
KSMR				eS	Sn	00 57 43.0	-0.6
KSMR				pmax	pmax		
	comp=Z,94nm,0.1s						
KSMR	Kasumkent	0.83	71	ePg	Pg	00 57 29.5	-0.5
	comp=Z,94nm,0.1s						
KSMR				eSg	Sn	00 57 43.0	-0.6
URKR	Urkarakh	0.93	26	i PG	Pb	00 57 31.5	-0.4
URKR				i S	Sn	00 57 45.5	-0.6
URKR				pmax	pmax		
	comp=Z,61nm,0.3s						
URKR	Urkarakh	0.93	26	i Pg	Pb	00 57 31.5	-0.4
	comp=Z,61nm,0.3s						
URKR				i Sg	Sn	00 57 45.5	-0.6
MTKZ	Martakert	1.15	190	⇓iP	Pb	00 57 34.4	-1.2
MTKZ				⇓iS	Sn	00 57 53.1	+1.8
MTKZ	Martakert	1.15	190	⇓P	Pb	00 57 34.4	-1.2
MTKZ				S	Sn	00 57 53.1	+1.8
DRN	Derbent	1.17	53	PG	Pb	00 57 36.0	+0.1
DRN				eS	Sg	00 57 54.0	+2.5
DRN	Derbent	1.17	53	Pg	Pb	00 57 36.0	+0.1
DRN				eSg	Sg	00 57 54.0	+2.5
XNZR	Khunzakh	1.24	347	ePG	Pn	00 57 36.5	-0.6
XNZR				i S	Sn	00 57 54.0	+0.2
XNZR	Khunzakh	1.24	347	ePg	Pn	00 57 36.5	-0.6
XNZR				i Sg	Sn	00 57 54.0	+0.2
ARKR	Arakani	1.27	357	ePG	Pn	00 57 36.1	-1.3
ARKR				pmax	pmax		
	comp=Z,46nm,0.2s						
ARKR	Arakani	1.27	357	ePg	Pn	00 57 36.1	-1.3
	comp=Z,46nm,0.2s						
DGRG	David-gareji	1.29	276	P	Pn	00 57 36.3	-1.4
DGRG				S	Sg	00 57 55.9	+0.5
UNCR	Uncukul	1.40	351	i PG	Pn	00 57 39.3	+0.2
UNCR				i S	Sg	00 57 59.8	+1.0
UNCR				pmax	pmax		
	comp=Z,56nm,0.4s						
UNCR	Uncukul	1.40	351	i Pg	Pn	00 57 39.3	+0.2
	comp=Z,56nm,0.4s						
UNCR				i Sg	Sg	00 57 59.8	+1.0
BTLR	Botlikh	1.48	335	PG	Pn	00 57 40.0	-0.2
BTLR				eS	Sb	00 58 00.5	+0.6
BTLR				pmax	pmax		
	comp=Z,26nm,0.2s						
BTLR	Botlikh	1.48	335	Pg	Pn	00 57 40.0	-0.2
	comp=Z,26nm,0.2s						
BTLR				eSg	Sb	00 58 00.5	+0.6
BUJR	Buynaksk	1.49	1	ePN	Pb	00 57 41.0	-0.4
BUJR				eS	Sg	00 58 04.5	+2.6
BUJR	Buynaksk	1.49	1	ePn	Pb	00 57 41.0	-0.4
KRNR	Karanay	1.50	355	⇓iPN	Pn	00 57 41.0	+0.4
KRNR				i S	Sg	00 58 02.0	-0.1
KRNR				pmax	pmax		
	comp=Z,34nm,0.2s						
KRNR	Karanay	1.50	355	i Pn	Pn	00 57 41.0	+0.4
	comp=Z,34nm,0.2s						
KRNR				i Sg	Sg	00 58 02.0	-0.1
VAD	Vardenisi	1.53	222	P	Pb	00 57 42.0	-0.2
VAD				S	Sg	00 58 03.0	-0.2
STKZ		1.54	189	i P	Pg	00 57 43.7	+0.3
STKZ				⇑iS	Sg	00 58 04.2	+0.8
STKZ		1.54	189	P	Pg	00 57 43.7	+0.3
STKZ				S	Sg	00 58 04.2	+0.8
VADZ	Vardenis	1.54	222	eP	Pb	00 57 42.0	-0.4
VADZ				⇑S	Sb	00 58 03.0	+1.1
VADZ	Vardenis	1.54	222	P	Pb	00 57 42.0	-0.4
VADZ				S	Sb	00 58 03.0	+1.1
DBC	Dubki	1.70	354	ePN	Pn	00 57 43.9	+0.6
DBC				i S	Sg	00 58 09.3	+0.9
DBC	Dubki	1.70	354	ePn	Pn	00 57 43.9	+0.6
DBC				i Sg	Sg	00 58 09.3	+0.9
MTA	Mtatsminda	1.75	283	P	Pn	00 57 34.4	-10
MTA				S	Sn	00 57 53.1	-13
SEAG	Tbilisi Sea	1.76	285	P	Sn	00 58 08.3	+1.8
TBLG	Delisi	1.80	284	PN	Pn	00 57 43.6	-1.1
TBLG	Delisi	1.80	284	P	Pn	00 57 43.6	-1.1
TBLG				S	Sn	00 58 07.9	+0.5
TBLG	Delisi	1.80	284	Pn	Pn	00 57 43.6	-1.1
TBLG				S	Sn	00 58 07.9	+0.5
GRS	Goris	1.92	198	⇓iP	Pn	00 57 43.0	-3.4
GRS				⇑iS	Sn	00 58 08.0	-2.4
GRS	Goris	1.92	198	P	Pn	00 57 43.0	-3.4
GRS				S	Sn	00 58 08.0	-2.4
GRS	Goris	1.92	198	⇓P	Pn	00 57 43.0	-3.4
GRS				S	Sn	00 58 08.0	-2.4
KZR	Kazreti	2.01	272	P	Pn	00 57 46.1	-1.4
KZR				S	Sn	00 58 11.7	-0.8
STEZ	Stepenevan	2.05	262	eP	Pn	00 57 47.0	-1.2
STEZ				S	Sn	00 58 13.0	-0.7
STE	Stepanavan	2.07	262	P	Pn	00 57 43.7	-4.8
STE				S	Sn	00 58 04.2	-10
STE	Stepanavan	2.07	262	P	Pn	00 57 47.0	-1.5
STE				S	Sn	00 58 13.0	-1.3
STE	Stepanavan	2.07	262	P	Pn	00 57 47.0	-1.5
STE				S	Sn	00 58 13.0	-1.3
GNI	Garni	2.13	237	⇑iP	Pn	00 57 49.8	+0.4
GNI				⇓iS	Sb	00 58 20.2	+1.3
GNI	Garni	2.13	237	P	Pn	00 57 49.8	+0.4
GNI				S	Sb	00 58 20.2	+1.3
GNI	Garni	2.13	237	⇑P	Pn	00 57 49.8	+0.4
GNI				S	Sb	00 58 20.2	+1.3
GOR	Gori	2.32	287	P	Pn	00 57 51.0	-0.8
GOR				S	Sn	00 58 20.2	0.0
AKH	Akhalkalaki	2.70	273	P	Pn	00 57 58.3	+1.1
AKH				S	Sn	00 58 32.4	+2.6
ONI	Oni	2.98	296	P	Pb	00 58 08.3	+1.4
ONI				S	Sb	00 58 41.4	-1.9

IDC 12 01:08:43.0±1.2, 18°25S×167°74E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.9/17, mbtmp3.9/7, ML3.4/1, MS3.5/5, Ms1 3.5/5, ms1mx3.1/27, Error ellipse: s-maj=39.6km s-min=23.1km az=130.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.99	198	Pn	Pn	01 09 47.3	+1.6
	2.4nm,0.3s,baz=29,slow=13,SNR=18						
DZM				LR	LR	01 10 29.9	
	comp=Z,161nm,20.0s,baz=194,slow=27						
DZM				Sn	Sn	01 10 32.5	-0.8
	4.5nm,0.3s,baz=126,slow=21,SNR=5.7						
HNR	Honiara	11.58	318	LR	LR	01 14 59.6	
	comp=Z,138nm,20.1s,baz=141,slow=32						
STKA	Stephens Creek	27.21	235	LR	LR	01 24 12.7	
	comp=Z,160nm,19.5s,baz=25,slow=34						
WRA	Warramunga Arr	31.58	261	P	P	01 15 07.6	-0.1
	0.8nm,0.9s,baz=93,slow=8.9,SNR=4.6						
ASAR	Alice Springs	32.01	254	P	P	01 15 10.5	-0.9
	0.5nm,0.5s,baz=82,slow=8.7,SNR=8.1						
ASAR				LR	LR	01 26 35.9	
	comp=Z,143nm,18.8s,baz=267,slow=34						
FITZ	Fitzroy Crossi	39.94	263	LR	LR	01 32 10.1	
	comp=Z,96nm,19.0s,baz=142,slow=35						
PETK	Petropavlovsk-	71.59	354	P	P	01 20 05.6	-0.4
	1.1nm,0.6s,baz=132,slow=4.4,SNR=3.6						
SONM	Songino Array	85.58	324	P	P	01 21 24.8	+1.4
	0.3nm,0.4s,baz=127,slow=3.8,SNR=5.9						
NVAR	Mina Array Bea	89.22	49	P	P	01 21 40.9	-0.4
	1.2nm,1.0s,baz=209,slow=7.2,SNR=6.0						
TXAR	Lajitas Array	97.55	62	P	P	01 22 19.2	-0.5
	0.2nm,0.8s,baz=248,slow=3.7,SNR=3.5						

DJA 12 01:23:50.4±1.1, 8°S±7°×10°8E±°, h35km±9km, M3.5/3, MLv3.5/3, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.60	21	P	Pn	01 24 02.8	+0.2
LEM	Lembang	1.28	1	P	Pn	01 24 13.9	+1.8
LEM				S	Sn	01 24 29.3	+1.1
SKJI	Sukabumi	1.52	317	P	Pn	01 24 15.4	+0.3
SKJI				S	Sn	01 24 33.7	+0.1
BJII	Banjamegara	2.23	70	P	Pn	01 24 26.2	+1.2
BJII				S	Sn	01 24 53.6	+2.2
UGM	Wanagama	2.90	86	S	Sn	01 25 06.5	-1.4
SMRI	Semarang	3.01	69	S	Sn	01 25 11.1	+0.6

IDC 12 01:34:22.7±2.4, 7°98S×74°16W, h116km±29km, mb3.8/6, mb1 3.8/10, mb1mx3.6/24, mbtmp3.7/10, Error ellipse: s-maj=34.2km s-min=11.8km az=41.0, Peru-Brazil border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATAH	Atahualpa	4.28	281	P	Pn	01 35 27.4	+0.9
	18nm,0.3s,baz=66,slow=6.5,SNR=123						
ATAH				S	Sn	01 36 14.9	-1.0
	21nm,0.3s,baz=2.1,slow=16,SNR=5.2						
NNA	Nana	4.78	213	P	Pn	01 35 33.1	+0.3
	13nm,0.3s,baz=24,slow=5.6,SNR=25						
NNA				S	Sn	01 36 22.1	-5.2
	44nm,0.3s,baz=199,slow=20,SNR=21						
LPAZ	La Paz	10.15	145	P	Pn	01 36 47.3	+1.2
	0.3nm,0.3s,baz=323,slow=12,SNR=8.8						
LPAZ				S	Sn	01 38 37.8	-0.8
	0.4nm,0.3s,baz=140,slow=11,SNR=3.7						
SIV	San Ignacio	15.07	123	P	P	01 37 51.2	-1.1
	0.6nm,0.3s,baz=290,slow=11,SNR=9.2						
SIV				S	Sn	01 40 34.3	-2.3
	0.3nm,0.3s,baz=217,slow=20,SNR=4.1						
CFAA	Coronel Fontan	24.15	168	P	P	01 39 28.9	+0.7
	0.2nm,0.5s,baz=326,slow=9.5,SNR=5.5						
CPUP	Villa Florida	24.27	141	P	P	01 39 28.6	-0.7
	3.4nm,0.6s,baz=310,slow=9.7,SNR=18						
BDFB	Brasilia	26.68	109	P	P	01 39 51.4	+0.1
	2.0nm,0.6s,baz=270,slow=11,SNR=2.9						
BDFB				pP	pP	01 40 25.7	+9.3
	1.7nm,0.5s,baz=272,slow=12,SNR=4.8						
TXAR	Lajitas Array	46.72	324	P	P	01 42 40.9	+0.4
	0.4nm,0.5s,baz=151,slow=8.7,SNR=14						
TXAR				pP	pP	01 43 14.5	+7.2
	0.3nm,0.6s,baz=150,slow=8.8,SNR=5.1						
DBIC	Dimbokro	70.62	80	P	P	01 45 26.2	-0.1
	3.5nm,0.5s,baz=256,slow=5.1,SNR=8.6						
TORD	Torodi Ar. Bea	78.19	75	P	P	01 46 09.7	-0.4
	2.4nm,0.5s,baz=281,slow=4.8,SNR=36						
ESDC	Sonseca Array	80.14	47	P	P	01 46 20.7	+0.4
	0.1nm,0.3s,baz=259,slow=4.7,SNR=4.0						

IDC 12 01:35:02.7±26.0, 21°06S×179°14W, h579km±243km, mb3.2/5, mb1 3.4/5, mb1mx3.0/20, mbtmp3.2/5, Error ellipse: s-maj=188.5km s-min=103.9km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	32.38	265	P	P	01 40 46.6	+0.6
	2.4nm,0.4s,baz=99,slow=12,SNR=4.3						
STKA	Stephens Creek	36.59	245	P	P	01 41 20.4	-0.4
	1.7nm,0.5s,baz=106,slow=15,SNR=4.2						
ASAR	Alice Springs	43.36	257	P	P	01 42 14.7	-0.3
	5.1nm,0.8s,baz=94,slow=8.0,SNR=43						
WRA	Warramunga Arr	43.47	263	P	P	01 42 15.3	-0.6
	1.5nm,0.3s,baz=96,slow=7.5,SNR=87						
FITZ	Fitzroy Crossi	51.90	263	P	P	01 43 18.9	+0.1
	0.8nm,0.3s,baz=69,slow=9.7,SNR=8.8						
BRTR	Keskin Array B	146.41	311	PKPbc	PKPbc	01 53 39.1	-0.7
	0.3nm,0.6s,baz=76,slow=2.5,SNR=3.7						

*ISCJB **12** 01:52:36.0±0.9, 40°07N±0°04×23°99E±0°05, h12km±6km, Error ellipse: s-maj=8.4km s-min=5.0km az=35.7*
*CSEM **12** 01:52:35.9±0.2, 40°09N×24°01E, h12km, ML1.6/5, Error ellipse: s-maj=5.0km s-min=3.3km az=40.0*
*ATH **12** 01:52:36.4, 40°14N×24°01E, h18km±9km, MD2.8/5*
*THE **12** 01:52:37.3, 40°15N×24°00E, h7km±1km, ML1.6/5, Error ellipse: s-maj=1.1km s-min=0.5km az=211.0*
ISC 12 01:52:36.4±1.1, 40°13N±0°03×24°02E±0°03, h13km±8km, n22, σ0s44/39, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	Ouranopolis	0.21	352	P	Pg	01 52 41.2	+0.2
OUR	Ouranopolis	0.21	352	P	Pg	01 52 41.2	+0.2
PLG	Polygyros	0.50	299	P	Pg	01 52 46.4	+0.1
PLG				S	Sg	01 52 53.1	0.0
PLG	Polygyros	0.50	299	ePB	Pg	01 52 46.3	0.0
PLG				eSB	Sg	01 52 52.7	-0.4
PLG	Polygyros	0.50	299	P	Pg	01 52 46.4	+0.1
PLG				eSb	Sg	01 52 52.7	-0.4
PLG				S	Sg	01 52 53.1	0.0
HORT	Hortiatis	0.84	304	P	Pg	01 52 52.6	-0.2
HORT				S	Sb	01 53 04.7	+0.4
HORT	Hortiatis	0.84	304	P	Pg	01 52 52.6	-0.2
HORT				S	Sb	01 53 04.7	+0.4
SOH	Sokhos	0.86	324	P	Pb	01 52 53.0	-0.2
SOH				S	Sb	01 53 04.8	+0.2
SOH	Sokhos	0.86	324	ePN	Pb	01 52 53.0	-0.2
SOH				eSN	Sg	01 53 04.1	-0.2
SOH	Sokhos	0.86	324	P	Pb	01 52 53.0	-0.2
SOH				eSn	Sg	01 53 04.1	-0.2
LIA	Limnos Island	0.92	104	P	Pn	01 52 54.9	-0.1
LIA	Limnos Island	0.92	104	ePN	Pn	01 52 54.8	-0.2
LIA				eSN	Sb	01 53 07.0	+0.6
LIA	Limnos Island	0.92	104	ePn	Pn	01 52 54.8	-0.2
LIA				eSn	Sb	01 53 07.0	+0.6
KAVA	Kavala	0.94	23	P	Pg	01 52 54.4	-0.3
KAVA				S	Sn	01 53 08.1	-0.6
KAVA	Kavala	0.94	23	P	Pg	01 52 54.4	-0.3
KAVA				S	Sn	01 53 08.1	-0.6
AOS	Alonnisos	0.96	187	ePN	Pg	01 52 54.9	-0.1
AOS	Alonnisos	0.96	187	ePn	Pg	01 52 54.9	-0.1
SRS	Serrai	1.04	342	P	Pb	01 52 56.4	+0.1
SRS				S	Sn	01 53 10.7	-0.4
SRS	Serrai	1.04	342	P	Pb	01 52 56.4	+0.1
SRS				S	Sn	01 53 10.7	-0.4
NVR	Nevrokopi	1.23	354	P	Pg	01 52 59.6	-0.4
NVR				S	Sn	01 53 17.0	+1.3
NVR	Nevrokopi	1.23	354	ePN	Pb	01 52 59.4	0.0
NVR	Nevrokopi	1.23	354	ePn	Pb	01 52 59.4	0.0
NVR				S	Sn	01 53 17.0	+1.3

*IDC **12** 02:11:48.3±0.6, 0°82N×126°04E, h0km, mb4.3/15, mb1 4.4/17, mb1mx4.3/25, mbtmp4.3/17, ML4.0/2, MS3.5/1, Ms1 3.5/1, ms1mx2.5/29, Error ellipse: s-maj=24.0km s-min=12.2km az=76.0*
*BJI **12** 02:11:48.7, 0°16N×126°64E, h55km, mB5.1/13, mb4.8/20, Ms4.9/5, Ms7 4.7/5*
*DJA **12** 02:11:52.7±0.4, 1°N±5°×12°6E±°, h10km, M4.7/6, mb4.8/4, mB5.1/3, MLv4.6/6, Mw(mB)4.4/3*
*ISCJB **12** 02:11:54.7±0.6, 0°77N±0°04×126°13E±0°04, h61km±5km, mb4.6/42, Error ellipse: s-maj=7.1km s-min=5.9km az=44.5*
*NEIC **12** 02:11:56.1±1.2, 0°79N×126°19E, h59km±11km, mb4.5/16, Error ellipse: s-maj=10.3km s-min=5.2km az=58.0*
ISC 12 02:11:56.6±0.5, 0°78N±0°05×126°16E±0°05, h61km±3km, n91, σ1s23/114, mb4.5/42, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	1.20	90	P	Pn	02 12 15.4	-2.0
MNI	Manado	1.48	296	P	Pn	02 12 17.7	-3.4
GAMI	Galela, Maluku	1.93	57	P	Pn	02 12 28.0	+0.7
LBMI	Labuha	1.94	136	P	Pn	02 12 26.3	-1.1
LBMI				S	Sn	02 12 54.8	+4.1
KMSI	Cibinong	2.19	265	P	Pn	02 12 28.4	-2.3
KMSI				S	Sn	02 12 58.1	+1.3
LUWI	Luwuk	3.84	242	P	Pn	02 12 53.7	+0.4
MRSI	Marisa	4.23	266	P	Pn	02 12 57.3	-1.4
MSAI	Masohi	4.95	146	P	Pn	02 13 09.5	+1.1
	25nm,0.6s,2µm						
SKSI	Soroako, Sulaw	5.84	236	P	Pn	02 13 20.3	-0.5
	90nm,1.0s,781nm						
CTBH	Cotabato--PC H	6.68	343	⇑iP	Pn	02 13 33.3	+1.1
TTSI	Tana Toraja	7.39	239	P	Pn	02 13 41.3	-0.7
	134nm,0.9s,2µm						
SPSI	Sidrap Palu	7.94	234	P	Pn	02 13 49.8	+0.3
KAPI	Kappang	8.61	228	ePn	Pn	02 13 58.7	0.0
KAPI	Kappang	8.61	228	Pn	Pn	02 13 55.1	-3.5
	2.8nm,0.3s,baz=55,slow=8.4,SNR=9.4						
KKM	Kota Kinabalu	11.22	298	ePn	Pn	02 14 33.8	-0.7
KSM	Kuching	15.87	273	ePn	Pn	02 15 37.7	+1.4
	16nm,0.7s						
FITZ	Fitzroy Crossi	18.77	182	P	P	02 16 09.2	-1.8
FITZ	Fitzroy Crossi	18.77	182	P	P	02 16 09.2	-1.8
	0.3nm,0.3s,baz=5.2,slow=11,SNR=8.2						
WRAB	Tennant Creek	22.10	159	eP	P	02 16 45.5	-1.5
	75nm,0.8s						
WRA	Warramunga Arr	22.10	159	P	P	02 16 46.0	-1.0
WRA				PcP	PcP	02 20 42.7	-0.2
WRA	Warramunga Arr	22.10	159	P	P	02 16 46.0	-1.0
	62nm,0.7s,baz=338,slow=11,SNR=193						
WRA				PcP	PcP	02 20 42.7	-0.2
	0.5nm,0.9s,baz=340,slow=1.9,SNR=3.7						
COEN	Coen	22.33	132	eP	P	02 16 50.1	+0.6
	161nm,0.9s						
MBWA	Marble Bar	22.70	196	eP	P	02 16 52.1	-1.3
	6.0nm,0.8s						

PMG	Port Moresby	23.23	116	P	P	02 16 59.4	+0.6
PMG	Port Moresby	23.23	116	P	P	02 16 59.4	+0.6
	23nm,0.8s,baz=290,slow=8.8,SNR=3.3						
IPM	Ipoh	25.37	279	eP	P	02 17 19.8	+1.3
	24nm,1.3s						
AS31	Alice Springs	25.44	163	eP	P	02 17 19.2	+0.3
ASAR	Alice Springs	25.44	163	P	P	02 17 18.9	-0.1
ASAR				PcP	PcP	02 20 50.5	+0.6
ASAR	Alice Springs	25.44	163	P	P	02 17 18.9	-0.1
	9.0nm,0.6s,baz=337,slow=7.3,SNR=74						
ASAR				PcP	PcP	02 20 50.5	+0.6
	0.5nm,0.6s,baz=353,slow=2.2,SNR=4.1						
FORT	Forrest	31.44	177	eP	P	02 18 12.1	-0.2
	24nm,0.8s						
GYA	Guiyang	31.68	325	P	P	02 18 16.8	+2.1
GYA				pP	pP	02 18 30.4	+0.7
GYA				sP	sP	02 18 39.0	+2.1
GYA				PP	PnPn	02 19 23.2	+2.5
GYA				PcP	PcP	02 21 06.7	+1.2
GYA				S	S	02 23 22.0	+1.8
GYA				sS	sS	02 23 45.9	+0.2
GYA				ScP	ScP	02 24 43.0	-0.8
GYA				ScS	ScS	02 28 40.4	-1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	Nanjing	31.86	348	eP	P	02 18 17.2	+1.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMAR	Chiang Mai Arr	31.98	305	P	P	02 18 15.9	-1.3
CMAR	Chiang Mai Arr	31.98	305	P	P	02 18 15.9	-1.3
	comp=Z,0.6nm,0.4s,baz=131,slow=6.5,SNR=4.6						
JNU	Nakatsue	32.47	7	P	P	02 18 20.9	-0.5
JNU	Nakatsue	32.47	7	P	P	02 18 20.9	-0.5
	comp=Z,12nm,1.0s,baz=28,slow=4.0,SNR=3.5						
KMI	Kunming	33.13	319	P	P	02 18 32.9	+5.4
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
STKA	Stephens Creek	35.62	157	eP	P	02 18 48.4	-0.3
	comp=Z,1.0nm,0.6s						
STKA	Stephens Creek	35.62	157	P	P	02 18 48.6	-0.1
	comp=Z,12nm,0.7s,baz=324,slow=8.2,SNR=16						
KSAR	Wonju Array Be	36.52	2	P	P	02 18 56.1	-0.1
KSRS	Korea Array	36.53	2	P	P	02 18 56.1	-0.2
	comp=Z,1.8nm,0.6s,baz=177,slow=11,SNR=5.9						
CD2	Chengdu	36.73	327	eP	P	02 18 59.0	+0.7
CD2				PP	PnPn	02 20 24.7	+1.2
CD2				S	S	02 24 42.7	+4.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,160nm,9.4s						
CD2				LR	LR		
	comp=Z,100nm,9.2s						
MJAR	Matsushiro Arr	37.29	16	P	P	02 19 01.9	-1.1
MJAR	Matsushiro Arr	37.29	16	P	P	02 19 01.9	-1.1
	comp=Z,2.8nm,0.7s,baz=187,slow=9.7,SNR=7.1						
LZH	Lanzhou	40.78	332	eP	P	02 19 33.5	+1.2
LZH				pP	pP	02 19 47.0	-0.7
LZH				sP	sP	02 19 52.2	-2.5
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC	Hu-ho-hao-te	42.02	343	eP	P	02 19 41.6	-0.7
HHC				S	S	02 25 57.3	+0.2
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,220nm,4.8s						
HHC				LR	LR		
	comp=N,260nm,12.4s						
HHC				LR	LR		
	comp=E,220nm,12.3s						
HHC				LR	LR		
	comp=Z,170nm,14.6s						
CN2	Changchun	42.84	359	eP	P	02 19 46.8	-1.9
USRK	Ussuriysk Arra	43.54	6	P	P	02 19 54.1	-0.2
	comp=Z,5.7nm,0.6s,baz=191,slow=6.8,SNR=12						
MDJ	Mudanjiang	43.75	4	P	P	02 19 57.3	+1.2
MDJ				sP	sP	02 20 15.9	-2.7
MDJ				PP	PcP	02 21 40.3	-1.7
MDJ				S	S	02 26 22.1	0.0
MDJ				pmax	pmax		
	comp=Z,16nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,100nm,4.0s						
GTA	Gaotai	45.35	331	eP	P	02 20 10.8	+1.7
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
TAPN	Taplejung	45.36	309	eP	P	02 20 08.8	-0.8
	comp=Z,7.4nm,0.4s						
ODAN	Odare	45.37	308	eP	P	02 20 09.6	0.0
	comp=Z,7.9nm,0.5s						
RAMN	Ramite	46.04	308	eP	P	02 20 14.5	-0.4
GUN	Gumba	47.05	309	eP	P	02 20 21.9	-1.0
	comp=Z,12nm,0.5s						
KOLN	Koldanda	48.79	307	eP	P	02 20 35.4	-0.8
	comp=Z,16nm,0.6s						
DANN	Dangsing	48.91	308	eP	P	02 20 36.4	-0.9
	comp=Z,20nm,0.7s						
SONM	Songino Array	49.91	343	P	P	02 20 43.2	-1.1
SONM				PcP	PcP	02 22 04.1	+0.2
SONM	Songino Array	49.91	343	P	P	02 20 43.2	-1.1
	comp=Z,1.4nm,0.7s,baz=158,slow=8.7,SNR=7.8						
SONM				PcP	PcP	02 22 04.1	+0.2
	comp=Z,1.0nm,0.7s,baz=149,slow=4.0,SNR=3.7						
SONM				LR	LR	02 45 42.8	
	comp=Z,48nm,19.9s,baz=139,slow=41						
WMQ	Urumqi	54.83	327	eP	P	02 21 21.2	+0.4
WMQ				pmax	pmax		
	comp=Z,13nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,85nm,3.6s						
PETK	Petropavlovsk-	58.36	22	P	P	02 21 45.0	-0.5
PETK	Petropavlovsk-	58.36	22	P	P	02 21 45.0	-0.5
	comp=Z,2.3nm,0.7s,baz=193,slow=5.4,SNR=7.1						
MK31	Makanchi Array	59.66	327	eP	P	02 21 53.6	-1.1
MKAR	Makanchi Array	59.66	327	eP	P	02 21 53.8	-1.0
MKAR	Makanchi Array	59.66	327	P	P	02 21 53.5	-1.2
	comp=Z,2.1nm,0.4s,baz=123,slow=8.4,SNR=21						
KSH	Kashi	59.75	317	eP	P	02 21 56.6	+1.0
KSH				epP	pP	02 22 13.0	+1.2
KSH				esP	sP	02 22 19.9	+1.2
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH				pmax	pmax		
	comp=Z,250nm,4.2s						
KSH				LR	LR		
	comp=N,1μm,10.6s						
KSH				LR	LR		
	comp=E,550nm,8.7s						
KSH				LR	LR		
	comp=Z,250nm,5.5s						
TKM2	Tokmak 2	61.59	320	eP	P	02 22 08.6	+0.4
	comp=Z,41nm,2.3s						
AAK	Ala-Archa	62.17	319	eP	P	02 22 11.4	-0.6
	comp=Z,3.3nm,0.8s						
EKS2	Erkin-Say	62.66	319	eP	P	02 22 15.8	+0.5
	comp=Z,3.6nm,0.8s						
KBL	Kabul	62.89	309	eP	P	02 22 16.4	-0.6
	comp=Z,4.3nm,0.8s						
ZALV	Zalesovo Beam	62.96	334	P	P	02 22 16.0	-0.8
ZALV	Zalesovo Beam	62.96	334	P	P	02 22 16.0	-0.8
	comp=Z,1.7nm,0.5s,baz=137,slow=7.2,SNR=8.0						
KURK	Kurchatov	63.92	329	eP	P	02 22 22.4	-0.8
	comp=Z,11nm,0.8s						
KKAR	Karatay Array	65.01	318	eP	P	02 22 31.1	+0.5
	comp=Z,2.1nm,0.8s						
BRVK	Borovoye	69.55	328	eP	P	02 22 57.2	-1.9
ABKAR	Akbulak array	74.07	321	eP	P	02 23 25.7	-0.6
	comp=Z,1.4nm,0.6s						
RDF	Al-Radifah	79.66	299	eP	P	02 23 58.2	+0.1
RDF				AMb	AMB	02 23 59.9	
	comp=Z,7.9nm,1.3s						
MIB	Mutribah	79.91	300	eP	P	02 23 58.8	-0.7
MIB				AMb	AMB	02 24 02.3	
	comp=Z,12nm,0.7s						
NAY	Al-Naaiem	79.95	299	eP	P	02 23 58.9	-0.8
NAY				AMb	AMB	02 23 59.8	
	comp=Z,6.6nm,1.5s						
RAYN	Ar Rayn	81.12	294	eP	P	02 24 06.2	0.0
	comp=Z,2.9nm,0.6s						
KBZ	Khabaz	84.59	314	P	P	02 24 23.1	-0.5
KBZ	Khabaz	84.59	314	P	P	02 24 23.1	-0.5
	comp=Z,3.4nm,0.9s,baz=112,slow=5.0,SNR=7.7						
ILAR	Eielson Array	87.99	25	P	P	02 24 39.2	-0.7
ILAR	Eielson Array	87.99	25	P	P	02 24 39.2	-0.7
	comp=Z,0.2nm,0.5s,baz=254,slow=4.8,SNR=7.4						
BR131	Keskin Array S	91.45	310	eP	P	02 24 57.7	+0.9
	comp=Z,1.1nm,0.7s						
BRTR	Keskin Array B	91.45	310	P	P	02 24 55.5	-1.3
BRTR	Keskin Array B	91.45	310	P	P	02 24 55.5	-1.3
	comp=Z,0.6nm,0.9s,baz=80,slow=3.4,SNR=4.5						
BUR08	Bucovina Ar. S	96.81	318	eP	P	02 25 21.1	-0.1
TORD	Torodi Ar. Bea	123.24	286	PKP	PKPdf	02 30 47.9	+0.2
TORD	Torodi Ar. Bea	123.24	286	PKP	PKPdf	02 30 47.9	+0.2
	comp=Z,1.4nm,0.8s,baz=60,slow=1.9,SNR=8.0						
TXAR	Lajitas Array	123.82	53	PKP	PKPdf	02 30 49.3	+0.7
TXAR	Lajitas Array	123.82	53	PKP	PKPdf	02 30 49.3	+0.7
	comp=Z,0.1nm,0.3s,baz=327,slow=2.1,SNR=3.7						

WEL 12 02:14:09.7±0.1, 40°.38S×174°.95E, h5km, ML3.7/45, 10C-12D, Error ellipse: s-maj=1.0km s-min=0.5km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OGWZ	Otaki Gorge	0.47	159	⇑PG	Pg	02 14 19.2	+0.3
OGWZ				SG	Sg	02 14 25.5	+0.4
KIW	Kapiti Island	0.49	184	⇑PG	Pg	02 14 19.5	+0.3
KIW				AML	AML	02 14 27.3	
KIW				AML	AML	02 14 27.3	
MRZ	Mangatainoka R	0.56	121	⇓PG	Pg	02 14 20.2	-0.3
MRZ				SG	Sg	02 14 27.0	-0.8
MRZ				AML	AML	02 14 27.4	
WAZ	Wanganui	0.62	3	⇑P*	Pb	02 14 22.5	-0.5
WAZ				AML	AML	02 14 38.1	
WAZ				AML	AML	02 14 38.3	
POWZ	Post Office Ro	0.62	92	⇓PG	Pg	02 14 21.2	-0.5
HOWZ	Holdsworth Sta	0.68	141	⇓PG	Pg	02 14 22.7	-0.1
CAW	Cannon Point	0.74	173	⇑PG	Pg	02 14 24.1	+0.2
CAW				SG	Sg	02 14 33.8	+0.2
CAW				AML	AML	02 14 34.5	
TIWZ	Tintock	0.82	120	⇓PG	Pg	02 14 25.4	-0.1
TSZ	Takapari Road	0.83	68	⇓PG	Pg	02 14 25.0	-0.8
TSZ				AML	AML	02 14 25.1	
TSZ				AML	AML	02 14 25.3	
MTW	Mount Morrison	0.89	152	⇓PG	Pg	02 14 27.2	+0.4
MTW				AML	AML	02 14 39.1	
MTW				AML	AML	02 14 39.5	
DUWZ	D'Urville Isla	0.89	241	⇓PG	Pg	02 14 27.3	+0.4
DUWZ				AML	AML	02 14 43.9	
DUWZ				AML	AML	02 14 44.4	
WEL	Wellington	0.92	189	P*	Pg	02 14 27.5	+0.1
DVHZ	Dannevirke	0.93	86	⇓P*	Pg	02 14 27.1	-0.6
SNZO	South Karori	0.95	191	⇑P*	Pg	02 14 27.9	-0.1
SNZO				AML	AML	02 14 45.3	
SNZO				AML	AML	02 14 45.7	
SNZO				AML	AML	02 14 45.8	
SNZO				AML	AML	02 14 46.8	
TCW	Tory Channel	0.98	211	P*	Pg	02 14 27.8	-0.7
TCW				AML	AML	02 14 46.6	
TCW				AML	AML	02 14 47.0	
TMWZ	Te Maipa	1.02	136	P*	Pg	02 14 29.7	+0.2
BFZ	Birch Farm	1.03	108	⇑P*	Pg	02 14 29.5	-0.1
BHW	Baring Head	1.03	183	P*	Pg	02 14 29.3	-0.2
BHW				AML	AML	02 14 48.0	
BHW				AML	AML	02 14 48.5	
PNHZ	Pukenui	1.06	65	⇓P*	Pg	02 14 29.0	-1.2
MSWZ	Moikau Station	1.06	168	⇑P*	Pb	02 14 30.7	0.0
MSWZ				AML	AML	02 14 48.1	
MSWZ				AML	AML	02 14 48.3	
MTVZ	Mangateitei	1.06	22	P*	Pg	02 14 29.4	-0.8
MTVZ				AML	AML	02 14 48.3	
MTVZ				AML	AML	02 14 50.1	
PAWZ	Paruwai Farm	1.07	160	P*	Pb	02 14 30.7	-0.1
PAWZ				AML	AML	02 14 47.4	
PAWZ				AML	AML	02 14 47.9	
PKVZ	Pokaka	1.12	16	⇑P*	Pg	02 14 30.5	-0.8
PKVZ				AML	AML	02 14 50.6	
PKVZ				AML	AML	02 14 51.9	
MOVZ	Moawhango	1.15	33	P*	Pg	02 14 29.9	-1.9
MOVZ				AML	AML	02 14 47.7	
MOVZ				AML	AML	02 14 47.8	
WNVZ	Wahianoa	1.16	26	P*	Pg	02 14 30.8	-1.4
WNVZ				AML	AML	02 14 53.0	
WNVZ				AML	AML	02 14 53.8	
RAEZ	Rainy Point	1.17	338	P*	Pn	02 14 33.6	+0.9
TRWZ	Traveller	1.17	152	P*	Pg	02 14 32.0	-0.2
TRWZ				AML	AML	02 14 51.3	
TRWZ				AML	AML	02 14 51.9	
TRVZ	Turoa	1.17	23	P*	Pg	02 14 31.0	-1.5
TRVZ				AML	AML	02 14 49.4	
TRVZ				AML	AML	02 14 51.1	
WPHZ	Waipukurau	1.18	75	⇓P*	Pg	02 14 32.1	-0.3
DRZ	Dome Shelter	1.20	24	P*	Pg	02 14 32.3	-0.7
DRZ				AML	AML	02 14 54.3	
DRZ				AML	AML	02 14 55.4	
FWVZ	Far West T-bar	1.21	23	P*	Pg	02 14 31.6	-1.6
FWVZ				AML	AML	02 14 51.0	
FWVZ				AML	AML	02 14 51.1	
PLWZ	Palliser	1.22	169	P*	Pg	02 14 32.9	-0.2
TUVZ	Tukino	1.23	26	P*	Pg	02 14 32.0	-1.5
TUVZ				AML	AML	02 14 54.5	
TUVZ				AML	AML	02 14 55.9	
BHHZ	Black Hill Sta	1.23	44	P*	Pg	02 14 31.2	-2.2
DFE	Dawson Falls	1.23	328	P*	Pn	02 14 34.9	+1.2
WPVZ	Whakapapa	1.25	22	P*	Pg	02 14 32.6	-1.3
WPVZ				AML	AML	02 14 53.0	
WPVZ				AML	AML	02 14 53.5	
VRZ	Vera Road	1.26	353	P*	Pg	02 14 33.7	-0.1
VRZ				AML	AML	02 14 54.6	
VRZ				AML	AML	02 15 03.4	
NEZ	North Egmont	1.28	329	P*	Pb	02 14 35.2	+0.7
PRHZ	Porangahau	1.29	86	P*	Pn	02 14 34.1	-0.3
NGZ	Ngauruhoe	1.30	23	P*	Pn	02 14 33.7	-1.0
NGZ				AML	AML	02 14 54.0	
NGZ				AML	AML	02 14 56.0	
TUWZ	Tuamarina	1.30	216	P*	Pn	02 14 33.4	-1.1
TUWZ				AML	AML	02 14 56.9	
TUWZ				AML	AML	02 14 57.0	
DREZ	Durham Road	1.32	334	P*	Pg	02 14 35.6	+0.7
OTVZ	Oturere	1.33	25	⇑P*	Pn	02 14 33.8	-1.3
OTVZ				AML	AML	02 14 54.7	
OTVZ				AML	AML	02 14 55.8	
WTVZ	West Tongariro	1.35	22	PN	Pn	02 14 34.7	-0.7
WTVZ				AML	AML	02 14 56.1	
WTVZ				AML	AML	02 15 04.3	
TWVZ	Taurewa	1.35	16	PN	Pn	02 14 34.1	-1.3
TWVZ				AML	AML	02 14 54.8	
TWVZ				AML	AML	02 14 58.2	
PKE	Pukeiti	1.39	327	PN	Pg	02 14 37.5	+1.0
PKE				AML	AML	02 14 59.8	
PKE				AML	AML	02 15 07.5	
NNZ	Nelson	1.46	234	PN	Pb	02 14 37.1	-0.2
NNZ				AML	AML	02 15 00.1	
NNZ				AML	AML	02 15 02.0	
CMWZ	Cape Campbell	1.48	202	P*	Pg	02 14 38.4	+0.3
CMWZ				AML	AML	02 15 09.5	
CMWZ				AML	AML	02 15 11.7	
PXZ	Pawanui	1.50	77	P*	Pn	02 14 36.9	-0.4
PXZ				AML	AML	02 15 08.4	
PXZ				AML	AML	02 15 08.4	
PXZ				AML	AML	02 15 13.8	
KATZ	Kakaramea	1.51	23	PN	Pn	02 14 37.4	-0.2
KATZ				AML	AML	02 15 01.9	
KATZ				AML	AML	02 15 04.5	
RITZ	Rihia Road	1.56	27	PN	Pn	02 14 38.4	+0.3
RITZ				AML	AML	02 15 02.8	
RITZ				AML	AML	02 15 05.0	
BSWZ	Blackbirch Sta	1.57	211	PN	Pn	02 14 38.4	+0.2
BSWZ				AML	AML	02 15 06.5	
BSWZ				AML	AML	02 15 08.6	
KAHZ	Kahuranaki	1.59	69	PN	Pn	02 14 38.4	-0.1
RATZ	Rangitukua	1.63	23	PN	Pn	02 14 39.7	+0.5
RATZ				AML	AML	02 15 08.8	
RATZ				AML	AML	02 15 13.4	
MCHZ	McNeill Hill	1.63	56	PN	Pb	02 14 40.7	+0.3
BKZ	Black Stump Fm	1.69	45	⇑PN	Pn	02 14 39.7	-0.3
BKZ				AML	AML	02 15 05.6	
BKZ				AML	AML	02 15 10.1	
HATZ	Hinemaiaia	1.72	31	AML	AML	02 15 04.5	
HATZ				AML	AML	02 15 06.8	
WATZ	Wairara	1.77	20	PN	Pb	02 14 41.9	-0.8
WATZ				AML	AML	02 15 11.6	
HIZ	Hauiti	1.86	358	⇓PN	Pn	02 14 42.6	+0.4
HIZ				AML	AML	02 15 12.7	
HIZ				AML	AML	02 15 19.6	
QRZ	Quartz Range	1.90	255	⇓PN	Pb	02 14 44.1	-0.8
QRZ				AML	AML	02 15 14.4	
QRZ				AML	AML	02 15 21.0	
NMHZ	Naumai	1.92	49	PN	Pn	02 14 43.8	+0.7
THZ	Tophouse	2.08	227	PN	Pb	02 14 46.8	-1.2
THZ				AML	AML	02 15 21.6	
THZ				AML	AML	02 15 22.9	
KHZ	Kahutara	2.30	207	PN	Pn	02 14 48.6	+0.3
TOZ	Tahuroa Road	2.67	9	PN	Pb	02 14 56.3	-1.7
DSZ	Denniston Nort	2.75	239	PN	Pn	02 14 56.5	+2.0
DSZ				AML	AML	02 15 47.1	
MWZ	Matawai	2.85	45	AML	AML	02 15 31.7	
LTZ	Lake Taylor	3.14	219	PN	Pn	02 15 00.1	+0.3
LTZ				AML	AML	02 15 49.9	
MQZ	McQueen's Vall	3.74	206	PN	Pn	02 15 06.1	-2.0
FOZ	Fox Glacier	5.05	229	PN	Pn	02 15 25.0	-1.0
ODZ	Otahua Downs	5.64	213	PN	Pn	02 15 32.2	-2.0

MEX 12 02:52:57.2±1.1, 15°.13N×94°.40W, h17km±112km, MD4.2, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.27	63	eP	Pn	02 53 16.3	-3.9
PCIG				i S	Sb	02 53 31.2	-5.7
HUIG	Huatulco	1.77	291	i P	Pn	02 53 24.2	-2.8
HUIG				i S	Sn	02 53 43.6	-5.5
TGIG		2.05	37	i P	Pn	02 53 28.8	-2.1
TGIG				i S	Sn	02 53 51.9	-4.3
THIG		2.08	96	i P	Pn	02 53 28.0	-3.2
THIG				i S	Sn	02 53 53.0	-3.7
CCIG	Comitan	2.46	62	eP	Pn	02 53 34.6	-2.2
CCIG				i S	Sn	02 54 03.1	-3.6
PNIG	Pinotepa	3.80	290	i P	Pn	02 53 53.1	-1.9
PNIG				i S	Sn	02 54 35.5	-3.9

*ISCJB **12** 03:11:33.6±0.4, 59°.77N±0°.03×153°.16W±0°.08, h127km±4km, mb3.7/1, Error ellipse: s-maj=7.4km s-min=3.9km az=25.3*
*IDC **12** 03:11:33.1±1.8, 59°.84N×153°.40W, h90km±30km, mb3.2/1, mb1 3.3/4, mb1mx3.0/28, mbtmp3.1/4, Error ellipse: s-maj=36.7km s-min=12.0km az=105.0*
*NEIC **12** 03:11:35.8, 59°.77N×153°.25W, h117km, MG2.9(AEIC), After AEIC.*
ISC 12 03:11:34.2±0.9, 59°.77N±0°.03×153°.22W±0°.05, h125km±6km, n65, σ0s.88/77, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPT	Oil Point	0.12	181	P	Pn	03 11 51.5	+0.2
ILS	Iliamna Low So	0.20	23	P	Pn	03 11 51.7	+0.2
ILIM	Iliamna	0.34	23	P	Pn	03 11 52.0	0.0
AUL	Augustine Lava	0.40	196	P	Pn	03 11 52.6	+0.4
AUL				S	Sn	03 12 05.8	+0.1
AUW	Augustine West	0.42	198	P	Pn	03 11 52.6	+0.3
AUI	Augustine Isla	0.45	193	P	Pn	03 11 52.6	+0.2
AUI				S	Sn	03 12 05.8	-0.4
RSO	Redoubt South	0.73	19	ePn	Pn	03 11 54.7	+0.1
RSO				eSn	Sn	03 12 09.6	-0.4
RDWB	Redoubt West	0.75	15	P	Pn	03 11 54.0	-0.6
RDWB				S	Sn	03 12 08.6	-1.4
NCT	North Crescent	0.81	10	P	Pn	03 11 55.4	+0.3
MCNL	McNeil River	0.82	225	P	Pn	03 11 55.0	0.0
DFR	Drift River	0.87	18	P	Pn	03 11 55.9	+0.3
FOSS	Fourpeaked Sta	1.00	194	P	Pn	03 11 57.0	+0.3
FONW	Fourpeaked Sta	1.00	201	P	Pn	03 11 57.0	+0.3
NNL	Ninilchik	1.01	73	P	Pn	03 11 58.4	+1.7
KAPH	Katmai Pasha	1.31	207	P	Pn	03 12 00.2	+0.3
KAPH				S	Sn	03 12 19.4	-0.1
CKL	Chakachamna La	1.50	17	P	Pn	03 12 02.6	+0.6
SPU	Mount Spurr	1.53	22	P	Pn	03 12 02.8	+0.4
BGL	Barrier Glacie	1.56	15	P	Pn	03 12 03.6	+0.9
KAWH	Katmai	1.61	211	P	Pn	03 12 03.6	+0.3
SLKM	Skilak Lake	1.68	62	P	Pn	03 12 05.0	+1.0
KAKN	Katmai Knife C	1.76	214	P	Pn	03 12 05.3	+0.3
SVW2	Sparrevohn	1.77	320	P	Pn	03 12 04.8	-0.3
KCE	Katmai Mt Cerb	1.84	214	P	Pn	03 12 06.7	+0.8
KELA	Mount Kelaz	1.86	225	P	Pn	03 12 06.4	+0.1
STLK	Strandline Lak	1.87	21	P	Pn	03 12 07.1	+0.8
KABR	Katmai Barrier	1.88	210	P	Pn	03 12 06.6	+0.2
ANCK	Angle Creek	1.96	218	P	Pn	03 12 08.0	+0.5
KDAK	Kodiak Island	2.02	170	P	Pn	03 12 07.4	-0.7
KDAK				S	Sn	03 12 32.4	-1.7
KDAK	Kodiak Island	2.02	170	P	Pn	03 12 07.4	-0.7
	4.0nm,0.3s,baz=9.5,slow=9.9,SNR=21						
KDAK				S	Sn	03 12 32.8	-1.2
	25nm,0.3s,baz=204,slow=19,SNR=74						
SUA	Susitna One	2.10	35	P	Pn	03 12 10.1	+0.9
RC01	Rabbit Creek A	2.18	51	P	Pn	03 12 10.5	+0.4
SKT	Skwentna	2.37	20	P	Pn	03 12 12.8	+0.4
OHAK	Old Harbor	2.56	181	P	Pn	03 12 13.9	-0.9
OHAK				S	Sn	03 12 43.9	-2.1
PMR	Palmer	2.72	46	P	Pn	03 12 16.8	-0.1
PMR				S	Sn	03 12 47.7	-2.1
SML	Sawmill	3.15	47	ePn	Pn	03 12 22.0	-0.6
SML				eSn	Sn	03 12 57.9	-2.1
PPLA	Purkeypile	3.18	9	ePn	Pn	03 12 24.0	+1.0
TT01	Tatalina	3.42	338	P	Pn	03 12 25.9	-0.2
MID	Middleton Isla	3.52	93	ePn	Pn	03 12 28.0	+0.7
VLZ	Valdez	3.68	65	P	Pn	03 12 29.4	0.0
DIV	Divide	3.94	67	P	Pn	03 12 33.7	+0.7
TRF	Thorofare Moun	3.95	20	P	Pn	03 12 32.5	-0.7
RND	Reindeer	4.21	28	P	Pn	03 12 37.0	+0.4
MCK	McKinley	4.47	25	P	Pn	03 12 40.6	+0.6
VRDI	Verde Repeater	5.05	69	P	Pn	03 12 48.7	+0.8
WRH	Wood River Hil	5.30	25	P	Pn	03 12 50.5	-0.5
BARK	Barkley Ridge	5.41	79	P	Pn	03 12 53.8	+1.1
PTPK	Patty Peak	5.51	70	P	Pn	03 12 54.9	+0.8
CCB	Clear Creek Bu	5.51	25	P	Pn	03 12 53.4	-0.5
KIAG	Kiagna River	5.52	73	P	Pn	03 12 54.1	-0.1
RIDG	Independ'e Rid	5.63	41	P	Pn	03 12 55.9	+0.3
MDM	Murphy Dome	5.70	22	P	Pn	03 12 56.3	-0.2
GRNC	Granite Creek	5.79	75	P	Pn	03 12 58.5	+0.5
IL1	Eielson Array	5.83	28	P	Pn	03 12 57.8	-0.4
ILAR	Eielson Array	5.83	28	P	Pn	03 12 57.4	-0.8
ILAR				S	Sn	03 14 01.4	-2.2
ILAR	Eielson Array	5.83	28	P	Pn	03 12 57.4	-0.8
	1.6nm,0.3s,baz=217,slow=14,SNR=126						
ILAR				S	Sn	03 14 01.4	-2.2
	0.5nm,0.3s,baz=216,slow=22,SNR=6.9						
BARN	Barnard Glacie	5.88	72	P	Pn	03 12 59.5	+0.5
GLM	Gilmore Dome	5.90	25	P	Pn	03 12 59.0	-0.1
IM3	Indian Mountai	6.24	358	P	Pn	03 13 04.7	+0.9
BCA3	Beaver Creek A	6.41	54	P	Pn	03 13 06.3	+0.3
PNL	Peninsula	7.00	85	P	Pn	03 13 14.6	+0.6
BM3	Burnt Mountain	8.57	23	P	Pn	03 13 34.9	-0.4
YKA	Yellowknife Ar	18.65	65	P	Pn	03 15 43.8	0.0
YKA	Yellowknife Ar	18.65	65	P	Pn	03 15 43.8	0.0
	0.1nm,0.3s,baz=279,slow=9.8,SNR=4.3						
SONM	Songino Array	54.83	306	P	P	03 20 52.8	+1.8
SONM	Songino Array	54.83	306	P	P	03 20 52.8	+1.8
	0.5nm,0.6s,baz=54,slow=7.4,SNR=3.0						

*ISK **12** 03:17:12.5, 37°.72N×26°.85E, h5km, MD3.5*
*ATH **12** 03:17:13.8, 37°.76N×26°.95E, h36km±3km, MD3.4/8*
*ISCJB **12** 03:17:13.3±0.4, 37°.73N±0°.02×26°.85E±0°.03, h8km±3km, Error ellipse: s-maj=3.4km s-min=2.7km az=166.6*
*CSEM **12** 03:17:13.3±0.1, 37°.71N×26°.82E, h5km, ML3.7/5, Error ellipse: s-maj=2.5km s-min=2.0km az=78.0*
*DDA **12** 03:17:14.3, 37°.76N×26°.94E, h8km, MD3.6, ML3.8*
*THE **12** 03:17:14.7, 37°.73N×26°.87E, h11km, ML3.7/5, Error ellipse: s-maj=0.9km s-min=0.4km az=76.0*
ISC 12 03:17:13.0±1.1, 37°.71N±0°.02×26°.84E±0°.02, h7km±9km, n163, σ0s.88/196, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	Samos	0.01	249	P	Pg	03 17 16.8	+2.5
SMG	Samos	0.01	249	P	Pg	03 17 16.8	+2.5
GCAM	G?zelcaml?	0.31	92	i P	Pg	03 17 19.2	+0.1
GCAM				i S	Sg	03 17 23.4	+0.2
GCAM	G?zelcaml?	0.31	92	i P	Pg	03 17 19.2	+0.1
GCAM				i S	Sg	03 17 23.4	+0.2
URLA	Izmir	0.68	343	i P	Pb	03 17 26.4	-0.7

URLA				*i* S	Sb	03 17 36.8	+0.1
URLA	Izmir	0.68	343	*i* P	Pb	03 17 26.4	-0.7
URLA				*i* S	Sb	03 17 36.8	+0.1
BLCB	Balcova	0.69	13	PG	Pg	03 17 26.3	0.0
BLCB				*e*SG	Sg	03 17 35.7	+0.4
BLCB	Balcova	0.69	13	*i* Pg	Pg	03 17 26.3	0.0
BLCB				*e*Sg	Sg	03 17 35.7	+0.4
BODT	Bodrum	0.75	150	*e*PG	Pb	03 17 27.4	-0.9
BODT				*e*SG	Sb	03 17 38.5	-0.2
BODT	Bodrum	0.75	150	*e*Pg	Pb	03 17 27.4	-0.9
BODT				*e*Sg	Sb	03 17 38.5	-0.2
IZM	Izmir	0.76	26	PG	Pg	03 17 27.3	-0.3
IZM	Izmir	0.76	26	*i* Pg	Pg	03 17 27.3	-0.3
AYDN	Tasoluk	0.82	93	*i* P	Pg	03 17 28.4	-0.4
AYDN				*i* S	Sg	03 17 38.7	-0.8
AYDN	Tasoluk	0.82	93	*i* P	Pg	03 17 28.4	-0.4
AYDN				*i* S	Sg	03 17 38.7	-0.8
MLSB	Milas	0.85	119	*e*PG	Pb	03 17 29.5	-0.6
MLSB	Milas	0.85	119	*e*Pg	Pb	03 17 29.5	-0.6
CHOS	Chios island	0.92	318	P	Pn	03 17 31.7	-0.6
CHOS				S	Sn	03 17 45.3	-0.5
CHOS	Chios island	0.92	318	*e*PN	Pn	03 17 31.8	-0.6
CHOS				*e*SN	Sn	03 17 45.3	-0.5
CHOS	Chios island	0.92	318	*e*Pn	Pn	03 17 31.8	-0.6
CHOS				*e*Sn	Sn	03 17 45.3	-0.5
NIS1	Nisyros Isl.	1.14	166	P	Pn	03 17 35.4	+0.1
NIS1				S	Sn	03 17 51.6	+0.5
NIS1	Nisyros Isl.	1.14	166	*e*PN	Pn	03 17 36.1	+0.8
NIS1	Nisyros Isl.	1.14	166	P	Pn	03 17 35.4	+0.1
NIS1	Nisyros Isl.	1.14	166	*e*Pn	Pn	03 17 36.1	+0.8
NIS1				S	Sn	03 17 51.6	+0.5
DAT	Datca	1.14	149	*e*PN	Pb	03 17 34.7	-0.4
DAT	Datca	1.14	149	*e*Pn	Pb	03 17 34.7	-0.4
APE	Apeiranthos	1.23	239	*e*PN	Pn	03 17 36.8	+0.3
APE	Apeiranthos	1.23	239	P	Pn	03 17 36.8	+0.3
APE				S	Sn	03 17 54.1	+0.7
APE	Apeiranthos	1.23	239	P	Pn	03 17 36.8	+0.3
APE				S	Sn	03 17 54.1	+0.7
YER	Yerkesik	1.28	116	*e*PN	Pn	03 17 36.6	-0.6
YER	Yerkesik	1.28	116	*e*Pn	Pn	03 17 36.7	-0.6
AKHS	Akhisar	1.39	33	*i* P	Pb	03 17 39.0	-0.3
AKHS				*i* S	Sg	03 17 58.1	+0.3
AKHS	Akhisar	1.39	33	*i* P	Pb	03 17 39.0	-0.3
AKHS				*i* S	Sg	03 17 58.1	+0.3
MANT	Manisa	1.56	60	*i* P	Pg	03 17 42.9	0.0
MANT				*i* S	Sn	03 18 00.1	-1.8
MANT	Manisa	1.56	60	*i* P	Pg	03 17 42.9	0.0
MANT				*i* S	Sn	03 18 00.1	-1.8
PRK	Paraskevi	1.60	344	P	Pn	03 17 41.7	+0.1
PRK				S	Sn	03 18 02.4	0.0
PRK	Paraskevi	1.60	344	*e*PB	Pn	03 17 41.3	-0.3
PRK				*e*SN	Sn	03 18 01.2	-1.2
PRK	Paraskevi	1.60	344	*e*Pb	Pn	03 17 41.3	-0.3
PRK	Paraskevi	1.60	344	P	Pn	03 17 41.7	+0.1
PRK				*e*Sn	Sn	03 18 01.2	-1.2
PRK				S	Sn	03 18 02.4	0.0
AYVA	Ayvalik	1.60	356	*i* P	Pg	03 17 43.6	0.0
AYVA				*i* S	Sg	03 18 06.5	+2.1
AYVA	Ayvalik	1.60	356	*i* P	Pg	03 17 43.6	0.0
AYVA				*i* S	Sg	03 18 06.5	+2.1
KULA	Kula-Manisa	1.64	60	*e*PN	Pb	03 17 43.1	-0.5
KULA	Kula-Manisa	1.64	60	*e*Pn	Pb	03 17 43.1	-0.5
SIGR	SIGRI	1.69	333	P	Pn	03 17 42.7	-0.1
SIGR				S	Sn	03 18 04.6	-0.1
SIGR	SIGRI	1.69	333	P	Pn	03 17 42.7	-0.1
SIGR				S	Sn	03 18 04.6	-0.1
THR2	Thira island,	1.69	222	P	Pb	03 17 43.6	-0.8
THR2	Thira island,	1.69	222	P	Pb	03 17 43.6	-0.8
DALY	Dalyan (Mu˜la	1.70	121	*e*PN	Pb	03 17 43.8	-0.7
DALY	Dalyan (Mu˜la	1.70	121	*e*Pn	Pb	03 17 43.8	-0.7
THR1	Thera Island	1.74	220	P	Pb	03 17 43.9	-1.3
THR1	Thera Island	1.74	220	P	Pb	03 17 43.9	-1.3
DENT	Denizli	1.74	88	*e*PN	Pn	03 17 43.7	+0.1
DENT	Denizli	1.74	88	*e*Pn	Pn	03 17 43.7	+0.1
THR5	Thira Island,	1.76	223	P	Pb	03 17 44.5	-1.0
THR5	Thira Island,	1.76	223	P	Pb	03 17 44.5	-1.0
ARG	Arkhangelos	1.81	145	P	Pn	03 17 44.7	+0.2
ARG	Arkhangelos	1.81	145	*e*PN	Pn	03 17 44.5	0.0
ARG	Arkhangelos	1.81	145	P	Pn	03 17 44.7	+0.2
DEMI	Demirci	1.98	47	*i* P	Pb	03 17 49.4	0.0
DEMI				*i* S	Sb	03 18 15.3	+1.0
DEMI	Demirci	1.98	47	*i* P	Pb	03 17 49.4	0.0
DEMI				*i* S	Sb	03 18 15.3	+1.0
FETY	Fethiye	2.09	120	*e*PN	Pn	03 17 49.1	+0.7
FETY	Fethiye	2.09	120	*e*Pn	Pn	03 17 49.1	+0.7
BALB	Balikesir	2.09	23	*e*PN	Pb	03 17 49.5	-1.6
BALB	Balikesir	2.09	23	*e*Pn	Pb	03 17 49.6	-1.6
BALY	Balya	2.12	16	*i* P	Pb	03 17 50.9	-0.8
BALY				*i* S	Sg	03 18 20.7	-0.3
BALY	Balya	2.12	16	*i* P	Pb	03 17 50.9	-0.8
BALY				*i* S	Sg	03 18 20.7	-0.3
EZN	Ezine	2.15	349	*e*PN	Pn	03 17 49.6	+0.4
EZN	Ezine	2.15	349	*e*Pn	Pn	03 17 49.6	+0.4
KARP	Karpathos	2.17	173	P	Pn	03 17 49.7	+0.1
KARP	Karpathos	2.17	173	*e*PN	Pn	03 17 49.7	+0.1
KARP	Karpathos	2.17	173	P	Pn	03 17 49.7	+0.1
GLHS	Glhisar (BURDU	2.19	104	*e*PN	Pn	03 17 50.3	+0.5
GLHS	Glhisar (BURDU	2.19	104	*e*Pn	Pn	03 17 50.3	+0.5
DURS	Dursunbey	2.28	34	*i* P	Pn	03 17 51.3	+0.2
DURS				*i* S	Sg	03 18 24.9	-1.3
DURS	Dursunbey	2.28	34	*i* P	Pn	03 17 51.3	+0.2
DURS				*i* S	Sg	03 18 24.9	-1.3
DST	Dursunbey	2.35	36	*e*PN	Pn	03 17 52.5	+0.5
DST	Dursunbey	2.35	36	*e*Pn	Pn	03 17 52.5	+0.5
PTL	Penteli	2.38	279	P	Pn	03 17 53.4	+1.0
PTL	Penteli	2.38	279	P	Pn	03 17 53.4	+1.0
GONE	Gonen-Balikesi	2.42	15	*e*PN	Pn	03 17 54.0	+1.0
GONE	Gonen-Balikesi	2.42	15	*e*Pn	Pn	03 17 54.0	+1.0
LIA	Limnos Island	2.54	330	P	Pn	03 17 54.8	+0.3
LIA	Limnos Island	2.54	330	*e*PN	Pn	03 17 54.5	0.0
LIA	Limnos Island	2.54	330	*e*Pn	Pn	03 17 54.5	0.0
LIA	Limnos Island	2.54	330	P	Pn	03 17 54.8	+0.3
ELL	Elmali	2.63	111	*e*PN	Pn	03 17 56.9	+1.0
ELL	Elmali	2.63	111	*e*Pn	Pn	03 17 56.9	+1.0
LPK	Lapseki	2.66	359	*e*PN	Pn	03 17 57.0	+0.8
LPK	Lapseki	2.66	359	*e*Pn	Pn	03 17 57.0	+0.8
TVSB	Tavsanli	2.69	49	*e*PN	Pn	03 17 57.4	+0.7
TVSB	Tavsanli	2.69	49	*e*Pn	Pn	03 17 57.4	+0.7
GELI	Tayfur-Gelibol	2.70	354	*e*PN	Pn	03 17 57.1	+0.4
GELI	Tayfur-Gelibol	2.70	354	*e*Pn	Pn	03 17 57.1	+0.4
KRBG	Karabiga-Canak	2.70	7	*e*PN	Pn	03 17 56.7	-0.1
KRBG	Karabiga-Canak	2.70	7	*e*Pn	Pn	03 17 56.7	-0.1
AOS	Alonnisos	2.75	303	*e*PN	Pn	03 17 58.5	+1.1
AOS	Alonnisos	2.75	303	*e*Pn	Pn	03 17 58.5	+1.1
BNT	Bandirma	2.77	17	*e*PN	Pn	03 17 58.5	+0.7
BNT	Bandirma	2.77	17	*e*Pn	Pn	03 17 58.5	+0.7
LAST	Lasithi	2.77	204	P	Pn	03 17 58.9	+1.1
LAST	Lasithi	2.77	204	*e*PN	Pn	03 17 58.9	+1.1
LAST	Lasithi	2.77	204	P	Pn	03 17 58.9	+1.1
KCTX	Karacabey (Bur	2.81	24	*e*PN	Pn	03 17 58.9	+0.6
KCTX	Karacabey (Bur	2.81	24	*e*Pn	Pn	03 17 58.9	+0.6
ORLT	Orhaneli	2.83	34	*e*PN	Pn	03 17 59.4	+0.8
ORLT	Orhaneli	2.83	34	*e*Pn	Pn	03 17 59.4	+0.8
IDI	Anoyia	2.88	214	P	Pn	03 17 59.8	+0.4
IDI	Anoyia	2.88	214	P	Pn	03 17 59.8	+0.4
ALT	Altintas	2.90	61	*e*PN	Pn	03 18 00.5	+0.9
ALT	Altintas	2.90	61	*e*Pn	Pn	03 18 00.5	+0.9
SMTH	Samothraki Isl	2.94	340	*e*PN	Pn	03 18 00.1	0.0
SMTH	Samothraki Isl	2.94	340	*e*Pn	Pn	03 18 00.1	0.0
ERIK	Erikli-Kesan	2.97	355	*e*PN	Pn	03 18 01.3	+0.9
ERIK	Erikli-Kesan	2.97	355	*e*Pn	Pn	03 18 01.3	+0.9
RKY	Sarkoy-Tekirda	2.98	5	*e*PN	Pn	03 18 00.7	0.0
RKY	Sarkoy-Tekirda	2.98	5	*e*Pn	Pn	03 18 00.7	0.0
ENEZ	Enez	3.07	350	*e*PN	Pn	03 18 02.3	+0.5
ENEZ	Enez	3.07	350	*e*Pn	Pn	03 18 02.3	+0.5
MDNY	Mudanya-Bursa	3.09	30	*e*PN	Pn	03 18 03.3	+1.1
MDNY	Mudanya-Bursa	3.09	30	*e*Pn	Pn	03 18 03.3	+1.1
ANTB	Antalya	3.14	104	*e*PN	Pn	03 18 04.1	+1.3
ANTB	Antalya	3.14	104	*e*Pn	Pn	03 18 04.1	+1.3
ALN	Alexandroupoli	3.24	349	P	Pn	03 18 04.3	+0.1
ALN	Alexandroupoli	3.24	349	P	Pn	03 18 04.3	+0.1
ARMT	Armutlu	3.25	28	*e*PN	Pn	03 18 05.5	+1.1
ARMT	Armutlu	3.25	28	*e*Pn	Pn	03 18 05.5	+1.1
CAVI	Cavuskoy	3.41	42	*e*PN	Pn	03 18 07.7	+1.1
CAVI	Cavuskoy	3.41	42	*e*Pn	Pn	03 18 07.7	+1.1
ADVT	Abdulvahap	3.53	39	*e*PN	Pn	03 18 09.5	+1.3
ADVT	Abdulvahap	3.53	39	*e*Pn	Pn	03 18 09.5	+1.3
ESKT	Eskisehir	3.62	59	*e*PN	Pn	03 18 10.9	+1.4
ESKT	Eskisehir	3.62	59	*e*Pn	Pn	03 18 10.9	+1.4
SLVT	Silivri	3.67	16	*e*PN	Pn	03 18 11.4	+1.3
SLVT	Silivri	3.67	16	*e*Pn	Pn	03 18 11.4	+1.3
GPA	Golpazari	3.73	45	*e*PN	Pn	03 18 12.6	+1.6
GPA	Golpazari	3.73	45	*e*Pn	Pn	03 18 12.6	+1.6
CTKS	Kestanelik-??a	3.75	20	*e*PN	Pn	03 18 12.7	+1.5
CTKS	Kestanelik-??a	3.75	20	*e*Pn	Pn	03 18 12.7	+1.5
ISK	Istanbul-Kandi	3.77	26	*e*PN	Pn	03 18 12.8	+1.4
ISK	Istanbul-Kandi	3.77	26	*e*Pn	Pn	03 18 12.8	+1.4
BGKT	Bogazkoy	3.77	23	*e*PN	Pn	03 18 12.9	+1.4
BGKT	Bogazkoy	3.77	23	*e*Pn	Pn	03 18 12.9	+1.4
HRT	Hereke	3.80	34	*e*PN	Pn	03 18 13.2	+1.2
HRT	Hereke	3.80	34	*e*Pn	Pn	03 18 13.2	+1.2
CTYL	Yal??k??y-??at	3.92	16	*e*PN	Pn	03 18 14.9	+1.4
CTYL	Yal??k??y-??at	3.92	16	*e*Pn	Pn	03 18 14.9	+1.4
KLYT	Kilyos	3.92	25	*e*PN	Pn	03 18 15.1	+1.5
KLYT	Kilyos	3.92	25	*e*Pn	Pn	03 18 15.1	+1.5
GULT	Gulveren	3.94	45	*e*PN	Pn	03 18 15.3	+1.4
GULT	Gulveren	3.94	45	*e*Pn	Pn	03 18 15.3	+1.4
SVRH	Sivrihisar-ESK	4.06	63	*e*PN	Pn	03 18 17.2	+1.7
SVRH	Sivrihisar-ESK	4.06	63	*e*Pn	Pn	03 18 17.2	+1.7
SILT	Sile	4.06	31	*e*PN	Pn	03 18 17.0	+1.5
SILT	Sile	4.06	31	*e*Pn	Pn	03 18 17.0	+1.5
KDZ	Kurdzhali	4.08	345	P	Pn	03 18 15.6	-0.2
KDZ	Kurdzhali	4.08	345	P	Pn	03 18 15.6	-0.2
KIZT	Kizilcal	4.13	72	*e*PN	Pn	03 18 18.1	+1.5
KIZT	Kizilcal	4.13	72	*e*Pn	Pn	03 18 18.1	+1.5
EDRB	Edirne	4.13	359	*e*PN	Pn	03 18 17.4	+1.0
EDRB	Edirne	4.13	359	*e*Pn	Pn	03 18 17.4	+1.0
RZN	Rozhen	4.30	338	P	Pn	03 18 19.5	+0.6
RZN	Rozhen	4.30	338	P	Pn	03 18 19.5	+0.6
SZH	Strazhica	5.59	353	P	Pn	03 18 37.1	+0.6
SZH	Strazhica	5.59	353	P	Pn	03 18 37.1	+0.6

*IDC **12** 03:58:58.1±0.9, 13.°67N×93.°10E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.6/28, mbtmp3.7/7, ML4.0/1, Error ellipse: s-maj=32.0km s-min=22.3km az=55.0*

ISC 12 03:59:01.2±1.3, **14.°0N**±0.°2×**92.°8E**±0.°2, **h32**km, **n16**, σ**1.69**/12, **mb3.8**/6, **Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	7.35	52	Pn	Pn	04 00 48.0	+1.6
	0.6nm,0.3s,baz=243,slow=14,SNR=6.5						
CMAR				Sn	Sn	04 01 54.6	-14
	1.2nm,0.3s,baz=245,slow=28,SNR=6.1						
SHL	Shillong	11.51	356	*e*x	Pn	04 01 48.0	+4.4
ODAN	Odare	13.74	339	*e*P	Pn	04 02 12.4	-1.6
	14nm,0.2s						
TAPN	Taplejung	14.09	341	*e*P	Pn	04 02 17.0	-1.8
	18nm,0.4s						
RAMN	Ramite	14.11	337	*e*P	Pn	04 02 17.9	-1.2
	7.8nm,0.2s						
PKI	Pulchoki	15.14	334	*e*P	Pn	04 02 32.0	-1.1
	5.9nm,0.2s						
PKIN	Phulchoki	15.15	334	*e*P	Pn	04 02 32.3	-0.9
	18nm,0.5s						
DMN	Daman	15.31	333	*e*P	Pn	04 02 33.9	-1.3
	6.0nm,0.2s						
KOLN	Koldanda	16.15	329	*e*P	Pn	04 02 45.8	-0.2
	6.5nm,0.2s						
DANN	Dangsing	16.55	331	*e*P	Pn	04 02 51.3	0.0
	6.3nm,0.2s						
MKAR	Makanchi Array	33.84	347	P	P	04 05 45.9	+5.3
	0.3nm,0.5s,baz=169,slow=8.1,SNR=3.6						
KURBB	Kurchatov Arra	38.30	345	P	P	04 06 23.7	+5.1
	0.4nm,0.6s,baz=167,slow=7.5,SNR=4.2						
WRA	Warramunga Arr	52.99	129	P	P	04 08 13.3	-1.9
	0.7nm,0.8s,baz=310,slow=8.7,SNR=11						
ASAR	Alice Springs	54.93	133	P	P	04 08 28.0	-1.3
	0.6nm,0.5s,baz=306,slow=6.4,SNR=10						
BOSA	Boshof	77.82	236	P	P	04 10 59.4	+3.4
	2.8nm,0.9s,baz=63,slow=2.3,SNR=4.7						
TORD	Torodi Ar. Bea	87.94	283	P	P	04 11 51.1	+2.5
	0.5nm,0.5s,baz=67,slow=4.3,SNR=6.4						

*ISCJB **12** 03:59:55.2±0.5, 24.°83N±0.°03×121.°97E±0.°02, h98km±3km, Error ellipse: s-maj=5.4km s-min=2.8km az=162.3*
*TAP **12** 03:59:55.8, 24.°81N×121.°95E, h94km, ML4.2, B*
*JMA **12** 03:59:55.8±0.3, 24.°90N×122.°01E, h88km, M3.5*

ISC 12 03:59:55.8±1.4, **24.°81N**±0.°05×**121.°97E**±0.°03, **h95**km±7km, **n60**, σ**0.73**/106, **22D**, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.20	4	⇓*i*P	Pn	04 00 09.4	0.0
	baz=19						
TWB1				*e*S	Sn	04 00 18.7	-0.8
	baz=19						
ILA	Ilan	0.21	259	P	Pn	04 00 09.4	+0.1
	baz=253						
ILA				S	Sn	04 00 19.9	+0.4
	baz=253						
TWC	Suao	0.23	210	⇓*i*P	Pn	04 00 09.7	+0.2
	baz=201						
TWC				*i* S	Sn	04 00 19.5	-0.1
	baz=201						
TWE	Neicheng	0.29	253	⇓P	Pn	04 00 10.1	+0.4
	baz=249						
TWE				*e*S	Sn	04 00 20.9	+0.9
	baz=249						
NWF	Wu-fen Shan	0.32	327	⇓*i*P	Pn	04 00 09.9	-0.1
	baz=330						
NWF				S	Sn	04 00 19.3	-1.2
	baz=330						
ENTT	Nioudou	0.40	246	⇓*i*P	Pn	04 00 11.0	+0.6
	baz=253						
ENTT				S	Sn	04 00 22.0	+0.8
	baz=253						
ENA	Nanau	0.43	209	⇓*i*P	Pn	04 00 11.1	+0.5
	baz=199						
ENA				*e*S	Sn	04 00 22.3	+0.8
	baz=199						
TAP1	Taipei	0.47	300	P	Pn	04 00 10.6	-0.2
	baz=303						
TAP1				S	Sn	04 00 21.2	-0.7
	baz=303						
TAP	Taipei	0.48	299	*e*P	Pn	04 00 10.6	-0.3
	baz=303						
TAP				*e*S	Sn	04 00 21.4	-0.8
	baz=303						
NSK	Sanguang	0.57	257	⇓*i*P	Pn	04 00 11.6	-0.1
	baz=255						
NSK				*i* S	Sn	04 00 22.8	-0.8
	baz=255						
TWY	Chenhua	0.58	324	⇓*i*P	Pn	04 00 11.6	-0.1
	baz=331						
TWY				*e*S	Sn	04 00 23.0	-0.4
	baz=331						
TWS1	Kuangyinshan	0.58	300	⇓*i*P	Pn	04 00 11.9	+0.2
	baz=304						
TWS1				*i* S	Sn	04 00 24.4	+0.8
	baz=304						
NNS	Nan Shan	0.66	236	⇓*i*P	Pn	04 00 12.8	+0.3
	baz=238						
NNS				*e*S	Sn	04 00 25.1	+0.1
	baz=238						
NCU	National Centr	0.73	283	⇓*i*P	Pn	04 00 13.3	+0.3
	baz=282						
NCU				S	Sn	04 00 26.3	+0.3
	baz=282						
TWD	Chiawan	0.80	205	⇓P	Pn	04 00 13.3	-0.5
	baz=212						
TWD				*e*S	Sn	04 00 26.4	-0.7
	baz=212						
PCYT	Pengchaiyu	0.82	6	⇓*e*P	Pn	04 00 14.2	+0.2
	baz=13						
HWA	Hwalien	0.89	202	*e*P	Pn	04 00 14.5	-0.2
	baz=190						
HWA				*e*S	Sn	04 00 29.2	+0.4
	baz=190						
NSTT	Nanjuang	0.90	259	⇓P	Pn	04 00 14.8	0.0
	baz=250						
NSTT				S	Sn	04 00 28.3	-0.7
	baz=250						
TWT	Tachien	0.91	233	⇓*i*P	Pn	04 00 15.9	+0.9
	baz=226						
TWT				S	Sn	04 00 30.0	+0.5
	baz=226						
HSN	Hsinchu	0.91	270	⇓P	Pn	04 00 14.7	-0.2
	baz=262						
HSN				*e*S	Sn	04 00 28.5	-0.7
	baz=262						
WHF	Hehuan Shan	0.92	225	⇓*i*P	Pn	04 00 15.7	+0.2
	baz=216						
WHF				S	Sn	04 00 30.1	-0.1
	baz=216						
YOJ	Yonaguni jima	1.01	110	⇓*i*P	Pn	04 00 16.0	+0.1
	baz=114						
YOJ				*e*S	Sn	04 00 30.6	-0.4
	baz=114						
YOJ	Yonaguni jima	1.01	110	P	Pn	04 00 15.7	-0.2
YOJ				S	Sn	04 00 30.6	-0.4
ESL	Shilin	1.10	207	*e*P	Pn	04 00 15.8	-1.2
	baz=203						
NSY	Sanyi	1.17	251	⇓P	Pn	04 00 18.2	+0.4
	baz=249						
NSY				*e*S	Sn	04 00 34.3	-0.1
	baz=249						
TWQ1	Liyutan	1.18	248	⇓P	Pn	04 00 18.1	+0.2
	baz=246						
TWQ1				*e*S	Sn	04 00 34.2	-0.4
	baz=246						
SMLT	Sun Moon Lake	1.34	227	*e*P	Pn	04 00 20.4	+0.4
	baz=232						
SMLT				*e*S	Sn	04 00 38.9	+0.7
	baz=232						
TCU	Taichung	1.35	241	*e*P	Pn	04 00 20.2	+0.2
	baz=240						
TCU				*e*S	Sn	04 00 37.9	-0.2
	baz=240						
TYC	Yuchr	1.36	229	⇓*i*P	Pn	04 00 20.4	+0.4
	baz=233						
TYC				S	Sn	04 00 38.9	+0.6
	baz=233						
EHY	Hungye	1.42	205	*e*P	Pn	04 00 19.8	-1.1
	baz=202						
WNT	Mingjian	1.50	232	*e*P	Pn	04 00 22.3	+0.6
	baz=239						
WNT				*e*S	Sn	04 00 41.9	+0.5
	baz=239						
TWF1	Yuli	1.57	203	*e*P	Pn	04 00 21.4	-1.4
	baz=194						
YUS	Yu-Shan	1.61	216	P	Pn	04 00 24.7	+1.0
	baz=207						
YUS				*e*S	Sn	04 00 46.4	+1.7
	baz=207						
IRIF	Iriomote-Funau	1.67	106	P	Pn	04 00 23.5	-0.4
IRIF				S	Sn	04 00 44.6	-0.6
ALS	Alishan	1.67	220	*e*P	Pn	04 00 25.0	+0.7
	baz=228						
ALS				*e*S	Sn	04 00 48.1	+2.2
	baz=228						
CHN5	Tsauling	1.69	225	⇓P	Pn	04 00 24.6	+0.4
	baz=223						
CHN5				*e*S	Sn	04 00 46.7	+0.8
	baz=223						
WGK	Gukeng	1.70	229	*e*P	Pn	04 00 25.0	+0.6
	baz=238						
WGK				*e*S	Sn	04 00 47.1	+1.0
	baz=238						
CHKT	Chengkung	1.79	198	*e*P	Pn	04 00 24.1	-1.3
	baz=197						
CHKT				*e*S	Sn	04 00 45.9	-2.1
	baz=197						
WTCT	Ta-ch'eng	1.81	239	*e*P	Pn	04 00 25.6	-0.1
	baz=237						
WTCT				*e*S	Sn	04 00 47.8	-0.5
	baz=237						
HATJ	Hateruma jima	1.83	114	P	Pn	04 00 26.4	+0.4
HATJ				*e*S	Sn	04 00 49.5	+0.6
ELDTW	Lidau	1.83	209	*e*P	Pn	04 00 26.3	+0.1
	baz=201						
CHN4	Tsaushan	1.92	221	*e*P	Pn	04 00 27.7	+0.6
	baz=220						
CHN4				*e*S	Sn	04 00 52.6	+1.5
	baz=220						
CHY	Chiayi	1.92	228	*e*P	Pn	04 00 26.9	-0.2
	baz=235						
CHY				*e*S	Sn	04 00 51.3	+0.3
	baz=235						
JKRS	Kuro-shima	1.94	107	P	Pn	04 00 28.0	+0.6
JKRS				S	Sn	04 00 51.6	+0.1
WSF	Szhu	1.98	234	*e*P	Pn	04 00 27.9	0.0
	baz=233						
WSF				*e*S	Sn	04 00 52.2	-0.1
	baz=233						
WTP	Ta-pu	1.99	219	*e*P	Pn	04 00 27.5	-0.6
	baz=216						
JIJ	Ishigaki jima	2.02	102	P	Pn	04 00 28.5	0.0
JIJ				S	Sn	04 00 52.4	-1.1
TWK	Hsinying	2.05	222	*e*P	Pn	04 00 29.2	+0.3
	baz=219						
CHN1	Nanshi	2.08	220	*e*P	Pn	04 00 29.6	+0.3
	baz=218						
CHN1				*e*S	Sn	04 00 55.2	+0.3
	baz=218						
TWG	Pinlang	2.14	203	*e*P	Pn	04 00 28.8	-1.3
	baz=194						
CHN8	Yiju	2.17	228	*e*P	Pn	04 00 30.4	0.0
	baz=236						
CHN8				*e*S	Sn	04 00 56.8	0.0
	baz=236						
SCLT	Jiali	2.30	225	*e*P	Pn	04 00 32.4	+0.3
	baz=224						
SCLT				*e*S	Sn	04 01 00.7	+0.8
	baz=224						
ECL	Taimali	2.39	203	*e*P	Pn	04 00 32.0	-1.3
	baz=195						
TWM1	Shoushan	2.43	216	*e*P	Pn	04 00 33.9	-0.1
	baz=214						
JTJ	Tarama	2.49	93	P	Pn	04 00 35.4	+0.8
JTJ				S	Sn	04 01 04.8	+0.4
PNG	Penghu	2.53	241	*e*P	Pn	04 00 33.8	-1.3
	baz=238						
WDGT	Dungji	2.62	234	*e*P	Pn	04 00 35.8	-0.5
	baz=233						
WDGT				*e*S	Sn	04 01 05.5	-1.9
	baz=233						
SCZT	Fangliau	2.72	207	*e*P	Pn	04 00 38.4	+0.6
	baz=215						
JMJ	Miyako jima 2	3.02	89	*e*S	Sn	04 01 17.2	+0.2
JOGS	Gusukube	3.12	90	*e*S	Sn	04 01 20.5	+1.0

*IDC **12** 04:01:25.1±2.4, 31.°70N×49.°51E, h0km, mb3.8/3, mb1 3.7/5, mb1mx3.4/29, mbtmp3.7/5, ML3.4/2, Error ellipse: s-maj=71.7km s-min=26.1km az=148.0*
*THR **12** 04:01:27.8±1.5, 31.°83N×49.°42E, h16km±13km, ML3.7*
*CSEM **12** 04:01:28.2±0.1, 31.°84N×49.°46E, h2km, ML3.7, Error ellipse: s-maj=2.5km s-min=2.0km az=139.0*
*TEH **12** 04:01:29.2, 31.°83N×49.°46E, h4km, ML3.7*

ISC 12 04:01:27.6±1.4, **31.°83N**±0.°04×**49.°47E**±0.°03, **h6**km±10km, **n82**, σ**1.32**/91, **mb3.9**/3, **2C**, **Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHGR	Shooshtar-Gavs	0.63	296	*e*Pg	Pg	04 01 39.7	+0.1
SHGR	Shooshtar-Gavs	0.63	296	*e*Pg	Pg	04 01 39.7	+0.1
KHMZ	Khomeyn	1.94	12	*e*Pg	Pn	04 02 02.8	+1.4
KHMZ				*e*Sg	Sg	04 02 30.0	-0.1
KHMZ				AML	AML	04 02 31.7	
	comp=N,614nm,0.6s						
KHMZ				AML	AML	04 02 39.2	
	comp=E,665nm,0.6s						
IGAR	Gharneh	2.26	75	*e*		04 02 47.7	
	comp=Z,3µm,0.3s						
IGAR				*e*Pn	Pn	04 02 07.3	+1.5
IKLH	Kolahrood	2.32	50	*e*Sg	Sb	04 02 41.3	+2.2
IKLH				*e*Pn	Pn	04 02 08.3	+1.7
IKLH				*e*		04 02 48.4	
	comp=Z,5µm,0.2s						
IZEF	Zefreh	2.65	66	⇑*e*Pn	Pn	04 02 12.5	+1.4
IZEF				*e*Sg	Sg	04 02 51.9	-0.7
IZEF				*e*		04 02 56.1	
	comp=Z,1µm,0.2s						
IZEF	Zefreh	2.65	66	⇑*e*Pn	Pn	04 02 12.5	+1.4
IZEF				*e*Sg	Sg	04 02 51.9	-0.7
MIB	Mutribah	2.73	223	*e*P	Pn	04 02 13.0	+1.0
MIB				AML	AML	04 03 01.9	
	comp=Z,79nm,0.7s						
MIB	Mutribah	2.73	223	*e*P	Pn	04 02 13.0	+1.0
UMR	Umm Al-Rimmam	2.73	214	*e*P	Pn	04 02 12.6	+0.6
UMR	Umm Al-Rimmam	2.73	214	*e*P	Pn	04 02 12.6	+0.6
ASAO	Ashtian	2.75	10	*e*Pn	Pn	04 02 13.9	+1.4
ASAO				AML	AML	04 02 58.3	
	comp=E,253nm,0.6s						
ASAO				AML	AML	04 03 01.1	
	comp=N,294nm,0.6s						
ASAO	Ashtian	2.75	10	*e*Pn	Pn	04 02 13.9	+1.4
NASN	Na'in	2.99	70	*e*Pn	Pn	04 02 17.6	+1.7

NASN	Na'in	2.99	70	ePn	Pn	04 02 17.6	+1.7
GHVR	GHOM	3.05	30	ePn	Pn	04 02 17.8	+1.2
GHVR				AML	AML	04 03 14.6	
	comp=N,297nm,0.7s						
GHVR				AML	AML	04 03 16.3	
	comp=E,200nm,0.8s						
GHVR	GHOM	3.05	30	ePn	Pn	04 02 17.8	+1.2
KBD	Kabd	3.06	210	eP	Pn	04 02 17.6	+1.1
KBD	Kabd	3.06	210	eP	Pn	04 02 17.6	+1.1
NAY	Al-Naaiem	3.21	217	eP	Pn	04 02 19.4	+0.8
NAY	Al-Naaiem	3.21	217	eP	Pn	04 02 19.4	+0.8
IBDR	Badra	3.25	294	ePn	Pg	04 02 28.7	-1.1
IBDR				ePb	Pb	04 02 35.0	+9.3
IBDR				i Sn	Sg	04 03 15.0	+3.1
IBDR				i Sg	Sb	04 03 35.0	+30
RDF	Al-Radifah	3.34	210	eP	Pn	04 02 22.1	+1.7
RDF	Al-Radifah	3.34	210	eP	Pn	04 02 22.1	+1.7
IVIS	Veis	3.47	321	ePn	Pn	04 02 23.7	+1.4
IVIS				e		04 03 33.7	
	comp=Z,2μm,0.3s						
IVIS	Veis	3.47	321	ePn	Pn	04 02 23.7	+1.4
IGHG	Ghaleghazi	3.48	316	ePn	Pn	04 02 23.7	+1.2
IGHG				e		04 03 36.8	
	comp=Z,4μm,0.3s						
IGHG	Ghaleghazi	3.48	316	ePn	Pn	04 02 23.7	+1.2
IR5	Iran Long-Peri	3.50	15	ePn	Pn	04 02 24.1	+1.4
IR5	Iran Long-Peri	3.50	15	ePn	Pn	04 02 24.1	+1.4
IRAZ	Razeghan	3.58	6	ePn	Pn	04 02 25.4	+1.5
IRAZ				e		04 03 36.1	
	comp=Z,2μm,0.3s						
IRAZ	Razeghan	3.58	6	ePn	Pn	04 02 25.4	+1.5
ISAD	Sadrabad	3.59	88	ePn	Pn	04 02 25.5	+1.4
ISAD				e		04 03 49.5	
	comp=Z,825nm,0.4s						
ISAD	Sadrabad	3.59	88	ePn	Pn	04 02 25.5	+1.4
IVRN	Varamin	3.68	30	ePn	Pn	04 02 26.5	+1.4
IVRN				e		04 03 30.2	
	comp=Z,1μm,0.3s						
IVRN	Varamin	3.68	30	ePn	Pn	04 02 26.5	+1.4
SNGE	Sanandaj	3.70	332	ePn	Pn	04 02 26.1	+0.5
SNGE				AML	AML	04 03 12.1	
	comp=E,115nm,0.6s						
SNGE				AML	AML	04 03 31.6	
	comp=N,152nm,0.4s						
SNGE	Sanandaj	3.70	332	ePn	Pn	04 02 26.1	+0.5
ILIN	Lien	3.72	326	ePn	Pn	04 02 26.6	+0.7
ILIN				e		04 03 13.1	
	comp=Z,3μm,0.2s						
ILIN	Lien	3.72	326	ePn	Pn	04 02 26.6	+0.7
IDHR	Dehrash	3.85	319	ePn	Pn	04 02 29.1	+1.5
IDHR				e		04 03 15.0	
	comp=Z,4μm,0.1s						
IDHR	Dehrash	3.85	319	ePn	Pn	04 02 29.1	+1.5
IR3	Iran Long-Peri	3.86	19	ePn	Pn	04 02 28.8	+1.2
IR3				eSg	Sg	04 03 29.9	-1.6
IR3	Iran Long-Peri	3.86	19	ePn	Pn	04 02 28.8	+1.2
IR3				eSg	Sg	04 03 29.9	-1.6
IMHD	Mahdasht	3.97	14	ePn	Pn	04 02 30.5	+1.3
IMHD				e		04 02 42.9	
	comp=Z,1μm,0.2s						
IMHD	Mahdasht	3.97	14	ePn	Pn	04 02 30.5	+1.3
ISRV	Sarvestan	3.98	127	ePn	Pn	04 02 31.1	+1.5
ISRV	Sarvestan	3.98	127	ePn	Pn	04 02 31.1	+1.5
ICHK	Chekchek	4.22	83	ePn	Pn	04 02 33.8	+1.1
ICHK				e		04 02 34.9	
	comp=Z,557nm,0.1s						
ICHK	Chekchek	4.22	83	ePn	Pn	04 02 33.8	+1.1
THKV	Tehran--Karaj	4.24	16	ePn	Pn	04 02 34.4	+1.5
THKV				AML	AML	04 03 52.7	
	comp=E,78nm,0.6s						
THKV				AML	AML	04 03 58.9	
	comp=N,64nm,0.6s						
THKV	Tehran--Karaj	4.24	16	ePn	Pn	04 02 34.4	+1.5
DAMV	Damavand	4.32	28	ePn	Pn	04 02 35.1	+0.9
DAMV				AML	AML	04 03 52.8	
	comp=N,69nm,0.5s						
DAMV				AML	AML	04 03 55.3	
	comp=E,82nm,0.5s						
DAMV	Damavand	4.32	28	ePn	Pn	04 02 35.1	+0.9
IMEH	Mehriz	4.41	94	ePn	Pn	04 02 36.4	+1.0
IMEH				e		04 03 03.3	
	comp=Z,195nm,0.3s						
IMEH	Mehriz	4.41	94	ePn	Pn	04 02 36.4	+1.0
BHD	Baghdad	4.53	290	ePn	Pn	04 02 37.7	+1.0
BHD				eSn	Sn	04 03 29.7	0.0
BHD				eLg	Lg	04 03 45.3	
BHD				eSg	Sg	04 03 51.7	-1.3
IGZV	Ghazvin	4.58	8	ePn	Pn	04 02 38.8	+1.1
IGZV				e		04 04 13.1	
	comp=Z,883nm,0.4s						
IGZV	Ghazvin	4.58	8	ePn	Pn	04 02 38.8	+1.1
ILAS	Lasjerd	4.58	39	ePn	Pn	04 02 38.6	+0.8
ILAS				e		04 04 17.7	
	comp=Z,809nm,0.3s						
ILAS	Lasjerd	4.58	39	ePn	Pn	04 02 38.6	+0.8
IFIR	Firoozkooh	4.68	35	ePn	Pn	04 02 40.3	+1.2
IFIR	Firoozkooh	4.68	35	ePn	Pn	04 02 40.3	+1.2
ZNJK	Zanjan	4.87	353	ePn	Pn	04 02 42.2	+0.6
ZNJK	Zanjan	4.87	353	ePn	Pn	04 02 42.2	+0.6
IPRN	Peran	5.00	28	ePn	Pn	04 02 45.7	+2.3
IALA	Alasht	5.07	32	ePn	Pn	04 02 45.8	+1.4
IALA	Alasht	5.07	32	ePn	Pn	04 02 45.8	+1.4
ISHM	Shahmirzad	5.08	38	ePn	Pn	04 02 45.7	+1.1
ISHM				e		04 02 47.4	
	comp=Z,736nm,0.1s						
ISHM	Shahmirzad	5.08	38	ePn	Pn	04 02 45.7	+1.1
IANJ	Anjilo	5.19	44	ePn	Pn	04 02 46.7	+0.7
IANJ				e		04 03 08.0	
	comp=Z,307nm,0.3s						
IANJ	Anjilo	5.19	44	ePn	Pn	04 02 46.7	+0.7
IBAF	Bafgh	5.21	91	ePn	Pn	04 02 47.6	+1.4
IBAF				e		04 04 37.5	
	comp=Z,185nm,0.4s						
IBAF	Bafgh	5.21	91	ePn	Pn	04 02 47.6	+1.4
IKIA	Kiasar	5.59	38	ePn	Pn	04 02 53.3	+1.7
IKIA				e		04 04 44.9	
	comp=Z,268nm,0.3s						
IKIA	Kiasar	5.59	38	ePn	Pn	04 02 53.3	+1.7
IGLO	Ghaloghah	5.90	37	ePn	Pn	04 02 56.8	+1.1
IGLO				e		04 04 53.2	
	comp=Z,595nm,0.4s						
BRTR	Keskin Array B	15.05	306	Pn	Pn	04 05 02.8	+1.7
	comp=Z,0.2nm,0.3s,baz=128,slow=13,SNR=6.4						
AKTO	Aktyubinsk	19.64	16	P	P	04 05 55.3	-1.6
	comp=Z,0.1nm,0.3s,baz=210,slow=14,SNR=4.4						
BVAR	Borovoye Array	26.03	29	P	P	04 07 00.7	-0.8
	comp=Z,1.5nm,0.6s,baz=224,slow=8.3,SNR=9.2						
MKAR	Makanchi Array	29.21	50	P	P	04 07 29.6	-0.5
	comp=Z,0.4nm,0.6s,baz=253,slow=10,SNR=3.9						
TORD	Torodi Ar. Bea	47.48	258	P	P	04 10 01.8	-1.9
	comp=Z,1.4nm,0.8s,baz=54,slow=7.8,SNR=6.6						

IDC 12 04:04:50.7±4.6, 13°.20N×88°.59W, h0km, mb3.5/4, mb1 3.9/4, mb1mx3.5/24, mbtmp3.6/4, Error ellipse: s-maj=81.3km s-min=56.6km az=157.0, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	21.29	321	P	P	04 09 40.0	+0.9
	0.5nm,0.5s,baz=146,slow=11,SNR=12						
TKL	Tuckaleechee C	22.78	10	P	P	04 09 54.6	-0.2
	2.5nm,0.8s,baz=176,slow=14,SNR=2.2						
SADO	Sadowa	32.48	13	P	P	04 11 23.5	+0.6
	1.8nm,0.8s,baz=225,slow=7.1,SNR=3.6						
YKA	Yellowknife Ar	52.60	345	P	P	04 14 04.4	-1.5
	0.1nm,0.4s,baz=158,slow=6.7,SNR=3.8						
WRA	Warramunga Arr	138.40	255	PKP	PKPdf	04 24 19.4	+0.4
	0.2nm,0.5s,baz=89,slow=2.1,SNR=6.1						

*ISK **12** 04:07:22.1, 40°.08N×40°.84E, h16km, MD2.8*
*CSEM **12** 04:07:23.2±0.2, 40°.05N×40°.83E, h23km±2km, MD2.9, Error ellipse: s-maj=7.2km s-min=4.8km az=13.0*
*DDA **12** 04:07:23.9, 40°.09N×40°.91E, h7km, MD2.9*
ISC 12 04:07:22.5±1.2, 40°.06N±0°.03×40°.86E±0°.02, h9km±12km, n29, σ0s.89/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	Kop Dagi	0.28	261	i P	Pb	04 07 30.6	+0.7
KOPT				i S	Sb	04 07 35.5	+0.6
KOPT	Kop Dagi	0.28	261	i P	Pb	04 07 30.6	+0.7
KOPT				i S	Sb	04 07 35.5	+0.6
EZM	Erzurum	0.41	112	ePG	Pg	04 07 31.5	+0.8
EZM				eSG	Sb	04 07 38.2	-0.5
ERZM	Erzurum	0.42	112	i P	Pb	04 07 32.1	-0.1
ERZM				i S	Sb	04 07 38.9	+0.1
ERZM	Erzurum	0.42	112	i P	Pb	04 07 32.1	-0.1
ERZM				i S	Sb	04 07 38.9	+0.1
BAYT	Ayd˜–ntepe-Bay	0.64	301	ePG	Pg	04 07 34.7	-0.3
BAYT	Ayd˜–ntepe-Bay	0.64	301	ePg	Pg	04 07 34.7	-0.3
HOMI	Horasan	0.80	91	eP	Pn	04 07 40.8	+0.6
HOMI				eS	Sg	04 07 49.3	+0.9
ERZN	Erzincan	1.00	242	ePG	Pg	04 07 41.5	-0.1
BNGB	Bingˆ¶l	1.08	188	ePN	Pg	04 07 43.3	+0.1
PZAR	Pazar-Rize	1.11	1	ePN	Pg	04 07 43.5	-0.4
PZAR	Pazar-Rize	1.11	1	ePn	Pg	04 07 43.5	-0.4
GUMT	Gumushane	1.13	291	ePN	Pb	04 07 43.5	-0.8
GUMT	Gumushane	1.13	291	ePn	Pb	04 07 43.5	-0.8
EZC	Erzincan	1.20	256	ePN	Pb	04 07 44.6	-0.9
EZC	Erzincan	1.20	256	ePg	Pb	04 07 41.6	-3.9
EZC	Erzincan	1.20	256	ePn	Pb	04 07 44.6	-0.9
BINT	Bingol	1.22	194	ePn	Pb	04 07 43.3	-2.5
KELT	Kelkit	1.23	275	eP	Pg	04 07 47.9	+1.7
KELT				eS	Sn	04 08 05.0	+1.9
BCA	Borcka	1.50	22	ePN	Pn	04 07 48.8	-0.8
BCA	Borcka	1.50	22	ePn	Pn	04 07 48.8	-0.8
PTK	Pertek	1.63	225	ePN	Pn	04 07 50.7	-0.9
PTK	Pertek	1.63	225	ePn	Pn	04 07 50.7	-0.9
AGRB	Hanur-Agry	1.71	106	ePN	Pn	04 07 52.3	-0.4
AGRB	Hanur-Agry	1.71	106	ePn	Pn	04 07 52.3	-0.4
ESPY	Espiye-Giresun	1.84	298	ePN	Pn	04 07 53.7	-0.6
ESPY	Espiye-Giresun	1.84	298	ePn	Pn	04 07 53.7	-0.6
ILIC	ilic-Erzincan	1.87	252	ePN	Pn	04 07 54.3	-0.5
ILIC	ilic-Erzincan	1.87	252	ePn	Pn	04 07 54.3	-0.5

GUC 12 04:33:01.3±0.8, 21°.77S×68°.70W, h126km±10km, ML3.5, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB04	Plate Boundary	0.88	236	⇑iP	Pn	04 33 29.8	+7.0
PB04				i S	Sn	04 33 51.3	+12
PB04				AML	AML	04 33 53.7	
	comp=N,481nm,0.2s						
PB01	Plate Boundary	1.03	314	⇓iP	Pn	04 33 24.9	+0.6
PB01				i S	Sn	04 33 42.7	+0.9
PB01				AML	AML	04 33 45.8	
	comp=E,1μm,0.2s						
MACH	Maria Elena	1.07	246	⇑iP	Pn	04 33 25.5	+0.7
MACH				i S	Sn	04 33 43.7	+1.0
HMBC	Humberstone	1.85	323	⇑iP	Pn	04 33 34.1	+0.6
HMBC				i S	Sn	04 33 59.3	+1.2
HMBC				AML	AML	04 34 00.4	
	comp=E,708nm,0.7s						
CEN1	Los Morros	2.13	220	⇑iP	Pn	04 33 40.9	+4.1
CEN1				i S	Sn	04 34 09.7	+5.7
CEN1				AML	AML	04 34 18.6	
	comp=N,121nm,0.6s						
ANCH	Antofagasta	2.47	219	eP	Pn	04 33 42.3	+1.3
ANCH				i S	Sn	04 34 10.8	-0.8
PSGC	Pisagua	2.54	328	eP	Pn	04 33 41.9	-0.1
PSGC				i S	Sn	04 34 14.0	+0.7
PSGC				AML	AML	04 34 15.6	
	comp=E,164nm,0.5s						
MNMC	Minimini	2.76	342	eP	Pn	04 33 46.0	+1.0
MNMC				i S	Sn	04 34 20.3	+1.6
MNMC				AML	AML	04 34 26.8	
	comp=E,372nm,0.3s						

*ISCJB **12** 04:38:41.7±0.3, 30°.62S±0°.04×178°.58W±0°.08, h124km, mb4.5/31, Error ellipse: s-maj=10.6km s-min=4.4km az=21.2*
*NEIC **12** 04:38:46.2±0.8, 30°.24S×178°.46W, h155km±6km, mb4.7/18, Error ellipse: s-maj=9.6km s-min=7.5km az=135.0*
*IDC **12** 04:38:46.2±0.6, 30°.16S×178°.44W, h150km±5km, mb4.2/16, mb1 4.4/16, mb1mx4.3/19, mbtmp4.2/16, MS3.4/2, Ms1 3.4/2, ms1mx2.7/32, Error ellipse: s-maj=14.6km s-min=13.4km az=129.0*
ISC 12 04:38:43.1±0.4, 30°.52S±0°.06×178°.52W±0°.09, h124km, n141, σ1s.59/140, mb4.7/30, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.37	22	P	Pn	04 39 11.2	+1.9
RAO				S	Sn	04 39 30.4	+1.2
RAO	Raoul Island	1.37	22	P	Pn	04 39 11.2	+1.9
	1μm,0.3s,baz=78,slow=10,SNR=41						
RAO				S	Sn	04 39 30.4	+1.2
	3μm,0.3s,baz=47,slow=22,SNR=17						
RIZ	Raoul Island	1.37	22	PN	Pn	04 39 11.2	+1.9
RIZ				SN	Sn	04 39 32.0	+2.7
OUZ	Omahuta	8.12	233	ePn	Pn	04 40 45.1	+7.0
MWZ	Matawai	8.45	202	Pn	Pn	04 40 41.7	-1.0
MWZ	Matawai	8.45	202	PN	Pn	04 40 41.7	-1.0
MWZ				SN	Sn	04 42 16.0	-0.4
URZ	Urewera	8.52	204	P	Pn	04 40 43.0	-0.5
URZ				S	Sn	04 42 19.3	+1.3
URZ	Urewera	8.52	204	PN	Pn	04 40 43.2	-0.4
URZ				SN	Sn	04 42 18.9	+0.9
URZ	Urewera	8.52	204	P	Pn	04 40 43.0	-0.5
	3.3nm,0.3s,baz=278,slow=16,SNR=17						
URZ				S	Sn	04 42 19.3	+1.3
	40nm,0.3s,baz=344,slow=23,SNR=19						
KNZ	Kokohu	9.04	199	Pn	Pn	04 40 48.1	-2.4
KNZ	Kokohu	9.04	199	PN	Pn	04 40 48.1	-2.4
RAHZ	Arahi	9.12	202	Pn	Pn	04 40 50.1	-1.6
RAHZ	Arahi	9.12	202	PN	Pn	04 40 50.1	-1.6
BKZ	Black Stump Fm	9.55	204	Pn	Pn	04 40 55.6	-1.8
BKZ	Black Stump Fm	9.55	204	PN	Pn	04 40 55.6	-1.8
KAHZ	Kahuranaki	9.99	201	Pn	Pn	04 41 02.0	-1.4
KAHZ	Kahuranaki	9.99	201	PN	Pn	04 41 02.0	-1.4
BFZ	Birch Farm	10.99	201	Pn	Pn	04 41 12.3	-4.5
BFZ	Birch Farm	10.99	201	PN	Pn	04 41 11.8	-5.0
OGWZ	Otaki Gorge	11.48	205	Pn	Pn	04 41 18.4	-4.9
OGWZ	Otaki Gorge	11.48	205	PN	Pn	04 41 18.3	-4.9
KIW	Kapiti Island	11.62	206	Pn	Pn	04 41 20.9	-4.2
KIW	Kapiti Island	11.62	206	PN	Pn	04 41 20.9	-4.2
CAW	Cannon Point	11.77	204	Pn	Pn	04 41 23.2	-3.9
CAW	Cannon Point	11.77	204	PN	Pn	04 41 23.2	-3.9
BHW	Baring Head	12.11	204	Pn	Pn	04 41 27.4	-4.0
TCW	Tory Channel	12.16	207	Pn	Pn	04 41 28.1	-4.1
TUWZ	Tuamarina	12.48	207	Pn	Pn	04 41 32.4	-3.9
NNZ	Nelson	12.53	209	Pn	P	04 41 43.3	-0.3
KHZ	Kahutara	13.47	206	Pn	Pn	04 41 43.1	-6.1
RPZ	Rata Peaks	15.56	209	P	P	04 42 18.2	+1.0
RPZ				S	Sn	04 44 55.4	-13
RPZ	Rata Peaks	15.56	209	P	P	04 42 18.2	+1.0
	3.6nm,0.3s,baz=354,slow=3.2,SNR=15						
RPZ				S	Sn	04 44 55.4	-13
	3.4nm,0.3s,baz=136,slow=23,SNR=11						
DZM	Mont Dzumac	15.88	298	P	P	04 42 24.9	+3.9
DZM	Mont Dzumac	15.88	298	P	P	04 42 24.9	+3.9
	0.5nm,0.3s,baz=156,slow=22,SNR=8.5						
DZM				LR	LR	04 46 49.3	
	comp=Z,123nm,21.0s,baz=193,slow=31						
EIDS	Eidsvold	27.30	273	eP	P	04 44 18.2	+2.0
	18nm,0.8s						
CTA	Charters Tower	33.38	280	P	P	04 45 12.2	+2.4
CTA	Charters Tower	33.38	280	P	P	04 45 12.2	+2.4
	40nm,0.5s,baz=105,slow=11,SNR=52						
CTAO	Charters Tower	33.38	280	eP	P	04 45 12.1	+2.3
	48nm,0.8s						
STKA	Stephens Creek	34.02	257	eP	P	04 45 17.8	+2.6
	7.4nm,0.9s						
STKA	Stephens Creek	34.02	257	P	P	04 45 18.3	+3.1
	22nm,0.6s,baz=101,slow=11,SNR=56						
STKA				LR	LR	04 59 02.0	
	comp=Z,76nm,19.0s,baz=201,slow=36						
PMG	Port Moresby	38.26	296	eP	P	04 45 50.0	-1.4
	36nm,1.1s						
COEN	Coen	38.88	286	eP	P	04 45 57.4	+0.8
AS31	Alice Springs	42.66	267	eP	P	04 46 27.7	+0.1
ASAR	Alice Springs	42.66	267	P	P	04 46 27.9	+0.2
ASAR				PcP	PcP	04 48 16.6	-0.8
ASAR				ScP	ScP	04 51 53.2	-3.6
ASAR	Alice Springs	42.66	267	P	P	04 46 27.9	+0.2
	12nm,0.6s,baz=104,slow=7.2,SNR=113						
ASAR				PcP	PcP	04 48 16.6	-0.8
	1.4nm,0.7s,baz=119,slow=4.2,SNR=5.3						
ASAR				ScP	ScP	04 51 53.2	-3.6
	1.5nm,0.8s,baz=109,slow=3.9,SNR=8.2						
WRAB	Tennant Creek	43.65	273	eP	P	04 46 35.4	-0.2
	22nm,0.6s						
WRA	Warramunga Arr	43.66	273	P	P	04 46 35.6	0.0
WRA	Warramunga Arr	43.66	273	P	P	04 46 35.6	0.0
	18nm,0.5s,baz=111,slow=8.0,SNR=212						
FORT	Forrest	45.59	255	eP	P	04 46 50.6	-0.2
	40nm,0.9s						
VNDA	Vanda	47.93	186	eP	P	04 47 11.8	+3.3
	11nm,1.5s						
VNDA	Vanda	47.93	186	P	P	04 47 12.1	+3.7
	1.5nm,0.5s,baz=354,slow=7.3,SNR=18						
FITZ	Fitzroy Crossi	51.91	270	P	P	04 47 39.7	+0.4
FITZ	Fitzroy Crossi	51.91	270	P	P	04 47 39.7	+0.4
	13nm,0.8s,baz=159,slow=7.5,SNR=29						
CASY	Casey	54.83	208	eP	P	04 48 00.5	+0.6
	22nm,0.8s						
MBWA	Marble Bar	55.77	264	eP	P	04 48 06.1	-1.3
	15nm,1.0s						
QSPA	South Pole Qui	59.59	180	eP	P	04 48 36.8	+3.2
	21nm,0.8s						
QSPA	South Pole Qui	59.59	180	P	P	04 48 36.8	+3.2
	18nm,0.7s,baz=45,slow=2.0,SNR=31						
MAW	Mawson	72.04	201	P	P	04 49 54.3	+1.3
MAW	Mawson	72.04	201	P	P	04 49 54.3	+1.3
	1.2nm,0.5s,baz=124,slow=3.4,SNR=3.8						
KKM	Kota Kinabalu	72.17	288	eP	P	04 49 54.3	-0.6
	7.4nm,0.6s						
SNAA	Sanae	78.05	179	eP	P	04 50 29.0	+1.4
SNAA	Sanae	78.05	179	e	P	04 50 33.0	+5.4
SNAA	Sanae	78.05	179	eP	P	04 50 28.7	+1.0
	4.5nm,0.6s						
VNA1	Neumayer--Stat	78.88	177	eP	P	04 50 34.1	+2.0
VNA1	Neumayer--Stat	78.88	177	e	P	04 50 38.4	+6.3
PLCA	Paso Flores	82.75	133	P	P	04 50 55.1	+1.8
PLCA	Paso Flores	82.75	133	P	P	04 50 55.1	+1.8
	2.2nm,1.0s,baz=235,slow=7.9,SNR=3.2						
IPM	Ipoh	84.06	279	eP	P	04 50 58.7	-1.8
	14nm,0.7s						
KSRS	Korea Array	84.15	320	P	P	04 50 59.8	-0.4
	1.6nm,0.7s,baz=149,slow=5.4,SNR=4.2						
KSAR	Wonju Array Be	84.16	320	P	P	04 50 59.8	-0.5
KULM	Kulim	84.80	279	eP	P	04 51 02.7	-1.4
	7.9nm,0.7s						
PETK	Petropavlovsk-	85.82	346	P	P	04 51 06.7	-1.5
PETK	Petropavlovsk-	85.82	346	P	P	04 51 06.7	-1.5
	2.6nm,0.7s,baz=151,slow=9.4,SNR=5.8						
USRK	Ussuriysk Arra	87.01	327	P	P	04 51 13.8	-0.3
	2.1nm,0.8s,baz=107,slow=6.6,SNR=4.5						
NVAR	Mina Array Bea	88.63	43	P	P	04 51 22.3	0.0
NVAR				pP	pP	04 51 58.2	+3.9
NVAR	Mina Array Bea	88.63	43	P	P	04 51 22.3	0.0
	0.8nm,0.7s,baz=227,slow=7.3,SNR=5.9						
NVAR				pP	pP	04 51 58.2	+3.9
	0.6nm,0.8s,baz=220,slow=10,SNR=3.7						
TUC	Tucson	89.53	52	eP	P	04 51 27.0	+0.4
	1.2nm,0.8s						
ENH	Enshi	91.30	305	eP	P	04 51 34.2	-0.6
	6.9nm,0.6s						
TXAR	Lajitas Array	92.83	58	P	P	04 51 41.2	-0.7
TXAR	Lajitas Array	92.83	58	P	P	04 51 41.2	-0.7
	0.3nm,0.9s,baz=210,slow=7.2,SNR=5.3						
MNTX	Cornudas Mount	92.91	55	eP	P	04 51 40.6	-1.6
	1.1nm,1.1s						
CMAR	Chiang Mai Arr	93.02	290	P	P	04 51 44.0	+1.0
CMAR	Chiang Mai Arr	93.02	290	P	P	04 51 44.0	+1.0
	1.5nm,0.7s,baz=136,slow=4.0,SNR=6.6						
ANMO	Albuquerque	94.00	52	eP	P	04 51 45.8	-1.5
	0.6nm,0.7s						
ILAR	Eielson Array	98.14	13	P	P	04 52 04.2	-1.0
ILAR	Eielson Array	98.14	13	P	P	04 52 04.2	-1.0
	0.4nm,0.9s,baz=223,slow=3.7,SNR=3.5						
LPAZ	La Paz	98.50	114	P	Pdif	04 52 12.2	+3.4
LPAZ	La Paz	98.50	114	P	Pdif	04 52 12.2	+3.4
	0.4nm,0.6s,baz=216,slow=8.7,SNR=2.5						
BOSA	Boshof	116.97	203	PKP	PKPdf	04 57 13.7	-0.1
BOSA	Boshof	116.97	203	PKP	PKPdf	04 57 13.7	-0.1
	0.9nm,0.5s,baz=236,slow=1.2,SNR=4.0						
MK31	Makanchi Array	117.51	310	ePKPdf	PKPdf	04 57 12.2	-1.8
MKAR	Makanchi Array	117.51	310	PKP	PKPdf	04 57 12.3	-1.7
MKAR	Makanchi Array	117.51	310	PKP	PKPdf	04 57 12.3	-1.7
	0.9nm,0.5s,baz=126,slow=0.6,SNR=11						
ZALV	Zalesovo Beam	117.83	318	PKP	PKPdf	04 57 12.3	-2.0
ZALV	Zalesovo Beam	117.83	318	PKP	PKPdf	04 57 12.3	-2.0
	0.6nm,0.5s,baz=56,slow=2.6,SNR=2.6						
LBTB	Lobatse	120.14	205	ePKPdf	PKPdf	04 57 19.9	-0.1
KURK	Kurchatov	120.81	314	ePKPdf	PKPdf	04 57 18.0	-2.1
TKM2	Tokmak 2	121.09	304	ePKPdf	PKPdf	04 57 19.7	-1.5
EKS2	Erkin-Say	122.33	304	ePKPdf	PKPdf	04 57 22.4	-1.2
KBL	Kabul	123.86	293	ePKPdf	PKPdf	04 57 26.0	-0.8
KKAR	Karatay Array	124.77	304	ePKPdf	PKPdf	04 57 26.4	-1.6
BRVK	Borovoye	126.25	316	ePKPdf	PKPdf	04 57 29.1	-1.4
LSZ	Lusaka	127.71	213	ePKPdf	PKPdf	04 57 35.4	+0.7
KMBO	Kilima Mbogo	133.64	234	ePKPdf	PKPdf	04 57 46.8	+0.7
KMBO				PKP	PKPdf	04 57 47.6	+1.5
KMBO	Kilima Mbogo	133.64	234	PKP	PKPdf	04 57 47.6	+1.5
	1.0nm,0.3s,baz=100,slow=5.9,SNR=3.8						
AKTO	Aktyubinsk	133.85	312	PKP	PKPdf	04 57 43.5	-1.6
AKTO	Aktyubinsk	133.85	312	PKP	PKPdf	04 57 43.5	-1.6
	1.7nm,0.7s,baz=103,slow=3.3,SNR=8.4						
ARCES	ARCESS Array B	138.61	347	PKPpre	PKPpre	04 57 44.2	
ARCES				PKP	PKPdf	04 57 54.1	+0.7
ARCES	ARCESS Array B	138.61	347	PKhKP	PKPpre	04 57 44.2	
	1.0nm,0.5s,baz=46,slow=3.5,SNR=9.9						
ARCES				PKP	PKPdf	04 57 54.1	+0.7
	2.3nm,0.6s,baz=48,slow=1.3,SNR=9.0						
KAF	Kangasniemi	144.51	340	epkp	PKPab	04 58 00.1	-2.7
	7.1nm,0.6s,baz=41,slow=3.3						
FIA1	FINESS Array S	145.10	340	ePKPdf	PKPbc	04 58 02.7	-2.2
FINES	FINESS Array B	145.10	340	PKP	PKPbc	04 58 03.0	-1.9
FINES	FINESS Array B	145.10	340	PKP	PKPbc	04 58 03.0	-1.9
	18nm,0.4s,baz=49,slow=5.8,SNR=87						
NB2	NORSAR Subarra	148.80	351	PKP	PKPdf	04 58 13.7	+2.3
	comp=Z,8.4nm,0.7s,baz=16,slow=2.7						
NOA	NORSAR Array B	148.80	351	PKPbc	PKPbc	04 58 14.0	-1.4
NOA	NORSAR Array B	148.80	351	PKPbc	PKPbc	04 58 14.0	-1.4
	comp=Z,7.0nm,0.6s,baz=15,slow=4.3,SNR=27						
NAO01	NORSAR Array S	149.03	351	ePKPbc	PKPbc	04 58 14.6	-1.3
NAO01				ePKPab	PKiKP	04 58 18.8	+1.7
HFS	Hagfors	149.27	348	PKPbc	PKPbc	04 58 14.7	-1.8
HFS	Hagfors	149.27	348	PKPbc	PKPbc	04 58 14.7	-1.8
	comp=Z,12nm,0.7s,baz=198,slow=0.5,SNR=21						
ASF	Jabal al Asfar	149.79	282	PKPbc	PKPbc	04 58 18.5	-0.4
ASF	Jabal al Asfar	149.79	282	PKPbc	PKPbc	04 58 18.5	-0.4
	comp=Z,3.6nm,0.8s,baz=315,slow=5.7,SNR=5.9						
EIL	Elat	151.09	277	PKPbc	PKPbc	04 58 20.9	-1.0
EIL	Elat	151.09	277	PKPbc	PKPbc	04 58 20.9	-1.0
	comp=Z,8.2nm,0.6s,baz=83,slow=0.4,SNR=9.2						
AKASG	Malin Array Be	151.12	322	PKPbc	PKPbc	04 58 19.8	-1.4
AKASG	Malin Array Be	151.12	322	PKPbc	PKPbc	04 58 19.8	-1.4
	comp=Z,10nm,0.6s,baz=50,slow=2.7,SNR=30						
MMAI	Mount Meron Ar	151.12	284	PKPbc	PKPbc	04 58 22.3	+0.3
MMAI	Mount Meron Ar	151.12	284	PKPbc	PKPbc	04 58 22.3	+0.3
	comp=Z,7.7nm,0.5s,baz=297,slow=5.5,SNR=5.4						
AK01	Malin Array Si	151.13	322	ePKPbc	PKPbc	04 58 19.6	-1.7
AK01				ePKPab	PKPab	04 58 27.4	-2.0
KIEV	Kiev	151.14	322	ePKPbc	PKPbc	04 58 19.7	-1.6
KIEV				ePKPab	PKPab	04 58 27.5	-1.9
AK02	Malin Array Si	151.16	322	ePKPbc	PKPbc	04 58 19.7	-1.6
BR131	Keskin Array S	152.26	298	ePKPbc	PKPbc	04 58 23.1	-1.3
BR131				ePKPab	PKPab	04 58 33.3	-1.5
BRTR	Keskin Array B	152.26	298	PKPbc	PKPbc	04 58 22.9	-1.5
BRTR	Keskin Array B	152.26	298	PKPbc	PKPbc	04 58 22.9	-1.5
	comp=Z,2.5nm,0.7s,baz=129,slow=4.0,SNR=14						
BUR08	Bucovina Ar. S	155.03	320	ePKPbc	PKPdf	04 58 29.4	+8.2
BUR08				ePKPab	PKPab	04 58 45.1	-1.0
GERES	GERESS Array B	159.47	337	PKPab	PKPab	04 59 03.8	-1.4
GERES	GERESS Array B	159.47	337	PKPab	PKPab	04 59 03.8	-1.4
	comp=Z,0.4nm,0.4s,baz=50,slow=7.1,SNR=4.1						
DAVOX	Davos/Dischmat	162.51	340	PKPab	PKPab	04 59 17.7	-1.0
DAVOX	Davos/Dischmat	162.51	340	PKPab	PKPab	04 59 17.7	-1.0
	comp=Z,0.8nm,0.3s,baz=339,slow=8.6,SNR=3.7						
TOA0	Torodi Ar. Sit	162.71	181	ePKPab	PKPab	04 59 19.7	-0.3
TORD	Torodi Ar. Bea	162.71	181	PKP	PKPdf	04 58 30.6	-0.4
TORD				PKPab	PKPab	04 59 20.8	+0.8
TORD	Torodi Ar. Bea	162.71	181	PKP	PKPdf	04 58 30.6	-0.4
	comp=Z,1.6nm,1.1s,baz=197,slow=1.5,SNR=4.1						
TORD				PKPab	PKPab	04 59 20.8	+0.8
	comp=Z,2.5nm,0.6s,baz=193,slow=3.2,SNR=23						

*HLW **12** 04:46:53.5, 36°.01N×24°.39E, h30km±14km, Md3.5, Ml3.6*
*CSEM **12** 04:46:53.5±0.1, 36°.00N×24°.01E, h20km, MD3.3, Error ellipse: s-maj=4.1km s-min=2.4km az=52.0*
*ATH **12** 04:46:53.5, 36°.01N×24°.01E, h37km±2km, MD3.3/26, ML3.2*

ISCJB ***12*** *04:46:54.0±0.3, 36°.00N±0°.02×23°.99E±0°.03, h55km±6km, mb3.4/3, Error ellipse: s-maj=4.7km s-min=2.7km az=143.3*
THE ***12*** *04:46:55.0, 36°.02N×24°.00E, h31km±31km, ML3.4/5, Error ellipse: s-maj=31.6km s-min=0.4km az=0.0*
IDC ***12*** *04:46:56.5±4.5, 35°.81N×24°.21E, h65km±48km, mb3.4/3, mb1 3.6/5, mb1mx3.2/29, mbtmp3.4/5, ML4.1/1, Error ellipse: s-maj=36.8km s-min=25.3km az=146.0*
ISC 12 04:46:54.5±1.2**, 36°.00N**±0°.02×**23°.99E**±0°.03**, h39**km±4km**, n109,** σ**1ˢ.04**/162**, mb3.5**/3**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.57**	**257**	*e*PN	**Pn**	**04 47 06.5**	**+0.3**
ANKY				*e*SN	**Sn**	**04 47 14.3**	**-0.2**
ANKY	**Antikythira Is**	**0.57**	**257**	*e*Pn	**Pn**	**04 47 06.5**	**+0.3**
ANKY				*e*Sn	**Sn**	**04 47 14.3**	**-0.2**
VAM	**Vamos**	**0.61**	**164**	P	**Pn**	**04 47 07.1**	**+0.3**
VAM				S	**Sn**	**04 47 15.8**	**+0.2**
VAM	**Vamos**	**0.61**	**164**	*e*PN	**Pn**	**04 47 07.2**	**+0.4**
VAM				*e*SN	**Sn**	**04 47 15.7**	**+0.2**
VAM	**Vamos**	**0.61**	**164**	P	**Pn**	**04 47 07.1**	**+0.3**
VAM				S	**Sn**	**04 47 15.8**	**+0.2**
KYTH	**Kithira**	**0.82**	**290**	P	**Pn**	**04 47 09.7**	**+0.1**
KYTH	**Kithira**	**0.82**	**290**	*e*PN	**Pn**	**04 47 09.7**	**+0.1**
KYTH	**Kithira**	**0.82**	**290**	P	**Pn**	**04 47 09.7**	**+0.1**
IDI	**Anoyia**	**1.02**	**134**	P	**Pn**	**04 47 12.3**	**-0.1**
IDI				S	**Sn**	**04 47 26.1**	**+0.6**
IDI	**Anoyia**	**1.02**	**134**	*e*PN	**Pn**	**04 47 12.3**	**-0.1**
IDI	**Anoyia**	**1.02**	**134**	P	**Pn**	**04 47 12.3**	**-0.1**
IDI				S	**Sn**	**04 47 26.1**	**+0.6**
VLI	**Veliai**	**1.11**	**311**	P	**Pn**	**04 47 13.5**	**-0.1**
VLI				S	**Sn**	**04 47 27.1**	**-0.6**
VLI	**Veliai**	**1.11**	**311**	*e*PN	**Pn**	**04 47 14.0**	**+0.4**
VLI	**Veliai**	**1.11**	**311**	P	**Pn**	**04 47 13.5**	**-0.1**
VLI	**Veliai**	**1.11**	**311**	*e*Pn	**Pn**	**04 47 14.0**	**+0.4**
VLI				S	**Sn**	**04 47 27.1**	**-0.6**
GVD	**Gavdhos**	**1.16**	**176**	*e*PN	**Pn**	**04 47 15.9**	**+1.7**
GVD	**Gavdhos**	**1.16**	**176**	*e*Pn	**Pn**	**04 47 15.9**	**+1.7**
SIVA	**Sivas**	**1.19**	**145**	*e*PN	**Pn**	**04 47 16.2**	**+1.6**
SIVA				*e*SN	**Sn**	**04 47 30.6**	**+1.1**
SIVA	**Sivas**	**1.19**	**145**	*e*Pn	**Pn**	**04 47 16.2**	**+1.6**
SIVA				*e*Sn	**Sn**	**04 47 30.6**	**+1.1**
THR6	**Thira Island,**	**1.20**	**72**	P	**Pn**	**04 47 14.8**	**+0.1**
THR6	**Thira Island,**	**1.20**	**72**	P	**Pn**	**04 47 14.8**	**+0.1**
THR3	**Thira Island,**	**1.22**	**70**	P	**Pn**	**04 47 15.0**	**0.0**
THR3	**Thira Island,**	**1.22**	**70**	P	**Pn**	**04 47 15.0**	**0.0**
THR1	**Thera Island**	**1.25**	**72**	P	**Pn**	**04 47 14.9**	**-0.6**
THR1	**Thera Island**	**1.25**	**72**	P	**Pn**	**04 47 14.9**	**-0.6**
LAST	**Lasithi**	**1.48**	**124**	P	**Pn**	**04 47 18.7**	**+0.1**
LAST				S	**Sn**	**04 47 37.4**	**+0.7**
LAST	**Lasithi**	**1.48**	**124**	*e*PN	**Pn**	**04 47 19.4**	**+0.8**
LAST				*e*SN	**Sn**	**04 47 37.1**	**+0.4**
LAST	**Lasithi**	**1.48**	**124**	P	**Pn**	**04 47 18.7**	**+0.1**
LAST	**Lasithi**	**1.48**	**124**	*e*Pn	**Pn**	**04 47 19.4**	**+0.8**
LAST				*e*Sn	**Sn**	**04 47 37.1**	**+0.4**
NPS	**Neapolis**	**1.51**	**119**	P	**Pn**	**04 47 19.3**	**+0.2**
NPS				S	**Sn**	**04 47 38.2**	**+0.6**
NPS	**Neapolis**	**1.51**	**119**	*e*PB	**Pn**	**04 47 19.6**	**+0.5**
NPS				*e*SN	**Sn**	**04 47 37.6**	**0.0**
NPS	**Neapolis**	**1.51**	**119**	P	**Pn**	**04 47 19.3**	**+0.2**
NPS	**Neapolis**	**1.51**	**119**	*e*Pb	**Pn**	**04 47 19.6**	**+0.5**
NPS				*e*Sn	**Sn**	**04 47 37.6**	**0.0**
NPS				S		04 47 38.2	
APE	**Apeiranthos**	**1.64**	**49**	P	**Pn**	**04 47 21.2**	**+0.3**
APE				S	**Sn**	**04 47 41.0**	**+0.2**
APE	**Apeiranthos**	**1.64**	**49**	*e*PB	**Pn**	**04 47 21.6**	**+0.7**
APE				*e*SN	**Sn**	**04 47 41.2**	**+0.4**
APE	**Apeiranthos**	**1.64**	**49**	P	**Pn**	**04 47 21.2**	**+0.3**
APE	**Apeiranthos**	**1.64**	**49**	*e*Pb	**Pn**	**04 47 21.6**	**+0.7**
APE				*e*Sn	**Sn**	**04 47 41.2**	**+0.4**
NAIG	**Nisos Aigina**	**1.80**	**347**	*e*PN	**Pn**	**04 47 24.1**	**+1.0**
NAIG	**Nisos Aigina**	**1.80**	**347**	*e*Pn	**Pn**	**04 47 24.1**	**+1.0**
ATHU	**Athens Univers**	**1.97**	**355**	P	**Pn**	**04 47 25.1**	**-0.3**
ATHU				S	**Sn**	**04 47 48.3**	**-0.6**
ATHU	**Athens Univers**	**1.97**	**355**	P	**Pn**	**04 47 25.1**	**-0.3**
ATHU				S	**Sn**	**04 47 48.3**	**-0.6**
ATH	**Athens Observa**	**1.98**	**354**	*e*PN	**Pn**	**04 47 25.9**	**+0.4**
ATH	**Athens Observa**	**1.98**	**354**	*e*Pn	**Pn**	**04 47 25.9**	**+0.4**
ZKR	**Zakros**	**2.02**	**115**	*e*PB	**Pn**	**04 47 27.4**	**+1.3**
ZKR	**Zakros**	**2.02**	**115**	*e*Pb	**Pn**	**04 47 27.4**	**+1.3**
ITM	**Ithomi**	**2.04**	**306**	P	**Pn**	**04 47 26.6**	**+0.3**
ITM				S	**Sn**	**04 47 51.4**	**+0.9**
ITM	**Ithomi**	**2.04**	**306**	*e*PB	**Pn**	**04 47 28.5**	**+2.2**
ITM	**Ithomi**	**2.04**	**306**	P	**Pn**	**04 47 26.6**	**+0.3**
ITM	**Ithomi**	**2.04**	**306**	*e*Pb	**Pn**	**04 47 28.5**	**+2.2**
ITM				S	**Sn**	**04 47 51.4**	**+0.9**
PTL	**Penteli**	**2.05**	**357**	P	**Pn**	**04 47 26.8**	**+0.3**
PTL				S	**Sn**	**04 47 50.6**	**-0.2**
PTL	**Penteli**	**2.05**	**357**	*e*PN	**Pn**	**04 47 27.7**	**+1.2**
PTL	**Penteli**	**2.05**	**357**	P	**Pn**	**04 47 26.8**	**+0.3**
PTL	**Penteli**	**2.05**	**357**	*e*Pn	**Pn**	**04 47 27.7**	**+1.2**
PTL				S	**Sn**	**04 47 50.6**	**-0.2**
MRMA	**Marmari**	**2.08**	**9**	P	**Pn**	**04 47 27.1**	**+0.2**
MRMA				S	**Sn**	**04 47 52.0**	**+0.5**
MRMA	**Marmari**	**2.08**	**9**	P	**Pn**	**04 47 27.1**	**+0.2**
MRMA				S	**Sn**	**04 47 52.0**	**+0.5**
KLV	**Kalavryta, Ach**	**2.52**	**325**	*e*PN	**Pn**	**04 47 34.2**	**+1.3**
KLV				*e*SN	**Sn**	**04 48 03.0**	**+0.6**
KLV	**Kalavryta, Ach**	**2.52**	**325**	*e*Pn	**Pn**	**04 47 34.2**	**+1.3**
KLV				*e*Sn	**Sn**	**04 48 03.0**	**+0.6**
KARP	**Karpathos**	**2.62**	**99**	P	**Pn**	**04 47 35.0**	**+0.7**
KARP				S	**Sn**	**04 48 05.7**	**+0.8**
KARP	**Karpathos**	**2.62**	**99**	*e*PN	**Pn**	**04 47 35.3**	**+1.0**
KARP				*e*SN	**Sn**	**04 48 05.0**	**+0.1**
KARP	**Karpathos**	**2.62**	**99**	P	**Pn**	**04 47 35.0**	**+0.7**
KARP	**Karpathos**	**2.62**	**99**	*e*Pn	**Pn**	**04 47 35.3**	**+1.0**
KARP				*e*Sn	**Sn**	**04 48 05.0**	**+0.1**
MRKA	**Markates**	**2.72**	**353**	P	**Pn**	**04 47 36.0**	**+0.3**
MRKA				S	**Sn**	**04 48 07.1**	**-0.3**
MRKA	**Markates**	**2.72**	**353**	P	**Pn**	**04 47 36.0**	**+0.3**
MRKA				S	**Sn**	**04 48 07.1**	**-0.3**
LAKA	**Lakka**	**2.75**	**325**	P	**Pn**	**04 47 36.7**	**+0.5**
LAKA				S	**Sn**	**04 48 08.9**	**+0.7**
LAKA	**Lakka**	**2.75**	**325**	*e*PN	**Pn**	**04 47 37.5**	**+1.3**
LAKA				*e*SN	**Sn**	**04 48 08.7**	**+0.5**
LAKA	**Lakka**	**2.75**	**325**	P	**Pn**	**04 47 36.7**	**+0.5**
LAKA	**Lakka**	**2.75**	**325**	*e*Pn	**Pn**	**04 47 37.5**	**+1.3**
LAKA				*e*Sn	**Sn**	**04 48 08.7**	**+0.5**
LKR	**Lokris**	**2.76**	**344**	P	**Pn**	**04 47 36.8**	**+0.5**
LKR				S	**Sn**	**04 48 08.7**	**+0.3**
LKR	**Lokris**	**2.76**	**344**	*e*PN	**Pn**	**04 47 37.5**	**+1.2**
LKR				*e*SN	**Sn**	**04 48 08.7**	**+0.3**
LKR	**Lokris**	**2.76**	**344**	P	**Pn**	**04 47 36.8**	**+0.5**
LKR	**Lokris**	**2.76**	**344**	*e*Pn	**Pn**	**04 47 37.5**	**+1.2**
LKR				S	**Sn**	**04 48 08.7**	**+0.3**
KALE	**Kalithea**	**2.81**	**329**	P	**Pn**	**04 47 37.5**	**+0.6**
KALE				S	**Sn**	**04 48 09.9**	**+0.3**
KALE	**Kalithea**	**2.81**	**329**	*e*PN	**Pn**	**04 47 37.9**	**+1.0**
KALE				*e*SN	**Sn**	**04 48 10.1**	**+0.5**
KALE	**Kalithea**	**2.81**	**329**	P	**Pn**	**04 47 37.5**	**+0.6**
KALE	**Kalithea**	**2.81**	**329**	*e*Pn	**Pn**	**04 47 37.9**	**+1.0**
KALE				S	**Sn**	**04 48 09.9**	**+0.3**
TRIZ	**Trizonia**	**2.81**	**328**	P	**Pn**	**04 47 37.6**	**+0.6**
TRIZ				S	**Sn**	**04 48 10.5**	**+0.9**
TRIZ	**Trizonia**	**2.81**	**328**	*e*PN	**Pn**	**04 47 38.1**	**+1.1**
TRIZ				*e*SN	**Sn**	**04 48 10.2**	**+0.6**
TRIZ	**Trizonia**	**2.81**	**328**	P	**Pn**	**04 47 37.6**	**+0.6**
TRIZ	**Trizonia**	**2.81**	**328**	*e*Pn	**Pn**	**04 47 38.1**	**+1.1**
TRIZ				*e*Sn	**Sn**	**04 48 10.2**	**+0.6**
RLS	**Riolos of Patr**	**2.88**	**316**	*e*PB	**Pn**	**04 47 41.0**	**+3.1**
SMIA	**Simia**	**2.94**	**348**	P	**Pn**	**04 47 39.2**	**+0.4**
SMIA				S	**Sn**	**04 48 12.9**	**+0.1**
SMIA	**Simia**	**2.94**	**348**	P	**Pn**	**04 47 39.2**	**+0.4**
SMIA				S	**Sn**	**04 48 12.9**	**+0.1**
AGG	**Agios Georgios**	**3.29**	**337**	*e*PN	**Pn**	**04 47 45.4**	**+1.8**
AGG	**Agios Georgios**	**3.29**	**337**	*e*Pn	**Pn**	**04 47 45.4**	**+1.8**
ARG	**Arkhangelos**	**3.36**	**85**	*e*PN	**Pn**	**04 47 46.8**	**+2.4**
ARG				*e*SN	**Sn**	**04 48 23.9**	**+0.8**
ARG	**Arkhangelos**	**3.36**	**85**	*e*Pn	**Pn**	**04 47 46.8**	**+2.4**
ARG				*e*Sn	**Sn**	**04 48 23.9**	**+0.8**
EVR	**Evrytania**	**3.39**	**330**	*e*PN	**Pn**	**04 47 46.9**	**+1.9**
EVR	**Evrytania**	**3.39**	**330**	*e*Pn	**Pn**	**04 47 46.9**	**+1.9**
XOR	**Xorichti**	**3.42**	**350**	P	**Pn**	**04 47 45.9**	**+0.6**
XOR				S	**Sn**	**04 48 25.4**	**+0.8**
XOR	**Xorichti**	**3.42**	**350**	P	**Pn**	**04 47 45.9**	**+0.6**
XOR				S	**Sn**	**04 48 25.4**	**+0.8**
THL	**Klokotos Trika**	**3.89**	**337**	*e*PN	**Pn**	**04 47 52.9**	**+1.2**
THL	**Klokotos Trika**	**3.89**	**337**	*e*Pn	**Pn**	**04 47 52.9**	**+1.2**
LTBQ	**Tobruq**	**3.93**	**181**	*i* P	**Pn**	**04 47 54.2**	**+1.8**
	SNR=36						
LTBQ				*e*S	**Sn**	**04 48 38.2**	**+1.0**
	26nm,0.7s,SNR=36						
SLUM		**4.61**	**167**	S	**Sn**	**04 48 48.7**	**-5.2**
	baz=171						
SLUM		**4.61**	**167**	P	**Pn**	**04 48 00.5**	**-1.1**
SWA2		**6.85**	**169**	P	**Pn**	**04 48 31.8**	**-0.6**
	baz=172						
SWA2				AMP		04 49 00.0	
	comp=N,40μm,0.4s,logA/T=5.0,baz=172						
SWA2		**6.85**	**169**	P	**Pn**	**04 48 31.8**	**-0.6**
BRTR	**Keskin Array B**	**8.49**	**61**	P	**Pn**	**04 48 55.5**	**+0.4**
	comp=N,0.1nm,0.3s,baz=243,slow=15,SNR=2.6						
AWBH		**8.71**	**150**	P	**Pn**	**04 48 56.6**	**-1.4**
	baz=152						
AWBH		**8.71**	**150**	P	**Pn**	**04 48 56.6**	**-1.4**
GLL	**Jalalah**	**9.12**	**132**	P	**Pn**	**04 49 00.7**	**-2.9**
	baz=134						
RSH		**9.55**	**119**	P	**Pn**	**04 49 06.6**	**-2.9**
	baz=120						
HFRF	**Wahat Farafira**	**9.56**	**156**	P	**Pn**	**04 49 08.1**	**-1.5**
	baz=158						
HFRF	**Wahat Farafira**	**9.56**	**156**	P	**Pn**	**04 49 08.1**	**-1.5**
GERES	**GERESS Array B**	**14.90**	**333**	P	**P**	**04 50 28.3**	**+0.8**
	comp=N,0.3nm,0.3s,baz=144,slow=12,SNR=12						
EKA	**Eskdalemuir Ar**	**26.80**	**325**	P	**P**	**04 52 32.2**	**+1.5**
	comp=N,0.5nm,0.4s,baz=124,slow=9.3,SNR=4.1						
TORD	**Torodi Ar. Bea**	**30.33**	**227**	P	**P**	**04 53 02.1**	**-0.4**
	comp=N,0.3nm,0.5s,baz=25,slow=8.4,SNR=12						
MKAR	**Makanchi Array**	**44.12**	**57**	P	**P**	**04 54 58.1**	**-0.8**
	comp=N,0.4nm,0.4s,baz=276,slow=7.1,SNR=5.4						
TBI	**Tubuai**	**166.17**	**334**	*e*LR	LR	05 08 10.2	
	comp=N,805nm,24.2s						

ISCJB ***12*** *04:51:38.0±0.6, 39°.38N±0°.02×39°.15E±0°.03, h0km±5km, Error ellipse: s-maj=4.3km s-min=3.3km az=142.8*
ISK ***12*** *04:51:37.6, 39°.39N×39°.17E, h6km, MD3.5*
CSEM ***12*** *04:51:38.4±0.1, 39°.37N×39°.17E, h5km, MD3.5, Error ellipse: s-maj=4.3km s-min=3.5km az=127.0*
DDA ***12*** *04:51:38.1, 39°.38N×39°.14E, h8km, MD3.1*
ISC 12 04:51:38.7±1.0**, 39°.38N**±0°.02×**39°.18E**±0°.02**, h6**km±10km**, n61,** σ**0ˢ.66**/77**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.40**	**20**	*e*PG	**Pg**	**04 51 45.6**	**-0.9**
EZC	**Erzincan**	**0.40**	**20**	*e*Pg	**Pg**	**04 51 47.3**	**+0.8**
ERZN	**Erzincan**	**0.47**	**63**	*e*PG	**Pg**	**04 51 47.3**	**-0.5**
ERZN				*e*SG	**Sg**	**04 51 54.6**	**+0.6**
ILIC	**ilic-Erzincan**	**0.48**	**279**	*e*PG	**Pg**	**04 51 47.3**	**-0.7**
ILIC	**ilic-Erzincan**	**0.48**	**279**	*e*Pg	**Pg**	**04 51 47.3**	**-0.7**
PTK	**Pertek**	**0.51**	**161**	*e*PG	**Pg**	**04 51 48.4**	**-0.2**
PTK	**Pertek**	**0.51**	**161**	*e*Pg	**Pg**	**04 51 48.4**	**-0.2**
KEMA	**Kemaliye**	**0.54**	**259**	*i* P	**Pg**	**04 51 48.8**	**-0.4**
KEMA				*i* S	**Sg**	**04 51 56.8**	**+0.5**
KEMA	**Kemaliye**	**0.54**	**259**	*i* S	**Sg**	**04 51 56.8**	**+0.5**
KEMA	**Kemaliye**	**0.54**	**259**	*i* P	**Pg**	**04 51 48.8**	**-0.4**
KELT	**Kelkit**	**0.77**	**4**	*i* P	**Pg**	**04 51 53.1**	**-0.5**
KELT				*i* S	**Sg**	**04 52 03.8**	**+0.1**
KELT	**Kelkit**	**0.77**	**4**	*i* P	**Pg**	**04 51 53.1**	**-0.5**
KELT				*i* S	**Sg**	**04 52 03.8**	**+0.1**
ELZG	**Elazig**	**0.89**	**190**	*i* P	**Pg**	**04 51 55.6**	**-0.2**
ELZG				*i* S	**Sg**	**04 52 07.9**	**+0.5**
ELZG	**Elazig**	**0.89**	**190**	*i* P	**Pg**	**04 51 55.6**	**-0.2**
ELZG				*i* S	**Sg**	**04 52 07.9**	**+0.5**
GUMT	**Gumushane**	**1.11**	**12**	*e*PN	**Pg**	**04 51 58.7**	**-1.3**
GUMT	**Gumushane**	**1.11**	**12**	*e*Pn	**Pg**	**04 51 58.7**	**-1.3**
BINT	**Bingol**	**1.14**	**116**	*e*Pn	**Pb**	**04 52 01.3**	**+0.5**
KOPT	**Kop Dagi**	**1.20**	**57**	*e*P	**Pb**	**04 52 02.3**	**+0.2**
KOPT				*e*S	**Sn**	**04 52 19.8**	**+0.7**
KOPT	**Kop Dagi**	**1.20**	**57**	*e*P	**Pb**	**04 52 02.3**	**+0.2**
KOPT				*e*S	**Sn**	**04 52 19.8**	**+0.7**
MYA	**Malataya**	**1.20**	**210**	*e*PN	**Pg**	**04 52 00.8**	**-1.0**
MYA	**Malataya**	**1.20**	**210**	*e*Pn	**Pg**	**04 52 00.8**	**-1.0**
BNGB	**Bingˆ¶l**	**1.23**	**108**	*e*PN	**Pg**	**04 52 01.3**	**-1.0**
BAYT	**Aydˆ–ntepe-Bay**	**1.26**	**36**	*e*PN	**Pg**	**04 52 01.8**	**-1.1**
BAYT	**Aydˆ–ntepe-Bay**	**1.26**	**36**	*e*Pn	**Pg**	**04 52 01.8**	**-1.1**
AKCD	**Akcadag**	**1.46**	**223**	*e*P	**Pn**	**04 52 04.7**	**-1.1**
AKCD				*e*S	**Sg**	**04 52 26.4**	**+0.8**
AKCD	**Akcadag**	**1.46**	**223**	*e*P	**Pn**	**04 52 04.7**	**-1.1**
AKCD				*e*S	**Sg**	**04 52 26.4**	**+0.8**
DARE	**Darende-Malaty**	**1.55**	**239**	*e*PN	**Pn**	**04 52 06.5**	**-0.5**
ESPY	**Espiye-Giresun**	**1.58**	**347**	*e*PN	**Pn**	**04 52 06.8**	**-0.5**
ESPY	**Espiye-Giresun**	**1.58**	**347**	*e*Pn	**Pn**	**04 52 06.8**	**-0.5**
BNGL	**BINGOL**	**1.59**	**105**	*e*P	**Pb**	**04 52 08.5**	**-0.1**
BNGL				*e*S	**Sg**	**04 52 30.4**	**+0.6**
DIY	**Diyarbakir**	**1.69**	**151**	*e*PN	**Pn**	**04 52 08.7**	**-0.2**
DIY	**Diyarbakir**	**1.69**	**151**	*e*Pn	**Pn**	**04 52 08.7**	**-0.2**
GRSN	**GIRESUNGRSN**	**1.70**	**336**	*e*P	**Pn**	**04 52 09.5**	**+0.5**
GRSN				*e*S	**Sb**	**04 52 31.6**	**-0.4**
GRSN	**GIRESUNGRSN**	**1.70**	**336**	*e*P	**Pn**	**04 52 09.5**	**+0.5**
GRSN				*e*S	**Sb**	**04 52 31.6**	**-0.4**
RSDY	**Resadiye-TOKAT**	**1.75**	**306**	*e*PN	**Pn**	**04 52 09.2**	**-0.5**
RSDY	**Resadiye-TOKAT**	**1.75**	**306**	*e*Pn	**Pn**	**04 52 09.2**	**-0.5**
EZM	**Erzurum**	**1.77**	**72**	*e*PN	**Pn**	**04 52 09.4**	**-0.7**
ERZM	**Erzurum**	**1.77**	**72**	*e*P	**Pb**	**04 52 12.0**	**+0.3**
ERZM				*e*S	**Sg**	**04 52 36.8**	**+1.2**
ERZM	**Erzurum**	**1.77**	**72**	*e*P	**Pb**	**04 52 12.0**	**+0.3**
ERZM				*e*S	**Sg**	**04 52 36.8**	**+1.2**
URFA	**Urfa**	**1.95**	**188**	*e*PN	**Pn**	**04 52 11.9**	**-0.5**
URFA	**Urfa**	**1.95**	**188**	*e*Pn	**Pn**	**04 52 12.0**	**-0.5**
ATAB	**Bozova**	**2.03**	**200**	*e*P	**Pg**	**04 52 17.0**	**-0.6**
ATAB	**Bozova**	**2.03**	**200**	*e*P	**Pg**	**04 52 17.0**	**-0.6**
BTMT	**Batman**	**2.16**	**123**	*e*PN	**Pn**	**04 52 13.9**	**-1.4**
BTMT	**Batman**	**2.16**	**123**	*e*Pn	**Pn**	**04 52 13.9**	**-1.4**
SARI	**SarD1z-Kayseri**	**2.36**	**247**	*e*PN	**Pn**	**04 52 18.3**	**+0.1**
AYKD	**Aykdinkavak**	**2.71**	**224**	*e*P	**Pn**	**04 52 23.9**	**+1.1**
AYKD				*e*S	**Sg**	**04 53 05.5**	**-0.1**
BCA	**Borcka**	**2.78**	**41**	*e*PN	**Pn**	**04 52 23.9**	**0.0**
BCA	**Borcka**	**2.78**	**41**	*e*Pn	**Pn**	**04 52 23.9**	**0.0**
AGRB	**Hanur-Agry**	**2.96**	**85**	*e*PN	**Pn**	**04 52 26.5**	**+0.1**
AGRB	**Hanur-Agry**	**2.96**	**85**	*e*Pn	**Pn**	**04 52 26.5**	**+0.1**
YOZ	**Yozgat**	**3.00**	**276**	*e*PN	**Pn**	**04 52 26.7**	**-0.2**
YOZ	**Yozgat**	**3.00**	**276**	*e*Pn	**Pn**	**04 52 26.7**	**-0.2**
KOZT	**Kozan**	**3.24**	**235**	*e*PN	**Pn**	**04 52 30.4**	**+0.2**
KOZT	**Kozan**	**3.24**	**235**	*e*Pn	**Pn**	**04 52 30.4**	**+0.2**
CORM	**Corum**	**3.60**	**284**	*e*PN	**Pn**	**04 52 35.2**	**+0.1**
CORM	**Corum**	**3.60**	**284**	*e*Pn	**Pn**	**04 52 35.2**	**+0.1**
NIG	**Nigde**	**3.79**	**252**	*e*PN	**Pn**	**04 52 38.1**	**+0.2**
NIG	**Nigde**	**3.79**	**252**	*e*Pn	**Pn**	**04 52 38.1**	**+0.2**
KAMT	**Kaman**	**4.24**	**272**	*e*PN	**Pn**	**04 52 44.6**	**+0.7**
KAMT	**Kaman**	**4.24**	**272**	*e*Pn	**Pn**	**04 52 44.6**	**+0.7**

MEX 12 04:56:32.8±0.6**, 16°.22N**×**94°.60W, h65**km±26km**, MD4.1, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		**1.43**	**111**	*e*P	Pn	04 56 55.1	-1.5
PCIG				*i* S	Sn	04 57 12.6	-1.9
HUIG	**Huatulco**	**1.52**	**253**	*i* P	Pn	04 56 56.8	-1.0
HUIG				*i* S	Sn	04 57 14.9	-1.8
TGIG		**1.52**	**68**	*i* P	Pn	04 56 57.0	-1.1
TGIG				*i* S	Sn	04 57 15.4	-1.7
CCIG	**Comitan**	**2.37**	**88**	*i* P	Pn	04 57 08.2	-1.4
CCIG				*i* S	Sn	04 57 35.1	-2.7
PNIG	**Pinotepa**	**3.39**	**273**	*i* P	Pn	04 57 22.6	-0.7
PNIG				*i* S	Sn	04 58 00.0	-2.4

ISCJB ***12*** *05:01:27.8±2.3, 7°.81S±0°.03×119°.2E±0°.1, h3km±17km, mb3.7/2, Error ellipse: s-maj=18.6km s-min=5.6km az=1.2*
DJA ***12*** *05:01:30.0±1.2, 8°S±2°×11°9E±°, h14km±10km, M3.7/6, MLv3.7/6*
IDC ***12*** *05:01:33.0±3.1, 7°.54S×120°.09E, h0km, mb3.5/2, mb1 3.6/4, mb1mx3.4/23, mbtmp3.5/4, ML3.3/2, Error ellipse: s-maj=139.9km s-min=20.6km az=66.0*
ISC 12 05:01:27.7±2.5**, 7°.76S**±0°.04×**119°.3E**±0°.1**, h0**km±16km**, n11,** σ**1ˢ.24**/16**, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.88**	**178**	P	**Pn**	**05 02 00.0**	**-1.1**
WBSI				S	**Sn**	**05 02 24.3**	**-1.2**
BSSI	**Bau Bau, Buton**	**1.98**	**36**	P	**Pg**	**05 02 06.2**	**+0.4**
BSSI				S	**Sg**	**05 02 31.7**	**+0.2**
WSI	**Waingapu**	**2.13**	**153**	P	**Pn**	**05 02 04.9**	**+0.3**
WSI				S	**Sb**	**05 02 34.7**	**+0.4**
BKSI	**Bulukumba**	**2.55**	**18**	P	**Pb**	**05 02 12.9**	**-1.4**
BKSI				S	**Sb**	**05 02 45.5**	**-0.7**
BASI	**Baing, Sumba**	**2.75**	**153**	P	**Pn**	**05 02 14.5**	**+1.5**
BASI				S	**Sn**	**05 02 48.0**	**+1.1**
KAPI	**Kappang**	**2.76**	**9**	P	**Pn**	**05 02 14.1**	**+0.9**
KAPI	**Kappang**	**2.76**	**9**	Pn	**Pn**	**05 02 14.3**	**+1.1**
	1.8nm,0.3s,baz=195,slow=8.1,SNR=23						
KAPI				Sn	**Sn**	**05 02 46.7**	**-0.5**
	6.0nm,0.3s,baz=217,slow=4.9,SNR=4.6						
MMRI	**Maumere**	**3.02**	**107**	S	**Sb**	**05 02 57.5**	**-2.4**
WRA	**Warramunga Arr**	**18.94**	**131**	P	**Pn**	**05 05 51.6**	**+0.6**
	0.2nm,0.3s,baz=303,slow=12,SNR=9.4						
ASAR	**Alice Springs**	**21.12**	**140**	P	**P**	**05 06 15.4**	**+1.2**
	1.3nm,0.3s,baz=315,slow=10,SNR=22						
SONM	**Songino Array**	**56.52**	**350**	P	P	05 11 17.2	+5.3
	0.4nm,0.5s,baz=160,slow=4.6,SNR=3.3						

IDC 12 05:01:40.6±1.4**, 55°.71S**×**26°.78W, h0**km**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/17**, mbtmp3.8**/3**, MS3.3**/2**, Ms1 3.3**/2**, ms1mx3.2**/21**, Error ellipse: s-maj=64.8km s-min=29.6km az=56.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**37.64**	**292**	LR	LR	05 24 03.9	
	comp=Z,20nm,20.0s,baz=190,slow=36						
BDFB	**Brasilia**	**43.18**	**329**	LR	LR	05 22 51.0	
	comp=Z,95nm,21.1s,baz=20,slow=29						
LVC	**Limon Verde**	**45.33**	**299**	P	P	05 10 00.8	+0.2
	1.1nm,0.4s,baz=148,slow=9.5,SNR=3.2						
VNDA	**Vanda**	**46.93**	**183**	P	P	05 10 12.2	-0.1
	0.5nm,0.6s,baz=181,slow=6.0,SNR=3.7						
LPAZ	**La Paz**	**50.37**	**305**	P	P	05 10 40.0	-0.1
	0.6nm,0.3s,baz=175,slow=8.3,SNR=5.6						
ILAR	**Eielson Array**	**150.06**	**312**	PKPbc	PKPbc	05 21 30.5	-1.1
	1.0nm,0.8s,baz=130,slow=2.7,SNR=10						
SONM	**Songino Array**	**150.47**	**86**	PKPbc	PKPbc	05 21 33.4	+0.1
	0.5nm,0.5s,baz=224,slow=2.1,SNR=4.0						

ISCJB ***12*** *05:04:36.3±0.9, 8°.2S±0°.2×68°.34E±0°.07, h10km, mb3.9/9, MS3.6/8, Error ellipse: s-maj=22.2km s-min=9.9km az=0.8*
IDC ***12*** *05:04:37.2±1.0, 8°.24S×68°.34E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.7/29, mbtmp3.8/8, MS3.6/8, Ms1 3.6/8, ms1mx3.2/36, Error ellipse: s-maj=31.3km s-min=24.6km az=44.0*
NEIC ***12*** *05:04:39.0±0.7, 8°.23S×68°.43E, h10km, mb4.3/1, Error ellipse: s-maj=22.4km s-min=14.8km az=188.0*
ISC 12 05:04:38.4±0.9**, 8°.3S**±0°.2×**68°.38E**±0°.09**, h10**km**, n29,** σ**0ˢ.87**/24**, mb3.9**/9**, MS3.5**/8**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.13**	**78**	*e*Pn	**Pn**	**05 05 39.4**	**-2.2**
DGAR				*e*Sn	**Sn**	**05 06 31.3**	**+1.3**
KMBO	**Kilima Mbogo**	**31.80**	**281**	LR	LR	05 20 37.7	
	comp=Z,77nm,21.7s,baz=278,slow=30						
MBAR	**Mbarara**	**38.26**	**280**	LR	LR	05 25 34.2	
	comp=Z,100nm,18.7s,baz=118,slow=33						
LSZ	**Lusaka**	**39.90**	**256**	P	**P**	**05 12 12.5**	**-0.6**
LSZ	**Lusaka**	**39.90**	**256**	P	**P**	**05 12 12.5**	**-0.6**
	1.0nm,0.4s,baz=80,slow=8.6,SNR=4.2						
CMAR	**Chiang Mai Arr**	**40.19**	**48**	LR	LR	05 25 18.5	
	comp=Z,47nm,21.8s,baz=210,slow=31						
AAK	**Ala-Archa**	**50.97**	**6**	LR	LR	05 34 23.9	
	comp=Z,51nm,19.0s,baz=173,slow=35						
MKAR	**Makanchi Array**	**56.21**	**11**	P	**P**	**05 14 17.9**	**-0.8**
MKAR	**Makanchi Array**	**56.21**	**11**	P	**P**	**05 14 17.9**	**-0.8**
	0.4nm,0.6s,baz=190,slow=7.8,SNR=3.4						
MKAR				LR	LR	05 37 28.2	
	comp=Z,39nm,18.8s,baz=350,slow=35						
BRTR	**Keskin Array B**	**57.57**	**329**	P	**P**	**05 14 28.7**	**0.0**
BRTR	**Keskin Array B**	**57.57**	**329**	P	**P**	**05 14 28.7**	**0.0**
	0.4nm,0.6s,baz=145,slow=7.1,SNR=3.9						
AKTO	**Aktyubinsk**	**59.16**	**352**	P	**P**	**05 14 39.0**	**-0.3**
AKTO	**Aktyubinsk**	**59.16**	**352**	P	**P**	**05 14 39.0**	**-0.3**
	1.4nm,0.3s,baz=187,slow=5.2,SNR=7.0						
KURBB	**Kurchatov Arra**	**59.31**	**8**	P	**P**	**05 14 40.0**	**-0.3**
	1.2nm,0.9s,baz=205,slow=7.2,SNR=7.9						
KURK	**Kurchatov**	**59.42**	**8**	*e*P	**P**	**05 14 40.6**	**-0.5**
	2.5nm,0.9s						
ASAR	**Alice Springs**	**64.34**	**112**	P	**P**	**05 15 15.8**	**+0.8**
ASAR	**Alice Springs**	**64.34**	**112**	P	**P**	**05 15 15.8**	**+0.8**
	0.7nm,0.8s,baz=278,slow=6.3,SNR=5.7						
WRA	**Warramunga Arr**	**64.68**	**108**	P	**P**	**05 15 17.2**	**0.0**
WRA	**Warramunga Arr**	**64.68**	**108**	P	**P**	**05 15 17.2**	**0.0**
	1.1nm,0.9s,baz=282,slow=6.1,SNR=4.9						
SONM	**Songino Array**	**65.19**	**27**	P	**P**	**05 15 21.2**	**+1.1**
SONM	**Songino Array**	**65.19**	**27**	P	**P**	**05 15 21.2**	**+1.1**
	0.4nm,0.6s,baz=217,slow=7.2,SNR=3.9						
SONM				LR	LR	05 45 24.3	
	comp=Z,56nm,20.0s,baz=135,slow=38						
KSRS	**Korea Array**	**71.78**	**46**	LR	LR	05 50 27.9	
	comp=Z,21nm,18.1s,baz=90,slow=38						
DBIC	**Dimbokro**	**74.51**	**279**	LR	LR	05 49 21.1	
	comp=Z,80nm,18.1s,baz=170,slow=36						
YKA	**Yellowknife Ar**	**125.84**	**2**	PKP	**PKPdf**	**05 23 41.4**	**+1.1**
YKA	**Yellowknife Ar**	**125.84**	**2**	PKP	**PKPdf**	**05 23 41.3**	**+1.1**
	0.4nm,0.9s,baz=349,slow=2.9,SNR=4.1						
PDAR	**Pinedale Array**	**145.60**	**357**	PKPbc	**PKPab**	**05 24 18.7**	**+0.6**
PDAR	**Pinedale Array**	**145.60**	**357**	PKPbc	**PKPab**	**05 24 18.7**	**+0.6**
	0.8nm,1.0s,baz=66,slow=3.6,SNR=5.5						
NVAR	**Mina Array Bea**	**149.38**	**10**	PKPbc	**PKPbc**	**05 24 28.4**	**0.0**
NVAR	**Mina Array Bea**	**149.38**	**10**	PKPbc	**PKPbc**	**05 24 28.4**	**0.0**
	0.9nm,1.0s,baz=321,slow=3.3,SNR=5.9						

CASC 12 05:37:20.3±3.2**, 16°.17N**×**88°.05W, h0**km±20km**, MD4.0, Belize**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRL	**Marmol**	**1.92**	**235**	*e*P	Pn	05 37 52.5	-2.1
MRL				*e*S	Sb	05 38 21.7	+0.5
MTO2	**Montecristo 2**	**2.17**	**216**	*e*P	Pn	05 37 57.0	-1.0
TGUH	**Tegucigalpa,Un**	**2.23**	**160**	*e*P	Pb	05 38 00.2	-1.4
TGUH				*e*S	Sb	05 38 29.1	-0.6
RBDL	**Robledal**	**2.58**	**218**	*e*P	Pn	05 38 03.1	-0.5
SNVI	**San Vicente**	**2.65**	**197**	*e*P	Pn	05 38 04.5	-0.1
BOQS	**Boqueron**	**2.69**	**206**	*e*P	Pn	05 38 05.2	-0.1
NBG	**Las Nubes**	**2.71**	**235**	*e*P	Pn	05 38 04.6	-0.9
NBG				*e*S	Sb	05 38 42.4	-1.8
SBLS	**San Blas**	**2.77**	**213**	*e*P	Pn	05 38 06.6	+0.3
FUG	**Fuego 3**	**3.19**	**238**	*e*P	Pn	05 38 11.0	-1.0
FUG				*e*S	Sb	05 38 54.3	-3.4
JAT	**Jato**	**3.92**	**242**	*e*P	Pn	05 38 21.8	0.0

DJA 12 05:39:22.5±0.4**, 0°N**±5°×**12°4E**±°**, h10**km**, M4.0**/6**, mb4.3**/3**, mB4.8**/2**, MLv3.9**/6**, Mw(mB)4.1**/2**, Mwp6.0**/1**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNI	**Manado**	**1.44**	**37**	P	Pn	05 39 48.3	-0.4
MNI				S	Sg	05 40 08.7	-0.2
MRSI	**Marisa**	**2.04**	**275**	P	Pn	05 39 57.9	+1.0
TNTI	**Ternate**	**3.43**	**82**	S	Sn	05 40 56.5	-0.3
LBMI	**Labuha**	**3.65**	**105**	S	Sb	05 41 11.3	-0.2
SKSI	**Soroako, Sulaw**	**3.84**	**223**	P	Pn	05 40 22.1	+0.2
TTSI	**Tana Toraja**	**5.31**	**231**	P	Pn	05 40 42.7	+0.8
	19nm,0.6s,2μm109μm0.1nm						
SPSI	**Sidrap Palu**	**5.96**	**225**	P	Pn	05 40 52.4	+1.6
	26nm,0.5s,397nm0.1nm						
MSAI	**Masohi**	**6.13**	**126**	P	Pn	05 40 54.2	+0.9

CSEM ***12*** *06:02:28.2±0.3, 37°.74N×35°.81E, h15km, MD2.5, Error ellipse: s-maj=10.3km s-min=4.9km az=119.0*
ISCJB ***12*** *06:02:31.7±0.8, 37°.55N±0°.04×35°.68E±0°.04, h7km±5km, Error ellipse: s-maj=6.7km s-min=5.7km az=151.9*
ISK ***12*** *06:02:31.9, 37°.51N×35°.76E, h14km, MD2.5*
DDA ***12*** *06:02:31.6, 37°.53N×35°.70E, h7km, MD2.8*
ISC 12 06:02:31.6±0.9**, 37°.53N**±0°.04×**35°.73E**±0°.03**, h16**km±5km**, n17,** σ**0ˢ.66**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOZT	**Kozan**	**0.09**	**122**	*e*PG	**Pg**	**06 02 35.1**	**+0.1**
KOZT				*e*SG	**Sg**	**06 02 37.0**	**-0.1**
KOZT	**Kozan**	**0.09**	**122**	*e*Pg	**Pg**	**06 02 35.1**	**+0.1**
KOZT				*e*Sg	**Sg**	**06 02 37.0**	**-0.1**
ANDN	**Andirin**	**0.49**	**84**	*i* P	**Pg**	**06 02 41.6**	**+0.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ANDN				*i* S	Sn	06 02 50.6	-1.7
ANDN	**Andirin**	**0.49**	**84**	*i* P	**Pg**	**06 02 41.6**	**+0.2**
CEYT	**Ceyhan**	**0.52**	**179**	*e*PG	**Pb**	**06 02 42.2**	**-0.1**
CEYT				*e*SG	**Sb**	**06 02 49.8**	**+0.2**
CEYT	**Ceyhan**	**0.52**	**179**	*e*Pg	**Pb**	**06 02 42.2**	**-0.1**
YURE	**YUREGIR**	**0.70**	**187**	*i* P	**Pg**	**06 02 45.3**	**-0.1**
YURE				*i* S	**Sn**	**06 02 57.1**	**-0.4**
YURE	**YUREGIR**	**0.70**	**187**	*i* P	**Pg**	**06 02 45.3**	**-0.1**
YURE				*i* S	**Sn**	**06 02 57.1**	**-0.4**
GULE	**Gulek**	**0.80**	**253**	*i* P	**Pb**	**06 02 46.2**	**-1.0**
GULE				*i* S	**Sg**	**06 02 58.2**	**+0.4**
GULE	**Gulek**	**0.80**	**253**	*i* P	**Pb**	**06 02 46.2**	**-1.0**
GULE				*i* S	**Sg**	**06 02 58.2**	**+0.4**
AYKD	**Aykdinkavak**	**0.86**	**97**	*i* P	**Pn**	**06 02 49.7**	**+0.6**
AYKD				*i* S	**Sn**	**06 03 01.0**	**-0.4**
KMRS	**Kahramanmaras**	**0.93**	**91**	*e*PG	**Pn**	**06 02 50.0**	**-0.1**
SARI	**SarD1z-Kayseri**	**1.03**	**31**	*e*PG	**Pg**	**06 02 52.1**	**+0.5**
SARI	**SarD1z-Kayseri**	**1.03**	**31**	*e*Pg	**Pg**	**06 02 52.1**	**+0.5**
NIG	**Nigde**	**1.06**	**304**	*e*PN	**Pg**	**06 02 53.2**	**+1.0**
COBT	**Iskenderun**	**1.09**	**157**	*i* P	**Pb**	**06 02 51.9**	**-0.3**
COBT				*i* S	**Sg**	**06 03 08.1**	**+1.1**
COBT	**Iskenderun**	**1.09**	**157**	*i* P	**Pb**	**06 02 51.9**	**-0.3**
COBT				*i* S	**Sg**	**06 03 08.1**	**+1.1**

*ISK **12** 06:03:06.1, 39.°40N×39.°16E, h2km, ML2.8*
*ISCJB **12** 06:03:07.8±0.5, 39.°37N±0.°02×39.°20E±0.°04, h2km±5km, Error ellipse: s-maj=4.9km s-min=3.9km az=14.6*
*DDA **12** 06:03:08.1, 39.°39N×39.°15E, h7km, MD2.9*
*CSEM **12** 06:03:08.0±0.2, 39.°36N×39.°16E, h8km, ML2.8, Error ellipse: s-maj=6.1km s-min=5.0km az=90.0*
ISC 12 06:03:08.0±1.1**, 39.°39N**±0.°02×**39.°16E**±0.°02**, h7**km±9km**, n31, σ1s17**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.39**	**22**	*e*PG	**Pg**	**06 03 15.4**	**-0.3**
EZC	**Erzincan**	**0.39**	**22**	*e*Pg	**Pg**	**06 03 16.2**	**+0.4**
EZC				*e*Sg	**Sb**	**06 03 23.6**	**-0.2**
ILIC	**ilic-Erzincan**	**0.47**	**278**	*e*PG	**Pg**	**06 03 16.1**	**-1.0**
ILIC	**ilic-Erzincan**	**0.47**	**278**	*e*Pg	**Pg**	**06 03 16.1**	**-1.0**
ERZN	**Erzincan**	**0.48**	**65**	*e*PG	**Pg**	**06 03 16.2**	**-1.1**
ERZN				*e*SG	**Sg**	**06 03 23.6**	**+0.1**
PTK	**Pertek**	**0.52**	**160**	*e*PG	**Pg**	**06 03 17.6**	**-0.5**
PTK				*e*SG	**Sg**	**06 03 25.9**	**+0.9**
PTK	**Pertek**	**0.52**	**160**	*e*Pg	**Pg**	**06 03 17.7**	**-0.5**
PTK				*e*Sg	**Sg**	**06 03 25.9**	**+0.9**
KEMA	**Kemaliye**	**0.53**	**258**	*i* P	**Pg**	**06 03 18.4**	**+0.1**
KEMA				*i* S	**Sb**	**06 03 26.7**	**-1.0**
KEMA	**Kemaliye**	**0.53**	**258**	*i* P	**Pg**	**06 03 18.4**	**+0.1**
KEMA				*i* S	**Sb**	**06 03 26.7**	**-1.0**
KELT	**Kelkit**	**0.77**	**5**	*i* P	**Pg**	**06 03 22.7**	**-0.1**
KELT				*i* S	**Sb**	**06 03 34.1**	**-0.4**
KELT	**Kelkit**	**0.77**	**5**	*i* P	**Pg**	**06 03 22.7**	**-0.1**
ELZG	**Elazig**	**0.90**	**189**	*i* P	**Pg**	**06 03 25.6**	**+0.4**
ELZG				*i* S	**Sn**	**06 03 39.8**	**-0.8**
ELZG	**Elazig**	**0.90**	**189**	*i* S	**Sn**	**06 03 39.8**	**-0.8**
ELZG	**Elazig**	**0.90**	**189**	*i* P	**Pg**	**06 03 25.6**	**+0.4**
GUMT	**Gumushane**	**1.10**	**13**	*e*PN	**Pg**	**06 03 27.9**	**-1.3**
SUSE	**Susehri**	**1.11**	**318**	*i* P	**Pg**	**06 03 29.4**	**+0.1**
SUSE				*i* S	**Sn**	**06 03 46.4**	**+0.6**
SUSE	**Susehri**	**1.11**	**318**	*i* P	**Pg**	**06 03 29.4**	**+0.1**
SUSE				*i* S	**Sn**	**06 03 46.4**	**+0.6**
BINT	**Bingol**	**1.15**	**116**	*e*Pn	**Pn**	**06 03 30.8**	**+0.1**
MYA	**Malataya**	**1.21**	**209**	*e*PN	**Pg**	**06 03 30.0**	**-1.1**
MYA	**Malataya**	**1.21**	**209**	*e*Pn	**Pg**	**06 03 30.0**	**-1.1**
KOPT	**Kop Dagi**	**1.21**	**58**	*i* P	**Pn**	**06 03 33.7**	**+2.1**
KOPT				*i* S	**Sn**	**06 03 52.2**	**+3.8**
KOPT	**Kop Dagi**	**1.21**	**58**	*i* P	**Pn**	**06 03 33.7**	**+2.1**
BNGB	**Bingˆ¶l**	**1.24**	**108**	*e*PN	**Pb**	**06 03 30.8**	**-1.1**
BAYT	**Ayd˜–ntepe-Bay**	**1.26**	**36**	*e*PN	**Pn**	**06 03 30.7**	**-1.5**
BAYT	**Ayd˜–ntepe-Bay**	**1.26**	**36**	*e*Pn	**Pn**	**06 03 30.7**	**-1.5**
AKCD	**Akcadag**	**1.46**	**222**	*i* P	**Pn**	**06 03 35.1**	**+0.2**
AKCD				*i* S	**Sg**	**06 03 57.4**	**+2.5**
AKCD	**Akcadag**	**1.46**	**222**	*i* P	**Pn**	**06 03 35.1**	**+0.2**
AKCD				*i* S	**Sg**	**06 03 57.4**	**+2.5**
DARE	**Darende-Malaty**	**1.54**	**239**	*e*PN	**Pn**	**06 03 35.9**	**-0.1**
GRSN	**GIRESUNGRSN**	**1.68**	**336**	*i* P	**Pb**	**06 03 39.0**	**-0.4**
GRSN				*i* S	**Sg**	**06 04 02.4**	**+0.2**
GRSN	**GIRESUNGRSN**	**1.68**	**336**	*i* P	**Pb**	**06 03 39.0**	**-0.4**
GRSN				*i* S	**Sg**	**06 04 02.4**	**+0.2**
EZM	**Erzurum**	**1.77**	**72**	*e*PN	**Pn**	**06 03 38.6**	**-0.9**

*ISCJB **12** 06:22:54.4±0.9, 29.°66S±0.°05×175.°77W±0.°10, h28km, mb4.5/9, MS3.9/7, Error ellipse: s-maj=12.1km s-min=7.1km az=173.5*
*IDC **12** 06:22:58.9±4.1, 29.°71S×175.°93W, h44km±31km, mb4.3/6, mb1 4.3/9, mb1mx4.0/22, mbtmp4.2/9, ML4.0/3, MS3.9/9, Ms1 3.9/9, ms1mx3.6/23, Error ellipse: s-maj=31.2km s-min=19.1km az=65.0*
*NEIC **12** 06:23:00.9±1.7, 29.°72S×175.°99W, h60km±12km, mb4.3/9, Error ellipse: s-maj=19.6km s-min=10.1km az=91.0*
ISC 12 06:22:56.6±0.7**, 29.°63S**±0.°07×**175.°83W**±0.°09**, h28**km**, n61, σ1s58**/58**, mb4.5**/9**, MS3.9**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.86**	**281**	*e*Pn	**Pn**	**06 23 27.2**	**+0.6**
RAO				*e*Sn	**Sn**	**06 23 49.0**	**-0.2**
RAO	**Raoul Island**	**1.86**	**281**	P	**Pn**	**06 23 27.6**	**+0.9**
	968nm,0.3s,baz=91,slow=2.9,SNR=25						
RAO				S	**Sn**	**06 23 49.1**	**-0.1**
	2µm,0.3s,baz=114,slow=21,SNR=19						
MWZ	**Matawai**	**10.29**	**211**	PN	**Pn**	**06 25 21.8**	**-0.5**
MWZ				SN	**Sn**	**06 27 19.1**	**+2.4**
URZ	**Urewera**	**10.41**	**212**	*e*Pn	**Pn**	**06 25 25.6**	**+1.5**
URZ				*e*Sn	**Sn**	**06 27 23.9**	**+4.1**
URZ	**Urewera**	**10.41**	**212**	PN	**Pn**	**06 25 23.5**	**-0.6**
URZ				SN	**Sn**	**06 27 23.2**	**+3.4**
URZ	**Urewera**	**10.41**	**212**	P	**Pn**	**06 25 23.5**	**-0.6**
	1.0nm,0.3s,baz=74,slow=17,SNR=8.8						
URZ				S	**Sn**	**06 27 20.0**	**+0.2**
	8.1nm,0.3s,baz=266,slow=21,SNR=13						
BKZ	**Black Stump Fm**	**11.43**	**212**	PN	**Pn**	**06 25 38.8**	**+0.8**
MRZ	**Mangatainoka R**	**13.05**	**210**	PN	**Pn**	**06 25 58.3**	**-1.9**
MSVF	**Nonsavu**	**13.10**	**333**	*e*Pn	Pn	06 26 06.2	+5.3
SNZO	**South Karori**	**13.96**	**211**	*e*Pn	**P**	**06 26 19.7**	**-0.6**
SNZO				*e*Sn	**Sn**	**06 28 43.2**	**-3.5**
CTZ	**Chatham Island**	**14.10**	**182**	PN	**Pn**	**06 26 15.4**	**+1.0**
KHZ	**Kahutara**	**15.37**	**211**	*e*P	**Pn**	**06 26 31.0**	**-0.5**
	8.6nm,0.4s						
KHZ				*e*S	**Sn**	**06 29 13.9**	**-7.0**
KHZ	**Kahutara**	**15.37**	**211**	PN	**Pn**	**06 26 33.7**	**+2.2**
LTZ	**Lake Taylor**	**16.24**	**213**	PN	**P**	**06 26 44.3**	**-1.4**
RAR	**Rarotonga**	**16.74**	**64**	LR	LR	06 32 36.8	
	comp=Z,343nm,18.1s,baz=110,slow=34						
RPZ	**Rata Peaks**	**17.53**	**213**	*e*P	**P**	**06 26 59.7**	**-0.2**
	26nm,0.9s						
RPZ				S	Sn	06 30 03.1	-10
RPZ	**Rata Peaks**	**17.53**	**213**	P	**Pn**	**06 26 57.4**	**-1.6**
	0.4nm,0.3s,baz=127,slow=20,SNR=2.9						
RPZ				S	Sn	06 30 03.1	-10
	0.7nm,0.3s,baz=351,slow=19,SNR=5.2						
DZM	**Mont Dzumac**	**17.63**	**291**	*e*LR	LR	06 30 47.1	
	613nm,24.6s						
DZM	**Mont Dzumac**	**17.63**	**291**	*e*P	**Pn**	**06 27 01.4**	**+1.0**
	8.5nm,0.7s						
DZM	**Mont Dzumac**	**17.63**	**291**	P	**P**	**06 27 01.9**	**+0.7**
	0.6nm,0.3s,baz=116,slow=14,SNR=7.6						
DZM				LR	LR	06 32 25.3	
	comp=Z,336nm,18.2s,baz=114,slow=32						
ODZ	**Otahua Downs**	**18.73**	**211**	*e*P	**Pn**	**06 27 14.2**	**+0.5**
	8.3nm,0.7s						
TBI	**Tubuai**	**24.39**	**81**	*e*LR	LR	06 33 43.9	
	401nm,28.0s						
PPT2	**Papeete2**	**26.80**	**69**	*e*LR	LR	06 34 38.5	
	438nm,28.5s						
PPT	**Papeete**	**26.82**	**69**	LR	LR	06 35 49.1	
	comp=Z,284nm,21.3s,baz=338,slow=29						
EIDS	**Eidsvold**	**29.60**	**270**	*e*P	**P**	**06 29 00.8**	**+1.4**
	5.1nm,0.9s						
HNR	**Honiara**	**30.29**	**307**	LR	LR	06 37 57.0	
	comp=Z,85nm,18.9s,baz=298,slow=30						
CTA	**Charters Tower**	**35.56**	**277**	P	**P**	**06 29 51.4**	**-0.3**
CTA	**Charters Tower**	**35.56**	**277**	P	**P**	**06 29 51.4**	**-0.3**
	6.7nm,0.5s,baz=117,slow=9.6,SNR=8.9						
CTAO	**Charters Tower**	**35.56**	**277**	*e*P	**P**	**06 29 51.6**	**-0.1**
	9.0nm,0.7s						
STKA	**Stephens Creek**	**36.49**	**255**	*e*P	**P**	**06 30 00.8**	**+1.3**
	3.2nm,1.3s						
STKA	**Stephens Creek**	**36.49**	**255**	P	**P**	**06 29 59.2**	**-0.3**
	8.4nm,1.1s,baz=108,slow=14,SNR=4.3						
STKA				LR	LR	06 42 42.5	
	comp=Z,152nm,20.3s,baz=26,slow=32						
RKT	**Rikitea**	**37.03**	**90**	*e*LR	LR	06 39 31.4	
	324nm,31.8s						
PMG	**Port Moresby**	**40.01**	**293**	LR	LR	06 43 23.1	
	comp=Z,171nm,21.2s,baz=108,slow=31						
ASAR	**Alice Springs**	**45.04**	**265**	P	**P**	**06 31 09.6**	**-0.6**
ASAR	**Alice Springs**	**45.04**	**265**	P	**P**	**06 31 09.6**	**-0.6**
	2.2nm,0.5s,baz=103,slow=6.8,SNR=35						
ASAR				LR	LR	06 49 48.7	
	comp=Z,241nm,19.5s,baz=154,slow=36						
WRAB	**Tennant Creek**	**45.96**	**270**	*e*P	**P**	**06 31 15.9**	**-1.6**
	6.5nm,0.9s						
WRA	**Warramunga Arr**	**45.96**	**270**	P	**P**	**06 31 16.2**	**-1.3**
WRA	**Warramunga Arr**	**45.96**	**270**	P	**P**	**06 31 16.2**	**-1.3**
	4.6nm,0.7s,baz=109,slow=7.9,SNR=33						
VNDA	**Vanda**	**49.06**	**186**	LR	LR	06 47 25.6	
	comp=Z,112nm,18.9s,baz=281,slow=30						
FITZ	**Fitzroy Crossi**	**54.25**	**268**	*e*P	**P**	**06 32 19.1**	**-1.3**
	4.7nm,1.0s						
PETK	**Petropavlovsk-**	**85.56**	**344**	P	**P**	**06 35 30.7**	**-1.1**
PETK	**Petropavlovsk-**	**85.56**	**344**	P	**P**	**06 35 30.7**	**-1.1**
	3.3nm,0.8s,baz=127,slow=12,SNR=5.6						
USRK	**Ussuriysk Arra**	**87.57**	**325**	P	**P**	**06 35 42.4**	**+0.6**
	3.2nm,1.0s,baz=141,slow=6.4,SNR=4.9						
TXAR	**Lajitas Array**	**90.39**	**56**	LR	LR	07 11 14.2	
	comp=Z,74nm,18.9s,baz=5.0,slow=32						
MKAR	**Makanchi Array**	**118.72**	**310**	PKP	**PKPdf**	**06 41 42.0**	**0.0**
MKAR	**Makanchi Array**	**118.72**	**310**	PKP	**PKPdf**	**06 41 42.0**	**0.0**
	1.4nm,0.9s,baz=66,slow=1.5,SNR=8.4						
KURK	**Kurchatov**	**121.87**	**314**	*e*PKPdf	**PKPdf**	**06 41 47.9**	**+0.2**
FINES	**FINESS Array B**	**145.03**	**342**	PKPbc	**PKPbc**	**06 42 29.6**	**-0.4**
FINES	**FINESS Array B**	**145.03**	**342**	PKPbc	**PKPbc**	**06 42 29.6**	**-0.4**
	9.9nm,0.7s,baz=64,slow=4.4,SNR=20						
KBZ	**Khabaz**	**146.22**	**305**	PKPbc	**PKPbc**	**06 42 34.9**	**+0.6**
KBZ	**Khabaz**	**146.22**	**305**	PKPbc	**PKPbc**	**06 42 34.9**	**+0.6**
	1.7nm,0.7s,baz=176,slow=1.9,SNR=6.9						
NB2	**NORSAR Subarra**	**148.24**	**353**	PKP	**PKPbc**	**06 42 38.7**	**-0.7**
	comp=Z,2.4nm,0.8s,baz=8.5,slow=2.9						
NOA	**NORSAR Array B**	**148.24**	**353**	PKPbc	**PKPbc**	**06 42 38.7**	**-0.7**
NOA	**NORSAR Array B**	**148.24**	**353**	PKPbc	**PKPbc**	**06 42 38.7**	**-0.7**
	comp=Z,5.0nm,0.9s,baz=15,slow=4.4,SNR=9.3						
MALT	**Malatya**	**150.43**	**296**	*e*PKPab	**PKPab**	**06 42 53.3**	**+1.0**
AKASG	**Malin Array Be**	**151.78**	**325**	PKPbc	**PKPbc**	**06 42 48.8**	**+0.5**
AKASG	**Malin Array Be**	**151.78**	**325**	PKPbc	**PKPbc**	**06 42 48.8**	**+0.5**
	comp=Z,7.9nm,0.8s,baz=47,slow=2.9,SNR=12						
AK01	**Malin Array Si**	**151.80**	**325**	*e*PKPbc	**PKPbc**	**06 42 48.6**	**+0.3**
BRTR	**Keskin Array B**	**153.86**	**301**	PKPbc	**PKPbc**	**06 42 53.5**	**0.0**
BRTR	**Keskin Array B**	**153.86**	**301**	PKPbc	**PKPbc**	**06 42 53.5**	**0.0**
	comp=Z,1.6nm,0.9s,baz=141,slow=2.4,SNR=6.9						
CLL	**Collm**	**157.36**	**346**	*e*PKPab	**PKPab**	**06 43 20.0**	**-0.9**
	comp=Z,6.0nm,1.0s						

*ISK **12** 06:25:11.4, 39.°26N×27.°91E, h2km, MD2.6*
*DDA **12** 06:25:11.7, 39.°27N×27.°90E, h7km, MD2.7*
*CSEM **12** 06:25:12.2±0.2, 39.°25N×27.°91E, h5km, MD2.6, Error ellipse: s-maj=4.6km s-min=2.4km az=54.0*
ISC 12 06:25:12.3±1.1**, 39.°25N**±0.°03×**27.°90E**±0.°03**, h11**km±9km**, n33, σ0s47**/50**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.39**	**358**	*e*PG	**Pg**	**06 25 19.9**	**0.0**
BALB				*e*SG	**Sg**	**06 25 26.1**	**+1.0**
BALB	**Balikesir**	**0.39**	**358**	*e*Pg	**Pg**	**06 25 19.9**	**0.0**
BALB				*e*Sg	**Sg**	**06 25 26.1**	**+1.0**
BALY	**Balya**	**0.53**	**336**	*i* P	**Pg**	**06 25 21.9**	**-0.7**
BALY				*i* S	**Sg**	**06 25 29.4**	**-0.3**
BALY	**Balya**	**0.53**	**336**	*i* P	**Pg**	**06 25 21.9**	**-0.7**
BALY				*i* S	**Sg**	**06 25 29.4**	**-0.3**
DURS	**Dursunbey**	**0.57**	**52**	*i* P	**Pg**	**06 25 22.4**	**-1.0**
DURS				*i* S	**Sg**	**06 25 31.1**	**+0.3**
DURS	**Dursunbey**	**0.57**	**52**	*i* P	**Pg**	**06 25 22.4**	**-1.0**
DURS				*i* S	**Sg**	**06 25 31.1**	**+0.3**
DEMI	**Demirci**	**0.67**	**108**	*i* P	**Pg**	**06 25 25.2**	**-0.1**
DEMI				*i* S	**Sg**	**06 25 34.5**	**+0.4**
DEMI	**Demirci**	**0.67**	**108**	*i* P	**Pg**	**06 25 25.2**	**-0.1**
DEMI				*i* S	**Sg**	**06 25 34.5**	**+0.4**
GONE	**Gonen-Balikesi**	**0.81**	**349**	*e*PG	**Pg**	**06 25 27.6**	**-0.3**
GONE	**Gonen-Balikesi**	**0.81**	**349**	*e*Pg	**Pg**	**06 25 27.6**	**-0.3**
MANT	**Manisa**	**0.92**	**146**	*i* P	**Pg**	**06 25 30.0**	**-0.1**
MANT				*i* S	**Sg**	**06 25 42.2**	**+0.1**
MANT	**Manisa**	**0.92**	**146**	*i* P	**Pg**	**06 25 30.0**	**-0.1**
MANT				*i* S	**Sg**	**06 25 42.2**	**+0.1**
KULA	**Kula-Manisa**	**0.95**	**141**	*e*PG	**Pg**	**06 25 30.4**	**-0.2**
KULA	**Kula-Manisa**	**0.95**	**141**	*e*Pg	**Pg**	**06 25 30.4**	**-0.2**
KCTX	**Karacabey (Bur**	**1.07**	**19**	*e*PG	**Pb**	**06 25 32.4**	**-0.4**
KCTX				*e*SG	**Sn**	**06 25 47.6**	**-0.4**
KCTX	**Karacabey (Bur**	**1.07**	**19**	*e*Pg	**Pb**	**06 25 32.4**	**-0.4**
KCTX				*e*Sg	**Sn**	**06 25 47.7**	**-0.4**
ORLT	**Orhaneli**	**1.11**	**44**	*e*PN	**Pn**	**06 25 33.7**	**0.0**
ORLT				*e*SN	**Sn**	**06 25 49.2**	**+0.2**
ORLT	**Orhaneli**	**1.11**	**44**	*e*Pn	**Pn**	**06 25 33.7**	**0.0**
ORLT				*e*Sn	**Sn**	**06 25 49.2**	**+0.2**
TVSB	**Tavsanli**	**1.23**	**80**	*e*PN	**Pn**	**06 25 35.4**	**-0.1**
TVSB	**Tavsanli**	**1.23**	**80**	*e*Pn	**Pn**	**06 25 35.4**	**-0.1**
GDZ	**Gediz**	**1.24**	**97**	*i* P	**Pn**	**06 25 35.2**	**-0.5**
GDZ				*i* S	**Sn**	**06 25 52.6**	**+0.1**
GDZ	**Gediz**	**1.24**	**97**	*i* P	**Pn**	**06 25 35.2**	**-0.5**
GDZ				*i* S	**Sn**	**06 25 52.6**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.35**	**34**	*e*PN	**Pg**	**06 25 38.1**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.35**	**34**	*e*Pn	**Pg**	**06 25 38.1**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.54**	**339**	*e*PN	**Pb**	**06 25 41.0**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.54**	**339**	*e*Pn	**Pb**	**06 25 41.0**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.58**	**317**	*e*PN	**Pb**	**06 25 41.5**	**0.0**
GELI	**Tayfur-Gelibol**	**1.58**	**317**	*e*Pn	**Pb**	**06 25 41.5**	**0.0**
MFT	**Murefte**	**1.60**	**343**	*e*PN	**Pn**	**06 25 41.1**	**+0.5**
MFT	**Murefte**	**1.60**	**343**	*e*Pn	**Pn**	**06 25 41.1**	**+0.5**
YLV	**Yalova**	**1.73**	**40**	*e*PN	**Pb**	**06 25 43.7**	**-0.4**
YLV	**Yalova**	**1.73**	**40**	*e*Pn	**Pb**	**06 25 43.7**	**-0.4**
BORA	**Eskisehir**	**2.07**	**72**	*i* P	**Pg**	**06 25 53.0**	**+0.9**
BORA				*i* S	**Sg**	**06 26 20.0**	**+1.1**

*MAN **12** 07:10:01, 12.°95N×124.°45E, h22km, mb5.0, ML4.0, MS4.0*
MAN INTENSITY II - LIGNON HILL LEGASPI CITY; SORSOGON CITY.
*ISCJB **12** 07:10:02.5±0.4, 12.°99N±0.°02×124.°43E±0.°03, h51km±4km, mb4.5/52, MS3.4/12, Error ellipse: s-maj=5.8km s-min=3.7km az=154.0*
*IDC **12** 07:10:03.7±3.1, 12.°91N×124.°37E, h49km±29km, mb4.1/21, mb1 4.2/21, mb1mx4.1/27, mbtmp4.1/21, MS3.5/10, Ms1 3.5/10, ms1mx3.3/31, Error ellipse: s-maj=20.4km s-min=10.2km az=78.0*
*NEIC **12** 07:10:10.0±1.2, 12.°95N×124.°34E, h105km±11km, mb4.5/24, Error ellipse: s-maj=10.6km s-min=6.6km az=71.0*
NEIC Felt [II PIVS] at Legaspi and Sorsogon, Luzon.
*BJI **12** 07:10:11.5, 12.°95N×124.°43E, h137km, mB4.8/22, mb4.6/32*
*DJA **12** 07:10:19.2±1.0, 13˚N±6˚×12˚4E±˚, h206km±10km, M5.0/14, mB4.9/3, mb4.5/14, MLv5.3/1, Mw(mB)4.1/3, Mwp6.3/1*
ISC 12 07:10:04.7±0.8**, 12.°97N**±0.°03×**124.°47E**±0.°04**, h57**km±6km**, n147, σ1s81**/159**, mb4.5**/52**, MS3.4**/12**, 2C-2D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	**Catarman**	**0.49**	**158**	*e*P	Pn	07 10 11.9	-4.4
CNP				*e*S	**Sn**	**07 10 21.2**	**-3.6**
MMPH	**Masbate**	**1.03**	**234**	*e*P	Pn	07 10 26.3	+3.3
MMPH				*e*S	**Sn**	**07 10 33.2**	**-3.3**
BESP	**Borongan**	**1.66**	**145**	*e*P	**Pn**	**07 10 29.6**	**-1.9**
BESP				*e*S	**Sn**	**07 10 54.2**	**+2.5**
AUQP	**San Andres**	**1.79**	**282**	*e*P	**Pn**	**07 10 31.7**	**-1.6**
AUQP				*e*S	**Sn**	**07 10 59.6**	**+4.7**
PLP	**Palo**	**1.86**	**165**⇓	*e*P	**Pn**	**07 10 32.8**	**-1.5**
OCLP	**Ormoc**	**1.91**	**176**	*e*P	**Pn**	**07 10 34.2**	**-0.8**
GQP	**Guinayangan**	**2.18**	**295**⇑	*e*P	Pn	07 10 35.4	-3.2
GQP				*e*S	**Sn**	**07 11 05.7**	**+1.3**
RCP	**Roxas**	**2.20**	**231**⇑	*e*P	**Pn**	**07 10 36.5**	**-2.3**
RCP				*e*S	**Sn**	**07 11 04.0**	**-0.9**
OTRP	**Odiongan**	**2.47**	**256**	*e*P	**Pn**	**07 10 40.3**	**-2.2**
BOAC	**Boac**	**2.61**	**281**	*e*P	**Pn**	**07 10 42.2**	**-2.2**
BOAC				*e*S	**Sn**	**07 11 17.9**	**+2.9**
LLP	**Lapu-Lapu**	**2.68**	**191**⇓	*e*P	**Pn**	**07 10 42.7**	**-2.8**
LLP				*e*S	**Sn**	**07 11 16.5**	**-0.3**
MSLP	**Maasin**	**2.84**	**172**	*e*P	**Pn**	**07 10 47.4**	**-0.3**
GUIM	**Jordan**	**2.97**	**219**	*e*P	**Pn**	**07 10 47.9**	**-1.6**
GUIM				*e*S	**Sn**	**07 11 23.9**	**0.0**
POLP	**Polilio Island**	**3.02**	**306**	*e*P	**Pn**	**07 10 48.7**	**-1.4**
POLP				*e*S	**Sn**	**07 11 25.3**	**+0.3**
LQP	**Lukban**	**3.07**	**292**	*e*P	**Pn**	**07 10 51.8**	**+0.8**
SJMP	**San Jose**	**3.31**	**262**	*e*P	**Pn**	**07 10 52.7**	**-1.4**
TBP	**Tagbilaran**	**3.31**	**190**	*e*P	**Pn**	**07 10 52.5**	**-1.7**
TGY	**Tagaytay City**	**3.62**	**289**	P	**Pn**	**07 11 00.6**	**+2.2**
TGY	**Tagaytay City**	**3.62**	**289**	P	**Pn**	**07 11 00.6**	**+2.2**
	69nm,0.3s,baz=21,slow=3.0,SNR=10						
CUYO	**Cuyo Island**	**3.98**	**238**	*e*P	**Pn**	**07 11 01.0**	**-2.4**
BUTP	**Butuan**	**4.13**	**164**	*e*P	**Pn**	**07 11 06.8**	**+1.5**
BUTP				*e*S	Sn	07 12 05.9	+13
PALP	**Palanan**	**4.53**	**334**	*e*P	Pn	07 11 16.5	+5.8
PALP				*e*S	**Sn**	**07 11 56.8**	**-5.2**
CAUP	**Cauayan**	**4.71**	**327**	*e*P	**Pn**	**07 11 10.8**	**-2.4**
BUKP	**Musuan**	**5.09**	**173**	*e*P	**Pn**	**07 11 19.0**	**+0.5**
PAGZ	**Pagadian**	**5.20**	**192**	*e*P	**Pn**	**07 11 19.9**	**-0.1**
PAGZ				*e*S	**Sn**	**07 12 19.2**	**+0.5**
ENPP	**El Nido**	**5.24**	**251**	*e*P	**Pn**	**07 11 18.8**	**-1.7**
BOLP	**Bolinao**	**5.56**	**308**	*e*P	**Pn**	**07 11 25.0**	**0.0**
APYP	**Conner**	**5.78**	**328**	*e*P	**Pn**	**07 11 26.4**	**-1.4**
APYP				*e*S	**Sn**	**07 12 30.7**	**-2.0**
ABRA	**Dolores**	**5.90**	**323**	*e*P	**Pn**	**07 11 26.8**	**-2.8**
DAV	**Davao City (W)**	**5.96**	**169**	*e*Pn	Pn	07 11 38.8	+8.3
DAV	**Davao City (W)**	**5.96**	**169**	P	Pn	07 11 44.7	+14
	327nm,0.6s,1.4nm						
DAV	**Davao City (W)**	**5.96**	**169**	LR	LR	07 14 50.1	
	comp=Z,706nm,19.1s,baz=331,slow=48						
MYLDM	**Lahad Datu**	**9.73**	**218**	P	Pn	07 12 40.1	+18
	25nm,1.0s						
MRSI	**Marisa**	**12.66**	**192**	P	P	07 13 16.8	+5.2
	22nm,0.6s,787nm						
SKSI	**Soroako, Sulaw**	**15.71**	**192**	P	**P**	**07 13 50.1**	**+4.5**
	109nm,1.2s,863nm						
SBUM	**Sibu**	**16.01**	**230**	P	**P**	**07 13 49.0**	**+0.1**
	34nm,1.2s						
TTSI	**Tana Toraja**	**16.57**	**197**	P	P	07 14 00.8	+5.8
	95nm,0.8s,2µm88µm						
SPSI	**Sidrap Palu**	**17.46**	**196**	P	**P**	**07 14 05.7**	**+0.8**
	27nm,0.8s						
KSM	**Kuching**	**18.09**	**232**	*e*P	**Pn**	**07 14 14.6**	**+2.4**
	45nm,1.2s						
KSM	**Kuching**	**18.09**	**232**	P	Pn	07 14 17.9	+5.8
	24nm,0.9s						
KAPI	**Kappang**	**18.47**	**195**	*e*P	**Pn**	**07 14 19.8**	**+3.0**
	37nm,1.0s						
KAPI	**Kappang**	**18.47**	**195**	P	**Pn**	**07 14 20.0**	**+3.3**
	36nm,1.0s						
KAPI	**Kappang**	**18.47**	**195**	P	**Pn**	**07 14 20.4**	**+3.6**
	1.1nm,0.3s,baz=27,slow=9.8,SNR=7.7						
UBPT	**Khong Chiam**	**18.57**	**279**	P	**P**	**07 14 16.8**	**-0.4**
	27nm,1.3s						
BKSI	**Bulukumba**	**18.68**	**194**	P	**Pn**	**07 14 20.6**	**+1.4**
	18nm,0.9s						
NJ2	**Nanjing**	**19.68**	**346**	*e*P	**Pn**	**07 14 31.5**	**+0.5**
NJ2				pmax	pmax		
	comp=Z,140nm,1.0s						
NJ2				LR	LR		
	comp=N,160nm,16.7s						
NJ2				LR	LR		
	comp=E,180nm,23.9s						
NJ2				LR	LR		
	comp=Z,2µm,21.0s						
JNU	**Nakatsue**	**20.89**	**15**	*e*P	Pn	07 14 45.6	+0.2
	comp=Z,28nm,1.5s						
JNU	**Nakatsue**	**20.89**	**15**	P	**P**	**07 14 42.3**	**-0.1**
	comp=Z,14nm,0.8s,baz=319,slow=0.7,SNR=4.7						
JNU				LR	LR	07 22 12.0	
	comp=Z,106nm,19.9s,baz=171,slow=35						
GYA	**Guiyang**	**21.44**	**311**	*e*P	**P**	**07 14 48.6**	**+0.3**
GYA				pP	pP	07 15 19.0	+18
GYA				sP	sP	07 15 37.5	+29
GYA				S	S	07 18 35.2	-8.1
GYA				PcP	**PcP**	**07 18 50.0**	**0.0**
GYA				ScP	ScP	07 22 12.3	-10
GYA				PcS	**PcS**	**07 22 25.6**	**-2.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TPI	**Tanjungpandan**	**22.87**	**228**	P	P	07 14 56.3	-7.3
KMI	**Kunming**	**23.79**	**304**	P	**P**	**07 15 13.4**	**+0.8**
KMI				S	**S**	**07 19 18.2**	**-6.3**
KMI				pmax	pmax		
	comp=Z,14nm,0.6s						
KMI				LR	LR		
	comp=N,140nm,17.1s						
KMI				LR	LR		
	comp=E,140nm,15.7s						
KMI				LR	LR		
	comp=Z,190nm,17.3s						
SJI	**Sawahan**	**24.14**	**212**	P	**P**	**07 15 19.7**	**+4.1**
KSAR	**Wonju Array Be**	**24.56**	**7**	P	**P**	**07 15 19.3**	**+0.1**
KSRS	**Korea Array**	**24.58**	**7**	P	**P**	**07 15 19.3**	**0.0**
	comp=Z,5.5nm,0.8s,baz=184,slow=10.0,SNR=14						
KSRS				LR	LR	07 24 05.1	
	comp=Z,117nm,20.8s,baz=58,slow=34						
IPM	**Ipoh**	**24.64**	**252**	*e*P	**P**	**07 15 19.4**	**-0.8**
	comp=Z,16nm,0.9s						
KULM	**Kulim**	**24.71**	**254**	*e*P	**P**	**07 15 19.3**	**-1.5**
	comp=Z,32nm,1.3s						
PCJI	**Pacitan**	**24.83**	**213**	P	**P**	**07 15 25.6**	**+3.8**
	comp=Z,46nm,1.2s						
CMAR	**Chiang Mai Arr**	**25.16**	**286**	P	**P**	**07 15 23.0**	**-1.9**
CMAR	**Chiang Mai Arr**	**25.16**	**286**	P	**P**	**07 15 23.0**	**-1.9**
	comp=Z,5.7nm,0.8s,baz=100,slow=7.9,SNR=18						
CMAR				LR	LR	07 26 48.9	
	comp=Z,43nm,18.1s,baz=100,slow=40						
CD2	**Chengdu**	**26.15**	**316**	*e*P	**P**	**07 15 35.9**	**+2.2**
CD2				pP	pP	07 16 05.2	+17
CD2				sP	sP	07 16 21.9	+27
CD2				PP	PP	07 16 24.5	-9.4
CD2				S	**S**	**07 19 55.5**	**-6.0**
CD2				sS	sS	07 20 47.2	+21
CD2				SS	SnSn	07 21 16.0	+11
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,30nm,4.2s						
MJAR	**Matsushiro Arr**	**26.52**	**25**	P	**P**	**07 15 35.8**	**-1.2**
MJAR				PcP	**PcP**	**07 19 02.6**	**+2.0**
MJAR	**Matsushiro Arr**	**26.52**	**25**	P	**P**	**07 15 35.8**	**-1.2**
	comp=Z,4.5nm,1.2s,baz=203,slow=8.5,SNR=6.0						
MJAR				PcP	**PcP**	**07 19 02.6**	**+2.0**
	comp=Z,1.4nm,0.3s,baz=184,slow=2.6,SNR=5.3						
MJAR				LR	LR	07 25 27.2	
	comp=Z,105nm,18.1s,baz=200,slow=35						
LZH	**Lanzhou**	**29.57**	**325**	*e*P	**P**	**07 16 05.0**	**+0.6**
LZH				pP	pP	07 16 35.2	+17
LZH				sP	sP	07 16 51.2	+26
LZH				*e*S	S	07 20 50.0	-5.6
LZH				sS	sS	07 21 42.3	+22
LZH				SS	**SnSn**	**07 22 33.2**	**+4.7**
LZH				pmax	pmax		
	comp=Z,18nm,1.6s						
LZH				pmax	pmax		
	comp=Z,120nm,6.0s						
LZH				LR	LR		
	comp=N,200nm,12.6s						
LZH				LR	LR		
	comp=E,160nm,11.7s						
LZH				LR	LR		
	comp=Z,390nm,16.2s						
HHC	**Hu-ho-hao-te**	**29.99**	**340**	*e*P	**P**	**07 16 08.6**	**+0.6**
HHC				pP	pP	07 16 38.5	+16
HHC				sP	sP	07 16 55.1	+26
HHC				PP	**PP**	**07 17 13.1**	**-3.4**
HHC				S	S	07 20 56.2	-5.8
HHC				sS	sS	07 21 49.4	+23
HHC				SS	**ScP**	**07 22 45.9**	**-0.8**
HHC				ScS	ScS	07 26 27.8	-14
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,240nm,5.4s						
FITZ	**Fitzroy Crossi**	**30.90**	**178**	P	**P**	**07 16 14.2**	**-1.8**
FITZ	**Fitzroy Crossi**	**30.90**	**178**	P	**P**	**07 16 14.2**	**-1.8**
	comp=Z,0.9nm,0.5s,baz=11,slow=13,SNR=5.4						
USRK	**Ussuriysk Arra**	**31.78**	**10**	P	**P**	**07 16 24.2**	**+0.6**
	comp=Z,9.8nm,0.7s,baz=194,slow=8.7,SNR=16						
MDJ	**Mudanjiang**	**31.84**	**7**	P	P	07 16 27.3	+3.2
MDJ				sP	sP	07 17 12.6	+27
MDJ				S	**S**	**07 21 29.7**	**-0.9**
MDJ				pmax	pmax		
	comp=Z,190nm,3.6s						
MDJ				LR	LR		

comp=N,39nm,30.0s
MDJ LR LR
comp=E,44nm,30.0s
MDJ LR LR
comp=Z,81nm,21.5s
COEN Coen 32.54 145 *e*P **P 07 16 29.9 -0.7**
comp=Z,83nm,1.0s
WRAB Tennant Creek 34.11 163 *e*P **P 07 16 43.4 -0.8**
comp=Z,3.3nm,0.6s
WRA Warramunga Arr 34.12 163 P **P 07 16 43.2 -1.0**
WRA Warramunga Arr 34.12 163 P **P 07 16 43.2 -1.0**
comp=Z,3.0nm,0.6s,baz=344,slow=8.9,SNR=46
GTA Gaotai 34.17 325 *e*P P 07 16 48.4 +3.7
GTA pP pP 07 17 19.9 +21
GTA sP sP 07 17 35.7 +30
GTA pmax pmax
comp=Z,4.0nm,0.8s
ASAJ Asahikawa 34.72 23 LR LR 07 31 49.1
comp=Z,41nm,18.5s,baz=179,slow=38
TAPN Taplejung 37.20 298 *e*P **P 07 17 09.8 -1.2**
comp=Z,13nm,0.7s
ODAN Odare 37.35 297 *e*P **P 07 17 10.9 -1.3**
comp=Z,42nm,0.7s
AS31 Alice Springs 37.56 166 *e*P **P 07 17 13.9 +0.2**
ASAR Alice Springs 37.56 166 P **P 07 17 14.6 +0.8**
ASAR S **S 07 22 58.3 -0.8**
ASAR Alice Springs 37.56 166 P **P 07 17 14.6 +0.8**
comp=Z,3.3nm,0.5s,baz=356,slow=13,SNR=58
ASAR S **S 07 22 58.3 -0.8**
comp=Z,0.7nm,0.6s,baz=334,slow=12,SNR=7.7
ULN Ulaanbaatar 37.70 341 *e*P **P 07 17 15.4 +0.6**
comp=Z,11nm,0.8s
ULN Ulaanbaatar 37.70 341 P **P 07 17 14.6 -0.2**
comp=Z,15nm,0.8s
SONM Songino Array 37.89 340 P **P 07 17 16.9 +0.5**
SONM Songino Array 37.89 340 P **P 07 17 16.9 +0.5**
comp=Z,3.2nm,0.7s,baz=160,slow=8.9,SNR=20
SONM LR LR 07 32 56.7
comp=Z,60nm,20.9s,baz=95,slow=36
RAMN Ramite 38.06 297 *e*P **P 07 17 17.2 -1.0**
comp=Z,36nm,0.7s
GUN Gumba 38.91 298 *e*P **P 07 17 24.3 -1.2**
comp=Z,35nm,0.7s
PKI Pulchoki 39.23 298 *e*P **P 07 17 26.5 -1.7**
comp=Z,20nm,0.7s
KKN Kakani 39.40 298 *e*P **P 07 17 27.9 -1.5**
comp=Z,17nm,0.7s
DMN Daman 39.50 298 *e*P **P 07 17 28.8 -1.5**
DANN Dangsing 40.84 298 *e*P **P 07 17 39.8 -1.6**
comp=Z,30nm,0.8s
KOLN Koldanda 40.84 298 *e*P **P 07 17 40.0 -1.3**
comp=Z,20nm,0.7s
WMQ Urumqi 44.03 321 *e*P **P 07 18 07.5 +0.7**
WMQ pmax pmax
comp=Z,11nm,1.0s
WMQ pmax pmax
comp=Z,70nm,3.5s
HYB Hyderabad 44.46 282 *i* P **P 07 18 10.0 -0.6**
EIDS Eidsvold 46.09 146 *e*P **P 07 18 24.3 +1.0**
comp=Z,2.7nm,0.6s
STKA Stephens Creek 47.52 160 *e*P **P 07 18 34.4 +0.1**
comp=Z,1.7nm,0.9s
STKA Stephens Creek 47.52 160 P **P 07 18 34.4 +0.1**
comp=Z,2.3nm,0.4s,baz=343,slow=11,SNR=8.8
PETK Petropavlovsk- 47.97 26 P **P 07 18 38.9 +1.3**
PETK Petropavlovsk- 47.97 26 P **P 07 18 38.9 +1.3**
comp=Z,6.8nm,0.6s,baz=204,slow=6.4,SNR=19
PETK LR LR 07 36 42.0
comp=Z,40nm,19.1s,baz=323,slow=33
MK31 Makanchi Array 48.83 322 *e*P **P 07 18 44.7 +0.3**
MKAR Makanchi Array 48.83 322 *e*P **P 07 18 44.8 +0.4**
MKAR PcP **PcP 07 20 09.3 +0.9**
MKAR Makanchi Array 48.83 322 P **P 07 18 44.7 +0.4**
comp=Z,11nm,0.8s,baz=119,slow=8.7,SNR=72
MKAR PcP **PcP 07 20 09.3 +0.9**
comp=Z,1.3nm,1.0s,baz=95,slow=4.3,SNR=2.1
KSH Kashi 50.13 311 *e*P **P 07 18 56.2 +1.6**
KSH *e*pP pP 07 19 28.4 +19
KSH *e*sP sP 07 19 44.4 +28
KSH *e*PcP **PcP 07 20 14.2 +0.8**
KSH *e*PP **PP 07 20 54.0 +3.8**
KSH *e*S S 07 25 53.9 -8.4
KSH *e*sS sS 07 26 51.6 +24
KSH pmax pmax
comp=Z,7.0nm,0.9s
KSH pmax pmax
comp=Z,160nm,4.4s
KSH LR LR
comp=N,340nm,6.2s
KSH LR LR
comp=E,210nm,5.7s
KSH LR LR
comp=Z,260nm,5.1s
ARMA Armidale 50.44 149 *e*P **P 07 18 58.6 +1.8**
comp=Z,3.6nm,0.6s
ZAA0 Zalesovo Array 51.43 331 *e*P **P 07 19 03.2 -0.7**
ZALV Zalesovo Beam 51.43 331 P **P 07 19 03.8 -0.1**
ZALV Zalesovo Beam 51.43 331 P **P 07 19 03.8 -0.1**
comp=Z,7.0nm,0.8s,baz=119,slow=7.8,SNR=24
ZALV LR LR 07 42 02.6
comp=Z,64nm,18.8s,baz=69,slow=37
EKS2 Erkin-Say 52.70 314 *e*P **P 07 19 13.6 -0.1**
comp=Z,5.3nm,1.0s
KURK Kurchatov 52.86 325 *e*P **P 07 19 14.9 +0.3**
comp=Z,31nm,1.2s
KBL Kabul 54.38 303 *e*P **P 07 19 25.9 -0.4**
comp=Z,4.4nm,0.7s
BRVK Borovoye 58.53 325 *e*P **P 07 19 55.3 +0.2**
comp=Z,15nm,0.8s
TAU Tasmania Unive 59.42 161 *e*P **P 07 19 58.5 -2.9**
comp=Z,99nm,1.8s
ABKAR Akbulak array 63.70 319 *e*P **P 07 20 30.1 -0.2**
comp=Z,6.7nm,0.7s
RPZ Rata Peaks 70.59 146 P **P 07 21 13.9 0.0**
RPZ Rata Peaks 70.59 146 P **P 07 21 13.9 0.0**
comp=Z,6.3nm,0.7s,baz=27,slow=4.5,SNR=3.1
RDF Al-Radifah 72.50 296 *e*P **P 07 21 24.5 -1.3**
RDF AMb AMB 07 21 25.9
comp=Z,25nm,0.7s
MIB Mutribah 72.61 297 *e*P **P 07 21 25.4 -1.1**
MIB AMb AMB 07 21 26.5
comp=Z,36nm,0.7s
NAY Al-Naaiem 72.74 297 *e*P **P 07 21 26.1 -1.2**
NAY AMb AMB 07 21 27.3
comp=Z,17nm,0.7s
RAYN Ar Rayn 74.95 291 *e*P **P 07 21 40.0 -0.3**
KBZ Khabaz 75.10 312 P **P 07 21 40.1 -0.6**
KBZ Khabaz 75.10 312 P **P 07 21 40.1 -0.6**
comp=Z,0.5nm,0.3s,baz=165,slow=5.5,SNR=4.0
COLD Coldfoot 76.33 24 *e*P **P 07 21 49.2 +1.9**
comp=Z,3.9nm,0.8s
TRF Thorofare Moun 76.37 27 *e*P **P 07 21 48.0 +0.1**
comp=Z,20nm,1.7s
MCK McKinley 76.97 27 *e*P **P 07 21 51.5 +0.5**
comp=Z,12nm,0.6s
PMR Palmer 76.99 29 *e*P **P 07 21 51.1 0.0**
comp=Z,4.8nm,0.6s
COLA College 77.38 26 *e*P **P 07 21 53.5 +0.3**
comp=Z,1.8nm,0.6s
ILAR Eielson Array 77.79 26 P **P 07 21 55.1 -0.5**
ILAR Eielson Array 77.79 26 P **P 07 21 55.1 -0.5**
comp=Z,1.6nm,0.7s,baz=248,slow=5.0,SNR=28
ILB Eielson Array 77.79 26 *e*P **P 07 21 55.6 0.0**
PAX Paxson 78.58 28 *e*P **P 07 22 00.5 +0.4**
comp=Z,5.4nm,1.2s
EGAK Eagle 80.23 26 *e*P **P 07 22 09.5 +0.6**
comp=Z,3.5nm,0.7s
ARCES ARCESS Array B 81.06 339 P **P 07 22 12.8 -0.5**
ARCES ARCESS Array B 81.06 339 P **P 07 22 12.8 -0.5**
comp=Z,1.3nm,0.6s,baz=72,slow=5.2,SNR=8.1
BRTR Keskin Array B 82.47 309 P **P 07 22 21.5 0.0**
BRTR Keskin Array B 82.47 309 P **P 07 22 21.5 0.0**
comp=Z,0.6nm,0.7s,baz=87,slow=2.7,SNR=3.8
AKASG Malin Array Be 83.37 320 P **P 07 22 24.8 -0.9**
AKASG Malin Array Be 83.37 320 P **P 07 22 24.8 -0.9**
comp=Z,1.2nm,0.6s,baz=60,slow=5.5,SNR=3.5
BUR08 Bucovina Ar. S 86.67 318 *e*P **P 07 22 42.6 +0.2**
NOA NORSAR Array B 89.57 333 LR LR 08 06 43.0
comp=Z,38nm,18.4s,baz=225,slow=38
YKA Yellowknife Ar 92.01 23 P **P 07 23 08.0 +0.9**
YKA Yellowknife Ar 92.01 23 P **P 07 23 08.0 +0.9**
comp=Z,0.9nm,0.6s,baz=301,slow=4.4,SNR=14
VNDA Vanda 92.82 172 *e*P **P 07 23 08.0 -2.4**
comp=Z,9.1nm,1.8s
VNDA Vanda 92.82 172 P **P 07 23 10.4 0.0**
comp=Z,0.5nm,0.7s,baz=283,slow=7.7,SNR=2.3

TXAR Lajitas Array 117.34 47 PKP **PKPdf 07 28 45.4 +0.8**
TXAR Lajitas Array 117.34 47 PKP **PKPdf 07 28 45.4 +0.8**
comp=Z,0.4nm,0.8s,baz=162,slow=1.0,SNR=5.5
STVI Saint Thomas 147.52 17 *e*PKPbc **PKPbc 07 29 43.8 +0.5**
MTP Monte Pirata 147.58 18 *e*PKPbc **PKPbc 07 29 42.9 -0.6**
PLCA Paso Flores 149.36 157 PKPbc **PKPbc 07 29 48.8 +1.1**
PLCA Paso Flores 149.36 157 PKPbc **PKPbc 07 29 48.8 +1.1**
comp=Z,1.1nm,0.5s,baz=260,slow=4.3,SNR=5.6

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*CSEM **12** 07:30:10.9±0.2, 37°.15N×5°.45W, h10^{km}, ML2.7/10, Error ellipse: s-maj=4.2km s-min=2.7km az=18.0*
*ISCJB **12** 07:30:11.9±0.6, 37°.07N±0°.06×5°.48W±0°.04, h24^{km}±9^{km}, Error ellipse: s-maj=10.4km s-min=5.2km az=174.3*
*PDA **12** 07:30:12.8±1.3, 37°.10N×5°.42W, h19^{km}±3^{km}, ML2.1, Error ellipse: s-maj=2.9km s-min=2.0km az=22.0*
*INMG **12** 07:30:12.8±1.3, 37°.10N×5°.42W, h19^{km}±3^{km}, ML2.1, Error ellipse: s-maj=2.9km s-min=2.0km az=22.0*
*MDD **12** 07:30:12.3±0.4, 37°.08N×5°.43W, h11^{km}, mbLg2.1/17, Error ellipse: s-maj=4.0km s-min=2.9km az=11.0*
*IGIL **12** 07:30:12.9, 37°.09N×5°.43W, h21^{km}, ML2.0*
*SFS **12** 07:30:13.0, 37°.08N×5°.42W, h21^{km}, ML2.1*
ISC 12 07:30:12.5±1.3**, 37°.05N**±0°.03×**5°.44W**±0°.03**, h19**^{km}±2^{km}**, n62, σ1^{s}33**/92**, 1C, Spain**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LIJA Lijar 0.15 169 ⇑Pg **Pb 07 30 14.7 -0.7**
LIJA Lg Lg 07 30 18.6
LIJA Lijar 0.15 169 *i* P **Pb 07 30 14.7 -0.7**
LIJA Lg Lg 07 30 18.6
ESPR Espera 0.38 241 Pg **Pg 07 30 21.1 +0.6**
12nm,0.2s,SNR=6.7
ESPR Lg Lg 07 30 27.5
37nm,0.4s,SNR=36
ESPR Espera 0.38 241 Pg **Pg 07 30 21.1 +0.6**
12nm,0.2s,SNR=6.7
ESPR Lg Lg 07 30 27.5
37nm,0.4s,SNR=36
EMIJ Mijas 0.72 132 Pg **Pb 07 30 26.4 -0.1**
1.3nm,0.1s,SNR=4.6
EMIJ Lg Lg 07 30 36.3
13nm,0.3s,SNR=6.1
EMIJ Mijas 0.72 132 Pg **Pb 07 30 26.4 -0.1**
1.3nm,0.1s,SNR=4.6
EMIJ Lg Lg 07 30 36.3
13nm,0.3s,SNR=6.1
ELUQ Luque 1.06 61 Pg **Pb 07 30 32.2 -0.1**
6.8nm,0.2s,SNR=7.9
ELUQ Lg Lg 07 30 46.3
25nm,0.2s,SNR=7.9
ELUQ Luque 1.06 61 Pg **Pb 07 30 32.2 -0.1**
6.8nm,0.2s,SNR=7.9
ELUQ Lg Lg 07 30 46.3
25nm,0.2s,SNR=7.9
EMIN Mina Concepcio 1.21 306 Pn **Pn 07 30 33.1 -1.4**
1.6nm,0.3s,SNR=17
EMIN Pg **Pb 07 30 34.5 -0.4**
2.7nm,0.1s,SNR=7.9
EMIN Lg Lg 07 30 50.7
8.4nm,0.1s,SNR=24
EMIN Mina Concepcio 1.21 306 Pn **Pn 07 30 33.1 -1.4**
1.6nm,0.3s,SNR=17
EADA Adamuz 1.30 31 Pn **Pn 07 30 35.4 -0.4**
1.1nm,0.1s,SNR=15
EADA Lg Lg 07 30 52.4
35nm,0.3s,SNR=4.9
EADA Adamuz 1.30 31 Pn **Pn 07 30 35.4 -0.4**
1.1nm,0.1s,SNR=15
EADA Lg Lg 07 30 52.4
35nm,0.3s,SNR=4.9
EQUE Quentar 1.60 84 Pg **Pb 07 30 41.2 -0.4**
0.9nm,0.1s,SNR=5.0
EQUE Lg Lg 07 31 02.7
5.1nm,0.2s,SNR=7.9
EQUE Quentar 1.60 84 Pg **Pb 07 30 41.2 -0.4**
0.9nm,0.1s,SNR=5.0
EQUE Lg Lg 07 31 02.7
5.1nm,0.2s,SNR=7.9
PBAR Barrancos 1.69 312 *e*Pn **Pn 07 30 39.8 -1.2**
PBAR Barrancos 1.69 312 *e*Pg **Pb 07 30 42.1 -0.9**
PBAR *e*Sg **Sb 07 31 04.7 +0.7**
PBAR A A 07 31 08.1
5.5nm,0.1s
PBAR Barrancos 1.69 312 Pn **Pn 07 30 39.8 -1.2**
PBAR Pg **Pb 07 30 42.1 -0.9**
PBAR Lg Lg 07 31 04.7
5.5nm,0.1s
PBAR Barrancos 1.69 312 Pn **Pn 07 30 39.8 -1.2**
PBAR Barrancos 1.69 312 Pg **Pb 07 30 42.1 -0.9**
PBAR *e*Sg **Sb 07 31 04.7 +0.7**
5.5nm,0.1s
EGRO El Granado 1.70 287 Pn **Pn 07 30 39.7 -1.4**
0.6nm,0.2s,SNR=7.9
EGRO Pg **Pb 07 30 43.4 +0.3**
0.5nm,0.1s,SNR=7.9
EGRO Sn **Sn 07 31 01.3 -1.1**
1.7nm,0.2s,SNR=7.9
EGRO Lg Lg 07 31 05.9
5.4nm,0.3s,SNR=7.9
EGRO El Granado 1.70 287 Pn **Pn 07 30 39.7 -1.4**
0.6nm,0.2s,SNR=7.9
PVAQ Vaqueiros 1.85 282 *e*Pn **Pn 07 30 42.4 -0.8**
PVAQ *e*Sn **Sn 07 31 04.7 -1.4**
PVAQ *e*Sg **Sb 07 31 10.5 +2.0**
PVAQ A A 07 31 13.9
11nm,0.2s
PVAQ Vaqueiros 1.85 282 Pn **Pn 07 30 42.4 -0.8**
PVAQ Sn **Sn 07 31 04.7 -1.4**
PVAQ Lg Lg 07 31 10.5
11nm,0.2s
PVAQ Vaqueiros 1.85 282 Pn **Pn 07 30 42.4 -0.8**
PVAQ Sn **Sn 07 31 04.7 -1.4**
PVAQ *e*Sg **Sb 07 31 10.5 +2.0**
11nm,0.2s
PBDV Barranco-do-Ve 2.00 276 *e*Pn **Pn 07 30 44.8 -0.5**
PBDV *e*Sn **Sn 07 31 08.9 -0.9**
PBDV *e*Sg **Sb 07 31 14.9 +2.1**
PBDV A A 07 31 19.6
7.5nm,0.3s
PBDV Barranco-do-Ve 2.00 276 Pn **Pn 07 30 44.8 -0.5**
PBDV Sn **Sn 07 31 08.9 -0.9**
PBDV Lg Lg 07 31 14.9
7.5nm,0.3s
PBDV Barranco-do-Ve 2.00 276 Pn **Pn 07 30 44.8 -0.5**
PBDV Sn **Sn 07 31 08.9 -0.9**
PBDV *e*Sg **Sb 07 31 14.9 +2.1**
7.5nm,0.3s
EQES Quesada 2.03 68 Sn **Sn 07 31 10.0 -0.6**
1.6nm,0.2s,SNR=7.9
EQES Lg Lg 07 31 16.3
6.1nm,0.3s,SNR=7.9
EQES Quesada 2.03 68 Sn **Sn 07 31 10.0 -0.6**
1.6nm,0.2s,SNR=7.9
EQES Lg Lg 07 31 16.3
6.1nm,0.3s,SNR=7.9
EBAD Badajoz 2.11 324 Pn **Pn 07 30 45.3 -1.4**
0.8nm,0.1s,SNR=7.9
EBAD Sn **Sn 07 31 11.3 -1.1**
SNR=7.9
EBAD Lg Lg 07 31 18.0
8.1nm,0.2s,SNR=7.9
EBAD Badajoz 2.11 324 Pn **Pn 07 30 45.3 -1.4**
0.8nm,0.1s,SNR=7.9
EBAD Sn **Sn 07 31 11.3 -1.1**
SNR=7.9
EBAD Lg Lg 07 31 18.0
8.1nm,0.2s,SNR=7.9
PCVE Castro Verde 2.15 286 *e*Sg **Sb 07 31 18.5 +1.4**
PCVE A A 07 31 29.9
6.0nm,0.4s
PCVE Castro Verde 2.15 286 Lg Lg 07 31 18.5
6.0nm,0.4s
PCVE Castro Verde 2.15 286 *e*Sg **Sb 07 31 18.5 +1.4**
6.0nm,0.4s
MESJ Messejana 2.35 290 *e*P **Pn 07 30 49.0 -1.1**
MESJ AML AML 07 31 33.0
comp=E,8.3nm,0.5s
MESJ Messejana 2.35 290 *e*P **Pn 07 30 49.0 -1.1**
MESJ Messejana 2.35 290 Pn **Pn 07 30 49.0 -1.1**
MESJ Messejana 2.35 290 *e*P **Pn 07 30 49.0 -1.1**
EHUE Huescar 2.39 71 Lg Lg 07 31 26.6
comp=E,1.8nm,0.2s,SNR=7.9
EHUE Huescar 2.39 71 Lg Lg 07 31 26.6
comp=E,1.8nm,0.2s,SNR=7.9

PESTR Estremoz 2.48 317 *e*Sn **Sn 07 31 19.9 -1.9**
PESTR *e*Sg **Sb 07 31 27.4 +0.7**
PESTR A A 07 31 35.2
comp=E,5.5nm,0.6s
PESTR Estremoz 2.48 317 Sn **Sn 07 31 19.9 -1.9**
PESTR Lg Lg 07 31 27.4
comp=E,5.5nm,0.6s
PESTR Estremoz 2.48 317 Sn **Sn 07 31 19.9 -1.9**
PESTR Lg Lg 07 31 27.4
comp=E,5.5nm,0.6s
MORF Marmelete 2.58 277 *e*Pn **Pn 07 30 53.2 -0.1**
MORF *e*Sn **Sn 07 31 23.2 -0.9**
MORF *e*Sg **Sb 07 31 32.7 +3.2**
MORF A A 07 31 36.3
comp=E,6.2nm,0.3s
MORF Marmelete 2.58 277 Pn **Pn 07 30 53.2 -0.1**
MORF Sn **Sn 07 31 23.2 -0.9**
MORF Lg Lg 07 31 32.7
comp=E,6.2nm,0.3s
MORF Marmelete 2.58 277 Pn **Pn 07 30 53.2 -0.1**
MORF Sn **Sn 07 31 23.2 -0.9**
MORF *e*Sg **Sb 07 31 32.7 +3.2**
comp=E,6.2nm,0.3s
PTEO Sao Teotonio 2.67 282 *e*Pn **Pn 07 30 53.7 -0.7**
PTEO Sao Teotonio 2.67 282 Pn **Pn 07 30 53.7 -0.7**
PTEO Sao Teotonio 2.67 282 Pn **Pn 07 30 53.7 -0.7**
PNCL Nicolau / Gran 2.67 294 *e*Pn **Pn 07 30 53.6 -0.9**
PNCL Nicolau / Gran 2.67 294 *e*Pn **Pn 07 30 53.6 -0.9**
PFVI Vila Bisbo 2.71 273 *e*Pn **Pn 07 30 54.0 -1.0**
PFVI *e*Sn **Sn 07 31 25.7 -1.6**
PFVI A A 07 31 26.9
comp=E,3.5nm,0.1s
PFVI Vila Bisbo 2.71 273 Pn **Pn 07 30 54.0 -1.0**
comp=E,0.9nm,0.1s,SNR=7.9
PFVI Sn **Sn 07 31 26.2 -1.1**
SNR=7.9
PFVI Lg Lg 07 31 37.5
comp=E,4.7nm,0.2s,SNR=7.9
PFVI Vila Bisbo 2.71 273 Pn **Pn 07 30 54.0 -1.0**
comp=E,0.9nm,0.1s,SNR=7.9
PFVI Sn **Sn 07 31 26.2 -1.1**
SNR=7.9
PFVI Lg Lg 07 31 37.5
comp=E,4.7nm,0.2s,SNR=7.9
MOE Montemor 2.73 303 *e*Sg **Sb 07 31 36.7 +2.8**
MOE Montemor 2.73 303 Lg Lg 07 31 36.7
MOE Montemor 2.73 303 *e*Sg **Sb 07 31 36.7 +2.8**
PMRV Marv??o 2.83 328 *e*Pg **Pb 07 31 02.4 +0.1**
PMRV *e*Sn **Sn 07 31 28.9 -1.3**
PMRV *e*Sg **Sb 07 31 39.1 +2.5**
PMRV A A 07 31 45.4
comp=E,3.4nm,0.4s
PMRV Marv??o 2.83 328 Pg **Pb 07 31 02.4 +0.1**
PMRV Sn **Sn 07 31 28.9 -1.3**
PMRV Lg Lg 07 31 39.1
comp=E,3.4nm,0.4s
PMRV Marv??o 2.83 328 Pg **Pb 07 31 02.4 +0.1**
PMRV Sn **Sn 07 31 28.9 -1.3**
PMRV *e*Sg **Sb 07 31 39.1 +2.5**
comp=E,3.4nm,0.4s
PMTG Montargil 2.98 313 *e*Pg **Pb 07 31 04.5 -0.5**
PMTG *e*Sg **Sb 07 31 43.4 +2.4**
PMTG A A 07 31 49.5
comp=E,4.3nm,0.5s
PMTG Montargil 2.98 313 *e*Pg **Pb 07 31 04.5 -0.5**
PMTG *e*Sg **Sb 07 31 43.4 +2.4**
comp=E,4.3nm,0.5s

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*CSEM **12** 07:31:15.4±0.2, 37°.14N×5°.40W, h0^{km}±3^{km}, ML2.9/8, Error ellipse: s-maj=5.0km s-min=4.5km az=151.0*
*ISCJB **12** 07:31:15.0±0.6, 37°.14N±0°.04×5°.34W±0°.05, h10^{km}, Error ellipse: s-maj=5.9km s-min=4.6km az=142.4*
*MDD **12** 07:31:16.5±0.4, 37°.11N×5°.39W, h0^{km}, mbLg2.1/8, Error ellipse: s-maj=3.7km s-min=3.3km az=81.0*
*SFS **12** 07:31:16.0, 37°.17N×5°.39W, h15^{km}, ML2.0*
*PDA **12** 07:31:17.0±1.7, 37°.12N×5°.42W, h0^{km}, ML2.1, Error ellipse: s-maj=3.7km s-min=3.4km az=53.0*
*INMG **12** 07:31:17.0±1.7, 37°.12N×5°.42W, h0^{km}, ML2.1, Error ellipse: s-maj=3.7km s-min=3.4km az=53.0*
ISC 12 07:31:15.6±0.9**, 37°.13N**±0°.04×**5°.38W**±0°.04**, h10**^{km}**, n38, σ0^{s}89**/39**, 2C, Spain**

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
LIJA Lijar 0.22 186 ⇑Pg **Pg 07 31 19.1 -1.1**
LIJA Lg Lg 07 31 22.8
LIJA Lijar 0.22 186 *i* P **Pg 07 31 19.1 -1.1**
LIJA *e*S **Sg 07 31 22.8 -0.5**
ESPR Espera 0.46 236 ⇑Pg **Pg 07 31 25.1 +0.5**
8.4nm,0.3s,SNR=18
ESPR Lg Lg 07 31 32.3
46nm,0.2s,SNR=7.9
ESPR Espera 0.46 236 Pg **Pg 07 31 25.1 +0.5**
8.4nm,0.3s,SNR=18
ESPR Lg Lg 07 31 32.3
46nm,0.2s,SNR=7.9
EMIJ Mijas 0.74 139 Pg **Pg 07 31 30.7 +0.8**
1.4nm,0.2s,SNR=5.4
EMIJ Lg Lg 07 31 40.7
22nm,0.3s,SNR=7.9
EMIJ Mijas 0.74 139 Pg **Pg 07 31 30.7 +0.8**
1.4nm,0.2s,SNR=5.4
EMIJ Lg Lg 07 31 40.7
22nm,0.3s,SNR=7.9
ELUQ Luque 0.99 64 Pg **Pg 07 31 34.0 -0.6**
6.3nm,0.2s,SNR=4.0
ELUQ Lg Lg 07 31 49.9
31nm,0.2s,SNR=4.0
ELUQ Luque 0.99 64 Pg **Pg 07 31 34.0 -0.6**
6.3nm,0.2s,SNR=4.0
ELUQ Lg Lg 07 31 49.9
31nm,0.2s,SNR=4.0
EMIN Mina Concepcio 1.21 302 Pn **Pb 07 31 37.5 -1.1**
0.1nm,0.0s,SNR=7.9
EMIN Pg **Pn 07 31 38.2 -0.4**
2.6nm,0.1s,SNR=7.9
EMIN Lg Lg 07 31 54.9
18nm,0.3s,SNR=7.9
EMIN Mina Concepcio 1.21 302 Pn **Pb 07 31 37.5 -1.1**
0.1nm,0.0s,SNR=7.9
EADA Adamuz 1.22 31 Pg **Pn 07 31 39.7 +0.9**
1.3nm,0.1s,SNR=18
EADA Lg Lg 07 31 56.4
SNR=7.9
EADA Adamuz 1.22 31 Pg **Pn 07 31 39.7 +0.9**
1.3nm,0.1s,SNR=18
EADA Lg Lg 07 31 56.4
SNR=7.9
PBAR Barrancos 1.68 309 *e*Pn **Pn 07 31 46.6 +1.5**
PBAR *e*Sn **Sb 07 32 09.0 +1.0**
PBAR A A 07 32 20.5
5.7nm,0.2s
PBAR Barrancos 1.68 309 Pn **Pn 07 31 46.6 +1.5**
PBAR Sn **Sb 07 32 09.0 +1.0**
5.7nm,0.2s
PBAR Barrancos 1.68 309 Pn **Pn 07 31 46.6 +1.5**
PBAR *e*Sn **Sb 07 32 09.0 +1.0**
5.7nm,0.2s
EGRO El Granado 1.73 284 Pg **Pb 07 31 47.7 +0.3**
2.0nm,0.2s,SNR=4.0
EGRO Lg Lg 07 32 09.4
2.9nm,0.1s,SNR=7.9
EGRO El Granado 1.73 284 Pg **Pb 07 31 47.7 +0.3**
2.0nm,0.2s,SNR=4.0
EGRO Lg Lg 07 32 09.4
2.9nm,0.1s,SNR=7.9
PVAQ Vaqueiros 1.89 279 *e*Sn **Sb 07 32 13.9 +0.1**
PVAQ A A 07 32 23.3
12nm,0.2s
PVAQ Vaqueiros 1.89 279 Sn **Sb 07 32 13.9 +0.1**
12nm,0.2s
PVAQ Vaqueiros 1.89 279 *e*Sn **Sb 07 32 13.9 +0.1**
12nm,0.2s
EQES Quesada 1.96 69 Lg Lg 07 32 20.5
4.9nm,0.3s,SNR=7.9
EQES Quesada 1.96 69 Lg Lg 07 32 20.5
4.9nm,0.3s,SNR=7.9
PBDV Barranco-do-Ve 2.04 274 *e*Sn **Sb 07 32 17.6 -0.7**
PBDV A A 07 32 26.5
5.5nm,0.2s
PBDV Barranco-do-Ve 2.04 274 Sn **Sb 07 32 17.6 -0.7**
5.5nm,0.2s
PBDV Barranco-do-Ve 2.04 274 *e*Sn **Sb 07 32 17.6 -0.7**

	5.5nm,0.2s						
EBAD	**Badajoz**	**2.08**	**322**	Sn	**Sn**	**07 32 16.0**	**-0.5**
	4.9nm,0.2s,SNR=7.9						
EBAD				Lg	Lg	07 32 21.6	
	7.9nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**2.08**	**322**	Sn	**Sn**	**07 32 16.0**	**-0.5**
	4.9nm,0.2s,SNR=7.9						
EBAD				Lg	Lg	07 32 21.6	
	7.9nm,0.2s,SNR=7.9						
PCVE	**Castro Verde**	**2.18**	**284**	*e*Sn	**Sb**	**07 32 21.1**	**-1.1**
PCVE				A	A	07 32 39.0	
	8.0nm,0.3s						
PCVE	**Castro Verde**	**2.18**	**284**	Sn	**Sb**	**07 32 21.1**	**-1.1**
	8.0nm,0.3s						
PCVE	**Castro Verde**	**2.18**	**284**	*e*Sn	**Sb**	**07 32 21.1**	**-1.1**
	8.0nm,0.3s						
PESTR	**Estremoz**	**2.46**	**316**	*e*Sn	**Sn**	**07 32 25.6**	**-0.5**
PESTR				A	A	07 32 38.5	
	6.3nm,0.5s						
PESTR	**Estremoz**	**2.46**	**316**	Sn	**Sn**	**07 32 25.6**	**-0.5**
	6.3nm,0.5s						
PESTR	**Estremoz**	**2.46**	**316**	*e*Sn	**Sn**	**07 32 25.6**	**-0.5**
	6.3nm,0.5s						
PNCL	**Nicolau / Gran**	**2.69**	**292**	*e*Sn	**Sn**	**07 32 32.6**	**+1.1**
PNCL				A	A	07 32 49.2	
	5.2nm,0.3s						
PNCL	**Nicolau / Gran**	**2.69**	**292**	*e*Sn	**Sn**	**07 32 32.6**	**+1.1**
	5.2nm,0.3s						
PMRV	**Marv??o**	**2.79**	**326**	*e*Sg	**Sg**	**07 32 44.8**	**-0.5**
PMRV				A	A	07 32 50.2	
	6.5nm,0.5s						
PMRV	**Marv??o**	**2.79**	**326**	Lg	Lg	07 32 44.8	
	6.5nm,0.5s						
PMRV	**Marv??o**	**2.79**	**326**	Lg	Lg	07 32 44.8	
	6.5nm,0.5s						

KRSC 12 07:36:07.9±0.0**, 54.88N×165.83E, h20**km±19km**, ML3.7, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.34**	**14**	*e*P	Pb	07 36 14.9	-0.2
BKI				*e*S	Sb	07 36 19.2	-0.9
MKZ	**Mys Kozlova**	**2.40**	**264**	*e*P	Pn	07 36 46.7	+0.7
MKZ				*e*S	Sn	07 37 14.1	-0.7
KMNR	**Kamenistaya**	**3.31**	**288**	P	Pn	07 37 00.7	+2.0
SPN	**Mys Shipunski**	**3.87**	**245**	*e*P	Pn	07 37 07.7	+1.6
SPN				*e*S	Sn	07 37 49.8	-1.1
NLC	**Nalytchevo**	**4.19**	**249**	*e*P	Pn	07 37 12.2	+1.6
NLC				*e*S	Sn	07 37 57.6	-1.3
SDLR	**Sedlovina**	**4.39**	**251**	*e*P	Pn	07 37 15.9	+2.3
SDLR				*e*S	Sn	07 38 03.7	-0.6
SMAR	**Somma**	**4.45**	**252**	*e*P	Pn	07 37 16.6	+2.2
KRER	**Koryakskii**	**4.46**	**252**	P	Pn	07 37 15.6	+1.0
KRER				S	Sn	07 38 03.6	-2.4
GNL	**Ganaly**	**4.77**	**259**	P	Pn	07 37 23.0	+4.2
RUS	**Russkaya**	**4.99**	**244**	*e*P	Pn	07 37 23.1	+1.5
ASAK	**Asacha**	**5.34**	**245**	*e*P	Pn	07 37 29.3	+2.8

IDC 12 07:40:11.3±1.0**, 24.94S×69.10W, h102**km±6km**, mb3.6**/4**, mb1 3.8**/5**, mb1mx3.5**/17**, mbtmp3.6**/5**, Error ellipse: s-maj=35.8km s-min=21.4km az=71.0, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.33**	**4**	P	Pn	07 40 47.2	-1.4
	26nm,0.3s,baz=173,slow=9.0,SNR=133						
LVC				S	Sn	07 41 10.8	-6.2
	74nm,0.3s,baz=187,slow=9.5,SNR=16						
CFAA	**Coronel Fontan**	**6.68**	**174**	P	Pn	07 41 45.6	-1.3
	0.2nm,0.3s,baz=352,slow=14,SNR=15						
CFAA				S	Sn	07 42 56.7	-4.8
	0.2nm,0.3s,baz=300,slow=8.1,SNR=2.2						
LPAZ	**La Paz**	**8.66**	**6**	P	Pn	07 42 10.8	-3.8
	0.1nm,0.3s,baz=172,slow=2.6,SNR=4.4						
CPUP	**Villa Florida**	**10.71**	**100**	P	Pn	07 42 36.6	-5.0
	0.1nm,0.3s,baz=288,slow=20,SNR=2.3						
SIV	**San Ignacio**	**11.65**	**42**	P	Pn	07 42 49.5	-4.9
	0.8nm,0.3s,baz=245,slow=10,SNR=20						
TXAR	**Lajitas Array**	**63.37**	**326**	P	P	07 50 29.9	-0.1
	0.3nm,0.8s,baz=159,slow=4.5,SNR=5.0						
TORD	**Torodi Ar. Bea**	**78.69**	**70**	P	P	07 52 02.4	-0.4
	1.9nm,0.6s,baz=259,slow=5.1,SNR=29						
TORD				pP	pP	07 52 28.9	-0.1
	1.9nm,0.6s,baz=260,slow=5.2,SNR=7.5						
BOSA	**Boshof**	**82.00**	**118**	P	P	07 52 20.6	0.0
	1.3nm,0.8s,baz=320,slow=7.9,SNR=2.8						
YKA	**Yellowknife Ar**	**94.36**	**341**	P	P	07 53 18.1	-0.8
	0.2nm,0.7s,baz=127,slow=4.3,SNR=3.9						
WRA	**Warramunga Arr**	**129.90**	**209**	PKP	PKPdf	07 59 09.1	-0.6
	0.3nm,0.8s,baz=162,slow=1.7,SNR=3.5						
ZALV	**Zalesovo Beam**	**145.11**	**27**	PKPbc	PKPdf	07 59 36.6	+0.2
	1.9nm,0.5s,baz=318,slow=4.2,SNR=8.9						
ZALV				pPKPbc	pPKPbc	08 00 03.0	-0.8
	2.2nm,0.6s,baz=322,slow=4.5,SNR=5.3						
MKAR	**Makanchi Array**	**148.46**	**39**	PKPbc	PKPbc	07 59 46.0	0.0
	0.8nm,0.6s,baz=309,slow=3.0,SNR=8.3						
MKAR				pPKPbc	pPKPbc	08 00 13.5	-0.2
	0.4nm,0.5s,baz=352,slow=2.5,SNR=4.0						

*ISK **12** 07:41:17.2, 37.25N×28.29E, h15km, MD2.1*
*ISCJB **12** 07:41:18.7±0.6, 37.21N±0.04×28.22E±0.04, h14km±12km, Error ellipse: s-maj=6.9km s-min=4.5km az=23.6*
*CSEM **12** 07:41:18.6±0.2, 37.22N×28.23E, h10km, MD2.1, Error ellipse: s-maj=5.8km s-min=4.3km az=24.0*
*DDA **12** 07:41:18.9, 37.24N×28.19E, h7km, MD2.5*
ISC 12 07:41:18.3±1.0**, 37.25N**±0.04×**28.25E**±0.03**, h10**km±7km**, n16, σ0.44**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.12**	**166**	*e*PG	**Pg**	**07 41 20.9**	**-0.3**
YER				*e*SG	**Sg**	**07 41 23.4**	**+0.2**
YER	**Yerkesik**	**0.12**	**166**	*e*Pg	**Pg**	**07 41 20.9**	**-0.3**
YER				*e*Sg	**Sg**	**07 41 23.4**	**+0.2**
MLSB	**Milas**	**0.38**	**277**	*e*PG	**Pg**	**07 41 25.6**	**-0.2**
MLSB				*e*SG	**Sb**	**07 41 32.5**	**-0.6**
MLSB	**Milas**	**0.38**	**277**	*e*Pg	**Pg**	**07 41 25.6**	**-0.2**
MLSB				*e*Sg	**Sb**	**07 41 32.5**	**-0.6**
TURN	**Turunc**	**0.47**	**143**	*i* P	**Pg**	**07 41 27.7**	**+0.2**
TURN				*i* S	**Sb**	**07 41 35.9**	**+0.2**
TURN	**Turunc**	**0.47**	**143**	*i* P	**Pg**	**07 41 27.7**	**+0.2**
TURN				*i* S	**Sb**	**07 41 35.9**	**+0.2**
AYDN	**Tasoluk**	**0.51**	**325**	*i* P	**Pg**	**07 41 28.6**	**+0.4**
AYDN				*i* S	**Sb**	**07 41 36.1**	**-0.7**
AYDN	**Tasoluk**	**0.51**	**325**	*i* P	**Pg**	**07 41 28.6**	**+0.4**
AYDN				*i* S	**Sb**	**07 41 36.1**	**-0.7**
DALY	**Dalyan (Mu˜la**	**0.54**	**143**	*e*PG	**Pg**	**07 41 28.0**	**-0.7**
DALY	**Dalyan (Mu˜la**	**0.54**	**143**	*e*Pg	**Pg**	**07 41 28.0**	**-0.7**
DAT	**Datca**	**0.74**	**226**	*e*PG	**Pg**	**07 41 32.8**	**+0.1**
DAT	**Datca**	**0.74**	**226**	*e*Pg	**Pg**	**07 41 32.8**	**+0.1**
BODT	**Bodrum**	**0.77**	**256**	*e*PG	**Pg**	**07 41 32.9**	**-0.3**
BODT				*e*SG	**Sb**	**07 41 44.9**	**+0.5**
BODT	**Bodrum**	**0.77**	**256**	*e*Pg	**Pg**	**07 41 32.9**	**-0.3**
BODT				*e*Sg	**Sb**	**07 41 44.9**	**+0.5**
DNZL	**Cakiroluk**	**0.78**	**55**	*i* P	**Pb**	**07 41 34.2**	**+0.2**
DNZL				*i* S	**Sn**	**07 41 47.2**	**-0.1**
DNZL	**Cakiroluk**	**0.78**	**55**	*i* P	**Pb**	**07 41 34.2**	**+0.2**
DNZL				*i* S	**Sn**	**07 41 47.2**	**-0.1**

*IDC **12** 08:22:09.8±0.9, 0.29S×133.12E, h0km, mb4.1/7, mb1 4.3/10, mb1mx4.1/23, mbtmp4.1/10, ML4.0/3, MS3.6/10, Ms1 3.6/10, ms1mx3.4/35, Error ellipse: s-maj=37.5km s-min=16.8km az=74.0*
*ISCJB **12** 08:22:13.4±0.5, 0.24S±0.06×132.97E±0.04, h32km, mb4.2/14, MS3.7/7, Error ellipse: s-maj=8.6km s-min=5.7km az=5.8*
*NEIC **12** 08:22:15.1±0.5, 0.34S×133.00E, h35km, mb4.4/9, Error ellipse: s-maj=13.6km s-min=7.8km az=71.0*
*DJA **12** 08:22:16.6±1.4, 1°S±7°×13°3E±°, h22km±16km, M4.7/8, mb4.7/8, mB5.3/3, MLv4.7/8, Mw(mB)4.7/3*
ISC 12 08:22:14.8±0.6**, 0.30S**±0.08×**132.98E**±0.05**, h32**km**, n53, σ1.08**/43**, mb4.3**/14**, MS3.7**/7**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.70**	**135**	P	**Pb**	**08 22 43.7**	**-1.7**
SWI	**Sorong**	**1.80**	**252**	P	**Pn**	**08 22 43.1**	**-0.5**
SWI				S	**Sn**	**08 23 07.4**	**+1.9**
FAKI	**Fak Fak**	**2.70**	**196**	P	**Pn**	**08 22 56.5**	**+0.5**
BAKI	**Biak**	**3.25**	**106**	P	**Pn**	**08 23 04.8**	**+1.2**
BAKI				S	**Sn**	**08 23 43.2**	**+1.9**
MSAI	**Masohi**	**5.05**	**233**	P	**Pn**	**08 23 30.3**	**+2.0**
LBMI	**Labuha**	**5.49**	**266**	P	Pn	08 23 39.4	+5.1
	103nm,1.0s,2μm0.5nm						
AAI	**Ambon**	**5.84**	**235**	P	**Pn**	**08 23 40.3**	**+1.1**
	531nm,0.8s,5μm1.4nm						
NLAI	**Namlea**	**6.56**	**244**	P	**Pn**	**08 23 49.8**	**+0.8**
	68nm,0.8s,1μm0.3nm						
DAV	**Davao City (W)**	**10.39**	**315**	LR	LR	08 28 04.2	
	comp=Z,225nm,18.3s,baz=213,slow=34						
TTSI	**Tana Toraja**	**13.43**	**258**	P	Pn	08 25 27.8	+4.5
	24nm,1.1s						
SPSI	**Sidrap Palu**	**13.69**	**254**	P	**Pn**	**08 25 27.3**	**+0.5**
	22nm,1.0s						
KAPI	**Kappang**	**14.01**	**250**	*e*Pn	**Pn**	**08 25 33.0**	**+1.8**
	41nm,1.1s						
KAPI	**Kappang**	**14.01**	**250**	P	**P**	**08 25 37.0**	**-1.7**
KAPI	**Kappang**	**14.01**	**250**	Pn	**Pn**	**08 25 33.4**	**+2.2**
	0.5nm,0.3s,baz=121,slow=5.1,SNR=8.3						
KAPI				LR	LR	08 31 03.1	
	comp=Z,144nm,20.0s,baz=88,slow=38						
MYLDM	**Lahad Datu**	**15.45**	**291**	P	P	08 26 09.7	+15
KHKI	**Kahang-Kahang**	**19.07**	**245**	P	Pn	08 26 41.4	+5.7
FITZ	**Fitzroy Crossi**	**19.10**	**202**	*e*P	**P**	**08 26 32.8**	**-2.2**
	21nm,1.3s						
FITZ				S	Sn	08 29 57.8	-11
FITZ	**Fitzroy Crossi**	**19.10**	**202**	P	**P**	**08 26 34.0**	**-1.0**
	0.4nm,0.3s,baz=41,slow=13,SNR=14						
FITZ				S	Sn	08 29 57.8	-11
	0.3nm,0.3s,baz=276,slow=18,SNR=4.2						
FITZ				LR	LR	08 33 41.2	
	comp=Z,126nm,21.6s,baz=38,slow=36						
WRAB	**Tennant Creek**	**19.56**	**176**	*e*P	**P**	**08 26 39.6**	**-0.5**
	21nm,1.1s						
WRAB				*e*S	**Sn**	**08 30 21.0**	**+0.7**
WRA	**Warramunga Arr**	**19.57**	**176**	P	**P**	**08 26 39.8**	**-0.4**
WRA	**Warramunga Arr**	**19.57**	**176**	P	**P**	**08 26 39.8**	**-0.4**
	0.5nm,0.3s,baz=354,slow=11,SNR=26						
SBUM	**Sibu**	**20.93**	**278**	P	Pn	08 27 05.4	+7.7
SJI	**Sawahan**	**22.39**	**250**	P	P	08 27 29.7	+19
KSM	**Kuching**	**22.73**	**275**	*e*P	**P**	**08 27 14.6**	**+0.2**
	5.8nm,0.5s						
ASAR	**Alice Springs**	**23.24**	**178**	P	**P**	**08 27 19.1**	**-0.4**
ASAR	**Alice Springs**	**23.24**	**178**	P	**P**	**08 27 19.1**	**-0.4**
	5.4nm,0.6s,baz=355,slow=11,SNR=43						
ASAR				LR	LR	08 37 09.3	
	comp=Z,116nm,18.3s,baz=342,slow=39						
CTA	**Charters Tower**	**23.57**	**147**	P	**P**	**08 27 24.3**	**+1.6**
CTA	**Charters Tower**	**23.57**	**147**	P	**P**	**08 27 24.3**	**+1.6**
	3.8nm,0.7s,baz=311,slow=11,SNR=2.9						
MBWA	**Marble Bar**	**24.43**	**211**	*e*P	**P**	**08 27 30.7**	**-0.1**
	40nm,1.5s						
STKA	**Stephens Creek**	**32.45**	**166**	*e*P	**P**	**08 28 40.8**	**-1.4**
	2.6nm,1.0s						
STKA	**Stephens Creek**	**32.45**	**166**	P	**P**	**08 28 41.3**	**-0.8**
	3.4nm,0.5s,baz=351,slow=9.9,SNR=8.5						
STKA				LR	LR	08 43 18.8	
	comp=Z,260nm,18.6s,baz=18,slow=39						
MJAR	**Matsushiro Arr**	**36.98**	**7**	LR	LR	08 41 25.1	
	comp=Z,166nm,20.7s,baz=190,slow=31						
KSRS	**Korea Array**	**37.86**	**353**	LR	LR	08 45 38.9	
	comp=Z,82nm,18.1s,baz=163,slow=37						
CMAR	**Chiang Mai Arr**	**38.28**	**301**	P	**P**	**08 29 32.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**38.28**	**301**	P	**P**	**08 29 32.7**	**+0.1**
	1.0nm,0.3s,baz=106,slow=6.7,SNR=6.8						
USRK	**Ussuriysk Arra**	**44.31**	**359**	LR	LR	08 47 25.4	
	comp=Z,68nm,21.1s,baz=323,slow=34						
SONM	**Songino Array**	**53.23**	**338**	LR	LR	08 53 05.8	
	comp=Z,74nm,18.4s,baz=102,slow=35						
MK31	**Makanchi Array**	**64.44**	**324**	*e*P	**P**	**08 32 47.8**	**-0.3**
MKAR	**Makanchi Array**	**64.44**	**324**	P	**P**	**08 32 48.6**	**+0.5**
MKAR	**Makanchi Array**	**64.44**	**324**	P	**P**	**08 32 48.6**	**+0.5**
	1.9nm,0.7s,baz=117,slow=8.7,SNR=11						
ZALV	**Zalesovo Beam**	**67.04**	**331**	P	**P**	**08 33 05.2**	**+0.5**
ZALV	**Zalesovo Beam**	**67.04**	**331**	P	**P**	**08 33 05.2**	**+0.5**
	1.0nm,0.8s,baz=116,slow=6.9,SNR=3.7						
AAK	**Ala-Archa**	**67.53**	**317**	LR	LR	09 06 20.3	
	comp=Z,50nm,19.6s,baz=13,slow=39						
KURK	**Kurchatov**	**68.50**	**326**	*e*P	**P**	**08 33 14.1**	**+0.1**
	4.5nm,0.8s						
KKAR	**Karatay Array**	**70.42**	**316**	*e*P	**P**	**08 33 25.4**	**-0.6**
	2.4nm,0.9s						
BRVK	**Borovoye**	**74.17**	**326**	*e*P	**P**	**08 33 49.0**	**+0.8**
	6.3nm,1.0s						
VNDA	**Vanda**	**78.72**	**174**	P	**P**	**08 34 13.6**	**+0.1**
VNDA	**Vanda**	**78.72**	**174**	P	**P**	**08 34 13.6**	**+0.1**
	1.2nm,0.9s,baz=343,slow=3.8,SNR=4.0						
ILAR	**Eielson Array**	**86.06**	**25**	P	**P**	**08 34 51.9**	**-0.2**
ILAR	**Eielson Array**	**86.06**	**25**	P	**P**	**08 34 51.9**	**-0.2**
	0.5nm,0.9s,baz=264,slow=3.8,SNR=5.2						
QSPA	**South Pole Qui**	**89.63**	**180**	*e*P	P	08 35 04.9	-4.4
	8.3nm,1.2s						
CPUP	**Villa Florida**	**151.72**	**160**	PKPbc	**PKPbc**	**08 42 07.0**	**+0.1**
CPUP	**Villa Florida**	**151.72**	**160**	PKPbc	**PKPbc**	**08 42 07.0**	**+0.1**
	1.1nm,0.7s,baz=233,slow=5.1,SNR=4.0						

*NEIC **12** 08:26:27.7, 42.84S×72.60W, h3km, mb4.5/3, After GUC.*
*GUC **12** 08:26:27.7±0.5, 42.84S×72.60W, h3km±6km, ML3.3*
*IDC **12** 08:26:28.8±0.8, 42.82S×72.47W, h0km, mb3.9/7, mb1 4.1/8, mb1mx4.0/18, mbtmp3.9/8, ML4.1/1, Error ellipse: s-maj=31.3km s-min=13.3km az=113.0*
ISC 12 08:26:29.4±1.4**, 42.79S**±0.04×**72.48W**±0.07**, h6**km±8km**, n37, σ1.31**/43**, mb4.1**/9**, 6C, Southern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUNY	**Huinay**	**0.41**	**7**	⇑*i*P	**Pg**	**08 26 37.0**	**-0.3**
HUNY				*i* S	**Sg**	**08 26 43.9**	**+1.2**
HUNY	**Huinay**	**0.41**	**7**	⇑*i*P	**Pg**	**08 26 37.0**	**-0.3**
HUNY				*i* S	**Sg**	**08 26 43.9**	**+1.2**
HUNY				AML	AML	08 26 45.2	
	comp=N,3μm,0.3s						
FUTA	**Futaleufœ**	**0.61**	**131**	⇑*i*P	**Pg**	**08 26 40.5**	**-0.7**
FUTA				*i* S	**Sg**	**08 26 49.8**	**+0.7**
FUTA	**Futaleufœ**	**0.61**	**131**	⇑*i*P	**Pg**	**08 26 40.5**	**-0.7**
FUTA				*i* S	**Sg**	**08 26 49.8**	**+0.7**
FUTA				AML	AML	08 26 53.1	
	comp=N,1μm,0.5s						
PUEL	**Puelo Alto**	**1.13**	**7**	⇑*i*P	**Pb**	**08 26 50.1**	**-1.2**
PUEL				*i* S	**Sn**	**08 27 06.6**	**-0.9**
PUEL	**Puelo Alto**	**1.13**	**7**	⇑*i*P	**Pb**	**08 26 50.1**	**-1.2**
PUEL				*i* S	**Sn**	**08 27 06.6**	**-0.9**
PUEL				AML	AML	08 27 23.6	
	comp=E,692nm,0.7s						
PMCH	**Puerto Montt**	**1.33**	**347**	*e*P	**Pb**	**08 26 53.6**	**-1.2**
PMCH				*i* S	**Sg**	**08 27 11.8**	**-0.3**
PMCH	**Puerto Montt**	**1.33**	**347**	*e*P	**Pb**	**08 26 53.6**	**-1.2**
PMCH				*i* S	**Sg**	**08 27 11.8**	**-0.3**
PMCH				AML	AML	08 27 21.8	
	comp=N,2μm,0.5s						
PLCA	**Paso Flores**	**2.51**	**36**	*e*Pn	**Pn**	**08 27 12.2**	**+1.5**
PLCA				Pg	**Pb**	**08 27 15.1**	**+0.2**
PLCA				*e*Sn	**Sb**	**08 27 45.7**	**-0.4**
PLCA				Lg	Lg	08 27 49.6	
PLCA	**Paso Flores**	**2.51**	**36**	Pn	**Pb**	**08 27 12.4**	**-2.5**
	comp=N,9.0nm,0.3s,baz=219,slow=17,SNR=111						
PLCA				Pg	**Pb**	**08 27 15.1**	**+0.2**
	comp=N,9.0nm,0.3s,baz=222,slow=17,SNR=158						
PLCA				Lg	Lg	08 27 49.6	
	comp=N,27nm,0.3s,baz=84,slow=7.6,SNR=16						
COYC	**Coyhaique**	**2.80**	**174**	AML	AML	08 27 59.6	
	comp=E,123nm,0.7s						
TRQA	**Tornquist**	**9.30**	**63**	*e*Pn	**Pn**	**08 28 43.8**	**-0.1**
LVC	**Limon Verde**	**20.34**	**10**	*e*P	Pn	08 31 07.2	-1.4
	comp=E,5.5nm,0.9s						
LVC	**Limon Verde**	**20.34**	**10**	P	Pn	08 31 07.6	-1.1
	comp=E,3.0nm,0.8s,baz=210,slow=1.5,SNR=3.8						
CPUP	**Villa Florida**	**20.57**	**42**	P	Pn	08 31 09.6	-1.4
CPUP	**Villa Florida**	**20.57**	**42**	P	Pn	08 31 09.6	-1.4
	comp=E,1.1nm,0.6s,baz=257,slow=19,SNR=3.5						
LPAZ	**La Paz**	**26.67**	**9**	P	**P**	**08 32 13.3**	**+3.5**
LPAZ	**La Paz**	**26.67**	**9**	P	**P**	**08 32 13.3**	**+3.5**
	comp=E,0.9nm,0.8s,baz=249,slow=8.4,SNR=3.5						
SNAA	**Sanae**	**43.69**	**155**	P	**P**	**08 34 34.3**	**-0.4**
SNAA	**Sanae**	**43.69**	**155**	P	**P**	**08 34 34.3**	**-0.4**
	comp=E,4.7nm,1.4s,baz=258,slow=5.7,SNR=5.4						
QSPA	**South Pole Qui**	**47.46**	**180**	P	**P**	**08 35 05.4**	**+0.7**
QSPA	**South Pole Qui**	**47.46**	**180**	P	**P**	**08 35 05.4**	**+0.7**
	comp=E,6.1nm,1.0s,baz=154,slow=5.4,SNR=10						
VNDA	**Vanda**	**55.44**	**192**	P	**P**	**08 36 05.2**	**+1.1**
VNDA	**Vanda**	**55.44**	**192**	P	**P**	**08 36 05.2**	**+1.1**
	comp=E,1.7nm,0.9s,baz=163,slow=6.7,SNR=3.7						
TXAR	**Lajitas Array**	**77.29**	**332**	P	**P**	**08 38 25.3**	**+0.7**
TXAR	**Lajitas Array**	**77.29**	**332**	P	**P**	**08 38 25.3**	**+0.7**
	comp=E,0.4nm,0.8s,baz=156,slow=6.8,SNR=6.1						
WMOK	**Wichita Mounta**	**80.82**	**338**	*e*P	**P**	**08 38 43.6**	**-0.1**
	comp=E,9.3nm,1.7s						
ANMO	**Albuquerque**	**83.36**	**332**	*e*P	**P**	**08 38 58.1**	**+0.8**
	comp=E,12nm,1.9s						
PDAR	**Pinedale Array**	**91.45**	**334**	P	**P**	**08 39 35.9**	**-0.5**
PDAR	**Pinedale Array**	**91.45**	**334**	P	**P**	**08 39 35.9**	**-0.5**
	comp=E,0.6nm,0.8s,baz=170,slow=4.5,SNR=5.6						
ULM	**Lac du Bonnet**	**94.89**	**345**	P	P	08 39 53.5	+1.8
ULM	**Lac du Bonnet**	**94.89**	**345**	P	P	08 39 53.5	+1.8
	comp=E,3.2nm,0.6s,baz=162,slow=3.2,SNR=3.3						
ILAR	**Eielson Array**	**121.78**	**331**	PKP	**PKPdf**	**08 45 23.3**	**+0.2**
ILAR	**Eielson Array**	**121.78**	**331**	PKP	**PKPdf**	**08 45 23.3**	**+0.2**
	comp=E,0.3nm,0.8s,baz=188,slow=2.8,SNR=4.6						
ABKAR	**Akbulak array**	**146.79**	**62**	*e*PKPdf	**PKPbc**	**08 46 09.8**	**-1.9**
MKAR	**Makanchi Array**	**161.68**	**69**	PKP	**PKPdf**	**08 46 28.6**	**-2.1**
MKAR				PKPab	**PKPab**	**08 47 14.9**	**-1.1**
MKAR	**Makanchi Array**	**161.68**	**69**	PKP	**PKPdf**	**08 46 28.6**	**-2.1**
	comp=E,0.2nm,0.3s,baz=242,slow=2.1,SNR=5.4						
MKAR				PKPab	**PKPab**	**08 47 14.9**	**-1.1**
	comp=E,0.5nm,0.7s,baz=267,slow=5.8,SNR=3.8						

*IDC **12** 08:47:35.0±0.5, 17.52S×167.79E, h0km, mb4.6/24, mb1 4.8/25, mb1mx4.7/28, mbtmp4.6/25, ML4.4/1, MS4.5/20, Ms1 4.5/20, ms1mx4.3/35, Error ellipse: s-maj=17.2km s-min=13.0km az=106.0*
*NEIC **12** 08:47:36.7±0.2, 17.49S×167.79E, h10km, mb5.1/33, Error ellipse: s-maj=8.3km s-min=6.4km az=118.0*
NEIC Felt [III] at Port-Vila.
*DJA **12** 08:47:37.6±0.6, 18°S±7°×16°8E±°, h10km, M5.0/19, mB5.5/9, mb5.0/19, Mw(mB)5.0/9*
*ISCJB **12** 08:47:38.4±1.9, 17.59S±0.04×167.71E±0.05, h29km±13km, mb5.0/61, MS4.6/33, Error ellipse: s-maj=8.0km s-min=6.9km az=167.3*
*MOS **12** 08:47:39.4±1.3, 17.46S×167.61E, h33km, mb5.3/25, Error ellipse: s-maj=10.3km s-min=9.0km az=13.4*
*NOU **12** 08:47:40.8±1.8, 17.58S×167.79E, h30km, MD3.6, ML4.0*
*GCMT **12** 08:47:42.8±0.1, 17.56S×167.58E, h19km, MW5.3, Moment Tensor Solution. s84,c141; s88,c155; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{\theta\phi}$0.00; $M_{\phi r}$0.00; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s3.00000°, δ24.00000°, λ110.00000°. NP2:ϕ_s161.00000°, δ67.00000°, λ81.00000°. Principal axes: T 1.2200, Plg67.0000°, Azm56.0000°; N 0.0000, Plg8.0000°, Azm165.0000°; P -1.2200, Plg22.0000°, Azm258.0000°; Data Used: II IU IC G.*
*BJI **12** 08:47:43.5, 17.16S×167.92E, h58km, mB5.2/27, mb4.9/34, Ms5.1/29, Ms7 4.7/31*
ISC 12 08:47:42.7±0.4**, 17.67S**±0.04×**167.68E**±0.05**, h51**km±2km**, n309, σ1.56**/349**, mb5.0**/59**, MS4.6**/33**, 9C-8D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.53**	**189**	*e*P	**Pn**	**08 48 47.9**	**-0.8**
BAYA				*e*S	**Sn**	**08 49 37.2**	**-2.9**
BAYA				AMP		08 49 55.3	
	comp=Z,23nm,7.0s						
DZM	**Mont Dzumac**	**4.53**	**195**	*e*P	**Pn**	**08 48 47.9**	**-1.0**
	comp=Z,257nm,1.1s						
DZM				*e*S	**Sn**	**08 49 37.3**	**-3.1**
	comp=Z,1μm,1.0s						
DZM	**Mont Dzumac**	**4.53**	**195**	*e*P	**Pn**	**08 48 46.4**	**-2.5**
DZM				*e*S	**Sn**	**08 49 36.9**	**-3.5**
DZM				AMP		08 49 41.7	
	comp=Z,3μm,3.5s						
DZM	**Mont Dzumac**	**4.53**	**195**	Pn	**Pn**	**08 48 46.2**	**-2.7**
DZM				Sn	**Sn**	**08 49 38.1**	**-2.2**
DZM	**Mont Dzumac**	**4.53**	**195**	Pn	**Pn**	**08 48 46.2**	**-2.7**
	comp=Z,15nm,0.3s,baz=34,slow=14,SNR=76						
DZM				Sn	**Sn**	**08 49 38.1**	**-2.2**
	comp=Z,13nm,0.3s,baz=106,slow=20,SNR=4.7						
DZM				LR	LR	08 50 18.0	
	comp=Z,3μm,20.4s,baz=21,slow=35						
NOUC	**Port Laguerre**	**4.60**	**196**	*e*P	**Pn**	**08 48 50.2**	**+0.5**
NOUC				AMP		08 49 58.9	
	comp=Z,103nm,3.0s						
NORM	**Noumea**	**4.67**	**194**	*e*P	**Pn**	**08 48 48.8**	**-1.9**
NORM				*e*S	**Sn**	**08 49 40.9**	**-2.8**
PLUM	**Mont Dore**	**4.69**	**192**	*e*P	**Pn**	**08 48 49.7**	**-1.2**
PLUM				*e*S	**Sn**	**08 49 40.5**	**-3.5**
PLUM				AMP		08 49 44.5	
	comp=Z,397nm,5.2s						
MSVF	**Nonsavu**	**9.88**	**92**	Pn	**Pn**	**08 50 04.6**	**+2.3**
	comp=Z,670nm,1.5s,SNR=9.6						
MSVF	**Nonsavu**	**9.88**	**92**	*e*P	**Pn**	**08 50 03.8**	**+1.5**
MSVF	**Nonsavu**	**9.88**	**92**	*e*Pn	**Pn**	**08 50 03.8**	**+1.5**
HNR	**Honiara**	**11.11**	**316**	*e*Pn	**Pn**	**08 50 16.6**	**-2.4**
HNR				*e*Sn	**Sn**	**08 52 24.3**	**+2.4**
HNR	**Honiara**	**11.11**	**316**	Pn	**Pn**	**08 50 17.4**	**-1.6**
	comp=Z,9.1nm,0.3s,baz=263,slow=5.1,SNR=5.2						
HNR				LR	LR	08 54 00.0	
	comp=Z,4μm,19.3s,baz=290,slow=35						
EIDS	**Eidsvold**	**17.23**	**241**	*e*P	**P**	**08 51 41.4**	**+0.7**
	comp=Z,120nm,1.5s						
OUZ	**Omahuta**	**18.26**	**164**	*e*P	**Pn**	**08 51 52.7**	**+0.4**
	comp=Z,65nm,1.0s						
ARMA	**Armidale**	**19.36**	**226**	*e*P	**Pn**	**08 52 06.4**	**+0.6**
	comp=Z,62nm,1.3s						
TARA	**Tarawa**	**19.59**	**16**	*e*P	**P**	**08 52 05.6**	**-1.2**
	comp=Z,194nm,1.1s						
AFI	**Afiamalu**	**20.12**	**82**	*e*P	**P**	**08 52 13.2**	**+0.7**
	comp=Z,96nm,1.1s						
AFI	**Afiamalu**	**20.12**	**82**	LR	LR	08 58 54.2	
	comp=Z,525nm,18.4s,baz=254,slow=34						
CTA	**Charters Tower**	**20.41**	**260**	P	**P**	**08 52 16.7**	**+1.0**
CTA	**Charters Tower**	**20.41**	**260**	P	**P**	**08 52 16.7**	**+1.0**
	comp=Z,14nm,0.8s,baz=83,slow=12,SNR=13						
CTA				LR	LR	08 59 12.9	
	comp=Z,2μm,19.4s,baz=13,slow=34						
CTAO	**Charters Tower**	**20.41**	**260**	*e*P	**P**	**08 52 16.3**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,48nm,1.0s						
CTAO	**Charters Tower**	**20.41**	**260**	*e*P	**P**	**08 52 16.3**	**+0.5**
	comp=Z,48nm,1.0s						
PMG	**Port Moresby**	**21.56**	**290**	LR	LR	08 59 43.8	
	comp=Z,3μm,19.1s,baz=101,slow=34						
URZ	**Urewera**	**22.12**	**160**	*e*P	**P**	**08 52 35.7**	**+1.9**
	comp=Z,89nm,1.1s						
URZ	**Urewera**	**22.12**	**160**	P	**P**	**08 52 34.5**	**+0.7**
	comp=Z,56nm,1.0s,baz=336,slow=7.2,SNR=5.1						
URZ				LR	LR	08 59 02.6	
	comp=Z,1μm,19.2s,baz=348,slow=31						
COEN	**Coen**	**23.86**	**275**	*e*P	**P**	**08 52 51.5**	**-0.1**
	comp=Z,961nm,1.6s						
CAN	**Canberra**	**24.19**	**220**	*e*P	**P**	**08 52 56.0**	**+1.5**
CAN				pmax	pmax		
	comp=Z,119nm,1.5s						
CAN	**Canberra**	**24.19**	**220**	*e*P	**P**	**08 52 56.0**	**+1.5**
	comp=Z,119nm,1.5s						
KHZ	**Kahutara**	**25.17**	**170**	*e*P	P	08 53 10.2	+7.0
	comp=Z,107nm,1.4s						
RPZ	**Rata Peaks**	**26.12**	**174**	P	**P**	**08 53 12.6**	**+0.7**
RPZ	**Rata Peaks**	**26.12**	**174**	P	**P**	**08 53 12.6**	**+0.7**
	comp=Z,12nm,1.0s,baz=20,slow=14,SNR=2.5						
RPZ				LR	LR	09 01 57.8	
	comp=Z,697nm,19.6s,baz=340,slow=33						
STKA	**Stephens Creek**	**27.50**	**234**	*e*P	**P**	**08 53 24.9**	**+0.6**
	comp=Z,14nm,1.1s						
STKA	**Stephens Creek**	**27.50**	**234**	P	**P**	**08 53 25.2**	**+0.9**
	comp=Z,15nm,0.8s,baz=54,slow=7.6,SNR=14						
STKA				LR	LR	09 04 16.0	
	comp=Z,3μm,18.1s,baz=153,slow=36						
WRAB	**Tennant Creek**	**31.60**	**261**	*e*P	**P**	**08 53 58.5**	**-2.5**
WRAB				pmax	pmax		
	comp=Z,21nm,1.1s						
WRAB	**Tennant Creek**	**31.60**	**261**	*e*P	**P**	**08 53 58.5**	**-2.5**
	comp=Z,21nm,1.1s						
WRA	**Warramunga Arr**	**31.61**	**261**	P	**P**	**08 53 59.8**	**-1.2**
WRA				PcP	**PcP**	**08 56 52.4**	**-0.2**
WRA				ScP	**ScP**	**09 00 36.8**	**+5.1**
WRA				PKiKP	**PKiKP**	**09 04 19.4**	**-2.3**
WRA	**Warramunga Arr**	**31.61**	**261**	P	**P**	**08 53 59.8**	**-1.2**
	comp=Z,5.1nm,0.9s,baz=81,slow=6.2,SNR=31						
WRA				PcP	**PcP**	**08 56 52.4**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=88,slow=3.2,SNR=5.7						
WRA				ScP	**ScP**	**09 00 36.8**	**+5.1**
	comp=Z,1.5nm,1.1s,baz=119,slow=2.7,SNR=5.6						
WRA				PKiKP	**PKiKP**	**09 04 19.4**	**-2.3**

comp=Z,0.7nm,0.7s,baz=27,slow=0.6,SNR=6.2
WRA LR LR 09 06 22.3
comp=Z,1µm,18.9s,baz=90,slow=36
AS31 Alice Springs 32.11 254 *e*P **P 08 54 04.5 -0.9**
ASAR Alice Springs 32.11 254 P **P 08 54 04.1 -1.3**
ASAR Alice Springs 32.11 254 P **P 08 54 04.1 -1.3**
comp=Z,12nm,0.7s,baz=80,slow=8.5,SNR=86
ASAR LR LR 09 06 53.8
comp=Z,3µm,18.7s,baz=80,slow=36
FITZ Fitzroy Crossi 39.95 263 *e*P **P 08 55 12.1 -0.3**
comp=Z,45nm,1.1s
FITZ Fitzroy Crossi 39.95 263 P **P 08 55 12.2 -0.2**
comp=Z,31nm,1.0s,baz=88,slow=9.9,SNR=27
TBI Tubuai 40.43 105 *e*S **S 09 01 26.6 +5.2**
TBI *e*LQ LQ 09 04 51.3
comp=Z,2µm,27.0s
TBI *e*LR LR 09 06 44.5
comp=Z,1µm,26.0s
PPT2 Papeete2 40.67 97 *e*S S 09 01 18.4 -6.9
comp=Z,661nm,25.2s
PPT2 *e*LQ LQ 09 05 01.3
comp=Z,2µm,29.0s
PPT2 *e*LR LR 09 06 52.6
comp=Z,2µm,25.0s
PPT Papeete 40.67 97 LR LR 09 08 16.6
comp=Z,713nm,20.7s,baz=184,slow=31
MBWA Marble Bar 45.23 258 *e*P **P 08 55 55.6 +0.4**
comp=Z,45nm,1.1s
NWAO Narrogin (SRO) 47.64 241 P **P 08 56 13.9 -0.1**
NWAO Narrogin (SRO) 47.64 241 P **P 08 56 13.9 -0.1**
comp=Z,8.2nm,0.8s,baz=72,slow=8.9,SNR=3.5
NWAO LR LR 09 15 52.8
comp=Z,1µm,20.2s,baz=256,slow=36
DAV Davao City (W) 48.30 297 LR LR 09 16 21.3
comp=Z,339nm,18.3s,baz=138,slow=36
KAPI Kappang 48.50 279 *e*P **P 08 56 19.3 -1.6**
comp=Z,91nm,1.4s
KAPI Kappang 48.50 279 P P 08 56 26.5 +5.6
comp=Z,33nm,1.3s
KAPI Kappang 48.50 279 P **P 08 56 19.3 -1.6**
comp=Z,3.4nm,0.5s,baz=144,slow=5.7,SNR=4.9
RKT Rikitea 53.75 106 *e*P P 08 57 04.9 +4.7
comp=Z,100nm,26.0s
RKT *e*S S 09 04 46.1 +15
comp=Z,422nm,27.5s
RKT *e*LR LR 09 12 53.3
comp=Z,846nm,25.8s
KSM Kuching 59.59 283 *e*P **P 08 57 42.1 +0.4**
comp=Z,35nm,1.0s
KSM Kuching 59.59 283 P **P 08 57 42.8 +1.0**
comp=Z,36nm,1.1s,comp=Z,428nm
VNDA Vanda 59.95 181 *e*P **P 08 57 40.4 -2.9**
comp=Z,25nm,1.6s
VNDA Vanda 59.95 181 P **P 08 57 43.7 +0.5**
comp=Z,1.7nm,0.8s,baz=351,slow=6.9,SNR=6.6
VNDA LR LR 09 21 30.2
comp=Z,212nm,19.4s,baz=190,slow=34
SBA Scott Base 60.22 180 *e*P **P 08 57 46.5 +1.4**
SBA pmax pmax
comp=Z,32nm,1.3s
SBA Scott Base 60.22 180 *e*P **P 08 57 46.5 +1.4**
comp=Z,32nm,1.3s
MJAR Matsushiro Arr 60.68 333 P **P 08 57 47.7 -1.1**
MJAR Matsushiro Arr 60.68 333 P **P 08 57 47.7 -1.1**
comp=Z,13nm,0.9s,baz=166,slow=7.1,SNR=23
MJAR LR LR 09 21 33.7
comp=Z,115nm,20.5s,baz=105,slow=34
MAJO Matsushiro 60.68 333 *e*P **P 08 57 46.7 -2.1**
MAJO pmax pmax
comp=Z,21nm,1.0s
MAJO Matsushiro 60.68 333 *e*P **P 08 57 46.7 -2.1**
comp=Z,22nm,1.0s
MAT Matsushiro 60.68 333 P **P 08 57 47.3 -1.5**
MAT S **S 09 05 59.8 -2.0**
CASY Casey 60.98 203 *e*P **P 08 57 53.0 +2.6**
comp=Z,6.5nm,0.9s
JNU Nakatsue 61.54 325 P **P 08 57 54.3 -0.4**
JNU Nakatsue 61.54 325 P **P 08 57 54.3 -0.4**
comp=Z,11nm,1.0s,baz=63,slow=14,SNR=2.9
QZH Quanzhou 63.88 310 *e*P **P 08 58 12.9 +2.5**
QZH *e*S **S 09 06 47.2 +4.9**
QZH LR LR
comp=Z,550nm,20.9s
ASAJ Asahikawa 65.62 340 *e*P **P 08 58 21.0 -0.4**
comp=Z,10.0nm,0.8s
ASAJ Asahikawa 65.62 340 P **P 08 58 21.1 -0.2**
comp=Z,12nm,0.9s,baz=224,slow=10,SNR=8.5
ASAJ LR LR 09 26 56.0
comp=Z,349nm,18.4s,baz=101,slow=36
NJ2 Nanjing 68.06 316 *e*P P 08 58 41.1 +4.0
NJ2 pmax pmax
comp=Z,20nm,1.0s
YSS Yuzh-Sakhalins 68.13 342 *e*P **P 08 58 34.4 -2.8**
YSS *e* 08 58 44.6
YSS pmax pmax
comp=Z,110nm,1.6s
IPM Ipoh 69.31 282 *e*P **P 08 58 45.1 -0.2**
comp=Z,14nm,0.9s
IPM Ipoh 69.31 282 P P 08 58 52.8 +7.4
comp=Z,19nm,1.0s
USRK Ussuriysk Arra 69.67 333 P **P 08 58 47.4 +0.6**
comp=Z,3.4nm,0.8s,baz=122,slow=4.4,SNR=6.6
KULM Kulim 69.95 283 P P 08 58 59.8 +11
PET Petropavlovsk 70.83 354 *e*P **P 08 58 54.1 +0.4**
PET *e*S **S 09 08 06.2 +1.5**
PET pmax pmax
comp=Z,100nm,14.5s
PEA0B Petropavlovsk- 71.01 354 *e*P **P 08 58 53.6 -1.3**
PETK Petropavlovsk- 71.01 354 P **P 08 58 53.4 -1.5**
PETK Petropavlovsk- 71.01 354 P **P 08 58 53.4 -1.5**
PETK Petropavlovsk- 71.01 354 P **P 08 58 53.4 -1.5**
comp=Z,3.9nm,0.6s,baz=153,slow=9.5,SNR=10
PETK LR LR 09 26 38.3
comp=Z,238nm,20.0s,baz=154,slow=33
MDJ Mudanjiang 71.05 332 P **P 08 58 55.2 -0.1**
MDJ sP **sP 08 59 17.5 +2.0**
MDJ SS **SS 09 12 39.3 -2.9**
MDJ pmax pmax
comp=Z,380nm,3.7s
MDJ LR LR
comp=N,220nm,28.9s
MDJ LR LR
comp=E,220nm,28.9s
MDJ LR LR
comp=Z,170nm,22.8s
MDJ Mudanjiang 71.05 332 *e*P **P 08 58 54.4 -0.9**
comp=Z,20nm,1.0s
CN2 Changchun 72.36 329 *e*P **P 08 59 03.0 -0.2**
CN2 *e*pP **pP 08 59 16.2 -1.4**
CN2 *e*S **S 09 08 22.1 -0.7**
CN2 *e*SS **SS 09 13 03.0 +0.7**
CN2 LR LR
comp=N,400nm,17.0s
CN2 LR LR
comp=E,200nm,17.0s
CN2 LR LR
comp=Z,200nm,18.0s
QSPA South Pole Qui 72.38 180 *e*P **P 08 59 03.5 +0.3**
comp=Z,34nm,1.0s
QSPA South Pole Qui 72.38 180 LR LR 09 28 14.3
comp=Z,200nm,21.7s,baz=31,slow=34
ENH Enshi 73.53 310 *e*P **P 08 59 09.9 -0.6**
comp=Z,40nm,1.4s
GYA Guiyang 73.71 305 P **P 08 59 12.8 +1.1**
GYA pP **PcP 08 59 27.8 +0.5**
GYA sP **sP 08 59 32.4 +0.4**
GYA PP **PP 09 01 58.7 +1.8**
GYA S **SKiKP 09 08 37.5 +0.2**
GYA sS **sS 09 09 03.4 -0.1**
GYA SKS **SKSac 09 09 11.0 -3.7**
GYA SS **SS 09 13 25.4 +1.5**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.2s
GYA LR LR
comp=N,540nm,18.6s
GYA LR LR
comp=E,490nm,19.0s
GYA LR LR
comp=Z,520nm,18.7s
KLR Kul'dur 73.84 336 *e*P P 08 59 07.8 -4.0
KLR *e* 08 59 16.0
KLR *e* 08 59 32.7
KLR *e*S **SKiKP 09 08 33.5 -3.1**
KLR pmax pmax
comp=Z,54nm,1.6s
BJI Beijing 74.79 321 P **P 08 59 19.4 +1.9**
BJI S **S 09 08 53.5 +3.1**
BJI sS **sS 09 09 16.3 +1.4**
BJI SS **SS 09 13 37.2 -2.4**
BJI pmax pmax
comp=Z,14nm,1.2s
BJI LR LR
comp=N,300nm,19.4s
BJI LR LR
comp=E,240nm,17.2s
BJI LR LR
comp=Z,190nm,22.1s
XAN Xi'an 75.96 313 P **P 08 59 24.5 0.0**
XAN S **S 09 09 05.7 +1.9**
XAN pmax pmax
comp=Z,23nm,4.4s
XAN LR LR
comp=N,170nm,20.6s
XAN LR LR
comp=Z,96nm,21.6s
KMI Kunming 76.19 302 P **P 08 59 27.1 +0.9**
KMI pP **PcP 08 59 38.8 +0.7**
KMI S **S 09 09 08.9 +1.9**
KMI SS **SS 09 14 03.4 +1.6**
KMI pmax pmax
comp=Z,31nm,1.4s
KMI LR LR
comp=N,130nm,15.2s
KMI LR LR
comp=E,190nm,14.5s
KMI LR LR
comp=Z,190nm,18.3s
CM31 Chiang Mai Arr 76.51 295 *e*P **P 08 59 28.9 +1.1**
comp=Z,16nm,0.9s
CMAR Chiang Mai Arr 76.51 295 P **P 08 59 29.1 +1.2**
CMAR Chiang Mai Arr 76.51 295 P **P 08 59 29.1 +1.2**
comp=Z,3.6nm,0.7s,baz=131,slow=3.6,SNR=11
CHTO Chiang Mai 76.65 295 *e*P **P 08 59 29.6 +0.9**
CHTO pmax pmax
comp=Z,42nm,1.5s
CHTO Chiang Mai 76.65 295 *e*P **P 08 59 29.6 +0.9**
comp=Z,42nm,1.5s
CHTO Chiang Mai 76.65 295 P **P 08 59 31.5 +2.8**
comp=Z,23nm,1.3s
HHC Hu-ho-hao-te 78.07 320 *e*P **P 08 59 35.6 -0.7**
HHC pP **pP 08 59 49.0 -1.9**
HHC PP **PP 09 02 33.2 -0.2**
HHC S **S 09 09 22.3 -4.3**
HHC SKS SKSac 09 09 36.6 -10
HHC sS **sS 09 09 49.6 -1.6**
HHC SS **SS 09 14 28.4 -1.1**
HHC pmax pmax
comp=Z,40nm,0.9s
HHC pmax pmax
comp=Z,250nm,5.7s
HHC LR LR
comp=N,610nm,17.3s
HHC LR LR
comp=E,600nm,17.5s
HHC LR LR
comp=Z,430nm,17.5s
CD2 Chengdu 78.11 308 *e*P **P 08 59 36.2 -0.4**
CD2 pP **pP 08 59 49.8 -1.5**
CD2 sP **sP 08 59 55.2 -1.8**
CD2 PP **PP 09 02 35.2 +1.3**
CD2 S **S 09 09 25.7 -1.6**
CD2 sS **SKKSac 09 09 48.5 +0.6**
CD2 SS **SS 09 14 30.8 +0.5**
CD2 pmax pmax
comp=Z,50nm,0.8s
CD2 pmax pmax
comp=Z,140nm,8.3s
CD2 LR LR
comp=N,340nm,19.0s
CD2 LR LR
comp=E,300nm,22.6s
CD2 LR LR
comp=Z,360nm,25.0s
MAW Mawson 79.33 202 *e*P **P 08 59 45.1 +2.5**
comp=Z,2.9nm,1.0s
MAW Mawson 79.33 202 P **P 08 59 44.8 +2.2**
comp=Z,11nm,1.1s,baz=126,slow=8.7,SNR=3.2
LZH Lanzhou 80.58 313 *e*P **P 08 59 52.9 +2.8**
LZH pP **pP 09 00 07.5 +2.7**
LZH sP **sP 09 00 11.9 +1.4**
LZH *e*S **S 09 09 58.2 +4.6**
LZH sS **sS 09 10 17.2 -1.1**
LZH pmax pmax
comp=Z,31nm,1.1s
LZH pmax pmax
comp=Z,150nm,7.0s
LZH LR LR
comp=N,280nm,15.5s
LZH LR LR
comp=E,460nm,16.8s
LZH LR LR
comp=Z,510nm,18.6s
CLNS Chul'man 82.38 338 *e*P **P 08 59 59.7 +0.7**
CLNS pmax pmax
comp=Z,17nm,1.2s
CLNS pmax pmax
comp=E,4.0nm,1.2s
CLNS pmax pmax
comp=N,9.0nm,1.2s
ULN Ulaanbaatar 84.73 324 *e*P **P 09 00 12.7 +1.3**
comp=N,30nm,0.9s
ULN Ulaanbaatar 84.73 324 P **P 09 00 12.3 +0.9**
YAK Yakutsk 84.94 343 *e*P **P 09 00 10.6 -1.3**
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=Z,35nm,1.0s
YAK pmax pmax
comp=N,10.0nm,1.1s
GTA Gaotai 84.98 314 *e*P **P 09 00 14.3 +1.5**
GTA pP **pP 09 00 29.1 +1.5**
GTA sP **sP 09 00 34.8 +1.5**
GTA SKS **SKSac 09 10 31.2 -2.1**
GTA S **S 09 10 37.8 -0.3**
GTA sS **sS 09 11 05.4 +2.4**
GTA SS **SS 09 16 13.7 +1.2**
GTA pmax pmax
comp=Z,15nm,1.3s
GTA pmax pmax
comp=Z,110nm,7.6s
GTA LR LR
comp=N,200nm,20.4s
GTA LR LR
comp=E,230nm,20.0s
GTA LR LR
comp=Z,290nm,22.3s
SONM Songino Array 85.08 324 P **P 09 00 13.6 +0.5**
SONM Songino Array 85.08 324 P **P 09 00 13.6 +0.5**
comp=Z,11nm,1.0s,baz=136,slow=5.1,SNR=55
SHL Shillong 85.31 299 *e*PKP **P 09 00 16.0 +1.2**
SHL *ex* x 09 37 18.5
BILL Bilibino 85.47 359⇓ *i*P **P 09 00 13.3 -1.1**
BILL *e* 09 03 30.1
BILL *e*S **S 09 10 40.5 -1.0**
BILL pmax pmax
comp=Z,109nm,1.4s
BILL MLR MLR
comp=Z,100nm,16.0s
SYO Syowa Base 86.02 197⇑ *e*P **P 09 00 16.4 -0.9**
PTRM Twissleman Ran 86.36 51 *e*P **P 09 00 19.7 0.0**
CMB Columbia Colle 87.23 49 *e*P **P 09 00 22.6 -1.3**
CMB pmax pmax
comp=Z,9.0nm,1.4s
CMB Columbia Colle 87.23 49 *e*P **P 09 00 22.6 -1.3**
comp=Z,9.4nm,1.4s
ZAK Zakamensk 88.16 325 *e*P **P 09 00 26.3 -1.8**
ZAK pmax pmax
comp=Z,14nm,1.4s
MTUM Tungsten Hills 88.27 50 *e*P **P 09 00 28.2 -0.8**
TLY Talaya 88.63 326 *e*P **P 09 00 31.0 +0.8**
TLY *e* 09 00 40.4
TLY *e* 09 04 01.0
TLY *e*S S 09 11 01.0 -12
TLY *e*PS **PS 09 12 25.6 +2.5**
TLY pmax pmax
comp=Z,15nm,1.3s
TLY MLR MLR
comp=Z,101nm,16.4s
NVAR Mina Array Bea 88.89 49 P **P 09 00 30.8 -1.2**
NVAR PKKPbc **PKKPbc 09 18 14.0 +1.7**
NVAR Mina Array Bea 88.89 49 P **P 09 00 30.8 -1.2**
comp=Z,1.3nm,0.8s,baz=235,slow=7.4,SNR=10
NVAR PKKPbc **PKKPbc 09 18 14.0 +1.7**
comp=Z,0.3nm,0.6s,baz=65,slow=1.0,SNR=4.6
NVAR LR LR 09 33 55.0
comp=Z,359nm,18.9s,baz=35,slow=31
NV11 Mina Array Sit 88.99 49 *e*P **P 09 00 30.9 -1.5**
ILAR Eielson Array 89.19 18 P **P 09 00 29.6 -2.8**
ILAR Eielson Array 89.19 18 P **P 09 00 29.6 -2.8**
comp=Z,1.3nm,0.6s,baz=244,slow=4.5,SNR=27
ILB Eielson Array 89.19 18 *e*P **P 09 00 29.4 -3.0**
MAIT Maitri 90.22 188 *e*P P 09 00 28.2 -9.2
WVOR Wild Horse Val 90.26 45 *e*P **P 09 00 36.7 -1.5**
WVOR pmax pmax
comp=Z,7.0nm,1.5s
WVOR Wild Horse Val 90.26 45 *e*P **P 09 00 36.7 -1.5**
comp=Z,6.6nm,1.5s
SNAA Sanae 90.65 183 *e*P **P 09 00 39.6 +0.1**
SNAA Sanae 90.65 183 *e*pP pP 09 00 54.7 +0.3
SNAA Sanae 90.65 183 *e*sP sP 09 00 59.9 -0.1
SNAA Sanae 90.65 183 *e*P **P 09 00 39.7 +0.1**
comp=Z,38nm,1.5s
EGAK Eagle 90.94 20 *e*P **P 09 00 42.1 +1.5**
comp=Z,2.9nm,1.0s
VNA1 Neumayer--Stat 91.87 181 *e*P **P 09 00 45.5 +0.5**
VNA1 Neumayer--Stat 91.87 181 *e*pP pP 09 00 56.3 -3.6
VNA1 Neumayer--Stat 91.87 181 *e*sP sP 09 01 01.5 -4.1
TIXI Tiksi 92.91 349 *d i*P **P 09 00 48.1 -1.5**
TIXI pmax pmax
comp=Z,9.0nm,1.4s
HVS Khovu-Aksy 93.92 323 *e*P **P 09 00 55.7 +0.8**
HVS pmax pmax
comp=Z,71nm,1.2s
WMQ Urumqi 95.05 314 *e*P **P 09 01 01.8 +1.6**
WMQ pP **pP 09 01 15.5 +0.4**
WMQ sP **sP 09 01 21.0 +0.2**
WMQ SKS **SKSac 09 11 32.0 +0.3**
WMQ *e*S **S 09 12 09.0 -2.1**
WMQ SS **SS 09 18 38.0 -0.1**
WMQ pmax pmax
comp=Z,8.0nm,0.8s
WMQ pmax pmax
comp=Z,98nm,4.8s
WMQ LR LR
comp=N,400nm,17.0s
WMQ LR LR
comp=E,390nm,21.6s
WMQ LR LR
comp=Z,430nm,23.6s
INK Inuvik 95.53 19 LR LR 09 37 41.9
comp=Z,267nm,20.8s,baz=81,slow=32
TXAR Lajitas Array 97.32 62 P **P 09 01 10.6 -0.4**
TXAR Lajitas Array 97.32 62 P **P 09 01 10.6 -0.4**
comp=Z,0.6nm,1.1s,baz=229,slow=4.8,SNR=4.0
MKAR Makanchi Array 99.58 316 P **Pdif 09 01 20.0 -0.6**
MKAR Makanchi Array 99.58 316 P **Pdif 09 01 19.9 -0.6**
MKAR Makanchi Array 99.58 316 P **Pdif 09 01 19.9 -0.6**
comp=Z,0.7nm,0.6s,baz=122,slow=4.0,SNR=6.1
YKA Yellowknife Ar 99.96 27 P **Pdif 09 01 18.9 -2.9**
YKA PKiKP **PKiKP 09 05 49.6 +0.1**
YKA Yellowknife Ar 99.96 27 P **Pdif 09 01 18.9 -2.9**
comp=Z,0.2nm,0.6s,baz=249,slow=4.5,SNR=6.8
YKA PKiKP **PKiKP 09 05 49.6 +0.1**
comp=Z,0.3nm,0.8s,baz=245,slow=1.2,SNR=4.1
ZAA0 Zalesovo Array 99.98 323 *e*P **Pdif 09 01 21.7 -0.3**
ZALV Zalesovo Beam 99.98 323 *i* P **Pdif 09 01 21.7 -0.3**
ZALV pmax pmax
comp=Z,2.0nm,0.7s
ZALV Zalesovo Beam 99.98 323 P **Pdif 09 01 22.1 +0.1**
ZALV Zalesovo Beam 99.98 323 P **Pdif 09 01 22.1 +0.1**
comp=Z,2.2nm,0.7s,baz=96,slow=4.5,SNR=9.6
ARU Arti 115.10 325 *i* PKIKP **PKPdf 09 06 17.5 -0.4**
ARU 09 07 14.8
ARU 09 13 00.0
ARU SS SS 09 23 07.3 -3.9
FRB Frobisher Bay 120.39 25 PKP **PKPdf 09 06 26.0 -1.8**
FRB Frobisher Bay 120.39 25 PKP **PKPdf 09 06 26.0 -1.8**
baz=51,slow=20
APA Apatity 122.27 341⇓ *i* PKIKP **PKPdf 09 06 30.0 -1.4**
APA pmax pmax
comp=Z,25nm,1.2s
APA MLR MLR
comp=Z,600nm,23.0s
ARCES ARCESS Array B 123.18 345 PKP **PKPdf 09 06 32.3 -0.8**
ARCES ARCESS Array B 123.18 345 PKP **PKPdf 09 06 32.3 -0.8**
comp=Z,7.6nm,0.7s,baz=43,slow=0.8,SNR=24
RDF Al-Radifah 124.38 293 *e*P **PKPdf 09 06 36.4 -0.2**
RDF AMb AMB 09 06 39.1
comp=Z,26nm,1.4s
MIB Mutribah 124.59 294 *e*P **PKPdf 09 06 36.9 -0.1**
MIB AMb AMB 09 06 38.5
comp=Z,19nm,1.1s
NAY Al-Naaiem 124.66 294 *e*P **PKPdf 09 06 36.4 -0.8**
NAY AMb AMB 09 06 38.5
comp=Z,8.7nm,1.2s
JOF Joensuu 125.73 337 *e*PKIKP **PKPdf 09 06 36.6 -1.5**
JOF pmax pmax
comp=Z,19nm,0.9s
JOF Joensuu 125.73 337 *ep* **PKPdf 09 06 36.6 -1.5**
comp=Z,19nm,0.9s
KBZ Khabaz 127.02 312 PKIKP **PKPdf 09 06 41.5 +0.3**
KBZ Khabaz 127.02 312 PKP **PKPdf 09 06 41.5 +0.3**
KBZ Khabaz 127.02 312 PKP **PKPdf 09 06 41.5 +0.3**
comp=Z,1.7nm,0.8s,baz=26,slow=1.3,SNR=3.6
KIV Kislovodsk 127.12 312⇓ *i* PKIKP **PKPdf 09 06 41.6 +0.1**
KIV *e* 09 08 37.2
KIV *e*PS **PS 09 18 43.8 -2.7**
KIV *e*SS SS 09 26 07.2 +21
KIV pmax pmax
comp=Z,10.0nm,1.0s
OBN Obninsk 127.38 327⇑ *i* PKIKP **PKPdf 09 06 39.8 -1.7**
OBN pmax pmax
comp=Z,19nm,1.6s
KAF Kangasniemi 128.06 338 *e*PKIKP **PKPdf 09 06 40.2 -2.4**
KAF pmax pmax
comp=Z,7.0nm,0.7s
KAF Kangasniemi 128.06 338 *ep* **PKPdf 09 06 40.2 -2.4**
comp=Z,6.8nm,0.7s,baz=46,slow=2.0
FINES FINESS Array B 128.58 338 PKP **PKPdf 09 06 43.0 -0.6**
FINES FINESS Array B 128.58 338 PKP **PKPdf 09 06 43.0 -0.6**
comp=Z,6.5nm,1.0s,baz=87,slow=11,SNR=6.5
ANN Anapa 130.57 314 *i* PKIKP **PKPdf 09 06 45.7 -2.2**
ANN pmax pmax
comp=Z,28nm,1.0s
AKASG Malin Array Be 133.36 325 PKIKP **PKPdf 09 06 51.9 -1.1**
AKASG Malin Array Be 133.36 325 PKP **PKPdf 09 06 51.9 -1.1**
AKASG Malin Array Be 133.36 325 PKP **PKPdf 09 06 51.9 -1.1**
comp=Z,4.6nm,0.8s,baz=57,slow=2.7,SNR=6.6
AK02 Malin Array Si 133.39 325 *e*PKPdf **PKPdf 09 06 52.8 -0.3**
NB2 NORSAR Subarra 133.54 344 PKPdf **PKPdf 09 06 52.9 -0.2**
comp=Z,2.9nm,0.8s,baz=31,slow=1.9
NOA NORSAR Array B 133.54 344 PKP **PKPdf 09 06 52.9 -0.2**
NOA NORSAR Array B 133.54 344 PKP **PKPdf 09 06 52.9 -0.2**
comp=Z,4.0nm,0.8s,baz=31,slow=2.0,SNR=10.0
HFS Hagfors 133.63 342 PKP **PKPdf 09 06 52.7 -0.6**
HFS Hagfors 133.63 342 PKP **PKPdf 09 06 52.7 -0.6**
comp=Z,2.7nm,0.7s,baz=180,slow=6.8,SNR=3.9
BRTR Keskin Array B 134.68 309 PKP **PKPdf 09 06 56.0 0.0**
BRTR Keskin Array B 134.68 309 PKP **PKPdf 09 06 56.0 0.0**
comp=Z,2.1nm,1.0s,baz=128,slow=2.0,SNR=8.2
LVV L'vov 136.65 326 *e*PKIKP **PKPdf 09 06 56.3 -2.9**
MLR Muntele Rosu 137.81 320 PKP **PKPdf 09 07 00.1 -1.6**
MLR Muntele Rosu 137.81 320 PKP **PKPdf 09 07 00.1 -1.6**
comp=Z,0.5nm,0.8s,baz=95,slow=3.0,SNR=5.0
UZH Uzhgorod 138.27 326 *e*PKIKP **PKPdf 09 06 57.4 -4.8**
UZH *e* 09 07 07.8
PSZ Piszkesteto 139.98 326 *e*PKPdf **PKPdf 09 07 05.5 0.0**
DPC Dobruska-Polom 140.14 331 *e*PKIKP **PKPdf 09 07 03.1 -2.6**
DPC *e* 09 07 08.7
DPC Dobruska-Polom 140.14 331 *e*PKPdf **PKPdf 09 07 03.1 -2.6**
DPC *ep*PKP **PKiKP 09 07 08.7 +0.5**
UPC Upice 140.17 332 *e*PKIKP **PKPdf 09 07 05.7 0.0**
UPC Upice 140.17 332 *e*PKPdf **PKPdf 09 07 05.7 0.0**
CLL Collm 140.87 335 *e*PKIKP **PKPdf 09 07 06.0 -0.9**
CLL Collm 140.87 335 *e*PKPdf **PKPdf 09 07 06.0 -0.9**
CLL *i* PKiKP **PKiKP 09 07 09.4 -0.1**
comp=Z,8.0nm,0.9s
KHC Kasperske Hory 142.26 332 *e*PKIKP **PKPdf 09 07 05.8 -3.7**
KHC Kasperske Hory 142.26 332 *e*PKPdf **PKPdf 09 07 05.8 -3.7**
KHC *ex* x 09 07 09.3
KHC Kasperske Hory 142.26 332 *e*PKPdf **PKPdf 09 07 06.0 -3.5**
GERES GERESS Array B 142.41 332 PKPpre PKPpre 09 07 06.2
GERES GERESS Array B 142.41 332 PKhKP PKPpre 09 07 06.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,2.8nm,0.9s,baz=35,slow=4.9,SNR=7.3						
GRF	**Grafenberg Arr**	**142.85**	**335**	*e*PKIKP	**PKPdf**	**09 07 10.0**	**-0.5**
MOA	**Molln**	**142.87**	**330**	⇑*i*PKPdf	**PKPdf**	**09 07 06.7**	**-3.9**
	comp=Z,11nm,0.9s						
SOKA	**Soboth**	**143.30**	**328**	⇓*i*PKPdf	PKPab	09 07 07.4	0.0
	comp=Z,10.0nm,1.3s						
KBA	**Koelnbreinsper**	**143.85**	**330**	⇑*i*PKPdf	PKPab	09 07 09.3	-0.3
	comp=Z,32nm,1.3s						
TOD	**Tromm**	**143.87**	**337**	PKIKP	PKPbc	09 07 09.9	-0.2
TOD	**Tromm**	**143.87**	**337**	PKP	PKPbc	09 07 09.9	-0.2
BOJS	**Bojanci**	**143.98**	**326**	*i* PKPbc	PKPbc	09 07 11.1	+0.5
MEM	**Membach**	**144.01**	**340**	PKP	PKPbc	09 07 10.9	+0.5
MYKA	**Terra Mystica**	**144.03**	**329**	⇑*i*PKPdf	**PKPab**	**09 07 09.5**	**-0.7**
	comp=Z,27nm,1.6s						
ABH	**Alteburg**	**144.10**	**338**	PKP	PKPbc	09 07 11.1	+0.3
KTD	**Kalmit**	**144.37**	**337**	PKIKP	PKPbc	09 07 11.8	+0.1
KTD	**Kalmit**	**144.37**	**337**	PKP	PKPbc	09 07 11.8	+0.1
STU	**Stuttgart**	**144.39**	**335**	*e*PKIKP	PKPbc	09 07 12.0	+0.3
STU	**Stuttgart**	**144.39**	**335**	*e*PKPdf	PKPbc	09 07 12.0	+0.3
BCLA	**Clavier**	**144.40**	**341**	PKP	PKPbc	09 07 12.1	+0.4
RUP	**Ruppelstein**	**144.43**	**338**	PKIKP	**PKPab**	**09 07 11.3**	**-0.3**
RUP	**Ruppelstein**	**144.43**	**338**	PKP	**PKPab**	**09 07 11.3**	**-0.3**
ABTA	**Abfaltersbach**	**144.49**	**330**	⇓*i*PKPdf	**PKPab**	**09 07 10.0**	**-1.9**
	comp=Z,46nm,1.2s,SNR=16						
WTTA	**Wattenberg**	**144.52**	**332**	⇑*i*PKPdf	**PKPab**	**09 07 10.9**	**-1.2**
	comp=Z,46nm,1.5s,SNR=6.3						
MOTA	**Moosalm**	**144.69**	**332**	⇓*i*PKPdf	**PKPab**	**09 07 12.8**	**0.0**
	comp=Z,30nm,0.8s						
RETA	**Reutte**	**144.74**	**333**	⇓*i*PKPdf	**PKPab**	**09 07 12.5**	**-0.4**
	comp=Z,41nm,1.2s,SNR=11						
LANF	**Langenberg**	**144.76**	**337**	PKIKP	**PKPab**	**09 07 12.8**	**0.0**
LANF	**Langenberg**	**144.76**	**337**	PKP	**PKPab**	**09 07 12.8**	**0.0**
LANF	**Langenberg**	**144.76**	**337**	PKP	**PKPab**	**09 07 12.8**	**0.0**
WLF	**Walferdange**	**144.77**	**339**	PKP	**PKPdf**	**09 07 14.2**	**+0.3**
WLF	**Walferdange**	**144.77**	**339**	*e*PKIKP	**PKPdf**	**09 07 14.0**	**+0.2**
WLF	**Walferdange**	**144.77**	**339**	*e*PKPdf	**PKPdf**	**09 07 14.0**	**+0.2**
DOU	**Dourbes**	**144.91**	**341**	PKP	PKPbc	09 07 13.6	+0.3
BFO	**Black Forest**	**145.09**	**336**	*e*PKIKP	**PKPbc**	**09 07 13.8**	**-0.2**
BFO	**Black Forest**	**145.09**	**336**	*e*PKPdf	**PKPbc**	**09 07 13.8**	**-0.2**
SPAK	**Spaichingen-Ko**	**145.09**	**335**	PKP	**PKPbc**	**09 07 13.7**	**-0.4**
FETA	**Feichten**	**145.11**	**332**	⇑*i*PKPdf	**PKPbc**	**09 07 13.8**	**-0.5**
	comp=Z,83nm,1.0s,SNR=39						
MENF	**Mencas**	**145.20**	**344**	PKP	**PKPbc**	**09 07 13.2**	**-1.0**
MENF	**Mencas**	**145.20**	**344**	PKP	**PKPbc**	**09 07 13.2**	**-1.0**
DAVA	**Damuels**	**145.28**	**333**	⇑*i*PKPdf	**PKPbc**	**09 07 14.2**	**-0.6**
	comp=Z,111nm,1.1s,SNR=25						
LIBD	**Limburg**	**145.51**	**336**	PKIKP	**PKPab**	**09 07 15.5**	**-0.1**
LIBD	**Limburg**	**145.51**	**336**	PKP	**PKPab**	**09 07 15.5**	**-0.1**
FELD	**Feldberg im Sc**	**145.58**	**336**	PKP	**PKPdf**	**09 07 15.4**	**-0.1**
ECH	**Echery**	**145.63**	**337**	*e*PKIKP	**PKPbc**	**09 07 15.6**	**-0.1**
ECH	**Echery**	**145.63**	**337**	*e*PKPdf	**PKPbc**	**09 07 15.6**	**-0.1**
ECH	**Echery**	**145.63**	**337**	PKP	**PKPdf**	**09 07 15.4**	**0.0**
DAVOX	**Davos/Dischmat**	**145.67**	**333**	PKPbc	**PKPbc**	**09 07 15.9**	**-0.1**
DAVOX	**Davos/Dischmat**	**145.67**	**333**	PKPbc	**PKPbc**	**09 07 15.9**	**-0.1**
	comp=Z,25nm,0.6s,baz=230,slow=1.1,SNR=38						
VAL	**Valentia**	**145.76**	**358**	⇑*i*P	**PKPab**	**09 07 16.3**	**0.0**
MOF	**Molkenrain**	**145.94**	**336**	PKP2	**PKPdf**	**09 07 16.3**	**+0.3**
MOF	**Molkenrain**	**145.94**	**336**	PKP	**PKPdf**	**09 07 16.3**	**+0.3**
MOF	**Molkenrain**	**145.94**	**336**	PKP	**PKPdf**	**09 07 16.3**	**+0.3**
THEF	**They Montfort**	**146.05**	**338**	PKP2	**PKPbc**	**09 07 16.8**	**-0.2**
THEF	**They Montfort**	**146.05**	**338**	PKP	**PKPbc**	**09 07 16.8**	**-0.2**
THEF	**They Montfort**	**146.05**	**338**	PKP	**PKPbc**	**09 07 16.8**	**-0.2**
BBS	**Basel-Blauen**	**146.11**	**336**	PKP2	**PKPdf**	**09 07 16.7**	**+0.4**
BBS	**Basel-Blauen**	**146.11**	**336**	PKP	**PKPdf**	**09 07 16.7**	**+0.4**
TUE	**Stuetta**	**146.14**	**333**	*e*PKPdf	**PKPdf**	**09 07 16.4**	**-0.1**
LOMF	**Lomont**	**146.47**	**336**	PKP2	**PKPbc**	**09 07 18.2**	**-0.2**
LOMF	**Lomont**	**146.47**	**336**	PKP	**PKPbc**	**09 07 18.2**	**-0.2**
LOMF	**Lomont**	**146.47**	**336**	PKP	**PKPbc**	**09 07 18.2**	**-0.2**
TIP	**Timpagrande**	**146.87**	**316**	*e*PKPbc	**PKPbc**	**09 07 19.8**	**+0.1**
CUC	**Castrocucco**	**147.03**	**318**	*e*PKPbc	**PKPdf**	**09 07 19.0**	**+0.9**
AQU	**L'Aquila**	**147.05**	**324**	*e*PKPbc	**PKPbc**	**09 07 20.6**	**+0.5**
CEL	**Celeste**	**147.93**	**315**	*e*PKPbc	**PKPbc**	**09 07 21.2**	**-1.5**
BNI	**Bardonecchia**	**148.41**	**334**	*e*PKP2	**PKPbc**	**09 07 23.8**	**0.0**
BNI	**Bardonecchia**	**148.41**	**334**	*e*PKPbc	**PKPbc**	**09 07 23.8**	**0.0**
GDM	**Grand'Maison**	**148.51**	**335**	PKP	**PKPbc**	**09 07 24.3**	**+0.2**
GDM	**Grand'Maison**	**148.51**	**335**	PKP	**PKPbc**	**09 07 24.3**	**+0.2**
GRN	**Grenoble**	**148.63**	**335**	PKP2	**PKPbc**	**09 07 24.4**	**+0.1**
GRN	**Grenoble**	**148.63**	**335**	PKP	**PKPbc**	**09 07 24.4**	**+0.1**
GRN	**Grenoble**	**148.63**	**335**	PKP	**PKPbc**	**09 07 24.4**	**+0.1**
BST	**Brest**	**148.71**	**349**	PKP	**PKPbc**	**09 07 23.7**	**-0.6**
BST	**Brest**	**148.71**	**349**	PKP	**PKPbc**	**09 07 23.7**	**-0.6**
SURF	**Saint Ours**	**148.81**	**333**	PKP	**PKPbc**	**09 07 25.2**	**+0.3**
SURF	**Saint Ours**	**148.81**	**333**	PKP	**PKPbc**	**09 07 25.2**	**+0.3**
SAOF	**Saorge**	**148.87**	**332**	PKP2	**PKPbc**	**09 07 24.2**	**-0.7**
SAOF	**Saorge**	**148.87**	**332**	PKP	**PKPbc**	**09 07 24.2**	**-0.7**
SAOF	**Saorge**	**148.87**	**332**	PKP	**PKPbc**	**09 07 24.2**	**-0.7**
AUTN	**L'Aution**	**148.92**	**332**	PKP2	**PKPbc**	**09 07 24.7**	**-0.6**
AUTN	**L'Aution**	**148.92**	**332**	PKP	**PKPbc**	**09 07 24.7**	**-0.6**
AUTN	**L'Aution**	**148.92**	**332**	PKP	**PKPbc**	**09 07 24.7**	**-0.6**
AGO	**Saint Agoulin**	**148.92**	**339**	PKP	**PKPbc**	**09 07 24.9**	**-0.1**
AGO	**Saint Agoulin**	**148.92**	**339**	PKP	**PKPbc**	**09 07 24.9**	**-0.1**
TOUF	**Mont Tournerai**	**148.98**	**332**	PKP2	**PKPbc**	**09 07 24.6**	**-0.8**
TOUF	**Mont Tournerai**	**148.98**	**332**	PKP	**PKPbc**	**09 07 24.6**	**-0.8**
TOUF	**Mont Tournerai**	**148.98**	**332**	PKP	**PKPbc**	**09 07 24.6**	**-0.8**
SSB	**Saint Sauveur**	**149.07**	**337**	*e*PKP2	**PKPbc**	**09 07 25.7**	**+0.3**
SSB	**Saint Sauveur**	**149.07**	**337**	*e*PKPbc	**PKPbc**	**09 07 25.7**	**+0.3**
SSB	**Saint Sauveur**	**149.07**	**337**	PKP	**PKPbc**	**09 07 25.2**	**-0.2**
MVIF	**Mont Vial**	**149.12**	**332**	PKP2	**PKPbc**	**09 07 25.0**	**-0.7**
MVIF	**Mont Vial**	**149.12**	**332**	PKP	**PKPbc**	**09 07 25.0**	**-0.7**
MVIF	**Mont Vial**	**149.12**	**332**	PKP	**PKPbc**	**09 07 25.0**	**-0.7**
PYM	**Petit Puy Mans**	**149.22**	**339**	PKP	**PKPbc**	**09 07 26.4**	**+0.6**
CALN	**Calern**	**149.35**	**332**	PKP2	**PKPbc**	**09 07 25.8**	**-0.5**
CALN	**Calern**	**149.35**	**332**	PKP	**PKPbc**	**09 07 25.8**	**-0.5**
CALN	**Calern**	**149.35**	**332**	PKP	**PKPbc**	**09 07 25.8**	**-0.5**
LBL	**Lubilhac**	**149.59**	**338**	PKP2	**PKPbc**	**09 07 26.9**	**+0.2**
LBL	**Lubilhac**	**149.59**	**338**	PKP	**PKPbc**	**09 07 26.9**	**+0.2**
LBL	**Lubilhac**	**149.59**	**338**	PKP	**PKPbc**	**09 07 26.9**	**+0.2**
MLS	**Moulis**	**152.33**	**338**	PKP	**PKPbc**	**09 07 32.4**	**-0.8**
LARF	**Larrau**	**152.94**	**342**	PKP	**PKPbc**	**09 07 34.5**	**0.0**
KEST	**Kesra**	**153.67**	**317**	PKPbc	**PKPbc**	**09 07 34.0**	**-2.4**
KEST	**Kesra**	**153.67**	**317**	PKPbc	**PKPbc**	**09 07 34.0**	**-2.4**
	comp=Z,1.1nm,0.6s,baz=36,slow=1.9,SNR=6.1						
PBRG	**Braganca**	**155.47**	**350**	*e*PKPab	**PKPab**	**09 07 56.5**	**0.0**
POLO	**Lamas de Olo**	**156.06**	**352**	*e*PKPab	**PKPab**	**09 07 59.1**	**0.0**
PVRL	**Vila Real**	**156.14**	**351**	*e*PKPab	**PKPab**	**09 07 59.8**	**+0.4**
MVO	**Moncorvo**	**156.14**	**350**	*e*PKPab	**PKPab**	**09 07 59.5**	**0.0**
PVIS	**Viseu**	**156.72**	**351**	*e*PKPab	**PKPab**	**09 08 02.2**	**+0.3**
ESDC	**Sonseca Array**	**156.90**	**343**	PKPab	**PKPab**	**09 08 00.4**	**-2.3**
ESDC	**Sonseca Array**	**156.90**	**343**	PKPab	**PKPab**	**09 08 00.4**	**-2.3**
	comp=Z,2.7nm,0.7s,baz=7.7,slow=3.0,SNR=11						
PCVE	**Castro Verde**	**159.76**	**350**	*e*PKPab	**PKPab**	**09 08 15.9**	**+0.8**
TORD	**Torodi Ar. Bea**	**165.76**	**254**	PKP	**PKPdf**	**09 07 42.3**	**-0.4**
TORD				PKPab	**PKPab**	**09 08 45.5**	**+3.2**
TORD	**Torodi Ar. Bea**	**165.76**	**254**	PKP	**PKPdf**	**09 07 42.3**	**-0.4**
	comp=Z,6.0nm,0.9s,baz=12,slow=0.8,SNR=20						
TORD				PKPab	**PKPab**	**09 08 45.5**	**+3.2**
	comp=Z,1.9nm,1.1s,baz=91,slow=3.2,SNR=2.7						

MEX 12 08:52:09.4±0.6**, 16°.62N**×**94°.76W, h64**km±27km**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.54**	**237**	*i* P	Pn	08 52 33.1	-1.7
HUIG				*e*S	Sn	08 52 52.4	-1.6
TGIG		**1.58**	**84**	*i* P	Pn	08 52 34.4	-0.9
TGIG				*i* S	Sn	08 52 53.0	-1.9
PCIG		**1.74**	**121**	*i* P	Pn	08 52 36.3	-1.1
PCIG				*i* S	Sn	08 52 56.8	-1.8
PNIG	**Pinotepa**	**3.23**	**266**	*i* P	Pn	08 52 57.7	-0.2
PNIG				*i* S	Sn	08 53 33.2	-2.0

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*ISCJB **12** 08:59:21.1±0.7, 72°.68N±0°.07×4°.5E±0°.2, h10km, mb3.3/4, MS3.0/2, Error ellipse: s-maj=10.7km s-min=8.4km az=37.9*

*NAO **12** 08:59:21.4±4.3, 72°.57N×4°.15E, ML3.3*

*CSEM **12** 08:59:22.5±0.2, 72°.70N×4°.41E, h10km, ML2.7, Error ellipse: s-maj=7.1km s-min=6.2km az=22.0*

*IDC **12** 08:59:22.2±1.0, 72°.63N×4°.35E, h0km, mb3.4/4, mb1 3.7/10, mb1mx3.5/32, mbtmp3.5/10, ML3.2/6, MS3.2/7, Ms1 3.2/7, ms1mx3.0/36, Error ellipse: s-maj=21.6km s-min=16.1km az=56.0*

*BER **12** 08:59:24.8±2.7, 72°.77N×4°.31E, h10km, ML2.7, ML3.3(NAO)*

ISC 12 08:59:23.5±0.8**, 72°.73N**±0°.08×**4°.29E**±0°.09**, h10**km**, n39, σ1s.46**/35**, mb3.5**/4**, Norwegian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**4.36**	**253**	*e*P	**Pn**	**09 00 29.1**	**-0.6**
JMIC				AMB	AMB	09 00 37.5	
	comp=Z,135nm,1.5s						
JMIC	**Jan Mayen**	**4.36**	**253**	Pn	**Pn**	**09 00 28.6**	**-1.1**
	comp=Z,2.7nm,0.3s,baz=106,slow=18,SNR=7.6						
JMIC	**Jan Mayen**	**4.36**	**253**	*e*P	**Pn**	**09 00 29.1**	**-0.6**
	comp=Z,135nm,1.5s,SNR=49						
LOF	**Lofoten**	**5.56**	**142**	*e*P	**Sn**	**09 01 52.9**	**+2.9**
TRO	**Tromso**	**5.66**	**116**	*e*P	**Pn**	**09 00 47.0**	**-0.4**
TRO				AMB	AMB	09 00 59.2	
	comp=Z,40nm,1.4s						
TRO	**Tromso**	**5.66**	**116**	*e*P	**Pn**	**09 00 47.0**	**-0.4**
	comp=Z,40nm,1.4s,SNR=49						
STEI	**Steigen**	**6.07**	**137**	*e*P	**Pn**	**09 00 53.7**	**+0.6**
SPA0	**Spitsbergen Ar**	**6.25**	**23**	Pn	**Pn**	**09 00 55.1**	**-0.3**
	baz=210,slow=16						
SPA0	**Spitsbergen Ar**	**6.25**	**23**	Pn	**Pn**	**09 00 55.1**	**-0.3**
	baz=210,slow=16						
SPA0	**Spitsbergen Ar**	**6.25**	**23**	Pn	**Pn**	**09 00 55.2**	**-0.3**
	baz=210,slow=15,SNR=50						
SPITS	**Spitsbergen Ar**	**6.25**	**23**	Pn	**Pn**	**09 00 55.5**	**0.0**
	baz=203,slow=17,SNR=16						
KONS	**Konsvik**	**6.97**	**150**	*e*P	Pn	09 00 55.0	-10
KONS				AMB	AMB	09 00 55.6	
	comp=Z,34nm,1.3s						
FLOS	**Flostrand**	**7.16**	**149**	*e*P	**Pn**	**09 01 06.9**	**-1.1**
KTK1	**Kautokeino**	**7.23**	**112**	*e*P	**Pn**	**09 01 07.2**	**-1.9**
KTK1				AML	AML	09 05 00.9	
	comp=Z,14nm,0.8s						
KTK1	**Kautokeino**	**7.23**	**112**	*e*P	**Pn**	**09 01 07.2**	**-1.9**
	SNR=47						
MOR8	**Moi Rana**	**7.48**	**147**	*e*P	**Pn**	**09 01 12.0**	**-0.5**
MOR8				AMB	AMB	09 01 14.0	
	comp=Z,9.9nm,0.8s						
MOR8				AML	AML	09 02 33.1	
	comp=Z,7.4nm,0.6s						
MOR8	**Moi Rana**	**7.48**	**147**	*e*P	**Pn**	**09 01 12.0**	**-0.5**
	comp=Z,9.9nm,0.8s,SNR=47						
ARA0	**ARCESS Array S**	**7.56**	**105**	Pn	**Pn**	**09 01 11.7**	**-1.9**
	baz=314,slow=12						
ARA0	**ARCESS Array S**	**7.56**	**105**	Pn	**Pn**	**09 01 11.7**	**-1.9**
	baz=314,slow=12						
ARA0	**ARCESS Array S**	**7.56**	**105**	Pn	**Pn**	**09 01 11.7**	**-1.9**
	baz=314,slow=12,SNR=50						
ARCES	**ARCESS Array B**	**7.56**	**105**	Pn	**Pn**	**09 01 11.6**	**-1.9**
	comp=Z,0.5nm,0.3s,baz=319,slow=12,SNR=12						
ARCES				LR	LR	09 04 18.0	
	comp=Z,87nm,21.1s,baz=250,slow=39						
APA0	**Apatity Array**	**10.92**	**104**	Pn	**Pn**	**09 02 01.1**	**+1.6**
	baz=319,slow=8.6						
APA0	**Apatity Array**	**10.92**	**104**	Pn	**Pn**	**09 02 01.1**	**+1.6**
	baz=319,slow=8.6						
NOA	**NORSAR Array B**	**12.04**	**164**	Pn	**Pn**	**09 02 14.6**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=339,slow=8.5,SNR=1.9						
NOA				LR	LR	09 06 47.2	
	comp=Z,57nm,18.2s,baz=345,slow=37						
HFS	**Hagfors**	**13.17**	**159**	Pn	**Pn**	**09 02 28.8**	**-1.5**
	baz=350,slow=12						
HFS	**Hagfors**	**13.17**	**159**	Pn	**Pn**	**09 02 28.8**	**-1.5**
	baz=350,slow=12						
HFS	**Hagfors**	**13.17**	**159**	Pn	**Pn**	**09 02 28.5**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=355,slow=12,SNR=7.6						
HFS				LR	LR	09 07 12.6	
	comp=Z,101nm,19.2s,baz=84,slow=36						
HFS	**Hagfors**	**13.17**	**159**	Pn	**Pn**	**09 02 28.8**	**-1.5**
	baz=350,slow=12,SNR=50						
FIA0	**FINESS Array S**	**14.02**	**133**	Pn	**Pn**	**09 02 39.8**	**-2.0**
	baz=330,slow=8.6						
FIA0	**FINESS Array S**	**14.02**	**133**	Pn	**Pn**	**09 02 39.8**	**-2.0**
	baz=330,slow=8.6						
FIA0	**FINESS Array S**	**14.02**	**133**	Pn	**Pn**	**09 02 39.8**	**-2.0**
	baz=330,slow=8.3,SNR=50						
FINES	**FINESS Array B**	**14.02**	**133**	Pn	**Pn**	**09 02 40.1**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=0.0,slow=3.8,SNR=3.8						
FINES				LR	LR	09 07 42.4	
	comp=Z,168nm,18.6s,baz=205,slow=36						
SFJD	**Kangerlussuaq**	**19.09**	**280**	LR	LR	09 10 14.5	
	comp=Z,122nm,18.4s,baz=48,slow=34						
VRAC	**Vranov**	**24.14**	**160**	LR	LR	09 13 39.6	
	comp=Z,49nm,18.5s,baz=281,slow=36						
GERES	**GERESS Array B**	**24.34**	**165**	P	**P**	**09 04 42.2**	**+1.0**
	comp=Z,0.3nm,0.2s,baz=326,slow=8.7,SNR=3.8						
DAVOX	**Davos/Dischmat**	**26.16**	**171**	LR	LR	09 14 55.5	
	comp=Z,54nm,20.4s,baz=266,slow=36						
ILAR	**Eielson Array**	**41.40**	**342**	P	**P**	**09 07 10.8**	**+1.6**
	comp=Z,0.4nm,0.9s,baz=1.6,slow=6.9,SNR=4.2						
TORD	**Torodi Ar. Bea**	**59.58**	**183**	P	**P**	**09 09 27.5**	**+0.5**
	comp=Z,0.5nm,0.6s,baz=359,slow=6.3,SNR=3.8						
TXAR	**Lajitas Array**	**67.37**	**296**	P	**P**	**09 10 17.9**	**-0.7**
	comp=Z,0.3nm,0.8s,baz=25,slow=6.9,SNR=4.3						

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*CSEM **12** 09:05:00.2, 39°.21N×20°.31E, h15km, MD3.0, After ATH*

ATH 12 09:05:00.2, 39°.21N×**20°.31E, h15**km±3km**, MD3.0**/9**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.50**	**147**	*e*PN	Pb	09 05 10.8	0.0
LKD2	**Lefkada island**	**0.50**	**147**	*e*Pn	Pb	09 05 10.8	0.0
JAN	**Janina**	**0.61**	**43**	*e*PN	Pg	09 05 11.5	-0.8
JAN				*e*SB	Sg	09 05 20.2	-0.3
JAN	**Janina**	**0.61**	**43**	*e*Pn	Pg	09 05 11.5	-0.8
JAN				*e*Sb	Sg	09 05 20.2	-0.3
KEK	**Kerkira**	**0.64**	**322**	*e*PB	Pg	09 05 11.9	-0.9
KEK				*e*SN	Sb	09 05 21.7	-0.2
KEK	**Kerkira**	**0.64**	**322**	*e*Pb	Pg	09 05 11.9	-0.9
KEK				*e*Sn	Sb	09 05 21.7	-0.2
VLS	**Valsamata**	**1.05**	**168**	*e*PN	Pn	09 05 20.4	-0.1
VLS	**Valsamata**	**1.05**	**168**	*e*Pn	Pn	09 05 20.4	-0.1
EVR	**Evrytania**	**1.20**	**104**	*e*PN	Pg	09 05 23.7	+0.1
EVR	**Evrytania**	**1.20**	**104**	*e*Pn	Pg	09 05 23.7	+0.1
THL	**Klokotos Trika**	**1.37**	**74**	*e*PN	Pg	09 05 26.6	+0.1
THL	**Klokotos Trika**	**1.37**	**74**	*e*Pn	Pg	09 05 26.6	+0.1
AGG	**Agios Georgios**	**1.58**	**96**	*e*PN	Pb	09 05 29.6	+0.4
AGG				*e*SN	Sg	09 05 50.7	-0.6
AGG	**Agios Georgios**	**1.58**	**96**	*e*Pn	Pb	09 05 29.6	+0.4
AGG				*e*Sn	Sg	09 05 50.7	-0.6
FNA	**Florina**	**1.77**	**27**	*e*PN	Pg	09 05 33.7	-0.7
FNA	**Florina**	**1.77**	**27**	*e*Pn	Pg	09 05 33.7	-0.7
GUR	**Goura**	**2.04**	**128**	*e*PN	Pb	09 05 36.7	-0.4
GUR	**Goura**	**2.04**	**128**	*e*Pn	Pb	09 05 36.7	-0.4

IDC 12 09:19:58.5±3.9**, 18°.60S**×**176°.99W, h0**km**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.7**/19**, mbtmp3.7**/3**, Error ellipse: s-maj=246.5km s-min=29.6km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.84**	**260**	P	P	09 28 23.6	+0.9
	0.2nm,0.3s,baz=93,slow=8.1,SNR=37						
ASAR	**Alice Springs**	**45.91**	**255**	P	P	09 28 22.0	-1.3
	0.8nm,0.7s,baz=95,slow=7.9,SNR=8.2						
NVAR	**Mina Array Bea**	**79.00**	**43**	P	P	09 32 04.8	+0.1
	0.5nm,0.6s,baz=226,slow=8.5,SNR=6.1						
BRTR	**Keskin Array B**	**146.22**	**315**	PKPbc	PKPdf	09 39 40.4	0.0
	0.8nm,0.8s,baz=31,slow=1.7,SNR=2.4						

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*IDC **12** 09:24:37.0±0.6, 17°.59S×167°.89E, h0km, mb4.6/18, mb1 4.7/20, mb1mx4.6/25, mbtmp4.6/20, ML4.6/2, MS4.9/11, Ms1 4.9/11, ms1mx4.5/34, Error ellipse: s-maj=20.4km s-min=15.2km az=130.0*

*DJA **12** 09:24:38.9±0.6, 17°S±7°×16°8E±1°0, h10km, M5.1/15, mB5.7/5, mb5.0/15, Mw(mB)5.2/5*

*NEIC **12** 09:24:38.8±0.3, 17°.54S×167°.84E, h10km, mb5.0/19, Error ellipse: s-maj=8.4km s-min=7.2km az=138.0*

*ISCJB **12** 09:24:39.0±1.8, 17°.62S±0°.04×167°.84E±0°.05, h22km±13km, mb4.8/50, MS4.9/18, Error ellipse: s-maj=7.8km s-min=6.2km az=29.4*

*MOS **12** 09:24:41.3±1.4, 17°.53S×167°.71E, h33km, mb5.3/20, Error ellipse: s-maj=10.8km s-min=9.1km az=33.6*

*NOU **12** 09:24:43.3±1.4, 17°.82S×168°.55E, h30km, MD3.7, ML2.6*

*GCMT **12** 09:24:44.3±0.2, 17°.55S×167°.54E, h19km, MW5.4, Moment Tensor Solution. s92,c154; s71,c116; Moment tensor: Scale 10^{17}Nm; M_{rr}1.13±.03; $M_{\theta\theta}$-0.01±.02; $M_{\phi\phi}$-1.12±.02; $M_{r\theta}$0.49±.05; $M_{\theta\phi}$0.24±.02; $M_{\phi r}$-1.10±.06; Best double couple: $M_0$1.70000×10^{17} NP1:ϕ_s358.00000°, δ23.00000°, λ107.00000°. NP2:ϕ_s159.00000°, δ68.00000°, λ83.00000°. Principal axes: T 1.6600, Plg66.0000°, Azm57.0000°; N 0.0100, Plg7.0000°, Azm162.0000°; P -1.6700, Plg23.0000°, Azm255.0000°; Data Used: II IU IC G.*

*BJI **12** 09:24:44.9, 17°.00S×168°.06E, h52km, mB5.3/22, mb4.9/30, Ms5.4/17, Ms7 5.0/17*

ISC 12 09:24:43.9±0.3**, 17°.68S**±0°.04×**167°.81E**±0°.05**, h48**km±2km**, h48**km**:pP-P, n252, σ1s.52**/306**, mb5.0**/48**, MS4.9**/18**, 10C-7D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**4.54**	**191**	*e*P	**Pn**	**09 25 50.2**	**+0.1**
BAYA				*e*S	**Sn**	**09 26 38.8**	**-2.8**
BAYA				AMP		09 26 48.8	
	comp=Z,22nm,2.2s						
DZM	**Mont Dzumac**	**4.56**	**196**	*e*Pn	**Pn**	**09 25 47.8**	**-2.6**
DZM				Sn	**Sn**	**09 26 39.4**	**-2.8**
DZM				*e*Sn	Sn	09 26 40.8	-1.5
DZM	**Mont Dzumac**	**4.56**	**196**	Pn	**Pn**	**09 25 49.0**	**-1.5**
	comp=Z,12nm,0.3s,baz=58,slow=20,SNR=72						
DZM				Sn	**Sn**	**09 26 39.4**	**-2.8**
	comp=Z,31nm,0.3s,baz=306,slow=23,SNR=9.3						
DZM				LR	LR	09 27 20.6	
	comp=Z,2μm,21.0s,baz=24,slow=35						
NOUC	**Port Laguerre**	**4.62**	**198**	*e*P	**Pn**	**09 25 52.2**	**+0.9**
NOUC				*e*S	**Sn**	**09 26 43.5**	**-0.3**
NOUC				AMP		09 27 06.3	
	comp=Z,81nm,5.0s						
NORM	**Noumea**	**4.70**	**195**	*e*P	**Pn**	**09 25 51.5**	**-0.8**
NORM				*e*S	**Sn**	**09 26 42.5**	**-3.0**
MSVF	**Nonsavu**	**9.76**	**92**	Pn	Pn	09 27 07.0	+5.2
	comp=Z,585nm,0.8s,SNR=11						
MSVF	**Nonsavu**	**9.76**	**92**	*e*P	**Pn**	**09 27 01.4**	**-0.4**
MSVF				*e*		09 28 50.0	
MSVF	**Nonsavu**	**9.76**	**92**	*e*Pn	**Pn**	**09 27 01.4**	**-0.4**
MSVF				*e*Sn	**Sn**	**09 28 50.0**	**-0.1**
HNR	**Honiara**	**11.21**	**316**	*e*Pn	**Pn**	**09 27 19.2**	**-2.2**
HNR				Sn	Sn	09 29 17.9	-7.5
HNR	**Honiara**	**11.21**	**316**	Pn	**Pn**	**09 27 19.3**	**-2.2**
	comp=Z,9.7nm,0.3s,baz=183,slow=5.3,SNR=9.1						
HNR				Sn	Sn	09 29 17.9	-7.5
	comp=Z,5.3nm,0.3s,baz=218,slow=19,SNR=1.6						
HNR				LR	LR	09 31 12.1	
	comp=Z,6μm,19.5s,baz=292,slow=35						
EIDS	**Eidsvold**	**17.33**	**241**	*e*P	**P**	**09 28 43.4**	**+0.1**
	comp=Z,59nm,1.3s						
EIDS				*e*Sn	Sn	09 31 45.5	-9.1
ARMA	**Armidale**	**19.44**	**226**	*e*P	**Pn**	**09 29 08.8**	**+0.7**
	comp=Z,50nm,1.3s						
ARMA				*e*S	**S**	**09 32 40.9**	**-3.2**
AFI	**Afiamalu**	**19.99**	**82**	LR	LR	09 35 06.3	
	comp=Z,3μm,21.9s,baz=241,slow=32						
CTA	**Charters Tower**	**20.54**	**260**	P	**P**	**09 29 18.4**	**-0.1**
CTA	**Charters Tower**	**20.54**	**260**	P	**P**	**09 29 18.4**	**-0.1**
	comp=Z,29nm,0.9s,baz=77,slow=14,SNR=8.6						
CTA				LR	LR	09 36 14.4	
	comp=Z,3μm,19.3s,baz=24,slow=34						
CTAO	**Charters Tower**	**20.54**	**260**	*e*P	**P**	**09 29 18.9**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,134nm,1.6s						
CTAO	**Charters Tower**	**20.54**	**260**	*e*P	**P**	**09 29 18.9**	**+0.4**
	comp=Z,134nm,1.6s						
PMG	**Port Moresby**	**21.68**	**290**	P	**P**	**09 29 31.9**	**+1.1**
PMG	**Port Moresby**	**21.68**	**290**	P	**P**	**09 29 31.9**	**+1.1**
	comp=Z,12nm,0.8s,baz=78,slow=18,SNR=2.2						
PMG				LR	LR	09 37 03.3	
	comp=Z,4μm,18.2s,baz=98,slow=34						
URZ	**Urewera**	**22.06**	**160**	*e*P	**P**	**09 29 37.8**	**+3.1**
	comp=Z,85nm,1.2s						
URZ	**Urewera**	**22.06**	**160**	P	**P**	**09 29 37.8**	**+3.1**
	comp=Z,16nm,0.7s,baz=338,slow=9.8,SNR=5.2						
URZ				LR	LR	09 36 05.1	
	comp=Z,2μm,19.1s,baz=347,slow=31						
CAN	**Canberra**	**24.26**	**220**	*e*P	**P**	**09 29 58.2**	**+1.6**
CAN				pmax	pmax		
	comp=Z,87nm,1.5s						
CAN	**Canberra**	**24.26**	**220**	*e*P	**P**	**09 29 58.2**	**+1.6**
	comp=Z,87nm,1.5s						
STKA	**Stephens Creek**	**27.59**	**234**	*e*P	**P**	**09 30 27.2**	**+0.5**
	comp=Z,6.4nm,0.8s						
STKA	**Stephens Creek**	**27.59**	**234**	P	**P**	**09 30 26.9**	**+0.2**
	comp=Z,8.0nm,0.7s,baz=68,slow=8.3,SNR=27						
STKA				LR	LR	09 41 17.7	
	comp=Z,3μm,18.4s,baz=58,slow=36						
RAR	**Rarotonga**	**30.74**	**102**	LR	LR	09 40 35.2	
	comp=Z,1μm,19.9s,baz=94,slow=31						
WRAB	**Tennant Creek**	**31.73**	**261**	*e*P	**P**	**09 31 02.0**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,12nm,1.0s						
WRAB	**Tennant Creek**	**31.73**	**261**	*e*P	**P**	**09 31 02.0**	**-1.5**
	comp=Z,12nm,1.0s						
WRA	**Warramunga Arr**	**31.74**	**261**	P	**P**	**09 31 02.3**	**-1.3**
WRA				PcP	**PcP**	**09 33 54.6**	**+0.2**
WRA	**Warramunga Arr**	**31.74**	**261**	P	**P**	**09 31 02.3**	**-1.3**
	comp=Z,2.8nm,0.6s,baz=80,slow=6.0,SNR=47						
WRA				PcP	**PcP**	**09 33 54.6**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=91,slow=2.4,SNR=4.3						
WRA				LR	LR	09 43 23.9	
	comp=Z,2μm,18.7s,baz=85,slow=35						
AS31	**Alice Springs**	**32.23**	**254**	*e*P	**P**	**09 31 06.5**	**-1.4**
ASAR	**Alice Springs**	**32.23**	**254**	P	**P**	**09 31 06.2**	**-1.7**
ASAR	**Alice Springs**	**32.23**	**254**	P	**P**	**09 31 06.2**	**-1.7**
	comp=Z,8.0nm,0.8s,baz=79,slow=8.6,SNR=40						
ASAR				LR	LR	09 43 55.3	
	comp=Z,4μm,18.7s,baz=90,slow=36						
FITZ	**Fitzroy Crossi**	**40.07**	**263**	*e*P	**P**	**09 32 14.3**	**-0.7**
FITZ	**Fitzroy Crossi**	**40.07**	**263**	P	**P**	**09 32 14.5**	**-0.4**
	comp=Z,27nm,1.1s,baz=101,slow=10,SNR=18						
FITZ				LR	LR	09 48 49.5	
	comp=Z,3μm,18.2s,baz=279,slow=36						
MBWA	**Marble Bar**	**45.35**	**258**	*e*P	**P**	**09 32 57.5**	**-0.2**
	comp=Z,34nm,1.2s						
MBWA				*e*pP	**pP**	**09 33 06.8**	**-4.0**
KAPI	**Kappang**	**48.62**	**279**	P	**P**	**09 33 25.2**	**+1.9**
KAPI	**Kappang**	**48.62**	**279**	P	**P**	**09 33 26.4**	**+3.0**
	comp=Z,40nm,1.1s,comp=Z,585nm						
KAPI	**Kappang**	**48.62**	**279**	P	**P**	**09 33 25.2**	**+1.9**
	comp=Z,16nm,1.0s,baz=115,slow=7.6,SNR=5.1						
KSM	**Kuching**	**59.71**	**282**	*e*P	**P**	**09 34 43.9**	**-0.3**
KSM				*e*pP	**pP**	**09 34 54.0**	**-3.7**
KSM	**Kuching**	**59.71**	**282**	P	P	09 34 48.5	+4.4
	comp=Z,21nm,1.4s						
VNDA	**Vanda**	**59.94**	**181**	*e*P	**P**	**09 34 46.8**	**+2.0**
	comp=Z,14nm,1.4s						
VNDA	**Vanda**	**59.94**	**181**	P	**P**	**09 34 46.8**	**+2.0**
	comp=Z,1.5nm,0.9s,baz=2.7,slow=6.6,SNR=5.9						
SBA	**Scott Base**	**60.21**	**180**	*e*P	**P**	**09 34 47.8**	**+1.3**
SBA				pmax	pmax		
	comp=Z,186nm,2.7s						
SBA	**Scott Base**	**60.21**	**180**	*e*P	**P**	**09 34 47.8**	**+1.3**
	comp=Z,186nm,2.7s						
MJAR	**Matsushiro Arr**	**60.75**	**333**	P	**P**	**09 34 49.1**	**-1.6**
MJAR	**Matsushiro Arr**	**60.75**	**333**	P	**P**	**09 34 49.1**	**-1.6**
	comp=Z,14nm,1.1s,baz=165,slow=7.5,SNR=18						
MAJO	**Matsushiro**	**60.75**	**333**	*e*P	**P**	**09 34 48.6**	**-2.2**
MAJO				*e**PP	**pP**	**09 35 00.7**	**-3.7**
MAJO				pmax	pmax		
	comp=Z,21nm,1.0s						
MAJO	**Matsushiro**	**60.75**	**333**	*e*P	**P**	**09 34 48.6**	**-2.2**
	comp=Z,20nm,1.0s						
MAJO				*e*pP	**pP**	**09 35 00.7**	**-3.7**
MAJO				*e*sP	**sP**	**09 35 07.5**	**-2.3**
MAT	**Matsushiro**	**60.75**	**333**	P	**P**	**09 34 49.1**	**-1.7**
MAT				S	**S**	**09 43 02.8**	**-1.6**
QZH	**Quanzhou**	**63.98**	**310**	*e*P	P	09 35 16.3	+3.8
QZH				S	**S**	**09 43 48.5**	**+3.2**
ASAJ	**Asahikawa**	**65.68**	**340**	P	**P**	**09 35 24.1**	**+0.9**
ASAJ	**Asahikawa**	**65.68**	**340**	P	**P**	**09 35 24.1**	**+0.9**
	comp=Z,13nm,0.8s,baz=258,slow=16,SNR=5.9						
NJ2	**Nanjing**	**68.15**	**316**	*e*P	**P**	**09 35 39.6**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS	**Yuzh-Sakhalins**	**68.18**	**342**	*e*P	**P**	**09 35 41.0**	**+2.0**
YSS				*e*		09 35 46.0	
IPM	**Ipoh**	**69.44**	**282**	*e*P	**P**	**09 35 47.6**	**0.0**
USRK	**Ussuriysk Arra**	**69.73**	**333**	P	**P**	**09 35 48.0**	**-0.7**
	comp=Z,3.5nm,0.8s,baz=145,slow=7.0,SNR=5.7						
FX1	**Attu Island--F**	**70.42**	**3**	*e*P	**P**	**09 35 52.0**	**-0.8**
PETK	**Petropavlovsk-**	**71.03**	**354**	P	**P**	**09 35 56.0**	**-0.6**
PETK	**Petropavlovsk-**	**71.03**	**354**	P	**P**	**09 35 56.0**	**-0.6**
PETK	**Petropavlovsk-**	**71.03**	**354**	P	**P**	**09 35 56.0**	**-0.6**
	comp=Z,4.5nm,0.7s,baz=145,slow=7.1,SNR=10						
MDJ	**Mudanjiang**	**71.11**	**332**	P	**P**	**09 35 57.3**	**+0.1**
MDJ				pP	**pP**	**09 36 11.4**	**+0.3**
MDJ				pmax	pmax		

comp=Z,21nm,1.8s
MDJ pmax pmax
comp=Z,200nm,4.4s
MDJ LR LR
comp=N,2µm,26.8s
MDJ LR LR
comp=E,2µm,28.7s
MDJ LR LR
comp=Z,1µm,22.9s
MDJ Mudanjiang 71.11 332 *e*P **P 09 35 57.6 +0.4**
comp=Z,69nm,1.8s
MDJ *e*pP **pP 09 36 08.4 -2.7**
HABR Khabarovsk 72.05 338 *e*P **P 09 36 02.0 -0.7**
HABR *e**PP **pP 09 36 16.3 -0.3**
HABR *e* 09 36 20.1
HABR S **S 09 45 19.8 -1.0**
HABR *e**SS **sS 09 45 43.8 -0.2**
HABR *e* 09 46 02.8
HABR *e*SS **SS 09 49 57.7 -1.4**
HABR pmax pmax
comp=N,28nm,2.3s
HABR pmax pmax
comp=E,49nm,2.4s
HABR pmax pmax
comp=Z,56nm,1.8s
HABR MLR MLR
comp=Z,344nm,18.0s
QSPA South Pole Qui 72.37 180 *e*P **P 09 36 05.4 +0.7**
comp=Z,28nm,1.0s
CN2 Changchun 72.43 329 *e*P **P 09 36 05.3 +0.2**
CN2 *e*sP **sP 09 36 23.7 -0.7**
CN2 *e*S **S 09 45 25.5 +0.1**
GYA Guiyang 73.82 305 P **P 09 36 15.0 +1.1**
GYA pP **PcP 09 36 30.4 +1.1**
GYA sP **sP 09 36 35.2 +2.0**
GYA PP **PP 09 39 02.9 +3.6**
GYA S **S 09 45 41.0 -1.1**
GYA sS **sS 09 46 05.3 -0.1**
GYA SKS **SKSac 09 46 11.8 -5.5**
GYA SS **SS 09 50 27.5 +0.2**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,120nm,5.4s
GYA LR LR
comp=N,560nm,18.9s
GYA LR LR
comp=E,510nm,19.2s
GYA LR LR
comp=Z,580nm,18.8s
KLR Kul'dur 73.90 336 *e*P P 09 36 10.0 -3.7
KLR pmax pmax
comp=Z,62nm,1.6s
PBKT Sadao Pong 74.10 294 P P 09 36 20.1 +4.6
comp=Z,10nm,0.9s
BJI Beijing 74.88 321 P **P 09 36 21.5 +1.9**
BJI S **S 09 45 53.9 +0.8**
BJI sS **sS 09 46 19.0 +2.5**
BJI SS **SS 09 50 43.5 +0.9**
BJI pmax pmax
comp=Z,10.0nm,1.2s
BJI LR LR
comp=N,660nm,15.4s
BJI LR LR
comp=E,490nm,18.8s
BJI LR LR
comp=Z,200nm,18.8s
XAN Xi'an 76.06 313 P **P 09 36 28.3 +1.7**
XAN pP **pP 09 36 41.6 +1.0**
XAN S **S 09 46 07.2 +0.5**
XAN SS **SS 09 50 58.7 -2.3**
XAN pmax pmax
comp=Z,2.0nm,0.9s
XAN pmax pmax
comp=Z,35nm,7.9s
XAN LR LR
comp=N,1µm,21.6s
XAN LR LR
comp=Z,620nm,22.7s
KMI Kunming 76.30 302 P **P 09 36 30.0 +1.6**
KMI pP **PcP 09 36 40.7 +0.6**
KMI pmax pmax
comp=Z,19nm,0.8s
CMAR Chiang Mai Arr 76.63 294 P **P 09 36 31.6 +1.6**
CMAR Chiang Mai Arr 76.63 294 P **P 09 36 31.6 +1.6**
comp=Z,1.2nm,0.3s,baz=126,slow=4.6,SNR=4.5
CHTO Chiang Mai 76.77 295 *e*P **P 09 36 32.4 +1.5**
CHTO pmax pmax
comp=Z,11nm,1.0s
CHTO Chiang Mai 76.77 295 *e*P **P 09 36 32.4 +1.5**
comp=Z,10nm,1.0s
CHTO Chiang Mai 76.77 295 P P 09 36 34.2 +3.3
comp=Z,16nm,2.1s
HHC Hu-ho-hao-te 78.16 320 *e*P **P 09 36 39.2 +0.9**
HHC pP **pP 09 36 55.4 +3.1**
HHC PP **PP 09 39 39.1 +3.5**
HHC S **S 09 46 28.1 -1.2**
HHC SKS **SKSac 09 46 42.5 -6.3**
HHC ScS **SKKSac 09 46 50.8 +1.0**
HHC SS **SS 09 51 30.3 -2.2**
HHC pmax pmax
comp=Z,44nm,0.8s
HHC pmax pmax
comp=Z,440nm,4.8s
HHC LR LR
comp=N,590nm,17.7s
HHC LR LR
comp=E,330nm,16.1s
HHC LR LR
comp=Z,500nm,17.7s
CD2 Chengdu 78.22 308 *e*P **P 09 36 39.8 +1.1**
CD2 pP **pP 09 36 55.2 +2.4**
CD2 sP **sP 09 37 01.3 +3.1**
CD2 PP **PP 09 39 39.2 +3.0**
CD2 S **S 09 46 29.2 -1.0**
CD2 sS **ScS 09 46 55.0 -0.2**
CD2 SS **SS 09 51 34.9 +1.3**
CD2 pmax pmax
comp=Z,30nm,0.8s
CD2 pmax pmax
comp=Z,120nm,6.8s
LZH Lanzhou 80.68 312 *e*P **P 09 36 54.0 +1.8**
LZH pP **pP 09 37 08.2 +1.9**
LZH sP **sP 09 37 14.5 +2.8**
LZH S **S 09 46 59.2 +2.8**
LZH sS **ScS 09 47 16.1 +0.7**
LZH SS **SS 09 52 13.1 +2.5**
LZH pmax pmax
comp=Z,25nm,1.5s
LZH pmax pmax
comp=Z,230nm,7.5s
LZH LR LR
comp=N,670nm,10.7s
LZH LR LR
comp=E,980nm,12.1s
LZH LR LR
comp=Z,880nm,14.0s
CLNS Chul'man 82.44 338 *e*P **P 09 37 01.8 +1.0**
CLNS *e* 09 37 11.0
CLNS *e* 09 40 05.9
CLNS *e*PPP PPP 09 41 57.7
CLNS *e*S **S 09 47 17.2 +3.8**
CLNS pmax pmax
comp=Z,20nm,1.3s
CLNS pmax pmax
comp=N,14nm,1.6s
CLNS pmax pmax
comp=E,9.0nm,1.7s
CLNS pmax pmax
comp=E,2.0nm,1.2s
CLNS pmax pmax
comp=Z,2.0nm,1.4s
CLNS pmax pmax
comp=N,4.0nm,1.3s
CLNS smax smax
comp=N,192nm,14.2s
CLNS smax smax
comp=E,324nm,13.7s
ULN Ulaanbaatar 84.81 324 *e*P **P 09 37 14.7 +1.3**
comp=E,34nm,1.4s
ULN *e*pP **pP 09 37 26.5 -1.1**
ULN Ulaanbaatar 84.81 324 P **P 09 37 14.8 +1.4**
YAK Yakutsk 84.99 343 *e*P **P 09 37 12.6 -1.0**
YAK pmax pmax
comp=Z,37nm,1.4s

YAK pmax pmax
comp=N,11nm,1.3s
YAK pmax pmax
comp=E,8.0nm,1.7s
GTA Gaotai 85.07 314 *e*P **P 09 37 15.1 +0.2**
GTA pP **pP 09 37 31.4 +2.4**
GTA sP **sP 09 37 37.9 +3.5**
GTA PP **PP 09 40 33.2 +0.4**
GTA SKS **SKSac 09 47 32.2 -3.6**
GTA S **S 09 47 39.8 -1.1**
GTA sS **sS 09 48 01.7 -3.0**
GTA pmax pmax
comp=Z,10.0nm,1.2s
GTA pmax pmax
comp=Z,150nm,4.7s
GTA LR LR
comp=N,260nm,11.9s
GTA LR LR
comp=E,270nm,13.3s
GTA LR LR
comp=Z,260nm,9.5s
SONM Songino Array 85.17 324 P **P 09 37 15.1 0.0**
SONM Songino Array 85.17 324 P **P 09 37 15.1 0.0**
comp=Z,6.1nm,1.0s,baz=140,slow=4.6,SNR=35
BILL Bilibino 85.48 359⇓ *i*P **P 09 37 15.7 -0.3**
BILL *e* 09 40 36.9
BILL pmax pmax
comp=Z,90nm,1.6s
BILL MLR MLR
comp=Z,100nm,19.0s
BILL Bilibino 85.48 359 *e*P **P 09 37 15.5 -0.5**
comp=Z,53nm,1.6s
SYO Syowa Base 86.04 196⇑ *e*P **P 09 37 20.0 +1.0**
SYO Syowa Base 86.04 196⇑ *e*PcP **PcP 09 37 22.0 +0.4**
BEKR Beckworth 87.93 47 *e*P **P 09 37 27.9 -1.0**
comp=Z,8.1nm,1.5s
ZAK Zakamensk 88.25 325 *e*P **P 09 37 28.0 -2.0**
ZAK pmax pmax
comp=Z,7.0nm,1.6s
NVAR Mina Array Bea 88.80 49 P **P 09 37 32.9 -0.2**
NVAR Mina Array Bea 88.80 49 P **P 09 37 32.9 -0.2**
comp=Z,1.1nm,0.9s,baz=235,slow=8.2,SNR=7.3
ILAR Eielson Array 89.16 18 P **P 09 37 32.4 -1.5**
ILAR Eielson Array 89.16 18 P **P 09 37 32.4 -1.5**
comp=Z,1.3nm,0.7s,baz=241,slow=4.8,SNR=16
WVOR Wild Horse Val 90.17 45 *e*P **P 09 37 38.7 -0.6**
WVOR *e**PP **pP 09 37 50.7 -2.9**
WVOR pmax pmax
comp=Z,5.0nm,1.4s
WVOR Wild Horse Val 90.17 45 *e*P **P 09 37 38.7 -0.6**
comp=Z,4.6nm,1.4s
WVOR *e*pP **pP 09 37 50.6 -2.9**
SNAA Sanae 90.65 183 *e*P **P 09 37 41.3 +0.3**
SNAA Sanae 90.65 183 *e*pP pP 09 37 56.6 +1.3
SNAA Sanae 90.65 183 *e*P **P 09 37 41.5 +0.5**
comp=Z,17nm,1.4s
VNA1 Neumayer--Stat 91.86 181 *e*P **P 09 37 47.3 +0.8**
TIXI Tiksi 92.95 348 *e*P **P 09 37 50.4 -0.9**
TIXI pmax pmax
comp=Z,3.0nm,0.8s
HVS Khovu-Aksy 94.01 323 *e*P **P 09 37 57.9 +1.1**
HVS pmax pmax
comp=Z,41nm,1.2s
WMQ Urumqi 95.15 314 *e*P **P 09 38 04.2 +2.0**
WMQ pP **pP 09 38 18.5 +2.0**
WMQ sP **sP 09 38 25.0 +3.2**
WMQ SKS **SKSac 09 48 34.0 -0.1**
WMQ *e*S **S 09 49 11.0 -2.7**
WMQ SS **SS 09 55 42.0 +0.8**
WMQ pmax pmax
comp=Z,11nm,0.7s
WMQ pmax pmax
comp=Z,150nm,6.5s
WMQ LR LR
comp=N,510nm,16.2s
WMQ LR LR
comp=E,1µm,16.2s
WMQ LR LR
comp=Z,460nm,22.6s
MKAR Makanchi Array 99.68 316 P **Pdif 09 38 22.4 -0.1**
MKAR Makanchi Array 99.68 316 P **Pdif 09 38 22.4 -0.1**
MKAR Makanchi Array 99.68 316 P **Pdif 09 38 22.4 -0.1**
comp=Z,0.4nm,0.6s,baz=97,slow=5.5,SNR=3.3
YKA Yellowknife Ar 99.91 27 P **Pdif 09 38 22.1 -0.9**
YKA PKiKP **PKiKP 09 42 50.2 -0.7**
YKA Yellowknife Ar 99.91 27 P **Pdif 09 38 22.1 -0.9**
comp=Z,0.4nm,0.8s,baz=243,slow=4.0,SNR=5.6
YKA PKiKP **PKiKP 09 42 50.2 -0.7**
comp=Z,0.1nm,0.5s,baz=250,slow=1.5,SNR=3.2
ZALV Zalesovo Beam 100.06 323 P **Pdif 09 38 24.2 +0.3**
ZALV Zalesovo Beam 100.06 323 P **Pdif 09 38 24.2 +0.3**
ZALV Zalesovo Beam 100.06 323 P **Pdif 09 38 24.2 +0.3**
comp=Z,1.8nm,0.8s,baz=116,slow=4.3,SNR=4.7
KEV Kevo 122.69 345 *e*PKIKP **PKPdf 09 43 32.9 -0.8**
KEV Kevo 122.69 345 *e*p **PKPdf 09 43 32.9 -0.8**
ARCES ARCESS Array B 123.22 345 PKP **PKPdf 09 43 34.5 -0.3**
ARCES ARCESS Array B 123.22 345 PKP **PKPdf 09 43 34.5 -0.3**
comp=Z,6.3nm,0.7s,baz=81,slow=1.8,SNR=21
KLMR Klimovskoe 123.53 333 *e*PKIKP **PKPdf 09 43 33.7 -1.8**
KLMR pmax pmax
comp=Z,21nm,1.4s
JOF Joensuu 125.79 337 *e*PKIKP **PKPdf 09 43 38.5 -1.3**
JOF pmax pmax
comp=Z,10.0nm,0.7s
JOF Joensuu 125.79 337 *e*p **PKPdf 09 43 38.5 -1.3**
comp=Z,10nm,0.7s
KBZ Khabaz 127.12 312 PKIKP **PKPdf 09 43 42.3 -0.6**
KBZ Khabaz 127.12 312 PKP **PKPdf 09 43 42.2 -0.6**
KBZ Khabaz 127.12 312 PKP **PKPdf 09 43 42.2 -0.6**
comp=Z,1.2nm,0.6s,baz=162,slow=3.2,SNR=3.2
KIV Kislovodsk 127.22 312⇑ *i*PKIKP **PKPdf 09 43 44.2 +0.9**
KIV *e* 09 45 45.8
KIV pmax pmax
comp=Z,8.0nm,1.3s
OBN Obninsk 127.45 327⇑ *i*PKIKP **PKPdf 09 43 42.1 -1.1**
OBN *e* 09 45 47.2
OBN pmax pmax
comp=Z,25nm,1.4s
FINES FINESS Array B 128.63 338 PKP **PKPdf 09 43 45.4 +0.1**
FINES FINESS Array B 128.63 338 PKP **PKPdf 09 43 45.4 +0.1**
comp=Z,3.3nm,0.8s,baz=132,slow=9.7,SNR=4.2
BDFB Brasilia 131.59 131 PKP **PKPdf 09 43 51.6 -0.9**
BDFB Brasilia 131.59 131 PKP **PKPdf 09 43 51.6 -0.9**
comp=Z,1.3nm,0.4s,baz=252,slow=3.2,SNR=2.6
AKASG Malin Array Be 133.44 325 PKIKP **PKPdf 09 43 54.7 0.0**
AKASG Malin Array Be 133.44 325 PKP **PKPdf 09 43 54.7 0.0**
AKASG Malin Array Be 133.44 325 PKP **PKPdf 09 43 54.7 0.0**
comp=Z,2.3nm,0.7s,baz=53,slow=2.0,SNR=4.3
NB2 NORSAR Subarra133.59 345 PKPdf **PKPdf 09 43 54.5 -0.3**
comp=Z,2.5nm,1.0s,baz=31,slow=1.9
NOA NORSAR Array B 133.59 345 PKP **PKPdf 09 43 55.5 +0.7**
NOA NORSAR Array B 133.59 345 PKP **PKPdf 09 43 55.5 +0.7**
comp=Z,2.0nm,0.7s,baz=33,slow=2.0,SNR=8.5
HFS Hagfors 133.68 342 PKP **PKPdf 09 43 55.3 +0.5**
HFS Hagfors 133.68 342 PKP **PKPdf 09 43 55.3 +0.5**
comp=Z,3.9nm,0.9s,baz=0.0,slow=5.8,SNR=3.1
BRTR Keskin Array B 134.79 309 PKP **PKPdf 09 43 59.6 +1.8**
BRTR Keskin Array B 134.79 309 PKP **PKPdf 09 43 59.6 +1.8**
comp=Z,1.2nm,1.0s,baz=49,slow=2.5,SNR=5.7
MLR Muntele Rosu 137.90 320 PKP **PKPdf 09 44 04.8 +1.4**
MLR Muntele Rosu 137.90 320 PKP **PKPdf 09 44 04.8 +1.4**
comp=Z,0.5nm,0.8s,baz=352,slow=5.8,SNR=5.2
UZH Uzhgorod 138.35 326 *e*PKIKP **PKPdf 09 44 01.4 -2.5**
DPC Dobruska-Polom 140.21 331 *e*PKIKP **PKPdf 09 44 05.3 -2.1**
DPC Dobruska-Polom 140.21 331 *e*PKPdf **PKPdf 09 44 05.3 -2.1**
DPC *e* 09 44 08.2
UPC Upice 140.24 332 *e*PKIKP **PKPdf 09 44 07.9 +0.6**
UPC Upice 140.24 332 *e*PKPdf **PKPdf 09 44 07.9 +0.6**
CLL Collm 140.94 335 *e*PKIKP **PKPdf 09 44 08.0 -0.5**
CLL Collm 140.94 335 *e*PKPdf **PKPdf 09 44 08.0 -0.5**
CLL *e*PKiKP **PKiKP 09 44 12.0 +0.8**
EKA Eskdalemuir Ar 141.78 352 PKPpre PKPpre 09 44 02.8
EKA PKP **PKPdf 09 44 11.2 +1.3**
EKA Eskdalemuir Ar 141.78 352 PKhKP PKPpre 09 44 02.8
comp=Z,0.6nm,0.6s,baz=9.6,slow=4.7,SNR=2.7
EKA PKP **PKPdf 09 44 11.2 +1.3**
comp=Z,0.7nm,0.5s,baz=21,slow=3.0,SNR=4.2
CONA Conrad Observa 142.11 329⇑ *i*PKPdf **PKPdf 09 44 10.8 -0.1**
comp=Z,8.7nm,1.0s
KHC Kasperske Hory 142.33 332 *e*PKIKP **PKPdf 09 44 07.7 -3.5**
KHC *e* 09 44 12.3
KHC Kasperske Hory 142.33 332 *e*PKPdf **PKPdf 09 44 07.7 -3.5**
KHC *ex* x 09 44 12.3
GERES GERESS Array B 142.48 332 PKPpre PKPpre 09 44 08.1
comp=Z,1.4nm,0.8s,baz=67,slow=4.5,SNR=5.7
GRF Grafenberg Arr 142.91 335 *e*PKIKP **PKPdf 09 44 09.9 -2.3**
MOA Molln 142.94 330⇑ *i*PKPdf **PKPdf 09 44 09.2 -3.1**
comp=Z,5.3nm,0.9s
PERS Pernice 143.37 328 *i* PKPbc PKPab 09 44 09.1 -0.1
SOKA Soboth 143.38 328⇑ *i*PKPdf PKPbc 09 44 10.0 -0.4
comp=Z,8.8nm,1.2s
KBA Koelnbreinsper 143.93 330⇑ *i*PKPdf PKPab 09 44 11.7 +0.2
comp=Z,17nm,1.2s
TOD Tromm 143.93 337 PKIKP PKPbc 09 44 12.0 +0.2
TOD Tromm 143.93 337 PKP PKPbc 09 44 12.0 +0.2
BOJS Bojanci 144.06 326 *i* PKPdf **PKPab 09 44 07.0 -4.8**
BOJS *i* PKPbc PKPbc 09 44 12.7 +0.3
MEM Membach 144.06 340 PKP PKPbc 09 44 12.8 +0.7
LJU Ljubljana 144.07 328 *i* PKPbc PKPbc 09 44 12.5 +0.1
MYKA Terra Mystica 144.10 329⇓ *i*PKPdf **PKPab 09 44 11.9 -0.2**
comp=Z,22nm,1.5s
ABH Alteburg 144.16 338 PKP PKPbc 09 44 13.0 +0.5
VOY Vojsko 144.40 328 *e*PKPbc **PKPab 09 44 12.9 -0.3**
VOY *e* 09 44 23.1
JAVS Javornik 144.41 328 *i* PKPbc **PKPab 09 44 12.5 -0.8**
BCLA Clavier 144.45 341 PKP **PKPdf 09 44 14.6 -0.2**
RUP Ruppelstein 144.48 338 PKIKP PKPbc 09 44 13.9 +0.3
RUP Ruppelstein 144.48 338 PKP PKPbc 09 44 13.9 +0.3
ABTA Abfaltersbach 144.56 330⇑ *i*PKPdf **PKPab 09 44 12.8 -1.0**
comp=Z,36nm,1.2s,SNR=8.7
WTTA Wattenberg 144.59 332⇓ *i*PKPdf PKPbc 09 44 14.5 +0.4
comp=Z,27nm,1.3s
MOTA Moosalm 144.76 332⇓ *i*PKPdf PKPbc 09 44 15.2 +0.5
comp=Z,19nm,0.8s
RETA Reutte 144.81 333⇓ *i*PKPdf PKPbc 09 44 14.8 +0.1
comp=Z,27nm,1.3s,SNR=7.0
LANF Langenberg 144.81 337 PKIKP PKPbc 09 44 15.1 +0.5
LANF Langenberg 144.81 337 PKP PKPbc 09 44 15.1 +0.5
LANF Langenberg 144.81 337 PKP PKPbc 09 44 15.1 +0.5
WLF Walferdange 144.83 339 PKP **PKPdf 09 44 15.8 +0.3**
WLF Walferdange 144.83 339 *e*PKIKP **PKPdf 09 44 15.7 +0.3**
WLF Walferdange 144.83 339 *e*PKPdf **PKPdf 09 44 15.7 +0.2**
DOU Dourbes 144.96 341 PKP **PKPdf 09 44 15.5 -0.2**
BFO Black Forest 145.15 336 *e*PKIKP **PKPbc 09 44 15.8 +0.1**
BFO Black Forest 145.15 336 *e*PKPbc **PKPbc 09 44 15.8 +0.1**
SPAK Spaichingen-Ko 145.15 335 PKP **PKPab 09 44 16.0 +0.1**
FETA Feichten 145.18 332⇑ *i*PKPdf **PKPbc 09 44 16.1 0.0**
comp=Z,43nm,0.9s,SNR=25
DAVA Damuels 145.34 333⇓ *i*PKPdf **PKPbc 09 44 16.2 -0.3**
comp=Z,41nm,0.7s,SNR=12
LIBD Limburg 145.57 336 PKIKP **PKPab 09 44 17.7 +0.4**
LIBD Limburg 145.57 336 PKP **PKPab 09 44 17.7 +0.4**
FELD Feldberg im Sc 145.64 336 PKP **PKPbc 09 44 17.6 +0.1**
ECH Echery 145.69 337 *e*PKP2 **PKPdf 09 44 17.3 +0.2**
ECH Echery 145.69 337 *e*PKPbc **PKPdf 09 44 17.3 +0.2**
ECH Echery 145.69 337 PKP **PKPbc 09 44 17.5 +0.1**
DAVOX Davos/Dischmat 145.73 333 PKPbc **PKPab 09 44 18.4 +0.2**
DAVOX Davos/Dischmat 145.73 333 PKPbc **PKPab 09 44 18.4 +0.2**
comp=Z,18nm,0.6s,baz=218,slow=4.0,SNR=28
VAL Valentia 145.78 358⇓ *i*P **PKPab 09 44 17.8 -0.1**
MOF Molkenrain 146.00 337 PKP2 **PKPbc 09 44 18.3 -0.2**
MOF Molkenrain 146.00 337 PKP **PKPbc 09 44 18.3 -0.2**
MOF Molkenrain 146.00 337 PKP **PKPbc 09 44 18.3 -0.2**
THEF They Montfort 146.11 338 PKP2 **PKPab 09 44 19.1 -0.3**
THEF They Montfort 146.11 338 PKP **PKPab 09 44 19.1 -0.3**
THEF They Montfort 146.11 338 PKP **PKPab 09 44 19.1 -0.3**
BBS Basel-Blauen 146.17 336 PKP2 **PKPbc 09 44 19.1 +0.1**
BBS Basel-Blauen 146.17 336 PKP **PKPbc 09 44 19.1 +0.1**
TUE Stuetta 146.21 333 *e*PKPdf **PKPdf 09 44 18.3 +0.1**
TUE *e*PKPbc **PKPab 09 44 20.1 +0.1**
LOMF Lomont 146.53 336 PKP2 **PKPbc 09 44 20.4 +0.3**
LOMF Lomont 146.53 336 PKP **PKPbc 09 44 20.4 +0.3**
LOMF Lomont 146.53 336 PKP **PKPbc 09 44 20.4 +0.3**
TIP Timpagrande 146.96 316 *e*PKPdf **PKPdf 09 44 18.9 -0.6**
TIP *e*PKPbc **PKPbc 09 44 21.9 +0.4**
CUC Castrocucco 147.13 318 *e*PKPbc **PKPdf 09 44 20.6 +0.9**
BNI Bardonecchia 148.47 334 *e*PKIKP **PKPdf 09 44 22.4 +0.5**
BNI *e* 09 44 26.1
BNI *e* 09 44 29.3
BNI Bardonecchia 148.47 334 *e*PKPdf **PKPdf 09 44 22.4 +0.5**
BNI *e*PKPbc **PKPbc 09 44 26.1 +0.5**
BNI *e*PKPab **PKPab 09 44 29.3 +0.4**
SAOF Saorge 148.94 332 PKP2 **PKPbc 09 44 26.7 +0.1**
SAOF Saorge 148.94 332 PKP **PKPbc 09 44 26.7 +0.1**
SAOF Saorge 148.94 332 PKP **PKPbc 09 44 26.7 +0.1**
AGO Saint Agoulin 148.97 339 PKP **PKPbc 09 44 27.1 +0.5**
AGO Saint Agoulin 148.97 339 PKP **PKPbc 09 44 27.1 +0.5**
AUTN L'Aution 148.99 332 PKP2 **PKPbc 09 44 26.8 -0.2**
AUTN L'Aution 148.99 332 PKP **PKPbc 09 44 26.8 -0.2**
AUTN L'Aution 148.99 332 PKP **PKPbc 09 44 26.8 -0.2**
TOUF Mont Tournerai 149.05 332 PKP2 **PKPbc 09 44 27.1 0.0**
TOUF Mont Tournerai 149.05 332 PKP **PKPbc 09 44 27.1 0.0**
TOUF Mont Tournerai 149.05 332 PKP **PKPbc 09 44 27.1 0.0**
SSB Saint Sauveur 149.13 337 *e*PKIKP **PKPdf 09 44 22.9 0.0**
SSB *e* 09 44 27.1
SSB *e* 09 44 31.7
SSB Saint Sauveur 149.13 337 *e*PKPdf **PKPdf 09 44 22.9 0.0**
SSB *e*PKPbc **PKPbc 09 44 27.1 0.0**
SSB *e*PKPab **PKPab 09 44 31.7 +0.3**
MVIF Mont Vial 149.19 332 PKP2 **PKPbc 09 44 27.1 -0.3**
MVIF Mont Vial 149.19 332 PKP **PKPbc 09 44 27.1 -0.3**
MVIF Mont Vial 149.19 332 PKP **PKPbc 09 44 27.1 -0.3**
REVF Revere 149.21 332 PKP2 **PKPbc 09 44 27.0 -0.4**
REVF Revere 149.21 332 PKP **PKPbc 09 44 27.0 -0.4**
REVF Revere 149.21 332 PKP **PKPbc 09 44 27.0 -0.4**
PYM Petit Puy Mans 149.28 339 PKP2 **PKPbc 09 44 28.0 +0.5**
PYM Petit Puy Mans 149.28 339 PKP **PKPbc 09 44 28.0 +0.5**
PYM Petit Puy Mans 149.28 339 PKP **PKPbc 09 44 28.0 +0.5**
CALN Calern 149.42 332 PKP2 **PKPbc 09 44 28.1 +0.1**
CALN Calern 149.42 332 PKP **PKPbc 09 44 28.1 +0.1**
CALN Calern 149.42 332 PKP **PKPbc 09 44 28.1 +0.1**
LBL Lubilhac 149.65 338 PKP2 **PKPbc 09 44 29.1 +0.7**
LBL Lubilhac 149.65 338 PKP **PKPbc 09 44 29.1 +0.7**
LBL Lubilhac 149.65 338 PKP **PKPbc 09 44 29.1 +0.7**
LARF Larrau 152.99 342 PKP **PKPbc 09 44 36.9 +0.7**
LARF Larrau 152.99 342 PKP **PKPbc 09 44 36.9 +0.7**
KEST Kesra 153.77 317 PKPbc **PKPbc 09 44 38.1 -0.1**
KEST Kesra 153.77 317 PKPbc **PKPbc 09 44 38.1 -0.1**
comp=Z,1.3nm,0.8s,baz=23,slow=3.1,SNR=3.6
ESDC Sonseca Array 156.95 344 PKPab **PKPab 09 45 04.1 -0.4**
ESDC Sonseca Array 156.95 344 PKPab **PKPab 09 45 04.1 -0.4**
comp=Z,0.7nm,0.4s,baz=14,slow=3.4,SNR=6.5
MDT Midelt 163.45 337 PKPab **PKPab 09 45 33.1 0.0**
MDT Midelt 163.45 337 PKPab **PKPab 09 45 33.1 0.0**
comp=Z,1.9nm,0.6s,baz=61,slow=2.6,SNR=4.3
TORD Torodi Ar. Bea 165.88 253 PKP **PKPdf 09 44 44.0 -0.3**
TORD PKPab **PKPab 09 45 45.0 +0.7**
TORD Torodi Ar. Bea 165.88 253 PKP **PKPdf 09 44 44.0 -0.3**
comp=Z,2.8nm,0.9s,baz=14,slow=1.6,SNR=9.1
TORD PKPab **PKPab 09 45 45.0 +0.7**
comp=Z,1.2nm,0.9s,baz=80,slow=2.5,SNR=3.6

TRN 12 09:26:28.8, 17°04N×62°25W, h18km, MD3.5, 4C-2D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MBRV		**0.23**	**167**	*i* P		Pg	09 26 36.0	+1.7
MBWH		**0.30**	**169**⇓	*i*P		Pb	09 26 36.7	+1.0
MBGB		**0.30**	**176**⇓	*i*P		Pb	09 26 37.1	+1.3
MLYT	**Lee's Yard**	**0.32**	**170**⇑	*i*P		Pb	09 26 37.2	+1.1
MLYT	**Lee's Yard**	**0.32**	**170**⇑	*i*P		Pb	09 26 37.2	+1.1
NEV	**Hard Times**	**0.32**	**288**	*e*P		Pb	09 26 37.4	+1.2
NEV				*e*S		Sn	09 26 43.5	-1.4
MBRY		**0.34**	**165**⇑	*i*P		Pb	09 26 37.7	+1.1
BPA	**Boggy Peak**	**0.38**	**89**	*e*P		Pn	09 26 39.3	-0.1
BPA				*e*S		Sn	09 26 44.7	-1.5
SKI	**Saint Kitts**	**0.55**	**302**	*e*P		Pn	09 26 42.7	+0.9
SKI				*e*S		Sn	09 26 50.8	+0.2
SEG	**Port Louis**	**0.95**	**131**	*e*P		Pg	09 26 48.5	+1.1
BCG	**Bois Riant Cap**	**1.12**	**147**	*e*P		Pg	09 26 51.0	+0.3
SCG	**Saint Claude**	**1.14**	**151**	*e*P		Pg	09 26 51.8	+0.7
DOG	**Dongo Capester**	**1.17**	**149**	*e*P		Pg	09 26 51.6	0.0
PHG	**Guadaloupe-2**	**1.17**	**150**	*e*P		Pg	09 26 52.2	+0.5
HMG	**Houelmont**	**1.17**	**153**	*e*P		Pg	09 26 52.0	+0.4
TBG	**Guadaloupe-3**	**1.31**	**154**⇑	*i*P		Pg	09 26 54.1	-0.1
DEG	**La Desirade**	**1.35**	**122**	*e*P		Pg	09 26 54.4	-0.6
MGG	**Marie-Galante**	**1.43**	**141**	*e*P		Pg	09 26 56.2	-0.2
DVCT	**Vielle Casse P**	**1.63**	**150**	*e*S		Sg	09 27 22.7	+1.2

IDC 12 09:44:03.2±3.1, 16°30S×167°93E, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.9/20, mbtmp4.1/5, ML4.8/1, Error

ellipse: s-maj=123.6km s-min=43.9km az=16.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	10.35	310	Pn	Pn	09 46 35.2	+2.2
	7.3nm,0.3s,baz=161,slow=10,SNR=6.0						
SONM	Songino Array	84.13	323	P	P	09 56 35.3	-1.0
	0.7nm,0.5s,baz=142,slow=5.9,SNR=6.3						
NVAR	Mina Array Bea	87.81	49	P	P	09 56 56.1	+1.2
	0.3nm,0.6s,baz=240,slow=8.2,SNR=3.3						
ILAR	Eielson Array	87.82	18	P	P	09 56 52.7	-1.3
	0.5nm,0.8s,baz=238,slow=4.8,SNR=6.0						
MKAR	Makanchi Array	98.77	316	P	Pdif	09 57 45.1	+0.2
	0.7nm,0.7s,baz=100,slow=6.2,SNR=4.6						
ARCES	ARCESS Array B	121.92	345	PKP	PKPdf	10 02 58.9	0.0
	0.5nm,0.4s,baz=73,slow=2.4,SNR=9.3						
ARCES	ARCESS Array B	121.92	345	PKP	PKPdf	10 02 58.9	0.0

IDC 12 09:44:12.9±0.4, 17°.60S×167°.78E, h0km, mb5.0/28, mb1 5.1/29, mb1mx5.1/31, mbtmp5.0/29, ML4.5/1, MS5.6/15, Ms1 5.6/15, ms1mx5.6/18, Error ellipse: s-maj=12.9km s-min=10.4km az=152.0

LDG 12 09:44:14.1±0.1, 17°.58S×167°.82E, h10km, Mb5.9/4, Ms5.5/10, Error ellipse: s-maj=16.9km s-min=6.8km az=95.0

NEIC 12 09:44:15.1±0.1, 17°.61S×167°.81E, h15km, mb5.5/98, ME5.5, MS5.6/157, MW6.0, MW6.0, Error ellipse: s-maj=4.3km s-min=3.5km az=152.0 Broadband fault plane solution: P waves. NP1:φs170.00000°, δ70.00000°, λ90.00000°. NP2:φs350.00000°, δ20.00000°, λ90.00000°. Principal axes: T Plg65.0000°, Azm80.0000°; N Plg0.0000°, Azm0.0000°; P Plg25.0000°, Azm260.0000°; Moment Tensor Solution. s38 Moment tensor: Scale 10^{18} Nm; Mrr0.66; Mθθ0.34; Mφφ-1.00; Mrθ-0.12; Mθφ0.25; Mφr-0.62; Best double couple: M0 1.10000×10^{18} NP1: φs324.00000°, δ33.00000°, λ51.00000°. NP2: φs188.00000°, δ65.00000°, λ112.00000°. Principal axes: T 0.9300, Plg62.0000°, Azm134.0000°; N 0.3000, Plg20.0000°, Azm358.0000°; P -1.2300, Plg17.0000°, Azm262.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.

NEIC Felt [III] at Port-Vila.

MOS 12 09:44:17.7±0.9, 17°.33S×167°.94E, h33km, mb5.8/56, MS5.6/57 Error ellipse: s-maj=10.0km s-min=6.9km az=118.1

NOU 12 09:44:17.5±1.0, 18°.00S×169°.17E, h30km, MD4.0, ML3.1

ISCJB 12 09:44:18.2±0.1, 17°.66S±0°.03×167°.74E±0°.03, h49km, mb5.4/149, MS5.6/217, Error ellipse: s-maj=4.2km s-min=3.8km az=29.6

BJI 12 09:44:19.3, 17°.26S×167°.93E, h53km, mB5.9/43, mb5.3/49, Ms5.8/66, Ms7 5.5/64

GCMT 12 09:44:21.4±0.1, 17°.52S×167°.63E, h20km, MW6.0, Moment Tensor Solution. s108,c241; s89,c121; Moment tensor: Scale 10^{18}Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M0 1.10000×10^{18} NP1:φs360.00000°, δ27.00000°, λ106.00000°. NP2:φs162.00000°, δ64.00000°, λ82.00000°. Principal axes: T 1.0900, Plg70.0000°, Azm55.0000°; N 0.0200, Plg7.0000°, Azm165.0000°; P -1.1100, Plg18.0000°, Azm258.0000°; Data Used: II IU IC G. Surface waves: sta=114, comp=254, per= 50.

NEIC 12 09:44:33.2±0.0, 17°.76S×167°.53E, h28km, Moment Tensor Solution. s136 Moment tensor: Scale 10^{18}Nm; Mrr1.02; Mθθ-0.14; Mφφ-0.87; Mrθ0.52; Mθφ0.16; Mφr-0.28; Best double couple: M0 1.10000×10^{18} NP1:φs2.00000°, δ36.00000°, λ119.00000°. NP2:φs148.00000°, δ59.00000°, λ71.00000°. Principal axes: T 1.2400, Plg69.0000°, Azm16.0000°; N -0.2500, Plg16.0000°, Azm158.0000°; P -0.9900, Plg12.0000°, Azm251.0000°;

DJA 12 09:44:59.2±3.9, 18°S±10°×16°6E±2°7, h308km±32km, M5.3/15, mB5.8/9, mb5.0/15, Mw(mB)5.4/9

ISC 12 09:44:19.6±0.3, **17°.68S**±0°.03×**167°.85E**±0°.04, **h50**km±1km, **h50**km**:pP-P, n1375, σ1s.34**/1341, **mb5.4**/146, **MS5.6**/218, **224C-199D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.54	191	eP	Pn	09 45 25.3	-0.5
BAYA				eS	Sn	09 46 13.9	-3.4
BAYA				AMP		09 46 44.6	
	comp=Z,66nm,1.4s						
DZM	Mont Dzumac	4.56	197	ePn	Pn	09 45 24.8	-1.4
	comp=Z,585nm,1.1s						
DZM				eSn	Sn	09 46 37.8	+20
	comp=Z,2μm,1.0s						
DZM	Mont Dzumac	4.56	197	ePn	Pn	09 45 23.4	-2.8
DZM				eSg	Sn	09 46 47.0	+29
DZM	Mont Dzumac	4.56	197	Pn	Pn	09 45 24.5	-1.7
	comp=Z,21nm,0.3s,baz=26,slow=14,SNR=123						
DZM				Sn	Sn	09 46 14.4	-3.5
	comp=Z,100nm,0.3s,baz=309,slow=22,SNR=7.6						
NOUC	Port Laguerre	4.63	198	eP	Pn	09 45 27.8	+0.7
NOUC				eS	Sn	09 46 20.9	+1.4
NOUC				AMP		09 46 34.1	
	comp=Z,328nm,5.1s						
PLUM	Mont Dore	4.71	194	eP	Pn	09 45 27.8	-0.3
PLUM				AMP		09 46 33.3	
	comp=Z,746nm,6.6s						
MVNO	Noumea	4.75	196	eP	Pn	09 45 28.2	-0.5
MSVF	Nonsavu	9.73	92	Pn	Pn	09 46 42.0	+5.0
	comp=Z,3μm,1.0s,SNR=49						
MSVF	Nonsavu	9.73	92	eP	Pn	09 46 41.2	+4.2
MSVF	Nonsavu	9.73	92	ePn	Pn	09 46 41.2	+4.2
HNR	Honiara	11.23	316	ePn	Pn	09 46 56.7	-0.8
HNR				eSn	Sn	09 49 03.2	+1.6
HNR	Honiara	11.23	316	Pn	Pn	09 46 56.2	-1.3
	comp=Z,13nm,0.3s,baz=217,slow=6.0,SNR=10						
HNR				Sn	Sn	09 49 10.7	+9.1
	comp=Z,6.4nm,0.3s,baz=45,slow=21,SNR=1.8						
HNR				LR	LR	09 50 39.8	
	comp=Z,31μm,19.4s,baz=282,slow=35						
FUNA	Funafuti	14.31	52	ePn	Pn	09 47 36.7	-2.8
RAO	Raoul Island	17.39	134	eP	P	09 48 19.4	-0.1
OUZ	Omahuta	18.20	165	eP	Pn	09 48 29.5	+0.9
	comp=Z,612nm,1.9s						
ARMA	Armidale	19.46	226	eP	Pn	09 48 45.0	+1.1
	comp=Z,795nm,1.8s						
TARA	Tarawa	19.57	15	eP	P	09 48 42.8	-0.6
	comp=Z,2μm,1.4s						
AFI	Afiamalu	19.96	82	eP	P	09 48 48.1	+0.2
	comp=Z,537nm,1.2s						
AFI	Afiamalu	19.96	82	P	Pn	09 48 49.3	-0.6
	comp=Z,303nm,1.0s,baz=27,slow=2.3,SNR=12						
CTA	Charters Tower	20.57	260	P	P	09 48 53.8	-0.5
CTA				S	S	09 52 44.6	+2.9
CTA	Charters Tower	20.57	260	P	P	09 48 53.8	-0.5
	comp=Z,26nm,0.9s,baz=82,slow=13,SNR=19						
CTA				S	S	09 52 44.6	+2.9
	comp=Z,5.3nm,0.8s,baz=125,slow=18,SNR=3.4						
CTAO	Charters Tower	20.57	260	eP	P	09 48 53.0	-1.3
CTAO				pmax	pmax		
	comp=Z,160nm,0.9s						
CTAO				MLR	MLR		
	comp=Z,24μm,19.0s						
CTAO	Charters Tower	20.57	260	eP	P	09 48 53.0	-1.3
	comp=Z,160nm,0.9s						
CTAO				LR	LR		
	comp=Z,24μm,19.0s						
PMG	Port Moresby	21.71	290	eP	P	09 49 07.1	+0.5
	comp=Z,260nm,1.3s						
PMG	Port Moresby	21.71	290	P	P	09 49 07.4	+0.8
	comp=Z,156nm,1.2s,comp=Z,5μm						
PMG	Port Moresby	21.71	290	P	P	09 49 06.2	-0.5
	comp=Z,80nm,1.1s,baz=356,slow=2.0,SNR=7.7						
PMG				LR	LR	09 56 23.1	
	comp=Z,22μm,18.5s,baz=260,slow=34						
URZ	Urewera	22.05	160	eP	P	09 49 11.9	+2.0
	comp=Z,729nm,1.2s						
URZ	Urewera	22.05	160	P	P	09 49 12.0	+2.0
	comp=Z,91nm,0.9s,baz=5.9,slow=6.1,SNR=12						
URZ				LR	LR	09 56 54.5	
	comp=Z,21μm,18.7s,baz=235,slow=34						
COEN	Coen	24.02	275	eP	P	09 49 28.6	-1.3
	comp=Z,3μm,1.6s						
SNZO	South Karori	24.28	167	eP	P	09 49 32.1	+0.1
	comp=Z,118nm,0.9s						
SNZO				LR	LR		
	comp=Z,17μm,19.0s						
CAN	Canberra	24.28	220	eP	P	09 49 32.6	+0.3
CAN				pmax	pmax		
	comp=Z,770nm,1.9s						
CAN				MLR	MLR		
	comp=Z,18μm,21.0s						
CAN	Canberra	24.28	220	eP	P	09 49 32.5	+0.3
	comp=Z,770nm,1.9s						
CAN				LR	LR		
	comp=Z,18μm,21.0s						
KHZ	Kahutara	25.13	170	eP	P	09 49 40.2	+0.4
	comp=Z,102nm,0.9s						
RPZ	Rata Peaks	26.09	175	eP	P	09 49 50.5	+1.9
	comp=Z,80nm,1.0s						
RPZ	Rata Peaks	26.09	175	P	P	09 49 49.4	+0.8
	comp=Z,21nm,0.9s,baz=236,slow=3.6,SNR=3.2						
STKA	Stephens Creek	27.61	234	eP	P	09 50 02.3	-0.1
	comp=Z,53nm,1.4s						
STKA				PcP	PcP	09 53 19.5	+0.5
STKA	Stephens Creek	27.61	234	P	P	09 50 02.5	+0.1
	comp=Z,14nm,0.5s,baz=76,slow=10,SNR=41						
STKA				PcP	PcP	09 53 19.5	+0.5
	comp=Z,22nm,1.1s,baz=318,slow=2.4,SNR=4.4						
STKA				LR	LR	10 00 46.0	
	comp=Z,20μm,18.4s,baz=61,slow=36						
TAU	Tasmania Unive	30.60	210	PFAKE		09 50 40.0	+11
TAU				LR	LR		
	comp=Z,9μm,19.0s						
RAR	Rarotonga	30.71	102	eP	P	09 50 30.5	+0.6
	comp=Z,123nm,1.3s						
RAR				LR	LR		
	comp=Z,7μm,22.0s						
WRAB	Tennant Creek	31.76	261	eP	P	09 50 37.3	-2.0
WRAB				pmax	pmax		
	comp=Z,176nm,1.5s						
WRAB				MLR	MLR		
	comp=Z,13μm,19.0s						
WRAB	Tennant Creek	31.76	261	eP	P	09 50 37.3	-2.0
	comp=Z,176nm,1.5s						
WRAB				LR	LR		
	comp=Z,13μm,19.0s						
WRA	Warramunga Arr	31.77	261	P	P	09 50 37.8	-1.5
WRA				PcP	PcP	09 53 30.3	+0.4
WRA				S	S	09 55 44.3	-1.8
WRA				ScP	ScP	09 57 15.2	+6.0
WRA	Warramunga Arr	31.77	261	P	P	09 50 37.8	-1.5
	comp=Z,11nm,0.9s,baz=82,slow=6.5,SNR=37						
WRA				PcP	PcP	09 53 30.3	+0.4
	comp=Z,6.6nm,0.9s,baz=91,slow=3.3,SNR=5.0						
WRA				S	S	09 55 44.3	-1.8
	comp=Z,1.5nm,1.1s,baz=90,slow=14,SNR=4.8						
WRA				ScP	ScP	09 57 15.2	+6.0
	comp=Z,4.4nm,1.2s,baz=92,slow=3.4,SNR=7.7						
WRA				LR	LR	10 02 20.0	
	comp=Z,13μm,21.0s,baz=95,slow=34						
AS31	Alice Springs	32.26	254	eP	P	09 50 41.5	-2.2
ASAR	Alice Springs	32.26	254	P	P	09 50 41.8	-1.8
ASAR				PcP	PcP	09 53 32.5	+1.3
ASAR				PKiKP	PKiKP	10 00 58.6	-0.5
ASAR	Alice Springs	32.26	254	P	P	09 50 41.8	-1.8
	comp=Z,30nm,0.9s,baz=80,slow=7.8,SNR=114						
ASAR				PcP	PcP	09 53 32.5	+1.3
	comp=Z,12nm,1.1s,baz=92,slow=3.4,SNR=4.7						
ASAR				PKiKP	PKiKP	10 00 58.6	-0.5
	comp=Z,0.9nm,0.9s,baz=99,slow=1.3,SNR=6.4						
ASAR				LR	LR	10 03 33.1	
	comp=Z,23μm,18.7s,baz=81,slow=36						
BBOO	Buckleboo	32.30	236	eP	P	09 50 44.8	+0.9
	comp=Z,926nm,0.8s						
WAKE	Wake Island	36.75	358	PFAKE		09 51 30.0	+7.7
WAKE				LR	LR		
	comp=Z,6μm,20.0s						
RKPI	Ransiki, Papua	36.77	292	P	P	09 51 24.8	+2.1
	comp=Z,228nm,1.9s						
FAKI	Fak Fak	37.86	289	P	P	09 51 31.6	-0.3
FORT	Forrest	38.35	243	eP	P	09 51 37.1	+1.3
	comp=Z,127nm,0.9s						
GUMO	Guam	38.47	322	eP	P	09 51 34.7	-2.2
GUMO				LR	LR		
	comp=Z,7μm,20.0s						
XMAS	Kiritimati	39.42	64	eP	P	09 51 46.4	+1.4
	comp=Z,135nm,1.0s						
XMAS				LR	LR		
	comp=Z,12μm,19.0s						
FITZ	Fitzroy Crossi	40.10	263	eP	P	09 51 46.8	-3.8
	comp=Z,316nm,1.4s						
FITZ				S	S	09 57 50.6	-3.0
FITZ	Fitzroy Crossi	40.10	263	P	P	09 51 48.2	-2.5
	comp=Z,62nm,0.8s,baz=104,slow=7.7,SNR=32						
FITZ				S	S	09 57 50.6	-3.0
	comp=Z,2.8nm,0.9s,baz=268,slow=6.1,SNR=3.7						
FITZ				LR	LR	10 08 17.9	
	comp=Z,15μm,18.7s,baz=99,slow=36						
TBI	Tubuai	40.27	105	eLR	LR	10 03 21.7	
	comp=Z,9μm,25.8s,baz=270						
PPT2	Papeete2	40.51	97	eLR	LR	10 03 30.5	
	comp=Z,17μm,25.0s,baz=251						
MBWA	Marble Bar	45.38	258	eP	P	09 52 33.3	-0.1
	comp=Z,212nm,1.4s						
MBWA				LR	LR		
	comp=Z,7μm,21.0s						
NWAO	Narrogin (SRO)	47.77	241	eP	P	09 52 52.5	+0.5
	comp=Z,71nm,1.0s						
NWAO	Narrogin (SRO)	47.77	241	P	P	09 52 51.5	-0.4
	comp=Z,42nm,0.7s,baz=88,slow=7.2,SNR=8.5						
NWAO				LR	LR	10 12 31.3	
	comp=Z,10μm,21.1s,baz=251,slow=36						
MIDW	Midway	47.82	18	PFAKE		09 53 00.0	+7.8
MIDW				LR	LR		
	comp=Z,4μm,22.0s						
DAV	Davao City (W)	48.45	297	PFAKE		09 53 10.0	+13
DAV				LR	LR		
	comp=Z,3μm,20.0s						
KAPI	Kappang	48.66	279	P	P	09 52 59.8	+0.7
	comp=Z,685nm,1.1s,SNR=12						
KAPI	Kappang	48.66	279	eP	P	09 52 58.7	-0.4
	comp=Z,240nm,1.4s						
KAPI				LR	LR		
	comp=Z,4μm,20.0s						
KIP	Kipapa	51.28	42	PFAKE		09 53 30.0	+11
KIP				LR	LR		
	comp=Z,6μm,19.0s						
DRV	Dumont d'Urvil	52.21	194	S	S	10 00 43.0	-2.9
DRV				SS	SS	10 03 59.0	-25
DRV				L	L	10 06 00.0	
DRV				R		10 08 00.0	
RCP	Roxas	53.18	300	eP	P	09 53 34.1	+1.1
RKT	Rikitea	53.59	106	eLR	LR	10 09 29.3	
	comp=Z,7μm,25.8s						
MYLDM	Lahad Datu	53.73	290	P	P	09 53 41.8	+4.7
TSM	Tawau	53.91	289	P	P	09 53 39.0	+0.6
KDM	Kudat	55.99	291	P	P	09 54 00.1	+6.7
KKM	Kota Kinabalu	56.16	290	eP	P	09 53 55.9	+1.2
	comp=Z,395nm,1.7s						
KKM				LR	LR		
	comp=Z,2μm,19.0s						
KKM	Kota Kinabalu	56.16	290	P	P	09 53 57.0	+2.3
BTM	Bintulu	57.83	286	P	P	09 54 11.7	+5.2
SBUM	Sibu	58.33	284	P	P	09 54 12.8	+2.7
KSM	Kuching	59.74	282	eP	P	09 54 20.0	+0.2
	comp=Z,198nm,1.3s						
KSM				LR	LR		
	comp=Z,2μm,19.0s						
KSM	Kuching	59.74	282	P	P	09 54 20.6	+0.8
VNDA	Vanda	59.94	182	eP	P	09 54 20.3	+0.1
	comp=Z,1.4nm,0.2s						
VNDA	Vanda	59.94	182	P	P	09 54 21.2	+1.1
	comp=Z,20nm,1.3s,baz=352,slow=7.8,SNR=28						
SBA	Scott Base	60.20	180	eP	P	09 54 23.2	+1.3
SBA				pmax	pmax		
	comp=Z,206nm,1.4s						
SBA				MLR	MLR		
	comp=Z,2μm,20.0s						
SBA	Scott Base	60.20	180	eP	P	09 54 23.2	+1.3
	comp=Z,206nm,1.4s						
SBA				LR	LR		
	comp=Z,2μm,20.0s						
MJAR	Matsushiro Arr	60.77	333	P	P	09 54 25.3	-1.0
MJAR	Matsushiro Arr	60.77	333	P	P	09 54 25.3	-1.0
	comp=Z,39nm,1.0s,baz=168,slow=7.4,SNR=61						
MJAR				LR	LR	10 18 03.3	
	comp=Z,1μm,18.9s,baz=155,slow=34						
MAJO	Matsushiro	60.77	333	eP	P	09 54 24.8	-1.5
MAJO				pmax	pmax		
	comp=Z,95nm,1.1s						
MAJO				MLR	MLR		
	comp=Z,2μm,20.0s						
MAJO	Matsushiro	60.77	333	eP	P	09 54 24.8	-1.5
	comp=Z,95nm,1.1s						
MAJO				LR	LR		
	comp=Z,2μm,20.0s						
MAT	Matsushiro	60.77	333	P	P	09 54 24.6	-1.7
MAT				S	S	10 02 35.6	-4.3
CASY	Casey	61.03	203	eP	P	09 54 27.7	0.0
	comp=Z,246nm,1.9s						
CASY				LR	LR		
	comp=Z,4μm,20.0s						
NACB	Ninganchiao	61.37	311	eP	P	09 54 30.8	+0.1
	comp=Z,65nm,1.1s						
TPUB	Ta-pu	61.53	310	eP	P	09 54 30.4	-1.4
	comp=Z,249nm,1.8s						
SSLB	Suanglung	61.59	311	eP	P	09 54 30.8	-1.4
	comp=Z,28nm,0.9s						
JNU	Nakatsue	61.64	325	eP	P	09 54 32.7	+0.4
	comp=Z,49nm,1.4s						
JNU	Nakatsue	61.64	325	P	P	09 54 31.9	-0.5
	comp=Z,24nm,1.2s,baz=149,slow=6.9,SNR=7.8						
YHNB	Yeheng	61.83	312	eP	P	09 54 33.8	0.0
	comp=Z,408nm,1.9s						
YHNB				LR	LR		
	comp=Z,4μm,21.0s						
TATO	Taipei	61.94	312	PFAKE		09 54 50.0	+16
TATO				LR	LR		
	comp=Z,4μm,22.0s						
ERM	Erimo	63.63	340	PFAKE		09 55 00.0	+15
ERM				LR	LR		
	comp=Z,4μm,19.0s						
QZH	Quanzhou	64.00	310⇑	iP	P	09 54 47.9	-0.3
QZH				S	S	10 03 22.3	+1.4
QZH				pmax	pmax		
	comp=Z,2μm,9.5s						
QZH				LR	LR		
	comp=N,2μm,12.7s						
QZH				LR	LR		
	comp=E,2μm,12.8s						
QZH				LR	LR		
	comp=Z,4μm,19.3s						
YUK	Yuzh-Kuril'sk	64.63	343c	iP	P	09 54 50.9	-0.9
YUK				i		09 57 12.7	
YUK				iS	S	10 03 31.3	+3.4
YUK				i		10 04 45.8	
YUK				pmax	pmax		
	comp=Z,2μm,3.3s						
KUR	Kuril'sk	65.20	345c	iP	P	09 54 46.4	-9.1
KUR				e		09 57 26.3	
KUR				iS	S	10 03 34.6	-0.2
KUR				pmax	pmax		
	comp=N,165nm,1.9s						
KUR				pmax	pmax		
	comp=E,28nm,1.0s						
KUR				pmax	pmax		
	comp=Z,406nm,1.9s						
KUR				MLR	MLR		
	comp=N,4μm,17.0s						
KUR				MLR	MLR		
	comp=E,2μm,17.0s						
KUR				MLR	MLR		
	comp=Z,3μm,17.0s						
ASAJ	Asahikawa	65.69	340	eP	P	09 54 59.1	+0.4
	comp=Z,56nm,1.0s						
ASAJ	Asahikawa	65.69	340	P	P	09 54 58.5	-0.2
	comp=Z,32nm,0.9s,baz=225,slow=8.8,SNR=11						
ASAJ				LR	LR	10 21 51.5	
	comp=Z,4μm,19.1s,baz=179,slow=34						
MYKOM	Kota Tinggi	65.89	280	P	P	09 55 03.0	+2.3
SSE	Sheshan	66.04	317	eP	P	09 55 01.2	0.0
SSE				pP	pP	09 55 17.3	+1.9
SSE				sP	sP	09 55 23.2	+2.1
SSE				S	S	10 03 43.9	-1.8
SSE				sS	sS	10 04 08.7	-0.7
SSE				ScS	SKSac	10 04 48.8	-4.4
SSE				pmax	pmax		
	comp=Z,38nm,0.7s						
SSE				pmax	pmax		
	comp=Z,600nm,6.1s						
SSE				LR	LR		
	comp=N,2μm,20.6s						
SSE				LR	LR		
	comp=E,1μm,20.6s						
SSE				LR	LR		
	comp=Z,2μm,17.9s						
KGM	Kluang	66.47	280	P	P	09 55 07.8	+3.4
KSRS	Korea Array	66.48	326	P	P	09 55 05.7	+1.8
	comp=Z,7.4nm,1.0s,baz=144,slow=6.3,SNR=9.0						
KSRS				LR	LR	10 22 34.3	
	comp=Z,2μm,20.9s,baz=129,slow=35						
KSAR	Wonju Array Be	66.49	326	P	P	09 55 05.7	+1.7
GZH	Guangzhou	66.92	305	P	P	09 55 07.8	+0.8
GZH				LR	LR		
	comp=N,1μm,21.3s						
GZH				LR	LR		
	comp=E,3μm,18.2s						
GZH				LR	LR		
	comp=Z,4μm,20.7s						
INCN	Inchon	67.19	325	eP	P	09 55 09.6	+1.0
	comp=Z,499nm,2.0s						
INCN				LR	LR		
	comp=Z,2μm,19.0s						
QIZ	Qiongzhong	67.66	300	P	P	09 55 12.4	+0.5
QIZ				pP	pP	09 55 25.8	-0.3
QIZ				sP	sP	09 55 31.5	-0.3
QIZ				S	S	10 04 06.6	+0.8
QIZ				sS	sS	10 04 24.7	-4.9
QIZ				pmax	pmax		
	comp=Z,29nm,1.6s						
QIZ				LR	LR		
	comp=Z,2μm,34.6s						
QIZ	Qiongzhong	67.66	300	PFAKE		09 55 20.0	+8.1
QIZ				LR	LR		
	comp=Z,1μm,20.0s						
KTGM	Kuala Trenggan	67.81	284	P	P	09 55 15.0	+2.1
MIR	Mirnyy	67.88	205⇓	iP	P	09 55 20.0	+7.6
MIR				i		09 55 30.0	
MIR				i		09 55 37.0	
MIR				pmax	pmax		
	comp=Z,455nm,2.0s						
NJ2	Nanjing	68.17	316	eP	P	09 55 15.4	+0.6
NJ2				pP	pP	09 55 28.6	-0.4
NJ2				sP	sP	09 55 34.3	-0.4
NJ2				S	S	10 04 11.0	-0.4
NJ2				sS	sS	10 04 35.0	-0.3
NJ2				pmax	pmax		
	comp=Z,20nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,900nm,9.2s						
NJ2				LR	LR		
	comp=N,2μm,20.3s						
NJ2				LR	LR		
	comp=E,2μm,23.7s						
NJ2				LR	LR		
	comp=Z,2μm,24.3s						
YSS	Yuzh-Sakhalins	68.19	342⇑	iP	P	09 55 15.8	+1.3
YSS				e		09 55 22.0	
YSS				e		09 55 42.0	
YSS				e		09 57 40.0	
YSS				ePPP	PPP	09 59 26.0	
YSS				eS	S	10 04 11.0	0.0
YSS				eSSS	SSS	10 11 32.0	
YSS				pmax	pmax		
	comp=Z,260nm,1.4s						
YSS				pmax	pmax		
	comp=Z,2μm,10.0s						
YSS				smax	smax		
	comp=N,1μm,12.0s						
YSS				MLR	MLR		
	comp=N,2μm,18.0s						
YSS				MLR	MLR		
	comp=Z,3μm,18.0s						
FRIM	Kepong	68.48	281	P	P	09 55 18.2	+1.1
COCO	West Island	68.49	264	PFAKE		09 55 30.0	+13
COCO				LR	LR		
	comp=Z,5μm,19.0s						
SKR	Severo-Kuril's	68.84	352	eP	P	09 55 14.0	-4.5
SKR				e		09 55 44.0	
SKR				ePPP	PPP	09 59 36.0	
SKR				eS	S	10 04 21.0	+2.4
SKR				ePS	PnS	10 04 40.0	-9.4
SKR				e		10 05 04.0	
SKR				eSS	SS	10 08 37.0	-8.0
SKR				eSSS	SSS	10 11 50.0	

SKR pmax pmax
comp=Z,480nm,1.5s
SKR pmax pmax
comp=N,1μm,12.0s
SKR pmax pmax
comp=Z,2μm,12.0s
SKR pmax pmax
comp=E,1μm,4.0s
SKR smax smax
comp=N,1μm,16.0s
SKR smax smax
comp=E,3μm,16.0s
SKR MLR MLR
comp=N,1μm,16.0s
SKR MLR MLR
comp=Z,2μm,16.0s
SKR MLR MLR
comp=E,2μm,18.0s
VLA Vladivostok 68.94 333 *e*P **P 09 55 19.7 +0.4**
VLA pmax pmax
comp=Z,56nm,1.7s
IPM Ipoh 69.47 282 *e*P **P 09 55 23.8 +0.5**
comp=Z,42nm,0.9s
IPM Ipoh 69.47 282 P **P 09 55 24.4 +1.1**
USRK Ussuriysk Arra 69.76 333 P **P 09 55 24.7 +0.4**
comp=Z,12nm,0.7s,baz=151,slow=4.4,SNR=22
KULM Kulim 70.10 283 *e*P **P 09 55 25.9 -1.2**
comp=Z,89nm,1.3s
KULM Kulim 70.10 283 P **P 09 55 28.4 +1.2**
WHN Wuhan 70.33 313 ⇑P **P 09 55 28.0 -0.2**
WHN S **S 10 04 39.0 +2.1**
WHN LR LR
comp=N,2μm,12.5s
WHN LR LR
comp=E,4μm,17.1s
WHN LR LR
comp=Z,5μm,21.3s
FX1 Attu Island--F 70.42 3 *e*P **P 09 55 27.4 -0.8**
PET Petropavlovsk 70.86 354 *c i*P **P 09 55 30.4 -0.5**
PET *e**PP **pP 09 55 44.8 -0.4**
PET *e*S **S 10 04 44.7 +2.6**
PET pmax pmax
comp=Z,1μm,8.9s
PET pmax pmax
comp=Z,65nm,1.6s
PET pmax pmax
comp=Z,1μm,14.5s
DL2 Dalian 70.98 323 ⇑ *i*P **P 09 55 31.9 -0.1**
DL2 S **S 10 04 45.3 +1.1**
DL2 pmax pmax
comp=Z,74nm,1.8s
DL2 pmax pmax
comp=Z,1μm,6.4s
DL2 LR LR
comp=N,1μm,17.6s
DL2 LR LR
comp=Z,1μm,17.7s
PEA0B Petropavlovsk- 71.04 354 *e*P **P 09 55 32.4 +0.4**
PETK Petropavlovsk- 71.04 354 P **P 09 55 31.4 -0.6**
PETK Petropavlovsk- 71.04 354 P **P 09 55 31.4 -0.6**
PETK Petropavlovsk- 71.04 354 P **P 09 55 31.4 -0.6**
comp=Z,10nm,0.7s,baz=134,slow=6.4,SNR=27
MDJ Mudanjiang 71.13 332 P **P 09 55 33.3 +0.5**
MDJ pP **pP 09 55 47.3 +0.2**
MDJ S **S 10 04 49.6 +3.9**
MDJ pmax pmax
comp=Z,70nm,2.3s
MDJ pmax pmax
comp=Z,1μm,14.3s
MDJ LR LR
comp=N,2μm,29.8s
MDJ LR LR
comp=E,2μm,28.7s
MDJ LR LR
comp=Z,1μm,20.3s
MDJ Mudanjiang 71.13 332 PFAKE 09 55 40.0 +7.2
MDJ LR LR
comp=Z,2μm,19.0s
TIA Tai'an 71.91 319 P **P 09 55 36.3 -1.3**
TIA S **S 10 04 52.3 -2.7**
TIA pmax pmax
comp=Z,1μm,13.2s
TIA LR LR
comp=N,3μm,18.6s
TIA LR LR
comp=E,2μm,14.7s
TIA LR LR
comp=Z,3μm,15.7s
SNY Shenyang 71.96 327 ⇑P **P 09 55 37.7 -0.1**
SNY S **S 10 04 59.6 +4.3**
SNY SS **SS 10 09 28.9 -4.4**
SNY pmax pmax
comp=Z,59nm,2.5s
SNY pmax pmax
comp=Z,1μm,12.0s
SNY LR LR
comp=N,3μm,17.4s
SNY LR LR
comp=Z,3μm,17.6s
HABR Khabarovsk 72.06 338 *e*P **P 09 55 37.2 -1.0**
HABR *e**PP **pP 09 55 51.4 -1.2**
HABR *e**SP **sP 09 55 57.4 -0.8**
HABR 09 58 17.1
HABR *e**SS **sS 10 05 19.5 -0.8**
HABR *e* 10 05 38.4
HABR pmax pmax
comp=N,285nm,3.5s
HABR pmax pmax
comp=Z,540nm,3.5s
HABR pmax pmax
comp=E,154nm,2.1s
HABR MLR MLR
comp=Z,900nm,17.0s
QSPA South Pole Qui 72.36 180 *e*P **P 09 55 40.1 0.0**
comp=Z,105nm,0.9s
QSPA LR LR
comp=Z,2μm,19.0s
CN2 Changchun 72.45 329 *e*P **P 09 55 40.8 +0.1**
CN2 *e*pP **pP 09 55 54.0 -1.0**
CN2 *e*sP **sP 09 55 59.2 -1.5**
CN2 *e*S **S 10 05 01.0 +0.1**
CN2 pmax pmax
comp=Z,70nm,1.4s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,2μm,18.0s
CN2 LR LR
comp=E,900nm,18.0s
CN2 LR LR
comp=Z,2μm,19.0s
ENH Enshi 73.67 310 *e*P **P 09 55 47.6 -0.7**
comp=Z,55nm,1.0s
ENH LR LR
comp=Z,2μm,21.0s
GYA Guiyang 73.85 305 P **P 09 55 49.5 0.0**
GYA pP **PcP 09 56 05.6 +0.8**
GYA sP **sP 09 56 13.2 +3.7**
GYA PP **PP 09 58 38.7 +3.7**
GYA sS **sS 10 05 41.2 -0.7**
GYA SKS **SKSac 10 05 49.8 -3.0**
GYA SS **SS 10 10 04.9 +1.9**
GYA pmax pmax
comp=Z,90nm,1.0s
GYA pmax pmax
comp=Z,600nm,6.7s
GYA LR LR
comp=N,1μm,19.7s
GYA LR LR
comp=E,1μm,19.4s
GYA LR LR
comp=Z,1μm,19.4s
KLR Kul'dur 73.92 336 *e*P **P 09 55 46.9 -2.3**
KLR *e*S **S 10 05 20.0 +2.7**
KLR pmax pmax
comp=N,100nm,2.0s
KLR pmax pmax
comp=E,90nm,2.0s
KLR pmax pmax
comp=Z,520nm,2.0s
KLR pmax pmax
comp=N,1μm,8.0s
KLR pmax pmax
comp=Z,2μm,8.0s
KLR smax smax
comp=N,2μm,9.0s
KLR smax smax
comp=E,2μm,9.0s
KLR MLR MLR
comp=N,700nm,16.0s
KLR MLR MLR
comp=E,2μm,16.0s
BJT Baijiatuan 74.89 321 *e*P **P 09 55 56.2 +1.1**
comp=E,42nm,0.8s
BJT LR LR
comp=Z,2μm,22.0s
BJI Beijing 74.90 321 P **P 09 55 55.5 +0.4**
BJI sP **sP 09 56 17.6 +2.4**
BJI S **S 10 05 32.7 +4.0**
BJI sS **SKSac 10 05 56.1 -3.7**
BJI SS SS 10 10 10.8 -7.5
BJI pmax pmax
comp=Z,71nm,2.2s
BJI pmax pmax
comp=Z,1μm,4.6s
BJI LR LR
comp=N,2μm,17.2s
BJI LR LR
comp=E,2μm,18.1s
BJI LR LR
comp=Z,2μm,21.4s
TIY Taiyuan 75.80 318 *e*P **P 09 56 01.3 +0.8**
TIY pP pP 09 56 19.9 +5.0
TIY S **S 10 05 44.3 +5.4**
TIY LR LR
comp=N,1μm,17.2s
TIY LR LR
comp=E,1μm,14.7s
TIY LR LR
comp=Z,2μm,25.8s
XAN Xi'an 76.09 313 P **P 09 56 02.0 -0.2**
XAN pP **pP 09 56 17.8 +1.2**
XAN S **S 10 05 45.4 +3.2**
XAN pmax pmax
comp=Z,270nm,8.9s
XAN LR LR
comp=N,890nm,16.5s
XAN LR LR
comp=E,270nm,16.5s
XAN LR LR
comp=Z,650nm,18.5s
KMI Kunming 76.33 302 P **P 09 56 05.3 +1.3**
KMI pP **PcP 09 56 16.8 +1.1**
KMI S **S 10 05 47.7 +2.1**
KMI SS **SS 10 10 42.0 +1.0**
KMI pmax pmax
comp=Z,75nm,1.8s
KMI pmax pmax
comp=Z,840nm,6.4s
KMI LR LR
comp=N,1μm,19.4s
KMI LR LR
comp=E,1μm,21.0s
KMI LR LR
comp=Z,1μm,19.4s
CM31 Chiang Mai Arr 76.66 294 *e*P **P 09 56 07.5 +1.9**
comp=Z,39nm,1.0s
CMAR Chiang Mai Arr 76.66 294 P **P 09 56 06.8 +1.2**
CMAR Chiang Mai Arr 76.66 294 P **P 09 56 06.8 +1.2**
comp=Z,27nm,1.1s,baz=126,slow=4.3,SNR=44
CHTO Chiang Mai 76.80 295 *e*P **P 09 56 06.9 +0.4**
CHTO pmax pmax
comp=Z,194nm,1.8s
CHTO MLR MLR
comp=Z,877nm,20.0s
CHTO Chiang Mai 76.80 295 P **P 09 56 08.2 +1.7**
SNR=29
CHTO Chiang Mai 76.80 295 *e*P **P 09 56 06.9 +0.4**
comp=Z,194nm,1.8s
CHTO LR LR
comp=Z,877nm,20.0s
CMBY CAMPBELL BAY 76.97 282 *e*PKP **P 09 56 05.5 -2.0**
CMBY AMB AMB 09 57 06.4
comp=Z,99nm,0.8s
HHC Hu-ho-hao-te 78.18 320 *e*P **P 09 56 14.2 +0.3**
HHC sP **sP 09 56 38.2 +4.2**
HHC S **S 10 06 04.9 +0.1**
HHC SKS **SKSac 10 06 19.8 -4.4**
HHC SS **SS 10 11 07.2 -1.0**
HHC pmax pmax
comp=Z,150nm,1.7s
HHC pmax pmax
comp=Z,2μm,10.0s
HHC LR LR
comp=N,3μm,16.5s
HHC LR LR
comp=E,3μm,18.1s
HHC LR LR
comp=Z,4μm,18.2s
CD2 Chengdu 78.24 308 P P 09 56 24.5 +10
CD2 pP pP 09 56 29.9 +1.1
CD2 sP sP 09 56 35.5 +1.0
CD2 PP **PP 09 59 14.3 +2.4**
CD2 S **S 10 06 04.2 -1.6**
CD2 Chengdu 78.24 308 SS SS 10 11 10.6 +1.3
CD2 pmax pmax
comp=Z,30nm,1.2s
CD2 pmax pmax
comp=Z,1μm,8.8s
CD2 LR LR
comp=N,2μm,19.0s
CD2 LR LR
comp=E,3μm,21.4s
CD2 LR LR
comp=Z,3μm,22.6s
BTO Baotou 79.00 319 *e*P **P 09 56 18.5 +0.2**
BTO pmax pmax
comp=Z,27nm,2.3s
HIA Hailar 79.11 330 *e*P **P 09 56 19.4 +0.8**
comp=Z,293nm,1.8s
HIA LR LR
comp=Z,2μm,20.0s
MAW Mawson 79.37 202 LR LR 10 26 52.3
comp=Z,4μm,19.1s,baz=99,slow=32
PBA Port Blair 79.66 286 *e*PKP P 09 56 21.8 -0.6
PBA AMB AMB 09 56 29.4
comp=Z,143nm,3.1s
DGPR DIGLIPUR 80.02 287 *e*PKP **P 09 56 23.6 -0.7**
DGPR AMB AMB 09 56 31.2
comp=Z,149nm,2.3s
LZH Lanzhou 80.71 312 *e*P **P 09 56 29.1 +1.3**
LZH S **S 10 06 35.0 +3.1**
LZH sS **sS 10 06 54.5 -1.9**
LZH pmax pmax
comp=Z,110nm,1.2s
LZH pmax pmax
comp=Z,520nm,4.0s
LZH LR LR
comp=N,1μm,14.1s
LZH LR LR
comp=E,820nm,11.2s
LZH LR LR
comp=Z,2μm,16.4s
KDAK Kodiak Island 82.03 20 PFAKE 09 56 50.0 +16
KDAK LR LR
comp=Z,2μm,20.0s
CLNS Chul'man 82.46 338 *e*P **P 09 56 37.0 +0.7**
CLNS *e* 09 56 43.2
CLNS *e* 09 59 42.9
CLNS *e*PPP PPP 10 01 40.9
CLNS *e*S S 10 06 55.5 +6.7
CLNS pmax pmax
comp=Z,72nm,1.2s
CLNS pmax pmax
comp=E,14nm,1.5s
CLNS pmax pmax
comp=N,40nm,1.4s
CLNS pmax pmax
comp=E,9.0nm,1.2s
CLNS pmax pmax
comp=N,17nm,1.5s
CLNS pmax pmax
comp=Z,6.0nm,1.2s
CLNS smax smax
comp=N,1μm,13.6s
CLNS smax smax
comp=E,2μm,13.6s
CLNS MLR MLR
comp=N,944nm,20.0s
CLNS MLR MLR
comp=Z,1μm,17.0s
CLNS MLR MLR
comp=E,652nm,18.0s
CIT Chita 83.89 330 *e*P **P 09 56 44.7 +0.8**
CIT *e* 09 56 54.3
CIT pmax pmax
comp=Z,686nm,2.1s
RSO Redoubt South 84.10 18 *e*P **P 09 56 44.5 -0.4**
comp=Z,100nm,1.0s
ULN Ulaanbaatar 84.83 324 P **P 09 56 49.2 +0.3**
SNR=148
ULN Ulaanbaatar 84.83 324 *e*P **P 09 56 49.2 +0.3**
comp=Z,275nm,1.4s
ULN LR LR
comp=Z,1μm,20.0s
YAK Yakutsk 85.00 343 *c i*P **P 09 56 49.2 +0.1**
YAK *e**PP pP 09 56 58.3 -5.5
YAK *e* 10 00 08.1
YAK *e*PPP PPP 10 01 56.7
YAK *e*S **S 10 07 10.8 -3.2**
YAK *e*SSS SSS 10 16 16.1
YAK pmax pmax
comp=Z,79nm,0.8s
YAK pmax pmax
comp=N,42nm,1.3s
YAK pmax pmax
comp=E,22nm,1.4s
YAK pmax pmax
comp=Z,238nm,4.8s
YAK smax smax
comp=E,1μm,12.1s
YAK smax smax
comp=N,1μm,12.9s
YAK MLR MLR
comp=N,2μm,18.0s
YAK MLR MLR
comp=E,2μm,19.0s
YAK MLR MLR
comp=Z,3μm,19.0s
GTA Gaotai 85.10 314 *e*P **P 09 56 51.6 +1.2**
GTA pP **pP 09 57 05.9 +0.8**
GTA sP **sP 09 57 11.8 +1.1**
GTA PP **PP 10 00 10.9 +2.5**
GTA SKS **SKSac 10 07 09.3 -1.8**
GTA S **S 10 07 15.4 -1.0**
GTA pmax pmax
comp=Z,69nm,2.0s
GTA pmax pmax
comp=Z,1μm,6.2s
GTA LR LR
comp=N,1μm,19.0s
GTA LR LR
comp=E,2μm,19.9s
GTA LR LR
comp=Z,2μm,20.4s
SONM Songino Array 85.19 324 P **P 09 56 51.5 +0.9**
SONM Songino Array 85.19 324 P **P 09 56 51.5 +0.9**
comp=Z,32nm,0.9s,baz=139,slow=3.7,SNR=145
SHL Shillong 85.45 298 *e*PKP **P 09 56 52.6 +0.1**
SHL *e*S **S 10 07 16.5 -4.0**
BILL Bilibino 85.48 359 ⇑ *i*P **P 09 56 51.4 -0.1**
BILL *i* S **S 10 07 21.1 +2.5**
BILL *e*SS **SS 10 12 52.1 -3.4**
BILL pmax pmax
comp=Z,645nm,1.3s
BILL Bilibino 85.48 359 *e*P **P 09 56 50.4 -1.1**
comp=Z,95nm,1.2s
BILL LR LR
comp=Z,940nm,20.0s
KCPM Cahto Peak 85.60 46 *e*P **P 09 56 53.6 +0.8**
comp=Z,45nm,1.3s
HOPS Hopland 85.64 47 *e*P **P 09 56 53.8 +0.9**
comp=Z,73nm,1.4s
SAO San Andreas Ge 85.81 49 *e*P **P 09 56 54.4 +0.6**
SAO pmax pmax
comp=Z,31nm,1.2s
SAO San Andreas Ge 85.81 49 *e*P **P 09 56 54.4 +0.6**
comp=Z,31nm,1.2s
KHMM Horse Mountain 86.04 45 *e*P **P 09 56 56.1 +1.0**
comp=Z,25nm,1.0s
SYO Syowa Base 86.05 196 ⇓ *e*P **P 09 56 53.4 -1.1**
SYO Syowa Base 86.05 196 ⇓ *i*pP P 09 57 00.0 +5.5
PMR Palmer 86.09 19 *e*P **P 09 56 55.1 +0.5**
PMR pmax pmax
comp=Z,8.0nm,0.9s
PMR Palmer 86.09 19 *e*P **P 09 56 55.1 +0.5**
comp=Z,8.2nm,0.9s
SBC Santa Barbara 86.11 52 ⇓P **P 09 56 55.6 +0.2**
baz=86
KRMB Red Mountain 86.22 44 *e*P **P 09 56 57.0 +1.1**
comp=Z,10nm,1.5s
PKM Peak Mountain 86.22 52 ⇑P **P 09 56 56.0 -0.2**
baz=86
SMMC Simmler 86.26 51 ⇑P **P 09 56 56.2 0.0**
baz=86
SCI San Clemente I 86.41 54 ⇑P **P 09 56 56.4 -0.5**
baz=86
BLG Laguna Peak 86.47 53 ⇓P **P 09 56 56.2 -1.0**
baz=87
SML Sawmill 86.50 19 *e*P **P 09 56 56.6 -0.1**
SML pmax pmax
comp=Z,1.0nm,0.5s
SML Sawmill 86.50 19 *e*P **P 09 56 56.6 -0.1**
comp=Z,1.4nm,0.5s
KEBM Edson Butte 86.56 43 *e*P **P 09 56 59.5 +2.0**
CIS Catalina Islan 86.69 54 ⇑P **P 09 56 57.8 -0.5**
baz=87
WDC Whiskeytown Da 86.71 46 *e*P **P 09 56 58.3 +0.1**
WDC pmax pmax
comp=Z,50nm,1.4s
WDC Whiskeytown Da 86.71 46 *e*P **P 09 56 58.3 +0.1**
comp=Z,50nm,1.4s
FMP Fort Macarthur 86.90 53 ⇑P **P 09 56 58.9 -0.4**
baz=87
OSI Osito Adit 86.93 52 ⇑P **P 09 56 59.3 -0.2**
baz=87
ARVC Arvin 87.06 52 ⇑P **P 09 56 59.8 -0.2**
baz=87
DECC Green Verdugo 87.08 53 ⇓P **P 09 56 59.3 -0.9**
baz=87
YBH Yreka Blue Hor 87.11 45 *e*P **P 09 57 00.9 +0.7**
comp=Z,32nm,1.3s
YBH Yreka Blue Hor 87.11 45 P **P 09 57 00.6 +0.3**
comp=Z,7.0nm,1.2s,baz=177,slow=3.7,SNR=19
CMB Columbia Colle 87.12 49 *e*P **P 09 56 59.6 -0.7**
CMB pmax pmax
comp=Z,65nm,1.4s
CMB Columbia Colle 87.12 49 *e*P **P 09 56 59.6 -0.7**
comp=Z,65nm,1.4s
VES Vestal, Richgr 87.16 51 ⇓P **P 09 56 59.8 -0.7**
baz=87
PASC Pasadena Art C 87.16 53 *e*P **P 09 57 00.9 +0.4**
comp=Z,18nm,1.0s
TRF Thorofare Moun 87.17 17 *e*P **P 09 56 58.5 -1.6**
comp=Z,13nm,0.9s
RCTC Rector, Farmer 87.23 51 ⇑P **P 09 56 60.0 -0.8**
baz=87
MWC Mount Wilson 87.28 53 *e*P **P 09 57 01.0 -0.4**
MWC pmax pmax
comp=Z,20nm,0.9s
MWC Mount Wilson 87.28 53 *e*P **P 09 57 01.0 -0.4**
comp=Z,20nm,0.9s
109C Camp Elliot, M 87.49 54 ⇓P **P 09 57 01.4 -0.7**
baz=88
ISA Isabella 87.54 51 *e*P **P 09 57 03.1 +0.7**
ISA pmax pmax
comp=Z,33nm,1.1s
ISA Isabella 87.54 51 *e*P **P 09 57 03.1 +0.7**
comp=Z,33nm,1.1s
ISA Isabella 87.54 51 ⇑P **P 09 57 02.1 -0.3**
baz=88,SNR=19
LSA Lhasa 87.59 302 P **P 09 57 03.7 +0.4**
LSA Lhasa 87.59 302 *e*P **P 09 57 04.5 +1.2**
LSA pmax pmax
comp=Z,14nm,0.8s
LSA MLR MLR
comp=Z,1μm,20.0s
LSA Lhasa 87.59 302 *e*P **P 09 57 04.5 +1.2**
comp=Z,14nm,0.8s
LSA LR LR
comp=Z,1μm,20.0s
BFSC Mount Baldy Ra 87.59 53 ⇓P **P 09 57 02.2 -0.6**
baz=88,SNR=9.1
EDW2 Edwards Air Fo 87.59 52 ⇓P **P 09 57 02.4 -0.2**
baz=88,SNR=12
MURC Murrieta 87.69 54 ⇓P **P 09 57 02.8 -0.4**
baz=88
MCK McKinley 87.78 18 *e*P **P 09 57 03.1 +0.3**
MCK pmax pmax

	comp=Z,25nm,1.4s						
MCK	McKinley	87.78	18	eP	P	09 57 03.1	+0.3
	comp=Z,25nm,1.4s						
BEKR	Beckworth	87.91	47	eP	P	09 57 04.2	-0.1
	comp=Z,17nm,1.2s						
MONP	Monument Peak	88.02	55	⇓P	P	09 57 04.6	-0.4
	baz=88						
LRMC	Laurel Mountai	88.05	52	⇑P	P	09 57 05.0	+0.1
	baz=88						
MLAC	Mammoth Lakes	88.07	50	⇑P	P	09 57 05.2	+0.1
	baz=88						
WCN	Washoe City	88.10	48	eP	P	09 57 05.9	+0.8
WCN				pmax	pmax		
	comp=Z,32nm,1.4s						
WCN	Washoe City	88.10	48	eP	P	09 57 05.9	+0.8
	comp=Z,32nm,1.4s						
CWC	Cottonwood Cre	88.14	51	⇑P	P	09 57 04.6	-0.8
	baz=88,SNR=7.4						
BBRC	Big Bear Solar	88.16	53	⇑P	P	09 57 04.9	-0.7
	baz=88						
DVTC	Desert V Tower	88.19	55	⇓P	P	09 57 05.3	-0.2
	baz=88						
ZAK	Zakamensk	88.27	325	⇑iP	P	09 57 05.8	+0.2
ZAK				e		10 07 32.2	
ZAK				pmax	pmax		
	comp=Z,81nm,1.7s						
PFO	Pinyon Flat Ob	88.27	54	P	P	09 57 05.8	-0.2
	comp=Z,40nm,0.9s,SNR=5.3						
PFO	Pinyon Flat Ob	88.27	54	eP	P	09 57 06.2	+0.1
	comp=Z,6.8nm,0.9s						
PFO				LR	LR		
	comp=Z,5µm,20.0s						
PFO	Pinyon Flat Ob	88.27	54	P	P	09 57 05.9	-0.1
	comp=Z,3.1nm,0.8s,baz=150,slow=0.3,SNR=8.3						
PFO	Pinyon Flat Ob	88.27	54	⇓P	P	09 57 05.9	-0.1
	baz=88						
TIN	Tinemaha	88.28	50	⇓P	P	09 57 06.1	+0.1
	baz=88						
RRX	Edison Barstow	88.34	53	⇓P	P	09 57 06.2	0.0
	baz=88						
MPMC	Manual Prospec	88.43	51	⇑P	P	09 57 06.5	-0.3
	baz=89,SNR=12						
SWSC	Sam W. Stewart	88.53	55	⇑P	P	09 57 07.0	-0.1
	baz=89						
GSC	Goldstone	88.65	52	eP	P	09 57 08.0	+0.3
GSC				pmax	pmax		
	comp=Z,73nm,1.9s						
GSC	Goldstone	88.65	52	eP	P	09 57 08.0	+0.3
	comp=Z,72nm,1.9s						
GSC	Goldstone	88.65	52	⇑P	P	09 57 07.5	-0.2
	baz=89,SNR=8.8						
IRK	Irkutsk	88.69	327	⇓iP	P	09 57 07.7	+0.3
IRK				eS	S	10 07 50.9	+0.7
IRK				pmax	pmax		
	comp=Z,180nm,2.4s						
TLY	Talaya	88.73	326c	iP	P	09 57 06.3	-1.3
TLY				e		10 02 42.5	
TLY				eS	S	10 07 39.0	-12
TLY				ePS	PS	10 09 06.3	+5.2
TLY				pmax	pmax		
	comp=Z,148µm,1.8s						
TLY				MLR	MLR		
	comp=Z,832nm,18.1s						
TLY	Talaya	88.73	326	P	P	09 57 08.0	+0.4
	comp=Z,274nm,2.3s,SNR=22						
BELC	Belle Mtn. Jos	88.77	54	⇑P	P	09 57 08.3	0.0
	baz=89,SNR=19						
NVAR	Mina Array Bea	88.78	49	P	P	09 57 08.6	+0.2
NVAR				PKKPbc	PKKPbc	10 14 51.0	+1.5
NVAR	Mina Array Bea	88.78	49	P	P	09 57 08.6	+0.2
	comp=Z,3.5nm,0.8s,baz=228,slow=7.6,SNR=33						
NVAR				PKKPbc	PKKPbc	10 14 51.0	+1.5
	comp=Z,0.9nm,0.8s,baz=83,slow=3.9,SNR=6.2						
NVAR				LR	LR	10 30 33.9	
	comp=Z,3µm,19.5s,baz=112,slow=31						
MENT	Mentasta	88.81	20	eP	P	09 57 08.4	+0.7
HEC	Hector,Ludlow	88.83	53	⇑P	P	09 57 08.2	-0.3
	baz=89						
GRAC	Grapevine Rang	88.89	51	⇑P	P	09 57 09.0	+0.3
	baz=89						
COLA	College	88.95	17	eP	P	09 57 06.2	-2.0
COLA				pmax	pmax		
	comp=Z,29nm,1.4s						
COLA				MLR	MLR		
	comp=Z,2µm,21.0s						
COLA	College	88.95	17	eP	P	09 57 06.2	-2.0
	comp=Z,29nm,1.4s						
COLA				LR	LR		
	comp=Z,2µm,21.0s						
NLWA	Neilton Lookou	88.96	39	eP	P	09 57 09.5	+0.7
	comp=Z,67nm,1.5s						
NLWA				LR	LR		
	comp=Z,3µm,19.0s						
FURC	Furnace Creek,	89.06	51	⇓P	P	09 57 09.3	-0.1
	baz=89,SNR=6.3						
BC3	Big Chuckawall	89.06	54	⇑P	P	09 57 09.7	0.0
	baz=89,SNR=7.7						
WRAK	Wrangell Islan	89.12	29	PFAKE		09 57 20.0	+11
WRAK				LR	LR		
	comp=Z,3µm,20.0s						
ILAR	Eielson Array	89.15	18	P	P	09 57 08.2	-1.0
ILAR				PKiKP	PKiKP	10 02 10.4	+2.7
ILAR	Eielson Array	89.15	18	P	P	09 57 08.2	-1.0
	comp=Z,3.0nm,0.7s,baz=233,slow=5.7,SNR=19						
ILAR				PKiKP	PKiKP	10 02 10.4	+2.7
	comp=Z,0.4nm,0.6s,baz=262,slow=3.2,SNR=5.1						
ILAR				LR	LR	10 34 51.0	
	comp=Z,2µm,19.0s,baz=235,slow=34						
DOT	Dot Lake	89.20	19	eP	P	09 57 10.2	+0.7
	comp=Z,9.4nm,1.1s						
LVP	Lakeview Peak	89.25	41	P	P	09 57 10.9	+0.6
SHOC	Shoshone	89.28	52	⇑P	P	09 57 10.6	+0.1
	baz=89						
GMRC	Granite Mounta	89.32	53	⇑P	P	09 57 10.6	-0.4
	baz=89,SNR=14						
GLA	Glamis	89.33	55	eP	P	09 57 12.1	+1.2
GLA				pmax	pmax		
	comp=Z,14nm,0.8s						
GLA	Glamis	89.33	55	eP	P	09 57 12.1	+1.2
	comp=Z,14nm,0.8s						
GLA	Glamis	89.33	55	⇓P	P	09 57 11.2	+0.3
	baz=89						
TUQ	Turquoise Moun	89.37	52	⇓P	P	09 57 10.9	-0.2
	baz=90						
TPH	Tonopah	89.42	50	PFAKE		09 57 20.0	+8.6
TPH				LR	LR		
	comp=Z,2µm,20.0s						
IRM	Iron Mountain	89.48	54	⇑P	P	09 57 11.7	+0.1
	baz=90,SNR=14						
VIPM	Ingram Point	89.71	43	P	P	09 57 12.6	+0.1
VIPM	Ingram Point	89.71	43	P	P	09 57 12.6	+0.1
Y12C	Blythe	89.82	54	⇑P	P	09 57 13.2	+0.1
	baz=90						
LDFC	Landfair	89.85	53	eP	P	09 57 14.2	+0.8
	comp=Z,48nm,1.1s						
LON	Longmire	89.92	40	eP	P	09 57 13.4	0.0
LON				pmax	pmax		
	comp=Z,25nm,1.2s						
LON	Longmire	89.92	40	eP	P	09 57 13.4	0.0
	comp=Z,25nm,1.2s						
BOK	Bokaro	89.94	295	ePKP	P	09 57 11.3	-2.6
BOK				AMB	AMB	09 57 14.7	
	comp=Z,30nm,3.7s						
113A	Mohawk Valley,	90.06	56	⇓P	P	09 57 14.1	-0.1
	baz=90						
NEE2	Needles Airpor	90.11	54	⇓P	P	09 57 14.5	0.0
	baz=90						
COLD	Coldfoot	90.12	15	eP	P	09 57 13.2	-0.5
	comp=Z,15nm,1.2s						
WVOR	Wild Horse Val	90.16	45	eP	P	09 57 14.8	+0.2
WVOR				pmax	pmax		
	comp=Z,35nm,1.2s						
WVOR				MLR	MLR		
	comp=Z,3µm,19.0s						
WVOR	Wild Horse Val	90.16	45	eP	P	09 57 14.8	+0.2
	comp=Z,35nm,1.2s						
WVOR				LR	LR		
	comp=Z,3µm,19.0s						
MOY	Mondy	90.16	325	eP	P	09 57 15.3	+0.9
MOY				pmax	pmax		
	comp=Z,299nm,2.7s						
MAIT	Maitri	90.22	188	eP	P	09 57 05.4	-8.9
MAIT				e		09 57 13.2	
RMW	Rattlesnake Mo	90.24	40	P	P	09 57 15.5	+0.6
RMW	Rattlesnake Mo	90.24	40	P	P	09 57 15.5	+0.6
VIS	Vishakhapatnam	90.26	288	ePKP	P	09 57 14.6	-0.9
PDMCI	Parker Dam,Lak	90.31	54	⇑P	P	09 57 15.4	0.0

	baz=90,SNR=18						
BMN	Battle Mountai	90.34	47	eP	P	09 57 16.4	+0.8
BMN				pmax	pmax		
	comp=Z,36nm,1.1s						
BMN				MLR	MLR		
	comp=Z,4µm,19.0s						
BMN	Battle Mountai	90.34	47	eP	P	09 57 16.4	+0.8
	comp=Z,36nm,1.1s						
BMN				LR	LR		
	comp=Z,4µm,19.0s						
NAC	Naches	90.53	41	P	P	09 57 16.6	+0.5
SNAA	Sanae	90.65	183	eP	P	09 57 16.5	+0.1
SNAA	Sanae	90.65	183	epP	pP	09 57 33.6	+2.4
SNAA	Sanae	90.65	183	eP	P	09 57 17.1	+0.6
	comp=Z,112nm,1.2s						
TWW	Teanaway	90.67	40	P	P	09 57 17.9	+1.0
R11A	Troy Canyon, C	90.71	50	⇑P	P	09 57 16.9	-0.5
	baz=91						
W13A	Hualapai Mount	90.80	53	⇑P	P	09 57 17.8	-0.2
	baz=91,SNR=16						
EGAK	Eagle	90.90	19	eP	P	09 57 16.0	-1.4
	comp=Z,23nm,1.3s						
EGAK				LR	LR		
	comp=Z,2µm,19.0s						
Z14A	Wintersburg	90.91	55	⇑P	P	09 57 18.4	+0.2
	baz=91						
Y14A	Wickenburg	91.06	55	⇓P	P	09 57 19.0	0.0
	baz=91,SNR=11						
HAWA	Hanford	91.19	41	eP	P	09 57 19.3	+0.1
	comp=Z,57nm,1.3s						
HAWA				LR	LR		
	comp=Z,2µm,21.0s						
ETW	Entiat	91.20	40	P	P	09 57 19.6	+0.2
DLBC	Dease Lake	91.28	28	eP	P	09 57 19.1	-0.4
ELK	Elko	91.85	48	eP	P	09 57 23.3	+0.6
	comp=Z,8.3nm,1.2s						
VNA1	Neumayer--Stat	91.86	181	eP	P	09 57 23.4	+1.5
BMO	Blue Mountains	92.00	43	eP	P	09 57 22.7	-0.5
BMO				pmax	pmax		
	comp=Z,14nm,1.2s						
BMO				MLR	MLR		
	comp=Z,3µm,19.0s						
BMO	Blue Mountains	92.00	43	eP	P	09 57 22.7	-0.5
	comp=Z,14nm,1.2s						
BMO				LR	LR		
	comp=Z,3µm,19.0s						
CCUT	Cedar City	92.06	51	eP	P	09 57 24.7	+0.9
	comp=Z,15nm,1.3s						
ARUT	Antelope Range	92.09	51	eP	P	09 57 24.1	+0.3
ARUT				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARUT	Antelope Range	92.09	51	eP	P	09 57 24.1	+0.3
	comp=Z,2.6nm,0.8s						
TUC	Tucson	92.26	57	eP	P	09 57 25.2	+0.6
TUC				pmax	pmax		
	comp=Z,29nm,1.4s						
TUC				MLR	MLR		
	comp=Z,2µm,21.0s						
TUC	Tucson	92.26	57	eP	P	09 57 25.1	+0.6
	comp=Z,29nm,1.4s						
TUC				LR	LR		
	comp=Z,2µm,21.0s						
MFID	Camas Ranch	92.44	45	eP	P	09 57 25.5	+0.3
	comp=Z,7.9nm,1.1s						
MFID	Camas Ranch	92.44	45	⇑P	P	09 57 24.9	-0.3
	baz=93						
X16A	Lo Mia Camp, P	92.45	55	⇓P	P	09 57 25.6	+0.1
	baz=93,SNR=22						
U15A	North Rim	92.47	53	⇑P	P	09 57 25.8	0.0
	baz=93						
WUAZ	Wupatki	92.87	54	eP	P	09 57 28.4	+1.0
	comp=Z,12nm,0.9s						
WUAZ				LR	LR		
	comp=Z,4µm,20.0s						
WUAZ	Wupatki	92.87	54	⇑P	P	09 57 27.6	+0.1
	baz=93,SNR=5.4						
DGAR	Diego Garcia	92.88	261	PFAKE		09 57 40.0	+12
DGAR				LR	LR		
	comp=Z,5µm,20.0s						
TIXI	Tiksi	92.96	348c	iP	P	09 57 26.0	-0.8
TIXI				pmax	pmax		
	comp=Z,36nm,1.6s						
TIXI				MLR	MLR		
	comp=Z,2µm,20.0s						
I12A	Atlanta	93.05	45	⇓P	P	09 57 28.0	-0.1
	baz=93						
MSU	Marysvale	93.27	51	eP	P	09 57 30.5	+1.2
MSU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
MSU	Marysvale	93.27	51	eP	P	09 57 30.5	+1.2
	comp=Z,7.2nm,1.2s						
TRD	Trivandrum	93.38	278	ePKP	P	09 57 29.8	-0.2
DUG	Dugway	93.38	49	eP	P	09 57 29.8	+0.1
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DUG				MLR	MLR		
	comp=Z,4µm,20.0s						
DUG	Dugway	93.38	49	eP	P	09 57 29.8	+0.1
	comp=Z,4.3nm,1.0s						
DUG				LR	LR		
	comp=Z,4µm,20.0s						
DUG	Dugway	93.38	49	⇓P	P	09 57 29.3	-0.4
	baz=94						
G12A	Big Creek, Yel	93.41	44	⇑P	P	09 57 29.1	-0.7
	baz=94						
NEW	Newport	93.44	40	eP	P	09 57 29.2	-0.4
	comp=Z,8.9nm,1.3s						
NEW				LR	LR		
	comp=Z,2µm,21.0s						
NEW	Newport	93.44	40	⇑P	P	09 57 29.2	-0.4
	baz=94						
HLID	Hailey	93.45	45	eP	P	09 57 30.3	+0.3
	comp=Z,14nm,1.5s						
HLID				LR	LR		
	comp=Z,5µm,20.0s						
HLID	Hailey	93.45	45	⇓P	P	09 57 29.9	-0.1
	baz=94						
H12A	Diamond D Ranc	93.51	44	⇑P	P	09 57 29.5	-0.7
	baz=94						
X18A	Snowflake	93.65	55	⇑P	P	09 57 31.1	0.0
	baz=94,SNR=8.8						
F12A	Elk City	93.69	43	⇓P	P	09 57 30.1	-0.8
	baz=94						
E12A	Beaver Dam Sad	93.72	42	⇑P	P	09 57 30.0	-1.1
	baz=94						
320A	Kipp Ranch, An	93.77	58	⇓P	P	09 57 31.9	+0.2
	baz=94,SNR=16						
220A	Playas Peak, P	93.94	58	⇑P	P	09 57 32.5	0.0
	baz=94						
HVS	Khovu-Aksy	94.03	323d	iP	P	09 57 33.2	+0.9
HVS				pmax	pmax		
	comp=Z,826nm,1.7s						
HVS				MLR	MLR		
	comp=Z,4µm,18.0s						
120A	U Bar Ranch, L	94.06	57	⇓P	P	09 57 33.0	0.0
	baz=94						
D12A	Red Ives Fores	94.10	42	⇑P	P	09 57 32.2	-0.5
	baz=94						
Q16A	Castle Valley	94.15	51	⇓P	P	09 57 33.3	0.0
	baz=94						
I14A	Mackay	94.23	45	⇓P	P	09 57 33.7	+0.1
	baz=94						
C12B	Naegeli Ranch,	94.26	41	⇓P	P	09 57 32.7	-0.7
	baz=94						
Z20A	Nine Sixteen R	94.27	57	⇑P	P	09 57 34.3	+0.4
	baz=94						
B12A	Libby	94.47	40	⇑P	P	09 57 33.8	-0.6
	baz=95						
JLU	Jordanelle	94.50	49	eP	P	09 57 34.7	-0.2
	comp=Z,3.1nm,0.9s						
HYB	Hyderabad	94.51	287	i P	P	09 57 34.0	-1.2
221A	Mesquite Ranch	94.58	58	⇑P	P	09 57 34.9	-0.5
	baz=95						
A12A	Yaak River Ran	94.60	40	⇑P	P	09 57 34.5	-0.5
	baz=95						
S18A	Hurst Farm, Bl	94.62	52	⇑P	P	09 57 35.1	-0.5
	baz=95						
D13A	Huson	94.68	42	⇑P	P	09 57 33.8	-1.6
	baz=95						
SRU	San Rafael	94.69	51	⇓P	P	09 57 34.6	-1.1
	baz=95						
Y20A	Horse Springs,	94.69	56	⇓P	P	09 57 35.2	-0.7
	baz=95						
121A	Cookes Peak, D	94.74	58	⇓P	P	09 57 36.0	-0.2
	baz=95						
BSMT	Bassoo Peak	94.75	41	eP	P	09 57 35.9	+0.1
	comp=Z,7.9nm,1.6s						

HWUT	Hardware Ranch	94.75	48	eP	P	09 57 35.3	-0.7
	comp=Z,4.3nm,1.0s						
HWUT				LR	LR		
	comp=Z,2µm,22.0s						
X20A	Quemado	94.79	55	⇓P	P	09 57 35.9	-0.4
	baz=95						
C13A	Hot Springs	94.82	41	⇑P	P	09 57 35.0	-1.0
	baz=95						
MSO	Missoula	94.92	42	eP	P	09 57 37.9	+1.3
	comp=Z,7.5nm,1.8s						
MSO				LR	LR		
	comp=Z,1µm,21.0s						
MSO	Missoula	94.92	42	⇑P	P	09 57 35.6	-1.0
	baz=95						
F14A	Wisdom	94.94	44	⇑P	P	09 57 36.0	-0.7
	baz=95						
W20A	Ramah	94.97	55	⇓P	P	09 57 36.6	-0.6
	baz=95						
Z21A	St. Cloud Mine	95.06	57	⇑P	P	09 57 37.3	-0.3
	baz=95						
E14A	Clinton	95.07	43	⇓P	P	09 57 36.1	-1.2
	baz=95						
B13A	Whitefish	95.13	41	⇑P	P	09 57 36.7	-0.8
	baz=95						
NGP	Nagpur	95.14	290	ePKP	P	09 57 35.4	-2.6
NGP				AMB	AMB	09 57 43.2	
	comp=Z,33nm,2.1s						
222A	Williams Famil	95.16	58	⇑P	P	09 57 37.7	-0.3
	baz=95						
WMQ	Urumqi	95.18	314	P	P	09 57 38.8	+1.1
WMQ				pP	pP	09 57 53.5	+1.0
WMQ				sP	sP	09 57 58.1	0.0
WMQ				PP	PP	10 01 29.5	+1.1
WMQ				SKS	SKSac	10 08 10.0	+0.6
WMQ				S	S	10 08 47.0	-2.2
WMQ				SS	SS	10 15 17.0	+0.2
WMQ				pmax	pmax		
	comp=Z,42nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,710nm,3.7s						
WMQ				LR	LR		
	comp=N,2µm,17.4s						
WMQ				LR	LR		
	comp=E,2µm,18.6s						
WMQ				LR	LR		
	comp=Z,2µm,21.1s						
V20A	Brimhall	95.20	54	⇓P	P	09 57 37.1	-1.1
	baz=95						
Y21A	Point of Rocks	95.27	56	⇑P	P	09 57 38.5	-0.1
	baz=95						
D14A	Greenough	95.29	42	⇑P	P	09 57 36.9	-1.4
	baz=95						
DLMT	Dillon	95.30	44	eP	P	09 57 39.3	+1.0
	comp=Z,11nm,1.5s						
X21A	Alamocita Cree	95.32	56	⇓P	P	09 57 38.5	-0.4
	baz=95						
M17A	Scullys Gap (B	95.34	48	⇑P	P	09 57 37.5	-1.3
	baz=96						
A13A	Flathead Natio	95.36	40	⇓P	P	09 57 38.1	-0.4
	baz=96						
A13A				⇑SKSac	SKSac	10 08 12.9	+2.7
	baz=96						
C14A	Swan Lake	95.37	42	⇑P	P	09 57 37.5	-1.1
	baz=96						
CHMT	Chamberlain Mo	95.39	43	eP	P	09 57 38.7	-0.1
	comp=Z,3.1nm,1.4s						
122A	Conniff Cattle	95.42	58	⇑P	P	09 57 38.8	-0.4
	baz=96						
RRI2	Red Ridge	95.49	46	eP	P	09 57 40.3	+0.8
	comp=Z,12nm,1.4s						
F15A	Butte	95.53	44	⇓P	P	09 57 38.7	-0.8
	baz=96						
I16A	Newdale	95.55	46	⇓P	P	09 57 39.2	-0.4
	baz=96						
PV10	Paradox Valley	95.56	52	eP	P	09 57 40.0	+0.2
	comp=Z,80nm,0.8s						
Z22A	Elephant Butte	95.61	57	⇓P	P	09 57 39.5	-0.5
	baz=96						
E15A	Deer Lodge	95.62	43	⇑P	P	09 57 38.6	-1.2
	baz=96						
W21A	San Fidel	95.63	55	⇓P	P	09 57 39.6	-0.6
	baz=96						
PV04	Paradox Valley	95.66	52	eP	P	09 57 40.8	+0.6
223A	Chaparral, Ant	95.67	58	⇑P	P	09 57 39.5	-0.9
	baz=96						
TPAW	Teton Pass	95.79	46	eP	P	09 57 41.1	+0.3
	comp=Z,5.0nm,1.1s						
LAZ	Ladron	95.81	56	eP	P	09 57 42.2	+1.1
	comp=Z,1.6nm,1.1s						
Y22A	Socorro	95.81	56	⇓P	P	09 57 40.2	-0.8
	baz=96						
PV01	Paradox Valley	95.83	52	eP	P	09 57 40.9	-0.2
	comp=Z,294nm,0.8s						
V21A	Milan	95.84	54	⇑P	P	09 57 40.8	-0.3
	baz=96						
B14A	Marquette Ranc	95.87	41	⇑P	P	09 57 39.8	-1.1
	baz=96						
S20A	Disappointment	95.90	52	⇑P	P	09 57 40.9	-0.6
	baz=96						
D15A	Lincoln	95.91	43	⇓P	P	09 57 40.3	-0.8
	baz=96						
SNOW	Snow King Moun	95.92	46	eP	P	09 57 41.5	+0.1
	comp=Z,2.7nm,0.8s						
L18A	Fontenelle, Gr	95.94	48	⇑P	P	09 57 40.4	-1.0
	baz=96						
X22A	Bernardo	95.95	56	⇑P	P	09 57 41.2	-0.4
	baz=96						
H16A	Russell Place,	95.98	45	⇓P	P	09 57 41.2	-0.3
	baz=96						
P19A	Cripple Cowboy	95.99	50	⇓P	P	09 57 41.1	-0.6
	baz=96						
A14A	Double T Ranch	95.99	41	⇓P	P	09 57 40.3	-1.1
	baz=96						
123A	Bell Site, Whi	95.99	58	⇓P	P	09 57 41.1	-0.7
	baz=96						
R20A	Redvale	95.99	52	⇓P	P	09 57 41.3	-0.5
	baz=96						
U21A	Nageezi	96.01	54	⇓P	P	09 57 41.5	-0.5
	baz=96						
MOOW	Moose Ponds	96.02	46	eP	P	09 57 41.7	-0.1
BOZ	Bozeman (W)	96.03	44	PFAKE		09 57 50.0	+8.3
BOZ				LR	LR		
	comp=Z,2µm,19.0s						
F16A	Kennard Place,	96.08	44	⇑P	P	09 57 41.2	-0.7
	baz=96						
C15A	Salmond Ranch,	96.10	42	⇓P	P	09 57 41.0	-0.9
	baz=96						
I17A	Pilgrim Ck.	96.19	46	⇓P	P	09 57 42.2	-0.4
	baz=96						
Z23A	Rita Site, Whi	96.20	57	⇓P	P	09 57 42.3	-0.4
	baz=96						
W22A	Albuquerque	96.23	55	⇑P	P	09 57 42.9	0.0
	baz=96						
T21A	Navajo Lake	96.28	53	⇑P	P	09 57 42.5	-0.6
	baz=96						
S21A	Coal Bank Pass	96.28	53	⇑P	P	09 57 42.9	-0.3
	baz=96						
324A	Moseley Ranch,	96.28	59	⇑P	P	09 57 42.4	-0.7
	baz=96						
Q20A	Ridgley Place,	96.29	51	⇓P	P	09 57 42.6	-0.5
	baz=96						
E16A	East Helena	96.29	43	⇑P	P	09 57 42.1	-0.7
	baz=96						
B15A	Bradely Ranch,	96.31	41	⇑P	P	09 57 40.9	-1.9
	baz=96						
H17A	Grant Village	96.34	46	⇑P	P	09 57 43.6	+0.3
	baz=96						
P20A	De Beque	96.38	51	⇓P	P	09 57 42.5	-0.9
	baz=96						
A15A	Johnson Ranch,	96.42	41	⇑P	P	09 57 42.1	-1.2
	baz=96						
224A	Cornudas Mount	96.43	59	⇓P	P	09 57 43.7	-0.1
	baz=96						
M19A	Rock Springs	96.43	49	⇑P	P	09 57 42.6	-1.1
	baz=96						
MNTX	Cornudas Mount	96.44	59	eP	P	09 57 44.9	+1.2
	comp=Z,1.9nm,0.8s						
MNTX				LR	LR		
	comp=Z,1µm,19.0s						
V22A	San Miguel Ran	96.44	54	⇓P	P	09 57 42.9	-1.0
	baz=96						
L19A	Farson	96.47	48	⇓P	P	09 57 42.6	-1.3
	baz=97						
425A	Indio Mountain	96.50	60	⇓P	P	09 57 43.9	-0.3
	baz=97						
ANMO	Albuquerque	96.51	56	eP	P	09 57 43.6	-0.6
	comp=Z,1.7nm,0.8s						
ANMO				LR	LR		

comp=Z,2µm,21.0s
LKWY Lake 96.51 45 PFAKE 09 58 00.0 +16
LKWY LR LR
comp=Z,10µm,19.0s
G17A Pierce Place, 96.52 45 ⇓P **P 09 57 43.6 -0.3**
baz=97
D16A Dana Ranch, Ca 96.53 43 ⇓P **P 09 57 43.1 -0.8**
baz=97
BW06 Boulder Array 96.53 47 PFAKE 09 58 00.0 +16
BW06 LR LR
comp=Z,2µm,20.0s
PDAR Pinedale Array 96.53 47 P **P 09 57 44.5 +0.4**
PDAR PP **PP 10 01 42.1 +3.1**
PDAR PKKPbc **PKKPbc 10 14 28.7 -0.8**
PDAR Pinedale Array 96.53 47 P **P 09 57 44.5 +0.4**
comp=Z,1.1nm,1.0s,baz=180,slow=2.8,SNR=4.3
PDAR PP **PP 10 01 42.1 +3.1**
comp=Z,0.7nm,0.9s,baz=238,slow=12,SNR=2.9
PDAR PKKPbc **PKKPbc 10 14 28.7 -0.8**
comp=Z,1.0nm,0.8s,baz=95,slow=4.9,SNR=6.0
Y23A Lovelace Mesa, 96.54 57 ⇑P **P 09 57 42.8 -1.5**
baz=97
U22A Llaves 96.62 54 ⇑P **P 09 57 43.2 -1.5**
baz=97
X23A Hourglass Bar 96.62 56 ⇓P **P 09 57 43.9 -0.8**
baz=97
I18A Diamond G Ranc 96.64 46 ⇓P **P 09 57 43.6 -1.1**
baz=97
C16A Fuhringer Ranc 96.65 42 ⇓P **P 09 57 43.4 -1.0**
baz=97
124A Stringfield Ra 96.67 58 ⇑P **P 09 57 44.0 -1.0**
baz=97
R21A Cimarron 96.67 52 ⇓P **P 09 57 44.4 -0.5**
baz=97
325A Bean Ranch, Si 96.68 59 ⇑P **P 09 57 43.7 -1.3**
baz=97
O20A White River Ci 96.68 50 ⇑P **P 09 57 44.0 -0.8**
baz=97
F17A Fitzpatrick Pl 96.76 44 ⇑P **P 09 57 45.0 0.0**
baz=97
T22A Edith 96.77 53 ⇑P **P 09 57 45.0 -0.4**
baz=97
Q21A Lamborn Mesa, 96.79 52 ⇓P **P 09 57 44.9 -0.5**
baz=97
E17A Martinsdale 96.80 43 ⇑P **P 09 57 44.2 -1.0**
baz=97
W23A Werner Place, 96.81 55 ⇓P **P 09 57 44.6 -1.0**
baz=97
626A Big Bend Ranch 96.86 61 ⇓P **P 09 57 45.6 -0.1**
baz=97
N20A Spence Gulch, 96.87 49 ⇓P **P 09 57 44.7 -1.0**
baz=97
B16A M & M Farms, S 96.88 41 ⇓P **P 09 57 44.1 -1.2**
baz=97
Z24A Sheeppen Canyo 96.92 57 ⇑P **P 09 57 45.7 -0.4**
baz=97
V23A Ortiz Mt. (NFS 96.95 55 ⇑P **P 09 57 46.0 -0.3**
baz=97
225A Deer Hill, Car 97.01 59 ⇓P **P 09 57 45.7 -0.8**
baz=97
Y24A Capitan 97.03 57 ⇑P **P 09 57 46.0 -0.5**
baz=97
S22A 4UR Ranch, Cre 97.03 53 ⇑P **P 09 57 45.9 -0.7**
baz=97
J19A Crowheart 97.04 47 ⇑P **P 09 57 45.7 -0.6**
baz=97
526A Mary Lane Ranc 97.04 61 ⇓P **P 09 57 46.2 -0.4**
baz=97
H18A Shoshone NF, C 97.05 45 ⇑P **P 09 57 45.7 -0.7**
baz=97
K19A Absolon Red Bu 97.05 47 ⇓P **P 09 57 45.3 -1.2**
baz=97
P21A Newcastle 97.08 51 ⇑P **P 09 57 46.0 -0.7**
baz=97
U23A El Rito 97.11 54 ⇑P **P 09 57 46.6 -0.4**
baz=97
M20A Sweetwater, Wa 97.12 49 ⇑P **P 09 57 46.5 -0.4**
baz=97
D17A Six Diamond Ra 97.13 43 ⇓P **P 09 57 46.0 -0.6**
baz=97
L20A Wamsutter 97.17 48 ⇓P **P 09 57 46.0 -1.0**
baz=97
TXAR Lajitas Array 97.19 62 P **P 09 57 47.0 -0.2**
TXAR PP **PP 10 01 44.6 +0.3**
TXAR PKKPbc **PKKPbc 10 14 24.7 -2.3**
TXAR Lajitas Array 97.19 62 P **P 09 57 47.0 -0.2**
comp=Z,1.3nm,0.8s,baz=268,slow=3.3,SNR=8.2
TXAR PP **PP 10 01 44.6 +0.3**
comp=Z,1.6nm,1.2s,baz=262,slow=2.7,SNR=3.1
TXAR PKKPbc **PKKPbc 10 14 24.7 -2.3**
comp=Z,0.6nm,1.0s,baz=88,slow=4.1,SNR=4.3
TXAR LR LR 10 36 45.9
comp=Z,3µm,18.1s,baz=255,slow=32
X24A Lazy VL Ranch, 97.21 56 ⇓P **P 09 57 47.5 +0.1**
baz=97
C17A Wharram Farm, 97.23 42 ⇑P **P 09 57 46.1 -0.9**
baz=97
426A McDonald Obser 97.26 60 ⇑P **P 09 57 46.9 -0.8**
baz=97
Q22A Crested Butte, 97.29 52 ⇓P **P 09 57 47.4 -0.4**
baz=97
125A Gardner Draw, 97.30 58 ⇓P **P 09 57 47.4 -0.4**
baz=97
G18A Lazy EL Ranch, 97.31 45 ⇑P **P 09 57 47.0 -0.5**
baz=97
I19A Meeteetse 97.31 46 ⇑P **P 09 57 47.1 -0.5**
baz=97
K20A Yellowstone Ra 97.36 48 ⇓P **P 09 57 46.9 -0.9**
baz=98
F18A Big Timber 97.38 44 ⇑P **P 09 57 47.5 -0.3**
baz=98
N21A Black Mountain 97.39 50 ⇑P **P 09 57 47.2 -0.9**
baz=98
W24A Lazy 6 Ranch, 97.41 56 ⇑P **P 09 57 47.5 -0.8**
baz=98
B17A L&G Farms, Che 97.41 42 ⇑P **P 09 57 47.3 -0.5**
baz=98
Z25A Roswell 97.42 58 ⇓P **P 09 57 47.7 -0.6**
baz=98
T23A Casias Ranch, 97.44 54 ⇓P **P 09 57 47.9 -0.6**
baz=98
RLMT Red Lodge 97.45 45 PFAKE 09 58 00.0 +12
RLMT LR LR
comp=Z,7µm,20.0s
E18A Harlowton 97.45 44 ⇓P **P 09 57 47.8 -0.3**
baz=98
627A Terlingua Ranc 97.46 62 ⇑P **P 09 57 48.2 -0.3**
baz=98
527A Woodward Ranch 97.46 61 ⇓P **P 09 57 48.1 -0.5**
baz=98
326A Caldwell Ranch 97.48 60 ⇓P **P 09 57 47.2 -1.4**
baz=98
H19A Powell 97.50 46 ⇑P **P 09 57 47.9 -0.5**
baz=98
226B Tecolote Peak, 97.54 59 ⇑P **P 09 57 48.0 -0.7**
baz=98
P22A Eagle 97.61 51 ⇓P **P 09 57 48.5 -0.6**
baz=98
Y25A Mesa, Roswell 97.62 57 ⇓P **P 09 57 48.4 -0.7**
baz=98
S23A Nye Farm, Mont 97.65 53 ⇓P **P 09 57 48.8 -0.5**
baz=98
V24A Rampart Ranch, 97.66 55 ⇓P **P 09 57 48.9 -0.6**
baz=98
A17A Triple J Farms 97.68 41 ⇑P **P 09 57 48.6 -0.4**
baz=98
D18A Linhart Farms, 97.72 43 ⇓P **P 09 57 48.9 -0.4**
baz=98
J20A Shoshoni 97.74 47 ⇓P **P 09 57 49.2 -0.3**
baz=98
M21A Separation Pea 97.75 49 ⇑P **P 09 57 49.0 -0.7**
baz=98
126A Clayton Basin, 97.81 58 ⇑P **P 09 57 49.4 -0.6**
baz=98
X25A Clemmons Ranch 97.81 56 ⇓P **P 09 57 49.1 -0.9**
baz=98
427A Hayter Ranch, 97.83 60 ⇑P **P 09 57 49.7 -0.4**
baz=98
L21A Rawlins 97.84 49 ⇓P **P 09 57 49.3 -0.8**
baz=98
U24A Moreno Valley 97.85 54 ⇑P **P 09 57 49.8 -0.5**
baz=98
I20A Worland 97.88 46 ⇑P **P 09 57 49.6 -0.5**
baz=98
F19A Roth Farm, Mol 97.88 44 ⇑P **P 09 57 49.1 -0.9**
baz=98
628A Black Gap, Mar 97.89 62 ⇑P **P 09 57 49.8 -0.5**
baz=98
327A Balmorhea Ranc 97.89 60 ⇑P **P 09 57 49.9 -0.5**
baz=98
R23A Moffat 97.92 53 ⇓P **P 09 57 50.1 -0.5**
baz=98
O22A Kremmling 97.93 50 ⇓P **P 09 57 50.2 -0.4**
baz=98
EGMT Eagleton 98.00 42 PFAKE 09 58 00.0 +10
EGMT LR LR
comp=Z,2µm,20.0s
EGMT Eagleton 98.00 42 ⇑P **P 09 57 49.9 -0.6**
baz=98
Z26A Caprock 98.01 58 ⇓P **P 09 57 49.9 -1.0**
baz=98
B18A Beardsley Farm 98.09 42 ⇓P **P 09 57 50.4 -0.4**
baz=98
K21A Alcova 98.12 48 ⇓Pdiff **P 09 57 50.4 -0.9**
baz=98
528A Cox Ranch, San 98.15 61 ⇑Pdiff **P 09 57 50.9 -0.7**
baz=98
W25A X Bar L Ranch, 98.16 56 ⇑Pdiff **P 09 57 50.7 -0.9**
baz=98
E19A Rath Farm, Rou 98.17 44 ⇓Pdiff **P 09 57 51.0 -0.3**
baz=98
N22A Wattenberg Ran 98.18 50 ⇓Pdiff **P 09 57 51.5 -0.1**
baz=98
J21A Lysite 98.18 47 ⇓Pdiff **P 09 57 51.1 -0.5**
baz=98
G20A Bridger 98.19 45 ⇑Pdiff **P 09 57 50.7 -0.7**
baz=98
V25A Rancho No Teng 98.20 55 ⇑Pdiff **P 09 57 51.0 -0.8**
baz=98
A18A Metzger Ranch, 98.21 41 ⇑Pdiff **P 09 57 50.5 -0.8**
baz=98
227A Bennet, Jal 98.23 59 ⇓Pdiff **P 09 57 50.9 -1.0**
baz=98
S24A Houghin Ranch, 98.23 53 ⇓Pdiff **P 09 57 50.9 -1.1**
baz=98
D19A Cripps Ranch, 98.31 43 ⇓Pdiff **P 09 57 51.5 -0.4**
baz=98
Y26A Elida 98.31 57 ⇑Pdiff **P 09 57 51.5 -0.8**
baz=98
127A Arkansas Junct 98.36 58 ⇑Pdiff **P 09 57 51.4 -1.0**
baz=98
428A Kincaid Ranch, 98.39 61 ⇓Pdiff **P 09 57 52.7 +0.1**
baz=98
O23A Lake Granby, G 98.41 51 ⇓Pdiff **P 09 57 52.5 -0.2**
baz=98
I21A Big Trails, Te 98.42 47 ⇑Pdiff **P 09 57 52.2 -0.3**
baz=98
328A Wristen Ranch, 98.46 60 ⇑Pdiff **P 09 57 52.3 -0.6**
baz=99
R24A Sanders Place, 98.47 53 ⇓Pdiff **P 09 57 52.6 -0.4**
baz=99
X26A CR and CF Fran 98.49 57 ⇓Pdiff **P 09 57 52.7 -0.4**
baz=99
U25A Circle Dot Ran 98.52 55 ⇑Pdiff **P 09 57 52.9 -0.3**
baz=99
ISCO Idaho Springs 98.52 51 PFAKE 09 58 00.0 +6.7
ISCO LR LR
comp=Z,5µm,21.0s
ISCO Idaho Springs 98.52 51 ⇓Pdiff **P 09 57 52.9 -0.4**
baz=99
L22A Ellis Ranch, M 98.53 49 ⇑Pdiff **P 09 57 52.6 -0.6**
baz=99
N23A Red Feather La 98.58 50 ⇓Pdiff **P 09 57 53.2 -0.3**
baz=99
E20A Meyer Farm, Mu 98.61 44 ⇑Pdiff Pdif 09 57 53.4 +0.2
baz=99
529A Stev Forest Ra 98.62 61 ⇑Pdiff **P 09 57 53.2 -0.4**
baz=99
K22A Casper 98.64 48 ⇑Pdiff **P 09 57 52.9 -0.6**
baz=99
B19A Brinkman Farms 98.64 42 ⇑Pdiff **P 09 57 53.1 -0.2**
baz=99
Q24A Divide 98.64 52 ⇓Pdiff **P 09 57 53.8 0.0**
baz=99
Z27A Tatum 98.64 58 ⇑Pdiff **P 09 57 53.5 -0.3**
baz=99
W26A Owens Ranch, T 98.67 56 ⇑Pdiff **P 09 57 53.5 -0.4**
baz=99
T25A Trinidad 98.71 54 ⇓Pdiff **P 09 57 53.4 -0.7**
baz=99
D20A Manuel Ranch, 98.78 43 ⇓Pdiff **P 09 57 53.5 -0.4**
baz=99
H21A Big Horn, Sher 98.82 46 ⇑Pdiff **P 09 57 54.2 0.0**
baz=99
228A UT Block 9, Go 98.83 59 ⇑Pdiff **P 09 57 53.9 -0.7**
baz=99
S25A Robets Cordova 98.83 53 ⇑Pdiff **P 09 57 54.1 -0.5**
baz=99
Y27A Causey 98.83 57 ⇓Pdiff **P 09 57 53.9 -0.7**
baz=99
V26A Tequesquite Ra 98.84 55 ⇑Pdiff **P 09 57 53.7 -0.9**
baz=99
G21A Lodge Grass 98.87 45 ⇑Pdiff **P 09 57 53.7 -0.7**
baz=99
J22A Midwest 98.88 47 ⇑Pdiff **P 09 57 53.9 -0.7**
baz=99
M23A Laramie 98.89 49 ⇓Pdiff **P 09 57 54.1 -0.7**
baz=99
A19A Kilnworth Far 98.91 42 ⇑Pdiff **P 09 57 54.4 -0.1**
baz=99
P24A Kohler Place, 98.97 51 ⇓Pdiff **P 09 57 54.8 -0.4**
baz=99
I22A 9 Mile Ranch, 99.01 47 ⇓Pdiff **Pdif 09 57 54.8 -0.3**
baz=99
O24A Longmont 99.01 51 ⇑Pdiff **Pdif 09 57 55.1 -0.2**
baz=99
429A Davenport Ranc 99.02 61 ⇑Pdiff **Pdif 09 57 54.6 -0.8**
baz=99
U26A Atchley Ranch, 99.03 55 ⇓Pdiff **Pdif 09 57 54.8 -0.7**
baz=99
C20A Veseth Ranch, 99.03 43 ⇓Pdiff **Pdif 09 57 55.2 +0.1**
baz=99
128A Castleberry Fa 99.05 59 ⇓Pdiff **Pdif 09 57 55.0 -0.5**
baz=99
R25A Fountain Ranch 99.08 53 ⇑Pdiff **Pdif 09 57 54.8 -0.8**
baz=99
L23A Garrett 99.08 49 ⇓Pdiff **Pdif 09 57 54.9 -0.7**
baz=99
X27A F and S Farms, 99.09 57 ⇓Pdiff **Pdif 09 57 54.6 -1.2**
baz=99
F21A Absaloka Mine, 99.09 45 ⇓Pdiff **Pdif 09 57 54.2 -1.2**
baz=99
MSTX Muleshoe 99.17 57 ⇓Pdiff **Pdif 09 57 55.5 -0.5**
baz=99
329A Wagon Wheel Ra 99.17 60 ⇑Pdiff **Pdif 09 57 55.4 -0.7**
baz=99
W27A Bowe Ranch, En 99.22 56 ⇓Pdiff **Pdif 09 57 55.9 -0.4**
baz=99
B20A Solberg Farm, 99.23 42 ⇑Pdiff **Pdif 09 57 55.5 -0.4**
baz=99
H22A Clearmont 99.29 46 ⇓Pdiff **Pdif 09 57 56.3 0.0**
baz=99
Z28A Tucker Farm, M 99.31 58 ⇓Pdiff **Pdif 09 57 56.1 -0.5**
baz=99
Q25A Bedland, Calha 99.31 52 ⇓Pdiff **Pdif 09 57 55.9 -0.8**
baz=99
E21A Keefer Ranch, 99.32 44 ⇑Pdiff **Pdif 09 57 56.3 0.0**
baz=99
N24A Carr 99.33 50 ⇓Pdiff **Pdif 09 57 56.4 -0.3**
baz=99
T26A Comanche Natio 99.35 54 ⇓Pdiff **Pdif 09 57 56.4 -0.6**
baz=100
530A J-C Ranch, Com 99.36 61 ⇓Pdiff **Pdif 09 57 56.3 -0.7**
baz=100
A20A Cobblestone Ra 99.41 42 ⇑Pdiff **Pdif 09 57 56.1 -0.6**
baz=100
229A Bryant Ranch, 99.44 59 ⇑Pdiff **Pdif 09 57 56.3 -0.9**
baz=100
G22A Birney 99.49 46 ⇑Pdiff **Pdif 09 57 56.9 -0.4**
baz=100
D21A La Casta Ranch 99.52 44 ⇑Pdiff **Pdif 09 57 57.1 -0.2**
baz=100
M24A Cheyenne 99.54 50 ⇓Pdiff **Pdif 09 57 57.3 -0.3**
baz=100
129A Stewart Farms, 99.56 59 ⇑Pdiff **Pdif 09 57 57.4 -0.4**
baz=100
S26A Kim 99.56 54 ⇓Pdiff **Pdif 09 57 57.0 -0.7**
baz=100
Y28A McKinney Farm, 99.58 58 ⇓Pdiff **Pdif 09 57 57.1 -0.8**
baz=100
V27A Dan Oppiter Fa 99.58 56 ⇓Pdiff **Pdif 09 57 57.4 -0.5**
baz=100
430A Baggett Ranch, 99.61 61 ⇑Pdiff **Pdif 09 57 57.6 -0.4**
baz=100
C21A Desert Coulee 99.66 43 ⇑Pdiff **Pdif 09 57 57.2 -0.6**
baz=100
F22A Rosebud 99.67 45 ⇓Pdiff **Pdif 09 57 57.9 -0.1**
baz=100
MK31 Makanchi Array 99.70 316 *e*P **Pdif 09 57 58.6 +0.6**
MK31 Makanchi Array 99.70 316 *e*Pdif **Pdif 09 57 58.6 +0.6**
MKAR Makanchi Array 99.70 316 P **Pdif 09 57 58.0 0.0**
MKAR 10 02 07.6
MKAR Makanchi Array 99.70 316 P **Pdif 09 57 58.0 0.0**
MKAR PP **PP 10 02 07.6 +4.6**
MKAR PKKPbc **PKKPbc 10 14 17.9 -2.6**
MKAR Makanchi Array 99.70 316 P **Pdif 09 57 58.0 0.0**
comp=Z,2.3nm,0.6s,baz=92,slow=6.9,SNR=8.3
MKAR PP **PP 10 02 07.6 +4.6**
comp=Z,2.8nm,1.0s,baz=108,slow=7.8,SNR=5.0
MKAR PKKPbc **PKKPbc 10 14 17.9 -2.6**
comp=Z,0.9nm,0.7s,baz=268,slow=4.6,SNR=5.9
O25A Wiggins 99.71 51 ⇑Pdiff **Pdif 09 57 58.1 -0.3**
baz=100
R26A Arlington 99.75 53 ⇑Pdiff **Pdif 09 57 57.6 -0.9**
baz=100
U27A Thompson Grove 99.76 55 ⇑Pdiff **Pdif 09 57 57.6 -1.0**
baz=100
X28A Dimmitt 99.77 57 ⇑Pdiff **Pdif 09 57 58.2 -0.5**
baz=100
631A Perdido Creek 99.81 62 ⇓Pdiff **Pdif 09 57 58.6 -0.3**
baz=100
330A Mertzon 99.82 60 ⇑Pdiff **Pdif 09 57 58.6 -0.3**
baz=100
Z29A Hungry Hill Ra 99.85 58 ⇑Pdiff **Pdif 09 57 58.7 -0.4**
baz=100
B21A Ellsworth Farm 99.87 42 ⇑Pdiff **Pdif 09 57 58.6 -0.1**
baz=100
K24A Anderson Ranch 99.87 48 ⇓Pdiff **Pdif 09 57 58.5 -0.5**
baz=100
YKA Yellowknife Ar 99.90 27 P **Pdif 09 57 57.2 -1.2**
YKA PP PP 10 02 12.4 +8.4
YKA PKiKP **PKiKP 10 02 26.2 -0.2**
YKA PKKPbc **PKKPbc 10 14 18.1 -2.4**
YKA Yellowknife Ar 99.90 27 P **Pdif 09 57 57.2 -1.2**
comp=Z,3.6nm,1.2s,baz=252,slow=4.6,SNR=19
YKA PP PP 10 02 12.4 +8.4
comp=Z,2.2nm,1.1s,baz=251,slow=7.1,SNR=5.8
YKA PKiKP **PKiKP 10 02 26.2 -0.2**
comp=Z,0.6nm,0.8s,baz=262,slow=1.6,SNR=3.8
YKA PKKPbc **PKKPbc 10 14 18.1 -2.4**
comp=Z,0.3nm,0.7s,baz=59,slow=2.9,SNR=3.3
N25A Grover 99.91 50 ⇑Pdiff **Pdif 09 57 59.1 -0.2**
baz=100
YKW3 Yellowknife Ar 99.92 27 *e*Pdif **Pdif 09 57 57.9 -0.6**
comp=Z,0.4nm,1.4s
230A Sterling City 99.99 60 ⇓Pdiff **Pdif 09 57 59.2 -0.5**
baz=100
T27A Campo 100.00 54 ⇑Pdiff **Pdif 09 57 59.5 -0.3**
baz=100
S27A Las Animas 100.02 54 ⇑Pdiff **Pdif 09 57 59.3 -0.5**
baz=100
531A Rocksprings 100.03 62 ⇑Pdiff **Pdif 09 57 59.3 -0.6**
baz=100
E22A Miles City 100.05 44 ⇓Pdiff **Pdif 09 57 59.3 -0.3**
baz=100
V28A Channing 100.06 56 ⇑Pdiff **Pdif 09 57 59.6 -0.4**
baz=100
A21A Bergtoll Ranch 100.07 42 ⇓Pdiff **Pdif 09 57 59.3 -0.4**
baz=100
D22A Cohagen 100.08 44 ⇓Pdiff **Pdif 09 57 59.6 -0.2**
baz=100
ZAA0 Zalesovo Array 100.08 323 *e*Pdif **Pdif 09 58 00.5 +1.0**
ZALV Zalesovo Beam 100.08 323 P **Pdif 09 57 59.4 -0.1**
ZALV Zalesovo Beam 100.08 323 P **Pdif 09 57 59.4 -0.1**
ZALV Zalesovo Beam 100.08 323 P **Pdif 09 57 59.4 -0.1**
comp=Z,5.9nm,0.9s,baz=112,slow=4.0,SNR=18
431A Sonora 100.11 61 ⇑Pdiff **Pdif 09 57 59.7 -0.6**
baz=100
G23A Biddle 100.11 46 ⇑Pdiff **Pdif 09 57 59.4 -0.5**
baz=100
P26A Davis Ranch, A 100.15 52 ⇓Pdiff **Pdif 09 57 59.6 -0.7**
baz=100
X29A Tulia 100.15 57 ⇑Pdiff **Pdif 09 58 00.1 -0.3**
baz=100
732A Laxson Ranch, 100.15 63 ⇓Pdiff **Pdif 09 58 00.3 -0.1**
baz=100
EFI East Falkland 100.19 153 PFAKE 09 58 10.0 +10
EFI LR LR
comp=Z,2µm,21.0s
U28A Mallet 100.22 55 ⇑Pdiff **Pdif 09 58 00.2 -0.5**
baz=100
F23A Volborg 100.23 45 ⇓Pdiff **Pdif 09 58 00.5 0.0**
baz=100
R27A Eads 100.25 53 ⇓Pdiff **Pdif 09 58 00.3 -0.4**
baz=100
AMTX Amarillo 100.27 57 PFAKE 09 58 10.0 +9.1
AMTX LR LR
comp=Z,2µm,19.0s
130A Snyder 100.29 59 ⇓Pdiff **Pdif 09 57 59.9 -1.1**
baz=100
I24A Kuemmerle Ranc 100.30 47 ⇓Pdiff **Pdif 09 58 01.0 +0.2**
baz=100
Z30A Sanderson Ranc 100.32 58 ⇓Pdiff **Pdif 09 58 00.3 -0.9**
baz=100
O26A Horse Wrangler 100.34 51 ⇑Pdiff **Pdif 09 58 00.9 -0.3**
baz=100
W29A Amraillo 100.36 56 ⇓Pdiff **Pdif 09 58 00.7 -0.6**
baz=100
C22A Vida 100.42 43 ⇓Pdiff **Pdif 09 58 01.2 0.0**
baz=100
T28A Walsh 100.48 54 ⇓Pdiff **Pdif 09 58 01.6 -0.2**
baz=101
E23A Ismay 100.49 45 ⇑Pdiff **Pdif 09 58 01.4 -0.2**
baz=101
B22A Reddig Ranch S 100.49 43 ⇑Pdiff **Pdif 09 58 01.5 0.0**
baz=101
K25A Mack Ranch, Ha 100.52 49 ⇓Pdiff **Pdif 09 58 01.6 -0.3**
baz=101
KSCO Kaye Shedlock' 100.55 52 ⇑Pdiff **Pdif 09 58 02.0 -0.1**
baz=101
N26A Koester Ranch, 100.55 51 ⇑Pdiff **Pdif 09 58 01.7 -0.4**
baz=101
532A Rocksprings 100.56 62 ⇓Pdiff **Pdif 09 58 01.6 -0.7**
baz=101
H24A Dirks Ranch, A 100.57 46 ⇓Pdiff **Pdif 09 58 01.4 -0.7**
baz=101
PLCA Paso Flores 100.57 139 *e*Pdif **Pdif 09 58 02.9 +0.6**
V29A Stinnett 100.64 56 ⇑Pdiff **Pdif 09 58 02.1 -0.5**
baz=101
231A Bronte 100.66 60 ⇑Pdiff **Pdif 09 58 02.0 -0.6**
baz=101
A22A Carney Farms, 100.72 42 ⇓Pdiff **Pdif 09 58 02.5 0.0**
baz=101
P27A Ficken Ranch, 100.72 52 ⇑Pdiff **Pdif 09 58 02.7 -0.2**
baz=101
D23A Lindsay 100.72 44 ⇑Pdiff **Pdif 09 58 02.4 -0.2**
baz=101
JCT Junction City 100.73 61 PFAKE 09 58 10.0 +7.0
JCT LR LR
comp=Z,2µm,19.0s
JCT Junction City 100.73 61 ⇓Pdiff **Pdif 09 58 02.1 -0.9**
baz=101
J25A Sunshine Ranch 100.76 48 ⇓Pdiff **Pdif 09 58 02.6 -0.3**
baz=101
S28A Manter 100.77 54 ⇓Pdiff **Pdif 09 58 03.0 -0.1**
baz=101
131A Roby 100.78 59 ⇑Pdiff **Pdif 09 58 02.9 -0.3**
baz=101
G24A Alzada 100.80 46 ⇑Pdiff **Pdif 09 58 02.6 -0.4**
baz=101
432A Menard 100.83 61 ⇑Pdiff **Pdif 09 58 02.9 -0.6**
baz=101
C23A Lambert 100.89 43 ⇑Pdiff **Pdif 09 58 03.3 0.0**
baz=101
F24A Ekalaka 100.91 45 ⇓Pdiff **Pdif 09 58 03.2 -0.3**
baz=101
O27A Beecher Island 100.95 51 ⇓Pdiff **Pdif 09 58 03.5 -0.3**
baz=101
L26A Underwood Farm 100.95 49 ⇓Pdiff **Pdif 09 58 03.8 0.0**
baz=101
332A Millersview 101.00 61 ⇓Pdiff **Pdif 09 58 03.8 -0.4**
baz=101
R28A Tribune 101.01 53 ⇓Pdiff **Pdif 09 58 03.7 -0.4**
baz=101
K26A Motz Farm, Whi 101.04 49 ⇓Pdiff **Pdif 09 58 04.1 -0.1**
baz=101
N27A Anderson Farm, 101.05 51 ⇓Pdiff **Pdif 09 58 04.1 -0.2**
baz=101
PAYG Puerto Ayora 101.10 94 PFAKE 09 58 20.0 +15
PAYG LR LR
comp=Z,2µm,19.0s
T29A Hugoton 101.13 55 ⇓Pdiff **Pdif 09 58 04.3 -0.3**
baz=101

Sta	Name	Dist	Azi	Phase	Phase ID	Time	Res
Y31A	**Rekieta Farm,**	**101.19**	**58**	⇓Pdiff	**Pdif**	**09 58 04.9**	**-0.1**
	baz=101						
232A	**Coleman**	**101.20**	**60**	⇓Pdiff	**Pdif**	**09 58 04.6**	**-0.4**
	baz=101						
NVS	**Novosibirsk**	**101.21**	**324**	⇓*i*P	**Pdif**	**09 58 03.7**	**-0.8**
NVS				*i*		10 08 41.4	
NVS				*i*		10 09 43.0	
NVS				pmax	pmax		
	comp=N,27nm,1.9s						
NVS				pmax	pmax		
	comp=E,55nm,1.9s						
NVS				pmax	pmax		
	comp=E,55nm,1.9s						
D24A	**Glendive**	**101.29**	**44**	⇑Pdiff	**Pdif**	**09 58 05.6**	**+0.4**
	baz=101						
C24A	**Savage**	**101.33**	**44**	⇑Pdiff	**Pdif**	**09 58 05.5**	**+0.2**
	baz=101						
A23A	**Redstone**	**101.37**	**42**	⇑Pdiff	**Pdif**	**09 58 05.8**	**+0.4**
	baz=102						
S29A	**Ulysses**	**101.37**	**54**	⇑Pdiff	**Pdif**	**09 58 05.8**	**+0.1**
	baz=102						
ABTX	**Abilene, Hawle**	**101.38**	**59**	⇑Pdiff	**Pdif**	**09 58 05.9**	**+0.1**
	baz=102						
OGNE	**Ogallala**	**101.46**	**51**	PFAKE		09 58 20.0	+14
OGNE				LR	LR		
	comp=Z,3μm,20.0s						
OGNE	**Ogallala**	**101.46**	**51**	⇑Pdiff	**Pdif**	**09 58 05.9**	**-0.1**
	baz=102						
KVTX	**Kingsville**	**101.64**	**65**	PFAKE		09 58 20.0	+13
KVTX				LR	LR		
	comp=Z,2μm,19.0s						
DGMT	**Dagmar**	**101.70**	**43**	PFAKE		09 58 20.0	+13
DGMT				LR	LR		
	comp=Z,1μm,19.0s						
WMOK	**Wichita Mounta**	**102.56**	**57**	PFAKE		09 58 20.0	+9.0
WMOK				LR	LR		
	comp=Z,2μm,19.0s						
KURK	**Kurchatov**	**102.99**	**319**	PFAKE		09 58 20.0	+7.5
KURK				LR	LR		
	comp=Z,2μm,20.0s						
RER	**Riviere de l'E**	**103.09**	**243**	PFAKE		09 58 30.0	+16
RER				LR	LR		
	comp=Z,4μm,20.0s						
TKM2	**Tokmak 2**	**103.43**	**311**	PFAKE		09 58 30.0	+15
TKM2				LR	LR		
	comp=Z,1μm,21.0s						
BHJ	**Bhuj**	**104.09**	**290**	*e*PKP	**Pdif**	**09 58 13.6**	**-4.4**
AAK	**Ala-Archa**	**104.17**	**311**	PFAKE		09 58 30.0	+12
AAK				LR	LR		
	comp=Z,865nm,19.0s						
FFC	**Flin Flon**	**104.34**	**37**	PFAKE		09 58 30.0	+12
FFC				LR	LR		
	comp=Z,3μm,19.0s						
EKS2	**Erkin-Say**	**104.70**	**310**	PFAKE		09 58 30.0	+10
EKS2				LR	LR		
	comp=Z,859nm,20.0s						
KSU1	**Kansas State U**	**105.15**	**53**	PFAKE		10 02 50.0	
KSU1				LR	LR		
	comp=Z,3μm,20.0s						
ECSD	**EROS Data Cent**	**105.94**	**49**	PFAKE		10 02 50.0	
ECSD				LR	LR		
	comp=Z,3μm,20.0s						
MIAR	**Mount Ida**	**106.73**	**58**	PFAKE		10 02 50.0	
MIAR				LR	LR		
	comp=Z,3μm,20.0s						
LCO	**Las Campanas**	**106.86**	**129**	PFAKE		10 02 50.0	
LCO				LR	LR		
	comp=Z,2μm,20.0s						
AGMN	**Agassiz Nation**	**107.13**	**44**	PFAKE		10 02 50.0	
AGMN				LR	LR		
	comp=Z,2μm,20.0s						
KKAR	**Karatay Array**	**107.14**	**311**	*e*PKPdf	Pdif	10 02 40.8	
TRQA	**Tornquist**	**107.47**	**141**	PFAKE		10 02 50.0	
TRQA				LR	LR		
	comp=Z,2μm,20.0s						
TGUH	**Tegucigalpa,Un**	**108.09**	**81**	PFAKE		10 02 50.0	
TGUH				LR	LR		
	comp=Z,1μm,20.0s						
SCIA	**State Center**	**108.15**	**51**	PFAKE		10 02 50.0	
SCIA				LR	LR		
	comp=Z,4μm,21.0s						
BRVK	**Borovoye**	**108.45**	**321**	PFAKE		10 02 50.0	
BRVK				LR	LR		
	comp=Z,2μm,19.0s						
TEIG	**Tepich**	**108.57**	**74**	PFAKE		10 03 00.0	
TEIG				LR	LR		
	comp=Z,963nm,20.0s						
VBMS	**Vicksburg**	**108.86**	**61**	PFAKE		10 03 00.0	
VBMS				LR	LR		
	comp=Z,2μm,19.0s						
JTS	**JuntasAbangare**	**109.33**	**85**	PFAKE		10 03 00.0	
JTS				LR	LR		
	comp=Z,4μm,19.0s						
NNA	**Nana**	**109.67**	**110**	PFAKE		10 03 00.0	
NNA				LR	LR		
	comp=Z,2μm,21.0s						
MSEY	**Mahe Island**	**109.70**	**258**	PFAKE		10 03 00.0	
MSEY				LR	LR		
	comp=Z,4μm,19.0s						
EYMN	**Ely**	**110.00**	**45**	PFAKE		10 03 00.0	
EYMN				LR	LR		
	comp=Z,3μm,19.0s						
OXF	**Oxford**	**110.12**	**59**	PFAKE		10 03 00.0	
OXF				LR	LR		
	comp=Z,2μm,19.0s						
JFWS	**Jewell Farm**	**110.45**	**50**	PFAKE		10 03 00.0	
JFWS				LR	LR		
	comp=Z,6μm,21.0s						
ABPO	**Ambohimpanom**	**111.20**	**241**	PFAKE		10 03 00.0	
ABPO				LR	LR		
	comp=Z,3μm,21.0s						
LVC	**Limon Verde**	**111.56**	**124**	PFAKE		10 03 00.0	
LVC				LR	LR		
	comp=Z,3μm,22.0s						
BRAL	**Brewton**	**111.59**	**63**	PFAKE		10 03 00.0	
BRAL				LR	LR		
	comp=Z,2μm,19.0s						
LRAL	**Lakeview Retre**	**111.91**	**61**	PFAKE		10 03 00.0	
LRAL				LR	LR		
	comp=Z,2μm,19.0s						
OTAV	**Otavalo**	**112.61**	**97**	PFAKE		10 03 00.0	
OTAV				LR	LR		
	comp=Z,2μm,20.0s						
BCIP	**Isla Barro Col**	**113.91**	**88**	PFAKE		10 03 10.0	
BCIP				LR	LR		
	comp=Z,990nm,20.0s						
SVE	**Sverdlovsk**	**114.03**	**325**	*e*PKIKP	PKPdf	10 02 53.1	+0.3
SVE				pmax	pmax		
	comp=Z,22nm,1.8s						
ARU	**Arti**	**115.21**	**325**	*i* PKIKP	**PKPdf**	**10 02 55.0**	**-0.1**
ARU						10 03 57.7	
ARU						10 09 39.5	
ARU				PS	**PKKPbc**	**10 13 32.7**	**+0.7**
ARU				SS	SS	10 19 42.8	-6.8
AAM	**Ann Arbor**	**115.27**	**51**	PFAKE		10 03 10.0	+14
AAM				LR	LR		
	comp=Z,2μm,21.0s						
ACSO	**Alum Creek Sta**	**115.72**	**53**	PFAKE		10 03 10.0	+13
ACSO				LR	LR		
	comp=Z,2μm,21.0s						
SOKR	**Solikamsk**	**115.73**	**328***d*	*i*PKIKP	**PKPdf**	**10 02 56.7**	**+0.8**
SOKR				SP	SP	10 13 39.3	+5.4
SOKR				pmax	pmax		
	comp=Z,30nm,1.0s						
NHSC	**New Hope**	**117.62**	**61**	PFAKE		10 03 10.0	+10
NHSC				LR	LR		
	comp=Z,2μm,22.0s						
BLA	**Blacksburg**	**117.62**	**57**	PFAKE		10 03 10.0	+10
BLA				LR	LR		
	comp=Z,1μm,19.0s						
KBS	**Kingsbay**	**117.67**	**355**	*e*PP	PP	10 04 07.4	-5.1
KBS				AMS	AMS	10 49 38.3	
	comp=Z,996nm,23.1s						
KBS	**Kingsbay**	**117.67**	**355**	PFAKE		10 03 10.0	+11
KBS				LR	LR		
	comp=Z,1μm,20.0s						
SPA0	**Spitsbergen Ar**	**117.91**	**354**	*e*	**PKPdf**	**10 03 00.7**	**+0.9**
SPA0				*e*PP	PP	10 04 05.8	-8.5
ERPA	**Erie**	**117.99**	**51**	PFAKE		10 03 10.0	+9.1
ERPA				LR	LR		
	comp=Z,2μm,20.0s						
CPUP	**Villa Florida**	**118.03**	**134**	PKP	**PKPdf**	**10 03 00.8**	**-0.7**
CPUP	**Villa Florida**	**118.03**	**134**	PKP	**PKPdf**	**10 03 00.8**	**-0.7**
	comp=Z,3.2nm,1.0s,baz=315,slow=4.3,SNR=4.4						
MTDJ	**Mount Denham**	**118.12**	**78**	PFAKE		10 03 10.0	+8.1
MTDJ				LR	LR		
	comp=Z,974nm,20.0s						
CNNC	**Cliffs of the**	**119.61**	**59**	PFAKE		10 03 20.0	+16
CNNC				LR	LR		
	comp=Z,2μm,20.0s						
CBN	**Corbin**	**120.05**	**56**	PFAKE		10 03 20.0	+15
CBN				LR	LR		
	comp=Z,2μm,19.0s						
GTBY	**Guantanamo Bay**	**120.67**	**77**	PFAKE		10 03 20.0	+13
GTBY				LR	LR		
	comp=Z,1μm,19.0s						
DAG	**Danmarks Havn**	**120.79**	**2**	⇑*i*PKIKP	**PKPdf**	**10 03 04.3**	**-1.0**
DAG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
DAG	**Danmarks Havn**	**120.79**	**2**	⇑*i*P	**PKPdf**	**10 03 04.3**	**-1.0**
	comp=Z,8.0nm,0.9s						
BINY	**Binghamton**	**120.96**	**51**	PFAKE		10 03 20.0	+13
BINY				LR	LR		
	comp=Z,2μm,21.0s						
SUR	**Sutherland**	**121.06**	**213**	PFAKE		10 03 20.0	+13
SUR				LR	LR		
	comp=Z,2μm,19.0s						
BOSA	**Boshof**	**121.46**	**219**	PKP	**PKPdf**	**10 03 09.0**	**+0.8**
BOSA	**Boshof**	**121.46**	**219**	PKP	**PKPdf**	**10 03 09.0**	**+0.8**
	comp=Z,8.6nm,1.0s,baz=267,slow=1.1,SNR=6.3						
LVZ	**Lovozero**	**121.76**	**341**	*i* PKIKP	**PKPdf**	**10 03 07.6**	**+0.2**
LVZ				pmax	pmax		
	comp=Z,62nm,2.5s						
LVZ				MLR	MLR		
	comp=Z,1μm,19.0s						
LONY	**Lake Ozonia**	**121.77**	**48**	*e*PKPdf	**PKPdf**	**10 03 07.5**	**-0.7**
LONY				LR	LR		
	comp=Z,3μm,20.0s						
NCB	**Newcomb**	**122.09**	**49**	*e*PKPdf	**PKPdf**	**10 03 08.0**	**-0.8**
NCB				LR	LR		
	comp=Z,5μm,21.0s						
APA	**Apatity**	**122.34**	**341**	⇓*i*PKIKP	**PKPdf**	**10 03 08.3**	**-0.2**
APA				*i*		10 03 16.0	
APA				*i*		10 04 50.0	
APA				*e*		10 10 18.0	
APA				*e*PS	**PS**	**10 14 44.0**	**+4.0**
APA				*e*PPS	PPS	10 16 11.0	
APA				*e*SS	SS	10 21 22.0	+1.3
APA				pmax	pmax		
	comp=Z,54nm,1.2s						
APA				MLR	MLR		
	comp=Z,500nm,27.0s						
FRNY	**Flat Rock**	**122.44**	**48**	*e*PKPdf	**PKPdf**	**10 03 08.7**	**-0.7**
KEV	**Kevo**	**122.70**	**345**	*e*PKIKP	**PKPdf**	**10 03 07.8**	**-1.3**
KEV				pmax	pmax		
	comp=Z,30nm,1.0s						
KEV	**Kevo**	**122.70**	**345**	*e*p	**PKPdf**	**10 03 07.8**	**-1.3**
	comp=Z,30nm,1.0s						
KEV	**Kevo**	**122.70**	**345**	PFAKE		10 03 20.0	+11
KEV				LR	LR		
	comp=Z,2μm,21.0s						
MDV	**Middlebury**	**122.84**	**49**	*e*PKPdf	**PKPdf**	**10 03 09.8**	**-0.3**
SUMG	**Summit**	**123.05**	**9**	*i* PKIKP	**PKPdf**	**10 03 10.3**	**0.0**
SUMG				pmax	pmax		
	comp=Z,23nm,1.1s						
SUMG	**Summit**	**123.05**	**9**	*e*PKPdf	**PKPdf**	**10 03 10.5**	**+0.2**
SUMG	**Summit**	**123.05**	**9**	*i* P	**PKPdf**	**10 03 10.3**	**0.0**
	comp=Z,23nm,1.1s						
SAML	**Samuel**	**123.08**	**114**	*e*PKPdf	**PKPdf**	**10 03 11.1**	**-0.4**
SAML				LR	LR		
	comp=Z,2μm,20.0s						
ARCES	**ARCESS Array B**	**123.23**	**345**	PKP	**PKPdf**	**10 03 09.8**	**-0.4**
ARCES	**ARCESS Array B**	**123.23**	**345**	PKP	**PKPdf**	**10 03 09.8**	**-0.4**
	comp=Z,23nm,0.8s,baz=48,slow=1.8,SNR=47						
ARE0	**ARCESS Array S**	**123.23**	**345**	*e*	**PKPdf**	**10 03 09.5**	**-0.7**
ARE0				*e*PP	**PP**	**10 04 49.0**	**-1.7**
ARE0	**ARCESS Array S**	**123.23**	**345**	*e*PKPdf	**PKPdf**	**10 03 10.2**	**0.0**
KLMR	**Klimovskoe**	**123.55**	**333***c*	*i*PKIKP	**PKPdf**	**10 03 10.8**	**-0.2**
KLMR				pmax	pmax		
	comp=Z,125nm,1.6s						
LBNH	**Lisbon**	**123.70**	**48**	*e*PKIKP	**PKPdf**	**10 03 10.8**	**-1.0**
LBNH				MLR	MLR		
	comp=Z,4μm,20.0s						
LBNH	**Lisbon**	**123.70**	**48**	*e*PKPdf	**PKPdf**	**10 03 10.8**	**-1.0**
LBNH				LR	LR		
	comp=Z,4μm,20.0s						
MAK	**Makhachkala**	**123.95**	**310**	*i* PKIKP	**PKPdf**	**10 03 12.6**	**+0.3**
MAK				*e*		10 04 56.4	
MAK				*e*SS	SS	10 21 43.7	+0.8
MAK				pmax	pmax		
	comp=Z,139nm,1.2s						
SDDR	**Presa de Saban**	**124.09**	**79**	PFAKE		10 03 30.0	+17
SDDR				LR	LR		
	comp=Z,2μm,20.0s						
KTK1	**Kautokeino**	**124.17**	**345**	*e*		10 04 52.9	
SCHQ	**Schefferville**	**124.41**	**35**	PKP	**PKPdf**	**10 03 12.2**	**-0.7**
SCHQ				*e*PKPdf	**PKiKP**	**10 03 12.7**	**-0.5**
SCHQ	**Schefferville**	**124.41**	**35**	PKP	**PKPdf**	**10 03 12.2**	**-0.7**
	comp=Z,10nm,0.9s,baz=342,slow=3.0,SNR=10						
RDF	**Al-Radifah**	**124.53**	**293**	*e*P	**PKPdf**	**10 03 14.6**	**+0.8**
RDF				AMb	AMB	10 03 19.5	
	comp=Z,144nm,1.3s						
TRO	**Tromso**	**124.65**	**347**	*e*PP	PP	10 04 52.2	-7.9
TRO				AMS	AMS	11 00 23.3	
	comp=Z,847nm,20.6s						
MIB	**Mutribah**	**124.74**	**294**	*e*P	**PKPdf**	**10 03 14.5**	**+0.2**
MIB				AMb	AMB	10 03 18.9	
	comp=Z,90nm,1.2s						
NAY	**Al-Naaiem**	**124.81**	**294**	*e*P	**PKPdf**	**10 03 14.5**	**+0.1**
NAY				AMb	AMB	10 03 18.9	
	comp=Z,41nm,1.3s						
SFJD	**Kangerlussuaq**	**124.82**	**17**	*e*PKPdf	**PKPdf**	**10 03 12.5**	**-0.8**
SFJD				LR	LR		
	comp=Z,2μm,19.0s						
SFJD	**Kangerlussuaq**	**124.82**	**17**	⇑*i*P	**PKPdf**	**10 03 12.4**	**-0.8**
	comp=Z,19nm,1.0s						
DGRG	**David-gareji**	**125.72**	**309**	P	**PKPdf**	**10 03 17.2**	**+1.4**
JOF	**Joensuu**	**125.81**	**337**	*e*PKIKP	**PKPdf**	**10 03 13.1**	**-2.1**
JOF				pmax	pmax		
	comp=Z,53nm,1.0s						
JOF	**Joensuu**	**125.81**	**337**	*e*p	**PKPdf**	**10 03 13.1**	**-2.1**
	comp=Z,52nm,1.0s						
IBDR	**Badra**	**125.95**	**298**	*i* PKP	**PKPdf**	**10 03 14.1**	**-2.4**
IBDR				*e*PP	PKiKP	10 03 58.1	+41
IBDR				*i* PPP	PPP	10 07 46.0	
IBDR				*e*SKS	SKSdf	10 09 35.6	-49
IBDR				*e*SKKS	**SKSac**	**10 10 10.6**	**-6.8**
PQI	**Presque Isle**	**125.97**	**45**	*e*PKPdf	**PKPdf**	**10 03 15.0**	**-1.1**
VRHR	**Novokhopersk**	**126.12**	**321**	*e*PKIKP	**PKPdf**	**10 03 16.2**	**0.0**
VRHR				pmax	pmax		
	comp=N,20nm,1.1s						
VRHR				pmax	pmax		
	comp=Z,50nm,1.1s						
VRHR				pmax	pmax		
	comp=E,20nm,0.7s						
TBLG	**Delisi**	**126.15**	**309**	PKIKP	**PKPdf**	**10 03 16.8**	**+0.2**
TBLG	**Delisi**	**126.15**	**309**	P	**PKPdf**	**10 03 16.8**	**+0.2**
GNI	**Garni**	**126.37**	**307**	P	**PKPdf**	**10 03 19.1**	**+1.8**
	SNR=11						
GNI	**Garni**	**126.37**	**307**	*e*PKPdf	**PKPdf**	**10 03 19.1**	**+1.8**
GNI				LR	LR		
	comp=Z,712nm,20.0s						
GNI	**Garni**	**126.37**	**307**	PKP	**PKPdf**	**10 03 19.1**	**+1.8**
	comp=Z,6.1nm,0.4s,baz=23,slow=7.7						
SPB	**Sao Paulo**	**126.43**	**139**	PFAKE		10 03 30.0	+12
SPB				LR	LR		
	comp=Z,1μm,19.0s						
KZR	**Kazreti**	**126.44**	**309**	P	**PKPdf**	**10 03 18.2**	**+0.9**
JMIC	**Jan Mayen**	**126.66**	**359**	*e*PP	PP	10 05 11.0	-2.4
JMIC				*e*SS	SS	10 22 20.9	+6.2
MOS	**Moscow**	**126.66**	**327**	*e*PKIKP	PKPdf	10 03 10.8	-6.3
MOS				pmax	pmax		
	comp=Z,82nm,1.1s						
EMMW	**East Machias**	**126.77**	**47**	*e*PKPdf	**PKPdf**	**10 03 17.8**	**+0.2**
STEI	**Steigen**	**126.83**	**347**	*e*PKPdf	**PKPdf**	**10 03 17.6**	**+0.5**
SCO	**Scoresbysund**	**126.87**	**4**	⇑*i*PKIKP	**PKPdf**	**10 03 17.7**	**+0.6**
SCO				pmax	pmax		
	comp=Z,16nm,0.9s						
SCO	**Scoresbysund**	**126.87**	**4**	⇑*i*P	**PKPdf**	**10 03 17.7**	**+0.6**
	comp=Z,16nm,0.9s						
ONI	**Oni**	**126.96**	**310**	P	**PKPdf**	**10 03 18.8**	**+0.6**
AKH	**Akhalkalaki**	**127.13**	**309**	P	**PKPdf**	**10 03 19.5**	**+0.8**
KBZ	**Khabaz**	**127.14**	**312**	PKIKP	**PKPdf**	**10 03 19.1**	**+0.7**
KBZ	**Khabaz**	**127.14**	**312**	PKP	**PKPdf**	**10 03 19.1**	**+0.7**
KBZ	**Khabaz**	**127.14**	**312**	PKP	**PKPdf**	**10 03 19.1**	**+0.7**
	comp=Z,8.2nm,0.9s,baz=93,slow=2.3,SNR=18						
BHD	**Baghdad**	**127.25**	**299**	*i* PKP	**PKPdf**	**10 03 18.0**	**-0.9**
BHD				*i* PP	PKiKP	10 04 08.0	+49
BHD				*i* PPP	PPP	10 06 31.5	
BHD				*i* SKS	SKSdf	10 09 52.0	-35
BHD				*i* SKKS	**SKSac**	**10 10 18.0**	**-3.3**
KIV	**Kislovodsk**	**127.25**	**312***c*	*i*PKIKP	**PKPdf**	**10 03 19.5**	**+0.8**
KIV				*e*		10 10 31.8	
KIV				*e*SS	SS	10 22 27.0	+2.6
KIV				pmax	pmax		
	comp=Z,111nm,2.5s						
OBN	**Obninsk**	**127.47**	**327***c*	*i*PKIKP	**PKPdf**	**10 03 19.1**	**+0.5**
OBN				*i*		10 05 22.8	
OBN				*i* PS	**PS**	**10 15 19.9**	**-5.8**
OBN				pmax	pmax		
	comp=Z,122nm,1.7s						
VSR	**Storozhevoye**	**127.55**	**322**	*e*PKIKP	**PKPdf**	**10 03 19.3**	**+0.4**
VSR				pmax	pmax		
	comp=Z,50nm,1.2s						
VSR				pmax	pmax		
	comp=N,8.0nm,1.4s						
VSR				pmax	pmax		
	comp=E,20nm,0.9s						
KMBO	**Kilima Mbogo**	**127.90**	**254**	P	**PKPdf**	**10 03 22.9**	**+1.8**
	SNR=9.7						
KMBO	**Kilima Mbogo**	**127.90**	**254**	*e*PKPdf	**PKPdf**	**10 03 22.8**	**+1.7**
KMBO				PKP	**PKPdf**	**10 03 22.9**	**+1.8**
KMBO				LR	LR		
	comp=Z,4μm,19.0s						
KMBO	**Kilima Mbogo**	**127.90**	**254**	PKP	**PKPdf**	**10 03 22.9**	**+1.8**
	comp=Z,9.2nm,1.1s,baz=96,slow=2.8,SNR=13						
KAF	**Kangasniemi**	**128.13**	**338**	*e*PKIKP	**PKPdf**	**10 03 16.0**	**-3.7**
KAF				pmax	pmax		
	comp=Z,21nm,0.9s						
KAF	**Kangasniemi**	**128.13**	**338**	*e*p	**PKPdf**	**10 03 16.0**	**-3.7**
	comp=Z,21nm,0.9s						
LSZ	**Lusaka**	**128.48**	**233**	P	**PKPdf**	**10 03 24.0**	**+2.1**
	SNR=15						
LSZ	**Lusaka**	**128.48**	**233**	*e*PKPdf	**PKPdf**	**10 03 23.6**	**+1.6**
LSZ				LR	LR		
	comp=Z,2μm,19.0s						
FINES	**FINESS Array B**	**128.65**	**338**	PKP	**PKPdf**	**10 03 21.1**	**+0.4**
FINES	**FINESS Array B**	**128.65**	**338**	PKP	**PKPdf**	**10 03 21.1**	**+0.4**
	comp=Z,31nm,1.0s,baz=57,slow=7.0,SNR=21						
SJG	**San Juan**	**128.78**	**81**	PFAKE		10 03 30.0	+7.8
SJG				LR	LR		
	comp=Z,878nm,20.0s						
SOC	**Sochi**	**129.43**	**312***c*	*i*PKIKP	**PKPdf**	**10 03 22.7**	**-0.1**
SOC				*e*		10 03 37.9	
SOC				*e*		10 05 31.1	
SOC				pmax	pmax		
	comp=Z,34nm,1.2s						
SOC				MLR	MLR		
	comp=Z,967nm,22.0s						
ANN	**Anapa**	**130.69**	**314**	*i* PKIKP	**PKPdf**	**10 03 20.0**	**-5.1**
ANN				*e*		10 05 40.9	
ANN				*e*		10 10 34.1	
ANN				pmax	pmax		
	comp=Z,60nm,1.2s						
ANN				MLR	MLR		
	comp=E,843nm,24.0s						
ANN				MLR	MLR		
	comp=Z,977nm,24.0s						
MALT	**Malatya**	**131.50**	**306**	PFAKE		10 03 40.0	+13
MALT				LR	LR		
	comp=Z,1μm,19.0s						
MALT	**Malatya**	**131.50**	**306**	⇑*i*P	PKPdf	10 03 35.7	+8.7
BDFB	**Brasilia**	**131.57**	**131**	PKP	**PKPdf**	**10 03 27.9**	**+0.1**
BDFB				SKPbc	**SKPab**	**10 06 54.3**	**+4.5**
BDFB	**Brasilia**	**131.57**	**131**	PKP	**PKPdf**	**10 03 27.9**	**+0.1**
	comp=Z,3.5nm,0.6s,baz=264,slow=3.5,SNR=6.6						
BDFB				SKPbc	**SKPab**	**10 06 54.3**	**+4.5**
	comp=Z,1.9nm,0.7s,baz=135,slow=11,SNR=3.2						
GRGR	**Grenville**	**131.96**	**89**	PFAKE		10 03 40.0	+12
GRGR				LR	LR		
	comp=Z,723nm,21.0s						
MICGM	**Minsk**	**132.14**	**330**	⇑*e*P	**PKPdf**	**10 03 27.0**	**-0.6**
MNK	**Minsk**	**132.16**	**330**	⇑*e*PKIKP	**PKPdf**	**10 03 27.0**	**-0.6**
MNK				pmax	pmax		
	comp=Z,260nm,2.0s						
NACGM	**Naroch**	**132.44**	**331**	*e*P	**PKPdf**	**10 03 26.0**	**-2.1**
BORG	**Borgarnes**	**132.56**	**5**	PFAKE		10 03 40.0	+12
BORG				LR	LR		
	comp=Z,1μm,19.0s						
ANWB	**Willy Bob**	**132.83**	**82**	PFAKE		10 03 40.0	+10
ANWB				LR	LR		
	comp=Z,711nm,22.0s						
SIM	**Simferopol'**	**132.88**	**316**	*e*PKIKP	**PKPdf**	**10 03 31.4**	**+2.1**
SIM				*e*		10 05 51.0	
SIM				*e*SS	SS	10 23 28.0	-5.1
SIM				pmax	pmax		
	comp=Z,100nm,8.9s						
TSUM	**Tsumeb**	**133.12**	**220**	*e*PKPdf	**PKPdf**	**10 03 31.9**	**+1.2**
TSUM				SKPab	**SKiKP**	**10 07 03.0**	**-1.0**
TSUM				LR	LR		
	comp=Z,2μm,20.0s						
TSUM	**Tsumeb**	**133.12**	**220**	SKPab	**SKiKP**	**10 07 03.0**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=158,slow=6.1,SNR=5.3						
AKASG	**Malin Array Be**	**133.46**	**325**	PKIKP	**PKPdf**	**10 03 30.1**	**-0.1**
AKASG	**Malin Array Be**	**133.46**	**325**	PKP	**PKPdf**	**10 03 30.1**	**-0.1**
AKASG				SKPbc	**SKPab**	**10 06 59.7**	**+3.1**
AKASG	**Malin Array Be**	**133.46**	**325**	PKP	**PKPdf**	**10 03 30.1**	**-0.1**
	comp=Z,14nm,1.0s,baz=65,slow=1.9,SNR=23						
AKASG				SKPbc	**SKPab**	**10 06 59.7**	**+3.1**
	comp=Z,1.7nm,0.7s,baz=57,slow=4.2,SNR=7.3						
AK01	**Malin Array Si**	**133.47**	**325**	*e*PKPdf	**PKPdf**	**10 03 30.6**	**+0.4**
KIEV	**Kiev**	**133.47**	**325**	*e*PKIKP	**PKPdf**	**10 03 30.0**	**-0.2**
KIEV				MLR	MLR		
	comp=Z,2μm,20.0s						
KIEV	**Kiev**	**133.47**	**325**	*e*PKPdf	**PKPdf**	**10 03 30.0**	**-0.2**
KIEV				LR	LR		
	comp=Z,2μm,20.0s						
AK02	**Malin Array Si**	**133.49**	**325**	*e*PKPdf	**PKPdf**	**10 03 30.0**	**-0.2**
NB2	**NORSAR Subarra**	**133.60**	**345**	PKPdf	**PKPdf**	**10 03 30.0**	**-0.2**
	comp=Z,50nm,1.4s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**133.60**	**345**	PKPdf	**PKPdf**	**10 03 30.0**	**-0.2**
	baz=31,slow=1.9						
NOA	**NORSAR Array B**	**133.60**	**345**	PKP	**PKPdf**	**10 03 30.5**	**+0.3**
NOA				PP	PP	10 06 06.8	+8.1
NOA				SKPbc	**SKPab**	**10 06 59.8**	**+2.8**
NOA	**NORSAR Array B**	**133.60**	**345**	PKP	**PKPdf**	**10 03 30.5**	**+0.3**
	comp=Z,11nm,0.9s,baz=34,slow=2.0,SNR=18						
NOA				PP	PP	10 06 06.8	+8.1
	comp=Z,4.7nm,1.1s,baz=32,slow=6.4,SNR=3.4						
NOA				SKPbc	**SKPab**	**10 06 59.8**	**+2.8**
	comp=Z,4.5nm,1.0s,baz=33,slow=2.8,SNR=4.1						
ASF	**Jabal al Asfar**	**133.62**	**298**	PKP	**PKPdf**	**10 03 32.6**	**+1.5**
ASF				PP	**PP**	**10 06 04.1**	**+3.7**
ASF				SKPab	**SKiKP**	**10 07 03.0**	**-1.4**
ASF	**Jabal al Asfar**	**133.62**	**298**	PKP	**PKPdf**	**10 03 32.6**	**+1.5**
	comp=Z,4.1nm,0.9s,baz=7.0,slow=1.2,SNR=17						
ASF				PP	**PP**	**10 06 04.1**	**+3.7**
	comp=Z,2.4nm,0.8s,baz=20,slow=0.5,SNR=4.3						
ASF				SKPab	**SKiKP**	**10 07 03.0**	**-1.4**
	comp=Z,3.0nm,0.9s,baz=252,slow=3.0,SNR=4.4						
HFS	**Hagfors**	**133.69**	**342**	PKPpre	PKPpre	10 03 21.1	
HFS				PKP	**PKPdf**	**10 03 30.3**	**0.0**
HFS	**Hagfors**	**133.69**	**342**	PKhKP	PKPpre	10 03 21.1	
	comp=Z,1.1nm,0.7s,baz=11,slow=2.9,SNR=4.1						
HFS				PKP	**PKPdf**	**10 03 30.3**	**0.0**
	comp=Z,8.1nm,0.8s,baz=48,slow=2.2,SNR=8.5						
NC602	**NORSAR Array S**	**133.78**	**344**	*e*	**PKPdf**	**10 03 32.7**	**+2.2**
NC602				*e*PP	**PP**	**10 05 59.2**	**-0.6**
MBAR	**Mbarara**	**134.05**	**251**	PFAKE		10 03 40.0	+7.4
MBAR				LR	LR		
	comp=Z,623nm,20.0s						
HWQ	**Hawqa**	**134.14**	**301**	*e*P	**PKPdf**	**10 03 32.1**	**0.0**
BBGH	**Gun Hill**	**134.17**	**89**	PFAKE		10 03 40.0	+7.5
BBGH				LR	LR		
	comp=Z,2μm,20.0s						
SUW	**Suwalki**	**134.64**	**331**	*e*PKPdf	**PKPdf**	**10 03 32.2**	**-0.1**
BR131	**Keskin Array S**	**134.81**	**309**	*e*PKPdf	**PKPdf**	**10 03 34.2**	**+0.9**
BRTR	**Keskin Array B**	**134.81**	**309**	PKPpre	PKPpre	10 03 25.3	
BRTR				PKP	**PKPdf**	**10 03 33.9**	**+0.6**
BRTR	**Keskin Array B**	**134.81**	**309**	PKhKP	PKPpre	10 03 25.3	
	comp=Z,1.1nm,0.8s,baz=48,slow=2.1,SNR=3.9						
BRTR				PKP	**PKPdf**	**10 03 33.9**	**+0.6**
	comp=Z,6.3nm,1.0s,baz=116,slow=2.9,SNR=24						
SUE	**Sulen**	**135.03**	**348**	*e*PKPdf	**PKPdf**	**10 03 32.8**	**0.0**
KONO	**Kongsberg**	**135.21**	**345**	*e*	**PKPdf**	**10 03 33.2**	**+0.1**
KONO				*e*PP	**PP**	**10 06 07.8**	**-1.0**
KONO				AMS	AMS	10 58 20.8	
	comp=Z,1μm,21.4s						
KONO	**Kongsberg**	**135.21**	**345**	PFAKE		10 03 50.0	+17
KONO				LR	LR		
	comp=Z,1μm,21.0s						
ANTO	**Ankara**	**135.40**	**309**	*e*PKIKP	**PKPdf**	**10 03 35.6**	**+1.3**
ANTO				MLR	MLR		
	comp=Z,618nm,19.0s						

ANTO Ankara 135.40 309 P PKPdf 10 03 35.8 +1.6
SNR=14
ANTO Ankara 135.40 309 *e*PKPdf **PKPdf 10 03 35.6 +1.3**
ANTO LR LR
comp=Z,618nm,19.0s
KIS Kishinev 135.46 320 *e*PKIKP **PKPdf 10 03 32.0 -2.0**
KIS *e* 10 10 39.0
KIS pmax pmax
comp=Z,240nm,2.5s
KIS pmax pmax
comp=Z,500nm,7.0s
KIS Kishinev 135.46 320 *e*PKP **PKPdf 10 03 32.0 -2.0**
comp=Z,200nm,2.5s
KIS Kishinev 135.46 320 *e*PP PP 10 06 04.0 -7.1
KIS *e*SKP 10 07 03.0
KIS Kishinev 135.46 320 *e*PKKP PKKPdf 10 13 25.0 +7.9
KIS *e*SKSP 10 15 46.0
KIS Kishinev 135.46 320 *e*PS PS 10 16 04.0 -31
BER Bergen 135.53 348 *e* **PKPdf 10 03 33.0 -0.7**
BER *e*PP **PP 10 06 11.2 +0.5**
BER AMS AMS 11 03 11.2
comp=Z,724nm,20.7s
ODD1 Odda 135.69 347 *e*P **PKPdf 10 03 30.8 -3.3**
CSS Prodhromos 136.15 302 P **PKPdf 10 03 35.7 0.0**
CSS Prodhromos 136.15 302 PFAKE 10 03 50.0 +14
CSS LR LR
comp=Z,1μm,20.0s
CFR Carcaliu 136.70 318 ⇓*i*P **PKPdf 10 03 38.5 +2.1**
LVV L'vov 136.75 326 *e*PKIKP **PKPdf 10 03 36.7 +0.3**
LVV *e* 10 06 17.5
LVV *e* 10 10 46.9
LVV *e* 10 16 35.1
BEL Belsk 137.15 330 *e*PKPdf **PKPdf 10 03 36.9 -0.1**
VRI Vrincioaia 137.26 320 ⇑*i*P PKPdf 10 03 54.2 +17
BUR08 Bucovina Ar. S 137.29 323 *e*PKPdf **PKPdf 10 03 39.5 +1.9**
BURAR Bucovina Array 137.30 323 ⇑*i*P **PKPdf 10 03 40.3 +2.7**
PLOR Plostina 137.32 320 ⇑*i*P PKPdf 10 03 56.1 +18
KWP Kalwaria Pacla 137.56 327 PFAKE 10 03 50.0 +12
KWP LR LR
comp=Z,2μm,20.0s
KWP Kalwaria Pacla 137.56 327 *e*PKPdf **PKPdf 10 03 38.9 +1.0**
ALT Altintas 137.62 309 P **PKPdf 10 03 38.5 0.0**
ISP Isparta 137.68 307 P **PKPdf 10 03 38.3 -0.3**
ISP Isparta 137.68 307 PFAKE 10 03 50.0 +11
ISP LR LR
comp=Z,1μm,20.0s
ISP Isparta 137.68 307 ⇑*i*P **PKPdf 10 03 41.6 +3.0**
ISK Istanbul-Kandi 137.72 312 P **PKPdf 10 03 38.2 -0.2**
ISR Istrita 137.73 319 ⇓*i*P PKPdf 10 03 44.2 +5.8
GKP Gorka Klasztor 137.75 334 *e*PKPdf **PKPdf 10 03 38.3 +0.2**
MLR Muntele Rosu 137.93 320 PKP **PKPdf 10 03 39.1 +0.2**
MLR Muntele Rosu 137.93 320 ⇓*i*P **PKPdf 10 03 40.9 +2.0**
MLR Muntele Rosu 137.93 320 PKP **PKPdf 10 03 39.1 +0.2**
comp=Z,2.8nm,1.1s,baz=8.7,slow=3.3,SNR=15
PRD Provadia 138.02 316 *e*P **PP 10 06 25.7 -1.6**
DOPR Dopca 138.03 321 ⇓*i*P **PKPdf 10 03 44.0 +5.1**
MUD Monsted U'grnd 138.08 342 *i* PKHKP PKPpre 10 03 24.6
MUD pmax pmax
comp=Z,19nm,1.0s
MUD Monsted U'grnd 138.08 342 *i* P PKPpre 10 03 24.6
comp=Z,19nm,1.0s
KOLS Kolonicke sedl 138.20 326 *e*PKIKP **PKPdf 10 03 38.7 -0.4**
KOLS Kolonicke sedl 138.20 326 *e*PKP **PKPdf 10 03 38.7 -0.4**
KOLS *e*SKP 10 07 16.2
UZH Uzhgorod 138.37 326 ⇓*i*PKIKP **PKPdf 10 03 40.0 +0.6**
UZH *e* 10 03 53.4
UZH *e* 10 06 27.0
STHS Stebnicka Huta 138.45 327 *e*PKIKP **PKPdf 10 03 40.7 +1.2**
STHS Stebnicka Huta 138.45 327 *e*PKP **PKPdf 10 03 40.7 +1.2**
STHS *e*SKP 10 07 16.7
VOIR 138.50 320 ⇓*i*P **PKPdf 10 03 41.9 +2.1**
TRPA Tarpa 138.53 325 ⇑*i*P **PKPdf 10 03 40.4 +0.8**
TRPA Tarpa 138.53 325 ⇑*e*PKPdf **PKPdf 10 03 40.1 +0.5**
CRVS Cervenica-Dubn 138.65 326 *e*PKIKP **PKPdf 10 03 37.7 -2.2**
CRVS Cervenica-Dubn 138.65 326 *e*PKP **PKPdf 10 03 37.7 -2.2**
CRVS *e*SKP 10 07 14.6
OJC Ojcow 138.68 329 *e*PKIKP **PKPdf 10 03 40.4 +0.5**
OJC *e* 10 06 31.9
OJC MLR MLR
comp=Z,2μm,23.5s
OJC Ojcow 138.68 329 *e*PKPdf **PKPdf 10 03 40.4 +0.5**
OJC *e*PP **PP 10 06 31.9 +1.0**
OJC *e*SS SS 10 24 50.9 +9.4
OJC L L 11 04 47.8
comp=Z,2μm,23.5s
KULA Kula-Manisa 138.87 309 P **PKPdf 10 03 41.1 +0.4**
JMB Yambol 138.88 315 P **PKPdf 10 03 41.6 +1.1**
NIE Niedzica 138.93 328 *e*PKIKP **PKPdf 10 03 41.9 +1.5**
NIE Niedzica 138.93 328 *e*PKPdf **PKPdf 10 03 41.9 +1.5**
SZH Strazhica 138.96 317 *e*P **PP 10 06 32.8 -0.3**
HUMR Humele 138.99 319 ⇑*i*P **PKPdf 10 03 42.6 +2.0**
EDRB Edirne 139.03 314 P **PKPdf 10 03 40.5 -0.3**
DRGR 139.18 323 ⇓*i*P **PKPdf 10 03 36.6 -4.4**
OKC Ostrava-Krasne 139.73 330 *e*PKIKP **PKPdf 10 03 43.1 +1.3**
OKC *e* 10 06 38.7
OKC MLR MLR
comp=Z,1μm,20.6s
OKC Ostrava-Krasne 139.73 330 *e*PKPdf **PKPdf 10 03 43.1 +1.3**
OKC *e*PP **PP 10 06 38.7 +1.3**
OKC *e*SS SS 10 25 01.3 +7.5
OKC AMS AMS 11 08 20.0
comp=Z,1μm,20.6s
BSEG Bad Segeberg 139.85 339 *e*PP PP 10 06 37.9 +0.1
ALN Alexandroupoli 139.89 313 *e*P **PKPdf 10 03 42.3 -0.1**
KSP Ksiaz 139.90 332 *e*PKHKP PKPpre 10 03 35.1
KSP *e* 10 03 43.0
KSP *e* 10 06 37.0
KSP MLR MLR
comp=Z,5μm,21.4s
KSP Ksiaz 139.90 332 *e*PKPdf **PKPdf 10 03 42.0 -0.1**
GZR Gura Zlata 139.90 321 ⇑*i*P **PKPdf 10 03 41.0 -1.4**
MORC Moravsky Berou 140.06 330 *e*PKIKP **PKPdf 10 03 43.4 +0.9**
MORC Moravsky Berou 140.06 330 *e*PKPdf **PKPdf 10 03 43.4 +0.9**
MORC Moravsky Berou 140.06 330 ⇓*i*P **PKPdf 10 03 43.8 +1.3**
PSZ Piszkesteto 140.08 326 *e*PKIKP **PKPdf 10 03 43.6 +1.0**
PSZ MLR MLR
comp=Z,2μm,19.0s
PSZ Piszkesteto 140.08 326 *e*PKPdf **PKPdf 10 03 43.6 +1.0**
PSZ LR LR
comp=Z,2μm,19.0s
PSZ Piszkesteto 140.08 326 ⇑*i*P **PKPdf 10 03 44.2 +1.6**
PSZ Piszkesteto 140.08 326 ⇓*e*PKPdf PKPdf 10 03 33.7 -8.9
DPC Dobruska-Polom 140.23 331 *e*PKHKP PKPpre 10 03 37.7
DPC *e* 10 03 43.5
DPC *e* 10 06 40.9
DPC *e* 10 19 06.8
DPC Dobruska-Polom 140.23 331 *e*PKPpre PKPpre 10 03 37.7
DPC *e*PKPdf **PKPdf 10 03 43.5 +0.7**
DPC *e*PP **PP 10 06 40.9 +0.4**
DPC *ex* x 10 19 06.8
DPC *e*SS SS 10 25 09.4 +10
UPC Upice 140.26 332 *e*PKPpre PKPpre 10 03 39.6
UPC *e*PKPdf **PKPdf 10 03 43.5 +0.7**
VYHS Vyhne 140.27 328 *e*PKIKP **PKPdf 10 03 42.0 -0.9**
VYHS Vyhne 140.27 328 *e*PKP **PKPdf 10 03 42.0 -0.9**
MPEP Malo Peshtene 140.34 318 *e*P **PP 10 06 40.5 -1.1**
PGB Panagyurishte 140.44 317 *e*P **PP 10 06 42.1 -0.2**
SMG Samos 140.49 308 P **PKPdf 10 03 43.1 -0.5**
SIGR SIGRI 140.68 311 P **PKPdf 10 03 43.4 -0.5**
BUD Budapest 140.81 326 ⇑*e*PKPdf **PKPdf 10 03 44.5 +0.7**
VRAC Vranov 140.83 330 PKPpre PKPpre 10 03 40.0
VRAC Vranov 140.83 330 PKhKP PKPpre 10 03 40.0
comp=Z,3.4nm,0.6s,baz=353,slow=4.5,SNR=5.0
CHOS Chios island 140.84 310 P **PKPdf 10 03 44.3 0.0**
PVCC Panska Ves 140.88 333 *e*PKPpre PKPpre 10 03 41.4
PVCC *e*PKPdf **PKPdf 10 03 45.1 +1.2**
PVCC AMS AMS 11 09 30.0
comp=Z,2μm,19.1s
LIA Limnos Island 140.89 312 P **PKPdf 10 03 42.6 -1.6**
BRG Berggiesshubel 140.90 334 PKP PKPpre 10 03 38.6
comp=Z,16nm,1.0s
BRG *i* 10 03 44.5
comp=Z,97nm,1.6s
BRG PP PP 10 06 20.7 -24
comp=Z,37nm,1.8s
BRG SKP 10 07 19.8
comp=Z,12nm,1.2s
BRG *e* 10 07 34.0
comp=Z,46nm,1.7s
BRG SS SS 10 24 21.0 -46
BRG
comp=Z,2μm,17.2s
BRG
comp=N,1μm,16.8s
BRG
comp=E,760nm,16.8s
BRG Berggiesshubel 140.90 334 *e*PP PP 10 06 44.3 -0.1
BRG Berggiesshubel 140.90 334 PKHKP PKPpre 10 03 38.6
BRG *i* 10 03 44.5
BRG pmax pmax
comp=Z,16nm,1.0s
BRG pmax pmax
comp=Z,97nm,1.6s
BRG pmax pmax
comp=Z,37nm,1.8s
BRG pmax pmax
comp=N,12nm,1.2s
BRG pmax pmax
comp=Z,46nm,1.7s
BRG MLR MLR
comp=Z,2μm,17.2s
BRG MLR MLR
comp=N,1μm,16.8s
BRG MLR MLR
comp=E,760nm,16.8s
KAVA Kavala 140.90 314 P **PKPdf 10 03 40.0 -4.2**
CLL Collm 140.96 335 *e*PP PP 10 06 41.6 -3.1
CLL Collm 140.96 335 *e*PKHKP PKPpre 10 03 38.0
CLL *e* 10 03 43.0
CLL *i* 10 03 47.3
CLL pmax pmax
comp=Z,12nm,1.0s
CLL MLR MLR
comp=Z,2μm,20.6s
CLL Collm 140.96 335 *e*PKPpre PKPpre 10 03 38.0
CLL *e* 10 03 43.0
comp=Z,12nm,1.0s
CLL *e*PKPdf **PKPdf 10 03 45.0 +1.0**
comp=Z,25nm,1.2s
CLL *i* PKiKP **PKiKP 10 03 47.3 +0.6**
comp=Z,41nm,1.1s
CLL *e*(sPKPdf)
CLL *i* sPKiKP sPKiKP 10 03 55.3 -12
CLL *e*PP PP 10 06 39.0 -5.7
CLL *e*PKSbc **PKSbc 10 07 23.0 +1.2**
CLL *e*PSKS 10 17 02.0
CLL *e* 10 18 07.0
CLL *e*PPS PPS 10 19 12.0
CLL *e*SS SS 10 25 30.0 +22
CLL *e*(PSS) 10 26 24.0
CLL *e*SSS SSS 10 30 18.0
CLL Lm MLR 11 08 00.0
comp=N,1μm,20.6s
CLL Lm MLR 11 08 00.0
comp=E,800nm,21.8s
CLL Lm MLR 11 08 00.0
comp=Z,2μm,20.6s
PKS7 Kunszentmiklos 141.01 326 ⇓*e*PKPdf **PKPdf 10 03 45.4 +1.2**
VTS Vitosha 141.05 317 P **PKPdf 10 03 44.6 -0.1**
VTS Vitosha 141.05 317 *e*P **PP 10 06 44.5 -1.6**
VTS Vitosha 141.05 317 ⇓*i*P **PKPdf 10 03 45.4 +0.7**
NRDL Niedersach Rie 141.11 338 *e*PP PP 10 06 45.6 +0.2
NVR Nevrokopi 141.19 315 P PKPdf 10 03 39.0 -5.8
NVR Nevrokopi 141.19 315 *e*P **PKPdf 10 03 41.7 -3.1**
PKSG 141.20 327 ⇓*e*PKPdf **PKPdf 10 03 45.5 +0.9**
PRA Prague 141.28 333 PKPpre PKPpre 10 03 39.0
PRU Pruhonice 141.29 332 *e*PKHKP PKPpre 10 03 39.6
PRU *e* 10 03 45.6
PRU *e* 10 06 44.2
PRU *e* 10 25 19.4
PRU MLR MLR
comp=Z,2μm,19.8s
PRU Pruhonice 141.29 332 *e*PKPpre PKPpre 10 03 39.6
PRU *e*PKPdf **PKPdf 10 03 45.6 +1.0**
PRU *e*PP **PP 10 06 44.2 -2.7**
PRU *e*SS SS 10 25 19.4 +7.5
PRU AMS AMS 11 09 50.0
comp=Z,2μm,19.8s
TREC Trest 141.36 331 AMS AMS 11 10 00.0
comp=Z,2μm,19.3s
PKST T"s 141.47 327 ⇓*e*PKPdf **PKPdf 10 03 44.6 -0.5**
SRS Serrai 141.48 315 P PKPdf 10 03 39.3 -6.0
CLZ Clausthal 141.54 338 *e*PP PP 10 06 48.2 -0.1
EKA Eskdalemuir Ar 141.79 352 PKPpre PKPpre 10 03 38.9
EKA PKP **PKPdf 10 03 44.9 -0.5**
EKA Eskdalemuir Ar 141.79 352 PKhKP PKPpre 10 03 38.9
comp=Z,3.3nm,0.9s,baz=15,slow=2.9,SNR=4.4
EKA PKP **PKPdf 10 03 44.9 -0.5**
comp=Z,6.6nm,0.8s,baz=298,slow=1.8,SNR=5.6
PKSM Moragy 141.80 325 ⇓*e*PKPdf **PKPdf 10 03 41.2 -4.5**
ESK Eskdalemuir 141.81 352 *e*PKIKP **PKPdf 10 03 46.5 +1.1**
ESK MLR MLR
comp=Z,1μm,21.0s
ESK Eskdalemuir 141.81 352 *e*PKPdf **PKPdf 10 03 46.5 +1.1**
ESK LR LR
comp=Z,1μm,21.0s
TANN Tannenbergstha 141.86 334 *e*PP PP 10 06 50.1 -0.2
WERD Werda 141.90 335 *e* **PKPdf 10 03 41.2 -4.6**
PLN Plauen 141.93 335 *e* **PKPdf 10 03 41.2 -4.6**
GUNZ Gunzen 141.95 334 *e* **PKPdf 10 03 41.6 -4.3**
SOP Sopron 141.95 328 ⇓*e*PKPdf **PKPdf 10 03 42.3 -3.6**
WERN Wernitzgruen 141.99 334 *e* **PKPdf 10 03 41.7 -4.3**
NKC Novy Kostel 142.00 334 *e*PKIKP **PKPdf 10 03 42.2 -3.8**
NKC *e* 10 03 46.7
NKC MLR MLR
comp=Z,2μm,19.8s
NKC Novy Kostel 142.00 334 *e*PKPpre PKPpre 10 03 42.2
NKC *e*PKPdf **PKPdf 10 03 46.7 +0.7**
NKC AMS AMS 11 09 00.0
comp=Z,2μm,19.8s
MOX Moxa 142.02 335 *e* **PKPdf 10 03 41.7 -4.3**
MOX *e*PP **PP 10 06 51.1 -0.1**
MOX *e*SS SS 10 25 20.6 +0.3
MOX Moxa 142.02 335 *e*PKHKP PKPpre 10 03 41.7
MOX *e* 10 06 51.1
MOX *e*SS SS 10 25 20.6 +0.3
IBBN Ibbenburen 142.06 340 *e*PP PP 10 06 51.3 0.0
VAY Valandovo 142.07 316 *e*PKP PKPdf 10 03 39.6 -6.7
CONA Conrad Observa 142.13 329 ⇓*i*PKPdf **PKPdf 10 03 43.5 -2.9**
comp=Z,484nm,4.3s,SNR=10
NPS Neapolis 142.21 305 P **PKPdf 10 03 48.2 +1.4**
DIVS Divibare 142.27 321 P PKPdf 10 03 40.8 -5.9
MANZ Manzenberg 142.34 334 *e* **PKPdf 10 03 42.7 -3.9**
LAST Lasithi 142.34 305 *e*P **PKPdf 10 03 47.0 -0.1**
KHC Kasperske Hory 142.35 332 *e*PKPpre PKPpre 10 03 43.2
KHC *e*PKPdf **PKiKP 10 03 50.0 +0.3**
KHC *e*PP **PP 10 06 51.8 -1.5**
KHC AMS AMS 11 11 00.0
comp=Z,2μm,18.8s
KHC Kasperske Hory 142.35 332 *e*PKPdf PKPpre 10 03 42.8
ROTZ Rotzenmuhle 142.46 334 *e* **PKPdf 10 03 43.4 -3.4**
ROTZ *e*PP **PP 10 06 53.8 -0.1**
SKO Skopje 142.50 317 P **PKPdf 10 03 44.2 -2.9**
SKO Skopje 142.50 317 *e*PKP **PKPdf 10 03 43.2 -3.9**
GEC2 GERESS Array S 142.50 332 *e* **PKPdf 10 03 43.5 -3.5**
GEC2 *e*PP **PP 10 06 53.0 -1.4**
GEC2 *e*SS SS 10 25 26.2 0.0
GEC2 GERESS Array S 142.50 332 *e*PKIKP **PKPdf 10 03 43.5 -3.5**
GEC2 *e* 10 06 53.0
GEC2 *e*SS SS 10 25 26.2 0.0
GERES GERESS Array B 142.50 332 PKPpre PKPpre 10 03 43.8
GERES GERESS Array B 142.50 332 PKhKP PKPpre 10 03 43.8
comp=Z,8.1nm,0.9s,baz=35,slow=4.9,SNR=28
UBBA Unterbreizbach 142.51 337 *e* **PKPdf 10 03 43.6 -3.1**
UBBA *e*SS SS 10 25 26.3 +0.8
BEHE Becsehely 142.64 327 ⇓*e*PKPdf **PKPdf 10 03 44.2 -3.0**
WET Wettzell 142.65 333 *e* **PKPdf 10 03 44.0 -3.1**
WET *e*PP **PP 10 06 54.9 -0.2**
WET *e*SS SS 10 25 27.8 +0.1
WET Wettzell 142.65 333 *e*PKIKP **PKPdf 10 03 44.0 -3.1**
WET *e* 10 06 54.9
WET *e*SS SS 10 25 27.8 +0.1
WTSB Winterswijk 142.66 341 *e*PKPdf **PKPdf 10 03 42.4 -4.6**
comp=Z,490nm,3.4s
LIT Litokhoron 142.68 314 P **PKPdf 10 03 42.8 -4.7**
LIT Litokhoron 142.68 314 *e*P PKPdf 10 03 42.3 -5.2
IDI Anoyia 142.76 305 P **PKPdf 10 03 43.5 -4.3**
IDI Anoyia 142.76 305 *e*P **PKPdf 10 03 46.5 -1.3**
IDI Anoyia 142.76 305 *e*PKPdf **PKPdf 10 03 47.2 -0.6**
ARSA Arzberg 142.76 328 ⇓*i*PKPdf **PKPdf 10 03 45.1 -2.3**
comp=Z,412nm,3.1s,SNR=7.5
GRF Grafenberg Arr 142.93 335 *e* **PKPdf 10 03 45.2 -2.4**
GRF *e*PP **PP 10 06 56.4 -0.3**
GRF *e*SS SS 10 25 31.1 +0.3
GRFO Grafenberg 142.93 335 *e*PKIKP **PKPdf 10 03 45.8 -1.8**
GRFO Grafenberg 142.93 335 *e*PKPdf **PKPdf 10 03 45.8 -1.8**
LKR Lokris 142.95 312 P **PKPdf 10 03 43.6 -4.4**
LKR Lokris 142.95 312 *e*P **PKPdf 10 03 47.6 -0.4**
BUG Bochum--Univer 142.96 340 *e*SS SS 10 25 31.4 +0.7
MOA Molln 142.96 330 ⇑*i*PKPdf **PKPdf 10 03 44.6 -3.1**
comp=Z,407nm,2.5s,SNR=19
BIA Bitola 143.04 316 *e*PKP PKPab 10 03 43.8 +0.3
KZN Kozani 143.08 315 P PKPab 10 03 43.4 -0.3
FNA Florina 143.12 316 P PKPab 10 03 43.9 +0.1
FNA Florina 143.12 316 *e*P **PKPdf 10 03 47.7 -0.6**
AXAR Agios Charalam 143.14 312 P PKPab 10 03 43.9 0.0
BCI Bajram Curri 143.17 319 *e*PN PKPbc 10 03 45.8 +0.5
DID Didima 143.23 310 *e*P PKPab 10 03 44.5 +0.1
THL Klokotos Trika 143.25 313 P PKPbc 10 03 45.0 -0.6
THL Klokotos Trika 143.25 313 *e*P PKPab 10 03 42.7 -1.6
VAM Vamos 143.26 306 *e*P **PKPdf 10 03 47.3 -1.3**
AGG Agios Georgios 143.27 312 *e*P PKPbc 10 03 46.9 +1.2
PHP Peshkopia 143.28 318 *e*PN PKPbc 10 03 45.7 0.0
PHP Peshkopia 143.28 318 P PKPbc 10 03 46.2 +0.5
PERS Pernice 143.39 328 *i* PKPbc PKPab 10 03 45.1 +0.4
PERS *i* 10 07 00.2
SOKA Soboth 143.40 328 ⇓*i*PKPdf PKPbc 10 03 46.6 +0.7
comp=Z,441nm,2.4s
PUK Puka 143.45 318 *e*PN PKPbc 10 03 46.4 +0.2
NEST Nestorio 143.51 315 P PKPbc 10 03 46.9 +0.5
TNS Taunus Mts 143.57 338 *e*PKP PKPbc 10 03 47.3 +1.1
TNS *e*SS SS 10 25 38.5 +0.4
TNS Taunus Mts 143.57 338 *e*PKIKP PKPbc 10 03 47.3 +1.1
TNS *e*SS SS 10 25 38.5 +0.4
KBN Korca 143.59 316 *e*PN PKPab 10 03 44.2 -1.5
KBN Korca 143.59 316 P PKPbc 10 03 47.4 +0.8
KALE Kalithea 143.67 312 *e*P PKPbc 10 03 47.6 +0.7
EVR Evrytania 143.68 313 P PKPbc 10 03 47.2 +0.2
GUR Goura 143.71 311 P PKPab 10 03 46.5 +0.2
GUR Goura 143.71 311 *e*P PKPbc 10 03 47.4 +0.3
RJOB Jochberg 143.72 331 *e*PKP PKPbc 10 03 47.6 +0.8
RJOB *e*SS SS 10 25 40.3 0.0
VLI Veliai 143.75 309 P PKPab 10 03 46.5 +0.1
VLI Veliai 143.75 309 *e*P PKPab 10 03 46.7 +0.3
ANKY Antikythira Is 143.79 307 *e*P **PKPdf 10 03 50.5 +1.0**
KLV Kalavryta, Ach 143.81 311 *e*P PKPbc 10 03 47.1 -0.2
EFP Efpalio 143.82 312 P **PKPdf 10 03 48.7 -0.8**
EFP Efpalio 143.82 312 *e*P PKPab 10 03 44.9 -1.7
TIR Tirane 143.83 317 *e*PN PKPbc 10 03 47.9 +0.7
TIR Tirane 143.83 317 P PKPab 10 03 48.1 +0.9
TIR Tirane 143.83 317 *e*PKIKP **PKPdf 10 03 48.6 -0.8**
TIR MLR MLR
comp=Z,1μm,20.0s
TIR Tirane 143.83 317 *e*PKPdf **PKPdf 10 03 48.6 -0.8**
TIR LR LR
comp=Z,1μm,20.0s
LAKA Lakka 143.85 311 P PKPbc 10 03 47.4 0.0
LAKA Lakka 143.85 311 *e*P **PKPdf 10 03 51.2 +1.6**
VLX Vlachokerasia 143.91 310 *e*P **PKPdf 10 03 50.5 +0.7**
TOD Tromm 143.94 337 PKIKP PKPbc 10 03 47.4 +0.1
TOD Tromm 143.94 337 PKP PKPbc 10 03 47.4 +0.1
KBA Koelnbreinsper 143.95 330 ⇓*i*PKPdf PKPab 10 03 46.9 -0.1
comp=Z,417nm,1.9s,SNR=32
HGN Heimansgroeve 143.97 340 *e*PKPdf PKPbc 10 03 47.0 -0.2
comp=Z,733nm,2.5s
JAN Janina 144.01 314 P PKPbc 10 03 48.5 +0.7
BEBN Eben Emael 144.02 341 PKP **PKPdf 10 03 48.5 -1.0**
BOJS Bojanci 144.08 327 *i* PKPbc PKPbc 10 03 48.0 +0.2
BOJS *e* 10 07 04.7
MEM Membach 144.08 340 PKP PKPbc 10 03 48.0 +0.3
FUR Furstenfeldbru 144.08 333 *e*PKP **PKPdf 10 03 49.2 -0.5**
FUR *e*SS SS 10 25 50.5 +6.3
FUR Furstenfeldbru 144.08 333 *e*PKIKP **PKPdf 10 03 49.2 -0.5**
FUR *e*SS SS 10 25 50.5 +6.3
LJU Ljubljana 144.09 328 *i* PKPbc PKPbc 10 03 48.4 +0.6
LJU *e* 10 07 04.2
MYKA Terra Mystica 144.12 329 ⇑*i*PKPdf PKPbc 10 03 48.1 +0.1
comp=Z,424nm,2.0s
ABH Alteburg 144.18 338 PKP **PKPab 10 03 47.7 +0.1**
DYR Agios Nikonas 144.19 309 P **PKPab 10 03 47.9 -0.1**
DYR Agios Nikonas 144.19 309 *e*P PKPbc 10 03 49.2 +0.7
DLF Lyons Farm 144.19 354 *e*P **PKPab 10 03 47.2 -0.2**
RLS Riolos of Patr 144.29 312 P **PKPdf 10 03 50.0 -0.3**
RLS Riolos of Patr 144.29 312 *e*P **PKPab 10 03 45.4 -2.9**
AXS Araxos 144.30 312 P PKPbc 10 03 49.1 +0.4
ITM Ithomi 144.32 310 P **PKPab 10 03 48.0 -0.5**
ITM Ithomi 144.32 310 *e*P **PKPdf 10 03 49.7 -0.8**
VOY Vojsko 144.42 328 *e*PKPbc **PKPab 10 03 48.2 -0.5**
VOY *e* 10 04 06.5
VOY *e* 10 04 51.8
JAVS Javornik 144.43 328 *i* PKPbc PKPbc 10 03 49.3 +0.3
JAVS *e* 10 07 05.3
STU Stuttgart 144.47 336 *e*PKP **PKPdf 10 03 49.9 -0.4**
STU *e*SS SS 10 25 54.0 +5.6
STU Stuttgart 144.47 336 *e*PKIKP **PKPdf 10 03 49.9 -0.4**
STU Stuttgart 144.47 336 *e*PKPdf **PKPdf 10 03 49.9 -0.4**
BCLA Clavier 144.47 341 PKP **PKPdf 10 03 49.7 -0.5**
SRN Sarande 144.48 315 *e*PN PKPbc 10 03 49.2 0.0
RUP Ruppelstein 144.50 338 PKIKP PKPbc 10 03 49.3 +0.2
RUP Ruppelstein 144.50 338 PKP PKPbc 10 03 49.3 +0.2
LKD2 Lefkada island 144.54 313 P **PKPdf 10 03 51.1 +0.3**
PYL PYLOS 144.57 310 P **PKPab 10 03 49.0 -0.4**
PYL PYLOS 144.57 310 *e*P **PKPab 10 03 49.5 +0.1**
WATA Walderalm 144.58 332 ⇓*i*PKPdf **PKPdf 10 03 50.5 -0.3**
comp=Z,320nm,1.8s
ABTA Abfaltersbach 144.58 330 ⇑*i*PKPdf **PKPab 10 03 48.7 -0.6**
comp=Z,377nm,1.5s,SNR=45
WTTA Wattenberg 144.60 332 ⇑*i*PKPdf **PKPab 10 03 49.5 +0.1**
comp=Z,1μm,2.4s,SNR=27
KEK Kerkira 144.69 315 P PKPbc 10 03 50.3 +0.4
MOTA Moosalm 144.78 332 ⇑*i*PKPdf **PKPab 10 03 50.1 0.0**
comp=Z,223nm,1.2s,SNR=29
RETA Reutte 144.82 333 ⇓*i*PKPdf **PKPdf 10 03 50.7 -0.3**
comp=Z,1μm,2.4s,SNR=50
LANF Langenberg 144.83 337 PKIKP PKPbc 10 03 50.2 +0.1
LANF Langenberg 144.83 337 PKP PKPbc 10 03 50.2 +0.1
LANF Langenberg 144.83 337 PKP PKPbc 10 03 50.2 +0.1
WLF Walferdange 144.84 339 PKP **PKPdf 10 03 51.1 +0.2**
WLF Walferdange 144.84 339 *e*PKP **PKPdf 10 03 50.9 0.0**
WLF *e*SS SS 10 25 53.1 +0.6
WLF Walferdange 144.84 339 *e*PKIKP **PKPdf 10 03 50.8 -0.1**
WLF MLR MLR
comp=Z,2μm,19.0s
WLF Walferdange 144.84 339 *e*PKPbc **PKPdf 10 03 50.8 -0.1**
WLF LR LR
comp=Z,2μm,19.0s
DOU Dourbes 144.97 341 PKP PKPbc 10 03 50.6 +0.2
BFO Black Forest 145.16 336 *e*PKP **PKPdf 10 03 51.7 +0.1**
BFO *e*SS SS 10 25 56.7 +0.3
BFO Black Forest 145.16 336 *e*PKIKP **PKPdf 10 03 51.7 +0.1**
BFO *e*SS SS 10 25 56.7 +0.3
BFO Black Forest 145.16 336 *e*PKPbc **PKPbc 10 03 51.2 0.0**
BFO LR LR
comp=Z,1μm,19.0s
SPAK Spaichingen-Ko 145.17 335 PKP **PKPab 10 03 51.5 +0.1**
FETA Feichten 145.19 332 *i* PKPdf **PKPbc 10 03 51.4 -0.1**
comp=Z,2μm,2.8s,SNR=135
MENF Mencas 145.26 344 PKP **PKPbc 10 03 50.2 -1.1**
MENF Mencas 145.26 344 PKP **PKPbc 10 03 50.2 -1.1**
DAVA Damuels 145.36 333 ⇑*i*PKPdf **PKPbc 10 03 51.3 -0.7**
comp=Z,2μm,1.9s,SNR=84
CDF Champ du Feu 145.50 337 *e*PKIKP **PKPdf 10 03 52.3 +0.1**
CDF Champ du Feu 145.50 337 *e*PKIKP **PKPdf 10 03 52.3 +0.1**
CDF Champ du Feu 145.50 337 *e*PKPdf **PKPdf 10 03 52.3 +0.1**
LIBD Limburg 145.59 336 PKIKP **PKPab 10 03 52.8 0.0**
LIBD Limburg 145.59 336 PKP **PKPab 10 03 52.8 0.0**
FELD Feldberg im Sc 145.66 336 PKP **PKPdf 10 03 52.5 -0.1**
ECH Echery 145.71 337 *e*PKIKP **PKPbc 10 03 52.9 0.0**
ECH MLR MLR
comp=Z,1μm,20.0s
ECH Echery 145.71 337 *e*PKPbc **PKPbc 10 03 52.9 0.0**
ECH LR LR
comp=Z,1μm,20.0s
ECH Echery 145.71 337 PKP **PKPbc 10 03 52.8 -0.1**
DAVOX Davos/Dischmat 145.75 333 PKPbc **PKPab 10 03 54.0 +0.3**
DAVOX Davos/Dischmat 145.75 333 PKPbc **PKPab 10 03 54.0 +0.3**
comp=Z,156nm,1.0s,baz=55,slow=0.7,SNR=126
VAL Valentia 145.78 358 ⇑*i*P **PKPbc 10 03 53.0 +0.1**
PAGF Fort de Pagny 145.94 339 *e*PKIKP **PKPdf 10 03 53.1 +0.2**
PAGF Fort de Pagny 145.94 339 *e*PKPdf **PKPdf 10 03 53.1 +0.2**
SHEL Horse Pasture 145.98 191 *e*PKIKP **PKPbc 10 03 54.5 -0.2**
SHEL MLR MLR
comp=Z,1μm,20.0s
SHEL Horse Pasture 145.98 191 *e*PKPdf **PKPbc 10 03 54.5 -0.2**
SHEL LR LR
comp=Z,1μm,20.0s
MOF Molkenrain 146.02 337 PKP2 **PKPdf 10 03 53.3 +0.2**

MOF	Molkenrain	146.02	337	PKP	PKPdf	10 03 53.3	+0.2
MOF	Molkenrain	146.02	337	PKP	PKPdf	10 03 53.3	+0.2
THEF	They Montfort	146.12	338	PKP2	PKPbc	10 03 53.8	-0.4
THEF	They Montfort	146.12	338	PKP	PKPbc	10 03 53.8	-0.4
THEF	They Montfort	146.12	338	PKP	PKPbc	10 03 53.8	-0.4
HINF	Hinteralfeld	146.15	337	ePKIKP	PKPdf	10 03 53.2	-0.1
HINF	Hinteralfeld	146.15	337	ePKIKP	PKPdf	10 03 53.2	-0.1
HINF	Hinteralfeld	146.15	337	ePKPdf	PKPdf	10 03 53.2	-0.1
HAU	Haudompre	146.18	337	ePKIKP	PKPdf	10 03 53.4	+0.1
	comp=Z,32nm,0.9s						
HAU				eR			
	comp=Z,2µm,19.8s						
HAU	Haudompre	146.18	337	ePKIKP	PKPdf	10 03 53.4	+0.1
HAU	Haudompre	146.18	337	ePKPdf	PKPdf	10 03 53.4	+0.1
BBS	Basel-Blauen	146.19	336	PKP2	PKPbc	10 03 54.2	-0.2
BBS	Basel-Blauen	146.19	336	PKP	PKPbc	10 03 54.2	-0.2
MEZF	Maizieres J'vi	146.21	339	ePKIKP	PKPbc	10 03 54.0	-0.4
MEZF	Maizieres J'vi	146.21	339	ePKPdf	PKPbc	10 03 54.0	-0.4
TUE	Stuetta	146.22	333	ePKPbc	PKPdf	10 03 53.8	+0.1
TUE				LR	LR		
	comp=Z,2µm,21.0s						
SFTF	Sexfontaines	146.47	339	ePKIKP	PKPdf	10 03 54.2	+0.4
SFTF	Sexfontaines	146.47	339	ePKPdf	PKPdf	10 03 54.2	+0.4
LOMF	Lomont	146.55	336	PKIKP	PKPdf	10 03 54.4	+0.4
LOMF	Lomont	146.55	336	PKP	PKPdf	10 03 54.4	+0.4
LOMF	Lomont	146.55	336	PKP	PKPdf	10 03 54.4	+0.4
RCBR	Riachuelo	146.90	133	ePKPbc	PKPbc	10 03 56.7	-0.8
RCBR				LR	LR		
	comp=Z,1µm,20.0s						
TIP	Timpagrande	146.99	316	P	PKPdf	10 03 55.1	+0.1
TIP	Timpagrande	146.99	316	ePKPdf	PKPdf	10 03 55.9	+0.9
TIP				ePKPbc	PKPab	10 03 58.1	-0.5
TIP				LR	LR		
	comp=Z,1µm,19.0s						
CUC	Castrocucco	147.15	318	ePKPbc	PKPdf	10 03 56.3	+1.1
CUC				LR	LR		
	comp=Z,1µm,20.0s						
AQU	L'Aquila	147.16	324	ePKPdf	PKPdf	10 03 56.1	+0.9
AQU				ePKPbc	PKPab	10 03 58.8	-0.3
AQU				LR	LR		
	comp=Z,2µm,19.0s						
CABF	La Chapelle	147.44	336	ePKIKP	PKPdf	10 03 56.5	+0.9
CABF	La Chapelle	147.44	336	ePKIKP	PKPdf	10 03 56.5	+0.9
CABF	La Chapelle	147.44	336	ePKPdf	PKPdf	10 03 56.5	+0.9
VLC	Villacollemand	147.49	329	ePKPbc	PKPbc	10 03 57.9	-0.3
VLC				LR	LR		
	comp=Z,2µm,21.0s						
FLN	La Foliniere	147.58	346	ePKIKP	PKPdf	10 03 55.8	+0.2
	comp=Z,93nm,1.3s						
FLN				eR			
	comp=Z,2µm,20.2s						
FLN	La Foliniere	147.58	346	ePKIKP	PKPdf	10 03 55.8	+0.2
FLN	La Foliniere	147.58	346	ePKPdf	PKPdf	10 03 55.8	+0.2
LDF	La Druitiere	147.65	345	ePKIKP	PKPdf	10 03 55.8	+0.1
LDF	La Druitiere	147.65	345	ePKIKP	PKPdf	10 03 55.8	+0.1
LDF	La Druitiere	147.65	345	ePKPdf	PKPdf	10 03 55.8	+0.1
LOR	Lormes	147.68	339	ePKIKP	PKPdf	10 03 56.1	+0.2
	comp=Z,41nm,1.3s						
LOR				eR			
	comp=Z,1µm,20.5s						
LOR	Lormes	147.68	339	ePKPdf	PKPdf	10 03 56.1	+0.2
SSF	Saint Saulge	147.98	340	ePKIKP	PKPdf	10 03 56.6	+0.3
	comp=Z,105nm,1.7s						
SSF	Saint Saulge	147.98	340	ePKIKP	PKPdf	10 03 56.6	+0.3
SSF	Saint Saulge	147.98	340	ePKPdf	PKPdf	10 03 56.6	+0.3
GRR	Gorron	148.02	346	ePKIKP	PKPdf	10 03 56.5	+0.2
	comp=Z,60nm,1.2s						
GRR	Gorron	148.02	346	ePKIKP	PKPdf	10 03 56.5	+0.2
GRR	Gorron	148.02	346	ePKPdf	PKPdf	10 03 56.5	+0.2
CEL	Celeste	148.05	316	ePKPdf	PKPdf	10 03 57.4	+0.6
CEL				ePKPbc	PKPbc	10 03 59.8	-0.1
CEL				ePKPab	PKPab	10 04 02.6	-0.2
CEL				LR	LR		
	comp=Z,955nm,20.0s						
LPL	La Plagne	148.09	334	ePKIKP	PKPdf	10 03 57.3	+0.4
LPL	La Plagne	148.09	334	ePKIKP	PKPdf	10 03 57.3	+0.4
LPL	La Plagne	148.09	334	ePKPdf	PKPdf	10 03 57.3	+0.4
LPG	La Plagne	148.10	334	ePKIKP	PKPdf	10 03 57.5	+0.6
LPG	La Plagne	148.10	334	ePKIKP	PKPdf	10 03 57.5	+0.6
LPG	La Plagne	148.10	334	ePKPdf	PKPdf	10 03 57.5	+0.6
SMF	Signal de Mont	148.23	339	ePKIKP	PKPdf	10 03 56.9	+0.1
SMF	Signal de Mont	148.23	339	ePKIKP	PKPdf	10 03 56.9	+0.1
SMF	Signal de Mont	148.23	339	ePKPdf	PKPdf	10 03 56.9	+0.1
AVF	Avril sur Loir	148.27	340	ePKIKP	PKPdf	10 03 56.8	0.0
AVF	Avril sur Loir	148.27	340	ePKIKP	PKPdf	10 03 56.8	0.0
AVF	Avril sur Loir	148.27	340	ePKPdf	PKPdf	10 03 56.8	0.0
BNI	Bardonecchia	148.49	334	ePKIKP	PKPdf	10 03 58.2	+0.8
BNI				e		10 04 01.9	
BNI				e		10 04 04.9	
BNI				MLR	MLR		
	comp=Z,2µm,20.0s						
BNI	Bardonecchia	148.49	334	ePKPdf	PKPdf	10 03 58.2	+0.8
BNI				ePKPbc	PKiKP	10 04 01.9	-0.6
BNI				ePKPab	PKPab	10 04 04.9	+0.5
BNI				LR	LR		
	comp=Z,2µm,20.0s						
SGMF	Saint Gilles	148.51	348	ePKIKP	PKPdf	10 03 57.2	+0.1
	comp=Z,65nm,1.2s						
SGMF	Saint Gilles	148.51	348	ePKIKP	PKPdf	10 03 57.2	+0.1
SGMF	Saint Gilles	148.51	348	ePKPdf	PKPdf	10 03 57.2	+0.1
ROSF	Rostrenen	148.58	349	ePKIKP	PKPdf	10 03 57.2	0.0
	comp=Z,28nm,1.1s						
ROSF	Rostrenen	148.58	349	ePKIKP	PKPdf	10 03 57.2	0.0
ROSF	Rostrenen	148.58	349	ePKPdf	PKPdf	10 03 57.2	0.0
GDM	Grand'Maison	148.59	335	PKP	PKPdf	10 03 58.7	+1.1
GDM	Grand'Maison	148.59	335	PKP	PKPdf	10 03 58.7	+1.1
BGF	Bois d'Agland	148.64	340	ePKIKP	PKPdf	10 03 57.8	+0.4
BGF	Bois d'Agland	148.64	340	ePKIKP	PKPdf	10 03 57.8	+0.4
BGF	Bois d'Agland	148.64	340	ePKPdf	PKPdf	10 03 57.8	+0.4
MBDF	Montbardon	148.71	334	ePKIKP	PKPdf	10 03 57.9	+0.1
MBDF	Montbardon	148.71	334	ePKIKP	PKPdf	10 03 57.9	+0.1
MBDF	Montbardon	148.71	334	ePKPdf	PKPdf	10 03 57.9	+0.1
GRN	Grenoble	148.71	335	PKIKP	PKPdf	10 03 58.7	+1.0
GRN	Grenoble	148.71	335	PKP	PKPdf	10 03 58.7	+1.0
GRN	Grenoble	148.71	335	PKP	PKPdf	10 03 58.7	+1.0
BST	Brest	148.75	350	PKP	PKPbc	10 04 01.8	+0.4
BST	Brest	148.75	350	PKP	PKPbc	10 04 01.8	+0.4
SURF	Saint Ours	148.89	333	PKP	PKPdf	10 03 59.5	+1.4
SURF	Saint Ours	148.89	333	PKP	PKPdf	10 03 59.5	+1.4
ORIF	Oris-en-Rattie	148.93	335	ePKIKP	PKPdf	10 03 58.2	+0.1
ORIF				eR			
	comp=Z,1µm,20.2s						
ORIF	Oris-en-Rattie	148.93	335	ePKIKP	PKPdf	10 03 58.2	+0.1
ORIF	Oris-en-Rattie	148.93	335	ePKPdf	PKPdf	10 03 58.2	+0.1
SAOF	Saorge	148.96	332	PKIKP	PKPdf	10 03 58.7	+0.6
SAOF	Saorge	148.96	332	PKP	PKPdf	10 03 58.7	+0.6
SAOF	Saorge	148.96	332	PKP	PKPdf	10 03 58.7	+0.6
QUIF	Quistinic	148.96	348	ePKIKP	PKPdf	10 03 57.9	0.0
	comp=Z,94nm,1.4s						
QUIF	Quistinic	148.96	348	ePKIKP	PKPdf	10 03 57.9	0.0
QUIF	Quistinic	148.96	348	ePKPdf	PKPdf	10 03 57.9	0.0
AGO	Saint Agoulin	148.99	339	PKP	PKPdf	10 03 59.0	+1.0
AGO	Saint Agoulin	148.99	339	PKP	PKPdf	10 03 59.0	+1.0
AUTN	L'Aution	149.00	332	PKIKP	PKPdf	10 03 59.0	+0.6
AUTN	L'Aution	149.00	332	PKP	PKPdf	10 03 59.0	+0.6
AUTN	L'Aution	149.00	332	PKP	PKPdf	10 03 59.0	+0.6
TOUF	Mont Tournerai	149.07	332	PKIKP	PKPdf	10 03 59.2	+0.7
TOUF	Mont Tournerai	149.07	332	PKP	PKPdf	10 03 59.2	+0.7
TOUF	Mont Tournerai	149.07	332	PKP	PKPdf	10 03 59.2	+0.7
TCF	Toulx Ste Croi	149.09	340	ePKIKP	PKPdf	10 03 58.5	+0.3
	comp=Z,63nm,1.4s						
TCF	Toulx Ste Croi	149.09	340	ePKIKP	PKPdf	10 03 58.5	+0.3
TCF	Toulx Ste Croi	149.09	340	ePKPdf	PKPdf	10 03 58.5	+0.3
SBF	Sospel	149.10	332	ePKIKP	PKPdf	10 03 58.2	-0.1
SBF	Sospel	149.10	332	ePKIKP	PKPdf	10 03 58.2	-0.1
SBF	Sospel	149.10	332	ePKPdf	PKPdf	10 03 58.2	-0.1
SSB	Saint Sauveur	149.15	337	ePKIKP	PKPdf	10 03 59.0	+0.7
SSB				e		10 04 03.5	
SSB				MLR	MLR		
	comp=Z,869nm,19.0s						
SSB	Saint Sauveur	149.15	337	ePKPdf	PKPdf	10 03 59.0	+0.7
SSB				ePKPbc	PKiKP	10 04 03.5	-0.3
SSB				LR	LR		
	comp=Z,869nm,19.0s						
SSB	Saint Sauveur	149.15	337	PKP	PKPdf	10 03 59.0	+0.7
MVIF	Mont Vial	149.21	332	PKIKP	PKPdf	10 03 59.2	+0.6
MVIF	Mont Vial	149.21	332	PKP	PKPdf	10 03 59.2	+0.6
MVIF	Mont Vial	149.21	332	PKP	PKPdf	10 03 59.2	+0.6
REVF	Revere	149.23	332	PKIKP	PKPdf	10 03 58.7	+0.2
REVF	Revere	149.23	332	PKP	PKPdf	10 03 58.7	+0.2
REVF	Revere	149.23	332	PKP	PKPdf	10 03 58.7	+0.2
COLF	Collangettes	149.26	338	PKP	PKPdf	10 03 59.7	+1.2
COLF	Collangettes	149.26	338	PKP	PKPdf	10 03 59.7	+1.2
PYM	Petit Puy Mans	149.30	339	PKIKP	PKPdf	10 03 59.9	+1.3
PYM	Petit Puy Mans	149.30	339	PKP	PKPdf	10 03 59.9	+1.3
PYM	Petit Puy Mans	149.30	339	PKP	PKPdf	10 03 59.9	+1.3
PGF	Pioggiola	149.36	328	ePKIKP	PKPdf	10 03 58.8	-0.1
	comp=Z,224nm,1.4s						
PGF	Pioggiola	149.36	328	ePKIKP	PKPdf	10 03 58.8	-0.1
PGF	Pioggiola	149.36	328	ePKPdf	PKPdf	10 03 58.8	-0.1
CALN	Calern	149.44	332	PKP	PKPdf	10 03 59.3	+0.3
CALN	Calern	149.44	332	PKP	PKPdf	10 03 59.3	+0.3
VIVF	Saint-Julien-l	149.46	336	ePKIKP	PKPdf	10 03 59.1	+0.3
VIVF	Saint-Julien-l	149.46	336	ePKPdf	PKPdf	10 03 59.1	+0.3
MFF	Saint Martin d	149.50	344	ePKIKP	PKPdf	10 03 59.1	+0.3
	comp=Z,137nm,1.6s						
MFF	Saint Martin d	149.50	344	ePKPdf	PKPdf	10 03 59.1	+0.3
LBL	Lubilhac	149.66	338	PKP	PKPdf	10 04 00.3	+1.1
LBL	Lubilhac	149.66	338	PKP	PKPdf	10 04 00.3	+1.1
FRF	La Foret Royal	149.69	332	ePKIKP	PKPdf	10 03 59.2	0.0
FRF	La Foret Royal	149.69	332	ePKIKP	PKPdf	10 03 59.2	0.0
FRF	La Foret Royal	149.69	332	ePKPdf	PKPdf	10 03 59.2	0.0
FRNF	Fournols	149.76	339	PKP	PKPdf	10 04 00.5	+1.2
FRNF	Fournols	149.76	339	PKP	PKPdf	10 04 00.5	+1.2
SMRF	Simiane la Rot	149.82	334	ePKIKP	PKPdf	10 03 59.9	+0.4
	comp=Z,60nm,1.3s						
SMRF	Simiane la Rot	149.82	334	ePKPdf	PKPdf	10 03 59.9	+0.4
LMR	La Mourre	149.94	332	ePKIKP	PKPdf	10 03 59.8	+0.2
	comp=Z,101nm,1.6s						
LMR	La Mourre	149.94	332	ePKPdf	PKPdf	10 03 59.8	+0.2
RJF	Les Rejaudoux	150.18	340	ePKIKP	PKPdf	10 04 00.4	+0.5
RJF				eR			
	comp=Z,2µm,21.0s						
RJF	Les Rejaudoux	150.18	340	ePKPdf	PKPdf	10 04 00.4	+0.5
WDD	Wield Dalam	150.23	313	ePKPdf	PKPdf	10 03 58.1	-2.1
WDD				LR	LR		
	comp=Z,1µm,19.0s						
CAF	Calviac	150.34	339	ePKIKP	PKPdf	10 04 00.8	+0.6
	comp=Z,76nm,1.7s						
CAF	Calviac	150.34	339	ePKIKP	PKPdf	10 04 00.8	+0.6
CAF	Calviac	150.34	339	ePKPdf	PKPdf	10 04 00.8	+0.6
LASF	Ste Croix	150.43	336	ePKIKP	PKPdf	10 04 00.8	+0.4
	comp=Z,99nm,1.7s						
LASF	Ste Croix	150.43	336	ePKPdf	PKPdf	10 04 00.8	+0.4
LFF	La Frestale	150.75	341	ePKIKP	PKPdf	10 04 01.3	+0.5
LFF	La Frestale	150.75	341	ePKIKP	PKPdf	10 04 01.3	+0.5
LFF	La Frestale	150.75	341	ePKPdf	PKPdf	10 04 01.3	+0.5
VSL	Villasalto	151.33	324	PFAKE		10 04 10.0	+2.1
VSL				LR	LR		
	comp=Z,1µm,19.0s						
MTLF	Montolieu	151.67	338	ePKIKP	PKPdf	10 04 02.7	+0.4
	comp=Z,45nm,1.3s						
MTLF	Montolieu	151.67	338	ePKIKP	PKPdf	10 04 02.7	+0.4
MTLF	Montolieu	151.67	338	ePKPdf	PKPdf	10 04 02.7	+0.4
LRDF	Laroque-de-Fa	151.90	337	PKP	PKPdf	10 04 03.2	+0.6
LRDF	Laroque-de-Fa	151.90	337	PKP	PKPdf	10 04 03.2	+0.6
SJAF	Saint Jean de	152.15	336	PKP	PKPdf	10 04 03.2	+0.1
SJAF	Saint Jean de	152.15	336	PKP	PKPdf	10 04 03.2	+0.1
FILF	Fillols	152.21	336	PKP	PKPdf	10 04 03.5	+0.3
FILF	Fillols	152.21	336	PKP	PKPdf	10 04 03.5	+0.3
CARF	Carcanieres	152.25	337	PKP	PKPdf	10 04 03.7	+0.4
CARF	Carcanieres	152.25	337	PKP	PKPdf	10 04 03.7	+0.4
MLS	Moulis	152.40	339	PKP	PKPdf	10 04 03.9	+0.5
MLS	Moulis	152.40	339	PKP	PKPdf	10 04 03.9	+0.5
VALF	Valcebollere	152.56	337	PKP	PKPdf	10 04 04.4	+0.6
VALF	Valcebollere	152.56	337	PKP	PKPdf	10 04 04.4	+0.6
EPF	Esparros	152.59	340	ePKIKP	PKPdf	10 04 04.3	+0.6
	comp=Z,103nm,1.5s						
EPF	Esparros	152.59	340	ePKIKP	PKPdf	10 04 04.3	+0.6
EPF	Esparros	152.59	340	ePKPdf	PKPdf	10 04 04.3	+0.6
LABF	Labassere	152.66	340	PKP	PKPdf	10 04 04.9	+1.1
LABF	Labassere	152.66	340	PKP	PKPdf	10 04 04.9	+1.1
RESF	Ens	152.79	340	PKP	PKPdf	10 04 05.4	+1.3
RESF	Ens	152.79	340	PKP	PKPdf	10 04 05.4	+1.3
REYF	Montagne du Re	152.79	341	PKP	PKPdf	10 04 04.9	+0.8
REYF	Montagne du Re	152.79	341	PKP	PKPdf	10 04 04.9	+0.8
ORDF	Ordiarp	152.83	342	PKP	PKPdf	10 04 04.6	+0.6
ORDF	Ordiarp	152.83	342	PKP	PKPdf	10 04 04.6	+0.6
VIEF	Viey	152.83	340	PKP	PKPdf	10 04 05.4	+1.3
VIEF	Viey	152.83	340	PKP	PKPdf	10 04 05.4	+1.3
OSSF	Osses	152.88	342	PKP	PKPdf	10 04 04.3	+0.2
OSSF	Osses	152.88	342	PKP	PKPdf	10 04 04.3	+0.2
ETSF	Etsaut	153.00	341	ePKIKP	PKPdf	10 04 05.3	+0.9
	comp=Z,98nm,1.7s						
ETSF	Etsaut	153.00	341	ePKIKP	PKPdf	10 04 05.3	+0.9
ETSF	Etsaut	153.00	341	ePKPdf	PKPdf	10 04 05.3	+0.9
LARF	Larrau	153.00	342	PKP	PKPdf	10 04 05.4	+1.1
LARF	Larrau	153.00	342	PKP	PKPdf	10 04 05.4	+1.1
SJPF	Ste Jean	153.00	342	ePKIKP	PKPdf	10 04 05.0	+0.7
	comp=Z,136nm,1.9s						
SJPF	Ste Jean	153.00	342	ePKIKP	PKPdf	10 04 05.0	+0.7
SJPF	Ste Jean	153.00	342	ePKPdf	PKPdf	10 04 05.0	+0.7
KEST	Kesra	153.79	318	ePKPdf	PKPdf	10 04 06.8	+1.1
KEST				PKP	PKPdf	10 04 07.1	+1.4
KEST				PKPbc	PKiKP	10 04 14.7	+1.0
KEST	Kesra	153.79	318	PKP	PKPdf	10 04 07.1	+1.4
	comp=Z,1.3nm,0.8s,baz=231,slow=6.5,SNR=6.1						
KEST				PKPbc	PKiKP	10 04 14.7	+1.0
	comp=Z,6.2nm,0.9s,baz=307,slow=4.1,SNR=13						
CMAH	Djebel Manchou	154.41	321	P	PKPdf	10 04 06.5	-0.1
ASCN	Ascension	154.46	175	PFAKE		10 04 20.0	+4.4
ASCN				LR	LR		
	comp=Z,585nm,19.0s						
ABSA	Djebel Ababsia	154.61	321	P	PKPdf	10 04 07.4	+0.5
CAEH	'Ain El Ouahch	154.64	322	P	PKPdf	10 04 07.1	+0.3
CKFL	Kef-Lekhel	154.98	322	P	PKPdf	10 04 08.2	+0.8
CASM	Ain Smara	155.21	322	P	PKPdf	10 04 08.0	+0.3
DFRA	Djebel Bou Aff	155.37	323	P	PKPdf	10 04 09.2	+1.2
CTEI	Djebel Teioual	155.39	322	P	PKPdf	10 04 09.6	+1.6
PBRG	Braganca	155.51	350	ePKPdf	PKPdf	10 04 06.5	-1.4
PBRG	Braganca	155.51	350	ePKPab	PKPab	10 04 34.3	+0.6
SET	Setif	155.88	323	P	PKPdf	10 04 09.0	+0.4
POLO	Lamas de Olo	156.09	352	ePKPdf	PKPdf	10 04 09.0	+0.3
POLO	Lamas de Olo	156.09	352	ePKPab	PKPab	10 04 37.0	+0.8
PVRL	Vila Real	156.18	352	ePKPab	PKPab	10 04 36.2	-0.3
MVO	Moncorvo	156.19	350	ePKPdf	PKPdf	10 04 09.0	+0.2
MVO	Moncorvo	156.19	350	ePKPab	PKPab	10 04 37.2	+0.6
MVO				eLR	LR	11 10 26.7	
	comp=Z,1µm,22.5s						
PVIS	Viseu	156.75	352	ePKPab	PKPab	10 04 39.8	+0.8
CMLA	Cha da Macela	156.81	28	PFAKE		10 04 20.0	+10
CMLA				LR	LR		
	comp=Z,2µm,20.0s						
AKET	Djebel Ketaf	156.84	325	P	PKPdf	10 04 11.4	+1.5
ESDC	Sonseca Array	156.96	344	PKP	PKPdf	10 04 10.2	+0.4
ESDC				PKPab	PKPab	10 04 39.6	-0.3
ESDC	Sonseca Array	156.96	344	PKP	PKPdf	10 04 10.2	+0.4
	comp=Z,0.3nm,0.4s,baz=113,slow=3.3,SNR=6.4						
ESDC				PKPab	PKPab	10 04 39.6	-0.3
	comp=Z,6.3nm,0.8s,baz=20,slow=3.2,SNR=12						
ESLA	Sonseca Array	156.96	344	ePKPdf	PKPdf	10 04 10.8	+0.9
ESLA				ePKPab	PKPab	10 04 40.0	+0.1
ADJB	Djebel Djouab	156.99	326	P	PKPdf	10 04 12.0	+1.9
MTE	Manteigas	157.01	351	ePKPdf	PKPdf	10 04 09.5	-0.4
MTE	Manteigas	157.01	351	ePKPab	PKPab	10 04 41.1	+0.9
MTE				eLR	LR	11 09 27.1	
	comp=Z,1µm,16.0s						
MTE	Manteigas	157.01	351	ePKPdf	PKPdf	10 04 10.1	+0.2
MTE				LR	LR		
	comp=Z,1µm,21.0s						
PAB	San Pablo	157.18	344	ePKIKP	PKPdf	10 04 09.9	-0.3
PAB				MLR	MLR		
	comp=Z,2µm,20.0s						
PAB	San Pablo	157.18	344	ePKPdf	PKPdf	10 04 09.9	-0.3
PAB				LR	LR		
	comp=Z,2µm,20.0s						
EMHD	Djebel Mahouad	157.22	327	P	PKPab	10 04 44.3	+3.0
PCBR	Castelo Branco	157.55	351	ePKPdf	PKPdf	10 04 09.9	-0.6
PCBR	Castelo Branco	157.55	351	ePKPab	PKPab	10 04 42.9	+0.5
EBNR	Beni Rached	157.86	330	P	PKPab	10 04 46.0	+2.0
PTOM	Tomar	157.90	352	ePKPdf	PKPdf	10 04 11.4	+0.4
PTOM	Tomar	157.90	352	ePKPab	PKPab	10 04 44.3	+0.4
PMRV	Marv??o	157.94	350	ePKPdf	PKPdf	10 04 11.3	+0.3
PMRV	Marv??o	157.94	350	ePKPab	PKPab	10 04 44.8	+0.7
PMRV				eLR	LR	11 08 41.6	
	comp=Z,2µm,20.0s						
EANR	'Ain N'Sour	158.34	330	P	PKPab	10 04 48.5	+2.4
PMTG	Montargil	158.42	352	ePKPdf	PKPdf	10 04 11.1	-0.5
PMTG	Montargil	158.42	352	ePKPab	PKPab	10 04 46.6	+0.4
PESTR	Estremoz	158.52	350	ePKPdf	PKPdf	10 04 11.2	-0.6
PESTR	Estremoz	158.52	350	ePKPab	PKPab	10 04 47.3	+0.7
PMAFR	Mafra	158.66	354	ePKPab	PKPab	10 04 48.0	+0.8
ETRT	Tiaret	158.69	328	P	PKPab	10 04 50.2	+2.5
LIS	Lisbon	158.88	353	eP	PKPdf	10 04 10.8	-1.4
LIS				AMS	AMS	11 18 49.2	
	comp=N,2µm,19.7s						
LIS	Lisbon	158.88	353	eP	PKPdf	10 04 10.8	-1.4
LIS	Lisbon	158.88	353	ePKIKP	PKPdf	10 04 10.7	-1.4
EVO	Evora	158.91	351	ePKIKP	PKPdf	10 04 12.3	+0.1
	comp=N,151nm,1.6s						
EVO				eR			
	comp=N,2µm,22.0s						
EVO	Evora	158.91	351	ePKPdf	PKPdf	10 04 12.3	+0.1
EVO	Evora	158.91	351	ePKPab	PKPab	10 04 49.3	+1.0
EVOP	Sao Brissos	158.93	351	ePKIKP	PKPdf	10 04 12.3	+0.1
EVOP	Sao Brissos	158.93	351	ePKPdf	PKPdf	10 04 12.3	+0.1
PBAR	Barrancos	159.10	349	ePKPdf	PKPdf	10 04 12.6	+0.2
PBAR	Barrancos	159.10	349	ePKPab	PKPab	10 04 50.0	+0.9
PNCL	Nicolau / Gran	159.40	352	ePKPdf	PKPdf	10 04 12.6	-0.2
PNCL	Nicolau / Gran	159.40	352	ePKPab	PKPab	10 04 51.4	+1.0
MESJ	Messejana	159.62	351	eP	PKPdf	10 04 11.6	-1.4
MESJ				AMS	AMS	11 26 08.2	
	comp=Z,1µm,17.3s						
MESJ	Messejana	159.62	351	eP	PKPdf	10 04 11.6	-1.4
MESJ				A	A	11 26 08.2	
	comp=Z,1µm,17.3s						
MESJ	Messejana	159.62	351	ePKIKP	PKPdf	10 04 11.6	-1.4
PCVE	Castro Verde	159.80	351	ePKpdf	PKPdf	10 04 13.5	+0.2
PCVE	Castro Verde	159.80	351	ePKPab	PKPab	10 04 53.4	+1.2
PVAQ	Vaqueiros	159.97	350	ePKPab	PKPab	10 04 53.6	+0.7
PVAQ				eLR	LR	11 10 28.3	
	comp=Z,2µm,18.0s						
PTEO	Sao Teotonio	159.98	352	ePKpdf	PKPdf	10 04 13.8	+0.3
PTEO	Sao Teotonio	159.98	352	ePKPab	PKPab	10 04 54.5	+1.5
PBDV	Barranco-do-Ve	160.16	350	ePKpdf	PKPdf	10 04 14.2	+0.5
PBDV	Barranco-do-Ve	160.16	350	ePKPab	PKPab	10 04 55.2	+1.4
MORF	Marmelete	160.21	352	ePKPdf	PKPdf	10 04 14.3	+0.5
MORF	Marmelete	160.21	352	ePKPab	PKPab	10 04 54.6	+0.5
MORF	Marmelete	160.21	352	ePKIKP	PKPdf	10 04 12.7	-1.1
TAM	Tamanrasset	162.65	290	ePKIKP	PKPdf	10 04 18.0	+1.1
TAM				MLR	MLR		
	comp=Z,2µm,21.0s						
TAM	Tamanrasset	162.65	290	ePKPdf	PKPdf	10 04 18.0	+1.1
TAM				LR	LR		
	comp=Z,2µm,21.0s						
MDT	Midelt	163.47	337	PKP	PKPdf	10 04 18.4	+1.0
MDT				PKPab	PKPab	10 05 09.2	+0.6
MDT	Midelt	163.47	337	PKP	PKPdf	10 04 18.4	+1.0
	comp=Z,12nm,1.0s,baz=43,slow=1.7,SNR=15						
MDT				PKPab	PKPab	10 05 09.2	+0.6
	comp=Z,11nm,1.1s,baz=67,slow=5.2,SNR=9.8						
TORD	Torodi Ar. Bea	165.91	253	PKP	PKPdf	10 04 20.1	+0.2
TORD				PKPab	PKPab	10 05 20.4	+0.6
TORD				PP	PP	10 09 04.9	-2.5
TORD	Torodi Ar. Bea	165.91	253	PKP	PKPdf	10 04 20.1	+0.2
	comp=Z,16nm,1.0s,baz=37,slow=0.7,SNR=47						
TORD				PKPab	PKPab	10 05 20.4	+0.6
	comp=Z,4.2nm,1.1s,baz=107,slow=4.0,SNR=2.5						
TORD				PP	PP	10 09 04.9	-2.5
	comp=Z,2.0nm,1.1s,baz=118,slow=6.1,SNR=3.1						
LIC	Lamto	166.65	212	ePKIKP	PKPdf	10 04 18.2	-2.3
	comp=Z,30nm,1.0s						
LIC				eR			
	comp=Z,3µm,22.0s						
LIC	Lamto	166.65	212	ePKPdf	PKPdf	10 04 18.2	-2.3
DBIC	Dimbokro	166.94	214	PKP	PKPdf	10 04 21.2	+0.5
DBIC	Dimbokro	166.94	214	PKP	PKPdf	10 04 21.2	+0.5
	comp=Z,9.7nm,0.9s,baz=310,slow=5.1,SNR=3.7						
SACV	Santiago Islan	168.68	102	PFAKE		10 04 30.0	+8.2
SACV				LR	LR		
	comp=Z,2µm,20.0s						

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*CSEM **12** 09:46:31.0, 62°.42N×26°.05E, h0^{km}, ML1.0, Mining explosion. After HEL*

HEL 12 09:46:31.0±0.9**, 62°.42N×26°.05E, h0^{km}, ML1.0, Explosion, Finland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAF	Kangasniemi	0.33	158	PG	Pg	09 46 37.0	-0.3
KAF				SG	Sg	09 46 41.0	-0.5
KAF	Kangasniemi	0.33	158	Pg	Pg	09 46 37.0	-0.3
KAF				Sg	Sg	09 46 41.0	-0.5
FIA0	FINESS Array S	0.98	179	PG	Pg	09 46 47.5	-2.2
	baz=353						
FIA0				SG	Sb	09 47 03.4	-0.8
FIA0	FINESS Array S	0.98	179	Pg	Pg	09 46 47.5	-2.2
FIA0				Sg	Sb	09 47 03.4	-0.8
VAF	Ylistaro	1.68	293	PG	Pn	09 47 01.3	-0.2
	baz=119						
VAF				SG	Sn	09 47 23.6	-0.1
VAF				MSG		09 47 23.6	
	comp=Z,0.5nm,0.1s						
VAF	Ylistaro	1.68	293	Pg	Pn	09 47 01.3	-0.2
VAF				Sg	Sn	09 47 23.5	-0.2
RAF	Rauma	2.47	237	SG	Sn	09 47 44.4	+1.1
RAF				MSG		09 47 44.4	
	comp=Z,0.8nm,0.1s						
RAF	Rauma	2.47	237	Sg	Sn	09 47 44.4	+1.1

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*NNC **12** 09:52:59.6±4.1, 37°.07N×69°.43E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=35.4km s-min=27.0km az=131.0*

ISC 12 09:52:52.9±1.3**, 36°.5N**±0°.1×**69°.6E**±0°.2**, h48^{km}, n6, σ1^s.46**/8**, 6C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.29	144	⇑P	Pn	09 53 42.8	+0.8
THW	Thamme Wali	4.11	153	⇑P	Pn	09 53 54.4	+1.2
SARP	Sargodha	5.24	150	P	Pn	09 54 07.4	-1.3
KK31	Karatay Array	6.64	6	P	Pn	09 54 30.9	+3.1
	3.0nm,0.3s,baz=174,slow=12,SNR=100						
KK31				⇑S	Sn	09 55 42.3	+0.1
	9.2nm,0.5s,baz=184,slow=21,SNR=13						
AB31	Akbulak array	14.55	334	P	P	09 56 19.4	-1.8
	0.7nm,0.3s,baz=148,slow=12,SNR=42						
AB31				⇑S	Sn	09 58 55.7	+0.1
	0.6nm,0.5s,baz=160,slow=22,SNR=3.9						
AKTO	Aktyubinsk	16.23	333	⇑P	P	09 56 41.2	+1.3
	3.0nm,0.8s						
AKTO				⇑S	Sn	09 59 37.7	+1.4
	1.7nm,0.8s						

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*ISCJB **12** 09:56:52.8±0.9, 5°.91S±0°.07×146°.2E±0°.1, h52^{km}, mb4.2/7, MS4.7/1, Error ellipse: s-maj=16.2km s-min=10.3km az=178.1*

*IDC **12** 09:57:01.2±3.0, 6°.22S×146°.25E, h106^{km}±25^{km}, mb4.1/7, mb1 4.2/9, mb1mx3.8/20, mbtmp4.0/9, MS4.7/1, Ms1 4.9/1, ms1mx4.2/24, Error ellipse: s-maj=24.5km s-min=21.9km az=49.0*

*NEIC **12** 09:57:02.7±1.9, 6°.22S×146°.19E, h120^{km}±15^{km}, mb4.2/3, Error ellipse: s-maj=19.3km s-min=16.1km az=155.0*

ISC 12 09:56:54.2±0.9**, 5°.87S**±0°.09×**146°.3E**±0°.1**, h52^{km}, n29, σ0^s.88**/27**, mb4.1**/7**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.62	166	P	Pn	09 57 52.6	+4.9
PMG				eSn	Sn	09 58 29.4	+0.2
PMG				S		09 58 29.6	
PMG	Port Moresby	3.62	166	P	Pn	09 57 52.6	+4.9
	23nm,0.3s,baz=358,slow=5.8,SNR=61						
PMG				S	Sn	09 58 29.6	+0.4
	105nm,0.3s,baz=155,slow=21,SNR=44						
COEN	Coen	8.60	201	ePn	Pn	09 59 00.7	+4.7
	90nm,0.4s						
COEN				eSn	Sn	10 00 33.8	+2.2
CTA	Charters Tower	14.13	180	P	P	10 00 18.2	+0.4
CTA	Charters Tower	14.13	180	P	P	10 00 18.2	+0.4
	6.3nm,0.3s,baz=0.2,slow=16,SNR=30						
WRAB	Tennant Creek	18.16	219	eP	P	10 01 01.5	-1.0
	5.7nm,0.4s						
WRA	Warramunga Arr	18.18	219	P	P	10 01 01.7	-1.0
WRA	Warramunga Arr	18.18	219	P	P	10 01 01.7	-1.0
	0.8nm,0.3s,baz=56,slow=11,SNR=46						
AS31	Alice Springs	21.33	213	eP	P	10 01 36.7	-0.3
ASAR	Alice Springs	21.33	213	P	P	10 01 36.6	-0.4
ASAR	Alice Springs	21.33	213	P	P	10 01 36.6	-0.4
	4.6nm,0.5s,baz=42,slow=7.6,SNR=57						
FITZ	Fitzroy Crossi	23.53	237	P	P	10 01 59.3	-0.7
FITZ	Fitzroy Crossi	23.53	237	P	P	10 01 59.3	-0.7
	7.1nm,0.4s,baz=59,slow=9.1,SNR=42						
STKA	Stephens Creek	26.24	189	eP	P	10 02 24.1	-0.3
	1.3nm,0.8s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	26.24	189	P	P	10 02 22.7	-1.7
	3.8nm,0.4s,baz=3.6,slow=11,SNR=13						
RPZ	Rata Peaks	43.53	154	eP	P	10 04 52.9	+0.1
	12nm,0.5s						
RPZ	Rata Peaks	43.53	154	P	P	10 04 53.0	+0.2
	13nm,0.6s,baz=350,slow=4.0,SNR=6.4						
CMAR	Chiang Mai Arr	52.56	298	P	P	10 06 06.6	+3.7
CMAR	Chiang Mai Arr	52.56	298	P	P	10 06 06.6	+3.7
	0.5nm,0.3s,baz=107,slow=5.8,SNR=4.0						
CMAR				LR	LR	10 31 42.4	
	comp=Z,676nm,19.1s,baz=110,slow=40						
VNDA	Vanda	72.08	176	P	P	10 08 11.5	-1.0
VNDA	Vanda	72.08	176	P	P	10 08 11.5	-1.0
	2.4nm,0.7s,baz=321,slow=6.0,SNR=13						
ILAR	Eielson Array	85.65	23	P	P	10 09 28.0	+1.0
ILAR	Eielson Array	85.65	23	P	P	10 09 28.0	+1.0
	0.9nm,0.6s,baz=252,slow=5.0,SNR=20						
TORD	Torodi Ar. Bea	144.37	284	PKP	PKPdf	10 16 25.1	-0.6
TORD	Torodi Ar. Bea	144.37	284	PKP	PKPdf	10 16 25.1	-0.6
	1.4nm,0.5s,baz=62,slow=3.3,SNR=9.1						
DBIC	Dimbokro	151.30	273	PKPbc	PKPbc	10 16 43.8	+0.7
DBIC	Dimbokro	151.30	273	PKPbc	PKPbc	10 16 43.8	+0.7
	8.9nm,0.9s,baz=106,slow=3.1,SNR=4.9						
BDFB	Brasilia	154.36	147	PKPbc	PKPbc	10 16 50.2	+0.2
BDFB	Brasilia	154.36	147	PKPbc	PKPbc	10 16 50.2	+0.2
	1.5nm,0.5s,baz=180,slow=1.0,SNR=3.9						

*IDC **12** 10:22:23.8±0.8, 50°.90N×73°.63E, h0km, mb3.6/1, mb1 3.4/6, mb1mx3.2/32, mbtmp3.3/6, ML3.0/5, MS3.1/3, Ms1 3.1/3, ms1mx2.7/39, Error ellipse: s-maj=20.1km s-min=7.6km az=25.0*

*NNC **12** 10:22:23.1±1.6, 50°.53N×73°.57E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=25.9km s-min=8.5km az=34.0*

ISC 12 10:22:23.5±0.8**, 50°.95N**±0°.07×**73°.60E**±0°.05**, h10**km**, n19, σ1s.19**/25**, 10C-12D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
VOSK	Vostochnaya	2.41	319	⇑Pn	Pb	10 23 05.5	-1.5
	11nm,0.6s						
VOSK				⇑Sn	Sg	10 23 40.5	-0.4
	59nm,0.8s						
VOSK				⇓Rg	Rg	10 24 02.5	
	136nm,1.4s						
BVA0	Borovoye Array	2.88	318	Pn	Pb	10 23 12.9	-1.9
	5.9nm,0.5s,baz=128,slow=15,SNR=36						
BVA0				⇓Sn	Sg	10 23 54.7	-1.1
	28nm,0.8s,baz=131,slow=27,SNR=14						
BVA0				⇓Rg	Rg	10 24 22.2	
	99nm,1.4s,baz=138,slow=33,SNR=5.2						
BVAR	Borovoye Array	2.88	318	Pn	Pn	10 23 11.4	+2.0
	2.4nm,0.3s,baz=123,slow=16,SNR=18						
BVAR				Lg	Lg	10 23 58.6	
	5.5nm,0.3s,baz=140,slow=28,SNR=12						
BVAR				LR	LR	10 24 17.7	
	comp=Z,491nm,20.3s,baz=17,slow=39						
BRVK	Borovoye	2.94	317	⇑Pn	Pb	10 23 16.5	+0.4
	9.3nm,0.6s						
BRVK				⇑Sn	Sg	10 23 59.6	+1.6
	110nm,0.8s						
BRVK				⇓Rg	Rg	10 24 26.3	
	133nm,1.2s						
KUR17	Kurchatov Arra	3.11	94	⇑Pn	Pn	10 23 13.0	+0.5
	2.6nm,0.7s						
KUR16	Kurchatov Arra	3.13	94	⇓Sn	Sb	10 23 57.5	+0.2
	16nm,0.8s						
KURBB	Kurchatov Arra	3.15	94	Pn	Pn	10 23 13.9	+0.8
	0.3nm,0.3s,baz=279,slow=14,SNR=48						
KURBB				Lg	Lg	10 24 03.3	
	1.1nm,0.3s,baz=278,slow=28,SNR=17						
KURK	Kurchatov	3.19	92	⇓Pn	Pn	10 23 13.6	-0.1
	5.4nm,0.8s						
KURK				⇑Sn	Sb	10 23 57.8	-1.4
	60nm,0.7s						
MK31	Makanchi Array	7.08	123	⇓Pn	Pn	10 24 07.7	+0.6
	0.3nm,0.5s						
MK31				⇓Pg	Pb	10 24 27.2	+0.7
	0.6nm,0.5s,baz=299,slow=12,SNR=5.1						
MK31				⇓Sn	Sn	10 25 29.2	+1.6
	1.4nm,0.6s,baz=229,slow=36,SNR=4.4						
MK31				⇓Lg	Lg	10 25 58.8	
	15nm,0.8s,baz=311,slow=25,SNR=6.7						
MKAR	Makanchi Array	7.08	123	Pn	Pn	10 24 07.5	+0.4
	0.1nm,0.3s,baz=302,slow=14,SNR=5.0						
MKAR				Pg	Pb	10 24 25.8	-0.7
	0.4nm,0.3s,baz=293,slow=13,SNR=7.6						
MKAR				Sn	Sn	10 25 26.1	-1.5
	0.3nm,0.3s,baz=301,slow=20,SNR=3.3						
MKAR				Lg	Lg	10 26 06.8	
	1.0nm,0.3s,baz=307,slow=24,SNR=15						
MKAR				LR	LR	10 27 08.0	
	comp=Z,286nm,21.6s,baz=117,slow=40						
ZALV	Zalesovo Beam	7.49	62	Pn	Pn	10 24 14.1	+1.4
	0.4nm,0.3s,baz=243,slow=15,SNR=5.2						
ZALV				Sn	Sn	10 25 36.2	-1.4
	0.2nm,0.3s,baz=242,slow=24,SNR=3.1						
KK31	Karatay Array	8.12	196	⇓Lg	Lg	10 26 24.9	
	4.3nm,0.7s,baz=17,slow=28,SNR=3.9						
TKM2	Tokmak 2	8.14	170	⇑Lg	Lg	10 26 32.9	
	30nm,1.1s						
AAK	Ala-Archa	8.34	175	Lg	Lg	10 26 47.0	
	0.4nm,0.3s,baz=163,slow=24,SNR=7.6						
AB31	Akbulak array	8.94	264	⇑Pn	Pn	10 24 32.4	-0.2
	0.5nm,0.5s,baz=84,slow=8.9,SNR=11						
AB31				⇑Lg	Lg	10 27 08.1	
	5.1nm,1.2s,baz=74,slow=30,SNR=3.9						
AKTO	Aktyubinsk	9.90	273	⇓Pn	Pn	10 24 44.3	-1.5
	0.9nm,0.4s						
AKTO				⇑Lg	Lg	10 27 35.3	
	6.5nm,0.9s						
AKTO	Aktyubinsk	9.90	273	Pn	Pn	10 24 46.1	+0.3
	0.5nm,0.3s,baz=94,slow=12,SNR=7.1						
AKTO				Sn	Sn	10 26 37.6	+0.6
	0.2nm,0.3s,baz=108,slow=18,SNR=3.0						
AKTO				Lg	Lg	10 27 40.0	
	0.1nm,0.3s,baz=108,slow=6.3,SNR=5.2						
TGY	Tagaytay City	52.88	117	LR	LR	10 53 50.2	
	comp=Z,10nm,21.9s,baz=235,slow=36						
ILAR	Eielson Array	60.43	19	P	P	10 32 33.7	+1.1
	0.4nm,0.5s,baz=324,slow=5.2,SNR=9.3						

IDC 12 10:25:42.4±52.0**, 15°.82S**×**172°.69W, h0**km**, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.7**/21**, mbtmp4.2**/3**, Error ellipse: s-maj=1010.0km s-min=181.8km az=79.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.42	240	P	P	10 33 56.0	+0.8
	2.6nm,0.7s,baz=92,slow=9.5,SNR=4.9						
WRA	Warramunga Arr	50.42	257	P	P	10 34 41.5	-0.6
	0.6nm,0.4s,baz=98,slow=7.2,SNR=20						
ASAR	Alice Springs	50.64	252	P	P	10 34 43.4	-0.3
	6.6nm,0.5s,baz=89,slow=7.7,SNR=204						

*ISCJB **12** 10:26:36.9±0.8, 38°.57N±0°.05×26°.85E±0°.09, h12km±10km, Error ellipse: s-maj=11.2km s-min=8.4km az=2.2*

*DDA **12** 10:26:37.0, 38°.52N×26°.88E, h7km, MD2.8*

*CSEM **12** 10:26:37.0, 38°.52N×26°.88E, h7km, MD2.8, After DDA*

ISC 12 10:26:36.8±1.5**, 38°.54N**±0°.05×**26°.87E**±0°.05**, h20**km±6km**, n10, σ0s.46**/18**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BLCB	Balcova	0.20	137	ePG	Pg	10 26 42.1	+0.1
URLA	Izmir	0.28	231	i P	Pb	10 26 43.0	-0.1
URLA				i S	Sb	10 26 47.1	-0.2
URLA	Izmir	0.28	231	i P	Pb	10 26 43.0	-0.1
URLA				i S	Sb	10 26 47.1	-0.2
IZM	Izmir	0.34	114	ePG	Pb	10 26 44.6	+0.3
AKHS	Akhisar	0.82	65	i P	Pg	10 26 52.8	0.0
AKHS				i S	Sb	10 27 02.5	-0.5
AKHS	Akhisar	0.82	65	i P	Pg	10 26 52.8	0.0
AKHS				i S	Sb	10 27 02.5	-0.5
AYDN	Tasoluk	1.18	137	eP	Pg	10 27 00.2	+0.4
AYDN				i S	Sg	10 27 14.6	-0.7
AYDN	Tasoluk	1.18	137	eP	Pg	10 27 00.2	+0.4
AYDN				i S	Sg	10 27 14.6	-0.7
BALY	Balya	1.34	26	i P	Pn	10 27 01.1	+0.6
BALY				i S	Sn	10 27 17.5	-0.2
BALY	Balya	1.34	26	i P	Pn	10 27 01.1	+0.6
BALY				i S	Sn	10 27 17.5	-0.2

KRSC 12 10:28:35.8±1.1**, 49°.10N**×**156°.03E, h5**km±5km**, ML3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.59	2	eP	Pn	10 29 03.5	-1.0
SKR				i S	Sn	10 29 23.7	-1.7
ASAK	Asacha	3.50	19	eP	Pn	10 29 32.9	+2.0
ASAK				i S	Sn	10 30 14.7	+2.0
MTVR	Mutnovka	3.65	21	eP	Pn	10 29 34.8	+1.7
MTVR				i S	Sn	10 30 17.8	+1.1
RUS	Russkaya	3.69	24	eP	Pn	10 29 34.4	+1.0
RUS				i S	Sn	10 30 17.5	+0.2
KOK	Koryaka	4.51	20	eP	Pn	10 29 46.8	+2.0
SDLR	Sedlovina	4.55	22	eP	Pn	10 29 47.7	+2.2
SPN	Mys Shipunski	4.73	31	eP	Pn	10 29 49.7	+2.0
SPN				i S	Sn	10 30 44.7	+1.8
KII	Karymskiy	5.38	22	eP	Pn	10 29 57.0	+0.2
MKZ	Mys Kozlova	6.50	31	eP	Pn	10 30 13.1	+1.1

IDC 12 10:38:46.8±2.4**, 17°.93S**×**166°.84E, h0**km**, mb4.1**/7**, mb1 4.3**/8**, mb1mx4.0**/20**, mbtmp4.0**/8**, ML3.4**/1**, Error ellipse: s-maj=52.8km s-min=24.4km az=98.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.14	185	eP	Pn	10 39 51.8	+0.4
DZM				eS	Sn	10 40 42.9	+2.3
DZM	Mont Dzumac	4.14	185	Pn	Pn	10 39 51.0	-0.4
	2.0nm,0.3s,baz=96,slow=20,SNR=27						
DZM				Sn	Sn	10 40 43.4	+2.8
	4.5nm,0.3s,baz=342,slow=20,SNR=3.0						
STKA	Stephens Creek	26.69	234	P	P	10 44 27.8	0.0
	2.9nm,0.6s,baz=68,slow=9.0,SNR=9.3						
WRA	Warramunga Arr	30.78	261	P	P	10 45 04.1	-0.2
	0.7nm,0.7s,baz=80,slow=6.0,SNR=11						
ASAR	Alice Springs	31.27	254	P	P	10 45 08.4	-0.2
	2.8nm,0.8s,baz=80,slow=8.7,SNR=32						
FITZ	Fitzroy Crossi	39.12	263	P	P	10 46 17.1	+0.8
	3.8nm,0.8s,baz=104,slow=6.7,SNR=6.5						
MJAR	Matsushiro Arr	60.55	334	P	P	10 49 00.1	+1.0
	3.6nm,1.1s,baz=161,slow=7.5,SNR=5.1						
CMAR	Chiang Mai Arr	75.89	295	P	P	10 50 34.4	-1.4
	0.6nm,0.4s,baz=124,slow=4.5,SNR=4.2						
SONM	Songino Array	84.82	324	P	P	10 51 22.6	-0.7
	0.2nm,0.4s,baz=128,slow=9.3,SNR=2.3						

IDC 12 10:42:46.8±1.9**, 9°.81S**×**121°.18E, h0**km**, mb3.5**/2**, mb1 3.5**/5**, mb1mx3.4**/21**, mbtmp3.4**/5**, ML3.1**/3**, MS4.4**/1**, Ms1 4.4**/1**, ms1mx2.3**/26**, Error ellipse: s-maj=141.8km s-min=24.3km az=59.0, Savu Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	9.31	153	Pn	Pn	10 45 01.4	-0.9
	0.3nm,0.3s,baz=335,slow=14,SNR=11						
FITZ				Sn	Sn	10 46 37.1	-11
	0.3nm,0.3s,baz=188,slow=15,SNR=5.1						
WRA	Warramunga Arr	16.21	130	Pn	Pn	10 46 35.8	-0.4
	0.1nm,0.3s,baz=303,slow=14,SNR=3.3						
WRA				Sn	Sn	10 49 22.1	-15
	0.1nm,0.3s,baz=293,slow=24,SNR=3.6						
ASAR	Alice Springs	18.38	140	P	P	10 47 04.2	+0.9
	0.1nm,0.3s,baz=319,slow=12,SNR=5.2						
URZ	Urewera	57.39	129	LR	LR	11 17 07.5	
	comp=Z,317nm,18.2s,baz=9.0,slow=36						
SONM	Songino Array	58.87	348	P	P	10 52 46.9	-0.6
	0.3nm,0.5s,baz=169,slow=8.7,SNR=2.7						
MKAR	Makanchi Array	66.17	332	P	P	10 53 36.5	+0.3
	0.2nm,0.5s,baz=133,slow=7.6,SNR=4.3						

IDC 12 10:57:14.3±8.0**, 18°.08S**×**178°.37W, h0**km**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.5**/19**, mbtmp3.3**/3**, Error ellipse: s-maj=350.4km s-min=38.7km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.64	260	P	P	11 05 29.2	+0.2
	0.3nm,0.3s,baz=95,slow=7.4,SNR=13						
ASAR	Alice Springs	44.78	254	P	P	11 05 29.6	-0.6
	0.2nm,0.5s,baz=86,slow=7.6,SNR=4.8						
ILAR	Eielson Array	86.04	13	P	P	11 09 56.4	0.0
	0.2nm,0.7s,baz=218,slow=5.1,SNR=4.7						

*CSEM **12** 11:34:34.0, 12°.25N×44°.37E, h2km, ML3.7, After DHMR*

DHMR 12 11:34:34.0±1.1**, 12°.25N**×**44°.37E, h3**km±5km**, ML3.7, 2D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ADEN	Aden	0.80	49	⇓iP	Pg	11 34 49.0	-0.4
ADEN				i S	Sg	11 35 00.5	+0.8
ADEN				AML	AML	11 35 02.5	
	comp=E,4μm,0.3s						
ADEN	Aden	0.80	49	⇓iP	Pg	11 34 49.0	-0.3
ADEN				i S	Sg	11 35 00.5	+0.8
	comp=E,2μm,0.3s						
TRBA	At Turbah	1.01	346	i P	Pg	11 34 52.6	-1.1
TRBA				i S	Sg	11 35 07.5	+0.5
TRBA				AML	AML	11 35 16.3	
	comp=E,1μm,0.5s						
UDYN	Al 'Udayn	1.75	347	i P	Pb	11 35 06.3	-0.8
UDYN				i S	Sg	11 35 30.9	+0.1
UDYN				AML	AML	11 35 39.1	
	comp=Z,801nm,0.5s						
UDYN	Al 'Udayn	1.75	347	i P	Pn	11 35 06.3	+0.7
UDYN				i S	Sg	11 35 30.9	+0.1
	comp=Z,401nm,0.5s						
LBOS		1.83	28	i P	Pn	11 35 06.6	-0.1
LBOS				i S	Sg	11 35 32.9	-0.6
BDHA	Al Bayda'	2.08	34	i P	Pn	11 35 11.3	+1.2
BDHA				i S	Sg	11 35 40.4	-0.9
BDHA				AML	AML	11 35 46.9	
	comp=E,1μm,0.5s						
BDHA	Al Bayda'	2.08	34	i P	Pn	11 35 11.3	+1.2
BDHA				i S	Sg	11 35 40.4	-1.0
	comp=E,520nm,0.5s						

*IDC **12** 11:42:42.9±0.8, 52°.70N×172°.18E, h0km, mb4.0/17, mb1 4.2/18, mb1mx4.1/31, mbtmp4.0/18, ML3.4/1, Error ellipse: s-maj=26.8km s-min=13.1km az=170.0*

*MOS **12** 11:42:44.2±0.8, 52°.68N×172°.11E, h17km, mb4.3/21, Error ellipse: s-maj=10.4km s-min=9.7km az=110.7*

*ISCJB **12** 11:42:45.9±0.3, 52°.73N±0°.06×172°.09E±0°.03, h28km, mb4.0/31, Error ellipse: s-maj=8.7km s-min=2.5km az=7.6*

*NEIC **12** 11:42:50.0, 53°.08N×172°.69E, h8km, mb4.4/10, ML3.9(AEIC), After AEIC.*

*KRSC **12** 11:42:51.3±2.2, 52°.67N×170°.98E, h5km±5km, ML4.4*

ISC 12 11:42:46.9±0.6**, 52°.62N**±0°.08×**172°.06E**±0°.04**, h28**km**, n109, σ2s.56**/138**, mb4.2**/31**, 1C-1D, Near Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FX1	Attu Island--F	0.72	68	ePg	Pb	11 42 59.5	-1.5
FX1				eSg	Sb	11 43 08.5	-2.0
SMY	Shemya	1.25	84	P	Pn	11 43 07.5	-1.0
SMY				S	Sn	11 43 22.2	-2.2
SMY	Shemya	1.25	84	P	Pn	11 43 07.5	-1.0
SMY				S	Sn	11 43 22.2	-2.2
LSNW	Little Sitkin	4.02	97	P	Pn	11 43 48.1	+1.5
LSSA	Little Sitkin	4.02	97	P	Pn	11 43 48.1	+1.5
LSSE	Little Sitkin	4.06	97	P	Pn	11 43 48.8	+1.7
BKI	Bering	4.43	308	P	Pn	11 43 53.7	+1.6
BKI				S	Sn	11 44 38.9	-3.8
BKI	Bering	4.43	308	eP	Pn	11 43 53.7	+1.6
BKI				eS	Sn	11 44 38.9	-3.8
CETU	Semis' Tuman	4.61	95	P	Pn	11 43 55.8	+1.1
AMKA	Amchitka	4.65	103	P	Pn	11 43 58.0	+2.8
AMKA				S	Sn	11 44 49.6	+1.5
CESW	Semis' Southwe	4.67	96	P	Pn	11 43 56.5	+1.1
MKZ	Mys Kozlova	6.45	292	P	Pn	11 44 21.1	+1.3
MKZ				S	Sn	11 45 27.3	-5.1
MKZ	Mys Kozlova	6.45	292	eP	Pn	11 44 21.1	+1.3
MKZ				eS	Sn	11 45 27.3	-5.1
GSCK	Great Sitkin C	7.25	90	P	Pn	11 44 32.1	+1.2
SPN	Mys Shipunski	7.30	279	P	Pn	11 44 33.4	+1.8
SPN				S	Sn	11 45 49.0	-4.5
SPN	Mys Shipunski	7.30	279	eP	Pn	11 44 33.4	+1.8
SPN				eS	Sn	11 45 49.0	-4.5
SMKR	Semkarok	7.32	307	eP	Pn	11 44 34.9	+3.1
SMKR				eS	Sn	11 45 52.0	-1.9
ZLN	Zelenaya	7.41	302	eP	Pn	11 44 36.0	+2.9
ZLN				eS	Sn	11 45 53.3	-2.8
BZGR	Bezymyannyi-Gr	7.43	301	eP	Pn	11 44 36.3	+2.8
BDR	Baidarnaya	7.44	306	P	Pn	11 44 36.8	+3.3
BDR				eS	Sn	11 45 52.9	-4.0
SRKR	Sorokina	7.50	307	eP	Pn	11 44 37.2	+2.9
SRKR				eS	Sn	11 45 54.2	-4.1
TUMR	Tumrok	7.51	295	eP	Pn	11 44 36.6	+2.0
TUMR				eS	Sn	11 45 54.9	-4.0
BZMR	Bezymyannaya	7.54	301	eP	Pn	11 44 38.1	+3.1
BZMR				eS	Sn	11 45 56.2	-3.3
BZWR	Bezymyannyi-We	7.55	301	eP	Pn	11 44 37.7	+2.6
BZWR				eS	Sn	11 45 56.2	-3.5
KRSR	Krestovskiy	7.61	303	eP	Pn	11 44 38.4	+2.5
KMNR	Kamenistaya	7.61	299	eP	Pn	11 44 38.1	+2.2
KMNR				eS	Sn	11 45 56.2	-5.0
KIRR	Kirishev	7.62	301	eP	Pn	11 44 39.2	+3.1
KII	Karymskiy	7.68	286	eP	Pn	11 44 38.7	+1.8
KII				eS	Sn	11 45 58.0	-4.9
KPT	Kopyto	7.69	301	eP	Pn	11 44 39.9	+2.9
NLC	Nalytchevo	7.71	279	P	Pn	11 44 38.7	+1.5
NLC				S	Sn	11 45 57.7	-5.7
NLC	Nalytchevo	7.71	279	eP	Pn	11 44 38.7	+1.5
NLC				eS	Sn	11 45 57.7	-5.7
SDLR	Sedlovina	7.99	280	eP	Pn	11 44 43.0	+1.9
SDLR				eS	Sn	11 46 05.7	-4.7
UGLR	Uglovaya	8.02	279	eP	Pn	11 44 43.3	+1.7
UGLR				eS	Sn	11 46 05.8	-5.5
KRER	Koryakskii	8.07	280	eP	Pn	11 44 44.1	+1.8
KRER				eS	Sn	11 46 07.8	-4.7
AVH	Avacha	8.07	280	eP	Pn	11 44 43.8	+1.6
AVH				eS	Sn	11 46 07.5	-5.0
SRDR	Sredinnyy	8.08	302	eP	Pn	11 44 45.0	+2.7
SRDR				eS	Sn	11 46 08.5	-4.2
PET	Petropavlovsk	8.13	278	eS	Sn	11 46 08.1	-5.7
KOK	Koryaka	8.13	280	eP	Pn	11 44 45.0	+1.9
KOK				eS	Sn	11 46 09.3	-4.8
RUS	Russkaya	8.26	274	P	Pn	11 44 46.7	+1.9
RUS				S	Sn	11 46 11.5	-5.6
RUS	Russkaya	8.26	274	eP	Pn	11 44 46.7	+1.9
RUS				eS	Sn	11 46 11.5	-5.6
KOWE	Korovin West	8.37	86	P	Pn	11 44 47.1	+0.9
ATKA	Atka Island	8.42	87	P	Pn	11 44 47.4	+0.5
MTVR	Mutnovka	8.46	275	eP	Pn	11 44 50.1	+2.5
MTVR				eS	Sn	11 46 17.3	-4.8
KOFP	Korovin Flat P	8.47	87	P	Pn	11 44 49.3	+1.7
ESO	Esso	8.49	298	P	Pn	11 44 49.2	+1.4
ESO	Esso	8.49	298	eP	Pn	11 44 49.2	+1.4
GNL	Ganaly	8.55	283	eP	Pn	11 44 50.7	+1.9
GNL				eS	Sn	11 46 19.1	-5.2
ASAK	Asacha	8.64	274	eP	Pn	11 44 52.5	+2.5
ASAK				eS	Sn	11 46 21.1	-5.4
PETK	Petropavlovsk-	8.70	279	P	Pn	11 44 52.6	+1.8
PETK						11 46 28.7	
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK				smax	smax		
	comp=N,1.0nm,0.3s						
PETK	Petropavlovsk-	8.70	279	Pn	Pn	11 44 52.6	+1.8
PETK	Petropavlovsk-	8.70	279	Pn	Pn	11 44 52.6	+1.8
	comp=N,0.5nm,0.3s,baz=99,slow=17,SNR=5.6						
PETK				Sn	Sn	11 46 28.7	+0.8
	comp=N,0.7nm,0.3s,baz=89,slow=22,SNR=5.3						
BILL	Bilibino	15.72	352	⇑eP	Pn	11 46 26.0	0.0
BILL				eS	S	11 49 25.2	-8.2
BILL				pmax	pmax		
	comp=Z,26nm,1.9s						
KDAK	Kodiak Island	20.66	61	P	P	11 47 22.0	-2.2
KDAK	Kodiak Island	20.66	61	P	P	11 47 22.0	-2.2
	comp=Z,6.1nm,0.4s,baz=253,slow=6.8,SNR=12						
RSO	Redoubt South	20.71	54	eP	P	11 47 25.1	+0.2
	comp=Z,69nm,0.8s						
TRF	Thorofare Moun	22.33	46	eP	P	11 47 41.4	-0.8
	comp=Z,13nm,0.7s						
PMR	Palmer	22.58	51	eP	P	11 47 43.9	-0.8
PMR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PMR	Palmer	22.58	51	eP	P	11 47 43.9	-0.8
	comp=Z,2.5nm,0.5s						
MCK	McKinley	22.98	46	eP	P	11 47 48.3	-0.6
MCK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MCK	McKinley	22.98	46	eP	P	11 47 48.3	-0.6
	comp=Z,8.4nm,0.7s						
SML	Sawmill	22.98	51	eP	P	11 47 48.4	-0.6
SML				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SML	Sawmill	22.98	51	eP	P	11 47 48.4	-0.6
	comp=Z,4.9nm,0.6s						
COLA	College	23.66	43	eP	P	11 47 54.9	-0.7
COLA				pmax	pmax		
	comp=Z,12nm,0.8s						
COLA	College	23.66	43	eP	P	11 47 54.9	-0.7
	comp=Z,12nm,0.8s						
ILAR	Eielson Array	24.05	44	P	P	11 47 57.3	-2.0
ILAR	Eielson Array	24.05	44	P	P	11 47 57.3	-2.0
	comp=Z,3.6nm,0.6s,baz=250,slow=7.8,SNR=55						
YAK	Yakutsk	24.30	309	eP	P	11 48 01.9	+0.3
YAK				pmax	pmax		
	comp=Z,12nm,0.9s						
PAX	Paxson	24.42	48	eP	P	11 48 03.0	+0.2
PAX				pmax	pmax		
	comp=Z,13nm,1.0s						
PAX	Paxson	24.42	48	eP	P	11 48 03.0	+0.2
	comp=Z,13nm,1.0s						
MENT	Mentasta	25.21	48	eP	P	11 48 10.5	+0.6
EGAK	Eagle	26.48	44	eP	P	11 48 19.2	-2.1
	comp=Z,14nm,0.7s						
TIXI	Tiksi	26.79	331	eP	P	11 48 23.9	-0.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MDJ	Mudanjiang	28.83	271	P	P	11 48 53.2	+11
MDJ				pmax	pmax		
	comp=Z,8.0nm,3.7s						
MDJ				pmax	pmax		
	comp=Z,99nm,4.3s						
INK	Inuvik	29.81	37	P	P	11 48 51.5	+0.6
INK	Inuvik	29.81	37	P	P	11 48 51.5	+0.6
	comp=Z,1.1nm,0.3s,baz=285,slow=6.3,SNR=17						
YKW3	Yellowknife Ar	38.42	46	eP	P	11 50 05.8	+0.3
	comp=Z,0.1nm,0.9s						
YKA	Yellowknife Ar	38.45	46	P	P	11 50 04.9	-0.8
YKA	Yellowknife Ar	38.45	46	P	P	11 50 04.9	-0.8
	comp=Z,1.7nm,0.4s,baz=288,slow=7.7,SNR=30						
SONM	Songino Array	40.97	291	P	P	11 50 28.5	+1.4
SONM	Songino Array	40.97	291	P	P	11 50 28.5	+1.4
	comp=Z,1.0nm,0.5s,baz=60,slow=7.3,SNR=7.0						
BOZ	Bozeman (W)	48.23	66	eP	P	11 51 23.9	-1.2
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BOZ	Bozeman (W)	48.23	66	eP	P	11 51 23.9	-1.2
	comp=Z,1.5nm,0.7s						
NVAR	Mina Array Bea	48.91	78	P	P	11 51 30.1	-0.4
NVAR	Mina Array Bea	48.91	78	P	P	11 51 30.1	-0.4
	comp=Z,0.8nm,0.6s,baz=297,slow=8.0,SNR=10						
PDAR	Pinedale Array	51.20	68	P	P	11 51 47.1	-0.6
PDAR	Pinedale Array	51.20	68	P	P	11 51 47.1	-0.6
	comp=Z,2.3nm,0.8s,baz=299,slow=4.6,SNR=15						
KURK	Kurchatov	53.94	308	P	P	11 52 07.9	+0.3
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KURK	Kurchatov	53.94	308	P	P	11 52 07.9	+0.3
KURBB	Kurchatov Arra	54.04	308	P	P	11 52 07.9	-0.4
	comp=Z,2.5nm,0.7s,baz=52,slow=7.2,SNR=18						
MKAR	Makanchi Array	54.71	303	P	P	11 52 12.5	-0.9
MKAR	Makanchi Array	54.71	303	P	P	11 52 12.4	-0.9
	comp=Z,0.3nm,0.4s,baz=40,slow=6.4,SNR=4.0						
AGMN	Agassiz Nation	54.88	55	eP	P	11 52 13.6	-0.9
	comp=Z,2.5nm,0.6s						
ARU	Arti	58.39	323	d iP	P	11 52 39.0	-0.3
ARU				S	S	12 00 44.4	+4.5
ARU				SS	SS	12 04 34.8	+3.4
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AAK	Ala-Archa	61.59	304	eP	P	11 53 02.1	+0.4
AAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SCHQ	Schefferville	62.34	34	P	P	11 53 06.6	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
SCHQ	Schefferville	62.34	34	P	P	11 53 06.6	+0.3
	comp=Z,3.4nm,0.7s,baz=283,slow=3.0,SNR=5.2						
TXAR	Lajitas Array	63.93	75	P	P	11 53 16.8	-0.6
TXAR	Lajitas Array	63.93	75	P	P	11 53 16.8	-0.6
	comp=Z,0.5nm,0.5s,baz=307,slow=6.0,SNR=13						
CMAR	Chiang Mai Arr	65.32	268	P	P	11 53 28.2	+1.7
CMAR	Chiang Mai Arr	65.32	268	P	P	11 53 28.2	+1.7
	comp=Z,0.6nm,0.5s,baz=36,slow=7.0,SNR=3.3						
NOA	NORSAR Array B	65.66	350	P	P	11 53 27.8	-0.2
NOA	NORSAR Array B	65.66	350	P	P	11 53 27.8	-0.2
	comp=Z,1.2nm,0.8s,baz=13,slow=6.4,SNR=3.1						
KBZ	Khabaz	74.52	324	P	P	11 54 22.5	0.0
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBZ	Khabaz	74.52	324	P	P	11 54 22.5	0.0
KBZ	Khabaz	74.52	324	P	P	11 54 22.5	0.0
	comp=Z,2.1nm,0.8s,baz=11,slow=5.2,SNR=5.3						
WRA	Warramunga Arr	79.34	216	P	P	11 54 50.4	+0.5
	comp=Z,0.6nm,0.9s,baz=29,slow=6.2,SNR=4.1						
BRTR	Keskin Array B	81.20	329	P	P	11 55 00.3	+0.3
BRTR	Keskin Array B	81.20	329	P	P	11 55 00.3	+0.3
	comp=Z,0.9nm,0.7s,baz=61,slow=2.5,SNR=5.6						
ASAR	Alice Springs	82.92	215	P	P	11 55 10.2	+1.3
	comp=Z,0.4nm,0.9s,baz=19,slow=4.5,SNR=2.8						

*ISK **12** 11:49:39.8, 39°.11N×29°.05E, h6km, MD2.6*
*ISCJB **12** 11:49:40.4±0.5, 39°.10N±0°.04×29°.07E±0°.04, h9km±7km, Error ellipse: s-maj=6.6km s-min=5.2km az=148.8*
*CSEM **12** 11:49:40.6±0.2, 39°.10N×29°.06E, h10km, MD2.6, Error ellipse: s-maj=3.9km s-min=3.3km az=67.0*
*DDA **12** 11:49:45.0, 39°.15N×28°.68E, h7km, MD2.8*
ISC 12 11:49:40.6±1.0**, 39°.12N**±0°.03×**29°.04E**±0°.03**, h12**km±10km**, n21, σ0s.53**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DEMI	Demirci	0.26	254	*i* Pg	Pb	11 49 46.8	-0.4
DEMI				*i* Sg	Sg	11 49 50.5	+0.9
TVSB	Tavsanli	0.47	44	*e*PG	Pg	11 49 49.4	-0.4
TVSB				*e*SG	Sg	11 49 55.9	-0.2
TVSB	Tavsanli	0.47	44	*e*Pg	Pg	11 49 49.4	-0.4
TVSB				*e*Sg	Sg	11 49 55.9	-0.2
DURS	Dursunbey	0.65	318	*e*P	Pb	11 49 54.1	+0.1
DURS				*e*S	Sb	11 50 03.8	+0.8
DURS	Dursunbey	0.65	318	*e*P	Pb	11 49 54.1	+0.1
DURS				*e*S	Sb	11 50 03.8	+0.8
KULA	Kula-Manisa	0.67	206	*e*PG	Pg	11 49 53.2	-0.3
KULA				*e*SG	Sg	11 50 02.5	+0.1
KULA	Kula-Manisa	0.67	206	*e*Pg	Pg	11 49 53.2	-0.3
KULA				*e*Sg	Sg	11 50 02.5	+0.1
ALT	Altintas	0.84	94	*e*PG	Pg	11 49 56.4	-0.4
ALT	Altintas	0.84	94	*e*Pg	Pg	11 49 56.4	-0.4
KHL	Karahalli	0.88	154	*e*PG	Pg	11 49 57.3	-0.2
KHL				*e*SG	Sb	11 50 09.6	+0.1
KHL	Karahalli	0.88	154	*e*Pg	Pg	11 49 57.3	-0.2
KHL				*e*Sg	Sb	11 50 09.6	+0.1
CAVI	Cavuskoy	1.25	30	*e*PN	Pn	11 50 04.1	+0.2
CAVI	Cavuskoy	1.25	30	*e*Pn	Pn	11 50 04.1	+0.2
BALY	Balya	1.26	300	*e*P	Pb	11 50 04.7	+0.4
BALY				*e*S	Sb	11 50 19.2	-1.3
BALY	Balya	1.26	300	*e*P	Pb	11 50 04.7	+0.4
BALY				*e*S	Sb	11 50 19.2	-1.3
KCTX	Karacabey (Bur	1.26	336	*e*PN	Pb	11 50 04.6	+0.3
KCTX	Karacabey (Bur	1.26	336	*e*Pn	Pb	11 50 04.6	+0.3
GONE	Gonen-Balikesi	1.40	312	*e*PN	Pb	11 50 06.8	+0.2
GONE	Gonen-Balikesi	1.40	312	*e*Pn	Pb	11 50 06.8	+0.2
YLV	Yalova	1.47	10	*e*PN	Pb	11 50 08.3	+0.4
YLV	Yalova	1.47	10	*e*Pn	Pb	11 50 08.3	+0.4

*ISK **12** 12:00:39.6, 37°.16N×37°.24E, h5km, MD2.7*
*CSEM **12** 12:00:41.3±0.3, 37°.16N×37°.22E, h10km, MD2.7, Error ellipse: s-maj=8.4km s-min=6.5km az=133.0*
DDA 12 12:00:41.6, 37°.18N×37°.20E, h7km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.02	136	*e*PG	Pg	12 00 40.1	-2.9
GAZ				*e*SG	Sg	12 00 40.5	-3.4
GAZ	Gaziantep	0.02	136	*e*Pg	Pg	12 00 40.1	-2.9
GZT	Gaziantep	0.34	60	*i* P	Pn	12 00 52.9	-0.3
GZT				*i* S	Sb	12 00 58.9	+2.8
AYKD	Aykdinkavak	0.39	307	*i* P	Pg	12 00 48.9	-0.3
AYKD				*i* S	Sg	12 00 55.7	+1.3
KMRS	Kahramanmaras	0.40	324	*e*PG	Pg	12 00 49.5	0.0
KMRS				*e*SG	Sb	12 00 56.4	-1.1
KMRS	Kahramanmaras	0.40	324	*e*Pg	Pg	12 00 49.5	0.0
KMRS				*e*Sg	Sb	12 00 56.4	-1.1
KUZU	Kuzuini	0.42	193	*i* P	Pg	12 00 49.3	-0.6
KUZU	Kuzuini	0.42	193	*i* P	Pg	12 00 49.3	-0.6
ANDN	Andirin	0.79	300	*i* P	Pb	12 00 57.9	+0.1
ANDN	Andirin	0.79	300	*i* P	Pb	12 00 57.9	+0.1
COBT	Iskenderun	1.00	229	*i* P	Pg	12 01 00.3	-0.9
COBT				*i* S	Sb	12 01 16.0	+0.7
COBT	Iskenderun	1.00	229	*i* P	Pg	12 01 00.3	-0.9
COBT				*i* S	Sb	12 01 16.0	+0.7
KOZT	Kozan	1.13	286	*e*PN	Pg	12 01 02.9	-0.5
KOZT	Kozan	1.13	286	*e*Pn	Pg	12 01 02.9	-0.5
AKCD	Akcadag	1.25	27	*i* P	Pn	12 01 05.0	-0.7
AKCD				*i* S	Sn	12 01 23.6	+0.6
AKCD	Akcadag	1.25	27	*i* P	Pn	12 01 05.0	-0.8
AKCD				*i* S	Sn	12 01 23.6	+0.6
URFA	Urfa	1.32	78	*e*PN	Pn	12 01 05.5	-1.2
URFA				*e*SN	Sg	12 01 24.4	0.0
URFA	Urfa	1.32	78	*e*Pn	Pn	12 01 05.5	-1.2
URFA				*e*Sn	Sg	12 01 24.4	+0.1
SARI	SarD1z-Kayseri	1.37	333	*e*PN	Pn	12 01 07.3	-0.1
SARI	SarD1z-Kayseri	1.37	333	*e*Pn	Pn	12 01 07.3	-0.2
DARE	Darende-Malaty	1.40	9	*e*PN	Pn	12 01 07.4	-0.4
DARE	Darende-Malaty	1.40	9	*e*Pn	Pn	12 01 07.4	-0.4
MALT	Malatya	1.49	40	*e*PN	Pn	12 01 09.0	0.0
MALT	Malatya	1.49	40	*e*Pn	Pn	12 01 09.0	0.0
MYA	Malataya	1.50	40	*e*PN	Pn	12 01 08.4	-0.7
MYA	Malataya	1.50	40	*e*Pn	Pn	12 01 08.4	-0.8
PINB	Pinarbasi	1.62	337	*i* P	Pb	12 01 11.8	-0.4
PINB	Pinarbasi	1.62	337	*i* P	Pb	12 01 11.8	-0.4

IDC 12 12:04:07.2±2.2**, 22°.32S**×**171°.29E, h0**km**, mb3.9**/6**, mb1 4.1**/7**, mb1mx3.9**/18**, mbtmp3.9**/7**, ML4.2**/1**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.4**/30**, Error ellipse: s-maj=78.3km s-min=26.4km az=161.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.50	272	*e*P	Pn	12 05 18.9	+2.2
DZM				*e*S	Sn	12 06 10.7	+0.9
DZM	Mont Dzumac	4.50	272	Pn	Pn	12 05 18.8	+2.1
	11nm,0.3s,baz=113,slow=14,SNR=208						
DZM				LR	LR	12 06 06.0	
	comp=Z,165nm,21.3s,baz=12,slow=26						
DZM				Sn	Sn	12 06 09.0	-0.8
	baz=80,slow=13,SNR=2.1						
NOUC	Port Laguerre	4.62	272	*e*P	Pb	12 05 24.4	-4.8
NOUC				*e*S	Sn	12 06 16.7	+4.0
ASAR	Alice Springs	34.38	260	P	P	12 10 55.8	-0.5
	1.2nm,0.8s,baz=91,slow=9.9,SNR=10						
WRA	Warramunga Arr	34.49	267	P	P	12 10 56.2	-1.1
	0.4nm,0.5s,baz=97,slow=8.3,SNR=9.9						
MJAR	Matsushiro Arr	66.36	331	P	P	12 14 56.7	-1.1
	0.9nm,0.7s,baz=148,slow=7.4,SNR=3.3						
CMAR	Chiang Mai Arr	81.50	294	P	P	12 16 28.5	+1.5
	1.5nm,0.8s,baz=127,slow=4.6,SNR=7.1						
NVAR	Mina Array Bea	89.42	48	P	P	12 17 06.2	-0.1
	0.6nm,0.8s,baz=223,slow=9.8,SNR=5.9						
SONM	Songino Array	90.82	322	P	P	12 17 12.4	-0.1
	0.7nm,0.9s,baz=134,slow=4.2,SNR=3.9						

IDC 12 12:13:52.8±4.0**, 13°.18S**×**166°.87E, h0**km**, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.6**/20**, mbtmp3.8**/4**, ML4.8**/1**, Error ellipse: s-maj=78.8km s-min=56.7km az=109.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	7.75	298	Pn	Pn	12 15 46.8	0.0
	14nm,0.3s,baz=152,slow=8.2,SNR=8.6						
HNR				Sn	Sn	12 17 04.9	-10
	7.7nm,0.3s,baz=238,slow=22,SNR=2.6						
WRA	Warramunga Arr	31.86	253	P	P	12 20 21.0	+1.1
	0.2nm,0.7s,baz=84,slow=9.4,SNR=2.9						
ASAR	Alice Springs	32.90	247	P	P	12 20 28.1	-0.9
	0.4nm,0.6s,baz=71,slow=9.4,SNR=6.1						
MKAR	Makanchi Array	95.82	317	P	P	12 27 21.0	-0.2
	0.2nm,0.5s,baz=90,slow=6.0,SNR=4.1						

*ISK **12** 12:33:29.4, 39°.78N×34°.75E, h2km, MD2.5*
*ISCJB **12** 12:33:30.2±0.7, 39°.75N±0°.04×34°.72E±0°.05, h5km±8km, Error ellipse: s-maj=6.7km s-min=5.9km az=32.4*
*DDA **12** 12:33:30.1, 39°.73N×34°.72E, h7km, MD2.8*
*CSEM **12** 12:33:30.2±0.2, 39°.75N×34°.72E, h2km, MD2.8, Error ellipse: s-maj=4.0km s-min=3.1km az=73.0*
ISC 12 12:33:30.5±1.1**, 39°.74N**±0°.03×**34°.73E**±0°.03**, h4**km±12km**, n14, σ0s.48**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDAG	Cicekdag	0.30	246	*i* P	Pg	12 33 36.6	+0.3
CDAG				*i* S	Sg	12 33 40.3	+0.1
CDAG	Cicekdag	0.30	246	*i* P	Pg	12 33 36.6	+0.3
CDAG				*i* S	Sg	12 33 40.3	+0.1
CORM	Corum	0.44	350	*e*PG	Pg	12 33 38.5	-0.5
CORM				*e*SG	Sg	12 33 44.9	+0.2
CORM	Corum	0.44	350	*e*Pg	Pg	12 33 38.5	-0.5
CORM				*e*Sg	Sg	12 33 44.9	+0.2
YOZ	Yozgat	0.47	103	*e*PG	Pg	12 33 39.3	-0.2
YOZ				*e*SG	Sg	12 33 46.5	+0.9
YOZ	Yozgat	0.47	103	*e*Pg	Pg	12 33 39.3	-0.2
YOZ				*e*Sg	Sg	12 33 46.5	+0.9
CTKT	Corum	0.88	3	*i* P	Pg	12 33 47.3	0.0
CTKT	Corum	0.88	3	*i* P	Pg	12 33 47.3	0.0
AVNT	Avonos	0.97	174	*i* P	Pg	12 33 48.3	-0.7
AVNT				*i* S	Sg	12 34 02.0	+0.4
AVNT	Avonos	0.97	174	*i* P	Pg	12 33 48.3	-0.7
AVNT				*i* S	Sg	12 34 02.0	+0.4
PINB	Pinarbasi	1.68	129	*e*P	Pb	12 34 01.7	-0.4
PINB	Pinarbasi	1.68	129	*e*P	Pb	12 34 01.7	-0.4
SVSK	Karacayir	1.76	84	*e*PN	Pn	12 34 01.7	0.0
SVSK				*e*SN	Sn	12 34 24.9	+0.5
SVSK	Karacayir	1.76	84	*e*Pn	Pn	12 34 01.7	0.0
SVSK				*e*Sn	Sn	12 34 25.0	+0.5

IDC 12 12:34:17.7±2.5**, 5°.60S**×**130°.70E, h0**km**, mb3.4**/1**, mb1 3.5**/4**, mb1mx3.4**/19**, mbtmp3.3**/4**, ML3.1**/3**, Error ellipse: s-maj=113.7km s-min=28.3km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	13.37	201	Pn	Pn	12 37 28.5	-0.3
	0.1nm,0.3s,baz=31,slow=13,SNR=9.1						
FITZ				Sn	Sn	12 39 43.2	-15
	0.1nm,0.3s,baz=222,slow=22,SNR=4.5						
WRA	Warramunga Arr	14.69	166	Pn	Pn	12 37 47.7	+0.8
	0.1nm,0.3s,baz=348,slow=11,SNR=3.7						
WRA				Sn	Sn	12 40 16.8	-14
	0.2nm,0.3s,baz=335,slow=21,SNR=6.6						
ASAR	Alice Springs	18.22	171	P	Pn	12 38 31.9	-0.4
	0.1nm,0.3s,baz=345,slow=8.0,SNR=5.7						
MKAR	Makanchi Array	67.45	326	P	P	12 45 15.4	0.0
	0.2nm,0.4s,baz=117,slow=8.3,SNR=3.5						

DDA 12 12:45:31.6, 36°.60N×32°.77E, h7km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERMK	Ermenek	0.12	68	*i* P	Pg	12 45 35.4	+0.8
GAZI	Gazipasa	0.52	226	*i* P	Pg	12 45 41.4	-0.2
GAZI				*i* S	Sb	12 45 49.9	-0.9
KIZK	Mersin	1.11	96	*e*P	Pg	12 45 52.1	-0.8
KIZK				*i* S	Sn	12 46 11.0	+1.8

*NIED **12** 12:51:00, 23°.80N×121°.60E, h5km, Mw4.3 Best double couple: M0 2.78000×10^15 NP1:φs 57.00000°, δ78.00000°, λ101.00000°. NP2:φs 196.00000°, δ16.00000°, λ50.00000°.*
*NEIC **12** 12:51:52.9±1.8, 23°.95N×121°.72E, h10km, ML4.2(TAP), Error ellipse: s-maj=24.6km s-min=6.7km az=99.0*
NEIC Recorded [4 TAP] in Hua-lien; [2 TAP] in I-lan and Nan-t'ou; [1 TAP] in T'ai-chung.
*JMA **12** 12:51:52.5±0.3, 23°.80N×121°.56E, h23km, M3.6*
*IDC **12** 12:51:52.4±0.9, 23°.98N×121°.76E, h0km, mb3.6/8, mb1 3.8/9, mb1mx3.6/26, mbtmp3.6/9, ML3.1/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/30, Error ellipse: s-maj=27.2km s-min=18.9km az=74.0*
*ISCJB **12** 12:51:53.5±0.3, 23°.99N±0°.01×121°.70E±0°.02, h3km±2km, mb3.5/8, MS3.4/1, Error ellipse: s-maj=2.6km s-min=1.7km az=29.0*
*BJI **12** 12:51:53.7, 24°.04N×121°.70E, h6km, mb4.0/3, ML3.9/5*
*TAP **12** 12:51:54.1, 24°.00N×121°.63E, h7km, ML4.2, B*
ISC 12 12:51:53.6±0.9**, 23°.98N**±0°.02×**121°.70E**±0°.02**, h7**km±6km**, n91, σ0s.60**/142**, mb3.6**/8**, 18C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.08	269	⇑P	Pg	12 51 56.0	+0.4
	baz=203						
TWD	Chiawan	0.14	318	⇑*i*P	Pg	12 51 56.5	0.0
	baz=347						
TWD				*i* S	Sg	12 51 58.1	-0.3
	baz=347						
ESF	Shoufeng Towns	0.20	238	P	Pg	12 51 57.9	+0.2
	baz=220						
ESF				*e*S	Sg	12 52 00.3	-0.1
	baz=220						
NACB	Ninganchiao	0.21	335	*e*Pg	Pg	12 51 57.5	-0.5
NACB				*e*Sg	Sg	12 52 00.3	-0.6
ESL	Shilin	0.29	236	⇑P	Pg	12 51 59.4	0.0
	baz=232						
ESL				S	Sg	12 52 03.0	-0.3
	baz=232						
TEGC	Jichi Village	0.30	208	*e*P	Pb	12 52 01.1	-0.3
	baz=197						
TEGC				*e*S	Sb	12 52 07.3	+0.7
	baz=197						
EHP	Heping Village	0.33	7	*e*P	Pb	12 52 01.3	-0.7
	baz=21						
WHF	Hehuan Shan	0.43	293	⇑*i*P	Pg	12 52 01.7	-0.3
	baz=295						
WHF				*e*S	Sg	12 52 06.7	-1.0
	baz=295						
ENA	Nanau	0.45	5	⇑*i*P	Pg	12 52 02.9	+0.5
	baz=16						
ENA				*e*S	Sg	12 52 08.8	+0.5
	baz=16						
NNS	Nan Shan	0.55	327	⇑*i*P	Pg	12 52 04.2	0.0
	baz=334						
NNS				*e*S	Sg	12 52 11.1	-0.3
	baz=334						
TWT	Tachien	0.55	300	⇑*i*P	Pg	12 52 04.6	+0.3
	baz=301						
TWT				*e*S	Sg	12 52 11.3	-0.1
	baz=301						
EHY	Hungye	0.58	216	*e*P	Pg	12 52 05.2	+0.3
	baz=218						
EHY				*e*S	Sg	12 52 13.0	+0.5
	baz=218						
TWC	Suao	0.64	13	⇑P	Pb	12 52 06.6	-0.6
	baz=20						
TWC				*e*S	Sg	12 52 15.3	+0.9
	baz=20						
ENTT	Nioudou	0.67	350	⇑*i*P	Pg	12 52 07.0	+0.4
	baz=357						
ENTT				*e*S	Sg	12 52 15.5	+0.2
	baz=357						
YULB	Yu-li	0.69	212	*e*Pg	Pg	12 52 06.9	0.0
YULB				*e*Sg	Sg	12 52 15.2	-0.7
SSLB	Suanglung	0.70	254	*e*Pg	Pg	12 52 06.6	-0.6
SSLB				*e*Sg	Sg	12 52 16.2	-0.1
TWF1	Yuli	0.72	210	*e*P	Pg	12 52 07.6	+0.1
	baz=216						
TWF1				*e*S	Sb	12 52 18.6	-0.2
	baz=216						
SMLT	Sun Moon Lake	0.73	263	⇑*i*P	Pg	12 52 08.0	+0.2
	baz=261						
SMLT				*e*S	Sg	12 52 17.1	-0.2
	baz=261						
TWE	Neicheng	0.74	358	⇑*i*P	Pb	12 52 08.4	-0.4
	baz=5.0						
TWE				*e*S	Sg	12 52 18.0	+0.5
	baz=5.0						
YHNB	Yeheng	0.75	337	*e*Pg	Pg	12 52 08.1	+0.1
YHNB				*e*Sg	Sg	12 52 17.7	-0.1
NSK	Sanguang	0.76	336	⇑*i*P	Pg	12 52 08.5	+0.3
	baz=333						
NSK				*e*S	Sg	12 52 17.8	-0.4
	baz=333						
TYC	Yuchr	0.77	265	⇑*i*P	Pg	12 52 08.4	-0.1
	baz=263						
TYC				S	Sg	12 52 17.5	-1.0
	baz=263						
ILA	Ilan	0.79	4	*e*P	Pb	12 52 09.5	-0.2
	baz=10.0						
ILA				*e*S	Sb	12 52 20.1	-0.4
	baz=10.0						
YUS	Yu-Shan	0.84	235	*e*P	Pg	12 52 10.2	+0.4
	baz=231						
YUS				*e*S	Sg	12 52 21.8	+1.1
	baz=231						
NSTT	Nanjuang	0.91	316	⇑*i*P	Pb	12 52 11.6	-0.1
	baz=319						
NSTT				*e*S	Sg	12 52 22.6	-0.3
	baz=319						
TWQ1	Liyutan	0.92	294	⇑P	Pb	12 52 11.9	-0.1
	baz=295						
TWQ1				*e*S	Sg	12 52 23.8	+0.5
	baz=295						
CHKT	Chengkung	0.93	199	P	Pb	12 52 12.0	-0.1
	baz=187						
CHKT				*e*S	Sb	12 52 24.8	+0.2
	baz=187						
WNT	Mingjian	0.93	264	*e*P	Pb	12 52 12.3	+0.2
	baz=263						
WNT				*e*S	Sg	12 52 24.0	+0.4
	baz=263						
ALS	Alishan	0.94	240	⇑*i*P	Pg	12 52 12.1	+0.3
	baz=247						
TCU	Taichung	0.95	280	*e*P	Pn	12 52 13.1	-0.3
	baz=275						
TCU				*e*S	Sb	12 52 25.1	0.0
	baz=275						
NSY	Sanyi	0.96	297	*e*P	Pb	12 52 13.1	+0.5
	baz=311						
NSY				*e*S	Sb	12 52 25.9	+0.3
	baz=311						
ELDTW	Lidau	1.00	218	*e*P	Pg	12 52 12.0	-0.9
	baz=215						
ELDTW				*e*S	Sb	12 52 27.0	+0.1
	baz=215						
CHN5	Tsauling	1.01	248	*e*P	Pb	12 52 13.7	+0.2
	baz=235						
CHN5				*e*S	Sb	12 52 27.4	+0.4
	baz=235						
TATO	Taipei	1.01	349	*e*Pg	Pb	12 52 13.5	0.0
TATO				*e*Sg	Sg	12 52 25.9	-0.3
HSN	Hsinchu	1.05	321	*e*P	Pn	12 52 14.6	-0.3
	baz=327						
HSN				*e*S	Sb	12 52 28.6	+0.3
	baz=327						
TWB1	Santiao Chiao	1.06	15	*e*P	Pb	12 52 14.3	0.0
	baz=13						
TAP1	Taipei	1.07	352	*e*P	Pb	12 52 14.4	-0.1
	baz=356						
TAP1				*e*S	Sg	12 52 27.1	-0.9
	baz=356						
TAP	Taipei	1.07	351	*e*P	Pg	12 52 14.2	0.0
	baz=356						
TAP				*e*S	Sg	12 52 28.4	+0.3
	baz=356						
WGK	Gukeng	1.08	255	*e*P	Pn	12 52 15.2	0.0
	baz=254						
NCU	National Centr	1.09	335	*e*P	Pb	12 52 14.8	-0.1
	baz=350						
NCU				*e*S	Sb	12 52 29.9	+0.6
	baz=350						
NWF	Wu-fen Shan	1.09	4	⇑*e*P	Pn	12 52 15.3	-0.2
	baz=9.0						
NWF				*e*S	Sg	12 52 29.1	+0.4
	baz=9.0						
TWS1	Kuangyinshan	1.15	347	*e*P	Pn	12 52 16.2	+0.1
	baz=352						
TWS1				*e*S	Sn	12 52 31.7	-0.4
	baz=352						
CHN4	Tsaushan	1.19	238	*e*P	Pn	12 52 16.8	0.0
	baz=225						
CHN4				*e*S	Sn	12 52 34.3	+1.1
	baz=225						
TPUB	Ta-pu	1.19	236	*e*Pn	Pg	12 52 16.0	-0.5
TPUB				*e*Sn	Sn	12 52 33.5	+0.3
CHN2	Minshiung	1.20	249	*e*P	Pn	12 52 17.2	+0.3
	baz=249						
WTP	Ta-pu	1.23	234	*e*P	Pn	12 52 17.5	+0.2
	baz=232						
WTP				*e*S	Sn	12 52 34.3	+0.1
	baz=232						
CHY	Chiayi	1.26	248	*e*P	Pg	12 52 17.9	+0.1
	baz=263						
CHY				*e*S	Sn	12 52 35.1	+0.3
	baz=263						
TWG	Pinlang	1.29	207	*e*P	Pn	12 52 15.9	-2.3
	baz=206						
TWG	Pinlang	1.29	207	*e*Pn	Pn	12 52 15.8	-2.3
TWY	Chenhua	1.29	356	*e*P	Pn	12 52 18.1	-0.1
	baz=346						
YOJ	Yonaguni jima	1.29	68	P	Pg	12 52 18.4	-0.1
	baz=66						
YOJ	Yonaguni jima	1.29	68	P	Pg	12 52 18.3	-0.2
YOJ				*e*S	Sn	12 52 37.0	+1.2
WTCT	Ta-ch'eng	1.30	265	*e*P	Pb	12 52 18.4	0.0
	baz=265						
WTCT				*e*S	Sn	12 52 36.6	+0.8
	baz=265						
TWK	Hsinying	1.31	238	*e*P	Pb	12 52 18.7	0.0
	baz=237						
TTN	Taitung	1.32	203	*e*P	Pg	12 52 19.3	+0.4
	baz=200						
CHN1	Nanshi	1.33	234	*e*P	Pg	12 52 19.3	+0.2
	baz=236						
CHN1				*e*S	Sn	12 52 37.4	+0.7
	baz=236						
WSF	Szhu	1.39	256	*e*P	Pb	12 52 20.0	0.0
	baz=256						
CHN8	Yiju	1.50	245	*e*P	Pn	12 52 21.1	+0.1
	baz=247						
CHN8				*e*S	Sg	12 52 42.4	+0.5
	baz=247						
CHN3	Shinhua	1.52	234	*e*P	Pg	12 52 22.9	+0.1
	baz=236						
ECL	Taimali	1.54	206	*e*P	Pn	12 52 20.1	-1.4
	baz=187						
SCLT	Jiali	1.59	240	*e*P	Pn	12 52 22.4	+0.1
	baz=242						
SCLT				*e*S	Sg	12 52 46.6	+1.8
	baz=242						
TAI1	Yung-k'ang	1.64	236	*e*P	Pb	12 52 23.7	-0.5
	baz=238						
TWM1	Shoushan	1.64	226	*e*P	Pg	12 52 25.0	-0.1
	baz=228						
SGLT	Jiouru	1.67	222	*e*P	Pg	12 52 25.4	-0.2
	baz=211						
EAST	Anshuo	1.77	206	*e*P	Pn	12 52 24.5	-0.3
	baz=188						
TAW	Tawu	1.77	205	*e*P	Pn	12 52 25.4	+0.7
	baz=186						
SCZT	Fangliau	1.88	212	*e*P	Pn	12 52 27.0	+0.8
	baz=197						
IRIF	Iriomote-Funau	1.89	79	P	Pn	12 52 26.8	+0.4
IRIF				*e*S	Sb	12 52 52.0	-0.4
HATJ	Hateruma jima	1.93	87	P	Pn	12 52 26.8	-0.1
HATJ				*e*S	Sn	12 52 52.1	+0.6
WDGT	Dungji	2.00	249	*e*P	Pn	12 52 28.3	+0.4
	baz=237						
WDGT				*e*S	Sn	12 52 53.6	+0.5
	baz=237						
PNG	Penghu	2.00	259	*e*P	Pn	12 52 28.2	+0.3
	baz=259						
PNG				*e*S	Sn	12 52 53.4	+0.1
	baz=259						
TWP	Hsiaoliuchiu	2.04	217	*e*P	Pb	12 52 31.4	+0.4
	baz=241						
JKRS	Kuro-shima	2.13	83	P	Pn	12 52 30.3	+0.6
HEN	Hengchun	2.15	204	*e*P	Pb	12 52 32.0	-1.0
	baz=189						
TWK1	Hengchun	2.19	202	*e*P	Pn	12 52 31.3	+0.8
	baz=206						
TSEB	Hengchuen, Pin	2.19	200	*e*P	Pn	12 52 30.4	-0.2
	baz=183						
JIJ	Ishigaki jima	2.27	80	P	Pn	12 52 31.6	0.0

JIJ				eS	Sn	12 53 01.2	+1.4
JTJ	Tarama	2.82	76	P	Pn	12 52 39.8	+0.6
JTJ				eS	Sn	12 53 15.2	+1.7
QZH	Quanzhou	2.99	289⇑	iPn	Pn	12 52 41.9	+0.5
QZH				Sn	Sn	12 53 17.8	+0.3
QZH				smax	smax		
	comp=N,520nm,0.7s						
QZH				smax	smax		
	comp=E,380nm,0.6s						
KNM	Kinmen	3.01	279	eP	Pn	12 52 43.3	+1.5
	baz=279						
KSRS	Korea Array	14.45	20	Pn	Pn	12 55 21.9	+3.3
	comp=E,0.2nm,0.3s,baz=200,slow=12,SNR=12						
MJAR	Matsushiro Arr	18.95	45	P	Pn	12 56 16.7	+0.7
	comp=E,0.1nm,0.3s,baz=221,slow=9.5,SNR=3.6						
CMAR	Chiang Mai Arr	21.90	260	P	P	12 56 47.8	+0.2
	comp=E,0.5nm,0.3s,baz=64,slow=10,SNR=3.6						
SONM	Songino Array	26.74	337	P	P	12 57 33.7	-0.2
	comp=E,0.9nm,0.7s,baz=156,slow=11,SNR=4.8						
KAPI	Kappang	28.88	184	LR	LR	13 11 12.4	
	comp=E,88nm,18.1s,baz=293,slow=40						
MKAR	Makanchi Array	38.81	316	P	P	12 59 19.2	+0.1
	comp=E,1.6nm,0.7s,baz=104,slow=10,SNR=5.2						
ZALV	Zalesovo Beam	40.67	327	P	P	12 59 35.2	+0.7
	comp=E,1.7nm,0.7s,baz=114,slow=7.2,SNR=5.4						
WRA	Warramunga Arr	45.36	163	P	P	13 00 12.3	-0.6
	comp=E,0.6nm,0.5s,baz=346,slow=8.7,SNR=12						
ASAR	Alice Springs	48.82	165	P	P	13 00 39.6	-0.2
	comp=E,0.2nm,0.3s,baz=340,slow=6.8,SNR=10						
ILAR	Eielson Array	69.18	27	P	P	13 02 59.8	-0.8
	comp=E,0.1nm,0.5s,baz=267,slow=5.0,SNR=6.3						
YKA	Yellowknife Ar	82.98	23	P	P	13 04 18.1	-1.2
	comp=E,0.4nm,0.8s,baz=318,slow=4.6,SNR=4.5						

MAN 12 12:59:31, 9°.66N×121°.90E, h33km, mb4.6, ML3.5, MS3.4, 2C-1D, Sulu Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	Jordan	1.18	35	eP	Pn	12 59 49.9	-1.3
GUIM				eS	Sn	13 00 06.0	-0.1
CUYO	Cuyo Island	1.47	324	eP	Pn	12 59 56.1	+0.9
CUYO				eS	Sn	13 00 14.4	+1.0
TBP	Tagbilaran	1.93	89	eP	Pn	13 00 02.3	+0.7
IPIL	Ipil	1.97	160	eP	Pn	13 00 02.6	+0.5
IPIL				eS	Sn	13 00 24.8	-0.9
RCP	Roxas	2.06	24⇓	eP	Pn	13 00 04.6	+1.2
RCP				i S	Sn	13 00 29.4	+1.4
LLP	Lapu-Lapu	2.14	72⇑	iP	Pn	13 00 04.5	+0.1
LLP				eS	Sn	13 00 27.1	-2.6
PAGZ	Pagadian	2.32	141	eP	Pn	13 00 08.3	+1.4
PAGZ				eS	Sn	13 00 35.8	+1.6
OTRP	Odiongan	2.69	2	eP	Pn	13 00 12.3	+0.3
ENPP	El Nido	2.88	303	eP	Pn	13 00 16.2	+1.5
ENPP				eS	Sn	13 00 48.0	-0.2
MSLP	Maasin	2.95	80	eP	Pn	13 00 16.8	+1.3
OCLP	Ormoc	3.00	62	eP	Pn	13 00 17.3	+1.0
CTBH	Cotabato--PC H	3.35	136⇑	iP	Pn	13 00 22.5	+1.4
BUKP	Musuan	3.59	119	eP	Pn	13 00 26.2	+1.8
BUKP				eS	Sn	13 01 09.8	+4.0
BATP	Bataraza	4.14	258	eP	Pb	13 00 37.7	-5.5
MYLDM	Lahad Datu	5.58	217	P	Pn	13 00 57.0	+5.2
TSM	Tawau	6.66	217	P	Pn	13 01 10.6	+4.0

IDC 12 13:05:10.2±1.2, 4°.18S×129°.74E, h0km, mb3.9/3, mb1 4.0/6, mb1mx3.7/21, mbtmp3.9/6, ML3.6/3, Error ellipse: s-maj=61.4km s-min=20.1km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	14.40	196	Pn	Pn	13 08 35.1	-0.4
	0.2nm,0.3s,baz=24,slow=13,SNR=7.1						
WRA	Warramunga Arr	16.29	164	Pn	Pn	13 08 58.8	-1.9
	0.2nm,0.3s,baz=347,slow=13,SNR=13						
WRA				Sn	Sn	13 11 57.9	-4.4
	0.1nm,0.3s,baz=352,slow=22,SNR=3.1						
ASAR	Alice Springs	19.78	169	P	Pn	13 09 43.8	0.0
	0.4nm,0.3s,baz=345,slow=9.4,SNR=44						
CTA	Charters Tower	22.55	136	P	P	13 10 11.8	-0.4
	7.6nm,0.8s,baz=315,slow=11,SNR=4.4						
SONM	Songino Array	55.71	341	P	P	13 14 49.0	+0.3
	0.3nm,0.4s,baz=138,slow=8.9,SNR=3.2						
MKAR	Makanchi Array	65.75	326	P	P	13 15 56.7	-0.4
	0.9nm,0.7s,baz=114,slow=8.2,SNR=9.6						

DDA 12 13:21:50.4, 37°.19N×28°.19E, h7km, MD2.7
ISK 12 13:21:50.7, 37°.23N×28°.18E, h2km, MD2.4
ISCJB 12 13:21:51.2±0.6, 37°.22N±0°.05×28°.19E±0°.05, h10km±9km, Error ellipse: s-maj=9.7km s-min=4.7km az=33.5
CSEM 12 13:21:51.1±0.2, 37°.23N×28°.21E, h10km, MD2.4, Error ellipse: s-maj=6.0km s-min=4.4km az=29.0
ISC 12 13:21:50.7±1.0, 37°.22N±0°.03×28°.20E±0°.03, h13km±7km, n16, σ0s.62/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	Yerkesik	0.11	143	ePG	Pg	13 21 53.9	0.0
YER				eSG	Sg	13 21 55.9	-0.2
YER	Yerkesik	0.11	143	ePg	Pg	13 21 53.9	0.0
YER				eSg	Sg	13 21 55.9	-0.2
MLSB	Milas	0.35	282	ePG	Pg	13 21 58.1	+0.3
MLSB				eSG	Sb	13 22 03.5	-0.7
MLSB	Milas	0.35	282	ePg	Pg	13 21 58.1	+0.3
MLSB				eSg	Sb	13 22 03.5	-0.7
TURN	Turunc	0.47	137	i P	Pg	13 21 58.8	-1.2
TURN				i S	Sb	13 22 08.7	+1.0
TURN	Turunc	0.47	137	i P	Pg	13 21 58.8	-1.2
TURN				i S	Sb	13 22 08.7	+1.0
AYDN	Tasoluk	0.51	330	i P	Pg	13 22 00.7	-0.1
AYDN				i S	Sb	13 22 08.5	-0.4
AYDN	Tasoluk	0.51	330	i P	Pg	13 22 00.7	-0.1
AYDN				i S	Sb	13 22 08.5	-0.4
DALY	Dalyan (Mu˜la	0.54	138	ePG	Pb	13 22 02.5	+0.5
DALY	Dalyan (Mu˜la	0.54	138	ePg	Pb	13 22 02.5	+0.5
DAT	Datca	0.70	226	ePG	Pb	13 22 05.0	+0.2
DAT	Datca	0.70	226	ePg	Pb	13 22 05.1	+0.2
BODT	Bodrum	0.73	258	ePG	Pb	13 22 05.6	+0.3
BODT	Bodrum	0.73	258	ePg	Pb	13 22 05.6	+0.3
DNZL	Cakiroluk	0.82	55	i P	Pb	13 22 06.9	0.0
DNZL				i S	Sb	13 22 18.6	+0.7
DNZL	Cakiroluk	0.82	55	i P	Pb	13 22 06.9	0.0
DNZL				i S	Sb	13 22 18.6	+0.7

IDC 12 13:41:36.9±1.1, 37°.14S×179°.28E, h0km, mb4.3/8, mb1 4.4/9, mb1mx4.1/20, mbtmp4.3/9, ML3.9/1, MS4.0/1, Ms1 4.0/1, ms1mx2.5/30, Error ellipse: s-maj=28.6km s-min=26.0km az=167.0
WEL 12 13:41:38.0±0.4, 37°.33S×179°.62E, h12km, ML4.3/26, Error ellipse: s-maj=3.7km s-min=3.5km az=0.0
ISC 12 13:41:40.0±0.9, 37°.65S±0°.06×179°.51E±0°.08, h29km, n95, σ1s.51/96, mb4.2/8, 1C, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	0.96	275	P*	Pn	13 41 57.3	-0.2
MXZ				AML	AML	13 42 11.6	
MXZ				AML	AML	13 42 11.7	
MXZ				AML	AML	13 42 12.2	
MXZ				S*	Sb	13 42 12.2	+1.8
PUZ	Puketiti	1.08	247	PN	Pb	13 42 01.6	+1.5
PUZ				SN	Sb	13 42 18.1	+4.3
PUZ				AML	AML	13 42 19.5	
CNGZ	Carnagh Statio	1.33	231	PN	Pb	13 42 06.4	+2.2
MWZ	Matawai	1.71	246	PN	Pb	13 42 09.6	-1.2
MWZ				AML	AML	13 42 38.0	
MWZ				AML	AML	13 42 40.5	
MWZ				AML	AML	13 42 44.7	
MWZ				AML	AML	13 42 44.8	
MHGZ	Mahia Peninsul	1.96	220	PN	Pb	13 42 14.6	-0.4
KNZ	Kokohu	1.99	226	PN	Pb	13 42 14.2	-1.4
URZ	Urewera	2.00	251	PN	Pn	13 42 13.5	+1.8
URZ				AML	AML	13 42 39.6	
URZ				AML	AML	13 42 53.0	
URZ	Urewera	2.00	251	Pn	Pn	13 42 13.7	+2.0
	46nm,0.3s,baz=86,slow=3.2,SNR=632						
URZ				Sn	Sb	13 42 38.7	-1.3
	22nm,0.3s,baz=17,slow=19,SNR=8.6						
EDRZ	Edgecumbe	2.24	257	PN	Pn	13 42 16.7	+1.4
EDRZ				AML	AML	13 43 05.3	
EDRZ				AML	AML	13 43 13.4	
RAHZ	Arahi	2.29	236	PN	Pn	13 42 18.2	+2.4
OPRZ	Ohinepanea	2.35	264	PN	Pn	13 42 17.1	+0.4
RRRZ	Republican Roa	2.47	253	PN	Pn	13 42 19.3	+1.1
NMHZ	Naumai	2.57	235	PN	Pn	13 42 22.1	+2.3
PRRZ	Plateau Road	2.60	250	PN	Pn	13 42 21.5	+1.4
ALRZ	Allen Road	2.66	249	PN	Pn	13 42 22.6	+1.7
BKZ	Black Stump Fm	2.82	236	PN	Pn	13 42 24.9	+1.8
BKZ				AML	AML	13 43 02.2	
BKZ				AML	AML	13 43 04.4	
MCHZ	McNeill Hill	2.84	230	PN	Pn	13 42 25.7	+2.3
HATZ	Hinemaiaia	2.97	244	PN	Pn	13 42 26.8	+1.7
KAHZ	Kahuranaki	2.98	223	PN	Pn	13 42 27.7	+2.4
PXZ	Pawanui	3.15	220	PN	Pn	13 42 29.8	+2.2
PXZ				AML	AML	13 43 10.5	
PXZ				AML	AML	13 43 10.5	
PXZ				AML	AML	13 43 10.5	
PXZ				AML	AML	13 43 34.2	
KUZ	Kuaotunu	3.16	285	PN	Pn	13 42 26.0	-1.8
KUZ				AML	AML	13 43 07.2	
KUZ				AML	AML	13 43 08.0	
TOZ	Tahuroa Road	3.18	267	⇑PN	Pn	13 42 28.3	+0.3
BHHZ	Black Hill Sta	3.27	235	PN	Pn	13 42 31.0	+1.7
WPHZ	Waipukurau	3.40	224	PN	Pn	13 42 32.7	+1.6
MOVZ	Moawhango	3.43	238	PN	Pn	13 42 33.1	+1.5
MOVZ				AML	AML	13 43 15.9	
MOVZ				AML	AML	13 43 26.0	
PNHZ	Pukenui	3.44	228	PN	Pn	13 42 32.7	+1.1
PRHZ	Porangahau	3.45	220	PN	Pn	13 42 32.9	+1.2
WPVZ	Whakapapa	3.48	242	PN	Pn	13 42 34.0	+1.7
WPVZ				AML	AML	13 43 15.7	
FWVZ	Far West T-bar	3.50	241	PN	Pn	13 42 34.1	+1.5
FWVZ				AML	AML	13 43 25.0	
FWVZ				AML	AML	13 43 25.0	
MKAZ	Moumakai	3.50	277	PN	Pn	13 42 32.2	-0.3
TRVZ	Turoa	3.52	241	PN	Pn	13 42 34.8	+1.8
MTVZ	Mangateitei	3.62	240	PN	Pn	13 42 35.9	+1.9
MTVZ				AML	AML	13 43 19.8	
MTVZ				AML	AML	13 43 26.8	
PKVZ	Pokaka	3.66	242	PN	Pn	13 42 36.7	+2.1
TSZ	Takapari Road	3.67	228	PN	Pn	13 42 35.6	+0.8
TSZ				AML	AML	13 43 22.1	
TSZ				AML	AML	13 43 24.0	
DVHZ	Dannevirke	3.72	224	PN	Pn	13 42 36.5	+1.0
OTAZ	Otara	3.73	279	PN	Pn	13 42 35.7	+0.2
HIZ	Hauiti	3.78	255	PN	Pn	13 42 37.7	+1.4
KAAZ	Kauri Point	3.93	281	PN	Pn	13 42 38.9	+0.6
BFZ	Birch Farm	3.95	219	PN	Pn	13 42 39.8	+1.2
POWZ	Post Office Ro	4.00	226	PN	Pn	13 42 40.5	+1.1
WTAZ	Waiatarua	4.00	279	PN	Pn	13 42 40.5	+1.2
VRZ	Vera Road	4.02	247	PN	Pn	13 42 41.5	+1.9
RVAZ	Riverhead Bore	4.04	281	PN	Pn	13 42 39.7	-0.1
WAZ	Wanganui	4.12	238	PN	Pn	13 42 42.7	+1.7
TIWZ	Tintock	4.21	221	PN	Pn	13 42 42.9	+0.7
MRZ	Mangatainoka R	4.29	224	PN	Pn	13 42 43.8	+0.5
MRZ				AML	AML	13 43 36.5	
MRZ				AML	AML	13 43 37.2	
TMWZ	Te Maipa	4.45	218	PN	Pn	13 42 45.7	+0.2
WCZ	Waipu Caves	4.49	291	PN	Pn	13 42 45.2	-0.8
WCZ				AML	AML	13 42 46.4	
WCZ				AML	AML	13 42 46.8	
HOWZ	Holdsworth Sta	4.49	222	PN	Pn	13 42 46.1	+0.1
OGWZ	Otaki Gorge	4.62	225	PN	Pn	13 42 47.7	-0.2
MTW	Mount Morrison	4.69	220	PN	Pn	13 42 48.4	-0.3
MTW				AML	AML	13 43 44.1	
MTW				AML	AML	13 43 45.6	
TRWZ	Traveller	4.77	217	PN	Pn	13 42 49.5	-0.4
TRWZ				AML	AML	13 43 49.3	
TRWZ				AML	AML	13 44 06.1	
KIW	Kapiti Island	4.80	227	PN	Pn	13 42 50.2	-0.2
CAW	Cannon Point	4.88	224	PN	Pn	13 42 51.0	-0.4
CAW				AML	AML	13 43 49.2	
CAW				AML	AML	13 43 50.4	
PAWZ	Paruwai Farm	4.89	219	PN	Pn	13 42 51.3	-0.2
PAWZ				AML	AML	13 43 51.1	
PAWZ				AML	AML	13 43 51.3	
MSWZ	Moikau Station	5.00	220	PN	Pn	13 42 52.5	-0.6
MSWZ				AML	AML	13 43 52.0	
MSWZ				AML	AML	13 43 52.8	
PLWZ	Palliser	5.12	219	PN	Pn	13 42 53.8	-0.9
WEL	Wellington	5.17	224	PN	Pn	13 42 54.6	-0.7
BHW	Baring Head	5.20	222	PN	Pn	13 42 55.3	-0.4
BHW				AML	AML	13 43 55.5	
SNZO	South Karori	5.22	224	PN	Pn	13 42 54.8	-1.1
SNZO				AML	AML	13 43 56.6	
DUWZ	D'Urville Isla	5.37	232	PN	Pn	13 42 58.4	+0.4
TCW	Tory Channel	5.40	227	PN	Pn	13 42 58.1	-0.3
TCW				AML	AML	13 44 02.0	
TCW				AML	AML	13 44 03.1	
TUWZ	Tuamarina	5.73	227	PN	Pn	13 43 01.8	-1.2
TUWZ				AML	AML	13 44 10.4	
TUWZ				AML	AML	13 44 11.0	
NNZ	Nelson	5.94	231	PN	Pn	13 43 04.9	-1.0
BSWZ	Blackbirch Sta	5.95	225	PN	Pn	13 43 05.8	-0.2
QRZ	Quartz Range	6.28	237	PN	Pn	13 43 10.0	-0.7
THZ	Tophouse	6.55	229	PN	Pn	13 43 13.1	-1.2
THZ				AML	AML	13 44 30.5	
THZ				AML	AML	13 44 36.5	
KHZ	Kahutara	6.61	222	PN	Pn	13 43 14.0	-1.1
CTZ	Chatham Island	6.75	155	PN	Pn	13 43 21.3	+4.3
DSZ	Denniston Nort	7.22	233	PN	Pn	13 43 21.8	-1.8
LTZ	Lake Taylor	7.55	225	PN	Pn	13 43 28.4	+0.3
LTZ				AML	AML	13 44 50.1	
CRLZ	Canterbury Las	7.91	219	PN	Pn	13 43 31.9	-1.0
MQZ	McQueen's Vall	7.99	219	PN	Pn	13 43 32.2	-1.8
WVZ	Waitaha Valley	8.62	228	PN	Pn	13 43 43.7	+1.0
RPZ	Rata Peaks	8.83	224	Pn	Pn	13 43 44.0	-1.6
	0.6nm,0.3s,baz=36,slow=16,SNR=7.7						
RPZ				Sn	Sn	13 45 19.0	-5.1
	2.1nm,0.3s,baz=5.3,slow=22,SNR=17						
LBZ	Lake Benmore	9.74	223	PN	Pn	13 43 57.3	-0.9
ODZ	Otahua Downs	9.95	219	PN	Pn	13 43 58.5	-2.4
JCZ	Jackson Bay	10.37	228	PN	Pn	13 44 04.3	-2.4
EAZ	Earnscleugh	10.77	222	PN	Pn	13 44 10.9	-1.2
TUZ	Tuapeka	11.10	218	PN	Pn	13 44 16.7	+0.1
STKA	Stephens Creek	31.53	269	P	P	13 47 59.8	+0.2
	2.9nm,0.7s,baz=86,slow=9.8,SNR=6.2						
VNDA	Vanda	40.69	186	LR	LR	14 03 35.6	
	comp=Z,165nm,18.3s,baz=171,slow=32						
ASAR	Alice Springs	41.24	276	P	P	13 49 21.5	-1.1
	4.3nm,0.8s,baz=117,slow=7.8,SNR=50						
WRA	Warramunga Arr	42.89	281	P	P	13 49 34.6	-1.4
	3.3nm,0.5s,baz=120,slow=7.8,SNR=77						
NWAO	Narrogin (SRO)	50.24	256	P	P	13 50 33.8	+0.3
	8.5nm,1.0s,baz=112,slow=5.4,SNR=2.4						
FITZ	Fitzroy Crossi	50.73	277	P	P	13 50 36.8	-0.6
	2.1nm,0.7s,baz=109,slow=11,SNR=7.8						
QSPA	South Pole Qui	52.48	180	P	P	13 50 55.2	+5.3
	3.4nm,1.1s,baz=59,slow=5.1,SNR=6.2						
KSRS	Korea Array	88.62	321	P	P	13 54 29.6	-0.3
	0.8nm,0.6s,baz=146,slow=7.2,SNR=4.5						
CMAR	Chiang Mai Arr	93.90	290	P	P	13 54 54.0	-1.0
	0.5nm,0.6s,baz=134,slow=5.2,SNR=3.6						
ARCES	ARCESS Array B	145.12	344	PKP	PKPbc	14 01 13.0	0.0
	2.6nm,0.8s,baz=14,slow=2.5,SNR=9.4						
JOF	Joensuu	148.16	333	ep	PKPdf	14 01 20.3	+1.6
KAF	Kangasniemi	150.45	335	ep	PKPdf	14 01 25.1	+2.7
FINES	FINESS Array B	150.99	334	PKPbc	PKPbc	14 01 30.0	+1.0
	5.3nm,0.8s,baz=37,slow=7.4,SNR=6.2						
BRTR	Keskin Array B	153.37	285	PKPbc	PKPbc	14 01 35.9	+0.6
	0.6nm,0.5s,baz=140,slow=4.0,SNR=4.8						
TORD	Torodi Ar. Bea	155.52	185	PKPab	PKPab	14 01 59.7	+2.8
	0.9nm,0.6s,baz=170,slow=4.4,SNR=6.9						

MEX 12 13:44:49.0±0.6, 16°.77N×99°.62W, h4km±8km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.68	294	eP	Pg	13 45 01.1	-1.0
CAIG				i S	Sg	13 45 11.0	-0.1
MEIG	Mezcala	1.15	360	eP	Pg	13 45 07.8	-3.5
MEIG				i S	Sg	13 45 23.3	-3.1
PNIG	Pinotepa	1.48	104	eP	Pn	13 45 13.2	-3.2
PNIG				i S	Sn	13 45 31.5	-4.8
PLIG	Platanillo	1.62	4	eP	Pn	13 45 15.5	-3.0
PLIG				i S	Sn	13 45 35.1	-4.8
ARIG	Puente Sto Nin	1.66	335	eP	Pn	13 45 15.4	-3.6
ARIG				i S	Sn	13 45 35.8	-5.0
ZIIG	Zihuatanejo	1.96	296	i P	Pn	13 45 19.7	-3.3
ZIIG				i S	Sn	13 45 43.9	-4.1
YAIG	Yautepec	2.15	14	i P	Pn	13 45 22.7	-3.2
YAIG				i S	Sn	13 45 48.2	-5.0
PPM	Popocatepetl	2.47	22	eP	Pn	13 45 26.6	-4.2
PPM				i S	Sn	13 45 57.1	-4.9

IDC 12 13:44:47.3±0.9, 17°.64S×167°.92E, h0km, mb4.1/13, mb1 4.2/15, mb1mx4.1/24, mbtmp4.2/15, ML3.9/2, MS3.7/7, Ms1 3.7/7, ms1mx3.1/36, Error ellipse: s-maj=25.3km s-min=17.7km az=98.0
ISCJB 12 13:44:49.7±0.8, 17°.69S±0°.06×167°.8E±0°.1, h27km, mb4.0/12, MS3.7/4, Error ellipse: s-maj=18.9km s-min=8.3km az=2.7
VIE 12 13:45:04.8, 17°.15S×167°.37E, h112km, mb3.8 120 km NW of Port Vila
ISC 12 13:44:51.7±0.8, 17°.66S±0°.07×167°.8E±0°.1, h27km, n22, σ1s.16/21, mb4.2/12, MS3.7/5, 3C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.57	196	Pn	Pn	13 45 59.3	+0.1
	2.5nm,0.3s,baz=63,slow=12,SNR=26						
DZM				Sn	Sn	13 46 50.2	-1.3
	8.7nm,0.3s,baz=300,slow=22,SNR=11						
DZM				LR	LR	13 47 41.5	
	comp=Z,534nm,18.2s,baz=196,slow=38						
HNR	Honiara	11.17	316	Pn	Pn	13 47 30.7	+0.9
	1.5nm,0.3s,baz=222,slow=10,SNR=2.2						
HNR				Sn	Sn	13 49 31.4	-2.5
	2.6nm,0.3s,baz=207,slow=10,SNR=3.0						
HNR				LR	LR	13 51 14.5	
	comp=Z,292nm,18.1s,baz=90,slow=34						
AFI	Afiamalu	20.02	82	LR	LR	13 55 04.9	
	comp=Z,188nm,21.9s,baz=210,slow=31						
CTA	Charters Tower	20.52	260	P	Pn	13 49 28.9	-1.5
	5.3nm,0.9s,baz=89,slow=17,SNR=4.0						
PMG	Port Moresby	21.65	290	LR	LR	13 56 58.7	
	comp=Z,180nm,20.0s,baz=219,slow=34						
RPZ	Rata Peaks	26.12	175	P	P	13 50 21.2	-2.3
	5.9nm,0.8s,baz=342,slow=13,SNR=2.4						
STKA	Stephens Creek	27.58	234	P	P	13 50 37.6	+0.9
	3.2nm,0.7s,baz=55,slow=9.6,SNR=7.7						
STKA				LR	LR	14 01 22.6	
	comp=Z,192nm,19.1s,baz=27,slow=36						
WRA	Warramunga Arr	31.71	261	P	P	13 51 13.4	-0.1
	1.1nm,0.8s,baz=90,slow=8.4,SNR=4.6						
ASAR	Alice Springs	32.21	254	P	P	13 51 17.8	-0.1
	2.5nm,0.8s,baz=80,slow=7.6,SNR=9.0						
ASAR				LR	LR	14 03 49.7	
	comp=Z,206nm,20.8s,baz=137,slow=35						
FITZ	Fitzroy Crossi	40.05	263	P	P	13 52 25.5	+0.5
	3.2nm,0.8s,baz=114,slow=7.4,SNR=4.9						
FITZ				LR	LR	14 07 02.3	
	comp=Z,132nm,21.2s,baz=114,slow=33						
MJAR	Matsushiro Arr	60.72	333	P	P	13 54 59.9	-1.1
	3.1nm,0.8s,baz=164,slow=7.9,SNR=8.7						
USRK	Ussuriysk Arra	69.71	333	P	P	13 55 59.6	+0.6
	1.4nm,0.7s,baz=163,slow=7.3,SNR=3.8						
PETK	Petropavlovsk-	71.01	354	P	P	13 56 06.6	-0.3
	1.0nm,0.7s,baz=168,slow=7.4,SNR=2.9						
QSPA	South Pole Qui	72.39	180	P	P	13 56 16.5	+1.2
	5.7nm,1.0s,baz=22,slow=2.6,SNR=10						
CMAR	Chiang Mai Arr	76.60	294	P	P	13 56 42.0	+1.6
	1.0nm,0.8s,baz=123,slow=4.4,SNR=5.5						
SONM	Songino Array	85.14	324	P	P	13 57 26.3	+0.8
	1.2nm,0.8s,baz=151,slow=5.0,SNR=8.3						
ILAR	Eielson Array	89.15	18	P	P	13 57 43.6	-0.7
	0.3nm,0.7s,baz=247,slow=4.5,SNR=6.8						
ARCES	ARCESS Array B	123.19	345	PKP	PKPdf	14 03 44.6	-0.8
	1.4nm,0.7s,baz=211,slow=1.4,SNR=5.1						
ABTA	Abfaltersbach	144.53	330⇑	iPKPdf	PKPdf	14 04 24.8	-1.1
	7.2nm,0.8s						
FETA	Feichten	145.15	332⇑	iPKPdf	PKPdf	14 04 27.0	0.0
	11nm,0.8s						
DAVA	Damuels	145.31	333⇑	iPKPdf	PKPdf	14 04 27.8	+0.5
	12nm,0.8s						
TORD	Torodi Ar. Bea	165.86	253	PKP	PKPdf	14 04 55.4	+0.3
	1.1nm,0.9s,baz=71,slow=1.0,SNR=4.7						

NEIC 12 13:48:52.4±0.5, 23°.64S×174°.58W, h10km, mb4.6/2, Error ellipse: s-maj=27.6km s-min=9.1km az=176.0
IDC 12 13:48:53.0±17.0, 22°.59S×175°.05W, h0km, mb4.2/5, mb1 4.4/5, mb1mx3.9/21, mbtmp4.2/5, Error ellipse: s-maj=318.1km s-min=128.7km az=82.0
ISCJB 12 13:48:53.5±0.8, 23°.5S±0°.3×174°.5W±0°.1, h33km, mb4.3/6, Error ellipse: s-maj=42.2km s-min=13.7km az=175.5
ISC 12 13:48:55.7±1.0, 23°.6S±0°.3×174°.5W±0°.1, h35km, n17, σ0s.50/17, mb4.3/6, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAR	Rarotonga	13.86	83	ePn	Pn	13 52 09.6	-0.2
CTA	Charters Tower	36.48	268	P	P	13 55 57.9	+0.1
CTA	Charters Tower	36.48	268	P	P	13 55 57.9	+0.1
	3.3nm,0.3s,baz=100,slow=7.8,SNR=13						
CTAO	Charters Tower	36.48	268	eP	P	13 55 57.8	+0.1
	8.9nm,1.3s						
TAU	Tasmania Unive	36.87	229	eP	P	13 56 00.3	-0.4
STKA	Stephens Creek	39.48	248	P	P	13 56 23.1	+0.2
STKA	Stephens Creek	39.48	248	P	P	13 56 23.1	+0.2
	1.3nm,0.4s,baz=92,slow=11,SNR=9.2						
COEN	Coen	41.03	276	eP	P	13 56 36.2	+0.2
	10nm,0.6s						
AS31	Alice Springs	47.01	259	eP	P	13 57 23.6	-0.3
ASAR	Alice Springs	47.01	259	P	P	13 57 23.4	-0.5
ASAR	Alice Springs	47.01	259	P	P	13 57 23.4	-0.5
	0.6nm,0.3s,baz=92,slow=8.3,SNR=40						
WRAB	Tennant Creek	47.41	264	eP	P	13 57 26.4	-0.6
WRA	Warramunga Arr	47.42	264	P	P	13 57 26.7	-0.4
WRA	Warramunga Arr	47.42	264	P	P	13 57 26.7	-0.4
	1.4nm,0.3s,baz=98,slow=8.2,SNR=52						
FITZ	Fitzroy Crossi	55.84	264	P	P	13 58 30.9	+0.9
FITZ	Fitzroy Crossi	55.84	264	P	P	13 58 30.9	+0.9
	3.0nm,0.9s,baz=119,slow=13,SNR=6.3						
SNAA	Sanae	84.83	177	eP	P	14 01 26.8	+0.5

IDC 12 13:51:27.4±0.9, 31°.27S×177°.97W, h0km, mb4.3/6, mb1 4.4/6, mb1mx4.0/21, mbtmp4.3/6, MS3.7/4, Ms1 3.6/4, ms1mx3.2/35, Error ellipse: s-maj=32.9km s-min=26.3km az=18.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	2.02	1	LR	LR	13 52 30.1	
	comp=Z,1µm,18.7s,baz=223,slow=31						
URZ	Urewera	8.06	209	Pn	Pn	13 53 21.6	-4.1
	0.7nm,0.3s,baz=13,slow=13,SNR=2.9						
URZ				Sn	Sn	13 54 44.0	-13
	5.2nm,0.3s,baz=153,slow=19,SNR=9.8						
RPZ	Rata Peaks	15.15	212	Sn	Sn	13 57 29.4	-22
	0.6nm,0.3s,baz=246,slow=20,SNR=3.8						
DZM	Mont Dzumac	16.66	300	LR	LR	13 59 57.0	
	comp=Z,124nm,19.7s,baz=93,slow=31						
CTA	Charters Tower	33.97	280	P	P	13 58 13.8	+0.9
	5.2nm,0.8s,baz=107,slow=12,SNR=3.8						
STKA	Stephens Creek	34.31	258	P	P	13 58 15.7	0.0
	4.3nm,1.0s,baz=84,slow=11,SNR=4.6						
STKA				LR	LR	14 10 13.0	
	comp=Z,112nm,19.3s,baz=197,slow=33						
ASAR	Alice Springs	43.09	268	P	P	13 59 29.1	-0.5
	2.3nm,0.7s,baz=105,slow=7.4,SNR=29						
WRA	Warramunga Arr	44.16	273	P	P	13 59 38.5	+0.3
	4.1nm,0.6s,baz=113,slow=7.8,SNR=30						
FITZ	Fitzroy Crossi	52.38	271	P	P	14 00 41.1	-0.6
	2.1nm,0.8s,baz=149,slow=4.5,SNR=4.0						
QSPA	South Pole Qui	58.84	180	P	P	14 01 27.9	+0.3
	1.8nm,0.7s,baz=66,slow=2.5,SNR=15						
ATAH	Atahualpa	94.45	101	LR	LR	14 37 11.4	
	comp=Z,88nm,20.0s,baz=84,slow=29						
MKAR	Makanchi Array	118.35	310	PKP	PKPdf	14 10 15.6	-0.9
	0.3nm,0.6s,baz=70,slow=1.4,SNR=3.7						
KURBB	Kurchatov Arra	121.70	313	PKP	PKPdf	14 10 22.0	-0.8
	0.7nm,0.5s,baz=112,slow=2.0,SNR=6.1						
BVAR	Borovoye Array	127.04	315	PKP	PKPdf	14 10 32.6	-0.4
	0.7nm,0.4s,baz=126,slow=2.6,SNR=4.3						
KAF	Kangasniemi	145.38	340	ep	PKPbc	14 11 05.9	-0.5
FINES	FINESS Array B	145.97	340	PKPbc	PKPbc	14 11 08.1	-0.2
	3.6nm,0.5s,baz=20,slow=6.1,SNR=14						
NB2	NORSAR Subarra	149.62	351	PKP	PKPbc	14 11 19.2	+0.9
	comp=Z,1.6nm,0.9s,baz=17,slow=2.6						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
NOA	NORSAR Array B	149.62	351	PKPbc	PKPbc	14 11 19.7	+1.4
	comp=Z,0.6nm,0.6s,baz=15,slow=4.1,SNR=2.4						
AKASG	Malin Array Be	152.00	322	PKPbc	PKPbc	14 11 22.6	-1.5
	comp=Z,1.4nm,0.6s,baz=44,slow=2.8,SNR=6.2						
BRTR	Keskin Array B	153.03	297	PKPbc	PKPbc	14 11 25.9	-1.1
	comp=Z,0.8nm,0.7s,baz=101,slow=5.2,SNR=4.4						
TORD	Torodi Ar. Bea	161.96	179	PKPab	PKPab	14 12 16.6	-0.5
	comp=Z,0.7nm,1.0s,baz=178,slow=3.3,SNR=4.6						

IDC 12 14:03:12.0±1.1**, 13°.51N×146°.65E, h0km, mb3.7**/8**, mb1 3.9**/8**, mb1mx3.7**/27**, mbtmp3.7**/8**, Error ellipse: s-maj=38.5km s-min=21.3km az=96.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	35.38	200	P	P	14 10 09.1	-0.6
	1.2nm,1.0s,baz=21,slow=9.6,SNR=4.5						
ASAR	Alice Springs	39.00	199	P	P	14 10 40.9	+0.4
	0.4nm,0.8s,baz=26,slow=11,SNR=3.5						
ZALV	Zalesovo Beam	62.70	324	P	P	14 13 38.7	0.0
	0.6nm,0.5s,baz=113,slow=11,SNR=3.5						
MKAR	Makanchi Array	62.75	316	P	P	14 13 39.5	+0.3
	0.4nm,0.3s,baz=93,slow=9.0,SNR=9.1						
KURBB	Kurchatov Arra	65.80	320	P	P	14 13 58.9	-0.3
	2.2nm,0.6s,baz=102,slow=6.7,SNR=21						
ILAR	Eielson Array	67.90	25	P	P	14 14 13.3	+1.0
	0.2nm,0.5s,baz=248,slow=5.5,SNR=3.5						
BVAR	Borovoye Array	71.06	322	P	P	14 14 31.9	-0.1
	1.1nm,0.6s,baz=98,slow=8.5,SNR=6.3						
YKA	Yellowknife Ar	82.13	28	P	P	14 15 33.3	-1.2
	0.1nm,0.4s,baz=288,slow=5.4,SNR=2.5						

IDC 12 14:06:20.4±1.3**, 8°.67S×159°.50E, h0km, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.5**/18**, mbtmp3.5**/4**, Error ellipse: s-maj=31.5km s-min=10.8km az=54.0, Bougainville - Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.88	150	Pg	Pg	14 06 36.2	-1.1
	52nm,0.3s,baz=350,slow=11,SNR=104						
HNR				Lg	Lg	14 06 50.6	
	376nm,0.3s,baz=342,slow=18,SNR=45						
WRA	Warramunga Arr	26.79	243	P	P	14 12 03.1	+0.7
	0.4nm,0.6s,baz=70,slow=9.7,SNR=6.4						
ASAR	Alice Springs	28.67	236	P	P	14 12 18.8	-0.6
	0.2nm,0.3s,baz=63,slow=10,SNR=10.0						
SONM	Songino Array	73.19	326	P	P	14 17 53.7	+0.4
	0.2nm,0.4s,baz=114,slow=6.4,SNR=2.1						
ILAR	Eielson Array	83.33	20	P	P	14 18 49.0	0.0
	0.3nm,0.9s,baz=225,slow=5.0,SNR=3.3						

*IDC **12** 14:06:33.4±0.8, 59°.62S×26°.34W, h0km, mb3.9/6, mb1 4.0/7, mb1mx3.9/18, mbtmp3.9/7, ML3.8/1, Error ellipse: s-maj=38.2km s-min=20.7km az=76.0*
*ISCJB **12** 14:06:37.3±0.9, 59°.7S±0°.1×26°.0W±0°.5, h40km, mb3.8/6, Error ellipse: s-maj=37.3km s-min=13.9km az=153.7*
ISC 12 14:06:38.9±0.8**, 59°.7S**±0°.1×**26°.2W**±0°.2**, h40km, n13,** σ1§**34**/12**, mb3.9**/6**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.25	153	ePn	Pn	14 09 42.7	-1.4
SNAA	Sanae	15.24	151	ePn	Pn	14 10 09.1	-1.7
SNAA	Sanae	15.24	151	eSn	Sn	14 12 47.1	-11
SNAA	Sanae	15.24	151	Pn	Pn	14 10 09.4	-1.4
	0.4nm,0.3s,baz=322,slow=15,SNR=44						
SNAA				Sn	Sn	14 12 46.9	-11
	0.0nm,0.3s,baz=324,slow=12,SNR=4.4						
QSPA	South Pole Qui	30.56	180	P	P	14 12 50.2	+1.9
	1.0nm,0.5s,baz=203,slow=3.0,SNR=16						
CPUP	Villa Florida	39.66	313	P	P	14 14 04.8	-1.9
	0.4nm,0.3s,baz=124,slow=3.7,SNR=3.2						
VNDA	Vanda	42.96	183	P	P	14 14 33.5	+0.3
	0.7nm,0.8s,baz=188,slow=4.7,SNR=4.1						
LPAZ	La Paz	52.94	306	P	P	14 15 52.3	+0.6
	0.6nm,0.3s,baz=155,slow=4.9,SNR=4.7						
TORD	Torodi Ar. Bea	76.00	28	P	P	14 18 22.6	+1.1
	0.5nm,0.3s,baz=198,slow=6.0,SNR=18						
ASAR	Alice Springs	95.36	162	P	P	14 19 58.8	0.0
	0.3nm,0.6s,baz=181,slow=4.4,SNR=9.7						
ARCES	ARCESS Array B	134.12	23	PKP	PKPdf	14 25 50.0	-0.1
	2.1nm,1.0s,baz=204,slow=2.0,SNR=6.9						
SONM	Songino Array	150.24	92	PKPbc	PKPbc	14 26 24.9	+0.4
	1.5nm,0.6s,baz=225,slow=2.2,SNR=11						
ILAR	Eielson Array	152.82	306	PKPbc	PKPbc	14 26 29.2	-0.5
	0.3nm,0.6s,baz=110,slow=2.7,SNR=5.6						

*ISCJB **12** 14:13:08.6±0.6, 70°.43N±0°.05×13°.6W±0°.2, h10km, mb3.4/7, MS3.0/4, Error ellipse: s-maj=12.9km s-min=4.2km az=30.5*
*CSEM **12** 14:13:08.3±0.5, 70°.67N×14°.79W, h10km, ML3.5, Error ellipse: s-maj=23.0km s-min=8.6km az=91.0*
*IDC **12** 14:13:11.0±1.0, 70°.75N×13°.70W, h0km, mb3.5/7, mb1 3.7/13, mb1mx3.5/35, mbtmp3.6/13, ML3.6/4, MS3.0/6, Ms1 3.0/6, ms1mx2.8/37, Error ellipse: s-maj=21.9km s-min=19.0km az=52.0*
*REY **12** 14:13:11.6, 70°.05N×12°.28W, h10km, ML3.7, ML3.5*
ISC 12 14:13:10.6±0.7**, 70°.43N**±0°.07×**13°.14W**±0°.08**, h10km, n31,** σ1§**64**/31**, mb3.4**/7**, MS3.0**/4**, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	Jan Mayen	1.64	68	Pn	Pn	14 13 37.8	-1.6
	8.6nm,0.3s,baz=116,slow=15,SNR=19						
JMIC				Sn	Sn	14 13 57.8	-2.7
	24nm,0.3s,baz=278,slow=24,SNR=15						
SCO	Scoresbysund	2.96	275	i S	Sn	14 14 15.8	-17
	42nm,0.6s,SNR=56						
ILEI	Leirhofn	4.22	199	P	Pn	14 14 13.4	-1.5
ILEI				S	Sn	14 15 01.9	-2.3
IGRI	Grimsey	4.29	207	P	Pn	14 14 15.3	-0.6
IGRI				S	Sn	14 15 05.0	-0.9
IGIL	Gilhagi	4.53	197	P	Pn	14 14 17.6	-1.5
IFLA	Flatey	4.63	204	P	Pn	14 14 19.6	-0.8
IFLA				S	Sn	14 15 13.5	-0.6
IHED	Heoinshofoi	4.63	202	P	Pn	14 14 19.3	-1.2
IHED				S	Sn	14 15 12.0	-2.3
IBRE	Brettingsstaoi	4.67	205	P	Pn	14 14 20.4	-0.6
IBRE				S	Sn	14 15 13.7	-1.5
IDIM	Dimmadalsˆ¡s	4.70	199	P	Pn	14 14 20.1	-1.4
IDIM				S	Sn	14 15 14.4	-1.6
IGRA	Granastaoir	4.82	202	P	Pn	14 14 22.4	-0.7
IGRA				S	Sn	14 15 17.5	-1.4
IHLA	Hella	4.91	206	P	Pn	14 14 24.1	-0.2
IHLA				S	Sn	14 15 20.4	-0.7
IGRS	Grimsstaoir	4.94	195	P	Pn	14 14 23.6	-1.2
BORG	Borgarnes	6.50	213	Pn	Pn	14 14 48.7	+2.6
	3.3nm,0.3s,baz=16,slow=6.1,SNR=6.2						
BORG				Sn	Sn	14 16 02.0	+1.7
	0.7nm,0.3s,baz=349,slow=19,SNR=2.3						
DAG	Danmarks Havn	6.56	349	i P	Pn	14 14 39.8	-7.1
DAG				i S	Sn	14 15 47.1	-15
DAG	Danmarks Havn	6.56	349	i P	Pn	14 14 39.8	-7.1
DAG				i S	Sn	14 15 47.1	-15
	3.3nm,0.2s,SNR=51						
SPITS	Spitsbergen Ar	10.96	32	Pn	Pn	14 15 46.5	-0.7
	baz=223,slow=14,SNR=33						
ARCES	ARCESS Array B	13.11	75	Pn	Pn	14 16 18.5	+2.0
	0.1nm,0.3s,baz=293,slow=12,SNR=7.5						
ARCES				LR	LR	14 20 24.7	
	comp=Z,46nm,19.9s,baz=267,slow=33						
NOA	NORSAR Array B	13.62	122	Pn	P	14 16 29.5	-3.0
	0.1nm,0.3s,baz=322,slow=13,SNR=3.1						
NOA				LR	LR	14 21 24.5	
	comp=Z,26nm,19.0s,baz=330,slow=35						
HFS	Hagfors	15.07	120	Pn	P	14 16 47.0	-1.6
	0.0nm,0.3s,baz=317,slow=9.8,SNR=2.2						
EKA	Eskdalemuir Ar	15.78	159	Pn	P	14 16 57.5	+1.0
	baz=336,slow=12,SNR=4.8						
RES	Resolute Bay	23.00	318	LR	LR	14 26 56.0	
	comp=Z,76nm,18.9s,baz=333,slow=36						
GERES	GERESS Array B	25.11	135	P	P	14 18 41.8	+6.5
	0.6nm,0.9s,baz=350,slow=11,SNR=3.4						
GERES				LR	LR	14 29 14.1	
	comp=Z,31nm,18.3s,baz=313,slow=38						
VRAC	Vranov	25.40	131	LR	LR	14 28 15.2	
	comp=Z,38nm,18.6s,baz=192,slow=35						
DAVOX	Davos/Dischmat	26.22	143	LR	LR	14 28 10.4	
	comp=Z,58nm,20.6s,baz=264,slow=34						
YKA	Yellowknife Ar	36.61	310	P	P	14 20 15.2	-1.0
	0.6nm,0.7s,baz=21,slow=8.6,SNR=4.2						
BVAR	Borovoye Array	39.35	71	P	P	14 20 41.2	+1.7
	0.4nm,0.4s,baz=304,slow=6.4,SNR=3.4						
ILAR	Eielson Array	41.34	332	P	P	14 20 54.1	-1.7
	0.3nm,0.9s,baz=13,slow=8.7,SNR=5.7						
KURBB	Kurchatov Arra	43.98	66	P	P	14 21 19.6	+2.1
	0.3nm,0.6s,baz=329,slow=7.6,SNR=8.0						
MKAR	Makanchi Array	48.53	66	P	P	14 21 55.2	+1.8
	0.4nm,0.8s,baz=344,slow=4.8,SNR=3.5						
TORD	Torodi Ar. Bea	57.98	163	P	P	14 23 07.5	+4.5
	1.0nm,0.8s,baz=2.6,slow=5.3,SNR=5.8						
ASAR	Alice Springs	129.43	40	PKP	PKPdf	14 32 21.9	+3.1
	0.2nm,0.9s,baz=352,slow=1.9,SNR=2.8						

*IDC **12** 14:32:50.8±0.4, 17°.55S×167°.92E, h0km, mb4.7/26, mb1 4.8/29, mb1mx4.8/30, mbtmp4.7/29, ML4.3/1, MS4.6/22, Ms1 4.6/22, ms1mx4.3/32, Error ellipse: s-maj=15.3km s-min=11.8km az=94.0*
*NEIC **12** 14:32:51.9±0.2, 17°.44S×167°.69E, h10km, mb5.0/19, Error ellipse: s-maj=7.7km s-min=6.3km az=126.0*
NEIC Felt [III] at Port-Vila.
*LDG **12** 14:32:52.3±0.2, 17°.51S×167°.47E, h10km, Mb5.5/2, Ms4.6/9, Error ellipse: s-maj=26.0km s-min=5.6km az=95.0*
*NOU **12** 14:32:53.7±1.9, 17°.81S×168°.93E, h30km, MD3.7, ML3.4*
*ISCJB **12** 14:32:53.9±0.2, 17°.61S±0°.03×167°.80E±0°.06, h33km, mb4.9/69, MS4.6/39, Error ellipse: s-maj=7.8km s-min=4.5km az=6.9*
*MOS **12** 14:32:56.2±1.0, 17°.38S×167°.24E, h33km, mb5.4/26, MS4.8/8, Error ellipse: s-maj=11.8km s-min=8.7km az=125.9*
*GCMT **12** 14:32:58.2±0.1, 17°.55S×167°.64E, h20km, MW5.3, Moment Tensor Solution. s92,c142; s99,c171; Moment tensor: Scale 10^17Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: Mo1.10000×10^17 NP1:φs9.00000°, δ31.00000°, λ115.00000°. NP2:φs160.00000°, δ62.00000°, λ75.00000°. Principal axes: T 1.0700, Plg69.0000°, Azm40.0000°; N 0.0200, Plg13.0000°, Azm167.0000°; P -1.0900, Plg16.0000°, Azm261.0000°; Data Used: II IU IC G CN. Surface waves from 100 sta.*
*BJI **12** 14:32:59.5, 16°.52S×167°.21E, h26km, mB5.3/26, mb5.0/40, Ms4.9/29, Ms7 4.5/31*
*DJA **12** 14:33:10.8±1.9, 18°S±11°×16°9E±1°7, h227km±21km, M4.7/16, mB5.2/4, mb4.7/16, Mw(mB)4.7/4*
ISC 12 14:32:55.6±0.4**, 17°.59S**±0°.04×**167°.79E**±0°.06**, h34km**±1km**, h34km:pP-P, n495,** σ1§**30**/552**, mb5.0**/66**, MS4.6**/41**, 15C-8D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	Yate Dam	4.62	190	eP	Pn	14 34 02.8	-0.2
BAYA				eS	Sn	14 34 52.6	-3.0
BAYA				AMP		14 35 14.3	
	comp=Z,32nm,0.7s						
DZM	Mont Dzumac	4.64	196	ePn	Pn	14 34 03.0	-0.3
	comp=Z,215nm,0.6s						
DZM				eSn	Sb	14 35 12.4	+0.7
	comp=Z,1μm,0.9s						
DZM	Mont Dzumac	4.64	196	Pn	Pn	14 34 02.2	-1.2
DZM				Sn	Sn	14 34 52.5	-3.5
DZM	Mont Dzumac	4.64	196	Pn	Pn	14 34 02.2	-1.2
	comp=Z,14nm,0.3s,baz=48,slow=15,SNR=82						
DZM				Sn	Sn	14 34 52.5	-3.5
	comp=Z,91nm,0.3s,baz=314,slow=21,SNR=9.4						
DZM				LR	LR	14 35 43.0	
	comp=Z,9μm,18.4s,baz=18,slow=37						
NOUC	Port Laguerre	4.71	197	eP	Pn	14 34 05.2	+1.1
NOUC				eS	Sn	14 34 58.3	+0.7
NOUC				AMP		14 35 29.5	
	comp=Z,154nm,7.7s						
NORM	Noumea	4.78	195	eP	Pn	14 34 03.5	-1.6
NORM				eS	Sn	14 34 56.6	-2.8
NORM				AMP		14 35 00.7	
	comp=Z,416nm,3.9s						
HNR	Honiara	11.12	316	ePn	Pn	14 35 27.2	-5.1
HNR				Sn	Sn	14 37 34.1	-1.4
HNR	Honiara	11.12	316	Pn	Pn	14 35 32.2	-0.1
	comp=Z,9.0nm,0.3s,baz=183,slow=9.3,SNR=9.0						
HNR				Sn	Sn	14 37 34.1	-1.4
	comp=Z,2.3nm,0.3s,baz=150,slow=20,SNR=2.0						
HNR				LR	LR	14 39 19.0	
	comp=Z,3μm,19.6s,baz=143,slow=35						
TARA	Tarawa	19.49	16	eP	P	14 37 17.5	-2.3
	comp=Z,391nm,1.3s						
ARMA	Armidale	19.49	226	eP	P	14 37 19.6	-0.2
AFI	Afiamalu	20.00	82	eP	P	14 37 25.3	-0.2
AFI	Afiamalu	20.00	82	P	P	14 37 25.5	0.0
	comp=Z,0.9nm,0.3s,baz=55,slow=19,SNR=3.2						
AFI				LR	LR	14 43 41.3	
	comp=Z,1μm,18.2s,baz=260,slow=33						
CTA	Charters Tower	20.53	260	P	Pn	14 37 33.2	-0.3
	comp=Z,11nm,0.9s,baz=93,slow=12,SNR=7.4						
CTA				LR	LR	14 44 31.5	
	comp=Z,2μm,20.4s,baz=177,slow=34						
CTAO	Charters Tower	20.53	260	eP	P	14 37 27.2	-4.0
CTAO	Charters Tower	20.53	260	eP	P	14 37 27.2	-4.0
URZ	Urewera	22.16	160	P	P	14 37 48.8	+0.4
	comp=Z,46nm,0.8s,baz=357,slow=7.8,SNR=6.8						
URZ				LR	LR	14 45 22.0	
	comp=Z,3μm,18.1s,baz=354,slow=34						
COEN	Coen	23.95	275	eP	P	14 38 04.4	-2.5
CAN	Canberra	24.32	220	eP	P	14 38 09.3	-0.9
CAN				pmax	pmax		
	comp=Z,73nm,1.4s						
CAN	Canberra	24.32	220	eP	P	14 38 09.3	-0.9
	comp=Z,73nm,1.4s						
SNZO	South Karori	24.38	167	eP	P	14 38 11.7	+1.2
RPZ	Rata Peaks	26.20	175	P	P	14 38 29.1	+2.1
RPZ	Rata Peaks	26.20	175	P	P	14 38 29.1	+2.1
	comp=Z,14nm,0.6s,baz=17,slow=13,SNR=4.0						
RPZ				LR	LR	14 47 14.3	
	comp=Z,937nm,20.4s,baz=236,slow=33						
STKA	Stephens Creek	27.63	234	eP	P	14 38 40.3	+0.2
STKA				PcP	PcP	14 41 58.2	+1.2
STKA	Stephens Creek	27.63	234	P	P	14 38 42.3	+2.3
	comp=Z,8.0nm,0.6s,baz=58,slow=7.2,SNR=17						
STKA				PcP	PcP	14 41 58.2	+1.2
	comp=Z,11nm,1.0s,baz=61,slow=1.4,SNR=3.7						
STKA				LR	LR	14 49 33.5	
	comp=Z,2μm,18.1s,baz=173,slow=36						
WRAB	Tennant Creek	31.72	260	eP	P	14 39 15.4	-1.1
WRAB				pmax	pmax		
	comp=Z,14nm,1.1s						
WRAB	Tennant Creek	31.72	260	eP	P	14 39 15.4	-1.1
	comp=Z,14nm,1.1s						
WRA	Warramunga Arr	31.73	260	P	P	14 39 16.4	-0.1
WRA				PcP	PcP	14 42 08.2	+0.5
WRA				ScP	ScP	14 45 52.5	+3.9
WRA	Warramunga Arr	31.73	260	P	P	14 39 16.4	-0.1
	comp=Z,2.7nm,0.9s,baz=89,slow=8.9,SNR=18						
WRA				PcP	PcP	14 42 08.2	+0.5
	comp=Z,4.7nm,0.9s,baz=89,slow=2.9,SNR=5.6						
WRA				ScP	ScP	14 45 52.5	+3.9
	comp=Z,0.8nm,0.9s,baz=95,slow=2.8,SNR=4.8						
WRA				LR	LR	14 51 40.7	
	comp=Z,1μm,19.0s,baz=110,slow=36						
ASAR	Alice Springs	32.23	253	P	P	14 39 20.6	-0.4
ASAR				PcP	PcP	14 42 09.7	+0.5
ASAR	Alice Springs	32.23	253	P	P	14 39 20.6	-0.4
	comp=Z,4.4nm,0.5s,baz=81,slow=8.3,SNR=51						
ASAR				PcP	PcP	14 42 09.7	+0.5
	comp=Z,5.8nm,1.0s,baz=90,slow=2.5,SNR=5.9						
ASAR				LR	LR	14 52 12.1	
	comp=Z,2μm,18.4s,baz=82,slow=36						
FITZ	Fitzroy Crossi	40.06	263	eP	P	14 40 28.2	+0.3
	comp=Z,42nm,0.9s						
FITZ				e		14 40 31.8	
FITZ	Fitzroy Crossi	40.06	263	LR	LR	14 57 06.0	
	comp=Z,1μm,18.0s,baz=150,slow=36						
TBI	Tubuai	40.35	106	eLQ	LQ	14 50 12.8	
	comp=Z,2μm,27.5s						
TBI				eLR	LR	14 52 00.8	
	comp=Z,752nm,23.2s						
PPT2	Papeete2	40.58	97	eP	P	14 40 21.1	-11
	comp=Z,148nm,25.2s						
PPT2				eS	S	14 46 46.6	+6.8
	comp=Z,574nm,24.5s						
PPT2				eLQ	LQ	14 50 07.3	
	comp=Z,1μm,28.2s						
PPT2				eLR	LR	14 52 07.9	
	comp=Z,1μm,24.2s						
PPT	Papeete	40.58	97	LR	LR	14 53 05.0	
	comp=Z,475nm,20.2s,baz=257,slow=30						
MBWA	Marble Bar	45.34	257	eP	P	14 41 12.4	+1.7
NWAO	Narrogin (SRO)	47.77	241	eP	P	14 41 30.2	+0.6
NWAO	Narrogin (SRO)	47.77	241	P	P	14 41 30.0	+0.4
	comp=Z,10.0nm,0.9s,baz=34,slow=7.3,SNR=2.9						
NWAO				LR	LR	15 01 09.5	
	comp=Z,893nm,19.7s,baz=349,slow=36						
KAPI	Kappang	48.59	279	LR	LR	15 02 01.7	
	comp=Z,334nm,19.8s,baz=112,slow=36						
KKM	Kota Kinabalu	56.07	290	P	P	14 42 41.5	+10
SBUM	Sibu	58.26	284	P	P	14 42 50.5	+3.3
	comp=Z,11nm,1.3s						
KSM	Kuching	59.67	282	P	P	14 42 59.3	+2.3
	comp=Z,37nm,0.9s,comp=Z,381nm						
VNDA	Vanda	60.03	181	P	P	14 42 58.9	+0.4
	comp=Z,4.5nm,1.0s,baz=355,slow=7.4,SNR=9.9						
VNDA				LR	LR	15 07 17.7	
	comp=Z,257nm,18.2s,baz=21,slow=34						
SBA	Scott Base	60.30	180	eP	P	14 43 01.8	+1.5
SBA				pmax	pmax		
	comp=Z,51nm,1.4s						
SBA	Scott Base	60.30	180	eP	P	14 43 01.8	+1.5
	comp=Z,50nm,1.4s						
MJAR	Matsushiro Arr	60.66	333	P	P	14 43 03.3	-0.1
MJAR	Matsushiro Arr	60.66	333	P	P	14 43 03.3	-0.1
	comp=Z,20nm,0.9s,baz=165,slow=7.6,SNR=48						
MAT	Matsushiro	60.66	333	P	P	14 43 03.2	-0.1
MAT				S	S	14 51 17.8	+0.2
NACB	Ninganchiao	61.26	311	eP	P	14 43 05.3	-2.4
TPUB	Ta-pu	61.43	310	eP	P	14 43 06.2	-2.7
SSLB	Suanglung	61.49	311	eP	P	14 43 06.7	-2.5
JNU	Nakatsue	61.53	325	P	P	14 43 10.7	+1.3
	comp=Z,11nm,1.0s,baz=108,slow=6.4,SNR=3.5						
YHNB	Yeheng	61.73	312	eP	P	14 43 09.0	-1.9
KUR	Kuril'sk	65.09	345	d iP	P	14 43 33.2	+0.6
KUR						14 45 55.4	
KUR				eS	S	14 52 03.0	-10
ASAJ	Asahikawa	65.58	340	P	P	14 43 37.6	+1.8
	comp=Z,18nm,0.9s,baz=225,slow=16,SNR=8.3						
KSRS	Korea Array	66.37	326	P	P	14 43 42.1	+1.1
	comp=Z,2.2nm,0.9s,baz=139,slow=8.6,SNR=6.9						
KSRS				LR	LR	15 11 01.5	
	comp=Z,219nm,20.4s,baz=140,slow=34						
KSAR	Wonju Array Be	66.38	326	P	P	14 43 42.1	+1.0
QIZ	Qiongzhong	67.57	300	P	P	14 43 49.2	+0.2
QIZ				S	S	14 52 42.4	-1.4
QIZ				pmax	pmax		
	comp=Z,14nm,1.4s						
QIZ				LR	LR		
	comp=Z,180nm,37.4s						
NJ2	Nanjing	68.07	316	eP	P	14 43 51.4	-0.5
NJ2				pP	pP	14 44 01.6	-0.9
NJ2				sP	sP	14 44 04.5	-2.0
NJ2				PP	PP	14 46 21.6	-1.0
NJ2				S	S	14 52 50.0	+0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,140nm,3.6s						
NJ2				LR	LR		
	comp=N,100nm,14.0s						
NJ2				LR	LR		
	comp=E,120nm,16.6s						
NJ2				LR	LR		
	comp=Z,170nm,20.3s						
YSS	Yuzh-Sakhalins	68.08	342	eP	P	14 43 54.0	+2.3
YSS				MLR	MLR		
	comp=Z,500nm,19.0s						
IPM	Ipoh	69.40	282	eP	P	14 43 59.2	-1.5
IPM	Ipoh	69.40	282	P	P	14 44 07.3	+6.7
	comp=Z,20nm,0.8s						
USRK	Ussuriysk Arra	69.64	333	P	P	14 44 02.4	+1.0
	comp=Z,8.2nm,0.7s,baz=134,slow=6.0,SNR=14						
USRK				LR	LR	15 11 05.5	
	comp=Z,177nm,19.9s,baz=133,slow=33						
KULM	Kulim	70.03	283	eP	P	14 44 02.7	-1.8
KULM	Kulim	70.03	283	P	P	14 44 06.7	+2.2
	comp=Z,16nm,2.2s						
WHN	Wuhan	70.22	313	⇑P	P	14 44 06.0	+0.7
FX1	Attu Island--F	70.33	3	eP	P	14 44 03.1	-2.4
PET	Petropavlovsk	70.76	354	eP	P	14 44 08.1	+0.1
PET				eS	S	14 53 19.5	-0.6
PET				eSS	SS	14 57 54.8	+1.5
PET				pmax	pmax		
	comp=Z,23nm,1.7s						
PET				pmax	pmax		
	comp=Z,200nm,11.2s						
PEA0B	Petropavlovsk-	70.94	354	eP	P	14 44 07.9	-1.3
PETK	Petropavlovsk-	70.94	354	P	P	14 44 09.6	+0.4
PETK	Petropavlovsk-	70.94	354	P	P	14 44 09.6	+0.4
PETK	Petropavlovsk-	70.94	354	P	P	14 44 09.6	+0.4
	comp=Z,5.7nm,0.7s,baz=152,slow=9.0,SNR=13						
PETK				LR	LR	15 13 44.6	
	comp=Z,170nm,18.9s,baz=172,slow=35						
MDJ	Mudanjiang	71.02	332	P	P	14 44 11.1	+1.2
MDJ				pP	pP	14 44 17.7	-2.8
MDJ				sP	sP	14 44 22.1	-2.4
MDJ				pmax	pmax		
	comp=Z,24nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,250nm,4.5s						
MDJ				LR	LR		
	comp=N,200nm,32.0s						
MDJ				LR	LR		
	comp=E,190nm,29.8s						
MDJ				LR	LR		
	comp=Z,130nm,22.1s						
MDJ	Mudanjiang	71.02	332	eP	P	14 44 08.6	-1.3
	comp=Z,18nm,0.9s						
CN2	Changchun	72.34	329	eP	P	14 44 19.0	+1.2
CN2				epP	pP	14 44 29.5	+1.0
CN2				esP	sP	14 44 33.3	+0.8
CN2				ePP	PP	14 47 02.0	+2.8
CN2				eS	S	14 53 39.2	+0.4
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,18.0s						
CN2				LR	LR		
	comp=E,200nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
QSPA	South Pole Qui	72.46	180	P	P	14 44 19.2	+0.7
QSPA	South Pole Qui	72.46	180	P	P	14 44 19.2	+0.7
	comp=Z,46nm,1.0s,baz=12,slow=1.6,SNR=67						
ENH	Enshi	73.56	310	eP	P	14 44 23.6	-1.9
	comp=Z,18nm,0.9s						
GYA	Guiyang	73.75	305	P	P	14 44 27.4	+0.7
GYA				pP	pP	14 44 37.7	+0.3
GYA				PP	PP	14 47 13.2	+1.5
GYA				S	S	14 53 56.9	+1.1
GYA				SKS	SKSac	14 54 26.5	-5.0
GYA				SS	SS	14 58 28.2	-12
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.1s						
GYA				LR	LR		
	comp=N,440nm,18.6s						
GYA				LR	LR		
	comp=E,430nm,20.4s						
GYA				LR	LR		
	comp=Z,500nm,18.6s						
KLR	Kul'dur	73.81	336	eP	P	14 44 24.1	-2.3
KLR				pmax	pmax		
	comp=Z,100nm,1.8s						
PBKT	Sadao Pong	74.04	294	P	P	14 44 30.6	+2.2
	comp=Z,13nm,0.9s						
BJI	Beijing	74.79	321	P	P	14 44 33.3	+1.0
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI				LR	LR		
	comp=N,180nm,16.6s						
BJI				LR	LR		
	comp=E,190nm,18.7s						
BJI				LR	LR		
	comp=Z,150nm,30.8s						
XAN	Xi'an	75.98	313	P	P	14 44 40.4	+1.0
XAN				pP	pP	14 44 49.4	-0.7
XAN				S	S	14 54 21.3	+1.0

XAN pmax pmax
comp=Z,3.0nm,0.9s
XAN pmax pmax
comp=Z,35nm,7.3s
XAN LR LR
comp=N,130nm,19.6s
XAN LR LR
comp=Z,68nm,17.5s
KMI Kunming 76.23 302 P **P** **14 44 43.3 +2.1**
KMI pP **PcP** **14 44 55.7 +2.5**
KMI S **S** **14 54 25.2 +1.4**
KMI pmax pmax
comp=Z,13nm,0.7s
KMI pmax pmax
comp=Z,140nm,6.9s
KMI LR LR
comp=N,120nm,18.0s
KMI LR LR
comp=E,140nm,23.8s
KMI LR LR
comp=Z,210nm,23.8s
CM31 Chiang Mai Arr 76.57 294 *e*P **P** **14 44 41.8 -1.3**
comp=Z,35nm,1.3s
CMAR Chiang Mai Arr 76.57 294 P **P** **14 44 45.1 +2.1**
comp=Z,7.6nm,0.8s,baz=127,slow=4.5,SNR=40
CMMT Chiang Mai 76.71 295 P **P** **14 44 46.2 +2.4**
comp=Z,21nm,1.7s
CHTO Chiang Mai 76.71 295 *e*P **P** **14 44 42.3 -1.5**
CHTO pmax pmax
comp=Z,19nm,1.2s
CHTO Chiang Mai 76.71 295 *e*P **P** **14 44 42.3 -1.5**
comp=Z,19nm,1.2s
CHTO Chiang Mai 76.71 295 P **P** **14 44 45.6 +1.8**
comp=Z,23nm,1.7s,comp=Z,451nm
HHC Hu-ho-hao-te 78.08 320 *e*P **P** **14 44 49.7 -1.4**
HHC pP **pP** **14 45 02.2 +0.4**
HHC PP **PP** **14 47 48.7 +0.7**
HHC S **S** **14 54 41.6 -1.3**
HHC sS **sS** **14 54 57.8 -2.9**
HHC ScS **ScS** **14 55 06.8 -1.6**
HHC pmax pmax
comp=Z,19nm,0.9s
HHC pmax pmax
comp=Z,330nm,7.4s
HHC LR LR
comp=N,350nm,15.9s
HHC LR LR
comp=E,300nm,15.5s
HHC LR LR
comp=Z,510nm,18.4s
MAW Mawson 79.44 202 P **P** **14 44 59.7 +1.6**
MAW Mawson 79.44 202 P **P** **14 44 59.7 +1.6**
comp=Z,3.9nm,0.8s,baz=122,slow=11,SNR=5.6
MAW LR LR 15 15 09.1
comp=Z,466nm,20.3s,baz=321,slow=32
LZH Lanzhou 80.60 312 *e*P **P** **14 45 06.7 +1.6**
LZH pP **pP** **14 45 16.5 +0.7**
LZH sP **sP** **14 45 20.3 +0.5**
LZH S **S** **14 55 10.5 +0.4**
LZH pmax pmax
comp=Z,22nm,1.0s
LZH pmax pmax
comp=Z,220nm,7.8s
LZH LR LR
comp=N,140nm,16.4s
LZH LR LR
comp=E,140nm,17.6s
LZH LR LR
comp=Z,190nm,18.4s
CLNS Chul'man 82.35 338 *e*P **P** **14 45 15.0 +1.4**
CLNS pmax pmax
comp=Z,20nm,0.9s
CLNS pmax pmax
comp=E,5.0nm,1.1s
CLNS pmax pmax
comp=N,16nm,1.2s
CIT Chita 83.78 330 *e*P **P** **14 45 22.2 +1.0**
ULN Ulaanbaatar 84.72 324 *e*P **P** **14 45 27.5 +1.2**
comp=N,52nm,1.0s
ULN Ulaanbaatar 84.72 324 P **P** **14 45 27.6 +1.4**
YAK Yakutsk 84.89 343*c i*P **P** **14 45 26.9 +0.4**
YAK *e**PP **pP** **14 45 38.8 +1.5**
YAK *e* 14 48 46.4
YAK *e*PPP PPP 14 50 35.5
YAK *e*S **S** **14 55 47.4 -4.9**
YAK *e*SS **SS** **15 01 27.1 +1.3**
YAK *e*SSS SSS 15 04 50.7
YAK pmax pmax
comp=Z,41nm,0.8s
YAK pmax pmax
comp=E,8.0nm,1.1s
YAK pmax pmax
comp=N,17nm,1.3s
YAK pmax pmax
comp=N,72nm,3.0s
YAK pmax pmax
comp=E,97nm,3.4s
YAK pmax pmax
comp=Z,96nm,4.2s
YAK smax smax
comp=N,105nm,12.0s
YAK smax smax
comp=E,69nm,10.0s
YAK MLR MLR
comp=E,137nm,18.0s
YAK MLR MLR
comp=Z,263nm,17.0s
YAK MLR MLR
comp=N,198nm,17.0s
GTA Gaotai 85.00 314 *e*P **P** **14 45 29.1 +1.3**
GTA pP **pP** **14 45 38.8 +0.2**
GTA sP **sP** **14 45 43.6 +1.1**
GTA PP **PP** **14 48 48.0 +2.8**
GTA S **S** **14 55 53.4 -1.2**
GTA pmax pmax
comp=Z,17nm,1.2s
GTA pmax pmax
comp=Z,120nm,7.1s
GTA LR LR
comp=N,150nm,18.1s
GTA LR LR
comp=E,160nm,17.6s
GTA LR LR
comp=Z,190nm,24.7s
SONM Songino Array 85.08 324 P **P** **14 45 28.9 +0.9**
SONM Songino Array 85.08 324 P **P** **14 45 28.9 +0.9**
comp=Z,13nm,0.9s,baz=139,slow=5.2,SNR=82
SHL Shillong 85.36 298 *e*PKP **P** **14 45 31.5 +1.6**
BILL Bilibino 85.39 359⇓ *i*P **P** **14 45 29.5 +0.6**
BILL *e* 14 48 45.8
BILL *e*S S 14 55 49.1 -7.9
BILL pmax pmax
comp=Z,176nm,1.0s
BILL Bilibino 85.39 359 *e*P **P** **14 45 28.1 -0.8**
comp=Z,59nm,1.5s
KHMM Horse Mountain 86.01 45 *e*P **P** **14 45 32.6 -0.2**
comp=Z,10nm,1.1s
SYO Syowa Base 86.12 196⇓ *e*P **P** **14 45 31.8 -0.9**
YBH Yreka Blue Hor 87.08 45 *e*P **P** **14 45 36.0 -2.0**
comp=Z,6.4nm,1.0s
YBH Yreka Blue Hor 87.08 45 P **P** **14 45 38.9 +0.9**
comp=Z,1.6nm,0.8s,baz=196,slow=7.4,SNR=3.9
ZAK Zakamensk 88.16 325 *e*P **P** **14 45 43.5 +0.6**
ZAK pmax pmax
comp=Z,19nm,1.6s
IRK Irkutsk 88.58 327 *e*P **P** **14 45 45.0 +0.2**
IRK pmax pmax
comp=Z,38nm,2.4s
TLY Talaya 88.62 326 *e*P **P** **14 45 46.5 +1.5**
TLY *e*S S 14 56 18.9 -10
TLY *e* 14 57 49.8
TLY pmax pmax
comp=Z,38nm,1.8s
TLY MLR MLR
comp=Z,87nm,19.3s
TLY Talaya 88.62 326 P **P** **14 45 46.2 +1.2**
comp=Z,73nm,1.0s,SNR=6.4
NVAR Mina Array Bea 88.75 49 P **P** **14 45 46.5 +0.3**
NVAR PKKPbc **PKKPbc** **15 03 28.5 +0.9**
NVAR Mina Array Bea 88.75 49 P **P** **14 45 46.5 +0.3**
comp=Z,2.2nm,0.8s,baz=227,slow=6.4,SNR=13
NVAR PKKPbc **PKKPbc** **15 03 28.5 +0.9**
comp=Z,0.2nm,0.3s,baz=153,slow=1.3,SNR=3.8
NVAR LR LR 15 17 28.6
comp=Z,298nm,19.0s,baz=109,slow=30
COLA College 88.88 17 *e*P **P** **14 45 43.3 -2.5**
COLA pmax pmax
comp=Z,4.0nm,0.8s
COLA College 88.88 17 *e*P **P** **14 45 43.3 -2.5**
comp=Z,4.2nm,0.8s
ILAR Eielson Array 89.08 18 P **P** **14 45 45.6 -1.2**
ILAR Eielson Array 89.08 18 P **P** **14 45 45.6 -1.2**
comp=Z,2.3nm,0.6s,baz=237,slow=5.3,SNR=23
ILAR LR LR 15 22 59.9
comp=Z,279nm,18.3s,baz=136,slow=34
COLD Coldfoot 90.04 15 *e*P **P** **14 45 53.6 +2.3**
comp=Z,3.8nm,1.0s
MOY Mondy 90.05 325 *e*P **P** **14 45 53.0 +1.2**
WVOR Wild Horse Val 90.13 45 *e*P **P** **14 45 51.7 -0.7**
WVOR pmax pmax
comp=Z,11nm,1.1s
WVOR Wild Horse Val 90.13 45 *e*P **P** **14 45 51.7 -0.7**
comp=Z,11nm,1.1s
MAIT Maitri 90.31 188 *e*P P 14 45 43.6 -9.1
SNAA Sanae 90.74 183 *e*P **P** **14 45 54.7 -0.1**
SNAA Sanae 90.74 183 *e*pP pP 14 46 04.9 -0.8
SNAA Sanae 90.74 183 *e*P **P** **14 45 52.8 -2.0**
SNAA Sanae 90.74 183 P **P** **14 45 54.9 +0.2**
comp=Z,6.9nm,1.0s,baz=189,slow=4.4,SNR=27
EGAK Eagle 90.83 19 *e*P **P** **14 45 52.7 -2.2**
comp=Z,4.6nm,0.7s
VNA1 Neumayer--Stat 91.95 181 *e*P **P** **14 46 00.8 +0.5**
VNA1 Neumayer--Stat 91.95 181 *e*pP pP 14 46 09.3 -1.9
BMO Blue Mountains 91.97 43 *e*P **P** **14 45 59.9 -1.0**
BMO pmax pmax
comp=Z,5.0nm,1.3s
BMO Blue Mountains 91.97 43 *e*P **P** **14 45 59.9 -1.0**
comp=Z,5.4nm,1.3s
TIXI Tiksi 92.85 349*ce*P **P** **14 46 04.1 -0.1**
TIXI pmax pmax
comp=Z,8.0nm,1.5s
TIXI MLR MLR
comp=Z,733nm,24.0s
WUAZ Wupatki 92.85 54 *e*P **P** **14 46 05.1 -0.2**
comp=Z,4.2nm,0.8s
HVS Khovu-Aksy 93.92 323*d i*P **P** **14 46 11.1 +1.4**
HVS pmax pmax
comp=Z,111nm,1.7s
WMQ Urumqi 95.07 314 *e*P **P** **14 46 15.5 +0.4**
WMQ pP **pP** **14 46 26.0 -0.1**
WMQ sP **sP** **14 46 30.0 0.0**
WMQ PP **PP** **14 50 07.0 +1.8**
WMQ SKS **SKSac** **14 56 47.0 -1.4**
WMQ *e*S **S** **14 57 24.0 -3.6**
WMQ pmax pmax
comp=Z,10.0nm,0.8s
WMQ pmax pmax
comp=Z,130nm,5.0s
WMQ LR LR
comp=N,350nm,20.6s
WMQ LR LR
comp=E,310nm,26.2s
WMQ LR LR
comp=Z,320nm,21.9s
PDAR Pinedale Array 96.51 47 P **P** **14 46 20.6 -1.4**
PDAR PKKPbc **PKKPbc** **15 03 06.9 -0.7**
PDAR Pinedale Array 96.51 47 P **P** **14 46 20.6 -1.4**
comp=Z,0.2nm,0.4s,baz=260,slow=4.3,SNR=2.2
PDAR PKKPbc **PKKPbc** **15 03 06.9 -0.7**
comp=Z,0.6nm,0.7s,baz=123,slow=5.5,SNR=4.2
PDAR LR LR 15 22 23.9
comp=Z,160nm,19.0s,baz=266,slow=31
TXAR Lajitas Array 97.19 62 P **P** **14 46 23.6 -1.6**
TXAR Lajitas Array 97.19 62 P **P** **14 46 23.6 -1.6**
comp=Z,1.4nm,1.0s,baz=134,slow=7.2,SNR=6.3
TXAR LR LR 15 25 13.8
comp=Z,251nm,20.1s,baz=295,slow=32
MKAR Makanchi Array 99.60 316 P **Pdif** **14 46 36.0 +0.6**
MKAR 14 50 40.8
MKAR Makanchi Array 99.60 316 P **Pdif** **14 46 36.0 +0.6**
MKAR PP **PP** **14 50 40.8 +0.9**
MKAR PKKPbc **PKKPbc** **15 02 55.5 -3.3**
MKAR Makanchi Array 99.60 316 P **Pdif** **14 46 36.0 +0.6**
comp=Z,0.8nm,0.6s,baz=93,slow=6.7,SNR=10
MKAR PP **PP** **14 50 40.8 +0.9**
comp=Z,0.9nm,1.0s,baz=113,slow=9.6,SNR=4.2
MKAR PKKPbc **PKKPbc** **15 02 55.5 -3.3**
comp=Z,0.7nm,0.8s,baz=273,slow=4.7,SNR=6.4
YKA Yellowknife Ar 99.84 27 P **Pdif** **14 46 35.6 -0.5**
YKA PKKPbc **PKKPbc** **15 02 54.8 -3.9**
YKA Yellowknife Ar 99.84 27 P **Pdif** **14 46 35.6 -0.5**
comp=Z,0.6nm,0.7s,baz=247,slow=4.7,SNR=5.3
YKA PKKPbc **PKKPbc** **15 02 54.7 -3.9**
comp=Z,0.2nm,0.5s,baz=46,slow=2.1,SNR=3.8
ZAA0 Zalesovo Array 99.97 323 *e*Pdif **Pdif** **14 46 35.9 -1.0**
ZALV Zalesovo Beam 99.97 323 P **Pdif** **14 46 37.5 +0.6**
ZALV Zalesovo Beam 99.97 323 P **Pdif** **14 46 37.5 +0.6**
ZALV Zalesovo Beam 99.97 323 P **Pdif** **14 46 37.5 +0.6**
comp=Z,2.2nm,0.8s,baz=123,slow=5.5,SNR=11
NVS Novosibirsk 101.10 324 *i* P **Pdif** **14 46 42.0 +0.1**
NVS pmax pmax
comp=Z,37nm,2.2s
NVS pmax pmax
comp=N,9.0nm,2.0s
NVS pmax pmax
comp=E,11nm,2.0s
ARU Arti 115.10 325 *i* PKIKP **PKPdf** **14 51 32.9 +0.1**
ARU 14 52 30.5
ARU 14 58 17.4
SIV San Ignacio 121.42 122 PKP **PKPdf** **14 51 45.8 -0.5**
SIV San Ignacio 121.42 122 PKP **PKPdf** **14 51 45.8 -0.5**
comp=E,0.4nm,0.4s,baz=331,slow=6.2,SNR=4.4
BOSA Boshof 121.50 219 PKP **PKPdf** **14 51 47.8 +1.5**
BOSA Boshof 121.50 219 PKP **PKPdf** **14 51 47.8 +1.5**
comp=E,3.7nm,0.9s,baz=163,slow=6.1,SNR=3.5
APA Apatity 122.23 341⇑ *i*PKIKP **PKPdf** **14 51 46.6 +0.3**
APA pmax pmax
comp=Z,21nm,1.0s
KEV Kevo 122.60 345 *e*PKIKP **PKPdf** **14 51 45.8 -1.1**
KEV Kevo 122.60 345 *ep* **PKPdf** **14 51 45.8 -1.1**
SUMG Summit 122.96 9 *e*PKIKP **PKPdf** **14 51 47.0 -1.1**
SUMG Summit 122.96 9 *e*PKPdf **PKPdf** **14 51 47.0 -1.1**
ARCES ARCESS Array B 123.12 345 PKP **PKPdf** **14 51 48.2 +0.2**
ARCES ARCESS Array B 123.12 345 PKP **PKPdf** **14 51 48.2 +0.2**
comp=Z,11nm,0.7s,baz=56,slow=0.9,SNR=48
KLMR Klimovskoe 123.44 333 *e*PKIKP **PKPdf** **14 51 47.2 -1.6**
KLMR pmax pmax
comp=Z,42nm,1.3s
SCHQ Schefferville 124.36 35 PKP **PKPdf** **14 51 50.4 -0.4**
SCHQ Schefferville 124.36 35 PKP **PKPdf** **14 51 50.4 -0.4**
comp=Z,2.9nm,0.7s,baz=20,slow=4.1,SNR=3.4
JOF Joensuu 125.70 337 *e*PKIKP **PKPdf** **14 51 51.6 -1.4**
JOF pmax pmax
comp=Z,25nm,0.8s
JOF Joensuu 125.70 337 *ep* **PKPdf** **14 51 51.6 -1.4**
comp=Z,25nm,0.8s
VRHR Novokhopersk 126.01 321 *e*PKIKP **PKPdf** **14 51 54.5 +0.5**
VRHR pmax pmax
comp=Z,20nm,0.7s
VRHR pmax pmax
comp=N,10.0nm,0.6s
VRHR pmax pmax
comp=E,10.0nm,0.9s
KBZ Khabaz 127.04 312 PKIKP **PKPdf** **14 51 57.6 +1.4**
KBZ Khabaz 127.04 312 PKP **PKPdf** **14 51 57.5 +1.4**
KBZ Khabaz 127.04 312 PKP **PKPdf** **14 51 57.5 +1.4**
comp=E,3.8nm,0.9s,baz=179,slow=0.7,SNR=6.5
KIV Kislovodsk 127.14 312⇑ *i*PKIKP **PKPdf** **14 51 57.1 +0.6**
KIV *i* 14 53 59.6
KIV pmax pmax
comp=Z,18nm,1.2s
OBN Obninsk 127.36 327⇓ *i*PKIKP **PKPdf** **14 51 55.2 -1.2**
OBN *e* 14 53 54.0
OBN pmax pmax
comp=Z,43nm,1.7s
VSR Storozhevoye 127.44 322 *e*PKIKP **PKPdf** **14 51 57.1 +0.4**
VSR pmax pmax
comp=Z,10.0nm,0.8s
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,9.0nm,0.7s
VORD Divnogorie 127.45 321 *e*PKIKP **PKPdf** **14 51 57.2 +0.5**
VORD pmax pmax
comp=Z,10.0nm,1.0s
VORD pmax pmax
comp=N,8.0nm,0.6s
VORD pmax pmax
comp=E,4.0nm,0.4s
KMBO Kilima Mbogo 127.88 254 PKP **PKPdf** **14 52 00.8 +1.8**
KMBO Kilima Mbogo 127.88 254 PKP **PKPdf** **14 52 00.8 +1.8**
comp=E,1.9nm,0.7s,baz=64,slow=24,SNR=4.6
KAF Kangasniemi 128.02 338 *e*PKIKP **PKPdf** **14 51 56.2 -1.3**
KAF pmax pmax
comp=Z,9.0nm,0.7s
KAF Kangasniemi 128.02 338 *ep* **PKPdf** **14 51 56.2 -1.3**
comp=Z,8.9nm,0.7s,baz=42,slow=2.0
FINES FINESS Array B 128.54 338 PKP **PKPdf** **14 51 57.6 -0.9**
FINES FINESS Array B 128.54 338 PKP **PKPdf** **14 51 57.6 -0.9**
comp=Z,12nm,1.0s,baz=46,slow=14,SNR=9.2
ANN Anapa 130.59 314 *i* PKIKP **PKPdf** **14 52 02.5 -0.4**
ANN pmax pmax
comp=Z,23nm,1.3s
MALT Malatya 131.40 306 *e*PKIKP **PKPdf** **14 52 03.2 -1.6**
MALT Malatya 131.40 306 *e*PKPdf **PKPdf** **14 52 03.2 -1.6**
AKASG Malin Array Be 133.35 325 PKIKP **PKPdf** **14 52 08.5 +0.5**
AKASG Malin Array Be 133.35 325 PKP **PKPdf** **14 52 08.4 +0.5**
AKASG Malin Array Be 133.35 325 PKP **PKPdf** **14 52 08.4 +0.5**
comp=Z,3.1nm,0.6s,baz=56,slow=2.2,SNR=6.0
AK01 Malin Array Si 133.36 325 *e*PKPdf **PKPdf** **14 52 06.7 -1.2**
KIEV Kiev 133.37 325 *e*PKIKP **PKPdf** **14 52 07.0 -1.0**
KIEV Kiev 133.37 325 *e*PKPdf **PKPdf** **14 52 07.0 -1.0**
AK02 Malin Array Si 133.38 325 *e*PKPdf **PKPdf** **14 52 07.4 -0.6**
NB2 NORSAR Subarra133.50 345 PKPdf **PKPdf** **14 52 07.7 -0.3**
comp=Z,5.3nm,0.9s,baz=31,slow=1.9
NB2 NORSAR Subarra133.50 345 PKPdf **PKPdf** **14 52 07.7 -0.3**
baz=31,slow=1.9
NOA NORSAR Array B133.50 345 PKP **PKPdf** **14 52 09.2 +1.2**
NOA NORSAR Array B133.50 345 PKP **PKPdf** **14 52 09.2 +1.2**
comp=Z,5.1nm,0.8s,baz=34,slow=2.0,SNR=12
BR131 Keskin Array S 134.71 309 *e*PKPdf **PKPdf** **14 52 10.6 -0.5**
BRTR Keskin Array B 134.71 309 PKPpre PKPpre 14 52 08.6
BRTR PKP **PKiKP** **14 52 12.1 -0.4**
BRTR Keskin Array B 134.71 309 PKiKP PKPpre 14 52 08.6
comp=Z,2.9nm,1.1s,baz=111,slow=3.2,SNR=4.3
BRTR PKP **PKiKP** **14 52 12.1 -0.4**
comp=Z,3.8nm,0.9s,baz=132,slow=1.8,SNR=17
BUR08 Bucovina Ar. S 137.18 323 *e*PKPdf **PKPdf** **14 52 13.9 -1.4**
KOLS Kolonicke sedl 138.09 326 *e*PKIKP **PKPdf** **14 52 18.3 +1.4**
KOLS Kolonicke sedl 138.09 326 *e*PKP **PKPdf** **14 52 18.3 +1.4**
UZH Uzhgorod 138.26 326 *e*PKIKP **PKPdf** **14 52 16.4 -0.7**
UZH *e* 14 52 23.4
UZH *e* 14 55 07.8
STHS Stebnicka Huta 138.34 327 *e*PKIKP **PKPdf** **14 52 18.9 +1.6**
STHS Stebnicka Huta 138.34 327 *e*PKP **PKPdf** **14 52 18.9 +1.6**
CRVS Cervenica-Dubn 138.54 326 *e*PKIKP **PKPdf** **14 52 16.3 -1.4**
CRVS Cervenica-Dubn 138.54 326 *e*PKP **PKPdf** **14 52 16.3 -1.4**
OKC Ostrava-Krasne 139.62 330 *e*PKIKP **PKPdf** **14 52 22.2 +2.6**
OKC Ostrava-Krasne 139.62 330 *e*PKPdf **PKPdf** **14 52 22.2 +2.6**
KSP Ksiaz 139.79 332 *e*PKIKP **PKPdf** **14 52 21.3 +1.4**
MORC Moravsky Berou 139.95 330 *e*PKIKP **PKPdf** **14 52 20.4 +0.1**
MORC Moravsky Berou 139.95 330 *e*PKPdf **PKPdf** **14 52 20.4 +0.1**
DPC Dobruska-Polom 140.12 331 *e*PKIKP **PKPdf** **14 52 18.9 -1.7**
DPC Dobruska-Polom 140.12 331 *e*PKPdf **PKPdf** **14 52 18.9 -1.7**
DPC *ep*PKP **PKiKP** **14 52 22.0 -1.1**
UPC Upice 140.15 332 *e*PKIKP **PKPdf** **14 52 18.3 -2.3**
UPC Upice 140.15 332 *e*PKPdf **PKPdf** **14 52 18.3 -2.3**
UPC *ep*PKP **PKiKP** **14 52 21.7 -1.4**
VYHS Vyhne 140.16 328 *e*PKIKP **PKPdf** **14 52 23.8 +3.1**
VYHS Vyhne 140.16 328 *e*PKP **PKPdf** **14 52 23.8 +3.1**
PVCC Panska Ves 140.77 333 *e*PKIKP **PKPdf** **14 52 19.2 -2.5**
PVCC Panska Ves 140.77 333 *e*PKPdf **PKPdf** **14 52 19.2 -2.5**
BRG Berggiesshubel 140.79 334 PKP PKPpre 14 52 16.3
comp=Z,4.3nm,0.7s
BRG *e* 14 52 22.9
comp=Z,17nm,1.1s
BRG Berggiesshubel 140.79 334 *e*PKiKP **PKiKP** **14 52 25.4 +1.1**
BRG Berggiesshubel 140.79 334 PKHKP PKPpre 14 52 16.3
BRG *e* 14 52 22.9
BRG pmax pmax
comp=Z,4.0nm,0.7s
BRG pmax pmax
comp=Z,17nm,1.1s
CLL Collm 140.84 335 *e*PKIKP **PKPdf** **14 52 22.0 +0.2**
CLL pmax pmax
comp=Z,6.0nm,0.9s
CLL pmax pmax
comp=Z,14nm,0.8s
CLL MLR MLR
comp=Z,200nm,20.1s
CLL Collm 140.84 335 *e*PKPdf **PKPdf** **14 52 22.0 +0.2**
comp=Z,6.0nm,0.9s
CLL *i* PKiKP **PKiKP** **14 52 25.1 +0.7**
comp=Z,14nm,0.8s
CLL LmV 15 57 00.0
comp=Z,200nm,20.1s
FBE Freiberg 141.00 334 *e*PKIKP **PKiKP** **14 52 25.9 +1.2**
PRU Pruhonice 141.18 332 *e*PKIKP **PKPdf** **14 52 23.3 +0.9**
PRU MLR MLR
comp=Z,200nm,20.3s
PRU Pruhonice 141.18 332 *e*PKPdf **PKPdf** **14 52 23.3 +0.9**
PRU *ep*PKP **PKiKP** **14 52 26.3 +1.1**
PRU AMS AMS 15 58 00.0
comp=Z,200nm,20.3s
ZST Bratislava 141.23 328 *e*PKIKP **PKPdf** **14 52 22.6 0.0**
ZST Bratislava 141.23 328 *e*PKP **PKPdf** **14 52 22.6 0.0**
TREC Trest 141.25 331 *e*PKIKP **PKPdf** **14 52 23.5 +0.9**
TREC MLR MLR
comp=Z,200nm,22.8s
TREC Trest 141.25 331 *e*PKPdf **PKPdf** **14 52 23.5 +0.9**
TREC *ep*PKP **PKiKP** **14 52 26.6 +1.2**
TREC AMS AMS 15 55 40.0
comp=Z,200nm,20.0s
NEUB Neuenburg 141.41 336 *e*PKIKP **PKiKP** **14 52 26.1 +0.5**
CLZ Clausthal 141.44 338 *e*PKIKP **PKiKP** **14 52 26.7 +1.0**
CLZ Clausthal 141.44 338 *i* PKIKP **PKiKP** **14 52 26.7 +1.0**
TANN Tannenbergstha 141.75 334 *e*PKIKP **PKiKP** **14 52 26.7 +0.3**
WERD Werda 141.79 335 *e*PKIKP **PKiKP** **14 52 26.8 +0.4**
PLN Plauen 141.82 335 *e*PKIKP **PKiKP** **14 52 27.1 +0.6**
WERN Wernitzgruen 141.88 334 *e*PKIKP **PKiKP** **14 52 27.6 +0.9**
NKC Novy Kostel 141.90 334 *e*PKIKP **PKPdf** **14 52 22.2 -1.6**
NKC MLR MLR
comp=Z,200nm,19.8s
NKC Novy Kostel 141.90 334 *e*PKPdf **PKPdf** **14 52 24.4 +0.6**
NKC *ep*PKP **PKiKP** **14 52 27.7 +1.0**
NKC AMS AMS 15 57 40.0
comp=Z,200nm,19.8s
MOX Moxa 141.91 335 *e*PKiKP **PKiKP** **14 52 27.7 +1.0**
MOX *e*L L 15 58 12.3
comp=Z,112nm,19.1s
MOX Moxa 141.91 335 *i* PKIKP **PKiKP** **14 52 27.7 +1.0**
IBBN Ibbenburen 141.95 340 *e*PKIKP **PKiKP** **14 52 27.7 +1.1**
CONA Conrad Observa 142.02 329⇓ *i*PKPdf **PKPdf** **14 52 21.3 -2.8**
comp=Z,9.6nm,1.6s
MANZ Manzenberg 142.22 334 *e*PKIKP **PKiKP** **14 52 28.3 +0.9**
KHC Kasperske Hory 142.24 332 *e*PKIKP **PKPdf** **14 52 20.8 -3.6**
KHC MLR MLR
comp=Z,200nm,21.1s
KHC Kasperske Hory 142.24 332 *e*PKPdf **PKPdf** **14 52 20.8 -3.6**
KHC *ep*PKP **PKiKP** **14 52 24.7 -2.7**
KHC AMS AMS 15 59 20.0
comp=Z,200nm,21.1s
ROTZ Rotzenmuhle 142.35 334 *e* **PKPdf** **14 52 21.3 -3.3**
ROTZ *e*PKIKP **PKiKP** **14 52 28.4 +0.8**
GEC2 GERESS Array S 142.39 332 *e* **PKPdf** **14 52 21.6 -3.2**
GEC2 *e*PKIKP **PKiKP** **14 52 28.5 +0.7**
GEC2 GERESS Array S 142.39 332 *e*PKIKP **PKPdf** **14 52 21.6 -3.2**
GERES GERESS Array B 142.39 332 PKP **PKPdf** **14 52 25.1 +0.3**
GERES GERESS Array B 142.39 332 PKhKP PKPpre 14 52 19.0
comp=Z,3.1nm,0.7s,baz=58,slow=3.3,SNR=21
GERES PKP **PKPdf** **14 52 25.1 +0.3**
comp=Z,5.4nm,0.8s,baz=64,slow=2.3,SNR=14
UBBA Unterbreizbach 142.40 337 *e* **PKPdf** **14 52 21.5 -3.0**
UBBA *e*PKIKP **PKiKP** **14 52 28.7 +1.2**
WET Wettzell 142.54 333 *e* **PKPdf** **14 52 21.9 -3.0**
WET *e*PKIKP **PKiKP** **14 52 29.1 +1.1**
WET Wettzell 142.54 333 *e*PKIKP **PKPdf** **14 52 21.8 -3.1**
GRF Grafenberg Arr 142.82 335 *e*PKIKP **PKiKP** **14 52 29.8 +1.2**
GRF *e*L L 15 58 31.1
comp=Z,150nm,20.2s
GRF Grafenberg Arr 142.82 335 *i* PKIKP **PKiKP** **14 52 29.8 +1.2**
MOA Molln 142.85 330⇓ *i*PKPdf **PKPdf** **14 52 22.3 -3.2**
comp=Z,17nm,0.8s
SOKA Soboth 143.29 328⇑ *i*PKPdf PKPbc 14 52 23.7 +0.2
comp=Z,12nm,0.9s
TNS Taunus Mts 143.46 338 *e* PKPbc 14 52 24.9 +1.1
TNS Taunus Mts 143.46 338 *e*PKIKP PKPbc 14 52 24.9 +1.1
RJOB Jochberg 143.62 331 *e* PKPbc 14 52 25.5 +1.1
OBKA Obir 143.65 328⇑ *i*PKPdf PKPbc 14 52 24.3 -0.3
comp=Z,17nm,1.0s,SNR=5.4
TOD Tromm 143.83 337 PKIKP PKPbc 14 52 25.8 +0.9
TOD Tromm 143.83 337 PKP PKPbc 14 52 25.8 +0.9
KBA Koelnbreinsper 143.84 330⇑ *i*PKPdf PKPbc 14 52 25.0 -0.2
comp=Z,39nm,1.2s,SNR=8.8

FUR	**Furstenfeldbru**	**143.97**	**333**	*e*	**PKPdf**	**14 52 26.8**	**-0.7**
FUR	**Furstenfeldbru**	**143.97**	**333**	*e*PKIKP	**PKPdf**	**14 52 26.8**	**-0.7**
MEM	**Membach**	**143.97**	**340**	PKP	**PKPdf**	**14 52 26.5**	**-0.9**
MEM				APKP	**PKiKP**	**14 52 31.8**	**+1.0**
MYKA	**Terra Mystica**	**144.01**	**329**	⇑*i*PKPdf	PKPbc	14 52 25.9	+0.3
	comp=Z,41nm,1.6s						
ABH	**Alteburg**	**144.07**	**338**	PKP	**PKPdf**	**14 52 26.8**	**-0.8**
KTD	**Kalmit**	**144.34**	**337**	PKIKP	**PKPdf**	**14 52 27.7**	**-0.4**
KTD	**Kalmit**	**144.34**	**337**	PKP	**PKPdf**	**14 52 27.7**	**-0.4**
STU	**Stuttgart**	**144.36**	**336**	*e*	**PKPdf**	**14 52 27.7**	**-0.4**
STU	**Stuttgart**	**144.36**	**336**	*e*PKIKP	**PKPdf**	**14 52 27.7**	**-0.4**
STU	**Stuttgart**	**144.36**	**336**	*e*PKPdf	**PKPdf**	**14 52 27.7**	**-0.4**
BCLA	**Clavier**	**144.36**	**341**	PKP	**PKPdf**	**14 52 27.5**	**-0.6**
RUP	**Ruppelstein**	**144.39**	**338**	PKIKP	**PKPdf**	**14 52 27.7**	**-0.5**
RUP	**Ruppelstein**	**144.39**	**338**	PKP	**PKPdf**	**14 52 27.7**	**-0.5**
WATA	**Walderalm**	**144.47**	**332**	⇓*i*PKPdf	PKPbc	14 52 27.8	+0.7
	comp=Z,13nm,0.7s						
ABTA	**Abfaltersbach**	**144.47**	**330**	⇑*i*PKPdf	PKPbc	14 52 27.2	+0.2
	comp=Z,73nm,1.0s,SNR=24						
WTTA	**Wattenberg**	**144.49**	**332**	⇑*i*PKPdf	PKPbc	14 52 27.6	+0.3
	comp=Z,59nm,1.5s						
MOTA	**Moosalm**	**144.67**	**332**	⇑*i*PKPdf	**PKPdf**	**14 52 28.4**	**-0.5**
	comp=Z,83nm,1.0s,SNR=18						
RETA	**Reutte**	**144.71**	**333**	⇑*i*PKPdf	**PKPdf**	**14 52 28.5**	**-0.3**
	comp=Z,78nm,1.4s,SNR=24						
LANF	**Langenberg**	**144.72**	**337**	PKIKP	**PKPdf**	**14 52 29.0**	**+0.2**
LANF	**Langenberg**	**144.72**	**337**	PKP	**PKPdf**	**14 52 29.0**	**+0.2**
LANF	**Langenberg**	**144.72**	**337**	PKP	**PKPdf**	**14 52 29.0**	**+0.2**
WLF	**Walferdange**	**144.73**	**339**	PKP	**PKPdf**	**14 52 29.4**	**+0.7**
WLF	**Walferdange**	**144.73**	**339**	*e*PKP	**PKPdf**	**14 52 29.4**	**+0.7**
WLF	**Walferdange**	**144.73**	**339**	*e*PKIKP	**PKPdf**	**14 52 28.8**	**+0.1**
WLF	**Walferdange**	**144.73**	**339**	*e*PKPdf	**PKPdf**	**14 52 28.8**	**+0.1**
DOU	**Dourbes**	**144.86**	**341**	PKP	**PKPdf**	**14 52 29.1**	**+0.1**
BFO	**Black Forest**	**145.06**	**336**	*e*PKP	**PKPdf**	**14 52 29.8**	**+0.4**
BFO	**Black Forest**	**145.06**	**336**	*e*PKIKP	**PKPdf**	**14 52 29.6**	**+0.2**
BFO	**Black Forest**	**145.06**	**336**	*e*PKPdf	**PKPdf**	**14 52 29.6**	**+0.2**
SPAK	**Spaichingen-Ko**	**145.06**	**335**	PKP	**PKPdf**	**14 52 29.7**	**+0.2**
FETA	**Feichten**	**145.08**	**332**	⇑*i*pPKPbc	**PKPdf**	**14 52 29.8**	**+0.1**
	comp=Z,138nm,1.0s,SNR=64						
MENF	**Mencas**	**145.15**	**344**	PKP	**PKPbc**	**14 52 28.6**	**-0.3**
MENF	**Mencas**	**145.15**	**344**	PKP	**PKPbc**	**14 52 28.6**	**-0.3**
DAVA	**Damuels**	**145.25**	**333**	⇑*i*pPKPbc	**PKPdf**	**14 52 30.2**	**+0.3**
	comp=Z,187nm,1.2s,SNR=55						
CDF	**Champ du Feu**	**145.39**	**337**	*e*PKIKP	**PKPab**	**14 52 30.2**	**+0.1**
CDF	**Champ du Feu**	**145.39**	**337**	*e*PKIKP	**PKPab**	**14 52 30.2**	**+0.1**
CDF	**Champ du Feu**	**145.39**	**337**	*e*PKPdf	**PKPab**	**14 52 30.2**	**+0.1**
LIBD	**Limburg**	**145.48**	**336**	PKIKP	**PKPab**	**14 52 31.4**	**+1.1**
LIBD	**Limburg**	**145.48**	**336**	PKP	**PKPab**	**14 52 31.4**	**+1.1**
FELD	**Feldberg im Sc**	**145.55**	**336**	PKP	**PKPab**	**14 52 31.5**	**+0.7**
ECH	**Echery**	**145.60**	**337**	*e*PKIKP	**PKPdf**	**14 52 30.4**	**+0.1**
ECH	**Echery**	**145.60**	**337**	*e*PKPdf	**PKPdf**	**14 52 30.4**	**+0.1**
ECH	**Echery**	**145.60**	**337**	PKP	**PKPab**	**14 52 31.5**	**+0.7**
VAL	**Valentia**	**145.69**	**358**	*e*P	**PKPdf**	**14 52 30.4**	**+0.1**
PAGF	**Fort de Pagny**	**145.83**	**339**	*e*PKIKP	**PKPbc**	**14 52 31.0**	**-0.2**
PAGF	**Fort de Pagny**	**145.83**	**339**	*e*PKPdf	**PKPbc**	**14 52 31.0**	**-0.2**
MOF	**Molkenrain**	**145.91**	**337**	PKP2	**PKPab**	**14 52 32.1**	**0.0**
MOF	**Molkenrain**	**145.91**	**337**	PKP	**PKPab**	**14 52 32.1**	**0.0**
MOF	**Molkenrain**	**145.91**	**337**	PKP	**PKPab**	**14 52 32.1**	**0.0**
THEF	**They Montfort**	**146.01**	**338**	PKP2	**PKPab**	**14 52 33.0**	**+0.6**
THEF	**They Montfort**	**146.01**	**338**	PKP	**PKPab**	**14 52 33.0**	**+0.6**
THEF	**They Montfort**	**146.01**	**338**	PKP	**PKPab**	**14 52 33.0**	**+0.6**
HINF	**Hinteralfeld**	**146.04**	**337**	*e*PKIKP	**PKPdf**	**14 52 31.2**	**+0.1**
HINF	**Hinteralfeld**	**146.04**	**337**	*e*PKIKP	**PKPdf**	**14 52 31.2**	**+0.1**
HINF	**Hinteralfeld**	**146.04**	**337**	*e*PKPdf	**PKPdf**	**14 52 31.2**	**+0.1**
HAU	**Haudompre**	**146.07**	**337**	*e*PKIKP	**PKPdf**	**14 52 31.3**	**+0.2**
HAU				*e*R			
	comp=Z,198nm,19.2s						
HAU	**Haudompre**	**146.07**	**337**	*e*PKIKP	**PKPdf**	**14 52 31.3**	**+0.2**
HAU	**Haudompre**	**146.07**	**337**	*e*PKPdf	**PKPdf**	**14 52 31.3**	**+0.2**
BBS	**Basel-Blauen**	**146.08**	**336**	PKP2	**PKPab**	**14 52 32.8**	**+0.1**
BBS	**Basel-Blauen**	**146.08**	**336**	PKP	**PKPab**	**14 52 32.8**	**+0.1**
MEZF	**Maizieres J'vi**	**146.10**	**339**	*e*PKIKP	**PKPbc**	**14 52 31.9**	**-0.1**
MEZF	**Maizieres J'vi**	**146.10**	**339**	*e*PKPdf	**PKPbc**	**14 52 31.9**	**-0.1**
TUE	**Stuetta**	**146.11**	**333**	*e*PKPdf	**PKPdf**	**14 52 31.8**	**+0.3**
SFTF	**Sexfontaines**	**146.37**	**339**	*e*PKIKP	**PKPdf**	**14 52 32.1**	**+0.5**
SFTF	**Sexfontaines**	**146.37**	**339**	*e*PKPdf	**PKPdf**	**14 52 32.1**	**+0.5**
LOMF	**Lomont**	**146.44**	**336**	PKP2	**PKPab**	**14 52 34.1**	**0.0**
LOMF	**Lomont**	**146.44**	**336**	PKP	**PKPab**	**14 52 34.1**	**0.0**
LOMF	**Lomont**	**146.44**	**336**	PKP	**PKPab**	**14 52 34.1**	**0.0**
TIP	**Timpagrande**	**146.88**	**316**	*e*PKPdf	**PKPdf**	**14 52 32.6**	**-0.2**
CUC	**Castrocucco**	**147.04**	**318**	*e*PKPdf	**PKPdf**	**14 52 33.1**	**+0.1**
AQU	**L'Aquila**	**147.05**	**324**	*e*PKPab	**PKPab**	**14 52 36.1**	**-0.5**
CABF	**La Chapelle**	**147.34**	**336**	*e*PKIKP	**PKPdf**	**14 52 34.1**	**+0.7**
	comp=Z,24nm,0.9s						
CABF	**La Chapelle**	**147.34**	**336**	*e*PKIKP	**PKPdf**	**14 52 34.1**	**+0.7**
CABF	**La Chapelle**	**147.34**	**336**	*e*PKPdf	**PKPdf**	**14 52 34.1**	**+0.7**
VLC	**Villacollemand**	**147.38**	**329**	*e*PKPab	**PKPbc**	**14 52 36.7**	**+0.8**
FLN	**La Foliniere**	**147.47**	**346**	*e*PKIKP	**PKPdf**	**14 52 33.6**	**+0.2**
	comp=Z,43nm,1.3s						
FLN				*e*R			
	comp=Z,138nm,20.0s						
FLN	**La Foliniere**	**147.47**	**346**	*e*PKIKP	**PKPdf**	**14 52 33.6**	**+0.2**
FLN	**La Foliniere**	**147.47**	**346**	*e*PKPdf	**PKPdf**	**14 52 33.6**	**+0.2**
LDF	**La Druitiere**	**147.54**	**345**	*e*PKIKP	**PKPdf**	**14 52 33.6**	**+0.1**
	comp=Z,7.3nm,0.9s						
LDF	**La Druitiere**	**147.54**	**345**	*e*PKIKP	**PKPdf**	**14 52 33.6**	**+0.1**
LDF	**La Druitiere**	**147.54**	**345**	*e*PKPdf	**PKPdf**	**14 52 33.6**	**+0.1**
LOR	**Lormes**	**147.57**	**339**	*e*PKIKP	**PKPdf**	**14 52 34.0**	**+0.3**
LOR				*e*R			
	comp=Z,161nm,21.5s						
LOR	**Lormes**	**147.57**	**339**	*e*PKPdf	**PKPdf**	**14 52 34.0**	**+0.3**
SSF	**Saint Saulge**	**147.87**	**340**	*e*PKIKP	**PKPdf**	**14 52 34.6**	**+0.5**
SSF	**Saint Saulge**	**147.87**	**340**	*e*PKIKP	**PKPdf**	**14 52 34.6**	**+0.5**
SSF	**Saint Saulge**	**147.87**	**340**	*e*PKPdf	**PKPdf**	**14 52 34.6**	**+0.5**
GRR	**Gorron**	**147.91**	**346**	*e*PKIKP	**PKPdf**	**14 52 34.5**	**+0.4**
GRR	**Gorron**	**147.91**	**346**	*e*PKIKP	**PKPdf**	**14 52 34.5**	**+0.4**
GRR	**Gorron**	**147.91**	**346**	*e*PKPdf	**PKPdf**	**14 52 34.5**	**+0.4**
LPL	**La Plagne**	**147.98**	**335**	*e*PKIKP	**PKPdf**	**14 52 35.2**	**+0.5**
LPL	**La Plagne**	**147.98**	**335**	*e*PKIKP	**PKPdf**	**14 52 35.2**	**+0.5**
LPL	**La Plagne**	**147.98**	**335**	*e*PKPdf	**PKPdf**	**14 52 35.2**	**+0.5**
LPG	**La Plagne**	**147.99**	**334**	*e*PKIKP	**PKPdf**	**14 52 35.3**	**+0.5**
LPG	**La Plagne**	**147.99**	**334**	*e*PKIKP	**PKPdf**	**14 52 35.3**	**+0.5**
LPG	**La Plagne**	**147.99**	**334**	*e*PKPdf	**PKPdf**	**14 52 35.3**	**+0.5**
SMF	**Signal de Mont**	**148.12**	**339**	*e*PKIKP	**PKPdf**	**14 52 34.8**	**+0.2**
SMF	**Signal de Mont**	**148.12**	**339**	*e*PKIKP	**PKPdf**	**14 52 34.8**	**+0.2**
SMF	**Signal de Mont**	**148.12**	**339**	*e*PKPdf	**PKPdf**	**14 52 34.8**	**+0.2**
AVF	**Avril sur Loir**	**148.16**	**340**	*e*PKIKP	**PKPdf**	**14 52 34.7**	**+0.1**
AVF	**Avril sur Loir**	**148.16**	**340**	*e*PKIKP	**PKPdf**	**14 52 34.7**	**+0.1**
AVF	**Avril sur Loir**	**148.16**	**340**	*e*PKPdf	**PKPdf**	**14 52 34.7**	**+0.1**
BNI	**Bardonecchia**	**148.38**	**334**	*e*PKIKP	**PKPdf**	**14 52 35.9**	**+0.7**
BNI	**Bardonecchia**	**148.38**	**334**	*e*PKPdf	**PKPdf**	**14 52 35.9**	**+0.7**
SGMF	**Saint Gilles**	**148.41**	**348**	*e*PKIKP	**PKPdf**	**14 52 35.0**	**0.0**
	comp=Z,47nm,1.2s						
SGMF	**Saint Gilles**	**148.41**	**348**	*e*PKIKP	**PKPdf**	**14 52 35.0**	**0.0**
SGMF	**Saint Gilles**	**148.41**	**348**	*e*PKPdf	**PKPdf**	**14 52 35.0**	**0.0**
GDM	**Grand'Maison**	**148.49**	**335**	PKP	**PKPbc**	**14 52 40.4**	**+1.4**
GDM	**Grand'Maison**	**148.49**	**335**	PKP	**PKPbc**	**14 52 40.4**	**+1.4**
BGF	**Bois d'Agland**	**148.53**	**340**	*e*PKIKP	**PKPdf**	**14 52 35.6**	**+0.3**
BGF	**Bois d'Agland**	**148.53**	**340**	*e*PKIKP	**PKPdf**	**14 52 35.6**	**+0.3**
BGF	**Bois d'Agland**	**148.53**	**340**	*e*PKPdf	**PKPdf**	**14 52 35.6**	**+0.3**
MBDF	**Montbardon**	**148.60**	**334**	*e*PKIKP	**PKPdf**	**14 52 35.8**	**+0.2**
MBDF	**Montbardon**	**148.60**	**334**	*e*PKIKP	**PKPdf**	**14 52 35.8**	**+0.2**
MBDF	**Montbardon**	**148.60**	**334**	*e*PKPdf	**PKPdf**	**14 52 35.8**	**+0.2**
GRN	**Grenoble**	**148.60**	**335**	PKP2	**PKPbc**	**14 52 40.7**	**+1.5**
GRN	**Grenoble**	**148.60**	**335**	PKP	**PKPbc**	**14 52 40.7**	**+1.5**
GRN	**Grenoble**	**148.60**	**335**	PKP	**PKPbc**	**14 52 40.7**	**+1.5**
SURF	**Saint Ours**	**148.78**	**333**	PKP	**PKPbc**	**14 52 41.1**	**+1.3**
SURF	**Saint Ours**	**148.78**	**333**	PKP	**PKPbc**	**14 52 41.1**	**+1.3**
ORIF	**Oris-en-Rattie**	**148.81**	**335**	*e*PKIKP	**PKPdf**	**14 52 36.1**	**+0.2**
ORIF				*e*R			
	comp=Z,203nm,22.8s						
ORIF	**Oris-en-Rattie**	**148.81**	**335**	*e*PKIKP	**PKPdf**	**14 52 36.1**	**+0.2**
ORIF	**Oris-en-Rattie**	**148.81**	**335**	*e*PKPdf	**PKPdf**	**14 52 36.1**	**+0.2**
SAOF	**Saorge**	**148.84**	**332**	PKP2	**PKPbc**	**14 52 40.5**	**+0.7**
SAOF	**Saorge**	**148.84**	**332**	PKP	**PKPbc**	**14 52 40.5**	**+0.7**
SAOF	**Saorge**	**148.84**	**332**	PKP	**PKPbc**	**14 52 40.5**	**+0.7**
QUIF	**Quistinic**	**148.85**	**348**	*e*PKIKP	**PKPdf**	**14 52 35.8**	**+0.1**
QUIF	**Quistinic**	**148.85**	**348**	*e*PKIKP	**PKPdf**	**14 52 35.8**	**+0.1**
QUIF	**Quistinic**	**148.85**	**348**	*e*PKPdf	**PKPdf**	**14 52 35.8**	**+0.1**
AGO	**Saint Agoulin**	**148.88**	**339**	PKP	**PKPbc**	**14 52 40.8**	**+1.0**
AGO	**Saint Agoulin**	**148.88**	**339**	PKP	**PKPbc**	**14 52 40.8**	**+1.0**
AUTN	**L'Aution**	**148.90**	**332**	PKP2	**PKPbc**	**14 52 40.8**	**+0.6**
AUTN	**L'Aution**	**148.90**	**332**	PKP	**PKPbc**	**14 52 40.8**	**+0.6**
AUTN	**L'Aution**	**148.90**	**332**	PKP	**PKPbc**	**14 52 40.8**	**+0.6**
TOUF	**Mont Tournerai**	**148.96**	**332**	PKP2	**PKPbc**	**14 52 41.0**	**+0.7**
TOUF	**Mont Tournerai**	**148.96**	**332**	PKP	**PKPbc**	**14 52 41.0**	**+0.7**
TOUF	**Mont Tournerai**	**148.96**	**332**	PKP	**PKPbc**	**14 52 41.0**	**+0.7**
TCF	**Toulx Ste Croi**	**148.98**	**340**	*e*PKIKP	**PKPdf**	**14 52 36.3**	**+0.3**
	comp=Z,17nm,1.2s						
TCF	**Toulx Ste Croi**	**148.98**	**340**	*e*PKIKP	**PKPdf**	**14 52 36.3**	**+0.3**
TCF	**Toulx Ste Croi**	**148.98**	**340**	*e*PKPdf	**PKPdf**	**14 52 36.3**	**+0.3**
SBF	**Sospel**	**149.00**	**332**	*e*PKIKP	**PKPdf**	**14 52 36.2**	**0.0**
SBF	**Sospel**	**149.00**	**332**	*e*PKIKP	**PKPdf**	**14 52 36.2**	**0.0**
SBF	**Sospel**	**149.00**	**332**	*e*PKPdf	**PKPdf**	**14 52 36.2**	**0.0**
SSB	**Saint Sauveur**	**149.04**	**337**	*e*PKIKP	**PKPdf**	**14 52 36.4**	**+0.2**
SSB						14 52 41.3	
SSB	**Saint Sauveur**	**149.04**	**337**	*e*PKPdf	**PKPdf**	**14 52 36.4**	**+0.2**
SSB				PKP	**PKiKP**	**14 52 41.3**	**-0.3**
MVIF	**Mont Vial**	**149.09**	**332**	PKP2	**PKPbc**	**14 52 41.3**	**+0.7**
MVIF	**Mont Vial**	**149.09**	**332**	PKP	**PKPbc**	**14 52 41.3**	**+0.7**
MVIF	**Mont Vial**	**149.09**	**332**	PKP	**PKPbc**	**14 52 41.3**	**+0.7**
REVF	**Revere**	**149.12**	**332**	PKP2	**PKPbc**	**14 52 41.0**	**+0.5**
REVF	**Revere**	**149.12**	**332**	PKP	**PKPbc**	**14 52 41.0**	**+0.5**
REVF	**Revere**	**149.12**	**332**	PKP	**PKPbc**	**14 52 41.0**	**+0.5**
PYM	**Petit Puy Mans**	**149.19**	**339**	PKP2	**PKPbc**	**14 52 41.8**	**+1.1**
PYM	**Petit Puy Mans**	**149.19**	**339**	PKP	**PKPbc**	**14 52 41.8**	**+1.1**
PYM	**Petit Puy Mans**	**149.19**	**339**	PKP	**PKPbc**	**14 52 41.8**	**+1.1**
PGF	**Pioggiola**	**149.25**	**328**	*e*PKIKP	**PKPdf**	**14 52 36.7**	**0.0**
	comp=Z,48nm,1.1s						
PGF	**Pioggiola**	**149.25**	**328**	*e*PKIKP	**PKPdf**	**14 52 36.7**	**0.0**
PGF	**Pioggiola**	**149.25**	**328**	*e*PKPdf	**PKPdf**	**14 52 36.7**	**0.0**
CALN	**Calern**	**149.33**	**332**	PKP2	**PKPbc**	**14 52 41.7**	**+0.5**
CALN	**Calern**	**149.33**	**332**	PKP	**PKPbc**	**14 52 41.7**	**+0.5**
CALN	**Calern**	**149.33**	**332**	PKP	**PKPbc**	**14 52 41.7**	**+0.5**
VIVF	**Saint-Julien-l**	**149.35**	**336**	*e*PKIKP	**PKPdf**	**14 52 37.0**	**+0.3**
VIVF	**Saint-Julien-l**	**149.35**	**336**	*e*PKIKP	**PKPdf**	**14 52 37.0**	**+0.3**
VIVF	**Saint-Julien-l**	**149.35**	**336**	*e*PKPdf	**PKPdf**	**14 52 37.0**	**+0.3**
MFF	**Saint Martin d**	**149.39**	**344**	*e*PKIKP	**PKPdf**	**14 52 37.0**	**+0.4**
MFF	**Saint Martin d**	**149.39**	**344**	*e*PKIKP	**PKPdf**	**14 52 37.0**	**+0.4**
MFF	**Saint Martin d**	**149.39**	**344**	*e*PKPdf	**PKPdf**	**14 52 37.0**	**+0.4**
LBL	**Lubilhac**	**149.55**	**338**	PKP2	**PKPbc**	**14 52 43.0**	**+1.4**
LBL	**Lubilhac**	**149.55**	**338**	PKP	**PKPbc**	**14 52 43.0**	**+1.4**
LBL	**Lubilhac**	**149.55**	**338**	PKP	**PKPbc**	**14 52 43.0**	**+1.4**
FRF	**La Foret Royal**	**149.59**	**332**	*e*PKIKP	**PKPdf**	**14 52 37.1**	**+0.1**
FRF	**La Foret Royal**	**149.59**	**332**	*e*PKPdf	**PKPdf**	**14 52 37.1**	**+0.1**
SMRF	**Simiane la Rot**	**149.71**	**334**	*e*PKIKP	**PKPdf**	**14 52 37.7**	**+0.4**
SMRF	**Simiane la Rot**	**149.71**	**334**	*e*PKPdf	**PKPdf**	**14 52 37.7**	**+0.4**
LMR	**La Mourre**	**149.83**	**332**	*e*PKIKP	**PKPdf**	**14 52 37.7**	**+0.3**
LMR	**La Mourre**	**149.83**	**332**	*e*PKHKP	PKPpre	14 52 37.7	
LMR	**La Mourre**	**149.83**	**332**	*e*PKPdf	**PKPdf**	**14 52 37.7**	**+0.3**
RJF	**Les Rejaudoux**	**150.07**	**340**	*e*PKIKP	**PKPdf**	**14 52 38.2**	**+0.4**
RJF				*e*R			
	comp=Z,194nm,23.0s						
RJF	**Les Rejaudoux**	**150.07**	**340**	*e*PKIKP	**PKPdf**	**14 52 38.2**	**+0.4**
RJF	**Les Rejaudoux**	**150.07**	**340**	*e*PKPdf	**PKPdf**	**14 52 38.2**	**+0.4**
CAF	**Calviac**	**150.23**	**339**	*e*PKIKP	**PKPdf**	**14 52 38.7**	**+0.6**
CAF	**Calviac**	**150.23**	**339**	*e*PKPdf	**PKPdf**	**14 52 38.7**	**+0.6**
LASF	**Ste Croix**	**150.32**	**336**	*e*PKIKP	**PKPdf**	**14 52 38.6**	**+0.4**
LASF	**Ste Croix**	**150.32**	**336**	*e*PKPdf	**PKPdf**	**14 52 38.6**	**+0.4**
MTLF	**Montolieu**	**151.56**	**338**	*e*PKIKP	**PKPdf**	**14 52 40.5**	**+0.4**
MTLF	**Montolieu**	**151.56**	**338**	*e*PKIKP	**PKPdf**	**14 52 40.5**	**+0.4**
MTLF	**Montolieu**	**151.56**	**338**	*e*PKPdf	**PKPdf**	**14 52 40.5**	**+0.4**
LRDF	**Laroque-de-Fa**	**151.79**	**337**	PKP	**PKPbc**	**14 52 47.5**	**+0.6**
LRDF	**Laroque-de-Fa**	**151.79**	**337**	PKP	**PKPbc**	**14 52 47.5**	**+0.6**
FILF	**Fillols**	**152.10**	**336**	PKP	**PKPbc**	**14 52 48.5**	**+0.8**
FILF	**Fillols**	**152.10**	**336**	PKP	**PKPbc**	**14 52 48.5**	**+0.8**
CARF	**Carcanieres**	**152.14**	**337**	PKP	**PKPbc**	**14 52 48.3**	**+0.5**
CARF	**Carcanieres**	**152.14**	**337**	PKP	**PKPbc**	**14 52 48.3**	**+0.5**
MLS	**Moulis**	**152.29**	**339**	PKP	**PKPbc**	**14 52 48.6**	**+0.6**
MLS	**Moulis**	**152.29**	**339**	PKP	**PKPbc**	**14 52 48.6**	**+0.6**
VALF	**Valcebollere**	**152.45**	**337**	PKP	**PKPbc**	**14 52 49.4**	**+0.8**
VALF	**Valcebollere**	**152.45**	**337**	PKP	**PKPbc**	**14 52 49.4**	**+0.8**
EPF	**Esparros**	**152.49**	**340**	*e*PKIKP	**PKPdf**	**14 52 42.2**	**+0.6**
	comp=Z,17nm,1.0s						
EPF	**Esparros**	**152.49**	**340**	*e*PKIKP	**PKPdf**	**14 52 42.2**	**+0.6**
EPF	**Esparros**	**152.49**	**340**	*e*PKPdf	**PKPdf**	**14 52 42.2**	**+0.6**
RESF	**Ens**	**152.68**	**340**	PKP	**PKPbc**	**14 52 50.7**	**+1.7**
RESF	**Ens**	**152.68**	**340**	PKP	**PKPbc**	**14 52 50.7**	**+1.7**
VIEF	**Viey**	**152.72**	**340**	PKP	**PKPbc**	**14 52 50.7**	**+1.6**
VIEF	**Viey**	**152.72**	**340**	PKP	**PKPbc**	**14 52 50.7**	**+1.6**
ETSF	**Etsaut**	**152.89**	**341**	*e*PKIKP	**PKPdf**	**14 52 43.1**	**+0.9**
ETSF	**Etsaut**	**152.89**	**341**	*e*PKIKP	**PKPdf**	**14 52 43.1**	**+0.9**
ETSF	**Etsaut**	**152.89**	**341**	*e*PKPdf	**PKPdf**	**14 52 43.1**	**+0.9**
LARF	**Larrau**	**152.90**	**342**	PKP	**PKPbc**	**14 52 50.5**	**+1.1**
LARF	**Larrau**	**152.90**	**342**	PKP	**PKPbc**	**14 52 50.5**	**+1.1**
KEST	**Kesra**	**153.68**	**318**	PKPbc	**PKPbc**	**14 52 52.5**	**+1.1**
KEST	**Kesra**	**153.68**	**318**	PKPbc	**PKPbc**	**14 52 52.5**	**+1.1**
	comp=Z,3.8nm,0.8s,baz=297,slow=4.6,SNR=9.4						
PBRG	**Braganca**	**155.41**	**350**	*e*PKPab	**PKPab**	**14 53 12.0**	**+0.9**
POLO	**Lamas de Olo**	**155.99**	**352**	*e*PKPab	**PKPab**	**14 53 14.7**	**+1.0**
PVRL	**Vila Real**	**156.07**	**352**	*e*PKPab	**PKPab**	**14 53 15.3**	**+1.3**
MVO	**Moncorvo**	**156.08**	**350**	*e*PKPab	**PKPab**	**14 53 15.2**	**+1.1**
PVIS	**Viseu**	**156.65**	**352**	*e*PKPab	**PKPab**	**14 53 18.0**	**+1.5**
ESDC	**Sonseca Array**	**156.85**	**344**	PKP	**PKPdf**	**14 52 48.0**	**+0.2**
ESDC				PKPab	**PKPab**	**14 53 18.4**	**+1.0**
ESDC	**Sonseca Array**	**156.85**	**344**	PKP	**PKPdf**	**14 52 48.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=23,slow=4.3,SNR=4.3						
ESDC				PKPab	**PKPab**	**14 53 18.4**	**+1.0**
	comp=Z,2.8nm,0.7s,baz=22,slow=2.9,SNR=9.0						
MTE	**Manteigas**	**156.91**	**351**	*e*PKPab	**PKPab**	**14 53 19.1**	**+1.5**
PMRV	**Marv??o**	**157.84**	**350**	*e*PKPab	**PKPab**	**14 53 23.3**	**+1.7**
PMTG	**Montargil**	**158.31**	**352**	*e*PKPab	**PKPab**	**14 53 24.7**	**+1.1**
EVO	**Evora**	**158.81**	**351**	*e*PKPab	**PKPab**	**14 53 27.2**	**+1.4**
PBAR	**Barrancos**	**158.99**	**349**	*e*PKPab	**PKPab**	**14 53 27.5**	**+0.9**
PBEJ	**Beja**	**159.28**	**350**	*e*PKPab	**PKPab**	**14 53 29.6**	**+1.7**
PNCL	**Nicolau / Gran**	**159.30**	**352**	*e*PKPab	**PKPab**	**14 53 29.6**	**+1.7**
PCVE	**Castro Verde**	**159.69**	**350**	*e*PKPab	**PKPab**	**14 53 31.4**	**+1.7**
MORF	**Marmelete**	**160.10**	**352**	*e*PKPab	**PKPab**	**14 53 32.8**	**+1.3**
TOA0	**Torodi Ar. Sit**	**165.88**	**254**	*e*PKPdf	**PKPdf**	**14 52 57.5**	**-0.3**
TORD	**Torodi Ar. Bea**	**165.88**	**254**	PKP	**PKPdf**	**14 52 57.6**	**-0.2**
TORD				PKPab	**PKPab**	**14 53 58.5**	**+0.8**
TORD	**Torodi Ar. Bea**	**165.88**	**254**	PKP	**PKPdf**	**14 52 57.6**	**-0.2**
	comp=Z,7.8nm,0.9s,baz=36,slow=0.7,SNR=31						
TORD				PKPab	**PKPab**	**14 53 58.5**	**+0.8**
	comp=Z,1.6nm,0.9s,baz=117,slow=4.6,SNR=2.7						

CASC 12 14:41:52.6±2.5**, 16°08N×88°16W, h18**^{km}±55^{km}**, MD4.2, Belize**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRL	**Marmol**	**1.79**	**236**	*e*P	Pn	14 42 20.5	-2.3
TGUH	**Tegucigalpa,Un**	**2.18**	**157**	*e*P	Pn	14 42 28.7	+0.6
TGUH				*e*S	Sn	14 42 55.2	+0.5
CAHU	**Cacacuatique**	**2.29**	**181**	*e*P	Pn	14 42 29.3	-0.6
RBDL	**Robledal**	**2.45**	**217**	*e*P	Pn	14 42 31.4	-0.6
RBDL				*e*S	Sn	14 43 02.3	+0.7
LBRS	**Las Brisas**	**2.48**	**200**	*e*P	Pn	14 42 31.9	-0.4
LBRS				*e*S	Sn	14 43 01.6	-0.6
LFU	**La Fuente**	**2.49**	**202**	*e*P	Pn	14 42 32.5	+0.1
SNVI	**San Vicente**	**2.54**	**195**	*e*P	Pn	14 42 33.9	+0.7
BOQS	**Boqueron**	**2.57**	**205**	*e*P	Pn	14 42 33.8	+0.1
BOQS				*e*S	Sn	14 43 05.3	+0.6
NBG	**Las Nubes**	**2.58**	**235**	*e*P	Pn	14 42 32.5	-1.3
NBG				*e*S	Sb	14 43 08.9	-1.5
LFRS	**El Faro**	**2.59**	**200**	*e*P	Pn	14 42 34.3	+0.4
RTR	**El Retiro**	**2.60**	**214**	*e*P	Pn	14 42 34.2	+0.1
RTR				*e*S	Sn	14 43 06.7	+1.3
SNJE	**San Jose**	**2.60**	**213**	*e*P	Pn	14 42 33.8	-0.3
SNJE				*e*S	Sn	14 43 06.9	+1.3
SBLS	**San Blas**	**2.64**	**213**	*e*P	Pn	14 42 34.6	0.0
SBLS				*e*S	Sn	14 43 07.2	+0.8
VSM	**San Miguel**	**2.64**	**182**	*e*P	Pn	14 42 35.2	+0.6
FUG	**Fuego 3**	**3.05**	**238**	*e*P	Pn	14 42 38.8	-1.6

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*IDC **12** 14:58:05.8±1.3, 23°01S×171°51E, h0^{km}, mb4.1/7, mb1 4.4/8, mb1mx4.1/19, mbtmp4.1/8, ML3.7/1, MS3.8/2, Ms1 3.8/2, ms1mx3.1/29, Error ellipse: s-maj=47.2km s-min=23.9km az=163.0*

*ISCJB **12** 14:58:11.0±1.1, 23°1S±0°3×171°39E±0°08, h49^{km}, mb4.1/7, MS3.8/2, Error ellipse: s-maj=40.2km s-min=9.9km az=4.1*

ISC 12 14:58:13.0±1.2**, 23°0S**±0°3×**171°39E**±0°10**, h49**^{km}**, n14, σ1§70**/15**, mb4.1**/7**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NORM	**Noumea**	**4.59**	**278**	*e*P	**Pn**	**14 59 17.5**	**-2.5**
NORM				*e*S	**Sn**	**15 00 09.5**	**-2.6**
DZM	**Mont Dzumac**	**4.66**	**280**	Pn	**Pn**	**14 59 18.8**	**-2.2**
	3.1nm,0.3s,baz=117,slow=20,SNR=79						
DZM				Sn	**Sn**	**15 00 16.0**	**+2.1**
	8.7nm,0.3s,baz=90,slow=20,SNR=3.6						
NOUC	**Port Laguerre**	**4.78**	**279**	*e*P	**Pn**	**14 59 24.3**	**+1.8**
NOUC				*e*S	**Sn**	**15 00 18.1**	**+1.3**
RPZ	**Rata Peaks**	**20.70**	**181**	LR	LR	15 09 10.3	
	comp=Z,153nm,18.5s,baz=0.8,slow=32						
ASAR	**Alice Springs**	**34.37**	**261**	P	**P**	**15 04 55.6**	**0.0**
	2.3nm,0.8s,baz=94,slow=9.5,SNR=27						
WRA	**Warramunga Arr**	**34.56**	**268**	P	**P**	**15 04 56.1**	**-1.1**
	0.8nm,0.5s,baz=98,slow=8.4,SNR=26						
FITZ	**Fitzroy Crossi**	**42.99**	**268**	P	**P**	**15 06 08.3**	**+0.5**
	3.6nm,0.8s,baz=107,slow=7.2,SNR=9.2						
MJAR	**Matsushiro Arr**	**66.96**	**331**	P	**P**	**15 09 01.6**	**+1.0**
	1.4nm,0.8s,baz=155,slow=7.8,SNR=3.9						
CMAR	**Chiang Mai Arr**	**81.85**	**294**	P	**P**	**15 10 29.1**	**+1.6**
	1.7nm,0.8s,baz=131,slow=4.3,SNR=10						
NVAR	**Mina Array Bea**	**89.78**	**48**	P	**P**	**15 11 06.0**	**-0.6**
	1.0nm,0.7s,baz=226,slow=8.4,SNR=12						
SONM	**Songino Array**	**91.38**	**322**	P	**P**	**15 11 12.7**	**-1.1**
	1.2nm,1.0s,baz=132,slow=4.7,SNR=6.1						
TXAR	**Lajitas Array**	**96.78**	**61**	LR	LR	15 46 08.7	
	comp=Z,73nm,18.8s,baz=0.0,slow=30						
GERES	**GERESS Array B**	**148.70**	**331**	PKPbc	**PKPbc**	**15 17 54.2**	**-0.7**
	1.2nm,0.8s,baz=52,slow=2.2,SNR=7.0						
TORD	**Torodi Ar. Bea**	**166.18**	**227**	PKPab	**PKPab**	**15 19 14.9**	**+0.5**
	0.3nm,0.6s,baz=110,slow=4.9,SNR=2.4						

IDC 12 15:05:29.5±2.3**, 9°00S**×**118°59E, h0**^{km}**, mb3.6**/3**, mb1 3.8**/5**, mb1mx3.6**/22**, mbtmp3.6**/5**, ML3.6**/2**, Error ellipse: s-maj=148.7km s-min=21.5km az=55.0, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.34**	**144**	Pn	Pn	15 08 13.5	+0.6
	0.2nm,0.3s,baz=328,slow=9.9,SNR=14						
FITZ				Sn	Sn	15 10 08.0	-13
	0.9nm,0.3s,baz=183,slow=19,SNR=18						
WRA	**Warramunga Arr**	**18.71**	**127**	P	P	15 09 49.4	-0.4
	0.2nm,0.3s,baz=302,slow=12,SNR=28						
WRA				S	Sn	15 13 02.8	-17
	0.1nm,0.3s,baz=305,slow=26,SNR=5.0						
ASAR	**Alice Springs**	**20.67**	**137**	P	P	15 10 11.2	-0.1
	2.2nm,0.6s,baz=319,slow=9.8,SNR=35						
ASAR				S	S	15 13 49.6	-14
	0.7nm,1.0s,baz=309,slow=23,SNR=4.6						
SONM	**Songino Array**	**57.61**	**350**	P	P	15 15 22.4	+1.0
	0.7nm,0.7s,baz=151,slow=6.3,SNR=4.4						
MKAR	**Makanchi Array**	**64.28**	**333**	P	P	15 16 05.8	-0.8
	0.2nm,0.3s,baz=142,slow=5.8,SNR=7.1						

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*ISK **12** 15:10:23.6, 40°10N×40°88E, h12^{km}, MD3.0*

*CSEM **12** 15:10:24.9±0.3, 40°08N×40°86E, h21^{km}±3^{km}, MD3.0, Error ellipse: s-maj=10.9km s-min=5.6km az=17.0*

*DDA **12** 15:10:25.7, 40°17N×40°90E, h7^{km}, MD3.0*

ISC 12 15:10:24.4±1.2**, 40°06N**±0°04×**40°86E**±0°02**, h4**^{km}±11^{km}**, n26, σ1§10**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.28**	**261**	*i* P	**Pb**	**15 10 31.5**	**-0.7**
KOPT				*i* S	**Sb**	**15 10 39.2**	**+1.8**
KOPT	**Kop Dagi**	**0.28**	**261**	*i* P	**Pb**	**15 10 31.5**	**-0.7**
KOPT				*i* S	**Sb**	**15 10 39.2**	**+1.8**
EZM	**Erzurum**	**0.42**	**112**	*e*PG	**Pg**	**15 10 33.1**	**+0.6**
EZM				*e*SG	**Sg**	**15 10 38.2**	**+0.2**
ERZM	**Erzurum**	**0.42**	**112**	*i* P	**Pg**	**15 10 33.0**	**+0.5**
ERZM				*i* S	**Sb**	**15 10 42.0**	**+0.7**
ERZM	**Erzurum**	**0.42**	**112**	*i* P	**Pg**	**15 10 33.0**	**+0.5**
ERZM				*i* S	**Sb**	**15 10 42.0**	**+0.7**
BAYT	**Ayd˜–ntepe-Bay**	**0.64**	**301**	*e*PG	**Pg**	**15 10 37.2**	**+0.5**
BAYT				*e*SG	**Sg**	**15 10 45.7**	**+0.6**
BAYT	**Ayd˜–ntepe-Bay**	**0.64**	**301**	*e*Pg	**Pg**	**15 10 37.2**	**+0.5**
BAYT				*e*Sg	**Sg**	**15 10 45.7**	**+0.6**
HOMI	**Horasan**	**0.80**	**91**	*i* P	**Pb**	**15 10 41.1**	**0.0**
HOMI				*i* S	**Sb**	**15 10 52.4**	**0.0**
ERZN	**Erzincan**	**1.00**	**242**	*e*PG	**Pg**	**15 10 43.5**	**0.0**
DDEM	**Demirkent**	**1.07**	**39**	*i* P	**Pg**	**15 10 44.7**	**-0.3**
DDEM				*i* S	**Sn**	**15 11 02.9**	**+1.2**
DDEM	**Demirkent**	**1.07**	**39**	*i* P	**Pg**	**15 10 44.7**	**-0.3**
BNGB	**Bingˆ¶l**	**1.08**	**187**	*e*PN	**Pg**	**15 10 45.3**	**+0.2**
GUMT	**Gumushane**	**1.13**	**291**	*e*PN	**Pg**	**15 10 45.4**	**-0.6**
GUMT	**Gumushane**	**1.13**	**291**	*e*Pn	**Pg**	**15 10 45.4**	**-0.6**
EZC	**Erzincan**	**1.20**	**256**	*e*PN	**Pb**	**15 10 47.4**	**-0.4**
EZC	**Erzincan**	**1.20**	**256**	*e*Pn	**Pb**	**15 10 47.4**	**-0.4**
BINT	**Bingol**	**1.22**	**194**	*e*Pn	**Pn**	**15 10 45.3**	**-3.0**
DAGI	**Agillar**	**1.29**	**38**	*i* P	**Pn**	**15 10 48.5**	**-0.9**
DAGI				*i* S	**Sn**	**15 11 08.8**	**+1.6**
PTK	**Pertek**	**1.63**	**225**	*e*PN	**Pn**	**15 10 54.1**	**0.0**
PTK	**Pertek**	**1.63**	**225**	*e*Pn	**Pn**	**15 10 54.1**	**0.0**
AGRB	**Hanur-Agry**	**1.71**	**106**	*e*PN	**Pn**	**15 10 53.7**	**-1.5**
AGRB	**Hanur-Agry**	**1.71**	**106**	*e*Pn	**Pn**	**15 10 53.7**	**-1.5**
ESPY	**Espiye-Giresun**	**1.84**	**298**	*e*PN	**Pn**	**15 10 55.0**	**-1.7**
ESPY	**Espiye-Giresun**	**1.84**	**298**	*e*Pn	**Pn**	**15 10 55.0**	**-1.7**
CLDR	**Caldiran**	**2.54**	**110**	*e*PN	**Pn**	**15 11 05.4**	**-1.1**
CLDR	**Caldiran**	**2.54**	**110**	*e*Pn	**Pn**	**15 11 05.4**	**-1.1**

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*NIC **12** 15:19:15.4±0.3, 35°98N×31°79E, h11^{km}, ML2.9, MW3.0*

*ISCJB **12** 15:19:17.5±0.7, 35°73N±0°03×31°77E±0°04, h4^{km}±5^{km}, Error ellipse: s-maj=6.4km s-min=3.9km az=41.5*

*ISK **12** 15:19:18.3, 35°78N×31°89E, h6^{km}, MD3.2*

*CSEM **12** 15:19:18.4±0.2, 35°72N×31°83E, h2^{km}, Mw3.0, Error ellipse: s-maj=6.9km s-min=3.7km az=51.0*

*DDA **12** 15:19:21.3, 35°95N×31°90E, h42^{km}, MD3.1*

ISC 12 15:19:17.5±1.1**, 35°83N**±0°03×**31°85E**±0°03**, h16**^{km}±9^{km}**, n47, σ1§11**/66**, 2C, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZI	**Gazipasa**	**0.55**	**44**	*i* P	**Pn**	**15 19 31.5**	**+0.8**
GAZI				*i* S	**Sn**	**15 19 40.2**	**+0.6**
GAZI	**Gazipasa**	**0.55**	**44**	*i* P	**Pn**	**15 19 31.5**	**+0.8**
GAZI				*i* S	**Sn**	**15 19 40.2**	**+0.6**
AKMC	**Akamas**	**0.90**	**154**	P	**Pb**	**15 19 35.1**	**+0.4**
AKMC	**Akamas**	**0.90**	**154**	P	**Pb**	**15 19 35.1**	**+0.4**
ALFC	**Alevga**	**0.91**	**137**	P	**Pg**	**15 19 34.8**	**-0.4**
	6.4nm,0.3s						
ALFC				S	**Sn**	**15 19 50.2**	**+1.7**
ALFC	**Alevga**	**0.91**	**137**	P	**Pg**	**15 19 34.8**	**-0.4**
	6.4nm,0.3s						
ALFC				S	**Sn**	**15 19 50.2**	**+1.7**
PPCY	**Paphos**	**1.03**	**157**	P	**Pn**	**15 19 37.6**	**+0.4**
PPCY	**Paphos**	**1.03**	**157**	P	**Pn**	**15 19 37.6**	**+0.4**
AKDN	**Akdeniz- K˜–br**	**1.06**	**120**	*e*PG	**Pn**	**15 19 38.0**	**+0.3**
AKDN				*e*SG	**Sn**	**15 19 52.3**	**+0.2**
AKDN	**Akdeniz- K˜–br**	**1.06**	**120**	*e*Pg	**Pn**	**15 19 38.0**	**+0.3**
AKDN				*e*Sg	**Sn**	**15 19 52.3**	**+0.2**
LEF	**Lefka**	**1.11**	**130**	*e*PG	**Pb**	**15 19 37.8**	**-0.5**
LEF				*e*SG	**Sg**	**15 19 53.5**	**+0.1**
LEF	**Lefka**	**1.11**	**130**	*e*Pg	**Pb**	**15 19 37.8**	**-0.5**
LEF				*e*Sg	**Sg**	**15 19 53.6**	**+0.1**
ERMK	**Ermenek**	**1.18**	**47**	*i* P	**Pg**	**15 19 41.8**	**+1.5**
ERMK				*i* S	**Sn**	**15 19 56.6**	**+1.2**
ERMK	**Ermenek**	**1.18**	**47**	*i* P	**Pg**	**15 19 41.8**	**+1.5**
MAMC	**Mammari**	**1.30**	**120**	⇑P	**Pn**	**15 19 41.2**	**+0.2**
MAMC	**Mammari**	**1.30**	**120**	⇑P	**Pn**	**15 19 41.2**	**+0.2**
ANTB	**Antalya**	**1.43**	**318**	*e*PN	**Pg**	**15 19 47.1**	**+2.0**
ANTB	**Antalya**	**1.43**	**318**	*e*Pn	**Pg**	**15 19 47.1**	**+2.0**
LFK	**Lefkose**	**1.48**	**111**	*e*PN	**Pb**	**15 19 44.9**	**+0.2**
LFK				*e*SN	**Sg**	**15 20 05.6**	**+0.3**
LFK	**Lefkose**	**1.48**	**111**	*e*Pn	**Pb**	**15 19 44.9**	**+0.2**
LFK				*e*Sn	**Sg**	**15 20 05.6**	**+0.3**
CSS	**Prodhromos**	**1.49**	**125**	P	**Pn**	**15 19 43.1**	**-0.5**
	1.0nm,0.4s						
CSS				S	**Sg**	**15 20 05.2**	**-0.4**
CSS	**Prodhromos**	**1.49**	**125**	*e*PN	**Pn**	**15 19 44.4**	**+0.8**
CSS	**Prodhromos**	**1.49**	**125**	P	**Pn**	**15 19 43.1**	**-0.5**
	1.0nm,0.4s						
CSS	**Prodhromos**	**1.49**	**125**	*e*Pn	**Pn**	**15 19 44.4**	**+0.8**
CSS				S	**Sg**	**15 20 05.2**	**-0.4**
BCK	**Bucak**	**1.91**	**328**	*e*PN	**Pg**	**15 19 53.8**	**-0.4**
BCK	**Bucak**	**1.91**	**328**	*e*Pn	**Pg**	**15 19 53.8**	**-0.4**
KIZK	**Mersin**	**1.97**	**70**	*i* P	**Pb**	**15 19 53.7**	**+0.8**
KIZK				*i* S	**Sg**	**15 20 21.3**	**+0.4**
KIZK	**Mersin**	**1.97**	**70**	*i* P	**Pb**	**15 19 53.7**	**+0.8**
KIZK				*i* S	**Sg**	**15 20 21.3**	**+0.4**
KONT	**Konya--Tatoy**	**2.15**	**11**	*e*PN	**Pb**	**15 19 56.1**	**+0.1**
KONT	**Konya--Tatoy**	**2.15**	**11**	*e*Pn	**Pb**	**15 19 56.1**	**+0.1**
GLHS	**Glhisar (BURDU**	**2.31**	**306**	*e*PN	**Pb**	**15 19 58.6**	**-0.1**
GLHS	**Glhisar (BURDU**	**2.31**	**306**	*e*Pn	**Pb**	**15 19 58.6**	**-0.1**
GOLH	**Golhisar**	**2.31**	**308**	*i* P	**Pb**	**15 19 57.8**	**-1.1**
GOLH				*i* S	**Sn**	**15 20 23.7**	**+0.6**
GOLH	**Golhisar**	**2.31**	**308**	*i* P	**Pb**	**15 19 57.8**	**-1.1**
LADK	**Ladik-KONYA**	**2.40**	**10**	*e*PN	**Pb**	**15 19 59.8**	**-0.5**
LADK	**Ladik-KONYA**	**2.40**	**10**	*e*Pn	**Pb**	**15 19 59.8**	**-0.5**
KDHN	**Kadinhani**	**2.69**	**5**	*i* P	**Pb**	**15 20 03.9**	**-1.4**
KDHN				*i* S	**Sb**	**15 20 38.1**	**-0.1**
KDHN	**Kadinhani**	**2.69**	**5**	*i* P	**Pb**	**15 20 03.9**	**-1.4**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KDHN				*i* S	Sb	15 20 38.1	-0.1
GULE	Gulek	2.77	58	*i* P	Pb	15 20 05.8	-0.9
GULE				*i* S	Sg	15 20 43.7	-2.7
GULE	Gulek	2.77	58	*i* P	Pb	15 20 05.8	-0.9
DNZL	Cakiroluk	2.91	310	*i* P	Pn	15 20 03.4	+0.1
DNZL				*i* S	Sn	15 20 40.0	+2.0
KHAL	Karahalli	3.15	324	*i* P	Pb	15 20 10.8	-2.4
KHAL				*i* S	Sn	15 20 44.8	+0.9
KHAL	Karahalli	3.15	324	*i* P	Pb	15 20 10.8	-2.4
YAYL	Yayladag	3.46	85	*i* P	Pn	15 20 14.8	+3.9
YAYL				*i* S	Sb	15 20 57.6	-2.8
YAYL	Yayladag	3.46	85	*i* P	Pn	15 20 14.8	+3.9
YAYL				*i* S	Sb	15 20 57.6	-2.8
KOZT	Kozan	3.60	62	*e*PN	Pn	15 20 16.3	+3.7
KOZT	Kozan	3.60	62	*e*Pn	Pn	15 20 16.3	+3.7

*ISCJB **12** 15:24:48.9±0.6, 34°.67N±0°.07×137°.56E±0°.07, h301km±4km, mb2.9/4, Error ellipse: s-maj=11.7km s-min=9.5km az=170.6*
*JMA **12** 15:24:49.3±0.4, 34°.72N×137°.54E, h303km±4km, M3.3*
*IDC **12** 15:24:50.2±0.7, 34°.83N×137°.66E, h308km±14km, mb2.8/4, mb1 3.0/6, mb1mx2.8/28, mbtmp2.9/6, Error ellipse: s-maj=43.7km s-min=10.1km az=68.0*
ISC 12 15:24:50.1±0.9**, 34°.75N**±0°.07×**137°.52E**±0°.06**, h297**km±7km**, n21,** σ1s.**12**/31**, mb2.9**/4**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JKKG	Kakegawa	0.38	84	P	Pn	15 25 28.0	0.0
JSG	Sagara	0.56	97	P	Pn	15 25 28.8	+0.3
JIE	Ise	0.76	242	P	Pn	15 25 28.9	-0.3
JIE				S	S	15 25 59.0	-1.2
JYN	Shimob	1.13	48	P	Pn	15 25 30.9	+0.1
JGM	Miyama	1.16	326	P	Pn	15 25 31.3	+0.4
JGM				S	S	15 26 03.1	-0.3
JOD2	Odawara 2	1.39	68	P	Pn	15 25 32.5	+0.3
JWY	Kouya	1.68	252	P	Pn	15 25 33.8	-0.5
JRY	Ryogami san	1.70	41	P	Pn	15 25 35.0	+0.7
JRY				S	S	15 26 10.6	+1.1
JKG	Kaga	1.81	328	P	Pn	15 25 35.3	+0.3
JWT	Wachi	1.82	288	P	Pn	15 25 35.2	+0.1
JWT				S	S	15 26 09.5	-1.5
MAT	Matsushiro	1.88	17	P	Pn	15 25 36.1	+0.5
MAT				S	S	15 26 11.9	0.0
MAT	Matsushiro	1.88	17	P	Pn	15 25 36.0	+0.5
MAT				S	S	15 26 12.1	+0.2
MJAR	Matsushiro Arr	1.88	17	P	Pn	15 25 35.7	+0.1
	4.4nm,0.3s,baz=190,slow=9.1,SNR=88						
MJAR				S	S	15 26 11.8	0.0
	0.5nm,0.3s,baz=201,slow=15,SNR=11						
JAG	Ashikaga	2.30	43	P	Pn	15 25 38.5	-0.5
JAG				S	S	15 26 16.1	-2.0
JHJ	Hachijo jima 2	2.49	130	P	Pn	15 25 40.5	-0.3
	3.5nm,0.3s,baz=279,slow=14,SNR=3.7						
JHJ				S	S	15 26 24.9	+3.7
	10.0nm,0.3s,baz=87,slow=23,SNR=6.5						
BSO1	Boso 1	2.85	91	P	Pn	15 25 42.4	-1.1
BSO1				S	S	15 26 24.9	-1.4
ASAJ	Asahikawa	10.15	21	P	Pn	15 27 09.0	-0.8
	0.6nm,0.3s,baz=207,slow=9.0,SNR=14						
SONM	Songino Array	26.59	309	P	P	15 30 03.0	+1.4
	0.4nm,0.5s,baz=105,slow=8.4,SNR=4.8						
MKAR	Makanchi Array	42.70	304	P	P	15 32 19.2	+1.0
	0.3nm,0.6s,baz=81,slow=9.9,SNR=3.5						
WRA	Warramunga Arr	54.47	184	P	P	15 33 46.2	-1.2
	0.2nm,0.4s,baz=0.2,slow=7.6,SNR=13						
ASAR	Alice Springs	58.19	184	P	P	15 34 12.7	-0.9
	0.3nm,0.8s,baz=354,slow=4.7,SNR=5.4						

IDC 12 16:01:34.2±2.1**, 22°.62S**×**171°.40E, h0**km**, mb4.0**/6**, mb1 4.2**/7**, mb1mx4.0**/19**, mbtmp4.0**/7**, ML4.1**/1**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.9**/20**, Error ellipse: s-maj=93.1km s-min=26.3km az=166.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NORM	Noumea	4.57	274	*e*P	Pn	16 02 46.2	+1.6
DZM	Mont Dzumac	4.62	276	Pn	Pn	16 02 46.8	+1.3
	8.4nm,0.3s,baz=119,slow=18,SNR=162						
DZM				Sn	Sn	16 03 39.9	-0.1
	baz=131,slow=20,SNR=2.3						
NOUC	Port Laguerre	4.75	275	*e*P	Pn	16 02 52.6	+5.5
NOUC				*e*S	Sn	16 03 46.6	+3.6
URZ	Urewera	16.34	164	LR	LR	16 10 23.0	
	comp=Z,97nm,18.7s,baz=130,slow=32						
ASAR	Alice Springs	34.44	261	P	P	16 08 23.6	-0.2
	1.5nm,0.9s,baz=97,slow=9.8,SNR=10						
WRA	Warramunga Arr	34.59	267	P	P	16 08 24.1	-1.0
	0.4nm,0.4s,baz=97,slow=8.3,SNR=12						
FITZ	Fitzroy Crossi	43.02	267	P	P	16 09 36.1	+0.3
	4.0nm,1.0s,baz=104,slow=9.8,SNR=4.2						
CMAR	Chiang Mai Arr	81.72	294	P	P	16 13 55.8	+0.6
	1.4nm,0.8s,baz=143,slow=4.4,SNR=6.9						
NVAR	Mina Array Bea	89.54	48	P	P	16 14 33.8	-0.1
	0.7nm,0.7s,baz=219,slow=7.0,SNR=6.7						
SONM	Songino Array	91.12	322	P	P	16 14 40.6	-0.4
	0.3nm,0.4s,baz=131,slow=5.9,SNR=3.8						

*ISK **12** 16:09:15.2, 36°.46N×28°.67E, h5km, MD2.8*
*CSEM **12** 16:09:15.5±0.3, 36°.45N×28°.67E, h12km, MD2.9, Error ellipse: s-maj=7.2km s-min=3.9km az=11.0*
*ISCJB **12** 16:09:16.7±0.8, 36°.48N±0°.05×28°.69E±0°.04, h23km±7km, Error ellipse: s-maj=8.1km s-min=4.8km az=17.1*
*DDA **12** 16:09:16.3, 36°.56N×28°.70E, h7km, MD2.9*
ISC 12 16:09:15.9±1.2**, 36°.48N**±0°.05×**28°.68E**±0°.03**, h17**km±8km**, n30,** σ**0s.67**/47**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DALY	Dalyan (Mu˜la	0.34	356	*e*PG	Pg	16 09 22.7	-0.3
DALY				*e*SG	Sg	16 09 28.0	+0.2
DALY	Dalyan (Mu˜la	0.34	356	*e*Pg	Pg	16 09 22.7	-0.3
DALY				*e*Sg	Sg	16 09 28.0	+0.2
FETY	Fethiye	0.36	64	*e*PG	Pg	16 09 22.8	-0.5
FETY				*e*SG	Sg	16 09 28.7	+0.3
FETY	Fethiye	0.36	64	*e*Pg	Pg	16 09 22.8	-0.5
FETY				*e*Sg	Sg	16 09 28.7	+0.3
TURN	Turunc	0.40	351	*i* P	Pb	16 09 25.2	+0.7
TURN				*i* S	Sb	16 09 32.6	+2.3
TURN	Turunc	0.40	351	*i* P	Pb	16 09 25.2	+0.7
YER	Yerkesik	0.73	334	*e*PG	Pg	16 09 29.8	-0.4
YER				*e*SG	Sb	16 09 40.5	+0.6
YER	Yerkesik	0.73	334	*e*Pg	Pg	16 09 29.8	-0.4
YER				*e*Sg	Sb	16 09 40.5	+0.6
AKAS	Kas	0.78	108	*i* P	Pg	16 09 30.6	-0.6
AKAS				*i* S	Sn	16 09 44.2	+0.5
AKAS	Kas	0.78	108	*i* P	Pg	16 09 30.6	-0.6
DAT	Datca	0.92	286	*e*PG	Pg	16 09 33.1	-0.8
DAT				*e*SG	Sb	16 09 46.3	+0.7
DAT	Datca	0.92	286	*e*Pg	Pg	16 09 33.1	-0.8
DAT				*e*Sg	Sb	16 09 46.3	+0.7
GLHS	Glhisar (BURDU	0.94	44	*e*PG	Pn	16 09 34.7	+0.3
GLHS	Glhisar (BURDU	0.94	44	*e*Pg	Pn	16 09 34.7	+0.3
ELL	Elmali	1.02	74	*e*PG	Pn	16 09 36.2	+0.6
ELL	Elmali	1.02	74	*e*Pg	Pn	16 09 36.2	+0.6
GOLH	Golhisar	1.03	43	*i* P	Pb	16 09 34.9	-0.5
GOLH				*i* S	Sg	16 09 50.2	+0.7
GOLH	Golhisar	1.03	43	*i* P	Pb	16 09 34.9	-0.5
GOLH				*i* S	Sg	16 09 50.2	+0.7
MLSB	Milas	1.09	318	*e*PN	Pb	16 09 36.5	+0.2
MLSB	Milas	1.09	318	*e*Pn	Pb	16 09 36.5	+0.2
DNZL	Cakiroluk	1.24	13	*i* P	Pn	16 09 38.5	-0.2
DNZL				*i* S	Sb	16 09 54.8	0.0
DNZL	Cakiroluk	1.24	13	*i* P	Pn	16 09 38.5	-0.2
DNZL				*i* S	Sb	16 09 54.8	0.0
BODT	Bodrum	1.25	298	*e*PN	Pg	16 09 39.4	-0.5
BODT	Bodrum	1.25	298	*e*Pn	Pg	16 09 39.4	-0.5
AYDN	Tasoluk	1.34	332	*i* P	Pb	16 09 40.8	+0.2
AYDN				*i* S	Sg	16 09 59.0	-0.3
AYDN	Tasoluk	1.34	332	*i* P	Pb	16 09 40.8	+0.2
AYDN				*i* S	Sg	16 09 59.0	-0.3
BCK	Bucak	1.81	57	*e*PN	Pb	16 09 48.5	-0.2
BCK	Bucak	1.81	57	*e*Pn	Pb	16 09 48.5	-0.2
KHAL	Karahalli	1.99	19	*i* P	Pn	16 09 48.6	-0.3
KHAL				*i* S	Sn	16 10 11.5	-2.1
KHAL	Karahalli	1.99	19	*i* P	Pn	16 09 48.6	-0.3

IDC 12 16:49:20.6±2.2**, 7°.66S**×**130°.07E, h0**km**, mb3.3**/1**, mb1 3.7**/4**, mb1mx3.5**/20**, mbtmp3.6**/4**, ML3.7**/3**, Error ellipse: s-maj=80.0km s-min=28.8km az=78.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.24	202	Pn	Pn	16 52 04.2	+1.5
	0.8nm,0.3s,baz=30,slow=11,SNR=53						
FITZ				Sn	Sn	16 54 02.8	-6.4
	0.3nm,0.3s,baz=210,slow=20,SNR=3.8						
WRA	Warramunga Arr	12.90	162	Pn	Pn	16 52 25.2	-0.1
	0.3nm,0.3s,baz=342,slow=13,SNR=27						
WRA				Sn	Sn	16 54 40.2	-10
	0.6nm,0.3s,baz=344,slow=21,SNR=12						
ASAR	Alice Springs	16.34	167	Pn	Pn	16 53 10.0	-1.6
	0.2nm,0.3s,baz=348,slow=12,SNR=27						
ASAR				Sn	Sn	16 56 04.3	-9.4
	0.2nm,0.3s,baz=350,slow=27,SNR=6.5						
MKAR	Makanchi Array	68.81	327	P	P	17 00 26.8	0.0
	0.1nm,0.4s,baz=133,slow=6.3,SNR=5.1						

IDC 12 17:00:14.5±1.0**, 39°.22N**×**104°.89E, h0**km**, mb3.3**/6**, mb1 3.5**/8**, mb1mx3.3**/29**, mbtmp3.3**/8**, ML3.3**/2**, Error ellipse: s-maj=43.3km s-min=17.4km az=62.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SONM	Songino Array	8.68	7	Pn	Pn	17 02 19.9	-1.6
	0.5nm,0.3s,baz=186,slow=14,SNR=6.2						
SONM				Lg	Lg	17 04 54.0	
	0.2nm,0.3s,baz=186,slow=24,SNR=6.5						
MKAR	Makanchi Array	18.14	302	P	P	17 04 28.8	+0.7
	0.1nm,0.3s,baz=118,slow=12,SNR=3.8						
ZALV	Zalesovo Beam	20.08	324	P	P	17 04 49.1	-0.2
	0.3nm,0.4s,baz=106,slow=9.2,SNR=2.8						
KURBB	Kurchatov Arra	21.75	310	P	P	17 05 07.7	+0.3
	0.1nm,0.4s,baz=114,slow=11,SNR=6.2						
HFS	Hagfors	57.52	324	P	P	17 10 04.9	-0.3
	1.6nm,0.7s,baz=87,slow=7.6,SNR=4.7						
NOA	NORSAR Array B	58.27	325	P	P	17 10 10.1	-0.4
	1.2nm,0.8s,baz=354,slow=6.6,SNR=3.2						
WRA	Warramunga Arr	64.99	149	P	P	17 10 56.1	-0.2
	0.1nm,0.3s,baz=339,slow=7.1,SNR=4.3						
ASAR	Alice Springs	68.19	151	P	P	17 11 17.1	+0.4
	0.1nm,0.4s,baz=338,slow=6.8,SNR=9.8						

*UPP **12** 17:02:00.9, 67°.07N×20°.93E, h0km, ML2.0, Mining explosion.*
*ISCJB **12** 17:02:00.2±0.4, 67°.08N±0°.03×20°.96E±0°.09, h0km, Error ellipse: s-maj=5.0km s-min=3.4km az=20.1*
*HEL **12** 17:02:01.6±0.2, 67°.08N×20°.79E, h0km, ML1.9, ML2.0(UPP), Explosion*
*CSEM **12** 17:02:01.6±0.2, 67°.13N×20°.90E, h2km, ML2.0, Error ellipse: s-maj=5.9km s-min=3.6km az=108.0, Mining explosion.*
*NAO **12** 17:02:02.2±1.1, 67°.13N×21°.07E, ML2.5*
*IDC **12** 17:02:03.0±0.9, 67°.18N×21°.09E, h0km, mb1 3.0/4, mb1mx2.9/29, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=15.3km s-min=6.9km az=115.0*
ISC 12 17:02:01.6±0.8**, 67°.07N**±0°.02×**20°.94E**±0°.04**, h0**km**, n45,** σ**1s.24**/65**, Sweden**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
HARU	Harads	0.91	179	*e*P	Pg	17 02 17.8	-1.2
HARU	Harads	0.91	179	P	Pg	17 02 17.8	-1.2
KUA	Kurravaara	0.92	346	*e*P	Pg	17 02 17.8	-1.3
KUA				*e*S	Sn	17 02 35.2	-0.4
KUA	Kurravaara	0.92	346	P	Pg	17 02 17.8	-1.3
LANU	Lannavaara	1.06	22	*e*P	Pg	17 02 20.6	-1.3
LANU	Lannavaara	1.06	22	P	Pg	17 02 20.6	-1.3
KALU	Kalix	1.56	140	*e*P	Pn	17 02 30.1	-0.3
KALU	Kalix	1.56	140	P	Pn	17 02 30.1	-0.3
SJUU	Sjulsmark	1.59	170	*e*P	Pn	17 02 29.9	-1.0
SJUU	Sjulsmark	1.59	170	P	Pn	17 02 29.9	-1.0
HEF	Hetta	1.70	36	*e*PG	Pn	17 02 32.3	-0.1
HEF				*e*SN	Sg	17 02 57.8	+1.8
HEF				MSG		17 02 57.8	
	comp=Z,13nm,0.2s						
HEF	Hetta	1.70	36	Pg	Pn	17 02 32.3	-0.1
HEF				Sn	Sg	17 02 57.8	+1.8
	comp=Z,13nm,0.2s						
LILU	Lilltraesk	1.85	194	*e*P	Pn	17 02 34.3	-0.1
LILU	Lilltraesk	1.85	194	P	Pn	17 02 34.3	-0.1
KIF	Kilpisjarvi	1.94	359	*e*PG	Pn	17 02 36.9	+1.2
KIF				MSG	Sg	17 03 05.0	+1.1
	comp=Z,14nm,0.4s						
KIF				*e*SG	Sg	17 03 05.0	+1.1
KIF	Kilpisjarvi	1.94	359	Pg	Pn	17 02 36.9	+1.2
KIF				Sg	Sg	17 03 05.0	+1.1
RNF	Rovaniemi	2.06	101	*e*P	Pn	17 02 37.0	-0.4
RNF				*e*SG	Sg	17 03 07.4	-0.2
RNF				MSG		17 03 07.4	
	comp=Z,6.0nm,0.4s						
RNF	Rovaniemi	2.06	101	P	Pn	17 02 37.0	-0.4
RNF				Sg	Sg	17 03 07.4	-0.2
	comp=Z,6.0nm,0.4s						
SGF	Sodankyl	2.20	78	*e*P	Pn	17 02 39.3	0.0
	baz=257						
SGF				MSG	Sg	17 03 13.1	+0.8
	comp=Z,2.7nm,0.4s						
SGF				*e*SG	Sg	17 03 13.1	+0.8
SGF	Sodankyl	2.20	78	P	Pn	17 02 39.3	0.0
SGF				Sg	Sg	17 03 13.1	+0.8
BURU	Burvik	2.50	176	*e*P	Pn	17 02 44.3	+0.8
BURU	Burvik	2.50	176	P	Pn	17 02 44.2	+0.8
ARA0	ARCESS Array S	3.00	32	Pn	Pn	17 02 50.2	-0.1
	baz=212,slow=14						
ARA0				Sn	Sn	17 03 26.1	-0.9
	baz=231,slow=18						
ARA0	ARCESS Array S	3.00	32	*e*P	Pn	17 02 50.2	-0.1
	baz=218						
ARA0	ARCESS Array S	3.00	32	P	Pn	17 02 50.2	-0.1
ARA0				Sn	Sn	17 03 26.1	-0.9
	baz=231,slow=18						
ARCES	ARCESS Array B	3.00	32	Pn	Pn	17 02 50.8	+0.5
	comp=Z,0.7nm,0.3s,baz=215,slow=13,SNR=39						
ARCES				Lg	Lg	17 03 33.0	
	comp=Z,2.0nm,0.3s,baz=214,slow=26,SNR=8.9						
UMAU	Umeaa	3.20	182	*e*P	Pn	17 02 53.8	+0.7
UMAU	Umeaa	3.20	182	P	Pn	17 02 53.8	+0.7
BREU	Bredtraesk	3.34	198	*e*P	Pn	17 02 55.3	+0.3
BREU	Bredtraesk	3.34	198	P	Pn	17 02 55.3	+0.3
VRF	Varrio	3.42	75	*e*P	Pn	17 02 58.3	+2.2
VRF	Varrio	3.42	75	P	Pn	17 02 58.2	+2.2
KEV	Kevo	3.51	37	*e*P	Pn	17 02 58.4	+1.2
	baz=223						
KEV	Kevo	3.51	37	P	Pn	17 02 58.4	+1.2
APA0	Apatity Array	4.69	78	Pn	Pn	17 03 13.8	+0.3
	baz=257,slow=11						
APA0				Sn	Sn	17 04 07.4	-1.2
	baz=270,slow=18						
APA0	Apatity Array	4.69	78	Pn	Pn	17 03 13.8	+0.3
	baz=257,slow=11,SNR=7.7						
APA0				Sn	Sn	17 04 07.4	-1.2
	baz=270,slow=17,SNR=6.5						
FIA0	FINESS Array S	6.08	156	Pn	Pn	17 03 33.7	+1.2
	baz=346,slow=14						
FIA0				Sn	Sn	17 04 44.5	+1.9
	baz=348,slow=18						
FIA0	FINESS Array S	6.08	156	Pn	Pn	17 03 33.7	+1.2
	baz=346,slow=14,SNR=7.7						
FIA0				Sn	Sn	17 04 44.5	+1.9
	baz=348,slow=17						
FINES	FINESS Array B	6.08	156	Pn	Pn	17 03 35.4	+2.9
	comp=Z,0.1nm,0.3s,baz=337,slow=14,SNR=13						
FINES				Sn	Sn	17 04 44.1	+1.5
	comp=Z,0.2nm,0.3s,baz=341,slow=25,SNR=3.2						
FINES				Lg	Lg	17 05 19.5	
	comp=Z,0.4nm,0.3s,baz=346,slow=23,SNR=3.4						
NB2	NORSAR Subarra	7.40	220	Pn	Pn	17 03 52.4	+1.7
	baz=31,slow=14						
NB2	NORSAR Subarra	7.40	220	Pn	Pn	17 03 52.4	+1.7
	baz=31,slow=14,SNR=6.1						
NOA	NORSAR Array B	7.40	220	Pn	Pn	17 03 52.0	+1.4
	comp=Z,0.1nm,0.3s,baz=18,slow=10.0,SNR=3.8						
NOA				Sn	Sn	17 05 16.2	+1.0
	comp=Z,0.2nm,0.3s,baz=218,slow=24,SNR=2.7						
HFS	Hagfors	7.67	208	Pn	Pn	17 03 55.0	+0.7
	baz=29,slow=14						
HFS				Sn	Sn	17 05 17.7	-4.2
HFS	Hagfors	7.67	208	Pn	Pn	17 03 55.3	+1.0
	comp=Z,0.1nm,0.3s,baz=19,slow=14,SNR=7.3						
HFS	Hagfors	7.67	208	Pn	Pn	17 03 55.0	+0.7
	baz=29,slow=13,SNR=6.6						

IDC 12 17:15:33.6±7.4**, 8°.51S**×**130°.90E, h75**km±81km**, mb3.4**/1**, mb1 3.5**/4**, mb1mx3.2**/19**, mbtmp3.3**/4**, ML3.4**/3**, Error ellipse: s-maj=54.4km s-min=44.0km az=37.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.82	208	P	Pn	17 18 05.9	+0.2
	0.4nm,0.3s,baz=40,slow=11,SNR=24						
FITZ				S	Sn	17 20 06.0	+0.9
	1.6nm,0.3s,baz=144,slow=16,SNR=9.9						
WRA	Warramunga Arr	11.85	164	P	Pn	17 18 19.3	-0.4
	0.2nm,0.3s,baz=347,slow=14,SNR=14						
WRA				S	Sn	17 20 30.3	+0.1
	0.7nm,0.3s,baz=338,slow=23,SNR=8.9						
ASAR	Alice Springs	15.35	170	P	Pn	17 19 07.0	+0.9
	0.1nm,0.3s,baz=349,slow=13,SNR=14						
ASAR				S	Sn	17 21 55.0	-0.2
	0.2nm,0.3s,baz=352,slow=25,SNR=5.4						
MKAR	Makanchi Array	69.97	327	P	P	17 26 37.0	0.0
	0.4nm,0.5s,baz=123,slow=7.1,SNR=9.3						

*CSEM **12** 17:17:43.3±0.5, 44°.05N×17°.97E, h2km, ML2.9/9, Error ellipse: s-maj=8.5km s-min=7.5km az=179.0*
*BEO **12** 17:17:44.8±1.2, 44°.38N×18°.04E, h25km±5km, ML2.3/4*
*PRU **12** 17:17:45.3, 45°.20N×18°.56E, h0km*
*PDG **12** 17:17:45.1±0.5, 43°.99N×18°.06E, h0km±11km, ML2.9/9, Error ellipse: s-maj=1.8km s-min=2.6km az=0.0*
ISC 12 17:17:40.5±1.1**, 44°.21N**±0°.02×**17°.84E**±0°.02**, h13**km±10km**, n40,** σ**0s.92**/64**, 8C-15D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BBLS	Lazići	1.18	107	*e*Sg	Sn	17 18 19.7	+1.0
BBLS	Lazići	1.18	107	*e*Sg	Sn	17 18 19.7	+1.0
UPM	Unac-Piva	1.27	142	⇓*i*Pg	Pn	17 18 02.9	-1.2
UPM				*e*Sg	Sb	17 18 18.6	-2.1
UPM	Unac-Piva	1.27	142	⇓*i*Pg	Pn	17 18 02.9	-1.2
UPM				*e*Sg	Sb	17 18 18.6	-2.1
STON	Ston	1.35	184	*e*Pn	Pb	17 18 05.4	-0.1
STON				Sn	Sg	17 18 23.9	+0.1
STON	Ston	1.35	184	*e*Pn	Pb	17 18 05.4	-0.1
STON				Sn	Sg	17 18 23.9	+0.1
BRY	Bratogost	1.41	159	*e*Pg	Pn	17 18 05.4	-0.5
BRY				*e*Sg	Sn	17 18 24.0	-0.4
BRY	Bratogost	1.41	159	*e*Pg	Pn	17 18 05.4	-0.5
BRY				*e*Sg	Sn	17 18 24.0	-0.4
PLE	Pljevlja	1.43	128	⇓*i*Pg	Pn	17 18 06.6	+0.4
PLE				*e*Sg	Sn	17 18 24.9	0.0
PLE	Pljevlja	1.43	128	⇓*i*Pg	Pn	17 18 06.6	+0.4
PLE				*e*Sg	Sn	17 18 24.9	0.0
DIVS	Divibare	1.55	94	*e*Pg	Pg	17 18 10.8	+0.5
DIVS				*e*Sg	Sg	17 18 30.1	-0.4
DIVS	Divibare	1.55	94	*e*Pg	Pg	17 18 10.8	+0.5
DIVS				*e*Sg	Sg	17 18 30.1	-0.4
NKY	Niksic	1.63	149	⇓*i*Pg	Pb	17 18 10.6	+0.1
NKY				*e*Sg	Sb	17 18 32.2	+1.2
NKY	Niksic	1.63	149	⇓*i*Pg	Pb	17 18 10.6	+0.1
NKY				*e*Sg	Sb	17 18 32.2	+1.2
HCY	Herceg Novi	1.83	165	⇑*i*Pg	Pg	17 18 14.8	-0.8
HCY				*e*Sg	Sg	17 18 39.6	+0.3
HCY	Herceg Novi	1.83	165	⇑*i*Pg	Pg	17 18 14.8	-0.8
HCY				*e*Sg	Sg	17 18 39.6	+0.3
BEY	Berane	2.01	131	⇑*i*Pn	Pb	17 18 17.4	+0.5
BEY				*e*Sn	Sb	17 18 42.9	+1.1
IVA	Berane	2.01	131	⇑*i*Pn	Pb	17 18 17.4	+0.5
IVA				*e*Sn	Sb	17 18 42.9	+1.1
PDG	Podgorica	2.06	149	⇓*i*Pn	Pb	17 18 17.3	-0.4
PDG				*e*Sn	Sb	17 18 44.0	+0.8
TTG	Podgorica	2.06	149	⇓*i*Pn	Pb	17 18 17.3	-0.4
TTG				*e*Sn	Sb	17 18 44.0	+0.8
BUM	Brajici-Budva	2.06	158	⇑*i*Pn	Pb	17 18 18.1	+0.3
BUM				*e*Sn	Sb	17 18 45.2	+1.9
BUM	Brajici-Budva	2.06	158	⇑*i*Pn	Pb	17 18 18.1	+0.3
PKSM	Moragy	2.08	16	⇓*i*P	Pb	17 18 17.3	-0.7
PKSM				S	Pg	17 18 24.7	+4.4
PKSM	Moragy	2.08	16	⇓*i*P	Pb	17 18 17.3	-0.7
GRUS	Gruza	2.10	98	*e*Pg	Pg	17 18 20.5	-0.2
GRUS				*e*Sg	Sg	17 18 48.1	+0.1
GRUS	Gruza	2.10	98	*e*Pg	Pg	17 18 20.5	-0.2
GRUS				*e*Sg	Sg	17 18 48.1	+0.1
NVLJ	Novalja	2.16	280	*e*Pn	Pg	17 18 21.9	+0.1
NVLJ				Sn	Sg	17 18 50.9	+1.1
NVLJ	Novalja	2.16	280	*e*Pn	Pg	17 18 21.9	+0.1
NVLJ				Sn	Sg	17 18 50.9	+1.1
ULC	Ulcinj	2.47	155	⇑*i*Pn	Pb	17 18 24.6	-0.2
ULC				*e*Sn	Sb	17 18 54.4	-0.7
ULC	Ulcinj	2.47	155	⇑*i*Pn	Pb	17 18 24.6	-0.2
ULC				*e*Sn	Sb	17 18 54.4	-0.7
BZS	Buzias	3.03	61	⇓*i*P	Pg	17 18 39.7	+1.2
ZAPS	Zavoj	3.60	103	*e*Pn	Pn	17 18 37.1	+1.1
ZAPS				*e*Sn	Sn	17 19 18.3	0.0
GZR	Gura Zlata	3.71	70	⇓*i*P	Pg	17 18 50.2	-1.3
DRGR		4.29	51	⇓*i*P	Pb	17 18 50.8	-4.9
DRGR		4.29	51	⇓*i*P	Pb	17 18 50.8	-4.9
LOT	Lotru	4.39	72	⇓*i*P	Pb	17 18 57.4	-0.2
KHC	Kasperske Hory	5.72	331	*e*x	Sb	17 20 30.0	+1.3
KHC	Kasperske Hory	5.72	331	Sg	Sb	17 20 30.0	+1.3
PRU	Pruhonice	6.20	340	*e*x	Sb	17 20 40.0	-2.2
PRU	Pruhonice	6.20	340	Sg	Sb	17 20 40.0	-2.2

*ISCJB **12** 17:34:08.9±0.2, 46°.48N±0°.01×12°.95E±0°.02, h9km±2km, Error ellipse: s-maj=2.4km s-min=1.7km az=19.4*
*VIE **12** 17:34:08.7±0.1, 46°.46N×12°.94E, h8km±1km, mb1.7/12, ML2.3/15, Error ellipse: s-maj=1.0km s-min=0.5km az=12.0 8 km SE of Comeglians*
*ROM **12** 17:34:08.8±0.1, 46°.46N×12°.97E, h4km±1km, Md2.6/14, Ml2.2/14, Error ellipse: s-maj=1.3km s-min=0.9km az=30.0*
*CSEM **12** 17:34:09.2±0.1, 46°.47N×12°.96E, h8km, ML2.7/16, Error ellipse: s-maj=1.6km s-min=1.2km az=18.0*
*PRU **12** 17:34:10.7, 46°.48N×12°.97E, h0km, M2.1*
ISC 12 17:34:09.6±0.8**, 46°.47N**±0°.01×**12°.96E**±0°.01**, h6**km±4km**, n100,** σ**0s.71**/179**, 34C-38D, Northern Italy**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FUSE	Fusea	0.06	154	⇑*i*Pg	Pg	17 34 11.0	-0.2
FUSE				*i* Sg	Sg	17 34 12.1	-0.3
FUSE	Fusea	0.06	154	⇑*i*Pg	Pg	17 34 11.0	-0.2
FUSE				*i* Sg	Sg	17 34 12.1	-0.3
ZOU	Zoufplan	0.09	6	⇓*i*Pg	Pg	17 34 11.9	+0.2
ZOU				*i* Sg	Sg	17 34 13.7	+0.5
ZOU	Zoufplan	0.09	6	⇓*i*Pg	Pg	17 34 11.9	+0.2
ZOU				*i* Sg	Sg	17 34 13.8	+0.5
ZOU	Zoufplan	0.09	6	⇓*i*Pg	Pg	17 34 11.9	+0.2
ZOU				*i* Sg	Sg	17 34 13.7	+0.5
PLRO	Paularo	0.15	58	⇑*i*Pg	Pg	17 34 12.8	+0.1
PLRO				*i* Sg	Sg	17 34 15.4	+0.5
PLRO	Paularo	0.15	58	⇑*i*Pg	Pg	17 34 12.8	+0.1
PLRO				*i* Sg	Sg	17 34 15.4	+0.5
FVI	Forni Avoltri	0.18	315	⇓*i*Pg	Pg	17 34 13.2	0.0
FVI				Sg	Sg	17 34 16.1	+0.5
	599nm,0.2s						
FVI	Forni Avoltri	0.18	315	⇓*i*Pg	Pg	17 34 13.2	0.0
FVI				Sg	Sg	17 34 16.1	+0.5
	599nm,0.2s						
BOO	Bordano	0.18	147	⇓*i*Pg	Pg	17 34 12.8	-0.3
BOO				*i* Sg	Sg	17 34 15.8	+0.2
BOO	Bordano	0.18	147	⇓*i*Pg	Pg	17 34 12.8	-0.3
BOO				*i* Sg	Sg	17 34 15.8	+0.2
CSMI	Casera Mimoias	0.22	281	⇓*e*Pg	Pg	17 34 13.8	-0.1
CSMI				*e*Sg	Sg	17 34 17.3	+0.4
CSMI	Casera Mimoias	0.22	281	⇓*e*Pg	Pg	17 34 13.8	-0.1
CSMI				*e*Sg	Sg	17 34 17.3	+0.4
MPRI	Monte Prat	0.23	175	⇓*e*Pg	Pg	17 34 13.7	-0.4
MPRI				*e*Sg	Sg	17 34 17.4	+0.3
MPRI	Monte Prat	0.23	175	⇓*e*Pg	Pg	17 34 13.7	-0.4
MPRI				*e*Sg	Sg	17 34 17.5	+0.3
GEPF	Gemona	0.23	148	⇓*i*Pg	Pg	17 34 13.7	-0.4
GEPF				Sg	Sg	17 34 17.1	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	233nm,0.5s						
PTCC	**Patocco-Chiusa**	**0.28**	**103**	Pg	**Pg**	**17 34 14.8**	**-0.3**
PTCC				Sg	**Sg**	**17 34 19.9**	**+1.1**
	260nm,0.3s						
PTCC	**Patocco-Chiusa**	**0.28**	**103**	Pg	**Pg**	**17 34 14.8**	**-0.3**
PTCC				Sg	**Sg**	**17 34 19.9**	**+1.1**
	260nm,0.3s						
BAD	**Bernadia**	**0.30**	**140**	⇓*e*Pg	**Pg**	**17 34 15.0**	**-0.6**
BAD				*e*Sg	**Sg**	**17 34 19.9**	**+0.3**
BAD	**Bernadia**	**0.30**	**140**	⇓*e*Pg	**Pg**	**17 34 15.0**	**-0.6**
BAD				*e*Sg	**Sg**	**17 34 19.9**	**+0.3**
VINO	**Villanova**	**0.31**	**134**	⇓*e*Pg	**Pg**	**17 34 15.1**	**-0.5**
VINO				*e*Sg	**Sg**	**17 34 19.9**	**+0.2**
VINO	**Villanova**	**0.31**	**134**	⇓*i*Pg	**Pg**	**17 34 15.1**	**-0.5**
VINO				Sg	**Sg**	**17 34 19.9**	**+0.2**
	237nm,0.2s						
VINO	**Villanova**	**0.31**	**134**	⇓*e*Pg	**Pg**	**17 34 15.1**	**-0.5**
VINO				Sg	**Sg**	**17 34 19.9**	**+0.2**
	237nm,0.2s						
ACOM	**Acomizza, Ital**	**0.39**	**78**	⇓*e*Pg	**Pg**	**17 34 17.4**	**+0.2**
ACOM				*e*Sg	**Sg**	**17 34 23.4**	**+1.1**
ACOM	**Acomizza, Ital**	**0.39**	**78**	Pg	**Pg**	**17 34 17.4**	**+0.2**
ACOM				Sg	**Sg**	**17 34 23.6**	**+1.3**
	330nm,0.2s						
ACOM	**Acomizza, Ital**	**0.39**	**78**	⇓*e*Pg	**Pg**	**17 34 17.4**	**+0.2**
ACOM				*e*Sg	**Sg**	**17 34 23.4**	**+1.1**
LSR	**Lussari**	**0.39**	**89**	⇑*e*Pg	**Pg**	**17 34 16.9**	**-0.4**
LSR				*e*Sg	**Sg**	**17 34 23.5**	**+1.1**
LSR	**Lussari**	**0.39**	**89**	⇑*e*Pg	**Pg**	**17 34 16.9**	**-0.4**
LSR				*e*Sg	**Sg**	**17 34 23.5**	**+1.1**
CIMO	**Cimolais**	**0.40**	**246**	*e*Pg	**Pg**	**17 34 16.9**	**-0.4**
CIMO				*e*Sg	**Sg**	**17 34 22.7**	**+0.3**
CIMO	**Cimolais**	**0.40**	**246**	*e*Pg	**Pg**	**17 34 16.9**	**-0.4**
CIMO				*e*Sg	**Sg**	**17 34 22.7**	**+0.3**
MLNI	**Malnisio**	**0.40**	**217**	⇑*e*Pg	**Pg**	**17 34 16.9**	**-0.4**
MLNI				*e*Sg	**Sg**	**17 34 23.9**	**+1.2**
MLNI	**Malnisio**	**0.40**	**217**	⇑*e*Pg	**Pg**	**17 34 17.0**	**-0.4**
MLNI				*e*Sg	**Sg**	**17 34 23.9**	**+1.2**
ABTA	**Abfaltersbach**	**0.41**	**312**	*e*Pg	**Pg**	**17 34 17.5**	**-0.1**
	SNR=23						
ABTA				⇓*i*Sg	**Sg**	**17 34 23.3**	**+0.2**
	62nm,0.2s						
ABTA	**Abfaltersbach**	**0.41**	**312**	*e*Pg	**Pg**	**17 34 17.5**	**-0.1**
ABTA				Sg	**Sg**	**17 34 23.3**	**+0.2**
	62nm,0.2s						
ROBS	**Robic**	**0.44**	**121**	*i* Pg	**Pg**	**17 34 17.4**	**-0.7**
ROBS	**Robic**	**0.44**	**121**	*i* Pg	**Pg**	**17 34 17.4**	**-0.7**
COLI	**Coloredo**	**0.45**	**139**	⇓*e*Pg	**Pg**	**17 34 17.6**	**-0.6**
COLI				*e*Sg	**Sg**	**17 34 25.0**	**+1.0**
COLI	**Coloredo**	**0.45**	**139**	⇓*e*Pg	**Pg**	**17 34 17.6**	**-0.6**
COLI				*e*Sg	**Sg**	**17 34 25.0**	**+1.0**
CSO	**Casso**	**0.48**	**246**	*e*Pg	**Pg**	**17 34 18.4**	**-0.5**
CSO	**Casso**	**0.48**	**246**	*e*Pg	**Pg**	**17 34 18.4**	**-0.5**
MYKA	**Terra Mystica**	**0.50**	**71**	⇑*i*Pg	**Pg**	**17 34 19.0**	**-0.2**
MYKA				⇑*i*Sg	**Sg**	**17 34 26.2**	**+0.6**
	24nm,0.2s						
MYKA	**Terra Mystica**	**0.50**	**71**	⇑*i*Pg	**Pg**	**17 34 19.0**	**-0.2**
MYKA				*i* Sg	**Sg**	**17 34 26.2**	**+0.6**
POLC	**Polcenigo**	**0.55**	**216**	Pg	**Pg**	**17 34 20.2**	**+0.1**
POLC				Sg	**Sg**	**17 34 28.7**	**+1.5**
	123nm,0.2s						
DRE	**Drenchia**	**0.56**	**122**	⇑*e*Pg	**Pg**	**17 34 19.6**	**-0.7**
DRE				*e*Sg	**Sg**	**17 34 28.5**	**+0.9**
DRE	**Drenchia**	**0.56**	**122**	⇑*e*Pg	**Pg**	**17 34 19.6**	**-0.7**
DRE				*e*Sg	**Sg**	**17 34 28.5**	**+0.9**
CADS	**Cadrg**	**0.59**	**114**	*i* Pg	**Pg**	**17 34 20.4**	**-0.5**
CADS				*i* Sg	**Sg**	**17 34 29.5**	**+0.9**
CADS	**Cadrg**	**0.59**	**114**	*i* Pg	**Pg**	**17 34 20.4**	**-0.5**
CADS				*e*Sg	**Sg**	**17 34 29.5**	**+0.9**
CAE	**Caneva**	**0.59**	**218**	⇓*e*Pg	**Pg**	**17 34 20.7**	**-0.2**
CAE	**Caneva**	**0.59**	**218**	⇓*e*Pg	**Pg**	**17 34 20.7**	**-0.2**
SABO	**M.te Sabotino**	**0.66**	**138**	*e*Pg	**Pg**	**17 34 21.8**	**-0.5**
SABO	**M.te Sabotino**	**0.66**	**138**	Pg	**Pg**	**17 34 21.7**	**-0.5**
SABO				Sg	**Sb**	**17 34 32.6**	**-0.4**
	99nm,0.4s						
SABO	**M.te Sabotino**	**0.66**	**138**	*e*Pg	**Pg**	**17 34 21.8**	**-0.5**
SABO				Sg	**Sb**	**17 34 32.6**	**-0.4**
	99nm,0.4s						
KBA	**Koelnbreinsper**	**0.66**	**23**	⇓*i*Pg	**Pg**	**17 34 22.3**	**-0.1**
KBA				⇓*i*Sg	**Sg**	**17 34 31.3**	**+0.3**
	10.0nm,0.1s						
KBA	**Koelnbreinsper**	**0.66**	**23**	⇓*i*Pg	**Pg**	**17 34 22.3**	**-0.1**
KBA				*i* Sg	**Sg**	**17 34 31.3**	**+0.3**
RISI	**Rein**	**0.77**	**308**	Pg	**Pg**	**17 34 24.0**	**-0.4**
	119nm,0.5s						
RISI	**Rein**	**0.77**	**308**	*e*Pg	**Pg**	**17 34 24.3**	**-0.1**
RISI				*e*Sg	**Sg**	**17 34 34.6**	**+0.1**
VOY	**Vojsko**	**0.78**	**124**	*e*Pg	**Pg**	**17 34 22.9**	**-1.7**
VOY				*e*Sg	**Sg**	**17 34 35.2**	**+0.4**
VOY	**Vojsko**	**0.78**	**124**	*e*Pg	**Pg**	**17 34 22.9**	**-1.7**
VOY				*e*Sg	**Sg**	**17 34 35.2**	**+0.4**
CGRP	**Cima Grappa**	**1.00**	**234**	*e*Pg	**Pg**	**17 34 29.4**	**+0.6**
CGRP	**Cima Grappa**	**1.00**	**234**	Pg	**Pg**	**17 34 29.4**	**+0.6**
	44nm,0.4s						
CGRP	**Cima Grappa**	**1.00**	**234**	Pg	**Pg**	**17 34 29.4**	**+0.6**
	44nm,0.4s						
CTI	**Castel Tesino**	**1.00**	**246**	Pg	**Pg**	**17 34 28.7**	**-0.1**
	58nm,0.2s						
CTI	**Castel Tesino**	**1.00**	**246**	Pg	**Pg**	**17 34 28.7**	**-0.1**
	58nm,0.2s						
KOSI	**Kohlern**	**1.09**	**270**	Pg	**Pg**	**17 34 30.6**	**0.0**
	18nm,0.5s						
KOSI	**Kohlern**	**1.09**	**270**	Pg	**Pg**	**17 34 30.6**	**0.0**
	18nm,0.5s						
OBKA	**Obir**	**1.10**	**87**	⇑*i*Pg	**Pg**	**17 34 30.3**	**-0.3**
OBKA				⇑*i*Sg	**Sb**	**17 34 46.0**	**+0.4**
	20nm,0.3s						
OBKA	**Obir**	**1.10**	**87**	⇑*i*Pg	**Pg**	**17 34 30.3**	**-0.3**
OBKA				*i* Sg	**Sb**	**17 34 46.0**	**+0.4**
ABSI	**Aberstueckl**	**1.16**	**283**	Pg	**Pb**	**17 34 31.4**	**-0.7**
	50nm,0.6s						
ABSI	**Aberstueckl**	**1.16**	**283**	Pg	**Pb**	**17 34 31.4**	**-0.7**
	50nm,0.6s						
WTTA	**Wattenberg**	**1.21**	**312**	⇑*e*Pg	**Pb**	**17 34 32.2**	**-0.7**
	SNR=11						
WTTA				⇓*i*Sg	**Sb**	**17 34 49.0**	**+0.2**
	8.3nm,0.2s						
WTTA	**Wattenberg**	**1.21**	**312**	Pg	**Pb**	**17 34 32.2**	**-0.7**
	30nm,0.9s						
WTTA	**Wattenberg**	**1.21**	**312**	Pg	**Pb**	**17 34 32.2**	**-0.7**
	30nm,0.9s						
WTTA				*i* Sg	**Sb**	**17 34 49.0**	**+0.2**
PANI	**Panarotta**	**1.22**	**250**	*e*Pg	**Pn**	**17 34 33.3**	**-0.1**
PANI				*e*Sg	**Sn**	**17 34 50.7**	**+0.4**
PANI	**Panarotta**	**1.22**	**250**	*e*Pg	**Pn**	**17 34 33.3**	**-0.1**
PANI				*e*Sg	**Sn**	**17 34 50.7**	**+0.4**
WATA	**Walderalm**	**1.28**	**313**	⇑*i*Pg	**Pn**	**17 34 33.5**	**-0.7**
WATA	**Walderalm**	**1.28**	**313**	⇑*i*Pg	**Pn**	**17 34 33.5**	**-0.7**
DDS	**Dosso del Somm**	**1.37**	**245**	⇑*e*Pg	**Pg**	**17 34 36.2**	**+0.4**
DDS				*e*Sg	**Sg**	**17 34 55.1**	**+1.6**
DDS	**Dosso del Somm**	**1.37**	**245**	⇑*e*Pg	**Pg**	**17 34 36.2**	**+0.4**
DDS				*e*Sg	**Sg**	**17 34 55.1**	**+1.6**
SOKA	**Soboth**	**1.44**	**81**	⇑*i*Pn	**Pn**	**17 34 35.2**	**-1.1**
SOKA				⇑*i*Pg	**Pb**	**17 34 36.5**	**-0.4**
SOKA				⇓*i*Sg	**Sg**	**17 34 57.3**	**+1.3**
	2.9nm,0.3s						
SOKA	**Soboth**	**1.44**	**81**	⇑*i*Pn	**Pn**	**17 34 35.2**	**-1.1**
MOTA	**Moosalm**	**1.54**	**305**	⇑*i*Pn	**Pn**	**17 34 36.6**	**-1.2**
MOTA				⇓*i*Pg	**Pb**	**17 34 38.2**	**-0.4**
MOTA				⇑*i*Sn	**Sn**	**17 34 57.8**	**-0.4**
MOTA				⇓*i*Sg	**Sg**	**17 34 59.8**	**+0.6**
	6.9nm,0.3s						
MOTA	**Moosalm**	**1.54**	**305**	⇑*i*Pn	**Pn**	**17 34 36.6**	**-1.2**
FETA	**Feichten**	**1.63**	**291**	⇑*i*Pn	**Pn**	**17 34 38.0**	**-0.9**
FETA				⇓*i*Pg	**Pb**	**17 34 39.6**	**-0.6**
FETA				⇑*i*Sg	**Sg**	**17 35 02.1**	**+0.2**
	5.2nm,0.4s						
FETA	**Feichten**	**1.63**	**291**	⇑*i*Pn	**Pn**	**17 34 38.0**	**-0.9**
MOA	**Molln**	**1.64**	**32**	⇓*e*Pg	**Pb**	**17 34 40.9**	**+0.7**
	SNR=10						
MOA				⇓*i*Sn	**Sn**	**17 35 00.7**	**+0.3**
MOA				⇑*i*Sg	**Sg**	**17 35 03.7**	**+1.4**
	8.3nm,0.4s						
MOA	**Molln**	**1.64**	**32**	⇓*e*Pg	**Pb**	**17 34 40.9**	**+0.7**
MOA				Sn	**Sn**	**17 35 00.7**	**+0.3**
MOA				Sg	**Sg**	**17 35 03.7**	**+1.4**
	8.3nm,0.4s						
MOSI	**Grossmontoni**	**1.67**	**276**	⇓*e*Pg	**Pb**	**17 34 41.6**	**+0.7**
MOSI				*e*Sg	**Sg**	**17 35 03.6**	**+0.3**
DAVA	**Damuels**	**2.27**	**292**	⇑*i*Pn	**Pn**	**17 34 46.7**	**-1.0**
DAVA				⇓*i*Pg	**Pb**	**17 34 52.0**	**+1.0**
DAVA				⇓*i*Sn	**Sn**	**17 35 15.2**	**-0.8**
DAVA				⇑*i*Sg	**Sg**	**17 35 22.7**	**+0.4**
	5.6nm,0.3s						
DAVA	**Damuels**	**2.27**	**292**	⇑*i*Pn	**Pn**	**17 34 46.7**	**-1.0**
DAVA	**Damuels**	**2.27**	**292**	Pg	**Pb**	**17 34 52.0**	**+1.0**
DAVA				*i* Sn	**Sn**	**17 35 15.2**	**-0.8**
DAVA				Sg	**Sg**	**17 35 22.7**	**+0.4**
	5.6nm,0.3s						
NVLJ	**Novalja**	**2.33**	**144**	*e*Pn	**Pn**	**17 34 49.1**	**+0.7**
NVLJ				Sn	**Sn**	**17 35 17.7**	**+0.4**
NVLJ	**Novalja**	**2.33**	**144**	*e*Pn	**Pn**	**17 34 49.1**	**+0.7**
NVLJ				Sn	**Sn**	**17 35 17.7**	**+0.4**
KHC	**Kasperske Hory**	**2.69**	**9**	*e*PN	**Pn**	**17 34 54.8**	**+1.3**
KHC				*e*PG	Pg	17 35 04.5	+3.3
KHC				*e*SG	**Sg**	**17 35 35.6**	**-0.5**
	comp=Z,4.0nm,0.5s						
KHC	**Kasperske Hory**	**2.69**	**9**	Pn	**Pn**	**17 34 54.8**	**+1.3**
KHC				Sg	**Sg**	**17 35 35.6**	**-0.5**
	4.0nm,0.5s						
PRU	**Pruhonice**	**3.67**	**16**	*e*SG	**Sg**	**17 36 07.5**	**-0.1**
	comp=Z,4.8nm,0.5s						
PRU	**Pruhonice**	**3.67**	**16**	Sg	**Sg**	**17 36 07.5**	**-0.1**
	4.8nm,0.5s						
NKC	**Novy Kostel**	**3.78**	**355**	*e*SG	**Sg**	**17 36 11.4**	**+0.5**
	comp=Z,3.1nm,0.3s						
NKC	**Novy Kostel**	**3.78**	**355**	Sg	**Sg**	**17 36 11.4**	**+0.5**
	3.1nm,0.3s						
DPC	**Dobruska-Polom**	**4.48**	**29**	*e*SG	**Sg**	**17 36 31.0**	**-2.4**
	comp=Z,16nm,0.6s						
DPC	**Dobruska-Polom**	**4.48**	**29**	Sg	**Sg**	**17 36 31.0**	**-2.4**
	16nm,0.6s						

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*IDC **12** 17:45:12.7±1.4, 17°.31N×122°.39E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.2/25, mbtmp3.3/4, Error ellipse: s-maj=70.9km s-min=23.9km az=75.0*
*ISCJB **12** 17:45:17.7±0.7, 17°.51N±0°.04×122°.50E±0°.05, h50km±7km, mb3.0/3, Error ellipse: s-maj=9.1km s-min=5.0km az=148.5*
*MAN **12** 17:45:17, 17°.47N×122°.46E, h28km, mb4.7, ML3.6, MS3.6*
ISC 12 17:45:18.4±1.1, **17°.51N**±0°.04×**122°.44E**±0°.06, **h38**km±12km, **n17**, σ**1s.49**/28, **mb3.0**/3, **4D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALP	**Palanan**	**0.44**	**181**	⇓*e*P	**Pn**	**17 45 27.7**	**-0.5**
PALP				*i* S	**Sn**	**17 45 37.1**	**+1.9**
PALP	**Palanan**	**0.44**	**181**	*e*P	**Pn**	**17 45 27.8**	**-0.5**
PALP				*e*S	**Sn**	**17 45 35.9**	**+0.7**
CVP	**Callao Caves**	**0.62**	**288**	⇓*i*P	**Pn**	**17 45 29.6**	**-1.1**
CVP				*i* S	**Sn**	**17 45 38.9**	**-0.5**
CAUP	**Cauayan**	**0.81**	**226**	*e*P	**Pn**	**17 45 33.5**	**+0.1**
CAUP				*e*S	**Sn**	**17 45 45.8**	**+1.6**
SGCP	**Mt. Cagua**	**0.82**	**333**	*e*P	**Pn**	**17 45 33.8**	**+0.3**
SGCP				*e*S	**Sn**	**17 45 46.2**	**+1.8**
APYP	**Conner**	**1.19**	**287**	*e*P	**Pn**	**17 45 38.5**	**-0.1**
APYP				*e*S	**Sn**	**17 45 54.3**	**+0.8**
ABRA	**Dolores**	**1.65**	**275**	*e*P	**Pn**	**17 45 45.1**	**+0.3**
ABRA				*e*S	**Sn**	**17 46 06.1**	**+1.2**
PIP	**Pasuquin**	**1.91**	**295**	⇓*i*P	**Pn**	**17 45 49.8**	**+1.3**
PIP				*e*S	**Sn**	**17 46 13.5**	**+2.2**
SIPP	**Brgy, Tapao**	**1.93**	**283**	⇓*e*P	**Pn**	**17 45 50.3**	**+1.6**
SIPP				*i* S	Sn	17 46 15.9	+4.1
BOLP	**Bolinao**	**2.66**	**245**	*e*P	**Pn**	**17 46 00.4**	**+1.6**
BOLP				*e*S	**Sn**	**17 46 32.5**	**+2.7**
POLP	**Polilio Island**	**2.81**	**190**	*e*P	**Pn**	**17 46 01.8**	**+1.0**
POLP				*e*S	**Sn**	**17 46 34.0**	**+0.6**
SCZP	**Santa Cruz**	**2.97**	**235**	*e*P	**Pn**	**17 46 04.0**	**+1.0**
CNP	**Catarman**	**5.42**	**156**	*e*P	**Pn**	**17 46 39.1**	**+2.5**
CNP				*e*S	**Sn**	**17 47 39.5**	**+1.7**
KSRS	**Korea Array**	**20.45**	**13**	P	**P**	**17 49 53.8**	**+1.2**
	1.0nm,0.6s,baz=196,slow=11,SNR=6.5						
WRA	**Warramunga Arr**	**39.01**	**162**	P	**P**	**17 52 39.1**	**-2.4**
	0.5nm,0.7s,baz=343,slow=9.3,SNR=4.1						
ASAR	**Alice Springs**	**42.43**	**164**	P	**P**	**17 53 08.4**	**-1.2**
	0.2nm,0.8s,baz=340,slow=7.1,SNR=5.0						
MKAR	**Makanchi Array**	**44.07**	**320**	P	**P**	**17 53 23.3**	**+0.6**
	0.1nm,0.4s,baz=110,slow=7.6,SNR=4.3						

IDC 12 17:55:21.5±6.0, **21°.94N**×**144°.02E**, **h75**km±54km, **mb3.6**/14, **mb1 3.8**/15, **mb1mx3.7**/29, **mbtmp3.6**/15, **ML4.1**/1, **Error ellipse: s-maj=27.3km s-min=12.8km az=85.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.40**	**342**	P	Pn	17 58 54.9	+0.4
	0.8nm,0.3s,baz=161,slow=8.5,SNR=13						
MAT	**Matsushiro**	**15.41**	**342**	P	P	17 58 58.8	+1.3
KSRS	**Korea Array**	**20.80**	**322**	P	P	17 59 57.9	+1.3
	3.6nm,0.6s,baz=148,slow=8.5,SNR=19						
USRK	**Ussuriysk Arra**	**24.33**	**339**	P	P	18 00 33.5	+1.5
	2.2nm,0.7s,baz=153,slow=10.0,SNR=4.0						
SONM	**Songino Array**	**39.65**	**320**	P	P	18 02 45.9	-0.2
	1.2nm,0.4s,baz=138,slow=8.4,SNR=6.4						
CMAR	**Chiang Mai Arr**	**42.33**	**274**	P	P	18 03 08.8	+0.5
	0.4nm,0.6s,baz=85,slow=6.2,SNR=5.5						
WRA	**Warramunga Arr**	**42.68**	**193**	P	P	18 03 11.1	0.0
	1.5nm,0.3s,baz=17,slow=9.3,SNR=48						
FITZ	**Fitzroy Crossi**	**43.67**	**206**	P	P	18 03 19.2	+0.2
	2.3nm,0.8s,baz=5.0,slow=5.4,SNR=11						
ASAR	**Alice Springs**	**46.38**	**193**	P	P	18 03 39.9	-0.6
	0.4nm,0.5s,baz=11,slow=6.8,SNR=19						
STKA	**Stephens Creek**	**53.56**	**183**	P	P	18 04 34.1	-0.6
	2.0nm,0.6s,baz=18,slow=10.0,SNR=5.8						
ZALV	**Zalesovo Beam**	**54.51**	**321**	P	P	18 04 40.0	-1.4
	1.5nm,0.5s,baz=106,slow=7.8,SNR=8.9						
MKAR	**Makanchi Array**	**55.11**	**312**	P	P	18 04 45.2	-0.8
	0.4nm,0.5s,baz=86,slow=8.8,SNR=6.1						
MKAR				pP	pP	18 05 10.9	+6.0
	0.3nm,0.5s,baz=83,slow=10,SNR=4.9						
ILAR	**Eielson Array**	**61.47**	**27**	P	P	18 05 28.8	-1.2
	0.7nm,0.7s,baz=253,slow=5.2,SNR=6.3						
BVAR	**Borovoye Array**	**62.99**	**319**	P	P	18 05 39.4	-0.9
	2.2nm,0.7s,baz=113,slow=9.6,SNR=8.8						
NVAR	**Mina Array Bea**	**82.39**	**52**	P	P	18 07 36.5	+0.6
	0.5nm,0.6s,baz=298,slow=5.8,SNR=4.5						
FINES	**FINESS Array B**	**83.30**	**335**	P	P	18 07 41.3	+1.6
	2.2nm,0.8s,baz=131,slow=5.7,SNR=5.4						
TORD	**Torodi Ar. Bea**	**129.19**	**310**	PKP	PKPdf	18 14 22.2	+0.3
	0.2nm,0.7s,baz=66,slow=1.1,SNR=3.5						
PLCA	**Paso Flores**	**145.33**	**131**	PKPbc	PKPab	18 14 51.0	-0.1
	2.0nm,0.5s,baz=234,slow=4.7,SNR=6.8						
CFAA	**Coronel Fontan**	**149.73**	**115**	PKPbc	PKPbc	18 15 02.7	-0.5
	0.1nm,0.3s,baz=90,slow=2.0,SNR=3.7						

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*ISCJB **12** 18:02:58.7±0.2, 43°.77N±0°.01×105°.32W±0°.02, h0km, mb4.0/2, Error ellipse: s-maj=2.2km s-min=1.9km az=150.5*
*IDC **12** 18:02:59.8±1.7, 43°.97N×105°.63W, h0km, mb3.8/2, mb1 3.9/5, mb1mx3.5/29, mbtmp3.7/5, ML3.5/3, Error ellipse: s-maj=54.4km s-min=9.0km az=147.0*
*NEIC **12** 18:02:59.6±0.3, 43°.82N×105°.27W, h0km, ML3.3, Error ellipse: s-maj=4.0km s-min=3.9km az=121.0, Suspected Mining explosion.*
NEIC 55 km [35 miles] SSE of Gillette.
ISC 12 18:02:59.1±0.6, **43°.76N**±0°.02×**105°.33W**±0°.02, **h0**km, **n270**, σ**0s.98**/291, **128C-104D, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
J23A	**Dilts Ranch, B**	**0.39**	**205**	⇓P	**Pg**	**18 03 07.4**	**+0.8**
	baz=0.5,SNR=188						
J23A				⇑S	**Sg**	**18 03 12.1**	**+0.4**
	baz=0.5						
J23A	**Dilts Ranch, B**	**0.39**	**205**	⇓P	**Pg**	**18 03 07.4**	**+0.8**
	baz=0.5,SNR=188						
J23A				⇑S	**Sg**	**18 03 12.1**	**+0.4**
	baz=0.5						
I24A	**Kuemmerle Ranc**	**0.52**	**79**	⇓P	**Pg**	**18 03 09.7**	**+0.6**
	baz=0.5						
I24A				⇑S	**Sg**	**18 03 16.9**	**+1.2**
	baz=0.5						
I24A	**Kuemmerle Ranc**	**0.52**	**79**	⇓P	**Pg**	**18 03 09.7**	**+0.6**
	baz=0.5						
I24A				⇑S	**Sg**	**18 03 16.9**	**+1.2**
	baz=0.5						
J24A	**Dixon Ranch, L**	**0.65**	**131**	⇑P	**Pg**	**18 03 11.7**	**+0.2**
	baz=0.7						
J24A	**Dixon Ranch, L**	**0.65**	**131**	⇑P	**Pg**	**18 03 11.7**	**+0.2**
	baz=0.7						
H23A	**Clabaugh Cattl**	**0.80**	**356**	⇓P	**Pg**	**18 03 15.1**	**+0.6**
	baz=0.7						
H23A	**Clabaugh Cattl**	**0.80**	**356**	⇓P	**Pg**	**18 03 15.1**	**+0.6**
	baz=0.7						
I22A	**9 Mile Ranch,**	**0.85**	**279**	⇓P	**Pg**	**18 03 16.1**	**+0.8**
	baz=0.9,SNR=1000						
I22A				⇑S	**Sg**	**18 03 25.9**	**-0.4**
	baz=0.9						
I22A	**9 Mile Ranch,**	**0.85**	**279**	⇓P	**Pg**	**18 03 16.1**	**+0.8**
	baz=0.9,SNR=1000						
I22A				⇑S	**Sg**	**18 03 25.9**	**-0.4**
	baz=0.9						
J22A	**Midwest**	**0.90**	**248**	⇑P	**Pg**	**18 03 16.4**	**0.0**
	baz=1.0,SNR=254						
J22A				⇑S	**Sg**	**18 03 27.7**	**-0.5**
	baz=1.0						
J22A	**Midwest**	**0.90**	**248**	⇑P	**Pg**	**18 03 16.4**	**0.0**
	baz=1.0,SNR=254						
J22A				⇑S	**Sg**	**18 03 27.7**	**-0.5**
	baz=1.0						
RSSD	**Black Hills**	**1.00**	**68**	*e*Pg	**Pg**	**18 03 18.1**	**-0.2**
K23A	**Bowen Ranch, D**	**1.03**	**192**	⇑P	**Pg**	**18 03 18.2**	**-0.6**
	baz=1.1						
K23A	**Bowen Ranch, D**	**1.03**	**192**	⇑P	**Pg**	**18 03 18.2**	**-0.6**
	baz=1.1						
K24A	**Anderson Ranch**	**1.10**	**160**	⇑P	**Pg**	**18 03 19.8**	**-0.5**
	baz=1.1						
K24A				⇓S	**Sg**	**18 03 35.3**	**+0.8**
	baz=1.1						
K24A	**Anderson Ranch**	**1.10**	**160**	⇑P	**Pg**	**18 03 19.8**	**-0.5**
	baz=1.1						
K24A				⇓S	**Sg**	**18 03 35.3**	**+0.8**
	baz=1.1						
H22A	**Clearmont**	**1.11**	**319**	⇓P	**Pg**	**18 03 21.1**	**+0.6**
	baz=1.1,SNR=58						
H22A	**Clearmont**	**1.11**	**319**	⇓P	**Pg**	**18 03 21.1**	**+0.6**
	baz=1.1,SNR=58						
H24A	**Dirks Ranch, A**	**1.14**	**29**	⇑P	**Pg**	**18 03 20.6**	**-0.2**
	baz=1.1						
H24A	**Dirks Ranch, A**	**1.14**	**29**	⇑P	**Pg**	**18 03 20.6**	**-0.2**
	baz=1.1						
J25A	**Sunshine Ranch**	**1.17**	**108**	⇑P	**Pg**	**18 03 21.0**	**-0.5**
	baz=1.1						
J25A	**Sunshine Ranch**	**1.17**	**108**	⇑P	**Pg**	**18 03 21.0**	**-0.5**
	baz=1.1						
K22A	**Casper**	**1.41**	**219**	⇓P	**Pn**	**18 03 25.4**	**-0.8**
	baz=1.5,SNR=369						
K22A	**Casper**	**1.41**	**219**	⇓P	**Pn**	**18 03 25.4**	**-0.8**
	baz=1.5,SNR=369						
I21A	**Big Trails, Te**	**1.42**	**273**	⇓P	**Pn**	**18 03 25.2**	**-1.2**
	baz=1.5,SNR=636						
I21A	**Big Trails, Te**	**1.42**	**273**	⇓P	**Pn**	**18 03 25.2**	**-1.2**
	baz=1.5,SNR=636						
G23A	**Biddle**	**1.44**	**358**	⇓P	**Pn**	**18 03 26.3**	**-0.3**
	baz=1.4,SNR=164						
G23A	**Biddle**	**1.44**	**358**	⇓P	**Pn**	**18 03 26.3**	**-0.3**
	baz=1.4,SNR=164						
H21A	**Big Horn, Sher**	**1.51**	**306**	⇑P	**Pn**	**18 03 28.0**	**+0.4**
	baz=1.5,SNR=262						
H21A	**Big Horn, Sher**	**1.51**	**306**	⇑P	**Pn**	**18 03 28.0**	**+0.4**
	baz=1.5,SNR=262						
K25A	**Mack Ranch, Ha**	**1.57**	**137**	⇑P	**Pn**	**18 03 28.7**	**+0.4**
	baz=1.6,SNR=37						
K25A	**Mack Ranch, Ha**	**1.57**	**137**	⇑P	**Pn**	**18 03 28.7**	**+0.4**
	baz=1.6,SNR=37						
J21A	**Lysite**	**1.59**	**256**	P	**Pn**	**18 03 28.3**	**-0.5**
	baz=1.6,SNR=142						
J21A	**Lysite**	**1.59**	**256**	P	**Pn**	**18 03 28.3**	**-0.5**
	baz=1.6,SNR=142						
G22A	**Birney**	**1.61**	**335**	⇓P	**Pn**	**18 03 29.4**	**+0.4**
	baz=1.6,SNR=179						
G22A	**Birney**	**1.61**	**335**	⇓P	**Pn**	**18 03 29.4**	**+0.4**
	baz=1.6,SNR=179						
L23A	**Garrett**	**1.67**	**190**	⇑P	**Pn**	**18 03 29.5**	**-0.3**
	baz=1.7,SNR=654						
L23A	**Garrett**	**1.67**	**190**	⇑P	**Pn**	**18 03 29.5**	**-0.3**
	baz=1.7,SNR=654						
G24A	**Alzada**	**1.70**	**22**	⇓P	**Pb**	**18 03 30.9**	**-0.4**
	baz=1.6,SNR=45						
G24A	**Alzada**	**1.70**	**22**	⇓P	**Pb**	**18 03 30.9**	**-0.4**
	baz=1.6,SNR=45						
L24A	**Wheatland**	**1.74**	**170**	⇓P	**Pn**	**18 03 30.8**	**+0.1**
	baz=1.8,SNR=28						
L24A	**Wheatland**	**1.74**	**170**	⇓P	**Pn**	**18 03 30.8**	**+0.1**
	baz=1.8,SNR=28						
L25A	**Engebretsen Ra**	**1.89**	**148**	⇑P	**Pn**	**18 03 33.9**	**+1.2**
	baz=1.9,SNR=171						
L25A	**Engebretsen Ra**	**1.89**	**148**	⇑P	**Pn**	**18 03 33.9**	**+1.2**
	baz=1.9,SNR=171						
K26A	**Motz Farm, Whi**	**1.89**	**123**	⇓P	**Pn**	**18 03 33.0**	**+0.2**
	baz=1.9,SNR=32						
K26A	**Motz Farm, Whi**	**1.89**	**123**	⇓P	**Pn**	**18 03 33.0**	**+0.2**
	baz=1.9,SNR=32						
L22A	**Ellis Ranch, M**	**1.91**	**206**	⇑P	**Pn**	**18 03 33.3**	**+0.2**
	baz=2.0						
L22A	**Ellis Ranch, M**	**1.91**	**206**	⇑P	**Pn**	**18 03 33.3**	**+0.2**
	baz=2.0						
F23A	**Volborg**	**1.96**	**358**	⇑P	**Pn**	**18 03 34.5**	**+0.8**
	baz=1.9,SNR=10						
F23A	**Volborg**	**1.96**	**358**	⇑P	**Pn**	**18 03 34.5**	**+0.8**
	baz=1.9,SNR=10						
G21A	**Lodge Grass**	**1.99**	**318**	⇑P	**Pn**	**18 03 35.0**	**+0.8**
	baz=2.0,SNR=62						
G21A	**Lodge Grass**	**1.99**	**318**	⇑P	**Pn**	**18 03 35.0**	**+0.8**
	baz=2.0,SNR=62						
I20A	**Worland**	**2.03**	**276**	⇑P	**Pn**	**18 03 36.0**	**+1.2**
	baz=2.1						
I20A				⇓Sb	**Sb**	**18 04 03.7**	**+0.8**
	baz=2.1						
I20A	**Worland**	**2.03**	**276**	⇑P	**Pn**	**18 03 36.0**	**+1.2**
	baz=2.1						
I20A				⇓Sb	**Sb**	**18 04 03.7**	**+0.8**
	baz=2.1						
J20A	**Shoshoni**	**2.04**	**259**	⇑P	**Pb**	**18 03 36.8**	**-0.4**
	baz=2.1						
J20A	**Shoshoni**	**2.04**	**259**	⇑P	**Pb**	**18 03 36.8**	**-0.4**
	baz=2.1						
F22A	**Rosebud**	**2.12**	**342**	⇓P	**Pn**	**18 03 36.2**	**+0.2**
	baz=2.1,SNR=107						
F22A				⇑Sb	**Sg**	**18 04 07.3**	**-0.1**
	baz=2.1						
F22A	**Rosebud**	**2.12**	**342**	⇓P	**Pn**	**18 03 36.2**	**+0.2**
	baz=2.1,SNR=107						
F22A				⇑Sb	**Sg**	**18 04 07.3**	**-0.1**
	baz=2.1						
F24A	**Ekalaka**	**2.18**	**16**	⇓P	**Pn**	**18 03 37.7**	**+1.0**
	baz=2.1,SNR=52						
F24A				⇑Sb	**Sg**	**18 04 09.5**	**+0.4**
	baz=2.1						
F24A	**Ekalaka**	**2.18**	**16**	⇓P	**Pn**	**18 03 37.7**	**+1.0**
	baz=2.1,SNR=52						
F24A				⇑Sb	**Sg**	**18 04 09.5**	**+0.4**
	baz=2.1						
M24A	**Cheyenne**	**2.32**	**171**	⇑P	**Pn**	**18 03 39.8**	**+1.1**
	baz=2.4,SNR=230						
M24A	**Cheyenne**	**2.32**	**171**	⇑P	**Pn**	**18 03 39.8**	**+1.1**
	baz=2.4,SNR=230						
L21A	**Rawlins**	**2.34**	**221**	⇓P	**Pn**	**18 03 40.1**	**+1.0**
	baz=2.4						
L21A	**Rawlins**	**2.34**	**221**	⇓P	**Pn**	**18 03 40.1**	**+1.0**
	baz=2.4						
L26A	**Underwood Farm**	**2.39**	**135**	⇑P	**Pn**	**18 03 40.1**	**+0.5**
	baz=2.4						
L26A	**Underwood Farm**	**2.39**	**135**	⇑P	**Pn**	**18 03 40.1**	**+0.5**
	baz=2.4						
F21A	**Absaloka Mine,**	**2.43**	**329**	⇑P	**Pn**	**18 03 40.0**	**-0.1**
	baz=2.4,SNR=15						
F21A	**Absaloka Mine,**	**2.43**	**329**	⇑P	**Pn**	**18 03 40.0**	**-0.1**
	baz=2.4,SNR=15						
PHWY	**Pilot Hill**	**2.46**	**182**	*e*Pn	**Pn**	**18 03 41.1**	**+0.4**
PHWY				*e*Sn	**Sn**	**18 04 12.7**	**+1.1**
K20A	**Yellowstone Ra**	**2.46**	**244**	⇑P	**Pn**	**18 03 41.9**	**+1.2**
	baz=2.5						
K20A				⇑Sb	**Sb**	**18 04 16.2**	**+0.9**
	baz=2.5						
K20A	**Yellowstone Ra**	**2.46**	**244**	⇑P	**Pn**	**18 03 41.9**	**+1.2**
	baz=2.5						
K20A				⇑Sb	**Sb**	**18 04 16.2**	**+0.9**
	baz=2.5						
K27A	**Flueckinger Fa**	**2.49**	**114**	⇓P	**Pn**	**18 03 42.7**	**+1.7**
	baz=2.5,SNR=36						
K27A	**Flueckinger Fa**	**2.49**	**114**	⇓P	**Pn**	**18 03 42.7**	**+1.7**
	baz=2.5,SNR=36						
M25A	**Palm-Egli Farm**	**2.51**	**158**	⇓P	**Pn**	**18 03 42.7**	**+1.4**
	baz=2.5						
M25A	**Palm-Egli Farm**	**2.51**	**158**	⇓P	**Pn**	**18 03 42.7**	**+1.4**
	baz=2.5						
G20A	**Bridger**	**2.53**	**306**	P	**Pn**	**18 03 41.8**	**+0.2**
	baz=2.5,SNR=199						
G20A	**Bridger**	**2.53**	**306**	P	**Pn**	**18 03 41.8**	**+0.2**
	baz=2.5,SNR=199						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
M22A	Cedar Creek Ra	2.53	202	⇑P	Pn	18 03 43.4	+1.7
	baz=2.6						
M22A	Cedar Creek Ra	2.53	202	⇑P	Pn	18 03 43.4	+1.7
	baz=2.6						
M21A	Separation Pea	2.62	216	⇓P	Pn	18 03 44.9	+2.0
	baz=2.7						
M21A	Separation Pea	2.62	216	⇓P	Pn	18 03 44.9	+2.0
	baz=2.7						
I19A	Meeteetse	2.66	277	⇓P	Pn	18 03 45.0	+1.5
	baz=2.7						
I19A	Meeteetse	2.66	277	⇓P	Pn	18 03 45.0	+1.5
	baz=2.7						
E22A	Miles City	2.71	351	⇑P	Pn	18 03 44.2	+0.1
	baz=2.7,SNR=12						
E22A	Miles City	2.71	351	⇑P	Pn	18 03 44.2	+0.1
	baz=2.7,SNR=12						
K19A	Absolon Red Bu	2.73	251	⇓P	Pn	18 03 45.7	+1.2
	baz=2.8						
K19A				⇓Sb	Sb	18 04 23.9	+0.8
	baz=2.8						
K19A	Absolon Red Bu	2.73	251	⇓P	Pn	18 03 45.7	+1.2
	baz=2.8						
K19A				⇓Sb	Sb	18 04 23.9	+0.8
	baz=2.8						
E23A	Ismay	2.74	0	⇑P	Pn	18 03 44.9	+0.6
	baz=2.7,SNR=55						
E23A	Ismay	2.74	0	⇑P	Pn	18 03 44.9	+0.6
	baz=2.7,SNR=55						
J19A	Crowheart	2.75	261	⇓P	Pn	18 03 46.6	+1.9
	baz=2.8						
J19A				⇑Sb	Sb	18 04 24.9	+1.2
	baz=2.8						
J19A	Crowheart	2.75	261	⇓P	Pn	18 03 46.6	+1.9
	baz=2.8						
J19A				⇑Sb	Sb	18 04 24.9	+1.2
	baz=2.8						
H19A	Powell	2.78	290	⇓P	Pn	18 03 46.4	+1.3
	baz=2.8						
H19A	Powell	2.78	290	⇓P	Pn	18 03 46.4	+1.3
	baz=2.8						
M26A	McRoberts Ranc	2.80	144	⇑P	Pn	18 03 46.1	+0.8
	baz=2.8						
M26A	McRoberts Ranc	2.80	144	⇑P	Pn	18 03 46.1	+0.8
	baz=2.8						
L20A	Wamsutter	2.82	233	⇑P	Pn	18 03 47.6	+1.9
	baz=2.9						
L20A	Wamsutter	2.82	233	⇑P	Pn	18 03 47.6	+1.9
	baz=2.9						
E24A	Baker	2.89	14	⇑P	Pn	18 03 47.6	+1.1
	baz=2.8,SNR=57						
E24A	Baker	2.89	14	⇑P	Pn	18 03 47.6	+1.1
	baz=2.8,SNR=57						
N23A	Red Feather La	2.90	189	⇑P	Pn	18 03 48.0	+1.2
	baz=3.0						
N23A	Red Feather La	2.90	189	⇑P	Pn	18 03 48.0	+1.2
	baz=3.0						
J28A	Allard Ranch,	2.99	95	⇓P	Pn	18 03 48.6	+0.7
	baz=2.9						
J28A	Allard Ranch,	2.99	95	⇓P	Pn	18 03 48.6	+0.7
	baz=2.9						
E21A	Keefer Ranch,	3.04	337	⇑P	Pn	18 03 48.1	-0.5
	baz=3.0						
E21A	Keefer Ranch,	3.04	337	⇑P	Pn	18 03 48.1	-0.5
	baz=3.0						
K28A	Ten Mile Ranch	3.08	108	⇓P	Pn	18 03 50.6	+1.6
	baz=3.0,SNR=7.9						
K28A	Ten Mile Ranch	3.08	108	⇓P	Pn	18 03 50.6	+1.6
	baz=3.0,SNR=7.9						
RLMT	Red Lodge	3.13	297	*e*Pn	Pn	18 03 50.7	+0.8
PDAR	Pinedale Array	3.24	254	Pn	Pn	18 03 53.0	+1.5
PDAR				Lg	Lg	18 04 38.1	
PDAR	Pinedale Array	3.24	254	Pn	Pn	18 03 53.0	+1.5
	6.1nm,0.3s,baz=75,slow=16,SNR=30						
PDAR				Lg	Lg	18 04 38.1	
	10nm,0.3s,baz=68,slow=31,SNR=6.1						
BW06	Boulder Array	3.25	254	*e*Pn	Pn	18 03 52.3	+0.8
H18A	Shoshone NF, C	3.25	288	⇓P	Pn	18 03 52.0	+0.5
	baz=3.3						
H18A	Shoshone NF, C	3.25	288	⇓P	Pn	18 03 52.0	+0.5
	baz=3.3						
I18A	Diamond G Ranc	3.25	271	⇓P	Pn	18 03 54.0	+2.4
	baz=3.3						
I18A	Diamond G Ranc	3.25	271	⇓P	Pn	18 03 54.0	+2.4
	baz=3.3						
F19A	Roth Farm, Mol	3.32	310	⇓P	Pn	18 03 53.4	+1.1
	baz=3.3,SNR=180						
F19A	Roth Farm, Mol	3.32	310	⇓P	Pn	18 03 53.4	+1.1
	baz=3.3,SNR=180						
N26A	Koester Ranch,	3.32	151	⇓P	Pn	18 03 52.8	+0.4
	baz=3.4						
N26A	Koester Ranch,	3.32	151	⇓P	Pn	18 03 52.8	+0.4
	baz=3.4						
E20A	Meyer Farm, Mu	3.38	325	⇑P	Pn	18 03 52.6	-0.7
	baz=3.4,SNR=14						
E20A	Meyer Farm, Mu	3.38	325	⇑P	Pn	18 03 52.6	-0.7
	baz=3.4,SNR=14						
L19A	Farson	3.39	242	⇓P	Pn	18 03 55.2	+1.7
	baz=3.5						
L19A	Farson	3.39	242	⇓P	Pn	18 03 55.2	+1.7
	baz=3.5						
G18A	Lazy EL Ranch,	3.41	299	⇓P	Pn	18 03 54.7	+1.1
	baz=3.4						
G18A	Lazy EL Ranch,	3.41	299	⇓P	Pn	18 03 54.7	+1.1
	baz=3.4						
N21A	Black Mountain	3.41	209	⇓P	Pn	18 03 55.4	+1.6
	baz=3.5						
N21A	Black Mountain	3.41	209	⇓P	Pn	18 03 55.4	+1.6
	baz=3.5						
D23A	Lindsay	3.42	1	⇓P	Pn	18 03 54.6	+0.9
	baz=3.4,SNR=7.4						
D23A	Lindsay	3.42	1	⇓P	Pn	18 03 54.6	+0.9
	baz=3.4,SNR=7.4						
D24A	Glendive	3.43	12	⇑P	Pn	18 03 55.4	+1.5
	baz=3.4,SNR=64						
D24A	Glendive	3.43	12	⇑P	Pn	18 03 55.4	+1.5
	baz=3.4,SNR=64						
D22A	Cohagen	3.44	350	⇓P	Pn	18 03 54.6	+0.5
	baz=3.4,SNR=13						
D22A	Cohagen	3.44	350	⇓P	Pn	18 03 54.6	+0.5
	baz=3.4,SNR=13						
D21A	La Casta Ranch	3.51	341	⇑P	Pn	18 03 55.2	+0.2
	baz=3.5						
D21A	La Casta Ranch	3.51	341	⇑P	Pn	18 03 55.2	+0.2
	baz=3.5						
O23A	Lake Granby, G	3.57	187	⇓P	Pn	18 03 57.5	+1.4
	baz=3.6						
O23A	Lake Granby, G	3.57	187	⇓P	Pn	18 03 57.5	+1.4
	baz=3.6						
N20A	Spence Gulch,	3.64	218	⇑P	Pn	18 03 58.2	+1.2
	baz=3.7						
N20A	Spence Gulch,	3.64	218	⇑P	Pn	18 03 58.2	+1.2
	baz=3.7						
E19A	Rath Farm, Rou	3.65	319	⇑P	Pn	18 03 56.9	+0.1
	baz=3.6,SNR=32						
E19A	Rath Farm, Rou	3.65	319	⇑P	Pn	18 03 56.9	+0.1
	baz=3.6,SNR=32						
GCMT	Greycliff	3.70	305	*e*Pn	Pn	18 03 58.6	+0.9
OGNE	Ogallala	3.73	138	*e*Pn	Pn	18 03 58.6	+0.7
OGNE	Ogallala	3.73	138	⇓P	Pn	18 03 58.8	+0.8
	baz=3.7,SNR=12						
OGNE	Ogallala	3.73	138	⇓P	Pn	18 03 58.8	+0.8
	baz=3.7,SNR=12						
LKWY	Lake	3.74	284	*e*Pn	Pn	18 03 59.4	+1.1
F18A	Big Timber	3.79	306	⇑P	Pn	18 03 59.6	+0.8
	baz=3.8						
F18A	Big Timber	3.79	306	⇑P	Pn	18 03 59.6	+0.8
	baz=3.8						
O26A	Horse Wrangler	3.82	156	⇑P	Pn	18 03 60.0	+0.7
	baz=3.9						
O26A	Horse Wrangler	3.82	156	⇑P	Pn	18 03 60.0	+0.7
	baz=3.9						
C24A	Savage	3.82	9	⇑P	Pn	18 04 00.8	+1.5
	baz=3.8,SNR=22						
C24A	Savage	3.82	9	⇑P	Pn	18 04 00.8	+1.5
	baz=3.8,SNR=22						
LOHW	Long Hollow	3.83	270	*e*Pn	Pn	18 04 00.2	+0.7
D20A	Manuel Ranch,	3.87	330	⇓P	Pn	18 03 59.7	-0.3
	baz=3.8,SNR=36						
D20A	Manuel Ranch,	3.87	330	⇓P	Pn	18 03 59.7	-0.3
	baz=3.8,SNR=36						
MOOW	Moose Ponds	3.92	272	*e*Pn	Pn	18 04 01.8	+1.0
L29A	Maesberg Ranch	3.94	114	⇓P	Pn	18 04 01.4	+0.4
	baz=3.9						
L29A	Maesberg Ranch	3.94	114	⇓P	Pn	18 04 01.4	+0.4
	baz=3.9						
SNOW	Snow King Moun	3.95	268	*e*Pn	Pn	18 04 05.4	+4.1
ISCO	Idaho Springs	3.96	183	*e*Pn	Pn	18 04 02.1	+0.7
ISCO	Idaho Springs	3.96	183	⇑P	Pn	18 04 01.5	+0.1
	baz=4.0						
ISCO	Idaho Springs	3.96	183	⇑P	Pn	18 04 01.5	+0.1
	baz=4.0						
C22A	Vida	4.01	355	⇑P	Pn	18 04 03.1	+1.3
	baz=4.0,SNR=27						
C22A	Vida	4.01	355	⇑P	Pn	18 04 03.1	+1.3
	baz=4.0,SNR=27						
YFT	Old Faithful	4.03	282	*e*Pn	Pn	18 04 05.4	+3.1
REDW	Red Top Meadow	4.03	266	Pn	Pn	18 04 03.0	+0.6
C23A	Lambert	4.04	1	⇑P	Pn	18 04 03.7	+1.4
	baz=4.0,SNR=11						
C23A	Lambert	4.04	1	⇑P	Pn	18 04 03.7	+1.4
	baz=4.0,SNR=11						
IMW	Indian Meadow	4.06	274	*e*Pn	Pn	18 04 02.8	0.0
TPAW	Teton Pass	4.09	268	*e*Pn	Pn	18 04 04.0	+0.8
O27A	Beecher Island	4.15	148	⇑P	Pn	18 04 04.7	+0.8
	baz=4.2						
O27A	Beecher Island	4.15	148	⇑P	Pn	18 04 04.7	+0.8
	baz=4.2						
O20A	White River Ci	4.22	212	⇑P	Pn	18 04 06.4	+1.5
	baz=4.3						
O20A	White River Ci	4.22	212	⇑P	Pn	18 04 06.4	+1.5
	baz=4.3						
C21A	Desert Coulee	4.25	344	⇑P	Pn	18 04 05.3	+0.2
	baz=4.2						
C21A	Desert Coulee	4.25	344	⇑P	Pn	18 04 05.3	+0.2
	baz=4.2						
DCID1	Drake Creek	4.25	270	*e*Pn	Pn	18 04 06.6	+1.3
E18A	Harlowton	4.29	312	⇓P	Pn	18 04 06.1	+0.4
	baz=4.3,SNR=25						
E18A	Harlowton	4.29	312	⇓P	Pn	18 04 06.1	+0.4
	baz=4.3,SNR=25						
AHID	Auburn Hatcher	4.33	259	*e*Pn	Pn	18 04 07.3	+0.9
P25A	Willow Gulch B	4.33	168	⇓P	Pn	18 04 06.9	+0.5
	baz=4.4						
P25A	Willow Gulch B	4.33	168	⇓P	Pn	18 04 06.9	+0.5
	baz=4.4						
F17A	Fitzpatrick Pl	4.36	301	⇓P	Pn	18 04 07.9	+1.3
	baz=4.4						
F17A	Fitzpatrick Pl	4.36	301	⇓P	Pn	18 04 07.9	+1.3
	baz=4.4						
RRI2	Red Ridge	4.37	267	*e*Pn	Pn	18 04 07.8	+0.8
C20A	Veseth Ranch,	4.38	336	⇓P	Pn	18 04 07.4	+0.6
	baz=4.3,SNR=9.2						
C20A	Veseth Ranch,	4.38	336	⇓P	Pn	18 04 07.4	+0.6
	baz=4.3,SNR=9.2						
P26A	Davis Ranch, A	4.45	160	⇓P	Pn	18 04 08.1	+0.1
	baz=4.5						
P26A	Davis Ranch, A	4.45	160	⇓P	Pn	18 04 08.1	+0.1
	baz=4.5						
QLMT	Earthquake Lak	4.51	286	Pn	Pn	18 04 11.4	+2.6
B22A	Reddig Ranch S	4.57	354	⇑P	Pn	18 04 10.3	+0.8
	baz=4.5,SNR=6.6						
B22A	Reddig Ranch S	4.57	354	⇑P	Pn	18 04 10.3	+0.8
	baz=4.5,SNR=6.6						
D18A	Linhart Farms,	4.66	319	⇑P	Pn	18 04 10.8	-0.1
	baz=4.6						
D18A	Linhart Farms,	4.66	319	⇑P	Pn	18 04 10.8	-0.1
	baz=4.6						
P27A	Ficken Ranch,	4.68	153	⇑P	Pn	18 04 11.4	+0.3
	baz=4.7,SNR=14						
P27A	Ficken Ranch,	4.68	153	⇑P	Pn	18 04 11.4	+0.3
	baz=4.7,SNR=14						
SMCO	Snowmass	4.74	196	*e*Pn	Pn	18 04 14.7	+2.5
C19A	Slack Wire Ran	4.75	328	⇑P	Pn	18 04 12.3	+0.2
	baz=4.7,SNR=26						
C19A	Slack Wire Ran	4.75	328	⇑P	Pn	18 04 12.3	+0.2
	baz=4.7,SNR=26						
E17A	Martinsdale	4.76	307	⇑P	Pn	18 04 13.4	+1.2
	baz=4.7						
E17A	Martinsdale	4.76	307	⇑P	Pn	18 04 13.4	+1.2
	baz=4.7						
DGMT	Dagmar	4.78	9	*e*Pn	Pn	18 04 13.2	+0.8
BOZ	Bozeman (W)	4.87	295	*e*Pn	Pn	18 04 13.2	-0.6
Q25A	Bedland, Calha	4.91	170	⇑P	Pn	18 04 14.6	+0.3
	baz=5.0						
Q25A	Bedland, Calha	4.91	170	⇑P	Pn	18 04 14.6	+0.3
	baz=5.0						
P28A	Saint Francis	4.96	146	⇓P	Pn	18 04 15.0	0.0
	baz=5.0,SNR=8.2						
P28A	Saint Francis	4.96	146	⇓P	Pn	18 04 15.0	0.0
	baz=5.0,SNR=8.2						
Q26A	Hugo	5.02	164	⇓P	Pn	18 04 16.3	+0.5
	baz=5.1						
Q26A	Hugo	5.02	164	⇓P	Pn	18 04 16.3	+0.5
	baz=5.1						
B20A	Solberg Farm,	5.04	339	⇑P	Pn	18 04 16.3	+0.3
	baz=5.0						
B20A	Solberg Farm,	5.04	339	⇑P	Pn	18 04 16.3	+0.3
	baz=5.0						
D17A	Six Diamond Ra	5.07	314	⇑P	Pn	18 04 16.7	+0.2
	baz=5.1,SNR=42						
D17A	Six Diamond Ra	5.07	314	⇑P	Pn	18 04 16.7	+0.2
	baz=5.1,SNR=42						
HWUT	Hardware Ranch	5.08	247	*e*Pn	Pn	18 04 17.0	+0.4
	12nm,0.6s						
A24A	Westby	5.25	10	⇑P	Pn	18 04 20.1	+1.3
	baz=5.2,SNR=10.0						
A24A	Westby	5.25	10	⇑P	Pn	18 04 20.1	+1.3
	baz=5.2,SNR=10.0						
EGMT	Eagleton	5.27	326	*e*Pn	Pn	18 04 19.1	0.0
	29nm,0.5s						
EGMT	Eagleton	5.27	326	⇓P	Pn	18 04 19.3	+0.2
	baz=5.2,SNR=9.1						
EGMT	Eagleton	5.27	326	⇓P	Pn	18 04 19.3	+0.2
	baz=5.2,SNR=9.1						
O30A	MW Ranch, Wils	5.31	131	⇑P	Pn	18 04 20.7	+0.9
	baz=5.3,SNR=6.1						
O30A	MW Ranch, Wils	5.31	131	⇑P	Pn	18 04 20.7	+0.9
	baz=5.3,SNR=6.1						
C17A	Wharram Farm,	5.43	317	⇑P	Pn	18 04 21.7	+0.3
	baz=5.4,SNR=10						
C17A	Wharram Farm,	5.43	317	⇑P	Pn	18 04 21.7	+0.3
	baz=5.4,SNR=10						
DLMT	Dillon	5.43	290	*e*P	Pn	18 04 22.3	+0.8
	4.7nm,0.6s						
LRM	Limekiln Ridge	5.47	295	*e*P	Pn	18 04 22.2	+0.1
	32nm,0.4s						
MCMT	McKenzie Canyo	5.50	284	*e*P	Pn	18 04 25.3	+2.8
	2.9nm,0.5s						
DAU	Daniels Canyon	5.53	235	*e*P	Pn	18 04 25.4	+2.3
	8.6nm,0.4s						
R26A	Arlington	5.63	165	⇑P	Pn	18 04 24.5	+0.2
	baz=5.7,SNR=19						
R26A	Arlington	5.63	165	⇑P	Pn	18 04 24.5	+0.2
	baz=5.7,SNR=19						
R25A	Fountain Ranch	5.66	172	⇑P	Pn	18 04 24.8	+0.2
	baz=5.7,SNR=7.4						
R25A	Fountain Ranch	5.66	172	⇑P	Pn	18 04 24.8	+0.2
	baz=5.7,SNR=7.4						
HVU	Hansel Valley	5.83	253	*e*Pn	Pn	18 04 28.1	+1.2
	7.2nm,0.7s						
B17A	L&G Farms, Che	5.92	322	⇓P	Pn	18 04 28.5	+0.5
	baz=5.9,SNR=11						
B17A	L&G Farms, Che	5.92	322	⇓P	Pn	18 04 28.5	+0.5
	baz=5.9,SNR=11						
PV04	Paradox Valley	6.00	208	*e*Pn	Pn	18 04 30.5	+1.2
MPU	Maple Canyon	6.01	234	*e*Pn	Pn	18 04 31.0	+1.5
	6.1nm,0.6s						
R28A	Tribune	6.03	153	⇑P	Pn	18 04 29.5	-0.1
	baz=6.1,SNR=8.0						
R28A	Tribune	6.03	153	⇑P	Pn	18 04 29.5	-0.1
	baz=6.1,SNR=8.0						
PV01	Paradox Valley	6.13	205	*e*Pn	Pn	18 04 32.3	+1.1
	609nm,0.5s						
S26A	Kim	6.29	166	⇓P	Pn	18 04 33.0	-0.2
	baz=6.3,SNR=6.3						
S26A	Kim	6.29	166	⇓P	Pn	18 04 33.0	-0.2
	baz=6.3,SNR=6.3						
ECSD	EROS Data Cent	6.31	87	*e*Pn	Pn	18 04 33.1	-0.3
	6.9nm,0.5s						
CHMT	Chamberlain Mo	6.41	302	*e*Pn	Pn	18 04 35.7	+0.7
	2.2nm,0.5s						
B16A	M & M Farms, S	6.43	319	⇓P	Pn	18 04 35.3	+0.2
	baz=6.4,SNR=21						
B16A	M & M Farms, S	6.43	319	⇓P	Pn	18 04 35.3	+0.2
	baz=6.4,SNR=21						
D14A	Greenough	6.64	303	⇓P	Pn	18 04 38.4	+0.3
	baz=6.6,SNR=21						
D14A	Greenough	6.64	303	⇓P	Pn	18 04 38.4	+0.3
	baz=6.6,SNR=21						
SLMT	Seeley Lake	6.71	304	*e*Pn	Pn	18 04 39.1	+0.1
	4.4nm,0.5s						
MSO	Missoula	6.80	300	*e*Pn	Pn	18 04 39.8	-0.5
	1.5nm,0.3s						
SWMT	Swartz Lake	7.14	305	*e*Pn	Pn	18 04 44.7	-0.1
	3.2nm,0.5s						
YBMT	Yellow Bay	7.32	307	*e*Pn	Pn	18 04 48.9	+1.5
	5.4nm,0.4s						
MSU	Marysvale	7.36	227	*e*Pn	Pn	18 04 49.1	+1.1
	6.2nm,0.6s						
JTMT	Jette	7.42	306	*e*Pn	Pn	18 04 50.5	+1.7
	2.5nm,0.5s						
A14A	Double T Ranch	7.65	316	⇑P	Pn	18 04 51.3	-0.6
	baz=7.6,SNR=5.2						
A14A	Double T Ranch	7.65	316	⇑P	Pn	18 04 51.3	-0.6
	baz=7.6,SNR=5.2						
BSMT	Bassoo Peak	7.77	305	*e*Pn	Pn	18 04 54.2	+0.6
	1.9nm,0.6s						
WALA	Waterton Lakes	7.95	315	*e*Pn	Pn	18 04 55.0	-1.0
	0.1nm,0.6s						
AGMN	Agassiz Nation	8.00	52	Pn	Pn	18 04 50.9	-5.6
	14nm,0.5s						
ARUT	Antelope Range	8.57	229	*e*Pn	Pn	18 05 05.9	+1.4
	4.2nm,0.5s						
ULM	Lac du Bonnet	9.15	42	Pn	Pn	18 05 12.2	-0.2
ULM				Pg		18 05 42.2	
ULM				Lg	Lg	18 07 43.2	
ULM	Lac du Bonnet	9.15	42	Pn	Pn	18 05 12.2	-0.2
	1.0nm,0.3s,baz=238,slow=12,SNR=4.2						
ULM				Pg		18 05 42.2	
	0.7nm,0.3s,baz=229,slow=17,SNR=2.3						
ULM				Lg	Lg	18 07 43.2	
	0.7nm,0.3s,baz=139,slow=20,SNR=2.9						
WUAZ	Wupatki	9.46	212	*e*Pn	Pn	18 05 18.1	+1.4
	5.5nm,0.5s						
NVAR	Mina Array Bea	11.14	246	Pn	Pn	18 05 41.6	+1.8
NVAR	Mina Array Bea	11.14	246	Pn	Pn	18 05 41.6	+1.8
	0.2nm,0.3s,baz=55,slow=12,SNR=3.8						
FFC	Flin Flon	11.19	10	*e*Pn	Pn	18 05 38.4	-1.8
	3.2nm,0.5s						
ARCES	ARCESS Array B	61.41	18	P	P	18 13 14.4	-2.1
ARCES	ARCESS Array B	61.41	18	P	P	18 13 14.4	-2.1
	2.0nm,1.0s,baz=338,slow=6.8,SNR=5.2						
MKAR	Makanchi Array	89.58	355	P	P	18 15 58.2	-0.2
MKAR	Makanchi Array	89.58	355	P	P	18 15 58.2	-0.2
	0.4nm,0.6s,baz=7.4,slow=6.1,SNR=5.0						

IDC 12 18:06:09.2±1.0**,9°.16S**×**117°.99E,h84**km±8km**,mb3.4**/5**,**
mb1 3.5/7**,mb1mx3.3**/22**,mbtmp3.4**/7**,Error ellipse:**
s-maj=23.4km s-min=12.8km az=78.0,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	4.47	23	P	Pn	18 07 16.4	+1.8
	2.3nm,0.3s,baz=189,slow=5.1,SNR=30						
KAPI				S	Sn	18 08 06.1	+0.6
	12nm,0.3s,baz=95,slow=23,SNR=43						
FITZ	Fitzroy Crossi	11.58	141	P	Pn	18 08 47.9	-3.7
	0.3nm,0.3s,baz=321,slow=3.5,SNR=32						
FITZ				S	Sn	18 10 46.4	-13
	0.9nm,0.3s,baz=183,slow=16,SNR=12						
WRA	Warramunga Arr	19.09	126	P	P	18 10 24.1	-1.3
	0.2nm,0.3s,baz=302,slow=13,SNR=14						
WRA				S	S	18 13 45.5	-12
	0.1nm,0.3s,baz=297,slow=20,SNR=4.9						
ASAR	Alice Springs	20.97	135	P	P	18 10 45.5	-0.3
	1.0nm,0.5s,baz=314,slow=12,SNR=34						
ASAR				S	S	18 14 30.5	-4.3
	0.2nm,0.6s,baz=308,slow=22,SNR=4.6						
STKA	Stephens Creek	31.47	139	P	P	18 12 23.6	+0.5
	1.9nm,0.6s,baz=324,slow=12,SNR=5.6						
STKA				pP	pP	18 12 43.3	+0.9
	4.7nm,1.1s,baz=303,slow=14,SNR=2.6						
SONM	Songino Array	57.67	351	P	P	18 15 50.1	-1.0
	0.4nm,0.3s,baz=146,slow=10,SNR=3.9						
SONM				pP	pP	18 16 10.7	-1.3
	0.5nm,0.5s,baz=158,slow=12,SNR=2.1						
MKAR	Makanchi Array	64.15	334	P	P	18 16 35.4	+0.6
	0.4nm,0.5s,baz=151,slow=7.0,SNR=8.2						
MKAR				pP	pP	18 16 56.5	+0.2
	0.3nm,0.6s,baz=146,slow=5.6,SNR=3.0						
ZALV	Zalesovo Beam	68.84	340	P	P	18 17 04.7	+0.2
	0.5nm,0.6s,baz=128,slow=9.5,SNR=3.2						

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*ISK **12** 18:45:36.6, 37°.88N×29°.20E, h8km, MD2.8*
*DDA **12** 18:45:36.9, 37°.87N×29°.22E, h8km, MD2.9*
*ISCJB **12** 18:45:37.0±0.4, 37°.88N±0°.02×29°.21E±0°.04, h7km±4km, Error ellipse: s-maj=4.8km s-min=3.4km az=8.3*
*CSEM **12** 18:45:37.0±0.1, 37°.87N×29°.21E, h10km, MD2.8, Error ellipse: s-maj=2.8km s-min=2.1km az=96.0*
ISC 12 18:45:37.1±0.8**,37°.87N**±0°.02×**29°.20E**±0°.02**,h14**km±6km**,**
n36,σ0s.46/55**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	Denizli	0.18	229	*e*PG	Pg	18 45 41.3	0.0
DENT				*e*SG	Sg	18 45 44.1	0.0
DENT	Denizli	0.18	229	*e*Pg	Pg	18 45 41.3	0.0
DENT				*e*Sg	Sg	18 45 44.1	0.0
DNZL	Cakiroluk	0.22	214	*i* P	Pg	18 45 41.8	-0.3
DNZL				*i* S	Sg	18 45 45.5	+0.1
DNZL	Cakiroluk	0.22	214	*i* P	Pg	18 45 41.8	-0.3
DNZL				*i* S	Sg	18 45 45.5	+0.1
KHL	Karahalli	0.52	29	*e*PG	Pg	18 45 46.9	-0.4
KHL				*e*SG	Sg	18 45 54.7	+0.4
KHL	Karahalli	0.52	29	*e*Pg	Pg	18 45 46.9	-0.4
KHL				*e*Sg	Sg	18 45 54.7	+0.4
KHAL	Karahalli	0.55	25	*i* P	Pg	18 45 47.2	-0.7
KHAL				*i* S	Sg	18 45 55.4	+0.1
KHAL	Karahalli	0.55	25	*i* P	Pg	18 45 47.2	-0.7
KHAL				*i* S	Sg	18 45 55.4	+0.1
GOLH	Golhisar	0.69	156	*i* P	Pg	18 45 50.1	-0.5
GOLH				*i* S	Sn	18 46 02.6	-0.6
GOLH	Golhisar	0.69	156	*i* P	Pg	18 45 50.1	-0.5
GOLH				*i* S	Sn	18 46 02.6	-0.6
GLHS	Glhisar (BURDU	0.75	162	*e*PG	Pg	18 45 51.8	+0.1
GLHS				*e*SG	Sb	18 46 02.5	+0.3
GLHS	Glhisar (BURDU	0.75	162	*e*Pg	Pg	18 45 51.8	+0.1
GLHS				*e*Sg	Sb	18 46 02.5	+0.3
KULA	Kula-Manisa	0.77	327	*e*PG	Pb	18 45 52.8	+0.4
KULA				*e*SG	Sg	18 46 02.3	0.0
KULA	Kula-Manisa	0.77	327	*e*Pg	Pb	18 45 52.8	+0.4
KULA				*e*Sg	Sg	18 46 02.3	0.0
MANT	Manisa	0.80	321	*i* P	Pb	18 45 53.1	+0.1
MANT				*i* S	Sb	18 46 04.3	+0.5
MANT	Manisa	0.80	321	*i* P	Pb	18 45 53.1	+0.1
MANT				*i* S	Sb	18 46 04.3	+0.5
YER	Yerkesik	1.04	225	*e*PG	Pg	18 45 56.7	-0.4
YER	Yerkesik	1.04	225	*e*Pg	Pg	18 45 56.7	-0.4
ISP	Isparta	1.05	92	*e*PG	Pb	18 45 57.2	+0.2
ISP	Isparta	1.05	92	*e*Pg	Pb	18 45 57.3	+0.2
AYDN	Tasoluk	1.07	259	*i* P	Pg	18 45 58.0	+0.3
AYDN				*i* S	Sg	18 46 11.5	-0.2
AYDN	Tasoluk	1.07	259	*i* P	Pg	18 45 58.0	+0.3
DALY	Dalyan (Mu˜la	1.14	203	*e*PN	Pb	18 45 58.2	-0.3
DALY	Dalyan (Mu˜la	1.14	203	*e*Pn	Pb	18 45 58.2	-0.3
BCK	Bucak	1.17	110	*e*PN	Pg	18 45 59.7	0.0
BCK	Bucak	1.17	110	*e*Pn	Pg	18 45 59.7	0.0
DEMI	Demirci	1.23	342	*i* P	Pb	18 46 00.5	+0.3
DEMI				*i* S	Sb	18 46 14.5	-1.5
DEMI	Demirci	1.23	342	*i* P	Pb	18 46 00.5	+0.3
DEMI				*i* S	Sb	18 46 14.5	-1.5
FETY	Fethiye	1.24	184	*e*PN	Pg	18 46 01.0	+0.1
FETY	Fethiye	1.24	184	*e*Pn	Pg	18 46 01.0	+0.1
SHUT	Suhut-Afyon	1.26	57	*e*PN	Pb	18 46 01.1	+0.3
SHUT	Suhut-Afyon	1.26	57	*e*Pn	Pb	18 46 01.1	+0.3
ALT	Altintas	1.38	31	*e*PN	Pb	18 46 03.2	+0.4
ALT	Altintas	1.38	31	*e*Pn	Pb	18 46 03.2	+0.4
TVSB	Tavsanli	1.59	7	*e*PN	Pn	18 46 05.5	+0.5
TVSB	Tavsanli	1.59	7	*e*Pn	Pn	18 46 05.5	+0.5

IDC 12 18:46:07.9±4.6**,17°.78S**×**167°.31E,h0**km**,mb3.9**/4**,**
mb1 4.1/5**,mb1mx3.8**/19**,mbtmp3.9**/5**,ML3.5**/1**,Error**
ellipse: s-maj=91.4km s-min=32.7km az=84.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.35	191	*e*P	Pn	18 47 13.8	-1.6
DZM				*e*S	Sn	18 48 04.0	-2.9
DZM	Mont Dzumac	4.35	191	Pn	Pn	18 47 14.5	-0.9
	2.5nm,0.3s,baz=128,slow=21,SNR=32						
DZM				Sn	Sn	18 48 06.2	-0.7
	3.0nm,0.3s,baz=139,slow=19,SNR=8.1						
STKA	Stephens Creek	27.14	234	P	P	18 51 54.2	+1.2
	2.6nm,0.7s,baz=95,slow=11,SNR=4.1						
WRA	Warramunga Arr	31.25	261	P	P	18 52 28.9	-0.7
	0.7nm,0.9s,baz=90,slow=9.0,SNR=5.0						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ASAR	Alice Springs	31.74	254	P	P	18 52 33.8	-0.1
	2.2nm,0.8s,baz=80,slow=8.7,SNR=20						
CMAR	Chiang Mai Arr	76.23	295	P	P	18 57 58.9	+0.1
	0.8nm,0.8s,baz=128,slow=5.4,SNR=5.9						

MEX 12 19:02:30.9±0.4, 15°.83N×95°.53W, h32km±12km, MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	0.56	264	eP	Pb	19 02 40.5	-1.9
HUIG				i S	Sb	19 02 48.0	-2.3
PCIG		2.23	93	eP	Pn	19 03 03.9	-1.7
PCIG				eS	Sn	19 03 29.6	-2.5
TGIG		2.50	67	i P	Pn	19 03 06.8	-2.6
TGIG				i S	Sn	19 03 36.9	-2.0
PNIG	Pinotepa	2.56	283	i P	Pn	19 03 09.2	-1.0
PNIG				i S	Sn	19 03 37.6	-2.7
UTMO	Huajuapan	2.95	313	i P	Pn	19 03 15.1	-0.7
UTMO				i S	Sn	19 03 47.6	-2.8

IDC 12 19:04:17.7±4.9, 6°.10S×146°.03E, h112km±63km, mb3.1/3, mb1 3.4/5, mb1mx3.1/19, mbtmp3.2/5, Error ellipse: s-maj=61.9km s-min=38.9km az=100.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.47	161	P	Pn	19 05 10.9	+0.9
	81nm,0.3s,baz=322,slow=7.1,SNR=329						
PMG				S	Sn	19 05 50.7	+0.2
	72nm,0.3s,baz=156,slow=20,SNR=20						
CTA	Charters Tower	13.90	179	P	P	19 07 35.2	+0.7
	1.5nm,0.3s,baz=3.7,slow=14,SNR=12						
WRA	Warramunga Arr	17.84	218	P	Pn	19 08 18.9	-0.1
	0.1nm,0.3s,baz=40,slow=12,SNR=4.4						
WRA				S	S	19 11 34.1	-3.6
	0.1nm,0.3s,baz=40,slow=22,SNR=4.5						
ASAR	Alice Springs	21.00	212	P	P	19 08 54.0	+1.7
	0.4nm,0.9s,baz=31,slow=14,SNR=3.7						
FITZ	Fitzroy Crossi	23.20	237	P	P	19 09 13.6	-1.3
	0.8nm,0.4s,baz=57,slow=9.1,SNR=12						
CMAR	Chiang Mai Arr	52.45	299	P	P	19 13 19.4	+0.1
	0.7nm,0.5s,baz=120,slow=6.1,SNR=7.8						
TORD	Torodi Ar. Bea	144.18	284	PKP	PKPbc	19 23 40.2	+0.4
	0.2nm,0.4s,baz=73,slow=3.0,SNR=7.3						

SKO 12 19:34:07.5, 41°.27N×22°.72E, h15km, M1.1, ML1.4
ISCJB 12 19:34:08.5±0.8, 41°.29N±0°.08×22°.72E±0°.06, h11km±7km, Error ellipse: s-maj=13.4km s-min=7.2km az=172.2
ATH 12 19:34:09.6, 41°.21N×22°.72E, h21km±7km, MD2.8/5
CSEM 12 19:34:09.6, 41°.21N×22°.72E, h21km, MD2.8, After ATH
ISC 12 19:34:08.1±1.1, 41°.27N±0°.07×22°.75E±0°.04, h10km±9km, n13, σ0s24/21, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.14	290	i Pg	Pg	19 34 11.3	-0.1
VAY				i Sg	Sg	19 34 13.6	0.0
VAY				eLg	Lg	19 34 13.6	
	comp=N,264nm,0.2s						
VAY				eLg	Lg	19 34 13.7	
	comp=E,141nm,0.5s						
SOH	Sokhos	0.64	134	ePB	Pb	19 34 21.4	-0.1
SOH				eSN	Sb	19 34 30.6	+0.1
SOH	Sokhos	0.64	134	ePb	Pb	19 34 21.4	-0.1
SOH				eSn	Sb	19 34 30.6	+0.1
NVR	Nevrokopi	0.84	84	P	Pn	19 34 25.9	-0.2
NVR	Nevrokopi	0.84	84	ePN	Pn	19 34 26.2	+0.1
NVR				eSN	Sn	19 34 38.7	+0.1
NVR	Nevrokopi	0.84	84	ePn	Pn	19 34 26.2	+0.1
NVR				eSn	Sn	19 34 38.7	+0.1
PLG	Polygyros	1.04	149	P	Pn	19 34 29.2	+0.4
PLG				S	Sn	19 34 43.1	-0.4
PLG	Polygyros	1.04	149	ePN	Pn	19 34 29.2	+0.4
PLG	Polygyros	1.04	149	ePn	Pn	19 34 29.2	+0.4
FNA	Florina	1.15	245	ePN	Pn	19 34 30.6	+0.3
FNA				eSN	Sn	19 34 45.8	-0.3
FNA	Florina	1.15	245	ePn	Pn	19 34 30.6	+0.3
FNA				eSn	Sn	19 34 45.8	-0.3
LIT	Litokhoron	1.19	190	ePN	Pn	19 34 30.8	0.0
LIT	Litokhoron	1.19	190	ePn	Pn	19 34 30.8	0.0

ISCJB 12 19:34:13.1±0.6, 39°.59N±0°.02×25°.99E±0°.05, h9km±5km, Error ellipse: s-maj=6.3km s-min=3.7km az=170.1
DDA 12 19:34:13.6, 39°.66N×26°.07E, h7km, MD2.6
CSEM 12 19:34:13.0±0.2, 39°.60N×25°.98E, h12km, MD2.9, Error ellipse: s-maj=5.3km s-min=3.1km az=72.0
ATH 12 19:34:13.0, 39°.59N×26°.01E, h13km±5km, MD2.9/5
ISC 12 19:34:13.3±1.0, 39°.60N±0°.02×26°.01E±0°.03, h11km±8km, n21, σ0s56/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.25	8	i P	Pg	19 34 18.3	-0.1
BOZC				i S	Sg	19 34 22.0	+0.2
SIGR	SIGRI	0.40	197	P	Pg	19 34 20.9	-0.3
SIGR				S	Sg	19 34 26.4	-0.2
SIGR	SIGRI	0.40	197	P	Pg	19 34 20.9	-0.3
SIGR				S	Sg	19 34 26.4	-0.2
PRK	Paraskevi	0.41	150	P	Pg	19 34 21.2	-0.1
PRK				S	Sg	19 34 27.0	+0.3
PRK	Paraskevi	0.41	150	ePB	Pg	19 34 21.2	-0.1
PRK				eSB	Sg	19 34 26.9	+0.3
PRK	Paraskevi	0.41	150	ePb	Pg	19 34 21.2	-0.1
PRK				eSb	Sg	19 34 26.9	+0.3
AYVA	Ayvalik	0.60	119	i P	Pg	19 34 25.2	+0.3
AYVA				i S	Sb	19 34 35.2	+0.9
AYVA	Ayvalik	0.60	119	i P	Pg	19 34 25.2	+0.3
AYVA				i S	Sb	19 34 35.2	+0.9
LIA	Limnos Island	0.70	295	P	Pg	19 34 27.0	0.0
LIA	Limnos Island	0.70	295	ePB	Pg	19 34 26.9	0.0
LIA				eSB	Sg	19 34 36.5	+0.3
LIA	Limnos Island	0.70	295	ePb	Pg	19 34 26.9	0.0
LIA				eSb	Sg	19 34 36.5	+0.3
SMTH	Samothraki Isl	0.95	337	ePB	Pg	19 34 31.1	-0.4
SMTH				eSB	Sg	19 34 43.8	-0.1
SMTH	Samothraki Isl	0.95	337	ePb	Pg	19 34 31.1	-0.4
SMTH				eSb	Sg	19 34 43.8	-0.1
CHOS	Chios island	1.21	178	ePB	Pn	19 34 36.0	-0.2
CHOS				eSB	Sb	19 34 51.9	0.0
CHOS	Chios island	1.21	178	ePb	Pn	19 34 36.0	-0.2
CHOS				eSb	Sb	19 34 51.9	0.0
ALN	Alexandroupoli	1.30	1	ePB	Pn	19 34 37.4	0.0
ALN				eSB	Sb	19 34 55.0	+0.6
ALN	Alexandroupoli	1.30	1	ePb	Pn	19 34 37.4	0.0
ALN				eSb	Sb	19 34 55.0	+0.6
SART	Tekirdag	1.41	39	i P	Pn	19 34 37.2	-1.8
SART				i S	Sn	19 34 57.8	+0.1
SART	Tekirdag	1.41	39	i P	Pn	19 34 37.2	-1.8
SART				i S	Sn	19 34 57.8	+0.1
RDO	Rodhopi	1.59	347	P	Pn	19 34 41.8	+0.4
RDO	Rodhopi	1.59	347	P	Pn	19 34 41.8	+0.4

IDC 12 19:47:15.8±1.2, 1°.37S×126°.79E, h0km, mb3.9/4, mb1 4.0/7, mb1mx3.8/24, mbtmp3.9/7, ML3.7/3, Error ellipse: s-maj=47.2km s-min=19.1km az=73.0, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	7.90	243	Pn	Pn	19 49 11.1	-1.0
	1.2nm,0.3s,baz=58,slow=14,SNR=8.3						
KAPI				Sn	Sn	19 50 32.2	-10
	0.6nm,0.3s,baz=286,slow=19,SNR=2.1						
FITZ	Fitzroy Crossi	16.67	184	Pn	Pn	19 51 11.5	+0.6
	0.1nm,0.3s,baz=1.3,slow=11,SNR=5.8						
WRA	Warramunga Arr	19.88	159	P	P	19 51 49.1	+0.2
	0.3nm,0.3s,baz=339,slow=12,SNR=13						
ASAR	Alice Springs	23.21	163	P	P	19 52 24.6	-0.1
	4.4nm,0.7s,baz=341,slow=11,SNR=63						
SONM	Songino Array	52.14	343	P	P	19 56 28.5	+0.4
	0.7nm,0.6s,baz=150,slow=6.1,SNR=4.4						
MKAR	Makanchi Array	61.79	327	P	P	19 57 36.7	+0.2
	1.9nm,0.6s,baz=119,slow=8.2,SNR=24						
ZALV	Zalesovo Beam	65.15	334	P	P	19 57 57.8	-0.8
	0.3nm,0.3s,baz=117,slow=5.0,SNR=4.1						

ISCJB 12 20:18:51.6±0.2, 45°.12N±0°.02×106°.91W±0°.02, h0km, Error ellipse: s-maj=2.4km s-min=2.2km az=153.8
NEIC 12 20:18:51.8±0.8, 45°.20N×106°.80W, h0km, ML2.8, Error ellipse: s-maj=11.5km s-min=10.0km az=204.0, Suspected Mining explosion.
NEIC 45 km [30 miles] NNE of Sheridan.
IDC 12 20:18:51.9±1.2, 44°.62N×106°.43W, h0km, mb1 3.6/3, mb1mx3.3/29, mbtmp3.4/3, ML3.1/3, Error ellipse: s-maj=42.8km s-min=8.4km az=139.0
ISC 12 20:18:51.4±0.7, 45°.10N±0°.02×106°.89W±0°.02, h0km, n144, σ0s81/165, 70C-44D, Montana

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
G21A	Lodge Grass	0.25	299	P	Pg	20 18 57.0	+0.8
	baz=0.3,SNR=230						
G21A	Lodge Grass	0.25	299	P	Pg	20 18 57.0	+0.8
	baz=0.3,SNR=230						
G22A	Birney	0.44	75	⇓P	Pg	20 19 00.7	+0.9
	baz=0.4,SNR=284						
G22A	Birney	0.44	75	⇓P	Pg	20 19 00.7	+0.9
	baz=0.4,SNR=284						
H21A	Big Horn, Sher	0.49	193	⇓P	Pg	20 19 01.5	+0.8
	baz=0.6,SNR=49						
H21A	Big Horn, Sher	0.49	193	⇓P	Pg	20 19 01.5	+0.8
	baz=0.6,SNR=49						
H22A	Clearmont	0.64	143	P	Pg	20 19 04.5	+0.9
	baz=0.7,SNR=165						
H22A	Clearmont	0.64	143	P	Pg	20 19 04.5	+0.9
	baz=0.7,SNR=165						
F21A	Absaloka Mine,	0.74	347	⇑P	Pg	20 19 06.0	+0.4
	baz=0.7,SNR=22						
F21A	Absaloka Mine,	0.74	347	⇑P	Pg	20 19 06.0	+0.4
	baz=0.7,SNR=22						
F22A	Rosebud	0.81	33	⇓P	Pg	20 19 07.3	+0.3
	baz=0.7,SNR=130						
F22A	Rosebud	0.81	33	⇓P	Pg	20 19 07.3	+0.3
	baz=0.7,SNR=130						
G20A	Bridger	0.94	278	⇓P	Pg	20 19 08.9	-0.5
	baz=1.0						
G20A	Bridger	0.94	278	⇓P	Pg	20 19 08.9	-0.5
	baz=1.0						
H20A	Greybull	1.00	232	⇑P	Pg	20 19 10.2	-0.3
	baz=1.1						
H20A	Greybull	1.00	232	⇑P	Pg	20 19 10.2	-0.3
	baz=1.1						
G23A	Biddle	1.07	84	P	Pg	20 19 12.4	+0.6
	baz=1.0,SNR=139						
G23A	Biddle	1.07	84	P	Pg	20 19 12.4	+0.6
	baz=1.0,SNR=139						
H23A	Clabaugh Cattl	1.19	116	⇓P	Pg	20 19 14.5	+0.2
	baz=1.2,SNR=13						
H23A	Clabaugh Cattl	1.19	116	⇓P	Pg	20 19 14.5	+0.2
	baz=1.2,SNR=13						
F23A	Volborg	1.22	59	⇓P	Pg	20 19 14.6	-0.2
	baz=1.1,SNR=206						
F23A	Volborg	1.22	59	⇓P	Pg	20 19 14.6	-0.2
	baz=1.1,SNR=206						
I22A	9 Mile Ranch,	1.25	166	⇓P	Pg	20 19 15.3	+0.1
	baz=1.3						
I22A				⇑S	Sn	20 19 33.5	-0.2
	baz=1.3						
I22A	9 Mile Ranch,	1.25	166	⇓P	Pg	20 19 15.3	+0.1
	baz=1.3						
I22A				⇑S	Sn	20 19 33.5	-0.2
	baz=1.3						
I21A	Big Trails, Te	1.32	193	⇓P	Pg	20 19 15.8	-0.9
	baz=1.4						
I21A	Big Trails, Te	1.32	193	⇓P	Pg	20 19 15.8	-0.9
	baz=1.4						
E21A	Keefer Ranch,	1.44	355	⇓P	Pn	20 19 18.4	-0.5
	baz=1.4,SNR=269						
E21A				⇑S	Sb	20 19 38.4	+0.2
	baz=1.4						
E21A	Keefer Ranch,	1.44	355	⇓P	Pn	20 19 18.4	-0.5
	baz=1.4,SNR=269						
E21A				⇑S	Sb	20 19 38.4	+0.2
	baz=1.4						
I20A	Worland	1.45	218	⇑P	Pn	20 19 18.5	-0.5
	baz=1.6						
I20A				⇑S	Sn	20 19 39.6	+0.7
	baz=1.6						
I20A	Worland	1.45	218	⇑P	Pn	20 19 18.5	-0.5
	baz=1.6						
I20A				⇑S	Sn	20 19 39.6	+0.7
	baz=1.6						
E22A	Miles City	1.49	26	⇑P	Pn	20 19 19.2	-0.3
	baz=1.4,SNR=58						
E22A				⇑S	Sn	20 19 40.0	+0.3
	baz=1.4						
E22A	Miles City	1.49	26	⇑P	Pn	20 19 19.2	-0.3
	baz=1.4,SNR=58						
E22A				⇑S	Sn	20 19 40.0	+0.3
	baz=1.4						
I23A	Meade Ranch, G	1.53	138	⇓P	Pn	20 19 20.4	+0.2
	baz=1.6,SNR=24						
I23A	Meade Ranch, G	1.53	138	⇓P	Pn	20 19 20.4	+0.2
	baz=1.6,SNR=24						
H19A	Powell	1.55	255	P	Pn	20 19 20.6	+0.3
	baz=1.6,SNR=138						
H19A				⇓S	Sg	20 19 41.9	+0.8
	baz=1.6						
H19A	Powell	1.55	255	P	Pn	20 19 20.6	+0.3
	baz=1.6,SNR=138						
H19A				⇓S	Sg	20 19 41.9	+0.8
	baz=1.6						
F19A	Roth Farm, Mol	1.63	298	P	Pn	20 19 21.4	-0.1
	baz=1.6,SNR=629						
F19A				⇑S	Sn	20 19 43.2	+0.1
	baz=1.6						
F19A	Roth Farm, Mol	1.63	298	P	Pn	20 19 21.4	-0.1
	baz=1.6,SNR=629						
F19A				⇑S	Sn	20 19 43.2	+0.1
	baz=1.6						
E20A	Meyer Farm, Mu	1.65	329	⇑P	Pn	20 19 21.8	+0.1
	baz=1.6,SNR=34						
E20A				⇑S	Sg	20 19 44.3	+0.1
	baz=1.6						
E20A	Meyer Farm, Mu	1.65	329	⇑P	Pn	20 19 21.8	+0.1
	baz=1.6,SNR=34						
E20A				⇑S	Sg	20 19 44.3	+0.1
	baz=1.6						
RLMT	Red Lodge	1.68	271	ePn	Pn	20 19 22.0	-0.2
H24A	Dirks Ranch, A	1.70	101	⇑P	Pn	20 19 22.7	+0.3
	baz=1.6,SNR=333						
H24A				⇑S	Sb	20 19 45.4	-0.2
	baz=1.6						
H24A	Dirks Ranch, A	1.70	101	⇑P	Pn	20 19 22.7	+0.3
	baz=1.6,SNR=333						
H24A				⇑S	Sb	20 19 45.4	-0.2
	baz=1.6						
J22A	Midwest	1.72	170	P	Pn	20 19 22.9	+0.2
	baz=1.8,SNR=550						
J22A	Midwest	1.72	170	P	Pn	20 19 22.9	+0.2
	baz=1.8,SNR=550						
G24A	Alzada	1.77	82	⇓P	Pn	20 19 23.6	+0.3
	baz=1.7,SNR=21						
G24A	Alzada	1.77	82	⇓P	Pn	20 19 23.6	+0.3
	baz=1.7,SNR=21						
E23A	Ismay	1.78	38	⇑P	Pn	20 19 23.7	+0.2
	baz=1.7,SNR=214						
E23A	Ismay	1.78	38	⇑P	Pn	20 19 23.7	+0.2
	baz=1.7,SNR=214						
J21A	Lysite	1.80	193	P	Pn	20 19 24.4	+0.5
	baz=1.9,SNR=81						
J21A	Lysite	1.80	193	P	Pn	20 19 24.4	+0.5
	baz=1.9,SNR=81						
I19A	Meeteetse	1.84	235	P	Pn	20 19 24.7	+0.2
	baz=2.0,SNR=46						
I19A	Meeteetse	1.84	235	P	Pn	20 19 24.7	+0.2
	baz=2.0,SNR=46						
F24A	Ekalaka	1.88	66	⇑P	Pn	20 19 24.9	+0.1
	baz=1.8,SNR=20						
F24A	Ekalaka	1.88	66	⇑P	Pn	20 19 24.9	+0.1
	baz=1.8,SNR=20						
E19A	Rath Farm, Rou	1.90	316	⇑P	Pn	20 19 25.3	+0.2
	baz=1.9,SNR=114						
E19A	Rath Farm, Rou	1.90	316	⇑P	Pn	20 19 25.3	+0.2
	baz=1.9,SNR=114						
G18A	Lazy EL Ranch,	1.90	277	P	Pn	20 19 25.6	+0.4
	baz=2.0,SNR=92						
G18A	Lazy EL Ranch,	1.90	277	P	Pn	20 19 25.6	+0.4
	baz=2.0,SNR=92						
J20A	Shoshoni	1.95	206	⇓P	Pn	20 19 26.5	+0.7
	baz=2.1,SNR=81						
J20A				⇑Sb	Sb	20 19 53.5	+0.8
	baz=2.1						
J20A	Shoshoni	1.95	206	⇓P	Pn	20 19 26.5	+0.7
	baz=2.1,SNR=81						
J20A				⇑Sb	Sb	20 19 53.5	+0.8
	baz=2.1						
J23A	Dilts Ranch, B	1.95	150	⇑P	Pn	20 19 26.7	+0.7
	baz=2.0,SNR=101						
J23A				⇓Sb	Sg	20 19 54.4	+0.3
	baz=2.0						
J23A	Dilts Ranch, B	1.95	150	⇑P	Pn	20 19 26.7	+0.7
	baz=2.0,SNR=101						
J23A				⇓Sb	Sg	20 19 54.4	+0.3
	baz=2.0						
D21A	La Casta Ranch	1.96	358	⇑P	Pn	20 19 27.1	+1.0
	baz=1.9,SNR=32						
D21A				⇓Sb	Sg	20 19 54.6	+0.1
	baz=1.9						
D21A	La Casta Ranch	1.96	358	⇑P	Pn	20 19 27.1	+1.0
	baz=1.9,SNR=32						
D21A				⇓Sb	Sg	20 19 54.6	+0.1
	baz=1.9						
H18A	Shoshone NF, C	2.01	259	⇑P	Pn	20 19 27.0	+0.2
	baz=2.1,SNR=75						
H18A				⇑S	Sn	20 19 53.5	+0.6
	baz=2.1						
H18A	Shoshone NF, C	2.01	259	⇑P	Pn	20 19 27.0	+0.2
	baz=2.1,SNR=75						
H18A				⇑S	Sn	20 19 53.5	+0.6
	baz=2.1						
I24A	Kuemmerle Ranc	2.04	127	P	Pn	20 19 27.6	+0.4
	baz=2.0,SNR=66						
I24A				⇑Sb	Sg	20 19 56.8	-0.3
	baz=2.0						
I24A	Kuemmerle Ranc	2.04	127	P	Pn	20 19 27.6	+0.4
	baz=2.0,SNR=66						
I24A				⇑Sb	Sg	20 19 56.8	-0.3
	baz=2.0						
GCMT	Greycliff	2.07	290	ePn	Pn	20 19 27.9	+0.4
D22A	Cohagen	2.11	13	⇓P	Pn	20 19 28.2	+0.2
	baz=2.0,SNR=38						
D22A	Cohagen	2.11	13	⇓P	Pn	20 19 28.2	+0.2
	baz=2.0,SNR=38						
F18A	Big Timber	2.14	293	P	Pn	20 19 28.9	+0.4
	baz=2.2,SNR=105						
F18A	Big Timber	2.14	293	P	Pn	20 19 28.9	+0.4
	baz=2.2,SNR=105						
D20A	Manuel Ranch,	2.17	337	⇓P	Pn	20 19 29.0	+0.2
	baz=2.1,SNR=124						
D20A	Manuel Ranch,	2.17	337	⇓P	Pn	20 19 29.0	+0.2
	baz=2.1,SNR=124						
RSSD	Black Hills	2.27	115	ePn	Pn	20 19 31.0	+0.7
E24A	Baker	2.32	50	⇑P	Pn	20 19 31.3	+0.4
	baz=2.2,SNR=48						
E24A				⇑S	Sn	20 20 01.6	+1.4
	baz=2.2						
E24A	Baker	2.32	50	⇑P	Pn	20 19 31.3	+0.4
	baz=2.2,SNR=48						
E24A				⇑S	Sn	20 20 01.6	+1.4
	baz=2.2						
D23A	Lindsay	2.38	29	⇑Sb	Sg	20 20 06.8	-1.1
	baz=2.3						
D23A	Lindsay	2.38	29	⇑Sb	Sg	20 20 06.8	-1.1
	baz=2.3						
J24A	Dixon Ranch, L	2.39	137	⇑Sb	Sg	20 20 07.2	-1.0
	baz=2.4						
J24A	Dixon Ranch, L	2.39	137	⇑Sb	Sg	20 20 07.2	-1.0
	baz=2.4						
J19A	Crowheart	2.41	221	⇑P	Pn	20 19 33.3	+1.1
	baz=2.5,SNR=128						
J19A	Crowheart	2.41	221	⇑P	Pn	20 19 33.3	+1.1
	baz=2.5,SNR=128						
K22A	Casper	2.47	174	⇓P	Pn	20 19 33.9	+0.9
	baz=2.6,SNR=38						
K22A	Casper	2.47	174	⇓P	Pn	20 19 33.9	+0.9
	baz=2.6,SNR=38						
D19A	Cripps Ranch,	2.48	327	⇑P	Pn	20 19 33.8	+0.6
	baz=2.4,SNR=6.3						
D19A	Cripps Ranch,	2.48	327	⇑P	Pn	20 19 33.8	+0.6
	baz=2.4,SNR=6.3						
I18A	Diamond G Ranc	2.52	237	⇑P	Pn	20 19 34.7	+0.8
	baz=2.6,SNR=5.5						
I18A	Diamond G Ranc	2.52	237	⇑P	Pn	20 19 34.7	+0.8
	baz=2.6,SNR=5.5						
LKWY	Lake	2.55	259	Pn	Pn	20 19 32.3	-2.0
E18A	Harlowton	2.57	306	⇓P	Pn	20 19 34.7	+0.3
	baz=2.6,SNR=76						
E18A	Harlowton	2.57	306	⇓P	Pn	20 19 34.7	+0.3
	baz=2.6,SNR=76						
K20A	Yellowstone Ra	2.66	204	⇑P	Pn	20 19 36.9	+1.2
	baz=2.8,SNR=27						
K20A	Yellowstone Ra	2.66	204	⇑P	Pn	20 19 36.9	+1.2
	baz=2.8,SNR=27						
F17A	Fitzpatrick Pl	2.77	288	⇑P	Pn	20 19 38.0	+0.9
	baz=2.8,SNR=71						
F17A	Fitzpatrick Pl	2.77	288	⇑P	Pn	20 19 38.0	+0.9
	baz=2.8,SNR=71						
YFT	Old Faithful	2.88	258	Pn	Pb	20 19 43.3	-0.5
YMR	Madison River	2.93	263	Pn	Pn	20 19 37.0	-2.4
C19A	Slack Wire Ran	3.02	331	⇑P	Pn	20 19 41.1	+0.4
	baz=3.0,SNR=25						
C19A	Slack Wire Ran	3.02	331	⇑P	Pn	20 19 41.1	+0.4
	baz=3.0,SNR=25						
BW06	Boulder Array	3.03	220	ePn	Pn	20 19 42.3	+1.6
PDAR	Pinedale Array	3.03	220	Pn	Pn	20 19 42.8	+2.0
PDAR				Lg	Lg	20 20 23.4	
PDAR	Pinedale Array	3.03	220	Pn	Pn	20 19 42.8	+2.0
	1.8nm,0.3s,baz=58,slow=16,SNR=34						
PDAR				Lg	Lg	20 20 23.4	
	7.0nm,0.3s,baz=53,slow=32,SNR=17						
LOHW	Long Hollow	3.05	242	ePn	Pb	20 19 45.2	-1.5
MOOW	Moose Ponds	3.07	245	ePn	Pn	20 19 43.5	+2.1
L23A	Garrett	3.11	163	P	Pn	20 19 42.1	+0.2
	baz=3.2,SNR=23						
L23A	Garrett	3.11	163	P	Pn	20 19 42.1	+0.2
	baz=3.2,SNR=23						
IMW	Indian Meadow	3.13	249	ePn	Pb	20 19 46.5	-1.7
QLMT	Earthquake Lak	3.23	267	Pn	Pb	20 19 48.6	-1.2
TPAW	Teton Pass	3.33	242	ePn	Pb	20 19 48.4	-3.0
D17A	Six Diamond Ra	3.34	309	⇑P	Pn	20 19 45.1	+0.1
	baz=3.3,SNR=43						
D17A	Six Diamond Ra	3.34	309	⇑P	Pn	20 19 45.1	+0.1
	baz=3.3,SNR=43						
BOZ	Bozeman (W)	3.38	281	ePn	Pn	20 19 45.0	-0.6
EGMT	Eagleton	3.52	327	ePn	Pn	20 19 48.1	+0.6
RRI2	Red Ridge	3.63	243	ePn	Pb	20 19 53.5	-3.2
E16A	East Helena	3.64	295	⇑P	Pn	20 19 49.6	+0.5
	baz=3.6,SNR=11						
E16A	East Helena	3.64	295	⇑P	Pn	20 19 49.6	+0.5
	baz=3.6,SNR=11						
B18A	Beardsley Farm	3.84	330	⇓P	Pn	20 19 52.5	+0.7
	baz=3.8,SNR=13						
B18A	Beardsley Farm	3.84	330	⇓P	Pn	20 19 52.5	+0.7
	baz=3.8,SNR=13						
DGMT	Dagmar	3.84	28	ePn	Pn	20 19 52.6	+0.8
PHWY	Pilot Hill	3.94	164	ePn	Pn	20 19 52.1	-1.4
LRM	Limekiln Ridge	3.98	282	ePn	Pn	20 19 53.9	+0.1
F15A	Butte	4.01	283	⇓P	Pn	20 19 54.7	+0.5
	baz=4.0,SNR=5.6						
F15A	Butte	4.01	283	⇓P	Pn	20 19 54.7	+0.5
	baz=4.0,SNR=5.6						
DLMT	Dillon	4.04	276	ePn	Pn	20 19 55.6	+1.1
B17A	L&G Farms, Che	4.17	321	⇓P	Pn	20 19 56.6	+0.3
	baz=4.1,SNR=11						
B17A	L&G Farms, Che	4.17	321	⇓P	Pn	20 19 56.6	+0.3
	baz=4.1,SNR=11						
MCMT	McKenzie Canyo	4.24	268	ePn	Pn	20 19 58.9	+1.5
B16A	M & M Farms, S	4.68	317	⇑P	Pn	20 20 03.2	-0.1
	baz=4.6,SNR=17						
B16A	M & M Farms, S	4.68	317	⇑P	Pn	20 20 03.2	-0.1
	baz=4.6,SNR=17						
CHMT	Chamberlain Mo	4.79	294	ePn	Pn	20 20 05.4	+0.5
HWUT	Hardware Ranch	4.88	226	Pn	Pn	20 20 09.1	+2.9
SLMT	Seeley Lake	5.06	297	ePn	Pn	20 20 11.4	+2.8
	3.7nm,0.4s						
SWMT	Swartz Lake	5.48	299	ePn	Pn	20 20 13.8	-0.5
	2.7nm,0.5s						
YBMT	Yellow Bay	5.64	302	ePn	Pn	20 20 18.4	+1.9
	3.0nm,0.3s						
JTMT	Jette	5.75	300	ePg	Pg	20 20 37.6	-4.0
	2.5nm,0.5s						
NEW	Newport	7.71	298	Lg	Lg	20 22 56.2	
NEW	Newport	7.71	298	Lg	Lg	20 22 56.2	
	0.2nm,0.3s,baz=100,slow=22,SNR=3.2						
ULM	Lac du Bonnet	9.04	51	Pn	Pn	20 21 02.1	-1.0
ULM				Lg	Lg	20 23 34.7	
ULM	Lac du Bonnet	9.04	51	Pn	Pn	20 21 02.1	-1.0
	0.8nm,0.3s,baz=239,slow=12,SNR=6.6						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ULM				Lg	Lg	20 23 34.7	
	0.6nm,0.3s,baz=330,slow=20,SNR=3.5						
YKA	**Yellowknife Ar**	**17.98**	**348**	P	P	20 23 10.0	+6.9
YKA	**Yellowknife Ar**	**17.98**	**348**	P	P	20 23 10.0	+6.9
	0.1nm,0.3s,baz=167,slow=14,SNR=3.2						

IDC 12 20:24:55.1±281.0**, 48.28N×152.85E, h0km, Error ellipse: s-maj=90.1km s-min=45.9km az=38.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I44RU	**PETROPAVLOVSK-**	**5.74**	**31**	*i*		21 01 44.3	
	baz=213,slow=327						
I45RU	**USSURIYSK INFR**	**15.00**	**262**	*i*		21 48 20.0	
	baz=65,slow=302,SNR=0.7						
I30JP	**ISUMI INFRASON**	**15.95**	**220**	*i*		21 55 20.0	
	baz=30,slow=318,SNR=0.9						

BJI ***12*** *20:46:53.7, 5.48S×128.27E, h356km, mB4.6/38, mb5.0/66*
NEIC ***12*** *20:46:55.4±0.1, 5.30S×128.03E, mb5.3/77, Error ellipse: s-maj=4.6km s-min=3.2km az=60.0*
MOS ***12*** *20:46:55.5±1.0, 5.28S×128.02E, h346km, mb5.2/58, Error ellipse: s-maj=8.7km s-min=4.2km az=117.4*
ISCJB ***12*** *20:46:56.2±0.2, 5.37S±0.02×128.02E±0.02, h362km±2km, mb5.2/177, Error ellipse: s-maj=3.2km s-min=2.8km az=159.8*
DJA ***12*** *20:46:56.7±0.1, 5°S±2°×12°8E±°, h353km±3km, M5.3/90, mb5.7/90, mB5.7/81, MLv6.1/22, Mw(mB)5.3/81*
TEH ***12*** *20:46:57.0, 5.27S×128.00E, h357km, ML5.4*
GCMT ***12*** *20:46:58.4±0.2, 5.31S×128.00E, h352km±1km, MW5.4, Moment Tensor Solution. s74,c112; Moment tensor: Scale 10^{17}Nm; M_{rr}-0.48±.03; $M_{\theta\theta}$0.06±.04; $M_{\phi\phi}$0.42±.04; $M_{r\theta}$-0.54±.05; $M_{\theta\phi}$-0.43±.04; $M_{\phi r}$1.08±.04; Best double couple: $M_0$1.40000×10^{17} NP1:ϕ_s313.00000°, δ14.00000°, λ-110.00000°. NP2:ϕ_s154.00000°, δ77.00000°, λ-85.00000°. Principal axes: T 1.4600, Plg32.0000°, Azm240.0000°; N -0.2200, Plg5.0000°, Azm333.0000°; P -1.2400, Plg58.0000°, Azm70.0000°; Data Used: II IU IC G CN.*
IDC ***12*** *20:46:58.0±0.5, 5.36S×127.98E, h361km±4km, mb5.0/34, mb1 5.0/40, mb1mx5.0/40, mbtmp5.0/40 Error ellipse: s-maj=8.9km s-min=4.7km az=64.0*
ISC 12 20:46:56.5±0.2**, 5.35S**±0.03×**127.99E**±0.03**, h352**km±1km**, h353km:pP-P, n1197,** σ1.**24**/1471**, mb5.3**/182**, 214C-252D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSAI	**Masohi**	**2.20**	**25**	P	**Pn**	**20 47 48.4**	**-1.1**
MSAI				S	**S**	**20 48 27.5**	**-4.5**
LBMI	**Labuha**	**4.71**	**354**	P	**Pn**	**20 48 14.6**	**+1.5**
LBMI				S	**S**	**20 49 13.9**	**-1.0**
FAKI	**Fak Fak**	**4.89**	**61**	P	**Pn**	**20 48 14.7**	**-0.4**
BBSI	**Bau Bau**	**5.39**	**268**	P	Pn	20 48 23.8	+3.2
	1µm,1.0s,16µm5.8nm						
SWI	**Sorong**	**5.53**	**36**	P	**Pn**	**20 48 21.7**	**-0.4**
	15µm,0.8s,137µm50nm						
SWI				S	**S**	**20 49 27.1**	**-4.3**
	15µm,0.8s,137µm50nm						
TNTI	**Ternate**	**6.11**	**354**	P	**Pn**	**20 48 29.5**	**+0.8**
	687nm,0.7s,10µm3.9nm						
MMRI	**Maumere**	**6.57**	**240**	P	**P**	**20 48 35.7**	**+0.4**
	1µm,1.2s,26µm4.3nm						
LUWI	**Luwuk**	**6.74**	**309**	P	**P**	**20 48 37.7**	**+0.4**
	2µm,1.1s,18µm7.2nm						
KMSI	**Cibinong**	**7.12**	**326**	P	**P**	**20 48 41.7**	**0.0**
	5µm,0.9s,35µm14nm						
GAMI	**Galela, Maluku**	**7.14**	**358**	P	**P**	**20 48 42.4**	**+0.4**
	1µm,0.9s,8µm3.0nm						
SKSI	**Soroako, Sulaw**	**7.20**	**293**	P	**P**	**20 48 44.1**	**+1.3**
	1µm,0.7s,7µm3.4nm						
RKPI	**Ransiki, Papua**	**7.26**	**59**	P	**Pn**	**20 48 42.6**	**+0.5**
	38µm,0.7s,361µm144nm						
MNI	**Manado**	**7.44**	**335**	P	**Pn**	**20 48 45.0**	**+0.8**
	1µm,0.8s,13µm4.6nm						
MNI				S	**S**	**20 50 10.2**	**-1.7**
	1µm,0.8s,13µm4.6nm						
BSSI	**Bau Bau, Buton**	**7.50**	**264**	P	**P**	**20 48 47.6**	**+1.5**
	799nm,1.0s,6µm2.4nm						
BKSI	**Bulukumba**	**7.83**	**270**	P	**P**	**20 48 51.2**	**+1.3**
	421nm,0.8s,3µm1.2nm						
BKSI				S	**S**	**20 50 22.2**	**+2.0**
	421nm,0.8s,3µm1.2nm						
KAPI	**Kappang**	**8.21**	**272**	Pn	**P**	**20 48 55.8**	**-0.1**
	2µm,1.2s,SNR=24						
KAPI	**Kappang**	**8.21**	**272**	*e*Pn	**Pn**	**20 48 54.4**	**+1.2**
	305nm,1.0s						
KAPI				S	**S**	**20 50 28.6**	**+0.3**
KAPI				*e*S	S	20 50 33.0	+4.6
KAPI	**Kappang**	**8.21**	**272**	P	**P**	**20 48 55.5**	**-0.4**
	284nm,1.1s,2µm1.1nm						
KAPI	**Kappang**	**8.21**	**272**	P	**Pn**	**20 48 54.8**	**+1.6**
	13nm,0.3s,baz=134,slow=5.4,SNR=44						
KAPI				S	**S**	**20 50 28.6**	**+0.3**
	baz=287,slow=17,SNR=2.4						
MRSI	**Marisa**	**8.36**	**314**	P	**Pn**	**20 48 56.4**	**+1.4**
	826nm,0.9s,6µm2.9nm						
TTSI	**Tana Toraja**	**8.46**	**285**	P	**P**	**20 48 59.3**	**+0.5**
	243nm,1.0s,2µm0.8nm						
WSI	**Waingapu**	**8.74**	**240**	P	**Pn**	**20 48 59.3**	**-0.2**
	3µm,0.8s,37µm28nm						
WSI				S	**S**	**20 50 35.3**	**-4.8**
	3µm,0.8s,37µm28nm						
BASI	**Baing, Sumba**	**8.79**	**236**	P	**Pn**	**20 49 00.8**	**+0.7**
	3µm,0.9s,25µm12nm						
BASI				S	**S**	**20 50 36.3**	**-4.8**
	3µm,0.9s,25µm12nm						
SRPI	**Serui, Papua**	**8.93**	**68**	P	**Pn**	**20 49 02.2**	**+0.4**
	5µm,0.6s,48µm19nm						
BAKI	**Biak**	**9.10**	**63**	P	**Pn**	**20 49 05.1**	**+1.3**
	9µm,0.9s,80µm						
BAKI				S	**S**	**20 50 49.1**	**+1.2**
	9µm,0.9s,80µm						
WBSI	**Waikabubak, Su**	**9.53**	**243**	P	**Pn**	**20 49 07.3**	**-1.6**
	2µm,0.9s,16µm						
SGKI	**Sangatta, Kali**	**11.42**	**294**	P	P	20 49 40.8	+9.1
BKB	**Balikpapan**	**11.79**	**290**	P	**Pn**	**20 49 38.7**	**+2.9**
	932nm,1.1s,10µm						
SMKI	**Samarinda**	**11.81**	**294**	P	Pn	20 49 40.3	+4.2
	957nm,1.2s,9µm						
KBKI	**Kotabaru**	**11.96**	**279**	P	**Pn**	**20 49 39.7**	**+1.9**
	406nm,1.0s,4µm						
MATI	**Mati**	**12.34**	**352**	*e*P	**Pn**	**20 49 44.0**	**+1.8**
MATI				*e*S	**S**	**20 51 57.5**	**-1.2**
DAV	**Davao City (W)**	**12.57**	**349**	P	**Pn**	**20 49 46.5**	**+1.5**
	SNR=10						
DAV	**Davao City (W)**	**12.57**	**349**	P	**Pn**	**20 49 45.3**	**+0.2**
DAV				S	**S**	**20 52 01.4**	**-2.1**
DAV	**Davao City (W)**	**12.57**	**349**	P	**Pn**	**20 49 46.3**	**+1.3**
	790nm,0.7s						
DAV	**Davao City (W)**	**12.57**	**349**	P	**Pn**	**20 49 45.3**	**+0.2**
	140nm,0.3s,baz=249,slow=17,SNR=9.4						
DAV				S	**S**	**20 52 01.4**	**-2.1**
	11nm,0.3s,baz=270,slow=20,SNR=1.8						
KHKI	**Kahang-Kahang**	**12.65**	**256**	P	**P**	**20 49 45.9**	**+0.6**
	1µm,0.8s,11µm						
MMPI	**Merauke**	**12.69**	**105**	P	**Pn**	**20 49 47.3**	**+0.8**
	5µm,0.6s,52µm						
FITZ	**Fitzroy Crossi**	**12.88**	**190**	P	**P**	**20 49 48.0**	**+0.3**
FITZ				S	**S**	**20 52 06.8**	**-2.9**
FITZ	**Fitzroy Crossi**	**12.88**	**190**	P	**P**	**20 49 48.0**	**+0.3**
	17nm,0.3s,baz=22,slow=8.6,SNR=316						
FITZ				S	**S**	**20 52 06.8**	**-2.9**
	5.2nm,0.3s,baz=158,slow=4.5,SNR=12						
JAY	**Jayapura**	**13.00**	**78**	P	**Pn**	**20 49 50.6**	**+0.5**
	502nm,0.9s,6µm						
CTBH	**Cotabato--PC H**	**13.03**	**343**	⇑*e*P	**Pn**	**20 49 50.9**	**+0.4**
DNP	**Denpasar**	**13.10**	**255**	P	**Pn**	**20 49 52.1**	**+0.8**
	1µm,0.8s,13µm						
IGBI	**Denpasar**	**13.20**	**254**	P	**P**	**20 49 51.3**	**0.0**
	210nm,1.0s,22µm						
BBKI	**Banjar Baru**	**13.24**	**278**	P	**Pn**	**20 49 54.6**	**+1.7**
	3µm,1.4s,33µm						
BUKP	**Musuan**	**13.46**	**347**	*e*P	**Pn**	**20 49 55.7**	**+0.1**
MTKI	**Muara Teweh, K**	**13.78**	**288**	P	**Pn**	**20 50 00.4**	**+1.1**
	773nm,0.8s,8µm						
BYJI	**Banyuwangi**	**13.83**	**257**	P	**Pn**	**20 50 00.6**	**+0.8**
	2µm,1.0s,19µm						
PAGZ	**Pagadian**	**13.89**	**341**	*e*P	**Pn**	**20 50 01.4**	**+0.9**
TSM	**Tawau**	**13.92**	**313**	P	**Pn**	**20 50 03.8**	**+2.9**
CGP	**Cagayan de Oro**	**14.10**	**347**	*e*P	**Pn**	**20 50 02.7**	**-0.2**
MYLDM	**Lahad Datu**	**14.11**	**318**	P	**Pn**	**20 50 06.1**	**+3.0**
MYLDM	**Lahad Datu**	**14.11**	**318**	P	**Pn**	**20 50 03.6**	**+0.5**
	191nm,1.1s,2µm						
IPIL	**Ipil**	**14.12**	**337**	*e*P	**Pn**	**20 50 05.3**	**+2.1**
BUTP	**Butuan**	**14.42**	**351**	*e*P	**Pn**	**20 50 06.3**	**-0.3**
BLJI	**Banyuglugur**	**14.49**	**260**	P	**Pn**	**20 50 06.9**	**-0.6**
	747nm,0.7s,5µm						
GMJI	**Gumukmas**	**14.73**	**258**	P	**P**	**20 50 07.7**	**-0.4**
	525nm,0.8s,4µm						
SDKM	**Sandakan**	**15.34**	**315**	P	**Pn**	**20 50 18.0**	**+0.6**
MSLP	**Maasin**	**15.69**	**349**	*e*P	**Pn**	**20 50 20.6**	**-0.8**
WRAB	**Tennant Creek**	**15.76**	**157**	P	**P**	**20 50 19.0**	**-0.4**
	5µm,0.5s						
WRAB	**Tennant Creek**	**15.76**	**157**	*e*P	**P**	**20 50 19.0**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,493nm,0.6s						
WRAB	**Tennant Creek**	**15.76**	**157**	*e*P	**P**	**20 50 19.0**	**-0.4**
	comp=Z,493nm,0.6s						
WRA	**Warramunga Arr**	**15.77**	**157**	P	**P**	**20 50 19.0**	**-0.4**
WRA				S	**S**	**20 53 04.2**	**-3.6**
WRA	**Warramunga Arr**	**15.77**	**157**	P	**P**	**20 50 19.0**	**-0.4**
	comp=Z,52nm,0.3s,baz=339,slow=12,SNR=821						
WRA				S	**S**	**20 53 04.2**	**-3.6**
	comp=Z,18nm,0.3s,baz=342,slow=21,SNR=12						
SJI	**Sawahan**	**16.29**	**261**	P	**P**	**20 50 25.0**	**-0.2**
	comp=Z,434nm,0.9s,comp=Z,4µm						
PWJI	**Pagerwojo**	**16.29**	**260**	P	**P**	**20 50 24.5**	**-0.6**
	comp=Z,331nm,0.8s,comp=Z,3µm						
KKM	**Kota Kinabalu**	**16.32**	**314**	*e*P	**P**	**20 50 26.9**	**+1.4**
	comp=Z,100nm,0.8s						
KKM	**Kota Kinabalu**	**16.32**	**314**	P	**P**	**20 50 27.1**	**+1.5**
KKM	**Kota Kinabalu**	**16.32**	**314**	P	**P**	**20 50 26.9**	**+1.4**
	comp=Z,180nm,1.2s,comp=Z,2µm						
PBKI	**Pangkalan Bun**	**16.48**	**279**	P	**P**	**20 50 28.6**	**+1.3**
	comp=Z,871nm,1.1s,comp=Z,7µm						
KDM	**Kudat**	**16.50**	**317**	P	**Pn**	**20 50 29.9**	**-0.9**
OCLP	**Ormoc**	**16.64**	**348**	*e*P	**P**	**20 50 30.4**	**+1.5**
GUIM	**Jordan**	**16.75**	**341**	*e*P	**P**	**20 50 31.3**	**+1.2**
PCJI	**Pacitan**	**16.93**	**259**	P	**P**	**20 50 30.5**	**-1.5**
	comp=Z,692nm,0.9s,comp=Z,5µm						
BESP	**Borongan**	**17.03**	**351**	*e*P	**Pn**	**20 50 35.0**	**-1.6**
BTM	**Bintulu**	**17.14**	**299**	P	**Pn**	**20 50 36.5**	**-1.4**
COEN	**Coen**	**17.23**	**121**	⇓*i*P	**P**	**20 50 35.0**	**-0.3**
	comp=Z,5µm,0.7s						
COEN				*e*S	**S**	**20 53 32.2**	**-4.5**
BATP	**Bataraza**	**17.34**	**324**	*e*P	**P**	**20 50 36.6**	**+0.3**
STKI	**Sintang**	**17.34**	**288**	P	**P**	**20 50 37.3**	**+0.8**
	comp=Z,163nm,1.1s,comp=Z,3µm						
SMRI	**Semarang**	**17.52**	**264**	P	**P**	**20 50 39.4**	**+1.0**
	comp=Z,961nm,0.9s,comp=Z,8µm						
UGM	**Wanagama**	**17.53**	**261**	P	**P**	**20 50 39.7**	**+1.2**
	comp=Z,765nm,1.2s,comp=Z,6µm						
SBUM	**Sibu**	**17.55**	**296**	P	**Pn**	**20 50 40.9**	**-1.8**
SBUM	**Sibu**	**17.55**	**296**	P	**P**	**20 50 40.4**	**+1.7**
	comp=Z,476nm,1.3s,comp=Z,5µm						
RCP	**Roxas**	**17.59**	**343**	⇓*e*P	**P**	**20 50 40.3**	**+1.2**
MBWA	**Marble Bar**	**17.64**	**206**	P	**P**	**20 50 39.8**	**+0.3**
	SNR=19						
MBWA	**Marble Bar**	**17.64**	**206**	⇑*i*P	**P**	**20 50 39.0**	**-0.6**
	comp=Z,256nm,0.8s						
YOGI	**Yogyakarta**	**17.74**	**261**	P	**P**	**20 50 41.2**	**+0.4**
	comp=Z,2µm,0.8s,comp=Z,16µm						
CNP	**Catarman**	**18.05**	**349**	*e*P	**P**	**20 50 44.2**	**+0.3**
BJII	**Banjamegara**	**18.27**	**263**	P	**P**	**20 50 46.6**	**+0.2**
	comp=Z,588nm,0.9s,comp=Z,6µm						
ENPP	**El Nido**	**18.52**	**333**	*e*P	**P**	**20 50 50.3**	**+1.3**
OTRP	**Odiongan**	**18.57**	**341**	*e*P	**P**	**20 50 52.0**	**+2.6**
TGJI	**Tegal**	**18.82**	**264**	P	**P**	**20 50 51.8**	**-0.3**
	comp=Z,614nm,1.0s,comp=Z,5µm						
KSM	**Kuching**	**18.91**	**291**	⇑*i*P	**P**	**20 50 53.4**	**+0.2**
	comp=Z,348nm,1.0s						
KSM	**Kuching**	**18.91**	**291**	P	**P**	**20 50 53.7**	**+0.5**
KSM	**Kuching**	**18.91**	**291**	P	**P**	**20 50 53.4**	**+0.2**
	comp=Z,312nm,1.1s,comp=Z,3µm						
SJMP	**San Jose**	**18.96**	**339**	*e*P	**P**	**20 50 55.0**	**+1.3**
AS31	**Alice Springs**	**19.08**	**163**	*e*P	**P**	**20 50 54.6**	**-0.2**
AS31				*e*S	**S**	**20 54 09.0**	**-3.2**
ASAR	**Alice Springs**	**19.08**	**163**	P	**P**	**20 50 54.9**	**-0.1**
ASAR				S	**S**	**20 54 09.2**	**-3.1**
ASAR				ScP	**ScP**	**20 58 04.2**	**0.0**
ASAR	**Alice Springs**	**19.08**	**163**	P	**P**	**20 50 54.9**	**-0.1**
	comp=Z,29nm,0.3s,baz=346,slow=10,SNR=1821						
ASAR				S	**S**	**20 54 09.2**	**-3.1**
	comp=Z,9.7nm,0.3s,baz=332,slow=18,SNR=20						
ASAR				ScP	**ScP**	**20 58 04.2**	**0.0**
	comp=Z,4.0nm,0.3s,baz=354,slow=2.2,SNR=6.5						
AUQP	**San Andres**	**19.29**	**344**	*e*P	**P**	**20 50 59.9**	**+2.8**
PMG	**Port Moresby**	**19.43**	**103**	*e*P	**P**	**20 50 58.4**	**-0.3**
	comp=Z,2µm,0.9s						
PMG	**Port Moresby**	**19.43**	**103**	P	**P**	**20 50 58.6**	**-0.1**
	comp=Z,2µm,0.9s,comp=Z,16µm						
PMG	**Port Moresby**	**19.43**	**103**	P	**P**	**20 50 58.8**	**+0.1**
	comp=Z,38nm,0.3s,baz=290,slow=5.6,SNR=174						
CISI	**Cisompet, Garu**	**20.16**	**263**	P	**P**	**20 51 03.3**	**-2.8**
	comp=Z,2µm,1.1s,comp=Z,15µm						
LEM	**Lembang**	**20.30**	**265**	P	**P**	**20 51 06.6**	**-0.9**
	comp=Z,1µm,1.3s,comp=Z,13µm						
TPI	**Tanjungpandan**	**20.44**	**276**	P	**P**	**20 51 08.7**	**+0.1**
	comp=Z,150nm,0.9s,comp=Z,1µm						
TGY	**Tagaytay City**	**20.55**	**340**	P	**P**	**20 51 10.7**	**+1.1**
TGY				ScP	**ScP**	**20 58 08.1**	**+0.4**
TGY	**Tagaytay City**	**20.55**	**340**	P	**P**	**20 51 10.7**	**+1.1**
	comp=Z,663nm,0.6s,baz=168,slow=1.4,SNR=21						
TGY				ScP	**ScP**	**20 58 08.1**	**+0.4**
	comp=Z,110nm,0.3s,baz=204,slow=16,SNR=6.8						
SKJI	**Sukabumi**	**21.37**	**264**	P	**P**	**20 51 15.4**	**-1.5**
	comp=Z,1µm,1.0s,comp=Z,9µm						
SBJI	**Serang**	**21.76**	**267**	P	**P**	**20 51 20.6**	**+0.1**
	comp=Z,351nm,1.0s,comp=Z,12µm						
BALP	**Baler**	**21.89**	**343**	*e*P	**P**	**20 51 21.1**	**-0.6**
PPBI	**Pangkal Pinang**	**22.03**	**277**	P	**P**	**20 51 23.9**	**+0.9**
	comp=Z,634nm,0.8s,comp=Z,5µm						
SCZP	**Santa Cruz**	**22.46**	**339**	*e*P	**P**	**20 51 24.1**	**-2.7**
XMIS	**Christmas Isla**	**22.69**	**256**	*e*P	**P**	**20 51 28.9**	**-0.1**
	comp=Z,6µm,0.8s						
PALP	**Palanan**	**22.94**	**346**	*e*P	**P**	**20 51 31.2**	**0.0**
CAUP	**Cauayan**	**22.97**	**345**	*e*P	**P**	**20 51 31.4**	**-0.1**
BOLP	**Bolinao**	**23.02**	**340**	*e*P	**P**	**20 51 31.6**	**-0.4**
CTA	**Charters Tower**	**23.03**	**131**	P	**P**	**20 51 33.2**	**+1.2**
CTA				ScP	**ScP**	**20 58 14.2**	**+0.2**
CTA	**Charters Tower**	**23.03**	**131**	P	**P**	**20 51 33.2**	**+1.2**
	comp=Z,227nm,0.9s,baz=305,slow=11,SNR=149						
CTA				ScP	**ScP**	**20 58 14.2**	**+0.2**
	comp=Z,93nm,0.9s,baz=34,slow=23,SNR=5.8						
CTAO	**Charters Tower**	**23.03**	**131**	⇓*i*P	**P**	**20 51 33.1**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,216nm,0.7s						
CTAO	**Charters Tower**	**23.03**	**131**	⇓*i*P	**P**	**20 51 33.1**	**+1.1**
	comp=Z,216nm,0.7s						
PMBI	**Palembang**	**23.27**	**275**	P	**P**	**20 51 36.9**	**+2.6**
	comp=Z,1µm,1.0s,comp=Z,7µm						
KASI	**Kota Agung**	**23.38**	**268**	P	**P**	**20 51 34.4**	**-0.9**
	comp=Z,478nm,0.9s,comp=Z,3µm						
LWLI	**Liwa**	**23.83**	**270**	P	**P**	**20 51 39.9**	**+0.4**
	comp=Z,307nm,0.7s,comp=Z,2µm						
ABRA	**Dolores**	**23.95**	**343**	*e*P	**P**	**20 51 40.3**	**0.0**
APYP	**Conner**	**24.00**	**344**	*e*P	**P**	**20 51 39.1**	**-1.7**
SGCP	**Mt. Cagua**	**24.16**	**346**	*e*P	**P**	**20 51 41.0**	**-1.2**
MYKOM	**Kota Tinggi**	**25.13**	**286**	P	**P**	**20 51 52.0**	**+1.0**
MYKOM	**Kota Tinggi**	**25.13**	**286**	P	**P**	**20 51 51.8**	**+0.8**
	comp=Z,268nm,1.1s,comp=Z,3µm						
GUMO	**Guam**	**25.20**	**42**	*e*P	**P**	**20 51 51.0**	**-0.6**
	comp=Z,409nm,0.9s						
FORT	**Forrest**	**25.30**	**180**	*e*P	**P**	**20 51 52.5**	**+0.3**
	comp=Z,645nm,0.8s						
FORT				*e*S	**S**	**20 55 50.6**	**-1.1**
FORT				*e*ScP	**ScP**	**20 58 19.0**	**-1.0**
KSI	**Kapahiang**	**25.37**	**273**	P	**P**	**20 51 54.0**	**+0.8**
	comp=Z,250nm,0.8s,comp=Z,2µm						
KGM	**Kluang**	**25.70**	**286**	P	**P**	**20 51 56.6**	**+0.4**
RGRI	**Rengat**	**26.09**	**280**	P	**P**	**20 52 02.3**	**+2.7**
	comp=Z,415nm,0.7s						
KTGM	**Kuala Trenggan**	**26.99**	**293**	P	**P**	**20 52 08.8**	**+1.3**
BKNI	**Bangkinang**	**27.49**	**281**	P	**P**	**20 52 12.7**	**+0.7**
	comp=Z,506nm,0.9s,comp=Z,3µm						
FRIM	**Kepong**	**27.68**	**287**	P	**P**	**20 52 14.3**	**+0.7**
PPI	**Padang Panjang**	**27.97**	**279**	P	**P**	**20 52 15.7**	**-0.5**
	comp=Z,932nm,0.8s,comp=Z,7µm						
BBOO	**Buckleboo**	**28.34**	**166**	*e*P	**P**	**20 52 19.3**	**+0.1**
	comp=Z,1µm,0.8s						
BBOO				*e*ScP	**ScP**	**20 58 28.2**	**-1.0**
IPM	**Ipoh**	**28.64**	**289**	*e*P	**P**	**20 52 21.8**	**-0.4**
	comp=Z,55nm,0.6s						
IPM				*e*pP	**pP**	**20 53 28.0**	**+0.3**
IPM				*e*ScP	**ScP**	**20 58 30.7**	**+0.2**
IPM	**Ipoh**	**28.64**	**289**	P	**P**	**20 52 22.7**	**+0.5**
IPM	**Ipoh**	**28.64**	**289**	P	**P**	**20 52 22.6**	**+0.5**
	comp=Z,105nm,1.2s,comp=Z,946nm						
TWG	**Pinlang**	**28.80**	**347**	*e*P	P	20 52 20.1	-3.3
	comp=Z,86nm,0.5s						
MNSI	**Mandailing Nat**	**29.02**	**281**	P	**P**	**20 52 25.1**	**-0.4**
	comp=Z,663nm,0.8s,comp=Z,5µm						
NWAO	**Narrogin (SRO)**	**29.21**	**199**	P	**P**	**20 52 27.6**	**+0.7**
	SNR=5.6						
NWAO	**Narrogin (SRO)**	**29.21**	**199**	*e*P	**P**	**20 52 27.2**	**+0.3**
	comp=Z,304nm,1.3s						
NWAO				*e*ScP	**ScP**	**20 58 31.4**	**-0.5**
NWAO				ScP	**ScP**	**20 58 31.7**	**-0.2**
NWAO	**Narrogin (SRO)**	**29.21**	**199**	P	**P**	**20 52 27.4**	**+0.5**
	comp=Z,152nm,0.8s,baz=26,slow=8.7,SNR=70						
NWAO				ScP	**ScP**	**20 58 31.7**	**-0.2**
	comp=Z,29nm,0.6s,baz=343,slow=2.0,SNR=9.0						
KULM	**Kulim**	**29.27**	**291**	*e*P	**P**	**20 52 27.6**	**-0.1**
	comp=Z,184nm,1.0s						
KULM				*e*pP	**pP**	**20 53 33.4**	**0.0**
KULM	**Kulim**	**29.27**	**291**	P	**P**	**20 52 27.9**	**+0.2**
KULM	**Kulim**	**29.27**	**291**	P	**P**	**20 52 27.7**	**0.0**
	comp=Z,195nm,1.0s,comp=Z,2µm						
YULB	**Yu-li**	**29.30**	**347**	*e*P	**P**	**20 52 24.6**	**-3.2**
	comp=Z,16nm,0.6s						
YULB				*e*ScP	**ScP**	**20 58 30.6**	**-1.7**
STKA	**Stephens Creek**	**29.31**	**156**	*e*P	**P**	**20 52 28.0**	**+0.2**
	comp=Z,0.7nm,0.6s						
STKA				S	**S**	**20 56 53.0**	**-1.7**
STKA				*e*ScP	**ScP**	**20 58 31.4**	**-0.8**
STKA				ScP	**ScP**	**20 58 32.1**	**-0.2**
STKA	**Stephens Creek**	**29.31**	**156**	P	**P**	**20 52 28.3**	**+0.5**
	comp=Z,166nm,0.5s,baz=328,slow=8.7,SNR=746						
STKA				S	**S**	**20 56 53.0**	**-1.7**
	comp=Z,28nm,0.8s,baz=221,slow=19,SNR=5.0						
STKA				ScP	**ScP**	**20 58 32.1**	**-0.2**
	comp=Z,40nm,0.7s,baz=11,slow=6.5,SNR=8.0						
TPUB	**Ta-pu**	**29.37**	**346**	*e*P	**P**	**20 52 26.9**	**-1.5**
	comp=Z,73nm,0.4s						
SSLB	**Suanglung**	**29.76**	**347**	*e*P	**P**	**20 52 29.7**	**-2.2**
	comp=Z,55nm,0.9s						
SSLB				*e*PcP	**PcP**	**20 55 25.1**	**-0.7**
SSLB				*e*S	**S**	**20 56 56.1**	**-5.8**
SSLB				*e*ScP	**ScP**	**20 58 33.2**	**-0.7**
EIDS	**Eidsvold**	**29.77**	**134**	*e*P	**P**	**20 52 30.6**	**-1.3**
	comp=Z,40nm,1.0s						
EIDS				*e*PP	**PnPn**	**20 53 47.7**	**0.0**
EIDS				*e*ScP	**ScP**	**20 58 34.2**	**+0.3**
NACB	**Ninganchiao**	**30.00**	**348**	*e*P	**P**	**20 52 31.5**	**-2.4**
	comp=Z,32nm,0.5s						
QIZ	**Qiongzhong**	**30.10**	**324**	P	**P**	**20 52 35.8**	**+0.9**
QIZ				pP	**pP**	**20 53 41.3**	**+0.5**
QIZ				sP	**sP**	**20 54 22.2**	**+0.4**
QIZ				S	**S**	**20 57 09.3**	**+1.9**
UBPT	**Khong Chiam**	**30.29**	**313**	P	**P**	**20 52 37.2**	**+0.6**
	comp=Z,160nm,0.8s						
YHNB	**Yeheng**	**30.52**	**348**	*e*P	**P**	**20 52 36.9**	**-1.6**
	comp=Z,85nm,0.6s						
TSI	**Tuntungan**	**30.67**	**286**	P	**P**	**20 52 41.2**	**+1.2**
	comp=Z,185nm,1.2s,comp=Z,2µm						
CHBT	**CHBT**	**31.20**	**305**	P	**P**	**20 52 45.2**	**+0.7**
	comp=Z,61nm,1.1s,comp=Z,793nm						
KCSI	**Kotacane, Aceh**	**31.44**	**286**	P	**P**	**20 52 45.1**	**-1.6**
	comp=Z,73nm,1.6s,comp=Z,949nm						
QZH	**Quanzhou**	**31.47**	**344**	⇓*i*P	**P**	**20 52 47.3**	**+0.6**
QZH				S	**S**	**20 57 24.0**	**-4.3**
QZH				sS	**sS**	**20 59 29.7**	**+0.3**
QZH				pmax	pmax		
	comp=Z,350nm,0.6s						
HNR	**Honiara**	**31.95**	**99**	*e*P	**P**	**20 52 50.2**	**-0.8**
	comp=Z,827nm,0.8s						
HNR				ScP	**ScP**	**20 58 42.6**	**+1.2**
HNR				*e*ScP	ScP	20 58 42.7	+1.3
HNR	**Honiara**	**31.95**	**99**	P	**P**	**20 52 51.1**	**+0.1**
	comp=Z,806nm,0.7s,baz=226,slow=1.7,SNR=83						
HNR				ScP	**ScP**	**20 58 42.6**	**+1.2**
	comp=Z,114nm,0.7s,baz=186,slow=3.2,SNR=9.4						
JOW	**Kunigami**	**31.99**	**0**	*e*P	**P**	**20 52 51.6**	**+0.4**
	comp=Z,117nm,0.8s						
LHMI	**Lhok Sumawe**	**32.73**	**288**	P	**P**	**20 52 57.8**	**+0.1**
	comp=Z,611nm,1.0s,comp=Z,5µm						
ARMA	**Armidale**	**33.43**	**141**	*e*P	**P**	**20 53 04.6**	**+0.9**
	comp=Z,175nm,0.6s						
ARMA				*e*PP	**PP**	**20 54 29.2**	**+0.9**
ARMA				*e*ScP	**ScP**	**20 58 46.8**	**+0.5**
BSI	**Banda Aceh**	**34.37**	**288**	P	**P**	**20 53 10.5**	**-1.4**
	comp=Z,108nm,1.3s,comp=Z,1µm						
PBKT	**Sadao Pong**	**34.47**	**310**	P	**P**	**20 53 12.9**	**+0.3**
	comp=Z,18nm,0.7s						
CAN	**Canberra**	**35.57**	**150**	*e*P	**P**	**20 53 23.2**	**+1.4**
CAN				pmax	pmax		
	comp=Z,285nm,0.7s						
CAN	**Canberra**	**35.57**	**150**	*e*P	**P**	**20 53 23.2**	**+1.4**
	comp=Z,285nm,0.7s						
CAN				*e*ScP	**ScP**	**20 58 54.0**	**+0.1**
SSE	**Sheshan**	**36.82**	**350**	⇓P	**P**	**20 53 32.3**	**+0.2**
SSE				pmax	pmax		
	comp=Z,90nm,0.9s						
SSE				pmax	pmax		
	comp=Z,91nm,3.7s						
SSE				LR	LR		
	comp=N,36nm,25.6s						
SSE				LR	LR		
	comp=E,180nm,25.6s						
SSE				LR	LR		
	comp=Z,46nm,19.1s						
CM31	**Chiang Mai Arr**	**37.14**	**310**	*e*P	**P**	**20 53 35.8**	**+0.7**
	comp=Z,55nm,0.6s						
CM31				*e*ScP	**ScP**	**20 59 01.2**	**+1.2**
CMAR	**Chiang Mai Arr**	**37.14**	**310**	P	**P**	**20 53 36.2**	**+1.1**
CMAR				S	**S**	**20 58 54.5**	**-0.6**
CMAR				ScP	**ScP**	**20 59 01.4**	**+1.4**
CMAR	**Chiang Mai Arr**	**37.14**	**310**	P	**P**	**20 53 36.2**	**+1.1**
	comp=Z,80nm,0.7s,baz=136,slow=6.9,SNR=516						
CMAR				S	**S**	**20 58 54.5**	**-0.6**
	comp=Z,2.2nm,1.0s,baz=142,slow=15,SNR=4.2						
CMAR				ScP	**ScP**	**20 59 01.4**	**+1.4**
	comp=Z,18nm,0.8s,baz=154,slow=3.2,SNR=26						
CHTO	**Chiang Mai**	**37.35**	**311**	*e*P	**P**	**20 53 37.6**	**+0.7**
CHTO				*e*S	**S**	**20 58 58.9**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,124nm,0.7s						
CHTO	**Chiang Mai**	**37.35**	**311**	P	**P**	**20 53 38.2**	**+1.4**
	SNR=33						
CHTO	**Chiang Mai**	**37.35**	**311**	*e*P	**P**	**20 53 37.6**	**+0.7**
	comp=Z,124nm,0.7s						
CHTO				*e*S	**S**	**20 58 58.9**	**+0.6**
CHTO				*e*ScP	**ScP**	**20 59 01.9**	**+1.1**
GYA	**Guiyang**	**37.77**	**328**	⇓*i*P	**P**	**20 53 41.1**	**+0.8**
GYA				pP	**pP**	**20 54 49.9**	**+1.4**
GYA				PP	**PnPn**	**20 55 19.0**	**-2.8**
GYA				sP	**sP**	**20 55 29.1**	**+0.2**
GYA				PcP	**PcP**	**20 55 50.3**	**+1.4**
GYA				S	**ScP**	**20 59 02.5**	**+0.1**
GYA				PcS	**PcS**	**20 59 38.5**	**+0.1**
GYA				sS	**sS**	**21 01 07.5**	**-0.6**
GYA				SS	**SS**	**21 02 03.1**	**-4.8**
GYA				ScS	**ScS**	**21 03 12.1**	**-0.5**
GYA				pmax	pmax		
	comp=Z,40nm,0.8s						
GYA				pmax	pmax		
	comp=Z,160nm,3.9s						
WHN	**Wuhan**	**38.00**	**341**	⇓*i*P	**P**	**20 53 42.9**	**+0.9**
WHN				ScP	**ScP**	**20 59 03.4**	**+0.5**
WHN				S	**S**	**20 59 07.0**	**-0.6**
WHN				pmax	pmax		
	comp=Z,310nm,1.0s						
NJ2	**Nanjing**	**38.20**	**347**	*e*P	**P**	**20 53 44.1**	**+0.5**
NJ2				pP	**pP**	**20 54 54.3**	**+2.4**
NJ2				PP	**PP**	**20 55 20.3**	**+0.3**
NJ2				sP	**sP**	**20 55 32.6**	**+0.3**
NJ2				S	**S**	**20 59 13.0**	**+2.6**
NJ2				sS	**sS**	**21 01 17.0**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,170nm,1.0s						
NJ2				LR	LR		
	comp=N,120nm,16.0s						
NJ2				LR	LR		
	comp=E,120nm,28.1s						
NJ2				LR	LR		
	comp=Z,110nm,13.4s						
JNU	**Nakatsue**	**38.36**	**4**	*e*P	**P**	**20 53 44.6**	**-0.4**
	comp=Z,47nm,0.8s						
JNU				*e*PP	PP	20 55 10.4	-11
JNU				ScP	**ScP**	**20 59 04.5**	**+0.2**

JNU Nakatsue 38.36 4 P **P** **20 53 44.9 -0.1**
comp=Z,96nm,0.7s,baz=199,slow=2.0,SNR=55
JNU ScP **ScP** **20 59 04.5 +0.2**
comp=Z,12nm,0.9s,baz=163,slow=5.0,SNR=3.7
KMI Kunming 38.99 322 P **P** **20 53 52.8 +2.3**
KMI pP **pP** **20 55 04.2 +5.1**
KMI ScP **ScP** **20 59 08.5 +1.3**
KMI S **S** **20 59 21.7 -1.2**
KMI sS **sS** **21 01 30.4 +3.4**
KMI pmax pmax
comp=Z,28nm,1.0s
KMI LR LR
comp=N,120nm,9.8s
KMI LR LR
comp=E,140nm,14.7s
KMI LR LR
comp=Z,140nm,14.2s
ENH Enshi 39.61 334 *e*P **P** **20 53 55.0 -0.3**
comp=Z,50nm,0.7s
ENH *e*ScP **ScP** **20 59 09.5 +0.2**
JHJ Hachijo jima 2 39.86 16 P **P** **20 53 55.2 -2.1**
comp=Z,123nm,0.8s,baz=65,slow=14,SNR=8.6
NOUC Port Laguerre 40.61 118 *e*P P 20 54 09.2 +5.6
DZM Mont Dzumac 40.73 118 *e*P **P** **20 54 04.6 0.0**
comp=Z,230nm,1.1s
DZM *e*LR LR 21 03 52.6
comp=Z,370nm,32.3s
DZM Mont Dzumac 40.73 118 *e*P **P** **20 54 04.0 -0.7**
DZM Mont Dzumac 40.73 118 *e*P **P** **20 54 04.8 +0.2**
comp=Z,81nm,0.8s
DZM ScP **ScP** **20 59 15.0 +1.1**
DZM Mont Dzumac 40.73 118 P **P** **20 54 05.2 +0.5**
comp=Z,66nm,0.7s,baz=279,slow=8.5,SNR=83
DZM ScP **ScP** **20 59 15.0 +1.1**
comp=Z,13nm,1.0s,baz=98,slow=24,SNR=3.3
TAU Tasmania Unive 41.14 158 P **P** **20 54 09.0 +1.5**
comp=Z,379nm,1.0s,SNR=6.7
KSAR Wonju Array Be 42.57 360 P **P** **20 54 20.1 +1.1**
KSAR PcP **PcP** **20 56 05.0 +0.9**
KSAR ScP **ScP** **20 59 21.2 +0.4**
KSRS Korea Array 42.58 360 P **P** **20 54 20.1 +1.0**
comp=Z,90nm,0.6s,baz=178,slow=9.9,SNR=370
KSRS PcP **PcP** **20 56 05.0 +0.9**
comp=Z,9.4nm,0.7s,baz=181,slow=2.6,SNR=6.0
KSRS ScP **ScP** **20 59 21.2 +0.4**
comp=Z,4.3nm,0.8s,baz=180,slow=3.9,SNR=5.5
INCN Inchon 42.63 358 P **P** **20 54 20.6 +1.1**
SNR=5.8
INCN Inchon 42.63 358 *e*P **P** **20 54 20.3 +0.8**
comp=Z,105nm,0.8s
MAJO Matsushiro 42.76 12 *e*P **P** **20 54 19.1 -1.4**
MAJO *e* 20 56 05.0
MAJO pmax pmax
comp=Z,120nm,0.8s
MAJO Matsushiro 42.76 12 *e*P **P** **20 54 19.1 -1.4**
comp=Z,120nm,0.8s
MAJO *e*PcP **PcP** **20 56 05.0 +0.3**
MAJO *e*ScP **ScP** **20 59 18.0 -3.6**
MAT Matsushiro 42.76 12 P **P** **20 54 19.6 -0.9**
MAT S S 21 00 01.0 -16
MJAR Matsushiro Arr 42.76 12 P **P** **20 54 19.5 -1.1**
MJAR PcP **PcP** **20 56 05.3 +0.6**
MJAR ScP **ScP** **20 59 21.5 -0.1**
MJAR Matsushiro Arr 42.76 12 P **P** **20 54 19.5 -1.1**
comp=Z,97nm,0.8s,baz=187,slow=9.3,SNR=349
MJAR PcP **PcP** **20 56 05.3 +0.6**
comp=Z,15nm,1.1s,baz=189,slow=4.1,SNR=7.2
MJAR ScP **ScP** **20 59 21.5 -0.1**
comp=Z,7.0nm,0.7s,baz=186,slow=5.9,SNR=13
CD2 Chengdu 42.85 329 *e*P **P** **20 54 21.5 0.0**
CD2 pP **pP** **20 55 32.8 +1.3**
CD2 PcP **PcP** **20 56 05.2 -0.1**
CD2 PP **PP** **20 56 10.2 +0.5**
CD2 S **S** **21 00 19.7 +0.6**
CD2 sS **sS** **21 02 25.9 +0.8**
CD2 SS **ScS** **21 03 37.2 -5.7**
CD2 ScS **SS** **21 03 40.3 -3.1**
CD2 pmax pmax
comp=Z,70nm,0.8s
CD2 pmax pmax
comp=Z,90nm,7.2s
XAN Xi'an 43.12 337 P **P** **20 54 23.1 -0.4**
XAN S **S** **21 00 17.9 -5.0**
XAN SS **ScS** **21 03 42.9 -1.6**
XAN pmax pmax
comp=Z,25nm,0.8s
XAN LR LR
comp=N,120nm,21.6s
XAN LR LR
comp=E,59nm,20.6s
XAN LR LR
comp=Z,49nm,23.7s
DL2 Dalian 44.42 353 ⇓P **P** **20 54 33.8 +0.2**
DL2 S **S** **21 00 39.7 -1.6**
DL2 pmax pmax
comp=Z,91nm,0.9s
TARA Tarawa 45.38 83 *e*P **P** **20 54 41.9 +0.4**
comp=Z,132nm,0.8s
BJT Baijiatuan 46.44 347 *e*P **P** **20 54 48.7 -0.5**
comp=Z,64nm,0.7s
BJT *e*PcP **PcP** **20 56 18.7 +1.3**
BJI Beijing 46.46 347 P **P** **20 54 49.4 0.0**
BJI PcP **PcP** **20 56 18.4 +0.9**
BJI ScP **ScP** **20 59 37.4 +0.7**
BJI S **S** **21 01 05.8 -4.3**
BJI sS **sS** **21 03 14.6 -3.3**
BJI ScS **ScS** **21 04 06.4 +0.8**
BJI pmax pmax
comp=Z,120nm,0.8s
SHL Shillong 46.62 313 *i* P **P** **20 54 52.3 +1.2**
SHL *i* 4 21 01 11.5
LZH Lanzhou 47.02 333 ⇓P **P** **20 54 55.1 +1.1**
LZH pP **pP** **20 56 06.7 +1.2**
LZH sP **sP** **20 56 45.0 0.0**
LZH S **S** **21 01 15.2 -3.4**
LZH SS **SS** **21 04 50.0 -1.1**
LZH pmax pmax
comp=Z,97nm,1.0s
LZH pmax pmax
comp=Z,320nm,5.6s
SNY Shenyang 47.12 356 ⇓P **P** **20 54 54.6 +0.2**
SNY S **S** **21 01 18.0 -1.4**
SNY sS **sS** **21 03 25.0 -2.5**
SNY pmax pmax
comp=Z,81nm,0.9s
SNY pmax pmax
comp=Z,170nm,4.6s
VLA Vladivostok 48.37 4*d* *i*P **P** **20 55 04.8 +0.9**
VLA pmax pmax
comp=Z,92nm,0.8s
HHC Hu-ho-hao-te 48.38 343 *e*P **P** **20 55 04.3 +0.1**
HHC pP **pP** **20 56 15.9 -0.2**
HHC S **S** **21 01 38.2 +0.9**
HHC ScS **ScS** **21 04 16.8 -1.9**
HHC SS **SS** **21 05 13.6 +1.2**
HHC pmax pmax
comp=Z,86nm,0.9s
HHC pmax pmax
comp=Z,260nm,4.9s
PALK Pallekele 48.82 284 P **P** **20 55 07.5 -0.4**
comp=Z,270nm,1.4s,SNR=9.8
PALK Pallekele 48.82 284 *e*P **P** **20 55 06.7 -1.2**
comp=Z,76nm,1.1s
CN2 Changchun 48.98 358 *e*P **P** **20 55 08.2 -0.3**
CN2 PcP **PcP** **20 56 26.6 +0.1**
CN2 *es*P **sP** **20 56 58.8 -1.1**
CN2 ScP **ScP** **20 59 46.7 -0.7**
CN2 eS **S** **21 01 44.8 -0.4**
CN2 *e*SS **SS** **21 05 19.7 -1.8**
CN2 pmax pmax
comp=Z,70nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
ERM Erimo 49.13 15 *e*P **P** **20 55 10.7 +1.1**
ERM pmax pmax
comp=Z,65nm,1.2s
ERM Erimo 49.13 15 *e*P **P** **20 55 09.9 +0.3**
comp=Z,40nm,0.8s
ERM Erimo 49.13 15 P **P** **20 55 10.2 +0.6**
comp=Z,347nm,0.8s,SNR=7.6
USRK Ussuriysk Arra 49.45 4 P **P** **20 55 12.7 +0.7**
comp=Z,151nm,0.5s,baz=187,slow=7.1,SNR=416
LSA Lhasa 49.63 317 P **P** **20 55 15.2 +1.0**
LSA Lhasa 49.63 317 *e*P **P** **20 55 15.1 +0.9**
LSA pmax pmax
comp=Z,67nm,0.7s
LSA Lhasa 49.63 317 *e*P **P** **20 55 15.1 +0.9**
comp=Z,67nm,0.7s
LSA *e*ScP **ScP** **20 59 51.2 +0.1**
MDJ Mudanjiang 49.76 2 P **P** **20 55 14.9 +0.6**
MDJ pP **pP** **20 56 24.3 -2.4**
MDJ PcP **PcP** **20 56 29.8 +0.4**
MDJ sP **sP** **20 57 01.9 -4.1**
MDJ PP **PP** **20 57 13.5 +0.4**
MDJ ScP **ScP** **20 59 51.0 +0.3**
MDJ S **S** **21 01 59.4 +3.5**
MDJ SS **SS** **21 05 34.9 +1.0**
MDJ pmax pmax
comp=Z,120nm,1.3s
MDJ pmax pmax
comp=Z,290nm,4.5s
MDJ Mudanjiang 49.76 2 *e*P **P** **20 55 14.7 +0.4**
comp=Z,138nm,1.1s
MSVF Nonsavu 50.42 109 P **P** **20 55 21.0 +1.2**
comp=Z,2µm,0.9s,SNR=31
MSVF Nonsavu 50.42 109 *e*P **P** **20 55 21.3 +1.5**
MSVF pmax pmax
comp=Z,195nm,0.8s
MSVF Nonsavu 50.42 109 *e*P **P** **20 55 21.3 +1.5**
comp=Z,195nm,0.8s
ODAN Odare 50.67 311⇑ *i*P **P** **20 55 22.3 +0.6**
comp=Z,298nm,0.6s
TAPN Taplejung 50.70 312⇑ *i*P **P** **20 55 22.6 +0.6**
comp=Z,198nm,0.4s
FUNA Funafuti 50.91 97 *e*P **P** **20 55 23.1 -0.3**
comp=Z,527nm,1.1s
ASAJ Asahikawa 50.97 14 *e*P **P** **20 55 23.7 +0.4**
comp=Z,63nm,0.8s
ASAJ Asahikawa 50.97 14 P **P** **20 55 24.0 +0.7**
comp=Z,82nm,0.4s,baz=231,slow=10,SNR=197
RAMN Ramite 51.31 311⇑ *i*P **P** **20 55 27.4 +0.9**
comp=Z,713nm,0.6s
GTA Gaotai 51.58 332⇓ *i*P **P** **20 55 29.1 +1.0**
GTA PcP **PcP** **20 56 38.2 +1.7**
GTA pP **pP** **20 56 42.7 +1.6**
GTA sP **sP** **20 57 19.3 -0.8**
GTA ScP **ScP** **20 59 59.9 +1.0**
GTA S **S** **21 02 19.1 -2.2**
GTA sS **sS** **21 04 29.2 -2.4**
GTA ScS **ScS** **21 04 39.5 -1.3**
GTA SS **SS** **21 06 02.3 -0.8**
GTA pmax pmax
comp=Z,68nm,0.6s
GTA pmax pmax
comp=Z,100nm,3.8s
GTA LR LR
comp=N,110nm,16.1s
GTA LR LR
comp=E,140nm,18.1s
GTA LR LR
comp=Z,120nm,21.4s
GUN Gumba 52.37 311⇑ *i*P **P** **20 55 34.9 +0.6**
comp=Z,508nm,0.7s
PKI Pulchoki 52.54 311⇑ *i*P **P** **20 55 35.7 +0.2**
comp=Z,169nm,0.7s
PKIN Phulchoki 52.55 311⇑ *i*P **P** **20 55 36.0 +0.5**
KKN Kakani 52.75 311⇑ *i*P **P** **20 55 37.4 +0.5**
comp=Z,293nm,0.9s
DMN Daman 52.79 311⇑ *i*P **P** **20 55 37.8 +0.6**
comp=Z,304nm,0.9s
YSS Yuzh-Sakhalins 53.70 13⇓ *i*P **P** **20 55 44.0 +0.9**
YSS pmax pmax
comp=N,70nm,0.7s
YSS pmax pmax
comp=Z,120nm,0.7s
RPZ Rata Peaks 53.76 142 *e*P **P** **20 55 44.5 +0.8**
comp=Z,418nm,1.1s
HYB Hyderabad 53.79 296 *i* P **P** **20 55 44.0 -0.4**
HYB eS **S** **21 02 53.0 +1.5**
HABR Khabarovsk 53.95 6 *e*P **P** **20 55 44.7 -0.2**
HABR *e* 20 56 44.4
HABR *e**SP **sP** **20 57 35.9 -1.6**
HABR S **S** **21 02 53.1 +0.6**
HABR *e* 21 04 56.6
HABR *e*SS **SS** **21 06 42.2 +2.3**
HABR pmax pmax
comp=E,56nm,1.7s
HABR pmax pmax
comp=Z,246nm,1.1s
HABR pmax pmax
comp=N,74nm,1.1s
HABR MLR MLR
comp=Z,161nm,15.0s
KOLN Koldanda 54.01 310⇑ *i*P **P** **20 55 46.7 +0.7**
comp=Z,316nm,0.8s
DANN Dangsing 54.19 311⇑ *i*P **P** **20 55 47.8 +0.4**
comp=Z,342nm,0.9s
KLR Kul'dur 54.45 3 *e*P **P** **20 55 45.7 -2.8**
KLR *e*S **S** **21 02 53.5 -5.7**
KLR *e* 21 04 53.5
KLR pmax pmax
comp=N,38nm,1.4s
KLR pmax pmax
comp=Z,200nm,1.4s
KHZ Kahutara 54.65 140 *e*P **P** **20 55 50.0 -0.1**
comp=Z,126nm,0.8s
JBP Jabalpur 54.77 303 *e*PKP **P** **20 55 51.7 +0.5**
JBP AMB AMB 20 55 52.2
comp=Z,147nm,0.9s
JBP *e*4 20 56 10.0
HIA Hailar 54.86 353 *e*P **P** **20 55 52.1 +0.6**
comp=Z,18nm,0.6s
HIA *e*PcP **PcP** **20 56 48.1 -0.6**
SNZO South Karori 54.89 138 *e*P **P** **20 55 51.3 -0.5**
comp=Z,183nm,1.1s
DGAR Diego Garcia 55.20 265 *e*P **P** **20 55 54.3 -0.2**
DGAR pmax pmax
comp=Z,174nm,0.6s
DGAR Diego Garcia 55.20 265 *e*P **P** **20 55 54.2 -0.2**
comp=Z,174nm,0.6s
URZ Urewera 55.24 134 *e*P **P** **20 55 54.1 -0.2**
comp=Z,87nm,0.7s
ULN Ulaanbaatar 56.10 343 P **P** **20 56 01.8 +1.5**
SNR=37
ULN Ulaanbaatar 56.10 343 *e*P **P** **20 56 01.3 +0.9**
comp=Z,107nm,0.8s
ULN *e*PcP **PcP** **20 56 54.3 +0.6**
ULN *e*ScP **ScP** **21 00 18.3 -0.2**
SONM Songino Array 56.27 343 P **P** **20 56 02.5 +1.0**
SONM ScP **ScP** **21 00 20.1 +0.9**
SONM P'P' 21 25 58.5
SONM Songino Array 56.27 343 P **P** **20 56 02.5 +1.0**
comp=Z,62nm,0.7s,baz=169,slow=7.9,SNR=284
SONM PcP **PcP** **20 56 54.8 +0.5**
comp=Z,9.3nm,0.6s,baz=147,slow=5.3,SNR=4.9
SONM ScP **ScP** **21 00 20.1 +0.9**
comp=Z,3.6nm,0.8s,baz=154,slow=6.6,SNR=3.8
SONM PKPPKP **P'P'df** **21 25 58.5 +1.3**
comp=Z,1.9nm,0.9s,baz=332,slow=4.8,SNR=8.5
KAD Karad 57.70 294 *e*PKP **P** **20 56 12.0 +0.1**
POO Poona 58.38 295⇓ *i*x P 20 56 12.0 -4.6
comp=Z,70nm,1.0s
CIT Chita 58.46 350 *e*P **P** **20 56 17.9 +1.4**
CIT *e* 20 57 02.0
CIT pmax pmax
comp=Z,89nm,1.8s
NDI New Delhi 59.40 308 *e*PKP **P** **20 56 22.0 -1.3**
NDI *ex* x 21 03 56.0
ZAK Zakamensk 59.47 342⇑ *i*P **P** **20 56 23.2 -0.3**
ZAK pmax pmax
comp=Z,19nm,1.2s
AFI Afiamalu 59.86 103 P **P** **20 56 26.9 +0.1**
AFI Afiamalu 59.86 103 P **P** **20 56 26.9 +0.1**
comp=Z,77nm,0.5s,baz=48,slow=20,SNR=7.0
TLY Talaya 60.51 343 *e*P **P** **20 56 31.8 +1.5**
TLY pmax pmax
comp=Z,33nm,1.0s
TLY Talaya 60.51 343 P **P** **20 56 31.8 +1.5**
comp=Z,214nm,1.0s,SNR=11
SMLA Simla 60.54 310 *e*PKP **P** **20 56 31.6 +0.8**
IRK Irkutsk 60.82 344 *e*P **P** **20 56 32.8 +0.4**
IRK pmax pmax
comp=Z,89nm,1.4s
SKR Severo-Kuril's 60.85 20 *e*P **P** **20 56 32.4 -0.1**
SKR pmax pmax
comp=E,60nm,0.5s
SKR pmax pmax
comp=Z,80nm,0.5s
SDNR Sundarnagar 60.86 311 *e*PKP **P** **20 56 34.0 +0.9**
WMQ Urumqi 60.93 328 P **P** **20 56 34.5 +1.1**
WMQ PcP **PcP** **20 57 15.0 +2.0**
WMQ sP **sP** **20 58 28.0 +0.5**
WMQ S **S** **21 04 23.0 -0.1**
WMQ ScS SKSac 21 05 46.0 -2.6
WMQ SS **SS** **21 08 31.0 +1.2**
WMQ pmax pmax
comp=Z,22nm,0.8s
WMQ pmax pmax
comp=Z,140nm,5.8s
WMQ LR LR
comp=N,280nm,30.4s
WMQ LR LR
comp=E,210nm,25.5s
WMQ LR LR
comp=Z,220nm,26.2s
CLNS Chul'man 62.03 358 *e*P **P** **20 56 41.2 +0.9**
CLNS *e* 20 57 18.2
CLNS *e* 20 58 59.3
CLNS *e*PPP PPP 21 00 32.1
CLNS *e*S **S** **21 04 39.5 +3.3**
CLNS *e* 21 05 59.7
CLNS pmax pmax
comp=Z,118nm,0.8s
CLNS pmax pmax
comp=E,23nm,0.9s
CLNS pmax pmax
comp=N,55nm,1.0s
CLNS pmax pmax
comp=E,8.0nm,1.0s
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=Z,6.0nm,1.0s
CLNS smax smax
comp=N,32nm,10.9s
CLNS smax smax
comp=E,92nm,11.4s
THN Thein Dam 62.23 311 *ex* **P** **20 56 39.0 -3.1**
PEA0B Petropavlovsk- 63.42 20 *e*P **P** **20 56 50.0 +0.5**
PEA0B *e*PcP **PcP** **20 57 22.6 -0.2**
PETK Petropavlovsk- 63.42 20 P **P** **20 56 50.4 +0.9**
PETK 20 57 22.9
PETK pmax pmax
comp=Z,138nm,0.8s
PETK pmax pmax
comp=Z,37nm,0.6s
PETK Petropavlovsk- 63.42 20 P **P** **20 56 50.4 +0.9**
PETK PcP **PcP** **20 57 22.9 +0.1**
PETK Petropavlovsk- 63.42 20 P **P** **20 56 50.4 +0.9**
comp=Z,138nm,0.8s,baz=190,slow=6.8,SNR=252
PETK PcP **PcP** **20 57 22.9 +0.1**
comp=Z,37nm,0.6s,baz=189,slow=5.1,SNR=8.7
HVS Khovu-Aksy 63.49 337*d* *i*P **P** **20 56 50.8 +0.8**
HVS pmax pmax
comp=Z,378nm,1.0s
PET Petropavlovsk 63.67 20*d* *i*P **P** **20 56 51.8 +0.8**
PET eS **S** **21 04 56.9 +0.4**
PET pmax pmax
comp=Z,175nm,1.2s
PET pmax pmax
comp=Z,100nm,14.9s
KSH Kashi 65.46 318⇑ *i*P **P** **20 57 04.3 +1.3**
KSH *e*PcP **PcP** **20 57 33.3 +1.6**
KSH *e*pP **pP** **20 58 21.7 +1.6**
KSH *es*P **sP** **20 58 58.3 +0.2**
KSH *e*PP **PP** **20 59 35.7 +3.3**
KSH *e*S **S** **21 05 13.2 -5.8**
KSH *es*S **sS** **21 07 34.1 -1.8**
KSH pmax pmax
comp=Z,100nm,0.7s
KSH LR LR
comp=N,120nm,4.3s
KSH LR LR
comp=E,200nm,4.1s
KSH LR LR
comp=Z,260nm,6.0s
MK31 Makanchi Array 65.76 327 *e*P **P** **20 57 05.2 +0.6**
MK31 *e*S **S** **21 05 22.5 +0.3**
MK31 Makanchi Array 65.76 327 *e*P **P** **20 57 05.2 +0.6**
MK31 *e*S **S** **21 05 22.5 +0.3**
MKAR Makanchi Array 65.76 327 P **P** **20 57 05.5 +0.9**
MKAR 20 57 33.0
MKAR S **S** **21 05 22.7 +0.5**
MKAR pmax pmax
comp=Z,32nm,0.5s
MKAR pmax pmax
comp=Z,10.0nm,0.5s
MKAR smax smax
comp=N,5.0nm,0.9s
MKAR pmax pmax
comp=Z,1.0nm,0.8s
MKAR Makanchi Array 65.76 327 P **P** **20 57 05.5 +0.9**
MKAR PcP **PcP** **20 57 33.0 +0.3**
MKAR S **S** **21 05 22.7 +0.5**
MKAR P'P' 21 25 36.2
MKAR Makanchi Array 65.76 327 P **P** **20 57 05.5 +0.9**
comp=Z,32nm,0.5s,baz=113,slow=8.6,SNR=471
MKAR PcP **PcP** **20 57 33.0 +0.3**
comp=Z,9.8nm,0.5s,baz=125,slow=4.2,SNR=6.8
MKAR S **S** **21 05 22.7 +0.5**
comp=Z,5.3nm,0.9s,baz=134,slow=12,SNR=8.1
MKAR PKPPKP P'P'df 21 25 36.2 -5.3
comp=Z,1.1nm,0.8s,baz=343,slow=3.8,SNR=5.5
YAK Yakutsk 67.20 1*d* *i*P **P** **20 57 13.7 +0.5**
YAK *e* 20 57 38.1
YAK *e**PP **pP** **20 58 33.6 +2.8**
YAK *e*PPP PPP 21 01 30.1
YAK *e*S **S** **21 05 38.6 0.0**
YAK *e* 21 06 33.6
YAK *e*SS **SS** **21 10 03.9 -2.2**
YAK pmax pmax
comp=Z,680nm,1.1s
YAK pmax pmax
comp=E,16nm,0.9s
YAK pmax pmax
comp=N,127nm,1.1s
YAK pmax pmax
comp=Z,101nm,3.0s
YAK pmax pmax
comp=N,121nm,4.1s
YAK pmax pmax
comp=E,63nm,2.3s
YAK smax smax
comp=E,482nm,2.3s
YAK smax smax
comp=N,131nm,2.1s
KZA Kyzart 67.23 320 P **P** **20 57 16.2 +1.7**
SNR=17
TKM2 Tokmak 2 67.45 321 *e*P **P** **20 57 16.3 +0.8**
TKM2 *e**PP **pP** **20 58 32.5 -0.6**
TKM2 pmax pmax
comp=Z,17nm,0.7s
TKM2 Tokmak 2 67.45 321 *e*P **P** **20 57 16.3 +0.8**
comp=Z,17nm,0.7s
TKM2 *ep*P **pP** **20 58 32.5 -0.6**
TKM2 Tokmak 2 67.45 321 P **P** **20 57 16.7 +1.2**
SNR=24
KRAR Krasnoyarsk 67.62 340*c* *i*P **P** **20 57 17.1 +1.1**
KRAR pmax pmax
comp=Z,20nm,0.6s
AAK Ala-Archa 68.00 320 P **P** **20 57 20.9 +2.0**
comp=Z,144nm,0.8s,SNR=8.4
AAK Ala-Archa 68.00 320 *e*P **P** **20 57 19.9 +1.0**
AAK pmax pmax
comp=Z,19nm,0.8s
AAK Ala-Archa 68.00 320 *e*P **P** **20 57 19.9 +1.0**
comp=Z,19nm,0.8s
AAK P'P' 21 25 35.0
AAK Ala-Archa 68.00 320 P **P** **20 57 20.7 +1.8**
SNR=14
AAK Ala-Archa 68.00 320 P **P** **20 57 20.7 +1.8**
comp=Z,14nm,0.6s,baz=125,slow=5.5,SNR=37
AAK PKPPKP **P'P'df** **21 25 35.0 -2.7**
comp=Z,4.0nm,0.8s,baz=216,slow=4.2,SNR=9.5
CHMS Chumysh 68.02 321 P **P** **20 57 19.5 +0.7**
SNR=10
KBL Kabul 68.17 310 *e*P **P** **20 57 20.1 -0.1**
KBL *e**PP **pP** **20 58 37.7 -0.3**
KBL pmax pmax
comp=Z,37nm,0.7s
KBL Kabul 68.17 310 *e*P **P** **20 57 20.1 -0.1**
comp=Z,37nm,0.7s
KBL *ep*P **pP** **20 58 37.7 -0.3**
AML Almayashu 68.26 319 P **P** **20 57 22.3 +1.5**

SNR=40
USP Ospenovka 68.31 321 P **P** **20 57 21.7 +1.1**
SNR=34
EKS2 Erkin-Say 68.47 320 *eP* **P** **20 57 22.6 +0.9**
EKS2 *e**PP **pP** **20 58 36.9 -2.7**
EKS2 pmax pmax
comp=Z,46nm,1.2s
EKS2 Erkin-Say 68.47 320 *eP* **P** **20 57 22.6 +0.9**
comp=Z,46nm,1.2s
EKS2 *ep*P **pP** **20 58 36.9 -2.7**
EKS2 Erkin-Say 68.47 320 P **P** **20 57 23.3 +1.6**
SNR=23
ZAA0 Zalesovo Array 69.23 334 *eP* **P** **20 57 25.7 -0.3**
ZALV Zalesovo Beam 69.23 334 P **P** **20 57 26.0 0.0**
ZALV S **S** **21 05 59.1 -3.7**
ZALV pmax pmax
comp=Z,100nm,0.7s
ZALV smax smax
comp=N,22nm,1.2s
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 69.23 334 P **P** **20 57 26.0 0.0**
ZALV S **S** **21 05 59.1 -3.7**
ZALV P'P' 21 25 30.6
ZALV Zalesovo Beam 69.23 334 P **P** **20 57 26.0 0.0**
comp=Z,100nm,0.7s,baz=122,slow=5.0,SNR=384
ZALV S **S** **21 05 59.1 -3.7**
comp=Z,22nm,1.2s,baz=127,slow=17,SNR=15
ZALV PKPPKP **P'P'df** **21 25 30.6 -5.1**
comp=Z,1.4nm,0.6s,baz=298,slow=3.2,SNR=6.5
FX1 Attu Island--F 69.41 27 *eP* **P** **20 57 27.6 +0.6**
FX1 *ep*P **pP** **20 58 44.1 -1.1**
MRIV Mauritius Mete 69.87 250 *eP* **P** **20 57 29.0 -1.6**
KURBB Kurchatov Arra 70.07 329 P **P** **20 57 31.9 +0.8**
comp=Z,31nm,0.7s,baz=132,slow=5.1,SNR=355
KURBB pP **pP** **20 58 52.6 +3.3**
comp=Z,9.5nm,0.8s,baz=131,slow=5.5,SNR=3.3
KURBB S S 21 06 06.1 -6.5
comp=Z,1.3nm,0.7s,baz=141,slow=13,SNR=11
KURBB PKPPKP P'P'df 21 25 25.3 -8.8
comp=Z,0.3nm,0.3s,baz=298,slow=3.5,SNR=4.5
KURK Kurchatov 70.08 329 *eP* **P** **20 57 31.8 +0.7**
KURK *e**PP **pP** **20 58 48.6 -0.8**
KURK S S 21 06 06.1 -6.6
KURK pmax pmax
comp=Z,45nm,0.8s
KURK Kurchatov 70.08 329 *eP* **P** **20 57 31.8 +0.7**
comp=Z,45nm,0.8s
KURK *ep*P **pP** **20 58 48.6 -0.8**
KURK pP **pP** **20 58 52.6 +3.2**
KURK *e*S S 21 05 59.9 -13
KURK S S 21 06 06.1 -6.6
KURK P'P' 21 25 25.3
KURK Kurchatov 70.08 329 P **P** **20 57 31.5 +0.4**
comp=Z,356nm,0.8s,SNR=70
NVS Novosibirsk 70.52 334‖ *i*P **P** **20 57 32.8 -0.9**
NVS *i* S **S** **21 06 13.2 -4.4**
NVS pmax pmax
comp=Z,103nm,1.0s
NVS pmax pmax
comp=N,45nm,0.9s
NVS pmax pmax
comp=E,52nm,0.9s
NVS smax smax
comp=N,91nm,1.8s
NVS smax smax
comp=E,203nm,1.8s
KKAR Karatay Array 70.79 319 *eP* **P** **20 57 35.7 0.0**
KKAR pmax pmax
comp=Z,6.0nm,0.8s
KKAR Karatay Array 70.79 319 *eP* **P** **20 57 35.6 0.0**
comp=Z,6.2nm,0.8s
WBK Wadi Bani Khal 72.90 295 P **P** **20 57 49.8 +1.3**
SNR=5.3
SMDO Samad 73.83 296 P **P** **20 57 54.7 +0.8**
SNR=12
VNDA Vanda 74.32 173 *eP* **P** **20 57 55.5 -0.2**
comp=Z,8.9nm,0.9s
VNDA Vanda 74.32 173 P **P** **20 57 55.9 +0.2**
comp=Z,8.9nm,0.8s,baz=316,slow=6.3,SNR=44
BSY Bisya 74.52 295 P **P** **20 57 58.5 +0.7**
SNR=8.1
HOQ Hoqain 74.60 296 P **P** **20 57 59.5 +1.3**
SNR=21
XMAS Kiritimati 74.84 86 *eP* **P** **20 58 00.5 +0.7**
comp=Z,103nm,1.1s
SBA Scott Base 75.23 172 *eP* **P** **20 58 01.7 +1.0**
SBA pmax pmax
comp=Z,22nm,1.2s
SBA Scott Base 75.23 172 *eP* **P** **20 58 01.7 +1.0**
comp=Z,22nm,1.2s
ARQ Araqi 75.26 296 P **P** **20 58 02.8 +0.8**
SNR=10
BVAR Borovoye Array 75.61 328 P **P** **20 58 04.0 +0.6**
BVAR *PP **pP** **20 59 26.6 +3.7**
BVAR S **S** **21 07 13.1 -1.6**
BVAR pmax pmax
comp=Z,12nm,0.7s
BVAR pmax pmax
comp=Z,8.0nm,0.8s
BVAR smax smax
comp=N,2.0nm,0.8s
BVAR Borovoye Array 75.61 328 P **P** **20 58 04.0 +0.6**
BVAR pP **pP** **20 59 26.6 +3.7**
BVAR S **S** **21 07 13.1 -1.6**
BVAR Borovoye Array 75.61 328 P **P** **20 58 04.0 +0.6**
comp=N,12nm,0.7s,baz=133,slow=6.3,SNR=64
BVAR pP **pP** **20 59 26.6 +3.7**
comp=N,8.0nm,0.8s,baz=148,slow=8.7,SNR=3.6
BVAR S **S** **21 07 13.1 -1.6**
comp=N,2.1nm,0.8s,baz=150,slow=15,SNR=6.9
IMYA Miami 75.64 309 *eP* **P** **20 58 05.1 +1.0**
BRVK Borovoye 75.68 328 *eP* **P** **20 58 03.9 +0.2**
BRVK *e**PP **pP** **20 59 22.7 -0.7**
BRVK pmax pmax
comp=Z,29nm,1.1s
BRVK Borovoye 75.68 328 *eP* **P** **20 58 03.9 +0.2**
comp=Z,29nm,1.1s
BRVK *ep*P **pP** **20 59 22.7 -0.7**
BRVK Borovoye 75.68 328 P **P** **20 58 04.3 +0.6**
comp=Z,148nm,1.0s,SNR=12
MAW Mawson 75.75 201 *eP* **P** **20 58 04.5 +0.7**
comp=Z,6.1nm,1.0s
MAW *ep*P **pP** **20 59 20.7 -2.8**
MAW pP **pP** **20 59 26.5 +3.0**
MAW Mawson 75.75 201 P **P** **20 58 04.8 +1.0**
comp=Z,16nm,0.8s,baz=66,slow=5.4,SNR=23
MAW pP **pP** **20 59 26.5 +3.0**
comp=Z,9.2nm,1.0s,baz=52,slow=3.9,SNR=3.2
UOSS Wadi Hilu 75.89 297 P **P** **20 58 05.8 +0.3**
comp=Z,389nm,0.8s,SNR=14
HATD Hatta, Dubai 75.93 297 P **P** **20 58 06.8 +1.1**
SNR=11
ASHO Ashiyiah 75.96 297 P **P** **20 58 06.8 +0.8**
SNR=14
BANOM Banah 76.03 298 P **P** **20 58 08.2 +1.9**
SNR=7.3
ISRO Mashad 76.11 309 *eP* **P** **20 58 08.0 +1.3**
IMOG Moghan 76.16 309 *eP* **P** **20 58 07.5 +0.3**
IBND Bandar-abas 76.17 300 *eP* **P** **20 58 08.0 +1.1**
IBND *eP* **P** **20 58 08.1 +1.1**
RBK Rabkut 76.25 289 P **P** **20 58 08.6 +0.9**
SNR=7.2
NAZ Nazwa, Dubai 76.38 297 P **P** **20 58 09.0 +0.8**
SNR=13
IPAY Payeh 76.52 309 *eP* **P** **20 58 10.1 +1.0**
ASUD Al Ashush, Dub 76.60 297 P **P** **20 58 10.7 +1.3**
SNR=15
IAKL Akhelmad 76.75 309 *eP* **P** **20 58 10.7 +0.3**
TIXI Tiksi 76.85 0d *i*P **P** **20 58 09.3 -0.5**
TIXI pmax pmax
comp=Z,103nm,0.9s
TIXI MLR MLR
comp=Z,625nm,20.0s
IKRD Kardeh 76.99 309 *eP* **P** **20 58 09.3 -2.4**
ABTO Aybut 77.08 289 P **P** **20 58 13.2 +0.9**
SNR=8.5
ISFR Sfrayin 77.46 310 *eP* **P** **20 58 14.5 +0.1**
ABKT Ailbek 77.62 311 P **P** **20 58 16.6 +1.7**
comp=Z,190nm,0.9s,SNR=14
IBAF Bafgh 77.97 304 *eP* **P** **20 58 17.4 +0.3**
BILL Bilibino 77.98 14‖ *i*P **P** **20 58 16.0 -0.2**
BILL *e* 21 01 17.6
BILL *eS* **S** **21 07 43.3 +3.7**
BILL pmax pmax
comp=Z,17nm,0.6s

IMEH Mehriz 78.72 303 *eP* **P** **20 58 20.5 -0.8**
ISRV Sarvestan 79.54 301 *eP* **P** **20 58 26.8 +1.0**
ABPO Ambohimpanom 79.55 252 *eP* **P** **20 58 25.6 -0.3**
ABPO pmax pmax
comp=Z,10.0nm,0.9s
ABPO Ambohimpanom 79.55 252 *eP* **P** **20 58 25.6 -0.3**
comp=Z,9.6nm,0.9s
ISAD Sadrabad 79.61 304 *eP* **P** **20 58 25.1 -1.0**
ABKAR Akbulak array 79.98 322 *eP* **P** **20 58 27.6 +0.3**
comp=Z,1.4nm,0.9s
ABKAR *ep*P **pP** **20 59 43.3 -4.5**
UNV Unalaska Valle 80.22 33 *eP* **P** **20 58 28.3 -0.1**
comp=Z,47nm,0.5s
AKUT Akutan 80.73 33 *eP* **P** **20 58 31.1 +0.1**
comp=Z,157nm,0.9s
IZEF Zefreh 80.94 304 *eP* **P** **20 58 32.1 -1.0**
IGAR Gharneh 81.07 304 *eP* **P** **20 58 33.4 -0.3**
TBI Tubuai 81.08 113 *eP* **P** 20 58 49.8 +16
comp=Z,631nm,1.5s
TBI *eLR* LR 21 23 40.0
comp=Z,472nm,32.5s
IFIR Firoozkooh 81.20 307 *eP* **P** **20 58 35.5 +1.1**
PAE Paea 81.20 107 *eP* **P** **20 58 36.5 +2.1**
comp=Z,19nm,0.9s
PPT2 Papeete2 81.21 107 *eP* **P** **20 58 36.8 +2.2**
comp=Z,107nm,1.0s
PPT2 *eLR* LR 21 21 40.0
comp=Z,232nm,36.5s
PPT Papeete 81.21 107 P **P** **20 58 35.3 +0.8**
PPT Papeete 81.21 107 P **P** **20 58 35.3 +0.8**
comp=Z,107nm,0.8s,baz=311,slow=9.2,SNR=9.0
TVO Taravao 81.51 107 *eP* **P** **20 58 38.5 +2.4**
comp=Z,64nm,0.8s
AKTO Aktyubinsk 81.55 323 P **P** **20 58 36.4 +0.9**
AKTO *PP **pP** **21 00 00.1 +3.6**
AKTO S **S** **21 08 16.1 -1.2**
AKTO pmax pmax
comp=Z,5.0nm,0.5s
AKTO pmax pmax
comp=Z,7.0nm,0.8s
AKTO smax smax
comp=N,2.0nm,1.0s
AKTO Aktyubinsk 81.55 323 P **P** **20 58 36.4 +0.9**
AKTO pP **pP** **21 00 00.1 +3.6**
AKTO S **S** **21 08 16.1 -1.2**
AKTO Aktyubinsk 81.55 323 P **P** **20 58 36.4 +0.9**
comp=N,5.4nm,0.5s,baz=104,slow=8.0,SNR=23
AKTO pP **pP** **21 00 00.1 +3.6**
comp=N,7.2nm,0.8s,baz=98,slow=2.8,SNR=2.9
AKTO S **S** **21 08 16.1 -1.2**
comp=N,2.1nm,1.0s,baz=326,slow=23,SNR=22
IKLH Kolahrood 81.64 305 *eP* **P** **20 58 37.3 +0.6**
IDMV Damavand 81.76 307 *eP* **P** **20 58 37.2 -0.1**
IVRN Varamin 81.88 306 *eP* **P** **20 58 37.8 +0.1**
IR5 Iran Long-Peri 82.84 306 *eP* **P** **20 58 43.5 +0.8**
PMOR Pomariorio Ree 82.97 104 *eP* **P** **20 58 45.8 +2.3**
comp=N,206nm,1.1s
ARU Arti 83.26 328 *d iP* **P** **20 58 43.9 -0.2**
ARU *PP **pP** **21 00 06.3 +0.9**
ARU 21 01 56.7
ARU PPP PPP 21 03 52.9
ARU S **S** **21 08 29.7 -4.5**
ARU pmax pmax
comp=Z,21nm,1.0s
ARU Arti 83.26 328 P **P** **20 58 44.3 +0.2**
comp=Z,129nm,0.5s,SNR=12
IRAZ Razeghan 83.40 306 *eP* **P** **20 58 46.0 +0.4**
SDPT Sand Point 84.03 33 *eP* **P** **20 58 47.8 -0.2**
comp=Z,433nm,0.8s
KBD Kabd 84.15 300 *eP* **P** **20 58 49.4 +0.1**
KBD AMb AMB 20 58 50.3
comp=Z,38nm,1.1s
UMR Umm Al-Rimmam 84.19 300 *eP* **P** **20 58 49.8 +0.4**
UMR AMb AMB 20 58 50.6
comp=Z,89nm,0.7s
RDF Al-Radifah 84.23 300 *eP* **P** **20 58 50.6 +1.0**
RDF AMb AMB 20 58 51.5
comp=Z,78nm,0.7s
SYO Syowa Base 84.47 201‖ *e*P **P** **20 58 48.8 -1.1**
SYO Syowa Base 84.47 201‖ *e*X **P** **20 58 50.6 +0.7**
NAY Al-Naaiem 84.55 300 *eP* **P** **20 58 51.4 +0.2**
NAY AMb AMB 20 58 52.5
comp=Z,102nm,0.7s
MIB Mutribah 84.56 301 *eP* **P** **20 58 51.3 +0.1**
MIB AMb AMB 20 58 52.7
comp=Z,139nm,1.0s
RAYN Ar Rayn 85.25 294 P **P** **20 58 55.0 +0.1**
comp=Z,515nm,0.7s,SNR=61
CHGN Chignik 85.42 32 *eP* **P** **20 58 54.1 -0.8**
ISRB Sarab 85.64 308 *eP* **P** **20 58 56.2 -0.5**
IBDR Badra 86.26 304 *eP* **P** **20 59 00.9 +1.4**
IBDR *i* SKS **SKSac** **21 08 46.8 -4.9**
IBDR *i* S **S** **21 09 02.1 -2.4**
ISHB Shabestar 87.31 309 *eP* **P** **20 59 04.8 +0.1**
BHD Baghdad 87.57 304 *eP* **P** **20 59 06.0 +0.3**
BHD *i* SKS **SKSac** **21 08 57.0 -2.6**
BHD *i* S **S** **21 09 12.0 -4.9**
GNI Garni 88.26 310 *eP* **P** **20 59 09.3 +0.2**
comp=Z,6.6nm,0.8s
GNI Garni 88.26 310 P **P** **20 59 10.3 +1.2**
comp=Z,1.8nm,0.4s,baz=97,slow=23,SNR=4.1
KDAK Kodiak Island 88.88 32 P **P** **20 59 11.0 -0.2**
comp=Z,450nm,0.5s,SNR=26
KDAK Kodiak Island 88.88 32 *eP* **P** **20 59 11.1 -0.1**
comp=Z,77nm,0.9s
KDAK Kodiak Island 88.88 32 P **P** **20 59 11.4 +0.2**
comp=Z,38nm,0.5s,baz=231,slow=4.8,SNR=53
RSO Redoubt South 89.34 29 *eP* **P** **20 59 12.3 -1.4**
comp=Z,71nm,0.8s
KBZ Khabaz 90.11 314 P **P** **20 59 19.2 +1.9**
KBZ pmax pmax
comp=Z,4.0nm,0.8s
KBZ Khabaz 90.11 314 P **P** **20 59 19.2 +1.9**
KBZ Khabaz 90.11 314 P **P** **20 59 19.2 +1.9**
comp=Z,4.1nm,0.8s,baz=105,slow=6.6,SNR=10
KIV Kislovodsk 90.29 314‖ *e*P **P** **20 59 17.8 -0.5**
KIV *e* 21 02 55.2
KIV *i* S **SKSac** **21 09 20.9 +5.5**
KIV pmax pmax
comp=Z,9.0nm,2.0s
KMBO Kilima Mbogo 90.62 269 *eP* **P** **20 59 21.7 +1.0**
comp=Z,18nm,1.1s
KMBO *ep*P **pP** **21 00 40.7 -2.6**
KMBO *eP*P **PP** **21 03 04.8 +3.2**
KMBO Kilima Mbogo 90.62 269 P **P** **20 59 22.2 +1.5**
comp=Z,13nm,0.9s,baz=54,slow=7.0,SNR=24
TRF Thorofare Moun 91.05 26 *eP* **P** **20 59 19.4 -2.1**
comp=Z,31nm,0.9s
PMR Palmer 91.28 28 *eP* **P** **20 59 21.4 -0.9**
PMR pmax pmax
comp=Z,86nm,0.6s
PMR Palmer 91.28 28 *eP* **P** **20 59 21.4 -0.9**
comp=Z,86nm,0.6s
SML Sawmill 91.69 28 *eP* **P** **20 59 23.6 -0.7**
SML *e**PP **pP** **21 00 44.5 -2.5**
SML pmax pmax
comp=Z,59nm,0.6s
SML Sawmill 91.69 28 *eP* **P** **20 59 23.6 -0.7**
comp=Z,59nm,0.6s
SML *ep*P **pP** **21 00 44.5 -2.5**
MCK McKinley 91.69 26 *eP* **P** **20 59 22.8 -1.5**
MCK *e**PP **pP** **21 00 44.3 -2.6**
MCK pmax pmax
comp=Z,84nm,1.1s
MCK McKinley 91.69 26 *eP* **P** **20 59 22.8 -1.5**
comp=Z,84nm,1.1s
MCK *ep*P **pP** **21 00 44.3 -2.6**
COLD Coldfoot 91.73 23 *eP* **P** **20 59 24.2 -0.1**
comp=Z,34nm,0.7s
COLD *ep*P **pP** **21 00 44.5 -2.4**
COLA College 92.32 25 *eP* P 20 59 23.8 -3.3
COLA pmax pmax
comp=Z,19nm,0.6s
COLA College 92.32 25 *eP* P 20 59 23.8 -3.3
comp=Z,19nm,0.6s
ILAR Eielson Array 92.72 25 P **P** **20 59 26.9 -2.0**
ILAR PP PP 21 03 07.5 -8.8
ILAR Eielson Array 92.72 25 P **P** **20 59 26.9 -2.0**
comp=Z,14nm,0.6s,baz=256,slow=4.6,SNR=120
ILAR PP PP 21 03 07.5 -8.8
comp=Z,5.2nm,1.1s,baz=263,slow=6.3,SNR=4.5
DIV Divide 92.83 29 *eP* **P** **20 59 29.5 -0.1**
comp=Z,161nm,0.7s
DIV *esP* **sP** **21 01 31.1 +2.3**
MALT Malatya 92.93 308 P **P** **20 59 33.2 +2.5**

MALT pmax pmax
comp=Z,4.0nm,0.9s
MALT Malatya 92.93 308 P **P** **20 59 33.2 +2.5**
comp=Z,4.0nm,0.9s
PAX Paxson 93.15 27 *eP* **P** **20 59 30.7 -0.4**
PAX pmax pmax
comp=Z,75nm,0.9s
PAX Paxson 93.15 27 *eP* **P** **20 59 30.7 -0.4**
comp=Z,76nm,0.9s
ASF Jabal al Asfar 93.73 302 P **P** **20 59 33.9 -0.6**
ASF Jabal al Asfar 93.73 302 P **P** **20 59 33.9 -0.6**
comp=Z,4.2nm,0.9s,baz=273,slow=4.1,SNR=9.3
DOT Dot Lake 93.84 27 *eP* **P** **20 59 33.1 -1.1**
comp=Z,43nm,0.8s
KLMR Klimovskoe 93.88 331 *eP* P 20 59 30.2 -4.1
KLMR pmax pmax
comp=Z,5.0nm,0.6s
MENT Mentasta 93.95 27 *eP* **P** **20 59 34.4 -0.3**
ANN Anapa 94.12 314 *eP* P 20 59 32.1 -3.7
ANN *e**PP pP 21 00 57.3 -1.2
ANN *e* 21 03 27.1
ANN *e* 21 05 44.2
ANN *e* 21 09 32.2
ANN pmax pmax
comp=Z,23nm,1.1s
MMAI Mount Meron Ar 95.04 303 P **P** **20 59 40.0 -0.4**
MMAI Mount Meron Ar 95.04 303 P **P** **20 59 40.0 -0.4**
comp=Z,5.2nm,0.8s,baz=81,slow=6.8,SNR=6.9
OBN Obninsk 95.16 325‖ *eP* **P** **20 59 40.6 +0.3**
OBN *e* 21 03 32.5
OBN *eS* **SKSac** **21 09 43.0 +1.7**
OBN pmax pmax
comp=Z,6.0nm,1.2s
EGAK Eagle 95.17 25 *eP* **P** **20 59 39.5 -0.6**
comp=Z,38nm,1.1s
EIL Elat 95.25 299 PKKPbc PKKPbc 21 16 34.7 +0.8
EIL Elat 95.25 299 PKKPbc PKKPbc 21 16 34.7 +0.8
comp=Z,2.8nm,0.6s,baz=327,slow=7.3,SNR=6.5
PNL Peninsula 95.91 31 *eP* **P** **20 59 43.3 -0.4**
comp=Z,30nm,1.0s
LVZ Lovozero 96.18 338 *eP* **P** **20 59 46.9 +2.2**
LVZ pmax pmax
comp=Z,25nm,1.2s
BRTR Keskin Array B 96.73 309 P **P** **20 59 46.9 -1.1**
BRTR PP **PP** **21 03 46.7 -1.4**
BRTR PKKPbc **PKKPbc** **21 16 30.4 -0.2**
BRTR Keskin Array B 96.73 309 P **P** **20 59 46.9 -1.1**
comp=Z,1.0nm,0.8s,baz=127,slow=5.0,SNR=7.2
BRTR PP **PP** **21 03 46.7 -1.4**
comp=Z,2.4nm,0.9s,baz=116,slow=8.4,SNR=5.4
BRTR PKKPbc **PKKPbc** **21 16 30.4 -0.2**
comp=Z,1.2nm,0.8s,baz=206,slow=3.3,SNR=5.7
SNAA Sanae 96.78 194 *eP* **P** **20 59 48.6 +1.1**
JOF Joensuu 97.78 333 *eP* **P** **20 59 50.7 -1.2**
JOF pmax pmax
comp=Z,7.0nm,0.5s
JOF Joensuu 97.78 333 *ep* **P** **20 59 50.7 -1.2**
comp=Z,7.1nm,0.5s
SKAG Skagway 97.98 31 *eP* **P** **20 59 52.5 -0.3**
comp=Z,17nm,1.0s
LSZ Lusaka 98.00 254 *eP* **P** **20 59 53.7 -0.5**
comp=Z,11nm,0.9s
LSZ *eP* **PP** **21 03 58.0 -0.4**
LSZ PKKPbc **PKKPbc** **21 16 27.2 +1.1**
LSZ Lusaka 98.00 254 PKKPbc PKKPbc 21 16 27.2 +1.0
comp=Z,1.9nm,0.8s,baz=21,slow=5.1,SNR=4.8
INK Inuvik 98.09 22 P **P** **20 59 52.5 -0.7**
INK PKiKP **PKiKP** **21 04 23.6 -0.5**
INK Inuvik 98.09 22 P **P** **20 59 52.5 -0.7**
comp=Z,20nm,0.6s,baz=287,slow=4.2,SNR=44
INK PKiKP **PKiKP** **21 04 23.6 -0.5**
comp=Z,1.8nm,0.6s,baz=319,slow=3.2,SNR=4.8
BOSA Boshof 98.56 240 P Pdif 20 59 56.1 -0.3
BOSA PKKPbc **PKKPbc** **21 16 24.9 -0.1**
BOSA Boshof 98.56 240 P Pdif 20 59 56.1 -0.3
comp=Z,7.5nm,0.7s,baz=95,slow=4.7,SNR=19
BOSA PKKPbc **PKKPbc** **21 16 24.9 -0.1**
comp=Z,3.2nm,0.5s,baz=238,slow=1.2,SNR=11
LBTB Lobatse 98.91 244 PKKPbc PKKPbc 21 16 23.5 -0.4
LBTB Lobatse 98.91 244 PKKPbc PKKPbc 21 16 23.5 -0.4
comp=Z,3.4nm,0.8s,baz=293,slow=6.5,SNR=5.7
ARCES ARCESS Array B 99.34 340 P **Pdif** **20 59 58.1 -0.7**
ARCES pP **pP** **21 01 25.6 +3.7**
ARCES PKiKP **PKiKP** **21 04 26.9 +0.5**
ARCES *e* 21 07 26.4
ARCES PKKPbc **PKKPbc** **21 16 20.9 -3.6**
ARCES ARCESS Array B 99.34 340 P **Pdif** **20 59 58.1 -0.7**
comp=Z,7.8nm,0.7s,baz=79,slow=6.0,SNR=35
ARCES pP **pP** **21 01 25.6 +3.7**
comp=Z,3.8nm,0.8s,baz=82,slow=8.7,SNR=4.0
ARCES PKiKP **PKiKP** **21 04 26.9 +0.5**
comp=Z,0.7nm,0.6s,baz=106,slow=1.6,SNR=4.6
ARCES SKiKP **SKiKP** **21 07 26.4 -0.9**
comp=Z,1.2nm,0.8s,baz=103,slow=1.8,SNR=3.8
ARCES PKKPbc **PKKPbc** **21 16 20.9 -3.6**
comp=Z,1.8nm,0.4s,baz=252,slow=2.8,SNR=23
SPITS Spitsbergen Ar 99.57 349 P **Pdif** **20 59 59.4 -0.3**
SPITS Spitsbergen Ar 99.57 349 P **Pdif** **20 59 59.4 -0.3**
comp=Z,26nm,0.8s,baz=81,slow=5.5,SNR=23
AKASG Malin Array Be 99.67 320 *i* P **Pdif** **21 00 04.0 +3.4**
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 99.67 320 P **Pdif** **21 00 00.1 -0.5**
AKASG Malin Array Be 99.67 320 P **Pdif** **21 00 00.1 -0.5**
comp=Z,1.3nm,0.5s,baz=70,slow=4.5,SNR=4.6
WRAK Wrangell Islan 99.78 34 *e*Pdif **Pdif** **21 00 01.5 +0.5**
comp=Z,33nm,0.8s
KAF Kangasniemi 100.17 332 *eP* **Pdif** **21 00 00.0 -2.6**
KAF pmax pmax
comp=Z,3.0nm,0.5s
KAF Kangasniemi 100.17 332 *ep* **Pdif** **21 00 00.0 -2.6**
comp=Z,2.7nm,0.5s
FINES FINESS Array B 100.37 331 P **Pdif** **21 00 02.6 -0.8**
FINES PKiKP **PKiKP** **21 04 28.5 +0.2**
FINES *e* 21 07 29.4
FINES FINESS Array B 100.37 331 P **Pdif** **21 00 02.6 -0.8**
comp=Z,1.8nm,0.6s,baz=47,slow=8.4,SNR=6.9
FINES PKiKP **PKiKP** **21 04 28.5 +0.2**
comp=Z,2.3nm,0.5s,baz=162,slow=0.6,SNR=9.2
FINES SKiKP **SKiKP** **21 07 29.4 +0.1**
comp=Z,4.1nm,0.7s,baz=90,slow=3.8,SNR=6.2
DLBC Dease Lake 100.81 32 *e*Pdif **Pdif** **21 00 05.2 -0.5**
DLBC Dease Lake 100.81 32 P **Pdif** **21 00 05.9 +0.3**
comp=Z,3.8nm,0.7s,baz=274,slow=4.3,SNR=7.0
MLR Muntele Rosu 102.23 315 PKiKP **PKiKP** **21 04 32.0 -0.4**
MLR Muntele Rosu 102.23 315 PKiKP **PKiKP** **21 04 32.0 -0.4**
comp=Z,1.7nm,0.9s,baz=89,slow=6.2,SNR=4.5
HFS Hagfors 106.57 332 Pdif **Pdif** **21 00 30.1 -1.0**
HFS PKiKP **PKiKP** **21 04 39.2 -0.5**
HFS *e* 21 07 40.3
HFS Hagfors 106.57 332 Pdiff **Pdif** **21 00 30.1 -1.0**
comp=Z,1.7nm,0.8s,baz=104,slow=4.7,SNR=13
HFS PKiKP **PKiKP** **21 04 39.2 -0.5**
comp=Z,1.4nm,0.7s,baz=151,slow=3.4,SNR=4.5
HFS SKiKP **SKiKP** **21 07 40.3 -0.7**
comp=Z,1.4nm,0.8s,baz=176,slow=9.7,SNR=4.2
YKW3 Yellowknife Ar 107.12 25 *e*PKPdf **PKiKP** **21 04 39.7 -1.0**
YKA Yellowknife Ar 107.15 26 Pdif **Pdif** **21 00 33.8 +0.1**
YKA PKiKP **PKiKP** **21 04 40.5 -0.3**
YKA PKKPbc **PKKPbc** **21 15 59.6 -1.5**
YKA Yellowknife Ar 107.15 26 Pdiff **Pdif** **21 00 33.7 +0.1**
comp=Z,1.5nm,0.8s,baz=289,slow=5.2,SNR=8.8
YKA PKiKP **PKiKP** **21 04 40.4 -0.3**
comp=Z,5.3nm,0.7s,baz=295,slow=1.7,SNR=28
YKA PKKPbc **PKKPbc** **21 15 59.6 -1.5**
comp=Z,0.4nm,0.5s,baz=115,slow=3.1,SNR=3.7
NOA NORSAR Array B 107.41 333 PKiKP **PKiKP** **21 04 41.8 +0.5**
NOA PP **PP** **21 05 08.2 +1.5**
NOA *e* 21 07 41.3
NOA NORSAR Array B 107.41 333 PKiKP **PKiKP** **21 04 41.8 +0.5**
comp=Z,0.7nm,0.7s,baz=278,slow=2.7,SNR=4.9
NOA PP **PP** **21 05 08.2 +1.5**
comp=Z,0.7nm,0.7s,baz=40,slow=4.6,SNR=3.3
NOA SKiKP **SKiKP** **21 07 41.3 -1.3**
comp=Z,1.4nm,0.7s,baz=278,slow=2.7,SNR=6.9
HUMO Hull Mountain 107.61 47 *e*PKPdf **PKiKP** **21 04 43.3 +1.0**
HUMO *e*PP **PP** **21 05 07.5 -1.3**
DPC Dobruska-Polom 107.85 321 *e*SKP **SKiKP** **21 07 44.2 +0.4**
VRAC Vranov 107.92 320 SKiKP **SKiKP** **21 07 43.8 -0.1**
comp=Z,0.9nm,0.5s,baz=83,slow=3.2,SNR=3.0
YBH Yreka Blue Hor 107.93 48 PP PP 21 05 10.7 -0.5
YBH Yreka Blue Hor 107.93 48 PP PP 21 05 10.7 -0.5
comp=Z,3.2nm,0.8s,baz=222,slow=7.7,SNR=5.3
UPC Upice 108.01 321 *e*SKP **SKiKP** **21 07 43.1 -1.0**
TREC Trest 108.63 320 *e*SKP **SKiKP** **21 07 45.5 +0.2**

PVCC Panska Ves 108.90 322 eSKP SKiKP 21 07 44.6 -1.1
PRU Pruhonice 109.05 321 eSKP SKiKP 21 07 45.3 -0.7
BRG Berggiesshubel 109.19 322 ePKP SKiKP 21 07 46.0 -0.3
comp=Z,4.6nm,0.8s
BRG Berggiesshubel 109.19 322 e SKiKP 21 07 46.7 +0.4
CLL Collm 109.64 323 e SKiKP 21 07 47.7 +0.6
CLL Collm 109.64 323 ePKiKP PKiKP 21 04 46.0 +0.3
comp=Z,4.0nm,0.8s
CLL i SKPdf SKiKP 21 07 46.8 -0.3
comp=Z,7.0nm,0.8s
GEC2 GERESS Array S 109.88 320 ePKiKP PKiKP 21 04 45.8 -0.6
GEC2 e 21 07 47.8
GERES GERESS Array B 109.88 320 PKiKP PKiKP 21 04 46.6 +0.2
GERES e 21 07 47.5
GERES PKKPbc PKKPbc 21 15 50.3 -1.9
GERES GERESS Array B 109.88 320 PKiKP PKiKP 21 04 46.6 +0.2
comp=Z,3.3nm,0.5s,baz=65,slow=1.7,SNR=42
GERES SKiKP SKiKP 21 07 47.5 -0.3
comp=Z,4.5nm,0.7s,baz=69,slow=1.6,SNR=19
GERES PKKPbc PKKPbc 21 15 50.3 -1.9
comp=Z,0.3nm,0.5s,baz=242,slow=2.9,SNR=5.6
KHC Kasperske Hory 109.88 321 eSKP SKiKP 21 07 47.6 -0.1
TANN Tannenbergstha 110.22 322 e SKiKP 21 07 48.6 +0.2
WET Wettzell 110.32 321 e SKiKP 21 07 48.6 0.0
BSEG Bad Segeberg 110.37 326 e SKiKP 21 07 49.8 +1.4
NEW Newport 110.42 40 PKiKP PKiKP 21 04 47.5 +0.1
NEW Newport 110.42 40 PKiKP PKiKP 21 04 47.5 +0.1
comp=Z,3.8nm,0.6s,baz=178,slow=0.6,SNR=8.0
NEW Newport 110.42 40 ⇑PKiKP PKiKP 21 04 48.9 +1.5
baz=110
MOX Moxa 110.67 322 e SKiKP 21 07 49.1 -0.1
NRDL Niedersach Rie 110.97 325 e SKiKP 21 07 50.1 +0.5
CLZ Clausthal 111.04 324 ePKiKP PKiKP 21 04 48.3 -0.1
CLZ e 21 07 50.2
CLZ Clausthal 111.04 324 iPKiKP PKiKP 21 04 48.3 -0.1
GRF Grafenberg Arr 111.20 322 ePKiKP PKiKP 21 04 47.8 -1.0
GRF Grafenberg Arr 111.20 322 iPKiKP PKiKP 21 04 47.8 -1.0
ABTA Abfaltersbach 111.21 318 ⇑iPKiKP PKiKP 21 04 48.6 -0.4
comp=Z,4.8nm,0.7s
PKM Peak Mountain 111.22 55 ⇓PKiKP PKiKP 21 04 50.8 +1.3
baz=111
FUR Furstenfeldbru 111.62 320 ePKiKP PKiKP 21 04 49.0 -0.6
FUR e 21 07 51.0
FUR Furstenfeldbru 111.62 320 iPKiKP PKiKP 21 04 49.0 -0.6
WTTA Wattenberg 111.64 319 ⇓iPKiKP PKiKP 21 04 50.0 +0.1
comp=Z,13nm,0.4s
VES Vestal, Richgr 111.67 54 ⇑PKiKP PKiKP 21 04 49.8 -0.2
baz=112
NVAR Mina Array Bea 111.83 51 Pdif Pdif 21 00 57.0 +1.7
NVAR PKiKP PKiKP 21 04 51.5 +0.9
NVAR PP PP 21 05 37.9 -1.5
NVAR Mina Array Bea 111.83 51 Pdiff Pdif 21 00 57.0 +1.7
comp=Z,0.5nm,0.6s,baz=265,slow=6.5,SNR=5.0
NVAR PKiKP PKiKP 21 04 51.5 +0.9
comp=Z,2.7nm,0.7s,baz=250,slow=1.8,SNR=14
NVAR PP PP 21 05 37.9 -1.5
comp=Z,3.4nm,0.9s,baz=258,slow=7.1,SNR=6.5
BLG Laguna Peak 111.95 55 ⇓PKiKP PKiKP 21 04 50.6 -0.1
baz=112
MOTA Moosalm 111.97 319 ⇑iPKiKP PKiKP 21 04 50.5 0.0
comp=Z,5.1nm,0.4s
BSMT Bassoo Peak 112.04 40 ePKPdf PKiKP 21 04 50.5 -0.2
B13A Whitefish 112.09 40 ⇑PKiKP PKiKP 21 04 50.8 +0.2
baz=112
WALA Waterton Lakes 112.23 39 ePKPdf PKiKP 21 04 50.7 -0.2
WALA ePP PP 21 05 39.4 -2.3
C13A Hot Springs 112.23 40 ⇑PKiKP PKiKP 21 04 50.5 -0.4
baz=112
FETA Feichten 112.30 319 ⇑iPKiKP PKiKP 21 04 51.5 +0.3
comp=Z,4.1nm,0.7s
F12A Elk City 112.33 43 ⇓PKiKP PKiKP 21 04 51.1 -0.1
baz=112
CWC Cottonwood Cre 112.37 53 ⇑PKiKP PKiKP 21 04 51.4 -0.2
baz=112
IBBN Ibbenburen 112.39 325 e SKiKP 21 07 52.7 +0.3
JTMT Jette 112.40 40 ePKPdf PKiKP 21 04 50.0 -1.3
G12A Big Creek, Yel 112.46 43 ⇑PKiKP PKiKP 21 04 51.3 -0.3
baz=112
D13A Huson 112.48 41 ⇑PKiKP PKiKP 21 04 51.0 -0.4
baz=112
MFID Camas Ranch 112.56 45 ePKPdf PKiKP 21 04 51.8 +0.1
MFID ePP PP 21 05 39.3 -4.9
MFID Camas Ranch 112.56 45 ⇓PKiKP PKiKP 21 04 52.5 +0.8
baz=112
CIS Catalina Islan 112.60 56 ⇑PKiKP PKiKP 21 04 52.5 +0.5
baz=112
SWMT Swartz Lake 112.65 40 ePKPdf PKiKP 21 04 51.0 -0.8
EDW2 Edwards Air Fo 112.71 54 ⇓PKiKP PKiKP 21 04 53.2 +1.0
baz=113
TNS Taunus Mts 112.72 323 e 21 07 53.3
STU Stuttgart 112.75 321 ePKiKP PKiKP 21 04 50.2 -1.6
STU e 21 07 53.3
DAVA Damuels 112.78 319 ⇑iPKiKP PKiKP 21 04 52.1 0.0
comp=Z,8.3nm,0.4s
GRAC Grapevine Rang 112.82 52 ⇑PKiKP PKiKP 21 04 52.6 +0.3
baz=113
LRMC Laurel Mountai 112.85 54 ⇓PKiKP PKiKP 21 04 53.2 +0.7
baz=113
B14A Marquette Ranc 112.85 39 ⇓PKiKP PKiKP 21 04 51.9 -0.3
baz=113
MSO Missoula 112.90 41 ⇓PKiKP PKiKP 21 04 52.2 -0.1
baz=113
MPMC Manual Prospec 112.90 53 ⇓PKiKP PKiKP 21 04 53.4 +0.6
baz=113
H12A Diamond D Ranc 112.94 44 ⇑PKiKP PKiKP 21 04 53.1 +0.6
baz=113
I12A Atlanta 112.95 45 ⇓PKiKP PKiKP 21 04 53.2 +0.6
baz=113
A15A Johnson Ranch, 112.99 39 ⇓PKiKP PKiKP 21 04 51.7 -0.7
baz=113
BUG Bochum--Univer 112.99 324 e SKiKP 21 07 54.1 +0.5
SLMT Seeley Lake 113.06 41 ePKPdf PKiKP 21 04 52.2 -0.4
BFSC Mount Baldy Ra 113.08 55 ⇓PKiKP PKiKP 21 04 53.3 +0.3
baz=113
D14A Greenough 113.10 41 ⇓PKiKP PKiKP 21 04 52.3 -0.4
baz=113
B15A Bradely Ranch, 113.31 39 ⇓PKiKP PKiKP 21 04 52.5 -0.5
baz=113
CHMT Chamberlain Mo 113.32 41 ePKPdf PKiKP 21 04 52.7 -0.5
FURC Furnace Creek, 113.33 53 ⇑PKiKP PKiKP 21 04 53.9 +0.7
baz=113
BFO Black Forest 113.44 321 ePKiKP PKiKP 21 04 52.1 -1.0
BFO e 21 07 54.5
BFO Black Forest 113.44 321 iPKiKP PKiKP 21 04 52.1 -1.0
C15A Salmond Ranch, 113.46 40 ⇓PKiKP PKiKP 21 04 53.1 -0.3
baz=113
RRX Edison Barstow 113.51 54 ⇓PKiKP PKiKP 21 04 54.4 +0.7
baz=113
HLID Hailey 113.51 45 ePKPdf PKiKP 21 04 54.3 +0.7
HLID eSKP 21 07 55.6
HLID Hailey 113.51 45 ⇑PKiKP PKiKP 21 04 54.9 +1.3
baz=113
F14A Wisdom 113.58 42 ⇓PKiKP PKiKP 21 04 53.8 +0.1
baz=114
GSC Goldstone 113.59 54 ePKiKP PKiKP 21 04 54.8 +0.9
GSC Goldstone 113.59 54 ePKPdf PKiKP 21 04 54.8 +0.9
GSC eSKP 21 07 55.6
GSC Goldstone 113.59 54 ⇓PKiKP PKiKP 21 04 55.0 +1.1
baz=114
ELK Elko 113.64 48 ePKPdf PKiKP 21 04 54.1 +0.1
ELK eSKP 21 07 55.3
D15A Lincoln 113.76 41 ⇑PKiKP PKiKP 21 04 53.5 -0.4
baz=114
B16A M & M Farms, S 113.82 39 ⇑PKiKP PKiKP 21 04 53.5 -0.4
baz=114
R11A Troy Canyon, C 113.93 50 ⇓PKiKP PKiKP 21 04 55.4 +0.8
baz=114
C16A Fuhringer Ranc 114.00 40 ⇓PKiKP PKiKP 21 04 53.8 -0.5
baz=114
HEC Hector,Ludlow 114.06 54 ⇓PKiKP PKiKP 21 04 55.7 +0.9
baz=114
CDF Champ du Feu 114.07 321 ePKiKP PKPdf 21 04 53.8 -0.6
comp=Z,3.4nm,0.7s
CDF Champ du Feu 114.07 321 ePKiKP PKPdf 21 04 53.8 -0.6
CDF Champ du Feu 114.07 321 ePKPdf PKPdf 21 04 53.8 -0.6
I14A Mackay 114.08 44 ⇓PKiKP PKiKP 21 04 55.4 +0.7
baz=114
BAR Barrett 114.16 57 ePKPdf PKPdf 21 04 54.9 -0.1
F15A Butte 114.16 42 ⇑PKiKP PKiKP 21 04 55.1 +0.3
baz=114
PFO Pinyon Flat Ob 114.18 56 ePKPdf PKPdf 21 04 55.6 +0.4
PFO ePP PP 21 05 52.5 -3.5
PFO eSKP 21 07 57.0
PFO e 21 07 57.5
PFO Pinyon Flat Ob 114.18 56 PKP PKPdf 21 04 56.2 +1.1
comp=Z,9.1nm,0.6s,baz=302,slow=1.3,SNR=15
PFO SKiKP SKiKP 21 07 57.5 +0.8
comp=Z,7.5nm,0.9s,baz=296,slow=2.1,SNR=7.9
PFO Pinyon Flat Ob 114.18 56 ⇓PKiKP PKiKP 21 04 56.0 +0.8
baz=114
MCMT McKenzie Canyo 114.23 43 ePKPdf PKPdf 21 04 55.9 +0.9
MCMT ePP PP 21 05 52.7 -3.4
DLMT Dillon 114.23 42 ePKPdf PKPdf 21 04 55.6 +0.7
DLMT ePP PP 21 05 53.4 -2.5
A17A Triple J Farms 114.26 38 ⇓PKiKP PKiKP 21 04 55.0 +0.3
baz=114
TUQ Turquoise Moun 114.27 54 ⇑PKiKP PKiKP 21 04 56.4 +1.1
baz=114
MONP Monument Peak 114.33 56 ⇓PKiKP PKiKP 21 04 56.6 +1.1
baz=114
D16A Dana Ranch, Ca 114.39 40 ⇑PKiKP PKiKP 21 04 55.2 +0.1
baz=114
B17A L&Q Farms, Che 114.43 39 ⇑PKiKP PKPdf 21 04 54.8 -0.3
baz=114
E16A East Helena 114.47 41 ⇑PKiKP PKPdf 21 04 55.1 -0.2
baz=114
BELC Belle Mtn. Jos 114.48 55 ⇑PKiKP PKiKP 21 04 57.0 +1.3
baz=114
HINF Hinteralfeld 114.54 321 ePKIKP PKPdf 21 04 54.8 -0.5
comp=Z,13nm,0.6s
HINF Hinteralfeld 114.54 321 ePKIKP PKPdf 21 04 54.8 -0.5
HINF Hinteralfeld 114.54 321 ePKPdf PKPdf 21 04 54.8 -0.5
GMRC Granite Mounta 114.61 54 ⇓PKiKP PKiKP 21 04 57.2 +1.3
baz=114
DVTC Dessert V Tower 114.63 57 ⇑PKiKP PKiKP 21 04 57.0 +1.0
baz=115
C17A Wharram Farm, 114.68 40 ⇓PKiKP PKPdf 21 04 55.3 -0.3
baz=115
F16A Kennard Place, 114.75 42 ⇑PKiKP PKiKP 21 04 56.3 +0.5
baz=115
PGF Pioggiola 114.77 315 ePKIKP PKPdf 21 04 55.9 -0.1
comp=Z,5.4nm,0.4s
PGF Pioggiola 114.77 315 ePKIKP PKPdf 21 04 55.9 -0.1
PGF Pioggiola 114.77 315 ePKPdf PKPdf 21 04 55.9 -0.1
A18A Metzger Ranch, 114.79 38 ⇑PKiKP PKiKP 21 04 55.6 -0.1
baz=115
HAU Haudompre 114.79 321 ePKIKP PKPdf 21 04 55.6 -0.1
comp=Z,4.1nm,0.5s
HAU eR
comp=Z,57nm,22.8s
HAU Haudompre 114.79 321 ePKIKP PKPdf 21 04 55.6 -0.1
HAU Haudompre 114.79 321 ePKPdf PKPdf 21 04 55.6 -0.1
SWSC Sam W. Stewart 114.84 56 ⇓PKiKP PKPdf 21 04 57.2 +1.0
baz=115
D17A Six Diamond Ra 114.90 40 ⇑PKiKP PKiKP 21 04 55.9 -0.3
baz=115
GIVF Givet 114.94 324 ePKIKP PKPdf 21 04 56.2 +0.3
GIVF Givet 114.94 324 ePKIKP PKPdf 21 04 56.2 +0.3
GIVF Givet 114.94 324 ePKPdf PKPdf 21 04 56.2 +0.3
PAGF Fort de Pagny 114.98 322 ePKIKP PKPdf 21 04 56.0 0.0
comp=Z,1.1nm,0.6s
PAGF Fort de Pagny 114.98 322 ePKPdf PKPdf 21 04 56.0 0.0
BC3 Big Chuckawall 114.99 55 ⇓PKiKP PKPdf 21 04 57.7 +1.0
baz=115
B18A Beardsley Farm 115.03 38 ⇑PKiKP PKiKP 21 04 56.1 -0.2
baz=115
E17A Martinsdale 115.03 41 ⇓PKiKP PKPdf 21 04 56.7 +0.3
baz=115
IRM Iron Mountain 115.14 55 ⇓PKiKP PKiKP 21 04 58.0 +1.2
baz=115
HVU Hansel Valley 115.17 46 ePKIKP PKPdf 21 04 57.2 +0.3
HVU Hansel Valley 115.17 46 ePKPdf PKPdf 21 04 57.1 +0.3
EGMT Eagleton 115.18 39 ePKPdf PKPdf 21 04 56.6 +0.1
EGMT ePP PP 21 06 02.5 +0.2
EGMT eSKP 21 07 56.5
EGMT Eagleton 115.18 39 ⇑PKiKP PKPdf 21 04 56.8 +0.2
baz=115
BAIF Baives 115.32 324 ePKIKP PKPdf 21 04 57.0 +0.4
comp=Z,8.5nm,0.9s
BAIF Baives 115.32 324 ePKIKP PKPdf 21 04 57.0 +0.4
BAIF Baives 115.32 324 ePKPdf PKPdf 21 04 57.0 +0.4
F17A Fitzpatrick Pl 115.35 41 ⇓PKiKP PKiKP 21 04 57.7 +0.7
baz=115
H16A Russell Place, 115.35 43 ⇓PKiKP PKiKP 21 04 58.2 +1.0
baz=115
LPG La Plagne 115.40 318 ePKIKP PKPdf 21 04 57.4 +0.1
comp=Z,11nm,0.7s
LPG La Plagne 115.40 318 ePKIKP PKPdf 21 04 57.4 +0.1
LPG La Plagne 115.40 318 ePKPdf PKPdf 21 04 57.4 +0.1
LPL La Plagne 115.41 318 ePKIKP PKPdf 21 04 57.3 0.0
comp=Z,12nm,0.6s
LPL La Plagne 115.41 318 ePKIKP PKPdf 21 04 57.3 0.0
LPL La Plagne 115.41 318 ePKPdf PKPdf 21 04 57.3 0.0
MEZF Maizieres J'vi 115.42 322 ePKIKP PKPdf 21 04 56.3 -0.6
MEZF Maizieres J'vi 115.42 322 ePKPdf PKPdf 21 04 56.3 -0.6
D18A Linhart Farms, 115.45 40 ⇓PKiKP PKPdf 21 04 57.0 -0.1
baz=115
I16A Newdale 115.45 44 ⇑PKiKP PKiKP 21 04 58.3 +1.0
baz=115
CABF La Chapelle 115.45 320 ⇓iPKiKP PKPdf 21 04 57.4 +0.3
comp=Z,23nm,0.5s
CABF La Chapelle 115.45 320 ⇓iPKiKP PKPdf 21 04 57.4 +0.3
CABF La Chapelle 115.45 320 ⇓iPKPdf PKPdf 21 04 57.4 +0.3
A19A Klindworth Far 115.46 38 ⇓PKiKP PKPdf 21 04 57.0 -0.1
baz=115
SBF Sospel 115.47 316 ePKIKP PKPdf 21 04 57.0 -0.2
comp=Z,12nm,0.6s
SBF Sospel 115.47 316 ePKIKP PKPdf 21 04 57.0 -0.2
SBF Sospel 115.47 316 ePKPdf PKPdf 21 04 57.0 -0.2
G17A Pierce Place, 115.49 42 ⇓PKiKP PKiKP 21 04 58.5 +1.1
baz=115
B19A Brinkman Farms 115.52 38 ⇑PKiKP PKiKP 21 04 57.4 +0.3
baz=115
DUG Dugway 115.57 48 ePKiKP PKPdf 21 04 58.4 +0.7
DUG e 21 06 01.9
DUG Dugway 115.57 48 ePKPdf PKPdf 21 04 58.4 +0.7
DUG ePP PP 21 06 01.9 -3.6
DUG eSKP 21 07 58.6
DUG Dugway 115.57 48 ⇓PKiKP PKiKP 21 04 58.6 +1.0
baz=116
E18A Harlowton 115.60 40 ⇓PKiKP PKiKP 21 04 57.6 +0.1
baz=116
GLA Glamis 115.62 56 ⇑PKiKP PKiKP 21 04 58.9 +1.1
baz=116
MBDF Montbardon 115.64 317 ePKIKP PKPdf 21 04 58.5 +0.9
MBDF Montbardon 115.64 317 ePKIKP PKPdf 21 04 58.5 +0.9
MBDF Montbardon 115.64 317 ePKPdf PKPdf 21 04 58.5 +0.9
C19A Slack Wire Ran 115.73 39 ⇓PKiKP PKiKP 21 04 58.0 +0.4
baz=116
RRI2 Red Ridge 115.73 44 ePKPdf PKPdf 21 04 58.7 +0.6
RRI2 eSKP 21 07 59.6
Y12C Blythe 115.73 55 ⇓PKiKP PKiKP 21 04 59.1 +1.1
baz=116
IMW Indian Meadow 115.82 43 ePKPdf PKPdf 21 04 59.0 +0.8
TPAW Teton Pass 115.94 44 ePKPdf PKPdf 21 04 59.5 +1.0
TPAW ePP PP 21 06 07.0 -1.0
TPAW eSKP 21 07 59.4
F18A Big Timber 115.96 41 ⇑PKiKP PKiKP 21 04 58.6 +0.4
baz=116
W13A Hualapai Mount 115.97 54 ⇑PKiKP PKiKP 21 04 59.5 +0.9
baz=116
A20A Cobblestone Ra 115.97 37 ⇓PKiKP PKPdf 21 04 57.7 -0.3
baz=116
GCMT Greycliff 116.04 41 ePKPdf PKPdf 21 04 58.8 +0.4
D19A Cripps Ranch, 116.05 39 ⇑PKiKP PKPdf 21 04 58.2 0.0
baz=116
REDW Red Top Meadow 116.05 44 ePKPdf PKPdf 21 04 59.1 +0.5
I17A Pilgrim Ck. 116.06 43 ⇓PKiKP PKPdf 21 04 58.2 -0.4
baz=116
HWUT Hardware Ranch 116.08 46 ePKPdf PKPdf 21 04 58.9 +0.3
SNOW Snow King Moun 116.08 44 ePKPdf PKPdf 21 04 59.7 +1.0
B20A Solberg Farm, 116.09 38 ⇑PKiKP PKiKP 21 04 58.6 +0.3
baz=116
FRF La Foret Royal 116.11 316 ePKIKP PKPdf 21 04 58.2 -0.2
FRF La Foret Royal 116.11 316 ePKIKP PKPdf 21 04 58.2 -0.2
FRF La Foret Royal 116.11 316 ePKPdf PKPdf 21 04 58.2 -0.2
LOHW Long Hollow 116.14 44 ePKPdf PKPdf 21 04 59.4 +0.7
LOHW eSKP 21 08 00.7
ORIF Oris-en-Rattie 116.18 318 ePKIKP PKPdf 21 04 58.6 0.0
comp=Z,6.7nm,0.6s
ORIF eR
comp=Z,54nm,21.8s
ORIF Oris-en-Rattie 116.18 318 ePKIKP PKPdf 21 04 58.6 0.0
ORIF Oris-en-Rattie 116.18 318 ePKPdf PKPdf 21 04 58.6 0.0
KEST Kesra 116.24 307 PP PP 21 06 05.4 -4.9
KEST e 21 07 59.5
KEST Kesra 116.24 307 PP PP 21 06 05.4 -4.9
comp=Z,2.9nm,1.0s,baz=261,slow=1.7,SNR=6.0
KEST SKiKP SKiKP 21 07 59.5 -1.1
comp=Z,2.9nm,0.8s,baz=344,slow=4.3,SNR=6.7
G18A Lazy EL Ranch, 116.27 42 ⇑PKiKP PKPdf 21 04 58.5 -0.4
baz=116
LMR La Mourre 116.28 316 ePKIKP PKPdf 21 04 58.5 -0.2
LMR La Mourre 116.28 316 ePKIKP PKPdf 21 04 58.5 -0.2
LMR La Mourre 116.28 316 ePKPdf PKPdf 21 04 58.5 -0.2
E19A Rath Farm, Rou 116.37 40 ⇓PKiKP PKPdf 21 04 58.9 0.0
baz=116
C20A Veseth Ranch, 116.39 39 ⇑PKiKP PKiKP 21 04 59.1 +0.2
baz=116
H18A Shoshone NF, C 116.42 42 ⇑PKiKP PKiKP 21 04 59.5 +0.2
baz=116
F19A Roth Farm, Mol 116.49 41 ⇑PKiKP PKiKP 21 04 59.3 +0.1
baz=116
MSU Marysvale 116.49 49 ePKIKP PKPdf 21 05 00.9 +1.3
MSU Marysvale 116.49 49 ePKPdf PKPdf 21 05 00.9 +1.3
A21A Bergtoll Ranch 116.53 37 ⇑PKiKP PKiKP 21 04 59.2 +0.1
baz=116
RLMT Red Lodge 116.53 42 ePKPdf PKPdf 21 04 59.9 +0.5
RLMT ePP PP 21 06 09.0 -3.1
D20A Manuel Ranch, 116.54 39 ⇑PKiKP PKiKP 21 04 59.3 +0.1
baz=116
113A Mohawk Valley, 116.55 56 ⇓PKiKP PKiKP 21 05 00.3 +0.8
baz=116
FFC Flin Flon 116.55 30 c iPKiKP PKPdf 21 04 59.0 +0.1
LOR Lormes 116.63 321 ePKiKP PKPdf 21 04 59.0 -0.3
comp=Z,7.1nm,0.7s
LOR eR
comp=Z,50nm,20.0s
LOR Lormes 116.63 321 ePKPdf PKPdf 21 04 59.0 -0.3
I18A Diamond G Ranc 116.65 43 ⇑PKiKP PKiKP 21 05 00.1 +0.3
baz=116
DAU Daniels Canyon 116.66 47 ePKIKP PKPdf 21 04 59.5 -0.4
DAU Daniels Canyon 116.66 47 ePKPdf PKPdf 21 04 59.5 -0.4
DAU ePP PP 21 06 07.9 -5.3
SMRF Simiane la Rot 116.70 317 ePKIKP PKPdf 21 05 00.0 +0.4
comp=Z,4.0nm,0.6s
SMRF Simiane la Rot 116.70 317 ePKPdf PKPdf 21 05 00.0 +0.4
B21A Ellsworth Farm 116.71 38 ⇓PKiKP PKiKP 21 04 59.9 +0.4
baz=117
M17A Scullys Gap (B 116.77 46 ⇓PKiKP PKiKP 21 05 00.3 +0.2
baz=117
E20A Meyer Farm, Mu 116.77 40 ⇓PKiKP PKiKP 21 04 59.9 +0.2
baz=117
H19A Powell 116.88 42 ⇑PKiKP PKiKP 21 05 00.6 +0.6
baz=117
SMF Signal de Mont 116.88 320 ePKIKP PKPdf 21 04 59.5 -0.3
comp=Z,6.0nm,0.5s
SMF Signal de Mont 116.88 320 ePKIKP PKPdf 21 04 59.5 -0.3
SMF Signal de Mont 116.88 320 ePKPdf PKPdf 21 04 59.5 -0.3
C21A Desert Coulee 116.90 38 ⇑PKiKP PKiKP 21 05 00.3 +0.4
baz=117
U15A North Rim 116.93 52 ⇑PKiKP PKiKP 21 05 01.8 +1.3
baz=117
Y14A Wickenburg 116.93 55 ⇓PKiKP PKiKP 21 05 01.0 +0.6
baz=117
SSF Saint Saulge 116.93 321 ⇓iPKiKP PKPdf 21 05 00.0 +0.1
comp=Z,15nm,0.6s
SSF Saint Saulge 116.93 321 ⇓iPKiKP PKPdf 21 05 00.0 +0.1
SSF Saint Saulge 116.93 321 ⇓iPKPdf PKPdf 21 05 00.0 +0.1
VIVF Saint-Julien-l 117.00 318 ePKIKP PKPdf 21 04 59.6 -0.5
comp=Z,9.1nm,0.7s
VIVF Saint-Julien-l 117.00 318 ePKIKP PKPdf 21 04 59.6 -0.5
VIVF Saint-Julien-l 117.00 318 ePKPdf PKPdf 21 04 59.6 -0.5
L18A Fontenelle, Gr 117.08 45 ⇑PKiKP PKiKP 21 05 01.2 +0.6
baz=117
I19A Meeteetse 117.10 43 ⇑PKiKP PKiKP 21 05 00.8 +0.3
baz=117
Z14A Wintersburg 117.10 55 ⇑PKiKP PKiKP 21 05 01.4 +0.8
baz=117
A22A Carney Farms, 117.14 37 ⇑PKiKP PKiKP 21 05 01.0 +0.8
baz=117
AVF Avril sur Loir 117.14 321 ⇓iPKiKP PKPdf 21 05 00.0 -0.2
comp=Z,6.8nm,0.4s
AVF Avril sur Loir 117.14 321 ⇓iPKIKP PKPdf 21 05 00.0 -0.2
AVF Avril sur Loir 117.14 321 ⇓iPKPdf PKPdf 21 05 00.0 -0.2
BW06 Boulder Array 117.14 44 ePKPdf PKPdf 21 05 00.6 -0.1
BW06 eSKP 21 08 00.0
PDAR Pinedale Array 117.14 44 PKP PKPdf 21 05 00.8 +0.1
PDAR PP PP 21 06 18.8 +2.4
PDAR e 21 08 02.3
PDAR PKKPbc PKKPbc 21 15 26.6 -1.2
PDAR Pinedale Array 117.14 44 PKP PKPdf 21 05 00.8 +0.1
comp=Z,5.0nm,0.5s,baz=213,slow=1.6,SNR=39
PDAR PP PP 21 06 18.8 +2.4
comp=Z,1.3nm,0.7s,baz=300,slow=3.3,SNR=3.7
PDAR SKiKP SKiKP 21 08 02.3 -0.1
comp=Z,3.1nm,1.1s,baz=222,slow=2.0,SNR=5.0
PDAR PKKPbc PKKPbc 21 15 26.6 -1.2
comp=Z,2.8nm,0.8s,baz=116,slow=5.4,SNR=8.8
Q16A Castle Valley 117.14 49 ⇓PKiKP PKiKP 21 05 01.7 +0.9
baz=117
G20A Bridger 117.19 41 ⇓PKiKP PKiKP 21 05 01.0 +0.4
baz=117
D21A La Casata Ranch 117.27 39 ⇓PKiKP PKiKP 21 05 01.0 +0.3
baz=117
J19A Crowheart 117.32 44 ⇑PKiKP PKiKP 21 05 01.4 +0.4
baz=117
B22A Reddig Ranch S 117.38 37 ⇑PKiKP PKiKP 21 05 01.3 +0.6
baz=117
E21A Keefer Ranch, 117.43 40 ⇓PKiKP PKiKP 21 05 01.5 +0.6
baz=117
L19A Farson 117.50 45 ⇑PKiKP PKiKP 21 05 02.0 +0.6
baz=117
BGF Bois d'Agland 117.55 320 ePKIKP PKPdf 21 05 01.4 +0.3
comp=Z,30nm,0.6s
BGF Bois d'Agland 117.55 320 ePKIKP PKPdf 21 05 01.4 +0.3
BGF Bois d'Agland 117.55 320 ePKPdf PKPdf 21 05 01.4 +0.3
SRU San Rafael 117.57 48 ⇓PKiKP PKiKP 21 05 02.1 +0.5
baz=118
H20A Greybull 117.61 42 ⇓PKiKP PKiKP 21 05 01.6 +0.2
baz=118
K19A Absolon Red Bu 117.61 44 ⇑PKiKP PKPdf 21 05 01.4 -0.1
baz=118
F21A Absaloka Mine, 117.68 40 ⇑PKiKP PKiKP 21 05 01.9 +0.4
baz=118
C22A Vida 117.68 38 ⇑PKiKP PKiKP 21 05 01.8 +0.4
baz=118
I20A Worland 117.71 43 ⇑PKiKP PKiKP 21 05 02.1 +0.5
baz=118
D22A Cohagen 117.75 39 ⇓PKiKP PKiKP 21 05 02.3 +0.8
baz=118
A23A Redstone 117.77 36 ⇑PKiKP PKiKP 21 05 01.7 +0.2
baz=118
LASF Ste Croix 117.83 318 ePKIKP PKPdf 21 05 01.8 +0.1
comp=Z,5.8nm,0.8s
LASF Ste Croix 117.83 318 ePKPdf PKPdf 21 05 01.8 +0.1
M19A Rock Springs 117.83 46 ⇑PKiKP PKiKP 21 05 02.5 +0.5
baz=118
G21A Lodge Grass 117.85 41 ⇓PKiKP PKiKP 21 05 02.1 +0.2
baz=118
WUAZ Wupatki 117.88 53 ePKPdf PKPdf 21 05 02.6 +0.4
WUAZ eSKP 21 08 04.0
WUAZ Wupatki 117.88 53 ⇑PKiKP PKiKP 21 05 03.3 +1.1
baz=118
J20A Shoshoni 117.95 43 ⇓PKiKP PKiKP 21 05 02.6 +0.5
baz=118
K20A Yellowstone Ra 118.02 44 ⇑PKiKP PKiKP 21 05 02.5 +0.1
baz=118
TCF Toulx Ste Croi 118.06 320 ⇓iPKIKP PKPdf 21 05 02.3 +0.2
comp=Z,12nm,0.6s
TCF Toulx Ste Croi 118.06 320 ⇓iPKIKP PKPdf 21 05 02.3 +0.2
TCF Toulx Ste Croi 118.06 320 ⇓iPKPdf PKPdf 21 05 02.3 +0.2
C23A Lambert 118.09 38 ⇓PKiKP PKiKP 21 05 02.8 +0.7
baz=118
X16A Lo Mia Camp, P 118.09 54 ⇓PKiKP PKiKP 21 05 03.9 +1.1
baz=118
E22A Miles City 118.18 39 ⇓PKiKP PKiKP 21 05 02.8 +0.4
baz=118
H21A Big Horn, Sher 118.19 42 ⇓PKiKP PKPdf 21 05 02.3 -0.2
baz=118
L20A Wamsutter 118.24 45 ⇑PKiKP PKiKP 21 05 03.6 +0.8
baz=118
O19A Miners Draw (B 118.24 47 ⇑PKiKP PKiKP 21 05 03.2 +0.4
baz=118
F22A Rosebud 118.25 40 ⇓PKiKP PKiKP 21 05 02.8 +0.2
baz=118
A24A Westby 118.30 36 ⇑PKiKP PKiKP 21 05 02.8 +0.3
baz=118
I21A Big Trails, Te 118.33 43 ⇑PKiKP PKPdf 21 05 02.8 -0.1
baz=118
D23A Lindsay 118.34 38 ⇓PKiKP PKiKP 21 05 03.6 +0.9
baz=118
S18A Hurst Farm, Bl 118.37 50 ⇑PKiKP PKiKP 21 05 03.8 +0.5
baz=118
J21A Lysite 118.39 43 ⇓PKiKP PKPdf 21 05 03.0 0.0
baz=118

G22A	Birney	118.45	41	⇓PKiKP	PKPdf	21 05 03.0	0.0
	baz=118						
USHA	Ushuaia	118.49	169	PKP	PKPdf	21 05 02.8	+0.2
USHA	Ushuaia	118.49	169	PKP	PKPdf	21 05 02.8	+0.2
	comp=Z,5.8nm,0.7s,baz=97,slow=6.6,SNR=4.7						
LDF	La Druitiere	118.50	324	ePKIKP	PKPdf	21 05 02.6	-0.2
LDF	La Druitiere	118.50	324	ePKIKP	PKPdf	21 05 02.6	-0.2
LDF	La Druitiere	118.50	324	ePKPdf	PKPdf	21 05 02.6	-0.2
M20A	Sweetwater, Wa	118.53	45	⇑PKiKP	PKiKP	21 05 04.0	+0.5
	baz=118						
P19A	Cripple Cowboy	118.56	47	⇓PKiKP	PKiKP	21 05 04.3	+0.7
	baz=118						
E23A	Ismay	118.56	39	⇑PKiKP	PKiKP	21 05 03.8	+0.7
	baz=118						
FLN	La Foliniere	118.64	324	ePKIKP	PKPdf	21 05 03.0	-0.1
FLN				eR			
	comp=Z,63nm,20.2s						
FLN	La Foliniere	118.64	324	ePKIKP	PKPdf	21 05 03.0	-0.1
FLN	La Foliniere	118.64	324	ePKPdf	PKPdf	21 05 03.0	-0.1
H22A	Clearmont	118.66	41	⇑PKiKP	PKPdf	21 05 03.3	-0.1
	baz=118						
C24A	Savage	118.67	38	⇓PKiKP	PKiKP	21 05 04.1	+0.8
	baz=118						
N20A	Spence Gulch,	118.69	46	⇓PKiKP	PKiKP	21 05 04.6	+0.7
	baz=119						
CAF	Calviac	118.69	319	⇓iPKIKP	PKPdf	21 05 03.8	+0.4
	comp=Z,5.3nm,0.5s						
CAF	Calviac	118.69	319	⇓iPKIKP	PKPdf	21 05 03.8	+0.4
CAF	Calviac	118.69	319	⇓iPKPdf	PKPdf	21 05 03.8	+0.4
F23A	Volborg	118.82	40	⇑PKiKP	PKiKP	21 05 03.7	0.0
	baz=119						
I22A	9 Mile Ranch,	118.84	42	⇓PKiKP	PKPdf	21 05 03.5	-0.3
	baz=119						
RJF	Les Rejaudoux	118.90	320	ePKIKP	PKPdf	21 05 03.2	-0.5
RJF				eR			
	comp=Z,68nm,19.5s						
RJF	Les Rejaudoux	118.90	320	ePKIKP	PKPdf	21 05 03.2	-0.5
RJF	Les Rejaudoux	118.90	320	ePKPdf	PKPdf	21 05 03.2	-0.5
D24A	Glendive	118.91	38	⇑PKiKP	PKiKP	21 05 04.4	+0.6
	baz=119						
O20A	White River Ci	118.94	47	⇑PKiKP	PKiKP	21 05 05.0	+0.8
	baz=119						
L21A	Rawlins	118.94	45	⇓PKiKP	PKiKP	21 05 04.3	+0.1
	baz=119						
PV04	Paradox Valley	118.99	49	ePKPdf	PKPdf	21 05 05.0	+0.6
PV04				eSKP		21 08 07.0	
J22A	Midwest	119.02	43	⇑PKiKP	PKPdf	21 05 04.0	-0.2
	baz=119						
P20A	De Beque	119.03	47	⇑PKiKP	PKiKP	21 05 05.0	+0.5
	baz=119						
GRR	Gorron	119.03	324	ePKIKP	PKPdf	21 05 03.8	0.0
GRR	Gorron	119.03	324	ePKIKP	PKPdf	21 05 03.8	0.0
GRR	Gorron	119.03	324	ePKPdf	PKPdf	21 05 03.8	0.0
G23A	Biddle	119.04	40	⇑PKiKP	PKPdf	21 05 03.9	-0.2
	baz=119						
M21A	Separation Pea	119.07	45	⇑PKiKP	PKiKP	21 05 04.8	+0.2
	baz=119						
TUC	Tucson	119.11	56	ePKIKP	PKPdf	21 05 05.1	+0.5
TUC	Tucson	119.11	56	ePKPdf	PKPdf	21 05 05.1	+0.5
TUC				eSKP		21 08 06.0	
E24A	Baker	119.16	39	⇓PKiKP	PKiKP	21 05 04.9	+0.5
	baz=119						
MTLF	Montolieu	119.20	317	⇓iPKIKP	PKPdf	21 05 04.4	+0.1
	comp=Z,5.0nm,0.5s						
MTLF	Montolieu	119.20	317	⇓iPKIKP	PKPdf	21 05 04.4	+0.1
MTLF	Montolieu	119.20	317	⇓iPKPdf	PKPdf	21 05 04.4	+0.1
N21A	Black Mountain	119.25	46	⇓PKiKP	PKiKP	21 05 05.4	+0.5
	baz=119						
X18A	Snowflake	119.25	53	⇓PKiKP	PKiKP	21 05 05.8	+0.8
	baz=119						
W18A	Petrified Fore	119.27	53	⇓PKiKP	PKiKP	21 05 06.1	+1.1
	baz=119						
Q20A	Ridgley Place,	119.27	48	⇓PKiKP	PKiKP	21 05 05.9	+1.0
	baz=119						
K22A	Casper	119.28	44	⇑PKiKP	PKPdf	21 05 04.6	-0.2
	baz=119						
H23A	Clabaugh Cattl	119.29	41	⇑PKiKP	PKPdf	21 05 04.3	-0.4
	baz=119						
PV01	Paradox Valley	119.32	49	ePKPdf	PKPdf	21 05 05.5	+0.5
F24A	Ekalaka	119.38	39	⇑PKiKP	PKiKP	21 05 04.9	+0.1
	baz=119						
MFF	Saint Martin d	119.41	321	⇓iPKIKP	PKPdf	21 05 04.7	+0.1
	comp=Z,24nm,0.6s						
MFF	Saint Martin d	119.41	321	⇓iPKIKP	PKPdf	21 05 04.7	+0.1
MFF	Saint Martin d	119.41	321	⇓iPKPdf	PKPdf	21 05 04.7	+0.1
R20A	Redvale	119.45	49	⇑PKiKP	PKiKP	21 05 06.1	+0.7
	baz=119						
O21A	Pagoda	119.47	46	⇓PKiKP	PKiKP	21 05 05.8	+0.4
	baz=119						
I23A	Meade Ranch, G	119.49	42	⇑PKiKP	PKPdf	21 05 04.9	-0.2
	baz=119						
LFF	La Frestale	119.55	319	⇓iPKIKP	PKPdf	21 05 05.5	+0.6
	comp=Z,10nm,0.6s						
LFF	La Frestale	119.55	319	⇓iPKIKP	PKPdf	21 05 05.5	+0.6
LFF	La Frestale	119.55	319	⇓iPKPdf	PKPdf	21 05 05.5	+0.6
L22A	Ellis Ranch, M	119.56	44	⇓PKiKP	PKiKP	21 05 05.8	+0.3
	baz=120						
S20A	Disappointment	119.57	49	⇓PKiKP	PKiKP	21 05 06.6	+1.0
	baz=120						
G24A	Alzada	119.62	40	⇓PKiKP	PKPdf	21 05 04.9	-0.3
	baz=120						
J23A	Dilts Ranch, B	119.65	42	⇓PKiKP	PKPdf	21 05 05.0	-0.4
	baz=120						
M22A	Cedar Creek Ra	119.68	45	⇑PKiKP	PKiKP	21 05 05.9	+0.2
	baz=120						
H24A	Dirks Ranch, A	119.77	41	⇑PKiKP	PKPdf	21 05 05.2	-0.3
	baz=120						
Q21A	Lamborn Mesa,	119.84	48	⇓PKiKP	PKiKP	21 05 07.0	+0.9
	baz=120						
K23A	Bowen Ranch, D	119.85	43	⇓PKiKP	PKPdf	21 05 05.5	-0.4
	baz=120						
U20A	Newcomb	119.88	51	⇑PKiKP	PKiKP	21 05 07.1	+1.0
	baz=120						
N22A	Wattenberg Ran	119.99	45	⇑PKiKP	PKiKP	21 05 07.2	+0.8
	baz=120						
R21A	Cimarron	120.01	48	⇑PKiKP	PKiKP	21 05 07.4	+1.0
	baz=120						
L23A	Garrett	120.04	44	⇓PKiKP	PKPdf	21 05 05.8	-0.5
	baz=120						
S21A	Coal Bank Pass	120.05	49	⇑PKiKP	PKiKP	21 05 08.1	+1.4
	baz=120						
V20A	Brimhall	120.08	52	⇑PKiKP	PKiKP	21 05 07.4	+0.8
	baz=120						
I24A	Kuemmerle Ranc	120.09	42	⇑PKiKP	PKPdf	21 05 05.5	-0.6
	baz=120						
SGMF	Saint Gilles	120.09	324	ePKIKP	PKPdf	21 05 05.8	-0.1
	comp=Z,8.3nm,0.6s						
SGMF	Saint Gilles	120.09	324	ePKIKP	PKPdf	21 05 05.8	-0.1
SGMF	Saint Gilles	120.09	324	ePKPdf	PKPdf	21 05 05.8	-0.1
O22A	Kremmling	120.15	46	⇑PKiKP	PKiKP	21 05 06.8	+0.1
	baz=120						
SMCO	Snowmass	120.17	47	ePKPdf	PKPdf	21 05 07.6	+0.7
SMCO				epPKPdf	pPKPdf	21 06 31.1	-2.9
P22A	Eagle	120.19	47	⇓PKiKP	PKiKP	21 05 07.5	+0.8
	baz=120						
W20A	Ramah	120.25	52	⇑PKiKP	PKiKP	21 05 07.9	+0.8
	baz=120						
J24A	Dixon Ranch, L	120.28	42	⇓PKiKP	PKPdf	21 05 06.4	-0.2
	baz=120						
N23A	Red Feather La	120.32	45	⇑PKiKP	PKiKP	21 05 07.5	+0.4
	baz=120						
Q22A	Crested Butte,	120.33	48	⇑PKiKP	PKiKP	21 05 08.2	+1.0
	baz=120						
RSSD	Black Hills	120.37	41	ePKIKP	PKPdf	21 05 06.2	-0.6
RSSD	Black Hills	120.37	41	ePKPdf	PKPdf	21 05 06.2	-0.6
X20A	Quemado	120.41	53	⇑PKiKP	PKiKP	21 05 08.5	+1.1
	baz=120						
K24A	Anderson Ranch	120.41	43	⇑PKiKP	PKPdf	21 05 06.7	-0.2
	baz=120						
T21A	Navajo Lake	120.45	50	⇓PKiKP	PKiKP	21 05 08.5	+1.2
	baz=120						
ROSF	Rostrenen	120.47	324	ePKIKP	PKPdf	21 05 06.5	-0.1
ROSF	Rostrenen	120.47	324	ePKIKP	PKPdf	21 05 06.5	-0.1
ROSF	Rostrenen	120.47	324	ePKPdf	PKPdf	21 05 06.5	-0.1
FRB	Frobisher Bay	120.50	8	PKP	PKPdf	21 05 06.0	-0.1
FRB				PP	PP	21 06 36.8	-1.1
FRB	Frobisher Bay	120.50	8	PKP	PKPdf	21 05 06.0	-0.1
	comp=Z,9.0nm,0.5s,baz=59,slow=1.5,SNR=16						
FRB				PP	PP	21 06 36.8	-1.1
	comp=Z,6.1nm,0.9s,baz=352,slow=8.6,SNR=3.1						
U21A	Nageezi	120.53	51	⇓PKiKP	PKiKP	21 05 08.7	+1.2
	baz=120						
319A	Douglas	120.56	57	⇓PKiKP	PKiKP	21 05 08.6	+1.0
	baz=120						
O23A	Lake Granby, G	120.58	46	⇑PKiKP	PKiKP	21 05 08.3	+0.7
	baz=120						

EPF	Esparros	120.59	318	ePKIKP	PKPdf	21 05 07.1	0.0
	comp=Z,6.1nm,0.5s						
EPF	Esparros	120.59	318	ePKIKP	PKPdf	21 05 07.1	0.0
EPF	Esparros	120.59	318	ePKPdf	PKPdf	21 05 07.1	0.0
QUIF	Quistinic	120.62	324	ePKIKP	PKPdf	21 05 06.8	-0.1
	comp=Z,8.1nm,0.6s						
QUIF	Quistinic	120.62	324	ePKIKP	PKPdf	21 05 06.8	-0.1
QUIF	Quistinic	120.62	324	ePKPdf	PKPdf	21 05 06.8	-0.1
Y20A	Horse Springs,	120.67	54	⇑PKiKP	PKiKP	21 05 08.9	+1.0
	baz=121						
Z20A	Nine Sixteen R	120.71	55	⇑PKiKP	PKiKP	21 05 09.0	+1.1
	baz=121						
V21A	Milan	120.73	51	⇑PKiKP	PKiKP	21 05 08.6	+0.7
	baz=121						
S22A	4UR Ranch, Cre	120.75	49	⇑PKiKP	PKiKP	21 05 09.1	+1.1
	baz=121						
120A	U Bar Ranch, L	120.82	55	⇓PKiKP	PKiKP	21 05 09.0	+0.8
	baz=121						
J25A	Sunshine Ranch	120.82	42	⇑PKiKP	PKPdf	21 05 07.5	-0.1
	baz=121						
M24A	Cheyenne	120.89	44	⇓PKiKP	PKiKP	21 05 08.3	+0.3
	baz=121						
W21A	San Fidel	120.92	52	⇓PKiKP	PKiKP	21 05 09.4	+1.1
	baz=121						
T22A	Edith	120.93	50	⇓PKiKP	PKiKP	21 05 09.6	+1.3
	baz=121						
ISCO	Idaho Springs	120.95	46	ePKIKP	PKPdf	21 05 08.8	+0.6
ISCO				e		21 06 38.4	
ISCO	Idaho Springs	120.95	46	ePKPdf	PKPdf	21 05 08.8	+0.6
ISCO				ePP	PP	21 06 38.4	-4.1
ISCO	Idaho Springs	120.95	46	⇓PKiKP	PKPdf	21 05 08.9	+0.6
	baz=121						
X21A	Alamocita Cree	121.00	53	⇓PKiKP	PKiKP	21 05 09.6	+1.1
	baz=121						
220A	Playas Peak, P	121.06	56	⇑PKiKP	PKiKP	21 05 09.2	+0.6
	baz=121						
N24A	Carr	121.09	45	⇓PKiKP	PKiKP	21 05 08.8	+0.4
	baz=121						
K25A	Mack Ranch, Ha	121.10	43	⇓PKiKP	PKPdf	21 05 08.1	0.0
	baz=121						
Q23A	Hartsel	121.10	47	⇑PKiKP	PKiKP	21 05 09.5	+0.8
	baz=121						
U22A	Llaves	121.16	50	⇑PKiKP	PKiKP	21 05 10.1	+1.4
	baz=121						
320A	Kipp Ranch, An	121.20	57	⇑PKiKP	PKiKP	21 05 10.1	+1.2
	baz=121						
Y21A	Point of Rocks	121.21	53	⇑PKiKP	PKiKP	21 05 10.2	+1.2
	baz=121						
L25A	Engebretsen Ra	121.22	43	⇓PKiKP	PKPdf	21 05 08.4	-0.1
	baz=121						
O24A	Longmont	121.22	46	⇑PKiKP	PKiKP	21 05 09.0	+0.3
	baz=121						
ETSF	Etsaut	121.25	318	ePKIKP	PKPdf	21 05 09.1	+0.7
	comp=Z,10nm,0.8s						
ETSF	Etsaut	121.25	318	ePKIKP	PKPdf	21 05 09.1	+0.7
ETSF	Etsaut	121.25	318	ePKPdf	PKPdf	21 05 09.1	+0.7
V22A	San Miguel Ran	121.26	51	⇑PKiKP	PKiKP	21 05 10.3	+1.3
	baz=121						
R23A	Moffat	121.35	48	⇓PKiKP	PKiKP	21 05 10.4	+1.3
	baz=121						
S23A	Nye Farm, Mont	121.38	49	⇑PKiKP	PKiKP	21 05 10.3	+1.1
	baz=121						
MDND	Maddock	121.39	36	⇓PKiKP	PKPdf	21 05 08.3	-0.1
	baz=121						
Z21A	St. Cloud Mine	121.40	54	⇓PKiKP	PKiKP	21 05 10.4	+1.1
	baz=121						
M25A	Palm-Egli Farm	121.44	44	⇓PKiKP	PKiKP	21 05 09.2	+0.1
	baz=121						
121A	Cookes Peak, D	121.51	55	⇓PKiKP	PKiKP	21 05 10.7	+1.1
	baz=121						
LAZ	Ladron	121.52	53	ePKPdf	PKPdf	21 05 10.2	+0.8
K26A	Motz Farm, Whi	121.53	42	⇑PKiKP	PKPdf	21 05 08.5	-0.5
	baz=121						
W22A	Albuquerque	121.54	52	⇑PKiKP	PKiKP	21 05 10.7	+1.2
	baz=121						
P24A	Kohler Place,	121.56	46	⇓PKiKP	PKiKP	21 05 10.8	+1.3
	baz=121						
T23A	Casias Ranch,	121.58	49	⇓PKiKP	PKiKP	21 05 10.8	+1.2
	baz=122						
Q24A	Divide	121.58	47	⇑PKiKP	PKiKP	21 05 10.7	+1.0
	baz=122						
X22A	Bernardo	121.60	53	⇓PKiKP	PKiKP	21 05 11.1	+1.5
	baz=122						
SJPF	Ste Jean	121.60	318	ePKIKP	PKPdf	21 05 09.8	+0.8
	comp=Z,3.3nm,0.5s						
SJPF	Ste Jean	121.60	318	ePKIKP	PKPdf	21 05 09.8	+0.8
SJPF	Ste Jean	121.60	318	ePKPdf	PKPdf	21 05 09.8	+0.8
221A	Mesquite Ranch	121.65	56	⇑PKiKP	PKiKP	21 05 10.7	+0.9
	baz=122						
N25A	Grover	121.66	45	⇓PKiKP	PKPdf	21 05 09.4	0.0
	baz=122						
U23A	El Rito	121.68	50	⇓PKiKP	PKiKP	21 05 11.0	+1.1
	baz=122						
LENM	Lemitar	121.72	53	ePKPdf	PKPdf	21 05 10.1	+0.4
Y22D	IRIS PASSCAL I	121.79	53	⇓PKiKP	PKiKP	21 05 10.8	+0.8
	baz=122						
Y22A	Socorro	121.79	53	⇓PKiKP	PKiKP	21 05 11.1	+1.0
	baz=122						
L26A	Underwood Farm	121.87	43	⇓PKiKP	PKiKP	21 05 09.9	+0.1
	baz=122						
R24A	Sanders Place,	121.87	48	⇑PKiKP	PKiKP	21 05 10.8	+0.7
	baz=122						
V23A	Ortiz Mt. (NFS	121.87	51	⇓PKiKP	PKiKP	21 05 11.9	+1.7
	baz=122						
ANMO	Albuquerque	121.90	52	ePKPdf	PKPdf	21 05 10.8	+0.8
ANMO				PKP	PKPdf	21 05 11.1	+1.1
ANMO				eSKP		21 08 11.6	
ANMO				e		21 08 13.0	
ANMO	Albuquerque	121.90	52	PKP	PKPdf	21 05 11.1	+1.1
	comp=Z,17nm,0.8s,baz=200,slow=2.5,SNR=37						
ANMO				SKiKP	SKiKP	21 08 13.0	+1.0
	comp=Z,5.6nm,1.0s,baz=250,slow=4.1,SNR=8.1						
LPM	Los Pinos Moun	121.95	53	ePKPdf	PKPdf	21 05 10.6	+0.5
Z22A	Elephant Butte	121.99	54	⇑PKiKP	PKiKP	21 05 11.1	+0.7
	baz=122						
S24A	Houchin Ranch,	121.99	49	⇑PKiKP	PKiKP	21 05 11.3	+0.9
	baz=122						
BNM	Barren Site	122.00	53	ePKPdf	PKPdf	21 05 10.6	+0.3
BNM				eSKP		21 08 13.4	
M26A	McRoberts Ranc	122.06	44	⇑PKiKP	PKiKP	21 05 11.1	+0.9
	baz=122						
W23A	Werner Place,	122.08	52	⇓PKiKP	PKiKP	21 05 11.3	+0.7
	baz=122						
P25A	Willow Gulch B	122.09	46	⇑PKiKP	PKiKP	21 05 11.1	+0.6
	baz=122						
122A	Conniff Cattle	122.11	55	⇓PKiKP	PKiKP	21 05 11.7	+1.1
	baz=122						
ULM	Lac du Bonnet	122.14	32	PKP	PKPdf	21 05 09.2	-0.6
ULM	Lac du Bonnet	122.14	32	PKP	PKPdf	21 05 09.2	-0.6
	comp=Z,21nm,0.6s,baz=280,slow=1.7,SNR=14						
K27A	Flueckinger Fa	122.15	42	⇑PKiKP	PKPdf	21 05 09.5	-0.7
	baz=122						
222A	Williams Famil	122.18	55	⇓PKiKP	PKiKP	21 05 11.6	+0.8
	baz=122						
N26A	Koester Ranch,	122.25	44	⇑PKiKP	PKPdf	21 05 10.5	+0.1
	baz=122						
Q25A	Bedland, Calha	122.26	47	⇓PKiKP	PKPdf	21 05 10.9	+0.1
	baz=122						
U24A	Moreno Valley	122.36	50	⇑PKiKP	PKiKP	21 05 11.6	+0.4
	baz=122						
L27A	T5 Ranch, Ells	122.36	43	⇓PKiKP	PKiKP	21 05 11.5	+0.7
	baz=122						
O26A	Horse Wrangler	122.42	45	⇓PKiKP	PKPdf	21 05 10.7	-0.1
	baz=122						
J28A	Allard Ranch,	122.50	41	⇓PKiKP	PKPdf	21 05 10.8	0.0
	baz=122						
R25A	Fountain Ranch	122.51	48	⇑PKiKP	PKiKP	21 05 11.4	+0.1
	baz=122						
Y23A	Lovelace Mesa,	122.52	53	⇑PKiKP	PKiKP	21 05 12.3	+0.8
	baz=122						
M27A	Reverse DX Ran	122.55	43	⇑PKiKP	PKPdf	21 05 10.9	-0.1
	baz=122						
S25A	Robets Cordova	122.57	48	⇓PKiKP	PKiKP	21 05 11.9	+0.4
	baz=122						
Z23A	Rita Site, Whi	122.57	54	⇑PKiKP	PKiKP	21 05 12.5	+1.0
	baz=122						
V24A	Rampart Ranch,	122.58	51	⇓PKiKP	PKiKP	21 05 12.7	+1.1
	baz=122						
W24A	Lazy 6 Ranch,	122.64	51	⇓PKiKP	PKiKP	21 05 12.4	+0.7
	baz=122						
P26A	Davis Ranch, A	122.66	46	⇑PKiKP	PKiKP	21 05 11.9	+0.3
	baz=122						
123A	Bell Site, Whi	122.72	54	⇓PKiKP	PKiKP	21 05 12.7	+0.8
	baz=123						
K28A	Ten Mile Ranch	122.73	42	⇑PKiKP	PKPdf	21 05 10.9	-0.3
	baz=123						
N27A	Anderson Farm,	122.74	44	⇓PKiKP	PKPdf	21 05 11.3	0.0

	baz=123						
223A	Chaparral, Ant	122.76	55	⇑PKiKP	PKiKP	21 05 12.5	+0.6
	baz=123						
T25A	Trinidad	122.77	49	⇓PKiKP	PKiKP	21 05 12.6	+0.7
	baz=123						
Q26A	Hugo	122.78	47	⇓PKiKP	PKiKP	21 05 12.2	+0.4
	baz=123						
X24A	Lazy VL Ranch,	122.82	52	⇓PKiKP	PKiKP	21 05 12.1	0.0
	baz=123						
Y24A	Capitan	123.01	53	⇑PKiKP	PKiKP	21 05 13.1	+0.6
	baz=123						
U25A	Circle Dot Ran	123.02	50	⇓PKiKP	PKiKP	21 05 13.1	+0.7
	baz=123						
O27A	Beecher Island	123.03	45	⇑PKiKP	PKiKP	21 05 12.1	0.0
	baz=123						
OGNE	Ogallala	123.03	44	⇓PKiKP	PKPdf	21 05 11.4	-0.5
	baz=123						
V25A	Rancho No Teng	123.05	50	⇓PKiKP	PKiKP	21 05 13.0	+0.5
	baz=123						
R26A	Arlington	123.06	47	⇓PKiKP	PKiKP	21 05 12.5	+0.2
	baz=123						
P27A	Ficken Ranch,	123.21	46	⇓PKiKP	PKPdf	21 05 12.5	+0.2
	baz=123						
Z24A	Sheeppen Canyo	123.25	53	⇑PKiKP	PKiKP	21 05 13.7	+0.8
	baz=123						
AGMN	Agassiz Nation	123.26	34	ePKPdf	PKPdf	21 05 11.1	-0.9
M28A	Bar X Bar Ranc	123.30	43	⇓PKiKP	PKPdf	21 05 12.1	-0.3
	baz=123						
S26A	Kim	123.30	48	⇑PKiKP	PKiKP	21 05 13.1	+0.3
	baz=123						
124A	Stringfield Ra	123.36	54	⇓PKiKP	PKiKP	21 05 13.9	+0.7
	baz=123						
T26A	Comanche Natio	123.36	49	⇑PKiKP	PKiKP	21 05 13.4	+0.4
	baz=123						
W25A	X Bar L Ranch,	123.37	51	⇓PKiKP	PKiKP	21 05 13.5	+0.4
	baz=123						
KSCO	Kaye Shedlock'	123.39	46	⇓PKiKP	PKiKP	21 05 13.1	+0.1
	baz=123						
K29A	Lazy Trails An	123.40	41	⇑PKiKP	PKPdf	21 05 12.5	0.0
	baz=123						
X25A	Clemmons Ranch	123.44	52	⇓PKiKP	PKPdf	21 05 13.1	+0.1
	baz=123						
BRSD	Miller	123.47	39	⇑PKiKP	PKPdf	21 05 12.2	-0.4
	baz=123						
224A	Cornudas Mount	123.48	55	⇓PKiKP	PKiKP	21 05 14.2	+0.8
	baz=123						
U26A	Atchley Ranch,	123.53	49	⇓PKiKP	PKiKP	21 05 13.6	+0.2
	baz=123						
R27A	Eads	123.54	47	⇓PKiKP	PKiKP	21 05 13.5	+0.2
	baz=123						
O28A	Krutsinger Ran	123.55	45	⇓PKiKP	PKPdf	21 05 12.9	0.0
	baz=123						
Y25A	Mesa, Roswell	123.60	53	⇑PKiKP	PKiKP	21 05 13.7	+0.2
	baz=124						
L29A	Maesberg Ranch	123.61	42	⇓PKiKP	PKiKP	21 05 13.6	+0.4
	baz=124						
324A	Moseley Ranch,	123.69	56	⇓PKiKP	PKiKP	21 05 14.1	+0.3
	baz=124						
S27A	Las Animas	123.69	48	⇓PKiKP	PKiKP	21 05 14.0	+0.4
	baz=124						
V26A	Tequesquite Ra	123.70	50	⇓PKiKP	PKiKP	21 05 13.8	+0.1
	baz=124						
MNTX	Cornudas Mount	123.70	55	ePKPdf	PKPdf	21 05 13.9	+0.6
MNTX				eSKP		21 08 16.2	
M29A	Burnside Ranch	123.74	43	⇓PKiKP	PKPdf	21 05 12.6	-0.7
	baz=124						
Z25A	Roswell	123.78	53	⇑PKiKP	PKiKP	21 05 14.3	+0.4
	baz=124						
P28A	Saint Francis	123.79	45	⇑PKiKP	PKiKP	21 05 13.8	+0.1
	baz=124						
Q28A	Sharon Springs	123.94	46	⇑PKiKP	PKiKP	21 05 14.4	+0.4
	baz=124						
W26A	Owens Ranch, T	123.95	51	⇓PKiKP	PKiKP	21 05 14.4	+0.2
	baz=124						
125A	Gardner Draw,	124.01	54	⇑PKiKP	PKiKP	21 05 14.7	+0.3
	baz=124						
225A	Deer Hill, Car	124.04	55	⇑PKiKP	PKiKP	21 05 14.9	+0.4
	baz=124						
N29A	Votaw Ranch, W	124.05	43	⇑PKiKP	PKPdf	21 05 13.6	-0.2
	baz=124						
T27A	Campo	124.06	48	⇓PKiKP	PKiKP	21 05 14.5	+0.1
	baz=124						
X26A	CR and CF Fran	124.10	52	⇓PKiKP	PKiKP	21 05 14.6	+0.1
	baz=124						
325A	Bean Ranch, Si	124.13	56	⇑PKiKP	PKiKP	21 05 14.8	+0.1
	baz=124						
U27A	Thompson Grove	124.21	49	⇓PKiKP	PKiKP	21 05 14.7	0.0
	baz=124						
O29A	4D Ranch, Culb	124.23	44	⇑PKiKP	PKPdf	21 05 14.3	+0.1
	baz=124						
R28A	Tribune	124.24	47	⇓PKiKP	PKiKP	21 05 14.9	+0.3
	baz=124						
M30A	Dale-Ortello V	124.25	42	⇓PKiKP	PKPdf	21 05 14.4	+0.2
	baz=124						
425A	Indio Mountain	124.28	56	⇓PKiKP	PKiKP	21 05 15.1	+0.1
	baz=124						
Y26A	Elida	124.29	52	⇑PKiKP	PKiKP	21 05 14.9	0.0
	baz=124						
P29A	Atwood	124.36	45	⇑PKiKP	PKPdf	21 05 14.3	-0.2
	baz=124						
Z26A	Caprock	124.37	53	⇓PKiKP	PKPdf	21 05 14.7	0.0
	baz=124						
N30A	Hueftle Ranch,	124.42	43	⇓PKiKP	PKPdf	21 05 14.5	0.0
	baz=124						
V27A	Dan Oppiter Fa	124.44	50	⇑PKiKP	PKiKP	21 05 15.1	0.0
	baz=124						
S28A	Manter	124.47	47	⇑PKiKP	PKiKP	21 05 15.1	0.0
	baz=124						
T28A	Walsh	124.48	48	⇓PKiKP	PKiKP	21 05 15.2	0.0
	baz=124						
W27A	Bowe Ranch, En	124.50	51	⇑PKiKP	PKiKP	21 05 15.2	-0.1
	baz=124						
126A	Clayton Basin,	124.53	54	⇓PKiKP	PKPdf	21 05 15.1	+0.1
	baz=124						
226B	Tecolote Peak,	124.58	55	⇓PKiKP	PKiKP	21 05 15.6	+0.1
	baz=124						
Q29A	Oakley	124.62	46	⇑PKiKP	PKiKP	21 05 15.3	0.0
	baz=124						
X27A	F and S Farms,	124.62	51	⇓PKiKP	PKiKP	21 05 15.4	-0.1
	baz=124						
U28A	Mallet	124.68	49	⇑PKiKP	PKPdf	21 05 15.2	0.0
	baz=125						
R29A	Marienthal	124.69	46	⇓PKiKP	PKiKP	21 05 15.4	-0.1
	baz=125						
O30A	MW Ranch, Wils	124.72	44	⇓PKiKP	PKiKP	21 05 15.7	+0.2
	baz=125						
Y27A	Causey	124.82	52	⇑PKiKP	PKPdf	21 05 15.8	+0.2
	baz=125						
P30A	Selden	124.86	45	⇓PKiKP	PKPdf	21 05 15.3	-0.1
	baz=125						
V28A	Channing	124.91	50	⇑PKiKP	PKiKP	21 05 16.0	0.0
	baz=125						
ESDC	Sonseca Array	124.93	316	PKP	PKPdf	21 05 15.1	-0.5
ESDC				PP	PP	21 07 09.9	+1.1
ESDC				SKPbc	SKiKP	21 07 55.4	-22
ESDC				PKKPbc	PKKPbc	21 14 58.5	+0.1
ESDC	Sonseca Array	124.93	316	PKP	PKPdf	21 05 15.1	-0.5
	comp=Z,0.8nm,0.6s,baz=23,slow=3.0,SNR=6.5						
ESDC				PP	PP	21 07 09.9	+1.1
	comp=Z,3.6nm,0.9s,baz=61,slow=6.4,SNR=12						
ESDC				SKPbc	SKiKP	21 07 55.4	-22
	comp=Z,3.3nm,0.8s,baz=38,slow=3.5,SNR=6.8						
ESDC				PKKPbc	PKKPbc	21 14 58.5	+0.1
	comp=Z,0.3nm,0.4s,baz=271,slow=3.0,SNR=4.8						
326A	Caldwell Ranch	124.96	55	⇓PKiKP	PKPdf	21 05 15.8	-0.1
	baz=125						
Z27A	Tatum	124.97	53	⇑PKiKP	PKPdf	21 05 16.0	+0.2
	baz=125						
S29A	Ulysses	125.03	47	⇑PKiKP	PKiKP	21 05 16.4	+0.2
	baz=125						
127A	Arkansas Junct	125.05	54	⇓PKiKP	PKiKP	21 05 16.3	-0.1
	baz=125						
T29A	Hugoton	125.08	48	⇓PKiKP	PKiKP	21 05 16.4	+0.1
	baz=125						
W28A	Vega	125.09	50	⇓PKiKP	PKiKP	21 05 16.7	+0.3
	baz=125						
MSTX	Muleshoe	125.10	52	⇑PKiKP	PKiKP	21 05 16.4	-0.1
	baz=125						
426A	McDonald Obser	125.10	56	⇑PKiKP	PKiKP	21 05 16.8	0.0
	baz=125						
Q30A	Quinter	125.12	45	⇑PKiKP	PKPdf	21 05 16.2	+0.3
	baz=125						
526A	Mary Lane Ranc	125.22	57	⇑PKiKP	PKiKP	21 05 16.9	0.0
	baz=125						
ECSD	EROS Data Cent	125.29	39	ePKPdf	PKPdf	21 05 15.7	-0.3
ECSD				ePP	PP	21 07 05.2	-5.7
227A	Bennet, Jal	125.31	54	⇑PKiKP	PKiKP	21 05 17.1	+0.2
	baz=125						

626A	Big Bend Ranch	125.32	57	⇓PKiKP	PKiKP	21 05 17.1	0.0
	baz=125						
327A	Balmorhea Ranc	125.34	55	⇑PKiKP	PKiKP	21 05 17.0	0.0
	baz=125						
X28A	Dimmitt	125.36	51	⇓PKiKP	PKPdf	21 05 16.7	+0.1
	baz=125						
U29A	Oasis Ranch, S	125.36	49	⇑PKiKP	PKiKP	21 05 16.8	0.0
	baz=125						
R30A	Dighton	125.37	46	⇓PKiKP	PKiKP	21 05 16.7	-0.1
	baz=125						
V29A	Stinnett	125.39	49	⇑PKiKP	PKiKP	21 05 17.0	+0.1
	baz=125						
BGNE	Belgrade	125.45	42	⇑PKiKP	PKPdf	21 05 16.6	+0.2
	baz=125						
S30A	Montezuma	125.49	47	⇑PKiKP	PKiKP	21 05 17.1	0.0
	baz=125						
Y28A	McKinney Farm,	125.53	52	⇓PKiKP	PKiKP	21 05 17.3	0.0
	baz=125						
427A	Hayter Ranch,	125.57	56	⇓PKiKP	PKiKP	21 05 17.8	+0.3
	baz=126						
W29A	Amraillo	125.57	50	⇓PKiKP	PKiKP	21 05 17.4	0.0
	baz=126						
527A	Woodward Ranch	125.59	57	⇓PKiKP	PKiKP	21 05 17.6	0.0
	baz=126						
Z28A	Tucker Farm, M	125.63	53	⇑PKiKP	PKPdf	21 05 16.9	-0.2
	baz=126						
AMTX	Amarillo	125.63	50	*e*PKPdf	PKPdf	21 05 17.6	+0.5
T30A	Plains	125.68	48	⇑PKiKP	PKiKP	21 05 17.6	+0.1
	baz=126						
Q31A	Ellis	125.69	45	⇑PKiKP	PKPdf	21 05 17.0	0.0
	baz=126						
X29A	Tulia	125.77	51	⇓PKiKP	PKiKP	21 05 17.7	0.0
	baz=126						
TXAR	Lajitas Array	125.77	58	PKP	PKPdf	21 05 17.5	0.0
TXAR				PP	PP	21 07 15.5	+0.6
TXAR				SKPbc	SKiKP	21 08 00.2	-20
TXAR				*e*		21 08 19.7	
TXAR				PKKPbc	PKKPbc	21 14 55.9	+1.1
TXAR	Lajitas Array	125.77	58	PKP	PKPdf	21 05 17.5	0.0
	comp=Z,7.2nm,0.6s,baz=259,slow=1.3,SNR=55						
TXAR				PP	PP	21 07 15.5	+0.6
	comp=Z,0.6nm,0.7s,baz=290,slow=3.7,SNR=3.8						
TXAR				SKPbc	SKiKP	21 08 00.2	-20
	comp=Z,4.0nm,0.8s,baz=247,slow=2.5,SNR=7.4						
TXAR				SKiKP	SKiKP	21 08 19.7	-0.1
	comp=Z,2.5nm,0.8s,baz=204,slow=2.7,SNR=4.6						
TXAR				PKKPbc	PKKPbc	21 14 55.9	+1.1
	comp=Z,0.5nm,0.9s,baz=141,slow=6.4,SNR=3.9						
U30A	WK&E Inc. Balk	125.79	48	⇓PKiKP	PKiKP	21 05 17.8	0.0
	baz=126						
EYMN	Ely	125.82	32	*e*PKPdf	PKPdf	21 05 16.4	-0.5
PBRG	Braganca	125.83	319	*e*SKP	SKPdf	21 08 00.8	-18
228A	UT Block 9, Go	125.84	54	⇓PKiKP	PKiKP	21 05 17.8	-0.1
	baz=126						
328A	Wristen Ranch,	125.89	55	⇑PKiKP	PKiKP	21 05 17.9	-0.1
	baz=126						
R31A	Burdett	125.90	46	⇓PKiKP	PKPdf	21 05 17.7	+0.2
	baz=126						
627A	Terlingua Ranc	125.97	57	⇓PKiKP	PKPdf	21 05 18.2	+0.3
	baz=126						
Y29A	Porterfield Fa	126.00	52	⇓PKiKP	PKiKP	21 05 18.2	-0.1
	baz=126						
V30A	Spur Ranch, Mi	126.06	49	⇑PKiKP	PKPdf	21 05 18.1	+0.3
	baz=126						
Z29A	Hungry Hill Ra	126.17	52	⇓PKiKP	PKPdf	21 05 18.3	+0.2
	baz=126						
428A	Kincaid Ranch,	126.19	56	⇓PKiKP	PKiKP	21 05 19.1	+0.4
	baz=126						
S31A	Mullinville	126.21	46	⇑PKiKP	PKiKP	21 05 18.4	-0.1
	baz=126						
129A	Stewart Farms,	126.26	53	⇑PKiKP	PKPdf	21 05 18.5	+0.2
	baz=126						
528A	Cox Ranch, San	126.27	56	⇑PKiKP	PKiKP	21 05 19.0	0.0
	baz=126						
T31A	Randall Ranch,	126.29	47	⇑PKiKP	PKiKP	21 05 18.8	+0.2
	baz=126						
MVO	Moncorvo	126.33	319	*e*SKP	SKPdf	21 08 01.3	-18
W30A	Crocket Farms	126.36	50	⇓PKiKP	PKiKP	21 05 19.0	+0.1
	baz=126						
628A	Black Gap, Mar	126.38	57	⇑PKiKP	PKiKP	21 05 19.2	+0.1
	baz=126						
X30A	Coker Ranch, T	126.41	51	⇓PKiKP	PKPdf	21 05 18.7	+0.2
	baz=126						
U31A	Nine Bar Ranch	126.45	48	⇑PKiKP	PKiKP	21 05 19.1	+0.1
	baz=126						
TORD	Torodi Ar. Bea	126.51	282	PKP	PKPdf	21 05 19.9	+0.7
TORD				SKPbc	SKiKP	21 08 19.4	-2.1
TORD				PKKPbc	PKKPbc	21 14 52.5	+1.2
TORD	Torodi Ar. Bea	126.51	282	PKP	PKPdf	21 05 19.9	+0.7
	comp=Z,3.0nm,0.8s,baz=112,slow=1.7,SNR=22						
TORD				SKPbc	SKiKP	21 08 19.4	-2.1
	comp=Z,9.6nm,0.8s,baz=45,slow=2.3,SNR=6.8						
TORD				PKKPbc	PKKPbc	21 14 52.5	+1.2
	comp=Z,2.3nm,0.8s,baz=296,slow=2.0,SNR=13						
229A	Bryant Ranch,	126.52	54	⇓PKiKP	PKPdf	21 05 18.8	0.0
	baz=126						
329A	Wagon Wheel Ra	126.53	54	⇑PKiKP	PKiKP	21 05 19.2	-0.1
	baz=126						
Y30A	Stafford Cattl	126.59	51	⇑PKiKP	PKiKP	21 05 19.3	-0.1
	baz=126						
Z30A	Sanderson Ranc	126.62	52	⇑PKiKP	PKPdf	21 05 18.9	0.0
	baz=126						
V31A	Spring Creek L	126.69	49	⇓PKiKP	PKiKP	21 05 20.0	+0.5
	baz=127						
POLO	Lamas de Olo	126.73	319	*e*SKP	SKPdf	21 08 03.1	-17
SPMN	St. Paul	126.75	35	⇑PKiKP	PKPdf	21 05 18.5	-0.3
	baz=127						
529A	Stev Forest Ra	126.75	56	⇑PKiKP	PKPdf	21 05 19.5	+0.2
	baz=127						
W31A	Holland Ranch,	126.84	49	⇓PKiKP	PKiKP	21 05 19.8	0.0
	baz=127						
429A	Davenport Ranc	126.87	55	⇑PKiKP	PKiKP	21 05 19.9	-0.2
	baz=127						
130A	Snyder	126.99	53	⇓PKiKP	PKPdf	21 05 19.7	0.0
	baz=127						
X31A	McDonald Ranch	127.03	50	⇑PKiKP	PKPdf	21 05 19.9	+0.3
	baz=127						
MTE	Manteigas	127.04	318	*e*SKP	SKPdf	21 08 04.2	-17
Y31A	Rekieta Farm,	127.06	51	⇑PKiKP	PKPdf	21 05 20.0	+0.3
	baz=127						
230A	Sterling City	127.11	54	⇓PKiKP	PKPdf	21 05 19.9	0.0
	baz=127						
PVIS	Viseu	127.12	318	*e*SKP	SKPdf	21 08 03.9	-17
330A	Mertzon	127.21	54	⇑PKiKP	PKPdf	21 05 19.9	-0.2
	baz=127						
PCBR	Castelo Branco	127.27	317	*e*SKP	SKPdf	21 08 04.8	-16
430A	Baggett Ranch,	127.36	55	⇑PKiKP	PKPdf	21 05 20.8	+0.3
	baz=127						
Z31A	Sharp Cattle R	127.38	52	⇓PKiKP	PKiKP	21 05 20.7	-0.2
	baz=127						
PMRV	Marv??o	127.41	317	*e*SKP	SKPdf	21 08 04.7	-17
131A	Roby	127.42	53	⇓PKiKP	PKPdf	21 05 20.7	+0.2
	baz=127						
530A	J-C Ranch, Com	127.48	56	⇑PKiKP	PKiKP	21 05 21.3	0.0
	baz=127						
KSU1	Kansas State U	127.58	44	*e*PKPdf	PKPdf	21 05 20.3	-0.2
KSU1				*e*SKP		21 08 04.4	
Y32A	R-V Farms, Ver	127.67	51	⇑PKiKP	PKPdf	21 05 21.1	+0.2
	baz=128						
231A	Bronte	127.73	53	⇓PKiKP	PKPdf	21 05 21.3	+0.2
	baz=128						
PBAR	Barrancos	127.74	315	*e*SKP	SKPdf	21 08 06.3	-16
331A	San Angelo	127.85	54	⇑PKiKP	PKPdf	21 05 21.5	+0.1
	baz=128						
WMOK	Wichita Mounta	127.90	49	*e*PKIKP	PKPdf	21 05 20.7	-0.6
WMOK	Wichita Mounta	127.90	49	*e*PKPdf	PKPdf	21 05 20.7	-0.6
WMOK				*e*SKP		21 08 07.1	
Z32A	Haskell	127.90	51	⇑PKiKP	PKiKP	21 05 21.9	-0.1
	baz=128						
431A	Sonora	127.91	55	⇓PKiKP	PKPdf	21 05 21.6	+0.1
	baz=128						
PTOM	Tomar	128.00	317	*e*SKP	SKPdf	21 08 07.4	-15
ABTX	Abilene, Hawle	128.02	52	⇓PKiKP	PKPdf	21 05 22.0	+0.3
	baz=128						
531A	Rocksprings	128.12	56	⇑PKiKP	PKPdf	21 05 22.2	+0.3
	baz=128						
PMTG	Montargil	128.15	317	*e*SKP	SKPdf	21 08 06.6	-16
COWI	Conover	128.24	32	*e*PKPdf	PKPdf	21 05 21.0	-0.6
EVO	Evora	128.26	316	*e*PKIKP	PKPdf	21 05 23.5	+1.7
	comp=Z,9.8nm,0.8s						
EVO				*e*R			
	comp=Z,40nm,19.5s						
232A	Coleman	128.28	53	⇑PKiKP	PKPdf	21 05 22.4	+0.3
	baz=128						
631A	Perdido Creek	128.33	56	⇓PKiKP	PKiKP	21 05 22.7	-0.2
	baz=128						
EVOP	Sao Brissos	128.34	316	*e*PKIKP	PKPdf	21 05 23.5	+1.5
EVOP	Sao Brissos	128.34	316	*e*PKPdf	PKPdf	21 05 23.5	+1.5
332A	Millersview	128.38	54	⇓PKiKP	PKPdf	21 05 22.7	+0.4
	baz=128						
SCIA	State Center	128.38	39	*e*PKPdf	PKPdf	21 05 21.6	-0.4
PBEJ	Beja	128.39	315	*e*SKP	SKPdf	21 08 09.2	-14
432A	Menard	128.51	54	⇓PKiKP	PKPdf	21 05 22.8	+0.2
	baz=128						
PVAQ	Vaqueiros	128.57	315	*e*SKP	SKPdf	21 08 09.9	-14
JCT	Junction City	128.63	55	*e*PKIKP	PKPdf	21 05 23.1	+0.3
JCT	Junction City	128.63	55	*e*PKPdf	PKPdf	21 05 23.1	+0.3
JCT	Junction City	128.63	55	⇑PKiKP	PKPdf	21 05 23.2	+0.3
	baz=128						
532A	Rocksprings	128.66	55	⇓PKiKP	PKPdf	21 05 22.9	-0.1
	baz=129						
PCVE	Castro Verde	128.70	315	*e*SKP	SKPdf	21 08 09.9	-14
PBDV	Barranco-do-Ve	128.80	315	*e*SKP	SKPdf	21 08 11.1	-13
PNCL	Nicolau / Gran	128.81	316	*e*SKP	SKPdf	21 08 10.6	-14
PMAFR	Mafra	128.92	317	*e*SKP		21 08 11.1	
632A	Uvalde	128.96	56	⇓PKiKP	PKiKP	21 05 24.2	+0.1
	baz=129						
732A	Laxson Ranch,	129.04	57	⇓PKiKP	PKiKP	21 05 24.1	-0.3
	baz=129						
PTEO	Sao Teotonio	129.22	315	*e*SKP	SKPab	21 08 12.6	+1.5
SCHQ	Schefferville	129.23	11	*e*PKPdf	PKPdf	21 05 22.2	-1.0
SCHQ				PKP	PKPdf	21 05 22.9	-0.3
SCHQ				SKPbc	SKPbc	21 08 10.4	-0.4
SCHQ	Schefferville	129.23	11	PKP	PKPdf	21 05 22.9	-0.3
	comp=Z,5.7nm,0.4s,baz=348,slow=2.6,SNR=21						
SCHQ				SKPbc	SKPbc	21 08 10.4	-0.4
	comp=Z,16nm,0.6s,baz=355,slow=4.4,SNR=25						
MORF	Marmelete	129.28	315	*e*SKP	SKPab	21 08 12.9	+1.5
PFVI	Vila Bisbo	129.48	315	*e*SKP	SKPab	21 08 13.6	+1.4
TUL1	Tulsa	129.62	47	⇓PKiKP	PKPdf	21 05 24.8	+0.2
	baz=130						
WHTX	Lake Whitney	129.98	52	⇓PKiKP	PKPdf	21 05 25.6	+0.3
	baz=130						
PLCA	Paso Flores	131.09	161	PKP	PKPdf	21 05 27.6	+0.3
PLCA				SKPbc	SKPab	21 08 18.9	0.0
PLCA	Paso Flores	131.09	161	PKP	PKPdf	21 05 27.6	+0.3
	comp=Z,5.8nm,0.8s,baz=241,slow=2.3,SNR=11						
PLCA				SKPbc	SKPab	21 08 18.9	0.0
	comp=Z,35nm,0.9s,baz=201,slow=5.4,SNR=32						
HDIL	Hopedale	131.58	38	*e*PKPpre	PKPpre	21 05 22.4	
HDIL				*e*SKP		21 08 18.8	
HKT	Hockley	132.03	54	*e*PKIKP	PKPdf	21 05 29.1	-0.1
HKT	Hockley	132.03	54	*e*PKPdf	PKPdf	21 05 29.1	-0.1
HKT				*e*SKP		21 08 22.9	
SLM	Saint Louis	132.08	41	*e*PKIKP	PKPdf	21 05 27.8	-1.3
SLM	Saint Louis	132.08	41	*e*PKPdf	PKPdf	21 05 27.8	-1.3
SLM				*e*SKP		21 08 21.0	
SFIN	Scholer Farm	133.02	37	⇓PKiKP	PKiKP	21 05 31.5	-0.5
	baz=133						
DBIC	Dimbokro	133.09	274	PKP	PKPdf	21 05 33.4	+1.7
DBIC				SKPbc	SKPbc	21 08 25.9	-0.1
DBIC	Dimbokro	133.09	274	PKP	PKPdf	21 05 33.4	+1.7
	comp=Z,3.6nm,0.8s,baz=119,slow=15,SNR=4.7						
DBIC				SKPbc	SKPbc	21 08 25.9	-0.1
	comp=Z,30nm,0.8s,baz=79,slow=3.6,SNR=15						
SADO	Sadowa	134.13	27	PKP	PKPdf	21 05 34.0	+1.2
SADO				SKPbc	SKPbc	21 08 28.1	-0.3
SADO	Sadowa	134.13	27	PKP	PKPdf	21 05 34.0	+1.2
	comp=Z,15nm,0.5s,baz=288,slow=3.3,SNR=12						
SADO				SKPbc	SKPbc	21 08 28.1	-0.3
	comp=Z,61nm,0.8s,baz=296,slow=2.4,SNR=26						
ACSO	Alum Creek Sta	135.50	34	*e*PKPpre	PKPpre	21 05 25.7	
ACSO				*e*PKPdf	PKPdf	21 05 36.2	+0.7
ACSO				*e*SKP		21 08 32.3	
MSNY	Massena	135.75	23	*e*PKPdf	PKPdf	21 05 34.3	-1.4
MSNY				*e*SKP		21 08 32.5	
LONY	Lake Ozonia	136.17	23	*e*PKPdf	PKPdf	21 05 36.5	-0.1
LONY				*e*SKP		21 08 33.7	
PQI	Presque Isle	136.57	16	*e*PKPdf	PKPdf	21 05 34.0	-3.2
PQI				*e*SKP		21 08 32.2	
NCB	Newcomb	136.86	24	*e*PKPpre	PKPpre	21 05 24.0	
NCB				*e*PKPdf	PKPdf	21 05 38.1	+0.2
NCB				*e*SKP		21 08 36.4	
MDV	Middlebury	137.24	23	*e*PKPdf	PKPdf	21 05 38.4	-0.2
LRAL	Lakeview Retre	137.35	45	*e*PKPpre	PKPpre	21 05 20.8	
LRAL				*e*PKPdf	PKPdf	21 05 38.4	-0.7
LRAL				*e*SKP		21 08 38.0	
PMAR	Madeira	137.43	314	*e*SKP	SKPbc	21 08 40.8	+1.6
ACCN	Adirondack Com	137.57	23	*e*PKPdf	PKPdf	21 05 37.6	-1.6
ACCN				*e*SKP		21 08 38.3	
PMOZ	Porto Moniz, M	137.58	315	*e*SKP	SKPbc	21 08 41.3	+1.7
TKL	Tuckaleechee C	138.00	40	PKP	PKPdf	21 05 40.9	+0.6
TKL				SKPbc	SKPbc	21 08 40.4	-0.1
TKL	Tuckaleechee C	138.00	40	PKP	PKPdf	21 05 40.9	+0.6
	comp=Z,37nm,0.6s,baz=146,slow=4.8,SNR=7.9						
TKL				SKPbc	SKPbc	21 08 40.4	-0.1
	comp=Z,6.6nm,0.5s,baz=162,slow=3.9,SNR=7.1						
TRY	Troy	138.12	24	*e*PKPdf	PKPdf	21 05 41.1	+0.9
TRY				*e*SKP		21 08 40.4	
BART	Pico Bartolome	139.50	327	*e*PP	PP	21 08 44.1	+3.0
KMSC	Kings Mountain	139.87	39	⇓PKiKP	PKPdf	21 05 44.5	+0.8
	baz=140						
CBN	Corbin	139.99	32	*e*PKPdf	PKPdf	21 05 37.1	-6.6
PSMN	Pico do Norte,	140.00	326	*e*PP	PP	21 08 45.6	+1.5
CFAA	Coronel Fontan	140.13	158	SKPbc	SKPbc	21 08 47.0	+0.4
CFAA	Coronel Fontan	140.13	158	SKPbc	SKPbc	21 08 47.0	+0.4
	comp=Z,0.7nm,0.3s,baz=229,slow=2.5,SNR=6.2						
ROSA	Rosais	140.40	330	*e*PP	PP	21 08 47.5	+1.2
TIGA	Tifton	140.64	45	⇑PKiKP	PKPdf	21 05 45.5	+0.4
	baz=140						
LCO	Las Campanas	141.40	153	*e*PKPdf	PKPdf	21 05 41.7	-5.3
LCO				*e*SKP		21 08 49.4	
TEIG	Tepich	141.79	64	*e*PKPdf	PKPpre	21 05 42.9	
TEIG				*e*SKP		21 08 48.8	
TEIG				SKPbc	SKPbc	21 08 51.5	+0.4
TEIG	Tepich	141.79	64	PKhKP	PKPpre	21 05 42.8	
	comp=Z,34nm,0.7s,baz=314,slow=6.3,SNR=24						
TEIG				SKPbc	SKPbc	21 08 51.5	+0.4
	comp=Z,43nm,0.9s,baz=334,slow=4.9,SNR=11						
TGUH	Tegucigalpa,Un	144.23	73	*e*PKPdf	PKPbc	21 05 51.2	+0.2
TGUH				*e*SKP		21 08 56.8	
JTS	JuntasAbangare	147.02	79	*e*PKPdf	PKPdf	21 05 57.0	+0.3
JTS				*e*PKPbc	PKPbc	21 06 00.2	+0.9
JTS				*e*pPKPdf	pPKPdf	21 07 24.9	+0.8
LVC	Limon Verde	147.67	150	PKP	PKPdf	21 05 58.8	+0.9
LVC				*e*PKPdf	PKPbc	21 05 59.0	-2.1
LVC				*e*PKPbc	PKiKP	21 06 02.3	-0.5
LVC				PKPbc	PKiKP	21 06 02.7	-0.1
LVC	Limon Verde	147.67	150	PKP	PKPdf	21 05 58.8	+0.9
	comp=Z,54nm,0.6s,baz=283,slow=3.7,SNR=14						
LVC				PKPbc	PKiKP	21 06 02.7	-0.1
	comp=Z,54nm,0.6s,baz=258,slow=2.8,SNR=68						
CPUP	Villa Florida	148.09	171	PKP	PKPdf	21 05 59.3	+1.2
CPUP				PKPbc	PKPbc	21 06 02.5	+0.7
CPUP	Villa Florida	148.09	171	PKP	PKPdf	21 05 59.3	+1.2
	comp=Z,37nm,0.6s,baz=176,slow=2.2,SNR=96						
CPUP				PKPbc	PKPbc	21 06 02.5	+0.7
	comp=Z,37nm,0.6s,baz=175,slow=1.7,SNR=92						
NNA	Nana	149.90	125	*e*PKPdf	PKPdf	21 06 01.6	+0.2
NNA				PKP	PKPdf	21 06 02.2	+0.8
NNA				*e*PKPbc	PKiKP	21 06 07.3	-0.1
NNA				PKPbc	PKiKP	21 06 07.4	0.0
NNA	Nana	149.90	125	PKP	PKPdf	21 06 02.2	+0.8
	comp=Z,112nm,0.8s,baz=305,slow=5.3,SNR=4.8						
NNA				PKPbc	PKiKP	21 06 07.4	0.0
	comp=Z,120nm,0.9s,baz=264,slow=5.7,SNR=39						
BBSR	BB Station	150.62	22	*e*PKPbc	PKPbc	21 06 08.1	+0.3
BBSR				*e*PKPab	PKPab	21 06 16.1	+0.2
ATAH	Atahualpa	150.90	115	PKP	PKPdf	21 06 05.5	+2.1
ATAH				PKPbc	PKiKP	21 06 11.7	+1.7
ATAH	Atahualpa	150.90	115	PKP	PKPdf	21 06 05.5	+2.1
	comp=Z,18nm,1.0s,baz=137,slow=3.7,SNR=7.2						
ATAH				PKPbc	PKiKP	21 06 11.7	+1.7
	comp=Z,131nm,0.7s,baz=184,slow=2.4,SNR=67						
CAM4	Nova Friburgo	150.95	198	⇑*i*P	PKPbc	21 06 10.2	+1.1
CAM4				*i*		21 06 12.5	
CAM4				*i*		21 06 15.9	
CAM4				*i*		21 06 22.2	
CAM4				*i*		21 06 24.2	
CAM4				*i*		21 06 32.0	
CAM4				*i*		21 06 38.8	
BCIP	Isla Barro Col	152.15	81	*e*PKPdf	PKPdf	21 06 04.0	-0.7
BCIP				*e*PKPbc	PKPbc	21 06 11.2	-0.5
BCIP				*e*PKPab	PKPab	21 06 23.4	+0.5
OTAV	Otavalo	153.12	100	*e*PKPdf	PKPdf	21 06 07.8	+1.0
LPAZ	La Paz	153.23	144	*e*PKPdf	PKPdf	21 06 08.1	+1.0
LPAZ				PKP	PKPdf	21 06 08.3	+1.2
LPAZ				*e*PKPbc	PKiKP	21 06 15.8	+0.9
LPAZ				*e*PKPab	PKPab	21 06 29.6	+1.5
LPAZ	La Paz	153.23	144	PKP	PKPdf	21 06 08.3	+1.2
	comp=Z,13nm,1.0s,baz=255,slow=0.3,SNR=46						
LPAZ				PKPbc	PKiKP	21 06 15.9	+0.9
	comp=Z,24nm,0.7s,baz=190,slow=3.3,SNR=50						
LPAZ				PKPab	PKPab	21 06 29.6	+1.5
	comp=Z,13nm,0.7s,baz=179,slow=8.8,SNR=4.0						
SIV	San Ignacio	156.98	157	PKP	PKPdf	21 06 12.6	+1.2
SIV				PKPab	PKPab	21 06 44.0	+0.7
SIV	San Ignacio	156.98	157	PKP	PKPdf	21 06 12.6	+1.2
	comp=Z,5.0nm,0.7s,baz=222,slow=1.0,SNR=26						
SIV				PKPab	PKPab	21 06 44.0	+0.7
	comp=Z,6.4nm,0.5s,baz=214,slow=4.0,SNR=13						
ROSC	El Rosal	157.77	90	*e*PKPdf	PKPdf	21 06 13.7	+0.8
ROSC				PKP	PKPdf	21 06 14.1	+1.1
ROSC				PKPab	PKPab	21 06 49.8	+2.2
ROSC	El Rosal	157.77	90	PKP	PKPdf	21 06 14.1	+1.1
	comp=Z,16nm,0.7s,baz=98,slow=20,SNR=6.4						
ROSC				PKPab	PKPab	21 06 49.8	+2.2
	comp=Z,10nm,0.4s,baz=76,slow=22,SNR=7.8						
BDFB	Brasilia	158.77	191	PKP	PKPdf	21 06 14.7	+1.0
BDFB	Brasilia	158.77	191	PKP	PKPdf	21 06 14.7	+1.0
	comp=Z,2.9nm,0.5s,baz=101,slow=5.9,SNR=5.4						
CELP	Cerrillos	160.96	47	*e*PKPab	PKPab	21 07 00.4	-0.3
OBIP	Obispado Ponce	160.96	47	*e*PKPab	PKPab	21 07 00.4	-0.3
SJG	San Juan	161.25	46	*e*PKPdf	PKPdf	21 06 14.8	-1.4
SJG				*e*PKPab	PKPab	21 07 01.5	-0.4
MTP	Monte Pirata	161.68	45	*e*PKPdf	PKPdf	21 06 15.6	-1.1
MTP				*e*PKPab	PKPab	21 07 03.5	-0.3
STVI	Saint Thomas	161.93	43	*e*PKPab	PKPab	21 07 03.4	-1.5
SAML	Samuel	161.95	142	*e*PKPdf	PKPdf	21 06 16.8	-0.3
SAML				*e*PKPab	PKPab	21 07 04.7	-0.3
CDVI	St. Croix	162.47	44	*e*PKPab	PKPab	21 07 06.2	-1.0
SEG	Port Louis	165.60	40	*e*P	PKPab	21 07 24.4	+3.3
LZG	Guadaloupe-1	165.62	41	*e*P	PKPab	21 07 21.3	+0.1
PHG	Guadaloupe-2	165.80	41	*e*P	PKPab	21 07 22.6	+0.5
TBG	Guadaloupe-3	165.92	41	*e*P	PKPab	21 07 22.9	+0.4
MGG	Marie-Galante	166.08	40	*e*P	PKPab	21 07 24.6	+1.4

WEL 12 20:49:02.1±0.1, 39°.75S×176°.59E, h32km±1km, ML2.6/2, 2C-2D, Error ellipse: s-maj=1.6km s-min=0.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAHZ	Kahuranaki	0.23	101	⇑P*	Pb	20 49 08.5	-0.4
KAHZ				S*	Sb	20 49 13.5	0.0
MCHZ	McNeill Hill	0.32	16	P*	Pb	20 49 09.7	-0.2
MCHZ				S*	Sn	20 49 16.4	+0.2
MCHZ	McNeill Hill	0.32	16	PN	Sn	20 49 16.4	+0.3
WPHZ	Waipukurau	0.33	200	P*	Pb	20 49 10.3	+0.2
PNHZ	Pukenui	0.34	241	⇓P*	Pb	20 49 10.1	-0.1
BHHZ	Black Hill Sta	0.48	303	P*	Pb	20 49 12.0	-0.4
TSZ	Takapari Road	0.57	237	⇓PN	Pb	20 49 13.6	-0.2
BKZ	Black Stump Fm	0.59	353	PN	Pb	20 49 13.6	-0.5
BKZ				SN	Sn	20 49 23.0	+0.1
BKZ				AML	AML	20 49 24.0	
DVHZ	Dannevirke	0.64	210	PN	Pb	20 49 14.4	-0.4
NMHZ	Naumai	0.67	15	PN	Pb	20 49 15.5	0.0
MOVZ	Moawhango	0.73	298	PN	Pn	20 49 16.3	0.0
TUVZ	Tukino	0.87	303	PN	Pb	20 49 19.0	+0.2
FWVZ	Far West T-bar	0.94	301	⇑PN	Pb	20 49 20.1	0.0
MRZ	Mangatainoka R	1.19	220	PN	Pn	20 49 21.6	-1.0
WAZ	Wanganui	1.23	269	PN	Pb	20 49 25.6	+0.8

WEL 12 20:49:04.7±0.1, 40°.06S×176°.90E, h38km±1km, ML3.3/4, 2C-2D, Error ellipse: s-maj=1.9km s-min=1.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PXZ	Pawanui	0.04	311	PN	Pn	20 49 10.3	-0.5
PXZ				SN	Sn	20 49 15.2	+0.2
PXZ				AML	AML	20 49 15.8	
PXZ				AML	AML	20 49 15.8	
PXZ				AML	AML	20 49 15.9	
KAHZ	Kahuranaki	0.26	356	⇓PN	Pn	20 49 12.1	-1.0
KAHZ				SN	Sn	20 49 17.8	-2.7
PRHZ	Porangahau	0.29	224	P*	Pn	20 49 12.9	0.0
PRHZ	Porangahau	0.29	224	PN	Pn	20 49 12.9	0.0
PRHZ				SN	Sn	20 49 19.2	-0.8
WPHZ	Waipukurau	0.35	269	PN	Pn	20 49 13.1	-0.1
WPHZ				SN	Sn	20 49 19.3	-0.7
PNHZ	Pukenui	0.56	285	⇑PN	Pn	20 49 15.5	-0.8
PNHZ				SN	Sn	20 49 23.7	-0.7
DVHZ	Dannevirke	0.61	247	PN	Pn	20 49 16.7	-0.3
DVHZ				SN	Sn	20 49 25.7	0.0
TSZ	Takapari Road	0.72	270	PN	Pn	20 49 17.8	-0.6
TSZ				AML	AML	20 49 27.8	
TSZ				AML	AML	20 49 28.3	
BFZ	Birch Farm	0.80	219	PN	Pn	20 49 19.5	+0.1
BHHZ	Black Hill Sta	0.86	311	⇑PN	Pn	20 49 19.7	-0.6
POWZ	Post Office Ro	0.93	249	PN	Pn	20 49 21.2	0.0
BKZ	Black Stump Fm	0.94	340	⇓PN	Pn	20 49 21.3	-0.2
NMHZ	Naumai	0.96	356	PN	Pn	20 49 22.3	+0.5
TIWZ	Tintock	1.06	227	PN	Pn	20 49 22.9	-0.1
MOVZ	Moawhango	1.10	306	PN	Pn	20 49 23.4	-0.2
RAHZ	Arahi	1.15	7	PN	Pn	20 49 24.2	-0.1
MRZ	Mangatainoka R	1.18	239	PN	Pn	20 49 24.4	-0.2
MRZ				AML	AML	20 49 39.8	
MRZ				AML	AML	20 49 40.9	
KNZ	Kokohu	1.20	30	PN	Pn	20 49 24.6	-0.2
TMWZ	Te Maipa	1.30	216	PN	Pn	20 49 26.0	-0.4
HOWZ	Holdsworth Sta	1.35	231	PN	Pn	20 49 26.4	-0.6
WPVZ	Whakapapa	1.35	309	PN	Pn	20 49 27.0	-0.1
KRVZ	Karewarewa	1.37	314	PN	Pn	20 49 28.3	+0.9
WAZ	Wanganui	1.50	281	PN	Pn	20 49 30.2	+1.1
OGWZ	Otaki Gorge	1.52	240	PN	Pn	20 49 29.0	-0.3
MTW	Mount Morrison	1.53	224	PN	Pn	20 49 28.5	-0.9
KIW	Kapiti Island	1.72	242	PN	Pn	20 49 31.6	-0.5
CAW	Cannon Point	1.75	232	PN	Pn	20 49 31.4	-1.0
MWZ	Matawai	1.79	16	PN	Pn	20 49 32.3	-0.8
MWZ				AML	AML	20 49 56.0	
PLWZ	Palliser	1.96	219	PN	Pn	20 49 33.6	-1.8
TCW	Tory Channel	2.31	239	PN	Pn	20 49 39.0	-1.1
TUWZ	Tuamarina	2.63	238	PN	Pn	20 49 43.2	-1.4
NNZ	Nelson	2.92	245	PN	Pn	20 49 47.6	-0.9

ISCJB ***12*** *21:00:36.6±0.7, 39°.52N±0°.05×73°.24E±0°.08, h14km, Error ellipse: s-maj=9.8km s-min=5.9km az=155.6*

NNC ***12*** *21:00:41.8±2.5, 39°.96N×73°.51E, h0km, mb4.2, mpv3.8, Error ellipse: s-maj=20.5km s-min=9.9km az=173.0*

ISC 12 21:00:38.0±0.9, 39°.64N±0°.06×73°.43E±0°.07, h14km, n21, σ1s.95/24, 8C-7D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	1.97	93	Pg	Pn	21 01 01.4	-10
KSH				Sg	Sn	21 01 20.6	-15
KSH				smax	smax		
	comp=N,680nm,0.4s						
KSH				smax	smax		
	comp=E,750nm,0.3s						
AML	Almayashu	2.49	4	P	Pn	21 01 20.5	+2.0
	SNR=50						
UCH	Uchtor	2.71	17	P	Pn	21 01 23.0	+1.4
	SNR=17						
KZA	Kyzart	2.79	29	P	Pn	21 01 25.0	+2.3
	SNR=22						
EKS2	Erkin-Say	3.03	5	P	Pn	21 01 28.3	+2.6
	SNR=18						
AAK	Ala-Archa	3.09	15	P	Pn	21 01 28.4	+1.9
	SNR=12						
KBK	Karagaybulak	3.22	20	P	Pn	21 01 31.3	+3.0
	SNR=15						
ULHL	Ulahol	3.36	38	P	Pn	21 01 31.1	+0.8
	SNR=15						
CHMS	Chumysh	3.50	16	P	Pn	21 01 33.4	+1.4
	SNR=12						
TKM2	Tokmak 2	3.66	26	⇓Pn	Pn	21 01 34.4	0.0
	comp=E,27nm,0.9s						
TKM2				⇑Sn	Sn	21 02 16.4	-1.1
	comp=E,10nm,0.5s						
TKM2				⇓Lg	Lg	21 02 29.2	
	comp=E,51nm,0.6s						
TKM2	Tokmak 2	3.66	26	P	Pn	21 01 37.1	+2.7
	SNR=6.4						
USP	Ospenovka	3.71	12	P	Pn	21 01 36.7	+1.7
	SNR=18						
KK31	Karatay Array	4.09	329	Pn	Pn	21 01 44.4	+4.1
	comp=E,3.9nm,0.3s,baz=130,slow=12,SNR=139						
KK31				⇑Pg	Pg	21 01 54.7	-1.8

	comp=E,11nm,0.3s,baz=142,slow=16,SNR=24						
KK31				⇑Sn	Sb	21 02 35.7	-3.6
	comp=E,19nm,0.5s,baz=143,slow=25,SNR=5.5						
KK31				⇓Lg	Lg	21 02 45.6	
	comp=E,33nm,0.5s,baz=143,slow=30						
KNDC	Almaty	4.45	36	⇑Pn	Pn	21 01 48.7	+3.5
	comp=E,5.3nm,0.3s						
KNDC				⇓Pg	Pg	21 02 01.3	-2.0
	comp=E,18nm,0.5s						
KNDC				⇓Lg	Lg	21 02 51.9	
	comp=E,142nm,0.7s						
DHRM	DHARAMSHALA	7.74	162	*e*PKP	Pn	21 02 29.9	-0.6
DHRM				*e*S	Sn	21 03 58.7	+0.8
DHRM				AML	AML	21 04 33.2	
	comp=E,48nm,0.9s						
DHRM				AML	AML	21 04 33.4	
	comp=N,46nm,0.1s						
SMLA	Simla	9.03	159	*e*PKP9	Pn	21 02 46.5	-1.4
SMLA				*e*S	Sn	21 04 14.1	-15
SMLA				AML	AML	21 04 28.8	
	comp=E,31nm,0.2s						
SMLA				AML	AML	21 04 28.9	
	comp=N,32nm,1.5s						
DDI	Dehra Dun	10.04	156	*e*S	Px	21 03 35.5	
DDI				AML	AML	21 04 55.1	
	comp=N,90nm,1.1s						
DDI				AML	AML	21 04 58.9	
	comp=E,92nm,0.1s						
BVA0	Borovoye Array	13.55	352	⇓Pn	Pn	21 03 51.5	+1.8
	comp=E,2.2nm,0.6s,baz=161,slow=11,SNR=5.3						
AB31	Akbulak array	13.59	319	⇑Pn	Pn	21 03 50.6	+0.4
	comp=E,1.6nm,0.6s,baz=125,slow=14,SNR=22						
AB31				⇑Sn	Sn	21 06 22.2	+1.3
	comp=E,0.4nm,0.4s						
BRVK	Borovoye	13.59	352	⇑Pn	Pn	21 03 52.0	+1.8
	comp=E,4.3nm,0.6s						
AKTO	Aktyubinsk	15.30	320	⇓Pn	Pn	21 04 13.7	+0.2
	comp=E,3.7nm,1.1s						
AKTO				⇑Sn	Sn	21 07 04.6	+2.0
	comp=E,4.2nm,2.0s						

PLV 12 21:01:17.3±2.1, 23°.83N×102°.45E, h0km±999km, MD3.6, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGV	Tuan Giao	2.40	158	*e*Pg	Pg	21 02 03.3	+0.1
TGV				*e*Sg	Sg	21 02 33.3	-1.1
DBV	Dienbien	2.48	168	*e*Pg	Pg	21 02 05.0	0.0
DBV				*e*Sg	Sg	21 02 37.0	-0.3
SLVN	Son La	2.82	151	*e*Pg	Pg	21 02 11.4	-0.1
SLVN				*e*Sg	Sg	21 02 49.9	+1.7
TTVN	Tram Tau	2.93	143	*e*Pg	Pg	21 02 12.8	-0.7
TTVN				*e*Sg	Sg	21 02 51.4	0.0
MCVV	Moc Chau	3.63	146	*e*Pg	Pg	21 02 26.7	-0.4
MCVV				*e*Sg	Sg	21 03 13.2	-1.1

*ISCJB **12** 21:08:54.5±0.6, 12°.61N±0°.07×47°.36E±0°.04, h14km, mb3.9/14, MS3.4/6, Error ellipse: s-maj=9.8km s-min=5.3km az=12.2*

*IDC **12** 21:08:54.2±0.9, 12°.62N×47°.49E, h0km, mb3.9/14, mb1 4.0/16, mb1mx3.9/30, mbtmp3.9/16, ML3.3/2, MS3.4/7, Ms1 3.5/7, ms1mx3.1/38, Error ellipse: s-maj=21.3km s-min=17.8km az=177.0*

*DHMR **12** 21:08:55.8±1.0, 12°.58N×47°.07E, h10km, ML4.1*

ISC 12 21:08:55.8±0.8, 12°.54N±0°.09×47°.28E±0°.06, h14km, n25, σ1s.44/28, mb4.0/14, MS3.4/6, 2C-1D, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDHA	Al Bayda'	2.19	311	⇑*i*P	Pn	21 09 31.9	-0.1
BDHA				*i* S	Sn	21 09 58.8	-0.4
BDHA				AML	AML	21 10 00.8	
	comp=N,3μm,0.6s						
ADEN	Aden	2.25	276	⇑*i*P	Pn	21 09 31.4	-1.2
ADEN				*i* S	Sn	21 10 00.1	-0.1
ADEN				AML	AML	21 10 01.2	
	comp=N,1μm,0.5s						
LBOS		2.38	304	⇓*i*P	Pn	21 09 34.5	-0.2
LBOS				*i* S	Sn	21 10 03.8	0.0
TRBA	At Turbah	3.16	283	*i* P	Pn	21 09 45.3	0.0
TRBA				*i* S	Sn	21 10 24.6	+1.6
UDYN	Al 'Udayn	3.52	294	*i* P	Pn	21 09 50.0	-0.3
UDYN				*i* S	Sn	21 10 32.7	+0.8
ATD	Arta Tunnel	4.45	257	Pn	Pn	21 10 04.6	+1.7
	comp=N,2.8nm,0.3s,baz=56,slow=5.9,SNR=14						
ATD				Sn	Sb	21 11 03.4	-4.0
	comp=N,2.9nm,0.3s,baz=241,slow=23,SNR=5.8						
HAJJ	Hajjah	4.75	312	*i* S	Sn	21 11 03.9	+1.6
HAJJ				AML	AML	21 11 26.3	
	comp=N,406nm,0.5s						
KMBO	Kilima Mbogo	16.83	217	P	P	21 12 53.7	+0.2
	comp=N,0.1nm,0.3s,baz=43,slow=13,SNR=9.8						
KMBO				LR	LR	21 18 59.0	
	comp=N,97nm,19.7s,baz=90,slow=36						
EIL	Elat	20.53	328	LR	LR	21 20 28.9	
	comp=N,154nm,20.8s,baz=115,slow=34						
ASF	Jabal al Asfar	21.75	336	P	P	21 13 48.4	+1.4
	comp=N,0.6nm,0.3s,baz=28,slow=10.0,SNR=6.9						
ASF				LR	LR	21 22 40.2	
	comp=N,147nm,19.1s,baz=275,slow=38						
MMAI	Mount Meron Ar	23.10	334	LR	LR	21 21 48.1	
	comp=N,43nm,20.1s,baz=180,slow=34						
GNI	Garni	27.59	356	P	P	21 14 43.4	+0.6
	comp=N,1.2nm,0.4s,baz=76,slow=17,SNR=2.7						
GNI				LR	LR	21 27 08.0	
	comp=N,124nm,18.2s,baz=102,slow=40						
BRTR	Keskin Array B	29.64	338	P	P	21 15 02.1	+1.1
	comp=N,0.5nm,0.8s,baz=150,slow=11,SNR=3.6						
KBZ	Khabaz	31.31	354	P	P	21 15 16.4	+0.9
	comp=N,1.0nm,0.8s,baz=104,slow=4.2,SNR=2.8						
TORD	Torodi Ar. Bea	44.40	276	P	P	21 17 08.3	+1.9
	comp=N,2.0nm,0.9s,baz=91,slow=7.9,SNR=7.6						
MKAR	Makanchi Array	45.07	34	P	P	21 17 10.4	-1.0
	comp=N,1.3nm,0.7s,baz=216,slow=7.8,SNR=9.7						
GERES	GERESS Array B	45.62	329	P	P	21 17 15.8	0.0
	comp=N,1.0nm,0.8s,baz=120,slow=7.9,SNR=5.5						
CMAR	Chiang Mai Arr	50.00	76	P	P	21 17 49.8	-0.4
	comp=N,1.3nm,0.7s,baz=271,slow=9.2,SNR=7.8						
ZALV	Zalesovo Beam	50.83	28	P	P	21 17 53.6	-2.1
	comp=N,2.7nm,0.6s,baz=224,slow=8.3,SNR=10.0						
FINES	FINESS Array B	51.20	347	P	P	21 18 00.6	+2.2
	comp=N,2.2nm,0.7s,baz=206,slow=6.0,SNR=3.3						
NOA	NORSAR Array B	55.07	340	LR	LR	21 45 08.5	
	comp=N,32nm,18.6s,baz=90,slow=40						
ARCES	ARCESS Array B	58.61	351	P	P	21 18 51.4	-0.6
	comp=N,0.9nm,0.7s,baz=135,slow=18,SNR=2.9						
ARCES				LR	LR	21 47 06.8	
	comp=N,56nm,20.1s,baz=322,slow=39						
SONM	Songino Array	60.19	42	P	P	21 19 01.3	-2.2
	comp=N,0.7nm,0.8s,baz=260,slow=7.2,SNR=3.7						
WRA	Warramunga Arr	91.49	110	P	P	21 22 02.5	0.0
	comp=N,1.2nm,0.7s,baz=296,slow=3.7,SNR=4.2						
ASAR	Alice Springs	91.92	114	P	P	21 22 05.9	+1.5
	comp=N,0.4nm,0.8s,baz=293,slow=4.9,SNR=5.1						

MAN 12 21:19:08, 11°.93N×124°.94E, h68km, mb4.3, ML3.1, MS2.9, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.58	124	*e*P	Pn	21 19 23.3	+1.8
BESP				*e*S	Sn	21 19 35.3	+3.8
CNP	Catarman	0.64	335	*e*P	Pn	21 19 24.2	+2.1
CNP				*e*S	Sn	21 19 36.0	+3.5
PLP	Palo	0.76	177	⇓*e*P	Pn	21 19 25.4	+1.9
PLP				*e*S	Sn	21 19 37.9	+3.0

*ISCJB **12** 21:21:00.1±0.9, 36°.73N±0°.04×141°.24E±0°.07, h42km±8km, mb3.5/7, MS3.0/1, Error ellipse: s-maj=10.5km s-min=6.1km az=21.6*

*NIED **12** 21:21:00, 36°.80N×141°.20E, h41km, Mw3.7 Best double couple: M0 4.32000×10^14 NP1: φs221.00000°, δ52.00000°, λ79.00000°. NP2: φs58.00000°, δ39.00000°, λ103.00000°.*

*JMA **12** 21:21:01.3±0.1, 36°.74N×141°.12E, h42km±1km, M3.8 Broadband fault plane solution: P waves. NP1: φs62.00000°, δ69.00000°, λ99.00000°. NP2: φs218.00000°, δ23.00000°, λ68.00000°. Principal axes: T Plg65.0000°, Azm347.0000°; N Plg8.0000°, Azm239.0000°; P Plg23.0000°, Azm145.0000°;*

JMA Felt II J1.

*IDC **12** 21:21:04.4±3.4, 36°.67N×141°.12E, h63km±29km, mb3.4/7, mb1 3.6/9, mb1mx3.4/28, mbtmp3.5/9, ML3.5/2, MS2.8/2, Ms1 3.0/2, ms1mx2.4/31 Error ellipse: s-maj=27.8km s-min=17.2km az=57.0*

ISC 12 21:21:01.3±1.0, 36°.77N±0°.04×141°.17E±0°.06, h33km±3km, n22, σ0s.99/33, mb3.6/7, 1C-6D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.45	318	⇓P	Pb	21 21 11.0	-0.2
ONAJ				S	Sb	21 21 17.6	-0.3
JHO	Hitachi	0.51	252	⇑P	Pb	21 21 11.6	-0.5
JHO				S	Sb	21 21 18.7	-0.8
JFK	Kawauchi	0.64	338	⇓P	Pb	21 21 13.8	-0.5
JFK				S	Sb	21 21 22.3	-0.8
JYT	Yasato	0.95	236	P	Pn	21 21 17.7	-0.7
JYT				S	Sn	21 21 29.1	-1.7
JFT	Otama	1.00	319	⇓P	Pb	21 21 19.8	-0.4
JFT				S	Sb	21 21 32.7	-0.4
JMM	Marumori	1.14	345	⇓P	Pn	21 21 20.8	-0.1
JMM				S	Sn	21 21 35.4	+0.1
JFY	Yanaizu	1.33	299	⇓P	Pn	21 21 24.1	+0.5
JFY				S	Sb	21 21 42.1	-0.5
JAG	Ashikaga	1.42	257	⇓P	Pn	21 21 24.7	-0.2
JAG				S	Sn	21 21 41.4	-1.0
JKT	Katashina	1.54	270	P	Pn	21 21 27.1	+0.5
JKT				S	Sn	21 21 45.9	+0.4
MJAR	Matsushiro Arr	2.39	265	P	Pn	21 21 39.2	+1.0
	7.1nm,0.3s,baz=87,slow=15,SNR=98						
MJAR				S	Sn	21 22 08.8	+2.4
	9.6nm,0.3s,baz=103,slow=20,SNR=11						
MAT	Matsushiro	2.39	265	P	Pn	21 21 39.5	+1.3
MAT				S	Sn	21 22 08.3	+1.9
JHJ	Hachijo jima 2	3.82	198	P	Pn	21 21 59.1	+1.3
	15nm,0.3s,baz=66,slow=20,SNR=13						
ASAJ	Asahikawa	7.42	8	LR	LR	21 26 03.0	
	comp=Z,50nm,20.4s,baz=184,slow=40						
SONM	Songino Array	27.77	304	P	P	21 26 46.9	-0.2
	0.4nm,0.5s,baz=107,slow=8.1,SNR=2.9						
CMAR	Chiang Mai Arr	41.24	255	LR	LR	21 47 19.9	
	comp=Z,20nm,18.7s,baz=160,slow=38						
ZALV	Zalesovo Beam	41.95	313	P	P	21 28 47.9	-0.8
	0.7nm,0.4s,baz=79,slow=7.7,SNR=3.6						
MKAR	Makanchi Array	44.09	302	P	P	21 29 06.5	+0.2
	0.3nm,0.6s,baz=97,slow=6.2,SNR=4.4						
KURBB	Kurchatov Arra	46.01	308	P	P	21 29 21.7	+0.3
	1.5nm,0.6s,baz=87,slow=7.9,SNR=7.4						
ILAR	Eielson Array	49.82	32	P	P	21 29 51.5	+0.8
	0.5nm,0.7s,baz=271,slow=5.9,SNR=4.5						
WRA	Warramunga Arr	56.77	188	P	P	21 30 41.0	-1.2
	0.6nm,0.8s,baz=5.1,slow=7.6,SNR=5.3						
WRA				pP	pP	21 30 52.8	+0.5
	1.1nm,0.7s,baz=4.2,slow=7.4,SNR=7.4						
ASAR	Alice Springs	60.50	188	P	P	21 31 07.0	-1.1
	0.2nm,0.8s,baz=16,slow=7.0,SNR=3.2						
ASAR				pP	pP	21 31 19.9	+1.6
	0.4nm,0.7s,baz=17,slow=6.8,SNR=5.1						
LPAZ	La Paz	146.99	60	PKPbc	PKPbc	21 40 41.9	+0.1
	0.7nm,0.6s,baz=295,slow=2.5,SNR=4.6						

IDC 12 21:27:22.8±1.1, 3°.37S×145°.26E, h0km, mb4.0/8, mb1 4.2/10, mb1mx4.0/20, mbtmp4.0/10, ML3.6/2, MS3.1/4, Ms1 3.1/4, ms1mx2.8/28, Error ellipse: s-maj=36.9km s-min=17.6km az=94.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.28	163	Pn	Pn	21 28 58.0	+1.2
	1.2nm,0.3s,baz=333,slow=18,SNR=3.8						
PMG				Sn	Sn	21 30 07.0	-2.4
	1.2nm,0.3s,baz=162,slow=20,SNR=3.8						
PMG				LR	LR	21 30 46.7	
	comp=Z,52nm,21.1s,baz=322,slow=32						
WRA	Warramunga Arr	19.62	212	P	P	21 31 52.3	-0.7
	0.6nm,0.3s,baz=31,slow=11,SNR=22						
ASAR	Alice Springs	22.97	208	P	P	21 32 28.4	-0.7
	3.7nm,0.6s,baz=35,slow=9.9,SNR=64						
ASAR				LR	LR	21 41 31.3	
	comp=Z,75nm,21.4s,baz=7.0,slow=37						
FITZ	Fitzroy Crossi	24.16	231	P	P	21 32 39.6	-1.3
	9.6nm,0.9s,baz=65,slow=8.6,SNR=36						
STKA	Stephens Creek	28.56	187	P	P	21 33 21.9	+1.3
	3.7nm,0.9s,baz=17,slow=13,SNR=2.5						
STKA				LR	LR	21 46 29.8	
	comp=Z,56nm,18.7s,baz=23,slow=40						
KSRS	Korea Array	43.70	340	LR	LR	21 52 30.1	
	comp=Z,23nm,19.1s,baz=334,slow=34						
CMAR	Chiang Mai Arr	50.50	297	P	P	21 36 24.6	+1.5
	1.1nm,0.8s,baz=124,slow=6.5,SNR=5.2						
MKAR	Makanchi Array	74.38	321	P	P	21 39 03.4	+0.7
	0.9nm,0.9s,baz=139,slow=5.8,SNR=5.6						
ZALV	Zalesovo Beam	75.88	328	P	P	21 39 10.6	-0.4
	0.4nm,0.5s,baz=122,slow=5.2,SNR=2.7						
KURBB	Kurchatov Arra	78.10	323	P	P	21 39 23.7	0.0
	0.7nm,0.8s,baz=105,slow=5.2,SNR=7.4						
ILAR	Eielson Array	83.77	24	P	P	21 39 52.8	-0.9
	1.7nm,0.8s,baz=254,slow=5.2,SNR=12						
TORD	Torodi Ar. Bea	142.71	287	PKhKP	PKPpre	21 46 54.5	
	0.6nm,1.0s,baz=74,slow=2.6,SNR=2.4						

*NIED **12** 21:33:00, 28°.50N×142°.50E, h5km, Mw4.1 Best double couple: M0 1.78000×10^15 NP1: φs198.00000°, δ85.00000°, λ98.00000°. NP2: φs319.00000°, δ9.00000°, λ32.00000°.*

*IDC **12** 21:33:47.2±1.6, 28°.29N×142°.86E, h0km, mb4.0/13, mb1 4.1/16, mb1mx3.9/29, mbtmp4.0/16, ML3.5/3, MS3.0/2, Ms1 3.0/2, ms1mx2.5/30, Error ellipse: s-maj=68.3km s-min=14.9km az=76.0*

*JMA **12** 21:33:50.2±0.2, 28°.54N×142°.47E, h16km, M4.3*

*NEIC **12** 21:33:52.2±0.8, 28°.37N×142°.93E, h35km, mb4.3/6, Error ellipse: s-maj=34.1km s-min=7.6km az=74.0*

ISC 12 21:33:52.4±0.9, 28°.45N±0°.05×142°.8E±0°.2, h34km, n53, σ1s.49/64, mb4.2/20, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.46	203	P	Pn	21 34 16.1	-0.3
CBIJ				*e*S	Sn	21 34 31.4	-2.9
JHHJ	Haha-jima-NKT	1.90	198	P	Pn	21 34 23.0	+0.6
JHJ2	Mitsune	5.32	332	P	Pn	21 35 08.8	-0.6
JHJ2				*e*S	Sn	21 36 06.0	-3.5
BSO1	Boso 1	6.38	346	P	Pn	21 35 23.2	-0.3
BSO1				*e*S	Sn	21 36 31.5	-3.4
BSO3	Boso 3	6.63	343	P	Pn	21 35 27.2	0.0
JOD2	Odawara 2	7.50	336	P	Pn	21 35 39.6	+0.2
JOD2				*e*S	Sn	21 37 01.3	-1.9
JHU	Hanno	7.96	339	P	Pn	21 35 45.8	0.0
JHU				*e*S	Sn	21 37 11.0	-3.7
JRY	Ryogami san	8.24	337	P	Pn	21 35 49.9	+0.3
JRY				*e*S	Sn	21 37 21.1	-0.4
JHO	Hitachi	8.36	347	P	Pn	21 35 49.8	-1.3
JHO				*e*S	Sn	21 37 18.1	-6.2
JAG	Ashikaga	8.45	341	P	Pn	21 35 51.6	-0.8
JAG				*e*S	Sn	21 37 21.5	-5.0
MJAR	Matsushiro Arr	8.96	335	Pn	Pn	21 35 58.7	-0.7
MJAR				Sn	Sn	21 37 40.3	+1.2
MJAR	Matsushiro Arr	8.96	335	Pn	Pn	21 35 58.7	-0.7
	2.1nm,0.3s,baz=15,slow=14,SNR=21						
MJAR				Sn	Sn	21 37 40.3	+1.2
	0.4nm,0.3s,baz=285,slow=18,SNR=3.8						
MAJO	Matsushiro	8.96	335	*e*Pn	Pn	21 35 60.0	+0.5
	8.0nm,0.5s						
MAT	Matsushiro	8.96	335	P	Pn	21 36 00.2	+0.8
MAT				S	Sn	21 37 38.1	-1.0
MAT	Matsushiro	8.96	335	P	Pn	21 36 00.0	+0.6
JMK	Ichinoseki	10.56	353	P	Pn	21 36 19.7	-1.6
JMK				*e*S	Sn	21 38 09.2	-9.1
JNU	Nakatsue	11.27	297	LR	LR	21 40 39.7	
	comp=Z,49nm,18.8s,baz=257,slow=36						
KSRS	Korea Array	15.38	310	Pn	P	21 37 29.1	-2.0
	0.4nm,0.3s,baz=118,slow=12,SNR=6.1						
KSRS				LR	LR	21 43 33.9	
	comp=Z,61nm,18.1s,baz=342,slow=38						
KSAR	Wonju Array Be	15.40	309	Pn	P	21 37 29.1	-2.2
USRK	Ussuriysk Arra	17.95	334	P	P	21 38 01.3	+1.8
	0.2nm,0.3s,baz=168,slow=28,SNR=4.0						
SONM	Songino Array	34.15	315	P	P	21 40 35.4	+1.0
SONM	Songino Array	34.15	315	P	P	21 40 35.4	+1.0
	0.4nm,0.4s,baz=123,slow=7.6,SNR=3.3						
WRAB	Tennant Creek	48.79	191	*e*P	P	21 42 33.9	-0.4
	4.4nm,0.7s						
WRA	Warramunga Arr	48.80	191	P	P	21 42 33.5	-0.9
WRA	Warramunga Arr	48.80	191	P	P	21 42 33.5	-0.9
	4.8nm,0.7s,baz=12,slow=8.4,SNR=17						
ZALV	Zalesovo Beam	48.84	318	P	P	21 42 35.8	+1.3
ZALV				PcP	PcP	21 43 59.6	+1.0
ZALV	Zalesovo Beam	48.84	318	P	P	21 42 35.8	+1.3
	0.5nm,0.4s,baz=99,slow=9.3,SNR=4.7						
ZALV				PcP	PcP	21 43 59.6	+1.0
	0.7nm,0.5s,baz=118,slow=4.1,SNR=4.1						
FITZ	Fitzroy Crossi	49.17	202	P	P	21 42 36.5	-0.8
FITZ	Fitzroy Crossi	49.17	202	P	P	21 42 36.5	-0.8
	1.2nm,0.8s,baz=360,slow=11,SNR=5.7						
MKAR	Makanchi Array	50.06	309	P	P	21 42 44.2	+0.4
MKAR	Makanchi Array	50.06	309	P	P	21 42 44.2	+0.4
	0.7nm,0.5s,baz=88,slow=9.6,SNR=10						
KURK	Kurchatov	52.45	314	*e*P	P	21 43 02.1	+0.5
	11nm,1.1s						
KURBB	Kurchatov Arra	52.51	314	P	P	21 43 03.0	+0.9
	3.6nm,0.8s,baz=90,slow=7.3,SNR=38						
ASAR	Alice Springs	52.52	190	P	P	21 42 59.9	-2.5
ASAR	Alice Springs	52.52	190	P	P	21 42 59.9	-2.5
	0.4nm,0.7s,baz=7.8,slow=5.5,SNR=8.6						
BRVK	Borovoye	57.49	317	*e*P	P	21 43 37.7	-0.3
	1.8nm,0.6s						
KKAR	Karatay Array	58.76	305	*e*P	P	21 43 47.8	+0.6
	1.4nm,0.5s						
STKA	Stephens Creek	60.00	181	P	P	21 43 54.9	-0.7
STKA	Stephens Creek	60.00	181	P	P	21 43 54.9	-0.7
	3.1nm,0.9s,baz=31,slow=10,SNR=2.9						
ABKAR	Akbulak array	64.56	314	*e*P	P	21 44 26.6	+0.5
	0.8nm,0.4s						
AKTO	Aktyubinsk	65.46	316	P	P	21 44 32.1	+0.2
AKTO	Aktyubinsk	65.46	316	P	P	21 44 32.1	+0.2
	1.3nm,0.6s,baz=72,slow=9.6						
ARCES	ARCESS Array B	72.45	341	P	P	21 45 16.6	+1.6
ARCES	ARCESS Array B	72.45	341	P	P	21 45 16.6	+1.6
	1.8nm,0.7s,baz=41,slow=11,SNR=5.2						
FINES	FINESS Array B	76.98	334	P	P	21 45 42.1	+0.8
FINES	FINESS Array B	76.98	334	P	P	21 45 42.1	+0.8
	0.5nm,0.3s,baz=328,slow=6.9,SNR=3.3						
KBZ	Khabaz	77.50	313	P	P	21 45 45.3	+0.7
KBZ	Khabaz	77.50	313	P	P	21 45 45.3	+0.7
	2.2nm,0.7s,baz=84,slow=2.4,SNR=5.5						
MIB	Mutribah	80.72	299	*e*P	P	21 46 03.0	+0.5
MIB				AMb	AMB	21 46 04.0	
	comp=Z,11nm,0.6s						
NAY	Al-Naaiem	81.05	298	*e*P	P	21 46 04.8	+0.5
NAY				AMb	AMB	21 46 05.8	
	comp=Z,8.3nm,0.9s						
BR131	Keskin Array S	85.49	313	*e*P	P	21 46 28.3	+1.1
	comp=Z,0.6nm,0.5s						
BRTR	Keskin Array B	85.49	313	P	P	21 46 27.8	+0.6
BRTR	Keskin Array B	85.49	313	P	P	21 46 27.8	+0.6
	comp=Z,1.0nm,0.7s,baz=90,slow=4.5,SNR=7.8						

IDC 12 21:42:24.4±1.1, 20°.43N×93°.47E, h0km, mb3.8/9, mb1 3.9/10, mb1mx3.7/29, mbtmp3.8/10, ML4.2/1, Error ellipse: s-maj=39.9km s-min=14.9km az=48.0, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	5.53	110	Pn	Pn	21 43 49.5	+1.5
	1.8nm,0.3s,baz=284,slow=13,SNR=39						
CMAR				Lg	Lg	21 45 19.2	
	0.5nm,0.3s,baz=286,slow=32,SNR=5.0						
MKAR	Makanchi Array	27.84	343	P	P	21 48 15.2	-0.4
	0.6nm,0.5s,baz=161,slow=8.6,SNR=9.9						
SONM	Songino Array	29.27	18	P	P	21 48 28.1	-0.4
	0.2nm,0.4s,baz=219,slow=6.7,SNR=2.3						
KURBB	Kurchatov Arra	32.36	342	P	P	21 48 55.8	+0.3
	2.2nm,0.8s,baz=155,slow=8.1,SNR=18						
ZALV	Zalesovo Beam	34.11	351	P	P	21 49 11.4	+0.7
	2.5nm,0.5s,baz=173,slow=8.8,SNR=16						
BVAR	Borovoye Array	37.09	337	P	P	21 49 37.2	+0.8
	0.4nm,0.4s,baz=143,slow=10,SNR=3.6						
WRA	Warramunga Arr	56.66	133	P	P	21 52 08.7	-1.2
	0.4nm,0.6s,baz=319,slow=7.7,SNR=3.2						
ASAR	Alice Springs	58.94	136	P	P	21 52 26.9	+1.0
	0.3nm,0.7s,baz=318,slow=7.0,SNR=6.6						
ARCES	ARCESS Array B	63.34	339	P	P	21 52 53.4	-1.7
	2.2nm,1.0s,baz=98,slow=7.5,SNR=4.7						
GERES	GERESS Array B	68.25	316	P	P	21 53 27.5	+0.3
	0.5nm,0.5s,baz=61,slow=8.2,SNR=6.5						

IDC 12 21:50:02.4±56.0, 20°.49S×179°.85E, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/18, mbtmp4.1/3, Error ellipse: s-maj=1004.0km s-min=147.5km az=82.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.98	244	P	P	21 57 04.6	-0.5
	3.1nm,0.8s,baz=84,slow=12,SNR=5.3						
ASAR	Alice Springs	42.55	257	P	P	21 57 60.0	-0.3
	2.5nm,0.8s,baz=97,slow=8.2,SNR=22						
WRA	Warramunga Arr	42.60	262	P	P	21 58 01.0	+0.3
	0.9nm,0.3s,baz=96,slow=7.8,SNR=16						

MAN 12 22:07:56, 11°.20N×126°.39E, h48km, mb4.1, ML2.9, MS2.6, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	1.01	294	*e*P	Pn	22 08 14.2	+0.4
BESP				*e*S	Sn	22 08 28.5	+1.5
PLP	Palo	1.38	269	⇓*e*P	Pn	22 08 20.6	+1.7
PLP				*e*S	Sn	22 08 37.3	+1.3
OCLP	Ormoc	1.75	265	*e*P	Pn	22 08 15.1	-8.9
MSLP	Maasin	1.83	235	*e*P	Pn	22 08 26.1	+1.0
MSLP				*e*S	Sn	22 08 56.6	+10
CNP	Catarman	2.13	308	*e*P	Pn	22 08 30.3	+1.2
CNP				*e*S	Sn	22 08 53.4	-1.1

IDC 12 22:10:04.4±280.0, 48°.33N×152°.85E, h0km, Error ellipse: s-maj=77.3km s-min=39.5km az=42.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I44RU	PETROPAVLOVSK-	5.69	31	*i*		22 46 40.0	
	baz=214,slow=324,SNR=2.2						
I45RU	USSURIYSK INFR	15.00	262	*i*		23 33 40.0	
	baz=66,slow=308,SNR=0.9						
I30JP	ISUMI INFRASON	15.99	220	*i*		23 40 30.0	
	baz=32,slow=319,SNR=1.3						

IDC 12 22:17:04.7±62.0, 21°.30S×177°.46W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/18, mbtmp3.8/3, Error ellipse: s-maj=1146.0km s-min=170.7km az=84.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	37.90	245	P	P	22 24 22.7	-1.1
	7.7nm,1.1s,baz=63,slow=9.0,SNR=2.9						
ASAR	Alice Springs	44.83	257	P	P	22 25 20.8	-0.1
	0.2nm,0.3s,baz=91,slow=6.7,SNR=5.3						
WRA	Warramunga Arr	44.99	263	P	P	22 25 22.7	+0.5
	0.3nm,0.3s,baz=96,slow=8.3,SNR=18						

IDC 12 22:47:42.9±2.0, 24°.08S×67°.01W, h169km±19km, mb3.0/1, mb1 3.1/6, mb1mx3.0/20, mbtmp3.0/6, Error ellipse: s-maj=37.5km s-min=20.6km az=11.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.28	310	P	Pn	22 48 23.9	+1.2
	10nm,0.3s,baz=143,slow=5.8,SNR=115						
LVC				S	Sn	22 48 53.5	0.0
	36nm,0.3s,baz=103,slow=8.6,SNR=10						
LPAZ	La Paz	7.83	352	P	Pn	22 49 35.5	+0.7
	0.4nm,0.3s,baz=172,slow=8.2,SNR=7.4						
CPUP	Villa Florida	9.05	106	P	Pn	22 49 50.1	0.0
	0.1nm,0.3s,baz=299,slow=10,SNR=1.7						
SIV	San Ignacio	9.79	36	P	Pn	22 49 58.8	-1.2
	0.2nm,0.3s,baz=222,slow=16,SNR=3.8						
BDFB	Brasilia	19.73	68	P	P	22 51 59.2	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	0.4nm,0.3s,baz=236,slow=12,SNR=5.7						
TORD	Torodi Ar. Bea	76.61	69	P	P	22 59 15.8	+0.5
	0.2nm,0.4s,baz=255,slow=5.6,SNR=6.8						
WRA	Warramunga Arr	131.55	207	PKP	PKPdf	23 06 35.0	-1.3
	0.5nm,0.9s,baz=159,slow=1.7,SNR=5.4						

*CSEM **12** 23:08:32.0±0.1, 43.°38N×1.°75W, h25km, ML2.3/12, Error ellipse: s-maj=3.2km s-min=3.0km az=178.0*
*LDG **12** 23:08:33.9±0.1, 43.°28N×1.°64W, h25km, Md2.4/1, Ml2.1/7, Error ellipse: s-maj=2.0km s-min=1.6km az=171.0*
*MDD **12** 23:08:34.1±0.4, 43.°30N×1.°71W, h25km±1km, mbLg2.0/16, Error ellipse: s-maj=3.9km s-min=3.5km az=175.0*
*STR **12** 23:08:35.0±1.1, 43.°16N×1.°70W, h2km, Ml2.1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 12 23:08:32.7±0.9**, 43.°33N**±0.°03×**1.°70W**±0.°03**, h31**km±6km**, n62,** σ**1.s20**/77**, 5C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EALK	Alkurruntz	0.18	128	Pg	Pb	23 08 39.3	+0.5
	2.3nm,0.1s,SNR=240						
EALK				Lg	Lg	23 08 42.9	
	148nm,0.1s,SNR=5.9						
EALK	Alkurruntz	0.18	128	Pg	Pb	23 08 39.3	+0.5
	2.3nm,0.1s,SNR=240						
EALK				Lg	Lg	23 08 42.9	
	148nm,0.1s,SNR=5.9						
ELIZ	Elizondo	0.21	143	⇑Pg	Pb	23 08 39.2	0.0
	3.8nm,0.1s,SNR=18						
ELIZ				Lg	Lg	23 08 42.6	
	34nm,0.2s,SNR=9.7						
ELIZ	Elizondo	0.21	143	Pg	Pb	23 08 39.2	0.0
	3.8nm,0.1s,SNR=18						
ELIZ				Lg	Lg	23 08 42.6	
	34nm,0.2s,SNR=9.7						
OSSF	Osses	0.33	103	Pg	Pb	23 08 41.2	+0.5
OSSF				Sg	Sb	23 08 46.8	+0.7
OSSF	Osses	0.33	103	Pg	Pb	23 08 41.1	+0.4
OSSF				Lg	Lg	23 08 46.8	
IUSE	Utxeti	0.40	164	Pg	Pb	23 08 41.5	-0.3
	12nm,0.1s,SNR=7.9						
IUSE				Lg	Lg	23 08 47.5	
	18nm,0.1s,SNR=7.9						
IUSE	Utxeti	0.40	164	Pg	Pb	23 08 41.5	-0.3
	12nm,0.1s,SNR=7.9						
IUSE				Lg	Lg	23 08 47.5	
	18nm,0.1s,SNR=7.9						
SJPF	Ste Jean	0.41	122	ePg	Pb	23 08 41.9	0.0
SJPF				eSg	Sb	23 08 47.8	-0.3
	28nm,0.2s						
SJPF	Ste Jean	0.41	122	Pg	Pb	23 08 41.9	0.0
SJPF				eSg	Sb	23 08 47.8	-0.3
	14nm,0.2s						
IZUN	Zunzarren	0.51	159	⇑Pg	Pb	23 08 43.2	-0.1
	12nm,0.1s,SNR=18						
IZUN				Lg	Lg	23 08 49.9	
	60nm,0.1s,SNR=7.9						
IZUN	Zunzarren	0.51	159	Pg	Pb	23 08 43.2	-0.1
	12nm,0.1s,SNR=18						
IZUN				Lg	Lg	23 08 49.9	
	60nm,0.1s,SNR=7.9						
EARA	Aranguren	0.57	171	Pg	Pb	23 08 44.1	-0.2
	5.2nm,0.1s,SNR=12						
EARA				Lg	Lg	23 08 52.4	
	15nm,0.1s,SNR=7.1						
EARA	Aranguren	0.57	171	Pg	Pb	23 08 44.1	-0.2
	5.2nm,0.1s,SNR=12						
EARA				Lg	Lg	23 08 52.4	
	15nm,0.1s,SNR=7.1						
ORDF	Ordiarp	0.57	102	Pg	Pn	23 08 46.2	+1.5
ORDF				Sg	Sb	23 08 52.7	+0.4
ORDF	Ordiarp	0.57	102	Pg	Pb	23 08 44.5	+0.1
ORDF				Lg	Lg	23 08 52.6	
IUNC	Unciti	0.60	165	⇑Pg	Pb	23 08 44.8	0.0
	6.7nm,0.1s,SNR=18						
IUNC				Lg	Lg	23 08 53.0	
	67nm,0.3s,SNR=7.9						
IUNC	Unciti	0.60	165	Pg	Pb	23 08 44.8	0.0
	6.7nm,0.1s,SNR=18						
IUNC				Lg	Lg	23 08 53.0	
	67nm,0.3s,SNR=7.9						
IELO	Elcoad	0.60	145	⇑Pg	Pb	23 08 44.4	-0.4
	4.4nm,0.1s,SNR=18						
IELO				Lg	Lg	23 08 52.1	
	18nm,0.1s,SNR=7.9						
IELO	Elcoad	0.60	145	Pg	Pb	23 08 44.4	-0.4
	4.4nm,0.1s,SNR=18						
IELO				Lg	Lg	23 08 52.1	
	18nm,0.1s,SNR=7.9						
LARF	Larrau	0.60	119	Pg	Pb	23 08 44.8	-0.1
LARF				Sg	Sb	23 08 53.1	-0.1
LARF	Larrau	0.60	119	Pg	Pb	23 08 44.8	-0.1
LARF				Lg	Lg	23 08 53.1	
IEPA	Eparoz	0.64	150	⇑Pg	Pb	23 08 46.5	+1.0
	8.4nm,0.1s,SNR=18						
IEPA				Lg	Lg	23 08 54.8	
	36nm,0.1s,SNR=7.9						
IEPA	Eparoz	0.64	150	Pg	Pb	23 08 46.5	+1.0
	8.4nm,0.1s,SNR=18						
IEPA				Lg	Lg	23 08 54.8	
	36nm,0.1s,SNR=7.9						
ETSF	Etsaut	0.94	117	ePg	Pb	23 08 50.7	+0.1
ETSF				eSg	Sb	23 09 03.5	+0.7
	15nm,0.2s						
ETSF	Etsaut	0.94	117	Pg	Pb	23 08 50.7	+0.1
ETSF				eSg	Sb	23 09 03.5	+0.7
	7.4nm,0.2s						
REYF	Montagne du Re	0.99	105	Lg	Lg	23 09 04.6	
ELAN	Lanestosa	1.27	266	Pg	Pb	23 08 57.3	+1.3
	0.4nm,0.2s,SNR=7.5						
ELAN				Lg	Lg	23 09 13.2	
	1.2nm,0.1s,SNR=5.0						
EPF	Esparros	1.52	101	ePn	Pn	23 08 57.3	-0.6
EPF	Esparros	1.52	101	ePg	Pb	23 09 01.3	+0.9
EPF				eSg	Sb	23 09 21.2	+1.9
	3.6nm,0.2s						
EPF	Esparros	1.52	101	Pn	Pn	23 08 57.3	-0.6
EPF	Esparros	1.52	101	ePg	Pb	23 09 01.3	+0.9
EPF				eSg	Sb	23 09 21.2	+1.9
	1.8nm,0.2s						
ESAC	San Caprasio	1.85	150	Lg	Lg	23 09 28.3	
	39nm,0.3s,SNR=7.9						
ESAC	San Caprasio	1.85	150	Lg	Lg	23 09 28.3	
	39nm,0.3s,SNR=7.9						
CSOR	Sort	2.29	114	Pg	Pb	23 09 14.5	+1.0
	1.5nm,0.3s,SNR=7.9						
CSOR				Lg	Lg	23 09 43.7	
	2.7nm,0.2s,SNR=7.9						
LFF	La Frestale	2.38	47	ePn	Pn	23 09 09.2	-0.4
LFF				eSn	Sn	23 09 36.3	-1.4
	1.7nm,0.3s						
LFF	La Frestale	2.38	47	Pn	Pn	23 09 09.2	-0.4
LFF				eSn	Sn	23 09 36.3	-1.4
	0.9nm,0.3s						
ETOR	Torete	2.53	186	Pn	Pn	23 09 11.7	0.0
	2.0nm,0.4s,SNR=7.9						
ETOR				Sn	Sn	23 09 40.5	-0.9
	2.3nm,0.3s,SNR=7.9						
ETOR	Torete	2.53	186	Pn	Pn	23 09 11.7	0.0
	2.0nm,0.4s,SNR=7.9						
ETOR				Sn	Sn	23 09 40.5	-0.9
	2.3nm,0.3s,SNR=7.9						
EARI	Arriondas	2.56	270	Pn	Pn	23 09 12.4	+0.3
	0.1nm,0.1s,SNR=7.9						
EARI				Sn	Sn	23 09 41.6	-0.6
	0.7nm,0.2s,SNR=7.9						
EARI	Arriondas	2.56	270	Pn	Pn	23 09 12.4	+0.3
	0.1nm,0.1s,SNR=7.9						
EARI				Sn	Sn	23 09 41.6	-0.6
	0.7nm,0.2s,SNR=7.9						
EMIR	Miracle	2.77	120	Lg	Lg	23 09 57.4	
	1.1nm,0.2s,SNR=7.9						
EMIR	Miracle	2.77	120	Lg	Lg	23 09 57.4	
	1.1nm,0.2s,SNR=7.9						
ERTA	Horta de San J	2.82	147	Sn	Sn	23 09 47.5	-1.0
	0.5nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	23 09 59.3	
	0.9nm,0.1s,SNR=7.9						
ERTA	Horta de San J	2.82	147	Sn	Sn	23 09 47.5	-1.0
	0.5nm,0.1s,SNR=7.9						
ERTA				Lg	Lg	23 09 59.3	
	0.9nm,0.1s,SNR=7.9						
CLLI	Llivia	2.83	106	Lg	Lg	23 10 00.5	
	4.0nm,0.4s,SNR=7.9						
CLLI	Llivia	2.83	106	Lg	Lg	23 10 00.5	
	4.0nm,0.4s,SNR=7.9						
EPOB	Poblet	2.86	133	Lg	Lg	23 09 59.0	
	1.0nm,0.1s,SNR=7.9						
EPOB	Poblet	2.86	133	Lg	Lg	23 09 59.0	
	1.0nm,0.1s,SNR=7.9						
MTLF	Montolieu	2.86	88	ePg	Pb	23 09 27.0	+4.0
MTLF				eSn	Sn	23 09 46.5	-3.1
MTLF				eSg	Sb	23 10 02.5	+4.9
	0.4nm,0.3s						
RJF	Les Rejaudoux	3.04	48	eSn	Sn	23 09 51.8	-2.1
	1.7nm,0.2s						
RJF	Les Rejaudoux	3.04	48	eSn	Sn	23 09 51.8	-2.1
	0.9nm,0.2s						
EMOS	Mosqueruela	3.11	162	Sn	Sn	23 09 56.1	+0.3
	0.3nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	23 10 06.9	
	1.3nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	3.11	162	Sn	Sn	23 09 56.2	+0.3
	0.3nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	23 10 06.9	
	1.3nm,0.2s,SNR=7.9						
CAF	Calviac	3.15	58	ePn	Pn	23 09 19.9	-0.2
CAF				eSn	Sn	23 09 54.2	-2.4
	1.6nm,0.2s						
CAF	Calviac	3.15	58	Pn	Pn	23 09 19.9	-0.2
CAF				Sn	Sn	23 09 54.2	-2.4
	0.4nm,0.2s						
MFF	Saint Martin d	3.45	18	ePn	Pn	23 09 24.5	+0.2
MFF				eSn	Sn	23 10 02.7	-1.4
	0.3nm,0.1s						
MFF	Saint Martin d	3.45	18	ePn	Pn	23 09 24.5	+0.2
MFF				eSn	Sn	23 10 02.7	-1.4
	0.2nm,0.1s						
ECAL	Calabor	3.97	251	Pn	Pn	23 09 32.3	+0.8
	0.8nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	23 10 14.5	-2.4
	0.3nm,0.2s,SNR=7.9						
ECAL	Calabor	3.97	251	Pn	Pn	23 09 32.3	+0.8
	0.8nm,0.2s,SNR=7.9						
ECAL				Sn	Sn	23 10 14.5	-2.4
	0.3nm,0.2s,SNR=7.9						
MVO	Moncorvo	4.51	243	Pn	Pn	23 09 38.2	-0.7
	0.1nm,0.2s,SNR=7.9						
MVO				Sn	Sn	23 10 28.8	-1.5
	1.1nm,0.2s,SNR=7.9						
MVO	Moncorvo	4.51	243	Pn	Pn	23 09 38.2	-0.7
	0.1nm,0.2s,SNR=7.9						
MVO				Sn	Sn	23 10 28.8	-1.5
	1.1nm,0.2s,SNR=7.9						

IDC 12 23:12:52.0±280.0**, 48.°26N**×**153.°05E, h0**km**, Error ellipse: s-maj=96.9km s-min=29.6km az=31.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I44RU	PETROPAVLOVSK-	5.68	30	i		23 48 30.0	
	baz=213,slow=323,SNR=1.8						
I45RU	USSURIYSK INFR	15.13	262	i		00 38 10.0	
	baz=65,slow=316,SNR=0.6						
I30JP	ISUMI INFRASON	16.02	221	i		00 44 20.0	
	baz=31,slow=321,SNR=1.3						

IDC 12 23:12:54.4±12.0**, 7.°02S**×**148.°88E, h0**km**, mb3.6**/2**, mb1 3.6**/3**, mb1mx3.4**/17**, mbtmp3.5**/3**, ML2.8**/1**, Error ellipse: s-maj=189.3km s-min=85.0km az=18.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	19.08	226	P	Pn	23 17 19.5	0.0
	0.0nm,0.3s,baz=52,slow=9.8,SNR=4.1						
ASAR	Alice Springs	21.93	219	P	P	23 17 47.9	-1.9
	0.3nm,0.7s,baz=52,slow=9.4,SNR=4.4						
STKA	Stephens Creek	25.65	194	P	P	23 18 26.9	+0.9
	4.9nm,1.0s,baz=45,slow=11,SNR=3.3						

IDC 12 23:26:14.7±1.1**, 23.°40S**×**66.°59W, h170**km±16km**, mb3.8**/2**, mb1 3.7**/7**, mb1mx3.5**/21**, mbtmp3.7**/7**, Error ellipse: s-maj=19.5km s-min=12.8km az=112.0, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVC	Limon Verde	2.28	290	P	Pn	23 26 56.2	+1.6
	69nm,0.3s,baz=114,slow=6.6,SNR=751						
LVC				S	Sn	23 27 25.3	0.0
	72nm,0.3s,baz=22,slow=21,SNR=22						
LPAZ	La Paz	7.22	348	P	Pn	23 27 59.5	+0.9
	0.5nm,0.3s,baz=169,slow=8.0,SNR=14						
LPAZ				S	Sn	23 29 19.5	-0.9
	0.2nm,0.3s,baz=218,slow=23,SNR=3.7						
CFAA	Coronel Fontan	8.30	190	P	Pn	23 28 12.6	+0.6
	0.1nm,0.3s,baz=357,slow=13,SNR=12						
CFAA				S	Sn	23 29 41.9	-3.0
	0.3nm,0.3s,baz=223,slow=17,SNR=12						
SIV	San Ignacio	9.02	36	P	Pn	23 28 22.2	+0.6
	3.0nm,0.3s,baz=271,slow=10,SNR=48						
SIV				S	Sn	23 29 57.9	-4.3
	baz=247,slow=7.6,SNR=3.5						
PLCA	Paso Flores	17.60	190	P	Pn	23 30 09.3	-0.3
	0.2nm,0.3s,baz=0.7,slow=13,SNR=5.9						
BDFB	Brasilia	19.12	70	P	Pn	23 30 26.5	-1.3
	1.0nm,0.3s,baz=240,slow=12,SNR=21						
RCBR	Riachuelo	34.33	64	P	P	23 32 45.5	+0.1
	2.1nm,0.5s,baz=189,slow=3.1,SNR=6.0						
TORD	Torodi Ar. Bea	76.00	69	P	P	23 37 43.0	-0.6
	1.3nm,0.4s,baz=258,slow=5.8,SNR=74						
WRA	Warramunga Arr	132.33	207	PKP	PKPdf	23 45 08.6	-0.8
	0.3nm,0.7s,baz=153,slow=1.9,SNR=4.3						
MKAR	Makanchi Array	145.83	39	PKPbc	PKPdf	23 45 33.2	+0.2
	1.1nm,0.8s,baz=303,slow=3.6,SNR=6.1						

*ISCJB **12** 23:29:35.4±0.4, 29.°36S±0.°02×70.°62W±0.°09, h91km±5km, mb3.7/2, Error ellipse: s-maj=12.6km s-min=4.0km az=3.7*
*NEIC **12** 23:29:35.7, 29.°35S×70.°70W, h81km, MG4.8(GUC), After GUC.*
NEIC Felt [II] at Alto del Carmen, Copiapo and Vallenar.
*GUC **12** 23:29:35.7±0.7, 29.°35S×70.°70W, h81km±3km, ML4.8*
*IDC **12** 23:29:37.2±0.9, 29.°28S×70.°49W, h89km±6km, mb3.5/2, mb1 3.6/8, mb1mx3.5/22, mbtmp3.4/8, MS3.2/1, Ms1 3.2/1, ms1mx2.6/22, Error ellipse: s-maj=26.4km s-min=11.1km az=60.0*
ISC 12 23:29:36.3±0.7**, 29.°35S**±0.°03×**70.°63W**±0.°08**, h87**km±6km**, n43,** σ**1.s19**/62**, 2D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.34	350	ePn	Pn	23 29 49.8	-0.2
LCO				eSn	Sn	23 29 59.4	-0.7
LCO	Las Campanas	0.34	350	eP	Pn	23 29 49.5	-0.5
LCO				i S	Sn	23 29 59.0	-1.1
LCO				AML	AML	23 30 00.9	
	comp=E,18μm,0.2s						
TLL	Tololo Astrono	0.83	190	eP	Pn	23 29 53.5	-0.7
TLL				eS	Sn	23 30 07.6	0.0
TLL	Tololo Astrono	0.83	190	eP	Pn	23 29 53.5	-0.7
TLL				eS	Sn	23 30 07.6	0.0
CMCH	Combarbala	1.85	190	⇓iP	Pn	23 30 06.1	-0.5
CMCH				i S	Sn	23 30 29.0	-0.5
CMCH	Combarbala	1.85	190	⇓iP	Pn	23 30 06.1	-0.5
CMCH				i S	Sn	23 30 29.0	-0.5
CMCH				AML	AML	23 30 34.5	
	comp=E,11μm,0.6s						
CPCH	Copiapo	2.00	7	eP	Pn	23 30 07.8	-0.5
CPCH				i S	Sn	23 30 32.9	+0.1
CPCH	Copiapo	2.00	7	eP	Pn	23 30 07.8	-0.5
CPCH				i S	Sn	23 30 32.9	+0.1
CPCH				AML	AML	23 30 39.4	
	comp=N,23μm,0.2s						
CDCH	Caldera	2.28	356	eP	Pn	23 30 11.7	-0.3
CDCH				S	Sn	23 30 36.1	-3.3
CDCH	Caldera	2.28	356	eP	Pn	23 30 11.7	-0.3
CDCH				i S	Sn	23 30 36.1	-3.3
CHNG	Los Chungos	2.64	196	eP	Pn	23 30 16.2	-0.6
CHNG	Los Chungos	2.64	196	eP	Pn	23 30 16.2	-0.6
CFAA	Coronel Fontan	3.06	138	P	Pn	23 30 23.6	+1.0
	comp=N,5.5nm,0.3s,baz=315,slow=12,SNR=56						
CFAA				S	Sn	23 30 58.8	+0.6
	comp=N,12nm,0.3s,baz=76,slow=19,SNR=6.3						
JACH	Jahuel	3.33	179	eP	Pn	23 30 26.6	+0.3
JACH	Jahuel	3.33	179	eP	Pn	23 30 26.6	+0.3
ROCH	El Roble	3.63	185	i Pn	Pn	23 30 30.1	-0.4
ROCH				i Pg		23 30 30.7	
ROCH				eS	Sn	23 31 12.3	-0.1
ROCH				i Sg		23 31 12.8	
ROCH				AML	AML	23 31 32.0	
	comp=N,2μm,0.3s						
PEL	Peldehue	3.79	181	eP	Pn	23 30 32.5	+0.1
PEL				eS	Sn	23 31 15.2	-0.7
CLCH	Cerro Calan	4.04	179	eP	Pn	23 30 36.3	+0.4
PCH	Pirque	4.26	179	eP	Pn	23 30 39.1	+0.1
PCH	Pirque	4.26	179	eP	Pn	23 30 39.1	+0.1
TACH	Talagante	4.30	183	eP	Pn	23 30 39.4	0.0
TACH	Talagante	4.30	183	eP	Pn	23 30 39.4	0.0
LMEL	Las Melosas	4.50	175	eP	Pn	23 30 42.8	+0.5
LMEL	Las Melosas	4.50	175	eP	Pn	23 30 42.8	+0.5
CHCH	Chadas Angostu	4.57	180	eP	Pn	23 30 43.1	0.0
CHCH	Chadas Angostu	4.57	180	eP	Pn	23 30 43.1	0.0
LNV	Longovilo	4.64	188	P	Pn	23 30 42.8	-1.2
LNV	Longovilo	4.64	188	eP	Pn	23 30 42.8	-1.2
CACH	El Canelo	4.76	180	eP	Pn	23 30 46.1	+0.4
CACH	El Canelo	4.76	180	eP	Pn	23 30 46.1	+0.4
LVC	Limon Verde	6.88	13	ePn	Pn	23 31 12.9	-1.9
LVC				eSn	Sn	23 32 34.0	+2.2
LVC	Limon Verde	6.88	13	P	Pn	23 31 12.5	-2.3
	comp=N,1.9nm,0.3s,baz=152,slow=7.8,SNR=12						
LVC				S	Sn	23 32 34.8	+3.0
	comp=N,7.6nm,0.3s,baz=243,slow=18,SNR=4.6						
TRQA	Tornquist	11.28	143	ePn	Pn	23 32 12.8	-1.6
TRQA				eSn	Sn	23 34 15.3	-3.3
PLCA	Paso Flores	11.36	180	P	Pn	23 32 17.9	+2.3
	comp=N,0.1nm,0.3s,baz=342,slow=3.2,SNR=2.4						
CPUP	Villa Florida	12.15	79	P	Pn	23 32 25.0	-1.2
	comp=N,0.6nm,0.3s,baz=240,slow=13,SNR=4.9						
LPAZ	La Paz	13.20	11	ePn	Pn	23 32 41.9	+1.0
LPAZ	La Paz	13.20	11	P	Pn	23 32 41.3	+0.5
	comp=N,0.2nm,0.3s,baz=196,slow=7.7,SNR=4.4						
SIV	San Ignacio	15.94	36	P	Pn	23 33 16.4	+0.8
	comp=N,0.3nm,0.3s,baz=226,slow=15,SNR=6.0						
SIV				LR	LR	23 40 21.9	
	comp=N,78nm,19.6s,slow=41						
TXAR	Lajitas Array	66.33	329	P	P	23 40 17.1	+1.4
	comp=N,0.6nm,0.6s,baz=153,slow=8.1,SNR=7.9						
TXAR				pP	pP	23 40 38.9	+0.9
	comp=N,0.2nm,0.5s,baz=134,slow=7.7,SNR=1.9						
TORD	Torodi Ar. Bea	81.49	70	P	P	23 41 44.4	0.0
	comp=N,0.9nm,0.7s,baz=275,slow=5.2,SNR=13						
TORD				pP	pP	23 42 07.8	+0.3
	comp=N,1.2nm,0.6s,baz=279,slow=5.5,SNR=7.7						
WRA	Warramunga Arr	125.40	209	PKP	PKPdf	23 48 27.6	-0.2
	comp=N,0.4nm,0.4s,baz=148,slow=1.7,SNR=16						
ZALV	Zalesovo Beam	149.62	29	PKPbc	PKPbc	23 49 16.0	+0.8
	comp=N,2.0nm,0.4s,baz=294,slow=3.3,SNR=12						
ZALV				pPKPbc	pPKPbc	23 49 39.8	+0.3
	comp=N,1.1nm,0.3s,baz=315,slow=2.0,SNR=4.8						
MKAR	Makanchi Array	152.67	43	PKPbc	PKPbc	23 49 22.0	-0.7
	comp=N,0.6nm,0.7s,baz=318,slow=1.6,SNR=4.6						

*IDC **13** 00:03:03.2±0.7, 34.°13S×179.°72W, h0km, mb4.5/8, mb1 4.6/9, mb1mx4.4/17, mbtmp4.5/9, ML4.5/1, MS3.6/8, Ms1 3.6/8, ms1mx3.3/26, Error ellipse: s-maj=25.5km s-min=18.7km az=74.0*
*ISCJB **13** 00:03:11.7±1.4, 34.°75S±0.°06×179.°7W±0.°1, h81km±11km, mb4.3/12, Error ellipse: s-maj=18.4km s-min=10.6km az=178.5*
*NEIC **13** 00:03:13.7±2.6, 34.°41S×179.°97W, h76km±21km, mb4.6/3, Error ellipse: s-maj=25.3km s-min=16.0km az=50.0*
ISC 13 00:03:13.0±2.7**, 34.°7S**±0.°1×**179.°7W**±0.°1**, h76**km±21km**, n105,** σ**1.s35**/88**, mb4.4**/12**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	3.77	205	PN	Pn	00 04 08.5	-0.3
PUZ				SN	Sn	00 04 51.7	-0.2
CNGZ	Carnagh Statio	4.16	203	PN	Pn	00 04 14.4	+0.4
CNGZ				SN	Sn	00 05 03.6	+2.3
MWZ	Matawai	4.28	211	PN	Pn	00 04 15.2	-0.6
MWZ				SN	Sn	00 05 05.2	+0.8
URZ	Urewera	4.40	215	ePn	Pn	00 04 17.1	-0.2
URZ	Urewera	4.40	215	PN	Pn	00 04 17.0	-0.4
URZ				SN	Sn	00 05 08.4	+1.0
URZ	Urewera	4.40	215	Pn	Pn	00 04 16.9	-0.4
	20nm,0.3s,baz=54,slow=4.3,SNR=51						
URZ				Sn	Sn	00 05 07.4	0.0
	35nm,0.3s,baz=319,slow=24,SNR=8.5						
TGRZ	Tauranga	4.47	226	PN	Pn	00 04 19.7	+1.5
TARZ	Mount Tarawera	4.69	220	PN	Pn	00 04 23.0	+1.7
KNZ	Kokohu	4.82	205	PN	Pn	00 04 21.4	-1.6
KNZ				SN	Sn	00 05 16.4	-1.1
MKAZ	Moumakai	4.83	238	PN	Pn	00 04 24.7	+1.6
TOZ	Tahuroa Road	4.93	231	PN	Pn	00 04 26.0	+1.4
PRRZ	Plateau Road	4.94	218	PN	Pn	00 04 25.7	+1.0
RAHZ	Arahi	4.96	210	PN	Pn	00 04 25.7	+0.8
ALRZ	Allen Road	5.02	218	PN	Pn	00 04 25.5	-0.2
NMHZ	Naumai	5.22	211	PN	Pn	00 04 28.2	-0.5
TLZ	Tolley Road	5.29	225	PN	Pn	00 04 30.0	+0.5
BKZ	Black Stump Fm	5.42	213	PN	Pn	00 04 29.7	-1.6
OUZ	Omahuta	5.54	263	ePn	Pn	00 04 32.2	-0.6
	161nm,0.8s						
MCHZ	McNeill Hill	5.56	210	PN	Pn	00 04 33.2	0.0
KRVZ	Karewarewa	5.78	219	PN	Pn	00 04 36.3	0.0
KAHZ	Kahuranaki	5.79	207	PN	Pn	00 04 34.4	-2.0
KAHZ				SN	Sn	00 05 39.3	-2.1
HIZ	Hauiti	5.82	227	PN	Pn	00 04 37.3	+0.6
BHHZ	Black Hill Sta	5.88	214	PN	Pn	00 04 36.4	-1.1
FWVZ	Far West T-bar	5.94	218	PN	Pn	00 04 37.8	-0.8
WHVZ	Whangaehu Hut	5.94	218	PN	Pn	00 04 37.7	-0.9
MOVZ	Moawhango	5.96	216	PN	Pn	00 04 37.2	-1.5
WNVZ	Wahianoa	5.97	218	PN	Pn	00 04 40.0	+1.0
PNHZ	Pukenui	6.16	211	PN	Pn	00 04 39.1	-2.3
WPHZ	Waipukurau	6.19	209	PN	Pn	00 04 40.4	-1.5
PRHZ	Porangahau	6.29	207	PN	Pn	00 04 42.3	-0.9
TSZ	Takapari Road	6.39	212	PN	Pn	00 04 41.6	-2.9
DVHZ	Dannevirke	6.50	209	PN	Pn	00 04 44.0	-2.0
WAZ	Wanganui	6.61	218	PN	Pn	00 04 46.0	-1.4
POWZ	Post Office Ro	6.75	211	PN	Pn	00 04 49.0	-0.4
TIWZ	Tintock	7.02	209	PN	Pn	00 04 51.1	-2.1
MRZ	Mangatainoka R	7.05	211	PN	Pn	00 04 49.7	-3.8
HOWZ	Holdsworth Sta	7.27	210	PN	Pn	00 04 52.8	-3.7
TMWZ	Te Maipa	7.30	207	PN	Pn	00 04 55.1	-1.9
OGWZ	Otaki Gorge	7.35	212	PN	Pn	00 04 54.5	-3.1
KIW	Kapiti Island	7.50	213	PN	Pn	00 04 56.2	-3.5
CAW	Cannon Point	7.63	211	PN	Pn	00 04 57.6	-3.9
MSWZ	Moikau Station	7.82	209	PN	Pn	00 04 59.9	-4.1
TCW	Tory Channel	8.07	214	PN	Pn	00 05 03.1	-4.3
TUWZ	Tuamarina	8.40	215	PN	Pn	00 05 08.6	-3.3
NNZ	Nelson	8.51	218	PN	Pn	00 05 09.1	-4.4
THZ	Tophouse	9.16	217	PN	Pn	00 05 17.0	-5.4
KHZ	Kahutara	9.36	212	PN	Pn	00 05 20.9	-4.1
LTZ	Lake Taylor	10.23	215	PN	Pn	00 05 32.4	-4.6
RPZ	Rata Peaks	11.52	216	ePn	Pn	00 05 48.0	-6.4
RPZ				Sn	Sn	00 07 51.0	-10
RPZ	Rata Peaks	11.52	216	Pn	Pn	00 05 48.2	-6.3
	1.0nm,0.3s,baz=75,slow=12,SNR=4.9						
RPZ				Sn	Sn	00 07 51.0	-10
	1.6nm,0.3s,baz=50,slow=19,SNR=3.3						
ODZ	Otahua Downs	12.72	213	PN	Pn	00 06 03.2	-7.6
DZM	Mont Dzumac	17.49	312	P	P	00 07 12.7	+0.6
DZM	Mont Dzumac	17.49	312	P	P	00 07 12.7	+0.6
	0.6nm,0.3s,baz=300,slow=20,SNR=6.8						
DZM				LR	LR	00 12 19.6	
	comp=Z,459nm,20.1s,baz=282,slow=32						
AFI	Afiamalu	21.89	21	LR	LR	00 13 50.5	
	comp=Z,70nm,18.2s,baz=130,slow=30						
HNR	Honiara	31.29	319	LR	LR	00 18 34.0	
	comp=Z,56nm,20.0s,baz=151,slow=30						
STKA	Stephens Creek	32.35	264	P	P	00 09 34.5	-0.7
	2.5nm,0.8s,baz=113,slow=15,SNR=2.0						
STKA				LR	LR	00 20 43.3	
	comp=Z,149nm,18.1s,baz=171,slow=33						
ASAR	Alice Springs	41.66	273	P	P	00 10 53.8	-0.4
ASAR	Alice Springs	41.66	273	P	P	00 10 53.8	-0.4
	3.4nm,0.5s,baz=114,slow=8.0,SNR=51						
ASAR				LR	LR	00 27 03.8	
	comp=Z,117nm,18.9s,baz=170,slow=35						
WRAB	Tennant Creek	43.03	278	eP	P	00 11 04.7	-0.6
	9.6nm,0.6s						
WRA	Warramunga Arr	43.03	278	P	P	00 11 04.9	-0.5
WRA	Warramunga Arr	43.03	278	P	P	00 11 04.9	-0.5
	11nm,0.7s,baz=119,slow=7.5,SNR=98						
VNDA	Vanda	43.70	186	P	P	00 11 15.5	+5.6
VNDA	Vanda	43.70	186	P	P	00 11 15.5	+5.6
	0.4nm,0.8s,baz=40,slow=9.6,SNR=2.1						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	51.08	274	eP	P	00 12 07.3	-0.7
NWAO	Narrogin (SRO)	51.66	253	eP	P	00 12 11.2	-0.9
QSPA	South Pole Qui	55.44	180	P	P	00 12 44.1	+4.6
QSPA	South Pole Qui	55.44	180	P	P	00 12 44.1	+4.6
	8.8nm,0.6s,baz=33,slow=1.8,SNR=85						
MAW	Mawson	67.81	202	eP	P	00 14 04.1	+1.8
	1.5nm,0.8s						
MAW	Mawson	67.81	202	P	P	00 14 04.2	+1.8
	6.1nm,0.7s,baz=136,slow=8.2,SNR=16						
SNAA	Sanae	73.92	179	eP	P	00 14 41.6	+2.1
	16nm,1.5s						
PLCA	Paso Flores	80.63	133	P	P	00 15 21.6	+4.0
PLCA	Paso Flores	80.63	133	P	P	00 15 21.6	+4.0
	2.1nm,1.0s,baz=220,slow=7.9,SNR=3.1						
KSRS	Korea Array	86.72	321	P	P	00 15 47.4	-1.0
	0.8nm,0.5s,baz=143,slow=5.1,SNR=4.5						
KSAR	Wonju Array Be	86.73	321	P	P	00 15 47.4	-1.0
PETK	Petropavlovsk-	89.61	347	P	P	00 16 01.1	-0.6
PETK	Petropavlovsk-	89.61	347	P	P	00 16 01.1	-0.6
	8.4nm,0.9s,baz=136,slow=7.5,SNR=10						
PETK				LR	LR	00 54 21.0	
	comp=Z,20nm,18.9s,baz=224,slow=35						
NVAR	Mina Array Bea	92.33	44	P	P	00 16 17.4	+2.4
NVAR	Mina Array Bea	92.33	44	P	P	00 16 17.4	+2.4
	0.6nm,0.7s,baz=206,slow=8.0,SNR=3.4						
CMAR	Chiang Mai Arr	93.48	290	LR	LR	00 58 50.8	
	comp=Z,12nm,18.8s,baz=160,slow=36						
CPUP	Villa Florida	98.40	130	LR	LR	00 52 47.6	
	comp=Z,70nm,19.0s,baz=29,slow=30						
MKAR	Makanchi Array	119.38	309	PKP	PKPdf	00 21 51.4	-1.9
MKAR	Makanchi Array	119.38	309	PKP	PKPdf	00 21 51.4	-1.9
	0.5nm,0.7s,baz=202,slow=0.9,SNR=5.9						
KURK	Kurchatov	122.91	312	ePKPdf	PKPdf	00 21 58.3	-1.5
ARCES	ARCESS Array B	142.42	346	PKPpre	PKPpre	00 22 32.5	
ARCES	ARCESS Array B	142.42	346	PKhKP	PKPpre	00 22 32.5	
	1.2nm,0.7s,baz=90,slow=2.4,SNR=6.1						
JOF	Joensuu	145.78	335	epkp	PKPdf	00 22 41.6	-0.3
KBZ	Khabaz	146.10	298	PKPbc	PKPdf	00 22 43.4	+0.3
KBZ	Khabaz	146.10	298	PKPbc	PKPdf	00 22 43.4	+0.3
	1.5nm,0.8s,baz=123,slow=3.1,SNR=3.6						
KAF	Kangasniemi	148.01	337	epkp	PKPbc	00 22 47.4	-1.5
FINES	FINESS Array B	148.58	336	PKPbc	PKPbc	00 22 49.1	-1.2
FINES	FINESS Array B	148.58	336	PKPbc	PKPbc	00 22 49.1	-1.2
	7.6nm,0.7s,baz=67,slow=6.4,SNR=24						
DBIC	Dimbokro	151.72	169	PKPbc	PKPbc	00 23 01.1	+1.7
DBIC	Dimbokro	151.72	169	PKPbc	PKPbc	00 23 01.1	+1.7
	4.2nm,0.8s,baz=153,slow=2.3,SNR=8.0						
NB2	NORSAR Subarra	152.71	348	PKP	PKPbc	00 22 59.8	-0.4
	comp=Z,2.0nm,0.7s,baz=19,slow=2.5						
NOA	NORSAR Array B	152.71	348	PKPbc	PKPbc	00 22 59.8	-0.4
NOA	NORSAR Array B	152.71	348	PKPbc	PKPbc	00 22 59.8	-0.4
	comp=Z,2.6nm,0.8s,baz=13,slow=4.1,SNR=10						
BR131	Keskin Array S	153.07	291	ePKPbc	PKPbc	00 23 00.5	-1.4
BRTR	Keskin Array B	153.07	291	PKPbc	PKPbc	00 23 00.6	-1.4
BRTR	Keskin Array B	153.07	291	PKPbc	PKPbc	00 23 00.6	-1.4
	comp=Z,0.7nm,0.5s,baz=135,slow=2.7,SNR=8.1						
AKASG	Malin Array Be	153.62	316	PKPbc	PKPbc	00 23 01.4	-1.1
AKASG	Malin Array Be	153.62	316	PKPbc	PKPbc	00 23 01.4	-1.1
	comp=Z,1.9nm,0.5s,baz=57,slow=2.5,SNR=8.5						
TORD	Torodi Ar. Bea	158.52	184	PKP	PKPdf	00 23 03.7	+1.5
TORD				PKPab	PKPab	00 23 38.9	+1.7
TORD	Torodi Ar. Bea	158.52	184	PKP	PKPdf	00 23 03.7	+1.5
	comp=Z,1.1nm,1.1s,baz=247,slow=1.0,SNR=4.1						
TORD				PKPab	PKPab	00 23 38.9	+1.7
	comp=Z,1.8nm,0.8s,baz=161,slow=3.3,SNR=6.0						
GERES	GERESS Array B	162.72	329	PKPab	PKPab	00 23 53.5	-1.4
GERES	GERESS Array B	162.72	329	PKPab	PKPab	00 23 53.5	-1.4
	comp=Z,0.1nm,0.3s,baz=46,slow=3.9,SNR=3.7						

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*NIED **13** 00:15:00, 23°.20N×121°.80E, h11km, Mw3.8 Best double couple: M₀6.08000×10¹⁴ NP1:φs301.00000°, δ52.00000°, λ-54.00000°. NP2:φs71.00000°, δ51.00000°, λ-127.00000°.*
*IDC **13** 00:15:29.4±4.8, 23°.15N×121°.58E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.4/26, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=98.6km s-min=57.1km az=4.0*
*ISCJB **13** 00:15:30.4±0.4, 23°.18N±0°.02×121°.84E±0°.02, h16km±4km, mb3.3/3, Error ellipse: s-maj=3.2km s-min=2.4km az=36.1*
*TAP **13** 00:15:32.1, 23°.21N×121°.76E, h26km, ML4.4, B*
*JMA **13** 00:15:32.3±0.3, 23°.18N×121°.82E, h67km, M3.7*
ISC 13 00:15:30.3±1.1**, 23°.18N**±0°.02×**121°.81E**±0°.02**, h14**km±7km**, n81, σ1ˢ.05**/135**, mb3.4**/3**, 18C-9D, Taiwan**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CHKT	Chengkung	0.42	260	⇓iP	Pb	00 15 39.8	+0.3
	baz=249						
CHKT				S	Sg	00 15 44.9	+0.5
	baz=249						
TWF1	Yuli	0.51	290	⇑iP	Pb	00 15 41.1	+0.1
	baz=289						
TWF1				eS	Sg	00 15 47.3	+0.2
	baz=289						
EHY	Hungye	0.56	306	⇑iP	Pg	00 15 41.8	+0.4
	baz=307						
EHY				S	Sb	00 15 49.6	-0.1
	baz=307						
TEGC	Jichi Village	0.59	335	eP	Pb	00 15 42.5	+0.2
	baz=338						
TEGC				S	Sg	00 15 50.1	+0.4
	baz=338						
ESL	Shilin	0.72	331	⇑iP	Pg	00 15 44.4	-0.1
	baz=334						
ESL				S	Sg	00 15 53.3	-0.7
	baz=334						
ELDTW	Lidau	0.73	271	⇓iP	Pg	00 15 44.4	-0.2
	baz=268						
ELDTW				eS	Sg	00 15 52.6	-1.7
	baz=268						
TTN	Taitung	0.74	236	eP	Pg	00 15 45.0	+0.2
	baz=223						
ESF	Shoufeng Towns	0.75	338	eP	Pg	00 15 45.2	+0.4
	baz=350						
ESF				eS	Sg	00 15 54.1	-0.6
	baz=350						
TWG	Pinlang	0.77	243	⇓eP	Pg	00 15 45.1	-0.2
	baz=251						
TWG				eS	Sg	00 15 54.8	-0.6
	baz=251						
HWA	Hwalien	0.82	347	eP	Pg	00 15 46.5	+0.2
	baz=350						
HWA				eS	Sg	00 15 56.6	-0.5
	baz=350						
YUS	Yu-Shan	0.85	292	⇑iP	Pb	00 15 47.0	-0.1
	baz=282						
YUS				eS	Sg	00 15 56.9	-1.3
	baz=282						
TWD	Chiawan	0.92	348	⇑iP	Pb	00 15 47.5	-0.5
	baz=350						
TWD				S	Sb	00 15 58.6	-1.5
	baz=350						
ECL	Taimali	0.98	234	eP	Pb	00 15 48.1	-1.0
	baz=230						
ALS	Alishan	0.98	290	⇑iP	Pb	00 15 49.4	+0.1
	baz=289						
ALS				eS	Sb	00 16 01.4	-0.8
	baz=289						
WHF	Hehuan Shan	1.09	333	⇑iP	Pb	00 15 50.3	-0.9
	baz=334						
WHF				eS	Sb	00 16 02.8	-2.6
	baz=334						
SMLT	Sun Moon Lake	1.09	310	⇑iP	Pb	00 15 50.9	-0.2
	baz=311						
SMLT				eS	Sb	00 16 03.7	-1.5
	baz=311						
WTP	Ta-pu	1.10	274	⇑P	Pb	00 15 51.5	+0.3
	baz=272						
WTP				eS	Sb	00 16 05.1	-0.4
	baz=272						
CHN5	Tsauling	1.12	292	⇑P	Pb	00 15 51.9	+0.3
	baz=291						
CHN5				S	Sb	00 16 06.3	+0.2
	baz=291						
CHN4	Tsaushan	1.13	279	⇑iP	Pb	00 15 52.1	+0.4
	baz=278						
CHN4				S	Sb	00 16 06.9	+0.6
	baz=278						
TYC	Yuchr	1.14	310	⇑iP	Pb	00 15 51.5	-0.3
	baz=317						
TYC				S	Sb	00 16 05.9	-0.5
	baz=317						
LAY	Lan-yu	1.16	192	eP	Pn	00 15 51.2	-0.9
	baz=189						
LAY				eS	Sb	00 16 04.7	-2.2
	baz=189						
TAW	Tawu	1.17	226	⇓eP	Pn	00 15 51.2	-1.1
	baz=233						
CHN1	Nanshi	1.18	271	⇑P	Pb	00 15 53.0	+0.5
	baz=269						
CHN1				eS	Sb	00 16 08.2	+0.5
	baz=269						
EAST	Anshuo	1.19	229	⇓iP	Pn	00 15 51.5	-1.0
	baz=225						
TWK	Hsinying	1.22	274	⇑iP	Pb	00 15 53.6	+0.3
	baz=273						
TWK				eS	Sb	00 16 08.6	-0.2
	baz=273						
TWT	Tachien	1.22	332	eP	Pn	00 15 53.0	-0.1
	baz=332						
TWT				S	Sb	00 16 06.5	-2.5
	baz=332						
ENA	Nanau	1.25	357	eP	Pn	00 15 52.7	-0.7
	baz=10.0						
ENA				eS	Sb	00 16 07.5	-2.1
	baz=10.0						
WNT	Mingjian	1.25	304	P	Pb	00 15 54.0	+0.3
	baz=304						
WNT				eS	Sn	00 16 10.1	+0.1
	baz=304						
WGK	Gukeng	1.25	294	eP	Pb	00 15 54.1	+0.4
	baz=293						
WGK				eS	Sn	00 16 10.3	+0.2
	baz=293						
CHN2	Minshiung	1.28	286	P	Pb	00 15 54.8	+0.7
	baz=285						
CHN2				S	Sg	00 16 11.6	0.0
	baz=285						
SGLT	Jiouru	1.30	250	eP	Pb	00 15 55.2	+0.7
	baz=241						
CHY	Chiayi	1.31	284	P	Pb	00 15 55.2	+0.4
	baz=283						
CHY				iS	Sb	00 16 11.6	+0.1
	baz=283						
NNS	Nan Shan	1.32	342	eP	Pn	00 15 54.0	-0.5
	baz=344						
NNS				eS	Sb	00 16 08.9	-2.9
	baz=344						
TWM1	Shoushan	1.33	255	⇓eP	Pg	00 15 56.4	+0.5
	baz=253						
TWM1				eS	Sg	00 16 15.6	+2.4
	baz=253						
CHN3	Shinhua	1.34	266	eP	Pn	00 15 54.5	0.0
	baz=264						
CHN3				eS	Sg	00 16 14.9	+1.4
	baz=264						
SCZT	Fangliau	1.36	234	eP	Pn	00 15 54.6	-0.3
	baz=224						
TCU	Taichung	1.42	313	⇑iP	Pb	00 15 56.9	+0.3
	baz=313						
TCU				eS	Sg	00 16 16.9	+0.7
	baz=313						
TWC	Suao	1.43	1	P	Pn	00 15 55.7	-0.1
	baz=13						
TWC				S	Sn	00 16 12.6	-1.7
	baz=13						
TAI1	Yung-k'ang	1.46	265	eP	Pg	00 15 58.6	+0.1
	baz=263						
ENTT	Nioudou	1.48	351	eP	Pn	00 15 56.3	-0.1
	baz=353						
CHN8	Yiju	1.48	277	eP	Pn	00 15 57.4	+0.9
	baz=275						
CHN8				eS	Sn	00 16 16.2	+0.6
	baz=275						
SCLT	Jiali	1.49	270	eP	Pn	00 15 56.6	0.0
	baz=268						
SCLT				eS	Sb	00 16 17.6	+1.1
	baz=268						
TWQ1	Liyutan	1.51	321	⇑iP	Pb	00 15 58.4	+0.3
	baz=331						
TWQ1				eS	Sb	00 16 17.1	+0.1
	baz=331						
KAU	Kaohsiung	1.51	247	eP	Pb	00 15 58.6	+0.5
	baz=244						
TSEB	Hengchuen, Pin	1.52	214	eP	Pn	00 15 57.3	+0.2
	baz=213						
TSEB				eS	Sn	00 16 16.7	0.0
	baz=213						
HEN	Hengchun	1.53	221	eP	Pn	00 15 57.1	-0.1
	baz=218						
WSF	Szhu	1.53	288	eP	Pb	00 15 58.4	-0.1
	baz=287						
WSF				eS	Sn	00 16 16.9	0.0
	baz=287						
TWK1	Hengchun	1.54	217	⇓P	Pn	00 15 57.0	-0.4
	baz=215						
TWK1				eS	Sn	00 16 15.2	-1.9
	baz=215						
TWE	Neicheng	1.54	355	eP	Pn	00 15 57.6	+0.2
	baz=357						
NSK	Sanguang	1.55	345	⇑P	Pn	00 15 57.7	+0.1
	baz=335						
NSK				eS	Sn	00 16 14.8	-2.7
	baz=335						
WTCT	Ta-ch'eng	1.56	296	eP	Pn	00 15 58.5	+0.9
	baz=296						
NSY	Sanyi	1.56	322	eP	Pb	00 15 59.2	+0.1
	baz=337						
NSY				eS	Sb	00 16 18.8	0.0
	baz=337						
TWP	Hsiaoliuchiu	1.57	239	eP	Pb	00 16 00.3	+1.1
	baz=236						
NSTT	Nanjuang	1.63	333	eP	Pn	00 15 59.5	+1.0
	baz=344						
NSTT				eS	Sn	00 16 17.9	-1.4
	baz=344						
YOJ	Yonaguni jima	1.69	40	P	Pn	00 15 59.9	+0.6
	baz=55						
YOJ				eS	Sn	00 16 19.1	-1.7
	baz=55						
YOJ	Yonaguni jima	1.69	40	P	Pn	00 15 59.9	+0.6
YOJ				S	Sn	00 16 21.0	+0.3
TWB1	Santiao Chiao	1.83	5	⇓iP	Pn	00 16 02.1	+0.7
	baz=7.0						
TWB1				eS	Sn	00 16 23.7	-0.6
	baz=7.0						
TAP1	Taipei	1.87	352	eP	Pn	00 16 00.6	-1.3
	baz=353						
NCU	National Centr	1.88	342	eP	Pb	00 16 04.1	-0.3
	baz=359						
NCU				eS	Sn	00 16 26.5	+1.0
	baz=359						
NWF	Wu-fen Shan	1.89	359	eP	Pn	00 16 03.5	+1.3
NWF				eS	Sn	00 16 25.8	0.0
TWS1	Kuangyinshan	1.95	349	eP	Pn	00 16 04.5	+1.5
	baz=351						
WDGT	Dungji	1.98	273	⇓P	Pn	00 16 03.8	+0.4
	baz=271						
WDGT				eS	Sn	00 16 25.9	-2.1
	baz=271						
HATJ	Hateruma jima	2.03	64	P	Pn	00 16 04.6	+0.6
HATJ				S	Sn	00 16 28.6	-0.5
TWY	Chenhua	2.10	355	eP	Pb	00 16 07.7	-0.4
	baz=342						
IRIF	Iriomote-Funau	2.10	56	P	Pn	00 16 06.0	+0.9
IRIF				eS	Sn	00 16 31.3	+0.3
PNG	Penghu	2.11	281	eP	Pn	00 16 05.2	+0.1
	baz=265						
PNG				eS	Sn	00 16 29.3	-1.9
	baz=265						
JKRS	Kuro-shima	2.27	62	P	Pn	00 16 08.4	+1.0
JKRS				S	Sn	00 16 35.3	+0.1
JIJ	Ishigaki jima	2.44	61	P	Pn	00 16 10.2	+0.5
JIJ				S	Sn	00 16 38.1	-1.3
PCYT	Pengchaiyu	2.45	5	eP	Pn	00 16 09.8	-0.1
	baz=7.0						
JTJ	Tarama	3.02	61	P	Pn	00 16 18.6	+0.9
JTJ				eS	Sn	00 16 53.8	+0.1
KNM	Kinmen	3.33	292	eP	Pn	00 16 22.9	+0.9
	baz=290						
QZH	Quanzhou	3.43	302	⇑iPn	Pn	00 16 23.8	+0.5
QZH				Sn	Sn	00 17 00.4	-3.3
QZH				smax	smax		
	comp=N,180nm,0.8s						
QZH				smax	smax		
	comp=E,180nm,0.6s						
JOGS	Gusukube	3.65	64	P	Pn	00 16 28.0	+1.7
JKE	Kume jima 2	5.50	54	P	Pn	00 16 51.6	-0.2
JOW	Kunigami	6.90	57	P	Pn	00 17 10.1	-1.0
JTK	Tokunoshima	7.92	53	P	Pn	00 17 22.8	-2.2
JTK				eS	Sn	00 18 48.7	-5.7
JAMN	Amaminishikomi	8.34	51	P	Pn	00 17 28.4	-2.4
KSRS	Korea Array	15.17	19	Pn	Pn	00 19 06.3	+2.2
	comp=E,0.4nm,0.3s,baz=196,slow=13,SNR=16						
SONM	Songino Array	27.52	337	P	P	00 21 16.9	+0.4
	comp=E,0.2nm,0.4s,baz=153,slow=9.7,SNR=2.3						
MKAR	Makanchi Array	39.46	317	P	P	00 23 00.3	+0.2
	comp=E,0.6nm,0.7s,baz=104,slow=10,SNR=4.3						
YKA	Yellowknife Ar	83.67	23	P	P	00 28 00.2	+2.0
	comp=E,0.2nm,0.6s,baz=322,slow=4.7,SNR=4.9						

TRN 13 00:21:22.3, 18°.78N×61°.25W, h83km, MD3.8, 2C, Leeward Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BPA	Boggy Peak	1.81	199	eP	Pn	00 21 52.6	+0.7
BPA				eS	Sn	00 22 12.2	-2.2
SKI	Saint Kitts	2.02	225	eP	Pn	00 21 55.7	+1.1
SKI				eS	Sn	00 22 20.9	+1.8
NEV	Hard Times	2.06	218	eP	Pn	00 21 57.0	+1.9
NEV				eS	Sn	00 22 21.5	+1.3
SEG	Port Louis	2.37	186	eP	Pn	00 22 00.8	+1.5
SEG	Port Louis	2.37	186	eP	Pn	00 22 01.2	+2.0
LZG	Guadaloupe-1	2.67	191	⇑iP	Pn	00 22 04.5	+1.2
BCG	Bois Riant Cap	2.70	188	eP	Pn	00 22 05.3	+1.6
DOG	Dongo Capester	2.75	187	eP	Pn	00 22 05.8	+1.3
SCG	Saint Claude	2.76	189	eP	Pn	00 22 06.8	+2.2
PHG	Guadaloupe-2	2.77	188	⇑iP	Pn	00 22 06.3	+1.5
HMG	Houelmont	2.81	189	eP	Pn	00 22 07.2	+1.9
MGG	Marie-Galante	2.84	181	eP	Pn	00 22 06.9	+1.3
MGG	Marie-Galante	2.84	181	eP	Pn	00 22 07.6	+2.0
TBG	Guadaloupe-3	2.93	188	eP	Pn	00 22 08.2	+1.4
FDF	Fort de France	4.02	179	eP	Pn	00 22 22.5	+0.9

MAN 13 02:11:20, 10°.86N×124°.59E, h1km, mb4.0, ML2.8, MS2.5, 1C-1D, Leyte

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OCLP	Ormoc	0.19	6	eP	Pg	02 11 24.4	+0.7
OCLP				eS	Sg	02 11 27.9	+1.6
PLP	Palo	0.49	51	⇓eP	Pb	02 11 31.1	-0.3
MSLP	Maasin	0.77	160	eP	Pb	02 11 37.0	+0.8
MSLP				eS	Sn	02 11 50.3	+0.1
LLP	Lapu-Lapu	0.82	229	eP	Pb	02 11 37.0	0.0
LLP				eS	Sb	02 11 49.3	+0.7
TBP	Tagbilaran	1.36	212	eP	Pb	02 11 47.1	+0.7
RCP	Roxas	1.94	291	⇑eP	Pn	02 11 55.0	+0.9
GUIM	Jordan	1.98	263	eP	Pb	02 11 55.9	-1.0
GUIM				eS	Sb	02 12 22.6	+0.6

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*MOS **13** 02:27:37.2±0.0, 53°.94N×169°.74E, h20km, mb4.3/1, Error ellipse: s-maj=74.2km s-min=31.6km az=9.4*
*KRSC **13** 02:27:42.2±0.0, 53°.86N×169°.00E, h20km±20km, ML4.2*
ISC 13 02:27:47.0±4.2**, 54°.0N**±0°.1×**168°.8E**±0°.2**, h25**km**, n23, σ0ˢ.90**/32**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BKI	Bering	2.07	308	PN	Pn	02 28 18.4	-1.7
BKI	Bering	2.07	308	eP	Pn	02 28 18.4	-1.7
BKI				iS	Sn	02 28 45.8	+0.8
MKZ	Mys Kozlova	4.20	281	PN	Pn	02 28 49.4	0.0
MKZ	Mys Kozlova	4.20	281	eP	Pn	02 28 49.4	0.0
MKZ				iS	Sn	02 29 36.5	-1.1
TUMR	Tumrok	5.21	288	eP	Pn	02 29 04.3	+0.9
KMNR	Kamenistaya	5.27	293	eP	Pn	02 29 05.2	+1.0
KMNR				iS	Sn	02 30 05.0	+0.8
SPN	Mys Shipunski	5.33	264	PN	Pn	02 29 05.2	+0.4
SPN	Mys Shipunski	5.33	264	eP	Pn	02 29 05.2	+0.4
SPN				iS	Sn	02 30 04.2	-1.1
NLC	Nalytchevo	5.71	266	PN	Pn	02 29 10.6	+0.5
NLC	Nalytchevo	5.71	266	eP	Pn	02 29 10.6	+0.5
NLC				iS	Sn	02 30 13.3	-1.4
SRDR	Sredinnyy	5.73	298	eP	Pn	02 29 11.7	+1.3
SRDR				iS	Sn	02 30 16.0	+0.7
SDLR	Sedlovina	5.96	267	eP	Pn	02 29 14.3	+0.6
UGLR	Uglovaya	6.01	267	eP	Pn	02 29 15.3	+1.0
SMAR	Somma	6.01	267	eP	Pn	02 29 15.1	+0.6
SMAR				iS	Sn	02 30 22.0	-0.5
KRER	Koryakskii	6.03	268	eP	Pn	02 29 14.9	+0.1
AVH	Avacha	6.05	267	eP	Pn	02 29 15.5	+0.7
KOK	Koryaka	6.10	268	eP	Pn	02 29 16.0	+0.4
RUS	Russkaya	6.39	260	PN	Pn	02 29 20.0	+0.6
RUS	Russkaya	6.39	260	eP	Pn	02 29 20.0	+0.6
GNL	Ganaly	6.45	272	eP	Pn	02 29 21.5	+1.1
MTVR	Mutnovka	6.57	261	eP	Pn	02 29 22.4	+0.4
MTVR				iS	Sn	02 30 34.7	-1.4
GRL	Gorelyy	6.61	262	eP	Pn	02 29 22.8	+0.2
ASAK	Asacha	6.76	261	eP	Pn	02 29 25.1	+0.5
ASAK				iS	Sn	02 30 41.3	+0.5

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*THE **13** 02:38:03.9, 34°.51N×23°.20E, h41km±9km, ML3.4/1, Error ellipse: s-maj=9.5km s-min=1.5km az=33.0*
*ISCJB **13** 02:38:04.4±1.0, 34°.61N±0°.09×23°.34E±0°.06, h67km±7km, mb3.7/6, Error ellipse: s-maj=15.3km s-min=5.7km az=21.2*
*ATH **13** 02:38:04.0, 34°.69N×23°.35E, h30km±2km, MD3.6/25*
*CSEM **13** 02:38:04.0±0.7, 34°.72N×23°.36E, h10km, MD3.6, Error ellipse: s-maj=18.2km s-min=4.4km az=24.0*
*IDC **13** 02:38:05.9±3.4, 34°.51N×23°.58E, h56km±37km, mb3.7/6, mb1 3.7/9, mb1mx3.4/31, mbtmp3.6/9, ML3.5/3, Error ellipse: s-maj=24.6km s-min=21.2km az=143.0*
ISC 13 02:38:05.8±1.5**, 34°.61N**±0°.09×**23°.35E**±0°.06**, h47**km±14km**, n88, σ1ˢ.02**/96**, mb3.8**/6**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GVD	Gavdhos	0.65	69	P	Pn	02 38 17.6	-1.1
GVD				S	Sn	02 38 29.8	+1.8
GVD	Gavdhos	0.65	69	ePN	Pn	02 38 16.7	-2.0
GVD	Gavdhos	0.65	69	ePn	Pn	02 38 16.7	-2.0
GVD	Gavdhos	0.65	69	P	Pn	02 38 17.6	-1.1
GVD				S	Sn	02 38 29.8	+1.8
VAM	Vamos	1.05	41	P	Pn	02 38 23.4	-0.8
VAM				S	Sn	02 38 39.6	+1.8
VAM	Vamos	1.05	41	ePN	Pn	02 38 23.4	-0.8
VAM				eSN	Sn	02 38 37.8	0.0
VAM	Vamos	1.05	41	P	Pn	02 38 23.4	-0.8
VAM				eSn	Sn	02 38 37.8	0.0
VAM				S		02 38 39.6	
ANKY	Antikythira Is	1.25	358	ePN	Pn	02 38 26.4	-0.5
ANKY	Antikythira Is	1.25	358	ePn	Pn	02 38 26.4	-0.5
SIVA	Sivas	1.26	71	P	Pn	02 38 27.0	0.0
SIVA	Sivas	1.26	71	ePN	Pn	02 38 27.3	+0.3
SIVA				eSN	Sn	02 38 43.5	+0.6
SIVA	Sivas	1.26	71	P	Pn	02 38 27.0	0.0
SIVA	Sivas	1.26	71	ePn	Pn	02 38 27.3	+0.3
SIVA				eSn	Sn	02 38 43.5	+0.6
IDI	Anoyia	1.43	61	P	Pn	02 38 29.3	-0.1
IDI				S	Sn	02 38 49.5	+2.4
IDI	Anoyia	1.43	61	ePN	Pn	02 38 29.5	+0.1
IDI	Anoyia	1.43	61	ePn	Pn	02 38 29.5	+0.1
IDI				S	Sn	02 38 49.5	+2.4
KYTH	Kithira	1.69	351	ePB	Pn	02 38 32.0	-0.8
KYTH	Kithira	1.69	351	ePb	Pn	02 38 32.0	-0.8
LAST	Lasithi	1.83	72	P	Pn	02 38 35.2	+0.3
LAST	Lasithi	1.83	72	ePB	Pn	02 38 35.6	+0.7
LAST	Lasithi	1.83	72	P	Pn	02 38 35.2	+0.3
LAST	Lasithi	1.83	72	ePb	Pn	02 38 35.6	+0.7
NPS	Neapolis	1.97	70	P	Pn	02 38 36.5	-0.2
NPS	Neapolis	1.97	70	ePB	Pn	02 38 37.5	+0.8
NPS	Neapolis	1.97	70	P	Pn	02 38 36.5	-0.2
NPS	Neapolis	1.97	70	ePb	Pn	02 38 37.5	+0.8
VLI	Veliai	2.13	351	ePB	Pn	02 38 39.4	+0.5
VLI	Veliai	2.13	351	ePb	Pn	02 38 39.4	+0.5
DYR	Agios Nikonas	2.30	339	ePB	Pn	02 38 41.7	+0.4
DYR	Agios Nikonas	2.30	339	ePb	Pn	02 38 41.7	+0.4
ZKR	Zakros	2.41	77	P	Pn	02 38 43.2	+0.5
ZKR	Zakros	2.41	77	ePN	Pn	02 38 43.5	+0.8
ZKR	Zakros	2.41	77	P	Pn	02 38 43.2	+0.5
ZKR	Zakros	2.41	77	ePn	Pn	02 38 43.5	+0.8
PYL	PYLOS	2.63	331	P	Pn	02 38 44.4	-1.4
PYL	PYLOS	2.63	331	ePN	Pn	02 38 45.0	-0.8
PYL	PYLOS	2.63	331	P	Pn	02 38 44.4	-1.4
PYL	PYLOS	2.63	331	ePn	Pn	02 38 45.0	-0.8
ITM	Ithomi	2.81	336	ePN	Pn	02 38 48.2	-0.1

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
ITM	**Ithomi**	**2.81**	**336**	*e*Pn	**Pn**	**02 38 48.2**	**-0.1**
DID	**Didima**	**2.89**	**358**	P	**Pn**	**02 38 48.9**	**-0.5**
DID	**Didima**	**2.89**	**358**	*e*PN	**Pn**	**02 38 49.7**	**+0.3**
DID	**Didima**	**2.89**	**358**	P	**Pn**	**02 38 48.9**	**-0.5**
DID	**Didima**	**2.89**	**358**	*e*Pn	**Pn**	**02 38 49.7**	**+0.3**
APE	**Apeiranthos**	**3.02**	**35**	*e*PN	**Pn**	**02 38 50.4**	**-0.8**
APE	**Apeiranthos**	**3.02**	**35**	*e*Pn	**Pn**	**02 38 50.4**	**-0.8**
AMT	**Artemida-Makis**	**3.21**	**336**	*e*PN	**Pn**	**02 38 54.5**	**+0.8**
AMT	**Artemida-Makis**	**3.21**	**336**	*e*Pn	**Pn**	**02 38 54.5**	**+0.8**
KARP	**Karpathos**	**3.26**	**72**	P	**Pn**	**02 38 54.4**	**+0.1**
KARP				S	**Sn**	**02 39 33.9**	**+1.9**
KARP	**Karpathos**	**3.26**	**72**	*e*PN	**Pn**	**02 38 54.5**	**+0.1**
KARP	**Karpathos**	**3.26**	**72**	*e*Pn	**Pn**	**02 38 54.5**	**+0.1**
KARP				S	**Sn**	**02 39 33.9**	**+1.9**
GUR	**Goura**	**3.42**	**346**	*e*PN	**Pn**	**02 38 57.5**	**+0.8**
GUR	**Goura**	**3.42**	**346**	*e*Pn	**Pn**	**02 38 57.5**	**+0.8**
LTK	**Loutraki**	**3.42**	**355**	*e*PN	**Pn**	**02 38 56.3**	**-0.3**
LTK	**Loutraki**	**3.42**	**355**	*e*Pn	**Pn**	**02 38 56.3**	**-0.3**
PTL	**Penteli**	**3.46**	**7**	*e*PN	**Pn**	**02 38 56.2**	**-0.9**
PTL	**Penteli**	**3.46**	**7**	*e*Pn	**Pn**	**02 38 56.2**	**-0.9**
KLV	**Kalavryta, Ach**	**3.56**	**345**	*e*PN	**Pn**	**02 38 58.7**	**+0.1**
KLV	**Kalavryta, Ach**	**3.56**	**345**	*e*Pn	**Pn**	**02 38 58.7**	**+0.1**
LAKA	**Lakka**	**3.79**	**343**	*e*PN	**Pn**	**02 39 01.5**	**-0.2**
LAKA	**Lakka**	**3.79**	**343**	*e*Pn	**Pn**	**02 39 01.5**	**-0.2**
TRIZ	**Trizonia**	**3.89**	**345**	*e*PN	**Pn**	**02 39 02.4**	**-0.6**
TRIZ	**Trizonia**	**3.89**	**345**	*e*Pn	**Pn**	**02 39 02.4**	**-0.6**
KALE	**Kalithea**	**3.90**	**346**	*e*PN	**Pn**	**02 39 02.7**	**-0.5**
KALE	**Kalithea**	**3.90**	**346**	*e*Pn	**Pn**	**02 39 02.7**	**-0.5**
EFP	**Efpalio**	**3.98**	**343**	*e*PN	**Pn**	**02 39 04.7**	**+0.4**
EFP	**Efpalio**	**3.98**	**343**	*e*Pn	**Pn**	**02 39 04.7**	**+0.4**
DAT	**Datca**	**4.04**	**57**	*e*PG	**Pn**	**02 39 04.5**	**-0.6**
ARG	**Arkhangelos**	**4.21**	**66**	*e*PN	**Pn**	**02 39 07.3**	**-0.2**
ARG	**Arkhangelos**	**4.21**	**66**	*e*Pn	**Pn**	**02 39 07.3**	**-0.2**
DALY	**Dalyan (Mu˜la**	**4.84**	**61**	*e*PG	**Pn**	**02 39 16.8**	**+0.7**
FETY	**Fethiye**	**5.08**	**65**	*e*PG	**Pn**	**02 39 18.9**	**-0.6**
AKAS	**Kas**	**5.35**	**71**	*i* P	**Pn**	**02 39 20.9**	**-2.4**
AKAS				*i* S	Sn	02 39 59.7	-24
AKAS	**Kas**	**5.35**	**71**	*i* P	**Pn**	**02 39 20.9**	**-2.4**
GOLH	**Golhisar**	**5.68**	**61**	*i* P	**Pn**	**02 39 26.6**	**-1.1**
GOLH	**Golhisar**	**5.68**	**61**	*i* P	**Pn**	**02 39 26.6**	**-1.1**
GAZI	**Gazipasa**	**7.49**	**75**	*i* P	Pn	02 39 43.2	-9.3
ERMK	**Ermenek**	**8.04**	**73**	*i* P	**Pn**	**02 39 57.9**	**-2.3**
BRTR	**Keskin Array B**	**9.66**	**55**	P	**Pn**	**02 40 21.9**	**-0.4**
	0.1nm,0.3s,baz=228,slow=17,SNR=4.2						
EIL	**Elat**	**10.99**	**113**	P	Pn	02 40 36.4	-4.0
	0.3nm,0.3s,baz=47,slow=16,SNR=7.3						
EIL				S	Sn	02 42 29.5	-12
	0.3nm,0.3s,baz=0.0,slow=16,SNR=4.6						
NVLJ	**Novalja**	**11.89**	**329**	*e*Pn	Pn	02 40 47.0	-5.5
NVLJ				Sn	Sn	02 42 52.3	-11
GERES	**GERESS Array B**	**15.92**	**336**	P	**P**	**02 41 50.0**	**+0.4**
	0.2nm,0.3s,baz=154,slow=11,SNR=9.1						
HFS	**Hagfors**	**26.30**	**349**	P	**P**	**02 43 35.8**	**-0.8**
	1.0nm,0.3s,baz=153,slow=13,SNR=7.6						
FINES	**FINESS Array B**	**26.91**	**3**	P	**P**	**02 43 40.7**	**-1.4**
	1.5nm,0.8s,baz=185,slow=13,SNR=3.6						
EKA	**Eskdalemuir Ar**	**27.66**	**327**	P	**P**	**02 43 51.5**	**+2.5**
	0.7nm,0.3s,baz=124,slow=7.9,SNR=19						
TORD	**Torodi Ar. Bea**	**29.01**	**228**	P	**P**	**02 44 01.1**	**-0.2**
	0.4nm,0.8s,baz=32,slow=8.9,SNR=9.6						
MKAR	**Makanchi Array**	**45.31**	**56**	P	**P**	**02 46 18.3**	**-0.6**
	1.5nm,0.3s,baz=264,slow=7.3,SNR=57						
ZALV	**Zalesovo Beam**	**46.45**	**46**	P	**P**	**02 46 26.2**	**-1.6**
	0.8nm,0.4s,baz=267,slow=8.2,SNR=2.6						

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*ISCJB **13** 02:50:58.4±0.6, 58.°78S±0.°09×26.°3W±0.°2, h116km, mb3.9/11, Error ellipse: s-maj=15.7km s-min=11.3km az=150.0*

*IDC **13** 02:51:00.9±4.8, 58.°86S×26.°40W, h126km±44km, mb3.6/11, mb1 3.7/12, mb1mx3.6/23, mbtmp3.6/12, Error ellipse: s-maj=16.9km s-min=15.0km az=32.0*

ISC 13 02:50:59.7±0.6**, 58.°8S**±0.°1×**26.°4W**±0.°1**, h116**km**, n20, σ0.s88**/22**, mb3.9**/11**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
VNA1	**Neumayer--Stat**	**14.05**	**155**	*e*Pn	**Pn**	**02 54 13.3**	**+0.1**
SNAA	**Sanae**	**16.02**	**153**	*e*Pn	**Pn**	**02 54 38.8**	**+0.7**
SNAA	**Sanae**	**16.02**	**153**	*e*Sn	Sn	02 57 16.1	-19
SNAA	**Sanae**	**16.02**	**153**	P	**Pn**	**02 54 38.9**	**+0.7**
	0.3nm,0.3s,baz=316,slow=14,SNR=22						
SNAA				S	Sn	02 57 19.3	-16
	0.1nm,0.3s,baz=338,slow=19,SNR=4.9						
USHA	**Ushuaia**	**23.07**	**262**	P	**P**	**02 55 56.3**	**+1.5**
	5.7nm,0.8s,baz=160,slow=12,SNR=4.5						
QSPA	**South Pole Qui**	**31.40**	**180**	P	**P**	**02 57 09.3**	**0.0**
	0.7nm,0.5s,baz=229,slow=3.2,SNR=9.9						
QSPA				PcP	**PcP**	**02 59 58.7**	**-1.1**
	0.3nm,0.4s,baz=334,slow=5.8,SNR=6.9						
CFAA	**Coronel Fontan**	**39.12**	**295**	P	**P**	**02 58 16.1**	**+0.5**
	0.2nm,0.3s,baz=142,slow=6.7,SNR=13						
VNDA	**Vanda**	**43.80**	**183**	P	**P**	**02 58 53.7**	**+0.5**
	0.6nm,0.7s,baz=187,slow=7.8,SNR=5.2						
BOSA	**Boshof**	**46.31**	**72**	P	**P**	**02 59 13.1**	**-0.6**
	1.8nm,0.9s,baz=188,slow=8.2,SNR=5.7						
LBTB	**Lobatse**	**49.47**	**70**	P	**P**	**02 59 38.3**	**+0.2**
	1.6nm,0.6s,baz=220,slow=7.9,SNR=3.1						
SIV	**San Ignacio**	**49.84**	**314**	P	**P**	**02 59 39.2**	**-1.7**
	0.5nm,0.4s,baz=159,slow=8.6,SNR=3.7						
LPAZ	**La Paz**	**52.37**	**306**	P	**P**	**02 59 60.0**	**-0.5**
	0.9nm,0.5s,baz=93,slow=4.8,SNR=7.2						
DBIC	**Dimbokro**	**67.55**	**23**	P	**P**	**03 01 44.0**	**+0.7**
	4.1nm,0.9s,baz=147,slow=7.0,SNR=6.0						
TORD	**Torodi Ar. Bea**	**75.29**	**28**	P	**P**	**03 02 31.1**	**+1.3**
	0.8nm,0.4s,baz=198,slow=6.2,SNR=64						
TORD				pP	**pP**	**03 02 59.6**	**+0.6**
	2.0nm,0.5s,baz=198,slow=6.3,SNR=20						
ASAR	**Alice Springs**	**96.19**	**162**	P	**P**	**03 04 13.6**	**-1.0**
	0.5nm,0.8s,baz=188,slow=6.4,SNR=5.6						
FINES	**FINESS Array B**	**126.65**	**28**	PKP	**PKPdf**	**03 09 47.8**	**+0.1**
	1.4nm,0.9s,baz=46,slow=5.5,SNR=5.7						
ARCES	**ARCESS Array B**	**133.37**	**22**	PKP	**PKPdf**	**03 10 00.5**	**+0.2**
	1.6nm,0.8s,baz=197,slow=2.9,SNR=9.4						
YKA	**Yellowknife Ar**	**138.52**	**316**	PKP	**PKPdf**	**03 10 08.7**	**-1.2**
	0.2nm,0.3s,baz=131,slow=2.3,SNR=5.4						
SONM	**Songino Array**	**150.35**	**91**	PKPbc	**PKPbc**	**03 10 36.0**	**-0.4**
	1.5nm,1.1s,baz=162,slow=1.3,SNR=4.3						
SONM				pPKPbc	**pPKPbc**	**03 11 06.7**	**-0.9**
	0.4nm,0.4s,baz=249,slow=3.4,SNR=4.3						
ILAR	**Eielson Array**	**152.25**	**308**	PKPbc	**PKPbc**	**03 10 40.0**	**0.0**
	0.4nm,0.3s,baz=156,slow=1.8,SNR=14						

IDC 13 03:04:05.8±1.4**, 24.°27S**×**66.°95W, h170**km±14km**, mb3.6**/5**, mb1 3.6**/10**, mb1mx3.5**/20**, mbtmp3.5**/10**, MS2.8**/1**, Ms1 2.9**/1**, ms1mx2.2**/30**, Error ellipse: s-maj=22.0km s-min=16.6km az=17.0, Salta Province**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
LVC	**Limon Verde**	**2.45**	**312**	P	Pn	03 04 49.0	+1.4
	51nm,0.3s,baz=143,slow=5.8,SNR=226						
LVC				S	Sn	03 05 20.0	-0.1
	43nm,0.3s,baz=5.3,slow=20,SNR=28						
CFAA	**Coronel Fontan**	**7.39**	**189**	S	Sn	03 07 07.3	-6.9
	0.4nm,0.3s,baz=135,slow=23,SNR=6.7						
LPAZ	**La Paz**	**8.02**	**352**	P	Pn	03 06 01.6	+1.3
	1.9nm,0.3s,baz=143,slow=7.1,SNR=60						
LPAZ				S	Sn	03 07 28.8	-1.9
	0.2nm,0.3s,baz=87,slow=18,SNR=4.3						
LPAZ				LR	LR	03 09 05.1	
	comp=Z,60nm,19.2s,baz=277,slow=37						
CPUP	**Villa Florida**	**8.94**	**105**	P	Pn	03 06 11.6	+0.1
	0.3nm,0.3s,baz=259,slow=13,SNR=4.9						
SIV	**San Ignacio**	**9.92**	**35**	P	Pn	03 06 24.6	+0.1
	0.6nm,0.3s,baz=222,slow=13,SNR=17						
BDFB	**Brasilia**	**19.75**	**68**	P	P	03 08 23.5	+0.7
	1.0nm,0.3s,baz=238,slow=12,SNR=14						
TXAR	**Lajitas Array**	**63.93**	**324**	P	P	03 14 20.9	+0.1
	0.1nm,0.4s,baz=155,slow=8.8,SNR=4.2						
DBIC	**Dimbokro**	**67.84**	**71**	P	P	03 14 45.4	-0.6
	9.3nm,1.1s,baz=216,slow=9.7,SNR=6.0						
TORD	**Torodi Ar. Bea**	**76.62**	**69**	P	P	03 15 37.6	-0.4
	1.9nm,0.3s,baz=269,slow=6.1,SNR=75						
BOSA	**Boshof**	**80.57**	**117**	P	P	03 15 59.0	-0.7
	1.9nm,0.8s,baz=236,slow=7.3,SNR=3.2						
MAW	**Mawson**	**81.16**	**163**	P	P	03 16 01.8	-0.1
	1.0nm,0.5s,baz=211,slow=7.2,SNR=4.5						
MKAR	**Makanchi Array**	**146.71**	**40**	PKPbc	PKPbc	03 23 28.1	+0.7
	1.6nm,0.8s,baz=326,slow=3.1,SNR=9.4						

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*NIED **13** 03:14:00, 43.°50N×147.°70E, h23km, Mw3.5 Best double couple: M0 1.83000×10^14 NP1:φs275.00000°, δ89.00000°, λ-136.00000°. NP2:φs184.00000°, δ46.00000°, λ-1.00000°.*

JMA 13 03:14:51.2±0.3**, 43.°46N**×**147.°67E, h19**km**, M3.5, Kuril Islands**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
NEM2	**Nemuro 2**	**1.41**	**267**	P	Pn	03 15 16.2	+0.4
NEM2				*e*S	Sb	03 15 34.2	-0.2
JRA	**Rausu**	**1.91**	**285**	P	Pn	03 15 23.4	+0.7
JRA				*e*S	Sn	03 15 46.9	+0.7
JNK	**Nakash**	**2.15**	**274**	P	Pn	03 15 26.5	+0.5
JNK				*e*S	Sn	03 15 52.3	+0.1
JAK	**Akkeshi**	**2.22**	**259**	P	Pn	03 15 28.2	+1.2
JTKR	**Abashiri--Toko**	**2.77**	**282**	P	Pn	03 15 36.3	+1.7
JAR	**Ashorobuto**	**2.85**	**268**	P	Pn	03 15 37.2	+1.6
JAR				*e*S	Sn	03 16 11.2	+1.8
JCH	**Churui**	**3.27**	**256**	P	Pn	03 15 42.6	+1.2
JCH				*e*S	Sn	03 16 20.6	+0.8
JNBK	**Urakawa-nobuka**	**3.80**	**254**	P	Pn	03 15 49.9	+1.2

IDC 13 03:26:47.1±0.8**, 21.°25S**×**67.°68W, h155**km±16km**, mb3.5**/1**, mb1 3.6**/5**, mb1mx3.3**/19**, mbtmp3.5**/5**, Error ellipse: s-maj=29.4km s-min=10.7km az=103.0, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
LVC	**Limon Verde**	**1.77**	**220**	P	Pn	03 27 20.2	-0.1
	34nm,0.3s,baz=45,slow=9.0,SNR=333						
LVC				S	Sn	03 27 45.9	0.0
	16nm,0.3s,baz=244,slow=20,SNR=34						
LPAZ	**La Paz**	**4.96**	**355**	P	Pn	03 28 01.0	+0.2
	6.7nm,0.3s,baz=166,slow=7.1,SNR=127						
LPAZ				S	Sn	03 28 59.1	+0.7
	0.1nm,0.3s,baz=347,slow=18,SNR=1.5						
SIV	**San Ignacio**	**8.16**	**51**	P	Pn	03 28 41.3	-1.4
	4.4nm,0.3s,baz=248,slow=13,SNR=57						
SIV				S	Sn	03 30 08.1	-5.7
	0.7nm,0.3s,baz=320,slow=21,SNR=10						
CFAA	**Coronel Fontan**	**10.32**	**183**	P	Pn	03 29 08.3	-3.0
	0.1nm,0.3s,baz=352,slow=13,SNR=14						
CPUP	**Villa Florida**	**10.74**	**120**	P	Pn	03 29 18.3	+1.6
	1.5nm,0.3s,baz=289,slow=9.5,SNR=12						
PLCA	**Paso Flores**	**19.57**	**187**	P	P	03 31 03.9	+0.8
	0.2nm,0.3s,baz=10.0,slow=11,SNR=5.3						
TORD	**Torodi Ar. Bea**	**76.19**	**70**	P	P	03 38 18.5	-0.2
	1.0nm,0.7s,baz=256,slow=5.8,SNR=18						

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*ISCJB **13** 03:31:14.9±0.5, 40.°0S±0.°1×46.°2E±0.°1, h10km, mb4.1/14, MS3.6/12, Error ellipse: s-maj=18.1km s-min=12.3km az=142.4*

*IDC **13** 03:31:15.1±0.6, 39.°99S×46.°17E, h0km, mb3.9/11, mb1 4.1/11, mb1mx4.0/25, mbtmp4.0/11, MS3.6/12, Ms1 3.6/12, ms1mx3.4/29, Error ellipse: s-maj=23.4km s-min=19.2km az=46.0*

*NEIC **13** 03:31:16.5±0.3, 39.°99S×46.°16E, h10km, mb4.4/5, Error ellipse: s-maj=11.4km s-min=7.8km az=51.0*

ISC 13 03:31:16.4±0.6**, 40.°0S**±0.°1×**46.°2E**±0.°1**, h10**km**, n45, σ0.s60**/40**, mb4.3**/14**, MS3.6**/12**, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
BOSA	**Boshof**	**20.61**	**297**	P	**P**	**03 35 56.7**	**+0.7**
BOSA	**Boshof**	**20.61**	**297**	P	**P**	**03 35 56.7**	**+0.7**
	6.6nm,1.1s,baz=120,slow=10,SNR=3.6						
BOSA				LR	LR	03 42 24.1	
	comp=Z,65nm,18.8s,baz=142,slow=32						
OPO	**Ambohidratompo**	**21.35**	**3**	LR	LR	03 42 51.3	
	comp=Z,125nm,20.4s,baz=175,slow=33						
LBTB	**Lobatse**	**22.80**	**305**	*e*P	**P**	**03 36 19.3**	**-0.2**
	11nm,1.0s						
LBTB	**Lobatse**	**22.80**	**305**	P	**P**	**03 36 19.6**	**0.0**
	7.6nm,0.8s,baz=151,slow=11,SNR=11						
LBTB				LR	LR	03 43 28.8	
	comp=Z,115nm,21.6s,baz=257,slow=32						
MAW	**Mawson**	**29.18**	**167**	LR	LR	03 45 21.3	
	comp=Z,185nm,19.6s,baz=149,slow=29						
LSZ	**Lusaka**	**29.20**	**322**	*e*P	**P**	**03 37 18.5**	**+0.2**
	5.7nm,1.2s						
LSZ	**Lusaka**	**29.20**	**322**	LR	LR	03 47 40.1	
	comp=Z,113nm,19.6s,baz=111,slow=34						
KMBO	**Kilima Mbogo**	**39.51**	**346**	LR	LR	03 53 10.5	
	comp=Z,64nm,18.5s,baz=275,slow=33						
SNAA	**Sanae**	**39.96**	**202**	P	**P**	**03 38 51.0**	**+0.4**
SNAA	**Sanae**	**39.96**	**202**	P	**P**	**03 38 51.0**	**+0.4**
	0.4nm,0.9s,baz=100,slow=11,SNR=3.7						
QSPA	**South Pole Qui**	**50.23**	**180**	P	**P**	**03 40 11.8**	**-0.6**
QSPA	**South Pole Qui**	**50.23**	**180**	P	**P**	**03 40 11.8**	**-0.6**
	4.2nm,1.0s,baz=251,slow=3.4,SNR=7.5						
ATD	**Arta Tunnel**	**51.33**	**356**	LR	LR	03 59 27.0	
	comp=Z,30nm,20.6s,baz=116,slow=33						
VNDA	**Vanda**	**56.48**	**166**	*e*P	**P**	**03 40 58.1**	**+0.1**
	4.4nm,1.3s						
VNDA	**Vanda**	**56.48**	**166**	LR	LR	04 03 34.1	
	comp=Z,103nm,20.2s,baz=249,slow=34						
DBIC	**Dimbokro**	**66.03**	**302**	LR	LR	04 05 58.7	
	comp=Z,57nm,20.0s,baz=144,slow=32						
TORD	**Torodi Ar. Bea**	**67.08**	**312**	P	**P**	**03 42 10.3**	**+0.2**
TORD	**Torodi Ar. Bea**	**67.08**	**312**	P	**P**	**03 42 10.3**	**+0.2**
	0.7nm,0.8s,baz=130,slow=6.2,SNR=4.4						
ASAR	**Alice Springs**	**73.54**	**107**	P	**P**	**03 42 50.3**	**+0.5**
ASAR	**Alice Springs**	**73.54**	**107**	P	**P**	**03 42 50.3**	**+0.5**
	1.2nm,0.8s,baz=234,slow=5.7,SNR=11						
AS31	**Alice Springs**	**73.55**	**107**	*e*P	**P**	**03 42 49.8**	**-0.1**
WRA	**Warramunga Arr**	**76.11**	**104**	P	**P**	**03 43 05.3**	**+0.6**
WRA	**Warramunga Arr**	**76.11**	**104**	P	**P**	**03 43 05.3**	**+0.6**
	2.0nm,0.9s,baz=225,slow=4.5,SNR=10						
CMAR	**Chiang Mai Arr**	**76.12**	**51**	LR	LR	04 12 28.7	
	comp=Z,30nm,18.4s,baz=200,slow=32						
TRQA	**Tornquist**	**78.24**	**230**	*e*P	**P**	**03 43 15.9**	**-0.5**
	7.2nm,0.9s						
BRTR	**Keskin Array B**	**80.14**	**350**	P	**P**	**03 43 26.9**	**+0.3**
BRTR	**Keskin Array B**	**80.14**	**350**	P	**P**	**03 43 26.9**	**+0.3**
	0.5nm,0.8s,baz=207,slow=1.3,SNR=2.6						
PLCA	**Paso Flores**	**81.18**	**223**	P	**P**	**03 43 32.5**	**+0.2**
PLCA	**Paso Flores**	**81.18**	**223**	P	**P**	**03 43 32.5**	**+0.2**
	4.3nm,0.9s,baz=140,slow=5.7,SNR=5.9						
PLCA				LR	LR	04 14 40.6	
	comp=Z,173nm,21.0s,baz=268,slow=32						
CPUP	**Villa Florida**	**83.03**	**242**	P	**P**	**03 43 42.5**	**+0.3**
CPUP	**Villa Florida**	**83.03**	**242**	P	**P**	**03 43 42.5**	**+0.3**
	3.4nm,0.9s,baz=93,slow=5.8,SNR=9.2						
KBZ	**Khabaz**	**83.38**	**358**	LR	LR	04 19 17.1	
	comp=Z,33nm,18.4s,baz=292,slow=35						
PSZ	**Piszkesteto**	**90.57**	**343**	*e*P	**P**	**03 44 16.9**	**-1.5**
	2.9nm,0.7s						
MKAR	**Makanchi Array**	**92.21**	**24**	P	**P**	**03 44 26.4**	**+0.5**
MKAR	**Makanchi Array**	**92.21**	**24**	P	**P**	**03 44 26.4**	**+0.5**
	0.2nm,0.7s,baz=204,slow=3.2,SNR=2.5						
WVT	**Waverly**	**143.88**	**279**	*e*PKPdf	PKPab	03 50 48.7	-0.2
HKT	**Hockley**	**147.50**	**264**	*e*PKPbc	**PKPbc**	**03 51 01.0**	**+0.3**
JCT	**Junction City**	**150.78**	**262**	*e*PKPbc	**PKPbc**	**03 51 08.9**	**-0.2**
WMOK	**Wichita Mounta**	**151.77**	**271**	*e*PKPbc	**PKPbc**	**03 51 11.2**	**0.0**
TXAR	**Lajitas Array**	**153.13**	**256**	PKP	**PKPdf**	**03 51 07.9**	**+0.8**
TXAR				PKPbc	**PKiKP**	**03 51 15.1**	**+0.4**
TXAR	**Lajitas Array**	**153.13**	**256**	PKP	**PKPdf**	**03 51 07.9**	**+0.8**
	0.3nm,0.9s,baz=54,slow=2.2,SNR=3.7						
TXAR				PKPbc	**PKiKP**	**03 51 15.1**	**+0.4**
	2.7nm,0.8s,baz=138,slow=5.1,SNR=35						
ILAR	**Eielson Array**	**154.03**	**13**	PKP	**PKPdf**	**03 51 07.5**	**+0.3**
ILAR				PKPbc	**PKPbc**	**03 51 14.1**	**-1.2**
ILAR	**Eielson Array**	**154.03**	**13**	PKP	**PKPdf**	**03 51 07.5**	**+0.3**
	0.5nm,1.1s,baz=256,slow=0.4,SNR=3.3						
ILAR				PKPbc	**PKPbc**	**03 51 14.1**	**-1.2**
	0.5nm,0.7s,baz=334,slow=3.1,SNR=7.3						
MNTX	**Cornudas Mount**	**155.58**	**259**	*e*PKPdf	**PKPdf**	**03 51 09.8**	**-0.6**
MNTX				*e*PKPab	**PKPab**	**03 51 35.0**	**-1.4**

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*CSEM **13** 03:32:28.9, 36.°46N×21.°77E, h20km, MD3.0, After ATH*

ATH 13 03:32:28.9, 36.°46N×**21.°77E, h20**km±4km**, MD3.0**/8**, Southern Greece**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
PYL	**PYLOS**	**0.43**	**357**	*e*PB	Pb	03 32 37.2	-0.7
PYL				*e*SB	Sb	03 32 44.5	+0.5
PYL	**PYLOS**	**0.43**	**357**	*e*Pb	Pb	03 32 37.2	-0.7
PYL				*e*Sb	Sb	03 32 44.5	+0.5
DYR	**Agios Nikonas**	**0.55**	**56**	*e*PN	Pb	03 32 39.7	-0.1
DYR				*e*SN	Sb	03 32 48.3	+1.0
DYR	**Agios Nikonas**	**0.55**	**56**	*e*Pn	Pb	03 32 39.7	-0.1
DYR				*e*Sn	Sb	03 32 48.3	+1.0
ITM	**Ithomi**	**0.73**	**10**	*e*PN	Pb	03 32 42.9	-0.1
ITM				*e*SN	Sn	03 32 54.1	-0.6
ITM	**Ithomi**	**0.73**	**10**	*e*Pn	Pb	03 32 42.9	-0.1
ITM				*e*Sn	Sn	03 32 54.1	-0.6
VLI	**Veliai**	**0.97**	**74**	*e*PN	Pn	03 32 47.7	+0.2
VLI				*e*SN	Sn	03 33 00.8	+0.1
VLI	**Veliai**	**0.97**	**74**	*e*Pn	Pn	03 32 47.7	+0.2
VLI				*e*Sn	Sn	03 33 00.8	+0.1
VLX	**Vlachokerasia**	**1.03**	**28**	*e*PB	Pb	03 32 47.8	-0.4
VLX	**Vlachokerasia**	**1.03**	**28**	*e*Pb	Pb	03 32 47.8	-0.4
KYTH	**Kithira**	**1.04**	**100**	*e*PN	Pn	03 32 49.5	+1.1
KYTH	**Kithira**	**1.04**	**100**	*e*Pn	Pn	03 32 49.5	+1.1
AMT	**Artemida-Makis**	**1.07**	**357**	*e*PN	Pn	03 32 49.4	+0.5
AMT	**Artemida-Makis**	**1.07**	**357**	*e*Pn	Pn	03 32 49.4	+0.5
KLV	**Kalavryta, Ach**	**1.61**	**11**	*e*PN	Pb	03 32 58.6	+0.5
KLV	**Kalavryta, Ach**	**1.61**	**11**	*e*Pn	Pb	03 32 58.6	+0.5

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*ISK **13** 03:33:03.0, 34.°82N×25.°69E, h8km, ML3.3*

*ISCJB **13** 03:33:05.9±0.7, 34.°90N±0.°04×25.°98E±0.°02, h8km±4km, mb3.4/4, Error ellipse: s-maj=6.2km s-min=2.8km az=176.9*

*ATH **13** 03:33:05.8, 34.°90N×25.°98E, h15km±1km, MD3.2/14*

*THE **13** 03:33:06.4, 34.°98N×25.°97E, h0km±1km, ML3.4/1, Error ellipse: s-maj=3.1km s-min=1.0km az=170.0*

*CSEM **13** 03:33:07.2±0.2, 34.°95N×25.°95E, h2km, ML3.4/1, Error ellipse: s-maj=7.0km s-min=2.6km az=177.0*

*DDA **13** 03:33:08.3, 35.°02N×26.°43E, h3km, MD3.3*

*IDC **13** 03:33:10.9±3.6, 34.°78N×26.°04E, h40km±42km, mb3.3/4, mb1 3.5/9, mb1mx3.4/30, mbtmp3.4/9, ML3.4/5, Error ellipse: s-maj=27.5km s-min=22.7km az=138.0*

ISC 13 03:33:06.4±1.2**, 34.°89N**±0.°05×**25.°98E**±0.°02**, h6**km±8km**, n94, σ1.s21**/124**, mb3.6**/4**, Crete**

Code	Station Name	Δ°	AZ°	Op	ISC	Time (h m s)	Res ISC
ZKR	**Zakros**	**0.30**	**41**	P	**Pg**	**03 33 11.6**	**-0.6**
ZKR				S	**Sg**	**03 33 16.1**	**-0.1**
ZKR	**Zakros**	**0.30**	**41**	*e*PB	**Pg**	**03 33 11.9**	**-0.3**
ZKR				*e*SB	**Sg**	**03 33 16.4**	**+0.2**
ZKR	**Zakros**	**0.30**	**41**	P	**Pg**	**03 33 11.6**	**-0.6**
ZKR	**Zakros**	**0.30**	**41**	*e*Pb	**Pg**	**03 33 11.9**	**-0.3**
ZKR				S	**Sg**	**03 33 16.1**	**-0.1**
NPS	**Neapolis**	**0.48**	**321**	P	**Pg**	**03 33 14.8**	**-0.9**
NPS				S	**Sg**	**03 33 22.2**	**+0.3**
NPS	**Neapolis**	**0.48**	**321**	*e*PB	**Pg**	**03 33 14.9**	**-0.8**
NPS				*e*SB	**Sg**	**03 33 21.9**	**0.0**
NPS	**Neapolis**	**0.48**	**321**	*e*Pb	**Pg**	**03 33 14.9**	**-0.8**
NPS				*e*Sb	**Sg**	**03 33 21.9**	**0.0**
NPS				S	**Sg**	**03 33 22.2**	**+0.3**
LAST	**Lasithi**	**0.49**	**304**	P	**Pg**	**03 33 15.3**	**-0.6**
LAST				S	**Sg**	**03 33 22.4**	**0.0**
LAST	**Lasithi**	**0.49**	**304**	*e*PB	**Pg**	**03 33 15.4**	**-0.5**
LAST				*e*SB	**Sg**	**03 33 21.9**	**-0.5**
LAST	**Lasithi**	**0.49**	**304**	*e*Pb	**Pg**	**03 33 15.4**	**-0.5**
LAST				*e*Sb	**Sg**	**03 33 21.9**	**-0.5**
LAST				S	**Sg**	**03 33 22.4**	**0.0**
SIVA	**Sivas**	**0.97**	**278**	P	**Pg**	**03 33 24.1**	**-0.9**
SIVA				S	**Sb**	**03 33 39.0**	**+0.4**
SIVA	**Sivas**	**0.97**	**278**	*e*PN	**Pg**	**03 33 24.2**	**-0.8**
SIVA	**Sivas**	**0.97**	**278**	P	**Pg**	**03 33 24.1**	**-0.9**
SIVA				S	**Sb**	**03 33 39.0**	**+0.4**
IDI	**Anoyia**	**0.98**	**294**	P	**Pg**	**03 33 23.8**	**-1.4**
IDI				S	**Sg**	**03 33 38.1**	**+0.2**
IDI	**Anoyia**	**0.98**	**294**	*e*PN	**Pg**	**03 33 24.0**	**-1.2**
IDI				*e*SN	**Sg**	**03 33 36.9**	**-1.0**
IDI	**Anoyia**	**0.98**	**294**	P	**Pg**	**03 33 23.8**	**-1.4**
IDI				*e*Sn	**Sg**	**03 33 36.9**	**-1.0**
IDI				S	**Sg**	**03 33 38.1**	**+0.2**
KARP	**Karpathos**	**1.17**	**55**	P	**Pg**	**03 33 27.2**	**-1.6**
KARP				S	**Sb**	**03 33 44.9**	**+0.4**
VAM	**Vamos**	**1.55**	**290**	P	**Pn**	**03 33 34.1**	**-0.4**
VAM				S	**Sb**	**03 33 55.4**	**+0.1**
VAM	**Vamos**	**1.55**	**290**	*e*PN	**Pn**	**03 33 34.3**	**-0.2**
VAM	**Vamos**	**1.55**	**290**	*e*Pn	**Pn**	**03 33 34.3**	**-0.2**
VAM				S	**Sb**	**03 33 55.4**	**+0.1**
GVD	**Gavdhos**	**1.56**	**269**	P	**Pn**	**03 33 34.8**	**+0.2**
GVD				S	**Sg**	**03 33 56.5**	**+0.1**
GVD	**Gavdhos**	**1.56**	**269**	*e*PN	**Pb**	**03 33 35.8**	**+0.2**
GVD	**Gavdhos**	**1.56**	**269**	P	**Pn**	**03 33 34.8**	**+0.2**
GVD	**Gavdhos**	**1.56**	**269**	*e*Pn	**Pb**	**03 33 35.8**	**+0.2**
GVD				S	**Sg**	**03 33 56.5**	**+0.1**
APE	**Apeiranthos**	**2.21**	**351**	*e*PN	**Pn**	**03 33 41.6**	**-2.0**
APE				*e*SN	**Sn**	**03 34 09.6**	**-1.6**
APE	**Apeiranthos**	**2.21**	**351**	*e*Pn	**Pn**	**03 33 41.6**	**-2.0**
APE				*e*Sn	**Sn**	**03 34 09.6**	**-1.6**
DAT	**Datca**	**2.25**	**35**	*e*PN	**Pn**	**03 33 44.2**	**0.0**
DAT				*e*SN	**Sb**	**03 34 14.4**	**-1.2**
DAT	**Datca**	**2.25**	**35**	*e*Pn	**Pn**	**03 33 44.2**	**0.0**
DAT				*e*Sn	**Sb**	**03 34 14.4**	**-1.2**
ANKY	**Antikythira Is**	**2.40**	**295**	*e*PN	**Pn**	**03 33 47.2**	**+1.0**
ANKY	**Antikythira Is**	**2.40**	**295**	*e*Pn	**Pn**	**03 33 47.2**	**+1.0**
BODT	**Bodrum**	**2.42**	**26**	*e*PN	**Pn**	**03 33 46.5**	**-0.1**
BODT	**Bodrum**	**2.42**	**26**	*e*Pn	**Pn**	**03 33 46.5**	**-0.1**
KYTH	**Kithira**	**2.77**	**301**	*e*PN	**Pn**	**03 33 51.7**	**+0.3**
KYTH	**Kithira**	**2.77**	**301**	*e*Pn	**Pn**	**03 33 51.7**	**+0.3**
DALY	**Dalyan (Mu˜la**	**2.90**	**48**	*e*PN	**Pn**	**03 33 54.4**	**+1.3**
DALY	**Dalyan (Mu˜la**	**2.90**	**48**	*e*Pn	**Pn**	**03 33 54.4**	**+1.3**
TURN	**Turunc**	**2.91**	**46**	*i* P	Pn	03 33 49.6	-3.6
TURN				*i* S	Sn	03 34 19.9	-8.5
TURN	**Turunc**	**2.91**	**46**	*i* P	Pn	03 33 49.6	-3.6
YER	**Yerkesik**	**2.92**	**39**	*e*PN	**Pn**	**03 33 54.4**	**+1.0**
YER	**Yerkesik**	**2.92**	**39**	*e*Pn	**Pn**	**03 33 54.4**	**+1.0**
FETY	**Fethiye**	**3.07**	**54**	*e*PN	**Pn**	**03 33 56.4**	**+1.0**
FETY	**Fethiye**	**3.07**	**54**	*e*Pn	**Pn**	**03 33 56.4**	**+1.0**
VLI	**Veliai**	**3.07**	**307**	*e*PN	**Pn**	**03 33 55.5**	**0.0**
VLI	**Veliai**	**3.07**	**307**	*e*Pn	**Pn**	**03 33 55.5**	**0.0**
AYDN	**Tasoluk**	**3.16**	**28**	*i* P	**Pn**	**03 33 58.1**	**+1.3**
AYDN				*i* S	**Sn**	**03 34 35.1**	**+0.3**
AYDN	**Tasoluk**	**3.16**	**28**	*i* P	**Pn**	**03 33 58.1**	**+1.3**
AKAS	**Kas**	**3.25**	**65**	*i* P	**Pn**	**03 33 56.7**	**-1.3**
AKAS				*i* S	**Sn**	**03 34 36.6**	**-0.4**
AKAS	**Kas**	**3.25**	**65**	*i* P	**Pn**	**03 33 56.7**	**-1.3**
AKAS				*i* S	**Sn**	**03 34 36.6**	**-0.4**
DID	**Didima**	**3.43**	**320**	*e*PN	**Pn**	**03 34 02.0**	**+1.6**
DID	**Didima**	**3.43**	**320**	*e*Pn	**Pn**	**03 34 02.0**	**+1.6**
BLCB	**Balcova**	**3.59**	**13**	*e*PN	**Pn**	**03 34 02.4**	**-0.2**
BLCB	**Balcova**	**3.59**	**13**	*e*Pn	**Pn**	**03 34 02.4**	**-0.2**
GLHS	**Glhisar (BURDU**	**3.64**	**51**	*e*PN	**Pn**	**03 34 05.0**	**+1.7**
GLHS	**Glhisar (BURDU**	**3.64**	**51**	*e*Pn	**Pn**	**03 34 05.1**	**+1.7**
ELL	**Elmali**	**3.69**	**59**	*e*PN	**Pn**	**03 34 05.9**	**+1.8**
ELL	**Elmali**	**3.69**	**59**	*e*Pn	**Pn**	**03 34 05.9**	**+1.8**
GOLH	**Golhisar**	**3.73**	**50**	*i* P	**Pn**	**03 34 05.2**	**+0.6**
GOLH				*i* S	**Sn**	**03 34 46.6**	**-2.3**
GOLH	**Golhisar**	**3.73**	**50**	*i* P	**Pn**	**03 34 05.2**	**+0.6**
GOLH				*i* S	**Sn**	**03 34 46.6**	**-2.3**
DNZL	**Cakiroluk**	**3.73**	**41**	*i* P	**Pn**	**03 34 06.3**	**+1.6**
DNZL	**Cakiroluk**	**3.73**	**41**	*i* P	**Pn**	**03 34 06.3**	**+1.6**
LTK	**Loutraki**	**3.96**	**323**	*e*PN	**Pn**	**03 34 09.6**	**+1.9**
LTK	**Loutraki**	**3.96**	**323**	*e*Pn	**Pn**	**03 34 09.6**	**+1.9**
KULA	**Kula-Manisa**	**4.21**	**30**	*e*PN	**Pn**	**03 34 11.8**	**+0.7**
KULA	**Kula-Manisa**	**4.21**	**30**	*e*Pn	**Pn**	**03 34 11.9**	**+0.7**
GUR	**Goura**	**4.22**	**317**	*e*PN	**Pn**	**03 34 12.1**	**+0.7**
GUR	**Goura**	**4.22**	**317**	*e*Pn	**Pn**	**03 34 12.1**	**+0.7**
KLV	**Kalavryta, Ach**	**4.41**	**317**	*e*PN	**Pn**	**03 34 14.8**	**+0.9**
KLV	**Kalavryta, Ach**	**4.41**	**317**	*e*Pn	**Pn**	**03 34 14.8**	**+0.9**
KHAL	**Karahalli**	**4.48**	**38**	*i* P	**Pn**	**03 34 15.1**	**+0.2**
KHAL	**Karahalli**	**4.48**	**38**	*i* P	**Pn**	**03 34 15.1**	**+0.2**
LAKA	**Lakka**	**4.64**	**317**	*e*PN	**Pn**	**03 34 17.8**	**+0.7**
LAKA	**Lakka**	**4.64**	**317**	*e*Pn	**Pn**	**03 34 17.8**	**+0.7**
KALE	**Kalithea**	**4.66**	**320**	*e*PN	**Pn**	**03 34 18.2**	**+0.8**
KALE	**Kalithea**	**4.66**	**320**	*e*Pn	**Pn**	**03 34 18.2**	**+0.8**
TRIZ	**Trizonia**	**4.68**	**319**	*e*PN	**Pn**	**03 34 18.8**	**+1.3**
TRIZ	**Trizonia**	**4.68**	**319**	*e*Pn	**Pn**	**03 34 18.8**	**+1.3**
TVSB	**Tavsanli**	**5.33**	**30**	*e*PN	**Pn**	**03 34 27.8**	**+1.2**
TVSB	**Tavsanli**	**5.33**	**30**	*e*Pn	**Pn**	**03 34 27.8**	**+1.2**
LEF	**Lefka**	**5.68**	**86**	*e*PN	**Pn**	**03 34 33.4**	**+2.2**
LEF	**Lefka**	**5.68**	**86**	*e*Pn	**Pn**	**03 34 33.4**	**+2.2**
CSS	**Prodhromos**	**6.04**	**87**	*e*PN	**Pn**	**03 34 38.6**	**+2.3**
CSS	**Prodhromos**	**6.04**	**87**	*e*Pn	**Pn**	**03 34 38.6**	**+2.3**
LFK	**Lefkose**	**6.21**	**84**	*e*PN	**Pn**	**03 34 40.8**	**+2.2**
LFK	**Lefkose**	**6.21**	**84**	*e*Pn	**Pn**	**03 34 40.8**	**+2.2**
BRTR	**Keskin Array B**	**7.78**	**49**	Pn	**Pn**	**03 35 01.9**	**+1.6**
	0.1nm,0.3s,baz=220,slow=14,SNR=4.1						
MMAI	**Mount Meron Ar**	**8.05**	**101**	Pn	**Pn**	**03 35 04.3**	**+0.4**
	1.0nm,0.3s,baz=280,slow=11,SNR=4.5						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EIL	Elat	9.20	122	Pn	Pn	03 35 19.6	-0.1
	0.3nm,0.3s,baz=350,slow=12,SNR=4.5						
EIL				Sn	Sn	03 36 59.4	-4.2
	0.3nm,0.3s,baz=184,slow=19,SNR=2.6						
KBZ	Khabaz	15.77	51	Pn	P	03 36 52.6	-0.3
	0.1nm,0.3s,baz=291,slow=14,SNR=2.9						
AKASG	Malin Array Be	15.98	8	Pn	P	03 36 54.0	-1.2
	0.4nm,0.3s,baz=188,slow=9.0,SNR=2.7						
GERES	GERESS Array B	16.64	331	Pn	P	03 37 06.5	+3.8
	0.1nm,0.3s,baz=150,slow=12,SNR=3.9						
ESDC	Sonseca Array	24.24	290	P	P	03 38 23.0	-1.1
	0.3nm,0.4s,baz=82,slow=11,SNR=4.4						
EKA	Eskdalemuir Ar	28.65	325	P	P	03 39 05.6	+2.0
	0.9nm,0.8s,baz=119,slow=9.8,SNR=3.1						
TORD	Torodi Ar. Bea	30.84	231	P	P	03 39 23.6	+0.3
	0.3nm,0.4s,baz=34,slow=8.7,SNR=13						
MKAR	Makanchi Array	43.36	56	P	P	03 41 09.0	-0.4
	0.8nm,0.5s,baz=268,slow=8.9,SNR=9.1						

*IDC **13** 03:44:10.6±0.9, 7°.14S×128°.64E, h0^{km}, mb3.9/4, mb1 4.4/7, mb1mx4.0/20, mbtmp4.2/7, ML4.7/3, Error ellipse: s-maj=77.6km s-min=18.9km az=71.0*
*AUST **13** 03:44:20.9, 7°.49S×128°.03E, h60^{km}*
*ISCJB **13** 03:44:24.5±0.6, 7°.63S±0°.05×128°.3E±0°.1, h151^{km}, mb3.7/4, Error ellipse: s-maj=14.9km s-min=6.1km az=169.4*
ISC 13 03:44:26.6±0.7**, 7°.68S**±0°.06×**128°.43E**±0°.08**, h151**^{km}**, n22,** σ2^{s}79/23**, mb3.7**/4**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	3.97	357	P	Pn	03 45 23.0	-3.6
	baz=3.8,SNR=3.9						
MTN	Manton Dam	5.78	153	P	Pn	03 45 50.7	+0.2
	baz=6.2,SNR=413						
MTN				S	Sn	03 46 55.9	-0.2
	baz=6.2,SNR=11						
FAKI	Fak Fak	6.07	39	P	Pn	03 45 51.6	-2.8
	baz=6.2,SNR=9.1						
FAKI				S	Sn	03 46 58.1	-4.9
	baz=6.2,SNR=7.0						
KDU	Kakadu	6.37	142	P	Pn	03 45 58.5	+0.1
	baz=6.8,SNR=490						
KNRA	Kununurra	7.96	178	P	Pn	03 46 19.5	+0.1
	baz=8.2,SNR=141						
KNRA				S	Sn	03 47 46.0	-2.2
	baz=8.2,SNR=12						
FITZ	Fitzroy Crossi	10.71	194	Pn	Pn	03 46 54.3	-1.7
	1.8nm,0.3s,baz=26,slow=9.7,SNR=86						
FITZ				Sn	Sn	03 48 49.7	-4.9
	3.3nm,0.3s,baz=273,slow=22,SNR=10						
FITZ	Fitzroy Crossi	10.71	194	P	Pn	03 46 54.0	-2.1
	baz=11,SNR=83						
WRA	Warramunga Arr	13.47	155	Pn	Pn	03 47 30.4	-1.5
	8.4nm,0.3s,baz=342,slow=13,SNR=252						
WRA				Sn	Sn	03 49 54.3	-6.9
	3.0nm,0.3s,baz=332,slow=22,SNR=7.0						
COEN	Coen	15.77	115	P	P	03 48 03.0	+1.6
	baz=16,SNR=6.4						
ASAR	Alice Springs	16.74	162	P	Pn	03 48 14.3	+1.8
	1.0nm,0.3s,baz=333,slow=9.2,SNR=71						
ASAR				S	S	03 51 13.4	-5.3
	0.6nm,0.3s,baz=328,slow=15,SNR=4.6						
QIS	Mount Isa	16.76	141	P	Pn	03 48 15.5	+2.8
	baz=17,SNR=8.6						
MTSU	Mount Surprise	18.63	125	P	Pn	03 48 41.6	+6.6
	baz=19,SNR=5.6						
MEEK	Meekatharra	21.04	205	P	P	03 49 03.8	+5.1
	baz=21,SNR=4.2						
QLP	Quilpie	24.07	143	P	P	03 49 34.2	+6.1
	baz=24,SNR=5.3						
MNAI	Manna	25.54	276	S	S	03 53 59.0	+0.7
	baz=25,SNR=4.5						
STKA	Stephens Creek	27.02	155	P	P	03 49 58.7	+4.0
	1.4nm,0.5s,baz=325,slow=13,SNR=4.1						
SONM	Songino Array	58.61	343	P	P	03 54 07.8	0.0
	0.3nm,0.4s,baz=126,slow=7.4,SNR=2.7						
MKAR	Makanchi Array	67.95	328	P	P	03 55 09.8	+0.6
	0.4nm,0.5s,baz=123,slow=8.2,SNR=8.8						
ZALV	Zalesovo Beam	71.51	335	P	P	03 55 30.4	-0.4
	0.9nm,0.3s,baz=117,slow=5.3,SNR=4.2						
TORD	Torodi Ar. Bea	127.41	281	PKP	PKPdf	04 03 16.6	+2.0
	0.3nm,0.6s,baz=83,slow=2.4,SNR=7.1						
CPUP	Villa Florida	145.74	171	PKPbc	PKPab	04 03 52.5	+3.4
	0.5nm,0.4s,baz=142,slow=3.7,SNR=6.1						
LPAZ	La Paz	151.09	146	PKPbc	PKPbc	04 04 07.1	+3.5
	1.0nm,0.4s,baz=188,slow=7.1,SNR=14						

KRSC 13 03:55:42.9±1.1**, 49°.20N**×**156°.32E, h5**^{km}±5^{km}**, ML3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.49	355	*e*P	Pn	03 56 09.7	-0.6
SKR				*e*S	Sn	03 56 29.3	-0.8
PAU	Pauzhetka	2.29	8	*e*P	Pn	03 56 21.8	+0.5
PAU				*e*S	Sn	03 56 50.5	+0.6
ASAK	Asacha	3.34	17	*e*P	Pn	03 56 38.1	+2.2
ASAK				*e*S	Sn	03 57 18.3	+2.3
MTVR	Mutnovka	3.49	19	*e*P	Pn	03 56 39.9	+1.9
MTVR				*e*S	Sn	03 57 21.7	+1.8
RUS	Russkaya	3.52	22	*e*P	Pn	03 56 39.3	+1.1
RUS				*e*S	Sn	03 57 21.3	+1.1
KOK	Koryaka	4.35	19	*e*P	Pn	03 56 52.4	+2.7
NLC	Nalytchevo	4.41	24	*e*S	Sn	03 57 41.6	-0.4

*ISCJB **13** 04:09:28.9±0.7, 39°.87N±0°.05×41°.48E±0°.04, h12^{km}±4^{km}, Error ellipse: s-maj=7.7km s-min=5.0km az=173.4*
*CSEM **13** 04:09:28.1±0.4, 39°.75N×41°.41E, h5^{km}, MD2.8, Error ellipse: s-maj=9.9km s-min=8.0km az=29.0*
*DDA **13** 04:09:29.5, 40°.03N×41°.45E, h7^{km}, MD2.9*
*ISK **13** 04:09:29.9, 39°.89N×41°.27E, h7^{km}, MD2.8*
ISC 13 04:09:28.1±1.0**, 39°.87N**±0°.04×**41°.50E**±0°.03**, h18**^{km}±5^{km}**, n19,** σ0^{s}68/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZM	Erzurum	0.11	291	*i* P	Pg	04 09 32.2	+0.1
ERZM				*i* S	Sg	04 09 35.2	+0.4
ERZM	Erzurum	0.11	291	*i* P	Pg	04 09 32.2	+0.1
ERZM				*i* S	Sg	04 09 35.2	+0.4
EZM	Erzurum	0.11	291	PG	Pb	04 09 32.2	+0.8
EZM				SG	Sb	04 09 33.8	+0.4
HOMI	Horasan	0.36	60	*i* P	Pb	04 09 36.4	+0.2
HOMI				*i* S	Sb	04 09 42.9	+1.4
KOPT	Kop Dagi	0.78	281	*i* P	Pn	04 09 44.3	-0.2
KOPT				*i* S	Sg	04 09 54.6	+0.7
KOPT	Kop Dagi	0.78	281	*i* P	Pn	04 09 44.3	-0.2
KOPT				*i* S	Sg	04 09 54.6	+0.7
DDEM	Demirkent	1.04	11	*i* P	Pb	04 09 46.8	-0.9
DDEM				*i* S	Sb	04 10 01.0	0.0
DDEM	Demirkent	1.04	11	*i* P	Pb	04 09 46.8	-0.9
DDEM				*i* S	Sb	04 10 01.0	0.0
BNGB	Bingˆ¶l	1.08	216	*e*PG	Pg	04 09 49.6	+0.6
TUTA	Tutak	1.12	114	*i* P	Pn	04 09 39.4	-10
TUTA				*i* S	Sn	04 10 04.3	+0.2
BAYT	Ayd˜–ntepe-Bay	1.17	297	*e*PG	Pn	04 09 49.5	-0.2
BAYT				*e*SG	Sb	04 10 04.0	-0.7
BAYT	Ayd˜–ntepe-Bay	1.17	297	*e*Pg	Pn	04 09 49.5	-0.2
BAYT				*e*Sg	Sb	04 10 04.0	-0.7
AGRB	Hanur-Agry	1.19	104	*e*PN	Pg	04 09 56.0	+4.9
DAGI	Agillar	1.25	15	*i* P	Pn	04 09 49.6	-1.2
DAGI				*i* S	Sn	04 10 07.9	+0.7
BINT	Bingol	1.26	219	*e*Pg	Pn	04 09 49.6	-1.3
PZAR	Pazar-Rize	1.39	341	*e*PN	Pg	04 09 55.3	+0.5
PZAR	Pazar-Rize	1.39	341	*e*Pn	Pg	04 09 55.3	+0.5
BCA	Borcka	1.58	3	*e*PN	Pg	04 09 59.0	+0.5
BCA	Borcka	1.58	3	*e*Pn	Pg	04 09 59.0	+0.5

IDC 13 04:25:44.4±1.5**, 1°.55S**×**24°.57W, h0**^{km}**, mb3.7**/2**, mb1 3.8**/2**, mb1mx3.4**/25**, mbtmp3.7**/2**, MS3.6**/14**, Ms1 3.6**/14**, ms1mx3.4**/26**, Error ellipse: s-maj=106.7km s-min=30.9km az=154.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBIC	Dimbokro	21.30	67	LR	LR	04 36 58.4	
	comp=Z,138nm,18.1s,baz=222,slow=32						
BDFB	Brasilia	27.03	238	LR	LR	04 41 57.0	
	comp=Z,183nm,19.8s,baz=23,slow=36						
TORD	Torodi Ar. Bea	29.87	60	P	P	04 31 54.0	+0.1
	0.9nm,1.0s,baz=232,slow=7.1,SNR=3.3						
TORD				LR	LR	04 42 20.8	
	comp=Z,132nm,19.2s,baz=200,slow=33						
MDT	Midelt	39.04	27	LR	LR	04 47 43.8	
	comp=Z,78nm,20.3s,baz=0.8,slow=34						
CPUP	Villa Florida	39.98	229	LR	LR	04 50 37.8	
	comp=Z,116nm,19.5s,baz=216,slow=37						
LPAZ	La Paz	45.32	249	P	P	04 34 05.2	-0.2
	0.9nm,0.8s,baz=47,slow=8.1,SNR=4.4						
LPAZ				LR	LR	04 54 21.8	
	comp=Z,57nm,18.9s,baz=344,slow=38						
KEST	Kesra	48.75	37	LR	LR	04 55 58.2	
	comp=Z,59nm,18.8s,baz=199,slow=37						
ROSC	El Rosal	50.12	278	LR	LR	04 55 00.5	
	comp=Z,69nm,19.6s,baz=185,slow=35						
BOSA	Boshof	54.56	124	LR	LR	04 53 59.8	
	comp=Z,64nm,19.8s,baz=164,slow=31						
GERES	GERESS Array B	60.12	28	LR	LR	04 58 43.3	
	comp=Z,22nm,21.6s,baz=268,slow=33						
KMBO	Kilima Mbogo	61.80	90	LR	LR	04 59 10.0	
	comp=Z,110nm,19.7s,baz=99,slow=32						
SCHQ	Schefferville	66.04	335	LR	LR	05 02 14.5	
	comp=Z,38nm,19.0s,baz=55,slow=33						
TXAR	Lajitas Array	81.26	300	LR	LR	05 09 14.1	
	comp=Z,45nm,21.7s,baz=185,slow=32						
PDAR	Pinedale Array	87.36	313	LR	LR	05 13 13.9	
	comp=Z,33nm,19.9s,baz=264,slow=33						
ASAR	Alice Springs	147.34	141	PKPbc	PKPbc	04 45 31.0	0.0
	0.8nm,0.8s,baz=202,slow=2.7,SNR=11						
WRA	Warramunga Arr	150.26	137	PKPbc	PKPbc	04 45 37.4	-1.2
	0.7nm,0.9s,baz=247,slow=2.7,SNR=4.5						

SKHL 13 04:30:10.4±0.5**, 55°.50N**×**130°.60E, h9**^{km}±1^{km}**, mb3.6**/5**, Southeastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BMKR	Bomnak	1.28	233	*e*Pg	Pn	04 30 34.0	-0.5
BMKR				AMB	AMB	04 30 34.4	
	40nm,0.4s						
BMKR				AMB	AMB	04 30 34.4	
	67nm,0.4s						
BMKR				pPg	Pg	04 30 37.2	+2.2
BMKR				*e*Sg	Sb	04 30 51.0	-0.3
BMKR				A	A	04 30 54.2	
	93nm,0.5s						
KROS	Kirovskiy	2.35	244	*e*Pn	Pn	04 30 48.5	-0.7
KROS				*e*Pg	Pb	04 30 52.6	-0.3
KROS				AMB	AMB	04 30 52.9	
	3.0nm,0.4s						
KROS				AMB	AMB	04 30 52.9	
	8.0nm,0.4s						
KROS				AMB	AMB	04 30 52.9	
	11nm,0.4s						
KROS				pPg	Pg	04 30 56.0	+0.5
KROS				*e*Sn	Sn	04 31 17.8	-0.4
KROS				*e*Sg	Sb	04 31 23.3	+1.3
KROS				A	A	04 31 24.8	
	52nm,0.5s						
KROS				A	A	04 31 24.8	
	29nm,0.5s						
KROS				A	A	04 31 24.8	
	19nm,0.5s						
ZEA	Zeya	2.63	229	*e*Sg	Sb	04 31 31.0	+1.0
EKMR	Ekimchan	2.80	150	*e*Pg	Pb	04 31 00.5	-0.1
EKMR				AMB	AMB	04 31 02.5	
	4.0nm,0.4s						
EKMR				*e*Sg	Sb	04 31 37.5	+2.6
EKMR				A	A	04 31 48.5	
	19nm,0.5s						
IENR	Iengra	3.32	285	*e*Pg	Pb	04 31 10.3	+0.8
IENR				AMB	AMB	04 31 10.4	
	5.0nm,0.6s						
IENR				*e*Sg	Sg	04 31 54.6	-2.5
IENR				A	A	04 31 54.7	
	34nm,0.6s						
CLNS	Chul'man	3.46	295	*e*Pg	Pb	04 31 11.4	-0.5
CLNS				AMB	AMB	04 31 17.4	
	5.0nm,0.3s						
CLNS				AMB	AMB	04 31 17.4	
	2.0nm,0.3s						
CLNS				AMB	AMB	04 31 17.4	
	11nm,0.3s						
CLNS				*e*Sg	Sb	04 31 56.4	+2.3
CLNS				A	A	04 32 05.7	
	13nm,0.3s						
CLNS				A	A	04 32 05.7	
	9.0nm,0.3s						
CLNS				A	A	04 32 05.7	
	6.0nm,0.3s						
TUP	Tupik	6.23	264	*e*Sg	Sg	04 33 25.9	-4.4

*ISK **13** 04:32:45.4, 37°.75N×37°.47E, h2^{km}, MD3.0*
*DDA **13** 04:32:46.3, 37°.77N×37°.45E, h6^{km}, MD3.1*
*CSEM **13** 04:32:46.4±0.2, 37°.79N×37°.46E, h2^{km}, MD3.0, Error ellipse: s-maj=4.1km s-min=3.2km az=150.0*
ISC 13 04:32:46.8±1.1**, 37°.76N**±0°.03×**37°.46E**±0°.02**, h6**^{km}±10^{km}**, n34,** σ0^{s}66/54**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMRS	Kahramanmaras	0.51	240	*e*PG	Pg	04 32 56.1	-0.6
KMRS				*e*SG	Sg	04 33 04.0	+0.6
KMRS	Kahramanmaras	0.51	240	*e*Pg	Pg	04 32 56.1	-0.6
KMRS				*e*Sg	Sg	04 33 04.0	+0.6
AYKD	Aykdinkavak	0.62	236	*i* P	Pg	04 32 58.1	-0.7
AYKD				*i* S	Sg	04 33 07.2	+0.3
AKCD	Akcadag	0.64	34	*i* P	Pg	04 32 58.7	-0.5
AKCD				*i* S	Sb	04 33 08.9	-1.0
AKCD	Akcadag	0.64	34	*i* P	Pg	04 32 58.7	-0.5
AKCD				*i* S	Sb	04 33 08.9	-1.0
ATAB	Bozova	0.72	114	*i* P	Pg	04 33 00.6	-0.1
ATAB				*i* S	Sg	04 33 10.7	+0.6
ATAB	Bozova	0.72	114	*i* P	Pg	04 33 00.6	-0.1
ATAB				*i* S	Sg	04 33 10.7	+0.6
DARE	Darende-Malaty	0.81	1	*e*PG	Pg	04 33 01.6	-0.6
DARE				*e*SG	Sb	04 33 14.2	-0.3
ANDN	Andirin	0.90	259	*i* P	Pg	04 33 03.2	-0.9
ANDN				*i* S	Sb	04 33 17.1	-0.2
ANDN	Andirin	0.90	259	*i* P	Pg	04 33 03.2	-0.9
ANDN				*i* S	Sb	04 33 17.1	-0.2
MYA	Malataya	0.95	53	*e*PG	Pg	04 33 04.5	-0.4
MYA	Malataya	0.95	53	*e*Pg	Pg	04 33 04.5	-0.4
KUZU	Kuzuini	1.04	197	*i* P	Pb	04 33 07.5	+0.3
KUZU				*i* S	Sn	04 33 22.2	-0.6
KUZU	Kuzuini	1.04	197	*i* P	Pb	04 33 07.5	+0.3
KUZU				*i* S	Sn	04 33 22.2	-0.6
SARI	SarD1z-Kayseri	1.04	308	*e*PG	Pg	04 33 06.8	0.0
SARI				*e*SG	Sn	04 33 22.5	-0.7
SARI	SarD1z-Kayseri	1.04	308	*e*Pg	Pg	04 33 06.8	0.0
SARI				*e*Sg	Sn	04 33 22.5	-0.7
URFA	Urfa	1.13	106	*e*PN	Pg	04 33 08.0	-0.4
URFA	Urfa	1.13	106	*e*Pn	Pg	04 33 08.0	-0.4
PINB	Pinarbasi	1.23	318	*i* P	Pg	04 33 09.2	-1.3
PINB				*i* S	Sn	04 33 29.4	+1.4
PINB	Pinarbasi	1.23	318	*i* P	Pg	04 33 09.2	-1.3
PINB				*i* S	Sn	04 33 29.4	+1.4
KOZT	Kozan	1.33	258	*e*PN	Pg	04 33 11.6	-0.6
KOZT	Kozan	1.33	258	*e*Pn	Pg	04 33 11.6	-0.6
ELZG	Elazig	1.41	58	*i* P	Pn	04 33 12.3	-0.9
ELZG				*i* S	Sn	04 33 32.6	+0.4
ELZG	Elazig	1.41	58	*i* P	Pn	04 33 12.3	-0.9
ELZG				*i* S	Sn	04 33 32.6	+0.4
COBT	Iskenderun	1.57	218	*i* P	Pn	04 33 15.5	+0.1
COBT				*i* S	Sg	04 33 38.0	+0.7
COBT	Iskenderun	1.57	218	*i* P	Pn	04 33 15.5	+0.1
COBT				*i* S	Sg	04 33 38.0	+0.7
PTK	Pertek	1.89	53	*e*PN	Pn	04 33 20.2	+0.4
PTK	Pertek	1.89	53	*e*Pn	Pn	04 33 20.2	+0.4
SVSK	Karacayir	2.18	351	*e*PN	Pn	04 33 24.1	+0.5
SVSK	Karacayir	2.18	351	*e*Pn	Pn	04 33 24.1	+0.5
NIG	Nigde	2.28	280	*e*PN	Pn	04 33 25.4	+0.1
NIG	Nigde	2.28	280	*e*Pn	Pn	04 33 25.4	+0.1
YOZ	Yozgat	2.51	319	*e*PN	Pn	04 33 28.9	+0.6
YOZ	Yozgat	2.51	319	*e*Pn	Pn	04 33 28.9	+0.6

IDC 13 04:49:22.5±280.0**, 48°.49N**×**153°.16E, h0**^{km}**, Error ellipse: s-maj=73.7km s-min=23.2km az=33.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I44RU	PETROPAVLOVSK-	5.45	30	*i*		05 24 40.0	
	baz=214,slow=320,SNR=3.5						
I45RU	USSURIYSK INFR	15.23	262	*i*		06 14 30.0	
	baz=65,slow=312,SNR=1.0						
I30JP	ISUMI INFRASON	16.25	221	*i*		06 20 50.0	
	baz=31,slow=319,SNR=1.4						

*ISCJB **13** 05:03:34.8±0.7, 14°.06N±0°.05×92°.34W±0°.04, h35^{km}±6^{km}, mb4.2/32, MS3.6/4, Error ellipse: s-maj=10.1km s-min=4.5km az=33.3*
*MEX **13** 05:03:37.5±1.1, 14°.12N×92°.58W, h13^{km}±26^{km}, MD4.4*
*CASC **13** 05:03:37.6±1.5, 13°.96N×92°.19W, h50^{km}±44^{km}, MD4.1, ML4.0, mb4.1(NEIC)*
*NEIC **13** 05:03:38.4, 14°.15N×92°.62W, h16^{km}, mb4.1/25, MD4.4(MEX), After MEX.*
*IDC **13** 05:03:41.8±4.8, 14°.32N×91°.89W, h84^{km}±41^{km}, mb3.7/8, mb1 4.0/10, mb1mx3.7/27, mbtmp3.7/10, MS3.2/4, Ms1 3.3/4, ms1mx2.9/30, Error ellipse: s-maj=42.1km s-min=17.3km az=51.0*
*BJI **13** 05:03:42.0, 14°.60N×92°.00W, h81^{km}, mB5.0/1, Ms7 4.4/1*
ISC 13 05:03:34.0±2.0**, 13°.99N**±0°.06×**92°.42W**±0°.04**, h25**^{km}±13^{km}**, n168,** σ1^{s}76/168**, mb4.1**/32**, MS3.3**/4**, 8C-14D, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAT	Jato	0.83	67	⇓*i*P	Pn	05 03 51.2	+1.1
THIG		0.93	10	*e*P	Pn	05 03 50.3	-1.2
THIG				*i* S	Sb	05 04 02.4	-1.0
THIG		0.93	10	*e*P	Pn	05 03 50.3	-1.2
THIG				*i* S	Sb	05 04 02.4	-1.0
FUG	Fuego 3	1.60	73	⇑*i*P	Pn	05 04 01.0	+0.1
PCG	Pacaya	1.81	77	⇑*e*P	Pn	05 04 04.3	+0.5
PCIG		1.87	336	*e*P	Pn	05 04 03.0	-1.5
PCIG				*i* S	Sn	05 04 22.2	-5.1
PCIG		1.87	336	*e*P	Pn	05 04 03.0	-1.5
NBG	Las Nubes	2.10	73	*e*P	Pn	05 04 09.6	+1.7
CCIG	Comitan	2.30	7	*e*P	Pn	05 04 11.8	+1.3
CCIG				*i* S	Sn	05 04 36.4	-1.7
CCIG	Comitan	2.30	7	*e*P	Pn	05 04 11.3	+0.8
CCIG				*i* S	Sn	05 04 36.4	-1.7
RBDL	Robledal	2.66	87	*e*P	Pn	05 04 15.3	-0.1
RBDL				*e*S	Sn	05 04 44.3	-2.7
RTR	El Retiro	2.70	92	*e*P	Pn	05 04 15.5	-0.5
RTR				*e*S	Sn	05 04 46.3	-1.7
SBLS	San Blas	2.72	93	*e*P	Pn	05 04 16.1	-0.3
SNJE	San Jose	2.74	92	*e*P	Pn	05 04 16.8	+0.2
SNJE				*e*S	Sn	05 04 47.2	-1.9
MRL	Marmol	2.85	68	*e*P	Pn	05 04 19.5	+1.3
TGIG		2.85	346	*i* P	Pn	05 04 18.2	+0.1
TGIG				*i* S	Sn	05 04 47.9	-3.8
TGIG		2.85	346	*i* P	Pn	05 04 18.2	+0.1
TGIG				*i* S	Sn	05 04 48.9	-2.7
BOQS	Boqueron	3.06	94	*e*P	Pn	05 04 21.0	-0.1
SNET	Serv Nac Est T	3.12	95	*e*P	Pn	05 04 21.2	-0.5
SNET				*e*S	Sn	05 04 55.6	-2.5
SNET				AML	AML	05 04 59.8	
	comp=Z,965nm,0.2s						
LFRS	El Faro	3.29	96	*e*P	Pn	05 04 23.9	-0.2
LBRS	Las Brisas	3.29	94	*e*P	Pn	05 04 23.6	-0.5
HUIG	Huatulco	3.98	297	*i* P	Pn	05 04 33.6	+0.2
HUIG				*i* S	Sn	05 05 14.5	-4.8
HUIG	Huatulco	3.98	297	*i* P	Pn	05 04 33.6	+0.2
HUIG				*i* S	Sn	05 05 15.5	-3.8
TGUH	Tegucigalpa,Un	5.00	89	*e*P	Pn	05 04 46.7	-0.8
TGUH	Tegucigalpa,Un	5.00	89	*e*Pn	Pn	05 04 49.3	+1.8
PNIG	Pinotepa	6.00	294	*i* P	Pn	05 05 02.2	+0.9
PNIG				*e*S	Sn	05 06 06.6	-2.7
PNIG	Pinotepa	6.00	294	*i* P	Pn	05 05 02.2	+0.9
PNIG				*e*S	Sn	05 06 06.6	-2.7
UTMO	Huajuapan	6.43	307	*i* P	Pn	05 05 08.3	+0.8
UTMO				*i* S	Sn	05 06 16.9	-3.3
UTMO	Huajuapan	6.43	307	*i* P	Pn	05 05 08.3	+0.8
UTMO				*i* S	Sn	05 06 16.9	-3.3
TPIG	Tehuac#an	6.47	314	*i* P	Pn	05 05 03.3	-4.6
TPIG	Tehuac#an	6.47	314	*i* P	Pn	05 05 03.3	-4.6
TEIG	Tepich	7.36	32	*e*Pn	Pn	05 05 20.1	+0.1
TEIG	Tepich	7.36	32	P	Pn	05 05 19.7	-0.2
	comp=Z,11nm,0.3s,baz=184,slow=19,SNR=63						
TEIG				LR	LR	05 08 21.0	
	comp=Z,105nm,20.8s,baz=193,slow=41						
JTS	JuntasAbangare	8.18	116	*e*Pn	Pn	05 05 40.6	+9.3
BCIP	Isla Barro Col	13.23	110	*e*Pn	P	05 06 49.7	-0.3
732A	Laxson Ranch,	16.26	336	⇓P	P	05 07 23.2	-0.4
	baz=16						
531A	Rocksprings	17.76	336	P	P	05 07 42.9	+2.6
	baz=18						
530A	J-C Ranch, Com	18.07	334	⇓P	P	05 07 47.0	+3.2
	baz=18						
628A	Black Gap, Mar	18.21	330	⇑P	P	05 07 48.6	+3.3
	baz=18						
431A	Sonora	18.24	337	⇓P	Pn	05 07 49.4	+3.7
	baz=18,SNR=5.5						
529A	Stev Forest Ra	18.43	332	P	Pn	05 07 49.6	+1.7
	baz=18,SNR=5.6						
627A	Terlingua Ranc	18.43	328	P	Pn	05 07 51.1	+3.1
	baz=18,SNR=11						
TXAR	Lajitas Array	18.48	328	P	Pn	05 07 51.2	+2.6
	comp=Z,0.1nm,0.3s,baz=152,slow=14,SNR=28						
430A	Baggett Ranch,	18.58	336	⇓P	Pn	05 07 51.9	+2.2
	baz=18						
429A	Davenport Ranc	18.71	334	P	Pn	05 07 53.9	+2.5
	baz=19,SNR=8.4						
528A	Cox Ranch, San	18.72	331	⇑P	Pn	05 07 53.7	+2.1
	baz=19						
331A	San Angelo	18.74	338	P	Pn	05 07 54.3	+2.6
	baz=19,SNR=7.1						
626A	Big Bend Ranch	18.90	327	P	Pn	05 07 56.1	+2.4
	baz=19,SNR=12						
232A	Coleman	19.01	341	⇓P	Pn	05 07 57.2	+2.4
	baz=19						
330A	Mertzon	19.11	337	⇓P	Pn	05 07 57.0	+0.9
	baz=19						
527A	Woodward Ranch	19.11	329	⇓P	Pn	05 07 57.9	+1.7
	baz=19						
428A	Kincaid Ranch,	19.15	332	⇑P	Pn	05 07 59.3	+2.6
	baz=19						
231A	Bronte	19.27	339	⇓P	Pn	05 07 58.3	+0.3
	baz=19						
526A	Mary Lane Ranc	19.28	328	⇓P	Pn	05 08 00.5	+2.2
	baz=19						
329A	Wagon Wheel Ra	19.50	335	P	Pn	05 08 01.8	+0.9
	baz=19,SNR=6.3						
230A	Sterling City	19.51	337	P	Pn	05 08 01.1	+0.2
	baz=19,SNR=8.7						
427A	Hayter Ranch,	19.59	331	⇑P	Pn	05 08 02.6	+0.7
	baz=19						
LRAL	Lakeview Retre	19.59	14	*e*P	P	05 08 00.6	+0.2
	comp=Z,3.7nm,0.8s						
426A	McDonald Obser	19.74	329	P	Pn	05 08 05.0	+1.1
	baz=20						
328A	Wristen Ranch,	19.76	333	P	Pn	05 08 04.7	+0.7
	baz=20,SNR=18						
ROSC	El Rosal	20.01	115	*e*P	Pn	05 08 09.2	+1.8
ROSC	El Rosal	20.01	115	P	Pn	05 08 08.9	+1.5
	baz=273,slow=22,SNR=6.5						
326A	Caldwell Ranch	20.25	330	P	Pn	05 08 09.9	+0.2
	baz=20,SNR=28						
Z32A	Haskell	20.27	343	⇓P	P	05 08 09.0	+1.1
	baz=20						
228A	UT Block 9, Go	20.30	334	P	Pn	05 08 10.0	-0.4
	baz=20,SNR=5.6						
425A	Indio Mountain	20.33	327	P	P	05 08 10.1	+1.5
	baz=20,SNR=5.5						
129A	Stewart Farms,	20.46	337	⇓P	P	05 08 11.5	+1.5
	baz=20						
Z31A	Sharp Cattle R	20.48	341	P	P	05 08 11.8	+1.7
	baz=20,SNR=5.2						
227A	Bennet, Jal	20.51	333	P	Pn	05 08 13.1	+0.2
	baz=20,SNR=8.8						
UALR	University of	20.70	0	*e*P	Pn	05 08 14.9	+0.1
	comp=Z,16nm,0.8s						
128A	Castleberry Fa	20.70	335	P	P	05 08 13.8	+1.3
	baz=20,SNR=14						
Z30A	Sanderson Ranc	20.78	339	P	P	05 08 14.2	+0.9
	baz=21,SNR=11						
325A	Bean Ranch, Si	20.78	328	P	Pn	05 08 15.9	-0.2
	baz=21,SNR=8.3						
Z29A	Hungry Hill Ra	20.96	338	P	P	05 08 15.6	+0.2
	baz=21,SNR=15						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
226B	Tecolote Peak,	20.97	331	P	Pn	05 08 17.7	-0.4
	baz=21,SNR=23						
324A	Moseley Ranch,	21.10	328	P	P	05 08 18.7	+1.7
	baz=21,SNR=11						
127A	Arkansas Junct	21.11	334	⇑P	P	05 08 19.3	+2.3
	baz=21						
GDL2	Guadalupe Moun	21.16	331	eP	P	05 08 19.8	+2.2
MNTX	Cornudas Mount	21.26	328	eP	P	05 08 19.3	+0.8
	comp=Z,3.1nm,0.7s						
225A	Deer Hill, Car	21.31	330	P	P	05 08 21.2	+2.0
	baz=21,SNR=12						
126A	Clayton Basin,	21.38	332	P	P	05 08 21.3	+1.5
	baz=21,SNR=6.6						
WMOK	Wichita Mounta	21.44	346	eP	P	05 08 20.9	+0.5
	comp=Z,1.5nm,0.6s						
Y29A	Porterfield Fa	21.49	339	⇑P	P	05 08 21.4	+0.3
	baz=21						
Z27A	Tatum	21.60	335	P	P	05 08 23.0	+0.7
	baz=21,SNR=8.4						
224A	Cornudas Mount	21.63	329	P	P	05 08 24.0	+1.4
	baz=22,SNR=18						
X31A	McDonald Ranch	21.66	343	P	P	05 08 23.4	+0.7
	baz=22,SNR=5.9						
125A	Gardner Draw,	21.68	331	P	P	05 08 24.4	+1.3
	baz=22,SNR=39						
Y28A	McKinney Farm,	21.74	337	P	P	05 08 24.2	+0.5
	baz=22,SNR=7.6						
X30A	Coker Ranch, T	21.76	341	P	P	05 08 25.2	+1.3
	baz=22,SNR=14						
Z26A	Caprock	21.89	333	P	P	05 08 27.6	+2.2
	baz=22,SNR=11						
MSTX	Muleshoe	22.00	337	⇓P	P	05 08 26.8	+0.3
	baz=22						
Y27A	Causey	22.07	336	⇓P	P	05 08 27.8	+0.4
	baz=22,SNR=11						
124A	Stringfield Ra	22.10	330	P	P	05 08 30.0	+2.3
	baz=22,SNR=26						
Z25A	Roswell	22.23	332	P	P	05 08 30.2	+1.2
	baz=22,SNR=7.3						
WVT	Waverly	22.43	10	eP	P	05 08 29.5	-1.5
	comp=Z,1.9nm,0.5s						
CPCT	Cooper Cave	22.52	17	eP	P	05 08 30.8	-1.3
Z24A	Sheeppen Canyo	22.57	331	P	P	05 08 34.2	+1.5
	baz=22,SNR=40						
X27A	F and S Farms,	22.72	337	P	P	05 08 34.5	+0.2
	baz=23,SNR=6.3						
Y25A	Mesa, Roswell	22.75	333	P	P	05 08 35.6	+1.0
	baz=23,SNR=16						
TKL	Tuckaleechee C	22.94	18	P	P	05 08 34.8	-1.6
	comp=Z,2.1nm,0.6s,baz=172,slow=11,SNR=4.6						
W27A	Bowe Ranch, En	23.07	337	P	P	05 08 38.0	+0.1
	baz=23,SNR=10						
Y24A	Capitan	23.09	331	P	P	05 08 39.5	+1.2
	baz=23,SNR=22						
121A	Cookes Peak, D	23.18	325	P	P	05 08 41.6	+2.5
	baz=23,SNR=9.7						
Y23A	Lovelace Mesa,	23.39	330	P	P	05 08 43.2	+2.0
	baz=23,SNR=17						
W25A	X Bar L Ranch,	23.76	335	P	P	05 08 45.8	+1.0
	baz=24,SNR=15						
SIUC	Southern Illin	23.80	6	eP	P	05 08 43.5	-1.4
	comp=Z,14nm,0.8s						
BNM	Barren Site	23.84	330	eP	P	05 08 48.0	+2.4
	comp=Z,3.6nm,0.8s						
LPM	Los Pinos Moun	23.98	330	eP	P	05 08 49.7	+2.9
	comp=Z,5.9nm,0.7s						
V26A	Tequesquite Ra	24.00	337	P	P	05 08 48.1	+1.2
	baz=24,SNR=6.8						
W24A	Lazy 6 Ranch,	24.16	333	P	P	05 08 50.4	+1.9
	baz=24,SNR=19						
U27A	Thompson Grove	24.20	339	P	P	05 08 49.6	+0.8
	baz=24,SNR=11						
V25A	Rancho No Teng	24.36	335	P	P	05 08 52.5	+2.1
	baz=24,SNR=9.8						
ANMO	Albuquerque	24.41	331	eP	P	05 08 52.1	+1.3
	comp=Z,2.1nm,1.0s						
ANMO	Albuquerque	24.41	331	P	P	05 08 52.0	+1.2
	comp=Z,1.6nm,0.8s,baz=149,slow=11,SNR=9.0						
V24A	Rampart Ranch,	24.53	334	P	P	05 08 54.1	+2.1
	baz=24,SNR=8.9						
X21A	Alamocita Cree	24.66	328	P	P	05 08 56.9	+3.8
	baz=24,SNR=5.7						
WCI	Wyandotte Cave	24.75	12	eP	P	05 08 51.4	-2.2
	comp=Z,8.7nm,0.8s						
U25A	Circle Dot Ran	24.77	336	P	P	05 08 55.9	+1.9
	baz=25,SNR=6.4						
S29A	Ulysses	24.77	343	P	P	05 08 55.0	+1.0
	baz=25,SNR=6.8						
OLIL	Olney	24.94	8	eP	P	05 08 54.4	-1.0
	comp=Z,14nm,0.8s						
V23A	Ortiz Mt. (NFS	24.95	333	P	P	05 08 58.9	+3.2
	baz=25,SNR=7.3						
U24A	Moreno Valley	25.12	335	P	P	05 08 59.7	+2.4
	baz=25,SNR=5.3						
R30A	Dighton	25.18	345	P	P	05 08 58.0	+0.4
	baz=25,SNR=12						
U23A	El Rito	25.44	333	P	P	05 09 02.0	+1.8
	baz=25,SNR=22						
U22A	Llaves	25.77	332	P	P	05 09 05.7	+2.5
	baz=26,SNR=7.7						
U20A	Newcomb	26.55	330	P	P	05 09 13.4	+3.2
	baz=26,SNR=6.4						
S22A	4UR Ranch, Cre	26.91	334	P	P	05 09 15.6	+2.1
	baz=27,SNR=8.5						
PV01	Paradox Valley	27.99	332	eP	P	05 09 25.8	+2.6
	comp=Z,110nm,0.7s						
PV04	Paradox Valley	28.36	332	eP	P	05 09 27.9	+1.5
PV10	Paradox Valley	28.40	332	eP	P	05 09 27.9	+1.0
	comp=Z,87nm,1.0s						
PFO	Pinyon Flat Ob	29.28	316	LR	LR	05 21 37.5	
	comp=Z,63nm,21.3s,baz=125,slow=37						
CCUT	Cedar City	29.96	325	eP	P	05 09 43.8	+3.1
	comp=Z,1.7nm,1.1s						
N20A	Spence Gulch,	30.11	336	P	P	05 09 43.8	+1.8
	baz=30,SNR=5.5						
ARUT	Antelope Range	30.18	326	eP	P	05 09 45.4	+2.9
	comp=Z,1.3nm,0.6s						
PDAR	Pinedale Array	32.26	336	P	P	05 10 01.6	+0.6
	comp=Z,0.8nm,0.8s,baz=140,slow=7.8,SNR=5.2						
SADO	Sadowa	32.70	18	P	P	05 10 01.4	-3.0
	comp=Z,1.5nm,0.6s,baz=268,slow=11,SNR=3.8						
SNOW	Snow King Moun	33.32	335	eP	P	05 10 11.4	+1.2
	comp=Z,16nm,1.1s						
LOHW	Long Hollow	33.39	336	eP	P	05 10 11.4	+0.7
	comp=Z,2.1nm,1.0s						
NVAR	Mina Array Bea	33.42	322	P	P	05 10 13.8	+2.7
	comp=Z,1.9nm,0.7s,baz=132,slow=8.7,SNR=17						
TPAW	Teton Pass	33.42	335	eP	P	05 10 12.7	+1.6
	comp=Z,3.1nm,0.8s						
RRI2	Red Ridge	33.46	335	eP	P	05 10 12.8	+1.4
	comp=Z,2.0nm,0.8s						
MOOW	Moose Ponds	33.56	336	eP	P	05 10 12.8	+0.6
	comp=Z,1.3nm,1.0s						
IMW	Indian Meadow	33.76	336	eP	P	05 10 15.1	+1.1
	comp=Z,1.2nm,0.5s						
I14A	Mackay	34.84	333	P	P	05 10 25.7	+2.4
	baz=35,SNR=5.3						
HLID	Hailey	34.99	332	eP	P	05 10 26.5	+1.9
	comp=Z,2.6nm,0.9s						
D22A	Cohagen	35.01	344	P	P	05 10 24.7	+0.2
	baz=35,SNR=11						
MCMT	McKenzie Canyo	35.30	335	eP	P	05 10 29.4	+2.0
	comp=Z,3.9nm,0.9s						
C22A	Vida	35.47	344	P	P	05 10 29.1	+0.6
	baz=35,SNR=6.6						
I12A	Atlanta	35.50	331	P	P	05 10 31.0	+2.0
	baz=35,SNR=8.1						
DLMT	Dillon	35.64	335	eP	P	05 10 31.7	+1.6
	comp=Z,4.4nm,1.3s						
H12A	Diamond D Ranc	35.95	332	P	P	05 10 34.7	+1.8
	baz=36,SNR=8.4						
LRM	Limekiln Ridge	35.95	336	eP	P	05 10 34.4	+1.5
	comp=Z,13nm,0.9s						
ULM	Lac du Bonnet	36.27	356	LR	LR	05 27 58.6	
	comp=Z,48nm,20.4s,baz=107,slow=40						
F12A	Elk City	37.07	333	P	P	05 10 43.5	+1.2
	baz=37,SNR=16						
E12A	Beaver Dam Sad	37.72	334	P	P	05 10 48.5	+0.7
	baz=38,SNR=6.9						
LPAZ	La Paz	38.49	141	LR	LR	05 25 26.8	
	comp=Z,60nm,21.6s,baz=49,slow=34						
C11A	Tepee Creek (N	39.13	334	P	P	05 11 00.7	+1.1
	baz=39,SNR=8.4						
LON	Longmire	40.89	329	eP	P	05 11 15.3	+1.1
	comp=Z,3.1nm,0.9s						
SIV	San Ignacio	42.98	133	P	P	05 11 31.3	-0.3
	comp=Z,2.1nm,0.6s,baz=314,slow=7.6,SNR=13						
SIV				PcP	PcP	05 13 21.4	-0.5
	comp=Z,0.6nm,0.6s,baz=270,slow=3.0,SNR=3.6						
YKA	Yellowknife Ar	50.94	347	P	P	05 12 32.2	-0.9
	comp=Z,4.1nm,0.6s,baz=150,slow=7.5,SNR=48						
YKA				PcP	PcP	05 13 48.5	-0.6
	comp=Z,0.7nm,0.8s,baz=147,slow=3.4,SNR=6.3						
DLBC	Dease Lake	52.50	336	eP	P	05 12 47.5	+2.6
ILAR	Eielson Array	62.69	337	P	P	05 13 56.5	0.0
	comp=Z,1.6nm,0.9s,baz=123,slow=4.8,SNR=18						
TRF	Thorofare Moun	63.47	335	eP	P	05 14 01.6	-0.3
	comp=Z,4.3nm,0.8s						
HHC	Hu-ho-hao-te	121.08	339	ePKP	PKPdf	05 22 24.1	-1.0
HHC				PP	PP	05 23 53.4	-0.2
HHC				PKS	PKSdf	05 25 59.1	-2.7
HHC				SKS	SKSdf	05 29 25.0	-11
HHC				SKKS	SKKSac	05 30 38.0	-15
HHC				SS	SKKSdf	05 40 14.6	+2.0
HHC				AMB	AMB		
	comp=Z,120nm,9.6s						
HHC				LR	LR		
	comp=Z,100nm,20.9s						
WMQ	Urumqi	122.47	360	ePKP	PKPdf	05 22 25.0	-2.6
LZH	Lanzhou	127.88	343	ePKP	PKPdf	05 22 37.5	-0.8
WRA	Warramunga Arr	134.99	256	PKP	PKPdf	05 22 53.0	+1.1
	comp=Z,0.5nm,0.7s,baz=83,slow=3.0,SNR=5.3						
CMAR	Chiang Mai Arr	145.87	341	PKPbc	PKPdf	05 23 11.9	+0.3
	comp=Z,3.2nm,0.7s,baz=341,slow=3.7,SNR=14						

IDC 13 05:06:15.1±0.9, 35.°57N×143.°02E, h0km, mb3.7/5, mb1 3.9/8, mb1mx3.7/28, mbtmp3.7/8, ML3.5/3, Error ellipse: s-maj=29.8km s-min=18.6km az=117.0
JMA 13 05:06:18.8±0.3, 35.°63N×142.°98E, h92km, M3.3
ISC 13 05:06:16.7±3.7, 35.°57N±0.°06×143.°04E±0.°07, h12km±23km, n20, σ1.s54/30, mb3.8/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	1.78	275	P	Pb	05 06 48.5	-0.7
CHOJ				eS	Sn	05 07 10.2	+0.5
BSO1	Boso 1	1.93	242	P	Pn	05 06 49.2	+0.5
BSO3	Boso 3	2.21	250	P	Pn	05 06 54.4	+1.5
BSO3				eS	Sb	05 07 23.0	-0.6
JFT	Otama	2.92	312	P	Pn	05 07 03.2	+0.4
JFT				S	Sn	05 07 36.1	-1.7
JAG	Ashikaga	3.03	287	P	Pn	05 07 05.1	+0.7
JAG				eS	Sn	05 07 39.0	-1.6
JOD2	Odawara 2	3.24	266	P	Pn	05 07 08.1	+0.8
JOD2				eS	Sn	05 07 44.9	-1.0
JRY	Ryogami san	3.39	279	P	Pn	05 07 11.1	+1.7
JHJ2	Mitsune	3.63	228	P	Pn	05 07 13.2	+0.6
JHJ2				eS	Sn	05 07 53.7	-1.6
JHJ	Hachijo jima 2	3.64	229	Pn	Pn	05 07 12.6	-0.2
	18nm,0.3s,baz=255,slow=21,SNR=10.0						
JHJ				Sn	Sn	05 07 52.3	-3.4
	59nm,0.3s,baz=63,slow=21,SNR=9.9						
JYN	Shimob	3.67	270	P	Pn	05 07 15.1	+1.9
JYK	Kaneyama	3.96	328	P	Pn	05 07 16.7	-0.5
JYK				eS	Sn	05 08 01.5	-2.1
MJAR	Matsushiro Arr	4.03	285	Pn	Pn	05 07 16.9	-1.3
	0.7nm,0.3s,baz=91,slow=9.4,SNR=4.1						
MJAR				Sn	Sn	05 08 07.7	+2.4
	1.3nm,0.3s,baz=80,slow=11,SNR=4.2						
MAT	Matsushiro	4.03	285	P	Pn	05 07 18.8	+0.6
MAT				S	Sn	05 08 04.0	-1.4
MAT	Matsushiro	4.03	285	P	Pn	05 07 21.4	+3.2
ASAJ	Asahikawa	8.54	358	Pn	Pn	05 08 18.4	-1.7
	0.9nm,0.3s,baz=230,slow=7.9,SNR=5.4						
ILAR	Eielson Array	50.03	32	P	P	05 15 11.8	+1.2
	0.5nm,0.7s,baz=265,slow=6.3,SNR=8.6						
WRA	Warramunga Arr	55.83	190	P	P	05 15 54.1	+0.3
	1.4nm,0.7s,baz=9.8,slow=7.6,SNR=18						
ASAR	Alice Springs	59.55	190	P	P	05 16 20.4	+0.5
	0.8nm,0.7s,baz=15,slow=10,SNR=7.4						
YKA	Yellowknife Ar	64.41	30	P	P	05 16 53.2	+1.1
	0.5nm,0.8s,baz=302,slow=6.6,SNR=5.9						
TXAR	Lajitas Array	89.95	53	P	P	05 19 15.6	-0.6
	0.3nm,0.9s,baz=311,slow=5.8,SNR=4.6						

NEIC 13 05:20:11.3, 17.°02N×94.°89W, h100km, MD4.1(MEX), After MEX.
MEX 13 05:20:11.4±0.9, 17.°02N×94.°89W, h99km±13km, MD4.1, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	Tuzandepetl	1.11	24	eP	Pn	05 20 32.1	-0.8
TUIG				i S	Sn	05 20 46.9	-2.2
TUIG	Tuzandepetl	1.11	24	eP	Pn	05 20 32.1	-0.8
TUIG				i S	Sn	05 20 46.9	-2.2
HUIG	Huatulco	1.70	223	eP	Pn	05 20 38.3	-1.9
HUIG				i S	Sn	05 21 01.4	-0.7
HUIG	Huatulco	1.70	223	eP	Pn	05 20 38.3	-1.9
HUIG				i S	Sn	05 21 01.4	-0.7
TGIG		1.71	98	i P	Pn	05 20 39.6	-0.8
TGIG				i S	Sn	05 21 01.0	-1.3
TGIG		1.71	98	i P	Pn	05 20 39.6	-0.8
TGIG				i S	Sn	05 21 01.0	-1.3
PCIG		2.07	129	i P	Pn	05 20 43.7	-1.2
PCIG				i S	Sn	05 21 08.3	-2.1
PCIG		2.07	129	i P	Pn	05 20 43.7	-1.2
PCIG				i S	Sn	05 21 08.3	-2.1
CCIG	Comitan	2.74	105	i P	Pn	05 20 53.2	-0.8
CCIG				i S	Sn	05 21 24.3	-2.3
CCIG	Comitan	2.74	105	i P	Pn	05 20 53.2	-0.8
CCIG				i S	Sn	05 21 24.3	-2.3
UTMO	Huajuapan	2.90	287	i P	Pn	05 20 55.9	-0.1
UTMO				i S	Sn	05 21 28.6	-1.8
UTMO	Huajuapan	2.90	287	i P	Pn	05 20 55.0	-1.1
UTMO				i S	Sn	05 21 28.6	-1.8
PNIG	Pinotepa	3.16	259	i P	Pn	05 20 58.3	-1.1
PNIG				i S	Sn	05 21 34.5	-1.8
PNIG	Pinotepa	3.16	259	i P	Pn	05 20 58.3	-1.1
PNIG				i S	Sn	05 21 34.5	-1.8
THIG		3.28	129	i P	Pn	05 20 59.8	-1.2
THIG				i S	Sn	05 21 37.9	-1.3
THIG		3.28	129	i P	Pn	05 20 59.8	-1.2
THIG				i S	Sn	05 21 37.9	-1.3

NERS 13 05:30:03.5, 64.°14N×145.°15E, h7km, MSH4.2, 1C-1D, Eastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUUS	Susuman	1.93	134	⇑iP	Pn	05 30 36.9	+0.2
SUUS				Pgmax		05 30 37.2	
	10.0nm,0.2s						
SUUS				ePg	Pb	05 30 38.3	-0.6
SUUS				Pgmax		05 30 39.7	
	70nm,0.3s						
SUUS				eSg	Sb	05 31 03.3	+0.1
SUUS				Sgmax		05 31 05.8	
	400nm,0.3s						
SUUS				Sgmax		05 31 05.8	
	120nm,0.2s						
OCHR	Omchak	2.78	152	⇓iP	Pn	05 30 50.4	+2.0
OCHR				Pmax		05 30 50.5	
	10.0nm,0.1s						
OCHR				ePg	Pg	05 30 55.9	-0.9
OCHR				Pgmax		05 30 57.2	
	70nm,0.2s						
OCHR				eSg	Sg	05 31 32.4	-0.4
OCHR				Sgmax		05 31 36.2	
	150nm,0.2s						
OCHR				Sgmax		05 31 36.2	
	70nm,0.2s						
SNGR	Sinegor'e	3.17	129	eSg	Sg	05 31 44.9	-0.3
SEY	Seymchan	3.46	107	eP	Pn	05 30 57.6	-0.1
SEY				ePb	Pb	05 31 02.0	-3.0
SEY				ePg	Pg	05 31 07.4	-2.3
SEY				Pgmax		05 31 09.7	
	10.0nm,0.3s						
SEY				eS	Sn	05 31 38.1	-0.7
SEY				eSg	Sg	05 31 53.2	-1.2
SEY				Sgmax		05 32 01.9	
	50nm,0.3s						
SEY				Sgmax		05 32 01.9	
	10.0nm,0.3s						
TLAR	Talaya	4.51	129	eSg	Sg	05 32 24.6	-3.6
TLAR				Sgmax		05 32 30.1	
	20nm,0.2s						
MGD	Magadan 1	4.87	145	ePg	Pb	05 31 32.5	+3.4
MGD				eSg	Sg	05 32 36.5	-3.3
MGD				Sgmax		05 32 43.6	
	100nm,0.4s						
OHTR	Okhotsk	4.88	191	eSg	Sg	05 32 36.1	-3.8

IDC 13 05:34:09.1±8.0, 3.°27N×127.°17E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, Error ellipse: s-maj=135.3km s-min=98.3km az=135.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.29	184	P	P	05 38 56.7	-0.8
	0.7nm,0.5s,baz=5.7,slow=7.4,SNR=4.7						
WRA	Warramunga Arr	24.12	163	P	P	05 39 26.7	-0.2
	0.6nm,0.5s,baz=345,slow=10,SNR=15						
ASAR	Alice Springs	27.57	167	P	P	05 39 58.0	-0.1
	0.3nm,0.6s,baz=343,slow=8.4,SNR=2.6						
STKA	Stephens Creek	37.55	160	P	P	05 41 25.8	+0.5
	2.2nm,0.9s,baz=339,slow=14,SNR=2.6						

IDC 13 05:36:29.2±2.3, 12.°84N×88.°45W, h0km, mb3.7/9, mb1 4.0/9, mb1mx3.8/24, mbtmp3.7/9, MS3.3/1, Ms1 3.4/1, ms1mx2.6/31, Error ellipse: s-maj=47.6km s-min=44.3km az=145.0
ISCJB 13 05:36:38.0±1.2, 13.°0N±0.°1×88.°88W±0.°05, h67km±6km, mb3.7/9, Error ellipse: s-maj=20.0km s-min=6.1km az=12.7
CASC 13 05:36:38.9±1.9, 12.°98N×88.°90W, h36km±208km, MD3.9, ML4.0
ISC 13 05:36:37.7±2.0, 12.°9N±0.°1×88.°89W±0.°05, h52km±13km, n25, σ1.s19/34, mb3.6/9, 2C-5D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	San Vicente	0.69	4	eP	Pn	05 36 51.8	+0.2
SNVI				eS	Sn	05 37 01.4	-0.2
LFRS	El Faro	0.72	346	⇓eP	Pn	05 36 51.6	-0.2
VSM	San Miguel	0.78	50	eP	Pn	05 36 53.3	+0.5
SNET	Serv Nac Est T	0.83	336	⇓eP	Pn	05 36 53.2	-0.2
SNET				eS	Sn	05 37 03.7	-1.1
SNET				AML	AML	05 37 06.7	
	comp=Z,5µm,0.2s						
BOQS	Boqueron	0.90	335	⇑eP	Pn	05 36 54.6	+0.3
BOQS				eS	Sn	05 37 06.5	+0.1
CNCH	Conchagua	1.08	71	eP	Pn	05 36 57.0	+0.3
CNCH				eS	Sn	05 37 11.9	+1.1
SBLS	San Blas	1.16	322	⇓eP	Pn	05 36 57.6	-0.2
SBLS				eS	Sn	05 37 13.1	+0.3
SNJE	San Jose	1.17	323	eP	Pn	05 36 58.2	+0.2
SNJE				eS	Sn	05 37 13.5	+0.4
RTR	El Retiro	1.22	323	⇓eP	Pn	05 36 58.9	+0.3
TGUH	Tegucigalpa,Un	1.93	54	⇓eP	Pn	05 37 09.4	+1.3
TGUH				eS	Sn	05 37 32.4	+1.1
NBG	Las Nubes	2.18	320	eP	Pn	05 37 13.9	+2.1
MRL	Marmol	2.27	340	⇑eP	Pn	05 37 15.5	+2.6
FUG	Fuego 3	2.43	309	eP	Pn	05 37 16.4	+1.3
FUG				eS	Sn	05 37 44.7	+0.8
TEIG	Tepich	7.29	5	Pn	Pn	05 38 23.7	+2.1
	comp=Z,3.3nm,0.3s,baz=37,slow=0.4,SNR=24						
TXAR	Lajitas Array	21.33	322	P	P	05 41 22.6	+2.0
	comp=Z,0.9nm,0.5s,baz=144,slow=11,SNR=33						
TKL	Tuckaleechee C	23.10	11	P	P	05 41 38.3	-0.9
	comp=Z,1.5nm,0.7s,baz=157,slow=13,SNR=3.5						
PDAR	Pinedale Array	34.71	333	P	P	05 43 24.1	+1.2
	comp=Z,0.3nm,0.6s,baz=141,slow=5.8,SNR=2.6						
PDAR				PcP	PcP	05 45 55.7	-0.2
	comp=Z,0.4nm,0.5s,baz=123,slow=3.3,SNR=3.3						
LPAZ	La Paz	35.54	144	LR	LR	05 56 54.4	
	comp=Z,45nm,21.1s,baz=61,slow=35						
NVAR	Mina Array Bea	36.43	319	P	P	05 43 39.1	+1.4
	comp=Z,0.4nm,0.7s,baz=127,slow=6.9,SNR=3.9						
NVAR				PcP	PcP	05 46 01.6	+0.5
	comp=Z,0.5nm,0.7s,baz=130,slow=3.6,SNR=4.9						
ULM	Lac du Bonnet	37.66	353	P	P	05 43 45.2	-2.5
	comp=Z,1.3nm,0.4s,baz=194,slow=4.5,SNR=3.2						
SCHQ	Schefferville	45.25	18	P	P	05 44 48.2	-1.6
	comp=Z,1.2nm,0.6s,baz=220,slow=15,SNR=3.2						
YKA	Yellowknife Ar	52.80	345	P	P	05 45 46.7	-0.7
	comp=Z,1.0nm,0.4s,baz=148,slow=7.0,SNR=22						
INK	Inuvik	62.34	343	P	P	05 46 54.3	-0.1
	comp=Z,0.9nm,0.8s,baz=167,slow=5.3,SNR=4.9						
ILAR	Eielson Array	65.03	336	P	P	05 47 11.4	-0.8
	comp=Z,0.2nm,0.5s,baz=164,slow=4.9,SNR=4.9						
WRA	Warramunga Arr	138.05	255	PKP	PKPdf	05 55 58.2	+0.5
	comp=Z,0.6nm,1.0s,baz=88,slow=2.5,SNR=5.7						

PLV 13 05:40:01.7±3.2, 23.°97N×102.°64E, h0km±999km, MD4.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGV	Tuan Giao	2.47	163	ePg	Pg	05 40 48.9	-0.2
TGV				eSg	Sg	05 41 20.9	-0.3
DBV	Dienbien	2.59	172	ePg	Pg	05 40 51.1	-0.5
DBV				eSg	Sg	05 41 25.0	-0.3
SLVN	Son La	2.87	156	ePg	Pg	05 40 57.2	+0.3
SLVN				eSg	Sg	05 41 35.7	+1.5
TTVN	Tram Tau	2.95	147	ePg	Pg	05 40 56.7	-1.5
TTVN				eSg	Sg	05 41 35.2	-1.3
MCVV	Moc Chau	3.66	149	ePg	Pg	05 41 13.0	+1.0
MCVV				eSg	Sg	05 41 59.5	-0.2

GUC 13 06:24:51.4±0.5, 31.°20S×68.°28W, h150km, MD3.5, ML3.6, 2C, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	2.33	270	i P	Pn	06 25 31.0	+0.4
CMCH				i S	Sn	06 26 01.3	+0.5
CMCH				AML	AML	06 26 03.3	
	comp=E,2µm,0.7s						
TLL	Tololo Astrono	2.41	295	⇑iP	Pn	06 25 32.8	+1.1
TLL				i S	Sn	06 26 03.5	+0.7
TLL				AML	AML	06 26 10.6	
	comp=E,126nm,0.4s						
PEL	Peldehue	2.81	226	⇑iP	Pn	06 25 37.0	+0.5
PEL				i S	Sn	06 26 11.8	+0.5
PEL				AML	AML	06 26 14.3	
	comp=E,129nm,0.4s						
CLCH	Cerro Calan	2.91	221	i P	Pn	06 25 38.4	+0.7
CLCH				i S	Sn	06 26 14.2	+0.7
CLCH				AML	AML	06 26 20.3	
	comp=E,124nm,0.4s						
ROCH	El Roble	2.92	232	AML	AML	06 26 18.7	
	comp=E,155nm,0.6s						
PCH	Pirque	3.06	218	i P	Pn	06 25 40.5	+0.8
ANTU	Antumapu	3.09	220	AML	AML	06 26 21.3	
	comp=E,83nm,0.2s						
LMEL	Las Melosas	3.10	211	eP	Pn	06 25 41.0	+0.8
LMEL				i S	Sn	06 26 18.6	+0.5
LMEL				AML	AML	06 26 33.0	
	comp=N,36nm,0.2s						
CHCH	Chadas Angostu	3.38	216	i P	Pn	06 25 44.4	+0.7
CACH	El Canelo	3.50	213	i P	Pn	06 25 46.2	+0.9

IDC 13 06:32:01.1±19.0, 48.°18N×154.°42E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/25, mbtmp3.3/3, Error ellipse: s-maj=568.1km s-min=33.7km az=167.0
KRSC 13 06:33:04.3±1.9, 52.°45N×153.°45E, h563km±33km, ML4.5
ISC 13 06:33:15.0±2.5, 52.°9N±0.°2×153.°8E±0.°2, h470km, n16, σ1.s62/17, mb2.9/3, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIPR	Malaya Ipel'ka	1.90	107	eP	P	06 34 17.2	+0.5
APC	Apacha	2.03	87	eP	P	06 34 18.0	+0.7
ASAK	Asacha	2.54	99	eP	P	06 34 21.4	+0.9
GNL	Ganaly	2.61	70	eP	P	06 34 22.4	+1.5
GRL	Gorelyy	2.61	95	eP	P	06 34 22.3	+1.3
MTVR	Mutnovka	2.69	97	eP	P	06 34 22.3	+0.8
RUS	Russkaya	2.90	97	eP	P	06 34 22.8	+0.1
RUS				i S	S	06 35 21.1	+3.2
PET	Petropavlovsk	2.93	85	eP	P	06 34 24.8	+1.9
SMAR	Somma	3.04	81	eP	P	06 34 24.9	+0.9
UGLR	Uglovaya	3.04	82	eP	P	06 34 25.2	+1.3
SPN	Mys Shipunski	3.76	84	eP	P	06 34 28.3	-1.0
SPN				i S	S	06 35 29.7	-0.2
SRDR	Sredinnyy	4.87	42	eP	P	06 34 41.3	+2.3

MKZ	Mys Kozlova	5.00	67	eP	P	06 34 40.9	+0.8
MKZ				i S	S	06 35 49.8	+0.1
ILAR	Eielson Array	31.66	45	P	P	06 38 55.1	-2.7
	0.3nm,0.7s,baz=267,slow=8.4,SNR=8.2						
MKAR	Makanchi Array	44.77	292	P	P	06 40 34.5	-11
	0.2nm,0.4s,baz=60,slow=7.8,SNR=7.1						
YKA	Yellowknife Ar	45.84	40	P	P	06 40 49.3	-3.9
	0.2nm,0.5s,baz=304,slow=6.9,SNR=3.8						

MEX 13 06:39:18.5±0.6, 16°.87N×99°.98W, h25^{km}±6^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACX	Acapulco	0.12	90	i P	Pb	06 39 21.6	-1.8
ACX				i S	Sb	06 39 24.5	-2.1
CAIG	El Cayaco	0.33	303	eP	Pb	06 39 24.5	-1.5
CAIG				i S	Sb	06 39 29.6	-1.5
MEIG	Mezcala	1.10	18	i P	Pn	06 39 34.1	-4.4
MEIG				i S	Sn	06 39 47.0	-6.0
ARIG	Puente Sto Nin	1.45	346	i P	Pn	06 39 40.8	-2.4
ARIG				i S	Sn	06 39 58.2	-3.1
PLIG	Platanillo	1.58	17	i P	Pn	06 39 42.9	-2.2
PLIG				i S	Sn	06 40 01.0	-3.8
YAIG	Yautepec	2.16	24	i P	Pn	06 39 50.7	-2.5
YAIG				i S	Sn	06 40 15.4	-3.9

IDC 13 07:00:55.8±2.7, 21°.35S×179°.83E, h0^{km}, mb3.9/3, mb1 4.2/3, mb1mx3.8/18, mbtmp3.9/3, Error ellipse: s-maj=274.7km s-min=31.3km az=162.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.35	258	P	P	07 08 50.7	-1.3
	0.5nm,0.5s,baz=92,slow=6.7,SNR=8.1						
WRA	Warramunga Arr	42.48	263	P	P	07 08 53.8	+0.8
	1.1nm,0.4s,baz=97,slow=8.4,SNR=43						
TXAR	Lajitas Array	89.23	58	P	P	07 13 54.0	0.0
	0.6nm,0.7s,baz=209,slow=6.3,SNR=10.0						

*CSEM **13** 07:41:56.0, 39°.11N×27°.55E, h5^{km}, MD2.6*
DDA 13 07:41:56.0, 39°.11N×27°.55E, h5^{km}, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.31	138	i P	Pg	07 42 02.7	+0.6
AKHS				i S	Sg	07 42 06.9	+0.8
AKHS	Akhisar	0.31	138	i P	Pg	07 42 02.7	+0.6
AKHS				i S	Sg	07 42 06.9	+0.7
DURS	Dursunbey	0.87	55	i P	Pg	07 42 12.9	0.0
DURS				i S	Sb	07 42 25.2	-0.6
DURS	Dursunbey	0.87	55	i P	Pg	07 42 12.9	0.0
DURS				i S	Sb	07 42 25.2	-0.6
DEMI	Demirci	0.91	94	i P	Pg	07 42 13.6	0.0
DEMI				i S	Sb	07 42 27.2	+0.2
DEMI	Demirci	0.91	94	i P	Pg	07 42 13.6	0.0
DEMI				i S	Sb	07 42 27.2	+0.2

*CSEM **13** 07:42:33.6±0.2, 37°.24N×28°.22E, h15^{km}, MD2.4, Error ellipse: s-maj=6.6km s-min=3.6km az=39.0*
ISK 13 07:42:32.2, 37°.31N×28°.25E, h16^{km}, MD2.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.17	171	ePG	Pg	07 42 36.7	+0.1
YER				eSG	Sb	07 42 40.1	-0.3
YER	Yerkesik	0.17	171	ePg	Pg	07 42 36.7	+0.1
YER				eSg	Sb	07 42 40.1	-0.3
MLSB	Milas	0.38	269	ePG	Pb	07 42 40.4	-0.2
MLSB				eSG	Sb	07 42 46.2	-0.1
MLSB	Milas	0.38	269	ePg	Pb	07 42 40.4	-0.2
MLSB				eSg	Sb	07 42 46.2	-0.1
AYDN	Tasoluk	0.46	320	i P	Pn	07 42 44.1	-0.1
AYDN				i S	Sn	07 42 51.2	-1.0
AYDN	Tasoluk	0.46	320	i P	Pn	07 42 44.1	-0.2
AYDN				i S	Sn	07 42 51.2	-1.0
AYDN	Tasoluk	0.46	320	i P	Pn	07 42 44.1	-0.2
AYDN				i S	Sn	07 42 51.2	-1.0
DALY	Dalyan (Mu˜la	0.58	146	ePG	Pb	07 42 44.0	-0.1
DALY				eSG	Sb	07 42 52.9	+0.8
DALY	Dalyan (Mu˜la	0.58	146	ePg	Pb	07 42 44.0	0.0
DALY				eSg	Sb	07 42 52.9	+0.8
DAT	Datca	0.79	223	ePG	Pg	07 42 48.1	+0.4
DAT	Datca	0.79	223	ePg	Pg	07 42 48.1	+0.4
BODT	Bodrum	0.79	252	ePG	Pg	07 42 48.1	+0.5
BODT				eSG	Sn	07 42 59.2	-1.0
BODT	Bodrum	0.79	252	ePg	Pg	07 42 48.1	+0.5
BODT				eSg	Sn	07 42 59.2	-1.0

IDC 13 08:43:36.7±5.4, 56°.70S×144°.08W, h0^{km}, mb3.6/2, mb1 3.9/2, mb1mx3.5/14, mbtmp3.6/2, Error ellipse: s-maj=1082.0km s-min=102.5km az=169.0, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	66.22	263	P	P	08 54 26.4	0.0
	0.6nm,0.8s,baz=142,slow=5.8,SNR=7.8						
WRA	Warramunga Arr	68.97	266	P	P	08 54 43.7	-0.1
	0.4nm,0.9s,baz=146,slow=5.7,SNR=5.1						
MKAR	Makanchi Array	150.18	271	PKPbc	PKPbc	09 03 28.2	-0.4
	0.4nm,0.8s,baz=95,slow=1.7,SNR=3.8						

IDC 13 08:50:47.3±2.1, 28°.71S×178°.11W, h0^{km}, mb3.6/2, mb1 3.8/2, mb1mx3.5/17, mbtmp3.6/2, MS3.3/1, Ms1 3.3/1, ms1mx2.9/16, Error ellipse: s-maj=55.4km s-min=14.9km az=56.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.56	163	Pn	Pn	08 51 01.7	-0.9
	605nm,0.3s,baz=85,slow=7.7,SNR=14						
RAO				Sn	Sn	08 51 15.1	+2.5
	2μm,0.3s,baz=72,slow=23,SNR=19						
URZ	Urewera	10.32	201	LR	LR	08 56 27.6	
	comp=Z,143nm,18.9s,baz=27,slow=33						
ASAR	Alice Springs	43.13	265	P	P	08 58 49.9	+0.1
	0.6nm,0.6s,baz=106,slow=7.6,SNR=12						
WRA	Warramunga Arr	43.96	270	P	P	08 58 55.8	-0.7
	0.8nm,0.8s,baz=108,slow=7.9,SNR=11						
AKASG	Malin Array Be	149.89	324	PKPbc	PKPbc	09 10 39.6	+0.4
	1.2nm,0.6s,baz=38,slow=3.1,SNR=4.5						

*DDA **13** 09:11:20.6, 38°.37N×26°.52E, h8^{km}, MD2.5*
*ISCJB **13** 09:11:21.8±0.6, 38°.35N±0°.03×26°.53E±0°.04, h5^{km}±4^{km}, Error ellipse: s-maj=6.2km s-min=4.7km az=139.5*
*ATH **13** 09:11:21.2, 38°.28N×26°.29E, h40^{km}±1^{km}, MD2.8/3*
*CSEM **13** 09:11:21.6±0.3, 38°.35N×26°.54E, h5^{km}, MD2.5, Error ellipse: s-maj=6.5km s-min=4.8km az=51.0*
ISC 13 09:11:21.5±0.9, 38°.36N±0°.03×26°.55E±0°.03, h8^{km}±5^{km}, n17, σ0^{s}52/32, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.04	94	i P	Pg	09 11 22.9	-0.1
URLA				i S	Sg	09 11 24.3	+0.1
URLA	Izmir	0.04	94	i P	Pg	09 11 22.9	-0.1
URLA				i S	Sg	09 11 24.3	+0.1
CHOS	Chios island	0.39	274	eP	Pg	09 11 29.0	-0.1
CHOS				eS	Sg	09 11 34.5	+0.3
CHOS	Chios island	0.39	274	eP	Pg	09 11 29.0	-0.1
CHOS				eS	Sg	09 11 34.5	+0.3
SMG	Samos	0.69	161	eP	Pb	09 11 35.7	-0.1
SMG				eS	Sb	09 11 46.4	+0.9
SMG	Samos	0.69	161	eP	Pb	09 11 35.7	-0.1
SMG				eS	Sb	09 11 46.4	+0.9
GCAM	G?zelcaml?	0.85	140	i P	Pg	09 11 37.5	-0.4
GCAM				i S	Sb	09 11 50.7	+0.5
GCAM	G?zelcaml?	0.85	140	i P	Pg	09 11 37.5	-0.4
GCAM				i S	Sb	09 11 50.7	+0.5
PRK	Paraskevi	0.91	346	eP	Pb	09 11 39.6	+0.1
PRK				eS	Sn	09 11 53.2	-0.6
PRK	Paraskevi	0.91	346	eP	Pb	09 11 39.6	+0.1
PRK				eS	Sn	09 11 53.2	-0.6
AYVA	Ayvalik	0.95	7	i P	Pg	09 11 34.6	-5.1
AKHS	Akhisar	1.12	62	i P	Pn	09 11 43.5	+0.1
AKHS				i S	Sb	09 11 58.1	+0.3
AKHS	Akhisar	1.12	62	i P	Pn	09 11 43.5	+0.1
AKHS				i S	Sb	09 11 58.1	+0.3
AYDN	Tasoluk	1.26	123	i P	Pn	09 11 45.3	-0.2
AYDN				i S	Sn	09 12 02.3	-0.4
AYDN	Tasoluk	1.26	123	i P	Pn	09 11 45.3	-0.2
AYDN				i S	Sn	09 12 02.3	-0.4
BALY	Balya	1.61	31	i P	Pn	09 11 49.4	-0.8
BALY				i S	Sg	09 12 14.2	+1.0
BALY	Balya	1.61	31	i P	Pn	09 11 49.4	-0.8
BALY				i S	Sg	09 12 14.2	+1.0

*ATH **13** 09:19:28.9, 41°.25N×22°.74E, h26^{km}±1^{km}, MD3.0/9*
*SKO **13** 09:19:28.4, 41°.28N×22°.73E, h15^{km}, M1.9, ML2.2*
*CSEM **13** 09:19:29.0±0.2, 41°.24N×22°.74E, h5^{km}, ML2.4, Error ellipse: s-maj=5.5km s-min=4.5km az=69.0*
*THE **13** 09:19:29.2, 41°.28N×22°.74E, h2^{km}±1^{km}, ML2.7/9, Error ellipse: s-maj=1.7km s-min=0.5km az=302.0*
*ISCJB **13** 09:19:29.2±0.4, 41°.25N±0°.02×22°.75E±0°.03, h9^{km}±3^{km}, Error ellipse: s-maj=3.7km s-min=3.2km az=32.5*
*BEO **13** 09:19:30.5±0.7, 41°.28N×22°.69E, h0^{km}, ML2.4/5*
ISC 13 09:19:29.0±0.8, 41°.28N±0°.02×22°.74E±0°.02, h9^{km}±6^{km}, n50, σ0^{s}65/78, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.14	289	P	Pg	09 19 31.8	-0.2
VAY				S	Sg	09 19 33.9	-0.1
VAY	Valandovo	0.14	289	ePg	Pg	09 19 31.8	-0.2
VAY				i Sg	Sg	09 19 34.2	+0.2
VAY	Valandovo	0.14	289	i Pg	Pg	09 19 31.8	-0.2
VAY				i Sg	Sg	09 19 34.2	+0.2
VAY				eLg	Lg	09 19 34.3	
	comp=N,2μm,0.6s						
VAY				eLg	Lg	09 19 34.4	
	comp=E,955nm,0.2s						
VAY	Valandovo	0.14	289	P	Pg	09 19 31.8	-0.2
VAY				S	Sg	09 19 33.9	-0.1
VAY				i Sg	Sg	09 19 34.2	+0.1
KNT	Kendrikon	0.17	134	P	Pg	09 19 33.0	+0.5
KNT				S	Sg	09 19 35.4	+0.5
KNT	Kendrikon	0.17	134	P	Pg	09 19 33.0	+0.5
KNT				S	Sg	09 19 35.4	+0.5
GRG	Griva	0.41	219	P	Pg	09 19 37.4	+0.4
GRG				S	Sg	09 19 43.4	+1.0
GRG	Griva	0.41	219	ePB	Pg	09 19 37.4	+0.4
GRG				eSB	Sg	09 19 43.5	+1.0
GRG	Griva	0.41	219	P	Pg	09 19 37.4	+0.4
GRG				S	Sg	09 19 43.4	+1.0
SOH	Sokhos	0.65	134	P	Pg	09 19 41.6	0.0
SOH				S	Sg	09 19 50.5	+0.4
SOH	Sokhos	0.65	134	ePN	Pg	09 19 41.8	+0.2
SOH				eSN	Sg	09 19 50.4	+0.4
SRS	Serrai	0.66	104	P	Pg	09 19 41.9	+0.1
SRS				S	Sg	09 19 51.1	+0.6
THE	Thessaloniki	0.67	165	P	Pg	09 19 41.9	0.0
THE				S	Sg	09 19 51.1	+0.5
THE	Thessaloniki	0.67	165	P	Pg	09 19 41.9	0.0
THE				S	Sg	09 19 51.1	+0.5
HORT	Hortiatis	0.73	158	P	Pg	09 19 43.2	+0.1
HORT				S	Sb	09 19 53.7	-0.5
NVR	Nevrokopi	0.85	85	P	Pg	09 19 45.2	-0.1
NVR				S	Sb	09 19 57.4	-0.1
NVR	Nevrokopi	0.85	85	ePN	Pg	09 19 45.5	+0.2
NVR				eSN	Sb	09 19 57.3	-0.2
NVR	Nevrokopi	0.85	85	P	Pg	09 19 45.2	-0.1
NVR	Nevrokopi	0.85	85	ePn	Pg	09 19 45.5	+0.2
NVR				eSn	Sb	09 19 57.3	-0.2
PLG	Polygyros	1.05	149	P	Pg	09 19 48.6	-0.6
PLG	Polygyros	1.05	149	ePN	Pg	09 19 49.0	-0.2
PLG				eSN	Sg	09 20 02.9	+0.1
PLG	Polygyros	1.05	149	P	Pg	09 19 48.6	-0.6
PLG	Polygyros	1.05	149	ePn	Pg	09 19 49.0	-0.2
PLG				eSn	Sg	09 20 02.9	+0.1
BIA	Bitola	1.10	257	ePg	Pn	09 19 53.1	+2.4
FNA	Florina	1.14	245	P	Pg	09 19 50.3	-0.7
FNA				S	Sb	09 20 06.5	+0.5
FNA	Florina	1.14	245	ePN	Pn	09 19 51.3	0.0
FNA	Florina	1.14	245	P	Pg	09 19 50.3	-0.7
FNA	Florina	1.14	245	ePn	Pn	09 19 51.3	0.0
FNA				S	Sb	09 20 06.5	+0.5
LIT	Litokhoron	1.19	189	ePN	Pb	09 19 50.8	-1.0
KZN	Kozani	1.22	217	ePN	Pb	09 19 52.3	0.0
KZN	Kozani	1.22	217	ePn	Pb	09 19 52.3	0.0
OUR	Ouranopolis	1.33	135	P	Pg	09 19 54.5	-0.1
OUR				S	Sg	09 20 12.8	+0.9
OUR	Ouranopolis	1.33	135	P	Pg	09 19 54.5	-0.1
VTS	Vitosha	1.36	15	ePg	Pg	09 19 55.3	+0.2
VTS	Vitosha	1.36	15	ePg	Pg	09 19 55.3	+0.2
VTS				eSn	Sg	09 20 13.4	+0.7
BARS	Barje	1.68	336	ePg	Pb	09 19 59.9	-0.3
BARS				eSg	Sg	09 20 22.9	-0.3
BARS	Barje	1.68	336	ePg	Pb	09 19 59.9	-0.3
BARS				eSg	Sg	09 20 22.9	-0.3
PLD	Plovdiv	1.69	60	ePn	Pg	09 20 01.2	-0.2
PLD				i Sn	Sg	09 20 24.3	+1.1
PLD	Plovdiv	1.69	60	ePn	Pg	09 20 01.2	-0.2
THL	Klokotos Trika	1.80	198	ePB	Pn	09 19 59.6	-0.7
THL	Klokotos Trika	1.80	198	ePb	Pn	09 19 59.6	-0.7
ZAPS	Zavoj	2.00	358	ePn	Pb	09 20 05.6	0.0
ZAPS				eSn	Sb	09 20 31.7	+1.1
AGG	Agios Georgios	2.27	188	ePN	Pn	09 20 06.3	-0.6
AOS	Alonnisos	2.28	157	ePN	Pn	09 20 06.6	-0.3
AOS	Alonnisos	2.28	157	ePn	Pn	09 20 06.6	-0.3
SELS	Selova	2.28	329	ePn	Pb	09 20 09.3	-1.1
BOLS	Boljevac	2.62	347	ePn	Pb	09 20 14.2	-1.9
BOLS	Boljevac	2.62	347	ePn	Pb	09 20 14.2	-1.9
DIVS	Divibare	3.47	325	ePn	Pn	09 20 24.4	+1.1
DIVS	Divibare	3.47	325	ePn	Pn	09 20 24.4	+1.1

NNC 13 09:26:00.7±26.0, 37°.04N×71°.21E, h223^{km}±451^{km}, mb2.5, mpv3.5, 1C-3D, Error ellipse: s-maj=287.5km s-min=127.2km az=4.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KK31	Karatay Array	6.08	355	⇓P	Pn	09 27 29.8	+0.5
	0.6nm,0.2s,baz=174,slow=12,SNR=2.7						
KK31				⇓S	S	09 28 40.2	+0.5
	0.8nm,0.3s,baz=173,slow=24,SNR=5.2						
TKM2	Tokmak 2	6.77	28	⇑P	Pn	09 27 38.7	+0.4
	3.1nm,0.5s						
TKM2				⇓S	S	09 28 55.8	-0.3
	1.8nm,0.7s						
AB31	Akbulak array	14.70	330	P	Pn	09 29 17.2	-0.9
	0.7nm,0.5s,baz=163,slow=12,SNR=22						

CASC 13 09:30:12.6±3.7, 9°.58N×82°.83W, h19^{km}±16^{km}, MD3.6, 3C-3D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNI	Changuinola	0.35	117	⇓iP	Pb	09 30 21.4	+1.1
CNI				eS	Sb	09 30 26.2	+0.7
TBS2		0.80	167	eP	Pb	09 30 27.4	-0.8
TBS2				eS	Sb	09 30 37.5	-1.2
URSC	Urasca	0.97	285	⇑iP	Pb	09 30 30.2	-0.8
URSC				eS	Sb	09 30 43.2	-0.4
ACR	Cerro Adams	0.98	200	⇑eP	Pg	09 30 31.7	-0.1
ACR				eS	Sn	09 30 45.4	+0.6
SJS	Escuela Geolog	1.26	287	⇓eP	Pn	09 30 35.3	-0.1
SJS				eS	Sn	09 30 52.4	+0.5
QCR	Quepos	1.32	263	⇑eP	Pb	09 30 36.6	-0.2
CGA2	Cerro Gallo 2	1.67	285	⇓eP	Pb	09 30 42.0	-0.9
CGA2				eS	Sb	09 31 04.1	+0.4
BCIP	Isla Barro Col	2.98	98	eP	Pn	09 30 58.7	-0.2
BCIP				eS	Sn	09 31 32.8	-1.4

*ISK **13** 09:30:31.3, 39°.42N×39°.18E, h8^{km}, MD2.7*
*DDA **13** 09:30:31.9, 39°.39N×39°.17E, h7^{km}, MD2.8*
*ISCJB **13** 09:30:32.0±0.5, 39°.40N±0°.02×39°.18E±0°.03, h7^{km}±6^{km}, Error ellipse: s-maj=4.5km s-min=3.9km az=31.7*
*CSEM **13** 09:30:32.3±0.2, 39°.40N×39°.14E, h20^{km}, MD2.7, Error ellipse: s-maj=5.4km s-min=4.2km az=97.0*
ISC 13 09:30:31.8±1.0, 39°.42N±0°.02×39°.15E±0°.03, h8^{km}±10^{km}, n24, σ0^{s}51/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EZC	Erzincan	0.37	25	ePG	Pg	09 30 38.8	-0.3
EZC				eSG	Sg	09 30 44.1	+0.1
EZC	Erzincan	0.37	25	ePg	Pb	09 30 40.6	-0.1
EZC				eSg	Sb	09 30 47.5	+0.8
ILIC	ilic-Erzincan	0.45	275	ePG	Pg	09 30 41.1	+0.5
ILIC				eSG	Sb	09 30 48.1	-0.9
ILIC	ilic-Erzincan	0.45	275	ePg	Pg	09 30 41.1	+0.5
ILIC				eSg	Sb	09 30 48.1	-0.9
ERZN	Erzincan	0.47	69	ePG	Pg	09 30 40.6	-0.4
ERZN				eSG	Sg	09 30 47.5	+0.2
EUZM	Uzumlu	0.51	56	i P	Pg	09 30 35.6	-6.2
EUZM				i S	Sb	09 30 50.7	-0.1
KEMA	Kemaliye	0.53	254	i P	Pb	09 30 42.9	-0.5
KEMA				i S	Sb	09 30 51.1	-0.1
KEMA	Kemaliye	0.53	254	i P	Pb	09 30 42.9	-0.5
KEMA				i S	Sb	09 30 51.1	-0.1
PTK	Pertek	0.56	160	ePG	Pg	09 30 42.6	0.0
PTK				eSG	Sg	09 30 50.3	+0.4
PTK	Pertek	0.56	160	ePg	Pg	09 30 42.6	0.0
PTK				eSg	Sg	09 30 50.3	+0.4
KELT	Kelkit	0.73	6	i P	Pg	09 30 46.1	+0.1
KELT				i S	Sb	09 30 57.4	+0.1
KELT	Kelkit	0.73	6	i P	Pg	09 30 46.1	+0.1
KELT				i S	Sb	09 30 57.4	+0.1
ELZG	Elazig	0.93	188	i P	Pg	09 30 48.9	-0.7
ELZG				i S	Sg	09 31 02.3	+0.6
ELZG	Elazig	0.93	188	i P	Pg	09 30 48.9	-0.7
ELZG				i S	Sg	09 31 02.3	+0.6
SVRC	Sivrice-ELAZID	1.04	173	ePG	Pg	09 30 52.0	+0.1
SVRC	Sivrice-ELAZID	1.04	173	ePg	Pg	09 30 52.0	+0.1
GUMT	Gumushane	1.07	14	ePG	Pg	09 30 52.2	-0.2
GUMT	Gumushane	1.07	14	ePg	Pg	09 30 52.2	-0.2
SUSE	Susehri	1.07	318	i P	Pg	09 30 52.4	-0.1
SUSE				i S	Sn	09 31 09.3	+0.8
SUSE	Susehri	1.07	318	i P	Pg	09 30 52.4	-0.1
SUSE				i S	Sn	09 31 09.3	+0.8
BINT	Bingol	1.17	117	ePn	Pn	09 30 55.5	+0.9
BAYT	Ayd˜–ntepe-Bay	1.24	38	ePN	Pn	09 30 54.8	-0.8
BAYT	Ayd˜–ntepe-Bay	1.24	38	ePn	Pn	09 30 54.8	-0.8
BNGB	Bingˆ¶l	1.26	109	ePN	Pn	09 30 55.5	-0.3

*ISK **13** 09:39:33.9, 39°.56N×42°.94E, h5^{km}, MD2.8*
*CSEM **13** 09:39:34.3±0.4, 39°.56N×42°.99E, h7^{km}±3^{km}, MD2.8, Error ellipse: s-maj=11.9km s-min=10.6km az=33.0*
*ISCJB **13** 09:39:35.0±0.6, 39°.60N±0°.04×43°.03E±0°.05, h4^{km}±6^{km}, Error ellipse: s-maj=7.4km s-min=6.0km az=147.0*
*DDA **13** 09:39:35.4, 39°.62N×42°.94E, h7^{km}, MD2.6*
ISC 13 09:39:34.3±0.9, 39°.62N±0°.05×43°.00E±0°.03, h4^{km}±8^{km}, n18, σ1^{s}08/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGRB	Hanur-Agry	0.04	186	ePG	Pg	09 39 35.2	-0.4
AGRB				eSG	Sg	09 39 37.1	+0.7
AGRB	Hanur-Agry	0.04	186	ePg	Pg	09 39 35.2	-0.4
AGRB				eSg	Sg	09 39 37.1	+0.7
TUTA	Tutak	0.26	214	i P	Pg	09 39 40.0	+0.7
TUTA				i S	Sg	09 39 44.9	+2.2
TUTA	Tutak	0.26	214	i P	Pg	09 39 40.0	+0.7
TUTA				i S	Sg	09 39 44.9	+2.2
DYDN	Diyadin	0.54	98	i P	Pg	09 39 44.0	-0.7
DYDN				i S	Sb	09 39 55.6	+1.0
DYDN	Diyadin	0.54	98	i P	Pg	09 39 44.0	-0.7
DYDN				i S	Sb	09 39 55.6	+1.0
DIGO	Kars	0.85	20	i P	Pn	09 39 52.5	-0.8
DIGO				i S	Sn	09 40 08.1	+1.9
DIGO	Kars	0.85	20	i P	Pn	09 39 52.5	-0.8
CLDR	Caldiran	0.86	123	ePG	Pb	09 39 51.0	-0.8
CLDR	Caldiran	0.86	123	ePg	Pb	09 39 51.0	-0.8
HOMI	Horasan	0.94	297	i P	Pn	09 39 52.6	-2.0
HOMI				i S	Sn	09 40 09.1	+0.5
KARS	Kars	1.01	4	ePG	Pn	09 39 54.7	-0.7
KARS				eSG	Sn	09 40 09.8	-0.4
KARS	Kars	1.01	4	ePg	Pn	09 39 54.7	-0.7
KARS				eSg	Sn	09 40 09.8	-0.4
EZM	Erzurum	1.29	283	ePN	Pn	09 39 58.6	-0.7
GNI	Garni	1.44	68	ePN	Pg	09 40 02.4	+0.4
GNI	Garni	1.44	68	ePn	Pg	09 40 02.4	+0.4
DDEM	Demirkent	1.59	324	i P	Pg	09 40 04.8	0.0
DDEM	Demirkent	1.59	324	i P	Pg	09 40 04.8	0.0

*IDC **13** 09:45:44.8±0.9, 35°.27N×141°.33E, h0^{km}, mb3.5/5, mb1 3.8/6, mb1mx3.5/26, mbtmp3.6/6, ML3.2/2, Error ellipse: s-maj=28.6km s-min=20.8km az=106.0*
*JMA **13** 09:45:47.6±0.1, 35°.30N×141°.25E, h25^{km}±2^{km}, M2.8*
*ISCJB **13** 09:45:48.0±1.0, 35°.28N±0°.04×141°.20E±0°.08, h33^{km}±5^{km}, mb3.6/5, Error ellipse: s-maj=10.5km s-min=6.0km az=9.7*
ISC 13 09:45:48.5±1.9, 35°.28N±0°.04×141°.20E±0°.08, h27^{km}±13^{km}, n18, σ1^{s}14/21, mb3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.51	327	P	Pb	09 45 58.0	-1.0
CHOJ				S	Sb	09 46 05.5	-0.6
BSO2	Boso 2	0.64	215	eS	Sb	09 46 10.2	+0.8
BSO1	Boso 1	0.65	197	P	Pn	09 46 00.4	-1.0
KTR	Katsuura	0.74	260	P	Pn	09 46 02.3	-0.8
KTR				eS	Sn	09 46 12.0	-1.4
BSO3	Boso 3	0.74	230	P	Pn	09 46 02.3	-0.6
BSO3				S	Sn	09 46 12.5	-0.6
BSO4	Boso 4	0.76	248	P	Pn	09 46 02.9	-0.5
JCN	Nagara	0.83	280	P	Pn	09 46 04.6	+0.2
JYT	Yasato	1.25	320	P	Pn	09 46 10.5	+0.3
JHO	Hitachi	1.43	339	P	Pn	09 46 11.9	-0.8
JIM2	Oshima 3	1.56	250	S	Sn	09 46 32.5	-1.2
JHJ	Hachijo jima 2	2.45	209	Pn	Pn	09 46 26.9	+0.1
	24nm,0.3s,baz=76,slow=8.7,SNR=11						
JHJ				Sn	Sn	09 46 55.9	+0.2
	35nm,0.3s,baz=59,slow=22,SNR=6.8						
MJAR	Matsushiro Arr	2.74	298	Pn	Pn	09 46 32.2	+1.5
	1.6nm,0.3s,baz=100,slow=14,SNR=19						
MAT	Matsushiro	2.74	298	P	Pn	09 46 32.7	+2.0
MAT				eS	Sn	09 47 00.8	-2.1
MKAR	Makanchi Array	44.93	304	P	P	09 54 01.2	+0.3
	0.5nm,0.6s,baz=93,slow=10,SNR=5.0						
ILAR	Eielson Array	51.08	32	P	P	09 54 47.1	-1.0
	0.3nm,0.8s,baz=262,slow=5.6,SNR=4.9						
WRA	Warramunga Arr	55.30	188	P	P	09 55 19.3	-0.4
	1.1nm,0.4s,baz=1.2,slow=7.6,SNR=38						
ASAR	Alice Springs	59.03	188	P	P	09 55 47.2	+1.3
	0.3nm,0.6s,baz=11,slow=14,SNR=7.1						
NVAR	Mina Array Bea	76.18	53	P	P	09 57 35.7	+1.1
	0.3nm,0.6s,baz=294,slow=7.6,SNR=4.1						

IDC 13 09:48:32.9±56.0, 17°.26S×175°.60W, h0^{km}, mb4.1/3, mb1 4.3/3, mb1mx3.7/19, mbtmp4.1/3, MS3.4/1, Ms1 3.4/1, ms1mx2.6/29, Error ellipse: s-maj=1048.0km s-min=181.3km az=79.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAR	Rarotonga	15.45	107	LR	LR	09 56 48.9	
	comp=Z,134nm,20.3s,baz=270,slow=32						
STKA	Stephens Creek	41.29	241	P	P	09 56 20.6	+0.3
	2.6nm,0.9s,baz=49,slow=9.3,SNR=3.9						
WRA	Warramunga Arr	47.39	259	P	P	09 57 09.0	-0.3
	0.6nm,0.5s,baz=96,slow=6.9,SNR=18						
ASAR	Alice Springs	47.55	254	P	P	09 57 10.3	-0.2
	3.5nm,0.4s,baz=90,slow=8.5,SNR=79						

*DDA **13** 09:49:24.4, 40°.68N×42°.85E, h7^{km}, MD2.7*
ISC 13 09:49:18.6±1.4, 40°.97N±0°.05×43°.29E±0°.05, h6^{km}±14^{km}, n6, σ1^{s}11/12, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKH	Akhalkalaki	0.47	19	P	Pg	09 49 27.1	-0.7
AKH				S	Sg	09 49 33.6	-0.3
DIGO	Kars	0.55	174	i P	Pg	09 49 29.3	0.0
DIGO				i S	Sn	09 49 41.2	-1.8
DAGI	Agillar	1.05	277	i P	Pb	09 49 39.3	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
DAGI				i S	Sn	09 49 54.7	-0.4
DDEM	Demirkent	1.17	267	i P	Pb	09 49 41.4	0.0
DDEM				i S	Sn	09 50 00.1	+2.0
DBAD	Bademkaya	1.21	273	i P	Pn	09 49 42.3	0.0
DBAD				i S	Sn	09 49 58.8	-0.3
DGRG	David-gareji	1.64	72	P	Pb	09 49 49.8	+0.4
DGRG				S	Sg	09 50 12.6	+1.3

SKHL 13 10:19:30.9±0.5, 54°.58N×123°.60E, h10km±1km, mb3.9/7, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KROS	Kirovskiy	1.97	93	ePn	Pn	10 20 03.7	-0.7
KROS				ePg	Pb	10 20 06.3	-0.6
KROS				AMB	AMB	10 20 06.9	
	4.0nm,0.4s						
KROS				AMB	AMB	10 20 06.9	
	39nm,0.4s						
KROS				AMB	AMB	10 20 06.9	
	34nm,0.4s						
KROS				pPg	Pg	10 20 09.5	+0.8
KROS				eSn	Sn	10 20 28.6	-0.5
KROS				eSg	Sb	10 20 32.3	+0.8
KROS				A	A	10 20 35.2	
	120nm,0.5s						
KROS				A	A	10 20 35.2	
	45nm,0.5s						
KROS				A	A	10 20 35.2	
	42nm,0.5s						
TUP	Tupik	2.13	267	ePn	Pb	10 20 08.9	-0.8
TUP				ePg	Pg	10 20 10.1	-1.7
TUP				AMB	AMB	10 20 13.6	
	25nm,0.2s						
TUP				eSn	Sb	10 20 36.7	+0.5
TUP				eSg	Sg	10 20 39.9	+0.4
TUP				A	A	10 20 42.7	
	53nm,0.3s						
YKLR	Yuktali	2.30	332	ePg	Pg	10 20 14.5	-0.5
YKLR				eSg	Sg	10 20 43.7	-1.1
ZEA	Zeya	2.31	110	ePg	Pb	10 20 13.5	+0.9
ZEA				AMB	AMB	10 20 14.9	
	25nm,0.3s						
ZEA				eSg	Sg	10 20 45.0	0.0
ZEA				A	A	10 20 47.0	
	200nm,1.5s						
ZEA				A	A	10 20 47.7	
	95nm,0.4s						
ZEA				A	A	10 20 47.7	
	110nm,0.4s						
ZEA				A	A	10 20 47.7	
	32nm,0.4s						
CLNS	Chul'man	2.38	17	ePg	Pb	10 20 12.8	-1.1
CLNS				AMB	AMB	10 20 20.3	
	4.0nm,0.2s						
CLNS				AMB	AMB	10 20 20.3	
	7.0nm,0.2s						
CLNS				AMB	AMB	10 20 20.3	
	10.0nm,0.2s						
CLNS				eSg	Sg	10 20 47.5	+0.1
CLNS				A	A	10 20 50.7	
	45nm,0.3s						
CLNS				A	A	10 20 50.7	
	33nm,0.3s						
CLNS				A	A	10 20 50.7	
	15nm,0.3s						
BMKR	Bomnak	3.05	85	ePn	Pb	10 20 22.4	-2.8
BMKR				ePg	Pg	10 20 25.9	-3.4
BMKR				AMB	AMB	10 20 26.4	
	14nm,0.5s						
BMKR				sPg	Sn	10 20 31.4	-24
BMKR				eSg	Sg	10 21 06.1	-2.7
BMKR				A	A	10 21 09.4	
	28nm,0.4s						
KHN	Khani	3.19	319	ePg	Pg	10 20 29.9	-2.1
KHN				eSg	Sb	10 21 08.9	+2.4
CRS	Chara	3.81	310	ePg	Pg	10 20 41.1	-2.8
CRS				AMB	AMB	10 20 48.8	
	22nm,1.1s						
CRS				eSg	Sg	10 21 31.8	-1.4
CRS				A	A	10 21 36.8	
	71nm,1.1s						
CGD	Chagda	5.69	40	eSg	Sg	10 22 28.4	-5.2
EKMR	Ekimchan	5.74	101	ePg	Pb	10 21 14.5	+3.4
EKMR				AMB	AMB	10 21 16.4	
	3.0nm,0.3s						
EKMR				eSg	Sg	10 22 30.0	-5.2
EKMR				A	A	10 22 38.9	
	4.0nm,0.5s						
EKMR				A	A	10 22 38.9	
	3.0nm,0.5s						
YAK	Yakutsk	8.12	21	eSg	Sg	10 23 42.7	-8.7

MEX 13 10:28:23.4±0.5, 16°.48N×99°.22W, h16km±999km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	Acapulco	0.73	302	eP	Pg	10 28 35.4	-2.3
ACX				i S	Sg	10 28 45.2	-2.2
PNIG	Pinotepa	1.05	95	i P	Pb	10 28 40.2	-3.0
PNIG				i S	Sb	10 28 52.2	-4.6
CAIG	El Cayaco	1.15	299	i P	Pn	10 28 40.6	-4.3
CAIG				i S	Sb	10 28 55.3	-4.4
UTMO	Huajuapan	1.91	45	i P	Pn	10 28 51.2	-4.3
UTMO				i S	Sn	10 29 14.4	-4.9
PLIG	Platanillo	1.92	352	i P	Pn	10 28 52.4	-3.1
PLIG				i S	Sn	10 29 15.6	-3.9
ARIG	Puente Sto Nin	2.09	329	eP	Pn	10 28 54.8	-3.0
ARIG				i S	Sn	10 29 18.8	-4.7
YAIG	Yautepec	2.37	3	i P	Pn	10 28 59.1	-2.8
YAIG				i S	Sn	10 29 25.8	-5.0

*SKO **13** 10:41:36.2, 41°.34N×22°.63E, h15km, M1.0, ML1.5*
*ATH **13** 10:41:37.4, 41°.33N×22°.69E, h3km, MD2.7/4*
*CSEM **13** 10:41:37.4, 41°.33N×22°.69E, h3km, MD2.7, After ATH*
ISC 13 10:41:36.5±1.2, 41°.33N±0°.08×22°.65E±0°.05, h12km±8km, n9, σ0s.14/18, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.06	263	i Pg	Pg	10 41 39.0	0.0
VAY				eLg	Lg	10 41 40.8	
	comp=E,116nm,0.3s						
VAY				i Sg	Sg	10 41 40.8	0.0
VAY				eLg	Lg	10 41 40.8	
	comp=N,399nm,0.2s						
GRG	Griva	0.41	207	ePG	Pb	10 41 45.7	-0.1
GRG				eSG	Sb	10 41 52.1	+0.1
GRG	Griva	0.41	207	ePg	Pb	10 41 45.7	-0.1
GRG				eSg	Sb	10 41 52.1	+0.1
SOH	Sokhos	0.74	133	ePG	Pg	10 41 51.0	+0.2
SOH				eSG	Sg	10 42 00.2	-0.3
SOH	Sokhos	0.74	133	ePg	Pg	10 41 51.0	+0.2
SOH				eSg	Sg	10 42 00.2	-0.3
NVR	Nevrokopi	0.92	88	ePG	Pn	10 41 55.1	-0.1
NVR				eSG	Sg	10 42 06.2	0.0
NVR	Nevrokopi	0.92	88	ePg	Pn	10 41 55.1	-0.1
NVR				eSg	Sg	10 42 06.2	0.0
PLG	Polygyros	1.13	147	ePG	Pn	10 41 58.1	0.0
PLG				eSB	Sn	10 42 13.6	0.0
PLG	Polygyros	1.13	147	ePg	Pn	10 41 58.1	0.0
PLG				eSb	Sn	10 42 13.6	0.0

*ISCJB **13** 10:56:57.4±0.5, 13°.54N±0°.04×120°.71E±0°.08, h123km±5km, mb3.9/6, Error ellipse: s-maj=13.7km s-min=5.4km az=164.8*
*IDC **13** 10:56:57.8±0.6, 13°.58N×121°.05E, h117km±8km, mb3.5/6, mb1 3.7/6, mb1mx3.3/27, mbtmp3.5/6, Error ellipse: s-maj=50.6km s-min=14.4km az=59.0*
*MAN **13** 10:56:58, 13°.55N×120°.64E, h93km, mb4.6, ML3.5, MS3.4*
ISC 13 10:56:58.5±0.8, 13°.57N±0°.04×120°.76E±0°.07, h116km±7km, n20, σ1s.45/26, mb3.9/6, 4C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.20	109	⇓iP	Pn	10 57 13.9	-0.7
TGY	Tagaytay City	0.56	18	⇑iP	Pn	10 57 16.7	+0.3
TGY	Tagaytay City	0.56	18	P	Pn	10 57 16.8	+0.3
	2µm,0.3s,baz=208,slow=1.4,SNR=114						
TGY				S	Sn	10 57 30.6	+0.6
	579nm,0.3s,baz=141,slow=22,SNR=9.7						
LQP	Lukban	0.93	54	⇑iP	Pn	10 57 20.3	+0.6
SJMP	San Jose	1.15	162	eP	Pn	10 57 21.8	0.0
SJMP				eS	Sn	10 57 38.8	-0.6
GQP	Guinayangan	1.67	78	⇑eP	Pn	10 57 28.6	+0.9
OTRP	Odiongan	1.71	134	eP	Pn	10 57 28.2	-0.1
OTRP				eS	Sn	10 57 50.0	-0.9
AUQP	San Andres	1.88	97	eP	Pn	10 57 32.4	+2.1
BALP	Baler	2.30	20	eP	Pn	10 57 37.1	+1.5
SCZP	Santa Cruz	2.35	340	eP	Pn	10 57 35.3	-0.9
SCZP				eS	Sn	10 58 03.5	-1.5
ENPP	El Nido	2.69	209	eP	Pn	10 57 40.6	+0.1
ENPP				eS	Sn	10 58 17.4	+4.5
CUYO	Cuyo Island	2.71	175	eP	Pn	10 57 40.9	-0.1
CUYO				eS	Sn	10 58 13.6	0.0
BOLP	Bolinao	2.92	344	eP	Pn	10 57 44.0	+0.4
BOLP				eS	Sn	10 58 18.7	+0.4
PPR	Puerto Princes	4.26	208	⇑iP	Pn	10 58 05.5	+3.9
CMAR	Chiang Mai Arr	21.52	286	P	P	11 01 40.5	+1.9
	7.3nm,0.8s,baz=94,slow=7.9,SNR=32						
FITZ	Fitzroy Crossi	31.83	171	P	P	11 03 11.8	-0.7
	1.1nm,0.9s,baz=39,slow=6.5,SNR=3.8						
WRA	Warramunga Arr	35.88	158	P	P	11 03 45.2	-2.4
	1.3nm,0.3s,baz=332,slow=10,SNR=50						
ASAR	Alice Springs	39.17	161	P	P	11 04 13.7	-1.6
	1.1nm,0.4s,baz=335,slow=7.0,SNR=47						
MKAR	Makanchi Array	46.17	324	P	P	11 05 12.0	+0.3
	0.4nm,0.5s,baz=118,slow=7.7,SNR=7.4						
KURBB	Kurchatov Arra	50.33	326	P	P	11 05 43.3	-0.2
	0.4nm,0.3s,baz=119,slow=9.0,SNR=9.7						

*ISCJB **13** 10:58:11.5±0.3, 41°.32N±0°.01×22°.69E±0°.02, h0km±3km, mb3.7/2, Error ellipse: s-maj=2.3km s-min=1.9km az=151.7*
*SKO **13** 10:58:11.4, 41°.33N×22°.68E, h15km, M2.6, ML3.1*
*SOF **13** 10:58:11.7, 41°.36N×22°.68E, h6km, MD3.8*
*ATH **13** 10:58:11.9, 41°.35N×22°.68E, h22km, MD3.5/27*
*IDC **13** 10:58:12.0±1.4, 41°.27N×22°.54E, h0km, mb3.7/2, mb1 3.8/6, mb1mx3.4/30, mbtmp3.6/6, ML3.3/4, MS2.7/2, Ms1 2.7/2, ms1mx2.1/39, Error ellipse: s-maj=21.2km s-min=17.9km az=158.0*
*THE **13** 10:58:12.5, 41°.32N×22°.68E, h1km±1km, ML3.6/8, Error ellipse: s-maj=1.3km s-min=0.5km az=218.0*
*CSEM **13** 10:58:12.4±0.1, 41°.32N×22°.69E, h2km, ML3.3, Error ellipse: s-maj=2.3km s-min=1.9km az=76.0*
*PDG **13** 10:58:12.3±0.4, 41°.33N×22°.69E, h6km, ML3.2/9, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*BEO **13** 10:58:12.2±0.7, 41°.26N×22°.58E, h6km±2km, ML3.3/1*
ISC 13 10:58:12.8±0.9, 41°.32N±0°.01×22°.67E±0°.01, h4km±6km, n197, σ0s.97/266, 28C-26D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	Valandovo	0.08	271	P	Pg	10 58 13.5	-0.9
VAY				S	Sg	10 58 15.9	+0.5
VAY	Valandovo	0.08	271	⇑iPg	Pg	10 58 14.1	-0.2
VAY				i Sg	Sg	10 58 15.9	+0.5
VAY	Valandovo	0.08	271	i Pg	Pg	10 58 14.2	-0.2
VAY				⇓iSg	Sg	10 58 15.9	+0.5
VAY				eLg	Lg	10 58 16.2	
	comp=E,9µm,0.5s						
VAY				eLg	Lg	10 58 16.2	
	comp=N,10µm,0.3s						
VAY	Valandovo	0.08	271	P	Pg	10 58 13.5	-0.9
VAY	Valandovo	0.08	271	⇑iPg	Pg	10 58 14.1	-0.2
VAY				S	Sg	10 58 15.9	+0.5
KNT	Kendrikon	0.23	133	P	Pg	10 58 17.2	0.0
KNT				S	Sg	10 58 20.4	+0.1
KNT	Kendrikon	0.23	133	P	Pg	10 58 17.2	0.0
KNT				S	Sg	10 58 20.4	+0.1
KKB	Krupnik	0.63	29	i Pg	Pg	10 58 24.1	-0.7
KKB	Krupnik	0.63	29	i Pg	Pg	10 58 24.1	-0.7
SOH	Sokhos	0.72	134	P	Pg	10 58 25.9	-0.6
SOH				S	Sg	10 58 35.8	0.0
SOH	Sokhos	0.72	134	ePN	Pg	10 58 26.0	-0.6
SOH				eSN	Sg	10 58 36.8	+1.0
SOH	Sokhos	0.72	134	P	Pg	10 58 25.9	-0.6
SOH				S	Sg	10 58 35.8	0.0
SOH				eSn	Sg	10 58 36.8	+1.0
THE	Thessaloniki	0.72	162	P	Pg	10 58 26.1	-0.5
THE				S	Sg	10 58 35.8	-0.1
THE	Thessaloniki	0.72	162	P	Pg	10 58 26.1	-0.5
THE				S	Sg	10 58 35.8	-0.1
SRS	Serrai	0.72	106	P	Pg	10 58 25.6	-1.0
SRS	Serrai	0.72	106	P	Pg	10 58 25.6	-1.0
HORT	Hortiatis	0.79	156	P	Pg	10 58 27.4	-0.5
HORT				S	Sg	10 58 38.5	+0.3
HORT	Hortiatis	0.79	156	P	Pg	10 58 27.4	-0.5
HORT				S	Sg	10 58 38.5	+0.3
MMB	Musomiste	0.84	71	i Pg	Pg	10 58 27.9	-0.9
MMB	Musomiste	0.84	71	i Pg	Pg	10 58 27.9	-0.9
NVR	Nevrokopi	0.90	88	P	Pg	10 58 28.9	-1.0
NVR				S	Sg	10 58 41.8	+0.2
NVR	Nevrokopi	0.90	88	ePN	Pg	10 58 29.3	-0.6
NVR				eSN	Sg	10 58 41.4	-0.2
NVR	Nevrokopi	0.90	88	P	Pg	10 58 28.9	-1.0
NVR	Nevrokopi	0.90	88	ePn	Pg	10 58 29.3	-0.6
NVR				eSn	Sg	10 58 41.4	-0.2
BIA	Bitola	1.06	254	P	Pg	10 58 32.1	-1.0
BIA	Bitola	1.06	254	ePg	Pg	10 58 32.3	-0.8
BIA	Bitola	1.06	254	P	Pg	10 58 32.1	-1.0
PLG	Polygyros	1.11	148	P	Pg	10 58 33.0	-1.1
PLG				S	Sb	10 58 49.3	-0.2
PLG	Polygyros	1.11	148	ePN	Pg	10 58 33.2	-0.9
PLG				eSN	Sg	10 58 48.9	+0.4
PLG	Polygyros	1.11	148	P	Pg	10 58 33.0	-1.1
PLG				eSn	Sg	10 58 48.9	+0.4
PLG				S	Sb	10 58 49.3	-0.2
FNA	Florina	1.12	242	P	Pg	10 58 33.5	-0.7
FNA	Florina	1.12	242	ePN	Pg	10 58 33.5	-0.7
FNA				eSN	Sb	10 58 49.4	-0.2
FNA	Florina	1.12	242	P	Pg	10 58 33.5	-0.7
FNA				eSn	Sb	10 58 49.4	-0.2
SKO	Skopje	1.13	306	ePg	Pg	10 58 33.6	-0.9
SKO				eSg	Sg	10 58 48.8	-0.3
SKO				eLg	Lg	10 58 50.3	
	comp=N,532nm,0.7s						
SKO				eLg	Lg	10 58 50.5	
	comp=E,597nm,0.9s						
KZN	Kozani	1.22	214	P	Pg	10 58 35.4	-0.8
KZN				S	Sb	10 58 52.9	+0.2
KZN	Kozani	1.22	214	ePN	Pg	10 58 36.1	-0.1
KZN				eSN	Sb	10 58 53.1	+0.4
KZN	Kozani	1.22	214	P	Pg	10 58 35.4	-0.8
KZN	Kozani	1.22	214	ePn	Pg	10 58 36.1	-0.1
KZN				eSn	Sb	10 58 53.1	+0.4
LIT	Litokhoron	1.23	187	P	Pg	10 58 34.8	-1.4
LIT				S	Sb	10 58 52.8	+0.1
LIT	Litokhoron	1.23	187	ePN	Pg	10 58 35.2	-1.0
LIT	Litokhoron	1.23	187	P	Pg	10 58 34.8	-1.4
LIT	Litokhoron	1.23	187	ePn	Pg	10 58 35.2	-1.0
LIT				S	Sb	10 58 52.8	+0.1
VTS	Vitosha	1.33	17	P	Pn	10 58 36.8	-1.5
VTS				S	Sn	10 58 56.9	+0.3
VTS	Vitosha	1.33	17	i Pg	Pn	10 58 37.2	-1.1
VTS	Vitosha	1.33	17	⇑ePg	Pn	10 58 37.6	-0.7
VTS				i Sg	Sg	10 58 55.4	-0.2
VTS	Vitosha	1.33	17	⇓iP	Pb	10 58 38.6	+0.2
VTS				S	Sb	10 58 55.9	0.0
VTS	Vitosha	1.33	17	P	Pn	10 58 36.8	-1.5
VTS	Vitosha	1.33	17	⇑ePg	Pn	10 58 37.6	-0.7
VTS				i Sg	Sg	10 58 55.4	-0.2
OUR	Ouranopolis	1.40	134	P	Pn	10 58 38.0	-1.1
OUR				S	Sn	10 58 57.8	-0.2
OUR	Ouranopolis	1.40	134	P	Pn	10 58 38.0	-1.1
OUR				S	Sn	10 58 57.8	-0.2
NEST	Nestorio	1.53	234	P	Pn	10 58 40.7	-0.3
NEST	Nestorio	1.53	234	P	Pn	10 58 40.7	-0.3
RZN	Rozhen	1.58	76	i P	Pn	10 58 41.7	-0.1
RZN	Rozhen	1.58	76	i P	Pn	10 58 41.7	-0.1
KBN	Korca	1.59	245	ePN	Pn	10 58 40.4	-1.4
KBN				i SN	Sn	10 59 02.8	0.0
BARS	Barje	1.63	337	ePn	Pn	10 58 41.5	-0.8
BARS				eSg	Sn	10 59 03.8	+0.1
BARS	Barje	1.63	337	ePn	Pn	10 58 41.5	-0.8
BARS				eSg	Sn	10 59 03.8	+0.1
PGB	Panagyurishte	1.66	42	i P	Pn	10 58 42.2	-0.6
PGB	Panagyurishte	1.66	42	i P	Pn	10 58 42.2	-0.6
PLD	Plovdiv	1.71	62	P	Pn	10 58 43.0	-0.4
PLD				S	Sn	10 59 05.9	+0.2
PLD	Plovdiv	1.71	62	P	Pn	10 58 43.0	-0.4
PLD	Plovdiv	1.71	62	eSn	Sb	10 59 06.7	0.0
PLD				eSg	Sg	10 59 09.1	+1.4
PLD	Plovdiv	1.71	62	P	Pn	10 58 43.0	-0.4
PLD				S	Sn	10 59 05.9	+0.2
PLD				eSn	Sb	10 59 06.7	0.0
PHP	Peshkopia	1.71	283	ePN	Pn	10 58 43.4	-0.1
PHP				i SN	Sn	10 59 05.6	-0.3
PHP	Peshkopia	1.71	283	P	Pn	10 58 43.3	-0.2
PHP				S	Sn	10 59 05.8	-0.1
PHP	Peshkopia	1.71	283	P	Pn	10 58 43.3	-0.2
PHP				S	Sn	10 59 05.8	-0.1
THL	Klokotos Trika	1.82	196	P	Pn	10 58 44.3	-0.6
THL	Klokotos Trika	1.82	196	ePN	Pn	10 58 44.5	-0.4
THL	Klokotos Trika	1.82	196	ePn	Pn	10 58 44.5	-0.4
ZAPS	Zavoj	1.95	359	ePn	Pn	10 58 47.2	+0.4
ZAPS				eSg	Sg	10 59 17.7	+2.2
NEO	Neokhori	2.06	168	ePB	Pn	10 58 47.0	-1.2
NEO	Neokhori	2.06	168	ePb	Pn	10 58 47.0	-1.2
KDZ	Kurdzhali	2.09	80	i P	Pn	10 58 48.9	+0.3
KDZ	Kurdzhali	2.09	80	i P	Pn	10 58 48.9	+0.3
TIR	Tirane	2.11	272	ePN	Pb	10 58 51.4	-0.3
JAN	Janina	2.17	220	ePB	Pn	10 58 50.0	+0.3
JAN	Janina	2.17	220	ePb	Pn	10 58 50.0	+0.3
MPEP	Malo Peshtene	2.18	21	i P	Pn	10 58 50.2	+0.3
PUK	Puka	2.20	290	ePN	Pb	10 58 52.9	-0.3
PUK				i SN	Sn	10 59 18.4	+0.4
BCI	Bajram Curri	2.21	299	ePN	Pn	10 58 51.4	+1.1
SELS	Selova	2.22	329	ePn	Pn	10 58 49.3	-1.1
DIM	Dimitrovgrad	2.26	70	P	Pb	10 58 54.5	+0.3
DIM	Dimitrovgrad	2.26	70	P	Pb	10 58 54.5	+0.3
AGG	Agios Georgios	2.31	187	P	Pn	10 58 51.1	-0.6
AGG	Agios Georgios	2.31	187	P	Pn	10 58 51.1	-0.6
SMTH	Samothraki Isl	2.33	110	ePN	Pn	10 58 51.2	-0.7
SMTH	Samothraki Isl	2.33	110	ePn	Pn	10 58 51.2	-0.7
MAKR	Makrakomi, Fth	2.34	190	P	Pn	10 58 51.9	-0.2
MAKR	Makrakomi, Fth	2.34	190	P	Pn	10 58 51.9	-0.2
LIA	Limnos Island	2.38	126	ePN	Pn	10 58 52.2	-0.4
LIA	Limnos Island	2.38	126	ePn	Pn	10 58 52.2	-0.4
PVY	Plav	2.39	303	⇓iPn	Pn	10 58 53.0	+0.1
PVY				eSn	Sn	10 59 24.6	+1.9
PVY	Plav	2.39	303	⇓iPn	Pn	10 58 53.0	+0.1
PVY				eSn	Sn	10 59 24.6	+1.9
EVR	Evrytania	2.49	196	ePB	Pn	10 58 55.4	+1.2
EVR	Evrytania	2.49	196	ePb	Pn	10 58 55.4	+1.2
SRN	Sarande	2.49	236	i SN	Sb	10 59 27.9	-1.2
SRN				i PN	Pb	10 58 56.0	-2.1
ALN	Alexandroupoli	2.58	98	P	Pn	10 58 54.8	-0.6
ALN	Alexandroupoli	2.58	98	P	Pn	10 58 54.8	-0.6
BEY	Berane	2.58	308	⇑iPn	Pn	10 58 55.9	+0.4
BEY				eSn	Sn	10 59 28.8	+1.4
IVA	Berane	2.58	308	⇑iPn	Pn	10 58 55.9	+0.4
IVA				eSn	Sn	10 59 28.8	+1.4
ULC	Ulcinj	2.65	285	⇑iPn	Pn	10 58 57.2	+0.9
ULC				eSn	Sb	10 59 31.9	-1.8
ULC	Ulcinj	2.65	285	⇑iPn	Pn	10 58 57.2	+0.9
ULC				eSn	Sb	10 59 31.9	-1.8
LKR	Lokris	2.68	175	ePN	Pn	10 58 56.9	+0.2
LKR	Lokris	2.68	175	ePn	Pn	10 58 56.9	+0.2
KEK	Kerkira	2.72	235	ePN	Pn	10 58 56.8	-0.4
KEK	Kerkira	2.72	235	ePn	Pn	10 58 56.8	-0.4
PVL	Pavlikeni	2.74	45	i P	Pn	10 58 55.8	-1.7
PVL	Pavlikeni	2.74	45	i P	Pn	10 58 55.8	-1.7
PDG	Podgorica	2.78	295	ePg	Pn	10 59 00.3	+2.2
PDG	Podgorica	2.78	295	⇑iPn	Pn	10 58 58.8	+0.7
PDG				eSn	Sb	10 59 34.9	-2.6
TTG	Podgorica	2.78	295	⇑iPn	Pn	10 58 58.8	+0.7
TTG				eSn	Sb	10 59 34.9	-2.6
GRUS	Gruza	2.94	331	ePn	Pn	10 58 59.4	-1.0
GRUS	Gruza	2.94	331	ePn	Pn	10 58 59.4	-1.0
EFP	Efpalio	2.95	192	ePN	Pn	10 59 00.5	+0.1
EFP	Efpalio	2.95	192	ePn	Pn	10 59 00.5	+0.1
KALE	Kalithea	2.95	188	ePN	Pn	10 59 00.5	0.0
KALE	Kalithea	2.95	188	ePn	Pn	10 59 00.5	0.0
LKD2	Lefkada island	2.96	212	ePN	Pn	10 59 00.9	+0.3
LKD2	Lefkada island	2.96	212	ePn	Pn	10 59 00.9	+0.3
TRIZ	Trizonia	2.99	189	ePN	Pn	10 59 01.0	+0.1
TRIZ	Trizonia	2.99	189	ePn	Pn	10 59 01.0	+0.1
BUM	Brajici-Budva	2.99	290	⇓iPn	Pn	10 59 01.8	+0.8
BUM				eSn	Sn	10 59 39.5	+2.1
BUM	Brajici-Budva	2.99	290	⇓iPn	Pn	10 59 01.8	+0.8
BUM				eSn	Sn	10 59 39.5	+2.1
NKY	Niksic	3.12	300	⇑iPn	Pn	10 59 03.9	+1.0
NKY				eSn	Sn	10 59 42.8	+2.2
NKY	Niksic	3.12	300	⇑iPn	Pn	10 59 03.9	+1.0
NKY				eSn	Sn	10 59 42.8	+2.2
LAKA	Lakka	3.12	190	ePN	Pn	10 59 03.8	+1.0
LAKA	Lakka	3.12	190	ePn	Pn	10 59 03.8	+1.0
JMB	Yambol	3.14	67	ePn	Pn	10 59 03.2	+0.2
JMB	Yambol	3.14	67	ePn	Pn	10 59 03.2	+0.2
PLE	Pljevlja	3.16	311	⇑iPn	Pn	10 59 03.2	-0.2
PLE				eSn	Sn	10 59 42.7	+1.1
PLE	Pljevlja	3.16	311	⇑iPn	Pn	10 59 03.2	-0.2
PLE				eSn	Sn	10 59 42.7	+1.1
KLV	Kalavryta, Ach	3.30	187	ePN	Pn	10 59 04.9	-0.4
KLV	Kalavryta, Ach	3.30	187	ePn	Pn	10 59 04.9	-0.4
LTK	Loutraki	3.30	176	ePN	Pn	10 59 05.1	-0.2
LTK	Loutraki	3.30	176	ePn	Pn	10 59 05.1	-0.2
HCY	Herceg Novi	3.32	291	ePn	Pn	10 59 06.4	+0.9
HCY				eSn	Sn	10 59 47.1	+1.7
HCY	Herceg Novi	3.32	291	ePn	Pn	10 59 06.4	+0.9
HCY				eSn	Sn	10 59 47.1	+1.7
UPM	Unac-Piva	3.37	305	⇑iPn	Pn	10 59 06.1	-0.3
UPM				eSn	Sn	10 59 48.5	+1.6
UPM	Unac-Piva	3.37	305	⇑iPn	Pn	10 59 06.1	-0.3
UPM				eSn	Sn	10 59 48.5	+1.6
RLS	Riolos of Patr	3.39	196	ePB	Pn	10 59 08.3	+1.9
RLS	Riolos of Patr	3.39	196	ePb	Pn	10 59 08.3	+1.9
GUR	Goura	3.39	184	ePN	Pn	10 59 06.9	+0.3
GUR	Goura	3.39	184	ePn	Pn	10 59 06.9	+0.3
DIVS	Divibare	3.41	325	P	Pn	10 59 05.9	-0.9
DIVS	Divibare	3.41	325	P	Pn	10 59 05.9	-0.9
BRY	Bratogost	3.46	299	ePn	Pn	10 59 08.4	+0.9
BRY				eSn	Sn	10 59 50.4	+1.4
BRY	Bratogost	3.46	299	ePn	Pn	10 59 08.4	+0.9
BRY				eSn	Sn	10 59 50.4	+1.4
BBLS	Lazići	3.51	318	ePn	Pn	10 59 08.0	-0.1
BBLS	Lazići	3.51	318	ePn	Pn	10 59 08.0	-0.1
DID	Didima	3.83	173	ePN	Pn	10 59 12.3	-0.3
DID	Didima	3.83	173	ePn	Pn	10 59 12.3	-0.3
GZR	Gura Zlata	4.07	1	⇓iP	Pn	10 59 15.9	0.0
GZR	Gura Zlata	4.07	1	⇓iP	Pn	10 59 15.9	0.0
ITM	Ithomi	4.17	188	ePN	Pn	10 59 18.1	+0.8
ITM	Ithomi	4.17	188	ePn	Pn	10 59 18.1	+0.8
LOT	Lotru	4.20	11	⇑iP	Pn	10 59 17.3	-0.5
LOT	Lotru	4.20	11	⇑iP	Pn	10 59 17.3	-0.5
LOT				S	Sn	11 00 05.2	-2.2
ARR	Arges	4.29	19	⇑iP	Pn	10 59 19.3	+0.4
ARR	Arges	4.29	19	⇑iP	Pn	10 59 19.3	+0.4
BZS	Buzias	4.36	350	⇑iP	Pn	10 59 18.3	-1.5
BZS	Buzias	4.36	350	⇑iP	Pn	10 59 18.3	-1.5
VOIR		4.46	22	⇓iP	Pn	10 59 21.4	+0.1
VOIR		4.46	22	⇓iP	Pn	10 59 21.4	+0.1
PYL	PYLOS	4.48	190	ePN	Pn	10 59 22.0	+0.6
PYL	PYLOS	4.48	190	ePn	Pn	10 59 22.0	+0.6
DYR	Agios Nikonas	4.56	183	ePN	Pn	10 59 24.0	+1.4
DYR	Agios Nikonas	4.56	183	ePn	Pn	10 59 24.0	+1.4
VLI	Veliai	4.60	177	ePN	Pn	10 59 23.4	+0.3
VLI	Veliai	4.60	177	ePn	Pn	10 59 23.4	+0.3
ISR	Istrita	4.73	35	⇑iP	Pn	10 59 27.2	+2.2
ISR	Istrita	4.73	35	⇑iP	Pn	10 59 27.2	+2.2
MLR	Muntele Rosu	4.80	29	⇓iP	Pn	10 59 27.8	+1.8
MLR	Muntele Rosu	4.80	29	Pn	Pn	10 59 28.8	+2.8
	comp=E,0.7nm,0.3s,baz=232,slow=5.6,SNR=28						
MLR				Lg	Lg	11 00 46.6	
	comp=E,0.1nm,0.3s,baz=273,slow=18,SNR=2.4						
MLR	Muntele Rosu	4.80	29	⇓iP	Pn	10 59 27.8	+1.8
DOPR	Dopca	5.05	22	⇑iP	Pn	10 59 30.7	+1.4
DOPR	Dopca	5.05	22	⇑iP	Pn	10 59 30.7	+1.4
TIRR	Tirgusor	5.25	51	⇓iP	Pn	10 59 34.3	+2.2
TIRR	Tirgusor	5.25	51	⇓iP	Pn	10 59 34.3	+2.2
VRI	Vrincioaia	5.42	32	⇓iP	Pn	10 59 36.0	+1.7
VRI	Vrincioaia	5.42	32	⇓iP	Pn	10 59 36.0	+1.7
DRGR		5.47	0	⇓iP	Pn	10 59 34.5	-0.6

DRGR		5.47	0	⇓iP	Pn	10 59 34.5	-0.6
CFR	Carcaliu	5.55	44	⇓iP	Pn	10 59 37.2	+1.1
CFR	Carcaliu	5.55	44	⇓iP	Pn	10 59 37.2	+1.1
PKSM	Moragy	5.69	331	⇓iP	Pn	10 59 37.3	-0.8
PKSM	Moragy	5.69	331	⇑e	Pn	10 59 37.2	-0.8
PKSM	Moragy	5.69	331	⇓iP	Pn	10 59 37.3	-0.8
PKS9	Tamasi	6.14	330	⇓e	Pn	10 59 43.7	-0.6
PKSG		6.80	335	⇑e	Pn	10 59 55.2	+1.9
PKST	Tˆ's	6.80	332	⇓e	Pn	10 59 53.1	-0.3
DOBS	Dobrina	7.11	315	⇓iPn	Pn	10 59 57.3	-0.2
DOBS	Dobrina	7.11	315	⇓iPn	Pn	10 59 57.3	-0.2
BRTR	Keskin Array B	8.50	97	Pn	Pn	11 00 18.7	+1.9
	comp=E,0.1nm,0.3s,baz=291,slow=9.1,SNR=2.7						
GERES	GERESS Array B	9.84	323	Pn	Pn	11 00 35.3	+0.3
	comp=E,0.4nm,0.3s,baz=149,slow=13,SNR=12						
GERES				LR	LR	11 04 53.8	
	comp=E,30nm,18.4s,baz=74,slow=41						
DAVOX	Davos/Dischmat	10.70	305	Pn	Pn	11 00 46.5	-0.4
	comp=E,0.2nm,0.3s,baz=156,slow=19,SNR=2.7						
DAVOX				LR	LR	11 05 43.8	
	comp=E,41nm,19.0s,baz=266,slow=42						
TORD	Torodi Ar. Bea	33.51	219	P	P	11 04 52.7	-0.8
	comp=E,0.6nm,0.8s,baz=38,slow=9.5,SNR=3.6						
ZALV	Zalesovo Beam	42.39	51	P	P	11 06 07.1	-1.0
	comp=E,1.0nm,0.5s,baz=276,slow=9.6,SNR=4.5						

*MOS **13** 11:01:08.6±1.1, 43°.19N×46°.18E, h13km, mb4.0/1, Error ellipse: s-maj=10.7km s-min=6.1km az=33.0*
*CSEM **13** 11:01:08.8±0.2, 43°.17N×46°.13E, h2km, mb4.0, Error ellipse: s-maj=5.9km s-min=2.3km az=22.0*
ISC 13 11:01:09.0±1.1**, 43°.14N**±0°.03×**46°.12E**±0°.02**, h3**km±10km**, n54, σ0s.81**/95**, 9C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRO	Groznyy	0.32	304	⇑iPG	Pg	11 01 14.9	-0.3
GRO	Groznyy	0.32	304	i Pg	Pg	11 01 14.9	-0.3
DLMR	Dylym	0.38	100	ePG	Pb	11 01 17.0	-1.4
DLMR				eS	Sb	11 01 26.0	+1.3
DLMR				pmax	pmax		
	comp=Z,230nm,0.2s						
DLMR	Dylym	0.38	100	ePg	Pb	11 01 17.0	-1.4
	comp=Z,230nm,0.2s						
DLMR				eSg	Sb	11 01 26.0	+1.3
BTLR	Botlikh	0.48	171	⇑iPG	Pg	11 01 18.5	+0.3
BTLR				eS	Sb	11 01 27.0	-0.6
BTLR				pmax	pmax		
	comp=Z,147nm,0.3s						
BTLR	Botlikh	0.48	171	i Pg	Pg	11 01 18.5	+0.3
	comp=Z,147nm,0.3s						
BTLR				eSg	Sb	11 01 27.0	-0.6
DBC	Dubki	0.54	102	i PG	Pg	11 01 18.2	-1.1
DBC				i S	Sg	11 01 26.1	-0.1
DBC	Dubki	0.54	102	i Pg	Pg	11 01 18.2	-1.1
DBC				i Sg	Sg	11 01 26.1	-0.1
UNCR	Uncukul	0.65	130	ePG	Pg	11 01 21.2	-0.3
UNCR				eS	Sg	11 01 30.7	+0.7
UNCR				pmax	pmax		
	comp=Z,47nm,0.2s						
UNCR	Uncukul	0.65	130	ePg	Pg	11 01 21.2	-0.3
	comp=Z,47nm,0.2s						
UNCR				eSg	Sg	11 01 30.7	+0.7
KRNR	Karanay	0.66	118	ePG	Pg	11 01 21.2	-0.4
KRNR				i S	Sg	11 01 30.2	+0.1
KRNR				pmax	pmax		
	comp=Z,57nm,0.2s						
KRNR	Karanay	0.66	118	ePg	Pg	11 01 21.2	-0.4
	comp=Z,57nm,0.2s						
KRNR				i Sg	Sg	11 01 30.2	+0.1
XNZR	Khunzakh	0.74	144	ePG	Pg	11 01 23.3	+0.2
XNZR				eS	Sb	11 01 34.5	-0.6
XNZR				pmax	pmax		
	comp=Z,110nm,0.2s						
XNZR	Khunzakh	0.74	144	ePg	Pg	11 01 23.3	+0.2
	comp=Z,110nm,0.2s						
XNZR				eSg	Sb	11 01 34.5	-0.6
ARKR	Arakani	0.84	129	ePG	Pg	11 01 24.4	-0.6
ARKR				eS	Sg	11 01 36.5	+0.6
ARKR				pmax	pmax		
	comp=Z,43nm,0.1s						
ARKR	Arakani	0.84	129	ePg	Pg	11 01 24.4	-0.6
	comp=Z,43nm,0.1s						
ARKR				eSg	Sg	11 01 36.5	+0.6
SNJR	Sundja	0.96	266	⇓iPG	Pn	11 01 28.7	-0.7
SNJR				eS	Sn	11 01 43.5	-0.1
SNJR	Sundja	0.96	266	i Pg	Pn	11 01 28.7	-0.7
SNJR				eSg	Sn	11 01 43.5	-0.1
MAK	Makhachkala	1.03	99	ePG	Pn	11 01 32.1	+1.8
MAK				e		11 01 46.3	
MAK				pmax	pmax		
	comp=Z,139nm,0.4s						
MAK				smax	smax		
	comp=N,472nm,0.6s						
MAK				smax	smax		
	comp=E,273nm,0.4s						
MAK	Makhachkala	1.03	99	ePg	Pn	11 01 32.1	+1.8
	comp=E,139nm,0.4s						
MAK				eSg	Sn	11 01 46.3	+1.0
	comp=E,472nm,0.6s						
VLKR	Vladikavkaz	1.06	266	⇑iPG	Pn	11 01 30.3	-0.5
VLKR				eS	Sn	11 01 46.5	+0.5
VLKR	Vladikavkaz	1.06	266	i Pg	Pn	11 01 30.3	-0.5
VLKR				eSg	Sn	11 01 46.5	+0.5
TRKR	Terskaya	1.17	301	⇓iPG	Pg	11 01 31.0	-0.3
TRKR				eS	Sn	11 01 48.1	-0.5
TRKR	Terskaya	1.17	301	i Pg	Pg	11 01 31.0	-0.3
TRKR				eSg	Sn	11 01 48.1	-0.5
BTKR	Batakoyurt	1.17	282	ePG	Pn	11 01 31.9	-0.4
BTKR				eS	Sn	11 01 49.3	+0.4
BTKR	Batakoyurt	1.17	282	ePg	Pn	11 01 31.9	-0.4
BTKR				eSg	Sn	11 01 49.3	+0.4
KMKR	Kumukh	1.24	144	ePG	Pb	11 01 33.0	-0.1
KMKR				eS	Sn	11 01 50.7	0.0
KMKR				pmax	pmax		
	comp=Z,85nm,0.1s						
KMKR	Kumukh	1.24	144	ePg	Pb	11 01 33.0	-0.1
	comp=Z,85nm,0.1s						
KMKR				eSg	Sn	11 01 50.7	0.0
ARNR	Ardon	1.34	273	⇓iPG	Pn	11 01 34.3	-0.4
ARNR				eS	Sg	11 01 54.0	+1.8
ARNR	Ardon	1.34	273	i Pg	Pn	11 01 34.3	-0.4
ARNR				eSg	Sg	11 01 54.0	+1.8
LACR	Lac	1.37	257	⇑iPG	Pn	11 01 33.6	-1.5
LACR				i S	Sb	11 01 53.4	+0.1
LACR	Lac	1.37	257	i Pg	Pn	11 01 33.6	-1.5
LACR				i Sg	Sb	11 01 53.4	+0.1
PRTR	Priterechnaya	1.47	295	⇑iPG	Pn	11 01 35.9	-0.5
PRTR				i S	Sg	11 01 56.8	+0.6
PRTR	Priterechnaya	1.47	295	i Pg	Pn	11 01 35.9	-0.5
PRTR				i Sg	Sg	11 01 56.8	+0.6
URKR	Urkarakh	1.48	130	ePG	Pb	11 01 37.0	-0.2
URKR				eS	Sg	11 01 58.5	+1.9
URKR	Urkarakh	1.48	130	ePg	Pb	11 01 37.0	-0.2
URKR				eSg	Sg	11 01 58.5	+1.9
KORR	Kora	1.50	269	⇑iPG	Pn	11 01 36.8	0.0
KORR				eS	Sg	11 01 58.5	+1.3
KORR	Kora	1.50	269	i Pg	Pn	11 01 36.8	0.0
KORR				eSg	Sg	11 01 58.5	+1.3
ZEI	Tsey	1.67	258	⇑iPN	Pn	11 01 38.7	-0.6
ZEI				i S	Sb	11 02 02.0	0.0
ZEI	Tsey	1.67	258	i Pn	Pn	11 01 38.7	-0.6
ZEI				i Sg	Sb	11 02 02.0	0.0
LSNR	Lesken	1.69	275	ePN	Pn	11 01 39.2	-0.2
LSNR				i S	Sb	11 02 02.8	+0.4
LSNR	Lesken	1.69	275	ePn	Pn	11 01 39.2	-0.2
LSNR				i Sg	Sb	11 02 02.8	+0.4
DIGR	Digorskoe uzhe	1.88	264	⇓iPN	Pn	11 01 41.5	-0.6
DIGR	Digorskoe uzhe	1.88	264	i Pn	Pn	11 01 41.5	-0.6
KSMR	Kasumkent	2.14	135	PN	Pb	11 01 48.0	-0.4
KSMR				eS	Sg	11 02 17.0	-0.7
KSMR	Kasumkent	2.14	135	Pn	Pb	11 01 48.0	-0.4
KSMR				eSb	Sg	11 02 17.0	-0.7
KIV	Kislovodsk	2.62	289	ePN	Pg	11 01 58.6	-0.7
KIV				eS	Sb	11 02 31.0	+1.6
KIV				pmax	pmax		
	comp=Z,13nm,0.8s						
KIV				smax	smax		
	comp=N,48nm,1.0s						
KIV	Kislovodsk	2.62	289	ePn	Pg	11 01 58.6	-0.7
	comp=N,13nm,0.8s						
KIV				eSb	Sb	11 02 31.0	+1.6
	comp=N,48nm,1.0s						
GOF	Gofitskoye	2.94	312	ePN	Pg	11 02 18.5	+13
GOF	Gofitskoye	2.94	312	ePn	Pg	11 02 18.5	+13
AKTO	Aktyubinsk	10.94	44	⇑Pn	Pn	11 03 46.6	+0.3
	comp=N,1.4nm,0.9s						
AKTO				⇓Sn	Sn	11 05 36.8	-12
	comp=N,1.2nm,0.7s						
AKTO	Aktyubinsk	10.94	44	Pn	Pn	11 03 46.6	+0.3
	comp=N,1.4nm,0.9s						
AKTO				Sn	Sn	11 05 36.8	-12
	comp=N,1.2nm,0.7s						
AB31	Akbulak array	11.36	53	⇓Pn	Pn	11 03 51.5	-0.6
	comp=N,0.1nm,0.3s,baz=244,slow=12						
AB31				⇑Sn	Sn	11 05 45.1	-14
	comp=N,0.3nm,0.3s,baz=238,slow=22,SNR=4.0						
AB31	Akbulak array	11.36	53	Pn	Pn	11 03 51.5	-0.6
	comp=N,0.1nm,0.3s,baz=244						
AB31				Sn	Sn	11 05 45.1	-14
	comp=N,0.3nm,0.3s,SNR=4.0						

*IDC **13** 11:07:37.5±1.1, 54°.04N×161°.84E, h0km, mb3.3/5, mb1 3.6/6, mb1mx3.4/28, mbtmp3.3/6, ML2.9/1, Error ellipse: s-maj=53.4km s-min=18.8km az=159.0*
*MOS **13** 11:07:37.6±1.4, 54°.40N×161°.50E, h11km, mb3.9/2, Error ellipse: s-maj=30.1km s-min=14.8km az=60.4*
*KRSC **13** 11:07:37.7±0.5, 53°.67N×161°.87E, h11km±10km, ML3.9*
*ISCJB **13** 11:07:38.5±0.8, 53°.67N±0°.02×161°.94E±0°.05, h20km±7km, mb3.4/7, Error ellipse: s-maj=6.1km s-min=2.7km az=30.2*
ISC 13 11:07:37.4±1.9**, 53°.67N**±0°.04×**161°.92E**±0°.05**, h4**km±12km**, n52, σ1s.20**/82**, mb3.4**/7**, 3C-1D, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.89	353	P	Pg	11 07 54.2	-0.3
MKZ				i S	Sg	11 08 05.7	-0.3
SPN	Mys Shipunski	1.27	244	P	Pn	11 08 01.5	-0.4
SPN				i S	Sb	11 08 18.3	-0.2
KII	Karymskiy	1.50	285	eP	Pn	11 08 03.9	-1.3
KII				i S	Sn	11 08 22.7	-2.6
NLC	Nalytchevo	1.62	253	eP	Pn	11 08 05.2	-1.4
NLC				i S	Sn	11 08 25.0	-2.9
SDLR	Sedlovina	1.85	259	eP	Pn	11 08 09.9	-0.1
SDLR				i S	Sn	11 08 33.2	-0.7
SMAR	Somma	1.91	259	eP	Pn	11 08 10.3	-0.5
SMAR				i S	Sn	11 08 33.3	-2.1
UGLR	Uglovaya	1.91	257	eP	Pn	11 08 09.8	-0.9
UGLR				i S	Sn	11 08 33.8	-1.4
TUMR	Tumrok	1.92	328	eP	Pn	11 08 10.2	-0.7
TUMR				i S	Sn	11 08 33.7	-1.7
KRER	Koryakskii	1.93	260	P	Pn	11 08 10.7	-0.4
KRER				i S	Sn	11 08 34.9	-1.0
AVH	Avacha	1.94	259	eP	Pn	11 08 10.8	-0.4
AVH				i S	Sn	11 08 35.2	-0.9
KOK	Koryaka	2.00	260	eP	Pn	11 08 11.4	-0.6
KOK				i S	Sn	11 08 35.9	-1.5
PET	Petropavlovsk	2.06	253	ePN	Pn	11 08 12.4	-0.3
PET				pmax	pmax		
	comp=Z,25nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
PET	Petropavlovsk	2.06	253	eP	Pn	11 08 12.2	-0.5
PET				i S	Sn	11 08 37.3	-1.5
KMNR	Kamenistaya	2.30	336	eP	Pn	11 08 16.7	+0.5
KMNR				i S	Sn	11 08 45.5	+0.5
GNL	Ganaly	2.36	272	eP	Pn	11 08 17.1	+0.1
GNL				i S	Sn	11 08 46.6	+0.1
BZGR	Bezymyannyi-Gr	2.38	343	eP	Pn	11 08 17.6	+0.4
BZGR				i S	Sn	11 08 46.7	-0.2
RUS	Russkaya	2.40	240	eP	Pn	11 08 17.7	+0.3
RUS				i S	Sn	11 08 47.2	0.0
BZMR	Bezymyannaya	2.41	341	eP	Pn	11 08 18.8	+1.1
BZMR				i S	Sn	11 08 49.0	+1.3
ZLN	Zelenaya	2.44	345	eP	Pn	11 08 19.3	+1.3
ZLN				i S	Sn	11 08 49.4	+1.1
BZWR	Bezymyannyi-We	2.44	341	eP	Pn	11 08 18.5	+0.4
KIRR	Kirishev	2.46	339	eP	Pn	11 08 19.0	+0.6
KIRR				i S	Sn	11 08 49.2	+0.3
KPT	Kopyto	2.50	338	eP	Pn	11 08 20.2	+1.4
KPT				i S	Sn	11 08 50.9	+1.1
LGNR	Loginova	2.52	344	eP	Pn	11 08 20.2	+0.9
LGNR				i S	Sn	11 08 51.0	+0.5
CIRR	Tsirk	2.54	345	eP	Pn	11 08 20.9	+1.4
CIRR				i S	Sn	11 08 52.0	+1.1
MTVR	Mutnovka	2.55	244	eP	Pn	11 08 20.8	+1.2
MTVR				i S	Sn	11 08 51.9	+0.8
GRL	Gorelyy	2.57	246	eP	Pn	11 08 21.1	+1.2
GRL				i S	Sn	11 08 52.6	+0.9
PETK	Petropavlovsk-	2.59	259	PN	Pn	11 08 20.4	+0.4
PETK						11 08 50.6	
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				smax	smax		
	comp=N,4.0nm,0.3s						
PETK	Petropavlovsk-	2.59	259	Pn	Pn	11 08 20.4	+0.4
	comp=N,2.3nm,0.3s,baz=74,slow=16,SNR=42						
PETK				Sn	Sn	11 08 50.6	-1.2
	comp=N,3.8nm,0.3s,baz=88,slow=18,SNR=6.2						
KOZ	Kozyrevsk	2.67	335	eP	Pn	11 08 21.4	+0.3
KOZ				i S	Sn	11 08 52.9	-0.9
KRSR	Krestovskiy	2.67	344	eP	Pn	11 08 21.9	+0.7
KRSR				i S	Sn	11 08 53.8	-0.1
KLY	Klyuchi	2.74	345	eP	Pn	11 08 21.9	-0.2
KLY				i S	Sn	11 08 53.9	-1.8
ASAK	Asacha	2.75	244	eP	Pn	11 08 23.8	+1.5
ASAK				i S	Sn	11 08 57.1	+1.2
BKI	Bering	2.82	55	eP	Pn	11 08 21.7	-1.5
BKI				i S	Sn	11 08 53.4	-4.2
ESO	Esso	2.92	322	eP	Pn	11 08 24.6	0.0
ESO				i S	Sn	11 08 58.4	-1.8
SMKR	Semkarok	2.93	355	eP	Pn	11 08 25.6	+0.9
SMKR				i S	Sn	11 08 59.9	-0.4
BDR	Baidarnaya	2.93	352	eP	Pn	11 08 25.7	+0.9
BDR				i S	Sn	11 09 00.3	-0.1
SRDR	Sredinnyy	2.94	335	eP	Pn	11 08 25.4	+0.6
SRDR				i S	Sn	11 08 59.6	-0.9
APC	Apacha	2.95	257	eP	Pn	11 08 26.6	+1.6
APC				i S	Sn	11 09 02.0	+1.2
SRKR	Sorokina	3.02	352	eP	Pn	11 08 26.8	+0.8
SRKR				i S	Sn	11 09 02.2	-0.4
MIPR	Malaya Ipel'ka	3.42	248	eP	Pn	11 08 33.1	+1.7
SKR	Severo-Kuril's	4.66	232	ePN	Pb	11 08 57.6	-1.9
ERM	Erimo	17.10	235	⇑eP	P	11 11 39.9	+1.0
TIXI	Tiksi	23.03	334	⇓eP	P	11 12 34.5	-8.5
TIXI				pmax	pmax		
	comp=Z,5.0nm,2.5s						
MJA0	Matsu Arr-Jizo	23.75	233	eP	P	11 12 58.9	+8.3
MJAR	Matsushiro Arr	23.77	233	P	P	11 12 53.7	+3.0
	comp=Z,0.6nm,0.6s,baz=22,slow=11,SNR=3.5						
ILAR	Eielson Array	27.63	46	P	P	11 13 24.3	-1.3
	comp=Z,0.4nm,0.8s,baz=254,slow=8.2,SNR=7.2						
KURK	Kurchatov	48.35	302	⇑eP	P	11 16 16.5	-3.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	48.88	296	P	P	11 16 23.3	-0.6
MKAR	Makanchi Array	48.88	296	P	P	11 16 23.3	-0.6
	comp=Z,0.2nm,0.5s,baz=63,slow=9.0,SNR=2.9						
BRVK	Borovoye	50.91	309	⇑eP	P	11 16 36.1	-3.1
NVAR	Mina Array Bea	54.52	72	P	P	11 17 07.2	+0.8
	comp=Z,0.5nm,0.6s,baz=296,slow=7.2,SNR=6.9						
TXAR	Lajitas Array	69.41	68	P	P	11 18 46.0	-0.5
	comp=Z,0.1nm,0.5s,baz=293,slow=4.6,SNR=3.4						

*ISCJB **13** 11:16:36.5±0.6, 25°.32N±0°.04×124°.39E±0°.07, h6km, mb3.4/7, MS2.8/1, Error ellipse: s-maj=9.1km s-min=5.7km az=161.0*
*JMA **13** 11:16:37.1±0.2, 25°.31N×124°.38E, h6km, M3.1*
*IDC **13** 11:16:48.1±5.7, 25°.22N×124°.21E, h92km±53km, mb3.3/7, mb1 3.5/8, mb1mx3.3/26, mbtmp3.3/8, ML3.1/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/16, Error ellipse: s-maj=35.1km s-min=22.2km az=71.0*
ISC 13 11:16:37.8±0.8**, 25°.28N**±0°.06×**124°.39E**±0°.06**, h6**km**, n14, σ0s.70**/14**, mb3.6**/7**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTJ	Tarama	0.70	156	P	Pg	11 16 51.2	0.0
JTJ				S	Sg	11 17 01.2	+0.9
JMJ	Miyako jima 2	0.94	120	eS	Sg	11 17 07.7	-0.4
JIJ	Ishigaki jima	0.94	194	P	Pg	11 16 55.2	-0.7
JIJ				S	Sg	11 17 08.3	+0.1
JOGS	Gusukube	1.06	119	P	Pg	11 16 57.6	-0.5
JKRS	Kuro-shima	1.10	199	P	Pg	11 16 58.5	-0.4
KSRS	Korea Array	12.50	13	P	Pn	11 19 43.5	+7.3
	0.1nm,0.3s,baz=189,slow=13,SNR=7.7						
ASAJ	Asahikawa	23.93	34	LR	LR	11 31 02.8	
	comp=Z,32nm,18.1s,baz=128,slow=36						
SONM	Songino Array	26.62	332	P	P	11 22 17.7	+0.6
	1.1nm,0.8s,baz=149,slow=9.7,SNR=7.2						
MKAR	Makanchi Array	39.63	314	P	P	11 24 10.6	+0.3
	0.5nm,0.8s,baz=97,slow=9.9,SNR=4.1						
ZALV	Zalesovo Beam	40.97	325	P	P	11 24 20.7	-0.5
	0.7nm,0.6s,baz=98,slow=11,SNR=4.4						
WRA	Warramunga Arr	45.98	167	P	P	11 25 01.9	-0.1
	0.5nm,0.8s,baz=348,slow=7.4,SNR=4.2						
ILAR	Eielson Array	66.89	28	P	P	11 27 31.6	+1.1
	0.2nm,0.8s,baz=282,slow=4.5,SNR=3.7						
YKA	Yellowknife Ar	80.81	24	P	P	11 28 50.8	-1.3
	0.2nm,0.8s,baz=305,slow=5.3,SNR=5.3						
NVAR	Mina Array Bea	93.62	44	P	P	11 29 56.0	+0.4
	0.2nm,0.7s,baz=292,slow=5.7,SNR=3.8						

*SOF **13** 11:34:46.8, 41°.33N×22°.70E, h7km, MD2.7*
*SKO **13** 11:34:46.5, 41°.29N×22°.68E, h15km, M1.4, ML1.9*
*CSEM **13** 11:34:47.2±0.5, 41°.36N×22°.64E, h5km, ML2.0, Error ellipse: s-maj=8.2km s-min=6.2km az=36.0*
*BEO **13** 11:34:49.0±1.2, 41°.36N×22°.58E, h0km, ML2.0/4*
ISC 13 11:34:47.4±1.2**, 41°.34N**±0°.05×**22°.67E**±0°.04**, h4**km±11km**, n15, σ0s.48**/22**, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.08	254	i Pg	Pg	11 34 49.0	0.0
VAY				eSg	Sg	11 34 50.8	+0.6
VAY				eLg	Lg	11 34 50.9	
	comp=N,968nm,0.2s						
VAY				eLg	Lg	11 34 50.9	
	comp=E,503nm,0.2s						
KKB	Krupnik	0.61	30	i Pg	Pg	11 34 59.1	+0.1
KKB	Krupnik	0.61	30	i Pg	Pg	11 34 59.1	+0.1
MMB	Musomiste	0.83	72	i Pg	Pg	11 35 03.1	-0.2
MMB	Musomiste	0.83	72	i Pg	Pg	11 35 03.1	-0.2
BIA	Bitola	1.07	253	ePg	Pg	11 35 07.7	-0.2
VTS	Vitosha	1.31	18	i P	Pg	11 35 12.8	+0.3
VTS	Vitosha	1.31	18	ePg	Pg	11 35 12.9	+0.4
VTS				eSg	Sn	11 35 30.6	0.0
VTS	Vitosha	1.31	18	ePg	Pg	11 35 12.9	+0.4
VTS				eSg	Sn	11 35 30.6	0.0
BARS	Barje	1.60	337	ePg	Pb	11 35 17.0	-0.6
BARS				eSg	Sg	11 35 38.5	-0.4
BARS	Barje	1.60	337	ePg	Pb	11 35 17.0	-0.6
BARS				eSg	Sg	11 35 38.5	-0.4
PGB	Panagyurishte	1.64	42	P	Pb	11 35 17.5	-0.7
PGB	Panagyurishte	1.64	42	P	Pb	11 35 17.5	-0.7
ZAPS	Zavoj	1.93	359	ePg	Pg	11 35 24.1	-0.2
ZAPS				eSg	Sg	11 35 49.3	-0.1
MPEP	Malo Peshtene	2.16	21	P	Pn	11 35 25.2	+1.1
MPEP				i Pg	Pg	11 35 28.6	-0.2

TRN 13 11:37:13.6, 15°.29N×61°.08W, h115km, MD3.6, M2.6(FDF)**, 7C, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FDF	Fort de France	0.56	187	eP	Pn	11 37 32.8	+1.2
FDF	Fort de France	0.56	187	⇑eP	Pn	11 37 33.0	+1.5
FDF				eS	Sn	11 37 46.9	+2.0
FDF				⇑eS		11 37 46.9	
MGG	Marie-Galante	0.67	340	⇑iP	Pn	11 37 33.5	+1.2
MVM	Montagne Vaucl	0.75	167	eP	Pn	11 37 34.2	+1.2
MVM				eS	Sn	11 37 49.1	+1.6
TBG	Guadaloupe-3	0.78	315	⇑iP	Pn	11 37 34.3	+1.1
TBG	Guadaloupe-3	0.78	315	eP	Pn	11 37 34.3	+1.1
DOG	Dongo Capester	0.90	325	⇑iP	Pn	11 37 35.4	+1.0
PHG	Guadaloupe-2	0.90	323	⇑iP	Pn	11 37 35.5	+1.1
SCG	Saint Claude	0.94	322	eP	Pn	11 37 35.9	+1.2
BCG	Bois Riant Cap	0.95	326	eP	Pn	11 37 35.7	+0.9
LZG	Guadaloupe-1	1.08	321	eP	Pn	11 37 37.4	+1.4
SEG	Port Louis	1.18	340	⇑iP	Pn	11 37 38.2	+1.1
SLW	Petit Monier	1.27	174	eP	Pn	11 37 39.1	+0.9
SLW	Petit Monier	1.27	174	eP	Pn	11 37 39.2	+1.0
SLW	Petit Monier	1.27	174	eP	Pn	11 37 39.3	+1.1
SLW				eS	Sn	11 37 57.5	+0.7
SLW				eS		11 37 58.4	
SLB	Belfond	1.46	179	eP	Pn	11 37 41.9	+1.5
SLB				eS	Sn	11 38 01.7	+1.1
SLDE	Delcer	1.48	179	eP	Pn	11 37 42.0	+1.4
SLDE				eS	Sn	11 38 02.9	+1.9
MCLT	Moule a Chique	1.58	175	eP	Pn	11 37 43.5	+1.8
MCLT				eS	Sn	11 38 04.0	+0.9

*SKO **13** 12:29:07.4, 41°.28N×22°.68E, h15km, M1.3, ML1.7*
*ISCJB **13** 12:29:07.8±0.4, 41°.34N±0°.02×22°.68E±0°.03, h8km±3km, Error ellipse: s-maj=3.5km s-min=3.5km az=17.4*
*ATH **13** 12:29:08.1, 41°.34N×22°.67E, h15km±2km, MD3.0/8*
*THE **13** 12:29:08.2, 41°.33N×22°.68E, h6km±1km, ML2.5/7, Error ellipse: s-maj=1.9km s-min=0.6km az=203.0*
*CSEM **13** 12:29:08.0±0.2, 41°.33N×22°.68E, h5km, ML2.0, Error ellipse: s-maj=3.7km s-min=3.2km az=83.0*
*BEO **13** 12:29:10.0±0.4, 41°.36N×22°.60E, h0km, ML2.0/5*
ISC 13 12:29:08.5±0.9**, 41°.34N**±0°.02×**22°.68E**±0°.02**, h5**km±7km**, n46, σ0s.65**/77**, 2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.08	261	P	Pg	12 29 09.8	-0.5
VAY				S	Sg	12 29 11.9	+0.3
VAY	Valandovo	0.08	261	⇓iPg	Pg	12 29 10.0	-0.3
VAY				eSg	Sg	12 29 11.8	+0.3
VAY	Valandovo	0.08	261	ePg	Pg	12 29 10.1	-0.3
VAY				i Sg	Sg	12 29 11.8	+0.3
VAY				eLg	Lg	12 29 11.9	
	comp=E,420nm,0.2s						
VAY				eLg	Lg	12 29 12.0	
	comp=N,558nm,0.2s						
VAY	Valandovo	0.08	261	⇓iPg	Pg	12 29 10.0	-0.3
VAY				eSg	Sg	12 29 11.8	+0.3
KNT	Kendrikon	0.24	136	P	Pg	12 29 13.3	+0.1
KNT				S	Sg	12 29 16.6	+0.3
KNT	Kendrikon	0.24	136	P	Pg	12 29 13.3	+0.1
KNT				S	Sg	12 29 16.6	+0.3
GRG	Griva	0.43	209	P	Pg	12 29 16.8	0.0
GRG				S	Sg	12 29 23.2	+0.8
GRG	Griva	0.43	209	ePB	Pg	12 29 16.9	+0.1
GRG				eSB	Sg	12 29 22.6	+0.2
GRG	Griva	0.43	209	P	Pg	12 29 16.8	0.0
GRG				eSb	Sg	12 29 22.6	+0.2
GRG				S	Sg	12 29 23.2	+0.8
SOH	Sokhos	0.72	135	P	Pg	12 29 21.4	-1.0
SOH				S	Sg	12 29 32.4	+0.6
SOH	Sokhos	0.72	135	ePB	Pg	12 29 21.6	-0.8
SOH				eSN	Sg	12 29 32.6	+0.8
SOH	Sokhos	0.72	135	ePb	Pg	12 29 21.6	-0.8
SOH				S	Sg	12 29 32.4	+0.6
SRS	Serrai	0.72	107	P	Pg	12 29 21.6	-0.8
SRS	Serrai	0.72	107	P	Pg	12 29 21.6	-0.8
THE	Thessaloniki	0.73	163	P	Pg	12 29 22.2	-0.4
THE				S	Sg	12 29 31.9	-0.2
THE	Thessaloniki	0.73	163	P	Pg	12 29 22.2	-0.4
THE				S	Sg	12 29 31.9	-0.2
HORT	Hortiatis	0.80	156	P	Pg	12 29 23.5	-0.4
HORT				S	Sg	12 29 35.2	+0.9
HORT	Hortiatis	0.80	156	P	Pg	12 29 23.5	-0.4
HORT				S	Sg	12 29 35.2	+0.9
NVR	Nevrokopi	0.89	89	P	Pg	12 29 24.9	-0.7
NVR				S	Sg	12 29 37.6	+0.4
NVR	Nevrokopi	0.89	89	ePN	Pg	12 29 25.0	-0.7
NVR				eSN	Sg	12 29 37.5	+0.4
NVR	Nevrokopi	0.89	89	P	Pg	12 29 24.9	-0.7
NVR				S	Sg	12 29 37.6	+0.4
BIA	Bitola	1.07	253	ePg	Pg	12 29 28.1	-0.8
BIA				eSg	Sg	12 29 43.1	+0.3
PLG	Polygyros	1.12	148	P	Pg	12 29 29.1	-0.9
PLG				S	Sb	12 29 45.2	-0.1
PLG	Polygyros	1.12	148	ePN	Pg	12 29 29.4	-0.6
PLG				eSN	Sg	12 29 44.5	-0.1
PLG	Polygyros	1.12	148	P	Pg	12 29 29.1	-0.9
PLG	Polygyros	1.12	148	ePn	Pg	12 29 29.4	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PLG				eSn	Sg	12 29 44.5	-0.1
PLG				S	Sb	12 29 45.2	-0.1
FNA	Florina	1.13	241	P	Pg	12 29 29.5	-0.6
FNA				S	Sg	12 29 44.8	+0.1
FNA	Florina	1.13	241	ePN	Pg	12 29 29.5	-0.6
FNA	Florina	1.13	241	P	Pg	12 29 29.5	-0.6
FNA				S	Sg	12 29 44.8	+0.1
KZN	Kozani	1.24	214	ePN	Pb	12 29 32.2	-0.1
KZN	Kozani	1.24	214	ePn	Pb	12 29 32.2	-0.1
LIT	Litokhoron	1.24	187	ePN	Pb	12 29 31.4	-1.0
LIT	Litokhoron	1.24	187	ePn	Pb	12 29 31.4	-1.0
VTS	Vitosha	1.32	17	P	Pn	12 29 32.9	-0.8
VTS				S	Sb	12 29 51.0	0.0
VTS	Vitosha	1.32	17	ePg	Pn	12 29 33.6	-0.1
VTS	Vitosha	1.32	17	P	Pn	12 29 32.9	-0.8
VTS	Vitosha	1.32	17	ePg	Pn	12 29 33.6	-0.1
VTS				S	Sb	12 29 51.0	0.0
BARS	Barje	1.61	337	ePg	Pn	12 29 37.6	0.0
BARS				eSg	Sb	12 29 59.7	+0.3
BARS	Barje	1.61	337	ePg	Pn	12 29 37.6	0.0
BARS				eSg	Sb	12 29 59.7	+0.3
PLD	Plovdiv	1.70	62	eSg	Sg	12 30 05.3	+2.2
THL	Klokotos Trika	1.84	196	ePN	Pn	12 29 40.8	+0.2
THL	Klokotos Trika	1.84	196	ePn	Pn	12 29 40.8	+0.2
ZAPS	Zavoj	1.94	359	ePn	Pb	12 29 43.7	-0.6
SMTH	Samothraki Isl	2.33	111	ePN	Pn	12 29 48.6	+1.2
SMTH	Samothraki Isl	2.33	111	ePn	Pn	12 29 48.6	+1.2
BBLS	Lazići	3.50	317	ePn	Pn	12 30 05.7	+2.2

IDC 13 12:40:49.8±4.7, 20°.58S×178°.33W, h533km±47km, mb3.3/10, mb1 3.5/11, mb1mx3.2/21, mbtmp3.3/11, Error ellipse: s-maj=53.2km s-min=21.3km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.27	261	P	P	12 43 52.1	0.0
	0.2nm,0.3s,baz=121,slow=12,SNR=2.9						
CTA	Charters Tower	33.18	265	P	P	12 46 42.9	+0.4
	5.8nm,0.5s,baz=92,slow=10.0,SNR=18						
STKA	Stephens Creek	37.48	244	P	P	12 47 18.1	0.0
	2.7nm,0.8s,baz=72,slow=9.6,SNR=5.2						
ASAR	Alice Springs	44.20	257	P	P	12 48 11.5	-0.3
	5.6nm,0.5s,baz=94,slow=7.9,SNR=96						
ASAR				PcP	PcP	12 49 44.6	-0.4
	0.8nm,0.5s,baz=101,slow=3.6,SNR=7.8						
WRA	Warramunga Arr	44.29	262	P	P	12 48 11.6	-0.9
	2.7nm,0.3s,baz=96,slow=7.4,SNR=75						
FITZ	Fitzroy Crossi	52.71	263	P	P	12 49 15.1	-0.1
	1.3nm,0.5s,baz=152,slow=6.0,SNR=11						
PETK	Petropavlovsk-	76.27	345	P	P	12 51 43.3	-0.1
	1.8nm,0.7s,baz=134,slow=10,SNR=3.8						
NVAR	Mina Array Bea	81.29	43	P	P	12 52 11.6	+0.8
	0.3nm,0.6s,baz=222,slow=11,SNR=3.9						
ILAR	Eielson Array	88.46	13	P	P	12 52 44.0	-0.8
	0.4nm,0.4s,baz=216,slow=5.4,SNR=12						
PDAR	Pinedale Array	89.23	43	P	P	12 52 49.1	-0.1
	0.4nm,0.6s,baz=283,slow=4.5,SNR=3.0						
CMAR	Chiang Mai Arr	89.85	290	P	P	12 52 54.0	+1.7
	0.2nm,0.3s,baz=90,slow=1.8,SNR=4.2						
ARCES	ARCESS Array B	128.94	349	PKP	PKPdf	12 58 55.3	-1.0
	1.2nm,0.9s,baz=28,slow=2.1,SNR=4.7						
AKASG	Malin Array Be	142.93	331	PKhKP	PKPpre	12 59 19.1	
	3.7nm,0.5s,baz=41,slow=4.2,SNR=18						
BRTR	Keskin Array B	146.66	312	PKPbc	PKPbc	12 59 31.5	-0.7
	1.1nm,0.5s,baz=142,slow=5.1,SNR=7.1						
GERES	GERESS Array B	150.19	344	PKPbc	PKPbc	12 59 40.4	-0.3
	0.3nm,0.5s,baz=54,slow=2.3,SNR=4.9						
GERES				PKPab	PKPab	12 59 48.6	-0.4
	0.3nm,0.5s,baz=12,slow=5.3,SNR=2.6						

IDC 13 12:41:29.9±1.2, 3°.94N×126°.89E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.5/24, mbtmp3.6/6, Error ellipse: s-maj=94.8km s-min=18.3km az=72.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BUKP	Musuan	4.31	335	eP	Pn	12 42 40.3	+3.4
FITZ	Fitzroy Crossi	21.94	183	P	P	12 46 25.1	-0.2
	1.4nm,0.9s,baz=13,slow=10,SNR=6.0						
WRA	Warramunga Arr	24.84	163	P	P	12 46 53.6	-0.6
	1.0nm,0.6s,baz=343,slow=11,SNR=21						
ASAR	Alice Springs	28.28	166	P	P	12 47 25.1	-0.1
	0.3nm,0.4s,baz=346,slow=9.8,SNR=8.1						
STKA	Stephens Creek	38.27	160	P	P	12 48 53.0	+0.9
	2.6nm,0.6s,baz=355,slow=11,SNR=3.5						
SONM	Songino Array	47.15	341	P	P	12 50 03.8	-0.4
	0.4nm,0.6s,baz=156,slow=8.7,SNR=3.0						
MKAR	Makanchi Array	57.48	325	P	P	12 51 21.1	+0.2
	0.3nm,0.4s,baz=123,slow=6.8,SNR=7.3						

GUC 13 12:52:30.4±0.4, 30°.34S×71°.38W, h6km±5km, MD3.6, ML3.4, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMCH	Combarbala	0.89	158	⇑iP	Pg	12 52 47.5	-0.2
CMCH				i S	Sb	12 53 00.6	-0.1
CMCH				AML	AML	12 53 02.7	
	comp=E,4µm,0.7s						
CHNG	Los Chungos	1.54	184	⇑iP	Pn	12 52 57.6	-0.7
CHNG				i S	Sn	12 53 18.1	-0.5
ROCH	El Roble	2.64	173	i P	Pn	12 53 15.2	+1.4
ROCH				eS	Sb	12 53 49.4	-1.9
ROCH				AML	AML	12 54 03.2	
	comp=N,112nm,0.3s						
PEL	Peldehue	2.85	168	⇑iP	Pn	12 53 17.6	+1.1
PEL				i S	Sn	12 53 53.2	+1.9
PEL				AML	AML	12 54 04.3	
	comp=E,143nm,0.8s						
LMEL	Las Melosas	3.63	164	eP	Pn	12 53 28.6	+1.2
LMEL				eS	Sn	12 54 13.0	+2.2
LMEL				AML	AML	12 54 25.9	
	comp=N,43nm,0.2s						

*ISCJB **13** 13:10:48.7±0.8, 4°.82N±0°.06×125°.8E±0°.2, h100km, mb3.3/5, Error ellipse: s-maj=23.8km s-min=7.3km az=169.4*

*IDC **13** 13:10:48.2±4.3, 5°.27N×126°.30E, h112km±38km, mb3.2/5, mb1 3.4/6, mb1mx3.2/25, mbtmp3.3/6, Error ellipse: s-maj=57.2km s-min=15.4km az=67.0*

*MAN **13** 13:10:49, 4°.87N×125°.80E, h57km, mb4.9, ML3.9, MS3.9*

ISC 13 13:10:49.0±1.0, 4°.86N±0°.09×125°.8E±0°.2, h100km, n13, σ1s86/13, mb3.4/5, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MATI	Mati	2.12	12	eP	Pn	13 11 23.5	+0.4
MATI				eS	Sn	13 11 59.6	+10
DAV	Davao City (W)	2.21	354	S	Sn	13 11 53.1	+1.9
	64nm,0.3s,baz=229,slow=20,SNR=3.5						
CTBH	Cotabato--PC H	2.81	327	⇑iP	Pn	13 11 32.9	+0.6
BUKP	Musuan	3.09	346	eP	Pn	13 11 37.4	+1.4
BUKP				eS	Sn	13 12 13.2	+1.0
PAGZ	Pagadian	3.82	321	eP	Pn	13 11 47.7	+1.9
TGY	Tagaytay City	10.36	333	P	Pn	13 13 12.2	-2.5
	56nm,0.3s,baz=153,slow=18,SNR=4.1						
KAPI	Kappang	11.52	212	P	Pn	13 13 36.3	+5.9
	0.6nm,0.3s,baz=59,slow=18,SNR=3.7						
FITZ	Fitzroy Crossi	22.82	180	P	P	13 15 45.5	+1.8
	1.5nm,0.8s,baz=9.6,slow=9.9,SNR=11						
WRA	Warramunga Arr	26.04	161	P	P	13 16 14.2	+1.1
	0.2nm,0.5s,baz=345,slow=10,SNR=9.7						
ASAR	Alice Springs	29.44	165	P	P	13 16 43.8	+0.4
	0.3nm,0.5s,baz=340,slow=7.2,SNR=3.3						
CMAR	Chiang Mai Arr	29.51	299	P	P	13 16 44.9	+0.8
	0.7nm,0.7s,baz=104,slow=6.7,SNR=5.0						
MKAR	Makanchi Array	56.10	325	P	P	13 20 15.6	-2.4
	0.3nm,0.3s,baz=116,slow=8.0,SNR=10						
TORD	Torodi Ar. Bea	121.69	289	PKP	PKPdf	13 29 29.7	-2.5
	0.6nm,1.0s,baz=90,slow=2.9,SNR=3.1						

IDC 13 13:37:45.0±18.0, 23°.85S×175°.31W, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.7/21, mbtmp3.8/5, Error ellipse: s-maj=332.7km s-min=137.2km az=84.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CTA	Charters Tower	35.77	268	P	P	13 44 46.4	+0.3
	1.2nm,0.4s,baz=102,slow=9.3,SNR=2.8						
STKA	Stephens Creek	38.73	248	P	P	13 45 11.2	+0.2
	4.0nm,1.1s,baz=97,slow=8.1,SNR=2.8						
ASAR	Alice Springs	46.27	259	P	P	13 46 11.9	-0.7
	0.2nm,0.3s,baz=95,slow=6.9,SNR=9.4						
WRA	Warramunga Arr	46.69	265	P	P	13 46 15.2	-0.8
	0.4nm,0.3s,baz=104,slow=8.1,SNR=18						
FITZ	Fitzroy Crossi	55.11	264	P	P	13 47 20.0	+0.6
	1.4nm,0.8s,baz=113,slow=7.7,SNR=3.0						

IDC 13 13:50:28.2±4.0, 21°.11S×68°.67W, h121km±39km, mb3.6/4, mb1 3.6/5, mb1mx3.3/19, mbtmp3.5/5, Error ellipse: s-maj=51.3km s-min=31.4km az=125.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LPAZ	La Paz	4.83	6	P	Pn	13 51 39.4	-0.3
	1.1nm,0.3s,baz=195,slow=8.8,SNR=17						
BDFB	Brasilia	20.34	78	P	P	13 54 55.7	+0.5
	3.0nm,0.5s,baz=260,slow=12,SNR=3.9						
QSPA	South Pole Qui	69.08	180	P	P	14 01 20.8	0.0
	2.1nm,1.2s,baz=124,slow=3.6,SNR=4.2						
TORD	Torodi Ar. Bea	77.02	70	P	P	14 02 07.7	-0.6
	0.3nm,0.3s,baz=255,slow=5.2,SNR=13						
TORD				pP	pP	14 02 35.7	-3.1
	0.6nm,0.8s,baz=237,slow=4.8,SNR=3.0						
TORD				sP	sP	14 02 47.0	-4.7
	1.0nm,0.8s,baz=246,slow=5.4,SNR=4.3						
TSUM	Tsumeb	79.94	107	P	P	14 02 24.9	+0.4
	0.8nm,0.8s,baz=266,slow=9.4,SNR=4.2						
MKAR	Makanchi Array	145.19	36	PKPbc	PKPbc	14 09 51.3	0.0
	0.7nm,0.8s,baz=316,slow=4.0,SNR=4.6						

*ISCJB **13** 13:51:36.9±0.5, 31°.24N±0°.06×130°.50E±0°.08, h151km, mb3.3/4, Error ellipse: s-maj=10.4km s-min=7.1km az=27.0*

*IDC **13** 13:51:36.7±1.5, 31°.22N×130°.51E, h145km±22km, mb3.2/4, mb1 3.4/6, mb1mx3.1/28, mbtmp3.1/6, MS2.8/1, Ms1 2.8/1, ms1mx2.0/12, Error ellipse: s-maj=37.1km s-min=21.3km az=121.0*

*JMA **13** 13:51:38.3±0.1, 31°.30N×130°.47E, h149km±1km, M3.4*

ISC 13 13:51:37.4±0.9, 31°.28N±0°.06×130°.45E±0°.08, h151km, n15, σ0s93/20, mb3.3/4, Kyushu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JSU	Suzuyama	0.23	1	P	Pn	13 51 58.7	+0.8
JTSR	Tashiro 2	0.42	105	P	Pn	13 51 59.2	+0.7
JTSR				eS	Sn	13 52 14.6	0.0
JSJ	Shimokoshiki	0.75	303	P	Pn	13 52 00.9	+0.6
JSJ				eS	Sn	13 52 18.5	+0.7
JTN	Tanegashima 3	0.77	144	P	Pn	13 52 01.4	+0.9
JTN				eS	Sn	13 52 18.9	+0.8
JTZ	Takazaki	0.83	41	P	Pn	13 52 01.4	+0.5
JIU2	Izumi 2	1.30	14	P	Pn	13 52 05.5	+0.5
JNU	Nakatsue	1.88	11	P	Pn	13 52 11.3	+0.2
	28nm,0.3s,baz=197,slow=7.0,SNR=541						
JNU				S	Sn	13 52 36.6	-0.6
	8.3nm,0.3s,baz=182,slow=18,SNR=4.0						
KSRS	Korea Array	6.51	342	P	Pn	13 53 12.1	+1.3
	0.3nm,0.3s,baz=169,slow=14,SNR=12						
MAT	Matsushiro	8.31	49	P	Pn	13 53 37.5	+2.6
MAT				S	Sn	13 55 07.0	-0.4
MJAR	Matsushiro Arr	8.31	49	P	Pn	13 53 35.4	+0.4
	1.8nm,0.3s,baz=244,slow=14,SNR=41						
MJAR				S	Sn	13 55 06.9	-0.6
	0.5nm,0.3s,baz=238,slow=24,SNR=6.9						
ASAJ	Asahikawa	16.00	33	LR	LR	14 00 33.0	
	comp=Z,32nm,18.3s,baz=107,slow=34						
FITZ	Fitzroy Crossi	49.31	186	P	P	14 00 10.5	-0.7
	1.1nm,0.6s,baz=350,slow=5.3,SNR=6.6						
WRA	Warramunga Arr	51.06	175	P	P	14 00 23.4	-0.9
	0.2nm,0.3s,baz=354,slow=8.0,SNR=6.7						
ASAR	Alice Springs	54.73	176	P	P	14 00 50.7	-0.5
	0.2nm,0.3s,baz=359,slow=6.0,SNR=13						
NVAR	Mina Array Bea	85.64	47	P	P	14 03 59.4	0.0
	0.2nm,0.5s,baz=316,slow=6.3,SNR=3.1						

IDC 13 13:57:35.1±2.5, 18°.83N×39°.29E, h0km, mb3.8/6, mb1 3.8/6, mb1mx3.5/27, mbtmp3.8/6, MS3.6/4, Ms1 3.7/4, ms1mx2.8/39, Error ellipse: s-maj=70.0km s-min=26.5km az=153.0, Red Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BRTR	Keskin Array B	21.39	348	P	P	14 02 24.3	-0.3
	1.7nm,0.8s,baz=167,slow=14,SNR=6.8						
TORD	Torodi Ar. Bea	36.53	267	P	P	14 04 42.7	-0.1
	1.4nm,1.0s,baz=77,slow=8.1,SNR=6.3						
AAK	Ala-Archa	38.04	44	LR	LR	14 22 15.8	
	comp=Z,38nm,20.9s,baz=198,slow=39						
BVAR	Borovoye Array	41.80	28	P	P	14 05 26.7	+0.4
	0.3nm,0.5s,baz=210,slow=8.3,SNR=3.3						
KURBB	Kurchatov Arra	44.40	35	P	P	14 05 47.2	-0.3
	0.8nm,0.5s,baz=240,slow=8.3,SNR=5.3						
MKAR	Makanchi Array	44.85	42	P	P	14 05 50.5	-0.6
	1.2nm,0.7s,baz=244,slow=8.4,SNR=7.9						
ZALV	Zalesovo Beam	49.39	34	P	P	14 06 26.6	+0.2
	0.5nm,0.6s,baz=243,slow=9.5,SNR=4.2						
CMAR	Chiang Mai Arr	56.28	80	LR	LR	14 32 37.0	
	comp=Z,63nm,18.5s,baz=155,slow=37						
SONM	Songino Array	60.97	45	LR	LR	14 38 52.2	
	comp=Z,62nm,19.6s,baz=248,slow=41						
MJAR	Matsushiro Arr	85.88	53	LR	LR	14 56 24.9	
	comp=Z,40nm,18.7s,baz=225,slow=41						

IDC 13 14:04:19.6±1.8, 18°.83N×39°.29E, h0km, mb3.9/8, mb1 3.9/8, mb1mx3.7/27, mbtmp3.9/8, MS3.1/6, Ms1 3.0/6, ms1mx2.7/36, Error ellipse: s-maj=48.3km s-min=22.9km az=161.0, Red Sea

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EIL	Elat	11.49	341	LR	LR	14 10 50.3	
	comp=Z,30nm,19.8s,baz=270,slow=34						
ASF	Jabal al Asfar	13.46	351	LR	LR	14 12 08.8	
	comp=Z,54nm,19.4s,baz=296,slow=35						
MMAI	Mount Meron Ar	14.55	347	LR	LR	14 12 40.2	
	comp=Z,60nm,19.0s,baz=245,slow=34						
KMBO	Kilima Mbogo	19.93	186	LR	LR	14 16 35.7	
	comp=Z,99nm,18.2s,baz=91,slow=37						
BRTR	Keskin Array B	21.39	348	P	P	14 09 09.0	-0.1
	3.1nm,0.9s,baz=171,slow=12,SNR=13						
GNI	Garni	21.77	11	LR	LR	14 18 13.2	
	comp=Z,59nm,18.7s,baz=241,slow=38						
KBZ	Khabaz	25.01	6	LR	LR	14 19 57.3	
	comp=Z,45nm,18.5s,baz=337,slow=38						
GERES	GERESS Array B	36.37	331	P	P	14 11 25.4	-0.3
	0.5nm,0.7s,baz=111,slow=5.4,SNR=2.2						
TORD	Torodi Ar. Bea	36.52	267	P	P	14 11 27.2	0.0
	1.8nm,0.9s,baz=79,slow=8.0,SNR=12						
BVAR	Borovoye Array	41.80	28	P	P	14 12 11.1	+0.3
	0.5nm,0.7s,baz=224,slow=10,SNR=3.4						
BVAR				PcP	PcP	14 14 06.7	-0.4
	0.2nm,0.4s,baz=252,slow=2.9,SNR=3.9						
KURBB	Kurchatov Arra	44.40	35	P	P	14 12 32.3	+0.3
	0.6nm,0.3s,baz=241,slow=8.4,SNR=5.8						
MKAR	Makanchi Array	44.85	42	P	P	14 12 35.5	-0.1
	2.2nm,0.9s,baz=236,slow=6.6,SNR=14						
ZALV	Zalesovo Beam	49.39	34	P	P	14 13 10.5	-0.5
	2.6nm,0.9s,baz=238,slow=8.2,SNR=7.9						
SONM	Songino Array	60.97	45	P	P	14 14 34.6	-0.3
	0.4nm,0.3s,baz=282,slow=7.1,SNR=4.6						

WEL 13 14:05:12.2±0.3, 45°.21S×167°.30E, h105km±2km, ML3.8/10, 7C-4D, Error ellipse: s-maj=2.4km s-min=1.4km az=90.0, South Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.28	202	⇑PN	Pn	14 05 26.8	-0.5
DCZ				SN	Sn	14 05 38.1	-0.5
DCZ				AML	AML	14 05 38.3	
DCZ				AML	AML	14 05 38.4	
DCZ				AML	AML	14 05 39.2	
MLZ	Mavora Lakes	0.63	103	⇑PN	Pn	14 05 29.2	-0.4
MLZ				SN	Sn	14 05 42.2	-0.3
MLZ				AML	AML	14 05 43.5	
MSZ	Milford Sound	0.70	40	⇑PN	Pn	14 05 30.1	0.0
MSZ				SN	Sn	14 05 43.2	-0.2
MSZ				AML	AML	14 05 44.5	
MSZ				AML	AML	14 05 44.6	
MSZ				AML	AML	14 05 44.6	
WHZ	Wether Hill Ro	0.82	147	⇑PN	Pn	14 05 31.0	-0.1
WHZ				SN	Sn	14 05 45.2	-0.3
WHZ				AML	AML	14 05 46.6	
WKZ	Wanaka	1.27	73	⇑PN	Pn	14 05 36.1	0.0
WKZ				SN	Sn	14 05 53.4	-0.7
WKZ				AML	AML	14 05 55.9	
WKZ				AML	AML	14 05 55.9	
WKZ				AML	AML	14 05 56.2	
EAZ	Earnscleugh	1.42	91	⇓PN	Pn	14 05 37.5	-0.2
EAZ				SN	Sn	14 05 55.5	-1.5
EAZ				AML	AML	14 05 56.4	
EAZ				AML	AML	14 05 56.8	
EAZ				AML	AML	14 05 57.1	
JCZ	Jackson Bay	1.54	43	⇑PN	Pn	14 05 38.7	-0.6
JCZ				SN	Sn	14 05 58.5	-1.5
JCZ				AML	AML	14 06 03.2	
APZ	The Paps	1.69	164	PN	Pn	14 05 40.8	-0.3
TUZ	Tuapeka	1.79	115	⇓PN	Pn	14 05 42.1	-0.2
TUZ				AML	AML	14 06 03.5	
TUZ				AML	AML	14 06 03.6	
SYZ	Scrubby Hill	1.84	137	⇓PN	Pn	14 05 42.8	-0.1
LBZ	Lake Benmore	2.21	69	⇓PN	Pn	14 05 46.0	-1.6
LBZ				AML	AML	14 06 12.7	
LBZ				AML	AML	14 06 13.3	
ODZ	Otahua Downs	2.37	87	⇑PN	Pn	14 05 48.5	-1.3
RPZ	Rata Peaks	3.07	62	SN	Sn	14 06 31.0	-4.2
RPZ				AML	AML	14 06 32.0	
DSZ	Denniston Nort	4.77	45	PN	Pn	14 06 20.2	-1.6

*IDC **13** 14:13:30.9±1.0, 36°.82N×69°.32E, h0km, mb3.5/7, mb1 3.7/12, mb1mx3.6/33, mbtmp3.6/12, ML3.5/5, MS2.9/2, Ms1 2.9/2, ms1mx2.3/31, Error ellipse: s-maj=18.7km s-min=15.4km az=117.0*

*ISCJB **13** 14:13:31.6±0.9, 37°.12N±0°.06×68°.99E±0°.08, h10km, mb3.5/6, MS2.9/2, Error ellipse: s-maj=9.4km s-min=9.2km az=177.8*

*NNC **13** 14:13:35.3±2.4, 37°.18N×68°.98E, h12km±11km, mb3.9, mpv3.4, Error ellipse: s-maj=17.3km s-min=13.6km az=178.0*

ISC 13 14:13:33.0±1.1, 37°.04N±0°.09×69°.02E±0°.10, h10km, n18, σ1s62/21, mb3.6/6, 6C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	6.17	10	⇑Pn	Pn	14 15 04.9	+0.8
	1.0nm,0.5s,baz=189,slow=14,SNR=15						
KK31				⇑Pg	Pb	14 15 24.9	+4.5
	1.8nm,0.6s,baz=196,slow=14,SNR=3.9						
KK31				⇑Sn	Sn	14 16 14.5	-0.2
	5.0nm,0.6s						
KK31				⇓Lg	Lg	14 16 47.2	
	15nm,0.7s,baz=191,slow=30						
AAK	Ala-Archa	7.00	35	Pn	Pn	14 15 17.7	+2.0
	1.7nm,0.3s,baz=193,slow=8.7,SNR=18						
AAK				Sn	Sn	14 16 36.6	+1.3
	0.4nm,0.3s,baz=188,slow=14,SNR=2.3						
AAK				Lg	Lg	14 17 11.8	
	0.7nm,0.3s,baz=345,slow=20,SNR=2.5						
TKM2	Tokmak 2	7.74	39	⇓Pn	Pn	14 15 27.3	+1.4
	2.4nm,0.5s						
TKM2				⇓Lg	Lg	14 17 38.3	
	4.3nm,0.6s						
MKAR	Makanchi Array	13.86	41	Pn	Pn	14 16 49.0	-0.5
	0.0nm,0.3s,baz=224,slow=9.9,SNR=3.4						
AB31	Akbulak array	13.88	334	⇑Pn	Pn	14 16 49.0	-0.6
	1.0nm,0.4s,baz=155,slow=13,SNR=58						
AB31				⇓Sn	Sn	14 19 22.7	-1.1
	0.4nm,0.4s						
KURBB	Kurchatov Arra	15.20	24	Pn	Pn	14 17 04.7	-2.8
	0.1nm,0.3s,baz=214,slow=12,SNR=2.4						
AKTO	Aktyubinsk	15.55	333	⇑Pn	Pn	14 17 11.6	-0.7
	3.0nm,0.7s						
AKTO				⇑Sn	Sn	14 20 03.3	-1.2
	2.9nm,1.1s						
AKTO	Aktyubinsk	15.55	333	Pn	Pn	14 17 12.4	+0.1
	0.3nm,0.3s,baz=135,slow=16,SNR=3.7						
AKTO				Sn	Sn	14 20 02.2	-2.3
	0.2nm,0.3s,baz=189,slow=19,SNR=2.6						
BVAR	Borovoye Array	16.02	3	Pn	Pn	14 17 16.3	-1.9
	0.3nm,0.3s,baz=170,slow=12,SNR=3.4						
ZALV	Zalesovo Beam	20.14	28	P	P	14 18 06.4	-0.6
	1.1nm,0.7s,baz=230,slow=8.6,SNR=5.0						
ASF	Jabal al Asfar	26.81	269	LR	LR	14 32 39.3	
	comp=Z,22nm,19.2s,baz=198,slow=42						
ATD	Arta Tunnel	34.62	230	LR	LR	14 34 30.0	
	comp=Z,25nm,19.1s,baz=37,slow=36						
HFS	Hagfors	41.66	322	P	P	14 21 23.5	+2.2
	1.2nm,0.7s,baz=97,slow=12,SNR=4.7						
NOA	NORSAR Array B	43.00	323	P	P	14 21 33.5	+1.3
	0.5nm,0.6s,baz=101,slow=8.2,SNR=3.0						
TORD	Torodi Ar. Bea	64.15	267	P	P	14 24 08.8	+0.9
	0.3nm,0.9s,baz=59,slow=6.6,SNR=2.4						
YKA	Yellowknife Ar	80.77	2	P	P	14 25 46.9	+0.6
	0.1nm,0.5s,baz=358,slow=28,SNR=2.9						
WRA	Warramunga Arr	83.62	121	P	P	14 25 58.8	-3.0
	0.5nm,1.0s,baz=326,slow=3.6,SNR=2.9						
ASAR	Alice Springs	85.87	124	P	P	14 26 12.1	-1.0
	0.6nm,0.9s,baz=308,slow=2.3,SNR=4.1						

IDC 13 14:16:32.3±0.8, 4°.33S×101°.30E, h0km, mb4.2/15, mb1 4.3/15, mb1mx4.1/27, mbtmp4.2/15, Error ellipse: s-maj=26.0km s-min=15.3km az=54.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	22.76	354	P	P	14 21 35.9	-0.6
	5.3nm,0.9s,baz=184,slow=10.0,SNR=23						
FITZ	Fitzroy Crossi	27.47	122	P	P	14 22 20.3	-0.1
	1.8nm,0.8s,baz=321,slow=7.5,SNR=6.2						
WRA	Warramunga Arr	35.73	119	P	P	14 23 32.5	-0.6
	0.5nm,0.3s,baz=305,slow=9.2,SNR=13						
ASAR	Alice Springs	36.86	125	P	P	14 23 42.7	-0.1
	0.5nm,0.6s,baz=296,slow=7.1,SNR=11						
KSRS	Korea Array	48.39	28	P	P	14 25 16.3	+0.1
	4.1nm,0.9s,baz=221,slow=7.8,SNR=20						
SONM	Songino Array	52.14	4	P	P	14 25 45.2	+0.5
	5.1nm,0.7s,baz=183,slow=8.9,SNR=15						
MJAR	Matsushiro Arr	53.30	37	P	P	14 25 52.4	-0.9
	3.8nm,1.0s,baz=213,slow=7.3,SNR=6.7						
MKAR	Makanchi Array	53.61	344	P	P	14 25 55.5	+0.1
	3.0nm,0.7s,baz=146,slow=8.3,SNR=22						
USRK	Ussuriysk Arra	55.62	26	P	P	14 26 10.1	+0.1
	7.5nm,0.8s,baz=225,slow=6.2,SNR=9.2						
KURBB	Kurchatov Arra	58.14	343	P	P	14 26 27.6	-0.2
	1.0nm,0.3s,baz=157,slow=7.1,SNR=7.9						
ZALV	Zalesovo Beam	59.69	349	P	P	14 26 38.0	-0.4
	1.7nm,0.4s,baz=182,slow=4.5,SNR=15						
ASAJ	Asahikawa	60.82	33	P	P	14 26 47.0	+0.6
	6.3nm,0.8s,baz=162,slow=7.5,SNR=5.1						
BVAR	Borovoye Array	62.80	340	P	P	14 26 58.7	-0.9
	1.7nm,0.6s,baz=152,slow=8.0,SNR=10.0						
KBZ	Khabaz	70.91	319	P	P	14 27 51.8	+0.3
	1.6nm,0.8s,baz=135,slow=5.7,SNR=3.4						
BOSA	Boshof	75.69	242	P	P	14 28 20.6	+0.3
	2.8nm,0.7s,baz=90,slow=2.0,SNR=4.7						
TXAR	Lajitas Array	145.68	41	PKPbc	PKPbc	14 36 14.0	0.0
	3.5nm,0.9s,baz=261,slow=1.3,SNR=20						

*NIED **13** 14:21:00, 41°.80N×143°.40E, h32km, Mw3.9 Best double couple: M0 6.86000×10^14 NP1:φs19.00000°, δ71.00000°, λ92.00000°. NP2:φs192.00000°, δ19.00000°, λ83.00000°.*

*ISCJB **13** 14:21:10.7±0.7, 41°.72N±0°.05×143°.49E±0°.07, h46km±5km, mb3.9/17, Error ellipse: s-maj=10.9km s-min=5.6km az=37.7*

*MOS **13** 14:21:11.2±0.9, 41°.76N×143°.44E, h50km, mb4.3/9, Error ellipse: s-maj=16.0km s-min=10.1km az=79.1*

*JMA **13** 14:21:12.6±0.1, 41°.83N×143°.44E, h29km±1km, M3.8*

JMA Felt I J1.

*IDC **13** 14:21:13.8±2.3, 41°.77N×143°.39E, h53km±18km, mb3.6/15, mb1 3.7/18, mb1mx3.6/31, mbtmp3.6/18, ML3.5/3, MS2.8/2, Ms1 2.8/2, ms1mx2.0/34, Error ellipse: s-maj=18.5km s-min=13.6km az=109.0*

ISC 13 14:21:13.0±0.8, 41°.83N±0°.06×143°.41E±0°.07, h41km±6km, n36, σ1s18/45, mb3.9/17, 2C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**0.26**	**315**	⇓P	**Pn**	**14 21 19.5**	**-1.5**
JEM				*e*S	**Sn**	**14 21 24.7**	**-1.8**
JNBK	**Urakawa-nobuka**	**0.66**	**313**	⇓P	**Pn**	**14 21 25.7**	**-0.2**
JCH	**Churui**	**0.79**	**358**	⇓P	**Pn**	**14 21 27.2**	**-0.4**
JCH				*e*S	**Sn**	**14 21 39.6**	**+1.4**
JOB	**Onbets**	**1.12**	**16**	P	**Pn**	**14 21 32.5**	**+0.3**
JBT2	**Biratori 2**	**1.22**	**321**	⇑P	**Pn**	**14 21 34.4**	**+0.8**
ASAJ	**Asahikawa**	**2.36**	**346**	P	**Pn**	**14 21 49.9**	**+0.6**
	15nm,0.3s,baz=189,slow=14,SNR=337						
ASAJ				S	**Sn**	**14 22 20.3**	**+3.3**
	11nm,0.3s,baz=353,slow=33,SNR=7.4						
YUK	**Yuzh-Kuril'sk**	**2.85**	**38**	*d*P	**Pn**	**14 21 55.5**	**-0.4**
YUK				*i* S	**Sn**	**14 22 28.5**	**-0.4**
YUK				pmax	pmax		
	comp=E,6.0nm,0.1s						
YUK				pmax	pmax		
	comp=Z,15nm,0.1s						
YUK				pmax	pmax		
	comp=N,5.0nm,0.1s						
YUK				smax	smax		
	comp=N,252nm,0.5s						
YUK				smax	smax		
	comp=E,244nm,0.4s						
KUR	**Kuril'sk**	**4.70**	**42**	*c i*P	**Pn**	**14 22 22.6**	**+1.3**
KUR				*i* S	**Sn**	**14 23 15.1**	**+0.6**
KUR				pmax	pmax		
	comp=N,12nm,0.4s						
KUR				pmax	pmax		
	comp=E,7.0nm,0.8s						
KUR				pmax	pmax		
	comp=Z,18nm,0.8s						
KUR				smax	smax		
	comp=E,23nm,0.3s						
KUR				smax	smax		
	comp=N,39nm,0.5s						
MAT	**Matsushiro**	**6.64**	**219**	P	**Pn**	**14 22 48.3**	**+0.2**
MAT				*e*S	**Sn**	**14 24 02.3**	**-0.2**
MJAR	**Matsushiro Arr**	**6.64**	**219**	P	**Pn**	**14 22 48.0**	**-0.1**
	comp=N,0.6nm,0.3s,baz=29,slow=13,SNR=15						
MJAR				S	**Sn**	**14 24 07.0**	**+4.4**
	baz=43,slow=19,SNR=2.6						
USRK	**Ussuriysk Arra**	**8.69**	**290**	LR	LR	14 27 00.6	
	comp=N,80nm,18.2s,baz=295,slow=40						
KSRS	**Korea Array**	**12.71**	**255**	P	**Pn**	**14 24 12.4**	**+1.4**
	comp=N,0.1nm,0.3s,baz=66,slow=13,SNR=5.9						
KSRS				LR	LR	14 28 55.7	
	comp=N,36nm,19.9s,baz=80,slow=36						
SONM	**Songino Array**	**26.74**	**296**	P	**P**	**14 26 48.6**	**0.0**
	comp=N,1.0nm,0.6s,baz=106,slow=6.5,SNR=2.6						
ZALV	**Zalesovo Beam**	**39.99**	**308**	P	**P**	**14 28 43.1**	**-0.2**
ZALV						14 30 48.0	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZALV	**Zalesovo Beam**	**39.99**	**308**	P	**P**	**14 28 43.1**	**-0.2**
	comp=Z,2.7nm,0.7s,baz=85,slow=8.1,SNR=10						
ZALV				PcP	**PcP**	**14 30 48.0**	**+0.3**
	comp=Z,0.2nm,0.2s,baz=123,slow=5.3,SNR=3.5						
MKAR	**Makanchi Array**	**43.05**	**298**	P	**P**	**14 29 07.8**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MKAR	**Makanchi Array**	**43.05**	**298**	P	**P**	**14 29 07.8**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=79,slow=9.1,SNR=10						
KURK	**Kurchatov**	**44.33**	**305**	P	**P**	**14 29 19.2**	**+0.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KURBB	**Kurchatov Arra**	**44.41**	**305**	P	**P**	**14 29 19.1**	**-0.2**
	comp=Z,2.5nm,0.5s,baz=73,slow=8.8,SNR=4.6						
ILAR	**Eielson Array**	**44.65**	**35**	P	**P**	**14 29 20.2**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=255,slow=6.5,SNR=6.1						
BVAR	**Borovoye Array**	**48.60**	**310**	P	**P**	**14 29 52.3**	**+0.1**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**48.60**	**310**	P	**P**	**14 29 52.3**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=78,slow=8.8,SNR=11						
INK	**Inuvik**	**49.44**	**29**	P	**P**	**14 29 57.5**	**-0.8**
	comp=Z,0.6nm,0.5s,baz=298,slow=4.0,SNR=5.1						
YKA	**Yellowknife Ar**	**58.91**	**32**	P	**P**	**14 31 06.6**	**-0.8**
	comp=Z,0.2nm,0.5s,baz=302,slow=8.0,SNR=4.3						
KEV	**Kevo**	**59.52**	**339**	*e*P	**P**	**14 31 10.7**	**-0.8**
KEV	**Kevo**	**59.52**	**339**	*e*p	**P**	**14 31 10.7**	**-0.8**
WRA	**Warramunga Ar**	**73.03**	**190**	P	**P**	**14 31 27.8**	**-1.3**
	comp=Z,0.6nm,1.0s,baz=6.3,slow=6.8,SNR=2.7						
WRA				pP	**pP**	**14 31 41.7**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=7.5,slow=6.9,SNR=2.6						
JOF	**Joensuu**	**62.48**	**331**	*e*P	**P**	**14 31 30.7**	**-0.9**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
JOF	**Joensuu**	**62.48**	**331**	*e*p	**P**	**14 31 30.7**	**-0.9**
	comp=Z,2.0nm,0.5s						
FINES	**FINESS Array B**	**65.30**	**332**	P	**P**	**14 31 49.5**	**-0.7**
	comp=Z,3.7nm,0.6s,baz=53,slow=9.8,SNR=11						
NOA	**NORSAR Array B**	**70.36**	**337**	P	**P**	**14 32 21.4**	**-0.7**
	comp=Z,0.8nm,0.6s,baz=35,slow=6.3,SNR=4.0						
NVAR	**Mina Array Bea**	**70.94**	**55**	P	**P**	**14 32 27.4**	**+1.2**
	comp=Z,0.2nm,0.6s,baz=269,slow=6.2,SNR=4.0						
EKA	**Eskdalemuir Ar**	**79.11**	**341**	P	**P**	**14 33 12.6**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=28,slow=5.0,SNR=3.7						
EKA				pP	**pP**	**14 33 26.6**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=29,slow=11,SNR=2.2						
GERES	**GERESS Array B**	**79.43**	**329**	P	**P**	**14 33 13.9**	**-0.9**
	comp=Z,0.3nm,0.5s,baz=1.7,slow=9.8,SNR=2.2						
TXAR	**Lajitas Array**	**86.01**	**54**	P	**P**	**14 33 49.5**	**+0.2**
	comp=Z,0.2nm,0.5s,baz=289,slow=5.6,SNR=3.3						
SIV	**San Ignacio**	**146.73**	**47**	PKPbc	**PKPbc**	**14 40 50.5**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=259,slow=10,SNR=3.7						

MAN 13 14:30:15,11.40N×125.57E, h25km, mb4.3, ML3.2, MS3.0, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.24**	**328**	*e*P	Pn	14 30 24.7	+1.7
PLP	**Palo**	**0.62**	**248**	⇑*i*P	Pn	14 30 27.8	-0.5
PLP				*e*S	Sb	14 30 36.0	+0.4
OCLP	**Ormoc**	**1.00**	**250**	*e*P	Pn	14 30 33.4	-0.1
OCLP				*e*S	Sn	14 30 48.2	+1.4
CNP	**Catarman**	**1.42**	**321**	*e*P	Pn	14 30 39.2	0.0
CNP				*e*S	Sb	14 30 58.2	-0.2
MSLP	**Maasin**	**1.44**	**209**	*e*P	Pb	14 30 40.8	-0.3
MSLP				*e*S	Sb	14 30 59.5	+0.5
TBP	**Tagbilaran**	**2.39**	**225**	*e*P	Pn	14 30 53.7	+1.2
GUIM	**Jordan**	**3.02**	**256**	*e*P	Pn	14 31 01.4	+0.1

IDC 13 14:30:37.4±1.0, 35.36N×87.24E, h0km, mb3.4/4, mb1 3.6/9, mb1mx3.4/30, mbtmp3.4/9, ML3.5/5, MS2.9/2, Ms1 2.9/2, ms1mx2.5/22, Error ellipse: s-maj=36.6km s-min=18.1km az=61.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**12.02**	**343**	Pn	Pn	14 33 29.5	-0.4
	0.1nm,0.3s,baz=148,slow=15,SNR=5.8						
AAK	**Ala-Archa**	**12.29**	**310**	LR	LR	14 39 18.6	
	comp=Z,54nm,21.3s,baz=105,slow=42						
KURBB	**Kurchatov Arra**	**16.52**	**340**	Pn	Pn	14 34 30.0	-0.3
	0.1nm,0.3s,baz=154,slow=11,SNR=3.2						
ZALV	**Zalesovo Beam**	**18.67**	**356**	P	P	14 34 55.2	-1.6
	0.1nm,0.3s,baz=183,slow=13,SNR=6.4						
SONM	**Songino Array**	**18.93**	**43**	P	Pn	14 35 00.4	0.0
	0.2nm,0.3s,baz=230,slow=11,SNR=2.7						
CMAR	**Chiang Mai Arr**	**19.77**	**145**	P	Pn	14 35 10.1	-0.6
	0.2nm,0.3s,baz=330,slow=8.6,SNR=3.9						
BVAR	**Borovoye Array**	**21.31**	**331**	P	P	14 35 25.0	-0.6
	0.8nm,0.6s,baz=134,slow=12,SNR=6.9						
AKTO	**Aktyubinsk**	**25.97**	**315**	LR	LR	14 47 44.2	
	comp=Z,34nm,19.9s,baz=289,slow=40						
WRA	**Warramunga Arr**	**70.84**	**133**	P	P	14 41 55.0	-1.2
	0.6nm,1.0s,baz=327,slow=6.2,SNR=3.6						
ASAR	**Alice Springs**	**73.47**	**136**	P	P	14 42 12.8	+0.8
	0.5nm,1.1s,baz=316,slow=6.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	**78.93**	**278**	P	P	14 42 43.4	+0.1
	0.1nm,0.6s,baz=52,slow=5.2,SNR=2.6						

*ISCJB **13** 15:23:36.9±0.4, 41.33N±0.02×22.68E±0.03, h8km±3km, Error ellipse: s-maj=4.1km s-min=3.3km az=155.2*
*ATH **13** 15:23:36.5, 41.37N×22.68E, h23km±2km, MD3.2/8*
*SKO **13** 15:23:36.9, 41.34N×22.66E, h12km, M1.6, ML2.0*
*THE **13** 15:23:37.5, 41.33N×22.70E, h4km±1km, ML2.4/6, Error ellipse: s-maj=2.0km s-min=0.5km az=199.0*
*CSEM **13** 15:23:37.2±0.1, 41.33N×22.68E, h8km, ML2.0, Error ellipse: s-maj=2.3km s-min=1.9km az=80.0*
*BEO **13** 15:23:38.1, 41.32N×22.55E, h8km, ML2.0/5*

ISC 13 15:23:37.2±0.8, 41.34N±0.02×22.68E±0.02, h7km±6km, n45, σ0.52/76, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.09**	**261**	P	**Pg**	**15 23 39.0**	**-0.2**
VAY				S	**Sg**	**15 23 40.9**	**+0.3**
VAY	**Valandovo**	**0.09**	**261**	*e*Pg	**Pg**	**15 23 39.3**	**+0.1**
VAY				*i* Sg	**Sg**	**15 23 41.0**	**+0.3**
VAY	**Valandovo**	**0.09**	**261**	*i* Pg	**Pg**	**15 23 39.2**	**0.0**
VAY				*e*Lg	Lg	15 23 41.0	
	comp=E,1μm,0.2s						
VAY				*i* Sg	**Sg**	**15 23 41.0**	**+0.4**
VAY				*e*Lg	Lg	15 23 41.1	
	comp=N,1μm,0.2s						
VAY	**Valandovo**	**0.09**	**261**	P	**Pg**	**15 23 39.0**	**-0.2**
VAY	**Valandovo**	**0.09**	**261**	*e*Pg	**Pg**	**15 23 39.3**	**+0.1**
VAY				*i* Sg	**Sg**	**15 23 41.0**	**+0.4**
KNT	**Kendrikon**	**0.24**	**137**	P	**Pg**	**15 23 42.2**	**+0.3**
KNT				S	**Sg**	**15 23 45.5**	**+0.4**
KNT	**Kendrikon**	**0.24**	**137**	P	**Pg**	**15 23 42.2**	**+0.3**
KNT				S	**Sg**	**15 23 45.5**	**+0.4**
GRG	**Griva**	**0.43**	**209**	P	**Pg**	**15 23 45.9**	**+0.3**
GRG				S	**Sg**	**15 23 52.2**	**+0.9**
GRG	**Griva**	**0.43**	**209**	*e*PB	**Pg**	**15 23 45.9**	**+0.3**
GRG				*e*SB	**Sg**	**15 23 52.6**	**+1.3**
GRG	**Griva**	**0.43**	**209**	P	**Pg**	**15 23 45.9**	**+0.3**
GRG				S	**Sg**	**15 23 52.2**	**+0.9**
SRS	**Serrai**	**0.72**	**107**	P	**Pg**	**15 23 51.3**	**+0.3**
SRS	**Serrai**	**0.72**	**107**	P	**Pg**	**15 23 51.3**	**+0.3**
SOH	**Sokhos**	**0.72**	**135**	P	**Pg**	**15 23 51.0**	**-0.1**
SOH				S	**Sg**	**15 24 00.7**	**+0.2**
SOH	**Sokhos**	**0.72**	**135**	*e*PN	**Pg**	**15 23 51.2**	**+0.1**
SOH				*e*SN	**Sg**	**15 24 00.9**	**+0.4**
SOH	**Sokhos**	**0.72**	**135**	P	**Pg**	**15 23 51.0**	**-0.1**
SOH				*e*Sn	**Sg**	**15 24 00.9**	**+0.4**
THE	**Thessaloniki**	**0.73**	**163**	P	**Pg**	**15 23 51.3**	**0.0**
THE				S	**Sb**	**15 24 01.6**	**-1.0**
THE	**Thessaloniki**	**0.73**	**163**	P	**Pg**	**15 23 51.3**	**0.0**
THE				S	**Sb**	**15 24 01.6**	**-1.0**
HORT	**Hortiatis**	**0.80**	**157**	P	**Pg**	**15 23 52.6**	**0.0**
HORT				S	**Sg**	**15 24 03.6**	**+0.6**
HORT	**Hortiatis**	**0.80**	**157**	P	**Pg**	**15 23 52.6**	**0.0**
HORT				S	**Sg**	**15 24 03.6**	**+0.6**
NVR	**Nevrokopi**	**0.89**	**89**	P	**Pg**	**15 23 53.9**	**-0.3**
NVR				S	**Sg**	**15 24 06.4**	**+0.6**
NVR	**Nevrokopi**	**0.89**	**89**	*e*PN	**Pg**	**15 23 54.0**	**-0.3**
NVR				*e*SN	**Sg**	**15 24 06.2**	**+0.4**
NVR	**Nevrokopi**	**0.89**	**89**	P	**Pg**	**15 23 53.9**	**-0.3**
NVR				S	**Sg**	**15 24 06.4**	**+0.6**
BIA	**Bitola**	**1.07**	**253**	*i* Pg	**Pg**	**15 23 57.8**	**0.0**
BIA				*i* Sg	**Sb**	**15 24 12.4**	**0.0**
BIA				*e*Lg	Lg	15 24 13.0	
	comp=N,7.5nm,0.2s						
BIA				*e*Lg	Lg	15 24 15.3	
	comp=E,11nm,0.2s						
PLG	**Polygyros**	**1.12**	**149**	P	**Pg**	**15 23 58.5**	**-0.2**
PLG				S	**Sb**	**15 24 14.3**	**+0.5**
PLG	**Polygyros**	**1.12**	**149**	*e*PN	**Pg**	**15 23 58.6**	**-0.2**
PLG				*e*SN	**Sb**	**15 24 14.4**	**+0.6**
PLG	**Polygyros**	**1.12**	**149**	P	**Pg**	**15 23 58.5**	**-0.2**
PLG				*e*Sn	**Sb**	**15 24 14.4**	**+0.6**
FNA	**Florina**	**1.13**	**241**	P	**Pg**	**15 23 58.6**	**-0.3**
FNA	**Florina**	**1.13**	**241**	*e*PN	**Pg**	**15 23 58.7**	**-0.2**
FNA	**Florina**	**1.13**	**241**	P	**Pg**	**15 23 58.6**	**-0.3**
KZN	**Kozani**	**1.24**	**214**	*e*PN	**Pb**	**15 24 00.5**	**-0.4**
KZN	**Kozani**	**1.24**	**214**	*e*Pn	**Pb**	**15 24 00.6**	**-0.4**
LIT	**Litokhoron**	**1.24**	**187**	*e*PN	**Pb**	**15 24 00.2**	**-0.8**
LIT				*e*SN	**Sn**	**15 24 18.9**	**+0.8**
LIT	**Litokhoron**	**1.24**	**187**	*e*Pn	**Pb**	**15 24 00.2**	**-0.8**
LIT				*e*Sn	**Sn**	**15 24 18.9**	**+0.8**
VTS	**Vitosha**	**1.31**	**17**	P	**Pn**	**15 24 02.1**	**-0.1**
VTS				S	**Sn**	**15 24 20.4**	**+0.3**
VTS	**Vitosha**	**1.31**	**17**	P	**Pn**	**15 24 02.1**	**-0.1**
VTS				S	**Sn**	**15 24 20.4**	**+0.3**
BARS	**Barje**	**1.61**	**337**	*e*Pn	**Pn**	**15 24 06.7**	**+0.5**
BARS				*i* Sg	**Sg**	**15 24 29.1**	**0.0**
BARS	**Barje**	**1.61**	**337**	*e*Pn	**Pn**	**15 24 06.7**	**+0.5**
BARS				*i* Sg	**Sg**	**15 24 29.1**	**0.0**
PLD	**Plovdiv**	**1.70**	**62**	*e*Pn	**Pg**	**15 24 09.5**	**-0.2**
PLD				*e*Sn	**Sg**	**15 24 32.9**	**+1.2**
ZAPS	**Zavoj**	**1.94**	**359**	*e*Pn	**Pn**	**15 24 11.5**	**+0.9**
ZAPS				*e*Sn	**Sn**	**15 24 35.8**	**+0.5**
RDO	**Rodhopi**	**2.16**	**94**	*e*PN	**Pn**	**15 24 12.9**	**-0.7**
RDO	**Rodhopi**	**2.16**	**94**	*e*Pn	**Pn**	**15 24 12.9**	**-0.7**
AGG	**Agios Georgios**	**2.33**	**187**	*e*PN	**Pn**	**15 24 15.2**	**-0.8**
AGG	**Agios Georgios**	**2.33**	**187**	*e*Pn	**Pn**	**15 24 15.2**	**-0.8**
DIVS	**Divibare**	**3.40**	**325**	*e*Pn	**Pn**	**15 24 30.4**	**-0.4**
DIVS	**Divibare**	**3.40**	**325**	*e*Pn	**Pn**	**15 24 30.4**	**-0.4**

KRSC 13 15:44:21.7±0.4, 53.00N×159.14E, h108km±22km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.21**	**36**	*e*P	Pn	15 44 38.0	+1.2
NLC				*i* S	Sn	15 44 50.4	+2.2
UGLR	**Uglovaya**	**0.28**	**318**	P	Pn	15 44 37.9	+0.6
UGLR				*i* S	Sn	15 44 50.1	+1.1
PET	**Petropavlovsk**	**0.29**	**275**	*e*P	Pn	15 44 37.3	+0.2
PET				*i* S	Sn	15 44 49.1	+0.4
SDLR	**Sedlovina**	**0.32**	**331**	P	Pn	15 44 37.7	+0.2
SDLR				*i* S	Sn	15 44 49.8	+0.5
SMAR	**Somma**	**0.33**	**322**	*e*P	Pn	15 44 38.0	+0.4
SMAR				*i* S	Sn	15 44 50.0	+0.4
AVH	**Avacha**	**0.36**	**318**	P	Pn	15 44 38.1	+0.5
AVH				*i* S	Sn	15 44 50.5	+1.0
KRER	**Koryakskii**	**0.39**	**322**	P	Pn	15 44 38.2	+0.3
KRER				*i* S	Sn	15 44 50.8	+0.8
KOK	**Koryaka**	**0.42**	**314**	P	Pn	15 44 38.2	+0.2
KOK				*i* S	Sn	15 44 50.8	+0.6
SPN	**Mys Shipunski**	**0.54**	**79**	P	Pn	15 44 39.5	+0.9
SPN				*i* S	Sn	15 44 53.2	+1.9
RUS	**Russkaya**	**0.68**	**214**	P	Pn	15 44 39.8	+0.1
RUS				*i* S	Sn	15 44 53.5	+0.3
MTVR	**Mutnovka**	**0.78**	**229**	*e*P	Pn	15 44 41.1	+0.4
MTVR				*i* S	Sn	15 44 55.9	+0.9
GRL	**Gorelyy**	**0.79**	**236**	*e*P	Pn	15 44 41.2	+0.4
GRL				*i* S	Sn	15 44 56.1	+0.9
ASAK	**Asacha**	**0.98**	**231**	P	Pn	15 44 43.0	+0.4
ASAK				*i* S	Sn	15 44 59.6	+1.3
GNL	**Ganaly**	**1.00**	**315**	*e*P	Pn	15 44 42.2	-0.7
GNL				*i* S	Sn	15 44 58.1	-0.7
KII	**Karymskiy**	**1.05**	**10**	*e*P	Pn	15 44 43.7	+0.3
APC	**Apacha**	**1.20**	**267**	*e*P	Pn	15 44 44.8	0.0
APC				*i* S	Sn	15 45 02.1	-0.3
MIPR	**Malaya Ipel'ka**	**1.62**	**244**	*e*P	Pn	15 44 50.0	+0.1
MKZ	**Mys Kozlova**	**2.19**	**44**	*e*P	Pn	15 44 57.3	+0.4
MKZ				*i* S	Sn	15 45 22.6	-1.3
TUMR	**Tumrok**	**2.36**	**14**	*e*P	Pn	15 45 00.7	+1.3
TUMR				*i* S	Sn	15 45 30.0	+1.7
KMNR	**Kamenistaya**	**2.83**	**13**	*e*P	Pn	15 45 06.3	+0.8
ESO	**Esso**	**2.94**	**355**	*e*P	Pn	15 45 07.7	+0.9
SKR	**Severo-Kuril's**	**2.98**	**220**	*e*P	Pn	15 45 07.3	0.0
SKR				*i* S	Sn	15 45 41.7	-0.8
BZMR	**Bezymyannaya**	**3.04**	**14**	*e*P	Pn	15 45 10.0	+1.6
BZWR	**Bezymyannyi-We**	**3.07**	**14**	*e*P	Pn	15 45 10.5	+1.7
BZGR	**Bezymyannyi-Gr**	**3.08**	**17**	P	Pn	15 45 10.7	+1.9
BKI	**Bering**	**4.59**	**59**	*e*P	Pn	15 45 28.9	+0.1
BKI				*i* S	Sn	15 46 17.0	-3.9

KRSC 13 15:54:07.2±0.8, 53.69N×161.83E, h5km±5km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.87**	**356**	P	Pb	15 54 24.8	0.0
MKZ				*i* S	Sb	15 54 37.0	+0.3
SPN	**Mys Shipunski**	**1.23**	**242**	P	Pn	15 54 31.4	+0.3
SPN				*i* S	Sn	15 54 48.6	+0.5
SDLR	**Sedlovina**	**1.81**	**258**	*e*P	Pn	15 54 39.4	+0.2
SDLR				*i* S	Sn	15 55 02.9	+0.3
UGLR	**Uglovaya**	**1.86**	**256**	P	Pn	15 54 40.6	+0.7
UGLR				*i* S	Sb	15 55 05.1	-0.4
KRER	**Koryakskii**	**1.88**	**259**	P	Pn	15 54 41.1	+0.8
KRER				*i* S	Sb	15 55 06.2	-0.1
AVH	**Avacha**	**1.90**	**258**	P	Pn	15 54 41.3	+1.0
AVH				*i* S	Sb	15 55 06.4	0.0
KOK	**Koryaka**	**1.95**	**259**	P	Pn	15 54 41.7	+0.6
KOK				*i* S	Sn	15 55 06.6	+0.6
PET	**Petropavlovsk**	**2.02**	**252**	*e*P	Pn	15 54 41.5	-0.3
PET				*i* S	Sn	15 55 06.7	-0.7
KMNR	**Kamenistaya**	**2.27**	**337**	*e*P	Pb	15 54 47.9	-0.8
KMNR				*i* S	Sb	15 55 17.0	-0.2
GNL	**Ganaly**	**2.31**	**272**	*e*P	Pn	15 54 47.2	+1.1
GNL				*i* S	Sb	15 55 16.8	-1.7
RUS	**Russkaya**	**2.37**	**239**	*e*P	Pn	15 54 48.2	+1.6
RUS				*i* S	Sb	15 55 18.1	-1.6
ASAK	**Asacha**	**2.71**	**243**	*e*P	Pn	15 54 53.7	+2.2
ASAK				*i* S	Sn	15 55 27.0	+2.3
ESO	**Esso**	**2.88**	**322**	*e*P	Pn	15 54 55.5	+1.7
ESO				*i* S	Sn	15 55 30.8	+2.0
APC	**Apacha**	**2.91**	**257**	*e*P	Pn	15 54 55.8	+1.8
APC				*i* S	Sn	15 55 30.9	+1.6
MIPR	**Malaya Ipel'ka**	**3.38**	**247**	*e*P	Pn	15 55 03.7	+3.1

IDC 13 16:02:04.6±2.0, 0.67N×125.76E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/22, mbtmp3.2/3, Error ellipse: s-maj=175.5km s-min=26.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.15**	**158**	P	P	16 07 01.3	-0.9
	0.3nm,0.5s,baz=336,slow=11,SNR=11						
ASAR	**Alice Springs**	**25.46**	**162**	P	P	16 07 35.2	+0.7
	0.2nm,0.5s,baz=346,slow=12,SNR=8.0						
MKAR	**Makanchi Array**	**59.53**	**327**	P	P	16 12 09.8	-0.1
	0.2nm,0.4s,baz=114,slow=7.8,SNR=4.6						

*AUST **13** 16:04:01.5, 4.00N×126.50E, h0km*
*IDC **13** 16:04:01.6±0.6, 3.94N×126.65E, h0km, mb4.0/16, mb1 4.2/16, mb1mx4.1/26, mbtmp4.0/16, Error ellipse: s-maj=38.1km s-min=12.8km az=73.0*
*ISCJB **13** 16:04:06.1±0.4, 3.95N±0.07×126.7E±0.1, h45km, mb4.0/18, Error ellipse: s-maj=17.5km s-min=5.3km az=151.0*
*NEIC **13** 16:04:06.7±0.4, 3.93N×126.65E, h35km, mb4.4/2, Error ellipse: s-maj=23.2km s-min=7.3km az=72.0*

ISC 13 16:04:08.2±0.5, 3.90N±0.08×126.7E±0.1, h45km, n48, σ1.06/52, mb4.1/18, 1C, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**4.10**	**324**	⇑*i*P	**Pn**	**16 05 11.3**	**+2.9**
BUKP	**Musuan**	**4.27**	**338**	*e*P	**Pn**	**16 05 13.2**	**+2.5**
BUKP				*e*S	Sn	16 06 11.1	+12
PAGZ	**Pagadian**	**5.12**	**320**	*e*P	**Pn**	**16 05 24.9**	**+2.6**
IPIL	**Ipil**	**5.63**	**313**	*e*P	**Pn**	**16 05 30.4**	**+1.0**
IPIL				*e*S	**Sn**	**16 06 32.6**	**-0.2**
FAKI	**Fak Fak**	**8.76**	**141**	P	**Pn**	**16 06 12.8**	**+0.4**
	baz=9.0,SNR=5.4						
MTN	**Manton Dam**	**17.21**	**165**	P	**P**	**16 08 05.8**	**-0.7**
	baz=18,SNR=6.1						
KDU	**Kakadu**	**17.45**	**161**	P	**P**	**16 08 09.4**	**+0.2**
	baz=18,SNR=4.9						
KNRA	**Kununurra**	**19.56**	**174**	P	**Pn**	**16 08 33.3**	**-0.7**
	baz=20,SNR=5.1						
FITZ	**Fitzroy Crossi**	**21.89**	**183**	P	**P**	**16 08 57.3**	**-0.2**
FITZ	**Fitzroy Crossi**	**21.89**	**183**	P	**P**	**16 08 57.3**	**-0.2**
	1.8nm,0.5s,baz=46,slow=16,SNR=9.6						
FITZ	**Fitzroy Crossi**	**21.89**	**183**	P	**P**	**16 08 57.5**	**0.0**
	baz=22,SNR=9.9						
WRAB	**Tennant Creek**	**24.85**	**163**	*e*P	**P**	**16 09 25.7**	**-1.0**
	7.5nm,0.8s						
WRA	**Warramunga Arr**	**24.86**	**163**	P	**P**	**16 09 25.6**	**-1.2**
WRA	**Warramunga Arr**	**24.86**	**163**	P	**P**	**16 09 25.6**	**-1.2**
	9.5nm,0.7s,baz=344,slow=11,SNR=76						
MTSU	**Mount Surprise**	**27.95**	**142**	S	S	16 15 00.8	+25
	baz=28,SNR=18						
ASAR	**Alice Springs**	**28.29**	**166**	P	**P**	**16 09 57.0**	**-0.6**
ASAR	**Alice Springs**	**28.29**	**166**	P	**P**	**16 09 57.0**	**-0.6**
	0.6nm,0.5s,baz=345,slow=7.2,SNR=12						
CMAR	**Chiang Mai Arr**	**30.75**	**300**	P	**P**	**16 10 19.6**	**+0.1**
CMAR	**Chiang Mai Arr**	**30.75**	**300**	P	**P**	**16 10 19.6

ML3.5
*THE **13** 16:11:43.3,38°.50N×21°.64E,h0km±1km,ML3.7/10,Error ellipse: s-maj=1.7km s-min=0.5km az=334.0*
*ISCJB **13** 16:11:43.2±0.4,38°.50N±0°.01×21°.63E±0°.02,h9km±3km, mb3.5/7,MS2.7/1,Error ellipse: s-maj=2.6km s-min=2.3km az=143.2*
*CSEM **13** 16:11:43.2±0.1,38°.49N×21°.64E,h2km,ML3.7/10,Error ellipse: s-maj=3.0km s-min=2.5km az=70.0*
*BEO **13** 16:11:53.0±1.4,39°.08N×21°.12E,ML3.8/4*

ISC 13 16:11:43.6±0.9,38°.51N±0°.01×21°.61E±0°.02,h11km±6km, n157,σ1§23/215,mb3.7/7,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EFP	**Efpalio**	**0.24**	**109**	P	**Pg**	**16 11 48.1**	**-0.6**
EFP				S	**Sg**	**16 11 51.8**	**-0.3**
EFP	**Efpalio**	**0.24**	**109**	*e*PB	**Pg**	**16 11 48.2**	**-0.5**
EFP				*e*SB	**Sg**	**16 11 52.4**	**+0.3**
EFP	**Efpalio**	**0.24**	**109**	P	**Pg**	**16 11 48.1**	**-0.6**
EFP				S	**Sg**	**16 11 51.8**	**-0.3**
EFP				*e*Sb	**Sg**	**16 11 52.4**	**+0.3**
AXS	**Araxos**	**0.36**	**211**	P	**Pg**	**16 11 50.1**	**-0.6**
AXS				S	**Sb**	**16 11 56.6**	**-0.9**
AXS	**Araxos**	**0.36**	**211**	P	**Pg**	**16 11 50.1**	**-0.6**
AXS				S	**Sb**	**16 11 56.6**	**-0.9**
TRIZ	**Trizonia**	**0.39**	**111**	P	**Pg**	**16 11 50.4**	**-0.9**
TRIZ				S	**Sg**	**16 11 56.2**	**-0.3**
TRIZ	**Trizonia**	**0.39**	**111**	*e*PB	**Pg**	**16 11 50.6**	**-0.7**
TRIZ				*e*SB	**Sg**	**16 11 56.9**	**+0.4**
TRIZ	**Trizonia**	**0.39**	**111**	*e*Pb	**Pg**	**16 11 50.6**	**-0.7**
TRIZ				S	**Sg**	**16 11 56.2**	**-0.3**
LAKA	**Lakka**	**0.39**	**132**	P	**Pg**	**16 11 50.5**	**-0.9**
LAKA				S	**Sg**	**16 11 56.8**	**+0.2**
LAKA	**Lakka**	**0.39**	**132**	*e*PB	**Pg**	**16 11 50.7**	**-0.7**
LAKA				*e*SB	**Sg**	**16 11 57.3**	**+0.7**
LAKA	**Lakka**	**0.39**	**132**	*e*Pb	**Pg**	**16 11 50.7**	**-0.7**
LAKA				S	**Sg**	**16 11 56.8**	**+0.2**
LAKA				*e*Sb	**Sg**	**16 11 57.3**	**+0.7**
KALE	**Kalithea**	**0.43**	**105**	P	**Pg**	**16 11 51.1**	**-1.0**
KALE				S	**Sg**	**16 11 57.9**	**+0.1**
KALE	**Kalithea**	**0.43**	**105**	*e*PB	**Pg**	**16 11 51.2**	**-0.9**
KALE	**Kalithea**	**0.43**	**105**	*e*Pb	**Pg**	**16 11 51.2**	**-0.9**
KALE				S	**Sg**	**16 11 57.9**	**+0.1**
EVR	**Evrytania**	**0.44**	**21**	P	**Pg**	**16 11 51.9**	**-0.4**
EVR	**Evrytania**	**0.44**	**21**	*e*PB	**Pg**	**16 11 51.7**	**-0.6**
EVR	**Evrytania**	**0.44**	**21**	*e*Pb	**Pg**	**16 11 51.7**	**-0.6**
RLS	**Riolos of Patr**	**0.46**	**194**	P	**Pg**	**16 11 52.2**	**-0.4**
RLS				S	**Sb**	**16 12 00.4**	**-0.1**
RLS	**Riolos of Patr**	**0.46**	**194**	*e*PB	**Pg**	**16 11 52.5**	**-0.1**
RLS	**Riolos of Patr**	**0.46**	**194**	P	**Pg**	**16 11 52.2**	**-0.4**
RLS	**Riolos of Patr**	**0.46**	**194**	*e*Pb	**Pg**	**16 11 52.5**	**-0.1**
RLS				S	**Sb**	**16 12 00.4**	**-0.1**
KLV	**Kalavryta, Ach**	**0.63**	**137**	*e*PB	**Pg**	**16 11 54.6**	**-1.2**
KLV				*e*SN	**Sg**	**16 12 04.3**	**+0.3**
KLV	**Kalavryta, Ach**	**0.63**	**137**	*e*Pb	**Pg**	**16 11 54.6**	**-1.2**
MAKR	**Makrakomi, Fth**	**0.65**	**39**	P	**Pg**	**16 11 56.1**	**-0.1**
MAKR				S	**Sg**	**16 12 05.0**	**+0.2**
MAKR	**Makrakomi, Fth**	**0.65**	**39**	P	**Pg**	**16 11 56.1**	**-0.1**
MAKR				S	**Sg**	**16 12 05.0**	**+0.2**
DSF	**Desfina**	**0.73**	**97**	P	**Pg**	**16 11 55.9**	**-1.7**
DSF	**Desfina**	**0.73**	**97**	P	**Pg**	**16 11 55.9**	**-1.7**
KFL	**Anninata**	**0.76**	**239**	P	**Pg**	**16 11 57.4**	**-0.8**
KFL				S	**Sb**	**16 12 10.0**	**+1.0**
KFL	**Anninata**	**0.76**	**239**	P	**Pg**	**16 11 57.4**	**-0.8**
KFL				S	**Sb**	**16 12 10.0**	**+1.0**
AGG	**Agios Georgios**	**0.76**	**47**	P	**Pg**	**16 11 57.8**	**-0.6**
AGG				S	**Sb**	**16 12 09.4**	**+0.1**
AGG	**Agios Georgios**	**0.76**	**47**	*e*PN	**Pg**	**16 11 58.3**	**-0.1**
AGG				*e*SN	**Sb**	**16 12 09.7**	**+0.4**
AGG	**Agios Georgios**	**0.76**	**47**	P	**Pg**	**16 11 57.8**	**-0.6**
AGG	**Agios Georgios**	**0.76**	**47**	*e*Pn	**Pg**	**16 11 58.3**	**-0.1**
AGG				S	**Sb**	**16 12 09.4**	**+0.1**
LKD2	**Lefkada island**	**0.80**	**291**	P	**Pg**	**16 11 58.4**	**-0.6**
LKD2				S	**Sn**	**16 12 11.8**	**-0.8**
LKD2	**Lefkada island**	**0.80**	**291**	*e*PN	**Pg**	**16 11 58.0**	**-1.0**
LKD2	**Lefkada island**	**0.80**	**291**	*e*Pn	**Pg**	**16 11 58.0**	**-1.0**
LKD2	**Lefkada island**	**0.80**	**291**	P	**Pg**	**16 11 58.4**	**-0.6**
GUR	**Goura**	**0.81**	**134**	P	**Pg**	**16 11 57.5**	**-1.7**
GUR				S	**Sg**	**16 12 09.9**	**+0.1**
GUR	**Goura**	**0.81**	**134**	*e*PB	**Pg**	**16 11 57.6**	**-1.7**
GUR	**Goura**	**0.81**	**134**	*e*Pb	**Pg**	**16 11 57.6**	**-1.7**
GUR				S	**Sg**	**16 12 09.9**	**+0.1**
AXAR	**Agios Charalam**	**0.86**	**72**	P	**Pg**	**16 11 59.5**	**-0.7**
AXAR				S	**Sg**	**16 12 11.0**	**-0.5**
AXAR	**Agios Charalam**	**0.86**	**72**	P	**Pg**	**16 11 59.5**	**-0.7**
AXAR				S	**Sg**	**16 12 11.0**	**-0.5**
VLS	**Valsamata**	**0.87**	**248**	P	**Pg**	**16 11 58.8**	**-1.5**
VLS				S	**Sb**	**16 12 12.9**	**+0.7**
VLS	**Valsamata**	**0.87**	**248**	*e*PN	**Pg**	**16 11 58.3**	**-1.4**
VLS	**Valsamata**	**0.87**	**248**	P	**Pg**	**16 11 58.8**	**-1.5**
VLS				S	**Sb**	**16 12 12.9**	**+0.7**
AMT	**Artemida-Makis**	**0.97**	**175**	*e*PN	**Pg**	**16 12 01.5**	**-0.8**
AMT	**Artemida-Makis**	**0.97**	**175**	*e*Pn	**Pg**	**16 12 01.5**	**-0.8**
LKR	**Lokris**	**1.10**	**82**	P	**Pg**	**16 12 02.8**	**-1.9**
LKR				S	**Sg**	**16 12 19.1**	**+0.1**
LKR	**Lokris**	**1.10**	**82**	*e*PB	**Pg**	**16 12 03.2**	**-1.5**
LKR	**Lokris**	**1.10**	**82**	P	**Pg**	**16 12 02.8**	**-1.9**
LKR	**Lokris**	**1.10**	**82**	*e*Pb	**Pg**	**16 12 03.2**	**-1.5**
LKR				S	**Sg**	**16 12 19.1**	**+0.1**
THL	**Klokotos Trika**	**1.10**	**16**	P	**Pg**	**16 12 03.5**	**-1.3**
THL				S	**Sb**	**16 12 19.6**	**+0.6**
THL	**Klokotos Trika**	**1.10**	**16**	*e*PN	**Pg**	**16 12 04.2**	**-0.6**
THL				*e*SN	**Sn**	**16 12 20.5**	**+0.4**
THL	**Klokotos Trika**	**1.10**	**16**	P	**Pg**	**16 12 03.5**	**-1.3**
THL	**Klokotos Trika**	**1.10**	**16**	*e*Pn	**Pg**	**16 12 04.2**	**-0.6**
THL				S	**Sb**	**16 12 19.6**	**+0.6**
THL				*e*Sn	**Sn**	**16 12 20.5**	**+0.4**
ATAL	**Atalanti**	**1.12**	**80**	P	**Pg**	**16 12 03.7**	**-1.4**
ATAL				S	**Sg**	**16 12 19.3**	**-0.4**
ATAL	**Atalanti**	**1.12**	**80**	P	**Pg**	**16 12 03.7**	**-1.4**
ATAL				S	**Sg**	**16 12 19.3**	**-0.4**
LTK	**Loutraki**	**1.17**	**114**	P	**Pg**	**16 12 05.0**	**-1.1**
LTK				S	**Sb**	**16 12 22.0**	**+1.0**
LTK	**Loutraki**	**1.17**	**114**	*e*PN	**Pg**	**16 12 05.0**	**-1.1**
LTK	**Loutraki**	**1.17**	**114**	P	**Pg**	**16 12 05.0**	**-1.1**
LTK				S	**Sb**	**16 12 22.0**	**+1.0**
VLX	**Vlachokerasia**	**1.29**	**152**	P	**Pg**	**16 12 06.3**	**-2.0**
VLX				S	**Sn**	**16 12 26.3**	**+1.5**
VLX	**Vlachokerasia**	**1.29**	**152**	*e*PN	**Pg**	**16 12 06.8**	**-1.5**
VLX	**Vlachokerasia**	**1.29**	**152**	P	**Pg**	**16 12 06.3**	**-2.0**
VLX	**Vlachokerasia**	**1.29**	**152**	*e*Pn	**Pg**	**16 12 06.8**	**-1.5**
VLX				S	**Sn**	**16 12 26.3**	**+1.5**
JAN	**Janina**	**1.29**	**333**	P	**Pn**	**16 12 08.2**	**+0.6**
JAN				S	**Sn**	**16 12 26.7**	**+1.8**
JAN	**Janina**	**1.29**	**333**	*e*PN	**Pn**	**16 12 08.1**	**+0.5**
JAN	**Janina**	**1.29**	**333**	*e*Pn	**Pn**	**16 12 08.1**	**+0.5**
JAN				S	**Sn**	**16 12 26.7**	**+1.8**
MEV	**Metsovon**	**1.31**	**347**	P	**Pb**	**16 12 08.2**	**-0.1**
MEV	**Metsovon**	**1.31**	**347**	P	**Pb**	**16 12 08.2**	**-0.1**
ITM	**Ithomi**	**1.35**	**169**	P	**Pn**	**16 12 07.4**	**-0.9**
ITM				S	**Sn**	**16 12 28.0**	**+1.9**
ITM	**Ithomi**	**1.35**	**169**	*e*PN	**Pn**	**16 12 07.7**	**-0.6**
ITM	**Ithomi**	**1.35**	**169**	P	**Pn**	**16 12 07.4**	**-0.9**
ITM	**Ithomi**	**1.35**	**169**	*e*Pn	**Pn**	**16 12 07.7**	**-0.6**
ITM				S	**Sn**	**16 12 28.0**	**+1.9**
IGT	**Igoumenitsa**	**1.43**	**316**	P	**Pn**	**16 12 09.8**	**+0.4**
IGT	**Igoumenitsa**	**1.43**	**316**	P	**Pn**	**16 12 09.8**	**+0.4**
NEO	**Neokhori**	**1.49**	**57**	*e*PN	**Pn**	**16 12 10.6**	**+0.3**
NEO	**Neokhori**	**1.49**	**57**	*e*Pn	**Pn**	**16 12 10.6**	**+0.3**
XOR	**Xorichti**	**1.50**	**55**	P	**Pn**	**16 12 09.8**	**-0.7**
XOR	**Xorichti**	**1.50**	**55**	P	**Pn**	**16 12 09.8**	**-0.7**
MRKA	**Markates**	**1.56**	**82**	P	**Pn**	**16 12 11.3**	**+0.1**
MRKA	**Markates**	**1.56**	**82**	P	**Pn**	**16 12 11.3**	**+0.1**
PYL	**PYLOS**	**1.61**	**176**	*e*PN	**Pn**	**16 12 12.6**	**+0.7**
PYL	**PYLOS**	**1.61**	**176**	*e*Pn	**Pn**	**16 12 12.6**	**+0.7**
DID	**Didima**	**1.63**	**127**	P	**Pn**	**16 12 12.0**	**-0.1**
DID				S	**Sb**	**16 12 35.2**	**+1.1**
DID	**Didima**	**1.63**	**127**	*e*PN	**Pn**	**16 12 13.2**	**+1.1**
DID	**Didima**	**1.63**	**127**	P	**Pn**	**16 12 12.0**	**-0.1**
DID	**Didima**	**1.63**	**127**	*e*Pn	**Pn**	**16 12 13.2**	**+1.1**
DID				S	**Sb**	**16 12 35.2**	**+1.1**
DIDY	**Didyma**	**1.63**	**129**	P	**Pn**	**16 12 12.4**	**+0.2**
DIDY				S	**Sn**	**16 12 34.3**	**+1.1**
DIDY	**Didyma**	**1.63**	**129**	P	**Pn**	**16 12 12.4**	**+0.2**
DIDY				S	**Sn**	**16 12 34.3**	**+1.1**
NAIG	**Nisos Aigina**	**1.66**	**116**	*e*PN	**Pn**	**16 12 12.9**	**+0.4**
NAIG	**Nisos Aigina**	**1.66**	**116**	*e*Pn	**Pn**	**16 12 12.9**	**+0.4**
LIT	**Litokhoron**	**1.73**	**23**	P	**Pn**	**16 12 14.6**	**+1.0**
LIT	**Litokhoron**	**1.73**	**23**	P	**Pn**	**16 12 14.6**	**+1.0**
ATH	**Athens Observa**	**1.74**	**107**	P	**Pn**	**16 12 13.8**	**+0.1**
ATH	**Athens Observa**	**1.74**	**107**	*e*PB	**Pn**	**16 12 13.8**	**+0.1**
ATH	**Athens Observa**	**1.74**	**107**	*e*Pb	**Pn**	**16 12 13.8**	**+0.1**
ATHU	**Athens Univers**	**1.79**	**107**	P	**Pn**	**16 12 14.3**	**-0.1**
ATHU	**Athens Univers**	**1.79**	**107**	P	**Pn**	**16 12 14.3**	**-0.1**
KZN	**Kozani**	**1.80**	**4**	P	**Pb**	**16 12 16.6**	**0.0**
KZN	**Kozani**	**1.80**	**4**	*e*PN	**Pb**	**16 12 16.1**	**-0.5**
KZN	**Kozani**	**1.80**	**4**	*e*Pn	**Pb**	**16 12 16.1**	**-0.5**
KZN	**Kozani**	**1.80**	**4**	P	**Pb**	**16 12 16.6**	**0.0**
PTL	**Penteli**	**1.83**	**104**	*e*PB	**Pn**	**16 12 14.8**	**-0.2**
PTL	**Penteli**	**1.83**	**104**	*e*Pb	**Pn**	**16 12 14.8**	**-0.2**
DYR	**Agios Nikonas**	**1.83**	**162**	P	**Pn**	**16 12 16.1**	**+1.1**
DYR				S	**Sb**	**16 12 40.6**	**+0.6**
DYR	**Agios Nikonas**	**1.83**	**162**	*e*PN	**Pn**	**16 12 16.4**	**+1.4**
DYR	**Agios Nikonas**	**1.83**	**162**	P	**Pn**	**16 12 16.1**	**+1.1**
DYR	**Agios Nikonas**	**1.83**	**162**	*e*Pn	**Pn**	**16 12 16.4**	**+1.4**
DYR				S	**Sb**	**16 12 40.6**	**+0.6**
KEK	**Kerkira**	**1.85**	**311**	*e*PN	**Pb**	**16 12 16.6**	**-0.8**
KEK	**Kerkira**	**1.85**	**311**	*e*Pn	**Pb**	**16 12 16.6**	**-0.8**
SRN	**Sarande**	**1.86**	**318**	*e*PN	**Pg**	**16 12 17.8**	**-1.4**
SRN	**Sarande**	**1.86**	**318**	*e*Pn	**Pg**	**16 12 17.8**	**-1.4**
VLI	**Veliai**	**2.07**	**149**	*e*PN	**Pn**	**16 12 19.0**	**+0.8**
VLI	**Veliai**	**2.07**	**149**	*e*Pn	**Pn**	**16 12 19.0**	**+0.8**
KBN	**Korca**	**2.21**	**344**	*e*PN	**Pb**	**16 12 23.8**	**+0.3**
KBN	**Korca**	**2.21**	**344**	*e*Pn	**Pb**	**16 12 23.8**	**+0.3**
PLG	**Polygyros**	**2.35**	**37**	*e*PN	**Pn**	**16 12 22.5**	**+0.5**
PLG	**Polygyros**	**2.35**	**37**	*e*Pn	**Pn**	**16 12 22.5**	**+0.5**
KYTH	**Kithira**	**2.49**	**152**	*e*PB	**Pn**	**16 12 26.0**	**+1.9**
KYTH	**Kithira**	**2.49**	**152**	*e*Pb	**Pn**	**16 12 26.0**	**+1.9**
BIA	**Bitola**	**2.52**	**355**	*e*Pn	**Pn**	**16 12 26.2**	**+1.8**
VAY	**Valandovo**	**2.91**	**14**	*e*Pn	**Pn**	**16 12 31.0**	**+1.3**
VAY				*e*Sg	**Sb**	**16 12 39.4**	**-1.5**
TIR	**Tirane**	**3.14**	**335**	*e*PN	**Pg**	**16 12 43.6**	**-0.1**
PHP	**Peshkopia**	**3.30**	**345**	*e*PN	**Pn**	**16 12 38.0**	**+2.8**
PHP	**Peshkopia**	**3.30**	**345**	*e*Pn	**Pn**	**16 12 38.0**	**+2.8**
NVR	**Nevrokopi**	**3.33**	**31**	*e*PN	**Pn**	**16 12 36.2**	**+0.7**
NVR	**Nevrokopi**	**3.33**	**31**	*e*Pn	**Pn**	**16 12 36.2**	**+0.7**
VAM	**Vamos**	**3.72**	**145**	*e*PB	**Pn**	**16 12 43.9**	**+3.0**
PUK	**Puka**	**3.77**	**340**	*e*PN	**Pn**	**16 12 44.6**	**+3.0**
PUK	**Puka**	**3.77**	**340**	*e*Pn	**Pn**	**16 12 44.6**	**+3.0**
BCI	**Bajram Curri**	**4.03**	**344**	*e*PN	**Pn**	**16 12 46.9**	**+1.7**
BCI	**Bajram Curri**	**4.03**	**344**	*e*Pn	**Pn**	**16 12 46.9**	**+1.7**
VTS	**Vitosha**	**4.26**	**16**	*e*Pn	**Pn**	**16 12 51.1**	**+2.7**
VTS				*e*Sn	**Sn**	**16 13 36.9**	**-1.3**
VTS	**Vitosha**	**4.26**	**16**	*e*Pn	**Pn**	**16 12 51.1**	**+2.7**
VTS				*e*Sn	**Sn**	**16 13 36.9**	**-1.3**
BARS	**Barje**	**4.31**	**2**	*e*Pn	**Pn**	**16 12 51.4**	**+2.4**
BARS	**Barje**	**4.31**	**2**	*e*Pn	**Pn**	**16 12 51.4**	**+2.4**
SELS	**Selova**	**4.72**	**356**	*e*Pn	**Pn**	**16 12 57.0**	**+2.3**
ZAPS	**Zavoj**	**4.83**	**9**	*e*Pn	**Pn**	**16 12 58.9**	**+2.8**
STON	**Ston**	**5.28**	**327**	*e*PN	**Pn**	**16 12 59.9**	**-2.4**
STON				Sn	**Sn**	**16 13 59.6**	**-3.5**
STON	**Ston**	**5.28**	**327**	*e*Pn	**Pn**	**16 13 01.9**	**-0.4**
STON				*e*Sn	Sn	16 13 53.2	-10
STON	**Ston**	**5.28**	**327**	*e*Pn	**Pn**	**16 13 01.9**	**-0.4**
STON				Sn	**Sn**	**16 13 59.5**	**-3.5**
GRUS	**Gruza**	**5.42**	**353**	*e*Pn	**Pn**	**16 13 07.1**	**+2.9**
GRUS	**Gruza**	**5.42**	**353**	*e*Pn	**Pn**	**16 13 07.1**	**+2.9**
DIVS	**Divibare**	**5.72**	**348**	*e*Pn	**Pn**	**16 13 09.0**	**+0.6**
DIVS	**Divibare**	**5.72**	**348**	*e*Pn	**Pn**	**16 13 09.0**	**+0.6**
MLR	**Muntele Rosu**	**7.69**	**23**	Pn	**Pn**	**16 13 38.5**	**+3.0**
	0.2nm,0.3s,baz=239,slow=4.4,SNR=11						
GBRS	**Gornja Briga**	**8.65**	**326**	*i* P	**Pn**	**16 13 48.2**	**-0.4**
BRTR	**Keskin Array B**	**9.43**	**79**	Pn	**Pn**	**16 14 01.9**	**+2.5**
	0.3nm,0.3s,baz=257,slow=12,SNR=7.8						
MMAI	**Mount Meron Ar**	**12.47**	**112**	Pn	Pn	16 14 44.4	+3.5
	0.4nm,0.3s,baz=307,slow=12,SNR=2.7						
ESDC	**Sonseca Array**	**19.87**	**281**	P	**P**	**16 16 13.8**	**-0.9**
	0.3nm,0.3s,baz=86,slow=11,SNR=3.1						
HFS	**Hagfors**	**22.22**	**350**	P	**P**	**16 16 39.5**	**-0.3**
	1.0nm,0.4s,baz=165,slow=12,SNR=7.3						
HFS				LR	LR	16 25 45.6	
	comp=Z,28nm,20.4s,baz=63,slow=38						
FINES	**FINESS Array B**	**23.13**	**5**	P	**P**	**16 16 47.7**	**-1.7**
	2.0nm,0.9s,baz=183,slow=5.2,SNR=2.6						
NOA	**NORSAR Array B**	**23.48**	**347**	P	**P**	**16 16 50.7**	**-2.3**
	0.4nm,0.6s,baz=170,slow=12,SNR=3.1						
EKA	**Eskdalemuir Ar**	**23.67**	**323**	P	**P**	**16 16 53.5**	**-1.3**
	0.5nm,0.4s,baz=125,slow=9.2,SNR=6.3						
TORD	**Torodi Ar. Bea**	**30.83**	**220**	P	**P**	**16 17 59.8**	**+0.3**
	0.5nm,0.5s,baz=32,slow=8.4,SNR=9.0						
MKAR	**Makanchi Array**	**44.40**	**59**	P	**P**	**16 19 53.6**	**-0.4**
	0.7nm,0.4s,baz=276,slow=7.5,SNR=24						
ZALV	**Zalesovo Beam**	**44.83**	**48**	P	**P**	**16 19 59.1**	**+1.8**
	0.8nm,0.4s,baz=263,slow=7.8,SNR=4.7						

*NEIC **13** 16:12:32.4,19°.18N×66°.59W,h9km,mb5.0/97, MD4.9(RSPR),After RSPR.*
NEIC Felt [II] at San Juan. Also felt at Barranquitas, Bayamon, Canovanas, Carolina, Cidra, Corozal and Guaynabo.
*RSPR **13** 16:12:32.4,19°.18N×66°.59W,h9km±3km,MD5.0/18*
*ISCJB **13** 16:12:32.5±0.4,19°.11N±0°.03×66°.62W±0°.02,h35km±5km, mb4.8/173,MS4.5/33,Error ellipse: s-maj=4.9km s-min=3.0km az=12.6*
*MOS **13** 16:12:33.0±0.9,19°.08N×66°.67W,h40km,mb5.1/64, MS4.5/5,Error ellipse: s-maj=6.3km s-min=4.6km az=65.8*
*IDC **13** 16:12:34.8±0.5,19°.06N×66°.66W,h43km±4km,mb4.3/41, mb1 4.4/42,mb1mx4.4/44,mbtmp4.3/42,MS4.4/19, Ms1 4.4/19,ms1mx4.2/39,Error ellipse: s-maj=10.2km s-min=8.0km az=94.0*
*BJI **13** 16:12:35.6,19°.00N×66°.60W,h42km,mB5.2/5,Ms5.0/4, Ms7 4.8/4*
*GCMT **13** 16:12:35.9±0.2,19°.31N×66°.59W,h12km,MW4.9, Moment Tensor Solution. s40,c48; s87,c135; Moment tensor: Scale 10^16^Nm; Mrr~3.20±.08; Mθθ3.08±.07; Mφφ0.12±.09; Mrθ0.39±.23; Mrφ0.26±.07; Mθφ0.11±.31; Best double couple: M0 3.20000×10^16^ NP1:φ=86.00000°, δ41.00000°,λ=-88.00000°. NP2:φ=264.00000°,δ49.00000°, λ=-92.00000°. Principal axes: T 3.1300, Plg4.0000°, Azm355.0000°; N 0.1000, Plg1.0000°, Azm265.0000°; P -3.2300, Plg86.0000°, Azm155.0000°; Data Used: II IU IC G CN.*
*SZGRF **13** 16:12:35.1,18°.85N×66°.18W,h33km,mb5.0,Puerto Rico region*
*LDG **13** 16:12:41.6±0.6,18°.83N×66°.68W,h127km,Mb4.6/24, Ms4.1/9,Error ellipse: s-maj=27.8km s-min=14.7km az=84.0*

ISC 13 16:12:31.9±1.1,19°.10N±0°.03×66°.56W±0°.03,h17km±6km, n683,σ0§93/690,mb4.9/173,MS4.6/33,46C-19D,Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOPR	**Arecibo Observ**	**0.77**	**194**	*e*P	**Pg**	**16 12 47.1**	**+0.1**
AOPR	**Arecibo Observ**	**0.77**	**194**	*e*P	**Pg**	**16 12 47.3**	**+0.2**
AOPR				*e*S	**Sg**	**16 12 59.3**	**+1.9**
AOPR	**Arecibo Observ**	**0.77**	**194**	*e*S	**Sg**	**16 12 59.0**	**+1.7**
AOPR				*e*S	**Sb**	**16 12 59.6**	**+2.4**
AOPR	**Arecibo Observ**	**0.77**	**194**	*e*P	**Pg**	**16 12 47.1**	**+0.1**
AOPR				*e*S	**Sg**	**16 12 59.3**	**+1.9**
AGPR	**Aguadilla, PR**	**0.82**	**220**	*e*P	**Pg**	**16 12 46.4**	**-1.5**
AGPR	**Aguadilla, PR**	**0.82**	**220**	*e*S	**Sg**	**16 12 58.4**	**-0.4**
AGPR	**Aguadilla, PR**	**0.82**	**220**	*e*Pn	**Pg**	**16 12 46.4**	**-1.5**
LRS	**Lares**	**0.85**	**199**	*e*P	**Pg**	**16 12 47.9**	**-0.6**
LRS				*e*S	**Sg**	**16 13 01.3**	**+1.5**
LRS	**Lares**	**0.85**	**199**	*e*P	**Pg**	**16 12 47.9**	**-0.6**
AGP	**Aguadilla**	**0.89**	**219**	*e*Pn	Pg	16 12 46.7	-2.4
CELP	**Cerrillos**	**1.02**	**181**	*i* P	**Pg**	**16 12 50.8**	**-0.9**
CELP	**Cerrillos**	**1.02**	**181**	*i* Pu		16 12 50.8	
MPR	**Mayaguez**	**1.04**	**212**	*e*P	**Pg**	**16 12 50.3**	**-1.8**
MPR	**Mayaguez**	**1.04**	**212**	*e*S	**Sg**	**16 13 04.6**	**-1.2**
MPR	**Mayaguez**	**1.04**	**212**	*e*P	**Pg**	**16 12 50.3**	**-1.8**
MPR				*e*S	**Sg**	**16 13 04.6**	**-1.2**
LSP	**Las Mesas**	**1.05**	**209**	*e*P	**Pg**	**16 12 50.6**	**-1.6**
LSP	**Las Mesas**	**1.05**	**209**	*e*Pn	**Pg**	**16 12 50.7**	**-1.6**
OBIP	**Obispado Ponce**	**1.05**	**183**	*e*P	**Pb**	**16 12 51.9**	**+0.2**
OBIP	**Obispado Ponce**	**1.05**	**183**	*e*S	**Sg**	**16 13 05.9**	**-0.3**
OBIP				*e*S	**Sg**	**16 13 05.3**	**-0.9**
OBIP	**Obispado Ponce**	**1.05**	**183**	*e*P	**Pb**	**16 12 51.9**	**+0.2**
OBIP				*e*S	**Sg**	**16 13 05.9**	**-0.3**
SJG	**San Juan**	**1.06**	**159**	*e*P	**Pb**	**16 12 51.5**	**-0.3**
SJG	**San Juan**	**1.06**	**159**	*e*P	**Pb**	**16 12 51.5**	**-0.3**
SJG	**San Juan**	**1.06**	**159**	*e*P	**Pb**	**16 12 51.5**	**-0.3**
SJG				*e*S	**Sg**	**16 13 05.2**	**-1.1**
CBYP	**Canovanas**	**1.06**	**141**	*e*P	**Pb**	**16 12 51.2**	**-0.7**
CBYP	**Canovanas**	**1.06**	**141**	*e*P	**Pb**	**16 12 51.4**	**-0.5**
CBYP	**Canovanas**	**1.06**	**141**	*e*S	**Sg**	**16 13 06.3**	**-0.1**
CBYP	**Canovanas**	**1.06**	**141**	*e*Pn	**Pb**	**16 12 50.9**	**-1.0**
GBPR	**Guanica, Bosqu**	**1.16**	**195**	*e*P	**Pn**	**16 12 53.0**	**-0.3**
GBPR	**Guanica, Bosqu**	**1.16**	**195**	*e*Pn	**Pn**	**16 12 53.0**	**-0.3**
HUMP	**Col San Antoni**	**1.17**	**145**	*e*P	**Pn**	**16 12 52.8**	**-0.6**
HUMP	**Col San Antoni**	**1.17**	**145**	*e*S	**Sb**	**16 13 07.6**	**-0.9**
HUMP	**Col San Antoni**	**1.17**	**145**	*e*P	**Pn**	**16 12 52.9**	**-0.6**
HUMP				*e*S	**Sb**	**16 13 09.0**	**+0.6**
HUMP	**Col San Antoni**	**1.17**	**145**	*e*P	**Pn**	**16 12 52.8**	**-0.6**
HUMP				*e*S	**Sb**	**16 13 07.6**	**-0.9**
CRPR	**Cabo Rojo, PR**	**1.21**	**206**	*e*P	**Pn**	**16 12 53.8**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.21**	**206**	*e*S	**Sb**	**16 13 09.5**	**-0.2**
CRPR	**Cabo Rojo, PR**	**1.21**	**206**	*e*P	**Pn**	**16 12 53.8**	**-0.2**
CRPR				*e*S	**Sb**	**16 13 09.5**	**-0.2**
CPD	**Cerro la Pandu**	**1.22**	**150**	*e*P	**Pn**	**16 12 54.0**	**-0.2**
CPD	**Cerro la Pandu**	**1.22**	**150**	*e*P	**Pn**	**16 12 54.0**	**-0.2**
CPD				*e*S	**Sb**	**16 13 10.4**	**+0.3**
CPD	**Cerro la Pandu**	**1.22**	**150**	*e*P	**Pn**	**16 12 54.0**	**-0.2**
CPD				*e*S	**Sb**	**16 13 10.4**	**+0.3**
MTP	**Monte Pirata**	**1.38**	**136**	*e*P	**Pn**	**16 12 55.5**	**-0.9**
MTP	**Monte Pirata**	**1.38**	**136**	*e*S	**Sn**	**16 13 14.7**	**+0.4**
MTP	**Monte Pirata**	**1.38**	**136**	*e*P	**Pn**	**16 12 55.5**	**-0.9**
MTP				*e*S	**Sn**	**16 13 14.7**	**+0.4**
IMO	**Isla Mona**	**1.62**	**233**	*e*P	**Pn**	**16 12 59.3**	**-0.3**
IMO	**Isla Mona**	**1.62**	**233**	*e*P	**Pn**	**16 12 59.3**	**-0.3**
STVI	**Saint Thomas**	**1.69**	**116**	*e*P	**Pn**	**16 12 59.6**	**-1.1**
STVI	**Saint Thomas**	**1.69**	**116**	*e*P	**Pn**	**16 12 59.9**	**-0.7**
STVI	**Saint Thomas**	**1.69**	**116**	*e*S	**Sn**	**16 13 21.1**	**-0.8**
STVI	**Saint Thomas**	**1.69**	**116**	*e*P	**Pn**	**16 12 59.6**	**-1.1

comp=Z,11nm,0.9s
NNA Nana 32.51 199 P P 16 19 02.5 +0.4
NNA Nana 32.51 199 P P 16 19 02.5 +0.4
comp=Z,5.0nm,0.4s,baz=18,slow=6.4,SNR=3.3
NNA LR LR 16 33 38.2
comp=Z,316nm,21.9s,baz=330,slow=39
ABTX Abilene, Hawle 32.53 301 P P 16 19 01.8 -0.4
baz=32,SNR=8.6
631A Perdido Creek 32.56 295 P P 16 19 02.5 +0.1
baz=32,SNR=10
531A Rocksprings 32.69 296 ⇑P P 16 19 04.3 +0.8
baz=33,SNR=6.4
COWI Conover 32.74 330 *e*P **P 16 19 02.9 -0.8**
comp=Z,42nm,1.1s
331A San Angelo 32.84 298 P P 16 19 05.1 +0.3
baz=33
431A Sonora 32.85 297 P P 16 19 04.5 -0.5
baz=33,SNR=12
231A Bronte 32.90 300 ⇓P P 16 19 04.9 -0.4
baz=33
Z31A Sharp Cattle R 33.13 302 P P 16 19 07.8 +0.5
baz=33
530A J-C Ranch, Com 33.35 296 P P 16 19 09.2 -0.2
baz=33,SNR=16
430A Baggett Ranch, 33.40 297 P P 16 19 09.4 -0.3
baz=33,SNR=6.4
Y31A Rekieta Farm, 33.41 303 P P 16 19 10.4 +0.5
baz=33
330A Mertzon 33.48 298 ⇑P P 16 19 09.5 -1.0
baz=33,SNR=9.7
230A Sterling City 33.54 299 ⇓P P 16 19 10.8 -0.2
baz=34
Z30A Sanderson Ranc 33.91 302 ⇑P P 16 19 12.5 -1.7
baz=34
429A Davenport Ranc 33.92 297 P P 16 19 12.4 -1.9
baz=34,SNR=14
T31A Randall Ranch, 34.05 309 P P 16 19 15.4 +0.1
baz=34
529A Stev Forest Ra 34.10 296 P P 16 19 15.5 -0.4
baz=34,SNR=14
329A Wagon Wheel Ra 34.17 298 P P 16 19 15.4 -1.0
baz=34,SNR=10
Z29A Hungry Hill Ra 34.37 301 P P 16 19 18.3 0.0
baz=34
628A Black Gap, Mar 34.56 294 P P 16 19 20.0 +0.1
baz=34,SNR=30
528A Cox Ranch, San 34.59 296 P P 16 19 19.9 -0.3
baz=34,SNR=26
428A Kincaid Ranch, 34.61 297 P P 16 19 20.1 -0.2
baz=34
328A Wristen Ranch, 34.84 298 P P 16 19 21.4 -0.9
baz=35,SNR=10
128A Castleberry Fa 34.85 300 P P 16 19 21.9 -0.4
baz=35
627A Terlingua Ranc 34.99 294 P P 16 19 24.0 +0.4
baz=35,SNR=52
ECSD EROS Data Cent 35.18 321 *e*P **P 16 19 22.9 -2.1**
comp=Z,13nm,0.7s
EYMN Ely 35.19 331 *e*P **P 16 19 24.0 -1.0**
comp=Z,13nm,0.7s
LPAZ La Paz 35.20 183 P P 16 19 25.2 -0.8
LPAZ La Paz 35.20 183 P P 16 19 25.2 -0.8
comp=Z,18nm,1.1s,baz=10,slow=11,SNR=29
LPAZ LR LR 16 35 08.8
comp=Z,588nm,18.0s,baz=198,slow=38
TXAR Lajitas Array 35.21 294 P P 16 19 25.4 -0.2
TXAR pP pP 16 19 37.5 +6.6
TXAR PcP **PcP 16 21 56.8 +0.3**
TXAR pPcP 16 22 09.4
TXAR Lajitas Array 35.21 294 P P 16 19 25.4 -0.2
comp=Z,12nm,0.8s,baz=104,slow=9.1,SNR=60
TXAR pP pP 16 19 37.5 +6.6
comp=Z,31nm,0.9s,baz=108,slow=7.8,SNR=26
TXAR PcP **PcP 16 21 56.8 +0.3**
comp=Z,2.7nm,0.8s,baz=111,slow=4.9,SNR=4.7
TXAR pPcP 16 22 09.4
comp=Z,5.5nm,0.8s,baz=130,slow=5.2,SNR=4.9
TXAR LR LR 16 34 58.1
comp=Z,147nm,21.4s,baz=180,slow=38
427A Hayter Ranch, 35.24 297 P P 16 19 24.8 -1.0
baz=35,SNR=20
SIV San Ignacio 35.29 171 P P 16 19 24.4 -1.7
SIV San Ignacio 35.29 171 P P 16 19 24.4 -1.7
comp=Z,10nm,0.8s,baz=15,slow=9.6,SNR=33
SIV LR LR 16 34 28.8
comp=Z,1µm,18.3s,slow=37
527A Woodward Ranch 35.29 295 P P 16 19 25.8 -0.5
baz=35,SNR=35
127A Arkansas Junct 35.57 300 P P 16 19 28.7 0.0
baz=36
R29A Marienthal 35.63 310 P P 16 19 29.0 0.0
baz=36,SNR=7.8
626A Big Bend Ranch 35.65 294 P P 16 19 30.3 +1.0
baz=36,SNR=14
SCHQ Schefferville 35.67 360 P P 16 19 28.2 -0.8
SCHQ Schefferville 35.67 360 P P 16 19 28.2 -0.8
comp=Z,9.5nm,0.5s,baz=189,slow=7.0,SNR=26
SCHQ LR LR 16 33 47.0
comp=Z,771nm,18.9s,baz=275,slow=36
ARE Arequipa 35.67 188 P P 16 19 29.0 -0.7
ARE Arequipa 35.67 188 P P 16 19 29.0 -0.7
526A Mary Lane Ranc 35.69 295 P P 16 19 30.2 +0.5
baz=36,SNR=29
Y27A Causey 35.71 302 P P 16 19 29.1 -0.7
baz=36,SNR=6.8
426A McDonald Obser 35.73 296 P P 16 19 29.4 -0.7
baz=36,SNR=22
326A Caldwell Ranch 35.81 297 P P 16 19 30.5 -0.2
baz=36
126A Clayton Basin, 36.11 299 P P 16 19 32.9 -0.4
baz=36,SNR=8.4
U27A Thompson Grove 36.17 306 P P 16 19 33.7 -0.1
baz=36
425A Indio Mountain 36.57 296 P P 16 19 37.0 -0.2
baz=36,SNR=33
125A Gardner Draw, 36.64 299 P P 16 19 37.5 -0.3
baz=37,SNR=8.5
325A Bean Ranch, Si 36.65 297 P P 16 19 37.7 -0.3
baz=37,SNR=50
225A Deer Hill, Car 36.67 298 P P 16 19 37.4 -0.7
baz=37,SNR=16
V26A Tequesquite Ra 36.73 305 P P 16 19 38.5 0.0
baz=37,SNR=8.8
R27A Eads 36.78 309 P P 16 19 39.2 +0.2
baz=37
Z25A Roswell 36.82 300 P P 16 19 39.9 +0.5
baz=37
Y25A Mesa, Roswell 36.95 301 P P 16 19 41.1 +0.7
baz=37,SNR=7.8
S26A Kim 37.05 308 P P 16 19 41.7 +0.4
baz=37
MNTX Cornudas Mount 37.06 298 *e*P **P 16 19 39.7 -1.5**
comp=Z,16nm,0.8s
W25A X Bar L Ranch, 37.09 303 P P 16 19 41.8 +0.1
baz=37,SNR=5.2
324A Moseley Ranch, 37.10 297 P P 16 19 41.6 -0.1
baz=37,SNR=12
224A Cornudas Mount 37.24 298 P P 16 19 42.7 -0.2
baz=37,SNR=14
124A Stringfield Ra 37.31 299 P P 16 19 44.2 +0.7
baz=37,SNR=16
Z24A Sheeppen Canyo 37.36 300 P P 16 19 44.5 +0.4
baz=37,SNR=7.0
U25A Circle Dot Ran 37.38 305 P P 16 19 44.0 -0.2
baz=37,SNR=7.5
V25A Rancho No Teng 37.38 304 P P 16 19 43.8 -0.4
baz=37,SNR=10
Q26A Hugo 37.54 310 P P 16 19 45.7 +0.3
baz=38
Y24A Capitan 37.55 301 P P 16 19 46.5 +0.9
baz=38,SNR=6.1
AGMN Agassiz Nation 37.55 328 *e*P **P 16 19 43.5 -1.7**
comp=Z,21nm,0.7s
T25A Trinidad 37.61 307 P P 16 19 46.4 +0.4
baz=38
S25A Robets Cordova 37.79 307 P P 16 19 47.5 -0.1
baz=38,SNR=6.6
W24A Lazy 6 Ranch, 37.84 303 P P 16 19 48.6 +0.5
baz=38
J28A Allard Ranch, 37.87 318 P P 16 19 48.8 +0.8
baz=38
Y23A Lovelace Mesa, 38.06 301 P P 16 19 50.5 +0.6
baz=38
Z23A Rita Site, Whi 38.06 300 P P 16 19 50.3 +0.4
baz=38
S24A Houchin Ranch, 38.37 307 P P 16 19 53.2 +0.6
baz=38
W23A Werner Place, 38.42 303 P P 16 19 53.5 +0.6
baz=38
R24A Sanders Place, 38.48 308 P P 16 19 54.3 +0.9
baz=38,SNR=6.2
BNM Barren Site 38.57 301 *e*P **P 16 19 54.3 +0.1**
comp=Z,20nm,1.1s
ANMO Albuquerque 38.61 302 *e*P **P 16 19 54.1 -0.4**
comp=Z,7.8nm,1.0s
U23A El Rito 38.75 305 P P 16 19 56.4 +0.7
baz=39
ULM Lac du Bonnet 38.86 330 P P 16 19 54.6 -1.5
ULM Lac du Bonnet 38.86 330 P P 16 19 54.6 -1.5
comp=Z,12nm,0.7s,baz=126,slow=8.8,SNR=12
ULM LR LR 16 36 26.1
comp=Z,904nm,18.8s,baz=242,slow=37
BDFB Brasilia 39.05 151 P P 16 19 57.4 -0.8
BDFB Brasilia 39.05 151 P P 16 19 57.4 -0.8
comp=Z,7.5nm,0.6s,baz=298,slow=9.5,SNR=10
BDFB LR LR 16 36 46.3
comp=Z,922nm,19.3s,baz=0.1,slow=37
V22A San Miguel Ran 39.20 304 P P 16 20 00.0 +0.5
baz=39
121A Cookes Peak, D 39.21 298 P P 16 20 00.0 +0.5
baz=39
N24A Carr 39.21 312 P P 16 20 00.2 +0.7
baz=39
ISCO Idaho Springs 39.37 310 *e*P **P 16 20 00.9 -0.1**
ISCO pmax pmax
comp=Z,12nm,0.9s
ISCO Idaho Springs 39.37 310 *e*P **P 16 20 00.9 -0.1**
comp=Z,12nm,0.9s
ISCO Idaho Springs 39.37 310 P P 16 20 01.2 +0.3
baz=39,SNR=9.3
Y21A Point of Rocks 39.39 301 P P 16 20 01.6 +0.5
baz=39,SNR=15
M24A Cheyenne 39.42 313 P P 16 20 02.2 +1.0
baz=39
T22A Edith 39.48 305 P P 16 20 02.3 +0.4
baz=39
X21A Alamocita Cree 39.57 301 P P 16 20 03.7 +1.1
baz=40,SNR=6.0
W21A San Fidel 39.60 302 P P 16 20 03.7 +0.9
baz=40
S22A 4UR Ranch, Cre 39.63 307 P P 16 20 04.5 +1.4
baz=40
220A Playas Peak, P 39.73 297 P P 16 20 04.5 +0.6
baz=40,SNR=7.8
PHWY Pilot Hill 39.80 312 *e*P **P 16 20 04.3 -0.1**
comp=Z,23nm,1.2s
U21A Nageezi 39.91 304 P P 16 20 06.1 +0.6
baz=40,SNR=12
120A U Bar Ranch, L 39.92 298 P P 16 20 06.3 +0.9
baz=40
Y20A Horse Springs, 39.94 300 P P 16 20 06.3 +0.6
baz=40
Z20A Nine Sixteen R 39.98 299 P P 16 20 06.8 +0.9
baz=40
N23A Red Feather La 39.99 312 P P 16 20 07.0 +1.0
baz=40
M23A Laramie 40.04 312 P P 16 20 07.3 +0.9
baz=40
K22A Casper 41.04 314 P P 16 20 15.1 +0.5
baz=41
Q20A Ridgley Place, 41.08 308 P P 16 20 15.6 +0.6
baz=41,SNR=5.4
M21A Separation Pea 41.24 312 P P 16 20 16.4 +0.1
baz=41,SNR=6.8
J22A Midwest 41.30 315 P P 16 20 17.5 +0.7
baz=41,SNR=6.7
LVC Limon Verde 41.52 183 P P 16 20 16.3 -2.5
LVC Limon Verde 41.52 183 P P 16 20 16.3 -2.5
comp=Z,12nm,0.6s,baz=354,slow=7.4,SNR=16
LVC pP pP 16 20 29.4 +5.3
comp=Z,26nm,0.8s,baz=9.3,slow=7.3,SNR=12
N20A Spence Gulch, 41.62 311 P P 16 20 19.9 +0.4
baz=42
TUC Tucson 41.69 297 *e*P **P 16 20 17.8 -2.1**
TUC pmax pmax
comp=Z,14nm,1.2s
TUC Tucson 41.69 297 *e*P **P 16 20 17.8 -2.1**
comp=Z,14nm,1.2s
E23A Ismay 41.87 320 P P 16 20 22.3 +1.1
baz=42
G22A Birney 41.92 317 P P 16 20 22.4 +0.7
baz=42,SNR=5.8
J21A Lysite 41.93 314 P P 16 20 22.0 0.0
baz=42,SNR=7.2
I21A Big Trails, Te 42.00 315 P P 16 20 23.1 +0.6
baz=42
S18A Hurst Farm, Bl 42.03 305 P P 16 20 23.1 +0.2
baz=42
L20A Wamsutter 42.06 312 P P 16 20 23.1 0.0
baz=42
O19A Mirs Draw (B 42.08 309 P P 16 20 23.2 0.0
baz=42
K20A Yellowstone Ra 42.29 313 P P 16 20 25.0 +0.2
baz=42
J20A Shoshoni 42.36 314 P P 16 20 25.8 +0.4
baz=42,SNR=11
I20A Worland 42.61 315 P P 16 20 27.4 0.0
baz=42,SNR=5.8
WUAZ Wupatki 42.66 302 *e*P **P 16 20 27.7 -0.3**
comp=Z,37nm,0.9s
WUAZ Wupatki 42.66 302 P P 16 20 28.5 +0.5
baz=43
D22A Cohagen 42.70 320 P P 16 20 28.7 +0.7
baz=43,SNR=5.2
J19A Crowheart 42.99 314 P P 16 20 30.8 +0.3
baz=43,SNR=12
G20A Bridger 43.16 317 P P 16 20 31.2 -0.6
baz=43,SNR=5.3
D21A La Casta Ranch 43.16 320 P P 16 20 32.1 +0.4
baz=43
PDAR Pinedale Array 43.17 313 P P 16 20 30.4 -1.7
PDAR Pinedale Array 43.17 313 P P 16 20 30.4 -1.7
comp=Z,2.3nm,0.9s,baz=122,slow=7.7,SNR=12
PDAR LR LR 16 40 35.9
comp=Z,228nm,18.6s,baz=124,slow=39
BW06 Boulder Array 43.17 313 *e*P **P 16 20 30.9 -1.2**
comp=Z,9.8nm,1.0s
H19A Powell 43.45 316 P P 16 20 34.7 +0.5
baz=43
C21A Desert Coulee 43.56 321 P P 16 20 35.8 +0.8
baz=44
E20A Meyer Farm, Mu 43.63 318 P P 16 20 35.6 +0.1
baz=44
I18A Diamond G Ranc 43.66 314 P P 16 20 36.5 +0.5
baz=44,SNR=21
Y14A Wickenburg 43.74 299 P P 16 20 37.1 +0.5
baz=44
RLMT Red Lodge 43.81 316 *e*P **P 16 20 36.7 -0.5**
comp=Z,25nm,1.0s
D20A Manuel Ranch, 43.88 319 P P 16 20 37.9 +0.4
baz=44
F19A Roth Farm, Mol 43.88 317 P P 16 20 37.7 +0.1
baz=44
H18A Shoshone NF, C 43.91 315 P P 16 20 37.3 -0.7
baz=44,SNR=15
E19A Rath Farm, Rou 44.02 318 P P 16 20 38.9 +0.2
baz=44,SNR=11
G18A Lazy EL Ranch, 44.08 316 P P 16 20 39.7 +0.4
baz=44
LOHW Long Hollow 44.17 314 *e*P **P 16 20 39.4 -0.8**
comp=Z,21nm,0.9s
SNOW Snow King Moun 44.23 313 *e*P **P 16 20 40.6 +0.1**
comp=Z,36nm,1.0s
HWUT Hardware Ranch 44.23 311 *e*P **P 16 20 39.0 -1.6**
comp=Z,9.0nm,1.0s
MOOW Moose Ponds 44.31 314 *e*P **P 16 20 39.7 -1.5**
comp=Z,14nm,0.8s
TPAW Teton Pass 44.37 313 *e*P **P 16 20 40.5 -1.2**
comp=Z,18nm,0.9s
F18A Big Timber 44.40 317 P P 16 20 42.0 +0.3
baz=44,SNR=7.0
IMW Indian Meadow 44.49 314 *e*P **P 16 20 41.9 -0.9**
comp=Z,7.3nm,0.8s
RRI2 Red Ridge 44.58 313 *e*P **P 16 20 42.7 -0.7**
comp=Z,22nm,1.1s
FFC Flin Flon 44.60 331 *i* P **P 16 20 44.1 +1.0**
FFC Flin Flon 44.60 331 *e*P **P 16 20 41.2 -1.9**
comp=Z,8.3nm,0.7s
DUG Dugway 44.77 308 *e*P **P 16 20 43.6 -1.3**
DUG pmax pmax
comp=Z,12nm,1.3s
DUG Dugway 44.77 308 *e*P **P 16 20 43.5 -1.3**
comp=Z,12nm,1.3s
E18A Harlowton 44.78 318 P P 16 20 44.9 0.0
baz=45,SNR=5.8
I16A Newdale 44.86 314 P P 16 20 45.9 +0.3
baz=45,SNR=6.8
B19A Brinkman Farms 44.95 321 P P 16 20 46.8 +0.7
baz=45
F17A Fitzpatrick Pl 45.01 317 P P 16 20 47.3 +0.6
baz=45,SNR=14
QLMT Earthquake Lak 45.14 315 *e*P **P 16 20 48.8 +1.0**
EGMT Eagleton 45.26 320 *e*P **P 16 20 47.3 -1.3**
comp=Z,11nm,1.3s
EGMT Eagleton 45.26 320 P P 16 20 49.5 +1.0
baz=45
E17A Martinsdale 45.34 317 P P 16 20 50.0 +0.7
baz=45,SNR=7.6
B18A Beardsley Farm 45.43 320 P P 16 20 50.7 +0.9
baz=45
D17A Six Diamond Ra 45.49 318 P P 16 20 51.4 +0.9
baz=45,SNR=8.0
IRM Iron Mountain 45.54 299 P P 16 20 51.4 +0.5
baz=45,SNR=12
BOZ Bozeman (W) 45.55 316 *e*P **P 16 20 50.5 -0.5**
BOZ pmax pmax
comp=Z,21nm,1.0s
BOZ Bozeman (W) 45.55 316 *e*P **P 16 20 50.5 -0.5**
comp=Z,21nm,1.0s
C17A Wharram Farm, 45.73 319 P P 16 20 52.6 +0.3
baz=46,SNR=6.8
D16A Dana Ranch, Ca 45.99 318 P P 16 20 55.1 +0.7
baz=46,SNR=5.0
CPUP Villa Florida 46.04 168 P P 16 20 51.8 -3.0
comp=Z,3.8nm,0.6s,baz=338,slow=6.7,SNR=16
CPUP LR LR 16 42 10.2
comp=Z,545nm,18.3s,baz=336,slow=39
MCMT McKenzie Canyo 46.09 314 *e*P **P 16 20 55.4 0.0**
comp=Z,6.7nm,0.9s
DLMT Dillon 46.09 315 *e*P **P 16 20 54.2 -1.1**
comp=Z,30nm,1.0s
LRM Limekiln Ridge 46.15 316 *e*P **P 16 20 55.5 -0.4**
comp=Z,202nm,1.1s
F15A Butte 46.19 316 P P 16 20 56.7 +0.6
baz=46,SNR=11
I14A Mackay 46.23 313 P P 16 20 56.6 +0.2
baz=46,SNR=33
TUQ Turquoise Moun 46.32 301 P P 16 20 58.2 +1.0
baz=46,SNR=9.9
MONP Monument Peak 46.48 297 P P 16 20 59.2 +0.6
baz=46,SNR=11
B16A M & M Farms, S 46.62 319 P P 16 20 59.9 +0.7
baz=46,SNR=5.4
D15A Lincoln 46.62 317 P P 16 21 00.2 +0.9
baz=46
F14A Wisdom 46.76 316 P P 16 21 00.7 +0.2
baz=47,SNR=5.4
A16A West Butte Ran 46.76 320 P P 16 21 01.0 +0.6
baz=47
HLID Hailey 46.80 312 *e*P **P 16 20 59.7 -1.2**
comp=Z,11nm,1.0s
HLID Hailey 46.80 312 P P 16 21 01.2 +0.4
baz=47,SNR=20
C15A Salmond Ranch, 46.94 318 P P 16 21 03.0 +1.2
baz=47,SNR=15
GSC Goldstone 47.02 301 *e*P **P 16 21 03.7 +1.1**
GSC pmax pmax
comp=Z,22nm,1.1s
GSC Goldstone 47.02 301 *e*P **P 16 21 03.7 +1.1**
comp=Z,22nm,1.1s
GSC Goldstone 47.02 301 P P 16 21 03.3 +0.6
baz=47
CHMT Chamberlain Mo 47.04 317 *e*P **P 16 21 02.8 0.0**
comp=Z,8.8nm,1.0s
B15A Bradely Ranch, 47.10 319 P P 16 21 03.6 +0.5
baz=47
MURC Murrieta 47.18 298 P P 16 21 04.5 +0.6
baz=47
D14A Greenough 47.26 317 P P 16 21 04.7 +0.3
baz=47
SLMT Seeley Lake 47.31 317 *e*P P 16 21 01.6 -3.2
comp=Z,14nm,1.0s
I12A Atlanta 47.36 312 P P 16 21 05.2 -0.1
baz=47
H12A Diamond D Ranc 47.38 313 P P 16 21 05.5 +0.1
baz=47
A15A Johnson Ranch, 47.46 320 P P 16 21 06.8 +0.9
baz=47,SNR=10
MSO Missoula 47.46 317 *e*P **P 16 21 05.2 -0.8**
comp=Z,7.1nm,1.0s
BFSC Mount Baldy Ra 47.62 299 P P 16 21 07.6 +0.3
baz=48
C14A Swan Lake 47.65 318 P P 16 21 07.8 +0.4
baz=48
MPMC Manual Prospec 47.66 302 P P 16 21 08.6 +0.8
baz=48,SNR=6.1
SWMT Swartz Lake 47.73 318 *e*P **P 16 21 08.3 +0.4**
comp=Z,8nm,1.0s
MFID Camas Ranch 47.75 312 *e*P **P 16 21 08.5 +0.3**
comp=Z,10nm,0.8s
MFID Camas Ranch 47.75 312 P P 16 21 08.6 +0.3
baz=48,SNR=6.9
G12A Big Creek, Yel 47.86 314 P P 16 21 09.2 +0.1
baz=48
A14A Double T Ranch 47.88 320 P P 16 21 09.6 +0.5
baz=48
D13A Huson 47.88 317 P P 16 21 09.4 +0.3
baz=48,SNR=6.6
EDW2 Edwards Air Fo 47.95 300 P P 16 21 10.3 +0.5
baz=48,SNR=7.4
JTMT Jette 47.98 318 *e*P **P 16 21 09.7 -0.3**
comp=Z,11nm,1.5s
F12A Elk City 47.99 315 P P 16 21 09.6 -0.5
baz=48,SNR=14
C13A Hot Springs 48.15 318 P P 16 21 11.4 +0.3
baz=48
B13A Whitefish 48.31 319 P P 16 21 12.6 +0.2
baz=48
BSMT Bassoo Peak 48.34 318 *e*P **P 16 21 12.9 +0.1**
comp=Z,16nm,1.1s
E12A Beaver Dam Sad 48.40 316 P P 16 21 13.0 -0.2
baz=48,SNR=18
D12A Red Ives Fores 48.45 317 P P 16 21 13.8 +0.2
baz=48
NVAR Mina Array Bea 48.61 305 P P 16 21 14.3 -0.8
NVAR Mina Array Bea 48.61 305 P P 16 21 14.3 -0.8
comp=Z,6.2nm,1.0s,baz=91,slow=7.6,SNR=20
NVAR LR LR 16 46 01.4
comp=Z,220nm,18.1s,baz=21,slow=41
SFJD Kangerlussuaq 48.97 8 P P 16 21 16.3 -0.7
SFJD pP pP 16 21 29.3 +6.8
SFJD Kangerlussuaq 48.97 8 *i* P **P 16 21 17.9 +0.9**
comp=Z,6.8nm,0.8s
SFJD *i* 16 21 29.6
SFJD Kangerlussuaq 48.97 8 P P 16 21 16.3 -0.7
comp=Z,5.5nm,0.5s,baz=164,slow=7.5,SNR=4.4
SFJD pP pP 16 21 29.3 +6.8
comp=Z,13nm,0.8s,baz=193,slow=9.4,SNR=6.5
BMO Blue Mountains 49.14 313 *e*P **P 16 21 17.7 -1.2**
BMO pmax pmax
comp=Z,7.0nm,0.7s
BMO Blue Mountains 49.14 313 *e*P **P 16 21 17.7 -1.2**
comp=Z,6.6nm,0.7s
C11A Tepee Creek (N 49.27 317 P P 16 21 20.0 +0.2
baz=49,SNR=6.7
PKM Peak Mountain 49.45 300 P P 16 21 22.6 +1.2
baz=49
WVOR Wild Horse Val 49.54 310 *e*P **P 16 21 20.3 -1.7**
WVOR pmax pmax
comp=Z,12nm,1.1s
WVOR Wild Horse Val 49.54 310 *e*P **P 16 21 20.3 -1.7**
comp=Z,12nm,1.1s
NEW Newport 49.96 318 *e*P **P 16 21 23.3 -1.7**
comp=Z,36nm,1.0s
NEW Newport 49.96 318 P P 16 21 24.7 -0.3
baz=50,SNR=17
CMB Columbia Colle 50.19 304 *e*P **P 16 21 26.5 -0.4**
CMB pmax pmax
comp=Z,2.0nm,0.9s
CMB Columbia Colle 50.19 304 *e*P **P 16 21 26.5 -0.4**
comp=Z,2.1nm,0.9s
CFAA Coronel Fontan 50.44 182 P P 16 21 27.1 -1.7
CFAA Coronel Fontan 50.44 182 P P 16 21 27.1 -1.7
comp=Z,1.1nm,0.7s,baz=353,slow=6.3,SNR=19
CFAA pP pP 16 21 39.9 +5.7
comp=Z,2.7nm,0.8s,baz=360,slow=6.4,SNR=14
YBH Yreka Blue Hor 52.42 308 *e*P P 16 21 41.0 -2.7
comp=Z,3.0nm,0.6s
YBH Yreka Blue Hor 52.42 308 P P 16 21 41.7 -1.9
comp=Z,2.5nm,0.8s,baz=90,slow=4.7
HUMO Hull Mountain 52.72 309 *e*P **P 16 21 43.5 -2.3**
comp=Z,7.9nm,1.1s
YKA Yellowknife Ar 54.44 335 P P 16 21 56.1 -1.8
YKA Yellowknife Ar 54.44 335 P P 16 21 56.1 -1.8

comp=Z,6.5nm,0.8s,baz=111,slow=7.4,SNR=29
YKW3 Yellowknife Ar 54.48 335 *e*P **P 16 21 56.9 -1.4**
comp=Z,0.3nm,0.8s
SUMG Summit 55.84 10 *i* P **P 16 22 08.6 +0.1**
SUMG *i* *PP pP 16 22 20.8 +6.9
SUMG pmax pmax
comp=Z,18nm,0.9s
SUMG Summit 55.84 10 *e*P **P 16 22 07.5 -0.9**
comp=Z,46nm,1.0s
SUMG Summit 55.84 10 *i* P **P 16 22 08.6 +0.1**
comp=Z,18nm,0.9s
SUMG *i* pP pP 16 22 20.8 +6.9
MDT Midelt 56.63 63 P **P 16 22 15.4 +0.9**
MDT Midelt 56.63 63 P **P 16 22 15.4 +0.9**
comp=Z,3.8nm,0.9s,baz=280,slow=7.9,SNR=6.9
ESDC Sonseca Array 57.13 55 P **P 16 22 18.4 +0.6**
ESDC Sonseca Array 57.13 55 P **P 16 22 18.4 +0.6**
comp=Z,6.6nm,0.9s,baz=274,slow=7.0,SNR=28
ESDC LR LR 16 43 43.1
comp=Z,250nm,18.8s,baz=300,slow=33
ESLA Sonseca Array 57.13 55 *e*P **P 16 22 17.8 0.0**
comp=Z,3.5nm,1.0s
SJPF Ste Jean 59.30 51 *e*P **P 16 22 34.0 +1.1**
comp=Z,14nm,0.7s
SJPF *e*pP PcP 16 23 04.6 -16
SJPF Ste Jean 59.30 51 *e*P **P 16 22 34.0 +1.1**
SJPF pmax pmax
comp=Z,14nm,0.7s
SJPF Ste Jean 59.30 51 *e*P **P 16 22 34.0 +1.1**
comp=Z,14nm,0.7s
SJPF *e*pP PcP 16 23 04.6 -16
EKA Eskdalemuir Ar 59.41 36 P **P 16 22 33.3 -0.1**
EKA Eskdalemuir Ar 59.41 36 P **P 16 22 33.3 -0.1**
comp=Z,1.6nm,0.5s,baz=271,slow=5.9,SNR=12
PLCA Paso Flores 59.64 184 P P 16 22 33.8 -1.3
PLCA *e*P pP 16 22 46.4 +5.8
PLCA Paso Flores 59.64 184 P P 16 22 33.8 -1.3
comp=Z,4.5nm,0.8s,baz=13,slow=7.2,SNR=4.9
PLCA pP pP 16 22 46.4 +5.8
comp=Z,10.0nm,0.9s,baz=357,slow=7.4,SNR=6.5
PLCA LR LR 16 52 12.7
comp=Z,399nm,18.1s,baz=0.1,slow=40
ETSF Etsaut 59.78 51 *e*P **P 16 22 37.1 +0.8**
ETSF Etsaut 59.78 51 *e*P **P 16 22 37.1 +0.8**
ETSF Etsaut 59.78 51 *e*P **P 16 22 37.1 +0.8**
GRR Gorron 59.88 45 *e*P **P 16 22 37.4 +0.7**
GRR *e*pP PcP 16 23 08.4 -15
GRR Gorron 59.88 45 *e*P **P 16 22 37.4 +0.7**
GRR Gorron 59.88 45 *e*P **P 16 22 37.4 +0.7**
GRR *e*pP PcP 16 23 08.4 -15
DLBC Dease Lake 60.08 327 *e*P **P 16 22 37.4 -0.7**
FLN La Foliniere 60.16 44 *e*P **P 16 22 39.2 +0.6**
comp=Z,5.5nm,0.5s
FLN *e*pP PcP 16 23 10.4 -14
FLN *e*R
comp=Z,117nm,17.8s
FLN La Foliniere 60.16 44 *e*P **P 16 22 39.2 +0.6**
FLN pmax pmax
comp=Z,6.0nm,0.5s
FLN La Foliniere 60.16 44 *e*P **P 16 22 39.2 +0.6**
comp=Z,5.5nm,0.5s
FLN *e*pP PcP 16 23 10.4 -14
MFF Saint Martin d 60.23 47 *e*P **P 16 22 40.1 +0.9**
comp=Z,7.8nm,0.6s
MFF *e*pP PcP 16 23 10.9 -14
MFF Saint Martin d 60.23 47 *e*P **P 16 22 40.1 +0.9**
MFF pmax pmax
comp=Z,8.0nm,0.6s
MFF Saint Martin d 60.23 47 *e*P **P 16 22 40.1 +0.9**
comp=Z,7.8nm,0.6s
MFF *e*pP PcP 16 23 10.9 -14
LDF La Druitiere 60.38 44 *e*P **P 16 22 40.0 -0.2**
comp=Z,7.4nm,0.6s
LDF *e*pP PcP 16 23 11.9 -13
LDF La Druitiere 60.38 44 *e*P **P 16 22 40.0 -0.2**
LDF pmax pmax
comp=Z,7.0nm,0.6s
LDF La Druitiere 60.38 44 *e*P **P 16 22 40.0 -0.2**
comp=Z,7.4nm,0.6s
LDF *e*pP PcP 16 23 11.9 -13
EPF Esparros 60.45 51 *e*P **P 16 22 41.4 +0.6**
comp=Z,7.2nm,0.5s
EPF Esparros 60.45 51 *e*P **P 16 22 41.4 +0.6**
EPF pmax pmax
comp=Z,7.0nm,0.5s
EPF Esparros 60.45 51 *e*P **P 16 22 41.4 +0.6**
comp=Z,7.2nm,0.5s
LFF La Frestale 60.78 49 *e*P **P 16 22 43.7 +0.8**
LFF La Frestale 60.78 49 *e*P **P 16 22 43.7 +0.8**
LFF La Frestale 60.78 49 *e*P **P 16 22 43.7 +0.8**
LIC Lamto 61.10 93 *e*P **P 16 22 45.2 -0.4**
comp=Z,24nm,0.7s,baz=287
LIC *e*R
comp=Z,203nm,18.5s
LIC Lamto 61.10 93 *e*P **P 16 22 45.2 -0.4**
comp=Z,24nm,0.7s
DBIC Dimbokro 61.13 93 P **P 16 22 45.8 0.0**
DBIC Dimbokro 61.13 93 P **P 16 22 45.8 0.0**
comp=Z,24nm,0.7s,baz=271,slow=7.3,SNR=24
DBIC LR LR 16 46 11.8
comp=Z,287nm,19.5s,baz=255,slow=33
RJF Les Rejaudoux 61.34 48 *e*P **P 16 22 47.2 +0.4**
RJF *e*pP PcP 16 23 18.0 -11
RJF *e*R
comp=Z,180nm,19.2s
RJF Les Rejaudoux 61.34 48 *e*P **P 16 22 47.2 +0.4**
RJF Les Rejaudoux 61.34 48 *e*P **P 16 22 47.2 +0.4**
RJF *e*pP PcP 16 23 18.0 -11
CAF Calviac 61.72 49 *e*P **P 16 22 50.0 +0.6**
CAF *e*pP PcP 16 23 20.7 -10
CAF Calviac 61.72 49 *e*P **P 16 22 50.0 +0.6**
CAF Calviac 61.72 49 *e*P **P 16 22 50.0 +0.6**
CAF *e*pP PcP 16 23 20.7 -10
MTLF Montolieu 61.82 50 *e*P **P 16 22 50.6 +0.5**
MTLF Montolieu 61.82 50 *e*P **P 16 22 50.6 +0.5**
MTLF Montolieu 61.82 50 *e*P **P 16 22 50.6 +0.5**
TCF Toulx Ste Croi 61.84 47 *e*P **P 16 22 50.6 +0.4**
comp=Z,5.5nm,0.6s
TCF *e*pP PcP 16 23 20.4 -11
TCF Toulx Ste Croi 61.84 47 *e*P **P 16 22 50.6 +0.4**
TCF pmax pmax
comp=Z,6.0nm,0.6s
TCF Toulx Ste Croi 61.84 47 *e*P **P 16 22 50.6 +0.4**
comp=Z,5.5nm,0.6s
TCF *e*pP PcP 16 23 20.4 -11
DAG Danmarks Havn 62.45 11 *i* P **P 16 22 53.8 +0.1**
DAG *i* 16 23 05.2
DAG pmax pmax
comp=Z,8.0nm,0.8s
DAG Danmarks Havn 62.45 11 *i* P **P 16 22 53.8 +0.1**
comp=Z,10.0nm,0.8s
DAG *i* 16 23 05.2
AVF Avril sur Loir 62.64 47 *e*P **P 16 22 55.7 +0.2**
comp=Z,14nm,1.0s
AVF Avril sur Loir 62.64 47 *e*P **P 16 22 55.7 +0.2**
AVF pmax pmax
comp=Z,15nm,1.0s
AVF Avril sur Loir 62.64 47 *e*P **P 16 22 55.7 +0.2**
comp=Z,14nm,1.0s
SSF Saint Saulge 62.75 46 *e*P **P 16 22 57.2 +1.0**
comp=Z,16nm,1.0s
SSF *e*pP PcP 16 23 27.2 -7.5
SSF Saint Saulge 62.75 46 *e*P **P 16 22 57.2 +1.0**
SSF pmax pmax
comp=Z,16nm,1.0s
SSF Saint Saulge 62.75 46 *e*P **P 16 22 57.2 +1.0**
comp=Z,16nm,1.0s
SSF *e*pP PcP 16 23 27.2 -7.5
SMF Signal de Mont 62.98 47 *e*P **P 16 22 57.9 +0.1**
comp=Z,21nm,1.1s
SMF Signal de Mont 62.98 47 *e*P **P 16 22 57.9 +0.1**
SMF pmax pmax
comp=Z,21nm,1.1s
SMF Signal de Mont 62.98 47 *e*P **P 16 22 57.9 +0.1**
comp=Z,21nm,1.1s
LOR Lormes 62.99 46 *e*P **P 16 22 58.0 +0.1**
comp=Z,7.2nm,0.6s
LOR *e*pP PcP 16 23 28.8 -6.9
LOR *e*R
comp=Z,262nm,19.5s
LOR Lormes 62.99 46 *e*P **P 16 22 58.0 +0.1**
comp=Z,7.2nm,0.6s
LOR *e*pP PcP 16 23 28.8 -6.9
LASF Ste Croix 63.00 50 *e*P **P 16 22 58.5 +0.5**
comp=Z,7.0nm,0.8s
LASF Ste Croix 63.00 50 *e*P **P 16 22 58.5 +0.5**
comp=Z,7.0nm,0.8s
BAIF Baives 63.29 43 *e*P **P 16 22 59.8 +0.1**
BAIF Baives 63.29 43 *e*P **P 16 22 59.8 +0.1**
BAIF Baives 63.29 43 *e*P **P 16 22 59.8 +0.1**
VIVF Saint-Julien-l 63.57 49 *e*P **P 16 23 03.2 +1.4**
comp=Z,20nm,1.0s
VIVF *e*pP PcP 16 23 33.9 -4.3
VIVF Saint-Julien-l 63.57 49 *e*P **P 16 23 03.2 +1.4**
VIVF *e**PP PcP 16 23 33.9 -4.3
VIVF pmax pmax
comp=Z,20nm,1.0s
VIVF Saint-Julien-l 63.57 49 *e*P **P 16 23 03.2 +1.4**
comp=Z,20nm,1.0s
VIVF *e*pP PcP 16 23 33.9 -4.3
GIVF Givet 63.69 43 *e*P **P 16 23 02.4 +0.1**
GIVF *e*pP PcP 16 23 33.7 -4.8
GIVF Givet 63.69 43 *e*P **P 16 23 02.4 +0.1**
GIVF *e**PP PcP 16 23 33.7 -4.8
GIVF Givet 63.69 43 *e*P **P 16 23 02.4 +0.1**
GIVF *e*pP PcP 16 23 33.7 -4.8
SFTF Sexfontaines 63.80 45 *e*P **P 16 23 03.5 +0.3**
SFTF *e*pP PcP 16 23 34.4 -4.6
SFTF Sexfontaines 63.80 45 *e*P **P 16 23 03.5 +0.3**
SFTF *e*pP PcP 16 23 34.4 -4.6
MEZF Maizieres J'vi 63.81 45 *e*P **P 16 23 03.8 +0.6**
comp=Z,26nm,0.6s
MEZF *e*pP PcP 16 23 34.6 -4.4
MEZF Maizieres J'vi 63.81 45 *e*P **P 16 23 03.8 +0.6**
comp=Z,26nm,0.6s
MEZF *e*pP PcP 16 23 34.6 -4.4
PAGF Fort de Pagny 64.26 45 *e*P **P 16 23 06.0 -0.2**
PAGF Fort de Pagny 64.26 45 *e*P **P 16 23 06.0 -0.2**
ORIF Oris-en-Rattie 64.43 49 *e*P **P 16 23 08.8 +1.3**
comp=Z,12nm,0.8s
ORIF *e*R
comp=Z,110nm,19.2s
ORIF Oris-en-Rattie 64.43 49 *e*P **P 16 23 08.8 +1.3**
ORIF pmax pmax
comp=Z,12nm,0.8s
ORIF Oris-en-Rattie 64.43 49 *e*P **P 16 23 08.8 +1.3**
comp=Z,12nm,0.8s
THEF They Montfort 64.43 45 *e*P **P 16 23 08.1 +0.8**
THEF They Montfort 64.43 45 *e*P **P 16 23 08.1 +0.8**
THEF They Montfort 64.43 45 *e*P **P 16 23 08.1 +0.8**
CABF La Chapelle 64.53 47 *e*P **P 16 23 08.3 +0.2**
comp=Z,13nm,0.9s
CABF La Chapelle 64.53 47 *e*P **P 16 23 08.3 +0.2**
CABF pmax pmax
comp=Z,13nm,0.9s
CABF La Chapelle 64.53 47 *e*P **P 16 23 08.3 +0.2**
comp=Z,13nm,0.9s
WLF Walferdange 64.54 43 P **P 16 23 09.0 +1.0**
comp=Z,8.1nm,1.6s
HAU Haudompre 64.68 45 *e*P **P 16 23 09.0 +0.1**
HAU *e*R
comp=Z,231nm,18.5s
HAU Haudompre 64.68 45 *e*P **P 16 23 09.0 +0.1**
HAU Haudompre 64.68 45 *e*P **P 16 23 09.0 +0.1**
LMR La Mourre 64.95 50 *e*P **P 16 23 11.2 +0.4**
LMR La Mourre 64.95 50 *e*P **P 16 23 11.2 +0.4**
LMR La Mourre 64.95 50 *e*P **P 16 23 11.2 +0.4**
BNI Bardonecchia 64.99 48 *e*P **P 16 23 10.6 -0.6**
BNI pmax pmax
comp=Z,11nm,1.4s
BNI Bardonecchia 64.99 48 *e*P **P 16 23 10.6 -0.6**
comp=Z,11nm,1.4s
LPL La Plagne 65.01 48 *e*P **P 16 23 12.4 +1.0**
comp=Z,13nm,0.9s
LPL *e*pP **PcP 16 23 43.0 -1.3**
LPL La Plagne 65.01 48 *e*P **P 16 23 12.4 +1.0**
LPL *e**PP **PcP 16 23 43.0 -1.3**
LPL pmax pmax
comp=Z,13nm,0.9s
LPL La Plagne 65.01 48 *e*P **P 16 23 12.4 +1.0**
comp=Z,13nm,0.9s
LPL *e*pP **PcP 16 23 43.0 -1.3**
LOMF Lomont 65.01 46 *e*P **P 16 23 12.6 +1.4**
LOMF Lomont 65.01 46 *e*P **P 16 23 12.6 +1.4**
LOMF Lomont 65.01 46 *e*P **P 16 23 12.6 +1.4**
HINF Hinteralfeld 65.02 45 *e*P **P 16 23 11.1 -0.1**
HINF *e*pP PcP 16 23 39.5 -4.6
HINF Hinteralfeld 65.02 45 *e*P **P 16 23 11.1 -0.1**
HINF *e**PP PcP 16 23 39.5 -4.6
HINF Hinteralfeld 65.02 45 *e*P **P 16 23 11.1 -0.1**
HINF *e*pP PcP 16 23 39.5 -4.6
LPG La Plagne 65.02 48 *e*P **P 16 23 12.6 +1.0**
LPG La Plagne 65.02 48 *e*P **P 16 23 12.6 +1.0**
LPG La Plagne 65.02 48 *e*P **P 16 23 12.6 +1.0**
FRF La Foret Royal 65.04 50 *e*P **P 16 23 11.9 +0.6**
FRF La Foret Royal 65.04 50 *e*P **P 16 23 11.9 +0.6**
FRF La Foret Royal 65.04 50 *e*P **P 16 23 11.9 +0.6**
MBDF Montbardon 65.07 49 *e*P **P 16 23 12.2 +0.5**
MBDF Montbardon 65.07 49 *e*P **P 16 23 12.2 +0.5**
MBDF Montbardon 65.07 49 *e*P **P 16 23 12.2 +0.5**
RUP Ruppelstein 65.13 43 *e*P **P 16 23 13.1 +1.2**
RUP Ruppelstein 65.13 43 *e*P **P 16 23 13.1 +1.2**
MOF Molkenrain 65.21 45 *e*P **P 16 23 13.1 +0.6**
MOF Molkenrain 65.21 45 *e*P **P 16 23 13.1 +0.6**
MOF Molkenrain 65.21 45 *e*P **P 16 23 13.1 +0.6**
ECH Echery 65.22 45 *e*P P 16 23 10.4 -2.1
ECH pmax pmax
comp=Z,8.0nm,1.0s
ECH Echery 65.22 45 *e*P P 16 23 10.3 -2.1
comp=Z,8.5nm,1.0s
BUG Bochum--Univer 65.26 41 *e*P **P 16 23 12.8 +0.2**
comp=Z,8.0nm,0.8s
CDF Champ du Feu 65.29 45 *e*P **P 16 23 13.2 +0.2**
comp=Z,11nm,1.0s
CDF Champ du Feu 65.29 45 *e*P **P 16 23 13.2 +0.2**
CDF pmax pmax
comp=Z,11nm,1.0s
CDF Champ du Feu 65.29 45 *e*P **P 16 23 13.2 +0.2**
comp=Z,11nm,1.0s
ABH Alteburg 65.44 43 *e*P **P 16 23 14.8 +0.9**
BBS Basel-Blauen 65.47 46 *e*P **P 16 23 14.6 +0.4**
BBS Basel-Blauen 65.47 46 *e*P **P 16 23 14.6 +0.4**
TOA0 Torodi Ar. Sit 65.49 84 *e*P **P 16 23 14.2 -0.6**
TORD Torodi Ar. Bea 65.49 84 P **P 16 23 14.2 -0.5**
TORD Torodi Ar. Bea 65.49 84 P **P 16 23 14.2 -0.5**
comp=Z,14nm,0.9s,baz=289,slow=7.0,SNR=44
TORD LR LR 16 49 35.7
comp=Z,549nm,19.4s,baz=285,slow=34
IBBN Ibbenburen 65.56 40 *e*P **P 16 23 14.8 +0.3**
comp=Z,27nm,1.4s
SBF Sospel 65.59 50 *e*P **P 16 23 15.5 +0.5**
comp=Z,23nm,0.8s
SBF Sospel 65.59 50 *e*P **P 16 23 15.5 +0.5**
SBF pmax pmax
comp=Z,23nm,0.8s
SBF Sospel 65.59 50 *e*P **P 16 23 15.5 +0.5**
comp=Z,23nm,0.8s
LANF Langenberg 65.63 44 *e*P **P 16 23 15.7 +0.6**
LANF Langenberg 65.63 44 *e*P **P 16 23 15.7 +0.6**
LANF Langenberg 65.63 44 *e*P **P 16 23 15.7 +0.6**
FELD Feldberg im Sc 65.79 45 *e*P **P 16 23 16.5 +0.2**
BFO Black Forest 66.00 45 *e*P **P 16 23 17.2 -0.3**
comp=Z,16nm,2.2s
BFO Black Forest 66.00 45 *e*P **P 16 23 17.2 -0.3**
BFO pmax pmax
comp=Z,16nm,2.2s
TNS Taunus Mts 66.02 43 *e*P **P 16 23 18.0 +0.4**
comp=Z,8.0nm,1.2s
TNS Taunus Mts 66.02 43 *e*P **P 16 23 18.0 +0.4**
TNS pmax pmax
comp=Z,8.0nm,1.2s
SPAK Spaichingen-Ko 66.31 45 *e*P **P 16 23 20.2 +0.6**
TAM Tamanrasset 66.81 73 *e*P **P 16 23 23.4 +0.1**
TAM pmax pmax
comp=Z,16nm,1.1s
TAM Tamanrasset 66.81 73 *e*P **P 16 23 23.4 +0.1**
comp=Z,16nm,1.1s
PGF Pioggiola 66.83 51 *e*P **P 16 23 23.1 +0.1**
comp=Z,18nm,0.7s
PGF Pioggiola 66.83 51 *e*P **P 16 23 23.1 +0.1**
PGF pmax pmax
comp=Z,18nm,0.7s
PGF Pioggiola 66.83 51 *e*P **P 16 23 23.1 +0.1**
comp=Z,18nm,0.7s
BSEG Bad Segeberg 67.09 39 *e*P **P 16 23 24.8 +0.5**
comp=Z,19nm,1.2s
BSEG Bad Segeberg 67.09 39 *e*P **P 16 23 24.8 +0.5**
BSEG pmax pmax
comp=Z,19nm,1.2s
DAVOX Davos/Dischmat 67.12 46 P **P 16 23 25.2 +0.3**
DAVOX Davos/Dischmat 67.12 46 P **P 16 23 25.2 +0.3**
comp=Z,4.4nm,0.8s,baz=206,slow=6.2,SNR=5.9
CLZ Clausthal 67.18 41 *e*P **P 16 23 25.4 +0.4**
comp=Z,12nm,1.1s
CLZ Clausthal 67.18 41 *e*P **P 16 23 25.4 +0.4**
CLZ pmax pmax
comp=Z,12nm,1.1s
DOT Dot Lake 67.52 332 *e*P **P 16 23 26.6 -0.3**
comp=Z,30nm,1.3s
NB2 NORSAR Subarra 67.56 31 P **P 16 23 27.6 +0.4**
comp=Z,12nm,1.1s,baz=267,slow=6.2
NOA NORSAR Array B 67.56 31 P **P 16 23 27.6 +0.4**
NOA pP pP 16 23 39.8 +7.0
NOA NORSAR Array B 67.56 31 P **P 16 23 27.6 +0.4**
comp=Z,4.5nm,0.9s,baz=270,slow=6.4,SNR=10
NOA pP pP 16 23 39.8 +7.0
comp=Z,4.8nm,0.9s,baz=270,slow=6.4,SNR=7.4
RETA Reutte 67.68 46⇑ *i*P **P 16 23 28.8 +0.5**
comp=Z,12nm,1.0s,SNR=7.0
FETA Feichten 67.69 46⇑ *i*P **P 16 23 29.2 +0.7**
comp=Z,14nm,0.7s,SNR=9.1
GRF Grafenberg Arr 67.83 43 *e*P **P 16 23 29.4 +0.3**
comp=Z,10.0nm,1.3s
GRF Grafenberg Arr 67.83 43 *e*P **P 16 23 29.4 +0.3**
GRF pmax pmax
comp=Z,10.0nm,1.3s
GRF MLR MLR
comp=Z,400nm,19.1s
KEST Kesra 67.88 58 P **P 16 23 29.6 -0.2**
KEST Kesra 67.88 58 P **P 16 23 29.6 -0.2**
comp=Z,1.3nm,0.6s,baz=99,slow=6.8,SNR=4.3
MOTA Moosalm 67.92 46⇑ *i*P **P 16 23 30.1 +0.2**
comp=Z,10nm,0.9s,SNR=6.7
MOX Moxa 68.02 42 *e*P **P 16 23 30.6 +0.3**
comp=Z,25nm,2.5s
MOX Moxa 68.02 42 *e*P **P 16 23 30.6 +0.3**
MOX pmax pmax
comp=Z,25nm,2.5s
NEUB Neuenburg 68.09 42 *e*P **P 16 23 31.0 +0.3**
comp=Z,14nm,0.9s
PAX Paxson 68.13 331 *e*P **P 16 23 29.8 -1.1**
PAX pmax pmax
comp=Z,8.0nm,0.9s
PAX Paxson 68.13 331 *e*P **P 16 23 29.8 -1.1**
comp=Z,7.7nm,0.9s
PLN Plauen 68.38 42 *e*P **P 16 23 32.7 +0.2**
comp=Z,41nm,1.3s
MANZ Manzenberg 68.38 43 *e*P **P 16 23 32.7 +0.1**
comp=Z,15nm,1.0s
ROTZ Rotzenmuhle 68.46 43 *e*P **P 16 23 33.6 +0.5**
comp=Z,9.0nm,1.1s
WERD Werda 68.47 42 *e*P **P 16 23 33.2 0.0**
comp=Z,5.0nm,1.1s
TANN Tannenbergstha 68.58 42 *e*P **P 16 23 34.0 +0.2**
comp=Z,7.0nm,1.1s
NKC Novy Kostel 68.58 43 *e*P **P 16 23 34.2 +0.4**
NKC MLR MLR
comp=Z,300nm,18.0s
NKC Novy Kostel 68.58 43 *e*P **P 16 23 34.2 +0.4**
NKC AMS AMS 16 50 30.0
comp=Z,300nm,18.0s
ILAR Eielson Array 68.78 333 P **P 16 23 33.1 -1.6**
ILAR Eielson Array 68.78 333 P **P 16 23 33.1 -1.6**
comp=Z,2.3nm,0.7s,baz=101,slow=4.8,SNR=23
ILAR LR LR 16 54 39.1
comp=Z,1μm,19.7s,baz=106,slow=37
HFS Hagfors 68.79 32 P **P 16 23 34.8 -0.1**
HFS Hagfors 68.79 32 P **P 16 23 34.8 -0.1**
comp=Z,3.5nm,0.9s,baz=249,slow=1.3,SNR=6.7
CLL Collm 68.85 41 *e*P **P 16 23 35.6 +0.2**
comp=Z,8.0nm,1.0s
CLL Collm 68.85 41 *e*P **P 16 23 35.0 -0.4**
CLL *e* 16 23 48.0
CLL pmax pmax
comp=Z,8.0nm,1.0s
CLL MLR MLR
comp=Z,300nm,20.7s
CLL Collm 68.85 41 *e*P **P 16 23 35.0 -0.4**
comp=Z,8.0nm,1.0s
CLL *e* 16 23 48.0
CLL *e*PPS PPS 16 33 36.0
CLL *e*SS SS 16 37 36.0 +32
CLL Lm MLR 16 50 00.0
comp=Z,300nm,20.7s
ABTA Abfaltersbach 68.93 46⇑ *i*P **P 16 23 35.7 -0.4**
comp=Z,10.0nm,1.1s
WET Wettzell 68.95 44 *e*P **P 16 23 36.3 +0.1**
comp=Z,6.0nm,0.9s
WET Wettzell 68.95 44 *e*P **P 16 23 36.3 +0.1**
WET pmax pmax
comp=Z,6.0nm,0.9s
FBE Freiberg 69.10 42 *e*P **P 16 23 37.5 +0.5**
comp=Z,16nm,1.0s
KHC Kasperske Hory 69.41 44 *e*P **P 16 23 39.4 +0.4**
KHC *e* 16 23 51.6
KHC MLR MLR
comp=Z,200nm,16.4s
KHC Kasperske Hory 69.41 44 *e*P **P 16 23 39.4 +0.4**
KHC *ex* x 16 23 51.6
KHC AMS AMS 16 52 50.0
comp=Z,200nm,16.4s
KHC Kasperske Hory 69.41 44 *e*P **P 16 23 38.0 -1.0**
comp=Z,8.2nm,0.9s
KBA Koelnbreinsper 69.46 46⇑ *i*P **P 16 23 39.8 +0.2**
comp=Z,9.7nm,1.0s
BRG Berggiesshubel 69.48 42 *e*P **P 16 23 39.6 +0.3**
comp=Z,11nm,1.0s
BRG *e* 16 23 52.2
comp=Z,5.4nm,1.0s
BRG
comp=Z,316nm,21.0s
BRG
comp=N,143nm,19.1s
BRG
comp=E,304nm,19.1s
BRG Berggiesshubel 69.48 42 *e*P **P 16 23 39.6 +0.3**
comp=Z,11nm,1.0s
BRG Berggiesshubel 69.48 42 *e*P **P 16 23 39.6 +0.3**
BRG *e* 16 23 52.2
BRG pmax pmax
comp=Z,11nm,1.0s
BRG pmax pmax
comp=Z,5.0nm,1.0s
BRG MLR MLR
comp=Z,316nm,21.0s
BRG MLR MLR
comp=N,143nm,19.1s
BRG MLR MLR
comp=E,304nm,19.1s
GEC2 GERESS Array S 69.52 44 *e*P **P 16 23 39.8 0.0**
comp=Z,5.0nm,1.1s
GEC2 GERESS Array S 69.52 44 *e*P **P 16 23 39.8 0.0**
GEC2 pmax pmax
comp=Z,5.0nm,1.1s
GERES GERESS Array B 69.52 44 P **P 16 23 39.0 -0.8**
GERES GERESS Array B 69.52 44 P **P 16 23 39.0 -0.8**
comp=Z,1.3nm,0.6s,baz=280,slow=7.7,SNR=9.5
MYKA Terra Mystica 69.72 46⇑ *i*P **P 16 23 40.0 -1.0**
comp=Z,6.5nm,0.9s
CADS Cadrg 69.83 47 *i* P **P 16 23 42.0 +0.3**
PRA Prague 69.87 43 P **P 16 23 42.0 +0.2**
PRU Pruhonice 69.95 43 *e*P **P 16 23 42.6 +0.3**
PRU *e* 16 23 54.8
PRU MLR MLR
comp=Z,200nm,16.9s
PRU Pruhonice 69.95 43 *e*P **P 16 23 42.6 +0.3**
PRU *ex* x 16 23 54.8
PRU AMS AMS 16 51 30.0
comp=Z,200nm,16.9s
TRF Thorofare Moun 70.31 332 *e*P **P 16 23 42.3 -2.1**
comp=Z,28nm,1.1s
OBKA Obir 70.35 46⇑ *i*P **P 16 23 45.8 +0.9**
comp=Z,11nm,0.8s,SNR=7.1
CEY Cerknica 70.37 47 *i* P **P 16 23 45.5 +0.5**
TREC Trest 70.64 43 AMS AMS 16 54 10.0
comp=Z,300nm,18.2s
SOKA Soboth 70.66 46⇑ *i*P **P 16 23 46.3 -0.5**
comp=Z,8.5nm,1.3s
UPC Upice 70.83 42 *e*P **P 16 23 48.1 +0.5**
UPC Upice 70.83 42 *e*P **P 16 23 48.1 +0.5**
DPC Dobruska-Polom 71.04 42 *e*P **P 16 23 48.9 -0.1**
DPC *e* 16 24 02.1
DPC Dobruska-Polom 71.04 42 *e*P **P 16 23 48.9 -0.1**
DPC *ex* x 16 24 02.1
CSNA Conrad Observa 71.05 45⇑ *i*P **P 16 23 48.9 -0.3**

comp=Z,4.6nm,1.4s
PPLA Purkeypile 71.21 331 *e*P **P 16 23 50.0 +0.1**
comp=Z,35nm,1.3s
VRAC Vranov 71.35 43 P **P 16 23 50.6 -0.2**
VRAC pP PcP 16 24 03.8 -6.7
VRAC Vranov 71.35 43 P **P 16 23 50.6 -0.2**
comp=Z,4.8nm,0.8s,baz=269,slow=4.1,SNR=6.1
VRAC pP PcP 16 24 03.8 -6.7
comp=Z,2.8nm,0.6s,baz=268,slow=1.1,SNR=2.3
MORC Moravsky Berou 71.90 43 *e*P **P 16 23 53.6 -0.6**
MORC pmax pmax
comp=Z,8.0nm,0.8s
MORC Moravsky Berou 71.90 43 *e*P **P 16 23 53.6 -0.6**
comp=Z,7.6nm,0.8s
KDAK Kodiak Island 71.95 326 P **P 16 23 54.8 +0.5**
KDAK Kodiak Island 71.95 326 P **P 16 23 54.8 +0.5**
comp=Z,5.0nm,0.9s,baz=65,slow=6.9,SNR=5.0
OKC Ostrava-Krasne 72.28 43 *e*P **P 16 23 57.4 +1.0**
OKC MLR MLR
comp=Z,200nm,18.8s
OKC Ostrava-Krasne 72.28 43 *e*P **P 16 23 57.4 +1.0**
OKC AMS AMS 16 55 20.0
comp=Z,200nm,18.8s
VYHS Vyhne 72.94 44 *e*P **P 16 24 00.9 +0.5**
VYHS pmax pmax
comp=Z,6.0nm,1.2s
VYHS Vyhne 72.94 44 *e*P **P 16 24 00.9 +0.5**
ARCES ARCESS Array B 72.99 22 P **P 16 23 59.8 -0.5**
ARCES ARCESS Array B 72.99 22 P **P 16 23 59.8 -0.5**
comp=Z,12nm,0.8s,baz=286,slow=4.5,SNR=20
KEV Kevo 73.47 21 *e*P **P 16 24 02.8 -0.3**
KEV Kevo 73.47 21 *e*p **P 16 24 02.8 -0.3**
KECS Kecovo 74.02 44 *e*P **P 16 24 08.4 +1.7**
KECS pmax pmax
comp=Z,3.0nm,1.0s
KECS Kecovo 74.02 44 *e*P **P 16 24 08.4 +1.7**
STHS Stebnicka Huta 74.33 43 *e*P **P 16 24 10.0 +1.4**
STHS Stebnicka Huta 74.33 43 *e*P **P 16 24 10.0 +1.4**
CRVS Cervenica-Dubn 74.57 43 *e*P **P 16 24 09.3 -0.7**
CRVS pmax pmax
comp=Z,6.0nm,0.9s
CRVS Cervenica-Dubn 74.57 43 *e*P **P 16 24 09.2 -0.7**
KAF Kangasniemi 74.64 29 *e*P **P 16 24 09.6 -0.4**
KAF Kangasniemi 74.64 29 *e*p **P 16 24 09.6 -0.4**
FINES FINESS Array B 74.67 30 P **P 16 24 09.9 -0.3**
FINES FINESS Array B 74.67 30 P **P 16 24 09.9 -0.3**
comp=Z,9.3nm,0.8s,baz=343,slow=6.0,SNR=12
UZH Uzhgorod 75.17 43 *e*P **P 16 24 13.5 +0.1**
UZH *e* 16 24 28.1
UZH *e* 16 24 33.5
KWP Kalwaria Pacla 75.22 42 *e*P **P 16 24 15.4 +1.7**
LVV L'vov 76.02 42 *e*P **P 16 24 19.3 +1.0**
LVV MLR MLR
comp=N,500nm,15.0s
LVV MLR MLR
comp=E,100nm,15.0s
LVV MLR MLR
comp=Z,600nm,15.0s
APA Apatity 76.25 23 ⇓*i*P **P 16 24 21.0 +1.8**
APA *i* 16 24 32.4
APA pmax pmax
comp=Z,21nm,1.0s
NACGM Naroch 76.48 36 *e* **P 16 24 20.0 -0.7**
LVZ Lovozero 76.61 22 ⇑*e*P **P 16 24 21.1 -0.2**
LVZ pmax pmax
comp=Z,31nm,1.7s
JOF Joensuu 76.70 28 *e*P **P 16 24 21.6 -0.2**
JOF Joensuu 76.70 28 *e*p **P 16 24 21.6 -0.2**
BUR08 Bucovina Ar. S 77.29 44 *e*P **P 16 24 26.5 +0.9**
TNA Tin City 77.39 335 *e*P **P 16 24 25.1 -0.6**
comp=Z,13nm,1.0s
KIEV Kiev 79.01 40 *e*P **P 16 24 33.2 -1.7**
KIEV pmax pmax
comp=Z,5.0nm,0.8s
KIEV Kiev 79.01 40 *e*P **P 16 24 33.2 -1.7**
comp=Z,5.3nm,0.8s
AK01 Malin Array Si 79.02 40 *e*P **P 16 24 34.3 -0.7**
AKASG Malin Array Be 79.02 40 P **P 16 24 34.4 -0.6**
AKASG Malin Array Be 79.02 40 P **P 16 24 34.4 -0.6**
AKASG Malin Array Be 79.02 40 P **P 16 24 34.4 -0.6**
comp=Z,5.6nm,0.7s,baz=272,slow=4.8,SNR=20
KLMR Klimovskoe 81.06 28 *e*P **P 16 24 44.3 -1.5**
KLMR pmax pmax
comp=Z,37nm,1.4s
OBN Obninsk 81.78 34 ⇑*i*P **P 16 24 49.2 -0.5**
OBN *i* 16 25 00.8
OBN pmax pmax
comp=Z,52nm,1.2s
PMSA Palmer Station 83.63 179 LR LR 17 03 22.5
comp=Z,348nm,18.7s,baz=335,slow=36
SIM Simferopol' 83.99 45 P **P** 16 25 11.7 +10
SIM S **S 16 35 26.0 +1.0**
VSR Storozhevoye 84.74 37 *e*P **P 16 25 05.6 +0.5**
VSR *e**SP sP 16 25 17.2 +4.4
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,20nm,1.1s
VSR pmax pmax
comp=Z,20nm,1.1s
VSR MLR MLR
comp=N,490nm,17.0s
VSR MLR MLR
comp=Z,860nm,17.0s
VSR MLR MLR
comp=E,290nm,18.0s
VORD Divnogorie 84.91 38 *e*P **P 16 25 06.6 +0.7**
VORD *e**SP sP 16 25 18.4 +4.7
VORD pmax pmax
comp=Z,10.0nm,0.7s
VORD pmax pmax
comp=N,20nm,0.9s
VORD pmax pmax
comp=E,30nm,0.9s
VORD MLR MLR
comp=Z,930nm,18.0s
VORD MLR MLR
comp=N,580nm,17.0s
VORD MLR MLR
comp=E,180nm,15.0s
BILL Bilibino 85.04 342 ⇓*i*P **P 16 25 06.5 +0.2**
BILL *i* 16 25 18.3
BILL pmax pmax
comp=Z,15nm,1.6s
BILL Bilibino 85.04 342 *e*P **P 16 25 06.2 0.0**
comp=Z,13nm,0.8s
BR131 Keskin Array S 85.53 50 *e*P **P 16 25 09.4 -0.1**
comp=Z,5.7nm,1.1s
BRTR Keskin Array B 85.53 50 P **P 16 25 09.6 +0.1**
BRTR Keskin Array B 85.53 50 P **P 16 25 09.6 +0.1**
comp=Z,3.5nm,0.9s,baz=261,slow=3.6,SNR=12
TIXI Tiksi 88.86 355 ⇓*e*P **P 16 25 25.0 +0.2**
TIXI pmax pmax
comp=Z,6.0nm,1.0s
MMAI Mount Meron Ar 89.33 55 P **P 16 25 29.1 +1.2**
MMAI Mount Meron Ar 89.33 55 P **P 16 25 29.1 +1.2**
comp=Z,0.8nm,0.5s,baz=228,slow=5.6,SNR=4.0
KIV Kislovodsk 90.00 43 ⇓*e*P **P 16 25 32.6 +1.8**
KIV pmax pmax
comp=Z,9.0nm,1.2s
KIV MLR MLR
comp=Z,100nm,19.0s
EIL Elat 90.23 59 P **P 16 25 32.9 +0.8**
EIL Elat 90.23 59 P **P 16 25 32.9 +0.8**
comp=Z,1.8nm,0.7s,baz=3.3,slow=7.7,SNR=4.7
KBZ Khabaz 90.24 43 P **P 16 25 33.3 +1.5**
KBZ Khabaz 90.24 43 P **P 16 25 33.2 +1.5**
KBZ Khabaz 90.24 43 P **P 16 25 33.2 +1.5**
comp=Z,3.4nm,0.9s,baz=264,slow=2.8,SNR=4.9
ASF Jabal al Asfar 90.81 56 P **P 16 25 35.5 +0.6**
ASF Jabal al Asfar 90.81 56 P **P 16 25 35.5 +0.6**
comp=Z,0.9nm,0.4s,baz=288,slow=3.2,SNR=3.2
ARU Arti 91.82 27*c* *i*P **P 16 25 40.4 +1.5**
ARU 16 29 19.5
ARU PPP PPP 16 31 16.6
ARU S **SKSac 16 36 10.2 -0.7**
ARU pmax pmax
comp=Z,9.0nm,1.2s
MAK Makhachkala 93.56 42 *e*P pP 16 26 04.9 +12
AKTO Aktyubinsk 95.34 32 P **P 16 25 54.8 -0.4**
AKTO Aktyubinsk 95.34 32 P **P 16 25 54.8 -0.4**
AKTO Aktyubinsk 95.34 32 P **P 16 25 54.8 -0.4**
comp=Z,0.9nm,0.5s,baz=318,slow=8.5,SNR=3.4
SNAA Sanae 100.14 163 *e*P **Pdif 16 26 17.9 +1.6**
SNAA Sanae 100.14 163 P **Pdif 16 26 17.0 +0.7**
SNAA Sanae 100.14 163 P **Pdif 16 26 17.0 +0.7**
comp=Z,0.2nm,0.6s,baz=315,slow=10.0,SNR=5.2
MKAR Makanchi Array 108.64 22 PKKPbc PKKPbc 16 42 21.9 +12
comp=Z,0.5nm,0.8s,baz=112,slow=1.3,SNR=4.0
SONM Songino Array 113.07 5 PKKPbc PKKPbc 16 41 53.2 -2.9
comp=Z,0.3nm,0.4s,baz=149,slow=2.9,SNR=4.0
SONM PKKP **PKKPdf 16 42 14.1 -1.8**
comp=Z,1.0nm,0.9s,baz=166,slow=4.4,SNR=4.2
WMQ Urumqi 113.08 20 *e*PKP **PKiKP 16 31 07.8 -0.8**
MJAR Matsushiro Arr 119.91 337 PKP **PKPdf 16 31 21.4 -0.5**
MJAR Matsushiro Arr 119.91 337 PKP **PKPdf 16 31 21.4 -0.5**
comp=Z,0.6nm,0.8s,baz=88,slow=1.0,SNR=4.0
HHC Hu-ho-hao-te 120.33 2 *e*PKP **PKPdf 16 31 21.8 -0.9**
HHC sPKP 16 31 36.8
HHC PP **PP 16 32 49.4 +2.2**
HHC SKS **SKSdf 16 38 30.1 -4.2**
HHC SKKS SKKSac 16 39 38.1 -10
HHC SS **SS 16 49 14.8 +1.0**
HHC AMB AMB
comp=Z,180nm,10.4s
HHC LR LR
comp=N,250nm,19.8s
HHC LR LR
comp=E,170nm,20.0s
HHC LR LR
comp=Z,240nm,19.6s
GTA Gaotai 120.41 12 *e*PKP **PKPdf 16 31 23.3 +0.4**
MAW Mawson 122.05 160 PKP **PKPdf 16 31 24.5 -0.3**
MAW Mawson 122.05 160 PKP **PKPdf 16 31 24.5 -0.3**
comp=Z,2.1nm,0.6s,baz=256,slow=11,SNR=4.6
KSRS Korea Array 122.12 346 PKP **PKPdf 16 31 25.4 -0.6**
comp=Z,0.5nm,0.3s,baz=38,slow=1.7,SNR=6.3
KSAR Wonju Array Be 122.14 346 PKP **PKPdf 16 31 25.4 -0.6**
LZH Lanzhou 124.36 9 *e*PKP **PKPdf 16 31 27.3 -3.4**
LZH LR LR
comp=N,120nm,17.9s
LZH LR LR
comp=E,100nm,16.0s
LZH LR LR
comp=Z,140nm,19.2s
CD2 Chengdu 129.41 11 *e*PKP **PKPdf 16 31 36.5 -3.8**
CD2 sPKP 16 31 54.5
CD2 PP **PP 16 33 50.0 +2.0**
CD2 SKS SKSdf 16 38 42.0 -10
CD2 SKKS SKKSac 16 40 36.3 -10
CD2 AMB AMB
comp=Z,50nm,11.0s
GYA Guiyang 134.24 8 *e*Pdif **Pdif 16 28 48.0 -1.1**
GYA PKP **PKPdf 16 31 48.9 -0.7**
GYA PP **PP 16 34 22.5 +3.4**
GYA PKS **PKSdf 16 35 23.8 -2.5**
GYA SKKS 16 41 13.0
GYA SS **SS 16 52 07.9 +0.8**
GYA AMB AMB
comp=Z,120nm,7.8s
GYA LR LR
comp=N,170nm,25.6s
GYA LR LR
comp=E,130nm,23.4s
GYA LR LR
comp=Z,150nm,22.6s
KMI Kunming 134.82 14 PKP **PKPdf 16 31 52.0 +1.1**
CMAR Chiang Mai Arr 140.05 22 PKP **PKPdf 16 32 00.0 -0.3**
CMAR Chiang Mai Arr 140.05 22 PKhKP PKPpre 16 31 51.2
comp=Z,0.5nm,0.7s,baz=350,slow=4.6,SNR=4.2
CMAR PKP **PKPdf 16 32 00.0 -0.3**
comp=Z,1.1nm,0.9s,baz=307,slow=3.0,SNR=5.3
CTA Charters Tower 149.10 263 PKPbc **PKPdf 16 32 19.4 +3.5**
CTA Charters Tower 149.10 263 PKPbc **PKPdf 16 32 19.4 +3.5**
comp=Z,2.7nm,0.6s,baz=296,slow=0.8,SNR=4.4
COEN Coen 151.06 276 *e*PKPbc **PKPbc 16 32 25.5 +0.5**
STKA Stephens Creek 151.68 238 *e*PKPbc **PKPbc 16 32 25.9 0.0**
STKA Stephens Creek 151.68 238 PKPbc **PKPbc 16 32 25.4 -0.6**
comp=Z,16nm,1.0s,baz=60,slow=2.7,SNR=17
WRA Warramunga Arr 160.29 264 PKP **PKPdf 16 32 30.2 -1.1**
WRA pPKP pPKPdf 16 32 43.2 +6.0
WRA Warramunga Arr 160.29 264 PKP **PKPdf 16 32 30.2 -1.1**
comp=Z,1.8nm,0.9s,baz=86,slow=0.9,SNR=13
WRA pPKP pPKPdf 16 32 43.2 +6.0
comp=Z,1.7nm,0.8s,baz=55,slow=0.7,SNR=6.3
ASAR Alice Springs 160.42 253 PKP **PKPdf 16 32 30.6 -0.9**
ASAR PKPab **PKPab 16 33 09.8 -2.7**
ASAR Alice Springs 160.42 253 PKP **PKPdf 16 32 30.6 -0.9**
comp=Z,2.0nm,1.0s,baz=95,slow=1.2,SNR=11
ASAR PKPab **PKPab 16 33 09.8 -2.7**
comp=Z,2.7nm,0.9s,baz=106,slow=4.3,SNR=19

*ISCJB **13** 16:30:33.5±1.6, 41°.22N±0°.10×22°.79E±0°.08, h5km±17km, Error ellipse: s-maj=17.9km s-min=7.8km az=154.9*
*CSEM **13** 16:30:35.3, 41°.25N×22°.72E, h16km, MD2.9, After ATH*
*ATH **13** 16:30:35.3, 41°.25N×22°.72E, h16km±9km, MD2.9/5*
*SKO **13** 16:30:35.4, 41°.30N×22°.73E, h1km, M1.0, ML1.4*
ISC 13 16:30:35.0±1.1, 41°.25N±0°.06×22°.69E±0°.03, h9km±11km, n11, σ0°.28/18, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**309**	*i* Pg	**Pg**	**16 30 37.5**	**-0.2**
VAY				*i* Sg	**Sg**	**16 30 39.5**	**0.0**
VAY				*e*Lg	Lg	16 30 39.6	
	comp=E,128nm,0.2s						
VAY				*e*Lg	Lg	16 30 39.7	
	comp=N,374nm,0.6s						
GRG	**Griva**	**0.36**	**216**	*e*PB	**Pg**	**16 30 42.4**	**+0.3**
GRG				*e*SB	**Sb**	**16 30 48.9**	**-0.5**
GRG	**Griva**	**0.36**	**216**	*e*Pb	**Pg**	**16 30 42.4**	**+0.3**
GRG				*e*Sb	**Sb**	**16 30 48.9**	**-0.5**
SOH	**Sokhos**	**0.66**	**130**	*e*PN	**Pg**	**16 30 47.7**	**-0.1**
SOH				*e*SN	**Sg**	**16 30 56.7**	**+0.2**
SOH	**Sokhos**	**0.66**	**130**	*e*Pn	**Pg**	**16 30 47.7**	**-0.1**
SOH				*e*Sn	**Sg**	**16 30 56.7**	**+0.2**
NVR	**Nevrokopi**	**0.89**	**83**	*e*PN	**Pg**	**16 30 52.4**	**+0.3**
NVR				*e*SN	**Sg**	**16 31 03.9**	**+0.1**
NVR	**Nevrokopi**	**0.89**	**83**	*e*Pn	**Pg**	**16 30 52.4**	**+0.3**
NVR				*e*Sn	**Sg**	**16 31 03.9**	**+0.1**
PLG	**Polygyros**	**1.05**	**146**	*e*PN	**Pb**	**16 30 55.1**	**-0.2**
PLG	**Polygyros**	**1.05**	**146**	*e*Pn	**Pb**	**16 30 55.1**	**-0.2**
FNA	**Florina**	**1.09**	**245**	*e*PN	**Pb**	**16 30 56.3**	**+0.2**
FNA	**Florina**	**1.09**	**245**	*e*Pn	**Pb**	**16 30 56.3**	**+0.2**

IDC 13 16:43:24.5±8.6, 18°.50N×145°.14E, h519km±108km, mb2.5/5, mb1 2.8/5, mb1mx2.6/24, mbtmp2.5/5, Error ellipse: s-maj=53.8km s-min=16.5km az=82.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**24.17**	**325**	P	P	16 47 59.4	0.0
	0.4nm,0.5s,baz=146,slow=7.9,SNR=3.9						
WRA	**Warramunga Arr**	**39.64**	**196**	P	P	16 50 11.4	0.0
	0.2nm,0.3s,baz=17,slow=8.4,SNR=13						
ASAR	**Alice Springs**	**43.32**	**195**	P	P	16 50 40.1	-0.4
	0.2nm,0.5s,baz=14,slow=7.1,SNR=6.2						
MKAR	**Makanchi Array**	**58.22**	**314**	P	P	16 52 29.0	+0.2
	0.2nm,0.3s,baz=93,slow=7.0,SNR=5.8						
NVAR	**Mina Array Bea**	**83.68**	**52**	P	P	16 54 59.0	-0.1
	0.3nm,0.6s,baz=285,slow=3.5,SNR=3.3						

IDC 13 16:44:42.3±9.7, 16°.01S×167°.76E, h175km±129km, mb3.3/3, mb1 3.5/4, mb1mx3.2/20, mbtmp3.3/4, Error ellipse: s-maj=135.6km s-min=47.7km az=141.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.15**	**191**	*e*P	Pn	16 46 11.8	+0.3
DZM				*e*S	Sn	16 47 22.0	+0.4
DZM	**Mont Dzumac**	**6.15**	**191**	P	Pn	16 46 12.1	+0.6
	2.6nm,0.3s,baz=24,slow=21,SNR=133						
DZM				S	Sn	16 47 21.0	-0.6
	0.9nm,0.3s,baz=135,slow=20,SNR=2.4						
WRA	**Warramunga Arr**	**32.00**	**258**	P	P	16 50 51.7	-0.6
	0.2nm,0.3s,baz=88,slow=9.3,SNR=10						
ASAR	**Alice Springs**	**32.68**	**251**	P	P	16 50 58.8	+0.5
	0.9nm,0.4s,baz=81,slow=8.8,SNR=30						
ASAR				pP	pP	16 51 31.0	-3.9
	0.4nm,0.7s,baz=79,slow=8.4,SNR=2.6						
SONM	**Songino Array**	**83.80**	**324**	P	P	16 56 51.9	-0.2
	0.3nm,0.4s,baz=141,slow=7.1,SNR=4.0						

*ATH **13** 16:46:22.7, 41°.92N×21°.07E, h17km±2km, MD3.5/15*
*SKO **13** 16:46:23.8, 41°.80N×21°.08E, h15km, M2.9, ML3.2*
*CSEM **13** 16:46:23.7±0.1, 41°.88N×21°.07E, h2km, ML3.0/4, Error ellipse: s-maj=2.9km s-min=1.9km az=53.0*
*THE **13** 16:46:23.6, 41°.87N×21°.05E, h1km±1km, ML3.0/4, Error ellipse: s-maj=1.9km s-min=0.7km az=241.0*
*PDG **13** 16:46:23.7±0.3, 41°.86N×21°.04E, h12km, ML3.2/9, Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*
*BEO **13** 16:46:24.2±0.6, 41°.85N×21°.04E, h5km±4km, ML2.8/1*
ISC 13 16:46:23.7±1.0, 41°.86N±0°.02×21°.04E±0°.01, h4km±9km, n131, σ0°.81/193, 17C-9D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKO	**Skopje**	**0.32**	**69**	P	**Pg**	**16 46 30.7**	**+0.8**
SKO				S	**Sg**	**16 46 35.4**	**+1.3**
SKO	**Skopje**	**0.32**	**69**	*i* Pg	**Pg**	**16 46 30.7**	**+0.8**
SKO				*i* Sg	**Sg**	**16 46 35.5**	**+1.3**
SKO				*e*Lg	Lg	16 46 35.6	
	comp=N,6μm,0.3s						
SKO				*e*Lg	Lg	16 46 35.8	
	comp=E,5μm,0.3s						
SKO	**Skopje**	**0.32**	**69**	P	**Pg**	**16 46 30.7**	**+0.8**
SKO				S	**Sg**	**16 46 35.4**	**+1.3**
PHP	**Peshkopia**	**0.48**	**249**	P	**Pg**	**16 46 32.4**	**-0.5**
PHP				S	**Sg**	**16 46 39.5**	**+0.3**
PHP	**Peshkopia**	**0.48**	**249**	P	**Pg**	**16 46 32.4**	**-0.5**
PHP				S	**Sg**	**16 46 39.5**	**+0.3**
BIA	**Bitola**	**0.87**	**166**	P	**Pg**	**16 46 40.0**	**-0.3**
BIA				S	**Sg**	**16 46 52.3**	**+0.7**
BIA	**Bitola**	**0.87**	**166**	*i* Pg	**Pg**	**16 46 40.1**	**-0.3**
BIA				*i* Sg	**Sg**	**16 46 52.3**	**+0.7**
BIA				*e*Lg	Lg	16 46 55.9	
	comp=N,381nm,0.2s						
BIA				*e*Lg	Lg	16 46 56.9	
	comp=E,433nm,0.2s						
BIA	**Bitola**	**0.87**	**166**	P	**Pg**	**16 46 40.0**	**-0.3**
BIA				S	**Sg**	**16 46 52.3**	**+0.7**
PVY	**Plav**	**1.09**	**313**	⇑*i*Pg	**Pg**	**16 46 43.4**	**-1.2**
PVY				*e*Sg	**Sb**	**16 47 00.8**	**+1.1**
PVY	**Plav**	**1.09**	**313**	⇑*i*Pg	**Pg**	**16 46 43.4**	**-1.2**
PVY				*e*Sg	**Sb**	**16 47 00.8**	**+1.1**
FNA	**Florina**	**1.10**	**167**	P	**Pg**	**16 46 44.6**	**-0.3**
FNA				S	**Sb**	**16 47 00.6**	**+0.5**
FNA	**Florina**	**1.10**	**167**	*e*PN	**Pg**	**16 46 44.7**	**-0.2**
FNA				*e*SN	**Sb**	**16 47 00.2**	**+0.1**
FNA	**Florina**	**1.10**	**167**	P	**Pg**	**16 46 44.6**	**-0.3**
FNA				*e*Sn	**Sb**	**16 47 00.2**	**+0.1**
BARS	**Barje**	**1.12**	**31**	*i* Pg	**Pg**	**16 46 45.0**	**-0.1**
BARS				*i* Sg	**Sg**	**16 47 00.2**	**+0.6**
BARS	**Barje**	**1.12**	**31**	*i* Pg	**Pg**	**16 46 45.0**	**-0.1**
BARS				*i* Sg	**Sg**	**16 47 00.2**	**+0.6**
VAY	**Valandovo**	**1.27**	**115**	P	**Pg**	**16 46 47.1**	**-1.0**
VAY				S	**Sb**	**16 47 05.1**	**+0.3**
VAY	**Valandovo**	**1.27**	**115**	*e*Pg	**Pg**	**16 46 47.0**	**-1.0**
VAY				*i* Sg	**Sg**	**16 47 04.3**	**-0.2**
VAY	**Valandovo**	**1.27**	**115**	*i* Pg	**Pg**	**16 46 46.3**	**-1.7**
VAY				*i* Sg	**Sg**	**16 47 04.3**	**-0.2**
VAY				*e*Lg	Lg	16 47 07.4	
	comp=N,286nm,0.6s						
VAY				*e*Lg	Lg	16 47 07.9	
	comp=E,235nm,0.5s						
VAY	**Valandovo**	**1.27**	**115**	P	**Pg**	**16 46 47.1**	**-1.0**
VAY				*i* Sg	**Sg**	**16 47 04.3**	**-0.2**
VAY				S	**Sb**	**16 47 05.1**	**+0.3**
BEY	**Berane**	**1.32**	**320**	⇑*i*Pg	**Pn**	**16 46 47.6**	**-1.4**
BEY				*e*Sg	**Sn**	**16 47 08.3**	**+1.3**
IVA	**Berane**	**1.32**	**320**	⇑*i*Pg	**Pn**	**16 46 47.6**	**-1.4**
IVA				*e*Sg	**Sn**	**16 47 08.3**	**+1.3**
ULC	**Ulcinj**	**1.34**	**275**	⇓*i*Pg	**Pn**	**16 46 48.5**	**-0.7**
ULC				*e*Sg	**Sn**	**16 47 09.3**	**+1.8**
ULC	**Ulcinj**	**1.34**	**275**	⇓*i*Pg	**Pn**	**16 46 48.5**	**-0.7**
ULC				*e*Sg	**Sn**	**16 47 09.3**	**+1.8**
SELS	**Selova**	**1.36**	**3**	*e*Pg	**Pn**	**16 46 48.1**	**-1.4**
SELS				*e*Sg	**Sb**	**16 47 07.3**	**-0.2**
GRG	**Griva**	**1.37**	**131**	P	**Pn**	**16 46 49.0**	**-0.6**
GRG				S	**Sn**	**16 47 08.7**	**+0.6**
GRG	**Griva**	**1.37**	**131**	*e*PN	**Pn**	**16 46 49.3**	**-0.3**
GRG				*e*SN	**Sn**	**16 47 08.1**	**0.0**
GRG	**Griva**	**1.37**	**131**	P	**Pn**	**16 46 49.0**	**-0.6**
GRG	**Griva**	**1.37**	**131**	*e*Pn	**Pn**	**16 46 49.3**	**-0.3**
GRG				*e*Sn	**Sn**	**16 47 08.1**	**0.0**
PDG	**Podgorica**	**1.44**	**294**	P	**Pn**	**16 46 49.6**	**-1.0**
PDG				S	**Sg**	**16 47 10.8**	**+0.7**
PDG	**Podgorica**	**1.44**	**294**	P	**Pn**	**16 46 49.6**	**-1.0**
PDG				S	**Sg**	**16 47 10.8**	**+0.7**
PDG				*e*Sg	**Sg**	**16 47 11.2**	**+1.1**
TTG	**Podgorica**	**1.44**	**294**	⇓*i*Pg	**Pn**	**16 46 49.5**	**-1.0**
TTG				*e*Sg	**Sg**	**16 47 11.2**	**+1.1**
NEST	**Nestorio**	**1.44**	**180**	P	**Pn**	**16 46 50.7**	**0.0**
NEST	**Nestorio**	**1.44**	**180**	P	**Pn**	**16 46 50.7**	**0.0**
KNT	**Kendrikon**	**1.56**	**116**	P	**Pn**	**16 46 51.8**	**-0.4**
KNT				S	**Sn**	**16 47 13.0**	**+0.1**
KNT	**Kendrikon**	**1.56**	**116**	P	**Pn**	**16 46 51.8**	**-0.4**
KNT				S	**Sn**	**16 47 13.0**	**+0.1**
SJES	**Sjenica**	**1.61**	**331**	*e*Sg	**Sb**	**16 47 15.3**	**+0.7**
KZN	**Kozani**	**1.65**	**160**	*e*PN	**Pn**	**16 46 53.7**	**+0.2**
KZN				*e*SN	**Sg**	**16 47 17.0**	**+0.4**
KZN	**Kozani**	**1.65**	**160**	*e*Pn	**Pn**	**16 46 53.7**	**+0.2**
KZN				*e*Sn	**Sg**	**16 47 17.0**	**+0.4**
BUM	**Brajici-Budva**	**1.66**	**286**	⇓*i*Pn	**Pn**	**16 46 53.9**	**+0.3**
BUM				*e*Sn	**Sg**	**16 47 17.1**	**+0.2**
BUM	**Brajici-Budva**	**1.66**	**286**	⇓*i*Pn	**Pn**	**16 46 53.9**	**+0.3**
BUM				*e*Sn	**Sg**	**16 47 17.1**	**+0.2**
VTS	**Vitosha**	**1.77**	**65**	P	**Pn**	**16 46 55.3**	**+0.1**
VTS				S	**Sn**	**16 47 18.4**	**+0.2**
VTS	**Vitosha**	**1.77**	**65**	*e*Pn	**Pn**	**16 46 55.5**	**+0.3**
VTS				*e*Sn	**Sn**	**16 47 18.5**	**+0.2**
VTS	**Vitosha**	**1.77**	**65**	⇑*i*P	**Pn**	**16 46 55.5**	**+0.3**
VTS				S	**Sn**	**16 47 19.1**	**+0.8**
VTS	**Vitosha**	**1.77**	**65**	*e*Pn	**Pn**	**16 46 55.5**	**+0.3**
VTS				S	**Sn**	**16 47 18.4**	**+0.2**
NKY	**Niksic**	**1.79**	**303**	⇑*i*Pn	**Pn**	**16 46 55.4**	**-0.1**
NKY				*e*Sn	**Sn**	**16 47 20.5**	**+0.6**
NKY	**Niksic**	**1.79**	**303**	⇑*i*Pn	**Pn**	**16 46 55.4**	**-0.1**
NKY				*e*Sn	**Sb**	**16 47 20.5**	**+0.6**
ZAPS	**Zavoj**	**1.84**	**39**	*e*Pn	**Pn**	**16 46 55.9**	**-0.2**
ZAPS	**Zavoj**	**1.84**	**39**	*e*Pn	**Pn**	**16 46 55.9**	**-0.2**
PLE	**Pljevlja**	**1.91**	**321**	⇓*i*Pn	**Pn**	**16 46 57.2**	**+0.1**
PLE				*e*Sn	**Sb**	**16 47 23.4**	**+0.1**
PLE	**Pljevlja**	**1.91**	**321**	⇓*i*Pn	**Pn**	**16 46 57.2**	**+0.1**
PLE				*e*Sn	**Sb**	**16 47 23.4**	**+0.1**
HCY	**Herceg Novi**	**1.98**	**288**	⇑*i*Pn	**Pn**	**16 46 58.1**	**+0.1**
HCY				*e*Sn	**Sb**	**16 47 24.9**	**-0.4**
HCY	**Herceg Novi**	**1.98**	**288**	⇑*i*Pn	**Pn**	**16 46 58.1**	**+0.1**
HCY				*e*Sn	**Sb**	**16 47 24.9**	**-0.4**
SOH	**Sokhos**	**2.03**	**120**	*e*PN	**Pn**	**16 46 59.0**	**+0.3**
SOH	**Sokhos**	**2.03**	**120**	*e*Pn	**Pn**	**16 46 59.0**	**+0.3**
GRUS	**Gruza**	**2.04**	**353**	*e*Pn	**Pn**	**16 46 59.8**	**+1.0**
GRUS				*e*Sg	**Sg**	**16 47 30.3**	**+1.0**
GRUS	**Gruza**	**2.04**	**353**	*e*Pn	**Pn**	**16 46 59.8**	**+1.0**
GRUS				*e*Sg	**Sg**	**16 47 30.3**	**+1.0**
SRS	**Serrai**	**2.06**	**110**	P	**Pn**	**16 46 59.2**	**+0.2**
SRS	**Serrai**	**2.06**	**110**	P	**Pn**	**16 46 59.2**	**+0.2**
UPM	**Unac-Piva**	**2.07**	**311**	⇑*i*Pn	**Pn**	**16 46 59.9**	**+0.5**
UPM				*e*Sn	**Sn**	**16 47 27.1**	**+1.4**
UPM	**Unac-Piva**	**2.07**	**311**	⇑*i*Pn	**Pn**	**16 46 59.9**	**+0.5**
UPM				*e*Sn	**Sn**	**16 47 27.1**	**+1.4**
LIT	**Litokhoron**	**2.07**	**147**	*e*PN	**Pn**	**16 46 59.8**	**+0.5**
LIT	**Litokhoron**	**2.07**	**147**	*e*Pn	**Pn**	**16 46 59.8**	**+0.5**
BOLS	**Boljevac**	**2.08**	**19**	*e*Pn	**Pn**	**16 47 00.7**	**+1.4**
BOLS	**Boljevac**	**2.08**	**19**	*e*Pn	**Pn**	**16 47 00.7**	**+1.4**
BRY	**Bratogost**	**2.12**	**300**	*e*Pn	**Pn**	**16 47 00.8**	**+0.7**
BRY				*e*Sn	**Sn**	**16 47 28.2**	**+1.2**
BRY	**Bratogost**	**2.12**	**300**	*e*

KEK	**Kerkira**	**2.34**	**204**	*e*Pn		**Pn**	**16 47 04.0**	**+1.1**
PLG	**Polygyros**	**2.35**	**128**	*e*PB		**Pn**	**16 47 03.6**	**+0.5**
PLG	**Polygyros**	**2.35**	**128**	*e*Pb		**Pn**	**16 47 03.6**	**+0.5**
DIVS	**Divibare**	**2.37**	**341**	P		**Pn**	**16 47 02.7**	**-0.7**
DIVS	**Divibare**	**2.37**	**341**	*e*Pn		**Pn**	**16 47 03.5**	**+0.1**
DIVS				*e*Sg		**Sg**	**16 47 40.4**	**+0.7**
DIVS	**Divibare**	**2.37**	**341**	P		**Pn**	**16 47 02.7**	**-0.7**
DIVS	**Divibare**	**2.37**	**341**	*e*Pn		**Pn**	**16 47 03.5**	**+0.1**
DIVS				*e*Sg		**Sg**	**16 47 40.4**	**+0.7**
THL	**Klokotos Trika**	**2.41**	**162**	*e*PB		**Pn**	**16 47 04.6**	**+0.7**
THL	**Klokotos Trika**	**2.41**	**162**	*e*Pb		**Pn**	**16 47 04.6**	**+0.7**
STON	**Ston**	**2.67**	**293**	*e*Pn		**Pb**	**16 47 10.6**	**-1.4**
STON				Sn		**Sb**	**16 47 43.8**	**-1.4**
STON	**Ston**	**2.67**	**293**	*e*Pn		**Pb**	**16 47 10.6**	**-1.4**
STON				Sn		**Sb**	**16 47 43.7**	**-1.4**
EVR	**Evrytania**	**3.00**	**168**	*e*PN		**Pn**	**16 47 12.9**	**+0.8**
EVR	**Evrytania**	**3.00**	**168**	*e*Pn		**Pn**	**16 47 12.9**	**+0.8**
AGG	**Agios Georgios**	**3.00**	**160**	*e*PN		**Pn**	**16 47 12.9**	**+0.9**
AGG	**Agios Georgios**	**3.00**	**160**	*e*Pn		**Pn**	**16 47 12.9**	**+0.9**
NEO	**Neokhori**	**3.05**	**146**	*e*PN		**Pn**	**16 47 12.3**	**-0.3**
NEO	**Neokhori**	**3.05**	**146**	*e*Pn		**Pn**	**16 47 12.3**	**-0.3**
LKD2	**Lefkada island**	**3.08**	**186**	*e*PN		**Pn**	**16 47 13.6**	**+0.5**
LKD2	**Lefkada island**	**3.08**	**186**	*e*Pn		**Pn**	**16 47 13.6**	**+0.5**
AOS	**Alonnisos**	**3.45**	**140**	*e*PN		**Pn**	**16 47 18.1**	**-0.1**
AOS	**Alonnisos**	**3.45**	**140**	*e*Pn		**Pn**	**16 47 18.1**	**-0.1**
RDO	**Rodhopi**	**3.45**	**100**	*e*PN		**Pn**	**16 47 18.2**	**0.0**
RDO	**Rodhopi**	**3.45**	**100**	*e*Pn		**Pn**	**16 47 18.2**	**0.0**
EFP	**Efpalio**	**3.49**	**169**	*e*PN		**Pn**	**16 47 20.5**	**+1.8**
EFP	**Efpalio**	**3.49**	**169**	*e*Pn		**Pn**	**16 47 20.5**	**+1.8**
KALE	**Kalithea**	**3.57**	**166**	*e*PN		**Pn**	**16 47 21.3**	**+1.5**
KALE	**Kalithea**	**3.57**	**166**	*e*Pn		**Pn**	**16 47 21.3**	**+1.5**
TRIZ	**Trizonia**	**3.58**	**167**	*e*PN		**Pn**	**16 47 19.5**	**-0.4**
TRIZ	**Trizonia**	**3.58**	**167**	*e*Pn		**Pn**	**16 47 19.5**	**-0.4**
SMTH	**Samothraki Isl**	**3.67**	**111**	*e*PN		**Pn**	**16 47 20.6**	**-0.5**
SMTH	**Samothraki Isl**	**3.67**	**111**	*e*Pn		**Pn**	**16 47 20.6**	**-0.5**
VLS	**Valsamata**	**3.69**	**185**	*e*PN		**Pn**	**16 47 22.2**	**+0.7**
VLS	**Valsamata**	**3.69**	**185**	*e*Pn		**Pn**	**16 47 22.2**	**+0.7**
BZS	**Buzias**	**3.78**	**6**⇑	*i*P		**Pn**	**16 47 21.2**	**-1.5**
BZS	**Buzias**	**3.78**	**6**⇑	*i*P		**Pn**	**16 47 21.2**	**-1.5**
ALN	**Alexandroupoli**	**3.89**	**103**	*e*PN		**Pn**	**16 47 23.5**	**-0.7**
ALN	**Alexandroupoli**	**3.89**	**103**	*e*Pn		**Pn**	**16 47 23.5**	**-0.7**
KLV	**Kalavryta, Ach**	**3.91**	**167**	*e*PN		**Pn**	**16 47 25.9**	**+1.4**
KLV	**Kalavryta, Ach**	**3.91**	**167**	*e*Pn		**Pn**	**16 47 25.9**	**+1.4**
GUR	**Goura**	**4.04**	**165**	*e*PN		**Pn**	**16 47 27.2**	**+0.7**
GUR	**Goura**	**4.04**	**165**	*e*Pn		**Pn**	**16 47 27.2**	**+0.7**
LTK	**Loutraki**	**4.11**	**158**	*e*PN		**Pn**	**16 47 27.6**	**+0.3**
LTK	**Loutraki**	**4.11**	**158**	*e*Pn		**Pn**	**16 47 27.6**	**+0.3**
VOIR		**4.61**	**38**⇓	*i*P		**Pn**	**16 47 33.3**	**-0.9**
VOIR		**4.61**	**38**⇓	*i*P		**Pn**	**16 47 33.3**	**-0.9**
DID	**Didima**	**4.67**	**158**	*e*PN		**Pn**	**16 47 35.6**	**+0.7**
DID	**Didima**	**4.67**	**158**	*e*Pn		**Pn**	**16 47 35.6**	**+0.7**
PKSM	**Moragy**	**4.68**	**339**⇑	*i*P		**Pn**	**16 47 33.9**	**-1.2**
PKSM	**Moragy**	**4.68**	**339**⇑	*i*P		**Pn**	**16 47 33.9**	**-1.2**
ITM	**Ithomi**	**4.72**	**171**	*e*PN		**Pn**	**16 47 36.9**	**+1.2**
ITM	**Ithomi**	**4.72**	**171**	*e*Pn		**Pn**	**16 47 36.9**	**+1.2**
PYL	**PYLOS**	**4.99**	**173**	*e*PN		**Pn**	**16 47 39.9**	**+0.6**
PYL	**PYLOS**	**4.99**	**173**	*e*Pn		**Pn**	**16 47 39.9**	**+0.6**
MLR	**Muntele Rosu**	**5.08**	**43**⇑	*i*P		**Pn**	**16 47 40.9**	**+0.2**
MLR	**Muntele Rosu**	**5.08**	**43**⇑	*i*P		**Pn**	**16 47 40.9**	**+0.2**
BOJS	**Bojanci**	**5.55**	**313**	*i* Pn		**Pn**	**16 47 48.7**	**+1.6**
BOJS	**Bojanci**	**5.55**	**313**	Pn		**Pn**	**16 47 48.7**	**+1.6**

SZGRF ***13*** *16:48:48.7, 73.2*$^{\circ}$*5N×4.7*$^{\circ}$*79E, h10km, mb4.3, MS3.8, Greenland Sea*
NAO ***13*** *16:48:50.5±3.2, 72.6*$^{\circ}$*3N×4.7*$^{\circ}$*35E, ML3.7*
CSEM ***13*** *16:48:50.5±0.2, 72.7*$^{\circ}$*5N×4.7*$^{\circ}$*45E, h2km, ML3.7, Error ellipse: s-maj=6.2km s-min=5.5km az=167.0*
ISCJB ***13*** *16:48:50.9±0.4, 72.8*$^{\circ}$*1N±0.0*$^{\circ}$*4×4.9*$^{\circ}$*E±0.2, h10km, mb3.9/23, Error ellipse: s-maj=6.8km s-min=6.1km az=161.3*
IDC ***13*** *16:48:51.5±0.7, 72.6*$^{\circ}$*7N×4.2*$^{\circ}$*6E, h0km, mb3.6/10, mb1 3.9/16, mb1mx3.7/33, mbtmp3.7/16, ML3.5/6, Error ellipse: s-maj=20.5km s-min=12.2km az=51.0*
BER ***13*** *16:48:53.6±2.9, 72.7*$^{\circ}$*5N×4.3*$^{\circ}$*1E, h10km, ML3.7(NAO)*
ISC 13 16:48:52.4±0.6**, 72.7**°**7N**±0.0°**06×4.6**°**1E**±0.0°**07, h10**km**, n102,**
σ1§47/93, mb4.0/23, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNE	**Jan Mayen East**	**4.41**	**252**	*e*P	**Pn**	**16 49 57.3**	**-1.9**
JNE	**Jan Mayen East** SNR=49	**4.41**	**252**	*e*P	**Pn**	**16 49 57.3**	**-1.9**
JNW	**Jan Mayen West**	**4.42**	**253**	*e*P	**Pn**	**16 49 57.1**	**-2.3**
JNW	**Jan Mayen West** SNR=49	**4.42**	**253**	*e*P	**Pn**	**16 49 57.1**	**-2.3**
JMIC	**Jan Mayen**	**4.47**	**253**	*e*P	**Pn**	**16 49 57.7**	**-2.3**
JMIC	**Jan Mayen** 5.3nm,0.3s,baz=314,slow=2.4,SNR=22	**4.47**	**253**	Pn	**Pn**	**16 49 57.5**	**-2.6**
JMIC	**Jan Mayen** SNR=49	**4.47**	**253**	*e*P	**Pn**	**16 49 57.7**	**-2.3**
BJO	**Bjornoya**	**4.47**	**60**	*e*P	**Pn**	**16 49 58.5**	**-1.6**
BJO	**Bjornoya** SNR=49	**4.47**	**60**	*e*P	**Pn**	**16 49 58.5**	**-1.6**
JMI	**Jan Mayen**	**4.56**	**253**	*e*P	**Pn**	**16 49 59.4**	**-1.9**
JMI	**Jan Mayen** SNR=49	**4.56**	**253**	*e*P	**Pn**	**16 49 59.4**	**-1.9**
LOF	**Lofoten**	**5.53**	**143**	*e*P	**Sn**	**16 51 18.6**	**+0.4**
TRO	**Tromso**	**5.59**	**117**	*e*P	**Pn**	**16 50 16.8**	**+1.4**
TRO	**Tromso** SNR=49	**5.59**	**117**	*e*P	**Pn**	**16 50 16.8**	**+1.4**
STEI	**Steigen**	**6.03**	**138**	*e*P	**Pn**	**16 50 22.0**	**+0.5**
SPA0	**Spitsbergen Ar** baz=215,slow=18	**6.17**	**23**	Pn	**Pn**	**16 50 24.2**	**+0.8**
SPA0	**Spitsbergen Ar** baz=215,slow=18	**6.17**	**23**	Pn	**Pn**	**16 50 24.2**	**+0.8**
SPA0	**Spitsbergen Ar** baz=215,slow=16,SNR=50	**6.17**	**23**	Pn	**Pn**	**16 50 24.2**	**+0.8**
SPITS	**Spitsbergen Ar** baz=206,slow=17,SNR=4.2	**6.17**	**23**	Pn	**Pn**	**16 50 24.3**	**+0.8**
KBS	**Kingsbay**	**6.44**	**13**	Pn	**Pn**	**16 50 26.6**	**-0.5**
KBS	**Kingsbay**	**6.44**	**13**	*e*P	**Pn**	**16 50 27.9**	**+0.8**
KBS	**Kingsbay**	**6.44**	**13**	Pn	**Pn**	**16 50 26.6**	**-0.5**
KBS	**Kingsbay** SNR=47	**6.44**	**13**	*e*P	**Pn**	**16 50 27.9**	**+0.8**
KONS	**Konsvik**	**6.95**	**151**	*e*P	Pn	16 50 23.1	-11
STOK	**Stokkvaagen**	**7.09**	**151**	*e*P	**Pn**	**16 50 35.5**	**-0.5**
MOR8	**Moi Rana**	**7.46**	**148**	*e*P	**Pn**	**16 50 40.9**	**-0.3**
MOR8	**Moi Rana** SNR=47	**7.46**	**148**	*e*P	**Pn**	**16 50 40.8**	**-0.3**
ARA0	**ARCESS Array S** baz=315,slow=12	**7.48**	**105**	Pn	**Pn**	**16 50 41.1**	**-0.2**
ARA0	**ARCESS Array S** baz=315,slow=12	**7.48**	**105**	Pn	**Pn**	**16 50 41.1**	**-0.2**
ARA0	**ARCESS Array S** baz=315,slow=12,SNR=50	**7.48**	**105**	Pn	**Pn**	**16 50 41.1**	**-0.2**
ARCES	**ARCESS Array B** 1.1nm,0.3s,baz=322,slow=11,SNR=13	**7.48**	**105**	Pn	**Pn**	**16 50 41.3**	**-0.1**
ARCES	1.4nm,0.3s,baz=301,slow=21,SNR=3.9				Sn	**Sn**	**16 52 02.2**	**-3.8**
HEF	**Hetta**	**7.68**	**115**	*e*P	**Pn**	**16 50 44.3**	**+0.2**
HEF	**Hetta** SNR=47	**7.68**	**115**	*e*P	**Pn**	**16 50 44.3**	**+0.2**
KEV	**Kevo**	**7.79**	**102**	*e*p	**Pn**	**16 50 44.8**	**-0.7**
KEV	**Kevo**	**7.79**	**102**	*e*P	**Pn**	**16 50 44.8**	**-0.7**
APA0	**Apatity Array** baz=309,slow=14	**10.83**	**104**	Pn	**Pn**	**16 51 25.9**	**-1.3**
APA0	**Apatity Array** baz=309,slow=14	**10.83**	**104**	Pn	**Pn**	**16 51 25.9**	**-1.3**
APA0	**Apatity Array** baz=309,slow=12,SNR=50	**10.83**	**104**	Pn	**Pn**	**16 51 25.9**	**-1.3**
NB2	**NORSAR Subarra** baz=339,slow=12	**12.05**	**164**	Pn	**Pn**	**16 51 43.6**	**-0.3**
NB2	**NORSAR Subarra** baz=339,slow=12	**12.05**	**164**	Pn	**Pn**	**16 51 43.6**	**-0.3**
NB2	**NORSAR Subarra** baz=339,slow=12,SNR=50	**12.05**	**164**	Pn	**Pn**	**16 51 43.6**	**-0.3**
NOA	**NORSAR Array B** 0.3nm,0.3s,baz=339,slow=12,SNR=5.4	**12.05**	**164**	Pn	**Pn**	**16 51 42.9**	**-1.0**
HFS	**Hagfors** baz=354,slow=12	**13.17**	**160**	Pn	**Pn**	**16 51 57.8**	**-1.4**
HFS	**Hagfors** baz=354,slow=12	**13.17**	**160**	Pn	**Pn**	**16 51 57.8**	**-1.4**
HFS	**Hagfors** 0.9nm,0.3s,baz=359,slow=13,SNR=34	**13.17**	**160**	Pn	**Pn**	**16 51 57.9**	**-1.2**
HFS	0.2nm,0.3s,baz=343,slow=23,SNR=3.2				Sn	Sn	16 54 13.1	-12
HFS	**Hagfors** baz=354,slow=12,SNR=50	**13.17**	**160**	Pn	**Pn**	**16 51 57.8**	**-1.4**
KAF	**Kangasniemi**	**13.43**	**132**	*e*p	**Pn**	**16 52 01.7**	**-0.9**
KAF	**Kangasniemi**	**13.43**	**132**	*e*P	**Pn**	**16 52 01.7**	**-0.9**
JOF	**Joensuu**	**13.93**	**121**	*e*p	**Pn**	**16 52 08.0**	**-1.5**
JOF	**Joensuu**	**13.93**	**121**	*e*P	**Pn**	**16 52 08.0**	**-1.5**
FIA0	**FINESS Array S** baz=339,slow=14	**13.97**	**133**	Pn	**Pn**	**16 52 08.7**	**-1.3**
FIA0	**FINESS Array S** baz=339,slow=14	**13.97**	**133**	Pn	**Pn**	**16 52 08.7**	**-1.3**
FIA0	**FINESS Array S** baz=339,slow=13,SNR=50	**13.97**	**133**	Pn	**Pn**	**16 52 08.7**	**-1.3**
FINES	**FINESS Array B** 0.3nm,0.3s,baz=358,slow=15,SNR=8.6	**13.97**	**133**	Pn	**Pn**	**16 52 09.1**	**-1.0**
EKA	**Eskdalemuir Ar** baz=12,slow=10,SNR=4.3	**17.80**	**195**	P	**Pn**	**16 52 58.3**	**-1.5**
NRDL	**Niedersach Rie** comp=Z,93nm,2.7s	**20.49**	**170**	*e*P	Pn	16 53 33.4	+1.3
IBBN	**Ibbenburen** comp=Z,14nm,1.1s	**20.58**	**175**	*e*P	Pn	16 53 35.8	+2.5
IBBN				*e*		16 54 20.3	
MICGM	**Minsk**	**20.76**	**139**	*e*P	Pn	16 53 36.0	+0.7
CLZ	**Clausthal** comp=Z,17nm,1.2s	**21.15**	**170**	*e*P	**P**	**16 53 41.0**	**+3.8**
CLZ				*e*		16 54 25.7	
CLL	**Collm** comp=Z,14nm,1.8s	**21.85**	**166**	*e*P	P	16 53 49.5	+4.8
CLL				*e*		16 54 33.6	
CLL	**Collm** comp=Z,13nm,1.7s	**21.85**	**166**	*e*(P)	**P**	**16 53 49.0**	**+4.3**
UBBA	**Unterbreizbach** comp=Z,45nm,2.4s	**22.15**	**171**	*e*P	**P**	**16 53 50.9**	**+3.1**
UBBA				*e*		16 54 36.3	
BRG	**Berggiesshubel** comp=Z,29nm,2.3s	**22.35**	**164**	*e*P	P	16 53 59.0	+9.0
BRG				*e*		16 54 37.5	
MOX	**Moxa** comp=Z,14nm,1.5s	**22.41**	**168**	*e*P	**P**	**16 53 53.2**	**+2.4**
MOX				*e*		16 54 39.2	
MOX	comp=Z,200nm,20.3s			*e*L	L	17 02 31.2	
BAIF	**Baives** comp=Z,14nm,1.1s	**22.79**	**181**	*e*P	**P**	**16 53 54.5**	**-0.2**
NKC	**Novy Kostel**	**22.88**	**167**	*e*P	**P**	**16 53 57.8**	**+2.1**
UPC	**Upice**	**22.90**	**161**	*e*P	**P**	**16 53 57.6**	**+1.7**
UPC	**Upice**	**22.90**	**161**	P	**P**	**16 53 57.6**	**+1.7**
DPC	**Dobruska-Polom**	**23.08**	**161**	*e*P	P	16 54 02.7	+4.9
PRU	**Pruhonice**	**23.28**	**164**	*e*P	**P**	**16 54 00.7**	**+0.9**
PRU	**Pruhonice**	**23.28**	**164**	P	**P**	**16 54 00.7**	**+0.9**
ROTZ	**Rotzenmuhle** comp=Z,7.0nm,1.4s	**23.33**	**168**	*e*P	**P**	**16 54 01.9**	**+1.6**
ROTZ				*e*		16 54 49.2	
GRF	**Grafenberg Arr** comp=Z,403nm,19.1s	**23.34**	**169**	*e*L	L	17 03 10.4	
WET	**Wettzell** comp=Z,11nm,1.6s	**23.99**	**167**	*e*P	**P**	**16 54 09.0**	**+2.2**
WET				*e*		16 54 56.2	
KHC	**Kasperske Hory**	**24.05**	**165**	*e*P	**P**	**16 54 08.9**	**+1.5**
KHC	**Kasperske Hory**	**24.05**	**165**	P	**P**	**16 54 08.9**	**+1.5**
VRAC	**Vranov** comp=Z,1.8nm,0.5s,baz=20,slow=10,SNR=3.7	**24.14**	**161**	P	**P**	**16 54 09.6**	**+1.4**
GEC2	**GERESS Array S** comp=Z,24nm,2.2s	**24.35**	**165**	*e*P	**P**	**16 54 11.5**	**+1.3**
GEC2				*e*		16 54 59.5	
GERES	**GERESS Array B** comp=Z,1.5nm,0.7s,baz=359,slow=8.0,SNR=12	**24.35**	**165**	P	**P**	**16 54 11.7**	**+1.6**
LDF	**La Druitiere**	**24.35**	**188**	*e*P	**P**	**16 54 09.3**	**-0.7**
LDF	**La Druitiere**	**24.35**	**188**	P	**P**	**16 54 09.3**	**-0.7**
BFO	**Black Forest** comp=Z,50nm,2.8s	**24.57**	**174**	*e*P	**P**	**16 54 13.6**	**+1.5**
BFO				*e*		16 55 01.6	
AKASG	**Malin Array Be** comp=Z,1.6nm,0.7s,baz=346,slow=9.8,SNR=5.0	**24.63**	**141**	P	**P**	**16 54 12.5**	**-0.1**
LOR	**Lormes** comp=Z,7.0nm,0.8s	**25.58**	**181**	*e*P	**P**	**16 54 21.1**	**-0.1**
LOR	**Lormes** comp=Z,7.0nm,0.8s	**25.58**	**181**	*e*P	**P**	**16 54 21.1**	**-0.1**
AVF	**Avril sur Loir** comp=Z,3.6nm,0.8s	**26.07**	**182**	*e*P	**P**	**16 54 25.4**	**-0.2**
AVF	**Avril sur Loir** comp=Z,3.0nm,0.8s	**26.07**	**182**	*e*P	**P**	**16 54 25.4**	**-0.2**
SMF	**Signal de Mont**	**26.21**	**181**	*e*P	**P**	**16 54 27.2**	**+0.3**
SMF	**Signal de Mont**	**26.21**	**181**	*e*P	**P**	**16 54 27.2**	**+0.3**
CABF	**La Chapelle** comp=Z,8.9nm,0.7s	**26.25**	**178**	*e*P	**P**	**16 54 27.7**	**+0.4**
CABF	**La Chapelle** comp=Z,8.0nm,0.7s	**26.25**	**178**	*e*P	**P**	**16 54 27.7**	**+0.4**
TCF	**Toulx Ste Croi**	**26.58**	**184**	*e*P	**P**	**16 54 29.7**	**-0.6**
TCF	**Toulx Ste Croi**	**26.58**	**184**	*e*P	**P**	**16 54 29.7**	**-0.6**
AKTO	**Aktyubinsk** comp=Z,1.3nm,0.8s,baz=329,slow=7.4,SNR=4.5	**32.06**	**105**	P	P	16 55 22.9	+4.0
KBZ	**Khabaz** comp=Z,0.9nm,0.5s,baz=0.5,slow=6.0,SNR=3.1	**34.20**	**127**	P	**P**	**16 55 40.2**	**+2.7**
BRTR	**Keskin Array B** comp=Z,0.8nm,0.8s,baz=352,slow=8.7,SNR=3.5	**36.04**	**140**	P	**P**	**16 55 54.2**	**+0.6**
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.7s,baz=18,slow=8.6,SNR=3.5	**38.94**	**320**	P	**P**	**16 56 18.1**	**+0.4**
ILAR	**Eielson Array** comp=Z,0.5nm,0.8s,baz=360,slow=6.4,SNR=6.2	**41.40**	**342**	P	**P**	**16 56 39.2**	**+1.1**
TORD	**Torodi Ar. Bea** comp=Z,0.8nm,0.6s,baz=352,slow=7.2,SNR=12	**59.62**	**183**	P	**P**	**16 58 56.4**	**+0.2**
NVAR	**Mina Array Bea** comp=Z,0.6nm,0.9s,baz=58,slow=5.4,SNR=4.5	**62.38**	**312**	P	**P**	**16 59 15.8**	**+0.8**
TXAR	**Lajitas Array** comp=Z,0.4nm,0.7s,baz=34,slow=4.9,SNR=4.7	**67.44**	**296**	P	**P**	**16 59 47.7**	**-0.2**
SNAA	**Sanae** comp=Z,0.3nm,1.0s,baz=27,slow=9.0,SNR=3.2	**144.29**	**184**	PKP	PKPbc	17 08 25.6	+0.7

ISCJB ***13*** *16:49:38.1±0.3, 72.7*$^{\circ}$*74N±0.0*$^{\circ}$*03×4.6*$^{\circ}$*E±0.1, h10km, mb4.0/35, MS4.0/13, Error ellipse: s-maj=4.8km s-min=4.4km az=144.4*
CSEM ***13*** *16:49:38.1±0.1, 72.7*$^{\circ}$*2N×4.3*$^{\circ}$*0E, h2km, mb4.4/17, Error ellipse: s-maj=5.4km s-min=4.6km az=32.0*
IDC ***13*** *16:49:38.8±0.6, 72.7*$^{\circ}$*0N×4.0*$^{\circ}$*5E, h0km, mb3.7/17, mb1 3.9/22, mb1mx3.8/32, mbtmp3.7/22, ML3.9/5, MS4.0/6, Ms1 4.0/6, ms1mx3.5/29, Error ellipse: s-maj=14.8km s-min=12.1km az=56.0*
MOS ***13*** *16:49:38.4±1.3, 72.6*$^{\circ}$*8N×4.3*$^{\circ}$*9E, h10km, mb4.4/16, MS4.1/5, Error ellipse: s-maj=24.0km s-min=5.7km az=93.1*
HEL ***13*** *16:49:39.3±0.3, 72.7*$^{\circ}$*7N×4.1*$^{\circ}$*4E, h10km, mb4.5(NEIC), ML3.7(NAO)*
NAO ***13*** *16:49:39.3±2.8, 72.6*$^{\circ}$*7N×4.1*$^{\circ}$*9E, ML3.7*
NEIC ***13*** *16:49:39.8±0.3, 72.7*$^{\circ}$*2N×4.1*$^{\circ}$*6E, h10km, mb4.5/8, Error ellipse: s-maj=6.8km s-min=5.1km az=84.0*
BER ***13*** *16:49:41.2±4.4, 72.7*$^{\circ}$*1N×4.1*$^{\circ}$*3E, h11km±52km, ML3.7(NAO)*
ISC 13 16:49:40.0±0.4**, 72.7**°**7N**±0.0°**04×4.2**°**4E**±0.0°**05, h10**km**, n248,**
σ1§46/245, mb4.0/35, MS4.0/13, 4C-1D, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**4.32**	**252**	*e*P	**Pn**	**16 50 44.1**	**-1.5**
JNW	**Jan Mayen West**	**4.32**	**252**	*e*P	**Pn**	**16 50 44.1**	**-1.5**
JNW	**Jan Mayen West**	**4.32**	**252**	P	**Pn**	**16 50 44.1**	**-1.5**
JMIC	**Jan Mayen**	**4.36**	**252**	*e*P	**Pn**	**16 50 44.3**	**-1.9**
JMIC	**Jan Mayen**	**4.36**	**252**	*e*P	**Pn**	**16 50 44.3**	**-1.9**
JMIC	**Jan Mayen**	**4.36**	**252**	Pn	**Pn**	**16 50 44.6**	**-1.6**
JMIC	**Jan Mayen** 4.7nm,0.3s,baz=53,slow=6.2,SNR=7.2	**4.36**	**252**	Pn	**Pn**	**16 50 44.6**	**-1.6**
JMIC	comp=Z,2μm,18.5s,baz=48,slow=35			LR	LR	16 52 08.9	
JMIC	**Jan Mayen** SNR=49	**4.36**	**252**	*e*P	**Pn**	**16 50 44.3**	**-1.9**
JMIC	**Jan Mayen**	**4.36**	**252**	Pn	**Pn**	**16 50 44.6**	**-1.6**
JMI	**Jan Mayen**	**4.45**	**252**	*e*P	**Pn**	**16 50 46.8**	**-0.7**
JMI	**Jan Mayen**	**4.45**	**252**	*e*P	**Pn**	**16 50 46.8**	**-0.7**
JMI	**Jan Mayen** SNR=49	**4.45**	**252**	*e*P	**Pn**	**16 50 46.8**	**-0.7**
BJO1	**Bjornoya**	**4.52**	**60**	*e*P	**Pn**	**16 50 46.2**	**-2.2**
BJO1	**Bjornoya**	**4.52**	**60**	P	**Pn**	**16 50 46.2**	**-2.2**
BJO	**Bjornoya**	**4.57**	**61**	*e*Pn	**Pn**	**16 50 46.2**	**-2.8**
HSP	**Hornsund**	**5.18**	**29**	*e*P	**Pn**	**16 50 56.4**	**-1.0**
LOF	**Lofoten**	**5.60**	**142**	*e*P	**Sn**	**16 52 05.4**	**-2.1**
TRO	**Tromso**	**5.69**	**116**	*e*P	**Pn**	**16 51 03.9**	**-0.5**
TRO	**Tromso**	**5.69**	**116**	*e*P	**Pn**	**16 51 03.9**	**-0.5**
TRO	**Tromso**	**5.69**	**116**	P	**Pn**	**16 51 03.8**	**-0.5**
STEI	**Steigen**	**6.10**	**137**	*e*P	**Pn**	**16 51 09.9**	**-0.2**
STEI	**Steigen**	**6.10**	**137**	*e*P	**Pn**	**16 51 09.9**	**-0.2**
STEI	**Steigen**	**6.10**	**137**	P	**Pn**	**16 51 09.8**	**-0.2**
SPA0	**Spitsbergen Ar** baz=210,slow=16	**6.22**	**24**	Pn	**Pn**	**16 51 11.4**	**-0.3**
SPA0	baz=220,slow=37			Sn	**Sn**	**16 52 20.2**	**-2.5**
SPA0	**Spitsbergen Ar** baz=210,slow=16	**6.22**	**24**	Pn	**Pn**	**16 51 11.4**	**-0.3**
SPA0				Sn	**Sn**	**16 52 20.2**	**-2.5**
SPA0	**Spitsbergen Ar** baz=220,slow=37	**6.22**	**24**	*e*P	**Pn**	**16 51 11.4**	**-0.3**
SPA0				*e*S	**Sn**	**16 52 20.2**	**-2.5**
SPA0	**Spitsbergen Ar**	**6.22**	**24**	P	**Pn**	**16 51 11.4**	**-0.3**
SPITS	**Spitsbergen Ar**	**6.22**	**24**	Pn	**Pn**	**16 51 10.7**	**-1.0**
SPITS				Sn	**Sn**	**16 52 17.2**	**-5.5**
SPITS	**Spitsbergen Ar** baz=201,slow=16,SNR=9.4	**6.22**	**24**	Pn	**Pn**	**16 51 10.7**	**-1.0**
SPITS	baz=219,slow=28,SNR=2.1			Sn	**Sn**	**16 52 17.2**	**-5.5**
SPITS	comp=Z,825nm,20.1s,baz=265,slow=34			LR	LR	16 53 11.5	
SPITS	**Spitsbergen Ar** 825nm,20.1s	**6.22**	**24**	P	**Pn**	**16 51 10.7**	**-1.0**
KBS	**Kingsbay**	**6.47**	**13**	Pn	**Pn**	**16 51 14.4**	**-0.7**
KBS	**Kingsbay**	**6.47**	**13**	*e*P	**Pn**	**16 51 15.3**	**+0.2**
KBS	**Kingsbay**	**6.47**	**13**	*e*Pn	**Pn**	**16 51 14.2**	**-0.9**
KBS	**Kingsbay**	**6.47**	**13**	Pn	**Pn**	**16 51 14.4**	**-0.7**
KBS	**Kingsbay**	**6.47**	**13**	P	**Pn**	**16 51 15.3**	**+0.2**
KIF	**Kilpisjarvi**	**6.60**	**117**	*e*P	**Pn**	**16 51 14.5**	**-2.5**
KIF	**Kilpisjarvi**	**6.60**	**117**	P	**Pn**	**16 51 14.4**	**-2.5**
KONS	**Konsvik**	**7.01**	**149**	*e*P	Pn	16 51 11.6	-11
KTK1	**Kautokeino**	**7.26**	**112**	*e*P	**Pn**	**16 51 24.9**	**-1.1**
KTK1	**Kautokeino**	**7.26**	**112**	*e*P	**Pn**	**16 51 24.9**	**-1.1**
KTK1	**Kautokeino**	**7.26**	**112**	P	**Pn**	**16 51 24.9**	**-1.1**
MOR8	**Moi Rana**	**7.52**	**147**	*e*P	**Pn**	**16 51 29.2**	**-0.4**
MOR8	**Moi Rana**	**7.52**	**147**	*e*P	**Pn**	**16 51 29.2**	**-0.4**
MOR8	**Moi Rana**	**7.52**	**147**	P	**Pn**	**16 51 29.2**	**-0.4**
ARA0	**ARCESS Array S** baz=295,slow=10	**7.58**	**105**	Pn	**Pn**	**16 51 28.8**	**-1.6**
ARA0	baz=286,slow=22			Sn	Sn	16 52 48.0	-8.3
ARA0	**ARCESS Array S** baz=295,slow=10	**7.58**	**105**	Pn	**Pn**	**16 51 28.8**	**-1.6**
ARA0	baz=286,slow=22			Sn	Sn	16 52 48.0	-8.3
ARA0	**ARCESS Array S**	**7.58**	**105**	*e*P	**Pn**	**16 51 28.8**	**-1.6**
ARA0				*e*		16 52 48.0	
ARA0	**ARCESS Array S**	**7.58**	**105**	P	**Pn**	**16 51 28.8**	**-1.6**
ARCES	**ARCESS Array B**	**7.58**	**105**	Pn	**Pn**	**16 51 29.4**	**-1.1**
ARCES				Sn	Sn	16 52 48.6	-7.7
ARCES	**ARCESS Array B** comp=Z,1.9nm,0.3s,baz=312,slow=12,SNR=8.0	**7.58**	**105**	Pn	**Pn**	**16 51 29.4**	**-1.1**
ARCES	comp=Z,0.3nm,0.3s,baz=317,slow=22,SNR=2.1			Sn	Sn	16 52 48.6	-7.7
ARCES	**ARCESS Array B** comp=Z,2.0nm,0.3s	**7.58**	**105**	P	**Pn**	**16 51 29.4**	**-1.1**
LANU	**Lannavaara**	**7.59**	**120**	*e*P	**Pn**	**16 51 28.6**	**-1.9**
LANU	**Lannavaara**	**7.59**	**120**	P	**Pn**	**16 51 28.6**	**-1.9**
HEF	**Hetta**	**7.78

	comp=Z,20nm,1.6s						
MORC	**Moravsky Berou**	**23.82**	**158**	*e*P	**P**	**16 54 52.0**	**-0.8**
	comp=Z,20nm,1.6s						
MORC	**Moravsky Berou**	**23.82**	**158**	*e*P	**P**	**16 54 52.0**	**-0.8**
	comp=Z,20nm,1.6s						
OKC	**Ostrava-Krasne**	**23.82**	**157**	AMS	AMS	17 04 10.0	
	comp=Z,600nm,16.5s						
SOKR	**Solikamsk**	**23.95**	**95**	*e*P	**P**	**16 54 54.5**	**+0.6**
SOKR				pmax	pmax		
	comp=Z,20nm,1.3s						
SOKR				MLR	MLR		
	comp=Z,270nm,16.0s						
SOKR	**Solikamsk**	**23.95**	**95**	*e*P	**P**	**16 54 54.5**	**+0.6**
	comp=Z,270nm,16.0s						
KHC	**Kasperske Hory**	**24.08**	**165**	*e*P	**P**	**16 54 54.3**	**-1.0**
KHC				pmax	pmax		
	comp=Z,23nm,1.8s						
KHC	**Kasperske Hory**	**24.08**	**165**	*e*P	**P**	**16 54 57.1**	**+1.8**
KHC				AMS	AMS	17 04 50.0	
	comp=Z,300nm,14.8s						
KHC	**Kasperske Hory**	**24.08**	**165**	*e*P	**P**	**16 54 54.3**	**-1.0**
	comp=Z,23nm,1.8s						
KHC	**Kasperske Hory**	**24.08**	**165**	*e*P	**P**	**16 54 54.3**	**-1.0**
	comp=Z,23nm,1.8s						
TREC	**Trest**	**24.08**	**162**	AMS	AMS	17 04 30.0	
	comp=Z,500nm,17.3s						
VRAC	**Vranov**	**24.18**	**160**	P	**P**	**16 54 57.1**	**+1.0**
VRAC	**Vranov**	**24.18**	**160**	P	**P**	**16 54 57.1**	**+1.0**
	comp=Z,1.9nm,0.5s,baz=1.0,slow=6.1,SNR=4.2						
VRAC	**Vranov**	**24.18**	**160**	P	**P**	**16 54 57.1**	**+1.0**
	comp=Z,2.0nm,0.5s						
GERES	**GERESS Array B**	**24.38**	**165**	P	**P**	**16 54 59.1**	**+1.0**
GERES	**GERESS Array B**	**24.38**	**165**	P	**P**	**16 54 59.1**	**+1.0**
	comp=Z,1.3nm,0.6s,baz=356,slow=9.4,SNR=7.0						
GERES	**GERESS Array B**	**24.38**	**165**	P	**P**	**16 54 59.1**	**+1.0**
	comp=Z,1.0nm,0.6s						
AKASG	**Malin Array Be**	**24.70**	**140**	P	**P**	**16 55 00.2**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG				MLR	MLR		
	comp=Z,970nm,19.2s						
AKASG	**Malin Array Be**	**24.70**	**140**	P	**P**	**16 55 00.2**	**-0.6**
AKASG	**Malin Array Be**	**24.70**	**140**	P	**P**	**16 55 00.2**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=342,slow=8.9,SNR=5.1						
AKASG				LR	LR	17 04 21.7	
	comp=Z,970nm,19.2s,baz=340,slow=36						
AKASG	**Malin Array Be**	**24.70**	**140**	P	**P**	**16 55 00.2**	**-0.6**
	comp=Z,970nm,19.2s						
ROSF	**Rostrenen**	**24.75**	**192**	*e*P	**P**	**16 55 00.4**	**-0.9**
	comp=Z,7.8nm,0.8s						
ROSF	**Rostrenen**	**24.75**	**192**	*e*P	**P**	**16 55 00.4**	**-0.9**
ROSF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ROSF	**Rostrenen**	**24.75**	**192**	*e*P	**P**	**16 55 00.4**	**-0.9**
	comp=Z,7.8nm,0.8s						
ROSF	**Rostrenen**	**24.75**	**192**	*e*P	**P**	**16 55 00.4**	**-0.9**
	comp=Z,7.8nm,0.8s						
SGMF	**Saint Gilles**	**24.78**	**191**	*e*P	**P**	**16 55 01.1**	**-0.5**
SGMF	**Saint Gilles**	**24.78**	**191**	*e*P	**P**	**16 55 01.1**	**-0.5**
SGMF	**Saint Gilles**	**24.78**	**191**	*e*P	**P**	**16 55 01.1**	**-0.5**
SGMF	**Saint Gilles**	**24.78**	**191**	*e*P	**P**	**16 55 01.1**	**-0.5**
LOR	**Lormes**	**25.58**	**181**	*e*P	**P**	**16 55 08.0**	**-0.8**
	comp=Z,7.9nm,0.8s						
LOR	**Lormes**	**25.58**	**181**	*e*P	**P**	**16 55 08.0**	**-0.8**
	comp=Z,7.9nm,0.8s						
LOR	**Lormes**	**25.58**	**181**	*e*P	**P**	**16 55 08.0**	**-0.8**
	comp=Z,7.9nm,0.8s						
SSF	**Saint Saulge**	**25.79**	**181**	*e*P	**P**	**16 55 10.3**	**-0.4**
SSF	**Saint Saulge**	**25.79**	**181**	*e*P	**P**	**16 55 10.3**	**-0.4**
SSF	**Saint Saulge**	**25.79**	**181**	*e*P	**P**	**16 55 10.3**	**-0.4**
SSF	**Saint Saulge**	**25.79**	**181**	*e*P	**P**	**16 55 10.3**	**-0.4**
AVF	**Avril sur Loir**	**26.06**	**181**	*e*P	**P**	**16 55 12.4**	**-0.8**
AVF	**Avril sur Loir**	**26.06**	**181**	*e*P	**P**	**16 55 12.4**	**-0.8**
AVF	**Avril sur Loir**	**26.06**	**181**	*e*P	**P**	**16 55 12.4**	**-0.8**
AVF	**Avril sur Loir**	**26.06**	**181**	*e*P	**P**	**16 55 12.4**	**-0.8**
CABF	**La Chapelle**	**26.25**	**177**	*e*P	**P**	**16 55 15.4**	**+0.4**
	comp=Z,12nm,0.8s						
CABF	**La Chapelle**	**26.25**	**177**	*e*P	**P**	**16 55 15.4**	**+0.4**
CABF				pmax	pmax		
	comp=Z,12nm,0.8s						
CABF	**La Chapelle**	**26.25**	**177**	*e*P	**P**	**16 55 15.4**	**+0.4**
	comp=Z,12nm,0.8s						
CABF	**La Chapelle**	**26.25**	**177**	*e*P	**P**	**16 55 15.4**	**+0.4**
	comp=Z,12nm,0.8s						
TCF	**Toulx Ste Croi**	**26.58**	**183**	*e*P	**P**	**16 55 16.6**	**-1.3**
TCF	**Toulx Ste Croi**	**26.58**	**183**	*e*P	**P**	**16 55 16.6**	**-1.3**
TCF	**Toulx Ste Croi**	**26.58**	**183**	*e*P	**P**	**16 55 16.6**	**-1.3**
TCF	**Toulx Ste Croi**	**26.58**	**183**	*e*P	**P**	**16 55 16.6**	**-1.3**
ARU	**Arti**	**27.09**	**98**	*d i*P	**P**	**16 55 21.8**	**-0.6**
ARU						16 56 02.7	
ARU				S	**S**	**17 00 01.5**	**+1.5**
ARU				SS	**SnSn**	**17 01 06.9**	**+0.8**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ARU	**Arti**	**27.09**	**98**	*i* P	**P**	**16 55 21.8**	**-0.6**
	comp=Z,8.0nm,1.2s						
KIS	**Kishinev**	**28.18**	**143**	*e*L	L	16 56 16.0	
KIS				LRM	MLR	16 58 26.0	
	comp=Z,300nm,18.0s						
MLR	**Muntele Rosu**	**29.16**	**148**	LR	LR	17 07 30.8	
	comp=Z,192nm,19.8s,baz=1.1,slow=37						
TIXI	**Tiksi**	**31.60**	**30**	*e*P	**P**	**16 56 03.9**	**+1.7**
TIXI				pmax	pmax		
	comp=Z,11nm,1.7s						
TIXI	**Tiksi**	**31.60**	**30**	*e*P	**P**	**16 56 03.9**	**+1.7**
	comp=Z,11nm,1.7s						
ANN	**Anapa**	**32.02**	**133**	*e*P	**P**	**16 56 08.5**	**+2.4**
ANN				*e**PP	**pP**	**16 56 11.9**	**+2.8**
ANN				*e*S	**S**	**17 01 20.6**	**+3.2**
ANN				pmax	pmax		
	comp=Z,53nm,1.3s						
ANN				MLR	MLR		
	comp=N,230nm,17.0s						
ANN				MLR	MLR		
	comp=E,178nm,17.0s						
ANN				MLR	MLR		
	comp=Z,680nm,17.0s						
AKTK	**Aktyubinsk**	**32.17**	**104**	P	**P**	**16 56 07.8**	**+0.4**
	comp=Z,1.0nm,0.7s						
AKTO	**Aktyubinsk**	**32.17**	**104**	P	**P**	**16 56 07.8**	**+0.3**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKTO	**Aktyubinsk**	**32.17**	**104**	P	**P**	**16 56 07.8**	**+0.3**
AKTO	**Aktyubinsk**	**32.17**	**104**	P	**P**	**16 56 07.8**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=305,slow=9.9,SNR=4.1						
AKTO	**Aktyubinsk**	**32.17**	**104**	P	**P**	**16 56 07.8**	**+0.3**
ESDC	**Sonseca Array**	**33.42**	**192**	P	**P**	**16 56 18.4**	**-0.1**
ESDC	**Sonseca Array**	**33.42**	**192**	P	**P**	**16 56 18.4**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=355,slow=7.7,SNR=2.8						
ESDC	**Sonseca Array**	**33.42**	**192**	P	**P**	**16 56 18.4**	**-0.1**
ABKAR	**Akbulak array**	**33.78**	**103**	*e*P	**P**	**16 56 20.7**	**-0.8**
ABKAR	**Akbulak array**	**33.78**	**103**	*e*P	**P**	**16 56 20.7**	**-0.8**
KBZ	**Khabaz**	**34.28**	**126**	P	**P**	**16 56 27.0**	**+1.1**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ	**Khabaz**	**34.28**	**126**	P	**P**	**16 56 27.0**	**+1.1**
KBZ	**Khabaz**	**34.28**	**126**	P	**P**	**16 56 27.0**	**+1.1**
	comp=Z,3.3nm,0.8s,baz=271,slow=4.0,SNR=4.3						
KBZ	**Khabaz**	**34.28**	**126**	P	**P**	**16 56 27.0**	**+1.1**
BRTR	**Keskin Array B**	**36.11**	**140**	P	**P**	**16 56 42.0**	**+0.2**
BRTR	**Keskin Array B**	**36.11**	**140**	P	**P**	**16 56 42.0**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=339,slow=3.6,SNR=2.8						
BRTR	**Keskin Array B**	**36.11**	**140**	P	**P**	**16 56 42.0**	**+0.2**
ZALV	**Zalesovo Beam**	**36.99**	**76**	P	**P**	**16 56 50.3**	**+1.2**
ZALV	**Zalesovo Beam**	**36.99**	**76**	P	**P**	**16 56 50.2**	**+1.2**
ZALV	**Zalesovo Beam**	**36.99**	**76**	P	**P**	**16 56 50.2**	**+1.2**
	comp=Z,0.2nm,0.3s,baz=349,slow=4.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**36.99**	**76**	P	**P**	**16 56 50.2**	**+1.2**
KURK	**Kurchatov**	**38.02**	**84**	⇑*e*P	**P**	**16 56 58.2**	**+0.4**
KURK				pmax	pmax		
	comp=Z,11nm,2.5s						
MALT	**Malatya**	**38.44**	**135**	*e*P	**P**	**16 57 00.3**	**-1.3**
MALT	**Malatya**	**38.44**	**135**	*e*P	**P**	**16 57 00.3**	**-1.3**
MALT	**Malatya**	**38.44**	**135**	*e*P	**P**	**16 57 00.3**	**-1.3**
YKA	**Yellowknife Ar**	**38.86**	**320**	P	**P**	**16 57 05.6**	**+0.9**
YKA				PcP	**PcP**	**16 59 14.3**	**-0.9**
YKA	**Yellowknife Ar**	**38.86**	**320**	P	**P**	**16 57 05.6**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=20,slow=8.5,SNR=3.9						
YKA				PcP	**PcP**	**16 59 14.3**	**-0.9**
	comp=Z,1.1nm,0.6s,baz=13,slow=3.1,SNR=7.8						
YKA	**Yellowknife Ar**	**38.86**	**320**	P	**P**	**16 57 05.6**	**+0.9**
YKA	**Yellowknife Ar**	**38.86**	**320**	PcP	**PcP**	**16 59 14.4**	**-0.9**
BILL	**Bilibino**	**38.94**	**11**	*c i*P	**P**	**16 57 06.2**	**+0.8**
BILL				pmax	pmax		
	comp=Z,16nm,1.6s						
BILL	**Bilibino**	**38.94**	**11**	*e*P	**P**	**16 57 04.9**	**-0.5**
	comp=Z,16nm,1.0s						
BILL	**Bilibino**	**38.94**	**11**	*e*P	**P**	**16 57 04.9**	**-0.5**
	comp=Z,16nm,1.0s						
ILAR	**Eielson Array**	**41.36**	**342**	P	**P**	**16 57 26.6**	**+1.1**
ILAR	**Eielson Array**	**41.36**	**342**	P	**P**	**16 57 26.6**	**+1.1**
	comp=Z,1.4nm,0.9s,baz=7.3,slow=7.8,SNR=7.1						
ILAR	**Eielson Array**	**41.36**	**342**	P	**P**	**16 57 26.6**	**+1.1**
MKAR	**Makanchi Array**	**42.61**	**83**	P	**P**	**16 57 36.9**	**+1.0**
MKAR	**Makanchi Array**	**42.61**	**83**	P	**P**	**16 57 36.9**	**+1.0**
MKAR	**Makanchi Array**	**42.61**	**83**	P	**P**	**16 57 36.9**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=3.6,slow=7.8,SNR=4.0						
MKAR	**Makanchi Array**	**42.61**	**83**	P	**P**	**16 57 36.9**	**+1.0**
FFC	**Flin Flon**	**43.18**	**306**	*i* P	**P**	**16 57 42.6**	**+2.3**
MOY	**Mondy**	**43.53**	**64**	*e*P	**P**	**16 57 45.9**	**+2.5**
ZAK	**Zakamensk**	**45.31**	**63**	*e*P	**P**	**16 57 58.4**	**+0.8**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.8s						
SONM	**Songino Array**	**48.47**	**62**	P	**P**	**16 58 22.8**	**+0.4**
SONM	**Songino Array**	**48.47**	**62**	P	**P**	**16 58 22.7**	**+0.4**
	comp=Z,0.3nm,0.6s,baz=316,slow=4.1,SNR=3.6						
SONM	**Songino Array**	**48.47**	**62**	P	**P**	**16 58 22.8**	**+0.4**
BSMT	**Bassoo Peak**	**52.55**	**312**	*e*P	**P**	**16 58 53.3**	**+0.1**
	comp=Z,1.3nm,0.9s						
BSMT	**Bassoo Peak**	**52.55**	**312**	*e*P	**P**	**16 58 53.3**	**+0.1**
	comp=Z,1.3nm,0.9s						
LKWY	**Lake**	**54.64**	**307**	*e*P	**P**	**16 59 07.4**	**-1.3**
LKWY	**Lake**	**54.64**	**307**	*e*P	**P**	**16 59 07.4**	**-1.3**
LKWY	**Lake**	**54.64**	**307**	*e*P	**P**	**16 59 07.4**	**-1.3**
MCMT	**McKenzie Canyo**	**54.97**	**309**	*e*P	**P**	**16 59 09.4**	**-1.7**
MCMT	**McKenzie Canyo**	**54.97**	**309**	*e*P	**P**	**16 59 09.4**	**-1.7**
PDAR	**Pinedale Array**	**56.14**	**306**	P	**P**	**16 59 22.1**	**+2.6**
PDAR	**Pinedale Array**	**56.14**	**306**	P	**P**	**16 59 22.1**	**+2.6**
	comp=Z,1.2nm,1.0s,baz=47,slow=6.5,SNR=4.9						
PDAR	**Pinedale Array**	**56.14**	**306**	P	**P**	**16 59 22.1**	**+2.6**
TORD	**Torodi Ar. Bea**	**59.61**	**183**	P	**P**	**16 59 43.2**	**-0.6**
TORD	**Torodi Ar. Bea**	**59.61**	**183**	P	**P**	**16 59 43.2**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=3.9,slow=6.7,SNR=10						
TORD	**Torodi Ar. Bea**	**59.61**	**183**	P	**P**	**16 59 43.2**	**-0.6**
NVAR	**Mina Array Bea**	**62.30**	**312**	P	**P**	**17 00 02.5**	**+0.3**
NVAR	**Mina Array Bea**	**62.30**	**312**	P	**P**	**17 00 02.5**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=32,slow=3.6,SNR=2.9						
NVAR	**Mina Array Bea**	**62.30**	**312**	P	**P**	**17 00 02.5**	**+0.3**
JCT	**Junction City**	**65.21**	**293**	*e*P	**P**	**17 00 20.9**	**-0.3**
JCT	**Junction City**	**65.21**	**293**	*e*P	**P**	**17 00 20.9**	**-0.3**
JCT	**Junction City**	**65.21**	**293**	*e*P	**P**	**17 00 20.9**	**-0.3**
MJAR	**Matsushiro Arr**	**66.47**	**39**	P	**P**	**17 00 30.4**	**+1.2**
MJAR	**Matsushiro Arr**	**66.47**	**39**	P	**P**	**17 00 30.4**	**+1.2**
	comp=Z,1.4nm,1.1s,baz=356,slow=4.9,SNR=3.4						
MJAR	**Matsushiro Arr**	**66.47**	**39**	P	**P**	**17 00 30.4**	**+1.2**
TXAR	**Lajitas Array**	**67.34**	**296**	P	**P**	**17 00 34.8**	**-0.2**
TXAR	**Lajitas Array**	**67.34**	**296**	P	**P**	**17 00 34.8**	**-0.2**
	comp=Z,0.5nm,0.7s,baz=62,slow=4.7,SNR=5.5						
TXAR	**Lajitas Array**	**67.34**	**296**	P	**P**	**17 00 34.8**	**-0.2**
CMAR	**Chiang Mai Arr**	**73.91**	**80**	P	**P**	**17 01 15.9**	**+1.0**
CMAR	**Chiang Mai Arr**	**73.91**	**80**	P	**P**	**17 01 15.9**	**+1.0**
	comp=Z,0.5nm,0.8s,baz=320,slow=9.1,SNR=4.5						
CMAR	**Chiang Mai Arr**	**73.91**	**80**	P	**P**	**17 01 15.9**	**+1.0**
SIV	**San Ignacio**	**98.14**	**242**	LR	LR	17 41 37.8	
	comp=Z,75nm,18.9s,slow=32						
SNAA	**Sanae**	**144.28**	**184**	PKP	PKPbc	17 09 12.5	0.0
SNAA	**Sanae**	**144.28**	**184**	PKP	PKPbc	17 09 12.5	0.0
	comp=Z,1.1nm,1.2s,baz=78,slow=5.3,SNR=2.8						

*IDC **13** 16:59:08.9±1.1, 11.°84N×143.°67E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.8/25, mbtmp3.8/9, MS3.1/1, Ms1 3.1/1, ms1mx2.2/36, Error ellipse: s-maj=35.7km s-min=27.5km az=90.0*

*NEIC **13** 16:59:14.2±0.8, 11.°83N×143.°56E, h35km, mb4.5/1, Error ellipse: s-maj=22.8km s-min=16.1km az=120.0*

ISC 13 16:59:12.7±0.9**, 11.°9N**±0.°1×**143.°7E**±0.°2**, h25**km**, n21, σ1.°08**/21**, mb3.8**/10**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**2.06**	**33**	*e*Pn	**Pb**	**16 59 47.8**	**-1.6**
GUMO				*e*Sn	**Sb**	**17 00 15.2**	**+0.6**
MJAR	**Matsushiro Arr**	**25.07**	**350**	P	**P**	**17 04 33.9**	**-1.3**
MJAR	**Matsushiro Arr**	**25.07**	**350**	P	**P**	**17 04 33.9**	**-1.3**
	1.0nm,0.6s,baz=167,slow=12,SNR=7.2						
KAPI	**Kappang**	**29.13**	**236**	LR	LR	17 16 32.7	
	comp=Z,36nm,19.1s,baz=220,slow=36						
WRA	**Warramunga Arr**	**32.92**	**196**	P	**P**	**17 05 44.3**	**-1.0**
WRA	**Warramunga Arr**	**32.92**	**196**	P	**P**	**17 05 44.3**	**-1.0**
	0.3nm,0.6s,baz=19,slow=9.8,SNR=4.8						
SONM	**Songino Array**	**47.51**	**326**	P	**P**	**17 07 46.7**	**+0.8**
SONM	**Songino Array**	**47.51**	**326**	P	**P**	**17 07 46.7**	**+0.8**
	0.5nm,0.5s,baz=142,slow=6.7,SNR=4.9						
MKAR	**Makanchi Array**	**61.95**	**317**	P	**P**	**17 09 31.4**	**+0.8**
MKAR	**Makanchi Array**	**61.95**	**317**	P	**P**	**17 09 31.4**	**+0.8**
	0.5nm,0.6s,baz=94,slow=8.1,SNR=7.1						
ZALV	**Zalesovo Beam**	**62.37**	**325**	P	**P**	**17 09 33.2**	**+0.1**
ZALV	**Zalesovo Beam**	**62.37**	**325**	P	**P**	**17 09 33.2**	**+0.1**
	0.7nm,0.4s,baz=102,slow=6.8,SNR=4.7						
KURK	**Kurchatov**	**65.17**	**321**	*e*P	**P**	**17 09 50.1**	**-1.6**
	3.1nm,0.8s						
ILAR	**Eielson Array**	**70.60**	**25**	P	**P**	**17 10 25.4**	**-0.3**
ILAR	**Eielson Array**	**70.60**	**25**	P	**P**	**17 10 25.4**	**-0.3**
	0.8nm,0.5s,baz=250,slow=6.1,SNR=13						
YKA	**Yellowknife Ar**	**84.91**	**27**	P	**P**	**17 11 46.3**	**+0.9**
YKA	**Yellowknife Ar**	**84.91**	**27**	P	**P**	**17 11 46.3**	**+0.9**
	0.2nm,0.4s,baz=286,slow=5.0,SNR=2.6						
ARCES	**ARCESS Array B**	**88.37**	**342**	P	**P**	**17 12 02.2**	**+0.1**
ARCES	**ARCESS Array B**	**88.37**	**342**	P	**P**	**17 12 02.2**	**+0.1**
	1.3nm,0.8s,baz=82,slow=6.5,SNR=3.6						
NVAR	**Mina Array Bea**	**88.88**	**51**	P	**P**	**17 12 07.2**	**+1.7**
NVAR	**Mina Array Bea**	**88.88**	**51**	P	**P**	**17 12 07.2**	**+1.7**
	0.3nm,0.6s,baz=286,slow=4.2,SNR=3.4						

*IDC **13** 17:12:46.6±1.0, 18.°30S×167.°97E, h0km, mb4.1/11, mb1 4.2/13, mb1mx4.1/21, mbtmp4.1/13, ML3.9/2, MS3.7/6, Ms1 3.7/6, ms1mx3.2/39, Error ellipse: s-maj=25.0km s-min=18.8km az=119.0*

*ISCJB **13** 17:12:48.8±0.6, 18.°44S±0.°04×167.°9E±0.°1, h29km, mb4.1/14, MS3.7/4, Error ellipse: s-maj=15.6km s-min=5.5km az=11.4*

*NOU **13** 17:12:48.5±1.8, 18.°09S×167.°53E, h30km, MD3.7, ML3.1, MS1.7*

*NEIC **13** 17:12:51.3±0.6, 18.°35S×167.°90E, h35km, mb4.4/6, Error ellipse: s-maj=13.1km s-min=10.6km az=95.0*

ISC 13 17:12:50.5±0.7**, 18.°40S**±0.°06×**167.°9E**±0.°1**, h29**km**, n38, σ1.°21**/41**, mb4.2**/14**, MS3.7**/4**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.84**	**194**	*e*S	**Sn**	**17 14 31.6**	**-0.4**
BAYA				AMP		17 14 40.4	
	comp=Z,8.9nm,4.2s						
DZM	**Mont Dzumac**	**3.89**	**200**	*e*LR	LR	17 13 54.8	
	comp=Z,918nm,24.1s						
DZM	**Mont Dzumac**	**3.89**	**200**	*e*P	**Pn**	**17 13 47.7**	**-0.8**
DZM				*e*S	**Sn**	**17 14 31.2**	**-2.0**
DZM				AMP		17 14 38.3	
	comp=Z,776nm,1.2s						
DZM	**Mont Dzumac**	**3.89**	**200**	Pn	**Pn**	**17 13 47.7**	**-0.8**
DZM				Sn	**Sn**	**17 14 31.5**	**-1.7**
DZM	**Mont Dzumac**	**3.89**	**200**	Pn	**Pn**	**17 13 47.7**	**-0.8**
	comp=Z,5.5nm,0.3s,baz=69,slow=17,SNR=45						
DZM				Sn	**Sn**	**17 14 31.5**	**-1.7**
	comp=Z,7.9nm,0.3s,baz=47,slow=19,SNR=3.1						
DZM				LR	LR	17 14 50.4	
	comp=Z,268nm,19.8s,baz=143,slow=31						
NOUC	**Port Laguerre**	**3.96**	**201**	*e*P	**Pn**	**17 13 49.2**	**-0.2**
NOUC				*e*S	**Sn**	**17 14 32.9**	**-2.0**
NOUC				AMP		17 14 45.1	
	comp=Z,32nm,15.3s						
MVNO	**Noumea**	**4.07**	**199**	*e*S	**Sn**	**17 14 38.1**	**+0.5**
MSVF	**Nonsavu**	**9.71**	**88**	Pn	Pn	17 14 58.1	-10
HNR	**Honiara**	**11.77**	**318**	Pn	**Pn**	**17 15 35.0**	**-1.5**
HNR	**Honiara**	**11.77**	**318**	Pn	**Pn**	**17 15 35.0**	**-1.5**
	comp=Z,1.0nm,0.3s,baz=168,slow=9.3,SNR=1.8						
HNR				LR	LR	17 19 26.6	
	comp=Z,300nm,19.9s,baz=123,slow=34						
AFI	**Afiamalu**	**20.05**	**80**	LR	LR	17 23 00.3	
	comp=Z,199nm,20.0s,baz=272,slow=31						
CTA	**Charters Tower**	**20.47**	**262**	P	**P**	**17 17 27.6**	**+1.4**
CTA	**Charters Tower**	**20.47**	**262**	P	**P**	**17 17 27.6**	**+1.4**
	comp=Z,3.0nm,0.5s,baz=97,slow=8.9,SNR=3.9						
CTAO	**Charters Tower**	**20.47**	**262**	*e*P	**P**	**17 17 26.2**	**+0.1**
	comp=Z,15nm,1.1s						
URZ	**Urewera**	**21.37**	**160**	P	**P**	**17 17 37.5**	**+1.8**
URZ	**Urewera**	**21.37**	**160**	P	**P**	**17 17 37.5**	**+1.8**
	comp=Z,5.1nm,0.7s,baz=346,slow=19,SNR=2.4						
URZ				LR	LR	17 24 55.1	
	comp=Z,372nm,18.0s,baz=180,slow=34						
STKA	**Stephens Creek**	**27.22**	**235**	*e*P	**P**	**17 18 31.5**	**-0.6**
	comp=Z,2.5nm,1.0s						
STKA	**Stephens Creek**	**27.22**	**235**	P	**P**	**17 18 33.6**	**+1.6**
	comp=Z,2.6nm,0.9s,baz=45,slow=7.1,SNR=4.1						
STKA				LR	LR	17 30 19.3	
	comp=Z,145nm,18.3s,baz=287,slow=38						
WRAB	**Tennant Creek**	**31.67**	**262**	*e*P	**P**	**17 19 12.7**	**+1.0**
	comp=Z,1.3nm,0.6s						
WRA	**Warramunga Arr**	**31.68**	**262**	P	**P**	**17 19 12.6**	**+0.8**
WRA				PcP	**PcP**	**17 22 03.8**	**+0.4**
WRA	**Warramunga Arr**	**31.68**	**262**	P	**P**	**17 19 12.6**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=84,slow=6.9,SNR=10						
WRA				PcP	**PcP**	**17 22 03.8**	**+0.4**
	comp=Z,2.0nm,1.3s,baz=90,slow=3.0,SNR=4.6						
ASAR	**Alice Springs**	**32.08**	**255**	P	**P**	**17 19 16.5**	**+1.2**
ASAR	**Alice Springs**	**32.08**	**255**	P	**P**	**17 19 16.5**	**+1.2**
	comp=Z,1.9nm,0.4s,baz=83,slow=9.0,SNR=103						
ASAR				LR	LR	17 31 53.5	
	comp=Z,218nm,18.7s,baz=142,slow=36						
FITZ	**Fitzroy Crossi**	**40.04**	**264**	P	**P**	**17 20 25.1**	**+1.8**
FITZ	**Fitzroy Crossi**	**40.04**	**264**	P	**P**	**17 20 25.1**	**+1.8**
	comp=Z,4.2nm,1.1s,baz=150,slow=6.7,SNR=7.6						
MJAR	**Matsushiro Arr**	**61.41**	**333**	P	**P**	**17 23 04.3**	**+0.1**
MJAR	**Matsushiro Arr**	**61.41**	**333**	P	**P**	**17 23 04.3**	**+0.1**
	comp=Z,2.1nm,1.0s,baz=164,slow=6.8,SNR=5.5						
USRK	**Ussuriysk Arra**	**70.40**	**333**	P	**P**	**17 24 03.3**	**+1.5**
	comp=Z,3.1nm,0.8s,baz=108,slow=6.3,SNR=6.7						
QSPA	**South Pole Qui**	**71.65**	**180**	*e*P	**P**	**17 24 08.9**	**-0.4**
	comp=Z,5.7nm,0.9s						
PETK	**Petropavlovsk-**	**71.75**	**354**	P	**P**	**17 24 10.0**	**+0.2**
PETK	**Petropavlovsk-**	**71.75**	**354**	P	**P**	**17 24 10.0**	**+0.2**
	comp=Z,3.9nm,0.9s,baz=163,slow=6.2,SNR=5.3						
MDJ	**Mudanjiang**	**71.78**	**332**	P	**P**	**17 24 11.3**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,12nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,220nm,4.2s						
MDJ	**Mudanjiang**	**71.78**	**332**	*e*P	**P**	**17 24 10.1**	**0.0**
	comp=Z,12nm,1.0s						
BILL	**Bilibino**	**86.20**	**359**	*e*P	**P**	**17 25 27.7**	**-0.9**
	comp=Z,5.7nm,0.9s						
NVAR	**Mina Array Bea**	**89.23**	**49**	P	**P**	**17 25 44.1**	**-0.1**
NVAR	**Mina Array Bea**	**89.23**	**49**	P	**P**	**17 25 44.1**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=229,slow=6.8,SNR=4.7						
ILAR	**Eielson Array**	**89.83**	**18**	P	**P**	**17 25 44.5**	**-1.5**
ILAR	**Eielson Array**	**89.83**	**18**	P	**P**	**17 25 44.5**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=218,slow=5.4,SNR=4.2						

DJA 13 17:13:39.2±1.4**, 9°S**±10°×**11°1E**±°**, h18**km±9km**, M3.7**/10**, MLv3.7**/10**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.83**	**354**	P	Pb	17 13 54.2	-1.0
PWJI	**Pagerwojo**	**1.13**	**28**	P	Pn	17 13 59.3	-0.9
UGM	**Wanagama**	**1.33**	**326**	P	Pn	17 14 01.8	-1.2
UGM				S	Sn	17 14 19.4	-0.9
SJI	**Sawahan**	**1.38**	**21**	P	Pn	17 14 03.0	-0.7
YOGI	**Yogyakarta**	**1.54**	**321**	P	Pn	17 14 04.9	-1.0
YOGI				S	Sn	17 14 24.4	-1.1
SMRI	**Semarang**	**2.13**	**337**	P	Pn	17 14 14.9	+0.9
GMJI	**Gumukmas**	**2.28**	**71**	P	Pn	17 14 14.8	-1.1
BJII	**Banjamegara**	**2.29**	**317**	P	Pn	17 14 16.8	+0.6
BLJI	**Banyuglugur**	**2.63**	**61**	P	Pn	17 14 21.6	+0.8
JAGI	**Jajag, Banyuwa**	**2.90**	**79**	P	Pn	17 14 24.2	-0.4

*BGS **13** 17:17:21.1±1.2, 43.°44N×81.°41E, h10km, mb5.4, MS5.5*

*SZGRF **13** 17:17:34.1, 43.°82N×79.°46E, h13km, mb5.8, Lake Issyk-Kul, Kyrgyzstan, region*

*LDG **13** 17:17:34.9±0.1, 44.°57N×78.°81E, h10km, Mb5.8/46, Ms4.8/10, Error ellipse: s-maj=5.4km s-min=3.6km az=2.0*

*IDC **13** 17:17:36.1±0.3, 44.°72N×78.°88E, h0km, mb5.4/46, mb1 5.5/52, mb1mx5.5/52, mbtmp5.4/52, ML5.3/7, MS4.9/46, Ms1 4.9/46, ms1mx4.8/56, Error ellipse: s-maj=6.1km s-min=4.4km az=178.0*

*ISCJB **13** 17:17:36.7±0.1, 44.°74N±0.°01×78.°87E±0.°01, h13km, mb5.6/454, MS5.1/218, Error ellipse: s-maj=2.0km s-min=1.5km az=7.0*

*NEIC **13** 17:17:37.7±0.1, 44.°73N×78.°87E, h11km, mb5.8/243, ME5.2, MS5.1/117, MW5.4, MW5.3, Error ellipse: s-maj=2.6km s-min=1.8km az=184.0, Moment Tensor Solution. s62 Moment tensor: Scale 10^{17}Nm; M_{rr}1.16; $M_{\theta\theta}$-1.02; $M_{\phi\phi}$-0.13; $M_{r\theta}$-0.60; $M_{\theta\phi}$-0.31; $M_{\phi r}$0.24; Best double couple: $M_0$1.30000×10^{17} NP1:ϕ_s269.00000°, δ59.00000°, λ107.00000°. NP2:ϕ_s58.00000°, δ35.00000°, λ64.00000°. Principal axes: T 1.3800, Plg70.0000°, Azm217.0000°; N -0.1400, Plg14.0000°, Azm80.0000°; P -1.2300, Plg12.0000°, Azm346.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*

NEIC One person died of a heart attack and several buildings damaged [VII] at Tekeli. Felt [III] at Almaty. Also felt at Druzhba and Ushtobe. Felt at Yining, China.

*TEH **13** 17:17:38.0, 44.°71N×78.°88E, h13km, ML5.5*

*BJI **13** 17:17:38.2, 44.°78N×79.°02E, h21km, mB5.5/45, mb5.4/59, ML5.9/9, Ms5.7/70, Ms7 5.4/67*

*MOS **13** 17:17:39.6±0.9, 44.°80N×78.°91E, h33km, mb5.9/146, MS5.1/81, Error ellipse: s-maj=4.8km s-min=3.8km az=31.6*

MOS Felt (III) at Almaty.

*NNC **13** 17:17:40.8±0.5, 44.°95N×78.°58E, h20km±2km, mb6.1, mpv5.8, Error ellipse: s-maj=2.7km s-min=1.3km az=123.0*

*GCMT **13** 17:17:40.6±0.1, 44.°77N×78.°83E, h12km, MW5.4, Moment Tensor Solution. s82,c142; s22,c22; Moment tensor: Scale 10^{17}Nm; M_{rr}1.10±.02; $M_{\theta\theta}$-1.40±.02; $M_{\phi\phi}$0.30±.02; $M_{r\theta}$-0.16±.04; $M_{\theta\phi}$-0.86±.02; $M_{\phi r}$0.49±.05; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s276.00000°, δ53.00000°, λ133.00000°. NP2:ϕ_s39.00000°, δ55.00000°, λ48.00000°. Principal axes: T 1.4400, Plg57.0000°, Azm248.0000°; N 0.3200, Plg33.0000°, Azm67.0000°; P -1.7600, Plg1.0000°, Azm157.0000°; Data Used: II IU CN IC G. Surface waves: sta= 99, comp=206, per= 50.*

*DJA **13** 17:17:41.8±2.1, 45°N±8°×7°9E±°, h24km±17km, M5.7/30, mB5.9/24, mb5.5/30, MLv6.8/1, Mw(mB)5.5/24*

*NEIC **13** 17:17:50.2±0.0, 44.°68N×78.°64E, h10km, Moment Tensor Solution. s151 Moment tensor: Scale 10^{17}Nm; M_{rr}1.08; $M_{\theta\theta}$-1.20; $M_{\phi\phi}$0.12; $M_{r\theta}$-1.01; $M_{\theta\phi}$-0.38; $M_{\phi r}$-0.73; Best double couple: $M_0$1.70000×10^{17} NP1:ϕ_s94.00000°, δ25.00000°, λ122.00000°. NP2:ϕ_s239.00000°, δ69.00000°, λ76.00000°. Principal axes: T 1.6700, Plg63.0000°, Azm126.0000°; N 0.1200, Plg12.0000°, Azm244.0000°; P -1.7900, Plg22.0000°, Azm339.0000°;*

ISC 13 17:17:39.2±0.3**, 44.°73N**±0.°02×**78.°83E**±0.°02**, h19**km±1km**, h19**km**:pP-P, n1742, σ1.°34**/1971**, mb5.7**/454**, MS5.2**/221**, 585C-115D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAA	**Alma-Ata**	**1.99**	**224**	*i* PN	**Pb**	**17 18 14.4**	**-0.4**
AAA				pmax	pmax		
	comp=Z,34µm,0.2s						
KNDC	**Almaty**	**2.02**	**222**	⇑Pn	**Pb**	**17 18 14.2**	**-1.1**
KNDC				⇑Sn	**Sb**	**17 18 40.9**	**+0.8**
KNDC	**Almaty**	**2.02**	**222**	Pn	**Pb**	**17 18 14.2**	**-1.1**
KNDC				Sn	**Sb**	**17 18 40.9**	**+0.8**
TKM2	**Tokmak 2**	**2.95**	**233**	⇑Pn	**Pn**	**17 18 26.4**	**+1.2**
	comp=Z,3µm,0.4s						
TKM2				⇓Sn	**Sn**	**17 19 02.7**	**+2.5**
	comp=Z,37µm,1.4s						
TKM2	**Tokmak 2**	**2.95**	**233**	*e*PN	**Pn**	**17 18 26.6**	**+1.4**
TKM2				*e*		17 19 05.7	
TKM2	**Tokmak 2**	**2.95**	**233**	*e*Pn	**Pn**	**17 18 26.6**	**+1.4**
TKM2				*e*Pb	**Pb**	**17 18 33.2**	**+2.0**
TKM2				*e*Sn	**Sb**	**17 19 05.7**	**-1.3**
TKM2	**Tokmak 2**	**2.95**	**233**	P	**Pn**	**17 18 26.7**	**+1.4**
	SNR=1441						
ULHL	**Ulahol**	**3.11**	**218**	*i* PN	**Pn**	**17 18 30.1**	**+2.7**
ULHL	**Ulahol**	**3.11**	**218**	P	**Pn**	**17 18 30.1**	**+2.7**
	SNR=2127						
MK31	**Makanchi Array**	**3.19**	**48**	⇓Pn	**Pn**	**17 18 29.6**	**+1.3**
	comp=Z,4µm,0.7s,baz=225,slow=14						

MK31 ⇑Sn **Sn** **17 19 07.9 +2.1**
comp=Z,22µm,0.9s,baz=222,slow=24,SNR=8.6
MK31 Makanchi Array 3.19 48 *e*PN **Pn** **17 18 29.5 +1.3**
MK31 *e*S **Sn** **17 19 07.8 +2.1**
MK31 pmax pmax
comp=Z,2µm,0.4s
MK31 smax smax
comp=Z,3µm,0.3s
MK31 Makanchi Array 3.19 48 *e*Pn **Pn** **17 18 29.2 +0.9**
MKAR Makanchi Array 3.19 48 PN **Pn** **17 18 29.4 +1.1**
MKAR 17 19 07.7
MKAR pmax pmax
comp=Z,296nm,0.3s
MKAR Makanchi Array 3.19 48 Pn **Pn** **17 18 29.4 +1.1**
MKAR Sn **Sn** **17 19 07.7 +2.0**
MKAR Lg Lg 17 19 14.9
MKAR Makanchi Array 3.19 48 Pn **Pn** **17 18 29.4 +1.1**
comp=Z,296nm,0.3s,baz=223,slow=14,SNR=2371
MKAR Sn **Sn** **17 19 07.7 +2.0**
comp=Z,1µm,0.3s,baz=223,slow=24,SNR=12
MKAR Lg Lg 17 19 14.9
comp=Z,6µm,0.3s,baz=229,slow=28,SNR=15
CHMS Chumysh 3.42 241 *i* PN **Pn** **17 18 32.7 +1.3**
CHMS Chumysh 3.42 241 P **Pn** **17 18 32.6 +1.3**
SNR=1408
USP Ospenovka 3.45 246 *i* PN **Pn** **17 18 33.1 +1.2**
USP Ospenovka 3.45 246 P **Pn** **17 18 33.0 +1.2**
SNR=1016
KBK Karagaybulak 3.49 235 *i* PN **Pn** **17 18 34.6 +2.0**
KBK Karagaybulak 3.49 235 P **Pn** **17 18 34.6 +2.0**
SNR=2421
KZA Kyzart 3.71 226 *i* PN **Pn** **17 18 38.6 +2.7**
KZA Kyzart 3.71 226 P **Pn** **17 18 38.6 +2.7**
SNR=685
AAK Ala-Archa 3.77 238 Pn **Pn** **17 18 38.6 +2.1**
comp=Z,29µm,0.4s
AAK Ala-Archa 3.77 238 *e*PN **Pn** **17 18 37.9 +1.4**
AAK *e* 17 19 32.7
AAK Ala-Archa 3.77 238 *e*Pn **Pn** **17 18 37.9 +1.4**
AAK *e*Sn **Sb** **17 19 32.7 +2.0**
AAK Lg Lg 17 19 35.9
AAK Ala-Archa 3.77 238 P **Pn** **17 18 38.2 +1.7**
SNR=482
AAK Ala-Archa 3.77 238 Pn **Pn** **17 18 38.2 +1.7**
comp=Z,511nm,0.3s,baz=69,slow=14,SNR=3687
AAK Lg Lg 17 19 35.9
comp=Z,505nm,0.3s,baz=261,slow=20,SNR=14
AAK LR LR 17 20 26.2
comp=Z,17µm,21.9s,baz=80,slow=45
UCH Uchtor 4.01 233 *i* PN **Pn** **17 18 42.4 +2.4**
UCH Uchtor 4.01 233 P **Pn** **17 18 42.4 +2.4**
SNR=369
EKS2 Erkin-Say 4.20 242 *e*PN **Pn** **17 18 43.8 +1.5**
EKS2 Erkin-Say 4.20 242 *e*Pn **Pn** **17 18 43.8 +1.5**
EKS2 Erkin-Say 4.20 242 P **Pn** **17 18 44.0 +1.7**
SNR=1472
AML Almayashu 4.55 237 *i* PN **Pn** **17 18 50.0 +2.7**
AML Almayashu 4.55 237 P **Pn** **17 18 50.0 +2.7**
SNR=739
KSH Kashi 5.62 203⇑ *i*Pn Pb 17 19 11.0 -5.7
KSH *e*Sn **Sb** **17 20 22.1 -1.7**
KSH LR LR
comp=N,77µm,4.6s
KSH LR LR
comp=E,108µm,6.8s
KSH LR LR
comp=Z,195µm,8.6s
KURBB Kurchatov Arra 5.90 358 Pn **Pn** **17 19 04.8 -0.7**
comp=Z,7.6nm,0.3s,baz=180,slow=12,SNR=496
KURBB Sn **Sn** **17 20 12.5 0.0**
comp=Z,106nm,0.3s,baz=179,slow=15,SNR=5.9
KURBB Lg Lg 17 20 40.5
comp=Z,240nm,0.3s,baz=172,slow=29,SNR=11
KUR17 Kurchatov Arra 5.91 358⇑Pn **Pn** **17 19 04.8 -0.9**
comp=Z,147nm,0.7s
KUR17 ⇓Pg Pb 17 19 24.9 +3.4
comp=Z,2µm,0.8s
KUR17 ⇑Sn **Sn** **17 20 10.2 -2.6**
comp=Z,891nm,0.6s
KUR17 ⇓Lg Lg 17 20 40.9
comp=Z,19µm,1.1s
KURK Kurchatov 5.99 359⇑Pn **Pn** **17 19 05.1 -1.7**
comp=Z,550nm,0.9s
KURK ⇓Pg Pb 17 19 26.4 +3.5
comp=Z,7µm,0.9s
KURK ⇓Sn **Sn** **17 20 11.1 -3.7**
comp=Z,5µm,0.9s
KURK ⇓Lg Lg 17 20 44.8
comp=Z,30µm,1.1s
KURK Kurchatov 5.99 359 PN **Pn** **17 19 05.0 -1.7**
KURK pmax pmax
comp=Z,7µm,0.9s
KURK Kurchatov 5.99 359 Pn **Pn** **17 19 04.8 -1.9**
KURK *e*Pg Pg 17 19 28.7 -5.1
KURK Sn **Sn** **17 20 12.5 -2.3**
KURK Lg Lg 17 20 40.5
KURK *e*Sg Sg 17 20 43.1 -8.3
KK31 Karatay Array 6.22 258⇑Pn **Pn** **17 19 10.4 +0.5**
comp=Z,132nm,0.3s,baz=72,slow=13,SNR=4009
KK31 ⇑Pg Pb 17 19 32.0 +5.1
comp=Z,584nm,0.7s
KK31 ⇓Lg Lg 17 20 54.2
comp=Z,4µm,0.6s,baz=69,slow=28,SNR=15
KK31 Karatay Array 6.22 258 *i* PN **Pn** **17 19 10.7 +0.8**
KK31 *e* 17 20 52.9
KK31 pmax pmax
comp=Z,279nm,0.3s
KKAR Karatay Array 6.22 258 *e*PN **Pn** **17 19 10.4 +0.5**
KKAR *e* 17 20 49.2
KKAR pmax pmax
comp=Z,3.0nm,0.8s
KKAR Karatay Array 6.22 258 *e*Pn **Pn** **17 19 10.4 +0.5**
comp=Z,3.1nm,0.8s
KKAR *e*Sg Sb 17 20 49.2 +8.3
WMQ Urumqi 6.43 95⇑ *i*Pn **Pn** **17 19 13.5 +0.6**
WMQ Sn **Sn** **17 20 27.0 +1.2**
WMQ smax smax
comp=N,7µm,1.0s
WMQ smax smax
comp=E,7µm,0.8s
WMQ LR LR
comp=N,40µm,8.6s
WMQ LR LR
comp=E,33µm,8.6s
WMQ LR LR
comp=Z,19µm,13.8s
VOSK Vostochnaya 9.53 330 ⇓Pn **Pn** **17 19 53.5 -1.7**
comp=Z,172nm,0.9s
VOSK ⇑Pg 17 20 29.3
comp=Z,842nm,1.4s
VOSK ⇓Sn **Sn** **17 21 37.3 -4.4**
comp=Z,1µm,0.8s
VOSK ⇑Lg Lg 17 22 34.7
comp=Z,7µm,1.1s
BVA0 Borovoye Array 9.98 329⇑Pn **Pn** **17 19 59.8 -1.7**
comp=Z,168nm,1.2s,baz=140,slow=14,SNR=750
BVA0 ⇑Pg 17 20 38.2
comp=Z,488nm,1.1s,baz=153,slow=16,SNR=5.2
BVA0 ⇓Sn **Sn** **17 21 48.9 -4.0**
comp=Z,791nm,0.8s,baz=134,slow=26,SNR=6.7
BVA0 ⇓Lg Lg 17 22 49.3
comp=Z,14µm,1.2s,baz=130,slow=26,SNR=4.3
BVA0 Borovoye Array 9.98 329 *e*P **Pn** **17 20 00.0 -1.5**
BVA0 *e* 17 21 48.9
BVA0 pmax pmax
comp=Z,74nm,0.3s
BVA0 smax smax
comp=Z,481nm,0.6s
BVAR Borovoye Array 9.98 329 P **Pn** **17 20 00.4 -1.1**
BVAR 17 21 48.9
BVAR pmax pmax
comp=Z,46nm,0.3s
BVAR smax smax
comp=N,78nm,0.3s
BVAR MLR MLR
comp=Z,7µm,18.6s
BVAR Borovoye Array 9.98 329 Pn **Pn** **17 20 00.4 -1.1**
BVAR Sn **Sn** **17 21 48.9 -4.0**
BVAR Lg Lg 17 22 50.6
BVAR Borovoye Array 9.98 329 Pn **Pn** **17 20 00.4 -1.1**
comp=Z,46nm,0.3s,baz=136,slow=14,SNR=231
BVAR Sn **Sn** **17 21 48.9 -4.0**
comp=Z,78nm,0.3s,baz=140,slow=22,SNR=6.2
BVAR Lg Lg 17 22 50.6
comp=Z,161nm,0.3s,baz=131,slow=26,SNR=6.6
BVAR LR LR 17 24 15.6
comp=Z,7µm,18.6s,baz=17,slow=40
ZAA0 Zalesovo Array 10.02 21 *e*Pn **Pn** **17 20 01.0 -0.9**
ZAA0 *e*Sn **Sn** **17 21 51.8 -1.9**
ZALV Zalesovo Beam 10.02 21 P **Pn** **17 20 01.3 -0.6**
ZALV 17 21 50.1
ZALV pmax pmax
comp=Z,73nm,0.3s
ZALV smax smax
comp=N,145nm,0.3s
ZALV MLR MLR
comp=Z,12µm,20.0s
ZALV Zalesovo Beam 10.02 21 Pn **Pn** **17 20 01.3 -0.6**
ZALV Sn **Sn** **17 21 50.1 -3.6**
ZALV Lg Lg 17 22 50.9
ZALV *e* 17 57 05.1
ZALV Zalesovo Beam 10.02 21 Pn **Pn** **17 20 01.3 -0.6**
comp=Z,72nm,0.3s,baz=211,slow=12,SNR=1560
ZALV Sn **Sn** **17 21 50.1 -3.6**
comp=Z,145nm,0.3s,baz=220,slow=23,SNR=8.9
ZALV Lg Lg 17 22 50.9
comp=Z,123nm,0.3s,baz=205,slow=26,SNR=8.6
ZALV LR LR 17 24 07.6
comp=Z,12µm,20.0s,baz=207,slow=39
ZALV P3KPbc 17 57 05.1
comp=Z,0.1nm,0.3s,baz=319,slow=4.3,SNR=3.6
BRVK Borovoye 10.05 329⇑Pn **Pn** **17 20 00.7 -1.6**
comp=Z,250nm,0.7s
BRVK ⇑Pg 17 20 38.2
comp=Z,762nm,1.2s
BRVK ⇓Sn **Sn** **17 21 49.9 -4.5**
comp=Z,4µm,1.3s
BRVK ⇑Lg Lg 17 22 51.2
comp=Z,21µm,1.2s
BRVK Borovoye 10.05 329 P **Pn** **17 20 01.0 -1.4**
BRVK 17 21 49.9
BRVK pmax pmax
comp=Z,259nm,0.4s
BRVK smax smax
comp=Z,2µm,0.6s
BRVK Borovoye 10.05 329 *e*Pn **Pn** **17 20 01.4 -1.0**
comp=Z,268nm,0.7s
BRVK *e*Sn Sn 17 21 43.7 -11
ZRNK Zerenda 10.46 325⇓Pn **Pn** **17 20 06.7 -1.3**
comp=Z,346nm,0.8s
ZRNK ⇑Pg 17 20 46.5
comp=Z,320nm,0.8s
ZRNK ⇓Sn **Sn** **17 21 59.3 -5.3**
comp=Z,1µm,0.8s
ZRNK ⇓Lg Lg 17 23 04.3
comp=Z,12µm,1.1s
NVS Novosibirsk 10.51 14⇓ *i*P **Pn** **17 20 07.3 -1.4**
NVS *e* 17 21 58.1
HVS Khovu-Aksy 11.85 52 *i* P **Pn** **17 20 26.0 -1.1**
CHCP Chirah Chowk 11.86 203⇓P **Pn** **17 20 28.4 +1.1**
CEP Cherat 12.13 208 P **Pn** **17 20 30.4 -0.6**
CEP S Sn 17 23 03.0 +17
DLH Dalhousie 12.37 191 *e*PKP **Pn** **17 20 35.0 +0.6**
DLH *ex* x 17 23 17.0
THN Thein Dam 12.51 192 *e*PKP **Pn** **17 20 33.0 -3.1**
THN *ex* x 17 24 18.4
DHRM DHARAMSHALA 12.61 190 *e*PKP **Pn** **17 20 38.1 +0.3**
DHRM AMB AMB 17 20 40.7
comp=Z,572nm,5.2s
KBL Kabul 12.65 220⇑ *i*P **Pn** **17 20 37.2 -1.0**
KBL pmax pmax
comp=Z,275nm,1.0s
KBL Kabul 12.65 220⇑ *i*Pn **Pn** **17 20 37.1 -1.0**
comp=Z,275nm,1.0s
THW Thamme Wali 13.13 207 P **Pn** **17 20 42.7 -1.9**
SDNR Sundarnagar 13.29 187 *e*4 Pn 17 20 58.0 +11
SDNR *ex* **Sn** **17 23 11.0 -2.9**
BHK Bhakra 13.42 189 *e*PKP **Pn** **17 20 49.0 +0.4**
BHK *e*4 x 17 23 05.8
SMLA Simla 13.64 186 *i* P **Pn** **17 20 50.6 -0.9**
SMLA AMB AMB 17 20 53.9
comp=Z,160nm,0.9s
SMLA *i* 4 x 17 23 14.6
AB31 Akbulak array 13.65 296 Pn **Pn** **17 20 48.8 -2.8**
comp=Z,193nm,0.7s,baz=101,slow=12,SNR=2458
AB31 ⇓Sn **Sn** **17 23 18.4 -4.2**
comp=Z,266nm,0.9s,baz=96,slow=25,SNR=4.4
AB31 ⇓Lg Lg 17 24 46.3
comp=Z,734nm,0.8s,baz=99,slow=25,SNR=4.7
AB31 Akbulak array 13.65 296 *i* P **Pn** **17 20 48.4 -3.2**
AB31 pmax pmax
comp=Z,58nm,0.3s
ABKAR Akbulak array 13.65 296 *e*Pn Pn 17 20 48.2 -3.4
comp=Z,45nm,0.8s
ABKAR *e*Sn Sn 17 23 10.9 -12
SARP Sargodha 13.66 203 P **Pn** **17 20 49.4 -2.4**
DDI Dehra Dun 14.39 183 *e*PKP **Pn** **17 21 00.2 -1.6**
DDI AMB AMB 17 21 01.6
comp=Z,704nm,1.8s
DDI *e*S Sn 17 23 34.4 -6.6
AKTO Aktyubinsk 15.14 300⇓Pn **Pn** **17 21 09.3 -2.5**
comp=Z,762nm,1.2s
AKTO ⇑Sn **Sn** **17 23 54.1 -4.7**
comp=Z,697nm,1.5s
AKTO ⇑Lg Lg 17 25 32.5
comp=Z,3µm,1.1s
AKTO Aktyubinsk 15.14 300 P **Pn** **17 21 08.9 -2.9**
AKTO 17 23 51.4
AKTO pmax pmax
comp=Z,15nm,0.3s
AKTO smax smax
comp=N,11nm,0.3s
AKTO MLR MLR
comp=Z,4µm,21.2s
AKTO Aktyubinsk 15.14 300 Pn **Pn** **17 21 08.9 -2.9**
AKTO Sn Sn 17 23 51.4 -7.4
AKTO Lg Lg 17 25 38.2
AKTO Aktyubinsk 15.14 300 Pn **Pn** **17 21 08.9 -2.9**
comp=Z,15nm,0.3s,baz=104,slow=12,SNR=178
AKTO Sn Sn 17 23 51.4 -7.4
comp=Z,11nm,0.3s,baz=202,slow=16,SNR=4.3
AKTO Lg Lg 17 25 38.2
comp=Z,8.6nm,0.3s,baz=186,slow=22,SNR=5.1
AKTO LR LR 17 26 42.1
comp=Z,4µm,21.2s,baz=285,slow=36
PTH Pithoragarh 15.19 175 *e*4 Pn 17 21 06.1 -6.7
PTH *e*4 x 17 23 29.1
LGTI Lohaghat 15.29 175 *e*PKP9 x 17 21 29.2
LGTI *e*S **S** **17 24 14.1 -4.9**
NDI New Delhi 16.07 185 *ex* Pn 17 21 18.0 -5.9
NDI *e*4 x 17 27 40.0
MOY Mondy 16.29 57 *e*P **Pn** **17 21 27.7 +0.9**
MOY pmax pmax
comp=Z,408nm,1.7s
GTA Gaotai 16.45 102⇓P **Pn** **17 21 26.3 -2.7**
GTA pP **P** **17 21 32.4 +0.8**
GTA sP **sP** **17 21 36.3 -3.2**
GTA S Sn 17 24 19.5 -12
GTA pmax pmax
comp=Z,53nm,0.9s
GTA pmax pmax
comp=Z,1µm,5.7s
GTA LR LR
comp=N,11µm,15.7s
GTA LR LR
comp=E,15µm,14.7s
GTA LR LR
comp=Z,15µm,11.4s
IMYA Miami 16.49 246 *e*P **Pn** **17 21 27.7 -1.8**
ISRO Mashad 16.92 247 *e*P **Pn** **17 21 32.9 -2.0**
ABKT Ailbek 16.95 254 Pn **Pn** **17 21 32.2 -3.0**
comp=Z,819nm,1.0s,SNR=47
IMOG Moghan 17.12 247 *e*P **Pn** **17 21 35.9 -1.7**
IPAY Payeh 17.15 248 *e*P **Pn** **17 21 36.0 -1.9**
IKRD Kardeh 17.29 250 *e*P Pn 17 21 29.4 -10
ARU Arti 17.32 320 *d*iP **Pn** **17 21 36.1 -3.6**
ARU S **Sn** **17 24 47.2 -4.5**
ARU pmax pmax
comp=Z,159nm,1.2s
ARU MLR MLR
comp=Z,6µm,11.0s
ARU Arti 17.32 320 Pn **Pn** **17 21 36.0 -3.6**
comp=Z,2µm,1.1s,SNR=55
ZAK Zakamensk 17.41 62 *e*P **P** **17 21 42.9 +0.8**
ZAK pmax pmax
comp=Z,186nm,1.2s
TLY Talaya 17.89 58 *e*P **P** **17 21 47.3 0.0**
TLY *e*S **Sn** **17 25 06.4 +0.8**
TLY pmax pmax
comp=Z,96nm,1.3s
TLY MLR MLR
comp=Z,12µm,11.6s
TLY Talaya 17.89 58 Pn **P** **17 21 47.9 +0.6**
comp=Z,234nm,1.2s,SNR=16
LSA Lhasa 17.89 143 P **P** **17 21 48.3 +0.3**
LSA S **Sn** **17 25 07.8 +1.3**
LSA pmax pmax
comp=Z,3µm,11.7s
LSA LR LR
comp=N,2µm,12.8s
LSA LR LR
comp=E,7µm,13.7s
LSA LR LR
comp=Z,8µm,12.8s
LSA Lhasa 17.89 143⇑ *e*P **P** **17 21 48.0 +0.1**
LSA pmax pmax
comp=Z,226nm,1.3s
LSA Lhasa 17.89 143⇑ *e*P **P** **17 21 48.0 +0.1**
comp=Z,226nm,1.3s
LSA *e*S **S** **17 25 15.6 +2.6**
IRK Irkutsk 18.40 57 *e*P **Pn** **17 21 54.4 +1.4**
IRK pmax pmax
comp=Z,327nm,2.0s
AJM Ajmer 18.52 192 *i* P **P** **17 21 52.0 -2.4**
IDAH Dahanechah 18.97 237 *e*P **Pn** **17 22 00.3 0.0**
SONM Songino Array 19.27 71 P **P** **17 22 02.6 0.0**
SONM S **S** **17 25 41.3 +1.3**
SONM PcP **PcP** **17 26 24.3 -0.5**
SONM Lg Lg 17 27 45.6
SONM *e* 17 56 31.7
SONM Songino Array 19.27 71 P **P** **17 22 02.6 0.0**
comp=Z,1.4nm,0.3s,baz=272,slow=10,SNR=138
SONM S **S** **17 25 41.3 +1.3**
baz=270,slow=19,SNR=2.4
SONM PcP **PcP** **17 26 24.3 -0.5**
comp=Z,0.4nm,0.3s,baz=271,slow=2.8,SNR=3.2
SONM Lg Lg 17 27 45.6
comp=Z,0.5nm,0.3s,baz=268,slow=23,SNR=3.7
SONM LR LR 17 30 42.6
comp=Z,5µm,18.6s,baz=263,slow=41
SONM P3KPbc 17 56 31.7
comp=Z,0.1nm,0.3s,baz=114,slow=4.6,SNR=21
ITEG Tejag 19.55 240 *e*P **Pn** **17 22 06.9 -0.2**
ULN Ulaanbaatar 19.71 71 P **P** **17 22 08.1 +0.6**
SNR=144
ULN Ulaanbaatar 19.71 71 *e*P **P** **17 22 07.5 0.0**
comp=Z,363nm,1.4s
ULN Ulaanbaatar 19.71 71 P **P** **17 22 08.1 +0.6**
comp=Z,209nm,1.7s,comp=Z,3µm
IKOO Kooshah 19.71 238 *e*P **P** **17 22 07.2 -0.5**
LZH Lanzhou 20.85 106⇑P **P** **17 22 20.3 +0.3**
LZH pP **pP** **17 22 24.9 -0.5**
LZH sP **sP** **17 22 27.0 -0.9**
LZH PP **PnPn** **17 22 43.0 +4.6**
LZH S **S** **17 26 06.3 -5.5**
LZH sS Sn 17 26 13.3 -4.2
LZH pmax pmax
comp=Z,240nm,1.1s
LZH pmax pmax
comp=Z,670nm,4.1s
LZH LR LR
comp=N,10µm,12.8s
LZH LR LR
comp=E,11µm,11.9s
LZH LR LR
comp=Z,13µm,13.0s
IANJ Anjilo 21.11 253 *e*P **P** **17 22 23.4 +0.5**
ISHM Shahmirzad 21.36 254 *e*P **P** **17 22 26.6 +1.1**
BHPL Bhopal 21.46 184 *e*PKP **P** **17 22 25.6 -0.9**
BHPL AMB AMB 17 22 30.2
comp=Z,439nm,1.0s
JBP Jabalpur 21.53 177⇑ *i*P **P** **17 22 27.1 +0.1**
JBP *e*S **S** **17 26 22.5 -2.4**
BOK Bokaro 21.66 162 *e*PKP **P** **17 22 29.0 +0.4**
BOK AMB AMB 17 22 34.0
comp=Z,394nm,1.3s
ILAS Lasjerd 21.81 254 *e*P **P** **17 22 31.0 +0.6**
SHL Shillong 21.84 147 *e*PKP **P** **17 22 30.0 -0.7**
SHL AMB AMB 17 22 33.6
comp=Z,429nm,0.0s
SHL *e*S **S** **17 26 30.0 -1.4**
IDMV Damavand 22.34 255 *e*P **P** **17 22 36.8 +0.7**
MAK Makhachkala 22.59 277*c* *i*P **P** **17 22 38.7 +0.3**
MAK *e* 17 23 01.7
MAK *e*S **S** **17 26 46.2 +1.3**
MAK *e*SS **SnSn** **17 27 16.1 +1.8**
MAK pmax pmax
comp=Z,784nm,1.7s
MAK MLR MLR
comp=Z,9µm,11.0s
BHJ Bhuj 22.70 202 *e*PKP **P** **17 22 39.6 0.0**
IVRN Varamin 22.87 254 *e*P **P** **17 22 41.4 0.0**
IR3 Iran Long-Peri 23.09 256 *e*P **P** **17 22 43.9 +0.1**
BTO Baotou 23.23 89 *e*P **P** **17 22 44.6 -0.5**
BTO S S 17 26 47.9 -8.3
BTO pmax pmax
comp=Z,24nm,0.7s
BTO LR LR
comp=N,2µm,6.1s
BTO LR LR
comp=E,1µm,8.4s
NGP Nagpur 23.52 179 *e*PKP **P** **17 22 46.0 -1.9**
NGP *ex* x 17 26 56.9
IR5 Iran Long-Peri 23.54 256 *e*P **P** **17 22 48.4 +0.1**
IZEF Zefreh 23.68 249 *e*P **P** **17 22 50.9 +1.1**
IRAZ Razeghan 23.89 257 *e*P **P** **17 22 51.9 +0.1**
IKLH Kolahrood 23.93 251 *e*P **P** **17 22 53.5 +1.3**
CD2 Chengdu 23.93 117 P **P** **17 22 51.8 -0.2**
CD2 pP **pP** **17 22 59.1 +1.4**
CD2 sP **sP** **17 23 02.8 +2.6**
CD2 PP **PnPn** **17 23 25.5 +5.1**
CD2 PcP **PcP** **17 26 36.0 +1.9**
CD2 S **S** **17 27 03.3 -4.2**
CD2 sS **sS** **17 27 15.3 -1.7**
CD2 SS **SnSn** **17 27 53.8 +6.4**
CD2 ScS **ScS** **17 33 56.8 -1.6**
CD2 pmax pmax
comp=Z,260nm,0.9s
CD2 pmax pmax
comp=Z,2µm,8.2s
CD2 LR LR
comp=N,8µm,13.2s
CD2 LR LR
comp=E,8µm,11.8s
CD2 LR LR
comp=Z,8µm,11.6s
CIT Chita 24.02 60 *e*P **P** **17 22 52.9 +0.3**
CIT *e* 17 23 19.7
CIT *e* 17 23 41.5
CIT *e* 17 27 11.2
HHC Hu-ho-hao-te 24.24 88 *i* P **P** **17 22 54.9 0.0**
HHC pP **pP** **17 23 02.5 +1.8**
HHC PP **PnPn** **17 23 29.9 +5.2**
HHC S **S** **17 27 15.3 +2.8**
HHC sS **sS** **17 27 22.1 0.0**
HHC SS **SnSn** **17 28 02.3 +7.3**
HHC ScS **ScS** **17 33 57.6 -1.9**
HHC pmax pmax
comp=Z,270nm,0.9s
HHC pmax pmax
comp=Z,3µm,5.1s
HHC LR LR
comp=N,9µm,11.1s
HHC LR LR
comp=E,7µm,11.9s
HHC LR LR
comp=Z,8µm,12.4s
ISRB Sarab 24.31 264 *e*P **P** **17 22 56.2 +0.5**
IHRS Heris 24.54 266 *e*P **P** **17 22 58.3 +0.5**
DGRG David-gareji 24.55 274 P **P** **17 22 59.1 +1.5**
IBND Bandar-abas 24.80 233 *e*P **P** **17 23 01.4 +1.5**
SEAG Tbilisi Sea 24.85 275 P **P** **17 23 02.0 +1.7**
TBLG Delisi 24.91 275 P **P** **17 23 01.0 +0.2**
TBLG Delisi 24.91 275 P **P** **17 23 01.2 +0.4**
KZR Kazreti 25.25 275 P **P** **17 23 04.3 +0.4**
GOR Gori 25.28 276 P **P** **17 23 05.9 +1.7**
GNI Garni 25.45 272 *e*P **P** **17 23 07.5 +1.6**
GNI Garni 25.45 272 P **P** **17 23 07.8 +1.9**
SNR=245
GNI Garni 25.45 272 *e*P **P** **17 23 07.4 +1.4**
comp=Z,1µm,1.1s
GNI S **S** **17 27 36.9 +4.9**
GNI Garni 25.45 272 P **P** **17 23 07.3 +1.4**
comp=Z,470nm,0.9s,baz=50,slow=1.3,SNR=161
GNI S **S** **17 27 36.9 +4.9**

comp=Z,32nm,0.8s,baz=210,slow=20,SNR=1.6
GNI LR LR 17 34 35.8
comp=Z,3µm,19.0s,baz=67,slow=40
XAN Xi'an 25.46 104 P **P** **17 23 05.5 -0.4**
XAN pP **pP** **17 23 11.8 +0.1**
XAN pmax pmax
comp=Z,79nm,1.0s
XAN pmax pmax
comp=Z,310nm,8.5s
XAN LR LR
comp=N,5µm,17.5s
XAN LR LR
comp=E,2µm,11.6s
XAN LR LR
comp=Z,2µm,12.3s
ISRV Sarvestan 25.46 242 *e*P **P** **17 23 07.4 +1.2**
ONI Oni 25.56 278 P **P** **17 23 08.1 +1.3**
ISHB Shabestar 25.57 267 *e*P **P** **17 23 08.4 +1.3**
IAZR Azarshahr 25.57 266 *e*P **P** **17 23 08.1 +1.0**
KBZ Khabaz 25.64 281 P **P** **17 23 07.5 +0.1**
KBZ S **S** **17 27 38.0 +3.4**
KBZ pmax pmax
comp=Z,80nm,1.0s
KBZ smax smax
comp=N,40nm,0.9s
KBZ MLR MLR
comp=Z,5µm,19.0s
KBZ Khabaz 25.64 281 P **P** **17 23 07.5 +0.1**
KBZ S **S** **17 27 38.0 +3.4**
KBZ Khabaz 25.64 281 P **P** **17 23 07.5 +0.1**
comp=Z,80nm,0.9s,baz=88,slow=7.9,SNR=66
KBZ S **S** **17 27 38.0 +3.4**
comp=Z,40nm,0.9s,baz=60,slow=20,SNR=1.8
KBZ LR LR 17 35 11.2
comp=Z,5µm,19.0s,baz=66,slow=41
KIV Kislovodsk 25.73 281⇑ *i*P **P** **17 23 08.5 +0.2**
KIV *i* S **S** **17 27 30.5 -5.7**
KIV pmax pmax
comp=Z,134nm,1.7s
KIV MLR MLR
comp=Z,7µm,15.0s
KIV Kislovodsk 25.73 281 P **P** **17 23 08.1 -0.2**
comp=Z,599nm,1.8s,SNR=30
AKH Akhalkalaki 25.90 275 P **P** **17 23 11.5 +1.5**
BANOM Banah 26.12 232 P **P** **17 23 13.4 +1.5**
SNR=106
LATR Latur 26.30 185 *ex* P 17 23 08.5 -5.0
CLDR Caldiran 26.42 270 *e*P **P** **17 23 16.6 +1.8**
POO Poona 26.45 191 *e*PKP **P** **17 23 14.8 -0.1**
POO AMB AMB 17 23 15.3
comp=Z,121nm,1.1s
POO *i* x x 17 24 22.0
CHVG Ch'k'valeri 26.49 279 P **P** **17 23 17.4 +2.3**
AGRB Hanur-Agry 26.91 272 *e*P **P** **17 23 21.4 +2.2**
UOSS Wadi Hilu 26.94 230 P **P** **17 23 19.1 -0.2**
comp=Z,860nm,1.0s,SNR=21
VORD Divnogorie 27.00 298 *e*P **P** **17 23 19.5 -0.1**
VORD pmax pmax
comp=Z,80nm,1.1s
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,80nm,0.8s
VORD MLR MLR
comp=Z,2µm,8.0s
VORD MLR MLR
comp=N,1µm,7.0s
VORD MLR MLR
comp=E,2µm,10.0s
VANB Van 27.02 269 *e*P **P** **17 23 21.2 +1.2**
VOR Voronezh 27.04 299 *e*P **P** **17 23 19.0 -1.0**
VOR pmax pmax
comp=Z,480nm,2.0s
VSR Storozhevoye 27.07 298 *e*P **P** **17 23 20.0 -0.3**
VSR pmax pmax
comp=Z,130nm,1.4s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,150nm,1.1s
VSR MLR MLR
comp=E,2µm,7.0s
VSR MLR MLR
comp=Z,2µm,7.0s
VSR MLR MLR
comp=N,590nm,6.0s
VIS Vishakhapatnam 27.19 171 *e*PKP **P** **17 23 20.9 -0.6**
BCA Borcka 27.21 276 *e*P **P** **17 23 23.2 +1.6**
ASHO Ashiyiah 27.23 230 P **P** **17 23 23.6 +1.7**
SNR=222
HYB Hyderabad 27.23 181⇑ *i*P **P** **17 23 20.0 -1.9**
HYB *e*S **S** **17 28 01.0 +1.0**
HYB Hyderabad 27.23 181 *e*PKP **P** **17 23 20.8 -1.1**
HYB AMB AMB 17 23 21.4
comp=Z,154nm,1.8s
WBK Wadi Bani Khal 27.42 223 P **P** **17 23 25.9 +2.3**
SNR=23
HOQ Hoqain 27.45 227 P **P** **17 23 25.2 +1.4**
SNR=39
CUKT Cukurca 27.45 267 *e*P **P** **17 23 24.6 +0.7**
SMDO Samad 27.50 225 P **P** **17 23 26.4 +2.0**
SNR=84
KMI Kunming 27.52 127⇑P **P** **17 23 24.8 0.0**
KMI pP **pP** **17 23 32.1 +1.5**
KMI sP **sP** **17 23 35.8 +2.8**
KMI PP **PnPn** **17 24 13.5 +3.7**
KMI PcP **PcP** **17 26 44.6 +2.0**
KMI S **S** **17 28 01.6 -3.4**
KMI sS **sS** **17 28 15.5 +0.8**
KMI SS **SnSn** **17 29 18.8 +3.1**
KMI pmax pmax
comp=Z,69nm,1.0s
KMI pmax pmax
comp=Z,590nm,5.9s
KMI LR LR
comp=N,3µm,10.8s
KMI LR LR
comp=E,5µm,12.6s
KMI LR LR
comp=Z,2µm,13.8s
KAD Karad 27.61 190 *i*P **P** **17 23 24.0 -1.4**
BJI Beijing 27.82 86 P **P** **17 23 27.5 +0.5**
BJI S **S** **17 28 10.0 +1.0**
BJI sS **sS** **17 28 20.1 +1.5**
BJI pmax pmax
comp=Z,72nm,1.0s
BJI pmax pmax
comp=Z,570nm,13.6s
BJI LR LR
comp=N,7µm,16.0s
BJI LR LR
comp=E,3µm,12.9s
BJI LR LR
comp=Z,2µm,22.2s
BJT Baijiatuau 27.82 87 *e*P **P** **17 23 27.2 +0.2**
comp=Z,53nm,0.8s
BJT LR LR
comp=Z,5µm,21.0s
SOC Sochi 27.90 282 *c i*P **P** **17 23 27.8 0.0**
SOC *e* 17 24 12.6
SOC *e*S **S** **17 28 11.0 +0.7**
SOC *e*SS **SnSn** **17 29 25.1 +0.9**
SOC pmax pmax
comp=Z,51nm,0.9s
SOC MLR MLR
comp=Z,4µm,13.0s
IBDR Badra 27.91 257 *i*P **P** **17 23 25.1 -2.9**
IBDR *i*S **S** **17 28 04.1 -6.5**
EZM Erzurum 27.95 273 *e*P **P** **17 23 30.9 +2.4**
HIA Hailar 28.02 66⇑ *i*P **P** **17 23 29.2 +0.4**
comp=Z,126nm,1.3s
HIA LR LR
comp=Z,6µm,21.0s
JMDO Jabal Madar 28.05 224 P **P** **17 23 31.3 +2.0**
SNR=24
ARQ Araqi 28.06 228 P **P** **17 23 30.9 +1.5**
SNR=40
ENH Enshi 28.09 110⇑ *i*P **P** **17 23 29.2 -0.3**
comp=Z,139nm,1.0s
ENH *e*PcP **PcP** **17 26 43.5 -0.2**
ENH LR LR
comp=Z,6µm,22.0s
MOS Moscow 28.15 308 *c i*P **P** **17 23 27.3 -2.5**
MOS *e*PPP PPP 17 24 23.8
MOS *e*S **S** **17 28 10.8 -3.1**
MOS pmax pmax
comp=Z,400nm,0.9s
MOS pmax pmax
comp=Z,221nm,0.7s
MOS MLR MLR
comp=E,7µm,12.0s
MOS MLR MLR
comp=Z,7µm,11.0s
KLMR Klimovskoe 28.17 319 *c i*P **P** **17 23 30.2 +0.3**
KLMR *e*S **S** **17 28 15.2 +1.1**
KLMR pmax pmax
comp=Z,850nm,2.0s
KLMR MLR MLR
comp=Z,7µm,10.0s
BSY Bisya 28.20 226 P **P** **17 23 32.8 +2.3**
SNR=84
BAYT Ayd¯ntepe-Bay 28.63 275 *e*P **P** **17 23 35.3 +0.7**
OBN Obninsk 28.70 306⇑ *i*P **P** **17 23 32.5 -2.2**
OBN *i* S **S** **17 28 26.4 +3.9**
OBN pmax pmax
comp=Z,162nm,1.3s
OBN MLR MLR
comp=Z,2µm,16.0s
OBN Obninsk 28.70 306 P **P** **17 23 34.6 -0.1**
comp=Z,655nm,1.1s,SNR=15
BNGB Bing¶ll 28.79 272 *e*P **P** **17 23 36.7 +0.8**
UMR Umm Al-Rimmam 28.84 249 *e*P **P** **17 23 36.6 +0.3**
UMR AMb AMB 17 23 40.3
comp=Z,114nm,1.3s
GYA Guiyang 28.85 120⇑ *i*P **P** **17 23 36.4 -0.1**
GYA pP **pP** **17 23 44.8 +2.4**
GYA PP **PnPn** **17 24 30.8 +3.0**
GYA PcP **PcP** **17 26 45.8 +0.1**
GYA S **S** **17 28 27.3 +1.5**
GYA ScP **SS** **17 30 27.5 -0.5**
GYA ScS **ScS** **17 34 17.0 -2.9**
GYA pmax pmax
comp=Z,100nm,1.0s
GYA pmax pmax
comp=Z,360nm,6.2s
GYA LR LR
comp=N,3µm,11.8s
GYA LR LR
comp=E,3µm,12.7s
GYA LR LR
comp=Z,3µm,15.5s
BHD Baghdad 28.91 259 *i*P **P** **17 23 36.3 -0.5**
BHD *i*S **S** **17 28 24.3 -1.9**
MIB Mutribah 28.93 250 *e*P **P** **17 23 37.4 +0.3**
MIB AMb AMB 17 23 43.5
comp=Z,72nm,1.8s
GUMT Gumushane 29.08 276 *e*P **P** **17 23 39.3 +0.9**
KBD Kabd 29.10 248 *e*P **P** **17 23 38.5 -0.1**
KBD AMb AMB 17 23 43.5
comp=Z,64nm,1.4s
ANN Anapa 29.16 285 *e*P **P** **17 23 38.6 -0.3**
ANN *e* 17 24 35.6
ANN *e*PPP PPP 17 24 42.0
ANN *e*S **S** **17 28 33.1 +3.0**
ANN pmax pmax
comp=Z,140nm,1.3s
ANN MLR MLR
comp=N,3µm,15.0s
ANN MLR MLR
comp=E,3µm,15.0s
ANN MLR MLR
comp=Z,5µm,15.0s
NAY Al-Naaiem 29.36 249 *e*P **P** **17 23 41.1 +0.3**
NAY AMb AMB 17 23 44.8
comp=Z,78nm,1.1s
RDF Al-Radifah 29.36 248 *e*P **P** **17 23 41.7 +0.8**
RDF AMb AMB 17 23 45.7
comp=Z,98nm,1.3s
GOA Goa 29.45 190⇑ *e*PKP **P** **17 23 41.7 0.0**
GOA AMb AMB 17 23 43.2
comp=Z,140nm,1.0s
GOA *ex* x 17 28 40.0
PTK Pertek 29.75 273 *e*P **P** **17 23 45.9 +1.4**
TIA Tai'an 30.12 93 P **P** **17 23 47.8 +0.2**
TIA S **S** **17 28 46.8 +1.4**
TIA LR LR
comp=N,8µm,12.9s
TIA LR LR
comp=E,7µm,13.9s
TIA LR LR
comp=Z,9µm,11.9s
MALT Malatya 30.68 272 *e*P P 17 23 59.7 +7.1
MALT pmax pmax
comp=Z,100nm,1.3s
MALT MLR MLR
comp=Z,3µm,19.0s
MALT Malatya 30.68 272 *e*P P 17 23 59.7 +7.1
comp=Z,100nm,1.3s
MALT LR LR
comp=Z,3µm,19.0s
MALT Malatya 30.68 272⇓ *i*P P 17 24 00.5 +7.9
URFA Urfa 30.78 270 *e*P **P** **17 23 54.3 +0.9**
CHTO Chiang Mai 30.82 141 *e*P **P** **17 23 53.0 -0.8**
CHTO *e* 17 26 50.0
CHTO pmax pmax
comp=Z,57nm,0.8s
CHTO MLR MLR
comp=Z,2µm,20.0s
CHTO Chiang Mai 30.82 141 P **P** **17 23 53.8 0.0**
SNR=24
CHTO Chiang Mai 30.82 141 *e*P **P** **17 23 53.0 -0.8**
comp=Z,14nm,0.8s
CHTO *e*PcP **PcP** **17 26 50.0 -0.8**
CHTO LR LR
comp=Z,2µm,20.0s
CHTO Chiang Mai 30.82 141 P **P** **17 23 53.3 -0.5**
comp=Z,92nm,1.1s,comp=Z,859nm
CMMT Chiang Mai 30.82 140 P **P** **17 23 53.5 -0.3**
comp=Z,82nm,1.0s,comp=Z,864nm
CLNS Chul'man 30.94 50 *e*P **P** **17 23 54.6 0.0**
CLNS *e*'PP **pP** **17 24 01.7 +1.2**
CLNS *e* 17 24 56.7
CLNS *e*PPP PPP 17 25 08.3
CLNS *e* 17 26 46.2
CLNS *e*S **S** **17 29 01.9 +4.1**
CLNS *e*SSS SSS 17 30 59.1
CLNS pmax pmax
comp=Z,49nm,1.3s
CLNS pmax pmax
comp=N,13nm,1.2s
CLNS pmax pmax
comp=E,35nm,1.2s
CLNS pmax pmax
comp=N,21nm,1.0s
CLNS pmax pmax
comp=Z,25nm,0.9s
CLNS pmax pmax
comp=E,18nm,1.1s
CLNS smax smax
comp=N,183nm,13.5s
CLNS smax smax
comp=E,246nm,12.2s
CLNS MLR MLR
comp=N,6µm,12.0s
CLNS MLR MLR
comp=Z,23µm,13.0s
CLNS MLR MLR
comp=E,17µm,12.0s
SVSK Karacayir 31.04 276 *e*P **P** **17 23 56.7 +1.1**
CMAR Chiang Mai Arr 31.13 141 P **P** **17 23 56.4 -0.1**
CMAR PcP **PcP** **17 26 51.2 -0.3**
CMAR S **S** **17 29 04.3 +3.1**
CMAR ScP **ScP** **17 30 34.9 +1.6**
CMAR *e* 17 55 40.9
CMAR Chiang Mai Arr 31.13 141 P **P** **17 23 56.4 -0.1**
comp=E,78nm,0.8s,baz=318,slow=8.7,SNR=402
CMAR PcP **PcP** **17 26 51.2 -0.3**
comp=E,41nm,0.9s,baz=313,slow=4.0,SNR=11
CMAR S **S** **17 29 04.3 +3.1**
comp=E,4.5nm,0.9s,baz=329,slow=8.7,SNR=2.7
CMAR ScP **ScP** **17 30 34.9 +1.6**
comp=E,6.5nm,0.9s,baz=329,slow=5.8,SNR=4.9
CMAR P3KPbc 17 55 40.9
comp=E,1.1nm,0.9s,baz=180,slow=4.3,SNR=6.5
WHN Wuhan 31.22 105⇑P **P** **17 23 57.5 +0.2**
WHN PcP **PcP** **17 26 51.5 -0.1**
WHN S **S** **17 29 02.9 +0.3**
WHN LR LR
comp=N,11µm,13.1s
WHN LR LR
comp=E,10µm,12.6s
WHN LR LR
comp=Z,13µm,13.0s
DARE Darende-Malaty 31.24 273 *e*P **P** **17 23 59.2 +1.7**
SIM Simferopol' 31.40 286 *c i*P **P** **17 23 59.1 +0.4**
SIM *i* S **S** **17 29 07.0 +1.8**
SIM pmax pmax
comp=Z,82nm,1.1s
SIM MLR MLR
comp=Z,2µm,14.0s
DIKM Dikmen 31.63 280 *e*P **P** **17 24 00.4 -0.4**
SARI SarD1z-Kayseri 32.07 274 *e*P **P** **17 24 06.5 +1.6**
KMRS Kahramanmaras 32.12 272 *e*P **P** **17 24 06.5 +1.3**
DL2 Dalian 32.14 85⇑P **P** **17 24 05.9 +0.6**
DL2 S **S** **17 29 16.3 -0.5**
DL2 pmax pmax
comp=Z,49nm,0.8s
DL2 pmax pmax
comp=Z,280nm,7.0s
DL2 LR LR
comp=N,1µm,12.0s
DL2 LR LR
comp=E,2µm,13.1s
DL2 LR LR
comp=Z,3µm,10.8s
BNN Bunyan 32.29 275 *e*P **P** **17 24 08.2 +1.4**
SNY Shenyang 32.40 79⇑P **P** **17 24 07.9 +0.3**
SNY S **S** **17 29 23.5 +2.7**
SNY pmax pmax
comp=Z,77nm,1.2s
SNY LR LR
comp=N,9µm,17.0s
SNY LR LR
comp=E,4µm,13.9s
SNY LR LR
comp=Z,9µm,13.1s
JOF Joensuu 32.44 321 *e*P **P** **17 24 08.3 +0.6**
JOF pmax pmax
comp=Z,214nm,0.6s
JOF Joensuu 32.44 321 *e*p **P** **17 24 08.3 +0.6**
comp=Z,214nm,0.6s
LVZ Lovozero 32.58 331 P **P** **17 24 09.1 +0.2**
comp=Z,535nm,0.9s,SNR=9.9
CORM Corum 32.62 278 *e*P **P** **17 24 10.9 +1.3**
DRWC Darouich 32.68 271 *e*P P 17 24 03.3 -6.9
KOZT Kozan 32.89 273 *e*P **P** **17 24 14.1 +2.2**
APA Apatity 32.90 330⇓ *i*P **P** **17 24 12.0 +0.4**
APA *i* S **S** **17 29 28.0 0.0**
APA *i* SS **SnSn** **17 31 32.0 +6.9**
APA pmax pmax
comp=Z,29nm,1.0s
APA pmax pmax
comp=Z,500nm,7.0s
APA MLR MLR
comp=Z,4µm,7.0s
CN2 Changchun 33.05 75⇑P **P** **17 24 13.8 +0.6**
CN2 *e*sP **sP** **17 24 23.8 +2.3**
CN2 *e*S **S** **17 29 28.9 -2.0**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,7µm,11.0s
CN2 LR LR
comp=E,5µm,11.0s
CN2 LR LR
comp=Z,6µm,13.0s
BTCH Batrach 33.10 270 *e*P P 17 24 19.9 +6.1
CEYT Ceyhan 33.16 272 *e*P **P** **17 24 15.4 +1.1**
CANT Cankiri 33.17 279 *e*P **P** **17 24 16.0 +1.6**
AKASG Malin Array Be 33.38 298 P **P** **17 24 15.8 -0.2**
AKASG 17 26 56.8
AKASG S **S** **17 29 40.8 +5.0**
AKASG pmax pmax
comp=Z,56nm,0.7s
AKASG smax smax
comp=N,11nm,1.0s
AKASG Malin Array Be 33.38 298 P **P** **17 24 15.8 -0.2**
AKASG PcP **PcP** **17 26 56.8 -0.4**
AKASG S **S** **17 29 40.8 +5.0**
AKASG Malin Array Be 33.38 298 P **P** **17 24 15.8 -0.2**
comp=N,56nm,0.7s,baz=71,slow=8.6,SNR=88
AKASG PcP **PcP** **17 26 56.8 -0.4**
comp=N,39nm,0.8s,baz=74,slow=3.3,SNR=11
AKASG S **S** **17 29 40.8 +5.0**
comp=N,11nm,0.9s,baz=64,slow=11,SNR=2.4
KIEV Kiev 33.39 298 *e*P **P** **17 24 15.8 -0.3**
KIEV pmax pmax
comp=Z,89nm,0.9s
KIEV MLR MLR
comp=Z,2µm,22.0s
KIEV Kiev 33.39 298 *e*P **P** **17 24 15.8 -0.3**
comp=Z,88nm,0.9s
KIEV LR LR
comp=Z,2µm,22.0s
WRDH Warideh 33.39 269 *e*P P 17 24 09.8 -6.5
ROOS tl_alroos 33.44 266 *e*P **P** **17 24 17.6 +0.8**
NIG Nigde 33.48 274 *e*P **P** **17 24 19.0 +1.6**
BRTR Keskin Array B 33.50 278 P **P** **17 24 17.7 +0.4**
BRTR S **S** **17 29 39.4 +1.2**
BRTR *e* 17 55 28.9
BRTR Keskin Array B 33.50 278 P **P** **17 24 17.7 +0.4**
comp=Z,61nm,1.0s,baz=86,slow=6.3,SNR=146
BRTR S **S** **17 29 39.4 +1.2**
comp=Z,8.6nm,1.1s,baz=60,slow=8.7,SNR=2.1
BRTR P3KPbc 17 55 28.9
comp=Z,1.0nm,0.8s,baz=219,slow=8.7,SNR=4.0
NJ2 Nanjing 33.50 98 *e*P **P** **17 24 17.1 -0.1**
NJ2 pP **pP** **17 24 22.6 -0.5**
NJ2 sP **sP** **17 24 26.0 +0.5**
NJ2 S **S** **17 29 35.0 -3.0**
NJ2 sS **sS** **17 29 49.0 +1.3**
NJ2 pmax pmax
comp=Z,40nm,1.1s
NJ2 pmax pmax
comp=Z,300nm,10.8s
NJ2 LR LR
comp=N,7µm,12.8s
NJ2 LR LR
comp=E,4µm,15.4s
NJ2 LR LR
comp=Z,5µm,16.8s
ARNB Al Arnab 33.54 270 *e*P **P** **17 24 14.9 -2.7**
SAFT Safranbolu 33.58 281 *e*P **P** **17 24 19.1 +1.2**
DGPR DIGLIPUR 33.67 155 *e*PKP **P** **17 24 19.5 +0.7**
DGPR AMB AMB 17 24 22.0
comp=Z,455nm,2.8s
PBKT Sadao Pong 33.70 139 P **P** **17 24 19.3 +0.2**
comp=Z,79nm,1.0s
MICGM Minsk 33.73 305⇑ *i*P **P** **17 24 17.0 -2.0**
MNK Minsk 33.76 305⇑ *i*P **P** **17 24 17.0 -2.3**
MNK *e* 17 25 37.0
MNK *e*S **S** **17 29 38.0 -3.6**
MNK *e*SSS SSS 17 32 06.0
MNK pmax pmax
comp=N,380nm,1.5s
MNK pmax pmax
comp=Z,760nm,0.8s
YAK Yakutsk 33.83 41 *c i*P **P** **17 24 19.0 -0.8**
YAK *e*'PP **pP** **17 24 29.1 +3.4**
YAK *e*PPP PPP 17 25 44.8
YAK *e*S **S** **17 29 41.0 -1.6**
YAK *e*'SS sS 17 30 01.9 +10
YAK *e*SS **SnSn** **17 31 41.1 -6.8**
YAK pmax pmax
comp=Z,567nm,1.4s
YAK pmax pmax
comp=E,452nm,1.5s
YAK pmax pmax
comp=N,99nm,1.3s
YAK smax smax
comp=E,383nm,2.1s
YAK smax smax
comp=N,365nm,2.0s
YAK MLR MLR
comp=E,2µm,10.0s
YAK MLR MLR
comp=Z,3µm,10.0s
YAK MLR MLR
comp=N,2µm,10.0s
HAWK Haweek 33.89 267 *e*P **P** **17 24 21.3 +0.5**
AFSR Af¯ar-Bala (A 34.01 277 *e*P **P** **17 24 22.9 +1.2**
ANTO Ankara 34.04 278 *e*P **P** **17 24 23.1 +1.1**
ANTO Ankara 34.04 278⇑ *i*P **P** **17 24 22.6 +0.6**

ANTO pmax pmax
comp=Z,105nm,1.1s
ANTO MLR MLR
comp=Z,3μm,20.0s
ANTO Ankara 34.04 278 P P 17 24 23.3 +1.3
SNR=17
ANTO Ankara 34.04 278 ⇑ *i*P P 17 24 22.6 +0.6
comp=Z,105nm,1.1s
ANTO LR LR
comp=Z,3μm,20.0s
LOD Lodumlu 34.05 278 *e*P P 17 24 22.8 +0.7
ZALF Zalf 34.06 264 *e*P P 17 24 22.9 +0.8
RBK Rabkut 34.10 225 P P 17 24 23.0 +0.3
SNR=22
SULT Sultanhani-AKS 34.22 275 *e*P P 17 24 24.9 +1.3
NACGM Naroch 34.34 306 *e*P P 17 24 22.0 -2.3
RAYN Ar Rayn 34.41 243 P P 17 24 25.5 +0.2
comp=Z,1μm,1.2s
KIS Kishinev 34.42 292 *c* *i*P P 17 24 24.0 -1.1
KIS *i* 17 25 38.0
KIS *i* 17 26 58.0
KIS *i* S **S 17 29 52.0 -0.1**
KIS *e*SSS SSS 17 32 06.0
KIS *i* 17 34 44.0
KIS pmax pmax
comp=Z,360nm,1.5s
KIS pmax pmax
comp=E,290nm,1.6s
KIS pmax pmax
comp=Z,700nm,6.0s
KIS MLR MLR
comp=Z,4μm,16.0s
KIS MLR MLR
comp=E,3μm,10.0s
KIS MLR MLR
comp=Z,4μm,10.0s
KIS MLR MLR
comp=N,2μm,8.0s
KIS Kishinev 34.42 292 *i* P P 17 24 24.0 -1.1
comp=N,400nm,1.5s
KIS Kishinev 34.42 292 *e*PP PP 17 25 38.0 -5.1
KIS Kishinev 34.42 292 *i* PPP PPP 17 25 48.0
KIS Kishinev 34.42 292 *i* PcP PcP 17 26 58.0 -2.2
KIS *i* S **S 17 29 52.0 -0.1**
KIS *e*SS SnSn 17 31 38.0 -25
KIS *e*SSS SSS 17 32 06.0
KIS *i* Li 17 34 44.0
KIS *i* ScS **ScS 17 34 53.0 +6.3**
KIS *i* Lg2 17 36 52.0
KIS *e*LR LR 17 37 38.0
comp=N,4μm,16.0s
TOTH TOTAH 34.47 266 *e*P P 17 24 22.3 -3.5
SALA Sala 34.60 264 *e*P P 17 24 28.0 +1.0
KAF Kangasniemi 34.62 319 *e*P P 17 24 27.1 +0.5
KAF pmax pmax
comp=Z,57nm,0.7s
KAF Kangasniemi 34.62 319 *e*p P 17 24 27.1 +0.5
comp=Z,56nm,0.7s
FIA1 FINESS Array S 34.67 318 *e*P P 17 24 27.2 +0.1
FINES FINESS Array B 34.67 318 P P **17 24 27.3 +0.2**
FINES FINESS Array B 34.67 318 P P **17 24 27.3 +0.2**
comp=Z,54nm,0.6s,baz=79,slow=9.9,SNR=90
ABTO Aybut 34.69 226 P P 17 24 28.2 +0.4
SNR=21
ASF Jabal al Asfar 34.77 263 P P 17 24 29.6 +1.1
ASF S **S 17 30 02.4 +4.5**
ASF Jabal al Asfar 34.77 263 P P 17 24 29.6 +1.1
comp=Z,16nm,1.0s,baz=301,slow=1.1,SNR=36
ASF S **S 17 30 02.4 +4.5**
comp=Z,8.3nm,1.1s,baz=28,slow=18,SNR=2.4
ASF LR LR 17 40 07.4
comp=Z,635nm,19.6s,baz=121,slow=39
MDUB Mudurnu 34.92 280 *e*P P 17 24 29.9 +0.3
TLCR 34.93 289 ⇓P P 17 24 30.0 +0.5
TLCR 34.93 289 ⇓ *i*P P 17 24 30.0 +0.5
LEOM Leova 34.94 291 ⇓P P 17 24 30.3 +0.7
LEOM Leova 34.94 291 ⇓ *i*P P 17 24 30.3 +0.7
LADK Ladik-KONYA 35.04 276 *e*P P 17 24 30.4 -0.3
PBA Port Blair 35.06 156 *e*PKP P 17 24 30.2 -0.6
PBA AMB AMB 17 24 37.7
comp=Z,240nm,0.6s
KIZT Kizilcal 35.09 277 *e*P P 17 24 31.9 +0.8
SVRH Sivrihisar-ESK 35.10 278 *e*P P 17 24 30.7 -0.5
KONT Konya--Tatoy 35.15 275 *e*P P 17 24 31.8 +0.3
MMAI Mount Meron Ar 35.38 266 P P 17 24 34.0 +0.3
MMAI PcP **PcP 17 27 03.3 -0.1**
MMAI S **S 17 30 12.6 +5.4**
MMAI Mount Meron Ar 35.38 266 P P 17 24 34.0 +0.3
comp=Z,15nm,1.0s,baz=49,slow=10,SNR=13
MMAI PcP **PcP 17 27 03.3 -0.1**
comp=Z,30nm,0.9s,baz=11,slow=2.9,SNR=8.4
MMAI S **S 17 30 12.6 +5.4**
comp=Z,0.9nm,0.3s,baz=253,slow=13,SNR=3.7
MMAI LR LR 17 40 11.9
comp=Z,1μm,20.2s,baz=55,slow=38
CFR Carcaliu 35.39 289 ⇑ *i*P P 17 24 34.2 +0.7
CFR Carcaliu 35.39 289 ⇑ *i*P P 17 24 34.2 +0.7
GULT Gulveren 35.41 280 *e*P P 17 24 34.4 +0.5
TIRR Tirgusor 35.43 288 ⇑P P 17 24 34.5 +0.7
TIRR Tirgusor 35.43 288 *e*P P 17 24 33.6 -0.2
comp=Z,21nm,0.8s
TIRR Tirgusor 35.43 288 ⇑ *i*P P 17 24 34.5 +0.7
GZH Guangzhou 35.48 116 P P 17 24 32.8 -1.7
GZH S **S 17 30 08.3 -0.4**
GZH LR LR
comp=N,5μm,16.1s
GZH LR LR
comp=E,6μm,15.5s
GZH LR LR
comp=Z,7μm,13.1s
MDJ Mudanjiang 35.62 72 P P 17 24 35.5 0.0
MDJ pP **pP 17 24 41.6 +0.2**
MDJ sP **sP 17 24 43.8 0.0**
MDJ PP **PP 17 25 56.4 +0.1**
MDJ PcP **PcP 17 27 03.3 -0.5**
MDJ S **S 17 30 11.5 +1.0**
MDJ sS **sS 17 30 21.3 +1.0**
MDJ ScP **ScP 17 30 47.4 -1.2**
MDJ PcS **PcS 17 30 51.4 +0.5**
MDJ pmax pmax
comp=Z,40nm,1.1s
MDJ pmax pmax
comp=Z,380nm,5.4s
MDJ LR LR
comp=N,5μm,10.7s
MDJ LR LR
comp=E,2μm,10.2s
MDJ LR LR
comp=Z,7μm,13.1s
MDJ Mudanjiang 35.62 72 ⇑ *i*P P 17 24 35.7 +0.2
comp=Z,174nm,1.6s
MDJ *e*PcP **PcP 17 27 02.9 -0.9**
MDJ LR LR
comp=Z,4μm,20.0s
SSE Sheshan 35.68 98 ⇑P P 17 24 36.4 +0.3
SSE S **S 17 30 11.4 -0.3**
SSE pmax pmax
comp=Z,42nm,1.0s
SSE pmax pmax
comp=Z,280nm,4.8s
SSE LR LR
comp=N,3μm,22.9s
SSE LR LR
comp=E,3μm,22.7s
SSE LR LR
comp=Z,4μm,17.4s
KLR Kul'dur 35.77 63 κ *i*P P 17 24 33.7 -3.0
KLR *e* 17 27 00.0
KLR *e*S **S 17 30 12.0 -0.8**
KLR pmax pmax
comp=E,170nm,1.8s
KLR pmax pmax
comp=Z,300nm,1.8s
KEV Kevo 35.82 332 *e*P P 17 24 37.3 +0.4
KEV pmax pmax
comp=Z,24nm,0.7s
KEV Kevo 35.82 332 *e*p P 17 24 37.3 +0.4
comp=Z,24nm,0.7s
KEV Kevo 35.82 332 *e*P P 17 24 36.8 -0.1
comp=Z,43nm,0.9s
KEV LR LR
comp=Z,209nm,19.0s
PETR Petresti 35.84 290 ⇓ *i*P P 17 24 39.3 +2.0
HRT Hereke 35.85 281 *e*P P 17 24 38.4 +0.8
CSS Prodhromos 35.86 270 *e*P P 17 24 36.7 -0.9
CSS Prodhromos 35.86 270 ⇑ *e*P P 17 24 36.9 -0.7
comp=Z,11nm,1.0s
CSS *e*PP **PnPn 17 25 56.3 -1.6**
CSS *e*PcP **PcP 17 27 03.5 -1.2**
CSS LR LR
comp=Z,310nm,21.0s
CAVI Cavuskoy 35.98 280 *e*P P 17 24 38.8 +0.1
TESR Tescani 35.99 292 ⇓ *i*P P 17 24 39.4 +0.8
PRAR RASCA 36.03 293 ⇑ *i*P P 17 24 39.9 +0.9
LEF Lefka 36.09 271 *e*P P 17 24 39.4 -0.2
TRD Trivandrum 36.12 183 *e*PKP P 17 24 40.3 +0.3
TRD AMB AMB 17 24 40.9
comp=Z,161nm,1.0s
KLYT Kilyos 36.12 282 *e*P P 17 24 40.6 +0.8
VRI Vrincioaia 36.13 291 ⇓P P 17 24 41.1 +1.3
VRI Vrincioaia 36.13 291 ⇓ *i*P P 17 24 41.1 +1.3
SHUT Suhut-Afyon 36.17 277 *e*P P 17 24 41.1 +0.7
PLOR Plostina 36.18 291 ⇓P P 17 24 41.7 +1.3
PLOR Plostina 36.18 291 ⇓ *i*P P 17 24 41.7 +1.3
ISK Istanbul-Kandi 36.19 282 *e*P P 17 24 41.2 +0.9
ALT Altintas 36.26 278 *e*P P 17 24 40.4 -0.7
ARCES ARCESS Array B 36.26 332 P P 17 24 41.0 +0.3
ARCES ARCESS Array B 36.26 332 P P 17 24 41.0 +0.3
comp=Z,42nm,0.7s,baz=99,slow=7.9,SNR=70
ARCES LR LR 17 41 40.4
comp=Z,837nm,20.4s,baz=103,slow=40
ARE0 ARCESS Array S 36.26 332 *e*P P 17 24 41.0 +0.2
INCN Inchon 36.31 84 P P 17 24 42.1 +0.6
SNR=17
INCN Inchon 36.31 84 *e*P P 17 24 41.2 -0.3
comp=Z,61nm,0.8s
INCN *e*PcP **PcP 17 27 03.4 -2.6**
INCN LR LR
comp=Z,636nm,19.0s
BGKT Bogazkoy 36.34 282 *e*P P 17 24 42.2 +0.5
GEMT Gemlik 36.34 281 *e*P P 17 24 41.3 -0.5
QIZ Qiongzhong 36.37 125 P P 17 24 42.0 -0.1
QIZ S **S 17 30 23.4 +1.0**
QIZ pmax pmax
comp=Z,72nm,1.0s
QIZ pmax pmax
comp=Z,430nm,8.8s
QIZ LR LR
comp=N,3μm,15.5s
QIZ LR LR
comp=Z,3μm,17.2s
QIZ Qiongzhong 36.37 125 ⇑ *i*P P 17 24 41.8 -0.3
comp=Z,122nm,1.2s
QIZ *e*PcP **PcP 17 27 06.4 0.0**
QIZ LR LR
comp=Z,3μm,20.0s
ISR Istrita 36.48 290 ⇑P P 17 24 45.2 +2.3
ISR Istrita 36.48 290 ⇑ *i*P P 17 24 45.2 +2.3
CTKS Kestanelik-??a 36.50 283 *e*P P 17 24 40.9 -2.2
ISP Isparta 36.51 276 *e*P P 17 24 43.0 -0.3
ISP Isparta 36.51 276 ⇑ *i*P P 17 24 43.3 0.0
ISP pmax pmax
comp=Z,122nm,1.1s
ISP MLR MLR
comp=Z,2μm,21.0s
ISP Isparta 36.51 276 ⇑ *i*P P 17 24 43.3 0.0
comp=Z,122nm,1.1s
ISP LR LR
comp=Z,2μm,21.0s
ISP Isparta 36.51 276 ⇑ *i*P P 17 24 43.7 +0.4
SUW Suwalki 36.53 305 ⇑ *e*P P 17 24 42.9 -0.2
SUW pmax pmax
comp=Z,432nm,1.1s
SUW Suwalki 36.53 305 ⇑ *e*P P 17 24 42.9 -0.2
comp=Z,432nm,1.1s
SUW Suwalki 36.53 305 *i* P P 17 24 43.2 +0.1
SUW *e*S **S 17 30 26.1 +1.9**
TVSB Tavsanli 36.55 279 *e*P P 17 24 44.4 +0.8
CTYL Yal??k??y-??at 36.56 283 *e*P P 17 24 44.0 +0.4
BURAR Bucovina Array 36.62 294 ⇓ *i*P P 17 24 45.2 +1.1
BUR08 Bucovina Ar. S 36.62 294 ⇑ *i*P P 17 24 44.4 +0.2
ORLT Orhaneli 36.70 281 *e*P P 17 24 56.9 +12
MLR Muntele Rosu 36.77 290 P P **17 24 46.5 +1.0**
MLR S **S 17 30 29.4 +1.1**
MLR Muntele Rosu 36.77 290 ⇓ *i*P P 17 24 47.0 +1.6
MLR Muntele Rosu 36.77 290 P P **17 24 46.5 +1.0**
comp=Z,13nm,0.8s,baz=58,slow=5.3,SNR=55
MLR S **S 17 30 29.4 +1.1**
comp=Z,7.1nm,1.1s,baz=49,slow=20,SNR=1.7
MLR LR LR 17 41 43.1
comp=Z,865nm,18.6s,baz=58,slow=39
LVV L'vov 36.82 298 *e*P P 17 24 45.9 +0.2
LVV *e* 17 26 10.7
LVV *e*S **S 17 30 28.5 -0.3**
LVV MLR MLR
comp=Z,900nm,14.0s
LVV MLR MLR
comp=E,700nm,16.0s
LVV MLR MLR
comp=N,1μm,13.0s
SECR 36.83 290 ⇓ *i*P P 17 24 48.0 +2.2
KTK1 Kautokeino 36.93 330 ⇑ *i*P P 17 24 46.7 +0.4
KTK1 AMB AMB 17 24 51.6
comp=Z,763nm,1.1s
KCTX Karacabey (Bur 36.99 281 *e*P P 17 24 47.9 +0.6
UBPT Khong Chiam 37.01 134 P P 17 24 46.5 -1.0
comp=Z,114nm,1.2s,comp=Z,1μm
KSAR Wonju Array Be 37.22 84 P P 17 24 49.2 0.0
KSAR PcP **PcP 17 27 08.4 -0.3**
KSAR S **S 17 30 36.8 +1.8**
KSRS Korea Array 37.24 84 P P 17 24 49.2 -0.1
comp=Z,48nm,0.8s,baz=283,slow=7.7,SNR=135
KSRS PcP **PcP 17 27 08.4 -0.3**
comp=Z,9.8nm,0.8s,baz=306,slow=2.9,SNR=6.7
KSRS S **S 17 30 36.8 +1.5**
comp=Z,0.9nm,0.8s,baz=301,slow=8.5,SNR=2.2
KSRS LR LR 17 42 04.4
comp=Z,1μm,18.3s,baz=293,slow=40
PALK Pallekele 37.35 177 P P 17 24 51.6 +1.1
comp=Z,829nm,1.0s,SNR=11
PALK Pallekele 37.35 177 *e*P P 17 24 50.5 +0.1
comp=Z,201nm,1.1s
PALK Pallekele 37.35 177 P P 17 24 51.0 +0.5
comp=Z,181nm,1.2s,comp=Z,2μm
USRK Ussuriysk Arra 37.38 71 P P 17 24 50.8 +0.4
comp=Z,59nm,0.9s,baz=298,slow=8.2,SNR=75
USRK S **S 17 30 40.3 +2.9**
comp=Z,2.2nm,0.8s,baz=297,slow=8.5,SNR=2.1
USRK LR LR 17 41 51.1
comp=Z,2μm,19.4s,baz=274,slow=39
VOIR 37.38 291 ⇓P P 17 24 51.3 +0.7
VOIR 37.38 291 ⇓ *i*P P 17 24 51.3 +0.7
ELL Elmali 37.43 275 *e*P P 17 24 50.7 -0.5
EDRB Edirne 37.49 284 *e*P P 17 24 51.9 +0.5
KULA Kula-Manisa 37.52 278 *e*P P 17 24 52.1 +0.2
SZH Strazhica 37.52 287 *i* P P 17 24 52.2 +0.5
GLHS Gihisar (BURDU 37.54 276 *e*P P 17 24 52.0 0.0
GONE Gonen-Balikesi 37.55 281 *e*P P 17 24 52.6 +0.6
EIL Elat 37.57 262 P P 17 24 52.9 +0.6
EIL PcP **PcP 17 27 10.0 +0.1**
EIL S **S 17 30 44.9 +4.4**
EIL Elat 37.57 262 P P 17 24 52.9 +0.6
comp=Z,24nm,1.0s,baz=44,slow=6.3,SNR=33
EIL PcP **PcP 17 27 10.0 +0.1**
comp=Z,36nm,0.8s,baz=348,slow=2.2,SNR=6.2
EIL S **S 17 30 44.9 +4.4**
comp=Z,4.5nm,0.9s,baz=76,slow=17,SNR=1.7
EIL LR LR 17 43 19.6
comp=Z,1μm,18.3s,baz=255,slow=41
RKY Sarkoy-Tekirda 37.65 282 *e*P P 17 24 53.0 +0.2
CHBT CHBT 37.67 140 P P 17 24 53.5 +0.4
comp=Z,59nm,1.4s,comp=Z,1μm
QZH Quanzhou 37.67 108 P P 17 24 53.8 +0.7
QZH PP **PnPn 17 26 23.1 +2.9**
QZH S **S 17 30 44.6 +2.5**
QZH LR LR
comp=N,8μm,15.7s
QZH LR LR
comp=E,6μm,12.0s
QZH LR LR
comp=Z,7μm,13.9s
KRBG Karabiga-Canak 37.68 282 *e*P P 17 24 52.8 -0.2
KWP Kalwaria Pacla 37.70 298 ⇓P P 17 24 54.8 +1.6
KWP Kalwaria Pacla 37.70 298 ⇑ *e*P P 17 24 53.8 +0.6
KWP LR LR
comp=Z,1μm,19.0s
KWP Kalwaria Pacla 37.70 298 ⇓ *i*P P 17 24 54.8 +1.6
KWP Kalwaria Pacla 37.70 298 *i* P P 17 24 54.2 +1.0
BMR Baia Mare 37.72 295 ⇑P P 17 24 54.7 +1.3
BMR Baia Mare 37.72 295 ⇑ *i*P P 17 24 54.7 +1.3
CJR Cluj-Napoca 37.94 293 ⇓ *i*P P 17 24 57.0 +1.7
LPK Lapseki 38.06 282 *e*P P 17 24 57.4 +1.1
HABR Khabarovsk 38.08 64 *de*P P 17 24 53.5 -2.8
HABR 17 26 20.8
HABR *e* 17 27 09.4
HABR *e*S **S 17 30 46.4 -1.4**
HABR *e* 17 30 57.9
HABR *e*SS **SnSn 17 33 29.3 -1.6**
HABR *e* 17 35 05.9
HABR pmax pmax
comp=Z,149nm,1.4s
HABR MLR MLR
comp=N,4μm,11.0s
HABR MLR MLR
comp=E,6μm,10.0s
HABR MLR MLR
comp=Z,5μm,10.0s
ERIK Erikli-Kesan 38.11 283 *e*P P 17 24 58.0 +1.3
TRPA Tarpa 38.21 296 ⇓ *i*P P 17 24 58.8 +1.4
TRPA Tarpa 38.21 296 ‖ *e* P P 17 24 58.5 +1.1
UZH Uzhgorod 38.23 297 *e*P P 17 24 56.5 -1.1
UZH *e* 17 26 27.0
UZH *e*S **S 17 30 46.1 -4.0**
UZH MLR MLR
comp=N,5μm,18.0s
UZH MLR MLR
comp=E,3μm,18.0s
UZH MLR MLR
comp=Z,2μm,18.0s
GELI Tayfur-Gelibol 38.25 282 *e*P P 17 24 59.0 +1.1
ALN Alexandroupoli 38.35 283 *e*P P 17 24 59.2 +0.5
BEL Belsk 38.35 302 *i* P P 17 24 59.3 +0.7
DRGR 38.50 294 ⇓P P 17 25 01.4 +1.4
DRGR 38.50 294 ⇓ *i*P P 17 25 01.4 +1.4
TRO Tromso 38.54 331 *e*P P 17 25 00.7 +0.7
RDO Rodhopi 38.60 284 *e*P P 17 25 01.4 +0.6
DEV Deva 38.66 292 ⇓P P 17 25 03.0 +1.7
DEV Deva 38.66 292 ⇓ *i*P P 17 25 03.0 +1.7
STHS Stebnicka Huta 38.68 298 *e*P P 17 25 01.6 +0.2
STHS pmax pmax
comp=Z,41nm,1.0s
STHS Stebnicka Huta 38.68 298 *e*P P 17 25 01.6 +0.2
CRVS Cervenica-Dubn 38.68 297 *e*P P 17 24 59.2 -2.2
CRVS pmax pmax
comp=Z,17nm,1.0s
CRVS Cervenica-Dubn 38.68 297 *e*P P 17 24 59.2 -2.2
PRK Paraskevi 38.88 281 *e*P P 17 25 03.8 +0.6
SMTH Samothraki Isl 38.88 283 *e*P P 17 25 03.3 +0.1
RZN Rozhen 38.95 285 *i* P P 17 25 05.0 +1.0
ARG Arkhangelos 38.95 275 *e*P P 17 25 03.6 -0.2
PGB Panagyurishte 38.99 287 *i* P P 17 25 05.5 +1.3
SMG Samos 39.16 278 *e*P P 17 25 06.0 +0.4
NIE Niedzica 39.26 298 ⇑P P 17 25 08.3 +2.0
NIE *e*S **S 17 31 11.1 +5.3**
NIE Niedzica 39.26 298 *i* P P 17 25 08.3 +2.0
NIE *e*pP **pP 17 25 11.8 -0.4**
NIE *e*S **S 17 31 11.1 +5.3**
MUKL Al Mukalla 39.34 229 ⇑ *e*P P 17 25 07.9 +0.7
LIA Limnos Island 39.36 282 *e*P P 17 25 07.7 +0.5
OJC Ojcow 39.36 300 ⇑ *i*P P 17 25 07.7 +0.6
OJC *e* 17 26 39.1
OJC *e*S **S 17 31 10.0 +2.7**
OJC MLR MLR
comp=Z,2μm,18.0s
OJC Ojcow 39.36 300 *i* P P 17 25 07.7 +0.6
OJC *e*pP **pP 17 25 11.0 -2.1**
OJC *e*PP **PnPn 17 26 39.1 -1.0**
OJC *e*S **S 17 31 10.0 +2.7**
OJC *e*SS **SnSn 17 34 05.7 +3.8**
OJC L L 17 40 39.7
comp=Z,2μm,18.0s
CHOS Chios island 39.41 280 *e*P P 17 25 02.7 -5.0
KECS Kecovo 39.42 297 *e*P P 17 25 08.5 +0.9
KECS Kecovo 39.42 297 *e*P P 17 25 08.5 +0.9
BZS Buzias 39.60 292 ⇓P P 17 25 10.5 +1.4
BZS Buzias 39.60 292 ⇓ *i*P P 17 25 10.5 +1.4
VTS Vitosha 39.63 287 ⇑P P 17 25 10.8 +1.2
VTS Vitosha 39.63 287 ⇑ *i*P P 17 25 10.8 +1.2
NVR Nevrokopi 39.67 285 *e*P P 17 25 10.9 +1.1
YHNB Yeheng 39.75 106 ⇑ *i*P P 17 25 11.4 +0.7
YHNB LR LR
comp=Z,66nm,0.9s
YHNB LR LR
comp=Z,2μm,19.0s
PSZ Piszkesteto 39.97 296 ⇓P P 17 25 13.6 +1.3
PSZ Piszkesteto 39.97 296 ⇓ *e*P P 17 25 13.1 +0.8
comp=Z,213nm,1.5s
PSZ LR LR
comp=Z,2μm,19.0s
PSZ Piszkesteto 39.97 296 ⇓ *i*P P 17 25 13.6 +1.3
PSZ Piszkesteto 39.97 296 ‖ *e* P P 17 25 13.3 +1.0
MOR8 Moi Rana 40.00 325 ⇑ *i*P P 17 25 11.4 -0.8
MOR8 AMB AMB 17 25 20.4
comp=Z,197nm,1.5s
SSLB Suanglung 40.04 107 *e*P P 17 25 13.7 +0.6
comp=Z,80nm,1.0s
GKP Gorka Klasztor 40.14 305 *i* P P 17 25 14.3 +0.8
TPUB Ta-pu 40.15 108 ⇑ *i*P P 17 25 14.1 +0.2
comp=Z,16nm,0.6s
NACB Ninganchiao 40.22 106 ⇓ *e*P P 17 25 16.4 +1.9
comp=Z,29nm,0.8s
PKSN Nyarlorinc 40.31 295 ⇓ *e* P P 17 25 17.0 +2.0
APE Apeiranthos 40.38 278 ⇓P P 17 25 15.7 -0.1
APE Apeiranthos 40.38 278 *e*P P 17 25 15.6 -0.2
APE Apeiranthos 40.38 278 ⇓ *i*P P 17 25 15.7 -0.1
RAC Raciborz 40.39 300 *e*P P 17 25 17.0 +1.4
RAC MLR MLR
comp=Z,4μm,12.4s
VYHS Vyhne 40.46 297 *e*P P 17 25 16.7 +0.4
VYHS pmax pmax
comp=Z,36nm,1.3s
VYHS Vyhne 40.46 297 *e*P P 17 25 16.7 +0.4
OKC Ostrava-Krasne 40.49 300 ⇑ *i*P P 17 25 17.1 +0.6
OKC *e*S **S 17 31 29.5 +5.4**
OKC MLR MLR
comp=Z,3μm,11.2s
OKC Ostrava-Krasne 40.49 300 ⇑ *i*P P 17 25 17.1 +0.6
OKC *e*pP **pP 17 25 20.4 -2.0**
OKC *e*PP PP 17 26 43.7 -5.9
OKC *e*S **S 17 31 29.5 +5.4**
OKC AMS AMS 17 42 40.0
comp=Z,3μm,11.2s
YULB Yu-li 40.54 107 *e*P P 17 25 17.4 +0.3
comp=Z,24nm,1.1s
VAY Valandovo 40.57 286 *e*P P 17 25 17.6 +0.4
AOS Alonnisos 40.58 282 *e*P P 17 25 16.7 -0.7
BUD Budapest 40.66 296 ‖ *e* P P 17 25 19.1 +1.2
PKS7 Kunszentmiklos 40.72 295 ‖ *e* P P 17 25 19.6 +1.2
SANT Santorini 40.77 277 ‖ *e*P P 17 25 17.7 -1.3
comp=Z,160nm,1.3s
SANT LR LR
comp=Z,1μm,20.0s
TWG Pinlang 40.77 108 ⇑ *i*P P 17 25 20.3 +1.2
comp=Z,270nm,0.9s
HFS Hagfors 40.78 316 P P **17 25 18.8 0.0**
HFS S **S 17 31 31.2 +3.0**
HFS Hagfors 40.78 316 P P **17 25 18.8 0.0**
comp=Z,75nm,0.9s,baz=98,slow=9.1,SNR=57
HFS S **S 17 31 31.2 +3.0**
comp=Z,11nm,0.8s,baz=98,slow=18,SNR=2.6
HFS LR LR 17 42 32.3
comp=Z,4μm,18.4s,baz=80,slow=37
ZKR Zakros 40.84 275 *e*P P 17 25 20.0 +0.4
MORC Moravsky Berou 40.88 300 ⇑ *i*P P 17 25 19.8 0.0
MORC pmax pmax
comp=Z,168nm,1.4s
MORC Moravsky Berou 40.88 300 ⇑ *i*P P 17 25 19.8 0.0
comp=Z,168nm,1.4s
MORC *e*PP PP 17 26 45.1 -8.8
MORC Moravsky Berou 40.88 300 ⇑ *i*P P 17 25 20.5 +0.7
SPITS Spitsbergen Ar 41.04 344 P P **17 25 22.3 +1.6**
SPITS PP **PnPn 17 27 03.0 +3.4**
SPITS Spitsbergen Ar 41.04 344 P P **17 25 22.3 +1.6**
comp=Z,3.8nm,0.5s,baz=131,slow=10,SNR=15
SPITS PP **PnPn 17 27 03.0 +3.4**
comp=Z,42nm,1.0s,baz=108,slow=15,SNR=3.7
SPITS LR LR 17 47 46.5
comp=Z,913nm,18.6s,baz=105,slow=44
BSD Bornholm Skovb 41.05 308 *i* P P 17 25 20.0 -1.0
BSD pmax pmax
comp=Z,51nm,0.9s
BSD Bornholm Skovb 41.05 308 *i* P P 17 25 20.0 -1.0
comp=Z,51nm,0.9s

SKO	**Skopje**	**41.08 287**	*eP*	**P**	**17 25 22.7 +1.3**
PKSG		**41.10 296**⇑	*e*	**P**	**17 25 22.6 +1.1**
PTL	**Penteli**	**41.10 280**	*eP*	**P**	**17 25 21.9 +0.2**
CSKK	**Cs˙ţkako**	**41.19 296**⇑	*e*	**P**	**17 25 23.5 +1.2**
KSP	**Ksiaz**	**41.34 302**⇑	*eP*	**P**	**17 25 24.2 +0.8**
KSP			*e*		17 26 56.7
KSP			*eS*	**S**	**17 31 35.0 -1.7**
KSP			MLR	MLR	
	comp=Z,4µm,19.5s				
KSP	**Ksiaz**	**41.34 302**	*i P*	**P**	**17 25 24.2 +0.8**
KSP			*eS*	**S**	**17 31 36.7 0.0**
PKSM	**Moragy**	**41.34 294**	⇓*iP*	**P**	**17 25 24.2 +0.7**
PKSM	**Moragy**	**41.34 294**	⇓*iP*	**P**	**17 25 24.2 +0.7**
PKSM	**Moragy**	**41.34 294**⇑	*e*	**P**	**17 25 23.9 +0.4**
SMOL	**Smolenice**	**41.34 298**	*eP*	**P**	**17 25 24.9 +1.4**
SMOL	**Smolenice**	**41.34 298**	*eP*	**P**	**17 25 24.9 +1.4**
LAST	**Lasithi**	**41.34 276**	*eP*	**P**	**17 25 23.9 +0.1**
PKST	**T˜'s**	**41.37 296**⇑	*e*	**P**	**17 25 24.5 +0.7**
DPC	**Dobruska-Polom**	**41.46 301**⇑	*iP*	**P**	**17 25 25.8 +1.3**
DPC			*eS*	**S**	**17 31 38.3 -0.4**
DPC	**Dobruska-Polom**	**41.46 301**⇑	*iP*	**P**	**17 25 25.8 +1.3**
DPC			*epP*	**pP**	**17 25 29.3 -1.2**
DPC			*ePP*	**PP**	**17 26 55.5 -4.7**
DPC			*eS*	**S**	**17 31 38.3 -0.4**
JNU	**Nakatsue**	**41.47 88**⇑	*iP*	**P**	**17 25 24.4 -0.4**
	comp=Z,33nm,1.0s				
JNU	**Nakatsue**	**41.47 88**	P	**P**	**17 25 24.5 -0.3**
	comp=Z,62nm,1.0s,baz=287,slow=4.0,SNR=29				
JNU			LR	LR	17 44 28.5
	comp=Z,4µm,18.1s,baz=301,slow=39				
UPC	**Upice**	**41.61 301**⇑	*iP*	**P**	**17 25 26.7 +1.0**
UPC			*e*		17 27 05.6
UPC	**Upice**	**41.61 301**⇑	*iP*	**P**	**17 25 26.7 +1.0**
UPC			*epP*	**pP**	**17 25 30.0 -1.6**
UPC			*ePP*	**PnPn**	**17 27 05.6 -1.0**
VRAC	**Vranov**	**41.62 299**	P	**P**	**17 25 26.5 +0.8**
VRAC			S	**S**	**17 31 42.9 +2.0**
VRAC	**Vranov**	**41.62 299**	⇓*iP*	**P**	**17 25 27.1 +1.3**
VRAC	**Vranov**	**41.62 299**	P	**P**	**17 25 26.5 +0.8**
	comp=Z,34nm,1.0s,baz=74,slow=9.0,SNR=27				
VRAC			S	**S**	**17 31 42.9 +2.0**
	comp=Z,3.9nm,0.8s,baz=78,slow=14,SNR=2.1				
VRAC			LR	LR	17 43 20.6
	comp=Z,2µm,18.1s,baz=82,slow=37				
BSI	**Banda Aceh**	**41.65 155**	P	**P**	**17 25 25.0 -1.3**
	comp=Z,43nm,1.3s				
BDHA	**Al Bayda'**	**41.67 233**⇑	*eP*	**P**	**17 25 27.9 +1.1**
IDI	**Anoyia**	**41.70 276**	*eP*	**P**	**17 25 25.8 -0.9**
IDI	**Anoyia**	**41.70 276**	*eP*	**P**	**17 25 25.3 -1.3**
	comp=Z,84nm,1.0s				
RADA	**Ahram - Rada'a**	**41.71 234**⇑	*eP*	**P**	**17 25 27.9 +0.8**
LTK	**Loutraki**	**41.74 281**	*eP*	**P**	**17 25 26.5 -0.4**
NC602	**NORSAR Array S**	**41.75 317**⇑	*iP*	**P**	**17 25 26.4 -0.2**
NC602			*ePP*	**PP**	**17 27 03.5 +0.4**
IVA	**Berane**	**41.77 289**⇑	*iP*	**P**	**17 25 27.8 +0.6**
DID	**Didima**	**41.79 280**	*eP*	**P**	**17 25 25.8 -1.6**
PVY	**Plav**	**41.83 289**⇑	*iP*	**P**	**17 25 28.0 +0.2**
NB2	**NORSAR Subarra**	**41.86 318**	P	**P**	**17 25 27.6 0.0**
	comp=Z,55nm,0.7s,baz=82,slow=8.6				
NB2	**NORSAR Subarra**	**41.86 318**	P	**P**	**17 25 27.6 0.0**
	baz=82,slow=8.6				
NOA	**NORSAR Array B**	**41.86 318**	P	**P**	**17 25 27.6 0.0**
NOA			PP	**PnPn**	**17 27 11.6 +2.3**
NOA			S	**S**	**17 31 44.5 +0.3**
NOA	**NORSAR Array B**	**41.86 318**	P	**P**	**17 25 27.6 0.0**
	comp=Z,40nm,0.7s,baz=81,slow=8.1,SNR=72				
NOA			PP	**PnPn**	**17 27 11.6 +2.3**
	comp=Z,12nm,0.9s,baz=83,slow=13,SNR=3.3				
NOA			S	**S**	**17 31 44.5 +0.3**
	comp=Z,3.7nm,0.8s,baz=86,slow=13,SNR=2.8				
NOA			LR	LR	17 43 08.0
	comp=Z,4µm,18.2s,baz=90,slow=37				
SIVA	**Sivas**	**41.89 276**	*eP*	**P**	**17 25 28.6 +0.5**
PLE	**Pljevlja**	**41.92 290**⇑	*iP*	**P**	**17 25 28.7 +0.2**
LBOS		**41.94 233**⇑	*eP*	**P**	**17 25 29.7 +0.7**
LBOS			AMb	AMB	17 25 30.7
	comp=Z,364nm,1.5s				
NAO01	**NORSAR Array S**	**42.05 317**⇑	*iP*	**P**	**17 25 28.9 -0.2**
	comp=Z,7.6nm,1.0s				
KBS	**Kingsbay**	**42.08 345**	*eP*	**P**	**17 25 29.6 +0.5**
KBS			pmax	pmax	
	comp=Z,77nm,1.2s				
KBS			MLR	MLR	
	comp=Z,2µm,19.0s				
KBS	**Kingsbay**	**42.08 345**	*eP*	**P**	**17 25 29.6 +0.5**
	comp=Z,76nm,1.2s				
KBS			LR	LR	
	comp=Z,2µm,19.0s				
RGN	**Rugen**	**42.08 308**	*eP*	**P**	**17 25 30.8 +1.4**
	comp=Z,359nm,0.9s				
VAM	**Vamos**	**42.13 277**	*eP*	**P**	**17 25 29.5 -0.6**
KALE	**Kalithea**	**42.15 282**	*eP*	**P**	**17 25 29.1 -1.2**
UPM	**Unac-Piva**	**42.30 290**⇑	*iP*	**P**	**17 25 31.9 +0.3**
TREC	**Trest**	**42.31 300**⇑	*iP*	**P**	**17 25 32.4 +1.0**
TREC			MLR	MLR	
	comp=Z,4µm,9.8s				
TREC	**Trest**	**42.31 300**⇑	*iP*	**P**	**17 25 32.4 +1.0**
TREC			*epP*	**pP**	**17 25 36.3 -1.1**
TREC			AMS	AMS	17 43 50.0
	comp=Z,4µm,9.8s				
RUE	**Ruedersdorf**	**42.37 305**	*eP*	**P**	**17 25 32.5 +0.7**
	comp=Z,180nm,1.4s				
RUE			*epP*	**pP**	**17 25 35.8 -2.0**
	comp=Z,180nm,1.4s				
RUE	**Ruedersdorf**	**42.37 305**	*eP*	**P**	**17 25 31.9 +0.2**
	comp=Z,102nm,1.0s				
TTG	**Podgorica**	**42.38 289**⇑	*iP*	**P**	**17 25 32.6 +0.6**
NKY	**Niksic**	**42.40 289**⇑	*iP*	**P**	**17 25 32.9 +0.6**
TIR	**Tirane**	**42.41 287**	*eP*	**P**	**17 25 33.1 +0.7**
TIR			pmax	pmax	
	comp=Z,157nm,1.2s				
TIR			MLR	MLR	
	comp=Z,1µm,22.0s				
TIR	**Tirane**	**42.41 287**	*eP*	**P**	**17 25 33.0 +0.7**
	comp=Z,157nm,1.2s				
TIR			LR	LR	
	comp=Z,1µm,22.0s				
LHMI	**Lhok Sumawe**	**42.42 153**	P	**P**	**17 25 32.9 +0.3**
	comp=Z,239nm,1.5s,comp=Z,3µm				
BEHE	**Becsehely**	**42.46 295**⇑	*ed*		17 25 33.3
PVCC	**Panska Ves**	**42.48 302**⇑	*iP*	**P**	**17 25 34.1 +1.3**
PVCC			*eS*	**S**	**17 31 56.7 +3.1**
PVCC			MLR	MLR	
	comp=Z,4µm,8.9s				
PVCC	**Panska Ves**	**42.48 302**⇑	*iP*	**P**	**17 25 34.1 +1.3**
PVCC			*epP*	**pP**	**17 25 37.3 -1.4**
PVCC			*eS*	**S**	**17 31 56.7 +3.1**
PVCC			AMS	AMS	17 43 50.0
	comp=Z,4µm,8.9s				
GVD	**Gavdhos**	**42.49 276**	*eP*	**P**	**17 25 32.5 -0.6**
GVD	**Gavdhos**	**42.49 276**	*eP*	**P**	**17 25 32.5 -0.6**
	comp=Z,518nm,1.1s				
LLD	**Lille Linde**	**42.50 309**	*i P*	P	17 25 37.2 +4.4
LLD			pmax	pmax	
	comp=Z,160nm,0.9s				
LLD	**Lille Linde**	**42.50 309**	*i P*	P	17 25 37.2 +4.4
	comp=Z,161nm,0.9s				
CONA	**Conrad Observa**	**42.53 298**	⇓*ipP*	**P**	**17 25 34.5 +1.2**
	comp=Z,143nm,1.4s,SNR=53				
ULC	**Ulcinj**	**42.58 288**⇑	*iP*	**P**	**17 25 34.0 +0.3**
BRY	**Bratogost**	**42.66 290**	*eP*	**P**	**17 25 34.4 -0.1**
PRU	**Pruhonice**	**42.66 301**⇑	*iP*	**P**	**17 25 35.3 +1.0**
PRU			*e*		17 27 10.3
PRU			*eS*	**S**	**17 31 55.9 -0.4**
PRU			MLR	MLR	
	comp=Z,3µm,10.5s				
PRU	**Pruhonice**	**42.66 301**⇑	*iP*	**P**	**17 25 35.3 +1.0**
PRU			*epP*	**pP**	**17 25 38.8 -1.5**
PRU			*ePP*	**PP**	**17 27 10.3 -2.8**
PRU			*eS*	**S**	**17 31 55.9 -0.4**
PRU			AMS	AMS	17 44 00.0
	comp=Z,3µm,10.5s				
BUM	**Brajici-Budva**	**42.67 289**⇑	*iP*	**P**	**17 25 34.6 +0.1**
PRA	**Prague**	**42.70 301**	⇑P	**P**	**17 25 36.0 +1.4**
PRA			PP	**PcP**	**17 27 23.0 -3.0**
PRA			AMS	AMS	17 44 00.0
DOMB	**Dombas**	**42.71 319**	*eP*	**P**	**17 25 34.3 -0.2**
BRG	**Berggiesshubel**	**42.75 302**⇑	*iP*	**P**	**17 25 35.8 +0.9**
	comp=Z,55nm,0.8s				
BRG			*i*		17 25 39.4
	comp=Z,154nm,1.6s				
BRG			*i*		17 25 47.9
	comp=Z,54nm,1.0s				
BRG			PP	**PP**	**17 27 16.0 +2.0**
	comp=Z,67nm,1.4s				
BRG			S	**S**	**17 32 00.0 +2.4**
BRG			SS	**SS**	**17 35 05.0 -3.1**
BRG					
	comp=Z,4µm,10.6s				
BRG					
	comp=N,3µm,10.2s				
BRG					
	comp=E,4µm,10.2s				
BRG	**Berggiesshubel**	**42.75 302**	*eP*	**P**	**17 25 35.9 +0.9**
	comp=Z,155nm,1.5s				
BRG			*epP*	**pP**	**17 25 39.3 -1.6**
	comp=Z,139nm,1.5s				
BRG	**Berggiesshubel**	**42.75 302**⇑	*iP*	**P**	**17 25 35.8 +0.9**
BRG			*i*		17 25 47.9
BRG					17 27 16.0
BRG			S	**S**	**17 32 00.0 +2.4**
BRG			SS	**SS**	**17 35 05.0 -3.1**
BRG			pmax	pmax	
	comp=Z,55nm,0.8s				
BRG			pmax	pmax	
	comp=Z,67nm,1.4s				
BRG			MLR	MLR	
	comp=Z,4µm,10.6s				
BRG			MLR	MLR	
	comp=N,3µm,10.2s				
BRG			MLR	MLR	
	comp=E,4µm,10.2s				
DYR	**Agios Nikonas**	**42.78 280**	*eP*	**P**	**17 25 34.4 -1.0**
KOGS	**Kog**	**42.80 295**	*i P*	**P**	**17 25 35.5 0.0**
KOGS			*eS*	**S**	**17 32 01.4 +2.9**
AMT	**Artemida-Makis**	**42.85 281**	*eP*	**P**	**17 25 34.9 -1.1**
ITM	**Ithomi**	**42.87 280**	*eP*	**P**	**17 25 34.4 -1.7**
HCY	**Herceg Novi**	**42.88 289**⇑	*iP*	**P**	**17 25 36.3 +0.2**
KONO	**Kongsberg**	**42.90 316**⇑	*iP*	**P**	**17 25 36.4 +0.4**
KONO			AMB	AMB	17 25 43.1
	comp=Z,208nm,1.6s				
KONO			*ePP*	**PP**	**17 27 15.7 +0.3**
KONO	**Kongsberg**	**42.90 316**	*eP*	**P**	**17 25 36.0 0.0**
KONO			*e*		17 27 15.9
KONO			pmax	pmax	
	comp=Z,238nm,1.4s				
KONO			MLR	MLR	
	comp=Z,1µm,20.0s				
KONO	**Kongsberg**	**42.90 316**	*eP*	**P**	**17 25 36.0 0.0**
	comp=Z,57nm,1.4s				
KONO			*ePP*	**PP**	**17 27 15.9 +0.5**
KONO			LR	LR	
	comp=Z,1µm,20.0s				
ARSA	**Arzberg**	**42.98 297**	*i P*	**P**	**17 25 37.5 +0.5**
	comp=Z,49nm,0.9s,SNR=27				
SISC	**Sisak**	**43.09 294**	P	**P**	**17 25 38.2 +0.5**
FBE	**Freiberg**	**43.09 303**	*eP*	**P**	**17 25 38.9 +1.2**
	comp=Z,185nm,1.2s				
FBE			*epP*	**pP**	**17 25 42.2 -1.5**
	comp=Z,185nm,1.2s				
TRBA	**At Turbah**	**43.10 234**⇑	*eP*	**P**	**17 25 39.1 +0.7**
TRBA			AMb	AMB	17 25 40.1
	comp=Z,33nm,0.4s				
CLL	**Collm**	**43.18 303**	*eP*	**P**	**17 25 39.1 +0.7**
	comp=Z,200nm,1.1s				
CLL	**Collm**	**43.18 303**⇑	*iP*	**P**	**17 25 38.9 +0.5**
CLL			*eS*	**S**	**17 32 03.0 -0.8**
CLL			pmax	pmax	
	comp=Z,135nm,0.8s				
CLL			MLR	MLR	
	comp=Z,1µm,22.9s				
CLL	**Collm**	**43.18 303**⇑	*iP*	**P**	**17 25 38.9 +0.5**
	comp=Z,135nm,0.8s				
CLL			*i* pP	**pP**	**17 25 42.3 -2.1**
	comp=Z,200nm,1.1s				
CLL			*ePP*	**PP**	**17 27 17.0 -1.6**
CLL			*ePPIp*		17 27 25.0
CLL			*i* pPcP		17 27 31.5
CLL			*eS*	**S**	**17 32 03.0 -0.8**
CLL			*e*(SPP)		17 32 30.0
CLL			*eSS*	**SS**	**17 35 15.0 -1.5**
CLL			*eSSS*	SSS	17 35 48.0
JOW	**Kunigami**	**43.20 97**	*eP*	**P**	**17 25 36.7 -2.2**
	comp=Z,38nm,1.1s				
MOL	**Molde**	**43.32 320**	*eP*	**P**	**17 25 40.1 +0.8**
MOL			AMB	AMB	17 25 46.5
	comp=Z,121nm,1.6s				
MOL			*ePP*	**PP**	**17 27 20.8 +1.0**
VLS	**Valsamata**	**43.33 282**	*eP*	**P**	**17 25 38.5 -1.3**
GCIS	**Gornji Cirnik**	**43.42 295**	*i P*	**P**	**17 25 40.8 +0.3**
GCIS			*ePP*	**PP**	**17 27 22.2 +0.9**
BISS	**Bistriski jare**	**43.45 296**⇑	*iP*	**P**	**17 25 41.1 +0.4**
PERS	**Pernice**	**43.46 296**	*i P*	**P**	**17 25 41.3 +0.4**
PERS			*e*		17 31 31.8
PERS			*eS*	**S**	**17 32 11.2 +3.0**
PERS			*e*		17 34 50.7
YSS	**Yuzh-Sakhalins**	**43.49 63**⇑	*eP*	**P**	**17 25 41.5 +0.6**
YSS			*e*		17 25 55.0
YSS			*eS*	**S**	**17 32 12.0 +3.6**
YSS			*e*		17 35 34.0
YSS			pmax	pmax	
	comp=Z,100nm,1.0s				
YSS			pmax	pmax	
	comp=Z,600nm,3.0s				
YSS			MLR	MLR	
	comp=N,2µm,12.0s				
YSS			MLR	MLR	
	comp=Z,4µm,12.0s				
YSS			MLR	MLR	
	comp=E,5µm,11.0s				
SOKA	**Soboth**	**43.50 296**⇑	*iP*	**P**	**17 25 41.5 +0.3**
	comp=E,129nm,1.4s				
KHC	**Kasperske Hory**	**43.54 300**⇑	*iP*	**P**	**17 25 42.3 +0.9**
KHC			*e*		17 27 20.6
KHC			*eS*	**S**	**17 32 11.5 +2.2**
KHC			MLR	MLR	
	comp=Z,2µm,10.3s				
KHC	**Kasperske Hory**	**43.54 300**⇑	*iP*	**P**	**17 25 42.3 +0.9**
KHC			*epP*	**pP**	**17 25 45.6 -1.8**
KHC			*ex*	x	17 26 08.5
KHC			*ePP*	**PP**	**17 27 20.6 -2.0**
KHC			*eS*	**S**	**17 32 11.5 +2.2**
KHC			AMS	AMS	17 44 20.0
	comp=Z,2µm,10.3s				
KHC	**Kasperske Hory**	**43.54 300**⇑	*iP*	**P**	**17 25 42.0 +0.6**
	comp=Z,62nm,1.2s				
KHC			*ePP*	**PP**	**17 27 22.1 -0.5**
MOA	**Molln**	**43.56 298**	*i P*	**P**	**17 25 42.4 +0.8**
	comp=Z,116nm,1.5s,SNR=18				
GEC2	**GERESS Array S**	**43.56 300**	*eP*	**P**	**17 25 42.7 +1.0**
	comp=Z,185nm,2.1s				
GEC2			*epP*	**pP**	**17 25 46.0 -1.7**
	comp=Z,77nm,1.4s				
GEC2	**GERESS Array S**	**43.56 300**	*eP*	**P**	**17 25 42.7 +1.0**
GEC2			pmax	pmax	
	comp=Z,185nm,2.1s				
GERES	**GERESS Array B**	**43.56 300**	P	**P**	**17 25 42.5 +0.8**
GERES			PP	**PP**	**17 27 21.3 -1.6**
GERES			PcP	**PcP**	**17 27 29.2 +0.1**
GERES			S	**S**	**17 32 13.6 +3.8**
GERES	**GERESS Array B**	**43.56 300**	P	**P**	**17 25 42.5 +0.8**
	comp=Z,14nm,0.7s,baz=64,slow=7.7,SNR=81				
GERES			PP	**PP**	**17 27 21.3 -1.6**
	comp=Z,14nm,1.1s,baz=64,slow=11,SNR=3.6				
GERES			PcP	**PcP**	**17 27 29.2 +0.1**
	comp=Z,13nm,0.9s,baz=90,slow=3.9,SNR=5.2				
GERES			S	**S**	**17 32 13.6 +3.8**
	comp=Z,2.7nm,0.9s,baz=100,slow=10,SNR=3.3				
GERES			LR	LR	17 43 20.2
	comp=Z,1µm,18.6s,baz=77,slow=35				
KULM	**Kulim**	**43.68 148**	*eP*	**P**	**17 25 41.8 -1.0**
	comp=Z,133nm,1.1s				
KULM			*ePcP*	**PcP**	**17 27 29.4 -0.4**
KULM			LR	LR	
	comp=Z,1µm,21.0s				
KULM	**Kulim**	**43.68 148**	P	**P**	**17 25 42.6 -0.2**
KULM	**Kulim**	**43.68 148**	P	**P**	**17 25 42.3 -0.5**
	comp=Z,116nm,1.1s,comp=Z,1µm				
HOMB	**Homborsund**	**43.76 314**⇑	*iP*	**P**	**17 25 43.0 +0.1**
HOMB			*ePP*	**PP**	**17 27 25.7 +1.1**
TANN	**Tannenbergstha**	**43.79 302**	*eP*	**P**	**17 25 44.5 +1.1**
	comp=Z,106nm,1.1s				
TANN			*epP*	**pP**	**17 25 47.7 -1.7**
	comp=Z,106nm,1.1s				
BOJS	**Bojanci**	**43.80 295**	*i P*	**P**	**17 25 44.1 +0.6**
BOJS			*ePP*	**PP**	**17 27 27.0 +1.6**
BOJS			*eS*	**S**	**17 32 16.4 +3.2**
NKC	**Novy Kostel**	**43.86 302**⇑	*iP*	**P**	**17 25 45.0 +1.0**
NKC			*e*		17 27 26.7
NKC			*eS*	**S**	**17 32 17.0 +3.1**
NKC			MLR	MLR	
	comp=N,7µm,11.7s				
NKC	**Novy Kostel**	**43.86 302**⇑	*iP*	**P**	**17 25 45.0 +1.0**
NKC			*epP*	**pP**	**17 25 48.5 -1.5**
NKC			*ePP*	**PP**	**17 27 26.7 +0.8**
NKC			*eS*	**S**	**17 32 17.0 +3.1**
NKC			AMS	AMS	17 41 30.0
MUD	**Monsted U'grnd**	**43.87 311**⇑	*iP*	**P**	**17 25 44.9 +1.0**
MUD			*e*		17 27 32.3
MUD			pmax	pmax	
	comp=Z,89nm,0.9s				
MUD	**Monsted U'grnd**	**43.87 311**⇑	*iP*	**P**	**17 25 44.9 +1.0**
	comp=Z,89nm,0.9s				
MUD			*e*		17 27 32.3
OBKA	**Obir**	**43.87 296**	*i P*	**P**	**17 25 44.6 +0.4**
	comp=Z,88nm,0.8s,SNR=46				
WERD	**Werda**	**43.87 302**	*eP*	**P**	**17 25 45.0 +0.9**
	comp=Z,88nm,1.1s				
WERD			*epP*	**pP**	**17 25 48.3 -1.8**
	comp=Z,88nm,1.1s				
WERN	**Wernitzgruen**	**43.88 302**	*eP*	**P**	**17 25 45.3 +1.1**
	comp=Z,71nm,1.0s				
WERN			*epP*	**pP**	**17 25 48.7 -1.5**
	comp=Z,71nm,1.0s				
GUNZ	**Gunzen**	**43.89 302**	*eP*	**P**	**17 25 45.3 +1.1**
	comp=Z,125nm,1.1s				
NEUB	**Neuenburg**	**43.94 303**	*eP*	**P**	**17 25 45.3 +0.7**
	comp=Z,199nm,1.1s				
NEUB			*epP*	**pP**	**17 25 48.9 -1.7**
	comp=Z,199nm,1.1s				
BSEG	**Bad Segeberg**	**43.94 308**	*eP*	**P**	**17 25 45.9 +1.4**
	comp=Z,209nm,1.0s				
BSEG	**Bad Segeberg**	**43.94 308**	*eP*	**P**	**17 25 45.9 +1.4**
BSEG			pmax	pmax	
	comp=Z,209nm,1.0s				
PLN	**Plauen**	**43.95 302**	*eP*	**P**	**17 25 45.6 +0.9**
	comp=Z,508nm,1.3s				
WET	**Wettzell**	**43.97 300**	*eP*	**P**	**17 25 45.9 +1.0**
	comp=Z,82nm,1.2s				
WET			*epP*	**pP**	**17 25 49.2 -1.7**
	comp=Z,82nm,1.2s				
WET	**Wettzell**	**43.97 300**	*eP*	**P**	**17 25 45.9 +1.0**
WET			pmax	pmax	
	comp=Z,82nm,1.2s				
LJU	**Ljubljana**	**44.06 296**	*eP*	**P**	**17 25 46.2 +0.6**
LJU			*i* PP	**PcP**	**17 27 30.9 +0.2**
LJU			*eS*	**S**	**17 32 19.4 +2.4**
MANZ	**Manzenberg**	**44.15 302**	*eP*	**P**	**17 25 47.2 +0.9**
	comp=Z,91nm,1.4s				
MANZ			*epP*	**pP**	**17 25 51.0 -1.3**
	comp=Z,91nm,1.4s				
ROTZ	**Rotzenmuhle**	**44.16 301**	*eP*	**P**	**17 25 47.6 +1.2**
	comp=Z,152nm,1.7s				
MOX	**Moxa**	**44.22 303**	*eP*	**P**	**17 25 47.8 +0.9**
	comp=Z,108nm,1.0s				
MOX			*epP*	**pP**	**17 25 51.1 -1.8**
	comp=Z,108nm,1.0s				
MOX			*eS*	**S**	**17 32 19.6 +0.4**
MOX	**Moxa**	**44.22 303**	*eP*	**P**	**17 25 47.8 +0.9**
MOX			*eS*	**S**	**17 32 19.6 +0.4**
MOX			pmax	pmax	
	comp=Z,108nm,1.0s				
GORS	**Gorjuse**	**44.30 296**⇑	*iP*	**P**	**17 25 47.5 -0.2**
ODD1	**Odda**	**44.30 317**	*eP*	**P**	**17 25 44.9 -2.5**
ODD1			AMB	AMB	17 25 52.0
	comp=Z,106nm,1.3s				
MYKA	**Terra Mystica**	**44.41 297**⇑	*iP*	**P**	**17 25 48.5 0.0**
	comp=Z,88nm,1.3s				
NVLJ	**Novalja**	**44.42 293**	P	**P**	**17 25 46.5 -2.0**
KBA	**Koelnbreinsper**	**44.42 297**⇑	*iP*	**P**	**17 25 49.0 +0.3**
	comp=Z,110nm,1.6s,SNR=34				
VOY	**Vojsko**	**44.48 296**	*eP*	**P**	**17 25 48.0 -1.0**
VOY			*e*		17 26 00.0
VOY			*e*		17 27 31.2
VOY			*e*		17 27 43.3
ASAJ	**Asahikawa**	**44.48 67**	*eP*	**P**	**17 25 48.8 -0.2**
	comp=Z,34nm,1.0s				
ASAJ			S	**S**	**17 32 25.9 +2.9**
ASAJ	**Asahikawa**	**44.48 67**	P	**P**	**17 25 49.0 0.0**
	comp=Z,36nm,0.6s,baz=275,slow=7.2,SNR=26				
ASAJ			S	**S**	**17 32 25.9 +2.9**
	comp=Z,16nm,1.2s,baz=308,slow=19,SNR=2.2				
ASAJ			LR	LR	17 44 59.3
	comp=Z,2µm,18.8s,baz=291,slow=37				
CADS	**Cadrg**	**44.50 296**	*i P*	**P**	**17 25 48.6 -0.6**
NRDL	**Niedersach Rie**	**44.51 306**	*eP*	**P**	**17 25 50.4 +1.4**
	comp=Z,198nm,1.1s				
NRDL			*epP*	**pP**	**17 25 53.6 -1.4**
	comp=Z,198nm,1.1s				
RJOB	**Jochberg**	**44.52 298**	*eP*	**P**	**17 25 50.4 +1.0**
CLZ	**Clausthal**	**44.56 305**	*eP*	**P**	**17 25 50.5 +0.9**
	comp=Z,86nm,1.3s				
CLZ			*epP*	**pP**	**17 25 54.2 -1.4**
	comp=Z,86nm,1.3s				
CLZ	**Clausthal**	**44.56 305**	*eP*	**P**	**17 25 50.5 +0.9**
CLZ			pmax	pmax	
	comp=Z,86nm,1.3s				
IPM	**Ipoh**	**44.57 148**⇑	*iP*	**P**	**17 25 48.3 -1.7**
	comp=Z,116nm,1.1s				
IPM			*ePcP*	**PcP**	**17 27 32.6 -0.3**
IPM	**Ipoh**	**44.57 148**	P	**P**	**17 25 49.3 -0.7**
IPM	**Ipoh**	**44.57 148**	P	**P**	**17 25 48.9 -1.0**
	comp=Z,105nm,1.2s,comp=Z,1µm				
TSI	**Tuntungan**	**44.58 151**	P	**P**	**17 25 50.9 +0.9**
	comp=Z,67nm,1.1s				
KTGM	**Kuala Trenggan**	**44.64 144**	P	**P**	**17 25 51.2 +0.7**
GRF	**Grafenberg Arr**	**44.79 302**	*eP*	**P**	**17 25 53.0 +1.6**
	comp=Z,207nm,1.0s				
GRF			*epP*	**pP**	**17 25 56.7 -0.7**
	comp=Z,207nm,1.0s				
GRF			*ePP*	**PP**	**17 27 39.4 +3.5**
GRF			*eS*	**S**	**17 32 29.5 +2.1**
GRF	**Grafenberg Arr**	**44.79 302**	*eP*	**P**	**17 25 53.0 +1.6**
GRF			*e*		17 27 39.4
GRF			*eS*	**S**	**17 32 29.5 +2.1**
GRF			pmax	pmax	
	comp=Z,207nm,1.0s				
GRFO	**Grafenberg**	**44.79 302**	*eP*	**P**	**17 25 52.5 +1.1**
GRFO			pmax	pmax	
	comp=Z,163nm,1.0s				
GRFO	**Grafenberg**	**44.79 302**	*eP*	**P**	**17 25 52.5 +1.1**
	comp=Z,163nm,1.0s				
RUND	**Rundenannen**	**44.80 318**	*eP*	**P**	**17 25 51.2 -0.1**
RUND			AMB	AMB	17 25 56.2
	comp=Z,180nm,1.9s				
BER	**Bergen**	**44.82 317**	*eP*	**P**	**17 25 51.4 0.0**
BER			AMB	AMB	17 26 00.4
	comp=Z,150nm,1.6s				
ASK	**Askoy**	**44.86 318**	*eP*	**P**	**17 25 51.6 -0.2**
ASK			AMB	AMB	17 26 00.8
	comp=Z,284nm,1.8s				
EGD	**Espegrend**	**44.90 317**	*eP*	**P**	**17 25 51.8 -0.2**
EGD			AMB	AMB	17 25 53.2
	comp=Z,97nm,1.2s				
MAJO	**Matsushiro**	**44.91 79**	*eP*	**P**	**17 25 50.8 -1.8**
MAJO			pmax	pmax	
	comp=Z,41nm,1.0s				
MAJO			MLR	MLR	
	comp=Z,5µm,19.0s				
MAJO	**Matsushiro**	**44.91 79**	*eP*	**P**	**17 25 50.8 -1.8**
	comp=Z,6.8nm,1.0s				
MAJO			LR	LR	
	comp=

comp=Z,241nm,1.1s
WTTA Wattenberg 45.43 298 *i* P P 17 25 57.3 +0.6
comp=Z,274nm,1.0s,SNR=89
WATA Walderalm 45.44 298⇑ *i* P P 17 25 57.1 +0.4
comp=Z,129nm,1.0s,SNR=30
TIP Timpagrande 45.51 286⇑ *i* P P 17 25 57.3 0.0
comp=Z,240nm,1.2s
TIP LR LR
comp=Z,906nm,20.0s
MOTA Moosalm 45.73 299 *i* P P 17 25 59.5 +0.4
comp=Z,237nm,1.0s,SNR=120
ERM Erimo 45.75 70⇓ *e*P P 17 25 59.0 -0.1
ERM pmax pmax
comp=Z,267nm,1.2s
ERM MLR MLR
comp=Z,3µm,21.0s
ERM Erimo 45.75 70⇓ *e*P P 17 25 59.0 -0.1
comp=Z,267nm,1.2s
ERM LR LR
comp=Z,3µm,21.0s
CUC Castrocucco 45.77 287⇑ *i*P P 17 25 59.9 +0.5
comp=Z,144nm,1.0s
CUC LR LR
comp=Z,1µm,22.0s
RETA Reutte 45.89 299 *i* P P 17 26 00.9 +0.6
comp=Z,182nm,1.3s,SNR=76
IBBN Ibbenburen 45.93 306 *e*P P 17 26 01.1 +0.8
comp=Z,147nm,1.2s
IBBN *e*pP **pP** 17 26 04.6 -1.7
comp=Z,147nm,1.2s
IBBN *e*PcP **PcP** 17 27 37.5 +0.5
IBBN *e*PP **PP** 17 27 49.8 +2.0
FRIM Kepong 45.94 147 P P 17 26 00.9 +0.1
FETA Feichten 46.10 298 *i* P P 17 26 02.3 +0.3
comp=Z,142nm,1.1s,SNR=86
TNS Taunus Mts 46.27 303 *e*P P 17 26 04.1 +1.0
comp=Z,83nm,1.2s
TNS *e*pP **pP** 17 26 07.5 -1.7
comp=Z,83nm,1.2s
TNS *e*PcP **PcP** 17 27 38.5 +0.2
TNS Taunus Mts 46.27 303 *e*P P 17 26 04.1 +1.0
TNS *e* 17 27 38.5
TNS pmax pmax
comp=Z,83nm,1.2s
TNS pmax pmax
comp=Z,83nm,1.2s
TOD Tromm 46.28 302⇑ *e*P P 17 26 03.7 +0.5
TOD Tromm 46.28 302⇑ *e*P P 17 26 03.7 +0.5
AQU L'Aquila 46.33 291 *e*P P 17 26 04.2 +0.5
comp=Z,82nm,1.1s
AQU LR LR
comp=Z,1µm,20.0s
AQU L'Aquila 46.33 291⇑ *i*P P 17 26 05.0 +1.3
STU Stuttgart 46.36 301 *e*P P 17 26 04.7 +0.9
comp=Z,136nm,1.1s
STU *e*PcP **PcP** 17 27 38.4 -0.2
STU *e*PP **PP** 17 27 54.9 +2.3
STU Stuttgart 46.36 301⇑ *i*P P 17 26 04.3 +0.5
STU pmax pmax
comp=Z,120nm,1.0s
STU Stuttgart 46.36 301⇑ *i*P P 17 26 04.3 +0.5
comp=Z,120nm,1.0s
BUG Bochum--Univer 46.52 305 *e*P P 17 26 06.0 +1.0
comp=Z,132nm,1.2s
BUG *e*pP **pP** 17 26 09.2 -1.8
comp=Z,132nm,1.2s
BUG *e*PP **PP** 17 27 57.0 +2.9
DAVA Damuels 46.52 299⇓ *i*P P 17 26 05.7 +0.4
comp=Z,167nm,1.1s,SNR=55
CEL Celeste 46.54 285⇑ *i*P P 17 26 05.5 0.0
comp=Z,435nm,1.1s
CEL LR LR
comp=Z,1µm,20.0s
WTSB Winterswijk 46.60 306 *i* P P 17 26 06.4 +0.8
comp=Z,63nm,0.8s
YUK Yuzh-Kuril'sk 46.66 66 *d i*P P 17 26 02.8 -3.3
YUK *i* 17 27 51.9
YUK *i* PPP PPP 17 28 36.1
YUK *i* S **S** **17 32 54.0 -0.3**
YUK *i* SS **SS** **17 36 15.1 -5.1**
YUK *i* SSS SSS 17 37 12.8
YUK pmax pmax
comp=N,142nm,1.4s
YUK pmax pmax
comp=Z,833nm,1.4s
YUK pmax pmax
comp=E,326nm,1.4s
YUK MLR MLR
comp=E,3µm,20.0s
YUK MLR MLR
comp=Z,3µm,20.0s
DAVOX Davos/Dischmat 46.73 298 P P 17 26 07.3 +0.4
DAVOX Davos/Dischmat 46.73 298 P P 17 26 07.3 +0.4
comp=Z,89nm,0.7s,baz=88,slow=6.1,SNR=117
DAVOX LR LR 17 46 36.1
comp=Z,2µm,18.7s,baz=67,slow=37
KTD Kalmit 46.83 302⇑ *e*P P 17 26 07.9 +0.4
KTD Kalmit 46.83 302⇑ *e*P P 17 26 07.9 +0.4
SPAK Spaichingen-Ko 46.88 300⇑ *e*P P 17 26 08.7 +0.7
TGY Tagaytay City 46.93 117 P P 17 26 09.8 +1.1
TGY Tagaytay City 46.93 117 P P 17 26 09.8 +1.1
comp=Z,112nm,0.3s,baz=170,slow=6.1,SNR=4.0
TGY LR LR 17 45 00.1
comp=Z,4.5nm,18.7s,baz=241,slow=35
ABH Alteburg 46.93 303⇑ *e*P P 17 26 09.2 +0.9
BFO Black Forest 47.07 301 *e*P P 17 26 10.1 +0.7
comp=Z,74nm,1.0s
BFO *e*PcP **PcP** 17 27 40.6 -0.5
BFO *e*PP **PP** 17 28 00.9 +1.0
BFO Black Forest 47.07 301 *e*P P 17 26 10.1 +0.7
BFO *e* 17 27 40.6
BFO *e* 17 28 00.9
BFO pmax pmax
comp=Z,74nm,1.0s
BFO Black Forest 47.07 301⇑ *i*P P 17 26 09.4 +0.1
comp=Z,83nm,1.1s
BFO *e*PP **PP** 17 27 59.0 -0.9
BFO LR LR
comp=Z,1µm,20.0s
LANF Langenberg 47.13 302⇑ *e*P P 17 26 10.2 +0.4
LANF Langenberg 47.13 302⇑ *e*P P 17 26 10.2 +0.4
LANF Langenberg 47.13 302⇑ *e*P P 17 26 10.2 +0.4
TUE Stuetta 47.19 298⇑ *i*P P 17 26 10.3 -0.3
comp=Z,99nm,1.0s
TUE LR LR
comp=Z,2µm,21.0s
RUP Ruppelstein 47.30 303⇑ *e*P P 17 26 12.0 +0.8
RUP Ruppelstein 47.30 303⇑ *e*P P 17 26 12.0 +0.8
DESE Dese 47.42 237 *i* P P 17 26 15.6 +2.8
FELD Feldberg im Sc 47.45 300⇑ *e*P P 17 26 12.6 +0.1
MNSI Mandailing Nat 47.45 151 P P 17 26 11.9 -0.7
comp=Z,88nm,1.1s,comp=Z,3µm
VLC Villacollemand 47.51 295⇑ *i*P P 17 26 13.4 +0.5
comp=Z,260nm,1.0s
VLC *e*PP **PP** 17 28 04.4 +0.3
HGN Heimansgroeve 47.55 305 *i* P P 17 26 13.5 +0.4
comp=Z,96nm,1.4s
HGN *e*PP **PP** 17 28 06.5 +2.2
HGN *e*S **S** 17 33 07.6 +0.6
HGN *e*SS **SS** 17 36 37.8 +3.3
HGN *e*L L 17 44 02.2
comp=Z,1µm,19.5s
MEM Membach 47.57 304 P P 17 26 14.0 +0.8
comp=Z,25nm,1.5s
MEM AP **pP** 17 26 21.5 +2.2
MEM PCP **PcP** 17 27 43.4 +0.6
LIBD Limburg 47.58 301⇑ *e*P P 17 26 13.9 +0.5
LIBD Limburg 47.58 301⇑ *e*P P 17 26 13.9 +0.5
JMIC Jan Mayen 47.66 334 S S 17 33 12.7 +4.6
comp=Z,15nm,0.7s,baz=150,slow=19,SNR=1.8
JMIC LR LR 17 50 09.1
comp=Z,661nm,18.3s,baz=78,slow=41
CDF Champ du Feu 47.68 301⇑ *i*P P 17 26 14.2 0.0
comp=Z,118nm,1.0s
CDF Champ du Feu 47.68 301⇑ *i*P P 17 26 14.2 0.0
CDF pmax pmax
comp=Z,118nm,1.0s
CDF Champ du Feu 47.68 301⇑ *i*P P 17 26 14.2 0.0
comp=Z,118nm,1.0s
BEBN Eben Emael 47.69 305 P P 17 26 14.3 +0.2
comp=Z,23nm,1.6s
KGM Kluang 47.72 146 P P 17 26 14.9 +0.1
JHJ Hachijo jima 2 47.79 82 LR LR 17 47 43.8
comp=Z,980nm,18.3s,baz=254,slow=38
ECH Echery 47.83 301⇑ *i*P P 17 26 15.3 0.0
ECH *e**PP **PP** 17 28 06.6 -0.4
ECH pmax pmax
comp=Z,99nm,1.1s
ECH MLR MLR
comp=Z,1µm,20.0s
ECH Echery 47.83 301⇑ *i*P P 17 26 15.3 0.0
comp=Z,99nm,1.1s
ECH *e*pP **PP** 17 28 06.5 -0.4
ECH LR LR
comp=Z,1µm,20.0s
ECH Echery 47.83 301⇑ *e*P P 17 26 15.7 +0.4
WLF Walferdange 47.85 303 P P 17 26 16.5 +1.1
comp=Z,63nm,1.6s
WLF PCP **PcP** 17 27 44.9 +1.0
WLF Walferdange 47.85 303 *e*P P 17 26 16.6 +1.1
comp=Z,102nm,1.1s
WLF *e*pP **pP** 17 26 20.2 -1.3
comp=Z,102nm,1.1s
WLF *e*PcP **PcP** 17 27 44.4 +0.5
WLF Walferdange 47.85 303⇑ *i*P P 17 26 16.0 +0.6
WLF *e* 17 28 06.6
WLF pmax pmax
comp=Z,92nm,1.1s
WLF Walferdange 47.85 303⇑ *i*P P 17 26 16.0 +0.6
comp=Z,92nm,1.1s
WLF *e*PP **PP** 17 28 06.6 -0.5
BBS Basel-Blauen 47.92 300⇑ *e*P P 17 26 16.1 0.0
BBS Basel-Blauen 47.92 300⇑ *e*P P 17 26 16.1 0.0
MOF Molkenrain 47.99 301⇑ *e*P P 17 26 16.9 +0.2
MOF Molkenrain 47.99 301⇑ *e*P P 17 26 16.9 +0.2
MOF Molkenrain 47.99 301⇑ *e*P P 17 26 16.9 +0.2
LRW Lerwick 48.00 318⇑ *e*P P 17 26 16.5 +0.1
LRW AMB AMB 17 26 24.3
comp=Z,68nm,2.1s
LRW AMS AMS 17 47 14.8
comp=Z,6µm,12.9s
LRW Lerwick 48.00 318 P P 17 26 16.5 +0.1
LRW AMB AMB 17 26 24.3
comp=Z,68nm,2.1s
LRW AMS AMS 17 47 14.8
comp=Z,6µm,12.9s
BCLA Clavier 48.05 304 P P 17 26 17.7 +0.7
comp=Z,50nm,1.7s
BCLA PCP **PcP** 17 27 46.0 +1.5
MYKOM Kota Tinggi 48.14 145 P P 17 26 18.4 +0.4
MYKOM Kota Tinggi 48.14 145 P P 17 26 17.8 -0.1
comp=Z,42nm,1.6s,comp=Z,1µm
HINF Hinteralfeld 48.18 301⇑ *i*P P 17 26 18.2 +0.1
comp=Z,195nm,1.2s
HINF Hinteralfeld 48.18 301⇑ *i*P P 17 26 18.2 +0.1
HINF pmax pmax
comp=Z,195nm,1.2s
HINF Hinteralfeld 48.18 301⇑ *i*P P 17 26 18.2 +0.1
comp=Z,195nm,1.2s
LOMF Lomont 48.39 300⇑ *e*P P 17 26 20.0 +0.3
LOMF Lomont 48.39 300⇑ *e*P P 17 26 20.0 +0.3
LOMF Lomont 48.39 300⇑ *e*P P 17 26 20.0 +0.3
HAU Haudompre 48.41 301⇑ *i*P P 17 26 19.9 +0.1
comp=Z,191nm,1.0s
HAU *e*R
comp=Z,1µm,18.2s
HAU Haudompre 48.41 301⇑ *i*P P 17 26 19.9 +0.1
HAU pmax pmax
comp=Z,191nm,1.0s
HAU Haudompre 48.41 301⇑ *i*P P 17 26 19.9 +0.1
comp=Z,191nm,1.0s
UCC Uccle 48.46 305 P P 17 26 20.6 +0.6
GIVF Givet 48.46 304⇑ *i*P P 17 26 20.7 +0.5
comp=Z,193nm,1.1s
GIVF Givet 48.46 304⇑ *i*P P 17 26 20.7 +0.5
GIVF pmax pmax
comp=Z,193nm,1.1s
GIVF Givet 48.46 304⇑ *i*P P 17 26 20.7 +0.5
comp=Z,193nm,1.1s
BTDF Bukit Timah Da 48.50 146 P P 17 26 20.9 +0.2
comp=Z,29nm,1.6s,comp=Z,578nm
THEF They Montfort 48.54 302⇑ *e*P P 17 26 21.3 +0.5
THEF They Montfort 48.54 302⇑ *e*P P 17 26 21.3 +0.5
THEF They Montfort 48.54 302⇑ *e*P P 17 26 21.3 +0.5
PAGF Fort de Pagny 48.56 302⇑ *i*P P 17 26 21.4 +0.5
comp=Z,53nm,1.4s
PAGF Fort de Pagny 48.56 302⇑ *i*P P 17 26 21.4 +0.5
comp=Z,53nm,1.4s
BILL Bilibino 48.56 30⇑ *i*P P 17 26 21.6 +0.9
BILL *i* 17 27 46.9
BILL *i* 17 28 13.9
BILL *i* S **S** **17 33 23.7 +2.8**
BILL pmax pmax
comp=Z,308nm,1.3s
BILL MLR MLR
comp=Z,600nm,16.0s
DOU Dourbes 48.60 304 P P 17 26 21.9 +0.8
comp=Z,36nm,1.6s
DOU PCP **PcP** 17 27 47.1 +0.5
DAG Danmarks Havn 48.61 342⇑ *i*P P 17 26 21.3 +0.4
DAG *i* 17 27 45.3
DAG *e* 17 28 16.4
DAG pmax pmax
comp=Z,29nm,0.9s
DAG Danmarks Havn 48.61 342⇑ *i*P P 17 26 21.3 +0.4
comp=Z,35nm,0.9s
DAG *i* 17 27 45.3
DAG *e* 17 28 16.4
WDD Wield Dalam 48.69 283 *e*P P 17 26 21.4 -0.7
comp=Z,326nm,1.5s
WDD LR LR
comp=Z,526nm,19.0s
BAIF Baives 48.84 304⇑ *i*P P 17 26 23.7 +0.6
comp=Z,181nm,1.2s
BAIF Baives 48.84 304⇑ *i*P P 17 26 23.7 +0.6
BAIF pmax pmax
comp=Z,181nm,1.2s
BAIF Baives 48.84 304⇑ *i*P P 17 26 23.7 +0.6
comp=Z,181nm,1.2s
PPI Padang Panjang 48.90 151 P P 17 26 23.2 -0.6
comp=Z,41nm,1.5s
OG01 Vacheresse 48.92 299⇑ *e*P P 17 26 23.9 +0.1
OG01 Vacheresse 48.92 299⇑ *e*P P 17 26 23.9 +0.1
MEZF Maizieres J'vi 48.99 302⇑ *i*P P 17 26 24.9 +0.7
comp=Z,551nm,1.3s
MEZF Maizieres J'vi 48.99 302⇑ *i*P P 17 26 24.9 +0.7
comp=Z,551nm,1.3s
SFTF Sexfontaines 49.12 302⇑ *i*P P 17 26 25.6 +0.4
comp=Z,414nm,1.2s
SFTF Sexfontaines 49.12 302⇑ *i*P P 17 26 25.6 +0.4
comp=Z,414nm,1.2s
PGF Pioggiola 49.14 293⇑ *i*P P 17 26 25.6 0.0
comp=Z,510nm,1.6s
PGF Pioggiola 49.14 293⇑ *i*P P 17 26 25.6 0.0
PGF pmax pmax
comp=Z,510nm,1.6s
PGF Pioggiola 49.14 293⇑ *i*P P 17 26 25.6 0.0
comp=Z,510nm,1.6s
CABF La Chapelle 49.16 300⇑ *i*P P 17 26 25.6 -0.1
comp=Z,219nm,1.1s
CABF La Chapelle 49.16 300⇑ *i*P P 17 26 25.6 -0.1
CABF pmax pmax
comp=Z,219nm,1.1s
CABF La Chapelle 49.16 300⇑ *i*P P 17 26 25.6 -0.1
comp=Z,219nm,1.1s
RSL Roselend 49.24 298⇑ *e*P P 17 26 26.6 +0.3
RSL Roselend 49.24 298⇑ *e*P P 17 26 26.6 +0.3
RSL Roselend 49.24 298⇑ *e*P P 17 26 26.6 +0.3
LPG La Plagne 49.24 298⇑ *i*P P 17 26 27.1 +0.6
comp=Z,380nm,0.9s
LPG La Plagne 49.24 298⇑ *i*P P 17 26 27.1 +0.6
LPG pmax pmax
comp=Z,380nm,0.9s
LPG La Plagne 49.24 298⇑ *i*P P 17 26 27.1 +0.6
comp=Z,380nm,0.9s
LPL La Plagne 49.24 298⇑ *i*P P 17 26 27.0 +0.5
comp=Z,506nm,0.9s
LPL La Plagne 49.24 298⇑ *i*P P 17 26 27.0 +0.5
LPL pmax pmax
comp=Z,506nm,0.9s
LPL La Plagne 49.24 298⇑ *i*P P 17 26 27.0 +0.5
comp=Z,506nm,0.9s
SAOF Saorge 49.41 296⇑ *e*P P 17 26 28.0 +0.4
SAOF Saorge 49.41 296⇑ *e*P P 17 26 28.0 +0.4
SAOF Saorge 49.41 296⇑ *e*P P 17 26 28.0 +0.4
BNI Bardonecchia 49.49 297⇑ *i*P P 17 26 28.3 +0.1
BNI pmax pmax
comp=Z,183nm,0.9s
BNI MLR MLR
comp=Z,2µm,20.0s
BNI Bardonecchia 49.49 297⇑ *i*P P 17 26 28.3 +0.1
comp=Z,183nm,0.9s
BNI LR LR
comp=Z,2µm,20.0s
AUTN L'Aution 49.49 296⇑ *e*P P 17 26 28.8 +0.4
AUTN L'Aution 49.49 296⇑ *e*P P 17 26 28.8 +0.4
AUTN L'Aution 49.49 296⇑ *e*P P 17 26 28.8 +0.4
SBF Sospel 49.55 296⇑ *i*P P 17 26 28.8 +0.2
comp=Z,643nm,1.3s
SBF Sospel 49.55 296⇑ *i*P P 17 26 28.8 +0.2
SBF pmax pmax
comp=Z,643nm,1.3s
SBF Sospel 49.55 296⇑ *i*P P 17 26 28.8 +0.2
comp=Z,643nm,1.3s
MBDF Montbardon 49.58 297⇑ *i*P P 17 26 28.6 -0.3
comp=Z,245nm,1.0s
MBDF Montbardon 49.58 297⇑ *i*P P 17 26 28.6 -0.3
MBDF pmax pmax
comp=Z,245nm,1.0s
MBDF Montbardon 49.58 297⇑ *i*P P 17 26 28.6 -0.3
comp=Z,245nm,1.0s
TOUF Mont Tournerai 49.60 296⇑ *e*P P 17 26 29.3 +0.1
TOUF Mont Tournerai 49.60 296⇑ *e*P P 17 26 29.3 +0.1
TOUF Mont Tournerai 49.60 296⇑ *e*P P 17 26 29.3 +0.1
REVF Revere 49.65 296⇑ *e*P P 17 26 29.6 +0.2
REVF Revere 49.65 296⇑ *e*P P 17 26 29.6 +0.2
REVF Revere 49.65 296⇑ *e*P P 17 26 29.6 +0.2
SURF Saint Ours 49.66 297⇑ *e*P P 17 26 29.2 -0.4
SURF Saint Ours 49.66 297⇑ *e*P P 17 26 29.2 -0.4
MVIF Mont Vial 49.71 296⇑ *e*P P 17 26 30.1 +0.1
MVIF Mont Vial 49.71 296⇑ *e*P P 17 26 30.1 +0.1
MVIF Mont Vial 49.71 296⇑ *e*P P 17 26 30.1 +0.1
OG35 Corcelles 49.74 299⇑ *e*P P 17 26 30.1 +0.1
FURI Furi 49.75 237 *i* P P 17 26 32.8 +2.0
GDM Grand'Maison 49.77 298⇑ *e*P P 17 26 30.7 +0.2
GDM Grand'Maison 49.77 298⇑ *e*P P 17 26 30.7 +0.2
DRUM Mains of Drumt 49.80 315⇑ *e*P P 17 26 29.9 -0.4
DRUM AMB AMB 17 26 33.0
comp=Z,83nm,3.3s
DRUM Mains of Drumt 49.80 315 P P 17 26 29.9 -0.4
DRUM AMB AMB 17 26 33.0
comp=Z,83nm,3.3s
MENF Mencas 49.84 306 *e*P P 17 26 28.8 -1.8
MENF Mencas 49.84 306 *e*P P 17 26 28.8 -1.8
MCD Coleburn Disti 49.92 316⇑ *e*P P 17 26 31.1 0.0
MCD Coleburn Disti 49.92 316 P P 17 26 31.1 0.0
CALN Calern 49.95 296⇑ *e*P P 17 26 32.0 +0.2
CALN Calern 49.95 296⇑ *e*P P 17 26 32.0 +0.2
CALN Calern 49.95 296⇑ *e*P P 17 26 32.0 +0.2
GRN Grenoble 49.99 298⇑ *e*P P 17 26 32.5 +0.5
GRN Grenoble 49.99 298⇑ *e*P P 17 26 32.5 +0.5
GRN Grenoble 49.99 298⇑ *e*P P 17 26 32.5 +0.5
PEA0B Petropavlovsk- 50.02 51 *e*P P 17 26 31.7 -0.4
PETK Petropavlovsk- 50.02 51 P P 17 26 31.8 -0.2
PETK S **S** **17 33 44.0 +2.3**
PETK pmax pmax
comp=Z,26nm,0.8s
PETK smax smax
comp=N,2.0nm,0.9s
PETK MLR MLR
comp=Z,2µm,21.8s
PETK Petropavlovsk- 50.02 51 P P 17 26 31.8 -0.2
PETK S **S** **17 33 44.0 +2.3**
PETK Petropavlovsk- 50.02 51 P P 17 26 31.8 -0.2
comp=Z,26nm,0.8s,baz=289,slow=4.4,SNR=34
PETK S **S** **17 33 44.0 +2.3**
comp=Z,1.6nm,0.9s,baz=325,slow=24,SNR=2.5
PETK LR LR 17 48 45.9
comp=Z,2µm,21.8s,baz=293,slow=37
ORIF Oris-en-Rattie 50.05 298⇑ *i*P P 17 26 32.2 -0.3
comp=Z,148nm,0.8s
ORIF *e*R
comp=Z,4µm,21.2s
ORIF Oris-en-Rattie 50.05 298⇑ *i*P P 17 26 32.2 -0.3
ORIF pmax pmax
comp=Z,148nm,0.8s
ORIF Oris-en-Rattie 50.05 298⇑ *i*P P 17 26 32.2 -0.3
comp=Z,148nm,0.8s
SKR Severo-Kuril's 50.14 54 P P 17 26 31.0 -1.9
SKR *e* 17 26 40.6
SKR *e* 17 28 23.0
SKR S **S** **17 33 40.0 -3.4**
SKR *e* 17 36 16.0
SKR pmax pmax
comp=Z,80nm,1.0s
SKR smax smax
comp=N,700nm,10.0s
SKR smax smax
comp=E,800nm,10.0s
SKR MLR MLR
comp=N,2µm,14.0s
SKR MLR MLR
comp=E,2µm,14.0s
SKR MLR MLR
comp=Z,4µm,14.0s
ELSH Elham, Standar 50.17 307⇑ *e*P P 17 26 33.7 +0.6
ELSH AMB AMB 17 26 34.5
comp=Z,225nm,0.7s
ELSH AMS AMS 17 49 01.7
comp=Z,2µm,20.8s
ELSH Elham, Standar 50.17 307 P P 17 26 33.7 +0.6
ELSH AMB AMB 17 26 34.5
comp=Z,225nm,0.7s
ELSH AMS AMS 17 49 01.7
comp=Z,2µm,20.8s
OG25 Le Caire 50.18 297⇑ *e*P P 17 26 32.8 -0.7
OG25 Le Caire 50.18 297⇑ *e*P P 17 26 32.8 -0.7
FRF La Foret Royal 50.19 296⇑ *i*P P 17 26 33.4 -0.1
comp=Z,368nm,1.1s
FRF La Foret Royal 50.19 296⇑ *i*P P 17 26 33.4 -0.1
FRF pmax pmax
comp=Z,368nm,1.1s
FRF La Foret Royal 50.19 296⇑ *i*P P 17 26 33.4 -0.1
comp=Z,368nm,1.1s
LOR Lormes 50.25 301⇑ *i*P P 17 26 33.2 -0.6
comp=Z,95nm,1.0s
LOR *e*R
comp=Z,1µm,18.5s
LOR Lormes 50.25 301⇑ *i*P P 17 26 33.2 -0.6
comp=Z,95nm,1.0s
MVH1 Achvaich 50.25 316⇑ *e*P P 17 26 33.6 -0.1
MVH1 Achvaich 50.25 316 P P 17 26 33.6 -0.1
ESY Stoneypath 50.25 314⇑ *e*P P 17 26 33.6 -0.1
ESY Stoneypath 50.25 314 P P 17 26 33.6 -0.1
VSL Villasalto 50.36 290 PFAKE 17 26 40.0 +5.2
VSL LR LR
comp=Z,750nm,19.0s
LMR La Mourre 50.39 296⇑ *i*P P 17 26 34.9 0.0
comp=Z,291nm,1.3s
LMR La Mourre 50.39 296⇑ *i*P P 17 26 34.9 0.0
LMR pmax pmax
comp=Z,291nm,1.3s
LMR La Mourre 50.39 296⇑ *i*P P 17 26 34.9 0.0
comp=Z,291nm,1.3s
KKM Kota Kinabalu 50.46 128 *e*P P 17 26 35.8 -0.1
comp=Z,88nm,1.3s
KKM LR LR
comp=Z,1µm,20.0s
KKM Kota Kinabalu 50.46 128 P P 17 26 36.6 +0.7
KKM Kota Kinabalu 50.46 128 P P 17 26 36.3 +0.4
comp=Z,56nm,1.3s,comp=Z,801nm
MDO Dochfour 50.53 316⇑ *e*P P 17 26 35.6 -0.2
MDO Dochfour 50.53 316 P P 17 26 35.6 -0.2
HPK Haverah Park 50.53 311⇑ *e*P P 17 26 36.0 +0.1
HPK AMB AMB 17 26 41.5
comp=Z,83nm,1.1s
HPK AMS AMS 17 47 04.0
comp=Z,3µm,15.9s
HPK Haverah Park 50.53 311 P P 17 26 36.0 +0.1
HPK AMB AMB 17 26 41.5
comp=Z,83nm,1.1s
HPK AMS AMS 17 47 04.0
comp=Z,3µm,15.9s
EBL Broad Law 50.53 314⇑ *e*P P 17 26 35.8 -0.1
EBL Broad Law 50.53 314 P P 17 26 35.8 -0.1
SMF Signal de Mont 50.54 300⇑ *i*P P 17 26 35.8 -0.2
comp=Z,238nm,1.2s
SMF Signal de Mont 50.54 300⇑ *i*P P 17 26 35.8 -0.2
SMF pmax pmax
comp=Z,238nm,1.2s
SMF Signal de Mont 50.54 300⇑ *i*P P 17 26 35.8 -0.2
comp=Z,238nm,1.2s
SSF Saint Saulge 50.55 301⇑ *i*P P 17 26 35.7 -0.4
comp=Z,131nm,1.2s
SSF Saint Saulge 50.55 301⇑ *i*P P 17 26 35.7 -0.4
SSF pmax pmax
comp=Z,131nm,1.2s

SSF	**Saint Saulge**	**50.55 301**	⇑	*i*	P	**17 26 35.7**	**-0.4**
	comp=Z,1311nm,1.2s						
OCF	**Saint Nazaire**	**50.58 297**	⇑	*e*	P	**17 26 36.9**	**+0.5**
OG26	**St.-Nazaire-De**	**50.58 297**	⇑	*e*	P	**17 26 36.9**	**+0.5**
PET	**Petropavlovsk**	**50.58 50**		*e*	P	**17 26 34.5**	**-1.7**
PET				*e*		17 28 33.3	
PET				*e*	S	**17 33 45.2**	**-4.2**
PET				pmax	pmax		
	comp=Z,500nm,6.7s						
PET				pmax	pmax		
	comp=Z,200nm,12.0s						
PET				pmax	pmax		
	comp=Z,300nm,10.0s						
PET				pmax	pmax		
	comp=Z,200nm,14.6s						
PET				MLR	MLR		
	comp=Z,4μm,13.0s						
PET				MLR	MLR		
	comp=Z,4μm,14.0s						
ELO	**Logie Almond**	**50.59 315**	⇑	*e*	P	**17 26 36.1**	**-0.2**
ELO	**Logie Almond**	**50.59 315**		P	P	**17 26 36.1**	**-0.2**
SMRF	**Simiane la Rot**	**50.68 297**	⇑	*i*	P	**17 26 37.4**	**+0.2**
	comp=Z,208nm,1.1s						
SMRF	**Simiane la Rot**	**50.68 297**	⇑	*i*	P	**17 26 37.4**	**+0.2**
	comp=Z,208nm,1.1s						
EAU	**Auchinoon**	**50.71 314**	⇑	*e*	P	**17 26 37.3**	**+0.1**
EAU	**Auchinoon**	**50.71 314**		P	P	**17 26 37.3**	**+0.1**
SSB	**Saint Sauveur**	**50.73 299**		*e*	P	**17 26 37.6**	**+0.1**
SSB				pmax	pmax		
	comp=Z,93nm,1.1s						
SSB				MLR	MLR		
	comp=Z,1μm,20.0s						
SSB	**Saint Sauveur**	**50.73 299**		*e*	P	**17 26 37.6**	**+0.1**
	comp=Z,92nm,1.1s						
SSB				LR	LR		
	comp=Z,1μm,20.0s						
SSB	**Saint Sauveur**	**50.73 299**	⇑	*e*	P	**17 26 38.2**	**+0.7**
HMNX	**Herstmonceux**	**50.75 307**	⇑	*e*	P	**17 26 37.9**	**+0.4**
HMNX	**Herstmonceux**	**50.75 307**		P	P	**17 26 37.9**	**+0.4**
AVF	**Avril sur Loir**	**50.77 301**	⇑	*i*	P	**17 26 37.6**	**-0.2**
	comp=Z,403nm,1.2s						
AVF	**Avril sur Loir**	**50.77 301**	⇑	*i*	P	**17 26 37.6**	**-0.2**
AVF				pmax	pmax		
	comp=Z,403nm,1.2s						
AVF	**Avril sur Loir**	**50.77 301**	⇑	*i*	P	**17 26 37.6**	**-0.2**
	comp=Z,403nm,1.2s						
KBI1	**Birley Grange**	**50.77 310**	⇑	*e*	P	**17 26 37.6**	**-0.1**
KBI1	**Birley Grange**	**50.77 310**		P	P	**17 26 37.6**	**-0.1**
EKA	**Eskdalemuir Ar**	**50.77 313**		P	P	**17 26 37.8**	**+0.2**
EKA				PcP	PcP	**17 27 54.7**	**+0.3**
EKA				S	S	**17 33 53.5**	**+1.4**
EKA	**Eskdalemuir Ar**	**50.77 313**		P	P	**17 26 37.8**	**+0.2**
	comp=Z,16nm,0.8s,baz=67,slow=6.8,SNR=42						
EKA				PcP	PcP	**17 27 54.7**	**+0.3**
	comp=Z,26nm,1.0s,baz=74,slow=4.4,SNR=8.1						
EKA				S	S	**17 33 53.5**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=74,slow=7.5,SNR=2.2						
ESK	**Eskdalemuir**	**50.80 313**		P	P	**17 26 37.1**	**-0.8**
	comp=Z,152nm,1.2s,SNR=7.6						
ESK	**Eskdalemuir**	**50.80 313**	⇑	*e*	P	**17 26 37.8**	**-0.1**
ESK				AMS	AMS	17 49 37.7	
	comp=Z,4μm,13.6s						
ESK	**Eskdalemuir**	**50.80 313**		P	P	**17 26 37.8**	**-0.1**
ESK				AMS	AMS	17 49 37.7	
	comp=Z,4μm,13.6s						
ESK	**Eskdalemuir**	**50.80 313**		*e*	P	**17 26 37.3**	**-0.6**
ESK				pmax	pmax		
	comp=Z,101nm,1.6s						
ESK				MLR	MLR		
	comp=Z,3μm,19.0s						
ESK	**Eskdalemuir**	**50.80 313**		*e*	P	**17 26 37.3**	**-0.6**
	comp=Z,101nm,1.6s						
ESK				LR	LR		
	comp=Z,3μm,19.0s						
ECK	**Cauldkaine Hil**	**50.82 313**	⇑	*e*	P	**17 26 37.8**	**-0.2**
ECK	**Cauldkaine Hil**	**50.82 313**		P	P	**17 26 37.8**	**-0.2**
VIVF	**Saint-Julien-l**	**50.84 298**	⇑	*i*	P	**17 26 38.4**	**0.0**
	comp=Z,176nm,1.0s						
VIVF	**Saint-Julien-l**	**50.84 298**	⇑	*i*	P	**17 26 38.4**	**0.0**
VIVF				pmax	pmax		
	comp=Z,176nm,1.0s						
VIVF	**Saint-Julien-l**	**50.84 298**	⇑	*i*	P	**17 26 38.4**	**0.0**
	comp=Z,176nm,1.0s						
KAC	**Achnashellach**	**50.97 316**	⇑	*e*	P	**17 26 38.9**	**-0.2**
KAC	**Achnashellach**	**50.97 316**		P	P	**17 26 38.9**	**-0.2**
HYF	**Humbligny**	**50.99 302**	⇑	*i*	P	**17 26 39.5**	**+0.1**
HYF	**Humbligny**	**50.99 302**	⇑	*i*	P	**17 26 39.5**	**+0.1**
SKP1	**Kophill**	**51.03 308**	⇑	*e*	P	**17 26 39.9**	**+0.3**
SKP1	**Kophill**	**51.03 308**		P	P	**17 26 39.9**	**+0.3**
KESW	**Keswick, Cumbr**	**51.06 312**	⇑	*e*	P	**17 26 39.7**	**-0.1**
KESW				AMB	AMB	17 26 40.6	
	comp=Z,58nm,1.5s						
KESW				AMS	AMS	17 50 04.1	
	comp=Z,4μm,13.7s						
KESW	**Keswick, Cumbr**	**51.06 312**		P	P	**17 26 39.7**	**-0.1**
KESW				AMB	AMB	17 26 40.6	
	comp=Z,58nm,1.5s						
KESW				AMS	AMS	17 50 04.1	
	comp=Z,4μm,13.7s						
COLF	**Collangettes**	**51.15 299**	⇑	*e*	P	**17 26 40.9**	**+0.2**
COLF	**Collangettes**	**51.15 299**	⇑	*e*	P	**17 26 40.9**	**+0.2**
KSB	**Sheil Bridge**	**51.15 316**	⇑	*e*	P	**17 26 40.1**	**-0.4**
KSB	**Sheil Bridge**	**51.15 316**		P	P	**17 26 40.1**	**-0.4**
BTM	**Bintulu**	**51.16 134**		P	P	**17 26 42.2**	**+1.1**
BGF	**Bois d'Agland**	**51.19 301**	⇑	*i*	P	**17 26 40.8**	**-0.1**
	comp=Z,250nm,1.0s						
BGF	**Bois d'Agland**	**51.19 301**	⇑	*i*	P	**17 26 40.8**	**-0.1**
BGF				pmax	pmax		
	comp=Z,250nm,1.0s						
BGF	**Bois d'Agland**	**51.19 301**	⇑	*i*	P	**17 26 40.8**	**-0.1**
	comp=Z,250nm,1.0s						
WNDE	**Wendo Genet**	**51.21 235**		*i*	P	**17 26 43.5**	**+1.9**
KPL	**Plockton**	**51.21 316**	⇑	*e*	P	**17 26 40.8**	**-0.1**
KPL				AMS	AMS	17 49 13.8	
	comp=Z,7μm,13.9s						
KPL	**Plockton**	**51.21 316**		P	P	**17 26 40.8**	**-0.1**
KPL				AMS	AMS	17 49 13.8	
	comp=Z,7μm,13.9s						
AGO	**Saint Agoulin**	**51.25 300**	⇑	*e*	P	**17 26 41.6**	**+0.2**
AGO	**Saint Agoulin**	**51.25 300**	⇑	*e*	P	**17 26 41.6**	**+0.2**
PGBU	**Glenifferbraes**	**51.26 314**	⇑	*e*	P	**17 26 41.5**	**+0.2**
PGBU				AMS	AMS	17 48 14.4	
	comp=Z,2μm,20.3s						
PGBU	**Glenifferbraes**	**51.26 314**		P	P	**17 26 41.5**	**+0.2**
PGBU				AMS	AMS	17 48 14.4	
	comp=Z,2μm,20.3s						
KSM	**Kuching**	**51.27 138**		*e*	P	**17 26 41.9**	**0.0**
	comp=Z,17nm,0.9s						
KSM				LR	LR		
	comp=Z,1μm,21.0s						
KSM	**Kuching**	**51.27 138**		P	P	**17 26 42.7**	**+0.8**
KSM	**Kuching**	**51.27 138**		P	P	**17 26 42.3**	**+0.4**
	comp=Z,34nm,2.0s,comp=Z,734nm						
SDKM	**Sandakan**	**51.34 128**		P	P	**17 26 42.6**	**+0.1**
SBUM	**Sibu**	**51.36 135**		P	P	**17 26 44.0**	**+1.5**
SBUM	**Sibu**	**51.36 135**		P	P	**17 26 43.2**	**+0.7**
	comp=Z,67nm,1.5s,comp=Z,970nm						
WOL	**Wolverton**	**51.44 308**	⇑	*e*	P	**17 26 42.9**	**+0.2**
WOL				AMB	AMB	17 26 47.4	
	comp=Z,212nm,1.8s						
WOL				AMS	AMS	17 50 11.5	
	comp=Z,2μm,10.9s						
WOL	**Wolverton**	**51.44 308**		P	P	**17 26 42.9**	**+0.2**
WOL				AMB	AMB	17 26 47.4	
	comp=Z,212nm,1.8s						
WOL				AMS	AMS	17 50 11.5	
	comp=Z,2μm,10.9s						
PYM	**Petit Puy Mans**	**51.46 300**	⇑	*e*	P	**17 26 43.2**	**+0.1**
PYM	**Petit Puy Mans**	**51.46 300**	⇑	*e*	P	**17 26 43.2**	**+0.1**
PYM	**Petit Puy Mans**	**51.46 300**	⇑	*e*	P	**17 26 43.2**	**+0.1**
SSW	**Stow on the Wo**	**51.50 309**	⇑	*e*	P	**17 26 43.5**	**+0.3**
SSW	**Stow on the Wo**	**51.50 309**		P	P	**17 26 43.5**	**+0.3**
LBL	**Lubilhac**	**51.56 299**		*e*	P	**17 26 44.2**	**+0.4**
LBL	**Lubilhac**	**51.56 299**		*e*	P	**17 26 44.2**	**+0.4**
LBL	**Lubilhac**	**51.56 299**		*e*	P	**17 26 44.2**	**+0.4**
TCF	**Toulx Ste Croi**	**51.70 301**	⇑	*i*	P	**17 26 44.9**	**+0.1**
	comp=Z,273nm,1.1s						
TCF	**Toulx Ste Croi**	**51.70 301**	⇑	*i*	P	**17 26 44.9**	**+0.1**
TCF				pmax	pmax		
	comp=Z,273nm,1.1s						
TCF	**Toulx Ste Croi**	**51.70 301**	⇑	*i*	P	**17 26 44.9**	**+0.1**
	comp=Z,273nm,1.1s						
LASF	**Ste Croix**	**51.73 298**	⇑	*i*	P	**17 26 45.5**	**+0.5**
	comp=Z,447nm,1.2s						
LASF	**Ste Croix**	**51.73 298**	⇑	*i*	P	**17 26 45.5**	**+0.5**
	comp=Z,447nm,1.2s						
GAL1	**Galloway**	**51.78 313**	⇑	*e*	P	**17 26 45.2**	**0.0**
GAL1				AMB	AMB	17 26 50.5	
	comp=Z,60nm,1.4s						
GAL1				AMS	AMS	17 50 00.1	
	comp=Z,3μm,12.5s						
GAL1	**Galloway**	**51.78 313**		P	P	**17 26 45.2**	**0.0**
GAL1				AMB	AMB	17 26 50.5	
	comp=Z,60nm,1.4s						
GAL1				AMS	AMS	17 50 00.1	
	comp=Z,3μm,12.5s						
HLM1	**Long Mynd**	**51.83 310**	⇑	*e*	P	**17 26 45.6**	**-0.1**
HLM1				AMB	AMB	17 26 50.4	
	comp=Z,76nm,1.9s						
HLM1	**Long Mynd**	**51.83 310**		P	P	**17 26 45.6**	**-0.1**
HLM1				AMB	AMB	17 26 50.4	
	comp=Z,76nm,1.9s						
FOEL	**Foel Wylfa**	**51.84 310**	⇑	*e*	P	**17 26 45.9**	**+0.2**
FOEL				AMB	AMB	17 26 51.5	
	comp=Z,68nm,1.9s						
FOEL				AMS	AMS	17 50 16.9	
	comp=Z,3μm,15.8s						
FOEL	**Foel Wylfa**	**51.84 310**		P	P	**17 26 45.9**	**+0.2**
FOEL				AMB	AMB	17 26 51.5	
	comp=Z,68nm,1.9s						
FOEL				AMS	AMS	17 50 16.9	
	comp=Z,3μm,15.8s						
FRNF	**Fournols**	**51.91 300**	⇑	*e*	P	**17 26 47.1**	**+0.7**
FRNF	**Fournols**	**51.91 300**	⇑	*e*	P	**17 26 47.1**	**+0.7**
SCO	**Scoresbysund**	**51.99 335**		*i*	P	**17 26 47.9**	**+1.3**
SCO	**Scoresbysund**	**51.99 335**		*i*	P	**17 26 47.9**	**+1.3**
	comp=Z,6.7nm,1.0s						
LDF	**La Druitiere**	**52.03 304**	⇑	*i*	P	**17 26 46.9**	**-0.3**
	comp=Z,235nm,1.2s						
LDF	**La Druitiere**	**52.03 304**	⇑	*i*	P	**17 26 46.9**	**-0.3**
LDF				pmax	pmax		
	comp=Z,235nm,1.2s						
LDF	**La Druitiere**	**52.03 304**	⇑	*i*	P	**17 26 46.9**	**-0.3**
	comp=Z,235nm,1.2s						
WPM1	**Penmaenmawr**	**52.06 311**	⇑	*e*	P	**17 26 47.2**	**-0.1**
WPM1	**Penmaenmawr**	**52.06 311**		P	P	**17 26 47.2**	**-0.1**
MCH1	**Michaelchurch**	**52.13 309**	⇑	*e*	P	**17 26 47.9**	**0.0**
MCH1				AMB	AMB	17 26 53.0	
	comp=Z,99nm,2.3s						
MCH1				AMS	AMS	17 50 53.7	
	comp=Z,3μm,12.6s						
MCH1	**Michaelchurch**	**52.13 309**		P	P	**17 26 47.9**	**0.0**
MCH1				AMB	AMB	17 26 53.0	
	comp=Z,99nm,2.3s						
MCH1				AMS	AMS	17 50 53.7	
	comp=Z,3μm,12.6s						
FLN	**La Foliniere**	**52.17 305**	⇑	*i*	P	**17 26 47.7**	**-0.5**
	comp=Z,159nm,1.1s						
FLN				*e*	R		
	comp=Z,3μm,22.0s						
FLN	**La Foliniere**	**52.17 305**	⇑	*i*	P	**17 26 47.7**	**-0.5**
FLN				pmax	pmax		
	comp=Z,159nm,1.1s						
FLN	**La Foliniere**	**52.17 305**	⇑	*i*	P	**17 26 47.7**	**-0.5**
	comp=Z,159nm,1.1s						
WME	**Mynd Eilian**	**52.21 311**	⇑	*e*	P	**17 26 48.4**	**-0.1**
WME	**Mynd Eilian**	**52.21 311**		P	P	**17 26 48.4**	**-0.1**
DGAR	**Diego Garcia**	**52.22 188**		PFAKE		17 27 00.0	+11
DGAR				LR	LR		
	comp=Z,2μm,20.0s						
WLF1	**Llynfaes**	**52.31 311**		AMS	AMS	17 51 39.9	
	comp=Z,2μm,11.2s						
KEST	**Kesra**	**52.33 286**		P	P	**17 26 49.9**	**+0.2**
KEST				PcP	PcP	**17 28 00.7**	**0.0**
KEST	**Kesra**	**52.33 286**		P	P	**17 26 49.9**	**+0.2**
	comp=Z,11nm,1.1s,baz=22,slow=6.7,SNR=19						
KEST				PcP	PcP	**17 28 00.7**	**0.0**
	comp=Z,10nm,0.9s,baz=219,slow=3.6,SNR=4.7						
KEST				LR	LR	17 51 05.8	
	comp=Z,350nm,20.3s,baz=174,slow=38						
YRC	**Rhoscolyn**	**52.42 311**	⇑	*e*	P	**17 26 49.9**	**-0.1**
YRC	**Rhoscolyn**	**52.42 311**		P	P	**17 26 49.9**	**-0.1**
CAF	**Calviac**	**52.44 299**	⇑	*i*	P	**17 26 50.8**	**+0.5**
	comp=Z,173nm,1.3s						
CAF	**Calviac**	**52.44 299**	⇑	*i*	P	**17 26 50.8**	**+0.5**
CAF				pmax	pmax		
	comp=Z,173nm,1.3s						
CAF	**Calviac**	**52.44 299**	⇑	*i*	P	**17 26 50.8**	**+0.5**
	comp=Z,173nm,1.3s						
MYLDM	**Lahad Datu**	**52.46 127**		P	P	**17 26 52.8**	**+2.1**
MYLDM	**Lahad Datu**	**52.46 127**		P	P	**17 26 52.6**	**+1.9**
	comp=Z,81nm,1.9s,comp=Z,1μm						
YRE	**Yr Eifl**	**52.46 311**	⇑	*e*	P	**17 26 50.3**	**0.0**
YRE	**Yr Eifl**	**52.46 311**		P	P	**17 26 50.3**	**0.0**
GRR	**Gorron**	**52.56 304**	⇑	*i*	P	**17 26 50.7**	**-0.4**
	comp=Z,148nm,0.9s						
GRR	**Gorron**	**52.56 304**	⇑	*i*	P	**17 26 50.7**	**-0.4**
GRR				pmax	pmax		
	comp=Z,148nm,0.9s						
GRR	**Gorron**	**52.56 304**	⇑	*i*	P	**17 26 50.7**	**-0.4**
	comp=Z,148nm,0.9s						
RJF	**Les Rejaudoux**	**52.60 300**	⇑	*i*	P	**17 26 52.0**	**+0.5**
	comp=Z,385nm,1.0s						
RJF				*e*	R		
	comp=Z,1μm,21.5s						
RJF	**Les Rejaudoux**	**52.60 300**	⇑	*i*	P	**17 26 52.0**	**+0.5**
RJF				pmax	pmax		
	comp=Z,385nm,1.0s						
RJF	**Les Rejaudoux**	**52.60 300**	⇑	*i*	P	**17 26 52.0**	**+0.5**
	comp=Z,385nm,1.0s						
TSM	**Tawau**	**52.83 128**		P	P	**17 26 53.5**	**+0.1**
JQE	**Queens East**	**52.87 306**	⇑	*e*	P	**17 26 52.8**	**-0.6**
JQE	**Queens East**	**52.87 306**		P	P	**17 26 52.8**	**-0.6**
JSA	**Saint Aubin**	**52.95 306**	⇑	*e*	P	**17 26 53.5**	**-0.4**
JSA				AMB	AMB	17 26 57.9	
	comp=Z,65nm,1.7s						
JSA				AMS	AMS	17 49 14.6	
	comp=Z,2μm,17.1s						
JSA	**Saint Aubin**	**52.95 306**		P	P	**17 26 53.5**	**-0.4**
JSA				AMB	AMB	17 26 57.9	
	comp=Z,65nm,1.7s						
JSA				AMS	AMS	17 49 14.6	
	comp=Z,2μm,17.1s						
MFF	**Saint Martin d**	**52.99 302**	⇑	*i*	P	**17 26 53.9**	**-0.4**
	comp=Z,246nm,1.3s						
MFF	**Saint Martin d**	**52.99 302**	⇑	*i*	P	**17 26 53.9**	**-0.4**
MFF				pmax	pmax		
	comp=Z,246nm,1.3s						
MFF	**Saint Martin d**	**52.99 302**	⇑	*i*	P	**17 26 53.9**	**-0.4**
	comp=Z,246nm,1.3s						
HEX	**Exmoor**	**53.00 308**	⇑	*e*	P	**17 26 54.1**	**-0.3**
HEX	**Exmoor**	**53.00 308**		P	P	**17 26 54.1**	**-0.3**
LRDF	**Laroque-de-Fa**	**53.12 297**	⇑	*e*	P	**17 26 55.5**	**+0.1**
LRDF	**Laroque-de-Fa**	**53.12 297**	⇑	*e*	P	**17 26 55.5**	**+0.1**
MTLF	**Montolieu**	**53.12 297**	⇑	*i*	P	**17 26 55.6**	**+0.2**
	comp=Z,234nm,1.2s						
MTLF	**Montolieu**	**53.12 297**	⇑	*i*	P	**17 26 55.6**	**+0.2**
MTLF				pmax	pmax		
	comp=Z,234nm,1.2s						
MTLF	**Montolieu**	**53.12 297**	⇑	*i*	P	**17 26 55.6**	**+0.2**
	comp=Z,234nm,1.2s						
SJAF	**Saint Jean de**	**53.13 296**	⇑	*e*	P	**17 26 55.0**	**-0.4**
SJAF	**Saint Jean de**	**53.13 296**	⇑	*e*	P	**17 26 55.0**	**-0.4**
CMAH	**Djebel Manchou**	**53.17 288**		P	P	**17 26 55.5**	**-0.4**
LFF	**La Frestale**	**53.26 300**	⇑	*i*	P	**17 26 56.8**	**+0.5**
	comp=Z,436nm,1.1s						
LFF	**La Frestale**	**53.26 300**	⇑	*i*	P	**17 26 56.8**	**+0.5**
LFF				pmax	pmax		
	comp=Z,437nm,1.1s						
LFF	**La Frestale**	**53.26 300**	⇑	*i*	P	**17 26 56.8**	**+0.5**
	comp=Z,436nm,1.1s						
FILF	**Fillols**	**53.30 296**	⇑	*e*	P	**17 26 57.3**	**+0.6**
FILF	**Fillols**	**53.30 296**	⇑	*e*	P	**17 26 57.3**	**+0.6**
ABSA	**Djebel Ababsia**	**53.32 287**		P	P	**17 26 56.7**	**-0.3**
DYA	**Yadsworthy**	**53.37 308**	⇑	*e*	P	**17 26 56.7**	**-0.3**
DYA				AMB	AMB	17 26 57.6	
	comp=Z,91nm,1.6s						
DYA				AMS	AMS	17 48 10.7	
	comp=Z,2μm,15.1s						
DYA	**Yadsworthy**	**53.37 308**		P	P	**17 26 56.7**	**-0.3**
DYA				AMB	AMB	17 26 57.6	
	comp=Z,91nm,1.6s						
DYA				AMS	AMS	17 48 10.7	
	comp=Z,2μm,15.1s						
HTL	**Hartland**	**53.41 309**	⇑	*e*	P	**17 26 57.4**	**0.0**
HTL				AMB	AMB	17 27 01.9	
	comp=Z,93nm,1.2s						
HTL				AMS	AMS	17 52 36.7	
	comp=Z,2μm,11.8s						
HTL	**Hartland**	**53.41 309**		P	P	**17 26 57.4**	**0.0**
HTL				AMB	AMB	17 27 01.9	
	comp=Z,93nm,1.2s						
HTL				AMS	AMS	17 52 36.7	
	comp=Z,2μm,11.8s						
MSEY	**Mahe Island**	**53.45 209**		PFAKE		17 27 10.0	+12
MSEY				LR	LR		
	comp=Z,1μm,20.0s						
CARF	**Carcanieres**	**53.51 297**	⇑	*e*	P	**17 26 58.2**	**-0.1**
CARF	**Carcanieres**	**53.51 297**	⇑	*e*	P	**17 26 58.2**	**-0.1**
SGMF	**Saint Gilles**	**53.62 305**	⇑	*i*	P	**17 26 58.9**	**0.0**
	comp=Z,286nm,1.2s						
SGMF	**Saint Gilles**	**53.62 305**	⇑	*i*	P	**17 26 58.9**	**0.0**
SGMF				pmax	pmax		
	comp=Z,287nm,1.2s						
SGMF	**Saint Gilles**	**53.62 305**	⇑	*i*	P	**17 26 58.9**	**0.0**
	comp=Z,286nm,1.2s						
VALF	**Valcebollere**	**53.72 297**	⇑	*e*	P	**17 27 00.1**	**+0.1**
VALF	**Valcebollere**	**53.72 297**	⇑	*e*	P	**17 27 00.1**	**+0.1**
CKFL	**Kef-Lekhel**	**53.77 288**		P	P	**17 26 59.8**	**-0.5**
CASM	**Ain Smara**	**54.00 288**		P	P	**17 27 01.2**	**-0.7**
ROSF	**Rostrenen**	**54.00 305**	⇑	*i*	P	**17 27 01.6**	**-0.1**
	comp=Z,238nm,1.2s						
ROSF	**Rostrenen**	**54.00 305**	⇑	*i*	P	**17 27 01.6**	**-0.1**
ROSF				pmax	pmax		
	comp=Z,238nm,1.2s						
ROSF	**Rostrenen**	**54.00 305**	⇑	*i*	P	**17 27 01.6**	**-0.1**
	comp=Z,238nm,1.2s						
MLS	**Moulis**	**54.02 298**	⇑	*e*	P	**17 27 02.1**	**+0.1**
MLS	**Moulis**	**54.02 298**	⇑	*e*	P	**17 27 02.1**	**+0.1**
QUIF	**Quistinic**	**54.14 305**	⇑	*i*	P	**17 27 02.6**	**-0.1**
	comp=Z,252nm,1.1s						
QUIF	**Quistinic**	**54.14 305**	⇑	*i*	P	**17 27 02.6**	**-0.1**
QUIF				pmax	pmax		
	comp=Z,252nm,1.1s						
QUIF	**Quistinic**	**54.14 305**	⇑	*i*	P	**17 27 02.6**	**-0.1**
	comp=Z,252nm,1.1s						
DFRA	**Djebel Bou Aff**	**54.26 288**		P	P	**17 27 03.9**	**0.0**
LWLI	**Líwa**	**54.45 149**		P	P	**17 27 03.5**	**-1.9**
EPF	**Esparros**	**54.46 298**	⇑	*i*	P	**17 27 04.5**	**-0.7**
	comp=Z,180nm,1.3s						
EPF	**Esparros**	**54.46 298**	⇑	*i*	P	**17 27 04.5**	**-0.7**
EPF				pmax	pmax		
	comp=Z,180nm,1.3s						
EPF	**Esparros**	**54.46 298**	⇑	*i*	P	**17 27 04.5**	**-0.7**
	comp=Z,180nm,1.3s						
BORG	**Borgarnes**	**54.57 329**		P	P	**17 27 05.7**	**+0.1**
BORG				LR	LR		
	comp=Z,1μm,20.0s						
BORG	**Borgarnes**	**54.57 329**		P	P	**17 27 05.7**	**+0.1**
	comp=Z,11nm,0.9s,baz=76,slow=10.0,SNR=5.3						
LABF	**Labassere**	**54.62 298**	⇑	*e*	P	**17 27 05.7**	**-0.7**
LABF	**Labassere**	**54.62 298**	⇑	*e*	P	**17 27 05.7**	**-0.7**
VIEF	**Viey**	**54.74 298**	⇑	*e*	P	**17 27 07.4**	**+0.1**
VIEF	**Viey**	**54.74 298**	⇑	*e*	P	**17 27 07.4**	**+0.1**
SET	**Setif**	**54.77 288**		P	P	**17 27 08.0**	**+0.4**
CKHR	**Kef el Ahmar**	**54.79 288**		P	P	**17 27 07.7**	**-0.1**
AKF	**Akfadou**	**55.09 289**		P	P	17 27 00.2	-10
ETSF	**Etsaut**	**55.10 298**	⇑	*i*	P	**17 27 10.2**	**+0.3**
	comp=Z,206nm,1.2s						
ETSF	**Etsaut**	**55.10 298**	⇑	*i*	P	**17 27 10.2**	**+0.3**
ETSF				pmax	pmax		
	comp=Z,206nm,1.2s						
ETSF	**Etsaut**	**55.10 298**	⇑	*i*	P	**17 27 10.2**	**+0.3**
	comp=Z,206nm,1.2s						
ORDF	**Ordiarp**	**55.17 299**		*e*	P	**17 27 09.8**	**-0.5**
ORDF	**Ordiarp**	**55.17 299**		*e*	P	**17 27 09.8**	**-0.5**
DAV	**Davao City (W)**	**55.22 118**		LR	LR	17 52 19.3	
	comp=Z,2μm,18.7s,baz=348,slow=38						
SUMG	**Summit**	**55.23 341**	⇑	*i*	P	**17 27 11.5**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,18nm,1.0s						
SUMG	**Summit**	**55.23 341**		*e*	P	**17 27 11.2**	**+0.5**
	comp=Z,84nm,1.4s						
SUMG	**Summit**	**55.23 341**	⇑	*i*	P	**17 27 11.5**	**+0.8**
	comp=Z,18nm,1.0s						
LARF	**Larrau**	**55.29 299**		*e*	P	**17 27 11.2**	**0.0**
LARF	**Larrau**	**55.29 299**		*e*	P	**17 27 11.2**	**0.0**
OSSF	**Osses**	**55.35 299**	⇑	*e*	P	**17 27 12.3**	**+0.7**
OSSF	**Osses**	**55.35 299**	⇑	*e*	P	**17 27 12.3**	**+0.7**
SJPF	**Ste Jean**	**55.40 299**	⇑	*i*	P	**17 27 11.7**	**-0.3**
	comp=Z,106nm,1.1s						
SJPF	**Ste Jean**	**55.40 299**	⇑	*i*	P	**17 27 11.7**	**-0.3**
SJPF				pmax	pmax		
	comp=Z,106nm,1.1s						
SJPF	**Ste Jean**	**55.40 299**	⇑	*i*	P	**17 27 11.7**	**-0.3**
	comp=Z,106nm,1.1s						
PBKI	**Pangkalan Bun**	**55.57 139**		P	P	**17 27 15.0**	**+1.6**
	comp=Z,107nm,1.2s,comp=Z,2μm						
AKET	**Djebel Ketaf**	**55.88 289**		P	P	17 27 05.9	-10
ABA	**Alger-Bouzarea**	**56.03 290**		P	P	17 27 20.6	+4.0
ADJB	**Djebel Djouab**	**56.12 289**		P	P	17 27 06.9	-10
EMHD	**Djebel Mahouad**	**56.42 290**		P	P	17 27 12.0	-7.5
**EBN

PESTR *i* S S 17 36 29.0 +11
PBAR Barrancos 61.82 297 *e*P **P 17 27 57.1 +0.4**
comp=Z,231nm,1.6s
PBAR *i* S S 17 36 26.7 +7.6
PTOM Tomar 61.84 299 *e*P **P 17 27 57.2 +0.4**
MBAR Mbarara 62.04 237⇑*i*P **P 17 27 57.2 -1.5**
PMTG Montargil 62.04 298 *e*P **P 17 27 58.2 0.0**
comp=Z,113nm,1.5s
SFJD Kangerlussuaq 62.17 340⇑*i*P **P 17 27 58.4 -0.2**
comp=Z,50nm,1.0s
SFJD Kangerlussuaq 62.17 340⇑*i*P **P 17 27 58.5 -0.1**
comp=Z,26nm,0.9s
SFJD Kangerlussuaq 62.17 340 P **P 17 27 58.6 +0.1**
comp=Z,29nm,0.8s,baz=40,slow=6.4,SNR=19
EVO Evora 62.23 298⇑*i*P **P 17 28 00.2 +0.7**
comp=Z,226nm,1.7s
EVO *e*R
comp=Z,940nm,22.5s
EVO Evora 62.23 298 *e*P **P 17 27 59.8 +0.3**
comp=Z,64nm,1.6s
AMKA Amchitka 62.27 44 *e*P **P 17 27 58.5 -1.1**
comp=Z,90nm,0.6s
EVOP Sao Brissos 62.30 298⇑*i*P **P 17 28 00.2 +0.3**
EVOP pmax pmax
comp=Z,226nm,1.7s
EVOP Sao Brissos 62.30 298⇑*i*P **P 17 28 00.2 +0.3**
comp=Z,226nm,1.7s
COLD Coldfoot 62.35 19⇑*i*P **P 17 28 00.0 +0.2**
comp=Z,34nm,1.0s
PBEJ Beja 62.44 297 *e*P **P 17 28 01.1 +0.2**
comp=Z,131nm,1.6s
TAM Tamanrasset 62.67 276⇑*i*P **P 17 28 03.0 +0.2**
TAM pmax pmax
comp=Z,112nm,1.4s
TAM MLR MLR
comp=Z,436nm,19.0s
TAM Tamanrasset 62.67 276⇑*i*P **P 17 28 03.0 +0.2**
comp=Z,112nm,1.4s
TAM LR LR
comp=Z,436nm,19.0s
MESJ Messejana 62.77 297 *e*P **P 17 28 02.8 -0.3**
MESJ AMb AMB 17 28 05.1
comp=Z,101nm,1.5s
MESJ *e*S **S 17 36 30.2 -0.8**
MESJ Messejana 62.77 297 *e*P **P 17 28 02.8 -0.3**
comp=Z,101nm,1.5s
MESJ *e*S **S 17 36 30.2 -0.8**
MESJ Messejana 62.77 297 *e*P **P 17 28 02.7 -0.3**
MESJ *e*S **S 17 36 30.2 -0.8**
PMAFR Mafra 62.77 299 *e*P **P 17 28 03.4 +0.3**
comp=Z,158nm,1.3s
PMAFR *i* S S 17 36 39.3 +8.2
PCVE Castro Verde 62.78 297 *e*P **P 17 28 03.4 +0.2**
comp=Z,81nm,1.4s
PCVE *i* S S 17 36 42.8 +12
PNCL Nicolau / Gran 62.80 298 *e*P **P 17 28 04.0 +0.7**
comp=Z,139nm,1.6s
PNCL *i* S S 17 36 41.6 +10
LIS Lisbon 62.83 299 *e*P **P 17 28 02.9 -0.6**
LIS AMb AMB 17 28 05.7
comp=Z,168nm,1.7s
LIS Lisbon 62.83 299 *e*P **P 17 28 02.9 -0.6**
comp=Z,168nm,1.7s
LIS Lisbon 62.83 299 *e*P **P 17 28 02.9 -0.6**
PBDV Barranco-do-Ve 62.95 297 *e*P **P 17 28 05.0 +0.7**
comp=Z,213nm,1.5s
PBDV *i* S S 17 36 45.0 +12
MORF Marmelete 63.37 297 *e*P **P 17 28 07.5 +0.4**
MORF Marmelete 63.37 297 *e*P **P 17 28 06.5 -0.6**
GUMO Guam 63.56 97 PFAKE 17 28 20.0 +11
GUMO LR LR
comp=Z,487nm,19.0s
PFVI Vila Bisbo 63.58 297 *e*P **P 17 28 09.3 +0.8**
COLA College 64.82 20⇑*i*P **P 17 28 16.5 +0.3**
COLA pmax pmax
comp=Z,118nm,1.3s
COLA MLR MLR
comp=Z,2µm,20.0s
COLA College 64.82 20⇑*i*P **P 17 28 16.5 +0.3**
comp=Z,32nm,1.3s
COLA LR LR
comp=Z,2µm,20.0s
ILAR Eielson Array 65.14 20 P **P 17 28 18.1 -0.2**
ILAR P'P' 17 56 54.9
ILAR Eielson Array 65.14 20 P **P 17 28 18.1 -0.2**
comp=Z,37nm,0.8s,baz=317,slow=4.9,SNR=182
ILAR PKPPKP P'P'df 17 56 54.9 -14
comp=Z,1.7nm,1.1s,baz=158,slow=2.9,SNR=6.7
ILAR LR LR 18 00 55.5
comp=Z,3µm,18.1s,baz=83,slow=40
PPLA Purkeypile 65.29 23⇑*i*P **P 17 28 19.7 +0.3**
comp=Z,2.4nm,0.6s
TRF Thorofare Moun 65.36 22⇑*e*P **P 17 28 17.7 -2.3**
comp=Z,40nm,0.9s
MCK McKinley 65.49 21⇑*e*P **P 17 28 19.6 -1.0**
MCK pmax pmax
comp=Z,37nm,1.2s
MCK McKinley 65.49 21⇑*e*P **P 17 28 19.6 -1.0**
comp=Z,37nm,1.2s
EGAK Eagle 66.44 17⇑*i*P **P 17 28 26.2 -0.4**
comp=Z,69nm,1.4s
EGAK LR LR
comp=Z,2µm,21.0s
DOT Dot Lake 66.76 19 *e*P P 17 28 25.1 -3.6
comp=Z,25nm,0.7s
PAX Paxson 67.00 20⇑*i*P **P 17 28 30.0 -0.3**
PAX pmax pmax
comp=Z,100nm,1.2s
PAX Paxson 67.00 20⇑*i*P **P 17 28 30.0 -0.3**
comp=Z,100nm,1.2s
RSO Redoubt South 67.06 25 *e*P **P 17 28 31.6 +0.7**
comp=Z,76nm,0.8s
UNV Unalaska Valle 67.13 36 *e*P **P 17 28 29.9 -1.3**
comp=Z,58nm,0.9s
PMR Palmer 67.19 23⇑*i*P **P 17 28 31.0 -0.4**
PMR pmax pmax
comp=Z,60nm,1.0s
PMR Palmer 67.19 23⇑*i*P **P 17 28 31.0 -0.4**
comp=Z,60nm,1.0s
AKUT Akutan 67.22 35 *e*P **P 17 28 29.9 -1.9**
comp=Z,151nm,1.4s
SML Sawmill 67.23 22⇑*i*P **P 17 28 31.5 -0.3**
SML pmax pmax
comp=Z,22nm,0.8s
SML Sawmill 67.23 22⇑*i*P **P 17 28 31.5 -0.3**
comp=Z,22nm,0.8s
MENT Mentasta 67.45 20 *e*P **P 17 28 32.5 -0.6**
FALS False Pass 67.65 34 *e*P **P 17 28 33.6 -0.8**
SDPT Sand Point 68.42 32 *e*P **P 17 28 37.7 -1.5**
comp=Z,28nm,0.7s
CHGN Chignik 68.45 30 *e*P **P 17 28 39.1 -0.3**
DIV Divide 68.48 21 *e*P **P 17 28 39.4 -0.3**
comp=Z,41nm,1.1s
FRB Frobisher Bay 68.83 345 P **P 17 28 41.6 0.0**
FRB Frobisher Bay 68.83 345 P **P 17 28 41.6 0.0**
comp=Z,44nm,0.9s,baz=7.7,slow=6.7,SNR=29
KDAK Kodiak Island 69.27 27 P **P 17 28 44.0 -0.5**
comp=Z,578nm,0.9s,SNR=23
KDAK Kodiak Island 69.27 27⇑*i*P **P 17 28 44.4 -0.1**
comp=Z,22nm,3.0s
KDAK LR LR
comp=Z,1µm,20.0s
OHAK Old Harbor 69.49 27⇑*i*P **P 17 28 46.5 +0.6**
comp=Z,264nm,1.2s
ABPO Ambohimpanom 69.68 212⇑*i*P **P 17 28 47.3 -0.3**
ABPO pmax pmax
comp=Z,68nm,1.1s
ABPO MLR MLR
comp=Z,1µm,22.0s
ABPO Ambohimpanom 69.68 212⇑*i*P **P 17 28 47.3 -0.3**
comp=Z,68nm,1.1s
ABPO LR LR
comp=Z,1µm,22.0s
PNL Peninsula 71.33 19 *e*P **P 17 28 57.5 +0.4**
comp=Z,29nm,0.8s
TOA0 Torodi Ar. Sit 71.75 271⇑*i*P **P 17 28 59.4 -0.9**
TORD Torodi Ar. Bea 71.75 271 P **P 17 28 59.6 -0.7**
TORD P'P' 17 56 42.3
TORD Torodi Ar. Bea 71.75 271 P **P 17 28 59.6 -0.7**
comp=Z,106nm,0.8s,baz=38,slow=5.6,SNR=314
TORD PKPPKP P'P'df 17 56 42.3 -10
comp=Z,1.1nm,1.1s,baz=219,slow=3.7,SNR=2.9
TORD LR LR 18 06 03.0
comp=Z,536nm,19.4s,baz=35,slow=40
SKAG Skagway 72.44 18 *e*P **P 17 29 04.5 +0.7**
comp=Z,50nm,0.8s

YKA Yellowknife Ar 72.59 6 P **P 17 29 04.7 +0.1**
YKA P'P' 17 56 47.0
YKA Yellowknife Ar 72.59 6 P **P 17 29 04.6 +0.1**
comp=Z,67nm,0.8s,baz=348,slow=6.0,SNR=352
YKA PKPPKP P'P'df 17 56 47.0 -8.6
comp=Z,1.0nm,0.9s,baz=153,slow=2.1,SNR=5.3
BART Pico Bartolome 73.07 307 *e*P **P 17 29 08.9 +0.9**
comp=Z,116nm,0.9s
CMLA Cha da Macela 73.28 307 *e*P **P 17 29 11.6 +2.5**
comp=Z,572nm,0.4s
CMLA *e*LQ LQ 17 48 12.8
CMLA *e*LR LR 17 51 06.4
comp=Z,65nm,15.7s
CMLA Cha da Macela 73.28 307 PFAKE 17 29 20.0 +11
CMLA LR LR
comp=Z,1µm,21.0s
PSET Sete Cidades 73.35 307 *e*P **P 17 29 12.2 +2.6**
comp=Z,101nm,0.9s
PSMN Pico do Norte, 73.54 306 *e*P P 17 29 07.3 -3.4
comp=Z,18nm,0.5s
PSMN *e*LQ LQ 17 48 56.0
PSMN *e*LR LR 17 52 04.2
comp=Z,62nm,16.8s
PGRA Graciosa 73.78 309 *e*P **P 17 29 12.8 +0.7**
comp=Z,28nm,0.5s
PMAN Manadas 74.12 309 *e*P **P 17 29 15.8 +1.8**
comp=Z,106nm,0.9s
ROSA Rosais 74.14 309 *e*P **P 17 29 14.7 +0.5**
comp=Z,64nm,0.8s
ROSA *e*LQ LQ 17 48 28.3
ROSA *e*LR LR 17 52 28.0
comp=Z,44nm,17.3s
DLBC Dease Lake 74.45 15⇑*i*P **P 17 29 16.1 +0.3**
DLBC Dease Lake 74.45 15 LR LR 18 04 46.0
comp=Z,895nm,21.3s,baz=116,slow=38
PCAN Candelaria 74.46 309 *e*P **P 17 29 17.3 +1.3**
comp=Z,146nm,0.9s
WAKE Wake Island 75.18 78 *e*P **P 17 29 19.8 -0.7**
comp=Z,225nm,1.1s
LSZ Lusaka 75.36 230⇑*i*P **P 17 29 21.3 -0.2**
LSZ Lusaka 75.36 230 P **P 17 29 21.8 +0.3**
SNR=28
LSZ Lusaka 75.36 230⇑*i*P **P 17 29 21.3 -0.2**
comp=Z,162nm,1.4s
LSZ LR LR
comp=Z,652nm,19.0s
MBWA Marble Bar 75.45 141⇑*i*P **P 17 29 20.9 -0.9**
comp=Z,186nm,1.1s
MBWA LR LR
comp=Z,442nm,20.0s
FITZ Fitzroy Crossi 75.68 134 P **P 17 29 22.8 -0.3**
FITZ Fitzroy Crossi 75.68 134 P **P 17 29 22.8 -0.3**
comp=Z,100nm,0.8s,baz=340,slow=5.6,SNR=134
WRAK Wrangell Islan 75.87 17⇑*i*P **P 17 29 23.8 0.0**
comp=Z,55nm,1.0s
CRAG Craig 76.58 18⇑*i*P **P 17 29 29.0 +1.2**
comp=Z,128nm,1.4s
SCHQ Schefferville 76.61 340 P **P 17 29 27.8 -0.3**
SCHQ Schefferville 76.61 340 P **P 17 29 27.8 -0.3**
comp=Z,35nm,0.9s,baz=28,slow=6.1,SNR=26
SCHQ LR LR 18 06 43.1
comp=Z,851nm,19.4s,baz=98,slow=38
MIDW Midway 79.64 61 PFAKE 17 30 00.0 +15
MIDW LR LR
comp=Z,1µm,21.0s
BBB Bella Bella 80.71 16 LR LR 18 10 13.8
comp=Z,610nm,18.3s,baz=141,slow=39
DBIC Dimbokro 80.86 270⇑*i*P **P 17 29 51.7 -0.4**
DBIC Dimbokro 80.86 270⇑*i*P **P 17 29 51.2 -0.8**
comp=Z,139nm,1.0s
DBIC PKKPbc **PKKPbc 17 48 28.9 +0.8**
DBIC Dimbokro 80.86 270 P **P 17 29 51.8 -0.3**
comp=Z,100nm,1.0s,baz=26,slow=6.6,SNR=54
DBIC PKKPbc **PKKPbc 17 48 28.9 +0.8**
comp=Z,4.6nm,0.9s,baz=207,slow=4.0,SNR=3.9
DBIC LR LR 18 11 53.2
comp=Z,766nm,18.2s,baz=273,slow=40
FFC Flin Flon 80.92 0 P **P 17 29 51.9 +0.2**
comp=Z,614nm,0.9s,SNR=62
FFC Flin Flon 80.92 0⇑*i*P **P 17 29 51.5 -0.3**
FFC MLR MLR
comp=Z,1µm,19.0s
FFC Flin Flon 80.92 0⇑*i*P **P 17 29 51.5 -0.3**
FFC LR LR
comp=Z,2µm,19.0s
LIC Lamto 81.29 270⇑*i*P **P 17 29 53.8 -0.6**
comp=Z,170nm,1.0s
LIC *e*R
comp=Z,970nm,18.0s
LIC Lamto 81.29 270⇑*i*P **P 17 29 53.8 -0.6**
comp=Z,170nm,1.0s
PMG Port Moresby 81.62 112 P **P 17 29 55.1 -0.8**
PMG LR LR
comp=Z,370nm,22.0s
PMG Port Moresby 81.62 112 P **P 17 29 55.1 -0.8**
comp=Z,67nm,1.1s,baz=11,slow=5.7,SNR=7.6
WRAB Tennant Creek 81.84 128 P **P 17 29 56.0 -1.0**
comp=Z,938nm,0.9s,SNR=36
WRAB Tennant Creek 81.84 128⇑*i*P **P 17 29 56.4 -0.6**
WRAB pmax pmax
comp=Z,147nm,0.9s
WRAB MLR MLR
comp=Z,449nm,21.0s
WRAB Tennant Creek 81.84 128⇑*i*P **P 17 29 56.4 -0.6**
comp=Z,146nm,0.9s
WRAB LR LR
comp=Z,449nm,21.0s
WRA Warramunga Arr 81.84 128 P **P 17 29 56.5 -0.6**
WRA PKKPbc **PKKPbc 17 48 27.4 +0.4**
WRA P'P' 17 56 29.3
WRA Warramunga Arr 81.84 128 P **P 17 29 56.5 -0.6**
comp=Z,92nm,0.9s,baz=330,slow=5.0,SNR=419
WRA PKKPbc **PKKPbc 17 48 27.4 +0.4**
comp=Z,3.2nm,0.7s,baz=147,slow=2.0,SNR=33
WRA PKPPKP **P'P'df 17 56 29.3 +0.2**
comp=Z,1.5nm,1.0s,baz=178,slow=1.4,SNR=4.8
WRA LR LR 18 10 48.9
comp=Z,326nm,21.0s,baz=350,slow=39
COEN Coen 82.44 118⇑*i*P **P 17 29 59.6 -0.7**
comp=Z,794nm,1.3s
POGA Pongola 83.69 221⇑*i*P **P 17 30 05.6 -0.9**
POGA AMB AMB 17 30 06.3
comp=Z,102nm,1.2s
SLR Silverton 83.93 224⇑*i*P **P 17 30 07.6 -0.3**
SLR AMB AMB 17 30 08.1
comp=Z,68nm,1.7s
PQI Presque Isle 84.40 338⇑*i*P **P 17 30 10.1 +0.1**
comp=Z,159nm,0.8s
ERPM east rand prop 84.46 224⇑*i*P **P 17 30 09.8 -0.8**
ERPM AMB AMB 17 30 10.4
comp=Z,42nm,1.2s
TSUM Tsumeb 84.56 236⇑*i*P **P 17 30 10.6 -0.6**
TSUM Tsumeb 84.56 236⇑*e*P **P 17 30 11.0 -0.2**
comp=Z,233nm,1.7s
ASAR Alice Springs 84.59 131 P **P 17 30 10.4 -0.8**
ASAR PKKPbc **PKKPbc 17 48 21.1 +0.3**
ASAR Alice Springs 84.59 131 P **P 17 30 10.4 -0.8**
comp=Z,58nm,0.8s,baz=323,slow=4.6,SNR=454
ASAR PKKPbc **PKKPbc 17 48 21.1 +0.3**
comp=Z,1.7nm,0.7s,baz=133,slow=2.3,SNR=22
ASAR LR LR 18 13 06.6
comp=Z,206nm,18.5s,baz=319,slow=39
LBTB Lobatse 84.71 227⇑*i*P **P 17 30 11.7 -0.1**
LBTB AMB AMB 17 30 12.6
comp=Z,107nm,1.5s
LBTB Lobatse 84.71 227⇑*i*P **P 17 30 11.5 -0.3**
comp=Z,139nm,1.3s
KSR Koster 84.73 225 *e*P **P 17 30 11.1 -0.9**
KSR AMB AMB 17 30 23.0
comp=Z,28nm,3.9s
NWAO Narrogin (SRO) 84.82 148⇑*e*P **P 17 30 10.5 -1.5**
comp=Z,92nm,1.3s
PNT Penticton 84.96 12 P **P 17 30 12.9 +0.1**
PNT Penticton 84.96 12 P **P 17 30 12.9 +0.1**
PGC Sidney 84.98 15 *e*P **P 17 30 13.1 +0.2**
comp=Z,3.5nm,1.2s
ULM Lac du Bonnet 85.29 357 P **P 17 30 13.8 -0.7**
ULM Lac du Bonnet 85.29 357 P **P 17 30 13.8 -0.7**
comp=Z,36nm,0.9s,baz=354,slow=5.4,SNR=18
ULM LR LR 18 13 18.8
comp=Z,941nm,18.4s,baz=175,slow=39
PRYS Parys 85.38 224 *e*P **P 17 30 13.6 -1.6**
PRYS AMB AMB 17 30 15.7
comp=Z,86nm,3.9s
CMW Cultus Mountai 85.43 14 P **P 17 30 15.4 +0.1**
OBC Olympics--Boni 85.46 15 P **P 17 30 16.7 +1.3**

JCW Jim Creek 85.69 14 P **P 17 30 16.6 +0.1**
A12A Yaak River Ran 85.86 10⇑*i*P **P 17 30 17.3 -0.1**
baz=86
WALA Waterton Lakes 85.93 8⇑*i*P **P 17 30 17.0 -0.8**
comp=Z,2.4nm,1.2s
A13A Flathead Natio 86.00 9⇑*i*P **P 17 30 17.8 -0.3**
baz=86
EMMW East Machias 86.05 337⇑*i*P **P 17 30 18.4 +0.1**
comp=Z,187nm,1.4s
A14A Double T Ranch 86.07 8 P **P 17 30 18.1 -0.4**
baz=86,SNR=34
NLWA Neilton Lookou 86.11 15⇑*i*P **P 17 30 19.5 +0.9**
comp=Z,107nm,1.2s
NLWA LR LR
comp=Z,1µm,21.0s
A15A Johnson Ranch, 86.13 8 P **P 17 30 18.2 -0.6**
baz=86,SNR=83
A16A West Butte Ran 86.26 7 P **P 17 30 18.6 -0.9**
baz=86,SNR=29
A17A Triple J Farms 86.34 6 P **P 17 30 19.4 -0.3**
baz=86,SNR=32
NEW Newport 86.34 11⇑*i*P **P 17 30 19.4 -0.3**
comp=Z,50nm,1.2s
NEW Newport 86.34 11 P **P 17 30 19.7 0.0**
comp=Z,20nm,1.0s,baz=333,slow=4.5,SNR=35
NEW LR LR 18 13 04.4
comp=Z,837nm,19.4s,baz=332,slow=38
NEW Newport 86.34 11 P **P 17 30 19.8 +0.1**
baz=86,SNR=35
SEK Senekal 86.40 224⇑*i*P **P 17 30 19.8 -0.5**
SEK AMB AMB 17 30 20.4
comp=Z,167nm,1.3s
RMW Rattlesnake Mo 86.42 14 P **P 17 30 20.8 +0.6**
RMW Rattlesnake Mo 86.42 14 P **P 17 30 20.8 +0.6**
A18A Metzger Ranch, 86.43 6 P **P 17 30 19.9 -0.2**
baz=86,SNR=29
A19A Klindworth Far 86.49 5 P **P 17 30 20.5 0.0**
baz=86,SNR=27
A21A Bergtoll Ranch 86.53 4⇑P **P 17 30 20.8 +0.1**
baz=86
B13A Whitefish 86.55 9 P **P 17 30 20.7 -0.1**
baz=86,SNR=32
A22A Carney Farms, 86.57 3 P **P 17 30 21.2 +0.3**
baz=86,SNR=6.8
SWZ Schweizer 86.61 226⇑*i*P **P 17 30 20.4 -0.9**
SWZ AMB AMB 17 30 21.5
comp=Z,198nm,1.3s
A23A Redstone 86.64 2 P **P 17 30 21.7 +0.5**
baz=86,SNR=7.6
D05A Enumclaw 86.65 14 P **P 17 30 22.1 +0.9**
B14A Marquette Ranc 86.69 8 P **P 17 30 21.0 -0.6**
baz=86,SNR=36
A24A Westby 86.70 2 P **P 17 30 22.1 +0.6**
baz=86,SNR=17
B16A M & M Farms, S 86.78 7 P **P 17 30 21.3 -0.6**
baz=86,SNR=17
B15A Bradley Ranch, 86.81 8 P **P 17 30 21.4 -0.7**
baz=86,SNR=67
C11A Tepee Creek (N 86.87 10 P **P 17 30 22.6 +0.2**
baz=86,SNR=36
TBM Table Mountain 86.90 13 P **P 17 30 22.5 -0.1**
BLMT Blacktail Moun 86.92 9 *e*P **P 17 30 22.6 -0.3**
comp=Z,100nm,1.7s
B19A Brinkman Farms 86.95 5 P **P 17 30 22.8 0.0**
baz=87,SNR=14
B18A Beardsley Farm 86.95 6 P **P 17 30 22.2 -0.5**
baz=87,SNR=50
B17A L&G Farms, Che 86.98 6 P **P 17 30 23.1 +0.2**
baz=87,SNR=18
B20A Solberg Farm, 87.02 5⇓P **P 17 30 22.9 -0.1**
baz=87
BSMT Bassoo Peak 87.03 9 *e*P **P 17 30 23.3 -0.1**
comp=Z,90nm,0.4s
C12B Naegeli Ranch, 87.09 10 P **P 17 30 24.0 +0.5**
baz=87,SNR=36
LON Longmire 87.10 14⇑*i*P **P 17 30 23.7 +0.1**
LON pmax pmax
comp=Z,30nm,1.0s
LON Longmire 87.10 14⇑*i*P **P 17 30 23.6 +0.1**
comp=Z,30nm,1.0s
YBMT Yellow Bay 87.11 9 *e*P **P 17 30 23.0 -0.6**
comp=Z,11nm,1.2s
DGMT Dagmar 87.15 2⇑*i*P **P 17 30 24.1 +0.4**
comp=Z,123nm,1.1s
DGMT LR LR
comp=Z,1µm,21.0s
DGMT Dagmar 87.15 2 P **P 17 30 24.5 +0.8**
baz=87,SNR=12
JTMT Jette 87.19 9 *e*P **P 17 30 23.8 -0.2**
comp=Z,46nm,1.3s
WPW White Pass 87.20 14 P **P 17 30 24.8 +0.8**
C13A Hot Springs 87.22 9⇑P **P 17 30 24.3 +0.2**
baz=87
C14A Swan Lake 87.23 8⇓P **P 17 30 23.8 -0.3**
baz=87
AGMN Agassiz Nation 87.24 356⇑*i*P **P 17 30 23.5 -0.6**
comp=Z,78nm,1.0s
AGMN LR LR
comp=Z,1µm,19.0s
B22A Reddig Ranch S 87.26 3 P **P 17 30 24.5 +0.3**
baz=87,SNR=11
D08A Wollman Farm, 87.27 12 P **P 17 30 24.4 +0.1**
EYMN Ely 87.32 354⇑*i*P **P 17 30 24.2 -0.2**
comp=Z,184nm,1.0s
EYMN LR LR
comp=Z,1µm,20.0s
EGMT Eagleton 87.33 6⇑*i*P **P 17 30 24.1 -0.5**
comp=Z,115nm,1.3s
EGMT LR LR
comp=Z,831nm,19.0s
EGMT Eagleton 87.33 6 P **P 17 30 24.4 -0.2**
baz=87,SNR=33
C15A Salmond Ranch, 87.33 8 P **P 17 30 24.4 -0.4**
baz=87,SNR=39
C16A Fuhringer Banc 87.39 7 P **P 17 30 24.3 -0.6**
baz=87,SNR=24
KSD Kokstad 87.39 221⇑*i*P **P 17 30 24.7 -0.2**
KSD AMB AMB 17 30 25.4
comp=Z,155nm,1.2s
SWMT Swartz Lake 87.46 9 *e*P **P 17 30 24.8 -0.5**
comp=Z,49nm,1.4s
FORT Forrest 87.51 139⇑*i*P **P 17 30 24.2 -1.1**
comp=Z,205nm,1.1s
FRNY Flat Rock 87.52 341⇑*i*P **P 17 30 24.8 -0.7**
comp=Z,47nm,1.2s
C17A Wharram Farm, 87.64 6 P **P 17 30 25.6 -0.5**
baz=87,SNR=36
MSNY Massena 87.66 342 *e*P **P 17 30 26.5 +0.4**
comp=Z,688nm,1.1s
C19A Slack Wire Ran 87.66 5 P **P 17 30 26.2 0.0**
baz=87,SNR=40
LBNH Lisbon 87.67 339⇑*i*P **P 17 30 26.7 +0.5**
LBNH pmax pmax
comp=Z,78nm,0.8s
LBNH MLR MLR
comp=Z,908nm,20.0s
LBNH Lisbon 87.67 339⇑*i*P **P 17 30 26.7 +0.5**
comp=Z,78nm,0.8s
LBNH LR LR
comp=Z,908nm,20.0s
C21A Desert Coulee 87.68 4 P **P 17 30 26.7 +0.4**
baz=87,SNR=39
ASR Mount Adams--S 87.72 14 P **P 17 30 27.2 +0.6**
C20A Veseth Ranch, 87.75 5 P **P 17 30 26.5 -0.1**
baz=87,SNR=32
D12A Red Ives Fores 87.75 10⇑P **P 17 30 26.4 -0.3**
baz=87
SLMT Seeley Lake 87.77 8 *e*P **P 17 30 26.1 -0.8**
comp=Z,101nm,1.1s
C23A Lambert 87.79 3 P **P 17 30 27.8 +1.1**
baz=87,SNR=23
MDND Maddock 87.80 359⇑P **P 17 30 26.7 -0.1**
baz=87
D13A Huson 87.82 9 P **P 17 30 26.6 -0.4**
baz=87,SNR=31
C22A Vida 87.82 3 P **P 17 30 27.6 +0.7**
baz=87,SNR=49
BOSA Boshof 87.82 225⇑*i*P **P 17 30 26.2 -0.9**
BOSA AMB AMB 17 30 27.1
comp=Z,90nm,1.2s
BOSA Boshof 87.82 225⇑*i*P **P 17 30 26.3 -0.8**
comp=Z,107nm,1.2s
BOSA Boshof 87.82 225 P **P 17 30 26.4 -0.7**
comp=Z,64nm,1.0s,baz=33,slow=4.5,SNR=36
HAWA Hanford 87.83 13 *e*P **P 17 30 26.5 -0.4**
comp=Z,25nm,1.4s
HAWA LR LR
comp=Z,634nm,19.0s

D14A	**Greenough**	**87.93**	**8**	P		**P**	**17 30 27.1**	**-0.4**
	baz=88,SNR=41								
LONY	**Lake Ozonia**	**87.95**	**341**	⇑*i*P		**P**	**17 30 27.8**	**+0.3**
	comp=Z,127nm,0.9s								
LONY				LR		LR			
	comp=Z,817nm,19.0s								
D15A	**Lincoln**	**88.07**	**8**	P		**P**	**17 30 28.4**	**+0.1**
	baz=88,SNR=16								
C24A	**Savage**	**88.08**	**2**	P		**P**	**17 30 29.1**	**+0.9**
	baz=88,SNR=18								
D17A	**Six Diamond Ra**	**88.12**	**6**	P		**P**	**17 30 28.3**	**-0.2**
	baz=88,SNR=45								
CHMT	**Chamberlain Mo**	**88.12**	**8**	*e*P		**P**	**17 30 27.8**	**-0.8**
	comp=Z,40nm,1.1s								
MSO	**Missoula**	**88.13**	**9**	⇑*i*P		**P**	**17 30 27.5**	**-1.0**
	comp=Z,39nm,1.3s								
MSO				LR		LR			
	comp=Z,969nm,19.0s								
MSO	**Missoula**	**88.13**	**9**	P		**P**	**17 30 28.2**	**-0.4**
	baz=88,SNR=27								
D18A	**Linhart Farms,**	**88.14**	**6**	P		**P**	**17 30 29.3**	**+0.7**
	baz=88,SNR=8.8								
D16A	**Dana Ranch, Ca**	**88.17**	**7**	P		**P**	**17 30 28.2**	**-0.5**
	baz=88,SNR=26								
SACV	**Santiago Islan**	**88.18**	**289**		PFAKE		17 30 40.0	+11	
SACV				LR		LR			
	comp=Z,493nm,21.0s								
MDV	**Middlebury**	**88.21**	**340**	*e*P		**P**	**17 30 28.9**	**+0.2**
D19A	**Cripps Ranch,**	**88.24**	**5**	P		**P**	**17 30 28.8**	**-0.2**
	baz=88,SNR=42								
HNH	**Hanover**	**88.27**	**339**	⇑*i*P		**P**	**17 30 29.5**	**+0.4**
	comp=Z,76nm,1.3s								
FFD	**Franklin Falls**	**88.33**	**339**	*e*P		**P**	**17 30 28.6**	**-0.7**
	comp=Z,45nm,1.1s								
E12A	**Beaver Dam Sad**	**88.36**	**10**	P		**P**	**17 30 28.8**	**-0.9**
	baz=88,SNR=14								
D20A	**Manuel Ranch,**	**88.36**	**5**	P		**P**	**17 30 29.3**	**-0.2**
	baz=88,SNR=15								
D22A	**Cohagen**	**88.40**	**3**	P		**P**	**17 30 30.8**	**+1.0**
	baz=88,SNR=94								
D23A	**Lindsay**	**88.42**	**3**	⇑P		**P**	**17 30 31.0**	**+1.2**
	baz=88								
D21A	**La Casta Ranch**	**88.45**	**4**	P		**P**	**17 30 30.2**	**+0.2**
	baz=88,SNR=27								
NCB	**Newcomb**	**88.48**	**341**	⇑*i*P		**P**	**17 30 30.1**	**0.0**
	comp=Z,22nm,0.8s								
NCB				LR		LR			
	comp=Z,1μm,19.0s								
D24A	**Glendive**	**88.50**	**2**	P		**P**	**17 30 31.3**	**+1.2**
	baz=88,SNR=12								
E16A	**East Helena**	**88.65**	**7**	P		**P**	**17 30 31.2**	**+0.2**
	baz=88,SNR=20								
SADO	**Sadowa**	**88.76**	**344**	LR		LR	18 14 51.7		
	comp=Z,1μm,20.1s,baz=1.8,slow=39								
E18A	**Harlowton**	**88.76**	**6**	P		**P**	**17 30 32.1**	**+0.5**
	baz=88,SNR=65								
E17A	**Martinsdale**	**88.79**	**7**	P		**P**	**17 30 32.1**	**+0.3**
	baz=88,SNR=35								
ACCN	**Adirondack Com**	**88.91**	**340**	⇑*i*P		**P**	**17 30 32.4**	**+0.3**
	comp=Z,167nm,1.4s								
COR	**Corvallis**	**88.92**	**16**	⇑*i*P		P	17 30 35.4	+3.3	
COR				pmax		pmax			
	comp=Z,128nm,1.4s								
COR	**Corvallis**	**88.92**	**16**	⇑*i*P		P	17 30 35.4	+3.3	
	comp=Z,21nm,1.4s								
COWI	**Conover**	**88.93**	**352**	⇑*i*P		**P**	**17 30 31.6**	**-0.6**
	comp=Z,40nm,1.0s								
COWI				LR		LR			
	comp=Z,2μm,20.0s								
E20A	**Meyer Farm, Mu**	**88.95**	**5**	P		**P**	**17 30 32.5**	**+0.2**
	baz=89,SNR=25								
E19A	**Rath Farm, Rou**	**88.95**	**5**	P		**P**	**17 30 32.5**	**+0.2**
	baz=89,SNR=44								
E21A	**Keefer Ranch,**	**88.97**	**4**	⇓P		**P**	**17 30 32.6**	**+0.2**
	baz=89								
CTA	**Charters Tower**	**88.99**	**120**	P		**P**	**17 30 32.1**	**-0.5**
CTA	**Charters Tower**	**88.99**	**120**	P		**P**	**17 30 32.1**	**-0.5**
	comp=Z,51nm,0.9s,baz=320,slow=6.5,SNR=41								
CTAO	**Charters Tower**	**88.99**	**120**	⇑*i*P		**P**	**17 30 31.8**	**-0.8**
CTAO				pmax		pmax			
	comp=Z,67nm,1.0s								
CTAO				MLR		MLR			
	comp=Z,354nm,20.0s								
CTAO	**Charters Tower**	**88.99**	**120**	⇑*i*P		**P**	**17 30 31.8**	**-0.8**
	comp=Z,67nm,1.0s								
CTAO				LR		LR			
	comp=Z,354nm,20.0s								
F12A	**Elk City**	**89.04**	**10**	P		**P**	**17 30 31.9**	**-1.0**
	baz=89,SNR=50								
E24A	**Baker**	**89.05**	**2**	P		**P**	**17 30 33.9**	**+1.0**
	baz=89,SNR=9.6								
E23A	**Ismay**	**89.09**	**3**	P		**P**	**17 30 33.9**	**+0.9**
	baz=89,SNR=40								
E22A	**Miles City**	**89.12**	**3**	P		**P**	**17 30 33.9**	**+0.8**
	baz=89,SNR=11								
E25A	**Miller Ranch,**	**89.14**	**2**	⇓P		**P**	**17 30 34.3**	**+1.1**
	baz=89								
E26A	**Carlson Angus**	**89.18**	**1**	⇓P		**P**	**17 30 34.1**	**+0.7**
	baz=89								
F14A	**Wisdom**	**89.20**	**8**	⇑P		**P**	**17 30 33.5**	**-0.2**
	baz=89,SNR=10								
HRV	**Adam Dziewonsk**	**89.20**	**339**	*e*P		**P**	**17 30 33.4**	**-0.1**
HRV				pmax		pmax			
	comp=Z,35nm,1.0s								
HRV	**Adam Dziewonsk**	**89.20**	**339**	*e*P		**P**	**17 30 33.4**	**-0.1**
	comp=Z,35nm,1.0s								
WES	**Weston**	**89.25**	**338**	*e*P		**P**	**17 30 33.4**	**-0.3**
WES				pmax		pmax			
	comp=Z,69nm,1.3s								
WES	**Weston**	**89.25**	**338**	*e*P		**P**	**17 30 33.4**	**-0.3**
	comp=Z,37nm,1.3s								
F15A	**Butte**	**89.26**	**8**	P		**P**	**17 30 33.9**	**-0.1**
	baz=89,SNR=31								
LRM	**Limekiln Ridge**	**89.28**	**8**	*e*P		**P**	**17 30 33.6**	**-0.6**
	comp=Z,328nm,1.2s								
F17A	**Fitzpatrick Pl**	**89.36**	**7**	P		**P**	**17 30 34.7**	**+0.3**
	baz=89,SNR=36								
BROR	**Big Rock Looko**	**89.39**	**15**	P		**P**	**17 30 34.8**	**+0.5**
F16A	**Kennard Place,**	**89.40**	**7**	P		**P**	**17 30 34.8**	**+0.3**
	baz=89,SNR=17								
F18A	**Big Timber**	**89.44**	**6**	P		**P**	**17 30 35.2**	**+0.5**
	baz=89,SNR=30								
VIPM	**Ingram Point**	**89.48**	**14**	P		**P**	**17 30 35.6**	**+0.6**
VIPM	**Ingram Point**	**89.48**	**14**	P		**P**	**17 30 35.6**	**+0.6**
FRIS	**Frissel Point**	**89.51**	**15**	P		**P**	**17 30 35.7**	**+0.6**
TRY	**Troy**	**89.52**	**340**	⇑*e*P		**P**	**17 30 34.5**	**-0.5**
	comp=Z,135nm,1.4s								
BOZ	**Bozeman (W)**	**89.53**	**7**	⇑*i*P		**P**	**17 30 35.4**	**+0.2**
BOZ				pmax		pmax			
	comp=Z,38nm,1.1s								
BOZ				MLR		MLR			
	comp=Z,888nm,20.0s								
BOZ	**Bozeman (W)**	**89.53**	**7**	⇑*i*P		**P**	**17 30 35.4**	**+0.2**
	comp=Z,48nm,1.1s								
BOZ				LR		LR			
	comp=Z,1μm,20.0s								
F19A	**Roth Farm, Mol**	**89.54**	**5**	P		**P**	**17 30 35.5**	**+0.4**
	baz=89,SNR=57								
GCMT	**Greycliff**	**89.55**	**6**	*e*P		**P**	**17 30 35.4**	**+0.2**
	comp=Z,38nm,1.1s								
GLMI	**Grayling**	**89.63**	**348**	*e*P		**P**	**17 30 35.4**	**-0.1**
	comp=Z,146nm,0.8s								
BMO	**Blue Mountains**	**89.66**	**11**	⇑*i*P		**P**	**17 30 34.9**	**-0.9**
	comp=Z,33nm,1.4s								
BMO				LR		LR			
	comp=Z,906nm,19.0s								
DLMT	**Dillon**	**89.72**	**8**	⇑*i*P		**P**	**17 30 36.0**	**-0.1**
	comp=Z,99nm,1.3s								
DLMT				*e*PP		PP	17 33 57.4	-10	
BRYW	**Bryant College**	**89.75**	**338**	⇑*i*P		**P**	**17 30 35.9**	**-0.1**
	comp=Z,151nm,1.4s								
F22A	**Rosebud**	**89.77**	**4**	P		**P**	**17 30 36.6**	**+0.4**
	baz=89,SNR=12								
F24A	**Ekalaka**	**89.77**	**2**	P		**P**	**17 30 37.1**	**+0.9**
	baz=89,SNR=12								
F23A	**Volborg**	**89.86**	**3**	P		**P**	**17 30 37.4**	**+0.8**
	baz=90,SNR=6.3								
G17A	**Pierce Place,**	**89.94**	**7**	P		**P**	**17 30 38.3**	**+1.2**
	baz=90,SNR=6.9								
G18A	**Lazy EL Ranch,**	**90.03**	**6**	P		**P**	**17 30 37.4**	**-0.2**
	baz=90,SNR=5.3								
SPMN	**St. Paul**	**90.12**	**354**	⇑P		**P**	**17 30 37.8**	**+0.1**
	baz=90								
G20A	**Bridger**	**90.22**	**5**	P		**P**	**17 30 38.6**	**+0.2**
	baz=90,SNR=53								
MCMT	**McKenzie Canyo**	**90.23**	**8**	⇑*i*P		**P**	**17 30 38.7**	**+0.1**
	comp=Z,73nm,0.6s								
RLMT	**Red Lodge**	**90.25**	**6**	⇑*i*P		**P**	**17 30 38.7**	**+0.1**
	comp=Z,103nm,1.4s								
RLMT				LR		LR			
	comp=Z,778nm,19.0s								
G21A	**Lodge Grass**	**90.27**	**4**	⇑P		**P**	**17 30 39.1**	**+0.6**
	baz=90								
H12A	**Diamond D Ranc**	**90.28**	**10**	P		**P**	**17 30 37.2**	**-1.5**
	baz=90								
G24A	**Alzada**	**90.28**	**2**	P		**P**	**17 30 38.8**	**+0.2**
	baz=90,SNR=8.3								
HNR	**Honiara**	**90.32**	**103**	LR		LR	18 13 47.4		
	comp=Z,239nm,19.7s,baz=322,slow=37								
QLMT	**Earthquake Lak**	**90.36**	**7**	*e*P		**P**	**17 30 39.2**	**0.0**
	comp=Z,4.4nm,1.1s								
KEBM	**Edson Butte**	**90.36**	**17**	*e*P		**P**	**17 30 39.3**	**+0.3**
	comp=Z,104nm,1.3s								
G23A	**Biddle**	**90.38**	**3**	P		**P**	**17 30 39.8**	**+0.8**
	baz=90,SNR=12								
H16A	**Russell Place,**	**90.50**	**7**	P		**P**	**17 30 40.3**	**+0.5**
	baz=90,SNR=31								
YMR	**Madison River**	**90.56**	**7**	P		**P**	**17 30 39.8**	**-0.3**
	comp=Z,26nm,0.9s								
BINY	**Binghamton**	**90.57**	**342**	⇑*i*P		**P**	**17 30 39.9**	**-0.1**
	comp=Z,64nm,0.9s								
BINY				LR		LR			
	comp=Z,1μm,19.0s								
H18A	**Shoshone NF, C**	**90.66**	**6**	P		**P**	**17 30 40.8**	**+0.2**
	baz=90,SNR=15								
YLE	**Yale**	**90.67**	**339**	*e*P		**P**	**17 30 39.9**	**-0.5**
	comp=Z,101nm,1.0s								
LKWY	**Lake**	**90.71**	**7**	*e*P		**P**	**17 30 42.1**	**+1.2**
LKWY				pmax		pmax			
	comp=Z,20nm,0.8s								
LKWY				MLR		MLR			
	comp=Z,1μm,20.0s								
LKWY	**Lake**	**90.71**	**7**	*e*P		**P**	**17 30 42.1**	**+1.2**
	comp=Z,20nm,0.8s								
LKWY				LR		LR			
	comp=Z,1μm,20.0s								
H19A	**Powell**	**90.72**	**6**	P		**P**	**17 30 41.8**	**+1.1**
	baz=90,SNR=16								
YFT	**Old Faithful**	**90.79**	**7**	*e*P		**P**	**17 30 42.8**	**+1.6**
	comp=Z,18nm,0.9s								
H24A	**Dirks Ranch, A**	**90.86**	**2**	P		**P**	**17 30 40.9**	**-0.4**
	baz=90,SNR=24								
H17A	**Grant Village**	**90.87**	**7**	P		**P**	**17 30 43.7**	**+2.1**
	baz=90,SNR=20								
H21A	**Big Horn, Sher**	**90.88**	**4**	P		**P**	**17 30 42.6**	**+1.1**
	baz=90,SNR=11								
HUMO	**Hull Mountain**	**90.89**	**16**	⇑*i*P		**P**	**17 30 42.0**	**+0.6**
	comp=Z,82nm,1.4s								
H22A	**Clearmont**	**90.94**	**4**	⇓P		**P**	**17 30 42.8**	**+1.1**
	baz=91								
H20A	**Greybull**	**90.96**	**5**	P		**P**	**17 30 42.8**	**+1.0**
	baz=91,SNR=15								
I12A	**Atlanta**	**90.99**	**10**	P		**P**	**17 30 42.1**	**0.0**
	baz=91,SNR=56								
H23A	**Clabaugh Cattl**	**91.02**	**3**	⇓P		**P**	**17 30 43.0**	**+0.9**
	baz=91								
I14A	**Mackay**	**91.05**	**9**	P		**P**	**17 30 42.6**	**+0.2**
	baz=91,SNR=68								
BRSD	**Miller**	**91.19**	**358**	⇑P		**P**	**17 30 43.1**	**+0.3**
	baz=91								
MFID	**Camas Ranch**	**91.27**	**11**	*e*P		**P**	**17 30 43.3**	**0.0**
	comp=Z,64nm,1.3s								
MFID	**Camas Ranch**	**91.27**	**11**	⇓P		**P**	**17 30 44.1**	**+0.8**
	baz=91								
I16A	**Newdale**	**91.30**	**7**	P		**P**	**17 30 44.8**	**+1.3**
	baz=91,SNR=35								
HLID	**Hailey**	**91.31**	**10**	⇑*i*P		**P**	**17 30 43.4**	**-0.1**
	comp=Z,28nm,1.4s								
HLID				LR		LR			
	comp=Z,1μm,20.0s								
HLID	**Hailey**	**91.31**	**10**	P		**P**	**17 30 43.7**	**+0.2**
	baz=91,SNR=28								
IMW	**Indian Meadow**	**91.33**	**7**	⇑*i*P		**P**	**17 30 44.5**	**+0.7**
	comp=Z,80nm,1.2s								
I17A	**Pilgrim Ck.**	**91.34**	**7**	⇑P		**P**	**17 30 45.1**	**+1.4**
	baz=91								
I19A	**Meeteetse**	**91.35**	**6**	⇓P		**P**	**17 30 44.7**	**+0.9**
	baz=91								
ERPA	**Erie**	**91.48**	**344**	⇑*e*P		**P**	**17 30 44.2**	**+0.1**
	comp=Z,182nm,1.4s								
ERPA				LR		LR			
	comp=Z,738nm,19.0s								
I20A	**Worland**	**91.49**	**5**	P		**P**	**17 30 45.2**	**+0.9**
	baz=91,SNR=12								
MOOW	**Moose Ponds**	**91.50**	**7**	⇑*i*P		**P**	**17 30 45.0**	**+0.5**
	comp=Z,34nm,1.4s								
RSSD	**Black Hills**	**91.50**	**2**	⇑*i*P		**P**	**17 30 44.6**	**+0.1**
RSSD				pmax		pmax			
	comp=Z,63nm,1.1s								
RSSD	**Black Hills**	**91.50**	**2**	⇑*i*P		**P**	**17 30 44.5**	**+0.1**
	comp=Z,16nm,1.1s								
I18A	**Diamond G Ranc**	**91.62**	**6**	P		**P**	**17 30 46.0**	**+0.9**
	baz=91,SNR=8.8								
I22A	**9 Mile Ranch,**	**91.64**	**4**	P		**P**	**17 30 45.7**	**+0.7**
	baz=91,SNR=13								
LOHW	**Long Hollow**	**91.64**	**7**	⇑*e*P		**P**	**17 30 44.8**	**-0.3**
	comp=Z,43nm,1.4s								
BRNJ	**Basking Ridge**	**91.68**	**340**	*e*P		**P**	**17 30 45.8**	**+0.8**
	comp=Z,25nm,0.6s								
I21A	**Big Trails, Te**	**91.68**	**4**	P		**P**	**17 30 45.5**	**+0.3**
	baz=91,SNR=69								
TPAW	**Teton Pass**	**91.73**	**7**	*e*P		**P**	**17 30 45.9**	**+0.2**
	comp=Z,46nm,1.4s								
I24A	**Kuemmerle Ranc**	**91.74**	**2**	P		**P**	**17 30 46.0**	**+0.5**
	baz=91								
KRMB	**Red Mountain**	**91.75**	**17**	*e*P		**P**	**17 30 46.1**	**+0.6**
	comp=Z,45nm,1.3s								
SNOW	**Snow King Moun**	**91.78**	**7**	*e*P		**P**	**17 30 46.9**	**+1.0**
	comp=Z,32nm,1.2s								
YBH	**Yreka Blue Hor**	**91.79**	**16**	⇑*e*P		**P**	**17 30 45.3**	**-0.3**
	comp=Z,16nm,1.2s								
YBH	**Yreka Blue Hor**	**91.79**	**16**	LR		LR	18 16 33.9		
	comp=Z,801nm,18.2s,baz=333,slow=38								
WVOR	**Wild Horse Val**	**91.83**	**13**	⇑*e*P		**P**	**17 30 45.8**	**-0.1**
WVOR				pmax		pmax			
	comp=Z,39nm,1.1s								
WVOR	**Wild Horse Val**	**91.83**	**13**	⇑*e*P		**P**	**17 30 45.8**	**-0.1**
	comp=Z,39nm,1.1s								
ECSD	**EROS Data Cent**	**91.83**	**357**	⇑*i*P		**P**	**17 30 45.6**	**-0.2**
	comp=Z,4.7nm,0.5s								
ECSD				LR		LR			
	comp=Z,1μm,19.0s								
RRI2	**Red Ridge**	**91.84**	**7**	*e*P		**P**	**17 30 46.5**	**+0.4**
	comp=Z,82nm,1.8s								
AAM	**Ann Arbor**	**91.95**	**347**	*e*P		**P**	**17 30 45.8**	**-0.4**
AAM				pmax		pmax			
	comp=Z,42nm,1.1s								
AAM				MLR		MLR			
	comp=Z,971nm,20.0s								
AAM	**Ann Arbor**	**91.95**	**347**	*e*P		**P**	**17 30 45.8**	**-0.4**
	comp=Z,42nm,1.1s								
AAM				LR		LR			
	comp=Z,971nm,20.0s								
ALLY	**Alegheny Colle**	**91.97**	**344**	⇑*e*P		**P**	**17 30 46.0**	**-0.4**
	comp=Z,275nm,1.5s								
J20A	**Shoshoni**	**92.09**	**5**	P		**P**	**17 30 48.5**	**+1.4**
	baz=92,SNR=22								
J19A	**Crowheart**	**92.11**	**6**	P		**P**	**17 30 48.2**	**+0.9**
	baz=92,SNR=72								
J22A	**Midwest**	**92.12**	**4**	P		**P**	**17 30 47.2**	**0.0**
	baz=92,SNR=28								
J21A	**Lysite**	**92.13**	**5**	P		**P**	**17 30 48.3**	**+0.9**
	baz=92,SNR=15								
JFWS	**Jewell Farm**	**92.20**	**352**	*e*P		**P**	**17 30 46.9**	**-0.5**
JFWS				pmax		pmax			
	comp=Z,56nm,0.6s								
JFWS	**Jewell Farm**	**92.20**	**352**	*e*P		**P**	**17 30 46.9**	**-0.5**
	comp=Z,56nm,0.6s								
J28A	**Allard Ranch,**	**92.23**	**0**	P		**P**	**17 30 48.3**	**+0.7**
	baz=92,SNR=9.3								
J25A	**Sunshine Ranch**	**92.24**	**2**	⇓P		**P**	**17 30 48.8**	**+1.1**
	baz=92								
KHMM	**Horse Mountain**	**92.41**	**17**	*e*P		**P**	**17 30 49.3**	**+0.7**
	comp=Z,97nm,1.8s								
K19A	**Absolon Red Bu**	**92.56**	**6**	P		**P**	**17 30 49.8**	**+0.4**
	baz=92,SNR=5.5								
BW06	**Boulder Array**	**92.57**	**6**	*e*P		**P**	**17 30 48.8**	**-0.7**
	comp=Z,18nm,1.4s								
BW06				LR		LR			
	comp=Z,1μm,19.0s								
PDAR	**Pinedale Array**	**92.57**	**6**	P		**P**	**17 30 49.0**	**-0.4**
PDAR				PKKPbc		**PKKPbc**	**17 47 59.9**	**-0.9**	
PDAR				P'P'			17 56 06.0		
PDAR	**Pinedale Array**	**92.57**	**6**	P		**P**	**17 30 49.0**	**-0.4**
	comp=Z,5.5nm,1.0s,baz=29,slow=3.4,SNR=28								
PDAR				PKKPbc		**PKKPbc**	**17 47 59.9**	**-0.9**	
	comp=Z,2.2nm,0.9s,baz=153,slow=6.1,SNR=11								
PDAR				PKPPKP		P'P'df	17 56 06.0	-13	
	comp=Z,0.6nm,0.8s,baz=159,slow=4.6,SNR=5.6								
PDAR				LR		LR	18 16 42.1		
	comp=Z,792nm,19.5s,baz=235,slow=38								
K20A	**Yellowstone Ra**	**92.76**	**5**	P		**P**	**17 30 50.6**	**+0.3**
	baz=92,SNR=24								
K23A	**Bowen Ranch, D**	**92.81**	**3**	P		**P**	**17 30 50.2**	**-0.3**
	baz=92,SNR=6.8								
K22A	**Casper**	**92.88**	**4**	P		**P**	**17 30 51.0**	**+0.2**
	baz=92,SNR=8.1								
K26A	**Motz Farm, Whi**	**92.94**	**1**	⇑P		**P**	**17 30 51.4**	**+0.4**
	baz=93								
K25A	**Mack Ranch, Ha**	**93.01**	**2**	P		**P**	**17 30 52.2**	**+0.8**
	baz=93,SNR=6.1								
SUR	**Sutherland**	**93.11**	**226**	P		**P**	**17 30 51.6**	**-0.2**
L19A	**Farson**	**93.25**	**6**	P		**P**	**17 30 53.1**	**+0.6**
	baz=93,SNR=16								
HVU	**Hansel Valley**	**93.25**	**9**	*e*P		**P**	**17 30 52.8**	**+0.3**
HVU				pmax		pmax			
	comp=Z,63nm,1.5s								
HVU	**Hansel Valley**	**93.25**	**9**	*e*P		**P**	**17 30 52.8**	**+0.3**
	comp=Z,62nm,1.5s								
L20A	**Wamsutter**	**93.41**	**5**	P		**P**	**17 30 53.9**	**+0.6**
	baz=93,SNR=6.1								
L23A	**Garrett**	**93.45**	**3**	P		**P**	**17 30 53.4**	**-0.2**
	baz=93,SNR=12								
SCIA	**State Center**	**93.45**	**354**	*e*P		**P**	**17 30 52.5**	**-0.8**
	comp=Z,28nm,0.8s								
L25A	**Engebretsen Ra**	**93.47**	**2**	⇓P		**P**	**17 30 53.7**	**+0.2**
	baz=93								
KIPM	**Iron Peak**	**93.48**	**17**	*e*P		**P**	**17 30 54.3**	**+0.7**
	comp=Z,63nm,1.2s								
L22A	**Ellis Ranch, M**	**93.50**	**4**	P		**P**	**17 30 54.9**	**+1.1**
	baz=93,SNR=14								
L21A	**Rawlins**	**93.51**	**5**	P		**P**	**17 30 54.0**	**+0.2**
	baz=93,SNR=20								
HWUT	**Hardware Ranch**	**93.55**	**8**	⇑*i*P		**P**	**17 30 54.4**	**+0.4**
	comp=Z,59nm,1.0s								
HWUT				LR		LR			
	comp=Z,949nm,20.0s								
L24A	**Wheatland**	**93.55**	**3**	⇑P		**P**	**17 30 53.7**	**-0.1**
	baz=93								
KCPM	**Cahto Peak**	**93.58**	**17**	*e*P		**P**	**17 30 54.3**	**+0.3**
	comp=Z,21nm,1.2s								
M17A	**Scullys Gap (B**	**93.76**	**7**	P		**P**	**17 30 55.2**	**+0.2**
	baz=93,SNR=20								
M19A	**Rock Springs**	**93.85**	**6**	⇑P		**P**	**17 30 55.6**	**+0.2**
	baz=94								
ACSO	**Alum Creek Sta**	**93.85**	**346**	⇑*i*P		**P**	**17 30 54.6**	**-0.5**
	comp=Z,98nm,1.0s								
ACSO				LR		LR			
	comp=Z,673nm,20.0s								
M21A	**Separation Pea**	**93.87**	**5**	P		**P**	**17 30 55.7**	**+0.2**
	baz=94,SNR=14								
M20A	**Sweetwater, Wa**	**93.94**	**5**	P		**P**	**17 30 56.5**	**+0.7**
	baz=94,SNR=8.3								
ELK	**Elko**	**93.98**	**11**	⇑*i*P		**P**	**17 30 56.3**	**+0.3**
	comp=Z,16nm,1.0s								
ELK	**Elko**	**93.98**	**11**	LR		LR	18 14 59.8		
	comp=Z,441nm,20.2s,baz=333,slow=37								
BEKR	**Beckworth**	**94.03**	**15**	*e*P		**P**	**17 30 56.1**	**-0.1**
	comp=Z,14nm,1.1s								
M23A	**Laramie**	**94.09**	**3**	P		**P**	**17 30 57.2**	**+0.8**
	baz=94,SNR=17								
M30A	**Dale-Ortello V**	**94.11**	**359**	⇑P		**P**	**17 30 57.1**	**+0.8**
	baz=94								
M22A	**Cedar Creek Ra**	**94.11**	**4**	P		**P**	**17 30 57.5**	**+0.9**
	baz=94,SNR=5.9								
M24A	**Cheyenne**	**94.13**	**3**	P		**P**	**17 30 57.5**	**+0.9**
	baz=94,SNR=9.4								
M26A	**McRoberts Ranc**	**94.17**	**1**	⇑P		**P**	**17 30 57.5**	**+0.7**
	baz=94								
M25A	**Palm-Egli Farm**	**94.18**	**2**	⇓P		**P**	**17 30 57.9**	**+1.1**
	baz=94								
BGNE	**Belgrade**	**94.20**	**358**	P		**P**	**17 30 57.8**	**+1.0**
	baz=94,SNR=8.0								
M28A	**Bar X Bar Ranc**	**94.26**	**0**	⇑P		**P**	**17 30 57.9**	**+0.8**
	baz=94								
PHWY	**Pilot Hill**	**94.27**	**3**	⇑*i*P		**P**	**17 30 57.3**	**-0.1**
	comp=Z,37nm,1.0s								
SFIN	**Scholer Farm**	**94.33**	**349**	P		**P**	**17 30 57.5**	**+0.3**
	baz=94,SNR=5.7								
HOPS	**Hopland**	**94.35**	**17**	*e*P		**P**	**17 30 57.7**	**+0.3**
	comp=Z,51nm,1.3s								
HDIL	**Hopedale**	**94.43**	**351**	*e*P		**P**	**17 30 57.0**	**-0.8**
	comp=Z,38nm,0.9s								
HDIL				LR		LR			
	comp=Z,1μm,19.0s								
JLU	**Jordanelle**	**94.55**	**8**	*e*P		**P**	**17 30 58.7**	**+0.1**
	comp=Z,42nm,1.3s								
N20A	**Spence Gul

ISCO Idaho Springs 95.76 3 eP P 17 31 03.9 -0.4
ISCO pmax pmax
comp=Z,21nm,1.1s
ISCO MLR MLR
comp=Z,2µm,20.0s
ISCO Idaho Springs 95.76 3 eP P 17 31 03.9 -0.4
comp=Z,21nm,1.1s
ISCO LR LR
comp=Z,2µm,20.0s
ISCO Idaho Springs 95.76 3 P P 17 31 04.8 +0.6
baz=95,SNR=24
NVAR Mina Array Bea 95.79 13 P P 17 31 04.5 +0.2
NVAR PKKPbc PKKPbc 17 47 52.3 0.0
NVAR Mina Array Bea 95.79 13 P P 17 31 04.5 +0.2
comp=Z,14nm,1.0s,baz=341,slow=3.0,SNR=56
NVAR PKKPbc PKKPbc 17 47 52.3 0.0
comp=Z,1.1nm,0.8s,baz=179,slow=5.0,SNR=7.0
CMB Columbia Colle 95.81 15 eP P 17 31 03.2 -0.9
CMB pmax pmax
comp=Z,13nm,1.3s
CMB Columbia Colle 95.81 15 eP P 17 31 03.2 -0.9
comp=Z,13nm,1.3s
EIDS Eidsvold 95.87 120 eP P 17 31 02.7 -1.7
comp=Z,23nm,1.2s
P22A Eagle 95.91 4 P P 17 31 05.9 +1.0
baz=96,SNR=13
P21A Newcastle 95.94 5 P P 17 31 05.7 +0.8
baz=96,SNR=12
P29A Atwood 96.05 360 P P 17 31 05.7 +0.4
baz=96,SNR=7.0
P26A Davis Ranch, A 96.07 2 P P 17 31 06.0 +0.6
baz=96,SNR=7.7
P24A Kohler Place, 96.07 3 ⇑P P 17 31 06.2 +0.6
baz=96
OLIL Olney 96.08 350 eP P 17 31 05.1 -0.2
comp=Z,76nm,1.1s
P27A Ficken Ranch, 96.09 1 P P 17 31 06.0 +0.5
baz=96,SNR=6.2
P25A Willow Gulch B 96.10 2 P P 17 31 06.1 +0.5
baz=96,SNR=6.3
P30A Selden 96.11 359 P P 17 31 05.5 +0.1
baz=96,SNR=6.1
P31A Stockton 96.12 359 P P 17 31 05.3 -0.2
baz=96,SNR=9.3
SRU San Rafael 96.12 7 ⇑P P 17 31 05.9 +0.1
baz=96
P23A Jefferson 96.17 4 ⇑P P 17 31 06.8 +0.6
baz=96
Q16A Castle Valley 96.25 8 P P 17 31 07.5 +1.2
baz=96,SNR=11
R11A Troy Canyon, C 96.29 11 ⇑P P 17 31 06.8 +0.3
baz=96
BLA Blacksburg 96.31 343 PFAKE 17 31 20.0 +14
BLA LR LR
comp=Z,1µm,19.0s
SMCO Snowmass 96.31 5 eP P 17 31 07.0 +0.1
comp=Z,20nm,1.1s
WCI Wyandotte Cave 96.34 348 P P 17 31 05.9 -0.6
WCI pmax pmax
comp=Z,17nm,0.8s
WCI Wyandotte Cave 96.34 348 P P 17 31 05.9 -0.6
comp=Z,17nm,0.8s
BBSR BB Station 96.39 330 PFAKE 17 31 20.0 +13
BBSR LR LR
comp=Z,442nm,21.0s
KSU1 Kansas State U 96.45 356 eP P 17 31 06.4 -0.6
comp=Z,56nm,0.9s
KSU1 LR LR
comp=Z,1µm,19.0s
Q20A Ridgley Place, 96.45 6 P P 17 31 07.7 +0.5
baz=96,SNR=6.3
MSU Marysvale 96.55 9 eP P 17 31 08.0 +0.3
MSU pmax pmax
comp=Z,27nm,1.6s
MSU Marysvale 96.55 9 eP P 17 31 08.0 +0.3
comp=Z,26nm,1.6s
Q28A Sharon Springs 96.59 1 ⇑P P 17 31 08.2 +0.4
baz=96
Q24A Divide 96.61 3 P P 17 31 08.3 +0.2
baz=96,SNR=11
Q21A Lamborn Mesa, 96.62 5 P P 17 31 08.8 +0.8
baz=96,SNR=8.9
Q22A Crested Butte, 96.63 5 P P 17 31 09.7 +1.5
baz=96,SNR=12
KSCO Kaye Shedlock' 96.63 1 P P 17 31 08.4 +0.4
baz=96,SNR=6.3
Q31A Ellis 96.63 359 ⇑P P 17 31 07.3 -0.5
baz=96
Q30A Quinter 96.67 359 P P 17 31 08.6 +0.6
baz=96,SNR=18
Q25A Bedland, Calha 96.69 2 ⇓P P 17 31 08.4 0.0
baz=96
Q26A Hugo 96.70 2 ⇑P P 17 31 08.7 +0.4
baz=96
Q29A Oakley 96.76 360 P P 17 31 08.5 0.0
baz=96,SNR=8.3
R21A Cimarron 97.08 5 P Pdif 17 31 10.5 +0.2
baz=97,SNR=14
ARUT Antelope Range 97.12 10 eP Pdif 17 31 10.4 0.0
ARUT pmax pmax
comp=Z,18nm,1.4s
ARUT Antelope Range 97.12 10 eP Pdif 17 31 10.3 0.0
comp=Z,18nm,1.4s
R20A Redvale 97.21 6 P Pdif 17 31 11.4 +0.6
baz=97,SNR=16
SIUC Southern Illin 97.23 350 eP P 17 31 10.3 -0.2
comp=Z,29nm,0.8s
R29A Marienthal 97.23 360 P Pdif 17 31 10.7 0.0
baz=97
PV01 Paradox Valley 97.25 6 eP Pdif 17 31 11.3 +0.3
R22A Saguache, Gunn 97.27 4 P Pdif 17 31 11.9 +0.7
baz=97,SNR=11
R26A Arlington 97.33 2 P Pdif 17 31 11.4 +0.2
baz=97,SNR=18
GRAC Grapevine Rang 97.34 13 ⇑P Pdif 17 31 12.2 +1.0
baz=97
R24A Sanders Place, 97.34 3 P Pdif 17 31 12.1 +0.7
baz=97,SNR=10
R31A Burdett 97.35 359 ⇓P P 17 31 11.1 0.0
baz=97
R27A Eads 97.35 1 P Pdif 17 31 11.7 +0.4
baz=97,SNR=5.4
R23A Moffat 97.35 4 P Pdif 17 31 12.6 +1.0
baz=97,SNR=13
CCUT Cedar City 97.36 10 eP Pdif 17 31 12.1 +0.6
comp=Z,21nm,1.3s
R30A Dighton 97.36 359 P Pdif 17 31 11.6 +0.3
baz=97,SNR=6.0
R25A Fountain Ranch 97.46 2 P Pdif 17 31 12.2 +0.4
baz=97,SNR=14
TZTN Tazewell 97.54 346 eP P 17 31 11.5 -0.5
comp=Z,16nm,1.0s
S20A Disappointment 97.56 6 P Pdif 17 31 13.4 +1.0
baz=97,SNR=25
S18A Hurst Farm, Bl 97.57 7 ⇑P Pdif 17 31 12.7 +0.2
baz=97,SNR=7.7
CNNC Cliffs of the 97.65 341 PFAKE 17 31 20.0 +7.5
CNNC LR LR
comp=Z,1µm,19.0s
S22A 4UR Ranch, Cre 97.75 5 P Pdif 17 31 13.9 +0.6
baz=97,SNR=14
S21A Coal Bank Pass 97.77 5 P Pdif 17 31 14.2 +0.8
baz=97,SNR=18
S24A Houchin Ranch, 97.93 3 P Pdif 17 31 14.3 +0.2
baz=98,SNR=6.2
S25A Robets Cordova 97.94 3 P P 17 31 13.3 -0.6
baz=98,SNR=6.9
FURC Furnace Creek, 97.94 13 ⇑P Pdif 17 31 15.2 +1.5
baz=98
S26A Kim 98.00 2 P Pdif 17 31 14.8 +0.5
baz=98,SNR=11
S29A Ulysses 98.03 360 P Pdif 17 31 15.0 +0.7
baz=98,SNR=9.7
S28A Manter 98.06 1 ⇓P Pdif 17 31 14.8 +0.3
baz=98
MPMC Manual Prospec 98.24 13 ⇓P Pdif 17 31 15.5 +0.1
baz=98
T26A Comanche Natio 98.45 2 P Pdif 17 31 16.6 +0.3
baz=98,SNR=12
TKL Tuckaleechee C 98.45 346 eP P 17 31 15.3 -0.7
TKL Tuckaleechee C 98.45 346 LR LR 18 18 08.1
comp=Z,676nm,19.6s,baz=0.8,slow=37
T21A Navajo Lake 98.45 5 P Pdif 17 31 17.5 +1.1
baz=98,SNR=7.9
T25A Trinidad 98.46 3 P Pdif 17 31 16.5 +0.1
baz=98,SNR=12
T22A Edith 98.47 5 P Pdif 17 31 17.6 +1.2
baz=98,SNR=12

KMSC Kings Mountain 98.49 344 P Pdif 17 31 16.4 +0.1
baz=98,SNR=6.9
T28A Walsh 98.53 1 ⇑P Pdif 17 31 16.5 0.0
baz=98
T31A Randall Ranch, 98.54 359 P Pdif 17 31 17.2 +0.7
baz=98,SNR=5.3
T27A Campo 98.58 1 P Pdif 17 31 17.7 +0.8
baz=98
SHOC Shoshone 98.59 12 P Pdif 17 31 17.8 +1.1
baz=98
T30A Plains 98.59 359 P Pdif 17 31 17.6 +0.8
baz=98,SNR=5.8
U15A North Rim 98.59 9 ⇑P Pdif 17 31 17.6 +0.5
baz=98
WVT Waverly 98.61 349 eP P 17 31 16.3 -0.5
WVT pmax pmax
comp=Z,27nm,1.0s
WVT Waverly 98.61 349 eP P 17 31 16.3 -0.5
comp=Z,27nm,1.0s
CPCT Cooper Cave 98.78 346 eP P 17 31 16.7 -0.8
U20A Newcomb 99.00 6 P Pdif 17 31 19.9 +1.1
baz=99,SNR=6.5
U21A Nageezi 99.01 5 P Pdif 17 31 19.0 +0.1
baz=99,SNR=8.3
GSC Goldstone 99.09 13 eP Pdif 17 31 19.2 +0.1
GSC pmax pmax
comp=Z,9.0nm,1.1s
GSC Goldstone 99.09 13 eP Pdif 17 31 19.2 +0.1
comp=Z,21nm,1.1s
GSC Goldstone 99.09 13 ⇓P Pdif 17 31 18.8 -0.3
baz=99
TUQ Turquoise Moun 99.10 12 ⇑P Pdif 17 31 20.3 +1.2
baz=99
U22A Llaves 99.11 5 ⇓P Pdif 17 31 20.6 +1.3
baz=99
U30A WK&E Inc. Balk 99.12 360 P Pdif 17 31 20.4 +1.3
baz=99,SNR=5.4
U24A Mcmo Valley 99.15 3 ⇓P Pdif 17 31 21.0 +1.4
baz=99
U23A El Rito 99.19 4 ⇓P Pdif 17 31 20.6 +1.0
baz=99
U25A Circle Dot Ran 99.20 3 P Pdif 17 31 20.5 +0.8
baz=99,SNR=5.1
U27A Thompson Grove 99.21 1 P Pdif 17 31 20.2 +0.6
baz=99,SNR=12
U26A Atchley Ranch, 99.22 2 P Pdif 17 31 20.9 +1.1
baz=99,SNR=14
U28A Mallet 99.26 1 ⇓P Pdif 17 31 20.3 +0.5
baz=99
EDW2 Edwards Air Fo 99.31 14 P Pdif 17 31 21.2 +1.2
baz=99
V22A San Miguel Ran 99.56 5 P Pdif 17 31 22.8 +1.4
baz=99,SNR=6.0
TUL1 Tulsa 99.59 356 P Pdif 17 31 21.5 +0.4
baz=99,SNR=5.3
WUAZ Wupatki 99.59 8 ePdif Pdif 17 31 22.1 +0.7
WUAZ Wupatki 99.59 8 P Pdif 17 31 22.9 +1.5
baz=99
W13A Hualapai Mount 99.71 11 ⇑P Pdif 17 31 23.2 +1.2
baz=99
V25A Rancho No Teng 99.75 3 P Pdif 17 31 23.1 +0.9
baz=99,SNR=16
GMRC Granite Mounta 99.78 12 ⇑P Pdif 17 31 23.0 +0.8
baz=99
V26A Tequesquite Ra 99.82 2 ⇑P Pdif 17 31 22.6 +0.3
baz=99
V24A Rampart Ranch, 99.83 3 P Pdif 17 31 23.0 +0.4
baz=100,SNR=6.2
NHSC New Hope 100.21 342 PFAKE 17 31 30.0 +6.1
NHSC LR LR
comp=Z,1µm,19.0s
W24A Lazy 6 Ranch, 100.34 4 P Pdif 17 31 26.3 +1.5
baz=100,SNR=6.4
W23A Werner Place, 100.36 4 ⇓P Pdif 17 31 26.3 +1.4
baz=99
W25A X Bar L Ranch, 100.37 3 P Pdif 17 31 25.8 +1.0
baz=100,SNR=8.6
W28A Vega 100.38 1 ⇑P Pdif 17 31 25.9 +1.0
baz=100
W31A Holland Ranch, 100.45 359 ⇑P Pdif 17 31 26.3 +1.2
baz=100
IRM Iron Mountain 100.46 12 ⇓P Pdif 17 31 26.2 +1.1
baz=100
BELC Bell Mtn. Jos 100.49 12 ⇑P Pdif 17 31 26.3 +0.9
baz=100
W26A Owens Ranch, T 100.52 2 ⇓P Pdif 17 31 26.5 +1.0
baz=100
ANMO Albuquerque 100.55 4 ePdif Pdif 17 31 25.9 +0.2
comp=Z,22nm,1.6s
ANMO LR LR
comp=Z,829nm,21.0s
W27A Bowe Ranch, En 100.56 2 P Pdif 17 31 26.6 +0.9
baz=100,SNR=12
MURC Murrieta 100.69 14 P Pdif 17 31 27.7 +1.5
baz=100
X18A Snowflake 100.71 7 P Pdif 17 31 28.1 +1.7
baz=100
AMTX Amarillo 100.76 0 ePdif Pdif 17 31 26.5 0.0
comp=Z,15nm,1.0s
AMTX LR LR
comp=Z,760nm,22.0s
MIAR Mount Ida 100.80 354 eP Pdif 17 31 25.3 -1.3
MIAR pmax pmax
comp=Z,14nm,1.3s
MIAR MLR MLR
comp=Z,2µm,19.0s
MIAR Mount Ida 100.80 354 ePdif Pdif 17 31 25.3 -1.3
comp=Z,14nm,1.3s
MIAR LR LR
comp=Z,2µm,19.0s
PFO Pinyon Flat Ob 100.80 13 PFAKE 17 31 40.0 +13
PFO LR LR
comp=Z,598nm,19.0s
PFO Pinyon Flat Ob 100.80 13 P Pdif 17 31 28.1 +1.3
baz=100
X20A Quemado 100.82 6 ⇑P Pdif 17 31 29.0 +2.1
baz=100
WMOK Wichita Mounta 100.88 358 eP Pdif 17 31 26.6 -0.3
WMOK pmax pmax
comp=Z,13nm,1.0s
WMOK Wichita Mounta 100.88 358 ePdif Pdif 17 31 26.6 -0.3
comp=Z,13nm,1.0s
BC3 Big Chuckawall 100.91 12 ⇓P Pdif 17 31 28.7 +1.4
baz=100
Y14A Wickenburg 100.97 10 P Pdif 17 31 28.6 +1.2
baz=101
X21A Alamocita Cree 100.97 6 P Pdif 17 31 28.0 +0.4
baz=101
X24A Lazy VL Ranch, 100.98 4 P Pdif 17 31 29.1 +1.5
baz=101
X31A Mcdonald Ranch 101.01 359 P Pdif 17 31 28.3 +0.8
baz=101
X25A Clemmons Ranch 101.05 3 P Pdif 17 31 29.1 +1.2
baz=101
X26A CR and CF Fran 101.06 2 P Pdif 17 31 29.1 +1.2
baz=101
LRAL Lakeview Retre 101.54 348 PFAKE 17 31 40.0 +10
LRAL LR LR
comp=Z,1µm,21.0s
Y24A Capitan 101.62 4 P Pdif 17 31 31.3 +0.8
baz=101,SNR=7.0
Y32A R-V Farms, Ver 101.62 359 ⇑P Pdif 17 31 30.9 +0.7
baz=101
Y25A Mesa, Roswell 101.66 3 P Pdif 17 31 31.6 +1.0
baz=101,SNR=7.6
MSTX Muleshoe 101.66 1 P Pdif 17 31 31.2 +0.7
baz=101,SNR=16
Y31A Rekieta Farm, 101.68 359 ⇓P Pdif 17 31 31.3 +0.8
baz=101
Y26A Elida 101.68 2 ⇑P Pdif 17 31 31.4 +0.7
baz=101,SNR=11
Y27A Causey 101.74 2 ⇑P Pdif 17 31 31.6 +0.7
baz=101
CAN Canberra 101.89 128 PFAKE 17 31 40.0 +8.8
CAN LR LR
comp=Z,462nm,19.0s
Z24A Sheeppen Canyo 102.22 4 P Pdif 17 31 34.6 +1.5
baz=102,SNR=6.8
Z25A Roswell 102.30 3 P Pdif 17 31 35.2 +1.8
baz=102,SNR=5.8
Z27A Tatum 102.30 2 ⇑P Pdif 17 31 33.6 +0.2
baz=102,SNR=8.5
Z31A Sharp Cattle R 102.32 359 ⇓P Pdif 17 31 34.1 +0.7
baz=102
Z32A Haskell 102.32 359 ⇑P Pdif 17 31 33.6 +0.3
baz=102
Z26A Caprock 102.33 2 P Pdif 17 31 34.4 +0.9
baz=102,SNR=5.6

Z30A Sanderson Ranc 102.36 360 P Pdif 17 31 34.2 +0.6
baz=102,SNR=11
Z29A Hungry Hill Ra 102.38 0 ⇑P Pdif 17 31 34.5 +0.8
baz=102
120A U Bar Ranch, L 102.79 6 ⇓P Pdif 17 31 36.2 +0.6
baz=102
VBMS Vicksburg 102.81 351 PFAKE 17 31 50.0 +15
VBMS LR LR
comp=Z,937nm,20.0s
124A Stringfield Ra 102.84 4 P Pdif 17 31 36.3 +0.3
baz=102,SNR=6.3
125A Gardner Draw, 102.92 3 P Pdif 17 31 37.0 +0.8
baz=103,SNR=5.6
127A Arkansas Junct 102.94 2 ⇓P Pdif 17 31 37.5 +1.2
baz=103
126A Clayton Basin, 102.95 2 ⇑P Pdif 17 31 37.4 +1.1
baz=103
ABTX Abilene, Hawle 103.00 359 ⇓P Pdif 17 31 37.2 +0.8
baz=103
128A Castleberry Fa 103.01 1 ⇓P Pdif 17 31 37.8 +1.3
baz=103
130A Snyder 103.04 360 ⇑P Pdif 17 31 37.8 +1.2
baz=103
FUNA Funafuti 103.31 89 PFAKE 17 31 50.0 +12
FUNA LR LR
comp=Z,20µm,19.0s
224A Cornudas Mount 103.46 4 ⇓P Pdif 17 31 38.9 +0.2
baz=103
BRAL Brewton 103.53 348 PFAKE 17 31 50.0 +11
BRAL LR LR
comp=Z,1µm,20.0s
232A Coleman 103.74 359 P Pdif 17 31 40.9 +1.1
baz=103,SNR=7.6
MNTX Cornudas Mount 103.84 4 PFAKE 17 31 50.0 +10
MNTX LR LR
comp=Z,467nm,20.0s
324A Moseley Ranch, 104.09 4 ⇓P Pdif 17 31 43.1 +1.6
baz=104
329A Wagon Wheel Ra 104.14 1 ⇓P Pdif 17 31 42.9 +1.3
baz=104
325A Bean Ranch, Si 104.19 3 P Pdif 17 31 43.0 +1.0
baz=104,SNR=6.1
330A Mertzon 104.23 0 ⇑P Pdif 17 31 43.4 +1.4
baz=104
332A Millersview 104.24 359 ⇓P Pdif 17 31 42.9 +0.9
baz=104
326A Caldwell Ranch 104.28 2 P Pdif 17 31 43.6 +1.4
baz=104,SNR=5.9
427A Hayter Ranch, 104.76 2 ⇓P Pdif 17 31 45.7 +1.3
baz=104
425A Indio Mountain 104.77 3 ⇑P Pdif 17 31 45.3 +0.8
baz=104
428A Kincaid Ranch, 104.89 1 ⇑P Pdif 17 31 46.1 +1.1
baz=104
426A McDonald Obser 104.92 3 P Pdif 17 31 46.1 +0.8
baz=105,SNR=5.7
431A Sonora 104.95 359 ⇓P Pdif 17 31 46.9 +1.7
baz=105
JCT Junction City 105.14 359 PFAKE 17 36 10.0
JCT LR LR
comp=Z,754nm,20.0s
527A Woodward Ranch 105.45 2 ⇑P Pdif 17 31 48.6 +1.0
baz=105
528A Cox Ranch, San 105.46 1 ⇓P Pdif 17 31 48.5 +1.0
baz=105
531A Rocksprings 105.47 359 ⇓P Pdif 17 31 48.7 +1.2
baz=105
530A J-C Ranch, Com 105.48 0 ⇑P Pdif 17 31 48.6 +1.1
baz=105
532A Rocksprings 105.50 359 ⇓P Pdif 17 31 48.2 +0.6
baz=105
526A Mary Lane Ranc 105.52 3 ⇓P Pdif 17 31 48.4 +0.6
baz=105
632A Uvalde 106.11 359 ⇓P Pdif 17 31 51.4 +1.1
baz=106
628A Black Gap, Mar 106.13 2 ⇑P Pdif 17 31 51.3 +0.9
baz=106
627A Terlingua Ranc 106.15 2 ⇑P Pdif 17 31 51.3 +0.7
baz=106
TXAR Lajitas Array 106.26 2 Pdif Pdif 17 31 51.5 +0.4
TXAR PKKPbc PKKPbc 17 47 20.9 -1.2
TXAR P'P' 17 55 45.9
TXAR Lajitas Array 106.26 2 Pdiff Pdif 17 31 51.5 +0.4
comp=Z,1.7nm,0.9s,baz=0.0,slow=2.9,SNR=11
TXAR PKKPbc PKKPbc 17 47 20.9 -1.2
comp=Z,2.2nm,0.9s,baz=179,slow=6.1,SNR=14
TXAR PKPPKP P'P'df 17 55 45.9 -6.3
comp=Z,1.0nm,1.1s,baz=160,slow=4.0,SNR=5.9
KVTX Kingsville 108.01 357 PFAKE 17 36 20.0
KVTX LR LR
comp=Z,1µm,19.0s
ANWB Willy Bob 108.28 320 PFAKE 17 36 20.0
ANWB LR LR
comp=Z,360nm,20.0s
MSVF Nonsavu 108.74 97 PFAKE 17 36 20.0
MSVF LR LR
comp=Z,287nm,20.0s
GTBY Guantanamo Bay 111.40 334 PFAKE 17 36 20.0
GTBY LR LR
comp=Z,447nm,19.0s
RCBR Riachuelo 111.55 284 PFAKE 17 36 20.0
RCBR LR LR
comp=Z,411nm,19.0s
MAW Mawson 112.66 187 PKiKP PKiKP 17 36 12.8 -0.1
MAW PKKPbc PKKPbc 17 47 00.0 -2.5
MAW Mawson 112.66 187 PKiKP PKiKP 17 36 12.8 -0.1
comp=Z,5.5nm,0.9s,baz=327,slow=3.3,SNR=9.6
MAW PKKPbc PKKPbc 17 47 00.0 -2.5
comp=Z,0.5nm,0.4s,baz=215,slow=12,SNR=4.1
GRGR Grenville 113.03 317 PFAKE 17 36 30.0
GRGR LR LR
comp=Z,329nm,21.0s
CASY Casey 113.33 167 PFAKE 17 36 20.0
CASY LR LR
comp=Z,1µm,19.0s
MTDJ Mount Denham 113.74 335 PFAKE 17 36 30.0
MTDJ LR LR
comp=Z,396nm,21.0s
SYO Syowa Base 117.08 195⇑ eP PKPdf 17 36 16.4 -5.0
SYO Syowa Base 117.08 195⇑ eP PKPdf 17 36 35.0 +14
RPZ Rata Peaks 120.20 123 PKP PKPdf 17 36 26.9 -1.4
RPZ Rata Peaks 120.20 123 PKP PKPdf 17 36 26.9 -1.4
comp=Z,40nm,0.9s,baz=335,slow=2.6,SNR=11
DRV Dumont d'Urvil 120.43 156 SS SS 17 54 20.0 -2.9
URZ Urewera 120.89 115 PKPpre PKPpre 17 36 26.4
URZ Urewera 120.89 115 PKhKP PKPpre 17 36 26.4
comp=Z,30nm,0.8s,baz=243,slow=2.3,SNR=8.5
BCIP Isla Barro Col 123.00 335 PFAKE 17 36 40.0 +5.5
BCIP LR LR
comp=Z,267nm,19.0s
JTS JuntasAbangare 123.31 341 PFAKE 17 36 50.0 +15
JTS LR LR
comp=Z,682nm,20.0s
MAIT Maitri 124.74 202 eP PKPdf 17 36 26.2 -10
ROSC El Rosal 125.08 327 ePKPdf PKPdf 17 36 38.5 -0.6
ROSC PKP PKPdf 17 36 39.1 +0.1
ROSC El Rosal 125.08 327 PKP PKPdf 17 36 39.1 +0.1
comp=Z,9.9nm,0.6s,baz=350,slow=6.4,SNR=7.7
BDFB Brasilia 126.85 286 PKP PKPdf 17 36 41.7 -0.2
BDFB PP PP 17 38 38.6 -0.8
BDFB Brasilia 126.85 286 PKP PKPdf 17 36 41.7 -0.2
comp=Z,6.6nm,0.8s,baz=155,slow=3.1,SNR=7.9
BDFB PP PP 17 38 38.6 -0.8
comp=Z,3.8nm,0.9s,baz=62,slow=12,SNR=3.6
SNAA Sanae 129.24 204 ePKPdf PKPdf 17 36 44.5 -0.3
SNAA Sanae 129.24 204 eP PKPdf 17 36 44.1 -0.6
SNAA Sanae 129.24 204 ePKPdf PKPdf 17 36 43.5 -1.3
SNAA PKP PKPdf 17 36 44.2 -0.6
SNAA Sanae 129.24 204 PKP PKPdf 17 36 44.2 -0.6
comp=Z,3.4nm,0.9s,baz=131,slow=1.5,SNR=23
VNA1 Neumayer--Stat 130.48 206 ePKPdf PKPdf 17 36 47.6 +0.6
OTAV Otavalo 130.89 329 ePKPdf PKPdf 17 36 50.4 +0.2
OTAV eSKP 17 40 15.2
OTAV LR LR
comp=Z,353nm,21.0s
SAML Samuel 131.56 306 ePKPdf PKPdf 17 36 50.1 -0.7
SAML eSKP 17 40 15.4
SAML LR LR
comp=Z,409nm,20.0s
VNDA Vanda 131.74 163 PKP PKPdf 17 36 48.6 -0.6
VNDA Vanda 131.74 163 PKP PKPdf 17 36 48.6 -0.6
comp=Z,4.4nm,0.7s,baz=290,slow=5.3,SNR=6.3
SPB Sao Paulo 131.75 277 PFAKE 17 37 00.0 +9.1
SPB LR LR
comp=Z,410nm,20.0s
SBA Scott Base 132.84 163 ePKIKP PKPdf 17 36 51.1 -0.3

SBA					MLR	MLR			
	comp=Z,441nm,19.0s								
SBA	**Scott Base**	**132.84**	**163**	*e*PKPdf	**PKPdf**	**17 36 51.1**	**-0.3**		
SBA					LR	LR			
	comp=Z,441nm,19.0s								
QSPA	**South Pole Qui**	**134.51**	**180**	PKP	**PKPdf**	**17 36 54.4**	**-0.5**		
QSPA					PP	**PP**	**17 39 24.7**	**-3.6**	
QSPA	**South Pole Qui**	**134.51**	**180**	PKP	**PKPdf**	**17 36 54.3**	**-0.5**		
	comp=Z,38nm,1.0s,baz=266,slow=1.8								
QSPA					PP	**PP**	**17 39 24.7**	**-3.6**	
	comp=Z,7.9nm,1.0s,baz=314,slow=4.2,SNR=3.7								
SIV	**San Ignacio**	**135.76**	**297**	PKP	**PKPdf**	**17 36 58.6**	**-0.1**		
SIV	**San Ignacio**	**135.76**	**297**	PKP	**PKPdf**	**17 36 58.6**	**-0.1**		
	comp=Z,14nm,0.9s,baz=54,slow=2.5,SNR=9.3								
ATAH	**Atahualpa**	**137.62**	**325**	SKPbc	**SKPbc**	**17 40 37.1**	**+1.8**		
ATAH	**Atahualpa**	**137.62**	**325**	SKPbc	**SKPbc**	**17 40 37.1**	**+1.8**		
	comp=Z,4.7nm,0.6s,baz=54,slow=2.7,SNR=3.7								
LPAZ	**La Paz**	**140.29**	**305**	PKPpre	PKPpre	17 36 58.5			
LPAZ				PKP	**PKPdf**	**17 37 07.5**	**-0.3**		
LPAZ	**La Paz**	**140.29**	**305**	PKhKP	PKPpre	17 36 58.5			
	comp=Z,1.6nm,0.9s,baz=72,slow=3.2,SNR=6.6								
LPAZ				PKP	**PKPdf**	**17 37 07.5**	**-0.3**		
	comp=Z,3.9nm,0.7s,baz=2.2,slow=4.8,SNR=13								
CPUP	**Villa Florida**	**140.42**	**283**	PKPpre	PKPpre	17 36 58.0			
CPUP	**Villa Florida**	**140.42**	**283**	PKhKP	PKPpre	17 36 58.0			
	comp=Z,7.0nm,0.8s,baz=34,slow=2.4,SNR=20								
NNA	**Nana**	**141.28**	**320**	PFAKE		17 37 20.0	+11		
NNA					LR	LR			
	comp=Z,315nm,19.0s								
ARE	**Arequipa**	**142.35**	**309**	*e*PKIKP	**PKPdf**	**17 37 07.0**	**-4.0**		
ARE	**Arequipa**	**142.35**	**309**	*e*P	**PKPdf**	**17 37 07.0**	**-4.0**		
LVC	**Limon Verde**	**145.60**	**299**	PKPbc	**PKPab**	**17 37 17.1**	**+0.1**		
LVC				*e*PKPdf	**PKPbc**	**17 37 17.4**	**+0.6**		
LVC				LR	LR				
	comp=Z,320nm,19.0s								
LVC	**Limon Verde**	**145.60**	**299**	PKPbc	**PKPab**	**17 37 17.1**	**+0.1**		
	comp=Z,182nm,1.0s,baz=24,slow=2.1,SNR=111								
TRQA	**Tornquist**	**150.07**	**269**	*e*PKPdf	**PKPdf**	**17 37 23.5**	**+0.4**		
TRQA				*e*PKPbc	**PKPbc**	**17 37 27.8**	**-0.4**		
EFI	**East Falkland**	**150.79**	**241**	*e*PKIKP	**PKPbc**	**17 37 28.3**	**-1.0**		
EFI				MLR	MLR				
	comp=Z,838nm,19.0s								
EFI	**East Falkland**	**150.79**	**241**	*e*PKPbc	**PKPbc**	**17 37 28.3**	**-1.0**		
EFI				LR	LR				
	comp=Z,1μm,19.0s								
CFAA	**Coronel Fontan**	**151.19**	**286**	PKP	**PKPdf**	**17 37 25.2**	**+0.1**		
CFAA				PKPbc	**PKPbc**	**17 37 31.0**	**0.0**		
CFAA	**Coronel Fontan**	**151.19**	**286**	PKP	**PKPdf**	**17 37 25.2**	**+0.1**		
	comp=Z,0.8nm,1.1s,baz=250,slow=0.9,SNR=5.5								
CFAA				PKPbc	**PKPbc**	**17 37 31.0**	**0.0**		
	comp=Z,11nm,0.9s,baz=28,slow=1.9,SNR=130								
LCO	**Las Campanas**	**151.22**	**293**	*e*PKPdf	**PKPdf**	**17 37 25.7**	**+0.2**		
LCO				*e*PKPbc	**PKPbc**	**17 37 31.7**	**+0.2**		
LCO	**Las Campanas**	**151.22**	**293**	*i*P	**PKPbc**	**17 37 31.6**	**+0.2**		
PMSA	**Palmer Station**	**151.31**	**213**	PKPbc	**PKPbc**	**17 37 30.2**	**+0.1**		
PMSA	**Palmer Station**	**151.31**	**213**	PKPbc	**PKPbc**	**17 37 30.2**	**+0.1**		
	comp=Z,61nm,0.9s,baz=78,slow=2.6,SNR=4.8								
TLL	**Tololo Astrono**	**152.04**	**291**	*i*PKIKP	**PKPbc**	**17 37 33.5**	**+0.2**		
TLL	**Tololo Astrono**	**152.04**	**291**	*i*P	**PKPbc**	**17 37 33.5**	**+0.2**		
TLL	**Tololo Astrono**	**152.04**	**291**	*i*P	**PKPbc**	**17 37 33.5**	**+0.2**		
CMCH	**Combarbala**	**152.81**	**289**	*i*P	**PKPbc**	**17 37 34.5**	**-0.3**		
CMCH	**Combarbala**	**152.81**	**289**	*i*P	**PKPbc**	**17 37 34.5**	**-0.3**		
USHA	**Ushuaia**	**156.77**	**233**	PKPab	**PKPab**	**17 38 03.1**	**+1.2**		
USHA	**Ushuaia**	**156.77**	**233**	PKPab	**PKPab**	**17 38 03.1**	**+1.2**		
	comp=Z,21nm,0.9s,baz=42,slow=3.9,SNR=5.8								
PLCA	**Paso Flores**	**157.22**	**269**	PKP	**PKPdf**	**17 37 33.1**	**-0.2**		
PLCA				PKPab	**PKPab**	**17 38 03.8**	**-0.6**		
PLCA	**Paso Flores**	**157.22**	**269**	PKP	**PKPdf**	**17 37 33.1**	**-0.2**		
	comp=Z,22nm,1.2s,baz=32,slow=3.0,SNR=7.2								
PLCA				PKPab	**PKPab**	**17 38 03.8**	**-0.6**		
	comp=Z,28nm,0.9s,baz=88,slow=4.2,SNR=13								

CSEM ***13*** *17:18:27.7±0.2, 72.7°N×4.4°E, h2km, mb4.4, Error ellipse: s-maj=6.1km s-min=5.2km az=55.0*

IDC ***13*** *17:18:28.7±0.6, 72.6°N×4.4°E, h0km, mb3.9/11, mb1 4.2/18, mb1mx4.1/35, mbtmp3.9/18, ML3.8/7, MS3.7/8, Ms1 3.7/8, ms1mx3.3/49, Error ellipse: s-maj=19.0km s-min=10.9km az=56.0*

MOS ***13*** *17:18:28.0±1.6, 72.8°N×4.7°E, h10km, mb4.5/28, Error ellipse: s-maj=23.7km s-min=4.1km az=94.3*

ISCJB ***13*** *17:18:28.4±0.2, 72.8°S×5.1°E±0.1, h10km, mb4.2/56, MS3.5/1, Error ellipse: s-maj=4.7km s-min=3.6km az=145.9*

NEIC ***13*** *17:18:29.9±0.3, 72.7°N×4.6°E, h10km, mb4.4/30, Error ellipse: s-maj=7.0km s-min=4.2km az=62.0*

NAO ***13*** *17:18:29.7±2.5, 72.6°N×5.0°E, ML4.0*

HEL ***13*** *17:18:29.8±0.2, 72.7°N×4.0°E, h10km, mb4.4(NEIC), MD2.9(BER), ML2.9(BER)*

BER ***13*** *17:18:31.3, 72.7°N×4.5°E, h10km, MD2.9, ML2.9, ML4.0(NAO)*

SZGRF ***13*** *17:18:33.2, 72.8°N×2.2°E, h10km, mb4.4, Norwegian Sea*

ISC 13 17:18:29.6±0.4, 72.8°N±0.0°×4.4°E±0.0°, 05, h10km, n298, σ1§45/297, mb4.4/56, 1C-2D, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op		h m s	ISC
BJO1	**Bjornoya**	**4.34**	**60**	*e*P	**Pn**	**17 19 35.8**	**+0.3**
BJO1	**Bjornoya**	**4.34**	**60**	P	**Pn**	**17 19 35.7**	**+0.3**
BJO	**Bjornoya**	**4.39**	**60**	*e*P	**Pn**	**17 19 35.8**	**-0.3**
BJO	**Bjornoya**	**4.39**	**60**	*e*P	**Pn**	**17 19 35.8**	**-0.3**
SNR=49							
JMIC	**Jan Mayen**	**4.55**	**253**	*e*P	**Pn**	**17 19 35.3**	**-3.1**
JMIC				*e*		17 21 24.6	
JMIC				AML	AML	17 21 27.3	
	comp=Z,24nm,0.6s						
JMIC	**Jan Mayen**	**4.55**	**253**	*e*P	**Pn**	**17 19 35.3**	**-3.1**
JMIC				*e*		17 21 24.6	
JMIC				AML	AML	17 21 27.3	
	comp=Z,24nm,0.6s						
JMIC	**Jan Mayen**	**4.55**	**253**	Pn	Pn	17 19 35.1	-3.2
JMIC	**Jan Mayen**	**4.55**	**253**	Pn	Pn	17 19 35.1	-3.2
	comp=Z,5.1nm,0.3s,baz=94,slow=12,SNR=9.9						
JMIC				LR	LR	17 20 59.7	
	comp=Z,891nm,19.0s,baz=68,slow=34						
JMIC	**Jan Mayen**	**4.55**	**253**	Pn	Pn	17 19 35.1	-3.2
HSP	**Hornsund**	**5.05**	**28**	*e*P	**Pn**	**17 19 46.9**	**+1.7**
LOF	**Lofoten**	**5.52**	**144**	*e*Pn	**Sn**	**17 20 56.1**	**+0.9**
LOF				AML	AML	17 22 02.1	
	comp=Z,20nm,0.7s						
LOF	**Lofoten**	**5.52**	**144**	*e*S	**Sn**	**17 20 56.1**	**+0.9**
LOF				AML	AML	17 22 02.1	
	comp=Z,20nm,0.7s						
LOF	**Lofoten**	**5.52**	**144**	S	**Sn**	**17 20 56.0**	**+0.9**
	comp=Z,20nm,0.7s						
TRO	**Tromso**	**5.54**	**118**	*e*Pn	**Pn**	**17 19 54.4**	**+2.4**
TRO				AML	AML	17 21 00.4	
	comp=Z,33nm,0.6s						
TRO	**Tromso**	**5.54**	**118**	*e*P	**Pn**	**17 19 54.4**	**+2.4**
TRO				AML	AML	17 21 00.4	
	comp=Z,33nm,0.6s						
TRO	**Tromso**	**5.54**	**118**	P	**Pn**	**17 19 54.4**	**+2.4**
STEI	**Steigen**	**6.01**	**139**	*e*Pn	**Pn**	**17 19 59.9**	**+1.5**
STEI				AML	AML	17 21 07.1	
	comp=Z,16nm,0.6s						
STEI	**Steigen**	**6.01**	**139**	*e*P	**Pn**	**17 19 59.9**	**+1.5**
STEI				AML	AML	17 21 07.1	
	comp=Z,16nm,0.6s						
STEI	**Steigen**	**6.01**	**139**	P	**Pn**	**17 19 59.9**	**+1.5**
SPA0	**Spitsbergen Ar**	**6.11**	**23**	Pn	**Pn**	**17 20 01.2**	**+1.5**
baz=200,slow=14							
SPA0	**Spitsbergen Ar**	**6.11**	**23**	*e*P	**Pn**	**17 20 01.7**	**+1.9**
SPA0	**Spitsbergen Ar**	**6.11**	**23**	*e*P	**Pn**	**17 20 01.7**	**+1.9**
SPA0	**Spitsbergen Ar**	**6.11**	**23**	Pn	**Pn**	**17 20 01.2**	**+1.5**
baz=200,slow=13,SNR=102							
SPA0	**Spitsbergen Ar**	**6.11**	**23**	P	**Pn**	**17 20 01.6**	**+1.9**
SPITS	**Spitsbergen Ar**	**6.11**	**23**	Pn	**Pn**	**17 20 01.5**	**+1.8**
SPITS	**Spitsbergen Ar**	**6.11**	**23**	Pn	**Pn**	**17 20 01.5**	**+1.8**
baz=209,slow=17,SNR=67							
SPITS				LR	LR	17 22 01.3	
	comp=Z,390nm,19.1s,baz=235,slow=34						
SPITS	**Spitsbergen Ar**	**6.11**	**23**	P	**Pn**	**17 20 01.5**	**+1.8**
	comp=Z,390nm,19.1s						
KBS	**Kingsbay**	**6.38**	**12**	Pn	**Pn**	**17 20 04.4**	**+0.9**
KBS	**Kingsbay**	**6.38**	**12**	*e*P	**Pn**	**17 20 04.5**	**+1.0**
KBS	**Kingsbay**	**6.38**	**12**	*e*P	**Pn**	**17 20 04.1**	**+0.6**
KBS				pmax	pmax		
	comp=Z,17nm,0.6s						
KBS	**Kingsbay**	**6.38**	**12**	*e*P	**Pn**	**17 20 04.5**	**+1.0**
KBS	**Kingsbay**	**6.38**	**12**	*e*Pn	**Pn**	**17 20 04.1**	**+0.6**
	comp=Z,17nm,0.6s						
KBS				*e*Sg	**Sg**	**17 21 50.4**	**-3.7**
KBS	**Kingsbay**	**6.38**	**12**	*e*P	**Pn**	**17 20 04.1**	**+0.6**
	comp=Z,17nm,0.6s						
KBS	**Kingsbay**	**6.38**	**12**	Pn	**Pn**	**17 20 04.4**	**+0.9**
KIF	**Kilpisjarvi**	**6.46**	**118**	*e*P	**Pn**	**17 20 05.8**	**+1.2**
KIF	**Kilpisjarvi**	**6.46**	**118**	P	**Pn**	**17 20 05.8**	**+1.2**
KONS	**Konsvik**	**6.96**	**152**	*e*Pn	Pn	17 20 01.2	-10
KONS				*e*		17 21 11.4	
KONS				AML	AML	17 21 19.1	
	comp=Z,27nm,0.7s						
KONS	**Konsvik**	**6.96**	**152**	*e*	Pn	17 20 01.2	-10
KONS				*e*		17 21 11.4	
KONS				AML	AML	17 21 19.1	
	comp=Z,27nm,0.7s						
STOK	**Stokkvaagen**	**7.10**	**152**	*e*Pn	**Pn**	**17 20 13.3**	**-0.1**
STOK				*e*Sn	Sn	17 21 27.4	-6.4
STOK				AML	AML	17 21 33.6	
	comp=N,25nm,0.7s						
STOK	**Stokkvaagen**	**7.10**	**152**	*e*P	**Pn**	**17 20 13.3**	**-0.1**
STOK				*e*		17 21 27.4	
STOK				AML	AML	17 21 33.6	
	comp=N,25nm,0.7s						
STOK	**Stokkvaagen**	**7.10**	**152**	P	**Pn**	**17 20 13.2**	**-0.1**
KTK1	**Kautokeino**	**7.11**	**113**	*e*Pn	**Pn**	**17 20 15.3**	**+1.9**
KTK1	**Kautokeino**	**7.11**	**113**	*e*P	**Pn**	**17 20 15.3**	**+1.9**
KTK1	**Kautokeino**	**7.11**	**113**	P	**Pn**	**17 20 15.3**	**+1.9**
DAG	**Danmarks Havn**	**7.30**	**314**	*i* P	Pn	17 20 12.8	-3.2
DAG				*e*S	Sn	17 21 23.9	-15
ARA0	**ARCESS Array S**	**7.42**	**106**	Pn	**Pn**	**17 20 18.4**	**+0.7**
baz=304,slow=10							
ARA0				Sn	**Sn**	**17 21 37.4**	**-4.4**
baz=304,slow=18							
ARA0	**ARCESS Array S**	**7.42**	**106**	Pn	**Pn**	**17 20 18.4**	**+0.7**
baz=304,slow=10							
ARA0				Sn	**Sn**	**17 21 37.4**	**-4.4**
baz=304,slow=18							
ARA0	**ARCESS Array S**	**7.42**	**106**	*e*P	**Pn**	**17 20 19.7**	**+2.0**
ARA0	**ARCESS Array S**	**7.42**	**106**	Pn	**Pn**	**17 20 18.5**	**+0.7**
baz=304,slow=9.6,SNR=50							
ARA0	**ARCESS Array S**	**7.42**	**106**	P	**Pn**	**17 20 19.7**	**+2.0**
ARCES	**ARCESS Array B**	**7.42**	**106**	Pn	**Pn**	**17 20 17.6**	**-0.1**
ARCES				Sn	**Sn**	**17 21 38.0**	**-3.8**
ARCES	**ARCESS Array B**	**7.42**	**106**	Pn	**Pn**	**17 20 17.6**	**-0.1**
	comp=N,1.7nm,0.3s,baz=297,slow=12,SNR=31						
ARCES				Sn	**Sn**	**17 21 38.0**	**-3.8**
	comp=N,0.9nm,0.3s,baz=301,slow=17,SNR=2.2						
ARCES				LR	LR	17 23 33.8	
	comp=N,436nm,18.2s,baz=299,slow=41						
ARCES	**ARCESS Array B**	**7.42**	**106**	P	**Pn**	**17 20 17.6**	**-0.1**
	comp=N,2.0nm,0.3s						
ARE0	**ARCESS Array S**	**7.42**	**106**	*e*Pn	**Pn**	**17 20 18.9**	**+1.2**
ARE0				*e*Pg	**Pg**	**17 20 52.9**	**+1.4**
ARE0	**ARCESS Array S**	**7.42**	**106**	*e*Pn	**Pn**	**17 20 18.9**	**+1.2**
LANU	**Lannavaara**	**7.45**	**121**	*e*P	**Pn**	**17 20 19.3**	**+1.0**
LANU	**Lannavaara**	**7.45**	**121**	P	**Pn**	**17 20 19.2**	**+1.0**
MOR8	**Moi Rana**	**7.46**	**149**	*e*Pn	**Pn**	**17 20 19.3**	**+1.0**
MOR8				AML	AML	17 21 41.6	
	comp=Z,22nm,0.6s						
MOR8	**Moi Rana**	**7.46**	**149**	*e*P	**Pn**	**17 20 19.3**	**+1.0**
MOR8				AML	AML	17 21 41.6	
	comp=Z,22nm,0.6s						
MOR8	**Moi Rana**	**7.46**	**149**	P	**Pn**	**17 20 19.3**	**+1.0**
HEF	**Hetta**	**7.63**	**116**	*e*P	**Pn**	**17 20 22.0**	**+1.4**
HEF	**Hetta**	**7.63**	**116**	P	**Pn**	**17 20 22.0**	**+1.4**
KEV	**Kevo**	**7.72**	**102**	*e*P	**Pn**	**17 20 22.2**	**+0.3**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.2s						
KEV	**Kevo**	**7.72**	**102**	*e*p	**Pn**	**17 20 22.2**	**+0.3**
	comp=Z,2.1nm,0.2s						
KEV	**Kevo**	**7.72**	**102**	*e*P	**Pn**	**17 20 22.5**	**+0.6**
KEV	**Kevo**	**7.72**	**102**	*e*Pn	**Pn**	**17 20 20.8**	**-1.1**
	comp=Z,12nm,0.7s						
KEV	**Kevo**	**7.72**	**102**	*e*Pn	**Pn**	**17 20 20.8**	**-1.1**
	comp=Z,12nm,0.7s						
KEV	**Kevo**	**7.72**	**102**	P	**Pn**	**17 20 22.5**	**+0.6**
SCO	**Scoresbysund**	**8.72**	**268**	*i* P	**Pn**	**17 20 34.0**	**-1.6**
SCO	**Scoresbysund**	**8.72**	**268**	*i* P	**Pn**	**17 20 34.0**	**-1.6**
SCO	**Scoresbysund**	**8.72**	**268**	*i* P	**Pn**	**17 20 34.0**	**-1.6**
SGF	**Sodankyl**	**9.08**	**116**	*e*P	**Pn**	**17 20 41.1**	**+0.5**
SGF	**Sodankyl**	**9.08**	**116**	P	**Pn**	**17 20 41.0**	**+0.5**
RNF	**Rovaniemi**	**9.57**	**120**	*e*P	**Pn**	**17 20 47.2**	**+0.1**
RNF	**Rovaniemi**	**9.57**	**120**	P	**Pn**	**17 20 47.2**	**+0.1**
VRF	**Varrio**	**9.72**	**109**	*e*P	**Pn**	**17 20 50.5**	**+1.2**
VRF	**Varrio**	**9.72**	**109**	P	**Pn**	**17 20 50.4**	**+1.2**
MOL	**Molde**	**10.34**	**173**	*e*Pn	**Pn**	**17 20 56.7**	**-1.0**
MOL	**Molde**	**10.34**	**173**	*e*P	**Pn**	**17 20 56.7**	**-1.0**
MOL	**Molde**	**10.34**	**173**	P	**Pn**	**17 20 56.6**	**-1.0**
APA0	**Apatity Array**	**10.77**	**105**	Pn	**Pn**	**17 21 04.2**	**+0.6**
baz=321,slow=11							
APA0	**Apatity Array**	**10.77**	**105**	Pn	**Pn**	**17 21 04.2**	**+0.6**
baz=321,slow=11							
APA0	**Apatity Array**	**10.77**	**105**	*e*P	**Pn**	**17 21 04.2**	**+0.6**
APA0	**Apatity Array**	**10.77**	**105**	P	**Pn**	**17 21 04.2**	**+0.6**
MSF	**Maaselka**	**10.89**	**117**	*e*P	**Pn**	**17 21 05.6**	**+0.3**
MSF	**Maaselka**	**10.89**	**117**	P	**Pn**	**17 21 05.6**	**+0.3**
LVZ	**Lovozero**	**11.06**	**102**	*i* P	**Pn**	**17 21 07.5**	**-0.1**
LVZ	**Lovozero**	**11.06**	**102**	*i* P	**Pn**	**17 21 07.5**	**-0.1**
KJN	**Kajaani**	**12.03**	**125**	*e*P	**Pn**	**17 21 21.8**	**+1.1**
KJN	**Kajaani**	**12.03**	**125**	P	**Pn**	**17 21 21.8**	**+1.1**
NB2	**NORSAR Subarra**	**12.07**	**165**	Pn	**Pn**	**17 21 21.8**	**+0.4**
baz=345,slow=14							
NB2	**NORSAR Subarra**	**12.07**	**165**	Pn	**Pn**	**17 21 21.8**	**+0.4**
baz=345,slow=14							
NB2	**NORSAR Subarra**	**12.07**	**165**	*e*P	**Pn**	**17 21 21.8**	**+0.4**
NB2	**NORSAR Subarra**	**12.07**	**165**	P	**Pn**	**17 21 21.8**	**+0.4**
NOA	**NORSAR Array B**	**12.07**	**165**	Pn	**Pn**	**17 21 19.6**	**-1.8**
NOA	**NORSAR Array B**	**12.07**	**165**	Pn	**Pn**	**17 21 19.6**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=339,slow=13,SNR=6.5						
NOA				LR	LR	17 25 54.3	
	comp=Z,259nm,18.6s,baz=345,slow=37						
NOA	**NORSAR Array B**	**12.07**	**165**	P	**Pn**	**17 21 19.6**	**-1.8**
	comp=Z,259nm,18.6s						
NAO01	**NORSAR Array S**	**12.24**	**166**	*e*Pn	**Pn**	**17 21 22.1**	**-1.6**
NAO01				*e*Sn	**Sn**	**17 23 37.7**	**-2.3**
NAO01	**NORSAR Array S**	**12.24**	**166**	*e*Pn	**Pn**	**17 21 22.1**	**-1.6**
BORG	**Borgarnes**	**12.33**	**242**	LR	LR	17 24 48.7	
	comp=Z,259nm,18.4s,baz=14,slow=31						
SUMG	**Summit**	**12.69**	**290**	*e*P	**Pn**	**17 21 27.5**	**-2.6**
SUMG	**Summit**	**12.69**	**290**	*e*Pn	**Pn**	**17 21 27.5**	**-2.6**
SUMG	**Summit**	**12.69**	**290**	*e*P	**Pn**	**17 21 27.5**	**-2.6**
HFS	**Hagfors**	**13.19**	**160**	Pn	**Pn**	**17 21 36.3**	**-0.3**
baz=352,slow=12							
HFS	**Hagfors**	**13.19**	**160**	Pn	**Pn**	**17 21 36.3**	**-0.3**
baz=352,slow=12							
HFS	**Hagfors**	**13.19**	**160**	*e*P	**Pn**	**17 21 36.3**	**-0.3**
HFS	**Hagfors**	**13.19**	**160**	Pn	**Pn**	**17 21 34.8**	**-1.8**
HFS				Sn	Sn	17 23 53.5	-9.5
HFS	**Hagfors**	**13.19**	**160**	Pn	**Pn**	**17 21 34.8**	**-1.8**
	comp=Z,1.5nm,0.3s,baz=0.6,slow=13,SNR=56						
HFS				Sn	Sn	17 23 53.5	-9.5
	comp=Z,0.3nm,0.3s,baz=352,slow=21,SNR=3.6						
HFS				LR	LR	17 26 20.0	
	comp=Z,409nm,20.0s,baz=349,slow=36						
HFS	**Hagfors**	**13.19**	**160**	P	**Pn**	**17 21 34.8**	**-1.8**
	comp=Z,409nm,20.0s						
KAF	**Kangasniemi**	**13.40**	**132**	*e*P	**Pn**	**17 21 38.9**	**-0.6**
KAF	**Kangasniemi**	**13.40**	**132**	*e*p	**Pn**	**17 21 38.9**	**-0.6**
KAF	**Kangasniemi**	**13.40**	**132**	*e*P	**Pn**	**17 21 38.9**	**-0.6**
JOF	**Joensuu**	**13.89**	**122**	*e*P	**Pn**	**17 21 44.8**	**-1.4**
JOF				pmax	pmax		
	comp=Z,3.0nm,0.3s						
JOF	**Joensuu**	**13.89**	**122**	*e*p	**Pn**	**17 21 44.8**	**-1.4**
	comp=Z,3.0nm,0.3s						
JOF	**Joensuu**	**13.89**	**122**	*e*P	**Pn**	**17 21 44.8**	**-1.4**
	comp=Z,3.0nm,0.3s						
FIA0	**FINESS Array S**	**13.95**	**134**	Pn	**Pn**	**17 21 46.9**	**-0.1**
baz=337,slow=14							
FIA0	**FINESS Array S**	**13.95**	**134**	Pn	**Pn**	**17 21 46.9**	**-0.1**
baz=337,slow=14							
FIA0	**FINESS Array S**	**13.95**	**134**	*e*P	**Pn**	**17 21 46.9**	**-0.1**
FIA0	**FINESS Array S**	**13.95**	**134**	P	**Pn**	**17 21 46.8**	**-0.1**
FIA1	**FINESS Array S**	**13.95**	**134**	*e*Pn	**Pn**	**17 21 46.2**	**-0.8**
FIA1	**FINESS Array S**	**13.95**	**134**	*e*Pn	**Pn**	**17 21 46.2**	**-0.8**
FINES	**FINESS Array B**	**13.95**	**134**	Pn	**Pn**	**17 21 46.0**	**-0.9**
FINES	**FINESS Array B**	**13.95**	**134**	Pn	**Pn**	**17 21 46.0**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=346,slow=15,SNR=16						
FINES	**FINESS Array B**	**13.95**	**134**	P	**Pn**	**17 21 46.0**	**-0.9**
	comp=Z,1.0nm,0.3s						
KLMR	**Klimovskoe**	**17.77**	**114**	*e*P	**Pn**	**17 22 35.6**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,47nm,1.5s						
EKA	**Eskdalemuir Ar**	**17.86**	**195**	P	**Pn**	**17 22 36.1**	**-1.7**
EKA	**Eskdalemuir Ar**	**17.86**	**195**	P	**Pn**	**17 22 36.1**	**-1.7**
baz=9.8,slow=11,SNR=7.1							
EKA	**Eskdalemuir Ar**	**17.86**	**195**	P	**Pn**	**17 22 36.1**	**-1.7**
ESK	**Eskdalemuir**	**17.88**	**195**	P	**P**	**17 22 39.5**	**+0.8**
ESK				pmax	pmax		
	comp=Z,11nm,1.0s						
ESK	**Eskdalemuir**	**17.88**	**195**	Pn	**P**	**17 22 39.5**	**+0.8**
	comp=Z,11nm,1.0s						
BSEG	**Bad Segeberg**	**19.09**	**170**	*e*P	**Pn**	**17 22 54.3**	**+1.6**
	comp=Z,19nm,1.1s						
BSEG	**Bad Segeberg**	**19.09**	**170**	*e*P	**Pn**	**17 22 54.3**	**+1.6**
BSEG				pmax	pmax		
	comp=Z,19nm,1.1s						
SFJD	**Kangerlussuaq**	**19.24**	**281**	LR	LR	17 29 21.3	
	comp=Z,555nm,18.0s,baz=54,slow=34						
SUW	**Suwalki**	**20.39**	**148**	*e*P	**P**	**17 23 06.0**	**-0.1**
SUW				pmax	pmax		
	comp=Z,54nm,0.8s						
SUW	**Suwalki**	**20.39**	**148**	*e*P	**P**	**17 23 06.0**	**-0.1**
	comp=Z,54nm,0.8s						
SUW	**Suwalki**	**20.39**	**148**	*e*P	Pn	17 23 07.1	-1.1
SUW	**Suwalki**	**20.39**	**148**	*e*P	**P**	**17 23 06.0**	**-0.1**
	comp=Z,54nm,0.8s						
IBBN	**Ibbenburen**	**20.62**	**175**	*e*P	**P**	**17 23 09.6**	**+1.0**
	comp=Z,9.0nm,0.8s						
CLZ	**Clausthal**	**21.18**	**170**	*e*P	**P**	**17 23 16.6**	**+1.8**
	comp=Z,24nm,1.2s						
CLZ	**Clausthal**	**21.18**	**170**	*e*P	**P**	**17 23 16.6**	**+1.8**
CLZ				pmax	pmax		
	comp=Z,24nm,1.2s						
BUG	**Bochum–Univer**	**21.47**	**176**	*e*P	**P**	**17 23 18.5**	**+0.7**
	comp=Z,17nm,1.0s						
CLL	**Collm**	**21.87**	**166**	*e*P	**P**	**17 23 23.0**	**+0.9**
CLL				*e*		17 23 30.0	
CLL	**Collm**	**21.87**	**166**	*e*P	**P**	**17 23 23.0**	**+0.9**
CLL				*e*		17 23 30.0	
CLL				*e*		17 23 34.0	
CLL	**Collm**	**21.87**	**166**	*e*P	**P**	**17 23 23.0**	**+0.9**
NEUB	**Neuenburg**	**21.89**	**168**	*e*P	**P**	**17 23 23.4**	**+1.1**
	comp=Z,21nm,1.1s						
OBN	**Obninsk**	**22.06**	**126**	*i*P	**P**	**17 23 25.5**	**+1.4**
OBN				pmax	pmax		
	comp=Z,16nm,1.0s						
OBN	**Obninsk**	**22.06**	**126**	*e*P	**P**	**17 23 25.5**	**+1.4**
	comp=Z,16nm,1.0s						
BEL	**Belsk**	**22.15**	**153**	*e*P	**P**	**17 23 27.1**	**+2.0**
FBE	**Freiberg**	**22.28**	**166**	*e*P	**P**	**17 23 29.2**	**+2.7**
	comp=Z,38nm,1.7s						
MEM	**Membach**	**22.29**	**178**	P	**P**	**17 23 31.0**	**+4.4**
BRG	**Berggiesshubel**	**22.37**	**165**	*e*P	**P**	**17 23 28.5**	**+1.0**
	comp=Z,17nm,1.7s						
BRG	**Berggiesshubel**	**22.37**	**165**	*e*P	**P**	**17 23 29.9**	**+2.4**
	comp=Z,20nm,

BFO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
BFO	**Black Forest**	**24.61 174**	P	**P**		**17 23 46.8**	**-2.8**
	comp=Z,5.2nm,1.0s						
AKASG	**Malin Array Be**	**24.62 141**	*i* P	**P**		**17 23 50.7**	**+1.1**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKASG	**Malin Array Be**	**24.62 141**	P	**P**		**17 23 50.5**	**+0.8**
AKASG	**Malin Array Be**	**24.62 141**	P	**P**		**17 23 50.5**	**+0.8**
	comp=Z,2.7nm,0.6s,baz=343,slow=9.2,SNR=9.3						
GRR	**Gorron**	**24.64 189**	*e*P	**P**		**17 23 49.5**	**-0.4**
GRR	**Gorron**	**24.64 189**	*e*P	**P**		**17 23 49.5**	**-0.4**
GRR	**Gorron**	**24.64 189**	*e*P	**P**		**17 23 49.5**	**-0.4**
ECH	**Echery**	**24.70 176**	*e*P	**P**		**17 23 51.3**	**+0.9**
ECH				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ECH	**Echery**	**24.70 176**	*e*P	**P**		**17 23 51.3**	**+0.9**
	comp=Z,5.4nm,1.0s						
ROSF	**Rostrenen**	**24.83 193**	*e*P	**P**		**17 23 51.3**	**-0.3**
	comp=Z,12nm,0.9s						
ROSF	**Rostrenen**	**24.83 193**	*e*P	**P**		**17 23 51.3**	**-0.3**
ROSF				pmax	pmax		
	comp=Z,12nm,0.9s						
ROSF	**Rostrenen**	**24.83 193**	*e*P	**P**		**17 23 51.3**	**-0.3**
	comp=Z,12nm,0.9s						
SGMF	**Saint Gilles**	**24.86 192**	*e*P	**P**		**17 23 52.1**	**+0.2**
	comp=Z,7.2nm,0.8s						
SGMF	**Saint Gilles**	**24.86 192**	*e*P	**P**		**17 23 52.1**	**+0.2**
SGMF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SGMF	**Saint Gilles**	**24.86 192**	*e*P	**P**		**17 23 52.1**	**+0.2**
	comp=Z,7.2nm,0.8s						
CRVS	**Cervenica-Dubn**	**25.12 154**	*e*P	**P**		**17 23 55.7**	**+1.5**
CRVS				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CRVS	**Cervenica-Dubn**	**25.12 154**	*e*P	**P**		**17 23 55.7**	**+1.5**
VYHS	**Vyhne**	**25.20 158**	*e*P	**P**		**17 23 57.1**	**+2.2**
VYHS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
VYHS	**Vyhne**	**25.20 158**	*e*P	**P**		**17 23 57.1**	**+2.2**
RJOB	**Jochberg**	**25.41 167**	*e*P	**P**		**17 23 59.1**	**+2.2**
	comp=Z,4.0nm,0.7s						
UZH	**Uzhgorod**	**25.50 152**	*e*P	**P**		**17 23 57.5**	**-0.1**
LOR	**Lormes**	**25.63 182**	*e*P	**P**		**17 23 58.8**	**-0.1**
	comp=Z,11nm,0.8s						
LOR	**Lormes**	**25.63 182**	*e*P	**P**		**17 23 58.8**	**-0.1**
	comp=Z,11nm,0.8s						
SSF	**Saint Saulge**	**25.84 182**	*e*P	**P**		**17 24 01.3**	**+0.6**
	comp=Z,8.0nm,0.9s						
SSF	**Saint Saulge**	**25.84 182**	*e*P	**P**		**17 24 01.3**	**+0.6**
SSF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SSF	**Saint Saulge**	**25.84 182**	*e*P	**P**		**17 24 01.3**	**+0.6**
	comp=Z,8.0nm,0.9s						
PSZ	**Piszkesteto**	**25.89 156**	P	**P**		**17 24 03.0**	**+1.7**
PSZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PSZ	**Piszkesteto**	**25.89 156**	P	**P**		**17 24 03.0**	**+1.7**
	comp=Z,5.9nm,0.9s						
AVF	**Avril sur Loir**	**26.11 182**	*e*P	**P**		**17 24 03.1**	**-0.1**
	comp=Z,9.9nm,0.8s						
AVF	**Avril sur Loir**	**26.11 182**	*e*P	**P**		**17 24 03.1**	**-0.1**
AVF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AVF	**Avril sur Loir**	**26.11 182**	*e*P	**P**		**17 24 03.1**	**-0.1**
	comp=Z,9.9nm,0.8s						
SMF	**Signal de Mont**	**26.25 182**	*e*P	**P**		**17 24 05.1**	**+0.6**
	comp=Z,5.8nm,0.7s						
SMF	**Signal de Mont**	**26.25 182**	*e*P	**P**		**17 24 05.1**	**+0.6**
SMF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SMF	**Signal de Mont**	**26.25 182**	*e*P	**P**		**17 24 05.1**	**+0.6**
	comp=Z,5.8nm,0.7s						
CABF	**La Chapelle**	**26.29 178**	*e*P	**P**		**17 24 06.1**	**+1.2**
	comp=Z,18nm,0.7s						
CABF	**La Chapelle**	**26.29 178**	*e*P	**P**		**17 24 06.1**	**+1.2**
CABF				pmax	pmax		
	comp=Z,18nm,0.7s						
CABF	**La Chapelle**	**26.29 178**	*e*P	**P**		**17 24 06.1**	**+1.2**
	comp=Z,18nm,0.7s						
BGF	**Bois d'Agland**	**26.35 183**	*e*P	**P**		**17 24 05.3**	**-0.1**
	comp=Z,9.2nm,0.7s						
BGF	**Bois d'Agland**	**26.35 183**	*e*P	**P**		**17 24 05.3**	**-0.1**
BGF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
BGF	**Bois d'Agland**	**26.35 183**	*e*P	**P**		**17 24 05.3**	**-0.1**
	comp=Z,9.2nm,0.7s						
MFF	**Saint Martin d**	**26.39 188**	*e*P	**P**		**17 24 06.0**	**+0.3**
MFF	**Saint Martin d**	**26.39 188**	*e*P	**P**		**17 24 06.0**	**+0.3**
MFF	**Saint Martin d**	**26.39 188**	*e*P	**P**		**17 24 06.0**	**+0.3**
TCF	**Toulx Ste Croi**	**26.63 184**	*e*P	**P**		**17 24 07.5**	**-0.5**
	comp=Z,6.3nm,0.7s						
TCF	**Toulx Ste Croi**	**26.63 184**	*e*P	**P**		**17 24 07.5**	**-0.5**
TCF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TCF	**Toulx Ste Croi**	**26.63 184**	*e*P	**P**		**17 24 07.5**	**-0.5**
	comp=Z,6.3nm,0.7s						
FRB	**Frobisher Bay**	**26.76 289**	LR	LR		17 33 30.8	
	comp=Z,120nm,19.1s,baz=157,slow=34						
BUR08	**Bucovina Ar. S**	**26.88 149**	*e*P	**P**		**17 24 11.8**	**+1.5**
ESDC	**Sonseca Array**	**33.50 192**	P	**P**		**17 25 07.7**	**-1.1**
ESDC	**Sonseca Array**	**33.50 192**	P	**P**		**17 25 07.7**	**-1.1**
	comp=Z,0.2nm,0.3s,baz=0,8,slow=9.5,SNR=4.8						
TIP	**Timpagrande**	**34.22 163**	P	**P**		**17 25 13.3**	**-1.8**
RLS	**Riolos of Patr**	**35.80 157**	*e*P	**P**		**17 25 29.5**	**+0.9**
BILL	**Bilibino**	**38.87 11**⇑	*e*P	**P**		**17 25 55.0**	**+0.7**
BILL				pmax	pmax		
	comp=Z,17nm,1.6s						
BILL	**Bilibino**	**38.87 11**	*e*P	**P**		**17 25 56.7**	**+2.4**
	comp=Z,12nm,1.0s						
YKW3	**Yellowknife Ar**	**38.89 320**	P	**P**		**17 25 54.2**	**-0.3**
YKA	**Yellowknife Ar**	**38.95 320**	P	**P**		**17 25 56.0**	**+1.0**
YKA			PcP	**PcP**		**17 28 06.1**	**+0.9**
YKA	**Yellowknife Ar**	**38.95 320**	P	**P**		**17 25 56.0**	**+1.0**
	comp=Z,0.6nm,0.7s,baz=20,slow=9.0,SNR=6.1						
YKA			PcP	**PcP**		**17 28 06.1**	**+0.9**
	comp=Z,1.6nm,0.7s,baz=17,slow=2.8,SNR=16						
ILAR	**Eielson Array**	**41.38 342**	P	**P**		**17 26 17.4**	**+2.2**
ILAR	**Eielson Array**	**41.38 342**	P	**P**		**17 26 17.4**	**+2.2**
	comp=Z,2.0nm,0.7s,baz=8.7,slow=6.5,SNR=21						
FFC	**Flin Flon**	**43.30 306**	*i* P	**P**		**17 26 33.7**	**+2.8**
WALA	**Waterton Lakes**	**51.32 312**	*e*P	**P**		**17 27 33.6**	**+0.1**
EGMT	**Eagleton**	**51.35 309**	*e*P	**P**		**17 27 34.5**	**+0.8**
	comp=Z,4.9nm,0.9s						
ECSD	**EROS Data Cent**	**52.06 296**	*e*P	**P**		**17 27 38.6**	**-0.4**
	comp=Z,2.8nm,1.0s						
BSMT	**Bassoo Peak**	**52.65 313**	*e*P	**P**		**17 27 44.0**	**+0.4**
	comp=Z,1.6nm,0.7s						
NEW	**Newport**	**52.76 315**	P	**P**		**17 27 44.8**	**+0.6**
	comp=Z,2.3nm,0.9s						
NEW	**Newport**	**52.76 315**	P	**P**		**17 27 45.0**	**+0.8**
	comp=Z,0.8nm,0.5s,baz=30,slow=7.7,SNR=3.4						
SLMT	**Seeley Lake**	**52.94 311**	*e*P	**P**		**17 27 45.6**	**-0.1**
	comp=Z,4.0nm,0.8s						
CHMT	**Chamberlain Mo**	**53.20 311**	*e*P	**P**		**17 27 47.4**	**-0.2**
	comp=Z,2.0nm,0.8s						
IMW	**Indian Meadow**	**55.52 308**	*e*P	**P**		**17 28 06.4**	**+1.7**
	comp=Z,3.4nm,0.8s						
PDAR	**Pinedale Array**	**56.26 306**	P	**P**		**17 28 10.5**	**+0.6**
PDAR	**Pinedale Array**	**56.26 306**	P	**P**		**17 28 10.5**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=57,slow=9.8,SNR=3.6						
HLID	**Hailey**	**56.64 311**	*e*P	**P**		**17 28 12.5**	**0.0**
	comp=Z,5.5nm,1.3s						
TOA0	**Torodi Ar. Sit**	**59.67 184**	*e*P	**P**		**17 28 33.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**59.67 184**	P	**P**		**17 28 33.6**	**-0.2**
TORD	**Torodi Ar. Bea**	**59.67 184**	P	**P**		**17 28 33.6**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=358,slow=6.8,SNR=22						
WMOK	**Wichita Mounta**	**61.06 294**	P	**P**		**17 28 43.1**	**-0.1**
WMOK	**Wichita Mounta**	**61.06 294**	*e*P	**P**		**17 28 43.1**	**-0.1**
	comp=Z,21nm,1.7s						
ERM	**Erimo**	**61.89 34**	*e*P	**P**		**17 28 47.3**	**-1.3**
NVAR	**Mina Array Bea**	**62.40 312**	P	**P**		**17 28 53.6**	**+1.2**
NVAR	**Mina Array Bea**	**62.40 312**	P	**P**		**17 28 53.6**	**+1.2**
	comp=Z,0.6nm,0.7s,baz=35,slow=4.7,SNR=4.7						
TXAR	**Lajitas Array**	**67.49 296**	P	**P**		**17 29 25.3**	**-0.1**
TXAR	**Lajitas Array**	**67.49 296**	P	**P**		**17 29 25.3**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=64,slow=4.9,SNR=14						

*ISCJB **13** 17:24:40.0±1.0, 40.47N±0.03×21.50E±0.06, h11km±9km, Error ellipse: s-maj=7.6km s-min=5.2km az=171.2*
*ATH **13** 17:24:39.8, 40.48N×21.52E, h19km±1km, MD3.2/11*
*CSEM **13** 17:24:39.8, 40.48N×21.52E, h19km, MD3.2, After ATH*
*SKO **13** 17:24:39.4, 40.37N×21.33E, h0km*
ISC 13 17:24:40.3±1.0, **40.50N**±0.03×**21.55E**±0.03, **h20**km±5km, **n36**, σ**8**°**75**/45, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	**0.25**	**138**	*e*PB	**Pb**	**17 24 45.5**	**-0.7**
KZN				*e*SB	**Sb**	**17 24 49.9**	**-0.2**
KZN	**Kozani**	**0.25**	**138**	*e*Pb	**Pb**	**17 24 45.5**	**-0.7**
KZN				*e*Sb	**Sb**	**17 24 49.9**	**-0.2**
FNA	**Florina**	**0.32**	**335**	*e*PB	**Pg**	**17 24 46.9**	**-0.5**
FNA				*e*SB	**Sg**	**17 24 51.8**	**-0.4**
FNA	**Florina**	**0.32**	**335**	*e*Pb	**Pg**	**17 24 46.9**	**-0.5**
FNA				*e*Sb	**Sg**	**17 24 51.8**	**-0.4**
BIA	**Bitola**	**0.55**	**342**	*e*Pg	**Pb**	**17 24 50.8**	**-0.6**
BIA				*e*Sg	**Sg**	**17 25 00.3**	**+1.3**
GRG	**Griva**	**0.79**	**54**	*e*PN	**Pn**	**17 24 56.5**	**0.0**
GRG	**Griva**	**0.79**	**54**	*e*Pn	**Pn**	**17 24 56.5**	**0.0**
LIT	**Litokhoron**	**0.82**	**118**	*e*PN	**Pb**	**17 24 56.0**	**+0.1**
LIT	**Litokhoron**	**0.82**	**118**	*e*Pn	**Pb**	**17 24 56.0**	**+0.1**
JAN	**Janina**	**0.99**	**213**	*e*PN	**Pb**	**17 24 58.9**	**0.0**
JAN	**Janina**	**0.99**	**213**	*e*Pn	**Pb**	**17 24 58.9**	**0.0**
THL	**Klokotos Trika**	**0.99**	**159**	*e*PB	**Pb**	**17 24 57.6**	**-1.3**
THL				*e*SN	**Sg**	**17 25 12.4**	**-0.4**
THL	**Klokotos Trika**	**0.99**	**159**	*e*Pb	**Pb**	**17 24 57.6**	**-1.3**
THL				*e*Sn	**Sg**	**17 25 12.4**	**-0.4**
SOH	**Sokhos**	**1.41**	**76**	*e*PN	**Pg**	**17 25 07.0**	**-0.6**
SOH				*e*SN	**Sg**	**17 25 26.9**	**+0.9**
SOH	**Sokhos**	**1.41**	**76**	*e*Pn	**Pg**	**17 25 07.0**	**-0.6**
SOH				*e*Sn	**Sg**	**17 25 26.9**	**+0.9**
PLG	**Polygyros**	**1.45**	**94**	*e*PN	**Pb**	**17 25 06.4**	**-0.3**
PLG	**Polygyros**	**1.45**	**94**	*e*P	**Pg**	**17 25 08.3**	**-0.1**
PLG	**Polygyros**	**1.45**	**94**	*e*Pn	**Pb**	**17 25 06.4**	**-0.3**
KEK	**Kerkira**	**1.55**	**240**	*e*PN	**Pb**	**17 25 07.7**	**-0.7**
KEK	**Kerkira**	**1.55**	**240**	*e*P	**Pg**	**17 25 10.0**	**-0.3**
KEK	**Kerkira**	**1.55**	**240**	*e*Pn	**Pb**	**17 25 07.7**	**-0.7**
AGG	**Agios Georgios**	**1.59**	**158**	*e*PN	**Pb**	**17 25 08.6**	**-0.5**
AGG	**Agios Georgios**	**1.59**	**158**	*e*P	**Pn**	**17 25 08.1**	**+0.7**
AGG	**Agios Georgios**	**1.59**	**158**	*e*Pn	**Pb**	**17 25 08.6**	**-0.5**
EVR	**Evrytania**	**1.59**	**173**	*e*P	**Pn**	**17 25 07.6**	**+0.1**
LKD2	**Lefkada island**	**1.84**	**202**	*e*PN	**Pb**	**17 25 12.7**	**-0.6**
LKD2	**Lefkada island**	**1.84**	**202**	*e*P	**Pb**	**17 25 12.9**	**-0.4**
LKD2	**Lefkada island**	**1.84**	**202**	*e*Pn	**Pb**	**17 25 12.7**	**-0.6**
EFP	**Efpalio**	**2.08**	**172**	*e*P	**Pb**	**17 25 16.6**	**-0.9**
TRIZ	**Trizonia**	**2.17**	**169**	*e*P	**Pb**	**17 25 17.8**	**-1.0**
VLS	**Valsamata**	**2.43**	**198**	*e*PB	**Pn**	**17 25 20.4**	**+1.4**
VLS	**Valsamata**	**2.43**	**198**	*e*Pb	**Pn**	**17 25 20.4**	**+1.4**
KLV	**Kalavryta, Ach**	**2.49**	**169**	*e*P	**Pb**	**17 25 25.7**	**+1.2**
GUR	**Goura**	**2.63**	**166**	*e*P	**Pb**	**17 25 25.6**	**-1.2**
PYL	**PYLOS**	**3.60**	**178**	*e*P	**Pn**	**17 25 36.0**	**+1.0**
STON	**Ston**	**3.73**	**311**	P	**Pn**	**17 25 37.5**	**+0.7**

NNC 13 17:25:23.6±2.0, **44.66N**×**79.02E**, **h0**km, **mb5.3, mpv5.0, 3C-5D, Error ellipse: s-maj=38.6km s-min=14.6km az=137.0, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDC	**Almaty**	**2.07**	**227**	⇓Pn	Pb	17 26 01.1	-1.1
	baz=226,slow=27						
KNDC				⇑Sn	Sb	17 26 28.0	-0.5
	baz=226,slow=27						
TKM2	**Tokmak 2**	**3.03**	**236**	⇑Pn	Pn	17 26 12.1	-1.0
	602nm,1.0s,baz=226,slow=27						
TKM2				⇑Lg	Lg	17 26 55.9	
	239nm,0.6s,baz=226,slow=27						
MK31	**Makanchi Array**	**3.13**	**46**	⇓Pg	Pg	17 26 22.2	-1.4
	314nm,0.8s,baz=222,slow=16,SNR=4.6						
MK31				⇓Lg	Lg	17 26 59.1	
	155nm,0.8s,baz=226,slow=27,SNR=4.7						
KK31	**Karatay Array**	**6.34**	**259**	⇓Pn	Pn	17 26 56.5	-1.9
	170nm,0.9s,baz=73,slow=13,SNR=2.6						
KK31				⇓Lg	Lg	17 28 39.5	
	58nm,0.6s,baz=68,slow=29,SNR=4.9						

IDC 13 17:32:50.4±1.4, **21.25N**×**145.21E**, **h0**km, **mb3.4**/4, **mb1 3.7**/4, **mb1mx3.4**/26, **mbtmp3.4**/4, **Error ellipse: s-maj=50.7km s-min=28.7km az=91.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**22.03**	**321**	P	P	17 37 46.8	+0.3
	0.5nm,0.6s,baz=147,slow=8.9,SNR=5.0						
WRA	**Warramunga Arr**	**42.30**	**195**	P	P	17 40 46.1	0.0
	0.3nm,0.5s,baz=16,slow=8.8,SNR=4.7						
ASAR	**Alice Springs**	**45.98**	**194**	P	P	17 41 15.3	-0.3
	0.4nm,0.7s,baz=18,slow=8.4,SNR=5.0						
NVAR	**Mina Array Bea**	**81.94**	**52**	P	P	17 45 12.5	-0.1
	0.4nm,0.6s,baz=288,slow=4.9,SNR=3.7						

IDC 13 17:55:10.0±48.0, **16.31S**×**172.13W**, **h0**km, **mb4.0**/3, **mb1 4.2**/3, **mb1mx3.7**/21, **mbtmp4.0**/3, **Error ellipse: s-maj=936.8km s-min=183.4km az=80.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**44.65**	**241**	P	P	18 03 25.4	+0.7
	1.7nm,0.9s,baz=79,slow=16,SNR=3.9						
WRA	**Warramunga Arr**	**50.83**	**257**	P	P	18 04 12.1	-0.7
	0.4nm,0.4s,baz=97,slow=7.0,SNR=31						
ASAR	**Alice Springs**	**51.00**	**253**	P	P	18 04 14.1	-0.1
	3.7nm,0.5s,baz=89,slow=8.3,SNR=126						

*ISCJB **13** 18:01:33.6±0.2, 43.70N±0.02×105.31W±0.03, h0km, mb4.1/2, Error ellipse: s-maj=2.8km s-min=2.5km az=139.2*
*NEIC **13** 18:01:34.5±0.3, 43.75N×105.25W, h0km, ML3.4, Error ellipse: s-maj=4.9km s-min=3.9km az=154.0, Suspected Mining explosion.*
NEIC 65 km [40 miles] SSE of Gillette.
*IDC **13** 18:01:35.6±0.8, 44.00N×105.74W, h0km, mb4.0/2, mb1 3.8/7, mb1mx3.5/31, mbtmp3.6/7, ML3.4/5, Error ellipse: s-maj=17.8km s-min=7.7km az=147.0*
ISC 13 18:01:34.3±0.6, **43.71N**±0.02×**105.31W**±0.02, **h0**km, **n130**, σ**1**°**03**/145, **30C-28D, Wyoming**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I23A	**Meade Ranch, G**	**0.28**	**336**	⇓P	**Pb**	**18 01 41.2**	**-1.0**
	baz=0.3,SNR=56						
I23A	**Meade Ranch, G**	**0.28**	**336**	⇓P	**Pb**	**18 01 41.2**	**-1.0**
	baz=0.3,SNR=56						
J23A	**Dilts Ranch, B**	**0.35**	**210**	P	**Pg**	**18 01 41.8**	**+0.8**
	baz=0.4,SNR=548						
J23A	**Dilts Ranch, B**	**0.35**	**210**	P	**Pg**	**18 01 41.8**	**+0.8**
	baz=0.4,SNR=548						
I24A	**Kuemmerle Ranc**	**0.52**	**73**	⇓P	**Pg**	**18 01 45.2**	**+1.0**
	baz=0.5,SNR=266						
I24A	**Kuemmerle Ranc**	**0.52**	**73**	⇓P	**Pg**	**18 01 45.2**	**+1.0**
	baz=0.5,SNR=266						
J24A	**Dixon Ranch, L**	**0.60**	**128**	⇑P	**Pg**	**18 01 46.3**	**+0.5**
	baz=0.6,SNR=10						
J24A	**Dixon Ranch, L**	**0.60**	**128**	⇑P	**Pg**	**18 01 46.3**	**+0.5**
	baz=0.6,SNR=10						
H23A	**Clabaugh Cattl**	**0.86**	**356**	P	**Pg**	**18 01 51.1**	**+0.5**
	baz=0.8,SNR=27						
H23A	**Clabaugh Cattl**	**0.86**	**356**	P	**Pg**	**18 01 51.1**	**+0.5**
	baz=0.8,SNR=27						
I22A	**9 Mile Ranch,**	**0.87**	**283**	P	**Pg**	**18 01 51.4**	**+0.5**
	baz=0.9,SNR=241						
I22A				⇑S	**Sg**	**18 02 03.5**	**+1.3**
	baz=0.9						
I22A	**9 Mile Ranch,**	**0.87**	**283**	P	**Pg**	**18 01 51.4**	**+0.5**
	baz=0.9,SNR=241						
I22A				⇑S	**Sg**	**18 02 03.5**	**+1.3**
	baz=0.9						
J22A	**Midwest**	**0.90**	**251**	P	**Pg**	**18 01 51.4**	**-0.1**
	baz=1.0,SNR=199						
J22A	**Midwest**	**0.90**	**251**	P	**Pg**	**18 01 51.4**	**-0.1**
	baz=1.0,SNR=199						
RSSD	**Black Hills**	**1.01**	**65**	*e*Pg	**Pg**	**18 01 53.8**	**+0.2**
K24A	**Anderson Ranch**	**1.05**	**160**	P	**Pg**	**18 01 54.4**	**0.0**
	baz=1.1,SNR=154						
K24A	**Anderson Ranch**	**1.05**	**160**	P	**Pg**	**18 01 54.4**	**0.0**
	baz=1.1,SNR=154						
J25A	**Sunshine Ranch**	**1.14**	**106**	⇑P	**Pg**	**18 01 56.0**	**-0.1**
	baz=1.1						
J25A	**Sunshine Ranch**	**1.14**	**106**	⇑P	**Pg**	**18 01 56.0**	**-0.1**
	baz=1.1						
H22A	**Clearmont**	**1.16**	**320**	⇓P	**Pg**	**18 01 57.1**	**+0.5**
	baz=1.2,SNR=22						
H22A	**Clearmont**	**1.16**	**320**	⇓P	**Pg**	**18 01 57.1**	**+0.5**
	baz=1.2,SNR=22						
H24A	**Dirks Ranch, A**	**1.17**	**27**	P	**Pg**	**18 01 56.6**	**-0.1**
	baz=1.1,SNR=297						
H24A	**Dirks Ranch, A**	**1.17**	**27**	P	**Pg**	**18 01 56.6**	**-0.1**
	baz=1.1,SNR=297						
K22A	**Casper**	**1.38**	**220**	Pb	**Pn**	**18 01 59.9**	**-1.1**
	baz=1.4,SNR=220						
K22A	**Casper**	**1.38**	**220**	Pb	**Pn**	**18 01 59.9**	**-1.1**
	baz=1.4,SNR=220						
I21A	**Big Trails, Te**	**1.44**	**275**	⇓Pb	**Pn**	**18 02 01.0**	**-0.7**
	baz=1.5,SNR=335						
I21A				⇓Sb	**Sg**	**18 02 20.3**	**-0.2**
	baz=1.5						
I21A	**Big Trails, Te**	**1.44**	**275**	⇓Pb	**Pn**	**18 02 01.0**	**-0.7**
	baz=1.5,SNR=335						
I21A				⇓Sb	**Sg**	**18 02 20.3**	**-0.2**
	baz=1.5						
G23A	**Biddle**	**1.49**	**358**	⇓Pb	**Pn**	**18 02 02.4**	**-0.1**
	baz=1.5,SNR=137						
G23A	**Biddle**	**1.49**	**358**	⇓Pb	**Pn**	**18 02 02.4**	**-0.1**
	baz=1.5,SNR=137						
H21A	**Big Horn, Sher**	**1.55**	**307**	Pb	**Pb**	**18 02 03.8**	**-0.2**
	baz=1.6,SNR=116						
H21A	**Big Horn, Sher**	**1.55**	**307**	Pb	**Pb**	**18 02 03.8**	**-0.2**
	baz=1.6,SNR=116						
J21A	**Lysite**	**1.59**	**258**	Pb	**Pn**	**18 02 03.5**	**-0.5**
	baz=1.6,SNR=140						
J21A	**Lysite**	**1.59**	**258**	Pb	**Pn**	**18 02 03.5**	**-0.5**
	baz=1.6,SNR=140						
L23A	**Garrett**	**1.62**	**190**	Pb	**Pn**	**18 02 03.9**	**-0.4**
	baz=1.7,SNR=298						
L23A	**Garrett**	**1.62**	**190**	Pb	**Pn**	**18 02 03.9**	**-0.4**
	baz=1.7,SNR=298						
G22A	**Birney**	**1.67**	**335**	⇓Pb	**Pb**	**18 02 05.8**	**-0.1**
	baz=1.8,SNR=72						
G22A	**Birney**	**1.67**	**335**	⇓Pb	**Pb**	**18 02 05.8**	**-0.1**
	baz=1.6,SNR=72						
L24A	**Wheatland**	**1.69**	**170**	⇑Pb	**Pn**	**18 02 05.3**	**+0.1**
	baz=1.7,SNR=59						
L24A	**Wheatland**	**1.69**	**170**	⇑Pb	**Pn**	**18 02 05.3**	**+0.1**
	baz=1.7,SNR=59						
G24A	**Alzada**	**1.74**	**21**	⇑Pb	**Pb**	**18 02 06.8**	**-0.3**
	baz=1.7,SNR=30						
G24A	**Alzada**	**1.74**	**21**	⇑Pb	**Pb**	**18 02 06.8**	**-0.3**
	baz=1.7,SNR=30						
L25A	**Engebretsen Ra**	**1.84**	**147**	⇑Pb	**Pn**	**18 02 08.5**	**+1.3**
	baz=1.9,SNR=47						
L25A	**Engebretsen Ra**	**1.84**	**147**	⇑Pb	**Pn**	**18 02 08.5**	**+1.3**
	baz=1.9,SNR=47						
K26A	**Motz Farm, Whi**	**1.85**	**122**	⇑Pb	**Pn**	**18 02 08.4**	**+1.0**
	baz=1.8						
K26A	**Motz Farm, Whi**	**1.85**	**122**	⇑Pb	**Pn**	**18 02 08.4**	**+1.0**
	baz=1.8						
L22A	**Ellis Ranch, M**	**1.87**	**207**	Pb	**Pn**	**18 02 08.2**	**+0.5**
	baz=1.9,SNR=165						
L22A	**Ellis Ranch, M**	**1.87**	**207**	Pb	**Pn**	**18 02 08.2**	**+0.5**
	baz=1.9,SNR=165						
F23A	**Volborg**	**2.01**	**358**	Pb	**Pn**	**18 02 10.4**	**+0.9**
	baz=2.0,SNR=110						
F23A				⇑Sb	**Sg**	**18 02 38.1**	**-0.8**
	baz=2.0						
F23A	**Volborg**	**2.01**	**358**	Pb	**Pn**	**18 02 10.4**	**+0.9**
	baz=2.0,SNR=110						
F23A				⇑Sb	**Sg**	**18 02 38.1**	**-0.8**
	baz=2.0						
G21A	**Lodge Grass**	**2.04**	**319**	⇓Pb	**Pn**	**18 02 11.0**	**+1.1**
	baz=2.0						
G21A				⇓Sb	**Sb**	**18 02 38.6**	**+0.4**
	baz=2.0						
G21A	**Lodge Grass**	**2.04**	**319**	⇓Pb	**Pn**	**18 02 11.0**	**+1.1**
	baz=2.0						
G21A				⇓Sb	**Sb**	**18 02 38.6**	**+0.4**
	baz=2.0						
I20A	**Worland**	**2.05**	**278**	Pb	**Pn**	**18 02 11.3**	**+1.1**
	baz=2.1,SNR=466						
I20A				⇑Sb	**Sb**	**18 02 38.6**	**-0.1**
	baz=2.1						
I20A	**Worland**	**2.05**	**278**	Pb	**Pn**	**18 02 11.3**	**

LRM	**Limekiln Ridge**	**5.51**	**295**	*e*Pn	**Pn**	**18 02 58.6**	**+0.9**
DAU	**Daniels Canyon**	**5.52**	**235**	*e*Pn	**Pn**	**18 02 59.2**	**+1.3**
JLU	**Jordanelle**	**5.52**	**238**	*e*Pn	**Pn**	**18 02 58.3**	**+0.4**
MCMT	**McKenzie Canyo**	**5.53**	**284**	Pn	**Pn**	**18 02 59.3**	**+1.3**
HVU	**Hansel Valley**	**5.83**	**253**	*e*Pn	**Pn**	**18 03 02.6**	**+0.6**
MPU	**Maple Canyon**	**5.99**	**234**	*e*Pn	**Pn**	**18 03 02.2**	**-2.1**
ECSD	**EROS Data Cent**	**6.30**	**87**	*e*Pn	**Pn**	**18 03 08.5**	**+0.1**
CHMT	**Chamberlain Mo**	**6.45**	**303**	*e*Pn	**Pn**	**18 03 11.2**	**+0.6**
DUG	**Dugway**	**6.60**	**240**	*e*Pn	**Pn**	**18 03 12.8**	**+0.1**
HLID	**Hailey**	**6.61**	**272**	*e*Pn	**Pn**	**18 03 13.8**	**+1.0**
SLMT	**Seeley Lake**	**6.75**	**304**	*e*Pn	**Pn**	**18 03 14.8**	**0.0**
MSO	**Missoula**	**6.84**	**300**	*e*Pn	**Pn**	**18 03 15.2**	**-0.7**
SWMT	**Swartz Lake**	**7.18**	**305**	*e*Pn	**Pn**	**18 03 21.5**	**+0.9**
MSU	**Marysvale**	**7.33**	**227**	*e*Pn	**Pn**	**18 03 23.8**	**+1.0**
YBMT	**Yellow Bay**	**7.37**	**307**	*e*Pn	**Pn**	**18 03 22.6**	**-0.5**
ELK	**Elko**	**7.94**	**252**	Pn	**Pn**	**18 03 32.4**	**+1.2**
ELK	**Elko**	**7.94**	**252**	Pn	**Pn**	**18 03 32.4**	**+1.2**
	0.3nm,0.3s,baz=65,slow=14,SNR=4.8						
WALA	**Waterton Lakes**	**8.00**	**315**	*e*Pn	**Pn**	**18 03 31.9**	**+0.1**
WALA				*e*Sg	Sb	18 05 36.3	+6.8
AGMN	**Agassiz Nation**	**8.02**	**52**	*e*Pn	**Pn**	**18 03 29.4**	**-2.6**
CCUT	**Cedar City**	**8.68**	**228**	*e*Pn	**Pn**	**18 03 42.6**	**+1.4**
ULM	**Lac du Bonnet**	**9.18**	**41**	Pn	**Pn**	**18 03 47.3**	**-0.6**
ULM				Lg	Lg	18 06 17.1	
ULM	**Lac du Bonnet**	**9.18**	**41**	Pn	**Pn**	**18 03 47.3**	**-0.6**
	2.7nm,0.3s,baz=234,slow=11,SNR=8.2						
ULM				Lg	Lg	18 06 17.1	
	0.5nm,0.3s,baz=304,slow=16,SNR=2.4						
NEW	**Newport**	**9.40**	**303**	Lg	Lg	18 06 15.2	
	0.1nm,0.3s,baz=49,slow=17,SNR=2.3						
NVAR	**Mina Array Bea**	**11.13**	**246**	Pn	**Pn**	**18 04 16.7**	**+1.9**
NVAR	**Mina Array Bea**	**11.13**	**246**	Pn	**Pn**	**18 04 16.7**	**+1.9**
	0.1nm,0.3s,baz=61,slow=12,SNR=3.6						
FFC	**Flin Flon**	**11.24**	**10**	*e*Pn	**Pn**	**18 04 14.1**	**-1.9**
YBH	**Yreka Blue Hor**	**12.95**	**267**	Pn	Pn	18 04 44.2	+4.6
YBH	**Yreka Blue Hor**	**12.95**	**267**	Pn	Pn	18 04 44.2	+4.6
	0.1nm,0.3s,baz=97,slow=6.5,SNR=4.4						
TXAR	**Lajitas Array**	**14.41**	**174**	Pn	**P**	**18 05 07.3**	**+0.6**
TXAR				Pg	P	18 06 02.9	+56
TXAR				Lg	Lg	18 09 13.4	
TXAR	**Lajitas Array**	**14.41**	**174**	Pn	**P**	**18 05 07.3**	**+0.6**
	0.1nm,0.3s,baz=345,slow=6.5,SNR=3.1						
TXAR				Pg		18 06 02.9	
	0.1nm,0.3s,baz=7.9,slow=16,SNR=4.0						
TXAR				Lg	Lg	18 09 13.4	
	0.1nm,0.3s,baz=12,slow=21,SNR=4.0						
ARCES	**ARCESS Array B**	**61.45**	**18**	P	**P**	**18 11 52.6**	**+0.7**
ARCES	**ARCESS Array B**	**61.45**	**18**	P	**P**	**18 11 52.6**	**+0.7**
	1.8nm,0.8s,baz=337,slow=5.8,SNR=7.4						
ZALV	**Zalesovo Beam**	**82.33**	**354**	P	**P**	**18 13 56.9**	**-0.6**
ZALV	**Zalesovo Beam**	**82.33**	**354**	P	**P**	**18 13 56.9**	**-0.6**
	0.4nm,0.3s,baz=355,slow=4.9,SNR=3.4						

DDA ***13*** *18:07:38.1,38°.58N×25°.19E,h2km,MD3.3*
ISCJB ***13*** *18:07:40.6±0.7,38°.54N±0°.02×25°.24E±0°.02,h6km±6km, Error ellipse: s-maj=3.5km s-min=2.6km az=169.5*
CSEM ***13*** *18:07:40.7±0.1,38°.53N×25°.21E,h2km,MD3.3,Error ellipse: s-maj=3.9km s-min=2.8km az=175.0*
THE ***13*** *18:07:41.8,38°.57N×25°.30E,h13km±1km,ML3.6/2,Error ellipse: s-maj=1.7km s-min=0.4km az=114.0*
ATH ***13*** *18:07:41.4,38°.55N×25°.34E,h43km±2km,MD3.3/16*
ISK ***13*** *18:07:41.0,38°.49N×25°.19E,h17km,ML3.4*

ISC 13 18:07:40.3±1.1,38°.55N±0°.02×25°.23E±0°.02,h8km±9km, n155,σ1°33/185,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
CHOS	**Chios island**	**0.67**	**104**	P		**Pb**	**18 07 54.3**	**0.0**
CHOS				S		**Sg**	**18 08 02.6**	**+0.6**
CHOS	**Chios island**	**0.67**	**104**	*e*P		**Pb**	**18 07 54.5**	**+0.2**
CHOS				*e*S		**Sg**	**18 08 02.8**	**+0.8**
CHOS	**Chios island**	**0.67**	**104**	P		**Pb**	**18 07 54.3**	**0.0**
CHOS				*e*S		**Sg**	**18 08 02.8**	**+0.8**
SIGR	**SIGRI**	**0.82**	**36**	P		**Pb**	**18 07 56.5**	**-0.3**
SIGR				S		**Sg**	**18 08 07.5**	**+0.7**
SIGR	**SIGRI**	**0.82**	**36**	P		**Pb**	**18 07 56.5**	**-0.3**
SIGR				S		**Sg**	**18 08 07.5**	**+0.7**
MRMA	**Marmari**	**0.83**	**234**	P		**Pn**	**18 07 58.8**	**+0.5**
MRMA				S		**Sn**	**18 08 10.9**	**+0.1**
MRMA	**Marmari**	**0.83**	**234**	P		**Pn**	**18 07 58.8**	**+0.5**
MRMA				S		**Sn**	**18 08 10.9**	**+0.1**
PRK	**Paraskevi**	**1.07**	**49**	P		**Pb**	**18 08 00.7**	**-0.3**
PRK				S		**Sg**	**18 08 15.1**	**+0.4**
PRK	**Paraskevi**	**1.07**	**49**	*e*P		**Pb**	**18 08 00.7**	**-0.3**
PRK				*e*S		**Sg**	**18 08 14.0**	**-0.7**
PRK	**Paraskevi**	**1.07**	**49**	*e*P		**Pb**	**18 08 00.7**	**-0.3**
PRK				S		**Sg**	**18 08 15.1**	**+0.4**
URLA	**Izmir**	**1.09**	**100**	*e*P		**Pb**	**18 08 00.3**	**-1.1**
URLA				*i* S		**Sg**	**18 08 15.7**	**+0.3**
URLA	**Izmir**	**1.09**	**100**	*e*P		**Pb**	**18 08 00.3**	**-1.1**
URLA				*i* S		**Sg**	**18 08 15.7**	**+0.3**
PTL	**Penteli**	**1.19**	**245**	P		**Pg**	**18 08 03.6**	**+0.5**
PTL				S		**Sn**	**18 08 20.8**	**+1.3**
PTL	**Penteli**	**1.19**	**245**	P		**Pg**	**18 08 03.6**	**+0.5**
PTL				S		**Sn**	**18 08 20.8**	**+1.3**
AOS	**Alonnisos**	**1.22**	**301**	P		**Pg**	**18 08 04.1**	**+0.3**
AOS	**Alonnisos**	**1.22**	**301**	*e*P		**Pg**	**18 08 04.5**	**+0.7**
AOS				*e*S		**Sn**	**18 08 21.5**	**+1.1**
AOS	**Alonnisos**	**1.22**	**301**	P		**Pg**	**18 08 04.1**	**+0.3**
AOS				*e*S		**Sn**	**18 08 21.5**	**+1.1**
MRKA	**Markates**	**1.30**	**277**	P		**Pg**	**18 08 05.0**	**-0.2**
MRKA				S		**Sg**	**18 08 23.5**	**+1.5**
MRKA	**Markates**	**1.30**	**277**	P		**Pg**	**18 08 05.0**	**-0.2**
MRKA				S		**Sg**	**18 08 23.5**	**+1.5**
LIA	**Limnos Island**	**1.34**	**358**	P		**Pn**	**18 08 05.0**	**-0.4**
LIA				S		**Sg**	**18 08 23.5**	**-0.1**
LIA	**Limnos Island**	**1.34**	**358**	*e*P		**Pn**	**18 08 04.9**	**-0.4**
LIA				*e*S		**Sb**	**18 08 21.6**	**-1.5**
LIA	**Limnos Island**	**1.34**	**358**	P		**Pn**	**18 08 05.0**	**-0.4**
LIA				S		**Sg**	**18 08 23.5**	**-0.1**
AYVA	**Ayvalik**	**1.37**	**56**	*e*P		**Pn**	**18 08 05.1**	**-0.6**
AYVA				*i* S		**Sg**	**18 08 24.7**	**+0.4**
AYVA	**Ayvalik**	**1.37**	**56**	*e*P		**Pn**	**18 08 05.1**	**-0.6**
AYVA				*i* S		**Sg**	**18 08 24.7**	**+0.4**
BLCB	**Balcova**	**1.43**	**96**	*e*PN		**Pg**	**18 08 07.5**	**-0.3**
BLCB				*e*SN		**Sg**	**18 08 26.3**	**-0.1**
BLCB	**Balcova**	**1.43**	**96**	*e*Pn		**Pg**	**18 08 07.5**	**-0.3**
BLCB				*e*Sn		**Sg**	**18 08 26.3**	**-0.1**
BOZC	**Bozcaada**	**1.44**	**26**	*e*P		**Pn**	**18 08 05.3**	**-1.3**
BOZC				*i* S		**Sn**	**18 08 25.2**	**-0.6**
APE	**Apeiranthos**	**1.50**	**171**	*e*PN		**Pn**	**18 08 07.2**	**-0.4**
APE				*e*SN		**Sn**	**18 08 26.3**	**-1.0**
APE	**Apeiranthos**	**1.50**	**171**	P		**Pn**	**18 08 07.2**	**-0.4**
APE	**Apeiranthos**	**1.50**	**171**	*e*P		**Pn**	**18 08 07.2**	**-0.4**
APE				*e*S		**Sn**	**18 08 25.5**	**-1.8**
APE	**Apeiranthos**	**1.50**	**171**	P		**Pn**	**18 08 07.2**	**-0.4**
APE				*e*S		**Sn**	**18 08 25.5**	**-1.8**
APE				*e*Sn		**Sn**	**18 08 26.3**	**-1.0**
SKIA	**Skiathos**	**1.51**	**295**	P		**Pg**	**18 08 08.4**	**-0.9**
SKIA	**Skiathos**	**1.51**	**295**	P		**Pg**	**18 08 08.4**	**-0.9**
SMG	**Samos**	**1.52**	**123**	P		**Pn**	**18 08 07.4**	**-0.4**
SMG	**Samos**	**1.52**	**123**	*e*P		**Pn**	**18 08 07.3**	**-0.5**
SMG	**Samos**	**1.52**	**123**	P		**Pn**	**18 08 07.4**	**-0.4**
IZM	**Izmir**	**1.60**	**95**	*e*PN		**Pb**	**18 08 10.1**	**-0.1**
IZM	**Izmir**	**1.60**	**95**	*e*Pn		**Pb**	**18 08 10.1**	**-0.1**
LKR	**Lokris**	**1.75**	**274**	*e*P		**Pb**	**18 08 11.5**	**-1.2**
LKR	**Lokris**	**1.75**	**274**	*e*P		**Pb**	**18 08 11.5**	**-1.2**
XOR	**Xorichti**	**1.79**	**298**	P		**Pn**	**18 08 11.6**	**+0.1**
XOR	**Xorichti**	**1.79**	**298**	P		**Pn**	**18 08 11.6**	**+0.1**
LTK	**Loutraki**	**1.86**	**254**	P		**Pb**	**18 08 13.2**	**-1.3**
LTK	**Loutraki**	**1.86**	**254**	P		**Pb**	**18 08 13.2**	**-1.3**
DID	**Didima**	**1.89**	**237**	P		**Pb**	**18 08 13.5**	**-1.6**
DID	**Didima**	**1.89**	**237**	P		**Pb**	**18 08 13.5**	**-1.6**
SMTH	**Samothraki Isl**	**1.93**	**7**	*e*P		**Pn**	**18 08 12.4**	**-1.1**
SMTH	**Samothraki Isl**	**1.93**	**7**	*e*P		**Pn**	**18 08 12.4**	**-1.1**
AXAR	**Agios Charalam**	**2.02**	**277**	P		**Pb**	**18 08 15.9**	**-1.5**
AXAR	**Agios Charalam**	**2.02**	**277**	P		**Pb**	**18 08 15.9**	**-1.5**
OUR	**Ouranopolis**	**2.03**	**332**	P		**Pn**	**18 08 15.1**	**+0.4**
OUR	**Ouranopolis**	**2.03**	**332**	P		**Pn**	**18 08 15.1**	**+0.4**
AKHS	**Akhisar**	**2.05**	**80**	*e*P		**Pg**	**18 08 19.3**	**-0.3**
AKHS				*i* S		**Sg**	**18 08 45.8**	**-0.3**
AKHS	**Akhisar**	**2.05**	**80**	*e*P		**Pg**	**18 08 19.3**	**-0.3**
AKHS				*i* S		**Sg**	**18 08 45.8**	**-0.3**
GELI	**Tayfur-Gelibol**	**2.08**	**27**	*e*PN		**Pn**	**18 08 16.1**	**+0.6**
GELI	**Tayfur-Gelibol**	**2.08**	**27**	*e*Pn		**Pn**	**18 08 16.1**	**+0.6**
DSF	**Desfina**	**2.13**	**267**	P		**Pb**	**18 08 16.9**	**-2.2**
DSF	**Desfina**	**2.13**	**267**	P		**Pb**	**18 08 16.9**	**-2.2**
LPK	**Lapseki**	**2.17**	**33**	*e*PN		**Pn**	**18 08 18.0**	**+1.3**
LPK	**Lapseki**	**2.17**	**33**	*e*Pn		**Pn**	**18 08 18.0**	**+1.3**
BALY	**Balya**	**2.20**	**57**	*e*P		**Pn**	**18 08 17.0**	**-0.2**
BALY				*i* S		**Sb**	**18 08 48.3**	**+0.4**
BALY	**Balya**	**2.20**	**57**	*e*P		**Pn**	**18 08 17.0**	**-0.2**
BALY				*i* S		**Sb**	**18 08 48.3**	**+0.4**
BODT	**Bodrum**	**2.22**	**131**	*e*PN		**Pn**	**18 08 17.6**	**+0.2**
BODT	**Bodrum**	**2.22**	**131**	*e*Pn		**Pn**	**18 08 17.6**	**+0.2**
AYDN	**Tasoluk**	**2.27**	**112**	*e*P		**Pg**	**18 08 24.1**	**+0.2**
AYDN				*i* S		**Sg**	**18 08 53.8**	**+0.5**
AYDN	**Tasoluk**	**2.27**	**112**	*e*P		**Pg**	**18 08 24.1**	**+0.2**
AYDN				*i* S		**Sg**	**18 08 53.8**	**+0.5**
PLG	**Polygyros**	**2.29**	**323**	P		**Pn**	**18 08 18.8**	**+0.4**
PLG	**Polygyros**	**2.29**	**323**	P		**Pn**	**18 08 18.8**	**+0.4**
ENEZ	**Enez**	**2.29**	**18**	*e*PN		**Pb**	**18 08 20.0**	**-1.9**
ENEZ	**Enez**	**2.29**	**18**	*e*Pn		**Pb**	**18 08 20.0**	**-1.9**
AGG	**Agios Georgios**	**2.31**	**283**	P		**Pb**	**18 08 19.9**	**-2.4**
AGG	**Agios Georgios**	**2.31**	**283**	*e*P		**Pn**	**18 08 19.5**	**+0.7**
AGG	**Agios Georgios**	**2.31**	**283**	*e*P		**Pn**	**18 08 19.5**	**+0.7**
BALB	**Balikesir**	**2.33**	**61**	*e*PN		**Pb**	**18 08 20.8**	**-1.8**
BALB	**Balikesir**	**2.33**	**61**	*e*Pn		**Pb**	**18 08 20.8**	**-1.8**
ERIK	**Erikli-Kesan**	**2.34**	**25**	*e*PN		**Pn**	**18 08 20.4**	**+1.4**
ERIK	**Erikli-Kesan**	**2.34**	**25**	*e*Pn		**Pn**	**18 08 20.4**	**+1.4**
GONE	**Gonen-Balikesi**	**2.42**	**51**	*e*PN		**Pb**	**18 08 22.5**	**-1.6**
GONE	**Gonen-Balikesi**	**2.42**	**51**	*e*Pn		**Pb**	**18 08 22.5**	**-1.6**
ALN	**Alexandroupoli**	**2.42**	**15**	P		**Pn**	**18 08 19.5**	**-0.7**
ALN	**Alexandroupoli**	**2.42**	**15**	*e*P		**Pn**	**18 08 19.5**	**-0.7**
ALN	**Alexandroupoli**	**2.42**	**15**	*e*P		**Pn**	**18 08 19.5**	**-0.7**
KRBG	**Karabiga-Canak**	**2.44**	**40**	*e*PN		**Pb**	**18 08 22.3**	**-2.1**
KRBG	**Karabiga-Canak**	**2.44**	**40**	*e*Pn		**Pb**	**18 08 22.3**	**-2.1**
DAT	**Datca**	**2.60**	**134**	*e*PN		**Pn**	**18 08 22.7**	**-0.1**
DAT	**Datca**	**2.60**	**134**	*e*Pn		**Pn**	**18 08 22.7**	**-0.1**
RKY	**Sarkoy-Tekirda**	**2.61**	**35**	*e*PN		**Pn**	**18 08 24.7**	**+1.9**
RKY	**Sarkoy-Tekirda**	**2.61**	**35**	*e*Pn		**Pn**	**18 08 24.7**	**+1.9**
MANT	**Manisa**	**2.61**	**90**	*e*P		**Pg**	**18 08 29.8**	**-0.6**
MANT				*i* S		**Sg**	**18 09 02.8**	**-1.4**
MANT	**Manisa**	**2.61**	**90**	*e*P		**Pg**	**18 08 29.8**	**-0.6**
MANT				*i* S		**Sg**	**18 09 02.8**	**-1.4**
LIT	**Litokhoron**	**2.63**	**307**	*e*P		**Pn**	**18 08 23.8**	**+0.7**
LIT	**Litokhoron**	**2.63**	**307**	*e*P		**Pn**	**18 08 23.8**	**+0.7**
KULA	**Kula-Manisa**	**2.69**	**90**	*e*PN		**Pn**	**18 08 25.0**	**+1.0**
KULA	**Kula-Manisa**	**2.69**	**90**	*e*Pn		**Pn**	**18 08 25.0**	**+1.0**
SOH	**Sokhos**	**2.69**	**328**	*e*P		**Pn**	**18 08 25.0**	**+1.1**
SOH	**Sokhos**	**2.69**	**328**	*e*P		**Pn**	**18 08 25.0**	**+1.1**
THL	**Klokotos Trika**	**2.70**	**293**	*e*P		**Pn**	**18 08 25.1**	**+1.1**
THL	**Klokotos Trika**	**2.70**	**293**	*e*P		**Pn**	**18 08 25.1**	**+1.1**
MFT	**Murefte**	**2.74**	**35**	*e*PN		**Pn**	**18 08 26.8**	**+2.2**
MFT	**Murefte**	**2.74**	**35**	*e*Pn		**Pn**	**18 08 26.8**	**+2.2**
BNT	**Bandirma**	**2.75**	**48**	*e*PN		**Pn**	**18 08 27.0**	**+2.2**
BNT	**Bandirma**	**2.75**	**48**	*e*Pn		**Pn**	**18 08 27.0**	**+2.2**
DST	**Dursunbey**	**2.84**	**67**	*e*PN		**Pn**	**18 08 27.2**	**+1.2**
DST	**Dursunbey**	**2.84**	**67**	*e*Pn		**Pn**	**18 08 27.2**	**+1.2**
KCTX	**Karacabey (Bur**	**2.96**	**54**	*e*PN		**Pn**	**18 08 28.5**	**+0.8**
KCTX	**Karacabey (Bur**	**2.96**	**54**	*e*Pn		**Pn**	**18 08 28.5**	**+0.8**
TKR	**Tekirdag**	**3.01**	**35**	*e*PN		**Pn**	**18 08 29.8**	**+1.5**
TKR	**Tekirdag**	**3.01**	**35**	*e*Pn		**Pn**	**18 08 29.8**	**+1.5**
DALY	**Dalyan (Mu˘la**	**3.22**	**121**	*e*PN		**Pn**	**18 08 32.5**	**+1.3**
DALY	**Dalyan (Mu˘la**	**3.22**	**121**	*e*Pn		**Pn**	**18 08 32.5**	**+1.3**
GRG	**Griva**	**3.24**	**319**	*e*P		**Pn**	**18 08 32.9**	**+1.4**
GRG	**Griva**	**3.24**	**319**	*e*P		**Pn**	**18 08 32.9**	**+1.4**
VAM	**Vamos**	**3.25**	**195**	*e*P		**Pn**	**18 08 32.5**	**+1.0**
VAM	**Vamos**	**3.25**	**195**	*e*P		**Pn**	**18 08 32.5**	**+1.0**
KHL	**Karahalli**	**3.38**	**93**	*e*PN		**Pn**	**18 08 35.0**	**+1.6**
KHL	**Karahalli**	**3.38**	**93**	*e*Pn		**Pn**	**18 08 35.0**	**+1.6**
TVSB	**Tavsanli**	**3.42**	**73**	*e*PN		**Pn**	**18 08 35.8**	**+1.8**
TVSB	**Tavsanli**	**3.42**	**73**	*e*Pn		**Pn**	**18 08 35.8**	**+1.8**
ARMT	**Armutlu**	**3.45**	**53**	*e*PN		**Pn**	**18 08 36.2**	**+1.9**
ARMT	**Armutlu**	**3.45**	**53**	*e*Pn		**Pn**	**18 08 36.3**	**+1.9**
EDRB	**Edirne**	**3.49**	**19**	*e*PN		Pn	18 08 37.3	+2.9
EDRB	**Edirne**	**3.49**	**19**	*e*Pn		Pn	18 08 37.8	+2.9
GEMT	**Gemlik**	**3.59**	**57**	*e*PN		Pn	18 08 39.4	+3.1
GEMT	**Gemlik**	**3.59**	**57**	*e*Pn		Pn	18 08 39.4	+3.1
FETY	**Fethiye**	**3.61**	**121**	*e*PN		**Pn**	**18 08 38.2**	**+1.7**
FETY	**Fethiye**	**3.61**	**121**	*e*Pn		**Pn**	**18 08 38.3**	**+1.7**
CTKS	**Kestanelik-??a**	**3.68**	**42**	*e*PN		Pn	18 08 40.4	+3.0
CTKS	**Kestanelik-??a**	**3.68**	**42**	*e*Pn		Pn	18 08 40.4	+3.0
FNA	**Florina**	**3.72**	**308**	*e*P		**Pn**	**18 08 39.7**	**+1.6**
FNA	**Florina**	**3.72**	**308**	*e*P		**Pn**	**18 08 39.7**	**+1.6**
CTYL	**Yal??k??y-??at**	**3.75**	**38**	*e*PN		Pn	18 08 41.7	+3.3
CTYL	**Yal??k??y-??at**	**3.75**	**38**	*e*Pn		Pn	18 08 41.7	+3.3
BUY	**Buyukada**	**3.78**	**51**	*e*PN		**Pn**	**18 08 41.6**	**+2.8**
BUY	**Buyukada**	**3.78**	**51**	*e*Pn		**Pn**	**18 08 41.6**	**+2.8**
YLV	**Yalova**	**3.78**	**57**	*e*PN		**Pn**	**18 08 41.8**	**+2.9**
YLV	**Yalova**	**3.78**	**57**	*e*Pn		**Pn**	**18 08 41.8**	**+2.9**
BGKT	**Bogazkoy**	**3.78**	**45**	*e*PN		**Pn**	**18 08 41.6**	**+2.7**
BGKT	**Bogazkoy**	**3.78**	**45**	*e*Pn		**Pn**	**18 08 41.6**	**+2.7**
ISK	**Istanbul-Kandi**	**3.87**	**48**	*e*PN		**Pn**	**18 08 42.5**	**+2.4**
ISK	**Istanbul-Kandi**	**3.87**	**48**	*e*Pn		**Pn**	**18 08 42.5**	**+2.4**
CAVI	**Cavuskoy**	**3.94**	**64**	*e*PN		**Pn**	**18 08 43.2**	**+2.2**
CAVI	**Cavuskoy**	**3.94**	**64**	*e*Pn		**Pn**	**18 08 43.2**	**+2.2**
ADVT	**Abdulvahap**	**3.96**	**60**	*e*PN		**Pn**	**18 08 43.5**	**+2.2**
ADVT	**Abdulvahap**	**3.96**	**60**	*e*Pn		**Pn**	**18 08 43.5**	**+2.2**
KLYT	**Kilyos**	**3.98**	**46**	*e*PN		**Pn**	**18 08 43.7**	**+2.1**
KLYT	**Kilyos**	**3.98**	**46**	*e*Pn		**Pn**	**18 08 43.7**	**+2.1**
HRT	**Hereke**	**4.11**	**55**	*e*PN		**Pn**	**18 08 45.6**	**+2.2**
HRT	**Hereke**	**4.11**	**55**	*e*Pn		**Pn**	**18 08 45.6**	**+2.2**
GULT	**Gulveren**	**4.50**	**64**	*e*PN		**Pn**	**18 08 51.1**	**+2.3**
GULT	**Gulveren**	**4.50**	**64**	*e*Pn		**Pn**	**18 08 51.1**	**+2.3**
BARS	**Barje**	**4.99**	**330**	*e*P		**Pn**	**18 08 56.7**	**+1.2**
MDUB	**Mudurnu**	**5.00**	**66**	*e*PN		**Pn**	**18 08 58.4**	**+2.7**
MDUB	**Mudurnu**	**5.00**	**66**	*e*Pn		**Pn**	**18 08 58.4**	**+2.7**
GRUS	**Gruza**	**6.33**	**329**	*e*P		**Pn**	**18 09 14.6**	**+0.8**
DIVS	**Divibare**	**6.80**	**326**	*e*P		**Pn**	**18 09 21.8**	**+1.4**

ISCJB ***13*** *18:25:15.6±0.3,72°.81N±0°.03×5°.0E±0°.1,h10km,mb4.0/33, MS3.7/19,Error ellipse: s-maj=5.3km s-min=4.2km az=154.0*
MOS ***13*** *18:25:15.8±1.5,72°.79N×4°.58E,h10km,mb4.2/21,Error ellipse: s-maj=26.5km s-min=4.9km az=94.5*
IDC ***13*** *18:25:15.7±0.6,72°.60N×4°.22E,h0km,mb3.7/11, mb1 4.0/18,mb1mx3.8/36,mbtmp3.8/18,ML3.5/7,MS3.7/17, Ms1 3.7/17,ms1mx3.5/42,Error ellipse: s-maj=17.0km s-min=11.2km az=57.0*
CSEM ***13*** *18:25:15.5±0.2,72°.76N×4°.57E,h2km,mb4.1/7,Error ellipse: s-maj=6.7km s-min=5.3km az=63.0*
HEL ***13*** *18:25:16.4±0.2,72°.74N×4°.07E,h10km,mb4.3(NEIC), MD2.7(BER),ML2.7(BER)*
NEIC ***13*** *18:25:17.3±0.4,72°.75N×4°.53E,h10km,mb4.3/8,Error ellipse: s-maj=10.6km s-min=6.1km az=77.0*
NAO ***13*** *18:25:18.8±8.0,72°.64N×4°.64E,h25km±83km,ML3.5*
BER ***13*** *18:25:18.4±3.8,72°.75N×4°.32E,h10km,MD2.7,ML2.7, ML3.5(NAO)*

ISC 13 18:25:17.0±0.4,72°.73N±0°.04×4°.56E±0°.05,h10km,n202, σ1°66/204,mb4.1/33,MS3.8/19,4C-3D,Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JMIC	**Jan Mayen**	**4.44**	**253**	*e*P		**Pn**	**18 26 22.2**	**-2.1**
JMIC	**Jan Mayen**	**4.44**	**253**	*e*P		**Pn**	**18 26 22.2**	**-2.1**
JMIC	**Jan Mayen**	**4.44**	**253**	Pn		**Pn**	**18 26 21.9**	**-2.4**
	2.3nm,0.3s,baz=73,slow=19,SNR=13							
JMIC				LR		LR	18 27 45.9	
	comp=Z,762nm,18.1s,baz=76,slow=35							
JMIC	**Jan Mayen**	**4.44**	**253**	P		**Pn**	**18 26 22.2**	**-2.1**
HSP	**Hornsund**	**5.17**	**29**	*e*P		**Pn**	**18 26 33.9**	**-0.3**
TRO	**Tromso**	**5.58**	**117**	*e*P		**Pn**	**18 26 41.0**	**+1.0**
TRO	**Tromso**	**5.58**	**117**	*e*P		**Pn**	**18 26 41.0**	**+1.0**
TRO	**Tromso**	**5.58**	**117**	P		**Pn**	**18 26 40.9**	**+1.0**
STEI	**Steigen**	**6.01**	**138**	*e*P		**Pn**	**18 26 46.5**	**+0.7**
STEI	**Steigen**	**6.01**	**138**	*e*P		**Pn**	**18 26 46.5**	**+0.7**
STEI	**Steigen**	**6.01**	**138**	P		**Pn**	**18 26 46.5**	**+0.7**
SPA0	**Spitsbergen Ar**	**6.21**	**23**	Pn		**Pn**	**18 26 48.6**	**-0.1**
	baz=208,slow=14							
SPA0					Sn	**Sn**	**18 27 57.8**	**-1.8**
	baz=235,slow=28							
SPA0	**Spitsbergen Ar**	**6.21**	**23**	Pn		**Pn**	**18 26 48.6**	**-0.1**
	baz=208,slow=14							
SPA0					Sn	**Sn**	**18 27 57.8**	**-1.8**
	baz=235,slow=28							
SPA0	**Spitsbergen Ar**	**6.21**	**23**	*e*P		**Pn**	**18 26 48.6**	**-0.1**
SPA0				*e*S		**Sn**	**18 27 57.8**	**-1.8**
SPA0	**Spitsbergen Ar**	**6.21**	**23**	P		**Pn**	**18 26 48.5**	**-0.1**
SPA0					Sn	**Sn**	**18 27 57.8**	**-1.8**
	baz=235,slow=23,SNR=4.1							
SPITS	**Spitsbergen Ar**	**6.21**	**23**	Pn		**Pn**	**18 26 48.8**	**+0.1**
	baz=206,slow=17,SNR=63							
SPITS					Sn	**Sn**	**18 27 57.9**	**-1.8**
	baz=200,slow=22,SNR=1.7							
SPITS	**Spitsbergen Ar**	**6.21**	**23**	P		**Pn**	**18 26 48.8**	**+0.1**
SPITS					S	**Sn**	**18 27 57.9**	**-1.8**

KBS	**Kingsbay**	**6.48**	**13**	Pn		**Pn**	**18 26 51.0**	**-1.2**
KBS	**Kingsbay**	**6.48**	**13**	Pn		**Pn**	**18 26 51.0**	**-1.2**
KBS	**Kingsbay**	**6.48**	**13**	*de*P		**Pn**	**18 26 51.1**	**-1.2**
KBS				pmax	pmax			
	comp=Z,17nm,0.7s							
KBS	**Kingsbay**	**6.48**	**13**	*e*P		**Pn**	**18 26 51.0**	**-1.2**
KBS	**Kingsbay**	**6.48**	**13**	*e*Pn		**Pn**	**18 26 51.3**	**-1.0**
KBS	**Kingsbay**	**6.48**	**13**	P		**Pn**	**18 26 51.0**	**-1.2**
KIF	**Kilpisjarvi**	**6.50**	**117**	*e*P		**Pn**	**18 26 52.4**

BAIF	**Baives**	**22.75**	**181**	*eP*	**P**	**18 30 19.2**	**+0.3**
BAIF				pmax	pmax		
	comp=Z,16nm,1.0s						
BAIF	**Baives**	**22.75**	**181**	*eP*	**P**	**18 30 19.2**	**+0.3**
	comp=Z,16nm,1.0s						
NKC	**Novy Kostel**	**22.84**	**167**	*eP*	**P**	**18 30 22.2**	**+2.2**
NKC				*e*		18 30 27.1	
NKC				MLR	MLR		
	comp=Z,200nm,12.1s						
NKC	**Novy Kostel**	**22.84**	**167**	*eP*	**P**	**18 30 22.2**	**+2.2**
NKC				*epP*	**pP**	**18 30 27.1**	**+4.3**
NKC				AMS	AMS	18 39 50.0	
	comp=Z,200nm,12.1s						
NKC	**Novy Kostel**	**22.84**	**167**	P	**P**	**18 30 22.2**	**+2.2**
UPC	**Upice**	**22.87**	**161**	*eP*	**P**	**18 30 22.3**	**+2.1**
UPC				*e*		18 30 26.1	
UPC	**Upice**	**22.87**	**161**	*eP*	**P**	**18 30 22.3**	**+2.1**
UPC				*epP*	**pP**	**18 30 26.1**	**+3.0**
UPC	**Upice**	**22.87**	**161**	P	**P**	**18 30 22.3**	**+2.1**
DPC	**Dobruska-Polom**	**23.05**	**161**	*eP*	**P**	**18 30 22.8**	**+0.6**
DPC				*e*		18 30 27.6	
DPC	**Dobruska-Polom**	**23.05**	**161**	*eP*	**P**	**18 30 22.8**	**+0.6**
DPC				*epP*	**pP**	**18 30 27.6**	**+2.5**
DPC	**Dobruska-Polom**	**23.05**	**161**	P	**P**	**18 30 22.8**	**+0.6**
PRU	**Pruhonice**	**23.25**	**164**	*eP*	**P**	**18 30 25.5**	**+1.4**
PRU				MLR	MLR		
	comp=Z,200nm,14.7s						
PRU	**Pruhonice**	**23.25**	**164**	*eP*	**P**	**18 30 25.5**	**+1.4**
PRU				AMS	AMS	18 41 00.0	
	comp=Z,200nm,14.7s						
PRU	**Pruhonice**	**23.25**	**164**	P	**P**	**18 30 25.5**	**+1.4**
OKC	**Ostrava-Krasne**	**23.75**	**158**	*eP*	P	18 30 35.1	+6.0
OKC				MLR	MLR		
	comp=Z,300nm,16.2s						
OKC	**Ostrava-Krasne**	**23.75**	**158**	*eP*	P	18 30 35.1	+6.0
OKC				AMS	AMS	18 39 40.0	
	comp=Z,300nm,16.2s						
TREC	**Trest**	**24.02**	**162**	AMS	AMS	18 39 30.0	
	comp=Z,300nm,20.7s						
KHC	**Kasperske Hory**	**24.02**	**165**	*eP*	**P**	**18 30 33.0**	**+1.3**
KHC				*e*		18 30 38.1	
KHC				MLR	MLR		
	comp=Z,200nm,17.4s						
KHC	**Kasperske Hory**	**24.02**	**165**	*eP*	**P**	**18 30 33.0**	**+1.3**
KHC				*epP*	**pP**	**18 30 38.1**	**+3.4**
KHC				AMS	AMS	18 41 30.0	
	comp=Z,200nm,17.4s						
KHC	**Kasperske Hory**	**24.02**	**165**	P	**P**	**18 30 33.0**	**+1.3**
VRAC	**Vranov**	**24.11**	**160**	P	**P**	**18 30 31.7**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=344,slow=7.4,SNR=3.5						
VRAC				LR	LR	18 39 48.7	
	comp=Z,255nm,18.2s,baz=0.8,slow=36						
VRAC	**Vranov**	**24.11**	**160**	*eP*	**P**	**18 30 35.2**	**+2.7**
FLN	**La Foliniere**	**24.15**	**188**	*eP*	**P**	**18 30 32.9**	**0.0**
FLN	**La Foliniere**	**24.15**	**188**	*eP*	**P**	**18 30 32.9**	**0.0**
FLN	**La Foliniere**	**24.15**	**188**	*eP*	**P**	**18 30 32.9**	**0.0**
LDF	**La Druitiere**	**24.31**	**188**	*eP*	**P**	**18 30 34.5**	**+0.2**
LDF	**La Druitiere**	**24.31**	**188**	*eP*	**P**	**18 30 34.5**	**+0.2**
LDF	**La Druitiere**	**24.31**	**188**	*eP*	**P**	**18 30 34.5**	**+0.2**
GEC2	**GERESS Array S**	**24.32**	**165**	*eP*	**P**	**18 30 35.8**	**+1.3**
GEC2				pmax	pmax		
	comp=Z,62nm,2.8s						
GERES	**GERESS Array B**	**24.32**	**165**	P	**P**	**18 30 34.4**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=357,slow=9.4,SNR=11						
GERES				LR	LR	18 38 57.3	
	comp=Z,100nm,19.6s,baz=169,slow=34						
STHS	**Stebnicka Huta**	**24.55**	**153**	*eP*	**P**	**18 30 38.7**	**+2.2**
STHS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
STHS	**Stebnicka Huta**	**24.55**	**153**	*eP*	**P**	**18 30 38.7**	**+2.2**
AKASG	**Malin Array Be**	**24.61**	**140**	P	**P**	**18 30 37.4**	**+0.4**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**24.61**	**140**	P	**P**	**18 30 37.4**	**+0.4**
	comp=Z,0.8nm,0.5s,baz=339,slow=9.4,SNR=7.8						
AK02	**Malin Array Si**	**24.65**	**140**	*eP*	**P**	**18 30 36.3**	**-1.1**
SGMF	**Saint Gilles**	**24.77**	**191**	*eP*	**P**	**18 30 38.9**	**+0.4**
SGMF	**Saint Gilles**	**24.77**	**191**	*eP*	**P**	**18 30 38.9**	**+0.4**
SGMF	**Saint Gilles**	**24.77**	**191**	*eP*	**P**	**18 30 38.9**	**+0.4**
RES	**Resolute Bay**	**24.91**	**322**	LR	LR	18 40 30.7	
	comp=Z,277nm,19.1s,baz=80,slow=37						
CRVS	**Cervenica-Dubn**	**25.08**	**153**	*eP*	**P**	**18 30 42.2**	**+0.9**
CRVS				pmax	pmax		
	comp=Z,11nm,1.7s						
CRVS	**Cervenica-Dubn**	**25.08**	**153**	*eP*	**P**	**18 30 42.2**	**+0.9**
VYHS	**Vyhne**	**25.16**	**157**	*eP*	**P**	**18 30 44.0**	**+2.0**
VYHS	**Vyhne**	**25.16**	**157**	*eP*	**P**	**18 30 44.0**	**+2.0**
KECS	**Kecovo**	**25.37**	**155**	*eP*	**P**	**18 30 45.9**	**+2.0**
KECS				pmax	pmax		
	comp=Z,3.0nm,1.1s						
KECS	**Kecovo**	**25.37**	**155**	*eP*	**P**	**18 30 45.9**	**+2.0**
UZH	**Uzhgorod**	**25.46**	**152**	*eP*	**P**	**18 30 47.7**	**+3.0**
UZH				*e*		18 35 13.5	
LOR	**Lormes**	**25.55**	**181**	*eP*	**P**	**18 30 45.7**	**+0.2**
	comp=Z,10nm,1.1s						
LOR	**Lormes**	**25.55**	**181**	*eP*	**P**	**18 30 45.7**	**+0.2**
	comp=Z,10nm,1.1s						
SSF	**Saint Saulge**	**25.75**	**182**	*eP*	**P**	**18 30 48.3**	**+0.9**
SSF	**Saint Saulge**	**25.75**	**182**	*eP*	**P**	**18 30 48.3**	**+0.9**
SSF	**Saint Saulge**	**25.75**	**182**	*eP*	**P**	**18 30 48.3**	**+0.9**
AVF	**Avril sur Loir**	**26.03**	**182**	*eP*	**P**	**18 30 50.0**	**+0.1**
AVF	**Avril sur Loir**	**26.03**	**182**	*eP*	**P**	**18 30 50.0**	**+0.1**
AVF	**Avril sur Loir**	**26.03**	**182**	*eP*	**P**	**18 30 50.0**	**+0.1**
DAVOX	**Davos/Dischmat**	**26.15**	**172**	LR	LR	18 40 22.5	
	comp=Z,169nm,19.1s,baz=86,slow=35						
SMF	**Signal de Mont**	**26.17**	**181**	*eP*	**P**	**18 30 51.9**	**+0.7**
SMF	**Signal de Mont**	**26.17**	**181**	*eP*	**P**	**18 30 51.9**	**+0.7**
SMF	**Signal de Mont**	**26.17**	**181**	*eP*	**P**	**18 30 51.9**	**+0.7**
CABF	**La Chapelle**	**26.21**	**178**	*eP*	**P**	**18 30 53.0**	**+1.3**
	comp=Z,12nm,0.9s						
CABF	**La Chapelle**	**26.21**	**178**	*eP*	**P**	**18 30 53.0**	**+1.3**
CABF				pmax	pmax		
	comp=Z,12nm,0.9s						
CABF	**La Chapelle**	**26.21**	**178**	*eP*	**P**	**18 30 53.0**	**+1.3**
	comp=Z,12nm,0.9s						
TCF	**Toulx Ste Croi**	**26.55**	**184**	*eP*	**P**	**18 30 54.6**	**0.0**
TCF	**Toulx Ste Croi**	**26.55**	**184**	*eP*	**P**	**18 30 54.6**	**0.0**
TCF	**Toulx Ste Croi**	**26.55**	**184**	*eP*	**P**	**18 30 54.6**	**0.0**
FRB	**Frobisher Bay**	**26.70**	**289**	LR	LR	18 40 45.9	
	comp=Z,147nm,18.3s,baz=32,slow=35						
ARU	**Arti**	**26.99**	**98**	P	**P**	**18 31 01.2**	**+2.7**
ARU						18 31 41.1	
ARU				S	**S**	**18 35 39.3**	**+3.8**
TIXI	**Tiksi**	**31.59**	**30**⇑	*iP*	**P**	**18 31 41.5**	**+2.4**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ANN	**Anapa**	**31.92**	**133**	*eP*	P	18 31 48.9	+6.6
ANN				pmax	pmax		
	comp=Z,67nm,1.4s						
ANN				MLR	MLR		
	comp=Z,328nm,16.0s						
BRVK	**Borovoye**	**33.38**	**90**⇓	*eP*	P	18 31 58.4	+3.4
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SCHQ	**Schefferville**	**33.53**	**277**	LR	LR	18 44 12.4	
	comp=Z,188nm,20.2s,baz=76,slow=34						
ABKAR	**Akbulak array**	**33.68**	**104**	*eP*	**P**	**18 31 59.0**	**+1.3**
	comp=Z,1.9nm,0.9s						
ABKAR	**Akbulak array**	**33.68**	**104**	*eP*	**P**	**18 31 59.0**	**+1.3**
	comp=Z,1.9nm,0.9s						
KIV	**Kislovodsk**	**33.92**	**127**	*eP*	**P**	**18 32 01.0**	**+1.1**
KIV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIV	**Kislovodsk**	**33.92**	**127**	*eP*	**P**	**18 32 01.0**	**+1.1**
	comp=Z,4.0nm,0.7s						
KBZ	**Khabaz**	**34.19**	**127**	LR	LR	18 46 11.6	
	comp=Z,266nm,18.1s,baz=349,slow=37						
NVS	**Novosibirsk**	**35.67**	**77**	*eP*	P	18 32 09.2	-5.5
NVS				pmax	pmax		
	comp=Z,16nm,2.1s						
BRTR	**Keskin Array B**	**36.02**	**140**	LR	LR	18 46 40.2	
	comp=Z,67nm,18.6s,baz=198,slow=36						
INK	**Inuvik**	**36.55**	**335**	P	**P**	**18 32 22.1**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=20,slow=11,SNR=5.6						
INK	**Inuvik**	**36.55**	**335**	P	**P**	**18 32 22.1**	**-0.1**
	comp=Z,1.0nm,0.8s						
ZALV	**Zalesovo Beam**	**36.91**	**76**	LR	LR	18 50 55.3	
	comp=Z,77nm,19.5s,baz=160,slow=42						
KURK	**Kurchatov**	**37.92**	**84**⇑	*eP*	**P**	**18 32 35.3**	**+1.3**
KURK				pmax	pmax		
	comp=Z,4.0nm,2.5s						
KURK	**Kurchatov**	**37.92**	**84**	*eP*	**P**	**18 32 35.3**	**+1.3**
	comp=Z,4.0nm,2.5s						
YKA	**Yellowknife Ar**	**38.95**	**320**	P	**P**	**18 32 42.5**	**0.0**
	comp=Z,0.7nm,0.6s,baz=18,slow=8.8,SNR=4.8						
YKA				PcP	**PcP**	**18 34 53.2**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=15,slow=3.1,SNR=7.4						
YKA	**Yellowknife Ar**	**38.95**	**320**	P	**P**	**18 32 42.5**	**0.0**
	comp=Z,1.0nm,0.6s						
BILL	**Bilibino**	**38.96**	**11**⇑	*iP*	**P**	**18 32 44.0**	**+1.5**
BILL				*i*		18 32 49.2	
BILL				pmax	pmax		
	comp=Z,50nm,1.4s						
BILL	**Bilibino**	**38.96**	**11**	*eP*	**P**	**18 32 43.4**	**+0.9**
	comp=Z,10nm,0.9s						
BILL	**Bilibino**	**38.96**	**11**	*eP*	**P**	**18 32 43.4**	**+0.9**
	comp=Z,10nm,0.9s						
ILAR	**Eielson Array**	**41.43**	**342**	P	**P**	**18 33 04.0**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=14,slow=7.0,SNR=8.5						
MKAR	**Makanchi Array**	**42.52**	**83**	P	**P**	**18 33 15.0**	**+2.8**
MKAR						18 35 00.0	
MKAR				MLR	MLR		
	comp=Z,82nm,19.1s						
MKAR	**Makanchi Array**	**42.52**	**83**	P	**P**	**18 33 15.0**	**+2.8**
	comp=Z,0.1nm,0.5s,baz=356,slow=5.8,SNR=2.4						
MKAR				PP	**PcP**	**18 35 00.0**	**-4.5**
	comp=Z,0.3nm,0.6s,baz=320,slow=8.5,SNR=4.4						
MKAR				LR	LR	18 53 41.3	
	comp=Z,82nm,19.1s,baz=353,slow=40						
FFC	**Flin Flon**	**43.28**	**306**	*eP*	**P**	**18 33 18.4**	**+0.2**
FFC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FFC	**Flin Flon**	**43.28**	**306**	*eP*	**P**	**18 33 18.4**	**+0.2**
	comp=Z,3.8nm,1.1s						
ULM	**Lac du Bonnet**	**45.81**	**298**	LR	LR	18 51 59.6	
	comp=Z,145nm,20.6s,baz=337,slow=35						
SWMT	**Swartz Lake**	**52.79**	**312**	*eP*	**P**	**18 34 32.0**	**+0.1**
	comp=Z,2.6nm,1.0s						
GTA	**Gaotai**	**54.39**	**72**	*eP*	P	18 34 48.1	+4.3
GTA				pP	pP	18 34 53.0	+6.0
GTA				sP	sP	18 34 55.9	+7.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TKL	**Tuckaleechee C**	**55.88**	**280**	P	**P**	**18 34 54.1**	**-0.3**
	comp=Z,1.8nm,0.8s,baz=51,slow=13,SNR=2.8						
TORD	**Torodi Ar. Bea**	**59.58**	**183**	P	**P**	**18 35 19.6**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=1.9,slow=6.9,SNR=13						
WMOK	**Wichita Mounta**	**61.02**	**294**	*eP*	**P**	**18 35 30.4**	**+0.1**
WMOK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
WMOK	**Wichita Mounta**	**61.02**	**294**	*eP*	**P**	**18 35 30.4**	**+0.1**
	comp=Z,3.4nm,1.1s						
NVAR	**Mina Array Bea**	**62.39**	**312**	P	**P**	**18 35 40.5**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=27,slow=5.0,SNR=5.3						
TXAR	**Lajitas Array**	**67.44**	**296**	P	**P**	**18 36 12.6**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=46,slow=5.4,SNR=7.3						

SKO 13 18:28:01.7, 41°29N × 22°77E, h1km, M0.9, ML1.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.15**	**282**	*i*	Pg	Pg		18 28 04.3	-0.4
VAY				*i*	Sg	Sg		18 28 07.0	+0.3
VAY				*e*	Lg	Lg		18 28 07.0	
	comp=N,97nm,0.3s								
VAY				*e*	Lg	Lg		18 28 07.1	
	comp=E,57nm,0.2s								

BER ***13*** *18:41:11.3±1.9, 80°29N × 0°42W, h15km±383km, MD2.7, ML1.6*

ISC 13 18:41:05.4±2.9, 80°4N±0°3 × 1°55W±0°07, h10km, n5, σ2s13/6, North of Svalbard

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**2.82**	**114**	*eP*		**Pn**		**18 41 51.0**	**+0.5**
KBS				*eS*		Sn		18 42 20.2	-4.2
KBS				AML	AML			18 42 27.7	
	comp=Z,6.2nm,0.2s								
SPA0	**Spitsbergen Ar**	**3.98**	**114**	*eP*		**Pn**		**18 42 07.9**	**+1.5**
SPA0				*eS*		**Sn**		**18 42 50.0**	**-3.0**
DAG	**Danmarks Havn**	**4.92**	**232**	*i*	P	**Pn**		**18 42 19.2**	**-0.1**
DAG				*i*	S	Sn		18 43 10.7	-5.5
JMIC	**Jan Mayen**	**9.56**	**194**	*e*		**Pn**		**18 43 24.1**	**+1.3**
SUMG	**Summit**	**11.33**	**247**	*i*	P	**Pn**		**18 43 46.8**	**-0.6**

HLW ***13*** *18:45:39.4, 32°94N × 35°39E, h10km±12km, Md3.0, Ml3.0*
ISCJB ***13*** *18:45:41.0±0.3, 32°77N±0°02 × 35°36E±0°03, h13km±3km, Error ellipse: s-maj=5.0km s-min=2.6km az=20.9*
CSEM ***13*** *18:45:41.2±0.1, 32°78N × 35°39E, h12km, ML3.0, Error ellipse: s-maj=3.5km s-min=2.0km az=105.0*
NSSC ***13*** *18:45:41.1±1.1, 32°79N × 35°37E, h10km±9km, ML2.5*
GRAL ***13*** *18:45:42.1±0.7, 32°80N × 35°35E, h6km±7km, MD3.3*

ISC 13 18:45:41.1±0.9, 32°79N±0°02 × 35°38E±0°03, h16km±7km, n51, σ0s50/73, 8C-2D, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BLGI	**Bet Lehem HaGe**	**0.17**	**249**	Pg		**Pg**		**18 45 45.4**	**0.0**
MMA0	**Mount Meron ar**	**0.22**	**6**	Pg		**Pg**		**18 45 46.4**	**+0.1**
MMA0				Sg		**Sb**		**18 45 50.4**	**-0.3**
HNTI	**Hanita**	**0.34**	**330**	Pg		**Pb**		**18 45 48.9**	**+0.2**
HNTI				Sg		**Sb**		**18 45 54.0**	**+0.1**
MMLI	**Mount Malkishu**	**0.36**	**174**	Pg		**Pg**		**18 45 48.2**	**-0.3**
MMLI				Sg		**Sg**		**18 45 53.2**	**-0.3**
OFRI	**'Ofer**	**0.37**	**243**	Pg		**Pg**		**18 45 48.6**	**-0.2**
KSDI	**Kefar Szold**	**0.46**	**31**	Pg		**Pg**		**18 45 50.2**	**-0.3**
KSDI				Sg		**Sb**		**18 45 58.0**	**+0.4**
TCHB	**Talchebab**	**0.52**	**104**	*eP*		**Pg**		**18 45 51.5**	**+0.1**
TCHB				AML	AML			18 45 59.9	
	comp=Z,653nm,0.2s								
TCHB	**Talchebab**	**0.52**	**104**⇓	*eP*		**Pg**		**18 45 51.5**	**+0.1**
TCHB				AML	AML			18 45 59.2	
	comp=N,637nm,0.3s								
TCHB				AML	AML			18 45 59.8	
	comp=Z,653nm,0.2s								
TCHB				AML	AML			18 46 02.9	
	comp=E,300nm,0.3s								
TCHB	**Talchebab**	**0.52**	**104**⇓	*eP*		**Pg**		**18 45 51.5**	**+0.1**
	SNR=94								
HMDT	**Nahal Hemdat**	**0.55**	**167**	Pg		**Pg**		**18 45 51.7**	**-0.4**
HMDT				Sg		**Sg**		**18 45 59.8**	**+0.3**
SLTI	**Sal'it**	**0.62**	**207**	Pg		**Pg**		**18 45 52.7**	**-0.6**
SLTI				Sg		**Sg**		**18 46 01.9**	**+0.3**
MATL	**Matarih**	**0.69**	**357**	*eP*		**Pg**		**18 45 54.7**	**-0.1**
MATL	**Matarih**	**0.69**	**357**	*eP*		**Pg**		**18 45 54.7**	**-0.1**
RCY	**Rachaya**	**0.80**	**29**	*eP*		**Pg**		**18 45 56.1**	**-0.6**
TOTH	**TOTAH**	**1.05**	**57**	*eP*		**Pb**		**18 46 00.7**	**-0.2**
TOTH				*eS*		**Sb**		**18 46 14.3**	**-0.2**
TOTH				AML	AML			18 46 15.6	
	comp=N,262nm,0.2s								
TOTH				AML	AML			18 46 15.8	
	comp=E,251nm,0.2s								
TOTH				AML	AML			18 46 16.1	
	comp=Z,139nm,0.1s								
TOTH	**TOTAH**	**1.05**	**57**⇑	*eP*		**Pb**		**18 46 00.7**	**-0.2**
TOTH				AML	AML			18 46 00.9	
	comp=Z,116nm,0.4s								
TOTH				*eS*		**Sb**		**18 46 14.7**	**+0.1**
TOTH				AML	AML			18 46 15.6	
	comp=N,262nm,0.2s								
TOTH	**TOTAH**	**1.05**	**57**⇑	*eP*		**Pb**		**18 46 00.7**	**-0.2**
	SNR=66								
TOTH				*eS*		**Sb**		**18 46 14.6**	**+0.1**
	comp=N,262nm,0.2s,SNR=62								
QASN	**Qassioun**	**1.06**	**45**	*eP*		**Pb**		**18 46 01.1**	**0.0**
QASN				*eS*		**Sn**		**18 46 15.9**	**+0.1**
QASN				AML	AML			18 46 20.1	
	comp=E,182nm,0.3s								
QASN				AML	AML			18 46 22.5	
	comp=Z,273nm,0.3s								
QASN				AML	AML			18 46 22.9	
	comp=N,437nm,0.5s								
QASN	**Qassioun**	**1.06**	**45**⇑	*eP*		**Pb**		**18 46 01.4**	**+0.3**
QASN				*eS*		**Sb**		**18 46 15.3**	**+0.6**
QASN				AML	AML			18 46 22.5	
	comp=Z,273nm,0.3s								
QASN				AML	AML			18 46 22.9	
	comp=N,437nm,0.5s								
QASN	**Qassioun**	**1.06**	**45**⇑	*eP*		**Pb**		**18 46 01.4**	**+0.3**
	SNR=66								
QASN				*eS*		**Sb**		**18 46 15.3**	**+0.6**
	comp=N,437nm,0.5s,SNR=62								
BEYL	**Beirut**	**1.08**	**5**	*eP*		**Pb**		**18 46 01.2**	**-0.2**
BEYL	**Beirut**	**1.08**	**5**	*eP*		**Pb**		**18 46 01.2**	**-0.2**
BHL	**Bhannes**	**1.13**	**12**	*eP*		**Pb**		**18 46 01.9**	**-0.5**
BHL	**Bhannes**	**1.13**	**12**	*eP*		**Pb**		**18 46 01.9**	**-0.5**
SALA	**Sala**	**1.15**	**94**	*eP*		**Pn**		**18 46 02.4**	**-0.3**
SALA				*eS*		**Sb**		**18 46 17.9**	**+0.5**
SALA	**Sala**	**1.15**	**94**⇑	*eP*		**Pn**		**18 46 02.4**	**-0.3**
SALA				*eS*		**Sb**		**18 46 18.0**	**+0.6**
SALA				AMPN				18 46 21.4	
	comp=N,4μm,0.4s								
SALA				AML	AML			18 46 21.5	
	comp=E,20nm,0.3s								
SALA				AML	AML			18 46 22.3	
	comp=N,346nm,0.3s								
SALA				AML	AML			18 46 22.6	
	comp=Z,198nm,0.2s								
SALA	**Sala**	**1.15**	**94**⇑	*eP*		**Pn**		**18 46 02.4**	**-0.3**
	SNR=66								
SALA				*eS*		**Sb**		**18 46 18.0**	**+0.6**
	comp=Z,198nm,0.2s,SNR=62								
DSI	**Dead Sea**	**1.22**	**180**	Pg		**Pn**		**18 46 02.4**	**-1.1**
DSI				Sg		**Sb**		**18 46 19.3**	**0.0**
YTIR	**Yattir**	**1.44**	**189**	Pn		**Pn**		**18 46 07.0**	**+0.3**
MZDA	**Masada**	**1.48**	**180**	Pn		**Pn**		**18 46 07.1**	**+0.1**
MZDA				Sn		**Sb**		**18 46 27.4**	**+0.7**
HWQ	**Hawqa**	**1.56**	**18**	*eP*		**Pb**		**18 46 09.3**	**-0.2**
HWQ	**Hawqa**	**1.56**	**18**	*eP*		**Pb**		**18 46 09.4**	**-0.2**
ZALF	**Zalf**	**1.65**	**85**	*eP*		**Pb**		**18 46 10.6**	**-0.7**
ZALF				*eS*		**Sb**		**18 46 32.7**	**+0.9**
ZALF				AML	AML			18 46 34.5	
	comp=N,146nm,0.3s								
ZALF				AML	AML			18 46 34.8	
	comp=E,190nm,0.4s								
ZALF				AML	AML			18 46 37.2	
	comp=Z,76nm,0.6s								
ZALF	**Zalf**	**1.65**	**85**⇑	*eP*		**Pb**		**18 46 10.5**	**-0.7**
ZALF				AML	AML			18 46 33.7	
	comp=E,220nm,0.5s								
ZALF	**Zalf**	**1.65**	**85**⇑	*eP*		**Pb**		**18 46 10.5**	**-0.7**
	SNR=51								
RTMI	**Retamim**	**1.83**	**199**	Pn		**Pn**		**18 46 12.8**	**+0.9**
HAWK	**Haweek**	**1.93**	**26**	*eP*		**Pb**		**18 46 14.9**	**-1.0**
KZIT	**Kziot**	**2.06**	**204**	Pn		**Pn**		**18 46 15.9**	**+0.9**
KZIT				Sn		**Sb**		**18 46 42.8**	**-0.6**
ZFRI	**Zfri**	**2.24**	**184**	Pn		**Pn**		**18 46 17.9**	**+0.4**
RSH		**2.31**	**218**	P		**Pn**		**18 46 18.7**	**+0.3**
RSH				S		**Sn**		**18 46 46.6**	**+0.1**
PRNI	**Paran**	**2.45**	**187**	Pn		**Pn**		**18 46 21.2**	**+0.7**
KRMI	**Paran Flat**	**2.73**	**192**	Pn		**Pn**		**18 46 25.3**	**+1.1**
HRFI	**Mount Harif**	**2.76**	**186**	Pn		**Pn**		**18 46 25.6**	**+0.8**
AMAG	**Maghara**	**2.83**	**221**	P		**Pn**		**18 46 25.4**	**-0.3**
	baz=220								
AMAG	**Maghara**	**2.83**	**221**	P		**Pn**		**18 46 25.4**	**-0.3**
MBRI	**Mt Berech**	**3.02**	**188**	Pn		**Pn**		**18 46 29.4**	**+1.1**
HNKL	**Nakhl**	**3.09**	**203**	P		**Pn**		**18 46 29.7**	**+0.4**
	baz=203								
HNKL				AMP				18 47 00.0	
	comp=E,70μm,0.7s,logA/T=5.0,baz=203								
HNKL				S		**Sn**		**18 47 05.8**	**-0.2**
	baz=203								
HNKL	**Nakhl**	**3.09**	**203**	P		**Pn**		**18 46 29.7**	**+0.4**
HNKL				S		**Sn**		**18 47 05.8**	**-0.2**
EIL	**Elat**	**3.13**	**187**	Pn		**Pn**		**18 46 30.8**	**+1.0**
HKAT	**Jabal Katrina**	**4.42**	**196**	P		**Pn**		**18 46 48.1**	**+0.4**
	baz=196								
HKAT	**Jabal Katrina**	**4.42**	**196**	P		**Pn**		**18 46 48.1**	**+0.4**

IDC 13 18:53:23.3±3.4, 3°15S × 139°60E, h0km, mb3.4/3, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=106.6km s-min=27.6km az=92.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.46**	**197**	P		P	Pn	18 57 27.9	-0.6
	0.3nm,0.3s,baz=17,slow=13,SNR=24								
WRA				S			Sn	19 00 32.3	-11
	0.0nm,0.3s,baz=18,slow=22,SNR=2.7								
FITZ	**Fitzroy Crossi**	**20.20**	**222**	P		P		18 58 00.0	+0.2
	1.0nm,0.4s,baz=41,slow=12,SNR=12								
ASAR	**Alice Springs**	**21.13**	**195**	P		P		18 58 10.0	0.0
	1.5nm,0.7s,baz=24,slow=9.9,SNR=20								
MKAR	**Makanchi Array**	**70.68**	**322**	P		P		19 04 41.2	+0.1
	0.2nm,0.6s,baz=104,slow=7.7,SNR=4.1								

IDC ***13*** *19:01:32.9±2.1, 5°86S × 130°33E, h0km, mb4.5/1, mb1 3.8/4, mb1mx3.4

HUMP	**Col San Antoni**	**1.47**	**199**	*e*P	**Pn**	**19 07 42.8**	**-0.5**
CPD	**Cerro la Pandu**	**1.59**	**200**	*e*P	**Pn**	**19 07 44.6**	**-0.4**
CPD	**Cerro la Pandu**	**1.59**	**200**	*e*P	**Pn**	**19 07 44.6**	**-0.4**
CPD	**Cerro la Pandu**	**1.59**	**200**	*e*P	**Pn**	**19 07 44.6**	**-0.4**
SJG	**San Juan**	**1.61**	**208**	*e*P	**Pn**	**19 07 44.9**	**-0.3**
SJG	**San Juan**	**1.61**	**208**	*e*P	**Pn**	**19 07 44.9**	**-0.3**
SJG	**San Juan**	**1.61**	**208**	*e*P	**Pn**	**19 07 44.9**	**-0.3**
SJG				*e*S	**Sn**	**19 08 05.6**	**-0.1**
SJG	**San Juan**	**1.61**	**208**	*e*P	**Pn**	**19 07 44.9**	**-0.3**
SJG				*e*S	**Sn**	**19 08 05.1**	**-0.6**
AOPR	**Arecibo Observ**	**1.78**	**228**	*e*P	**Pn**	**19 07 47.2**	**-0.4**
AOPR	**Arecibo Observ**	**1.78**	**228**	*e*P	**Pn**	**19 07 47.2**	**-0.4**
AOPR	**Arecibo Observ**	**1.78**	**228**	*e*P	**Pn**	**19 07 47.2**	**-0.4**
CELP	**Cerrillos**	**1.87**	**219**	*e*P	**Pn**	**19 07 48.6**	**-0.2**
CELP	**Cerrillos**	**1.87**	**219**	*e*P	**Pn**	**19 07 48.6**	**-0.2**
CELP	**Cerrillos**	**1.87**	**219**	*e*P	**Pn**	**19 07 48.6**	**-0.2**
CDVI	**St. Croix**	**1.87**	**163**	*e*Pn	**Pn**	**19 07 49.3**	**+0.6**
CDVI				*e*Sn	**Sb**	**19 08 14.6**	**+0.3**
LRS	**Lares**	**1.88**	**229**	*e*P	**Pn**	**19 07 48.3**	**-0.7**
LRS	**Lares**	**1.88**	**229**	*e*P	**Pn**	**19 07 48.3**	**-0.7**
LRS	**Lares**	**1.88**	**229**	*e*P	**Pn**	**19 07 48.3**	**-0.7**
OBIP	**Obispado Ponce**	**1.91**	**219**	*e*P	**Pn**	**19 07 48.8**	**-0.5**
OBIP	**Obispado Ponce**	**1.91**	**219**	*e*P	**Pn**	**19 07 48.8**	**-0.5**
OBIP	**Obispado Ponce**	**1.91**	**219**	*e*P	**Pn**	**19 07 48.8**	**-0.5**
AGPR	**Aguadilla, PR**	**1.98**	**237**	*e*P	**Pn**	**19 07 49.4**	**-0.8**
AGPR	**Aguadilla, PR**	**1.98**	**237**	*e*P	**Pn**	**19 07 49.4**	**-0.8**
AGPR	**Aguadilla, PR**	**1.98**	**237**	*e*P	**Pn**	**19 07 49.4**	**-0.8**
GBPR	**Guanica, Bosqu**	**2.13**	**223**	*e*P	**Pn**	**19 07 51.9**	**-0.4**
GBPR	**Guanica, Bosqu**	**2.13**	**223**	*e*P	**Pn**	**19 07 51.9**	**-0.4**
GBPR	**Guanica, Bosqu**	**2.13**	**223**	*e*P	**Pn**	**19 07 51.9**	**-0.4**
LSP	**Las Mesas**	**2.13**	**201**	*e*Pn	**Pn**	**19 07 50.3**	**-2.1**
CRPR	**Cabo Rojo, PR**	**2.26**	**228**	*e*Pn	**Pn**	**19 07 54.5**	**+0.4**
DR12	**Loma Pena Alta**	**3.88**	**259**	*e*P	**Pn**	**19 08 15.5**	**-1.0**
DR12	**Loma Pena Alta**	**3.88**	**259**	*e*P	**Pn**	**19 08 15.5**	**-1.0**
SDDR	**Presa de Saban**	**5.63**	**265**	*e*Pn	**Pn**	**19 08 41.2**	**+0.6**
	46nm,0.5s						
BCIP	**Isla Barro Col**	**17.40**	**236**	*e*Pn	**Pn**	**19 11 20.1**	**+0.4**
TKL	**Tuckaleechee C**	**22.83**	**318**	P	**P**	**19 12 20.8**	**+1.0**
TKL	**Tuckaleechee C**	**22.83**	**318**	P	**P**	**19 12 20.8**	**+1.0**
	1.0nm,0.5s,baz=153,slow=11,SNR=2.7						
LPAZ	**La Paz**	**35.71**	**185**	P	**P**	**19 14 17.4**	**+1.2**
LPAZ	**La Paz**	**35.71**	**185**	P	**P**	**19 14 17.4**	**+1.2**
	0.8nm,0.8s,baz=352,slow=7.6,SNR=4.1						
TXAR	**Lajitas Array**	**36.08**	**293**	P	**P**	**19 14 18.9**	**+0.2**
TXAR	**Lajitas Array**	**36.08**	**293**	P	**P**	**19 14 18.9**	**+0.2**
	0.2nm,0.5s,baz=102,slow=8.4,SNR=4.0						
PDAR	**Pinedale Array**	**43.71**	**312**	P	**P**	**19 15 22.4**	**+0.3**
PDAR	**Pinedale Array**	**43.71**	**312**	P	**P**	**19 15 22.4**	**+0.3**
	0.2nm,0.4s,baz=108,slow=7.7,SNR=2.9						
NVAR	**Mina Array Bea**	**49.30**	**304**	P	**P**	**19 16 06.3**	**+0.3**
NVAR	**Mina Array Bea**	**49.30**	**304**	P	**P**	**19 16 06.3**	**+0.3**
	0.7nm,0.7s,baz=104,slow=6.6,SNR=6.1						
YBH	**Yreka Blue Hor**	**53.03**	**308**	P	**P**	**19 16 33.6**	**-0.3**
YBH	**Yreka Blue Hor**	**53.03**	**308**	P	**P**	**19 16 33.6**	**-0.3**
	1.0nm,0.8s,baz=74,slow=7.4,SNR=3.9						
YKA	**Yellowknife Ar**	**54.52**	**334**	P	**P**	**19 16 43.7**	**-0.6**
YKA	**Yellowknife Ar**	**54.52**	**334**	P	**P**	**19 16 43.7**	**-0.6**
	0.5nm,0.3s,baz=112,slow=7.4,SNR=4.8						
WRA	**Warramunga Arr**	**161.46**	**265**	PKPab	**PKPab**	**19 28 01.6**	**-1.2**
WRA	**Warramunga Arr**	**161.46**	**265**	PKPab	**PKPab**	**19 28 01.6**	**-1.2**
	0.6nm,1.0s,baz=91,slow=4.9,SNR=2.7						
ASAR	**Alice Springs**	**161.63**	**254**	PKPab	**PKPab**	**19 28 02.8**	**-0.7**
ASAR	**Alice Springs**	**161.63**	**254**	PKPab	**PKPab**	**19 28 02.8**	**-0.7**
	0.3nm,0.6s,baz=102,slow=4.9,SNR=8.3						

NIED ***13*** *19:20:00,35˚.70N×143˚.00E,h5km,Mw4.1 Best double couple: M0 1.82000×10^15 NP1:φ=211.00000°,δ=66.00000°, λ=-88.00000°. NP2:φ=27.00000°,δ=24.00000°,λ=-94.00000°.*

IDC ***13*** *19:20:46.7±0.6,35˚.51N×143˚.10E,h0km,mb4.0/17, mb1 4.2/21,mb1mx4.1/32,mbtmp4.0/21,ML3.3/4,MS3.2/6, Ms1 3.2/6,ms1mx2.8/40,Error ellipse: s-maj=1.0km s-min=13.9km az=149.0*

NEIC ***13*** *19:20:48.3±0.3,35˚.54N×143˚.13E,h10km,mb4.5/7, MW4.1(NIED),Error ellipse: s-maj=8.8km s-min=6.0km az=170.0*

ISCJB ***13*** *19:20:50.1±1.8,35˚.64N±0˚.04×142˚.99E±0˚.04, h31km±13km,mb4.1/24,MS3.3/3, Error ellipse: s-maj=7.5km s-min=5.8km az=170.6*

JMA ***13*** *19:20:50.5±0.3,35˚.66N×143˚.00E,h68km,M3.8*

ISC 13 19:20:50.5±3.2,35˚.62N±0˚.06×143˚.02E±0˚.07,h23km±21km, n70,σ1s10/82,mb4.1/24,MS3.2/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.77**	**273**	P	**Pn**	**19 21 19.4**	**-0.3**
CHOJ				*e*S	**Sn**	**19 21 40.5**	**-0.9**
BSO1	**Boso 1**	**1.94**	**241**	P	**Pn**	**19 21 20.4**	**-1.1**
BSO1				*e*S	**Sn**	**19 21 43.9**	**-1.0**
BSO2	**Boso 2**	**2.05**	**246**	S	**Sb**	**19 21 51.5**	**-0.4**
BSO3	**Boso 3**	**2.21**	**249**	P	**Pn**	**19 21 25.7**	**+0.1**
BSO3				*e*S	**Sn**	**19 21 53.2**	**+1.0**
JHO	**Hitachi**	**2.22**	**297**	P	**Pn**	**19 21 25.0**	**-0.9**
JHO				*e*S	**Sn**	**19 21 50.4**	**-2.2**
BSO4	**Boso 4**	**2.29**	**255**	P	**Pn**	**19 21 27.5**	**+0.8**
BSO4				*e*S	**Sn**	**19 21 55.1**	**+1.0**
JYT	**Yasato**	**2.37**	**286**	P	**Pn**	**19 21 27.1**	**-0.9**
JYT				*e*S	**Sn**	**19 21 53.7**	**-2.7**
JFK	**Kawauchi**	**2.45**	**316**	P	**Pn**	**19 21 27.7**	**-1.5**
JFK				*e*S	**Sn**	**19 21 55.6**	**-2.9**
JFT	**Otama**	**2.87**	**312**	P	**Pn**	**19 21 34.6**	**-0.3**
JFT				S	**Sn**	**19 22 07.5**	**-1.3**
JHJ	**Hachijo jima 2**	**3.66**	**228**	Pn	**Pn**	**19 21 44.1**	**-1.7**
	15nm,0.3s,baz=59,slow=17,SNR=37						
JHJ				Sn	**Sn**	**19 22 25.2**	**-3.1**
	39nm,0.3s,baz=66,slow=19,SNR=12						
MJAR	**Matsushiro Arr**	**4.01**	**285**	Pn	**Pn**	**19 21 51.3**	**+0.8**
MJAR	**Matsushiro Arr**	**4.01**	**285**	Pn	**Pn**	**19 21 51.3**	**+0.8**
	3.5nm,0.3s,baz=92,slow=10,SNR=65						
MAJO	**Matsushiro**	**4.01**	**285**	*e*Pn	**Pn**	**19 21 51.1**	**+0.5**
MAT	**Matsushiro**	**4.01**	**285**	P	**Pn**	**19 21 51.7**	**+1.2**
MAT				S	**Sn**	**19 22 35.3**	**-1.5**
ASAJ	**Asahikawa**	**8.49**	**358**	Pn	**Pn**	**19 22 50.0**	**-2.1**
ASAJ				Sn	**Sn**	**19 24 22.4**	**-4.7**
ASAJ	**Asahikawa**	**8.49**	**358**	Pn	**Pn**	**19 22 50.0**	**-2.1**
	1.4nm,0.3s,baz=197,slow=11,SNR=20						
ASAJ				Sn	Sn	19 24 22.4	-4.7
	1.5nm,0.3s,baz=348,slow=31,SNR=5.6						
ASAJ				LR	LR	19 26 11.0	
	comp=Z,97nm,20.6s,baz=183,slow=38						
JNU	**Nakatsue**	**10.34**	**260**	Pn	**Pn**	**19 23 17.9**	**+0.4**
JNU	**Nakatsue**	**10.34**	**260**	Pn	**Pn**	**19 23 17.9**	**+0.4**
	0.1nm,0.3s,baz=95,slow=11,SNR=2.7						
USRK	**Ussuriysk Arra**	**12.03**	**319**	LR	LR	19 28 53.2	
	comp=Z,64nm,18.4s,baz=260,slow=40						
KSRS	**Korea Array**	**12.28**	**283**	Pn	**Pn**	**19 23 46.4**	**+2.4**
	0.1nm,0.3s,baz=99,slow=13,SNR=6.6						
KSRS				LR	LR	19 28 13.9	
	comp=Z,80nm,20.0s,baz=160,slow=36						
KSAR	**Wonju Array Be**	**12.31**	**283**	Pn	**Pn**	**19 23 46.4**	**+2.0**
ULN	**Ulaanbaatar**	**29.23**	**306**	Pn	**P**	**19 26 52.1**	**+1.4**
	1.5nm,0.6s						
SONM	**Songino Array**	**29.66**	**306**	P	**P**	**19 26 56.0**	**+1.6**
SONM				PcP	**PcP**	**19 29 57.9**	**-0.5**
SONM	**Songino Array**	**29.66**	**306**	P	**P**	**19 26 56.0**	**+1.6**
	1.2nm,0.7s,baz=105,slow=8.8,SNR=8.3						
SONM				PcP	**PcP**	**19 29 57.9**	**-0.5**
	0.5nm,0.7s,baz=94,slow=2.0,SNR=3.5						
SONM				LR	LR	19 38 35.0	
	comp=Z,55nm,20.6s,baz=77,slow=36						
CMAR	**Chiang Mai Arr**	**42.44**	**258**	P	**P**	**19 28 43.2**	**-0.5**
CMAR	**Chiang Mai Arr**	**42.44**	**258**	P	**P**	**19 28 43.2**	**-0.5**
	0.5nm,0.8s,baz=45,slow=5.5,SNR=5.8						
ZALV	**Zalesovo Beam**	**43.83**	**313**	P	**P**	**19 28 55.3**	**+0.8**
ZALV				PcP	**PcP**	**19 30 40.9**	**+0.3**
ZALV	**Zalesovo Beam**	**43.83**	**313**	P	**P**	**19 28 55.3**	**+0.8**
	0.8nm,0.5s,baz=110,slow=7.1,SNR=4.3						
ZALV				PcP	**PcP**	**19 30 40.9**	**+0.3**
	1.2nm,0.8s,baz=106,slow=3.2,SNR=4.0						
MK31	**Makanchi Array**	**45.97**	**304**	*e*P	**P**	**19 29 13.4**	**+1.6**
MKAR	**Makanchi Array**	**45.97**	**304**	P	**P**	**19 29 12.1**	**+0.3**
MKAR	**Makanchi Array**	**45.97**	**304**	P	**P**	**19 29 12.1**	**+0.3**
	0.8nm,0.7s,baz=91,slow=8.7,SNR=11						
MKAR				LR	LR	19 48 32.0	
	comp=Z,28nm,21.5s,baz=248,slow=36						
OHAK	**Old Harbor**	**46.92**	**42**	*e*P	**P**	**19 29 18.2**	**-0.8**
	7.9nm,1.0s						
KDAK	**Kodiak Island**	**47.29**	**41**	P	**P**	**19 29 21.7**	**-0.2**
KDAK				*e*		19 29 32.0	
KDAK	**Kodiak Island**	**47.29**	**41**	P	**P**	**19 29 21.7**	**-0.2**
	7.6nm,0.8s,baz=275,slow=4.7,SNR=10						
KURK	**Kurchatov**	**47.83**	**309**	*e*P	**P**	**19 29 26.5**	**+0.4**
	2.6nm,0.8s						
ILAR	**Eielson Array**	**50.00**	**32**	P	**P**	**19 29 43.0**	**+0.4**
ILAR	**Eielson Array**	**50.00**	**32**	P	**P**	**19 29 43.0**	**+0.4**
	12nm,0.5s,baz=265,slow=6.1,SNR=54						
TKM2	**Tokmak 2**	**51.45**	**300**	P	**P**	**19 29 55.1**	**+0.9**
INK	**Inuvik**	**55.05**	**27**	P	**P**	**19 30 20.5**	**+0.6**
INK	**Inuvik**	**55.05**	**27**	P	**P**	**19 30 20.5**	**+0.6**
	1.0nm,0.6s,baz=298,slow=5.2,SNR=4.9						
WRAB	**Tennant Creek**	**55.86**	**190**	*e*P	**P**	**19 30 24.8**	**-1.5**
	17nm,1.4s						
WRA	**Warramunga Arr**	**55.87**	**190**	P	**P**	**19 30 25.2**	**-1.2**
WRA	**Warramunga Arr**	**55.87**	**190**	P	**P**	**19 30 25.2**	**-1.2**
	4.6nm,0.7s,baz=9.2,slow=7.6,SNR=47						
ASAR	**Alice Springs**	**59.60**	**190**	P	**P**	**19 30 51.8**	**-0.8**
ASAR	**Alice Springs**	**59.60**	**190**	P	**P**	**19 30 51.8**	**-0.8**
	1.3nm,0.7s,baz=15,slow=12,SNR=25						
ABKAR	**Akbulak array**	**59.84**	**311**	*e*P	**P**	**19 30 54.2**	**+0.2**
	1.4nm,0.7s						
ABKAR				*e*		19 31 04.1	
YKA	**Yellowknife Ar**	**64.37**	**30**	P	**P**	**19 31 24.6**	**+0.4**
YKA	**Yellowknife Ar**	**64.37**	**30**	P	**P**	**19 31 24.6**	**+0.4**
	0.6nm,0.7s,baz=300,slow=6.6,SNR=3.5						
GNI	**Garni**	**73.59**	**308**	LR	LR	20 07 47.4	
	comp=Z,27nm,18.8s,baz=263,slow=38						
FFC	**Flin Flon**	**74.18**	**33**	*e*P	**P**	**19 32 25.6**	**+0.5**
	1.9nm,0.8s						
LRM	**Limekiln Ridge**	**74.24**	**45**	*e*P	**P**	**19 32 26.7**	**+0.7**
	14nm,0.7s						
NVAR	**Mina Array Bea**	**74.78**	**54**	P	**P**	**19 32 29.6**	**+0.5**
NVAR	**Mina Array Bea**	**74.78**	**54**	P	**P**	**19 32 29.6**	**+0.5**
	0.4nm,0.3s,baz=306,slow=7.6,SNR=4.2						
AKASG	**Malin Array Be**	**76.20**	**323**	P	**P**	**19 32 36.5**	**-0.2**
AKASG	**Malin Array Be**	**76.20**	**323**	P	**P**	**19 32 36.5**	**-0.2**
	1.4nm,0.6s,baz=45,slow=6.6,SNR=6.7						
PDAR	**Pinedale Array**	**77.72**	**46**	P	**P**	**19 32 46.0**	**+0.3**
PDAR	**Pinedale Array**	**77.72**	**46**	P	**P**	**19 32 46.0**	**+0.3**
	0.9nm,0.6s,baz=295,slow=4.9,SNR=5.8						
BRTR	**Keskin Array B**	**80.76**	**313**	P	**P**	**19 33 02.3**	**0.0**
BRTR	**Keskin Array B**	**80.76**	**313**	P	**P**	**19 33 02.3**	**0.0**
	1.3nm,0.8s,baz=94,slow=3.8,SNR=5.7						
CLL	**Collm**	**82.96**	**331**	*i* P	**P**	**19 33 13.8**	**+0.3**
ANMO	**Albuquerque**	**84.49**	**51**	P	**P**	**19 33 21.7**	**-0.2**
ANMO	**Albuquerque**	**84.49**	**51**	P	**P**	**19 33 21.7**	**-0.2**
	0.5nm,0.4s,baz=324,slow=5.1,SNR=4.8						
GERES	**GERESS Array B**	**84.59**	**329**	P	**P**	**19 33 21.8**	**-0.3**
GERES	**GERESS Array B**	**84.59**	**329**	P	**P**	**19 33 21.8**	**-0.3**
	0.6nm,0.7s,baz=31,slow=3.4,SNR=6.5						
TXAR	**Lajitas Array**	**89.94**	**53**	P	**P**	**19 33 48.7**	**+0.4**
TXAR	**Lajitas Array**	**89.94**	**53**	P	**P**	**19 33 48.7**	**+0.4**
	0.9nm,0.8s,baz=294,slow=2.8,SNR=8.5						
TORD	**Torodi Ar. Bea**	**119.25**	**316**	PKP	**PKPdf**	**19 39 37.5**	**-0.9**
TORD	**Torodi Ar. Bea**	**119.25**	**316**	PKP	**PKPdf**	**19 39 37.5**	**-0.9**
	0.6nm,0.9s,baz=21,slow=2.8,SNR=3.4						
LPAZ	**La Paz**	**146.22**	**63**	PKPbc	**PKPbc**	**19 40 29.9**	**-0.4**
LPAZ	**La Paz**	**146.22**	**63**	PKPbc	**PKPbc**	**19 40 29.9**	**-0.4**
	1.4nm,0.7s,baz=307,slow=5.5,SNR=7.8						

IDC 13 19:26:48.6±24.0,13˚.14N×143˚.53E,h290km±260km, mb2.9/7,mb1 3.1/7,mb1mx2.9/25,mbtmp2.9/7,Error ellipse: s-maj=59.7km s-min=27.3km az=64.0,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**34.09**	**196**	P	P	19 33 06.2	-0.3
	2.4nm,0.6s,baz=17,slow=9.6,SNR=26						
ASAR	**Alice Springs**	**37.77**	**194**	P	P	19 33 37.6	0.0
	0.5nm,0.5s,baz=14,slow=14,SNR=11						
STKA	**Stephens Creek**	**44.79**	**182**	P	P	19 34 34.3	+0.1
	1.6nm,0.7s,baz=347,slow=14,SNR=5.3						
SONM	**Songino Array**	**46.36**	**326**	P	P	19 34 46.6	+0.2
	0.2nm,0.6s,baz=142,slow=7.3,SNR=2.6						
MKAR	**Makanchi Array**	**60.91**	**316**	P	P	19 36 30.7	-0.6
	0.1nm,0.4s,baz=98,slow=6.3,SNR=3.4						
KURBB	**Kurchatov Arra**	**64.13**	**320**	P	P	19 36 52.6	+0.3
	0.2nm,0.4s,baz=105,slow=7.0,SNR=6.2						
ILAR	**Eielson Array**	**69.53**	**25**	P	P	19 37 25.9	-0.1
	0.3nm,0.6s,baz=261,slow=6.0,SNR=2.5						

SOF ***13*** *19:41:36.9,41˚.26N×22˚.78E,h12km,MD2.7*

THE ***13*** *19:41:37.7,41˚.28N×22˚.78E,h3km±1km,ML2.0/5,Error ellipse: s-maj=1.4km s-min=0.5km az=214.0*

ISCJB ***13*** *19:41:37.0±0.4,41˚.29N±0˚.02×22˚.77E±0˚.03,h9km±3km, Error ellipse: s-maj=4.4km s-min=3.3km az=159.7*

SKO ***13*** *19:41:37.4,41˚.29N×22˚.77E,h12km,M1.2,ML1.3*

ATH ***13*** *19:41:37.0,41˚.28N×22˚.77E,h21km±4km,MD3.1/6*

CSEM ***13*** *19:41:37.4±0.2,41˚.27N×22˚.75E,h8km,ML1.5/5,Error ellipse: s-maj=3.8km s-min=2.9km az=69.0*

BEO ***13*** *19:41:39.3±0.8,41˚.30N×22˚.74E,h0km,ML1.5/5*

ISC 13 19:41:37.4±0.8,41˚.27N±0˚.02×22˚.76E±0˚.02,h10km±6km, n42,σ0s36/67,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.15**	**290**	P	**Pg**	**19 41 40.6**	**-0.2**
VAY				S	**Sg**	**19 41 43.1**	**-0.1**
VAY	**Valandovo**	**0.15**	**290**	*i* Pg	**Pg**	**19 41 40.8**	**0.0**
VAY				*i* Sg	**Sg**	**19 41 43.5**	**+0.4**
VAY				*e*Lg	Lg	19 41 43.6	
	comp=N,196nm,0.3s						
VAY				*e*Lg	Lg	19 41 44.0	
	comp=E,128nm,0.2s						
VAY	**Valandovo**	**0.15**	**290**	P	**Pg**	**19 41 40.6**	**-0.2**
VAY				S	**Sg**	**19 41 43.1**	**-0.1**
KNT	**Kendrikon**	**0.15**	**136**	P	**Pg**	**19 41 41.3**	**+0.4**
KNT				S	**Sg**	**19 41 43.0**	**-0.3**
KNT	**Kendrikon**	**0.15**	**136**	P	**Pg**	**19 41 41.3**	**+0.4**
KNT				S	**Sg**	**19 41 43.0**	**-0.3**
SOH	**Sokhos**	**0.64**	**135**	P	**Pg**	**19 41 50.0**	**+0.2**
SOH				S	**Sg**	**19 41 58.4**	**+0.3**
SOH	**Sokhos**	**0.64**	**135**	*e*PN	**Pg**	**19 41 49.7**	**-0.1**
SOH				*e*SN	**Sg**	**19 41 58.3**	**+0.2**
SOH	**Sokhos**	**0.64**	**135**	*e*Pn	**Pg**	**19 41 49.7**	**-0.1**
SOH	**Sokhos**	**0.64**	**135**	P	**Pg**	**19 41 50.0**	**+0.2**
SOH				*e*Sn	**Sg**	**19 41 58.3**	**+0.2**
KKB	**Krupnik**	**0.64**	**22**	*i* Pg	**Pg**	**19 41 49.9**	**0.0**
KKB	**Krupnik**	**0.64**	**22**	*i* Pg	**Pg**	**19 41 49.9**	**0.0**
SRS	**Serrai**	**0.65**	**103**	P	**Pg**	**19 41 49.7**	**-0.3**
SRS	**Serrai**	**0.65**	**103**	P	**Pg**	**19 41 49.7**	**-0.3**
HORT	**Hortiatis**	**0.72**	**159**	P	**Pg**	**19 41 51.4**	**0.0**
HORT				S	**Sb**	**19 42 01.6**	**-0.4**
MMB	**Musomiste**	**0.80**	**66**	*i* Pg	**Pg**	**19 41 52.5**	**-0.3**
MMB	**Musomiste**	**0.80**	**66**	*i* Pg	**Pg**	**19 41 52.5**	**-0.3**
NVR	**Nevrokopi**	**0.84**	**84**	P	**Pg**	**19 41 53.3**	**-0.3**
NVR				S	**Sg**	**19 42 04.8**	**+0.3**
NVR	**Nevrokopi**	**0.84**	**84**	*e*PN	**Pg**	**19 41 53.1**	**-0.5**
NVR				*e*SN	**Sg**	**19 42 04.2**	**-0.3**
NVR	**Nevrokopi**	**0.84**	**84**	P	**Pg**	**19 41 53.3**	**-0.3**
NVR				*e*Sn	**Sg**	**19 42 04.2**	**-0.3**
PLG	**Polygyros**	**1.04**	**150**	P	**Pb**	**19 41 57.6**	**+0.1**
PLG				S	**Sn**	**19 42 12.2**	**-0.4**
PLG	**Polygyros**	**1.04**	**150**	*e*PN	**Pg**	**19 41 57.4**	**0.0**
PLG				*e*SN	**Sg**	**19 42 10.3**	**-0.6**
PLG	**Polygyros**	**1.04**	**150**	P	**Pg**	**19 41 57.6**	**+0.1**
PLG				*e*Sn	**Sg**	**19 42 10.3**	**-0.6**
PLG				S	**Sn**	**19 42 12.2**	**-0.4**
FNA	**Florina**	**1.15**	**245**	*e*PN	**Pb**	**19 41 59.3**	**-0.1**
FNA				*e*SN	**Sg**	**19 42 15.0**	**+0.5**
FNA	**Florina**	**1.15**	**245**	*e*Pn	**Pb**	**19 41 59.3**	**-0.1**
FNA				*e*Sn	**Sg**	**19 42 15.0**	**+0.5**
LIT	**Litokhoron**	**1.19**	**190**	*e*PN	**Pb**	**19 42 00.1**	**+0.1**
LIT	**Litokhoron**	**1.19**	**190**	*e*Pn	**Pb**	**19 42 00.1**	**+0.1**
OUR	**Ouranopolis**	**1.32**	**135**	P	**Pb**	**19 42 02.2**	**0.0**
OUR				S	**Sg**	**19 42 21.0**	**+1.1**
OUR	**Ouranopolis**	**1.32**	**135**	P	**Pb**	**19 42 02.2**	**0.0**
OUR				S	**Sg**	**19 42 21.0**	**+1.1**
VTS	**Vitosha**	**1.36**	**14**	P	**Pn**	**19 42 02.7**	**+0.1**
VTS				S	**Sg**	**19 42 21.4**	**+0.2**
VTS	**Vitosha**	**1.36**	**14**	*i* P	**Pb**	**19 42 03.1**	**0.0**
VTS	**Vitosha**	**1.36**	**14**	*e*Pg	**Pg**	**19 42 03.9**	**+0.3**
VTS				*i* Sg	**Sg**	**19 42 21.5**	**+0.2**
VTS	**Vitosha**	**1.36**	**14**	P	**Pn**	**19 42 02.7**	**+0.1**
VTS	**Vitosha**	**1.36**	**14**	*e*Pg	**Pg**	**19 42 03.9**	**+0.3**
VTS				*i* Sg	**Sg**	**19 42 21.5**	**+0.2**
RZN	**Rozhen**	**1.53**	**74**	P	**Pb**	**19 42 06.0**	**0.0**
RZN	**Rozhen**	**1.53**	**74**	P	**Pb**	**19 42 06.0**	**0.0**
PLD	**Plovdiv**	**1.68**	**60**	*i* Sg	**Sg**	**19 42 32.2**	**+0.8**
PLD	**Plovdiv**	**1.68**	**60**	*i* Sg	**Sg**	**19 42 32.2**	**+0.8**
BARS	**Barje**	**1.70**	**336**	*e*Pn	**Pg**	**19 42 10.2**	**+0.2**
BARS				*i* Sg	**Sg**	**19 42 31.8**	**-0.2**
ZAPS	**Zavoj**	**2.00**	**357**	*e*Pn	**Pb**	**19 42 14.2**	**+0.3**
ZAPS				*e*Sg	**Sg**	**19 42 42.2**	**+0.4**
RDO	**Rodhopi**	**2.10**	**92**	*e*PB	**Pn**	**19 42 12.7**	**+0.1**
RDO	**Rodhopi**	**2.10**	**92**	*e*Pb	**Pn**	**19 42 12.7**	**+0.1**
MPEP	**Malo Peshtene**	**2.21**	**19**	*i* P	**Pg**	**19 42 19.3**	**-0.4**

IDC ***13*** *19:49:21.1±3.9,6˚.38N×127˚.04E,h57km±33km,mb3.7/11, mb1 3.9/12,mb1mx3.6/26,mbtmp3.8/12,ML3.9/1,Error ellipse: s-maj=41.6km s-min=11.4km az=65.0*

MAN ***13*** *19:49:24,6˚.23N×126˚.89E,h77km,mb4.9,ML3.8,MS3.9*

ISCJB ***13*** *19:49:25.6±0.8,6˚.27N±0˚.05×126˚.8E±0˚.1,h110km±8km, mb3.8/11,Error ellipse: s-maj=18.7km s-min=7.7km az=164.3*

AUST ***13*** *19:49:25.2,6˚.50N×127˚.01E,h100km*

ISC 13 19:49:25.1±1.0,6˚.31N±0˚.06×127˚.0E±0˚.1,h94km±10km, n33,σ1s52/34,mb3.9/11,1C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.96**	**311**	*e*P	**Pn**	**19 49 44.9**	**+0.2**
MATI				*e*S	**Sn**	**19 49 58.5**	**-0.8**
DAV	**Davao City (W)**	**1.58**	**299**	P	Pn	19 49 46.2	-5.9
	71nm,0.3s,baz=352,slow=2.3,SNR=3.6						
DAV				S	Sn	19 50 07.1	-5.5
	128nm,0.3s,baz=253,slow=21,SNR=6.5						
BUKP	**Musuan**	**2.46**	**309**	*e*P	**Pn**	**19 50 04.2**	**+0.6**
BUKP				*e*S	**Sn**	**19 50 33.3**	**+0.2**
CTBH	**Cotabato--PC H**	**2.86**	**289**	*i* P	**Pn**	**19 50 08.6**	**-0.2**
BUTP	**Butuan**	**2.97**	**333**	*e*P	Pn	19 50 14.1	+3.8
BUTP				*e*S	**Sn**	**19 50 48.7**	**+3.6**
CGP	**Cagayan de Oro**	**3.11**	**313**	*e*P	**Pn**	**19 50 11.8**	**-0.4**
CGP				*i* S	**Sn**	**19 50 48.8**	**+0.2**
PAGZ	**Pagadian**	**3.89**	**293**	*e*P	**Pn**	**19 50 23.2**	**+0.5**
MSLP	**Maasin**	**4.34**	**331**	*e*P	**Pn**	**19 50 30.3**	**+1.4**
TBP	**Tagbilaran**	**4.56**	**318**	*e*P	**Pn**	**19 50 32.6**	**+0.7**
BESP	**Borongan**	**5.47**	**344**	*e*P	Pn	19 51 00.

PB01 **Plate Boundary** 3.82 160⇓ *e*P **Pn** **20 11 48.0 -0.5**
PB01 *e*S **Sn** **20 12 29.1 -3.2**
PB01 AML AML 20 13 00.3
comp=N,4µm,0.7s
LVC Limon Verde 5.47 160⇓ *e*P **Pn** **20 12 11.4 0.0**
LVC Limon Verde 5.47 160⇓ *e*P **Pn** **20 12 11.4 0.0**
LVC Limon Verde 5.47 160 P **Pn** **20 12 11.4 0.0**
comp=N,45nm,0.3s,baz=331,slow=8.1,SNR=625
LVC S **Sn** **20 13 14.0 +0.9**
comp=N,106nm,0.3s,baz=229,slow=20,SNR=7.0
LVC LR LR 20 14 49.4
comp=N,3µm,21.4s,baz=175,slow=43
ANCH Antofagasta 6.22 176 *e*P **Pn** **20 12 19.1 -2.3**
ANCH Antofagasta 6.22 176 *e*P **Pn** **20 12 19.1 -2.3**
NNA Nana 7.91 313 Pn **Pn** **20 12 45.5 +0.9**
comp=N,3µm,0.9s,SNR=8.3
NNA Nana 7.91 313 *e*Pn **Pn** **20 12 44.0 -0.5**
comp=N,323nm,0.8s
NNA *e*Sn **Sn** **20 14 09.2 -3.4**
NNA Nana 7.91 313 P **Pn** **20 12 44.8 +0.3**
comp=N,15nm,0.3s,baz=146,slow=12,SNR=21
NNA S **Sn** **20 14 17.4 +4.8**
comp=N,26nm,0.3s,baz=301,slow=18,SNR=2.8
NNA LR LR 20 16 04.1
comp=N,1µm,20.2s,baz=153,slow=40
SIV San Ignacio 9.52 83 P **Pn** **20 13 07.7 +1.1**
SIV S **Sn** **20 14 52.7 +0.6**
SIV San Ignacio 9.52 83 P **Pn** **20 13 07.7 +1.1**
comp=N,61nm,0.3s,baz=279,slow=11,SNR=267
SIV S **Sn** **20 14 52.7 +0.6**
baz=29,slow=19,SNR=1.4
SIV LR LR 20 17 30.3
comp=N,4µm,20.9s,slow=42
SAML Samuel 11.29 43⇑ *i*Pn **Pn** **20 13 30.3 -0.5**
LCO Las Campanas 11.52 179 *e*Pn Pn 20 13 30.7 -3.4
comp=N,37nm,0.8s
LCO *e*Sn Sn 20 15 30.0 -11
ATAH Atahualpa 12.59 324 P Pn 20 13 52.0 +3.1
ATAH S **Sn** **20 16 08.6 +0.8**
ATAH Atahualpa 12.59 324 P Pn 20 13 52.0 +3.1
comp=N,1.6nm,0.3s,baz=156,slow=10,SNR=18
ATAH S **Sn** **20 16 08.6 +0.8**
comp=N,0.7nm,0.3s,baz=204,slow=20,SNR=2.0
CFAA Coronel Fontan 14.30 171 P Pn 20 14 06.2 -5.3
CFAA S **Sn** **20 16 54.0 +5.2**
CFAA Coronel Fontan 14.30 171 P Pn 20 14 06.2 -5.3
comp=N,0.1nm,0.3s,baz=344,slow=13,SNR=23
CFAA S **Sn** **20 16 54.0 +5.2**
comp=N,0.1nm,0.3s,baz=49,slow=20,SNR=2.2
CFAA LR LR 20 19 56.6
comp=N,145nm,20.1s,baz=342,slow=38
CPUP Villa Florida 15.37 127 P **Pn** **20 14 24.8 -0.6**
CPUP S **Sn** **20 17 09.7 -5.0**
CPUP Villa Florida 15.37 127 P **Pn** **20 14 24.8 -0.6**
comp=N,1.2nm,0.3s,baz=300,slow=11,SNR=8.8
CPUP S **Sn** **20 17 09.7 -5.0**
comp=N,0.9nm,0.3s,baz=90,slow=20,SNR=2.1
CPUP LR LR 20 21 27.4
comp=N,496nm,21.1s,baz=293,slow=41
OTAV Otavalo 19.08 336 *e*Pn **Pn** **20 15 12.6 +1.0**
comp=N,81nm,1.0s
TRQA Tornquist 21.98 161 *e*P **P** **20 15 39.9 -1.0**
comp=N,109nm,1.0s
BDFB Brasilia 22.00 89 P **P** **20 15 41.0 -0.5**
BDFB Brasilia 22.00 89 P **P** **20 15 41.0 -0.5**
comp=N,24nm,0.6s,baz=261,slow=11,SNR=19
BDFB LR LR 20 25 25.5
comp=N,394nm,19.4s,baz=77,slow=40
ROSC El Rosal 22.41 351 P **P** **20 15 45.2 -1.1**
ROSC El Rosal 22.41 351 P **P** **20 15 45.2 -1.1**
comp=N,25nm,0.5s,baz=116,slow=7.9,SNR=11
ROSC LR LR 20 25 13.7
comp=N,843nm,21.6s,baz=192,slow=38
SPB Sao Paulo 22.79 109 *e*P **P** **20 15 48.7 -1.1**
comp=N,37nm,0.8s
PLCA Paso Flores 23.21 179 P **P** **20 15 52.7 -1.2**
PLCA sP **sP** **20 16 15.9 +0.5**
PLCA Paso Flores 23.21 179 P **P** **20 15 52.7 -1.2**
comp=N,35nm,0.8s,baz=356,slow=12,SNR=41
PLCA sP **sP** **20 16 15.9 +0.5**
comp=N,190nm,1.1s,baz=4.6,slow=11,SNR=18
PLCA LR LR 20 24 37.2
comp=N,354nm,18.9s,baz=356,slow=36
CAM4 Nova Friburgo 27.06 105⇓ *i*P **P** **20 16 28.0 -1.3**
CAM4 *i* 20 16 30.0
CAM4 *i* 20 16 35.3
CAM4 *i* 20 16 38.9
CAM4 *i* 20 16 44.5
CAM4 *i* 20 16 47.1
CAM4 *i* 20 16 49.1
CAM4 *i* 20 16 56.6
CAM4 *i* 20 17 01.0
CAM4 *i* 20 17 07.7
CAM4 *i* 20 17 14.0
CAM4 *i* 20 17 19.8
BCIP Isla Barro Col 27.88 341 *e*P **P** **20 16 37.6 +1.3**
comp=N,40nm,0.7s
GRGR Grenville 30.77 18 *e*P **P** **20 17 00.1 -1.8**
comp=N,191nm,0.9s
CRPR Cabo Rojo, PR 35.42 6 *e*P **P** **20 17 40.7 -1.7**
comp=N,47nm,0.8s
OBIP Obispado Ponce 35.51 7 *e*P **P** **20 17 41.0 -2.1**
comp=N,30nm,0.6s
CELP Cerrillos 35.55 7 *e*P **P** **20 17 41.5 -1.9**
LSP Las Mesas 35.59 6 P **P** **20 17 41.6 -2.2**
SJG San Juan 35.64 8 *e*P **P** **20 17 41.9 -2.3**
comp=N,56nm,1.0s
MTP Monte Pirata 35.71 9 *e*P **P** **20 17 42.5 -2.4**
comp=N,50nm,0.8s
LRS Lares 35.73 7 *e*P **P** **20 17 42.6 -2.4**
CBYP Canovanas 35.83 8 *e*P **P** **20 17 43.3 -2.7**
comp=N,102nm,0.7s
ANWB Willy Bob 36.02 15 *e*P P 20 17 43.0 -4.6
comp=N,86nm,0.6s
RCBR Riachuelo 36.09 76 *e*P **P** **20 17 48.5 +0.2**
comp=N,18nm,0.8s
RCBR Riachuelo 36.09 76 P **P** **20 17 49.0 +0.6**
comp=N,9.3nm,0.6s,baz=245,slow=12,SNR=14
USHA Ushuaia 37.37 178 P **P** **20 17 59.3 +0.7**
USHA Ushuaia 37.37 178 P **P** **20 17 59.3 +0.7**
comp=N,6.7nm,0.6s,baz=354,slow=9.6,SNR=5.9
USHA LR LR 20 34 17.3
comp=N,338nm,18.1s,baz=325,slow=38
TEIG Tepich 41.14 335 *e*P **P** **20 18 30.9 +0.4**
comp=N,37nm,1.0s
TEIG Tepich 41.14 335 P **P** **20 18 30.2 -0.2**
comp=N,15nm,0.6s,baz=153,slow=8.8,SNR=17
TIGA Tifton 50.11 346 P **P** **20 19 41.3 +0.3**
baz=50
NHSC New Hope 51.04 350 *e*P **P** **20 19 48.0 0.0**
comp=N,204nm,0.8s
LRAL Lakeview Retre 52.50 343 *e*P **P** **20 19 56.6 -2.4**
comp=N,30nm,1.1s
KMSC Kings Mountain 53.23 349 P **P** **20 20 04.7 +0.5**
baz=53,SNR=10
732A Laxson Ranch, 53.83 328 P **P** **20 20 09.1 +0.4**
baz=54
CPCT Cooper Cave 54.17 346 *e*P **P** **20 20 09.7 -1.4**
632A Uvalde 54.37 329 P **P** **20 20 13.6 +0.8**
baz=55
631A Perdido Creek 54.69 328 P **P** **20 20 15.2 +0.2**
baz=55,SNR=6.2
532A Rocksprings 54.94 329 P **P** **20 20 17.7 +0.7**
baz=55
TZTN Tazewell 55.01 348 *e*P **P** **20 20 15.6 -1.6**
comp=N,42nm,1.3s
BLA Blacksburg 55.10 351 *e*P **P** **20 20 17.7 -0.2**
BLA pmax pmax
comp=Z,34nm,0.6s
BLA Blacksburg 55.10 351 *e*P **P** **20 20 17.7 -0.2**
comp=Z,34nm,0.6s
JCT Junction City 55.18 329 *e*P **P** **20 20 18.6 0.0**
JCT pmax pmax
comp=Z,8.0nm,0.9s
JCT Junction City 55.18 329 *e*P **P** **20 20 18.6 0.0**
comp=Z,8.2nm,0.9s
JCT Junction City 55.18 329 P **P** **20 20 19.2 +0.6**
baz=55
531A Rocksprings 55.28 329 P **P** **20 20 20.2 +0.8**
baz=56,SNR=9.5
WHTX Lake Whitney 55.36 332 P **P** **20 20 20.7 +0.9**
baz=56
432A Menard 55.50 330 P **P** **20 20 21.7 +0.7**
baz=56,SNR=5.8
WVT Waverly 55.64 343 *e*P **P** **20 20 19.5 -2.3**
WVT pmax pmax
comp=Z,12nm,0.7s
WVT Waverly 55.64 343 *e*P **P** **20 20 19.5 -2.3**
comp=Z,12nm,0.7s
530A J-C Ranch, Com 55.67 328 ⇓P **P** **20 20 22.9 +0.7**
baz=56,SNR=6.3
431A Sonora 55.74 329 P **P** **20 20 22.9 +0.2**
baz=56,SNR=7.0
UALR University of 55.79 339 *e*P **P** **20 20 22.4 -0.4**
comp=Z,20nm,0.9s
UALR *e* **pP** **20 20 39.1 -0.1**
332A Millersview 55.90 330 ⇓P **P** **20 20 24.0 +0.2**
baz=56,SNR=7.6
628A Black Gap, Mar 55.95 326 P **P** **20 20 24.6 +0.4**
baz=56
MIAR Mount Ida 56.02 337 *e*P **P** **20 20 23.5 -1.1**
MIAR *e* 20 20 40.6
MIAR pmax pmax
comp=Z,34nm,0.8s
MIAR Mount Ida 56.02 337 *e*P **P** **20 20 23.5 -1.1**
comp=Z,34nm,0.8s
MIAR *e* **pP** **20 20 40.6 -0.3**
529A Stev Forest Ra 56.10 327 ⇓P **P** **20 20 25.4 +0.1**
baz=56,SNR=18
430A Baggett Ranch, 56.13 328 ⇓P **P** **20 20 25.3 -0.2**
baz=56,SNR=7.5
331A San Angelo 56.16 329 P **P** **20 20 26.1 +0.4**
baz=56
627A Tetingua Ranc 56.19 326 ⇓P **P** **20 20 26.4 +0.4**
baz=56,SNR=7.5
TXAR Lajitas Array 56.25 325 P **P** **20 20 25.6 -0.8**
TXAR pP **pP** **20 20 41.8 -1.0**
TXAR Lajitas Array 56.25 325 P **P** **20 20 25.6 -0.8**
comp=Z,2.7nm,0.6s,baz=151,slow=9.0,SNR=19
TXAR pP **pP** **20 20 41.8 -1.0**
comp=Z,7.1nm,0.8s,baz=155,slow=9.1,SNR=16
232A Coleman 56.27 331 ⇓P **P** **20 20 26.8 +0.4**
baz=56,SNR=11
429A Davenport Ranc 56.34 328 ⇓P **P** **20 20 26.9 -0.1**
baz=56,SNR=14
528A Cox Ranch, San 56.43 327 P **P** **20 20 27.8 +0.1**
baz=57,SNR=5.2
330A Mertzon 56.61 329 P **P** **20 20 29.1 +0.2**
baz=57
231A Bronte 56.62 330 P **P** **20 20 29.1 +0.2**
baz=57
626A Big Bend Ranch 56.67 325 P **P** **20 20 30.6 +1.3**
baz=57,SNR=6.3
PARMO Parma 56.69 342 P **P** **20 20 28.7 -0.5**
428A Kincaid Ranch, 56.82 327 P **P** **20 20 31.0 +0.5**
baz=57
527A Woodward Ranch 56.85 326 P **P** **20 20 31.2 +0.4**
baz=57,SNR=11
ABTX Abilene, Hawle 56.88 331 P **P** **20 20 31.4 +0.7**
baz=57,SNR=9.4
230A Sterling City 56.97 329 P **P** **20 20 31.9 +0.5**
baz=57
526A May Lane Ranc 57.04 326 P **P** **20 20 32.7 +0.6**
baz=57,SNR=7.4
329A Wagon Wheel Ra 57.08 328 P **P** **20 20 32.7 +0.5**
baz=57
WCI Wyandotte Cave 57.23 346 *e*P **P** **20 20 31.3 -1.8**
WCI pmax pmax
comp=Z,24nm,0.6s
WCI Wyandotte Cave 57.23 346 *e*P **P** **20 20 31.3 -1.8**
comp=Z,24nm,0.6s
131A Roby 57.27 330 P **P** **20 20 34.1 +0.6**
baz=58
427A Hayter Ranch, 57.30 327 P **P** **20 20 34.2 +0.4**
baz=58,SNR=5.3
USIN University of 57.32 344 *e*P **P** **20 20 32.7 -1.0**
comp=Z,28nm,0.6s
Z32A Haskell 57.38 332 P **P** **20 20 34.2 0.0**
baz=58
229A Bryant Ranch, 57.38 329 P **P** **20 20 34.8 +0.5**
baz=58
328A Wristen Ranch, 57.41 328 P **P** **20 20 34.6 +0.1**
baz=58,SNR=6.7
130A Snyder 57.48 330 P **P** **20 20 35.4 +0.4**
baz=58
426A McDonald Obser 57.48 326 ⇑P **P** **20 20 35.4 +0.1**
baz=58,SNR=7.7
SIUC Southern Illin 57.51 343 *e*P **P** **20 20 33.8 -1.2**
comp=Z,79nm,0.7s
Z31A Sharp Cattle R 57.69 331 ⇓P **P** **20 20 36.5 0.0**
baz=58,SNR=14
228A UT Block 9, Go 57.89 328 P **P** **20 20 38.2 +0.3**
baz=58
129A Stewart Farms, 57.94 329 P **P** **20 20 38.7 +0.4**
baz=58
Y32A R-V Farms, Ver 57.94 332 P **P** **20 20 38.9 +0.7**
baz=58
326A Caldwell Ranch 57.97 327 P **P** **20 20 38.1 -0.4**
baz=58,SNR=10.0
TUL1 Tulsa 58.07 336 P **P** **20 20 39.7 +0.7**
baz=58,SNR=5.5
425A Indio Mountain 58.09 325 P **P** **20 20 39.4 -0.1**
baz=58,SNR=11
Z30A Sanderson Ranc 58.12 330 P **P** **20 20 39.0 -0.5**
baz=58,SNR=19
227A Bennet, Jal 58.16 328 P **P** **20 20 40.5 +0.7**
baz=58
OLIL Olney 58.16 344 *e*P **P** **20 20 37.9 -1.7**
comp=Z,11nm,0.6s
BLO Bloomington 58.19 346 *e*P **P** **20 20 38.6 -1.1**
BLO pmax pmax
comp=Z,22nm,0.6s
BLO Bloomington 58.19 346 *e*P **P** **20 20 38.6 -1.1**
comp=Z,22nm,0.6s
BLO *es*P **sP** **20 21 01.9 -1.3**
128A Castleberry Fa 58.24 329 P **P** **20 20 40.6 +0.2**
baz=58
WMOK Wichita Mounta 58.27 333 *e*P **P** **20 20 39.8 -0.7**
WMOK *e**PP **pP** **20 20 56.2 -0.7**
WMOK pmax pmax
comp=Z,16nm,1.0s
WMOK Wichita Mounta 58.27 333 *e*P **P** **20 20 39.8 -0.7**
comp=Z,16nm,1.0s
WMOK *e*pP **pP** **20 20 56.2 -0.7**
WMOK *es*P **sP** **20 21 03.8 -0.2**
Y31A Rekieta Farm, 58.28 331 P **P** **20 20 41.5 +0.9**
baz=58
Z29A Hungry Hill Ra 58.38 330 ⇓P **P** **20 20 41.3 0.0**
baz=59,SNR=7.3
ACSO Alum Creek Sta 58.47 349 *e*P **P** **20 20 40.8 -1.0**
comp=Z,65nm,0.9s
325A Bean Ranch, Si 58.54 326 ⇓P **P** **20 20 42.9 +0.3**
baz=59,SNR=18
SLM Saint Louis 58.66 342 *e*P **P** **20 20 42.4 -0.6**
SLM Saint Louis 58.66 342 *e*P **P** **20 20 42.4 -0.6**
226B Tecolote Peak, 58.66 327 ⇓P **P** **20 20 44.0 +0.6**
baz=59,SNR=6.6
X31A McDonald Ranch 58.71 332 ⇓P **P** **20 20 43.5 0.0**
baz=59,SNR=12
127A Arkansas Junct 58.72 328 P **P** **20 20 44.0 +0.2**
baz=59
Y29A Porterfield Fa 58.85 330 P **P** **20 20 45.0 +0.4**
baz=59
GDL2 Guadalupe Moun 58.86 327 *e*P **P** **20 20 45.0 +0.2**
comp=Z,10nm,1.0s
324A Moseley Ranch, 58.87 325 ⇓P **P** **20 20 44.8 0.0**
baz=59,SNR=16
MNTX Cornudas Mount 59.01 326 *e*P **P** **20 20 44.3 -1.4**
comp=Z,17nm,1.0s
MNTX *ep*P **pP** **20 21 00.5 -1.6**
225A Deer Hill, Car 59.03 326 P **P** **20 20 46.9 +0.9**
baz=59,SNR=6.9
126A Clayton Basin, 59.04 327 P **P** **20 20 46.3 +0.4**
baz=59,SNR=7.2
BRYW Bryant College 59.06 359 *e*P **P** **20 20 44.4 -1.4**
comp=Z,82nm,1.1s
Z27A Tatum 59.16 329 ⇓P **P** **20 20 46.2 -0.7**
baz=59,SNR=10
X29A Tulia 59.35 331 P **P** **20 20 48.1 +0.1**
baz=60
125A Gardner Draw, 59.38 327 P **P** **20 20 48.3 0.0**
baz=60
224A Cornudas Mount 59.38 326 ⇓P **P** **20 20 47.5 -0.8**
baz=60,SNR=12
ALLY Alegheny Colle 59.41 352 *e*P **P** **20 20 47.5 -0.8**
comp=Z,97nm,0.8s
MSTX Muleshoe 59.47 329 P **P** **20 20 49.2 +0.3**
baz=60,SNR=7.5
Z26A Caprock 59.51 328 P **P** **20 20 49.1 -0.2**
baz=60
BINY Binghamton 59.53 356 *e*P **P** **20 20 48.6 -0.4**
comp=Z,48nm,0.8s
Y27A Causey 59.59 329 P **P** **20 20 50.0 +0.2**
baz=60,SNR=7.4
V31A Spring Creek L 59.61 333 P **P** **20 20 50.4 +0.7**
baz=60
HRV Adam Dziewonsk 59.65 359 *e*P **P** **20 20 48.5 -1.3**
HRV pmax pmax
comp=Z,15nm,0.8s
HRV Adam Dziewonsk 59.65 359 *e*P **P** **20 20 48.5 -1.3**
comp=Z,15nm,0.8s
AMTX Amarillo 59.70 331 P **P** **20 20 49.7 -0.7**
comp=Z,15nm,1.0s
AMTX *es*P **sP** **20 21 13.2 -0.7**
124A Stringfield Ra 59.83 326 P **P** **20 20 51.7 +0.2**
baz=60
ERPA Erie 59.85 352 *e*P **P** **20 20 50.7 -0.6**
comp=Z,102nm,0.8s
ERPA *ep*P **pP** **20 21 06.9 -0.9**
W29A Amraillo 59.88 331 P **P** **20 20 52.1 +0.4**
baz=60
Z25A Roswell 59.89 327 ⇓P **P** **20 20 51.2 -0.7**
baz=60,SNR=8.1
TRY Troy 59.93 358 *e*P **P** **20 20 51.6 -0.1**
comp=Z,26nm,0.8s
TRY *ep*P **pP** **20 21 07.4 -0.8**
TRY *es*P **sP** **20 21 14.1 -1.1**
222A Williams Famil 60.26 325 P **P** **20 20 55.4 +1.0**
baz=60
Z24A Sheeppen Canyo 60.27 327 ⇓P **P** **20 20 54.4 -0.2**
baz=60,SNR=9.7
Y25A Mesa, Roswell 60.39 328 P **P** **20 20 55.1 -0.1**
baz=61
X26A CR and CF Fran 60.45 329 ⇑P **P** **20 20 55.5 -0.2**
baz=61,SNR=8.5
320A Kipp Ranch, An 60.48 323 P **P** **20 20 56.6 +0.6**
baz=61
ACCN Adirondack Com 60.58 358 *e*P **P** **20 20 55.7 -0.5**
comp=Z,5.5nm,0.8s
T31A Randall Ranch, 60.66 334 ⇓P **P** **20 20 57.1 +0.2**
baz=61,SNR=8.1
V28A Channing 60.66 331 P **P** **20 20 58.0 +0.9**
baz=61
Z23A Rita Site, Whi 60.67 326 P **P** **20 20 57.8 +0.6**
baz=61
Y24A Capitan 60.77 327 P **P** **20 20 58.7 +0.7**
baz=61
220A Playas Peak, P 60.90 324 P **P** **20 20 59.0 +0.2**
baz=61,SNR=6.6
319A Douglas 60.95 323 ⇓P **P** **20 20 59.4 +0.4**
baz=61,SNR=6.3
121A Cookes Peak, D 60.96 325 ⇓P **P** **20 20 59.7 +0.5**
baz=61,SNR=6.2
Z22A Elephant Butte 61.06 326 P **P** **20 20 59.9 +0.1**
baz=61
Y23A Lovelace Mesa, 61.10 327 P **P** **20 21 00.5 +0.4**
baz=61
MDV Middlebury 61.18 358 P **P** **20 20 59.8 -0.4**
comp=Z,97µm,0.7s
U28A Mallet 61.18 331 P **P** **20 21 01.1 +0.6**
baz=61
KSU1 Kansas State U 61.18 337 *e*P **P** **20 20 58.7 -1.6**
comp=Z,12nm,0.7s
KSU1 *ep*P **pP** **20 21 16.0 -1.0**
NCB Newcomb 61.19 357 *e*P **P** **20 20 59.5 -0.8**
comp=Z,17nm,1.0s
NCB *e* 20 21 31.3
W25A X Bar L Ranch, 61.30 329 ⇑P **P** **20 21 01.0 -0.5**
baz=62,SNR=7.5
LBNH Lisbon 61.39 359 *e*P **P** **20 21 01.0 -0.6**
LBNH *e**PP **pP** **20 21 17.9 -0.3**
LBNH pmax pmax
comp=Z,17nm,0.9s
LBNH Lisbon 61.39 359 *e*P **P** **20 21 01.0 -0.6**
comp=Z,17nm,0.9s
LBNH *ep*P **pP** **20 21 17.9 -0.3**
LBNH *es*P **sP** **20 21 24.0 -1.2**
V26A Tequesquite Ra 61.44 330 P **P** **20 21 02.2 -0.1**
baz=62,SNR=10.0
120A U Bar Ranch, L 61.44 324 P **P** **20 21 03.4 +0.9**
baz=62
S30A Montezuma 61.45 334 P **P** **20 21 03.0 +0.7**
baz=62
BNM Barren Site 61.57 327 *e*P **P** **20 21 03.2 -0.2**
comp=Z,4.2nm,1.1s
Y22A Socorro 61.58 326 P **P** **20 21 04.2 +0.8**
baz=62
R31A Burdett 61.61 335 P **P** **20 21 03.8 +0.4**
baz=62
X23A Hourglass Bar 61.67 327 P **P** **20 21 04.5 +0.4**
baz=62
LPM Los Pinos Moun 61.69 327 *e*P **P** **20 21 03.5 -0.7**
comp=Z,7.1nm,1.1s
LPM *e* **pP** **20 21 20.8 +0.1**
S29A Ulysses 61.72 333 P **P** **20 21 04.9 +0.8**
baz=62
T28A Walsh 61.74 332 P **P** **20 21 04.6 +0.3**
baz=62
LENM Lemitar 61.76 326 P **P** **20 21 04.9 +0.3**
LENM *ep*P **pP** **20 21 20.3 -0.9**
W24A Lazy 6 Ranch, 61.77 328 P **P** **20 21 04.7 +0.1**
baz=62
Z20A Nine Sixteen R 61.84 324 ⇑P **P** **20 21 05.8 +0.6**
baz=62,SNR=9.9
LONY Lake Ozonia 61.85 357 *e*P **P** **20 21 04.1 -0.6**
comp=Z,20nm,0.8s
V25A Rancho No Teng 61.87 329 P **P** **20 21 05.7 +0.4**
baz=62,SNR=8.0
U26A Atchley Ranch, 61.90 330 ⇑P **P** **20 21 05.9 +0.4**
baz=62,SNR=5.2
R30A Dighton 61.92 334 P **P** **20 21 06.0 +0.6**
baz=62
Y21A Point of Rocks 62.02 326 P **P** **20 21 08.1 +1.8**
baz=62
FRNY Flat Rock 62.02 358 *e*P **P** **20 21 05.3 -0.6**
comp=Z,20nm,0.9s
S28A Manter 62.03 332 P **P** **20 21 06.7 +0.5**
baz=62
ANMO Albuquerque 62.09 327 *e*P **P** **20 21 06.6 -0.2**
comp=Z,11nm,0.9s
ANMO *e* **pP** **20 21 23.3 -0.2**
W23A Werner Place, 62.10 328 P **P** **20 21 07.5 +0.6**
baz=62
V24A Rampart Ranch, 62.10 329 P **P** **20 21 07.5 +0.6**
baz=62
Q31A Ellis 62.17 335 P **P** **20 21 07.8 +0.7**
baz=62
U25A Circle Dot Ran 62.22 330 P **P** **20 21 07.5 -0.2**
baz=62
MSNY Massena 62.24 357 *e*P **P** **20 21 06.7 -0.6**
comp=Z,379nm,0.9s
Y20A Horse Springs, 62.32 325 P **P** **20 21 09.3 +0.8**
baz=62
X21A Alamocita Cree 62.41 326 ⇑P **P** **20 21 10.3 +1.3**
baz=63,SNR=5.8
TUC Tucson 62.50 322 *e*P **P** **20 21 09.9 +0.4**
TUC *e* 20 21 25.2
TUC pmax pmax
comp=Z,16nm,1.8s
TUC Tucson 62.50 322 *e*P **P** **20 21 09.9 +0.4**
comp=Z,16nm,1.8s
TUC *e* **pP** **20 21 25.2 -0.9**
SCIA State Center 62.55 341 *e*P **P** **20 21 07.9 -1.6**
comp=Z,15nm,0.5s
P31A Stockton 62.60 335 P **P** **20 21 10.0 0.0**
baz=63,SNR=6.2
JFWS Jewell Farm 62.64 344 *e*P **P** **20 21 08.6 -1.5**
JFWS pmax pmax
comp=Z,19nm,0.6s
JFWS Jewell Farm 62.64 344 *e*P **P** **20 21 08.6 -1.5**
comp=Z,19nm,0.6s
Q29A Oakley 62.72 334 P **P** **20 21 11.4 +0.6**
baz=63
S26A Kim 62.77 331 P **P** **20 21 12.1 +0.9**
baz=63
T25A Trinidad 62.81 330 P **P** **20 21 12.5 +0.9**
baz=63
U23A El Rito 63.04 328 ⇓P **P** **20 21 13.6 +0.5**
baz=63,SNR=5.6
V22A San Miguel Ran 63.08 328 P **P** **20 21 14.0 +0.6**
baz=63
Q28A Sharon Springs 63.23 333 P **P** **20 21 14.8 +0.6**
baz=63
S25A Robets Cordova 63.24 331 P **P** **20 21 14.8 +0.4**
baz=64
W20A Ramah 63.30 326 P **P** **20 21 15.7 +0.7**
baz=64
R26A Arlington 63.31 332 P **P** **20 21 15.5 +0.7**
baz=64
V21A Milan 63.37 327 P **P** **20 21 16.3 +0.9**
baz=64

U22A **Llaves** 63.41 328 P P 20 21 16.8 +1.2
baz=64
O30A **MW Ranch, Wils** 63.44 335 P P 20 21 16.4 +0.9
baz=64
214A **Organ Pipe Nat** 63.46 321 P P 20 21 16.8 +1.1
baz=64
T23A **Casias Ranch,** 63.52 329 P P 20 21 17.1 +0.8
baz=64
KSCO **Kaye Shedlock'** 63.53 333 P P 20 21 17.1 +0.9
baz=64
S24A **Houchin Ranch,** 63.60 330 P P 20 21 17.7 +0.7
baz=64
V20A **Brimhall** 63.80 326 P P 20 21 19.1 +1.0
baz=64
Q26A **Hugo** 63.85 332 P P 20 21 19.3 +0.9
baz=64
U21A **Nageezi** 63.86 327 P P 20 21 19.9 +1.4
baz=64,SNR=7.9
T22A **Edith** 63.93 328 P P 20 21 19.7 +0.6
baz=64
P27A **Ficken Ranch,** 63.96 333 P P 20 21 20.1 +1.0
baz=64
W18A **Petrified Fore** 63.97 325 P P 20 21 20.2 +1.0
baz=64
N29A **Votaw Ranch, W** 64.21 335 P P 20 21 21.5 +0.9
baz=64
T21A **Navajo Lake** 64.23 328 P P 20 21 21.5 +0.5
baz=64
U20A **Newcomb** 64.26 327 P P 20 21 22.1 +1.0
baz=64
R23A **Moffat** 64.33 330 P P 20 21 22.6 +0.9
baz=64
X16A **Lo Mia Camp, P** 64.40 323 ⇓P P 20 21 23.6 +1.4
baz=65,SNR=5.9
S22A **4UR Ranch, Cre** 64.46 329 P P 20 21 23.7 +1.1
baz=65
P25A **Willow Gulch B** 64.62 332 P P 20 21 24.4 +0.9
baz=65
VNA1 **Neumayer--Stat** 64.71 161 eP P 20 21 25.2 +1.8
VNA1 **Neumayer--Stat** 64.71 161 esP sP 20 21 42.0 -5.0
S21A **Coal Bank Pass** 64.88 328 P P 20 21 26.2 +0.9
baz=65
Y14A **Wickenburg** 64.97 322 P P 20 21 27.1 +1.4
baz=65
WUAZ **Wupatki** 65.16 324 eP P 20 21 29.9 +2.8
comp=Z,26nm,1.0s
WUAZ e pP 20 21 44.5 +0.7
P23A **Jefferson** 65.28 331 P P 20 21 28.0 +0.1
baz=66
ECSD **EROS Data Cent** 65.28 340 eP P 20 21 26.3 -1.1
comp=Z,77nm,1.3s
S20A **Disappointment** 65.29 328 P P 20 21 27.9 0.0
baz=66
R21A **Cimarron** 65.30 329 P P 20 21 28.8 +0.8
baz=66
COWI **Conover** 65.36 346 eP P 20 21 26.6 -1.2
comp=Z,13nm,0.8s
SPMN **St. Paul** 65.47 343 P P 20 21 28.1 -0.5
baz=66,SNR=6.9
ISCO **Idaho Springs** 65.51 331 eP P 20 21 30.2 +0.9
ISCO e 20 21 45.3
ISCO pmax pmax
comp=Z,13nm,0.9s
ISCO **Idaho Springs** 65.51 331 eP P 20 21 30.2 +0.9
comp=Z,13nm,0.9s
ISCO e pP 20 21 45.3 -0.8
ISCO **Idaho Springs** 65.51 331 P P 20 21 30.6 +1.3
baz=66,SNR=7.5
R20A **Redvale** 65.58 328 ⇑P P 20 21 31.0 +1.3
baz=66,SNR=5.3
SMCO **Snowmass** 65.66 330 eP P 20 21 31.2 +0.8
comp=Z,17nm,0.8s
SMCO e pP 20 21 47.8 +0.6
K29A **Lazy Trails An** 65.75 337 P P 20 21 31.5 +1.1
baz=66
P22A **Eagle** 65.88 330 P P 20 21 32.2 +0.5
baz=66
O23A **Lake Granby, G** 65.98 331 P P 20 21 33.7 +1.4
baz=66
S18A **Hurst Farm, Bl** 66.03 327 P P 20 21 33.7 +1.0
baz=66
P21A **Newcastle** 66.16 330 P P 20 21 34.3 +0.8
baz=66
O22A **Kremmling** 66.23 331 P P 20 21 35.1 +1.1
baz=66,SNR=6.2
BC3 **Big Chuckawall** 66.24 320 P P 20 21 34.9 +1.0
baz=66
MONP **Monument Peak** 66.32 319 P P 20 21 35.9 +1.3
baz=66
U15A **North Rim** 66.34 324 ⇑P P 20 21 36.5 +1.7
baz=66,SNR=6.2
BAR **Barrett** 66.34 319 eP P 20 21 33.0 -1.5
comp=Z,19nm,1.1s
BAR e 20 21 51.8
IRM **Iron Mountain** 66.40 321 P P 20 21 36.3 +1.5
baz=67
N23A **Red Feather La** 66.54 332 P P 20 21 36.9 +1.0
baz=67
P20A **De Beque** 66.59 329 P P 20 21 37.0 +0.8
baz=67
PHWY **Pilot Hill** 66.65 332 eP P 20 21 36.2 -0.4
comp=Z,8.1nm,0.9s
PHWY epP pP 20 21 52.9 -0.5
J28A **Allard Ranch,** 66.66 336 P P 20 21 37.4 +1.0
baz=67
N22A **Wattenberg Ran** 66.70 331 P P 20 21 37.5 +0.6
baz=67
BRSD **Miller** 66.70 338 P P 20 21 36.9 +0.4
baz=67
SNAA **Sanae** 66.70 161 eP P 20 21 36.8 +0.5
SNAA **Sanae** 66.70 161 esP sP 20 21 53.8 -6.2
SNAA **Sanae** 66.70 161 eP P 20 21 36.4 +0.1
comp=Z,30nm,0.9s
SNAA epP pP 20 21 53.2 +0.2
SNAA **Sanae** 66.70 161 LR LR 20 47 04.5
comp=Z,89nm,20.8s,baz=330,slow=32
PFO **Pinyon Flat Ob** 66.82 320 eP P 20 21 37.7 0.0
comp=Z,9.7nm,1.2s
PFO epP pP 20 21 53.5 -0.9
P19A **Cripple Cowboy** 66.99 329 ⇑P P 20 21 39.5 +0.8
baz=67,SNR=6.0
GMRC **Granite Mounta** 67.13 321 P P 20 21 40.6 +1.0
baz=67,SNR=7.2
SRU **San Rafael** 67.37 327 ⇓P P 20 21 42.4 +1.3
baz=68,SNR=6.3
L23A **Garrett** 67.41 333 P P 20 21 42.2 +0.9
baz=68
K24A **Anderson Ranch** 67.52 334 P P 20 21 43.0 +1.0
baz=68
Q16A **Castle Valley** 67.56 327 P P 20 21 43.3 +1.0
baz=68
N20A **Spence Gulch,** 67.57 330 P P 20 21 43.8 +1.4
baz=68,SNR=6.5
O19A **Miners Draw (B** 67.57 329 ⇓P P 20 21 43.5 +1.2
baz=68,SNR=5.8
EYMN **Ely** 67.66 345 eP P 20 21 41.1 -1.4
comp=Z,22nm,0.9s
EYMN epP pP 20 21 58.4 -0.8
CCUT **Cedar City** 67.74 325 eP P 20 21 44.5 +0.9
comp=Z,21nm,0.9s
CCUT e pP 20 22 01.7 +1.4
M21A **Separation Pea** 67.75 331 P P 20 21 44.7 +1.1
baz=68
MSU **Marysvale** 67.79 326 eP P 20 21 44.2 +0.4
MSU e 20 22 00.5
MSU pmax pmax
comp=Z,25nm,0.9s
MSU **Marysvale** 67.79 326 eP P 20 21 44.2 +0.4
comp=Z,25nm,0.9s
MSU e pP 20 22 00.5 -0.1
ARUT **Antelope Range** 67.95 325 eP P 20 21 46.7 +1.9
ARUT e 20 22 02.9
ARUT pmax pmax
comp=Z,41nm,0.8s
ARUT **Antelope Range** 67.95 325 eP P 20 21 46.7 +1.9
comp=Z,40nm,0.8s
ARUT e pP 20 22 02.9 +1.3
L21A **Rawlins** 68.04 331 ⇑P P 20 21 45.8 +0.5
baz=68,SNR=6.4
M20A **Sweetwater, Wa** 68.04 331 P P 20 21 46.1 +0.7
baz=68
GSC **Goldstone** 68.17 321 P P 20 21 47.2 +1.1
GSC e 20 22 03.7
GSC pmax pmax
comp=Z,2.0nm,0.8s
GSC **Goldstone** 68.17 321 P P 20 21 47.2 +1.1
comp=Z,2.1nm,0.8s
GSC e pP 20 22 03.7 +0.8
K22A **Casper** 68.20 332 P P 20 21 47.2 +1.0
baz=68
MWC **Mount Wilson** 68.22 319 P P 20 21 46.3 -0.3
MWC e 20 22 02.6
MWC pmax pmax
comp=Z,19nm,1.1s
MWC **Mount Wilson** 68.22 319 P P 20 21 46.3 -0.3
comp=Z,18nm,1.1s
MWC e pP 20 22 02.6 -0.8
RSSD **Black Hills** 68.35 335 eP P 20 21 46.7 -0.5
RSSD pmax pmax
comp=Z,2.0nm,0.6s
RSSD **Black Hills** 68.35 335 eP P 20 21 46.7 -0.5
comp=Z,2.4nm,0.6s
I24A **Kuemmerle Ranc** 68.37 334 P P 20 21 48.3 +1.1
baz=69
L20A **Wamsutter** 68.52 331 P P 20 21 48.8 +0.5
baz=69
EDW2 **Edwards Air Fo** 68.61 320 P P 20 21 49.4 +0.5
baz=69
MPU **Maple Canyon** 68.61 327 eP P 20 21 50.0 +1.1
comp=Z,20nm,1.0s
MPU e pP 20 22 06.2 +0.4
J22A **Midwest** 68.80 333 P P 20 21 50.6 +0.7
baz=69
JLU **Jordanelle** 68.96 328 eP P 20 21 51.4 +0.4
comp=Z,4.5nm,0.7s
JLU e pP 20 22 08.6 +0.6
FURC **Furnace Creek,** 68.99 322 ⇓P P 20 21 52.9 +1.9
baz=69,SNR=8.7
K20A **Yellowstone Ra** 69.03 331 P P 20 21 52.0 +0.6
baz=69,SNR=5.1
L19A **Farson** 69.07 330 ⇑P P 20 21 52.8 +1.1
baz=69,SNR=5.6
H24A **Dirks Ranch, A** 69.07 335 P P 20 21 52.1 +0.5
baz=69
MPMC **Manual Prospec** 69.09 321 P P 20 21 52.8 +0.9
baz=69
AGMN **Agassiz Nation** 69.14 342 eP P 20 21 50.5 -1.3
comp=Z,38nm,1.1s
LIC **Lamto** 69.15 76 eP P 20 21 51.7 -0.8
comp=Z,18nm,0.4s,baz=252
LIC eR
comp=Z,484nm,21.0s
LIC **Lamto** 69.15 76 eP P 20 21 51.7 -0.8
comp=Z,18nm,0.4s
J21A **Lysite** 69.17 332 ⇑P P 20 21 52.7 +0.4
baz=69,SNR=6.1
I22A **9 Mile Ranch,** 69.18 333 ⇓P P 20 21 52.5 +0.2
baz=69,SNR=6.2
M17A **Scullys Gap (B** 69.22 329 ⇓P P 20 21 53.4 +0.8
baz=69,SNR=5.3
DUG **Dugway** 69.36 327 eP P 20 21 54.7 +1.3
DUG e 20 22 10.9
DUG pmax pmax
comp=Z,26nm,1.0s
DUG **Dugway** 69.36 327 eP P 20 21 54.7 +1.3
comp=Z,26nm,1.0s
DUG e pP 20 22 10.9 +0.6
DUG **Dugway** 69.36 327 P P 20 21 54.8 +1.4
baz=70,SNR=5.2
K19A **Absolon Red Bu** 69.39 331 P P 20 21 54.1 +0.4
baz=70,SNR=5.7
ISA **Isabella** 69.42 320 P P 20 21 54.3 +0.4
ISA e 20 22 11.5
ISA pmax pmax
comp=Z,9.0nm,0.9s
ISA **Isabella** 69.42 320 P P 20 21 54.3 +0.4
comp=Z,9.2nm,0.9s
ISA e pP 20 22 11.4 +0.7
ISA **Isabella** 69.42 320 P P 20 21 54.5 +0.6
baz=70
J20A **Shoshoni** 69.46 332 P P 20 21 54.8 +0.9
baz=70
DBIC **Dimbokro** 69.47 76 P P 20 21 54.2 -0.3
DBIC pP pP 20 22 11.8 +0.4
DBIC sP sP 20 22 18.6 +0.3
DBIC **Dimbokro** 69.47 76 P P 20 21 54.2 -0.3
comp=Z,30nm,0.7s,baz=225,slow=6.0,SNR=34
DBIC pP pP 20 22 11.8 +0.4
comp=Z,21nm,0.8s,baz=238,slow=6.7,SNR=5.8
DBIC sP sP 20 22 18.6 +0.3
comp=Z,36nm,0.7s,baz=227,slow=7.1,SNR=6.3
DBIC LR LR 20 50 54.0
comp=Z,357nm,19.8s,baz=225,slow=35
I21A **Big Trails, Te** 69.47 333 ⇑P P 20 21 54.0 -0.1
baz=70,SNR=12
R11A **Troy Canyon, C** 69.54 324 ⇑P P 20 21 56.2 +1.5
baz=70,SNR=11
BW06 **Boulder Array** 69.68 331 eP P 20 21 54.8 -0.7
comp=Z,1.9nm,0.7s
PDAR **Pinedale Array** 69.68 331 P P 20 21 55.2 -0.3
PDAR pP pP 20 22 11.8 -0.6
PDAR **Pinedale Array** 69.68 331 P P 20 21 55.2 -0.3
comp=Z,1.9nm,0.8s,baz=138,slow=7.5,SNR=7.6
PDAR pP pP 20 22 11.8 -0.6
comp=Z,5.4nm,0.8s,baz=152,slow=6.7,SNR=10.0
E26A **Carlson Angus** 69.71 337 P P 20 21 55.9 +0.6
baz=70
PKM **Peak Mountain** 69.76 319 P P 20 21 56.8 +0.7
baz=70
HWUT **Hardware Ranch** 69.77 329 eP P 20 21 55.6 -0.4
comp=Z,22nm,1.0s
HWUT e pP 20 22 12.3 -0.5
G23A **Biddle** 69.79 335 P P 20 21 56.8 +0.9
baz=70
J19A **Crowheart** 69.83 331 P P 20 21 57.4 +1.0
baz=70,SNR=7.7
F24A **Ekalaka** 69.94 336 P P 20 21 57.8 +1.0
baz=70
I20A **Worland** 69.95 332 P P 20 21 57.9 +1.0
baz=70
E25A **Miller Ranch,** 70.08 337 P P 20 21 58.1 +0.5
baz=70
H20A **Greybull** 70.31 333 P P 20 21 59.6 +0.4
baz=70
I19A **Meeteetse** 70.40 332 P P 20 22 00.5 +0.6
baz=71
E24A **Baker** 70.48 336 P P 20 22 00.6 +0.5
baz=71
HVU **Hansel Valley** 70.50 328 eP P 20 22 00.8 +0.4
HVU e 20 22 16.9
HVU pmax pmax
comp=Z,19nm,0.8s
HVU **Hansel Valley** 70.50 328 eP P 20 22 00.8 +0.4
comp=Z,18nm,0.8s
HVU e pP 20 22 16.9 -0.4
I18A **Diamond G Ranc** 70.52 331 ⇑P P 20 22 01.1 +0.5
baz=71,SNR=6.8
G21A **Lodge Grass** 70.56 334 P P 20 22 01.2 +0.6
baz=71
F22A **Rosebud** 70.61 335 P P 20 22 01.6 +0.7
baz=71
E23A **Ismay** 70.81 336 P P 20 22 02.9 +0.8
baz=71,SNR=7.0
LOHW **Long Hollow** 70.82 331 eP P 20 22 01.5 -0.9
comp=Z,8.1nm,0.8s
LOHW e pP 20 22 19.5 +0.1
TPAW **Teton Pass** 70.89 330 eP P 20 22 02.9 0.0
comp=Z,8.2nm,0.8s
H19A **Powell** 70.89 332 P P 20 22 03.7 +0.9
baz=71
ULM **Lac du Bonnet** 70.91 343 P P 20 22 01.5 -1.0
ULM pP pP 20 22 18.2 -1.3
ULM **Lac du Bonnet** 70.91 343 P P 20 22 01.5 -1.0
comp=Z,14nm,0.6s,baz=157,slow=5.5,SNR=15
ULM pP pP 20 22 18.2 -1.3
comp=Z,12nm,0.6s,baz=173,slow=7.1,SNR=4.3
D24A **Glendive** 70.95 337 ⇑P P 20 22 03.4 +0.5
baz=71,SNR=6.5
RRI2 **Red Ridge** 70.95 330 eP P 20 22 03.4 +0.1
comp=Z,38nm,0.8s
RRI2 e pP 20 22 20.8 +0.6
MOOW **Moose Ponds** 70.99 331 eP P 20 22 02.7 -0.8
comp=Z,5.9nm,1.0s
G20A **Bridger** 70.99 333 P P 20 22 03.7 +0.4
baz=71
ELK **Elko** 71.04 326 eP P 20 22 05.0 +1.1
comp=Z,4.7nm,1.3s
ELK e pP 20 22 20.8 +0.1
I17A **Pilgrim Ck.** 71.04 331 P P 20 22 05.4 +1.6
baz=71
DCID1 **Drake Creek** 71.08 330 P P 20 22 00.2 -3.8
comp=Z,33nm,0.9s
DCID1 e 20 22 20.4
NVAR **Mina Array Bea** 71.16 322 P P 20 22 05.2 +0.6
NVAR pP pP 20 22 22.6 +1.1
NVAR **Mina Array Bea** 71.16 322 P P 20 22 05.2 +0.6
comp=Z,3.7nm,0.8s,baz=150,slow=6.5,SNR=23
NVAR pP pP 20 22 22.6 +1.1
comp=Z,9.2nm,0.8s,baz=147,slow=7.2,SNR=19
IMW **Indian Meadow** 71.19 331 eP P 20 22 05.4 +0.6
comp=Z,12nm,0.8s
IMW e pP 20 22 22.1 +0.4
H18A **Shoshone NF, C** 71.20 332 ⇑P P 20 22 05.4 +0.6
baz=71,SNR=7.5
MAIT **Maitri** 71.24 160 eP P 20 21 55.4 -8.9
MAIT e 20 22 13.0
D23A **Lindsay** 71.33 336 P P 20 22 06.1 +0.8
baz=72
RLMT **Red Lodge** 71.37 332 eP P 20 22 06.6 +0.9
comp=Z,17nm,0.9s
RLMT e pP 20 22 22.3 -0.4
E21A **Keefer Ranch,** 71.56 335 P P 20 22 07.2 +0.5
baz=72
G18A **Lazy EL Ranch,** 71.66 332 ⇑P P 20 22 08.2 +0.9
baz=72,SNR=10
D22A **Cohagen** 71.69 335 ⇓P P 20 22 08.3 +0.9
baz=72,SNR=14
YMR **Madison River** 71.79 331 eP P 20 22 08.8 +0.5
comp=Z,20nm,1.0s
YMR e pP 20 22 26.3 +1.1
F19A **Roth Farm, Mol** 71.80 333 P P 20 22 09.5 +1.3
baz=72,SNR=5.1
C23A **Lambert** 71.84 336 P P 20 22 09.5 +1.2
baz=72
H16A **Russell Place,** 71.95 331 ⇓P P 20 22 10.0 +0.8
baz=72,SNR=5.5
D21A **La Casta Ranch** 71.95 335 ⇑P P 20 22 09.9 +0.9
baz=72,SNR=8.2
E20A **Meyer Farm, Mu** 71.97 334 ⇑P P 20 22 10.2 +1.1
baz=72,SNR=5.6
DGMT **Dagmar** 72.03 337 eP P 20 22 10.5 +1.2
comp=Z,25nm,0.9s
DGMT e pP 20 22 26.9 +0.6
DGMT **Dagmar** 72.03 337 P P 20 22 10.6 +1.2
baz=72
C22A **Vida** 72.06 336 P P 20 22 10.7 +1.0
baz=72
SCHQ **Schefferville** 72.07 2 eP P 20 22 08.7 -0.7
comp=Z,30nm,0.8s
SCHQ **Schefferville** 72.07 2 P P 20 22 08.8 -0.6
comp=Z,30nm,0.8s,baz=184,slow=4.1,SNR=31
SCHQ LR LR 20 56 15.7
comp=Z,129nm,18.7s,baz=102,slow=38
GCMT **Greycliff** 72.07 333 eP P 20 22 10.7 +0.9
GCMT e pP 20 22 27.0 +0.2
QLMT **Earthquake Lak** 72.13 331 eP P 20 22 10.8 +0.5
comp=Z,0.6nm,0.5s
QLMT e pP 20 22 27.9 +0.7
CMB **Columbia Colle** 72.13 321 eP P 20 22 10.6 +0.4
CMB e 20 22 27.5
CMB pmax pmax
comp=Z,17nm,1.4s
CMB **Columbia Colle** 72.13 321 eP P 20 22 10.6 +0.4
comp=Z,17nm,1.4s
CMB e pP 20 22 27.5 +0.3
F18A **Big Timber** 72.18 333 ⇓P P 20 22 10.8 +0.4
baz=72,SNR=9.2
E19A **Rath Farm, Rou** 72.21 334 ⇑P P 20 22 11.2 +0.6
baz=72,SNR=17
A24A **Westby** 72.33 338 P P 20 22 12.5 +1.4
baz=73
I14A **Mackay** 72.42 329 P P 20 22 13.5 +1.5
baz=73
D20A **Manuel Ranch,** 72.44 334 P P 20 22 12.9 +1.0
baz=73
B22A **Reddig Ranch S** 72.56 336 ⇓P P 20 22 12.9 +0.3
baz=73,SNR=7.7
F17A **Fitzpatrick Pl** 72.60 332 P P 20 22 14.2 +1.3
baz=73
C21A **Desert Coulee** 72.61 335 ⇑P P 20 22 13.2 +0.3
baz=73,SNR=9.0
HLID **Hailey** 72.63 328 eP P 20 22 13.7 +0.5
comp=Z,15nm,0.9s
HLID e PcP 20 22 30.8 +0.4
HLID **Hailey** 72.63 328 P P 20 22 14.0 +0.8
baz=73,SNR=11
QSPA **South Pole Qui** 72.73 180 P P 20 22 14.1 +0.5
QSPA pP PcP 20 22 31.4 +0.9
QSPA **South Pole Qui** 72.73 180 P P 20 22 14.0 +0.5
comp=Z,8.4nm,0.4s,baz=162,slow=0.6,SNR=63
QSPA pP PcP 20 22 31.4 +0.9
comp=Z,20nm,1.0s,baz=160,slow=5.8,SNR=12
E18A **Harlowton** 72.78 333 P P 20 22 15.2 +1.2
baz=73
MCMT **McKenzie Canyo** 72.79 330 eP P 20 22 14.8 +0.6
comp=Z,5.5nm,0.9s
MCMT e PcP 20 22 31.5 +0.3
D19A **Cripps Ranch,** 72.81 334 P P 20 22 15.2 +1.1
baz=73,SNR=7.2
BOZ **Bozeman (W)** 72.84 331 eP P 20 22 14.2 -0.2
BOZ e 20 22 30.6
BOZ pmax pmax
comp=Z,7.0nm,0.9s
BOZ **Bozeman (W)** 72.84 331 eP P 20 22 14.2 -0.2
comp=Z,6.8nm,0.9s
BOZ e PcP 20 22 30.6 -0.6
C20A **Veseth Ranch,** 72.88 335 P P 20 22 15.0 +0.5
baz=73
DLMT **Dillon** 73.07 331 eP P 20 22 17.0 +1.2
comp=Z,11nm,1.1s
DLMT e PcP 20 22 31.2 -1.0
A22A **Carney Farms,** 73.10 337 P P 20 22 16.3 +0.5
baz=73,SNR=6.6
E17A **Martinsdale** 73.11 332 P P 20 22 17.6 +1.6
baz=73,SNR=7.0
I12A **Atlanta** 73.16 328 P P 20 22 17.8 +1.5
baz=73
MFID **Camas Ranch** 73.24 327 eP P 20 22 17.5 +0.7
comp=Z,13nm,1.0s
MFID e pP 20 22 34.5 +0.8
MFID **Camas Ranch** 73.24 327 P P 20 22 18.9 +2.2
baz=73,SNR=12
BEKR **Beckworth** 73.31 322 eP P 20 22 15.4 -1.9
comp=Z,2.2nm,0.6s
BEKR e 20 22 35.1
C19A **Slack Wire Ran** 73.33 334 P P 20 22 18.6 +1.4
baz=74,SNR=8.7
LRM **Limekiln Ridge** 73.35 331 eP P 20 22 17.5 0.0
comp=Z,18nm,0.8s
LRM e pP 20 22 34.9 +0.4
F15A **Butte** 73.38 331 P P 20 22 18.7 +1.0
baz=74
B20A **Solberg Farm,** 73.47 335 P P 20 22 19.0 +1.1
baz=74
H12A **Diamond D Ranc** 73.56 329 P P 20 22 20.0 +1.3
baz=74
D17A **Six Diamond Ra** 73.57 333 P P 20 22 20.2 +1.5
baz=74,SNR=12
F14A **Wisdom** 73.77 331 P P 20 22 21.0 +1.0
baz=74
EGMT **Eagleton** 73.85 334 eP P 20 22 20.4 +0.2
EGMT e pP 20 22 37.1 -0.1
B19A **Brinkman Farms** 73.85 335 P P 20 22 21.6 +1.4
baz=74,SNR=9.3
D16A **Dana Ranch, Ca** 73.86 332 ⇓P P 20 22 20.9 +0.6
baz=74,SNR=14
C17A **Wharram Farm,** 73.97 333 P P 20 22 22.2 +1.2
baz=74,SNR=8.5
WVOR **Wild Horse Val** 74.04 325 eP P 20 22 21.5 0.0
WVOR e 20 22 38.3
WVOR pmax pmax
comp=Z,9.0nm,1.5s
WVOR **Wild Horse Val** 74.04 325 eP P 20 22 21.5 0.0
comp=Z,8.6nm,1.5s
WVOR e pP 20 22 38.3 -0.2
A19A **Klindworth Far** 74.15 335 P P 20 22 22.0 +0.1
baz=74
B18A **Beardsley Farm** 74.15 334 ⇑P P 20 22 22.5 +0.6
baz=74,SNR=10
G12A **Big Creek, Yel** 74.21 329 P P 20 22 23.8 +1.3
baz=74
D15A **Lincoln** 74.30 332 P P 20 22 24.0 +1.0
baz=74
PPT **Papeete** 74.45 256 LR LR 20 46 33.3
comp=Z,192nm,21.6s,baz=119,slow=29
C16A **Fuhringer Ranc** 74.53 333 P P 20 22 25.7 +1.5
baz=75,SNR=8.6
F12A **Elk City** 74.63 329 P P 20 22 25.9 +1.0
baz=75,SNR=8.0
D14A **Greenough** 74.78 331 P P 20 22 27.1 +1.4
baz=75

MSO **Missoula** 74.79 331 *e*P P 20 22 25.6 -0.1
comp=Z,2.5nm,0.9s
MSO *e*pP **pP** 20 22 43.4 +0.6
MSO Missoula 74.79 331 P P 20 22 27.0 +1.3
baz=75
C15A Salmond Ranch, 74.89 332 P P 20 22 27.2 +0.9
baz=75,SNR=17
SLMT Seeley Lake 74.89 331 *e*P P 20 22 27.3 +0.9
comp=Z,4.2nm,1.0s
SLMT *e*pP **pP** 20 22 44.0 +0.5
A17A Triple J Farms 74.96 334 ⇑P P 20 22 27.6 +1.0
baz=75,SNR=5.3
B16A M & M Farms, S 74.98 333 P P 20 22 27.5 +0.8
baz=75
BMO Blue Mountains 75.01 328 *e*P P 20 22 27.6 +0.6
BMO *e**PP **pP** 20 22 43.7 -0.4
BMO pmax pmax
comp=Z,14nm,0.8s
BMO Blue Mountains 75.01 328 *e*P P 20 22 27.6 +0.6
comp=Z,14nm,0.8s
BMO *e*pP **pP** 20 22 43.7 -0.4
WDC Whiskeytown Da 75.04 322 *e*P P 20 22 26.3 -0.9
WDC *e**PP **pP** 20 22 43.0 -1.3
WDC pmax pmax
comp=Z,6.0nm,0.8s
WDC Whiskeytown Da 75.04 322 *e*P P 20 22 26.3 -0.9
comp=Z,5.8nm,0.8s
WDC *e*pP **pP** 20 22 43.0 -1.3
WDC *e*sP **sP** 20 22 50.4 -0.7
KCPM Cahto Peak 75.11 321 *e*P P 20 22 25.6 -2.2
comp=Z,6.0nm,1.1s
D13A Huson 75.22 331 ⇑P P 20 22 29.6 +1.4
baz=75,SNR=8.7
E12A Beaver Dam Sad 75.25 330 P P 20 22 29.2 +0.8
baz=76
B15A Bradely Ranch, 75.27 333 ⇑P P 20 22 29.2 +0.7
baz=76,SNR=8.8
SWMT Swartz Lake 75.32 331 *e*P P 20 22 29.8 +1.1
comp=Z,4.0nm,0.9s
SWMT *e*pP **pP** 20 22 45.8 0.0
A16A West Butte Ran 75.34 334 P P 20 22 30.0 +1.2
baz=76
C14A Swan Lake 75.39 332 P P 20 22 30.5 +1.3
baz=76
YBMT Yellow Bay 75.58 332 *e*P P 20 22 31.4 +1.1
comp=Z,4.0nm,0.9s
YBMT *e*pP **pP** 20 22 47.8 +0.4
D12A Red Ives Fores 75.61 330 P P 20 22 31.6 +1.2
baz=76
HOG Hogback Mounta 75.62 324 P P 20 22 32.9 +2.2
JTMT Jette 75.62 331 *e*P P 20 22 31.7 +1.2
comp=Z,12nm,1.7s
JTMT *e*pP **pP** 20 22 48.5 +0.9
B14A Marquette Ranc 75.62 332 ⇓P P 20 22 31.5 +1.0
baz=76,SNR=6.1
C13A Hot Springs 75.71 331 P P 20 22 32.5 +1.6
baz=76
YBH Yreka Blue Hor 75.87 323 *e*P P 20 22 32.2 +0.2
comp=Z,9.6nm,0.9s
YBH *e*pP **pP** 20 22 47.9 -1.2
BSMT Bassoo Peak 75.93 331 *e*P P 20 22 33.2 +0.8
comp=Z,4.6nm,1.1s
BSMT *e*pP **pP** 20 22 49.6 +0.2
KHMM Horse Mountain 75.93 321 *e*P P 20 22 33.2 +0.7
comp=Z,14nm,1.0s
KHMM *e*pP **pP** 20 22 49.8 +0.2
A14A Double T Ranch 76.15 333 P P 20 22 34.3 +0.8
baz=76
B13A Whitefish 76.17 332 P P 20 22 34.6 +1.0
baz=76
WALA Waterton Lakes 76.43 333 *e*P P 20 22 35.8 +0.8
comp=Z,0.3nm,0.9s
WALA *e*pP **pP** 20 22 51.6 -0.6
KRMB Red Mountain 76.44 322 *e*P P 20 22 36.0 +0.7
comp=Z,12nm,1.6s
KRMB *e*PcP **PcP** 20 22 45.3 -1.5
KRMB *e*pP **pP** 20 22 52.8 +0.4
A13A Flathead Natio 76.56 332 P P 20 22 36.9 +1.1
baz=77
HUMO Hull Mountain 76.57 323 *e*P P 20 22 35.4 -0.5
comp=Z,6.7nm,0.9s
HUMO *e*pP **pP** 20 22 52.5 -0.5
BBOR Butler Butte 76.59 324 P P 20 22 36.3 +0.1
C11A Tepee Creek (N 76.60 330 P P 20 22 37.2 +1.2
baz=77
FFC Flin Flon 76.61 342 *i* P P 20 22 36.2 +0.4
FFC Flin Flon 76.61 342 *e*P P 20 22 35.4 -0.4
comp=Z,3.1nm,0.8s
FRIS Frissel Point 77.11 325 P P 20 22 40.2 +1.1
HAWA Hanford 77.20 328 *e*P P 20 22 40.1 +0.7
comp=Z,14nm,1.1s
HAWA *e*pP **pP** 20 22 57.2 +0.8
NEW Newport 77.31 330 *e*P P 20 22 40.2 +0.3
comp=Z,1.4nm,0.7s
BROR Big Rock Looko 77.34 325 P P 20 22 40.9 +0.7
TOA0 Torodi Ar. Sit 77.82 72 *e*P P 20 22 42.6 -0.9
TOA0 *e*pP **pP** 20 23 00.1 -0.5
TOA0 *e*sP **sP** 20 23 07.1 -0.4
TORD Torodi Ar. Bea 77.82 72 P P 20 22 42.8 -0.7
TORD pP **pP** 20 23 00.5 -0.2
TORD S **S** 20 32 30.0 -1.9
TORD Torodi Ar. Bea 77.82 72 P P 20 22 42.8 -0.7
comp=Z,28nm,0.7s,baz=263,slow=4.9,SNR=234
TORD pP **pP** 20 23 00.5 -0.2
comp=Z,44nm,0.7s,baz=254,slow=5.2,SNR=16
TORD S **S** 20 32 30.0 -1.9
comp=Z,0.8nm,1.0s,baz=261,slow=8.1,SNR=3.7
TORD LR LR 20 56 10.8
comp=Z,609nm,18.3s,baz=255,slow=35
COR Corvallis 78.01 325 P P 20 22 43.6 -0.3
COR pmax pmax
comp=Z,29nm,1.0s
COR Corvallis 78.01 325 P P 20 22 43.6 -0.3
comp=Z,29nm,1.0s
LON Longmire 78.61 327 P P 20 22 48.1 +0.9
LON *e**PP **pP** 20 23 04.5 +0.1
LON pmax pmax
comp=Z,7.0nm,0.9s
LON Longmire 78.61 327 P P 20 22 48.1 +0.9
comp=Z,6.8nm,0.9s
LON *e*pP **pP** 20 23 04.5 +0.1
CMW Cultus Mountai 79.86 328 P P 20 22 54.9 +0.8
MORF Marmelete 79.94 46 *e*P P 20 22 56.7 +2.0
comp=Z,66nm,1.9s
PTEO Sao Teotonio 80.01 46 *e*P P 20 22 58.1 +3.1
comp=Z,108nm,1.4s
NLWA Neilton Lookou 80.10 327 *e*P P 20 22 55.1 -0.2
comp=Z,26nm,0.9s
NLWA *e* **pP** 20 23 13.5 +1.0
PMAFR Mafra 80.37 44 *e*P P 20 22 59.9 +3.0
comp=Z,182nm,1.5s
PBDV Barranco-do-Ve 80.40 46 *e*P P 20 22 59.8 +2.7
comp=Z,54nm,1.7s
PNCL Nicolau / Gran 80.44 45 *e*P P 20 22 58.4 +1.2
comp=Z,43nm,1.8s
VNDA Vanda 80.50 190 P P 20 22 58.1 +1.1
VNDA pP **pP** 20 23 15.8 +1.5
VNDA Vanda 80.50 190 P P 20 22 58.1 +1.1
comp=Z,3.7nm,0.8s,baz=129,slow=3.7,SNR=17
VNDA pP **pP** 20 23 15.8 +1.5
comp=Z,3.8nm,0.8s,baz=140,slow=4.0,SNR=8.2
VNDA LR LR 20 51 33.5
comp=Z,122nm,21.5s,baz=138,slow=30
MESJ Messejana 80.51 45 *e*P P 20 22 56.7 -0.9
MESJ *e*S **S** 20 32 59.1 -0.4
MESJ AMS AMS 20 54 13.5
comp=Z,138nm,26.3s
MESJ Messejana 80.51 45 *e*P P 20 22 56.7 -0.9
MESJ *e*S **S** 20 32 59.1 -0.4
MESJ A A 20 54 13.5
comp=Z,138nm,26.3s
PCVE Castro Verde 80.52 46 *e*P P 20 22 59.1 +1.4
comp=Z,37nm,1.4s
PVAQ Vaqueiros 80.63 46 *e*LR LR 22 07 32.4
comp=Z,261nm,18.0s
PGC Sidney 80.68 328 P P 20 22 59.1 +0.9
comp=Z,2.2nm,1.1s
PGC *e* **pP** 20 23 16.3 +0.8
PBEJ Beja 80.84 45 *e*P P 20 23 00.8 +1.4
comp=Z,47nm,1.7s
EVOP Sao Brissos 80.92 45 *e*P P 20 22 59.3 -0.5
EVOP pmax pmax
comp=Z,19nm,0.8s
EVOP Sao Brissos 80.92 45 *e*P P 20 22 59.3 -0.5
comp=Z,19nm,0.8s
SYO Syowa Base 80.94 160 ⇑ *i*P P 20 22 59.0 -0.4

SYO Syowa Base 80.94 160 ⇓ *e*PcP **PcP** 20 23 05.0 -0.8
EVO Evora 81.00 45 *e*P P 20 22 59.3 -1.0
comp=Z,19nm,0.8s
EVO *e*R
comp=Z,368nm,21.0s
PMTG Montargil 81.13 44 *e*P P 20 23 02.7 +1.8
comp=Z,65nm,1.3s
PESTR Estremoz 81.45 45 *e*P P 20 23 04.3 +1.6
comp=Z,42nm,2.1s
PBAR Barrancos 81.48 46 *e*P P 20 23 04.2 +1.4
comp=Z,24nm,1.9s
PMRV Marv??o 81.87 44 *e*P P 20 23 08.3 +3.4
comp=Z,29nm,1.8s
PMRV Marv??o 81.87 44 *e*LR LR 22 09 42.3
comp=Z,174nm,18.0s
PCBR Castelo Branco 82.02 44 *e*P P 20 23 06.9 +1.3
comp=Z,22nm,1.3s
MTE Manteigas 82.26 44 *e*P P 20 23 08.3 +1.3
comp=Z,28nm,1.9s
MTE *e*pP **pP** 20 23 27.1 +2.9
MTE Manteigas 82.26 44 *e*LR LR 22 08 19.2
comp=Z,357nm,20.0s
MTE Manteigas 82.26 44 *e*P P 20 23 06.6 -0.4
comp=Z,20nm,1.0s
MTE *e*pP **pP** 20 23 24.7 +0.4
POLO Lamas de Olo 82.59 43 *e*P P 20 23 11.2 +2.5
comp=Z,16nm,1.6s
PVRL Vila Real 82.59 43 *e*P P 20 23 12.4 +3.7
comp=Z,33nm,1.5s
MVO Moncorvo 82.98 43 *e*P P 20 23 12.4 +1.7
comp=Z,39nm,2.0s
MVO *e*pP **pP** 20 23 31.2 +3.2
MVO Moncorvo 82.98 43 *e*LR LR 22 08 46.8
comp=Z,342nm,20.0s
TSUM Tsumeb 83.03 108 *e*P P 20 23 12.0 +0.4
comp=Z,54nm,1.1s
PBRG Braganca 83.49 43 *e*P P 20 23 14.7 +1.4
comp=Z,51nm,1.7s
PAB San Pablo 83.98 46 *e*P P 20 23 15.8 -0.1
PAB *e**PP **pP** 20 23 33.5 +0.3
PAB pmax pmax
comp=Z,21nm,0.8s
PAB San Pablo 83.98 46 *e*P P 20 23 15.8 -0.1
comp=Z,21nm,0.8s
PAB *e*pP **pP** 20 23 33.5 +0.3
PAB *e*sP **sP** 20 23 40.4 +0.4
ESDC Sonseca Array 84.30 46 P P 20 23 18.1 +0.6
ESDC pP **pP** 20 23 35.6 +0.8
ESDC sP **sP** 20 23 42.0 +0.3
ESDC Sonseca Array 84.30 46 P P 20 23 18.1 +0.6
comp=Z,14nm,0.8s,baz=254,slow=5.1,SNR=77
ESDC pP **pP** 20 23 35.6 +0.8
comp=Z,5.9nm,0.7s,baz=255,slow=6.7,SNR=5.8
ESDC sP **sP** 20 23 42.0 +0.3
comp=Z,12nm,0.8s,baz=252,slow=5.4,SNR=5.8
ESDC LR LR 20 58 20.8
comp=Z,158nm,18.6s,baz=175,slow=34
ESLA Sonseca Array 84.30 46 *e*P P 20 23 17.8 +0.3
comp=Z,8.1nm,1.0s
ESLA *e*pP **pP** 20 23 35.2 +0.3
ESLA *e*sP **sP** 20 23 41.8 +0.1
TAM Tamanrasset 84.71 64 *e*P P 20 23 20.5 +0.4
TAM *e**PP **pP** 20 23 37.9 +0.5
TAM pmax pmax
comp=Z,27nm,1.3s
TAM Tamanrasset 84.71 64 *e*P P 20 23 20.5 +0.4
comp=Z,27nm,1.3s
TAM *e*pP **pP** 20 23 37.9 +0.5
TAM *e*sP **sP** 20 23 44.8 +0.6
SFJD Kangerlussuaq 85.53 8 *i* P P 20 23 22.8 -0.1
comp=Z,8.4nm,0.9s
YKA Yellowknife Ar 86.76 341 P P 20 23 28.7 -0.3
YKA pP **pP** 20 23 46.5 0.0
YKA Yellowknife Ar 86.76 341 P P 20 23 28.7 -0.3
comp=Z,16nm,0.8s,baz=136,slow=4.9,SNR=86
YKA pP **pP** 20 23 46.5 0.0
comp=Z,10nm,0.7s,baz=138,slow=5.2,SNR=7.9
YKW3 Yellowknife Ar 86.81 341 *e*P P 20 23 28.7 -0.7
comp=Z,0.6nm,1.0s
YKW3 *e*pP **pP** 20 23 46.3 -0.4
BOSA Boshof 87.02 119 P P 20 23 32.8 +1.4
BOSA Boshof 87.02 119 P P 20 23 32.8 +1.4
comp=Z,4.1nm,1.0s,baz=162,slow=4.8,SNR=3.4
BOSA LR LR 20 58 25.2
comp=Z,155nm,20.5s,baz=345,slow=33
SJPF Ste Jean 87.71 43 *e*P P 20 23 34.5 +0.4
comp=Z,17nm,0.8s
SJPF *e*pP **sP** 20 23 59.2 +0.8
SJPF Ste Jean 87.71 43 *e*P P 20 23 34.5 +0.4
SJPF pmax pmax
comp=Z,17nm,0.8s
SJPF Ste Jean 87.71 43 *e*P P 20 23 34.5 +0.4
comp=Z,17nm,0.8s
SJPF *e*pP **sP** 20 23 59.2 +0.8
ETSF Etsaut 88.05 44 *e*P P 20 23 36.3 +0.4
comp=Z,15nm,0.7s
ETSF Etsaut 88.05 44 *e*P P 20 23 36.3 +0.4
ETSF pmax pmax
comp=Z,15nm,0.7s
ETSF Etsaut 88.05 44 *e*P P 20 23 36.3 +0.4
comp=Z,15nm,0.7s
REYF Montagne du Re 88.24 44 *e*P P 20 23 36.2 -0.5
REYF Montagne du Re 88.24 44 *e*P P 20 23 36.2 -0.5
BST Brest 88.34 38 *e*P P 20 23 37.9 +0.9
BST Brest 88.34 38 *e*P P 20 23 37.9 +0.9
LBTB Lobatse 88.43 116 LR LR 20 58 00.8
comp=Z,142nm,19.9s,baz=264,slow=32
LABF Labassere 88.53 44 *e*P P 20 23 38.5 +0.4
LABF Labassere 88.53 44 *e*P P 20 23 38.5 +0.4
QUIF Quistinic 88.69 39 *e*P P 20 23 38.6 0.0
comp=Z,21nm,1.0s
QUIF Quistinic 88.69 39 *e*P P 20 23 38.6 0.0
QUIF pmax pmax
comp=Z,21nm,1.0s
QUIF Quistinic 88.69 39 *e*P P 20 23 38.6 0.0
comp=Z,21nm,1.0s
EPF Esparros 88.70 44 *e*P P 20 23 39.1 +0.2
comp=Z,17nm,0.9s
EPF *e*pP **sP** 20 24 04.0 +0.8
EPF Esparros 88.70 44 *e*P P 20 23 39.1 +0.2
EPF pmax pmax
comp=Z,17nm,0.9s
EPF Esparros 88.70 44 *e*P P 20 23 39.1 +0.2
comp=Z,17nm,0.9s
EPF *e*pP **sP** 20 24 04.0 +0.8
MAW Mawson 88.73 164 *e*P P 20 23 38.8 +0.1
comp=Z,2.8nm,0.8s
MAW *e*pP **pP** 20 23 55.9 -0.1
MAW *e*sP **sP** 20 24 02.2 -0.6
MAW Mawson 88.73 164 P P 20 23 38.7 +0.1
comp=Z,14nm,0.8s,baz=219,slow=5.9,SNR=28
MAW LR LR 21 01 17.1
comp=Z,220nm,19.9s,baz=217,slow=34
ROSF Rostrenen 88.82 38 *e*P P 20 23 38.6 -0.6
comp=Z,21nm,1.0s
ROSF *e*pP **sP** 20 24 03.3 -0.2
ROSF Rostrenen 88.82 38 *e*P P 20 23 38.6 -0.6
ROSF pmax pmax
comp=Z,21nm,1.0s
ROSF Rostrenen 88.82 38 *e*P P 20 23 38.6 -0.6
comp=Z,21nm,1.0s
ROSF *e*pP **sP** 20 24 03.3 -0.2
MLS Moulis 89.17 44 *e*P P 20 23 41.2 +0.1
MLS Moulis 89.17 44 *e*P P 20 23 41.2 +0.1
SGMF Saint Gilles 89.20 38 *e*P P 20 23 39.4 -1.6
comp=Z,7.1nm,0.8s
SGMF Saint Gilles 89.20 38 *e*P P 20 23 39.4 -1.6
SGMF pmax pmax
comp=Z,7.0nm,0.8s
SGMF Saint Gilles 89.20 38 *e*P P 20 23 39.4 -1.6
comp=Z,7.1nm,0.8s
WRAK Wrangell Islan 89.67 331 P P 20 23 41.3 -1.7
comp=Z,13nm,1.1s
WRAK *e*pP **pP** 20 24 00.1 -0.4
CARF Carcanieres 89.75 45 *e*P P 20 23 43.9 0.0
CARF Carcanieres 89.75 45 *e*P P 20 23 43.9 0.0
DLBC Dease Lake 89.76 333 *e*P P 20 23 44.6 +1.1
DLBC *e*pP **pP** 20 24 01.0 0.0
LFF La Frestale 89.78 42 *e*P P 20 23 43.5 -0.3
comp=Z,26nm,0.7s
LFF *e*pP **sP** 20 24 08.4 +0.3
LFF La Frestale 89.78 42 *e*P P 20 23 43.5 -0.3
LFF pmax pmax
comp=Z,26nm,0.7s
LFF La Frestale 89.78 42 *e*P P 20 23 43.5 -0.3
comp=Z,26nm,0.7s

LFF *e*pP **sP** 20 24 08.4 +0.3
MFF Saint Martin d 89.93 41 *e*P P 20 23 43.9 -0.6
comp=Z,16nm,0.9s
MFF Saint Martin d 89.93 41 *e*P P 20 23 43.9 -0.6
MFF pmax pmax
comp=Z,16nm,0.9s
MFF Saint Martin d 89.93 41 *e*P P 20 23 43.9 -0.6
comp=Z,16nm,0.9s
FILF Fillols 90.00 45 *e*P P 20 23 44.6 -0.4
FILF Fillols 90.00 45 *e*P P 20 23 44.6 -0.4
MTLF Montolieu 90.08 44 *e*P P 20 23 44.9 -0.4
comp=Z,16nm,0.8s
MTLF *e*pP **sP** 20 24 09.8 +0.2
MTLF Montolieu 90.08 44 *e*P P 20 23 44.9 -0.4
MTLF pmax pmax
comp=Z,16nm,0.8s
MTLF Montolieu 90.08 44 *e*P P 20 23 44.9 -0.4
comp=Z,16nm,0.8s
MTLF *e*pP **sP** 20 24 09.8 +0.2
GRR Gorron 90.28 39 *e*P P 20 23 45.2 -0.8
comp=Z,23nm,0.7s
GRR *e*pP **sP** 20 24 09.9 -0.4
GRR Gorron 90.28 39 *e*P P 20 23 45.2 -0.8
GRR pmax pmax
comp=Z,23nm,0.7s
GRR Gorron 90.28 39 *e*P P 20 23 45.2 -0.8
comp=Z,23nm,0.7s
GRR *e*pP **sP** 20 24 09.9 -0.4
RJF Les Rejaudoux 90.43 42 *e*P P 20 23 46.3 -0.6
comp=Z,11nm,0.8s
RJF *e*R
comp=Z,312nm,23.0s
RJF Les Rejaudoux 90.43 42 *e*P P 20 23 46.3 -0.6
RJF pmax pmax
comp=Z,11nm,0.8s
RJF Les Rejaudoux 90.43 42 *e*P P 20 23 46.3 -0.6
comp=Z,11nm,0.8s
CAF Calviac 90.63 43 *e*P P 20 23 47.5 -0.3
comp=Z,17nm,1.2s
CAF Calviac 90.63 43 *e*P P 20 23 47.5 -0.3
CAF pmax pmax
comp=Z,17nm,1.2s
CAF Calviac 90.63 43 *e*P P 20 23 47.5 -0.3
comp=Z,17nm,1.2s
FLN La Foliniere 90.67 39 *e*P P 20 23 47.1 -0.8
comp=Z,25nm,0.9s
FLN *e*pP **sP** 20 24 12.0 -0.1
FLN *e*R
comp=Z,101nm,21.5s
FLN La Foliniere 90.67 39 *e*P P 20 23 47.1 -0.8
FLN pmax pmax
comp=Z,25nm,0.9s
FLN La Foliniere 90.67 39 *e*P P 20 23 47.1 -0.8
comp=Z,25nm,0.9s
FLN *e*pP **sP** 20 24 12.0 -0.1
LDF La Druitiere 90.81 39 *e*P P 20 23 47.7 -0.8
comp=Z,21nm,0.8s
LDF La Druitiere 90.81 39 *e*P P 20 23 47.7 -0.8
LDF pmax pmax
comp=Z,21nm,0.8s
LDF La Druitiere 90.81 39 *e*P P 20 23 47.7 -0.8
comp=Z,21nm,0.8s
TCF Toulx Ste Croi 91.28 42 *e*P P 20 23 49.4 -1.4
comp=Z,11nm,1.1s
TCF *e*pP **sP** 20 24 14.7 -0.4
TCF Toulx Ste Croi 91.28 42 *e*P P 20 23 49.4 -1.4
TCF pmax pmax
comp=Z,11nm,1.1s
TCF Toulx Ste Croi 91.28 42 *e*P P 20 23 49.4 -1.4
comp=Z,11nm,1.1s
TCF *e*pP **sP** 20 24 14.7 -0.4
LASF Ste Croix 91.46 44 *e*P P 20 23 51.7 0.0
comp=Z,7.5nm,0.8s
LASF *e*pP **sP** 20 24 16.6 +0.6
LASF Ste Croix 91.46 44 *e*P P 20 23 51.7 0.0
comp=Z,7.5nm,0.8s
LASF *e*pP **sP** 20 24 16.6 +0.6
LBL Lubilhac 91.52 43 *e*P P 20 23 52.8 +0.8
LBL Lubilhac 91.52 43 *e*P P 20 23 52.8 +0.8
LBL Lubilhac 91.52 43 *e*P P 20 23 52.8 +0.8
BGF Bois d'Agland 91.79 42 *e*P P 20 23 52.5 -0.6
comp=Z,14nm,0.6s
BGF Bois d'Agland 91.79 42 *e*P P 20 23 52.5 -0.6
BGF pmax pmax
comp=Z,14nm,0.6s
BGF Bois d'Agland 91.79 42 *e*P P 20 23 52.5 -0.6
comp=Z,14nm,0.6s
AVF Avril sur Loir 92.20 41 *e*P P 20 23 54.0 -1.0
comp=Z,7.3nm,0.8s
AVF Avril sur Loir 92.20 41 *e*P P 20 23 54.0 -1.0
AVF pmax pmax
comp=Z,7.0nm,0.8s
AVF Avril sur Loir 92.20 41 *e*P P 20 23 54.0 -1.0
comp=Z,7.3nm,0.8s
VIVF Saint-Julien-l 92.30 44 *e*P P 20 23 55.7 +0.1
comp=Z,13nm,1.1s
VIVF *e*pP **sP** 20 24 20.6 +0.7
VIVF Saint-Julien-l 92.30 44 *e*P P 20 23 55.7 +0.1
VIVF pmax pmax
comp=Z,13nm,1.0s
VIVF Saint-Julien-l 92.30 44 *e*P P 20 23 55.7 +0.1
comp=Z,13nm,1.0s
VIVF *e*pP **sP** 20 24 20.6 +0.7
SUMG Summit 92.37 9 *i* P P 20 23 56.3 +0.5
SUMG *i* 20 24 13.5
SUMG pmax pmax
comp=Z,13nm,0.7s
SUMG Summit 92.37 9 *e*P P 20 23 56.0 +0.2
comp=Z,15nm,0.7s
SUMG *e*pP **pP** 20 24 13.7 +0.5
SUMG Summit 92.37 9 *i* P P 20 23 56.3 +0.5
comp=Z,13nm,0.7s
SUMG *i* 20 24 13.5
KEST Kesra 92.38 53 P P 20 23 56.1 -0.1
KEST Kesra 92.38 53 P P 20 23 56.1 -0.1
comp=Z,1.7nm,0.8s,baz=272,slow=4.6,SNR=6.5
SSF Saint Saulge 92.40 41 *e*P P 20 23 54.8 -1.2
comp=Z,7.0nm,0.9s
SSF *e*pP **sP** 20 24 20.5 +0.3
SSF Saint Saulge 92.40 41 *e*P P 20 23 54.8 -1.2
SSF pmax pmax
comp=Z,7.0nm,0.9s
SSF Saint Saulge 92.40 41 *e*P P 20 23 54.8 -1.2
comp=Z,7.0nm,0.9s
SSF *e*pP **sP** 20 24 20.5 +0.3
SMF Signal de Mont 92.45 42 *e*P P 20 23 55.5 -0.7
comp=Z,12nm,0.8s
SMF *e*pP **sP** 20 24 20.5 0.0
SMF Signal de Mont 92.45 42 *e*P P 20 23 55.5 -0.7
SMF pmax pmax
comp=Z,12nm,0.8s
SMF Signal de Mont 92.45 42 *e*P P 20 23 55.5 -0.7
comp=Z,12nm,0.8s
SMF *e*pP **sP** 20 24 20.5 0.0
LOR Lormes 92.70 41 *e*P P 20 23 56.2 -1.2
comp=Z,4.4nm,0.7s
LOR *e*R
comp=Z,112nm,21.0s
LOR Lormes 92.70 41 *e*P P 20 23 56.2 -1.2
comp=Z,4.4nm,0.7s
LMR La Mourre 92.97 45 *e*P P 20 23 58.0 -0.7
comp=Z,16nm,1.0s
LMR La Mourre 92.97 45 *e*P P 20 23 58.0 -0.7
LMR pmax pmax
comp=Z,16nm,1.0s
LMR La Mourre 92.97 45 *e*P P 20 23 58.0 -0.7
comp=Z,16nm,1.0s
ORIF Oris-en-Rattie 93.12 44 *e*P P 20 23 59.8 +0.3
comp=Z,17nm,0.7s
ORIF *e*R
comp=Z,413nm,22.0s
ORIF Oris-en-Rattie 93.12 44 *e*P P 20 23 59.8 +0.3
ORIF pmax pmax
comp=Z,17nm,0.7s
ORIF Oris-en-Rattie 93.12 44 *e*P P 20 23 59.8 +0.3
comp=Z,17nm,0.7s
MBDF Montbardon 93.64 44 *e*P P 20 24 01.9 -0.1
MBDF Montbardon 93.64 44 *e*P P 20 24 01.9 -0.1
MBDF Montbardon 93.64 44 *e*P P 20 24 01.9 -0.1
REVF Revere 93.70 45 *e*P P 20 24 02.1 0.0
REVF Revere 93.70 45 *e*P P 20 24 02.1 0.0
REVF Revere 93.70 45 *e*P P 20 24 02.1 0.0
SBF Sospel 93.79 45 *e*P P 20 24 02.1 -0.4
SBF Sospel 93.79 45 *e*P P 20 24 02.1 -0.4
SBF Sospel 93.79 45 *e*P P 20 24 02.1 -0.4

SFTF	**Sexfontaines**	**93.80**	**41**	*e*P		**P**	**20 24 01.6**	**-0.8**
	comp=Z,18nm,0.9s								
SFTF	**Sexfontaines**	**93.80**	**41**	*e*P		**P**	**20 24 01.6**	**-0.8**
	comp=Z,18nm,0.9s								
AUTN	**L'Aution**	**93.83**	**45**	*e*P		**P**	**20 24 03.7**	**+0.8**
AUTN	**L'Aution**	**93.83**	**45**	*e*P		**P**	**20 24 03.7**	**+0.8**
AUTN	**L'Aution**	**93.83**	**45**	*e*P		**P**	**20 24 03.7**	**+0.8**
CABF	**La Chapelle**	**93.87**	**42**	*e*P		**P**	**20 24 02.3**	**-0.6**
	comp=Z,5.1nm,0.8s								
CABF	**La Chapelle**	**93.87**	**42**	*e*P		**P**	**20 24 02.3**	**-0.6**
CABF					pmax	pmax			
	comp=Z,5.0nm,0.8s								
CABF	**La Chapelle**	**93.87**	**42**	*e*P		**P**	**20 24 02.3**	**-0.6**
	comp=Z,5.1nm,0.8s								
LPL	**La Plagne**	**93.90**	**44**	*e*P		**P**	**20 24 03.5**	**+0.3**
	comp=Z,9.3nm,0.7s								
LPL	**La Plagne**	**93.90**	**44**	*e*P		**P**	**20 24 03.5**	**+0.3**
LPL					pmax	pmax			
	comp=Z,9.0nm,0.7s								
LPL	**La Plagne**	**93.90**	**44**	*e*P		**P**	**20 24 03.5**	**+0.3**
	comp=Z,9.3nm,0.7s								
LPG	**La Plagne**	**93.91**	**44**	*e*P		**P**	**20 24 03.6**	**+0.3**
	comp=Z,11nm,0.8s								
LPG				*e*pP		**sP**	**20 24 28.6**	**+1.0**
LPG	**La Plagne**	**93.91**	**44**	*e*P		**P**	**20 24 03.6**	**+0.3**
LPG					pmax	pmax			
	comp=Z,11nm,0.8s								
LPG	**La Plagne**	**93.91**	**44**	*e*P		**P**	**20 24 03.6**	**+0.3**
	comp=Z,11nm,0.8s								
LPG				*e*pP		**sP**	**20 24 28.6**	**+1.0**
SAOF	**Saorge**	**93.91**	**45**	*e*P		**P**	**20 24 03.2**	**+0.2**
SAOF	**Saorge**	**93.91**	**45**	*e*P		**P**	**20 24 03.2**	**+0.2**
SAOF	**Saorge**	**93.91**	**45**	*e*P		**P**	**20 24 03.2**	**+0.2**
MEZF	**Maizieres J'vi**	**93.92**	**40**	*e*P		**P**	**20 24 02.2**	**-0.7**
	comp=Z,9.4nm,0.7s								
MEZF	**Maizieres J'vi**	**93.92**	**40**	*e*P		**P**	**20 24 02.2**	**-0.7**
	comp=Z,9.4nm,0.7s								
BAIF	**Baives**	**93.99**	**39**	*e*P		**P**	**20 24 02.4**	**-0.8**
BAIF	**Baives**	**93.99**	**39**	*e*P		**P**	**20 24 02.4**	**-0.8**
BAIF	**Baives**	**93.99**	**39**	*e*P		**P**	**20 24 02.4**	**-0.8**
PAGF	**Fort de Pagny**	**94.35**	**40**	*e*P		**P**	**20 24 04.6**	**-0.3**
	comp=Z,3.7nm,1.0s								
PAGF	**Fort de Pagny**	**94.35**	**40**	*e*P		**P**	**20 24 04.6**	**-0.3**
	comp=Z,3.7nm,1.0s								
GIVF	**Givet**	**94.37**	**39**	*e*P		**P**	**20 24 04.4**	**-0.6**
GIVF	**Givet**	**94.37**	**39**	*e*P		**P**	**20 24 04.4**	**-0.6**
GIVF	**Givet**	**94.37**	**39**	*e*P		**P**	**20 24 04.4**	**-0.6**
PGF	**Pioggiola**	**94.41**	**47**	*e*P		**P**	**20 24 04.9**	**-0.6**
	comp=Z,7.2nm,0.8s								
PGF	**Pioggiola**	**94.41**	**47**	*e*P		**P**	**20 24 04.9**	**-0.6**
PGF					pmax	pmax			
	comp=Z,7.0nm,0.8s								
PGF	**Pioggiola**	**94.41**	**47**	*e*P		**P**	**20 24 04.9**	**-0.6**
	comp=Z,7.2nm,0.8s								
HAU	**Haudompre**	**94.54**	**41**	*e*P		**P**	**20 24 05.0**	**-0.8**
HAU				*e*R					
	comp=Z,121nm,22.0s								
HAU	**Haudompre**	**94.54**	**41**	*e*P		**P**	**20 24 05.0**	**-0.8**
HAU	**Haudompre**	**94.54**	**41**	*e*P		**P**	**20 24 05.0**	**-0.8**
HINF	**Hinteralfeld**	**94.79**	**41**	*e*P		**P**	**20 24 06.0**	**-1.0**
HINF	**Hinteralfeld**	**94.79**	**41**	*e*P		**P**	**20 24 06.0**	**-1.0**
HINF	**Hinteralfeld**	**94.79**	**41**	*e*P		**P**	**20 24 06.0**	**-1.0**
CDF	**Champ du Feu**	**95.27**	**41**	*e*P		**P**	**20 24 08.4**	**-0.8**
	comp=Z,4.6nm,0.8s								
CDF				*e*pP		**sP**	**20 24 34.0**	**+0.5**
CDF	**Champ du Feu**	**95.27**	**41**	*e*P		**P**	**20 24 08.4**	**-0.8**
CDF					pmax	pmax			
	comp=Z,5.0nm,0.8s								
CDF	**Champ du Feu**	**95.27**	**41**	*e*P		**P**	**20 24 08.4**	**-0.8**
	comp=Z,4.6nm,0.8s								
CDF				*e*pP		**sP**	**20 24 34.0**	**+0.5**
RUP	**Ruppelstein**	**95.58**	**40**	*e*P		**P**	**20 24 10.9**	**+0.3**
RUP	**Ruppelstein**	**95.58**	**40**	*e*P		**P**	**20 24 10.9**	**+0.3**
LANF	**Langenberg**	**95.79**	**40**	*e*P		**P**	**20 24 11.8**	**+0.3**
LANF	**Langenberg**	**95.79**	**40**	*e*P		**P**	**20 24 11.8**	**+0.3**
LANF	**Langenberg**	**95.79**	**40**	*e*P		**P**	**20 24 11.8**	**+0.3**
INK	**Inuvik**	**96.51**	**341**	P		**P**	**20 24 14.0**	**-0.3**
INK	**Inuvik**	**96.51**	**341**	P		**P**	**20 24 14.0**	**-0.3**
	comp=Z,2.0nm,0.9s,baz=108,slow=3.9,SNR=6.4								
GRF	**Grafenberg Arr**	**98.14**	**41**	*e*P		**P**	**20 24 21.2**	**-0.9**
GRF					pmax	pmax			
	comp=Z,16nm,1.6s								
GERES	**GERESS Array B**	**99.45**	**42**	P		**Pdif**	**20 24 27.6**	**-0.5**
GERES	**GERESS Array B**	**99.45**	**42**	P		**Pdif**	**20 24 27.6**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=241,slow=2.6,SNR=13								
CLL	**Collm**	**99.68**	**39**	*e*P		**Pdif**	**20 24 30.0**	**+1.1**
CLL	**Collm**	**99.68**	**39**	*e*Pdif		**Pdif**	**20 24 30.0**	**+1.1**
CLL				*e*PPS		PPS	20 38 21.0		
CLL				*e*(SSS)			20 47 30.0		
ILAR	**Eielson Array**	**99.80**	**335**	PP		PP	20 28 38.1	**+3.6**
ILAR	**Eielson Array**	**99.80**	**335**	PP		PP	20 28 38.1	**+3.6**
	comp=Z,0.9nm,0.9s,baz=110,slow=6.7,SNR=5.5								
ILAR					LR	LR	21 15 12.4		
	comp=Z,79nm,18.9s,baz=117,slow=39								
ARCES	**ARCESS Array B**	**108.44**	**22**		PKKPbc	PKKPbc	20 40 23.8	**-2.2**
ARCES	**ARCESS Array B**	**108.44**	**22**		PKKPbc	PKKPbc	20 40 23.8	**-2.2**
	comp=Z,2.6nm,0.9s,baz=98,slow=4.2,SNR=6.2								
APA	**Apatity**	**111.44**	**24**	*e*P		**Pdif**	**20 25 28.0**	**+7.1**
APA					MLR	MLR			
	comp=Z,300nm,22.0s								
ANN	**Anapa**	**115.02**	**48**	*i* PKIKP		PKPdf	20 29 20.8	-5.3	
ANN					pmax	pmax			
	comp=Z,45nm,1.0s								
STKA	**Stephens Creek**	**121.90**	**213**	PKP		**PKPdf**	**20 29 39.9**	**-0.1**
STKA	**Stephens Creek**	**121.90**	**213**	PKP		**PKPdf**	**20 29 39.9**	**-0.1**
	comp=Z,1.6nm,0.6s,baz=128,slow=19,SNR=7.0								
TIXI	**Tiksi**	**124.55**	**353**	*d*	PKIKP	**PKPdf**	**20 29 46.5**	**+2.8**
ARU	**Arti**	**125.78**	**32**	*i* PKIKP		**PKPdf**	**20 29 46.8**	**+0.3**
ARU							20 31 36.2		
ARU							20 36 45.3		
ARU					SP	SP	20 41 31.8	-2.0	
ABKAR	**Akbulak array**	**129.35**	**40**	*e*PKPdf		**PKPdf**	**20 29 54.7**	**+1.2**
ASAR	**Alice Springs**	**132.50**	**211**	PKP		**PKPdf**	**20 30 00.3**	**-0.1**
ASAR				SKP			20 33 27.9		
ASAR	**Alice Springs**	**132.50**	**211**	PKP		**PKPdf**	**20 30 00.3**	**-0.1**
	comp=Z,2.2nm,0.9s,baz=124,slow=1.9,SNR=20								
ASAR				SKP			20 33 27.9		
	comp=Z,0.8nm,0.7s,baz=142,slow=4.7,SNR=3.9								
WRA	**Warramunga Arr**	**135.34**	**215**	PKPpre		PKPpre	20 29 52.8		
WRA				PKP		**PKPdf**	**20 30 05.6**	**-0.3**	
WRA				SKPbc		**SKPbc**	**20 33 29.6**	**-2.1**	
WRA	**Warramunga Arr**	**135.34**	**215**	PKhKP		PKPpre	20 29 52.8		
	comp=Z,0.5nm,0.8s,baz=139,slow=3.4,SNR=7.5								
WRA				PKP		**PKPdf**	**20 30 05.6**	**-0.3**	
	comp=Z,2.7nm,0.7s,baz=143,slow=1.6,SNR=6.7								
WRA				SKPbc		**SKPbc**	**20 33 29.6**	**-2.1**	
	comp=Z,0.8nm,0.8s,baz=137,slow=2.7,SNR=5.3								
NVS	**Novosibirsk**	**137.72**	**22**	*e*PKHKP		PKPpre	20 30 02.1		
NVS					pmax	pmax			
	comp=Z,18nm,2.0s								
KURK	**Kurchatov**	**138.84**	**29**	*c*	*i* PKIKP	**PKPdf**	**20 30 13.5**	**+2.2**
KURK					pmax	pmax			
	comp=Z,5.0nm,1.2s								
ZAA0	**Zalesovo Array**	**138.99**	**22**	*e*PKPdf		**PKPdf**	**20 30 11.2**	**-0.3**
ZALV	**Zalesovo Beam**	**138.99**	**22**	PKHKP		PKPpre	20 30 02.2		
ZALV							20 30 11.5		
ZALV	**Zalesovo Beam**	**138.99**	**22**	PKPpre		PKPpre	20 30 02.2		
ZALV				PKP		**PKPdf**	**20 30 11.5**	**+0.1**	
ZALV				SKPbc		**SKPbc**	**20 33 41.2**	**0.0**	
ZALV	**Zalesovo Beam**	**138.99**	**22**	PKhKP		PKPpre	20 30 02.2		
	comp=Z,1.1nm,0.6s,baz=332,slow=3.6,SNR=6.5								
ZALV				PKP		**PKPdf**	**20 30 11.5**	**+0.1**	
	comp=Z,5.6nm,0.9s,baz=298,slow=3.2,SNR=16								
ZALV				SKPbc		**SKPbc**	**20 33 41.2**	**0.0**	
	comp=Z,1.4nm,0.8s,baz=328,slow=5.1,SNR=4.7								
EKS2	**Erkin-Say**	**140.86**	**43**	*e*PKIKP		**PKPdf**	**20 30 17.2**	**+1.8**
EKS2	**Erkin-Say**	**140.86**	**43**	*e*PKPdf		**PKPdf**	**20 30 17.2**	**+1.8**
AAK	**Ala-Archa**	**141.34**	**42**	*i* PKIKP		**PKPdf**	**20 30 18.8**	**+2.5**
MK31	**Makanchi Array**	**143.30**	**31**	*e*PKIKP		PKPab	20 30 16.0	**+0.5**
MK31	**Makanchi Array**	**143.30**	**31**	*e*PKPpre		PKPbc	20 30 16.0	-0.7
MKAR	**Makanchi Array**	**143.30**	**31**	PKIKP		PKPab	20 30 16.3	**+0.8**
MKAR	**Makanchi Array**	**143.30**	**31**	PKPpre		PKPbc	20 30 16.3	-0.4
MKAR	**Makanchi Array**	**143.30**	**31**	PKhKP		PKPbc	20 30 16.3	-0.4
	comp=Z,1.9nm,0.6s,baz=316,slow=3.1,SNR=26								
KSH	**Kashi**	**143.82**	**46**	*e*PKP		PKPbc	20 30 18.5	-0.1	
KSH					AMB	AMB			
	comp=Z,170nm,3.8s								
KSH					LR	LR			
	comp=N,760nm,7.3s								
KSH					LR	LR			
	comp=E,560nm,8.6s								
KSH					LR	LR			
	comp=Z,230nm,8.3s								
IRK	**Irkutsk**	**145.07**	**5**	*e*PKIKP		**PKPbc**	**20 30 21.7**	**-0.2**
IRK					pmax	pmax			
	comp=Z,50nm,1.5s								
MOY	**Mondy**	**145.25**	**9**	*e*PKIKP		**PKPdf**	**20 30 23.5**	**+0.7**
MOY					pmax	pmax			
	comp=Z,51nm,2.8s								
CIT	**Chita**	**145.32**	**355**	*e*PKIKP		**PKPab**	**20 30 23.6**	**+0.7**
CIT				*e*			20 30 40.7		
TLY	**Talaya**	**145.56**	**6**	*e*PKIKP		**PKPab**	**20 30 24.5**	**+0.7**
TLY				*i*			20 30 43.3		
TLY					MLR	MLR			
	comp=Z,85nm,19.5s								
ZAK	**Zakamensk**	**146.81**	**7**	*i* PKP2		**PKPbc**	**20 30 27.8**	**+0.4**
ZAK					pmax	pmax			
	comp=Z,6.0nm,1.0s								
USRK	**Ussuriysk Arra**	**147.09**	**329**	PKPbc		**PKPbc**	**20 30 28.9**	**+0.8**
	comp=Z,4.7nm,0.7s,baz=47,slow=4.9,SNR=14								
USRK					pPKPbc	**pPKPbc**	**20 30 46.8**	**+0.6**	
	comp=Z,9.8nm,0.7s,baz=13,slow=1.2,SNR=9.6								
MAJO	**Matsushiro**	**148.03**	**312**	*e*PKP2		**PKPdf**	**20 30 29.6**	**+1.7**
MAJO	**Matsushiro**	**148.03**	**312**	*e*PKPdf		**PKPdf**	**20 30 29.6**	**+1.7**
MAJO				*e*			20 30 49.0		
SONM	**Songino Array**	**149.61**	**4**	PKPbc		**PKPbc**	**20 30 34.7**	**-0.1**
SONM	**Songino Array**	**149.61**	**4**	PKPbc		**PKPbc**	**20 30 34.7**	**-0.1**
	comp=Z,5.2nm,0.7s,baz=314,slow=1.6,SNR=26								
ULN	**Ulaanbaatar**	**149.61**	**3**	*e*PKPbc		**PKPbc**	**20 30 35.1**	**+0.2**
ULN				*e*SKP			20 34 05.3		
CN2	**Changchun**	**150.31**	**336**	*e*PKPbc		**PKPdf**	**20 30 33.0**	**+1.7**
CN2				*e*pPKP		**PKPab**	**20 30 44.0**	**+1.1**
CN2				*e*PP	PP		20 34 16.9	+5.5	
CN2				*e*SS	SS		20 53 29.0	+4.5	
CN2					AMB	AMB			
	comp=Z,200nm,8.0s								
CN2					LR	LR			
	comp=N,400nm,22.0s								
CN2					LR	LR			
	comp=E,500nm,22.0s								
CN2					LR	LR			
	comp=Z,800nm,23.0s								
HYB	**Hyderabad**	**150.86**	**85**	*i* PKP		**PKPbc**	**20 30 39.0**	**+0.4**
KSRS	**Korea Array**	**154.09**	**324**	PKP		**PKPdf**	**20 30 38.0**	**+1.0**
	comp=Z,1.1nm,0.9s,baz=17,slow=1.3,SNR=5.5								
KSRS					PKPbc	**PKiKP**	**20 30 46.2**	**+1.0**	
	comp=Z,1.6nm,0.9s,baz=44,slow=0.8,SNR=7.3								
KSAR	**Wonju Array Be**	**154.12**	**324**	PKP		**PKPdf**	**20 30 38.0**	**+0.9**
KSAR					PKPbc	**PKiKP**	**20 30 46.2**	**+0.9**	
JNU	**Nakatsue**	**154.95**	**313**	PKPab		**PKPab**	**20 31 01.1**	**-1.7**
JNU	**Nakatsue**	**154.95**	**313**	PKPab		**PKPab**	**20 31 01.1**	**-1.7**
	comp=Z,4.2nm,0.9s,baz=18,slow=3.2,SNR=4.5								
HHC	**Hu-ho-hao-te**	**156.58**	**355**	*e*PKP		**PKPdf**	**20 30 37.9**	**-2.6**
HHC				PKS		**PKSdf**	**20 34 10.3**	**-4.2**
HHC				PP		**PP**	**20 34 46.5**	**0.0**
HHC				SKS		**SKSdf**	**20 37 38.3**	**-3.2**
HHC				SKKS		**SKKSac**	**20 41 31.8**	**+0.1**
HHC				SS		**SS**	**20 54 34.5**	**+2.0**
HHC				AMB	AMB				
	comp=Z,180nm,9.0s								
HHC					LR	LR			
	comp=N,300nm,19.2s								
HHC					LR	LR			
	comp=E,190nm,20.8s								
HHC					LR	LR			
	comp=Z,170nm,20.6s								
GTA	**Gaotai**	**156.66**	**18**	*e*PKP		**PKPdf**	**20 30 42.9**	**+2.2**
GTA				PKPab		**PKPab**	**20 31 11.8**	**+1.8**
GTA				PP		**PP**	**20 34 50.9**	**+3.6**
GTA				SKKS			20 41 37.0		
GTA				SS		**SS**	**20 54 35.8**	**+1.9**
GTA				AMB	AMB				
	comp=Z,120nm,5.2s								
GTA					LR	LR			
	comp=N,93nm,18.1s								
GTA					LR	LR			
	comp=E,77nm,19.9s								
GTA					LR	LR			
	comp=Z,130nm,20.4s								
LZH	**Lanzhou**	**160.85**	**13**	*e*PKP		**PKPdf**	**20 30 46.8**	**+1.0**
LZH				pPKP		**pPKPdf**	**20 31 00.4**	**-3.6**
LZH				sPKP			20 31 09.0		
LZH				PKPab		**PKPab**	**20 31 29.3**	**+1.1**
LZH				*e*PP	PP		20 35 17.0	+7.0	
LZH				SKKS			20 41 52.3		
LZH				AMB	AMB				
	comp=Z,95nm,4.6s								
LZH					LR	LR			
	comp=N,130nm,17.7s								
LZH					LR	LR			
	comp=E,180nm,19.1s								
LZH					LR	LR			
	comp=Z,200nm,20.8s								
NJ2	**Nanjing**	**162.99**	**331**	*e*PKP		**PKPdf**	**20 30 46.0**	**-1.9**
NJ2				PKPab		**PKPab**	**20 31 41.5**	**+4.0**
NJ2				PP		**PP**	**20 35 21.0**	**-0.6**
NJ2				AMB	AMB				
	comp=Z,100nm,9.3s								
NJ2					LR	LR			
	comp=N,90nm,16.6s								
NJ2					LR	LR			
	comp=E,70nm,15.7s								
NJ2					LR	LR			
	comp=Z,50nm,17.1s								
ENH	**Enshi**	**167.22**	**359**	*e*PKPdf		**PKPdf**	**20 30 51.8**	**+0.2**
CMAR	**Chiang Mai Arr**	**170.27**	**82**	PKP		**PKPdf**	**20 30 53.8**	**0.0**
CMAR	**Chiang Mai Arr**	**170.27**	**82**	PKP		**PKPdf**	**20 30 53.8**	**0.0**
	comp=Z,0.5nm,0.7s,baz=289,slow=3.0,SNR=4.6								
KMI	**Kunming**	**170.33**	**37**	PKP		**PKPdf**	**20 30 52.3**	**-1.7**
KMI				PP		**PP**	**20 36 00.8**	**+0.8**
KMI				SKKS			20 42 42.8		
KMI				AMB	AMB				
	comp=Z,76nm,6.7s								
KMI					LR	LR			
	comp=N,110nm,21.7s								
KMI					LR	LR			
	comp=E,83nm,26.1s								
KMI					LR	LR			
	comp=Z,130nm,33.3s								
GYA	**Guiyang**	**170.75**	**14**	PKP		**PKPdf**	**20 30 52.3**	**-1.7**
GYA				pPKP		**pPKPdf**	**20 31 08.6**	**-3.7**
GYA				sPKP			20 31 14.0		
GYA				PKPab		**PKPab**	**20 32 11.8**	**-0.2**
GYA				PKS		**PKSdf**	**20 34 22.4**	**-4.3**
GYA				PP		**PP**	**20 36 03.3**	**+2.1**
GYA				SKKS			20 42 43.5		
GYA				SS		**SS**	**20 56 57.9**	**-0.8**
GYA				AMB	AMB				
	comp=Z,130nm,8.0s								
GYA					LR	LR			
	comp=N,230nm,20.8s								
GYA					LR	LR			
	comp=E,160nm,21.7s								
GYA					LR	LR			
	comp=Z,210nm,20.5s								
QIZ	**Qiongzhong**	**178.27**	**336**	PKP		**PKPdf**	**20 30 55.1**	**-1.3**
QIZ				PP		**PP**	**20 36 39.0**	**+1.4**
QIZ				SS		SS	20 58 10.3	-0.9	
QIZ				LR		LR			
	comp=Z,130nm,28.5s								

KRSC 13 20:13:33.4±0.4, 53.62N×161.97E, h11km±11km, ML3.8, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.95**	**352**	P	Pg	20 13 50.4	-1.3
MKZ				*i* S	Sg	20 14 02.5	-1.5
SPN	**Mys Shipunski**	**1.28**	**247**	P	Pn	20 13 56.5	-0.7
SPN				*i* S	Sb	20 14 13.3	-0.6
KII	**Karymskiy**	**1.55**	**287**	*e*P	Pn	20 14 00.1	-1.0
KII				*i* S	Sn	20 14 19.3	-1.9
NLC	**Nalytchevo**	**1.64**	**255**	*e*P	Pn	20 14 02.5	+0.5
NLC				*i* S	Sn	20 14 23.1	+0.1
SDLR	**Sedlovina**	**1.88**	**261**	P	Pn	20 14 05.7	+0.1
SDLR				*i* S	Sn	20 14 30.0	+0.6
UGLR	**Uglovaya**	**1.93**	**259**	P	Pn	20 14 07.0	+0.7
UGLR				*i* S	Sn	20 14 31.5	+0.9
SMAR	**Somma**	**1.93**	**261**	*e*P	Pn	20 14 06.7	+0.3
SMAR				*i* S	Sn	20 14 31.0	+0.1
KRER	**Koryakskii**	**1.95**	**262**	P	Pn	20 14 06.5	-0.2
KRER				*i* S	Sn	20 14 31.4	0.0
AVH	**Avacha**	**1.97**	**261**	P	Pn	20 14 07.6	+0.9
AVH				*i* S	Sn	20 14 32.5	+1.0
TUMR	**Tumrok**	**1.98**	**328**	*e*P	Pn	20 14 06.9	-0.1
TUMR				*i* S	Sn	20 14 31.8	-0.1
KOK	**Koryaka**	**2.02**	**262**	P	Pn	20 14 07.4	-0.1
KOK				*i* S	Sn	20 14 32.8	-0.1
PET	**Petropavlovsk**	**2.08**	**255**	*e*P	Pn	20 14 08.7	+0.6
PET				*i* S	Sn	20 14 34.7	+0.7
KMNR	**Kamenistaya**	**2.37**	**336**	*e*P	Pn	20 14 12.9	+0.6
KMNR				*i* S	Sn	20 14 42.3	+0.9
GNL	**Ganaly**	**2.40**	**273**	*e*P	Pn	20 14 13.4	+0.7
GNL				*i* S	Sn	20 14 42.6	+0.4
RUS	**Russkaya**	**2.40**	**242**	*e*P	Pn	20 14 13.1	+0.5
RUS				*i* S	Sn	20 14 42.6	+0.6
BZGR	**Bezymyannyi-Gr**	**2.44**	**343**	*e*P	Pn	20 14 14.0	+0.7
BZGR				*i* S	Sn	20 14 43.7	+0.5
BZMR	**Bezymyannaya**	**2.47**	**340**	*e*P	Pn	20 14 14.8	+1.0
BZMR				*i* S	Sn	20 14 45.7	+1.6
ZLN	**Zelenaya**	**2.50**	**345**	*e*P	Pn	20 14 15.2	+1.1
ZLN				*i* S	Sn	20 14 45.3	+0.7
BZWR	**Bezymyannyi-We**	**2.50**	**341**	*e*P	Pn	20 14 15.5	+1.3
BZWR				*i* S	Sn	20 14 46.4	+1.6
KIRR	**Kirishev**	**2.52**	**339**	*e*P	Pb	20 14 16.7	-2.2
KIRR				*i* S	Sb	20 14 48.5	-1.5
MTVR	**Mutnovka**	**2.55**	**245**	*e*P	Pn	20 14 15.9	+1.0
MTVR				*i* S	Sn	20 14 47.1	+1.0
LGNR	**Loginova**	**2.58**	**344**	*e*P	Pn	20 14 16.0	+0.6
LGNR				*i* S	Sn	20 14 47.3	+0.3
CIRR	**Tsirk**	**2.60**	**345**	*e*P	Pn	20 14 15.4	-0.1
CIRR				*i* S	Sn	20 14 46.4	-0.8
KRSR	**Krestovskiy**	**2.73**	**343**	*e*P	Pn	20 14 17.7	+0.5
KOZ	**Kozyrevsk**	**2.73**	**334**	*e*P	Pn	20 14 19.1	+2.0
KOZ				*i* S	Sn	20 14 52.1	+2.0
ASAK	**Asacha**	**2.75**	**245**	P	Pn	20 14 19.9	+2.3
ASAK				*i* S	Sn	20 14 53.3	+2.4
BKI	**Bering**	**2.83**	**54**	*e*P	Pn	20 14 16.7	-1.7
BKI				*i* S	Sn	20 14 48.2	-4.2
APC	**Apacha**	**2.97**	**258**	*e*P	Pn	20 14 21.9	+1.5
APC				*i* S	Sn	20 14 58.4	+2.4
SMKR	**Semkarok**	**2.98**	**355**	*e*P	Pn	20 14 21.4	+0.7
SMKR				*i* S	Sn	20 14 56.8	+0.3
BDR	**Baidarnaya**	**2.99**	**352**	*e*P	Pn	20 14 20.9	+0.1
BDR				*i* S	Sn	20 14 56.1	-0.5
ESO	**Esso**	**2.99**	**322**	*e*P	Pn	20 14 20.8	+0.1
ESO				*i* S	Sn	20 14 54.9	-1.6
SRDR	**Sredinnyy**	**3.00**	**335**	*e*P	Pn	20 14 22.7	+1.8
MIPR	**Malaya Ipel'ka**	**3.43**	**249**	*e*P	Pn	20 14 28.1	+1.4

NIED ***13*** *20:14:00, 46.80N×153.20E, h20km, Mw3.8 Best double couple: M0 6.18000×10^14 NP1:φs 126.00000°, δ 84.00000°, λ -24.00000°. NP2:φs 219.00000°, δ 66.00000°, λ -174.00000°.*

ISCJB ***13*** *20:14:10.7±1.0, 46.7N±0.1×153.1E±0.2, h24km, mb3.7/9, MS2.9/2, Error ellipse: s-maj=25.8km s-min=4.6km az=136.7*

JMA ***13*** *20:14:12.9±0.8, 46.85N×153.24E, h30km, M4.5*

MOS ***13*** *20:14:16.5±1.2, 47.05N×152.77E, h65km, mb4.2/6, Error ellipse: s-maj=22.1km s-min=12.8km az=60.4*

IDC ***13*** *20:14:17.7±3.4, 46.80N×152.93E, h68km±27km, mb3.5/10, mb1 3.6/13, mb1mx3.5/29, mbtmp3.5/13, MS2.9/3, Ms1 2.9/3, ms1mx2.5/25, Error ellipse: s-maj=58.2km s-min=17.3km az=147.0*

ISC 13 20:14:11.3±1.5, 46.6N±0.2×153.3E±0.2, h24km, n39, σ1 s83/36, mb3.7/9, 1C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.05**	**253**	*c*	*i* PN	Pn	20 15 15.7	+4.1
KUR					*i* S	**Sn**	**20 16 01.8**	**+3.6**
KUR					pmax	pmax		
	comp=N,19nm,0.3s							
KUR					pmax	pmax		
	comp=E,14nm,0.1s							
KUR					pmax	pmax		
	comp=Z,54nm,0.3s							
KUR					smax	smax		
	comp=E,59nm,0.3s							
KUR					smax	smax		
	comp=N,85nm,0.7s							
SKR	**Severo-Kuril's**	**4.51**	**23**	*e*	PN	**Pn**	**20 15 18.9**	**+0.9**
SKR				*e*	S	**Sn**	**20 16 07.5**	**-2.1**
SKR					pmax	pmax		
	comp=Z,40nm,0.6s							
SKR					pmax	pmax		
	comp=N,40nm,0.4s							
SKR					smax	smax		

MKAR	**Makanchi Array**	**42.54**	**347**	P		P		20 23 02.2	+0.1
	2.7nm,0.5s,baz=163,slow=8.1,SNR=35								
SONM	**Songino Array**	**43.40**	**12**	P		P		20 23 08.8	-0.4
	0.2nm,0.3s,baz=188,slow=9.0,SNR=4.1								
SONM				pP		pP		20 23 20.8	-0.6
	0.8nm,0.8s,baz=199,slow=7.8,SNR=4.0								
WRA	**Warramunga Arr**	**46.47**	**124**	P		P		20 23 33.8	0.0
	0.4nm,0.3s,baz=306,slow=8.3,SNR=8.6								
ASAR	**Alice Springs**	**48.00**	**129**	P		P		20 23 45.5	-0.2
	0.3nm,0.4s,baz=301,slow=8.4,SNR=5.6								
ZALV	**Zalesovo Beam**	**49.00**	**352**	P		P		20 23 52.8	-0.1
	2.0nm,0.4s,baz=182,slow=7.7,SNR=14								
ZALV				pP		pP		20 24 05.7	+0.5
	1.1nm,0.5s,baz=164,slow=7.7,SNR=3.5								
GERES	**GERESS Array B**	**79.96**	**319**	P		P		20 27 15.2	-0.3
	0.3nm,0.5s,baz=108,slow=4.3,SNR=4.4								
GERES				pP		pP		20 27 28.6	0.0
	0.6nm,0.8s,baz=98,slow=5.5,SNR=4.4								

KRSC 13 20:15:44.6±0.6, 53.76N×161.59E, h5km±5km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.80**	**6**	P		Pg	20 16 00.3	+0.3
MKZ				*i* S		Sg	20 16 11.1	+0.7
SPN	**Mys Shipunski**	**1.15**	**235**	P		Pg	20 16 06.7	+0.1
SPN				*i* S		Sb	20 16 22.4	+0.3
KII	**Karymskiy**	**1.30**	**283**	*e*P		Pg	20 16 09.6	0.0
NLC	**Nalytchevo**	**1.47**	**247**	*e*P		Pn	20 16 11.5	-0.1
NLC				*i* S		Sb	20 16 31.4	+0.2
SDLR	**Sedlovina**	**1.69**	**254**	*e*P		Pn	20 16 15.4	+0.5
SDLR				*i* S		Sb	20 16 37.7	-0.2
SMAR	**Somma**	**1.74**	**254**	*e*P		Pn	20 16 16.2	+0.5
SMAR				*i* S		Sn	20 16 38.9	+0.4
TUMR	**Tumrok**	**1.74**	**332**	*e*P		Pn	20 16 15.7	0.0
TUMR				*i* S		Sn	20 16 38.9	+0.5
UGLR	**Uglovaya**	**1.74**	**253**	*e*P		Pn	20 16 16.1	+0.5
UGLR				*i* S		Sn	20 16 38.9	+0.6
KRER	**Koryakskii**	**1.76**	**256**	*e*P		Pn	20 16 16.5	+0.5
KRER				*i* S		Sb	20 16 40.1	0.0
AVH	**Avacha**	**1.77**	**255**	*e*P		Pb	20 16 17.1	-0.6
AVH				*i* S		Sb	20 16 40.4	+0.1
KOK	**Koryaka**	**1.82**	**256**	*e*P		Pb	20 16 17.8	-0.8
KOK				*i* S		Sb	20 16 42.2	+0.4
PET	**Petropavlovsk**	**1.91**	**248**	*e*P		Pn	20 16 18.7	+1.0
PET				*i* S		Sn	20 16 42.9	+0.8
KMNR	**Kamenistaya**	**2.15**	**339**	*e*P		Pn	20 16 22.4	+1.2
KMNR				*i* S		Sb	20 16 50.7	-0.5
GNL	**Ganaly**	**2.17**	**270**	*e*P		Pb	20 16 23.0	-1.5
GNL				*i* S		Sb	20 16 51.6	-0.2
BZGR	**Bezymyannyi-Gr**	**2.25**	**347**	*e*P		Pn	20 16 23.3	+0.7
BZGR				*i* S		Sn	20 16 52.1	+1.4
RUS	**Russkaya**	**2.28**	**236**	*e*P		Pn	20 16 23.2	+0.3
RUS				*i* S		Sn	20 16 51.6	+0.3
ZLN	**Zelenaya**	**2.31**	**349**	*e*P		Pn	20 16 24.7	+1.3
ZLN				*i* S		Sb	20 16 54.1	-1.6
KIRR	**Kirishev**	**2.31**	**342**	*e*P		Pn	20 16 25.2	+1.7
KIRR				*i* S		Sb	20 16 55.2	-0.8
KPT	**Kopyto**	**2.35**	**341**	*e*P		Pn	20 16 25.4	+1.5
KPT				*i* S		Sb	20 16 55.8	-1.1
LGNR	**Loginova**	**2.38**	**348**	*e*P		Pn	20 16 25.6	+0.9
LGNR				*i* S		Sn	20 16 55.7	+1.1
CIRR	**Tsirk**	**2.41**	**349**	*e*P		Pb	20 16 27.5	-1.1
CIRR				*i* S		Sb	20 16 59.7	+0.9
MTVR	**Mutnovka**	**2.42**	**239**	*e*P		Pn	20 16 26.1	+1.1
MTVR				*i* S		Sn	20 16 56.5	+1.4
KOZ	**Kozyrevsk**	**2.51**	**337**	*e*P		Pn	20 16 27.9	+1.9
KOZ				*i* S		Sn	20 16 59.1	+2.1
KRSR	**Krestovskiy**	**2.53**	**347**	*e*P		Pn	20 16 26.5	0.0
KRSR				*i* S		Sn	20 16 56.6	-1.2
ASAK	**Asacha**	**2.62**	**240**	*e*P		Pn	20 16 29.6	+2.0
ASAK				*i* S		Sb	20 17 02.7	-1.9
ESO	**Esso**	**2.74**	**324**	*e*P		Pn	20 16 30.6	+1.4
ESO				*i* S		Sn	20 17 03.6	+0.9
SRDR	**Sredinnyy**	**2.78**	**338**	*e*P		Pn	20 16 31.5	+1.7
SRDR				*i* S		Sn	20 17 05.4	+1.6
APC	**Apacha**	**2.79**	**254**	*e*P		Pn	20 16 31.7	+1.9
APC				*i* S		Sn	20 17 06.1	+2.4
SMKR	**Semkarok**	**2.83**	**359**	*e*P		Pn	20 16 31.9	+1.4
SMKR				*i* S		Sn	20 17 06.4	+1.3

WEL 13 20:17:10.3±0.6, 37.20S×179.56E, h33km, ML3.6/6, 2C-1D, Error ellipse: s-maj=6.6km s-min=5.0km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.06**	**249**	PN		Pn	20 17 27.8	-1.1
MXZ				SN		Sn	20 17 41.7	-0.8
MXZ				AML		AML	20 17 42.7	
MXZ				AML		AML	20 17 42.7	
PUZ	**Puketiti**	**1.35**	**229**	PN		Pn	20 17 32.2	-0.7
PUZ				SN		Sn	20 17 48.5	-1.3
PUZ				AML		AML	20 17 50.0	
CNGZ	**Carnagh Statio**	**1.67**	**219**	PN		Pn	20 17 37.3	0.0
CNGZ				SN		Sn	20 17 57.1	-0.5
MWZ	**Matawai**	**1.97**	**234**	PN		Pn	20 17 40.5	-0.9
MWZ				SN		Sn	20 18 02.7	-2.4
MWZ				AML		AML	20 18 23.0	
URZ	**Urewera**	**2.21**	**241**	⇑PN		Pn	20 17 44.5	-0.2
URZ				SN		Sn	20 18 09.6	-1.4
MHGZ	**Mahia Peninsul**	**2.35**	**213**	PN		Pn	20 17 45.7	-0.9
RAHZ	**Arahi**	**2.60**	**228**	PN		Pn	20 17 49.1	-1.0
NMHZ	**Naumai**	**2.88**	**228**	PN		Pn	20 17 52.8	-1.2
KUZ	**Kuaotunu**	**3.11**	**277**	PN		Pn	20 17 57.6	+0.6
KUZ				AML		AML	20 18 42.2	
BKZ	**Black Stump Fm**	**3.12**	**230**	⇓PN		Pn	20 17 55.9	-1.3
BKZ				AML		AML	20 18 32.2	
KAHZ	**Kahuranaki**	**3.34**	**218**	PN		Pn	20 17 58.1	-2.2
MKAZ	**Moumakai**	**3.51**	**270**	⇑PN		Pn	20 18 03.2	+0.6
BHHZ	**Black Hill Sta**	**3.58**	**229**	PN		Pn	20 18 01.7	-1.9
MRZ	**Mangatainoka R**	**4.65**	**221**	PN		Pn	20 18 14.6	-3.6

IDC 13 20:23:41.0±1.6, 23.40S×66.45W, h173km±20km, mb3.4/2, mb1 3.3/5, mb1mx3.2/19, mbtmp3.3/5, Error ellipse: s-maj=26.6km s-min=15.2km az=100.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LVC	**Limon Verde**	**2.40**	**288**	P		Pn	20 24 24.0	+1.6
	17nm,0.3s,baz=106,slow=6.1,SNR=302							
LVC				S		Sn	20 24 54.2	-0.3
	24nm,0.3s,baz=108,slow=20,SNR=76							
LPAZ	**La Paz**	**7.25**	**347**	P		Pn	20 25 26.2	+1.0
	0.3nm,0.3s,baz=157,slow=6.8,SNR=9.7							
CFAA	**Coronel Fontan**	**8.33**	**191**	P		Pn	20 25 39.9	+1.3
	0.1nm,0.3s,baz=45,slow=5.7,SNR=5.5							
CFAA				S		Sn	20 27 09.0	-2.8
	0.2nm,0.3s,baz=207,slow=14,SNR=9.5							
SIV	**San Ignacio**	**8.94**	**35**	P		Pn	20 25 47.8	+1.0
	1.2nm,0.3s,baz=233,slow=14,SNR=11							
QSPA	**South Pole Qui**	**66.81**	**180**	P		P	20 34 14.8	+1.0
	0.7nm,0.5s,baz=159,slow=6.9,SNR=4.4							
TORD	**Torodi Ar. Bea**	**75.88**	**69**	P		P	20 35 07.6	-1.2
	0.4nm,0.4s,baz=256,slow=5.9,SNR=12							
MKAR	**Makanchi Array**	**145.74**	**39**	PKPbc		PKPdf	20 42 59.0	+0.2
	1.4nm,0.7s,baz=312,slow=3.2,SNR=13							

ISCJB 13 20:24:07.0±0.6, 23.69N±0.03×122.85E±0.02, h20km±6km, Error ellipse: s-maj=5.4km s-min=3.4km az=165.5
JMA 13 20:24:08.3±0.4, 23.76N×122.89E, h50km, M2.3
TAP 13 20:24:09.5, 23.73N×122.70E, h87km±1km, ML3.0, D

ISC 13 20:24:04.8±1.2, 23.65N±0.04×122.85E±0.02, h3km±11km, n39, σ1.945/67, 1C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.82**	**11**	P		**Pb**	**20 24 22.3**	**+0.5**
YOJ				S		**Sg**	**20 24 31.8**	**+0.6**
HATJ	**Hateruma jima**	**0.97**	**65**	P		**Pg**	**20 24 24.5**	**+1.1**
HATJ				*e*S		**Sg**	**20 24 37.1**	**+1.2**
IRIF	**Iriomote-Funau**	**1.06**	**50**	P		**Pg**	**20 24 25.7**	**+0.6**
IRIF				S		**Sg**	**20 24 38.6**	**-0.2**
JKRS	**Kuro-shima**	**1.21**	**61**	P		**Pg**	**20 24 28.3**	**+0.2**
JKRS				S		**Sg**	**20 24 43.3**	**-0.6**
TWD	**Chiawan**	**1.22**	**291**	*e*P		**Pg**	**20 24 28.7**	**+0.5**
	baz=295							
TWD				*e*S		**Sg**	**20 24 43.2**	**-0.9**
ENA	**Nanau**	**1.27**	**308**	*e*P		**Pg**	**20 24 29.7**	**+0.5**
	baz=313							
ENA				S		**Sg**	**20 24 45.9**	**+0.2**
	baz=313							
ESL	**Shilin**	**1.30**	**277**	P		**Pg**	**20 24 29.8**	**-0.1**
	baz=271							
ESL				*e*S		**Sg**	**20 24 45.2**	**-1.5**
	baz=271							
TWC	**Suao**	**1.32**	**317**	*e*P		**Pg**	**20 24 30.9**	**+0.8**
	baz=319							
TWC				*e*S		**Sg**	**20 24 46.3**	**-1.0**
	baz=319							
JIJ	**Ishigaki jima**	**1.38**	**59**	P		**Pg**	**20 24 29.9**	**-1.5**
JIJ				S		**Sg**	**20 24 46.0**	**-3.3**
EHY	**Hungye**	**1.41**	**264**	P		**Pn**	**20 24 32.1**	**+0.7**
	baz=258							
EHY				*e*S		**Sg**	**20 24 49.2**	**-0.8**
	baz=258							
TWF1	**Yuli**	**1.45**	**258**	⇑*i*P		**Pn**	**20 24 32.8**	**+0.8**
	baz=249							
TWF1				S		**Sg**	**20 24 50.5**	**-1.0**
	baz=249							
CHKT	**Chengkung**	**1.47**	**248**	*e*P		**Pn**	**20 24 32.5**	**+0.3**
	baz=241							
CHKT				*e*S		**Sg**	**20 24 49.7**	**-2.3**
	baz=241							
TWE	**Neicheng**	**1.51**	**315**	*e*P		**Pn**	**20 24 33.6**	**+0.8**
	baz=317							
TWE				*e*S		**Sg**	**20 24 51.2**	**-2.3**
	baz=317							
ENTT	**Nioudou**	**1.53**	**310**	P		**Pn**	**20 24 34.1**	**+1.0**
	baz=306							
ENTT				*e*S		**Sg**	**20 24 51.8**	**-2.2**
	baz=306							
WHF	**Hehuan Shan**	**1.53**	**289**	P		**Pn**	**20 24 33.8**	**+0.4**
	baz=295							
WHF				S		**Sg**	**20 24 51.8**	**-2.2**
	baz=295							
NNS	**Nan Shan**	**1.56**	**301**	*e*P		**Pn**	**20 24 34.4**	**+0.8**
	baz=307							
NNS				*e*S		**Sn**	**20 24 52.6**	**-1.8**
	baz=307							
TWB1	**Santiao Chiao**	**1.56**	**330**	*e*P		**Pn**	**20 24 34.4**	**+0.9**
	baz=333							
TWT	**Tachien**	**1.64**	**292**	*e*P		**Pn**	**20 24 36.3**	**+1.5**
	baz=295							
TWT				*e*S		**Sn**	**20 24 54.9**	**-1.6**
	baz=295							
NSK	**Sanguang**	**1.70**	**307**	*e*P		**Pn**	**20 24 36.4**	**+0.9**
	baz=308							
NWF	**Wu-fen Shan**	**1.71**	**326**	*e*P		**Pb**	**20 24 38.2**	**+1.2**
	baz=336							
ELDTW	**Lidau**	**1.74**	**255**	P		**Pn**	**20 24 36.9**	**+0.8**
	baz=251							
ELDTW				S		**Sn**	**20 24 56.3**	**-2.6**
	baz=251							
YUS	**Yu-Shan**	**1.74**	**265**	P		**Pn**	**20 24 38.0**	**+1.5**
	baz=262							
YUS				*e*S		**Sn**	**20 24 57.9**	**-1.6**
	baz=262							
SMLT	**Sun Moon Lake**	**1.80**	**278**	*e*P		**Pn**	**20 24 37.9**	**+1.0**
	baz=276							
SMLT				*e*S		**Sn**	**20 24 58.4**	**-1.9**
	baz=276							
TTN	**Taitung**	**1.80**	**241**	*e*P		**Pn**	**20 24 39.1**	**+2.3**
	baz=233							
TWG	**Pinlang**	**1.83**	**243**	*e*P		**Pn**	**20 24 38.5**	**+1.3**
	baz=237							
TWG				*e*S		**Sn**	**20 24 59.4**	**-1.5**
	baz=237							
TYC	**Yuchr**	**1.84**	**278**	*e*P		**Pn**	**20 24 38.1**	**+0.8**
	baz=273							
ALS	**Alishan**	**1.88**	**266**	P		**Pn**	**20 24 40.3**	**+2.2**
	baz=263							
NSTT	**Nanjuang**	**1.95**	**300**	*e*P		**Pn**	**20 24 39.7**	**+0.9**
	baz=307							
NSTT				*e*S		**Sn**	**20 25 03.4**	**-0.4**
	baz=307							
JTJ	**Tarama**	**1.96**	**59**	*e*S		**Sn**	**20 25 01.0**	**-3.1**
CHN5	**Tsauling**	**1.99**	**269**	*e*P		**Pn**	**20 24 41.1**	**+1.6**
	baz=266							
CHN5				*e*S		**Sn**	**20 25 05.1**	**+0.2**
	baz=266							
ECL	**Taimali**	**2.03**	**239**	P		**Pn**	**20 24 41.0**	**+1.0**
	baz=242							
ECL				*e*S		**Sn**	**20 25 04.3**	**-1.6**
	baz=242							
WTP	**Ta-pu**	**2.09**	**259**	*e*P		**Pn**	**20 24 43.2**	**+2.4**
	baz=256							
WTP				*e*S		**Sn**	**20 25 08.9**	**+1.5**
	baz=256							
CHN4	**Tsaushan**	**2.09**	**262**	*e*P		**Pn**	**20 24 43.5**	**+2.7**
	baz=266							
CHN4				*e*S		**Sn**	**20 25 08.5**	**+1.2**
	baz=266							
WGK	**Gukeng**	**2.09**	**271**	*e*P		**Pb**	**20 24 43.8**	**+0.3**
	baz=269							
CHN1	**Nanshi**	**2.18**	**258**	*e*P		**Pb**	**20 24 45.1**	**+0.2**
	baz=255							
CHN1				*e*S		**Sn**	**20 25 11.3**	**+1.8**
	baz=255							
TWK	**Hsinying**	**2.20**	**260**	*e*P		**Pb**	**20 24 45.6**	**+0.3**
	baz=257							
EAST	**Anshuo**	**2.23**	**236**	*e*P		**Pn**	**20 24 44.1**	**+1.4**
	baz=225							
EAST				*e*S		**Sn**	**20 25 09.5**	**-1.4**
	baz=225							
TWM1	**Shoushan**	**2.38**	**250**	*e*P		**Pb**	**20 24 48.8**	**+0.5**
	baz=246							
SCZT	**Fangliau**	**2.41**	**239**	*e*P		**Pn**	**20 24 46.3**	**+1.0**
	baz=234							

NSSC 13 20:33:31.7±1.9, 41.12N×39.97E, h0km±154km, ML3.3
DDA 13 20:33:54.8, 39.39N×39.11E, h13km, MD3.4
ISK 13 20:33:54.2, 39.38N×39.19E, h3km, ML3.7
CSEM 13 20:33:55.5±0.1, 39.37N×39.17E, h2km, ML3.7, Error ellipse: s-maj=3.9km s-min=3.7km az=56.0

ISC 13 20:33:55.6±1.1, 39.40N±0.02×39.18E±0.02, h3km±13km, n96, σ1.911/105, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EZC	**Erzincan**	**0.38**	**21**	PG		**Pg**	**20 34 02.7**	**-0.3**
EZC	**Erzincan**	**0.38**	**21**	*i* Pg		**Pg**	**20 34 04.1**	**+1.1**
EZC				*e*Sg		**Sb**	**20 34 10.6**	**-0.9**
ERZN	**Erzincan**	**0.46**	**65**	PG		**Pg**	**20 34 04.1**	**-0.4**
ERZN				*e*SG		**Sg**	**20 34 10.6**	**0.0**
ILIC	**ilic-Erzincan**	**0.47**	**277**	PG		**Pg**	**20 34 04.1**	**-0.6**
ILIC				*e*SG		**Sg**	**20 34 11.2**	**+0.3**
ILIC	**ilic-Erzincan**	**0.47**	**277**	*i* Pg		**Pg**	**20 34 04.1**	**-0.6**
ILIC				*e*Sg		**Sg**	**20 34 11.2**	**+0.3**
PTK	**Pertek**	**0.53**	**161**	PG		**Pg**	**20 34 05.1**	**-0.7**
PTK				*e*SG		**Sg**	**20 34 12.5**	**-0.1**
PTK	**Pertek**	**0.53**	**161**	*i* Pg		**Pg**	**20 34 05.1**	**-0.7**
PTK				*e*Sg		**Sg**	**20 34 12.5**	**-0.1**
ELZG	**Elazig**	**0.91**	**189**	*i* P		**Pg**	**20 34 11.9**	**-1.1**
ELZG				*i* S		**Sb**	**20 34 26.0**	**-0.6**
ELZG	**Elazig**	**0.91**	**189**	*i* P		**Pg**	**20 34 11.9**	**-1.1**
ELZG				*i* S		**Sb**	**20 34 26.0**	**-0.6**
GUMT	**Gumushane**	**1.09**	**12**	PN		**Pb**	**20 34 15.8**	**-1.3**
SUSE	**Susehri**	**1.10**	**318**	*i* P		**Pb**	**20 34 16.1**	**-1.3**
SUSE	**Susehri**	**1.10**	**318**	*i* P		**Pb**	**20 34 16.1**	**-1.3**
BINT	**Bingol**	**1.15**	**116**	*i* Pn		**Pg**	**20 34 18.0**	**+0.4**
MYA	**Malataya**	**1.22**	**209**	PN		**Pn**	**20 34 17.2**	**-2.3**
MYA	**Malataya**	**1.22**	**209**	*i* Pn		**Pn**	**20 34 17.2**	**-2.3**
BNGB	**Bing¶l**	**1.24**	**109**	PN		**Pn**	**20 34 17.9**	**-1.9**
BAYT	**Ayd¯ntepe-Bay**	**1.24**	**36**	PN		**Pn**	**20 34 18.4**	**-1.6**
BAYT	**Ayd¯ntepe-Bay**	**1.24**	**36**	*i* Pn		**Pn**	**20 34 18.4**	**-1.6**
AKCD	**Akcadag**	**1.47**	**222**	*e*P		**Pn**	**20 34 21.2**	**-1.9**
AKCD				*i* S		**Sg**	**20 34 45.6**	**+2.8**
AKCD	**Akcadag**	**1.47**	**222**	*e*P		**Pn**	**20 34 21.2**	**-1.9**
AKCD				*i* S		**Sg**	**20 34 45.6**	**+2.8**
DARE	**Darende-Malaty**	**1.55**	**239**	PN		**Pn**	**20 34 23.4**	**-0.8**
ESPY	**Espiye-Giresun**	**1.56**	**347**	*e*PN		**Pn**	**20 34 23.9**	**-0.3**
ESPY	**Espiye-Giresun**	**1.56**	**347**	*e*Pn		**Pn**	**20 34 23.9**	**-0.3**
DIY	**Diyarbakir**	**1.71**	**151**	*e*PN		**Pn**	**20 34 25.6**	**-0.6**
DIY	**Diyarbakir**	**1.71**	**151**	*e*Pn		**Pn**	**20 34 25.7**	**-0.6**
RSDY	**Resadiye-TOKAT**	**1.74**	**306**	*e*PN		**Pn**	**20 34 26.6**	**-0.1**
RSDY	**Resadiye-TOKAT**	**1.74**	**306**	*e*Pn		**Pn**	**20 34 26.6**	**-0.1**
SVSK	**Karacayir**	**1.76**	**288**	*e*PN		**Pn**	**20 34 27.1**	**+0.2**
SVSK	**Karacayir**	**1.76**	**288**	*e*Pn		**Pn**	**20 34 27.1**	**+0.2**
EZM	**Erzurum**	**1.76**	**73**	*e*PN		**Pn**	**20 34 26.6**	**-0.6**
URFA	**Urfa**	**1.97**	**188**	*e*PN		**Pn**	**20 34 29.6**	**-0.3**
URFA	**Urfa**	**1.97**	**188**	*e*Pn		**Pn**	**20 34 29.6**	**-0.3**
PZAR	**Pazar-Rize**	**2.22**	**36**	*e*PN		**Pn**	**20 34 33.4**	**+0.2**
PZAR	**Pazar-Rize**	**2.22**	**36**	*e*Pn		**Pn**	**20 34 33.4**	**+0.2**
BEST	**Besiri**	**2.22**	**132**	*e*P		**Pb**	**20 34 35.6**	**-0.8**
TOKT	**Tokat**	**2.23**	**295**	*e*PN		**Pn**	**20 34 33.3**	**-0.1**
TOKT	**Tokat**	**2.23**	**295**	*e*Pn		**Pn**	**20 34 33.3**	**-0.1**
DDEM	**Demirkent**	**2.48**	**52**	*e*P		**Pb**	**20 34 38.7**	**-2.1**
DDEM				*i* S		Sg	20 35 22.4	+7.2
DDEM	**Demirkent**	**2.48**	**52**	*e*P		**Pb**	**20 34 38.7**	**-2.1**
KMRS	**Kahramanmaras**	**2.60**	**224**	*e*PN		**Pn**	**20 34 38.5**	**0.0**
KMRS	**Kahramanmaras**	**2.60**	**224**	*e*Pn		**Pn**	**20 34 38.5**	**0.0**
KBSD	**Kabsdagh**	**2.62**	**155**	*e*P		**Pn**	**20 34 36.9**	**-1.9**
KBSD				*e*S		**Sg**	**20 35 22.7**	**+2.9**
KBSD				AML		AML	20 35 28.2	
	comp=Z,122nm,0.7s							
KBSD				AML		AML	20 35 28.4	
	comp=N,151nm,0.8s							
KBSD				AML		AML	20 35 32.2	
	comp=E,162nm,0.6s							
KBSD	**Kabsdagh**	**2.62**	**155**	*e*P		**Pn**	**20 34 36.9**	**-1.9**
	SNR=45							
BNN	**Bunyan**	**2.65**	**259**	*e*PN		**Pn**	**20 34 39.4**	**+0.2**
BNN	**Bunyan**	**2.65**	**259**	*e*Pn		**Pn**	**20 34 39.4**	**+0.2**
AYKD	**Aykdinkavak**	**2.71**	**224**	*e*P		**Pn**	**20 34 40.6**	**+0.5**
BCA	**Borcka**	**2.77**	**42**	*e*PN		**Pn**	**20 34 41.3**	**+0.4**
BCA	**Borcka**	**2.77**	**42**	*e*Pn		**Pn**	**20 34 41.3**	**+0.4**
ANDN	**Andirin**	**2.87**	**232**	*e*P		**Pn**	**20 34 42.8**	**+0.5**
ANDN	**Andirin**	**2.87**	**232**	*e*P		**Pn**	**20 34 42.8**	**+0.5**
KVT	**Kavak**	**2.93**	**306**	*e*PN		**Pn**	**20 34 43.7**	**+0.7**
KVT	**Kavak**	**2.93**	**306**	*e*Pn		**Pn**	**20 34 43.7**	**+0.7**
AGRB	**Hanur-Agry**	**2.96**	**85**	*e*PN		**Pn**	**20 34 44.1**	**+0.5**
AGRB	**Hanur-Agry**	**2.96**	**85**	*e*Pn		**Pn**	**20 34 44.1**	**+0.5**
YOZ	**Yozgat**	**2.99**	**276**	*e*PN		**Pn**	**20 34 44.1**	**+0.2**
YOZ	**Yozgat**	**2.99**	**276**	*e*Pn		**Pn**	**20 34 44.2**	**+0.2**
SFNV	**Sufian**	**3.06**	**166**	*e*P		**Pn**	**20 34 44.4**	**-0.5**
SFNV				AML		AML	20 35 44.9	
	comp=Z,142nm,0.7s							
SFNV				AML		AML	20 35 45.3	
	comp=N,135nm,0.7s							
SFNV				AML		AML	20 35 51.7	
	comp=E,55nm,0.5s							
SFNV	**Sufian**	**3.06**	**166**	*e*P		**Pn**	**20 34 44.4**	**-0.5**
	SNR=45							
KOZT	**Kozan**	**3.25**	**235**	*e*PN		**Pn**	**20 34 48.5**	**+1.1**
KOZT	**Kozan**	**3.25**	**235**	*e*Pn		**Pn**	**20 34 48.5**	**+1.1**
SLMH	**Al Salmeh**	**3.33**	**198**	*e*P		**Pn**	**20 34 50.4**	**+1.9**
SLMH	**Al Salmeh**	**3.33**	**198**	*e*P		**Pn**	**20 34 50.4**	**+1.9**
	SNR=45							
VANB	**Van**	**3.38**	**102**	*e*PN		**Pn**	**20 34 50.0**	**+0.7**
VANB	**Van**	**3.38**	**102**	*e*Pn		**Pn**	**20 34 50.0**	**+0.7**
AVNT	**Avonos**	**3.42**	**261**	*e*P		**Pn**	**20 34 49.1**	**-0.8**
AVNT	**Avonos**	**3.42**	**261**	*e*P		**Pn**	**20 34 49.1**	**-0.8**
MNKR	**ALMNKUR**	**3.45**	**179**	*e*P		**Pn**	**20 34 51.5**	**+1.4**
MNKR	**ALMNKUR**	**3.45**	**179**	*e*P		**Pn**	**20 34 51.5**	**+1.4**
	SNR=45							
CORM	**Corum**	**3.59**	**284**	*e*PN		**Pn**	**20 34 53.0**	**+0.8**
CORM	**Corum**	**3.59**	**284**	*e*Pn		**Pn**	**20 34 53.0**	**+0.8**
CEYT	**Ceyhan**	**3.60**	**230**	*e*PN		**Pn**	**20 34 53.3**	**+1.1**
CEYT	**Ceyhan**	**3.60**	**230**	*e*Pn		**Pn**	**20 34 53.3**	**+1.1**
CLDR	**Caldiran**	**3.69**	**92**	*e*PN		**Pn**	**20 34 54.1**	**+0.4**
CLDR	**Caldiran**	**3.69**	**92**	*e*Pn		**Pn**	**20 34 54.1**	**+0.4**
CDAG	**Cicekdag**	**3.72**	**275**	*e*P		Pb	20 34 58.5	-3.5
CDAG				*i* S		**Sg**	**20 35 54.2**	**-0.9**
CDAG	**Cicekdag**	**3.72**	**275**	*e*P		Pb	20 34 58.5	-3.5
DIKM	**Dikmen**	**3.74**	**308**	*e*PN		**Pn**	**20 34 54.9**	**+0.7**
DIKM	**Dikmen**	**3.74**	**308**	*e*Pn		**Pn**	**20 34 54.9**	**+0.7**
MZRK	**Al-Mazaregh**	**3.75**	**161**	*e*P		**Pn**	**20 34 54.1**	**-0.2**
MZRK				AML		AML	20 35 10.9	
	comp=Z,41nm,0.5s							
MZRK				*e*S		**Sb**	**20 35 51.0**	**+

LKBD2	**Leukerbad 2**	**0.58**	**75**	*e*Pg		**Pg**	**20 38 16.7**	**+0.6**
	16nm,0.2s								
LKBD2	**Leukerbad 2**	**0.58**	**75**	*e*Pg		**Pg**	**20 38 16.7**	**+0.6**
	16nm,0.2s								
CABF	**La Chapelle**	**0.64**	**306**	*e*Pg		**Pb**	**20 38 18.3**	**+0.2**
	SNR=1.0								
CABF				*e*Sg		**Sb**	**20 38 27.2**	**+0.1**
CABF				*e*Sn		**Sn**	**20 38 31.2**	**+1.0**
	12nm,0.3s,SNR=1.0								
CABF	**La Chapelle**	**0.64**	**306**	*e*Pg		**Pb**	**20 38 18.3**	**+0.2**
	SNR=1.0								
CABF				*e*Sg		**Sb**	**20 38 27.2**	**+0.1**
LPL	**La Plagne**	**0.72**	**186**	*e*Pg		**Pg**	**20 38 19.3**	**+0.5**
	SNR=1.0								
LPL				*e*Sg		**Sb**	**20 38 29.5**	**+0.1**
	7.6nm,0.3s								
LPL	**La Plagne**	**0.72**	**186**	*e*Pg		**Pg**	**20 38 19.3**	**+0.5**
	SNR=1.0								
LPL				*e*Sg		**Sb**	**20 38 29.5**	**+0.1**
	3.8nm,0.3s								
LPG	**La Plagne**	**0.74**	**185**	*e*Pg		**Pg**	**20 38 19.7**	**+0.6**
	SNR=1.0								
LPG				*e*Sg		**Sg**	**20 38 29.6**	**+0.8**
	10nm,0.3s								
LPG	**La Plagne**	**0.74**	**185**	*e*Pg		**Pg**	**20 38 19.7**	**+0.6**
	SNR=1.0								
LPG				*e*Sg		**Sg**	**20 38 29.6**	**+0.8**
	5.2nm,0.3s								
OG35	**Corcelles**	**0.90**	**259**	Pg		**Pb**	**20 38 23.0**	**+0.5**
OG35				Sg		**Sn**	**20 38 35.7**	**-0.8**
TRAV	**Traversella**	**0.96**	**138**	P		**Pg**	**20 38 23.0**	**-0.3**
TRAV				S		**Sg**	**20 38 34.9**	**-0.9**
LOMF	**Lomont**	**1.12**	**360**	Pg		**Pg**	**20 38 27.0**	**+0.6**
LOMF				Sg		**Sn**	**20 38 41.7**	**-0.2**
LOMF	**Lomont**	**1.12**	**360**	Pg		**Pg**	**20 38 27.0**	**+0.6**
LOMF				Sg		**Sn**	**20 38 41.7**	**-0.2**
RSP	**Reno Superiore**	**1.12**	**164**	P		**Pb**	**20 38 26.0**	**-0.3**
RSP				S		**Sb**	**20 38 39.4**	**-1.5**
BBS	**Basel-Blauen**	**1.32**	**20**	Pg		**Pg**	**20 38 30.5**	**+0.4**
BBS				Sg		**Sg**	**20 38 47.8**	**+0.5**
ORIF	**Oris-en-Rattie**	**1.48**	**208**	*e*Pg		**Sg**	**20 38 33.5**	**+0.4**
	SNR=1.0								
ORIF				*e*Sn		**Sn**	**20 38 51.0**	**+0.4**
	SNR=1.0								
ORIF				*e*Sg		**Sg**	**20 38 53.3**	**+1.0**
	15nm,0.4s,SNR=1.0								
ORIF	**Oris-en-Rattie**	**1.48**	**208**	*e*Pg		**Pg**	**20 38 33.5**	**+0.4**
	SNR=1.0								
ORIF				*e*Sn		**Sn**	**20 38 51.0**	**+0.4**
	SNR=1.0								
ORIF				*e*Sg		**Sg**	**20 38 53.3**	**+1.0**
	7.7nm,0.4s,SNR=1.0								
MBDF	**Montbardon**	**1.50**	**182**	*e*Sg		**Sg**	**20 38 53.6**	**+0.4**
	5.1nm,0.3s								
MBDF	**Montbardon**	**1.50**	**182**	*e*Sg		**Sg**	**20 38 53.6**	**+0.4**
	2.5nm,0.3s								
HINF	**Hinteralfeld**	**1.59**	**0**	*e*Pn		**Pn**	**20 38 33.2**	**+0.3**
	SNR=1.0								
HINF	**Hinteralfeld**	**1.59**	**0**	*e*Pg		**Pg**	**20 38 35.5**	**+0.2**
HINF				*e*Sg		**Sg**	**20 38 56.3**	**+0.4**
	27nm,0.4s								
HINF	**Hinteralfeld**	**1.59**	**0**	*e*Pn		**Pn**	**20 38 33.2**	**+0.3**
	SNR=1.0								
HINF	**Hinteralfeld**	**1.59**	**0**	*e*Pg		**Pg**	**20 38 35.5**	**+0.2**
HINF				*e*Sg		**Sg**	**20 38 56.3**	**+0.4**
	13nm,0.4s								
MOF	**Molkenrain**	**1.63**	**7**	Pg		**Pg**	**20 38 36.2**	**0.0**
MOF				Sg		**Sg**	**20 38 57.7**	**+0.3**
MOF	**Molkenrain**	**1.63**	**7**	Pg		**Pg**	**20 38 36.2**	**0.0**
MOF				Sg		**Sg**	**20 38 57.7**	**+0.3**
PZZ	**Stroppo**	**1.73**	**173**	P		**Pb**	**20 38 36.4**	**-0.3**
PZZ				S		**Sn**	**20 38 55.5**	**-1.6**
HAU	**Haudompre**	**1.81**	**349**	*e*Pn		**Pn**	**20 38 36.7**	**+0.8**
	SNR=1.0								
HAU	**Haudompre**	**1.81**	**349**	*e*Pg		**Pg**	**20 38 39.2**	**-0.3**
HAU				*e*Sn		**Sn**	**20 38 58.6**	**-0.2**
	SNR=1.0								
HAU				*e*Sg		**Sg**	**20 39 03.0**	**+0.1**
	23nm,0.3s								
HAU	**Haudompre**	**1.81**	**349**	*e*Pn		**Pn**	**20 38 36.7**	**+0.8**
	SNR=1.0								
HAU	**Haudompre**	**1.81**	**349**	*e*Pg		**Pg**	**20 38 39.2**	**-0.3**
HAU				*e*Sn		**Sn**	**20 38 58.6**	**-0.2**
	SNR=1.0								
HAU				*e*Sg		**Sg**	**20 39 03.0**	**+0.1**
	12nm,0.3s								
FELD	**Feldberg im Sc**	**1.83**	**25**	Pg		**Pg**	**20 38 39.5**	**-0.4**
FELD				Sg		**Sg**	**20 39 03.7**	**+0.1**
ECH	**Echery**	**2.00**	**6**	Pn		**Pn**	**20 38 38.3**	**-0.2**
ECH				Sg		**Sg**	**20 39 09.3**	**+0.3**
ECH	**Echery**	**2.00**	**6**	Pn		**Pn**	**20 38 38.3**	**-0.2**
ECH				Sg		**Sg**	**20 39 09.3**	**+0.3**
VIVF	**Saint-Julien-l**	**2.05**	**229**	*e*Pn		**Pn**	**20 38 40.5**	**+1.3**
	SNR=1.0								
VIVF	**Saint-Julien-l**	**2.05**	**229**	*e*Pg		**Pg**	**20 38 44.6**	**+0.5**
	SNR=1.0								
VIVF				*e*Sg		**Sg**	**20 39 11.3**	**+0.6**
	6.6nm,0.3s								
VIVF	**Saint-Julien-l**	**2.05**	**229**	*e*Pn		**Pn**	**20 38 40.5**	**+1.3**
	SNR=1.0								
VIVF	**Saint-Julien-l**	**2.05**	**229**	*e*Pg		**Pg**	**20 38 44.6**	**+0.5**
	SNR=1.0								
VIVF				*e*Sg		**Sg**	**20 39 11.3**	**+0.6**
	3.3nm,0.3s								
THEF	**They Montfort**	**2.08**	**344**	Pg		**Pg**	**20 38 44.2**	**-0.5**
THEF	**They Montfort**	**2.08**	**344**	Pg		**Pg**	**20 38 44.2**	**-0.5**
SMF	**Signal de Mont**	**2.11**	**282**	*e*Pn		**Pn**	**20 38 41.0**	**+0.9**
	SNR=1.0								
SMF	**Signal de Mont**	**2.11**	**282**	*e*Pg		**Pg**	**20 38 45.7**	**+0.4**
SMF				*e*Sn		**Sn**	**20 39 06.4**	**+0.1**
	SNR=1.0								
SMF				*e*Sg		**Sg**	**20 39 12.7**	**0.0**
	6.2nm,0.2s								
SMF	**Signal de Mont**	**2.11**	**282**	*e*Pn		**Pn**	**20 38 41.0**	**+0.9**
	SNR=1.0								
SMF	**Signal de Mont**	**2.11**	**282**	*e*Pg		**Pg**	**20 38 45.7**	**+0.4**
SMF				*e*Sn		**Sn**	**20 39 06.4**	**+0.1**
	SNR=1.0								
SMF				*e*Sg		**Sg**	**20 39 12.7**	**0.0**
	3.1nm,0.2s								
CDF	**Champ du Feu**	**2.20**	**8**	*e*Pn		**Pn**	**20 38 41.8**	**+0.4**
	SNR=1.0								
CDF	**Champ du Feu**	**2.20**	**8**	*e*Pg		**Pg**	**20 38 46.9**	**-0.1**
CDF				*e*Sg		**Sg**	**20 39 14.8**	**-0.8**
	5.4nm,0.4s,SNR=1.0								
CDF	**Champ du Feu**	**2.20**	**8**	*e*Pn		**Pn**	**20 38 41.8**	**+0.4**
	SNR=1.0								
CDF	**Champ du Feu**	**2.20**	**8**	*e*Pg		**Pg**	**20 38 46.9**	**-0.1**
CDF				*e*Sg		**Sg**	**20 39 14.8**	**-0.8**
	2.7nm,0.4s,SNR=1.0								
LOR	**Lormes**	**2.30**	**298**	*e*P		**Pb**	**20 38 45.9**	**-0.3**
	baz=118								
LOR	**Lormes**	**2.30**	**298**	*e*Pg		**Pg**	**20 38 48.7**	**-0.1**
	baz=115								
LOR				*e*Sn		**Sn**	**20 39 10.7**	**-0.1**
LOR				*e*Sg		**Sg**	**20 39 18.8**	**+0.2**
	3.4nm,0.2s								
LOR	**Lormes**	**2.30**	**298**	*e*P		**Pb**	**20 38 45.9**	**-0.3**
	baz=118								
LOR	**Lormes**	**2.30**	**298**	*e*Pg		**Pg**	**20 38 48.7**	**-0.1**
	baz=115								
LOR				*e*Sn		**Sn**	**20 39 10.7**	**-0.1**
LOR				*e*Sg		**Sg**	**20 39 18.8**	**+0.2**
	1.7nm,0.2s								
SFTF	**Sexfontaines**	**2.33**	**329**	*e*Pg		**Pg**	**20 38 49.3**	**-0.1**
	baz=145								
SFTF				*e*Sg		**Sg**	**20 39 19.4**	**-0.1**
	4.1nm,0.2s								
SFTF	**Sexfontaines**	**2.33**	**329**	*e*Pg		**Pg**	**20 38 49.3**	**-0.1**
	baz=145								
SFTF				*e*Sg		**Sg**	**20 39 19.4**	**-0.1**
	2.0nm,0.2s								
SMRF	**Simiane la Rot**	**2.43**	**202**	*e*Pn		**Pn**	**20 38 45.1**	**+0.7**
SMRF	**Simiane la Rot**	**2.43**	**202**	*e*Pg		**Pg**	**20 38 52.1**	**+0.8**
SMRF				*e*Sg		**Sg**	**20 39 23.0**	**+0.3**
	1.5nm,0.4s								
SMRF	**Simiane la Rot**	**2.43**	**202**	*e*Pn		**Pn**	**20 38 45.1**	**+0.7**
SMRF	**Simiane la Rot**	**2.43**	**202**	*e*Pg		**Pg**	**20 38 52.1**	**+0.8**
SMRF				*e*Sg		**Sg**	**20 39 23.0**	**+0.3**
	0.8nm,0.4s								
SSF	**Saint Saulge**	**2.44**	**291**	*e*Pn		**Pn**	**20 38 45.6**	**+1.0**
SSF	**Saint Saulge**	**2.44**	**291**	*e*Pg		**Pg**	**20 38 51.8**	**+0.2**
SSF				*e*Sg		**Sg**	**20 39 23.8**	**+0.6**
	2.1nm,0.2s,SNR=1.0								
SSF	**Saint Saulge**	**2.44**	**291**	*e*Pn		**Pn**	**20 38 45.6**	**+1.0**
SSF	**Saint Saulge**	**2.44**	**291**	*e*Pg		**Pg**	**20 38 51.8**	**+0.2**
SSF				*e*Sg		**Sg**	**20 39 23.8**	**+0.6**
	1.0nm,0.2s,SNR=1.0								
PAGF	**Fort de Pagny**	**2.45**	**342**	*e*Pn		**Pn**	**20 38 45.2**	**+0.6**
PAGF	**Fort de Pagny**	**2.45**	**342**	*e*Pg		**Pg**	**20 38 51.3**	**-0.4**
	baz=167								
PAGF				*e*Sg		**Sg**	**20 39 23.0**	**-0.4**
	0.8nm,0.3s								
PAGF	**Fort de Pagny**	**2.45**	**342**	*e*Pn		**Pn**	**20 38 45.2**	**+0.6**
PAGF	**Fort de Pagny**	**2.45**	**342**	*e*Pg		**Pg**	**20 38 51.3**	**-0.4**
	baz=167								
PAGF				*e*Sg		**Sg**	**20 39 23.0**	**-0.4**
	0.4nm,0.3s								
AVF	**Avril sur Loir**	**2.47**	**284**	*e*Pn		**Pn**	**20 38 46.3**	**+1.3**
	SNR=1.0								
AVF	**Avril sur Loir**	**2.47**	**284**	*e*Pg		**Pg**	**20 38 52.3**	**+0.1**
	SNR=1.0								
AVF				*e*Sg		**Sg**	**20 39 24.4**	**+0.2**
	1.8nm,0.3s,SNR=1.0								
AVF	**Avril sur Loir**	**2.47**	**284**	*e*Pn		**Pn**	**20 38 46.3**	**+1.3**
	SNR=1.0								
AVF	**Avril sur Loir**	**2.47**	**284**	*e*Pg		**Pg**	**20 38 52.3**	**+0.1**
	SNR=1.0								
AVF				*e*Sg		**Sg**	**20 39 24.4**	**+0.2**
	0.9nm,0.3s,SNR=1.0								
MEZF	**Maizieres J'vi**	**2.58**	**333**	*e*Pg		**Pg**	**20 38 53.4**	**-0.8**
	baz=153,SNR=1.0								
MEZF				*e*Sg		**Sg**	**20 39 27.1**	**-0.5**
	6.1nm,0.4s,SNR=1.0								
MEZF	**Maizieres J'vi**	**2.58**	**333**	*e*Pg		**Pg**	**20 38 53.4**	**-0.8**
	baz=153,SNR=1.0								
MEZF				*e*Sg		**Sg**	**20 39 27.1**	**-0.5**
	3.0nm,0.4s,SNR=1.0								
FRF	**La Foret Royal**	**2.67**	**183**	*e*Pn		**Pn**	**20 38 48.2**	**+0.5**
	SNR=1.0								
FRF	**La Foret Royal**	**2.67**	**183**	*e*Pg		**Pg**	**20 38 55.1**	**-0.9**
	SNR=1.0								
FRF				*e*Sn		**Sn**	**20 39 19.7**	**-0.4**
	SNR=1.0								
FRF				*e*Sg		**Sg**	**20 39 30.0**	**-0.7**
	2.7nm,0.5s,SNR=1.0								
FRF	**La Foret Royal**	**2.67**	**183**	*e*Pn		**Pn**	**20 38 48.2**	**+0.5**
	SNR=1.0								
FRF	**La Foret Royal**	**2.67**	**183**	*e*Pg		**Pg**	**20 38 55.1**	**-0.9**
	SNR=1.0								
FRF				*e*Sn		**Sn**	**20 39 19.7**	**-0.4**
	SNR=1.0								
FRF				*e*Sg		**Sg**	**20 39 30.0**	**-0.7**
	1.4nm,0.5s,SNR=1.0								
BGF	**Bois d'Agland**	**2.78**	**278**	*e*Pn		**Pn**	**20 38 50.5**	**+1.3**
	SNR=1.0								
BGF	**Bois d'Agland**	**2.78**	**278**	*e*Pg		**Pg**	**20 38 58.6**	**+0.5**
	SNR=1.0								
BGF				*e*Sg		**Sg**	**20 39 33.6**	**-0.6**
	4.4nm,0.3s,SNR=1.0								
BGF	**Bois d'Agland**	**2.78**	**278**	*e*Pn		**Pn**	**20 38 50.5**	**+1.3**
	SNR=1.0								
BGF	**Bois d'Agland**	**2.78**	**278**	*e*Pg		**Pg**	**20 38 58.6**	**+0.5**
	SNR=1.0								
BGF				*e*Sg		**Sg**	**20 39 33.6**	**-0.6**
	2.2nm,0.3s,SNR=1.0								
LMR	**La Mourre**	**2.91**	**185**	*e*Pn		**Pn**	**20 38 51.4**	**+0.5**
LMR	**La Mourre**	**2.91**	**185**	*e*Pg		**Pg**	**20 38 59.8**	**-0.7**
LMR				*e*Sg		**Sg**	**20 39 37.5**	**-0.6**
	0.7nm,0.2s								
LMR	**La Mourre**	**2.91**	**185**	*e*Pn		**Pn**	**20 38 51.4**	**+0.5**
LMR	**La Mourre**	**2.91**	**185**	*e*Pg		**Pg**	**20 38 59.8**	**-0.7**
LMR				*e*Sg		**Sg**	**20 39 37.5**	**-0.6**
	0.3nm,0.2s								
LASF	**Ste Croix**	**3.02**	**225**	*e*Pn		**Pn**	**20 38 53.8**	**+1.3**
LASF	**Ste Croix**	**3.02**	**225**	*e*Pg		**Pg**	**20 39 02.2**	**-0.4**
LASF				*e*Sg		**Sg**	**20 39 41.3**	**-0.3**
	1.8nm,0.2s,SNR=1.0								
LASF	**Ste Croix**	**3.02**	**225**	*e*Pn		**Pn**	**20 38 53.8**	**+1.3**
LASF	**Ste Croix**	**3.02**	**225**	*e*Pg		**Pg**	**20 39 02.2**	**-0.4**
LASF				*e*Sg		**Sg**	**20 39 41.3**	**-0.3**
	0.9nm,0.2s,SNR=1.0								
HYF	**Humbligny**	**3.07**	**291**	*e*Pg		**Pg**	**20 39 02.4**	**-1.2**
HYF	**Humbligny**	**3.07**	**291**	*e*Pg		**Pg**	**20 39 02.4**	**-1.2**
TCF	**Toulx Ste Croi**	**3.21**	**273**	*e*Pn		**Pn**	**20 38 56.5**	**+1.3**
TCF	**Toulx Ste Croi**	**3.21**	**273**	*e*Pg		**Pg**	**20 39 06.2**	**-0.1**
TCF				*e*Sn		**Sn**	**20 39 31.7**	**-1.7**
	SNR=1.0								
TCF				*e*Sg		**Sg**	**20 39 47.1**	**-0.8**
	1.8nm,0.3s								
TCF	**Toulx Ste Croi**	**3.21**	**273**	*e*Pn		**Pn**	**20 38 56.5**	**+1.3**
TCF	**Toulx Ste Croi**	**3.21**	**273**	*e*Pg		**Pg**	**20 39 06.2**	**-0.1**
TCF				*e*Sn		**Sn**	**20 39 31.7**	**-1.7**
	SNR=1.0								
TCF				*e*Sg		**Sg**	**20 39 47.1**	**-0.8**
	0.9nm,0.3s								
CAF	**Calviac**	**3.60**	**250**	*e*Pg		**Pg**	**20 39 12.8**	**-0.9**
CAF				*e*Sg		**Sg**	**20 40 00.1**	**-0.2**
	1.1nm,0.3s								
CAF	**Calviac**	**3.60**	**250**	*e*Pg		**Pg**	**20 39 12.8**	**-0.9**
CAF				*e*Sg		**Sg**	**20 40 00.1**	**-0.2**
	0.6nm,0.3s								
BAIF	**Baives**	**4.22**	**336**	*e*Pn		**Pn**	**20 39 10.8**	**+1.9**
	SNR=1.0								
BAIF	**Baives**	**4.22**	**336**	*e*Pn		**Pn**	**20 39 10.8**	**+1.9**
	SNR=1.0								
MTLF	**Montolieu**	**4.38**	**230**	*e*Pn		**Pn**	**20 39 12.2**	**+1.0**
MTLF	**Montolieu**	**4.38**	**230**	*e*Pg		**Pg**	**20 39 27.5**	**-1.1**
MTLF				*e*Sg		**Sg**	**20 40 23.8**	**-1.5**
	0.6nm,0.3s								
MTLF	**Montolieu**	**4.38**	**230**	*e*Pn		**Pn**	**20 39 12.2**	**+1.0**
MTLF	**Montolieu**	**4.38**	**230**	*e*Pg		**Pg**	**20 39 27.5**	**-1.1**
MTLF				*e*Sg		**Sg**	**20 40 23.8**	**-1.5**
	0.3nm,0.3s								

IDC 13 20:39:59.6±6.4, 55°.91S×27°.93W, h146km±58km, mb3.8/5, mb1 3.8/6, mb1mx3.6/19, mbtmp3.7/6, Error ellipse: s-maj=26.0km s-min=21.1km az=88.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SNAA	**Sanae**	**19.04**	**156**	P	P	20	44	09.3	-0.7
	0.3nm,0.3s,baz=326,slow=11,SNR=57								
QSPA	**South Pole Qui**	**34.34**	**180**	P	P	20	46	32.3	+0.3
	1.8nm,0.4s,baz=200,slow=1.8,SNR=22								
VNDA	**Vanda**	**46.69**	**183**	P	P	20	48	12.9	+0.1
	2.0nm,0.6s,baz=187,slow=4.6,SNR=13								
LBTB	**Lobatse**	**49.37**	**74**	P	P	20	48	34.0	-0.2
	2.2nm,0.8s,baz=231,slow=7.7,SNR=4.3								
LPAZ	**La Paz**	**49.96**	**306**	P	P	20	48	39.0	-0.3
	0.8nm,0.3s,baz=118,slow=5.7,SNR=7.5								
TORD	**Torodi Ar. Bea**	**73.14**	**30**	P	P	20	51	14.5	+0.6
	1.6nm,0.5s,baz=199,slow=6.2,SNR=10								
FINES	**FINESS Array B**	**124.46**	**28**	PKP	PKPdf	20	58	38.8	-0.9
	2.4nm,0.9s,baz=151,slow=4.4,SNR=7.8								
ARCES	**ARCESS Array B**	**130.97**	**22**	PKP	PKPdf	20	58	51.6	-0.4
	1.0nm,0.5s,baz=222,slow=1.5,SNR=9.5								
MKAR	**Makanchi Array**	**137.24**	**72**	PKP	PKPdf	20	59	03.5	-1.0
	0.1nm,0.3s,baz=204,slow=3.2,SNR=3.6								
ZALV	**Zalesovo Beam**	**142.69**	**64**	PKhKP	PKPpre	20	59	08.1	
	0.4nm,0.4s,baz=222,slow=1.9,SNR=3.5								
ILAR	**Eielson Array**	**149.71**	**312**	PKPbc	PKPbc	20	59	30.0	-0.5
	2.2nm,0.8s,baz=127,slow=1.7,SNR=21								
SONM	**Songino Array**	**151.14**	**87**	PKPbc	PKPbc	20	59	34.2	-0.3
	3.0nm,0.5s,baz=222,slow=3.5,SNR=33								

IDC 13 20:46:00.1±2.6, 4°.81S×133°.80E, h0km, mb3.3/2, mb1 3.7/5, mb1mx3.5/17, mbtmp3.6/5, ML3.7/3, Error ellipse: s-maj=122.8km s-min=26.3km az=84.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
WRA	**Warramunga Arr**	**15.05**	**178**	Pn	Pn	20	49	32.3	-2.0
	0.3nm,0.3s,baz=355,slow=13,SNR=9.3								
WRA				Sn	Sn	20	52	16.5	-5.3
	0.3nm,0.3s,baz=0.6,slow=24,SNR=5.2								
WRA				Lg	Lg	20	54	01.5	
	baz=12,slow=29,SNR=3.5								
FITZ	**Fitzroy Crossi**	**15.43**	**210**	Pn	Pn	20	49	39.1	-0.2
	0.4nm,0.3s,baz=37,slow=12,SNR=36								
FITZ				Sn	Sn	20	52	24.4	-6.8
	0.6nm,0.3s,baz=192,slow=14,SNR=5.6								
ASAR	**Alice Springs**	**18.75**	**180**	P	Pn	20	50	21.6	+0.5
	0.3nm,0.3s,baz=5.5,slow=12,SNR=24								
ASAR				S	Sn	20	53	45.1	-6.5
	0.1nm,0.3s,baz=347,slow=23,SNR=3.5								
SONM	**Songino Array**	**57.69**	**338**	P	P	20	55	52.2	-0.4
	0.2nm,0.6s,baz=132,slow=6.2,SNR=2.4								
MKAR	**Makanchi Array**	**68.55**	**325**	P	P	20	57	04.9	+0.2
	0.2nm,0.4s,baz=129,slow=4.6,SNR=5.4								

*ISK **13** 21:08:17.6, 39°.40N×39°.20E, h4km, MD3.2*
*DDA **13** 21:08:18.1, 39°.39N×39°.17E, h7km, MD3.2*
*CSEM **13** 21:08:18.5±0.2, 39°.40N×39°.17E, h2km, MD3.2, Error ellipse: s-maj=5.7km s-min=4.9km az=134.0*

ISC 13 21:08:18.7±1.0, 39°.40N±0°.02×39°.19E±0°.02, h7km±13km, n45, σ0§87/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
EZC	**Erzincan**	**0.37**	**20**	*e*PG	**Pg**	**21**	**08**	**26.0**	**-0.1**
EZC				*e*SG	**Sg**	**21**	**08**	**30.9**	**-0.2**
EZC	**Erzincan**	**0.37**	**20**	*e*Pg	**Pg**	**21**	**08**	**26.0**	**-0.1**
EZC				*e*Sg	**Sg**	**21**	**08**	**30.9**	**-0.2**
ERZN	**Erzincan**	**0.46**	**66**	*e*PG	**Pg**	**21**	**08**	**27.0**	**-0.6**
ERZN				*e*SG	**Sg**	**21**	**08**	**34.2**	**+0.6**
ILIC	**ilic-Erzincan**	**0.48**	**276**	*e*PG	**Pg**	**21**	**08**	**27.7**	**-0.4**
ILIC	**ilic-Erzincan**	**0.48**	**276**	*e*Pg	**Pg**	**21**	**08**	**27.7**	**-0.4**
PTK	**Pertek**	**0.53**	**162**	*e*PG	**Pg**	**21**	**08**	**28.8**	**-0.2**
PTK	**Pertek**	**0.53**	**162**	*e*Pg	**Pg**	**21**	**08**	**28.8**	**-0.2**
KEMA	**Kemaliye**	**0.55**	**256**	*e*P	**Pg**	**21**	**08**	**29.0**	**-0.4**
KEMA				*i* S	**Sg**	**21**	**08**	**37.1**	**+0.4**
KEMA	**Kemaliye**	**0.55**	**256**	*e*P	**Pg**	**21**	**08**	**29.0**	**-0.4**
KEMA				*i* S	**Sg**	**21**	**08**	**37.1**	**+0.4**
ELZG	**Elazig**	**0.92**	**190**	*e*P	**Pg**	**21**	**08**	**35.0**	**-1.3**
ELZG				*i* S	**Sg**	**21**	**08**	**48.8**	**+0.6**
ELZG	**Elazig**	**0.92**	**190**	*e*P	**Pg**	**21**	**08**	**35.0**	**-1.3**
ELZG				*i* S	**Sg**	**21**	**08**	**48.8**	**+0.6**
GUMT	**Gumushane**	**1.08**	**12**	*e*PN	**Pb**	**21**	**08**	**39.4**	**-0.5**
GUMT	**Gumushane**	**1.08**	**12**	*e*Pn	**Pb**	**21**	**08**	**39.4**	**-0.5**
BINT	**Bingol**	**1.14**	**117**	*e*PN	**Pn**	**21**	**08**	**41.5**	**+0.3**
MYA	**Malataya**	**1.23**	**209**	*e*PN	**Pn**	**21**	**08**	**40.8**	**-1.5**
MYA	**Malataya**	**1.23**	**209**	*e*Pn	**Pn**	**21**	**08**	**40.8**	**-1.5**
BNGB	**Bing¶ll**	**1.23**	**109**	*e*PN	**Pn**	**21**	**08**	**41.5**	**-0.9**
BAYT	**Ayd¯–ntepe-Bay**	**1.23**	**36**	*e*PN	**Pn**	**21**	**08**	**41.4**	**-1.2**
BAYT	**Ayd¯–ntepe-Bay**	**1.23**	**36**	*e*Pn	**Pn**	**21**	**08**	**41.4**	**-1.2**
AKCD	**Akcadag**	**1.48**	**222**	*e*P	**Pn**	**21**	**08**	**44.3**	**-1.6**
AKCD				*i* S	**Sg**	**21**	**09**	**07.9**	**+1.6**
AKCD	**Akcadag**	**1.48**	**222**	*e*P	**Pn**	**21**	**08**	**44.3**	**-1.6**
AKCD				*i* S	**Sg**	**21**	**09**	**07.9**	**+1.6**
ESPY	**Espiye-Giresun**	**1.56**	**347**	*e*PN	**Pb**	**21**	**08**	**47.2**	**-0.6**
ESPY	**Espiye-Giresun**	**1.56**	**347**	*e*Pn	**Pb**	**21**	**08**	**47.2**	**-0.6**
DARE	**Darende-Malaty**	**1.56**	**239**	*e*PN	**Pb**	**21**	**08**	**47.6**	**-0.4**
DIYA	**Diyarbakir**	**1.65**	**153**	*e*P	**Pg**	**21**	**08**	**50.2**	**-0.1**
DIYA				*i* S	**Sg**	**21**	**09**	**12.8**	**+1.2**
DIYA	**Diyarbakir**	**1.65**	**153**	*e*P	**Pg**	**21**	**08**	**50.2**	**-0.1**
DIYA				*i* S	**Sg**	**21**	**09**	**12.8**	**+1.2**
RSDY	**Resadiye-TOKAT**	**1.74**	**305**	*e*PN	**Pn**	**21**	**08**	**49.9**	**+0.5**
RSDY	**Resadiye-TOKAT**	**1.74**	**305**	*e*Pn	**Pn**	**21**	**08**	**49.9**	**+0.5**
EZM	**Erzurum**	**1.75**	**73**	*e*PN	**Pn**	**21**	**08**	**50.2**	**+0.5**
ERZM	**Erzurum**	**

CFAA Lg Lg 21 23 40.6
comp=E,57nm,0.3s,baz=202,slow=19,SNR=10
CFAA LR LR 21 24 23.9
comp=E,1µm,18.1s,baz=62,slow=47
CHCH Chadas Angostu 3.33 165 *eP* **Pn 21 22 57.6 +0.8**
CHCH Chadas Angostu 3.33 165 *eP* **Pn 21 22 57.6 +0.8**
LMEL Las Melosas 3.37 159 *eP* **Pn 21 22 59.0 +1.6**
LMEL Las Melosas 3.37 159 *eP* **Pn 21 22 59.0 +1.6**
CACH El Canelo 3.52 165 ⇓*iP* **Pn 21 23 01.0 +1.6**
CACH El Canelo 3.52 165 ⇓*iP* **Pn 21 23 01.0 +1.6**
LVC Limon Verde 8.44 18 *e*Pn **Pn 21 24 05.5 -1.7**
LVC Sn Sn 21 25 46.6 +5.0
LVC Limon Verde 8.44 18 Pn **Pn 21 24 05.4 -1.7**
comp=E,1.3nm,0.3s,baz=209,slow=8.2,SNR=13
LVC Sn Sn 21 25 46.6 +5.0
comp=E,6.0nm,0.3s,baz=187,slow=16,SNR=2.2
LVC LR LR 21 27 23.4
comp=E,3µm,20.2s,baz=210,slow=38
PLCA Paso Flores 10.04 175 *e*Pn **Pn 21 24 30.0 +1.1**
PLCA Paso Flores 10.04 175 Pn **Pn 21 24 29.1 +0.1**
comp=E,0.6nm,0.3s,baz=336,slow=13,SNR=13
PLCA LR LR 21 28 26.6
comp=E,2µm,19.6s,baz=351,slow=38
TRQA Tornquist 10.86 135 *e*Pn **Pn 21 24 40.9 +0.8**
TRQA *e*Sn **Sn 21 26 40.9 +0.3**
CPUP Villa Florida 13.35 74 Pn **Pn 21 25 12.1 -2.0**
CPUP Villa Florida 13.35 74 Pn **Pn 21 25 12.1 -2.0**
comp=E,1.5nm,0.3s,baz=235,slow=11,SNR=16
CPUP LR LR 21 30 44.8
comp=E,2µm,21.9s,baz=237,slow=39
LPAZ La Paz 14.72 14 *e*Pn **Pn 21 25 33.6 +0.2**
LPAZ La Paz 14.72 14 Pn **Pn 21 25 33.5 +0.1**
comp=E,2.1nm,0.3s,baz=185,slow=8.7,SNR=54
SIV San Ignacio 17.58 36 P **Pn 21 26 08.5 -1.0**
SIV San Ignacio 17.58 36 P **Pn 21 26 08.5 -1.0**
comp=E,0.7nm,0.3s,baz=230,slow=12,SNR=58
SIV LR LR 21 34 12.6
comp=E,2µm,20.5s,slow=42
NNA Nana 19.23 345 LR LR 21 32 11.1
comp=E,508nm,20.9s,baz=166,slow=32
SPB Sao Paulo 22.69 78 *eP* **P 21 27 06.2 +0.3**
comp=E,36nm,0.9s
SAML Samuel 23.06 22 *eP* **P 21 27 09.1 -0.7**
comp=E,25nm,1.0s
EFI East Falkland 23.25 158 *eP* **P 21 27 11.5 +0.1**
comp=E,94nm,1.1s
USHA Ushuaia 24.22 175 P **P 21 27 21.1 +0.5**
USHA Ushuaia 24.22 175 P **P 21 27 21.1 +0.5**
comp=E,20nm,0.8s,baz=346,slow=5.2,SNR=10
USHA LR LR 21 38 13.8
comp=E,1µm,18.6s,baz=200,slow=40
ATAH Atahualpa 24.28 344 LR LR 21 34 36.2
comp=E,446nm,21.8s,baz=348,slow=31
BDFB Brasilia 26.35 61 P **P 21 27 39.9 -0.5**
BDFB Brasilia 26.35 61 P **P 21 27 39.9 -0.5**
comp=E,31nm,0.9s,baz=226,slow=8.4,SNR=37
BDFB LR LR 21 39 10.4
comp=E,2µm,18.6s,baz=221,slow=39
SDV Santo Domingo 39.38 2 *eP* **P 21 29 33.3 -0.7**
comp=E,9.2nm,0.8s
RCBR Riachuelo 41.72 61 *eP* **P 21 29 51.7 -1.6**
comp=E,23nm,1.0s
CRPR Cabo Rojo, PR 48.63 6 *eP* **P 21 30 48.3 +0.4**
comp=E,77nm,0.9s
OBIP Obispado Ponce 48.72 6 *eP* **P 21 30 47.9 -0.6**
comp=E,60nm,0.9s
CELP Cerrillos 48.75 6 *eP* **P 21 30 48.1 -0.8**
SJG San Juan 48.83 7 *eP* **P 21 30 48.4 -1.1**
comp=E,40nm,0.9s
SJG *epP* **pP 21 30 56.4 -1.4**
LRS Lares 48.94 6 *eP* **P 21 30 50.3 0.0**
AOPR Arecibo Observ 49.00 6 *eP* **P 21 30 50.4 -0.4**
comp=E,28nm,0.8s
CBYP Canovanas 49.02 7 *eP* **P 21 30 49.5 -1.5**
comp=E,40nm,0.9s
CBYP *epP* **pP 21 30 58.5 -0.9**
SNAA Sanae 54.52 159 *eP* **P 21 31 31.4 -0.1**
SNAA Sanae 54.52 159 *eP* **P 21 31 31.1 -0.4**
comp=E,13nm,0.9s
MAIT Maitri 59.19 157 *eP* P 21 31 54.6 -10
732A Laxson Ranch, 64.97 333 P **P 21 32 45.2 +1.4**
baz=65
632A Uvalde 65.59 333 P **P 21 32 48.8 +1.0**
baz=66
532A Rocksprings 66.19 333 P **P 21 32 52.8 +1.1**
baz=66
JCT Junction City 66.46 334 *eP* **P 21 32 53.1 -0.3**
comp=E,5.8nm,0.8s
531A Rocksprings 66.47 333 P **P 21 32 54.6 +1.1**
baz=67
530A J-C Ranch, Com 66.77 332 P **P 21 32 56.1 +0.7**
baz=67
628A Black Gap, Mar 66.83 331 P **P 21 32 56.7 +0.9**
baz=67
CPCT Cooper Cave 66.91 349 *eP* **P 21 32 56.0 -0.1**
CPCT *epP* **pP 21 33 03.4 -1.3**
431A Sonora 66.96 333 P **P 21 32 57.1 +0.5**
baz=67
627A Terlingua Ranc 67.02 330 P **P 21 32 57.2 +0.2**
baz=67
TXAR Lajitas Array 67.03 330 P **P 21 32 57.4 +0.3**
TXAR Lajitas Array 67.03 330 P **P 21 32 57.4 +0.3**
comp=E,1.0nm,0.6s,baz=151,slow=8.0,SNR=16
TXAR LR LR 21 57 37.7
comp=E,206nm,18.4s,baz=5.0,slow=32
529A Stev Forest Ra 67.11 331 P **P 21 32 58.2 +0.6**
baz=67
332A Millersview 67.25 334 P **P 21 32 59.2 +0.8**
baz=68
430A Baggett Ranch, 67.30 333 P **P 21 32 59.1 +0.3**
baz=68
528A Cox Ranch, San 67.38 331 P **P 21 32 59.4 +0.1**
baz=68
VNDA Vanda 67.38 191 P **P 21 32 60.0 +1.3**
VNDA Vanda 67.38 191 P **P 21 32 60.0 +1.3**
comp=E,1.2nm,0.7s,baz=132,slow=4.5,SNR=7.8
429A Davenport Ranc 67.42 332 P **P 21 32 60.0 +0.5**
baz=68
626A Big Bend Ranch 67.42 330 ⇓P **P 21 33 00.2 +0.6**
baz=68,SNR=7.2
330A Mertzon 67.82 333 P **P 21 33 02.7 +0.7**
baz=68
526A Mary Lane Ranc 67.84 330 ⇑P **P 21 33 02.9 +0.6**
baz=68,SNR=5.3
231A Bronte 67.96 334 P **P 21 33 03.4 +0.6**
baz=68
WVT Waverly 68.19 346 *eP* **P 21 33 03.5 -0.7**
comp=E,8.9nm,0.9s
329A Wagon Wheel Ra 68.21 332 P **P 21 33 05.5 +1.0**
baz=68
426A McDonald Obser 68.34 330 P **P 21 33 06.4 +0.9**
baz=69
SYO Syowa Base 68.81 159‖ *eP* **P 21 33 05.8 -1.9**
SYO Syowa Base 68.81 159‖ *eX* P 21 33 11.4 +3.7
228A UT Block 9, Go 69.01 332 P **P 21 33 10.8 +1.3**
baz=69
226B Tecolote Peak, 69.62 331 P **P 21 33 14.8 +1.5**
baz=70
MNTX Cornudas Mount 69.81 330 *eP* **P 21 33 13.4 -1.0**
comp=E,2.8nm,1.0s
WCI Wyandotte Cave 69.93 348 *eP* **P 21 33 13.8 -1.1**
comp=E,6.0nm,0.9s
WCI *epP* **pP 21 33 22.5 -1.1**
SIUC Southern Illin 70.02 345 *eP* **P 21 33 13.4 -2.1**
comp=E,16nm,0.9s
TUL1 Tulsa 70.03 339 P **P 21 33 16.1 +0.5**
baz=70
Z26A Caprock 70.58 332 P **P 21 33 19.5 +0.3**
baz=71,SNR=7.5
BLO Bloomington 70.88 348 *eP* **P 21 33 20.7 0.0**
comp=E,7.0nm,0.6s
Z25A Roswell 70.89 331 P **P 21 33 22.3 +1.2**
baz=71
PPT Papeete 71.05 260 LR LR 21 56 05.9
comp=E,287nm,18.8s,baz=132,slow=29
ACSO Alum Creek Sta 71.36 351 *eP* **P 21 33 23.3 -0.3**
comp=E,13nm,0.8s
220A Playas Peak, P 71.40 327 P **P 21 33 25.2 +1.0**
baz=72
121A Cookes Peak, D 71.59 328 P **P 21 33 26.7 +1.3**
baz=72
120A U Bar Ranch, L 71.98 328 P **P 21 33 29.1 +1.3**
baz=72
Y23A Lovelace Mesa, 72.02 330 P **P 21 33 29.4 +1.4**
baz=72
Z20A Nine Sixteen R 72.44 328 P **P 21 33 31.6 +1.2**
baz=73
V25A Rancho No Teng 73.07 333 P **P 21 33 35.3 +1.0**
baz=73
X21A Alamocita Cree 73.20 329 P **P 21 33 36.6 +1.5**
baz=74
DBIC Dimbokro 73.86 72 P **P 21 33 39.1 0.0**
DBIC Dimbokro 73.86 72 P **P 21 33 39.1 0.0**
comp=E,9.6nm,0.4s,baz=209,slow=7.1,SNR=45
DBIC LR LR 22 03 53.9
comp=E,427nm,18.6s,baz=213,slow=34
W20A Ramah 74.09 329 P **P 21 33 41.6 +1.3**
baz=74
S26A Kim 74.19 334 P **P 21 33 41.8 +1.2**
baz=74
P31A Stockton 74.47 338 P **P 21 33 42.6 +0.5**
baz=75
S25A Robets Cordova 74.59 334 P **P 21 33 43.7 +0.6**
baz=75
V20A Brimhall 74.64 330 P **P 21 33 44.9 +1.5**
baz=75
R26A Arlington 74.78 335 P **P 21 33 44.9 +0.9**
baz=75
U21A Nageezi 74.83 331 P **P 21 33 45.7 +1.2**
baz=75
S24A Houchin Ranch, 74.88 333 P **P 21 33 46.2 +1.4**
baz=75,SNR=9.9
T22A Edith 75.01 331 P **P 21 33 47.4 +1.8**
baz=75
JFWS Jewell Farm 75.22 346 *eP* **P 21 33 46.2 -0.1**
comp=E,12nm,1.0s
T21A Navajo Lake 75.25 331 P **P 21 33 48.8 +1.9**
baz=76
R24A Sanders Place, 75.35 333 P **P 21 33 49.2 +1.8**
baz=76,SNR=5.7
R23A Moffat 75.59 333 P **P 21 33 50.7 +1.8**
baz=76
S22A 4UR Ranch, Cre 75.61 332 P **P 21 33 50.3 +1.3**
baz=76
Q25A Bedland, Calha 75.62 334 P **P 21 33 50.4 +1.4**
baz=76
S21A Coal Bank Pass 75.93 331 P **P 21 33 52.8 +1.9**
baz=76
Q24A Divide 76.00 334 P **P 21 33 52.5 +1.2**
baz=76
SUR Sutherland 76.17 119 LR LR 22 00 41.0
comp=E,195nm,20.7s,baz=213,slow=30
BC3 Big Chuckawall 76.20 324 P **P 21 33 53.5 +1.2**
baz=76
MAW Mawson 76.24 164 P **P 21 33 52.3 +0.4**
MAW Mawson 76.24 164 P **P 21 33 52.3 +0.4**
comp=E,12nm,0.6s,baz=218,slow=8.0,SNR=32
MAW LR LR 22 06 29.6
comp=E,318nm,19.8s,baz=225,slow=35
S20A Disappointment 76.31 331 P **P 21 33 54.2 +1.2**
baz=77
R21A Cimarron 76.44 332 P **P 21 33 55.7 +2.0**
baz=77
IRM Iron Mountain 76.45 324 P **P 21 33 55.7 +2.1**
baz=77
W13A Hualapai Mount 76.57 326 P **P 21 33 55.7 +1.2**
baz=77
P23A Jefferson 76.62 333 P **P 21 33 56.8 +2.0**
baz=77
R20A Redvale 76.62 331 P **P 21 33 56.1 +1.4**
baz=77
U15A North Rim 76.88 327 P **P 21 33 57.5 +1.2**
baz=77
S18A Hurst Farm, Bl 76.89 330 P **P 21 33 57.4 +1.1**
baz=77
SMCO Snowmass 76.90 333 *eP* **P 21 33 56.3 -0.2**
comp=E,11nm,0.9s
ISCO Idaho Springs 76.91 334 *eP* **P 21 33 55.8 -0.6**
comp=E,3.7nm,0.8s
ISCO Idaho Springs 76.91 334 ⇑P **P 21 33 57.3 +1.0**
baz=77,SNR=5.3
P22A Eagle 77.17 333 P **P 21 33 59.2 +1.4**
baz=77
GMRC Granite Mounta 77.19 324 P **P 21 33 59.3 +1.4**
baz=78
O23A Lake Granby, G 77.38 334 P **P 21 34 00.7 +1.7**
baz=78
ECSD EROS Data Cent 77.52 342 *eP* **P 21 33 59.2 -0.1**
comp=E,12nm,0.8s
O22A Kremling 77.58 333 P **P 21 34 01.4 +1.2**
baz=78
BFSC Mount Baldy Ra 77.80 322 P **P 21 34 02.2 +0.9**
baz=78
COWI Conover 78.07 348 *eP* **P 21 34 02.2 -0.2**
comp=E,11nm,0.2s
COWI *epP* **pP 21 34 11.2 +0.1**
N22A Wattenberg Ran 78.09 334 P **P 21 34 04.8 +1.8**
baz=78
GSC Goldstone 78.19 324 P **P 21 34 04.3 +0.9**
baz=78
O20A White River Ci 78.22 332 P **P 21 34 05.2 +1.6**
baz=78
CCUT Cedar City 78.29 327 *eP* **P 21 34 06.2 +2.0**
comp=E,6.4nm,1.0s
N21A Black Mountain 78.47 333 P **P 21 34 06.6 +1.6**
baz=79
J28A Allard Ranch, 78.59 338 P **P 21 34 06.0 +0.6**
baz=79
O19A Miners Draw (B 78.72 332 P **P 21 34 07.8 +1.5**
baz=79
M21A Separation Pea 79.13 334 P **P 21 34 09.1 +0.5**
baz=79
L22A Ellis Ranch, M 79.15 334 P **P 21 34 10.4 +1.7**
baz=79
ISA Isabella 79.32 323 P **P 21 34 11.2 +1.6**
baz=80
M20A Sweetwater, Wa 79.35 333 P **P 21 34 10.8 +1.0**
baz=80
L21A Rawlins 79.44 334 P **P 21 34 11.1 +0.8**
baz=80
PKM Peak Mountain 79.45 321 P **P 21 34 11.8 +1.4**
baz=80
K23A Bowen Ranch, D 79.48 335 P **P 21 34 11.4 +1.0**
baz=80
K22A Casper 79.72 335 P **P 21 34 12.2 +0.5**
baz=80
CWC Cottonwood Cre 79.72 324 P **P 21 34 12.1 +0.3**
baz=80
M19A Rock Springs 79.75 332 P **P 21 34 12.7 +0.7**
baz=80
VES Vestal, Richgr 79.78 323 P **P 21 34 13.6 +1.7**
baz=80
TSUM Tsumeb 79.83 106 *eP* **P 21 34 13.8 +0.8**
L20A Wamsutter 79.85 333 P **P 21 34 13.8 +1.3**
baz=80
R11A Troy Canyon, C 79.98 326 P **P 21 34 14.4 +1.1**
baz=80
DUG Dugway 80.20 329 P **P 21 34 15.7 +1.4**
baz=80
L19A Farson 80.33 333 P **P 21 34 16.5 +1.4**
baz=81
K20A Yellowstone Ra 80.41 333 P **P 21 34 16.3 +0.8**
baz=81
I22A 9 Mile Ranch, 80.78 335 P **P 21 34 17.9 +0.6**
baz=81
HWUT Hardware Ranch 80.82 331 *eP* **P 21 34 17.8 +0.1**
H24A Dirks Ranch, A 80.85 337 P **P 21 34 18.4 +0.8**
baz=81
PDAR Pinedale Array 80.97 333 P **P 21 34 19.0 +0.4**
PDAR Pinedale Array 80.97 333 P **P 21 34 19.0 +0.4**
comp=E,1.4nm,0.8s,baz=182,slow=4.5,SNR=6.2
J19A Crowheart 81.20 333 P **P 21 34 20.0 +0.3**
baz=82
BOSA Boshof 81.34 118 *eP* **P 21 34 21.4 +0.5**
comp=E,22nm,0.9s
BOSA Boshof 81.34 118 P **P 21 34 20.7 -0.2**
comp=E,16nm,0.8s,baz=239,slow=3.7,SNR=23
BOSA LR LR 22 05 58.4
comp=E,238nm,18.8s,baz=165,slow=32
NVAR Mina Array Bea 81.37 325 P **P 21 34 21.5 +0.8**
NVAR Mina Array Bea 81.37 325 P **P 21 34 21.5 +0.8**
comp=E,1.9nm,0.8s,baz=152,slow=6.1,SNR=9.6
I20A Worland 81.43 334 P **P 21 34 21.3 +0.5**
baz=82
HVU Hansel Valley 81.48 330 *eP* **P 21 34 21.0 -0.1**
AGMN Agassiz Nation 81.58 344 *eP* **P 21 34 20.8 -0.6**
comp=E,7.9nm,0.8s
AGMN *epP* **pP 21 34 29.9 -0.3**
ELK Elko 81.73 328 *eP* **P 21 34 23.5 +0.9**
comp=E,3.6nm,0.8s
I19A Meeteetse 81.83 334 P **P 21 34 23.9 +0.8**
baz=82
H20A Greybull 81.84 335 P **P 21 34 23.4 +0.4**
baz=82,SNR=7.6
CMB Columbia Colle 82.12 323 *eP* **P 21 34 25.8 +1.3**
comp=E,2.2nm,0.8s
E24A Baker 82.37 338 P **P 21 34 26.3 +0.7**
baz=83
G20A Bridger 82.55 335 ⇑P **P 21 34 26.7 +0.1**
baz=83,SNR=8.2
H18A Shoshone NF, C 82.63 334 P **P 21 34 27.8 +0.6**
baz=83,SNR=6.5
E23A Ismay 82.64 337 P **P 21 34 27.0 0.0**
baz=83
I16A Newdale 82.67 332 P **P 21 34 28.1 +0.7**
baz=83
TOA0 Torodi Ar. Sit 82.81 70 *eP* **P 21 34 28.2 -0.4**
TOA0 *es*P **sP 21 34 40.7 +0.1**
TORD Torodi Ar. Bea 82.81 70 P **P 21 34 28.4 -0.1**
TORD Torodi Ar. Bea 82.81 70 P **P 21 34 28.4 -0.1**
comp=E,5.0nm,0.8s,baz=281,slow=6.3,SNR=85
TORD LR LR 22 09 39.6
comp=E,478nm,18.7s,baz=240,slow=34
RLMT Red Lodge 82.86 334 *eP* **P 21 34 28.6 +0.2**
comp=E,2.5nm,0.7s
D23A Lindsay 83.20 338 P **P 21 34 31.1 +1.2**
baz=84
F19A Roth Farm, Mol 83.36 335 P **P 21 34 31.4 +0.6**
baz=84
ULM Lac du Bonnet 83.41 345 *eP* **P 21 34 30.8 0.0**
ULM Lac du Bonnet 83.41 345 P **P 21 34 30.4 -0.4**
comp=E,14nm,1.1s,baz=163,slow=3.8,SNR=6.2
LBTB Lobatse 83.42 115 *eP* **P 21 34 31.9 +0.1**
comp=E,23nm,0.8s
LBTB Lobatse 83.42 115 LR LR 22 07 29.1
comp=E,448nm,19.6s,baz=262,slow=33
BEKR Beckworth 83.49 324 *eP* **P 21 34 32.0 +0.3**
comp=E,1.8nm,0.9s
D22A Cohagen 83.50 337 P **P 21 34 32.2 +0.8**
baz=84
I14A Mackay 83.52 331 P **P 21 34 32.8 +1.0**
baz=84
E20A Meyer Farm, Mu 83.62 336 ⇓P **P 21 34 32.2 +0.1**
baz=84,SNR=7.7
HLID Hailey 83.63 330 *eP* **P 21 34 33.5 +1.2**
comp=E,3.9nm,0.9s
HLID Hailey 83.63 330 P **P 21 34 33.2 +0.9**
baz=84
F18A Big Timber 83.69 334 ⇓P **P 21 34 32.5 0.0**
baz=84,SNR=5.7
C23A Lambert 83.75 338 P **P 21 34 32.9 +0.3**
baz=84
E19A Rath Farm, Rou 83.82 335 ⇑P **P 21 34 32.9 -0.2**
baz=84,SNR=7.0
C22A Vida 83.93 338 P **P 21 34 33.8 +0.3**
baz=84
MCMT McKenzie Canyo 84.01 332 *eP* **P 21 34 34.0 -0.3**
comp=E,1.8nm,0.8s
DGMT Dagmar 84.03 339 *eP* **P 21 34 35.1 +1.0**
comp=E,22nm,0.9s
DGMT Dagmar 84.03 339 P **P 21 34 35.0 +1.0**
baz=84
C21A Desert Coulee 84.40 337 P **P 21 34 36.4 +0.4**
baz=85
LRM Limekiln Ridge 84.67 333 *eP* **P 21 34 38.0 +0.4**
comp=E,19nm,0.9s
A22A Carney Farms, 85.03 338 P **P 21 34 39.4 +0.3**
baz=85
D17A Six Diamond Ra 85.10 334 ⇓P **P 21 34 39.7 0.0**
baz=85,SNR=5.4
G12A Big Creek, Yel 85.28 331 P **P 21 34 41.7 +1.0**
baz=86
SCHQ Schefferville 85.29 3 P **P 21 34 40.7 +0.4**
SCHQ Schefferville 85.29 3 P **P 21 34 40.7 +0.4**
comp=E,11nm,1.0s,baz=177,slow=6.0,SNR=7.5
D16A Dana Ranch, Ca 85.32 334 P **P 21 34 42.0 +1.2**
baz=86
B19A Brinkman Farms 85.58 336 P **P 21 34 42.3 +0.5**
baz=86
D15A Lincoln 85.70 333 P **P 21 34 43.7 +1.0**
baz=86
F12A Elk City 85.75 331 P **P 21 34 42.9 0.0**
baz=86
B18A Beardsley Farm 85.82 336 P **P 21 34 43.0 -0.1**
baz=86
A19A Klindworth Far 85.91 337 P **P 21 34 43.6 0.0**
baz=86
C16A Fuhringer Ranc 86.04 334 P **P 21 34 44.8 +0.5**
baz=86,SNR=5.8
B17A L&G Farms, Che 86.10 335 P **P 21 34 44.4 -0.1**
baz=86
D14A Greenough 86.12 333 P **P 21 34 44.9 +0.2**
baz=86
C15A Salmond Ranch, 86.34 334 ⇑P **P 21 34 46.1 +0.3**
baz=87,SNR=7.8
E12A Beaver Dam Sad 86.41 331 P **P 21 34 46.3 +0.1**
baz=87
D13A Huson 86.51 332 P **P 21 34 47.0 +0.4**
baz=87
A17A Triple J Farms 86.61 335 ⇓P **P 21 34 46.7 -0.3**
baz=87,SNR=5.3
SWMT Swartz Lake 86.66 333 *eP* **P 21 34 47.9 +0.6**
B15A Bradely Ranch, 86.77 334 ⇓P **P 21 34 47.5 -0.3**
baz=87,SNR=6.3
D12A Red Ives Fores 86.83 332 P **P 21 34 48.0 -0.2**
baz=87
A16A West Butte Ran 86.94 335 P **P 21 34 48.7 0.0**
baz=87
YBMT Yellow Bay 86.96 333 *eP* **P 21 34 48.2 -0.6**
comp=E,1.9nm,0.8s
JTMT Jette 86.97 333 *eP* **P 21 34 49.9 +1.0**
A15A Johnson Ranch, 87.38 334 P **P 21 34 50.4 -0.5**
baz=88
C11A Tepee Creek (N 87.83 332 P **P 21 34 52.7 -0.2**
baz=88
WALA Waterton Lakes 87.89 334 *eP* **P 21 34 53.1 -0.1**
comp=E,0.1nm,0.8s
WALA *epP* **pP 21 35 03.0 +0.8**
FFC Flin Flon 89.00 343 *eP* **P 21 34 57.6 -0.6**
TAM Tamanrasset 91.13 64 *eP* **P 21 35 09.1 -0.1**
comp=E,2.5nm,0.8s
ESDC Sonseca Array 94.08 46 P **P 21 35 22.8 +0.5**
ESDC Sonseca Array 94.08 46 P **P 21 35 22.8 +0.5**
comp=E,0.1nm,0.3s,baz=243,slow=3.3,SNR=5.2
YKA Yellowknife Ar 99.05 341 P **Pdif 21 35 45.3 +1.2**
YKA Yellowknife Ar 99.05 341 P **Pdif 21 35 45.3 +1.2**
comp=E,0.8nm,0.6s,baz=140,slow=3.9,SNR=4.4
CLL Collm 110.21 42 *es*PKiKP sPKiKP 21 40 48.0 +0.5
CLL *e*PPS PPS 21 51 54.0
CLL LmH 22 27 00.0
comp=N,100nm,19.5s
CLL LmH 22 27 00.0
comp=E,200nm,19.4s
CLL LmV 22 27 00.0
comp=Z,200nm,18.7s
ASAR Alice Springs 120.62 207 PKP **PKPdf 21 40 55.4 -0.9**
ASAR Alice Springs 120.62 207 PKP **PKPdf 21 40 55.4 -0.9**
comp=Z,1.0nm,0.8s,baz=150,slow=2.0,SNR=9.2
WRA Warramunga Arr 123.77 210 PKP **PKPdf 21 41 01.1 -1.2**
WRA Warramunga Arr 123.77 210 PKP **PKPdf 21 41 01.1 -1.2**
comp=Z,2.1nm,0.7s,baz=155,slow=1.6,SNR=15
BRVK Borovoye 144.55 40 *e*PKPdf **PKPab 21 41 38.6 +0.3**
BVAR Borovoye Array 144.62 40 PKP PKPbc 21 41 39.6 +0.8
BVAR Borovoye Array 144.62 40 PKP PKPbc 21 41 39.6 +0.8
baz=305,slow=2.3
KKAR Karatay Array 147.61 57 *e*PKPbc **PKPbc 21 41 47.7 -0.4**
HYB Hyderabad 149.88 109 *i* PKP **PKPbc 21 41 56.0 +1.3**
EKS2 Erkin-Say 150.05 57 *e*PKPbc **PKPbc 21 41 54.8 +0.3**
KURK Kurchatov 150.21 39 *e*PKPdf **PKPdf 21 41 49.6 +0.4**
KURK *e*PKPbc **PKPbc 21 41 54.3 -0.1**
KURK *e*PKPab **PKPab 21 42 01.0 +0.4**
AAK Ala-Archa 150.57 57 *e*PKPbc **PKPbc 21 41 55.7 -0.1**
AAK Ala-Archa 150.57 57 PKPbc **PKPbc 21 41 56.5 +0.7**
comp=Z,6.5nm,0.8s,baz=193,slow=3.7,SNR=12
ZAA0 Zalesovo Array 151.25 29 *e*PKPdf **PKPdf 21 41 50.7 -0.1**
ZAA0 *e*PKPbc **PKPbc 21 41 56.3 -0.5**
ZALV Zalesovo Beam 151.25 29 PKP **PKPdf 21 41 50.7 -0.1**
ZALV PKPbc **PKPbc 21 41 56.8 0.0**
ZALV PKPab **PKPab 21 42 03.9 -0.9**
ZALV Zalesovo Beam 151.25 29 PKP **PKPdf 21 41 50.7 -0.1**
comp=Z,30nm,0.9s,baz=300,slow=2.8,SNR=13
ZALV PKPbc **PKPbc 21 41 56.8 0.0**
comp=Z,23nm,0.7s,baz=310,slow=2.5,SNR=77
ZALV PKPab **PKPab 21 42 03.9 -0.9**
comp=Z,11nm,0.8s,baz=304,slow=3.7,SNR=8.7
TKM2 Tokmak 2 151.29 56 *e*PKPbc **PKPbc 21 41 57.4 -0.2**
TKM2 *es*PKPdf **sPKPdf 21 42 04.9 +1.1**
KSH Kashi 152.24 63 PKPbc **PKPbc 21 41 59.1 -0.6**
KSH *ep*PKP **PKPab 21 42 09.6 0.0**
KSH *es*PKP 21 42 13.1
KSH *e*PP PP 21 45 59.0 +17

KSH					*e*SKS	**SKSdf**	**21 49 00.1**	**+1.6**
KSH	**Kashi**	**152.24**	**63**		*e*SKKS		21 52 52.0	
KSH					AMB	AMB		
	comp=Z,190nm,4.1s							
KSH					LR	LR		
	comp=N,210nm,5.2s							
KSH					LR	LR		
	comp=E,140nm,5.2s							
KSH					LR	LR		
	comp=Z,180nm,5.5s							
MK31	**Makanchi Array**	**154.29**	**44**	*e*PKPdf		**PKPdf**	**21 41 55.4**	**-0.2**
MK31				*e*PKPbc		**PKPbc**	**21 42 03.3**	**-0.5**
MKAR	**Makanchi Array**	**154.29**	**44**	PKP		**PKPdf**	**21 41 54.6**	**-0.9**
MKAR				PKPbc		**PKPbc**	**21 42 03.7**	**-0.1**
MKAR				PKPab		**PKPab**	**21 42 17.3**	**-0.6**
MKAR	**Makanchi Array**	**154.29**	**44**	PKP		**PKPdf**	**21 41 54.6**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=318,slow=1.9,SNR=5.6							
MKAR				PKPbc		**PKPbc**	**21 42 03.7**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=318,slow=1.6,SNR=14							
MKAR				PKPab		**PKPab**	**21 42 17.3**	**-0.6**
	comp=Z,5.0nm,0.9s,baz=294,slow=3.9,SNR=16							
WMQ	**Urumqi**	**159.08**	**46**	*e*PKP		**PKPdf**	**21 42 02.3**	**+0.4**
WMQ				pPKP		**pPKPdf**	**21 42 13.0**	**+1.9**
WMQ				sPKP			21 42 16.5	
WMQ				LR	LR			
	comp=Z,200nm,22.7s							
CN2	**Changchun**	**161.16**	**319**	*e*PKP		**PKPdf**	**21 42 04.6**	**+0.5**
SONM	**Songino Array**	**162.83**	**4**	PKP		**PKPdf**	**21 42 05.8**	**-0.1**
SONM				PKPab		**PKPab**	**21 42 55.9**	**+1.0**
SONM	**Songino Array**	**162.83**	**4**	PKP		**PKPdf**	**21 42 05.8**	**-0.1**
	comp=Z,0.1nm,0.5s,baz=12,slow=2.1,SNR=4.6							
SONM				PKPab		**PKPab**	**21 42 55.9**	**+1.0**
	comp=Z,3.2nm,0.9s,baz=332,slow=3.5,SNR=17							
CMAR	**Chiang Mai Arr**	**165.13**	**143**	PKPab		**PKPab**	**21 43 05.6**	**0.0**
CMAR	**Chiang Mai Arr**	**165.13**	**143**	PKPab		**PKPab**	**21 43 05.6**	**0.0**
	comp=Z,3.7nm,0.9s,baz=229,slow=5.7,SNR=18							
GTA	**Gaotai**	**168.88**	**36**	PKP		**PKPdf**	**21 42 11.3**	**+0.3**
HHC	**Hu-ho-hao-te**	**169.54**	**346**	*e*PKP		**PKPdf**	**21 42 11.5**	**+0.1**
HHC				pPKP		**pPKPdf**	**21 42 22.9**	**+2.3**
HHC				PP		**PP**	**21 47 14.8**	**+1.1**
HHC				SKKS			21 53 58.4	
HHC				SS		**SS**	**22 08 10.6**	**+2.2**
HHC				AMB	AMB			
	comp=Z,150nm,9.2s							
HHC				LR	LR			
	comp=N,250nm,21.2s							
HHC				LR	LR			
	comp=E,140nm,19.0s							
HHC				LR	LR			
	comp=Z,150nm,20.0s							
NJ2	**Nanjing**	**170.89**	**281**	*e*PKP		**PKPdf**	**21 42 12.5**	**+0.3**
NJ2				PKPab		**PKPab**	**21 43 30.0**	**-1.0**
NJ2				PP		**PP**	**21 47 22.5**	**+0.5**
NJ2				SKS		**SKSdf**	**21 49 14.0**	**+0.2**
NJ2				SS		**SS**	**22 08 22.5**	**-2.2**
NJ2				AMB	AMB			
	comp=Z,110nm,10.8s							
NJ2				LR	LR			
	comp=N,90nm,19.9s							
NJ2				LR	LR			
	comp=E,100nm,22.5s							
NJ2				LR	LR			
	comp=Z,90nm,23.9s							
KMI	**Kunming**	**172.57**	**137**	PKP		**PKPdf**	**21 42 13.1**	**-0.4**
KMI				PP		**PP**	**21 47 30.8**	**+1.1**
KMI				SS		SS	22 08 38.4	-1.4
KMI				AMB	AMB			
	comp=Z,52nm,5.0s							
KMI				LR	LR			
	comp=N,91nm,17.8s							
KMI				LR	LR			
	comp=E,89nm,16.7s							
KMI				LR	LR			
	comp=Z,95nm,19.3s							
LZH	**Lanzhou**	**173.46**	**34**	*e*PKP		**PKPdf**	**21 42 12.6**	**-0.9**
LZH				pPKP		**pPKPdf**	**21 42 22.3**	**-0.4**
LZH				sPKP			21 42 26.4	
LZH				LR	LR			
	comp=N,120nm,18.0s							
LZH				LR	LR			
	comp=E,120nm,16.6s							
LZH				LR	LR			
	comp=Z,160nm,19.8s							
GYA	**Guiyang**	**175.52**	**161**	PKP		**PKPdf**	**21 42 13.3**	**-1.1**
GYA				PKPab		**PKPab**	**21 43 53.0**	**+1.5**
GYA				PKS		**PKSdf**	**21 45 43.9**	**-2.9**
GYA				PKS			21 45 44.3	
GYA				PP		**PP**	**21 47 45.6**	**+2.4**
GYA				SKKS			21 54 28.8	
GYA				SS		**SS**	**22 09 05.8**	**-1.0**
GYA				AMB	AMB			
	comp=Z,90nm,7.9s							
GYA				LR	LR			
	comp=N,130nm,24.8s							
GYA				LR	LR			
	comp=E,120nm,25.7s							
GYA				LR	LR			
	comp=Z,110nm,24.5s							
CD2	**Chengdu**	**176.07**	**86**	*e*PKP		**PKPdf**	**21 42 13.8**	**-0.5**
CD2				sPKP			21 42 29.3	
CD2				PKPab		**PKPab**	**21 43 55.0**	**+0.8**
CD2				PP		**PP**	**21 47 49.3**	**+1.8**
CD2				SKKS			21 54 29.8	
CD2				SS		**SS**	**22 09 09.4**	**-5.9**
CD2				AMB	AMB			
	comp=Z,120nm,11.0s							
CD2				LR	LR			
	comp=N,110nm,22.4s							
CD2				LR	LR			
	comp=Z,120nm,24.2s							

*ISCJB **13** 21:25:27.4±1.8, 41°.30N±0°.10×22°.8E±0°.1, h4km±21km, Error ellipse: s-maj=19.2km s-min=11.9km az=142.0*
*ATH **13** 21:25:28.8, 41°.30N×22°.74E, h27km±1km, MD3.0/4*
*SKO **13** 21:25:28.3, 41°.29N×22°.66E, h15km, M1.1, ML1.5*
*CSEM **13** 21:25:28.8, 41°.30N×22°.74E, h27km, MD3.0, After ATH*

ISC 13 21:25:27.7±1.3, 41°.37N±0°.10×22°.76E±0°.09, h11km±14km, n11, σ0°.18/18, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.15**	**253**	*i* Pg	**Pg**	**21 25 31.3**	**+0.1**
VAY				*i* Sg	**Sg**	**21 25 33.3**	**-0.3**
VAY				*e*Lg	Lg	21 25 33.4	
	comp=E,320nm,0.3s						
VAY				*e*Lg	Lg	21 25 33.6	
	comp=N,271nm,0.3s						
SOH	**Sokhos**	**0.70**	**140**	*e*PN	**Pb**	**21 25 41.9**	**-0.1**
SOH				*e*SN	**Sb**	**21 25 51.8**	**+0.1**
SOH	**Sokhos**	**0.70**	**140**	*e*Pn	**Pb**	**21 25 41.9**	**-0.1**
SOH				*e*Sn	**Sb**	**21 25 51.8**	**+0.1**
NVR	**Nevrokopi**	**0.83**	**91**	*e*PN	**Pn**	**21 25 45.5**	**+0.2**
NVR				*e*SN	**Sn**	**21 25 57.3**	**-0.3**
NVR	**Nevrokopi**	**0.83**	**91**	*e*Pn	**Pn**	**21 25 45.5**	**+0.2**
NVR				*e*Sn	**Sn**	**21 25 57.3**	**-0.3**
PLG	**Polygyros**	**1.12**	**152**	*e*PN	**Pb**	**21 25 49.1**	**+0.1**
PLG				*e*SN	**Sn**	**21 26 04.5**	**-0.2**
PLG	**Polygyros**	**1.12**	**152**	*e*Pn	**Pb**	**21 25 49.1**	**+0.1**
PLG				*e*Sn	**Sn**	**21 26 04.5**	**-0.2**
FNA	**Florina**	**1.20**	**241**	*e*PN	**Pg**	**21 25 50.8**	**+0.1**
FNA	**Florina**	**1.20**	**241**	*e*Pn	**Pg**	**21 25 50.8**	**+0.1**
LIT	**Litokhoron**	**1.28**	**189**	*e*PN	**Pn**	**21 25 51.6**	**+0.1**
LIT	**Litokhoron**	**1.28**	**189**	*e*Pn	**Pn**	**21 25 51.6**	**+0.1**

*JMA **13** 21:28:18.4±0.3, 25°.22N×123°.04E, h8km, M2.1*
*TAP **13** 21:28:19.0, 24°.55N×122°.64E, h97km, ML3.2, C*
*ISCJB **13** 21:28:19.5±0.7, 24°.49N±0°.04×122°.68E±0°.02, h82km±7km, Error ellipse: s-maj=6.7km s-min=3.6km az=175.0*

ISC 13 21:28:19.1±2.0, 24°.49N±0°.07×122°.68E±0°.04, h88km±16km, n35, σ1°.01/35, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.30**	**95**	P	Pn	21 28 32.8	+0.5
YOJ				S	**Sn**	**21 28 42.9**	**+0.9**
TWC	**Suao**	**0.77**	**279**	*i* P	Pn	21 28 36.0	0.0
	baz=278						
TWC				S	**Sn**	**21 28 48.4**	**-0.3**
	baz=278						
TWB1	**Santiao Chiao**	**0.82**	**310**	*e*P	Pn	21 28 36.6	+0.1
	baz=306						
TWB1				*e*S	**Sn**	**21 28 48.8**	**-0.8**
	baz=306						
ENA	**Nanau**	**0.86**	**266**	*i* P	Pn	21 28 37.4	+0.3
	baz=258						
ENA				*e*S	**Sn**	**21 28 51.4**	**+0.9**
	baz=258						
ILA	**Ilan**	**0.89**	**288**	*e*P	Pn	21 28 37.9	+0.5
	baz=279						
ILA				*e*S	**Sn**	**21 28 51.5**	**+0.3**
	baz=279						
TWE	**Neicheng**	**0.95**	**284**	P	Pn	21 28 38.4	+0.3
	baz=280						
TWE				S	**Sn**	**21 28 52.0**	**-0.3**
	baz=280						
IRIF	**Iriomote-Funau**	**0.97**	**99**	P	Pn	21 28 38.7	+0.4
NWF	**Wu-fen Shan**	**1.00**	**306**	P	Pn	21 28 39.1	+0.3
	baz=298						
NWF				S	**Sn**	**21 28 53.2**	**-0.3**
	baz=298						
ENTT	**Nioudou**	**1.03**	**279**	P	Pn	21 28 39.5	+0.6
	baz=275						
ENTT				*e*S	**Sn**	**21 28 54.4**	**+0.5**
	baz=275						
TWD	**Chiawan**	**1.07**	**248**	P	Pn	21 28 39.5	0.0
	baz=238						
TWD				*e*S	**Sn**	**21 28 54.3**	**-0.4**
	baz=238						
NNS	**Nan Shan**	**1.19**	**268**	*i* P	Pn	21 28 41.4	+0.3
	baz=258						
NNS				S	**Sn**	**21 28 57.4**	**-0.1**
	baz=258						
NSK	**Sanguang**	**1.22**	**279**	*i* P	Pn	21 28 41.8	+0.5
	baz=276						
NSK				S	**Sn**	**21 28 57.8**	**-0.2**
	baz=276						
JKRS	**Kuro-shima**	**1.24**	**101**	P	Pn	21 28 42.4	+0.9
JKRS				*e*S	**Sn**	**21 28 59.6**	**+1.3**
TWS1	**Kuangyinshan**	**1.30**	**298**	*e*P	Pn	21 28 42.2	-0.1
	baz=290						
TWS1				*e*S	**Sn**	**21 28 59.1**	**-0.6**
	baz=290						
ESL	**Shilin**	**1.32**	**240**	P	Pn	21 28 42.4	-0.1
	baz=235						
ESL				S	**Sn**	**21 28 59.9**	**-0.3**
	baz=235						
WHF	**Hehuan Shan**	**1.33**	**256**	*i* P	Pn	21 28 43.4	+0.3
	baz=257						
WHF				S	**Sn**	**21 29 00.8**	**-0.3**
	baz=257						
JIJ	**Ishigaki jima**	**1.34**	**95**	P	Pn	21 28 43.0	+0.3
JIJ				*e*S	**Sn**	**21 29 00.3**	**-0.2**
TWT	**Tachien**	**1.39**	**261**	P	Pn	21 28 44.6	+1.0
	baz=255						
TWT				S	**Sn**	**21 29 02.5**	**+0.5**
	baz=255						
NSTT	**Nanjuang**	**1.54**	**276**	*e*P	Pn	21 28 45.8	+0.6
	baz=273						
NSTT				S	**Sn**	**21 29 04.9**	**-0.1**
	baz=273						
EHY	**Hungye**	**1.58**	**232**	P	Pn	21 28 45.7	-0.1
	baz=228						
EHY				*e*S	**Sn**	**21 29 05.4**	**-0.6**
	baz=228						
TWF1	**Yuli**	**1.70**	**229**	*i* P	Pn	21 28 47.3	0.0
	baz=233						
TWF1				S	**Sn**	**21 29 08.8**	**+0.1**
	baz=233						
SMLT	**Sun Moon Lake**	**1.73**	**250**	P	Pn	21 28 48.8	+1.0
	baz=241						
SMLT				*e*S	**Sn**	**21 29 11.3**	**+1.6**
	baz=241						
NSY	**Sanyi**	**1.75**	**268**	*e*P	Pn	21 28 48.9	+0.9
	baz=265						
NSY				*e*S	**Sn**	**21 29 10.7**	**+0.7**
	baz=265						
TYC	**Yuchr**	**1.76**	**251**	*e*P	Pn	21 28 49.0	+0.9
	baz=242						
TYC				*e*S	**Sn**	**21 29 11.3**	**+1.1**
	baz=242						
CHKT	**Chengkung**	**1.83**	**221**	P	**Pn**	**21 28 48.8**	**-0.2**
	baz=214						
CHKT				S	**Sn**	**21 29 10.9**	**-0.9**
	baz=214						
JTJ	**Tarama**	**1.85**	**85**	*e*S	**Sn**	**21 29 11.9**	**-0.2**
YUS	**Yu-Shan**	**1.87**	**238**	P	Pn	21 28 50.8	+0.8
	baz=230						
YUS				S	**Sn**	**21 29 13.2**	**-0.1**
	baz=230						
ALS	**Alishan**	**1.97**	**241**	P	Pn	21 28 52.5	+1.3
	baz=232						
ALS				*e*S	**Sn**	**21 29 16.3**	**+0.8**
	baz=232						
ELDTW	**Lidau**	**2.00**	**230**	P	Pn	21 28 51.4	+0.1
	baz=226						
ELDTW				*e*S	**Sn**	**21 29 15.0**	**-0.8**
	baz=226						
CHN5	**Tsauling**	**2.03**	**245**	P	Pn	21 28 53.2	+1.5
	baz=235						
CHN5				*e*S	**Sn**	**21 29 19.0**	**+2.3**
	baz=235						
CHN4	**Tsaushan**	**2.22**	**240**	*e*P	Pn	21 28 55.9	+1.8
	baz=230						
CHN4				*e*S	**Sn**	**21 29 22.9**	**+1.9**
	baz=230						
TWG	**Pinlang**	**2.22**	**222**	*e*P	Pn	21 28 54.2	0.0
	baz=225						
TWG				*e*S	**Sn**	**21 29 20.3**	**-0.6**
	baz=225						
WTP	**Ta-pu**	**2.26**	**237**	P	Pn	21 28 56.5	+1.7
	baz=234						
CHN1	**Nanshi**	**2.36**	**237**	*e*P	Pn	21 28 57.9	+1.9
	baz=243						
CHN1				*e*S	**Sn**	**21 29 26.3**	**+2.0**
	baz=243						
ECL	**Taimali**	**2.46**	**220**	*e*P	**Pn**	**21 28 57.2**	**-0.1**
	baz=217						
ECL				*e*S	**Sn**	**21 29 24.2**	**-2.4**
	baz=217						

GUC 13 21:39:13.5±0.7, 30°.72S×71°.68W, h32km±3km, MD3.6, ML2.7, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**0.74**	**128**	*i* P	Pn	21 39 27.3	-0.6
CMCH				*i* S	Sb	21 39 38.0	0.0
CMCH				AML	AML	21 39 38.8	
	comp=N,677nm,0.3s						
TLL	**Tololo Astrono**	**0.94**	**54**	*i* P	Pn	21 39 31.1	+0.3
TLL				*i* S	Sb	21 39 44.3	+0.3
TLL				AML	AML	21 39 48.5	
	comp=N,286nm,0.3s						
CHNG	**Los Chungos**	**1.17**	**172**	*i* P	Pn	21 39 33.9	+0.3
CHNG				*i* S	Sb	21 39 49.6	-0.3
LCO	**Las Campanas**	**1.91**	**27**	*i* P	Pn	21 39 45.5	+1.3
LCO				*i* S	Sb	21 40 10.7	-1.1
LCO				AML	AML	21 40 12.9	
	comp=E,51nm,0.2s						
ROCH	**El Roble**	**2.31**	**166**	AML	AML	21 40 28.6	
	comp=N,56nm,0.3s						
PEL	**Peldehue**	**2.56**	**161**	*i* P	Pn	21 39 54.1	+1.2
PEL				*e*S	Sn	21 40 25.3	+2.3
PEL				AML	AML	21 40 36.4	
	comp=E,112nm,0.3s						

*IDC **13** 21:41:13.4±3.8, 3°.40S×140°.19E, h0km, mb3.8/3, mb1 4.2/4, mb1mx3.7/16, mbtmp3.9/4, ML4.1/1, Error ellipse: s-maj=121.3km s-min=28.2km az=93.0*
*ISCJB **13** 21:41:18.7±1.7, 3°.4S±0°.1×139°.7E±0°.2, h37km, mb3.2/1, Error ellipse: s-maj=32.2km s-min=17.5km az=9.8*
*AUST **13** 21:43:08.6±14.0, 11°.97S×136°.18E, h48km±2km, Error ellipse: s-maj=6.6km s-min=1.5km az=26.0*

ISC 13 21:41:21.5±1.9, 3°.6S±0°.1×139°.7E±0°.3, h37km, n9, σ1°.76/12, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDU	**Kakadu**	**11.54**	**218**	P	**Pn**	**21 44 04.7**	**+0.9**
	baz=3.7,SNR=30						
MTN	**Manton Dam**	**12.52**	**222**	P	**Pn**	**21 44 19.7**	**+2.5**
	baz=5.0,SNR=7.1						
KNRA	**Kununurra**	**16.15**	**221**	P	**Pn**	**21 45 06.0**	**+0.3**
	baz=8.1,SNR=11						
QIS	**Mount Isa**	**16.88**	**180**	P	**P**	**21 45 18.5**	**+1.8**
	baz=9.2,SNR=9.1						
WRA	**Warramunga Arr**	**17.09**	**197**	P	**Pn**	**21 45 17.9**	**+0.2**
	0.8nm,0.3s,baz=26,slow=12,SNR=21						
WRA				S	**Sn**	**21 48 23.2**	**-3.5**
	0.2nm,0.3s,baz=21,slow=22,SNR=4.0						
FITZ	**Fitzroy Crossi**	**19.96**	**223**	P	**P**	**21 45 51.5**	**+0.9**
	3.2nm,0.7s,baz=42,slow=11,SNR=8.0						
FITZ				S	**S**	**21 49 32.1**	**-1.2**
	2.8nm,0.8s,baz=185,slow=17,SNR=3.5						
FITZ	**Fitzroy Crossi**	**19.96**	**223**	P	**Pn**	**21 45 52.5**	**0.0**
	baz=12,SNR=5.6						
ASAR	**Alice Springs**	**20.74**	**195**	P	**P**	**21 45 59.6**	**+0.5**
	12nm,0.8s,baz=26,slow=8.3,SNR=45						
ASAR				S	**S**	**21 49 48.8**	**-0.1**
	1.1nm,1.0s,baz=15,slow=23,SNR=3.2						
MKAR	**Makanchi Array**	**71.09**	**322**	P	**P**	**21 52 34.6**	**-1.4**
	0.2nm,0.7s,baz=112,slow=7.0,SNR=2.8						

*ISK **13** 21:58:41.7, 39°.42N×39°.17E, h12km, MD2.9*
*ISCJB **13** 21:58:42.6±0.6, 39°.42N±0°.03×39°.17E±0°.04, h8km±5km, Error ellipse: s-maj=5.4km s-min=3.7km az=43.7*
*DDA **13** 21:58:42.5, 39°.39N×39°.15E, h7km, MD2.8*
*CSEM **13** 21:58:42.5±0.2, 39°.42N×39°.16E, h10km, MD2.9, Error ellipse: s-maj=4.4km s-min=2.8km az=117.0*

ISC 13 21:58:42.7±1.0, 39°.42N±0°.02×39°.16E±0°.02, h13km±9km, n27, σ0°.56/49, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZC	**Erzincan**	**0.36**	**25**	*e*PG	**Pg**	**21 58 50.0**	**0.0**
EZC				*e*SG	**Sg**	**21 58 54.7**	**-0.4**
EZC	**Erzincan**	**0.36**	**25**	*e*Pg	**Pg**	**21 58 50.1**	**0.0**
EZC				*e*Sg	**Sg**	**21 58 54.7**	**-0.4**
EUZM	**Uzumlu**	**0.51**	**55**	*i* P	**Pg**	**21 58 52.9**	**+0.2**
EUZM				*i* S	**Sb**	**21 59 01.1**	**+0.2**
EUZM	**Uzumlu**	**0.51**	**55**	*i* P	**Pg**	**21 58 52.9**	**+0.2**
EUZM				*i* S	**Sb**	**21 59 01.1**	**+0.2**
KEMA	**Kemaliye**	**0.54**	**254**	*i* P	**Pg**	**21 58 53.0**	**-0.2**
KEMA				*i* S	**Sb**	**21 59 01.4**	**-0.2**
KEMA	**Kemaliye**	**0.54**	**254**	*i* P	**Pg**	**21 58 53.0**	**-0.2**
KEMA				*i* S	**Sb**	**21 59 01.4**	**-0.2**
KELT	**Kelkit**	**0.73**	**6**	*i* P	**Pg**	**21 58 57.3**	**+0.4**
KELT				*i* S	**Sb**	**21 59 07.9**	**+0.5**
KELT	**Kelkit**	**0.73**	**6**	*i* P	**Pg**	**21 58 57.3**	**+0.4**
KELT				*i* S	**Sb**	**21 59 07.9**	**+0.5**
ELZG	**Elazig**	**0.93**	**188**	*i* P	**Pb**	**21 58 59.8**	**-1.0**
ELZG				*i* S	**Sg**	**21 59 13.6**	**+0.8**
ELZG	**Elazig**	**0.93**	**188**	*i* P	**Pb**	**21 58 59.8**	**-1.0**
ELZG				*i* S	**Sg**	**21 59 13.6**	**+0.8**
GUMT	**Gumushane**	**1.07**	**13**	*e*PG	**Pb**	**21 59 02.7**	**-0.4**
GUMT				*e*SG	**Sg**	**21 59 17.8**	**+0.6**
GUMT	**Gumushane**	**1.07**	**13**	*e*Pg	**Pb**	**21 59 02.7**	**-0.4**
GUMT				*e*Sg	**Sg**	**21 59 17.8**	**+0.6**
SUSE	**Susehri**	**1.08**	**317**	*i* P	**Pg**	**21 59 04.1**	**+0.7**
SUSE				*i* S	**Sn**	**21 59 19.0**	**+0.5**
SUSE	**Susehri**	**1.08**	**317**	*i* P	**Pg**	**21 59 04.1**	**+0.7**
SUSE				*i* S	**Sn**	**21 59 19.0**	**+0.5**
BINT	**Bingol**	**1.17**	**117**	*e*Pn	**Pg**	**21 59 05.5**	**+0.3**
BINT				*e*Sn	**Sg**	**21 59 22.6**	**+2.2**
MYA	**Malataya**	**1.23**	**208**	*e*PN	**Pn**	**21 59 05.5**	**-0.2**
MYA				*e*SN	**Sg**	**21 59 22.6**	**+0.2**
MYA	**Malataya**	**1.23**	**208**	*e*Pn	**Pn**	**21 59 05.5**	**-0.2**
MYA				*e*Sn	**Sg**	**21 59 22.6**	**+0.2**
BAYT	**Ayd¨–ntepe-Bay**	**1.23**	**38**	*e*PN	**Pn**	**21 59 05.3**	**-0.5**
BAYT				*e*SN	**Sg**	**21 59 22.7**	**+0.2**
BAYT	**Ayd¨–ntepe-Bay**	**1.23**	**38**	*e*Pn	**Pn**	**21 59 05.3**	**-0.5**
BAYT				*e*Sn	**Sg**	**21 59 22.7**	**+0.2**
BNGB	**Bing¯¶l**	**1.26**	**109**	*e*PN	**Pn**	**21 59 05.5**	**-0.6**
BNGB				*e*SN	**Sn**	**21 59 22.6**	**-0.3**
AKCD	**Akcadag**	**1.48**	**221**	*e*P	**Pn**	**21 59 09.4**	**+0.3**
AKCD				*i* S	**Sg**	**21 59 30.5**	**+0.2**
AKCD	**Akcadag**	**1.48**	**221**	*e*P	**Pn**	**21 59 09.4**	**+0.3**
AKCD				*i* S	**Sg**	**21 59 30.5**	**+0.2**
ESPY	**Espiye-Giresun**	**1.53**	**348**	*e*PN	**Pn**	**21 59 08.9**	**-0.8**
ESPY	**Espiye-Giresun**	**1.53**	**348**	*e*Pn	**Pn**	**21 59 08.9**	**-0.8**
RSDY	**Resadiye-TOKAT**	**1.71**	**305**	*e*PN	**Pn**	**21 59 12.3**	**+0.1**
RSDY	**Resadiye-TOKAT**	**1.71**	**305**	*e*Pn	**Pn**	**21 59 12.3**	**+0.1**
SARI	**SarD1z-Kayseri**	**2.36**	**246**	*e*PN	**Pn**	**21 59 21.8**	**+0.4**

*ISCJB **13** 22:03:06.5±0.7, 39°.40N±0°.03×39°.18E±0°.04, h6km±6km, Error ellipse: s-maj=5.8km s-min=4.8km az=154.9*
*DDA **13** 22:03:06.2, 39°.40N×39°.17E, h7km, MD2.8*
*CSEM **13** 22:03:06.7±0.2, 39°.40N×39°.15E, h10km, MD2.6, Error ellipse: s-maj=5.4km s-min=4.1km az=104.0*
*ISK **13** 22:03:07.1, 39°.46N×39°.22E, h18km, MD2.6*

ISC 13 22:03:06.7±1.1, 39°.40N±0°.02×39°.17E±0°.03, h8km±10km, n17, σ0°.59/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZC	**Erzincan**	**0.38**	**22**	*e*PG	**Pg**	**22 03 14.1**	**0.0**
EZC				*e*SG	**Sg**	**22 03 19.0**	**-0.1**
EZC	**Erzincan**	**0.38**	**22**	*e*Pg	**Pb**	**22 03 15.6**	**-0.2**
EZC				*e*Sg	**Sg**	**22 03 19.0**	**-0.1**
ERZN	**Erzincan**	**0.46**	**67**	*e*PG	**Pg**	**22 03 15.6**	**-0.2**
ERZN				*e*SG	**Sg**	**22 03 22.4**	**+0.6**
KEMA	**Kemaliye**	**0.54**	**256**	*i* P	**Pg**	**22 03 16.9**	**-0.3**
KEMA				*i* S	**Sg**	**22 03 25.1**	**+0.7**
KEMA	**Kemaliye**	**0.54**	**256**	*i* P	**Pg**	**22 03 16.9**	**-0.3**
KEMA				*i* S	**Sg**	**22 03 25.1**	**+0.7**
KELT	**Kelkit**	**0.75**	**5**	*i* P	**Pg**	**22 03 21.0**	**-0.1**
KELT				*i* S	**Sg**	**22 03 31.6**	**+0.7**
KELT	**Kelkit**	**0.75**	**5**	*i* P	**Pg**	**22 03 21.0**	**-0.1**
KELT				*i* S	**Sg**	**22 03 31.6**	**+0.7**
ELZG	**Elazig**	**0.92**	**189**	*i* P	**Pg**	**22 03 23.8**	**-0.6**
ELZG				*i* S	**Sg**	**22 03 36.7**	**+0.5**
ELZG	**Elazig**	**0.92**	**189**	*i* P	**Pg**	**22 03 23.7**	**-0.6**
ELZG				*i* S	**Sg**	**22 03 36.7**	**+0.5**
SUSE	**Susehri**	**1.10**	**317**	*i* P	**Pg**	**22 03 27.7**	**-0.1**
SUSE				*i* S	**Sb**	**22 03 42.8**	**+0.2**
SUSE	**Susehri**	**1.10**	**317**	*i* P	**Pg**	**22 03 27.7**	**-0.1**
SUSE				*i* S	**Sb**	**22 03 42.8**	**+0.2**
BINT	**Bingol**	**1.15**	**117**	*e*Pn	**Pn**	**22 03 29.7**	**+0.4**
BINT				*e*Sn	**Sn**	**22 03 46.6**	**+1.3**
BAYT	**Ayd¨–ntepe-Bay**	**1.24**	**37**	*e*PN	**Pn**	**22 03 29.6**	**-1.0**
BAYT	**Ayd¨–ntepe-Bay**	**1.24**	**37**	*e*Pn	**Pn**	**22 03 29.6**	**-1.0**
BNGB	**Bing¯¶l**	**1.24**	**109**	*e*PN	**Pn**	**22 03 29.7**	**-0.8**
BNGB				*e*SN	**Sb**	**22 03 46.6**	**-0.1**
ESPY	**Espiye-Giresun**	**1.55**	**347**	*e*PN	**Pn**	**22 03 34.2**	**-0.5**
ESPY	**

TIXI Tiksi 17.88 96 *e*P **P** **22 11 44.2 +0.4**
comp=Z,4.0nm,1.5s
ARCES ARCESS Array B 17.90 214 Pn **Pn** **22 11 40.6 -3.0**
ARCES Sn Sn 22 14 46.5 -16
ARCES ARCESS Array B 17.90 214 Pn **Pn** **22 11 40.6 -3.0**
comp=Z,0.5nm,0.3s,baz=6.2,slow=9.2,SNR=11
ARCES Sn Sn 22 14 46.4 -16
comp=Z,0.1nm,0.3s,baz=14,slow=20,SNR=2.9
SUMG Summit 17.96 283 *e*P **Pn** **22 11 40.4 -4.3**
SUMG Summit 17.96 283 *e*P Pn 22 11 39.6 -5.0
comp=Z,37nm,1.6s
SUMG Summit 17.96 283 *i*P Pn 22 11 40.0 -4.7
RES Resolute Bay 18.18 334 LR LR 22 18 34.9
comp=Z,113nm,18.4s,baz=285,slow=36
SCO Scoresbysund 19.13 265 *i*P **P** **22 11 57.6 0.0**
SCO Scoresbysund 19.13 265 *i*P **P** **22 11 57.6 0.0**
SCO Scoresbysund 19.13 265 *i*P **P** **22 11 57.6 0.0**
LVZ Lovozero 19.30 203‖ *e*P **P** **22 11 57.5 -2.1**
LVZ pmax pmax
comp=Z,25nm,1.0s
LVZ Lovozero 19.30 203 *e*P **P** **22 11 57.5 -2.1**
comp=Z,25nm,1.0s
BILL Bilibino 23.44 61 *e*P **P** **22 12 43.0 -0.7**
BILL pmax pmax
comp=Z,11nm,1.6s
BILL Bilibino 23.44 61 *e*P **P** **22 12 43.0 -0.7**
comp=Z,11nm,1.6s
JOF Joensuu 24.37 206 *e*P **P** **22 12 51.6 -0.9**
JOF pmax pmax
comp=Z,2.0nm,0.5s
JOF Joensuu 24.37 206 *e*p **P** **22 12 51.6 -0.9**
comp=Z,2.4nm,0.5s
JOF Joensuu 24.37 206 *e*P **P** **22 12 51.6 -0.9**
comp=Z,2.0nm,0.5s
INK Inuvik 24.95 7 P **P** **22 12 56.1 -1.5**
INK Inuvik 24.95 7 P **P** **22 12 56.1 -1.5**
comp=Z,2.2nm,0.6s,baz=14,slow=8.6,SNR=9.1
INK LR LR 22 23 17.3
comp=Z,95nm,18.9s,baz=16,slow=38
INK Inuvik 24.95 7 P **P** **22 12 56.1 -1.5**
comp=Z,95nm,18.9s
KAF Kangasniemi 25.31 211 *e*P **P** **22 13 01.9 +0.9**
KAF Kangasniemi 25.31 211 *e*p **P** **22 13 01.9 +0.9**
KAF Kangasniemi 25.31 211 *e*P **P** **22 13 01.9 +0.9**
COLD Coldfoot 25.80 22 *e*P **P** **22 13 05.3 -0.1**
comp=Z,16nm,1.2s
COLD Coldfoot 25.80 22 *e*P **P** **22 13 05.3 -0.1**
comp=Z,16nm,1.2s
FINES FINESS Array B 25.99 211 P **P** **22 13 06.9 -0.2**
FINES FINESS Array B 25.99 211 P **P** **22 13 06.9 -0.2**
comp=Z,5.4nm,0.8s,baz=0.0,slow=9.7,SNR=6.5
FINES FINESS Array B 25.99 211 P **P** **22 13 06.9 -0.2**
comp=Z,5.0nm,0.8s
KLMR Klimovskoe 26.28 196 P P 22 13 05.0 -4.8
KLMR pmax pmax
comp=Z,16nm,1.4s
NB2 NORSAR Subarra 26.91 227 P **P** **22 13 15.0 -0.5**
comp=Z,9.0nm,1.0s,baz=4.3,slow=9.3
NOA NORSAR Array B 26.91 227 P **P** **22 13 15.4 -0.1**
NOA NORSAR Array B 26.91 227 P **P** **22 13 15.4 -0.1**
comp=Z,5.3nm,0.8s,baz=4.2,slow=8.8,SNR=9.0
NOA NORSAR Array B 26.91 227 P **P** **22 13 15.4 -0.1**
comp=Z,5.0nm,0.8s
YAK Yakutsk 27.49 99 *e*P **P** **22 13 20.6 0.0**
YAK Yakutsk 27.49 99 *e*P **P** **22 13 20.6 0.0**
HFS Hagfors 27.72 225 P **P** **22 13 22.6 -0.1**
HFS Hagfors 27.72 225 P **P** **22 13 22.6 -0.1**
comp=Z,6.2nm,1.1s,baz=351,slow=3.9,SNR=3.8
HFS Hagfors 27.72 225 P **P** **22 13 22.6 -0.1**
comp=Z,6.0nm,1.1s
FRB Frobisher Bay 28.23 308 LR LR 22 24 06.7
comp=Z,125nm,18.8s,baz=200,slow=35
ILAR Eielson Array 28.33 19 P **P** **22 13 29.1 +0.9**
ILAR Eielson Array 28.33 19 P **P** **22 13 29.1 +0.9**
comp=Z,2.2nm,1.0s,baz=355,slow=7.6,SNR=20
ILAR LR LR 22 25 40.8
comp=Z,114nm,18.3s,baz=63,slow=38
ILAR Eielson Array 28.33 19 P **P** **22 13 29.1 +0.9**
comp=Z,114nm,18.3s
TRF Thorofare Moun 29.59 22 *e*P **P** **22 13 40.4 +0.9**
comp=Z,7.1nm,1.2s
TRF Thorofare Moun 29.59 22 *e*P **P** **22 13 40.4 +0.9**
comp=Z,7.1nm,1.2s
PPLA Purkeypile 30.10 24 *e*P **P** **22 13 44.9 +0.8**
comp=Z,26nm,1.5s
PPLA Purkeypile 30.10 24 *e*P **P** **22 13 44.9 +0.8**
comp=Z,26nm,1.5s
PAX Paxson 30.16 18 *e*ScP **ScP** **22 20 25.8 +0.3**
PAX Paxson 30.16 18 *e*ScP **ScP** **22 20 25.8 +0.3**
MENT Mentasta 30.22 16 *e*P **P** **22 13 46.0 +1.0**
MENT Mentasta 30.22 16 *e*P **P** **22 13 46.0 +1.0**
ARU Arti 30.61 175 *c i*P **P** **22 13 48.5 +0.1**
ARU 22 14 46.0
ARU S **S** **22 18 51.4 +2.4**
ARU pmax pmax
comp=Z,9.0nm,1.7s
ARU Arti 30.61 175 *i*P **P** **22 13 48.5 +0.1**
comp=Z,9.0nm,1.7s
YKA Yellowknife Ar 30.76 350 P **P** **22 13 48.7 -0.9**
YKA PcP **PcP** **22 16 45.5 -0.8**
YKA Yellowknife Ar 30.76 350 P **P** **22 13 48.7 -0.9**
comp=Z,0.9nm,0.7s,baz=3.0,slow=8.4,SNR=8.7
YKA PcP **PcP** **22 16 45.5 -0.8**
comp=Z,0.5nm,0.8s,baz=347,slow=3.1,SNR=4.9
YKA Yellowknife Ar 30.76 350 P **P** **22 13 48.7 -0.9**
comp=Z,1.0nm,0.7s
SML Sawmill 31.28 21 *e*P **P** **22 13 54.6 +0.3**
SML pmax pmax
comp=Z,2.0nm,1.0s
SML Sawmill 31.28 21 *e*P **P** **22 13 54.6 +0.3**
comp=Z,2.2nm,1.0s
SML *e*ScP **ScP** **22 20 31.0 +1.9**
SML Sawmill 31.28 21 *e*P **P** **22 13 54.6 +0.3**
comp=Z,2.0nm,1.0s
SML *e*ScP **ScP** **22 20 31.0 +1.9**
SVW2 Sparrevohn 31.83 27 *e*P **P** **22 14 00.6 +1.5**
comp=Z,19nm,1.8s
SVW2 Sparrevohn 31.83 27 *e*P **P** **22 14 00.6 +1.5**
comp=Z,19nm,1.8s
EKA Eskdalemuir Ar 33.25 242 P **P** **22 14 11.5 -0.1**
EKA Eskdalemuir Ar 33.25 242 P **P** **22 14 11.5 -0.1**
comp=Z,1.6nm,0.8s,baz=17,slow=6.7,SNR=6.2
EKA Eskdalemuir Ar 33.25 242 P **P** **22 14 11.5 -0.1**
comp=Z,2.0nm,0.8s
ZALV Zalesovo Beam 33.56 147 P **P** **22 14 14.0 -0.2**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV MLR MLR
comp=Z,71nm,19.5s
ZALV Zalesovo Beam 33.56 147 P **P** **22 14 14.0 -0.2**
ZALV Zalesovo Beam 33.56 147 P **P** **22 14 14.0 -0.2**
comp=Z,0.6nm,0.4s,baz=358,slow=12,SNR=4.9
ZALV LR LR 22 29 26.0
comp=Z,71nm,19.5s,baz=159,slow=39
ZALV Zalesovo Beam 33.56 147 P **P** **22 14 14.0 -0.2**
comp=Z,71nm,19.5s
BRVK Borovoye 34.11 163‖ *e*P **P** **22 14 19.5 +0.4**
BRVK pmax pmax
comp=Z,5.0nm,1.7s
BRVK Borovoye 34.11 163 *e*P **P** **22 14 19.5 +0.4**
comp=Z,5.0nm,1.7s
BVAR Borovoye Array 34.15 163 P **P** **22 14 19.3 -0.1**
BVAR 22 16 55.8
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR MLR MLR
comp=Z,152nm,19.6s
BVAR Borovoye Array 34.15 163 P **P** **22 14 19.3 -0.1**
BVAR PcP **PcP** **22 16 55.8 -0.1**
BVAR Borovoye Array 34.15 163 P **P** **22 14 19.3 -0.1**
comp=Z,1.1nm,0.6s,baz=350,slow=7.5,SNR=8.2
BVAR PcP **PcP** **22 16 55.8 -0.1**
comp=Z,1.0nm,0.7s,baz=0.0,slow=1.5,SNR=3.8
BVAR LR LR 22 30 51.4
comp=Z,152nm,19.6s,baz=48,slow=41
BVAR Borovoye Array 34.15 163 P **P** **22 14 19.3 -0.1**
comp=Z,1.0nm,0.6s
DLBC Dease Lake 34.87 4 *e*P **P** **22 14 27.6 +1.9**
DLBC Dease Lake 34.87 4 *e*P **P** **22 14 27.6 +1.9**
NRDL Niedersach Rie 35.50 227 *e*P **P** **22 14 31.8 +0.9**
comp=Z,19nm,1.5s
OHAK Old Harbor 35.77 26 *e*P **P** **22 14 34.1 +0.8**
comp=Z,14nm,1.0s
OHAK Old Harbor 35.77 26 *e*P **P** **22 14 34.1 +0.8**
comp=Z,14nm,1.0s
VSR Storozhevoye 35.94 196 *i*P **P** **22 14 33.7 -1.1**
VSR Storozhevoye 35.94 196 *i*P **P** **22 14 33.7 -1.1**
CLZ Clausthal 36.14 227 *e*P **P** **22 14 37.4 +0.8**
comp=Z,9.0nm,1.2s
CLZ Clausthal 36.14 227 *e*P **P** **22 14 37.4 +0.8**
CLZ pmax pmax
comp=Z,9.0nm,1.2s
CLZ Clausthal 36.14 227 *e*P **P** **22 14 37.4 +0.8**
comp=Z,9.0nm,1.2s
CLL Collm 36.57 224 *e*P **P** **22 14 40.2 0.0**
comp=Z,8.0nm,1.1s
CLL Collm 36.57 224 *i*P **P** **22 14 40.0 -0.2**
CLL *i* **22 14 46.6**
CLL pmax pmax
comp=Z,9.0nm,1.1s
CLL Collm 36.57 224 *i*P **P** **22 14 40.0 -0.2**
comp=Z,9.0nm,1.1s
CLL *i*pP **pP** **22 14 46.6 +0.4**
CLL *es*P **sP** **22 14 50.0 +1.3**
CLL *e*PPP PPP 22 16 13.0
CLL *e*PPPP 22 16 25.0
CLL Collm 36.57 224 *i*P **P** **22 14 40.0 -0.2**
comp=Z,9.0nm,1.1s
AKTK Aktyubinsk 36.62 176 P **P** **22 14 40.9 +0.3**
comp=Z,85nm,20.1s
AKTO Aktyubinsk 36.62 176 P **P** **22 14 40.9 +0.3**
AKTO pmax pmax
comp=Z,2.0nm,0.7s
AKTO MLR MLR
comp=Z,85nm,20.1s
AKTO Aktyubinsk 36.62 176 P **P** **22 14 40.9 +0.3**
AKTO Aktyubinsk 36.62 176 P **P** **22 14 40.9 +0.3**
comp=Z,2.2nm,0.7s,baz=6.7,slow=7.6,SNR=7.4
AKTO LR LR 22 31 22.4
comp=Z,85nm,20.1s,baz=327,slow=39
AKTO Aktyubinsk 36.62 176 P **P** **22 14 40.9 +0.3**
KURK Kurchatov 36.62 154 P **P** **22 14 41.0 +0.3**
KURK 22 17 03.2
KURK pmax pmax
comp=Z,1.0nm,0.9s
KURK Kurchatov 36.62 154 P **P** **22 14 41.0 +0.3**
KURK PcP **PcP** **22 17 03.2 0.0**
KURK Kurchatov 36.62 154 P **P** **22 14 41.0 +0.3**
comp=Z,1.0nm,0.9s
AKASG Malin Array Be 36.66 207 *ce*P **P** **22 14 40.2 -0.8**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 36.66 207 P **P** **22 14 40.4 -0.5**
AKASG Malin Array Be 36.66 207 P **P** **22 14 40.4 -0.5**
comp=Z,1.7nm,0.7s,baz=1.2,slow=9.5,SNR=7.1
AKASG Malin Array Be 36.66 207 P **P** **22 14 40.4 -0.5**
HVS Khovu-Aksy 36.66 138 *d* iP **P** **22 14 41.8 +0.7**
HVS pmax pmax
comp=Z,32nm,1.7s
HVS Khovu-Aksy 36.66 138 *i*P **P** **22 14 41.8 +0.7**
comp=Z,32nm,1.7s
BUG Bochum--Univer 36.67 230 *e*P **P** **22 14 41.7 +0.7**
comp=Z,11nm,1.2s
BUG *e*pP **pP** **22 14 49.0 +2.0**
KURBB Kurchatov Arra 36.72 154 P **P** **22 14 41.0 -0.4**
comp=Z,0.9nm,0.9s,baz=352,slow=8.8,SNR=7.7
KURBB PcP **PcP** **22 17 03.2 -0.2**
comp=Z,0.9nm,0.7s,baz=347,slow=3.0,SNR=9.4
NEUB Neuenburg 36.72 225 *e*P **P** **22 14 41.8 +0.4**
comp=Z,10.0nm,1.1s
KSP Ksiaz 36.91 221 *e*P **P** **22 14 42.5 -0.6**
KSP Ksiaz 36.91 221 *e*P **P** **22 14 42.5 -0.6**
FBE Freiberg 36.94 224 *e*P **P** **22 14 43.7 +0.3**
comp=Z,14nm,0.9s
FBE *e*pP **pP** **22 14 51.1 +1.7**
BRG Berggiesshubel 36.97 223 *i*P **P** **22 14 43.9 +0.3**
comp=Z,12nm,1.2s
BRG *e* 22 14 50.9
comp=Z,8.8nm,1.4s
BRG Berggiesshubel 36.97 223 *e*P **P** **22 14 43.9 +0.3**
comp=Z,12nm,1.2s
BRG Berggiesshubel 36.97 223 *i*P **P** **22 14 43.9 +0.3**
BRG *e* 22 14 50.9
BRG pmax pmax
comp=Z,12nm,1.2s
BRG Berggiesshubel 36.97 223 *i*P **P** **22 14 43.9 +0.3**
comp=Z,12nm,1.2s
SCHQ Schefferville 37.06 305 LR LR 22 28 10.0
comp=Z,65nm,21.4s,baz=340,slow=33
MOX Moxa 37.29 226 *e*P **P** **22 14 47.0 +0.7**
comp=Z,14nm,1.1s
MOX *e*pP **pP** **22 14 54.4 +2.0**
MOX Moxa 37.29 226 *e*P **P** **22 14 47.0 +0.7**
MOX *e**PP **pP** **22 14 54.4 +2.0**
MOX pmax pmax
comp=Z,14nm,1.1s
DPC Dobruska-Polom 37.40 221 *i*P **P** **22 14 47.3 -0.1**
DPC *e* 22 14 54.8
DPC Dobruska-Polom 37.40 221 *i*P **P** **22 14 47.3 -0.1**
DPC *e*pP **pP** **22 14 54.8 +1.4**
DPC Dobruska-Polom 37.40 221 P **P** **22 14 47.3 -0.1**
PLN Plauen 37.42 225 *e*P **P** **22 14 48.0 +0.5**
comp=Z,91nm,1.6s
WERD Werda 37.46 225 *e*P **P** **22 14 48.5 +0.7**
comp=Z,6.0nm,1.1s
TANN Tannenbergstha 37.48 225 *e*P **P** **22 14 48.5 +0.5**
comp=Z,9.0nm,1.2s
GUNZ Gunzen 37.54 225 *e*P **P** **22 14 49.3 +0.8**
comp=Z,9.0nm,1.1s
GUNZ *e*pP **pP** **22 14 56.5 +1.9**
MEM Membach 37.55 231 P **P** **22 14 48.9 +0.4**
comp=Z,4.6nm,1.4s
WERN Wernitzgruen 37.61 225 *e*P **P** **22 14 50.1 +1.0**
comp=Z,22nm,1.2s
WERN *e*pP **pP** **22 14 57.2 +2.0**
NKC Novy Kostel 37.66 225 *i*P **P** **22 14 50.0 +0.5**
NKC *e* 22 14 57.7
NKC Novy Kostel 37.66 225 *i*P **P** **22 14 50.0 +0.5**
NKC *e*pP **pP** **22 14 57.7 +2.1**
NKC Novy Kostel 37.66 225 P **P** **22 14 50.0 +0.5**
BCLA Clavier 37.77 232 P **P** **22 14 50.9 +0.5**
comp=Z,5.6nm,1.5s
ZAK Zakamensk 37.80 128 *e*P **P** **22 14 49.9 -0.9**
ZAK *e* 22 16 25.7
ABKAR Akbulak array 37.80 174 *e*P **P** **22 14 50.8 +0.1**
ABKAR Akbulak array 37.80 174 *e*P **P** **22 14 50.8 +0.1**
PRU Pruhonice 37.83 222 *i*P **P** **22 14 51.7 +0.8**
PRU Pruhonice 37.83 222 *i*P **P** **22 14 51.7 +0.8**
PRU Pruhonice 37.83 222 AMS AMS 22 28 40.0
comp=Z,200nm,19.9s
PRU Pruhonice 37.83 222 P **P** **22 14 51.7 +0.8**
TNS Taunus Mts 37.84 229 *e*P **P** **22 14 51.8 +0.8**
comp=Z,8.0nm,0.9s
TNS *e*pP **pP** **22 14 59.3 +2.2**
TNS Taunus Mts 37.84 229 *e*P **P** **22 14 51.8 +0.8**
TNS *e**PP **pP** **22 14 59.3 +2.2**
TNS pmax pmax
comp=Z,8.0nm,0.9s
OKC Ostrava-Krasne 37.85 219 *i*P **P** **22 14 50.8 -0.3**
OKC *e* 22 14 58.2
OKC Ostrava-Krasne 37.85 219 *i*P **P** **22 14 50.8 -0.3**
OKC *e*pP **pP** **22 14 58.2 +1.1**
OKC Ostrava-Krasne 37.85 219 AMS AMS 22 29 10.0
comp=Z,200nm,18.4s
OKC Ostrava-Krasne 37.85 219 P **P** **22 14 50.8 -0.3**
PETK Petropavlovsk- 37.91 73 LR LR 22 30 14.9
comp=Z,31nm,19.8s,baz=76,slow=36
KWP Kalwaria Pacla 37.91 214 *e*P **P** **22 14 52.1 +0.5**
KWP *e**PP **pP** **22 14 59.6 +1.9**
KWP pmax pmax
comp=Z,22nm,1.1s
KWP Kalwaria Pacla 37.91 214 *e*P **P** **22 14 52.1 +0.5**
comp=Z,22nm,1.1s
KWP *e*pP **pP** **22 14 59.6 +1.9**
KWP Kalwaria Pacla 37.91 214 *e*P **P** **22 14 52.1 +0.5**
comp=Z,22nm,1.1s
KWP *e*pP **pP** **22 14 59.6 +1.9**
MANZ Manzenberg 37.92 225 *e*P **P** **22 14 52.6 +0.8**
comp=Z,13nm,1.6s
MORC Moravsky Berou 37.93 219 *e*P **P** **22 14 51.3 -0.6**
MORC *e* 22 16 19.5
MORC *e* 22 17 10.4
MORC pmax pmax
comp=Z,7.0nm,1.0s
MORC Moravsky Berou 37.93 219 *e*P **P** **22 14 51.3 -0.6**
comp=Z,7.5nm,1.0s
MORC *e*PP **PnPn** **22 16 19.5 -0.2**
MORC *e*PcP **PcP** **22 17 10.4 +3.1**
MORC Moravsky Berou 37.93 219 *e*P **P** **22 14 51.3 -0.6**
comp=Z,7.5nm,1.0s
GIVF Givet 38.11 233 *e*P **P** **22 14 52.9 -0.4**
GIVF Givet 38.11 233 *e*P **P** **22 14 52.9 -0.4**
GIVF Givet 38.11 233 *e*P **P** **22 14 52.9 -0.4**
ROTZ Rotzenmuhle 38.14 225 *e*P **P** **22 14 54.6 +1.1**
comp=Z,12nm,1.2s
ROTZ *e*pP **pP** **22 15 01.7 +2.1**
STHS Stebnicka Huta 38.17 215 *e*P **P** **22 14 54.6 +0.8**
STHS pmax pmax
comp=Z,6.0nm,1.2s
STHS Stebnicka Huta 38.17 215 *e*P **P** **22 14 54.6 +0.8**
BAIF Baives 38.18 233 *e*P **P** **22 14 53.8 0.0**
comp=Z,11nm,1.2s
BAIF Baives 38.18 233 *e*P **P** **22 14 53.8 0.0**
BAIF pmax pmax
comp=Z,11nm,1.2s
BAIF Baives 38.18 233 *e*P **P** **22 14 53.8 0.0**
comp=Z,11nm,1.2s
BAIF Baives 38.18 233 *e*P **P** **22 14 53.8 0.0**
comp=Z,5.3nm,1.2s
GRF Grafenberg Arr 38.25 226 *e*P **P** **22 14 55.5 +1.0**
comp=Z,15nm,1.1s
GRF *e*pP **pP** **22 15 02.6 +2.0**
GRF Grafenberg Arr 38.25 226 *e*P **P** **22 14 55.5 +1.0**
GRF *e**PP **pP** **22 15 02.6 +2.0**
GRF pmax pmax
comp=Z,15nm,1.1s
GRFO Grafenberg 38.25 226 *e*P **P** **22 14 55.2 +0.7**
GRFO pmax pmax
comp=Z,10.0nm,1.0s
GRFO Grafenberg 38.25 226 *e*P **P** **22 14 55.2 +0.7**
comp=Z,9.8nm,1.0s
GRFO Grafenberg 38.25 226 *e*P **P** **22 14 55.2 +0.7**
comp=Z,9.8nm,1.0s
VRAC Vranov 38.44 220 P **P** **22 14 56.3 +0.3**
VRAC Vranov 38.44 220 P **P** **22 14 56.3 +0.3**
comp=Z,6.5nm,1.0s,baz=18,slow=9.2,SNR=10
VRAC Vranov 38.44 220 P **P** **22 14 56.3 +0.3**
TREC Trest 38.49 221 *i*P **P** **22 14 56.8 +0.3**
TREC Trest 38.49 221 *i*P **P** **22 14 56.8 +0.3**
TREC Trest 38.49 221 AMS AMS 22 28 50.0
comp=Z,200nm,18.9s
TREC Trest 38.49 221 P **P** **22 14 56.8 +0.3**
WLF Walferdange 38.49 231 *e*pP pP 22 15 04.6 +2.1
CRVS Cervenica-Dubn 38.68 215 *e*P **P** **22 14 56.3 -1.8**
CRVS pmax pmax
comp=Z,43nm,3.1s
CRVS Cervenica-Dubn 38.68 215 *e*P **P** **22 14 56.3 -1.8**
KHC Kasperske Hory 38.72 223 *i*P **P** **22 14 59.1 +0.6**
KHC *e* 22 15 06.7
KHC Kasperske Hory 38.72 223 *i*P **P** **22 14 59.1 +0.6**
KHC *e*pP **pP** **22 15 06.7 +2.1**
KHC Kasperske Hory 38.72 223 AMS AMS 22 29 30.0
comp=Z,200nm,18.8s
KHC Kasperske Hory 38.72 223 *e*P **P** **22 14 59.0 +0.6**
comp=Z,4.1nm,1.0s
KHC Kasperske Hory 38.72 223 *e*P **P** **22 14 59.0 +0.6**
comp=Z,4.1nm,1.0s
WET Wettzell 38.74 224 *e*P **P** **22 14 59.5 +0.9**
comp=Z,10.0nm,1.3s
WET Wettzell 38.74 224 *e*P **P** **22 14 59.5 +0.9**
WET pmax pmax
comp=Z,10.0nm,1.3s
GEC2 GERESS Array S 39.00 223 *e*P **P** **22 15 01.6 +0.7**
comp=Z,5.0nm,0.9s
GEC2 *e*pP **pP** **22 15 08.9 +1.9**
GEC2 GERESS Array S 39.00 223 *e*P **P** **22 15 02.0 +1.1**
GEC2 *e* 22 16 28.2
GEC2 GERESS Array S 39.00 223 *e*P **P** **22 15 02.0 +1.1**
GEC2 *e**PP **PP** **22 16 28.2 -1.9**
GEC2 GERESS Array S 39.00 223 *e*P **P** **22 15 02.0 +1.1**
GERES GERESS Array B 39.00 223 P **P** **22 15 01.9 +0.9**
GERES GERESS Array B 39.00 223 P **P** **22 15 01.9 +0.9**
comp=Z,2.6nm,0.8s,baz=11,slow=8.2,SNR=28
GERES GERESS Array B 39.00 223 P **P** **22 15 01.9 +1.1**
VYHS Vyhne 39.17 218 *e*P **P** **22 15 02.3 +0.1**
VYHS pmax pmax
comp=Z,4.0nm,1.3s
VYHS Vyhne 39.17 218 *e*P **P** **22 15 02.3 +0.1**
STU Stuttgart 39.25 228 *e*P **P** **22 15 03.7 +0.8**
comp=Z,22nm,1.3s
PAGF Fort de Pagny 39.62 231 *e*P **P** **22 15 06.1 +0.2**
comp=Z,2.7nm,0.9s
PAGF Fort de Pagny 39.62 231 *e*P **P** **22 15 06.1 +0.2**
comp=Z,2.7nm,0.9s
PAGF Fort de Pagny 39.62 231 *e*P **P** **22 15 06.1 +0.2**
comp=Z,1.4nm,0.9s
FLN La Foliniere 39.69 238 *e*P **P** **22 15 05.1 -1.4**
FLN La Foliniere 39.69 238 *e*P **P** **22 15 05.1 -1.4**
FLN La Foliniere 39.69 238 *e*P **P** **22 15 05.1 -1.4**
FLN La Foliniere 39.69 238 *e*P **P** **22 15 05.1 -1.4**
CDF Champ du Feu 39.69 230 *e*P **P** **22 15 06.8 +0.2**
comp=Z,17nm,1.0s
CDF Champ du Feu 39.69 230 *e*P **P** **22 15 06.8 +0.2**
CDF pmax pmax
comp=Z,17nm,1.0s
CDF Champ du Feu 39.69 230 *e*P **P** **22 15 06.8 +0.2**
comp=Z,17nm,1.0s
CDF Champ du Feu 39.69 230 *e*P **P** **22 15 06.8 +0.2**
comp=Z,8.6nm,1.0s
MEZF Maizieres J'vi 39.70 232 *e*P **P** **22 15 06.6 0.0**
MEZF Maizieres J'vi 39.70 232 *e*P **P** **22 15 06.6 0.0**
MEZF Maizieres J'vi 39.70 232 *e*P **P** **22 15 06.6 0.0**
PSZ Piszkesteto 39.71 217 *e*P **P** **22 15 06.8 0.0**
PSZ *e**PP **pP** **22 15 15.0 +2.1**
PSZ pmax pmax
comp=Z,8.0nm,1.0s
PSZ Piszkesteto 39.71 217 *e*P **P** **22 15 06.8 0.0**
comp=Z,7.7nm,1.0s
PSZ *e*pP **pP** **22 15 15.0 +2.1**
PSZ Piszkesteto 39.71 217 *e*P **P** **22 15 06.8 0.0**
comp=Z,7.7nm,1.0s
PSZ *e*pP **pP** **22 15 15.0 +2.1**
BFO Black Forest 39.73 229 *e*P **P** **22 15 07.8 +0.9**
comp=Z,8.0nm,1.1s
BFO Black Forest 39.73 229 *e*P **P** **22 15 07.8 +0.9**
BFO pmax pmax
comp=Z,8.0nm,1.1s
BFO Black Forest 39.73 229 *e*P **P** **22 15 07.7 +0.9**
comp=Z,6.9nm,1.1s
BFO Black Forest 39.73 229 *e*P **P** **22 15 07.7 +0.9**
comp=Z,6.9nm,1.1s
BUR08 Bucovina Ar. S 39.83 211 *e*P **P** **22 15 07.7 -0.1**
BUR08 Bucovina Ar. S 39.83 211 *e*P **P** **22 15 07.7 -0.1**
LDF La Druitiere 39.84 238 *e*P **P** **22 15 06.6 -1.1**
comp=Z,22nm,1.1s
LDF La Druitiere 39.84 238 *e*P **P** **22 15 06.6 -1.1**
LDF pmax pmax
comp=Z,22nm,1.0s
LDF La Druitiere 39.84 238 *e*P **P** **22 15 06.6 -1.1**
comp=Z,22nm,1.0s
LDF La Druitiere 39.84 238 *e*P **P** **22 15 06.6 -1.1**
comp=Z,11nm,1.1s
ECH Echery 39.89 230 *e*P **P** **22 15 08.6 +0.4**
ECH *e**PP **pP** **22 15 16.2 +1.9**
ECH pmax pmax
comp=Z,8.0nm,1.0s
ECH Echery 39.89 230 *e*P **P** **22 15 08.6 +0.4**
comp=Z,8.2nm,1.0s
ECH *e*pP **pP** **22 15 16.2 +1.9**
ECH Echery 39.89 230 *e*P **P** **22 15 08.6 +0.4**
comp=Z,8.2nm,1.0s
ECH *e*pP **pP** **22 15 16.2 +1.9**
SFTF Sexfontaines 39.99 232 *e*P **P** **22 15 08.7 -0.4**
SFTF Sexfontaines 39.99 232 *e*P **P** **22 15 08.7 -0.4**
SFTF Sexfontaines 39.99 232 *e*P **P** **22 15 08.7 -0.4**
GRR Gorron 40.08 238 *e*P **P** **22 15 08.7 -1.0**
comp=Z,23nm,1.0s
GRR Gorron 40.08 238 *e*P **P** **22 15 08.7 -1.0**
GRR pmax pmax
comp=Z,23nm,1.0s
GRR Gorron 40.08 238 *e*P **P** **22 15 08.7 -1.0**
comp=Z,23nm,1.0s
GRR Gorron 40.08 238 *e*P **P** **22 15 08.7 -1.0**
comp=Z,11nm,1.0s
HAU Haudompre 40.14 231 *e*P **P** **22 15 10.3 0.0**
comp=Z,16nm,1.0s
HAU Haudompre 40.14 231 *e*P **P** **22 15 10.3 0.0**
HAU pmax pmax
comp=Z,16nm,1.0s
HAU Haudompre 40.14 231 *e*P **P** **22 15 10.3 0.0**
comp=Z,16nm,1.0s
HAU Haudompre 40.14 231 *e*P **P** **22 15 10.3 0.0**
comp=Z,7.8nm,1.0s
RJOB Jochberg 40.15 224 *e*P **P** **22 15 11.2 +0.8**
comp=Z,6.0nm,0.8s

SGMF **Saint Gilles** 40.29 240 *e*P P 22 15 10.8 -0.7
comp=Z,22nm,1.1s
SGMF **Saint Gilles** 40.29 240 *e*P P 22 15 10.8 -0.7
SGMF pmax pmax
comp=Z,22nm,1.1s
SGMF **Saint Gilles** 40.29 240 *e*P P 22 15 10.8 -0.7
comp=Z,22nm,1.1s
SGMF **Saint Gilles** 40.29 240 *e*P P 22 15 10.8 -0.7
comp=Z,11nm,1.1s
HINF **Hinteralfeld** 40.30 230 *e*P P 22 15 11.5 -0.2
comp=Z,17nm,0.8s
HINF **Hinteralfeld** 40.30 230 *e*P P 22 15 11.5 -0.2
HINF pmax pmax
comp=Z,17nm,0.8s
HINF **Hinteralfeld** 40.30 230 *e*P P 22 15 11.5 -0.2
comp=Z,17nm,0.8s
HINF **Hinteralfeld** 40.30 230 *e*P P 22 15 11.5 -0.2
comp=Z,8.5nm,0.8s
SONM **Songino Array** 40.48 125 P P 22 15 13.5 +0.2
SONM **Songino Array** 40.48 125 P P 22 15 13.5 +0.2
comp=Z,0.5nm,0.7s,baz=340,slow=7.1,SNR=7.7
SONM LR LR 22 33 17.5
comp=Z,83nm,19.1s,baz=137,slow=38
SONM **Songino Array** 40.48 125 P P 22 15 13.5 +0.2
MKAR **Makanchi Array** 40.64 150 *e*P P 22 15 13.8 -0.6
MKAR *e* 22 16 50.4
MKAR *e* 22 17 14.3
MKAR 22 17 14.8
MKAR **Makanchi Array** 40.64 150 *e*P P 22 15 13.8 -0.6
MKAR *e*PP PnPn 22 16 50.4 -1.6
MKAR *e*PcP PcP 22 17 14.2 -1.6
MKAR PcP PcP 22 17 14.8 -1.0
MKAR **Makanchi Array** 40.64 150 P P 22 15 13.9 -0.6
comp=Z,1.5nm,0.9s,baz=12,slow=6.2,SNR=11
MKAR PcP PcP 22 17 14.8 -1.0
comp=Z,0.9nm,0.9s,baz=349,slow=4.4,SNR=3.9
MKAR LR LR 22 33 48.3
comp=Z,89nm,20.0s,baz=322,slow=39
MKAR **Makanchi Array** 40.64 150 *e*P P 22 15 13.8 -0.6
QUIF **Quistinic** 40.66 241 *e*P P 22 15 13.9 -0.6
comp=Z,28nm,1.1s
QUIF **Quistinic** 40.66 241 *e*P P 22 15 13.9 -0.6
QUIF pmax pmax
comp=Z,28nm,1.1s
QUIF **Quistinic** 40.66 241 *e*P P 22 15 13.9 -0.6
comp=Z,28nm,1.1s
QUIF **Quistinic** 40.66 241 *e*P P 22 15 13.9 -0.6
comp=Z,14nm,1.1s
LOR **Lormes** 40.98 233 *e*P P 22 15 16.6 -0.6
comp=Z,6.0nm,0.8s
LOR **Lormes** 40.98 233 *e*P P 22 15 16.6 -0.6
comp=Z,6.0nm,0.8s
LOR **Lormes** 40.98 233 *e*P P 22 15 16.6 -0.6
comp=Z,3.0nm,0.8s
PERS **Pernice** 41.16 221 *i*P P 22 15 19.5 +0.7
SSF **Saint Saulge** 41.20 234 *e*P P 22 15 18.5 -0.5
comp=Z,8.7nm,1.0s
SSF **Saint Saulge** 41.20 234 *e*P P 22 15 18.5 -0.5
SSF pmax pmax
comp=Z,9.0nm,1.0s
SSF **Saint Saulge** 41.20 234 *e*P P 22 15 18.5 -0.5
comp=Z,8.7nm,1.0s
SSF **Saint Saulge** 41.20 234 *e*P P 22 15 18.5 -0.5
comp=Z,4.3nm,1.0s
DAVOX **Davos/Dischmat** 41.22 227 P P 22 15 20.6 +1.2
DAVOX **Davos/Dischmat** 41.22 227 P P 22 15 20.5 +1.2
comp=Z,2.1nm,0.8s,baz=0.0,slow=12,SNR=3.1
DAVOX **Davos/Dischmat** 41.22 227 P P 22 15 20.5 +1.2
FUORN **Ofenpass-Fuorn** 41.36 227 *e*P P 22 15 22.2 +1.6
comp=Z,12nm,1.2s
FUORN *e*PP PP 22 16 55.7 -0.2
FUORN **Ofenpass-Fuorn** 41.36 227 *e*P P 22 15 22.2 +1.6
comp=Z,12nm,1.2s
AVF **Avril sur Loir** 41.48 234 *e*P P 22 15 20.8 -0.5
comp=Z,27nm,1.4s
AVF **Avril sur Loir** 41.48 234 *e*P P 22 15 20.8 -0.5
AVF pmax pmax
comp=Z,27nm,1.4s
AVF **Avril sur Loir** 41.48 234 *e*P P 22 15 20.8 -0.5
comp=Z,27nm,1.4s
AVF **Avril sur Loir** 41.48 234 *e*P P 22 15 20.8 -0.5
comp=Z,14nm,1.4s
GORS **Gorjuse** 41.52 223 *i*P P 22 15 22.2 +0.5
CABF **La Chapelle** 41.54 231 *e*P P 22 15 21.8 -0.1
comp=Z,8.8nm,0.9s
CABF **La Chapelle** 41.54 231 *e*P P 22 15 21.8 -0.1
CABF pmax pmax
comp=Z,9.0nm,0.9s
CABF **La Chapelle** 41.54 231 *e*P P 22 15 21.8 -0.1
comp=Z,8.8nm,0.9s
CABF **La Chapelle** 41.54 231 *e*P P 22 15 21.8 -0.1
comp=Z,4.4nm,0.9s
SMF **Signal de Mont** 41.60 233 *e*P P 22 15 21.5 -0.8
comp=Z,11nm,1.1s
SMF **Signal de Mont** 41.60 233 *e*P P 22 15 21.5 -0.8
SMF pmax pmax
comp=Z,11nm,1.1s
SMF **Signal de Mont** 41.60 233 *e*P P 22 15 21.5 -0.8
comp=Z,11nm,1.1s
SMF **Signal de Mont** 41.60 233 *e*P P 22 15 21.5 -0.8
comp=Z,5.5nm,1.1s
BGF **Bois d'Agland** 41.74 234 *e*P P 22 15 23.1 -0.3
comp=Z,4.8nm,1.2s
BGF **Bois d'Agland** 41.74 234 *e*P P 22 15 23.1 -0.3
BGF pmax pmax
comp=Z,4.8nm,1.2s
BGF **Bois d'Agland** 41.74 234 *e*P P 22 15 23.1 -0.3
comp=Z,4.8nm,1.2s
BGF **Bois d'Agland** 41.74 234 *e*P P 22 15 23.1 -0.3
comp=Z,24nm,1.2s
MFF **Saint Martin d** 41.83 237 *e*P P 22 15 23.7 -0.4
comp=Z,31nm,1.3s
MFF **Saint Martin d** 41.83 237 *e*P P 22 15 23.7 -0.4
MFF pmax pmax
comp=Z,31nm,1.3s
MFF **Saint Martin d** 41.83 237 *e*P P 22 15 23.7 -0.4
comp=Z,31nm,1.3s
MFF **Saint Martin d** 41.83 237 *e*P P 22 15 23.7 -0.4
comp=Z,15nm,1.3s
LEGS **Legarje** 41.84 221 *e*P P 22 15 24.6 +0.3
GCIS **Gornji Cirnik** 41.91 221 *i*P P 22 15 25.2 +0.4
VISS **Visnje** 42.00 222 *i*P P 22 15 25.2 -0.4
TCF **Toulx Ste Croi** 42.03 235 *e*P P 22 15 25.3 -0.6
comp=Z,29nm,1.3s
TCF **Toulx Ste Croi** 42.03 235 *e*P P 22 15 25.3 -0.6
TCF pmax pmax
comp=Z,29nm,1.3s
TCF **Toulx Ste Croi** 42.03 235 *e*P P 22 15 25.3 -0.6
comp=Z,29nm,1.3s
TCF **Toulx Ste Croi** 42.03 235 *e*P P 22 15 25.3 -0.6
comp=Z,15nm,1.3s
LPL **La Plagne** 42.61 230 *e*P P 22 15 31.3 +0.5
comp=Z,6.3nm,0.8s
LPL **La Plagne** 42.61 230 *e*P P 22 15 31.3 +0.5
LPL pmax pmax
comp=Z,6.0nm,0.8s
LPL **La Plagne** 42.61 230 *e*P P 22 15 31.3 +0.5
comp=Z,6.3nm,0.8s
LPL **La Plagne** 42.61 230 *e*P P 22 15 31.3 +0.5
comp=Z,3.2nm,0.8s
LPG **La Plagne** 42.62 230 *e*P P 22 15 31.6 +0.6
LPG **La Plagne** 42.62 230 *e*P P 22 15 31.6 +0.6
LPG **La Plagne** 42.62 230 *e*P P 22 15 31.6 +0.6
LPG **La Plagne** 42.62 230 *e*P P 22 15 31.6 +0.6
ULM **Lac du Bonnet** 42.69 332 LR LR 22 33 06.6
comp=Z,104nm,20.2s,baz=6.1,slow=36
RJF **Les Rejaudoux** 43.05 236 *e*P P 22 15 33.7 -0.4
comp=Z,41nm,1.2s
RJF **Les Rejaudoux** 43.05 236 *e*P P 22 15 33.7 -0.4
RJF pmax pmax
comp=Z,41nm,1.2s
RJF **Les Rejaudoux** 43.05 236 *e*P P 22 15 33.7 -0.4
comp=Z,41nm,1.2s
RJF **Les Rejaudoux** 43.05 236 *e*P P 22 15 33.7 -0.4
comp=Z,20nm,1.2s
ORIF **Oris-en-Rattie** 43.24 231 *e*P P 22 15 35.8 0.0
comp=Z,9.3nm,0.9s
ORIF **Oris-en-Rattie** 43.24 231 *e*P P 22 15 35.8 0.0
ORIF pmax pmax
comp=Z,9.0nm,0.9s
ORIF **Oris-en-Rattie** 43.24 231 *e*P P 22 15 35.8 0.0
comp=Z,9.3nm,0.9s
ORIF **Oris-en-Rattie** 43.24 231 *e*P P 22 15 35.8 0.0
comp=Z,4.7nm,0.9s
VIVF **Saint-Julien-I** 43.35 232 *e*P P 22 15 36.2 -0.4
VIVF **Saint-Julien-I** 43.35 232 *e*P P 22 15 36.2 -0.4

VIVF **Saint-Julien-I** 43.35 232 *e*P P 22 15 36.2 -0.4
VIVF **Saint-Julien-I** 43.35 232 *e*P P 22 15 36.2 -0.4
CAF **Calviac** 43.40 235 *e*P P 22 15 36.7 -0.3
CAF **Calviac** 43.40 235 *e*P P 22 15 36.7 -0.3
CAF **Calviac** 43.40 235 *e*P P 22 15 36.7 -0.3
CAF **Calviac** 43.40 235 *e*P P 22 15 36.7 -0.3
LFF **La Frestale** 43.45 236 *e*P P 22 15 38.1 +0.8
comp=Z,27nm,1.2s
LFF **La Frestale** 43.45 236 *e*P P 22 15 38.1 +0.8
LFF pmax pmax
comp=Z,27nm,1.2s
LFF **La Frestale** 43.45 236 *e*P P 22 15 38.1 +0.8
comp=Z,27nm,1.2s
LFF **La Frestale** 43.45 236 *e*P P 22 15 38.1 +0.8
comp=Z,14nm,1.2s
WMQ **Urumqi** 43.77 145 *e*P P 22 15 43.4 +3.4
WMQ pP pP 22 15 51.0 +4.9
WMQ pmax pmax
comp=Z,6.0nm,1.0s
WMQ pmax pmax
comp=Z,110nm,4.0s
WMQ LR LR
comp=N,200nm,20.4s
WMQ LR LR
comp=E,270nm,19.2s
WMQ LR LR
comp=Z,240nm,19.2s
MAK **Makhachkala** 44.11 187 *e*P P 22 15 46.2 +3.6
MAK *e* 22 17 21.6
MAK *e*S S 22 22 18.5 +4.7
MAK pmax pmax
comp=Z,65nm,1.1s
LASF **Ste Croix** 44.17 233 *e*P P 22 15 43.7 +0.6
comp=Z,17nm,1.4s
LASF **Ste Croix** 44.17 233 *e*P P 22 15 43.7 +0.6
comp=Z,17nm,1.4s
LASF **Ste Croix** 44.17 233 *e*P P 22 15 43.7 +0.6
comp=Z,8.7nm,1.4s
A22A **Carney Farms,** 44.17 341 ⇑P P 22 15 42.8 -0.3
baz=44
SMRF **Simiane la Rot** 44.19 231 *e*P P 22 15 43.6 +0.2
comp=Z,37nm,1.5s
SMRF **Simiane la Rot** 44.19 231 *e*P P 22 15 43.6 +0.2
comp=Z,37nm,1.5s
SMRF **Simiane la Rot** 44.19 231 *e*P P 22 15 43.6 +0.2
comp=Z,18nm,1.5s
WALA **Waterton Lakes** 44.22 349 *e*P P 22 15 44.8 +1.2
WALA **Waterton Lakes** 44.22 349 *e*P P 22 15 44.8 +1.2
SBF **Sospel** 44.23 229 *e*P P 22 15 43.3 -0.4
SBF **Sospel** 44.23 229 *e*P P 22 15 43.3 -0.4
SBF **Sospel** 44.23 229 *e*P P 22 15 43.3 -0.4
SBF **Sospel** 44.23 229 *e*P P 22 15 43.3 -0.4
A15A **Johnson Ranch,** 44.28 348 ⇓P P 22 15 43.5 -0.6
baz=44,SNR=9.4
FRF **La Foret Royal** 44.56 230 *e*P P 22 15 46.1 -0.2
FRF **La Foret Royal** 44.56 230 *e*P P 22 15 46.1 -0.2
FRF **La Foret Royal** 44.56 230 *e*P P 22 15 46.1 -0.2
FRF **La Foret Royal** 44.56 230 *e*P P 22 15 46.1 -0.2
AAK **Ala-Archa** 44.62 159⇓*e*P P 22 15 47.3 +0.4
AAK pmax pmax
comp=Z,8.0nm,1.7s
AGMN **Agassiz Nation** 44.65 332 *e*P P 22 15 46.8 -0.1
comp=Z,4.7nm,0.8s
AGMN **Agassiz Nation** 44.65 332 *e*P P 22 15 46.8 -0.1
comp=Z,4.7nm,0.8s
LMR **La Mourre** 44.79 230 *e*P P 22 15 47.8 -0.3
LMR **La Mourre** 44.79 230 *e*P P 22 15 47.8 -0.3
LMR **La Mourre** 44.79 230 *e*P P 22 15 47.8 -0.3
LMR **La Mourre** 44.79 230 *e*P P 22 15 47.8 -0.3
B13A **Whitefish** 44.91 349 ⇑P P 22 15 49.9 +0.9
baz=45
B14A **Marquette Ranc** 44.91 348 ⇓P P 22 15 50.4 +1.3
baz=45
B17A **L&G Farms, Che** 44.95 346 ⇑P P 22 15 49.4 +0.1
baz=45
B15A **Bradely Ranch,** 44.95 348 ⇑P P 22 15 48.8 -0.6
baz=45,SNR=6.3
MTLF **Montolieu** 44.97 235 *e*P P 22 15 49.5 -0.1
MTLF **Montolieu** 44.97 235 *e*P P 22 15 49.5 -0.1
MTLF **Montolieu** 44.97 235 *e*P P 22 15 49.5 -0.1
MTLF **Montolieu** 44.97 235 *e*P P 22 15 49.5 -0.1
NEW **Newport** 45.04 352 *e*P P 22 15 51.7 +1.6
comp=Z,6.4nm,1.1s
NEW **Newport** 45.04 352 *e*P P 22 15 51.7 +1.6
comp=Z,6.4nm,1.1s
NEW **Newport** 45.04 352 ⇓P P 22 15 51.8 +1.8
baz=45,SNR=5.4
C23A **Lambert** 45.35 341 ⇑P P 22 15 52.1 -0.4
baz=45
EPF **Esparros** 45.37 237 *e*P P 22 15 52.0 -0.7
comp=Z,17nm,1.1s
EPF **Esparros** 45.37 237 *e*P P 22 15 52.0 -0.7
EPF pmax pmax
comp=Z,17nm,1.1s
EPF **Esparros** 45.37 237 *e*P P 22 15 52.0 -0.7
comp=Z,17nm,1.1s
EPF **Esparros** 45.37 237 *e*P P 22 15 52.0 -0.7
comp=Z,8.7nm,1.1s
CN2 **Changchun** 45.45 106 *e*P P 22 15 54.0 +0.7
PGF **Pioggiola** 45.48 228 *e*P P 22 15 53.4 -0.3
comp=Z,18nm,1.0s
PGF **Pioggiola** 45.48 228 *e*P P 22 15 53.4 -0.3
PGF pmax pmax
comp=Z,18nm,1.0s
PGF **Pioggiola** 45.48 228 *e*P P 22 15 53.4 -0.3
comp=Z,18nm,1.0s
PGF **Pioggiola** 45.48 228 *e*P P 22 15 53.4 -0.3
comp=Z,9.2nm,1.0s
AQU **L'Aquila** 45.50 223 *e*P P 22 15 55.2 +1.4
comp=Z,17nm,1.2s
AQU **L'Aquila** 45.50 223 *e*P P 22 15 55.2 +1.4
comp=Z,17nm,1.2s
JTMT **Jette** 45.53 349 *e*P P 22 15 54.9 +0.8
JTMT **Jette** 45.53 349 *e*P P 22 15 54.9 +0.8
ETSF **Etsaut** 45.54 237 *e*P P 22 15 54.6 +0.5
comp=Z,10nm,1.1s
ETSF **Etsaut** 45.54 237 *e*P P 22 15 54.6 +0.5
ETSF pmax pmax
comp=Z,10.0nm,1.0s
ETSF **Etsaut** 45.54 237 *e*P P 22 15 54.6 +0.5
comp=Z,10nm,1.0s
ETSF **Etsaut** 45.54 237 *e*P P 22 15 54.6 +0.5
comp=Z,5.1nm,1.1s
C13A **Hot Springs** 45.60 350 ⇑P P 22 15 53.3 -1.3
baz=45
C17A **Wharram Farm,** 45.60 346 ⇓P P 22 15 55.1 +0.5
baz=45
SLMT **Seeley Lake** 46.03 349 *e*P P 22 15 59.6 +1.5
SLMT **Seeley Lake** 46.03 349 *e*P P 22 15 59.6 +1.5
D20A **Manuel Ranch,** 46.11 343 ⇓P P 22 15 59.7 +1.2
baz=46,SNR=5.1
D13A **Huson** 46.19 349 ⇓P P 22 15 59.2 0.0
baz=46,SNR=6.2
D14A **Greenough** 46.19 349 ⇑P P 22 15 59.7 +0.5
baz=46,SNR=5.8
D16A **Dana Ranch, Ca** 46.22 347 ⇓P P 22 15 59.5 0.0
baz=46
D12A **Red Ives Fores** 46.24 350 ⇓P P 22 15 59.9 +0.3
baz=46
CHMT **Chamberlain Mo** 46.35 348 *e*P P 22 16 01.8 +1.1
CHMT **Chamberlain Mo** 46.35 348 *e*P P 22 16 01.8 +1.1
MSO **Missoula** 46.45 349 *e*P P 22 16 00.8 -0.5
comp=Z,6.4nm,1.1s
MSO **Missoula** 46.45 349 *e*P P 22 16 00.8 -0.5
comp=Z,6.4nm,1.1s
LON **Longmire** 46.58 356 *e*P P 22 16 04.5 +2.2
LON *e* 22 17 31.6
LON pmax pmax
comp=Z,4.0nm,1.0s
LON **Longmire** 46.58 356 *e*P P 22 16 04.5 +2.2
comp=Z,4.2nm,1.0s
LON *e*PcP PcP 22 17 31.6 -4.4
LON **Longmire** 46.58 356 *e*P P 22 16 04.5 +2.2
comp=Z,4.2nm,1.0s
E17A **Martinsdale** 46.78 346 ⇑P P 22 16 04.1 +0.1
baz=47
E12A **Beaver Dam Sad** 46.88 350 ⇑P P 22 16 04.3 -0.4
baz=47
F24A **Ekalaka** 47.29 340 ⇑P P 22 16 08.6 +0.7
baz=47
F18A **Big Timber** 47.32 345 ⇓P P 22 16 08.3 +0.2
baz=47
F17A **Fitzpatrick Pl** 47.33 346 ⇓P P 22 16 08.2 0.0
baz=47,SNR=5.2
BRTR **Keskin Array B** 47.53 202 P P 22 16 10.8 +1.0
BRTR **Keskin Array B** 47.53 202 P P 22 16 10.8 +1.0

comp=Z,1.7nm,0.9s,baz=18,slow=6.5,SNR=7.0
BRTR **Keskin Array B** 47.53 202 P P 22 16 10.9 +1.0
F12A **Elk City** 47.53 350 ⇑P P 22 16 09.3 -0.5
baz=47,SNR=5.7
BOZ **Bozeman (W)** 47.60 347 *e*P P 22 16 11.8 +1.4
BOZ pmax pmax
comp=Z,4.0nm,1.1s
BOZ **Bozeman (W)** 47.60 347 *e*P P 22 16 11.8 +1.4
comp=Z,3.6nm,1.1s
BOZ **Bozeman (W)** 47.60 347 *e*P P 22 16 11.8 +1.4
comp=Z,3.6nm,1.1s
HHC **Hu-ho-hao-te** 47.69 120 *e*P P 22 16 09.5 -1.5
HHC pP pP 22 16 16.8 -0.4
HHC PP PP 22 18 02.8 +0.4
HHC S S 22 23 05.5 -0.1
HHC sS sS 22 23 13.1 -2.7
HHC ScS ScS 22 26 05.1 +2.2
HHC SS SS 22 26 27.8 -5.5
HHC pmax pmax
comp=Z,37nm,0.8s
HHC pmax pmax
comp=Z,120nm,4.9s
HHC LR LR
comp=N,200nm,15.1s
HHC LR LR
comp=E,230nm,16.2s
HHC LR LR
comp=Z,130nm,18.4s
DLMT **Dillon** 47.90 348 *e*P P 22 16 13.3 +0.6
comp=Z,4.3nm,1.0s
DLMT **Dillon** 47.90 348 *e*P P 22 16 13.3 +0.6
comp=Z,4.3nm,1.0s
G12A **Big Creek, Yel** 48.16 350 ⇑P P 22 16 14.9 +0.2
baz=48
MCMT **McKenzie Canyo** 48.44 348 *e*P P 22 16 17.4 +0.4
MCMT **McKenzie Canyo** 48.44 348 *e*P P 22 16 17.4 +0.4
TIP **Timpagrande** 48.55 219 *e*P P 22 16 18.1 +0.5
comp=Z,5.5nm,0.6s
TIP *e*PcP PcP 22 17 44.8 +1.7
TIP **Timpagrande** 48.55 219 *e*P P 22 16 18.1 +0.5
comp=Z,5.5nm,0.6s
H18A **Shoshone NF, C** 48.55 345 ⇓P P 22 16 16.8 -0.9
baz=48
H21A **Big Horn, Sher** 48.55 342 ⇓P P 22 16 17.9 +0.2
baz=48,SNR=5.7
BRSD **Miller** 48.58 335 ⇑P P 22 16 17.3 -0.4
baz=48
H12A **Diamond D Ranc** 48.74 350 ⇑P P 22 16 18.9 -0.3
baz=48,SNR=5.7
ESDC **Sonseca Array** 48.92 241 P P 22 16 20.5 +0.1
ESDC **Sonseca Array** 48.92 241 P P 22 16 20.5 +0.1
comp=Z,1.7nm,0.7s,baz=3.3,slow=7.8,SNR=15
ESDC **Sonseca Array** 48.92 241 P P 22 16 20.5 +0.1
RSSD **Black Hills** 49.01 339 *e*P P 22 16 21.3 0.0
RSSD pmax pmax
comp=Z,8.0nm,1.0s
RSSD **Black Hills** 49.01 339 *e*P P 22 16 21.3 0.0
comp=Z,8.4nm,1.0s
RSSD **Black Hills** 49.01 339 *e*P P 22 16 21.3 0.0
comp=Z,8.4nm,1.0s
PAB **San Pablo** 49.06 241 *e*P P 22 16 21.7 +0.1
PAB *e**PP pP 22 16 28.6 +0.8
PAB pmax pmax
comp=Z,5.0nm,1.1s
PAB **San Pablo** 49.06 241 *e*P P 22 16 21.6 +0.1
comp=Z,4.8nm,1.1s
PAB *e*pP pP 22 16 28.6 +0.8
PAB **San Pablo** 49.06 241 *e*P P 22 16 21.6 +0.1
comp=Z,4.8nm,1.1s
PAB *e*pP pP 22 16 28.6 +0.8
ECSD **EROS Data Cent** 49.23 332 *e*P P 22 16 21.9 -0.8
comp=Z,8.3nm,1.0s
ECSD **EROS Data Cent** 49.23 332 *e*P P 22 16 22.0 -0.8
comp=Z,8.3nm,1.0s
I21A **Big Trails, Te** 49.37 343 ⇑P P 22 16 23.2 -0.8
baz=49,SNR=6.8
MOOW **Moose Ponds** 49.49 346 *e*P P 22 16 26.4 +1.4
comp=Z,4.4nm,1.2s
MOOW **Moose Ponds** 49.49 346 *e*P P 22 16 26.4 +1.4
comp=Z,4.4nm,1.2s
J22A **Midwest** 49.76 342 ⇑P P 22 16 25.9 -1.0
baz=50
J20A **Shoshoni** 49.84 343 ⇓P P 22 16 27.7 +0.1
baz=50,SNR=8.0
PDAR **Pinedale Array** 50.45 345 P P 22 16 32.0 -0.3
PDAR **Pinedale Array** 50.45 345 P P 22 16 32.0 -0.3
comp=Z,2.2nm,0.9s,baz=30,slow=4.8,SNR=12
PDAR LR LR 22 39 02.6
comp=Z,119nm,18.3s,baz=32,slow=38
PDAR **Pinedale Array** 50.45 345 P P 22 16 32.0 -0.3
K22A **Casper** 50.52 342 ⇑P P 22 16 31.7 -1.0
baz=50
HUMO **Hull Mountain** 50.73 357 *e*P P 22 16 36.3 +2.2
comp=Z,6.3nm,1.2s
HUMO *e*PcP PcP 22 17 51.0 0.0
HUMO **Hull Mountain** 50.73 357 *e*P P 22 16 36.3 +2.2
comp=Z,6.3nm,1.2s
HUMO **Hull Mountain** 50.73 357 *e*PcP PcP 22 17 51.0 0.0
WVOR **Wild Horse Val** 50.88 353 *e*P P 22 16 34.1 -1.3
WVOR **Wild Horse Val** 50.88 353 *e*P P 22 16 34.1 -1.3
WVOR **Wild Horse Val** 50.88 353 *e*P P 22 16 34.1 -1.3
L21A **Rawlins** 51.22 343 ⇑P P 22 16 36.7 -1.4
baz=51
M21A **Separation Pea** 51.58 343 ⇓P P 22 16 40.0 -0.8
baz=51
HWUT **Hardware Ranch** 51.64 347 *e*P P 22 16 41.4 +0.2
comp=Z,4.9nm,0.9s
HWUT **Hardware Ranch** 51.64 347 *e*P P 22 16 41.4 +0.2
comp=Z,4.8nm,0.9s
LZH **Lanzhou** 52.09 129 *e*P P 22 16 45.5 +0.9
LZH pP pP 22 16 50.8 0.0
LZH sP sP 22 16 52.8 -0.4
LZH *e*S S 22 24 09.0 +1.8
LZH sS sS 22 24 15.1 -2.3
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,68nm,4.1s
LZH LR LR
comp=N,200nm,11.5s
LZH LR LR
comp=E,240nm,12.2s
LZH LR LR
comp=Z,320nm,16.4s
KEST **Kesra** 52.26 227 P P 22 16 46.7 +1.0
KEST **Kesra** 52.26 227 P P 22 16 46.7 +1.0
comp=Z,3.5nm,1.0s,baz=7.1,slow=8.1,SNR=7.2
KEST **Kesra** 52.26 227 P P 22 16 46.7 +1.0
O22A **Kremmling** 53.01 342 ⇑P P 22 16 51.8 +0.3
baz=53
ISCO **Idaho Springs** 53.35 341 *e*P P 22 16 54.0 -0.1
ISCO pmax pmax
comp=Z,2.0nm,0.8s
ISCO **Idaho Springs** 53.35 341 *e*P P 22 16 54.0 -0.1
comp=Z,2.0nm,0.8s
ISCO **Idaho Springs** 53.35 341 *e*P P 22 16 54.0 -0.1
comp=Z,2.0nm,0.8s
ISCO **Idaho Springs** 53.35 341 ⇑P P 22 16 53.4 -0.7
baz=53
P23A **Jefferson** 53.78 341 ⇓P P 22 16 57.2 -0.1
baz=54
NVAR **Mina Array Bea** 54.88 353 P P 22 17 05.8 +0.7
NVAR **Mina Array Bea** 54.88 353 P P 22 17 05.8 +0.7
comp=Z,0.9nm,0.7s,baz=356,slow=5.5,SNR=7.8
NVAR **Mina Array Bea** 54.88 353 P P 22 17 05.8 +0.7
R11A **Troy Canyon, C** 54.94 350 ⇓P P 22 17 05.7 +0.3
baz=55
R20A **Redvale** 55.01 343 ⇑P P 22 17 05.8 -0.2
baz=55
S20A **Disappointment** 55.37 343 ⇓P P 22 17 08.7 0.0
baz=55
S22A **4UR Ranch, Cre** 55.42 342 ⇑P P 22 17 09.3 +0.2
baz=55
S29A **Ulysses** 55.44 336 ⇓P P 22 17 08.7 -0.3
baz=55
S25A **Robets Cordova** 55.47 340 ⇓P P 22 17 09.6 +0.3
baz=55
CD2 **Chengdu** 57.24 129 *e*P P 22 17 23.3 +1.5
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,50nm,10.2s
V25A **Rancho No Teng** 57.29 340 ⇓P P 22 17 21.4 -0.9
baz=57
V26A **Tequesquite Ra** 57.31 339 ⇓P P 22 17 21.3 -1.1
baz=57

V20A	**Brimhall**	**57.39**	**343**	⇑P		**P**	**22 17 22.8**	**-0.3**
	baz=57							
TUC	**Tucson**	**60.91**	**346**	*e*P		**P**	**22 17 47.1**	**-0.2**
TUC					pmax	pmax		
	comp=Z,19nm,1.0s							
TUC	**Tucson**	**60.91**	**346**	*e*P		**P**	**22 17 47.0**	**-0.2**
	comp=Z,19nm,1.0s							
TUC	**Tucson**	**60.91**	**346**	*e*P		**P**	**22 17 47.0**	**-0.2**
	comp=Z,19nm,1.0s							
GYA	**Guiyang**	**61.80**	**126**	*e*P		**P**	**22 17 53.8**	**+0.4**
GYA					pmax	pmax		
	comp=Z,10.0nm,0.8s							
JCT	**Junction City**	**62.53**	**335**	*e*P		**P**	**22 17 57.4**	**-0.7**
JCT					pmax	pmax		
	comp=Z,8.0nm,1.1s							
JCT	**Junction City**	**62.53**	**335**	*e*P		**P**	**22 17 57.4**	**-0.7**
	comp=Z,8.2nm,1.1s							
JCT	**Junction City**	**62.53**	**335**	*e*P		**P**	**22 17 57.4**	**-0.7**
	comp=Z,8.2nm,1.1s							
KMI	**Kunming**	**62.96**	**130**	P		**P**	**22 18 02.8**	**+1.5**
KMI					pmax	pmax		
	comp=Z,3.0nm,0.9s							
RAYN	**Ar Rayn**	**63.51**	**189**	*e*P		**P**	**22 18 05.4**	**+0.7**
	comp=Z,6.4nm,1.2s							
RAYN	**Ar Rayn**	**63.51**	**189**	*e*P		**P**	**22 18 05.4**	**+0.7**
	comp=Z,6.4nm,1.2s							
TXAR	**Lajitas Array**	**63.75**	**339**	P		**P**	**22 18 05.5**	**-0.9**
TXAR	**Lajitas Array**	**63.75**	**339**	P		**P**	**22 18 05.5**	**-0.9**
	comp=Z,1.6nm,1.0s,baz=16,slow=3.1,SNR=13							
TXAR				LR		LR	22 47 04.4	
	comp=Z,170nm,19.3s,baz=180,slow=37							
TXAR	**Lajitas Array**	**63.75**	**339**	P		**P**	**22 18 05.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**69.43**	**135**	P		**P**	**22 18 42.0**	**-0.6**
CMAR	**Chiang Mai Arr**	**69.43**	**135**	P		**P**	**22 18 42.0**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=347,slow=7.1,SNR=10							
CMAR				LR		LR	22 51 08.0	
	comp=Z,44nm,21.2s,baz=30,slow=38							
CMAR	**Chiang Mai Arr**	**69.43**	**135**	P		**P**	**22 18 42.0**	**-0.6**
TORD	**Torodi Ar. Bea**	**75.04**	**233**	P		**P**	**22 19 15.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**75.04**	**233**	P		**P**	**22 19 15.4**	**-0.7**
	comp=Z,1nm,0.7s,baz=354,slow=4.6,SNR=18							
TORD	**Torodi Ar. Bea**	**75.04**	**233**	P		**P**	**22 19 15.4**	**-0.7**

ISK ***13*** *22:12:12.6,37.65N×36.35E,h4km,MD2.7*
DDA ***13*** *22:12:13.7,37.62N×36.36E,h3km,MD2.8*
CSEM ***13*** *22:12:13.3±0.3,37.68N×36.32E,h2km,MD2.8,Error ellipse: s-maj=8.9km s-min=5.1km az=171.0*

ISC 13 22:12:13.8±1.1,37.64N±0.03×36.35E±0.03,h2km±11km, n16,σ0.51/30,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.06**	**181**	*i* P	**Pg**	**22 12 14.8**	**-0.3**
ANDN				*i* S	**Sg**	**22 12 16.3**	**+0.3**
ANDN	**Andirin**	**0.06**	**181**	*i* P	**Sg**	**22 12 14.8**	**-0.3**
ANDN				*i* S	**Sg**	**22 12 16.3**	**+0.3**
AYKD	**Aykdinkavak**	**0.43**	**122**	*i* P	**Pg**	**22 12 21.7**	**-0.4**
AYKD				*i* S	**Sg**	**22 12 27.8**	**+0.1**
KOZT	**Kozan**	**0.44**	**249**	*e*PG	**Pg**	**22 12 21.8**	**-0.5**
KOZT				*e*SG	**Sg**	**22 12 29.0**	**+0.9**
KOZT	**Kozan**	**0.44**	**249**	*e*Pg	**Pg**	**22 12 21.8**	**-0.5**
KOZT				*e*Sg	**Sg**	**22 12 29.0**	**+0.9**
KMRS	**Kahramanmaras**	**0.46**	**107**	*e*PG	**Pg**	**22 12 22.2**	**-0.4**
KMRS				*e*SG	**Sg**	**22 12 29.1**	**+0.6**
KMRS	**Kahramanmaras**	**0.46**	**107**	*e*Pg	**Pg**	**22 12 22.3**	**-0.4**
KMRS				*e*Sg	**Sg**	**22 12 29.2**	**+0.6**
SARI	**SarD1z-Kayseri**	**0.77**	**4**	*e*PG	**Pg**	**22 12 28.2**	**-0.3**
SARI				*e*SG	**Sg**	**22 12 39.2**	**+0.7**
SARI	**SarD1z-Kayseri**	**0.77**	**4**	*e*Pg	**Pg**	**22 12 28.2**	**-0.3**
SARI				*e*Sg	**Sg**	**22 12 39.2**	**+0.7**
GAZ	**Gaziantep**	**0.83**	**124**	*e*PG	**Pg**	**22 12 29.8**	**0.0**
GAZ	**Gaziantep**	**0.83**	**124**	*e*Pg	**Pg**	**22 12 29.8**	**0.0**
GZT	**Gaziantep**	**1.01**	**106**	*i* P	**Pb**	**22 12 33.9**	**-0.2**
GZT				*i* S	**Sb**	**22 12 48.0**	**+0.1**
KUZU	**Kuzuini**	**1.04**	**146**	*i* P	**Pb**	**22 12 34.7**	**+0.1**
KUZU				*i* S	**Sb**	**22 12 49.0**	**+0.2**
KUZU	**Kuzuini**	**1.04**	**146**	*i* P	**Pb**	**22 12 34.7**	**+0.1**
KUZU				*i* S	**Sb**	**22 12 49.0**	**+0.2**
AKCD	**Akcadag**	**1.41**	**62**	*e*P	**Pn**	**22 12 39.9**	**-0.7**
AKCD				*i* S	**Sn**	**22 13 00.3**	**+0.5**
AKCD	**Akcadag**	**1.41**	**62**	*e*P	**Pn**	**22 12 39.9**	**-0.7**
AKCD				*i* S	**Sn**	**22 13 00.3**	**+0.5**

CSEM ***13*** *22:16:04.4,36.87N×19.89E,h8km,MD3.6,After ATH*

ATH 13 22:16:04.4,36.87N×19.89E,h8km±1km,MD3.6/22, Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**1.42**	**23**	*e*PG	Pn	22 16 30.7	+0.2
VLS				*e*SB	Sg	22 16 51.4	+1.3
VLS	**Valsamata**	**1.42**	**23**	*e*Pg	Pn	22 16 30.7	+0.2
VLS				*e*Sb	Sg	22 16 51.4	+1.3
PYL	**PYLOS**	**1.48**	**88**	*e*PB	Pg	22 16 32.6	-0.3
PYL				*e*SB	Sg	22 16 53.0	+0.8
PYL	**PYLOS**	**1.48**	**88**	*e*Pb	Pg	22 16 32.6	-0.3
PYL				*e*Sb	Sg	22 16 53.0	+0.8
AMT	**Artemida-Makis**	**1.60**	**65**	*e*PB	Pb	22 16 34.4	+0.2
AMT	**Artemida-Makis**	**1.60**	**65**	*e*Pb	Pb	22 16 34.4	+0.2
ITM	**Ithomi**	**1.66**	**79**	*e*PB	Pb	22 16 35.7	+0.4
ITM				*e*SB	Sg	22 16 57.5	-0.3
ITM	**Ithomi**	**1.66**	**79**	*e*Pb	Pb	22 16 35.7	+0.4
ITM				*e*Sb	Sg	22 16 57.5	-0.3
RLS	**Riolos of Patr**	**1.73**	**46**	*e*PN	Pb	22 16 36.7	+0.3
RLS				*e*SN	Sg	22 17 00.3	+0.4
RLS	**Riolos of Patr**	**1.73**	**46**	*e*Pn	Pb	22 16 36.7	+0.3
RLS				*e*Sn	Sg	22 17 00.3	+0.4
DYR	**Agios Nikonas**	**1.96**	**92**	*e*PN	Pb	22 16 39.8	-0.7
DYR				*e*SN	Sg	22 17 06.5	-1.1
DYR	**Agios Nikonas**	**1.96**	**92**	*e*Pn	Pb	22 16 39.8	-0.7
DYR				*e*Sn	Sg	22 17 06.5	-1.1
LKD2	**Lefkada island**	**2.01**	**17**	*e*PN	Pb	22 16 40.6	-0.7
LKD2	**Lefkada island**	**2.01**	**17**	*e*Pn	Pb	22 16 40.6	-0.7
VLX	**Vlachokerasia**	**2.05**	**75**	*e*PN	Pb	22 16 41.6	-0.5
VLX	**Vlachokerasia**	**2.05**	**75**	*e*Pn	Pb	22 16 41.6	-0.5
KLV	**Kalavryta, Ach**	**2.15**	**56**	*e*PN	Pb	22 16 42.6	-1.0
KLV				*e*SN	Sb	22 17 11.0	+0.5
KLV	**Kalavryta, Ach**	**2.15**	**56**	*e*Pn	Pb	22 16 42.6	-1.0
KLV				*e*Sn	Sb	22 17 11.0	+0.5
LAKA	**Lakka**	**2.15**	**50**	*e*PN	Pb	22 16 43.3	-0.4
LAKA	**Lakka**	**2.15**	**50**	*e*Pn	Pb	22 16 43.3	-0.4
GUR	**Goura**	**2.22**	**61**	*e*PN	Pb	22 16 43.8	-1.2
GUR	**Goura**	**2.22**	**61**	*e*Pn	Pb	22 16 43.8	-1.2
EFP	**Efpalio**	**2.23**	**45**	*e*PN	Pb	22 16 43.9	-1.1
EFP	**Efpalio**	**2.23**	**45**	*e*Pn	Pb	22 16 43.9	-1.1
TRIZ	**Trizonia**	**2.29**	**49**	*e*PN	Pb	22 16 44.5	-1.4
TRIZ	**Trizonia**	**2.29**	**49**	*e*Pn	Pb	22 16 44.5	-1.4
KALE	**Kalithea**	**2.34**	**49**	*e*PN	Pb	22 16 46.2	-0.8
KALE	**Kalithea**	**2.34**	**49**	*e*Pn	Pb	22 16 46.2	-0.8
VLI	**Veliai**	**2.45**	**93**	*e*PN	Pb	22 16 47.7	-1.0
VLI	**Veliai**	**2.45**	**93**	*e*Pn	Pb	22 16 47.7	-1.0
EVR	**Evrytania**	**2.54**	**36**	*e*PN	Pb	22 16 48.6	-1.9
EVR	**Evrytania**	**2.54**	**36**	*e*Pn	Pb	22 16 48.6	-1.9
KYTH	**Kithira**	**2.60**	**102**	*e*PB	Pn	22 16 47.9	+1.1
KYTH	**Kithira**	**2.60**	**102**	*e*Pb	Pn	22 16 47.9	+1.1
LTK	**Loutraki**	**2.71**	**64**	*e*PB	Pn	22 16 49.7	+1.5
LTK	**Loutraki**	**2.71**	**64**	*e*Pb	Pn	22 16 49.7	+1.5
DID	**Didima**	**2.75**	**76**	*e*PN	Pn	22 16 51.0	+2.2
DID	**Didima**	**2.75**	**76**	*e*Pn	Pn	22 16 51.0	+2.2
AGG	**Agios Georgios**	**2.89**	**41**	*e*PN	Pn	22 16 53.3	+2.5
AGG	**Agios Georgios**	**2.89**	**41**	*e*Pn	Pn	22 16 53.3	+2.5
THL	**Klokotos Trika**	**3.17**	**31**	*e*PN	Pn	22 16 56.9	+2.4
THL				*e*SN	Sn	22 17 34.6	+2.1
THL	**Klokotos Trika**	**3.17**	**31**	*e*Pn	Pn	22 16 56.9	+2.4
THL				*e*Sn	Sn	22 17 34.6	+2.1
AOS	**Alonnisos**	**3.90**	**53**	*e*PN	Pn	22 17 07.4	+2.8
AOS	**Alonnisos**	**3.90**	**53**	*e*Pn	Pn	22 17 07.4	+2.8

IDC 13 22:22:58.6±2.9,4.02S×143.69E,h0km,mb3.6/4, mb1 3.9/5,mb1mx3.6/18,mbtmp3.8/5,ML4.2/1,Error ellipse: s-maj=86.7km s-min=25.4km az=102.0,New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.27**	**209**	P	P	22 27 14.9	+1.0
	0.9nm,0.3s,baz=31,slow=12,SNR=65						
ASAR	**Alice Springs**	**21.70**	**205**	P	P	22 27 51.5	+0.1
	0.8nm,0.4s,baz=27,slow=12,SNR=16						
FITZ	**Fitzroy Crossi**	**22.54**	**230**	P	P	22 27 59.1	-1.3
	1.4nm,0.4s,baz=62,slow=10.0,SNR=21						
MKAR	**Makanchi Array**	**73.89**	**321**	P	P	22 34 35.3	-0.2
	0.2nm,0.5s,baz=115,slow=6.5,SNR=4.8						
BVAR	**Borovoye Array**	**83.24**	**324**	P	P	22 35 27.7	+0.7
	0.5nm,0.5s,baz=104,slow=5.0,SNR=4.5						

IDC 13 22:28:33.4±1.2,3.91N×126.35E,h0km,mb3.7/7, mb1 3.9/7,mb1mx3.6/24,mbtmp3.8/7,Error ellipse: s-maj=98.2km s-min=16.0km az=69.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.88**	**182**	P	P	22 33 27.9	-0.2
	2.4nm,1.1s,baz=13,slow=11,SNR=2.3						
WRA	**Warramunga Arr**	**24.97**	**162**	P	P	22 33 58.1	-0.8
	2.8nm,0.7s,baz=342,slow=11,SNR=22						
ASAR	**Alice Springs**	**28.38**	**165**	P	P	22 34 29.4	-0.3
	0.3nm,0.7s,baz=343,slow=8.9,SNR=3.7						
STKA	**Stephens Creek**	**38.43**	**159**	P	P	22 35 58.2	+1.2
	7.4nm,1.1s,baz=339,slow=10,SNR=3.9						
MKAR	**Makanchi Array**	**57.19**	**325**	P	P	22 38 23.1	+0.6
	0.5nm,0.5s,baz=119,slow=7.8,SNR=13						
ZALV	**Zalesovo Beam**	**60.26**	**333**	P	P	22 38 43.6	0.0
	0.4nm,0.4s,baz=134,slow=6.2,SNR=2.7						
KURBB	**Kurchatov Arra**	**61.38**	**327**	P	P	22 38 50.5	-0.8
	0.5nm,0.5s,baz=127,slow=6.2,SNR=12						

ISCJB ***13*** *22:37:05.7±0.5,32.05N±0.02×115.47W±0.03,h8km±4km, Error ellipse: s-maj=3.8km s-min=3.7km az=174.9*
ECX ***13*** *22:37:07.5±0.7,32.05N×115.49W,h5km,MD3.6,ML3.7*
NEIC ***13*** *22:37:07.5,32.05N×115.49W,h5km,ML3.7(ECX), ML3.6(PAS),After ECX.*

ISC 13 22:37:05.6±1.0,32.07N±0.02×115.46W±0.02,h8km±8km, n39,σ0.96/66,20C-9D,California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMX	**El Mayor**	**0.20**	**114**	⇑*i*P	**Pg**	**22 37 09.8**	**+0.1**
EMX				*e*S	**Sg**	**22 37 12.9**	**+0.4**
EMX	**El Mayor**	**0.20**	**114**	⇑*i*P	**Pg**	**22 37 09.8**	**+0.1**
EMX				*e*S	**Sg**	**22 37 12.9**	**+0.4**
EMX				⇓*e*		22 37 13.2	
	comp=E,8μm,0.3s						
CPBX	**Cerro Prieto**	**0.37**	**21**	⇓*i*P	**Pb**	**22 37 14.2**	**-0.3**
CPBX				*e*S	**Sb**	**22 37 20.5**	**0.0**
CPBX	**Cerro Prieto**	**0.37**	**21**	⇓*i*P	**Pb**	**22 37 14.2**	**-0.3**
CPBX				*e*S	**Sb**	**22 37 20.5**	**0.0**
RDX	**Rancho Dawling**	**0.43**	**251**	⇑*i*P	**Pg**	**22 37 14.6**	**+0.6**
RDX				*e*S	**Sg**	**22 37 20.2**	**+0.4**
RDX	**Rancho Dawling**	**0.43**	**251**	⇑*i*P	**Pg**	**22 37 14.6**	**+0.6**
RDX				*i* S	**Sg**	**22 37 20.2**	**+0.4**
RDX				⇓*e*		22 37 21.0	
	comp=N,4μm,0.6s						
RDX				⇑*e*		22 37 24.2	
	comp=E,4μm,0.4s						
ECBX	**El Chinero**	**0.69**	**149**	*e*P	**Pg**	**22 37 18.5**	**-0.4**
ECBX	**El Chinero**	**0.69**	**149**	*e*P	**Pg**	**22 37 18.5**	**-0.4**
ECBX				*e*S	**Sg**	**22 37 27.7**	**-0.2**
ECBX				⇑*e*		22 37 29.4	
	comp=E,3μm,0.4s						
RMX	**La Rumorosa**	**0.74**	**316**	*e*P	**Pg**	**22 37 20.2**	**+0.2**
RMX				*e*S	**Sg**	**22 37 31.0**	**+1.4**
RMX	**La Rumorosa**	**0.74**	**316**	*e*P	**Pg**	**22 37 20.2**	**+0.2**
RMX				*e*S	**Sg**	**22 37 31.0**	**+1.4**
DVTC	**Desert V Tower**	**0.80**	**318**	P	**Pg**	**22 37 21.3**	**+0.4**
	baz=0.9,SNR=117						
DVTC				⇑S	**Sg**	**22 37 31.4**	**+0.1**
	baz=0.9						
ZAX	**El Zacaton**	**0.89**	**231**	*e*P	**Pg**	**22 37 22.7**	**+0.1**
ZAX				*e*S	**Sg**	**22 37 34.3**	**+0.2**
SWSC	**Sam W. Stewart**	**0.91**	**342**	P	**Pg**	**22 37 23.0**	**-0.2**
	baz=1.0,SNR=186						
SWSC				⇑S	**Sg**	**22 37 35.5**	**+0.5**
	baz=1.0						
SPX	**San Pedro Mart**	**1.02**	**180**	*e*P	**Pg**	**22 37 25.1**	**-0.2**
SPX				*e*S	**Sg**	**22 37 39.0**	**+0.4**
SPX				⇑*e*		22 37 40.9	
	comp=E,2μm,0.4s						
CBX	**Cerro Bola**	**1.05**	**284**	⇑*e*P	**Pg**	**22 37 25.6**	**-0.1**
CBX				*e*S	**Sg**	**22 37 39.4**	**+0.1**
ECNX	**Esteban Cantu**	**1.05**	**247**	⇓*i*P	**Pg**	**22 37 25.7**	**-0.1**
ECNX				*e*S	**Sg**	**22 37 39.2**	**-0.2**
ECNX	**Esteban Cantu**	**1.05**	**247**	⇓*i*P	**Pg**	**22 37 25.7**	**-0.1**
ECNX				*e*S	**Sg**	**22 37 39.2**	**-0.2**
GLA	**Glamis**	**1.12**	**29**	*e*Pn	**Pg**	**22 37 25.8**	**-1.3**
GLA				*e*Sn	**Sb**	**22 37 42.7**	**+0.7**
GLA	**Glamis**	**1.12**	**29**	P	**Pg**	**22 37 26.0**	**-1.1**
	baz=1.2,SNR=38						
PBX	**Punta Banda**	**1.12**	**253**	⇑*i*P	**Pg**	**22 37 27.0**	**-0.2**
PBX				*e*S	**Sg**	**22 37 41.3**	**-0.4**
PBX	**Punta Banda**	**1.12**	**253**	⇑*i*P	**Pg**	**22 37 27.0**	**-0.2**
PBX				*e*S	**Sg**	**22 37 41.3**	**-0.4**
MONP	**Monument Peak**	**1.15**	**316**	P	**Pg**	**22 37 27.6**	**-0.1**
	baz=1.2,SNR=162						
MONP				⇓S	**Sg**	**22 37 42.2**	**-0.4**
	baz=1.2						
BAR	**Barrett**	**1.19**	**301**	*e*Pn	**Pg**	**22 37 27.8**	**-0.7**
BAR				*e*Sn	**Sg**	**22 37 42.6**	**-1.3**
BC3	**Big Chuckawall**	**1.58**	**0**	Pn	**Pn**	**22 37 32.8**	**-1.3**
	baz=1.7,SNR=65						
113A	**Mohawk Valley,**	**1.59**	**64**	⇑Pn	**Pn**	**22 37 33.1**	**-1.1**
	baz=1.7						
109C	**Camp Elliot, M**	**1.61**	**301**	⇑Pn	**Pn**	**22 37 34.1**	**-0.2**
	baz=1.6,SNR=41						
109C				⇑Sn	**Sn**	**22 37 55.3**	**0.0**
	baz=1.6						
PFO	**Pinyon Flat Ob**	**1.75**	**332**	*e*Pn	**Pn**	**22 37 35.0**	**-1.4**
PFO				*e*Sn	**Sn**	**22 37 59.5**	**+0.5**
PFO	**Pinyon Flat Ob**	**1.75**	**332**	⇓Pn	**Pn**	**22 37 35.2**	**-1.2**
	baz=1.8,SNR=56						
IRM	**Iron Mountain**	**2.10**	**7**	⇓Pn	**Pn**	**22 37 40.4**	**-0.8**
	baz=2.2						
MURC	**Murrieta**	**2.11**	**317**	⇑Pb	**Pb**	**22 37 43.8**	**-0.4**
	baz=2.2,SNR=31						
MURC				⇑Sb	**Sb**	**22 38 11.1**	**+0.5**
	baz=2.2						
214A	**Organ Pipe Nat**	**2.25**	**92**	⇑Pn	**Pn**	**22 37 42.0**	**-1.3**
	baz=2.3						
Z14A	**Wintersburg**	**2.48**	**58**	⇑Pn	**Pn**	**22 37 45.7**	**-0.7**
	baz=2.6						
Z14A				⇑Sn	**Sn**	**22 38 15.7**	**-1.2**
	baz=2.6						
LDFC	**Landfair**	**3.01**	**6**	*e*Pg	**Pg**	**22 38 05.1**	**+1.7**
MWC	**Mount Wilson**	**3.06**	**315**	*e*Pn	**Pb**	**22 37 58.4**	**-2.0**
MWC				*e*Sn	**Sb**	**22 38 37.0**	**-1.0**
GSC	**Goldstone**	**3.41**	**341**	*e*Pn	Pn	22 38 02.5	+3.3
OSI	**Osito Adit**	**3.73**	**314**	*e*Pn	**Pn**	**22 38 03.8**	**+0.3**
OSI				*e*Sn	**Sn**	**22 38 50.9**	**+3.2**
TUC	**Tucson**	**3.97**	**85**	*e*Pn	**Pn**	**22 38 09.0**	**+2.0**
TUC				*e*Sn	**Sn**	**22 38 56.9**	**+3.0**
ISA	**Isabella**	**4.37**	**326**	*e*Pn	**Pb**	**22 38 22.9**	**+0.2**
ISA				*e*Sn	Sn	22 39 10.5	+6.9
MNTX	**Cornudas Mount**	**8.58**	**90**	*e*Pn	**Pn**	**22 39 09.2**	**-1.0**

ROM 13 22:54:31.3±0.1,37.98N×14.07E,h6km±1km,Md1.2/3, Error ellipse: s-maj=0.6km s-min=0.4km az=165.0, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GIB	**Gibilmanna**	**0.04**	**284**	Pg	Pg	22 54 32.8	+0.1
GIB				Sg	Sg	22 54 33.9	+0.2
	64nm,0.3s						
CSLB	**Castelbuono**	**0.04**	**197**	Pg	Pg	22 54 33.0	+0.3
CSLB				Sg	Sg	22 54 34.0	+0.3
	48nm,0.2s						
PLLN	**Pollina**	**0.06**	**78**	Pg	Pg	22 54 33.0	+0.1
PLLN				Sg	Sg	22 54 34.3	+0.3
	9.0nm,0.1s						

ISCJB ***13*** *22:55:24.8±0.5,38.01N±0.03×14.05E±0.03,h7km±5km, Error ellipse: s-maj=5.1km s-min=4.0km az=6.3*
ROM ***13*** *22:55:24.6±0.1,38.01N×14.06E,h4km±1km,Md2.5/15, Ml2.3/11,Error ellipse: s-maj=1.9km s-min=1.3km az=2.0*
CSEM ***13*** *22:55:24.6,38.01N×14.06E,h4km,MD2.5/15,After ROM*

ISC 13 22:55:24.6±0.8,38.00N±0.03×14.06E±0.02,h6km±5km, n40,σ0.52/56,Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GIB	**Gibilmanna**	**0.03**	**243**	Pg	**Pg**	**22 55 26.0**	**+0.1**
GIB				Sg	**Sg**	**22 55 27.1**	**+0.3**
	7μm,0.4s						
GIB	**Gibilmanna**	**0.03**	**243**	Pg	**Pg**	**22 55 26.0**	**+0.1**
GIB				Sg	**Sg**	**22 55 27.1**	**+0.3**
	7μm,0.4s						
PLLN	**Pollina**	**0.07**	**101**	Pg	**Pg**	**22 55 26.3**	**0.0**
PLLN				Sg	**Sg**	**22 55 27.6**	**+0.1**
	2μm,0.4s						
PLLN	**Pollina**	**0.07**	**101**	Pg	**Pg**	**22 55 26.3**	**0.0**
PLLN				Sg	**Sg**	**22 55 27.6**	**+0.1**
	2μm,0.4s						
CSLB	**Castelbuono**	**0.07**	**183**	Pg	**Pg**	**22 55 26.0**	**-0.3**
CSLB				Sg	**Sg**	**22 55 27.5**	**0.0**
CSLB	**Castelbuono**	**0.07**	**183**	Pg	**Pg**	**22 55 26.0**	**-0.3**
CSLB				Sg	**Sg**	**22 55 27.5**	**0.0**
ALJA	**Alia**	**0.35**	**224**	Pg	**Pg**	**22 55 32.5**	**+1.0**
ALJA				Sg	**Sb**	**22 55 38.6**	**-0.6**
	211nm,0.4s						
ALJA	**Alia**	**0.35**	**224**	Pg	**Pg**	**22 55 32.5**	**+1.0**
ALJA				Sg	**Sb**	**22 55 38.6**	**-0.6**
	211nm,0.4s						
RESU	**Resuttano**	**0.36**	**181**	Pg	**Pb**	**22 55 32.8**	**-0.6**
RESU	**Resuttano**	**0.36**	**181**	Pg	**Pb**	**22 55 32.8**	**-0.6**
GALF	**Gagliano Caste**	**0.49**	**126**	Pg	**Pb**	**22 55 35.3**	**-0.5**
GALF				Sg	**Sb**	**22 55 42.5**	**-0.8**
	86nm,0.6s						
GALF	**Gagliano Caste**	**0.49**	**126**	Pg	**Pb**	**22 55 35.3**	**-0.5**
GALF				Sg	**Sb**	**22 55 42.5**	**-0.8**
	86nm,0.6s						
MNO	**Monte Soro**	**0.50**	**98**	Pg	**Pg**	**22 55 35.1**	**+0.7**
MNO				Sg	**Sb**	**22 55 44.0**	**+0.2**
	93nm,0.5s						
MNO	**Monte Soro**	**0.50**	**98**	Pg	**Pg**	**22 55 35.1**	**+0.7**
MNO				Sg	**Sb**	**22 55 44.0**	**+0.2**
	93nm,0.5s						
IACL	**Alicudi**	**0.58**	**24**	Pg	**Pb**	**22 55 37.1**	**-0.1**
IACL				Sg	**Sb**	**22 55 46.6**	**+0.9**
	243nm,0.5s						
IACL	**Alicudi**	**0.58**	**24**	Pg	**Pb**	**22 55 37.1**	**-0.1**
IACL				Sg	**Sb**	**22 55 46.6**	**+0.9**
	243nm,0.5s						
CORL	**Corleone**	**0.61**	**260**	Pg	**Pg**	**22 55 36.7**	**+0.3**
	142nm,0.8s						
CORL	**Corleone**	**0.61**	**260**	Pg	**Pg**	**22 55 36.7**	**+0.3**
	142nm,0.8s						
VPL	**Vulcano Piano**	**0.82**	**62**	Pg	**Pb**	**22 55 41.0**	**-0.3**
VPL	**Vulcano Piano**	**0.82**	**62**	Pg	**Pb**	**22 55 41.0**	**-0.3**
LLI	**Lipari**	**0.82**	**57**	Pg	**Pb**	**22 55 41.7**	**+0.3**
	352nm,0.6s						
LLI	**Lipari**	**0.82**	**57**	Pg	**Pb**	**22 55 41.7**	**+0.3**
	352nm,0.6s						
CRJA	**Costa Raja**	**0.86**	**257**	Pg	**Pb**	**22 55 41.9**	**-0.1**
CRJA	**Costa Raja**	**0.86**	**257**	Pg	**Pb**	**22 55 41.9**	**-0.1**
MMGO	**Monte Magaggia**	**0.93**	**249**	Pg	**Pb**	**22 55 42.9**	**-0.2**
MMGO	**Monte Magaggia**	**0.93**	**249**	Pg	**Pb**	**22 55 42.9**	**-0.2**
MMME	**Mongiuffi-Meli**	**0.94**	**94**	Pg	**Pb**	**22 55 43.4**	**-0.1**
	27nm,0.5s						
MMME	**Mongiuffi-Meli**	**0.94**	**94**	Pg	**Pb**	**22 55 43.4**	**-0.1**
	27nm,0.5s						
HVZN	**Vizzini**	**0.97**	**148**	Pg	**Pb**	**22 55 44.7**	**+0.7**
	102nm,0.5s						
HVZN	**Vizzini**	**0.97**	**148**	Pg	**Pb**	**22 55 44.7**	**+0.7**
	102nm,0.5s						
USI	**Ustica**	**0.99**	**316**	Pg	**Pg**	**22 55 43.1**	**-0.5**
USI				Sg	**Sb**	**22 55 57.0**	**-0.5**
	109nm,0.3s						
USI	**Ustica**	**0.99**	**316**	Pg	**Pg**	**22 55 43.1**	**-0.5**
USI				Sg	**Sb**	**22 55 57.0**	**-0.5**
	109nm,0.3s						
HCRL	**Carlentini**	**1.05**	**133**	Pg	**Pb**	**22 55 45.3**	**0.0**
HCRL	**Carlentini**	**1.05**	**133**	Pg	**Pb**	**22 55 45.3**	**0.0**
SSY	**Sortino**	**1.17**	**136**	Pg	**Pn**	**22 55 47.7**	**+0.1**
	109nm,0.7s						
SSY	**Sortino**	**1.17**	**136**	Pg	**Pn**	**22 55 47.7**	**+0.1**
	109nm,0.7s

PZAR	**Pazar-Rize**	**2.21 35**	*e*Pn	**Pn**	**23 00 34.3 +0.2**	
TOKT	**Tokat**	**2.25 295**	*e*PN	**Pn**	**23 00 34.5 -0.2**	
TOKT	**Tokat**	**2.25 295**	*e*PN	**Pn**	**23 00 34.5 -0.2**	
SARI	**SarD1z-Kayseri**	**2.38 247**	*e*PN	**Pn**	**23 00 36.7 0.0**	
GZT	**Gaziantep**	**2.41 213**	*i* P	**Pn**	**23 00 38.2 +1.2**	
MARD	**Mardin**	**2.42 149**	*i* P	**Pb**	**23 00 39.9 -0.9**	
MARD			*i* S	**Sb**	**23 01 09.9 -1.0**	
DDEM	**Demirkent**	**2.46 52**	*i* P	**Pb**	**23 00 41.8 +0.2**	
DDEM	**Demirkent**	**2.46 52**	*i* P	**Pb**	**23 00 41.8 +0.2**	
KMRS	**Kahramanmaras**	**2.61 225**	*e*Pn	**Pn**	**23 00 40.1 +0.5**	
KMRS	**Kahramanmaras**	**2.61 225**	*e*Pn	**Pn**	**23 00 40.2 +0.5**	
DAGI	**Agillar**	**2.67 50**	*i* P	**Pb**	**23 00 43.3 -1.9**	
GAZ	**Gaziantep**	**2.71 216**	*e*PN	**Pn**	**23 00 41.3 +0.2**	
GAZ	**Gaziantep**	**2.71 216**	*e*Pn	**Pn**	**23 00 41.3 +0.2**	
AYKD	**Aykdinkavak**	**2.73 224**	*i* P	**Pn**	**23 00 42.0 +0.8**	
ANDN	**Andirin**	**2.88 232**	*i* P	**Pn**	**23 00 44.3 +0.9**	
ANDN	**Andirin**	**2.88 232**	*i* P	**Pn**	**23 00 44.3 +0.9**	
KVT	**Kavak**	**2.95 306**	*e*PN	**Pn**	**23 00 44.9 +0.6**	
KVT	**Kavak**	**2.95 306**	*e*Pn	**Pn**	**23 00 44.9 +0.6**	
YOZ	**Yozgat**	**3.01 276**	*e*PN	**Pn**	**23 00 46.1 +0.8**	
YOZ	**Yozgat**	**3.01 276**	*e*Pn	**Pn**	**23 00 46.1 +0.8**	
KOZT	**Kozan**	**3.27 235**	*e*PN	**Pn**	**23 00 49.2 +0.5**	
KOZT	**Kozan**	**3.27 235**	*e*Pn	**Pn**	**23 00 49.2 +0.5**	
DRWC	**Darouich**	**3.41 217**	*e*P	**Pn**	**23 00 49.2 -1.6**	
DRWC	**Darouich** SNR=46	**3.41 217**	*e*P	**Pn**	**23 00 49.2 -1.6**	
AVNT	**Avonos**	**3.44 261**	*i* P	**Pn**	**23 00 52.0 +0.8**	
AVNT	**Avonos**	**3.44 261**	*i* P	**Pn**	**23 00 52.0 +0.8**	
CORM	**Corum**	**3.61 284**	*e*PN	**Pn**	**23 00 54.5 +1.0**	
CORM	**Corum**	**3.61 284**	*e*PN	**Pn**	**23 00 54.5 +1.0**	
CLDR	**Caldiran**	**3.67 92**	*e*PN	**Pn**	**23 00 55.3 +0.9**	
CLDR	**Caldiran**	**3.67 92**	*e*Pn	**Pn**	**23 00 55.3 +0.9**	
MZRK	**Al-Mazaregh**	**3.74 162**	*e*P	**Pn**	**23 00 55.5 +0.3**	
MZRK	**Al-Mazaregh** SNR=46	**3.74 162**	*e*P	**Pn**	**23 00 55.5 +0.3**	
BTCH	**Batrach**	**3.99 214**	*e*P	**Pn**	**23 01 00.1 +1.5**	
BTCH	**Batrach** SNR=46	**3.99 214**	*e*P	**Pn**	**23 01 00.2 +1.5**	
CUKT	**Cukurca**	**4.07 120**	*e*PN	**Pn**	**23 01 01.3 +1.4**	
CUKT	**Cukurca**	**4.07 120**	*e*Pn	**Pn**	**23 01 01.3 +1.4**	
KAMT	**Kaman**	**4.25 271**	*e*PN	**Pn**	**23 01 03.0 +0.6**	
KAMT	**Kaman**	**4.25 271**	*e*Pn	**Pn**	**23 01 03.0 +0.6**	
ARNB	**Al Arnab**	**4.36 217**	*e*P	**Pn**	**23 01 04.8 +1.0**	
ARNB	**Al Arnab** SNR=46	**4.36 217**	*e*P	**Pn**	**23 01 04.8 +1.0**	

*ISCJB **13** 23:05:43.6±0.3, 37°.28N±0°.03×72°.07E±0°.07, h200km, mb3.5/10, Error ellipse: s-maj=7.7km s-min=3.4km az=158.0*
*IDC **13** 23:05:44.2±3.5, 37°.15N×72°.26E, h206km±30km, mb3.4/10, mb1 3.4/16, mb1mx3.3/32, mbtmp3.4/16, Error ellipse: s-maj=26.1km s-min=13.5km az=10.0*
*NNC **13** 23:05:53.3±4.9, 37°.92N×71°.77E, h214km±38km, mb3.0, mpv3.7, Error ellipse: s-maj=44.1km s-min=23.3km az=10.0*

ISC 13 23:05:44.5±0.6, **37°.26N**±0°.05×**72°.25E**±0°.08, **h200**km, **n36,** σ1§**21**/40, **mb3.7**/10, **8C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.44**	**185**	⇑P	Pn	23 06 44.0	+4.4
CEP				S	**Sn**	**23 07 24.0**	**+1.3**
CHCP	**Chirah Chowk**	**3.69**	**167**	⇑P	Pn	23 06 47.9	+5.4
THW	**Thamme Wali**	**4.47**	**185**	⇑P	Pn	23 06 56.2	+3.9
THN	**Thein Dam**	**5.60**	**148**	*i* P	**Pn**	**23 07 07.5**	**+0.9**
THN				*e*S	**Sn**	**23 08 11.5**	**+0.1**
DLH	**Dalhousie**	**5.61**	**146**	*e*PKP	**Pn**	**23 07 09.0**	**+2.0**
DLH				*e*S	**Sn**	**23 08 13.0**	**+0.9**
AAK	**Ala-Archa** comp=N,0.3s,baz=182,slow=5.0,SNR=21	**5.64**	**17**	P	**Pn**	**23 07 09.9**	**+2.7**
AAK	comp=E,1.6nm,0.3s,baz=302,slow=22,SNR=4.0			S	**Sn**	**23 08 12.2**	**-0.3**
KK31	**Karatay Array** 3.1nm,0.5s,baz=168,slow=13,SNR=70	**5.99**	**348**	P	**Pn**	**23 07 12.5**	**+0.9**
KK31	17nm,0.4s,baz=175,slow=23,SNR=23			⇓S	Sn	23 08 13.9	-6.6
DHRM	**DHARAMSHALA**	**6.01**	**145**	*e*PKP	Pn	23 07 15.3	+3.1
DHRM				*e*S	**Sn**	**23 08 21.8**	**+0.4**
DHRM	comp=E,134nm,0.4s			AML	AML	23 08 24.4	
DHRM	comp=N,139nm,0.5s			AML	AML	23 08 27.1	
TKM2	**Tokmak 2** comp=N,8.4nm,0.7s	**6.21**	**23**	⇑P	**Pn**	**23 07 16.8**	**+2.2**
TKM2	comp=N,4.8nm,0.9s			⇑S	**Sn**	**23 08 25.7**	**-0.3**
SMLA	**Simla**	**7.35**	**145**	*e*PKP	**Pn**	**23 07 31.6**	**+2.4**
SMLA				*e*S	**Sn**	**23 08 50.1**	**-2.4**
SMLA	comp=E,84nm,0.3s			AML	AML	23 08 54.8	
SMLA	comp=N,59nm,0.5s			AML	AML	23 08 54.9	
DDI	**Dehra Dun** comp=E,3.1nm,0.6s	**8.44**	**143**	*e*PKP	**Pn**	**23 07 45.2**	**+1.7**
DDI				*e*S	**Sn**	**23 09 16.9**	**-1.6**
DDI	comp=N,155nm,0.3s			AML	AML	23 09 20.3	
DDI	comp=E,100nm,0.2s			AML	AML	23 09 20.6	
MK31	**Makanchi Array** comp=E,0.4nm,0.5s,baz=213,slow=11,SNR=17	**12.10**	**35**	⇑P	**P**	**23 08 35.2**	**+0.1**
MKAR	**Makanchi Array** comp=E,0.1nm,0.3s,baz=212,slow=10,SNR=6.6	**12.10**	**35**	P	**Pn**	**23 08 31.6**	**+1.1**
KURBB	**Kurchatov Arra** comp=E,0.1nm,0.3s,baz=206,slow=11,SNR=4.2	**14.10**	**17**	P	**Pn**	**23 08 55.4**	**-0.1**
AB31	**Akbulak array** comp=E,1.4nm,0.4s,baz=135,slow=11,SNR=87	**14.95**	**327**	P	**Pn**	**23 09 05.1**	**-0.8**
AB31	comp=E,1.2nm,0.5s,baz=134,slow=24,SNR=4.2			⇓S	S	23 11 42.7	-9.0
VOSK	**Vostochnaya** comp=E,2.3nm,0.7s	**15.49**	**357**	⇓P	**Pn**	**23 09 11.9**	**-0.6**
BVA0	**Borovoye Array** comp=E,1.7nm,0.4s,baz=164,slow=11,SNR=22	**15.82**	**356**	⇑P	**Pn**	**23 09 16.6**	**+0.2**
BVAR	**Borovoye Array** comp=E,1.5nm,0.3s,baz=164,slow=10,SNR=21	**15.82**	**356**	P	**Pn**	**23 09 17.5**	**+1.1**
ZRNK	**Zerenda** comp=E,3.1nm,0.6s	**15.86**	**353**	⇑P	**P**	**23 09 16.6**	**0.0**
BRVK	**Borovoye** comp=E,5.6nm,0.7s	**15.86**	**356**	⇓P	**P**	**23 09 16.7**	**+0.1**
AKTO	**Aktyubinsk** comp=E,15nm,0.7s	**16.66**	**327**	⇓P	**P**	**23 09 25.2**	**-0.2**
AKTO	comp=E,2.7nm,1.3s			⇓S	S	23 12 21.6	-7.6
AKTO	**Aktyubinsk** comp=E,2.2nm,0.3s,baz=127,slow=11,SNR=52	**16.66**	**327**	P	**Pn**	**23 09 26.6**	**+0.1**
ZALV	**Zalesovo Beam** comp=E,1.2nm,0.3s,baz=211,slow=11,SNR=30	**18.82**	**24**	P	**P**	**23 09 49.4**	**+0.5**
SONM	**Songino Array** comp=E,0.7nm,0.6s,baz=257,slow=9.6,SNR=8.0	**27.08**	**56**	P	**P**	**23 11 09.6**	**+1.0**
BRTR	**Keskin Array B** comp=E,1.0nm,0.6s,baz=93,slow=7.0,SNR=7.2	**30.16**	**287**	P	**P**	**23 11 36.5**	**+0.5**
JOF	**Joensuu**	**35.72**	**329**	*ep*	**P**	**23 12 23.6**	**0.0**
FINES	**FINESS Array B** comp=E,1.2nm,0.4s,baz=113,slow=13,SNR=13	**37.42**	**325**	P	**P**	**23 12 37.6**	**-0.4**
KAF	**Kangasniemi**	**37.54**	**326**	*ep*	**P**	**23 12 38.9**	**-0.1**
ARCES	**ARCESS Array B** comp=E,0.9nm,0.4s,baz=112,slow=8.1,SNR=18	**40.83**	**337**	P	**P**	**23 13 06.2**	**0.0**
HFS	**Hagfors** comp=E,2.9nm,0.5s,baz=92,slow=10,SNR=17	**43.09**	**321**	P	**P**	**23 13 24.1**	**-0.4**
KSRS	**Korea Array** comp=E,1.0nm,0.4s,baz=274,slow=9.4,SNR=4.4	**43.69**	**72**	P	**P**	**23 13 27.1**	**-2.5**
NB2	**NORSAR Subarra** comp=Z,1.1nm,0.5s,baz=93,slow=7.9	**44.38**	**322**	P	**P**	**23 13 33.9**	**-0.9**
NOA	**NORSAR Array B** comp=Z,1.3nm,0.6s,baz=95,slow=7.7,SNR=6.5	**44.38**	**322**	P	**P**	**23 13 34.3**	**-0.5**
ESDC	**Sonseca Array** comp=Z,0.4nm,0.5s,baz=61,slow=6.7,SNR=5.0	**57.99**	**298**	P	**P**	**23 15 16.0**	**-0.2**
TORD	**Torodi Ar. Bea** comp=Z,0.6nm,0.3s,baz=48,slow=6.0,SNR=43	**66.73**	**269**	P	**P**	**23 16 12.8**	**-1.7**
WRA	**Warramunga Arr** comp=Z,0.6nm,0.9s,baz=316,slow=3.7,SNR=3.4	**81.55**	**123**	P	**P**	**23 17 38.8**	**-1.2**

IDC 13 23:11:34.8±8.5, **20°.24S**×**177°.91W, h521**km±90km, **mb3.4**/9, **mb1 3.6**/9, **mb1mx3.4**/17, **mbtmp3.4**/9, **Error ellipse: s-maj=41.2km s-min=19.8km az=71.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs** 5.4nm,0.5s,baz=93,slow=7.5,SNR=71	**44.66**	**256**	P	P	23 19 00.7	-0.5
WRA	**Warramunga Arr** 3.8nm,0.3s,baz=96,slow=7.6,SNR=275	**44.72**	**262**	P	P	23 19 00.9	-0.8
VNDA	**Vanda** 0.6nm,0.6s,baz=5.7,slow=7.6,SNR=8.1	**58.17**	**185**	P	P	23 20 38.9	+0.7
PETK	**Petropavlovsk-** 2.4nm,0.6s,baz=144,slow=8.5,SNR=4.7	**76.04**	**345**	P	P	23 22 28.2	-0.1
KSRS	**Korea Array** 0.6nm,0.5s,baz=124,slow=6.0,SNR=4.1	**76.75**	**318**	P	P	23 22 33.4	+1.0
USRK	**Ussuriysk Arra** 2.9nm,0.7s,baz=82,slow=7.0,SNR=5.2	**78.79**	**326**	P	P	23 22 44.3	+1.0
ILAR	**Eielson Array** 0.9nm,0.9s,baz=224,slow=6.6,SNR=5.0	**88.04**	**13**	P	P	23 23 27.5	-1.5
CMAR	**Chiang Mai Arr** 1.5nm,0.8s,baz=123,slow=2.8,SNR=10	**90.10**	**290**	P	P	23 23 40.8	+1.1
SONM	**Songino Array** 0.3nm,0.6s,baz=115,slow=5.4,SNR=2.5	**95.61**	**319**	P	P	23 24 04.7	+0.3
MKAR	**Makanchi Array** 0.1nm,0.5s,baz=110,slow=2.1,SNR=2.9	**111.08**	**313**	PKiKP	PKiKP	23 29 06.5	-2.5
AKASG	**Malin Array Be** 1.5nm,0.5s,baz=46,slow=4.0,SNR=7.3	**142.82**	**331**	PKhKP	PKPpre	23 30 04.8	
BRTR	**Keskin Array B** 0.6nm,0.5s,baz=142,slow=4.2,SNR=5.6	**146.72**	**313**	PKPbc	PKPbc	23 30 17.7	-0.9
GERES	**GERESS Array B** 0.5nm,0.7s,baz=357,slow=2.7,SNR=7.7	**149.97**	**345**	PKPbc	PKPbc	23 30 25.7	-0.7
GERES	0.2nm,0.5s,baz=29,slow=3.3,SNR=3.8			PKPab	PKPab	23 30 33.9	-0.4
TORD	**Torodi Ar. Bea** 0.4nm,0.8s,baz=173,slow=4.3,SNR=3.5	**172.94**	**177**	PKPab	PKPab	23 32 14.4	-0.7

*ISCJB **13** 23:26:44.8±0.5, 7°.09S±0°.05×127°.87E±0°.09, h309km, mb3.7/7, Error ellipse: s-maj=12.1km s-min=6.3km az=8.1*
*IDC **13** 23:26:45.7±2.2, 7°.20S×127°.54E, h296km±23km, mb3.5/7, mb1 3.6/10, mb1mx3.4/21, mbtmp3.5/10, Error ellipse: s-maj=31.6km s-min=12.0km az=80.0*
*AUST **13** 23:26:48.5±2.0, 7°.30S×128°.59E, h387km, Error ellipse: s-maj=2.8km s-min=1.5km az=288.0*

ISC 13 23:26:46.0±0.6, **7°.17S**±0°.06×**127°.9E**±0°.1, **h309**km, **n19,** σ1§**66**/24, **mb3.8/7, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak** baz=5.7,SNR=48	**6.04**	**46**	P	**Pn**	**23 28 15.1**	**-1.0**
FAKI	baz=5.7,SNR=8.0			S	**S**	**23 29 24.1**	**-4.8**
MTN	**Manton Dam** baz=6.1,SNR=4.8	**6.47**	**151**	P	**Pn**	**23 28 21.8**	**+0.6**
KDU	**Kakadu** baz=6.6,SNR=31	**7.09**	**141**	P	**Pn**	**23 28 29.4**	**+0.8**
KNRA	**Kununurra** baz=8.4,SNR=36	**8.49**	**174**	P	**Pn**	**23 28 45.1**	**-0.5**
FITZ	**Fitzroy Crossi** 1.8nm,0.3s,baz=24,slow=13,SNR=32	**11.09**	**191**	P	**Pn**	**23 29 15.1**	**-2.3**
FITZ	0.9nm,0.3s,baz=349,slow=16,SNR=4.2			S	**S**	**23 31 19.5**	**-2.0**
FITZ	**Fitzroy Crossi** baz=11,SNR=8.7	**11.09**	**191**	P	**P**	**23 29 19.9**	**+0.5**
WRA	**Warramunga Arr** 1.4nm,0.3s,baz=329,slow=12,SNR=72	**14.14**	**154**	P	**Pn**	**23 29 54.6**	**+0.5**
WRA	0.3nm,0.3s,baz=333,slow=22,SNR=5.2			S	**S**	**23 32 29.6**	**+0.8**
ASAR	**Alice Springs** 1.5nm,0.3s,baz=338,slow=11,SNR=90	**17.38**	**161**	P	**Pn**	**23 30 31.1**	**-0.9**
ASAR	0.1nm,0.3s,baz=343,slow=18,SNR=4.2			S	**S**	**23 33 36.2**	**+2.8**
ASAR	0.1nm,0.3s,baz=356,slow=1.7,SNR=5.0			ScP	**ScP**	**23 38 01.3**	**+2.2**
MEEK	**Meekatharra** baz=22,SNR=5.6	**21.28**	**203**	P	**P**	**23 31 07.9**	**-1.0**
MORW	**Morawa** baz=25,SNR=5.3	**24.49**	**206**	P	**P**	**23 31 37.3**	**-0.6**
NWAO	**Narrogin (SRO)** 4.5nm,0.5s,baz=22,slow=7.3,SNR=7.8	**27.48**	**200**	P	**P**	**23 32 04.5**	**0.0**
CNB	**Canberra Magne** baz=34,SNR=6.2	**34.24**	**148**	P	P	23 32 55.1	-8.5
KSRS	**Korea Array** 0.6nm,0.5s,baz=178,slow=11,SNR=4.5	**44.39**	**0**	P	**P**	**23 34 27.7**	**+1.0**
SONM	**Songino Array** 0.5nm,0.6s,baz=169,slow=7.3,SNR=4.9	**57.97**	**343**	P	**P**	**23 36 07.6**	**+0.7**
PETK	**Petropavlovsk-** 1.1nm,0.6s,baz=196,slow=8.3,SNR=2.5	**65.15**	**19**	P	**P**	**23 36 56.4**	**+2.1**
MKAR	**Makanchi Array** 1.1nm,0.6s,baz=118,slow=8.5,SNR=22	**67.25**	**328**	P	**P**	**23 37 07.7**	**0.0**
MKAR	0.5nm,0.6s,baz=121,slow=4.8,SNR=5.0			PcP	**PcP**	**23 37 33.2**	**+0.1**
ZALV	**Zalesovo Beam** 1.8nm,0.6s,baz=136,slow=5.2,SNR=8.6	**70.83**	**335**	P	**P**	**23 37 28.8**	**-0.6**
KURBB	**Kurchatov Arra** 1.6nm,0.4s,baz=132,slow=5.0,SNR=5.4	**71.58**	**329**	P	**P**	**23 37 34.2**	**+0.3**
TORD	**Torodi Ar. Bea** 0.3nm,1.0s,baz=99,slow=1.8,SNR=4.0	**126.81**	**281**	PKP	**PKPdf**	**23 45 14.6**	**+0.5**

*STR **13** 23:36:50.9±0.1, 42°.56N×2°.31E, h5km, Ml2.2, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **13** 23:36:50.5±0.1, 42°.60N×2°.32E, h10km, ML2.4/11, Error ellipse: s-maj=2.7km s-min=2.1km az=130.0*
*MDD **13** 23:36:51.8±0.2, 42°.57N×2°.31E, h0km, mbLg1.8/8, Error ellipse: s-maj=2.4km s-min=1.7km az=172.0*
*LDG **13** 23:36:51.3±0.0, 42°.57N×2°.31E, h3km, Md2.5/1, Ml2.2/11, Error ellipse: s-maj=0.8km s-min=0.6km az=124.0*

ISC 13 23:36:51.1±0.9, **42°.58N**±0°.02×**2°.33E**±0°.02, **h6**km±8km, **n62,** σ1§**36**/93, **1C, Pyrenees**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FILF	**Fillols**	**0.17**	**95**	Pg	**Pg**	**23 36 53.2**	**-1.3**
FILF				Sg	**Sg**	**23 36 54.5**	**-2.3**
FILF	**Fillols**	**0.17**	**95**	Pg	**Pg**	**23 36 53.3**	**-1.3**
FILF				Lg	Lg	23 36 54.6	
CARF	**Carcanieres**	**0.22**	**310**	Pg	**Pg**	**23 36 55.7**	**+0.3**
CARF				Sg	**Sg**	**23 36 58.6**	**+0.3**
CARF	**Carcanieres**	**0.22**	**310**	Pg	**Pg**	**23 36 55.7**	**+0.3**
CARF				Sg	**Sg**	**23 36 58.6**	**+0.3**
CLLI	**Llivia** 4.6nm,0.0s,SNR=18	**0.28**	**250**	⇑Pg	**Pg**	**23 36 56.6**	**0.0**
CLLI	10nm,0.1s,SNR=5.0			Lg	Lg	23 37 00.1	
CLLI	**Llivia** 4.6nm,0.0s,SNR=18	**0.28**	**250**	Pg	**Pg**	**23 36 56.6**	**0.0**
CLLI	10nm,0.1s,SNR=5.0			Lg	Lg	23 37 00.1	
VALF	**Valcebollere**	**0.29**	**233**	Pg	**Pg**	**23 36 56.7**	**0.0**
VALF				Sg	**Sg**	**23 37 00.4**	**-0.2**
VALF	**Valcebollere**	**0.29**	**233**	Pg	**Pg**	**23 36 56.8**	**0.0**
VALF				Sg	**Sg**	**23 37 00.4**	**-0.2**
LRDF	**Laroque-de-Fa**	**0.39**	**23**	Pg	**Pg**	**23 36 59.3**	**+0.6**
LRDF				Sg	**Sg**	**23 37 05.0**	**+1.1**
LRDF	**Laroque-de-Fa**	**0.39**	**23**	Pg	**Pg**	**23 36 59.3**	**+0.6**
LRDF				Lg	Lg	23 37 04.9	
LRDF				Sg	**Sg**	**23 37 05.0**	**+1.1**
SJAF	**Saint Jean de**	**0.42**	**102**	Pg	**Pg**	**23 36 59.4**	**+0.3**
SJAF				Sg	**Sg**	**23 37 05.1**	**+0.5**
SJAF	**Saint Jean de**	**0.42**	**102**	Pg	**Pg**	**23 36 59.4**	**+0.3**
SJAF				Sg	**Sg**	**23 37 05.1**	**+0.5**
EJON	**La Jonquera** 1.5nm,0.1s,SNR=17	**0.43**	**107**	Pg	**Pg**	**23 36 59.9**	**+0.5**
EJON	7.8nm,0.1s,SNR=7.9			Lg	Lg	23 37 05.7	
EJON	**La Jonquera** 1.5nm,0.1s,SNR=17	**0.43**	**107**	Pg	**Pg**	**23 36 59.9**	**+0.5**
EJON	7.8nm,0.1s,SNR=7.9			Lg	Lg	23 37 05.7	
GRBF	**Gourbit**	**0.64**	**295**	Pg	**Pb**	**23 37 05.3**	**+0.6**
GRBF				Lg	Lg	23 37 12.4	
MTLF	**Montolieu**	**0.77**	**354**	*e*Pg	**Pg**	**23 37 05.9**	**+0.1**
MTLF	**Montolieu**	**0.77**	**354**	*e*Pn	**Pb**	**23 37 07.4**	**+0.6**
MTLF				*e*Sg	**Sg**	**23 37 15.6**	**-0.2**
MTLF	14nm,0.2s			*e*Sn	**Sb**	**23 37 19.0**	**+1.4**
MTLF	**Montolieu**	**0.77**	**354**	Pg	**Pg**	**23 37 05.9**	**+0.1**
MTLF				*e*Sg	**Sg**	**23 37 15.6**	**-0.2**
MTLF	7.1nm,0.2s			*e*Sn	**Sb**	**23 37 19.0**	**+1.4**
CFON	**Fontmartina** 2.2nm,0.1s,SNR=27	**0.82**	**174**	Pg	**Pg**	**23 37 06.6**	**-0.1**
CFON	7.4nm,0.1s,SNR=10.0			Lg	Lg	23 37 18.0	
CFON	**Fontmartina** 2.2nm,0.1s,SNR=27	**0.82**	**174**	Pg	**Pg**	**23 37 06.6**	**-0.1**
CFON	7.4nm,0.1s,SNR=10.0			Lg	Lg	23 37 18.0	
EMIR	**Miracle** 1.3nm,0.1s,SNR=14	**0.89**	**222**	Pg	**Pg**	**23 37 08.1**	**-0.1**
EMIR	2.1nm,0.1s,SNR=5.0			Lg	Lg	23 37 20.4	
CSOR	**Sort** 0.8nm,0.1s,SNR=18	**0.91**	**258**	Pg	**Pg**	**23 37 08.0**	**-0.5**
CSOR	3.6nm,0.2s,SNR=7.1			Lg	Lg	23 37 20.1	
CSOR	**Sort** 0.8nm,0.1s,SNR=18	**0.91**	**258**	Pg	**Pg**	**23 37 08.0**	**-0.5**
CSOR	3.6nm,0.2s,SNR=7.1			Lg	Lg	23 37 20.1	
MELF	**Melles**	**1.20**	**285**	Lg	Lg	23 37 28.8	
RESF	**Ens**	**1.49**	**280**	Lg	Lg	23 37 36.9	
EPF	**Esparros** 1.6nm,0.2s	**1.53**	**288**	*e*Pg	**Pn**	**23 37 19.4**	**+0.4**
EPF	0.8nm,0.2s			*e*Sg	**Sn**	**23 37 39.4**	**+0.1**
EPF	**Esparros**	**1.53**	**288**	Pg	**Pn**	**23 37 19.4**	**+0.4**
EPF	0.8nm,0.2s			*e*Sg	**Sn**	**23 37 39.4**	**+0.1**
EPOB	**Poblet** 1.7nm,0.1s,SNR=7.9	**1.54**	**218**	Pg	**Pb**	**23 37 19.8**	**-0.2**
EPOB	15nm,0.2s,SNR=7.9			Lg	Lg	23 37 39.7	
EPOB	**Poblet** 1.7nm,0.1s,SNR=7.9	**1.54**	**218**	Pg	**Pb**	**23 37 19.8**	**-0.2**
EPOB	15nm,0.2s,SNR=7.9			Lg	Lg	23 37 39.7	
LASF	**Ste Croix** 2.5nm,0.3s	**1.87**	**36**	*e*Pn	**Pn**	**23 37 23.0**	**-0.6**
LASF	**Ste Croix**	**1.87**	**36**	*e*Pg	**Pb**	**23 37 26.2**	**+0.6**
LASF	1.2nm,0.3s			*e*Sg	**Sb**	**23 37 50.5**	**+1.3**
LASF	**Ste Croix**	**1.87**	**36**	Pn	**Pn**	**23 37 23.0**	**-0.6**
LASF	**Ste Croix**	**1.87**	**36**	Pg	**Pb**	**23 37 26.2**	**+0.6**
LASF	1.2nm,0.3s			*e*Sg	**Sb**	**23 37 50.5**	**+1.3**
ETSF	**Etsaut** 2.8nm,0.3s	**2.15**	**280**	*e*Pn	**Pn**	**23 37 26.1**	**-1.4**
ETSF	**Etsaut**	**2.15**	**280**	*e*Pg	**Pb**	**23 37 30.8**	**+0.3**
ETSF				*e*Sg	**Sb**	**23 37 58.8**	**+1.4**
ETSF	**Etsaut** 1.4nm,0.3s	**2.15**	**280**	Pn	**Pn**	**23 37 26.1**	**-1.4**
ETSF	**Etsaut**	**2.15**	**280**	Pg	**Pb**	**23 37 30.8**	**+0.3**
ETSF				*e*Sg	**Sb**	**23 37 58.8**	**+1.4**
ERTA	**Horta de San J** 0.3nm,0.1s,SNR=7.9	**2.20**	**223**	Pg	**Pb**	**23 37 32.2**	**+0.9**
ERTA	0.9nm,0.1s,SNR=7.9			Lg	Lg	23 38 01.0	
ERTA	**Horta de San J** 0.3nm,0.1s,SNR=7.9	**2.20**	**223**	Pg	**Pb**	**23 37 32.2**	**+0.9**
ERTA	0.9nm,0.1s,SNR=7.9			Lg	Lg	23 38 01.0	
ESAC	**San Caprasio** 2.7nm,0.2s,SNR=4.7	**2.25**	**249**	Pg	**Pg**	**23 37 33.6**	**-0.6**
ESAC	9.3nm,0.3s,SNR=7.9			Sn	**Sn**	**23 37 57.6**	**+0.6**
ESAC	7.7nm,0.2s,SNR=7.9			Lg	Lg	23 38 03.3	
ESAC	**San Caprasio** 2.7nm,0.2s,SNR=4.7	**2.25**	**249**	Pg	**Pg**	**23 37 33.6**	**-0.6**
ESAC	9.3nm,0.3s,SNR=7.9			Sn	**Sn**	**23 37 57.6**	**+0.6**
ESAC	7.7nm,0.2s,SNR=7.9			Lg	Lg	23 38 03.3	
CAF	**Calviac** 3.0nm,0.2s	**2.36**	**355**	*e*Pn	**Pn**	**23 37 29.3**	**-1.0**
CAF	**Calviac**	**2.36**	**355**	*e*Pg	**Pb**	**23 37 35.0**	**+1.1**
CAF	1.5nm,0.2s			*e*Sg	**Sb**	**23 38 04.9**	**+1.6**
CAF	**Calviac** 1.9nm,0.2s	**2.36**	**355**	Pn	**Pn**	**23 37 29.3**	**-1.0**
CAF	**Calviac**	**2.36**	**355**	Pg	**Pb**	**23 37 35.0**	**+1.1**
CAF	0.9nm,0.2s			*e*Sg	**Sb**	**23 38 04.9**	**+1.6**
LFF	**La Frestale** 1.9nm,0.2s	**2.63**	**335**	*e*Pn	**Pn**	**23 37 34.3**	**+0.3**
LFF	**La Frestale**	**2.63**	**335**	*e*Pg	**Pg**	**23 37 40.4**	**-1.0**
LFF	0.4nm,0.2s			*e*Sg	**Sb**	**23 38 13.1**	**+2.1**
LFF	**La Frestale** 1.3nm,0.3s	**2.63**	**335**	Pn	**Pn**	**23 37 34.3**	**+0.3**
LFF	**La Frestale**	**2.63**	**335**	Pg	**Pg**	**23 37 40.4**	**-1.0**
LFF	0.6nm,0.2s			*e*Sg	**Sb**	**23 38 13.1**	**+2.1**
SJPF	**Ste Jean** 1.3nm,0.3s	**2.67**	**283**	*e*Sg	**Sg**	**23 38 14.9**	**-1.9**
SJPF	**Ste Jean** 0.6nm,0.3s	**2.67**	**283**	*e*Sg	**Sg**	**23 38 14.9**	**-1.9**
RJF	**Les Rejaudoux** 3.9nm,0.2s	**2.79**	**348**	*e*Sg	**Sg**	**23 38 19.1**	**-1.6**
RJF	**Les Rejaudoux** 2.0nm,0.2s	**2.79**	**348**	*e*Sg	**Sg**	**23 38 19.1**	**-1.6**
VIVF	**Saint-Julien-l** 1.1nm,0.2s	**2.84**	**36**	*e*Pg	**Pb**	**23 37 44.3**	**+2.1**
VIVF				*e*Sn	**Sn**	**23 38 08.6**	**-2.9**
VIVF				*e*Sg	**Sb**	**23 38 20.3**	**+3.1**
VIVF	**Saint-Julien-l** 0.6nm,0.2s	**2.84**	**36**	Pg	**Pb**	**23 37 44.3**	**+2.1**
VIVF				Sn	**Sn**	**23 38 08.6**	**-2.9**
VIVF				*e*Sg	**Sb**	**23 38 20.3**	**+3.1**
TCF	**Toulx Ste Croi** 1.5nm,0.3s	**3.71**	**359**	*e*Pn	**Pn**	**23 37 47.6**	**-1.3**
TCF	**Toulx Ste Croi**	**3.71**	**359**	*e*Pg	**Pb**	**23 37 59.9**	**+2.9**
TCF	0.8nm,0.3s			*e*Sg	**Sg**	**23 38 47.9**	**-2.3**
TCF	**Toulx Ste Croi**	**3.71**	**359**	*e*Pn

KIF	**Kilpisjarvi**	**1.86**	**2**	Pn		**Pb**	**23 53 38.6**	**-0.4**
KIF				Sg		**Sb**	**23 54 03.2**	**+0.4**
KTK1	**Kautokeino**	**2.11**	**26**	*e*P		**Pb**	**23 53 42.6**	**-0.6**
KTK1				*e*Sg		**Sb**	**23 54 10.2**	**+0.3**
KTK1				AML		AML	23 54 12.1	
	comp=Z,87nm,0.5s							
KTK1	**Kautokeino**	**2.11**	**26**	*e*P		**Pb**	**23 53 42.6**	**-0.6**
	SNR=50							
KTK1				*e*Sg		**Sb**	**23 54 10.2**	**+0.3**
	comp=Z,87nm,0.5s,SNR=90							
RNF	**Rovaniemi**	**2.19**	**102**	*e*PB		**Pb**	**23 53 43.8**	**-0.8**
RNF				*e*SG		**Sb**	**23 54 13.1**	**+0.8**
RNF				MSG			23 54 13.1	
	comp=Z,3.1nm,0.2s							
RNF	**Rovaniemi**	**2.19**	**102**	Pb		**Pb**	**23 53 43.8**	**-0.8**
RNF				Sg		**Sb**	**23 54 13.0**	**+0.8**
	comp=Z,3.1nm,0.2s							
SGF	**Sodankyl**	**2.30**	**80**	*e*PB		**Pb**	**23 53 45.5**	**-1.0**
	baz=263							
SGF				MSG		**Sb**	**23 54 16.3**	**+0.8**
	comp=Z,0.7nm,0.1s							
SGF				*e*SG		**Sb**	**23 54 16.3**	**+0.8**
SGF	**Sodankyl**	**2.30**	**80**	Pb		**Pb**	**23 53 45.5**	**-1.0**
SGF				Sg		**Sb**	**23 54 16.3**	**+0.8**
OUL	**Oulu**	**2.98**	**132**	*e*SG		**Sb**	**23 54 36.5**	**+1.6**
OUL				MSG			23 54 36.5	
	comp=Z,0.5nm,0.2s							
OUL	**Oulu**	**2.98**	**132**	Sg		**Sb**	**23 54 36.4**	**+1.6**
	comp=Z,0.5nm,0.2s							
ARA0	**ARCESS Array S**	**3.00**	**35**	Pn		**Pn**	**23 53 53.8**	**+0.9**
	baz=213,slow=14							
ARA0				Sn		**Sn**	**23 54 28.3**	**-1.2**
	baz=219,slow=18							
ARA0	**ARCESS Array S**	**3.00**	**35**	Pn		**Pn**	**23 53 53.8**	**+0.9**
	baz=213,slow=14							
ARA0				Sn		**Sn**	**23 54 28.3**	**-1.2**
	baz=219,slow=18							
ARA0	**ARCESS Array S**	**3.00**	**35**	*e*P		**Pn**	**23 53 53.8**	**+0.9**
	baz=212							
ARA0				*e*SB		**Sb**	**23 54 34.1**	**-1.4**
ARA0				MSG			23 54 34.1	
	comp=Z,4.6nm,0.4s							
ARA0	**ARCESS Array S**	**3.00**	**35**	P		**Pn**	**23 53 53.8**	**+0.9**
ARA0				Sn		**Sn**	**23 54 28.3**	**-1.2**
	baz=219,slow=17,SNR=50							
ARA0				Sb		**Sb**	**23 54 34.1**	**-1.4**
	comp=Z,4.6nm,0.4s							
VRF	**Varrio**	**3.51**	**76**	*e*SG		**Sb**	**23 54 53.2**	**+3.1**
VRF				MSG			23 54 53.2	
	comp=Z,3.3nm,0.4s							
VRF	**Varrio**	**3.51**	**76**	Sg		**Sb**	**23 54 53.2**	**+3.1**
	comp=Z,3.3nm,0.4s							
MSF	**Maaselka**	**3.58**	**106**	*e*SG		**Sg**	**23 54 55.6**	**-3.6**
MSF				MSG			23 54 55.6	
	comp=Z,1.4nm,0.4s							
MSF	**Maaselka**	**3.58**	**106**	Sg		**Sg**	**23 54 55.6**	**-3.6**
	comp=Z,1.4nm,0.4s							
FIA0	**FINESS Array S**	**6.20**	**155**	Pn		**Pn**	**23 54 38.9**	**+2.1**
	baz=337,slow=16							
FIA0				Sn		**Sn**	**23 55 45.8**	**-2.4**
	baz=347,slow=18							
FIA0				Lg		Lg	23 56 18.7	
	baz=333,slow=28							
FIA0	**FINESS Array S**	**6.20**	**155**	Pn		**Pn**	**23 54 38.9**	**+2.1**
	baz=337,slow=16							
FIA0				Sn		**Sn**	**23 55 45.8**	**-2.4**
	baz=347,slow=18							
FIA0				Lg		Lg	23 56 18.7	
	baz=333,slow=28							
FIA0	**FINESS Array S**	**6.20**	**155**	Pn		**Pn**	**23 54 38.8**	**+2.1**
	baz=337,slow=15,SNR=50							
FIA0				Lg		Lg	23 56 18.7	
	baz=333,slow=28							
NB2	**NORSAR Subarra**	**7.38**	**218**	Pn		**Pn**	**23 54 55.2**	**+2.1**
NB2				Sn		**Sn**	**23 56 15.2**	**-2.2**
NB2	**NORSAR Subarra**	**7.38**	**218**	Pn		**Pn**	**23 54 55.2**	**+2.1**
NB2				Sn		**Sn**	**23 56 15.2**	**-2.2**
NB2	**NORSAR Subarra**	**7.38**	**218**	Pn		**Pn**	**23 54 55.2**	**+2.1**
	SNR=50							
HFS	**Hagfors**	**7.69**	**207**	Sn		**Sn**	**23 56 22.4**	**-2.3**
	baz=45,slow=22							
HFS	**Hagfors**	**7.69**	**207**	Sn		**Sn**	**23 56 22.4**	**-2.3**
	baz=45,slow=22							

*ISK **13** 23:56:26.6,37.°70N×37.°50E,h12km,MD2.8*
*ISCJB **13** 23:56:27.2±0.6,37.°77N±0.°03×37.°47E±0.°04,h5km±5km, Error ellipse: s-maj=5.9km s-min=3.8km az=143.7*
*DDA **13** 23:56:27.3,37.°76N×37.°43E,h8km,MD2.8*
*CSEM **13** 23:56:27.3±0.2,37.°76N×37.°48E,h12km,MD2.8, Error ellipse: s-maj=6.9km s-min=3.7km az=149.0*
ISC 13 23:56:27.2±1.1, 37.°76N±0.°03×37.°47E±0.°03, h9km±9km, n18, σ0s55/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GZT	**Gaziantep**	**0.41**	**169**	*i* P		**Pb**	**23 56 36.3**	**-0.4**
GZT				*i* S		**Sg**	**23 56 41.6**	**+0.8**
KMRS	**Kahramanmaras**	**0.52**	**241**	*e*PG		**Pg**	**23 56 37.2**	**-0.1**
KMRS				*e*SG		**Sg**	**23 56 44.4**	**+0.3**
KMRS	**Kahramanmaras**	**0.52**	**241**	*e*Pg		**Pg**	**23 56 37.2**	**-0.1**
KMRS				*e*Sg		**Sg**	**23 56 44.4**	**+0.3**
AYKD	**Aykdinkavak**	**0.63**	**237**	*i* P		**Pg**	**23 56 39.3**	**-0.1**
AYKD				*i* S		**Sg**	**23 56 47.7**	**+0.1**
AKCD	**Akcadag**	**0.64**	**34**	*i* P		**Pg**	**23 56 40.0**	**+0.3**
AKCD				*i* S		**Sb**	**23 56 49.6**	**-0.3**
AKCD	**Akcadag**	**0.64**	**34**	*i* P		**Pg**	**23 56 40.0**	**+0.3**
AKCD				*i* S		**Sb**	**23 56 49.6**	**-0.3**
ANDN	**Andirin**	**0.91**	**259**	*i* P		**Pg**	**23 56 44.5**	**-0.2**
ANDN				*i* S		**Sn**	**23 56 58.8**	**-0.7**
ANDN	**Andirin**	**0.91**	**259**	*i* P		**Pg**	**23 56 44.5**	**-0.2**
ANDN				*i* S		**Sn**	**23 56 58.8**	**-0.7**
MYA	**Malataya**	**0.94**	**53**	*e*PG		**Pg**	**23 56 45.3**	**-0.1**
MYA				*e*SG		**Sb**	**23 56 59.0**	**+0.6**
MYA	**Malataya**	**0.94**	**53**	*e*Pg		**Pg**	**23 56 45.3**	**-0.1**
MYA				*e*Sg		**Sb**	**23 56 59.0**	**+0.6**
KUZU	**Kuzuini**	**1.03**	**198**	*i* P		**Pn**	**23 56 48.4**	**+0.5**
KUZU				*i* S		**Sn**	**23 57 03.5**	**+1.0**
KUZU	**Kuzuini**	**1.03**	**198**	*i* P		**Pn**	**23 56 48.4**	**+0.5**
KUZU				*i* S		**Sn**	**23 57 03.5**	**+1.0**
SARI	**SarD1z-Kayseri**	**1.05**	**308**	*e*PN		**Pn**	**23 56 48.6**	**+0.3**
SARI				*e*SN		**Sn**	**23 57 04.0**	**+0.9**
SARI	**SarD1z-Kayseri**	**1.05**	**308**	*e*Pn		**Pn**	**23 56 48.6**	**+0.3**
SARI				*e*Sn		**Sn**	**23 57 04.0**	**+0.9**
URFA	**Urfa**	**1.12**	**106**	*e*PN		**Pb**	**23 56 47.9**	**-0.9**
URFA				*e*SN		**Sn**	**23 57 04.2**	**-0.5**
URFA	**Urfa**	**1.12**	**106**	*e*Pn		**Pb**	**23 56 47.9**	**-0.9**
URFA				*e*Sn		**Sn**	**23 57 04.2**	**-0.5**
KOZT	**Kozan**	**1.33**	**258**	*e*PN		**Pn**	**23 56 51.8**	**-0.2**
KOZT				*e*SN		**Sg**	**23 57 10.2**	**+0.2**
KOZT	**Kozan**	**1.33**	**258**	*e*Pn		**Pn**	**23 56 51.8**	**-0.2**
KOZT				*e*Sn		**Sg**	**23 57 10.3**	**+0.2**

*CSEM **13** 23:58:42.0,28.°89N×16.°31W,h45km±4km,mb3.5/5, After MDD*
MDD 13 23:58:42.0±0.4, 28.°89N×16.°31W, h45km±4km, mb3.5/5, 3C, Error ellipse: s-maj=5.5km s-min=2.0km az=1.0, TT-MODEL: CANARY, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EBAJ	**Bajamar**	**0.35**	**185**	⇑P		Pn	23 58 50.5	-0.8
	19nm,0.1s,SNR=18							
EBAJ				S		Sn	23 58 56.6	-1.3
	4.7nm,0.1s,SNR=7.9							
EBAJ	**Bajamar**	**0.35**	**185**	P		Pn	23 58 50.5	-0.8
	19nm,0.1s,SNR=18							
EBAJ				S		Sn	23 58 56.6	-1.2
	4.7nm,0.1s,SNR=7.9							
CCAN	**Las Canadas**	**0.72**	**201**	⇑P		Pn	23 58 55.0	-1.1
	11nm,0.2s,SNR=18							
CCAN				S		Sn	23 59 04.1	-2.3
	5.4nm,0.1s,SNR=12							
CCAN	**Las Canadas**	**0.72**	**201**	P		Pn	23 58 55.0	-1.2
	11nm,0.2s,SNR=18							
CCAN				S		Sn	23 59 04.1	-2.3
	5.4nm,0.1s,SNR=12							
EOSO	**Osorio**	**1.05**	**141**	P		Pn	23 58 59.1	-1.4
	0.5nm,0.1s,SNR=17							
EOSO				S		Sn	23 59 11.3	-2.8
	9.1nm,0.1s,SNR=7.9							
EOSO	**Osorio**	**1.05**	**141**	P		Pn	23 58 59.1	-1.4
	0.5nm,0.1s,SNR=17							
EOSO				S		Sn	23 59 11.3	-2.8
	9.1nm,0.1s,SNR=7.9							
EGOM	**La Gomera**	**1.08**	**228**	⇑P		Pn	23 58 59.4	-1.3
	2.0nm,0.1s,SNR=18							
EGOM				S		Sn	23 59 12.1	-2.4
	26nm,0.1s,SNR=7.9							
EGOM	**La Gomera**	**1.08**	**228**	P		Pn	23 58 59.4	-1.3
	2.0nm,0.1s,SNR=18							
EGOM				S		Sn	23 59 12.1	-2.4
	26nm,0.1s,SNR=7.9							
EHIG	**Higuera**	**1.36**	**256**	P		Pn	23 59 02.9	-1.8
	2.1nm,0.1s,SNR=11							
EHIG				S		Sn	23 59 18.4	-3.1
	14nm,0.1s,SNR=7.9							
EHIG	**Higuera**	**1.36**	**256**	P		Pn	23 59 02.9	-1.7
	2.1nm,0.1s,SNR=11							
EHIG				S		Sn	23 59 18.4	-3.1
	14nm,0.1s,SNR=7.9							
CFTV	**Fuerteventura**	**2.01**	**103**	P		Pn	23 59 10.7	-2.8
	1.3nm,0.1s,SNR=7.9							
CFTV	**Fuerteventura**	**2.01**	**103**	P		Pn	23 59 10.7	-2.9
	1.3nm,0.1s,SNR=7.9							

GUC 14 00:06:28.1±0.6, 30.°69S×71.°73W, h20km±4km, MD3.5, ML3.0, 2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMCH	**Combarbala**	**0.79**	**128**	*i* P		Pb	00 06 42.7	-0.7
CMCH				*i* S		Sb	00 06 53.5	-0.2
CMCH				AML		AML	00 06 55.0	
	comp=N,1μm,0.7s							
TLL	**Tololo Astrono**	**0.96**	**57**	*i* P		Pb	00 06 45.8	-0.6
TLL				*i* S		Sb	00 06 59.1	+0.3
TLL				AML		AML	00 07 03.3	
	comp=N,496nm,0.7s							
CHNG	**Los Chungos**	**1.21**	**170**	⇑*i* P		Pn	00 06 48.9	-0.9
CHNG				*i* S		Sb	00 07 04.9	-0.5
LCO	**Las Campanas**	**1.90**	**28**	⇓*i* P		Pn	00 07 00.2	+0.4
LCO				*i* S		Sb	00 07 25.5	-0.5
LCO				AML		AML	00 07 32.0	
	comp=E,68nm,0.2s							
PEL	**Peldehue**	**2.60**	**160**	*i* P		Pn	00 07 10.5	+1.3
PEL				*i* S		Sn	00 07 42.4	+2.1
PEL				AML		AML	00 07 52.1	
	comp=N,125nm,0.5s							
CLCH	**Cerro Calan**	**2.88**	**160**	AML		AML	00 08 00.4	
	comp=E,96nm,0.6s							
LMEL	**Las Melosas**	**3.40**	**158**	*i* P		Pn	00 07 21.7	+1.3
LMEL				*i* S		Sn	00 08 02.1	+1.8
LMEL				AML		AML	00 08 20.1	
	comp=N,47nm,0.3s							

*IDC **14** 00:10:15.2±2.5, 52.°09N×171.°42E, h0km, mb3.2/4, mb1 3.5/5, mb1mx3.3/27, mbtmp3.3/5, ML3.3/1, Error ellipse: s-maj=91.6km s-min=22.2km az=179.0*
*ISCJB **14** 00:10:22.6±1.5, 52.°5N±0.°1×170.°8E±0.°2, h33km, mb3.2/4, Error ellipse: s-maj=16.7km s-min=14.9km az=26.8*
*KRSC **14** 00:10:23.9±1.3, 52.°37N×170.°27E, h10km±10km, ML3.7*
ISC 14 00:10:21.5±1.3, 52.°3N±0.°1×171.°02E±0.°08, h35km, n19, σ2s55/27, mb3.2/4, Near Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
BKI	**Bering**	**4.17**	**316**	P		**Pn**	**00 11 25.1**	**+2.6**
BKI				*i* S		**Sn**	**00 12 08.9**	**-1.1**
MKZ	**Mys Kozlova**	**5.99**	**296**	*e*P		**Pn**	**00 11 48.0**	**+0.5**
MKZ				*e*S		**Sn**	**00 12 50.9**	**-3.9**
SPN	**Mys Shipunski**	**6.73**	**281**	*e*P		**Pn**	**00 11 59.4**	**+1.7**
SPN				*e*S		**Sn**	**00 13 09.8**	**-3.3**
NLC	**Nalytchevo**	**7.14**	**282**	P		**Pn**	**00 12 05.1**	**+1.8**
NLC				*i* S		**Sn**	**00 13 20.3**	**-2.9**
KMNR	**Kamenistaya**	**7.23**	**303**	P		**Pn**	**00 12 07.0**	**+2.4**
SDLR	**Sedlovina**	**7.42**	**282**	*e*P		**Pn**	**00 12 09.5**	**+2.2**
UGLR	**Uglovaya**	**7.46**	**282**	*e*P		**Pn**	**00 12 10.2**	**+2.4**
SMAR	**Somma**	**7.47**	**282**	*e*P		**Pn**	**00 12 10.5**	**+2.4**
KRER	**Koryakskii**	**7.51**	**282**	P		**Pn**	**00 12 11.0**	**+2.5**
AVH	**Avacha**	**7.51**	**282**	P		**Pn**	**00 12 10.9**	**+2.4**
RUS	**Russkaya**	**7.66**	**276**	*e*P		**Pn**	**00 12 12.8**	**+2.4**
RUS				*e*S		**Sn**	**00 13 31.9**	**-4.0**
MTVR	**Mutnovka**	**7.86**	**276**	*e*P		**Pn**	**00 12 15.7**	**+2.4**
MTVR				*i* S		**Sn**	**00 13 38.5**	**-2.5**
GNL	**Ganaly**	**8.01**	**285**	P		**Pn**	**00 12 18.1**	**+2.7**
ASAK	**Asacha**	**8.04**	**276**	*e*P		**Pn**	**00 12 18.3**	**+2.6**
ASAK				*e*S		**Sn**	**00 13 42.6**	**-2.7**
PETK	**Petropavlovsk-**	**8.13**	**281**	Pn		**Pn**	**00 12 19.6**	**+2.6**
	0.4nm,0.3s,baz=92,slow=18,SNR=6.9							
PETK				Sn		**Sn**	**00 13 48.9**	**+1.4**
	0.5nm,0.3s,baz=276,slow=13,SNR=3.6							
ILAR	**Eielson Array**	**24.71**	**43**	P		**P**	**00 15 38.1**	**-0.8**
	0.3nm,0.8s,baz=262,slow=6.1,SNR=3.4							
SONM	**Songino Array**	**40.49**	**290**	P		**P**	**00 17 59.0**	**+2.3**
	0.3nm,0.5s,baz=66,slow=11,SNR=2.2							
MKAR	**Makanchi Array**	**54.35**	**302**	P		**P**	**00 19 44.2**	**-0.1**
	0.1nm,0.5s,baz=60,slow=7.3,SNR=3.0							
TXAR	**Lajitas Array**	**64.63**	**74**	P		**P**	**00 20 53.4**	**-2.1**
	0.3nm,0.4s,baz=308,slow=5.6,SNR=9.2							

IDC 14 00:18:13.7±1.9, 0.°72N×127.°05E, h0km, mb3.9/4, mb1 4.1/4, mb1mx3.7/20, mbtmp4.0/4, Error ellipse: s-maj=153.6km s-min=24.8km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.74**	**161**	P		P	00 23 07.7	+0.8
	2.9nm,0.6s,baz=340,slow=11,SNR=20							
ASAR	**Alice Springs**	**25.14**	**165**	P		P	00 23 40.6	-0.1
	2.8nm,0.9s,baz=342,slow=9.2,SNR=16							
STKA	**Stephens Creek**	**35.23**	**158**	P		P	00 25 09.3	-0.7
	6.2nm,1.1s,baz=325,slow=13,SNR=3.3							
MKAR	**Makanchi Array**	**60.21**	**326**	P		P	00 28 23.7	0.0
	0.8nm,0.8s,baz=115,slow=8.8,SNR=5.0							

*AUST **14** 00:34:29.0,5.°98S×129.°53E,h100km*
*ISCJB **14** 00:34:29.5±0.4,5.°98S±0.°03×129.°84E±0.°07, h146km, mb3.8/10, Error ellipse: s-maj=10.0km s-min=4.6km az=1.1*
*IDC **14** 00:34:35.6±2.4,6.°02S×130.°28E, h199km±23km, mb3.6/10, mb1 3.7/13, mb1mx3.7/19, mbtmp3.6/13, Error ellipse: s-maj=34.1km s-min=10.0km az=81.0*
ISC 14 00:34:31.1±0.6, 6.°03S±0.°05×129.°86E±0.°09, h146km, n26, σ2s19/31, mb3.9/10, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FAKI	**Fak Fak**	**3.90**	**38**	P		**Pn**	**00 35 31.5**	**+1.5**
	baz=4.1,SNR=856							
FAKI				S		**Sn**	**00 36 13.9**	**-1.9**
	baz=4.1,SNR=20							
MTN	**Manton Dam**	**6.88**	**170**	P		Pn	00 36 14.0	+4.3
	baz=7.0,SNR=40							
MTN				S		**Sn**	**00 37 27.5**	**+0.6**
	baz=7.0,SNR=18							
KDU	**Kakadu**	**7.10**	**159**	P		**Pn**	**00 36 15.6**	**+3.1**
	baz=7.3,SNR=116							
KDU				S		**Sn**	**00 37 30.9**	**-1.0**
	baz=7.3,SNR=11							
KNRA	**Kununurra**	**9.64**	**186**	P		Pn	00 36 50.0	+3.4
	baz=9.7,SNR=20							
KNRA				S		**Sn**	**00 38 30.9**	**-2.5**
	baz=9.7,SNR=14							
FITZ	**Fitzroy Crossi**	**12.68**	**199**	P		**Pn**	**00 37 29.4**	**+2.9**
	1.0nm,0.3s,baz=46,slow=11,SNR=16							
FITZ				S		**Sn**	**00 39 43.7**	**-3.0**
	3.8nm,0.3s,baz=116,slow=16,SNR=9.4							
FITZ	**Fitzroy Crossi**	**12.68**	**199**	P		**Pn**	**00 37 29.2**	**+2.7**
	baz=13,SNR=36							
FITZ				S		**Sn**	**00 39 43.7**	**-3.0**
	baz=13,SNR=5.4							
WRA	**Warramunga Arr**	**14.50**	**163**	P		**Pn**	**00 37 49.6**	**0.0**
	0.9nm,0.3s,baz=346,slow=10,SNR=23							
WRA				S		**Sn**	**00 40 25.2**	**-5.2**
	2.5nm,0.3s,baz=330,slow=24,SNR=11							
COEN	**Coen**	**15.29**	**122**	P		**P**	**00 38 01.6**	**+0.6**
	baz=16,SNR=8.1							
COEN				S		Sn	00 40 40.0	-9.4
	baz=16,SNR=4.9							
QIS	**Mount Isa**	**17.26**	**148**	P		**Pn**	**00 38 24.2**	**+0.7**
	baz=18,SNR=10.0							
ASAR	**Alice Springs**	**17.96**	**168**	P		**Pn**	**00 38 31.9**	**0.0**
	4.6nm,0.3s,baz=346,slow=9.8,SNR=314							
ASAR				S		**S**	**00 41 44.2**	**-4.8**
	0.5nm,0.3s,baz=346,slow=20,SNR=11							
ASAR				ScP		ScP	00 46 13.2	-7.9
	baz=306,slow=1.7,SNR=6.2							
MTSU	**Mount Surprise**	**18.54**	**132**	P		**Pn**	**00 38 40.1**	**+1.5**
	baz=19,SNR=4.2							
MEEK	**Meekatharra**	**23.13**	**206**	P		**P**	**00 39 26.3**	**+1.7**
	baz=23,SNR=5.1							
QLP	**Quilpie**	**24.61**	**148**	P		**P**	**00 39 39.7**	**+1.8**
	baz=25,SNR=5.0							
KMBL	**Kambalda**	**26.29**	**196**	P		**P**	**00 39 54.8**	**+1.7**
	baz=26,SNR=7.8							
MORW	**Morawa**	**26.38**	**208**	P		**P**	**00 39 55.5**	**+1.6**
	baz=26,SNR=4.0							
KLBR	**Kellerberrin**	**27.84**	**203**	P		**P**	**00 40 08.8**	**+1.8**
	baz=28,SNR=12							
STKA	**Stephens Creek**	**27.96**	**158**	P		**P**	**00 40 07.9**	**-0.1**
	3.2nm,0.9s,baz=328,slow=11,SNR=3.7							
KSRS	**Korea Array**	**43.30**	**358**	P		**P**	**00 42 17.5**	**-0.9**
	0.7nm,0.5s,baz=173,slow=8.9,SNR=3.8							
USRK	**Ussuriysk Arra**	**50.04**	**2**	P		**P**	**00 43 08.7**	**-2.1**
	1.6nm,0.5s,baz=191,slow=6.9,SNR=4.6							
SONM	**Songino Array**	**57.48**	**341**	P		**P**	**00 44 04.7**	**-0.3**
	0.8nm,0.7s,baz=152,slow=4.6,SNR=4.7							
PETK	**Petropavlovsk-**	**63.45**	**18**	P		**P**	**00 44 44.0**	**-1.3**
	2.5nm,0.6s,baz=184,slow=5.9,SNR=5.0							
MKAR	**Makanchi Array**	**67.34**	**327**	P		**P**	**00 45 10.7**	**+0.2**
	0.9nm,0.5s,baz=112,slow=8.6,SNR=18							
ZALV	**Zalesovo Beam**	**70.66**	**334**	P		**P**	**00 45 29.8**	**-0.9**
	0.5nm,0.4s,baz=143,slow=5.8,SNR=3.8							
KURBB	**Kurchatov Arra**	**71.62**	**328**	P		**P**	**00 45 36.3**	**-0.2**
	0.5nm,0.4s,baz=126,slow=5.0,SNR=5.7							
MAW	**Mawson**	**75.79**	**201**	P		**P**	**00 46 01.5**	**+0.8**
	0.7nm,0.4s,baz=69,slow=8.6,SNR=6.7							
ILAR	**Eielson Array**	**92.54**	**25**	P		P	00 47 21.7	-3.8
	0.6nm,0.6s,baz=270,slow=4.5,SNR=5.9							

*ISCJB **14** 00:47:58.5±0.5, 29.°51S±0.°04×69.°47W±0.°08, h117km±7km, mb3.9/4, Error ellipse: s-maj=11.9km s-min=5.8km az=172.9*
*IDC **14** 00:47:58.8±1.5, 29.°38S×69.°29W, h96km±12km, mb3.7/4, mb1 3.6/8, mb1mx3.5/20, mbtmp3.5/8, Error ellipse: s-maj=29.7km s-min=11.0km az=80.0*
*GUC **14** 00:48:00.1±0.6, 29.°49S×69.°88W, h138km±8km, MD3.7, ML3.9*
ISC 14 00:47:58.7±0.8, 29.°48S±0.°04×69.°38W±0.°07, h104km±9km, n17, σ1s44/26, mb4.1/4, 2C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LCO	**Las Campanas**	**1.25**	**292**	⇓*i* P		**Pn**	**00 48 23.3**	**+0.9**
LCO				*i* S		**Sn**	**00 48 41.0**	**+0.6**
LCO				AML		AML	00 48 43.0	
	comp=N,3μm,0.2s							
TLL	**Tololo Astrono**	**1.42**	**241**	⇑*i* P		**Pn**	**00 48 25.2**	**+0.8**
TLL				*i* S		**Sn**	**00 48 44.2**	**+0.3**
TLL				AML		AML	00 48 46.9	
	comp=N,1μm,0.6s							
CMCH	**Combarbala**	**2.20**	**219**	⇓*i* P		**Pn**	**00 48 34.0**	**-0.1**
CMCH				*i* S		**Sn**	**00 49 00.6**	**-0.6**
CMCH				AML		AML	00 49 01.5	
	comp=N,4μm,0.5s							
CPCH	**Copiapo**	**2.28**	**338**	⇑*i* P		**Pn**	**00 48 37.0**	**+1.9**
CPCH				*i* S		**Sn**	**00 49 04.7**	**+1.8**
CFAA	**Coronel Fontan**	**2.34**	**155**	P		**Pn**	**00 48 37.7**	**+1.8**
	comp=N,1.4nm,0.3s,baz=337,slow=13,SNR=207							
CFAA				S		**Sn**	**00 49 05.8**	**+1.4**
	comp=N,4.7nm,0.3s,baz=126,slow=20,SNR=36							
CDCH	**Caldera**	**2.72**	**332**	⇓*i* P		**Pn**	**00 48 41.8**	**+1.0**
CDCH				*i* S		**Sn**	**00 49 13.2**	**0.0**
CDCH				AML		AML	00 49 19.2	
	comp=E,218nm,0.5s							
CHNG	**Los Chungos**	**3.02**	**217**	⇓*i* P		**Pn**	**00 48 44.2**	**-0.5**
CHNG				*i* S		**Sn**	**00 49 18.1**	**-2.2**
LVC	**Limon Verde**	**6.85**	**4**	P		**Pn**	**00 49 36.1**	**-0.8**
	comp=E,1.4nm,0.3s,baz=187,slow=8.8,SNR=7.4							
LVC				S		**Sn**	**00 50 49.4**	**-4.0**
	comp=E,1.0nm,0.3s,baz=196,slow=16,SNR=3.8							
CPUP	**Villa Florida**	**11.11**	**76**	P		**Pn**	**00 50 32.4**	**-2.1**
	comp=E,1.3nm,0.3s,baz=227,slow=12,SNR=12							
LPAZ	**La Paz**	**13.18**	**5**	P		**Pn**	**00 51 02.2**	**-0.2**
	comp=E,0.1nm,0.3s,baz=180,slow=5.1,SNR=3.6							
TXAR	**Lajitas Array**	**67.02**	**328**	P		**P**	**00 58 41.8**	**+1.0**
	comp=E,0.2nm,0.6s,baz=152,slow=6.1,SNR=2.6							
DBIC	**Dimbokro**	**71.57**	**71**	P		**P**	**00 59 09.7**	**+0.6**
	comp=E,1.9nm,0.5s,baz=193,slow=4.4,SNR=5.6							
BOSA	**Boshof**	**80.14**	**117**	P		**P**	**00 59 57.5**	**-0.4**
	comp=E,2.5nm,1.0s,baz=222,slow=1.8,SNR=5.6							
TORD	**Torodi Ar. Bea**	**80.51**	**69**	P		**P**	**01 00 00.

JTH	**Tanohata**	**9.28**	**239**	*eS*		**Sn**	**00 52 59.5**	**-3.8**
JTM	**Tenmabayashi**	**9.28**	**245**	P		**Pn**	**00 51 21.2**	**+1.2**
JTM				*eS*		**Sn**	**00 52 58.5**	**-4.8**
OFUJ	**Ofunato**	**9.95**	**235**	P		**Pn**	**00 51 30.6**	**+1.5**
JRG	**Rokugo**	**10.36**	**239**	P		**Pn**	**00 51 36.9**	**+2.1**
JRG				*eS*		**Sn**	**00 53 25.8**	**-4.0**
JIO	**Ouri**	**10.55**	**234**	P		**Pn**	**00 51 39.2**	**+1.7**
JIO				*eS*		**Sn**	**00 53 31.1**	**-3.5**
USRK	**Ussuriysk Arra**	**14.38**	**273**	P		**Pn**	**00 52 29.9**	**+0.3**
	comp=E,0.2nm,0.3s,baz=145,slow=44,SNR=3.2							
USRK				LR		LR	00 57 33.9	
	comp=E,78nm,22.0s,baz=100,slow=36							
KSRS	**Korea Array**	**19.75**	**255**	P		**Pn**	**00 53 36.9**	**-0.4**
	comp=E,0.1nm,0.3s,baz=61,slow=11,SNR=8.3							
YAK	**Yakutsk**	**21.24**	**330**	*eP*		**P**	**00 53 51.4**	**-0.1**
YAK				pmax	pmax			
	comp=N,5.0nm,1.0s							
YAK				pmax	pmax			
	comp=E,5.0nm,1.0s							
YAK				pmax	pmax			
	comp=Z,16nm,0.9s							
ZALV	**Zalesovo Beam**	**42.95**	**307**	PcP		**PcP**	**00 58 54.7**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=90,slow=4.4,SNR=3.8							
ZALV				LR		LR	01 15 55.4	
	comp=Z,41nm,18.2s,baz=70,slow=38							
MKAR	**Makanchi Array**	**47.05**	**298**	P		P	00 57 34.1	-2.8
MKAR							00 59 08.7	
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.6s							
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.8s							
MKAR	**Makanchi Array**	**47.05**	**298**	P		P	00 57 34.1	-2.8
	comp=Z,0.6nm,0.6s,baz=67,slow=8.3,SNR=6.6							
MKAR				PcP		**PcP**	**00 59 08.7**	**+0.1**
	comp=Z,0.8nm,0.8s,baz=68,slow=2.6,SNR=6.2							
CMAR	**Chiang Mai Arr**	**51.39**	**257**	P		**P**	**00 58 11.7**	**+1.3**
	comp=Z,1.2nm,0.4s,baz=47,slow=7.6,SNR=8.6							
YKA	**Yellowknife Arr**	**52.50**	**36**	P		**P**	**00 58 18.2**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=299,slow=6.9,SNR=6.1							
FINES	**FINESS Array B**	**65.09**	**335**	P		P	00 59 41.9	-3.6
	comp=Z,1.6nm,0.7s,baz=60,slow=8.2,SNR=3.9							
WRA	**Warramunga Arr**	**66.90**	**198**	P		P	01 00 02.3	+4.6
	comp=Z,0.6nm,0.8s,baz=17,slow=6.7,SNR=5.1							
NOA	**NORSAR Array B**	**69.41**	**341**	P		P	01 00 09.9	-3.1
	comp=Z,1.1nm,0.8s,baz=28,slow=6.2,SNR=6.8							
AKASG	**Malin Array Be**	**72.40**	**326**	P		P	01 00 28.3	-3.0
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AKASG	**Malin Array Be**	**72.40**	**326**	P		P	01 00 28.3	-3.0
	comp=Z,0.6nm,0.4s,baz=34,slow=5.7,SNR=5.1							
TXAR	**Lajitas Array**	**78.80**	**60**	P		**P**	**01 01 09.5**	**+1.1**
	comp=Z,0.3nm,0.9s,baz=322,slow=8.3,SNR=3.0							
BRTR	**Keskin Array B**	**79.01**	**316**	P		P	01 01 06.0	-3.5
	comp=Z,1.1nm,0.9s,baz=51,slow=5.0,SNR=4.0							
GERES	**GERESS Array B**	**79.49**	**334**	P		**P**	**01 01 09.8**	**-2.1**
	comp=Z,0.5nm,0.5s,baz=38,slow=4.9,SNR=7.8							

IDC 14 01:16:37.8±1.2, 7.31°S×67.88°E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/25, mbtmp3.7/8, MS3.8/13, Ms1 3.8/13, ms1mx3.5/27, Error ellipse: s-maj=40.3km s-min=24.4km az=42.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**23.04**	**239**	LR	LR	01 28 04.8	
	comp=Z,446nm,19.6s,baz=48,slow=30						
KMBO	**Kilima Mbogo**	**31.14**	**280**	LR	LR	01 32 49.9	
	comp=Z,236nm,21.1s,baz=97,slow=31						
CMAR	**Chiang Mai Arr**	**39.93**	**50**	P		P	01 24 14.9	+0.9
	0.3nm,0.4s,baz=248,slow=8.7,SNR=3.2							
BOSA	**Boshof**	**45.42**	**237**	LR	LR	01 44 07.1		
	comp=Z,131nm,18.1s,baz=167,slow=36							
GNI	**Garni**	**51.83**	**337**	LR	LR	01 46 48.0		
	comp=Z,46nm,19.8s,baz=109,slow=35							
MKAR	**Makanchi Array**	**55.37**	**12**	P		P	01 26 12.6	-1.0
	0.2nm,0.5s,baz=190,slow=6.2,SNR=4.5							
BRTR	**Keskin Array B**	**56.50**	**329**	P		P	01 26 21.4	-0.5
	0.6nm,0.8s,baz=108,slow=8.2,SNR=4.8							
BRTR				LR		LR	01 49 21.9	
	comp=Z,32nm,18.1s,baz=37,slow=35							
FITZ	**Fitzroy Crossi**	**57.15**	**107**	LR		LR	01 46 46.9	
	comp=Z,127nm,19.6s,baz=288,slow=32							
DAV	**Davao City (W)**	**59.29**	**77**	LR		LR	01 50 09.3	
	comp=Z,90nm,19.1s,baz=177,slow=34							
MAW	**Mawson**	**60.30**	**182**	LR		LR	01 47 56.6	
	comp=Z,47nm,18.9s,baz=129,slow=31							
ZALV	**Zalesovo Beam**	**62.68**	**11**	P		P	01 27 03.5	-0.7
	0.3nm,0.4s,baz=180,slow=2.6,SNR=3.1							
SONM	**Songino Array**	**64.56**	**28**	P		P	01 27 17.4	+0.5
	1.5nm,0.8s,baz=210,slow=8.6,SNR=6.4							
ASAR	**Alice Springs**	**65.16**	**113**	P		P	01 27 21.4	+0.2
	0.9nm,1.1s,baz=278,slow=7.1,SNR=3.5							
ASAR				LR		LR	01 51 20.2	
	comp=Z,89nm,19.1s,baz=102,slow=32							
WRA	**Warramunga Arr**	**65.44**	**109**	P		P	01 27 22.2	-0.9
	2.6nm,1.1s,baz=279,slow=6.3,SNR=5.6							
WRA				LR		LR	01 51 11.9	
	comp=Z,173nm,19.8s,baz=265,slow=32							
TORD	**Torodi Ar. Bea**	**68.80**	**287**	LR		LR	01 56 15.1	
	comp=Z,76nm,18.8s,baz=120,slow=35							
DBIC	**Dimbokro**	**73.87**	**279**	LR		LR	01 58 31.9	
	comp=Z,71nm,19.0s,baz=112,slow=34							
ESDC	**Sonseca Array**	**80.90**	**312**	P		P	01 28 54.9	+0.7
	0.1nm,0.3s,baz=84,slow=3.6,SNR=5.1							
NOA	**NORSAR Array B**	**81.09**	**336**	LR		LR	02 05 37.5	
	comp=Z,23nm,21.0s,baz=90,slow=36							
YKA	**Yellowknife Ar**	**124.89**	**1**	PKP		PKPdf	01 35 40.3	+0.9
	0.6nm,1.1s,baz=1.3,slow=2.5,SNR=4.3							
PDAR	**Pinedale Array**	**144.61**	**357**	PKP		PKPbc	01 36 16.4	+0.7
	0.4nm,0.3s,baz=48,slow=1.3,SNR=2.6							
NVAR	**Mina Array Bea**	**148.51**	**9**	PKPbc		PKPbc	01 36 26.1	-1.2
	1.2nm,0.8s,baz=12,slow=2.1,SNR=4.1							

FUNV 14 01:20:10.2, 5.94N×72.75W, h12km, MW3.5, 3C-1D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.96**	**13**	*eP*	Pn	01 20 43.6	-0.1
CAPV				*eS*	Sn	01 21 07.2	-1.4
SOCV	**Socops**	**3.00**	**39**	*eP*	Pn	01 20 57.1	-0.6
SOCV				*eS*	Sn	01 21 31.2	-2.4
VIGV	**El Vigia**	**3.20**	**25**	*eP*	Pn	01 20 59.1	-1.4
VIGV				*eS*	Sn	01 21 35.4	-3.1
ELOV	**Elorza**	**3.42**	**72**	*eS*	Sn	01 21 40.9	-3.1
QARV	**Quebrada Arrib**	**4.78**	**27**	*iP*	Pn	01 21 20.9	-1.3
CURV	**Curarigua**	**4.90**	**34**	*eP*	Pn	01 21 21.9	-2.1
CURV				*eS*	Sn	01 22 16.1	-4.7
BAUV	**El Baul**	**5.55**	**57**	*eP*	Pn	01 21 30.8	-1.8
MAPV	**Macapo**	**5.75**	**47**	*eP*	Pn	01 21 33.4	-2.2
MONV	**Montecano**	**6.58**	**24**	*eP*	Pn	01 21 44.6	-2.3

IDC 14 01:23:36.5±1.4, 41.31N×141.90E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/24, mbtmp3.4/3, Error ellipse: s-maj=44.4km s-min=32.6km az=101.0
ISCJB 14 01:23:43.8±0.6, 41.48N±0.05×141.95E±0.06, h70km±6km, mb3.4/3, Error ellipse: s-maj=8.9km s-min=5.8km az=138.0
JMA 14 01:23:44.4±0.1, 41.49N×141.97E, h62km±2km, M3.2
ISC 14 01:23:44.7±1.0, 41.48N±0.05×141.95E±0.05, h63km±10km, n16, σ0.950/23, mb3.5/3, 4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.69**	**262**	*i*P	**Pn**	**01 23 58.9**	**0.0**
JOT				*e*S	**Sn**	**01 24 09.7**	**+0.4**
JKB	**Kayabe**	**0.80**	**301**	*i*P	**Pn**	**01 24 00.0**	**-0.2**
JKB				*e*S	**Sn**	**01 24 11.7**	**0.0**
JTM	**Tenmabayashi**	**0.96**	**224**	*i*P	**Pn**	**01 24 02.6**	**+0.3**
JTM				*e*S	**Sn**	**01 24 15.6**	**+0.3**
JNBK	**Urakawa-nobuka**	**1.00**	**37**	P	**Pn**	**01 24 02.1**	**-0.7**
JNBK				*e*S	**Sn**	**01 24 16.1**	**-0.1**
JEM	**Erimo**	**1.05**	**59**	P	**Pn**	**01 24 03.2**	**-0.2**
JEM				*e*S	**Sn**	**01 24 17.3**	**-0.1**
JSR	**Shiriuchi**	**1.15**	**273**	P	**Pn**	**01 24 05.0**	**+0.3**
JANG	**Nango**	**1.15**	**197**	P	**Pn**	**01 24 04.5**	**-0.3**
JNB	**Noboribetsu**	**1.20**	**326**	P	**Pn**	**01 24 04.9**	**-0.5**
JNB				*e*S	**Sn**	**01 24 20.1**	**-0.8**
JBT2	**Biratori 2**	**1.33**	**13**	P	**Pn**	**01 24 07.5**	**+0.3**
JEW	**Eniwo**	**1.41**	**345**	*i*P	**Pn**	**01 24 08.4**	**+0.2**
JEW				*e*S	**Sn**	**01 24 26.2**	**+0.3**
JCH	**Churui**	**1.55**	**42**	P	**Pn**	**01 24 10.6**	**+0.6**
JFR	**Furan**	**1.75**	**16**	P	**Pn**	**01 24 12.8**	**0.0**
JOSM	**Okushiri--Mats**	**1.95**	**289**	P	**Pn**	**01 24 15.1**	**-0.3**
MKAR	**Makanchi Array**	**42.25**	**298**	P	**P**	**01 31 31.6**	**0.0**
	0.4nm,0.5s,baz=85,slow=8.4,SNR=5.3						
ILAR	**Eielson Array**	**45.56**	**35**	P	**P**	**01 31 58.9**	**+1.0**
	0.4nm,0.6s,baz=273,slow=9.8,SNR=4.9						
WRA	**Warramunga Arr**	**61.52**	**188**	P	**P**	**01 33 54.0**	**-1.0**
	0.4nm,0.9s,baz=6.7,slow=7.0,SNR=3.4						

BJI 14 01:31:14.6, 7.70S×107.50E, h15km, mB4.7/15, mb4.8/19, Ms4.7/10, Ms7 4.3/9
IDC 14 01:31:15.1±0.5, 7.75S×107.54E, h0km, mb4.4/21, mb1 4.5/22, mb1mx4.4/27, mbtmp4.4/22, ML3.6/1, MS3.6/6, Ms1 3.6/6, ms1mx3.2/25, Error ellipse: s-maj=23.4km s-min=12.2km az=53.0
NEIC 14 01:31:18.1±2.4, 7.75S×107.47E, h18km±14km, mb4.6/20, Error ellipse: s-maj=7.5km s-min=5.2km az=49.0
ISCJB 14 01:31:18.5±0.2, 7.95S±0.03×107.35E±0.02, h33km, mb4.6/52, MS3.8/8, Error ellipse: s-maj=4.4km s-min=3.4km az=175.0
AUST 14 01:31:22.4±0.0, 8.10S×107.45E, h43km, Error ellipse: s-maj=0.8km s-min=0.6km az=333.0
DJA 14 01:31:23.2±0.8, 8°S±7°×10°8E±°, h18km±6km, M4.9/15, mb4.9/5, mB5.4/4, MLv5.0/15, Mw(mB)4.8/4
ISC 14 01:31:18.2±0.5, 7.92S±0.04×107.36E±0.03, h20km±2km, n159, σ1s28/177, mb4.7/52, MS3.8/10, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**0.58**	**51**	P	Pn	01 31 34.1	+2.8
CISI	**Cisompet, Garu**	**0.58**	**51**	P	Pn	01 31 33.8	+2.5
	baz=0.7,SNR=1000						
CNJI	**Cibinong**	**0.65**	**339**	P	Pn	01 31 37.7	+5.4
LEM	**Lembang**	**1.11**	**13**	P	Pg	01 31 44.4	+4.5
LEM	**Lembang**	**1.11**	**13**	P	Pg	01 31 45.0	+5.1
	baz=1.3,SNR=695						
SBJI	**Serang**	**2.17**	**326**	P	**Pg**	**01 32 00.7**	**+0.8**
BJII	**Banjamegara**	**2.40**	**76**	P	**Pn**	**01 31 58.3**	**+1.9**
BJII				*e*S	**Sb**	**01 32 27.5**	**-2.5**
YOGI	**Yogyakarta**	**2.91**	**88**	P	**Pb**	**01 32 08.9**	**-0.5**
YOGI				*e*S	**Sn**	**01 32 35.9**	**-1.9**
XMI	**Christmas Isla**	**3.01**	**213**	P	**Pn**	**01 32 06.6**	**+1.8**
	baz=2.9,SNR=29						
XMI				S	**Sn**	**01 32 38.2**	**-2.1**
	baz=2.9,SNR=9.5						
XMIS	**Christmas Isla**	**3.06**	**213**	*e*Pn	**Pn**	**01 32 06.7**	**+1.3**
XMIS				*e*Sn	**Sn**	**01 32 38.6**	**-2.9**
XMIS	**Christmas Isla**	**3.06**	**213**	P	**Pn**	**01 32 07.0**	**+1.5**
	baz=3.0,SNR=15						
XMIS				S	**Sn**	**01 32 38.3**	**-3.1**
	baz=3.0,SNR=8.4						
UGM	**Wanagama**	**3.13**	**90**	*e*Pn	**Pn**	**01 32 07.6**	**+1.1**
UGM	**Wanagama**	**3.13**	**90**	P	**Pb**	**01 32 10.4**	**-2.8**
UGM				S	**Sn**	**01 32 42.0**	**-1.3**
UGM	**Wanagama**	**3.13**	**90**	P	**Pn**	**01 32 07.6**	**+1.1**
	baz=3.0,SNR=34						
UGM				S	**Sn**	**01 32 41.9**	**-1.5**
	baz=3.0,SNR=6.3						
SMRI	**Semarang**	**3.17**	**74**	P	Pn	01 32 10.3	+3.3
SMRI				S	**Sn**	**01 32 47.5**	**+3.2**
SMRI	**Semarang**	**3.17**	**74**	P	Pb	01 32 10.6	-3.3
	baz=3.1,SNR=23						
SMRI				S	**Sn**	**01 32 47.6**	**+3.2**
	baz=3.1,SNR=5.0						
KASI	**Kota Agung**	**3.71**	**310**	P	**Pb**	**01 32 22.4**	**-0.7**
KASI				S	**Sb**	**01 33 05.8**	**-1.9**
PCJI	**Pacitan**	**3.79**	**94**	P	Pn	01 32 18.3	+2.8
PCJI				S	**Sn**	**01 32 56.1**	**-3.4**
SJI	**Sawahan**	**4.37**	**88**	P	Pn	01 32 26.3	+2.7
LWLI	**Liwa**	**4.37**	**311**	P	**Pb**	**01 32 32.7**	**-1.7**
PWJI	**Pagerwojo**	**4.40**	**92**	P	**Pn**	**01 32 25.7**	**+1.8**
PWJI				S	**Sn**	**01 33 15.1**	**+0.5**
TPI	**Tanjungpandan**	**5.14**	**3**	P	Pn	01 32 40.2	+6.1
	58nm,0.7s,504nm0.2nm						
MNAI	**Manna**	**5.63**	**309**	P	Pb	01 32 49.1	-6.7
	baz=5.8,SNR=4.8						
MNAI				S	Sn	01 33 53.5	+8.4
	baz=5.8,SNR=3.6						
PPBI	**Pangkal Pinang**	**5.85**	**348**	P	Pn	01 32 51.6	+7.7
	50nm,0.9s,0.5nm						
GMJI	**Gumukmas**	**6.03**	**94**	P	Pn	01 32 49.4	+3.0
	74nm,0.8s,2µm0.6nm						
BLJI	**Banyuglugur**	**6.18**	**89**	P	Pn	01 32 50.7	+2.3
	84nm,0.5s,6µm0.6nm						
KSI	**Kapahiang**	**6.36**	**312**	P	Pn	01 32 59.3	+8.3
JAMBI	**JAMBI**	**7.26**	**329**	P	Pb	01 33 14.5	-9.2
KAPI	**Kappang**	**12.64**	**78**	*e*Pn	**Pn**	**01 34 16.0**	**-1.0**
KAPI	**Kappang**	**12.64**	**78**	Pn	Pn	01 34 13.5	-3.6
	0.3nm,0.3s,baz=144,slow=9.7,SNR=3.7						
KULM	**Kulim**	**14.73**	**333**	*e*Pn	**Pn**	**01 34 43.0**	**-2.6**
KKM	**Kota Kinabalu**	**16.44**	**33**	*e*Pn	**Pn**	**01 35 04.5**	**-3.6**
MBWA	**Marble Bar**	**17.77**	**139**	*e*Pn	**P**	**01 35 25.7**	**+0.4**
FITZ	**Fitzroy Crossi**	**20.46**	**121**	*e*P	**P**	**01 35 55.0**	**+0.2**
	7.4nm,0.8s						
FITZ	**Fitzroy Crossi**	**20.46**	**121**	P	**P**	**01 35 55.0**	**+0.2**
	6.4nm,0.7s,baz=258,slow=4.7,SNR=19						
FITZ	**Fitzroy Crossi**	**20.46**	**121**	P	**P**	**01 35 55.5**	**+0.8**
	baz=20,SNR=8.3						
MEEK	**Meekatharra**	**21.47**	**151**	P	P	01 36 15.8	+10
	baz=21,SNR=6.0						
MEEK				S	S	01 39 53.3	-10
	baz=21,SNR=3.4						
KNRA	**Kununurra**	**22.30**	**112**	P	**P**	**01 36 15.5**	**+0.8**
	baz=22,SNR=4.3						
MORW	**Morawa**	**22.57**	**160**	S	S	01 40 16.9	-7.1
	baz=22,SNR=4.4						
MTN	**Manton Dam**	**23.88**	**104**	P	**P**	**01 36 30.0**	**-0.7**
	baz=24,SNR=24						
KDU	**Kakadu**	**25.15**	**103**	P	**P**	**01 36 41.1**	**-1.2**
	baz=25,SNR=5.0						
FAKI	**Fak Fak**	**25.26**	**80**	P	**P**	**01 36 42.5**	**-0.9**
	baz=25,SNR=5.3						
NWAO	**Narrogin (SRO)**	**26.51**	**161**	LR	LR	01 46 27.6	
	comp=Z,249nm,18.5s,baz=4.9,slow=34						
CMAR	**Chiang Mai Arr**	**27.50**	**342**	P	**P**	**01 37 02.6**	**-0.8**
CMAR	**Chiang Mai Arr**	**27.50**	**342**	P	**P**	**01 37 02.6**	**-0.8**
	1.6nm,0.4s,baz=178,slow=8.5,SNR=6.1						
CHTO	**Chiang Mai**	**27.83**	**343**	*e*P	**P**	**01 37 06.3**	**-0.2**
	2.8nm,0.6s						
WRA	**Warramunga Arr**	**28.73**	**117**	P	**P**	**01 37 13.4**	**-1.1**
WRA				PcP	**PcP**	**01 40 24.4**	**-0.4**
WRA	**Warramunga Arr**	**28.73**	**117**	P	**P**	**01 37 13.4**	**-1.1**
	0.9nm,0.6s,baz=292,slow=11,SNR=11						
WRA				PcP	**PcP**	**01 40 24.4**	**-0.4**
	1.1nm,0.5s,baz=303,slow=2.1,SNR=8.1						
ASAR	**Alice Springs**	**29.87**	**125**	P	**P**	**01 37 23.9**	**-0.8**
ASAR				PcP	**PcP**	**01 40 27.7**	**0.0**
ASAR	**Alice Springs**	**29.87**	**125**	P	**P**	**01 37 23.9**	**-0.8**
	0.4nm,0.5s,baz=303,slow=9.0,SNR=7.5						
ASAR				PcP	**PcP**	**01 40 27.7**	**0.0**
	1.4nm,0.6s,baz=309,slow=1.9,SNR=10						
AS31	**Alice Springs**	**29.87**	**125**	*e*P	**P**	**01 37 25.1**	**+0.5**
KMI	**Kunming**	**33.15**	**352**	P	P	01 37 57.9	+4.2
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
GYA	**Guiyang**	**34.18**	**359**	*e*P	**P**	**01 38 03.3**	**+0.8**
GYA				PcP	**PcP**	**01 40 40.4**	**+1.0**
GYA				S	**S**	**01 43 29.6**	**+1.4**
GYA				ScP	**ScP**	**01 44 23.3**	**-0.2**
GYA				ScS	**ScS**	**01 48 24.0**	**-1.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
COEN	**Coen**	**35.64**	**103**	*e*P	**P**	**01 38 13.8**	**-1.4**
	comp=Z,41nm,0.8s						
COEN	**Coen**	**35.64**	**103**	P	**P**	**01 38 14.3**	**-0.9**
	baz=36,SNR=5.6						
MTSU	**Mount Surprise**	**37.33**	**110**	P	**P**	**01 38 30.0**	**+0.3**
	baz=37,SNR=9.0						
CD2	**Chengdu**	**38.76**	**355**	*e*P	**P**	**01 38 44.0**	**+2.5**
CD2				pP	**pP**	**01 38 48.5**	**+0.9**
CD2				sP	**sP**	**01 38 51.0**	**+0.9**
CD2				S	**ScP**	**01 44 41.6**	**+1.3**
CD2				sS	**sS**	**01 44 48.5**	**+0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
CD2				LR	LR		
	comp=E,100nm,14.2s						
CTAO	**Charters Tower**	**39.52**	**112**	*e*P	**P**	**01 38 48.2**	**+0.2**
	comp=E,6.4nm,0.9s						
STKA	**Stephens Creek**	**39.76**	**132**	*e*P	**P**	**01 38 50.5**	**+0.6**
	comp=E,60nm,3.0s						
STKA				PcP	**PcP**	**01 40 56.0**	**-0.1**
STKA	**Stephens Creek**	**39.76**	**132**	P	**P**	**01 38 49.2**	**-0.6**
	comp=E,8.8nm,0.7s,baz=305,slow=9.1,SNR=19						
STKA				PcP	**PcP**	**01 40 56.0**	**-0.1**
	comp=E,4.4nm,0.6s,baz=352,slow=4.5,SNR=5.2						
STKA	**Stephens Creek**	**39.76**	**132**	P	**P**	**01 38 50.4**	**+0.6**
	baz=40,SNR=13						
NJ2	**Nanjing**	**41.23**	**15**	*e*P	**P**	**01 39 02.8**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMSA	**Cobar Meteorol**	**42.71**	**129**	P	**P**	**01 39 15.3**	**+1.2**
	baz=43,SNR=5.8						
LZH	**Lanzhou**	**43.90**	**356**	*e*P	**P**	**01 39 26.1**	**+2.4**
LZH				PP	**PP**	**01 41 06.5**	**+0.3**
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,63nm,5.2s						
LZH				LR	LR		
	comp=N,380nm,13.7s						
LZH				LR	LR		
	comp=E,330nm,13.5s						
LZH				LR	LR		
	comp=Z,440nm,17.6s						
BJI	**Beijing**	**48.41**	**9**	P	**P**	**01 39 58.8**	**-0.2**
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
HHC	**Hu-ho-hao-te**	**48.68**	**4**	*e*P	**P**	**01 40 01.5**	**+0.3**
HHC				*e*P	**sP**	**01 40 10.3**	**+0.4**
HHC				S	**S**	**01 47 04.0**	**+1.3**
HHC				sS	**sS**	**01 47 12.8**	**-0.2**
HHC				ScS	**ScS**	**01 49 52.4**	**-0.6**
HHC				pmax	pmax		
	comp=Z,37nm,0.9s						
HHC				pmax	pmax		
	comp=Z,120nm,4.6s						
HHC				LR	LR		
	comp=N,290nm,11.2s						
HHC				LR	LR		
	comp=E,270nm,15.0s						
HHC				LR	LR		
	comp=Z,140nm,15.5s						
KSAR	**Wonju Array Be**	**49.04**	**22**	PcP	**PcP**	**01 41 27.1**	**-0.5**
KSRS	**Korea Array**	**49.06**	**22**	PcP	**PcP**	**01 41 27.1**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=208,slow=3.7,SNR=5.2						
KSRS				LR	LR	01 59 50.4	
	comp=Z,33nm,18.7s,baz=250,slow=35						
CN2	**Changchun**	**54.03**	**16**	*e*P	**P**	**01 40 40.3**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
WMQ	**Urumqi**	**54.50**	**343**	*e*P	**P**	**01 40 45.1**	**+0.4**
WMQ				pP	**pP**	**01 40 52.0**	**+1.0**
WMQ				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,70nm,3.6s						
KSH	**Kashi**	**55.43**	**331**	*e*P	**P**	**01 40 50.9**	**-0.7**
KSH				*e*pP	**pP**	**01 40 54.8**	**-3.1**
KSH				*e*sP	**sP**	**01 40 57.6**	**-2.7**
KSH				*e*PcP	**PcP**	**01 41 52.0**	**+0.3**
KSH				*e*PP	**PP**	**01 42 55.5**	**-0.2**
KSH				*e*S	**S**	**01 48 30.9**	**-4.7**
KSH				*e*sS	sS	01 48 38.5	-7.5
KSH				pmax	pmax		
	comp=Z,11nm,0.6s						
KSH				pmax	pmax		
	comp=Z,130nm,5.2s						
KSH				LR	LR		
	comp=N,880nm,12.6s						
KSH				LR	LR		
	comp=E,210nm,5.3s						
KSH				LR	LR		
	comp=Z,140nm,4.0s						
SONM	**Songino Array**	**55.52**	**359**	P	**P**	**01 40 51.7**	**-0.3**
SONM				PcP	**PcP**	**01 41 51.8**	**-0.1**
SONM	**Songino Array**	**55.52**	**359**	P	**P**	**01 40 51.7**	**-0.3**
	comp=Z,1.1nm,0.4s,baz=175,slow=8.6,SNR=11						
SONM				PcP	**PcP**	**01 41 51.8**	**-0.1**
	comp=Z,4.2nm,0.5s,baz=175,slow=3.9,SNR=21						
SONM				LR	LR	02 04 20.0	
	comp=Z,57nm,21.1s,baz=182,slow=36						
KBL	**Kabul**	**55.65**	**322**	*e*P	**P**	**01 40 52.6**	**-0.7**
	comp=Z,5.5nm,0.6s						
MDJ	**Mudanjiang**	**56.01**	**19**	P	**P**	**01 40 56.6**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,62nm,4.0s						
USRK	**Ussuriysk Arra**	**56.46**	**21**	P	**P**	**01 40 57.2**	**-1.4**
	comp=Z,1.7nm,0.5s,baz=185,slow=6.9,SNR=5.1						
TKM2	**Tokmak 2**	**58.28**	**333**	*e*P	**P**	**01 41 10.5**	**-1.3**
	comp=Z,13nm,0.6s						
MK31	**Makanchi Array**	**58.87**	**340**	*e*P	**P**	**01 41 14.2**	**-1.4**
MKAR	**Makanchi Array**	**58.87**	**340**	P	**P**	**01 41 14.1**	**-1.5**
MKAR	**Makanchi Array**	**58.87**	**340

AKASG	Malin Array Be	88.63	322	P		P	01 44 09.4	-0.5
	comp=Z,1.6nm,0.6s,baz=89,slow=4.6,SNR=9.5							
AK01	Malin Array Si	88.64	321	*eP*		P	01 44 09.5	-0.5
KIEV	Kiev	88.64	321	*eP*		P	01 44 10.1	+0.1
	comp=Z,4.8nm,0.8s							
MLR	Muntele Rosu	89.62	316	P		P	01 44 16.3	+1.5
MLR	Muntele Rosu	89.62	316	P		P	01 44 16.3	+1.5
	comp=Z,0.4nm,0.5s,baz=298,slow=9.8,SNR=8.3							
BUR08	Bucovina Ar. S	90.54	318	*eP*		P	01 44 20.2	+1.0
JOF	Joensuu	90.71	334	*ep*		P	01 44 19.5	+0.1
	comp=Z,3.3nm,0.4s							
FINES	FINESS Array B	92.75	332	P		P	01 44 29.2	+0.4
FINES	FINESS Array B	92.75	332	P		P	01 44 29.2	+0.4
	comp=Z,2.2nm,0.7s,baz=134,slow=8.2,SNR=5.3							
ARCES	ARCESS Array B	94.52	340	P		P	01 44 35.8	-1.0
ARCES	ARCESS Array B	94.52	340	P		P	01 44 35.8	-1.0
	comp=Z,2.4nm,0.8s,baz=92,slow=7.6,SNR=8.2							
ARCES				LR		LR	02 36 06.8	
	comp=Z,30nm,18.1s,baz=62,slow=41							
SPITS	Spitsbergen Ar	97.90	348	P		P	01 44 51.0	-1.1
SPITS	Spitsbergen Ar	97.90	348	P		P	01 44 51.0	-1.1
	comp=Z,0.4nm,0.4s,baz=121,slow=7.9,SNR=5.2							
YKA	Yellowknife Ar	117.59	21	PKP		PKPdf	01 50 01.7	-0.8
YKA	Yellowknife Ar	117.59	21	PKP		PKPdf	01 50 01.7	-0.8
	comp=Z,0.8nm,0.5s,baz=331,slow=1.3,SNR=24							
FFC	Flin Flon	127.76	21	*e*PKPdf		PKPdf	01 50 22.5	+0.2
PDAR	Pinedale Array	132.51	37	PKP		PKPdf	01 50 32.6	+0.6
PDAR	Pinedale Array	132.51	37	PKP		PKPdf	01 50 32.6	+0.6
	comp=Z,0.4nm,0.6s,baz=165,slow=3.7,SNR=3.5							
SCHQ	Scheffer ville	132.99	355	PKP		PKPdf	01 50 32.4	+0.1
SCHQ	Scheffer ville	132.99	355	PKP		PKPdf	01 50 32.4	+0.1
	comp=Z,1.1nm,0.5s,baz=18,slow=10,SNR=3.8							
CPUP	Villa Florida	142.85	203	PKP		PKPdf	01 50 50.1	-1.1
CPUP	Villa Florida	142.85	203	PKP		PKPdf	01 50 50.1	-1.1
	comp=Z,0.5nm,0.6s,baz=83,slow=19,SNR=3.4							
TXAR	Lajitas Array	143.89	50	PKP		PKPbc	01 50 51.2	+0.5
TXAR	Lajitas Array	143.89	50	PKP		PKPbc	01 50 51.2	+0.5
	comp=Z,0.5nm,0.4s,baz=227,slow=1.2,SNR=14							
NCB	Newcomb	144.06	2	*e*PKPdf		PKPab	01 50 50.2	-0.1
WMOK	Wichita Mounta	144.09	38	*e*PKPdf		PKPab	01 50 51.1	+0.4
ERPA	Erie	145.33	10	*e*PKPbc		PKPbc	01 50 54.1	-0.7
SLM	Saint Louis	145.55	25	*e*PKPbc		PKPdf	01 50 54.8	-0.7
BINY	Binghamton	145.73	4	*e*PKPbc		PKPdf	01 50 55.4	-0.4
JCT	Junction City	146.09	45	*e*PKPbc		PKPbc	01 50 57.8	+0.2
BDFB	Brasilia	146.19	226	PKPbc		PKPab	01 50 60.0	+1.0
BDFB	Brasilia	146.19	226	PKPbc		PKPab	01 50 60.0	+1.0
	comp=Z,3.4nm,0.5s,baz=118,slow=1.9,SNR=12							
BLO	Bloomington	146.47	20	*e*PKPbc		PKPdf	01 50 57.8	+0.7
ACSO	Alum Creek Sta	146.52	14	*e*PKPbc		PKPdf	01 50 58.0	+0.9
SIUC	Southern Illin	146.75	24	*e*PKPdf		PKPdf	01 50 57.0	-0.6
SIUC				*e*PKPbc		PKPbc	01 50 59.2	0.0
MIAR	Mount Ida	147.24	33	*e*PKPbc		PKPbc	01 51 00.7	-0.1
WCI	Wyandotte Cave	147.40	20	*e*PKPbc		PKPbc	01 51 00.6	-0.5
WVT	Waverly	148.68	24	*e*PKPbc		PKPbc	01 51 04.3	-0.2
LVC	Limon Verde	149.44	187	*e*PKPbc		PKPbc	01 51 08.6	+1.4
TZTN	Tazewell	149.82	18	*e*PKPbc		PKPbc	01 51 07.0	-0.5
CPCT	Cooper Cave	150.51	20	*e*PKPbc		PKPbc	01 51 08.7	-0.4
CPCT				*e*PKPab		PKPab	01 51 14.9	-0.6
LRAL	Lakeview Retre	151.69	26	*e*PKPbc		PKPbc	01 51 11.3	-0.5
LPAZ	La Paz	155.54	190	*e*PKPdf		PKPdf	01 51 13.3	+0.9

IDC 14 01:56:21.4±2.3, 8.00S×113.15E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/21, mbtmp3.5/4, Error ellipse: s-maj=147.4km s-min=20.8km az=49.0, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	23.71	122	P		P	02 01 35.7	+0.4
	1.0nm,0.4s,baz=298,slow=12,SNR=27							
ASAR	Alice Springs	25.27	130	P		P	02 01 49.2	-0.4
	0.7nm,0.4s,baz=304,slow=9.2,SNR=13							
MKAR	Makanchi Array	61.07	336	P		P	02 06 36.9	-0.3
	0.4nm,0.4s,baz=157,slow=7.6,SNR=9.8							
KURBB	Kurchatov Arra	65.63	337	P		P	02 07 07.6	+0.3
	0.2nm,0.5s,baz=153,slow=6.3,SNR=3.8							

NNC 14 02:14:40.3±1.3, 44.94N×78.66E, h14km±8km, mb3.5, mpv3.2,12C-8D, Error ellipse: s-maj=7.0km s-min=2.7km az=125.0, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KNDC	Almaty	2.11	216	⇓Pn		Pn	02 15 15.0	-0.3
	43nm,0.6s							
KNDC				⇓Sn		Sn	02 15 41.6	+0.2
	148nm,0.8s							
TKM2	Tokmak 2	2.99	229	⇓Pn		Pn	02 15 28.3	+0.6
	3.9nm,0.4s							
TKM2				⇑Sn		Sn	02 16 05.0	+1.5
	16nm,0.7s							
MK31	Makanchi Array	3.14	53	Pn		Pn	02 15 28.8	-0.7
	1.8nm,0.2s,baz=318,slow=5.7,SNR=112							
MK31				⇑Sn		Sn	02 16 07.9	+1.1
	3.3nm,0.2s,baz=222,slow=27,SNR=4.4							
KUR16	Kurchatov Arra	5.69	359	⇓Pn		Pn	02 16 05.9	+1.5
	0.3nm,0.3s							
KUR16				⇑Sn		Sn	02 17 11.1	+1.6
	0.6nm,0.6s							
KUR16				⇑Lg		Lg	02 17 41.4	
	9.2nm,0.8s							
KURK	Kurchatov	5.78	360	⇑Pn		Pn	02 16 07.2	+1.6
	3.5nm,1.4s							
KURK				⇓Pg		Pg	02 16 26.1	-4.8
	1.5nm,0.6s							
KURK				⇑Sn		Sn	02 17 10.7	-1.0
	2.0nm,0.5s							
KURK				⇑Lg		Lg	02 17 42.3	
	26nm,0.7s							
KK31	Karatay Array	6.15	256	Pn		Pn	02 16 10.6	-0.2
	0.6nm,0.3s,baz=73,slow=13,SNR=24							
KK31				⇑Lg		Lg	02 17 54.5	
	4.2nm,0.5s,baz=74,slow=27,SNR=10							
VOSK	Vostochnaya	9.29	330	⇑Sn		Sn	02 18 38.7	+0.8
	0.6nm,0.4s							
VOSK				⇓Lg		Lg	02 19 34.3	
	2.6nm,0.6s							
BVA0	Borovoye Array	9.74	329	⇑Lg		Lg	02 19 49.7	
	4.7nm,1.1s,baz=162,slow=26,SNR=4.0							
BRVK	Borovoye	9.81	329	⇑Lg		Lg	02 19 49.9	
	8.6nm,1.0s							
ZRNK	Zerenda	10.22	325	⇓Pn		Pn	02 17 06.1	-0.4
	2.1nm,1.1s							
ZRNK				⇑Sn		Sn	02 19 02.0	+1.2
ZRNK				⇓Lg		Lg	02 20 02.3	
	2.3nm,0.7s							
AB31	Akbulak array	13.46	295	P		Pn	02 17 48.4	-2.3
	0.3nm,0.3s,baz=107,slow=8.3,SNR=9.8							

*ISCJB **14** 02:19:31.5±0.3, 42.81N±0.04×136.47E±0.06, h341km, mb3.5/14, Error ellipse: s-maj=6.8km s-min=4.8km az=43.5*
*IDC **14** 02:19:31.9±0.9, 42.83N×136.34E, h320km±7km, mb3.2/14, mb1 3.4/19, mb1mx3.3/32, mbtmp3.3/19, Error ellipse: s-maj=16.0km s-min=8.9km az=180.0*
*JMA **14** 02:19:35.0±0.4, 42.76N×136.92E, h330km, M3.5*
ISC 14 02:19:32.4±0.6, 42.77N±0.06×136.57E±0.06, h341km, n39, σ1§68/40, mb3.5/14, Eastern Sea of Japan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JOSM	Okushiri--Mats	2.26	107	P		Pn	02 20 24.4	-0.4
JSK	Shakotan	2.92	77	P		Pn	02 20 29.9	-0.4
JKB	Kayabe	3.42	103	P		Pn	02 20 35.3	+0.3
JOT	Ohata	3.61	111	P		Pn	02 20 37.0	+0.1
USRK	Ussuriysk Arra	3.62	295	P		Pn	02 20 33.5	-3.4
	1.4nm,0.3s,baz=96,slow=10.0,SNR=10							
USRK				S		S	02 21 24.3	-4.5
	0.3nm,0.3s,baz=119,slow=20,SNR=4.5							
JRG	Rokugo	4.56	136	P		Pn	02 20 47.2	+0.4
ASAJ	Asahikawa	4.59	71	P		Pn	02 20 47.1	+0.1
	4.2nm,0.3s,baz=230,slow=9.6,SNR=23							
ASAJ				S		S	02 21 46.5	-0.7
	0.3nm,0.3s,baz=90,slow=20,SNR=4.5							
JWK2	Keihoku	4.61	55	P		Pn	02 20 48.1	+0.9
JSD	Sado	4.90	164	P		Pn	02 20 51.8	+1.2
JCH	Churui	5.01	90	P		Pn	02 20 50.9	-0.7
JCH				S		S	02 21 50.7	-5.0
JMK	Ichinoseki	5.20	136	P		Pn	02 20 53.3	-0.5
JTKR	Abashiri--Toko	5.48	75	P		Pn	02 20 56.8	-0.1
JHK	Hiroka	5.83	160	P		Pn	02 21 03.1	+2.1
JMM	Marumori	5.87	145	P		Pn	02 21 01.2	-0.2
JMM				S		S	02 22 12.0	-1.5
JFT	Otama	5.99	150	P		Pn	02 21 04.5	+1.6
JFK	Kawauchi	6.33	147	P		Pn	02 21 07.2	+0.4
JFK				S		S	02 22 20.1	-3.2
MAT	Matsushiro	6.35	168	P		Pn	02 21 11.0	+4.0
JNG	Nsakai	6.47	169	P		Pn	02 21 11.0	+2.5
NEM2	Nemuro 2	6.75	82	P		Pn	02 21 09.8	-1.7
NEM2				S		S	02 22 24.3	-7.6
JRY	Ryogami san	6.98	164	P		Pn	02 21 15.5	+1.0
KSRS	Korea Array	8.49	234	P		Pn	02 21 30.9	-1.3
	0.7nm,0.3s,baz=46,slow=12,SNR=25							
JHJ	Hachijo jima 2	9.96	164	P		Pn	02 21 49.9	-0.1
	12nm,0.3s,baz=30,slow=15,SNR=5.6							
PETK	Petropavlovsk-	17.46	46	P		Pn	02 23 15.3	-2.3
	0.6nm,0.3s,baz=215,slow=8.2,SNR=5.4							
SONM	Songino Array	21.74	294	P		P	02 23 55.4	-1.4
	1.4nm,0.5s,baz=90,slow=9.1,SNR=9.6							
ZALV	Zalesovo Beam	35.39	307	P		P	02 25 55.5	-1.2
	1.1nm,0.5s,baz=86,slow=9.3,SNR=5.4							
MKAR	Makanchi Array	38.09	295	P		P	02 26 18.6	-0.8
	1.5nm,0.6s,baz=84,slow=9.5,SNR=16							
BVAR	Borovoye Array	44.04	307	P		P	02 27 07.4	+0.2
	1.0nm,0.3s,baz=78,slow=9.2,SNR=7.8							
ILAR	Eielson Array	46.78	35	P		P	02 27 30.4	+2.1
	2.9nm,0.5s,baz=280,slow=7.9,SNR=41							
AKTO	Aktyubinsk	52.15	307	P		P	02 28 09.6	+0.9
	0.9nm,0.5s,baz=63,slow=13,SNR=6.7							
JOF	Joensuu	59.14	329	*ep*		P	02 28 57.6	-0.1
YKA	Yellowknife Ar	60.73	30	P		P	02 29 08.7	+0.4
	0.2nm,0.6s,baz=308,slow=6.5,SNR=5.0							
KAF	Kangasniemi	61.49	330	*ep*		P	02 29 13.7	+0.2
FINES	FINESS Array B	62.00	329	P		P	02 29 17.1	+0.3
	4.8nm,0.7s,baz=41,slow=6.8,SNR=27							
WRA	Warramunga Arr	62.43	182	P		P	02 29 21.9	+1.8
	0.5nm,1.0s,baz=358,slow=7.0,SNR=4.7							
NOA	NORSAR Array B	67.44	335	P		P	02 29 51.9	+0.2
	0.9nm,0.7s,baz=26,slow=8.9,SNR=2.9							
NVAR	Mina Array Bea	74.46	52	P		P	02 30 37.2	+3.0
	1.1nm,0.6s,baz=301,slow=6.0,SNR=11							
GERES	GERESS Array B	75.88	325	P		P	02 30 42.4	+0.5
	0.3nm,0.7s,baz=38,slow=6.8,SNR=4.2							
PDAR	Pinedale Array	76.21	44	P		P	02 30 46.4	+2.3
	0.9nm,0.4s,baz=32,slow=0.8,SNR=7.7							
TXAR	Lajitas Array	89.39	49	P		P	02 31 54.2	+3.0
	0.4nm,0.6s,baz=280,slow=2.7,SNR=8.8							

IDC 14 02:46:15.2±2.3, 30.64S×178.39W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.8/17, mbtmp3.9/3, Error ellipse: s-maj=64.3km s-min=36.7km az=41.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ASAR	Alice Springs	42.76	267	P		P	02 54 14.2	-0.4
	0.9nm,0.4s,baz=106,slow=7.3,SNR=18							
WRA	Warramunga Arr	43.77	273	P		P	02 54 22.9	+0.1
	0.9nm,0.3s,baz=111,slow=8.1,SNR=32							
QSPA	South Pole Qui	59.47	180	P		P	02 56 19.8	-0.1
	0.6nm,0.6s,baz=45,slow=1.4,SNR=6.1							
FINES	FINESS Array B	145.25	340	PKPbc		PKPbc	03 05 53.0	-0.8
	3.0nm,0.9s,baz=48,slow=2.8,SNR=3.4							

MEX 14 02:50:04.6±0.7, 18.17N×100.84W, h43km±9km, MD4.1, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARIG	Puente Sto Nin	0.48	77	*eP*		Pn	02 50 13.2	-2.1
ARIG				*eS*		Sn	02 50 21.4	-1.5
ZIIG	Zihuatanejo	0.81	227	*eP*		Pn	02 50 17.3	-2.4
ZIIG				*eS*		Sn	02 50 28.4	-2.2
MEIG	Mezcala	1.19	102	*eP*		Pn	02 50 23.0	-1.9
MEIG				*eS*		Sn	02 50 38.0	-2.0
CAIG	El Cayaco	1.24	154	*eP*		Pn	02 50 23.6	-2.0
CAIG				*eS*		Sn	02 50 37.9	-3.1
PLIG	Platanillo	1.29	80	*eP*		Pn	02 50 24.3	-2.1
PLIG				*i S*		Sn	02 50 40.8	-1.8
ACX	Acapulco	1.60	144	*eP*		Pn	02 50 28.9	-1.5
ACX				*eS*		Sn	02 50 47.6	-2.2
YAIG	Yautepec	1.82	67	*eP*		Pn	02 50 31.8	-1.9
YAIG				*eS*		Sn	02 50 52.7	-3.0
PPM	Popocatepetl	2.28	67	*eP*		Pn	02 50 39.1	-1.3
PPM				*i S*		Sn	02 51 06.3	-1.6
MMIG	Aquila	2.38	273	*eP*		Pn	02 50 40.3	-0.9
MMIG				*eS*		Sn	02 51 07.5	-1.7
UTMO	Huajuapan	2.91	96	*eP*		Pn	02 50 47.6	-1.1
UTMO				*eS*		Sn	02 51 20.7	-2.0
PNIG	Pinotepa	3.14	124	*eP*		Pn	02 50 50.5	-1.1
PNIG				*eS*		Sn	02 51 26.2	-1.7

*MOS **14** 02:50:21.9±0.9, 53.69N×161.96E, h13km, mb4.4/18, Error ellipse: s-maj=14.0km s-min=8.1km az=62.3*
*KRSC **14** 02:50:21.7±0.9, 53.65N×161.87E, h5km±5km, ML4.6*
*IDC **14** 02:50:21.7±0.7, 53.91N×161.71E, h0km, mb3.9/13, mb1 4.2/15, mb1mx4.0/28, mbtmp3.9/15, ML3.6/2, MS3.5/3, Ms1 3.5/3, ms1mx2.9/46, Error ellipse: s-maj=26.2km s-min=13.1km az=153.0*
*ISCJB **14** 02:50:22.4±0.8, 53.59N±0.02×162.03E±0.04, h16km±6km, mb4.0/30, MS3.5/3, Error ellipse: s-maj=4.0km s-min=2.8km az=36.0*
*NEIC **14** 02:50:26.4±2.4, 53.93N×161.68E, h31km±17km, mb4.3/17, Error ellipse: s-maj=10.7km s-min=4.9km az=156.0*
ISC 14 02:50:22.3±2.1, 53.72N±0.04×161.82E±0.05, h5km±13km, n108, σ1§24/145, mb4.2/30, MS3.6/3, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKZ	Mys Kozlova	0.84	356	PN		Pb	02 50 39.5	+0.2
MKZ				S		Sn	02 50 52.4	-1.0
MKZ	Mys Kozlova	0.84	356	P		Pb	02 50 39.5	+0.2
MKZ				*i S*		Sn	02 50 52.4	-1.0
SPN	Mys Shipunski	1.24	241	PN		Pn	02 50 45.4	-0.9
SPN				S		Sg	02 51 02.6	+0.4
SPN	Mys Shipunski	1.24	241	P		Pn	02 50 45.4	-0.9
SPN				*i S*		Sg	02 51 02.6	+0.4
KII	Karymskiy	1.44	284	P		Pn	02 50 48.7	-0.4
KII				*i S*		Sn	02 51 08.1	-0.3
NLC	Nalytchevo	1.58	251	PN		Pn	02 50 50.4	-0.5
NLC				S		Sn	02 51 11.1	-0.5
NLC	Nalytchevo	1.58	251	P		Pn	02 50 50.4	-0.5
NLC				*i S*		Sn	02 51 11.1	-0.5
SDLR	Sedlovina	1.81	257	P		Pn	02 50 54.3	+0.1
SDLR				*i S*		Sn	02 51 18.1	+0.6
TUMR	Tumrok	1.85	329	P		Pn	02 50 55.6	+0.9
TUMR				*i S*		Sb	02 51 20.3	+0.3
SMAR	Somma	1.86	257	P		Pn	02 50 54.8	-0.2
SMAR				*i S*		Sn	02 51 19.3	+0.4
UGLR	Uglovaya	1.86	255	P		Pn	02 50 55.4	+0.5
UGLR				*i S*		Sn	02 51 19.9	+1.1
KRER	Koryakskii	1.88	258	P		Pn	02 50 55.8	+0.6
KRER				*i S*		Sn	02 51 20.4	+1.0
AVH	Avacha	1.90	257	P		Pn	02 50 55.8	+0.5
AVH				*i S*		Sn	02 51 20.6	+1.0
KOK	Koryaka	1.95	259	P		Pn	02 50 56.3	+0.2
KOK				*i S*		Sn	02 51 21.4	+0.4
PET	Petropavlovsk	2.02	251	*e*PN		Pn	02 50 58.6	+1.6
PET				*eS*		Sn	02 51 22.7	+0.1
PET				smax	smax			
	comp=N,746nm,0.7s							
PET				smax	smax			
	comp=E,678nm,0.8s							
PET				MLR	MLR			
	comp=Z,1μm,16.0s							
PET				MLR	MLR			
	comp=Z,1μm,12.0s							
PET	Petropavlovsk	2.02	251	P		Pn	02 50 57.8	+0.8
PET				*i S*		Sn	02 51 24.4	+1.8
KMNR	Kamenistaya	2.24	336	P		Pb	02 51 02.1	-1.1
KMNR				*i S*		Sb	02 51 32.0	+0.8
GNL	Ganaly	2.31	271	P		Pn	02 51 02.2	+1.2
GNL				*i S*		Sn	02 51 32.2	+2.4
BZGR	Bezymyannyi-Gr	2.32	344	P		Pn	02 51 02.9	+1.7
BZGR				*i S*		Sb	02 51 33.5	-0.1
BZMR	Bezymyannaya	2.35	341	P		Pb	02 51 04.2	-0.9
BZMR				*i S*		Sb	02 51 35.2	+0.7
RUS	Russkaya	2.38	238	PN		Pn	02 51 02.6	+0.8
RUS				S		Sn	02 51 32.4	+1.1
RUS	Russkaya	2.38	238	P		Pn	02 51 02.6	+0.8
RUS				*i S*		Sn	02 51 32.4	+1.1
BZWR	Bezymyannyi-We	2.38	342	P		Pb	02 51 04.3	-1.3
BZWR				*i S*		Sb	02 51 35.4	+0.1
ZLN	Zelenaya	2.38	346	P		Pb	02 51 04.0	-1.6
ZLN				*i S*		Sb	02 51 34.7	-0.5
KIRR	Kirishev	2.40	340	P		Pb	02 51 04.6	-1.3
KIRR				*i S*		Sb	02 51 36.3	+0.5
KPT	Kopyto	2.43	338	P		Pb	02 51 05.2	-1.3
LGNR	Loginova	2.46	345	P		Pb	02 51 05.4	-1.7
LGNR				*i S*		Sb	02 51 37.5	-0.2
CIRR	Tsirk	2.48	346	P		Pb	02 51 06.0	-1.4
CIRR				*i S*		Sb	02 51 38.4	+0.2
MTVR	Mutnovka	2.52	242	P		Pn	02 51 05.2	+1.3
MTVR				*i S*		Sn	02 51 36.9	+1.8
PEA0B	Petropavlovsk-	2.54	258	*e*Pn		Pn	02 51 04.6	+0.5
PETK	Petropavlovsk-	2.54	258	PN		Pn	02 51 05.4	+1.3
PETK							02 51 37.6	
PETK				pmax	pmax			
	comp=Z,13nm,0.3s							
PETK				smax	smax			
	comp=N,16nm,0.3s							
PETK	Petropavlovsk-	2.54	258	Pn		Pn	02 51 05.4	+1.3
PETK				Sn		Sn	02 51 37.5	+2.1
PETK	Petropavlovsk-	2.54	258	Pn		Pn	02 51 05.4	+1.3
	comp=N,13nm,0.3s,baz=85,slow=20,SNR=88							
PETK				Sn		Sn	02 51 37.5	+2.1
	comp=N,16nm,0.3s,baz=105,slow=15,SNR=12							
GRL	Goreliy	2.54	244	P		Pn	02 51 06.6	+2.4
KOZ	Kozyrevsk	2.60	335	P		Pb	02 51 07.7	-1.6
KOZ				*i S*		Sb	02 51 41.5	0.0
KOZR	Kozyr	2.60	335	PN		Pb	02 51 07.7	-1.6
KOZR				S		Sb	02 51 41.5	-0.1
KRSR	Krestovskiy	2.60	344	P		Pn	02 51 06.8	+1.7
KLY	Klyuchi	2.69	346	PN		Pn	02 51 07.6	+1.5
KLY				S		Sn	02 51 41.0	+2.1
KLY	Klyuchi	2.69	346	P		Pn	02 51 07.6	+1.5
KLY				*i S*		Sn	02 51 41.0	+2.1
ASAK	Asacha	2.72	242	P		Pn	02 51 08.8	+2.2
ASAK				*i S*		Sn	02 51 43.4	+3.5
SRDR	Sredinnyy	2.87	336	P		Pn	02 51 10.9	+2.2
SRDR				*i S*		Sb	02 51 46.9	-2.5
BDR	Baidarnaya	2.88	353	P		Pn	02 51 10.8	+2.0
BDR				*i S*		Sn	02 51 46.5	+2.7
SMKR	Semkarok	2.88	356	P		Pn	02 51 10.9	+2.1
SMKR				*i S*		Sb	02 51 47.0	-2.6
SRKR	Sorokina	2.96	353	P		Pn	02 51 12.0	+2.0
SRKR				*i S*		Sn	02 51 48.8	+2.8
ASAJ	Asahikawa	15.83	240	Pn		Pn	02 54 07.2	+1.6
ASAJ	Asahikawa	15.83	240	Pn		Pn	02 54 07.2	+1.6
	comp=N,0.3nm,0.3s,baz=21,slow=7.9,SNR=4.2							
MAJO	Matsushiro	23.75	233	*eP*		P	02 55 36.7	+1.4
MAJO				pmax	pmax			
	comp=Z,20nm,0.8s							
MAJO	Matsushiro	23.75	233	*eP*		P	02 55 36.7	+1.4
	comp=Z,20nm,0.8s							
MAT	Matsushiro	23.75	233	P		P	02 55 36.6	+1.3
TRF	Thorofare Moun	26.16	49	*eP*		P	02 55 56.5	-0.9
	comp=Z,3.9nm,0.9s							
MCK	McKinley	26.77	48	*eP*		P	02 56 02.5	-0.1
MCK				pmax	pmax			
	comp=Z,7.0nm,0.9s							
MCK	McKinley	26.77	48	*eP*		P	02 56 02.5	-0.1
	comp=Z,6.9nm,0.9s							
SML	Sawmill	27.16	53	*eP*		P	02 56 05.7	-0.5
SML				pmax	pmax			
	comp=Z,3.0nm,1.3s							
SML	Sawmill	27.16	53	*eP*		P	02 56 05.7	-0.5
	comp=Z,3.5nm,1.3s							
COLA	College	27.22	46	*eP*		P	02 56 06.3	-0.3
COLA				pmax	pmax			
	comp=Z,8.0nm,1.2s							
COLA	College	27.22	46	*eP*		P	02 56 06.3	-0.3
	comp=Z,8.3nm,1.2s							
ILAR	Eielson Array	27.64	46	P		P	02 56 08.6	-1.8
ILAR	Eielson Array	27.64	46	P		P	02 56 08.6	-1.8
	comp=Z,2.1nm,0.9s,baz=261,slow=7.9,SNR=29							
KSRS	Korea Array	28.41	249	P		P	02 56 18.4	+0.9
	comp=Z,0.5nm,0.7s,baz=56,slow=6.9,SNR=3.1							
KSAR	Wonju Array Be	28.44	249	P		P	02 56 18.4	+0.7
BBB	Bella Bella	40.67	63	LR		LR	03 15 24.9	
	comp=Z,86nm,18.4s,baz=6.7,slow=37							
YKW3	Yellowknife Ar	41.96	44	*eP*		P	02 58 12.5	-1.1
YKA	Yellowknife Ar	42.00	44	P		P	02 58 14.1	+0.2

*AUST **14** 02:50:39.9, 6.24S×147.62E, h35km*
*ISCJB **14** 02:50:40.5±0.4, 6.07S±0.04×147.33E±0.07, h77km, mb4.2/17, Error ellipse: s-maj=9.4km s-min=5.3km az=11.1*
*IDC **14** 02:50:41.0±2.2, 6.04S×147.46E, h69km±20km, mb4.0/13, mb1 4.2/16, mb1mx4.1/21, mbtmp4.0/16, MS3.4/4, Ms1 3.3/4, ms1mx2.9/29, Error ellipse: s-maj=21.2km s-min=11.3km az=105.0*
*NEIC **14** 02:50:41.1±1.2, 6.07S×147.42E, h72km±11km, mb4.4/10, Error ellipse: s-maj=10.1km s-min=7.9km az=80.0*

ISC 14 02:50:41.7±0.5, 6.05S±0.06×147.45E±0.09, h77km, n69, σ0.97/71, mb4.3/16, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.35**	**185**	P	**Pn**	**02 51 30.3**	**-1.4**
PMG				S	**Sn**	**02 52 10.5**	**+0.1**
PMG	**Port Moresby**	**3.35**	**185**	P	**Pn**	**02 51 30.3**	**-1.4**
	22nm,0.3s,baz=7.3,slow=5.7,SNR=31						
PMG				S	**Sn**	**02 52 10.5**	**+0.1**
	28nm,0.3s,baz=2.7,slow=9.3,SNR=3.7						
PMG				LR	LR	02 53 07.1	
	comp=Z,322nm,21.7s,baz=50,slow=44						
RABL	**Rabaul**	**5.05**	**69**	P	**Pn**	**02 51 53.9**	**-1.1**
	baz=5.0,SNR=6.0						
COEN	**Coen**	**8.91**	**208**	*e*Pn	**Pn**	**02 52 46.6**	**-1.1**
	51nm,0.4s						
COEN	**Coen**	**8.91**	**208**	P	**Pn**	**02 52 46.6**	**-1.1**
	baz=8.9,SNR=27						
COEN				S	**Sn**	**02 54 25.8**	**-0.7**
	baz=8.9,SNR=6.5						
MTSU	**Mount Surprise**	**12.39**	**194**	P	**Pn**	**02 53 34.8**	**-0.4**
	baz=12,SNR=9.4						
CTA	**Charters Tower**	**14.00**	**185**	P	**Pn**	**02 53 55.6**	**-1.0**
CTA	**Charters Tower**	**14.00**	**185**	P	**Pn**	**02 53 55.6**	**-1.0**
	0.5nm,0.3s,baz=94,slow=13,SNR=5.2						
KDU	**Kakadu**	**16.17**	**245**	P	**Pn**	**02 54 23.2**	**-1.2**
	baz=16,SNR=12						
WRAB	**Tennant Creek**	**18.77**	**221**	*e*P	**P**	**02 54 53.9**	**-1.0**
	8.3nm,0.5s						
WRA	**Warramunga Arr**	**18.79**	**221**	P	**P**	**02 54 54.3**	**-0.8**
WRA				S	S	02 58 16.4	-8.2
WRA	**Warramunga Arr**	**18.79**	**221**	P	**P**	**02 54 54.3**	**-0.8**
	2.3nm,0.3s,baz=45,slow=12,SNR=31						
WRA				S	S	02 58 16.5	-8.2
	0.1nm,0.3s,baz=47,slow=22,SNR=3.1						
EIDS	**Eidsvold**	**19.52**	**170**	*e*P	**P**	**02 55 04.0**	**+0.9**
	7.9nm,0.8s						
RMQ	**Roma**	**20.36**	**177**	P	**P**	**02 55 13.5**	**+1.4**
	baz=20,SNR=7.5						
QLP	**Quilpie**	**20.65**	**188**	P	**P**	**02 55 15.7**	**+0.5**
	baz=21,SNR=16						
KNRA	**Kununurra**	**20.67**	**241**	P	**P**	**02 55 14.9**	**-0.6**
	baz=21,SNR=6.6						
AS31	**Alice Springs**	**21.83**	**215**	*e*P	**P**	**02 55 27.3**	**-0.6**
ASAR	**Alice Springs**	**21.83**	**215**	P	**P**	**02 55 27.8**	**-0.2**
ASAR				S	**S**	**02 59 27.0**	**+1.8**
ASAR	**Alice Springs**	**21.83**	**215**	P	**P**	**02 55 27.8**	**-0.2**
	9.3nm,0.5s,baz=53,slow=8.4,SNR=98						
ASAR				S	**S**	**02 59 27.0**	**+1.8**
	0.7nm,0.7s,baz=37,slow=25,SNR=3.7						
ASAR				LR	LR	03 04 24.6	
	comp=Z,108nm,18.7s,baz=356,slow=38						
DZM	**Mont Dzumac**	**24.31**	**133**	*e*P	**P**	**02 55 52.3**	**0.0**
	6.4nm,0.8s						
DZM	**Mont Dzumac**	**24.31**	**133**	P	**P**	**02 55 53.8**	**+1.4**
	3.9nm,0.6s,baz=328,slow=18,SNR=6.0						
FITZ	**Fitzroy Crossi**	**24.42**	**239**	*e*P	**P**	**02 55 53.2**	**0.0**
	43nm,0.9s						
FITZ	**Fitzroy Crossi**	**24.42**	**239**	P	**P**	**02 55 53.7**	**+0.5**
	38nm,0.7s,baz=67,slow=7.8,SNR=101						
FITZ				LR	LR	03 05 17.4	
	comp=Z,71nm,20.2s,baz=312,slow=36						
FITZ	**Fitzroy Crossi**	**24.42**	**239**	P	**P**	**02 55 53.0**	**-0.3**
	baz=24,SNR=82						
ARMA	**Armidale**	**24.56**	**171**	*e*P	**P**	**02 55 54.7**	**+0.1**
	11nm,0.8s						
ARMA	**Armidale**	**24.56**	**171**	P	**P**	**02 55 55.1**	**+0.6**
	baz=24,SNR=12						
LUWI	**Luwuk**	**25.11**	**280**	S	S	03 00 34.6	+15
	baz=25,SNR=3.1						
CMSA	**Cobar Meteorol**	**25.41**	**183**	P	**P**	**02 56 03.0**	**+0.8**
	baz=25,SNR=8.5						
STKA	**Stephens Creek**	**26.27**	**191**	P	**P**	**02 56 09.9**	**-0.1**
STKA	**Stephens Creek**	**26.27**	**191**	P	**P**	**02 56 09.9**	**-0.1**
	4.3nm,0.4s,baz=353,slow=8.6,SNR=17						
STKA				LR	LR	03 07 01.1	
	comp=Z,120nm,19.8s,baz=25,slow=37						
STKA	**Stephens Creek**	**26.27**	**191**	P	**P**	**02 56 09.8**	**-0.1**
	baz=26,SNR=16						
MGCD	**Mangrove Creek**	**27.24**	**173**	P	**P**	**02 56 22.1**	**+3.5**
	baz=27,SNR=7.0						
KAPI	**Kappang**	**27.58**	**271**	*e*P	**P**	**02 56 21.2**	**-0.7**
	22nm,1.2s						
YNG	**Young**	**28.12**	**178**	P	P	02 56 30.6	+4.1
	baz=28,SNR=7.1						
BBOO	**Buckleboo**	**28.66**	**200**	P	**P**	**02 56 33.4**	**+2.1**
	baz=29,SNR=5.1						
MBWA	**Marble Bar**	**30.76**	**238**	*e*P	**P**	**02 56 49.9**	**-0.1**
	23nm,1.0s						
MEEK	**Meekatharra**	**34.26**	**230**	P	**P**	**02 57 20.9**	**+0.3**
	baz=34,SNR=25						
KMBL	**Kambalda**	**34.75**	**220**	P	**P**	**02 57 24.9**	**+0.1**
	baz=35,SNR=6.6						
MORW	**Morawa**	**37.47**	**229**	P	**P**	**02 57 48.3**	**+0.3**
	baz=38,SNR=6.8						
KLBR	**Kellerberrin**	**37.64**	**224**	P	**P**	**02 57 49.2**	**-0.2**
	baz=38,SNR=14						
RPZ	**Rata Peaks**	**42.87**	**155**	LR	LR	03 12 24.7	
	comp=Z,717nm,18.5s,baz=216,slow=30						
MAJO	**Matsushiro**	**43.24**	**349**	*e*P	**P**	**02 58 35.3**	**-0.2**
	5.3nm,0.7s						
KSRS	**Korea Array**	**46.96**	**339**	P	**P**	**02 59 06.2**	**+1.3**
	0.4nm,0.3s,baz=154,slow=8.5,SNR=4.6						
KSAR	**Wonju Array Be**	**46.96**	**339**	P	**P**	**02 59 06.2**	**+1.3**
PETK	**Petropavlovsk-**	**59.57**	**7**	P	**P**	**03 00 38.0**	**+0.8**
PETK	**Petropavlovsk-**	**59.57**	**7**	P	**P**	**03 00 38.0**	**+0.8**
	2.0nm,0.6s,baz=163,slow=6.3,SNR=4.5						
SONM	**Songino Array**	**64.66**	**331**	P	**P**	**03 01 12.5**	**+0.9**
SONM	**Songino Array**	**64.66**	**331**	P	**P**	**03 01 12.5**	**+0.9**
	0.9nm,0.8s,baz=137,slow=5.8,SNR=4.3						
VNDA	**Vanda**	**71.84**	**177**	*e*P	**P**	**03 01 56.3**	**+0.6**
	2.2nm,0.8s						
VNDA	**Vanda**	**71.84**	**177**	P	**P**	**03 01 56.4**	**+0.6**
	1.8nm,0.8s,baz=327,slow=6.4,SNR=8.3						
MK31	**Makanchi Array**	**77.82**	**320**	*e*P	**P**	**03 02 31.0**	**+0.2**
MKAR	**Makanchi Array**	**77.82**	**320**	P	**P**	**03 02 31.8**	**+0.9**
MKAR	**Makanchi Array**	**77.82**	**320**	P	**P**	**03 02 31.8**	**+0.9**
	0.6nm,0.8s,baz=107,slow=5.5,SNR=4.1						
ZALV	**Zalesovo Beam**	**79.29**	**328**	P	**P**	**03 02 38.2**	**-0.5**
ZALV	**Zalesovo Beam**	**79.29**	**328**	P	**P**	**03 02 38.2**	**-0.5**
	2.0nm,0.5s,baz=110,slow=6.3,SNR=11						
QSPA	**South Pole Qui**	**83.92**	**180**	*e*P	**P**	**03 03 03.0**	**-0.1**
	5.8nm,0.6s						
QSPA	**South Pole Qui**	**83.92**	**180**	P	**P**	**03 03 03.3**	**+0.2**
	7.7nm,0.6s,baz=297,slow=0.8,SNR=81						
ILAR	**Eielson Array**	**85.35**	**23**	P	**P**	**03 03 08.6**	**-1.6**
ILAR	**Eielson Array**	**85.35**	**23**	P	**P**	**03 03 08.6**	**-1.6**
	1.6nm,0.6s,baz=252,slow=4.9,SNR=43						
YKA	**Yellowknife Ar**	**99.01**	**28**	P	**Pdif**	**03 04 13.7**	**0.0**
YKA	**Yellowknife Ar**	**99.01**	**28**	P	**Pdif**	**03 04 13.6**	**0.0**
	0.3nm,0.7s,baz=272,slow=5.1,SNR=5.2						
GERES	**GERESS Array B**	**122.20**	**326**	PKP	**PKPdf**	**03 09 26.6**	**-1.3**
GERES	**GERESS Array B**	**122.20**	**326**	PKP	**PKPdf**	**03 09 26.6**	**-1.3**
	0.2nm,0.6s,baz=56,slow=3.4,SNR=3.7						
TOAO	**Torodi Ar. Sit**	**145.53**	**284**	*e*PKPbc	**PKPdf**	**03 10 11.9**	**-0.2**
TORD	**Torodi Ar. Bea**	**145.53**	**284**	PKPbc	**PKPdf**	**03 10 11.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**145.53**	**284**	PKPbc	**PKPdf**	**03 10 11.4**	**-0.7**
	1.7nm,0.6s,baz=74,slow=3.1,SNR=39						
SAML	**Samuel**	**146.03**	**116**	*e*PKPbc	**PKPdf**	**03 10 13.6**	**+0.6**
BDFB	**Brasilia**	**153.56**	**145**	PKPbc	**PKPbc**	**03 10 32.8**	**+0.1**
BDFB	**Brasilia**	**153.56**	**145**	PKPbc	**PKPbc**	**03 10 32.8**	**+0.1**
	1.2nm,0.5s,baz=129,slow=11,SNR=4.8						

*ISCJB **14** 03:01:15.8±0.5, 32.06N±0.03×115.43W±0.04, h13km±5km, Error ellipse: s-maj=6.2km s-min=5.1km az=170.1*
*ECX **14** 03:01:17.3±0.7, 32.07N×115.47W, h5km, MD3.1, ML3.2*
*NEIC **14** 03:01:17.3, 32.07N×115.47W, h5km, ML3.2(ECX), After ECX.*

ISC 14 03:01:16.0±1.1, 32.05N±0.03×115.47W±0.03, h4km±13km, n23, σ1.57/31, 14C-2D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EMX	**El Mayor**	**0.21**	**107**	⇑*i*P	**Pg**	**03 01 19.9**	**-0.2**
EMX				*e*S	**Sg**	**03 01 22.9**	**+0.2**
EMX	**El Mayor**	**0.21**	**107**	⇑*i*P	**Pg**	**03 01 19.9**	**-0.2**
EMX				*e*S	**Sg**	**03 01 22.9**	**+0.2**
EMX				*e*		03 01 23.1	
	comp=N,3μm,0.1s						
CPBX	**Cerro Prieto**	**0.39**	**21**	⇑*e*P	**Pg**	**03 01 24.2**	**+0.6**
CPBX				*e*S	**Sg**	**03 01 29.5**	**+0.7**
CPBX	**Cerro Prieto**	**0.39**	**21**	⇑*e*P	**Pg**	**03 01 24.2**	**+0.6**
CPBX				*e*S	**Sg**	**03 01 29.5**	**+0.7**
CPBX				*e*		03 01 37.0	
	comp=N,6μm,0.2s						
CPBX				⇓*e*		03 01 38.9	
	comp=E,8μm,0.4s						
RDX	**Rancho Dawling**	**0.42**	**253**	⇑*i*P	**Pg**	**03 01 24.6**	**+0.4**
RDX				*e*		03 01 33.2	
RDX	**Rancho Dawling**	**0.42**	**253**	⇑*i*P	**Pg**	**03 01 24.6**	**+0.4**
RDX				⇑*e*		03 01 33.2	
	comp=E,1μm,0.3s						
ECBX	**El Chinero**	**0.68**	**148**	⇑*i*P	**Pg**	**03 01 28.6**	**-0.4**
ECBX				*i*S	**Sg**	**03 01 37.8**	**-0.1**
ECBX	**El Chinero**	**0.68**	**148**	⇑*i*P	**Pg**	**03 01 28.6**	**-0.4**
ECBX				*i*S	**Sg**	**03 01 37.8**	**-0.1**
ECBX				⇑*e*		03 01 39.6	
	comp=E,581nm,0.3s						
RMX	**La Rumorosa**	**0.75**	**317**	*e*P	**Pg**	**03 01 30.2**	**-0.3**
RMX	**La Rumorosa**	**0.75**	**317**	*e*P	**Pg**	**03 01 30.2**	**-0.3**
ZAX	**El Zacaton**	**0.87**	**232**	⇓*i*P	**Pg**	**03 01 32.8**	**+0.2**
ECNX	**Esteban Cantu**	**1.03**	**248**	⇑*i*P	**Pg**	**03 01 35.7**	**-0.2**
ECNX	**Esteban Cantu**	**1.03**	**248**	⇑*i*P	**Pg**	**03 01 35.7**	**-0.2**
PBX	**Punta Banda**	**1.11**	**254**	⇑*i*P	**Pb**	**03 01 37.0**	**-0.8**
PBX	**Punta Banda**	**1.11**	**254**	⇑*i*P	**Pb**	**03 01 37.0**	**-0.8**
GLA	**Glamis**	**1.14**	**28**	*e*P	**Pb**	**03 01 35.8**	**-2.5**
GLA				*e*S	**Sb**	**03 01 50.1**	**-3.4**
BAR	**Barrett**	**1.19**	**302**	*e*P	**Pb**	**03 01 37.7**	**-1.6**
BAR				*e*S	**Sb**	**03 01 52.9**	**-2.2**
PFO	**Pinyon Flat Ob**	**1.76**	**332**	*e*Pn	Pn	03 01 43.9	-3.6
LDFC	**Landfair**	**3.04**	**6**	*e*Pn	**Pn**	**03 02 04.0**	**-1.0**
LDFC				*e*Pg	**Pg**	**03 02 15.5**	**+1.3**
MWC	**Mount Wilson**	**3.07**	**316**	*e*Pn	**Pn**	**03 02 07.2**	**+1.8**
PASC	**Pasadena Art C**	**3.11**	**314**	Pn	**Pn**	**03 02 08.3**	**+2.4**
GSC	**Goldstone**	**3.43**	**341**	*e*Pn	**Pn**	**03 02 13.0**	**+2.6**
TUC	**Tucson**	**3.98**	**85**	*e*Pn	Pb	03 02 23.9	-3.0
TUC				*e*Sn	**Sb**	**03 03 19.8**	**+4.3**

IDC 14 03:04:51.5±3.6, 21.61N×143.03E, h338km±36km, mb3.3/12, mb1 3.5/13, mb1mx3.3/28, mbtmp3.4/13, Error ellipse: s-maj=21.2km s-min=12.8km az=89.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**11.83**	**347**	P	Pn	03 07 31.1	-0.1
	4.4nm,0.3s,baz=60,slow=20,SNR=2.7						
KSRS	**Korea Array**	**20.50**	**324**	P	P	03 09 05.1	+0.2
	1.7nm,0.6s,baz=146,slow=8.9,SNR=12						
WRA	**Warramunga Arr**	**42.16**	**192**	P	P	03 12 11.8	-0.3
	0.6nm,0.4s,baz=17,slow=9.5,SNR=28						
ASAR	**Alice Springs**	**45.87**	**192**	P	P	03 12 40.9	-0.4
	0.3nm,0.5s,baz=13,slow=8.7,SNR=6.4						
ZALV	**Zalesovo Beam**	**54.20**	**322**	P	P	03 13 42.5	-0.3
	0.9nm,0.5s,baz=107,slow=9.5,SNR=5.6						
ZALV				PcP	PcP	03 14 42.2	-0.2
	1.1nm,0.4s,baz=114,slow=3.7,SNR=5.6						
MKAR	**Makanchi Array**	**54.66**	**313**	P	P	03 13 46.8	+0.4
	0.5nm,0.5s,baz=93,slow=9.2,SNR=8.1						
MKAR				PcP	PcP	03 14 44.8	+0.3
	0.2nm,0.4s,baz=73,slow=4.6,SNR=4.7						
ILAR	**Eielson Array**	**62.19**	**27**	P	P	03 14 36.7	-0.9
	1.0nm,0.6s,baz=255,slow=5.7,SNR=11						
INK	**Inuvik**	**67.71**	**24**	P	P	03 15 12.7	0.0
	0.7nm,0.5s,baz=325,slow=7.1,SNR=3.9						
YKA	**Yellowknife Ar**	**76.60**	**28**	P	P	03 16 05.2	+0.1
	1.8nm,0.6s,baz=291,slow=5.6,SNR=26						
ARCES	**ARCESS Array B**	**78.96**	**341**	P	P	03 16 18.1	+0.2
	2.9nm,0.6s,baz=69,slow=7.7,SNR=12						
JOF	**Joensuu**	**80.34**	**334**	*e*p	P	03 16 25.9	+0.6
	3.1nm,0.4s						
FINES	**FINESS Array B**	**83.20**	**334**	P	P	03 16 39.5	-0.7
	9.2nm,1.1s,baz=64,slow=6.6,SNR=12						
NVAR	**Mina Array Bea**	**83.31**	**51**	P	P	03 16 42.0	+0.5
	0.9nm,0.7s,baz=279,slow=5.5,SNR=10						
BRTR	**Keskin Array B**	**90.30**	**313**	P	P	03 17 13.8	-1.2
	0.6nm,0.8s,baz=69,slow=7.9,SNR=3.1						
LPAZ	**La Paz**	**150.09**	**85**	PKPbc	PKPbc	03 24 04.5	+0.4
	1.5nm,0.6s,baz=233,slow=0.7,SNR=11						

*ISCJB **14** 03:19:27.3±0.7, 38.33N±0.02×26.43E±0.03, h3km±5km, Error ellipse: s-maj=4.7km s-min=3.5km az=135.4*
*DDA **14** 03:19:27.3, 38.35N×26.46E, h11km, MD2.9*
*ATH **14** 03:19:28.3, 38.32N×26.45E, h29km±2km, MD3.3/7*
*ISK **14** 03:19:28.1, 38.35N×26.50E, h8km, MD3.4*
*CSEM **14** 03:19:28.3±0.1, 38.35N×26.49E, h2km, MD2.9, Error ellipse: s-maj=3.3km s-min=2.3km az=54.0*

ISC 14 03:19:28.6±0.9, 38.35N±0.02×26.51E±0.02, h6km±6km, n84, σ0.59/109, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URLA	**Izmir**	**0.07**	**82**	*i*P	**Pg**	**03 19 29.9**	**-0.4**
URLA				*i*S	**Sg**	**03 19 31.5**	**+0.1**
URLA	**Izmir**	**0.07**	**82**	*i*P	**Pg**	**03 19 29.9**	**-0.4**
URLA				*i*S	**Sg**	**03 19 31.5**	**+0.1**
CHOS	**Chios island**	**0.36**	**276**	*e*PB	**Pg**	**03 19 36.2**	**+0.6**
CHOS				*e*SB	**Sg**	**03 19 41.6**	**+1.2**
CHOS	**Chios island**	**0.36**	**276**	*e*Pb	**Pg**	**03 19 36.2**	**+0.6**
CHOS				*e*Sb	**Sg**	**03 19 41.6**	**+1.2**
BLCB	**Balcova**	**0.42**	**85**	*e*PG	**Pg**	**03 19 36.6**	**-0.1**
BLCB	**Balcova**	**0.42**	**85**	*e*Pg	**Pg**	**03 19 36.6**	**-0.1**
IZM	**Izmir**	**0.59**	**85**	*e*PG	**Pg**	**03 19 40.1**	**+0.1**
IZM				*e*SG	**Sb**	**03 19 49.6**	**-0.5**
IZM	**Izmir**	**0.59**	**85**	*e*Pg	**Pg**	**03 19 40.1**	**+0.1**
IZM				*e*Sg	**Sb**	**03 19 49.6**	**-0.5**
SMG	**Samos**	**0.69**	**158**	*e*PN	**Pg**	**03 19 41.6**	**-0.3**
SMG				*e*SN	**Sb**	**03 19 52.4**	**-0.5**
SMG	**Samos**	**0.69**	**158**	*e*Pn	**Pg**	**03 19 41.6**	**-0.3**
SMG				*e*Sn	**Sb**	**03 19 52.4**	**-0.5**
GCAM	**G?zelcaml?**	**0.86**	**138**	*i*P	**Pg**	**03 19 44.8**	**-0.4**
GCAM				*i*S	**Sb**	**03 19 57.7**	**-0.2**
GCAM	**G?zelcaml?**	**0.86**	**138**	*i*P	**Pg**	**03 19 44.8**	**-0.4**
GCAM				*i*S	**Sb**	**03 19 57.7**	**-0.2**
PRK	**Paraskevi**	**0.91**	**348**	*e*PB	**Pg**	**03 19 45.9**	**-0.2**
PRK				*e*SN	**Sn**	**03 20 00.7**	**-0.8**
PRK	**Paraskevi**	**0.91**	**348**	*e*Pb	**Pg**	**03 19 45.9**	**-0.2**
PRK				*e*Sn	**Sn**	**03 20 00.7**	**-0.8**
AYVA	**Ayvalik**	**0.97**	**8**	*i*P	**Pg**	**03 19 46.4**	**-0.8**
AYVA				*i*S	**Sb**	**03 20 01.5**	**+0.7**
AYVA	**Ayvalik**	**0.97**	**8**	*i*P	**Pg**	**03 19 46.4**	**-0.8**
AYVA				*i*S	**Sb**	**03 20 01.5**	**+0.7**
AKHS	**Akhisar**	**1.15**	**62**	*i*P	**Pg**	**03 19 50.6**	**-0.1**
AKHS				*i*S	**Sb**	**03 20 06.6**	**+0.5**
AKHS	**Akhisar**	**1.15**	**62**	*i*P	**Pg**	**03 19 50.6**	**-0.1**
AKHS				*i*S	**Sb**	**03 20 06.6**	**+0.5**
BODT	**Bodrum**	**1.44**	**154**	*e*PN	**Pn**	**03 19 55.4**	**+0.2**
BODT				*e*SN	**Sn**	**03 20 14.7**	**+0.3**
BODT	**Bodrum**	**1.44**	**154**	*e*Pn	**Pn**	**03 19 55.4**	**+0.2**
BODT				*e*Sn	**Sn**	**03 20 14.7**	**+0.3**
MLSB	**Milas**	**1.45**	**136**	*e*PN	**Pn**	**03 19 55.2**	**-0.3**
MLSB	**Milas**	**1.45**	**136**	*e*Pn	**Pn**	**03 19 55.2**	**-0.3**
BOZC	**Bozcaada**	**1.53**	**347**	*i*P	**Pn**	**03 19 55.5**	**-1.0**
BOZC				*i*S	**Sn**	**03 20 14.1**	**-2.7**
MANT	**Manisa**	**1.61**	**84**	*i*P	**Pg**	**03 19 59.7**	**+0.2**
MANT				*i*S	**Sg**	**03 20 20.6**	**+0.1**
MANT	**Manisa**	**1.61**	**84**	*i*P	**Pg**	**03 19 59.7**	**+0.2**
MANT				*i*S	**Sg**	**03 20 20.6**	**+0.1**
BALY	**Balya**	**1.63**	**32**	*i*P	**Pn**	**03 19 58.1**	**+0.1**
BALY				*i*S	**Sg**	**03 20 21.8**	**+0.7**
BALY	**Balya**	**1.63**	**32**	*i*P	**Pn**	**03 19 58.1**	**+0.1**
BALY				*i*S	**Sg**	**03 20 21.8**	**+0.7**
KULA	**Kula-Manisa**	**1.70**	**84**	*e*PN	**Pn**	**03 19 58.8**	**-0.1**
KULA				*e*SN	**Sn**	**03 20 21.2**	**+0.2**
KULA	**Kula-Manisa**	**1.70**	**84**	*e*Pn	**Pn**	**03 19 58.8**	**-0.1**
KULA				*e*Sn	**Sn**	**03 20 21.2**	**+0.2**
YER	**Yerkesik**	**1.86**	**130**	*e*PN	**Pn**	**03 20 00.8**	**-0.2**
YER	**Yerkesik**	**1.86**	**130**	*e*Pn	**Pn**	**03 20 00.8**	**-0.2**
LIA	**Limnos Island**	**1.86**	**327**	*e*PB	**Pn**	**03 20 00.5**	**-0.5**
LIA	**Limnos Island**	**1.86**	**327**	*e*Pb	**Pn**	**03 20 00.5**	**-0.5**
GONE	**Gonen-Balikesi**	**1.92**	**28**	*e*PN	**Pn**	**03 20 02.3**	**+0.4**
GONE	**Gonen-Balikesi**	**1.92**	**28**	*e*Pn	**Pn**	**03 20 02.3**	**+0.4**
GELI	**Tayfur-Gelibol**	**2.04**	**359**	*e*PN	**Pn**	**03 20 04.1**	**+0.5**
GELI	**Tayfur-Gelibol**	**2.04**	**359**	*e*Pn	**Pn**	**03 20 04.1**	**+0.5**
DST	**Dursunbey**	**2.06**	**52**	*e*PN	**Pn**	**03 20 04.4**	**+0.5**
DST	**Dursunbey**	**2.06**	**52**	*e*Pn	**Pn**	**03 20 04.4**	**+0.5**
DNZL	**Cakiroluk**	**2.11**	**107**	*i*P	**Pn**	**03 20 04.9**	**+0.2**
DNZL	**Cakiroluk**	**2.11**	**107**	*i*P	**Pn**	**03 20 04.9**	**+0.2**
KRBG	**Karabiga-Canak**	**2.13**	**16**	*e*PN	**Pn**	**03 20 04.3**	**-0.4**
KRBG	**Karabiga-Canak**	**2.13**	**16**	*e*Pn	**Pn**	**03 20 04.3**	**-0.4**
AOS	**Alonnisos**	**2.21**	**293**	*e*PB	**Pn**	**03 20 05.4**	**-0.5**
AOS	**Alonnisos**	**2.21**	**293**	*e*Pb	**Pn**	**03 20 05.4**	**-0.5**
SMTH	**Samothraki Isl**	**2.25**	**341**	*e*PN	**Pn**	**03 20 05.5**	**-0.9**
SMTH	**Samothraki Isl**	**2.25**	**341**	*e*Pn	**Pn**	**03 20 05.5**	**-0.9**
BNT	**Bandirma**	**2.28**	**28**	*e*PN	**Pn**	**03 20 06.9**	**0.0**
BNT	**Bandirma**	**2.28**	**28**	*e*Pn	**Pn**	**03 20 06.9**	**0.0**
ERIK	**Erikli-Kesan**	**2.32**	**0**	*e*PN	**Pn**	**03 20 07.5**	**+0.2**
ERIK	**Erikli-Kesan**	**2.32**	**0**	*e*Pn	**Pn**	**03 20 07.5**	**+0.2**
KHAL	**Karahalli**	**2.34**	**89**	*i*P	**Pg**	**03 20 13.1**	**-0.4**
KHL	**Karahalli**	**2.37**	**90**	*e*PN	**Pn**	**03 20 08.7**	**+0.6**
KHL	**Karahalli**	**2.37**	**90**	*e*Pn	**Pn**	**03 20 08.7**	**+0.6**
KCTX	**Karacabey (Bur**	**2.39**	**36**	*e*PN	**Pn**	**03 20 08.5**	**+0.2**
KCTX	**Karacabey (Bur**	**2.39**	**36**	*e*Pn	**Pn**	**03 20 08.5**	**+0.2**
ENEZ	**Enez**	**2.40**	**353**	*e*PN	**Pn**	**03 20 09.3**	**+0.9**
ENEZ	**Enez**	**2.40**	**353**	*e*Pn	**Pn**	**03 20 09.3**	**+0.9**
ALN	**Alexandroupoli**	**2.57**	**352**	*e*PN	**Pn**	**03 20 09.9**	**-0.9**
ALN	**Alexandroupoli**	**2.57**	**352**	*e*Pn	**Pn**	**03 20 09.9**	**-0.9**
FETY	**Fethiye**	**2.67**	**129**	*e*PN	**Pn**	**03 20 12.1**	**-0.1**
FETY	**Fethiye**	**2.67**	**129**	*e*Pn	**Pn**	**03 20 12.1**	**-0.1**
MDNY	**Mudanya-Bursa**	**2.73**	**42**	*e*PN	**Pn**	**03 20 13.7**	**+0.7**
MDNY	**Mudanya-Bursa**	**2.73**	**42**	*e*Pn	**Pn**	**03 20 13.7**	**+0.7**
ARMT	**Armutlu**	**2.86**	**39**	*e*PN	**Pn**	**03 20 15.6**	**+0.7**
ARMT	**Armutlu**	**2.86**	**39**	*e*Pn	**Pn**	**03 20 15.6**	**+0.7**
ALT	**Altintas**	**2.90**	**75**	*e*PN	**Pn**	**03 20 15.6**	**+0.1**
ALT	**Altintas**	**2.90**	**75**	*e*Pn	**Pn**	**03 20 15.6**	**+0.1**
GEMT	**Gemlik**	**2.94**	**44**	*e*PN	**Pn**	**03 20 16.4**	**+0.5**
GEMT	**Gemlik**	**2.94**	**44**	*e*Pn	**Pn**	**03 20 16.4**	**+0.5**
CTKS	**Kestanelik-??a**	**3.27**	**27**	*e*PN	**Pn**	**03 20 21.3**	**+0.9**
CTKS	**Kestanelik-??a**	**3.27**	**27**	*e*Pn	**Pn**	**03 20 21.3**	**+0.9**
BGKT	**Bogazkoy**	**3.32**	**31**	*e*PN	**Pn**	**03 20 21.6**	**+0.5**
BGKT	**Bogazkoy**	**3.32**	**31**	*e*Pn	**Pn**	**03 20 21.6**	**+0.5**
ISK	**Istanbul-Kandi**	**3.35**	**35**	*e*PN	**Pn**	**03 20 22.0**	**+0.5**
ISK	**Istanbul-Kandi**	**3.35**	**35**	*e*Pn	**Pn**	**03 20 22.0**	**+0.5**
EDRB	**Edirne**	**3.50**	**3**	*e*PN	**Pn**	**03 20 24.3**	**+0.7**
EDRB	**Edirne**	**3.50**	**3**	*e*Pn	**Pn**	**03 20

CSEM ***14*** *03:32:51.1±0.2,39.˙38N×39.˙16E,h8km,MD3.0,Error ellipse: s-maj=6.5km s-min=4.3km az=122.0*

ISC 14 03:32:51.0±1.0,39.˙39N±0.˙02×39.˙16E±0.˙02,h9km±10km, n34,σ≤64/54,Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.39**	**22**	*e*PG		**Pg**		**03 32 58.1**	**-0.6**
EZC				*e*SG		**Sg**		**03 33 04.4**	**+0.5**
EZC	**Erzincan**	**0.39**	**22**	*e*Pg		**Pg**		**03 32 59.3**	**+0.6**
EZC				*e*Sg		**Sg**		**03 33 04.4**	**+0.5**
ERZN	**Erzincan**	**0.47**	**65**	*e*PG		**Pg**		**03 32 59.3**	**-0.9**
ERZN				*e*SG		**Sg**		**03 33 06.9**	**+0.4**
EUZM	**Uzumlu**	**0.52**	**52**	*i* P		**Pg**		**03 33 01.0**	**-0.2**
EUZM				*i* S		**Sb**		**03 33 09.0**	**-1.0**
EUZM	**Uzumlu**	**0.52**	**52**	*i* P		**Pg**		**03 33 01.0**	**-0.2**
EUZM				*i* S		**Sb**		**03 33 09.0**	**-1.0**
KEMA	**Kemaliye**	**0.53**	**257**	*i* P		**Pg**		**03 33 01.4**	**0.0**
KEMA				*i* S		**Sb**		**03 33 09.6**	**-0.8**
KEMA	**Kemaliye**	**0.53**	**257**	*i* P		**Pg**		**03 33 01.4**	**0.0**
KEMA				*i* S		**Sb**		**03 33 09.6**	**-0.8**
KELT	**Kelkit**	**0.76**	**5**	*i* P		**Pg**		**03 33 05.7**	**0.0**
KELT				*i* S		**Sg**		**03 33 15.6**	**-0.1**
KELT	**Kelkit**	**0.76**	**5**	*i* P		**Pg**		**03 33 05.7**	**0.0**
KELT				*i* S		**Sg**		**03 33 15.6**	**-0.1**
ELZG	**Elazig**	**0.90**	**189**	*i* P		**Pg**		**03 33 08.0**	**-0.3**
ELZG				*i* S		**Sb**		**03 33 20.9**	**-0.2**
ELZG	**Elazig**	**0.90**	**189**	*i* P		**Pg**		**03 33 08.0**	**-0.3**
ELZG				*i* S		**Sb**		**03 33 20.9**	**-0.2**
GUMT	**Gumushane**	**1.10**	**13**	*e*PN		**Pg**		**03 33 11.6**	**-0.5**
GUMT				*e*SN		**Sb**		**03 33 26.7**	**+0.1**
GUMT	**Gumushane**	**1.10**	**13**	*e*Pn		**Pg**		**03 33 11.6**	**-0.5**
GUMT				*e*Sn		**Sb**		**03 33 26.7**	**+0.1**
SUSE	**Susehri**	**1.10**	**318**	*i* P		**Pb**		**03 33 12.0**	**-0.3**
SUSE				*i* S		**Sn**		**03 33 28.7**	**+0.5**
SUSE	**Susehri**	**1.10**	**318**	*i* P		**Pb**		**03 33 12.0**	**-0.3**
SUSE				*i* S		**Sn**		**03 33 28.7**	**+0.5**
BINT	**Bingol**	**1.15**	**116**	*e*Pn		**Pn**		**03 33 14.0**	**+0.6**
KOPT	**Kop Dagi**	**1.21**	**58**	*i* P		**Pg**		**03 33 15.8**	**+1.6**
KOPT	**Kop Dagi**	**1.21**	**58**	*i* P		**Pg**		**03 33 15.8**	**+1.6**
MYA	**Malataya**	**1.21**	**209**	*e*PN		**Pn**		**03 33 13.4**	**-0.7**
MYA	**Malataya**	**1.21**	**209**	*e*Pn		**Pn**		**03 33 13.4**	**-0.7**
BNGB	**Bing¨ll**	**1.24**	**108**	*e*PN		**Pn**		**03 33 14.0**	**-0.6**
BAYT	**Ayd¨–ntepe-Bay**	**1.25**	**37**	*e*PN		**Pn**		**03 33 13.9**	**-0.9**
BAYT	**Ayd¨–ntepe-Bay**	**1.25**	**37**	*e*Pn		**Pn**		**03 33 13.9**	**-0.9**
AKCD	**Akcadag**	**1.46**	**222**	*i* P		**Pn**		**03 33 17.5**	**-0.2**
AKCD				*i* S		**Sg**		**03 33 38.8**	**+0.8**
AKCD	**Akcadag**	**1.46**	**222**	*i* P		**Pn**		**03 33 17.5**	**-0.2**
AKCD				*i* S		**Sg**		**03 33 38.8**	**+0.8**
ESPY	**Espiye-Giresun**	**1.56**	**348**	*e*PN		**Pn**		**03 33 19.3**	**+0.4**
ESPY	**Espiye-Giresun**	**1.56**	**348**	*e*Pn		**Pn**		**03 33 19.3**	**+0.4**
MACK	**Trabzon**	**1.62**	**16**	*i* P		**Pg**		**03 33 22.1**	**0.0**
MACK				*i* S		**Sg**		**03 33 43.6**	**+0.6**
MACK	**Trabzon**	**1.62**	**16**	*i* P		**Pg**		**03 33 22.1**	**0.0**
MACK				*i* S		**Sg**		**03 33 43.6**	**+0.6**
RSDY	**Resadiye-TOKAT**	**1.73**	**306**	*e*PN		**Pb**		**03 33 22.6**	**-0.4**
RSDY	**Resadiye-TOKAT**	**1.73**	**306**	*e*Pn		**Pb**		**03 33 22.6**	**-0.4**
EZM	**Erzurum**	**1.77**	**72**	*e*PN		**Pn**		**03 33 22.3**	**+0.2**
BEST	**Besiri**	**2.23**	**132**	*i* P		**Pb**		**03 33 31.0**	**-0.5**
BEST				*i* S		**Sb**		**03 33 59.5**	**+0.4**
SARI	**SarD1z-Kayseri**	**2.36**	**246**	*e*PN		**Pn**		**03 33 31.2**	**+1.2**

IDC ***14*** *03:35:57.9±0.3,7.˙71S×117.˙08E,h0km,mb5.2/38, mb1 5.2/40,mb1mx5.2/41,mbtmp5.2/40,ML4.9/2,MS4.9/28, Ms1 4.9/28,ms1mx4.8/32,Error ellipse: s-maj=13.3km s-min=9.1km az=65.0*

MOS ***14*** *03:35:57.8±0.8,7.˙62S×117.˙15E,h10km,mb5.9/52, MS4.9/38,Error ellipse: s-maj=9.2km s-min=5.3km az=113.7*

NEIC ***14*** *03:36:00.1±0.1,7.˙69S×117.˙20E,h17km,mb5.6/58, MS5.1/140,MW5.4,MW5.4,Error ellipse: s-maj=5.8km s-min=3.9km az=55.0,Moment Tensor Solution. s44 Moment tensor: Scale 10¹⁷Nm; Mrr=1.47; Mθθ=1.27; Mϕϕ=0.20; Mrθ=0.47; Mθϕ=0.13; Mϕr=0.28; Best double couple: Mo=1.50000×10¹⁷ NP1:ϕs=85.00000°,δ55.00000°, λ78.00000°. NP2:ϕs=286.00000°,δ37.00000°,λ106.00000°. Principal axes: T 1.6000, Plg76.0000°, Azm316.0000°; N -0.2400, Plg9.0000°, Azm92.0000°; P -1.3500, Plg9.0000°, Azm184.0000°;*

NEIC Felt [IV] at Sumbawa Besar, Sumbawa and [III] at Denpasar, Bali and at Mataram, Lombok. Also felt at Ubud, Bali.

BJI ***14*** *03:36:01.0,7.˙70S×117.˙20E,h35km,mB5.7/41,mb5.5/61, Ms5.3/67,Ms7 5.1/66*

AUST ***14*** *03:36:01.1±0.8,7.˙75S×117.˙29E,h12km,Error ellipse: s-maj=0.7km s-min=0.4km az=30.0*

ISCJB ***14*** *03:36:02.6±0.3,7.˙67S±0.˙02×117.˙19E±0.˙02,h44km±3km, mb5.5/154,MS5.0/194,Error ellipse: s-maj=3.6km s-min=3.0km az=24.8*

TEH ***14*** *03:36:04.0,7.˙62S×117.˙22E,h40km,ML5.7*

DJA ***14*** *03:36:04.6±0.4,8.˙5±2.˙1×11.˙7E±.˙1,h30km±4km,M5.6/82, mb5.5/82,mB5.9/59,MLv6.0/22,Mw(mB)5.5/59,Mwp5.8/6*

GCMT ***14*** *03:36:05.8±0.1,7.˙73S×117.˙18E,h28km,MW5.5,Moment Tensor Solution. s91,c161; s39,c41; Moment tensor: Scale 10¹⁷Nm; Mrr=1.73±.03; Mθθ-1.96±.02; Mϕϕ0.23±.02; Mrθ0.53±.03; Mθϕ-0.04±.02; Mϕr0.06±.04; Best double couple: Mo1.90000×10¹⁷ NP1:ϕs271.00000°,δ37.00000°, λ93.00000°. NP2:ϕs87.00000°,δ53.00000°,λ88.00000°. Principal axes: T 1.8100, Plg82.0000°, Azm348.0000°; N 0.2300, Plg2.0000°, Azm89.0000°; P -2.0400, Plg8.0000°, Azm179.0000°; Data Used: II IU CN IC G. Surface waves: sta=106, comp=203, per= 50.*

NEIC ***14*** *03:36:12.5±0.0,7.˙95S×117.˙86E,h10km,Moment Tensor Solution. s125 Moment tensor: Scale 10¹⁷Nm; Mrr=1.29; Mθθ-1.40; Mϕϕ0.11; Mrθ-0.39; Mθϕ-0.04; Mϕr0.53; Best double couple: Mo1.50000×10¹⁷ NP1:ϕs70.00000°, δ40.00000°,λ58.00000°. NP2:ϕs288.00000°,δ56.00000°, λ114.00000°. Principal axes: T 1.5400, Plg68.0000°, Azm249.0000°; N -0.0800, Plg19.0000°, Azm94.0000°; P -1.4600, Plg8.0000°, Azm1.0000°;*

ISC 14 03:36:02.2±0.4,7.˙66S±0.˙03×117.˙23E±0.˙03,h30km±2km, h29km:pP-P,n903,σ1≤44/844,mb5.6/153,MS5.0/195, 61C-29D,Bali Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TWSI	**Taliwang, Sumb**	**1.12**	**198**	P			**Pb**	**03 36 22.2**	**-0.9**
KHKI	**Kahang-Kahang**	**1.75**	**246**	P			**Pn**	**03 36 31.2**	**+0.6**
KHKI				S			**Sb**	**03 36 55.6**	**+0.3**
SRBI	**Singaraja**	**2.04**	**258**	P			**Pn**	**03 36 34.4**	**-0.2**
DNP	**Denpasar**	**2.24**	**243**	P			**Pn**	**03 36 38.1**	**+0.8**
IGBI	**Denpasar**	**2.36**	**241**	P			**Pn**	**03 36 38.2**	**-0.8**
JAGI	**Jajag, Banyuwa**	**3.15**	**255**	P			**Pn**	**03 36 50.1**	**+0.2**
JAGI	**Jajag, Banyuwa** baz=3.2,SNR=50	**3.15**	**255**	P			**Pn**	**03 36 49.8**	**-0.1**
BSSI	**Bau Bau, Buton**	**3.57**	**65**	P			**Pn**	**03 36 56.9**	**+1.3**
BLJI	**Banyuglugur**	**3.60**	**268**	P			**Pn**	**03 36 56.4**	**+0.3**
WSI	**Waingapu**	**3.63**	**124**	P			**Pn**	**03 36 58.2**	**+1.7**
WSI	**Waingapu** baz=3.5,SNR=8.8	**3.63**	**124**	P			**Pn**	**03 36 58.6**	**+2.1**
KAPI	**Kappang** 17µm,0.5s	**3.63**	**44**	Pn			**Pn**	**03 36 56.6**	**+0.1**
KAPI	**Kappang**	**3.63**	**44**	*e*Pn			**Pn**	**03 36 56.5**	**0.0**
KAPI				*e*Sn			**Sn**	**03 37 38.7**	**+0.4**
KAPI	**Kappang**	**3.63**	**44**	P			**Pn**	**03 36 56.8**	**+0.3**
KAPI	**Kappang** 224nm,0.3s,baz=198,slow=7.1,SNR=805	**3.63**	**44**	Pn			**Pn**	**03 36 56.6**	**+0.1**
KAPI				S			**Sn**	**03 37 33.3**	**-5.1**
BKSI	**Bulukumba** 241nm,0.3s,baz=143,slow=22,SNR=7.5	**3.69**	**51**	P			**Pn**	**03 36 58.6**	**+1.2**
GMJI	**Gumukmas**	**3.80**	**261**	P			**Pn**	**03 36 58.9**	**+0.1**
BASI	**Baing, Sumba**	**4.17**	**128**	P			Pn	03 37 06.5	+2.6
SPSI	**Sidrap Palu**	**4.46**	**35**	P			**Pn**	**03 37 08.6**	**+0.8**
BBKI	**Banjar Baru**	**4.80**	**330**	P			**Pn**	**03 37 14.3**	**+1.7**
MMRI	**Maumere** 2µm,1.5s,29µm13nm	**5.05**	**101**	P			**Pn**	**03 37 17.1**	**+1.1**
TTSI	**Tana Toraja** 1µm,1.1s,31µm42µm16nm	**5.26**	**29**	P			Pn	03 37 21.6	+2.7
PWJI	**Pagerwojo** 663nm,0.9s,15µm5.0nm	**5.39**	**266**	P			**Pn**	**03 37 21.2**	**+0.6**
BBSI	**Bau Bau** 661nm,0.7s,10µm	**5.73**	**68**	P			Pn	03 37 29.2	+3.9
PCJI	**Pacitan** 894nm,1.1s,17µm5.9nm	**6.02**	**265**	P			Pn	03 37 31.1	+1.8
UGM	**Wanagama**	**6.65**	**267**	*e*Pn			**Pn**	**03 37 39.8**	**+1.7**
UGM	**Wanagama** 754nm,0.9s,17µm6.8nm	**6.65**	**267**	P			**Pn**	**03 37 39.2**	**+1.2**
UGM	**Wanagama** baz=6.7,SNR=42	**6.65**	**267**	P			**Pn**	**03 37 39.7**	**+1.7**
SMRI	**Semarang** 1µm,1.1s,16µm7.4nm	**6.76**	**275**	P			**Pn**	**03 37 39.4**	**-0.1**
SMRI	**Semarang** baz=6.8,SNR=18	**6.76**	**275**	P			**Pn**	**03 37 39.5**	**-0.1**
MTKI	**Muara Teweh, K**	**7.07**	**341**	P			**Pn**	**03 37 45.8**	**+2.1**
PBKI	**Pangkalan Bun** 738nm,1.0s,21µm15nm	**7.41**	**311**	P			**Pn**	**03 37 49.8**	**+1.4**
BJII	**Banjamegara** 459nm,0.8s,8µm189µm2.2nm	**7.46**	**272**	P			**Pn**	**03 37 49.7**	**+0.5**
TGJI	**Tegal** 442nm,0.9s,7µm	**8.08**	**275**	P			**Pn**	**03 37 59.3**	**+1.6**
LUWI	**Luwuk** 284nm,0.8s,5µm27µm	**8.59**	**40**	P			Pn	03 38 08.8	+4.2
LUWI	**Luwuk** baz=8.7,SNR=4.4	**8.59**	**40**	P			Pn	03 38 15.3	+11
CISI	**Cisompet, Garu** 660nm,0.7s,6µm	**9.33**	**270**	P			Pn	03 38 16.8	+1.9
CISI	**Cisompet, Garu** baz=9.4,SNR=3.9	**9.33**	**270**	P			Pn	03 38 19.6	+4.7
MRSI	**Marisa** 239nm,1.2s,2µm	**9.35**	**30**	P			**Pn**	**03 38 17.5**	**+2.4**
LEM	**Lembang** 877nm,0.9s,11µm	**9.57**	**274**	P			Pn	03 38 23.8	+5.5
LEM	**Lembang** baz=9.6,SNR=17	**9.57**	**274**	P			Pn	03 38 23.9	+5.6
CNJI	**Cibinong** 500nm,0.8s	**10.02**	**271**	P			Pn	03 38 26.3	+2.0
SKJI	**Sukabumi** 655nm,0.7s,8µm	**10.61**	**273**	P			Pn	03 38 36.4	+4.1
TPI	**Tanjungpandan** 45nm,0.8s,648nm	**10.71**	**297**	P			**Pn**	**03 38 34.9**	**+1.2**
NLAI	**Namlea** 206nm,1.4s,3µm	**10.76**	**66**	P			Pn	03 38 41.0	+6.6
SBJI	**Serang** 655nm,1.2s,10µm	**11.13**	**277**	P			Pn	03 38 43.9	+4.5
SBUM	**Sibu**	**11.22**	**333**	P			Pn	03 38 43.1	+2.4
SBUM	**Sibu** 100nm,1.2s,2µm20µm	**11.22**	**333**	P			**Pn**	**03 38 42.9**	**+2.2**
KSM	**Kuching**	**11.40**	**322**	*e*Pn			**Pn**	**03 38 44.5**	**+1.3**
KSM	**Kuching**	**11.40**	**322**	P			**Pn**	**03 38 44.5**	**+1.3**
KSM	**Kuching** 115nm,0.9s,1µm17µm	**11.40**	**322**	P			**Pn**	**03 38 44.7**	**+1.5**
KSM	**Kuching** baz=12,SNR=4.4	**11.40**	**322**	P			Pn	03 38 46.9	+3.7
BTM	**Bintulu**	**11.55**	**339**	P			Pn	03 38 49.4	+4.1
AAI	**Ambon** 214nm,1.4s,3µm	**11.60**	**71**	P			Pn	03 38 52.0	+6.1
XMIS	**Christmas Isla** baz=12,SNR=3.4	**11.77**	**255**	P			**Pn**	**03 38 47.7**	**-0.6**
XMIS	baz=12,SNR=3.2			S			Sn	03 40 50.3	-8.5
MNI	**Manado**	**11.81**	**40**	P			Pn	03 39 04.0	+15
TSM	**Tasau**	**11.89**	**3**	P			Pn	03 39 00.9	+11
PPBI	**Pangkal Pinang** 87nm,0.6s,4µm	**12.32**	**296**	P			Pn	03 38 58.1	+2.3
MSAI	**Masohi** 24nm,1.2s,2µm	**12.41**	**70**	P			Pn	03 38 59.9	+3.0
MYLDM	**Lahad Datu**	**12.82**	**6**	P			**P**	**03 39 14.7**	**+1.5**
MYLDM	**Lahad Datu** 142nm,1.1s,5µm24µm	**12.82**	**6**	P			Pn	03 39 07.8	+5.2
KASI	**Kota Agung** 457nm,0.9s,3µm	**12.83**	**279**	P			Pn	03 39 06.1	+3.4
TNTI	**Ternate**	**13.13**	**51**	P			P	03 39 21.8	+5.2
SDKM	**Sandakan**	**13.21**	**360**	P			P	03 39 14.3	-3.3
FITZ	**Fitzroy Crossi**	**13.22**	**143**	Pn			**Pn**	**03 39 06.5**	**-1.5**
FITZ				Sn			Sn	03 41 27.2	-6.9
FITZ	**Fitzroy Crossi** 2.8nm,0.3s,baz=310,slow=6.1,SNR=47	**13.22**	**143**	Pn			**Pn**	**03 39 06.5**	**-1.5**
FITZ	9.4nm,0.3s,baz=178,slow=18,SNR=8.2			Sn			Sn	03 41 27.2	-6.9
FITZ	comp=Z,8µm,18.7s,baz=322,slow=41			LR			LR	03 44 59.7	
FITZ	**Fitzroy Crossi** baz=13,SNR=54	**13.22**	**143**	P			**Pn**	**03 39 05.9**	**-2.1**
FITZ	baz=13,SNR=6.0			S			Sn	03 41 25.1	-9.0
LWLI	**Liwa** 556nm,0.8s,7µm	**13.35**	**281**	P			Pn	03 39 12.3	+2.3
MBWA	**Marble Bar**	**13.64**	**170**	*e*Pn			**Pn**	**03 39 12.0**	**-1.7**
MBWA				*e*Sn			Sn	03 41 29.2	-15
KKM	**Kota Kinabalu** 263nm,1.4s	**13.65**	**356**	*e*Pn			**Pn**	**03 39 13.5**	**-0.5**
KKM	**Kota Kinabalu**	**13.65**	**356**	P			**P**	**03 39 22.5**	**-0.1**
KKM	**Kota Kinabalu** 140nm,1.8s,4µm	**13.65**	**356**	P			P	03 39 18.9	-3.6
KKM	**Kota Kinabalu** baz=14,SNR=4.6	**13.65**	**356**	P			**P**	**03 39 19.7**	**-2.9**
KNRA	**Kununurra** baz=14,SNR=58	**13.82**	**126**	P			**Pn**	**03 39 15.1**	**-1.0**
GAMI	**Galela, Maluku** 332nm,1.3s,7µm	**14.14**	**49**	P			**P**	**03 39 25.3**	**-2.6**
MNAI	**Manna** 638nm,1.0s,9µm	**14.57**	**282**	P			**Pn**	**03 39 28.3**	**+1.8**
MNAI	**Manna** baz=15,SNR=5.4	**14.57**	**282**	P			**Pn**	**03 39 28.6**	**+2.1**
MTN	**Manton Dam** baz=14,SNR=77	**14.62**	**112**	P			**Pn**	**03 39 25.2**	**-1.9**
KSI	**Kapahiang** 658nm,0.9s,9µm	**15.10**	**284**	P			**P**	**03 39 37.2**	**-1.4**
FAKI	**Fak Fak** 309nm,0.9s,5µm	**15.68**	**73**	P			**Pn**	**03 39 43.2**	**+2.0**
FAKI	**Fak Fak** baz=16,SNR=42	**15.68**	**73**	P			**Pn**	**03 39 42.2**	**+1.1**
FAKI	baz=16,SNR=12			S			**S**	**03 42 47.1**	**-1.4**
KDU	**Kakadu** baz=16,SNR=16	**15.81**	**110**	P			**Pn**	**03 39 41.0**	**-1.9**
BTDF	**Bukit Timah Da** 270nm,1.1s,3µm	**16.14**	**303**	P			**P**	**03 39 52.9**	**+2.8**
BTDF	**Bukit Timah Da** baz=16,SNR=14	**16.14**	**303**	P			**P**	**03 39 53.3**	**+3.2**
BTDF	baz=16,SNR=14			P			**P**	**03 39 53.3**	**+3.2**
MYKOM	**Kota Tinggi**	**16.32**	**305**	P			**P**	**03 39 51.0**	**-1.0**
MYKOM	**Kota Tinggi** 216nm,1.1s,3µm	**16.32**	**305**	P			**P**	**03 39 51.6**	**-0.5**
CTBH	**Cotabato--PC H**	**16.35**	**25**	*e*P			**P**	**03 39 54.9**	**+2.4**
DAV	**Davao City (W)** SNR=14	**16.84**	**30**	P			**P**	**03 40 01.8**	**+4.0**
DAV	**Davao City (W)**	**16.84**	**30**	*i*P			**P**	**03 40 00.6**	**+2.8**
DAV	**Davao City (W)**	**16.84**	**30**	S			S	03 43 23.0	+11
DAV	**Davao City (W)**	**16.84**	**30**	Pn			**P**	**03 39 59.7**	**+1.9**
DAV	**Davao City (W)**	**16.84**	**30**	P			P	03 40 12.8	+15
DAV	**Davao City (W)** 32nm,0.3s,baz=246,slow=11,SNR=14	**16.84**	**30**	Pn			**P**	**03 39 59.7**	**+1.9**
DAV	comp=Z,7µm,18.3s,baz=201,slow=40			LR			LR	03 47 10.5	
KGM	**Kluang**	**16.88**	**304**	P			**P**	**03 39 58.4**	**+0.1**
PPR	**Puerto Princes**	**17.39**	**5**	*i*P			P	03 40 10.0	+6.1
BKNI	**Bangkinang** 350nm,1.1s,6µm	**17.99**	**295**	P			P	03 40 14.7	+4.1
PPI	**Padang Panjang** 253nm,1.7s,8µm	**18.24**	**292**	P			**P**	**03 40 14.6**	**+1.2**
PPI	**Padang Panjang** baz=18,SNR=3.6	**18.24**	**292**	P			**P**	**03 40 15.8**	**+2.4**
PPI	baz=18,SNR=10			S			Sn	03 43 28.0	-8.4
MEEK	**Meekatharra** baz=19,SNR=66	**18.92**	**176**	P			**Pn**	**03 40 21.4**	**-0.2**
MEEK	baz=19,SNR=6.7			S			Sn	03 43 36.0	-17
FRIM	**Kepong**	**18.96**	**304**	P			**Pn**	**03 40 24.2**	**+2.1**
KTGM	**Kuala Trenggan**	**19.09**	**312**	P			**Pn**	**03 40 26.1**	**+2.5**
MNSI	**Mandailing Nat** 196nm,1.3s,6µm	**19.50**	**295**	P			**Pn**	**03 40 30.9**	**+2.3**
RCP	**Roxas**	**19.87**	**16**	*e*P			**Pn**	**03 40 34.1**	**+1.2**
BAKI	**Biak** 733nm,1.9s,12µm	**19.88**	**72**	P			**Pn**	**03 40 34.3**	**+1.2**
IPM	**Ipoh** 298nm,0.8s	**20.17**	**306**	*e*P			Pn	03 40 37.0	+0.5
IPM	**Ipoh**	**20.17**	**306**	P			Pn	03 40 37.0	+0.5
IPM	**Ipoh**	**20.17**	**306**	P			Pn	03 40 37.2	+0.6
IPM	**Ipoh** 434nm,0.9s,4µm	**20.17**	**306**	P			Pn	03 40 37.3	+0.8
PLP	**Palo**	**20.23**	**22**	*e*P			**P**	**03 40 36.0**	**+0.9**
COCO	**West Island**	**20.58**	**256**	PFAKE				03 40 50.0	+8.7
COCO	comp=Z,3µm,20.0s			LR			LR		
WRA	**Warramunga Arr**	**20.59**	**128**	P			**P**	**03 40 39.1**	**+0.1**
WRA				S			**S**	**03 44 23.9**	**-4.1**
WRA	**Warramunga Arr** comp=Z,38nm,0.5s,baz=301,slow=12,SNR=411	**20.59**	**128**	P			**P**	**03 40 39.1**	**+0.1**
WRA	comp=Z,31nm,0.9s,baz=308,slow=24,SNR=6.1			S			**S**	**03 44 23.9**	**-4.1**
WRA	comp=Z,4µm,18.9s,baz=305,slow=40			LR			LR	03 49 37.3	
WRAB	**Tennant Creek** comp=Z,1µm,0.8s	**20.59**	**128**	P			**P**	**03 40 39.0**	**0.0**
WRAB	**Tennant Creek**	**20.59**	**128**	*e*P			**P**	**03 40 39.1**	**0.0**
WRAB	comp=Z,175nm,0.8s			pmax			pmax		
WRAB	comp=Z,4µm,20.0s			MLR			MLR		
WRAB	**Tennant Creek** comp=Z,175nm,0.8s	**20.59**	**128**	*e*P			**P**	**03 40 39.1**	**0.0**
WRAB	comp=Z,4µm,20.0s			LR			LR		
KULM	**Kulim** comp=Z,176nm,0.8s	**20.95**	**307**	*e*P			Pn	03 40 44.8	-0.9
KULM	comp=Z,17µm,19.0s			LR			LR		
KULM	**Kulim**	**20.95**	**307**	P			Pn	03 40 45.0	-0.7
KULM	**Kulim** comp=Z,286nm,1.2s,comp=Z,3µm	**20.95**	**307**	P			Pn	03 40 45.0	-0.7
MORW	**Morawa** baz=21,SNR=24	**21.32**	**183**	P			**P**	**03 40 47.4**	**+0.5**
MORW	baz=21,SNR=4.9			S			S	03 44 34.9	-7.4
TSI	**Tuntungan** comp=Z,1µm,1.0s,comp=Z,14µm	**21.67**	**300**	P			**P**	**03 40 54.2**	**+3.5**
TGY	**Tagaytay City**	**21.93**	**10**	P			**P**	**03 40 54.3**	**+0.8**
TGY	**Tagaytay City** comp=Z,497nm,0.7s,baz=181,slow=3.4,SNR=24	**21.93**	**10**	P			**P**	**03 40 54.3**	**+0.8**
KCSI	**Kotacane, Aceh** comp=Z,311nm,1.8s	**22.37**	**299**	P			**P**	**03 40 59.8**	**+1.6**
AS31	**Alice Springs**	**22.56**	**137**	*e*P			**P**	**03 41 00.3**	**0.0**
ASAR	**Alice Springs**	**22.56**	**137**	P			**P**	**03 41 00.5**	**+0.2**
ASAR	comp=Z,43nm,0.8s,baz=312,slow=9.5,SNR=282			S			**S**	**03 45 03.5**	**-2.5**
ASAR	**Alice Springs** comp=Z,20nm,0.9s,baz=314,slow=22,SNR=6.5	**22.56**	**137**	P			**P**	**03 41 00.5**	**+0.2**
ASAR	comp=Z,4µm,19.1s,baz=46,slow=39			S			**S**	**03 45 03.5**	**-2.5**
SNSI	**Sinabang, Aceh** comp=Z,285nm,1.9s	**23.13**	**295**	P			**P**	**03 41 06.9**	**+0.7**
KLBR	**Kellerberrin** baz=24,SNR=13	**23.82**	**179**	P			**P**	**03 41 13.8**	**+1.1**
KLBR	baz=24,SNR=5.1			S			**S**	**03 45 31.5**	**+4.8**
LHMI	**Lhok Sumawe** comp=Z,577nm,0.9s,comp=Z,7µm	**23.95**	**302**	P			**P**	**03 41 15.4**	**+1.3**
LHMI	**Lhok Sumawe** baz=24,SNR=12	**23.95**	**302**	P			**P**	**03 41 15.4**	**+1.3**
KMBL	**Kambalda** baz=24,SNR=30	**23.98**	**170**	P			**P**	**03 41 14.4**	**+0.1**
FORT	**Forest** comp=Z,317nm,0.7s	**25.14**	**158**	*e*P			**P**	**03 41 25.6**	**+0.9**
FORT	**Forest** baz=25,SNR=33	**25.14**	**158**	P			**P**	**03 41 25.3**	**+0.5**
NWAO	**Narrogin (SRO)** comp=Z,62nm,0.8s	**25.14**	**180**	*e*P			**P**	**03 41 26.4**	**+1.5**
NWAO	comp=Z,4µm,21.0s			LR			LR		
NWAO	**Narrogin (SRO)** comp=Z,20nm,0.5s,baz=7.6,slow=9.1,SNR=23	**25.14**	**180**	P			**P**	**03 41 25.2**	**+0.4**
NWAO	comp=Z,4µm,21.2s,baz=320,slow=37			LR			LR	03 51 25.8	
QIS	**Mount Isa** baz=25,SNR=97	**25.16**	**123**	P			**P**	**03 41 25.8**	**+0.7**
BSI	**Banda Aceh** comp=Z,198nm,1.0s,comp=Z,2µm	**25.49**	**300**	P			**P**	**03 41 29.7**	**+1.5**
UBPT	**Khong Chiam**	**25.60**	**333**	P			**P**	**03 41 31.1**	**+2.0**
COEN	**Coen** comp=Z,4µm,1.8s	**26.23**	**106**	*e*P			**P**	**03 41 34.9**	**0.0**
COEN	**Coen** baz=26,SNR=55	**26.23**	**106**	P			**P**	**03 41 34.7**	**-0.1**
RKGY	**Rocky Gully** baz=27,SNR=6.3	**26.82**	**180**	P			**P**	**03 41 43.1**	**+3.1**
PHET	**Kaeng Krachan** comp=Z,131nm,0.9s,comp=Z,1µm	**26.90**	**319**	P			**P**	**03 41 43.6**	**+2.7**
QIZ	**Qiongzhong**	**27.50**	**345**	P			**P**	**03 41 47.8**	**+1.5**
QIZ				sP			sP	03 42 00.8	+2.3
QIZ				S			**S**	**03 46 27.1**	**+1.6**
QIZ				sS			sS	03 46 45.8	+6.1
QIZ	comp=Z,28nm,1.1s			pmax			pmax		
QIZ	comp=Z,420nm,10.1s			pmax			pmax		
QIZ	comp=N,2µm,17.7s			LR			LR		
QIZ	comp=Z,3µm,18.6s			LR			LR		
QIZ	**Qiongzhong** comp=Z,30nm,0.8s	**27.50**	**345**	*e*P			**P**	**03 41 45.1**	**-1.2**
QIZ	comp=Z,3µm,19.0s			LR			LR		
MTSU	**Mount Surprise** baz=28,SNR=25	**28.34**	**114**	P			**P**	**03 41 55.0**	**+1.1**
PBKT	**Sadao Pong** comp=Z,49nm,0.8s	**28.95**	**326**	P			**P**	**03 42 01.4**	**+2.2**
PMG	**Port Moresby** comp=Z,27nm,0.9s	**29.64**	**96**	*e*P			**P**	**03 42 06.8**	**+1.3**
PMG	comp=Z,2µm,20.0s			LR			LR		
PMG	**Port Moresby** comp=Z,2µm,18.1s,baz=92,slow=43	**29.64**	**96**	LR			LR	03 57 19.1	
BBOO	**Buckleboo** comp=Z,454nm,0.7s	**30.52**	**148**

comp=Z,2μm,18.5s,baz=308,slow=39
STKA Stephens Creek 33.10 140 P P 03 42 36.4 +0.8
baz=33,SNR=18
GUMO Guam 34.62 53 *e*P P 03 42 49.4 +0.3
GUMO LR LR
comp=Z,1μm,19.0s
RMQ Roma 35.32 126 P P 03 42 57.1 +2.0
baz=35,SNR=24
GYA Guiyang 35.43 344⇑ *i*P P 03 42 57.8 +1.7
GYA pP pP 03 43 07.5 +2.7
GYA sP sP 03 43 13.0 +4.7
GYA PP **PP 03 44 17.9 +1.0**
GYA PcP **PcP 03 45 25.8 +0.2**
GYA S **S 03 48 31.1 +1.7**
GYA sS sS 03 48 45.5 +1.8
GYA ScP **ScP 03 49 09.0 -0.5**
GYA SS **SnSn 03 50 48.3 -1.8**
GYA ScS **ScS 03 53 13.3 -0.9**
GYA pmax pmax
comp=Z,40nm,0.7s
GYA pmax pmax
comp=Z,260nm,5.1s
GYA LR LR
comp=N,2μm,18.3s
GYA LR LR
comp=E,2μm,17.0s
GYA LR LR
comp=Z,2μm,20.5s
KMI Kunming 35.51 337 ⇑P P 03 42 59.8 +2.9
KMI pP pP 03 43 05.1 -0.5
KMI PP **PP 03 44 24.3 +6.4**
KMI S **S 03 48 31.8 +1.0**
KMI SS **SnSn 03 50 56.4 +4.2**
KMI ScS **ScS 03 53 15.6 +0.7**
KMI pmax pmax
comp=Z,53nm,1.2s
KMI pmax pmax
comp=Z,410nm,3.5s
KMI LR LR
comp=N,2μm,16.5s
KMI LR LR
comp=E,2μm,15.7s
KMI LR LR
comp=Z,2μm,14.4s
CMSA Cobar Meteorol 35.61 136 P P 03 42 58.9 +1.4
baz=36,SNR=16
ARPS Mount Arapiles 36.63 146 P P 03 43 07.5 +1.5
baz=37,SNR=13
EIDS Eidsvold 36.76 123 *e*P P 03 43 08.7 +1.3
comp=Z,13nm,0.7s
EIDS Eidsvold 36.76 123 P P 03 43 09.7 +2.3
baz=37,SNR=3.4
WHN Wuhan 38.09 356 ⇓P P 03 43 20.4 +2.0
WHN S S 03 49 02.6 -6.8
WHN LR LR
comp=N,5μm,15.2s
WHN LR LR
comp=E,880nm,14.4s
WHN LR LR
comp=Z,6μm,18.6s
ENH Enshi 38.44 349 *e*P P 03 43 22.4 +0.9
comp=Z,142nm,1.4s
ENH LR LR
comp=Z,3μm,20.0s
SSE Sheshan 38.72 5 P P 03 43 25.3 +1.5
SSE sP sP 03 43 41.3 +5.2
SSE PP **PnPn 03 44 55.4 +0.3**
SSE S **ScP 03 49 22.4 +0.9**
SSE pmax pmax
comp=Z,49nm,1.0s
SSE pmax pmax
comp=Z,480nm,10.5s
SSE LR LR
comp=N,1μm,20.0s
SSE LR LR
comp=E,370nm,20.0s
SSE LR LR
comp=Z,1μm,19.4s
YNG Young 39.07 137 P P 03 43 28.4 +1.7
baz=39,SNR=39
TOO Toolangi 39.28 144 P P 03 43 30.7 +2.2
baz=39,SNR=10
PALK Palkekele 39.33 291 *e*P P 03 43 28.3 -1.0
comp=Z,24nm,0.9s
ARMA Armidale 39.36 130 *e*P P 03 43 31.8 +2.5
comp=Z,41nm,0.9s
ARMA Armidale 39.36 130 P P 03 43 31.9 +2.5
baz=39,SNR=15
NJ2 Nanjing 39.52 2 *e*P P 03 43 32.3 +1.9
NJ2 pP pP 03 43 42.1 +2.9
NJ2 sP sP 03 43 46.4 +3.6
NJ2 PP **PnPn 03 45 05.3 +0.7**
NJ2 S **S 03 49 32.0 +1.0**
NJ2 sS sS 03 49 49.0 +3.5
NJ2 pmax pmax
comp=Z,50nm,0.9s
NJ2 pmax pmax
comp=Z,550nm,6.5s
NJ2 LR LR
comp=N,720nm,21.8s
NJ2 LR LR
comp=E,670nm,22.0s
NJ2 LR LR
comp=Z,910nm,18.7s
CAN Canberra 40.06 138 *e*P P 03 43 36.1 +1.0
CAN pmax pmax
comp=Z,46nm,1.1s
CAN MLR MLR
comp=Z,3μm,19.0s
CAN Canberra 40.06 138 *e*P P 03 43 36.1 +1.0
comp=Z,46nm,1.1s
CAN LR LR
comp=Z,3μm,19.0s
CNB Canberra Magne 40.30 138 P P 03 43 38.8 +1.7
baz=40,SNR=7.0
MGCD Mangrove Creek 40.35 134 P P 03 43 40.2 +2.7
baz=40,SNR=20
CD2 Chengdu 40.47 342 P P 03 43 39.6 +1.2
CD2 pP pP 03 43 49.8 +2.6
CD2 sP sP 03 43 54.1 +3.3
CD2 PP **PnPn 03 45 17.4 +1.4**
CD2 PcP **PcP 03 45 41.5 +0.6**
CD2 S **S 03 49 47.3 +1.9**
CD2 sS sS 03 50 04.0 +4.1
CD2 SS **SS 03 52 43.3 -2.3**
CD2 ScS **ScS 03 53 40.3 -2.3**
CD2 pmax pmax
comp=Z,170nm,0.9s
CD2 pmax pmax
comp=Z,640nm,10.7s
CD2 LR LR
comp=N,3μm,16.6s
CD2 LR LR
comp=E,2μm,17.8s
CD2 LR LR
comp=Z,3μm,17.8s
MILA Mila 41.20 140 P P 03 43 47.4 +3.0
baz=41,SNR=8.5
SHL Shillong 41.22 324 *i* PCN P 03 43 45.0 +0.2
comp=Z,22nm,0.7s
SHL *i* S **S 03 50 00.0 +3.0**
VIS Vishakhapatnam 41.92 307 *e*PKP P 03 43 50.6 +0.1
VIS AMb AMB 03 43 55.1
comp=Z,124nm,1.8s
MDRS Chennai 42.12 299 *ex* P 03 43 54.2 +2.1
MDRS *ex* x 03 49 06.2
XAN Xi'an 42.21 350 P P 03 43 53.1 +0.4
XAN pP pP 03 44 04.8 +3.3
XAN PP **PP 03 45 30.9 0.0**
XAN S **S 03 50 13.5 +2.3**
XAN sS sS 03 50 33.9 +8.1
XAN ScS **ScS 03 53 52.8 -0.3**
XAN pmax pmax
comp=Z,150nm,11.6s
XAN LR LR
comp=N,2μm,20.4s
XAN LR LR
comp=E,450nm,19.4s
XAN LR LR
comp=Z,1μm,21.4s
HNR Honiara 42.26 96 PFAKE 03 44 00.0 +6.6
HNR LR LR
comp=Z,1μm,22.0s
JNU Nakatsue 42.58 17 *e*P P 03 43 56.2 +0.5
comp=Z,12nm,0.9s
JNU Nakatsue 42.58 17 P P 03 43 56.0 +0.3
comp=Z,19nm,0.7s,baz=20,slow=2.1,SNR=13
TAU Tasmania Unive 43.95 148 PFAKE 03 44 20.0 +13
TAU LR LR
comp=Z,4μm,20.0s
DGAR Diego Garcia 44.38 267 PFAKE 03 44 20.0 +10
DGAR LR LR
comp=Z,2μm,20.0s
LSA Lhasa 44.82 327 P P 03 44 16.5 +2.2
LSA S **S 03 50 45.9 -4.5**
LSA LR LR
comp=N,400nm,21.7s
LSA LR LR
comp=E,1μm,23.2s
LSA LR LR
comp=Z,2μm,19.6s
LSA Lhasa 44.82 327 *e*P P 03 44 16.3 +2.0
LSA pmax pmax
comp=Z,103nm,0.8s
LSA MLR MLR
comp=Z,2μm,20.0s
LSA Lhasa 44.82 327 *e*P P 03 44 16.3 +2.0
comp=Z,103nm,0.8s
LSA LR LR
comp=Z,2μm,20.0s
LZH Lanzhou 45.30 345 ⇑P P 03 44 19.5 +1.9
LZH pP pP 03 44 30.0 +3.5
LZH sP sP 03 44 33.8 +3.7
LZH PcP **PcP 03 45 58.5 +1.4**
LZH PP **PP 03 46 04.8 +0.8**
LZH PcS **PcS 03 49 51.5 +0.3**
LZH S **S 03 50 58.3 +1.8**
LZH sS sS 03 51 14.6 +3.5
LZH SS **ScS 03 54 13.4 +0.7**
LZH pmax pmax
comp=Z,100nm,1.3s
LZH pmax pmax
comp=Z,470nm,5.4s
LZH LR LR
comp=N,2μm,15.2s
LZH LR LR
comp=E,1μm,14.0s
LZH LR LR
comp=Z,2μm,16.5s
TIY Taiyuan 45.36 355 *e*P P 03 44 18.6 +0.6
TIY PcP **PcP 03 45 58.1 +0.9**
TIY S **S 03 50 58.3 +1.2**
TIY LR LR
comp=N,1μm,16.8s
TIY LR LR
comp=E,670nm,13.9s
TIY LR LR
comp=Z,1μm,16.7s
HYB Hyderabad 45.62 303⇑ *i*P P 03 44 18.5 -1.9
HYB *es*P **sP 03 44 28.0 -4.8**
HYB *eS* **S 03 51 02.0 +0.5**
INCN Inchon 45.76 10 PFAKE 03 44 30.0 +8.9
INCN LR LR
comp=Z,855nm,19.0s
KSAR Wonju Array Be 45.96 12 P P 03 44 24.0 +1.4
KSRS Korea Array 45.98 12 P P 03 44 24.0 +1.3
comp=Z,8.6nm,0.8s,baz=192,slow=8.4,SNR=38
KSRS LR LR 04 05 25.2
comp=Z,875nm,19.1s,baz=216,slow=38
NGP Nagpur 47.17 308 *e*PKP P 03 44 31.2 -1.3
NGP *ex* x 03 55 03.2
BJT Baijiatuau 47.45 359 *e*P P 03 44 35.0 +0.7
comp=Z,113nm,1.2s
BJT LR LR
comp=Z,2μm,20.0s
BJI Beijing 47.47 359 P P 03 44 35.5 +1.1
BJI pP **pP 03 44 44.6 +1.3**
BJI sP sP 03 44 48.8 +2.0
BJI PP **PP 03 46 28.4 +2.3**
BJI S **S 03 51 29.3 +2.2**
BJI sS sS 03 51 47.5 +5.7
BJI pmax pmax
comp=Z,110nm,1.5s
BJI pmax pmax
comp=Z,750nm,3.9s
BJI LR LR
comp=N,2μm,19.9s
BJI LR LR
comp=E,820nm,19.4s
BJI LR LR
comp=Z,1μm,20.4s
JBP Jabalpur 47.60 311⇑ *i*P P 03 44 36.5 +0.8
JBP *i* x x 03 44 37.5
comp=Z,213nm,0.9s
JBP *ex* x 03 44 44.4
MAJO Matsushiro 48.18 23 *e*P P 03 44 40.2 +0.2
MAJO pmax pmax
comp=Z,339nm,1.5s
MAJO MLR MLR
comp=Z,1μm,20.0s
MAJO Matsushiro 48.18 23 *e*P P 03 44 40.1 +0.2
comp=Z,339nm,1.5s
MAJO LR LR
comp=Z,1μm,20.0s
MAT Matsushiro 48.18 23 P P 03 44 40.2 +0.2
MAT S **S 03 51 38.4 +1.0**
BTO Baotou 48.48 353 *e*P P 03 44 42.6 +0.2
BTO pmax pmax
comp=Z,26nm,1.7s
HHC Hu-ho-hao-te 48.55 354 *e*P P 03 44 44.0 +1.1
HHC pP pP 03 44 53.8 +2.0
HHC sP sP 03 44 57.9 +2.5
HHC PP **PP 03 46 37.6 +1.6**
HHC S **S 03 51 45.3 +2.6**
HHC sS sS 03 52 00.4 +3.0
HHC SS **SS 03 55 09.5 -3.7**
HHC pmax pmax
comp=Z,130nm,1.3s
HHC pmax pmax
comp=Z,1μm,5.8s
HHC LR LR
comp=N,3μm,15.5s
HHC LR LR
comp=E,2μm,15.2s
HHC LR LR
comp=Z,2μm,15.1s
NOUC Port Laguerre 49.33 113 *e*P P 03 44 50.1 +1.0
DZM Mont Dzumac 49.45 112 *e*LQ LQ 03 57 11.8
comp=Z,3μm,23.1s
DZM *e*LR LR 04 02 49.0
comp=Z,3μm,22.1s
DZM Mont Dzumac 49.45 112 *e*P P 03 44 51.0 +0.8
comp=Z,115nm,1.2s
DZM Mont Dzumac 49.45 112 P P 03 44 51.5 +1.3
comp=Z,21nm,0.7s,baz=281,slow=8.9,SNR=24
GTA Gaotai 49.54 342 ⇑P P 03 44 52.5 +2.0
GTA pP pP 03 45 01.9 +2.4
GTA sP sP 03 45 06.3 +3.3
GTA S **S 03 51 59.3 +2.6**
GTA sS sS 03 52 14.6 +3.2
GTA SS **SS 03 55 25.8 -3.4**
GTA pmax pmax
comp=Z,62nm,0.9s
GTA pmax pmax
comp=Z,550nm,5.0s
GTA LR LR
comp=N,2μm,17.8s
GTA LR LR
comp=E,1μm,20.2s
GTA LR LR
comp=Z,2μm,19.5s
BHPL Bhopal 49.58 309 *e*PKP P 03 44 49.4 -1.6
BHPL AMb AMB 03 44 54.6
comp=Z,122nm,1.8s
SNY Shenyang 49.59 6 ⇑P P 03 44 50.8 +0.1
SNY pmax pmax
comp=Z,47nm,1.8s
SNY pmax pmax
comp=Z,560nm,8.4s
SNY LR LR
comp=N,560nm,16.2s
SNY LR LR
comp=E,1μm,17.6s
SNY LR LR
comp=Z,1μm,18.2s
POO Poona 50.08 302 *ex* P 03 44 52.3 -2.6
LGTI Lohaghat 51.26 318 *ex* pP 03 45 19.5 +7.0
CN2 Changchun 51.76 8 *e*P P 03 45 06.8 -0.2
CN2 *es*P sP 03 45 20.5 +1.0
CN2 PcP **PcP 03 46 20.5 +0.5**
CN2 PP **PP 03 47 05.0 -0.1**
CN2 *e*S **S 03 52 26.3 -0.7**
CN2 SS **SS 03 56 01.3 -2.8**
CN2 pmax pmax
comp=Z,20nm,1.3s
CN2 pmax pmax
comp=Z,200nm,7.0s
CN2 LR LR
comp=N,800nm,16.0s
CN2 LR LR
comp=E,900nm,16.0s
CN2 LR LR
comp=Z,1μm,19.0s
VLA Vladivostok 52.27 14⇑ *e*P P 03 45 10.1 -0.7
VLA pmax pmax
comp=Z,195nm,2.5s
BISR Bishrakh 52.63 315 *ex* P 03 45 04.0 -10
AYAN Aya Nagar 52.80 315 *e*PKP P 03 45 13.7 -1.3
NDI New Delhi 52.86 315 *e*PKP P 03 45 13.0 -2.5
MDJ Mudanjiang 53.22 11 P P 03 45 18.1 +0.3
MDJ pP **pP 03 45 27.0 +0.2**
MDJ sP sP 03 45 30.4 0.0
MDJ S **S 03 52 44.5 -2.5**
MDJ pmax pmax
comp=Z,68nm,1.1s
MDJ pmax pmax
comp=Z,220nm,4.0s
MDJ LR LR
comp=N,270nm,18.8s
MDJ LR LR
comp=E,390nm,19.8s
MDJ LR LR
comp=Z,530nm,20.8s
MDJ Mudanjiang 53.22 11 *e*P P 03 45 17.8 -0.1
comp=Z,64nm,0.9s
MDJ LR LR
comp=Z,838nm,21.0s
USRK Ussuriysk Arra 53.32 13 P P 03 45 19.4 +0.9
comp=Z,26nm,0.7s,baz=186,slow=7.4,SNR=46
USRK LR LR 04 07 02.5
comp=Z,646nm,21.4s,baz=94,slow=35
AJM Ajmer 53.46 311 *e*PKP P 03 45 18.5 -1.5
AJM AMb AMB 03 45 23.4
comp=Z,144nm,1.8s
RTK Rohtak 53.63 315 *e*PKP P 03 45 19.0 -2.2
RTK AMB AMB 03 45 19.7
comp=Z,209nm,1.1s
KKR Kurukshetra 53.90 316 *e*PKP P 03 45 22.4 -0.8
KKR AMB AMB 03 45 23.2
comp=Z,234nm,0.4s
SMLA Simla 54.38 317 *i* P P 03 45 26.5 -0.1
ERM Erimo 54.83 23 PFAKE 03 45 40.0 +10
ERM LR LR
comp=Z,1μm,20.0s
BHK Bhakra 55.06 317 *e*PKP P 03 45 31.5 -0.1
ULN Ulaanbaatar 56.01 352 P P 03 45 39.6 +1.3
SNR=40
ULN Ulaanbaatar 56.01 352 *e*P P 03 45 39.4 +1.1
comp=Z,138nm,1.6s
ULN LR LR
comp=Z,1μm,19.0s
ULN Ulaanbaatar 56.01 352 P P 03 45 39.4 +1.1
comp=Z,52nm,1.9s,comp=Z,1μm
SONM Songino Array 56.08 351 P P 03 45 39.7 +1.0
SONM Songino Array 56.08 351 P P 03 45 39.7 +1.0
comp=Z,32nm,0.7s,baz=170,slow=8.8,SNR=233
SONM LR LR 04 12 45.4
comp=Z,1μm,18.4s,baz=189,slow=39
THN Thein Dam 56.15 318 *i* P P 03 45 38.8 -0.6
ASAJ Asahikawa 56.41 22 *e*P P 03 45 42.0 +1.0
comp=Z,89nm,1.3s
ASAJ Asahikawa 56.41 22 P P 03 45 42.3 +1.3
comp=Z,55nm,0.7s,baz=234,slow=12,SNR=40
ASAJ LR LR 04 09 32.3
comp=Z,740nm,21.5s,baz=212,slow=36
HIA Hailar 56.73 2 *e*P P 03 45 43.4 +0.2
HIA LR LR
comp=Z,793nm,19.0s
YUK Yuzh-Kuril'sk 57.60 24*d* *i*P P 03 45 48.9 -0.5
YUK *i* 03 47 56.7
YUK *i* SS **SS 03 57 32.8 -3.5**
YUK pmax pmax
comp=E,602nm,1.3s
YUK pmax pmax
comp=N,505nm,1.3s
YUK pmax pmax
comp=Z,409nm,1.3s
YUK MLR MLR
comp=Z,518nm,21.0s
YUK MLR MLR
comp=N,681nm,25.0s
WMQ Urumqi 57.80 335 P P 03 45 52.0 +1.1
WMQ pP pP 03 46 02.0 +2.0
WMQ sP sP 03 46 06.0 +2.5
WMQ PcP **PcP 03 46 44.0 +0.6**
WMQ PP **PP 03 48 02.0 +2.6**
WMQ S **S 03 53 48.0 -0.4**
WMQ ScS **ScS 03 55 35.0 -3.5**
WMQ SS **SS 03 57 39.0 -0.6**
WMQ pmax pmax
comp=Z,91nm,0.9s
WMQ pmax pmax
comp=Z,100nm,4.9s
WMQ LR LR
comp=N,2μm,16.0s
WMQ LR LR
comp=E,650nm,19.0s
WMQ LR LR
comp=Z,950nm,23.6s
HABR Khabarovsk 58.05 14*de*P P 03 45 52.5 0.0
HABR *e* 03 46 41.8
HABR S **S 03 53 48.4 -2.9**
HABR *e**SS sS 03 54 08.3 +2.0
HABR *e* 03 55 36.3
HABR *e*SS **SS 03 57 41.0 -2.2**
HABR pmax pmax
comp=Z,246nm,1.7s
HABR pmax pmax
comp=N,84nm,2.3s
HABR pmax pmax
comp=E,124nm,1.7s
HABR pmax pmax
comp=Z,518nm,2.0s
HABR MLR MLR
comp=Z,465nm,18.0s
KLR Kul'dur 58.06 11 *e*P P 03 45 49.4 -3.1
KLR *e* 03 55 43.0
KLR *e* 03 57 48.5
KLR pmax pmax
comp=E,56nm,1.8s
KLR pmax pmax
comp=Z,220nm,1.8s
CASY Casey 58.71 183 PFAKE 03 46 10.0 +13
CASY LR LR
comp=Z,3μm,20.0s
YSS Yuzh-Sakhalins 58.92 20⇑ *i*P P 03 46 00.0 +1.5
YSS *eS* **S 03 54 04.0 +1.4**
YSS *ePS* **PnS 03 54 14.0 -3.3**
YSS *eSS* **SS 03 57 58.0 +1.1**
YSS pmax pmax
comp=Z,220nm,1.3s
YSS MLR MLR
comp=Z,600nm,20.0s
ZAK Zakamensk 59.06 350⇓ *i*P P 03 45 59.8 +0.2
ZAK pmax pmax
comp=Z,18nm,1.6s
KUR Kuril'sk 59.41 25*d* *i*P P 03 46 00.2 -1.8
CIT Chita 59.53 357 *e*P P 03 46 04.3 +1.6
CIT *e* 03 46 49.3
CIT pmax pmax
comp=Z,256nm,1.7s
MSVF Nonsavu 59.96 106 P P 03 46 07.6 +1.2
comp=Z,428nm,1.1s,SNR=6.5
MSVF Nonsavu 59.96 106 *e*P P 03 46 07.1 +0.7
MSVF pmax pmax
comp=Z,80nm,1.0s
MSVF MLR MLR
comp=Z,557nm,20.0s
MSVF Nonsavu 59.96 106 *e*P P 03 46 07.1 +0.7
comp=Z,80nm,1.0s
MSVF LR LR
comp=Z,557nm,20.0s
TLY Talaya 60.25 350*c* *i*P P 03 46 09.0 +1.3
TLY *eS* **S 03 54 23.0 +3.2**
TLY pmax pmax
comp=Z,71nm,1.6s

TLY MLR MLR
comp=Z,2μm,19.3s
TLY Talaya 60.25 350 P **P** **03 46 09.3 +1.6**
comp=Z,184nm,1.5s,SNR=16
KSH Kashi 60.50 324⇑ *i*P **P** **03 46 10.1 +0.3**
KSH *e*pP **pP** **03 46 19.5 +0.6**
KSH *es*P sP 03 46 24.1 +1.7
KSH *e*PcP **PcP** **03 46 54.6 +0.3**
KSH *e*PP **PP** **03 48 25.3 +1.8**
KSH *e*S **S** **03 54 20.0 -3.6**
KSH *es*S **sS** **03 54 37.8 -0.9**
KSH pmax pmax
comp=Z,200nm,0.9s
KSH LR LR
comp=N,1μm,10.5s
KSH LR LR
comp=E,1μm,13.4s
KSH LR LR
comp=Z,1μm,13.8s
IRK Irkutsk 60.69 351 *e*P **P** **03 46 10.2 -0.5**
IRK pmax pmax
comp=Z,135nm,2.2s
RER Riviere de l'E 60.71 250 *e*P **P** **03 46 12.6 +1.0**
comp=Z,87nm,0.9s
MOY Mondy 60.72 348 *e*P **P** **03 46 11.9 +0.9**
MOY pmax pmax
comp=Z,113nm,2.2s
SNZO South Karori 60.75 133 PFAKE 03 46 20.0 +8.6
SNZO LR LR
comp=Z,3μm,20.0s
MSEY Mahe Island 61.42 269 PFAKE 03 46 30.0 +14
MSEY LR LR
comp=Z,1μm,21.0s
URZ Urewera 61.76 129 P **P** **03 46 19.0 +0.8**
URZ Urewera 61.76 129 P **P** **03 46 19.0 +0.8**
comp=Z,18nm,0.7s,baz=343,slow=2.5,SNR=9.6
KBL Kabul 61.91 316 *e*P **P** **03 46 18.7 -0.9**
KBL pmax pmax
comp=Z,60nm,0.8s
KBL Kabul 61.91 316 *e*P **P** **03 46 18.6 -0.9**
comp=Z,60nm,0.8s
KBL Kabul 61.91 316 P **P** **03 46 19.4 -0.2**
baz=62,SNR=3.8
HVS Khovu-Aksy 61.98 343*c* *i*P **P** **03 46 19.5 0.0**
HVS pmax pmax
comp=Z,248nm,1.6s
ULHL Ulahol 62.17 327 P **P** **03 46 21.9 +0.7**
SNR=58
MK31 Makanchi Array 62.48 334 *e*P **P** **03 46 23.5 +0.6**
MK31 Makanchi Array 62.48 334 *e*P **P** **03 46 23.5 +0.6**
MKAR Makanchi Array 62.48 334 P **P** **03 46 23.7 +0.8**
MKAR Makanchi Array 62.48 334 P **P** **03 46 23.6 +0.8**
MKAR ⇑ *e* 04 15 33.7
MKAR Makanchi Array 62.48 334 P **P** **03 46 23.6 +0.8**
comp=Z,89nm,0.7s,baz=144,slow=7.5,SNR=786
MKAR LR LR 04 15 27.8
comp=Z,1μm,22.0s,baz=142,slow=38
MKAR PKP2bc 04 15 33.7
comp=Z,0.6nm,0.8s,baz=358,slow=3.8,SNR=8.9
AAA Alma-Ata 62.49 328 *i* P **P** **03 46 24.1 +1.0**
AAA *e*S **S** **03 54 46.5 -2.2**
AAA pmax pmax
comp=Z,1μm,4.5s
AAA smax smax
comp=E,1μm,8.9s
AAA MLR MLR
comp=Z,1μm,21.0s
KZA Kyzart 62.60 326 P **P** **03 46 25.6 +1.3**
SNR=231
TKM2 Tokmak 2 62.98 327 *e*P **P** **03 46 27.1 +0.6**
TKM2 pmax pmax
comp=Z,66nm,0.7s
TKM2 MLR MLR
comp=Z,1μm,19.0s
TKM2 Tokmak 2 62.98 327 *e*P **P** **03 46 27.1 +0.6**
comp=Z,66nm,0.7s
TKM2 LR LR
comp=Z,1μm,19.0s
TKM2 Tokmak 2 62.98 327 P **P** **03 46 27.4 +0.8**
SNR=87
UCH Uchtor 63.11 326 P **P** **03 46 28.8 +1.1**
SNR=11
KBK Karagaybulak 63.16 326 P **P** **03 46 29.0 +1.3**
SNR=140
AAK Ala-Archa 63.39 326 P **P** **03 46 30.0 +0.8**
comp=Z,798nm,0.7s,SNR=45
AAK Ala-Archa 63.39 326 *e*P **P** **03 46 30.2 +1.0**
AAK pmax pmax
comp=Z,85nm,0.7s
AAK MLR MLR
comp=Z,1μm,20.0s
AAK Ala-Archa 63.39 326 *e*P **P** **03 46 30.2 +1.0**
comp=Z,85nm,0.7s
AAK LR LR
comp=Z,1μm,20.0s
AAK Ala-Archa 63.39 326 P **P** **03 46 30.5 +1.3**
SNR=84
AAK Ala-Archa 63.39 326 P **P** **03 46 30.5 +1.3**
comp=Z,102nm,0.8s,baz=131,slow=5.3,SNR=191
AAK LR LR 04 18 34.3
comp=Z,1μm,18.9s,baz=133,slow=40
CHMS Chumnysh 63.49 326 P **P** **03 46 30.2 +0.5**
SNR=14
AML Almayashu 63.51 325 P **P** **03 46 31.4 +1.1**
SNR=106
USP Ospenovka 63.81 326 P **P** **03 46 32.4 +0.6**
SNR=80
EKS2 Erkin-Say 63.81 326 *e*P **P** **03 46 32.8 +0.9**
EKS2 pmax pmax
comp=Z,95nm,0.9s
EKS2 MLR MLR
comp=Z,1μm,20.0s
EKS2 Erkin-Say 63.81 326 *e*P **P** **03 46 32.8 +0.9**
comp=Z,95nm,0.9s
EKS2 LR LR
comp=Z,1μm,20.0s
EKS2 Erkin-Say 63.81 326 P **P** **03 46 33.2 +1.3**
SNR=66
CLNS Chul'man 64.58 5*c* *i*P **P** **03 46 38.1 +1.5**
CLNS *e**PP pP 03 46 39.5 -6.3
CLNS *e* 03 47 14.3
CLNS pmax pmax
comp=Z,29nm,0.6s
CLNS pmax pmax
comp=E,12nm,0.6s
CLNS pmax pmax
comp=N,28nm,0.7s
CLNS pmax pmax
comp=Z,21nm,1.7s
CLNS pmax pmax
comp=E,7.0nm,0.7s
CLNS pmax pmax
comp=N,17nm,1.6s
KK31 Karatay Array 65.95 324 *i* P **P** **03 46 45.4 -0.3**
KK31 pmax pmax
comp=Z,158nm,1.4s
KKAR Karatay Array 65.95 324 *e*P **P** **03 46 45.5 -0.2**
KKAR pmax pmax
comp=Z,51nm,1.0s
KKAR Karatay Array 65.95 324 *e*P **P** **03 46 45.5 -0.2**
comp=Z,51nm,1.0s
KURBB Kurchatov Arra 67.00 334 P **P** **03 46 52.7 +0.4**
comp=Z,41nm,0.7s,baz=149,slow=5.1,SNR=358
KURK Kurchatov 67.03 334 *e*P **P** **03 46 52.8 +0.3**
KURK pmax pmax
comp=Z,111nm,1.0s
KURK MLR MLR
comp=Z,791nm,21.0s
KURK Kurchatov 67.03 334 *e*P **P** **03 46 52.8 +0.3**
comp=Z,111nm,1.0s
KURK LR LR
comp=Z,791nm,21.0s
ZAA0 Zalesovo Array 67.18 340 *e*P **P** **03 46 52.8 -0.5**
ZALV Zalesovo Beam 67.18 340 P **P** **03 46 53.1 -0.2**
ZALV 03 47 23.2
ZALV Zalesovo Beam 67.18 340 P **P** **03 46 53.0 -0.2**
ZALV PcP **PcP** **03 47 23.2 +2.0**
ZALV Zalesovo Beam 67.18 340 P **P** **03 46 53.0 -0.2**
comp=Z,64nm,0.7s,baz=139,slow=4.3,SNR=265
ZALV PcP **PcP** **03 47 23.2 +2.0**
comp=Z,13nm,0.7s,baz=160,slow=4.7,SNR=3.5
ZALV LR LR 04 19 23.4
comp=Z,1μm,18.2s,baz=249,slow=39
ASHO Ashiyiah 67.68 301 P **P** **03 46 55.7 -1.4**
SNR=7.4
IDAH Dahanechah 67.71 310 *e*P **P** **03 46 56.6 -0.9**

NVS Novosibirsk 68.45 340⇑ *i*P **P** **03 47 00.8 -0.5**
NVS *i* 03 47 22.4
NVS *e* 03 49 28.3
NVS pmax pmax
comp=N,25nm,1.2s
NVS pmax pmax
comp=E,23nm,1.2s
NVS pmax pmax
comp=Z,55nm,1.2s
ABPO Ambohimpanom 68.68 253 *e*P **P** **03 47 03.4 -0.3**
ABPO pmax pmax
comp=Z,123nm,1.8s
ABPO MLR MLR
comp=Z,637nm,20.0s
ABPO Ambohimpanom 68.68 253 *e*P **P** **03 47 03.4 -0.3**
comp=Z,123nm,1.8s
ABPO LR LR
comp=Z,637nm,20.0s
OPO Ambohidratompo 68.72 253 P **P** **03 47 03.5 -0.5**
OPO Ambohidratompo 68.72 253 P **P** **03 47 03.5 -0.5**
comp=Z,17nm,0.8s,baz=93,slow=5.1,SNR=36
IMYA Miami 69.13 313 *e*P **P** **03 47 06.0 -0.2**
ISRO Mashad 69.57 313 *e*P **P** **03 47 09.1 +0.3**
PEA0B Petropavlovsk- 69.58 25 *e*P **P** **03 47 09.7 +1.4**
PETK Petropavlovsk- 69.58 25 P **P** **03 47 10.0 +1.7**
PETK Petropavlovsk- 69.58 25 P **P** **03 47 10.0 +1.7**
PETK Petropavlovsk- 69.58 25 P **P** **03 47 10.0 +1.7**
comp=Z,29nm,0.7s,baz=198,slow=7.9,SNR=49
PETK LR LR 04 17 23.6
comp=Z,390nm,20.8s,baz=216,slow=36
IMOG Moghan 69.58 313 *e*P **P** **03 47 08.8 -0.3**
MAW Mawson 69.90 199 P **P** **03 47 10.3 +0.2**
MAW Mawson 69.90 199 P **P** **03 47 10.3 +0.2**
comp=Z,12nm,0.5s,baz=7.3,slow=3.9,SNR=41
MAW LR LR 04 11 12.1
comp=Z,859nm,21.9s,baz=52,slow=30
PET Petropavlovsk 69.91 25*c* *i*P **P** **03 47 12.2 +1.8**
PET *i* S **S** **03 56 22.9 +4.6**
PET pmax pmax
comp=Z,700nm,3.1s
PET pmax pmax
comp=Z,89nm,1.5s
PET pmax pmax
comp=Z,600nm,15.9s
PET MLR MLR
comp=Z,400nm,19.0s
PET MLR MLR
comp=Z,400nm,16.0s
YAK Yakutsk 70.15 6*c* *i*P **P** **03 47 12.0 +0.4**
YAK *e* 03 47 32.4
YAK *e* 03 49 44.5
YAK *e*PPP PPP 03 51 26.4
YAK *e*S **S** **03 56 20.3 -0.4**
YAK *e* 03 56 59.5
YAK pmax pmax
comp=Z,68nm,0.9s
YAK pmax pmax
comp=N,27nm,1.3s
YAK pmax pmax
comp=E,4.0nm,1.0s
YAK pmax pmax
comp=Z,69nm,2.4s
YAK pmax pmax
comp=N,57nm,2.6s
YAK pmax pmax
comp=E,55nm,2.2s
YAK smax smax
comp=N,401nm,6.8s
YAK smax smax
comp=E,53nm,3.7s
IEMG Emamgholi 70.65 314 *e*P **P** **03 47 16.1 +0.5**
ABKT Ailbek 71.26 314 P **P** **03 47 19.4 +0.4**
comp=E,533nm,0.8s,SNR=24
IMEH Mehriz 71.26 307 *e*P **P** **03 47 17.4 -2.0**
ISAD Sadrabad 72.19 307 *e*P **P** **03 47 22.5 -2.5**
BVA0 Borovoye Array 72.30 332 *i* P **P** **03 47 25.3 +0.4**
BVA0 pmax pmax
comp=Z,146nm,1.0s
BVAR Borovoye Array 72.30 332 P **P** **03 47 25.3 +0.4**
BVAR Borovoye Array 72.30 332 P **P** **03 47 25.3 +0.4**
BVAR Borovoye Array 72.30 332 P **P** **03 47 25.3 +0.4**
comp=Z,74nm,0.7s,baz=138,slow=7.6,SNR=209
BVAR LR LR 04 23 28.0
comp=Z,1μm,19.0s,baz=129,slow=39
BRVK Borovoye 72.37 332*c* *i*P **P** **03 47 25.2 -0.1**
BRVK pmax pmax
comp=Z,206nm,1.7s
BRVK Borovoye 72.37 332 *e*P **P** **03 47 25.5 +0.2**
comp=Z,334nm,1.6s
BRVK LR LR
comp=Z,2μm,20.0s
VNDA Vanda 73.58 171 *e*P **P** **03 47 32.6 +0.5**
comp=Z,51nm,1.4s
VNDA P'P'ab 04 14 56.9
VNDA Vanda 73.58 171 P **P** **03 47 33.0 +0.9**
comp=Z,4.0nm,0.4s,baz=314,slow=6.2,SNR=43
VNDA PKP2ab 04 14 56.9
comp=Z,1.5nm,0.7s,baz=19,slow=3.5,SNR=9.8
VNDA LR LR 04 18 56.7
comp=Z,1μm,19.8s,baz=339,slow=35
ISHM Shahmirzad 73.93 311 *e*P **P** **03 47 34.0 -1.3**
IFIR Firoozkooh 74.27 310 *e*P **P** **03 47 35.1 -2.2**
IKLH Kolahrood 74.35 308 *e*P **P** **03 47 36.3 -1.4**
SBA Scott Base 74.59 170 *e*P **P** **03 47 39.4 +1.4**
SBA pmax pmax
comp=Z,55nm,1.5s
SBA MLR MLR
comp=Z,1μm,20.0s
SBA Scott Base 74.59 170 *e*P **P** **03 47 39.4 +1.4**
comp=Z,55nm,1.5s
SBA LR LR
comp=Z,1μm,20.0s
IVRN Varamin 74.82 309 *e*P **P** **03 47 37.8 -2.4**
AB31 Akbulak array 75.47 325 *i* P **P** **03 47 43.6 +0.1**
AB31 pmax pmax
comp=Z,233nm,0.9s
ABKAR Akbulak array 75.47 325 *e*P **P** **03 47 43.4 -0.1**
comp=Z,140nm,0.8s
IR5 Iran Long-Peri 75.78 309 *e*P **P** **03 47 43.9 -1.9**
RDF Al-Radifah 76.23 302 *e*P **P** **03 47 46.2 -2.1**
RDF AMb AMB 03 47 47.9
comp=Z,48nm,0.9s
IRAZ Razeghan 76.34 309 *e*P **P** **03 47 48.2 -0.9**
ATD Arta Tunnel 76.39 284 P **P** **03 47 49.3 -0.3**
ATD Arta Tunnel 76.39 284 P **P** **03 47 49.3 -0.3**
comp=Z,4.1nm,0.3s,baz=214,slow=21,SNR=3.7
ATD LR LR 04 17 35.1
comp=Z,345nm,20.2s,baz=98,slow=33
RAYN Ar Rayn 76.54 296 P **P** **03 47 48.0 -2.3**
comp=Z,78nm,0.8s,SNR=5.8
NAY Al-Naaiem 76.58 302 *e*P **P** **03 47 47.6 -2.8**
NAY AMb AMB 03 47 49.0
comp=Z,17nm,0.9s
MIB Mutribah 76.66 303 *e*P **P** **03 47 47.9 -2.8**
MIB AMb AMB 03 47 50.0
comp=Z,30nm,0.8s
AKTO Aktyubinsk 77.14 326 P **P** **03 47 53.3 +0.3**
AKTO Aktyubinsk 77.14 326 P **P** **03 47 53.3 +0.3**
AKTO Aktyubinsk 77.14 326 P **P** **03 47 53.3 +0.3**
comp=Z,73nm,0.8s,baz=100,slow=5.5
AKTO LR LR 04 26 18.4
comp=Z,660nm,21.0s,baz=353,slow=39
IBDR Badra 78.77 306 *i* P P 03 47 59.1 -3.3
IBDR *e*S S 03 57 50.7 -7.8
AMKA Amchitka 79.18 34 *e*P **P** **03 48 04.7 +0.5**
comp=Z,84nm,0.9s
TIXI Tiksi 79.52 4*c* *i*P **P** **03 48 05.4 -0.3**
TIXI pmax pmax
comp=Z,224nm,2.5s
ARU Arti 79.85 331*c* *i*P **P** **03 48 07.4 -0.3**
ARU PPP PPP 03 52 57.4
ARU S **S** **03 58 08.8 -0.2**
ARU pmax pmax
comp=Z,222nm,1.7s
ARU Arti 79.85 331 P **P** **03 48 07.5 -0.3**
comp=Z,483nm,1.2s,SNR=20
KMBO Kilima Mbogo 79.92 270⇑ *i*P **P** **03 48 09.3 -0.2**
KMBO Kilima Mbogo 79.92 270 P **P** **03 48 09.6 +0.1**
SNR=11
KMBO Kilima Mbogo 79.92 270 *e*P **P** **03 48 08.7 -0.7**
comp=Z,22nm,0.9s
KMBO LR LR
comp=Z,1μm,21.0s
KMBO Kilima Mbogo 79.92 270 P **P** **03 48 09.2 -0.2**
comp=Z,13nm,0.8s,baz=59,slow=7.5,SNR=40
KMBO LR LR 04 18 28.8
comp=Z,1μm,21.2s,baz=346,slow=32
KMBO Kilima Mbogo 79.92 270 P **P** **03 48 09.2 -0.2**
baz=80,SNR=10
BHD Baghdad 80.06 306 *e*P P 03 48 04.0 -5.5
BHD *e*S S 03 58 01.7 -10
MAK Makhachkala 80.66 316 *e*P P 03 48 07.5 -5.0
MAK *e*S S 03 58 11.1 -7.0
MAK pmax pmax
comp=Z,296nm,2.2s
DGRG David-gareji 81.68 314 P **P** **03 48 17.6 -0.4**
GNI Garni 81.75 312 *e*P **P** **03 48 19.0 +0.4**
comp=Z,33nm,1.0s
GNI LR LR
comp=Z,601nm,21.0s
GNI Garni 81.75 312 P **P** **03 48 19.2 +0.7**
comp=Z,3.7nm,0.6s,baz=10.0,slow=19,SNR=4.1
CUKT Cukurca 81.77 309 *e*P **P** **03 48 17.3 -1.4**
CLDR Caldiran 82.06 311 *e*P **P** **03 48 20.0 -0.3**
TBLG Delisi 82.22 314 P **P** **03 48 21.0 +0.2**
TBLG Delisi 82.22 314 P **P** **03 48 21.0 +0.2**
QSPA South Pole Qui 82.33 180 *e*P **P** **03 48 21.0 0.0**
comp=Z,236nm,1.9s
QSPA LR LR
comp=Z,2μm,22.0s
POGA Pongola 82.65 243⇑ *i*P **P** **03 48 23.2 -0.2**
POGA AMB AMB 03 48 23.9
comp=Z,63nm,1.1s
AGRB Hanur-Agry 82.87 311 *e*P **P** **03 48 24.4 -0.1**
BILL Bilibino 83.01 17α *i*P **P** **03 48 24.7 +0.4**
BILL *i* *PP **pP** **03 48 33.9 +0.2**
BILL 03 51 37.0
BILL pmax pmax
comp=Z,110nm,1.7s
BILL Bilibino 83.01 17 PFAKE 03 48 40.0 +16
BILL LR LR
comp=Z,3μm,21.0s
AKH Akhalkalaki 83.02 313 P **P** **03 48 25.7 +0.5**
KARS Kars 83.10 312 *e*P **P** **03 48 25.6 0.0**
ONI Oni 83.38 314 P **P** **03 48 27.4 +0.5**
KBZ Khabaz 84.10 315 P **P** **03 48 30.3 -0.1**
KBZ Khabaz 84.10 315 P **P** **03 48 30.3 -0.1**
KBZ Khabaz 84.10 315 P **P** **03 48 30.3 -0.1**
comp=Z,21nm,0.8s,baz=132,slow=3.6,SNR=39
KIV Kislovodsk 84.31 316 *e*P **P** **03 48 31.1 -0.5**
KIV *e* 03 51 46.4
KIV *e*PPP PPP 03 53 39.3
KIV *e* 03 58 50.3
KIV *es*SS SSS 04 07 52.4
KIV pmax pmax
comp=Z,9.0nm,0.6s
GUMT Gumushane 85.71 312 *e*P **P** **03 48 39.0 +0.2**
ZALF Zalf 85.72 304 *i* P **P** **03 48 38.4 -0.5**
ERPM east rand prop 85.75 244 *e*P P 03 48 35.1 -4.3
ERPM AMB AMB 03 48 40.1
comp=Z,56nm,2.3s
SLR Silverton 85.78 245⇑ *i*P **P** **03 48 38.6 -0.9**
SLR AMB AMB 03 48 40.0
comp=Z,63nm,1.6s
ASF Jabal al Asfar 85.93 303 P **P** **03 48 40.4 +0.4**
ASF Jabal al Asfar 85.93 303 P **P** **03 48 40.4 +0.4**
comp=Z,6.0nm,0.7s,baz=346,slow=2.6,SNR=23
MALT Malatya 86.00 309 *e*P P 03 48 45.8 +5.5
MALT Malatya 86.00 309 *e*P P 03 48 45.4 +5.1
MALT pmax pmax
comp=Z,46nm,1.4s
MALT MLR MLR
comp=Z,525nm,21.0s
MALT Malatya 86.00 309 *e*P P 03 48 45.4 +5.1
comp=Z,46nm,1.4s
MALT LR LR
comp=Z,525nm,21.0s
ROOS tl_alroos 86.01 305 *i* P **P** **03 48 40.0 -0.3**
SEK Senekal 86.07 242 *e*P **P** **03 48 40.4 -0.5**
SEK AMB AMB 03 48 42.0
comp=Z,67nm,2.7s
SALA Sala 86.17 304 *i* P **P** **03 48 41.1 -0.2**
SOC Sochi 86.29 315*c* *i*P **P** **03 48 40.1 -1.3**
SOC *e*S S 03 59 02.1 -13
SOC *es*SS SSS 04 08 25.0
SOC pmax pmax
comp=Z,35nm,0.5s
SOC MLR MLR
comp=Z,412nm,22.0s
KLOF Kloof 86.31 244 *e*P **P** **03 48 42.6 +0.4**
KLOF AMB AMB 03 48 43.5
comp=Z,52nm,2.4s
MBAR Mbarara 86.44 270 *e*P **P** **03 48 42.0 -1.1**
MBAR Mbarara 86.44 270 PFAKE 03 48 50.0 +6.9
MBAR LR LR
comp=Z,783nm,20.0s
GRM Grahamstown 86.45 237⇑ *i*P **P** **03 48 42.9 +0.4**
GRM AMB AMB 03 48 43.8
comp=Z,78nm,2.2s
PRYS Parys 86.47 243⇑ *i*P **P** **03 48 42.4 -0.5**
PRYS AMB AMB 03 48 43.2
comp=Z,74nm,2.2s
TOTH TOTAH 86.55 304 *i* P **P** **03 48 42.4 -0.6**
HAWK Haweek 86.80 305 *e*P **P** **03 48 43.5 -0.8**
WRDH Warideh 86.99 306 *i* P **P** **03 48 44.1 -1.0**
KSR Koster 87.01 244 *e*P **P** **03 48 46.4 +0.8**
DRWC Darouich 87.01 307 *i* P P 03 48 37.8 -7.4
BTCH Batrach 87.06 307 *i* P P 03 48 48.3 +2.9
EIL Elat 87.09 300 P **P** **03 48 45.3 -0.3**
EIL Elat 87.09 300 P **P** **03 48 45.3 -0.3**
comp=Z,10.0nm,0.9s,baz=118,slow=1.3,SNR=15
EIL Elat 87.09 300 P **P** **03 48 45.7 0.0**
baz=87,SNR=4.0
LSZ Lusaka 87.10 255 P **P** **03 48 45.7 -0.4**
SNR=18
LSZ Lusaka 87.10 255 *e*P **P** **03 48 45.8 -0.4**
comp=Z,86nm,0.9s
LSZ *ep*P **pP** **03 48 55.4 -0.2**
LSZ LR LR
comp=Z,825nm,22.0s
RSDY Resadiye-TOKAT 87.29 311 *e*P **P** **03 48 45.7 -0.8**
MMAI Mount Meron Ar 87.33 304 P **P** **03 48 46.4 -0.4**
MMAI Mount Meron Ar 87.33 304 P **P** **03 48 46.4 -0.4**
comp=Z,16nm,0.8s,baz=91,slow=7.0,SNR=12
ARNB Al Arnab 87.41 307 *i* P **P** **03 48 46.4 -0.8**
SARI SarD1z-Kayseri 87.57 309 *e*P **P** **03 48 47.4 -0.6**
CEYT Ceyhan 87.81 308 *e*P **P** **03 48 48.7 -0.3**
KOZT Kozan 87.84 308 *e*P **P** **03 48 49.0 -0.1**
MAIT Maitri 87.87 199 *e*P P 03 48 38.6 -10
KIP Kipapa 87.92 68‖ *e*P **P** **03 48 50.9 +1.1**
KIP pmax pmax
comp=Z,76nm,1.2s
BOSA Boshof 88.11 242⇑ *i*P **P** **03 48 50.7 0.0**
BOSA AMB AMB 03 48 51.3
comp=Z,53nm,2.1s
BOSA Boshof 88.11 242 *e*P **P** **03 48 49.9 -0.8**
comp=Z,12nm,0.6s
BOSA Boshof 88.11 242 P **P** **03 48 50.6 -0.2**
comp=Z,18nm,0.8s,baz=90,slow=4.1,SNR=31
BOSA LR LR 04 21 28.8
comp=Z,778nm,21.6s,baz=101,slow=31
UNV Unalaska Valle 88.12 35 *e*P **P** **03 48 48.9 -1.1**
comp=Z,100nm,1.8s
ANN Anapa 88.17 315 *e*P **P** **03 48 49.4 -1.0**
ANN *e*S **SKSac** **03 59 12.5 -4.6**
ANN pmax pmax
comp=Z,74nm,2.0s
SWZ Schweizer 88.23 243⇑ *i*P **P** **03 48 51.1 -0.3**
SWZ AMB AMB 03 48 52.0
comp=Z,79nm,2.2s
LBTB Lobatse 88.28 245⇑ *i*P **P** **03 48 51.6 0.0**
LBTB AMB AMB 03 48 52.3
comp=Z,63nm,2.4s
LBTB Lobatse 88.28 245 *e*P **P** **03 48 50.8 -0.8**
comp=Z,22nm,0.7s
VORD Divnogorie 88.37 322 *e*P **P** **03 48 49.8 -1.4**
VSR Storozhevoye 88.51 322 *e*P **P** **03 48 50.5 -1.4**
CORM Corum 89.27 311 *e*P **P** **03 48 55.0 -0.9**
CSS Prodhromos 89.37 305 *e*P **P** **03 48 55.5 -0.8**
comp=Z,6.3nm,0.7s
CSS LR LR
comp=Z,1μm,21.0s
BR131 Keskin Array S 89.94 310 *e*P **P** **03 48 57.8 -1.4**
comp=Z,3.5nm,0.8s
BRTR Keskin Array B 89.94 310 P **P** **03 48 57.5 -1.7**
BRTR PP **PP** **03 52 31.7 -0.6**
BRTR Keskin Array B 89.94 310 P **P** **03 48 57.5 -1.7**
comp=Z,3.5nm,0.9s,baz=136,slow=5.1,SNR=19
BRTR PP **PP** **03 52 31.7 -0.6**
comp=Z,3.2nm,0.9s,baz=108,slow=8.4,SNR=4.6

BRTR LR LR 04 33 46.3
comp=Z,319nm,19.2s,baz=103,slow=39
TBI Tubuai 90.02 113 *e*S **S 03 59 53.4 +2.1**
comp=Z,248nm,23.5s
TBI *e*LQ LQ 04 14 56.7
comp=Z,702nm,35.5s
TBI *e*LR LR 04 22 15.0
comp=Z,631nm,25.2s
MOS Moscow 90.46 326 *e*P P 03 48 56.2 -4.7
MOS pmax pmax
comp=Z,68nm,0.9s
SIM Simferopol' 90.51 315 *e*P **P 03 48 59.7 -1.7**
SIM *e*PS **S 03 59 59.0 +4.2**
SIM pmax pmax
comp=Z,61nm,0.5s
ANTO Ankara 90.61 310 PFAKE 03 49 10.0 +7.9
ANTO LR LR
comp=Z,302nm,20.0s
KLMR Klimovskoe 90.70 331 *e*P P 03 48 57.8 -4.1
KLMR *e*SP SP 04 01 01.6 -1.3
KLMR pmax pmax
comp=Z,84nm,1.6s
PPT2 Papeete2 90.74 108 *e*S **S 03 59 55.9 -2.3**
comp=Z,161nm,23.2s
PPT2 *e*LR LR 04 22 41.6
comp=Z,794nm,26.0s
PPT Papeete 90.74 108 LR LR 04 24 33.6
comp=Z,398nm,21.3s,baz=254,slow=32
OBN Obninsk 90.92 325 *c*e**P 03 49 02.1 -0.9**
OBN 03 52 40.0
OBN *e* 04 00 02.0
OBN *e*PS **PnS 04 01 10.0 0.0**
OBN SS SS 04 06 10.0 +8.5
OBN SSS SSS 04 09 38.0
OBN pmax pmax
comp=Z,68nm,1.8s
SUR Sutherland 91.33 237 PFAKE 03 49 20.0 +14
SUR LR LR
comp=Z,970nm,20.0s
SNAA Sanae 91.81 196 *e*P **P 03 49 07.8 +0.7**
SNAA Sanae 91.81 196 *e*pP pP 03 49 21.3 +4.7
SNAA Sanae 91.81 196 ⇑*i*P **P 03 49 07.8 +0.7**
SNAA Sanae 91.81 196 *e*P **P 03 49 07.7 +0.6**
comp=Z,19nm,1.0s
SDPT Sand Point 91.88 34 *e*P **P 03 49 07.0 -0.5**
comp=Z,44nm,0.8s
ISP Isparta 92.05 308 PFAKE 03 49 20.0 +11
ISP LR LR
comp=Z,605nm,20.0s
VNA1 Neumayer--Stat 93.84 196 *e*P **P 03 49 17.5 +1.2**
VNA1 Neumayer--Stat 93.84 196 *e*pP pP 03 49 29.8 +3.9
KIS Kishinev 94.46 317 *e*P **P 03 49 18.0 -1.6**
KIS *i* 03 53 06.0
KIS Kishinev 94.46 317 *e*P **P 03 49 18.0 -1.6**
KIS Kishinev 94.46 317 *i*PP PP 03 53 06.0 -1.5
KIS LRM MLR 04 37 24.0
comp=Z,400nm,18.0s
AKASG Malin Array Be 94.60 320 P **P 03 49 18.5 -1.7**
AKASG 03 53 09.2
AKASG Malin Array Be 94.60 320 P **P 03 49 18.5 -1.7**
AKASG PP **PP 03 53 09.2 +0.7**
AKASG Malin Array Be 94.60 320 P **P 03 49 18.5 -1.7**
comp=Z,3.5nm,0.8s,baz=80,slow=5.0,SNR=9.4
AKASG PP **PP 03 53 09.2 +0.7**
comp=Z,3.5nm,0.8s,baz=91,slow=6.0,SNR=10
AKASG LR LR 04 43 09.3
comp=Z,285nm,19.0s,baz=120,slow=43
AK01 Malin Array Si 94.61 320 *e*P **P 03 49 19.1 -1.1**
AK02 Malin Array Si 94.61 320 *e*P **P 03 49 19.5 -0.8**
KIEV Kiev 94.61 320 *e*P **P 03 49 18.0 -2.2**
KIEV *e* 03 53 09.2
KIEV pmax pmax
comp=Z,5.0nm,0.8s
KIEV MLR MLR
comp=Z,367nm,19.0s
KIEV Kiev 94.61 320 *e*P **P 03 49 18.0 -2.2**
comp=Z,5.0nm,0.8s
KIEV *e*pP pP 03 49 31.7 +1.9
KIEV *e*PP **PP 03 53 09.2 +0.6**
KIEV LR LR
comp=Z,367nm,19.0s
JOF Joensuu 94.90 333 *e*P **P 03 49 21.1 -0.2**
JOF pmax pmax
comp=Z,9.0nm,0.7s
JOF Joensuu 94.90 333 *e*p **P 03 49 21.1 -0.2**
comp=Z,9.1nm,0.7s
SANT Santorini 95.91 306 PFAKE 03 49 40.0 +13
SANT LR LR
comp=Z,370nm,21.0s
MLR Muntele Rosu 96.30 315 P **P 03 49 28.6 +0.3**
MLR PP **PP 03 53 20.6 -1.3**
MLR Muntele Rosu 96.30 315 P **P 03 49 28.6 +0.3**
comp=Z,0.4nm,0.6s,baz=155,slow=12,SNR=4.0
MLR PP **PP 03 53 20.6 -1.3**
comp=Z,3.0nm,0.9s,baz=100,slow=2.2,SNR=9.5
KDAK Kodiak Island 96.52 33 *e*P **P 03 49 28.0 -0.7**
comp=Z,13nm,1.1s
KDAK PP **PP 03 53 20.9 -2.2**
KDAK LR LR
comp=Z,501nm,19.0s
KDAK Kodiak Island 96.52 33 PP PP 03 53 20.9 -2.2
comp=Z,3.2nm,0.8s,baz=201,slow=5.4,SNR=4.9
TSUM Tsumeb 96.53 250 *e*P **P 03 49 29.4 -0.5**
comp=Z,13nm,1.0s
TSUM LR LR
comp=Z,507nm,20.0s
BUR08 Bucovina Ar. S 96.97 317 *e*P **P 03 49 30.7 -0.5**
BUR08 *e*pP pP 03 49 42.9 +2.2
PPLA Purkeypile 97.03 27 *e*P **P 03 49 30.4 -0.7**
comp=Z,33nm,1.9s
KEV Kevo 97.21 339 PFAKE 03 49 40.0 +8.3
KEV LR LR
comp=Z,913nm,19.0s
FINES FINESS Array B 97.22 331 P **P 03 49 31.5 -0.3**
FINES FINESS Array B 97.22 331 P **P 03 49 31.5 -0.3**
comp=Z,7.2nm,0.8s,baz=60,slow=11,SNR=8.2
FINES LR LR 04 43 04.4
comp=Z,818nm,18.1s,baz=96,slow=41
ARCES ARCESS Array B 97.73 339 P **P 03 49 33.6 -0.4**
ARCES ARCESS Array B 97.73 339 P **P 03 49 33.6 -0.4**
comp=Z,7.9nm,0.8s,baz=83,slow=4.0,SNR=13
ARCES LR LR 04 39 22.4
comp=Z,1μm,20.1s,baz=103,slow=39
ARE0 ARCESS Array S 97.73 339 *e*PP PP 03 53 36.3 +4.2
TRF Thorofare Moun 97.91 27 *e*P **P 03 49 33.6 -1.6**
comp=Z,46nm,2.0s
COLD Coldfoot 98.00 23 *e*P Pdif 03 49 36.0 +0.7
comp=Z,3.9nm,0.8s
MCK McKinley 98.52 27 *e*P **P 03 49 37.6 -0.1**
MCK pmax pmax
comp=Z,44nm,1.6s
MCK McKinley 98.52 27 *e*P **P 03 49 37.6 -0.1**
comp=Z,44nm,1.6s
KWP Kalwaria Pacla 98.71 319 PFAKE 03 49 50.0 +11
KWP LR LR
comp=Z,699nm,20.0s
TRPA Tarpa 98.78 318 ⇑*e*PP PP 03 53 39.1 -1.6
UZH Uzhgorod 98.96 318 *e*P Pdif 03 49 52.4 +12
UZH *i* 03 53 42.4
COLA College 98.98 26 PFAKE 03 49 50.0 +10
COLA LR LR
comp=Z,225nm,20.0s
ILAR Eielson Array 99.39 26 P **Pdif 03 49 41.4 -0.2**
ILAR Eielson Array 99.39 26 P **Pdif 03 49 41.4 -0.2**
comp=Z,0.4nm,0.7s,baz=251,slow=3.9,SNR=6.8
ILAR LR LR 04 36 34.4
comp=Z,178nm,20.9s,baz=104,slow=36
CRVS Cervenica-Dubn 99.51 318 *e*PP PP 03 53 40.7 -5.7
SPA0 Spitsbergen Ar 99.68 348 *e*PP PP 03 53 49.9 +3.1
TRO Tromso 100.03 339 *e*PP PP 03 53 49.2 -0.3
TRO AMS AMS 04 39 34.1
comp=Z,704nm,18.2s
KECS Kecovo 100.15 318 *e*PP PP 03 53 50.1 -1.1
KBS Kingsbay 100.39 349 *e*PP PP 03 53 54.7 +2.5
KBS AMS AMS 04 42 02.5
comp=Z,602nm,20.6s
KBS Kingsbay 100.39 349 PFAKE 03 50 00.0 +14
KBS LR LR
comp=Z,712nm,20.0s
TIR Tirane 100.53 311 PFAKE 03 50 00.0 +13
TIR LR LR
comp=Z,406nm,21.0s
PSZ Piszkesteto 100.55 317 PFAKE 03 50 00.0 +13
PSZ LR LR
comp=Z,499nm,21.0s
PSZ Piszkesteto 100.55 317⇑ *e*PP PP 03 53 53.3 -1.1
BUD Budapest 101.14 317⇑ *e*PP PP 03 53 57.6 -1.1
VYHS Vyhne 101.25 318 *e*PP PP 03 53 58.0 -1.6
PKSM Moragy 101.42 316⇑ *e*PP PP 03 53 56.9 -4.0
OKC Ostrava-Krasne 101.67 319 *e*PP PP 03 54 02.1 -0.5
OKC *e*SP SP 04 03 06.3 +3.3
OKC AMS AMS 04 44 20.0
comp=Z,300nm,16.5s
EGAK Eagle 101.84 25 PFAKE 03 50 00.0 +7.6
EGAK LR LR
comp=Z,364nm,20.0s
MORC Moravsky Berou 102.06 319 *e*P **Pdif 03 49 55.0 +1.2**
MORC Moravsky Berou 102.06 319 *e*Pdif **Pdif 03 49 55.0 +1.2**
KRLC Kraliky 102.54 320 *e*PP PP 03 54 06.5 -2.7
VRAC Vranov 102.70 319 PP PP 03 54 09.3 -1.1
VRAC Vranov 102.70 319 PP PP 03 54 09.3 -1.1
comp=Z,1.0nm,0.4s,baz=105,slow=7.9,SNR=11
BEHE Becsehely 102.71 316⇑ *e*PP PP 03 54 09.6 -0.9
SOP Sopron 102.81 317⇓ *e*PP PP 03 54 09.4 -1.8
DPC Dobruska-Polom 102.82 320 *e*PP PP 03 54 11.3 0.0
DPC *e*PS **PS 04 03 24.8 +5.3**
TIP Timpagrande 102.91 308 PFAKE 03 50 10.0 +12
TIP LR LR
comp=Z,533nm,20.0s
UPC Upice 103.00 320 *e*PP PP 03 54 07.3 -5.3
RKT Rikitea 103.13 116 *e*LR LR 04 28 38.8
comp=Z,916nm,23.5s
HFS Hagfors 103.34 330 Pdif **Pdif 03 49 58.9 -0.4**
HFS Hagfors 103.34 330 Pdiff **Pdif 03 49 58.9 -0.4**
comp=Z,4.4nm,1.0s,baz=56,slow=3.9,SNR=5.2
TREC Trest 103.42 319 *e*PP PP 03 54 10.7 -5.1
TREC *e*PS **PS 04 03 28.1 +2.1**
TREC AMS AMS 04 48 10.0
comp=Z,500nm,17.3s
CEL Celeste 103.59 307 PFAKE 03 50 10.0 +9.0
CEL LR LR
comp=Z,334nm,21.0s
CUC Castrocucco 103.62 309 PFAKE 03 50 10.0 +9.0
CUC LR LR
comp=Z,359nm,21.0s
PRU Pruhonice 103.98 320 *e*PP PP 03 54 17.9 -2.0
PRU *e*SP SP 04 03 35.4 +7.9
PRU AMS AMS 04 45 30.0
comp=Z,600nm,20.1s
PRA Prague 104.05 320 PP PP 03 54 19.0 -1.4
INK Inuvik 104.15 21 Pdif **Pdif 03 50 02.6 0.0**
INK Inuvik 104.15 21 Pdiff **Pdif 03 50 02.6 0.0**
comp=Z,1.8nm,0.9s,baz=297,slow=6.7,SNR=7.0
BRG Bergqgiesshubel 104.29 320 *e*PKP **PKiKP 03 54 21.7 +1.5**
comp=Z,36nm,2.2s
BRG *e* 03 54 31.0
comp=Z,68nm,2.7s
BRG *e* 04 03 40.0
BRG
comp=Z,656nm,24.3s
BRG
comp=N,306nm,18.4s
BRG
comp=E,427nm,18.4s
NB2 NORSAR Subarra 104.40 331 PP PP 03 54 12.2 -11
comp=Z,48nm,2.0s,baz=80,slow=7.9
NB2 NORSAR Subarra 104.40 331 PP PP 03 54 12.2 -11
baz=80,slow=7.9
NOA NORSAR Array B 104.40 331 PP PP 03 54 22.1 -0.7
NOA NORSAR Array B 104.40 331 PP PP 03 54 22.1 -0.7
comp=Z,1.5nm,0.7s,baz=88,slow=7.6,SNR=4.6
NAO01 NORSAR Array S 104.60 331 *e*Pdif **Pdif 03 50 05.7 +0.9**
GERES GERESS Array B 104.63 318 Pdif **Pdif 03 50 05.2 -0.1**
GERES PP **PKiKP 03 54 21.1 0.0**
GERES GERESS Array B 104.63 318 Pdiff **Pdif 03 50 05.2 -0.1**
comp=Z,0.3nm,0.7s,baz=90,slow=2.7,SNR=4.4
GERES PP **PKiKP 03 54 21.1 0.0**
comp=Z,1.1nm,0.8s,baz=90,slow=8.0,SNR=5.3
KHC Kasperske Hory 104.69 319 *e*x x 03 53 19.0
KHC *e*PS **PS 04 03 40.5 +1.3**
KHC AMS AMS 04 43 50.0
comp=Z,500nm,18.5s
WDD Wield Dalam 104.73 305 PFAKE 03 50 20.0 +14
WDD LR LR
comp=Z,219nm,20.0s
CLL Collm 104.83 321 *e*P **Pdif 03 50 04.0 -2.1**
CLL *e* 03 54 29.0
CLL *e* 04 00 40.0
CLL *e*S **Sdif 04 01 56.0 -1.6**
CLL MLR MLR
comp=Z,600nm,18.4s
CLL Collm 104.83 321 *e*Pdif **Pdif 03 50 04.0 -2.1**
CLL *e*PP **PP 03 54 29.0 +2.8**
CLL *e*SKSac **SKSac 04 00 40.0 -4.1**
CLL *e*Sdif **Sdif 04 01 56.0 -1.6**
CLL *e*PS **PS 04 03 37.0 -3.5**
CLL *e*PPS PPS 04 04 30.0
CLL *e* 04 05 28.0
CLL *e*SS SS 04 09 00.0 -17
CLL *e*SSSS 04 16 36.0
CLL Lm MLR 04 47 00.0
comp=N,500nm,19.4s
CLL Lm MLR 04 47 00.0
comp=E,200nm,19.7s
CLL Lm MLR 04 47 00.0
comp=Z,600nm,18.4s
NKC Novy Kostel 105.30 320 *e*SP SP 04 03 52.3 +11
NKC AMS AMS 04 45 50.0
comp=Z,500nm,19.9s
AQU L'Aquila 105.34 312 *e*PKP **PKiKP 03 54 24.1 +1.6**
AQU LR LR
comp=Z,673nm,20.0s
KONO Kongsberg 105.46 330 *e* PP 03 54 39.3 +8.8
KONO Kongsberg 105.46 330 PFAKE 03 54 30.0
KONO LR LR
comp=Z,885nm,19.0s
MOX Moxa 105.78 320 *e*PP PP 03 54 33.5 +0.2
MOX *e*L L 04 47 52.7
comp=Z,502nm,18.8s
GRF Grafenberg Arr 106.15 319 *e*PP PP 03 54 35.4 -0.6
GRF *e*L L 04 48 38.6
comp=Z,564nm,19.5s
GRFO Grafenberg 106.15 319 *e*PKP **PKiKP 03 54 22.4 -1.4**
GRFO *e*PP **PP 03 54 35.4 -0.6**
VLC Villacollemand 107.38 314 PFAKE 03 54 40.0
VLC LR LR
comp=Z,602nm,21.0s
WRAK Wrangell Islan 107.59 33 PFAKE 03 54 40.0
WRAK LR LR
comp=Z,334nm,20.0s
TUE Stuetta 107.82 316 PFAKE 03 54 40.0
TUE LR LR
comp=Z,534nm,21.0s
BFO Black Forest 108.23 318 PFAKE 03 54 40.0
BFO LR LR
comp=Z,415nm,19.0s
JMIC Jan Mayen 108.35 344 *e*PP PP 03 54 55.6 +4.3
JMIC AMS AMS 04 46 13.4
comp=Z,523nm,21.5s
PGF Pioggiola 108.56 312 *e*PKiKP **PKiKP 03 54 27.1 -1.5**
PGF Pioggiola 108.56 312 *e*PKPdf **PKiKP 03 54 27.1 -1.5**
VSL Villasalto 108.60 309 PFAKE 03 54 40.0
VSL LR LR
comp=Z,356nm,20.0s
KEST Kesra 108.94 305 PP PP 03 54 50.8 -6.2
KEST Kesra 108.94 305 PP PP 03 54 50.8 -6.2
comp=Z,1.1nm,0.8s,baz=18,slow=7.6,SNR=4.8
ECH Echery 109.02 318 PFAKE 03 54 40.0
ECH LR LR
comp=Z,457nm,20.0s
WLF Walferdange 109.41 320 PFAKE 03 54 40.0
WLF LR LR
comp=Z,393nm,21.0s
LPG La Plagne 109.76 316 *e*PKiKP **PKiKP 03 54 29.6 -1.4**
LPG La Plagne 109.76 316 *e*PKPdf **PKiKP 03 54 29.6 -1.4**
LPL La Plagne 109.77 316 *e*PKiKP **PKiKP 03 54 29.6 -1.3**
LPL La Plagne 109.77 316 *e*PKPdf **PKiKP 03 54 29.6 -1.3**
BNI Bardonecchia 109.88 315 *e*PKP **PKiKP 03 54 30.2 -0.8**
BNI *e*PP **PP 03 54 59.6 -3.9**
BNI LR LR
comp=Z,658nm,22.0s
CABF La Chapelle 110.02 317 *e*PKiKP **PKiKP 03 54 29.9 -1.3**
comp=Z,6.2nm,0.9s
CABF La Chapelle 110.02 317 *e*PKPdf **PKiKP 03 54 29.9 -1.3**
FRF La Foret Royal 110.14 314 *e*PKiKP **PKiKP 03 54 30.1 -1.3**
comp=Z,11nm,1.2s
FRF La Foret Royal 110.14 314 *e*PKiKP **PKiKP 03 54 30.1 -1.3**
FRF La Foret Royal 110.14 314 *e*PKPdf **PKiKP 03 54 30.1 -1.3**
LMR La Mourre 110.27 313 *e*PKiKP **PKiKP 03 54 30.1 -1.5**
comp=Z,7.1nm,1.1s
LMR La Mourre 110.27 313 *e*PKiKP **PKiKP 03 54 30.1 -1.5**
LMR La Mourre 110.27 313 *e*PKPdf **PKiKP 03 54 30.1 -1.5**
SMRF Simiane la Rot 110.84 314 *e*PKiKP **PKiKP 03 54 31.7 -1.0**
SMRF Simiane la Rot 110.84 314 *e*PKPdf **PKiKP 03 54 31.7 -1.0**
SSB Saint Sauveur 111.33 316 PFAKE 03 54 50.0
SSB LR LR
comp=Z,368nm,19.0s
SSF Saint Saulge 111.67 318 *e*PKiKP **PKiKP 03 54 32.9 -1.3**
comp=Z,7.1nm,0.9s
SSF Saint Saulge 111.67 318 *e*PKiKP **PKiKP 03 54 32.9 -1.3**
SSF Saint Saulge 111.67 318 *e*PKPdf **PKiKP 03 54 32.9 -1.3**
AVF Avril sur Loir 111.83 317 *e*PKiKP **PKiKP 03 54 33.4 -1.0**
AVF Avril sur Loir 111.83 317 *e*PKiKP **PKiKP 03 54 33.4 -1.0**
AVF Avril sur Loir 111.83 317 *e*PKPdf **PKiKP 03 54 33.4 -1.0**
LASF Ste Croix 112.04 314 *e*PKiKP **PKiKP 03 54 33.8 -1.2**
LASF Ste Croix 112.04 314 *e*PKPdf **PKiKP 03 54 33.8 -1.2**
BGF Bois d'Agland 112.22 317 *e*PKiKP **PKiKP 03 54 34.1 -1.1**
BGF Bois d'Agland 112.22 317 *e*PKiKP **PKiKP 03 54 34.1 -1.1**
BGF Bois d'Agland 112.22 317 *e*PKPdf **PKiKP 03 54 34.1 -1.1**
TCF Toulx Ste Croi 112.71 317 *e*PKiKP **PKiKP 03 54 35.0 -1.2**
TCF Toulx Ste Croi 112.71 317 *e*PKiKP **PKiKP 03 54 35.0 -1.2**
TCF Toulx Ste Croi 112.71 317 *e*PKPdf **PKiKP 03 54 35.0 -1.2**
TAM Tamanrasset 112.91 291 PFAKE 03 54 50.0
TAM LR LR
comp=Z,244nm,20.0s
CAF Calviac 113.12 316 *e*PKiKP **PKiKP 03 54 36.0 -1.0**
CAF Calviac 113.12 316 *e*PKiKP **PKiKP 03 54 36.0 -1.0**
CAF Calviac 113.12 316 *e*PKPdf **PKiKP 03 54 36.0 -1.0**
ESK Eskdalemuir 113.31 328 PFAKE 03 54 50.0
ESK LR LR
comp=Z,793nm,19.0s
RJF Les Rejaudoux 113.41 316 *e*PKiKP **PKiKP 03 54 36.7 -0.8**
comp=Z,7.1nm,1.0s
RJF Les Rejaudoux 113.41 316 *e*PKiKP **PKiKP 03 54 36.7 -0.8**
RJF Les Rejaudoux 113.41 316 *e*PKPdf **PKiKP 03 54 36.7 -0.8**
YKW3 Yellowknife Ar 113.64 23 *e*PKP **PKiKP 03 54 36.2 -1.2**
LDF La Druitiere 113.66 320 *e*PKiKP **PKiKP 03 54 36.8 -1.1**
LDF La Druitiere 113.66 320 *e*PKiKP **PKiKP 03 54 36.8 -1.1**
LDF La Druitiere 113.66 320 *e*PKPdf **PKiKP 03 54 36.8 -1.1**
YKA Yellowknife Ar 113.68 23 Pdif **Pdif 03 50 48.6 +3.4**
YKA PKiKP **PKiKP 03 54 36.5 -1.0**
YKA Yellowknife Ar 113.68 23 Pdiff **Pdif 03 50 48.6 +3.4**
comp=Z,0.1nm,0.2s,baz=312,slow=4.9,SNR=10
YKA PKiKP **PKiKP 03 54 36.5 -1.0**
comp=Z,1.1nm,0.6s,baz=314,slow=1.9,SNR=19
FLN La Foliniere 113.84 320 *e*PKiKP **PKiKP 03 54 36.9 -1.3**
comp=Z,6.9nm,1.0s
FLN La Foliniere 113.84 320 *e*PKiKP **PKiKP 03 54 36.9 -1.3**
FLN La Foliniere 113.84 320 *e*PKPdf **PKiKP 03 54 36.9 -1.3**
LFF La Frestale 114.03 316 *e*PKiKP **PKPdf 03 54 37.6 -1.1**
LFF La Frestale 114.03 316 *e*PKiKP **PKPdf 03 54 37.6 -1.1**
LFF La Frestale 114.03 316 *e*PKPdf **PKPdf 03 54 37.6 -1.1**
GRR Gorron 114.19 320 *e*PKiKP **PKPdf 03 54 37.8 -1.1**
GRR Gorron 114.19 320 *e*PKiKP **PKPdf 03 54 37.8 -1.1**
GRR Gorron 114.19 320 *e*PKPdf **PKPdf 03 54 37.8 -1.1**
MFF Saint Martin d 114.22 318 *e*PKiKP **PKPdf 03 54 37.7 -1.3**
MFF Saint Martin d 114.22 318 *e*PKiKP **PKPdf 03 54 37.7 -1.3**
MFF Saint Martin d 114.22 318 *e*PKPdf **PKPdf 03 54 37.7 -1.3**
EPF Esparros 114.76 314 *e*PKiKP **PKPdf 03 54 39.0 -1.3**
EPF Esparros 114.76 314 *e*PKiKP **PKPdf 03 54 39.0 -1.3**
EPF Esparros 114.76 314 *e*PKPdf **PKPdf 03 54 39.0 -1.3**
NLWA Neilton Lookou 115.00 41 PFAKE 03 54 50.0 +9.4
NLWA LR LR
comp=Z,238nm,20.0s
SGMF Saint Gilles 115.31 320 *e*PKiKP **PKPdf 03 54 40.1 -1.0**
SGMF Saint Gilles 115.31 320 *e*PKiKP **PKPdf 03 54 40.1 -1.0**
SGMF Saint Gilles 115.31 320 *e*PKPdf **PKPdf 03 54 40.1 -1.0**
BORG Borgarnes 116.00 342 PFAKE 03 54 50.0 +8.1
BORG LR LR
comp=Z,435nm,20.0s
TOA0 Torodi Ar. Sit 116.50 281 *e*PKPdf **PKPdf 03 54 42.1 -2.2**
TORD Torodi Ar. Bea 116.50 281 PKP **PKPdf 03 54 42.8 -1.5**
TORD PKKPbc **PKKPbc 04 05 10.9 -1.1**
TORD Torodi Ar. Bea 116.50 281 PKP **PKPdf 03 54 42.8 -1.5**
comp=Z,4.6nm,0.6s,baz=66,slow=1.8,SNR=62
TORD PKKPbc **PKKPbc 04 05 10.9 -1.1**
comp=Z,0.6nm,0.8s,baz=274,slow=2.4,SNR=5.6
YBH Yreka Blue Hor 117.35 47 PP PP 03 55 56.5 -0.1
YBH Yreka Blue Hor 117.35 47 PP PP 03 55 56.5 -0.1
comp=Z,1.2nm,0.8s,baz=237,slow=3.7,SNR=4.2
HAWA Hanford 118.14 41 PFAKE 03 55 00.0 +13
HAWA LR LR
comp=Z,324nm,21.0s
ESDC Sonseca Array 118.71 311 PKP **PKPdf 03 54 47.1 -0.9**
ESDC PP **PP 03 56 02.3 -3.8**
ESDC Sonseca Array 118.71 311 PKP **PKPdf 03 54 47.1 -0.9**
comp=Z,0.2nm,0.4s,baz=36,slow=1.9,SNR=6.9
ESDC PP **PP 03 56 02.3 -3.8**
comp=Z,0.8nm,0.6s,baz=62,slow=7.1,SNR=6.0
NEW Newport 118.98 38 PKP **PKPdf 03 54 47.8 -0.5**
NEW *e*PKPdf **PKiKP 03 54 47.9 -0.4**
NEW LR LR
comp=Z,373nm,22.0s
NEW Newport 118.98 38 PKP **PKPdf 03 54 47.8 -0.5**
comp=Z,1.1nm,0.5s,baz=51,slow=0.1,SNR=3.5
PAB San Pablo 119.03 311 PFAKE 03 55 00.0 +11
PAB LR LR
comp=Z,457nm,21.0s
SAO San Andreas Ge 119.52 52 *e*PKiKP **PKPdf 03 54 49.6 +0.1**
SAO *e* 03 56 07.8
SAO San Andreas Ge 119.52 52 *e*PKPdf **PKPdf 03 54 49.6 +0.1**
SAO *e*PP **PP 03 56 07.8 -3.9**
C11A Tepee Creek (N 119.68 39 ⇑P **PKPdf 03 54 49.0 -0.6**
baz=120
CMB Columbia Colle 120.03 50 *e*PKiKP **PKPdf 03 54 49.8 -0.7**
CMB *e* 03 56 11.9
CMB Columbia Colle 120.03 50 *e*PKPdf **PKPdf 03 54 49.8 -0.7**
CMB *e*PP **PP 03 56 11.9 -3.3**
WVOR Wild Horse Val 120.05 45 *e*PKiKP **PKPdf 03 54 49.1 -1.5**
WVOR MLR MLR
comp=Z,339nm,20.0s
WVOR Wild Horse Val 120.05 45 *e*PKPdf **PKPdf 03 54 49.1 -1.5**
WVOR *e*PP PP 03 56 07.7 -7.5
WVOR LR LR
comp=Z,339nm,20.0s
BMO Blue Mountains 120.14 42 PFAKE 03 55 00.0 +9.4
BMO LR LR
comp=Z,267nm,19.0s
SFJD Kangerlussuaq 120.17 355 PFAKE 03 55 00.0 +10
SFJD LR LR
comp=Z,560nm,20.0s
A13A Flathead Natio 120.34 37 ⇓P **PKPdf 03 54 50.8 -0.1**
baz=120
B13A Whitefish 120.55 37 ⇑P **PKPdf 03 54 50.8 -0.5**
baz=120
D12A Red Ives Fores 120.56 39 ⇑P **PKPdf 03 54 50.0 -1.3**
baz=121
BSMT Bassoo Peak 120.58 38 *e*PKPdf **PKPdf 03 54 50.5 -1.0**
EFI East Falkland 120.76 183 PFAKE 03 55 00.0 +8.5
EFI LR LR
comp=Z,2μm,20.0s
D13A Huson 121.10 39 ⇑P **PKPdf 03 54 51.3 -1.1**
baz=121
MTE Manteigas 121.14 313 PFAKE 03 55 00.0 +7.4
MTE LR LR
comp=Z,465nm,19.0s
SWMT Swartz Lake 121.21 38 *e*PKPdf **PKPdf 03 54 52.0 -0.7**
PKM Peak Mountain 121.24 54 P **PKPdf 03 54 53.7 +0.5**
baz=121
C14A Swan Lake 121.25 38 P **PKPdf 03 54 51.7 -1.0**
baz=121
G12A Big Creek, Yel 121.34 41 P **PKPdf 03 54 51.5 -1.6**
baz=121
NVAR Mina Array Bea 121.50 49 PKP **PKPdf 03 54 53.0 -0.6**
NVAR PP **PP 03 56 25.2 -0.2**
NVAR Mina Array Bea 121.50 49 PKP **PKPdf 03 54 53.0 -0.6**
comp=Z,2.0nm,0.7s,baz=248,slow=1.9,SNR=16
NVAR PP **PP 03 56 25.2 -0.2**
comp=Z,2.4nm,1.0s,baz=264,slow=6.4,SNR=8.2
MSO Missoula 121.53 39 *e*PKPdf **PKPdf 03 54 52.1 -1.1**
MSO LR LR
comp=Z,198nm,19.0s
SLMT Seeley Lake 121.63 38 *e*PKPdf **PKPdf 03 54 51.7 -1.8**
MFID Camas Ranch 121.65 43 *e*PKPdf **PKPdf 03 54 53.7 +0.1**
MFID *e*PP **PP 03 56 24.8 -1.3**
MFID Camas Ranch 121.65 43 P **PKPdf 03 54 53.4 -0.3**
baz=122
D14A Greenough 121.69 38 P **PKPdf 03 54 52.1 -1.5**
baz=122
B15A Bradely Ranch, 121.72 37 P **PKPdf 03 54 52.3 -1.3**
baz=122
H12A Diamond D Ranc 121.88 42 P **PKPdf 03 54 53.9 -0.2**
baz=122

CHMT	Chamberlain Mo	121.92	39	ePKPdf	PKPdf	03 54 52.9	-1.2		
C15A	Salmond Ranch,	121.94	37	P	PKPdf	03 54 53.1	-0.9		
	baz=122								
I12A	Atlanta	121.98	43	P	PKPdf	03 54 54.4	+0.1		
	baz=122								
EVO	Evora	122.06	311	ePKIKP	PKPdf	03 54 53.2	-1.2		
	comp=Z,20nm,1.2s								
EVOP	Sao Brissos	122.14	311	ePKIKP	PKPdf	03 54 53.2	-1.3		
EVOP	Sao Brissos	122.14	311	ePKPdf	PKPdf	03 54 53.2	-1.3		
D15A	Lincoln	122.32	38	⇓P	PKPdf	03 54 53.8	-1.1		
	baz=122								
C16A	Fuhringer Ranc	122.44	37	⇑P	PKPdf	03 54 54.2	-0.8		
	baz=122								
A17A	Triple J Farms	122.51	35	⇓P	PKPdf	03 54 54.4	-0.6		
	baz=122,SNR=8.0								
HLID	Hailey	122.55	43	ePKPdf	PKPdf	03 54 55.6	+0.2		
HLID				ePP	PP	03 56 33.0	+0.8		
HLID				LR	LR				
	comp=Z,370nm,19.0s								
HLID	Hailey	122.55	43	P	PKPdf	03 54 55.8	+0.4		
	baz=123								
DBIC	Dimbokro	122.57	273	ePKPdf	PKPdf	03 54 54.2	-1.8		
DBIC				PKP	PKPdf	03 54 54.7	-1.3		
DBIC	Dimbokro	122.57	273	PKP	PKPdf	03 54 54.7	-1.3		
	comp=Z,7.0nm,0.8s,baz=126,slow=1.3,SNR=7.3								
GRAC	Grapevine Rang	122.62	51	⇑P	PKPdf	03 54 55.5	-0.1		
	baz=123								
LIC	Lamto	122.70	272	ePKIKP	PKPdf	03 54 54.7	-1.6		
	comp=Z,8.1nm,0.6s								
LIC	Lamto	122.70	272	ePKPdf	PKPdf	03 54 54.7	-1.6		
EDW2	Edwards Air Fo	122.70	53	⇓P	PKPdf	03 54 55.6	-0.2		
	baz=123								
MPMC	Manual Prospec	122.78	52	⇑P	PKPdf	03 54 55.1	-1.0		
	baz=123								
D16A	Dana Ranch, Ca	122.91	38	⇓P	PKPdf	03 54 55.3	-0.7		
	baz=123,SNR=7.1								
DLMT	Dillon	123.00	40	ePKPdf	PKPdf	03 54 55.8	-0.4		
ELK	Elko	123.02	46	ePKPdf	PKPdf	03 54 56.7	+0.2		
ELK				ePP	PP	03 56 35.3	-0.3		
I14A	Mackay	123.05	42	⇑P	PKPdf	03 54 56.0	-0.3		
	baz=123								
MCMT	McKenzie Canyo	123.07	41	ePKPdf	PKPdf	03 54 56.3	-0.2		
MCMT				ePP	PP	03 56 33.6	-2.2		
C17A	Wharram Farm,	123.11	37	⇑P	PKPdf	03 54 55.4	-0.8		
	baz=123								
B18A	Beardsley Farm	123.31	36	P	PKPdf	03 54 56.1	-0.4		
	baz=123,SNR=6.5								
D17A	Six Diamond Ra	123.38	37	⇓P	PKPdf	03 54 55.4	-1.5		
	baz=123								
F16A	Kennard Place,	123.43	39	⇓P	PKPdf	03 54 56.0	-1.0		
	baz=123								
BOZ	Bozeman (W)	123.49	39	ePKIKP	PKPdf	03 54 56.6	-0.5		
BOZ				e		03 56 35.8			
BOZ				MLR	MLR				
	comp=Z,202nm,20.0s								
BOZ	Bozeman (W)	123.49	39	ePKPdf	PKPdf	03 54 56.6	-0.5		
BOZ				ePP	PP	03 56 35.8	-2.7		
BOZ				LR	LR				
	comp=Z,202nm,20.0s								
EGMT	Eagleton	123.51	36	ePKPdf	PKPdf	03 54 56.4	-0.6		
EGMT				LR	LR				
	comp=Z,362nm,22.0s								
EGMT	Eagleton	123.51	36	P	PKPdf	03 54 56.6	-0.4		
	baz=124,SNR=8.3								
R11A	Troy Canyon, C	123.56	49	⇑P	PKPdf	03 54 57.2	-0.3		
	baz=124,SNR=7.9								
E17A	Martinsdale	123.60	38	⇑P	PKPdf	03 54 56.8	-0.6		
	baz=124								
FFC	Flin Flon	123.60	26	i PKIKP	PKPdf	03 54 56.7	-0.1		
FFC	Flin Flon	123.60	26	ePKPdf	PKPdf	03 54 55.8	-1.0		
FFC				LR	LR				
	comp=Z,323nm,19.0s								
F17A	Fitzpatrick Pl	123.98	39	⇑P	PKPdf	03 54 58.0	0.0		
	baz=124,SNR=7.5								
C19A	Slack Wire Ran	124.06	36	⇓P	PKPdf	03 54 58.0	-0.1		
	baz=124,SNR=7.6								
H16A	Russell Place,	124.15	40	⇓P	PKPdf	03 54 58.6	+0.1		
	baz=124								
PFO	Pinyon Flat Ob	124.25	54	PFAKE		03 55 10.0	+11		
PFO				LR	LR				
	comp=Z,363nm,21.0s								
B20A	Solberg Farm,	124.30	35	⇓P	PKPdf	03 54 57.7	-0.8		
	baz=124								
HVU	Hansel Valley	124.36	44	ePKIKP	PKPdf	03 54 58.6	-0.3		
HVU				e		03 56 43.7			
HVU	Hansel Valley	124.36	44	ePKPdf	PKPdf	03 54 58.6	-0.3		
HVU				ePP	PP	03 56 43.7	-0.7		
D19A	Cripps Ranch,	124.45	37	⇓P	PKPdf	03 54 58.3	-0.5		
	baz=124								
BELC	Belle Mtn. Jos	124.52	54	⇓P	PKPdf	03 55 00.1	+0.7		
	baz=124								
F18A	Big Timber	124.56	38	⇑P	PKPdf	03 54 59.2	+0.1		
	baz=124,SNR=8.7								
GMRC	Granite Mounta	124.57	53	⇑P	PKPdf	03 54 59.8	+0.3		
	baz=125								
C20A	Veseth Ranch,	124.68	36	⇑P	PKPdf	03 54 58.6	-0.6		
	baz=125,SNR=6.9								
LKWY	Lake	124.76	40	PFAKE		03 55 10.0	+10		
LKWY				LR	LR				
	comp=Z,420nm,19.0s								
E19A	Rath Farm, Rou	124.86	37	⇑P	PKPdf	03 54 58.5	-1.1		
	baz=125								
TPAW	Teton Pass	124.88	41	ePKPdf	PKPdf	03 54 59.8	-0.2		
TPAW				ePP	PP	03 56 46.1	-1.8		
MOOW	Moose Ponds	124.90	41	ePKPdf	PKPdf	03 54 59.6	-0.4		
MOOW				ePP	PP	03 56 45.6	-2.4		
LDFC	Landfair	124.92	52	ePKPdf	PKPdf	03 55 00.4	+0.3		
LDFC				ePP	PP	03 56 48.7	+0.2		
D20A	Manuel Ranch,	124.93	36	⇑P	PKPdf	03 54 59.1	-0.6		
	baz=125								
DUG	Dugway	124.94	46	ePKIKP	PKPdf	03 54 59.9	-0.2		
DUG				e		03 56 45.4			
DUG				MLR	MLR				
	comp=Z,223nm,20.0s								
DUG	Dugway	124.94	46	ePKPdf	PKPdf	03 54 59.9	-0.2		
DUG				ePP	PP	03 56 45.4	-3.0		
DUG				LR	LR				
	comp=Z,223nm,20.0s								
DUG	Dugway	124.94	46	P	PKPdf	03 55 00.0	0.0		
	baz=125								
SNOW	Snow King Moun	125.02	41	ePKPdf	PKPdf	03 55 00.2	0.0		
LOHW	Long Hollow	125.05	41	ePKPdf	PKPdf	03 55 00.1	-0.1		
LOHW				ePP	PP	03 56 47.0	-2.1		
F19A	Roth Farm, Mol	125.06	38	⇓P	PKPdf	03 54 59.7	-0.4		
	baz=125								
RLMT	Red Lodge	125.21	39	PFAKE		03 55 10.0	+9.5		
RLMT				LR	LR				
	comp=Z,242nm,19.0s								
E20A	Meyer Farm, Mu	125.23	37	P	PKPdf	03 55 00.1	-0.2		
	baz=125								
HWUT	Hardware Ranch	125.26	44	ePKPdf	PKPdf	03 55 00.5	-0.1		
HWUT				ePP	PP	03 56 48.0	-2.5		
HWUT				LR	LR				
	comp=Z,351nm,21.0s								
ARUT	Antelope Range	125.34	49	ePKIKP	PKPdf	03 55 00.6	-0.3		
ARUT				e		03 56 49.9			
ARUT	Antelope Range	125.34	49	ePKPdf	PKPdf	03 55 00.6	-0.3		
ARUT				ePP	PP	03 56 49.9	-1.3		
JLU	Jordanelle	125.74	45	ePKPdf	PKPdf	03 55 01.4	-0.3		
JLU				ePP	PP	03 56 52.5	-1.4		
G20A	Bridger	125.82	38	⇓P	PKPdf	03 55 01.5	-0.1		
	baz=126,SNR=7.7								
E21A	Keefer Ranch,	125.83	36	P	PKPdf	03 55 01.5	0.0		
	baz=126								
W13A	Hualapai Mount	125.87	52	P	PKPdf	03 55 02.4	+0.3		
	baz=126								
M17A	Scullys Gap (B	125.93	44	P	PKPdf	03 55 01.9	-0.1		
	baz=126								
DAU	Daniels Canyon	125.95	45	ePKIKP	PKPdf	03 55 01.8	-0.4		
DAU				e		03 56 54.6			
DAU	Daniels Canyon	125.95	45	ePKPdf	PKPdf	03 55 01.8	-0.4		
DAU				ePP	PP	03 56 54.6	-0.7		
MSU	Marysvale	126.02	47	ePKIKP	PKPdf	03 55 02.5	+0.2		
MSU				e		03 56 54.3			
MSU	Marysvale	126.02	47	ePKPdf	PKPdf	03 55 02.5	+0.2		
MSU				ePP	PP	03 56 54.3	-1.5		
D22A	Cohagen	126.03	35	⇑P	PKPdf	03 55 02.1	+0.3		
	baz=126,SNR=11								
BW06	Boulder Array	126.11	42	PFAKE		03 55 10.0	+7.7		
BW06				LR	LR				
	comp=Z,362nm,22.0s								
PDAR	Pinedale Array	126.11	42	PKP	PKPdf	03 55 01.8	-0.6		
PDAR	Pinedale Array	126.11	42	PKP	PKPdf	03 55 01.8	-0.6		
	comp=Z,2.0nm,1.1s,baz=354,slow=1.5,SNR=11								
J19A	Crowheart	126.22	41	P	PKPdf	03 55 02.3	-0.2		
	baz=126,SNR=5.1								
A24A	Westby	126.24	33	P	PKPdf	03 55 02.1	0.0		
	baz=126								
H20A	Greybull	126.31	39	P	PKPdf	03 55 02.3	-0.2		
	baz=126,SNR=6.3								
DGMT	Dagmar	126.40	33	PFAKE		03 55 10.0	+7.6		
DGMT				LR	LR				
	comp=Z,293nm,20.0s								
I20A	Worland	126.49	40	P	PKPdf	03 55 02.7	-0.2		
	baz=126,SNR=6.1								
K19A	Absolon Red Bu	126.55	41	P	PKPdf	03 55 02.8	-0.3		
	baz=126,SNR=5.8								
Q16A	Castle Valley	126.60	47	P	PKPdf	03 55 03.6	+0.3		
	baz=127								
U15A	North Rim	126.67	50	P	PKPdf	03 55 03.8	+0.1		
	baz=127								
J20A	Shoshoni	126.80	40	P	PKPdf	03 55 03.3	-0.2		
	baz=127								
E23A	Ismay	126.89	36	P	PKPdf	03 55 03.6	+0.1		
	baz=127,SNR=6.0								
WUAZ	Wupatki	127.68	51	PFAKE		03 55 20.0	+15		
WUAZ				LR	LR				
	comp=Z,323nm,22.0s								
WUAZ	Wupatki	127.68	51	P	PKPdf	03 55 04.5	-0.9		
	baz=128,SNR=8.4								
J22A	Midwest	127.79	40	P	PKPdf	03 55 04.6	-0.8		
	baz=128,SNR=7.9								
N20A	Spence Gulch,	127.84	43	P	PKPdf	03 55 05.1	-0.6		
	baz=128								
L21A	Rawlins	127.92	42	P	PKPdf	03 55 05.7	-0.1		
	baz=128,SNR=7.0								
S18A	Hurst Farm, Bl	127.92	48	P	PKPdf	03 55 06.3	+0.3		
	baz=128								
X16A	Lo Mia Camp, P	128.00	52	P	PKPdf	03 55 06.7	+0.6		
	baz=128								
M21A	Separation Pea	128.09	42	P	PKPdf	03 55 06.0	-0.2		
	baz=128,SNR=6.3								
K22A	Casper	128.14	40	P	PKPdf	03 55 04.9	-1.2		
	baz=128								
O20A	White River Ci	128.16	44	⇓P	PKPdf	03 55 07.1	+0.8		
	baz=128,SNR=5.5								
H24A	Dirks Ranch, A	128.28	37	P	PKPdf	03 55 05.7	-0.6		
	baz=128								
L22A	Ellis Ranch, M	128.50	41	P	PKPdf	03 55 07.2	+0.3		
	baz=128								
E26A	Carlson Angus	128.52	34	P	PKPdf	03 55 06.7	+0.1		
	baz=128								
Q20A	Ridgley Place,	128.63	45	P	PKPdf	03 55 08.0	+0.8		
	baz=129,SNR=7.1								
PV01	Paradox Valley	128.78	46	ePKPdf	PKPdf	03 55 07.6	0.0		
PV01				ePP	PP	03 57 11.2	-2.7		
R20A	Redvale	128.90	46	P	PKPdf	03 55 08.7	+0.9		
	baz=129								
L23A	Garrett	128.94	41	P	PKPdf	03 55 07.3	-0.5		
	baz=129								
RSSD	Black Hills	128.94	38	ePKIKP	PKPdf	03 55 06.9	-0.8		
RSSD	Black Hills	128.94	38	ePKPdf	PKPdf	03 55 06.9	-0.8		
S20A	Disappointment	129.06	47	⇓P	PKPdf	03 55 09.3	+1.2		
	baz=129,SNR=5.7								
TUC	Tucson	129.19	54	PFAKE		03 55 20.0	+12		
TUC				LR	LR				
	comp=Z,311nm,19.0s								
N23A	Red Feather La	129.37	42	P	PKPdf	03 55 08.8	+0.2		
	baz=129								
ULM	Lac du Bonnet	129.39	27	PKP	PKPdf	03 55 07.4	-0.6		
ULM	Lac du Bonnet	129.39	27	PKP	PKPdf	03 55 07.4	-0.6		
	comp=Z,2.5nm,0.6s,baz=187,slow=3.1,SNR=3.6								
J25A	Sunshine Ranch	129.47	38	P	PKPdf	03 55 07.3	-1.3		
	baz=129								
S21A	Coal Bank Pass	129.54	47	⇑P	PKPdf	03 55 09.9	+0.7		
	baz=130,SNR=8.4								
Q22A	Crested Butte,	129.65	45	P	PKPdf	03 55 10.2	+0.9		
	baz=130								
O23A	Lake Granby, G	129.71	43	P	PKPdf	03 55 10.1	+0.7		
	baz=130								
V20A	Brimhall	129.78	49	P	PKPdf	03 55 10.1	+0.5		
	baz=130								
K25A	Mack Ranch, Ha	129.84	39	P	PKPdf	03 55 10.2	+0.9		
	baz=130								
W20A	Ramah	130.01	50	⇑P	PKPdf	03 55 10.9	+0.9		
	baz=130,SNR=5.1								
ISCO	Idaho Springs	130.11	43	PFAKE		03 55 20.0	+10		
ISCO				LR	LR				
	comp=Z,375nm,19.0s								
ISCO	Idaho Springs	130.11	43	P	PKPdf	03 55 10.5	+0.4		
	baz=130								
U21A	Nageezi	130.14	48	⇓P	PKPdf	03 55 10.1	-0.1		
	baz=130,SNR=7.9								
K26A	Motz Farm, Whi	130.23	39	P	PKPdf	03 55 10.4	+0.4		
	baz=130								
T22A	Edith	130.45	47	P	PKPdf	03 55 11.4	+0.6		
	baz=130								
Y20A	Horse Springs,	130.56	51	⇓P	PKPdf	03 55 11.7	+0.6		
	baz=131,SNR=6.6								
319A	Douglas	130.70	55	P	PKPdf	03 55 12.0	+0.8		
	baz=131								
U22A	Llaves	130.75	48	P	PKPdf	03 55 11.8	+0.4		
	baz=131								
AGMN	Agassiz Nation	130.77	29	PFAKE		03 55 20.0	+9.3		
AGMN				LR	LR				
	comp=Z,409nm,21.0s								
X21A	Alamocita Cree	130.81	51	⇓P	PKPdf	03 55 10.6	-0.9		
	baz=131,SNR=9.8								
J28A	Allard Ranch,	131.01	37	P	PKPdf	03 55 11.1	-0.3		
	baz=131								
T23A	Casias Ranch,	131.07	47	P	PKPdf	03 55 12.7	+0.7		
	baz=131								
220A	Playas Peak, P	131.13	54	P	PKPdf	03 55 13.1	+1.0		
	baz=131								
U23A	El Rito	131.26	48	P	PKPdf	03 55 12.7	+0.4		
	baz=131								
PLCA	Paso Flores	131.32	172	PKP	PKPdf	03 55 12.4	+0.2		
PLCA				ePKPdf	PKiKP	03 55 12.9	-0.2		
PLCA	Paso Flores	131.32	172	PKP	PKPdf	03 55 12.4	+0.2		
	comp=Z,3.2nm,0.6s,baz=250,slow=3.2,SNR=4.4								
320A	Kipp Ranch, An	131.32	55	P	PKPdf	03 55 13.0	+0.5		
	baz=131								
ANMO	Albuquerque	131.63	49	PFAKE		03 55 20.0	+7.0		
ANMO				LR	LR				
	comp=Z,293nm,21.0s								
BNM	Barren Site	131.81	50	ePKPdf	PKPdf	03 55 13.8	+0.4		
BNM				ePP	PP	03 57 33.4	-0.4		
OGNE	Ogallala	131.90	40	PFAKE		03 55 20.0	+6.8		
OGNE				LR	LR				
	comp=Z,399nm,19.0s								
V25A	Rancho No Teng	132.62	47	P	PKPdf	03 55 15.2	+0.3		
	baz=133								
T26A	Comanche Natio	132.75	45	P	PKPdf	03 55 14.9	-0.2		
	baz=133								
Y24A	Capitan	132.81	50	P	PKPdf	03 55 15.6	+0.3		
	baz=133								
SCHQ	Schefferville	132.85	3	PKP	PKPdf	03 55 15.4	+0.9		
SCHQ				PP	PP	03 57 38.1	-0.6		
SCHQ	Schefferville	132.85	3	PKP	PKPdf	03 55 15.4	+0.9		
	comp=Z,3.2nm,0.7s,baz=358,slow=1.7,SNR=5.0								
SCHQ				PP	PP	03 57 38.1	-0.6		
	comp=Z,3.6nm,0.8s,baz=11,slow=7.2,SNR=5.1								
EYMN	Ely	133.03	26	PFAKE		03 55 30.0	+15		
EYMN				LR	LR				
	comp=Z,292nm,21.0s								
ECSD	EROS Data Cent	133.47	34	ePKPdf	PKPdf	03 55 15.3	-0.7		
ECSD				ePP	PP	03 57 38.5	-4.9		
ECSD				eSKPbc	SKPbc	03 58 39.8	-2.7		
ECSD				LR	LR				
	comp=Z,357nm,20.0s								
MNTX	Cornudas Mount	133.71	53	PFAKE		03 55 30.0	+13		
MNTX				LR	LR				
	comp=Z,235nm,20.0s								
TRQA	Tornquist	134.51	181	ePKPdf	PKPdf	03 55 18.2	0.0		
TRQA				LR	LR				
	comp=Z,951nm,21.0s								
AMTX	Amarillo	135.19	47	PFAKE		03 55 30.0	+10		
AMTX				LR	LR				
	comp=Z,297nm,20.0s								
COWI	Conover	135.48	26	PFAKE		03 55 30.0	+10		
COWI				LR	LR				
	comp=Z,334nm,22.0s								
TXAR	Lajitas Array	135.95	55	PKPpre	PKPpre	03 55 10.7			
TXAR				PKP	PKPdf	03 55 20.8	-0.4		
TXAR	Lajitas Array	135.95	55	PKhKP	PKPpre	03 55 10.7			
	comp=Z,0.6nm,0.7s,baz=250,slow=1.9,SNR=10								
TXAR				PKP	PKPdf	03 55 20.8	-0.4		
	comp=Z,1.0nm,0.7s,baz=230,slow=0.6,SNR=9.1								
KSU1	Kansas State U	136.37	39	PFAKE		03 55 30.0	+8.5		
KSU1				LR	LR				
	comp=Z,356nm,21.0s								
SCIA	State Center	136.55	33	PFAKE		03 55 30.0	+8.2		
SCIA				LR	LR				
	comp=Z,329nm,20.0s								
WMOK	Wichita Mounta	137.34	46	PFAKE		03 55 40.0	+16		
WMOK				LR	LR				
	comp=Z,336nm,19.0s								
JFWS	Jewell Farm	137.38	30	PFAKE		03 55 30.0	+6.7		
JFWS				LR	LR				
	comp=Z,293nm,20.0s								
JCT	Junction City	138.58	52	ePKHKP	PKPpre	03 55 17.6			
JCT				e		03 55 25.0			
JCT				MLR	MLR				
	comp=Z,351nm,19.0s								
JCT	Junction City	138.58	52	ePKPpre	PKPpre	03 55 17.6			
JCT				ePKPdf	PKPdf	03 55 25.0	-1.0		
JCT				LR	LR				
	comp=Z,351nm,19.0s								
HDIL	Hopedale	139.59	32	PFAKE		03 55 40.0	+13		
HDIL				LR	LR				
	comp=Z,374nm,19.0s								
AAM	Ann Arbor	140.88	25	PFAKE		03 55 40.0	+10		
AAM				LR	LR				
	comp=Z,309nm,20.0s								
SACV	Santiago Islan	140.97	284	PFAKE		03 55 40.0	+9.4		
SACV				LR	LR				
	comp=Z,440nm,21.0s								
MIAR	Mount Ida	141.03	42	ePKIKP	PKPdf	03 55 26.7	-3.5		
MIAR				MLR	MLR				
	comp=Z,293nm,20.0s								
MIAR	Mount Ida	141.03	42	ePKPdf	PKPdf	03 55 26.7	-3.5		
MIAR				LR	LR				
	comp=Z,293nm,20.0s								
SIUC	Southern Illin	141.67	35	ePKPdf	PKPdf	03 55 26.3	-4.9		
LONY	Lake Ozonia	141.77	14	PFAKE		03 55 40.0	+8.8		
LONY				LR	LR				
	comp=Z,409nm,21.0s								
ERPA	Erie	142.46	21	PFAKE		03 55 40.0	+7.5		
ERPA				LR	LR				
	comp=Z,390nm,19.0s								
NCB	Newcomb	142.47	14	ePKPdf	PKPdf	03 55 28.0	-4.6		
NCB				LR	LR				
	comp=Z,362nm,20.0s								
MDV	Middlebury	142.68	12	ePKPdf	PKPdf	03 55 28.6	-4.3		
LBNH	Lisbon	142.69	11	PFAKE		03 55 40.0	+7.1		
LBNH				LR	LR				
	comp=Z,398nm,20.0s								
LCO	Las Campanas	142.75	168	ePKPpre	PKPpre	03 55 29.5			
LCO				ePKPdf	PKPdf	03 55 33.6	-0.2		
LCO				LR	LR				
	comp=Z,738nm,22.0s								
ACSO	Alum Creek Sta	142.87	26	ePKPdf	PKPdf	03 55 28.5	-4.8		
ACSO				LR	LR				
	comp=Z,339nm,20.0s								
WCI	Wyandotte Cave	142.88	31	ePKHKP	PKPpre	03 55 28.8			
WCI	Wyandotte Cave	142.88	31	ePKPdf	PKPpre	03 55 28.8			
HNH	Hanover	143.14	12	ePKPdf	PKPbc	03 55 30.4	-0.1		
FFD	Franklin Falls	143.49	11	ePKPdf	PKPbc	03 55 31.6	+0.2		
WVT	Waverly	143.57	35	ePKIKP	PKPab	03 55 30.9	-0.2		
WVT	Waverly	143.57	35	ePKPdf	PKPab	03 55 30.9	-0.2		
BINY	Binghamton	143.67	17	PFAKE		03 55 50.0	+15		
BINY				LR	LR				
	comp=Z,405nm,20.0s								
OXF	Oxford	143.74	39	ePKIKP	PKPab	03 55 31.6	-0.2		
OXF				MLR	MLR				
	comp=Z,368nm,20.0s								
OXF	Oxford	143.74	39	ePKPdf	PKPab	03 55 31.6	-0.2		
OXF				LR	LR				
	comp=Z,368nm,20.0s								
TRY	Troy	143.77	14	ePKPdf	PKPbc	03 55 32.4	0.0		
CAM4	Nova Friburgo	144.20	213	⇑P	PKPdf	03 55 35.7	-0.8		
CAM4				i		03 55 39.0			
CAM4				i		03 55 49.1			
CAM4				i		03 56 00.0			
CAM4				i		03 56 23.4			
CAM4				i		03 56 36.8			
CAM4				i		03 56 46.2			
HRV	Adam Dziewonsk	144.44	11	ePKIKP	PKPab	03 55 34.4	+0.3		
HRV	Adam Dziewonsk	144.44	11	ePKPdf	PKPab	03 55 34.4	+0.3		
VBMS	Vicksburg	144.47	43	ePKPdf	PKPbc	03 55 35.0	+0.2		
VBMS				LR	LR				
	comp=Z,367nm,20.0s								
WES	Weston	144.60	11	ePKIKP	PKPab	03 55 34.7	-0.1		
WES	Weston	144.60	11	ePKPdf	PKPab	03 55 34.7	-0.1		
BRYW	Bryant College	145.01	11	ePKPdf	PKPbc	03 55 35.9	-0.4		
YLE	Yale	145.29	14	ePKPbc	PKPbc	03 55 37.0	-0.2		
BRNJ	Basking Ridge	145.47	16	ePKPbc	PKPab	03 55 38.5	+0.5		
SPB	Sao Paulo	145.51	205	ePKPbc	PKPab	03 55 39.1	+0.5		
SPB				LR	LR				
	comp=Z,438nm,21.0s								
CPNY	Central Park	145.53	15	ePKPbc	PKPdf	03 55 38.0	+0.2		
TZTN	Tazewell	145.57	30	ePKPbc	PKPdf	03 55 37.6	-0.6		
CPUP	Villa Florida	145.80	189	PKPbc	PKPdf	03 55 38.5	-0.3		
CPUP	Villa Florida	145.80	189	PKPbc	PKPdf	03 55 38.5	-0.3		
	comp=Z,12nm,0.5s,baz=145,slow=1.9,SNR=76								
CPCT	Cooper Cave	145.90	33	ePKPbc	PKPdf	03 55 38.3	-0.5		
SDMD	Soldier's Deli	145.95	20	ePKPbc	PKPdf	03 55 38.9	+0.2		
TKL	Tuckaleechee C	146.14	32	PKPbc	PKPdf	03 55 39.0	-0.2		
TKL	Tuckaleechee C	146.14	32	PKPbc	PKPdf

SIV	**San Ignacio**	**156.44**	**184**	PP	PP	03 59 59.8	+0.2		
	comp=Z,4.3nm,1.1s,baz=162,slow=5.1,SNR=7.5								
JTS	**JuntasAbangare**	**157.94**	**82**	PFAKE		03 56 10.0	+13		
JTS				LR	LR				
	comp=Z,480nm,20.0s								
ATAH	**Atahualpa**	**158.58**	**133**	PKP	**PKPdf**	**03 55 58.7**	**+0.1**		
ATAH				PKPab	**PKPab**	**03 56 35.2**	**+1.6**		
ATAH	**Atahualpa**	**158.58**	**133**	PKP	**PKPdf**	**03 55 58.7**	**+0.1**		
	comp=Z,4.0nm,0.8s,baz=26,slow=16,SNR=8.0								
ATAH				PKPab	**PKPab**	**03 56 35.2**	**+1.6**		
	comp=Z,5.2nm,0.9s,baz=220,slow=6.5,SNR=5.7								
MTDJ	**Mount Denham**	**162.20**	**52**	PFAKE		03 56 10.0	+8.0		
MTDJ				LR	LR				
	comp=Z,430nm,22.0s								
OTAV	**Otavalo**	**162.72**	**115**	*e*PKPdf	**PKPdf**	**03 56 02.5**	**-0.6**		
OTAV				LR	LR				
	comp=Z,325nm,20.0s								
GTBY	**Guantanamo Bay**	**162.92**	**43**	PFAKE		03 56 10.0	+7.4		
GTBY				LR	LR				
	comp=Z,554nm,21.0s								
BCIP	**Isla Barro Col**	**163.05**	**84**	PFAKE		03 56 10.0	+7.1		
BCIP				LR	LR				
	comp=Z,364nm,21.0s								
SAML	**Samuel**	**163.50**	**179**	*e*PKPdf	**PKPdf**	**03 56 02.6**	**-0.7**		
SAML				*e*PKPab	**PKPab**	**03 56 54.0**	**-0.2**		
SAML				LR	LR				
	comp=Z,572nm,19.0s								
SDDR	**Presa de Saban**	**166.03**	**35**	PFAKE		03 56 20.0	+15		
SDDR				LR	LR				
	comp=Z,416nm,20.0s								
ROSC	**El Rosal**	**168.18**	**103**	*e*PKPdf	**PKPdf**	**03 56 07.1**	**-0.5**		
ROSC				PKP	PKPdf	03 56 07.4	-0.2		
ROSC				*e*PKPab	**PKPab**	**03 57 16.3**	**+0.5**		
ROSC				PKPab	PKPab	03 57 18.1	+2.2		
ROSC	**El Rosal**	**168.18**	**103**	PKP	**PKPdf**	**03 56 07.4**	**-0.2**		
	comp=Z,1.0nm,0.4s,baz=103,slow=22,SNR=8.0								
ROSC				PKPab	**PKPab**	**03 57 18.1**	**+2.2**		
	comp=Z,2.9nm,0.6s,baz=97,slow=17,SNR=4.0								
SJG	**San Juan**	**169.10**	**17**	PFAKE		03 56 20.0	+12		
SJG				LR	LR				
	comp=Z,487nm,22.0s								
ANWB	**Willy Bob**	**170.00**	**355**	PFAKE		03 56 20.0	+12		
ANWB				LR	LR				
	comp=Z,420nm,20.0s								
GRGR	**Grenville**	**175.42**	**346**	PFAKE		03 56 20.0	+10		
GRGR				LR	LR				
	comp=Z,373nm,22.0s								

CASC ***14*** *03:55:23.1±1.9, 13°.08N×90°.00W, h23km±8km, MD4.2, ML4.4, mb4.5(NEIC)*

ISCJB ***14*** *03:55:23.2±0.5, 13°.08N±0°.04×90°.00W±0°.03, h52km±4km, mb4.4/46, MS4.1/14, Error ellipse: s-maj=7.0km s-min=3.4km az=39.2*

MEX ***14*** *03:55:25.2±0.5, 12°.84N×90°.34W, h14km±928km, MD4.4*

BJI ***14*** *03:55:27.5, 13°.20N×89°.60W, h91km, mB5.0/1*

IDC ***14*** *03:55:28.3±3.1, 13°.34N×89°.57W, h77km±28km, mb3.9/20, mb1 4.1/21, mb1mx3.9/31, mbtmp3.9/21, MS4.0/13, Ms1 4.0/13, ms1mx3.9/29, Error ellipse: s-maj=25.8km s-min=10.3km az=66.0*

NEIC ***14*** *03:55:29.6±1.0, 13.27N×89.59W, h90km±9km, mb4.5/33, MD4.5(SNET), Error ellipse: s-maj=11.4km s-min=4.6km az=62.0*

NEIC Felt [II] at San Salvador.

ISC 14 03:55:24.5±0.8, 13°.10N±0°.04×89°.98W±0°.04, h50km±7km, n202, σ1§62/199, mb4.4/46, MS4.0/14, 13C-2D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SONS	**Sonsonate**	**0.69**	**22**	*e*P	**Pn**	**03 55 36.2**	**-2.0**
SONS				*e*S	**Sn**	**03 55 47.1**	**-0.9**
SONS				AML	AML	03 55 47.8	
	comp=Z,11μm,0.3s						
SBLS	**San Blas**	**0.82**	**25**	*e*P	**Pn**	**03 55 38.7**	**-1.4**
SNJE	**San Jose**	**0.85**	**25**	*e*P	**Pn**	**03 55 39.0**	**-1.5**
BOQS	**Boqueron**	**0.93**	**47**	*e*P	**Pn**	**03 55 40.3**	**-1.3**
SNET	**Serv Nac Est T**	**0.94**	**51**	*e*S	**Sn**	**03 55 53.5**	**-0.5**
SNET				AML	AML	03 56 02.3	
	comp=Z,14μm,0.6s						
LFRS	**El Faro**	**1.04**	**60**	*e*P	**Pn**	**03 55 41.5**	**-1.4**
RBDL	**Robledal**	**1.05**	**16**	*e*P	**Pn**	**03 55 42.3**	**-0.8**
LFU	**La Fuente**	**1.07**	**52**	*e*P	**Pn**	**03 55 42.5**	**-0.7**
LFU				*e*S	**Sn**	**03 55 58.1**	**+1.0**
LBRS	**Las Brisas**	**1.11**	**55**	*e*P	**Pn**	**03 55 43.0**	**-0.9**
SNVI	**San Vicente**	**1.23**	**65**	*e*P	**Pn**	**03 55 44.6**	**-0.8**
PCG	**Pacaya**	**1.43**	**335**	*e*P	**Pn**	**03 55 47.5**	**-0.8**
MTO2	**Montecristo 2**	**1.43**	**25**	*e*P	**Pn**	**03 55 48.1**	**-0.2**
NBG	**Las Nubes**	**1.52**	**347**	*e*P	**Pn**	**03 55 50.3**	**+0.6**
NBG				*e*S	**Sn**	**03 56 10.6**	**+2.1**
FUG	**Fuego 3**	**1.58**	**328**	*e*P	**Pn**	**03 55 49.1**	**-1.3**
VSM	**San Miguel**	**1.70**	**79**	*e*P	**Pn**	**03 55 51.7**	**-0.3**
CAHU	**Cacacuatique**	**1.85**	**69**	*e*P	**Pn**	**03 55 53.7**	**-0.3**
MRL	**Marmol**	**1.98**	**8**	*e*P	**Pn**	**03 55 57.0**	**+1.2**
JAT	**Jato**	**2.02**	**307**	*e*P	**Pn**	**03 55 55.2**	**-0.9**
CNCH	**Conchagua**	**2.10**	**85**	*e*P	**Pn**	**03 55 56.9**	**-0.5**
TGUH	**Tegucigalpa,Un**	**2.80**	**70**	*e*Pn	**Pn**	**03 56 06.6**	**-0.3**
THIG		**2.85**	**309**	*i* P	**Pn**	**03 56 06.4**	**-1.2**
THIG				*i* S	**Sn**	**03 56 38.9**	**-1.9**
CCIG	**Comitan**	**3.79**	**327**	*e*P	**Pn**	**03 56 22.2**	**+1.6**
CCIG				*i* S	**Sn**	**03 57 04.9**	**+0.8**
PCIG		**4.07**	**310**	*e*P	**Pn**	**03 56 23.3**	**-1.0**
PCIG				*i* S	**Sn**	**03 57 08.9**	**-1.8**
TGIG		**4.75**	**321**	*e*P	**Pn**	**03 56 33.7**	**-0.1**
TGIG				*i* S	**Sn**	**03 57 28.4**	**+0.7**
VCR	**Vista de Mar**	**5.18**	**124**	*e*P	**Pn**	**03 56 40.1**	**+0.4**
JTS	**JuntasAbangare**	**5.66**	**119**	*e*Pn	**Pn**	**03 56 46.9**	**+0.7**
JTS				*e*Sn	**Sn**	**03 57 48.0**	**-1.9**
CGA2	**Cerro Gallo 2**	**6.21**	**119**	*e*P	**Pn**	**03 56 56.2**	**+2.4**
HUIG	**Huatulco**	**6.50**	**295**	*e*P	**Pn**	**03 56 56.8**	**-0.9**
HUIG				*i* S	**Sn**	**03 58 07.0**	**-3.6**
QCR	**Quepos**	**6.77**	**122**	*e*P	**Pn**	**03 57 02.5**	**+1.1**
QCR				*e*S	**Sn**	**03 58 17.4**	**+0.1**
URSC	**Urasca**	**6.89**	**117**	*e*P	**Pn**	**03 57 04.7**	**+1.5**
URSC				*e*S	Sn	03 58 26.5	+6.1
TEIG	**Tepich**	**7.28**	**13**	*e*Pn	**Pn**	**03 57 09.4**	**+1.1**
TEIG	**Tepich**	**7.28**	**13**	P	**Pn**	**03 57 08.9**	**+0.6**
	comp=Z,11nm,0.3s,baz=199,slow=6.4,SNR=145						
TEIG				LR	LR	04 00 26.8	
	comp=Z,1μm,19.4s,baz=185,slow=43						
ACR	**Cerro Adams**	**8.02**	**123**	*e*P	Pn	03 57 21.2	+2.7
ACR				*e*S	**Sn**	**03 58 44.4**	**-3.6**
PNIG	**Pinotepa**	**8.53**	**294**	*i* P	**Pn**	**03 57 24.4**	**-1.1**
PNIG				*i* S	**Sn**	**03 58 56.1**	**-4.4**
BCIP	**Isla Barro Col**	**10.69**	**110**	*e*Pn	**Pn**	**03 57 55.7**	**+0.6**
MTDJ	**Mount Denham**	**13.03**	**65**	*e*Pn	**Pn**	**03 58 27.7**	**+0.6**
OTAV	**Otavalo**	**17.14**	**137**	*e*Pn	**Pn**	**03 59 22.4**	**+1.2**
ROSC	**El Rosal**	**17.48**	**117**	*e*Pn	**Pn**	**03 59 23.4**	**-1.9**
732A	**Laxson Ranch,** baz=18,SNR=6.2	**18.12**	**331**	⇑P	**Pn**	**03 59 34.1**	**+1.4**
632A	**Uvalde** baz=19	**18.69**	**332**	⇓P	**Pn**	**03 59 40.7**	**+1.1**
631A	**Perdido Creek** baz=19	**18.98**	**330**	⇑P	**Pn**	**03 59 44.0**	**+0.9**
VBMS	**Vicksburg** comp=Z,53nm,0.3s	**19.04**	**359**	*e*P	**Pn**	**03 59 43.8**	**+0.1**
532A	**Rocksprings** baz=19	**19.28**	**333**	P	**Pn**	**03 59 48.3**	**+1.6**
SDV	**Santo Domingo** comp=Z,18nm,0.9s	**19.45**	**100**	*e*Pn	**P**	**03 59 47.5**	**+0.2**
JCT	**Junction City**	**19.54**	**334**	*e*P	**Pn**	**03 59 50.5**	**+0.8**
JCT	**Junction City** baz=20	**19.54**	**334**	P	**Pn**	**03 59 51.0**	**+1.3**
531A	**Rocksprings** baz=20,SNR=6.1	**19.60**	**332**	⇑P	**Pn**	**03 59 52.2**	**+1.7**
432A	**Menard** baz=20,SNR=11	**19.88**	**334**	P	**Pn**	**03 59 53.5**	**-0.2**
530A	**J-C Ranch, Com** baz=20	**19.96**	**330**	⇑P	**Pn**	**03 59 55.9**	**+1.2**
WHTX	**Lake Whitney** baz=20,SNR=7.9	**20.02**	**341**	⇑P	**P**	**03 59 54.2**	**+1.0**
431A	**Sonora** baz=20,SNR=6.3	**20.06**	**332**	P	Pn	03 59 55.7	-0.3
628A	**Black Gap, Mar** baz=20	**20.23**	**326**	P	Pn	03 59 59.6	+1.7
332A	**Millersview** baz=20,SNR=9.1	**20.30**	**335**	⇑P	**P**	**03 59 57.3**	**+1.0**
529A	**Stev Forest Ra** baz=20	**20.38**	**328**	P	Pn	04 00 00.2	+0.4
430A	**Baggett Ranch,** baz=20	**20.44**	**331**	P	Pn	04 00 00.7	+0.3
627A	**Terlingua Ranc**	**20.48**	**325**	P	Pn	04 00 01.4	+0.4
	baz=21						
331A	**San Angelo** baz=21	**20.52**	**334**	P	**P**	**04 00 00.4**	**+1.6**
TXAR	**Lajitas Array**	**20.55**	**324**	P	Pn	04 00 02.1	+0.3
TXAR				PcP	**PcP**	**04 04 10.6**	**+1.7**
TXAR	**Lajitas Array**	**20.55**	**324**	P	Pn	04 00 02.1	+0.2
	comp=Z,4.0nm,0.7s,baz=139,slow=11,SNR=21						
TXAR				PcP	**PcP**	**04 04 10.6**	**+1.7**
	comp=Z,0.4nm,0.7s,baz=156,slow=4.9,SNR=4.1						
TXAR				LR	LR	04 10 35.4	
	comp=Z,127nm,18.2s,baz=95,slow=44						
429A	**Davenport Ranc** baz=21	**20.62**	**330**	⇑P	Pn	04 00 01.8	-0.8
232A	**Coleman** baz=21,SNR=10	**20.70**	**336**	P	**P**	**04 00 01.8**	**+1.1**
528A	**Cox Ranch, San** baz=21	**20.71**	**327**	⇑P	Pn	04 00 03.0	-0.7
330A	**Mertzon** baz=21,SNR=8.7	**20.93**	**332**	P	Pn	04 00 05.8	-0.5
626A	**Big Bend Ranch** baz=21,SNR=13	**20.99**	**324**	P	Pn	04 00 07.1	+0.1
231A	**Bronte** baz=21,SNR=7.2	**21.02**	**335**	P		04 00 06.1	
GOGA	**Godfrey**	**21.08**	**15**	*e*P	**P**	**04 00 05.4**	**+0.7**
	comp=Z,15nm,1.1s						
GOGA				*e*pP	pP	04 00 24.6	+8.3
527A	**Woodward Ranch** baz=21,SNR=5.4	**21.14**	**326**	P	**P**	**04 00 08.8**	**+3.2**
230A	**Sterling City** baz=21	**21.31**	**333**	P	**P**	**04 00 09.1**	**+1.8**
OXF	**Oxford**	**21.33**	**1**	*e*P	**P**	**04 00 09.8**	**+2.5**
526A	**Mary Lane Ranc** baz=22	**21.34**	**325**	⇑P	**P**	**04 00 10.3**	**+2.6**
ABTX	**Abilene, Hawle** baz=21	**21.36**	**337**	P	**P**	**04 00 09.6**	**+1.9**
329A	**Wagon Wheel Ra** baz=22	**21.38**	**331**	P	**P**	**04 00 10.2**	**+2.2**
427A	**Hayter Ranch,** baz=22	**21.57**	**327**	P	**P**	**04 00 11.9**	**+1.8**
MIAR	**Mount Ida** comp=Z,33nm,1.2s	**21.60**	**352**	*e*P	**P**	**04 00 11.6**	**+1.4**
UALR	**University of** comp=Z,20nm,0.8s	**21.69**	**355**	*e*P	**P**	**04 00 11.3**	**+0.2**
328A	**Wristen Ranch,** baz=22,SNR=7.6	**21.69**	**329**	⇑P	**P**	**04 00 13.7**	**+2.4**
426A	**McDonald Obser** baz=22	**21.77**	**326**	⇓P	**P**	**04 00 14.7**	**+2.4**
PLAL	**Pickwick Lake** comp=Z,16nm,1.0s	**21.86**	**4**	*e*P	**P**	**04 00 14.3**	**+1.3**
Z32A	**Haskell** baz=22	**21.91**	**338**	⇑P	**P**	**04 00 15.5**	**+2.0**
Z31A	**Sharp Cattle R** baz=22,SNR=8.1	**22.16**	**337**	P	**P**	**04 00 18.0**	**+1.7**
129A	**Stewart Farms,** baz=22	**22.28**	**333**	P	**P**	**04 00 19.2**	**+1.5**
HBAR	**Hatsburg**	**22.37**	**359**	*e*P	**P**	**04 00 17.6**	**-0.9**
425A	**Indio Mountain** baz=22	**22.39**	**324**	P	**P**	**04 00 20.9**	**+1.9**
Z30A	**Sanderson Ranc** baz=23	**22.52**	**335**	P	**P**	**04 00 21.2**	**+0.9**
128A	**Castleberry Fa** baz=23	**22.55**	**332**	P	**P**	**04 00 21.3**	**+0.7**
Z29A	**Hungry Hill Ra** baz=23	**22.75**	**334**	P	**P**	**04 00 23.4**	**+0.7**
Y31A	**Rekieta Farm,** baz=23	**22.78**	**337**	P	**P**	**04 00 24.0**	**+1.1**
CPCT	**Cooper Cave**	**22.80**	**12**	*e*P	**P**	**04 00 22.2**	**-0.8**
325A	**Bean Ranch, Si** baz=23	**22.83**	**325**	P	**P**	**04 00 25.1**	**+1.5**
226B	**Tecolote Peak,** baz=23	**22.94**	**328**	P	**P**	**04 00 26.9**	**+2.3**
WVT	**Waverly** comp=Z,7.3nm,0.8s	**23.02**	**4**	*e*P	**P**	**04 00 24.1**	**-1.2**
GLAT	**Glass**	**23.08**	**1**	*e*P	**P**	**04 00 26.1**	**+0.2**
TKL	**Tuckaleechee C**	**23.15**	**13**	P	**P**	**04 00 26.2**	**-0.4**
TKL	**Tuckaleechee C**	**23.15**	**13**	P	**P**	**04 00 26.2**	**-0.4**
	comp=Z,18nm,1.1s,baz=190,slow=8.9,SNR=9.8						
TKL				LR	LR	04 10 06.3	
	comp=Z,483nm,20.2s,baz=210,slow=38						
ATAH	**Atahualpa**	**23.16**	**150**	P	**P**	**04 00 30.1**	**+2.8**
ATAH	**Atahualpa**	**23.16**	**150**	P	**P**	**04 00 30.1**	**+2.8**
	comp=Z,4.8nm,0.7s,baz=69,slow=3.5,SNR=4.0						
ATAH				LR	LR	04 08 38.6	
	comp=Z,354nm,18.3s,baz=359,slow=34						
324A	**Moseley Ranch,** baz=23,SNR=8.2	**23.17**	**325**	P	**P**	**04 00 28.6**	**+1.6**
Y29A	**Porterfield Fa** baz=23	**23.25**	**335**	P	**P**	**04 00 29.0**	**+1.3**
225A	**Deer Hill, Car** baz=23	**23.31**	**327**	P	**P**	**04 00 29.8**	**+1.4**
X30A	**Coker Ranch, T** baz=24,SNR=14	**23.44**	**337**	P	**P**	**04 00 30.5**	**+1.0**
PARMO	**Parma**	**23.47**	**0**	*e*P	**P**	**04 00 30.9**	**+1.3**
Z27A	**Tatum** baz=24	**23.47**	**331**	P	**P**	**04 00 31.0**	**+1.1**
224A	**Cornudas Mount** baz=24	**23.67**	**325**	P	**P**	**04 00 33.4**	**+1.7**
Z26A	**Caprock** baz=24	**23.80**	**330**	P	**P**	**04 00 34.3**	**+1.3**
Y27A	**Causey** baz=24	**23.92**	**332**	P	**P**	**04 00 35.2**	**+1.2**
124A	**Stringfield Ra** baz=24	**24.11**	**327**	P	**P**	**04 00 37.8**	**+1.9**
SIUC	**Southern Illin** comp=Z,80nm,1.2s	**24.53**	**1**	*e*P	**P**	**04 00 39.7**	**+0.3**
Z24A	**Sheeppen Canyo** baz=25	**24.55**	**328**	P	**P**	**04 00 42.5**	**+2.7**
Y25A	**Mesa, Roswell** baz=25	**24.68**	**330**	P	**P**	**04 00 42.8**	**+1.8**
USIN	**University of** comp=Z,34nm,0.8s	**24.85**	**4**	*e*P	**P**	**04 00 41.8**	**-0.5**
320A	**Kipp Ranch, An** baz=25	**24.92**	**320**	P	**P**	**04 00 46.0**	**+2.8**
WCI	**Wyandotte Cave** comp=Z,14nm,0.8s	**25.25**	**7**	*e*P	**P**	**04 00 45.4**	**-0.6**
121A	**Cookes Peak, D** baz=26	**25.30**	**323**	P	**P**	**04 00 49.4**	**+2.8**
220A	**Playas Peak, P** baz=26	**25.30**	**321**	P	**P**	**04 00 49.2**	**+2.5**
319A	**Douglas** baz=26	**25.42**	**319**	P	**P**	**04 00 50.1**	**+2.4**
T31A	**Randall Ranch,** baz=26,SNR=5.0	**25.43**	**342**	⇑P	**P**	**04 00 48.6**	**+0.9**
X24A	**Lazy VL Ranch,** baz=26	**25.56**	**329**	P	**P**	**04 00 51.1**	**+2.1**
OLIL	**Olney**	**25.59**	**3**	*e*P	**P**	**04 00 49.8**	**+0.8**
W25A	**X Bar L Ranch,** baz=26	**25.62**	**332**	P	**P**	**04 00 51.3**	**+1.8**
V26A	**Tequesquite Ra** baz=26	**25.80**	**334**	P	**P**	**04 00 52.7**	**+1.5**
U27A	**Thompson Grove** baz=26	**25.93**	**336**	P	**P**	**04 00 54.3**	**+2.0**
W24A	**Lazy 6 Ranch,** baz=26	**26.06**	**330**	P	**P**	**04 00 55.7**	**+2.1**
Z20A	**Nine Sixteen R** baz=26	**26.18**	**323**	P	**P**	**04 00 57.4**	**+2.7**
ANMO	**Albuquerque** comp=Z,134nm,19.9s,baz=32,slow=41	**26.37**	**328**	LR	LR	04 13 18.1	
V24A	**Rampart Ranch,** baz=26	**26.41**	**331**	P	**P**	**04 00 58.9**	**+2.1**
R31A	**Burdett** baz=26,SNR=7.6	**26.49**	**343**	⇑P	**P**	**04 00 58.7**	**+1.5**
R30A	**Dighton** baz=27	**26.70**	**342**	P	**P**	**04 01 01.2**	**+2.0**
TUC	**Tucson** comp=Z,19nm,1.1s	**27.00**	**319**	*e*P	P	04 01 08.1	+6.1
U23A	**El Rito** baz=28	**27.34**	**331**	P	**P**	**04 01 07.0**	**+1.9**
ACSO	**Alum Creek Sta** comp=Z,6.5nm,0.9s	**27.72**	**12**	*e*P	**P**	**04 01 06.7**	**-1.5**
JFWS	**Jewell Farm** comp=Z,5.4nm,0.6s	**29.71**	**360**	*e*P	**P**	**04 01 24.2**	**-1.7**
ECSD	**EROS Data Cent** comp=Z,11nm,1.3s	**31.06**	**351**	*e*P	**P**	**04 01 37.1**	**-0.7**
LDFC	**Landfair** comp=Z,13nm,1.0s	**31.54**	**318**	*e*P	**P**	**04 01 44.9**	**+2.7**
CCUT	**Cedar City**	**32.07**	**324**	*e*P	P	04 01 53.3	+6.3
SADO	**Sadowa**	**32.90**	**14**	P	**P**	**04 01 52.6**	**-1.2**
SADO	**Sadowa**	**32.90**	**14**	P	**P**	**04 01 52.6**	**-1.2**
	comp=Z,3.2nm,0.5s,baz=255,slow=5.4,SNR=9.6						
SADO				LR	LR	04 16 07.7	
	comp=Z,304nm,19.2s,baz=188,slow=38						
COWI	**Conover** comp=Z,3.8nm,0.5s	**32.90**	**1**	*e*P	**P**	**04 01 52.9**	**-1.1**
DAU	**Daniels Canyon**	**33.00**	**329**	*e*P	P	04 01 58.7	+3.4
LONY	**Lake Ozonia** comp=Z,6.8nm,0.9s	**34.06**	**20**	*e*P	**P**	**04 02 02.6**	**-1.5**
PDAR	**Pinedale Array**	**34.07**	**334**	P	**P**	**04 02 04.5**	**0.0**
PDAR				PcP	**PcP**	**04 04 42.3**	**+1.1**
PDAR	**Pinedale Array**	**34.07**	**334**	P	**P**	**04 02 04.5**	**0.0**
	comp=Z,0.3nm,0.5s,baz=139,slow=8.4,SNR=3.1						
PDAR				PcP	**PcP**	**04 04 42.3**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=188,slow=2.5,SNR=4.1						
SAML	**Samuel**	**34.47**	**128**	*e*P	**P**	**04 02 07.2**	**-0.7**
	comp=Z,15nm,1.0s						
EYMN	**Ely**	**34.77**	**358**	*e*P	**P**	**04 02 08.6**	**-1.5**
	comp=Z,69nm,2.3s						
SNOW	**Snow King Moun**	**35.15**	**333**	*e*P	**P**	**04 02 14.8**	**+1.1**
LOHW	**Long Hollow** comp=Z,3.2nm,0.9s	**35.20**	**334**	*e*P	**P**	**04 02 15.1**	**+0.9**
TPAW	**Teton Pass**	**35.26**	**333**	*e*P	**P**	**04 02 15.5**	**+0.8**
AGMN	**Agassiz Nation** comp=Z,14nm,0.9s	**35.44**	**353**	*e*P	**P**	**04 02 14.9**	**-0.9**
NVAR	**Mina Array Bea**	**35.61**	**320**	P	**P**	**04 02 20.2**	**+2.5**
NVAR	**Mina Array Bea**	**35.61**	**320**	P	**P**	**04 02 20.2**	**+2.5**
	comp=Z,9.0nm,0.7s,baz=134,slow=7.7,SNR=8.2						
NVAR				LR	LR	04 18 59.3	
	comp=Z,353nm,20.7s,baz=108,slow=40						
LPAZ	**La Paz** comp=Z,2.7nm,0.8s	**36.32**	**143**	*e*P	**P**	**04 02 24.9**	**+0.5**
LPAZ	**La Paz**	**36.32**	**143**	P	**P**	**04 02 25.5**	**+1.1**
	comp=Z,1.8nm,0.6s,baz=324,slow=9.4,SNR=8.0						
LPAZ				LR	LR	04 17 45.0	
	comp=Z,210nm,18.1s,baz=51,slow=37						
GCMT	**Greycliff** comp=Z,2.3nm,1.0s	**36.61**	**337**	*e*P	**P**	**04 02 25.9**	**-0.2**
MCMT	**McKenzie Canyo** comp=Z,1.6nm,0.8s	**37.15**	**333**	*e*P	**P**	**04 02 32.1**	**+1.2**
ULM	**Lac du Bonnet**	**37.36**	**354**	P	**P**	**04 02 30.8**	**-1.4**
ULM	**Lac du Bonnet**	**37.36**	**354**	P	**P**	**04 02 30.8**	**-1.4**
	comp=Z,4.7nm,0.5s,baz=169,slow=11,SNR=6.9						
ULM				LR	LR	04 20 41.3	
	comp=Z,238nm,20.1s,baz=154,slow=41						
BEKR	**Beckworth** comp=Z,3.8nm,1.0s	**37.75**	**321**	*e*P	**P**	**04 02 38.0**	**+2.1**
OHCM	**Honcut**	**38.15**	**319**	*e*P	P	04 02 42.4	+3.3
WVOR	**Wild Horse Val** comp=Z,2.2nm,0.8s	**38.34**	**325**	*e*P	**P**	**04 02 43.2**	**+2.4**
EGMT	**Eagleton** comp=Z,8.7nm,1.1s	**38.52**	**339**	*e*P	**P**	**04 02 42.7**	**+0.6**
MSO	**Missoula**	**39.19**	**334**	*e*P	**P**	**04 02 50.8**	**+3.0**
KIPM	**Iron Peak** comp=Z,11nm,1.0s	**39.70**	**318**	*e*P	**P**	**04 02 54.4**	**+2.3**
YBH	**Yreka Blue Hor**	**40.29**	**321**	P	**P**	**04 02 57.8**	**+0.8**
YBH	**Yreka Blue Hor**	**40.29**	**321**	P	**P**	**04 02 57.8**	**+0.8**
	comp=Z,1.9nm,0.8s,baz=66,slow=11,SNR=7.8						
KHMM	**Horse Mountain** comp=Z,9.1nm,0.8s	**40.44**	**319**	*e*P	**P**	**04 03 00.5**	**+2.2**
SIV	**San Ignacio**	**40.65**	**134**	P	**P**	**04 03 00.6**	**+0.4**
SIV	**San Ignacio**	**40.65**	**134**	P	**P**	**04 03 00.6**	**+0.4**
	comp=Z,6.6nm,0.8s,baz=323,slow=9.2,SNR=17						
LVC	**Limon Verde** comp=Z,8.7nm,1.1s	**41.06**	**150**	*e*P	**P**	**04 03 04.0**	**+0.3**
LVC	**Limon Verde**	**41.06**	**150**	P	**P**	**04 03 04.8**	**+1.1**
	comp=Z,5.1nm,1.0s,baz=278,slow=1.9,SNR=4.4						
SCHQ	**Schefferville** comp=Z,14nm,0.6s	**45.42**	**19**	*e*P	**P**	**04 03 36.0**	**-2.3**
SCHQ	**Schefferville**	**45.42**	**19**	P	**P**	**04 03 35.9**	**-2.3**
	comp=Z,12nm,0.5s,baz=216,slow=6.6,SNR=51						
SCHQ				LR	LR	04 25 06.7	
	comp=Z,240nm,19.7s,baz=235,slow=40						
LCO	**Las Campanas** comp=Z,6.3nm,0.8s	**45.82**	**156**	*e*P	**P**	**04 03 43.3**	**+1.3**
BDFB	**Brasilia**	**50.39**	**123**	LR	LR	04 28 01.4	
	comp=Z,153nm,18.6s,baz=25,slow=39						
CPUP	**Villa Florida**	**50.44**	**141**	P	P	**04 04 16.8**	**-0.6**
CPUP	**Villa Florida**	**50.44**	**141**	P	P	**04 04 16.8**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=333,slow=9.0,SNR=4.3						
YKA	**Yellowknife Ar**	**52.36**	**346**	P	P	**04 04 30.6**	**-0.7**
YKA	**Yellowknife Ar**	**52.36**	**346**	P	P	**04 04 30.5**	**-0.7**
	comp=Z,0.8nm,0.4s,baz=132,slow=7.5,SNR=28						
PLCA	**Paso Flores** comp=Z,3.0nm,0.6s	**56.50**	**162**	*e*P	**P**	**04 05 01.6**	**-0.1**
PLCA	**Paso Flores**	**56.50**	**162**	P	**P**	**04 05 01.6**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=336,slow=10,SNR=5.2						
ILAR	**Eielson Array**	**64.44**	**337**	P	**P**	**04 05 55.1**	**-0.3**
ILAR	**Eielson Array**	**64.44**	**337**	P	**P**	**04 05 55.1**	**-0.3**
	comp=Z,0.9nm,0.8s,baz=120,slow=4.1,SNR=8.3						
EKA	**Eskdalemuir Ar**	**77.55**	**36**	P	P	04 07 11.8	-3.3
EKA	**Eskdalemuir Ar**	**77.55**	**36**	P	P	04 07 11.8	-3.3
	comp=Z,0.2nm,0.4s,baz=274,slow=5.8,SNR=6.1						
SPITS	**Spitsbergen Ar**	**80.58**	**12**	P	**P**	**04 07 30.6**	**-0.6**
SPITS	**Spitsbergen Ar**	**80.58**	**12**	P	**P**	**04 07 30.6**	**-0.6**
	comp=Z,3.2nm,1.0s,baz=222,slow=4.5,SNR=4.3						
DBIC	**Dimbokro** comp=Z,314nm,19.4s,baz=76,slow=36	**83.79**	**85**	LR	LR	04 44 46.7	
ARCES	**ARCESS Array B**	**86.37**	**19**	P	**P**	**04 07 59.2**	**-1.9**
ARCES	**ARCESS Array B**	**86.37**	**19**	P	**P**	**04 07 59.2**	**-1.9**
	comp=Z,3.5nm,1.0s,baz=282,slow=4.5,SNR=7.0						
GERES	**GERESS Array B**	**89.04**	**40**	P	**P**	**04 08 13.7**	**-0.8**
GERES	**GERESS Array B**	**89.04**	**40**	P	**P**	**04 08 13.7**	**-0.8**
	comp=Z,0.3nm,0.8s,baz=243,slow=2.4,SNR=3.5						
KEST	**Kesra**	**89.86**

NVR				*e*Sn	**Sb**	**04 23 59.6**	**-0.5**
PLG	**Polygyros**	**1.07**	**147**	*e*PN	**Pg**	**04 23 50.8**	**-0.1**
PLG				*e*SN	**Sb**	**04 24 03.8**	**-1.2**
PLG	**Polygyros**	**1.07**	**147**	*e*Pn	**Pg**	**04 23 50.8**	**-0.1**
PLG				*e*Sn	**Sb**	**04 24 03.8**	**-1.2**
FNA	**Florina**	**1.09**	**244**	*e*PN	**Pn**	**04 23 51.8**	**0.0**
FNA				*e*SN	**Sn**	**04 24 07.4**	**+0.4**
FNA	**Florina**	**1.09**	**244**	*e*Pn	**Pn**	**04 23 51.8**	**0.0**
FNA				*e*Sn	**Sn**	**04 24 07.4**	**+0.4**
LIT	**Litokhoron**	**1.18**	**187**	*e*PN	**Pg**	**04 23 53.0**	**0.0**
LIT	**Litokhoron**	**1.18**	**187**	*e*Pn	**Pg**	**04 23 53.0**	**0.0**
KZN	**Kozani**	**1.18**	**216**	*e*PN	**Pg**	**04 23 54.0**	**+0.9**
KZN	**Kozani**	**1.18**	**216**	*e*Pn	**Pg**	**04 23 54.0**	**+0.9**
VTS	**Vitosha**	**1.38**	**17**	*e*Pg	**Pg**	**04 23 57.1**	**+0.3**
VTS				*i* Sg	**Sg**	**04 24 15.5**	**+0.8**
VTS	**Vitosha**	**1.38**	**17**	*e*Pg	**Pg**	**04 23 57.1**	**+0.3**
VTS				*i* Sg	**Sg**	**04 24 15.5**	**+0.8**
BARS	**Barje**	**1.67**	**338**	*e*Pg	**Pb**	**04 24 00.9**	**-0.3**
BARS				*e*Sg	**Sg**	**04 24 23.7**	**-0.3**
BARS	**Barje**	**1.67**	**338**	*e*Pg	**Pb**	**04 24 00.9**	**-0.3**
BARS				*e*Sg	**Sg**	**04 24 23.7**	**-0.3**
PLD	**Plovdiv**	**1.73**	**61**	*e*Sg	**Sg**	**04 24 28.1**	**+2.0**
ZAPS	**Zavoj**	**2.00**	**359**	*e*Pn	**Pb**	**04 24 06.2**	**-0.6**
AGG	**Agios Georgios**	**2.26**	**187**	*e*PN	**Pn**	**04 24 07.8**	**0.0**
AGG	**Agios Georgios**	**2.26**	**187**	*e*Pn	**Pn**	**04 24 07.8**	**0.0**
ALN	**Alexandroupoli**	**2.58**	**97**	*e*PN	**Pn**	**04 24 11.7**	**-0.4**
ALN	**Alexandroupoli**	**2.58**	**97**	*e*Pn	**Pn**	**04 24 11.7**	**-0.4**
GRUS	**Gruza**	**2.99**	**332**	*e*Pn	**Pn**	**04 24 17.6**	**-0.1**
GRUS	**Gruza**	**2.99**	**332**	*e*Pn	**Pn**	**04 24 17.6**	**-0.1**
DIVS	**Divibare**	**3.45**	**326**	*e*Pn	**Pn**	**04 24 23.9**	**-0.2**
DIVS	**Divibare**	**3.45**	**326**	*e*Pn	**Pn**	**04 24 23.9**	**-0.2**

NNC ***14*** *04:34:34.3±1.6, 39.°97N×73.°02E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=15.1km s-min=6.3km az=163.0*

ISC 14 04:34:41.2±3.7, **40.°1N**±0.°3×**72.°83E**±0.°09, **h36**km±**n10**, σ1=**65**/10, **4C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu** SNR=45	**2.10**	**18**	P	**Pn**	**04 35 13.4**	**-0.7**
EKS2	**Erkin-Say** SNR=5.7	**2.62**	**15**	P	**Pn**	**04 35 20.5**	**-0.6**
KZA	**Kyzart** SNR=15	**2.67**	**43**	P	Pn	04 35 16.7	-5.2
AAK	**Ala-Archa** SNR=20	**2.79**	**26**	P	**Pn**	**04 35 21.5**	**-2.0**
KBK	**Karagaybulak** SNR=9.7	**2.98**	**32**	P	**Pn**	**04 35 28.0**	**+1.9**
ULHL	**Ulahol** SNR=15	**3.33**	**50**	P	**Pn**	**04 35 31.3**	**+0.4**
KK31	**Karatay Array** 2.8nm,0.3s,baz=142,slow=12,SNR=94	**3.44**	**330**	⇓Pn	**Pn**	**04 35 32.3**	**+0.1**
KK31	11nm,0.5s,baz=150,slow=22,SNR=5.0			⇑Lg	Lg	04 36 30.0	
TKM2	**Tokmak 2** 9.1nm,0.7s	**3.47**	**36**	⇑Pn	**Pn**	**04 35 30.1**	**-2.7**
TKM2	26nm,0.9s			⇓Sn	**Sn**	**04 36 14.2**	**+1.4**
AB31	**Akbulak array** 0.5nm,0.5s,baz=136,slow=13,SNR=15	**12.91**	**319**	⇑P	**Pn**	**04 37 41.3**	**-0.7**
AKTO	**Aktyubinsk** 2.4nm,0.9s	**14.63**	**320**	⇑P	**Pn**	**04 38 06.1**	**+0.8**

ISCJB ***14*** *04:52:05.2±0.9, 41.°22N±0.°05×22.°73E±0.°08, h2km±13km, Error ellipse: s-maj=10.7km s-min=7.8km az=142.1*
SKO ***14*** *04:52:05.2, 41.°26N×22.°67E, h15km, M1.2, ML1.5*
ATH ***14*** *04:52:06.3, 41.°23N×22.°74E, h5km, MD2.9/5*
CSEM ***14*** *04:52:06.3, 41.°23N×22.°74E, h5km, MD2.9, After ATH*

ISC 14 04:52:05.4±1.0, **41.°27N**±0.°06×**22.°73E**±0.°05, **h11**km±10km, **n11**, σ0=**31**/18, **Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.13**	**293**	*e*Pg	**Pg**	**04 52 08.4**	**-0.1**
VAY				*i* Sg	**Sg**	**04 52 10.7**	**-0.1**
VAY	comp=E,89nm,0.2s			*e*Lg	Lg	04 52 10.7	
VAY	comp=N,299nm,0.2s			*e*Lg	Lg	04 52 10.8	
SOH	**Sokhos**	**0.65**	**133**	*e*PB	**Pg**	**04 52 18.3**	**+0.3**
SOH				*e*SB	**Sg**	**04 52 26.8**	**+0.3**
SOH	**Sokhos**	**0.65**	**133**	*e*Pb	**Pg**	**04 52 18.3**	**+0.3**
SOH				*e*Sb	**Sg**	**04 52 26.8**	**+0.3**
NVR	**Nevrokopi**	**0.85**	**84**	*e*PB	**Pn**	**04 52 23.3**	**-0.1**
NVR				*e*SB	**Sb**	**04 52 33.6**	**-0.1**
NVR	**Nevrokopi**	**0.85**	**84**	*e*Pb	**Pn**	**04 52 23.3**	**-0.1**
NVR				*e*Sb	**Sb**	**04 52 33.6**	**-0.1**
PLG	**Polygyros**	**1.05**	**149**	*e*PG	**Pg**	**04 52 25.4**	**-0.1**
PLG				*e*SB	**Sb**	**04 52 39.2**	**-0.1**
PLG	**Polygyros**	**1.05**	**149**	*e*Pg	**Pg**	**04 52 25.4**	**-0.1**
PLG				*e*Sb	**Sb**	**04 52 39.2**	**-0.1**
FNA	**Florina**	**1.14**	**245**	*e*PN	**Pb**	**04 52 27.5**	**+0.4**
FNA	**Florina**	**1.14**	**245**	*e*Pn	**Pb**	**04 52 27.5**	**+0.4**
LIT	**Litokhoron**	**1.18**	**189**	*e*PG	**Pb**	**04 52 27.4**	**-0.5**
LIT	**Litokhoron**	**1.18**	**189**	*e*Pg	**Pb**	**04 52 27.4**	**-0.5**

TIF 14 04:55:50.5, 43.°31N×46.°42E, h16km±16km, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBLG	**Delisi**	**2.01**	**219**	P	Pb	04 56 26.7	-0.1
TBLG				S	Sb	04 56 52.6	+1.0
DGRG	**David-gareji**	**2.02**	**203**	P	Pb	04 56 27.7	+0.8
DGRG				S	Sg	04 56 54.5	-1.0
GOR	**Gori**	**2.16**	**233**	P	Pg	04 56 33.0	+0.9
GOR				S	Sb	04 56 56.3	+0.3
ONI	**Oni**	**2.30**	**253**	P	Pb	04 56 30.3	-1.4
ONI				S	Sb	04 57 00.0	+0.1
KZR	**Kazreti**	**2.44**	**218**	P	Pg	04 56 35.8	-1.6
KZR				S	Sb	04 57 04.8	+0.9
AKH	**Akhalkalaki**	**2.88**	**230**	P	Pb	04 56 40.9	-1.0
AKH				S	Sb	04 57 16.5	-0.6

CASC 14 04:55:51.6±1.2, **14.°49N**×**89.°39W, h34**km, **MD3.6, ML3.1, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRL	**Marmol**	**0.65**	**333**	*e*P	Sn	04 56 24.9	+11
SNJE	**San Jose**	**0.65**	**199**	*e*P	Pb	04 56 05.3	+0.3
SBLS	**San Blas**	**0.68**	**199**	*e*P	Pn	04 56 04.6	-0.6
BOQS	**Boqueron**	**0.76**	**172**	*e*P	Pb	04 56 06.9	+0.2
SNET	**Serv Nac Est T**	**0.81**	**169**	*e*S	Sb	04 56 30.1	+12
SNET	comp=Z,498nm,0.2s			AML	AML	04 56 35.2	
NBG	**Las Nubes**	**0.93**	**276**	*e*P	Pb	04 56 16.1	+6.4
FUG	**Fuego 3**	**1.41**	**269**	*e*P	Pn	04 56 15.3	+0.2

MOS ***14*** *05:02:23.9±0.8, 53.°62N×162.°08E, h8km, mb4.1/10, Error ellipse: s-maj=14.6km s-min=9.2km az=66.2*
KRSC ***14*** *05:02:23.6±0.3, 53.°57N×162.°06E, h5km±5km, ML4.6*
ISCJB ***14*** *05:02:24.4±0.9, 53.°57N±0.°02×162.°08E±0.°05, h8km±6km, mb3.8/16, Error ellipse: s-maj=5.8km s-min=2.8km az=30.2*
IDC ***14*** *05:02:24.6±0.7, 53.°78N×161.°82E, h0km, mb3.8/15, mb1 4.1/17, mb1mx3.9/30, mbtmp3.9/17, ML3.7/2, MS2.9/1, Ms1 2.9/1, ms1mx1.8/31, Error ellipse: s-maj=23.4km s-min=13.0km az=158.0*

ISC 14 05:02:25.1±1.7, **53.°62N**±0.°04×**161.°93E**±0.°06, **h2**km±10km, **n62**, σ1=**09**/100, **mb3.9**/16, **Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.95**	**353**	PN	**Pg**	**05 02 42.7**	**-0.6**
MKZ				S	**Sg**	**05 02 56.5**	**+0.9**
MKZ	**Mys Kozlova**	**0.95**	**353**	P	**Pg**	**05 02 42.7**	**-0.6**
MKZ				*i* S	**Sg**	**05 02 56.5**	**+0.9**
SPN	**Mys Shipunski**	**1.26**	**246**	PN	**Pg**	**05 02 48.6**	**-0.6**
SPN				S	**Sb**	**05 03 06.5**	**+0.4**
SPN	**Mys Shipunski**	**1.26**	**246**	P	**Pg**	**05 02 48.6**	**-0.6**
SPN				*i* S	**Sb**	**05 03 06.5**	**+0.4**
KII	**Karymskiy**	**1.53**	**287**	P	**Pn**	**05 02 52.7**	**-0.8**
NLC	**Nalytchevo**	**1.61**	**255**	PN	**Pn**	**05 02 54.2**	**-0.3**
NLC				S	**Sn**	**05 03 15.8**	**-0.1**
NLC	**Nalytchevo**	**1.61**	**255**	P	**Pn**	**05 02 54.2**	**-0.3**
NLC				*i* S	**Sn**	**05 03 15.8**	**-0.1**
SDLR	**Sedlovina**	**1.86**	**261**	P	**Pn**	**05 02 57.4**	**-0.6**
SDLR				*i* S	**Sn**	**05 03 22.2**	**+0.1**
UGLR	**Uglovaya**	**1.91**	**259**	P	**Pn**	**05 02 58.5**	**-0.2**
UGLR				*i* S	**Sn**	**05 03 24.4**	**+1.1**
SMAR	**Somma**	**1.91**	**261**	P	**Pn**	**05 02 58.5**	**-0.3**
SMAR				*i* S	**Sb**	**05 03 24.8**	**-0.2**
KRER	**Koryakskii**	**1.93**	**262**	P	**Pn**	**05 02 59.0**	**-0.1**
KRER				*i* S	**Sn**	**05 03 24.8**	**+0.8**
AVH	**Avacha**	**1.94**	**261**	P	**Pn**	**05 02 59.1**	**-0.1**
AVH				*i* S	**Sn**	**05 03 25.1**	**+0.9**
TUMR	**Tumrok**	**1.97**	**329**	P	**Pn**	**05 02 58.9**	**-0.7**
TUMR				*i* S	**Sn**	**05 03 24.8**	**0.0**
KOK	**Koryaka**	**2.00**	**262**	P	**Pn**	**05 02 59.7**	**-0.3**
KOK				*i* S	**Sn**	**05 03 26.0**	**+0.5**
PET	**Petropavlovsk**	**2.06**	**255**	*e*PN	**Pn**	**05 03 00.8**	**+0.2**
PET				*e*S	**Sn**	**05 03 25.6**	**-1.2**
PET	comp=E,837nm,0.5s			smax	smax		
PET	comp=N,868nm,0.6s			smax	smax		
PET	comp=Z,400nm,12.0s			MLR	MLR		
PET	comp=Z,700nm,12.0s			MLR	MLR		
PET	**Petropavlovsk**	**2.06**	**255**	P	**Pn**	**05 03 00.5**	**-0.1**
PET				*i* S	**Sb**	**05 03 28.3**	**-0.8**
KMNR	**Kamenistaya**	**2.36**	**336**	P	**Pn**	**05 03 05.2**	**+0.3**
KMNR				*i* S	**Sn**	**05 03 36.0**	**+1.6**
GNL	**Ganaly**	**2.38**	**273**	P	**Pn**	**05 03 05.4**	**+0.2**
GNL				*i* S	**Sn**	**05 03 36.1**	**+1.2**
RUS	**Russkaya**	**2.38**	**242**	PN	**Pn**	**05 03 05.5**	**+0.4**
RUS				S	**Sn**	**05 03 35.8**	**+1.0**
RUS	**Russkaya**	**2.38**	**242**	P	**Pn**	**05 03 05.5**	**+0.4**
RUS				*i* S	**Sn**	**05 03 35.8**	**+1.0**
BZGR	**Bezymyannyi-Gr**	**2.44**	**343**	P	**Pn**	**05 03 06.4**	**+0.4**
BZGR				*i* S	**Sn**	**05 03 37.7**	**+1.4**
BZMR	**Bezymyannaya**	**2.47**	**341**	P	**Pn**	**05 03 07.0**	**+0.5**
BZMR				*i* S	**Sn**	**05 03 38.0**	**+0.8**
ZLN	**Zelenaya**	**2.49**	**345**	P	**Pn**	**05 03 07.8**	**+1.1**
ZLN				*i* S	**Sn**	**05 03 39.5**	**+1.8**
BZWR	**Bezymyannyi-We**	**2.50**	**341**	P	**Pn**	**05 03 07.5**	**+0.7**
BZWR				*i* S	**Sn**	**05 03 39.2**	**+1.3**
KIRR	**Kirishev**	**2.52**	**339**	P	**Pn**	**05 03 07.6**	**+0.5**
KIRR				*i* S	**Sn**	**05 03 40.1**	**+1.7**
MTVR	**Mutnovka**	**2.53**	**245**	P	**Pn**	**05 03 08.1**	**+0.8**
MTVR				*i* S	**Sn**	**05 03 40.3**	**+1.5**
KPT	**Kopyto**	**2.55**	**338**	P	**Pn**	**05 03 08.5**	**+0.9**
KPT				*i* S	**Sn**	**05 03 41.1**	**+1.9**
LGNR	**Loginova**	**2.57**	**344**	P	**Pn**	**05 03 08.8**	**+0.8**
LGNR				*i* S	**Sn**	**05 03 41.5**	**+1.5**
PETK	**Petropavlovsk-**	**2.59**	**260**	PN	**Pn**	**05 03 08.7**	**+0.7**
PETK						05 03 39.9	
PETK	comp=Z,14nm,0.3s			pmax	pmax		
PETK	comp=N,24nm,0.3s			smax	smax		
PETK	comp=Z,204nm,18.3s			MLR	MLR		
PETK	**Petropavlovsk-** comp=Z,14nm,0.3s,baz=87,slow=19,SNR=101	**2.59**	**260**	Pn	**Pn**	**05 03 08.7**	**+0.7**
PETK				Sn	**Sn**	**05 03 39.9**	**-0.1**
PETK	comp=Z,24nm,0.3s,baz=101,slow=15,SNR=9.2			LR	LR	05 04 20.9	
PETK	comp=Z,204nm,18.3s,baz=66,slow=46			LR	LR		
CIRR	**Tsirk**	**2.59**	**345**	P	**Pn**	**05 03 08.8**	**+0.6**
CIRR				*i* S	**Sn**	**05 03 41.6**	**+1.3**
KOZ	**Kozyrevsk**	**2.72**	**335**	P	**Pn**	**05 03 10.4**	**+0.6**
KOZ				*i* S	**Sn**	**05 03 44.5**	**+1.3**
KOZR	**Kozyr**	**2.72**	**335**	PN	**Pn**	**05 03 10.4**	**+0.6**
KOZR				S	**Sn**	**05 03 44.5**	**+1.2**
KRSR	**Krestovskiy**	**2.72**	**344**	P	**Pn**	**05 03 10.4**	**+0.5**
KRSR				*i* S	**Sn**	**05 03 44.7**	**+1.3**
ASAK	**Asacha**	**2.73**	**245**	P	**Pn**	**05 03 11.8**	**+1.8**
ASAK				*i* S	**Sn**	**05 03 46.1**	**+2.5**
KLY	**Klyuchi**	**2.80**	**345**	PN	**Pn**	**05 03 10.6**	**-0.3**
KLY				S	**Sn**	**05 03 44.5**	**-0.6**
KLY	**Klyuchi**	**2.80**	**345**	P	**Pn**	**05 03 10.6**	**-0.3**
KLY				*i* S	**Sn**	**05 03 44.5**	**-0.6**
SMKR	**Semkarok**	**2.98**	**355**	P	**Pn**	**05 03 14.3**	**+0.8**
BDR	**Baidarnaya**	**2.99**	**352**	P	**Pn**	**05 03 14.3**	**+0.8**
BDR				*i* S	**Sn**	**05 03 51.5**	**+1.6**
SRDR	**Sredinnyy**	**2.99**	**336**	P	**Pn**	**05 03 13.8**	**+0.2**
SRDR				*i* S	**Sn**	**05 03 50.4**	**+0.4**
SRKR	**Sorokina**	**3.08**	**352**	P	**Pn**	**05 03 15.4**	**+0.7**
SRKR				*i* S	**Sn**	**05 03 53.3**	**+1.3**
SKR	**Severo-Kuril's**	**4.63**	**233**	*e*PN	**Pn**	**05 03 37.3**	**+1.3**
ASAJ	**Asahikawa** comp=Z,0.6nm,0.3s,baz=73,slow=12,SNR=6.3	**15.84**	**241**	Pn	**Pn**	**05 06 09.7**	**+0.7**
MAT	**Matsushiro**	**23.74**	**234**	P	**P**	**05 07 40.9**	**+2.4**
KDAK	**Kodiak Island** comp=Z,1.6nm,0.5s,baz=280,slow=6.1,SNR=4.1	**25.58**	**62**	P	**P**	**05 07 54.0**	**-1.2**
ILAR	**Eielson Array** comp=Z,1.2nm,0.8s,baz=260,slow=8.0,SNR=26	**27.66**	**46**	P	**P**	**05 08 13.0**	**-0.9**
KSRS	**Korea Array** comp=Z,0.5nm,0.4s,baz=45,slow=9.5,SNR=2.9	**28.43**	**249**	P	**P**	**05 08 23.8**	**+2.9**
INK	**Inuvik** comp=Z,0.9nm,0.6s,baz=169,slow=6.1,SNR=4.6	**32.78**	**38**	P	**P**	**05 08 57.9**	**-1.1**
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.6s,baz=299,slow=7.9,SNR=5.6	**42.02**	**44**	P	**P**	**05 10 16.7**	**-0.7**
ZALV	**Zalesovo Beam**	**43.42**	**303**	P	**P**	**05 10 29.0**	**+0.2**
ZALV	**Zalesovo Beam** comp=Z,0.2nm,0.4s,baz=52,slow=9.3,SNR=2.7	**43.42**	**303**	P	**P**	**05 10 29.0**	**+0.2**
MKAR	**Makanchi Array** comp=Z,1.0nm,0.5s	**48.92**	**296**	P	**P**	**05 11 10.5**	**-1.7**
MKAR				pmax	pmax		
MKAR	**Makanchi Array** comp=Z,0.5nm,0.5s,baz=66,slow=8.4,SNR=6.4	**48.92**	**296**	P	**P**	**05 11 10.5**	**-1.7**
NVAR	**Mina Array Bea** comp=Z,1.7nm,0.6s,baz=308,slow=7.8,SNR=12	**54.53**	**72**	P	**P**	**05 11 55.9**	**+1.4**
PDAR	**Pinedale Array** comp=Z,1.1nm,0.8s,baz=325,slow=2.3,SNR=8.3	**56.30**	**62**	P	**P**	**05 12 07.8**	**+0.6**
CMAR	**Chiang Mai Arr** comp=Z,1.0nm,0.4s,baz=25,slow=6.8,SNR=4.8	**59.37**	**259**	P	**P**	**05 12 30.1**	**+1.4**
FINES	**FINESS Array B** comp=Z,4.8nm,1.0s,baz=27,slow=7.8,SNR=3.4	**60.07**	**33**	P	**P**	**05 12 31.1**	**-1.9**
NOA	**NORSAR Array B** comp=Z,0.9nm,0.7s,baz=15,slow=5.5,SNR=4.7	**63.34**	**345**	P	**P**	**05 12 52.4**	**-2.7**
HFS	**Hagfors** comp=Z,3.4nm,1.1s,baz=42,slow=6.6,SNR=4.4	**63.78**	**343**	P	**P**	**05 12 55.0**	**-3.0**
TXAR	**Lajitas Array** comp=Z,0.6nm,0.6s,baz=303,slow=5.7,SNR=12	**69.42**	**68**	P	**P**	**05 13 34.5**	**-0.1**
WRA	**Warramunga Arr** comp=Z,0.4nm,0.6s,baz=22,slow=6.1,SNR=6.3	**77.03**	**207**	P	**P**	**05 14 18.6**	**-0.8**
ASAR	**Alice Springs** comp=Z,0.2nm,0.7s,baz=8.9,slow=6.6,SNR=2.9	**80.70**	**206**	P	**P**	**05 14 38.7**	**-0.8**

DDA ***14*** *05:05:00.9, 35.°26N×33.°98E, h7km, MD3.1*
NSSC ***14*** *05:05:03.9±2.7, 35.°35N×34.°44E, h1km±19km, MD1.7, ML2.0*
CSEM ***14*** *05:05:03.2±0.4, 35.°30N×34.°00E, h10km, Mw2.9, Error ellipse: s-maj=13.5km s-min=7.9km az=154.0*
NIC ***14*** *05:05:04.1±0.2, 35.°52N×33.°78E, h11km, ML3.0, MW2.9*

ISC 14 05:05:03.1±1.2, **35.°29N**±0.°03×**33.°99E**±0.°03, **h17**km±10km, **n33**, σ1=**78**/47, **2C-2D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni** 16nm,0.2s	**0.28**	**172**	P	**Pn**	**05 05 15.1**	**+2.7**
PHNC				S	Sb	05 05 23.0	+8.9
PHNC	**Paralimni** 16nm,0.2s	**0.28**	**172**	P	**Pn**	**05 05 15.1**	**+2.7**
PHNC				S	Sb	05 05 23.0	+8.9
CSS	**Prodhromos** 6.6nm,0.3s	**0.63**	**239**	P	**Pb**	**05 05 17.2**	**+1.7**
CSS				S	**Sb**	**05 05 26.9**	**+2.9**
CSS	**Prodhromos**	**0.63**	**239**	*e*PG	**Pb**	**05 05 17.0**	**+1.4**
CSS				*e*SG	**Sb**	**05 05 26.9**	**+2.9**
CSS	**Prodhromos** 6.6nm,0.3s	**0.63**	**239**	P	**Pb**	**05 05 17.2**	**+1.7**
CSS				S	**Sb**	**05 05 26.9**	**+2.9**
MAMC	**Mammari**	**0.64**	**260**	P	**Pn**	**05 05 18.2**	**+0.9**
MAMC	**Mammari**	**0.64**	**260**	P	**Pn**	**05 05 18.2**	**+0.9**
LEF	**Lefka**	**0.91**	**260**	*e*PG	**Pg**	**05 05 19.0**	**-1.9**
LEF				*e*SG	**Sg**	**05 05 32.6**	**-0.2**
ALFC	**Alevga** 5.1nm,0.2s	**1.14**	**264**	⇓P	**Pb**	**05 05 23.6**	**-0.8**
ALFC				S	**Sb**	**05 05 37.4**	**-1.5**
ALFC	**Alevga** 5.1nm,0.2s	**1.14**	**264**	⇓*i*P	**Pb**	**05 05 23.6**	**-0.8**
ALFC				S	**Sb**	**05 05 37.4**	**-1.5**
KIZK	**Mersin**	**1.20**	**6**	*i* P	**Pg**	**05 05 26.9**	**+0.6**
KIZK				*i* S	**Sg**	**05 05 41.3**	**-0.7**
KIZK	**Mersin**	**1.20**	**6**	*i* P	**Pg**	**05 05 26.9**	**+0.6**
KIZK				*i* S	**Sg**	**05 05 41.3**	**-0.7**
AKMC	**Akamas**	**1.38**	**260**	P	**Pn**	**05 05 27.8**	**+0.3**
AKMC	**Akamas**	**1.38**	**260**	P	**Pn**	**05 05 27.8**	**+0.3**
PPCY	**Paphos**	**1.40**	**254**	⇑P	**Pn**	**05 05 27.8**	**0.0**
PPCY	**Paphos**	**1.40**	**254**	⇑P	**Pn**	**05 05 27.8**	**0.0**
ERMK	**Ermenek**	**1.61**	**328**	*i* P	**Pb**	**05 05 32.7**	**+0.3**
ERMK				*i* S	**Sn**	**05 05 52.4**	**+1.1**
ERMK	**Ermenek**	**1.61**	**328**	*i* P	**Pb**	**05 05 32.7**	**+0.3**
ERMK				*i* S	**Sn**	**05 05 52.4**	**+1.1**
GAZI	**Gazipasa**	**1.66**	**305**	*i* P	**Pn**	**05 05 31.4**	**0.0**
GAZI				*i* S	**Sn**	**05 05 50.3**	**-1.9**
GAZI	**Gazipasa**	**1.66**	**305**	*i* P	**Pn**	**05 05 31.4**	**0.0**
GAZI				*i* S	**Sn**	**05 05 50.3**	**-1.9**
YAYL	**Yayladag**	**1.88**	**66**	*i* P	**Pn**	**05 05 36.2**	**+1.7**
YAYL				*i* S	**Sn**	**05 05 58.4**	**+0.5**
YAYL	**Yayladag**	**1.88**	**66**	*i* P	**Pn**	**05 05 36.2**	**+1.7**
YAYL				*i* S	**Sn**	**05 05 58.4**	**+0.5**
HWQ	**Hawqa**	**1.90**	**121**	*e*P	**Pn**	**05 05 35.4**	**+0.6**
HWQ	**Hawqa**	**1.90**	**121**	*e*P	**Pn**	**05 05 35.4**	**+0.6**
BHL	**Bhannes**	**1.95**	**135**	*e*P	**Pn**	**05 05 34.4**	**-1.0**
BHL	**Bhannes**	**1.95**	**135**	*e*P	**Pn**	**05 05 34.4**	**-1.0**
WRDH	**Warideh**	**1.99**	**83**	*e*S	Sn	05 05 55.5	-5.1
WRDH	comp=E,47nm,0.2s			AML	AML	05 05 56.6	
WRDH	comp=N,71nm,0.2s			AML	AML	05 05 56.8	
HAWK	**Haweek**	**2.13**	**110**	*e*P	Pn	05 05 34.7	-3.2
HAWK				*e*S	**Sn**	**05 05 59.8**	**-4.2**
HAWK	comp=E,16nm,0.2s			AML	AML	05 06 00.5	
HAWK	comp=N,24nm,0.7s			AML	AML	05 06 00.7	
HAWK	comp=E,14nm,0.1s			AML	AML	05 06 02.4	
HAWK	**Haweek** SNR=45	**2.13**	**110**	*e*P	Pn	05 05 34.7	-3.2
HAWK	comp=E,14nm,0.1s,SNR=40			*e*S	**Sn**	**05 05 59.8**	**-4.2**
BTCH	**Batrach**	**2.15**	**69**	*e*P	Pn	05 05 34.3	-3.9
BTCH				*e*S	**Sn**	**05 06 00.0**	**-4.4**
BTCH	comp=E,48nm,0.2s			AML	AML	05 06 02.4	
BTCH	comp=N,37nm,0.2s			AML	AML	05 06 02.6	
BTCH	comp=Z,834nm,0.2s			AML	AML	05 06 05.0	
DRWC	**Darouich**	**2.55**	**58**	*e*P	**Pn**	**05 05 43.7**	**0.0**
DRWC	**Darouich** SNR=45	**2.55**	**58**	*e*P	**Pn**	**05 05 43.7**	**0.0**
AYKD	**Aykdinkavak**	**3.11**	**46**	*i* P	**Pn**	**05 05 53.2**	**+1.8**
AYKD				*i* S	**Sn**	**05 06 28.1**	**-0.1**

CSEM ***14*** *05:12:46.0, 42.°90N×13.°12E, h10km, MD1.8/7, After ROM*

ROM 14 05:12:46.0±0.1, **42.°90N×13.°12E, h10**km, **Md1.8**/7, **Ml0.8**/1, **Error ellipse: s-maj=1.4km s-min=0.7km az=84.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NRCA	**Norcia**	**0.06**	**183**	Pg	Pg	05 12 48.9	+0.6
NRCA				Sg	Sg	05 12 50.6	+0.6
NRCA	**Norcia**	**0.06**	**183**	Pg	Pg	05 12 48.9	+0.6
NRCA				Sg	Sg	05 12 50.6	+0.6
FDMO	**Fiordimonte**	**0.14**	**351**	Pg	Pg	05 12 49.8	+0.5
FDMO				Sg	Sg	05 12 52.3	+0.6
FDMO	**Fiordimonte**	**0.14**	**351**	Pg	Pg	05 12 49.8	+0.5
FDMO				Sg	Sg	05 12 52.3	+0.6
CESI	**CESI - Serrava**	**0.19**	**304**	Pg	Pg	05 12 50.8	+0.6
CESI				Sg	Sg	05 12 54.3	+1.2
CESI	**CESI - Serrava**	**0.19**	**304**	Pg	Pg	05 12 50.8	+0.6
CESI				Sg	Sg	05 12 54.3	+1.2
LNSS	**Leonessa**	**0.30**	**191**	Pg	Pg	05 12 52.6	+0.4
LNSS				Sg	Sb	05 12 57.6	-1.1
LNSS	**Leonessa**	**0.30**	**191**	Pg	Pg	05 12 52.6	+0.4
LNSS				Sg	Sb	05 12 57.6	-1.1
TERO	**Teramo**	**0.45**	**127**	Pg	Pg	05 12 55.1	+0.2
TERO				Sg	Sg	05 13 01.9	+1.0
TERO	**Teramo**	**0.45**	**127**	Pg	Pg	05 12 55.1	+0.2
TERO				Sg	Sg	05 13 01.9	+1.0
CING	**Cingoli**	**0.48**	**7**	Pg	Pg	05 12 55.6	+0.1
CING	5.0nm,0.1s			Sg	Sb	05 13 03.3	-0.5
CING	**Cingoli** 5.0nm,0.1s	**0.48**	**7**	Pg	Pg	05 12 55.6	+0.1
CING				Sg	Sb	05 13 03.3	-0.5
GUMA	**Gualdo di Mace**	**0.62**	**74**	Pg	Pg	05 12 51.5	-6.6
GUMA				Sg	Sg	05 12 55.7	-11
GUMA	**Gualdo

PDG				S	Sg	05 13 26.6	+0.2	
PDG				Sn	Sg	05 13 27.9	+1.5	
	837nm,0.4s							
PDG				*e*Sg	Sg	05 13 28.2	+1.8	
TTG	**Podgorica**	**1.07**	**345**	⇓*i*Pg	Pn	05 13 11.8	0.0	
TTG				*e*Sg	Sg	05 13 28.6	+2.2	
KBN	**Korca**	**1.17**	**131**	*e*PG	Pg	05 13 14.7	+0.6	
KBN				*i* SG	Sg	05 13 30.6	+1.2	
PVY	**Plav**	**1.23**	**11**	⇑*i*Pg	Pn	05 13 13.8	-0.1	
PVY				*e*Sg	Sg	05 13 33.4	+2.1	
PVY	**Plav**	**1.23**	**11**	⇑*i*Pg	Pn	05 13 13.8	-0.1	
PVY				*e*Sg	Sg	05 13 33.4	+2.1	
BIA	**Bitola**	**1.33**	**106**	P	Pn	05 13 14.6	-0.7	
BIA				S	Sg	05 13 34.0	-0.6	
BIA	**Bitola**	**1.33**	**106**	*e*Pn	Pn	05 13 13.9	-1.4	
BIA				*e*Sg	Sg	05 13 34.4	-0.2	
BIA	**Bitola**	**1.33**	**106**	P	Pn	05 13 14.6	-0.7	
BIA				S	Sg	05 13 34.0	-0.6	
HCY	**Herceg Novi**	**1.35**	**322**	*e*Pg	Pb	05 13 16.5	+0.2	
HCY				*e*Sg	Sg	05 13 36.2	+0.9	
HCY	**Herceg Novi**	**1.35**	**322**	*e*Pg	Pb	05 13 16.5	+0.2	
HCY				*e*Sg	Sg	05 13 36.2	+0.9	
NEST	**Nestorio**	**1.45**	**132**	P	Pb	05 13 18.7	+0.6	
NEST				S	Sg	05 13 38.9	+0.4	
NEST	**Nestorio**	**1.45**	**132**	P	Pb	05 13 18.7	+0.6	
NEST				S	Sg	05 13 38.9	+0.4	
FNA	**Florina**	**1.46**	**114**	P	Pn	05 13 17.2	+0.2	
FNA				S	Sb	05 13 37.2	+0.9	
FNA	**Florina**	**1.46**	**114**	*e*P	Pb	05 13 18.2	+0.1	
FNA				*e*S	Sg	05 13 38.3	-0.2	
FNA	**Florina**	**1.46**	**114**	*e*P	Pb	05 13 18.2	+0.1	
FNA				S	Sb	05 13 37.2	+0.9	
SKO	**Skopje**	**1.48**	**66**	*e*Pn	Pn	05 13 17.8	+0.5	
SKO				*e*Sg	Sg	05 13 38.6	-0.5	
BEY	**Berane**	**1.49**	**8**	⇑*i*Pg	Pb	05 13 18.6	-0.2	
BEY				*e*Sg	Sg	05 13 41.2	+1.5	
IVA	**Berane**	**1.49**	**8**	⇑*i*Pg	Pb	05 13 18.6	-0.2	
IVA				*e*Sg	Sg	05 13 41.2	+1.5	
NKY	**Niksic**	**1.50**	**342**	⇓*i*Pg	Pb	05 13 19.1	+0.2	
NKY				*e*Sg	Sg	05 13 40.4	+0.5	
NKY	**Niksic**	**1.50**	**342**	⇓*i*Pg	Pb	05 13 19.1	+0.2	
NKY				*e*Sg	Sg	05 13 40.4	+0.5	
SRN	**Sarande**	**1.54**	**169**	*e*PN	Pb	05 13 19.0	-0.4	
SRN				*i* SN	Sb	05 13 39.2	+0.6	
SRN	**Sarande**	**1.54**	**169**	P	Pb	05 13 19.1	-0.4	
SRN				S	Sg	05 13 41.8	+0.7	
SRN	**Sarande**	**1.54**	**169**	P	Pb	05 13 19.1	-0.4	
SRN				S	Sg	05 13 41.8	+0.7	
MESG	**Mesagne**	**1.57**	**240**	Pn	Pn	05 13 18.7	+0.2	
	401nm,0.4s							
MESG	**Mesagne**	**1.57**	**240**	Pn	Pn	05 13 18.7	+0.2	
	401nm,0.4s							
SCTE	**Santa Cesarea**	**1.59**	**214**	Pn	Pn	05 13 18.9	+0.1	
	501nm,0.5s							
SCTE	**Santa Cesarea**	**1.59**	**214**	Pn	Pn	05 13 18.9	+0.1	
	501nm,0.5s							
KEK	**Kerkira**	**1.68**	**176**	P	Pn	05 13 20.7	+0.7	
KEK				S	Sg	05 13 45.1	-0.7	
KEK	**Kerkira**	**1.68**	**176**	*e*P	Pn	05 13 20.8	+0.7	
KEK				*e*S	Sn	05 13 41.1	-0.1	
KEK	**Kerkira**	**1.68**	**176**	Pn	Pn	05 13 20.7	+0.7	
	228nm,0.7s							
KEK	**Kerkira**	**1.68**	**176**	*e*P	Pn	05 13 20.8	+0.7	
KEK				*e*S	Sn	05 13 41.1	-0.1	
BRY	**Bratogost**	**1.71**	**332**	⇓*i*Pn	Pb	05 13 22.2	-0.4	
BRY				*e*Sn	Sg	05 13 46.0	-0.8	
BRY	**Bratogost**	**1.71**	**332**	⇓*i*Pn	Pb	05 13 22.2	-0.4	
BRY				*e*Sn	Sg	05 13 46.0	-0.8	
SJES	**Sjenica**	**1.89**	**8**	*e*Pn	Pb	05 13 25.6	+0.1	
SJES	**Sjenica**	**1.89**	**8**	*e*Pn	Pb	05 13 25.6	+0.1	
UPM	**Unac-Piva**	**1.89**	**344**	*e*Pn	Pb	05 13 24.8	-0.8	
UPM				*e*Sn	Sb	05 13 49.9	+1.0	
UPM	**Unac-Piva**	**1.89**	**344**	*e*Pn	Pb	05 13 24.8	-0.8	
UPM				*e*Sn	Sb	05 13 49.9	+1.0	
IGT	**Igoumenitsa**	**1.93**	**164**	P	Pn	05 13 24.9	+1.3	
IGT				S	Sb	05 13 50.7	+0.6	
IGT	**Igoumenitsa**	**1.93**	**164**	P	Pn	05 13 24.9	+1.3	
IGT				S	Sb	05 13 50.7	+0.6	
PLE	**Pljevlja**	**1.94**	**355**	⇑*i*Pn	Pb	05 13 25.7	-0.8	
PLE				*e*Sn	Sb	05 13 51.2	+0.7	
PLE	**Pljevlja**	**1.94**	**355**	⇑*i*Pn	Pb	05 13 25.7	-0.8	
PLE				*e*Sn	Sb	05 13 51.2	+0.7	
KZN	**Kozani**	**1.95**	**123**	*e*P	Pn	05 13 25.0	+1.1	
KZN				*e*S	Sn	05 13 49.3	+1.3	
KZN	**Kozani**	**1.95**	**123**	*e*P	Pn	05 13 25.0	+1.1	
KZN				*e*S	Sn	05 13 49.3	+1.3	
JAN	**Janina**	**1.97**	**151**	*e*P	Pn	05 13 24.9	+0.8	
JAN	**Janina**	**1.97**	**151**	*e*P	Pn	05 13 24.9	+0.8	
NOCI	**Noci**	**2.03**	**254**	Pn	Pn	05 13 24.9	0.0	
	320nm,0.4s							
NOCI	**Noci**	**2.03**	**254**	Pn	Pn	05 13 24.9	0.0	
	320nm,0.4s							
STON	**Ston**	**2.06**	**316**	*e*Pn	Pn	05 13 25.7	+0.5	
STON				Sn	Sn	05 13 51.0	+0.5	
STON	**Ston**	**2.06**	**316**	*e*Pn	Pn	05 13 25.7	+0.5	
STON				Sn	Sn	05 13 51.0	+0.5	
BAI	**Bari**	**2.09**	**263**	*e*Pn	Pn	05 13 25.1	-0.6	
BAI				*e*Sn	Sn	05 13 50.9	-0.4	
LTRZ	**Laterza**	**2.27**	**251**	Pn	Pn	05 13 28.0	-0.1	
	123µm,20.0s							
LTRZ	**Laterza**	**2.27**	**251**	Pn	Pn	05 13 28.0	-0.1	
	123µm,20.0s							
MATE	**Matera**	**2.33**	**252**	Pn	Pn	05 13 29.2	+0.2	
	172nm,0.5s							
MATE	**Matera**	**2.33**	**252**	Pn	Pn	05 13 29.2	+0.2	
	172nm,0.5s							
AMUR	**Altamura**	**2.33**	**259**	Pn	Pn	05 13 29.2	+0.1	
	131nm,0.4s							
AMUR	**Altamura**	**2.33**	**259**	Pn	Pn	05 13 29.2	+0.1	
	131nm,0.4s							
BBLS	**Lazići**	**2.48**	**356**	*e*Pn	Pb	05 13 34.0	-1.6	
BBLS				*e*Sn	Sb	05 14 04.6	-1.2	
BBLS	**Lazići**	**2.48**	**356**	*e*Pn	Pb	05 13 34.0	-1.6	
BBLS				*e*Sn	Sb	05 14 04.6	-1.2	
LIT	**Litokhoron**	**2.53**	**120**	*e*P	Pn	05 13 33.8	+2.1	
LIT				*e*S	Sn	05 14 03.0	+0.9	
LIT	**Litokhoron**	**2.53**	**120**	*e*P	Pn	05 13 33.8	+2.1	
LIT				*e*S	Sn	05 14 03.0	+0.9	
MIGL	**Miglionico**	**2.54**	**253**	Pn	Pn	05 13 32.4	+0.5	
	558nm,0.6s							
MIGL	**Miglionico**	**2.54**	**253**	Pn	Pn	05 13 32.4	+0.5	
	558nm,0.6s							
THL	**Klokotos Trika**	**2.58**	**134**	*e*P	Pn	05 13 34.4	+2.0	
THL				*e*S	Sn	05 14 05.4	+2.1	
THL	**Klokotos Trika**	**2.58**	**134**	*e*P	Pn	05 13 34.4	+2.0	
THL				*e*S	Sn	05 14 05.4	+2.1	
MRVN	**Minervino Murg**	**2.61**	**264**	Pn	Pn	05 13 33.3	+0.4	
	92nm,0.5s							
MRVN	**Minervino Murg**	**2.61**	**264**	Pn	Pn	05 13 33.3	+0.4	
	92nm,0.5s							
GRUS	**Gruza**	**2.62**	**17**	*e*Pn	Pn	05 13 34.3	+1.3	
GRUS				*e*Sn	Sn	05 14 05.4	+1.1	
GRUS	**Gruza**	**2.62**	**17**	*e*Pn	Pn	05 13 34.3	+1.3	
GRUS				*e*Sn	Sn	05 14 05.4	+1.1	
CRAC	**Craco**	**2.63**	**248**	Pn	Pn	05 13 33.8	+0.7	
	411nm,0.9s							
CRAC	**Craco**	**2.63**	**248**	Pn	Pn	05 13 33.8	+0.7	
	411nm,0.9s							
DIVS	**Divibare**	**2.72**	**6**	P	Pn	05 13 35.3	+0.9	
DIVS				S	Sn	05 14 08.0	+1.1	
DIVS	**Divibare**	**2.72**	**6**	*e*Pn	Pn	05 13 35.4	+1.0	
DIVS				*e*Sn	Sn	05 14 08.5	+1.6	
DIVS	**Divibare**	**2.72**	**6**	*e*Pn	Pn	05 13 35.4	+1.0	
DIVS				S	Sn	05 14 08.0	+1.1	
LKD2	**Lefkada island**	**2.72**	**163**	*e*P	Pn	05 13 35.0	+0.6	
LKD2	**Lefkada island**	**2.72**	**163**	*e*P	Pn	05 13 35.0	+0.6	
MS1	**Monte Sant'Ang**	**2.78**	**278**	*e*Pn	Pn	05 13 35.6	+0.3	
PALZ	**Palazzo San Ge**	**2.81**	**262**	Pn	Pn	05 13 36.2	+0.7	
	256nm,0.7s							
PALZ	**Palazzo San Ge**	**2.81**	**262**	Pn	Pn	05 13 36.2	+0.7	
	256nm,0.7s							
MSAG	**Monte S. Angel**	**2.81**	**278**	Pn	Pn	05 13 35.8	+0.1	
	167nm,0.5s							
MSAG	**Monte S. Angel**	**2.81**	**278**	Pn	Pn	05 13 35.8	+0.1	
	167nm,0.5s							
SOH	**Sokhos**	**2.87**	**100**	*e*P	Pn	05 13 37.2	+0.7	
SOH				*e*S	Sn	05 14 12.0	+1.4	
SOH	**Sokhos**	**2.87**	**100**	*e*P	Pn	05 13 37.2	+0.7	
SOH				*e*S	Sn	05 14 12.0	+1.4	
ZAPS	**Zavoj**	**2.92**	**49**	*e*Pn	Pn	05 13 38.7	+1.6	
ZAPS				*e*Sn	Sn	05 14 11.0	-0.7	
ZAPS	**Zavoj**	**2.92**	**49**	*e*Pn	Pn	05 13 38.7	+1.6	
LADO	**San Nicola del**	**2.92**	**225**	Pn	Pn	05 13 37.3	+0.1	
	146nm,0.8s							
LADO	**San Nicola del**	**2.92**	**225**	Pn	Pn	05 13 37.3	+0.1	
	146nm,0.8s							
VTS	**Vitosha**	**2.92**	**65**	*e*Pn	Pn	05 13 38.6	+1.3	
VTS	**Vitosha**	**2.92**	**65**	⇑*i*P	Pn	05 13 38.7	+1.4	
VTS	**Vitosha**	**2.92**	**65**	⇑*i*P	Pn	05 13 38.7	+1.4	
SGRT	**San Giovanni R**	**2.94**	**278**	Pn	Pn	05 13 37.4	0.0	
	88nm,0.8s							
SGRT	**San Giovanni R**	**2.94**	**278**	Pn	Pn	05 13 37.4	0.0	
	88nm,0.8s							
SCHR	**S. Chirico Rap**	**2.95**	**247**	Pn	Pn	05 13 38.2	+0.6	
	89nm,1.0s							
SCHR	**S. Chirico Rap**	**2.95**	**247**	Pn	Pn	05 13 38.2	+0.6	
	89nm,1.0s							
BOLS	**Boljevac**	**2.98**	**34**	*e*Sn	Sn	05 14 13.8	+0.6	
BOLS	**Boljevac**	**2.98**	**34**	*e*Sn	Sn	05 14 13.8	+0.6	
EVR	**Evrytania**	**2.98**	**145**	*e*P	Pn	05 13 39.2	+1.1	
EVR	**Evrytania**	**2.98**	**145**	*e*P	Pn	05 13 39.2	+1.1	
PLG	**Polygyros**	**3.07**	**108**	*e*P	Pn	05 13 39.8	+0.6	
PLG	**Polygyros**	**3.07**	**108**	*e*P	Pn	05 13 39.8	+0.6	
MCEL	**Monticello**	**3.09**	**251**	Pn	Pn	05 13 40.3	+0.8	
	80nm,0.7s							
MCEL	**Monticello**	**3.09**	**251**	Pn	Pn	05 13 40.3	+0.8	
	80nm,0.7s							
SVIS	**Svilajnac**	**3.10**	**22**	*e*Pn	Pn	05 13 41.4	+1.9	
SVIS				*e*Sn	Sn	05 14 16.7	+0.6	
SIRI	**Monte Sirino -**	**3.10**	**248**	Pn	Pn	05 13 40.2	+0.5	
SIRI	**Monte Sirino -**	**3.10**	**248**	Pn	Pn	05 13 40.2	+0.5	
TIP	**Timpagrande**	**3.12**	**226**	Pn	Pn	05 13 40.0	+0.1	
	51nm,0.8s							
TIP	**Timpagrande**	**3.12**	**226**	Pn	Pn	05 13 40.0	+0.1	
	51nm,0.8s							
AGG	**Agios Georgios**	**3.14**	**138**	*e*P	Pn	05 13 42.2	+2.0	
AGG	**Agios Georgios**	**3.14**	**138**	*e*P	Pn	05 13 42.2	+2.0	
NVR	**Nevrokopi**	**3.19**	**89**	*e*P	Pn	05 13 42.2	+1.4	
NVR	**Nevrokopi**	**3.19**	**89**	*e*P	Pn	05 13 42.2	+1.4	
MRLC	**Muro Lucano**	**3.19**	**260**	Pn	Pn	05 13 41.6	+0.7	
	59nm,0.5s							
MRLC	**Muro Lucano**	**3.19**	**260**	Pn	Pn	05 13 41.6	+0.7	
	59nm,0.5s							
CUC	**Castrocucco**	**3.22**	**245**	Pn	Pn	05 13 41.7	+0.4	
	83nm,0.8s							
CUC	**Castrocucco**	**3.22**	**245**	Pn	Pn	05 13 41.7	+0.4	
	83nm,0.8s							
SGTA	**Sant Agata di**	**3.22**	**267**	Pn	Pn	05 13 42.1	+0.7	
	99nm,0.5s							
SGTA	**Sant Agata di**	**3.22**	**267**	Pn	Pn	05 13 42.1	+0.7	
	99nm,0.5s							
SERS	**Sersale**	**3.26**	**225**	Pn	Pn	05 13 41.4	-0.5	
	54nm,1.0s							
SERS	**Sersale**	**3.26**	**225**	Pn	Pn	05 13 41.4	-0.5	
	54nm,1.0s							
VLS	**Valsamata**	**3.30**	**167**	*e*P	Pn	05 13 41.9	-0.4	
VLS				*e*S	Sn	05 14 20.6	-0.4	
VLS	**Valsamata**	**3.30**	**167**	*e*P	Pn	05 13 41.9	-0.4	
VLS				*e*S	Sn	05 14 20.6	-0.4	
CAFE	**Carife**	**3.33**	**265**	Pn	Pn	05 13 43.7	+0.8	
	89nm,0.8s							
CAFE	**Carife**	**3.33**	**265**	Pn	Pn	05 13 43.7	+0.8	
	89nm,0.8s							
MGR	**Morigerati**	**3.34**	**249**	Pn	Pn	05 13 44.1	+1.2	
	60nm,0.7s							
MGR	**Morigerati**	**3.34**	**249**	Pn	Pn	05 13 44.1	+1.2	
	60nm,0.7s							
MOCO	**Biccari - m.te**	**3.36**	**271**	Pn	Pn	05 13 44.5	+1.2	
	80nm,0.8s							
SNAL	**S. Angelo Dei**	**3.37**	**263**	Pn	Pn	05 13 43.8	+0.5	
	108nm,0.8s							
SNAL	**S. Angelo Dei**	**3.37**	**263**	Pn	Pn	05 13 43.8	+0.5	
	108nm,0.8s							
CARO	**Carolei**	**3.37**	**232**	Pn	Pn	05 13 44.1	+0.8	
	93nm,0.8s							
CARO	**Carolei**	**3.37**	**232**	Pn	Pn	05 13 44.1	+0.8	
	93nm,0.8s							
SGO	**Sicignano**	**3.38**	**257**	Pn	Pn	05 13 44.2	+0.8	
	44nm,0.3s							
SGO	**Sicignano**	**3.38**	**257**	Pn	Pn	05 13 44.2	+0.8	
	44nm,0.3s							
CDRU	**Civita di Ruta**	**3.40**	**256**	Pn	Pn	05 13 44.3	+0.5	
	22nm,0.3s							
CDRU	**Civita di Ruta**	**3.40**	**256**	Pn	Pn	05 13 44.3	+0.5	
	22nm,0.3s							
MCRV	**Calabrutti - M**	**3.43**	**261**	Pn	Pn	05 13 44.4	+0.2	
	48nm,0.3s							
MCRV	**Calabrutti - M**	**3.43**	**261**	Pn	Pn	05 13 44.4	+0.2	
	48nm,0.3s							
EFP	**Efpalio**	**3.44**	**149**	*e*P	Pn	05 13 44.8	+0.5	
EFP	**Efpalio**	**3.44**	**149**	*e*P	Pn	05 13 44.8	+0.5	
CMPR	**Campora**	**3.45**	**253**	Pn	Pn	05 13 44.9	+0.4	
	33nm,0.5s							
CMPR	**Campora**	**3.45**	**253**	Pn	Pn	05 13 44.9	+0.4	
	33nm,0.5s							
MRB1	**Monte Rocchett**	**3.52**	**267**	Pn	Pn	05 13 46.5	+1.1	
	80nm,0.6s							
MRB1	**Monte Rocchett**	**3.52**	**267**	Pn	Pn	05 13 46.5	+1.1	
	80nm,0.6s							
TRIZ	**Trizonia**	**3.56**	**147**	*e*P	Pn	05 13 47.5	+1.6	
TRIZ	**Trizonia**	**3.56**	**147**	*e*P	Pn	05 13 47.5	+1.6	
KALE	**Kalithea**	**3.57**	**146**	*e*P	Pn	05 13 48.1	+2.0	
KALE	**Kalithea**	**3.57**	**146**	*e*P	Pn	05 13 48.1	+2.0	
RLS	**Riolos of Patr**	**3.62**	**156**	*e*P	Pn	05 13 47.8	+1.1	
RLS	**Riolos of Patr**	**3.62**	**156**	*e*P	Pn	05 13 47.8	+1.1	
LAKA	**Lakka**	**3.63**	**149**	*e*P	Pn	05 13 48.7	+1.8	
LAKA	**Lakka**	**3.63**	**149**	*e*P	Pn	05 13 48.7	+1.8	
PSB1	**Pescosannita**	**3.63**	**269**	Pn	Pn	05 13 48.1	+1.2	
	32nm,0.5s							
PSB1	**Pescosannita**	**3.63**	**269**	Pn	Pn	05 13 48.1	+1.2	
	32nm,0.5s							
SACR	**S. Croce Del S**	**3.70**	**272**	Pn	Pn	05 13 49.0	+1.1	
	48nm,0.8s							
SACR	**S. Croce Del S**	**3.70**	**272**	Pn	Pn	05 13 49.0	+1.1	
	48nm,0.8s							
LKR	**Lokris**	**3.77**	**136**	*e*P	Pn	05 13 49.9	+1.1	
LKR	**Lokris**	**3.77**	**136**	*e*P	Pn	05 13 49.9	+1.1	
BLY	**Banja Luka**	**3.80**	**333**	Pn	Pn	05 13 51.1	+1.9	
BLY	**Banja Luka**	**3.80**	**333**	Pn	Pn	05 13 51.1	+1.9	
PLAC	**Placanica**	**3.83**	**221**	Pn	Pn	05 13 49.2	-0.4	
	24nm,0.6s							
PLAC	**Placanica**	**3.83**	**221**	Pn	Pn	05 13 49.2	-0.4	
	24nm,0.6s							
PTRJ	**Pietraroja**	**3.84**	**271**	Pn	Pn	05 13 50.6	+0.8	
PTRJ	**Pietraroja**	**3.84**	**271**	Pn	Pn	05 13 50.6	+0.8	
KLV	**Kalavryta, Ach**	**3.87**	**149**	*e*P	Pn	05 13 51.8	+1.6	
KLV	**Kalavryta, Ach**	**3.87**	**149**	*e*P	Pn	05 13 51.8	+1.6	
DJES	**Djerdap**	**3.90**	**32**	*e*Pn	Pn	05 13 51.5	+0.9	
DJES				*e*Sn	Sn	05 14 35.2	-0.7	
GUR	**Goura**	**4.04**	**148**	*e*P	Pn	05 13 53.1	+0.5	
GUR	**Goura**	**4.04**	**148**	*e*P	Pn	05 13 53.1	+0.5	
MIDA	**Miranda**	**4.04**	**275**	Pn	Pn	05 13 53.4	+0.8	
	38nm,0.4s							
MIDA	**Miranda**	**4.04**	**275**	Pn	Pn	05 13 53.4	+0.8	
	38nm,0.4s							
VAGA	**Valle Agricola**	**4.06**	**272**	Pn	Pn	05 13 54.3	+1.5	
	66nm,0.5s							
VAGA	**Valle Agricola**	**4.06**	**272**	Pn	Pn	05 13 54.3	+1.5	
	66nm,0.5s							
ISOR	**Termini**	**4.09**	**260**	Pn	Pn	05 13 53.7	+0.5	
	48nm,1.0s							
ISOR	**Termini**	**4.09**	**260**	Pn	Pn	05 13 53.7	+0.5	
	48nm,1.0s							
INTR	**Introdacqua**	**4.33**	**280**	Pn	Pn	05 13 57.3	+0.7	
	53nm,0.5s							
INTR	**Introdacqua**	**4.33**	**280**	Pn	Pn	05 13 57.3	+0.7	
	53nm,0.5s							
POFI	**Posta Fibreno**	**4.45**	**276**	Pn	Pn	05 13 59.4	+1.2	
POFI	**Posta Fibreno**	**4.45**	**276**	Pn	Pn	05 13 59.4	+1.2	
BZS	**Buzias**	**4.46**	**18**	*e*Pn	Pn	05 13 58.8	+0.5	
BZS	**Buzias**	**4.46**	**18**	⇑*i*P	Pn	05 13 58.8	+0.5	
BZS	**Buzias**	**4.46**	**18**	⇑*i*P	Pn	05 13 58.8	+0.5	
ITM	**Ithomi**	**4.57**	**156**	*e*P	Pn	05 14 02.0	+2.2	
ITM	**Ithomi**	**4.57**	**156**	*e*P	Pn	05 14 02.0	+2.2	
GZR	**Gura Zlata**	**4.61**	**29**	⇓*i*P	Pn	05 14 02.0	+1.6	
GZR	**Gura Zlata**	**4.61**	**29**	⇓*i*P	Pn	05 14 02.0	+1.6	
NVLJ	**Novalja**	**4.71**	**314**	*i* Pn	Pn	05 14 02.3	+0.5	
NVLJ				Sn	Sn	05 14 54.5	-1.5	
NVLJ	**Novalja**	**4.71**	**314**	*i* Pn	Pn	05 14 02.2	+0.5	
NVLJ				Sn	Sn	05 14 54.4	-1.5	
AQU	**L'Aquila**	**4.75**	**284**	⇑*i*P	Pn	05 14 03.2	+0.9	
AQU	**L'Aquila**	**4.75**	**284**	⇑*i*P	Pn	05 14 03.2	+0.9	
CAMP	**Campotosto**	**4.78**	**286**	Pn	Pn	05 14 03.7	+1.0	
	22nm,0.6s							
CAMP	**Campotosto**	**4.78**	**286**	Pn	Pn	05 14 03.7	+1.0	
	22nm,0.6s							
DID	**Didima**	**4.78**	**143**	*e*P	Pn	05 14 04.4	+1.7	
DID	**Didima**	**4.78**	**143**	*e*P	Pn	05 14 04.4	+1.7	
PYL	**PYLOS**	**4.78**	**159**	*e*P	Pn	05 14 02.8	+0.1	
PYL	**PYLOS**	**4.78**	**159**	*e*P	Pn	05 14 02.8	+0.1	
PKSM	**Moragy**	**4.87**	**352**	*e*Pn	Pn	05 14 07.3	+3.4	
PKSM	**Moragy**	**4.87**	**352**	⇑*i*P	Pn	05 14 05.4	+1.5	
PKSM	**Moragy**	**4.87**	**352**	⇑*i*P	Pn	05 14 05.4	+1.5	
PKSM	**Moragy**	**4.87**	**352**	*e*Pn	Pn	05 14 07.3	+3.4	
FIAM	**Fiamignano**	**4.94**	**282**	Pn	Pn	05 14 06.8	+1.8	
	40nm,0.5s							
FIAM	**Fiamignano**	**4.94**	**282**	Pn	Pn	05 14 06.8	+1.8	
	40nm,0.5s							
LOT	**Lotru**	**5.05**	**35**	⇓*i*P	Pn	05 14 07.9	+1.4	
LOT	**Lotru**	**5.05**	**35**	⇓*i*P	Pn	05 14 07.9	+1.4	
NRCA	**Norcia**	**5.05**	**289**	Pn	Pn	05 14 07.5	+1.0	
	31nm,0.6s							
NRCA	**Norcia**	**5.05**	**289**	Pn	Pn	05 14 07.5	+1.0	
	31nm,0.6s							
LNSS	**Leonessa**	**5.06**	**286**	Pn	Pn	05 14 07.8	+1.2	
	36nm,0.4s							
LNSS	**Leonessa**	**5.06**	**286**	Pn	Pn	05 14 07.8	+1.2	
	36nm,0.4s							
DYR	**Agios Nikonas**	**5.08**	**155**	*e*P	Pn	05 14 08.3	+1.5	
DYR	**Agios Nikonas**	**5.08**	**155**	*e*P	Pn	05 14 08.3	+1.5	
CING	**Cingoli**	**5.16**	**295**	Pn	Pn	05 14 08.2	+0.3	
	31nm,0.5s							
CING	**Cingoli**	**5.16**	**295**	Pn	Pn	05 14 08.2	+0.3	
	31nm,0.5s							
BOJS	**Bojanci**	**5.20**	**324**	*i* Pn	Pn	05 14 09.4	+1.0	
BOJS				*i* Sn	Sn	05 15 07.7	-0.2	
BOJS	**Bojanci**	**5.20**	**324**	*i* Pn	Pn	05 14 09.4	+1.0	
BOJS				*i* Sn	Sn	05 15 07.7	-0.2	
CRES	**Cresnjev**	**5.37**	**327**	Pn	Pn	05 14 11.5	+0.8	
CRES				*i* Sn	Sn	05 15 09.7	-2.4	
ARVD	**Arcevia**	**5.38**	**295**	Pn	Pn	05 14 11.1	+0.2	
	11nm,0.3s							
ARVD	**Arcevia**	**5.38**	**295**	Pn	Pn	05 14 11.1	+0.2	
	11nm,0.3s							
ARR	**Arges**	**5.39**	**41**	⇑*i*P	Pn	05 14 12.9	+1.8	
ARR	**Arges**	**5.39**	**41**	⇑*i*P	Pn	05 14 12.9	+1.8	
FSSB	**Fossombrone**	**5.56**	**297**	Pn	Pn	05 14 13.8	+0.4	
	52nm,0.3s							
FSSB	**Fossombrone**	**5.56**	**297**	Pn	Pn	05 14 13.8	+0.4	
	52nm,0.3s							
PESA	**Pesaro**	**5.62**	**299**	Pn	Pn	05 14 14.5	+0.4	
	32nm,0.5s							
PESA	**Pesaro**	**5.62**	**299**	Pn	Pn	05 14 14.5	+0.4	
	32nm,0.5s							
VOIR		**5.65**	**43**	⇑*i*P	Pn	05 14 16.7	+2.0	
VOIR		**5.65**	**43**	⇑*i*P	Pn	05 14 16.7	+2.0	
CEY	**Cerknica**	**5.76**	**321**	*i* Pn	Pn	05 14 17.0	+0.9	
CEY				*i* Sn	Sn	05 15 22.6	+0.9	
CEY	**Cerknica**	**5.76**

PET				*e*S	Sb	05 16 46.5	-0.5
GNL	**Ganaly**	**2.08**	**269**	P	Pn	05 16 26.8	+1.2
GNL				*e*S	Sb	05 16 53.2	-1.4
KMNR	**Kamenistaya**	**2.11**	**341**	P	Pn	05 16 26.5	+0.5
KMNR				S	Sn	05 16 52.7	+0.4
BZGR	**Bezymyannyi-Gr**	**2.22**	**349**	P	Pn	05 16 28.5	+1.0
BZGR				S	Sn	05 16 56.1	+1.1
RUS	**Russkaya**	**2.22**	**234**	*e*P	Pn	05 16 27.8	+0.5
RUS				*e*S	Sn	05 16 55.3	+0.6
BZMR	**Bezymyannaya**	**2.24**	**346**	P	Pn	05 16 28.8	+1.0
BZMR				S	Sn	05 16 56.8	+1.2
BZWR	**Bezymyannyi-We**	**2.27**	**346**	P	Pn	05 16 29.4	+1.2
BZWR				S	Sn	05 16 57.5	+1.2
ZLN	**Zelenaya**	**2.28**	**351**	P	Pn	05 16 29.9	+1.6
ZLN				S	Sb	05 16 58.8	-1.5
KPT	**Kopyto**	**2.31**	**343**	P	Pn	05 16 28.5	-0.2
KPT				S	Sn	05 16 56.4	-0.8
MTVR	**Mutnovka**	**2.35**	**238**	*e*P	Pn	05 16 30.0	+0.6
MTVR				*e*S	Sn	05 16 58.7	+0.3
GRL	**Gorelyy**	**2.37**	**240**	S	Sb	05 17 01.7	-1.1
KOZ	**Kozyrevsk**	**2.47**	**339**	P	Pb	05 16 33.9	-1.1
KRSR	**Krestovskiy**	**2.50**	**349**	P	Pn	05 16 32.0	+0.6
ASAK	**Asacha**	**2.55**	**238**	*e*P	Pn	05 16 33.7	+1.7
ASAK				*e*S	Sn	05 17 05.2	+2.1
KLY	**Klyuchi**	**2.59**	**350**	S	Sn	05 17 04.3	+0.5
ESO	**Esso**	**2.68**	**325**	*e*P	Pn	05 16 34.5	+0.8
ESO				*e*S	Sn	05 17 07.4	+1.2
APC	**Apacha**	**2.71**	**254**	*e*P	Pn	05 16 36.2	+2.2
APC				*e*S	Sn	05 17 09.4	+2.7
SRDR	**Sredinnyy**	**2.74**	**339**	P	Pn	05 16 34.8	+0.2
SRDR				S	Sn	05 17 06.0	-1.7
BDR	**Baidarnaya**	**2.81**	**357**	P	Pn	05 16 36.4	+0.9
BDR				S	Sn	05 17 10.1	+0.7
SMKR	**Semkarok**	**2.82**	**0**	P	Pn	05 16 35.5	-0.2
SMKR				S	Sn	05 17 08.1	-1.6
SRKR	**Sorokina**	**2.90**	**357**	P	Pn	05 16 38.0	+1.3
SRKR				S	Sn	05 17 12.9	+1.3

MAN 14 05:17:39, 4.68N×126.71E, h33km, mb6.5, ML5.6, MS6.3, Talaud Islands

MAN 14 05:17:40, 10.83N×122.06E, h8km, mb4.7, ML3.5, MS3.5, 1C, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.56**	**111**	*e*P	Pg	05 17 59.3	-0.5
GUIM				*e*S	Sg	05 17 59.0	+1.0
RCP	**Roxas**	**0.99**	**43**	*e*P	Pg	05 17 59.1	0.0
RCP				*e*S	Sn	05 18 14.4	-0.1
CUYO	**Cuyo Island**	**1.03**	**271**	*e*P	Pg	05 17 59.9	+0.1
SJMP	**San Jose**	**1.87**	**330**	*e*P	Pn	05 18 11.7	-0.6
LLP	**Lapu-Lapu**	**1.94**	**105**	*e*P	Pn	05 18 13.3	0.0
LLP				*e*S	Sn	05 18 38.9	+1.0
TBP	**Tagbilaran**	**2.10**	**122**	*e*P	Pn	05 18 16.2	+0.7
MSLP	**Maasin**	**2.84**	**104**	*e*P	Pn	05 18 26.4	+0.8

NEIC ***14*** *05:29:29.6, 19.64N×65.21W, h67km, MD3.5(RSPR), After RSPR.*

RSPR 14 05:29:29.6, 19.64N×65.21W, h67km±11km**, MD3.5**/10**, 38C-11D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**1.31**	**169**	*e*P	Pn	05 29 51.7	-0.3
STVI	**Saint Thomas**	**1.31**	**169**	*e*P	Pn	05 29 51.7	-0.3
STVI				*e*S	Sn	05 30 07.8	-0.9
STVI	**Saint Thomas**	**1.31**	**169**	*e*P	Pn	05 29 51.7	-0.3
STVI				*e*S	Sn	05 30 07.8	-0.9
TBVI	**Tortola**	**1.34**	**155**	*e*P	Pn	05 29 52.2	-0.3
TBVI				*e*S	Sn	05 30 09.1	-0.5
TBVI	**Tortola**	**1.34**	**155**	*e*P	Pn	05 29 52.2	-0.3
TBVI				*e*S	Sn	05 30 09.5	-0.1
TBVI	**Tortola**	**1.34**	**155**	*e*P	Pn	05 29 52.2	-0.3
TBVI				*e*S	Sn	05 30 09.1	-0.5
CBYP	**Canovanas**	**1.49**	**204**	*e*P	Pn	05 29 53.3	-1.2
CBYP	**Canovanas**	**1.49**	**204**	*e*P	Pn	05 29 53.3	-1.2
CBYP				*e*S	Sn	05 30 12.4	-0.8
CBYP	**Canovanas**	**1.49**	**204**	*e*P	Pn	05 29 53.3	-1.2
CBYP				*e*S	Sn	05 30 12.4	-0.8
MTP	**Monte Pirata**	**1.57**	**192**	*e*P	Pn	05 29 54.8	-0.7
MTP	**Monte Pirata**	**1.57**	**192**	*e*P	Pn	05 29 54.8	-0.7
MTP				*e*S	Sn	05 30 14.4	-0.6
MTP	**Monte Pirata**	**1.57**	**192**	*e*P	Pn	05 29 54.8	-0.7
MTP				*e*S	Sn	05 30 14.4	-0.6
HUMP	**Col San Antoni**	**1.61**	**202**	*e*P	Pn	05 29 55.0	-1.0
HUMP	**Col San Antoni**	**1.61**	**202**	*e*P	Pn	05 29 55.0	-1.0
HUMP				*e*S	Sn	05 30 15.3	-0.7
HUMP	**Col San Antoni**	**1.61**	**202**	*e*P	Pn	05 29 55.0	-1.0
HUMP				*e*S	Sn	05 30 15.3	-0.7
CPD	**Cerro la Pandu**	**1.73**	**203**	*e*P	Pn	05 29 56.8	-0.9
CPD	**Cerro la Pandu**	**1.73**	**203**	*e*P	Pn	05 29 56.8	-0.9
CPD				*e*S	Sn	05 30 18.1	-0.8
CPD	**Cerro la Pandu**	**1.73**	**203**	*e*P	Pn	05 29 56.8	-0.9
CPD				*e*S	Sn	05 30 18.1	-0.8
SJG	**San Juan**	**1.76**	**210**	*e*P	Pn	05 29 57.1	-0.9
SJG	**San Juan**	**1.76**	**210**	*i*P	Pn	05 29 57.2	-0.9
SJG				*e*S	Sn	05 30 19.3	-0.3
SJG	**San Juan**	**1.76**	**210**	*e*P	Pn	05 29 57.1	-0.9
SJG	**San Juan**	**1.76**	**210**	*i*P	Pn	05 29 57.2	-0.9
SJG				*e*S	Sn	05 30 18.7	-0.9
SJG				*e*S		05 30 19.3	
SJG	**San Juan**	**1.76**	**210**	*i*P	Pn	05 29 57.2	-0.9
SJG				*e*S	Sn	05 30 18.7	-0.9
SJG				*e*S		05 30 19.3	
CDVI	**St. Croix**	**1.93**	**167**	*e*Pn	Pn	05 30 02.4	+2.1
CDVI				*e*Sn	Sn	05 30 26.6	+3.0
AOPR	**Arecibo Observ**	**1.95**	**229**	*e*P	Pn	05 30 00.1	-0.5
AOPR	**Arecibo Observ**	**1.95**	**229**	*e*P	Pn	05 30 00.8	+0.2
AOPR				*e*S	Sn	05 30 23.9	-0.2
AOPR	**Arecibo Observ**	**1.95**	**229**	*e*P	Pn	05 30 00.1	-0.5
AOPR				*e*S	Sn	05 30 23.9	-0.2
CELP	**Cerrillos**	**2.03**	**220**	*e*P	Pn	05 30 01.1	-0.6
CELP	**Cerrillos**	**2.03**	**220**	*e*P	Pn	05 30 01.7	+0.1
CELP	**Cerrillos**	**2.03**	**220**	*e*P	Pn	05 30 01.1	-0.6
LRS	**Lares**	**2.05**	**229**	*e*P	Pn	05 30 01.1	-0.9
LRS	**Lares**	**2.05**	**229**	*e*P	Pn	05 30 01.9	-0.1
LRS	**Lares**	**2.05**	**229**	*e*P	Pn	05 30 01.1	-0.9
OBIP	**Obispado Ponce**	**2.07**	**220**	*e*P	Pn	05 30 01.8	-0.4
OBIP	**Obispado Ponce**	**2.07**	**220**	*e*P	Pn	05 30 01.8	-0.4
OBIP				*e*S	Sn	05 30 26.4	-0.5
OBIP	**Obispado Ponce**	**2.07**	**220**	*e*P	Pn	05 30 01.8	-0.4
OBIP				*e*S	Sn	05 30 26.4	-0.5
AGPR	**Aguadilla, PR**	**2.14**	**237**	*e*P	Pn	05 30 02.6	-0.6
AGPR	**Aguadilla, PR**	**2.14**	**237**	*e*P	Pn	05 30 02.6	-0.6
AGPR	**Aguadilla, PR**	**2.14**	**237**	*e*P	Pn	05 30 02.6	-0.6
GBPR	**Guanica, Bosqu**	**2.29**	**224**	*e*P	Pn	05 30 05.1	-0.1
GBPR	**Guanica, Bosqu**	**2.29**	**224**	*e*P	Pn	05 30 05.6	+0.4
GBPR	**Guanica, Bosqu**	**2.29**	**224**	*e*P	Pn	05 30 05.1	-0.1
LSP	**Las Mesas**	**2.30**	**231**	*e*P	Pn	05 30 04.7	-0.6
LSP	**Las Mesas**	**2.30**	**231**	*e*P	Pn	05 30 04.7	-0.6
LSP	**Las Mesas**	**2.30**	**231**	*e*P	Pn	05 30 04.7	-0.6
CRPR	**Cabo Rojo, PR**	**2.42**	**228**	*e*P	Pn	05 30 06.8	-0.2
CRPR	**Cabo Rojo, PR**	**2.42**	**228**	*e*P	Pn	05 30 06.8	-0.2
CRPR	**Cabo Rojo, PR**	**2.42**	**228**	*e*P	Pn	05 30 06.8	-0.2
DR12	**Loma Pena Alta**	**4.03**	**258**	*e*P	Pn	05 30 28.4	-0.6
DR12	**Loma Pena Alta**	**4.03**	**258**	*e*P	Pn	05 30 28.4	-0.6
SDDR	**Presa de Saban** 17nm,0.8s	**5.77**	**264**	*e*Pn	Pn	05 30 53.3	+0.5
SDDR				*e*Sn	Sn	05 31 56.9	-0.9

ISCJB ***14*** *05:34:43.6±0.5, 39.29N±0.02×27.97E±0.03, h1km±5km, Error ellipse: s-maj=4.0km s-min=3.3km az=151.9*
ISK ***14*** *05:34:43.1, 39.29N×28.01E, h8km, MD2.9*
CSEM ***14*** *05:34:43.9±0.1, 39.30N×28.00E, h8km, MD2.9, Error ellipse: s-maj=2.8km s-min=2.3km az=63.0*
DDA ***14*** *05:34:44, 39.29N×27.98E, h7km, MD2.8*

ISC 14 05:34:44.1±1.0, 39.30N±0.02×28.00E±0.02, h7km±9km**, n50, σ0.957/72, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.35**	**345**	*e*PG	**Pg**	**05 34 51.2**	**+0.2**
BALB				*e*SG	**Sg**	**05 34 56.4**	**+0.7**
BALB	**Balikesir**	**0.35**	**345**	*e*Pg	**Pg**	**05 34 51.2**	**+0.2**
BALB				*e*Sg	**Sg**	**05 34 56.4**	**+0.7**
AKHS	**Akhisar**	**0.44**	**199**	*i*P	**Pg**	**05 34 52.5**	**-0.2**
AKHS				*i*S	**Sg**	**05 34 59.4**	**+0.9**
AKHS	**Akhisar**	**0.44**	**199**	*i*P	**Pg**	**05 34 52.5**	**-0.2**
AKHS				*i*S	**Sg**	**05 34 59.4**	**+0.9**
DURS	**Dursunbey**	**0.48**	**51**	*i*P	**Pg**	**05 34 53.1**	**-0.3**
DURS				*i*S	**Sb**	**05 35 02.0**	**-0.3**
DURS	**Dursunbey**	**0.48**	**51**	*i*P	**Pg**	**05 34 53.1**	**-0.3**
DURS				*i*S	**Sb**	**05 35 02.0**	**-0.3**
BALY	**Balya**	**0.53**	**327**	*i*P	**Pg**	**05 34 54.0**	**-0.4**
BALY				*i*S	**Sg**	**05 35 01.7**	**+0.4**
BALY	**Balya**	**0.53**	**327**	*i*P	**Pg**	**05 34 54.0**	**-0.4**
BALY				*i*S	**Sg**	**05 35 01.7**	**+0.4**
DST	**Dursunbey**	**0.57**	**57**	*e*PG	**Pg**	**05 34 54.6**	**-0.6**
DST				*e*SG	**Sg**	**05 35 03.0**	**+0.3**
DST	**Dursunbey**	**0.57**	**57**	*e*Pg	**Pg**	**05 34 54.6**	**-0.6**
DST				*e*Sg	**Sg**	**05 35 03.0**	**+0.3**
GONE	**Gonen-Balikesi**	**0.79**	**342**	*e*PG	**Pg**	**05 34 58.8**	**-0.4**
GONE	**Gonen-Balikesi**	**0.79**	**342**	*e*Pg	**Pg**	**05 34 58.8**	**-0.4**
MANT	**Manisa**	**0.92**	**151**	*i*P	**Pb**	**05 35 02.3**	**-0.2**
MANT				*i*S	**Sg**	**05 35 13.8**	**+0.1**
MANT	**Manisa**	**0.92**	**151**	*i*P	**Pb**	**05 35 02.3**	**-0.2**
MANT				*i*S	**Sg**	**05 35 13.8**	**+0.1**
KULA	**Kula-Manisa**	**0.94**	**146**	*e*PG	**Pg**	**05 35 01.3**	**-0.9**
KULA				*e*SG	**Sg**	**05 35 14.5**	**+0.1**
KULA	**Kula-Manisa**	**0.94**	**146**	*e*Pg	**Pg**	**05 35 01.3**	**-0.9**
KULA				*e*Sg	**Sg**	**05 35 14.5**	**+0.1**
KCTX	**Karacabey (Bur**	**1.01**	**16**	*e*PG	**Pg**	**05 35 02.8**	**-0.7**
KCTX	**Karacabey (Bur**	**1.01**	**16**	*e*Pg	**Pg**	**05 35 02.8**	**-0.7**
AYVA	**Ayvalik**	**1.01**	**271**	*i*P	**Pg**	**05 35 03.4**	**-0.2**
AYVA				*i*S	**Sb**	**05 35 17.5**	**0.0**
AYVA	**Ayvalik**	**1.01**	**271**	*i*P	**Pg**	**05 35 03.4**	**-0.2**
AYVA				*i*S	**Sb**	**05 35 17.5**	**0.0**
IZM	**Izmir**	**1.06**	**213**	*e*PG	**Pg**	**05 35 03.7**	**-0.9**
IZM	**Izmir**	**1.06**	**213**	*e*Pg	**Pg**	**05 35 03.7**	**-0.9**
TVSB	**Tavsanli**	**1.15**	**82**	*e*PN	**Pg**	**05 35 05.3**	**-0.8**
TVSB	**Tavsanli**	**1.15**	**82**	*e*Pn	**Pg**	**05 35 05.3**	**-0.8**
GDZ	**Gediz**	**1.17**	**100**	*i*P	**Pn**	**05 35 08.0**	**+0.9**
GDZ				*i*S	**Sn**	**05 35 24.0**	**+0.6**
GDZ	**Gediz**	**1.17**	**100**	*i*P	**Pn**	**05 35 08.0**	**+0.9**
GDZ				*i*S	**Sn**	**05 35 24.0**	**+0.6**
KRBG	**Karabiga-Canak**	**1.22**	**334**	*e*PN	**Pb**	**05 35 07.2**	**-0.3**
KRBG	**Karabiga-Canak**	**1.22**	**334**	*e*Pn	**Pb**	**05 35 07.2**	**-0.3**
ULDT	**Uludag**	**1.22**	**46**	*i*P	**Pn**	**05 35 08.5**	**+0.7**
ULDT				*i*S	**Sn**	**05 35 25.5**	**+0.9**
ULDT	**Uludag**	**1.22**	**46**	*i*P	**Pn**	**05 35 08.5**	**+0.7**
ULDT				*i*S	**Sn**	**05 35 25.5**	**+0.9**
MDNY	**Mudanya-Bursa**	**1.27**	**32**	*e*PN	**Pn**	**05 35 07.8**	**-0.5**
MDNY	**Mudanya-Bursa**	**1.27**	**32**	*e*Pn	**Pn**	**05 35 07.8**	**-0.5**
EZN	**Ezine**	**1.39**	**293**	*e*PN	**Pn**	**05 35 09.7**	**-0.3**
EZN	**Ezine**	**1.39**	**293**	*e*Pn	**Pn**	**05 35 09.7**	**-0.3**
GEMT	**Gemlik**	**1.46**	**39**	*e*PN	**Pn**	**05 35 10.3**	**-0.6**
GEMT	**Gemlik**	**1.46**	**39**	*e*Pn	**Pn**	**05 35 10.3**	**-0.6**
KHAL	**Karahalli**	**1.49**	**128**	*i*P	**Pg**	**05 35 13.8**	**+1.1**
KHAL				*i*S	**Sg**	**05 35 32.4**	**+0.3**
KHAL	**Karahalli**	**1.49**	**128**	*i*P	**Pg**	**05 35 13.8**	**+1.1**
KHAL				*i*S	**Sg**	**05 35 32.4**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.52**	**336**	*e*PN	**Pn**	**05 35 11.2**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.52**	**336**	*e*Pn	**Pn**	**05 35 11.2**	**-0.6**
KHL	**Karahalli**	**1.54**	**129**	*e*PN	**Pn**	**05 35 11.5**	**-0.6**
KHL	**Karahalli**	**1.54**	**129**	*e*Pn	**Pn**	**05 35 11.5**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.61**	**314**	*e*PN	**Pn**	**05 35 13.1**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.61**	**314**	*e*Pn	**Pn**	**05 35 13.1**	**+0.2**
YLV	**Yalova**	**1.65**	**39**	*e*PN	**Pn**	**05 35 13.7**	**+0.1**
YLV	**Yalova**	**1.65**	**39**	*e*Pn	**Pn**	**05 35 13.7**	**+0.1**
ALT	**Altintas**	**1.66**	**98**	*e*PN	**Pn**	**05 35 13.1**	**-0.7**
ALT	**Altintas**	**1.66**	**98**	*e*Pn	**Pn**	**05 35 13.1**	**-0.7**
ERIK	**Erikli-Kesan**	**1.78**	**321**	*e*PN	**Pn**	**05 35 15.2**	**-0.1**
ERIK	**Erikli-Kesan**	**1.78**	**321**	*e*Pn	**Pn**	**05 35 15.2**	**-0.1**

IDC ***14*** *05:41:58.4±1.2, 33.70N×138.23E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/27, mbtmp3.5/4, Error ellipse: s-maj=38.7km s-min=17.5km az=36.0*
ISCJB ***14*** *05:42:00.1±0.6, 34.53N±0.04×140.26E±0.05, h85km±4km, mb3.6/4, Error ellipse: s-maj=6.6km s-min=5.8km az=138.4*
JMA ***14*** *05:42:00.0±0.2, 34.53N×140.26E, h83km±2km, M2.9*

ISC 14 05:42:01.3±0.9, 34.53N±0.04×140.23E±0.05, h78km±7km**, n19, σ0.983/33, mb3.7/4, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSO3	**Boso 3**	**0.35**	**40**	P	**Pn**	**05 42 12.9**	**-0.5**
BSO3				S	**Sn**	**05 42 23.6**	**+1.2**
BSO4	**Boso 4**	**0.47**	**11**	P	**Pn**	**05 42 14.1**	**-0.4**
BSO4				*e*S	**Sn**	**05 42 25.7**	**+1.5**
BSO2	**Boso 2**	**0.48**	**63**	*e*S	**Sn**	**05 42 25.8**	**+1.7**
TATJ	**Tateyama 2**	**0.57**	**331**	P	**Pn**	**05 42 15.5**	**-0.1**
TATJ				S	**Sn**	**05 42 27.1**	**+1.0**
KTR	**Katsuura**	**0.62**	**6**	P	**Pn**	**05 42 15.3**	**-0.7**
KTR				*e*S	**Sn**	**05 42 26.9**	**0.0**
BSO1	**Boso 1**	**0.63**	**79**	P	**Pn**	**05 42 14.7**	**-0.8**
BSO1				*e*S	**Sn**	**05 42 25.6**	**-0.4**
JIM2	**Oshima 3**	**0.69**	**286**	P	**Pn**	**05 42 16.0**	**-0.7**
JIM2				S	**Sn**	**05 42 27.6**	**-0.5**
JKO	**Kozu shima**	**0.97**	**250**	P	**Pn**	**05 42 20.0**	**+0.1**
JKO				*e*S	**Sn**	**05 42 34.8**	**+1.1**
KTJJ	**Kamata 2**	**1.04**	**293**	P	**Pn**	**05 42 19.7**	**-1.0**
KTJJ				S	**Sn**	**05 42 34.4**	**-0.8**
JIZS	**Izushimoda**	**1.13**	**280**	P	**Pn**	**05 42 21.8**	**-0.1**
JIZS				*e*S	**Sn**	**05 42 37.5**	**+0.2**
JOD2	**Odawara 2**	**1.19**	**308**	P	**Pn**	**05 42 21.8**	**-0.8**
JOD2				S	**Sn**	**05 42 38.1**	**-0.5**
JHJ	**Hachijo jima 2** 42nm,0.3s,baz=162,slow=0.5,SNR=31	**1.46**	**195**	Pn	**Pn**	**05 42 26.2**	**+0.2**
JHJ				Sn	**Sn**	**05 42 44.8**	**+0.2**
	239nm,0.3s,baz=234,slow=22,SNR=22						
JHJ2	**Mitsune**	**1.46**	**194**	P	**Pn**	**05 42 26.2**	**+0.2**
JHJ2				S	**Sn**	**05 42 44.9**	**+0.3**
JYN	**Shimob**	**1.69**	**305**	P	**Pn**	**05 42 29.4**	**+0.3**
JYN				S	**Sn**	**05 42 51.3**	**+1.2**
MAT	**Matsushiro**	**2.60**	**321**	P	**Pn**	**05 42 41.9**	**+0.7**
MAT				S	**Sn**	**05 43 13.0**	**+1.1**
MKAR	**Makanchi Array** 0.6nm,0.6s,baz=90,slow=9.9,SNR=8.3	**44.68**	**304**	P	**P**	**05 50 05.6**	**-0.7**
KURBB	**Kurchatov Arra** 0.7nm,0.3s,baz=79,slow=7.7,SNR=10	**46.82**	**310**	P	**P**	**05 50 23.6**	**+0.6**
WRA	**Warramunga Arr** 0.6nm,0.6s,baz=1.5,slow=7.5,SNR=11	**54.48**	**187**	P	**P**	**05 51 19.7**	**-1.1**
ASAR	**Alice Springs** 0.2nm,0.7s,baz=6.2,slow=9.5,SNR=3.1	**58.19**	**187**	P	**P**	**05 51 47.9**	**+0.6**

IDC 14 05:50:42.0±1.0, 32.69N×81.89E, h0km, mb3.6/7, mb1 3.8/9, mb1mx3.5/29, mbtmp3.6/9, ML3.1/2, MS3.8/2, Ms1 3.8/2, ms1mx2.7/39, Error ellipse: s-maj=36.9km s-min=18.2km az=62.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa** comp=Z,52nm,18.4s,baz=69,slow=40	**11.52**	**332**	LR	LR	05 58 27.1	
MKAR	**Makanchi Array** 0.1nm,0.3s,baz=182,slow=12,SNR=8.7	**14.09**	**1**	Pn	Pn	05 54 01.4	-1.4
KURBB	**Kurchatov Arra** 0.0nm,0.3s,baz=178,slow=11,SNR=12	**18.09**	**353**	P	Pn	05 54 54.6	0.0
CMAR	**Chiang Mai Arr** 3.9nm,0.7s,baz=311,slow=11,SNR=20	**20.87**	**129**	P	P	05 55 26.8	+1.1
ZALV	**Zalesovo Beam** 1.3nm,0.6s,baz=185,slow=9.5,SNR=8.2	**21.36**	**5**	P	P	05 55 30.6	0.0
BVAR	**Borovoye Array** 1.9nm,0.6s,baz=143,slow=10,SNR=11	**21.95**	**341**	P	P	05 55 35.7	-1.4
SONM	**Songino Array** comp=Z,2μm,20.5s,baz=244,slow=42	**23.91**	**44**	LR	LR	06 07 29.8	
WRA	**Warramunga Arr** 0.5nm,0.6s,baz=324,slow=6.1,SNR=8.2	**72.47**	**129**	P	P	06 02 09.6	-1.0
TORD	**Torodi Ar. Bea** 0.3nm,0.6s,baz=46,slow=4.2,SNR=3.2	**74.85**	**276**	P	P	06 02 25.3	+0.5
ASAR	**Alice Springs** 0.4nm,0.6s,baz=313,slow=5.8,SNR=7.1	**74.85**	**132**	P	P	06 02 24.4	-0.2
ILAR	**Eielson Array** 0.3nm,0.9s,baz=316,slow=5.2,SNR=4.8	**75.67**	**19**	P	P	06 02 30.1	+1.4

AUST ***14*** *05:58:40.8±1.5, 5.19N×126.68E, h5km, Error ellipse: s-maj=0.9km s-min=0.6km az=40.0*
BJI ***14*** *05:58:40.8, 5.05N×126.54E, h49km, mB6.2/49, mb5.7/68, Ms5.9/81, Ms7 5.8/75*
MOS ***14*** *05:58:42.5±1.1, 5.41N×126.37E, h39km, mb6.0/81, MS5.6/91, Error ellipse: s-maj=8.5km s-min=4.5km az=114.7*
IDC ***14*** *05:58:42.3±1.3, 5.30N×126.27E, h28km±7km, mb5.3/39, mb1 5.3/39, mb1mx5.3/40, mbtmp5.3/39, MS5.5/35, Ms1 5.6/35, ms1mx5.5/40, Error ellipse: s-maj=14.0km s-min=6.7km az=75.0*
NEIC ***14*** *05:58:43.3±0.1, 5.36N×126.44E, h35km, mb5.7/121, ME5.7, MS5.7/149, MW6.1, MW6.0, Error ellipse: s-maj=5.1km s-min=3.3km az=73.0, Moment Tensor Solution. s54 Moment tensor: Scale 10¹⁸Nm; Mrr0.90; Mθθ0.40; Mϕϕ-1.31; Mrθ0.38; Mθϕ0.21; Mϕr0.28; Best double couple: Mo1.30000×10¹⁸ NP1:ϕs19.00000°, δ57.00000°, λ125.00000°. NP2:ϕs146.00000°, δ46.00000°, λ48.00000°. Principal axes: T 1.1500, Plg60.0000°, Azm343.0000°; N 0.2000, Plg28.0000°, Azm177.0000°; P -1.3600, Plg6.0000°, Azm84.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [II PIVS] at Davao and General Santos. Also felt at Governor Generoso.
ISCJB ***14*** *05:58:46.0±0.3, 5.37N±0.02×126.53E±0.02, h75km±2km, mb5.7/223 Error ellipse: s-maj=3.7km s-min=2.5km az=167.5*
DJA ***14*** *05:58:47.3±0.3, 5.7N±2.2×12.7E±1.2, h54km±3km, M6.0/106, mb5.9/106, mB6.2/93, MLv6.6/8, Mw(mB)5.9/93, Mwp6.2/36*
TEH ***14*** *05:58:48.0, 5.36N×126.41E, h76km, ML6.3*
GCMT ***14*** *05:58:48.8±0.1, 5.32N×126.60E, h37km, MW6.1, Moment Tensor Solution. s118, c272; s90, c140; Moment tensor: Scale 10¹⁸Nm; Mrr1.35±.01; Mθθ0.49±.01; Mϕϕ-1.84±.01; Mrθ0.86±.02; Mθϕ-0.07±.01; Mϕr0.64±.02; Best double couple: Mo2.00000×10¹⁸ NP1:ϕs154.00000°, δ41.00000°, λ44.00000°. NP2:ϕs28.00000°, δ63.00000°, λ122.00000°. Principal axes: T 1.9500, Plg59.0000°, Azm345.0000°; N 0.0300, Plg28.0000°, Azm192.0000°; P -1.9900, Plg12.0000°, Azm96.0000°; Data Used: II IU CN IC G. Surface waves: sta=127, comp=283, per= 50.*
NEIC ***14*** *05:58:57.0±0.0, 5.32N×126.79E, h44km, Moment Tensor Solution. s152 Moment tensor: Scale 10¹⁸Nm; Mrr1.70; Mθθ0.34; Mϕϕ-2.04; Mrθ0.43; Mθϕ0.00; Mϕr0.23; Best double couple: Mo1.90000×10¹⁸ NP1:ϕs15.00000°, δ51.00000°, λ111.00000°. NP2:ϕs164.00000°, δ44.00000°, λ67.00000°. Principal axes: T 1.8400, Plg73.0000°, Azm348.0000°; N 0.2200, Plg15.0000°, Azm181.0000°; P -2.0500, Plg3.0000°, Azm90.0000°;*

ISC 14 05:58:44.8±0.2, 5.34N±0.02×126.50E±0.03, h47km±1km**, h47**km**:pP-P, n1389, σ1.944/1476, mb5.8/231, MS5.7/242, 178C-136D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.61**	**351**	*e*P	**Pn**	**05 59 12.8**	**+2.0**
DAV	**Davao City (W)**	**1.95**	**332**	*e*P	**Pn**	**05 59 16.6**	**+1.2**
DAV	**Davao City (W)**	**1.95**	**332**	*e*Pn	**Pn**	**05 59 15.2**	**-0.2**
DAV				Sn	**Sn**	**05 59 41.9**	**+3.2**
DAV	**Davao City (W)**	**1.95**	**332**	P	**Pn**	**05 59 16.2**	**+0.8**
DAV	**Davao City (W)** 219nm,0.3s,baz=223,slow=4.3,SNR=47	**1.95**	**332**	Pn	**Pn**	**05 59 15.4**	**0.0**
DAV				Sn	**Sn**	**05 59 41.9**	**+3.2**
	2μm,0.3s,baz=246,slow=20,SNR=9.0						
DAV				LR	LR	06 00 17.6	
	comp=Z,283μm,21.0s,baz=147,slow=50						
KCP	**Kidapawan**	**2.17**	**320**	*i*P	**Pn**	**05 59 18.1**	**-0.4**
KCP				*i*S	**Sn**	**05 59 49.2**	**+5.0**
BUKP	**Musuan**	**2.90**	**331**	*e*P	**Pn**	**05 59 29.5**	**+1.0**
CTBH	**Cotabato--PC H**	**2.92**	**310**	*e*P	**Pn**	**05 59 28.1**	**-0.6**
CGP	**Cagayan de Oro**	**3.58**	**330**	*e*P	Pn	05 59 49.1	+11
CGP				*e*S	Sn	06 00 30.4	+12
BUTP	**Butuan**	**3.71**	**346**	*e*P	Pn	05 59 43.7	+4.1
GAMI	**Galela, Maluku**	**3.71**	**160**	P	**Pn**	**05 59 42.1**	**+2.5**
PAGZ	**Pagadian**	**3.98**	**309**	*e*P	**Pn**	**05 59 45.2**	**+1.9

BTM Bintulu 13.55 262 P Pn 06 01 58.4 +3.9
PIP Pasuquin 14.13 336⇑*e*P **Pn** **06 02 04.7 +2.4**
MMRI Maumere 14.52 197 P **Pn** **06 02 07.8 +0.3**
1µm,1.7s,13µm25µm
SBUM Sibu 14.53 259 P **P** **06 02 11.6 -1.7**
SBUM Sibu 14.53 259 P **P** **06 02 10.8 -2.4**
657nm,1.9s,17µm87µm
BBKI Banjar Baru 14.56 233 P **P** **06 02 12.8 -0.8**
2µm,1.4s,33µm
WSI Waingapu 16.14 203 P pP 06 02 45.8 +3.7
WSI Waingapu 16.14 203 S Sn 06 05 03.9 -23
baz=16,SNR=3.8
WBSI Waikabubak, Su 16.48 205 P **Pn** **06 02 33.8 +0.9**
1µm,0.8s,9µm
BASI Baing, Sumba 16.54 201 P **Pn** **06 02 33.9 +0.3**
1µm,1.2s,14µm
KSM Kuching 16.61 257 *e*Pn **P** **06 02 36.9 +0.6**
623nm,1.1s
KSM *e*Sn **S** **06 05 45.6 -2.0**
KSM Kuching 16.61 257 P **P** **06 02 38.3 +1.9**
KSM Kuching 16.61 257 P **P** **06 02 38.3 +1.9**
414nm,1.1s,12µm82µm
KSM Kuching 16.61 257 P **P** **06 02 37.5 +1.1**
baz=17,SNR=28
KSM S S 06 05 58.5 +11
baz=17,SNR=4.9
PBKI Pangkalan Bun 16.83 242 P P 06 02 45.1 +6.3
KHKI Kahang-Kahang 17.42 219 P **P** **06 02 46.2 +1.0**
427nm,1.4s,7µm49µm
SRBI Singaraja 17.45 220 P **P** **06 02 45.8 +0.2**
422nm,1.1s,9µm34µm
DNP Denpasar 17.91 219 P **P** **06 02 52.7 +2.1**
2µm,1.6s,44µm602µm
IGBI Denpasar 18.05 219 P **Pn** **06 02 54.8 +2.5**
210nm,1.1s,30µm
TWG Pinlang 18.15 344 *e*Pn **Pn** **06 02 54.4 +0.9**
470nm,0.7s
BLJI Banyuglugur 18.30 225 P **Pn** **06 02 55.8 +0.5**
282nm,0.6s,7µm
JAGI Jajag, Banyuwa 18.43 222 P **Pn** **06 02 58.1 +1.1**
671nm,1.0s,9µm51µm
JAGI Jajag, Banyuwa 18.43 222 P **Pn** **06 02 58.7 +1.7**
baz=18,SNR=19
JAGI S S 06 06 35.9 +11
baz=18,SNR=5.7
YULB Yu-li 18.64 345 *e*P **Pn** **06 02 59.2 -0.1**
87nm,0.8s
MTN Manton Dam 18.64 166 P **P** **06 02 56.2 -2.5**
baz=19,SNR=89
TPUB Ta-pu 18.73 343 *e*P **P** **06 02 59.6 -0.1**
266nm,0.9s
GMJI Gumukmas 18.77 224 P **Pn** **06 03 00.8 -0.2**
408nm,1.1s
KDU Kakadu 18.87 162 P **P** **06 02 59.4 -1.8**
baz=19,SNR=35
SSLB Suanglung 19.10 344 *e*P **Pn** **06 03 05.2 +0.2**
172nm,0.9s
NACB Ninganchiao 19.31 346 *e*P **Pn** **06 03 07.0 -0.4**
112nm,0.8s
SJI Sawahan 19.61 229 P **Pn** **06 03 11.6 +0.4**
528nm,1.0s,9µm
PWJI Pagerwojo 19.78 228 P **Pn** **06 03 14.1 +1.1**
278nm,0.9s,5µm
YHNB Yeheng 19.84 346 *e*Pn **Pn** **06 03 14.6 +0.8**
193nm,0.7s
GUMO Guam 19.87 64 *e*P **P** **06 03 12.1 -0.1**
GUMO *e*S **Sn** **06 06 58.1 +1.2**
TATO Taipei 20.11 347 *e*P **P** **06 03 12.9 -1.8**
159nm,0.9s
TATO LR LR
comp=Z,8µm,20.0s
SMRI Semarang 20.21 233 P Pn 06 03 17.5 -0.6
comp=Z,1µm,1.4s,comp=Z,17µmcomp=Z,56µm
SMRI Semarang 20.21 233 P Pn 06 03 20.3 +2.2
baz=20,SNR=6.6
PCJI Pacitan 20.36 229 P Pn 06 03 22.4 +2.5
comp=Z,453nm,0.7s,comp=Z,7µm
TPI Tanjungpandan 20.47 247 P Pn 06 03 20.1 -1.2
comp=Z,315nm,1.1s,comp=Z,4µm
HKC Hong Kong Obse 20.65 326⇑*i*P Pn 06 03 22.0 -1.3
HKC S **S** **06 07 10.0 +1.1**
UGM Wanagama 20.67 231 *e*P Pn 06 03 24.0 +0.3
comp=Z,1µm,1.4s
UGM Wanagama 20.67 231 P Pn 06 03 24.5 +0.8
comp=Z,759nm,1.2s,comp=Z,11µm
UGM Wanagama 20.67 231 P Pn 06 03 23.9 +0.2
baz=21,SNR=3.5
YOGI Yogyakarta 20.79 231 P Pn 06 03 26.1 +1.1
comp=Z,2µm,1.4s,comp=Z,19µmcomp=Z,52µm
QZH Quanzhou 20.92 340⇑*i*P Pn 06 03 25.3 -1.2
QZH S **S** **06 07 13.4 -0.7**
QZH pmax pmax
comp=Z,990nm,1.1s
QZH pmax pmax
comp=Z,7µm,4.6s
QZH LR LR
comp=N,80µm,25.8s
QZH LR LR
comp=E,55µm,26.5s
QZH LR LR
comp=Z,80µm,27.9s
BJII Banjamegara 20.96 233 P Pn 06 03 25.8 -1.3
comp=Z,676nm,1.5s,comp=Z,15µmcomp=Z,71µm
KNRA Kununurra 21.00 174 P **P** **06 03 23.5 -0.9**
baz=21,SNR=499
KNRA S **S** **06 07 14.2 -1.6**
baz=21,SNR=5.3
TGJI Tegal 21.16 235 P P 06 03 32.0 +5.8
comp=Z,695nm,1.1s,comp=Z,9µm
QIZ Qiongzhong 21.19 311 P **P** **06 03 27.1 +0.7**
QIZ sP **sP** **06 03 43.0 -0.6**
QIZ S **S** **06 07 21.5 +1.9**
QIZ sS **sS** **06 07 38.3 +0.6**
QIZ pmax pmax
comp=Z,130nm,1.8s
QIZ pmax pmax
comp=Z,3µm,5.3s
QIZ LR LR
comp=E,8µm,19.0s
QIZ LR LR
comp=Z,31µm,22.6s
QIZ Qiongzhong 21.19 311 *e*P **P** **06 03 27.0 +0.5**
comp=Z,223nm,1.0s
QIZ *e* 06 07 17.3
QIZ LR LR
comp=Z,28µm,22.0s
JOW Kunigami 21.44 4 P **P** **06 03 29.2 +0.1**
comp=Z,388nm,0.9s
JOW *e*S Sn 06 07 32.1 -2.3
PPBI Pangkal Pinang 21.66 250 P **P** **06 03 32.9 +1.3**
comp=Z,419nm,1.4s,comp=Z,5µmcomp=Z,33µm
GZH Guangzhou 21.74 326 P **P** **06 03 35.5 +3.3**
GZH LR LR
comp=N,14µm,20.0s
GZH LR LR
comp=E,12µm,19.6s
LEM Lembang 22.39 238 P **P** **06 03 41.6 +2.1**
comp=E,566nm,1.3s,comp=E,10µm
LEM Lembang 22.39 238 P **P** **06 03 43.7 +4.2**
baz=22,SNR=7.0
LEM S Sn 06 07 56.0 -1.6
baz=22,SNR=4.4
CISI Cisompet, Garu 22.62 236 P **P** **06 03 42.8 +0.9**
comp=E,506nm,1.1s,comp=E,7µmcomp=E,40µm
CISI Cisompet, Garu 22.62 236 P **P** **06 03 44.2 +2.3**
baz=23,SNR=4.6
MYKOM **Kota Tinggi 22.88 262** P **P** **06 03 45.1 +0.6**
MYKOM **Kota Tinggi 22.88 262** P **P** **06 03 45.5 +1.0**
comp=E,726nm,1.5s,comp=E,9µmcomp=E,55µm
UBPT Khong Chiam 22.90 297 P **P** **06 03 44.5 -0.3**
comp=E,294nm,1.3s
BTDF Bukit Timah Da 23.02 261 P **P** **06 03 47.7 +1.6**
baz=23,SNR=21
BTDF P **P** **06 03 47.7 +1.6**
baz=23,SNR=21
CNJI Cibinong 23.05 237 P pP 06 04 03.1 +5.4
KTGM Kuala Trenggan 23.26 271 P **P** **06 03 49.4 +0.9**
SBJI Serang 23.30 241 P **P** **06 03 52.0 +3.2**
comp=E,634nm,1.5s,comp=E,13µm
FITZ Fitzroy Crossi 23.31 182 P **P** **06 03 47.6 -1.2**
FITZ S **S** **06 07 59.1 +1.1**
FITZ Fitzroy Crossi 23.31 182 P **P** **06 03 47.6 -1.2**
comp=E,50nm,0.7s,baz=14,slow=9.6,SNR=64
FITZ S **S** **06 07 59.1 +1.1**
comp=E,143nm,1.2s,baz=32,slow=19,SNR=6.7
FITZ Fitzroy Crossi 23.31 182 P P 06 03 40.0 -8.7
baz=23,SNR=33
FITZ S **S** **06 08 02.4 +4.4**
baz=23,SNR=4.6
KGM Kluang 23.36 263 P **P** **06 03 50.3 +0.9**
SKJI Sukabumi 23.38 239 P **P** **06 03 52.7 +3.2**
comp=E,774nm,1.4s,comp=E,9µm
BLSI Bandar Lampung 23.74 244 P P 06 03 58.9 +6.0
comp=E,463nm,0.9s,comp=E,8µm
KASI Kota Agung 24.48 244 P **P** **06 04 02.1 +2.4**
comp=E,366nm,1.1s,comp=E,5µm
LWLI Liwa 24.66 246 P **P** **06 04 03.7 +2.2**
comp=E,1µm,0.9s,comp=E,10µmcomp=E,30µm
RGRI Rengat 24.79 258 P P 06 04 10.4 +7.9
comp=E,640nm,1.6s,comp=E,62µm
FRIM Kepong 24.89 266 P **P** **06 04 03.3 -0.1**
CHBT CHBT 24.96 289 P **P** **06 04 05.9 +1.8**
comp=E,366nm,1.5s,comp=E,7µm
PMG Port Moresby 25.27 125 P **P** **06 04 07.4 +0.6**
PMG *e*S S 06 08 18.7 -11
PMG Port Moresby 25.27 125 P P 06 04 14.8 +7.9
comp=E,82nm,1.0s,comp=E,3µm
PMG Port Moresby 25.27 125 P **P** **06 04 07.4 +0.6**
comp=E,48nm,0.8s,baz=276,slow=10,SNR=10
PMG LR LR 06 13 43.4
comp=E,12µm,20.8s,baz=279,slow=35
COEN Coen 25.33 139 *e*P **P** **06 04 08.5 +1.2**
COEN *e*S **S** **06 08 25.9 -4.6**
COEN *e*ScP **ScP** **06 11 17.6 +2.6**
COEN Coen 25.33 139 P **P** **06 04 07.0 -0.4**
baz=25,SNR=23
COEN S **S** **06 08 24.0 -6.5**
baz=25,SNR=6.1
IPM Ipoh 25.39 269 *e*P **P** **06 04 07.5 -0.6**
comp=E,647nm,1.3s
IPM *e*ScP **ScP** **06 11 14.7 -0.7**
IPM Ipoh 25.39 269 P **P** **06 04 07.7 -0.4**
IPM Ipoh 25.39 269 P **P** **06 04 08.2 +0.1**
comp=E,392nm,1.4s,comp=E,7µmcomp=E,38µm
MNAI Manna 25.41 248 P P 06 04 14.7 +6.5
comp=E,1µm,1.4s,comp=E,23µm
MNAI Manna 25.41 248 P **P** **06 04 12.9 +4.7**
baz=26,SNR=4.9
KSI Kapahiang 25.50 250 P **P** **06 04 12.5 +3.5**
comp=E,1µm,1.5s,comp=E,20µm
KULM Kulim 25.74 271 *e*P **P** **06 04 11.0 -0.1**
KULM LR LR
comp=Z,6µm,19.0s
KULM Kulim 25.74 271 P **P** **06 04 11.9 +0.8**
KULM Kulim 25.74 271 P **P** **06 04 12.0 +0.8**
comp=Z,370nm,1.3s,comp=Z,5µm
BKNI Bangkinang 25.90 260 P **P** **06 04 14.4 +1.7**
comp=E,869nm,1.3s,comp=Z,11µmcomp=Z,38µm
BKNI Bangkinang 25.90 260 P P 06 04 18.8 +6.2
baz=26,SNR=8.1
XMIS Christmas Isla 26.04 233 P **P** **06 04 15.4 +1.5**
comp=Z,1µm,1.0s
XMIS Christmas Isla 26.04 233 P P 06 04 21.0 +7.1
baz=26,SNR=4.9
SSE Sheshan 26.10 350 P **P** **06 04 15.5 +1.3**
SSE S **S** **06 08 45.8 +3.4**
SSE sS **sS** **06 09 08.3 +5.0**
SSE pmax pmax
comp=Z,470nm,1.0s
SSE pmax pmax
comp=Z,4µm,8.9s
SSE LR LR
comp=N,7µm,23.8s
SSE LR LR
comp=E,8µm,23.8s
SSE LR LR
comp=Z,10µm,24.2s
WRAB Tennant Creek 26.27 163 P **P** **06 04 17.0 +1.1**
comp=Z,2µm,1.2s,SNR=51
WRAB Tennant Creek 26.27 163 *e*P **P** **06 04 14.0 -1.9**
WRAB *e*S S 06 08 53.5 +8.1
WRAB pmax pmax
comp=Z,751nm,1.2s
WRAB MLR MLR
comp=Z,17µm,20.0s
WRAB Tennant Creek 26.27 163 *e*P **P** **06 04 14.0 -1.9**
comp=Z,751nm,1.2s
WRAB *e*S S 06 08 53.5 +8.1
WRAB LR LR
comp=Z,17µm,20.0s
WRA Warramunga Arr 26.28 163 P **P** **06 04 15.7 -0.3**
WRA S **S** **06 08 51.7 +6.2**
WRA ScP **ScP** **06 11 19.7 +2.0**
WRA *e* 06 36 59.7
WRA Warramunga Arr 26.28 163 P **P** **06 04 15.7 -0.3**
comp=Z,81nm,0.9s,baz=341,slow=9.8,SNR=92
WRA S **S** **06 08 51.7 +6.2**
comp=Z,44nm,1.2s,baz=340,slow=18,SNR=6.8
WRA ScP **ScP** **06 11 19.7 +2.0**
comp=Z,25nm,1.1s,baz=345,slow=3.1,SNR=4.9
WRA P3KPbc 06 36 59.7
comp=Z,3.4nm,1.0s,baz=154,slow=2.8,SNR=13
PPI Padang Panjang 26.70 258 P **P** **06 04 21.4 +1.6**
comp=Z,1µm,1.5s
PPI Padang Panjang 26.70 258 P **P** **06 04 22.7 +2.9**
baz=27,SNR=18
MBWA Marble Bar 27.16 194 P **P** **06 04 24.7 +0.9**
SNR=15
MBWA Marble Bar 27.16 194 *e*P **P** **06 04 22.9 -1.0**
comp=Z,390nm,0.9s
MBWA *e*S **S** **06 08 55.3 -4.0**
MBWA LR LR
comp=Z,8µm,22.0s
MNSI Mandailing Nat 27.25 261 P P 06 04 32.2 +7.4
comp=Z,167nm,0.9s,comp=Z,4µm
PBKT Sadao Pong 27.39 296 P **P** **06 04 26.9 +0.9**
comp=Z,102nm,0.7s
NJ2 Nanjing 27.52 346 *e*P **P** **06 04 28.8 +1.8**
NJ2 pP **pP** **06 04 40.1 +0.7**
NJ2 sP **sP** **06 04 45.3 +0.3**
NJ2 S **S** **06 09 09.5 +4.7**
NJ2 sS sS 06 09 31.5 +5.8
NJ2 pmax pmax
comp=Z,210nm,1.2s
NJ2 pmax pmax
comp=Z,3µm,7.2s
NJ2 LR LR
comp=N,10µm,24.8s
NJ2 LR LR
comp=E,18µm,26.3s
NJ2 LR LR
comp=Z,13µm,25.4s
WHN Wuhan 27.56 337⇓P **P** **06 04 28.8 +1.5**
WHN S **S** **06 09 03.3 -2.1**
WHN LR LR
comp=N,29µm,22.2s
WHN LR LR
comp=E,31µm,17.9s
WHN LR LR
comp=Z,84µm,26.6s
TSI Tuntungan 27.91 267 P **P** **06 04 32.4 +1.7**
comp=Z,250nm,1.2s,comp=Z,6µmcomp=Z,51µm
JNU Nakatsue 27.94 8 *e*P **P** **06 04 29.2 -1.5**
comp=Z,149nm,0.9s
JNU *e*S **S** **06 09 12.3 +0.8**
JNU Nakatsue 27.94 8 P **P** **06 04 32.7 +1.9**
comp=Z,78nm,1.0s,baz=168,slow=7.8,SNR=36
JNU LR LR 06 15 29.9
comp=Z,14µm,21.8s,baz=181,slow=36
GYA Guiyang 28.28 320⇑*i*P **P** **06 04 34.9 +0.9**
GYA pP **pP** **06 04 46.6 +0.2**
GYA sP **sP** **06 04 52.1 0.0**
GYA PP **PnPn** **06 05 27.3 +3.0**
GYA S **S** **06 09 17.9 +0.7**
GYA sS **sS** **06 09 37.3 -0.8**
GYA pmax pmax
comp=Z,150nm,1.0s
GYA LR LR
comp=N,14µm,19.9s
GYA LR LR
comp=E,16µm,19.6s
GYA LR LR
comp=Z,25µm,21.1s
KCSI Kotacane, Aceh 28.70 268 P **P** **06 04 36.2 -1.6**
comp=Z,315nm,1.2s,comp=Z,4µm
QIS Mount Isa 28.78 154 P **P** **06 04 38.8 +0.5**
baz=29,SNR=44
MTSU Mount Surprise 29.21 143 P **P** **06 04 44.0 +1.8**
baz=29,SNR=24
LHMI Lhok Sumawe 29.43 271 P pP 06 05 00.0 +3.4
LHMI Lhok Sumawe 29.43 271 P **P** **06 04 47.1 +2.9**
baz=30,SNR=3.9
ENH Enshi 29.53 329 *e*P **P** **06 04 44.8 -0.1**
comp=Z,121nm,0.8s
ENH *e*PcP **PcP** **06 07 50.3 +0.9**
ENH LR LR
comp=Z,25µm,20.0s
ASAR Alice Springs 29.72 166 P **P** **06 04 45.5 -1.2**
ASAR PcP **PcP** **06 07 50.9 +0.8**
ASAR S **S** **06 09 38.7 -1.0**
ASAR ScP **ScP** **06 11 29.9 +1.6**
ASAR *e* 06 36 46.0
ASAR Alice Springs 29.72 166 P **P** **06 04 45.5 -1.2**
comp=Z,11nm,0.7s,baz=340,slow=6.8,SNR=49
ASAR PcP **PcP** **06 07 50.9 +0.8**
comp=Z,24nm,0.7s,baz=334,slow=1.7,SNR=5.1
ASAR S **S** **06 09 38.7 -1.0**
comp=Z,12nm,1.0s,baz=350,slow=19,SNR=3.8
ASAR ScP **ScP** **06 11 29.9 +1.6**
comp=Z,51nm,1.1s,baz=344,slow=2.3,SNR=12
ASAR P3KPbc 06 36 46.0
comp=Z,1.4nm,0.7s,baz=162,slow=4.1,SNR=10
CM31 Chiang Mai Arr 29.89 298 *e*P **P** **06 04 48.9 +0.6**
comp=Z,41nm,0.7s
CMAR Chiang Mai Arr 29.89 298 P **P** **06 04 48.1 -0.1**
CMAR PcP **PcP** **06 07 50.6 +0.1**
CMAR ScP **ScP** **06 11 30.2 +1.2**
CMAR Chiang Mai Arr 29.89 298 P **P** **06 04 48.1 -0.1**
comp=Z,19nm,0.8s,baz=111,slow=7.2,SNR=62
CMAR PcP **PcP** **06 07 50.6 +0.1**
comp=Z,22nm,0.9s,baz=113,slow=1.1,SNR=9.3
CMAR ScP **ScP** **06 11 30.2 +1.2**
comp=Z,34nm,1.1s,baz=96,slow=1.5,SNR=24
CMAR LR LR 06 17 52.0
comp=Z,17µm,18.4s,baz=105,slow=39
CMMT Chiang Mai 30.02 299 P **P** **06 04 50.5 +1.1**
comp=Z,71nm,1.1s,comp=Z,2µm
CHTO Chiang Mai 30.02 299 *e*P **P** **06 04 48.1 -1.4**
CHTO *e* 06 07 53.0
CHTO MLR MLR
comp=Z,13µm,19.0s
CHTO Chiang Mai 30.02 299 P **P** **06 04 50.0 +0.6**
SNR=18
CHTO Chiang Mai 30.02 299 *e*P **P** **06 04 48.1 -1.4**
CHTO *e*PcP **PcP** **06 07 53.0 +2.1**
CHTO LR LR
comp=Z,13µm,19.0s
CHTO Chiang Mai 30.02 299 P **P** **06 04 50.0 +0.6**
comp=Z,42nm,1.4s,comp=Z,2µmcomp=Z,20µm
KMI Kunming 30.10 313⇑P **P** **06 04 51.5 +1.2**
KMI pP **pP** **06 05 05.9 +3.2**
KMI PP **PnPn** **06 05 52.5 +3.6**
KMI S **S** **06 09 47.3 +1.2**
KMI sS **sS** **06 10 09.3 +2.3**
KMI pmax pmax
comp=Z,85nm,1.1s
KMI pmax pmax
comp=Z,1µm,8.3s
KMI LR LR
comp=N,10µm,17.7s
KMI LR LR
comp=E,12µm,17.0s
KMI LR LR
comp=Z,26µm,21.9s
SNSI Sinabang, Aceh 30.24 266 P P 06 04 55.5 +4.1
comp=Z,301nm,1.1s
JHJ Hachijo jima 2 30.28 22 P **P** **06 04 52.7 +1.2**
comp=Z,58nm,0.7s,baz=63,slow=23,SNR=2.6
JHJ LR LR 06 15 42.2
comp=Z,20µm,21.4s,baz=40,slow=34
BSI Banda Aceh 31.06 272 P **P** **06 04 58.9 +0.2**
comp=Z,142nm,1.3s,comp=Z,2µm
CTA Charters Tower 31.87 143 P **P** **06 05 06.8 +1.1**
CTA ScP **ScP** **06 11 37.8 +2.3**
CTA Charters Tower 31.87 143 P **P** **06 05 06.8 +1.1**
comp=Z,62nm,1.0s,baz=334,slow=11,SNR=18
CTA ScP **ScP** **06 11 37.8 +2.3**
comp=Z,47nm,0.9s,baz=308,slow=4.6,SNR=12
CTA LR LR 06 18 52.3
comp=Z,9µm,21.4s,baz=328,slow=38
CTAO Charters Tower 31.87 143 *e*P **P** **06 05 07.5 +1.8**
CTAO *e*S **S** **06 10 15.7 +2.3**
CTAO pmax pmax
comp=Z,234nm,1.3s
CTAO MLR MLR
comp=Z,9µm,20.0s
CTAO Charters Tower 31.87 143 *e*P **P** **06 05 07.5 +1.8**
comp=Z,234nm,1.3s
CTAO *e*S **S** **06 10 15.7 +2.3**
CTAO LR LR
comp=Z,9µm,20.0s
TIA Tai'an 31.91 346 P **P** **06 05 06.3 +0.5**
TIA S **S** **06 10 18.8 +5.1**
TIA pmax pmax
comp=Z,180nm,1.0s
TIA LR LR
comp=N,10µm,21.4s
TIA LR LR
comp=E,13µm,25.2s
TIA LR LR
comp=Z,12µm,18.9s
KSAR Wonju Array Be 31.98 2 P **P** **06 05 08.1 +1.7**
KSAR PcP **PcP** **06 07 56.5 +0.8**
KSAR ScP **ScP** **06 11 35.8 +0.3**
KSAR *e* 06 36 37.0
KSRS Korea Array 31.99 2 P **P** **06 05 08.1 +1.6**
comp=Z,32nm,0.7s,baz=187,slow=10,SNR=50
KSRS PcP **PcP** **06 07 56.5 +0.8**
comp=Z,17nm,0.8s,baz=190,slow=2.4,SNR=8.4
KSRS ScP **ScP** **06 11 35.8 +0.3**
comp=Z,3.7nm,1.0s,baz=195,slow=3.4,SNR=2.9
KSRS LR LR 06 18 56.0
comp=Z,6µm,18.3s,baz=195,slow=38
KSRS P3KPbc 06 36 37.0
comp=Z,1.0nm,0.8s,baz=353,slow=2.8,SNR=4.4
INCN Inchon 31.99 0 *e*P **P** **06 05 05.2 -1.3**
comp=Z,69nm,0.7s
INCN *e*PcP **PcP** **06 07 58.1 +2.4**
INCN *e*ScP **ScP** **06 11 32.7 -2.9**
INCN LR LR
comp=Z,9µm,19.0s
CMBY CAMPBELL BAY 32.42 275 *e*PKP **P** **06 05 11.3 +0.6**
CMBY AMB AMB 06 05 24.7
comp=Z,292nm,0.6s
MEEK Meekatharra 32.69 193 P **P** **06 05 11.5 -1.3**
baz=33,SNR=161
MAJO Matsushiro 32.86 18 *e*P **P** **06 05 12.0 -2.2**
MAJO *e* 06 07 58.4
MAJO pmax pmax
comp=Z,26nm,0.7s
MAJO MLR MLR
comp=Z,18µm,21.0s
MAJO Matsushiro 32.86 18 *e*P **P** **06 05 12.0 -2.2**
comp=Z,26nm,0.7s
MAJO *e*PcP **PcP** **06 07 58.4 +0.2**
MAJO LR LR
comp=Z,18µm,21.0s
MAT Matsushiro 32.86 18 P **P** **06 05 11.9 -2.3**
MAT S **S** **06 10 24.2 -4.3**
XAN Xi'an 32.89 332 P **P** **06 05 13.9 -0.6**
XAN pP **pP** **06 05 22.9 -4.1**
XAN pmax pmax
comp=Z,85nm,1.2s
XAN pmax pmax
comp=Z,510nm,8.0s
XAN LR LR
comp=N,16µm,30.6s
XAN LR LR
comp=Z,7µm,27.5s
CD2 Chengdu 33.22 323 P **P** **06 05 17.5 0.0**
CD2 pP **pP** **06 05 30.6 +0.6**
CD2 sP **sP** **06 05 36.5 +0.9**
CD2 PP **PnPn** **06 06 29.9 +1.0**
CD2 PcP **PcP** **06 07 59.8 +0.5**
CD2 S **S** **06 10 32.9 -1.5**
CD2 sS **sS** **06 10 54.8 -0.6**
CD2 ScS **ScS** **06 15 37.3 -3.5**
CD2 pmax pmax
comp=Z,160nm,1.2s
CD2 pmax pmax
comp=Z,2µm,9.2s
CD2 LR LR
comp=N,21µm,19.0s
CD2 LR LR
comp=E,12µm,19.0s
CD2 LR LR
comp=Z,20µm,19.2s
DL2 Dalian 33.70 353⇑*i*P **P** **06 05 22.9 +1.4**
DL2 S **S** **06 10 43.3 +1.9**

DL2 pmax pmax
comp=Z,950nm,1.0s
DL2 LR LR
comp=E,6μm,15.2s
DL2 LR LR
comp=Z,5μm,25.9s
DGPR DIGLIPUR 34.00 286 *e*PKP **P** **06 05 24.8 +0.4**
DGPR AMB AMB 06 06 01.1
comp=Z,73nm,0.2s
COCO West Island 34.25 239 PFAKE 06 05 40.0 +13
COCO LR LR
comp=Z,8μm,21.0s
TIY Taiyuan 34.68 340 *e*P **P** **06 05 30.8 +0.7**
TIY PP **PnPn** **06 06 47.4 +0.3**
TIY S **S** **06 10 58.6 +1.8**
TIY pmax pmax
comp=Z,2μm,4.5s
TIY LR LR
comp=N,2μm,14.6s
TIY LR LR
comp=E,3μm,14.0s
TIY LR LR
comp=Z,6μm,20.5s
MORW Morawa 35.66 196 P **P** **06 05 37.2 -1.3**
baz=36,SNR=64
BJT Baijiatuau 35.76 346 *e*P **P** **06 05 39.0 -0.2**
comp=Z,499nm,0.8s
BJT *e*PcP **PcP** **06 08 07.9 +1.5**
BJT *e*S S 06 11 24.4 +11
BJT LR LR
comp=Z,9μm,22.0s
BJI Beijing 35.78 346 P **P** **06 05 39.8 +0.5**
BJI pP **pP** **06 05 52.8 +0.9**
BJI sP **sP** **06 05 57.9 +0.4**
BJI PP **PP** **06 07 03.8 +2.4**
BJI S **S** **06 11 17.3 +4.0**
BJI sS **sS** **06 11 36.4 +2.0**
BJI pmax pmax
comp=Z,360nm,0.8s
BJI pmax pmax
comp=Z,4μm,3.8s
BJI LR LR
comp=N,4μm,28.4s
BJI LR LR
comp=E,8μm,28.8s
BJI LR LR
comp=Z,8μm,25.6s
FORT Forrest 35.95 178 *e*P **P** **06 05 40.2 -0.7**
FORT Forrest 35.95 178 P **P** **06 05 40.2 -0.7**
baz=36,SNR=60
QLP Quilpie 36.09 152 P **P** **06 05 41.4 -0.7**
baz=36,SNR=52
HNR Honiara 36.42 114 LR LR 06 19 19.1
comp=Z,11μm,20.3s,baz=292,slow=34
SNY Shenyang 36.42 356 ⇓P **P** **06 05 46.6 +1.7**
SNY pP **pP** **06 05 52.6 -4.8**
SNY S **S** **06 11 27.3 +4.1**
SNY pmax pmax
comp=Z,430nm,1.3s
SNY pmax pmax
comp=Z,4μm,3.5s
SNY LR LR
comp=N,5μm,21.6s
SNY LR LR
comp=E,9μm,25.5s
SNY LR LR
comp=Z,8μm,22.6s
IMP Imphal 36.74 305 *e*PKP **P** **06 05 49.0 +1.0**
IMP *ex* x 06 08 09.0
KMBL Kambalda 36.77 187 P **P** **06 05 47.1 -0.8**
baz=37,SNR=36
LZH Lanzhou 37.01 329 ⇓P **P** **06 05 50.6 +0.4**
LZH pP **pP** **06 06 03.5 +0.7**
LZH PP **PnPn** **06 07 17.0 +1.2**
LZH PcP **PcP** **06 08 09.6 -0.9**
LZH S **S** **06 11 33.0 +0.3**
LZH ScP **ScP** **06 11 50.0 -3.7**
LZH sS **sS** **06 11 55.3 +1.5**
LZH ScS **ScS** **06 15 58.5 -2.8**
LZH pmax pmax
comp=Z,350nm,1.0s
LZH pmax pmax
comp=Z,2μm,5.7s
LZH LR LR
comp=N,6μm,14.0s
LZH LR LR
comp=E,12μm,15.0s
LZH LR LR
comp=Z,33μm,19.5s
KLBR Kellerberrin 37.66 192 P **P** **06 05 54.5 -0.9**
baz=38,SNR=64
HHC Hu-ho-hao-te 37.81 341 *e*P **P** **06 05 57.6 +0.8**
HHC pP **pP** **06 06 09.9 +0.5**
HHC sP **sP** **06 06 15.4 +0.4**
HHC PP **PnPn** **06 07 26.9 +1.5**
HHC S **S** **06 11 47.4 +2.9**
HHC sS **sS** **06 12 04.0 -1.7**
HHC ScS **ScS** **06 16 00.8 -4.7**
HHC pmax pmax
comp=Z,270nm,1.3s
HHC pmax pmax
comp=Z,4μm,5.6s
HHC LR LR
comp=N,11μm,17.6s
HHC LR LR
comp=E,10μm,17.8s
HHC LR LR
comp=Z,14μm,18.8s
VLA Vladivostok 37.92 6 *e*P **P** **06 05 58.1 +0.6**
VLA pmax pmax
comp=Z,159nm,0.9s
BTO Baotou 38.10 340 *e*P **P** **06 05 58.6 -0.7**
BTO PP **PnPn** **06 07 33.4 +4.5**
BTO pmax pmax
comp=Z,38nm,2.0s
BTO LR LR
comp=N,2μm,21.0s
BTO LR LR
comp=E,2μm,29.0s
RMQ Roma 38.29 147 P **P** **06 06 03.8 +2.9**
baz=38,SNR=11
CN2 Changchun 38.32 359 *e*P **P** **06 06 01.8 +0.9**
CN2 *ep*P **pP** **06 06 14.1 +0.6**
CN2 *es*P **sP** **06 06 19.3 +0.2**
CN2 PP **PnPn** **06 07 34.5 +3.2**
CN2 PcP **PcP** **06 08 13.3 -0.8**
CN2 pmax pmax
comp=Z,80nm,0.7s
CN2 LR LR
comp=N,5μm,19.0s
CN2 LR LR
comp=E,5μm,19.0s
CN2 LR LR
comp=Z,5μm,18.0s
SHL Shillong 38.76 305 *e*PKP **P** **06 06 04.0 -1.1**
comp=Z,65nm,0.7s
SHL *i* S **S** **06 11 58.0 -1.4**
EIDS Eidsvold 38.76 143 *e*P **P** **06 06 04.2 -0.7**
EIDS Eidsvold 38.76 143 P **P** **06 06 04.1 -0.7**
baz=39,SNR=16
USRK Ussuriysk Arra 39.00 6 P **P** **06 06 06.9 +0.3**
comp=Z,101nm,0.7s,baz=184,slow=8.2,SNR=71
USRK ScP **S** **06 12 02.5 +0.3**
comp=Z,3.6nm,0.8s,baz=191,slow=2.0,SNR=5.0
USRK LR LR 06 22 03.7
comp=Z,4μm,20.5s,baz=178,slow=36
BBOO Buckleboo 39.01 167 *e*P **P** **06 06 06.9 +0.1**
comp=Z,3μm,0.9s
BBOO *e* 06 12 02.4
BBOO Buckleboo 39.01 167 P **P** **06 06 06.9 +0.1**
baz=39,SNR=11
NWAO Narrogin (SRO) 39.06 192 P **P** **06 06 07.7 +0.5**
SNR=9.4
NWAO Narrogin (SRO) 39.06 192 *e*P **P** **06 06 07.0 -0.2**
comp=Z,238nm,1.1s
NWAO LR LR
comp=Z,5μm,22.0s
NWAO Narrogin (SRO) 39.06 192 P **P** **06 06 06.4 -0.8**
comp=Z,59nm,0.6s,baz=16,slow=9.1,SNR=42
MDJ Mudanjiang 39.21 3 P **P** **06 06 09.1 +0.7**
MDJ pP **pP** **06 06 20.3 -0.8**
MDJ sP **sP** **06 06 25.3 -1.3**
MDJ PcP **PcP** **06 08 17.8 +0.9**
MDJ S **S** **06 12 06.3 +0.9**
MDJ sS **sS** **06 12 25.3 -1.4**

MDJ ScS **ScS** **06 16 14.3 +1.1**
MDJ pmax pmax
comp=Z,410nm,0.9s
MDJ pmax pmax
comp=Z,1μm,6.8s
MDJ LR LR
comp=N,5μm,21.8s
MDJ LR LR
comp=E,6μm,26.4s
MDJ LR LR
comp=Z,10μm,29.7s
MDJ Mudanjiang 39.21 3 *e*P **P** **06 06 08.8 +0.5**
comp=Z,398nm,0.9s
MDJ *e*PcP **PcP** **06 08 17.1 +0.2**
MDJ LR LR
comp=Z,8μm,22.0s
ERM Erimo 39.42 20 *e*P **P** **06 06 11.4 +1.3**
ERM pmax pmax
comp=Z,74nm,1.2s
ERM Erimo 39.42 20 PFAKE 06 06 20.0 +10
ERM LR LR
comp=Z,9μm,20.0s
STKA Stephens Creek 39.71 160 *e*P **P** **06 06 13.2 +0.6**
comp=Z,1.6nm,1.3s
STKA ScP **ScP** **06 12 05.4 +1.6**
STKA Stephens Creek 39.71 160 P **P** **06 06 13.5 +0.8**
comp=Z,70nm,0.7s,baz=336,slow=9.4,SNR=22
STKA ScP **ScP** **06 12 05.4 +1.6**
comp=Z,23nm,0.9s,baz=316,slow=7.7,SNR=4.9
STKA LR LR 06 23 15.0
comp=Z,6μm,21.9s,baz=330,slow=37
STKA Stephens Creek 39.71 160 P **P** **06 06 12.6 -0.1**
baz=40,SNR=27
STKA S S 06 12 06.1 -7.0
baz=40,SNR=4.3
RKGY Rocky Gully 40.74 192 P **P** **06 06 21.6 +0.5**
baz=41,SNR=30
CMSA Cobar Meteorol 40.99 155 P **P** **06 06 24.2 +0.9**
baz=41,SNR=58
CMSA S S 06 12 11.7 -21
baz=41,SNR=6.5
ASAJ Asahikawa 41.13 18 *e*P **P** **06 06 25.2 +0.9**
comp=Z,61nm,1.1s
ASAJ Asahikawa 41.13 18 P **P** **06 06 25.4 +1.2**
comp=Z,62nm,0.7s,baz=220,slow=9.0,SNR=14
ASAJ LR LR 06 22 47.4
comp=Z,14μm,21.6s,baz=56,slow=35
LSA Lhasa 41.22 310 P **P** **06 06 26.4 +0.6**
LSA pP **pP** **06 06 35.3 -3.3**
LSA sP **sP** **06 06 39.3 -4.8**
LSA PP **PP** **06 07 59.3 -2.3**
LSA LR LR
comp=N,3μm,26.8s
LSA LR LR
comp=E,8μm,29.5s
LSA LR LR
comp=Z,10μm,30.9s
LSA Lhasa 41.22 310 *e*P **P** **06 06 26.4 +0.6**
LSA pmax pmax
comp=Z,448nm,1.4s
LSA MLR MLR
comp=Z,10μm,22.0s
LSA Lhasa 41.22 310 *e*P **P** **06 06 26.4 +0.6**
comp=Z,448nm,1.4s
LSA LR LR
comp=Z,10μm,22.0s
WAKE Wake Island 41.48 67 PFAKE 06 06 40.0 +13
WAKE LR LR
comp=Z,4μm,21.0s
GTA Gaotai 41.61 328 ⇓P **P** **06 06 28.1 -0.4**
GTA pP **pP** **06 06 40.3 -0.9**
GTA sP **sP** **06 06 45.5 -1.3**
GTA PP **PnPn** **06 08 08.4 -2.0**
GTA PcP **PcP** **06 08 25.8 +0.9**
GTA S **S** **06 12 39.1 -2.5**
GTA sS **sS** **06 13 02.8 -0.2**
GTA pmax pmax
comp=Z,100nm,1.9s
GTA pmax pmax
comp=Z,2μm,6.2s
GTA LR LR
comp=N,7μm,24.2s
GTA LR LR
comp=E,10μm,21.8s
GTA LR LR
comp=Z,15μm,19.2s
YUK Yuzh-Kuril'sk 42.13 21 *c* *i*P P 06 06 26.7 -5.7
YUK *i* 06 08 12.3
YUK *i* S **S** **06 12 43.8 -5.1**
YUK *i* SS SS 06 15 48.6 -9.4
YUK MLR MLR
comp=N,2μm,21.0s
YUK MLR MLR
comp=E,2μm,21.0s
YUK MLR MLR
comp=Z,6μm,21.0s
TAPN Taplejung 42.90 305 *e*P **P** **06 06 38.7 -0.6**
comp=Z,176nm,0.5s
ARMA Armidale 42.93 147 *e*P **P** **06 06 39.7 +0.4**
comp=Z,124nm,0.8s
ARMA *e*S **S** **06 13 01.0 -0.3**
ARMA Armidale 42.93 147 P **P** **06 06 39.7 +0.4**
baz=43,SNR=24
ODAN Odare 42.97 304 *e*P **P** **06 06 39.2 -0.6**
comp=Z,411nm,0.7s
BOK Bokaro 43.16 299 *e*PKP **P** **06 06 40.0 -1.1**
BOK AMB AMB 06 06 42.8
comp=Z,52nm,1.6s
HABR Khabarovsk 43.59 8 *i* P **P** **06 06 45.5 +1.3**
HABR *e**PP **pP** **06 07 00.1 +3.1**
HABR *e* 06 08 25.3
HABR *e* 06 08 29.1
HABR *e*S **S** **06 13 11.8 +1.6**
HABR *e*SS **SS** **06 16 25.3 -1.2**
HABR 06 16 35.3
HABR *e*SSS SSS 06 17 07.1
HABR pmax pmax
comp=N,442nm,1.8s
HABR pmax pmax
comp=Z,1μm,1.8s
HABR pmax pmax
comp=E,456nm,1.8s
HABR pmax pmax
comp=Z,1μm,1.9s
HABR MLR MLR
comp=N,4μm,19.0s
HABR MLR MLR
comp=E,5μm,19.0s
HABR MLR MLR
comp=Z,6μm,19.0s
RAMN Ramite 43.65 304 *e*P **P** **06 06 45.0 -0.4**
comp=Z,243nm,0.7s
YSS Yuzh-Sakhalins 43.77 16 ⇑*i*P **P** **06 06 47.0 +1.4**
YSS *e* 06 06 58.0
YSS *e* 06 08 34.0
YSS *e*PPP PPP 06 09 10.0
YSS *e*S **S** **06 13 12.0 -0.7**
YSS *e*SSS SSS 06 16 25.0
YSS pmax pmax
comp=Z,1μm,10.0s
YSS pmax pmax
comp=Z,120nm,1.0s
YSS MLR MLR
comp=N,6μm,19.0s
YSS MLR MLR
comp=Z,5μm,19.0s
YSS MLR MLR
comp=E,4μm,18.0s
KUR Kuril'sk 43.89 22 *c* *i*P P 06 06 41.3 -5.4
KUR *i* 06 08 28.3
KUR *i* S **S** **06 13 10.2 -4.4**
KUR *i* SS **SS** **06 16 29.6 -2.8**
KUR pmax pmax
comp=N,25nm,1.0s
KUR pmax pmax
comp=E,31nm,1.0s
KUR pmax pmax
comp=Z,5μm,24.4s
KUR pmax pmax
comp=Z,850nm,1.8s
KUR MLR MLR
comp=E,5μm,24.0s
KUR MLR MLR
comp=N,6μm,24.0s
VIS Vishakhapatnam 43.94 290 *e*PKP **P** **06 06 50.4 +2.9**
KLR Kul'dur 43.96 5 *e*P P 06 06 43.2 -4.0

KLR *e*S **S** **06 13 13.5 -2.1**
KLR *e*SS SS 06 16 17.0 -17
KLR pmax pmax
comp=Z,560nm,1.8s
KLR pmax pmax
comp=N,2μm,10.0s
KLR pmax pmax
comp=Z,3μm,10.0s
KLR MLR MLR
comp=Z,4μm,13.0s
HIA Hailar 44.15 354 *e*P **P** **06 06 49.6 +0.9**
comp=Z,440nm,1.2s
HIA *e* 06 08 36.0
HIA *e*ScP **ScP** **06 12 24.2 +3.0**
HIA LR LR
comp=Z,6μm,20.0s
ARPS Mount Arapiles 44.28 162 P **P** **06 06 50.5 +0.6**
baz=44,SNR=23
YNG Young 44.52 154 P **P** **06 06 52.4 +0.6**
baz=44,SNR=27
GUN Gumba 44.61 305 *e*P **P** **06 06 51.7 -1.5**
comp=Z,687nm,0.7s
PKI Pulchoki 44.87 304 *e*P **P** **06 06 53.9 -1.3**
comp=Z,167nm,0.8s
PKIN Phulchoki 44.88 304 *e*P **P** **06 06 54.6 -0.6**
comp=Z,148nm,0.7s
MGCD Mangrove Creek 44.88 150 P **P** **06 06 52.0 -2.7**
baz=45,SNR=10
KKN Kakani 45.05 304 *e*P **P** **06 06 55.5 -1.0**
comp=Z,191nm,0.8s
DMN Daman 45.13 304 *e*P **P** **06 06 56.3 -0.9**
comp=Z,255nm,0.8s
ULN Ulaanbaatar 45.53 342 P **P** **06 06 59.9 +0.1**
SNR=142
ULN Ulaanbaatar 45.53 342 *e*P **P** **06 06 59.3 -0.5**
comp=Z,109nm,0.8s
ULN *e*PcP **PcP** **06 08 36.5 -1.6**
ULN *e*ScP **ScP** **06 12 27.4 +0.3**
ULN LR LR
comp=Z,7μm,21.0s
ULN Ulaanbaatar 45.53 342 P **P** **06 06 59.6 -0.3**
comp=Z,180nm,0.8s,comp=Z,2μmcomp=Z,10μm
PALK Pallekele 45.55 275 *e*P **P** **06 06 59.9 -0.6**
comp=Z,42nm,1.0s
PALK Pallekele 45.55 275 P **P** 06 07 03.8 +3.4
comp=Z,48nm,2.0s,comp=Z,2μm
CAN Canberra 45.65 154 *e*P **P** **06 07 01.5 +0.6**
CAN pmax pmax
comp=Z,334nm,1.4s
CAN MLR MLR
comp=Z,11μm,19.0s
CAN Canberra 45.65 154 *e*P **P** **06 07 01.5 +0.6**
comp=Z,334nm,1.4s
CAN LR LR
comp=Z,11μm,19.0s
SONM Songino Array 45.71 341 P **P** **06 07 01.2 -0.1**
SONM PcP **PcP** **06 08 38.8 +0.2**
SONM ScP **ScP** **06 12 30.4 +2.5**
SONM Songino Array 45.71 341 P **P** **06 07 01.2 -0.1**
comp=Z,13nm,0.5s,baz=154,slow=8.0,SNR=51
SONM PcP **PcP** **06 08 38.8 +0.2**
comp=Z,18nm,0.7s,baz=156,slow=2.9,SNR=4.0
SONM ScP **ScP** **06 12 30.4 +2.5**
comp=Z,6.1nm,1.0s,baz=163,slow=1.5,SNR=3.6
SONM LR LR 06 28 23.8
comp=Z,7μm,20.4s,baz=253,slow=39
CNB Canberra Magne 45.80 154 P **P** **06 07 04.3 +2.2**
baz=46,SNR=30
TOO Toolangi 46.21 159 P **P** **06 07 07.3 +2.0**
baz=46,SNR=14
MDRS Chennai 46.24 283 *e*S **S** **06 13 50.2 +0.8**
KOLN Koldanda 46.43 304 *e*P **P** **06 07 06.5 -0.9**
comp=Z,408nm,0.7s
TARA Tarawa 46.50 93 PFAKE 06 07 20.0 +12
TARA LR LR
comp=Z,11μm,20.0s
DANN Dangsing 46.51 304 *e*P **P** **06 07 06.5 -1.6**
comp=Z,664nm,0.7s
PYUN Piuthan 47.05 304 *e*P **P** **06 07 11.7 -0.6**
comp=Z,743nm,1.0s
MILA Mila 47.19 155 P **P** **06 07 15.6 +2.7**
baz=47,SNR=13
NOUC Port Laguerre 47.56 126 *e*P **P** **06 07 17.1 +1.1**
DZM Mont Dzumac 47.66 126 *e*P **P** **06 07 19.9 +3.0**
comp=Z,259nm,1.2s
DZM *e*S **S** **06 14 05.1 -4.6**
comp=Z,9μm,32.4s
DZM *e*LR LR 06 22 21.5
comp=Z,29μm,27.9s
DZM Mont Dzumac 47.66 126 P **P** **06 07 17.6 +0.8**
comp=Z,4.3nm,0.9s
DZM ScP **ScP** **06 12 40.0 +3.5**
DZM Mont Dzumac 47.66 126 P **P** **06 07 17.6 +0.8**
comp=Z,22nm,0.7s,baz=270,slow=8.1,SNR=20
DZM ScP **ScP** **06 12 40.0 +3.5**
comp=Z,29nm,1.2s,baz=297,slow=4.5,SNR=6.4
CIT Chita 47.75 349 *e*P **P** **06 07 18.5 +1.4**
CIT *e* 06 14 13.7
CIT *e* 06 17 09.3
CIT pmax pmax
comp=Z,1μm,2.9s
JBP Jabalpur 48.18 296 ⇑*i*P **P** **06 07 20.5 -0.3**
JBP *ex* x 06 14 13.6
HYB Hyderabad 48.37 288 *i* P **P** **06 07 22.0 -0.4**
HYB *e*ScP **ScP** **06 12 40.0 +0.4**
HYB *e*S **S** **06 14 20.0 +0.1**
HYB Hyderabad 48.37 288 *e*PKP **P** **06 07 21.6 -0.8**
NGP Nagpur 48.57 293 *ex* **PP** **06 09 17.5 +0.4**
NGP *ex* **S** **06 14 19.6 -2.9**
ZAK Zakamensk 48.94 340 *e*P **P** **06 07 25.8 -0.5**
ZAK *e* 06 08 52.5
ZAK *e* 06 17 07.8
ZAK pmax pmax
comp=Z,31nm,1.3s
TRD Trivandrum 49.26 277 *e*PKP **P** **06 07 28.4 -0.8**
TRD AMB AMB 06 07 37.3
comp=Z,65nm,1.2s
LGTI Lohaghat 49.78 304 *ex* pP 06 07 48.2 +2.2
TLY Talaya 49.94 342 *e*P **P** **06 07 33.6 -0.2**
TLY *e* 06 09 33.9
TLY *e*S **S** **06 14 43.7 +2.9**
TLY *e* 06 17 22.6
TLY *e*SSS SSS 06 19 40.9
TLY pmax pmax
comp=Z,152nm,1.0s
TLY MLR MLR
comp=Z,6μm,22.0s
TLY Talaya 49.94 342 P **P** **06 07 34.0 +0.2**
comp=Z,652nm,0.8s,SNR=30
IRK Irkutsk 50.23 342 *e*P **P** **06 07 36.4 +0.4**
IRK *e* 06 14 51.2
IRK pmax pmax
comp=Z,330nm,2.2s
LATR Latur 50.40 289 *e*PKP **P** **06 07 36.9 -0.9**
BHPL Bhopal 50.49 296 *e*PKP **P** **06 07 38.3 -0.2**
BHPL AMB AMB 06 07 54.8
comp=Z,76nm,0.3s
MOO Moorlands 51.15 160 P P 06 07 52.4 +9.4
baz=51,SNR=5.0
WMQ Urumqi 51.28 324 ⇑*i*P **P** **06 07 44.3 +0.1**
WMQ pP **pP** **06 07 56.5 -0.8**
WMQ sP **sP** **06 08 02.0 -0.8**
WMQ PcP **PcP** **06 08 59.5 +0.8**
WMQ ScP **ScP** **06 12 50.5 -1.1**
WMQ S **S** **06 14 58.0 -1.9**
WMQ sS **sS** **06 15 19.0 -2.8**
WMQ ScS **ScS** **06 17 27.5 -3.3**
WMQ pmax pmax
comp=Z,83nm,1.6s
WMQ pmax pmax
comp=Z,940nm,3.6s
WMQ LR LR
comp=N,12μm,16.8s
WMQ LR LR
comp=E,9μm,16.8s
WMQ LR LR
comp=Z,15μm,30.2s
CLNS Chul'man 51.37 359 *e*P **P** **06 07 44.7 +0.1**
CLNS *e**PP **pP** **06 07 54.1 -3.5**
CLNS *e* 06 09 01.2
CLNS *e* 06 09 41.1
CLNS *e*S **S** **06 15 01.7 +1.1**
CLNS *e* 06 17 29.1
CLNS pmax pmax
comp=Z,159nm,0.7s

CLNS pmax pmax
comp=E,49nm,0.7s
CLNS pmax pmax
comp=N,103nm,0.8s
CLNS pmax pmax
comp=Z,113nm,2.0s
CLNS pmax pmax
comp=E,38nm,1.2s
CLNS pmax pmax
comp=N,100nm,1.6s
CLNS smax smax
comp=E,92nm,1.9s
CLNS smax smax
comp=N,77nm,1.5s
SKR Severo-Kuril's 51.54 24 *e*P **P 06 07 43.5 -2.3**
SKR *e* 06 08 01.2
SKR pmax pmax
comp=Z,930nm,2.0s
SKR MLR MLR
comp=N,2μm,20.0s
SKR MLR MLR
comp=Z,3μm,20.0s
TAU Tasmania Unive 51.61 161 *e*P **P 06 07 47.6 +1.2**
TAU pmax pmax
comp=Z,61nm,1.0s
TAU MLR MLR
comp=Z,7μm,20.0s
TAU Tasmania Unive 51.61 161 *e*P **P 06 07 47.6 +1.2**
comp=Z,61nm,1.0s
TAU LR LR
comp=Z,7μm,20.0s
DDI Dehra Dun 51.86 305 *e*PKP **P 06 07 48.4 -0.4**
DDI AMB AMB 06 07 49.4
comp=Z,589nm,2.0s
NDI New Delhi 52.06 302 *ex* P 06 07 42.0 -8.2
NDI *ex* **S 06 15 06.0 -4.9**
KAD Karad 52.50 288 *i* P **P 06 07 52.7 -0.9**
GOA Goa 52.65 285⇑ *e*PKP **P 06 07 53.5 -1.2**
GOA *i* S **S 06 15 19.2 -0.1**
SMLA Simla 52.84 305 *i* P **P 06 07 56.9 +1.0**
SMLA AMb AMB 06 08 02.0
comp=Z,574nm,0.4s
SMLA *i* x x 06 15 19.2
POO Poona 52.96 289 *e*PKP **P 06 07 58.4 +1.3**
POO AMB AMB 06 08 04.7
comp=Z,42nm,1.5s
HVS Khovu-Aksy 53.19 335 *c i*P **P 06 07 57.4 -0.8**
HVS pmax pmax
comp=Z,930nm,1.0s
BHK Bhakra 53.54 305 *e*PKP **P 06 08 01.6 +0.5**
AJM Ajmer 53.69 299 *e*PKP **P 06 08 01.0 -1.3**
DHRM DHARAMSHALA 53.90 306 *e*PKP **P 06 08 03.9 -0.1**
DHRM AMB AMB 06 08 05.7
comp=Z,280nm,1.1s
PEA0B Petropavlovsk- 54.04 23 *e*P **P 06 08 03.4 -0.9**
PETK Petropavlovsk- 54.04 23 P **P 06 08 04.7 +0.4**
PETK pmax pmax
comp=Z,121nm,1.0s
PETK pmax pmax
comp=N,6.0nm,0.7s
PETK Petropavlovsk- 54.04 23 P **P 06 08 04.7 +0.4**
PETK ScP **ScP 06 13 06.7 +3.5**
PETK Petropavlovsk- 54.04 23 P **P 06 08 04.7 +0.4**
comp=N,121nm,1.0s,baz=197,slow=4.5,SNR=32
PETK ScP **ScP 06 13 06.7 +3.5**
comp=N,6.1nm,0.7s,baz=218,slow=3.8,SNR=4.2
PETK LR LR 06 28 53.3
comp=N,3μm,21.5s,baz=62,slow=33
DLH Dalhousie 54.26 307 *e*PKP **P 06 08 05.0 -1.6**
DLH *ex* x 06 08 32.0
FUNA Funafuti 54.32 104 PFAKE 06 08 20.0 +13
FUNA LR LR
comp=Z,23μm,20.0s
PET Petropavlovsk 54.34 23 *c i*P **P 06 08 06.2 -0.3**
PET *i* S **S 06 15 42.8 +1.7**
PET pmax pmax
comp=Z,2μm,9.0s
PET pmax pmax
comp=Z,200nm,1.5s
PET pmax pmax
comp=Z,2μm,15.1s
PET MLR MLR
comp=Z,4μm,21.0s
PET MLR MLR
comp=Z,3μm,21.0s
THN Thein Dam 54.43 306 *e*PKP **P 06 08 04.9 -2.6**
THN *ex* x 06 15 37.5
DGAR Diego Garcia 55.39 257 PFAKE 06 08 30.0 +15
DGAR LR LR
comp=Z,6μm,21.0s
MSVF Nonsavu 55.80 116 P **P 06 08 18.0 +0.3**
comp=Z,537nm,1.0s,SNR=8.4
MSVF Nonsavu 55.80 116 *e*P **P 06 08 18.7 +1.0**
MSVF pmax pmax
comp=Z,138nm,1.1s
MSVF MLR MLR
comp=Z,9μm,22.0s
MSVF Nonsavu 55.80 116 *e*P **P 06 08 18.7 +1.0**
comp=Z,138nm,1.1s
MSVF LR LR
comp=Z,9μm,22.0s
MK31 Makanchi Array 56.11 325 *e*P **P 06 08 18.2 -1.2**
MK31 pmax pmax
comp=Z,68nm,0.6s
MK31 Makanchi Array 56.11 325 *e*P **P 06 08 17.9 -1.5**
MKAR Makanchi Array 56.11 325 P **P 06 08 18.0 -1.4**
MKAR 06 09 18.1
MKAR pmax pmax
comp=Z,59nm,0.5s
MKAR pmax pmax
comp=Z,45nm,0.7s
MKAR pmax pmax
comp=N,13nm,0.9s
MKAR MLR MLR
comp=Z,11μm,20.7s
MKAR Makanchi Array 56.11 325 P **P 06 08 18.0 -1.4**
MKAR PcP **PcP 06 09 18.1 +1.1**
MKAR ScP **ScP 06 13 13.4 +0.9**
MKAR P'P' 06 38 04.0
MKAR Makanchi Array 56.11 325 P **P 06 08 18.0 -1.4**
comp=Z,59nm,0.5s,baz=118,slow=8.4,SNR=148
MKAR PcP **PcP 06 09 18.1 +1.1**
comp=Z,45nm,0.7s,baz=114,slow=3.6,SNR=4.8
MKAR ScP **ScP 06 13 13.4 +0.9**
comp=Z,13nm,0.8s,baz=94,slow=5.2,SNR=5.3
MKAR LR LR 06 33 52.7
comp=Z,11μm,20.7s,baz=113,slow=38
MKAR PKPPKP P'P'df 06 38 04.0 -15
comp=Z,0.4nm,0.8s,baz=243,slow=5.0,SNR=3.6
YAK Yakutsk 56.62 2 *c i*P **P 06 08 22.1 -0.5**
YAK *e**PP pP 06 08 29.4 -6.5
YAK *e* 06 09 16.9
YAK *e*S **S 06 16 10.9 -0.2**
YAK *e**SS **sS 06 16 30.6 -2.6**
YAK *e* 06 18 05.8
YAK *e*SSS SSS 06 22 04.2
YAK pmax pmax
comp=Z,429nm,1.0s
YAK pmax pmax
comp=E,32nm,1.0s
YAK pmax pmax
comp=N,176nm,1.1s
YAK pmax pmax
comp=Z,273nm,2.2s
YAK pmax pmax
comp=N,165nm,2.0s
YAK pmax pmax
comp=E,79nm,2.5s
YAK smax smax
comp=N,744nm,2.3s
YAK smax smax
comp=E,913nm,2.5s
YAK MLR MLR
comp=Z,5μm,22.0s
YAK MLR MLR
comp=N,4μm,22.0s
YAK MLR MLR
comp=E,3μm,25.0s
KSH Kashi 56.75 314 P **P 06 08 24.5 +0.2**
KSH *ep*P **pP 06 08 37.3 -0.2**
KSH *es*P **sP 06 08 42.5 -0.5**
KSH *e*PcP **PcP 06 09 20.9 +1.1**
KSH *e*PP **PP 06 10 31.8 +0.9**
KSH *e*S **S 06 16 09.3 -4.7**
KSH pmax pmax
comp=Z,39nm,1.2s

KSH LR LR
comp=N,14μm,20.1s
KSH LR LR
comp=E,19μm,19.0s
KSH LR LR
comp=Z,21μm,22.6s
BHJ Bhuj 57.51 294 *e*PKP **P 06 08 29.0 -0.7**
BHJ AMB AMB 06 08 42.8
comp=Z,121nm,1.7s
AAA Alma-Ata 57.66 319 *e*P **P 06 08 31.0 +0.5**
AAA *e*S **S 06 16 22.7 -3.0**
AAA pmax pmax
comp=Z,1μm,3.6s
AAA smax smax
comp=N,2μm,14.9s
AAA MLR MLR
comp=Z,8μm,26.0s
ULHL Ulahol 57.68 318 P **P 06 08 29.9 -1.0**
SNR=83
MIDW Midway 57.78 60 PFAKE 06 08 40.0 +8.5
MIDW LR LR
comp=Z,5μm,22.0s
KZA Kyzart 58.28 317 P **P 06 08 34.8 -0.6**
SNR=175
TKM2 Tokmak 2 58.40 318 *e*P **P 06 08 35.0 -0.9**
TKM2 pmax pmax
comp=Z,162nm,1.3s
TKM2 MLR MLR
comp=Z,15μm,22.0s
TKM2 Tokmak 2 58.40 318 *e*P **P 06 08 35.0 -0.9**
comp=Z,162nm,1.3s
TKM2 *e*ScP **ScP 06 13 26.1 +3.1**
TKM2 LR LR
comp=Z,15μm,22.0s
TKM2 Tokmak 2 58.40 318 P **P 06 08 34.7 -1.1**
SNR=81
KBK Karagaybulak 58.72 317 P **P 06 08 39.1 +1.0**
SNR=35
UCH Uchtor 58.84 317 P **P 06 08 41.5 +2.2**
SNR=27
CHMS Chumysh 59.00 318 P **P 06 08 40.1 +0.3**
SNR=41
AAK Ala-Archa 59.02 317 P **P 06 08 40.2 +0.1**
comp=Z,475nm,1.6s,SNR=31
AAK Ala-Archa 59.02 317 P **P 06 08 39.7 -0.5**
AAK pmax pmax
comp=Z,33nm,0.8s
AAK MLR MLR
comp=Z,8μm,21.3s
AAK Ala-Archa 59.02 317 P **P 06 08 39.7 -0.5**
AAK *ep*P **pP 06 10 53.7 +2.7**
AAK *e*ScP **ScP 06 13 27.8 +2.1**
AAK Ala-Archa 59.02 317 P **P 06 08 40.4 +0.2**
SNR=30
AAK Ala-Archa 59.02 317 P **P 06 08 39.7 -0.5**
comp=Z,33nm,0.8s,baz=106,slow=7.7,SNR=75
AAK LR LR 06 37 41.7
comp=Z,8μm,21.3s,baz=97,slow=40
ZAA0 Zalesovo Array 59.06 333 *e*P **P 06 08 38.2 -1.7**
ZALV Zalesovo Beam 59.06 333 P **P 06 08 37.9 -2.1**
ZALV pmax pmax
comp=Z,26nm,0.5s
ZALV MLR MLR
comp=Z,4μm,21.4s
ZALV Zalesovo Beam 59.06 333 P **P 06 08 37.9 -2.1**
ZALV ⇑ *e* 06 38 19.1
ZALV Zalesovo Beam 59.06 333 P **P 06 08 37.9 -2.1**
comp=Z,26nm,0.5s,baz=130,slow=7.1,SNR=56
ZALV LR LR 06 35 49.3
comp=Z,4μm,21.4s,baz=135,slow=38
ZALV PKP2bc 06 38 19.1
comp=Z,4.7nm,0.9s,baz=303,slow=3.8,SNR=11
USP Ospenovka 59.27 318 P **P 06 08 40.2 -1.5**
SNR=149
AML Almayashu 59.37 316 P **P 06 08 42.1 -0.8**
SNR=124
EKS2 Erkin-Say 59.52 317 *e*P **P 06 08 43.0 -0.6**
EKS2 pmax pmax
comp=Z,254nm,1.3s
EKS2 MLR MLR
comp=Z,8μm,22.0s
EKS2 Erkin-Say 59.52 317 *e*P **P 06 08 43.0 -0.6**
comp=Z,254nm,1.3s
EKS2 *e*ScP **ScP 06 13 27.8 0.0**
EKS2 LR LR
comp=Z,8μm,22.0s
EKS2 Erkin-Say 59.52 317 P **P 06 08 42.7 -0.8**
SNR=114
KURBB Kurchatov Arra 60.27 327 P **P 06 08 47.4 -0.9**
comp=Z,88nm,0.7s,baz=122,slow=7.3,SNR=133
KURBB P4KPbc 06 45 52.7
comp=Z,0.4nm,0.7s,baz=108,slow=7.6,SNR=4.0
KURK Kurchatov 60.27 327 P **P 06 08 47.4 -0.9**
KURK pmax pmax
comp=Z,88nm,0.7s
KURK Kurchatov 60.27 327 P **P 06 08 47.4 -0.9**
comp=Z,34nm,1.1s
KURK *e* 06 45 52.7
KURK LR LR
comp=Z,5μm,22.0s
KURK Kurchatov 60.27 327 P **P 06 08 47.4 -0.9**
comp=Z,2μm,0.7s
NVS Novosibirsk 60.34 333⇑ *i*P **P 06 08 47.8 -0.9**
NVS *e*S S 06 16 49.0 -11
NVS *e* 06 18 28.5
NVS pmax pmax
comp=N,233nm,1.9s
NVS pmax pmax
comp=E,242nm,1.9s
NVS pmax pmax
comp=Z,472nm,1.9s
NVS smax smax
comp=N,116nm,3.3s
NVS smax smax
comp=E,731nm,3.6s
KBL Kabul 60.37 307 P **P 06 08 50.6 +1.0**
baz=61,SNR=6.4
KK31 Karatay Array 61.91 317 P **P 06 08 57.7 -2.0**
KK31 pmax pmax
comp=Z,62nm,0.7s
KKAR Karatay Array 61.91 317 *e*P **P 06 08 58.1 -1.6**
KKAR pmax pmax
comp=Z,83nm,0.8s
KKAR Karatay Array 61.91 317 *e*P **P 06 08 58.1 -1.6**
comp=Z,83nm,0.8s
RPZ Rata Peaks 63.20 145 *e*P **P 06 09 08.3 +0.1**
comp=Z,69nm,0.7s
RPZ Rata Peaks 63.20 145 P **P 06 09 08.5 +0.3**
comp=Z,59nm,0.7s,baz=330,slow=8.1,SNR=20
AMKA Amchitka 63.30 34 *e*P **P 06 09 08.7 0.0**
comp=Z,51nm,0.6s
RAO Raoul Island 63.46 126 PFAKE 06 09 20.0 +10
RAO LR LR
comp=Z,11μm,21.0s
KHZ Kahutara 63.88 143 *e*P **P 06 09 13.6 +1.0**
comp=Z,32nm,0.7s
SNZO South Karori 63.95 141 PFAKE 06 09 30.0 +17
SNZO LR LR
comp=Z,7μm,21.0s
AFI Afiamalu 64.15 108 PFAKE 06 09 30.0 +15
AFI LR LR
comp=Z,8μm,22.0s
BVA0 Borovoye Array 65.86 327 P **P 06 09 22.7 -2.7**
BVA0 pmax pmax
comp=Z,161nm,1.0s
BVAR Borovoye Array 65.86 327 P **P 06 09 24.1 -1.3**
BVAR pmax pmax
comp=Z,79nm,0.8s
BVAR MLR MLR
comp=Z,4μm,19.8s
BVAR Borovoye Array 65.86 327 P **P 06 09 24.1 -1.3**
BVAR *e* 06 46 23.3
BVAR Borovoye Array 65.86 327 P **P 06 09 24.1 -1.3**
comp=Z,79nm,0.8s,baz=131,slow=8.6,SNR=60
BVAR LR LR 06 43 06.5
comp=Z,4μm,19.8s,baz=324,slow=40
BVAR P4KPbc 06 46 23.3
comp=Z,1.0nm,0.7s,baz=158,slow=4.2,SNR=3.7
BRVK Borovoye 65.93 327 *c i*P **P 06 09 23.7 -2.1**
BRVK pmax pmax
comp=Z,303nm,1.7s
BRVK Borovoye 65.93 327 *e*P **P 06 09 24.1 -1.7**
comp=Z,160nm,0.8s
BRVK *e*PP **PP 06 11 52.7 +1.3**
BRVK LR LR
comp=Z,5μm,21.0s
BRVK Borovoye 65.93 327 P **P 06 09 24.0 -1.8**
comp=Z,927nm,0.8s,SNR=46
TIXI Tiksi 66.25 1 *c i*P **P 06 09 26.2 -1.3**
TIXI pmax pmax
comp=Z,433nm,2.5s
IDAH Dahanechah 67.50 303 *e*P **P 06 09 35.9 -0.7**
IMYA Miami 67.89 307 *e*P **P 06 09 38.2 -0.7**
BILL Bilibino 68.07 15 *k i*P **P 06 09 38.9 -0.2**
BILL *e* 06 09 51.1
BILL *i* 06 10 01.7
BILL *i*S **S 06 18 35.3 +0.3**
BILL *e*PPS PPS 06 19 12.4
BILL *e* 06 19 37.3
BILL *i* SS **SS 06 22 58.4 +0.4**
BILL pmax pmax
comp=Z,47nm,1.0s
BILL MLR MLR
comp=Z,500nm,16.0s
ISRO Mashad 68.38 307 *e*P **P 06 09 40.7 -1.2**
IMOG Moghan 68.46 307 *e*P **P 06 09 42.2 -0.4**
ITEG Tejag 68.46 303 *e*P **P 06 09 42.3 -0.3**
IAKL Akhelmad 69.00 307 *e*P **P 06 09 45.1 -0.9**
IEMG Emamgholi 69.21 308 *e*P **P 06 09 46.6 -0.7**
IKRD Kardeh 69.22 307 *e*P P 06 09 41.3 -6.0
ABKT Ailbek 69.72 308 P **P 06 09 50.7 +0.6**
comp=Z,327nm,1.0s,SNR=19
HATD Hatta, Dubai 69.97 294 P **P 06 09 51.4 -0.4**
SNR=8.8
AB31 Akbulak array 70.77 320 P **P 06 09 54.5 -1.7**
AB31 pmax pmax
comp=Z,65nm,0.7s
ABKAR Akbulak array 70.77 320 *e*P **P 06 09 54.7 -1.5**
comp=Z,60nm,0.7s
IBAF Bafgh 70.99 301 *e*P **P 06 09 57.2 -0.9**
MSEY Mahe Island 71.62 263 PFAKE 06 10 10.0 +7.9
MSEY LR LR
comp=Z,2μm,20.0s
IMEH Mehriz 71.78 301 *e*P **P 06 10 00.8 -2.2**
ICHK Chekchek 72.03 302 *e*P **P 06 10 03.9 -0.6**
UNV Unalaska Valle 72.24 35 *e*P **P 06 10 03.5 -1.5**
comp=Z,110nm,0.8s
AKTO Aktyubinsk 72.27 321 P **P 06 10 04.8 -0.4**
AKTO pmax pmax
comp=Z,112nm,0.7s
AKTO MLR MLR
comp=Z,11μm,20.7s
AKTO Aktyubinsk 72.27 321 P **P 06 10 04.8 -0.4**
AKTO Aktyubinsk 72.27 321 P **P 06 10 04.8 -0.4**
comp=Z,112nm,0.7s,baz=107,slow=7.2,SNR=64
AKTO LR LR 06 44 46.0
comp=Z,11μm,20.7s,baz=289,slow=38
CASY Casey 72.38 187 P **P 06 10 06.7 +1.2**
comp=Z,61nm,0.8s
CASY LR LR
comp=Z,3μm,22.0s
DRV Dumont d'Urvil 72.49 174 P P 06 09 54.0 -12
DRV Dumont d'Urvil 72.49 174 PP PP 06 13 13.0 +25
DRV S **S 06 19 24.0 -2.5**
DRV SS SS 06 23 51.0 -15
DRV L L 06 28 00.0
DRV R 06 33 00.0
ISAD Sadrabad 72.61 302 *e*P P 06 10 04.6 -3.4
AKUT Akutan 72.73 35 *e*P **P 06 10 08.0 +0.1**
comp=Z,98nm,0.6s
IANJ Anjilo 72.74 305 *e*P **P 06 10 07.5 -1.2**
IKIA Kiasar 73.00 306 *e*P **P 06 10 10.2 0.0**
GAMB Gambell 73.03 24 *e*P **P 06 10 09.9 +0.5**
comp=Z,65nm,1.1s
PAF Port-aux-Franc 73.05 215 PFAKE 06 10 20.0 +10
PAF LR LR
comp=Z,6μm,21.0s
ISHM Shahmirzad 73.28 306 *e*P **P 06 10 11.2 -0.7**
ARU Arti 73.46 328 *c i*P **P 06 10 10.0 -2.2**
ARU *e* 06 10 24.4
ARU *PP **PcP 06 10 29.5 +1.4**
ARU 06 12 53.0
ARU PPP PPP 06 14 41.7
ARU S **S 06 19 33.9 -4.2**
ARU 06 20 14.0
ARU pmax pmax
comp=Z,111nm,0.8s
ARU MLR MLR
comp=Z,3μm,19.0s
ARU Arti 73.46 328 P **P 06 10 10.3 -1.9**
comp=Z,1μm,0.6s,SNR=28
ILAS Lasjerd 73.51 305 *e*P **P 06 10 12.9 -0.3**
IALA Alasht 73.70 306 *e*P **P 06 10 13.4 -1.0**
IFIR Firoozkooh 73.70 305 *e*P **P 06 10 13.8 -0.6**
IZEF Zefreh 73.83 303 *e*P **P 06 10 13.0 -2.2**
IPRN Peran 74.09 306 *e*P **P 06 10 16.8 +0.3**
RER Riviere de l'E 74.15 246 *e*P **P 06 10 16.6 -0.3**
comp=Z,39nm,0.8s
RER LR LR
comp=Z,5μm,22.0s
FALS False Pass 74.24 34 *e*P **P 06 10 16.1 -0.7**
comp=Z,94nm,0.6s
IDMV Damavand 74.28 305 *e*P **P 06 10 16.5 -1.3**
IVRN Varamin 74.48 305 *e*P **P 06 10 17.3 -1.4**
IVRN *e*P **P 06 10 17.5 -1.2**
IKLH Kolahrood 74.49 303 *e*P **P 06 10 18.5 -0.5**
KIP Kipapa 74.57 69 PFAKE 06 10 30.0 +11
KIP LR LR
comp=Z,3μm,22.0s
IR3 Iran Long-Peri 75.09 305 *e*P **P 06 10 21.8 -0.4**
TNA Tin City 75.20 23 *e*P **P 06 10 22.7 +0.7**
comp=Z,37nm,1.1s
IMHD Mahdasht 75.40 305 *e*P **P 06 10 23.6 -0.4**
MIR Mirnyy 75.66 193⇑ *i*P **P 06 10 25.5 +0.9**
MIR pmax pmax
comp=Z,162nm,1.5s
MIR MLR MLR
comp=N,3μm,22.0s
MIR MLR MLR
comp=E,3μm,22.0s
MIR MLR MLR
comp=Z,4μm,22.0s
XMAS Kiritimati 75.93 89 PFAKE 06 10 40.0 +13
XMAS LR LR
comp=Z,9μm,22.0s
IRAZ Razeghan 75.98 305 *e*P **P 06 10 26.2 -1.3**
SDPT Sand Point 76.00 34 *e*P **P 06 10 26.1 -0.7**
comp=Z,139nm,0.8s
RAR Rarotonga 76.88 113 PFAKE 06 10 40.0 +7.5
RAR LR LR
comp=Z,4μm,19.0s
CHGN Chignik 77.31 34 *e*P **P 06 10 33.2 -1.0**
UMR Umm Al-Rimmam 77.64 299 *e*P **P 06 10 34.8 -1.9**
UMR AMb AMB 06 10 52.2
comp=Z,151nm,1.0s
KBD Kabd 77.65 299 *e*P **P 06 10 34.5 -2.2**
KBD AMb AMB 06 10 39.7
comp=Z,70nm,1.6s
RDF Al-Radifah 77.77 298 *e*P **P 06 10 35.9 -1.6**
RDF AMb AMB 06 10 53.5
comp=Z,117nm,1.1s
ISRB Sarab 77.93 307 *e*P **P 06 10 37.7 -0.7**
MIB Mutribah 77.97 299 *e*P **P 06 10 36.7 -1.7**
MIB AMb AMB 06 10 47.2
comp=Z,172nm,0.8s
NAY Al-Naaiem 78.05 299 *e*P **P 06 10 37.0 -1.9**
NAY AMb AMB 06 10 54.3
comp=Z,80nm,0.9s
MAK Makhachkala 78.33 313 *e*P P 06 10 34.4 -5.8
MAK *e**PP pP 06 10 54.5 +0.5
MAK *e* 06 13 44.0
MAK *e*PPP PPP 06 15 26.9
MAK *e*S S 06 20 22.1 -10
MAK *e* 06 20 42.8
MAK *e**SS sS 06 20 55.9 +0.6
MAK *e*SS **SS 06 25 39.7 +4.2**
MAK pmax pmax
comp=Z,196nm,1.7s
MAK MLR MLR
comp=Z,5μm,22.0s
IHRS Heris 78.44 308 *e*P **P 06 10 41.3 +0.1**
IDHR Dehrash 78.86 304 *e*P **P 06 10 42.2 -1.4**
ITBZ Tabriz 79.14 308 *e*P **P 06 10 44.5 -0.5**
IBDR Badra 79.21 303 *i*P **P 06 10 42.1 -3.2**
IBDR *e*S S 06 20 31.1 -11
IAZR Azarshahr 79.26 307 *e*P **P 06 10 45.0 -0.8**
ISHB Shabestar 79.56 308 *e*P **P 06 10 47.2 -0.2**
RAYN Ar Rayn 79.65 293 P **P 06 10 46.3 -1.6**
comp=Z,238nm,1.2s,SNR=13
DGRG David-gareji 79.84 311 P **P 06 10 49.0 +0.5**
OHAK Old Harbor 80.23 33 *e*P **P 06 10 49.7 -0.5**

comp=Z,54nm,0.9s
GNI Garni 80.28 310 *e*P **P 06 10 51.4 +0.2**
GNI Garni 80.28 310 P **P 06 10 51.8 +0.6**
SNR=26
GNI Garni 80.28 310 *e*P **P 06 10 51.3 +0.2**
comp=Z,144nm,1.3s
GNI *e*S **S 06 20 56.7 +3.3**
GNI Garni 80.28 310 LR LR 06 52 48.4
comp=Z,2µm,21.4s,baz=95,slow=40
TBLG Delisi 80.32 311 P **P 06 10 50.8 -0.3**
TBLG Delisi 80.32 311 P **P 06 10 50.8 -0.3**
BHD Baghdad 80.51 303 *e*P **P 06 10 50.5 -1.8**
BHD *e*S S 06 20 49.5 -6.2
KDAK Kodiak Island 80.66 32 P **P 06 10 52.0 -0.5**
comp=Z,525nm,0.6s,SNR=26
KDAK Kodiak Island 80.66 32 P **P 06 10 52.6 +0.1**
comp=Z,11nm,0.6s
KDAK LR LR
comp=Z,6µm,22.0s
KDAK Kodiak Island 80.66 32 P **P 06 10 52.6 +0.1**
comp=Z,48nm,0.6s,baz=261,slow=4.4,SNR=47
RSO Redoubt South 80.81 30 *e*P **P 06 10 53.1 -0.5**
comp=Z,70nm,0.6s
CLDR Caldiran 80.90 309 *e*P **P 06 10 54.5 -0.1**
HAKT HAKKARI 81.06 307 *i*P **P 06 10 55.4 -0.1**
CUKT Cukurca 81.14 307 *e*P **P 06 10 53.8 -1.9**
AKH Akhalkalaki 81.25 311 P **P 06 10 56.3 0.0**
ONI Oni 81.30 312 P **P 06 10 56.6 +0.2**
PPLA Purkeypile 81.31 27 *e*P **P 06 10 55.8 -0.3**
comp=Z,68nm,0.9s
VANB Van 81.31 308 *e*P **P 06 10 55.1 -1.5**
DIGO Kars 81.33 310 *i*P **P 06 10 56.9 +0.1**
KARS Kars 81.56 310 *e*P **P 06 10 58.2 +0.3**
OPO Ambohidratompo 81.61 250 P **P 06 10 56.9 -1.7**
OPO Ambohidratompo 81.61 250 P **P 06 10 56.9 -1.7**
comp=Z,29nm,0.8s,baz=67,slow=4.5,SNR=33
AGRB Hanur-Agry 81.62 309 *e*P **P 06 10 58.7 +0.4**
ABPO Ambohimpanom 81.64 250 *e*P **P 06 10 57.6 -1.2**
ABPO pmax pmax
comp=Z,45nm,0.8s
ABPO MLR MLR
comp=Z,2µm,22.0s
ABPO Ambohimpanom 81.64 250 *e*P **P 06 10 57.5 -1.2**
comp=Z,45nm,0.8s
ABPO LR LR
comp=Z,2µm,22.0s
KBZ Khabaz 81.71 313 P **P 06 10 57.9 -0.5**
KBZ pmax pmax
comp=Z,14nm,1.0s
KBZ MLR MLR
comp=Z,4µm,21.2s
KBZ Khabaz 81.71 313 P **P 06 10 57.9 -0.5**
KBZ Khabaz 81.71 313 P **P 06 10 57.9 -0.5**
comp=Z,14nm,1.0s,baz=91,slow=6.6,SNR=16
KBZ LR LR 06 51 50.3
comp=Z,4µm,21.1s,baz=72,slow=39
TUTA Tutak 81.76 309 *i*P **P 06 10 59.0 -0.1**
KIV Kislovodsk 81.87 314*c i*P **P 06 10 58.8 -0.6**
KIV *e* 06 14 06.3
KIV *e*S **S 06 21 05.7 -4.0**
KIV *e*SSS SSS 06 29 57.7
KIV pmax pmax
comp=Z,45nm,1.1s
KIV pmax pmax
comp=Z,160nm,4.1s
KIV MLR MLR
comp=Z,3µm,19.0s
KIV Kislovodsk 81.87 314 P **P 06 10 59.8 +0.4**
comp=Z,230nm,0.8s,SNR=6.8
TRF Thorofare Moun 82.21 27 *e*P **P 06 10 59.6 -1.3**
comp=Z,92nm,1.0s
DAGI Agillar 82.44 311 *i*P **P 06 11 01.8 -0.7**
HOMI Horasan 82.46 310 *i*P **P 06 11 02.9 +0.1**
COLD Coldfoot 82.51 23 *e*P **P 06 11 02.9 +0.7**
comp=Z,42nm,0.7s
DDEM Demirkent 82.57 310 *i*P **P 06 11 03.3 +0.1**
PMR Palmer 82.65 29 *e*P **P 06 11 02.4 -0.6**
PMR pmax pmax
comp=Z,116nm,1.2s
PMR Palmer 82.65 29 *e*P **P 06 11 02.4 -0.6**
comp=Z,116nm,1.2s
BCA Borcka 82.66 311 *e*P **P 06 11 02.8 -0.8**
ATD Arta Tunnel 82.75 281 LR LR 06 46 33.6
comp=Z,655nm,21.8s,baz=85,slow=35
MCK McKinley 82.83 27 *e*P **P 06 11 03.2 -0.7**
MCK pmax pmax
comp=Z,619nm,1.6s
MCK McKinley 82.83 27 *e*P **P 06 11 03.2 -0.7**
comp=Z,619nm,1.6s
SML Sawmill 83.04 28 *e*P **P 06 11 04.5 -0.6**
SML pmax pmax
comp=Z,58nm,1.2s
SML Sawmill 83.04 28 *e*P **P 06 11 04.5 -0.6**
comp=Z,58nm,1.2s
COLA College 83.35 25 *e*P **P 06 11 05.7 -0.8**
COLA pmax pmax
comp=Z,37nm,0.8s
COLA MLR MLR
comp=Z,2µm,22.0s
COLA College 83.35 25 *e*P **P 06 11 05.7 -0.8**
comp=Z,37nm,0.8s
COLA LR LR
comp=Z,2µm,22.0s
MARD Mardin 83.39 307 *i*P **P 06 11 06.9 -0.6**
BNGB Bing¯ll 83.43 309 *e*P **P 06 11 07.3 -0.4**
KOPT Kop Dagi 83.54 310 *i*P **P 06 11 08.5 0.0**
MZRK Al-Mazaregh 83.54 305 *e*P P 06 11 04.5 -3.7
ILAR Eielson Array 83.76 25 P **P 06 11 07.6 -1.1**
ILAR Eielson Array 83.76 25 P **P 06 11 07.6 -1.1**
comp=Z,19nm,0.8s,baz=247,slow=4.2,SNR=89
ILAR LR LR 06 49 38.2
comp=Z,1µm,19.9s,baz=132,slow=36
BAYT Ayd¯ntepe-Bay 83.80 310 *e*P **P 06 11 09.8 +0.1**
DIYA Diyarbakir 83.90 307 *i*P **P 06 11 09.9 -0.1**
KLMR Klimovskoe 83.90 331*c i*P **P 06 11 09.3 -0.1**
KLMR *e* 06 14 21.9
KLMR *i*S **S 06 21 23.6 -5.8**
KLMR pmax pmax
comp=Z,2µm,3.4s
KLMR pmax pmax
comp=Z,2µm,3.4s
KLMR MLR MLR
comp=Z,9µm,25.0s
SOC Sochi 84.02 313*c i*P **P 06 11 09.0 -1.4**
SOC *e**PP **pP 06 11 25.5 +1.1**
SOC *e*PPP PPP 06 16 12.7
SOC *e*S S 06 21 23.7 -7.6
SOC pmax pmax
comp=Z,53nm,0.9s
SOC MLR MLR
comp=Z,4µm,22.0s
VORD Divnogorie 84.13 321 *e*P **P 06 11 12.0 +1.2**
VORD *e*S S 06 21 25.3 -6.7
VORD *e*SP SPn 06 22 44.9 +21
VORD pmax pmax
comp=Z,430nm,1.4s
VORD pmax pmax
comp=N,520nm,0.6s
VORD pmax pmax
comp=Z,790nm,0.5s
VORD smax smax
comp=Z,90nm,2.8s
VORD smax smax
comp=N,170nm,2.2s
VORD smax smax
comp=E,290nm,2.8s
VORD MLR MLR
comp=Z,5µm,26.0s
VORD MLR MLR
comp=N,2µm,20.0s
VORD MLR MLR
comp=E,4µm,24.0s
VOR Voronezh 84.17 321 *e*P **P 06 11 09.0 -2.0**
VOR pmax pmax
comp=Z,350nm,2.0s
VSR Storozhevoye 84.20 321 *e*P **P 06 11 09.6 -1.6**
VSR *e*S S 06 21 25.8 -7.0
VSR *e*SP SPn 06 22 45.8 +21
VSR pmax pmax
comp=Z,100nm,1.4s
VSR pmax pmax
comp=N,7.0nm,0.5s
VSR pmax pmax
comp=E,40nm,1.2s
VSR smax smax
comp=Z,120nm,4.2s
VSR smax smax
comp=N,190nm,2.3s
VSR smax smax
comp=E,140nm,2.0s
VSR MLR MLR
comp=Z,4µm,24.0s
VSR MLR MLR
comp=N,1µm,19.0s
VSR MLR MLR
comp=E,2µm,21.0s
DIV Divide 84.26 29 *e*P **P 06 11 11.3 -0.1**
comp=E,375nm,1.3s
GUMT Gumushane 84.30 310 *e*P **P 06 11 11.3 -0.8**
PAX Paxson 84.38 27 *e*P **P 06 11 11.8 -0.2**
PAX pmax pmax
comp=Z,279nm,1.7s
PAX Paxson 84.38 27 *e*P **P 06 11 11.8 -0.2**
comp=Z,279nm,1.7s
PTK Pertek 84.43 308 *e*P **P 06 11 13.2 +0.3**
KELT Kelkit 84.49 310 *i*P **P 06 11 13.0 -0.2**
ELZG Elazig 84.77 308 *i*P **P 06 11 15.5 +0.9**
MOS Moscow 84.99 325*α i*P **P 06 11 11.9 -3.1**
MOS *e* 06 14 26.4
MOS *e*S S 06 21 31.4 -9.1
MOS pmax pmax
comp=Z,184nm,1.1s
MOS pmax pmax
comp=Z,700nm,1.8s
MOS smax smax
comp=N,800nm,3.0s
MOS MLR MLR
comp=E,6µm,23.0s
MOS MLR MLR
comp=Z,6µm,23.0s
DOT Dot Lake 85.00 27 *e*P **P 06 11 14.9 -0.2**
comp=Z,52nm,1.1s
VNDA Vanda 85.04 173 P **P 06 11 14.3 -0.5**
VNDA Vanda 85.04 173 P **P 06 11 14.3 -0.5**
comp=Z,20nm,1.0s,baz=316,slow=6.7,SNR=27
VNDA LR LR 06 49 26.4
comp=Z,4µm,20.6s,baz=344,slow=36
ILIC ilic-Erzincan 85.05 309 *e*P **P 06 11 15.1 -0.8**
KEMA Kemaliye 85.11 309 *i*P **P 06 11 16.3 +0.1**
MAW Mawson 85.18 200 P **P 06 11 14.2 -1.4**
MAW P'P' 06 37 33.8
MAW Mawson 85.18 200 P **P 06 11 14.2 -1.4**
comp=Z,20nm,0.8s,baz=69,slow=7.0,SNR=25
MAW PKPPKP P'P'df 06 37 33.8 +7.0
comp=Z,1.7nm,0.7s,baz=293,slow=5.5,SNR=3.6
MAW LR LR 06 46 12.4
comp=Z,3µm,22.0s,baz=66,slow=34
MENT Mentasta 85.18 27 *e*P **P 06 11 16.6 +0.6**
MALT Malatya 85.21 308 ||P P 06 11 23.4 +6.7
MALT Malatya 85.21 308 *e*P P 06 11 22.0 +5.2
comp=Z,46nm,1.0s
MALT LR LR
comp=Z,2µm,21.0s
MALT Malatya 85.21 308 ||*i*P P 06 11 23.4 +6.7
SUSE Susehri 85.29 310 *i*P **P 06 11 16.1 -1.0**
ATAB Bozova 85.36 307 *i*P **P 06 11 17.1 -0.3**
AKCD Akcadag 85.61 308 *i*P **P 06 11 19.1 +0.4**
ANN Anapa 85.61 314*c i*P **P 06 11 16.9 -1.5**
ANN *e**PP **pP 06 11 34.4 +2.1**
ANN *e*S S 06 21 34.9 -12
ANN pmax pmax
comp=Z,180nm,1.6s
OBN Obninsk 85.62 325*x e*P **P 06 11 17.1 -1.1**
OBN *e* 06 11 26.5
OBN *i* 06 11 34.4
OBN PPP PPP 06 16 31.0
OBN *i* 06 21 37.3
OBN *e* 06 21 41.8
OBN *e*PPS PPS 06 23 02.5
OBN pmax pmax
comp=Z,451nm,1.7s
OBN Obninsk 85.62 325 P **P 06 11 17.0 -1.1**
comp=Z,1µm,0.9s,SNR=15
LVZ Lovozero 85.79 338*c i*P **P 06 11 18.5 -0.4**
LVZ pmax pmax
comp=Z,142nm,1.2s
LVZ Lovozero 85.79 338 P **P 06 11 19.4 +0.5**
comp=Z,630nm,1.1s,SNR=8.0
PPT Papeete 85.83 108 LR LR 06 42 09.0
comp=Z,2µm,19.3s,baz=265,slow=30
PPT2 Papeete2 85.83 108 *e*P P 06 11 13.7 -6.4
comp=Z,692nm,28.5s
PPT2 *e*S **S 06 21 47.5 -2.8**
PPT2 *e*LQ LQ 06 37 25.0
comp=Z,16µm,38.8s
PPT2 *e*LR LR 06 38 53.3
comp=Z,12µm,26.0s
DARE Darende-Malaty 85.94 308 *e*P **P 06 11 20.7 +0.4**
SBA Scott Base 85.95 172 *e*P **P 06 11 20.1 +0.7**
SBA pmax pmax
comp=Z,64nm,1.1s
SBA MLR MLR
comp=Z,3µm,21.0s
SBA Scott Base 85.95 172 *e*P **P 06 11 20.1 +0.7**
comp=Z,64nm,1.1s
SBA LR LR
comp=Z,3µm,21.0s
GZT Gaziantep 85.95 307 *i*P **P 06 11 20.4 -0.1**
EGAK Eagle 86.21 25 *e*P **P 06 11 21.2 +0.2**
comp=Z,20nm,0.8s
EGAK LR LR
comp=Z,2µm,21.0s
SVSK Karacayir 86.23 310 *e*P **P 06 11 21.8 +0.2**
APA Apatity 86.29 337||*i*P **P 06 11 22.0 +0.7**
APA *i* 06 21 41.0
APA *i*S **S 06 21 51.0 -1.8**
APA pmax pmax
comp=Z,190nm,1.4s
APA pmax pmax
comp=Z,2µm,22.0s
APA MLR MLR
comp=Z,9µm,22.0s
KUZU Kuzuini 86.38 306 *i*P **P 06 11 22.3 -0.2**
ZALF Zalf 86.43 303 *e*P **P 06 11 22.9 +0.1**
KMRS Kahramanmaras 86.47 307 *e*P **P 06 11 22.7 -0.2**
AYKD Aykdinkavak 86.55 307 *i*P **P 06 11 22.6 -0.7**
TOKA Tokat 86.60 310 *i*P **P 06 11 23.3 -0.2**
TBI Tubuai 86.64 114 *e*P **P 06 11 21.5 -2.4**
comp=Z,472nm,30.0s
TBI *e*S S 06 21 51.0 -6.8
TBI *e*LQ LQ 06 35 22.6
comp=Z,5µm,26.0s
TBI *e*LR LR 06 39 49.6
comp=Z,11µm,27.2s,baz=291
DRWC Darouich 86.72 306 *e*P P 06 11 18.0 -6.2
SARI SarD1z-Kayseri 86.78 308 *e*P **P 06 11 24.4 -0.2**
KVT Kavak 86.87 311 *e*P **P 06 11 24.6 -0.2**
ANDN Andirin 86.90 307 *i*P **P 06 11 25.2 +0.1**
SALA Sala 86.95 302 *e*P **P 06 11 25.0 -0.5**
WRDH Warideh 87.01 305 *e*P P 06 11 18.8 -6.8
TOTH TOTAH 87.16 303 *e*P **P 06 11 25.6 -0.7**
BNN Bunyan 87.20 309 *e*P **P 06 11 25.5 -1.0**
YAYL Yayladag 87.21 306 *i*P **P 06 11 25.1 -1.6**
KOZT Kozan 87.32 307 *e*P **P 06 11 27.3 +0.3**
ARNB Al Arnab 87.34 306 *e*P **P 06 11 26.7 -0.5**
CEYT Ceyhan 87.42 307 *e*P **P 06 11 26.8 -0.6**
YURE YUREGIR 87.53 307 *i*P **P 06 11 29.9 +1.8**
BRBR Barbar 87.55 303 *e*P **P 06 11 26.3 -2.1**
JOF Joensuu 87.65 333 *e*P **P 06 11 27.4 -0.6**
JOF pmax pmax
comp=Z,145nm,0.8s
JOF Joensuu 87.65 333 *e*p **P 06 11 27.4 -0.6**
comp=Z,145nm,0.8s
KRTS Karatas 87.76 306 *e*P **P 06 11 27.9 -1.1**
CTKT Corum 87.86 310 *i*P **P 06 11 28.6 -1.2**
SIM Simferopol' 87.95 315*c i*P **P 06 11 29.1 -0.7**
SIM *e* 06 14 54.0
SIM *e* 06 21 53.0
SIM *i*S **S 06 22 06.6 -3.2**
SIM pmax pmax
comp=Z,55nm,0.4s
SIM pmax pmax
comp=Z,560nm,17.0s
AVNT Avonos 87.97 309 *i*P **P 06 11 29.5 -0.8**
CORM Corum 88.02 310 *e*P **P 06 11 29.6 -0.8**
NIG Nigde 88.23 308 *e*P **P 06 11 31.0 -0.6**
CDAG Cicekdag 88.27 309 *i*P **P 06 11 30.0 -1.6**
KEV Kevo 88.31 340 *e*P **P 06 11 30.5 -0.5**
KEV pmax pmax
comp=Z,95nm,1.2s
KEV MLR MLR
comp=Z,4µm,20.0s
KEV Kevo 88.31 340 *e*p **P 06 11 29.9 -1.1**
comp=Z,61nm,0.9s
KEV Kevo 88.31 340 *e*P **P 06 11 30.5 -0.5**
comp=Z,95nm,1.2s
KEV LR LR
comp=Z,4µm,20.0s
TOS Tosya 88.40 311 *e*P **P 06 11 32.7 +0.5**
EIL Elat 88.73 300 P **P 06 11 35.0 +1.2**
baz=89,SNR=3.4
CANT Cankiri 88.75 310 *e*P **P 06 11 33.1 -0.7**
KIZK Mersin 88.75 306 *i*P **P 06 11 32.3 -1.5**
INK Inuvik 88.76 21 P **P 06 11 32.7 -0.4**
INK PKKP **PKKPdf 06 29 10.3 +0.3**
INK Inuvik 88.76 21 P **P 06 11 32.7 -0.4**
comp=Z,44nm,1.0s,baz=202,slow=4.7,SNR=34
INK PKKP **PKKPdf 06 29 10.3 +0.3**
comp=Z,2.8nm,0.9s,baz=72,slow=2.5,SNR=3.3
INK LR LR 06 51 51.5
comp=Z,2µm,21.8s,baz=274,slow=36
BR131 Keskin Array S 88.82 310 *e*P **P 06 11 32.5 -1.7**
comp=Z,12nm,0.8s
BRTR Keskin Array B 88.82 310 P **P 06 11 32.1 -2.1**
BRTR PKKPbc **PKKPbc 06 29 14.8 -0.1**
BRTR Keskin Array B 88.82 310 P **P 06 11 32.1 -2.1**
comp=Z,12nm,1.1s,baz=120,slow=4.8,SNR=22
BRTR PKKPbc **PKKPbc 06 29 14.8 -0.1**
comp=Z,0.7nm,0.7s,baz=211,slow=4.1,SNR=3.8
BRTR LR LR 07 00 04.0
comp=Z,1µm,21.3s,baz=202,slow=42
BALT Daday 88.83 311 *i*P **P 06 11 35.0 +0.7**
SPA0 Spitsbergen Ar 88.86 349 *e*P **P 06 11 32.7 -0.8**
SPITS Spitsbergen Ar 88.86 349 LR LR 06 55 52.7
comp=Z,2µm,20.9s,baz=50,slow=39
ARCES ARCESS Array B 88.87 340 P **P 06 11 32.3 -1.3**
ARCES PKKPbc **PKKPbc 06 29 15.6 0.0**
ARCES ARCESS Array B 88.87 340 P **P 06 11 32.3 -1.3**
comp=Z,88nm,0.9s,baz=74,slow=6.7,SNR=71
ARCES PKKPbc **PKKPbc 06 29 15.6 0.0**
comp=Z,2.0nm,0.8s,baz=305,slow=4.3,SNR=3.7
ARCES LR LR 06 56 36.1
comp=Z,3µm,18.2s,baz=82,slow=39
ARE0 ARCESS Array S 88.87 340 *e*P **P 06 11 33.4 -0.3**
ARE0 ARCESS Array S 88.87 340 *e*P **P 06 11 32.7 -0.9**
BBAL Bala 89.24 309 *i*P **P 06 11 34.2 -2.0**
KMBO Kilima Mbogo 89.35 269 P **P 06 11 38.4 +1.0**
SNR=9.3
KMBO Kilima Mbogo 89.35 269 P **P 06 11 36.9 -0.5**
comp=Z,22nm,1.0s
KMBO Kilima Mbogo 89.35 269 P **P 06 11 36.5 -0.9**
comp=Z,22nm,1.1s,baz=62,slow=7.9,SNR=16
KMBO LR LR 06 48 22.2
comp=Z,2µm,21.2s,baz=92,slow=33
KMBO Kilima Mbogo 89.35 269 P **P 06 11 39.2 +1.8**
baz=90,SNR=6.1
KBS Kingsbay 89.39 350 *e*P **P 06 11 34.5 -1.4**
KBS AMB AMB 06 11 38.1
comp=Z,55nm,1.2s
KBS Kingsbay 89.39 350*c i*P **P 06 11 35.5 -0.4**
KBS pmax pmax
comp=Z,45nm,1.2s
KBS Kingsbay 89.39 350 *e*P **P 06 11 34.5 -1.4**
comp=Z,21nm,0.6s
KBS LR LR
comp=Z,3µm,19.0s
HSP Hornsund 89.45 348 *e*P **P 06 11 37.4 +1.2**
ANTO Ankara 89.46 310 *e*P **P 06 11 35.3 -1.9**
ANTO Ankara 89.46 310 *e*P **P 06 11 35.5 -1.6**
ANTO pmax pmax
comp=Z,10.0nm,0.6s
ANTO MLR MLR
comp=Z,2µm,20.0s
ANTO Ankara 89.46 310 *e*P **P 06 11 35.5 -1.6**
comp=Z,9.5nm,0.6s
ANTO LR LR
comp=Z,2µm,20.0s
BJO Bjornoya 89.46 345 *e*P **P 06 11 34.6 -1.7**
BJO AMB AMB 06 11 39.0
comp=Z,372nm,1.5s
CSS Prodhromos 89.57 305 *e*P **P 06 11 36.0 -1.7**
CSS Prodhromos 89.57 305 *e*P **P 06 11 36.6 -1.1**
comp=Z,24nm,0.7s
CSS LR LR
comp=Z,1µm,22.0s
SKAG Skagway 89.59 30 *e*P **P 06 11 37.0 -0.2**
comp=Z,18nm,0.9s
ERMK Ermenek 89.72 307 *i*P **P 06 11 37.5 -1.1**
KTK1 Kautokeino 89.77 339 *e*P **P 06 11 36.8 -1.1**
KTK1 AMB AMB 06 11 42.6
comp=Z,806nm,1.2s
LEF Lefka 89.91 305 *e*P **P 06 11 37.6 -1.7**
KAF Kangasniemi 90.07 332 *e*P **P 06 11 38.3 -1.1**
KAF pmax pmax
comp=Z,69nm,0.6s
KAF Kangasniemi 90.07 332 *e*p **P 06 11 38.3 -1.1**
comp=Z,69nm,0.6s
KDHN Kadinhani 90.14 309 *i*P **P 06 11 38.9 -1.4**
GAZI Gazipasa 90.25 306 *i*P P 06 11 35.5 -5.3
FIA1 FINESS Array S 90.31 332 *e*P **P 06 11 39.5 -1.0**
FINES FINESS Array B 90.31 332 P **P 06 11 39.4 -1.1**
FINES FINESS Array B 90.31 332 P **P 06 11 39.4 -1.1**
comp=Z,44nm,0.6s,baz=63,slow=6.4,SNR=63
FINES LR LR 06 55 42.2
comp=Z,6µm,20.1s,baz=82,slow=38
SVRH Sivrihisar-ESK 90.48 310 *e*P **P 06 11 40.1 -1.8**
AKASG Malin Array Be 90.51 321 P **P 06 11 40.1 -1.5**
AKASG pmax pmax
comp=Z,18nm,1.0s
AKASG MLR MLR
comp=Z,3µm,21.2s
AKASG Malin Array Be 90.51 321 P **P 06 11 40.1 -1.5**
AKASG Malin Array Be 90.51 321 P **P 06 11 40.1 -1.5**
comp=Z,18nm,1.0s,baz=68,slow=4.3,SNR=41
AKASG LR LR 06 54 38.3
comp=Z,3µm,21.2s,baz=70,slow=37
AK01 Malin Array Si 90.52 321 *e*P **P 06 11 40.7 -1.0**
KIEV Kiev 90.52 321 *e*P **P 06 11 39.6 -2.1**
KIEV *e*S **S 06 22 29.9 -3.5**
KIEV pmax pmax
comp=Z,52nm,1.0s
KIEV MLR MLR
comp=Z,3µm,22.0s
KIEV Kiev 90.52 321 *e*P **P 06 11 39.5 -2.1**
comp=Z,52nm,1.0s
KIEV *e*S **S 06 22 29.9 -3.5**
KIEV LR LR
comp=Z,3µm,22.0s
AK02 Malin Array Si 90.53 321 *e*P **P 06 11 40.7 -1.1**
MDUB Mudurnu 90.60 311 *e*P P 06 11 38.2 -4.3
MICGM Minsk 90.69 325 ||*i*P **P 06 11 40.0 -2.4**
MNK Minsk 90.71 325 *e*P **P 06 11 40.0 -2.5**
MNK *e* 06 15 20.0
MNK *e* 06 22 08.0
MNK *e*S S 06 22 22.0 -13
MNK *e*PS PnS 06 24 10.0 +21
MNK *e*SS SS 06 28 46.0 +8.7
MNK pmax pmax
comp=Z,190nm,1.2s
MNK MLR MLR
comp=Z,12µm,25.0s
TRO Tromso 91.07 340 *e*P **P 06 11 44.0 +0.1**
TRO AMB AMB 06 11 50.0
comp=Z,185nm,1.2s
NACGM Naroch 91.24 325 *e*P **P 06 11 43.0 -2.0**
KIS Kishinev 91.36 317 *e*P **P 06 11 44.0 -1.7**
KIS *e* 06 11 57.0
KIS *e* 06 15 26.0
KIS *e* 06 22 13.0
KIS *e*S S 06 22 34.0 -7.3
KIS *e*PS **PnS 06 24 00.0 +3.4**
KIS *e*PPS PPS 06 24 32.0
KIS pmax pmax
comp=Z,450nm,10.0s
KIS pmax pmax
comp=Z,800nm,19.0s
KIS Kishinev 91.36 317 *e*P P 06 11 40.0 -5.7
comp=Z,500nm,10.0s
KIS Kishinev 91.36 317 *e*PP PP 06 15 26.0 +2.5
ISP Isparta 91.47 308 *e*P **P 06 11 43.7 -2.9**
ISP Isparta 91.47 308 *e*P **P 06 11 44.5 -2.1**
ISP *e* 06 15 24.9
ISP pmax pmax
comp=Z,38nm,1.3s

ISP MLR MLR
comp=Z,2µm,22.0s
ISP Isparta 91.47 308 *e*P **P 06 11 44.5 -2.1**
comp=Z,38nm,1.3s
ISP *e*PP **PP 06 15 24.9 +0.1**
ISP LR LR
comp=Z,2µm,22.0s
ISP Isparta 91.47 308⇑ *i*P **P 06 11 45.0 -1.6**
ALT Altintas 91.62 309 *e*P **P 06 11 45.1 -2.1**
TLCR 91.65 315⇓ *i*P **P 06 11 47.3 +0.2**
TLCR 91.65 315⇓ *i*P **P 06 11 47.3 +0.2**
CAVI Cavuskoy 91.66 310 *e*P **P 06 11 45.2 -2.1**
ADVT Abdulvahap 91.70 311 *e*P **P 06 11 45.6 -1.9**
KORT Korkueli 91.72 307 *i* P **P 06 11 46.3 -1.5**
WRAK Wrangell Islan 91.73 33 *e*P **P 06 11 48.1 +1.0**
comp=Z,47nm,1.2s
WRAK LR LR
comp=Z,2µm,22.0s
TIRR Tirgusor 92.05 315 *e*P **P 06 11 50.4 +1.4**
TIRR pmax pmax
comp=Z,52nm,1.4s
TIRR Tirgusor 92.05 315 *e*P **P 06 11 50.4 +1.4**
comp=Z,52nm,1.4s
TVSB Tavsanli 92.06 310 *e*P **P 06 11 47.5 -1.8**
GDZ Gediz 92.10 309 *i* P **P 06 11 47.3 -2.2**
BUY Buyukada 92.11 311 *i* P **P 06 11 47.2 -2.2**
CFR Carcaliu 92.12 316⇑ *i*P **P 06 11 49.8 +0.5**
CFR Carcaliu 92.12 316⇑ *i*P **P 06 11 49.8 +0.5**
ALE Alert 92.15 1 P **P 06 11 49.5 +0.8**
comp=Z,122nm,1.6s,SNR=11
KHAL Karahalli 92.20 309 *i* P **P 06 11 47.5 -2.4**
ARMT Armutlu 92.35 311 *e*P **P 06 11 48.3 -2.2**
DLBC Dease Lake 92.49 31 *e*P **P 06 11 51.1 +0.3**
DLBC Dease Lake 92.49 31 LR LR 06 48 48.9
comp=Z,3µm,21.8s,baz=307,slow=32
DNZL Cakiroluk 92.65 308 *i* P P 06 11 47.6 -4.6
DURS Dursunbey 92.79 310 *i* P **P 06 11 49.6 -3.0**
TESR Tescani 92.91 317⇑ *i*P **P 06 11 52.4 -0.5**
STEI Steigen 92.91 339 *e*P **P 06 11 51.0 -1.4**
STEI AMB AMB 06 11 53.8
comp=Z,125nm,1.4s
VRI Vrincioaia 92.98 316⇓ P **P 06 11 54.6 +1.3**
VRI Vrincioaia 92.98 316⇓ *i*P **P 06 11 54.6 +1.3**
PLOR Plostina 93.03 316⇑ P **P 06 11 54.7 +1.1**
PLOR Plostina 93.03 316⇑ *i*P **P 06 11 54.7 +1.1**
ISR Istrita 93.25 316⇑ P P 06 11 57.8 +3.2
ISR Istrita 93.25 316⇑ *i*P P 06 11 57.8 +3.2
SUW Suwalki 93.48 325 *e*P **P 06 11 53.4 -1.9**
SUW pmax pmax
comp=Z,123nm,0.9s
SUW Suwalki 93.48 325 *e*P **P 06 11 53.4 -1.9**
comp=Z,123nm,0.9s
SUW Suwalki 93.48 325 *e*P **P 06 11 54.1 -1.2**
SUW *e*SKSac **SKSac 06 22 26.5 +0.6**
SUW LMZ LR 06 54 46.1
MLR Muntele Rosu 93.59 316⇑ *i*P **P 06 11 58.0 +1.8**
BURAR Bucovina Array 93.65 318⇑ *i*P **P 06 11 56.8 +0.3**
BUR08 Bucovina Ar. S 93.66 318 *e*P **P 06 11 56.3 -0.2**
SYO Syowa Base 93.83 201⇑ *e*X **P 06 11 55.0 -1.6**
LVV L'vov 93.95 321 *e*P **P 06 11 56.9 -0.7**
LVV *e* 06 15 41.9
LVV *e* 06 22 24.3
LVV *e*S S 06 22 53.9 -10
LVV MLR MLR
comp=N,900nm,23.0s
LVV MLR MLR
comp=E,2µm,23.0s
LVV MLR MLR
comp=Z,3µm,23.0s
TAOE Nuku Hiva Isla 94.11 98 *e*T T 07 56 21.0
comp=Z,43nm,0.2s
VOIR 94.22 316⇓ P **P 06 11 58.6 -0.5**
VOIR 94.22 316⇓ *i*P **P 06 11 58.6 -0.5**
KWP Kalwaria Pacla 94.83 321⇑ P P 06 12 06.9 +5.2
KWP Kalwaria Pacla 94.83 321 *e*P **P 06 12 01.0 -0.6**
comp=Z,73nm,1.1s
KWP LR LR
comp=Z,3µm,21.0s
KWP Kalwaria Pacla 94.83 321⇑ *i*P P 06 12 06.9 +5.2
KWP Kalwaria Pacla 94.83 321 *e*P **P 06 12 01.1 -0.6**
KWP LMZ LR 06 54 58.6
QSPA South Pole Qui 95.24 180 P **P 06 12 03.2 0.0**
comp=Z,24nm,1.2s
QSPA LR LR
comp=Z,5µm,21.0s
QSPA South Pole Qui 95.24 180 P **P 06 12 03.2 0.0**
comp=Z,14nm,0.9s,baz=330,slow=1.1,SNR=28
TRPA Tarpa 95.30 319⇑ *i*P **P 06 12 04.8 +1.0**
TRPA Tarpa 95.30 319⇑ *e*P **P 06 12 03.3 -0.5**
UZH Uzhgorod 95.33 320⇓ *i*P **P 06 12 03.2 -0.8**
UZH *e* 06 12 15.6
UZH *i* 06 12 20.4
UZH *e* 06 15 56.2
UZH *e* 06 17 59.0
UZH *e*S S 06 23 07.4 -8.9
UZH *e* 06 24 34.6
UZH MLR MLR
comp=N,2µm,21.5s
UZH MLR MLR
comp=E,2µm,21.5s
UZH MLR MLR
comp=Z,250nm,21.5s
BEL Belsk 95.44 323 *e*P **P 06 12 04.3 -0.1**
BEL *e*SKSac **SKSac 06 22 38.7 +2.2**
BEL LMZ LR 06 54 41.7
DRGR 95.50 318⇑ P **P 06 12 05.2 +0.3**
DRGR 95.50 318⇑ *i*P **P 06 12 05.2 +0.3**
MPEP Malo Peshtene 95.58 314 P P 06 12 10.4 +5.2
DEV Deva 95.59 317⇓ P **P 06 12 06.3 +1.1**
DEV Deva 95.59 317⇓ *i*P **P 06 12 06.3 +1.1**
DAG Danmarks Havn 95.64 352⇑ *i*P **P 06 12 03.5 -1.3**
DAG pmax pmax
comp=Z,87nm,0.9s
DAG MLR MLR
comp=Z,3µm,26.0s
DAG Danmarks Havn 95.64 352⇑ *i*P **P 06 12 03.5 -1.3**
comp=Z,103nm,0.9s
DAG
comp=Z,2µm,26.0s
SANT Santorini 95.70 307 PFAKE 06 12 20.0 +14
SANT LR LR
comp=Z,1µm,22.0s
GZR Gura Zlata 95.79 317⇑ P **P 06 12 06.1 -0.1**
GZR Gura Zlata 95.79 317⇑ *i*P **P 06 12 06.1 -0.1**
MBAR Mbarara 95.79 270 PFAKE 06 12 20.0 +13
MBAR LR LR
comp=Z,1µm,21.0s
CRVS Cervenica-Dubn 95.80 320 *e*P P 06 12 02.2 -3.9
CRVS pmax pmax
comp=Z,22nm,1.1s
CRVS Cervenica-Dubn 95.80 320 *e*P P 06 12 02.2 -3.9
STHS Stebnicka Huta 95.80 321 *e*P **P 06 12 06.3 +0.2**
STHS pmax pmax
comp=Z,5.0nm,1.2s
STHS Stebnicka Huta 95.80 321 *e*P **P 06 12 06.3 +0.2**
MMB Musomiste 95.97 313 P **P 06 12 04.0 -3.1**
VTS Vitosha 96.12 314⇑ P **P 06 12 08.0 +0.1**
VTS Vitosha 96.12 314 *e*P **P 06 12 05.0 -2.9**
VTS Vitosha 96.12 314⇑ *i*P **P 06 12 08.0 +0.1**
RES Resolute Bay 96.28 10 LR LR 07 02 06.2
comp=Z,1µm,18.7s,baz=300,slow=40
NIE Niedzica 96.39 321 *e*P **P 06 12 08.5 -0.3**
NIE Niedzica 96.39 321 *e*P **P 06 12 08.5 -0.3**
OJC Ojcow 96.49 322 *e*P **P 06 12 08.8 -0.4**
OJC *e* 06 16 02.1
OJC *e*S **S 06 23 29.5 +3.2**
OJC MLR MLR
comp=Z,3µm,20.8s
OJC Ojcow 96.49 322 *e*P **P 06 12 08.8 -0.4**
OJC *e*PP **PP 06 16 02.1 -1.3**
OJC *e*S **S 06 23 29.5 +3.2**
OJC L L 06 57 51.4
comp=Z,3µm,20.8s
BZS Buzias 96.53 317⇑ P **P 06 12 09.3 -0.2**
BZS Buzias 96.53 317⇑ *i*P **P 06 12 09.3 -0.2**
KECS Kecovo 96.53 320 *e*P **P 06 12 08.6 -0.8**
KECS pmax pmax
comp=Z,5.0nm,0.9s
KECS Kecovo 96.53 320 *e*P **P 06 12 08.6 -0.8**
VAY Valandovo 96.88 313 *e*P P 06 12 06.7 -4.5
PSZ Piszkesteto 97.06 319⇑ P Pdif 06 12 12.8 +0.7
PSZ Piszkesteto 97.06 319 *e*P **P 06 12 10.2 -1.8**
comp=Z,13nm,0.9s

PSZ LR LR
comp=Z,3µm,21.0s
PSZ Piszkesteto 97.06 319⇑ *i*P Pdif 06 12 12.8 +0.7
PSZ Piszkesteto 97.06 319⇑ *e*P **P 06 12 11.2 -0.8**
GKP Gorka Klasztor 97.09 325 *e*P Pdif 06 12 12.2 +0.3
GKP LMZ LR 06 57 30.4
NC602 NORSAR Array S 97.23 333 *e*P Pdif 06 12 13.1 +0.7
NB2 NORSAR Subarra 97.25 334 P **P 06 12 10.1 -2.4**
comp=Z,41nm,0.8s,baz=66,slow=4.6
NB2 NORSAR Subarra 97.25 334 P **P 06 12 10.1 -2.4**
baz=66,slow=4.6
NOA NORSAR Array B 97.25 334 P **P 06 12 10.4 -2.1**
NOA NORSAR Array B 97.25 334 P **P 06 12 10.4 -2.1**
comp=Z,30nm,0.8s,baz=66,slow=4.6,SNR=52
NOA LR LR 07 00 09.5
comp=Z,5µm,21.3s,baz=65,slow=38
NAO01 NORSAR Array S 97.48 334 *e*P **P 06 12 11.4 -2.1**
comp=Z,31nm,0.8s
RAC Raciborz 97.51 322 *e*P Pdif 06 12 14.4 +0.5
RAC MLR MLR
comp=Z,4µm,27.5s
VYHS Vyhne 97.58 320 *e*P **P 06 12 13.0 -1.2**
VYHS Vyhne 97.58 320 *e*P **P 06 12 13.0 -1.2**
OKC Ostrava-Krasne 97.62 322 *e*P Pdif 06 12 14.7 +0.3
OKC *e* 06 16 09.9
OKC *e* 06 23 38.5
OKC MLR MLR
comp=Z,2µm,19.6s
OKC Ostrava-Krasne 97.62 322 *e*P Pdif 06 12 14.7 +0.3
OKC *e*pP pP 06 12 21.7 -6.7
OKC *e*PP **PP 06 16 09.9 -2.2**
OKC *e*S **S 06 23 38.5 +2.5**
OKC AMS AMS 06 58 20.0
comp=Z,2µm,19.6s
BSD Bornholm Skovb 97.75 327 *i* P Pdif 06 12 19.2 +4.4
BSD pmax pmax
comp=Z,38nm,1.0s
BSD MLR MLR
comp=Z,4µm,22.0s
BSD Bornholm Skovb 97.75 327 *i* P Pdif 06 12 19.2 +4.4
comp=Z,38nm,1.0s
BSD
comp=Z,4µm,22.0s
BUD Budapest 97.75 319⇓ *e*P **P 06 12 13.4 -1.6**
MORC Moravsky Berou 98.01 322⇓ P Pdif 06 12 18.8 +2.6
MORC Moravsky Berou 98.01 322 *e*P **P 06 12 15.5 -0.6**
comp=Z,9.2nm,0.9s
MORC *e*PP **PP 06 16 13.7 -1.4**
MORC Moravsky Berou 98.01 322⇓ *i*P Pdif 06 12 18.8 +2.6
YKW3 Yellowknife Ar 98.10 24 *e*P **P 06 12 15.6 -0.6**
comp=Z,1.0nm,1.6s
MOL Molde 98.12 336 *e*P Pdif 06 12 17.8 +1.5
MOL AMB AMB 06 12 21.5
comp=Z,40nm,1.5s
YKA Yellowknife Ar 98.14 24 P **P 06 12 15.6 -0.7**
YKA PKKPbc **PKKPbc 06 28 46.9 -4.3**
YKA Yellowknife Ar 98.14 24 P **P 06 12 15.6 -0.7**
comp=Z,5.1nm,0.8s,baz=298,slow=4.7,SNR=29
YKA PKKPbc **PKKPbc 06 28 46.8 -4.3**
comp=Z,1.9nm,0.8s,baz=114,slow=2.5,SNR=12
JMIC Jan Mayen 98.25 346 *e*P **P 06 12 15.6 -1.1**
JMIC Jan Mayen 98.25 346 LR LR 07 02 55.3
comp=Z,2µm,21.2s,baz=42,slow=39
PKSM Moragy 98.37 318⇑ P **P 06 12 15.0 -2.8**
PKSM Moragy 98.37 318⇑ *i*P **P 06 12 15.0 -2.8**
PKSM Moragy 98.37 318 *e*P **P 06 12 17.2 -0.6**
KSP Ksiaz 98.43 323 *e*P **P 06 12 17.3 -0.6**
KSP *e* 06 22 52.0
KSP MLR MLR
comp=Z,9µm,26.9s
KSP Ksiaz 98.43 323 *e*P **P 06 12 17.5 -0.4**
KSP *e*SKSac **SKSac 06 22 52.9 +0.8**
KSP LMZ LR 06 56 51.5
DPC Dobruska-Polom 98.57 323 *e*P Pdif 06 12 19.4 +0.7
DPC *e* 06 16 20.0
DPC Dobruska-Polom 98.57 323 *e*PDIFF Pdif 06 12 19.4 +0.7
DPC *e*PP **PP 06 16 20.0 +0.6**
DPC *ex* x 06 31 24.8
KONO Kongsberg 98.58 333 *e*P **P 06 12 17.7 -0.7**
KONO AMB AMB 06 12 21.3
comp=Z,91nm,1.8s
KONO Kongsberg 98.58 333 *e*P P 06 12 14.6 -3.8
KONO pmax pmax
comp=Z,18nm,0.8s
KONO MLR MLR
comp=Z,5µm,21.0s
KONO Kongsberg 98.58 333 *e*P P 06 12 14.6 -3.8
comp=Z,18nm,0.8s
KONO LR LR
comp=Z,5µm,21.0s
UPC Upice 98.71 323 *e*P Pdif 06 12 19.3 +0.1
UPC *e* 06 12 28.9
UPC *e* 06 16 19.4
UPC Upice 98.71 323 *e*P Pdif 06 12 19.3 +0.1
UPC *e*pP pP 06 12 28.9 -4.4
UPC *e*PP **PP 06 16 19.4 -1.0**
VRAC Vranov 98.74 321⇑ *i*P **P 06 12 18.8 -0.6**
TIR Tirane 98.84 313 PFAKE 06 12 30.0 +10
TIR LR LR
comp=Z,2µm,22.0s
NLWA Neilton Lookou 99.17 40 *e*P **Pdif 06 12 21.8 +0.3**
comp=Z,9.4nm,0.9s
NLWA LR LR
comp=Z,2µm,22.0s
SOP Sopron 99.28 320⇑ *e*Pdiff **Pdif 06 12 17.8 -4.0**
RUE Ruedersdorf 99.33 325 *e*Pdiff **Pdif 06 12 22.9 +1.0**
comp=Z,104nm,1.2s
RUE Ruedersdorf 99.33 325 *e*P **Pdif 06 12 22.0 +0.2**
comp=Z,93nm,1.1s
LSZ Lusaka 99.39 255 *e*P **Pdif 06 12 22.9 -0.2**
comp=Z,21nm,1.1s
LSZ LR LR
comp=Z,3µm,20.0s
LSZ Lusaka 99.39 255 P **Pdif 06 12 22.2 -0.9**
comp=Z,13nm,1.0s,baz=72,slow=7.3,SNR=12
TREC Trest 99.43 322 *e*P **Pdif 06 12 22.8 +0.3**
TREC *e* 06 16 27.0
TREC MLR MLR
comp=Z,4µm,21.5s
TREC Trest 99.43 322 *e*PDIFF **Pdif 06 12 22.8 +0.3**
TREC *e*PP **PP 06 16 27.0 +1.0**
TREC AMS AMS 06 59 20.0
comp=Z,4µm,21.5s
BEHE Becsehely 99.52 319⇓ *e*Pdiff **Pdif 06 12 23.8 +0.9**
PRU Pruhonice 99.77 323 *e*P **Pdif 06 12 21.2 -2.8**
PRU *e* 06 12 37.0
PRU *e* 06 16 25.9
PRU *e* 06 22 58.0
PRU *e* 06 23 54.1
PRU MLR MLR
comp=Z,4µm,19.8s
PRU Pruhonice 99.77 323 *e*PDIFF **Pdif 06 12 21.2 -2.8**
PRU *e*pP **pP 06 12 37.0 -1.1**
PRU *e*PP **PP 06 16 25.9 -2.6**
PRU *e*SKS **SKSac 06 22 58.0 -0.8**
PRU *e*SDIF **ScS 06 23 54.1 0.0**
PRU *ex* x 06 31 17.6
PRU AMS AMS 07 01 40.0
comp=Z,4µm,19.8s
ODD1 Odda 99.79 334 *e*P **Pdif 06 12 20.8 -3.0**
PRA Prague 99.81 323 PDIFF **Pdif 06 12 24.0 -0.1**
PRA PP **PP 06 16 29.0 +0.3**
PRA AMS AMS 07 02 00.0
BRG Berggiesshubel 99.81 324 *e*P **Pdif 06 12 24.1 0.0**
comp=Z,27nm,1.1s
BRG PP PP 06 16 35.0 +6.2
comp=Z,33nm,1.7s
BRG SKS **SKSac 06 23 01.0 +2.0**
BRG S **S 06 23 56.0 +1.5**
BRG PS PS 06 26 11.0 +43
BRG SS SS 06 31 28.0 +41
BRG
comp=Z,4µm,22.1s
BRG
comp=N,2µm,19.6s
BRG
comp=E,2µm,19.6s
BRG Berggiesshubel 99.81 324 *e*Pdiff **Pdif 06 12 24.2 +0.1**
comp=Z,30nm,1.2s
BRG Berggiesshubel 99.81 324 *e*P **Pdif 06 12 24.1 0.0**
BRG 06 16 35.0
BRG 06 23 01.0
BRG S **S 06 23 56.0 +1.5**
BRG PS PS 06 26 11.0 +43

BRG pmax pmax
comp=Z,27nm,1.1s
BRG pmax pmax
comp=Z,33nm,1.7s
BRG MLR MLR
comp=Z,4µm,22.1s
BRG MLR MLR
comp=N,2µm,19.6s
BRG MLR MLR
comp=E,2µm,19.6s
RKT Rikitea 99.91 112 *e*LR LR 06 46 25.0
comp=E,6µm,26.0s
RUND Rundenannen 100.09 334 *e*P **Pdif 06 12 25.9 +0.7**
BER Bergen 100.12 334 *e*P **Pdif 06 12 25.5 +0.3**
BER AMB AMB 06 12 27.6
comp=Z,55nm,2.0s
FBE Freiberg 100.14 324 *e*Pdiff **Pdif 06 12 25.9 +0.3**
comp=Z,33nm,1.1s
CLL Collm 100.21 324 *e*Pdiff **Pdif 06 12 25.5 -0.4**
comp=Z,33nm,1.5s
CLL Collm 100.21 324 *i* P **Pdif 06 12 24.8 -1.1**
CLL *e* 06 22 59.0
CLL pmax pmax
comp=Z,33nm,1.5s
CLL Collm 100.21 324 *i* Pdif **Pdif 06 12 24.8 -1.1**
comp=Z,33nm,1.5s
CLL *i* 06 12 32.0
CLL *i* sP sP 06 12 38.0 -7.2
CLL *e*PP **PP 06 16 29.0 -2.7**
CLL *e*pPP 06 16 40.0
CLL *e*PPP PPP 06 18 36.0
CLL *e*SKSac **SKSac 06 22 59.0 -1.9**
CLL *e*PS **PS 06 25 29.0 -3.3**
CLL *e*PPS PPS 06 26 18.0
CLL *e*SS SS 06 31 30.0 +38
CLL *e*SSS SSS 06 35 12.0
CLL Lm MLR 07 06 00.0
comp=N,2µm,20.5s
CLL Lm MLR 07 06 00.0
comp=E,2µm,19.8s
CLL Lm MLR 07 06 00.0
comp=Z,4µm,20.6s
PERS Pernice 100.55 319 *i* P **Pdif 06 12 26.6 -1.0**
KHC Kasperske Hory 100.66 322 *e*P **Pdif 06 12 27.6 -0.4**
KHC *e* 06 16 34.6
KHC *e* 06 23 03.5
KHC *e* 06 24 02.2
KHC MLR MLR
comp=Z,5µm,29.2s
KHC Kasperske Hory 100.66 322 *e*PDIFF **Pdif 06 12 27.6 -0.4**
KHC *ex* x 06 12 32.0
KHC *e*pP pP 06 12 36.0 -6.2
KHC *e*PP **PP 06 16 34.6 -0.7**
KHC *e*SKS 06 23 03.5
KHC *e*SDIF **Sdif 06 24 02.2 +0.5**
KHC *ex* x 06 31 38.5
KHC AMS AMS 06 56 10.0
comp=Z,5µm,29.2s
KHC Kasperske Hory 100.66 322 *e*Pdif **Pdif 06 12 27.8 -0.2**
comp=Z,18nm,1.4s
BSEG Bad Segeberg 100.67 327 *e*Pdiff **Pdif 06 12 28.2 +0.4**
comp=Z,45nm,1.1s
BSEG Bad Segeberg 100.67 327 *e*P **Pdif 06 12 28.2 +0.4**
BSEG pmax pmax
comp=Z,45nm,1.1s
MOA Molln 100.69 321⇓ *i*Pdiff **Pdif 06 12 28.1 0.0**
comp=Z,23nm,0.9s,SNR=6.4
GEC2 GERESS Array S 100.69 322 *e*Pdiff **Pdif 06 12 28.1 -0.1**
comp=Z,27nm,1.5s
GEC2 GERESS Array S 100.69 322 *e*P **Pdif 06 12 28.1 -0.1**
GEC2 pmax pmax
comp=Z,27nm,1.5s
GERES GERESS Array B 100.69 322 P **Pdif 06 12 27.8 -0.4**
GERES GERESS Array B 100.69 322 P **Pdif 06 12 27.8 -0.4**
comp=Z,4.0nm,0.9s,baz=59,slow=4.7,SNR=22
BOJS Bojanci 100.84 318 *i* P **Pdif 06 12 28.2 -0.6**
BOJS *e*S **SKSac 06 23 02.9 -1.4**
TANN Tannenbergstha 100.86 323 *e*Pdiff **Pdif 06 12 28.9 0.0**
comp=Z,19nm,1.2s
NKC Novy Kostel 100.94 323 *e*P **Pdif 06 12 29.8 +0.6**
NKC *e* 06 24 02.8
NKC MLR MLR
comp=Z,4µm,23.6s
NKC Novy Kostel 100.94 323 *e*PDIFF **Pdif 06 12 29.8 +0.6**
NKC *e*pP pP 06 12 41.6 -1.8
NKC *e*SDIF **Sdif 06 24 02.8 -1.2**
NKC *ex* x 06 31 39.9
NKC AMS AMS 06 59 00.0
comp=Z,4µm,23.6s
WERD Werda 100.94 324 *e*Pdiff **Pdif 06 12 29.2 0.0**
comp=Z,16nm,1.1s
GUNZ Gunzen 100.96 323 *e*Pdiff **Pdif 06 12 29.3 0.0**
comp=Z,24nm,1.1s
NEUB Neuenburg 100.96 324 *e*Pdiff **Pdif 06 12 29.5 +0.3**
comp=Z,38nm,1.1s
WERN Wernitzgruen 100.96 323 *e*Pdiff **Pdif 06 12 29.5 +0.2**
comp=Z,14nm,1.1s
PLN Plauen 101.01 324 *e*Pdiff **Pdif 06 12 29.8 +0.3**
comp=Z,92nm,1.2s
LJU Ljubljana 101.14 319 *e*P **Pdif 06 12 28.9 -1.3**
LJU *e*PP **PP 06 16 41.2 +2.2**
LJU *e*S **SKSac 06 23 04.1 -1.6**
MANZ Manzenberg 101.23 323 *e*Pdiff **Pdif 06 12 30.8 +0.3**
comp=Z,24nm,1.5s
ROTZ Rotzenmuhle 101.26 323 *e*Pdiff **Pdif 06 12 31.1 +0.5**
comp=Z,22nm,1.4s
MOX Moxa 101.27 324 *e*Pdiff **Pdif 06 12 30.8 +0.2**
comp=Z,30nm,1.5s
MOX *e*PP **PP 06 16 39.2 -0.6**
MOX Moxa 101.27 324 *e*P **Pdif 06 12 30.8 +0.2**
MOX *e* 06 16 39.2
MOX pmax pmax
comp=Z,30nm,1.5s
HUMO Hull Mountain 101.28 45 *e*Pdif **Pdif 06 12 32.2 +1.3**
comp=Z,5.6nm,1.0s
NRDL Niedersach Rie 101.39 326 *e*Pdiff **Pdif 06 12 31.7 +0.7**
comp=Z,62nm,1.3s
SCO Scoresbysund 101.43 350⇑ *i*P **Pdif 06 12 32.0 +1.2**
SCO *i* S PP 06 16 46.0 +5.8
SCO pmax pmax
comp=Z,16nm,1.1s
SCO MLR MLR
comp=Z,3µm,26.0s
SCO Scoresbysund 101.43 350⇑ *i*P **Pdif 06 12 32.0 +1.2**
comp=Z,16nm,1.1s
SCO
comp=Z,3µm,26.0s
JAVS Javornik 101.49 319 *i* P **Pdif 06 12 30.6 -1.2**
JAVS *e*S **SKSac 06 23 06.3 -1.3**
CLZ Clausthal 101.51 325 *e*Pdiff **Pdif 06 12 32.3 +0.6**
comp=Z,42nm,1.0s
CLZ Clausthal 101.51 325 *e*P **Pdif 06 12 32.3 +0.6**
CLZ pmax pmax
comp=Z,42nm,1.0s
SUMG Summit 101.63 355 *i* P **Pdif 06 12 33.1 +0.9**
SUMG pmax pmax
comp=Z,10.0nm,1.0s
SUMG MLR MLR
comp=Z,4µm,25.0s
SUMG Summit 101.63 355 *e*Pdif **Pdif 06 12 30.8 -1.5**
comp=Z,10nm,0.8s
SUMG Summit 101.63 355 *i* P **Pdif 06 12 33.1 +0.9**
comp=Z,9.6nm,1.0s
SUMG
comp=Z,4µm,25.0s
YBH Yreka Blue Hor 101.72 46 *e*Pdif **Pdif 06 12 32.8 -0.1**
comp=Z,2.3nm,0.8s
TIP Timpagrande 101.73 312 PFAKE 06 12 40.0 +7.0
TIP LR LR
comp=Z,3µm,22.0s
GRF Grafenberg Arr 101.88 323 *e*Pdiff **Pdif 06 12 33.7 +0.3**
comp=Z,36nm,1.8s
GRF *e*PP **PP 06 16 47.2 +2.8**
GRF Grafenberg Arr 101.88 323 *e*P **Pdif 06 12 33.7 +0.3**
GRF *e* 06 16 47.2
GRF pmax pmax
comp=Z,36nm,1.8s
GRFO Grafenberg 101.88 323 *e*P **Pdif 06 12 33.2 -0.2**
GRFO pmax pmax
comp=Z,9.0nm,1.0s
GRFO Grafenberg 101.88 323 *e*Pdif **Pdif 06 12 33.2 -0.2**
comp=Z,9.5nm,1.0s
LBTB Lobatse 102.11 246 P **Pdif 06 12 34.2 -0.8**
LBTB Lobatse 102.11 246 P **Pdif 06 12 34.2 -0.8**
comp=Z,3.4nm,0.8s,baz=90,slow=5.1,SNR=3.9

UBBA	**Unterbreizbach**	**102.14**	**325**	*e*Pdiff	**Pdif**	**06 12 34.4**	**+0.1**		
CUC	**Castrocucco**	**102.18**	**313**	PFAKE		06 12 50.0	+15		
CUC				LR	LR				
	comp=Z,3µm,22.0s								
HAWA	**Hanford**	**102.31**	**40**	PFAKE		06 12 50.0	+15		
HAWA				LR	LR				
	comp=Z,2µm,22.0s								
BOSA	**Boshof**	**102.40**	**242**	P	**Pdif**	**06 12 36.1**	**-0.1**		
BOSA	**Boshof**	**102.40**	**242**	P	**Pdif**	**06 12 36.1**	**-0.1**		
	comp=Z,10nm,1.2s,baz=82,slow=3.9,SNR=1.9								
WTTA	**Wattenberg**	**102.56**	**321**	⇑*i*Pdiff	**Pdif**	**06 12 35.2**	**-1.5**		
	comp=Z,18nm,1.0s								
CEL	**Celeste**	**102.64**	**311**	PFAKE		06 12 50.0	+13		
CEL				LR	LR				
	comp=Z,2µm,22.0s								
IBBN	**Ibbenburen**	**102.77**	**326**	*e*Pdiff	**Pdif**	**06 12 37.7**	**+0.5**		
	comp=Z,49nm,1.1s								
NEW	**Newport**	**103.11**	**38**	*e*Pdif	**Pdif**	**06 12 38.6**	**-0.3**		
	comp=Z,5.0nm,0.9s								
NEW				LR	LR				
	comp=Z,3µm,22.0s								
NEW	**Newport**	**103.11**	**38**	⇓P	**Pdif**	**06 12 39.1**	**+0.1**		
	baz=103								
AQU	**L'Aquila**	**103.15**	**316**	PFAKE		06 12 50.0	+11		
AQU				LR	LR				
	comp=Z,4µm,22.0s								
FETA	**Feichten**	**103.22**	**321**	⇑*i*Pdiff	**Pdif**	**06 12 39.2**	**-0.4**		
	comp=Z,13nm,1.0s								
BUG	**Bochum--Univer**	**103.43**	**326**	*e*Pdiff	**Pdif**	**06 12 40.6**	**+0.5**		
	comp=Z,61nm,1.7s								
C11A	**Tepee Creek (N**	**103.81**	**38**	⇓P	**Pdif**	**06 12 42.9**	**+0.8**		
	baz=104								
BEKR	**Beckworth**	**104.01**	**47**	*e*Pdif	**Pdif**	**06 12 44.8**	**+1.5**		
	comp=Z,1.5nm,0.6s								
BFO	**Black Forest**	**104.17**	**323**	PFAKE		06 12 50.0	+6.4		
BFO				LR	LR				
	comp=Z,3µm,20.0s								
TUE	**Stuetta**	**104.31**	**321**	*e*Pdif	**Pdif**	**06 12 43.4**	**-1.1**		
	comp=Z,7.2nm,1.1s								
TUE				LR	LR				
	comp=Z,2µm,21.0s								
BMO	**Blue Mountains**	**104.34**	**41**	*e*P	**Pdif**	**06 12 45.5**	**+1.0**		
BMO				pmax	pmax				
	comp=Z,6.0nm,1.3s								
BMO				MLR	MLR				
	comp=Z,2µm,21.0s								
BMO	**Blue Mountains**	**104.34**	**41**	*e*Pdif	**Pdif**	**06 12 45.5**	**+1.0**		
	comp=Z,6.3nm,1.3s								
BMO				LR	LR				
	comp=Z,2µm,21.0s								
WVOR	**Wild Horse Val**	**104.35**	**44**	*e*P	**Pdif**	**06 12 44.3**	**-0.3**		
WVOR				pmax	pmax				
	comp=Z,19nm,1.7s								
WVOR				MLR	MLR				
	comp=Z,1µm,21.0s								
WVOR	**Wild Horse Val**	**104.35**	**44**	*e*Pdif	**Pdif**	**06 12 44.3**	**-0.3**		
	comp=Z,19nm,1.7s								
WVOR				LR	LR				
	comp=Z,1µm,21.0s								
WDD	**Wield Dalam**	**104.40**	**309**	PFAKE		06 13 00.0	+15		
WDD				LR	LR				
	comp=Z,984nm,22.0s								
MEM	**Membach**	**104.52**	**325**	P	**Pdif**	**06 12 46.1**	**+1.1**		
	comp=Z,12nm,1.8s								
VLC	**Villacollemand**	**104.55**	**318**	PFAKE		06 13 00.0	+15		
VLC				LR	LR				
	comp=Z,4µm,22.0s								
CMB	**Columbia Colle**	**104.59**	**49**	*e*P	**Pdif**	**06 12 43.8**	**-1.9**		
CMB				pmax	pmax				
	comp=Z,6.0nm,1.2s								
CMB	**Columbia Colle**	**104.59**	**49**	*e*Pdif	**Pdif**	**06 12 43.8**	**-1.9**		
	comp=Z,5.9nm,1.2s								
BEBN	**Eben Emael**	**104.61**	**326**	P	**Pdif**	**06 12 46.6**	**+1.2**		
B13A	**Whitefish**	**104.67**	**37**	⇑P	**Pdif**	**06 12 46.3**	**+0.4**		
	baz=105								
D12A	**Red Ives Fores**	**104.70**	**39**	⇑P	**Pdif**	**06 12 46.1**	**0.0**		
	baz=105								
WALA	**Waterton Lakes**	**104.70**	**36**	*e*Pdif	**Pdif**	**06 12 46.0**	**-0.1**		
	comp=Z,0.3nm,1.3s								
BSMT	**Bassoo Peak**	**104.71**	**38**	*e*Pdif	**Pdif**	**06 12 46.3**	**+0.1**		
	comp=Z,22nm,1.5s								
CDF	**Champ du Feu**	**104.77**	**323**	*e*P	**Pdif**	**06 12 46.4**	**0.0**		
	comp=Z,13nm,1.0s								
CDF	**Champ du Feu**	**104.77**	**323**	*e*P	**Pdif**	**06 12 46.4**	**0.0**		
CDF				pmax	pmax				
	comp=Z,13nm,1.0s								
CDF	**Champ du Feu**	**104.77**	**323**	*e*P	**Pdif**	**06 12 46.4**	**0.0**		
	comp=Z,13nm,1.0s								
E12A	**Beaver Dam Sad**	**104.83**	**39**	⇑P	**Pdif**	**06 12 46.8**	**+0.1**		
	baz=105								
WLF	**Walferdange**	**104.87**	**325**	P	**Pdif**	**06 12 47.9**	**+1.3**		
	comp=Z,14nm,2.5s								
WLF	**Walferdange**	**104.87**	**325**	*e*P	**Pdif**	**06 12 46.8**	**+0.1**		
WLF				pmax	pmax				
	comp=Z,15nm,1.0s								
WLF				MLR	MLR				
	comp=Z,4µm,22.0s								
WLF	**Walferdange**	**104.87**	**325**	*e*Pdif	**Pdif**	**06 12 46.8**	**+0.1**		
	comp=Z,15nm,1.0s								
WLF				LR	LR				
	comp=Z,4µm,22.0s								
C13A	**Hot Springs**	**104.91**	**38**	⇑P	**Pdif**	**06 12 46.7**	**-0.2**		
	baz=105								
ECH	**Echery**	**104.93**	**323**	PFAKE		06 13 00.0	+13		
ECH				LR	LR				
	comp=Z,2µm,19.0s								
BCLA	**Clavier**	**105.00**	**325**	P	**Pdif**	**06 12 49.1**	**+1.9**		
	comp=Z,14nm,2.1s								
A14A	**Double T Ranch**	**105.03**	**36**	⇑P	**Pdif**	**06 12 48.2**	**+0.6**		
	baz=105								
JTMT	**Jette**	**105.06**	**38**	*e*Pdif	**Pdif**	**06 12 46.9**	**-0.9**		
	comp=Z,1.0nm,0.8s								
HINF	**Hinteralfeld**	**105.29**	**323**	*e*P	**Pdif**	**06 12 48.3**	**-0.3**		
HINF	**Hinteralfeld**	**105.29**	**323**	*e*P	**Pdif**	**06 12 48.3**	**-0.3**		
HINF	**Hinteralfeld**	**105.29**	**323**	*e*P	**Pdif**	**06 12 48.3**	**-0.3**		
F12A	**Elk City**	**105.30**	**40**	⇑P	**Pdif**	**06 12 47.6**	**-1.3**		
	baz=105								
SWMT	**Swartz Lake**	**105.33**	**38**	*e*Pdif	**Pdif**	**06 12 50.4**	**+1.5**		
	comp=Z,2.9nm,1.0s								
C14A	**Swan Lake**	**105.37**	**37**	⇓P	**Pdif**	**06 12 48.0**	**-1.1**		
	baz=105								
B14A	**Marquette Ranc**	**105.39**	**37**	⇑P	**Pdif**	**06 12 48.7**	**-0.5**		
	baz=105								
GIVF	**Givet**	**105.42**	**325**	*e*P	**Pdif**	**06 12 49.9**	**+0.8**		
	comp=Z,67nm,1.6s								
GIVF	**Givet**	**105.42**	**325**	*e*P	**Pdif**	**06 12 49.9**	**+0.8**		
GIVF				pmax	pmax				
	comp=Z,67nm,1.6s								
GIVF	**Givet**	**105.42**	**325**	*e*P	**Pdif**	**06 12 49.9**	**+0.8**		
	comp=Z,67nm,1.6s								
A15A	**Johnson Ranch,**	**105.43**	**36**	⇓P	**Pdif**	**06 12 48.2**	**-1.1**		
	baz=105								
HAU	**Haudompre**	**105.51**	**323**	*e*P	**Pdif**	**06 12 50.0**	**+0.4**		
HAU	**Haudompre**	**105.51**	**323**	*e*P	**Pdif**	**06 12 50.0**	**+0.4**		
HAU	**Haudompre**	**105.51**	**323**	*e*P	**Pdif**	**06 12 50.0**	**+0.4**		
DOU	**Dourbes**	**105.56**	**325**	P	**Pdif**	**06 12 51.7**	**+2.0**		
	comp=Z,9.7nm,1.6s								
PAGF	**Fort de Pagny**	**105.63**	**324**	*e*P	**Pdif**	**06 12 50.7**	**+0.6**		
	comp=Z,5.2nm,1.1s								
PAGF	**Fort de Pagny**	**105.63**	**324**	*e*P	**Pdif**	**06 12 50.7**	**+0.6**		
	comp=Z,5.2nm,1.1s								
MSO	**Missoula**	**105.67**	**38**	*e*PKPdf	Pdif	06 17 03.0			
MSO				LR	LR				
	comp=Z,1µm,22.0s								
MSO	**Missoula**	**105.67**	**38**	⇑PKiKP	**PKiKP**	**06 17 03.1**	**-0.2**		
	baz=106								
SLMT	**Seeley Lake**	**105.76**	**38**	*e*Pdif	**Pdif**	**06 12 50.5**	**-0.4**		
	comp=Z,14nm,1.6s								
BAIF	**Baives**	**105.79**	**326**	*e*P	**Pdif**	**06 12 51.7**	**+1.0**		
	comp=Z,47nm,1.5s								
BAIF	**Baives**	**105.79**	**326**	*e*P	**Pdif**	**06 12 51.7**	**+1.0**		
BAIF				pmax	pmax				
	comp=Z,47nm,1.5s								
BAIF	**Baives**	**105.79**	**326**	*e*P	**Pdif**	**06 12 51.7**	**+1.0**		
	comp=Z,47nm,1.5s								
B15A	**Bradely Ranch,**	**105.84**	**37**	⇑P	**Pdif**	**06 12 50.7**	**-0.4**		
	baz=106								
MFID	**Camas Ranch**	**105.88**	**42**	*e*PKPdf		06 17 02.7			
NVAR	**Mina Array Bea**	**106.00**	**48**	Pdif	**Pdif**	**06 12 54.1**	**+1.9**		
NVAR				PKiKP	**PKiKP**	**06 17 05.0**	**+0.6**		
NVAR				PKKPbc	**PKKPbc**	**06 28 27.5**	**-0.2**		
NVAR	**Mina Array Bea**	**106.00**	**48**	Pdiff	**Pdif**	**06 12 54.1**	**+1.9**		
	comp=Z,2.0nm,0.7s,baz=280,slow=5.4,SNR=12								
NVAR				PKiKP	**PKiKP**	**06 17 05.0**	**+0.6**		
	comp=Z,1.4nm,0.7s,baz=298,slow=1.9,SNR=5.6								
NVAR				PKKPbc	**PKKPbc**	**06 28 27.5**	**-0.2**		
	comp=Z,1.1nm,0.7s,baz=116,slow=4.1,SNR=8.4								
SUR	**Sutherland**	**106.09**	**238**	PFAKE		06 17 20.0			
SUR				LR	LR				
	comp=Z,5µm,21.0s								
PGF	**Pioggiola**	**106.11**	**317**	*e*P	**Pdif**	**06 12 52.1**	**-0.4**		
	comp=Z,33nm,1.3s								
PGF	**Pioggiola**	**106.11**	**317**	*e*P	**Pdif**	**06 12 52.1**	**-0.4**		
PGF				pmax	pmax				
	comp=Z,33nm,1.3s								
PGF	**Pioggiola**	**106.11**	**317**	*e*P	**Pdif**	**06 12 52.1**	**-0.4**		
	comp=Z,33nm,1.3s								
BORG	**Borgarnes**	**106.14**	**346**	PFAKE		06 17 10.0			
BORG				LR	LR				
	comp=Z,2µm,21.0s								
SFTF	**Sexfontaines**	**106.20**	**324**	*e*P	**Pdif**	**06 12 52.7**	**+0.1**		
	comp=Z,22nm,1.1s								
SFTF	**Sexfontaines**	**106.20**	**324**	*e*P	**Pdif**	**06 12 52.7**	**+0.1**		
	comp=Z,22nm,1.1s								
CABF	**La Chapelle**	**106.29**	**322**	*e*P	**Pdif**	**06 12 51.8**	**-1.4**		
	comp=Z,45nm,1.7s								
CABF	**La Chapelle**	**106.29**	**322**	*e*P	**Pdif**	**06 12 51.8**	**-1.4**		
CABF				pmax	pmax				
	comp=Z,45nm,1.7s								
CABF	**La Chapelle**	**106.29**	**322**	*e*P	**Pdif**	**06 12 51.8**	**-1.4**		
	comp=Z,45nm,1.7s								
B16A	**M & M Farms, S**	**106.29**	**36**	⇓P	**Pdif**	**06 12 51.9**	**-1.2**		
	baz=106								
B16A				⇓PKiKP	**PKiKP**	**06 17 04.7**	**+0.3**		
	baz=106								
LPG	**La Plagne**	**106.37**	**320**	*e*P	**Pdif**	**06 12 53.9**	**+0.1**		
	comp=Z,9.8nm,0.7s								
LPG	**La Plagne**	**106.37**	**320**	*e*P	**Pdif**	**06 12 53.9**	**+0.1**		
LPG				pmax	pmax				
	comp=Z,10.0nm,0.7s								
LPG	**La Plagne**	**106.37**	**320**	*e*P	**Pdif**	**06 12 53.9**	**+0.1**		
	comp=Z,9.8nm,0.7s								
LPL	**La Plagne**	**106.37**	**320**	*e*P	**Pdif**	**06 12 53.7**	**0.0**		
	comp=Z,12nm,0.9s								
LPL	**La Plagne**	**106.37**	**320**	*e*P	**Pdif**	**06 12 53.7**	**0.0**		
LPL				pmax	pmax				
	comp=Z,12nm,0.9s								
LPL	**La Plagne**	**106.37**	**320**	*e*P	**Pdif**	**06 12 53.7**	**0.0**		
	comp=Z,12nm,0.9s								
C16A	**Fuhringer Ranc**	**106.56**	**37**	⇑P	**Pdif**	**06 12 54.2**	**-0.1**		
	baz=106								
BNI	**Bardonecchia**	**106.61**	**320**	PFAKE		06 17 20.0			
BNI				LR	LR				
	comp=Z,4µm,20.0s								
SBF	**Sospel**	**106.62**	**319**	*e*P	**Pdif**	**06 12 53.8**	**-0.9**		
SBF	**Sospel**	**106.62**	**319**	*e*P	**Pdif**	**06 12 53.8**	**-0.9**		
SBF	**Sospel**	**106.62**	**319**	*e*P	**Pdif**	**06 12 53.8**	**-0.9**		
SNAA	**Sanae**	**106.70**	**195**	*e*PP	PP	06 17 21.3	+1.4		
SNAA	**Sanae**	**106.70**	**195**	*e*PKKPbc	PKKPbc	06 28 22.9	-3.5		
SNAA	**Sanae**	**106.70**	**195**	*e*PKKPab	PKKPab	06 28 40.2	+0.7		
SNAA	**Sanae**	**106.70**	**195**	PKKPbc	PKKPbc	06 28 22.0	-4.5		
SNAA	**Sanae**	**106.70**	**195**	PKKPbc	PKKPbc	06 28 22.0	-4.5		
	comp=Z,2.0nm,0.8s,baz=299,slow=4.8,SNR=12								
REVF	**Revere**	**106.72**	**319**	*e*P	**PP**	**06 17 21.9**	**+1.3**		
ESK	**Eskdalemuir**	**106.72**	**333**	PFAKE		06 17 20.0			
ESK				LR	LR				
	comp=Z,3µm,21.0s								
HLID	**Hailey**	**106.76**	**42**	*e*Pdif	**Pdif**	**06 12 55.4**	**0.0**		
	comp=Z,4.4nm,1.1s								
HLID				*e*PKPdf	**PKiKP**	**06 17 06.1**	**+0.5**		
HLID				LR	LR				
	comp=Z,2µm,22.0s								
HLID	**Hailey**	**106.76**	**42**	⇑P	**Pdif**	**06 12 54.8**	**-0.7**		
	baz=107								
HLID				⇓PKiKP	**PKiKP**	**06 17 06.1**	**+0.5**		
	baz=107								
B17A	**L&G Farms, Che**	**106.88**	**36**	⇓P	**Pdif**	**06 12 56.5**	**+0.8**		
	baz=107								
VSL	**Villasalto**	**107.02**	**314**	PFAKE		06 17 20.0			
VSL				LR	LR				
	comp=Z,2µm,22.0s								
D16A	**Dana Ranch, Ca**	**107.04**	**37**	⇑P	**Pdif**	**06 12 56.9**	**+0.3**		
	baz=107								
ORIF	**Oris-en-Rattie**	**107.17**	**320**	*e*P	**Pdif**	**06 12 56.2**	**-0.9**		
	comp=Z,14nm,1.0s								
ORIF	**Oris-en-Rattie**	**107.17**	**320**	*e*P	**Pdif**	**06 12 56.2**	**-0.9**		
ORIF				pmax	pmax				
	comp=Z,14nm,1.0s								
ORIF	**Oris-en-Rattie**	**107.17**	**320**	*e*P	**Pdif**	**06 12 56.2**	**-0.9**		
	comp=Z,14nm,1.0s								
C17A	**Wharram Farm,**	**107.22**	**37**	⇓PKiKP	**PKiKP**	**06 17 06.1**	**0.0**		
	baz=107								
FRF	**La Foret Royal**	**107.27**	**319**	*e*P	**Pdif**	**06 12 57.0**	**-0.5**		
FRF	**La Foret Royal**	**107.27**	**319**	*e*P	**Pdif**	**06 12 57.0**	**-0.5**		
FRF	**La Foret Royal**	**107.27**	**319**	*e*P	**Pdif**	**06 12 57.0**	**-0.5**		
LOR	**Lormes**	**107.34**	**323**	*e*P	**Pdif**	**06 12 57.7**	**0.0**		
	comp=Z,17nm,1.3s								
LOR	**Lormes**	**107.34**	**323**	*e*P	**Pdif**	**06 12 57.7**	**0.0**		
	comp=Z,17nm,1.3s								
LMR	**La Mourre**	**107.45**	**319**	*e*P	**Pdif**	**06 12 58.2**	**-0.1**		
LMR	**La Mourre**	**107.45**	**319**	*e*P	**Pdif**	**06 12 58.2**	**-0.1**		
LMR	**La Mourre**	**107.45**	**319**	*e*P	**Pdif**	**06 12 58.2**	**-0.1**		
EGMT	**Eagleton**	**107.62**	**36**	*e*PKPdf	**PKiKP**	**06 17 06.8**	**-0.1**		
EGMT				LR	LR				
	comp=Z,2µm,21.0s								
EGMT	**Eagleton**	**107.62**	**36**	⇓PKiKP	**PKiKP**	**06 17 06.7**	**-0.2**		
	baz=108								
BOZ	**Bozeman (W)**	**107.63**	**39**	*e*PKPdf	**PKiKP**	**06 17 09.5**	**+2.5**		
BOZ				*e*PP	**PP**	**06 17 28.8**	**+1.5**		
BOZ				LR	LR				
	comp=Z,1µm,22.0s								
SMF	**Signal de Mont**	**107.65**	**323**	*e*P	**Pdif**	**06 12 59.3**	**+0.2**		
	comp=Z,13nm,0.9s								
SMF	**Signal de Mont**	**107.65**	**323**	*e*P	**Pdif**	**06 12 59.3**	**+0.2**		
SMF				pmax	pmax				
	comp=Z,13nm,0.9s								
SMF	**Signal de Mont**	**107.65**	**323**	*e*P	**Pdif**	**06 12 59.3**	**+0.2**		
	comp=Z,13nm,0.9s								
E17A	**Martinsdale**	**107.73**	**38**	⇑P	**Pdif**	**06 12 59.5**	**-0.1**		
	baz=108								
SMRF	**Simiane la Rot**	**107.79**	**319**	*e*P	**Pdif**	**06 12 59.8**	**0.0**		
SMRF	**Simiane la Rot**	**107.79**	**319**	*e*P	**Pdif**	**06 12 59.8**	**0.0**		
SFJD	**Kangerlussuaq**	**107.81**	**359**	PKPdf	**PKiKP**	**06 17 07.0**	**+0.5**		
SFJD				*e*PP	**PP**	**06 17 26.9**	**-0.6**		
SFJD				LR	LR				
	comp=Z,2µm,22.0s								
SSB	**Saint Sauveur**	**107.86**	**321**	PFAKE		06 17 20.0			
SSB				LR	LR				
	comp=Z,2µm,20.0s								
FFC	**Flin Flon**	**107.91**	**27**	PFAKE		06 17 20.0			
FFC				LR	LR				
	comp=Z,3µm,22.0s								
R11A	**Troy Canyon, C**	**108.02**	**47**	⇑P	**Pdif**	**06 13 02.0**	**+0.8**		
	baz=108								
F17A	**Fitzpatrick Pl**	**108.11**	**38**	⇓P	**Pdif**	**06 13 01.8**	**+0.4**		
	baz=108								
B20A	**Solberg Farm,**	**108.41**	**35**	⇓PKiKP	**PKiKP**	**06 17 08.3**	**0.0**		
	baz=108								
HVU	**Hansel Valley**	**108.61**	**43**	*e*PKPdf	**PKiKP**	**06 17 10.0**	**+1.0**		
VNA1	**Neumayer--Stat**	**108.72**	**194**	*e*PP	PP	06 17 35.8	+1.4		
VNA1	**Neumayer--Stat**	**108.72**	**194**	*e*PKKPbc	PKKPbc	06 28 23.6	+3.7		
VNA1	**Neumayer--Stat**	**108.72**	**194**	*e*PKKPab	PKKPab	06 28 32.7	+2.3		
C20A	**Veseth Ranch,**	**108.80**	**36**	⇓PKiKP	**PKiKP**	**06 17 09.7**	**+0.7**		
	baz=109								
TCF	**Toulx Ste Croi**	**108.81**	**323**	*e*P	**Pdif**	**06 13 04.3**	**0.0**		
	comp=Z,50nm,1.8s								
TCF	**Toulx Ste Croi**	**108.81**	**323**	*e*P	**Pdif**	**06 13 04.3**	**0.0**		
TCF				pmax	pmax				
	comp=Z,50nm,1.8s								
TCF	**Toulx Ste Croi**	**108.81**	**323**	*e*P	**Pdif**	**06 13 04.3**	**0.0**		
	comp=Z,50nm,1.8s								
LASF	**Ste Croix**	**108.84**	**320**	*e*P	**Pdif**	**06 13 05.5**	**+1.0**		
	comp=Z,18nm,1.4s								
LASF	**Ste Croix**	**108.84**	**320**	*e*P	**Pdif**	**06 13 05.5**	**+1.0**		
	comp=Z,18nm,1.4s								
LKWY	**Lake**	**108.91**	**39**	PFAKE		06 17 20.0			
LKWY				LR	LR				
	comp=Z,3µm,22.0s								
LDF	**La Druitiere**	**108.98**	**326**	*e*P	**Pdif**	**06 13 05.4**	**+0.5**		
	comp=Z,26nm,1.3s								
LDF	**La Druitiere**	**108.98**	**326**	*e*P	**Pdif**	**06 13 05.4**	**+0.5**		
LDF				pmax	pmax				
	comp=Z,26nm,1.3s								
LDF	**La Druitiere**	**108.98**	**326**	*e*P	**Pdif**	**06 13 05.4**	**+0.5**		
	comp=Z,26nm,1.3s								
D20A	**Manuel Ranch,**	**109.04**	**36**	⇓P	**Pdif**	**06 13 06.0**	**+0.6**		
	baz=109								
TPAW	**Teton Pass**	**109.06**	**40**	*e*PKPdf	Pdif	06 17 11.7			
PFO	**Pinyon Flat Ob**	**109.08**	**52**	PFAKE		06 17 20.0			
PFO				LR	LR				
	comp=Z,2µm,21.0s								
FLN	**La Foliniere**	**109.09**	**326**	*e*P	**Pdif**	**06 13 06.0**	**+0.6**		
	comp=Z,35nm,1.5s								
FLN	**La Foliniere**	**109.09**	**326**	*e*P	**Pdif**	**06 13 06.0**	**+0.6**		
SNOW	**Snow King Moun**	**109.19**	**40**	*e*PKPdf	**PKiKP**	**06 17 11.1**	**+0.9**		
DUG	**Dugway**	**109.26**	**44**	*e*PKPdf	**PKiKP**	**06 17 10.4**	**+0.1**		
DUG				LR	LR				
	comp=Z,2µm,22.0s								
DUG	**Dugway**	**109.26**	**44**	⇓PKiKP	**PKiKP**	**06 17 10.4**	**+0.1**		
	baz=109								
C21A	**Desert Coulee**	**109.26**	**35**	⇓P	**Pdif**	**06 13 06.5**	**+0.2**		
	baz=109								
C21A				⇓PKiKP	**PKiKP**	**06 17 10.8**	**+0.9**		
	baz=109								
RLMT	**Red Lodge**	**109.35**	**38**	*e*Pdif	**Pdif**	**06 13 07.6**	**+0.6**		
RLMT				LR	LR				
	comp=Z,2µm,21.0s								
HWUT	**Hardware Ranch**	**109.50**	**42**	*e*PKPdf	**PKiKP**	**06 17 11.2**	**+0.5**		
HWUT				LR	LR				
	comp=Z,4µm,22.0s								
CAF	**Calviac**	**109.57**	**322**	*e*P	**Pdif**	**06 13 08.1**	**+0.4**		
CAF	**Calviac**	**109.57**	**322**	*e*P	**Pdif**	**06 13 08.1**	**+0.4**		
CAF	**Calviac**	**109.57**	**322**	*e*P	**Pdif**	**06 13 08.1**	**+0.4**		
TSUM	**Tsumeb**	**109.59**	**252**	PFAKE		06 17 20.0			
TSUM				LR	LR				
	comp=Z,2µm,22.0s								
C22A	**Vida**	**110.00**	**35**	⇓PKiKP	**PKiKP**	**06 17 11.9**	**+0.6**		
	baz=110								
D22A	**Cohagen**	**110.15**	**35**	⇑PKiKP	**PKiKP**	**06 17 12.2**	**+0.5**		
	baz=110								
M17A	**Scullys Gap (B**	**110.16**	**42**	⇓PKiKP	**PKiKP**	**06 17 11.9**	**-0.2**		
	baz=110								
DAU	**Daniels Canyon**	**110.24**	**43**	*e*PKiKP	**PKiKP**	**06 17 10.8**	**-1.6**		
DAU				*e*		06 17 46.4			
DAU	**Daniels Canyon**	**110.24**	**43**	*e*PKPdf	**PKiKP**	**06 17 10.8**	**-1.6**		
DAU				*e*PP	**PP**	**06 17 46.4**	**-0.2**		
BW06	**Boulder Array**	**110.30**	**41**	PFAKE		06 17 20.0			
BW06				LR	LR				
	comp=Z,4µm,22.0s								
PDAR	**Pinedale Array**	**110.30**	**41**	PKiKP	**PKiKP**	**06 17 11.4**	**-0.8**		
PDAR				PKKPbc	**PKKPbc**	**06 28 12.6**	**-1.8**		
PDAR				PKKPab	**PKKPab**	**06 28 22.9**	**-2.2**		
PDAR	**Pinedale Array**	**110.30**	**41**	PKiKP	**PKiKP**	**06 17 11.4**	**-0.8**		
	comp=Z,1.3nm,0.8s,baz=326,slow=1.3,SNR=6.2								
PDAR				PKKPbc	**PKKPbc**	**06 28 12.6**	**-1.8**		
	comp=Z,0.9nm,0.7s,baz=120,slow=5.3,SNR=5.5								
PDAR				PKKPab	**PKKPab**	**06 28 22.9**	**-2.2**		
	comp=Z,4.3nm,0.7s,baz=120,slow=5.3,SNR=16								
C23A	**Lambert**	**110.36**	**34**	⇑PKiKP	**PKiKP**	**06 17 12.5**	**+0.5**		
	baz=110								
MSU	**Marysvale**	**110.41**	**46**	*e*PKiKP	**PKiKP**	**06 17 12.6**	**0.0**		
MSU	**Marysvale**	**110.41**	**46**	*e*PKPdf	**PKiKP**	**06 17 12.6**	**0.0**		
H20A	**Greybull**	**110.44**	**38**	⇓PKiKP	**PKiKP**	**06 17 12.2**	**-0.1**		
	baz=110								
DGMT	**Dagmar**	**110.53**	**33**	PFAKE		06 17 20.0			
DGMT				LR	LR				
	comp=Z,3µm,22.0s								
I20A	**Worland**	**110.63**	**39**	⇑PKiKP	**PKiKP**	**06 17 12.9**	**+0.2**		
	baz=110								
D23A	**Lindsay**	**110.69**	**35**	⇓PKiKP	**PKiKP**	**06 17 12.4**	**-0.2**		
	baz=111								
C24A	**Savage**	**110.94**	**34**	⇓PKiKP	**PKiKP**	**06 17 13.7**	**+0.7**		
	baz=111								
J20A	**Shoshoni**	**110.96**	**40**	⇓PKiKP	**PKiKP**	**06 17 13.8**	**+0.4**		
	baz=111								
E23A	**Ismay**	**111.01**	**36**	⇓PKiKP	**PKiKP**	**06 17 13.5**	**+0.3**		
	baz=111								
K20A	**Yellowstone Ra**

baz=115
R24A **Sanders Place,** 115.47 43 ⇓PKiKP **PKPdf** 06 17 23.0 +0.7
baz=115
120A **U Bar Ranch, L** 115.55 50 ⇓PKiKP **PKPdf** 06 17 23.1 +0.6
baz=116
Y21A **Point of Rocks** 115.64 48 ⇑PKiKP **PKPdf** 06 17 23.7 +0.9
baz=116
U23A **El Rito** 115.65 45 ⇓PKiKP **PKPdf** 06 17 23.5 +0.9
baz=116
Q25A **Bedland, Calha** 115.70 42 ⇑PKiKP **PKiKP** 06 17 22.6 -0.1
baz=116
LAZ **Ladron** 115.86 48 *e*PKPdf **PKPdf** 06 17 24.4 +1.3
TAM **Tamanrasset** 115.93 298 *e*PKiKP **PKPdf** 06 17 25.5 +2.0
TAM MLR MLR
comp=Z,1μm,21.0s
TAM **Tamanrasset** 115.93 298 *e*PKPdf **PKPdf** 06 17 25.5 +2.0
TAM LR LR
comp=Z,1μm,21.0s
P26A **Davis Ranch, A** 115.96 41 ⇓PKiKP **PKiKP** 06 17 22.6 -0.5
baz=116
OGNE **Ogallala** 116.05 39 PFAKE 06 17 30.0 +6.9
OGNE LR LR
comp=Z,1μm,21.0s
R25A **Fountain Ranch** 116.07 43 ⇓PKiKP **PKiKP** 06 17 23.4 0.0
baz=116
ESDC **Sonseca Array** 116.10 319 PKP **PKPdf** 06 17 23.9 +0.7
ESDC PKKPbc **PKKPbc** 06 27 51.8 -2.8
ESDC **Sonseca Array** 116.10 319 PKP **PKPdf** 06 17 23.9 +0.7
comp=Z,0.1nm,0.3s,baz=64,slow=3.0,SNR=4.1
ESDC PKKPbc **PKKPbc** 06 27 51.8 -2.8
comp=Z,0.2nm,0.3s,baz=266,slow=3.6,SNR=4.1
ANMO **Albuquerque** 116.11 47 *e*PKPdf **PKPdf** 06 17 24.3 +0.7
ANMO LR LR
comp=Z,3μm,22.0s
320A **Kipp Ranch, An** 116.14 51 ⇓PKiKP **PKiKP** 06 17 24.6 +0.9
baz=116
Q26A **Hugo** 116.18 42 ⇑PKiKP **PKiKP** 06 17 24.1 +0.6
baz=116
Y22A **Socorro** 116.20 48 ⇑PKiKP **PKiKP** 06 17 24.5 +0.8
baz=116
121A **Cookes Peak, D** 116.20 50 ⇓PKiKP **PKPdf** 06 17 23.3 -0.5
baz=116
S25A **Robets Cordova** 116.22 43 ⇓PKiKP **PKiKP** 06 17 23.8 +0.1
baz=116
BNM **Barren Site** 116.35 48 *e*PKPdf **PKPdf** 06 17 25.0 +1.0
PAB **San Pablo** 116.42 319 *e*PKiKP **PKPdf** 06 17 22.4 -1.4
PAB MLR MLR
comp=Z,1μm,20.0s
PAB **San Pablo** 116.42 319 *e*PKPdf **PKPdf** 06 17 22.4 -1.4
PAB LR LR
comp=Z,1μm,20.0s
X23A **Hourglass Bar** 116.47 47 ⇑PKiKP **PKiKP** 06 17 24.5 +0.2
baz=116
T25A **Trinidad** 116.50 44 ⇓PKiKP **PKiKP** 06 17 24.7 +0.4
baz=116
Z22A **Elephant Butte** 116.50 49 ⇑PKiKP **PKiKP** 06 17 24.9 +0.5
baz=116
R26A **Arlington** 116.56 42 ⇑PKiKP **PKiKP** 06 17 24.5 +0.3
baz=116
V24A **Rampart Ranch,** 116.59 46 ⇑PKiKP **PKiKP** 06 17 25.3 +0.7
baz=116
W24A **Lazy 6 Ranch,** 116.74 46 ⇓PKiKP **PKiKP** 06 17 24.8 0.0
baz=117
U25A **Circle Dot Ran** 116.87 45 ⇑PKiKP **PKiKP** 06 17 25.4 +0.4
baz=117
Y23A **Lovelace Mesa,** 116.87 48 ⇑PKiKP **PKiKP** 06 17 25.6 +0.5
baz=117
S26A **Kim** 116.89 43 ⇑PKiKP **PKiKP** 06 17 25.2 +0.3
baz=117
R27A **Eads** 117.00 42 ⇑PKiKP **PKPdf** 06 17 24.8 -0.3
baz=117
V25A **Rancho No Teng** 117.00 45 ⇓PKiKP **PKiKP** 06 17 25.9 +0.6
baz=117
T26A **Comanche Natio** 117.04 43 ⇑PKiKP **PKiKP** 06 17 25.4 +0.1
baz=117
MVO **Moncorvo** 117.20 322 *e*PKP **PKPdf** 06 17 28.7 +3.4
MVO *e*LR LR 06 56 39.0
comp=Z,2μm,39.0s
O29A **4D Ranch, Culb** 117.29 39 ⇑PKiKP **PKPdf** 06 17 25.4 -0.1
baz=117
Y24A **Capitan** 117.33 47 ⇓PKiKP **PKiKP** 06 17 26.2 +0.2
baz=117
EYMN **Ely** 117.33 28 *e*PKPdf **PKPdf** 06 17 24.3 -1.0
EYMN LR LR
comp=Z,916nm,20.0s
U26A **Atchley Ranch,** 117.33 44 ⇓PKiKP **PKPdf** 06 17 25.7 -0.2
baz=117
W25A **X Bar L Ranch,** 117.42 46 ⇑PKiKP **PKiKP** 06 17 26.4 +0.4
baz=117
POLO **Lamas de Olo** 117.55 323 *e*PKP **PKPdf** 06 17 30.1 +4.1
PVRL **Vila Real** 117.56 322 *e*PKP **PKPdf** 06 17 30.4 +4.5
ECSD **EROS Data Cent** 117.59 34 *e*PKPdf **PKPdf** 06 17 25.4 -0.5
ECSD LR LR
comp=Z,811nm,21.0s
V26A **Tequesquite Ra** 117.61 45 ⇓PKiKP **PKPdf** 06 17 26.3 -0.1
baz=118
X25A **Clemmons Ranch** 117.61 47 ⇑PKiKP **PKiKP** 06 17 26.4 0.0
baz=118
R28A **Tribune** 117.62 42 ⇓PKiKP **PKPdf** 06 17 25.9 -0.4
baz=118
Z24A **Sheeppen Canyo** 117.66 48 ⇓PKiKP **PKiKP** 06 17 27.0 +0.4
baz=118
Q29A **Oakley** 117.86 41 ⇑PKiKP **PKPdf** 06 17 26.2 -0.4
baz=118
Y25A **Mesa, Roswell** 117.87 47 ⇑PKiKP **PKiKP** 06 17 27.1 +0.1
baz=118
124A **Stringfield Ra** 117.89 49 ⇑PKiKP **PKiKP** 06 17 27.4 +0.3
baz=118
U27A **Thompson Grove** 117.96 44 ⇓PKiKP **PKiKP** 06 17 27.5 +0.5
baz=118
P30A **Selden** 117.97 40 ⇓PKiKP **PKPdf** 06 17 26.4 -0.4
baz=118
MTE **Manteigas** 117.97 322 *e*PKP **PKPdf** 06 17 29.8 +3.0
MTE *e*LR LR 06 56 23.8
comp=Z,2μm,19.5s
MTE **Manteigas** 117.97 322 PFAKE 06 17 40.0 +13
MTE LR LR
comp=Z,3μm,21.0s
W26A **Owens Ranch, T** 117.97 46 ⇑PKiKP **PKiKP** 06 17 27.5 +0.5
baz=118
T28A **Walsh** 118.08 43 ⇓PKiKP **PKPdf** 06 17 27.2 0.0
baz=118
Z25A **Roswell** 118.16 48 ⇑PKiKP **PKiKP** 06 17 27.8 +0.3
baz=118
X26A **CR and CF Fran** 118.21 46 ⇑PKiKP **PKiKP** 06 17 27.8 +0.2
baz=118
PCBR **Castelo Branco** 118.25 321 *e*PKP **PKPdf** 06 17 30.1 +2.9
Q30A **Quinter** 118.30 40 ⇑PKiKP **PKiKP** 06 17 27.5 0.0
baz=118
MNTX **Cornudas Mount** 118.40 50 *e*PKPdf **PKPdf** 06 17 28.4 +0.6
MNTX *e*SKPdf **SKiKP** 06 21 01.6 +1.8
324A **Moseley Ranch,** 118.44 50 ⇑PKiKP **PKiKP** 06 17 28.5 +0.4
baz=118
PMRV **Marv??o** 118.44 321 *e*PKP **PKPdf** 06 17 30.8 +3.1
PMRV *e*LR LR 06 56 39.0
comp=Z,1μm,19.5s
W27A **Bowe Ranch, En** 118.48 45 ⇑PKiKP **PKiKP** 06 17 28.6 +0.6
baz=118
125A **Gardner Draw,** 118.50 48 ⇓PKiKP **PKPdf** 06 17 27.6 -0.5
baz=118
P31A **Stockton** 118.53 39 ⇓PKiKP **PKPdf** 06 17 27.6 -0.2
baz=118
T29A **Hugoton** 118.61 42 ⇓PKiKP **PKiKP** 06 17 28.4 +0.2
baz=118
SPMN **St. Paul** 118.63 31 ⇑PKiKP **PKPdf** 06 17 27.4 -0.4
baz=118
225A **Deer Hill, Car** 118.63 49 ⇓PKiKP **PKiKP** 06 17 28.8 +0.3
baz=119
R30A **Dighton** 118.66 41 ⇓PKiKP **PKiKP** 06 17 28.6 +0.3
baz=119
X27A **F and S Farms,** 118.67 46 ⇓PKiKP **PKiKP** 06 17 28.7 +0.3
baz=119
Z26A **Caprock** 118.71 47 ⇓PKiKP **PKPdf** 06 17 28.2 -0.2
baz=119
V28A **Channing** 118.72 44 ⇑PKiKP **PKiKP** 06 17 29.0 +0.5
baz=119
325A **Bean Ranch, Si** 118.86 50 ⇑PKiKP **PKiKP** 06 17 29.0 0.0
baz=119
PESTR **Estremoz** 118.89 320 *e*PKP **PKPdf** 06 17 31.7 +3.2
S30A **Montezuma** 118.90 42 ⇑PKiKP **PKiKP** 06 17 28.8 +0.1
baz=119
PBAR **Barrancos** 118.93 319 *e*PKP **PKPdf** 06 17 32.4 +3.8
GDL2 **Guadalupe Moun** 118.93 49 *e*PKPdf **PKPdf** 06 17 31.6 +2.6
PTOM **Tomar** 118.96 321 *e*PKP **PKPdf** 06 17 32.9 +4.3
126A **Clayton Basin,** 118.98 48 ⇑PKiKP **PKiKP** 06 17 29.2 +0.2
baz=119
Y27A **Causey** 119.00 46 ⇓PKiKP **PKiKP** 06 17 29.5 +0.4
baz=119
SCHQ **Schefferville** 119.02 9 *e*PKPdf **PKPdf** 06 17 28.2 -0.1
SCHQ PKP **PKPdf** 06 17 28.8 +0.4
SCHQ **Schefferville** 119.02 9 PKP **PKPdf** 06 17 28.8 +0.4
comp=Z,9.5nm,0.7s,baz=306,slow=1.8,SNR=16
425A **Indio Mountain** 119.11 50 ⇓PKiKP **PKiKP** 06 17 29.5 +0.1
baz=119
226B **Tecolote Peak,** 119.14 49 ⇑PKiKP **PKiKP** 06 17 29.4 0.0
baz=119
R31A **Burdett** 119.14 40 ⇑PKiKP **PKPdf** 06 17 28.5 -0.6
baz=119
V29A **Stinnett** 119.14 44 ⇑PKiKP **PKiKP** 06 17 29.9 +0.6
baz=119
PMTG **Montargil** 119.17 321 *e*PKP **PKPdf** 06 17 30.4 +1.4
MSTX **Muleshoe** 119.24 46 ⇓PKiKP **PKPdf** 06 17 29.5 0.0
baz=119
Z27A **Tatum** 119.25 47 ⇑PKiKP **PKPdf** 06 17 29.5 0.0
baz=119
EVO **Evora** 119.35 320 *e*PKiKP **PKPdf** 06 17 30.5 +1.1
comp=Z,44nm,1.3s
EVO **Evora** 119.35 320 *e*PKP **PKPdf** 06 17 32.9 +3.5
X28A **Dimmitt** 119.38 45 ⇓PKiKP **PKiKP** 06 17 30.0 +0.2
baz=119
EVOP **Sao Brissos** 119.42 320 *e*PKiKP **PKPdf** 06 17 30.5 +1.0
EVOP **Sao Brissos** 119.42 320 *e*PKPdf **PKPdf** 06 17 30.5 +1.0
127A **Arkansas Junct** 119.45 48 ⇓PKiKP **PKiKP** 06 17 30.1 +0.1
baz=119
PBEJ **Beja** 119.55 320 *e*PKP **PKPdf** 06 17 34.1 +4.3
AMTX **Amarillo** 119.55 45 *e*PKPdf **PKPdf** 06 17 30.5 +0.5
AMTX LR LR
comp=Z,2μm,22.0s
Y28A **McKinney Farm,** 119.65 46 ⇓PKiKP **PKiKP** 06 17 30.5 +0.2
baz=120
X29A **Tulia** 119.76 45 ⇓PKiKP **PKiKP** 06 17 30.7 +0.2
baz=120
V30A **Spur Ranch, Mi** 119.77 43 ⇓PKiKP **PKiKP** 06 17 31.1 +0.6
baz=120
PVAQ **Vaqueiros** 119.81 319 *e*LR LR 06 58 06.8
comp=Z,1μm,24.4s
Z28A **Tucker Farm, M** 119.86 47 ⇓PKiKP **PKPdf** 06 17 30.2 -0.5
baz=120
PCVE **Castro Verde** 119.89 319 *e*PKP **PKPdf** 06 17 34.0 +3.5
426A **McDonald Obser** 119.90 50 ⇑PKiKP **PKiKP** 06 17 31.4 +0.3
baz=120
PNCL **Nicolau / Gran** 119.92 320 *e*PKP **PKPdf** 06 17 34.0 +3.5
LIS **Lisbon** 119.96 321 *e*PP PP 06 18 55.0 +0.5
LIS AMS AMS 07 12 39.1
comp=E,3μm,20.8s
LIS **Lisbon** 119.96 321 *e*PP PP 06 18 55.0 +0.5
LIS **Lisbon** 119.96 321 *e*PP PP 06 18 55.0 +0.5
PBDV **Barranco-do-Ve** 120.04 319 *e*PKP **PKPdf** 06 17 34.6 +3.8
Y29A **Porterfield Fa** 120.09 46 ⇑PKiKP **PKiKP** 06 17 31.3 +0.1
baz=120
MDT **Midelt** 120.10 313 PKP **PKPdf** 06 17 31.6 +0.5
MDT **Midelt** 120.10 313 PKP **PKPdf** 06 17 31.6 +0.5
comp=E,4.6nm,0.8s,baz=80,slow=4.3,SNR=14
128A **Castleberry Fa** 120.12 47 ⇓PKiKP **PKPdf** 06 17 30.8 -0.4
baz=120
526A **Mary Lane Ranc** 120.13 51 ⇑PKiKP **PKPdf** 06 17 31.3 0.0
baz=120
427A **Hayter Ranch,** 120.29 50 ⇓PKiKP **PKiKP** 06 17 31.9 +0.3
baz=120
626A **Big Bend Ranch** 120.33 51 ⇑PKiKP **PKPdf** 06 17 31.0 -0.7
baz=120
V31A **Spring Creek L** 120.34 43 ⇑PKiKP **PKiKP** 06 17 32.4 +0.8
baz=120
X30A **Coker Ranch, T** 120.35 45 ⇑PKiKP **PKPdf** 06 17 31.5 0.0
baz=120
Z29A **Hungry Hill Ra** 120.37 46 ⇓PKiKP **PKPdf** 06 17 31.5 -0.1
baz=120
527A **Woodward Ranch** 120.46 50 ⇑PKiKP **PKiKP** 06 17 32.2 +0.1
baz=120
MORF **Marmelete** 120.47 319 *e*PKP **PKPdf** 06 17 35.5 +3.8
MORF **Marmelete** 120.47 319 *e*PKiKP **PKPdf** 06 17 30.9 -0.8
MORF *e* 06 18 58.4
328A **Wristen Ranch,** 120.48 49 ⇑PKiKP **PKPdf** 06 17 31.9 0.0
baz=120
KSU1 **Kansas State U** 120.50 38 *e*PKPdf **PKPdf** 06 17 31.4 -0.2
KSU1 LR LR
comp=Z,873nm,21.0s
129A **Stewart Farms,** 120.57 47 ⇑PKiKP **PKPdf** 06 17 31.8 -0.2
baz=120
W31A **Holland Ranch,** 120.59 44 ⇑PKiKP **PKiKP** 06 17 32.6 +0.6
baz=120
Y30A **Stafford Cattl** 120.63 45 ⇑PKiKP **PKPdf** 06 17 32.1 0.0
baz=120
SCIA **State Center** 120.68 34 *e*PKPdf **PKPdf** 06 17 31.9 0.0
SCIA LR LR
comp=Z,2μm,22.0s
Z30A **Sanderson Ranc** 120.77 46 ⇑PKiKP **PKPdf** 06 17 32.2 -0.2
baz=121
TXAR **Lajitas Array** 120.79 51 PKP **PKPdf** 06 17 32.3 -0.3
TXAR PKKPab **PKKPab** 06 27 38.6 -0.1
TXAR **Lajitas Array** 120.79 51 PKP **PKPdf** 06 17 32.3 -0.3
comp=Z,3.8nm,0.7s,baz=298,slow=1.9,SNR=21
TXAR PKKPab **PKKPab** 06 27 38.6 -0.1
comp=Z,2.2nm,0.7s,baz=120,slow=6.3,SNR=18
X31A **McDonald Ranch** 120.87 44 ⇓PKiKP **PKPdf** 06 17 32.3 -0.2
baz=121
428A **Kincaid Ranch,** 120.89 49 ⇓PKiKP **PKiKP** 06 17 33.1 +0.3
baz=121
229A **Bryant Ranch,** 120.94 48 ⇑PKiKP **PKPdf** 06 17 32.7 -0.1
baz=121
627A **Terlingua Ranc** 120.95 51 ⇑PKiKP **PKPdf** 06 17 32.9 0.0
baz=121
Y31A **Rekieta Farm,** 121.03 45 ⇑PKiKP **PKPdf** 06 17 32.4 -0.5
baz=121
329A **Wagon Wheel Ra** 121.05 48 ⇑PKiKP **PKPdf** 06 17 32.7 -0.3
baz=121
528A **Cox Ranch, San** 121.08 50 ⇓PKiKP **PKiKP** 06 17 33.5 +0.2
baz=121
130A **Snyder** 121.24 47 ⇓PKiKP **PKPdf** 06 17 33.2 -0.1
baz=121
628A **Black Gap, Mar** 121.32 51 ⇓PKiKP **PKiKP** 06 17 33.7 0.0
baz=121
Z31A **Sharp Cattle R** 121.46 46 ⇓PKiKP **PKiKP** 06 17 33.8 0.0
baz=121
230A **Sterling City** 121.50 47 ⇑PKiKP **PKPdf** 06 17 33.7 -0.1
baz=120
529A **Stev Forest Ra** 121.53 50 ⇓PKiKP **PKPdf** 06 17 34.0 0.0
baz=122
429A **Davenport Ranc** 121.54 49 ⇑PKiKP **PKPdf** 06 17 33.7 -0.3
baz=122
JFWS **Jewell Farm** 121.56 31 *e*PKiKP **PKPdf** 06 17 32.3 -1.3
JFWS MLR MLR
comp=Z,1μm,22.0s
JFWS **Jewell Farm** 121.56 31 *e*PKPdf **PKPdf** 06 17 32.3 -1.3
JFWS LR LR
comp=Z,1μm,22.0s
Y32A **R-V Farms, Ver** 121.58 44 ⇑PKiKP **PKiKP** 06 17 34.6 +0.6
baz=122
131A **Roby** 121.62 46 ⇑PKiKP **PKiKP** 06 17 34.6 +0.4
baz=122
WMOK **Wichita Mounta** 121.64 43 PFAKE 06 17 50.0 +16
WMOK LR LR
comp=Z,4μm,22.0s
330A **Mertzon** 121.69 48 ⇓PKiKP **PKPdf** 06 17 33.9 -0.3
baz=122
Z32A **Haskell** 121.93 45 ⇑PKiKP **PKiKP** 06 17 34.8 +0.1
baz=122
430A **Baggett Ranch,** 121.95 49 ⇓PKiKP **PKiKP** 06 17 34.9 0.0
baz=122
231A **Bronte** 122.05 47 ⇓PKiKP **PKPdf** 06 17 34.6 -0.2
baz=122
ABTX **Abilene, Hawle** 122.18 46 ⇓PKiKP **PKPdf** 06 17 34.6 -0.5
baz=122
530A **J-C Ranch, Com** 122.19 49 ⇑PKiKP **PKiKP** 06 17 35.4 +0.1
baz=122
TOA0 **Torodi Ar. Sit** 122.19 289 *e*PKPdf **PKPdf** 06 17 34.6 -0.8
TORD **Torodi Ar. Bea** 122.19 289 PKP **PKPdf** 06 17 34.5 -0.9
TORD SKP 06 21 08.1
TORD PKKPab **PKKPab** 06 27 32.0 -0.4
TORD **Torodi Ar. Bea** 122.19 289 PKP **PKPdf** 06 17 34.5 -0.9
comp=Z,24nm,0.8s,baz=48,slow=1.8,SNR=38
TORD SKP 06 21 08.1
comp=Z,2.0nm,0.8s,baz=73,slow=0.9,SNR=2.2
TORD PKKPab **PKKPab** 06 27 32.0 -0.4
comp=Z,4.1nm,1.0s,baz=280,slow=3.8,SNR=8.9
331A **San Angelo** 122.29 48 ⇓PKiKP **PKPdf** 06 17 35.3 -0.1
baz=122
431A **Sonora** 122.47 48 ⇓PKiKP **PKPdf** 06 17 35.6 -0.1
baz=122
232A **Coleman** 122.56 47 ⇑PKiKP **PKPdf** 06 17 35.6 -0.2
baz=122
332A **Millersview** 122.76 47 ⇑PKiKP **PKiKP** 06 17 36.4 0.0
baz=123
531A **Rocksprings** 122.78 49 ⇓PKiKP **PKPdf** 06 17 36.3 0.0
baz=123
TUL1 **Tulsa** 122.95 41 ⇑PKiKP **PKiKP** 06 17 36.7 0.0
baz=123
432A **Menard** 122.98 48 ⇑PKiKP **PKPdf** 06 17 36.7 0.0
baz=123
631A **Perdido Creek** 123.13 50 ⇑PKiKP **PKPdf** 06 17 36.7 -0.2
baz=123
JCT **Junction City** 123.17 48 *e*PKiKP **PKPdf** 06 17 37.2 +0.2
JCT MLR MLR
comp=Z,2μm,21.0s
JCT **Junction City** 123.17 48 *e*PKPdf **PKPdf** 06 17 37.2 +0.2
JCT LR LR
comp=Z,2μm,21.0s
JCT **Junction City** 123.17 48 ⇑PKiKP **PKPdf** 06 17 37.2 +0.2
baz=123
532A **Rocksprings** 123.28 49 ⇓PKiKP **PKPdf** 06 17 37.1 -0.2
baz=123
632A **Uvalde** 123.68 49 ⇑PKiKP **PKiKP** 06 17 38.4 +0.1
baz=124
732A **Laxson Ranch,** 123.92 50 ⇑PKiKP **PKiKP** 06 17 39.1 +0.3
baz=124
WHTX **Lake Whitney** 124.08 45 ⇓PKiKP **PKiKP** 06 17 38.9 0.0
baz=124
SLM **Saint Louis** 124.57 35 *e*PKiKP **PKPdf** 06 17 39.2 -0.3
SLM **Saint Louis** 124.57 35 *e*PKPdf **PKPdf** 06 17 39.1 -0.3
SFIN **Scholer Farm** 125.02 31 ⇓PKiKP **PKPdf** 06 17 40.0 -0.3
baz=125
AAM **Ann Arbor** 125.22 27 *e*PKiKP **PKPdf** 06 17 40.4 -0.2
AAM MLR MLR
comp=Z,2μm,22.0s
AAM **Ann Arbor** 125.22 27 *e*PKPdf **PKPdf** 06 17 40.4 -0.2
AAM LR LR
comp=Z,2μm,22.0s
MIAR **Mount Ida** 125.22 41 *e*PKiKP **PKPdf** 06 17 40.9 +0.1
MIAR MLR MLR
comp=Z,1μm,19.0s
MIAR **Mount Ida** 125.22 41 *e*PKPdf **PKPdf** 06 17 40.9 +0.1
MIAR LR LR
comp=Z,1μm,19.0s
OLIL **Olney** 125.69 33 *e*PKPdf **PKPdf** 06 17 41.6 0.0
SIUC **Southern Illin** 125.79 35 *e*PKPdf **PKPdf** 06 17 41.9 +0.1
UALR **University of** 125.87 40 *e*PKPdf **PKPdf** 06 17 41.9 -0.1
KVTX **Kingsville** 126.10 50 PFAKE 06 17 50.0 +7.3
KVTX LR LR
comp=Z,1μm,19.0s
PARMO **Parma** 126.20 36 *e*PKPdf **PKPdf** 06 17 43.0 +0.4
BLO **Bloomington** 126.21 32 *e*PKiKP **PKPdf** 06 17 42.2 -0.4
BLO **Bloomington** 126.21 32 *e*PKPdf **PKPdf** 06 17 42.2 -0.4
MSNY **Massena** 126.35 19 *e*PKPdf **PKPdf** 06 17 42.7 +0.1
HBAR **Harrisburg** 126.41 38 *e*PKPdf **PKPdf** 06 17 43.1 0.0
USIN **University of** 126.48 34 *e*PKPdf **PKPdf** 06 17 43.1 0.0
GNAR **Gosnell** 126.52 37 *e*PKPdf **PKPdf** 06 17 43.1 -0.1
POI **Presque Isle** 126.64 12 *e*PKPdf **PKPdf** 06 17 42.8 -0.3
GLAT **Glass** 126.75 36 *e*PKPdf **PKPdf** 06 17 43.9 +0.2
LONY **Lake Ozonia** 126.78 19 *e*PKPdf **PKPdf** 06 17 43.0 -0.5
LONY LR LR
comp=Z,2μm,22.0s
FRNY **Flat Rock** 126.90 18 *e*PKPdf **PKPdf** 06 17 43.1 -0.6
UTMT **University of** 126.94 36 *e*PKPdf **PKPdf** 06 17 43.9 -0.1
ERPA **Erie** 126.96 25 *e*PKPdf **PKPdf** 06 17 41.1 -2.8
ERPA LR LR
comp=Z,2μm,21.0s
HALT **Halls** 126.96 37 *e*PKPdf **PKPdf** 06 17 44.6 +0.5
WCI **Wyandotte Cave** 127.03 32 *e*PKiKP **PKPdf** 06 17 43.9 -0.3
WCI **Wyandotte Cave** 127.03 32 *e*PKPdf **PKPdf** 06 17 43.9 -0.3
ACSO **Alum Creek Sta** 127.16 28 *e*PKPdf **PKPdf** 06 17 44.2 -0.2
ACSO LR LR
comp=Z,1μm,22.0s
NCB **Newcomb** 127.48 19 *e*PKPdf **PKPdf** 06 17 44.5 -0.3
NCB LR LR
comp=Z,3μm,22.0s
WVT **Waverly** 127.69 35 *e*PKiKP **PKPdf** 06 17 45.7 +0.2
WVT **Waverly** 127.69 35 *e*PKPdf **PKPdf** 06 17 45.7 +0.2
WVT *e*SKPdf SKPdf 06 20 59.7 -17
MDV **Middlebury** 127.78 18 *e*PKPdf **PKPdf** 06 17 44.8 -0.6
OXF **Oxford** 127.87 38 *e*PKiKP **PKPdf** 06 17 44.5 -1.4
OXF MLR MLR
comp=Z,825nm,19.0s
OXF **Oxford** 127.87 38 *e*PKPdf **PKPdf** 06 17 44.5 -1.4
OXF LR LR
comp=Z,825nm,19.0s
LBNH **Lisbon** 127.93 17 *e*PKiKP **PKPdf** 06 17 45.6 -0.1
LBNH MLR MLR
comp=Z,3μm,22.0s
LBNH **Lisbon** 127.93 17 *e*PKPdf **PKPdf** 06 17 45.6 -0.1
LBNH LR LR
comp=Z,3μm,22.0s
ACCN **Adirondack Com** 128.18 19 *e*PKPdf **PKPdf** 06 17 46.0 -0.2
HNH **Hanover** 128.31 17 *e*PKPdf **PKPdf** 06 17 46.8 +0.3
BINY **Binghamton** 128.44 21 *e*PKPdf **PKPdf** 06 17 46.5 -0.3
BINY LR LR
comp=Z,1μm,21.0s
EMMW **East Machias** 128.62 13 *e*PKPdf **PKPdf** 06 17 44.9 -2.1
VBMS **Vicksburg** 128.67 41 PFAKE 06 18 00.0 +13
VBMS LR LR
comp=Z,921nm,20.0s
FFD **Franklin Falls** 128.72 17 *e*PKPdf **PKPdf** 06 17 48.0 +0.8
TRY **Troy** 128.77 19 *e*PKPdf **PKPdf** 06 17 47.8 +0.5
HRV **Adam Dziewonsk** 129.63 17 *e*PKiKP **PKPdf** 06 17 48.6 -0.4
HRV **Adam Dziewonsk** 129.63 17 *e*PKPdf **PKPdf** 06 17 48.6 -0.4
TZTN **Tazewell** 129.74 32 *e*PKPdf **PKPdf** 06 17 50.3 +0.9
WES **Weston** 129.81 17 *e*PKiKP **PKPdf** 06 17 48.3 -1.0
WES *e* 06 20 00.7
WES **Weston** 129.81 17 *e*PKPdf **PKPdf** 06 17 48.3 -1.0
WES *e*PP **PP** 06 20 00.7 +1.1
CMLA **Cha da Macela** 129.83 331 PFAKE 06 18 00.0 +10
CMLA LR LR
comp=Z,2μm,21.0s
DBIC **Dimbokro** 130.00 283 PKP **PKPdf** 06 17 49.7 -0.8
DBIC **Dimbokro** 130.00 283 PKP **PKPdf** 06 17 49.7 -0.8
comp=Z,26nm,0.8s,baz=72,slow=3.7,SNR=15
CPCT **Cooper Cave** 130.04 33 *e*PKPdf **PKPdf** 06 17 49.9 -0.1
BRYW **Bryant College** 130.17 18 *e*PKPdf **PKPdf** 06 17 50.1 +0.1
LIC **Lamto** 130.27 283 *e*PKiKP **PKPdf** 06 17 51.2 +0.2
comp=Z,66nm,0.9s
LIC **Lamto** 130.27 283 *e*PKPdf **PKPdf** 06 17 51.2 +0.2
YLE **Yale** 130.28 19 *e*PKPdf **PKPdf** 06 17 50.3 +0.1
TKL **Tuckaleechee C** 130.29 33 SKPbc **SKPbc** 06 21 12.0 +2.1
TKL **Tuckaleechee C** 130.29 33 SKPbc **SKPbc** 06 21 12.0 +2.1
comp=Z,68nm,1.0s,baz=310,slow=4.7,SNR=11
LRAL **Lakeview Retre** 130.34 37 *e*PKPdf **PKPdf** 06 17 51.2 +0.6
LRAL LR LR
comp=Z,1μm,20.0s
CPNY **Central Park** 130.40 20 *e*PKPdf **PKPdf** 06 17 49.1 -1.4
SDMD **Soldier's Deli** 130.53 24 *e*PKPdf **PKPdf** 06 17 51.2 +0.4
BLA **Blacksburg** 130.78 29 *e*PKiKP **PKPdf** 06 17 51.3 -0.1
BLA MLR MLR
comp=Z,2μm,22.0s
BLA **Blacksburg** 130.78 29 *e*PKPdf **PKPdf** 06 17 51.3 -0.1
BLA LR LR
comp=Z,2μm,22.0s
CBN **Corbin** 131.33 25 *e*PKPdf **PKPdf** 06 17 53.4 +1.0
CBN LR LR
comp=Z,1μm,19.0s
JSRW **J. Sargeant Re** 131.54 26 *e*PKPdf **PKPdf** 06 17 53.7 +0.9
BRAL **Brewton** 131.69 39 *e*PKPdf **PKPdf** 06 17 53.4 +0.2
BRAL LR LR
comp=Z,2μm,21.0s
KMSC **Kings Mountain** 131.96 31 ⇑PKiKP **PKPdf** 06 17 53.9 +0.3
baz=132
SHEL **Horse Pasture** 132.01 253 PFAKE 06 18 10.0 +16
SHEL LR LR
comp=Z,3μm,20.0s
CNNC **Cliffs of the** 133.57 28 PKPdf **PKPdf** 06 17 56.7 +0.1
EFI **East Falkland** 133.66 176 PFAKE 06 18 10.0 +14
EFI LR LR
comp=Z,3μm,21.0s
NHSC **New Hope** 134.15 32 PFAKE 06 18 10.0 +12
NHSC LR LR
comp=Z,2μm,22.0s
TEIG **Tepich** 137.41 52 PFAKE 06 18 20.0 +16
TEIG LR LR
comp=Z,2μm,21.0s
BBSR **BB Station** 141.01 15 *e*PKPdf **PKPdf** 06 18 11.4 +1.0
BBSR LR LR
comp=Z,2μm,21.0s
ASCN **Ascension** 141.05 264 PFAKE 06 18 20.0 +9.0
ASCN LR LR
comp=Z,637nm,22.0s
TGUH **Tegucigalpa,Un** 141.34 60 PKPdf **PKPdf** 06 18 08.0 -3.5
TGUH LR LR
comp=Z,1μm,22.0s
PLCA **Paso Flores** 141.58 159 PKP **PKPdf** 06 18 09.9 -1.4
PLCA **Paso Flores** 141.58 159 PKP **PKPdf** 06 18 09.9 -1.4

	comp=Z,11nm,0.7s,baz=242,slow=4.0,SNR=10								
PAYG	**Puerto Ayora**	**142.99**	**84**	PFAKE			06 18 30.0	+15	
PAYG				LR	LR				
	comp=Z,3μm,21.0s								
SACV	**Santiago Islan**	**144.15**	**305**	*e*PKPdf	**PKPdf**		**06 18 16.6**	**+0.1**	
SACV				LR	LR				
	comp=Z,1μm,22.0s								
JTS	**JuntasAbangare**	**145.04**	**64**	*e*PKPbc	**PKPdf**		**06 18 17.9**	**-0.1**	
JTS				LR	LR				
	comp=Z,5μm,22.0s								
TRQA	**Tornquist**	**146.53**	**168**	*e*PKPdf	**PKPdf**		**06 18 20.4**	**+0.4**	
TRQA				LR	LR				
	comp=Z,3μm,22.0s								
MTDJ	**Mount Denham**	**146.68**	**45**	*e*PKPbc	**PKPbc**		**06 18 22.9**	**+0.4**	
MTDJ				LR	LR				
	comp=Z,1μm,21.0s								
MCJ	**Malvern**	**146.77**	**45**	*i* P	**PKPbc**		**06 18 22.9**	**+0.2**	
GTBY	**Guantanamo Bay**	**147.10**	**40**	*e*PKPbc	**PKPbc**		**06 18 23.9**	**+0.3**	
GTBY				*e*PKPab	**PKiKP**		**06 18 26.6**	**+0.6**	
PCJ	**Portland Cotta**	**147.27**	**45**	*i* P	**PKPbc**		**06 18 24.4**	**+0.4**	
STH	**Stony Hill**	**147.28**	**44**	*i* P	**PKPbc**		**06 18 24.2**	**+0.1**	
GWJ	**Greenwich**	**147.34**	**44**	*i* P	**PKPbc**		**06 18 24.7**	**+0.3**	
HOJ	**Hope**	**147.38**	**44**	*i* P	**PKPbc**		**06 18 24.4**	**+0.1**	
LMEL	**Las Melosas**	**147.67**	**153**	⇑*i*P	**PKPab**		**06 18 26.3**	**-0.9**	
LMEL	**Las Melosas**	**147.67**	**153**	⇑*i*P	**PKPab**		**06 18 26.3**	**-0.9**	
CLCH	**Cerro Calan**	**147.90**	**153**	*i* P	**PKPbc**		**06 18 24.1**	**-1.4**	
ROCH	**El Roble**	**148.03**	**151**	⇑*i*P	**PKPab**		**06 18 27.9**	**-0.8**	
PEL	**Peldehue**	**148.04**	**152**	⇑*i*P	**PKPbc**		**06 18 26.1**	**+0.3**	
CMCH	**Combarbala**	**149.50**	**149**	⇑*i*P	**PKPdf**		**06 18 26.6**	**+1.5**	
CMCH	**Combarbala**	**149.50**	**149**	⇑*i*P	**PKPdf**		**06 18 26.6**	**+1.5**	
BCIP	**Isla Barro Col**	**150.05**	**61**	*e*PKPdf	**PKPdf**		**06 18 26.0**	**-0.3**	
BCIP				*e*PKPbc	**PKPbc**		**06 18 31.4**	**0.0**	
BCIP				*e*PKPab	**PKPab**		**06 18 38.8**	**+1.6**	
BCIP				LR	LR				
	comp=Z,2μm,21.0s								
SDDR	**Presa de Saban**	**150.15**	**36**	*e*PKPbc	**PKPbc**		**06 18 31.7**	**+0.2**	
SDDR				LR	LR				
	comp=Z,2μm,22.0s								
LPA	**La Plata**	**150.29**	**173**	*de*PKP	**PKPab**		**06 18 36.0**	**-1.5**	
TLL	**Tololo Astrono**	**150.40**	**149**	⇑*i*PKIKP	**PKPdf**		**06 18 28.0**	**+1.2**	
TLL	**Tololo Astrono**	**150.40**	**149**	⇑*i*P	**PKPdf**		**06 18 28.0**	**+1.2**	
TLL	**Tololo Astrono**	**150.40**	**149**	⇑*i*P	**PKPdf**		**06 18 28.0**	**+1.2**	
CFAA	**Coronel Fontan**	**150.44**	**154**	PKP	**PKPdf**		**06 18 27.0**	**+0.4**	
CFAA				PKPbc	**PKPbc**		**06 18 31.9**	**+0.1**	
CFAA	**Coronel Fontan**	**150.44**	**154**	PKP	**PKPdf**		**06 18 27.0**	**+0.4**	
	comp=Z,5.1nm,0.8s,baz=252,slow=3.5,SNR=20								
CFAA				PKPbc	**PKPbc**		**06 18 31.9**	**+0.1**	
	comp=Z,17nm,0.8s,baz=238,slow=3.7,SNR=60								
LCO	**Las Campanas**	**151.37**	**147**	*e*PKPdf	**PKPdf**		**06 18 29.9**	**+1.5**	
LCO				*e*PKPbc	**PKiKP**		**06 18 36.9**	**+1.9**	
LCO				LR	LR				
	comp=Z,3μm,22.0s								
AGPR	**Aguadilla, PR**	**152.80**	**29**	*e*PKPdf	**PKPdf**		**06 18 31.3**	**+0.9**	
AGPR				*e*PKPbc	**PKiKP**		**06 18 38.9**	**+1.1**	
LSP	**Las Mesas**	**153.06**	**30**	*e*PKPbc	**PKPbc**		**06 18 40.2**	**+2.1**	
LRS	**Lares**	**153.08**	**29**	*e*PKPdf	**PKPdf**		**06 18 31.6**	**+0.7**	
LRS				*e*PKPbc	**PKiKP**		**06 18 38.7**	**+0.3**	
CRPR	**Cabo Rojo, PR**	**153.19**	**30**	*e*PKPdf	**PKPdf**		**06 18 31.8**	**+0.8**	
CRPR				*e*PKPbc	**PKiKP**		**06 18 40.5**	**+2.0**	
CRPR				*e*PP	**PP**		**06 22 22.2**	**-0.1**	
CELP	**Cerrillos**	**153.39**	**29**	*e*PKPdf	**PKPdf**		**06 18 31.7**	**+0.5**	
CELP				*e*PKPbc	**PKPbc**		**06 18 38.4**	**-0.5**	
OBIP	**Obispado Ponce**	**153.41**	**29**	*e*PKPdf	**PKPdf**		**06 18 32.0**	**+0.7**	
OBIP				*e*PKPbc	**PKiKP**		**06 18 39.6**	**+0.6**	
OBIP				*e*PKPab	**PKPab**		**06 18 52.2**	**+1.3**	
CBYP	**Canovanas**	**153.56**	**27**	*e*PKPdf	**PKPdf**		**06 18 31.3**	**-0.3**	
CBYP				*e*PP	**PP**		**06 22 24.4**	**0.0**	
SJG	**San Juan**	**153.56**	**28**	*e*PKPdf	**PKPdf**		**06 18 31.9**	**+0.5**	
SJG				*e*PKPbc	**PKiKP**		**06 18 39.6**	**+0.3**	
SJG				*e*PKPab	**PKPab**		**06 18 51.9**	**+0.3**	
SJG				LR	LR				
	comp=Z,2μm,22.0s								
MTP	**Monte Pirata**	**153.85**	**27**	*e*PKPdf	**PKPdf**		**06 18 32.2**	**+0.3**	
MTP				*e*PKPbc	**PKiKP**		**06 18 40.1**	**+0.2**	
MTP				*e*PP	**PP**		**06 22 25.1**	**-0.9**	
STVI	**Saint Thomas**	**153.89**	**25**	*e*PKPdf	**PKPdf**		**06 18 32.0**	**0.0**	
STVI				*e*PKPbc	**PKiKP**		**06 18 40.4**	**+0.5**	
OTAV	**Otavalo**	**154.47**	**78**	*e*PKPdf	**PKPdf**		**06 18 34.1**	**+0.5**	
OTAV				LR	LR				
	comp=Z,1μm,22.0s								
CDVI	**St. Croix**	**154.50**	**26**	*e*PKPdf	**PKPdf**		**06 18 33.3**	**+0.5**	
CDVI				*e*PKPbc	**PKiKP**		**06 18 42.4**	**+1.1**	
ATAH	**Atahualpa**	**155.19**	**95**	PKP	**PKPdf**		**06 18 35.5**	**+1.1**	
ATAH	**Atahualpa**	**155.19**	**95**	PKP	**PKPdf**		**06 18 35.5**	**+1.1**	
	comp=Z,11nm,0.9s,baz=76,slow=1.8,SNR=13								
ANWB	**Willy Bob**	**155.72**	**20**	PFAKE			06 18 50.0	-11	
ANWB				LR	LR				
	comp=Z,2μm,22.0s								
NNA	**Nana**	**156.01**	**108**	*e*PKPdf	**PKPdf**		**06 18 35.1**	**+0.1**	
NNA				PKP	**PKPdf**		**06 18 35.2**	**+0.2**	
NNA				*e*PKPab	**PKPab**		**06 19 02.4**	**0.0**	
NNA				LR	LR				
	comp=Z,3μm,22.0s								
NNA	**Nana**	**156.01**	**108**	PKP	**PKPdf**		**06 18 35.2**	**+0.2**	
	comp=Z,12nm,0.8s,baz=269,slow=2.6,SNR=6.5								
ROSC	**El Rosal**	**156.86**	**64**	PKP	**PKPdf**		**06 18 37.3**	**+0.7**	
ROSC				*e*PKPdf	**PKPdf**		**06 18 37.5**	**+0.9**	
ROSC				*e*PKPab	**PKPab**		**06 19 09.9**	**+3.4**	
ROSC	**El Rosal**	**156.86**	**64**	PKP	**PKPdf**		**06 18 37.3**	**+0.7**	
	comp=Z,12nm,1.1s,baz=305,slow=4.3,SNR=15								
LVC	**Limon Verde**	**157.27**	**141**	*e*PKPdf	**PKPdf**		**06 18 36.4**	**-0.3**	
LVC				PKP	**PKPdf**		**06 18 37.7**	**+1.0**	
LVC				LR	LR				
	comp=Z,3μm,22.0s								
LVC	**Limon Verde**	**157.27**	**141**	PKP	**PKPdf**		**06 18 37.7**	**+1.0**	
	comp=Z,9.8nm,0.9s,baz=270,slow=3.1,SNR=9.9								
HMG	**Houelmont**	**157.31**	**21**	*e*P	**PKPab**		**06 19 07.8**	**+0.1**	
CPUP	**Villa Florida**	**158.81**	**170**	PKP	**PKPdf**		**06 18 37.9**	**-0.3**	
CPUP	**Villa Florida**	**158.81**	**170**	PKP	**PKPdf**		**06 18 37.9**	**-0.3**	
	comp=Z,4.4nm,0.7s,baz=75,slow=0.9,SNR=20								
ARE	**Arequipa**	**159.19**	**123**	PKIKP	**PKPdf**		**06 18 41.0**	**+1.8**	
ARE	**Arequipa**	**159.19**	**123**	P	**PKPdf**		**06 18 41.0**	**+1.8**	
CAM4	**Nova Friburgo**	**160.05**	**211**	(P)	PKPdf		06 18 31.8	-8.3	
CAM4				*i*	PKPdf		06 18 31.7	-8.3	
CAM4				*i*			06 18 40.0		
CAM4				*i*			06 18 47.0		
CAM4				*i*			06 18 50.1		
CAM4				*i*			06 18 59.6		
CAM4				*i*			06 19 21.9		
CAM4				*i*			06 19 31.7		
CAM4				*i*			06 19 49.7		
CAM4				*i*			06 20 01.7		
BBGH	**Gun Hill**	**160.68**	**18**	PFAKE			06 18 50.0	+9.4	
BBGH				LR	LR				
	comp=Z,4μm,22.0s								
GRGR	**Grenville**	**160.84**	**25**	PFAKE			06 18 50.0	+9.2	
GRGR				LR	LR				
	comp=Z,1μm,22.0s								
SPB	**Sao Paulo**	**160.93**	**197**	PFAKE			06 18 50.0	+9.4	
SPB				LR	LR				
	comp=Z,1μm,21.0s								
LPAZ	**La Paz**	**161.99**	**128**	*e*PKPdf	**PKPdf**		**06 18 43.2**	**+0.5**	
LPAZ				PKP	**PKPdf**		**06 18 43.8**	**+1.1**	
LPAZ	**La Paz**	**161.99**	**128**	PKP	**PKPdf**		**06 18 43.8**	**+1.1**	
	comp=Z,8.5nm,0.9s,baz=253,slow=3.3,SNR=26								
RCBR	**Riachuelo**	**162.48**	**268**	PFAKE			06 18 50.0	+7.4	
RCBR				LR	LR				
	comp=Z,2μm,21.0s								
SIV	**San Ignacio**	**167.07**	**146**	PKP	**PKPdf**		**06 18 47.0**	**+0.6**	
SIV	**San Ignacio**	**167.07**	**146**	PKP	**PKPdf**		**06 18 47.0**	**+0.6**	
	comp=Z,20nm,1.1s,baz=195,slow=1.5,SNR=39								
BDFB	**Brasilia**	**168.43**	**207**	PKP	**PKPdf**		**06 18 48.0**	**+0.5**	
BDFB	**Brasilia**	**168.43**	**207**	PKP	**PKPdf**		**06 18 48.0**	**+0.5**	
	comp=Z,13nm,1.0s,baz=139,slow=2.0,SNR=9.3								
SAML	**Samuel**	**169.75**	**111**	*e*PKPdf	**PKPdf**		**06 18 48.2**	**0.0**	
SAML				*e*PKPab	**PKPab**		**06 20 03.4**	**+0.9**	
SAML				LR	LR				
	comp=Z,2μm,20.0s								

*IDC **14** 06:06:26.8±1.1,6°.01N×127°.41E,h0km,mb4.2/6, mb1 4.3/7,mb1mx4.0/24,mbtmp4.2/7,ML4.0/1, Error ellipse: s-maj=55.1km s-min=17.8km az=60.0*
*ISCJB **14** 06:06:34.7±0.9,5°.36N±0°.10×126°.5E±0°.2,h66km,mb4.1/6, Error ellipse: s-maj=34.2km s-min=9.0km az=160.4*
ISC 14 06:06:36.3±1.1,5°.5N±0°.1×126°.6E±0°.2,h66km,n10, σ1°89/13,mb4.2/6,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MATI	**Mati**	**1.52**	**348**	*e*P		**Pn**	**06 07 02.3**	**+0.9**
MATI				*e*S		**Sn**	**06 07 20.7**	**+0.3**
DAV	**Davao City (W)**	**1.90**	**328**	Pn		**Pn**	**06 07 04.0**	**-2.5**
	50nm,0.3s,baz=324,slow=12,SNR=1.9							
DAV				Sn		**Sn**	**06 07 30.9**	**+1.6**
	89nm,0.3s,baz=207,slow=18,SNR=3.7							
KCP	**Kidapawan**	**2.15**	**316**	⇓*e*P		**Pn**	**06 07 08.9**	**-1.0**
KCP				*i* S		**Sn**	**06 07 38.9**	**+3.4**
BUKP	**Musuan**	**2.85**	**328**	*e*P		**Pn**	**06 07 19.5**	**0.0**
WRA	**Warramunga Arr**	**26.36**	**163**	P		**P**	**06 12 08.8**	**+2.3**
	3.3nm,0.6s,baz=347,slow=9.5,SNR=3.3							
ASAR	**Alice Springs**	**29.81**	**166**	P		**P**	**06 12 37.6**	**+0.4**
	2.8nm,1.0s,baz=340,slow=8.2,SNR=2.0							
MKAR	**Makanchi Array**	**56.07**	**325**	P		**P**	**06 16 07.5**	**-1.2**
	1.1nm,0.5s,baz=116,slow=7.5,SNR=5.3							
ZALV	**Zalesovo Beam**	**59.00**	**333**	P		**P**	**06 16 26.8**	**-2.2**
	1.3nm,0.7s,baz=143,slow=5.0,SNR=2.6							
KURBB	**Kurchatov Arra**	**60.23**	**327**	P		**P**	**06 16 36.1**	**-1.4**
	1.2nm,0.6s,baz=130,slow=6.9,SNR=6.0							
ARCES	**ARCESS Array B**	**88.80**	**340**	P		**P**	**06 19 22.9**	**+0.3**
	2.0nm,0.8s,baz=80,slow=6.5,SNR=4.0							

*ISCJB **14** 06:21:39.4±1.1,76°.66N±0°.05×15°.3E±0°.3,h10km, Error ellipse: s-maj=10.8km s-min=5.7km az=147.8*
*CSEM **14** 06:21:41.0±0.3,76°.69N×15°.20E,h5km,ML2.4, Error ellipse: s-maj=6.4km s-min=3.2km az=50.0*
*NAO **14** 06:21:42.4±1.8,76°.75N×15°.30E,ML2.5*
*BER **14** 06:21:45.7±2.3,76°.81N×15°.56E,h4km±14km,MD1.9, ML2.4,ML2.5(NAO)*
ISC 14 06:21:42.1±1.3,76°.72N±0°.07×15°.30E±0°.08,h10km,n12, σ0°72/17,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HSP	**Hornsund**	**0.29**	**11**	*i* Pg		**Pg**	**06 21 48.4**	**+0.4**
HSP				*e*Sg		**Sg**	**06 21 50.4**	**-1.6**
SPA0	**Spitsbergen Ar**	**1.48**	**9**	Pg		**Pb**	**06 22 09.7**	**0.0**
	baz=180,slow=18							
SPA0				Lg		Lg	06 22 27.9	
	baz=193,slow=37							
SPA0	**Spitsbergen Ar**	**1.48**	**9**	Pg		**Pb**	**06 22 09.7**	**0.0**
	baz=180,slow=18							
SPA0				Lg		Lg	06 22 27.9	
	baz=193,slow=37							
SPA0	**Spitsbergen Ar**	**1.48**	**9**	Pg		**Pb**	**06 22 09.7**	**0.0**
	baz=180,slow=17,SNR=92							
SPA0				Lg		Lg	06 22 27.9	
	baz=193,slow=33,SNR=16							
HOPEN	**Hopen**	**2.27**	**91**	*e*Sg		**Sg**	**06 22 55.3**	**+0.4**
HOPEN	**Hopen**	**2.27**	**91**	*e*Sg		**Sg**	**06 22 55.3**	**+0.4**
	SNR=91							
KBS	**Kingsbay**	**2.33**	**344**	Pn		**Pn**	**06 22 20.8**	**+0.4**
KBS				Pg		**Pb**	**06 22 25.4**	**+1.3**
KBS				Sn		**Sn**	**06 22 49.1**	**+0.1**
KBS				Lg		Lg	06 22 56.0	
KBS	**Kingsbay**	**2.33**	**344**	*e*P		**Pn**	**06 22 20.9**	**+0.5**
KBS				*e*Pg		**Pg**	**06 22 26.1**	**-0.6**
KBS				Sn		**Sn**	**06 22 49.1**	**+0.1**
KBS				Lg		Lg	06 22 56.0	
KBS				AML		AML	06 22 57.6	
	comp=Z,52nm,0.3s							
KBS	**Kingsbay**	**2.33**	**344**	Pn		**Pn**	**06 22 20.8**	**+0.4**
ARA0	**ARCESS Array S**	**7.79**	**153**	Sn		**Sn**	**06 25 02.7**	**-0.8**
	baz=350,slow=28							
ARA0	**ARCESS Array S**	**7.79**	**153**	Sn		**Sn**	**06 25 02.7**	**-0.8**
	baz=350,slow=28							
ARA0	**ARCESS Array S**	**7.79**	**153**	Sn		**Sn**	**06 25 02.7**	**-0.8**
	baz=350,slow=23,SNR=50							

*IDC **14** 06:28:31.4±1.3,41°.58N×140°.76E,h0km,mb3.6/5, mb1 3.7/5,mb1mx3.5/25,mbtmp3.6/5, Error ellipse: s-maj=35.4km s-min=28.7km az=68.0*
*ISCJB **14** 06:28:45.6±0.5,41°.75N±0°.05×140°.72E±0°.07, h131km±3km,mb3.3/5, Error ellipse: s-maj=9.1km s-min=7.4km az=157.1*
*JMA **14** 06:28:47.0±0.1,41°.80N×140°.76E,h125km±1km,M2.9*
ISC 14 06:28:46.5±0.9,41°.76N±0°.05×140°.73E±0°.06,h128km±6km, n19,σ0°48/28,mb3.5/5,Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JKB	**Kayabe**	**0.26**	**59**	P		**Pn**	**06 29 04.4**	**+0.3**
JKB				*e*S		**Sn**	**06 29 17.4**	**-0.1**
JSR	**Shiriuchi**	**0.33**	**226**	P		**Pn**	**06 29 04.8**	**+0.4**
JSR				*e*S		**Sn**	**06 29 17.9**	**0.0**
JOT	**Ohata**	**0.44**	**147**	P		**Pn**	**06 29 05.4**	**+0.5**
JYM2	**Yakumo 2**	**0.45**	**323**	P		**Pn**	**06 29 05.2**	**+0.2**
JYM2				*e*S		**Sn**	**06 29 19.0**	**0.0**
JNB	**Noboribetsu**	**0.75**	**18**	P		**Pn**	**06 29 06.7**	**-0.2**
JNB				*e*S		**Sn**	**06 29 21.6**	**-0.9**
JOSM	**Okushiri--Mats**	**0.99**	**290**	P		**Pn**	**06 29 09.1**	**+0.1**
JOSM				*e*S		**Sn**	**06 29 25.7**	**-0.5**
JTM	**Tenmabayashi**	**1.00**	**165**	P		**Pn**	**06 29 09.9**	**+0.7**
JSH	**Shimam**	**1.02**	**330**	P		**Pn**	**06 29 09.6**	**+0.3**
JSH				*e*S		**Sn**	**06 29 26.3**	**-0.4**
JEW	**Eniwo**	**1.21**	**26**	P		**Pn**	**06 29 11.5**	**+0.3**
JANG	**Nango**	**1.50**	**156**	P		**Pn**	**06 29 14.5**	**+0.1**
JANG				*e*S		**Sn**	**06 29 35.6**	**-0.1**
JNBK	**Urakawa-nobuka**	**1.59**	**70**	P		**Pn**	**06 29 15.6**	**+0.2**
JNBK				*e*S		**Sn**	**06 29 37.6**	**0.0**
JSK	**Shakotan**	**1.61**	**353**	P		**Pn**	**06 29 15.9**	**+0.3**
JSK				*e*S		**Sn**	**06 29 38.2**	**+0.4**
JFR	**Furan**	**1.97**	**44**	P		**Pn**	**06 29 19.3**	**-0.6**
JHR	**Hokuryu**	**2.12**	**20**	P		**Pn**	**06 29 22.8**	**+1.1**
ZALV	**Zalesovo Beam**	**38.46**	**308**	P		**P**	**06 35 55.7**	**+0.1**
	0.6nm,0.5s,baz=101,slow=7.5,SNR=4.6							
MKAR	**Makanchi Array**	**41.31**	**298**	P		**P**	**06 36 19.5**	**+0.3**
	0.3nm,0.4s,baz=84,slow=9.2,SNR=4.1							
KURBB	**Kurchatov Arra**	**42.80**	**304**	P		**P**	**06 36 31.2**	**0.0**
	0.8nm,0.5s,baz=76,slow=8.4,SNR=6.6							
ILAR	**Eielson Array**	**45.85**	**35**	P		**P**	**06 36 55.8**	**+0.5**
	0.2nm,0.5s,baz=285,slow=7.5,SNR=6.6							
WRA	**Warramunga Arr**	**61.67**	**187**	P		**P**	**06 38 49.9**	**-0.9**
	0.4nm,0.8s,baz=6.3,slow=7.3,SNR=4.4							

MAN 14 06:35:25,18°.38N×120°.91E,h33km,mb4.0,ML2.8,MS2.5, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PIP	**Pasuquin**	**0.28**	**260**	⇓*i*P		Pn	06 35 34.7	+2.0
APYP	**Conner**	**0.60**	**148**	*e*P		Pn	06 35 36.6	-0.6
APYP				*e*S		Sn	06 35 47.9	+2.1
ABRA	**Dolores**	**0.75**	**195**	*e*P		Pb	06 35 39.9	+0.2
ABRA				*e*S		Sb	06 35 50.4	+0.8
CVP	**Callao Caves**	**1.09**	**128**	*e*P		Pn	06 35 44.4	+0.4
CAUP	**Cauayan**	**1.67**	**148**	*e*P		Pb	06 35 55.8	+0.7

*IDC **14** 06:37:53.3±4.0,36°.49N×70°.54E,h260km±38km,mb3.3/7, mb1 3.4/12,mb1mx3.1/31,mbtmp3.4/12, Error ellipse: s-maj=29.8km s-min=18.1km az=28.0*
*ISCJB **14** 06:37:55.6±0.4,36°.64N±0°.03×70°.67E±0°.07,h300km, mb3.6/7,Error ellipse: s-maj=7.9km s-min=3.4km az=159.2*
*NNC **14** 06:38:00.8±3.0,37°.15N×70°.51E,h271km±23km,mb3.0, mpv4.0,Error ellipse: s-maj=33.9km s-min=18.3km az=32.0*
ISC 14 06:37:55.7±0.7,36°.59N±0°.06×70°.70E±0°.09,h300km,n54, σ1°98/53,mb3.6/7,3C-5D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CEP	**Cherat**	**2.94**	**160**	⇓P		**Pn**	**06 38 51.4**	**+0.3**
CEP				S		**S**	**06 39 31.0**	**-4.3**
CHCP	**Chirah Chowk**	**3.60**	**144**	P		**Pn**	**06 38 59.1**	**+1.3**
THW	**Thamme Wali**	**3.89**	**167**	⇓P		**Pn**	**06 39 00.9**	**+0.1**
SARP	**Sargodha**	**4.94**	**160**	⇓P		**Pn**	**06 39 13.1**	**+0.5**
THN	**Thein Dam**	**5.86**	**134**	*i* P		**Pn**	**06 39 22.6**	**-0.8**
THN				*e*S		**S**	**06 40 32.0**	**-2.1**
DLH	**Dalhousie**	**5.94**	**131**	*e*PKP		**Pn**	**06 39 25.0**	**+0.5**
DLH				*e*S		**S**	**06 40 33.0**	**-3.1**
AML	**Almayashu**	**6.00**	**22**	P		**Pn**	**06 39 24.3**	**-1.0**
	SNR=56							
KK31	**Karatay Array**	**6.50**	**359**	P		**Pn**	**06 39 29.2**	**-1.8**
	3.6nm,0.3s,baz=187,slow=13,SNR=148							
KK31				⇑S		S	06 40 39.5	-8.4
	19nm,0.9s							
EKS2	**Erkin-Say**	**6.51**	**20**	P		**Pn**	**06 39 30.7**	**-0.4**
	SNR=32							
KZA	**Kyzart**	**6.51**	**31**	P		**Pn**	**06 39 30.8**	**-0.7**
	SNR=17							
AAK	**Ala-Archa**	**6.70**	**25**	P		**Pn**	**06 39 33.4**	**-0.1**
	SNR=16							
AAK	**Ala-Archa**	**6.70**	**25**	P		**Pn**	**06 39 33.4**	**-0.1**
	7.4nm,0.3s,baz=188,slow=5.6,SNR=39							
AAK				S		**S**	**06 40 50.3**	**-2.2**
	baz=159,slow=18,SNR=2.2							
KBK	**Karagaybulak**	**6.88**	**27**	P		**Pn**	**06 39 36.1**	**+0.4**
	SNR=6.1							
ULHL	**Ulahol**	**7.09**	**36**	P		**Pn**	**06 39 38.5**	**+0.2**
	SNR=20							
USP	**Ospenovka**	**7.28**	**22**	P		**Pn**	**06 39 40.5**	**+0.2**
	SNR=6.6							
TKM2	**Tokmak 2**	**7.36**	**29**	⇓P		**Pn**	**06 39 41.0**	**-0.6**
	6.8nm,0.5s							
TKM2	**Tokmak 2**	**7.36**	**29**	P		**Pn**	**06 39 41.6**	**+0.1**
	SNR=14							
SMLA	**Simla**	**7.66**	**134**	*i* P		**Pn**	**06 39 47.7**	**+2.5**
KKR	**Kurukshetra**	**8.37**	**140**	*e*PKP		**Pn**	**06 39 54.1**	**+0.2**
KKR				*e*S		**S**	**06 41 27.8**	**-2.0**
KKR				AML		AML	06 41 46.1	
	comp=Z,219nm,0.4s							
NDI	**New Delhi**	**9.61**	**143**	*e*PKP		**Pn**	**06 40 09.0**	**-0.1**
AYAN	**Aya Nagar**	**9.74**	**144**	*e*PKP		**P**	**06 40 12.0**	**-2.5**
AYAN				*e*S		**S**	**06 41 58.6**	**-2.1**
AGRA	**Agra**	**11.18**	**145**	*e*S		**S**	**06 42 31.0**	**-2.4**
AGRA				AML		AML	06 42 49.2	
	comp=N,77nm,0.5s							
AGRA				AML		AML	06 42 49.2	
	comp=E,70nm,0.6s							
MK31	**Makanchi Array**	**13.36**	**37**	P		**Pn**	**06 40 56.0**	**+1.5**
	comp=E,1.3nm,0.5s,baz=206,slow=9.4,SNR=30							
MKAR	**Makanchi Array**	**13.36**	**37**	P		**Pn**	**06 40 56.0**	**+1.5**
	comp=E,0.6nm,0.3s,baz=219,slow=13,SNR=30							
PYUN	**Piuthan**	**13.39**	**126**	*e*P		**Pn**	**06 40 56.6**	**+1.3**
	comp=E,26nm,0.5s							
DANN	**Dangsing**	**13.74**	**123**	*e*P		Pn	06 41 02.8	+3.2
	comp=E,18nm,0.3s							
KOLN	**Koldanda**	**14.02**	**125**	*e*P		**Pn**	**06 41 04.1**	**+1.3**
	comp=E,9.9nm,0.2s							
AB31	**Akbulak array**	**14.88**	**332**	P		**Pn**	**06 41 10.5**	**-2.1**
	comp=E,1.7nm,0.4s,baz=144,slow=12,SNR=66							
KURBB	**Kurchatov Arra**	**15.11**	**19**	P		**Pn**	**06 41 15.4**	**+0.2**
	comp=E,0.1nm,0.3s,baz=211,slow=11,SNR=18							
DMN	**Daman**	**15.13**	**122**	*e*P		**Pn**	**06 41 19.5**	**+3.5**
	comp=E,12nm,0.4s							
KKN	**Kakani**	**15.13**	**121**	*e*P		**Pn**	**06 41 19.5**	**+3.5**
PKIN	**Phulchoki**	**15.35**	**122**	*e*P		**Pn**	**06 41 21.4**	**+2.9**
	comp=E,17nm,0.3s							
PKI	**Pulchoki**	**15.36**	**122**	*e*P		**Pn**	**06 41 22.7**	**+4.0**
	comp=E,18nm,0.4s							
GUN	**Gumba**	**15.47**	**120**	*e*P		**Pn**	**06 41 24.1**	**+4.0**
	comp=E,19nm,0.3s							
VOSK	**Vostochnaya**	**16.13**	**1**	⇑P		**Pn**	**06 41 26.0**	**-1.1**
	comp=E,2.5nm,0.5s							
ZRNK	**Zerenda**	**16.40**	**356**	⇓P		**Pn**	**06 41 29.3**	**-0.9**
	comp=E,9.7nm,0.6s							
BVA0	**Borovoye Array**	**16.43**	**359**	P		**Pn**	**06 41 29.0**	**-1.6**
	comp=E,2.4nm,0.5s,baz=234,slow=43,SNR=22							
BVAR	**Borovoye Array**	**16.43**	**359**	P		**Pn**	**06 41 29.2**	**-1.4**
	comp=E,1.7nm,0.3s,baz=166,slow=9.6,SNR=20							
RAMN	**Ramite**	**16

WSI	**Waingapu**	**57.96**	**274**	S	S	07 32 57.5	-14	
	baz=58,SNR=3.4							
MAW	**Mawson**	**77.46**	**201**	P	**P**	**07 27 50.7**	**+1.2**	
	0.9nm,0.4s,baz=134,slow=7.7,SNR=11							
KSRS	**Korea Array**	**77.98**	**320**	P	**P**	**07 27 53.1**	**+0.4**	
	1.1nm,0.7s,baz=150,slow=5.8,SNR=6.3							
NVAR	**Mina Array Bea**	**85.20**	**44**	P	**P**	**07 28 31.1**	**+1.2**	
	0.7nm,0.8s,baz=226,slow=7.4,SNR=8.0							
CMAR	**Chiang Mai Arr**	**89.05**	**291**	P	**P**	**07 28 50.0**	**+1.8**	
	0.4nm,0.3s,baz=156,slow=3.5,SNR=5.7							
TXAR	**Lajitas Array**	**90.95**	**58**	P	**P**	**07 28 59.2**	**+2.3**	
	0.7nm,0.7s,baz=214,slow=6.3,SNR=13							
ILAR	**Eielson Array**	**92.26**	**14**	P	**P**	**07 29 01.6**	**-0.4**	
	0.2nm,0.7s,baz=224,slow=5.0,SNR=3.9							
ARCES	**ARCESS Array B**	**131.88**	**348**	PKP	**PKPdf**	**07 35 00.8**	**-0.6**	
	3.2nm,0.9s,baz=37,slow=2.3,SNR=5.1							
FINES	**FINESS Array B**	**138.37**	**341**	PKP	**PKPdf**	**07 35 13.7**	**+0.1**	
	3.4nm,0.9s,baz=132,slow=2.1,SNR=3.8							
NOA	**NORSAR Array B**	**142.10**	**351**	PKhKP	PKPpre	07 35 16.7		
	1.0nm,0.7s,baz=30,slow=2.6,SNR=4.9							
AKASG	**Malin Array Be**	**144.76**	**327**	PKP	**PKPdf**	**07 35 25.1**	**-0.3**	
	2.5nm,0.5s,baz=46,slow=3.9,SNR=20							
BRTR	**Keskin Array B**	**147.21**	**307**	PKPbc	**PKPbc**	**07 35 32.5**	**-0.7**	
	2.5nm,0.6s,baz=117,slow=2.0,SNR=12							
CLL	**Collm**	**150.79**	**342**	*i* PKPbc	**PKPbc**	**07 35 41.7**	**+0.3**	
	comp=Z,10.0nm,0.7s							
CLL				*i* PKPab	**PKPab**	**07 35 52.3**	**+1.4**	
CLL				*ep*PKP	pPKPdf	07 37 52.0	+10	
BRG	**Berggiesshubel**	**150.91**	**341**	*i* P	**PKPbc**	**07 35 42.1**	**+0.5**	
	comp=Z,8.2nm,0.6s							
GERES	**GERESS Array B**	**152.76**	**339**	PKPbc	**PKPbc**	**07 35 45.6**	**-0.4**	
	comp=Z,0.7nm,0.7s,baz=66,slow=2.4,SNR=7.1							
GERES				PKPab	**PKPab**	**07 35 59.1**	**-0.4**	
	comp=Z,0.2nm,0.4s,baz=7.6,slow=4.0,SNR=4.1							
TORD	**Torodi Ar. Bea**	**168.99**	**192**	PKP	**PKPdf**	**07 35 54.8**	**-1.4**	
	comp=Z,0.6nm,0.9s,baz=143,slow=0.4,SNR=3.3							
TORD				PKPab	**PKPab**	**07 37 10.5**	**-0.5**	
	comp=Z,1.8nm,0.8s,baz=159,slow=3.5,SNR=8.9							

IDC 14 07:43:03.9±2.2, 4.72S×153.31E, h0km, mb3.3/3, mb1 3.7/3, mb1mx3.4/17, mbtmp3.4/3, Error ellipse: s-maj=163.9km s-min=26.8km az=127.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.88**	**229**	P	P	07 48 18.5	-0.9
	0.4nm,0.5s,baz=56,slow=9.3,SNR=8.3						
ASAR	**Alice Springs**	**26.55**	**223**	P	P	07 48 45.0	+1.2
	0.4nm,0.8s,baz=57,slow=9.3,SNR=4.0						
ILAR	**Eielson Array**	**81.89**	**22**	P	P	07 55 25.6	+0.6
	0.3nm,0.6s,baz=245,slow=5.2,SNR=12						
TORD	**Torodi Ar. Bea**	**150.77**	**289**	PKPbc	PKPbc	08 02 57.8	-1.6
	0.2nm,0.3s,baz=78,slow=1.9,SNR=5.2						

*ISK **14** 07:55:11.4, 37.28N×19.19E, h13km, MD2.5*
*CSEM **14** 07:55:12.3±0.1, 37.22N×28.17E, h15km, MD2.5, Error ellipse: s-maj=4.5km s-min=2.8km az=30.0*
*DDA **14** 07:55:12.6, 37.20N×28.14E, h7km, MD2.4*

ISC 14 07:55:12.4±1.0, 37.23N±0.04×28.17E±0.03, h13km±7km, n18, σ0934/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.14**	**136**	*e*P	**Pg**	**07 55 15.6**	**-0.3**
YER				*e*SG	**Sg**	**07 55 18.8**	**+0.4**
YER	**Yerkesik**	**0.14**	**136**	*e*Pg	**Pg**	**07 55 15.6**	**-0.3**
YER				*e*Sg	**Sg**	**07 55 18.8**	**+0.4**
MLSB	**Milas**	**0.32**	**282**	*e*PG	**Pg**	**07 55 18.4**	**-0.5**
MLSB				*e*SG	**Sg**	**07 55 23.9**	**+0.6**
MLSB	**Milas**	**0.32**	**282**	*e*Pg	**Pg**	**07 55 18.4**	**-0.5**
MLSB				*e*Sg	**Sg**	**07 55 23.9**	**+0.6**
AYDN	**Tasoluk**	**0.48**	**332**	*i* P	**Pb**	**07 55 22.8**	**0.0**
AYDN				*i* S	**Sb**	**07 55 30.0**	**+0.1**
AYDN	**Tasoluk**	**0.48**	**332**	*i* P	**Pb**	**07 55 22.8**	**0.0**
AYDN				*i* S	**Sb**	**07 55 30.0**	**+0.1**
TURN	**Turunc**	**0.50**	**136**	*i* P	**Pg**	**07 55 21.7**	**-0.6**
TURN	**Turunc**	**0.50**	**136**	*i* P	**Pg**	**07 55 21.7**	**-0.6**
DALY	**Dalyan (Mu¨la**	**0.57**	**137**	*e*PG	**Pg**	**07 55 23.5**	**0.0**
DALY				*e*SG	**Sb**	**07 55 32.3**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.57**	**137**	*e*Pg	**Pg**	**07 55 23.5**	**0.0**
DALY				*e*Sg	**Sb**	**07 55 32.3**	**+0.2**
DAT	**Datca**	**0.69**	**223**	*e*PG	**Pb**	**07 55 26.2**	**-0.1**
DAT	**Datca**	**0.69**	**223**	*e*Pg	**Pb**	**07 55 26.2**	**-0.1**
BODT	**Bodrum**	**0.70**	**256**	*e*PG	**Pg**	**07 55 25.9**	**-0.2**
BODT	**Bodrum**	**0.70**	**256**	*e*Pg	**Pg**	**07 55 25.9**	**-0.2**
DNZL	**Cakiroluk**	**0.84**	**57**	*i* P	**Pb**	**07 55 28.8**	**-0.1**
DNZL	**Cakiroluk**	**0.84**	**57**	*i* P	**Pb**	**07 55 28.8**	**-0.1**
FETY	**Fethiye**	**0.95**	**129**	*e*PG	**Pb**	**07 55 30.6**	**-0.1**
FETY	**Fethiye**	**0.95**	**129**	*e*Pg	**Pb**	**07 55 30.6**	**-0.1**

IDC 14 08:07:15.0±2.3, 5.67N×127.04E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/22, mbtmp3.5/3, Error ellipse: s-maj=177.6km s-min=25.2km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.44**	**164**	P	P	08 12 54.5	+0.7
	0.7nm,0.6s,baz=345,slow=10.0,SNR=8.6						
ASAR	**Alice Springs**	**29.92**	**167**	P	P	08 13 24.1	-0.8
	0.3nm,0.9s,baz=341,slow=7.4,SNR=3.6						
MKAR	**Makanchi Array**	**56.16**	**324**	P	P	08 16 56.5	-0.1
	0.4nm,0.5s,baz=122,slow=7.8,SNR=9.6						

*MAN **14** 08:15:45, 4.94N×126.98E, h15km, mb5.7, ML4.7, MS5.1*
*AUST **14** 08:15:49.6±2.3, 5.49N×126.90E, h7km, Error ellipse: s-maj=1.3km s-min=0.7km az=226.0*
*BJI **14** 08:15:51.8, 4.94N×126.63E, h56km, mB5.2/40, mb5.1/63, Ms4.9/63, Ms7 4.7/63*
*MOS **14** 08:15:52.3±1.2, 5.37N×126.32E, h33km, mb5.5/48, MS4.6/11, Error ellipse: s-maj=12.4km s-min=5.3km az=112.0*
*NEIC **14** 08:15:54.1±0.1, 5.39N×126.51E, h35km, mb5.2/53, Error ellipse: s-maj=6.3km s-min=4.0km az=71.0*
*ISCJB **14** 08:15:55.3±0.4, 5.37N±0.02×126.58E±0.03, h63km±3km, mb5.2/132, Error ellipse: s-maj=5.3km s-min=2.9km az=165.6*
*IDC **14** 08:15:55.7±1.2, 5.35N×126.37E, h48km±10km, mb4.6/24, mb1 4.7/25, mb1mx4.7/28, mbtmp4.6/25, ML4.1/1, MS4.5/25, Ms1 4.5/25, ms1mx4.4/41, Error ellipse: s-maj=20.4km s-min=8.3km az=73.0*
*GCMT **14** 08:15:56.2±0.2, 5.32N×126.66E, h36km±1km, MW5.4, Moment Tensor Solution. s61,c83; s91,c153; Moment tensor: Scale 10^17^Nm; Mrr0.71±.06; Mθθ1.12±.04; Mϕϕ-1.83±.04; Mrθ0.43±.05; Mϕr-0.17±.03; Mθr0.85±.06; Best double couple: M0 1.80000×10^17^ NP1:ϕs140.00000°, δ50.00000°, λ17.00000°. NP2:ϕs39.00000°, δ77.00000°, λ139.00000°. Principal axes: T 1.4300, Plg38.0000°, Azm351.0000°; N 0.6900, Plg47.0000°, Azm205.0000°; P -2.1100, Plg17.0000°, Azm95.0000°; Data Used: IU II G IC CN.*
*DJA **14** 08:15:56.2±1.1, 5.4N±4.12.7E±., h31km±9km, M5.1/45, mb5.2/45, mB5.5/32, MLv5.8/6, Mw(mB)5.0/32*

ISC 14 08:15:56.5±0.3, 5.40N±0.03×126.56E±0.04, h55km±1km, h55km:pP-P,n491,σ1961/575, mb5.2/132, MS4.6/57, 24C-15D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.57**	**349**	*e*P	**Pn**	**08 16 22.8**	**+0.7**
DAV	**Davao City (W)**	**1.93**	**330**	*e*Pn	**Pn**	**08 16 26.4**	**-0.6**
DAV				*e*Sn	**Sn**	**08 16 51.6**	**+1.5**
DAV				S		08 16 53.6	
DAV	**Davao City (W)**	**1.93**	**330**	P	**Pn**	**08 16 28.0**	**+1.0**
DAV	**Davao City (W)**	**1.93**	**330**	P	**Pn**	**08 16 27.1**	**+0.1**
	148nm,0.3s,baz=171,slow=3.1,SNR=60						
DAV				S	**Sn**	**08 16 53.6**	**+3.4**
	1μm,0.3s,baz=80,slow=19,SNR=9.3						
DAV				LR	LR	08 17 26.5	
	comp=Z,31μm,18.1s,baz=153,slow=48						
DMPH	**Davao City--Mi**	**1.98**	**328**	*e*P	**Pn**	**08 16 30.7**	**+3.1**
DMPH				*e*S	Sn	08 17 02.0	+11
KCP	**Kidapawan**	**2.17**	**318**	↓*e*P	**Pn**	**08 16 29.6**	**-0.8**
KCP				*e*S	**Sn**	**08 16 59.9**	**+3.8**
BUKP	**Musuan**	**2.88**	**329**	*e*P	**Pn**	**08 16 40.1**	**0.0**
CGP	**Cagayan de Oro**	**3.56**	**329**	*e*P	**Pn**	**08 16 49.4**	**0.0**
CGP				*e*S	Sn	08 17 39.1	+8.9
BUTP	**Butuan**	**3.67**	**345**	*e*P	Pn	08 16 54.1	+3.3
GAMI	**Galela, Maluku**	**3.74**	**161**	P	**Pn**	**08 16 50.4**	**-1.4**
PAGZ	**Pagadian**	**3.99**	**308**	*e*P	**Pn**	**08 16 55.9**	**+0.7**
MNI	**Manado**	**4.29**	**204**	P	**Pn**	**08 16 58.1**	**-1.2**
DCPH	**Dipolog City**	**4.49**	**315**	↑*e*P	**Pn**	**08 17 03.0**	**+0.9**
TBP	**Tagbilaran**	**5.04**	**328**	*e*P	**Pn**	**08 17 10.9**	**+1.3**
SNPH	**Sibulan**	**5.12**	**320**	↑*e*P	Pn	08 17 01.0	-10
KMSI	**Cibinong**	**5.44**	**208**	P	**Pn**	**08 17 16.5**	**+1.4**
	1μm,0.8s,17μm11nm						
LLP	**Lapu-Lapu**	**5.52**	**332**	*e*P	**Pn**	**08 17 16.1**	**-0.2**
LLP				*e*S	**Sn**	**08 18 20.7**	**+2.2**
PLP	**Palo**	**5.94**	**345**	↓*e*P	**Pn**	**08 17 22.5**	**+0.5**
PLP				*e*S	**Sn**	**08 18 32.5**	**+3.7**
LBMI	**Labuha**	**6.07**	**171**	P	**Pn**	**08 17 23.4**	**-0.3**
	899nm,0.8s,19μm4.5nm						
GUIM	**Jordan**	**6.52**	**323**	*e*P	**Pn**	**08 17 32.6**	**+2.8**
MRSI	**Marisa**	**6.72**	**224**	P	**Pn**	**08 17 31.2**	**-1.5**
RCP	**Roxas**	**7.19**	**329**	||*e*P	**Pn**	**08 17 40.7**	**+1.5**
LUWI	**Luwuk**	**7.43**	**211**	P	**Pn**	**08 17 43.1**	**+0.7**
	867nm,0.9s,8μm3.4nm						
LUWI	**Luwuk**	**7.43**	**211**	P	**Pn**	**08 17 43.2**	**+0.7**
	baz=7.7,SNR=27						
MYLDM	**Lahad Datu**	**8.03**	**269**	P	**Pn**	**08 17 51.1**	**+0.5**
MYLDM	**Lahad Datu**	**8.03**	**269**	P	**Pn**	**08 17 51.2**	**+0.5**
MYLDM	**Lahad Datu**	**8.03**	**269**	P	**Pn**	**08 17 51.0**	**+0.4**
	244nm,1.5s,5μm						
NLAI	**Namlea**	**8.60**	**176**	P	**Pn**	**08 17 56.0**	**-2.4**
	310nm,0.6s,6μm						
TSM	**Tawau**	**8.73**	**263**	P	**Pn**	**08 18 01.7**	**+1.5**
MSAI	**Masohi**	**9.00**	**165**	P	Pn	08 18 08.3	+4.4
AAI	**Ambon**	**9.17**	**170**	P	**Pn**	**08 18 05.3**	**-1.0**
	175nm,0.9s,3μm						
AAI	**Ambon**	**9.17**	**170**	P	**Pn**	**08 18 05.3**	**-1.0**
	baz=9.3,SNR=4.6						
SDKM	**Sandakan**	**9.33**	**272**	P	**Pn**	**08 18 09.4**	**+1.0**
SKSI	**Soroako, Sulaw**	**9.45**	**214**	P	**Pn**	**08 18 11.6**	**+1.5**
	174nm,0.9s,2μm						
FAKI	**Fak Fak**	**10.03**	**145**	P	**Pn**	**08 18 18.4**	**+0.4**
	126nm,1.2s,2μm						
FAKI	**Fak Fak**	**10.03**	**145**	P	**Pn**	**08 18 17.9**	**-0.1**
	baz=10.0,SNR=12						
TGY	**Tagaytay City**	**10.27**	**328**	P	Pn	08 18 25.5	+4.1
TGY	**Tagaytay City**	**10.27**	**328**	P	Pn	08 18 25.5	+4.1
	35nm,0.3s,baz=162,slow=5.6,SNR=4.1						
KKM	**Kota Kinabalu**	**10.32**	**274**	*e*Pn	**Pn**	**08 18 21.2**	**-0.8**
KKM	**Kota Kinabalu**	**10.32**	**274**	P	**Pn**	**08 18 24.2**	**+2.2**
KKM	**Kota Kinabalu**	**10.32**	**274**	P	**Pn**	**08 18 24.1**	**+2.1**
	135nm,1.9s,2μm						
KKM	**Kota Kinabalu**	**10.32**	**274**	P	**Pn**	**08 18 23.0**	**+0.9**
	baz=11,SNR=6.4						
TTSI	**Tana Toraja**	**10.76**	**219**	P	**Pn**	**08 18 28.5**	**+0.6**
	153nm,1.0s,2μm						
SPSI	**Sidrap Palu**	**11.51**	**216**	P	**Pn**	**08 18 38.8**	**+0.5**
	79nm,1.2s,1μm						
BAKI	**Biak**	**11.56**	**124**	P	Pn	08 18 43.9	+4.9
KAPI	**Kappang**	**12.38**	**213**	Pn	**Pn**	**08 18 50.9**	**+0.8**
	406nm,1.2s,SNR=5.2						
KAPI	**Kappang**	**12.38**	**213**	P	**Pn**	**08 18 49.1**	**-1.0**
KAPI	**Kappang**	**12.38**	**213**	P	**Pn**	**08 18 50.7**	**+0.6**
	88nm,1.0s,1μm						
KAPI	**Kappang**	**12.38**	**213**	P	**Pn**	**08 18 49.1**	**-1.0**
	1.1nm,0.3s,baz=14,slow=11,SNR=12						
BCPH	**Baguio City Da**	**12.39**	**332**	↓*e*P	**Pn**	**08 18 52.1**	**+1.7**
BKSI	**Bulukumba**	**12.44**	**211**	P	P	08 18 56.4	-4.7
KBKI	**Kotabaru**	**13.51**	**230**	P	P	**08 19 14.6**	**+1.6**
MMRI	**Maumere**	**14.59**	**197**	P	P	08 19 35.0	+10
SBUM	**Sibu**	**14.60**	**259**	P	**Pn**	**08 19 21.8**	**+1.6**
SBUM	**Sibu**	**14.60**	**259**	P	**Pn**	**08 19 21.8**	**+1.6**
	128nm,0.9s,2μm						
BBKI	**Banjar Baru**	**14.65**	**233**	P	**P**	**08 19 25.3**	**-0.4**
	226nm,0.8s,6μm						
KSM	**Kuching**	**16.68**	**257**	*e*P	**Pn**	**08 19 47.3**	**+0.6**
	72nm,0.9s						
KSM				*e*S	**S**	**08 22 58.3**	**-1.6**
KSM				*e*ScP	**ScP**	**08 28 06.4**	**+2.3**
KSM	**Kuching**	**16.68**	**257**	P	**P**	**08 19 48.9**	**+0.6**
KSM	**Kuching**	**16.68**	**257**	P	**P**	**08 19 50.4**	**+2.1**
	86nm,1.9s,2μm						
KSM	**Kuching**	**16.68**	**257**	P	**P**	**08 19 49.3**	**+0.9**
	baz=17,SNR=6.8						
KSM				S	S	08 23 11.5	+12
	baz=17,SNR=5.9						
KHKI	**Kahang-Kahang**	**17.50**	**219**	P	**P**	**08 20 01.5**	**+4.2**
	73nm,0.9s,1μm						
TWG	**Pinlang**	**18.12**	**344**	*e*P	**P**	**08 20 03.1**	**-1.0**
	144nm,0.7s						
JAGI	**Jajag, Banyuwa**	**18.52**	**222**	P	**Pn**	**08 20 13.8**	**+4.5**
	78nm,0.9s,1μm						
JAGI	**Jajag, Banyuwa**	**18.52**	**222**	P	**Pn**	**08 20 12.9**	**+3.6**
	baz=19,SNR=4.8						
YULB	**Yu-li**	**18.60**	**345**	*e*P	**P**	**08 20 09.2**	**-0.2**
	24nm,0.7s						
MTN	**Manton Dam**	**18.68**	**166**	P	**P**	**08 20 07.1**	**-3.2**
	baz=19,SNR=17						
TPUB	**Ta-pu**	**18.70**	**343**	*e*P	**P**	**08 20 10.7**	**+0.2**
	107nm,1.1s						
TPUB				*e*S	S	08 23 54.5	+14
GMJI	**Gumukmas**	**18.86**	**224**	P	Pn	08 20 22.6	+9.3
KDU	**Kakadu**	**18.90**	**162**	P	**P**	**08 20 10.3**	**-2.5**
	baz=19,SNR=19						
SSLB	**Suanglung**	**19.07**	**344**	*e*P	**P**	**08 20 13.7**	**-0.9**
	50nm,0.8s						
NACB	**Ninganchiao**	**19.27**	**346**	P	**P**	**08 20 16.8**	**+0.1**
	24nm,0.8s						
SJI	**Sawahan**	**19.70**	**229**	P	**Pn**	**08 20 25.7**	**+2.3**
	64nm,0.8s,6μm						
YHNB	**Yeheng**	**19.80**	**346**	*e*P	**P**	**08 20 23.0**	**+0.4**
	64nm,0.9s						
SMRI	**Semarang**	**20.29**	**233**	P	Pn	08 20 35.7	+5.3
TPI	**Tanjungpandan**	**20.55**	**247**	P	Pn	08 20 33.2	-0.2
	38nm,0.9s,562nm						
UGM	**Wanagama**	**20.75**	**231**	P	Pn	08 20 40.9	+5.0
	baz=21,SNR=3.3						
QZH	**Quanzhou**	**20.89**	**339**	P	**P**	**08 20 34.8**	**+0.5**
QZH				S	**S**	**08 24 22.4**	**-1.8**
QZH				LR	LR		
	comp=N,6μm,24.4s						
QZH				LR	LR		
	comp=E,5μm,24.0s						
QZH				LR	LR		
	comp=Z,4μm,22.7s						
BJII	**Banjamegara**	**21.04**	**233**	P	**P**	**08 20 40.7**	**+4.6**
	comp=Z,136nm,1.6s,comp=Z,2μm						
KNRA	**Kununurra**	**21.05**	**174**	P	**P**	**08 20 34.8**	**-1.3**
	baz=21,SNR=113						
KNRA				S	**S**	**08 24 31.0**	**+3.4**
	baz=21,SNR=5.8						
QIZ	**Qiongzhong**	**21.20**	**311**	P	**P**	**08 20 37.4**	**-0.3**
QIZ				sP	**sP**	**08 20 53.1**	**-4.0**
QIZ				S	**S**	**08 24 31.4**	**+0.9**
QIZ				sS	**sS**	**08 24 50.6**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,31nm,1.4s						
QIZ				pmax	pmax		
	comp=Z,310nm,3.6s						
QIZ				LR	LR		
	comp=N,1μm,20.3s						
QIZ				LR	LR		
	comp=Z,3μm,21.0s						
QIZ	**Qiongzhong**	**21.20**	**311**	*e*P	**P**	**08 20 36.1**	**-1.5**
	comp=Z,117nm,1.3s						
TGJI	**Tegal**	**21.25**	**235**	P	P	08 20 43.7	+5.5
	comp=Z,89nm,1.0s						
JOW	**Kunigami**	**21.38**	**4**	*e*P	**P**	**08 20 39.5**	**-0.1**
	comp=Z,87nm,1.1s						
LEM	**Lembang**	**22.47**	**238**	P	**P**	**08 20 53.4**	**+1.8**
	comp=Z,98nm,0.9s						
UBPT	**Khong Chiam**	**22.93**	**297**	P	**P**	**08 20 57.6**	**+1.4**
	comp=Z,54nm,1.6s						
MYKOM	**Kota Tinggi**	**22.95**	**262**	P	**P**	**08 20 56.8**	**+0.5**
MYKOM	**Kota Tinggi**	**22.95**	**262**	P	**P**	**08 20 56.9**	**+0.5**
	comp=Z,79nm,1.6s,comp=Z,1μm						
BTDF	**Bukit Timah Da**	**23.09**	**261**	P	**P**	**08 20 58.9**	**+1.0**
	comp=Z,85nm,1.3s,comp=Z,979nm						
KTGM	**Kuala Trenggan**	**23.32**	**271**	P	**P**	**08 21 00.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**23.37**	**182**	*e*P	**P**	**08 20 59.2**	**-1.2**
	comp=Z,88nm,1.1s						
FITZ				*e*S	**S**	**08 25 10.2**	**+0.9**
FITZ	**Fitzroy Crossi**	**23.37**	**182**	P	**P**	**08 20 59.2**	**-1.2**
	comp=Z,18nm,0.5s,baz=16,slow=10,SNR=49						
FITZ	**Fitzroy Crossi**	**23.37**	**182**	P	**P**	**08 20 59.8**	**-0.6**
	baz=24,SNR=18						
KGM	**Kluang**	**23.43**	**263**	P	**P**	**08 21 02.5**	**+1.4**
KASI	**Kota Agung**	**24.56**	**244**	P	**P**	**08 21 15.8**	**+4.4**
	comp=Z,62nm,1.0s,comp=Z,1μm						
LWLI	**Liwa**	**24.74**	**246**	P	**P**	**08 21 15.9**	**+2.7**
	comp=Z,254nm,0.8s,comp=Z,5μm						
FRIM	**Kepong**	**24.96**	**266**	P	**P**	**08 21 17.3**	**+2.2**
PMG	**Port Moresby**	**25.25**	**126**	P	**P**	**08 21 17.6**	**-0.1**
PMG	**Port Moresby**	**25.25**	**126**	P	**P**	**08 21 17.6**	**-0.1**
	comp=Z,8.0nm,0.7s,baz=311,slow=9.3,SNR=3.5						
PMG				LR	LR	08 30 49.5	
	comp=Z,1μm,20.9s,baz=278,slow=35						
COEN	**Coen**	**25.33**	**140**	*e*P	**P**	**08 21 17.5**	**-0.9**
	comp=Z,1μm,1.8s						
COEN	**Coen**	**25.33**	**140**	P	**P**	**08 21 17.5**	**-0.9**
	baz=25,SNR=8.1						
COEN				S	**S**	**08 25 41.6**	**+0.7**
	baz=25,SNR=4.6						
IPM	**Ipoh**	**25.46**	**269**	*e*P	**P**	**08 21 17.9**	**-1.7**
	comp=Z,42nm,1.0s						
IPM	**Ipoh**	**25.46**	**269**	P	**P**	**08 21 21.7**	**+2.0**
IPM	**Ipoh**	**25.46**	**269**	P	**P**	**08 21 20.5**	**+0.8**
	comp=Z,43nm,1.6s,comp=Z,675nm						
KSI	**Kapahiang**	**25.57**	**250**	P	**P**	**08 21 25.4**	**+4.7**
	comp=Z,184nm,1.4s						
KULM	**Kulim**	**25.80**	**271**	*e*P	**P**	**08 21 22.0**	**-0.7**
	comp=Z,207nm,2.0s						
KULM	**Kulim**	**25.80**	**271**	P	**P**	**08 21 24.8**	**+2.1**
KULM	**Kulim**	**25.80**	**271**	P	**P**	**08 21 25.9**	**+3.2**
	comp=Z,34nm,1.1s,comp=Z,646nm						
SSE	**Sheshan**	**26.06**	**349**	P	**P**	**08 21 26.3**	**+1.5**
SSE				sP	**sP**	**08 21 48.4**	**+3.1**
SSE				S	**S**	**08 25 55.6**	**+3.5**
SSE				sS	**sS**	**08 26 19.0**	**+3.3**
SSE				pmax	pmax		
	comp=Z,100nm,0.8s						
SSE				pmax	pmax		
	comp=Z,330nm,4.5s						
SSE				LR	LR		
	comp=N,750nm,18.7s						
SSE				LR	LR		
	comp=E,670nm,18.7s						
SSE				LR	LR		
	comp=Z,890nm,19.0s						
WRAB	**Tennant Creek**	**26.31**	**163**	P	**P**	**08 21 28.0**	**+0.7**
	comp=Z,449nm,0.8s,SNR=14						
WRAB	**Tennant Creek**	**26.31**	**163**	*e*P	**P**	**08 21 25.7**	**-1.6**
WRAB				*e*S	**S**	**08 25 58.0**	**+1.6**
WRAB				pmax	pmax		
	comp=Z,103nm,1.0s						
WRAB	**Tennant Creek**	**26.31**	**163**	*e*P	**P**	**08 21 25.7**	**-1.6**
	comp=Z,103nm,1.0s						
WRAB				*e*S	**S**	**08 25 58.0**	**+1.6**
WRAB				ScP	**ScP**	**08 28 30.6**	**+2.8**
WRA	**Warramunga Arr**	**26.32**	**163**	P	**P**	**08 21 27.9**	**+0.6**
WRA				PcP	**PcP**	**08 24 52.3**	**-0.2**
WRA				S	**S**	**08 25 57.8**	**+1.3**
WRA				ScP	**ScP**	**08 28 28.9**	**+1.1**
WRA				*e*		08 54 10.3	
WRA	**Warramunga Arr**	**26.32**	**163**	P	**P**	**08 21 27.9**	**+0.6**
	comp=Z,36nm,0.9s,baz=343,slow=9.8,SNR=94						
WRA				PcP	**PcP**	**08 24 52.3**	**-0.2**
	comp=Z,2.4nm,0.6s,baz=338,slow=2.2,SNR=4.7						
WRA				S	**S**	**08 25 57.8**	**+1.3**
	comp=Z,1.5nm,0.8s,baz=348,slow=20,SNR=3.3						
WRA				ScP	**ScP**	**08 28 28.9**	**+1.1**
	comp=Z,7.7nm,0.9s,baz=346,slow=2.8,SNR=8.2						
WRA				P3KPbc		08 54 10.3	
	comp=Z,0.7nm,1.0s,baz=161,slow=4.0,SNR=5.0						
PPI	**Padang Panjang**	**26.77**	**258**	P	**P**	**08 21 32.4**	**+0.9**
	comp=Z,64nm,1.5s,comp=Z,1μm						
MBWA	**Marble Bar**	**27.23**	**194**	*e*P	**P**	**08 21 34.8**	**-0.7**
	comp=Z,270nm,2.1s						
PBKT	**Sadao Pong**	**27.43**	**296**	P	**P**	**08 21 39.6**	**+2.3**
	comp=Z,20nm,0.8s						
NJ2	**Nanjing**	**27.48**	**346**	*e*P	**P**	**08 21 39.8**	**+2.2**
NJ2				pP	**pP**	**08 21 51.3**	**-0.2**
NJ2				sP	**sP**	**08 21 58.3**	**+0.2**
NJ2				S	**S**	**08 26 17.5**	**+2.9**
NJ2				sS	**sS**	**08 26 41.5**	**+3.3**
NJ2				pmax	pmax		
	comp=Z,50nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,300nm,5.5s						
NJ2				LR	LR		
	comp=N,740nm,18.4s						
NJ2				LR	LR		
	comp=E,2μm,24.7s						
NJ2				LR	LR		
	comp=Z,720nm,18.2s						
WHN	**Wuhan**	**27.53**	**337**	↓P	**P**	**08 21 38.1**	**0.0**
WHN				LR	LR		
	comp=N,2μm,21.1s						
WHN				LR	LR		
	comp=E,5μm,20.9s				

comp=Z,25nm,1.1s,baz=301,slow=8.3,SNR=24
CTA LR LR 08 36 18.5
comp=Z,800nm,20.7s,baz=327,slow=38
CTAO Charters Tower 31.88 143 *e*P **P 08 22 16.3 -0.5**
CTAO pmax pmax
comp=Z,77nm,1.4s
CTAO Charters Tower 31.88 143 *e*P **P 08 22 16.3 -0.5**
comp=Z,77nm,1.4s
KSAR Wonju Array Be 31.92 2 P P **08 22 18.8 +1.9**
KSAR PcP **PcP 08 25 06.9 +0.6**
KSAR ScP **ScP 08 28 46.6 +1.4**
KSRS Korea Array 31.93 2 P **P 08 22 18.8 +1.8**
comp=Z,9.5nm,0.7s,baz=189,slow=10,SNR=43
KSRS PcP **PcP 08 25 06.9 +0.6**
comp=Z,4.1nm,0.6s,baz=180,slow=2.5,SNR=10
KSRS ScP **ScP 08 28 46.6 +1.3**
comp=Z,2.6nm,0.9s,baz=198,slow=2.7,SNR=9.4
MEEK Meekatharra 32.76 193 P **P 08 22 23.7 -0.8**
baz=33,SNR=14
MAJO Matsushiro 32.79 17 *e*P **P 08 22 24.8 +0.2**
MAJO pmax pmax
comp=Z,46nm,1.6s
MAJO Matsushiro 32.79 17 *e*P **P 08 22 24.8 +0.2**
comp=Z,46nm,1.6s
MAT Matsushiro 32.79 17 P **P 08 22 23.6 -1.0**
MAT S **S 08 27 34.6 -3.1**
XAN Xi'an 32.87 332 P **P 08 22 23.6 -1.7**
XAN pP **pP 08 22 35.3 -4.1**
XAN PP **PnPn 08 23 35.6 -0.1**
XAN PcS PcS 08 28 46.6 -7.9
XAN pmax pmax
comp=Z,15nm,1.1s
XAN LR LR
comp=N,1μm,29.6s
XAN LR LR
comp=Z,420nm,28.6s
CD2 Chengdu 33.22 323⇓ *i*P **P 08 22 27.9 -0.5**
CD2 pP **pP 08 22 42.1 -0.4**
CD2 sP **sP 08 22 49.3 +0.3**
CD2 PP **PnPn 08 23 40.3 +0.1**
CD2 S **S 08 27 43.5 -1.1**
CD2 sS **sS 08 28 06.6 -1.8**
CD2 ScS **ScS 08 32 46.1 -4.6**
CD2 pmax pmax
comp=Z,40nm,0.8s
CD2 pmax pmax
comp=Z,170nm,7.8s
CD2 LR LR
comp=N,2μm,20.2s
CD2 LR LR
comp=E,2μm,19.0s
CD2 LR LR
comp=Z,2μm,20.2s
DL2 Dalian 33.66 353⇑ P **P 08 22 32.5 +0.5**
DL2 pP **pP 08 22 45.8 -0.3**
DL2 S **S 08 27 52.5 +1.5**
DL2 pmax pmax
comp=Z,180nm,1.2s
DL2 pmax pmax
comp=Z,590nm,3.5s
DL2 LR LR
comp=E,790nm,17.1s
DL2 LR LR
comp=Z,370nm,18.0s
BJT Baijiatuao 35.72 346 *e*P **P 08 22 49.5 -0.4**
comp=Z,84nm,0.6s
MORW Morawa 35.73 196 P **P 08 22 49.3 -0.8**
baz=36,SNR=6.5
BJI Beijing 35.74 346 P **P 08 22 50.4 +0.4**
BJI pP **pP 08 23 02.5 -1.6**
BJI sP **sP 08 23 10.5 -0.2**
BJI S **S 08 28 24.8 +1.7**
BJI pmax pmax
comp=Z,61nm,0.6s
BJI pmax pmax
comp=Z,370nm,3.6s
BJI LR LR
comp=N,130nm,24.8s
BJI LR LR
comp=E,1μm,24.0s
BJI LR LR
comp=Z,520nm,30.6s
FORT Forrest 36.00 178 *e*P **P 08 22 51.9 -0.4**
FORT Forrest 36.00 178 P **P 08 22 51.9 -0.4**
baz=36,SNR=12
QLP Quilpie 36.11 153 P **P 08 22 52.4 -0.9**
baz=36,SNR=6.3
HNR Honiara 36.39 114 LR LR 08 36 35.8
comp=Z,838nm,21.9s,baz=115,slow=34
KMBL Kambalda 36.83 187 P **P 08 22 58.6 -0.8**
baz=37,SNR=17
LZH Lanzhou 36.99 329⇑ P **P 08 23 00.6 -0.4**
LZH pP **pP 08 23 15.0 -0.2**
LZH sP **sP 08 23 21.4 -0.3**
LZH PP **PnPn 08 24 33.5 +6.6**
LZH PcP **PcP 08 25 21.5 +0.3**
LZH S **S 08 28 46.1 +3.3**
LZH ScP **ScP 08 29 00.0 -3.7**
LZH sS **sS 08 29 05.8 -1.0**
LZH ScS **ScS 08 33 08.3 -2.9**
LZH pmax pmax
comp=Z,50nm,1.5s
LZH pmax pmax
comp=Z,220nm,5.2s
LZH LR LR
comp=N,1μm,12.0s
LZH LR LR
comp=E,960nm,12.6s
LZH LR LR
comp=Z,2μm,16.5s
KLBR Kellerberrin 37.73 192 P **P 08 23 07.2 +0.1**
baz=38,SNR=4.7
HHC Hu-ho-hao-te 37.77 341 *e*P **P 08 23 08.0 +0.5**
HHC pP **pP 08 23 19.8 -1.9**
HHC sP **sP 08 23 25.6 -2.6**
HHC PP **PnPn 08 24 39.4 +3.2**
HHC S **S 08 28 53.9 -0.5**
HHC ScS **ScS 08 33 12.0 -3.3**
HHC pmax pmax
comp=Z,74nm,0.9s
HHC pmax pmax
comp=Z,900nm,4.8s
HHC LR LR
comp=N,1μm,15.3s
HHC LR LR
comp=E,930nm,15.3s
HHC LR LR
comp=Z,1μm,17.8s
BTO Baotou 38.07 339 *e*P P 08 23 03.9 -6.1
CN2 Changchun 38.26 359 *e*P **P 08 23 12.3 +0.9**
CN2 *ep*P **pP 08 23 24.8 -0.8**
CN2 PcP **PcP 08 25 25.8 +1.1**
CN2 *e*S **S 08 29 01.8 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,15.0s
CN2 LR LR
comp=E,500nm,15.0s
CN2 LR LR
comp=Z,500nm,16.0s
RMQ Roma 38.30 147 P **P 08 23 12.5 +0.5**
baz=38,SNR=7.1
RMQ S S 08 29 12.3 +10
baz=38,SNR=14
EIDS Eidsvold 38.77 143 *e*P **P 08 23 14.8 -1.1**
comp=Z,98nm,1.3s
EIDS Eidsvold 38.77 143 P **P 08 23 15.3 -0.5**
baz=39,SNR=11
SHL Shillong 38.77 305 *e*PKP **P 08 23 15.0 -1.2**
SHL *e*S **S 08 29 09.0 -1.1**
USRK Ussuriysk Arra 38.94 6 P **P 08 23 18.5 +1.5**
comp=Z,15nm,0.7s,baz=190,slow=6.3,SNR=32
USRK ScP **S 08 29 11.8 +0.2**
comp=Z,2.0nm,0.9s,baz=164,slow=7.7,SNR=6.3
BBOO Buckleboo 39.05 167 P **P 08 23 17.9 -0.3**
baz=39,SNR=12
NWAO Narrogin (SRO) 39.13 192 *e*P **P 08 23 18.4 -0.4**
MDJ Mudanjiang 39.15 3 P **P 08 23 20.3 +1.5**
MDJ pP **pP 08 23 33.3 +0.2**
MDJ sP **sP 08 23 38.8 -0.8**
MDJ PcP PcP 08 25 21.5 -6.0
MDJ S **S 08 29 18.3 +3.5**
MDJ sS **sS 08 29 41.1 +2.1**
MDJ SS **SnSn 08 32 12.1 +0.1**
MDJ ScS ScS 08 33 14.3 -8.5
MDJ pmax pmax
comp=Z,38nm,1.1s
MDJ pmax pmax
comp=Z,130nm,4.6s
MDJ LR LR
comp=N,410nm,21.4s
MDJ LR LR
comp=E,470nm,22.5s
MDJ LR LR
comp=Z,560nm,20.0s
MDJ Mudanjiang 39.15 3 *e*P **P 08 23 20.5 +1.7**
comp=Z,39nm,0.9s
ERM Erimo 39.34 20 *e*P **P 08 23 23.4 +2.9**
ERM pmax pmax
comp=Z,40nm,1.0s
ERM Erimo 39.34 20 *e*P **P 08 23 23.4 +2.9**
comp=Z,40nm,1.0s
STKA Stephens Creek 39.74 160 P **P 08 23 23.8 -0.1**
STKA Stephens Creek 39.74 160 P **P 08 23 23.8 -0.1**
comp=Z,22nm,0.8s,baz=340,slow=9.3,SNR=31
STKA Stephens Creek 39.74 160 P **P 08 23 23.8 -0.1**
baz=40,SNR=30
CMSA Cobar Meteorol 41.01 155 P **P 08 23 34.0 -0.4**
baz=41,SNR=26
ASAJ Asahikawa 41.06 18 *e*P **P 08 23 35.8 +1.1**
LSA Lhasa 41.23 310 P **P 08 23 35.8 -1.1**
LSA Lhasa 41.23 310 *e*P **P 08 23 36.9 0.0**
LSA pmax pmax
comp=Z,12nm,0.6s
LSA Lhasa 41.23 310 *e*P **P 08 23 36.9 0.0**
comp=Z,12nm,0.6s
GTA Gaotai 41.59 328 *e*P **P 08 23 38.3 -1.0**
GTA pP **pP 08 23 50.8 -2.9**
GTA sP **sP 08 23 56.3 -3.8**
GTA PP **PP 08 25 16.4 +0.1**
GTA S **S 08 29 49.5 -2.2**
GTA ScS **ScS 08 33 38.0 0.0**
GTA pmax pmax
comp=Z,12nm,1.4s
GTA pmax pmax
comp=Z,120nm,4.8s
GTA LR LR
comp=N,760nm,19.7s
GTA LR LR
comp=E,890nm,18.5s
GTA LR LR
comp=Z,890nm,17.6s
YUK Yuzh-Kuril'sk 42.06 21*c i*P P 08 23 33.2 -10
YUK *i* 08 25 18.5
YUK *i* PPP PPP 08 25 44.7
TAPN Taplejung 42.91 305 *e*P **P 08 23 49.8 -0.6**
ARMA Armidale 42.95 148 *e*P **P 08 23 50.7 +0.3**
ARMA Armidale 42.95 148 P **P 08 23 50.4 +0.1**
baz=43,SNR=28
ODAN Odare 42.99 304 *e*P **P 08 23 50.6 -0.3**
comp=Z,112nm,0.6s
HABR Khabarovsk 43.53 8 *e*P **P 08 23 53.9 -0.7**
HABR *e**PP **pP 08 24 08.4 -0.7**
HABR *e*S **S 08 30 19.3 -0.2**
HABR SSS SSS 08 34 18.1
HABR pmax pmax
comp=E,45nm,1.5s
HABR pmax pmax
comp=N,47nm,1.8s
HABR pmax pmax
comp=Z,146nm,1.9s
HABR MLR MLR
comp=Z,393nm,20.0s
RAMN Ramite 43.67 304 *e*P **P 08 23 55.8 -0.7**
comp=Z,81nm,0.7s
YSS Yuzh-Sakhalins 43.69 16 *e*P **P 08 23 58.0 +2.0**
YSS *e*S **S 08 30 25.0 +3.0**
YSS *e*SS **SS 08 33 38.0 -1.1**
YSS MLR MLR
comp=Z,400nm,19.0s
KLR Kul'dur 43.90 5 *e*P P 08 23 53.2 -4.4
KLR *e*S **S 08 30 22.0 -3.0**
KLR *e*SS **SS 08 33 41.0 -2.2**
KLR pmax pmax
comp=Z,57nm,1.6s
HIA Hailar 44.10 354 *e*P **P 08 24 00.7 +1.4**
comp=Z,26nm,0.6s
HIA *e*ScP **ScP 08 29 33.4 +2.3**
ARPS Mount Arapiles 44.31 162 P **P 08 24 02.1 +1.0**
baz=44,SNR=20
YNG Young 44.54 154 P **P 08 24 03.9 +0.9**
baz=45,SNR=10
GUN Gumba 44.63 305 *e*P **P 08 24 03.3 -1.0**
comp=Z,135nm,0.7s
PKI Pulchoki 44.89 304 *e*P **P 08 24 05.6 -0.7**
PKIN Phulchoki 44.90 304 *e*P **P 08 24 05.8 -0.5**
comp=Z,29nm,0.7s
KKN Kakani 45.07 304 *e*P **P 08 24 06.1 -1.6**
comp=Z,62nm,1.0s
DMN Daman 45.15 304 *e*P **P 08 24 07.2 -1.1**
comp=Z,46nm,0.7s
ULN Ulaanbaatar 45.49 342 *e*P **P 08 24 10.3 -0.2**
comp=Z,46nm,0.9s
CAN Canberra 45.67 154 *e*P **P 08 24 11.8 -0.2**
CAN pmax pmax
comp=Z,104nm,1.4s
CAN Canberra 45.67 154 *e*P **P 08 24 11.8 -0.2**
comp=Z,104nm,1.4s
SONM Songino Array 45.68 341 P **P 08 24 11.6 -0.4**
SONM ScP **ScP 08 29 39.1 +1.4**
SONM Songino Array 45.68 341 P **P 08 24 11.6 -0.4**
comp=Z,10nm,0.8s,baz=157,slow=8.5,SNR=52
SONM ScP **ScP 08 29 39.1 +1.4**
comp=Z,2.1nm,0.9s,baz=147,slow=3.3,SNR=5.5
SONM LR LR 08 45 29.5
comp=Z,446nm,20.6s,baz=157,slow=39
CNB Canberra Magne 45.83 154 P **P 08 24 14.4 +1.1**
baz=46,SNR=6.2
TOO Toolangi 46.24 159 P **P 08 24 17.8 +1.4**
baz=46,SNR=9.1
KOLN Koldanda 46.45 304 *e*P **P 08 24 17.3 -1.2**
comp=Z,64nm,0.6s
DANN Dangsing 46.53 304 *e*P **P 08 24 17.3 -1.9**
comp=Z,92nm,0.7s
DZM Mont Dzumac 47.64 126 *e*LR LR 08 39 34.7
comp=Z,2μm,28.4s
CIT Chita 47.71 349 *e*P **P 08 24 28.8 +1.1**
CIT pmax pmax
comp=Z,175nm,1.7s
HYB Hyderabad 48.41 288 *i* P **P 08 24 32.0 -1.7**
NGP Nagpur 48.60 293 *e*PKP **P 08 24 34.5 -0.6**
NGP AMB AMB 08 24 47.4
comp=Z,17nm,0.7s
ZAK Zakamensk 48.91 340⇑ *i*P **P 08 24 35.6 -1.4**
ZAK pmax pmax
comp=Z,9.0nm,0.9s
TLY Talaya 49.90 342 *e*P **P 08 24 45.8 +1.3**
TLY *e* 08 26 43.1
TLY *e*S **S 08 31 55.6 +5.0**
TLY *e* 08 34 33.0
TLY pmax pmax
comp=Z,564nm,23.1s
TLY pmax pmax
comp=Z,46nm,0.9s
TLY Talaya 49.90 342 P **P 08 24 45.3 +0.8**
comp=Z,168nm,0.7s,SNR=5.4
IRK Irkutsk 50.20 342 *e*P **P 08 24 45.9 -0.8**
IRK pmax pmax
comp=Z,60nm,1.7s
MOY Mondy 50.77 340 *e*P **P 08 24 51.1 -0.1**
MOY pmax pmax
comp=Z,64nm,1.4s
WMQ Urumqi 51.27 324 P **P 08 24 54.3 -0.8**
WMQ pP **pP 08 25 09.0 -0.8**
WMQ sP **sP 08 25 16.0 -0.2**
WMQ PcP **PcP 08 26 10.0 +0.5**
WMQ *e*S **S 08 32 08.0 -2.0**
WMQ sS **sS 08 32 35.0 +0.1**
WMQ pmax pmax
comp=Z,29nm,1.0s
WMQ pmax pmax
comp=Z,210nm,5.0s
WMQ LR LR
comp=N,2μm,20.2s
WMQ LR LR
comp=E,820nm,17.6s
WMQ LR LR
comp=Z,1μm,28.2s
CLNS Chul'man 51.32 359 *e*P **P 08 24 55.8 +0.7**
CLNS *e**PP **pP 08 25 06.1 -3.8**
CLNS *e* 08 26 10.8
CLNS *e* 08 26 53.9
CLNS *e*PPP PPP 08 27 53.1
CLNS *e*S **S 08 32 15.1 +5.0**
CLNS pmax pmax
comp=N,14nm,0.7s
CLNS pmax pmax
comp=Z,31nm,0.8s
CLNS pmax pmax
comp=E,15nm,0.8s
CLNS pmax pmax
comp=Z,13nm,1.5s
CLNS pmax pmax
comp=N,12nm,1.4s
CLNS pmax pmax
comp=E,9.0nm,1.1s
CLNS smax smax
comp=E,158nm,11.2s
CLNS smax smax
comp=N,107nm,11.9s
CLNS MLR MLR
comp=Z,387nm,20.0s
CLNS MLR MLR
comp=N,321nm,20.0s
CLNS MLR MLR
comp=E,226nm,18.0s
SMLA Simla 52.86 305 *i* P **P 08 25 06.4 -0.5**
SMLA AMB AMB 08 25 18.8
comp=Z,56nm,0.9s
POO Poona 53.00 289 *e*PKP **P 08 25 07.0 -1.3**
HVS Khovu-Aksy 53.17 335*d i*P **P 08 25 09.0 0.0**
HVS pmax pmax
comp=Z,275nm,1.2s
PEA0B Petropavlovsk- 53.96 23 *e*P **P 08 25 14.8 +0.2**
PETK Petropavlovsk- 53.96 23 P **P 08 25 15.0 +0.4**
PETK Petropavlovsk- 53.96 23 P **P 08 25 15.0 +0.4**
PETK Petropavlovsk- 53.96 23 P **P 08 25 15.0 +0.4**
comp=Z,12nm,0.7s,baz=195,slow=7.2,SNR=14
PETK LR LR 08 50 37.4
comp=Z,183nm,18.5s,baz=294,slow=38
PET Petropavlovsk 54.27 23 *e*P **P 08 25 18.0 +1.2**
PET *e*S **S 08 32 48.1 -2.2**
PET pmax pmax
comp=Z,44nm,1.1s
PET MLR MLR
comp=Z,400nm,19.0s
MK31 Makanchi Array 56.10 325 *e*P **P 08 25 28.9 -1.4**
MK31 Makanchi Array 56.10 325 *e*P **P 08 25 28.9 -1.4**
MKAR Makanchi Array 56.10 325 P **P 08 25 28.8 -1.5**
MKAR Makanchi Array 56.10 325 P **P 08 25 28.8 -1.5**
MKAR ScP **ScP 08 30 22.1 -0.4**
MKAR ⇑ *e* 08 55 35.3
MKAR Makanchi Array 56.10 325 P **P 08 25 28.8 -1.5**
comp=Z,16nm,0.5s,baz=119,slow=6.9,SNR=178
MKAR ScP **ScP 08 30 22.1 -0.4**
comp=Z,2.0nm,0.7s,baz=111,slow=3.5,SNR=3.8
MKAR LR LR 08 51 00.6
comp=Z,806nm,19.7s,baz=133,slow=38
MKAR PKP2bc 08 55 35.3
comp=Z,0.2nm,0.5s,baz=316,slow=4.0,SNR=2.6
YAK Yakutsk 56.56 2*c i*P **P 08 25 33.0 -0.1**
YAK *e**PP pP 08 25 42.5 -5.6
YAK *e* 08 26 28.8
YAK *e* 08 27 38.9
YAK *e*S **S 08 33 20.1 -0.5**
YAK *e**SS sS 08 33 35.7 -10
YAK *e* 08 35 15.6
YAK *e*SS **SS 08 37 09.3 +0.6**
YAK pmax pmax
comp=Z,68nm,1.0s
YAK pmax pmax
comp=N,48nm,1.3s
YAK pmax pmax
comp=E,11nm,1.3s
YAK pmax pmax
comp=Z,12nm,0.8s
YAK smax smax
comp=N,180nm,2.1s
YAK smax smax
comp=E,87nm,2.2s
YAK MLR MLR
comp=Z,392nm,20.0s
YAK MLR MLR
comp=N,152nm,23.0s
YAK MLR MLR
comp=E,98nm,20.0s
KSH Kashi 56.76 314 *e*P **P 08 25 35.0 -0.2**
KSH *ep*P **pP 08 25 50.9 +0.7**
KSH *e*sP **sP 08 25 57.8 +1.3**
KSH *e*PcP **PcP 08 26 30.4 -0.2**
KSH *e*PP **PP 08 27 43.3 +1.4**
KSH *e*S **S 08 33 19.4 -4.9**
KSH *es*S **sS 08 33 47.6 -1.9**
KSH pmax pmax
comp=Z,140nm,1.8s
KSH pmax pmax
comp=Z,280nm,4.5s
KSH LR LR
comp=N,320nm,6.6s
KSH LR LR
comp=E,330nm,8.1s
KSH LR LR
comp=Z,390nm,7.5s
ULHL Ulahol 57.68 317 P **P 08 25 41.0 -0.7**
SNR=6.2
KZA Kyzart 58.28 317 P **P 08 25 45.9 -0.3**
SNR=30
TKM2 Tokmak 2 58.40 318 *i* P **P 08 25 45.9 -0.9**
TKM2 Tokmak 2 58.40 318 *e*P **P 08 25 44.6 -2.1**
comp=Z,22nm,0.8s
TKM2 Tokmak 2 58.40 318 P **P 08 25 45.9 -0.9**
SNR=15
KBK Karagaybulak 58.73 317 P **P 08 25 48.1 -0.9**
SNR=11
CHMS Chumysh 59.00 318 P P 08 25 47.2 -3.5
SNR=7.0
AAK Ala-Archa 59.02 317*ce*P **P 08 25 49.9 -1.2**
AAK pmax pmax
comp=Z,48nm,1.7s
AAK Ala-Archa 59.02 317 *e*P **P 08 25 49.4 -1.7**
comp=Z,14nm,0.9s
ZAA0 Zalesovo Array 59.04 333 *e*P **P 08 25 48.8 -1.9**
ZALV Zalesovo Beam 59.04 333 *i* P **P 08 25 48.9 -1.8**
ZALV pmax pmax
comp=Z,12nm,0.6s
ZALV Zalesovo Beam 59.04 333 P **P 08 25 48.6 -2.1**
ZALV Zalesovo Beam 59.04 333 P **P 08 25 48.6 -2.1**
comp=Z,12nm,0.7s,baz=126,slow=6.8,SNR=27
ZALV LR LR 08 52 46.4
comp=Z,412nm,21.4s,baz=254,slow=38
USP Ospenovka 59.27 318 P **P 08 25 51.1 -1.5**
SNR=19
AML Almayashu 59.37 316 P **P 08 25 52.8 -0.9**
SNR=18
EKS2 Erkin-Say 59.52 317 *e*P **P 08 25 53.5 -0.9**
EKS2 pmax pmax
comp=Z,32nm,0.8s
EKS2 Erkin-Say 59.52 317 *e*P **P 08 25 53.5 -0.9**
comp=Z,32nm,0.8s
EKS2 *e*ScP **ScP 08 30 36.1 -1.7**
EKS2 Erkin-Say 59.52 317 P **P 08 25 53.9 -0.6**
SNR=18
KURBB Kurchatov Arra 60.26 327 PKPPKP P'P'df 08 55 14.9 -8.3
comp=Z,0.4nm,0.8s,baz=262,slow=3.4,SNR=4.3
KURK Kurchatov 60.26 327*c i*P **P 08 25 57.5 -1.6**
KURK pmax pmax
comp=Z,24nm,0.6s
KURK Kurchatov 60.26 327 *e*P **P 08 25 57.6 -1.5**
comp=Z,100nm,0.8s
KURK P'P' 08 55 14.9
KURK Kurchatov 60.26 327 P **P 08 25 57.9 -1.2**
comp=Z,324nm,0.6s,SNR=42
NVS Novosibirsk 60.32 333⇑ *i*P **P 08 25 56.7 -2.8**
NVS *e*S **S 08 34 08.6 -1.2**
NVS *e* 08 35 40.6
NVS pmax pmax
comp=Z,74nm,1.6s
NVS pmax pmax
comp=N,26nm,1.4s
NVS pmax pmax
comp=E,31nm,1.4s
NVS smax smax
comp=N,36nm,2.6s
NVS smax smax

comp=E,44nm,2.1s
KK31 Karatay Array 61.91 316 *i* P **P** **08 26 08.7 -1.9**
KK31 pmax pmax
comp=Z,35nm,0.9s
KKAR Karatay Array 61.91 316 *eP* **P** **08 26 08.9 -1.7**
KKAR pmax pmax
comp=Z,27nm,0.8s
KKAR Karatay Array 61.91 316 *eP* **P** **08 26 08.8 -1.7**
comp=Z,27nm,0.8s
RPZ Rata Peaks 63.22 145 LR LR 08 51 21.8
comp=Z,890nm,20.1s,baz=300,slow=34
URZ Urewera 63.87 137 LR LR 08 52 40.1
comp=Z,831nm,18.6s,baz=48,slow=34
BVA0 Borovoye Array 65.84 327 *i* P **P** **08 26 34.4 -1.8**
BVA0 pmax pmax
comp=Z,102nm,0.9s
BRVK Borovoye 65.91 327 *eP* **P** **08 26 35.5 -1.1**
BRVK pmax pmax
comp=Z,137nm,0.9s
BRVK Borovoye 65.91 327 *eP* **P** **08 26 35.5 -1.1**
comp=Z,137nm,0.9s
BRVK Borovoye 65.91 327 P **P** **08 26 35.7 -0.9**
comp=Z,819nm,0.9s,SNR=9.8
TIXI Tiksi 66.19 1*d i*P **P** **08 26 38.0 0.0**
TIXI pmax pmax
comp=Z,33nm,1.7s
BILL Bilibino 68.00 15 P **P** **08 26 50.6 +1.0**
BILL *e* 08 26 56.9
BILL *e* 08 27 02.8
BILL *e* 08 27 17.5
BILL pmax pmax
comp=Z,10.0nm,1.5s
BILL MLR MLR
comp=Z,100nm,19.0s
AB31 Akbulak array 70.76 320 *i* P **P** **08 27 05.1 -1.9**
AB31 pmax pmax
comp=Z,42nm,0.9s
ABKAR Akbulak array 70.76 320 *eP* **P** **08 27 05.2 -1.8**
comp=Z,29nm,0.8s
UNV Unalaska Valle 72.16 35 *eP* **P** **08 27 14.5 -0.9**
comp=Z,27nm,0.9s
AKTO Aktyubinsk 72.26 321 P **P** **08 27 13.8 -2.2**
AKTO pmax pmax
comp=Z,66nm,1.2s
AKTO Aktyubinsk 72.26 321 LR LR 09 01 45.8
comp=Z,636nm,20.5s,baz=132,slow=38
DRV Dumont d'Urvil 72.54 174 PP PP 08 29 10.0 -49
DRV S SKiKP 08 36 58.0 +11
ARU Arti 73.45 327*c i*P **P** **08 27 20.8 -2.1**
ARU 08 27 31.4
ARU *PP **pP** **08 27 36.4 -2.0**
ARU 08 30 03.5
ARU PPP PPP 08 31 45.9
ARU S **S** **08 36 45.8 -2.3**
ARU SSS SSS 08 44 37.3
ARU pmax pmax
comp=Z,14nm,0.6s
ARU MLR MLR
comp=Z,407nm,20.0s
ARU Arti 73.45 327 P **P** **08 27 21.4 -1.5**
comp=Z,171nm,0.6s,SNR=7.2
FALS False Pass 74.16 34 *eP* **P** **08 27 26.9 -0.2**
comp=Z,35nm,0.6s
SDPT Sand Point 75.92 34 *eP* **P** **08 27 36.7 -0.5**
comp=Z,32nm,0.7s
CHGN Chignik 77.23 34 *eP* **P** **08 27 44.0 -0.7**
RDF Al-Radifah 77.80 298 *eP* **P** **08 27 47.1 -1.3**
RDF AMb AMB 08 28 01.1
comp=Z,24nm,0.9s
MIB Mutribah 77.99 299 *eP* **P** **08 27 48.2 -1.3**
MIB AMb AMB 08 27 57.0
comp=Z,28nm,0.7s
NAY Al-Naaiem 78.07 299 *eP* **P** **08 27 48.2 -1.7**
NAY AMb AMB 08 27 57.3
comp=Z,11nm,0.7s
IBDR Badra 79.23 303 *eP* P 08 28 01.4 +5.2
IBDR *eS* S 08 38 08.7 +16
OHAK Old Harbor 80.15 33 *eP* **P** **08 28 00.5 -0.2**
comp=Z,26nm,1.0s
GNI Garni 80.29 310 *eP* **P** **08 28 01.8 -0.3**
comp=Z,22nm,0.9s
BHD Baghdad 80.53 303 *eP* P 08 28 10.0 +6.8
BHD *eS* S 08 38 18.5 +12
KDAK Kodiak Island 80.58 32 P **P** **08 28 03.0 +0.1**
comp=Z,101nm,0.7s,SNR=6.4
KDAK Kodiak Island 80.58 32 *eP* **P** **08 28 03.1 +0.1**
comp=Z,21nm,0.9s
KDAK Kodiak Island 80.58 32 LR LR 09 01 28.9
comp=Z,262nm,21.2s,baz=258,slow=34
PPLA Purkeypile 81.23 27 *eP* **P** **08 28 06.7 +0.1**
comp=Z,11nm,0.7s
ABPO Ambohimpanom 81.72 250 *eP* **P** **08 28 08.6 -1.4**
ABPO pmax pmax
comp=Z,9.0nm,1.0s
ABPO Ambohimpanom 81.72 250 *eP* **P** **08 28 08.6 -1.4**
comp=Z,8.7nm,1.0s
KBZ Khabaz 81.72 313 P **P** **08 28 08.5 -0.8**
KBZ Khabaz 81.72 313 P **P** **08 28 08.5 -0.8**
KBZ Khabaz 81.72 313 P **P** **08 28 08.5 -0.8**
comp=Z,4.6nm,0.9s,baz=76,slow=8.3,SNR=5.6
KBZ LR LR 09 08 58.9
comp=Z,338nm,20.1s,baz=269,slow=39
KIV Kislovodsk 81.88 314 *eP* **P** **08 28 10.7 +0.4**
KIV pmax pmax
comp=Z,13nm,1.1s
KIV MLR MLR
comp=Z,266nm,19.0s
TRF Thorofare Moun 82.14 27 *eP* **P** **08 28 10.2 -1.2**
comp=Z,25nm,1.1s
COLD Coldfoot 82.43 23 *eP* **P** **08 28 13.6 +1.0**
comp=Z,17nm,0.9s
PMR Palmer 82.57 29 *eP* **P** **08 28 12.5 -0.9**
PMR pmax pmax
comp=Z,15nm,0.8s
PMR Palmer 82.57 29 *eP* **P** **08 28 12.5 -0.9**
comp=Z,15nm,0.8s
ILAR Eielson Array 83.68 25 P **P** **08 28 17.9 -1.2**
ILAR PKKPbc **PKKPbc** **08 46 35.5 -3.2**
ILAR Eielson Array 83.68 25 P **P** **08 28 17.9 -1.2**
comp=Z,4.3nm,1.0s,baz=266,slow=4.5,SNR=32
ILAR PKKPbc **PKKPbc** **08 46 35.5 -3.2**
comp=Z,0.7nm,1.1s,baz=225,slow=1.1,SNR=2.6
KLMR Klimovskoe 83.88 331 *eP* **P** **08 28 17.9 -2.3**
KLMR *e* 08 31 32.8
KLMR pmax pmax
comp=Z,216nm,2.5s
VORD Divnogorie 84.12 321 *eP* **P** **08 28 20.1 -1.5**
VORD *e*PP **PcP** **08 28 30.3 +4.9**
VORD pmax pmax
comp=Z,8.0nm,0.4s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VSR Storozhevoye 84.20 321 *eP* **P** **08 28 20.9 -1.1**
VSR *e*PP **PcP** **08 28 30.5 +4.8**
VSR pmax pmax
comp=Z,7.0nm,0.5s
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,10.0nm,1.4s
MOS Moscow 84.98 325 *eP* **P** **08 28 25.5 -0.3**
MOS *e*PPP PPP 08 33 32.1
MOS *eS* **S** **08 38 45.3 -5.2**
MOS pmax pmax
comp=Z,37nm,0.8s
VNDA Vanda 85.09 173 P **P** **08 28 26.4 +0.5**
VNDA Vanda 85.09 173 P **P** **08 28 26.4 +0.5**
comp=Z,7.9nm,0.9s,baz=318,slow=7.0,SNR=22
VNDA LR LR 09 06 31.1
comp=Z,306nm,21.2s,baz=335,slow=36
MALT Malatya 85.23 308 ⇓*i*P P 08 28 37.5 +10
OBN Obninsk 85.61 325*ceP* **P** **08 28 27.2 -1.8**
OBN *i* 08 28 37.2
OBN *i* *PP **pP** **08 28 43.1 -1.7**
OBN 08 38 58.0
OBN pmax pmax
comp=Z,42nm,1.4s
ANN Anapa 85.62 314 *eP* **P** **08 28 28.7 -0.5**
ANN *e*PP **pP** **08 28 47.6 +2.5**
ANN pmax pmax
comp=Z,33nm,1.2s
PPT Papeete 85.78 108 LR LR 09 00 53.1
comp=Z,299nm,19.9s,baz=272,slow=31

PPT2 Papeete2 85.79 108 *e*LR LR 08 56 19.1
comp=Z,948nm,26.8s
SBA Scott Base 86.00 172 *eP* **P** **08 28 31.3 +0.9**
SBA pmax pmax
comp=Z,12nm,1.1s
SBA Scott Base 86.00 172 *eP* **P** **08 28 31.3 +0.9**
comp=Z,12nm,1.1s
APA Apatity 86.26 337⇓*iP* **P** **08 28 35.0 +3.1**
APA *eS* S 08 39 09.0 +6.4
APA pmax pmax
comp=Z,21nm,1.0s
APA MLR MLR
comp=Z,800nm,20.0s
TBI Tubuai 86.61 114 *e*LR LR 08 56 56.4
comp=Z,808nm,26.8s
ASF Jabal al Asfar 86.88 302 LR LR 09 12 52.6
comp=Z,98nm,21.8s,baz=135,slow=39
JOF Joensuu 87.63 333 *eP* **P** **08 28 38.9 +0.2**
JOF pmax pmax
comp=Z,21nm,0.7s
JOF Joensuu 87.63 333 *ep* **P** **08 28 38.9 +0.2**
comp=Z,21nm,0.7s
MMAI Mount Meron Ar 88.07 303 LR LR 09 12 13.3
comp=Z,122nm,18.8s,baz=55,slow=38
KEV Kevo 88.28 340 *eP* **P** **08 28 41.6 0.0**
KEV pmax pmax
comp=Z,14nm,0.8s
KEV Kevo 88.28 340 *ep* **P** **08 28 41.6 0.0**
comp=Z,14nm,0.8s
KEV Kevo 88.28 340 *eP* **P** **08 28 41.0 -0.6**
comp=Z,7.6nm,0.7s
EIL Elat 88.76 300 LR LR 09 11 58.7
comp=Z,167nm,21.8s,baz=90,slow=38
SPA0 Spitsbergen Ar 88.82 349 *eP* **P** **08 28 43.9 -0.2**
BR131 Keskin Array S 88.83 310 *eP* **P** **08 28 44.2 -1.0**
comp=Z,6.4nm,0.8s
BRTR Keskin Array B 88.83 310 P **P** **08 28 43.5 -1.6**
BRTR Keskin Array B 88.83 310 P **P** **08 28 43.5 -1.6**
comp=Z,1.1nm,0.4s,baz=60,slow=4.5,SNR=4.9
BRTR LR LR 09 17 19.4
comp=Z,96nm,21.0s,baz=235,slow=42
ARCES ARCESS Array B 88.84 340 P **P** **08 28 43.7 -0.6**
ARCES ARCESS Array B 88.84 340 P **P** **08 28 43.7 -0.6**
comp=Z,21nm,0.7s,baz=82,slow=6.5,SNR=53
ARCES LR LR 09 13 26.9
comp=Z,390nm,18.9s,baz=260,slow=39
ARE0 ARCESS Array S 88.84 340 *eP* **P** **08 28 43.9 -0.4**
ARE0 ARCESS Array S 88.84 340 *eP* **P** **08 28 43.5 -0.8**
KBS Kingsbay 89.34 350 *eP* **P** **08 28 46.2 -0.3**
KBS AMB AMB 08 28 47.9
comp=Z,9.4nm,1.1s
KBS Kingsbay 89.34 350 *eP* **P** **08 28 45.7 -0.8**
KBS pmax pmax
comp=Z,6.0nm,0.8s
KBS Kingsbay 89.34 350 *eP* **P** **08 28 45.7 -0.8**
comp=Z,6.2nm,0.8s
KMBO Kilima Mbogo 89.42 269 LR LR 09 10 56.8
comp=Z,148nm,18.2s,baz=96,slow=37
KTK1 Kautokeino 89.74 339 *eP* **P** **08 28 48.0 -0.6**
KTK1 AMB AMB 08 28 54.8
comp=Z,176nm,1.4s
KAF Kangasniemi 90.05 332 *eP* **P** **08 28 49.7 -0.4**
KAF pmax pmax
comp=Z,9.0nm,0.5s
KAF Kangasniemi 90.05 332 *ep* **P** **08 28 49.7 -0.4**
comp=Z,8.6nm,0.5s
FINES FINESS Array B 90.29 332 P **P** **08 28 49.7 -1.6**
FINES FINESS Array B 90.29 332 P **P** **08 28 49.7 -1.6**
comp=Z,7.3nm,0.6s,baz=64,slow=6.6,SNR=26
FINES LR LR 09 12 49.5
comp=Z,452nm,19.0s,baz=201,slow=38
AKASG Malin Array Be 90.50 321*ceP* **P** **08 28 51.5 -0.9**
AKASG pmax pmax
comp=Z,3.0nm,0.6s
AKASG Malin Array Be 90.50 321 P **P** **08 28 51.6 -0.9**
AKASG Malin Array Be 90.50 321 P **P** **08 28 51.6 -0.9**
comp=Z,2.9nm,0.6s,baz=67,slow=4.6,SNR=9.4
AKASG LR LR 09 14 36.1
comp=Z,199nm,19.2s,baz=45,slow=39
AK01 Malin Array Si 90.51 321 *eP* **P** **08 28 52.0 -0.5**
KIEV Kiev 90.51 321 *eP* **P** **08 28 51.1 -1.4**
KIEV pmax pmax
comp=Z,27nm,1.3s
KIEV Kiev 90.51 321 *eP* **P** **08 28 51.1 -1.4**
comp=Z,27nm,1.3s
AK02 Malin Array Si 90.52 321 *eP* **P** **08 28 52.0 -0.5**
TRO Tromso 91.04 341 *eP* **P** **08 28 53.3 -1.2**
TRO AMB AMB 08 29 05.0
comp=Z,50nm,1.7s
TIRR Tirgusor 92.05 315 ⇓*iP* P 08 29 05.6 +5.8
TIRR Tirgusor 92.05 315 ⇓*iP* P 08 29 05.6 +5.8
CFR Carcaliu 92.13 316 ⇑*iP* P 08 29 09.8 +10
CFR Carcaliu 92.13 316 ⇑*iP* P 08 29 09.8 +10
STEI Steigen 92.88 339 *eP* **P** **08 29 02.0 -1.1**
STEI AMB AMB 08 29 14.0
comp=Z,67nm,1.6s
VRI Vrincioaia 92.98 316 ⇓*iP* P 08 29 14.5 +10
VRI Vrincioaia 92.98 316 ⇓*iP* P 08 29 14.5 +10
PLOR Plostina 93.04 316 ⇑*iP* P 08 29 15.3 +11
PLOR Plostina 93.04 316 ⇑*iP* P 08 29 15.3 +11
SUW Suwalki 93.47 325 *eP* **P** **08 29 06.4 +0.3**
SUW pmax pmax
comp=Z,50nm,1.0s
SUW Suwalki 93.47 325 *eP* **P** **08 29 06.4 +0.3**
comp=Z,50nm,1.0s
MLR Muntele Rosu 93.59 316⇑*iP* P 08 29 17.0 +10
BUR08 Bucovina Ar. S 93.66 318 *eP* **P** **08 29 07.7 +0.4**
SYO Syowa Base 93.91 201⇑*epP* pP 08 29 25.0 +1.3
QSPA South Pole Qui 95.29 180 *eP* **P** **08 29 14.4 +0.1**
comp=Z,6.8nm,1.0s
QSPA South Pole Qui 95.29 180 P **P** **08 29 14.9 +0.6**
comp=Z,3.6nm,1.0s,baz=2.2,slow=2.5,SNR=10
UZH Uzhgorod 95.33 320 *eP* **P** **08 29 13.4 -1.4**
UZH *i* 08 29 24.6
DAG Danmarks Havn 95.59 352⇑*iP* **P** **08 29 14.4 -1.0**
DAG pmax pmax
comp=Z,8.0nm,0.9s
DAG Danmarks Havn 95.59 352⇑*iP* **P** **08 29 14.4 -1.0**
comp=Z,9.7nm,0.9s
DAG *i* 08 29 45.1
CRVS Cervenica-Dubn 95.79 320 *eP* P 08 29 13.6 -3.3
CRVS Cervenica-Dubn 95.79 320 *eP* P 08 29 13.6 -3.3
STHS Stebnicka Huta 95.80 321 *eP* P 08 29 20.3 +3.4
STHS Stebnicka Huta 95.80 321 *eP* P 08 29 20.3 +3.4
VTS Vitosha 96.13 314 ⇑*iP* P 08 29 25.1 +6.3
VTS Vitosha 96.13 314 ⇑*iP* P 08 29 25.0 +6.3
KECS Kecovo 96.53 320 *eP* **P** **08 29 20.0 -0.3**
KECS Kecovo 96.53 320 *eP* **P** **08 29 20.0 -0.3**
NB2 NORSAR Subarra 97.23 334 P **P** **08 29 20.9 -2.3**
comp=Z,5.1nm,0.7s,baz=66,slow=4.6
NB2 NORSAR Subarra 97.23 334 P **P** **08 29 20.9 -2.3**
baz=66,slow=4.6
NOA NORSAR Array B 97.23 334 P **P** **08 29 21.3 -1.9**
NOA NORSAR Array B 97.23 334 P **P** **08 29 21.3 -1.9**
comp=Z,3.7nm,0.7s,baz=65,slow=4.6,SNR=17
NOA LR LR 09 17 07.1
comp=Z,480nm,21.5s,baz=80,slow=38
OKC Ostrava-Krasne 97.61 322 AMS AMS 09 15 30.0
comp=Z,200nm,14.7s
YKA Yellowknife Ar 98.06 24 P **P** **08 29 26.4 -0.4**
YKA PKiKP **PKiKP** **08 34 00.9 +1.2**
YKA PKKPbc **PKKPbc** **08 45 58.2 -3.9**
YKA Yellowknife Ar 98.06 24 P **P** **08 29 26.4 -0.4**
comp=Z,0.8nm,0.8s,baz=298,slow=4.2,SNR=7.6
YKA PKiKP **PKiKP** **08 34 00.9 +1.2**
comp=Z,0.4nm,0.6s,baz=305,slow=1.6,SNR=4.7
YKA PKKPbc **PKKPbc** **08 45 58.2 -3.9**
comp=Z,0.4nm,0.7s,baz=120,slow=2.8,SNR=5.3
DPC Dobruska-Polom 98.56 323 *epP* pP 08 29 39.0 -6.4
UPC Upice 98.70 323 *eP* Pdif 08 29 35.8 +5.8
UPC Upice 98.70 323 *epP* Pdif 08 29 35.8 +5.8
TREC Trest 99.42 322 AMS AMS 09 12 40.0
comp=Z,300nm,26.9s
PRU Pruhonice 99.76 323 *eP* Pdif 08 29 44.8 +10
PRU MLR MLR
comp=Z,300nm,20.1s
PRU Pruhonice 99.76 323 *epP* pP 08 29 44.8 -6.0
PRU AMS AMS 09 17 00.0
comp=Z,300nm,20.1s
BRG Berggiesshubel 99.81 324 *eP* **Pdif** **08 29 34.1 -0.8**
comp=Z,10nm,1.6s
BRG *i* 08 29 40.5
comp=Z,6.0nm,1.0s
BRG *e* 08 29 57.4
comp=Z,6.5nm,1.2s

BRG Berggiesshubel 99.81 324 *e*Pdiff **Pdif** **08 29 40.2 +5.3**
BRG Berggiesshubel 99.81 324 *eP* **Pdif** **08 29 34.1 -0.8**
BRG *i* 08 29 40.5
BRG pmax pmax
comp=Z,10.0nm,1.6s
BRG pmax pmax
comp=Z,6.0nm,1.0s
BRG pmax pmax
comp=Z,7.0nm,1.2s
CLL Collm 100.20 324 *eP* **Pdif** **08 29 37.0 +0.4**
CLL Collm 100.20 324 *e*Pdif **Pdif** **08 29 37.0 +0.4**
KHC Kasperske Hory 100.66 322 *eP* pP 08 29 49.1 -5.8
KHC MLR MLR
comp=Z,300nm,23.4s
KHC Kasperske Hory 100.66 322 *ep*P pP 08 29 49.1 -5.8
KHC AMS AMS 09 18 00.0
comp=Z,300nm,23.4s
GERES GERESS Array B 100.68 322 P **Pdif** **08 29 40.2 +1.2**
GERES GERESS Array B 100.68 322 P **Pdif** **08 29 40.2 +1.2**
comp=Z,0.9nm,0.7s,baz=79,slow=5.1,SNR=7.8
TANN Tannenbergstha 100.85 324 *e*Pdiff **Pdif** **08 29 41.5 +1.8**
NKC Novy Kostel 100.93 323 AMS AMS 09 15 40.0
comp=Z,300nm,20.0s
MOX Moxa 101.26 324 *eL* L 09 19 30.6
comp=Z,339nm,20.6s
SCO Scoresbysund 101.38 350 *eP* **Pdif** **08 29 41.1 -0.4**
SCO pmax pmax
comp=Z,1.0nm,0.8s
SCO Scoresbysund 101.38 350 *i* P **Pdif** **08 29 41.1 -0.4**
comp=Z,1.4nm,0.8s
CLZ Clausthal 101.50 325 *e*Pdiff **Pdif** **08 29 43.1 +0.6**
CLZ Clausthal 101.50 325 *eP* **Pdif** **08 29 43.1 +0.6**
GRF Grafenberg Arr 101.87 323 *e*Pdiff **Pdif** **08 29 43.1 -1.0**
GRF *eL* L 09 18 42.4
comp=Z,282nm,22.0s
GRF Grafenberg Arr 101.87 323 *eP* **Pdif** **08 29 43.1 -1.0**
GRF MLR MLR
comp=Z,300nm,22.0s
NVAR Mina Array Bea 105.92 48 Pdif **Pdif** **08 30 05.7 +3.0**
NVAR Mina Array Bea 105.92 48 Pdiff **Pdif** **08 30 05.7 +3.0**
comp=Z,0.7nm,0.6s,baz=282,slow=4.2,SNR=4.4
PGF Pioggiola 106.11 317 *e*PKIKP **PKiKP** **08 34 11.9 -3.1**
comp=Z,20nm,1.2s
PGF Pioggiola 106.11 317 *e*PKPdf **PKiKP** **08 34 11.9 -3.1**
LPG La Plagne 106.36 321 *e*PKIKP **PKiKP** **08 34 12.8 -2.9**
comp=Z,14nm,1.2s
LPG La Plagne 106.36 321 *e*PKPdf **PKiKP** **08 34 12.8 -2.9**
FRF La Foret Royal 107.27 319 *e*PKIKP **PKiKP** **08 34 14.8 -2.2**
comp=Z,9.5nm,0.9s
FRF La Foret Royal 107.27 319 *e*PKPdf **PKiKP** **08 34 14.8 -2.2**
LMR La Mourre 107.45 319 *e*PKIKP **PKiKP** **08 34 14.8 -2.5**
comp=Z,20nm,1.1s
LMR La Mourre 107.45 319 *e*PKPdf **PKiKP** **08 34 14.8 -2.5**
LDF La Druitiere 108.97 326 *e*PKIKP **PKiKP** **08 34 18.0 -2.0**
LDF La Druitiere 108.97 326 *e*PKPdf **PKiKP** **08 34 18.0 -2.0**
MNTX Cornudas Mount 118.31 50 *e*PKPdf **PKPdf** **08 34 39.1 +0.7**
SCHQ Schefferville 118.96 9 PKP **PKPdf** **08 34 39.1 +0.2**
SCHQ Schefferville 118.96 9 PKP **PKPdf** **08 34 39.1 +0.2**
comp=Z,3.1nm,0.5s,baz=347,slow=1.4,SNR=8.2
EVO Evora 119.35 320 *e*PKIKP **PKPdf** **08 34 40.6 +0.4**
comp=Z,8.2nm,0.9s
EVOP Sao Brissos 119.42 320 *e*PKIKP **PKPdf** **08 34 40.6 +0.3**
EVOP Sao Brissos 119.42 320 *e*PKPdf **PKPdf** **08 34 40.6 +0.3**
TXAR Lajitas Array 120.70 51 PKP **PKPdf** **08 34 43.0 -0.2**
TXAR PKKPbc **PKKPbc** **08 44 48.1 -0.4**
TXAR Lajitas Array 120.70 51 PKP **PKPdf** **08 34 43.0 -0.2**
comp=Z,1.1nm,0.6s,baz=309,slow=0.6,SNR=11
TXAR PKKPbc **PKKPbc** **08 44 48.1 -0.4**
comp=Z,0.5nm,0.6s,baz=123,slow=4.8,SNR=7.2
JFWS Jewell Farm 121.48 31 *e*PKIKP **PKPdf** **08 34 43.8 -0.4**
JFWS Jewell Farm 121.48 31 *e*PKPdf **PKPdf** **08 34 43.8 -0.4**
JFWS *e*SKPdf **SKiKP** **08 38 16.0 +0.3**
WMOK Wichita Mounta 121.56 43 *e*PKIKP **PKPdf** **08 34 44.7 +0.1**
WMOK Wichita Mounta 121.56 43 *e*PKPdf **PKPdf** **08 34 44.7 +0.1**
WMOK *e*SKPdf **SKiKP** **08 38 16.6 +0.6**
TOA0 Torodi Ar. Sit 122.23 289 *e*PKPdf **PKPdf** **08 34 45.4 -1.0**
TORD Torodi Ar. Bea 122.23 289 PKP **PKPdf** **08 34 45.6 -0.7**
TORD PKKPab **PKKPab** **08 44 44.2 +1.1**
TORD SKKP 08 48 46.1
TORD Torodi Ar. Bea 122.23 289 PKP **PKPdf** **08 34 45.6 -0.7**
comp=Z,3.1nm,0.6s,baz=60,slow=2.1,SNR=18
TORD PKKPab **PKKPab** **08 44 44.2 +1.1**
comp=Z,1.1nm,0.9s,baz=242,slow=3.4,SNR=4.2
TORD SKKP 08 48 46.1
comp=Z,1.0nm,0.9s,baz=258,slow=2.6,SNR=3.9
JCT Junction City 123.09 48 *e*PKIKP **PKPdf** **08 34 48.2 +0.5**
JCT Junction City 123.09 48 *e*PKPdf **PKPdf** **08 34 48.2 +0.5**
OLIL Olney 125.61 33 *e*PKPdf **PKPdf** **08 34 52.7 +0.5**
SIUC Southern Illin 125.71 35 *e*PKPdf **PKPdf** **08 34 53.4 +1.0**
BLO Bloomington 126.13 32 *e*PKIKP **PKPdf** **08 34 53.7 +0.5**
BLO Bloomington 126.13 32 *e*PKPdf **PKPdf** **08 34 53.7 +0.5**
PQI Presque Isle 126.57 12 *e*PKPdf **PKPdf** **08 34 54.1 +0.3**
PQI *e*SKPdf **SKiKP** **08 38 27.0 +1.4**
FRNY Flat Rock 126.83 18 *e*PKPdf **PKPdf** **08 34 55.1 +0.7**
WCI Wyandotte Cave 126.95 32 *e*PKIKP **PKPdf** **08 34 55.7 +0.9**
WCI Wyandotte Cave 126.95 32 *e*PKPdf **PKPdf** **08 34 55.7 +0.9**
ACSO Alum Creek Sta 127.09 28 *e*PKPdf **PKPdf** **08 34 55.0 +0.1**
NCB Newcomb 127.40 19 *e*PKPdf **PKPdf** **08 34 57.0 +1.5**
WVT Waverly 127.61 35 *e*PKIKP **PKPdf** **08 34 56.3 +0.2**
WVT Waverly 127.61 35 *e*PKPdf **PKPdf** **08 34 56.3 +0.2**
MDV Middlebury 127.71 18 *e*PKIKP **PKPdf** **08 34 57.3 +1.3**
OXF Oxford 127.78 38 *e*PKIKP **PKPdf** **08 34 57.0 +0.5**
OXF Oxford 127.78 38 *e*PKPdf **PKPdf** **08 34 57.0 +0.5**
ACCN Adirondack Com 128.11 19 *e*PKPdf **PKPdf** **08 34 57.1 +0.2**
BINY Binghamton 128.37 21 *e*PKPdf **PKPdf** **08 34 58.0 +0.6**
TRY Troy 128.69 19 *e*PKPdf **PKPdf** **08 34 59.3 +1.3**
DBIC Dimbokro 130.05 283 PKP **PKPdf** **08 35 01.8 +0.5**
DBIC Dimbokro 130.05 283 PKP **PKPdf** **08 35 01.8 +0.5**
comp=Z,3.1nm,0.7s,baz=135,slow=1.4,SNR=4.4
TKL Tuckaleechee C 130.21 33 SKPbc **SKPbc** **08 38 21.5 +1.9**
TKL Tuckaleechee C 130.21 33 SKPbc **SKPbc** **08 38 21.5 +1.9**
baz=281,slow=4.6
LRAL Lakeview Retre 130.26 37 *e*PKPdf **PKPdf** **08 35 02.0 +0.7**
LIC Lamto 130.31 283 *e*PKIKP **PKPdf** **08 35 01.6 -0.2**
comp=Z,20nm,0.9s
LIC Lamto 130.31 283 *e*PKPdf **PKPdf** **08 35 01.6 -0.2**
CBN Corbin 131.25 25 *e*PKPdf **PKPdf** **08 35 03.1 +0.1**
BRAL Brewton 131.60 39 *e*PKPdf **PKPdf** **08 35 05.3 +1.5**
PLCA Paso Flores 141.61 159 PKP **PKPdf** **08 35 21.8 -0.4**
PLCA Paso Flores 141.61 159 PKP **PKPdf** **08 35 21.8 -0.4**
comp=Z,3.6nm,0.8s,baz=215,slow=3.7,SNR=3.1
JTS Juntas Abangare 144.96 64 *e*PKPbc **PKPdf** **08 35 28.4 -0.3**
TRQA Tornquist 146.57 168 *e*PKPbc **PKPab** **08 35 33.0 -0.4**
GTBY Guantanamo Bay 147.02 40 PKPbc **PKPbc** **08 35 34.4 +0.3**
BCIP Isla Barro Col 149.97 61 *e*PKPdf **PKPdf** **08 35 36.1 -0.9**
BCIP *e*PKPbc **PKPbc** **08 35 41.8 -0.1**
BCIP *e*PKPab **PKPab** **08 35 49.1 +1.4**
SDDR Presa de Saban 150.06 36 *e*PKPbc **PKPbc** **08 35 42.6 +0.5**
CFAA Coronel Fontan 150.47 154 PKPbc **PKPbc** **08 35 41.5 -1.2**
CFAA Coronel Fontan 150.47 154 PKPbc **PKPbc** **08 35 41.5 -1.2**
comp=Z,4.3nm,0.8s,baz=214,slow=2.9,SNR=43
LCO Las Campanas 151.39 147 *e*PKPbc **PKPbc** **08 35 46.5 +1.3**
LCO *e*SKPdf **SKPdf** **08 39 11.1 +3.0**
LRS Lares 153.00 29 *e*PKPbc **PKPbc** **08 35 49.0 +0.1**
CELP Cerrillos 153.31 29 *e*PKPbc **PKPbc** **08 35 50.9 +1.4**
STVI Saint Thomas 153.81 25 *e*PKPbc **PKPbc** **08 35 50.8 +0.3**
STVI *e*SKPdf **SKPdf** **08 39 12.8 +1.6**
OTAV Otavalo 154.40 78 *e*PKPdf **PKPdf** **08 35 45.2 +0.9**
OTAV *e*PKPab **PKPab** **08 36 08.1 +1.1**
ATAH Atahualpa 155.13 95 PKP **PKPdf** **08 35 45.9 +0.7**
ATAH Atahualpa 155.13 95 PKP **PKPdf** **08 35 45.9 +0.7**
comp=Z,2.0nm,0.5s,baz=259,slow=5.2,SNR=4.2
ROSC El Rosal 156.78 64 PKP **PKPdf** **08 35 47.7 +0.4**
ROSC El Rosal 156.78 64 PKP **PKPdf** **08 35 47.7 +0.4**
comp=Z,2.6nm,0.4s,baz=95,slow=23,SNR=4.2
CPUP Villa Florida 158.85 170 PKP **PKPdf** **08 35 49.6 +0.7**
CPUP Villa Florida 158.85 170 PKP **PKPdf** **08 35 49.6 +0.7**
comp=Z,1.0nm,0.6s,baz=108,slow=3.2,SNR=5.7
LPAZ La Paz 161.98 128 PKP **PKPdf** **08 35 54.3 +0.8**
LPAZ PKPab **PKPab** **08 36 40.0 +0.3**
LPAZ La Paz 161.98 128 PKP **PKPdf** **08 35 54.3 +0.8**
comp=Z,3.4nm,1.1s,baz=250,slow=3.0,SNR=10.0
LPAZ PKPab **PKPab** **08 36 40.0 +0.3**
comp=Z,3.4nm,1.0s,baz=228,slow=1.7,SNR=4.0
SIV San Ignacio 167.08 145 PKP **PKPdf** **08 35 58.3 +1.1**
SIV PKPab **PKPab** **08 37 01.0 -0.3**
SIV San Ignacio 167.08 145 PKP **PKPdf** **08 35 58.3 +1.1**
comp=Z,3.1nm,0.9s,baz=226,slow=1.8,SNR=3.7
SIV PKPab **PKPab** **08 37 01.0 -0.3**
comp=Z,4.5nm,1.1s,baz=223,slow=7.1,SNR=4.3
BDFB Brasilia 168.51 207 PKP **PKPdf** **08 35 60.0 +1.6**
BDFB Brasilia 168.51 207 PKP **PKPdf** **08 35 60.0 +1.6**
comp=Z,1.8nm,0.9s,baz=350,slow=7.2,SNR=2.8

SAML Samuel 169.71 111 *e*PKPdf **PKPdf** 08 35 58.8 -0.2

DDA ***14*** *08:19:56.5,39˚07N×29˚55E,h3km,MD2.3*
ISCJB ***14*** *08:20:18.3±0.8,39˚08N±0˚05×27˚6E±0˚1,h11km,Error ellipse: s-maj=17.0km s-min=3.8km az=20.1*
ISK ***14*** *08:20:18.0,39˚10N×27˚59E,h6km,MD2.7*
CSEM ***14*** *08:20:18.0,39˚10N×27˚59E,h6km,MD2.7,After ISK*
ISC 14 08:20:18.0±1.0,39˚11N±0˚03×27˚60E±0˚06,h11km,n23,σ0s30/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.57**	**22**	*e*PG	**Pb**	**08 20 29.9**	**-0.2**
BALB				*e*SG	**Sb**	**08 20 38.2**	**-0.1**
BALB	**Balikesir**	**0.57**	**22**	*e*Pg	**Pb**	**08 20 29.9**	**-0.2**
BALB				*e*Sg	**Sb**	**08 20 38.2**	**-0.1**
BALY	**Balya**	**0.63**	**1**	*i* P	**Pb**	**08 20 31.8**	**+0.6**
IZM	**Izmir**	**0.76**	**200**	*e*PG	**Pg**	**08 20 32.6**	**-0.1**
IZM				*e*SG	**Sb**	**08 20 44.0**	**+0.4**
IZM	**Izmir**	**0.76**	**200**	*e*Pg	**Pg**	**08 20 32.6**	**-0.1**
IZM				*e*Sg	**Sb**	**08 20 44.0**	**+0.4**
BLCB	**Balcova**	**0.84**	**211**	*e*PG	**Pg**	**08 20 34.2**	**-0.1**
BLCB				*e*SG	**Sb**	**08 20 46.4**	**+0.4**
BLCB	**Balcova**	**0.84**	**211**	*e*Pg	**Pg**	**08 20 34.2**	**-0.1**
BLCB				*e*Sg	**Sb**	**08 20 46.4**	**+0.4**
GONE	**Gonen-Balikesi**	**0.94**	**4**	*e*PG	**Pn**	**08 20 36.9**	**-0.3**
GONE	**Gonen-Balikesi**	**0.94**	**4**	*e*Pg	**Pn**	**08 20 36.9**	**-0.3**
EZN	**Ezine**	**1.22**	**306**	*e*PN	**Pg**	**08 20 41.6**	**+0.2**
EZN	**Ezine**	**1.22**	**306**	*e*Pn	**Pg**	**08 20 41.6**	**+0.2**
KCTX	**Karacabey (Bur**	**1.29**	**27**	*e*PN	**Pg**	**08 20 43.3**	**+0.4**
KCTX	**Karacabey (Bur**	**1.29**	**27**	*e*Pn	**Pg**	**08 20 43.3**	**+0.4**
KRBG	**Karabiga-Canak**	**1.30**	**350**	*e*PN	**Pg**	**08 20 43.5**	**+0.4**
KRBG	**Karabiga-Canak**	**1.30**	**350**	*e*Pn	**Pg**	**08 20 43.5**	**+0.4**
LPK	**Lapseki**	**1.42**	**333**	*e*PN	**Pg**	**08 20 45.1**	**-0.2**
LPK	**Lapseki**	**1.42**	**333**	*e*Pn	**Pg**	**08 20 45.1**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.55**	**326**	*e*PN	**Pb**	**08 20 46.8**	**0.0**
GELI	**Tayfur-Gelibol**	**1.55**	**326**	*e*Pn	**Pb**	**08 20 46.8**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.61**	**349**	*e*PN	**Pb**	**08 20 47.7**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.61**	**349**	*e*Pn	**Pb**	**08 20 47.7**	**-0.1**
MFT	**Murefte**	**1.69**	**352**	*e*PN	**Pb**	**08 20 48.9**	**-0.3**
MFT	**Murefte**	**1.69**	**352**	*e*Pn	**Pb**	**08 20 48.9**	**-0.3**

IDC ***14*** *08:20:16.2±0.5,24˚57S×176˚56W,h0km,mb4.6/17, mb1 4.8/19,mb1mx4.7/24,mbtmp4.6/19,ML4.9/2,MS3.9/3, Ms1 3.9/3,ms1mx3.4/28,Error ellipse: s-maj=18.2km s-min=15.3km az=138.0*
AUST ***14*** *08:20:25.8,24˚28S×175˚72W,h100km*
NEIC ***14*** *08:20:25.7±0.9,24˚73S×176˚67W,h69km±8km,mb4.9/46, Error ellipse: s-maj=7.8km s-min=5.5km az=151.0*
ISCJB ***14*** *08:20:28.4±0.3,24˚64S±0˚07×176˚78W±0˚05,h101km, mb4.7/68,Error ellipse: s-maj=10.6km s-min=5.9km az=157.0*
BJI ***14*** *08:20:28.4,24˚43S×176˚13W,h104km,mB5.4/14, mb5.1/18*
ISC 14 08:20:29.7±0.5,24˚77S±0˚06×176˚70W±0˚07, h105km±3km,n423,σ0s90/436,mb4.7/68,13C-8D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**4.60**	**193**	Pn	Pn	08 21 31.4	-5.5
RAO				Sn	**Sn**	**08 22 26.4**	**-2.8**
RAO	**Raoul Island**	**4.60**	**193**	Pn	Pn	08 21 31.4	-5.5
	145nm,0.3s,baz=90,slow=22,SNR=3.1						
RAO				Sn	**Sn**	**08 22 26.4**	**-2.8**
	211nm,0.3s,baz=345,slow=20,SNR=2.8						
RAO				LR	LR	08 22 42.9	
	comp=Z,492nm,20.9s,baz=64,slow=30						
NIUE	**Niue**	**8.46**	**49**	P	Pn	08 22 12.9	-17
	baz=7.5,SNR=13						
NIUE				S	Sn	08 23 37.9	-25
	baz=7.5,SNR=4.2						
MSVF	**Nonsavu**	**8.54**	**324**	*e*Pn	Pn	08 22 27.5	-3.2
AFI	**Afiamalu**	**11.76**	**24**	*e*Pn	Pn	08 22 58.9	-15
AFI	**Afiamalu**	**11.76**	**24**	Pn	Pn	08 22 58.7	-16
	8.2nm,0.3s,baz=121,slow=6.4,SNR=10						
NFK	**Norfolk Island**	**14.35**	**249**	S	S	08 26 46.3	+7.2
	baz=15,SNR=3.5						
URZ	**Urewera**	**14.44**	**200**	Pn	**Pn**	**08 23 47.8**	**-1.2**
URZ	**Urewera**	**14.44**	**200**	Pn	Pn	08 23 44.6	-4.4
	2.2nm,0.3s,baz=13,slow=15,SNR=9.5						
DZM	**Mont Dzumac**	**15.70**	**276**	*e*P	**P**	**08 24 11.1**	**+4.1**
	90nm,1.1s						
DZM	**Mont Dzumac**	**15.70**	**276**	*e*Pn	**Pn**	**08 24 03.7**	**-1.5**
	28nm,0.8s						
RAR	**Rarotonga**	**15.98**	**81**	Pn	Pn	08 23 54.5	-14
RAR				Sn	Sn	08 26 34.9	-31
RAR	**Rarotonga**	**15.98**	**81**	Pn	Pn	08 23 54.5	-14
	5.5nm,0.3s,baz=270,slow=12,SNR=5.8						
RAR				Sn	Sn	08 26 34.9	-31
	0.5nm,0.3s,baz=270,slow=17,SNR=6.1						
RAR				LR	LR	08 28 07.4	
	comp=Z,500nm,19.9s,baz=91,slow=30						
RPZ	**Rata Peaks**	**21.40**	**205**	P	P	08 25 03.2	-5.7
RPZ	**Rata Peaks**	**21.40**	**205**	P	P	08 25 03.2	-5.7
	14nm,1.1s,baz=148,slow=22,SNR=2.4						
LHI	**Lord Howe Isla**	**22.38**	**247**	S	Sn	08 29 47.0	+8.2
	baz=23,SNR=3.5						
TBI	**Tubuai**	**24.90**	**92**	*e*LR	LR	08 31 35.1	
	355nm,25.0s						
TBI				*e*T	T	08 50 47.7	
	85nm,0.3s						
PPT2	**Papeete2**	**26.25**	**79**	*e*LR	LR	08 31 59.3	
	654nm,24.8s						
PPT2				*e*T	T	08 52 27.6	
	41nm,0.3s						
TIAR	**Tiarei**	**26.47**	**80**	*e*T	T	08 52 31.7	
	43nm,0.3s						
TVO	**Taravao**	**26.47**	**80**	*e*T	T	08 52 39.2	
	41nm,0.3s						
MEH	**Mehetia**	**27.51**	**81**	*e*T	T	08 54 04.4	
	1µm,0.3s						
ARMA	**Armidale**	**28.57**	**252**	*e*P	**P**	**08 26 16.9**	**+0.9**
	4.0nm,0.7s						
EIDS	**Eidsvold**	**29.15**	**262**	*e*P	**P**	**08 26 21.4**	**+0.3**
	18nm,1.0s						
MGCD	**Mangrove Creek**	**29.30**	**246**	P	P	08 26 27.5	+5.2
	baz=30,SNR=6.8						
RMQ	**Roma**	**31.14**	**259**	P	P	08 26 47.9	+9.3
	baz=32,SNR=6.0						
RMQ				S	**S**	**08 31 37.1**	**+0.3**
	baz=32,SNR=4.5						
YNG	**Young**	**31.69**	**244**	P	**P**	**08 26 46.1**	**+2.7**
	baz=33,SNR=5.3						
CTA	**Charters Tower**	**34.49**	**270**	P	**P**	**08 27 08.4**	**+0.5**
CTA	**Charters Tower**	**34.49**	**270**	P	**P**	**08 27 08.4**	**+0.5**
	8.0nm,0.4s,baz=96,slow=11,SNR=24						
CTAO	**Charters Tower**	**34.49**	**270**	*e*P	**P**	**08 27 08.4**	**+0.5**
	46nm,1.1s						
TOO	**Toolangi**	**34.55**	**239**	P	P	08 27 16.7	+8.5
	baz=36,SNR=4.5						
MTSU	**Mount Surprise**	**36.79**	**273**	P	**P**	**08 27 28.6**	**+1.0**
	baz=38,SNR=9.3						
STKA	**Stephens Creek**	**37.22**	**249**	P	**P**	**08 27 29.7**	**-1.3**
STKA	**Stephens Creek**	**37.22**	**249**	P	**P**	**08 27 29.7**	**-1.3**
	3.7nm,0.8s,baz=84,slow=10,SNR=3.7						
PMG	**Port Moresby**	**37.62**	**288**	P	**P**	**08 27 32.5**	**-2.2**
PMG	**Port Moresby**	**37.62**	**288**	P	**P**	**08 27 32.5**	**-2.2**
	20nm,0.7s,baz=144,slow=3.0,SNR=7.1						
RKT	**Rikitea**	**38.07**	**96**	*e*T	T	09 07 15.1	
	28nm,0.3s						
TAOE	**Nuku Hiva Isla**	**38.24**	**72**	*e*T	T	09 07 21.4	
	56nm,0.2s						
COEN	**Coen**	**39.22**	**278**	P	**P**	**08 27 48.9**	**+0.9**
	baz=40,SNR=6.3						
AS31	**Alice Springs**	**44.86**	**261**	*e*P	**P**	**08 28 34.1**	**+0.2**
ASAR	**Alice Springs**	**44.86**	**261**	P	**P**	**08 28 33.8**	**-0.1**
ASAR	**Alice Springs**	**44.86**	**261**	P	**P**	**08 28 33.8**	**-0.1**
	11nm,1.0s,baz=103,slow=8.0,SNR=17						
WRA	**Warramunga Arr**	**45.35**	**266**	P	**P**	**08 28 37.2**	**-0.5**
WRA	**Warramunga Arr**	**45.35**	**266**	P	**P**	**08 28 37.2**	**-0.5**
	6.6nm,0.6s,baz=100,slow=8.2,SNR=39						
KDU	**Kakadu**	**49.36**	**274**	P	**P**	**08 29 07.9**	**-0.9**
	baz=50,SNR=5.3						
MTN	**Manton Dam**	**50.52**	**274**	P	P	08 29 25.3	+7.7
	baz=51,SNR=4.1						
KNRA	**Kununurra**	**51.69**	**269**	P	**P**	**08 29 25.9**	**-0.5**
	baz=53,SNR=6.5						
FITZ	**Fitzroy Crossi**	**53.76**	**265**	P	**P**	**08 29 42.4**	**+0.9**
FITZ	**Fitzroy Crossi**	**53.76**	**265**	P	**P**	**08 29 42.4**	**+0.9**
	7.8nm,0.7s,baz=104,slow=5.6,SNR=13						
FITZ	**Fitzroy Crossi**	**53.76**	**265**	P	**P**	**08 29 42.2**	**+0.7**
	baz=55,SNR=17						
MORW	**Morawa**	**59.40**	**250**	P	P	08 30 29.0	+7.6
	baz=60,SNR=4.0						
QSPA	**South Pole Qui**	**65.32**	**180**	P	**P**	**08 31 01.7**	**+1.3**
QSPA	**South Pole Qui**	**65.32**	**180**	P	**P**	**08 31 01.7**	**+1.3**
	4.3nm,1.0s,baz=96,slow=3.4,SNR=3.9						
FX1	**Attu Island--F**	**77.82**	**354**	*e*P	**P**	**08 32 13.5**	**-1.7**
MAW	**Mawson**	**77.97**	**200**	*e*P	**P**	**08 32 16.9**	**+0.9**
	2.3nm,1.0s						
MAW	**Mawson**	**77.97**	**200**	P	**P**	**08 32 17.4**	**+1.4**
	4.1nm,0.7s,baz=133,slow=6.0,SNR=7.6						
MAW				LR	LR	09 03 32.7	
	comp=Z,185nm,18.1s,baz=84,slow=33						
UNV	**Unalaska Valle**	**78.78**	**6**	*e*P	**P**	**08 32 19.1**	**-1.4**
	12nm,0.6s						
SAO	**San Andreas Ge**	**80.34**	**42**	*e*P	**P**	**08 32 29.4**	**+0.1**
	9.3nm,1.0s						
PEA0B	**Petropavlovsk-**	**80.69**	**345**	*e*P	**P**	**08 32 30.3**	**-0.5**
PETK	**Petropavlovsk-**	**80.69**	**345**	P	**P**	**08 32 30.0**	**-0.7**
PETK	**Petropavlovsk-**	**80.69**	**345**	P	**P**	**08 32 30.0**	**-0.7**
	16nm,0.8s,baz=120,slow=8.5,SNR=22						
KSRS	**Korea Array**	**80.86**	**318**	P	**P**	**08 32 31.8**	**-0.2**
	0.9nm,0.7s,baz=133,slow=7.4,SNR=5.5						
KSAR	**Wonju Array Be**	**80.88**	**318**	P	**P**	**08 32 31.8**	**-0.3**
ARVC	**Arvin**	**80.93**	**45**	P	**P**	**08 32 32.7**	**+0.2**
	baz=81						
SDPT	**Sand Point**	**80.99**	**9**	*e*P	**P**	**08 32 31.2**	**-1.0**
	2.0nm,0.8s						
MURC	**Murrieta**	**81.05**	**47**	⇓P	**P**	**08 32 33.1**	**-0.1**
	baz=81						
BFSC	**Mount Baldy Ra**	**81.14**	**46**	⇓P	**P**	**08 32 33.6**	**-0.2**
	baz=81						
MONP	**Monument Peak**	**81.14**	**48**	⇓P	**P**	**08 32 33.9**	**0.0**
	baz=81						
VES	**Vestal, Richgr**	**81.22**	**44**	⇓P	**P**	**08 32 33.9**	**-0.1**
	baz=81						
EDW2	**Edwards Air Fo**	**81.32**	**45**	⇑P	**P**	**08 32 34.6**	**-0.1**
	baz=82						
ISA	**Isabella**	**81.49**	**44**	*e*P	**P**	**08 32 35.9**	**+0.3**
	15nm,1.3s						
ISA	**Isabella**	**81.49**	**44**	⇑P	**P**	**08 32 36.1**	**+0.5**
	baz=82						
PFO	**Pinyon Flat Ob**	**81.55**	**47**	⇑P	**P**	**08 32 35.8**	**-0.2**
	baz=82						
KHMM	**Horse Mountain**	**81.75**	**38**	*e*P	**P**	**08 32 37.5**	**+0.6**
	26nm,1.6s						
CMB	**Columbia Colle**	**81.81**	**42**	*e*P	**P**	**08 32 37.0**	**-0.1**
	8.2nm,1.1s						
LRMC	**Laurel Mountai**	**81.88**	**45**	⇑P	**P**	**08 32 38.0**	**+0.4**
	baz=82						
BELC	**Belle Mtn. Jos**	**82.09**	**47**	P	**P**	**08 32 39.3**	**+0.5**
	baz=82,SNR=7.4						
WDC	**Whiskeytown Da**	**82.22**	**39**	*e*P	**P**	**08 32 39.4**	**+0.3**
	8.8nm,1.1s						
CWC	**Cottonwood Cre**	**82.22**	**44**	⇑P	**P**	**08 32 39.9**	**+0.4**
	baz=82						
CHGN	**Chignik**	**82.23**	**10**	*e*P	**P**	**08 32 38.4**	**-0.4**
BC3	**Big Chuckawall**	**82.25**	**48**	P	**P**	**08 32 39.9**	**+0.2**
	baz=82,SNR=5.6						
GLA	**Glamis**	**82.31**	**48**	⇑P	**P**	**08 32 41.0**	**+1.1**
	baz=82						
GSC	**Goldstone**	**82.34**	**46**	*e*P	**P**	**08 32 40.2**	**+0.1**
	9.3nm,1.1s						
GSC	**Goldstone**	**82.34**	**46**	⇓P	**P**	**08 32 40.1**	**+0.1**
	baz=82						
MPMC	**Manual Prospec**	**82.36**	**45**	⇑P	**P**	**08 32 40.8**	**+0.5**
	baz=82						
IRM	**Iron Mountain**	**82.75**	**47**	P	**P**	**08 32 43.1**	**+0.9**
	baz=83,SNR=5.9						
GMRC	**Granite Mounta**	**82.78**	**47**	⇓P	**P**	**08 32 42.8**	**+0.5**
	baz=83						
SYO	**Syowa Base**	**82.84**	**192**	⇑*e*P	**P**	**08 32 41.0**	**-1.0**
113A	**Mohawk Valley,**	**82.87**	**49**	P	**P**	**08 32 43.1**	**+0.4**
	baz=83						
YBH	**Yreka Blue Hor**	**82.89**	**38**	*e*P	**P**	**08 32 42.9**	**+0.2**
	13nm,1.4s						
Y12C	**Blythe**	**82.93**	**48**	P	**P**	**08 32 43.6**	**+0.6**
	baz=83						
TUQ	**Turquoise Moun**	**83.00**	**46**	P	**P**	**08 32 44.0**	**+0.5**
	baz=83						
BEKR	**Beckworth**	**83.00**	**40**	*e*P	**P**	**08 32 43.6**	**+0.1**
	3.3nm,1.0s						
FURC	**Furnace Creek,**	**83.02**	**45**	P	**P**	**08 32 44.1**	**+0.7**
	baz=83						
SHOC	**Shoshone**	**83.04**	**45**	P	**P**	**08 32 44.2**	**+0.7**
	baz=83						
214A	**Organ Pipe Nat**	**83.07**	**50**	P	**P**	**08 32 43.8**	**-0.1**
	baz=83						
USRK	**Ussuriysk Arra**	**83.15**	**326**	P	**P**	**08 32 44.4**	**+0.5**
	5.8nm,0.8s,baz=102,slow=5.0,SNR=10						
LDFC	**Landfair**	**83.32**	**47**	*e*P	**P**	**08 32 46.2**	**+1.0**
	20nm,0.9s						
NVAR	**Mina Array Bea**	**83.32**	**42**	P	**P**	**08 32 44.8**	**-0.5**
NVAR	**Mina Array Bea**	**83.32**	**42**	P	**P**	**08 32 44.8**	**-0.5**
	3.7nm,0.9s,baz=224,slow=7.5,SNR=26						
HUMO	**Hull Mountain**	**83.34**	**37**	*e*P	**P**	**08 32 46.0**	**+1.0**
	40nm,2.0s						
PDMCI	**Parker Dam,Lak**	**83.51**	**48**	P	**P**	**08 32 46.7**	**+0.8**
	baz=84,SNR=5.5						
NJ2	**Nanjing**	**83.51**	**310**	*e*P	**P**	**08 32 47.1**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SNAA	**Sanae**	**83.73**	**178**	*e*P	**P**	**08 32 47.3**	**+0.6**
SNAA	**Sanae**	**83.73**	**178**	*e*PcP	**PcP**	**08 32 49.4**	**-1.2**
SNAA	**Sanae**	**83.73**	**178**	*e*P	**P**	**08 32 47.1**	**+0.5**
	comp=Z,19nm,1.1s						
Z14A	**Wintersburg**	**83.78**	**49**	P	**P**	**08 32 48.3**	**+0.9**
	baz=84						
Y14A	**Wickenburg**	**84.07**	**49**	P	**P**	**08 32 49.4**	**+0.5**
	baz=84,SNR=5.2						
W13A	**Hualapai Mount**	**84.14**	**47**	P	**P**	**08 32 50.0**	**+0.5**
	baz=84,SNR=10						
VNA1	**Neumayer--Stat**	**84.49**	**176**	*e*P	**P**	**08 32 51.3**	**+0.9**
COR	**Corvallis**	**84.50**	**35**	*e*P	**P**	**08 32 53.0**	**+2.2**
	comp=Z,39nm,1.4s						
TUC	**Tucson**	**84.69**	**51**	*e*P	**P**	**08 32 52.1**	**0.0**
	comp=Z,44nm,1.1s						
R11A	**Troy Canyon, C**	**84.96**	**44**	P	**P**	**08 32 53.5**	**0.0**
	baz=85						
319A	**Douglas**	**85.26**	**52**	P	**P**	**08 32 55.5**	**+0.5**
	baz=85						
X16A	**Lo Mia Camp, P**	**85.41**	**49**	P	**P**	**08 32 57.0**	**+1.2**
	baz=86,SNR=8.1						
PLCA	**Paso Flores**	**85.49**	**133**	P	**P**	**08 32 56.5**	**+0.3**
PLCA	**Paso Flores**	**85.49**	**133**	P	**P**	**08 32 56.5**	**+0.3**
	comp=Z,4.3nm,0.9s,baz=236,slow=6.2,SNR=5.8						
320A	**Kipp Ranch, An**	**85.78**	**53**	P	**P**	**08 32 58.1**	**+0.4**
	baz=86						
CCUT	**Cedar City**	**85.91**	**45**	*e*P	**P**	**08 32 58.7**	**+0.5**
	comp=Z,11nm,1.3s						
U15A	**North Rim**	**85.97**	**47**	P	**P**	**08 32 59.3**	**+0.7**
	baz=86						
ARUT	**Antelope Range**	**86.00**	**45**	*e*P	**P**	**08 32 58.9**	**+0.3**
	comp=Z,8.6nm,1.2s						
WUAZ	**Wupatki**	**86.06**	**48**	*e*P	**P**	**08 32 58.9**	**-0.1**
	comp=Z,16nm,1.4s						
WUAZ	**Wupatki**	**86.06**	**48**	P	**P**	**08 32 59.5**	**+0.5**
	baz=86						
220A	**Playas Peak, P**	**86.08**	**52**	P	**P**	**08 32 59.9**	**+0.8**
	baz=86						
120A	**U Bar Ranch, L**	**86.35**	**52**	P	**P**	**08 33 01.1**	**+0.6**
	baz=86						
CN2	**Changchun**	**86.39**	**322**	*e*P	**P**	**08 33 00.9**	**+0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
X18A	**Snowflake**	**86.49**	**49**	P	**P**	**08 33 01.8**	**+0.7**
	baz=87						
Z20A	**Nine Sixteen R**	**86.68**	**51**	P	**P**	**08 33 03.1**	**+1.0**
	baz=87						
121A	**Cookes Peak, D**	**86.95**	**52**	P	**P**	**08 33 04.6**	**+1.2**
	baz=87,SNR=6.6						
RSO	**Redoubt South**	**87.15**	**12**	*e*P	**P**	**08 33 02.2**	**-1.5**
	comp=Z,17nm,1.1s						
222A	**Williams Famil**	**87.22**	**53**	P	**P**	**08 33 05.6**	**+1.0**
	baz=87,SNR=7.8						
MSU	**Marysvale**	**87.22**	**45**	*e*P	**P**	**08 33 05.6**	**+0.9**
Y20A	**Horse Springs,**	**87.25**	**51**	P	**P**	**08 33 06.2**	**+1.2**
	baz=87,SNR=13						
SVW2	**Sparrevohn**	**87.26**	**10**	*e*P	**P**	**08 33 03.0**	**-1.0**
	comp=Z,5.6nm,0.9s						
X20A	**Quemado**	**87.51**	**50**	P	**P**	**08 33 07.0**	**+0.9**
	baz=88,SNR=7.5						
122A	**Conniff Cattle**	**87.60**	**52**	P	**P**	**08 33 07.9**	**+1.4**
	baz=88,SNR=6.8						
DUG	**Dugway**	**87.78**	**43**	P	**P**	**08 33 07.5**	**+0.3**
	baz=88						
Y21A	**Point of Rocks**	**87.80**	**51**	P	**P**	**08 33 08.8**	**+1.2**
	baz=88,SNR=9.6						
W20A	**Ramah**	**87.82**	**50**	P	**P**	**08 33 08.1**	**+0.5**
	baz=88						
MFID	**Camas Ranch**	**87.87**	**40**	*e*P	**P**	**08 33 06.9**	**-0.6**
	comp=Z,9.8nm,1.6s						
Z22A	**Elephant Butte**	**87.91**	**52**	P	**P**	**08 33 08.8**	**+0.9**
	baz=88,SNR=14						
SPU	**Mount Spurr**	**87.94**	**12**	*e*P	**P**	**08 33 06.3**	**-1.0**
X21A	**Alamocita Cree**	**87.95**	**50**	P	**P**	**08 33 09.4**	**+1.1**
	baz=88,SNR=8.8						
324A	**Moseley Ranch,**	**88.06**	**54**	P	**P**	**08 33 08.7**	**0.0**
	baz=88,SNR=7.0						
425A	**Indio Mountain**	**88.09**	**55**	P	**P**	**08 33 09.2**	**+0.3**
	baz=88,SNR=10						
Q16A	**Castle Valley**	**88.10**	**45**	P	**P**	**08 33 09.3**	**+0.5**
	baz=88						
626A	**Big Bend Ranch**	**88.12**	**56**	P	**P**	**08 33 09.3**	**+0.3**
	baz=88						
MNTX	**Cornudas Mount**	**88.26**	**54**	*e*P	**P**	**08 33 09.6**	**+0.1**
	comp=Z,3.2nm,1.0s						
Y22A	**Socorro**	**88.27**	**51**	P	**P**	**08 33 10.2**	**+0.5**
	baz=88						
224A	**Cornudas Mount**	**88.35**	**54**	P	**P**	**08 33 10.8**	**+0.7**
	baz=88,SNR=6.9						
TXAR	**Lajitas Array**	**88.36**	**57**	P	**P**	**08 33 09.9**	**-0.2**
TXAR				PKiKP	PKiKP	08 38 16.6	+5.7
TXAR	**Lajitas Array**	**88.36**	**57**	P	**P**	**08 33 09.9**	**-0.2**
	comp=Z,3.1nm,0.9s,baz=213,slow=6.5,SNR=29						
TXAR				PKiKP	PKiKP	08 38 16.6	+5.7
	comp=Z,0.6nm,0.8s,baz=112,slow=1.0,SNR=3.5						
LAZ	**Ladron**	**88.39**	**51**	*e*P	**P**	**08 33 10.9**	**+0.7**
325A	**Bean Ranch, Si**	**88.40**	**54**	P	**P**	**08 33 10.2**	**-0.2**
	baz=88,SNR=6.5						
526A	**Mary Lane Ranc**	**88.40**	**56**	P	**P**	**08 33 10.5**	**+0.1**
	baz=88						
Z23A	**Rita Site, Whi**	**88.44**	**52**	P	**P**	**08 33 10.9**	**+0.5**
	baz=89						
I12A	**Atlanta**	**88.50**	**40**	P	**P**	**08 33 10.1**	**-0.5**
	baz=89						
BNM	**Barren Site**	**88.62**	**51**	*e*P	**P**	**08 33 11.4**	**0.0**
SRU	**San Rafael**	**88.63**	**45**	P	**P**	**08 33 11.6**	**+0.3**
	baz=89						
627A	**Terlingua Ranc**	**88.63**	**57**	P	**P**	**08 33 11.5**	**+0.1**
	baz=89						
LPM	**Los Pinos Moun**	**88.70**	**51**	*e*P	**P**	**08 33 12.3**	**+0.6**
124A	**Stringfield Ra**	**88.72**	**53**	P	**P**	**08 33 12.3**	**+0.5**
	baz=89,SNR=6.9						
426A	**McDonald Obser**	**88.75**	**55**	P	**P**	**08 33 12.0**	**0.0**
	baz=89						
HLID	**Hailey**	**88.78**	**40**	*e*P	**P**	**08 33 12.1**	**+0.2**
	comp=Z,36nm,2.5s						
HLID	**Hailey**	**88.78**	**40**	P	**P**	**08 33 12.1**	**+0.2**
	baz=89						
527A	**Woodward Ranch**	**88.80**	**56**	P	**P**	**08 33 12.4**	**+0.2**
	baz=89						
225A	**Deer Hill, Car**	**88.88**	**54**	P	**P**	**08 33 13.0**	**+0.4**
	baz=89						
PMR	**Palmer**	**88.89**	**13**	*e*P	**P**	**08 33 11.5**	**-0.1**
	comp=Z,15nm,1.2s						
Y23A	**Lovelace Mesa,**	**88.91**	**52**	P	**P**	**08 33 13.2**	**+0.4**
	baz=89,SNR=8.0						
628A	**Black Gap, Mar**	**89.03**	**57**	P	**P**	**08 33 13.2**	**0.0**
	baz=89						
U21A	**Nageezi**	**89.09**	**49**	P	**P**	**08 33 14.2**	**+0.6**
	baz=89,SNR=14						
Z24A	**Sheeppen Canyo**	**89.10**	**52**	P	**P**	**08 33 14.1**	**+0.5**
	baz=89,SNR=5.2						
H12A	**Diamond D Ranc**	**89.12**	**39**	P	**P**	**08 33 13.5**	**+0.1**
	baz=89						
ANMO	**Albuquerque**	**89.15**	**51**	*e*P	**P**	**08 33 13.9**	**0.0**
	comp=Z,9.5nm,1.1s						
G12A	**Big Creek, Yel**	**89.20**	**38**	P	**P**	**08 33 13.9**	**+0.2**
	baz=89						
125A	**Gardner Draw,**	**89.28**	**53**	P	**P**	**08 33 14.4**	**0.0**
	baz=89						
427A	**Hayter Ranch,**	**89.31**	**55**	P	**P**	**08 33 14.8**	**+0.3**
	baz=89						
V22A	**San Miguel Ran**	**89.33**	**50**	P	**P**	**08 33 14.9**	**+0.2**
	baz=90						
226B	**Tecolote Peak,**	**89.34**	**54**	P	**P**	**08 33 14.7**	**0.0**
	baz=90						
Y24A	**Capitan**	**89.35**	**52**	P	**P**	**08 33 15.2**	**+0.5**
	baz=90,SNR=21						
S20A	**Disappointment**	**89.36**	**47**	P	**P**	**08 33 14.8**	**0.0**
	baz=90						
HWUT	**Hardware Ranch**	**89.37**	**43**	*e*P	**P**	**08 33 13.7**	**-0.9**
	comp=Z,2.5nm,1.2s						
528A	**Cox Ranch, San**	**89.43**	**56**

W25A	**X Bar L Ranch,** baz=91,SNR=15	90.70	51	P		P	08 33 20.8	-0.1
F14A	**Wisdom** baz=91	90.71	39	P		P	08 33 20.8	0.0
631A	**Perdido Creek** baz=91	90.77	58	P		P	08 33 21.2	0.0
TPAW	**Teton Pass** comp=Z,8.6nm,1.3s	90.80	42	*e*P		P	08 33 21.5	+0.1
MCK	**McKinley** comp=Z,9.7nm,1.0s	90.87	12	*e*P		P	08 33 20.2	-0.7
Q22A	**Crested Butte,** baz=91	90.87	47	P		P	08 33 22.0	+0.1
V25A	**Rancho No Teng** baz=91,SNR=7.3	90.90	51	P		P	08 33 21.6	-0.4
SNOW	**Snow King Moun** comp=Z,13nm,1.1s	90.90	42	*e*P		P	08 33 22.2	+0.3
732A	**Laxson Ranch,** baz=91	90.91	59	P		P	08 33 21.7	-0.2
Y27A	**Causey** baz=91,SNR=7.7	90.97	53	P		P	08 33 22.2	0.0
MSO	**Missoula**	90.98	38	*e*P		P	08 33 21.5	-0.5
MSO	**Missoula** baz=91	90.98	38	P		P	08 33 21.3	-0.7
SMCO	**Snowmass** comp=Z,3.7nm,1.0s	90.99	47	*e*P		P	08 33 22.2	-0.4
L19A	**Farson** baz=91	91.01	43	P		P	08 33 21.8	-0.6
N20A	**Spence Gulch,** baz=91	91.02	45	P		P	08 33 22.3	-0.2
IMW	**Indian Meadow** comp=Z,8.6nm,1.1s	91.03	41	*e*P		P	08 33 22.6	+0.1
MOOW	**Moose Ponds** comp=Z,6.3nm,1.4s	91.07	41	*e*P		P	08 33 22.5	-0.1
LOHW	**Long Hollow** comp=Z,5.9nm,1.1s	91.08	42	*e*P		P	08 33 22.4	-0.2
531A	**Rocksprings** baz=91	91.14	57	P		P	08 33 22.8	-0.2
F15A	**Butte** baz=91	91.23	39	P		P	08 33 23.1	-0.2
LRM	**Limekiln Ridge**	91.24	39	*e*P		P	08 33 23.2	-0.1
Z28A	**Tucker Farm, M** baz=91	91.25	54	P		P	08 33 22.9	-0.6
330A	**Mertzon** baz=91	91.25	56	P		P	08 33 22.8	-0.7
BW06	**Boulder Array** comp=Z,4.5nm,1.0s	91.25	43	*e*P		P	08 33 22.8	-0.7
PDAR	**Pinedale Array**	91.25	43	P		P	08 33 22.7	-0.8
PDAR	**Pinedale Array** comp=Z,3.7nm,0.9s,baz=215,slow=3.0,SNR=20	91.25	43	P		P	08 33 22.7	-0.8
R23A	**Moffat** baz=91	91.25	48	P		P	08 33 23.6	0.0
QLMT	**Earthquake Lak**	91.27	40	*e*P		P	08 33 23.9	+0.4
MSTX	**Muleshoe** baz=91,SNR=6.1	91.29	53	P		P	08 33 23.9	+0.1
H16A	**Russell Place,** baz=92,SNR=9.1	91.30	40	P		P	08 33 24.4	+0.8
129A	**Stewart Farms,** baz=91	91.31	55	P		P	08 33 23.6	-0.2
U25A	**Circle Dot Ran** baz=92	91.32	50	P		P	08 33 23.9	0.0
D14A	**Greenough** baz=92,SNR=5.8	91.37	38	⇓P		P	08 33 23.2	-0.6
X27A	**F and S Farms,** baz=92	91.39	52	P		P	08 33 24.2	0.0
S24A	**Houchin Ranch,** baz=92	91.39	49	P		P	08 33 24.2	-0.2
632A	**Uvalde** baz=92	91.42	58	P		P	08 33 24.1	-0.1
CHMT	**Chamberlain Mo**	91.42	38	*e*P		P	08 33 23.9	-0.3
V26A	**Tequesquite Ra** baz=92	91.46	51	P		P	08 33 24.5	0.0
N21A	**Black Mountain** baz=92	91.46	45	P		P	08 33 24.5	0.0
230A	**Sterling City** baz=92	91.52	56	P		P	08 33 24.4	-0.3
H17A	**Grant Village** baz=92	91.53	41	P		P	08 33 25.1	+0.4
L20A	**Wamsutter** baz=92,SNR=5.2	91.60	44	P		P	08 33 26.1	+1.0
I18A	**Diamond G Ranc** baz=92	91.60	42	P		P	08 33 25.2	+0.1
532A	**Rocksprings** baz=92,SNR=12	91.61	58	P		P	08 33 25.2	-0.1
W27A	**Bowe Ranch, En** baz=92	91.61	52	P		P	08 33 24.6	-0.6
T25A	**Trinidad** baz=92	91.69	50	P		P	08 33 25.5	-0.1
F16A	**Kennard Place,** baz=92,SNR=5.3	91.69	39	P		P	08 33 25.6	+0.3
Z29A	**Hungry Hill Ra** baz=92,SNR=6.6	91.73	54	P		P	08 33 25.3	-0.4
331A	**San Angelo** baz=92	91.77	56	P		P	08 33 25.1	-0.8
O22A	**Kremmling** baz=92	91.78	46	P		P	08 33 26.0	-0.2
U26A	**Atchley Ranch,** baz=92	91.78	51	P		P	08 33 25.6	-0.4
DOT	**Dot Lake**	91.79	14	*e*P		P	08 33 25.2	+0.1
J19A	**Crowheart** baz=92,SNR=7.2	91.83	43	P		P	08 33 25.5	-0.6
JCT	**Junction City** comp=Z,21nm,0.7s	91.86	57	*e*P		P	08 33 26.4	+0.1
JCT	**Junction City** baz=92	91.86	57	P		P	08 33 26.2	-0.1
D15A	**Lincoln** baz=92	91.90	38	P		P	08 33 26.4	+0.2
S25A	**Robets Cordova** baz=92	91.93	49	P		P	08 33 26.8	+0.1
K20A	**Yellowstone Ra** baz=92	91.95	43	P		P	08 33 26.3	-0.4
130A	**Snyder** baz=92	91.97	55	P		P	08 33 26.5	-0.3
X28A	**Dimmitt** baz=92	91.97	53	P		P	08 33 26.5	-0.4
M21A	**Separation Pea** baz=92	92.01	45	P		P	08 33 27.3	+0.2
Y29A	**Porterfield Fa** baz=92,SNR=8.2	92.04	54	P		P	08 33 27.1	-0.1
432A	**Menard** baz=92,SNR=9.6	92.05	57	P		P	08 33 26.2	-1.0
E16A	**East Helena** baz=92,SNR=5.4	92.09	39	P		P	08 33 27.1	0.0
COLA	**College**	92.11	12	*e*P		P	08 33 25.6	-1.0
V27A	**Dan Oppiter Fa** baz=92	92.11	51	P		P	08 33 27.3	-0.2
231A	**Bronte** baz=92,SNR=9.1	92.14	56	P		P	08 33 27.0	-0.6
Z30A	**Sanderson Ranc** baz=92,SNR=5.8	92.17	54	P		P	08 33 27.5	-0.2
N22A	**Wattenberg Ran** baz=92	92.17	46	P		P	08 33 28.7	+0.8
ILAR	**Eielson Array**	92.20	12	P		P	08 33 25.7	-1.3
ILAR	**Eielson Array** comp=Z,2.2nm,1.0s,baz=218,slow=5.3,SNR=9.3	92.20	12	P		P	08 33 25.7	-1.3
ISCO	**Idaho Springs** baz=92	92.21	47	P		P	08 33 28.2	+0.1
O23A	**Lake Granby, G** baz=92	92.22	46	P		P	08 33 28.9	+0.8
H18A	**Shoshone NF, C** baz=92	92.23	41	P		P	08 33 28.3	+0.4
B14A	**Marquette Ranc** baz=92,SNR=6.8	92.25	37	⇑P		P	08 33 27.3	-0.5
C15A	**Salmond Ranch,** baz=92	92.27	37	P		P	08 33 27.4	-0.5
T26A	**Comanche Natio** baz=92	92.27	50	P		P	08 33 27.8	-0.5
I19A	**Meeteetse** baz=92	92.28	42	P		P	08 33 28.4	+0.2
X29A	**Tulia** baz=92	92.30	53	P		P	08 33 28.1	-0.2
332A	**Millersview** baz=92,SNR=10	92.32	56	P		P	08 33 27.9	-0.5
F17A	**Fitzpatrick Pl** baz=92,SNR=7.5	92.32	40	P		P	08 33 29.0	+0.8
KMI	**Kunming**	92.34	296	P		P	08 33 30.5	+1.6
KMI				S		S	08 44 24.0	+0.1
KMI	comp=Z,8.0nm,0.7s			pmax		pmax		
KMI	comp=N,140nm,17.1s			LR		LR		
KMI	comp=E,200nm,13.8s			LR		LR		
KMI	comp=Z,270nm,17.1s			LR		LR		
131A	**Roby** baz=93,SNR=5.4	92.43	55	P		P	08 33 28.6	-0.3
D16A	**Dana Ranch, Ca** baz=93,SNR=6.1	92.44	38	P		P	08 33 29.1	+0.4
U27A	**Thompson Grove** baz=93	92.44	51	P		P	08 33 28.6	-0.4
J20A	**Shoshoni** baz=93,SNR=6.1	92.48	43	P		P	08 33 29.4	+0.4
V28A	**Channing** baz=93	92.55	52	P		P	08 33 29.6	+0.1
N23A	**Red Feather La** baz=93	92.56	46	P		P	08 33 30.2	+0.6
S26A	**Kim** baz=93	92.58	50	P		P	08 33 29.6	-0.1
K21A	**Alcova** baz=93	92.62	44	P		P	08 33 29.6	-0.2
232A	**Coleman** baz=93,SNR=12	92.62	56	P		P	08 33 29.6	-0.3
H19A	**Powell** baz=93	92.63	41	P		P	08 33 30.1	+0.4
G18A	**Lazy EL Ranch,** baz=93,SNR=5.4	92.64	41	P		P	08 33 30.3	+0.6
CMAR	**Chiang Mai Arr**	92.65	289	P		P	08 33 32.1	+1.9
CMAR	**Chiang Mai Arr** comp=Z,1.5nm,0.7s,baz=138,slow=3.5,SNR=6.2	92.65	289	P		P	08 33 32.1	+1.9
W29A	**Amraillo** baz=93	92.66	52	P		P	08 33 30.1	+0.1
RLMT	**Red Lodge** comp=Z,3.7nm,1.1s	92.71	41	*e*P		P	08 33 30.3	+0.2
C16A	**Fuhringer Ranc** baz=93,SNR=5.3	92.77	38	P		P	08 33 29.7	-0.5
I20A	**Worland** baz=93,SNR=6.5	92.77	42	P		P	08 33 30.4	+0.1
CHTO	**Chiang Mai** comp=Z,3.5nm,0.6s	92.80	289	P		P	08 33 31.1	+0.2
F18A	**Big Timber** baz=93,SNR=5.5	92.87	40	P		P	08 33 31.0	+0.2
J21A	**Lysite** baz=93,SNR=11	92.87	43	P		P	08 33 31.1	+0.2
A15A	**Johnson Ranch,** baz=93	92.90	36	P		P	08 33 31.3	+0.5
Z31A	**Sharp Cattle R** baz=93	92.91	55	P		P	08 33 30.8	-0.3
R26A	**Arlington** baz=93	92.93	49	P		P	08 33 30.9	-0.3
ABTX	**Abilene, Hawle** baz=93	92.97	55	P		P	08 33 31.5	+0.1
D17A	**Six Diamond Ra** baz=93,SNR=11	93.00	39	P		P	08 33 31.5	+0.2
P25A	**Willow Gulch B** baz=93	93.03	48	P		P	08 33 31.9	+0.2
K22A	**Casper** baz=93	93.08	44	P		P	08 33 32.1	+0.3
E18A	**Harlowton** baz=93	93.12	39	P		P	08 33 32.6	+0.7
Y31A	**Rekieta Farm,** baz=93,SNR=8.5	93.12	54	P		P	08 33 32.0	-0.1
H20A	**Greybull** baz=93,SNR=7.1	93.13	42	P		P	08 33 31.6	-0.4
HHC	**Hu-ho-hao-te**	93.17	314	*e*P		P	08 33 32.0	-0.2
HHC				pP		pP	08 34 01.0	+1.3
HHC				sP		sP	08 34 12.0	+1.2
HHC				SKS		SKSac	08 43 53.6	-3.2
HHC				S		S	08 44 25.6	-4.8
HHC				SS		SS	08 50 46.5	-2.2
HHC	comp=Z,33nm,0.8s			pmax		pmax		
HHC	comp=Z,440nm,8.3s			pmax		pmax		
Q26A	**Hugo** baz=93	93.18	48	P		P	08 33 32.2	-0.2
I21A	**Big Trails, Te** baz=93,SNR=9.9	93.21	43	P		P	08 33 31.7	-0.7
N24A	**Carr** baz=93	93.22	46	P		P	08 33 33.0	+0.5
C17A	**Wharram Farm,** baz=93,SNR=9.1	93.22	38	P		P	08 33 31.8	-0.4
F19A	**Roth Farm, Mol** baz=94,SNR=5.1	93.30	40	P		P	08 33 32.8	+0.1
L23A	**Garrett** baz=94	93.33	45	P		P	08 33 33.3	+0.2
R27A	**Eads** baz=94	93.37	49	P		P	08 33 32.9	-0.3
G20A	**Bridger** baz=94	93.39	41	P		P	08 33 33.0	-0.2
Z32A	**Haskell** baz=94,SNR=9.6	93.40	55	P		P	08 33 33.0	-0.3
EGAK	**Eagle** comp=Z,8.8nm,1.2s	93.41	14	*e*P		P	08 33 33.4	+0.8
A16A	**West Butte Ran** baz=94	93.50	37	P		P	08 33 33.1	-0.4
J22A	**Midwest** baz=94,SNR=8.0	93.51	43	P		P	08 33 33.5	-0.3
D18A	**Linhart Farms,** baz=94	93.53	39	P		P	08 33 34.7	+1.0
M24A	**Cheyenne** baz=94	93.57	46	P		P	08 33 34.7	+0.5
X31A	**McDonald Ranch** baz=94	93.64	54	P		P	08 33 33.5	-0.9
E19A	**Rath Farm, Rou** baz=94,SNR=5.9	93.71	40	P		P	08 33 35.0	+0.4
Y32A	**R-V Farms, Ver** baz=94,SNR=6.0	93.75	54	P		P	08 33 34.7	-0.2
I22A	**9 Mile Ranch,** baz=94,SNR=6.7	93.75	43	P		P	08 33 34.9	+0.1
W31A	**Holland Ranch,** baz=94	93.92	53	P		P	08 33 35.7	0.0
A17A	**Triple J Farms** baz=94	93.98	37	P		P	08 33 35.4	-0.3
D19A	**Cripps Ranch,** baz=94,SNR=6.6	94.04	39	P		P	08 33 36.7	+0.7
CD2	**Chengdu**	94.08	302	*e*P		P	08 33 37.0	+0.4
CD2				pP		pP	08 34 04.0	0.0
CD2				sP		sP	08 34 15.0	-0.1
CD2				PP		PP	08 37 27.3	+2.7
CD2				SKS		SKSac	08 44 01.0	-1.1
CD2				S		S	08 44 36.3	-2.4
CD2				sS		sS	08 45 23.0	-3.2
CD2				SS		SS	08 51 02.8	+0.9
CD2	comp=Z,10.0nm,0.8s			pmax		pmax		
CD2	comp=Z,40nm,6.8s			pmax		pmax		
E20A	**Meyer Farm, Mu** baz=94	94.12	40	P		P	08 33 36.7	+0.2
H22A	**Clearmont** baz=94	94.19	42	P		P	08 33 37.5	+0.7
C19A	**Slack Wire Ran** baz=94,SNR=5.2	94.25	39	P		P	08 33 37.4	+0.4
V31A	**Spring Creek L** baz=94	94.27	53	P		P	08 33 37.6	+0.3
N26A	**Koester Ranch,** baz=94	94.31	47	P		P	08 33 37.7	+0.2
D20A	**Manuel Ranch,** baz=95,SNR=5.5	94.43	40	P		P	08 33 38.4	+0.6
O27A	**Beecher Island** baz=95	94.50	48	P		P	08 33 37.8	-0.6
F23A	**Volborg** baz=96	95.34	42	P		P	08 33 42.0	0.0
H24A	**Dirks Ranch, A** baz=96	95.38	43	P		P	08 33 41.8	-0.4
F24A	**Ekalaka** baz=96	95.98	42	P		P	08 33 45.2	+0.3
LZH	**Lanzhou**	96.29	307	*e*P		P	08 33 49.5	+2.8
LZH				pP		pP	08 34 16.6	+2.4
LZH				sP		sP	08 34 27.0	+1.7
LZH				SKS		SKSac	08 44 16.4	+2.5
LZH				*e*S		S	08 44 58.1	+0.2
LZH				sS		sS	08 45 44.0	-1.5
LZH	comp=Z,16nm,1.5s			pmax		pmax		
LZH	comp=Z,91nm,9.3s			pmax		pmax		
LZH	comp=N,140nm,18.4s			LR		LR		
LZH	comp=E,130nm,17.6s			LR		LR		
LZH	comp=Z,180nm,20.0s			LR		LR		
J28A	**Allard Ranch,** baz=97	96.84	45	P		P	08 33 49.5	+0.6
K29A	**Lazy Trails An** baz=97	97.14	46	P		Pdif	08 33 50.7	+0.4
WMQ	**Urumqi**	110.59	310	*e*PKP			08 38 50.0	
MK31	**Makanchi Array**	114.96	312	*e*PKPdf		PKPdf	08 38 57.6	-0.6
MKAR	**Makanchi Array**	114.96	312	PKP		PKPdf	08 38 57.1	-1.1
MKAR	**Makanchi Array** comp=Z,0.8nm,0.8s,baz=72,slow=2.7,SNR=8.7	114.96	312	PKP		PKPdf	08 38 57.1	-1.1
KKAR	**Karatay Array**	122.79	307	*e*PKPdf		PKPdf	08 39 13.3	-0.1
ARCES	**ARCESS Array B**	133.32	349	PKP		PKPdf	08 39 32.1	-0.5
ARCES	**ARCESS Array B** comp=Z,1.9nm,0.8s,baz=341,slow=1.9,SNR=6.3	133.32	349	PKP		PKPdf	08 39 32.1	-0.5
FINES	**FINESS Array B**	140.19	343	PKPpre		PKPpre	08 39 41.0	
FINES	**FINESS Array B** comp=Z,1.4nm,0.6s,baz=58,slow=4.7,SNR=3.8	140.19	343	PKhKP		PKPpre	08 39 41.0	
HFS	**Hagfors**	143.92	351	PKPpre		PKPpre	08 39 49.4	
HFS	**Hagfors** comp=Z,4.0nm,0.7s,baz=58,slow=3.6,SNR=13	143.92	351	PKhKP		PKPpre	08 39 49.4	
NACGM	**Naroch**	145.26	336	*e*		PKPbc	08 39 52.0	-2.6
SUW	**Suwalki**	147.23	338	*e*PKPbc		PKPab	08 40 01.6	-0.8
SUW	**Suwalki**	147.23	338	*e*PKP		PKPab	08 40 02.3	-0.1
AKASG	**Malin Array Be**	147.29	329	PKPbc		PKPbc	08 39 59.9	-0.8
AKASG	**Malin Array Be** comp=Z,5.8nm,0.6s,baz=43,slow=3.9,SNR=22	147.29	329	PKPbc		PKPbc	08 39 59.9	-0.8
AK01	**Malin Array Si**	147.31	329	*e*PKPbc		PKPbc	08 40 00.5	-0.3
KIEV	**Kiev**	147.31	329	*e*PKPbc		PKPbc	08 40 00.4	-0.4
AK02	**Malin Array Si**	147.33	329	*e*PKPbc		PKPbc	08 40 00.6	-0.3
AK02				*e*PKPab		PKPab	08 40 02.5	-0.4
EKA	**Eskdalemuir Ar**	149.10	7	PKPbc		PKPbc	08 40 04.6	-0.7
EKA	**Eskdalemuir Ar** comp=Z,1.6nm,0.7s,baz=353,slow=2.9,SNR=6.4	149.10	7	PKPbc		PKPbc	08 40 04.6	-0.7
ASF	**Jabal al Asfar**	149.65	292	PKPbc		PKPbc	08 40 08.0	+0.4
ASF	**Jabal al Asfar** comp=Z,3.8nm,0.8s,baz=14,slow=4.2,SNR=5.8	149.65	292	PKPbc		PKPbc	08 40 08.0	+0.4
BR131	**Keskin Array S**	150.49	308	*e*PKPbc		PKPbc	08 40 09.8	+0.4
BR131				*e*PKPab		PKPab	08 40 17.0	+0.6
BRTR	**Keskin Array B**	150.49	308	PKPbc		PKPbc	08 40 09.2	-0.3
BRTR				PKPab		PKPab	08 40 16.1	-0.3
BRTR	**Keskin Array B** comp=Z,3.6nm,0.9s,baz=111,slow=2.0,SNR=11	150.49	308	PKPbc		PKPbc	08 40 09.2	-0.3
BRTR	comp=Z,3.7nm,0.6s,baz=46,slow=4.2,SNR=13			PKPab		PKPab	08 40 16.1	-0.3
MMAI	**Mount Meron Ar**	150.80	294	PKPbc		PKPbc	08 40 11.4	+1.1
MMAI				PKPab		PKPab	08 40 18.3	+0.5
MMAI	**Mount Meron Ar** comp=Z,7.1nm,0.6s,baz=46,slow=4.2,SNR=6.2	150.80	294	PKPbc		PKPbc	08 40 11.4	+1.1
MMAI	comp=Z,7.8nm,0.5s,baz=64,slow=3.4,SNR=7.8			PKPab		PKPab	08 40 18.3	+0.5
ANTO	**Ankara**	151.04	308	*e*PKPbc		PKPbc	08 40 11.7	+1.1
ANTO				*e*PKPab		PKPab	08 40 18.9	+0.3
BUR08	**Bucovina Ar. S**	151.32	328	*e*PKPbc		PKPbc	08 40 12.9	+1.8
BUR08				*e*PKPab		PKPab	08 40 19.6	+0.2
EIL	**Elat**	151.49	287	PKPbc		PKPbc	08 40 12.4	+0.6
EIL				PKPab		PKPab	08 40 20.4	-0.2
EIL	**Elat** comp=Z,4.6nm,0.7s,baz=52,slow=3.2,SNR=6.6	151.49	287	PKPbc		PKPbc	08 40 12.4	+0.6
EIL	comp=Z,16nm,1.0s,baz=57,slow=2.2,SNR=9.9			PKPab		PKPab	08 40 20.4	-0.2
STHS	**Stebnicka Huta**	151.68	335	*e*PKP		PKPbc	08 40 13.4	+1.7
CRVS	**Cervenica-Dubn**	152.01	334	*e*PKP		PKPbc	08 40 10.6	-1.9
KSP	**Ksiaz**	152.10	342	*e*PKP		PKPbc	08 40 13.3	+0.7
CSS	**Prodhromos**	152.14	298	PKPdf		PKPbc	08 40 12.9	-0.3
MLR	**Muntele Rosu**	152.41	324	PKPab		PKPab	08 40 24.8	+0.7
MLR	**Muntele Rosu** comp=Z,0.6nm,0.5s,baz=321,slow=9.3,SNR=4.5	152.41	324	PKPab		PKPab	08 40 24.8	+0.7
CLL	**Collm** comp=Z,9.0nm,0.9s	152.47	347	⇓*i* PKPbc		PKPbc	08 40 14.0	+0.6
CLL				*i* PKPab		PKPab	08 40 22.5	-1.5
CLL				*e*pPKPbc		pPKPbc	08 40 32.0	-10
CLL				*e*sPKPbc		sPKPbc	08 40 40.0	-13
UPC	**Upice**	152.48	342	⇑*e*PKP		PKPbc	08 40 14.3	+0.8
UPC				*e*PKPAB		PKPab	08 40 22.0	-2.1
DPC	**Dobruska-Polom**	152.54	342	⇑*e*PKP		PKPbc	08 40 14.6	+1.0
DPC				*e*PKPAB		PKPab	08 40 23.4	-1.0
BRG	**Berggiesshubel** comp=Z,5.5nm,1.0s	152.67	345	*i* PKP		PKPbc	08 40 14.2	+0.3
BRG	comp=Z,7.3nm,0.8s			*i*			08 40 23.4	
VYHS	**Vyhne**	153.34	337	*e*PKP		PKPbc	08 40 16.2	+0.8
PRU	**Pruhonice**	153.35	344	*e*PKPAB		PKPab	08 40 23.3	-4.4
VRAC	**Vranov**	153.39	340	PKPab		PKPab	08 40 28.1	+0.1
VRAC	**Vranov** comp=Z,2.5nm,0.5s,baz=3,slow=4.8,SNR=5.3	153.39	340	PKPab		PKPab	08 40 28.1	+0.1
PSZ	**Piszkesteto**	153.42	335	*e*PKPab		PKPab	08 40 29.6	+1.4
KHC	**Kasperske Hory**	154.38	344	*e*PKPDF		PKPdf	08 40 09.9	+0.6
KHC				⇑*e*PKP		PKiKP	08 40 19.3	+1.6
KHC				*ex*		x	08 40 25.5	
KHC				*e*PKPAB		PKPab	08 40 32.0	-0.2
KHC	**Kasperske Hory**	154.38	344	*e*PKPdf		PKPdf	08 40 09.5	+0.2
KHC				*e*PKPab		PKPab	08 40 32.2	0.0
GERES	**GERESS Array B**	154.62	344	PKP		PKPdf	08 40 09.7	0.0
GERES				PKPbc		PKPbc	08 40 17.0	-1.2
GERES	**GERESS Array B** comp=Z,0.2nm,0.5s,baz=35,slow=2.4,SNR=4.5	154.62	344	PKP		PKPdf	08 40 09.7	0.0
GERES	comp=Z,0.9nm,0.9s,baz=79,slow=2.1,SNR=4.5			PKPbc		PKPbc	08 40 17.0	-1.2
BFO	**Black Forest**	156.15	352	*e*PKPdf		PKPdf	08 40 10.9	-0.8
BFO				*e*PKPab		PKPab	08 40 38.8	-0.9
PERS	**Pernice**	156.22	340	*i* PKPdf		PKPab	08 40 40.5	+0.3
PERS				*i*			08 40 48.9	
VISS	**Visnje**	157.04	339	*i* PKPdf		PKPab	08 40 43.4	-0.3
VISS				*i*			08 40 51.1	
JAVS	**Javornik**	157.21	340	*i* PKPdf		PKPab	08 40 43.8	-0.7
JAVS				*i*			08 40 53.6	
TORD	**Torodi Ar. Bea**	168.34	172	PKP		PKPdf	08 40 24.0	-0.8
TORD				PKPab		PKPab	08 41 34.7	+1.0
TORD	**Torodi Ar. Bea** comp=Z,0.9nm,0.8s,baz=146,slow=1.2,SNR=4.2	168.34	172	PKP		PKPdf	08 40 24.0	-0.8
TORD	comp=Z,3.4nm,0.9s,baz=179,slow=4.6,SNR=11			PKPab		PKPab	08 41 34.7	+1.0

*ISCJB **14** 08:32:22.1±1.0,34°.91N±0°.08×28°.23E±0°.05,h28km, Error ellipse: s-maj=11.2km s-min=5.7km az=163.4*
*CSEM **14** 08:32:22.8±0.5,34°.96N×28°.19E,h20km,MD3.3, Error ellipse: s-maj=13.7km s-min=6.2km az=160.0*
*DDA **14** 08:32:24.8,35°.30N×28°.28E,h4km,MD3.4*
*ATH **14** 08:32:24.0,35°.03N×28°.09E,h58km±32km,MD3.3/5*

ISC 14 08:32:23.4±1.5,34°.98N±0°.08×28°.18E±0°.04,h28km,n22, σ1s01/30,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	1.01	304	*e*P		Pn	08 32 41.2	-0.5
KARP				*e*S		Sn	08 32 55.2	+0.2
KARP	**Karpathos**	1.01	304	*e*P		Pn	08 32 41.2	-0.5
KARP				*e*S		Sn	08 32 55.2	+0.2
ARG	**Arkhangelos**	1.23	358	*e*P		Pb	08 32 45.7	-0.4
ARG				*e*S		Sb	08 33 01.1	-0.5
ARG	**Arkhangelos**	1.23	358	*e*P		Pb	08 32 45.7	-0.4
ARG				*e*S		Sb	08 33 01.1	-0.5
ZKR	**Zakros**	1.62	275	*e*P		Pn	08 32 49.8	-0.3
ZKR	**Zakros**	1.62	275	*e*P		Pn	08 32 49.8	-0.3
AKAS	**Kas**	1.71	42	*i* P		Pn	08 32 52.0	+0.6
AKAS	**Kas**	1.71	42	*i* P		Pn	08 32 52.0	+0.6
TURN	**Turunc**	1.92	10	*i* P		Pn	08 32 52.7	-1.5
TURN	**Turunc**	1.92	10	*i* P		Pn	08 32 52.7	-1.5
NPS	**Neapolis**	2.12	278	*e*P		Pn	08 32 57.7	+0.6
NPS	**Neapolis**	2.12	278	*e*P		Pn	08 32 57.7	+0.6
LAST	**Lasithi**	2.23	275	*e*P		Pn	08 32 58.8	+0.3
LAST	**Lasithi**	2.23	275	*e*P		Pn	08 32 58.8	+0.3
GOLH	**Golhisar**	2.51	26	*i* P		Pn	08 33 04.1	+1.6
GOLH				*i* S		Sn	08 33 34.3	+2.0
GOLH	**Golhisar**	2.51	26	*i* P		Pn	08 33 04.1	+1.6
GOLH				*i* S		Sn	08 33 34.3	+2.0
DNZL	**Cakiroluk**	2.79	14	*i* P		Pn	08 33 06.6	+0.2
DNZL	**Cakiroluk**	2.79	14	*i* P		Pn	08 33 06.6	+0.2
VAM	**Vamos**	3.29	279	*e*P		Pn	08 33 14.0	+0.9
VAM	**Vamos**	3.29	279	*e*P		Pn	08 33 14.0	+0.9
GAZI	**Gazipasa**	3.59	68	*i* P		Pn	08 33 17.5	+0.3
GAZI				*i* S		Sn	08 33 57.3	-1.5
GAZI	**Gazipasa**	3.59	68	*i* P		Pn	08 33 17.5	+0.3
GAZI				*i* S		Sn	08 33 57.3	-1.5

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*NSSC **14** 08:37:41.2±2.0, 36°42N×36°04E, h4km±30km, MD1.0, ML2.1*
*DDA **14** 08:37:52.2, 36°36N×36°97E, h7km, MD2.8*
*CSEM **14** 08:37:52.2, 36°36N×36°97E, h7km, MD2.8*
ISC 14 08:37:52.7±1.2, 36°38N±0°06×36°95E±0°07, h11km, n14, σ0s62/14, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRWC	**Darouich**	**0.33**	**317**	*e*P	Pg	08 37 50.8	-8.5
DRWC	**Darouich**	**0.33**	**317**	*e*P	Pg	08 37 50.8	-8.5
	SNR=75						
KUZU	**Kuzuini**	**0.41**	**15**	*i* P	**Pg**	**08 38 00.0**	**-0.7**
KUZU				*i* S	**Sb**	**08 38 07.7**	**-0.5**
KUZU	**Kuzuini**	**0.41**	**15**	*i* P	**Pg**	**08 38 00.0**	**-0.7**
KUZU				*i* S	**Sb**	**08 38 07.7**	**-0.5**
BTCH	**Batrach**	**0.52**	**229**	*e*P	Pg	08 37 51.8	-11
BTCH				*e*S	Sg	08 37 58.0	-12
BTCH				AML	AML	08 38 05.0	
	comp=N,98nm,0.4s						
BTCH				AML	AML	08 38 07.7	
	comp=Z,172nm,0.5s						
BTCH				AML	AML	08 38 07.8	
	comp=E,224nm,0.7s						
BTCH	**Batrach**	**0.52**	**229**	*e*P	Pg	08 37 51.8	-11
	SNR=75						
BTCH				*e*S	Sg	08 37 58.0	-12
	comp=E,224nm,0.7s,SNR=59						
YAYL	**Yayladag**	**0.76**	**243**	*i* P	**Pg**	**08 38 06.5**	**-0.9**
YAYL				*i* S	**Sb**	**08 38 18.9**	**+0.5**
YAYL	**Yayladag**	**0.76**	**243**	*i* P	**Pg**	**08 38 06.5**	**-0.9**
YAYL				*i* S	**Sb**	**08 38 18.9**	**+0.5**
SLMH	**Al Salmeh**	**0.81**	**102**	*e*P	**Pn**	**08 38 10.6**	**+0.5**
SLMH	**Al Salmeh**	**0.81**	**102**	*e*P	**Pn**	**08 38 10.6**	**+0.5**
	SNR=57						
WRDH	**Warideh**	**0.97**	**207**	*e*P	Pg	08 37 59.0	-12
WRDH				*e*S	Sg	08 38 12.2	-12
WRDH				AML	AML	08 38 21.3	
	comp=N,63nm,0.7s						
WRDH				AML	AML	08 38 21.9	
	comp=E,60nm,0.6s						
WRDH				AML	AML	08 38 22.0	
	comp=Z,30nm,0.8s						
WRDH	**Warideh**	**0.97**	**207**	*e*P	Pg	08 37 59.0	-13
	SNR=67						
WRDH				*e*S	Sg	08 38 12.2	-12
	comp=Z,30nm,0.8s,SNR=59						
AYKD	**Aykdinkavak**	**1.04**	**354**	*i* P	**Pg**	**08 38 12.7**	**0.0**
AYKD				*i* S	**Sn**	**08 38 28.1**	**+0.3**
AYKD	**Aykdinkavak**	**1.04**	**354**	*i* P	**Pg**	**08 38 12.7**	**0.0**
AYKD				*i* S	**Sn**	**08 38 28.1**	**+0.3**

*IDC **14** 08:39:54.2±0.9, 51°35N×179°31E, h0km, mb3.4/9, mb1 3.8/10, mb1mx3.6/28, mbtmp3.5/10, ML4.2/1, Error ellipse: s-maj=34.9km s-min=18.5km az=164.0*
*ISCJB **14** 08:40:01.2±0.6, 51°36N±0°09×179°24E±0°05, h66km±4km, mb3.3/9, Error ellipse: s-maj=14.6km s-min=5.0km az=4.6*
*NEIC **14** 08:40:02.3, 51°39N×179°29E, h49km, ML3.6(AEIC), After AEIC.*
ISC 14 08:40:01.9±0.9, 51°37N±0°09×179°28E±0°04, h58km±7km, n53, σ1s22/59, mb3.5/9, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	**Amchitka**	**0.02**	**74**	P	**Pn**	**08 40 10.2**	**-0.3**
AMKA				S	**Sn**	**08 40 16.4**	**-0.3**
CESW	**Semis' Southwe**	**0.56**	**19**	P	**Pn**	**08 40 14.2**	**-0.1**
CERAA	**Semis' Rag'd T**	**0.59**	**25**	P	**Pn**	**08 40 14.8**	**+0.1**
CETU	**Semis' Tuman**	**0.61**	**13**	P	**Pn**	**08 40 15.0**	**+0.1**
CEAP	**Semis' Anvil P**	**0.66**	**17**	P	**Pn**	**08 40 15.6**	**+0.1**
LSSE	**Little Sitkin**	**0.71**	**322**	P	**Pn**	**08 40 16.5**	**+0.4**
LSPA	**Little Sitkin**	**0.73**	**323**	P	**Pn**	**08 40 16.7**	**+0.3**
LSPA				S	**Sn**	**08 40 27.8**	**+0.9**
LSSA	**Little Sitkin**	**0.75**	**321**	P	**Pn**	**08 40 16.9**	**+0.3**
LSNW	**Little Sitkin**	**0.76**	**322**	P	**Pn**	**08 40 17.0**	**+0.2**
GAKI	**Gareloi-Kavalg**	**1.21**	**81**	P	**Pn**	**08 40 23.2**	**+0.6**
GALAA	**Gareloi Lava P**	**1.28**	**72**	P	**Pn**	**08 40 24.4**	**+0.9**
GANE	**Gareloi Northe**	**1.29**	**69**	P	**Pn**	**08 40 24.2**	**+0.5**
GAEA	**Gareloi East**	**1.30**	**71**	P	**Pn**	**08 40 24.6**	**+0.8**
TANO	**Tanaga North**	**1.71**	**70**	P	**Pn**	**08 40 30.2**	**+0.9**
TASE	**Tanaga Southea**	**1.74**	**74**	P	**Pn**	**08 40 30.5**	**+0.8**
TAFP	**Tanaga Falls P**	**1.79**	**72**	P	**Pn**	**08 40 30.9**	**+0.5**
TAFP				S	**Sn**	**08 40 52.7**	**+0.6**
TAPA	**Tanaga Point A**	**1.87**	**75**	P	**Pn**	**08 40 32.2**	**+0.7**
KIKV	**Kanaga Island**	**2.27**	**76**	P	**Pn**	**08 40 37.9**	**+0.9**
KINC	**Kanaga Island**	**2.31**	**75**	P	**Pn**	**08 40 38.4**	**+0.9**
KINC				S	**Sn**	**08 41 06.5**	**+1.8**
KIRH	**Kanaga Island**	**2.32**	**75**	P	**Pn**	**08 40 38.7**	**+1.0**
ETKA	**Kagalaska Isla**	**2.74**	**78**	P	**Pn**	**08 40 44.4**	**+1.1**
GSCK	**Great Sitkin C**	**2.91**	**76**	P	**Pn**	**08 40 46.7**	**+1.0**
GSMY	**Great Sitkin M**	**2.98**	**75**	P	**Pn**	**08 40 47.5**	**+0.8**
GSTR	**Great Sitkin T**	**2.99**	**74**	*e*Pn	**Pn**	**08 40 47.4**	**+0.6**
GSTR				*e*Sn	**Sn**	**08 41 24.1**	**+2.7**
SMY	**Shemya**	**3.47**	**295**	P	**Pn**	**08 40 54.3**	**+1.0**
KOWE	**Korovin West**	**4.13**	**74**	P	**Pn**	**08 41 03.9**	**+1.5**
ATKA	**Atka Island**	**4.14**	**76**	P	**Pn**	**08 41 03.3**	**+0.9**
ATKA				S	**Sn**	**08 41 50.2**	**+0.7**
KOKL	**Mount Kliuchef**	**4.16**	**74**	P	**Pn**	**08 41 04.3**	**+1.6**
KOFP	**Korovin Flat P**	**4.21**	**75**	P	**Pn**	**08 41 04.5**	**+1.0**
SPIA	**Saint Paul Isl**	**8.45**	**42**	P	**Pn**	**08 42 03.8**	**+2.4**
MREP	**Makushin Rep't**	**8.85**	**69**	P	**Pn**	**08 42 10.2**	**+3.2**
UNV	**Unalaska Valle**	**9.00**	**68**	P	**Pn**	**08 42 11.3**	**+2.3**
ZRO	**Akutan Zero**	**9.35**	**67**	P	**Pn**	**08 42 16.6**	**+2.9**
KDAK	**Kodiak Island**	**17.44**	**57**	P	**Pn**	**08 43 58.9**	**-1.9**
KDAK	**Kodiak Island**	**17.44**	**57**	P	**Pn**	**08 43 58.9**	**-1.9**
	0.8nm,0.3s,baz=277,slow=10.0,SNR=7.1						
ILAR	**Eielson Array**	**22.01**	**40**	P	**P**	**08 44 49.7**	**-1.2**
ILAR	**Eielson Array**	**22.01**	**40**	P	**P**	**08 44 49.7**	**-1.2**
	0.3nm,0.7s,baz=233,slow=7.9,SNR=6.6						
YKA	**Yellowknife Ar**	**36.11**	**46**	P	**P**	**08 46 56.8**	**-0.9**
YKA	**Yellowknife Ar**	**36.11**	**46**	P	**P**	**08 46 56.8**	**-0.9**
	0.4nm,0.6s,baz=280,slow=8.3,SNR=4.8						
NVAR	**Mina Array Bea**	**44.75**	**81**	P	**P**	**08 48 10.6**	**+1.1**
NVAR	**Mina Array Bea**	**44.75**	**81**	P	**P**	**08 48 10.6**	**+1.1**
	0.4nm,0.7s,baz=300,slow=7.2,SNR=5.0						
SONM	**Songino Array**	**45.56**	**296**	P	**P**	**08 48 17.0**	**+1.2**
SONM	**Songino Array**	**45.56**	**296**	P	**P**	**08 48 17.0**	**+1.2**
	0.3nm,0.4s,baz=64,slow=9.8,SNR=2.8						
PDAR	**Pinedale Array**	**47.46**	**71**	P	**P**	**08 48 30.3**	**-0.5**
PDAR	**Pinedale Array**	**47.46**	**71**	P	**P**	**08 48 30.3**	**-0.5**
	0.3nm,0.6s,baz=297,slow=5.9,SNR=3.8						
MKAR	**Makanchi Array**	**59.08**	**307**	P	**P**	**08 49 55.1**	**-0.7**
MKAR	**Makanchi Array**	**59.08**	**307**	P	**P**	**08 49 55.1**	**-0.7**
	0.2nm,0.4s,baz=42,slow=6.0,SNR=4.3						
TXAR	**Lajitas Array**	**59.84**	**80**	P	**P**	**08 50 00.5**	**-0.9**
TXAR	**Lajitas Array**	**59.84**	**80**	P	**P**	**08 50 00.5**	**-0.9**
	0.2nm,0.5s,baz=305,slow=6.1,SNR=7.1						
WRA	**Warramunga Arr**	**81.19**	**222**	P	**P**	**08 52 10.9**	**-0.2**
WRA	**Warramunga Arr**	**81.19**	**222**	P	**P**	**08 52 10.9**	**-0.2**
	0.2nm,0.5s,baz=31,slow=6.0,SNR=4.6						
ASAR	**Alice Springs**	**84.68**	**221**	P	**P**	**08 52 30.2**	**+1.0**
ASAR	**Alice Springs**	**84.68**	**221**	P	**P**	**08 52 30.2**	**+1.0**
	0.3nm,0.7s,baz=27,slow=6.3,SNR=3.9						

*THE **14** 08:48:29.6, 40°40N×20°91E, h11km±1km, ML2.4/3, Error ellipse: s-maj=1.3km s-min=0.5km az=213.0*
*ISCJB **14** 08:48:31.0±0.5, 40°46N±0°02×21°00E±0°04, h5km±4km, Error ellipse: s-maj=4.8km s-min=4.1km az=13.4*
*CSEM **14** 08:48:30.9±0.2, 40°46N×20°98E, h2km, ML2.4/3, Error ellipse: s-maj=5.9km s-min=4.2km az=116.0*
*SKO **14** 08:48:30.1, 40°48N×20°80E, h11km*
*ATH **14** 08:48:31.2, 40°45N×21°00E, h5km±4km, MD3.1/8*
ISC 14 08:48:30.7±0.9, 40°46N±0°02×20°98E±0°03, h7km±6km, n31, σ0s48/51, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	**Nestorio**	**0.07**	**127**	P	**Pg**	**08 48 32.4**	**-0.2**
NEST				S	**Sg**	**08 48 34.3**	**+0.3**
NEST	**Nestorio**	**0.07**	**127**	P	**Pg**	**08 48 32.4**	**-0.2**
NEST				S	**Sg**	**08 48 34.3**	**+0.3**
KBN	**Korca**	**0.22**	**319**	P	**Pg**	**08 48 34.8**	**-0.4**
KBN				S	**Sg**	**08 48 38.6**	**+0.4**
KBN	**Korca**	**0.22**	**319**	P	**Pg**	**08 48 34.8**	**-0.4**
KBN				S	**Sg**	**08 48 38.6**	**+0.4**
FNA	**Florina**	**0.45**	**43**	P	**Pg**	**08 48 39.6**	**+0.2**
FNA				S	**Sb**	**08 48 47.6**	**-0.3**
FNA	**Florina**	**0.45**	**43**	*e*PG	**Pg**	**08 48 39.6**	**+0.2**
FNA				*e*SB	**Sg**	**08 48 46.0**	**+0.7**
FNA	**Florina**	**0.45**	**43**	P	**Pg**	**08 48 39.6**	**+0.2**
FNA				*e*Sb	**Sg**	**08 48 46.0**	**+0.7**
BIA	**Bitola**	**0.62**	**25**	P	**Pg**	**08 48 42.4**	**-0.3**
BIA				S	**Sb**	**08 48 52.9**	**0.0**
BIA	**Bitola**	**0.62**	**25**	*e*Pg	**Pg**	**08 48 42.0**	**-0.7**
BIA				*e*Sg	**Sb**	**08 48 52.8**	**-0.1**
BIA	**Bitola**	**0.62**	**25**	P	**Pg**	**08 48 42.4**	**-0.3**
BIA				S	**Sb**	**08 48 52.9**	**0.0**
KZN	**Kozani**	**0.62**	**104**	P	**Pg**	**08 48 42.1**	**-0.7**
KZN				S	**Sb**	**08 48 52.3**	**-0.7**
KZN	**Kozani**	**0.62**	**104**	*e*PB	**Pg**	**08 48 42.3**	**-0.5**
KZN				*e*SB	**Sg**	**08 48 51.4**	**+0.5**
KZN	**Kozani**	**0.62**	**104**	*e*Pb	**Pg**	**08 48 42.3**	**-0.5**
KZN				*e*Sb	**Sg**	**08 48 51.4**	**+0.5**
KZN				S	**Sb**	**08 48 52.3**	**-0.7**
JAN	**Janina**	**0.81**	**187**	*e*PG	**Pb**	**08 48 46.8**	**-0.2**
JAN				*e*SB	**Sg**	**08 48 57.1**	**+0.5**
JAN	**Janina**	**0.81**	**187**	*e*Pg	**Pb**	**08 48 46.8**	**-0.2**
JAN				*e*Sb	**Sg**	**08 48 57.1**	**+0.5**
KEK	**Kerkira**	**1.17**	**231**	*e*PB	**Pn**	**08 48 54.0**	**+0.5**
KEK				*e*SB	**Sn**	**08 49 09.1**	**-0.6**
KEK	**Kerkira**	**1.17**	**231**	*e*Pb	**Pn**	**08 48 54.0**	**+0.5**
KEK				*e*Sb	**Sn**	**08 49 09.1**	**-0.6**
GRG	**Griva**	**1.19**	**65**	*e*PB	**Pg**	**08 48 53.8**	**+0.2**
GRG	**Griva**	**1.19**	**65**	*e*Pb	**Pg**	**08 48 53.8**	**+0.2**
LIT	**Litokhoron**	**1.21**	**107**	*e*PG	**Pb**	**08 48 53.4**	**-0.6**
LIT	**Litokhoron**	**1.21**	**107**	*e*Pg	**Pb**	**08 48 53.4**	**-0.6**
EVR	**Evrytania**	**1.67**	**157**	*e*PB	**Pb**	**08 49 02.2**	**+0.4**
EVR				*e*SB	**Sg**	**08 49 25.0**	**+0.7**
EVR	**Evrytania**	**1.67**	**157**	*e*Pb	**Pb**	**08 49 02.2**	**+0.4**
EVR				*e*Sb	**Sg**	**08 49 25.0**	**+0.7**
LKD2	**Lefkada island**	**1.68**	**189**	*e*PB	**Pg**	**08 49 03.1**	**+0.1**
LKD2	**Lefkada island**	**1.68**	**189**	*e*Pb	**Pg**	**08 49 03.1**	**+0.1**
AGG	**Agios Georgios**	**1.77**	**144**	*e*PG	**Pb**	**08 49 03.9**	**+0.4**
AGG	**Agios Georgios**	**1.77**	**144**	*e*Pg	**Pb**	**08 49 03.9**	**+0.4**
EFP	**Efpalio**	**2.15**	**160**	*e*PN	**Pb**	**08 49 09.7**	**-0.3**
EFP	**Efpalio**	**2.15**	**160**	*e*Pn	**Pb**	**08 49 09.7**	**-0.3**
KALE	**Kalithea**	**2.25**	**156**	*e*PN	**Pb**	**08 49 10.9**	**-0.8**
KALE	**Kalithea**	**2.25**	**156**	*e*Pn	**Pb**	**08 49 10.9**	**-0.8**

IDC 14 08:56:46.7±1.9, 16°09S×173°50W, h0km, mb3.9/6, mb1 4.2/7, mb1mx3.9/20, mbtmp3.9/7, ML1.9/1, Error ellipse: s-maj=89.6km s-min=21.3km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.73**	**38**	Pn	Pn	08 57 30.0	-1.9
	13nm,0.3s,baz=219,slow=6.5,SNR=22						
AFI				Sn	Sn	08 57 59.0	-6.7
	90nm,0.3s,baz=30,slow=20,SNR=14						
WRA	**Warramunga Arr**	**49.60**	**257**	P	P	09 05 39.2	-1.0
	0.4nm,0.4s,baz=92,slow=6.8,SNR=6.9						
ASAR	**Alice Springs**	**49.81**	**252**	P	P	09 05 41.0	-0.7
	2.3nm,0.6s,baz=88,slow=8.0,SNR=20						
PETK	**Petropavlovsk-**	**73.25**	**342**	P	P	09 08 19.7	+0.2
	1.2nm,0.7s,baz=151,slow=9.5,SNR=3.6						
NVAR	**Mina Array Bea**	**74.90**	**42**	P	P	09 08 29.9	+0.1
	0.6nm,0.9s,baz=220,slow=8.3,SNR=5.1						
PDAR	**Pinedale Array**	**82.84**	**42**	P	P	09 09 13.0	-0.3
	0.6nm,0.6s,baz=229,slow=5.5,SNR=5.0						
ILAR	**Eielson Array**	**83.14**	**11**	P	P	09 09 13.8	-0.3
	0.4nm,0.6s,baz=226,slow=6.3,SNR=13						
BRTR	**Keskin Array B**	**146.63**	**320**	PKPbc	PKPab	09 16 31.7	-0.1
	1.8nm,0.7s,baz=86,slow=2.7,SNR=10						
GERES	**GERESS Array B**	**146.80**	**351**	PKPbc	PKPab	09 16 31.6	-0.6
	0.5nm,0.6s,baz=46,slow=2.8,SNR=4.8						

IDC 14 08:57:56.5±1.4, 5°38N×126°43E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.6/25, mbtmp3.8/6, Error ellipse: s-maj=103.3km s-min=17.7km az=69.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.35**	**182**	P	P	09 03 07.6	+1.0
	1.0nm,0.4s,baz=350,slow=11,SNR=7.1						
WRA	**Warramunga Arr**	**26.34**	**163**	P	P	09 03 33.2	-1.1
	1.7nm,0.8s,baz=342,slow=10,SNR=16						
ASAR	**Alice Springs**	**29.78**	**166**	P	P	09 04 05.4	+0.3
	0.5nm,0.6s,baz=339,slow=7.1,SNR=9.2						
ASAR				PcP	PcP	09 07 09.2	+0.1
	0.5nm,0.7s,baz=348,slow=1.9,SNR=4.1						
MKAR	**Makanchi Array**	**56.04**	**325**	P	P	09 07 37.6	+0.3
	0.5nm,0.7s,baz=131,slow=9.0,SNR=6.4						
KURBB	**Kurchatov Arra**	**60.20**	**327**	P	P	09 08 06.3	+0.1
	0.6nm,0.7s,baz=125,slow=5.9,SNR=7.2						
AKTO	**Aktyubinsk**	**72.19**	**321**	P	P	09 09 22.7	-0.6
	1.0nm,0.3s,baz=45,slow=10.0,SNR=3.1						

IDC 14 09:05:55.2±2.4, 0°87N×128°49E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.2/20, mbtmp3.2/3, MS2.8/1, Ms1 2.8/1, ms1mx1.6/17, Error ellipse: s-maj=168.3km s-min=27.0km az=68.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**6.81**	**335**	LR	LR	09 10 43.2	
	comp=Z,75nm,18.8s,baz=184,slow=42						
WRA	**Warramunga Arr**	**21.46**	**165**	P	P	09 10 46.0	+0.5
	0.2nm,0.4s,baz=345,slow=10,SNR=4.4						
ASAR	**Alice Springs**	**24.95**	**168**	P	P	09 11 20.1	-0.4
	0.8nm,1.2s,baz=352,slow=6.0,SNR=3.0						
MKAR	**Makanchi Array**	**60.89**	**325**	P	P	09 16 09.9	0.0
	0.1nm,0.4s,baz=120,slow=7.7,SNR=4.8						

*DDA **14** 09:18:05.0, 39°40N×39°19E, h7km, MD2.8*
*ISK **14** 09:18:04.0, 39°38N×39°16E, h10km, MD2.8*
*CSEM **14** 09:18:04.9±0.2, 39°40N×39°19E, h10km, MD2.8, Error ellipse: s-maj=6.5km s-min=4.0km az=111.0*
*ISCJB **14** 09:18:05.0±0.6, 39°40N±0°03×39°19E±0°05, h7km±7km, Error ellipse: s-maj=7.1km s-min=4.3km az=44.2*
ISC 14 09:18:04.8±1.0, 39°41N±0°03×39°17E±0°03, h14km±11km, n23, σ0s38/34, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.37**	**22**	*e*PG	**Pg**	**09 18 11.9**	**-0.5**
EZC				*e*SG	**Sb**	**09 18 19.0**	**0.0**
EZC	**Erzincan**	**0.37**	**22**	*e*Pg	**Pg**	**09 18 11.9**	**-0.5**
EZC				*e*Sg	**Sb**	**09 18 19.0**	**0.0**
ERZN	**Erzincan**	**0.46**	**67**	*e*PG	**Pg**	**09 18 13.8**	**-0.2**
ERZN				*e*SG	**Sb**	**09 18 21.4**	**-0.1**
ILIC	**ilic-Erzincan**	**0.47**	**276**	*e*PG	**Pg**	**09 18 14.1**	**-0.1**
ILIC	**ilic-Erzincan**	**0.47**	**276**	*e*Pg	**Pg**	**09 18 14.1**	**-0.1**
PTK	**Pertek**	**0.54**	**162**	*e*PG	**Pg**	**09 18 15.2**	**-0.3**
PTK	**Pertek**	**0.54**	**162**	*e*Pg	**Pg**	**09 18 15.2**	**-0.3**
KEMA	**Kemaliye**	**0.55**	**256**	*i* P	**Pg**	**09 18 15.8**	**+0.2**
KEMA				*i* S	**Sb**	**09 18 24.1**	**+0.2**
KEMA	**Kemaliye**	**0.55**	**256**	*i* P	**Pg**	**09 18 15.8**	**+0.2**
KEMA				*i* S	**Sb**	**09 18 24.1**	**+0.2**
KELT	**Kelkit**	**0.74**	**5**	*i* P	**Pb**	**09 18 19.7**	**+0.1**
KELT				*i* S	**Sb**	**09 18 30.2**	**+0.5**
KELT	**Kelkit**	**0.74**	**5**	*i* P	**Pb**	**09 18 19.7**	**+0.1**
KELT				*i* S	**Sb**	**09 18 30.2**	**+0.5**
ELZG	**Elazig**	**0.92**	**189**	*i* P	**Pb**	**09 18 22.4**	**-0.2**
ELZG				*i* S	**Sg**	**09 18 35.5**	**+0.8**
ELZG	**Elazig**	**0.92**	**189**	*i* P	**Pb**	**09 18 22.4**	**-0.2**
ELZG				*i* S	**Sg**	**09 18 35.5**	**+0.8**
GUMT	**Gumushane**	**1.08**	**13**	*e*PN	**Pg**	**09 18 25.9**	**+0.3**
GUMT	**Gumushane**	**1.08**	**13**	*e*Pn	**Pg**	**09 18 25.9**	**+0.3**
BINT	**Bingol**	**1.15**	**117**	*e*Pn	**Pg**	**09 18 27.7**	**+0.7**
MYA	**Malataya**	**1.23**	**209**	*e*PN	**Pn**	**09 18 27.0**	**-0.6**
MYA	**Malataya**	**1.23**	**209**	*e*Pn	**Pn**	**09 18 27.0**	**-0.6**
BAYT	**Ayd¨–ntepe-Bay**	**1.23**	**37**	*e*PN	**Pg**	**09 18 28.6**	**0.0**
BAYT	**Ayd¨–ntepe-Bay**	**1.23**	**37**	*e*Pn	**Pg**	**09 18 28.6**	**0.0**
BNGB	**Bing¶ll**	**1.24**	**109**	*e*Pn	**Pn**	**09 18 27.7**	**-0.1**
AKCD	**Akcadag**	**1.48**	**222**	*i* P	**Pg**	**09 18 33.4**	**+0.2**
AKCD				*i* S	**Sg**	**09 18 52.4**	**0.0**
AKCD	**Akcadag**	**1.48**	**222**	*i* P	**Pg**	**09 18 33.4**	**+0.2**
AKCD				*i* S	**Sg**	**09 18 52.4**	**0.0**

*DDA **14** 09:20:50.0, 39°51N×33°06E, h18km, MD2.6*
*ISK **14** 09:20:49.9, 39°45N×33°16E, h5km, MD2.1*
*ISCJB **14** 09:20:50.2±0.9, 39°37N±0°05×33°10E±0°05, h2km±11km, Error ellipse: s-maj=8.7km s-min=5.9km az=1.5*
*CSEM **14** 09:20:50.3±0.2, 39°38N×33°11E, h2km, MD2.6, Error ellipse: s-maj=4.6km s-min=3.7km az=179.0*
ISC 14 09:20:50.0±1.1, 39°37N±0°04×33°09E±0°03, h4km±10km, n12, σ0s56/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFSR	**Af¨ar-Bala (A**	**0.07**	**351**	*e*PG	**Pg**	**09 20 51.5**	**-0.1**
AFSR				*e*SG	**Sg**	**09 20 53.0**	**+0.2**
AFSR	**Af¨ar-Bala (A**	**0.07**	**351**	*e*Pg	**Pg**	**09 20 51.5**	**-0.1**
AFSR				*e*Sg	**Sg**	**09 20 53.0**	**+0.2**
BBAL	**Bala**	**0.17**	**10**	*i* P	**Pg**	**09 20 53.6**	**+0.2**
BBAL				*i* S	**Sg**	**09 20 55.9**	**+0.2**
BBAL	**Bala**	**0.17**	**10**	*i* P	**Pg**	**09 20 53.6**	**+0.2**
BBAL				*i* S	**Sg**	**09 20 55.9**	**+0.2**
KAMT	**Kaman**	**0.49**	**90**	*e*PG	**Pg**	**09 20 59.4**	**0.0**
KAMT				*e*SG	**Sg**	**09 21 06.5**	**+0.8**
KAMT	**Kaman**	**0.49**	**90**	*e*Pg	**Pg**	**09 20 59.4**	**0.0**
KAMT				*e*Sg	**Sg**	**09 21 06.5**	**+0.8**
ANTO	**Ankara**	**0.54**	**336**	*e*PG	**Pb**	**09 21 01.4**	**-0.8**
ANTO				*e*SG	**Sg**	**09 21 08.7**	**+1.2**
ANTO	**Ankara**	**0.54**	**336**	*e*Pg	**Pb**	**09 21 01.4**	**-0.8**
ANTO				*e*Sg	**Sg**	**09 21 08.7**	**+1.2**
CDAG	**Cicekdag**	**1.03**	**76**	*i* P	**Pg**	**09 21 09.3**	**-0.4**
CDAG				*i* S	**Sb**	**09 21 24.2**	**-0.1**
CDAG	**Cicekdag**	**1.03**	**76**	*i* P	**Pg**	**09 21 09.3**	**-0.4**
CDAG				*i* S	**Sb**	**09 21 24.2**	**-0.1**
KDHN	**Kadinhani**	**1.14**	**222**	*i* P	**Pn**	**09 21 13.2**	**+0.3**
KDHN				*i* S	**Sg**	**09 21 26.9**	**+0.3**
KDHN	**Kadinhani**	**1.14**	**222**	*i* P	**Pn**	**09 21 13.2**	**+0.3**
KDHN				*i* S	**Sg**	**09 21 26.9**	**+0.3**

*SKHL **14** 09:22:32.2±0.7, 48°42N×130°10E, h10km, mb4.3/5*
*IDC **14** 09:22:33.3±1.0, 48°29N×130°15E, h0km, mb3.7/5, mb1 3.9/8, mb1mx3.7/27, mbtmp3.7/8, ML3.1/3, MS3.6/2, Ms1 3.6/2, ms1mx2.8/41, Error ellipse: s-maj=22.3km s-min=17.9km az=65.0*
*BJI **14** 09:22:33.7, 48°32N×130°07E, h7km, mB4.4/1, ML4.1/10, Ms3.8/3, Ms7 3.6/3*
ISC 14 09:22:33.3±0.6, 48°45N±0°04×130°00E±0°05, h10km, n22, σ2s88/30, mb3.8/5, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**1.40**	**55**	*e*Pg	**Pn**	**09 22 55.8**	**-3.1**
KLR				*e*rx	rx	09 23 24.2	
MDJ	**Mudanjiang**	**3.84**	**184**	Pg	**Pn**	**09 23 34.5**	**+2.0**
MDJ				Sg	**Sb**	**09 24 29.3**	**+1.5**
MDJ				smax	smax		
	comp=N,220nm,0.8s						
MDJ				smax	smax		
	comp=E,290nm,0.7s						
USRK	**Ussuriysk Arra**	**4.47**	**161**	Pn	**Pn**	**09 23 40.9**	**-0.2**
	comp=E,1.9nm,0.3s,baz=345,slow=14,SNR=22						
USRK				Pg	**Pb**	**09 23 51.2**	**-0.7**
	comp=E,6.3nm,0.3s,baz=346,slow=14,SNR=19						
USRK				Lg	Lg	09 24 48.4	
	comp=E,7.9nm,0.3s,baz=347,slow=30,SNR=8.7						
GRNR	**Gornyy**	**4.78**	**59**	*e*Pg	**Pb**	**09 23 59.0**	**+1.9**
GRNR				AMB	AMB	09 24 02.8	
	comp=E,52nm,0.6s						
GRNR				*e*Sg	**Sg**	**09 25 01.0**	**-5.6**
GRNR				A	A	09 25 08.0	
	comp=E,560nm,1.0s						
EKMR	**Ekimchan**	**4.99**	**21**	*e*Pn	**Pn**	**09 23 47.0**	**-1.3**
EKMR				*e*Pg	**Pb**	**09 24 02.0**	**+1.3**
EKMR				AMB	AMB	09 24 06.8	
	comp=E,8.0nm,0.5s						
EKMR				AMB	AMB	09 24 06.8	
	comp=E,15nm,0.5s						
EKMR				*e*Sn	**Sn**	**09 24 46.0**	**0.0**
EKMR				*e*Sg	Sb	09 25 06.2	+5.4
EKMR				A	A	09 25 16.5	
	comp=E,190nm,0.5s						
EKMR				A	A	09 25 16.5	
	comp=E,260nm,0.5s						
EKMR				A	A	09

*ISCJB **14** 09:25:11.9±1.6,31.96S×177.05E×0.2,h33km, mb4.7/8, Error ellipse: s-maj=29.8km s-min=5.9km az=6.3*
*AUST **14** 09:25:14.1,31.955S×177.62W,h60km*
*IDC **14** 09:25:16.2±3.1,31.24S×178.06W,h44km±29km,mb4.5/5, mb1 4.6/5,mb1mx4.0/18,mbtmp4.5/5,MS3.3/1,Ms1 3.3/1, ms1mx2.9/28, Error ellipse: s-maj=26.3km s-min=20.3km az=122.0*
*NEIC **14** 09:25:17.8±1.3,31.28S×178.04W,h62km±10km,mb4.9/5, Error ellipse: s-maj=16.5km s-min=10.9km az=128.0*

ISC 14 09:25:14.1±0.9,31.73S±0.08×178.0W±0.2,h35km,n64, σ1§80/58,mb4.8/8,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.47**	**1**	*e*Pn	**Pn**	**09 25 49.5**	**-2.3**
RAO				*e*Sn	Sn	09 26 10.7	-10
RAO	**Raoul Island**	**2.47**	**1**	P	Pn	09 25 47.4	-4.4
	200nm,0.3s,baz=35,slow=23,SNR=6.9						
RAO				S	Sn	09 26 11.2	-10
	723nm,0.3s,baz=270,slow=24,SNR=9.2						
PUZ	**Puketiti**	**7.05**	**205**	*e*PN	**Pn**	**09 26 53.5**	**-1.2**
PUZ				SN	**Sn**	**09 28 14.3**	**+0.7**
CNGZ	**Carnagh Statio**	**7.43**	**204**	PN	**Pn**	**09 26 59.9**	**-0.1**
MWZ	**Matawai**	**7.55**	**208**	*e*PN	**Pn**	**09 27 01.2**	**-0.5**
MWZ				SN	**Sn**	**09 28 29.1**	**+3.0**
URZ	**Urewera**	**7.66**	**210**	*e*Pn	Pn	09 27 06.0	+2.8
URZ				*e*Sn	**Sn**	**09 28 30.3**	**+1.6**
URZ	**Urewera**	**7.66**	**210**	*e*PN	**Pn**	**09 27 02.4**	**-0.8**
URZ				SN	**Sn**	**09 28 31.5**	**+2.8**
URZ	**Urewera**	**7.66**	**210**	P	**Pn**	**09 27 02.3**	**-0.9**
	0.6nm,0.3s,baz=6.1,slow=19,SNR=10.0						
URZ				S	**Sn**	**09 28 29.8**	**+1.1**
	4.3nm,0.3s,baz=200,slow=14,SNR=7.4						
OUZ	**Omahuta**	**7.86**	**241**	*e*Pn	Pn	09 27 11.8	+6.0
OUZ	**Omahuta**	**7.86**	**241**	PN	Pn	09 27 12.1	+6.3
KNZ	**Kokohu**	**8.10**	**205**	*e*PN	**Pn**	**09 27 08.3**	**-0.8**
BKZ	**Black Stump Fm**	**8.69**	**210**	*e*PN	**Pn**	**09 27 14.2**	**-3.1**
BKZ				SN	**Sn**	**09 28 53.6**	**-0.4**
KAHZ	**Kahuranaki**	**9.07**	**206**	*e*PN	**Pn**	**09 27 20.9**	**-1.6**
KAHZ				SN	**Sn**	**09 29 06.1**	**+2.7**
TSZ	**Takapari Road**	**9.66**	**209**	SN	**Sn**	**09 29 15.5**	**-2.3**
PRWZ	**Pori Road**	**10.08**	**207**	SN	**Sn**	**09 29 25.0**	**-3.0**
BFZ	**Birch Farm**	**10.08**	**206**	SN	**Sn**	**09 29 24.8**	**-3.3**
MRZ	**Mangatainoka R**	**10.32**	**208**	*e*PN	Pn	09 27 35.1	-4.6
MRZ				SN	Sn	09 29 27.7	-6.3
HOWZ	**Holdsworth Sta**	**10.55**	**208**	SN	**Sn**	**09 29 34.3**	**-5.3**
KIW	**Kapiti Island**	**10.77**	**210**	SN	**Sn**	**09 29 40.5**	**-4.5**
TUWZ	**Tuamarina**	**11.65**	**212**	*e*PN	**Pn**	**09 27 55.1**	**-2.7**
NNZ	**Nelson**	**11.75**	**214**	*e*PN	**Pn**	**09 27 58.2**	**-0.9**
NNZ				SN	Sn	09 30 01.9	-7.0
KHZ	**Kahutara**	**12.63**	**210**	*e*PN	**Pn**	**09 28 08.8**	**-2.3**
KHZ				SN	Sn	09 30 22.9	-7.6
LTZ	**Lake Taylor**	**13.48**	**212**	SN	Sn	09 30 41.0	-10
OXZ	**Oxford**	**14.02**	**212**	SN	Sn	09 30 52.6	-12
DZM	**Mont Dzumac**	**16.88**	**301**	LR	LR	09 33 05.5	
	comp=Z,100nm,20.0s,baz=30,slow=28						
CMSA	**Cobar Meteorol**	**30.85**	**261**	P	**P**	**09 31 28.8**	**+1.9**
	baz=31,SNR=12						
QLP	**Quilpie**	**33.28**	**269**	P	**P**	**09 31 49.9**	**+1.5**
	baz=34,SNR=4.1						
CTA	**Charters Tower**	**34.05**	**281**	P	**P**	**09 31 56.5**	**+1.4**
CTA	**Charters Tower**	**34.05**	**281**	P	**P**	**09 31 56.5**	**+1.4**
	7.3nm,0.5s,baz=107,slow=12						
CTAO	**Charters Tower**	**34.05**	**281**	*e*P	**P**	**09 31 56.0**	**+0.8**
	8.5nm,0.6s						
STKA	**Stephens Creek**	**34.22**	**259**	*e*P	**P**	**09 31 58.0**	**+1.5**
	4.2nm,1.4s						
STKA	**Stephens Creek**	**34.22**	**259**	P	**P**	**09 31 58.1**	**+1.5**
	2.5nm,0.4s,baz=95,slow=12,SNR=26						
STKA	**Stephens Creek**	**34.22**	**259**	P	**P**	**09 31 58.2**	**+1.7**
	baz=34,SNR=17						
MTSU	**Mount Surprise**	**36.58**	**283**	P	**P**	**09 32 18.0**	**+1.0**
	baz=37,SNR=10						
BBOO	**Buckleboo**	**38.65**	**256**	P	**P**	**09 32 34.6**	**+0.3**
	baz=39,SNR=5.7						
QIS	**Mount Isa**	**39.45**	**276**	P	**P**	**09 32 41.3**	**+0.2**
	baz=40,SNR=7.1						
COEN	**Coen**	**39.67**	**287**	*e*P	**P**	**09 32 43.0**	**+0.1**
	26nm,0.6s						
COEN	**Coen**	**39.67**	**287**	P	**P**	**09 32 43.7**	**+0.7**
	baz=40,SNR=6.4						
ASAR	**Alice Springs**	**43.08**	**268**	P	**P**	**09 33 10.7**	**-0.2**
ASAR	**Alice Springs**	**43.08**	**268**	P	**P**	**09 33 10.7**	**-0.2**
	9.5nm,0.5s,baz=108,slow=7.4,SNR=263						
WRAB	**Tennant Creek**	**44.18**	**274**	*e*P	**P**	**09 33 19.4**	**-0.4**
	13nm,0.6s						
WRA	**Warramunga Arr**	**44.18**	**273**	P	**P**	**09 33 19.4**	**-0.4**
WRA	**Warramunga Arr**	**44.18**	**273**	P	**P**	**09 33 19.4**	**-0.4**
	12nm,0.3s,baz=111,slow=8.1,SNR=391						
VNDA	**Vanda**	**46.78**	**186**	*e*P	P	09 33 48.2	+8.6
	0.7nm,0.7s						
VNDA				PcP	**PcP**	**09 35 15.1**	**+2.8**
KDU	**Kakadu**	**49.18**	**281**	P	**P**	**09 33 58.5**	**-0.4**
	baz=50,SNR=3.7						
KNRA	**Kununurra**	**50.84**	**275**	P	**P**	**09 34 12.0**	**+0.5**
	baz=51,SNR=4.7						
QSPA	**South Pole Qui**	**58.39**	**180**	*e*P	P	09 35 10.4	+4.7
	9.0nm,0.7s						
QSPA	**South Pole Qui**	**58.39**	**180**	P	P	09 35 10.6	+4.8
	1.4nm,0.5s,baz=49,slow=1.2,SNR=26						
KURK	**Kurchatov**	**121.97**	**313**	*e*PKPdf	**PKPdf**	**09 44 03.6**	**-0.6**
ARCES	**ARCESS Array B**	**139.89**	**347**	PKPpre	PKPpre	09 44 34.1	
ARCES	**ARCESS Array B**	**139.89**	**347**	PKhKP	PKPpre	09 44 34.1	
	1.9nm,0.7s,baz=0.0,slow=0.9,SNR=3.9						
JOF	**Joensuu**	**143.65**	**338**	*e*p	PKPbc	09 44 42.6	+0.6
KAF	**Kangasniemi**	**145.80**	**340**	*e*p	**PKPdf**	**09 44 47.6**	**-0.6**
FINES	**FINESS Array B**	**146.39**	**339**	PKPbc	**PKPbc**	**09 44 49.8**	**-0.7**
FINES	**FINESS Array B**	**146.39**	**339**	PKPbc	**PKPbc**	**09 44 49.8**	**-0.7**
	5.2nm,0.7s,baz=64,slow=4.4,SNR=12						
NB2	**NORSAR Subarra**	**150.06**	**351**	PKP	**PKPbc**	**09 45 00.5**	**+0.2**
	comp=Z,1.3nm,0.7s,baz=9.9,slow=4.0						
NOA	**NORSAR Array B**	**150.06**	**351**	PKPbc	**PKPbc**	**09 45 00.3**	**0.0**
NOA	**NORSAR Array B**	**150.06**	**351**	PKPbc	**PKPbc**	**09 45 00.3**	**0.0**
	comp=Z,1.6nm,0.8s,baz=16,slow=4.1,SNR=2.7						
AKASG	**Malin Array Be**	**152.35**	**321**	PKPbc	**PKPbc**	**09 45 05.6**	**-0.3**
AKASG	**Malin Array Be**	**152.35**	**321**	PKPbc	**PKPbc**	**09 45 05.6**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=57,slow=2.2,SNR=7.3						
BRTR	**Keskin Array B**	**153.22**	**296**	PKPbc	**PKPbc**	**09 45 07.8**	**-0.6**
BRTR	**Keskin Array B**	**153.22**	**296**	PKPbc	**PKPbc**	**09 45 07.8**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=136,slow=4.0,SNR=3.8						
TORD	**Torodi Ar. Bea**	**161.50**	**179**	PKPab	**PKPab**	**09 45 58.4**	**+2.3**
TORD	**Torodi Ar. Bea**	**161.50**	**179**	PKPab	**PKPab**	**09 45 58.4**	**+2.3**
	comp=Z,0.9nm,0.7s,baz=178,slow=4.3,SNR=8.6						

WEL 14 09:31:20.3±0.1,43.73S×171.61E,h5km,ML3.7/15,2C-5D, Error ellipse: s-maj=1.3km s-min=0.9km az=0.0,South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPZ	**Rata Peaks**	**0.40**	**272**	↓P	Pg	09 31 28.3	+0.2
RPZ				SG	Sg	09 31 34.0	+0.6
RPZ				AML	AML	09 31 35.3	
CRLZ	**Canterbury Las**	**0.75**	**78**	↓P*	Pg	09 31 35.0	+0.3
CRLZ				AML	AML	09 31 47.7	
CRLZ				AML	AML	09 31 50.7	
MQZ	**McQueen's Vall**	**0.76**	**88**	↓P*	Pg	09 31 35.2	+0.4
MQZ				AML	AML	09 31 48.1	
MQZ				AML	AML	09 31 48.7	
WVZ	**Waitaha Valley**	**0.91**	**316**	↓P*	Pg	09 31 36.5	-1.3
WVZ				S*	Sg	09 31 50.0	+0.4
WVZ				AML	AML	09 31 50.0	
LTZ	**Lake Taylor**	**1.07**	**27**	↑P*	Pg	09 31 39.0	-1.8
LTZ				AML	AML	09 31 53.8	
LTZ				AML	AML	09 31 54.7	
LBZ	**Lake Benmore**	**1.22**	**237**	P*	Pg	09 31 43.3	-0.4
LBZ				AML	AML	09 32 03.5	
LBZ				AML	AML	09 32 04.5	
LBZ				AML	AML	09 32 06.5	
LBZ				AML	AML	09 32 06.5	
FOZ	**Fox Glacier**	**1.40**	**276**	P*	Pn	09 31 45.0	-1.5
FOZ				AML	AML	09 32 04.4	
FOZ				AML	AML	09 32 04.5	
FOZ				AML	AML	09 32 09.3	
FOZ				AML	AML	09 32 09.4	
ODZ	**Otahua Downs**	**1.48**	**207**	PN	Pn	09 31 46.9	-0.8
KHZ	**Kahutara**	**1.93**	**48**	PN	Pn	09 31 51.1	-2.6
DSZ	**Denniston Nort**	**1.99**	**4**	PN	Pn	09 31 52.6	-2.1
DSZ				AML	AML	09 32 22.2	
DSZ				AML	AML	09 32 24.9	
JCZ	**Jackson Bay**	**2.09**	**260**	PN	Pn	09 31 55.7	-0.3
JCZ				AML	AML	09 32 33.2	
JCZ				AML	AML	09 32 35.0	
WKZ	**Wanaka**	**2.16**	**239**	PN	Pn	09 31 55.5	-1.4
WKZ				AML	AML	09 32 39.3	
WKZ				AML	AML	09 32 39.4	
WKZ				AML	AML	09 32 43.9	
WKZ				AML	AML	09 32 54.2	
THZ	**Tophouse**	**2.19**	**26**	↑↑PN	Pn	09 31 54.9	-2.6
THZ				AML	AML	09 32 28.2	
THZ				AML	AML	09 32 28.9	
EAZ	**Earnscleugh**	**2.23**	**227**	PN	Pn	09 31 56.7	-1.1
EAZ				AML	AML	09 32 25.8	
EAZ				AML	AML	09 32 25.8	
EAZ				AML	AML	09 32 25.9	
EAZ				AML	AML	09 32 25.9	
TUZ	**Tuapeka**	**2.63**	**212**	PN	Pn	09 32 02.7	-0.7
TUZ				AML	AML	09 32 51.2	
TUZ				AML	AML	09 32 56.1	
MSZ	**Milford Sound**	**2.81**	**249**	PN	Pn	09 32 04.3	-1.5
MSZ				AML	AML	09 32 53.1	
MSZ				AML	AML	09 32 56.4	
NNZ	**Nelson**	**2.83**	**28**	PN	Pn	09 32 03.6	-2.6
MLZ	**Mavora Lakes**	**2.94**	**236**	PN	Pn	09 32 06.9	-0.8
QRZ	**Quartz Range**	**2.98**	**14**	PN	Pn	09 32 05.9	-2.4
QRZ				AML	AML	09 32 56.1	
QRZ				AML	AML	09 32 56.4	
TCW	**Tory Channel**	**3.20**	**39**	*e*PN	Pn	09 32 08.3	-2.9
SYZ	**Scrubby Hill**	**3.30**	**211**	↓↓PN	Pn	09 32 12.1	-0.5
CAW	**Cannon Point**	**3.67**	**46**	PN	Pn	09 32 14.1	-3.6
KIW	**Kapiti Island**	**3.77**	**42**	*e*PN	Pn	09 32 17.3	-1.9
APZ	**The Paps**	**4.01**	**218**	*e*PN	Pn	09 32 21.2	-1.3
MRZ	**Mangatainoka R**	**4.26**	**45**	*e*PN	Pn	09 32 21.6	-4.2

IDC 14 09:33:50.0±2.5,5.48N×126.34E,h0km,mb3.2/3, mb1 3.4/3,mb1mx3.2/22,mbtmp3.2/3,Error ellipse: s-maj=208.1km s-min=28.0km az=66.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.46**	**163**	P	P	09 39 29.0	0.0
	0.4nm,0.6s,baz=343,slow=9.9,SNR=4.9						
ASAR	**Alice Springs**	**29.89**	**166**	P	P	09 39 59.7	0.0
	0.2nm,0.7s,baz=345,slow=6.7,SNR=3.6						
MKAR	**Makanchi Array**	**55.91**	**325**	P	P	09 43 29.6	-0.1
	0.2nm,0.5s,baz=116,slow=6.7,SNR=4.2						

*NEIC **14** 09:44:55.7±1.2,30.29S×177.79W,h35km,mb4.3/3,Error ellipse: s-maj=26.1km s-min=17.0km az=112.0*
*IDC **14** 09:44:57.8±3.8,30.24S×177.92W,h48km±38km,mb3.8/4, mb1 4.0/4,mb1mx3.6/17,mbtmp3.8/4,Error ellipse: s-maj=41.0km s-min=32.1km az=153.0*

ISC 14 09:44:56.9±1.6,30.3S±0.1×177.8W±0.2,h46km,n17, σ0§85/18,mb4.2/5,Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.02**	**354**	*e*Pn	**Pn**	**09 45 14.1**	**-0.8**
RAO				*e*Sn	**Sn**	**09 45 27.9**	**-0.2**
RAO	**Raoul Island**	**1.02**	**354**	P	**Pn**	**09 45 15.5**	**+0.7**
	162nm,0.3s,baz=180,slow=20,SNR=3.6						
RAO				S	**Sn**	**09 45 28.6**	**+0.5**
	730nm,0.3s,baz=94,slow=22,SNR=11						
URZ	**Urewera**	**9.01**	**206**	S	Sn	09 48 37.1	-7.3
	0.4nm,0.3s,baz=221,slow=19,SNR=4.9						
CTA	**Charters Tower**	**33.95**	**279**	P	**P**	**09 51 37.5**	**+1.5**
CTA	**Charters Tower**	**33.95**	**279**	P	**P**	**09 51 37.5**	**+1.5**
	0.9nm,0.4s,baz=114,slow=11,SNR=3.1						
CTAO	**Charters Tower**	**33.95**	**279**	*e*P	**P**	**09 51 35.8**	**-0.3**
	2.8nm,0.6s						
STKA	**Stephens Creek**	**34.67**	**257**	*e*P	**P**	**09 51 42.6**	**+0.4**
	1.7nm,1.0s						
STKA	**Stephens Creek**	**34.67**	**257**	P	**P**	**09 51 41.1**	**-1.0**
	5.0nm,0.8s,baz=84,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**43.28**	**267**	P	**P**	**09 52 54.1**	**-0.2**
ASAR	**Alice Springs**	**43.28**	**267**	P	**P**	**09 52 54.1**	**-0.2**
	0.5nm,0.6s,baz=106,slow=7.5,SNR=10						
WRAB	**Tennant Creek**	**44.26**	**272**	*e*P	**P**	**09 53 01.1**	**-1.1**
	6.4nm,1.1s						
WRA	**Warramunga Arr**	**44.26**	**272**	P	**P**	**09 53 01.4**	**-0.8**
WRA	**Warramunga Arr**	**44.26**	**272**	P	**P**	**09 53 01.4**	**-0.8**
	1.2nm,0.4s,baz=110,slow=8.0,SNR=23						
FINES	**FINESS Array B**	**145.09**	**340**	PKPbc	**PKPbc**	**10 04 27.5**	**-0.6**
FINES	**FINESS Array B**	**145.09**	**340**	PKPbc	**PKPbc**	**10 04 27.5**	**-0.6**
	2.9nm,0.7s,baz=46,slow=5.5,SNR=5.8						
TORD	**Torodi Ar. Bea**	**162.95**	**178**	PKPab	**PKPab**	**10 05 44.6**	**+0.5**
TORD	**Torodi Ar. Bea**	**162.95**	**178**	PKPab	**PKPab**	**10 05 44.6**	**+0.5**
	0.2nm,0.7s,baz=199,slow=2.3,SNR=3.0						

*IDC **14** 09:55:18.6±0.6,5.35N×126.22E,h0km,mb4.1/12, mb1 4.2/12,mb1mx4.0/23,mbtmp4.1/12,Error ellipse: s-maj=41.0km s-min=13.8km az=77.0*
*NEIC **14** 09:55:23.9±0.3,5.30N×126.11E,h35km,mb4.1/4,Error ellipse: s-maj=22.6km s-min=6.9km az=76.0*
*ISCJB **14** 09:55:25.6±0.4,5.30N±0.05×126.2E±0.1,h66km, mb4.0/16,Error ellipse: s-maj=16.8km s-min=6.6km az=166.0*

ISC 14 09:55:27.2±0.5,5.32N±0.07×126.2E±0.1,h66km,n40, σ1§77/47,mb4.2/16,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.62**	**2**	*e*P	**Pn**	**09 55 54.2**	**+0.5**
MATI				*e*S	**Sn**	**09 56 11.9**	**-1.8**
CTBH	**Cotabato--PC H**	**2.71**	**314**	↓↓P	**Pn**	**09 56 10.1**	**+1.7**
BUKP	**Musuan**	**2.79**	**336**	*e*P	**Pn**	**09 56 11.2**	**+1.7**
PAGZ	**Pagadian**	**3.76**	**312**	*e*P	**Pn**	**09 56 22.3**	**-0.5**
SSLB	**Suanglung**	**19.05**	**345**	*e*P	**P**	**09 59 42.2**	**-2.0**
	5.7nm,0.4s						
FITZ	**Fitzroy Crossi**	**23.27**	**181**	P	**P**	**10 00 28.6**	**-0.7**
FITZ	**Fitzroy Crossi**	**23.27**	**181**	P	**P**	**10 00 28.6**	**-0.7**
	1.6nm,0.4s,baz=1.0,slow=15,SNR=5.6						
WRAB	**Tennant Creek**	**26.34**	**163**	*e*P	**P**	**10 00 56.6**	**-0.6**
	2.9nm,0.5s						
WRA	**Warramunga Arr**	**26.34**	**163**	P	**P**	**10 00 57.1**	**-0.2**
WRA	**Warramunga Arr**	**26.34**	**163**	P	**P**	**10 00 57.1**	**-0.2**
	2.8nm,0.8s,baz=340,slow=10,SNR=13						
ASAR	**Alice Springs**	**29.77**	**166**	P	**P**	**10 01 28.1**	**+0.3**
ASAR				PcP	**PcP**	**10 04 30.4**	**+0.1**
ASAR	**Alice Springs**	**29.77**	**166**	P	**P**	**10 01 28.1**	**+0.3**
	0.9nm,0.5s,baz=349,slow=7.8,SNR=16						
ASAR				PcP	**PcP**	**10 04 30.4**	**+0.1**
	0.5nm,0.5s,baz=351,slow=2.1,SNR=8.3						
KSAR	**Wonju Array Be**	**32.01**	**3**	P	**P**	**10 01 49.2**	**+1.9**
KSRS	**Korea Array**	**32.03**	**3**	P	**P**	**10 01 49.2**	**+1.8**
	1.2nm,0.7s,baz=185,slow=9.7,SNR=6.0						
STKA	**Stephens Creek**	**39.79**	**159**	P	**P**	**10 02 53.9**	**0.0**
STKA	**Stephens Creek**	**39.79**	**159**	P	**P**	**10 02 53.9**	**0.0**
	1.2nm,0.4s,baz=347,slow=9.8,SNR=8.2						
ASAJ	**Asahikawa**	**41.25**	**18**	P	**P**	**10 03 06.4**	**+0.6**
ASAJ	**Asahikawa**	**41.25**	**18**	P	**P**	**10 03 06.4**	**+0.6**
	8.1nm,1.0s,baz=243,slow=11,SNR=4.5						
ARMA	**Armidale**	**43.08**	**147**	*e*P	**P**	**10 03 21.6**	**+0.6**
	3.8nm,0.9s						
SONM	**Songino Array**	**45.64**	**341**	P	**P**	**10 03 41.9**	**+0.6**
SONM				PcP	**PcP**	**10 05 19.6**	**+1.0**
SONM	**Songino Array**	**45.64**	**341**	P	**P**	**10 03 41.9**	**+0.6**
	0.9nm,0.4s,baz=161,slow=8.3,SNR=4.3						
SONM				PcP	**PcP**	**10 05 19.6**	**+1.0**
	0.4nm,0.5s,baz=157,slow=4.1,SNR=2.6						
PETK	**Petropavlovsk-**	**54.18**	**23**	P	**P**	**10 04 45.8**	**0.0**
PETK	**Petropavlovsk-**	**54.18**	**23**	P	**P**	**10 04 45.8**	**0.0**
	3.5nm,0.9s,baz=212,slow=8.1,SNR=3.8						
MK31	**Makanchi Array**	**55.96**	**325**	*e*P	**P**	**10 04 58.5**	**-0.2**
MKAR	**Makanchi Array**	**55.96**	**325**	P	**P**	**10 04 59.0**	**+0.2**
MKAR				PcP	**PcP**	**10 05 56.9**	**+0.3**
MKAR	**Makanchi Array**	**55.96**	**325**	P	**P**	**10 04 59.0**	**+0.2**
	1.4nm,0.5s,baz=122,slow=8.0,SNR=23						
MKAR				PcP	**PcP**	**10 05 56.9**	**+0.3**
	1.0nm,0.8s,baz=108,slow=4.0,SNR=4.4						
ZALV	**Zalesovo Beam**	**58.95**	**333**	P	**P**	**10 05 19.2**	**-0.4**
ZALV	**Zalesovo Beam**	**58.95**	**333**	P	**P**	**10 05 19.2**	**-0.4**
	1.2nm,0.3s,baz=133,slow=7.7,SNR=6.6						
KURK	**Kurchatov**	**60.13**	**327**	*e*P	**P**	**10 05 27.5**	**-0.3**
	2.7nm,0.6s						
ILAR	**Eielson Array**	**83.91**	**25**	P	**P**	**10 07 48.5**	**-1.2**
ILAR	**Eielson Array**	**83.91**	**25**	P	**P**	**10 07 48.5**	**-1.2**
	0.4nm,0.5s,baz=252,slow=4.9,SNR=10.0						
ARCES	**ARCESS Array B**	**88.79**	**340**	P	**P**	**10 08 13.2**	**-0.3**
ARCES	**ARCESS Array B**	**88.79**	**340**	P	**P**	**10 08 13.2**	**-0.3**
	1.7nm,0.6s,baz=64,slow=5.5,SNR=5.9						
FINES	**FINESS Array B**	**90.19**	**332**	P	**P**	**10 08 20.4**	**+0.2**
FINES	**FINESS Array B**	**90.19**	**332**	P	**P**	**10 08 20.4**	**+0.2**
	2.1nm,0.8s,baz=132,slow=2.8,SNR=3.3						
CLL	**Collm**	**100.05**	**324**	*e*(P)	**Pdif**	**10 08 55.0**	**-10**
TORD	**Torodi Ar. Bea**	**121.92**	**289**	PKP	**PKPdf**	**10 14 15.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**121.92**	**289**	PKP	**PKPdf**	**10 14 15.4**	**+0.3**
	0.4nm,0.6s,baz=42,slow=2.3,SNR=4.8						
CFAA	**Coronel Fontan**	**150.55**	**154**	PKPbc	**PKPbc**	**10 15 11.9**	**-0.4**
CFAA	**Coronel Fontan**	**150.55**	**154**	PKPbc	**PKPbc**	**10 15 11.9**	**-0.4**
	0.2nm,0.5s,baz=228,slow=3.4,SNR=8.5						

IDC 14 09:59:37.1±0.8,19.34S×66.93W,h270km±16km,mb3.9/2, mb1 3.7/6,mb1mx3.2/22,mbtmp3.7/6,Error ellipse: s-maj=29.4km s-min=10.6km az=100.0,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**3.25**	**339**	P	Pn	10 00 36.1	+1.8
	7.8nm,0.3s,baz=107,slow=5.6,SNR=259						
LPAZ				S	S	10 01 19.4	-0.4
	0.8nm,0.3s,baz=198,slow=23,SNR=6.8						
LVC	**Limon Verde**	**3.75**	**209**	P	Pn	10 00 40.9	+1.7
	23nm,0.3s,baz=28,slow=7.9,SNR=125						
LVC				S	S	10 01 28.2	-0.6
	8.0nm,0.3s,baz=238,slow=22,SNR=27						
SIV	**San Ignacio**	**6.50**	**60**	P	Pn	10 01 10.2	-1.7
	5.0nm,0.3s,baz=262,slow=10,SNR=73						
CFAA	**Coronel Fontan**	**12.27**	**185**	P	Pn	10 02 24.1	+0.6
	0.0nm,0.3s,baz=14,slow=16,SNR=9.2						
CFAA				S	S	10 04 33.0	-7.2
	0.1nm,0.3s,baz=267,slow=21,SNR=8.9						
BDFB	**Brasilia**	**18.41**	**81**	P	P	10 03 33.7	+0.5
	0.7nm,0.3s,baz=250,slow=11,SNR=8.3						
RCBR	**Riachuelo**	**33.04**	**70**	P	P	10 05 48.6	+0.8
	8.1nm,0.9s,baz=239,slow=12,SNR=3.7						
TORD	**Torodi Ar. Bea**	**74.88**	**70**	P	P	10 10 48.2	-0.6
	2.2nm,0.5s,baz=253,slow=5.3,SNR=60						

*IDC **14** 10:13:28.7±5.0,32.55S×179.96W,h184km±40km,mb3.9/6, mb1 4.1/7,mb1mx3.7/19,mbtmp4.0/7,Error ellipse: s-maj=41.8km s-min=17.7km az=43.0*
*ISCJB **14** 10:13:29.4±0.5,32.92S±0.03×179.84E±0.10,h200km, mb4.1/12,Error ellipse: s-maj=11.6km s-min=4.0km az=8.8*
*NEIC **14** 10:13:30.5±1.7,33.03S×179.93E,h202km±16km, mb4.8/13,Error ellipse: s-maj=18.7km s-min=14.2km az=88.0*

ISC 14 10:13:30.3±0.4,32.92S±0.03×179.96W±0.07,h200km, n163,σ1§63/129,mb4.1/12,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.06**	**26**	S	**Sn**	**10 15 21.2**	**-0.8**
	171nm,0.3s,baz=120,slow=20,SNR=5.2						
MXZ	**Matakaoa Point**	**4.84**	**197**	*e*PN	**Pn**	**10 14 44.1**	**+1.6**
MXZ				SN	**Sn**	**10 15 40.5**	**+0.8**
PUZ	**Puketiti**	**5.34**	**195**	Pn	**Pn**	**10 14 49.8**	**+0.8**
PUZ	**Puketiti**	**5.34**	**195**	PN	**Pn**	**10 14 49.5**	**+0.5**
PUZ				SN	**Sn**	**10 15 53.0**	**+0.4**
OPRZ	**Ohinepanea**	**5.68**	**209**	Pn	Pn	10 14 57.8	+4.5
OPRZ	**Ohinepanea**	**5.68**	**209**	PN	Pn	10 14 56.2	+3.0
OPRZ				SN	**Sn**	**10 16 03.2**	**+4.3**
CNGZ	**Carnagh Statio**	**5.75**	**195**	Pn	**Pn**	**10 14 55.3**	**+1.1**
CNGZ	**Carnagh Statio**	**5.75**	**195**	PN	**Pn**	**10 14 54.6**	**+0.4**
MWZ	**Matawai**	**5.77**	**200**	Pn	**Pn**	**10 14 55.2**	**+0.6**
MWZ	**Matawai**	**5.77**	**200**	PN	**Pn**	**10 14 54.7**	**+0.1**
MWZ				SN	**Sn**	**10 16 00.7**	**-0.7**
OUZ	**Omahuta**	**5.82**	**245**	*e*Pn	Pn	10 14 58.2	+3.1
URZ	**Urewera**	**5.83

TRWZ	**Traveller**	**9.14**	**201**	Pn	**Pn**	**10**	**15**	**36.6**	**-1.7**
TRWZ	**Traveller**	**9.14**	**201**	*e*PN	**Pn**	**10**	**15**	**35.9**	**-2.4**
PAWZ	**Paruwai Farm**	**9.21**	**202**	Pn	**Pn**	**10**	**15**	**37.6**	**-1.5**
PAWZ	**Paruwai Farm**	**9.21**	**202**	*e*PN	**Pn**	**10**	**15**	**36.9**	**-2.2**
DUWZ	**D'Urville Isla**	**9.26**	**210**	Pn	**Pn**	**10**	**15**	**38.3**	**-1.6**
DUWZ	**D'Urville Isla**	**9.26**	**210**	*e*PN	**Pn**	**10**	**15**	**38.2**	**-1.7**
MSWZ	**Moikau Station**	**9.30**	**203**	Pn	**Pn**	**10**	**15**	**37.5**	**-2.8**
MSWZ	**Moikau Station**	**9.30**	**203**	PN	Pn	10	15	37.2	-3.1
SNZO	**South Karori**	**9.39**	**205**	*e*Pn	**Pn**	**10**	**15**	**39.2**	**-2.2**
	59nm,0.4s								
SNZO				*e*Sn	Sn	10	17	20.1	-6.4
SNZO	**South Karori**	**9.39**	**205**	Pn	Pn	10	15	38.0	-3.4
SNZO	**South Karori**	**9.39**	**205**	*e*PN	**Pn**	10	15	37.9	-3.6
BHW	**Baring Head**	**9.42**	**204**	Pn	Pn	10	15	38.7	-3.2
BHW	**Baring Head**	**9.42**	**204**	*e*PN	Pn	10	15	38.6	-3.3
PLWZ	**Palliser**	**9.43**	**202**	Pn	**Pn**	**10**	**15**	**39.5**	**-2.6**
PLWZ	**Palliser**	**9.43**	**202**	*e*PN	Pn	10	15	38.6	-3.5
TUWZ	**Tuamarina**	**9.78**	**208**	Pn	Pn	10	15	43.4	-3.2
TUWZ	**Tuamarina**	**9.78**	**208**	*e*PN	Pn	10	15	42.1	-4.5
NNZ	**Nelson**	**9.84**	**211**	*e*PN	Pn	10	15	43.8	-3.5
QRZ	**Quartz Range**	**9.92**	**215**	Pn	**Pn**	**10**	**15**	**46.3**	**-2.0**
QRZ	**Quartz Range**	**9.92**	**215**	*e*PN	**Pn**	**10**	**15**	**46.3**	**-2.0**
BSWZ	**Blackbirch Sta**	**10.05**	**207**	Pn	**Pn**	**10**	**15**	**47.6**	**-2.4**
BSWZ	**Blackbirch Sta**	**10.05**	**207**	*e*PN	Pn	10	15	46.5	-3.5
THZ	**Tophouse**	**10.49**	**211**	Pn	**Pn**	**10**	**15**	**53.5**	**-2.3**
THZ	**Tophouse**	**10.49**	**211**	*e*PN	**Pn**	**10**	**15**	**52.7**	**-3.1**
KHZ	**Kahutara**	**10.78**	**207**	*e*Pn	Pn	10	15	56.1	-3.3
	80nm,0.4s								
KHZ				*e*Sn	Sn	10	17	50.3	-9.3
KHZ	**Kahutara**	**10.78**	**207**	Pn	Pn	10	15	55.9	-3.6
KHZ	**Kahutara**	**10.78**	**207**	*e*PN	Pn	10	15	55.3	-4.2
DSZ	**Denniston Nort**	**10.97**	**214**	PN	Pn	10	15	58.5	-3.4
LTZ	**Lake Taylor**	**11.59**	**210**	Pn	**Pn**	**10**	**16**	**07.7**	**-2.2**
LTZ	**Lake Taylor**	**11.59**	**210**	*e*PN	**Pn**	**10**	**16**	**07.5**	**-2.4**
OXZ	**Oxford**	**12.14**	**209**	*e*PN	Pn	10	16	12.7	-4.1
WVZ	**Waitaha Valley**	**12.50**	**213**	*e*PN	Pn	10	16	17.8	-3.6
RPZ	**Rata Peaks**	**12.87**	**211**	*e*Pn	Pn	10	16	22.4	-3.6
	23nm,0.5s								
RPZ				S	S	10	18	35.6	-14
RPZ	**Rata Peaks**	**12.87**	**211**	P	Pn	10	16	22.6	-3.4
	5.8nm,0.3s,baz=50,slow=0.6,SNR=22								
RPZ				S	S	10	18	35.6	-14
	1.8nm,0.3s,baz=5.1,slow=18,SNR=12								
FOZ	**Fox Glacier**	**13.37**	**214**	*e*PN	Pn	10	16	27.7	-4.5
ODZ	**Otahua Downs**	**14.12**	**208**	*e*Pn	**Pn**	**10**	**16**	**39.7**	**-1.9**
ODZ	**Otahua Downs**	**14.12**	**208**	PN	**Pn**	**10**	**16**	**39.3**	**-2.3**
JCZ	**Jackson Bay**	**14.20**	**215**	PN	Pn	10	16	39.0	-3.6
MSVF	**Nonsavu**	**15.23**	**353**	*e*Pn	**Pn**	**10**	**16**	**55.7**	**+0.2**
	43nm,0.8s								
DZM	**Mont Dzumac**	**16.18**	**309**	*e*P	**Pn**	**10**	**17**	**07.1**	**+0.2**
	44nm,0.9s								
DZM	**Mont Dzumac**	**16.18**	**309**	P	**Pn**	**10**	**17**	**07.8**	**+0.8**
	1.2nm,0.3s,baz=110,slow=15,SNR=21								
EIDS	**Eidsvold**	**26.33**	**279**	*e*P	**P**	**10**	**18**	**47.8**	**0.0**
	3.5nm,0.6s								
STKA	**Stephens Creek**	**32.36**	**261**	P	**P**	**10**	**19**	**42.2**	**+1.2**
STKA	**Stephens Creek**	**32.36**	**261**	P	**P**	**10**	**19**	**42.2**	**+1.2**
	4.0nm,1.0s,baz=107,slow=11,SNR=3.2								
CTA	**Charters Tower**	**32.68**	**285**	P	**P**	**10**	**19**	**44.0**	**+0.1**
CTA	**Charters Tower**	**32.68**	**285**	P	**P**	**10**	**19**	**44.0**	**+0.1**
	5.5nm,0.5s,baz=115,slow=11,SNR=11								
CTAO	**Charters Tower**	**32.68**	**285**	*e*P	**P**	**10**	**19**	**43.7**	**-0.2**
	3.4nm,0.5s								
COEN	**Coen**	**38.47**	**291**	*e*P	**P**	**10**	**20**	**32.7**	**-0.4**
	53nm,1.0s								
ASAR	**Alice Springs**	**41.38**	**271**	P	**P**	**10**	**20**	**56.2**	**-0.9**
ASAR	**Alice Springs**	**41.38**	**271**	P	**P**	**10**	**20**	**56.2**	**-0.9**
	3.6nm,0.7s,baz=107,slow=7.6,SNR=47								
WRAB	**Tennant Creek**	**42.60**	**276**	*e*P	**P**	**10**	**21**	**05.4**	**-1.6**
	5.3nm,0.7s								
WRA	**Warramunga Arr**	**42.61**	**276**	P	**P**	**10**	**21**	**05.8**	**-1.2**
WRA	**Warramunga Arr**	**42.61**	**276**	P	**P**	**10**	**21**	**05.8**	**-1.2**
	4.0nm,0.5s,baz=115,slow=7.7,SNR=46								
FITZ	**Fitzroy Crossi**	**50.75**	**273**	P	**P**	**10**	**22**	**09.8**	**-0.4**
FITZ	**Fitzroy Crossi**	**50.75**	**273**	P	**P**	**10**	**22**	**09.8**	**-0.4**
	3.8nm,1.0s,baz=97,slow=4.0,SNR=5.4								
GUMO	**Guam**	**57.17**	**318**	*e*P	P	10	22	51.5	-5.0
	90nm,1.1s								
QSPA	**South Pole Qui**	**57.19**	**180**	*e*P	**P**	**10**	**22**	**59.0**	**+2.7**
	2.1nm,0.8s								
QSPA	**South Pole Qui**	**57.19**	**180**	P	**P**	**10**	**22**	**58.9**	**+2.7**
	2.8nm,0.9s,baz=66,slow=4.2,SNR=17								
CMB	**Columbia Colle**	**89.75**	**43**	*e*P	**P**	**10**	**26**	**07.2**	**+1.4**
	1.6nm,1.0s								
NVAR	**Mina Array Bea**	**91.22**	**44**	P	**P**	**10**	**26**	**14.8**	**+2.0**
NVAR	**Mina Array Bea**	**91.22**	**44**	P	**P**	**10**	**26**	**14.8**	**+2.0**
	0.4nm,0.8s,baz=215,slow=6.7,SNR=4.7								
FINES	**FINESS Array B**	**146.88**	**337**	PKPbc	**PKPbc**	**10**	**32**	**47.2**	**-1.0**
FINES	**FINESS Array B**	**146.88**	**337**	PKPbc	**PKPbc**	**10**	**32**	**47.2**	**-1.0**
	2.7nm,0.9s,baz=204,slow=1.9,SNR=3.7								
NB2	**NORSAR Subarra**	**150.94**	**349**	PKP	**PKPbc**	**10**	**32**	**56.8**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=16,slow=2.6								
NOA	**NORSAR Array B**	**150.94**	**349**	PKPbc	**PKPbc**	**10**	**32**	**57.3**	**-1.2**
NOA	**NORSAR Array B**	**150.94**	**349**	PKPbc	**PKPbc**	**10**	**32**	**57.3**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=14,slow=4.2,SNR=3.6								
HFS	**Hagfors**	**151.33**	**346**	PKPbc	**PKPbc**	**10**	**32**	**58.4**	**-1.0**
HFS	**Hagfors**	**151.33**	**346**	PKPbc	**PKPbc**	**10**	**32**	**58.4**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=18,slow=5.0,SNR=3.2								
TORD	**Torodi Ar. Bea**	**160.26**	**185**	PKPab	**PKPab**	**10**	**33**	**49.0**	**+1.4**
TORD	**Torodi Ar. Bea**	**160.26**	**185**	PKPab	**PKPab**	**10**	**33**	**49.0**	**+1.4**
	comp=Z,0.8nm,1.0s,baz=192,slow=4.5,SNR=3.0								

*ISCJB **14** 10:17:54.1±0.3,33.°13N±0.°04×132.°09E±0.°03,h68km±3km, mb4.1/19, Error ellipse: s-maj=6.0km s-min=4.6km az=159.7*

*JMA **14** 10:17:55.5,33.°11N×132.°11E,h56km±1km,M4.2 Broadband fault plane solution: P waves. NP1: ϕs130.00000°,δ85.00000°,λ-158.00000°. NP2: ϕs38.00000°,δ69.00000°,λ-6.00000°. Principal axes: T Plg11.0000°, Azm262.0000°; N Plg68.0000°, Azm144.0000°; P Plg19.0000°, Azm356.0000°; JMA Felt II J1.*

*NEIC **14** 10:17:55.7±0.6,33.°14N×131.°99E,h64km±5km,mb4.5/5, MW4.2(NIED) Error ellipse: s-maj=9.8km s-min=8.5km az=93.0*

NEIC Recorded [2 JMA] in Kumamoto, Miyazaki and Oita. Also recorded [2 JMA] in Ehime and Kochi, Shikoku and [1 JMA] in Hiroshima and Yamaguchi, Honshu.

*IDC **14** 10:17:57.5±1.2,33.°12N×131.81E,h78km±9km,mb3.9/14, mb1 4.0/16,mb1mx3.8/29,mbtmp3.8/16,MS2.9/6, Ms1 2.9/6,ms1mx2.6/40,Error ellipse: s-maj=20.1km s-min=10.9km az=79.0*

*NIED **14** 10:18:00,33.°10N×132.°10E,h44km,Mw4.3 Best double couple: M0 2.92000×10^15 NP1:ϕs310.00000°,δ75.00000°, λ152.00000°. NP2:ϕs48.00000°,δ63.00000°,λ16.00000°.*

ISC 14 10:17:55.4±0.7,33.°13N±0.°04×132.°09E±0.°03,h61km±6km, n62,σ1s°07/69,mb4.3/19,6C-2D,Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JUS	**Usuki**	**0.29**	**258**	S		**Sn**		**10 18 12.3**	**-0.6**
UWA2	**Uw jima 2**	**0.46**	**79**	⇑P		**Pn**		**10 18 06.4**	**-0.7**
UWA2				S		**Sn**		**10 18 15.0**	**-0.6**
JNA	**Nagahama**	**0.54**	**37**	⇑P		**Pn**		**10 18 07.7**	**-0.2**
JNA				S		**Sn**		**10 18 16.4**	**-0.6**
JTO	**Tosashimizu**	**0.66**	**114**	⇑P		**Pn**		**10 18 08.5**	**-0.7**
JTO				S		**Sn**		**10 18 18.2**	**-1.1**
JKU	**Kubokawa**	**0.84**	**77**	⇑P		**Pn**		**10 18 10.9**	**-0.5**
JKU				S		**Sn**		**10 18 23.0**	**-0.2**
JNU	**Nakatsue**	**1.01**	**270**	*e*Pn		**Pn**		**10 18 13.6**	**-0.1**
JNU				*e*Sn		**Sn**		**10 18 28.2**	**+0.9**
JNU	**Nakatsue**	**1.01**	**270**	P		**Pn**		**10 18 13.4**	**-0.3**
	406nm,0.3s,baz=87,slow=5.8,SNR=5654								
JNU				S		**Sn**		**10 18 27.4**	**+0.1**
	389nm,0.3s,baz=248,slow=19,SNR=24								
JET	**Tanbara**	**1.03**	**51**	⇑P		**Pn**		**10 18 13.8**	**-0.1**
JET				S		**Sn**		**10 18 27.0**	**-0.7**
JHM	**Kurahashi**	**1.07**	**20**	⇓P		**Pn**		**10 18 14.8**	**+0.4**
JHM				S		**Sn**		**10 18 28.8**	**+0.2**
JIU2	**Izumi 2**	**1.22**	**242**	⇑P		**Pn**		**10 18 16.3**	**0.0**
JIU2				S		**Sn**		**10 18 32.2**	**+0.2**
JTZ	**Takazaki**	**1.49**	**215**	⇓P		**Pn**		**10 18 20.5**	**+0.6**
KSRS	**Korea Array**	**5.50**	**323**	P		**Pn**		**10 19 15.7**	**+1.0**
	1.5nm,0.3s,baz=141,slow=14,SNR=23								
KSRS				S		**Sn**		**10 20 15.9**	**-0.6**
	3.2nm,0.3s,baz=140,slow=24,SNR=9.5								
KSRS				LR		LR		10 21 44.7	
	comp=Z,101nm,18.5s,baz=160,slow=42								
KSAR	**Wonju Array Be**	**5.51**	**323**	P		**Pn**		**10 19 15.7**	**+0.9**
KSAR				S		**Sn**		**10 20 15.9**	**-0.9**
MAJO	**Matsushiro**	**6.08**	**54**	*e*Pn		**Pn**		**10 19 23.6**	**+1.0**
	48nm,0.4s								
MAT	**Matsushiro**	**6.08**	**54**	P		**Pn**		**10 19 23.9**	**+1.3**
MAT				S		**Sn**		**10 20 29.6**	**-1.2**
JHJ	**Hachijo jima 2**	**6.46**	**88**	P		**Pn**		**10 19 27.9**	**+0.1**
	378nm,0.3s,baz=260,slow=24,SNR=270								
JHJ				LR		LR		10 21 23.4	
	comp=Z,91nm,21.9s,baz=259,slow=31								
JOW	**Kunigami**	**7.09**	**209**	*e*Pn		**Pn**		**10 19 36.3**	**-0.3**
USRK	**Ussuriysk Arra**	**11.06**	**360**	P		**Pn**		**10 20 33.6**	**+3.0**
	0.8nm,0.3s,baz=182,slow=11,SNR=8.5								
USRK				LR		LR		10 24 27.6	
	comp=Z,35nm,21.7s,baz=163,slow=35								
ASAJ	**Asahikawa**	**13.69**	**34**	LR		LR		10 26 10.3	
	comp=Z,45nm,21.6s,baz=260,slow=36								
ENH	**Enshi**	**19.43**	**268**	*e*P		**P**		**10 22 17.1**	**+0.3**
	17nm,0.7s								
ULN	**Ulaanbaatar**	**23.92**	**315**	*e*P		**P**		**10 23 03.3**	**-0.4**
	16nm,1.0s								
SONM	**Songino Array**	**24.30**	**315**	P		**P**		**10 23 07.0**	**-0.1**
SONM	**Songino Array**	**24.30**	**315**	P		**P**		**10 23 07.0**	**-0.1**
	7.0nm,0.8s,baz=119,slow=11,SNR=28								
PETK	**Petropavlovsk-**	**27.11**	**35**	LR		LR		10 32 53.9	
	comp=Z,25nm,21.7s,baz=230,slow=33								
CMAR	**Chiang Mai Arr**	**33.06**	**252**	PcP		**PcP**		**10 27 08.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**33.06**	**252**	PcP		**PcP**		**10 27 08.3**	**+0.6**
	0.7nm,0.4s,baz=37,slow=3.3,SNR=5.1								
CMAR				LR		LR		10 38 11.9	
	comp=Z,36nm,18.5s,baz=50,slow=37								
BVAR	**Borovoye Array**	**47.64**	**314**	P		**P**		**10 26 23.7**	**-1.5**
BVAR	**Borovoye Array**	**47.64**	**314**	P		**P**		**10 26 23.7**	**-1.5**
	2.5nm,0.6s,baz=96,slow=9.9,SNR=12								
BRVK	**Borovoye**	**47.70**	**314**	*e*P		**P**		**10 26 24.5**	**-1.1**
	3.4nm,0.6s								
FITZ	**Fitzroy Crossi**	**51.31**	**188**	P		**P**		**10 26 53.8**	**+0.3**
FITZ	**Fitzroy Crossi**	**51.31**	**188**	P		**P**		**10 26 53.8**	**+0.3**
	1.8nm,0.5s,baz=15,slow=7.4,SNR=5.6								
WRAB	**Tennant Creek**	**52.81**	**177**	*e*P		**P**		**10 27 04.6**	**+0.1**
	11nm,1.2s								
WRA	**Warramunga Arr**	**52.81**	**177**	P		**P**		**10 27 04.5**	**-0.1**
WRA	**Warramunga Arr**	**52.81**	**177**	P		**P**		**10 27 04.5**	**-0.1**
	1.3nm,0.6s,baz=353,slow=8.0,SNR=18								
KDAK	**Kodiak Island**	**55.03**	**39**	P		**P**		**10 27 21.9**	**+1.5**
KDAK	**Kodiak Island**	**55.03**	**39**	P		**P**		**10 27 21.9**	**+1.5**
	1.1nm,0.4s,baz=265,slow=3.9,SNR=6.4								
ASAR	**Alice Springs**	**56.50**	**178**	P		**P**		**10 27 31.6**	**+0.3**
ASAR	**Alice Springs**	**56.50**	**178**	P		**P**		**10 27 31.6**	**+0.3**
	1.1nm,0.5s,baz=10,slow=14,SNR=25								
ILAR	**Eielson Array**	**56.80**	**30**	P		**P**		**10 27 33.9**	**+0.9**
ILAR	**Eielson Array**	**56.80**	**30**	P		**P**		**10 27 33.9**	**+0.9**
	0.6nm,0.6s,baz=264,slow=6.7,SNR=18								
STKA	**Stephens Creek**	**65.28**	**171**	P		**P**		**10 28 31.5**	**+0.8**
STKA	**Stephens Creek**	**65.28**	**171**	P		**P**		**10 28 31.5**	**+0.8**
	1.5nm,0.3s,baz=37,slow=5.2,SNR=8.7								
KBZ	**Khabaz**	**67.46**	**308**	P		**P**		**10 28 45.1**	**+0.4**
KBZ	**Khabaz**	**67.46**	**308**	P		**P**		**10 28 45.1**	**+0.4**
	3.3nm,0.8s,baz=194,slow=1.6,SNR=7.6								
GNI	**Garni**	**67.72**	**304**	P		**P**		**10 28 47.0**	**+0.4**
GNI	**Garni**	**67.72**	**304**	P		**P**		**10 28 47.0**	**+0.4**
	5.0nm,0.5s,baz=145,slow=12,SNR=3.6								
FINES	**FINESS Array B**	**68.54**	**330**	P		**P**		**10 28 49.8**	**-1.4**
FINES	**FINESS Array B**	**68.54**	**330**	P		**P**		**10 28 49.8**	**-1.4**
	2.2nm,0.8s,baz=100,slow=9.9,SNR=4.6								
YKA	**Yellowknife Ar**	**70.88**	**27**	P		**P**		**10 29 07.0**	**+1.5**
YKA	**Yellowknife Ar**	**70.88**	**27**	P		**P**		**10 29 07.0**	**+1.5**
	0.5nm,0.7s,baz=306,slow=5.9,SNR=7.9								
AKASG	**Malin Array Be**	**72.48**	**319**	P		**P**		**10 29 13.0**	**-2.3**
AKASG	**Malin Array Be**	**72.48**	**319**	P		**P**		**10 29 13.0**	**-2.3**
	0.7nm,0.4s,baz=55,slow=7.3,SNR=2.7								
SUMG	**Summit**	**74.38**	**357**	*e*P		**P**		**10 29 27.4**	**+0.9**
	5.8nm,1.0s								
BRTR	**Keskin Array B**	**75.45**	**308**	P		**P**		**10 29 32.1**	**-0.9**
BRTR	**Keskin Array B**	**75.45**	**308**	P		**P**		**10 29 32.1**	**-0.9**
	0.9nm,0.7s,baz=82,slow=5.4,SNR=4.9								
GERES	**GERESS Array B**	**81.67**	**324**	P		**P**		**10 30 04.2**	**-2.9**
GERES	**GERESS Array B**	**81.67**	**324**	P		**P**		**10 30 04.2**	**-2.9**
	0.2nm,0.4s,baz=57,slow=4.9,SNR=4.5								
NVAR	**Mina Array Bea**	**83.37**	**48**	pP		pP		10 30 33.2	-0.1
NVAR	**Mina Array Bea**	**83.37**	**48**	pP		pP		10 30 33.2	-0.1
	0.5nm,0.6s,baz=310,slow=5.7,SNR=4.4								
PPT	**Papeete**	**90.08**	**111**	LR		LR		11 07 23.9	
	comp=Z,86nm,19.2s,baz=152,slow=33								
QSPA	**South Pole Qui**	**122.88**	**180**	PKP		**PKPdf**		**10 36 43.6**	**-0.1**
QSPA	**South Pole Qui**	**122.88**	**180**	PKP		**PKPdf**		**10 36 43.6**	**-0.1**
	0.7nm,0.6s,baz=314,slow=2.8,SNR=8.9								

NNC 14 10:22:54.6±1.5,43.°75N×80.°41E,h0km,mb3.8,mpv3.5, 10C-5D,Error ellipse: s-maj=17.5km s-min=7.2km az=144.0,Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KNDC	**Almaty**	**2.56**	**259**	⇑Pg		Pb		10 23 40.4	-1.1
	21nm,0.4s								
KNDC				⇑Lg		Lg		10 24 17.0	
MK31	**Makanchi Array**	**3.32**	**23**	⇓Pn		Pn		10 23 48.5	+0.6
	3.5nm,0.4s,baz=208,slow=14,SNR=174								
MK31				⇑Lg		Lg		10 24 40.2	
	6.8nm,0.3s,baz=201,slow=27,SNR=8.1								
TKM2	**Tokmak 2**	**3.61**	**258**	⇑Pn		Pn		10 23 53.6	+1.6
	9.5nm,0.5s								
TKM2				⇑Lg		Lg		10 24 48.6	
	50nm,0.6s								
KUR16	**Kurchatov Arra**	**7.00**	**350**	⇑Pn		Pn		10 24 37.5	-0.8
	0.8nm,0.7s								
KUR16				⇑Lg		Lg		10 26 35.6	
	4.0nm,0.7s								
KURK	**Kurchatov**	**7.07**	**351**	⇑Pn		Pn		10 24 38.5	-0.8
	5.0nm,1.0s								
KURK				⇑Lg		Lg		10 26 36.9	
	23nm,1.0s								
KK31	**Karatay Array**	**7.23**	**268**	⇑Pg		Pg		10 25 07.3	-5.9
	1.8nm,0.7s,baz=78,slow=16,SNR=9.3								
KK31				⇓Lg		Lg		10 26 42.3	
	6.2nm,0.6s,baz=76,slow=29,SNR=5.3								
VOSK	**Vostochnaya**	**10.95**	**328**	⇓Lg		Lg		10 28 41.0	
	7.5nm,1.6s								
BVA0	**Borovoye Array**	**11.41**	**328**	⇓Lg		Lg		10 28 55.2	
	3.1nm,0.6s,baz=126,slow=23,SNR=4.1								
ZRNK	**Zerenda**	**11.91**	**325**	⇓Lg		Lg		10 29 11.7	
	4.6nm,0.9s								

IDC 14 10:25:55.8±2.3,5.°46N×126.°30E,h0km,mb3.4/3, mb1 3.6/3,mb1mx3.4/22,mbtmp3.4/3,Error ellipse: s-maj=178.2km s-min=26.9km az=66.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.45**	**163**	P		P		10 31 34.0	-0.7
	0.4nm,0.4s,baz=343,slow=10,SNR=6.0								
ASAR	**Alice Springs**	**29.89**	**166**	P		P		10 32 06.1	+0.6
	0.2nm,0.7s,baz=346,slow=6.5,SNR=3.6								
MKAR	**Makanchi Array**	**55.90**	**325**	P		P		10 35 35.5	-0.1
	0.2nm,0.4s,baz=118,slow=6.7,SNR=5.4								

*MOS **14** 10:30:11.6±1.9,51.°67N×104.°10E,h18km,mb4.3/18,Error ellipse: s-maj=16.4km s-min=10.5km az=61.5*

MOS Felt (II-III) at Baykal'sk, (II) at Sluydyanka.

*BYKL **14** 10:30:12.1±0.2,51.°70N×104.°07E,h10km±4km,FELT I=III-IV MSK at Baikalsk; III at Sluydyuanka*

ISC 14 10:30:11.9±1.0,51.°72N±0.°03×104.°06E±0.°02,h5km±9km, n35,σ1s°41/69,8C-7D,Lake Baykal region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TLY	**Talaya**	**0.26**	**262**	⇓*i*Pg		**Pg**		**10 30 17.1**	**+0.1**
TLY				*e*				10 30 20.7	
TLY				pmax	pmax				
	comp=Z,836nm,0.1s								
TLY				smax	smax				
	comp=N,8μm,0.3s								
TLY	**Talaya**	**0.26**	**262**	⇓*i*Pg		**Pg**		**10 30 17.2**	**+0.2**
TLY				*e*				10 30 19.2	
TLY				*i* Sg		**Sg**		**10 30 20.9**	**+0.4**
LSTR	**Listvyanka**	**0.50**	**72**	*e*Pg		**Pg**		**10 30 21.6**	**+0.1**
LSTR				*e*				10 30 28.6	
LSTR				pmax	pmax				
	comp=Z,151nm,0.1s								
LSTR				smax	smax				
	comp=N,1μm,0.2s								
LSTR	**Listvyanka**	**0.50**	**72**	⇓*i*Pg		**Pg**		**10 30 21.6**	**+0.1**
LSTR				*i* Sg		**Sg**		**10 30 28.7**	**+0.6**
LSTR				Pmax					
	comp=N,153nm,0.1s								
LSTR				Smax					
	comp=N,1μm,0.2s								
IRK	**Irkutsk**	**0.54**	**14**	*e*PG		**Pg**		**10 30 22.8**	**+0.5**
IRK				*e*				10 30 30.3	
IRK				pmax	pmax				
	comp=Z,511nm,0.3s								
IRK				smax	smax				
	comp=N,10μm,0.3s								
IRK	**Irkutsk**	**0.54**	**14**	⇓*i*Pg		**Pg**		**10 30 22.8**	**+0.5**
IRK				*i* Sg		**Sg**		**10 30 30.3**	**+0.9**
IRK				Pmax					
	comp=N,389nm,0.1s								
IRK				Smax					
	comp=N,10μm,0.5s								
ARS	**Arshan**	**1.04**	**282**	*e*PG		**Pg**		**10 30 30.9**	**-0.9**
ARS				*e*				10 30 44.0	
ARS				pmax	pmax				
	comp=Z,256nm,0.1s								
ARS				smax	smax				
	comp=N,1μm,0.2s								
ARS	**Arshan**	**1.04**	**282**	⇓*i*Pg		**Pg**		**10 30 30.8**	**-1.0**
ARS				*e*				10 30 34.2	
ARS				*e*Sg		**Sg**		**10 30 44.1**	**-1.1**
ARS				*e*Sb		**Sn**		**10 30 48.1**	**+0.1**
ARS				Pmax					
	comp=N,227nm,0.1s								
ARS				max					
	comp=N,1μm,0.3s								
ZAK	**Zakamensk**	**1.42**	**201**	*e*PN		**Pn**		**10 30 37.4**	**-1.0**
ZAK				*e*				10 30 55.5	
ZAK				pmax	pmax				
	comp=Z,143nm,0.1s								
ZAK				smax	smax				
	comp=N,557nm,0.2s								
ZAK	**Zakamensk**	**1.42**	**201**	⇑*i*Pg		**Pn**		**10 30 37.6**	**-0.8**
	comp=N,72nm,0.6s								
ZAK				⇑*i*Pg		**Pn**		**10 30 37.6**	**-0.8**
	comp=N,43nm,0.6s								
ZAK				⇓*i*Pg		**Pn**		**10 30 37.6**	**-0.8**
	comp=N,97nm,0.6s								
ZAK				*e*				10 30 39.3	
ZAK				*i* Sg		**Sn**		**10 30 56.0**	**-1.6**
ZAK				*e*Sb		**Sg**		**10 30 57.8**	**+0.2**
ZAK				max					
	comp=N,143nm,0.1s								
ZAK				max					
	comp=N,555nm,0.2s								
KAB	**Kabansk**	**1.64**	**77**	*e*PN		**Pb**		**10 30 42.3**	**-0.3**
KAB				*e*				10 31 04.2	
KAB				pmax	pmax				
	comp=Z,138nm,0.5s								
KAB				smax	smax				
	comp=N,848nm,0.2s								
KAB	**Kabansk**	**1.64**	**77**	*e*Pg		**Pb**		**10 30 42.4**	**-0.2**
KAB				*e*Sg		**Sg**		**10 31 04.2**	**-0.4**
KAB				*e*				10 31 05.9	
KAB				Pmax					
	comp=N,111nm,0.3s								
KAB	

NIZ eSn **Sn** **10 32 29.7 -1.0**
NIZ eSg **Sb** **10 32 51.2 +5.2**
NIZ Pmax
comp=N,8.0nm,0.2s
NIZ Smax
comp=N,105nm,0.7s
YLYR **Ulyunkhan** **5.30 51** ePn **Pn** **10 31 32.1 +0.4**
YLYR e 10 31 37.5
YLYR ePg **Pb** **10 31 46.5 +1.5**
YLYR e 10 31 48.3
YLYR e 10 32 30.7
YLYR eSg Sg 10 32 56.0 -6.1
YLYR max
comp=N,5.0nm,0.5s
YLYR Smax
comp=N,56nm,1.2s
KMO **Kumora** **5.94 43** e **Sn** **10 32 46.9 -1.9**
KMO eSg Sg 10 33 15.8 -6.8
KMO e 10 33 18.2
KMO max
comp=N,100nm,1.2s
YOA **Uoyan** **6.33 43** eSg **Sg** **10 33 29.7 -5.2**
YOA Smax
comp=N,303nm,1.5s
UKT **Uakit** **6.83 53** ePg **Pb** **10 32 13.5 +2.5**
UKT e 10 33 06.8
UKT eSg Sb 10 33 41.7 +8.9
UKT Pmax
comp=N,2.0nm,0.6s
UKT Smax
comp=N,35nm,2.3s
NLYR **Nelyaty** **8.34 50** e 10 34 02.8
NLYR *i* Sg Sg 10 34 29.7 -10
NLYR Smax
comp=N,32nm,1.7s
BOD **Bodaibo** **8.39 39** eSg Sg 10 34 32.1 -8.7
BOD Smax
comp=N,33nm,1.7s
CRS **Chara** **9.79 52** eSg Sn 10 35 15.8 +52
CRS e 10 35 21.1
CRS e 10 35 30.4
CRS max
comp=N,10.0nm,1.4s
TUP **Tupik** **9.94 68** e **Sn** **10 34 27.4 +0.3**
TUP eSg 10 35 18.3
TUP e 10 35 22.7
TUP max
comp=N,22nm,2.7s
AAK **Ala-Archa** **21.93 257** eP **P** **10 35 06.6 +0.5**

IDC **14** *10:32:48.8±0.7,36°.53N×61°.55E,h0km,mb4.0/18, mb1 4.1/23,mb1mx4.0/33,mbtmp4.0/23,ML4.2/4,MS3.4/12, Ms1 3.4/12,ms1mx3.1/38,Error ellipse: s-maj=17.2km s-min=13.6km az=6.0*
THR **14** *10:32:49.9±0.6,36°.68N×61°.49E,h14km±10km,ML4.5*
ISCJB **14** *10:32:49.1±1.1,36°.72N±0°.04×61°.49E±0°.03,h7km±7km, mb4.1/28,MS3.5/8,Error ellipse: s-maj=6.8km s-min=3.8km az=151.1*
BJI **14** *10:32:50.1,36°.70N×61°.40E,h12km,mB4.7/3,mb4.3/3, Ms4.0/3,Ms7 3.8/3*
CSEM **14** *10:32:51.5±0.2,36°.74N×61°.44E,h10km,mb4.3/18,Error ellipse: s-maj=6.6km s-min=3.4km az=143.0*
TEH **14** *10:32:52.4,36°.71N×61°.41E,h6km,ML4.5*
MOS **14** *10:32:53.1±1.6,36°.77N×61°.49E,h33km,mb4.3/18,Error ellipse: s-maj=7.9km s-min=6.0km az=71.7*
NNC **14** *10:33:00.7±1.3,37°.42N×61°.52E,h33km±13km,mb4.3, mpv4.0,Error ellipse: s-maj=8.0km s-min=6.4km az=32.0*
ISC 14 10:32:52.4±2.8,36°.77N±0°.04×61°.45E±0°.04,h15km±18km, n214,σ1$46/209,mb4.2/28,MS3.5/8,21C-15D, Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time h m s	Res ISC
				Op		ISC		
IMYA	**Miami**	**1.17**	**249**	⇑*e*Pg		**Pn**	**10 33 12.6**	**-1.7**
IMYA				*e*Sg		**Sb**	**10 33 28.1**	**-1.3**
IMYA				*e*			10 33 30.5	
	comp=Z,57μm,0.1s							
IMYA	**Miami**	**1.17**	**249**	⇑*e*Pg		**Pn**	**10 33 12.6**	**-1.7**
IMYA				*e*Sg		**Sb**	**10 33 28.1**	**-1.3**
ISRO	**Mashad**	**1.66**	**254**	⇓*e*Pn		**Pn**	**10 33 20.3**	**-0.8**
ISRO	**Mashad**	**1.66**	**254**	⇓*e*Pn		**Pn**	**10 33 20.3**	**-0.8**
MHI	**Mashad**	**1.66**	**254**	*e*Pn		**Pb**	**10 33 21.3**	**-1.4**
MHI				*e*			10 33 48.8	
	comp=Z,32μm,0.0s							
IMOG	**Moghan**	**1.83**	**249**	*e*Pn		**Pn**	**10 33 23.0**	**-0.5**
IMOG				*e*			10 33 24.8	
	comp=Z,24μm,0.1s							
IMOG	**Moghan**	**1.83**	**249**	*e*Pn		**Pn**	**10 33 23.0**	**-0.5**
IPAY	**Payeh**	**2.00**	**261**	*e*Pn		**Pn**	**10 33 25.4**	**-0.4**
IPAY				*e*			10 33 27.4	
	comp=Z,37μm,0.1s							
IPAY	**Payeh**	**2.00**	**261**	*e*Pn		**Pn**	**10 33 25.4**	**-0.4**
IAKL	**Akhelmad**	**2.17**	**266**	‖*e*Pn		**Pn**	**10 33 28.3**	**+0.1**
IAKL				*e*			10 34 01.8	
	comp=Z,54μm,0.1s							
IEMG	**Emamgholi**	**2.33**	**287**	*e*Pn		**Pn**	**10 33 31.1**	**+0.7**
IEMG				eSg		**Sb**	**10 34 03.4**	**+0.5**
IEMG				*e*			10 34 07.7	
	comp=Z,24μm,0.1s							
IEMG	**Emamgholi**	**2.33**	**287**	*e*Pn		**Pn**	**10 33 31.1**	**+0.7**
IEMG				eSg		**Sb**	**10 34 03.4**	**+0.5**
IKRD	**Kardeh**	**2.36**	**271**	*e*Pn		Pn	10 33 20.0	-11
IKRD				eSg		Sn	10 33 40.1	-20
IKRD				*e*			10 33 43.8	
	comp=Z,76μm,0.1s							
IKRD	**Kardeh**	**2.36**	**271**	*e*Pn		Pn	10 33 20.0	-11
IKRD				eSg		Sn	10 33 40.1	-20
ISFR	**Sfrayin**	**2.78**	**277**	*e*Pn		**Pn**	**10 33 37.1**	**+0.5**
ISFR				*e*			10 34 37.7	
	comp=Z,41μm,0.3s							
ISFR	**Sfrayin**	**2.78**	**277**	*e*Pn		**Pn**	**10 33 37.1**	**+0.5**
SHRT	**Shahrakht**	**3.26**	**197**	*e*Pn		**Pn**	**10 33 41.6**	**-1.4**
SHRT				eSg		**Sb**	**10 34 29.0**	**-0.5**
BJRD	**Bojnurd**	**3.36**	**287**	*e*Pn		**Pn**	**10 33 44.9**	**+0.5**
BJRD				Sn		**Sn**	**10 34 25.0**	**+1.0**
BJRD				AML		AML	10 34 48.3	
	comp=N,662nm,0.4s							
BJRD				AML		AML	10 35 04.7	
	comp=E,932nm,0.6s							
BJRD	**Bojnurd**	**3.36**	**287**	*e*Pn		**Pn**	**10 33 44.9**	**+0.5**
IDAH	**Dahanechah**	**4.23**	**198**	*e*Pn		**Pn**	**10 33 56.3**	**-0.2**
IDAH				eSg		**Sb**	**10 35 01.6**	**+4.0**
IDAH				*e*			10 35 02.9	
	comp=Z,43μm,0.5s							
IDAH	**Dahanechah**	**4.23**	**198**	*e*Pn		**Pn**	**10 33 56.3**	**-0.2**
IDAH				eSg		**Sb**	**10 35 01.6**	**+4.0**
MRVT	**Maraveh tapeh**	**4.37**	**283**	*e*Pn		**Pn**	**10 33 58.4**	**+0.2**
MRVT	**Maraveh tapeh**	**4.37**	**283**	*e*Pn		**Pn**	**10 33 58.4**	**+0.2**
SHRO	**Shahrood**	**4.46**	**262**	*e*Pn		**Pn**	**10 33 59.1**	**-0.4**
ITEG	**Tejag**	**4.46**	**211**	eSg		**Sb**	**10 35 08.9**	**+4.7**
ITEG	**Tejag**	**4.46**	**211**	eSg		**Sb**	**10 35 08.9**	**+4.7**
TABS	**Tabas**	**4.72**	**230**	*e*Pn		**Pn**	**10 34 02.7**	**-0.4**
TABS	**Tabas**	**4.72**	**230**	*e*Pn		**Pn**	**10 34 02.7**	**-0.4**
IKOO	**Kooshah**	**4.79**	**206**	*e*Pn		**Pn**	**10 34 03.4**	**-0.7**
IKOO	**Kooshah**	**4.79**	**206**	*e*Pn		**Pn**	**10 34 03.4**	**-0.7**
IANJ	**Anjilo**	**6.24**	**260**	*e*Pn		**Pn**	**10 34 23.8**	**-0.3**
IANJ				*e*			10 34 26.4	
	comp=Z,729nm,0.3s							
IANJ	**Anjilo**	**6.24**	**260**	*e*Pn		**Pn**	**10 34 23.8**	**-0.3**
IKIA	**Kiasar**	**6.29**	**267**	*e*Pn		**Pn**	**10 34 24.9**	**+0.2**
IKIA				*e*			10 34 33.5	
	comp=Z,611nm,0.1s							
IKIA	**Kiasar**	**6.29**	**267**	*e*Pn		**Pn**	**10 34 24.9**	**+0.2**
ISHM	**Shahmirzad**	**6.66**	**264**	*e*Pn		**Pn**	**10 34 29.8**	**-0.1**
ISHM				*e*			10 34 30.8	
	comp=Z,2μm,0.2s							
ISHM	**Shahmirzad**	**6.66**	**264**	*e*Pn		**Pn**	**10 34 29.8**	**-0.1**
IALA	**Alasht**	**7.00**	**267**	*e*Pn		**Pn**	**10 34 35.7**	**+1.1**
IALA				*e*			10 35 10.8	
	comp=Z,1μm,0.2s							
IALA	**Alasht**	**7.00**	**267**	*e*Pn		**Pn**	**10 34 35.7**	**+1.1**
ILAS	**Lasjerd**	**7.02**	**261**	*e*Pn		**Pn**	**10 34 34.3**	**-0.5**
ILAS				*e*			10 34 48.1	
	comp=Z,594nm,0.2s							
ILAS	**Lasjerd**	**7.02**	**261**	*e*Pn		**Pn**	**10 34 34.3**	**-0.5**
IBAF	**Bafgh**	**7.11**	**225**	*e*Pn		**Pn**	**10 34 35.2**	**-0.7**
IBAF				*e*			10 34 37.1	
	comp=Z,1μm,0.3s							
IBAF	**Bafgh**	**7.11**	**225**	*e*Pn		**Pn**	**10 34 35.2**	**-0.7**
IFIR	**Firoozkooh**	**7.12**	**263**	*e*Pn		**Pn**	**10 34 36.2**	**-0.1**
IFIR				*e*			10 34 37.0	
	comp=Z,842nm,0.2s							
IFIR	**Firoozkooh**	**7.12**	**263**	*e*Pn		**Pn**	**10 34 36.2**	**-0.1**
IPRN	**Peran**	**7.36**	**269**	*e*Pn		**Pn**	**10 34 39.9**	**+0.5**
IPRN				*e*			10 35 16.2	
	comp=Z,862nm,0.2s							
ICHK	**Chekchek**	**7.36**	**234**	*e*Pn		**Pn**	**10 34 38.9**	**-0.6**
ICHK				*e*			10 34 40.6	
	comp=Z,873nm,0.1s							
ICHK	**Chekchek**	**7.36**	**234**	*e*Pn		**Pn**	**10 34 38.9**	**-0.6**
IDMV	**Damavand**	**7.71**	**264**	*e*Pn		**Pn**	**10 34 43.9**	**-0.5**
IDMV				*e*			10 34 56.5	
	comp=Z,529nm,0.2s							
IDMV	**Damavand**	**7.71**	**264**	*e*Pn		**Pn**	**10 34 43.9**	**-0.5**
IMEH	**Mehriz**	**7.81**	**229**	*e*Pn		**Pn**	**10 34 45.4**	**-0.3**
IMEH				*e*			10 34 46.1	
	comp=Z,1μm,0.2s							
IMEH	**Mehriz**	**7.81**	**229**	*e*Pn		**Pn**	**10 34 45.4**	**-0.3**
KRBR	**Kerman**	**7.83**	**211**	*e*Pn		**Pn**	**10 34 45.0**	**-0.9**
KRBR	**Kerman**	**7.83**	**211**	*e*Pn		**Pn**	**10 34 45.0**	**-0.9**
ISAD	**Sadrabad**	**8.05**	**235**	*e*Pn		**Pn**	**10 34 48.0**	**-0.9**
ISAD				*e*			10 37 26.4	
	comp=Z,668nm,0.3s							
ISAD	**Sadrabad**	**8.05**	**235**	*e*Pn		**Pn**	**10 34 48.0**	**-0.9**
IVRN	**Varamin**	**8.09**	**260**	*e*Pn		**Pn**	**10 34 48.7**	**-0.6**
IVRN	**Varamin**	**8.09**	**260**	*e*Pn		**Pn**	**10 34 48.7**	**-0.6**
IZEF	**Zefreh**	**8.44**	**245**	*e*Pn		**Pn**	**10 34 53.6**	**-0.7**
IZEF				*e*			10 35 40.3	
	comp=Z,124nm,0.3s							
IZEF	**Zefreh**	**8.44**	**245**	*e*Pn		**Pn**	**10 34 53.6**	**-0.7**
KK31	**Karatay Array**	**9.39**	**45**	⇑Pn		**Pn**	**10 35 07.1**	**-0.1**
	comp=Z,2.0nm,0.3s,baz=236,slow=12,SNR=76							
KK31				⇑Sn		**Sn**	**10 36 47.9**	**-4.6**
	comp=Z,33nm,0.7s,baz=230,slow=25,SNR=4.9							
KK31				⇓Lg		Lg	10 37 44.8	
	comp=Z,73nm,0.8s							
KK31	**Karatay Array**	**9.39**	**45**	P		**Pn**	**10 35 07.0**	**-0.1**
KK31							10 36 47.8	
KK31				pmax		pmax		
	comp=Z,2.0nm,0.2s							
KK31				pmax		pmax		
	comp=Z,5.0nm,0.4s							
KK31				smax		smax		
	comp=Z,9.0nm,0.3s							
KK31				pmax		pmax		
	comp=Z,24nm,0.5s							
KK31	**Karatay Array**	**9.39**	**45**	Pn		**Pn**	**10 35 07.1**	**-0.1**
	comp=Z,2.0nm,0.3s,baz=236,SNR=76							
KK31				Sn		**Sn**	**10 36 47.9**	**-4.6**
	comp=Z,33nm,0.7s,SNR=4.9							
KK31				Lg		Lg	10 37 44.8	
	comp=Z,73nm,0.8s							
KHMZ	**Khomeyn**	**9.88**	**256**	*e*Pn		**Pn**	**10 35 14.2**	**+0.3**
KHMZ	**Khomeyn**	**9.88**	**256**	*e*Pn		**Pn**	**10 35 14.2**	**+0.3**
AML	**Almayashu**	**10.87**	**57**	*i* P		**Pn**	**10 35 30.3**	**+2.6**
AML	**Almayashu**	**10.87**	**57**	*i* P		**Pn**	**10 35 30.3**	**+2.6**
	SNR=5.9							
AML	**Almayashu**	**10.87**	**57**	*i* P		**Pn**	**10 35 30.3**	**+2.6**
EKS2	**Erkin-Say**	**11.16**	**54**	*i* P		Pn	10 35 37.9	+6.5
EKS2	**Erkin-Say**	**11.16**	**54**	P		Pn	10 35 37.9	+6.5
	SNR=24							
EKS2	**Erkin-Say**	**11.16**	**54**	*i* P		Pn	10 35 37.9	+6.5
AAK	**Ala-Archa**	**11.62**	**56**	P		**Pn**	**10 35 38.7**	**+1.0**
AAK							10 37 44.9	
AAK				pmax		pmax		
	comp=Z,1.0nm,0.3s							
AAK				smax		smax		
	comp=N,4.0nm,0.3s							
AAK				MLR		MLR		
	comp=Z,108nm,18.5s							
AAK	**Ala-Archa**	**11.62**	**56**	P		**Pn**	**10 35 38.9**	**+1.2**
	SNR=15							
AAK	**Ala-Archa**	**11.62**	**56**	Pn		**Pn**	**10 35 38.7**	**+1.0**
	comp=Z,1.1nm,0.3s,baz=250,slow=4.5,SNR=9.6							
AAK				Sn		**Sn**	**10 37 44.9**	**-2.3**
	comp=Z,3.9nm,0.3s,baz=338,slow=22,SNR=6.1							
AAK				LR		LR	10 41 05.8	
	comp=Z,108nm,18.4s,baz=189,slow=42							
AAK	**Ala-Archa**	**11.62**	**56**	P		**Pn**	**10 35 38.7**	**+1.0**
	comp=Z,1.0nm,0.3s							
AAK				S		**Sn**	**10 37 44.9**	**-2.3**
	comp=Z,108nm,18.5s							
KZA	**Kyzart**	**11.91**	**59**	*i* P		**Pn**	**10 35 42.7**	**+0.8**
KZA	**Kyzart**	**11.91**	**59**	P		**Pn**	**10 35 42.7**	**+0.8**
	SNR=19							
KZA	**Kyzart**	**11.91**	**59**	*i* P		**Pn**	**10 35 42.7**	**+0.8**
KBK	**Karagaybulak**	**11.93**	**56**	*i* P		**Pn**	**10 35 43.2**	**+1.2**
KBK	**Karagaybulak**	**11.93**	**56**	P		**Pn**	**10 35 43.2**	**+1.2**
	SNR=13							
KBK	**Karagaybulak**	**11.93**	**56**	*i* P		**Pn**	**10 35 43.2**	**+1.2**
CHMS	**Chumysh**	**11.95**	**55**	*i* P		Pn	10 35 47.2	+5.0
CHMS	**Chumysh**	**11.95**	**55**	P		Pn	10 35 47.2	+5.0
	SNR=14							
CHMS	**Chumysh**	**11.95**	**55**	*i* P		Pn	10 35 47.2	+5.0
MAK	**Makhachkala**	**12.36**	**304**	*e*P		**Pn**	**10 35 49.9**	**+2.2**
MAK				MLR		MLR		
	comp=Z,292nm,16.0s							
MAK	**Makhachkala**	**12.36**	**304**	*e*P		**Pn**	**10 35 49.9**	**+2.2**
	comp=Z,292nm,16.0s							
TKM2	**Tokmak 2**	**12.48**	**56**	⇓Pn		**Pn**	**10 35 49.6**	**+0.1**
	comp=Z,38nm,1.0s							
TKM2				⇑Sn		**Sn**	**10 38 03.9**	**-4.4**
	comp=Z,14nm,0.8s							
TKM2				⇑Lg		Lg	10 39 25.7	
	comp=Z,52nm,1.0s							
TKM2	**Tokmak 2**	**12.48**	**56**	P		**Pn**	**10 35 49.5**	**+0.1**
TKM2				pmax		pmax		
	comp=Z,38nm,1.0s							
TKM2	**Tokmak 2**	**12.48**	**56**	P		**Pn**	**10 35 49.7**	**+0.2**
	SNR=18							
TKM2	**Tokmak 2**	**12.48**	**56**	Pn		**Pn**	**10 35 49.6**	**+0.1**
	comp=Z,38nm,1.0s							
TKM2				Sn		**Sn**	**10 38 03.9**	**-4.4**
	comp=Z,14nm,0.8s							
TKM2				Lg		Lg	10 39 25.7	
	comp=Z,52nm,1.0s							
AB31	**Akbulak array**	**12.52**	**355**	⇑Pn		**Pn**	**10 35 47.5**	**-2.4**
	comp=Z,3.9nm,0.7s,baz=190,slow=13,SNR=26							
AB31				⇓Sn		Sn	10 38 00.9	-8.1
	comp=Z,4.7nm,0.5s,baz=193,slow=24,SNR=5.9							
AB31				⇓Lg		Lg	10 39 17.9	
	comp=Z,47nm,1.1s							
AB31	**Akbulak array**	**12.52**	**355**	P		**Pn**	**10 35 47.4**	**-2.4**
AB31							10 38 04.0	
AB31				smax		smax		
	comp=Z,4.0nm,0.2s							
AB31	**Akbulak array**	**12.52**	**355**	Pn		**Pn**	**10 35 47.5**	**-2.4**
	comp=Z,3.9nm,0.7s,SNR=26							
AB31				Sn		Sn	10 38 00.9	-8.1
	comp=Z,4.7nm,0.5s,SNR=5.9							
AB31				S			10 38 04.0	
	comp=Z,4.0nm,0.2s							
AB31				Lg		Lg	10 39 17.9	
	comp=Z,47nm,1.1s							
GNI	**Garni**	**13.52**	**290**	Pn		Pn	10 36 06.8	+3.1
	comp=Z,0.8nm,0.3s,baz=135,slow=11,SNR=3.3							
GNI				LR		LR	10 42 14.5	
	comp=Z,76nm,21.8s,baz=71,slow=41							
GNI	**Garni**	**13.52**	**290**	*e*P		Pn	10 36 07.0	+3.3
	comp=Z,4.0nm,0.7s							
MIB	**Mutribah**	**13.69**	**244**	*e*P		**Pn**	**10 36 04.7**	**-1.2**
MIB				AMb		AMB	10 36 15.3	
	comp=Z,167nm,0.6s							
MIB	**Mutribah**	**13.69**	**244**	*e*P		**Pn**	**10 36 04.7**	**-1.2**
	comp=Z,167nm,0.6s							
KBD	**Kabd**	**13.80**	**241**	*e*P		**Pn**	**10 36 05.9**	**-1.6**
KBD	**Kabd**	**13.80**	**241**	*e*P		**Pn**	**10 36 05.9**	**-1.6**
AKTK	**Aktyubinsk**	**13.88**	**351**	P		**Pn**	**10 36 06.8**	**-1.6**
	comp=Z,2.0nm,0.3s							
AKTK				S		Sn	10 38 33.9	-8.2
	comp=Z,162nm,18.6s							
AKTO	**Aktyubinsk**	**13.88**	**351**	⇓Pn		**Pn**	**10 36 06.3**	**-2.1**
	comp=Z,25nm,1.2s							
AKTO				⇑Sn		Sn	10 38 33.0	-9.1
	comp=Z,17nm,0.7s							
AKTO				⇑Lg		Lg	10 40 01.8	
	comp=Z,41nm,1.4s							
AKTO	**Aktyubinsk**	**13.88**	**351**	P		**Pn**	**10 36 06.8**	**-1.6**
AKTO							10 38 33.9	
AKTO				pmax		pmax		
	comp=Z,2.0nm,0.3s							
AKTO				smax		smax		
	comp=N,1.0nm,0.3s							
AKTO				MLR		MLR		
	comp=Z,162nm,18.6s							
AKTO	**Aktyubinsk**	**13.88**	**351**	Pn		**Pn**	**10 36 06.8**	**-1.6**
	comp=Z,1.7nm,0.3s,baz=162,slow=13,SNR=36							
AKTO				Sn		Sn	10 38 33.9	-8.2
	comp=Z,0.5nm,0.3s,baz=208,slow=17,SNR=3.5							
AKTO				LR		LR	10 42 40.9	
	comp=Z,162nm,18.6s,baz=304,slow=42							
AKTO	**Aktyubinsk**	**13.88**	**351**	Pn		**Pn**	**10 36 06.3**	**-2.1**
	comp=Z,25nm,1.2s							
AKTO				Sn		Sn	10 38 33.0	-9.1
	comp=Z,17nm,0.7s							
AKTO				Lg		Lg	10 40 01.8	
	comp=Z,41nm,1.4s							
RDF	**Al-Radifah**	**14.05**	**240**	*e*P		**Pn**	**10 36 09.8**	**-1.1**
RDF	**Al-Radifah**	**14.05**	**240**	*e*P		**Pn**	**10 36 09.8**	**-1.1**
KBZ	**Khabaz**	**15.76**	**302**	P		**Pn**	**10 36 34.3**	**+0.6**
KBZ				MLR		MLR		
	comp=Z,80nm,18.4s							
KBZ	**Khabaz**	**15.76**	**302**	Pn		**Pn**	**10 36 34.3**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=82,slow=4.2,SNR=4.8							
KBZ				LR		LR	10 44 41.8	
	comp=Z,80nm,18.4s,baz=13,slow=45							
KBZ	**Khabaz**	**15.76**	**302**	P		**Pn**	**10 36 34.3**	**+0.6**
	comp=Z,80nm,18.4s							
KIV	**Kislovodsk**	**15.98**	**302**	*e*P		**Pn**	**10 36 36.2**	**-0.4**
KIV				pmax		pmax		
	comp=Z,11nm,1.0s							
KIV				MLR		MLR		
	comp=Z,16nm,10.0s							
KIV	**Kislovodsk**	**15.98**	**302**	*e*P		**Pn**	**10 36 36.2**	**-0.4**
	comp=Z,16nm,10.0s							
ZRNK	**Zerenda**	**17.02**	**16**	Pn		**Pn**	**10 36 47.3**	**-2.4**
ZRNK				⇑Sn		Sn	10 39 49.4	-9.1
	comp=Z,6.4nm,0.6s							
ZRNK				⇑Lg		Lg	10 41 41.5	
	comp=Z,22nm,1.4s							
ZRNK	**Zerenda**	**17.02**	**16**	Pn		**Pn**	**10 36 47.3**	**-2.4**
ZRNK				Sn		Sn	10 39 49.4	-9.1
	comp=Z,6.4nm,0.6s							
ZRNK				Lg		Lg	10 41 41.5	
	comp=Z,22nm,1.4s							
VOSK	**Vostochnaya**	**17.30**	**20**	Pn		**Pn**	**10 36 49.9**	**-3.2**
VOSK				⇑Sn		Sn	10 39 55.0	-10
	comp=Z,8.8nm,0.8s							
VOSK				⇓Lg		Lg	10 41 50.9	
	comp=Z,32nm,1.2s							
VOSK	**Vostochnaya**	**17.30**	**20**	P		**Pn**	**10 36 50.2**	**-2.9**
VOSK				pmax		pmax		
	comp=Z,9.0nm,0.7s							
BVA0	**Borovoye Array**	**17.41**	**18**	⇓Pn		**Pn**	**10 36 54.1**	**-0.5**
	comp=Z,13nm,0.8s,baz=198,slow=11,SNR=7.8							
BVA0				⇑Sn		Sn	10 39 59.4	-8.6
	comp=Z,11nm,0.8s							
BVA0				⇓Lg		Lg	10 41 56.7	
	comp=Z,22nm,1.3s							
BVA0	**Borovoye Array**	**17.41**	**18**	*i* P		**Pn**	**10 36 54.0**	**-0.5**
BVA0							10 39 57.2	
BVA0				pmax		pmax		
	comp=Z,13nm,0.9s							
BVA0				smax		smax		
	comp=Z,11nm,0.8s							
BVA0	**Borovoye Array**	**17.41**	**18**	Pn		**Pn**	**10 36 54.1**	**-0.5**
	comp=Z,13nm,0.8s,SNR=7.8							
BVAR	**Borovoye Array**	**17.41**	**18**	P		**Pn**	**10 36 52.7**	**-1.9**
BVAR				S		Sn	10 39 57.5	-10
BVAR				pmax		pmax		
	comp=Z,3.0nm,0.3s							
BVAR				smax		smax		
	comp=N,1.0nm,0.3s							
BVAR				MLR		MLR		
	comp=Z,214nm,19.9s							
BVAR	**Borovoye Array**	**17.41**	**18**	P		**Pn**	**10 36 52.7**	**-1.9**
	comp=Z,2.9nm,0.3s,baz=194,slow=12,SNR=27							
BVAR				S		Sn	10 39 57.5	-10
	comp=Z,0.8nm,0.3s,baz=199,slow=16,SNR=4.1							
BVAR				LR		LR	10 44 40.5	
	comp=Z,214nm,19.9s,baz=26,slow=40							
BRVK	**Borovoye**	**17.42**	**18**	⇓Pn		**Pn**	**10 36 53.4**	**-1.2**
	comp=Z,18nm,0.7s							
BRVK				⇓Sn		Sn	10 39 58.4	-10
	comp=Z,27nm,1.1s							
BRVK				⇓Lg		Lg	10 41 56.0	
	comp=Z,35nm,1.3s							
BRVK	**Borovoye**	**17.42**	**18**	*ce*P		**Pn**	**10 36 54.0**	**-0.6**
BRVK				pmax		pmax		
	comp=Z,19nm,1.2s							
BRVK	**Borovoye**	**17.42**	**18**	Pn		**Pn**	**10 36 53.4**	**-1.2**
	comp=Z,18nm,0.7s							
BRVK	**Borovoye**	**17.42**	**18**	*e*P		**Pn**	**10 36 54.0**	**-0.6**
	comp=Z,19nm,1.2s							
BRVK				Sn		Sn	10 39 58.4	-10
	comp=Z,27nm,1.1s							
BRVK				Lg		Lg	10 41 56.0	
	comp=Z,35nm,1.3s							
MK31	**Makanchi Array**	**18.43**	**51**	Pn		**Pn**	**10 37 08.7**	**+1.4**
	comp=Z,6.5nm,0.7s,baz=242,slow=11,SNR=84							
MK31				⇑Lg		Lg	10 42 31.4	
	comp=Z,14nm,1.2s,baz=44,slow=32,SNR=7.0							
MK31	**Makanchi Array**	**18.43**	**51**	*i* P		**Pn**	**10 37 08.6**	**+1.4**
MK31				pmax		pmax		
	comp=Z,7.0nm,0.7s							
MK31	**Makanchi Array**	**18.43**	**51**	*i* P		**Pn**	**10 37 08.6**	**+1.4**
	comp=Z,7.0nm,0.7s							
MK31				Lg		Lg	10 42 31.4	
	comp=Z,14nm,1.2s,SNR=7.0							
MKAR	**Makanchi Array**	**18.43**	**51**	P		**Pn**	**10 37 07.5**	**+0.3**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.3s							
MKAR				MLR		MLR		
	comp=Z,117nm,20.7s							
MKAR	**Makanchi Array**	**18.43**	**51**	P		**Pn**	**10 37 07.5**	**+0.3**
	comp=Z,0.5nm,0.3s,baz=238,slow=11,SNR=22							
MKAR				LR		LR	10 45 19.1	
	comp=Z,117nm,20.7s,baz=31,slow=40							
MKAR	**Makanchi Array**	**18.43**	**51**	P		**Pn**	**10 37 07.5**	**+0.3**
	comp=Z,117nm,20.7s							
KUR16	**Kurchatov Arra**	**18.47**	**36**	⇓Pn		**Pn**	**10 37 08.1**	**+0.5**
	comp=Z,1.8nm,0.8s							
KUR16				⇑

VORD					pmax	pmax		
	comp=N,50nm,0.6s							
VORD					pmax	pmax		
	comp=E,40nm,0.5s							
VORD	**Divnogorie**	**21.25**	**319**	*eP*	**P**		**10 37 36.6**	**-1.1**
	comp=E,50nm,0.6s							
VSR	**Storozhevoye**	**21.46**	**319**	*eP*	**P**		**10 37 39.5**	**-0.4**
VSR					pmax	pmax		
	comp=Z,20nm,0.9s							
VSR					pmax	pmax		
	comp=N,10.0nm,0.6s							
VSR					pmax	pmax		
	comp=E,10.0nm,0.6s							
VSR	**Storozhevoye**	**21.46**	**319**	*eP*	**P**		**10 37 39.5**	**-0.4**
	comp=E,20nm,0.9s							
BRTR	**Keskin Array B**	**22.01**	**286**	P	**P**		**10 37 48.3**	**+2.2**
	comp=E,6.9nm,0.9s,baz=106,slow=9.5,SNR=27							
BRTR	**Keskin Array B**	**22.01**	**286**	*eP*	**P**		**10 37 48.7**	**+2.6**
	comp=E,7.0nm,0.9s							
NVS	**Novosibirsk**	**23.43**	**33**	*eP*	P		10 38 06.7	+6.0
NVS					pmax	pmax		
	comp=Z,9.0nm,1.2s							
NVS					pmax	pmax		
	comp=E,4.0nm,0.8s							
NVS	**Novosibirsk**	**23.43**	**33**	*eP*	P		10 38 06.7	+6.0
	comp=E,9.0nm,1.2s							
ZALV	**Zalesovo Beam**	**23.58**	**36**	*eP*	**P**		**10 38 03.6**	**+1.4**
ZALV					pmax	pmax		
	comp=Z,6.0nm,0.4s							
ZALV	**Zalesovo Beam**	**23.58**	**36**	P	**P**		**10 38 03.6**	**+1.4**
	comp=Z,6.2nm,0.4s,baz=242,slow=9.7,SNR=28							
ZALV					LR	LR	10 48 29.4	
	comp=Z,155nm,19.0s,baz=292,slow=40							
ZALV	**Zalesovo Beam**	**23.58**	**36**	*eP*	**P**		**10 38 03.6**	**+1.4**
	comp=Z,6.0nm,0.4s							
OBN	**Obninsk**	**24.99**	**325**	P	**P**		**10 38 17.0**	**+1.8**
OBN				*e*			10 38 53.8	
OBN					SS	SS	10 43 27.0	
OBN					pmax	pmax		
	comp=Z,42nm,2.2s							
OBN					MLR	MLR		
	comp=Z,100nm,16.0s							
OBN	**Obninsk**	**24.99**	**325**	P	**P**		**10 38 17.0**	**+1.8**
	comp=Z,42nm,2.2s							
AKASG	**Malin Array Be**	**26.88**	**311**	P	**P**		**10 38 33.5**	**+1.1**
AKASG					pmax	pmax		
	comp=Z,2.0nm,0.7s							
AKASG	**Malin Array Be**	**26.88**	**311**	P	**P**		**10 38 33.5**	**+1.1**
	comp=Z,1.9nm,0.7s,baz=103,slow=7.7,SNR=4.5							
AKASG	**Malin Array Be**	**26.88**	**311**	P	**P**		**10 38 33.5**	**+1.1**
	comp=Z,2.0nm,0.7s							
KIEV	**Kiev**	**26.89**	**311**	*i* P	**P**		**10 38 33.5**	**+1.1**
KIEV	**Kiev**	**26.89**	**311**	*i* P	**P**		**10 38 33.5**	**+1.1**
KLMR	**Klimovskoe**	**27.82**	**337**	P	P		10 38 51.5	+11
KLMR					pmax	pmax		
	comp=Z,19nm,1.9s							
MLR	**Muntele Rosu**	**27.94**	**299**	P	P		10 38 47.6	+5.5
	comp=Z,0.8nm,0.6s,baz=183,slow=6.5,SNR=4.6							
MLR	**Muntele Rosu**	**27.94**	**299**	P	P		10 38 47.6	+5.5
	comp=Z,1.0nm,0.6s							
DIVS	**Divibare**	**32.12**	**296**	*e*Pn	**P**		**10 39 19.1**	**0.0**
FINES	**FINESS Array B**	**33.14**	**329**	P	**P**		**10 39 27.7**	**+0.1**
	comp=Z,3.5nm,0.9s,baz=150,slow=14,SNR=3.6							
FINES	**FINESS Array B**	**33.14**	**329**	P	**P**		**10 39 27.7**	**+0.1**
	comp=Z,4.0nm,0.9s							
SONM	**Songino Array**	**34.57**	**57**	LR	LR		10 55 49.8	
	comp=Z,85nm,19.0s,baz=251,slow=40							
VRAC	**Vranov**	**34.60**	**306**	P	**P**		**10 39 41.9**	**+1.4**
	comp=Z,1.9nm,0.3s,baz=130,slow=7.9,SNR=3.5							
VRAC	**Vranov**	**34.60**	**306**	P	**P**		**10 39 41.9**	**+1.4**
	comp=Z,2.0nm,0.3s							
ULN	**Ulaanbaatar**	**35.02**	**57**	*i* P	**P**		**10 39 46.8**	**+2.5**
NVLJ	**Novalja**	**35.77**	**297**	*e*Pn	**P**		**10 39 48.8**	**-1.8**
CMAR	**Chiang Mai Arr**	**37.60**	**109**	P	P		10 40 02.9	-3.6
	comp=Z,0.6nm,0.4s,baz=312,slow=9.5,SNR=5.2							
CMAR					LR	LR	10 56 39.5	
	comp=Z,43nm,19.7s,baz=310,slow=38							
ARCES	**ARCESS Array B**	**38.13**	**340**	P	**P**		**10 40 11.4**	**+1.0**
	comp=Z,3.7nm,1.0s,baz=139,slow=8.4,SNR=3.8							
ARCES					LR	LR	10 57 42.9	
	comp=Z,114nm,18.2s,baz=209,slow=39							
ARCES	**ARCESS Array B**	**38.13**	**340**	P	**P**		**10 40 11.4**	**+1.0**
	comp=Z,114nm,18.3s							
PGF	**Pioggiola**	**40.25**	**295**	*eP*	**P**		**10 40 28.3**	**-0.3**
PGF	**Pioggiola**	**40.25**	**295**	*eP*	**P**		**10 40 28.3**	**-0.3**
LPL	**La Plagne**	**41.42**	**300**	*eP*	**P**		**10 40 38.2**	**-0.1**
LPL	**La Plagne**	**41.42**	**300**	*eP*	**P**		**10 40 38.2**	**-0.1**
MBDF	**Montbardon**	**41.50**	**299**	*eP*	**P**		**10 40 38.8**	**-0.1**
	comp=Z,6.6nm,0.3s							
MBDF	**Montbardon**	**41.50**	**299**	*eP*	**P**		**10 40 38.8**	**-0.1**
	comp=Z,2.0nm,0.3s							
KEST	**Kesra**	**41.60**	**285**	P	**P**		**10 40 40.2**	**+0.4**
	comp=Z,2.1nm,1.0s,baz=318,slow=4.0,SNR=6.6							
CABF	**La Chapelle**	**41.72**	**302**	*eP*	**P**		**10 40 40.6**	**0.0**
CABF	**La Chapelle**	**41.72**	**302**	*eP*	**P**		**10 40 40.6**	**0.0**
SFTF	**Sexfontaines**	**42.25**	**304**	*eP*	**P**		**10 40 45.2**	**+0.3**
SFTF	**Sexfontaines**	**42.25**	**304**	*eP*	**P**		**10 40 45.2**	**+0.3**
VIVF	**Saint-Julien-l**	**42.96**	**299**	*eP*	**P**		**10 40 50.8**	**+0.1**
VIVF	**Saint-Julien-l**	**42.96**	**299**	*eP*	**P**		**10 40 50.8**	**+0.1**
SMF	**Signal de Mont**	**43.25**	**302**	*eP*	**P**		**10 40 53.1**	**+0.1**
	comp=Z,8.5nm,1.0s							
SMF	**Signal de Mont**	**43.25**	**302**	*eP*	**P**		**10 40 53.1**	**+0.1**
	comp=Z,8.0nm,1.0s							
AVF	**Avril sur Loir**	**43.56**	**302**	*eP*	**P**		**10 40 55.6**	**+0.1**
	comp=Z,3.9nm,0.7s							
AVF	**Avril sur Loir**	**43.56**	**302**	*eP*	**P**		**10 40 55.6**	**+0.1**
	comp=Z,3.0nm,0.7s							
CAF	**Calviac**	**44.77**	**300**	*eP*	**P**		**10 41 05.5**	**+0.3**
CAF	**Calviac**	**44.77**	**300**	*eP*	**P**		**10 41 05.5**	**+0.3**
SPITS	**Spitsbergen Ar**	**45.56**	**348**	P	**P**		**10 41 12.4**	**+1.4**
	comp=Z,2.0nm,0.6s,baz=155,slow=10,SNR=7.2							
SPITS	**Spitsbergen Ar**	**45.56**	**348**	P	**P**		**10 41 12.4**	**+1.4**
	comp=Z,2.0nm,0.6s							
EKA	**Eskdalemuir Ar**	**46.70**	**315**	P	**P**		**10 41 20.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=90,slow=8.3,SNR=4.5							
EKA	**Eskdalemuir Ar**	**46.70**	**315**	P	**P**		**10 41 20.1**	**-0.1**
	comp=Z,1.0nm,0.7s							
TIXI	**Tiksi**	**48.47**	**23**	*ceP*	**P**		**10 41 34.9**	**+1.2**
TIXI					pmax	pmax		
	comp=Z,4.0nm,1.7s							
TIXI	**Tiksi**	**48.47**	**23**	*eP*	**P**		**10 41 34.9**	**+1.2**
	comp=Z,4.0nm,1.7s							
ESDC	**Sonseca Array**	**50.44**	**294**	P	**P**		**10 41 47.9**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=58,slow=9.3,SNR=3.7							
KSRS	**Korea Array**	**51.97**	**68**	LR	LR		11 07 23.0	
	comp=Z,36nm,19.6s,baz=250,slow=40							
USRK	**Ussuriysk Arra**	**52.67**	**59**	LR	LR		11 06 37.0	
	comp=Z,68nm,21.1s,baz=258,slow=38							
TORD	**Torodi Ar. Bea**	**58.09**	**262**	P	**P**		**10 42 43.8**	**-1.5**
	comp=Z,6.8nm,0.7s,baz=41,slow=6.7,SNR=43							
BOSA	**Boshof**	**73.40**	**213**	P	**P**		**10 44 21.2**	**-2.6**
	comp=Z,2.8nm,0.8s,baz=112,slow=4.8,SNR=5.2							
BOSA	**Boshof**	**73.40**	**213**	P	**P**		**10 44 21.2**	**-2.6**
	comp=Z,3.0nm,0.8s							
ILAR	**Eielson Array**	**76.37**	**12**	P	**P**		**10 44 40.9**	**+0.4**
	comp=Z,0.2nm,0.5s,baz=306,slow=4.0,SNR=4.6							
ILAR	**Eielson Array**	**76.37**	**12**	P	**P**		**10 44 40.9**	**+0.4**
YKA	**Yellowknife Ar**	**81.02**	**358**	P	**P**		**10 45 06.8**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=358,slow=5.9,SNR=8.4							
YKA	**Yellowknife Ar**	**81.02**	**358**	P	**P**		**10 45 06.8**	**+0.7**
WRA	**Warramunga Arr**	**88.84**	**116**	P	**P**		**10 45 44.5**	**-1.6**
	comp=Z,0.6nm,0.9s,baz=320,slow=4.4,SNR=3.8							
WRA	**Warramunga Arr**	**88.84**	**116**	P	**P**		**10 45 44.5**	**-1.6**
	comp=Z,1.0nm,0.9s							
ASAR	**Alice Springs**	**90.91**	**119**	P	**P**		**10 45 54.9**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=313,slow=4.9,SNR=4.3							
ASAR	**Alice Springs**	**90.91**	**119**	P	**P**		**10 45 54.9**	**-0.8**

*ISCJB **14** 10:35:15.0±0.5, 17.44S±0.05×70.90W±0.07, h72km±5km, mb4.1/13, Error ellipse: s-maj=12.8km s-min=5.0km az=149.9*
*IDC **14** 10:35:15.9±0.7, 17.41S×70.80W, h63km±5km, mb3.9/11, mb1 4.1/14, mb1mx3.9/23, mbtmp4.0/14, MS3.2/5, Ms1 3.2/5, ms1mx2.9/29, Error ellipse: s-maj=19.8km s-min=12.9km az=51.0*
*GUC **14** 10:35:16.4±0.4, 18.19S×71.58W, h20km, ML5.0*
*NEIC **14** 10:35:17.1±0.7, 17.52S×70.89W, h78km±7km, mb4.4/6, Error ellipse: s-maj=12.3km s-min=7.4km az=58.0*
NEIC Felt [III] at Ilo and [II] at Arequipa.

ISC 14 10:35:15.7±0.5,**17.55S**±0.06×**71.00W**±0.08,**h66**km±4km, **n53**,σ1⁋64/68,**mb4.3**/13,**5D**,**Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARCH	**Arica**	**1.15**	**144**	*e*P	**Pn**	**10 35 37.8**	**+1.9**
ARCH				*e*S	**Sn**	**10 35 54.3**	**+3.3**
ARCH	**Arica**	**1.15**	**144**	*e*P	**Pn**	**10 35 37.8**	**+1.9**
ARCH				*e*S	**Sn**	**10 35 54.3**	**+3.3**
ARCH				AML	AML	10 35 59.2	
	comp=E,58μm,0.3s						
ARE	**Arequipa**	**1.18**	**336**	⇓*i*P	**Pn**	**10 35 34.9**	**-1.8**
ARE				*i* S	**Sn**	**10 35 49.9**	**-2.4**
MNMC	**Minimini**	**2.06**	**140**	⇓*i*P	**Pn**	**10 35 50.2**	**+1.9**
MNMC				*e*S	**Sn**	**10 36 17.6**	**+4.5**
MNMC	**Minimini**	**2.06**	**140**	⇓*i*P	**Pn**	**10 35 50.2**	**+1.9**
MNMC				*e*S	**Sn**	**10 36 17.6**	**+4.5**
MNMC				AML	AML	10 36 24.1	
	comp=N,21μm,0.2s						
PSGC	**Pisagua**	**2.19**	**158**	⇓*i*P	**Pn**	**10 35 50.9**	**+0.9**
PSGC				*e*S	**Sn**	**10 36 16.1**	**-0.1**
PSGC	**Pisagua**	**2.19**	**158**	⇓*i*P	**Pn**	**10 35 50.9**	**+0.9**
PSGC				*e*S	**Sn**	**10 36 16.1**	**-0.1**
PSGC				AML	AML	10 36 27.4	
	comp=E,9μm,0.4s						
LPAZ	**La Paz**	**3.02**	**66**	P	Pn	10 36 06.5	+4.7
LPAZ	**La Paz**	**3.02**	**66**	P	Pn	10 36 06.5	+4.7
	comp=E,68nm,0.3s,baz=251,slow=8.1,SNR=1479						
PB01	**Plate Boundary**	**3.75**	**158**	*eP*	**Pn**	**10 36 11.4**	**+0.2**
PB01				*e*S	**Sn**	**10 36 53.7**	**-0.5**
PB01	**Plate Boundary**	**3.75**	**158**	*eP*	**Pn**	**10 36 11.4**	**+0.2**
PB01				*e*S	**Sn**	**10 36 53.7**	**-0.5**
PB01				AML	AML	10 37 17.0	
	comp=N,3μm,0.3s						
LVC	**Limon Verde**	**5.40**	**159**	*eP*	**Pn**	**10 36 34.6**	**+0.7**
LVC				*e*S	**Sn**	**10 37 33.6**	**-1.3**
LVC	**Limon Verde**	**5.40**	**159**	*eP*	**Pn**	**10 36 34.6**	**+0.7**
LVC				*e*S	**Sn**	**10 37 33.6**	**-1.3**
LVC	**Limon Verde**	**5.40**	**159**	P	**Pn**	**10 36 35.0**	**+1.0**
	comp=N,35nm,0.3s,baz=323,slow=4.9,SNR=361						
LVC				S	**Sn**	**10 37 32.9**	**-2.0**
	comp=N,23nm,0.3s,baz=346,slow=12,SNR=3.1						
LVC				LR	LR	10 38 33.3	
	comp=N,134nm,20.2s,baz=177,slow=36						
NNA	**Nana**	**7.91**	**314**	*e*Pn	**Pn**	**10 37 10.0**	**+1.9**
	comp=N,37nm,0.7s						
NNA				S	**Sn**	**10 38 38.3**	**+2.1**
NNA	**Nana**	**7.91**	**314**	P	**Pn**	**10 37 10.6**	**+2.5**
	comp=N,2.4nm,0.3s,baz=157,slow=9.2,SNR=26						
NNA				S	**Sn**	**10 38 38.3**	**+2.1**
	comp=N,2.9nm,0.3s,baz=196,slow=14,SNR=4.0						
SIV	**San Ignacio**	**9.63**	**82**	P	**Pn**	**10 37 33.1**	**+1.4**
SIV	**San Ignacio**	**9.63**	**82**	P	**Pn**	**10 37 33.1**	**+1.4**
	comp=N,36nm,0.3s,baz=281,slow=12,SNR=200						
SIV				LR	LR	10 41 54.3	
	comp=N,204nm,19.8s,slow=42						
LCO	**Las Campanas**	**11.41**	**179**	*e*Pn	**Pn**	**10 37 53.8**	**-2.3**
	comp=N,10nm,0.6s						
SAML	**Samuel**	**11.44**	**43**	*e*Pn	**Pn**	**10 37 54.5**	**-1.9**
	comp=N,11nm,0.6s						
ATAH	**Atahualpa**	**12.62**	**324**	LR	LR	10 43 50.9	
	comp=N,56nm,19.9s,baz=350,slow=41						
CFAA	**Coronel Fontan**	**14.21**	**170**	P	Pn	10 38 30.4	-3.3
CFAA	**Coronel Fontan**	**14.21**	**170**	P	Pn	10 38 30.4	-3.3
	comp=N,0.2nm,0.3s,baz=346,slow=13,SNR=16						
CPUP	**Villa Florida**	**15.39**	**127**	P	**Pn**	**10 38 49.2**	**+0.3**
CPUP	**Villa Florida**	**15.39**	**127**	P	**Pn**	**10 38 49.2**	**+0.3**
	comp=N,0.6nm,0.3s,baz=301,slow=11,SNR=5.5						
OTAV	**Otavalo**	**19.14**	**337**	*e*Pn	**Pn**	**10 39 37.6**	**+1.9**
	comp=N,7.2nm,0.9s						
TRQA	**Tornquist**	**21.90**	**161**	*eP*	**P**	**10 40 04.0**	**+0.6**
	comp=N,15nm,1.0s						
BDFB	**Brasilia**	**22.11**	**88**	P	**P**	**10 40 03.9**	**-2.1**
BDFB	**Brasilia**	**22.11**	**88**	P	**P**	**10 40 03.9**	**-2.1**
	comp=N,7.0nm,0.5s,baz=252,slow=12,SNR=16						
BDFB				LR	LR	10 49 13.9	
	comp=N,44nm,18.2s,baz=54,slow=38						
PLCA	**Paso Flores**	**23.10**	**179**	*eP*	**P**	**10 40 16.9**	**+0.8**
	comp=N,21nm,1.0s						
PLCA	**Paso Flores**	**23.10**	**179**	P	**P**	**10 40 17.1**	**+1.0**
	comp=N,16nm,0.9s,baz=354,slow=10,SNR=18						
TXAR	**Lajitas Array**	**56.28**	**325**	P	**P**	**10 44 49.3**	**-0.5**
TXAR				pP	**pP**	**10 45 07.1**	**+0.1**
TXAR	**Lajitas Array**	**56.28**	**325**	P	**P**	**10 44 49.3**	**-0.5**
	comp=N,0.4nm,0.6s,baz=149,slow=9.0,SNR=7.4						
TXAR				pP	**pP**	**10 45 07.1**	**+0.1**
	comp=N,0.5nm,0.7s,baz=153,slow=8.8,SNR=5.0						
SIUC	**Southern Illin**	**57.59**	**343**	*eP*	**P**	**10 44 57.3**	**-1.4**
	comp=N,7.7nm,0.5s						
DBIC	**Dimbokro**	**69.59**	**76**	*eP*	**P**	**10 46 17.4**	**-1.0**
	comp=N,5.3nm,0.6s						
DBIC	**Dimbokro**	**69.59**	**76**	P	**P**	**10 46 17.8**	**-0.6**
	comp=N,3.7nm,0.5s,baz=235,slow=7.7,SNR=13						
DBIC				LR	LR	11 16 42.4	
	comp=N,59nm,18.6s,baz=182,slow=36						
NVAR	**Mina Array Bea**	**71.18**	**322**	P	**P**	**10 46 29.2**	**+1.4**
NVAR	**Mina Array Bea**	**71.18**	**322**	P	**P**	**10 46 29.2**	**+1.4**
	comp=N,0.4nm,0.7s,baz=141,slow=7.6,SNR=5.0						
SCHQ	**Schefferville**	**72.18**	**3**	P	**P**	**10 46 32.1**	**-1.1**
SCHQ	**Schefferville**	**72.18**	**3**	P	**P**	**10 46 32.1**	**-1.1**
	comp=N,1.5nm,0.7s,baz=236,slow=12,SNR=4.4						
QSPA	**South Pole Qui**	**72.61**	**180**	*eP*	**P**	**10 46 37.4**	**+1.4**
	comp=N,2.1nm,0.6s						
QSPA	**South Pole Qui**	**72.61**	**180**	P	**P**	**10 46 37.6**	**+1.6**
	comp=N,2.2nm,0.7s,baz=136,slow=3.4,SNR=17						
TOA0	**Torodi Ar. Sit**	**77.95**	**72**	*eP*	**P**	**10 47 06.2**	**-1.1**
TORD	**Torodi Ar. Bea**	**77.95**	**72**	P	**P**	**10 47 06.4**	**-1.0**
TORD				pP	**pP**	**10 47 24.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**77.95**	**72**	P	**P**	**10 47 06.4**	**-1.0**
	comp=N,4.9nm,0.6s,baz=251,slow=5.6,SNR=83						
TORD				pP	**pP**	**10 47 24.2**	**-1.2**
	comp=N,5.6nm,0.7s,baz=255,slow=5.2,SNR=8.2						
ESDC	**Sonseca Array**	**84.45**	**46**	P	**P**	**10 47 41.6**	**+0.2**
ESDC	**Sonseca Array**	**84.45**	**46**	P	**P**	**10 47 41.6**	**+0.2**
	comp=N,0.8nm,0.5s,baz=253,slow=5.2,SNR=8.7						
YKA	**Yellowknife Ar**	**86.83**	**341**	P	**P**	**10 47 52.5**	**0.0**
YKA				pP	**pP**	**10 48 09.5**	**-1.3**
YKA				sP	**sP**	**10 48 17.3**	**-0.7**
YKA	**Yellowknife Ar**	**86.83**	**341**	P	**P**	**10 47 52.5**	**0.0**
	comp=N,1.4nm,0.7s,baz=136,slow=4.7,SNR=22						
YKA				pP	**pP**	**10 48 09.5**	**-1.3**
	comp=N,0.9nm,0.7s,baz=134,slow=5.2,SNR=5.4						
YKA				sP	**sP**	**10 48 17.3**	**-0.7**
	comp=N,1.3nm,0.8s,baz=134,slow=5.0,SNR=4.7						
MAW	**Mawson**	**88.65**	**164**	P	**P**	**10 48 02.9**	**+1.5**
MAW	**Mawson**	**88.65**	**164**	P	**P**	**10 48 02.9**	**+1.5**
	comp=N,1.6nm,0.6s,baz=238,slow=9.5,SNR=4.4						
MKAR	**Makanchi Array**	**143.45**	**31**	PKPpre	PKPpre	10 54 39.1	
MKAR	**Makanchi Array**	**143.45**	**31**	PKhKP	PKPpre	10 54 39.1	
	comp=N,0.2nm,0.4s,baz=322,slow=3.8,SNR=6.0						

*ATH **14** 10:36:20.7, 41.31N×22.64E, h28km±2km, MD2.8/5*
*CSEM **14** 10:36:20.7, 41.31N×22.64E, h28km, MD2.8, After ATH*
*SKO **14** 10:36:21.8, 41.29N×22.70E, h8km, ML1.1*

ISC 14 10:36:21.3±2.1,**41.3N**±0.2×**22.66E**±0.07,**h15**km±19km, **n11**,σ0⁋40/18,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.07**	**291**	*i* Pg	**Pg**	**10 36 24.2**	**-0.1**
VAY				*e*Sg	**Sg**	**10 36 26.3**	**+0.1**
VAY				*e*Lg	Lg	10 36 26.3	
VAY				*e*Lg	Lg	10 36 26.4	
GRG	**Griva**	**0.39**	**210**	*e*PB	**Pb**	**10 36 30.0**	**0.0**
GRG				*e*SB	**Sb**	**10 36 36.0**	**+0.2**
GRG	**Griva**	**0.39**	**210**	*e*Pb	**Pb**	**10 36 30.0**	**0.0**
GRG				*e*Sb	**Sb**	**10 36 36.0**	**+0.2**
SOH	**Sokhos**	**0.71**	**132**	*e*PN	**Pb**	**10 36 34.6**	**-0.8**
SOH	**Sokhos**	**0.71**	**132**	*e*Pn	**Pb**	**10 36 34.6**	**-0.8**
NVR	**Nevrokopi**	**0.91**	**86**	*e*PN	**Pg**	**10 36 39.2**	**+0.3**
NVR				*e*SN	**Sg**	**10 36 51.4**	**+0.6**
NVR	**Nevrokopi**	**0.91**	**86**	*e*Pn	**Pg**	**10 36 39.2**	**+0.3**
NVR				*e*Sn	**Sg**	**10 36 51.4**	**+0.6**
PLG	**Polygyros**	**1.10**	**147**	*e*PN	**Pb**	**10 36 41.9**	**-0.1**
PLG				*e*SN	**Sn**	**10 36 57.1**	**-0.1**
PLG	**Polygyros**	**1.10**	**147**	*e*Pn	**Pb**	**10 36 41.9**	**-0.1**
PLG				*e*Sn	**Sn**	**10 36 57.1**	**-0.1**
THL	**Klokotos Trika**	**1.80**	**196**	*e*PB	**Pn**	**10 36 51.6**	**-0.2**
THL	**Klokotos Trika**	**1.80**	**196**	*e*Pb	**Pn**	**10 36 51.6**	**-0.2**

*THE **14** 10:37:19.5, 35.63N×22.02E, h0km±2km, ML3.7/4, Error ellipse: s-maj=4.0km s-min=1.8km az=220.0*
*CSEM **14** 10:37:20.2±0.7, 35.71N×22.16E, h2km, MD3.6, Error ellipse: s-maj=17.2km s-min=5.8km az=45.0*
*ATH **14** 10:37:21.2, 35.70N×22.13E, h26km±1km, MD3.6/30*

ISC 14 10:37:17.7±1.2,**35.60N**±0.04×**21.99E**±0.04,**h9**km±7km,

n75,σ1⁋28/85,**Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KYTH	**Kithira**	**1.09**	**51**	*e*PN	**Pb**	**10 37 39.2**	**+0.4**
KYTH	**Kithira**	**1.09**	**51**	*e*Pn	**Pb**	**10 37 39.2**	**+0.4**
ANKY	**Antikythira Is**	**1.10**	**76**	*e*PN	**Pn**	**10 37 40.4**	**+1.1**
ANKY				*e*SN	**Sb**	**10 37 53.3**	**-0.1**
ANKY	**Antikythira Is**	**1.10**	**76**	*e*Pn	**Pn**	**10 37 40.4**	**+1.1**
ANKY				*e*Sn	**Sb**	**10 37 53.3**	**-0.1**
DYR	**Agios Nikonas**	**1.19**	**14**	P	**Pg**	**10 37 41.1**	**+0.4**
DYR				S	**Sn**	**10 37 56.8**	**-0.2**
DYR	**Agios Nikonas**	**1.19**	**14**	*e*PN	**Pn**	**10 37 41.3**	**+0.7**
DYR				*e*SN	**Sn**	**10 37 56.9**	**-0.1**
DYR	**Agios Nikonas**	**1.19**	**14**	*e*Pn	**Pn**	**10 37 41.3**	**+0.7**
DYR				*e*Sn	**Sn**	**10 37 56.9**	**-0.1**
PYL	**PYLOS**	**1.31**	**351**	P	**Pn**	**10 37 42.6**	**+0.4**
PYL				S	**Sg**	**10 38 02.3**	**+2.5**
PYL	**PYLOS**	**1.31**	**351**	*e*PN	**Pg**	**10 37 44.0**	**+1.2**
PYL	**PYLOS**	**1.31**	**351**	P	**Pn**	**10 37 42.6**	**+0.4**
PYL	**PYLOS**	**1.31**	**351**	*e*Pn	**Pg**	**10 37 44.0**	**+1.2**
PYL				S	**Sg**	**10 38 02.3**	**+2.5**
VLI	**Veliai**	**1.35**	**34**	P	**Pb**	**10 37 43.8**	**+0.5**
VLI				S	**Sg**	**10 38 03.8**	**+2.4**
VLI	**Veliai**	**1.35**	**34**	*e*PN	**Pb**	**10 37 43.7**	**+0.5**
VLI				*e*SN	**Sg**	**10 38 01.2**	**-0.2**
VLI	**Veliai**	**1.35**	**34**	P	**Pb**	**10 37 43.8**	**+0.5**
VLI				*e*Sn	**Sg**	**10 38 01.2**	**-0.2**
VLI				S	**Sg**	**10 38 03.8**	**+2.4**
ITM	**Ithomi**	**1.58**	**358**	P	**Pb**	**10 37 47.6**	**+0.5**
ITM				S	**Sg**	**10 38 09.7**	**+1.2**
ITM	**Ithomi**	**1.58**	**358**	*e*PN	**Pb**	**10 37 47.8**	**+0.7**
ITM				*e*SN	**Sg**	**10 38 08.5**	**0.0**
ITM	**Ithomi**	**1.58**	**358**	*e*Pn	**Pb**	**10 37 47.8**	**+0.7**
ITM				*e*Sn	**Sg**	**10 38 08.5**	**0.0**
VLX	**Vlachokerasia**	**1.79**	**10**	P	**Pb**	**10 37 50.9**	**+0.1**
VLX				S	**Sg**	**10 38 15.5**	**0.0**
VLX	**Vlachokerasia**	**1.79**	**10**	*e*PN	**Pb**	**10 37 51.0**	**+0.1**
VLX	**Vlachokerasia**	**1.79**	**10**	*e*Pn	**Pb**	**10 37 51.0**	**+0.1**
VLX				S	**Sg**	**10 38 15.5**	**0.0**
VAM	**Vamos**	**1.82**	**95**	P	**Pb**	**10 37 51.1**	**-0.1**
VAM	**Vamos**	**1.82**	**95**	*e*PB	**Pb**	**10 37 51.1**	**-0.1**
VAM	**Vamos**	**1.82**	**95**	*e*Pb	**Pb**	**10 37 51.1**	**-0.1**
AMT	**Artemida-Makis**	**1.94**	**353**	*e*PB	**Pb**	**10 37 53.2**	**-0.1**
AMT	**Artemida-Makis**	**1.94**	**353**	*e*Pb	**Pb**	**10 37 53.2**	**-0.1**
DIDY	**Didyma**	**2.12**	**27**	P	**Pn**	**10 37 54.4**	**+1.0**
DIDY				S	**Sb**	**10 38 22.7**	**-0.1**
DIDY	**Didyma**	**2.12**	**27**	P	**Pn**	**10 37 54.4**	**+1.0**
DIDY				S	**Sb**	**10 38 22.7**	**-0.1**
DID	**Didima**	**2.15**	**28**	P	**Pn**	**10 37 54.5**	**+0.7**
DID				S	**Sb**	**10 38 23.9**	**+0.2**
DID	**Didima**	**2.15**	**28**	*e*PN	**Pn**	**10 37 54.7**	**+0.9**
DID	**Didima**	**2.15**	**28**	*e*Pn	**Pn**	**10 37 54.7**	**+0.9**
DID				S	**Sb**	**10 38 23.9**	**+0.2**
GUR	**Go

1.1nm,0.8s,baz=156,slow=6.9,SNR=4.9
STKA Stephens Creek 33.19 137 P **P 10 53 35.5 +0.5**
4.9nm,0.8s,baz=307,slow=8.8,SNR=16
SONM Songino Array 57.24 353 P P 10 56 38.3 -6.4
0.9nm,0.7s,baz=167,slow=7.0,SNR=3.1
MKAR Makanchi Array 63.01 335 P P 10 57 17.8 -6.2
1.1nm,0.4s,baz=150,slow=7.3,SNR=25
ZALV Zalesovo Beam 67.94 341 P P 10 57 49.0 -6.6
0.4nm,0.5s,baz=145,slow=5.3,SNR=2.9
AKTO Aktyubinsk 77.34 326 P P 10 58 45.9 -5.5
0.6nm,0.3s,baz=74,slow=7.4,SNR=2.8
CPUP Villa Florida 144.10 191 PKP **PKPab 11 06 29.6 -0.6**
1.4nm,0.4s,baz=154,slow=6.2,SNR=9.0

*NEIC **14** 11:04:06.5,25°.29N×99°.33W,h18km,MD4.4(MEX),After MEX.*
MEX 14 11:04:06.5±0.5,25°.29N×99°.33W,h18km±30km,MD4.4, 13C-15D,Northern Mexico

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
LNIG	**Linares**	**0.41**	**197**	*i* P		Pg	11 04 13.7	-1.3
LNIG	**Linares**	**0.41**	**197**	*i* P		Pg	11 04 13.7	-1.3
LNIG				*i* S		Sg	11 04 19.1	-1.6
KVTX	**Kingsville**	**2.59**	**30**	*e*Pn		Pb	11 04 50.7	-1.8
732A	**Laxson Ranch,** baz=3.5	**3.47**	**351**	⇓P		Pn	11 05 00.7	+1.1
ZAIG	**Zacatecas**	**3.88**	**230**	*i* P		Pn	11 05 03.7	-2.0
ZAIG				*i* S		Sn	11 05 47.4	-3.7
ZAIG	**Zacatecas**	**3.88**	**230**	*i* P		Pn	11 05 03.7	-2.0
ZAIG				*i* S		Sn	11 05 47.4	-3.7
632A	**Uvalde** baz=4.2	**4.22**	**355**	⇓P		Pn	11 05 11.8	+1.8
632A				⇑S		Sn	11 05 59.7	+0.8
631A	**Perdido Creek** baz=4.3	**4.25**	**345**	⇓P		Pn	11 05 11.0	+0.5
532A	**Rocksprings** baz=4.9,SNR=150	**4.84**	**354**	⇓P		Pn	11 05 21.0	+2.4
532A				⇑S		Sn	11 06 15.4	+1.0
531A	**Rocksprings** baz=4.9 **Rocksprings** baz=5.0	**4.97**	**348**	⇑P		Pn	11 05 21.9	+1.5
DEIG	**Demacu**	**4.97**	**177**	*i* P		Pn	11 05 18.1	-2.6
DEIG				*i* S		Sn	11 06 14.4	-3.7
DEIG	**Demacu**	**4.97**	**177**	*i* P		Pn	11 05 18.1	-2.6
DEIG				*i* S		Sn	11 06 14.4	-3.7
530A	**J-C Ranch, Com** baz=5.2	**5.15**	**340**	⇑P		Pn	11 05 23.4	+0.5
JCT	**Junction City**	**5.18**	**356**	*e*Pn		Pn	11 05 26.0	+2.7
JCT				*e*Sn		Sn	11 06 26.1	+3.4
JCT	**Junction City** baz=5.2,SNR=180	**5.18**	**356**	⇓P		Pn	11 05 26.1	+2.8
JCT				⇓S		Sn	11 06 23.6	+0.9
628A	**Black Gap, Mar** baz=5.2	**5.24**	**324**	⇓P		Pn	11 05 24.4	+0.4
529A	**Stev Forest Ra** baz=5.5	**5.45**	**333**	⇑P		Pn	11 05 27.1	+0.1
431A	**Sonora** baz=5.5,SNR=62	**5.49**	**348**	⇑P		Pn	11 05 29.5	+2.1
627A	**Terlingua Ranc** baz=5.5	**5.49**	**320**	⇓P		Pn	11 05 27.3	-0.4
432A	**Menard** baz=5.6,SNR=228	**5.58**	**356**	P		Pn	11 05 31.5	+2.7
430A	**Baggett Ranch,** baz=5.7	**5.73**	**343**	⇓P		Pn	11 05 32.8	+2.0
528A	**Cox Ranch, San** baz=5.7	**5.74**	**329**	⇑P		Pn	11 05 31.2	+0.2
429A	**Davenport Ranc** baz=5.8	**5.78**	**338**	⇑P		Pn	11 05 32.5	+1.0
HPIG		**5.92**	**287**	*i* P		Pn	11 05 30.7	-3.0
HPIG				*i* S		Sn	11 06 39.0	-2.3
HPIG		**5.92**	**287**	*i* P		Pn	11 05 30.7	-3.0
HPIG				*i* S		Sn	11 06 39.0	-2.3
626A	**Big Bend Ranch** baz=6.0	**6.02**	**316**	⇓P		Pn	11 05 34.1	-0.7
331A	**San Angelo** baz=6.1,SNR=49	**6.07**	**351**	P		Pn	11 05 38.5	+3.0
332A	**Millersview** baz=6.1,SNR=75	**6.08**	**357**	P		Pn	11 05 38.0	+2.4
527A	**Woodward Ranch** baz=6.2	**6.14**	**323**	⇑P		Pn	11 05 37.1	+0.5
428A	**Kincaid Ranch,** baz=6.2	**6.17**	**332**	⇓P		Pn	11 05 37.8	+0.9
330A	**Mertzon** baz=6.3,SNR=68	**6.30**	**346**	P		Pn	11 05 41.5	+2.8
ANIG	**Ahuacatlan**	**6.37**	**230**	*e*P		Pn	11 05 37.5	-2.2
ANIG				*i* S		Sn	11 06 48.2	-3.9
ANIG	**Ahuacatlan**	**6.37**	**230**	*e*P		Pn	11 05 37.5	-2.2
ANIG				*i* S		Sn	11 06 48.2	-3.9
232A	**Coleman** baz=6.6,SNR=47	**6.58**	**358**	P		Pn	11 05 44.9	+2.4
427A	**Hayter Ranch,** baz=6.6	**6.60**	**328**	⇓P		Pn	11 05 44.0	+1.2
230A	**Sterling City** baz=6.8,SNR=42	**6.75**	**347**	P		Pn	11 05 47.3	+2.4
EZ5V		**7.00**	**215**	*i* P		Pn	11 05 51.3	+2.7
ABTX	**Abilene, Hawle** baz=7.3,SNR=28	**7.31**	**358**	P		Pn	11 05 54.7	+2.2
131A	**Roby** baz=7.4,SNR=10	**7.41**	**353**	⇑P		Pn	11 05 56.0	+2.1
130A	**Snyder** baz=7.4,SNR=7.9	**7.42**	**349**	⇓P		Pn	11 05 56.5	+2.5
129A	**Stewart Farms,** baz=7.7,SNR=15	**7.64**	**344**	⇓P		Pn	11 05 59.6	+2.5
Z32A	**Haskell** baz=8.0,SNR=14	**7.99**	**359**	P		Pn	11 06 04.1	+2.3
Z30A	**Sanderson Ranc** baz=8.1,SNR=11	**8.12**	**349**	⇑P		Pn	11 06 05.6	+2.0
Z29A	**Hungry Hill Ra** baz=8.2,SNR=23	**8.21**	**346**	⇑P		Pn	11 06 05.9	+1.1
MNTX	**Cornudas Mount**	**8.31**	**322**	*e*Pn		Pn	11 06 06.5	+0.4
MNTX				*e*Lg		Lg	11 08 23.3	
CGIG		**9.17**	**305**	*i* P		Pn	11 06 18.0	-0.2
CGIG				*i* S		Sn	11 07 58.8	-2.3
CGIG		**9.17**	**305**	*i* P		Pn	11 06 18.0	-0.2
CGIG				*i* S		Sn	11 07 58.8	-2.3
X31A	**McDonald Ranch** baz=9.4,SNR=9.8	**9.32**	**357**	⇓P		Pn	11 06 22.0	+1.9
X29A	**Tulia** baz=9.4,SNR=8.0	**9.35**	**348**	⇑P		Pn	11 06 22.1	+1.5
WMOK	**Wichita Mounta**	**9.43**	**3**	*e*Pn		Pn	11 06 22.7	+1.2
WMOK				*e*Sn		Sn	11 08 03.8	-3.4
AMTX	**Amarillo**	**9.77**	**349**	Pn		Pn	11 06 21.8	-4.6
ANMO	**Albuquerque**	**11.42**	**329**	*e*Pn		Pn	11 06 52.7	+3.6
ANMO				*e*Lg		Lg	11 10 00.7	
LRAL	**Lakeview Retre**	**13.25**	**52**	*e*Pn		Pn	11 07 13.2	-0.6
LRAL				*e*Sn		Sn	11 09 38.7	-1.9

IDC 14 11:07:29.7±1.7,3°.19N×126°.76E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.6/23,mbtmp3.8/5,Error ellipse: s-maj=103.2km s-min=22.9km az=68.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
FITZ	**Fitzroy Crossi** 2.7nm,0.9s,baz=21,slow=11,SNR=4.0	**21.19**	**183**	P		P	11 12 18.3	+1.3
WRA	**Warramunga Arr** 3.0nm,0.5s,baz=339,slow=10,SNR=30	**24.17**	**162**	P		P	11 12 46.8	-1.1
ASAR	**Alice Springs** 0.5nm,0.6s,baz=342,slow=7.6,SNR=7.2	**27.59**	**166**	P		P	11 13 20.4	+1.5
STKA	**Stephens Creek** 3.6nm,0.9s,baz=0.2,slow=9.5,SNR=4.4	**37.62**	**159**	P		P	11 14 45.2	-1.2
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=122,slow=7.6,SNR=7.3	**58.01**	**325**	P		P	11 17 24.2	-0.2

*GUC **14** 11:36:53.1±0.5,42°.86S×72°.67W,h13km±5km,ML3.3*
*IDC **14** 11:36:56.2±1.5,42°.72S×72°.63W,h0km,mb3.6/3, mb1 4.0/4,mb1mx3.7/17,mbtmp3.6/4,ML4.1/1,MS3.3/2, Ms1 3.2/2,ms1mx2.7/20,Error ellipse: s-maj=44.8km s-min=16.8km az=128.0*
ISC 14 11:36:54.3±1.9,42°.80S±0°.07×72°.5W±0°.1,h18km±7km,n11, σ1§14/12,1C-1D,Southern Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
HUNY	**Huinay**	**0.42**	**9**	*i* P		**Pg**	**11 37 02.8**	**-0.2**
HUNY				*i* S		**Sg**	**11 37 10.4**	**+1.5**
HUNY					AML	AML	11 37 11.3	
	comp=N,4μm,0.4s							
FUTA	**Futaleufœ**	**0.61**	**130**	⇓*i* P		**Pg**	**11 37 05.8**	**-0.7**
FUTA				*i* S		**Sb**	**11 37 16.0**	**+1.2**
FUTA					AML	AML	11 37 18.1	
	comp=N,1μm,0.5s							
CNTO	**Contao**	**1.01**	**351**	*e*P		**Pb**	**11 37 12.6**	**-0.7**
CNTO				*i* S		**Sg**	**11 37 27.4**	**+0.3**
CNTO					AML	AML	11 37 32.9	
	comp=E,3μm,0.3s							
PUEL	**Puelo Alto**	**1.15**	**8**	⇑*i* P		**Pn**	**11 37 15.6**	**+0.2**
PUEL				*i* S		**Sg**	**11 37 32.5**	**+1.1**
PUEL					AML	AML	11 37 55.6	
	comp=E,412nm,0.8s							
PMCH	**Puerto Montt**	**1.34**	**347**	*e*P		**Pg**	**11 37 19.5**	**-0.7**
PMCH				*i* S		**Sg**	**11 37 38.7**	**+1.0**
PMCH					AML	AML	11 37 49.6	
	comp=E,1μm,0.7s							
PLCA	**Paso Flores**	**2.53**	**36**	Pn		**Pb**	**11 37 39.0**	**-0.2**
	comp=E,8.6nm,0.3s,baz=211,slow=15,SNR=101							
PLCA					Pg	**Pg**	**11 37 41.1**	**-1.6**
	comp=E,8.6nm,0.3s,baz=218,slow=17,SNR=101							
PLCA					Lg	Lg	11 38 16.1	
	comp=E,48nm,0.3s,baz=106,slow=9.7,SNR=20							
PLCA					LR	LR	11 38 50.4	
	comp=E,317nm,21.6s,baz=163,slow=45							
COYC	**Coyhaique** comp=N,58nm,0.5s	**2.79**	**174**		AML	AML	11 38 23.0	
CPUP	**Villa Florida** comp=N,0.3nm,0.4s,baz=236,slow=11,SNR=3.0	**20.59**	**42**	P		Pn	11 41 38.3	+3.8
BDFB	**Brasilia** comp=N,78nm,19.1s,baz=307,slow=39	**34.24**	**45**	LR		LR	11 59 04.4	
VNDA	**Vanda** comp=N,1.6nm,1.1s,baz=127,slow=9.5,SNR=3.3	**55.43**	**192**	P		P	11 46 32.3	+5.3
TXAR	**Lajitas Array** comp=N,1.1nm,1.1s,baz=152,slow=6.1,SNR=5.8	**77.29**	**332**	P		P	11 48 51.3	+3.8

IDC 14 11:52:19.0±2.4,8°.99S×75°.22W,h57km±27km,mb3.3/2, mb1 3.7/6,mb1mx3.4/24,mbtmp3.7/6,ML3.6/4,MS2.9/5, Ms1 2.9/5,ms1mx2.8/10,Error ellipse: s-maj=23.8km s-min=12.0km az=64.0,Central Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
NNA	**Nana** 6.5nm,0.3s,baz=45,slow=14,SNR=17	**3.38**	**208**	P		Pn	11 53 07.9	-1.5
NNA				S		Sn	11 53 49.2	+0.8
	24nm,0.3s,baz=287,slow=12,SNR=7.4							
ATAH	**Atahualpa** 7.3nm,0.3s,baz=119,slow=15,SNR=51	**3.65**	**300**	P		Pn	11 53 13.6	+0.1
ATAH				S		Sn	11 53 56.2	+0.5
	4.8nm,0.3s,baz=9.7,slow=20,SNR=3.5							
LPAZ	**La Paz** 0.1nm,0.3s,baz=326,slow=16,SNR=2.5	**10.02**	**137**	P		Pn	11 54 40.6	-0.5
ROSC	**El Rosal** comp=Z,54nm,18.6s,baz=110,slow=41	**13.78**	**4**	LR		LR	12 01 41.9	
LVC	**Limon Verde** comp=Z,153nm,19.6s,baz=262,slow=38	**14.84**	**157**	LR		LR	12 01 46.0	
SIV	**San Ignacio** 0.6nm,0.3s,baz=298,slow=12,SNR=47	**15.46**	**118**	P		Pn	11 55 54.4	+0.7
SIV					LR	LR	12 03 30.5	
	comp=Z,25nm,20.6s,slow=43							
CFAA	**Coronel Fontan** 0.1nm,0.6s,baz=325,slow=12,SNR=4.1	**23.42**	**165**	P		P	11 57 23.2	0.0
CFAA					LR	LR	12 06 27.9	
	comp=Z,7.0nm,18.8s,baz=216,slow=36							
BDFB	**Brasilia** comp=Z,47nm,19.1s,baz=256,slow=40	**27.37**	**107**	LR		LR	12 10 26.6	
TXAR	**Lajitas Array** 0.1nm,0.4s,baz=158,slow=12,SNR=3.8	**46.94**	**325**	P		P	12 00 43.6	-0.8
TORD	**Torodi Ar. Bea** 1.0nm,0.9s,baz=272,slow=6.1,SNR=5.2	**79.47**	**75**	P		P	12 04 20.7	+0.6
WRA	**Warramunga Arr** 0.3nm,0.6s,baz=118,slow=2.0,SNR=6.9	**139.09**	**225**	PKP		PKPdf	12 11 40.6	+0.2
KSRS	**Korea Array** 0.7nm,0.7s,baz=39,slow=2.8,SNR=5.8	**144.78**	**327**	PKP		PKPab	12 11 48.8	-0.1

CASC 14 11:56:56.8±1.1,13°.22N×89°.84W,h27km±4km,MD3.5, ML3.1,El Salvador

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
SBLS	**San Blas**	**0.66**	**19**	*e*P		Pb	11 57 09.8	-0.2
SBLS				*e*S		Sn	11 57 20.2	-0.1
SNJE	**San Jose**	**0.69**	**19**	*e*P		Pb	11 57 10.3	-0.3
BOQS	**Boqueron**	**0.75**	**47**	*e*P		Pb	11 57 11.6	0.0
BOQS				*e*S		Sn	11 57 22.5	-0.1
SNET	**Serv Nac Est T**	**0.76**	**52**	*e*S		Sb	11 57 21.1	-0.5
SNET					AML	AML	11 57 23.9	
	comp=Z,664nm,0.3s							
LFRS	**El Faro**	**0.86**	**62**	*e*P		Pn	11 57 12.4	-0.9
LFRS				*e*S		Sb	11 57 24.3	-0.3
LFU	**La Fuente**	**0.88**	**53**	*e*P		Pn	11 57 13.5	-0.1
LFU				*e*S		Sn	11 57 26.2	+0.6
RBDL	**Robledal**	**0.90**	**10**	*e*P		Pn	11 57 13.5	-0.5
RBDL				*e*S		Sn	11 57 26.9	+0.6
LBRS	**Las Brisas**	**0.93**	**56**	*e*P		Pn	11 57 14.0	-0.2
SNVI	**San Vicente**	**1.05**	**68**	*e*P		Pn	11 57 15.5	-0.5
SNVI				*e*S		Sb	11 57 31.3	+1.1
PCG	**Pacaya**	**1.39**	**328**	*e*S		Sn	11 57 39.1	+0.6
NBG	**Las Nubes**	**1.45**	**340**	*e*P		Pn	11 57 22.4	+0.8
VSM	**San Miguel**	**1.54**	**82**	*e*P		Pn	11 57 22.8	-0.1
FUG	**Fuego 3**	**1.56**	**322**	*e*P		Pn	11 57 22.7	-0.4
MRL	**Marmol**	**1.84**	**5**	*e*P		Pn	11 57 27.4	+0.4
CNCH	**Conchagua**	**1.96**	**88**	*e*P		Pn	11 57 28.4	0.0

*ISCJB **14** 12:02:54.5±0.5,72°.71N±0°.05×4°.8E±0°.2,h10km,mb3.7/12, MS3.6/3,Error ellipse: s-maj=9.4km s-min=7.2km az=174.8*
*NAO **14** 12:02:55.4±4.1,72°.58N×4°.60E,ML3.1*
*IDC **14** 12:02:55.6±0.8,72°.66N×4°.22E,h0km,mb3.6/7, mb1 3.8/11,mb1mx3.6/29,mbtmp3.6/11,ML3.4/4,MS3.6/3, Ms1 3.7/3,ms1mx3.1/18,Error ellipse: s-maj=22.8km s-min=14.1km az=58.0*
*CSEM **14** 12:02:55.7±0.4,72°.70N×4°.44E,h10km,ML3.1,Error ellipse: s-maj=13.6km s-min=4.5km az=76.0*
*BER **14** 12:03:00.0±2.5,72°.81N×4°.83E,h10km,ML3.1(NAO)*
ISC 14 12:02:56.6±0.7,72°.70N±0°.07×4°.4E±0°.1,h10km,n46, σ1§15/43,mb3.9/12,MS3.8/3,Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
SPA0	**Spitsbergen Ar** baz=207,slow=18	**6.26**	**23**	Pn		**Pn**	**12 04 28.3**	**-0.5**
SPA0	**Spitsbergen Ar**	**6.26**	**23**	*e*P		**Pn**	**12 04 27.8**	**-1.0**
SPA0	**Spitsbergen Ar** SNR=49	**6.26**	**23**	*e*P		**Pn**	**12 04 27.8**	**-1.0**
SPA0	**Spitsbergen Ar** baz=207,slow=16,SNR=8.6	**6.26**	**23**	Pn		**Pn**	**12 04 28.3**	**-0.5**
SPITS	**Spitsbergen Ar** baz=204,slow=18,SNR=31	**6.26**	**23**	Pn		**Pn**	**12 04 28.4**	**-0.5**
KBS	**Kingsbay**	**6.52**	**13**	*e*P		**Pn**	**12 04 31.5**	**-0.8**
KBS	**Kingsbay** SNR=47	**6.52**	**13**	*e*P		**Pn**	**12 04 31.5**	**-0.8**
KONS	**Konsvik**	**6.92**	**150**	*e*P		**Pn**	**12 04 35.3**	**-2.6**
STOK	**Stokkvaagen**	**7.06**	**151**	*e*P		**Pn**	**12 04 39.0**	**-0.8**
KTK1	**Kautokeino**	**7.18**	**112**	*e*P		**Pn**	**12 04 41.8**	**+0.3**
KTK1	**Kautokeino** SNR=47	**7.18**	**112**	*e*P		**Pn**	**12 04 41.8**	**+0.3**
ARA0	**ARCESS Array S** baz=315,slow=12	**7.51**	**105**	Pn		**Pn**	**12 04 44.6**	**-1.4**
ARA0	**ARCESS Array S** baz=315,slow=12	**7.51**	**105**	P		**Pn**	**12 04 44.6**	**-1.4**
ARA0	**ARCESS Array S** baz=315,slow=12,SNR=47	**7.51**	**105**	P		**Pn**	**12 04 44.6**	**-1.4**
ARCES	**ARCESS Array B** 0.3nm,0.3s,baz=308,slow=12,SNR=14	**7.51**	**105**	Pn		**Pn**	**12 04 45.1**	**-0.9**
KEV	**Kevo**	**7.83**	**101**	*e*p		**Pn**	**12 04 49.6**	**-0.7**
KEV	**Kevo**	**7.83**	**101**	*e*P		**Pn**	**12 04 49.6**	**-0.7**
HFS	**Hagfors** baz=352,slow=12	**13.12**	**159**	Pn		**Pn**	**12 06 02.4**	**-0.4**
HFS	**Hagfors** baz=352,slow=12	**13.12**	**159**	P		**Pn**	**12 06 02.4**	**-0.4**
HFS	**Hagfors** 0.3nm,0.3s,baz=7.8,slow=12,SNR=8.7	**13.12**	**159**	Pn		**Pn**	**12 06 02.2**	**-0.6**
HFS	**Hagfors** baz=352,slow=12,SNR=47	**13.12**	**159**	P		**Pn**	**12 06 02.4**	**-0.4**
FIA0	**FINESS Array S** baz=338,slow=16	**13.96**	**133**	Pn		**Pn**	**12 06 12.8**	**-1.4**
FIA0	**FINESS Array S** baz=338,slow=16	**13.96**	**133**	P		**Pn**	**12 06 12.8**	**-1.4**
FIA0	**FINESS Array S** baz=338,slow=15,SNR=47	**13.96**	**133**	P		**Pn**	**12 06 12.8**	**-1.4**
EKA	**Eskdalemuir Ar** baz=324,slow=26,SNR=3.2	**17.72**	**194**	P		**Pn**	**12 07 01.9**	**-1.2**
BAIF	**Baives** 7.6nm,0.8s	**22.72**	**180**	*e*P		**P**	**12 07 57.8**	**-0.4**
UPC	**Upice**	**22.85**	**161**	*e*P		**P**	**12 08 01.1**	**+1.5**
DPC	**Dobruska-Polom**	**23.04**	**160**	*e*P		P	12 08 08.4	+6.8
KHC	**Kasperske Hory**	**24.00**	**165**	*e*P		**P**	**12 08 13.5**	**+2.4**
FLN	**La Foliniere**	**24.12**	**188**	*e*P		**P**	**12 08 10.6**	**-1.5**
LDF	**La Druitiere** 12nm,1.1s	**24.27**	**187**	*e*P		**P**	**12 08 12.3**	**-1.3**
GERES	**GERESS Array B** 1.0nm,0.7s,baz=353,slow=9.4,SNR=9.6	**24.30**	**165**	P		**P**	**12 08 15.5**	**+1.6**
AKASG	**Malin Array Be** 0.5nm,0.3s,baz=345,slow=10,SNR=4.9	**24.61**	**140**	P		**P**	**12 08 17.1**	**+0.4**
LOR	**Lormes** 9.3nm,1.1s	**25.52**	**181**	*e*P		**P**	**12 08 24.0**	**-0.8**
SSF	**Saint Saulge**	**25.72**	**181**	*e*P		**P**	**12 08 26.9**	**+0.2**
AVF	**Avril sur Loir** 4.0nm,0.8s	**26.00**	**182**	*e*P		**P**	**12 08 28.5**	**-0.7**
CABF	**La Chapelle** 8.3nm,0.8s	**26.18**	**177**	*e*P		**P**	**12 08 31.6**	**+0.6**
TCF	**Toulx Ste Croi**	**26.51**	**183**	*e*P		**P**	**12 08 33.1**	**-0.8**
KBZ	**Khabaz** 1.6nm,0.9s,baz=306,slow=7.6,SNR=3.9	**34.20**	**127**	P		**P**	**12 09 44.4**	**+2.6**
YKA	**Yellowknife Ar** 0.3nm,0.7s,baz=20,slow=8.5,SNR=5.8	**38.95**	**320**	P		**P**	**12 10 22.2**	**+0.1**
YKA					PcP	**PcP**	**12 12 32.3**	**+0.2**
	0.5nm,0.7s,baz=17,slow=3.2,SNR=9.6							
ILAR	**Eielson Array** 0.8nm,0.7s,baz=6.9,slow=6.7,SNR=15	**41.44**	**342**	P		**P**	**12 10 43.8**	**+1.1**
TORD	**Torodi Ar. Bea** 0.7nm,0.7s,baz=359,slow=5.9,SNR=6.4	**59.55**	**183**	P		**P**	**12 13 00.3**	**+0.4**
KSRS	**Korea Array** comp=Z,20nm,19.5s,baz=330,slow=39	**63.49**	**48**	LR		LR	12 43 47.9	
TXAR	**Lajitas Array** 0.4nm,0.8s,baz=44,slow=5.3,SNR=7.3	**67.42**	**296**	P		**P**	**12 13 51.8**	**-0.2**
TEIG	**Tepich** comp=Z,64nm,19.9s,baz=328,slow=38	**71.66**	**279**	LR		LR	12 47 54.6	
CMAR	**Chiang Mai Arr** comp=Z,46nm,20.4s,baz=190,slow=38	**73.86**	**80**	LR		LR	12 49 51.8	

*CSEM **14** 12:03:59.3±0.1,72°.70N×4°.44E,h2km,mb4.5/9,Error ellipse: s-maj=5.8km s-min=4.2km az=85.0*
*NAO **14** 12:03:59.7±8.2,72°.62N×4°.64E,h1km±77km,ML3.2*
*ISCJB **14** 12:03:59.2±0.4,72°.73N±0°.04×4°.9E±0°.2,h10km,mb4.0/18, MS3.4/5,Error ellipse: s-maj=8.6km s-min=6.3km az=173.3*
*IDC **14** 12:03:59.8±0.7,72°.63N×4°.38E,h0km,mb3.8/7, mb1 3.9/13,mb1mx3.7/30,mbtmp3.8/13,ML3.5/6,MS3.5/5, Ms1 3.5/5,ms1mx3.0/26,Error ellipse: s-maj=21.6km s-min=13.5km az=59.0*
*NEIC **14** 12:04:01.1±0.3,72°.70N×4°.30E,h10km,mb4.5/9,Error ellipse: s-maj=8.5km s-min=5.8km az=89.0*
*BER **14** 12:04:02.6±2.7,72°.74N×4°.45E,h10km,ML3.2(NAO)*
ISC 14 12:04:00.8±0.5,72°.61N±0°.06×4°.62E±0°.06,h10km,n125, σ1§47/122,mb4.3/18,MS3.4/5,Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
JMIC	**Jan Mayen**	**4.42**	**255**	Pn		**Pn**	**12 05 05.8**	**-2.1**
JMIC	**Jan Mayen** 3.4nm,0.3s,baz=353,slow=16,SNR=3.9	**4.42**	**255**	Pn		**Pn**	**12 05 05.8**	**-2.1**
JMIC					LR	LR	12 06 29.6	
	comp=Z,610nm,18.1s,baz=64,slow=34							
JMIC	**Jan Mayen**	**4.42**	**255**	Pn		**Pn**	**12 05 05.8**	**-2.1**
LOF	**Lofoten**	**5.41**	**142**	*e*P		**Pn**	**12 05 20.9**	**-0.5**
LOF	**Lofoten** SNR=49	**5.41**	**142**	*e*P		**Pn**	**12 05 20.9**	**-0.5**
STEI	**Steigen**	**5.91**	**137**	*e*		**Pb**	**12 05 41.2**	**-2.6**
STEI	**Steigen**	**5.91**	**137**	*e*P		**Pn**	**12 05 31.1**	**+2.8**
SPA0	**Spitsbergen Ar** baz=215,slow=18	**6.32**	**22**	Pn		**Pn**	**12 05 32.6**	**-1.2**
SPA0	**Spitsbergen Ar** baz=215,slow=18	**6.32**	**22**	Pn		**Pn**	**12 05 32.6**	**-1.2**
SPA0	**Spitsbergen Ar** baz=215,slow=16,SNR=50	**6.32**	**22**	Pn		**Pn**	**12 05 32.6**	**-1.2**
SPITS	**Spitsbergen Ar**	**6.32**	**22**	Pn		**Pn**	**12 05 32.6**	**-1.2**
SPITS	**Spitsbergen Ar** baz=207,slow=18,SNR=5.8	**6.32**	**22**	Pn		**Pn**	**12 05 32.6**	**-1.2**
SPITS	**Spitsbergen Ar**	**6.32**	**22**	Pn		**Pn**	**12 05 32.6**	**-1.2**
KBS	**Kingsbay**	**6.59**	**12**	Pn		**Pn**	**12 05 35.5**	**-2.1**
KBS						Sn	**12 06 56.8**	**+4.2**
KBS	**Kingsbay**	**6.59**	**12**	*e*P		**Pn**	**12 05 35.6**	**-1.9**
KBS	**Kingsbay** 8.0nm,0.6s	**6.59**	**12**	*e*Pn		**Pn**	**12 05 35.7**	**-1.9**
KBS	**Kingsbay** 8.0nm,0.6s	**6.59**	**12**	*e*Pn		**Pn**	**12 05 35.7**	**-1.9**
KONS	**Konsvik**	**6.82**	**150**	*e*P		Pn	12 05 32.4	-8.3
KTK1	**Kautokeino**	**7.10**	**111**	*e*P		**Pn**	**12 05 46.0**	**+1.4**
KTK1	**Kautokeino** SNR=47	**7.10**	**111**	*e*P		**Pn**	**12 05 46.0**	**+1.4**
DAG	**Danmarks Havn**	**7.39**	**315**	*i* P		Pn	12 05 44.3	-4.1
ARA0	**ARCESS Array S** baz=306,slow=12	**7.43**	**104**	Pn		**Pn**	**12 05 49.0**	**-0.2**
ARA0						Sn	**12 07 11.0**	**-2.4**
	baz=309,slow=28							
ARA0	**ARCESS Array S** baz=306,slow=12	**7.43**	**104**	Pn		**Pn**	**12 05 49.0**	**-0.2**
ARA0						Sn	**12 07 11.0**	**-2.4**
	baz=309,slow=28							
ARA0	**ARCESS Array S** baz=306,slow=12,SNR=50	**7.43**	**104**	Pn		**Pn**	**12 05 49.0**	**-0.2**
ARA0						Sn	**12 07 11.0**	**-2.4**
	baz=309,slow=23,SNR=50							
ARCES	**ARCESS Array B**	**7.43**	**104**	Pn		**Pn**	**12 05 48.9**	**-0.3**
ARCES						Sn	**12 07 09.9**	**-3.5**
ARCES	**ARCESS Array B** 0.8nm,0.3s,baz=308,slow=12,SNR=5.9	**7.43**	**104**	Pn		**Pn**	**12 05 48.9**	**-0.3**
ARCES						Sn	**12 07 09.9**	**-3.5**
	baz=310,slow=17,SNR=1.9							
ARCES	**ARCESS Array B**	**7.43**	**104**	Pn		**Pn**	**12 05 48.9**	**-0.3**
NOA

FLN	La Foliniere	24.04	188	eP	P		12 09 16.2	+0.6
FLN	La Foliniere	24.04	188	eP	P		12 09 16.2	+0.6
LDF	La Druitiere	24.20	188	eP	P		12 09 17.9	+0.8
	14nm,1.0s							
LDF	La Druitiere	24.20	188	eP	P		12 09 17.9	+0.8
	14nm,1.0s							
LDF	La Druitiere	24.20	188	eP	P		12 09 17.9	+0.8
	14nm,1.0s							
GERES	GERESS Array B	24.20	165	P	P		12 09 20.2	+3.0
GERES	GERESS Array B	24.20	165	P	P		12 09 20.2	+3.0
	2.1nm,0.7s,baz=359,slow=9.3,SNR=12							
GERES	GERESS Array B	24.20	165	P	P		12 09 20.2	+3.0
CDF	Champ du Feu	24.31	176	eP	P		12 09 18.6	+0.4
CDF	Champ du Feu	24.31	176	eP	P		12 09 18.6	+0.4
CDF	Champ du Feu	24.31	176	eP	P		12 09 18.6	+0.4
AKASG	Malin Array Be	24.51	140	P	P		12 09 21.2	+1.3
AKASG	Malin Array Be	24.51	140	P	P		12 09 21.2	+1.3
	0.7nm,0.5s,baz=339,slow=9.9,SNR=3.7							
AKASG	Malin Array Be	24.51	140	P	P		12 09 21.2	+1.3
ROSF	Rostrenen	24.62	193	eP	P		12 09 21.0	+0.1
ROSF	Rostrenen	24.62	193	eP	P		12 09 21.0	+0.1
ROSF	Rostrenen	24.62	193	eP	P		12 09 21.0	+0.1
SGMF	Saint Gilles	24.66	192	eP	P		12 09 21.5	+0.3
SGMF	Saint Gilles	24.66	192	eP	P		12 09 21.5	+0.3
SGMF	Saint Gilles	24.66	192	eP	P		12 09 21.5	+0.3
LOR	Lormes	25.43	181	eP	P		12 09 28.8	+0.5
	7.5nm,0.8s							
LOR	Lormes	25.43	181	eP	P		12 09 28.8	+0.5
	7.5nm,0.8s							
LOR	Lormes	25.43	181	eP	P		12 09 28.8	+0.5
	7.5nm,0.8s							
SSF	Saint Saulge	25.64	182	eP	P		12 09 31.6	+1.5
SSF	Saint Saulge	25.64	182	eP	P		12 09 31.6	+1.5
SSF	Saint Saulge	25.64	182	eP	P		12 09 31.6	+1.5
AVF	Avril sur Loir	25.91	182	eP	P		12 09 34.0	+1.4
	12nm,1.1s							
AVF	Avril sur Loir	25.91	182	eP	P		12 09 34.0	+1.4
	12nm,1.1s							
AVF	Avril sur Loir	25.91	182	eP	P		12 09 34.0	+1.4
	12nm,1.1s							
DAVOX	Davos/Dischmat	26.03	172	LR	LR		12 19 52.9	
	comp=Z,104nm,20.7s,baz=272,slow=37							
CABF	La Chapelle	26.09	178	eP	P		12 09 36.8	+2.4
	12nm,0.7s							
CABF	La Chapelle	26.09	178	eP	P		12 09 36.8	+2.4
	12nm,0.7s							
CABF	La Chapelle	26.09	178	eP	P		12 09 36.8	+2.4
	12nm,0.7s							
BGF	Bois d'Agland	26.15	183	eP	P		12 09 36.3	+1.5
	7.4nm,0.7s							
BGF	Bois d'Agland	26.15	183	eP	P		12 09 36.3	+1.5
	7.4nm,0.7s							
BGF	Bois d'Agland	26.15	183	eP	P		12 09 36.3	+1.5
	7.4nm,0.7s							
MFF	Saint Martin d	26.18	187	eP	P		12 09 36.1	+1.0
MFF	Saint Martin d	26.18	187	eP	P		12 09 36.1	+1.0
MFF	Saint Martin d	26.18	187	eP	P		12 09 36.1	+1.0
TCF	Toulx Ste Croi	26.43	184	eP	P		12 09 37.7	+0.3
	4.6nm,0.7s							
TCF	Toulx Ste Croi	26.43	184	eP	P		12 09 37.7	+0.3
	4.6nm,0.7s							
TCF	Toulx Ste Croi	26.43	184	eP	P		12 09 37.7	+0.3
	4.6nm,0.7s							
BVAR	Borovoye Array	33.43	90	PP	PP		12 11 56.1	+1.5
BVAR	Borovoye Array	33.43	90	PP	PP		12 11 56.1	+1.5
	1.9nm,0.7s,baz=316,slow=10,SNR=4.4							
BVAR	Borovoye Array	33.43	90	PP	PP		12 11 56.1	+1.5
KBZ	Khabaz	34.10	127	P	P		12 10 48.9	+3.7
KBZ	Khabaz	34.10	127	P	P		12 10 48.9	+3.7
	1.8nm,0.8s,baz=5.9,slow=6.1,SNR=4.2							
BRTR	Keskin Array B	35.92	140	P	P		12 11 02.2	+1.2
BRTR	Keskin Array B	35.92	140	P	P		12 11 02.2	+1.2
	1.3nm,0.8s,baz=351,slow=6.6,SNR=4.9							
BRTR	Keskin Array B	35.92	140	P	P		12 11 02.2	+1.2
YKA	Yellowknife Ar	39.05	320	P	P		12 11 27.2	+0.1
YKA				PcP	PcP		12 13 36.8	+0.1
YKA	Yellowknife Ar	39.05	320	P	P		12 11 27.2	+0.1
	0.4nm,0.6s,baz=19,slow=8.8,SNR=4.9							
YKA				PcP	PcP		12 13 36.7	+0.1
	0.8nm,0.6s,baz=18,slow=3.1,SNR=15							
YKA	Yellowknife Ar	39.05	320	P	P		12 11 27.2	+0.1
YKA	Yellowknife Ar	39.05	320	PcP	PcP		12 13 36.8	+0.1
BILL	Bilibino	39.07	11	eP	P		12 11 27.6	+0.3
	6.5nm,1.0s							
BILL	Bilibino	39.07	11	eP	P		12 11 27.5	+0.3
	6.5nm,1.0s							
ILAR	Eielson Array	41.54	342	P	P		12 11 48.2	+0.5
ILAR				PcP	PcP		12 13 44.6	-0.1
ILAR	Eielson Array	41.54	342	P	P		12 11 48.2	+0.5
	1.0nm,0.7s,baz=10,slow=6.3,SNR=11							
ILAR				PcP	PcP		12 13 44.6	-0.1
	0.3nm,0.7s,baz=322,slow=3.2,SNR=5.8							
ILAR	Eielson Array	41.54	342	P	P		12 11 48.2	+0.5
TORD	Torodi Ar. Bea	59.47	183	P	P		12 14 04.6	+1.0
TORD	Torodi Ar. Bea	59.47	183	P	P		12 14 04.6	+1.0
	1.5nm,0.6s,baz=358,slow=6.7,SNR=11							
TORD	Torodi Ar. Bea	59.47	183	P	P		12 14 04.6	+1.0
WMOK	Wichita Mounta	61.08	294	eP	P		12 14 13.5	-1.0
	20nm,2.1s							
WMOK	Wichita Mounta	61.08	294	eP	P		12 14 13.5	-1.0
	20nm,2.1s							
TXAR	Lajitas Array	67.51	296	P	P		12 14 56.5	-0.3
TXAR	Lajitas Array	67.51	296	P	P		12 14 56.5	-0.3
	0.4nm,0.7s,baz=55,slow=5.1,SNR=6.6							
TXAR	Lajitas Array	67.51	296	P	P		12 14 56.5	-0.3

IDC 14 12:14:27.2±2.3, 5.70S×129.63E, h0km, mb3.5/1, mb1 3.9/4, mb1mx3.6/19, mbtmp3.7/4, ML3.8/3, Error ellipse: s-maj=96.2km s-min=29.1km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.93	197	Pn	Pn	12 17 33.6	+1.2
	0.5nm,0.3s,baz=27,slow=12,SNR=23						
FITZ				Sn	Sn	12 19 40.8	-16
	0.3nm,0.3s,baz=315,slow=20,SNR=6.2						
WRA	Warramunga Arr	14.88	163	Pn	Pn	12 17 59.5	+0.4
	0.4nm,0.3s,baz=344,slow=12,SNR=24						
WRA				Sn	Sn	12 20 30.8	-14
	0.9nm,0.3s,baz=338,slow=21,SNR=7.6						
ASAR	Alice Springs	18.33	167	P	Pn	12 18 42.0	-1.2
	0.3nm,0.3s,baz=341,slow=9.6,SNR=37						
ASAR				S	Sn	12 21 54.2	-14
	0.2nm,0.3s,baz=127,slow=17,SNR=5.3						
MKAR	Makanchi Array	66.95	327	P	P	12 25 21.7	0.0
	0.3nm,0.6s,baz=117,slow=6.2,SNR=3.9						

*ISCJB **14** 12:32:26.0±0.7, 72.81N±0.05×5.5E±0.2, h10km, mb3.4/5, MS3.0/5, Error ellipse: s-maj=9.7km s-min=6.7km az=154.5*
*IDC **14** 12:32:26.1±1.0, 72.65N×4.59E, h0km, mb3.5/5, mb1 3.6/8, mb1mx3.4/26, mbtmp3.5/8, ML3.1/3, MS3.0/10, Ms1 3.0/10, ms1mx2.8/39, Error ellipse: s-maj=22.3km s-min=15.8km az=46.0*
*NAO **14** 12:32:27.4±3.1, 72.69N×5.21E, ML2.8*
*BER **14** 12:32:28.0±2.7, 72.68N×4.43E, h10km, ML2.8(NAO)*
*CSEM **14** 12:32:28.0±0.2, 72.80N×5.27E, h10km, ML2.8, Error ellipse: s-maj=7.1km s-min=2.9km az=78.0*
ISC 14 12:32:27.5±0.8, 72.78N±0.06×5.13E±0.08, h10km, n32, σ0.84/32, mb3.4/5, MS3.1/5, Norwegian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMIC	Jan Mayen	4.62	254	LR	LR	12 34 54.8	
	comp=Z,144nm,18.1s,baz=70,slow=34						
SPA0	Spitsbergen Ar	6.10	22	Pn	Pn	12 33 58.3	+0.6
	baz=206,slow=16						
SPA0				Sn	Sn	12 35 07.1	-0.2
	baz=199,slow=22						
SPA0	Spitsbergen Ar	6.10	22	Pn	Pn	12 33 58.3	+0.6
	baz=206,slow=16						
SPA0				Sn	Sn	12 35 07.1	-0.2
	baz=199,slow=22						
SPA0	Spitsbergen Ar	6.10	22	Pn	Pn	12 33 58.3	+0.6
	baz=206,slow=15,SNR=5.1						
SPA0				Sn	Sn	12 35 07.1	-0.2
	baz=199,slow=19						
SPITS	Spitsbergen Ar	6.10	22	Pn	Pn	12 33 58.2	+0.6
	baz=203,slow=16,SNR=13						
KBS	Kingsbay	6.40	12	eP	Pn	12 34 01.4	-0.2
KBS	Kingsbay	6.40	12	eP	Pn	12 34 01.4	-0.2
	SNR=47						
ARA0	ARCESS Array S	7.33	106	Pn	Pn	12 34 14.7	+0.2
	baz=302,slow=12						
ARA0				Sn	Sn	12 35 36.4	-1.2
	baz=310,slow=22						
ARA0	ARCESS Array S	7.33	106	Pn	Pn	12 34 14.7	+0.2
	baz=302,slow=12						
ARA0				Sn	Sn	12 35 36.4	-1.2
	baz=310,slow=22						
ARA0	ARCESS Array S	7.33	106	Pn	Pn	12 34 14.6	+0.2
	baz=302,slow=11,SNR=7.9						
ARA0				Sn	Sn	12 35 36.4	-1.2
	baz=310,slow=21,SNR=4.2						
ARCES	ARCESS Array B	7.33	106	Pn	Pn	12 34 15.1	+0.6
	0.4nm,0.3s,baz=310,slow=12,SNR=18						
ARCES				Sn	Sn	12 35 37.4	-0.2
	0.2nm,0.3s,baz=312,slow=20,SNR=2.6						
ARCES				LR	LR	12 37 21.5	
	comp=Z,43nm,21.3s,baz=54,slow=40						
KEV	Kevo	7.64	103	ep	Pn	12 34 19.5	+0.8
KEV	Kevo	7.64	103	eP	Pn	12 34 19.5	+0.8
NOA	NORSAR Array B	12.02	166	LR	LR	12 39 49.8	
	comp=Z,32nm,19.0s,baz=190,slow=37						
HFS	Hagfors	13.13	161	Pn	Pn	12 35 34.5	+0.8
	baz=352,slow=16						
HFS	Hagfors	13.13	161	Pn	Pn	12 35 34.5	+0.8
	baz=352,slow=16						
HFS	Hagfors	13.13	161	Pn	Pn	12 35 33.1	-0.7
	0.2nm,0.3s,baz=354,slow=14,SNR=4.0						
HFS				LR	LR	12 40 15.6	
	comp=Z,51nm,20.1s,baz=341,slow=36						
HFS	Hagfors	13.13	161	Pn	Pn	12 35 34.5	+0.8
	baz=352,slow=14,SNR=7.7						
FIA0	FINESS Array S	13.87	134	Pn	Pn	12 35 44.3	+0.5
	baz=338,slow=16						
FIA0	FINESS Array S	13.87	134	Pn	Pn	12 35 44.3	+0.5
	baz=338,slow=16						
FIA0	FINESS Array S	13.87	134	Pn	Pn	12 35 44.3	+0.5
	baz=338,slow=14,SNR=4.5						
FINES	FINESS Array B	13.87	134	LR	LR	12 40 44.7	
	comp=Z,100nm,18.6s,baz=44,slow=36						
VRAC	Vranov	24.10	161	LR	LR	12 46 31.4	
	comp=Z,32nm,19.5s,baz=227,slow=35						
GERES	GERESS Array B	24.32	166	P	P	12 37 45.6	+0.6
	0.6nm,0.7s,baz=356,slow=9.4,SNR=5.3						
DAVOX	Davos/Dischmat	26.17	173	LR	LR	12 47 59.4	
	comp=Z,24nm,20.9s,baz=49,slow=36						
BRTR	Keskin Array B	35.95	141	P	P	12 39 29.4	+1.4
	0.8nm,0.7s,baz=0.8,slow=8.6,SNR=4.1						
ZALV	Zalesovo Beam	36.73	77	LR	LR	12 57 32.9	
	comp=Z,30nm,21.2s,baz=67,slow=41						
YKA	Yellowknife Ar	39.02	320	PcP	PcP	12 42 03.0	-0.3
	0.2nm,0.7s,baz=35,slow=2.5,SNR=3.9						
ILAR	Eielson Array	41.43	342	P	P	12 40 15.0	+1.5
	0.4nm,0.7s,baz=6.0,slow=6.7,SNR=8.2						
SADO	Sadowa	46.27	281	LR	LR	13 01 19.3	
	comp=Z,28nm,19.8s,baz=169,slow=38						
TORD	Torodi Ar. Bea	59.64	184	P	P	12 42 29.9	-1.6
	0.6nm,0.7s,baz=355,slow=7.1,SNR=4.7						
TXAR	Lajitas Array	67.58	297	P	P	12 43 22.4	-1.5
	0.1nm,0.4s,baz=57,slow=4.6,SNR=4.4						
TXAR				LR	LR	13 11 17.3	
	comp=Z,23nm,21.9s,baz=185,slow=34						

IDC 14 12:37:00.6±6.9, 18.13S×175.53E, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.7/17, mbtmp3.9/3, Error ellipse: s-maj=154.9km s-min=108.8km az=132.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	33.51	239	P	P	12 43 42.1	+0.2
	3.1nm,1.0s,baz=85,slow=11,SNR=3.4						
WRA	Warramunga Arr	38.91	261	P	P	12 44 27.9	-0.4
	0.1nm,0.3s,baz=94,slow=7.6,SNR=6.1						
ASAR	Alice Springs	39.17	255	P	P	12 44 30.4	-0.2
	1.2nm,0.4s,baz=89,slow=8.0,SNR=53						
BRTR	Keskin Array B	140.71	311	PKP	PKPdf	12 56 32.6	-0.2
	0.2nm,0.5s,baz=73,slow=2.5,SNR=2.9						

*BJI **14** 12:45:41.0, 56.10N×157.20W, h22km, mB4.8/4, mb4.7/5, Ms4.5/1, Ms7 4.3/1*
*ISCJB **14** 12:45:47.7±0.3, 56.32N±0.03×157.47W±0.04, h71km±3km, mb4.1/47, Error ellipse: s-maj=6.2km s-min=2.7km az=146.3*
*IDC **14** 12:45:47.0±2.6, 56.50N×157.46W, h44km±22km, mb3.9/23, mb1 4.1/27, mb1mx4.0/35, mbtmp3.9/27, ML3.9/4, MS3.2/7, Ms1 3.2/7, ms1mx2.9/31, Error ellipse: s-maj=19.9km s-min=10.8km az=22.0*
*NEIC **14** 12:45:48.1, 56.13N×157.17W, h29km, mb4.2/21, ML4.0(AEIC), After AEIC.*
ISC 14 12:45:46.8±0.8, 56.16N±0.06×157.31W±0.04, h48km±7km, n312, σ1.9e76/329, mb4.2/47, MS3.3/5, 14C-11D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHGN	Chignik	0.63	283	P	Pn	12 46 00.6	+1.0
CHGN				S	Sn	12 46 10.3	+1.5
ANPK	Aniakchak Peak	0.82	327	P	Pn	12 46 03.0	+0.9
ANNE	Aniakchak Nort	0.86	331	P	Pn	12 46 03.4	+0.8
ANNW	Aniakchak Nort	0.95	328	P	Pn	12 46 04.9	+1.0
VNHG	Veniaminof 1	1.04	274	P	Pn	12 46 07.2	+2.1
VNFG	Veniaminof 2	1.26	276	P	Pn	12 46 10.2	+2.1
VNWF	Veniaminof 8	1.26	270	P	Pn	12 46 10.2	+2.1
VNWF				S	Sn	12 46 26.9	+2.9
PLBL	Peulik Blue Cr	1.56	10	P	Pn	12 46 13.6	+1.4
PLK3	Peulik 3	1.63	20	P	Pn	12 46 14.9	+1.8
PLK3				S	Sn	12 46 35.4	+2.5
PLK1	Peulik 1	1.69	13	P	Pn	12 46 15.2	+1.4
PLK5	Peulik 5	1.85	7	P	Pn	12 46 17.5	+1.4
SDPT	Sand Point	1.97	247	P	Pn	12 46 18.9	+1.2
SDPT				S	Sn	12 46 42.9	+1.8
ACHA	Angle Creek He	2.32	27	P	Pn	12 46 23.9	+1.3
ACHA				S	Sn	12 46 49.8	0.0
KABR	Katmai Barrier	2.35	32	P	Pn	12 46 23.9	+1.0
KABU	Katmai Buttres	2.38	27	P	Pn	12 46 25.0	+1.6
KCE	Katmai Mt Cerb	2.38	28	P	Pn	12 46 24.9	+1.5
KELA	Mount Kelaz	2.44	20	P	Pn	12 46 25.0	+0.8
OHAK	Old Harbor	2.46	63	P	Pn	12 46 24.3	0.0
OHAK				S	Sn	12 46 52.6	-0.5
KAKN	Katmai Knife C	2.46	29	P	Pn	12 46 25.8	+1.3
KAKN				S	Sn	12 46 55.8	+2.4
KAWH	Katmai	2.61	30	P	Pn	12 46 27.2	+0.8
PVV	Pavlof Volcano	2.66	255	P	Pn	12 46 28.5	+1.4
PS4A	Pavlof South-4	2.70	254	P	Pn	12 46 29.1	+1.5
HAG	Hague Volcano	2.73	254	P	Pn	12 46 30.1	+1.9
DOL	Dolgoi Island	2.78	250	P	Pn	12 46 30.0	+1.2
KAPH	Katmai Pasha	2.92	32	P	Pn	12 46 32.1	+1.4
DT1	Dutton Round H	3.01	251	P	Pn	12 46 33.1	+1.1
KDAK	Kodiak Island	3.05	56	P	Pn	12 46 32.6	+0.1
KDAK				S	Sn	12 47 05.0	-2.8
KDAK	Kodiak Island	3.05	56	P	Pn	12 46 32.6	+0.1
	16nm,0.3s,baz=234,slow=6.6,SNR=70						
KDAK				S	Sn	12 47 05.0	-2.8
	30nm,0.3s,baz=228,slow=5.0,SNR=4.3						
DRIA	Deer Island	3.06	249	P	Pn	12 46 33.6	+1.0
FOSS	Fourpeaked Sta	3.28	35	P	Pn	12 46 36.3	+0.6
MCNL	McNeil River	3.42	27	P	Pn	12 46 38.7	+1.1
FALS	False Pass	3.71	252	P	Pn	12 46 42.9	+1.3
FALS				S	Sn	12 47 26.3	+2.4
AUW	Augustine West	3.81	31	P	Pn	12 46 44.0	+1.1
SSBA	Shishaldin	4.12	253	P	Pn	12 46 49.2	+1.9
RSO	Redoubt South	4.93	27	eP	Pn	12 47 00.3	+1.8
RSO				eSn	Sn	12 48 06.0	+12
RDWB	Redoubt West	4.93	27	P	Pn	12 46 59.0	+0.6
SVW2	Sparrevohn	5.03	10	P	Pn	12 47 00.6	+1.0
DFR	Drift River	5.06	27	P	Pn	12 47 01.2	+1.1
AKUT	Akutan	5.26	251	P	Pn	12 47 04.9	+2.1
CKL	Chakachamna La	5.67	25	P	Pn	12 47 09.2	+0.7
SPU	Mount Spurr	5.73	26	P	Pn	12 47 10.3	+1.0
UNV	Unalaska Valle	5.78	250	P	Pn	12 47 11.8	+1.9
MTBL	Makushin Table	5.82	252	P	Pn	12 47 11.9	+1.4
MSW	Makushin Switc	5.90	251	P	Pn	12 47 13.2	+1.7
MCIR	Makushin Cirqu	5.94	252	P	Pn	12 47 13.4	+1.2
STLK	Strandline Lak	6.06	26	P	Pn	12 47 14.4	+0.7
SUA	Susitna One	6.31	30	P	Pn	12 47 18.4	+1.1
SKT	Skwentna	6.55	25	P	Pn	12 47 22.1	+1.7
TT01	Tatalina	6.80	5	P	Pn	12 47 24.5	+0.7
OKTU	Okmok Mt. Tuli	6.81	250	P	Pn	12 47 25.7	+1.7
PMR	Palmer	6.89	35	P	Pn	12 47 24.6	-0.5
SPIA	Saint Paul Isl	7.20	283	P	Pn	12 47 30.9	+1.6
CUT	Chulitna	7.22	27	P	Pn	12 47 30.4	+0.8
PPLA	Purkeypile	7.24	19	P	Pn	12 47 31.9	+1.9
SML	Sawmill	7.31	36	P	Pn	12 47 31.1	+0.2
EYAK	Cordova Ski Ar	7.50	49	P	Pn	12 47 32.7	-0.7
DIV	Divide	7.80	46	ePn	Pn	12 47 38.5	+0.8
DIV				eSn	Sn	12 49 09.7	+5.2
RAGM	Ragged Mountai	7.88	52	P	Pn	12 47 38.2	-0.6
KLU	Klutina	7.96	43	P	Pn	12 47 39.3	-0.4
TRF	Thorofare Moun	8.12	23	P	Pn	12 47 41.7	-0.3
RND	Reindeer	8.41	27	P	Pn	12 47 45.0	-1.0
DHY	Denali Highway	8.56	32	P	Pn	12 47 48.0	-0.1
MCK	McKinley	8.67	25	P	Pn	12 47 49.8	+0.3
BARK	Barkley Ridge	8.88	55	P	Pn	12 47 52.1	-0.3
PAX	Paxson	9.08	36	ePn	Pn	12 47 55.8	+0.6
PAX				eSn	Sn	12 49 39.8	+4.0
KIAG	Kiagna River	9.15	52	P	Pn	12 47 56.9	+0.7
MENT	Mentasta	9.66	40	ePn	Pn	12 48 06.1	+3.1
COLA	College	9.89	24	ePn	Pn	12 48 04.5	-1.5
DOT	Dot Lake	10.01	36	ePn	Pn	12 48 09.7	+1.9
ILAR	Eielson Array	10.03	26	P	Pn	12 48 05.7	-2.4
ILAR				S	Sn	12 49 51.3	-7.7
ILAR	Eielson Array	10.03	26	P	Pn	12 48 05.7	-2.4
	0.9nm,0.3s,baz=230,slow=12,SNR=41						
ILAR				S	Sn	12 49 51.3	-7.7
	0.3nm,0.3s,baz=216,slow=24,SNR=3.2						
ILAR				LR	LR	12 52 16.5	
	comp=Z,41nm,21.4s,baz=180,slow=40						
PNL	Peninsula	10.15	62	ePn	Pn	12 48 09.9	+0.2
TNA	Tin City	10.73	336	ePn	Pn	12 48 18.9	+1.3
COLD	Coldfoot	11.59	14	ePn	Pn	12 48 32.9	+3.6
EGAK	Eagle	11.71	36	ePn	Pn	12 48 33.3	+2.3
AMKA	Amchitka	14.61	261	ePn	Pn	12 49 11.0	+0.8
DLBC	Dease Lake	14.88	70	P	Pn	12 49 15.4	+1.5
DLBC	Dease Lake	14.88	70	P	Pn	12 49 15.4	+1.5
	0.1nm,0.3s,baz=259,slow=16,SNR=3.6						
INK	Inuvik	16.30	32	P	Pn	12 49 30.7	-1.3
INK	Inuvik	16.30	32	P	Pn	12 49 30.7	-1.3
	0.6nm,0.3s,baz=220,slow=13,SNR=23						
INK				LR	LR	12 56 08.6	
	comp=Z,57nm,21.4s,baz=38,slow=39						
FX1	Attu Island--F	17.39	272	eP	Pn	12 49 44.5	-1.1
BBB	Bella Bella	17.48	91	LR	LR	12 54 28.5	
	comp=Z,45nm,20.8s,baz=252,slow=30						
YKA	Yellowknife Ar	22.33	56	P	P	12 50 39.4	-0.7
YKA				PcP	PcP	12 54 33.0	-0.5
YKA	Yellowknife Ar	22.33	56	P	P	12 50 39.3	-0.7
	1.4nm,0.6s,baz=281,slow=9.9,SNR=26						
YKA				PcP	PcP	12 54 33.0	-0.5
	0.6nm,0.5s,baz=273,slow=1.7,SNR=10.0						
LON	Longmire	23.79	98	eP	P	12 50 57.9	+3.0
	6.3nm,1.4s						
HAWA	Hanford	25.27	97	eP	P	12 51 10.4	+2.2
	2.4nm,0.8s						
NEW	Newport	25.54	91	eP	P	12 51 12.4	+1.7
	3.6nm,0.9s						
NEW	Newport	25.54	91	P	P	12 51 12.5	+1.7
	2.5nm,0.8s,baz=311,slow=6.2,SNR=9.0						
NEW				LR	LR	13 00 48.6	
	comp=Z,46nm,18.3s,baz=316,slow=35						
NEW	Newport	25.54	91	⇑P	P	12 51 12.3	+1.7
	baz=25						
HUMO	Hull Mountain	25.83	107	eP	P	12 51 16.5	+3.1
	4.2nm,0.8s						
PETK	Petropavlovsk-	25.87	282	P	P	12 51 12.1	-1.5
PETK	Petropavlovsk-	25.87	282	P	P	12 51 12.1	-1.5
	1.4nm,0.4s,baz=83,slow=10,SNR=12						
C11A	Tepee Creek (N	26.26	91	P	P	12 51 18.9	+1.6
	baz=26						
YBH	Yreka Blue Hor	26.57	108	P	P	12 51 23.5	+3.3
YBH	Yreka Blue Hor	26.57	108	P	P	12 51 23.5	+3.3
	0.6nm,0.5s,baz=172,slow=2.5,SNR=6.2						
YBH				LR	LR	12 59 39.8	
	comp=Z,54nm,18.1s,baz=306,slow=31						
C13A	Hot Springs	27.29	90	⇓P	P	12 51 28.0	+1.5
	baz=27						
E12A	Beaver Dam Sad	27.46	93	⇓P	P	12 51 29.9	+1.7
	baz=27						
C14A	Swan Lake	27.71	89	⇓P	P	12 51 31.8	+1.5
	baz=28						
F12A	Elk City	28.03	94	P	P	12 51 35.0	+1.7
	baz=28,SNR=6.1						
D14A	Greenough	28.23	90	P	P	12 51 36.0	+1.0
	baz=28						
WVOR	Wild Horse Val	28.29	103	eP	P	12 51 38.0	+2.4
	4.2nm,1.0s						
C15A	Salmond Ranch,	28.34	88	⇑P	P	12 51 38.1	+2.1
	baz=28						
G12A	Big Creek, Yel	28.38	95	⇑P	P	12 51 38.2	+1.8
	baz=28						
H12A	Diamond D Ranc	29.00	95	⇑P	P	12 51 43.9	+2.0
	baz=29						
I12A	Atlanta	29.32	97	⇓P	P	12 51 47.0	+2.2
	baz=29	

baz=34
L20A **Wamsutter** 34.27 93 P P 12 52 29.6 +1.3
baz=34
K21A **Alcova** 34.47 92 P P 12 52 30.8 +0.9
baz=34
MSU **Marysvale** 34.55 101 *e*P P 12 52 33.3 +2.6
8.5nm,1.4s
BFSC **Mount Baldy Ra** 34.81 112 P P 12 52 34.9 +2.0
baz=35
Q16A **Castle Valley** 34.81 100 P P 12 52 35.6 +2.7
baz=35,SNR=6.7
L21A **Rawlins** 34.84 93 P P 12 52 34.6 +1.4
baz=35
O19A **Miners Draw (B** 34.99 96 P P 12 52 36.6 +2.2
baz=35,SNR=9.3
SRU **San Rafael** 35.04 99 P P 12 52 37.2 +2.4
baz=35,SNR=33
M21A **Separation Pea** 35.08 93 P P 12 52 36.7 +1.4
baz=35
N20A **Spence Gulch,** 35.10 95 P P 12 52 37.3 +1.9
baz=35
L22A **Ellis Ranch, M** 35.32 92 P P 12 52 39.4 +2.1
baz=35
P19A **Cripple Cowboy** 35.52 97 P P 12 52 41.0 +1.9
baz=35,SNR=16
N21A **Black Mountain** 35.57 94 P P 12 52 40.9 +1.4
baz=35
O20A **White River Ci** 35.59 96 ⇑P P 12 52 41.5 +1.9
baz=35,SNR=5.3
L23A **Garrett** 35.68 91 P P 12 52 41.8 +1.4
baz=36
BELC **Belle Mtn. Jos** 35.86 111 P P 12 52 43.7 +1.8
baz=36
P20A **De Beque** 35.95 97 P P 12 52 44.2 +1.5
baz=36
N22A **Wattenberg Ran** 36.13 93 P P 12 52 46.5 +2.1
baz=36
ULM **Lac du Bonnet** 36.17 73 P P 12 52 43.5 -0.7
ULM **Lac du Bonnet** 36.17 73 P P 12 52 43.5 -0.7
3.6nm,0.4s,baz=308,slow=6.9,SNR=4.5
IRM **Iron Mountain** 36.18 109 P P 12 52 46.8 +2.3
baz=36,SNR=5.7
S18A **Hurst Farm, Bl** 36.34 100 ⇓P P 12 52 47.7 +1.6
baz=36,SNR=6.6
PV10 **Paradox Valley** 36.38 99 *e*P P 12 52 48.4 +2.0
29nm,0.6s
Q20A **Ridgley Place,** 36.38 97 P P 12 52 47.7 +1.3
baz=36
BC3 **Big Chuckawall** 36.41 110 P P 12 52 48.3 +1.7
baz=36
P21A **Newcastle** 36.45 96 P P 12 52 48.9 +1.9
baz=36
MONP **Monument Peak** 36.50 112 P P 12 52 50.0 +2.5
baz=36
PDMCI **Parker Dam,Lak** 36.61 108 P P 12 52 50.3 +2.2
baz=36
PV01 **Paradox Valley** 36.81 98 *e*P P 12 52 51.9 +1.9
Y12C **Blythe** 36.83 109 P P 12 52 52.7 +2.7
baz=37
O23A **Lake Granby, G** 36.83 93 ⇓P P 12 52 52.6 +2.2
baz=37,SNR=5.1
R20A **Redvale** 36.87 98 ⇑P P 12 52 52.3 +1.7
baz=37,SNR=8.2
S20A **Disappointment** 37.14 99 P P 12 52 54.8 +1.9
baz=37
WUAZ **Wupatki** 37.17 104 P P 12 52 55.8 +2.6
baz=37
GLA **Glamis** 37.21 110 *e*P P 12 52 55.6 +2.4
4.8nm,0.9s
GLA **Glamis** 37.21 110 P P 12 52 55.3 +2.0
baz=37
Q22A **Crested Butte,** 37.21 96 P P 12 52 54.6 +1.0
baz=37
AGMN **Agassiz Nation** 37.29 75 *e*P P 12 52 54.2 +0.4
7.1nm,0.7s
P23A **Jefferson** 37.45 94 P P 12 52 58.1 +2.4
baz=37
Y14A **Wickenburg** 37.49 107 P P 12 52 57.4 +1.7
baz=37,SNR=5.4
O25A **Wiggins** 37.91 92 P P 12 53 01.1 +1.8
baz=38
X16A **Lo Mia Camp, P** 37.96 105 P P 12 53 02.2 +2.4
baz=38,SNR=6.9
113A **Mohawk Valley,** 37.99 109 P P 12 53 01.6 +1.9
baz=38
S22A **4UR Ranch, Cre** 38.05 97 P P 12 53 02.5 +1.8
baz=38
Q24A **Divide** 38.12 94 P P 12 53 03.2 +1.9
baz=38
R23A **Moffat** 38.29 96 P P 12 53 04.6 +1.9
baz=38
P25A **Willow Gulch B** 38.29 93 P P 12 53 04.6 +2.0
baz=38
T22A **Edith** 38.53 98 P P 12 53 07.3 +2.7
baz=38
U21A **Nageezi** 38.54 99 P P 12 53 06.9 +2.2
baz=38,SNR=8.0
V20A **Brimhall** 38.55 101 P P 12 53 06.4 +1.6
baz=38
R24A **Sanders Place,** 38.66 95 P P 12 53 07.3 +1.6
baz=38
X18A **Snowflake** 38.69 104 P P 12 53 07.9 +2.0
baz=38
P26A **Davis Ranch, A** 38.72 92 P P 12 53 08.4 +2.3
baz=38
V21A **Milan** 39.01 100 P P 12 53 10.9 +2.3
baz=39
U22A **Llaves** 39.02 99 P P 12 53 10.8 +2.1
baz=39
S24A **Houchin Ranch,** 39.02 96 P P 12 53 11.2 +2.4
baz=39
W20A **Ramah** 39.03 102 P P 12 53 10.9 +2.1
baz=39
214A **Organ Pipe Nat** 39.12 109 P P 12 53 11.9 +2.5
baz=39
R25A **Fountain Ranch** 39.18 94 P P 12 53 12.0 +2.1
baz=39
V22A **San Miguel Ran** 39.33 99 P P 12 53 12.9 +1.6
baz=39
U23A **El Rito** 39.42 98 P P 12 53 14.4 +2.4
baz=39,SNR=15
X20A **Quemado** 39.47 102 P P 12 53 14.4 +1.9
baz=39
R26A **Arlington** 39.54 94 P P 12 53 15.0 +2.1
baz=39,SNR=6.8
T25A **Trinidad** 39.83 96 P P 12 53 17.3 +1.9
baz=40
EYMN **Ely** 39.85 73 *e*P P 12 53 15.4 +0.1
11nm,0.6s
R27A **Eads** 39.91 93 P P 12 53 17.6 +1.6
baz=40
X21A **Alamocita Cree** 39.93 102 P P 12 53 18.8 +2.4
baz=40,SNR=9.1
S26A **Kim** 40.01 94 ⇓P P 12 53 18.4 +1.6
baz=40,SNR=5.4
T26A **Comanche Natio** 40.26 95 P P 12 53 20.0 +1.1
baz=40
ANMO **Albuquerque** 40.29 100 P P 12 53 20.6 +1.4
ANMO **Albuquerque** 40.29 100 P P 12 53 20.6 +1.4
0.4nm,0.4s,baz=328,slow=9.1,SNR=5.5
U25A **Circle Dot Ran** 40.36 96 P P 12 53 21.6 +1.8
baz=40,SNR=8.2
V24A **Rampart Ranch,** 40.37 98 P P 12 53 21.8 +1.8
baz=40
R28A **Tribune** 40.42 92 P P 12 53 22.0 +1.8
baz=40
V25A **Rancho No Teng** 40.65 97 P P 12 53 24.0 +1.8
baz=40
W24A **Lazy 6 Ranch,** 40.67 99 P P 12 53 24.5 +2.1
baz=40
U26A **Atchley Ranch,** 40.73 96 P P 12 53 24.7 +1.8
baz=40,SNR=6.1
Y22A **Socorro** 40.76 101 P P 12 53 25.4 +2.3
baz=41
Z21A **St. Cloud Mine** 40.85 103 P P 12 53 27.0 +3.1
baz=41
S28A **Manter** 40.91 93 P P 12 53 25.3 +1.2
baz=41
T28A **Walsh** 41.12 94 P P 12 53 27.3 +1.4
baz=41
V26A **Tequesquite Ra** 41.14 97 P P 12 53 28.1 +1.8
baz=41,SNR=11
W25A **X Bar L Ranch,** 41.19 98 P P 12 53 28.6 +1.9
baz=41
Y23A **Lovelace Mesa,** 41.27 101 P P 12 53 29.5 +2.2
baz=41
121A **Cookes Peak, D** 41.38 104 P P 12 53 31.3 +3.1
baz=41

220A **Playas Peak, P** 41.45 105 P P 12 53 30.8 +2.0
baz=41,SNR=6.2
FRB **Frobisher Bay** 41.60 42 P P 12 53 28.3 -1.1
FRB **Frobisher Bay** 41.60 42 P P 12 53 28.3 -1.1
5.2nm,0.8s,baz=280,slow=12,SNR=3.0
320A **Kipp Ranch, An** 41.89 105 P P 12 53 34.9 +2.5
baz=42
Y25A **Mesa, Roswell** 42.02 99 ⇑P P 12 53 35.2 +1.8
baz=42,SNR=9.0
X26A **CR and CF Fran** 42.04 98 P P 12 53 35.1 +1.5
baz=42
Z24A **Sheppen Canyo** 42.10 100 P P 12 53 36.0 +1.9
baz=42
U30A **WK&E Inc. Balk** 42.36 93 P P 12 53 37.3 +1.2
baz=42
124A **Stringfield Ra** 42.52 101 P P 12 53 39.0 +1.4
baz=42
Y27A **Causey** 42.90 98 P P 12 53 41.6 +1.1
baz=43
Z26A **Caprock** 42.90 99 P P 12 53 42.1 +1.6
baz=43
224A **Cornudas Mount** 42.96 102 P P 12 53 42.9 +1.8
baz=43
Y28A **McKinney Farm,** 43.39 97 P P 12 53 45.8 +1.4
baz=43
226B **Tecolote Peak,** 43.70 101 P P 12 53 48.9 +1.9
baz=44
Y29A **Porterfield Fa** 43.74 97 P P 12 53 48.4 +1.2
baz=44
325A **Bean Ranch, Si** 43.80 102 P P 12 53 49.7 +1.8
baz=44,SNR=6.9
425A **Indio Mountain** 44.24 103 ⇑P P 12 53 53.7 +2.3
baz=44,SNR=7.0
WMOK **Wichita Mounta** 44.71 93 *e*P P 12 53 55.8 +0.9
3.9nm,0.7s
426A **McDonald Obser** 44.85 102 P P 12 53 57.8 +1.5
baz=45
329A **Wagon Wheel Ra** 45.35 99 P P 12 54 01.5 +1.4
baz=45
Z32A **Haskell** 45.37 95 P P 12 54 00.5 +0.3
baz=45
527A **Woodward Ranch** 45.48 102 P P 12 54 02.5 +1.2
baz=45
428A **Kincaid Ranch,** 45.55 100 P P 12 54 03.5 +1.8
baz=45,SNR=5.9
626A **Big Bend Ranch** 45.66 103 P P 12 54 03.9 +1.3
baz=46
ABTX **Abilene, Hawle** 45.79 96 P P 12 54 04.5 +0.9
baz=46
330A **Mertzon** 45.86 98 P P 12 54 05.3 +1.2
baz=46
528A **Cox Ranch, San** 45.92 101 P P 12 54 06.4 +1.7
baz=46,SNR=5.4
429A **Davenport Ranc** 46.06 100 P P 12 54 06.8 +1.1
baz=46
TXAR **Lajitas Array** 46.08 103 P P 12 54 07.4 +1.4
TXAR PcP PcP 12 55 41.6 +0.1
TXAR **Lajitas Array** 46.08 103 P P 12 54 07.4 +1.4
2.2nm,0.7s,baz=306,slow=5.7,SNR=35
TXAR PcP PcP 12 55 41.6 +0.1
0.1nm,0.5s,baz=328,slow=3.2,SNR=2.6
627A **Terlingua Ranc** 46.14 102 ⇓P P 12 54 08.1 +1.7
baz=46,SNR=7.1
529A **Stev Forest Ra** 46.27 101 ⇑P P 12 54 08.7 +1.4
baz=46,SNR=5.7
232A **Coleman** 46.34 97 P P 12 54 09.2 +1.3
baz=46
628A **Black Gap, Mar** 46.39 102 P P 12 54 09.8 +1.5
baz=46,SNR=9.8
431A **Sonora** 46.73 99 P P 12 54 11.7 +0.7
baz=46
530A **J-C Ranch, Com** 46.73 100 P P 12 54 12.2 +1.2
baz=47,SNR=6.1
531A **Rocksprings** 47.16 99 ⇓P P 12 54 15.1 +0.9
baz=47,SNR=6.9
SFIN **Scholer Farm** 47.19 78 P P 12 54 14.3 0.0
baz=47
JCT **Junction City** 47.33 98 *e*P P 12 54 16.4 +0.8
6.1nm,0.8s
JCT **Junction City** 47.33 98 P P 12 54 16.6 +1.0
baz=47
SCHQ **Schefferville** 47.67 51 P P 12 54 16.4 -1.4
SCHQ **Schefferville** 47.67 51 P P 12 54 16.4 -1.4
2.5nm,0.5s,baz=305,slow=8.1,SNR=7.7
631A **Perdido Creek** 47.72 100 P P 12 54 18.9 +0.3
baz=48
MIAR **Mount Ida** 47.76 89 *e*P P 12 54 18.8 0.0
5.3nm,0.9s
632A **Uvalde** 48.08 99 P P 12 54 21.6 +0.2
baz=48
CN2 **Changchun** 48.61 290 *e*P P 12 54 24.0 -1.3
CN2 pmax pmax
comp=Z,10.0nm,0.8s
KSRS **Korea Array** 51.77 282 P P 12 54 48.1 -1.1
comp=Z,1.8nm,0.7s,baz=52,slow=6.6,SNR=11
KSAR **Wonju Array Be** 51.80 282 P P 12 54 48.1 -1.3
ARCES **ARCESS Array B** 54.59 359 P P 12 55 08.1 -1.5
ARCES **ARCESS Array B** 54.59 359 P P 12 55 08.1 -1.5
comp=Z,6.7nm,1.1s,baz=27,slow=8.2,SNR=8.2
SONM **Songino Array** 55.17 305 P P 12 55 13.4 -0.8
SONM PcP PcP 12 56 14.2 -0.6
SONM **Songino Array** 55.17 305 P P 12 55 13.4 -0.8
comp=Z,4.0nm,0.8s,baz=47,slow=7.6,SNR=21
SONM PcP PcP 12 56 14.2 -0.6
comp=Z,1.1nm,0.7s,baz=48,slow=3.4,SNR=4.0
HHC **Hu-ho-hao-te** 57.88 296 *e*P P 12 55 35.3 +1.8
HHC pP pP 12 55 43.8 -3.2
HHC PP PP 12 57 45.0 +3.2
HHC S S 13 03 33.0 +3.4
HHC sS sS 13 03 43.5 -8.6
HHC SS SS 13 07 24.8 +4.6
HHC pmax pmax
comp=Z,200nm,4.5s
HHC LR LR
comp=N,140nm,13.1s
HHC LR LR
comp=E,120nm,13.1s
HHC LR LR
comp=Z,170nm,15.5s
ZALV **Zalesovo Beam** 59.07 322 P P 12 55 40.5 -1.0
ZALV **Zalesovo Beam** 59.07 322 P P 12 55 40.5 -1.0
comp=Z,0.5nm,0.3s,baz=31,slow=6.1,SNR=5.5
ZALV LR LR 13 23 08.9
comp=Z,23nm,18.9s,baz=70,slow=38
FINES **FINESS Array B** 62.70 358 P P 12 56 05.6 -0.4
FINES **FINESS Array B** 62.70 358 P P 12 56 05.6 -0.4
comp=Z,4.0nm,0.9s,baz=39,slow=7.3,SNR=4.2
MK31 **Makanchi Array** 65.94 320 *e*P P 12 56 26.0 -1.4
MKAR **Makanchi Array** 65.94 320 P P 12 56 25.8 -1.6
MKAR **Makanchi Array** 65.94 320 P P 12 56 25.8 -1.6
comp=Z,1.5nm,0.5s,baz=37,slow=5.3,SNR=30
WMQ **Urumqi** 66.37 314 *e*P P 12 56 39.0 +8.7
CD2 **Chengdu** 69.57 295 *e*P P 12 56 55.0 +4.4
ABKAR **Akbulak array** 70.46 335 *e*P P 12 56 54.2 -1.5
comp=Z,2.0nm,0.6s
AAK **Ala-Archa** 72.30 322 *e*P P 12 57 06.8 -0.2
comp=Z,2.1nm,0.5s
KKAR **Karatay Array** 73.19 325 *e*P P 12 57 11.4 -0.8
comp=Z,0.8nm,0.5s
AKASG **Malin Array Be** 73.36 356 P P 12 57 10.3 -2.7
AKASG **Malin Array Be** 73.36 356 P P 12 57 10.3 -2.7
comp=Z,0.5nm,0.3s,baz=9.8,slow=6.0,SNR=5.8
GERES **GERESS Array B** 75.09 6 P P 12 57 23.0 -0.3
GERES **GERESS Array B** 75.09 6 P P 12 57 23.0 -0.3
comp=Z,0.4nm,0.7s,baz=7.6,slow=3.0,SNR=2.8
MFF **Saint Martin d** 75.82 16 *e*P P 12 57 26.4 -0.9
comp=Z,31nm,1.5s
SSF **Saint Saulge** 75.89 13 *e*P P 12 57 27.3 -0.4
comp=Z,2.6nm,0.7s
AVF **Avril sur Loir** 76.14 14 *e*P P 12 57 28.5 -0.6
RJF **Les Rejaudoux** 77.34 15 *e*P P 12 57 35.4 -0.6
LFF **La Frestale** 77.58 16 *e*P P 12 57 37.4 +0.1
VIVF **Saint-Julien-l** 78.21 13 *e*P P 12 57 39.8 -1.0
MTLF **Montolieu** 79.36 15 *e*P P 12 57 46.4 -0.8
ESDC **Sonseca Array** 81.88 20 P P 12 58 00.9 +0.1
ESDC **Sonseca Array** 81.88 20 P P 12 58 00.9 +0.1
comp=Z,0.5nm,0.5s,baz=341,slow=5.4,SNR=3.4
ROSC **El Rosal** 82.08 93 LR LR 13 35 51.4
comp=Z,60nm,21.4s,baz=11,slow=37
CMAR **Chiang Mai Arr** 82.26 291 P P 12 58 02.1 -0.8
CMAR **Chiang Mai Arr** 82.26 291 P P 12 58 02.1 -0.8
comp=Z,1.4nm,0.7s,baz=12,slow=4.6,SNR=7.3
BRTR **Keskin Array B** 84.03 352 P P 12 58 10.8 -1.1
BRTR **Keskin Array B** 84.03 352 P P 12 58 10.8 -1.1
comp=Z,2.0nm,1.1s,baz=27,slow=5.7,SNR=5.4

MEX 14 12:56:21.2±0.6, 16.50N×99.95W, h9km±3km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACP2	**Acapulco**	**0.38**	**10**	*i* P	Pg	12 56 27.9	-0.8
ACP2				*i* S	Sg	12 56 33.8	0.0
ACX	**Acapulco**	**0.38**	**14**	*i* P	Pg	12 56 28.2	-0.6
CAIG	**El Cayaco**	**0.62**	**331**	*e*P	Pg	12 56 32.1	-1.2
CAIG				*i* S	Sg	12 56 40.5	-1.1
MEIG	**Mezcala**	**1.46**	**13**	*e*P	Pn	12 56 44.2	-3.6
MEIG				*i* S	Sn	12 57 02.6	-4.6
PNIG	**Pinotepa**	**1.75**	**93**	*i* P	Pn	12 56 48.6	-3.2
PNIG				*i* S	Sn	12 57 09.1	-5.3
ARIG	**Puente Sto Nin**	**1.81**	**348**	*i* P	Pn	12 56 49.9	-2.8
ARIG				*i* S	Sn	12 57 10.8	-5.1
PLIG	**Platanillo**	**1.93**	**13**	*e*P	Pn	12 56 51.7	-2.8
PLIG				*i* S	Sn	12 57 14.6	-4.3
YAIG	**Yautepec**	**2.50**	**20**	*i* P	Pn	12 56 59.0	-3.3
YAIG				*i* S	Sn	12 57 28.2	-4.9
PPM	**Popocatepetl**	**2.85**	**26**	*i* P	Pn	12 57 05.4	-2.2
PPM				*i* S	Sn	12 57 36.0	-6.5

GUC 14 13:50:53.8±0.3, 26.29S×69.39W, h99km±10km, ML3.5, 1C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPCH	**Copiapo**	**1.37**	**219**	*e*P	Pn	13 51 18.6	+0.1
CPCH				*i* S	Sn	13 51 37.6	+0.5
CDCH	**Caldera**	**1.49**	**239**	*e*P	Pn	13 51 20.4	+0.5
CDCH				*i* S	Sn	13 51 40.2	+0.5
CDCH				AML	AML	13 51 44.6	
	comp=N,407nm,0.6s						
ANCH	**Antofagasta**	**2.76**	**340**	⇑*i* P	Pn	13 51 36.6	+0.3
ANCH				*i* S	Sn	13 52 09.2	+0.2
LCO	**Las Campanas**	**2.95**	**203**	*e*P	Pn	13 51 40.0	+0.8
LCO				*i* S	Sn	13 52 15.0	+0.8
LCO				AML	AML	13 52 23.8	
	comp=E,128nm,0.4s						
TLL	**Tololo Astrono**	**4.06**	**198**	*e*P	Pn	13 51 55.0	+0.9
TLL				AML	AML	13 53 16.8	
	comp=E,36nm,0.5s						

*ISCJB **14** 13:52:32.4±0.7, 8.6N±0.1×93.9E±0.1, h22km, mb4.0/13, Error ellipse: s-maj=19.8km s-min=15.4km az=44.1*
*IDC **14** 13:52:41.1±7.1, 8.88N×94.16E, h75km±62km, mb3.4/10, mb1 3.5/11, mb1mx3.4/29, mbtmp3.4/11, ML3.8/1, Error ellipse: s-maj=56.7km s-min=17.7km az=55.0*
ISC 14 13:52:34.4±0.9, 8.6N±0.1×93.8E±0.2, h22km, n15, σ1s25/15, mb3.7/13, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**10.99**	**26**	P	**Pn**	**13 55 12.0**	**+1.5**
	0.2nm,0.3s,baz=211,slow=14,SNR=8.3						
MKAR	**Makanchi Array**	**39.33**	**347**	P	**P**	**14 00 00.1**	**-1.9**
	0.4nm,0.8s,baz=147,slow=6.5,SNR=4.4						
ZALV	**Zalesovo Beam**	**45.81**	**353**	P	**P**	**14 00 54.0**	**-0.5**
	4.1nm,0.8s,baz=176,slow=8.8,SNR=6.6						
RDF	**Al-Radifah**	**47.89**	**301**	*e*P	**P**	**14 01 12.7**	**+1.5**
RDF				AMb	AMB	14 01 13.4	
	comp=Z,12nm,0.9s						
BVAR	**Borovoye Array**	**48.22**	**341**	P	**P**	**14 01 11.5**	**-1.9**
	comp=Z,0.5nm,0.6s,baz=134,slow=6.4,SNR=3.7						
NAY	**Al-Naaiem**	**48.24**	**302**	*e*P	**P**	**14 01 13.9**	**0.0**
NAY				AMb	AMB	14 01 15.6	
	comp=Z,4.5nm,1.1s						
MIB	**Mutribah**	**48.31**	**302**	*e*P	**P**	**14 01 13.5**	**-0.9**
MIB				AMb	AMB	14 01 16.3	
	comp=Z,10.0nm,0.8s						
WRA	**Warramunga Arr**	**48.92**	**126**	P	**P**	**14 01 19.0**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=305,slow=8.6,SNR=6.1						
ASAR	**Alice Springs**	**50.61**	**130**	P	**P**	**14 01 31.3**	**-0.8**
	comp=Z,0.2nm,0.6s,baz=298,slow=7.8,SNR=3.4						
GERES	**GERESS Array B**	**77.09**	**318**	P	**P**	**14 04 26.5**	**+0.2**
	comp=Z,0.7nm,0.8s,baz=72,slow=4.3,SNR=4.4						
HFS	**Hagfors**	**77.69**	**330**	P	**P**	**14 04 29.1**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=133,slow=8.5,SNR=2.8						
EKA	**Eskdalemuir Ar**	**86.96**	**325**	P	**P**	**14 05 17.1**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=97,slow=5.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**90.14**	**283**	P	**P**	**14 05 35.3**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=81,slow=5.1,SNR=2.3						
ILAR	**Eielson Array**	**94.20**	**22**	P	**P**	**14 05 51.0**	**-0.5**
	comp=Z,0.2nm,0.7s,baz=315,slow=5.1,SNR=5.1						
PLCA	**Paso Flores**	**145.11**	**201**	PKPbc	**PKPdf**	**14 12 12.1**	**+1.4**
	comp=Z,2.5nm,0.8s,baz=170,slow=3.5,SNR=4.5						

IDC 14 13:56:38.8±2.0, 5.86N×126.93E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/22, mbtmp3.5/3, Error ellipse: s-maj=172.8km s-min=25.0km az=67.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.65**	**164**	P	P	14 02 19.1	-0.3
	0.4nm,0.6s,baz=345,slow=10,SNR=5.1						
ASAR	**Alice Springs**	**30.12**	**167**	P	P	14 02 50.8	+0.4
	0.5nm,0.8s,baz=340,slow=7.0,SNR=5.2						
MKAR	**Makanchi Array**	**55.94**	**324**	P	P	14 06 18.9	+0.1
	0.5nm,0.5s,baz=122,slow=8.2,SNR=6.2						
MKAR				PcP	PcP	14 07 17.0	-0.5
	0.2nm,0.7s,baz=128,slow=4.1,SNR=2.9						

*ISK **14** 14:06:11.9, 37.12N×28.59E, h4km, MD2.7*
*DDA **14** 14:06:12.6, 37.11N×28.49E, h7km, MD2.8*
*CSEM **14** 14:06:13.2±0.2, 37.14N×28.56E, h5km, MD2.7, Error ellipse: s-maj=4.5km s-min=4.3km az=97.0*
ISC 14 14:06:13.0±1.1, 37.15N±0.03×28.53E±0.03, h7km±9km, n20, σ1s15/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.20**	**265**	*e*PG	**Pg**	**14 06 17.2**	**+0.1**
YER				*e*SG	**Sg**	**14 06 21.1**	**+1.3**
YER	**Yerkesik**	**0.20**	**265**	*e*Pg	**Pg**	**14 06 17.2**	**+0.1**
YER				*e*Sg	**Sg**	**14 06 21.2**	**+1.3**
TURN	**Turunc**	**0.28**	**169**	*i* P	**Pg**	**14 06 19.8**	**+1.2**
TURN	**Turunc**	**0.28**	**169**	*i* P	**Pg**	**14 06 19.8**	**+1.2**
DALY	**Dalyan (Mu˘la**	**0.35**	**164**	*e*PG	**Pg**	**14 06 18.5**	**-1.3**
DALY				*e*SG	**Sg**	**14 06 23.7**	**-0.7**
DALY	**Dalyan (Mu˘la**	**0.35**	**164**	*e*Pg	**Pg**	**14 06 18.5**	**-1.3**
DALY				*e*Sg	**Sg**	**14 06 23.7**	**-0.7**
DNZL	**Cakiroluk**	**0.68**	**37**	*i* P	**Pg**	**14 06 26.1**	**+0.1**
DNZL				*i* S	**Sb**	**14 06 37.0**	**+0.1**
DNZL	**Cakiroluk**	**0.68**	**37**	*i* P	**Pg**	**14 06 26.1**	**+0.1**
DNZL				*i* S	**Sb**	**14 06 37.0**	**+0.1**
DENT	**Denizli**	**0.72**	**33**	*e*PG	**Pg**	**14 06 26.3**	**-0.6**
DENT	**Denizli**	**0.72**	**33**	*e*Pg	**Pg**	**14 06 26.3**	**-0.6**
AYDN	**Tasoluk**	**0.73**	**314**	*i* P	**Pb**	**14 06 27.6**	**-0.5**
AYDN				*i* S	**Sb**	**14 06 37.4**	**-0.9**
AYDN	**Tasoluk**	**0.73**	**314**	*i* P	**Pb**	**14 06 27.6**	**-0.5**
AYDN				*i* S	**Sb**	**14 06 37.4**	**-0.9**
DAT	**Datca**	**0.87**	**241**	*e*PG	**Pn**	**14 06 30.4**	**-1.4**
DAT	**Datca**	**0.87**	**241**	*e*Pg	**Pn**	**14 06 30.4**	**-1.4**
BODT	**Bodrum**	**0.98**	**265**	*e*PG	**Pn**	**14 06 32.4**	**-0.8**
BODT	**Bodrum**	**0.98**	**265**	*e*Pg	**Pn**	**14 06 32.4**	**-0.8**
AKAS	**Kas**	**1.26**	**136**	*i* P	**Pg**	**14 06 37.1**	**-0.1**
AKAS				*i* S	**Sn**	**14 06 57.1**	**+2.8**
AKAS	**Kas**	**1.26**	**136**	*i* P	**Pg**	**14 06 37.1**	**-0.1**
AKAS				*i* S	**Sn**	**14 06 57.1**	**+2.8**
KULA	**Kula-Manisa**	**1.36**	**4**	*e*PN	**Pg**	**14 06 39.7**	**+0.5**
KULA	**Kula-Manisa**	**1.36**	**4**	*e*Pn	**Pg**	**14 06 39.7**	**+0.5**

*ISCJB **14** 14:06:44.8±0.9, 62.71N±0.04×5.9E±0.1, h0km, Error ellipse: s-maj=9.7km s-min=4.1km az=33.4*
*IDC **14** 14:06:45.6±1.9, 62.72N×5.64E, h0km, mb1 3.4/5, mb1mx3.1/30, mbtmp3.3/5, ML3.0/5, Error ellipse: s-maj=17.4km s-min=13.4km az=60.0*
*BER **14** 14:06:48.8, 62.82N×5.68E, h17km, MD2.9, ML2.9, ML3.0(NAO)*
*NAO **14** 14:06:49.8±5.7, 62.66N×5.99E, h12km±25km, ML3.0*
*CSEM **14** 14:06:49.5±0.5, 62.61N×6.16E, h2km, ML2.9, Error ellipse: s-maj=10.2km s-min=5.1km az=129.0, Suspected Mining explosion.*
*UPP **14** 14:06:52.2, 62.74N×6.50E, h0km, ML1.8, Suspected Mining explosion.*

ISC 14 14:06:45.1±1.3, 62.89N±0.06×5.76E±0.06, h0km, n51, σ1§63/72, Southern Norway

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HYA	**Hoyanger**	**1.75**	**173**	*e*P	**Pn**	**14 07 15.8**	**-0.8**
HYA				*e*Pg	**Pg**	**14 07 18.4**	**-0.1**
HYA				*e*Sg	**Sn**	**14 07 38.9**	**-0.6**
HYA				AML	AML	14 07 41.7	
	comp=Z,492nm,0.3s						
DOMB	**Dombas**	**1.76**	**118**	*e*P	**Pg**	**14 07 20.8**	**+2.1**
DOMB				*e*S	**Sg**	**14 07 42.2**	**+0.7**
DOMB				AML	AML	14 07 44.4	
	comp=Z,240nm,0.2s						
ASK	**Askoy**	**2.43**	**187**	*e*P	**Pn**	**14 07 24.6**	**-1.5**
ASK				*e*Sg	**Sb**	**14 08 00.4**	**+0.2**
RUND	**Rundenannen**	**2.50**	**185**	*e*P	**Pn**	**14 07 25.4**	**-1.6**
RUND				*e*Sg	**Sn**	**14 07 59.9**	**+1.8**
BER	**Bergen**	**2.53**	**185**	*e*P	**Pn**	**14 07 28.7**	**+1.4**
BER				*e*Sg	**Sn**	**14 08 00.5**	**+1.7**
BER				AML	AML	14 08 08.5	
	comp=Z,116nm,0.7s						
BER	**Bergen** SNR=55	**2.53**	**185**	*e*P	**Pn**	**14 07 28.7**	**+1.4**
BER				*e*Sg	**Sn**	**14 08 00.5**	**+1.7**
	comp=Z,103nm,0.2s,SNR=91						
EGD	**Espegrend**	**2.64**	**186**	*e*P	**Pn**	**14 07 26.5**	**-2.4**
EGD				*e*Sg	**Sn**	**14 08 02.5**	**+0.9**
EGD				AML	AML	14 08 08.9	
	comp=Z,103nm,0.2s						
NB2	**NORSAR Subarra** baz=301,slow=11	**3.18**	**123**	Pn	**Pn**	**14 07 36.2**	**-0.2**
NB2				Pg	**Pb**	**14 07 43.3**	**+0.9**
NB2				Lg	Lg	14 08 22.7	
NB2	**NORSAR Subarra** baz=301,slow=11	**3.18**	**123**	Pn	**Pn**	**14 07 36.5**	**+0.2**
NB2				Pg	**Pb**	**14 07 44.0**	**+1.6**
NB2				Lg	Lg	14 08 22.7	
NB2	**NORSAR Subarra** baz=301,slow=11	**3.18**	**123**	Pn	**Pn**	**14 07 36.2**	**-0.2**
NB2	**NORSAR Subarra** SNR=91	**3.18**	**123**	Pg	**Pb**	**14 07 44.0**	**+1.6**
NB2				Lg	Lg	14 08 22.7	
NOA	**NORSAR Array B**	**3.18**	**123**	Pn	**Pn**	**14 07 35.0**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=42,slow=25,SNR=6.4						
NOA				Pg	**Pb**	**14 07 42.9**	**+0.5**
	comp=Z,12nm,0.3s,baz=303,slow=16,SNR=30						
NOA				Lg	Lg	14 08 22.4	
	comp=Z,41nm,0.3s,baz=5.0,slow=13,SNR=3.7						
BLS5	**Blasjo**	**3.50**	**174**	*e*P	**Pn**	**14 07 39.1**	**-1.7**
BLS5				*e*Sg	**Sb**	**14 08 31.1**	**+0.2**
BLS5				AML	AML	14 08 36.3	
	comp=Z,159nm,0.5s						
KMY	**Karmoy**	**3.70**	**184**	*e*P	**Pn**	**14 07 42.6**	**-0.9**
KMY				AML	AML	14 08 45.7	
	comp=Z,42nm,0.4s						
KMY	**Karmoy** SNR=55	**3.70**	**184**	*e*P	**Pn**	**14 07 42.6**	**-0.9**
KONO	**Kongsberg**	**3.74**	**149**	*e*P	**Pn**	**14 07 45.2**	**+1.1**
KONO				*e*Sg	**Sb**	**14 08 38.9**	**+1.0**
KONO				AML	AML	14 08 45.8	
	comp=Z,87nm,0.5s						
KONO	**Kongsberg** SNR=53	**3.74**	**149**	*e*P	**Pn**	**14 07 45.2**	**+1.1**
KONO				*e*Sg	**Sb**	**14 08 38.9**	**+1.0**
	comp=Z,87nm,0.5s,SNR=91						
STAV	**Stavanger**	**3.97**	**180**	*e*Sg	**Sb**	**14 08 44.9**	**+0.5**
STAV	**Stavanger** SNR=91	**3.97**	**180**	*e*Sg	**Sb**	**14 08 44.9**	**+0.5**
SNART	**Snartemo**	**4.62**	**170**	*e*P	**Pn**	**14 07 56.8**	**+0.6**
SNART				*e*Sg	**Sb**	**14 09 07.7**	**+4.4**
SNART				AML	AML	14 09 12.3	
	comp=Z,66nm,0.3s						
HFS	**Hagfors** baz=305,slow=14	**4.70**	**123**	Pn	**Pn**	**14 07 56.9**	**-0.3**
HFS				Lg	Lg	14 09 12.2	
	baz=315,slow=28						
HFS	**Hagfors** baz=305,slow=14	**4.70**	**123**	Pn	**Pn**	**14 07 56.8**	**-0.3**
HFS				Pg	**Pb**	**14 08 05.2**	**-3.1**
	baz=297,slow=14						
HFS				Lg	Lg	14 09 09.9	
	baz=306,slow=28						
HFS	**Hagfors**	**4.70**	**123**	Pn	**Pn**	**14 07 57.1**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=312,slow=12,SNR=17						
HFS				Pg	**Pb**	**14 08 08.2**	**-0.1**
	comp=Z,2.1nm,0.3s,baz=302,slow=12,SNR=14						
HFS				Sn	**Sn**	**14 08 52.4**	**0.0**
	comp=Z,2.7nm,0.3s,baz=304,slow=26,SNR=2.9						
HFS				Lg	Lg	14 09 13.0	
	comp=Z,22nm,0.3s,baz=303,slow=29,SNR=15						
HFS	**Hagfors**	**4.70**	**123**	Pn	**Pn**	**14 07 56.9**	**-0.3**
	baz=305,slow=14,SNR=212						
HFS	**Hagfors** SNR=91	**4.70**	**123**	Pg	**Pb**	**14 08 05.2**	**-3.1**
HFS				Lg	Lg	14 09 12.2	
	baz=315,slow=28,SNR=8.4						
ROTU	**Roteberg**	**4.94**	**103**	P	**Pn**	**14 08 02.0**	**+1.5**
FALU	**Falun**	**5.36**	**112**	P	**Pn**	**14 08 07.3**	**+1.0**
HUDU	**Hudiksvall**	**5.42**	**97**	P	**Pn**	**14 08 08.6**	**+1.5**
HUDU				S	**Sn**	**14 09 08.2**	**-1.9**
ARNU	**Arnoeviken**	**5.55**	**97**	P	**Pn**	**14 08 10.2**	**+1.3**
NRAU	**Nora**	**5.58**	**122**	P	**Pn**	**14 08 09.5**	**+0.2**
IGGU	**Iggoen**	**5.83**	**105**	P	**Pn**	**14 08 13.7**	**+1.0**
OSTU	**Oestervaala**	**6.05**	**111**	P	**Pn**	**14 08 16.2**	**+0.4**
LOF	**Lofoten**	**6.17**	**28**	*e*P	**Pn**	**14 08 19.4**	**+2.1**
LOF				AML	AML	14 09 32.2	
	comp=Z,6.9nm,0.5s						
LOF	**Lofoten** SNR=51	**6.17**	**28**	*e*P	**Pn**	**14 08 19.4**	**+2.1**
BACU	**Backbrunna**	**6.25**	**114**	P	**Pn**	**14 08 18.7**	**+0.3**
ESKU	**Eskilstuna**	**6.33**	**121**	P	**Pn**	**14 08 20.1**	**+0.5**
FLYU	**Flymyra**	**6.43**	**110**	P	**Pn**	**14 08 20.6**	**-0.3**
MUD	**Monsted U'grnd**	**6.68**	**164**	*i* Sg	Sg	14 10 13.0	-6.6
	comp=Z,23nm,0.5s,SNR=91						
NRTU	**Norrtaelje** baz=304	**6.99**	**112**	P	**Pn**	**14 08 28.8**	**+0.3**
NYNU	**Nynaeshamn**	**7.12**	**118**	P	**Pn**	**14 08 30.8**	**+0.4**
EKSU	**Eksjoe**	**7.14**	**134**	P	**Pn**	**14 08 31.1**	**+0.4**
AAL	**Aland**	**7.32**	**105**	P	**Pn**	**14 08 33.3**	**+0.1**
VSTU	**Vaestervik**	**7.49**	**130**	P	**Pn**	**14 08 36.2**	**+0.7**
VXJU	**Vaexsjoe**	**7.55**	**138**	P	**Pn**	**14 08 36.0**	**-0.4**
OSKU	**Oskarshamn**	**7.70**	**133**	P	**Pn**	**14 08 38.9**	**+0.5**
EKA	**Eskdalemuir Ar** baz=20,slow=12,SNR=7.0	**8.85**	**215**	Pn	**Pn**	**14 08 51.8**	**-2.4**
EKA				Sn	Sn	14 10 25.0	-10
	baz=23,slow=22,SNR=3.9						
FIA0	**FINESS Array S** baz=300,slow=12	**9.60**	**90**	Pn	**Pn**	**14 09 04.9**	**+0.5**
FIA0				Sn	**Sn**	**14 10 48.0**	**-4.9**
	baz=279,slow=18						
FIA0				Lg	Lg	14 11 46.9	
	baz=281,slow=28						
FIA0	**FINESS Array S** baz=300,slow=12	**9.60**	**90**	Pn	**Pn**	**14 09 04.9**	**+0.5**
FIA0				Sn	**Sn**	**14 10 47.6**	**-5.2**
FIA0				Lg	Lg	14 11 46.5	
	baz=277,slow=22						
FIA0	**FINESS Array S** baz=300,slow=11,SNR=55	**9.60**	**90**	Pn	**Pn**	**14 09 04.9**	**+0.5**
FIA0				Lg	Lg	14 11 46.5	
	baz=277,slow=22,SNR=90						
FINES	**FINESS Array B**	**9.60**	**90**	Pn	**Pn**	**14 09 05.0**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=306,slow=12,SNR=4.6						
FINES				Sn	**Sn**	**14 10 49.0**	**-3.8**
	comp=Z,0.4nm,0.3s,baz=270,slow=15,SNR=3.5						
FINES				Lg	Lg	14 11 46.8	
	comp=Z,1.1nm,0.3s,baz=277,slow=23,SNR=4.0						
ARCES	**ARCESS Array B**	**10.34**	**41**	Pn	**Pn**	**14 09 15.6**	**+1.1**
	comp=Z,0.1nm,0.3s,baz=234,slow=12,SNR=3.8						
ARCES				Lg	Lg	14 12 17.4	
	comp=Z,0.2nm,0.3s,baz=226,slow=21,SNR=2.6						

GUC 14 14:13:01.2±0.7, 30.33S×71.59W, h14km±5km, MD3.7, ML3.2, 3C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TLL	**Tololo Astrono**	**0.69**	**77**	*e*P	Pg	14 13 14.9	-0.2
TLL				*i* S	Sg	14 13 24.8	+0.3
CMCH	**Combarbala**	**0.98**	**149**	*i* P	Pb	14 13 17.7	-2.4
CMCH				*i* S	Sb	14 13 30.9	-2.2
CMCH				AML	AML	14 13 32.4	
	comp=N,1μm,0.4s						
LCO	**Las Campanas**	**1.52**	**31**	⇑*i*P	Pn	14 13 28.1	-0.2
LCO				*i* S	Sn	14 13 47.8	-0.3
LCO				AML	AML	14 13 51.0	
	comp=N,225nm,0.4s						
CHNG	**Los Chungos**	**1.55**	**177**	⇑*i*P	Pn	14 13 27.7	-0.7
CHNG				*i* S	Sn	14 13 47.7	-0.7
PEL	**Peldehue**	**2.91**	**165**	*e*P	Pn	14 13 48.0	+0.8
PEL				*e*S	Sn	14 14 23.9	+1.9
PEL				AML	AML	14 14 32.0	
	comp=N,98nm,0.3s						
CLCH	**Cerro Calan**	**3.19**	**164**	⇑*i*P	Pn	14 13 51.8	+0.8
CLCH				*i* S	Sn	14 14 30.9	+2.0
CLCH				AML	AML	14 14 41.4	
	comp=E,73nm,0.7s						

CASC ***14*** *14:18:12.4±3.3, 15°.53N×90°.69W, h0km±18km, MD4.8, ML5.2, mb4.9(NEIC)*

IDC ***14*** *14:18:14.0±0.7, 15°.32N×90°.43W, h0km, mb4.4/24, mb1 4.6/25, mb1mx4.6/28, mbtmp4.4/25, ML5.2/2, MS4.5/25, Ms1 4.5/25, ms1mx4.4/28, Error ellipse: s-maj=22.5km s-min=12.4km az=49.0*

ISCJB ***14*** *14:18:17.5±0.3, 15°.36N±0°.02×90°.61W±0°.02, h33km±3km, mb4.8/167, MS4.6/30, Error ellipse: s-maj=4.8km s-min=2.8km az=38.4*

GCMT ***14*** *14:18:17.7±0.2, 15°.48N×90°.56W, h15km±1km, MW5.1, Moment Tensor Solution. s45,c67; s85,c136; Moment tensor: Scale 10^16 Nm; Mrr 0.01±.13; Mθθ 0.86±.12; Mφφ -0.87±.14; Mrθ 0.70±.23; Mrφ 4.99±.13; Mθφ 0.19±.24; Best double couple: M0 5.10000×10^16 NP1:φs 5.00000°, δ 82.00000°, λ 177.00000°. NP2:φs 95.00000°, δ 87.00000°, λ 8.00000°. Principal axes: T 5.1400, Plg 7.0000°, Azm 320.0000°; N -0.0600, Plg 82.0000°, Azm 115.0000°; P -5.0900, Plg 3.0000°, Azm 230.0000°; Data Used: II IU CN IC G.*

NEIC ***14*** *14:18:19.9±0.5, 15°.34N×90°.58W, h43km±4km, mb4.9/129, MD5.3(SNET) Error ellipse: s-maj=5.9km s-min=3.4km az=205.0*

NEIC Felt [VI] at San Cristobal Verapaz, [V] at Coban and [III] at Guatemala and Mixco. Also felt at Antigua Guatemala, Chisec, Fraijanes, Jalapa, Panajachel, Petapa, San Andres Sajcabaja, San Benito, Santa Catarina Mita, Santa Catarina Pinula, Tactic and Villa Nueva. Felt [II] at Santa Ana, El Salvador. Felt [II] at Belize City, Belize. Also felt at Dangriga. Felt at Copan, Honduras.

BJI ***14*** *14:18:21.1, 15°.48N×90°.50W, h47km, mB5.3/3, Ms5.2/4, Ms7 4.8/4*

SZGRF ***14*** *14:18:29.7, 15°.88N×88°.09W, h33km, mb5.2, MS4.6, Honduras*

ISC 14 14:18:18.7±0.7, 15°.33N±0°.03×90°.61W±0°.03, h31km±5km, n718, σ1§17/715, mb4.9/176, MS4.5/31, 8C-3D, Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCG	**Guatemala City**	**0.74**	**174**	*e*P	Pn	14 18 29.8	-3.4
GCG				*e*S	**Sb**	**14 18 40.5**	**-2.7**
GCG				*e*S	**Sn**	**14 18 40.7**	**-2.8**
NBG	**Las Nubes**	**0.78**	**161**	*e*P	Pn	14 18 30.1	-3.8
FUG	**Fuego 3**	**0.90**	**194**	*e*P	**Pn**	**14 18 32.5**	**-3.0**
PCG	**Pacaya**	**0.93**	**180**	*e*P	**Pn**	**14 18 33.6**	**-2.3**
JAT	**Jato**	**1.41**	**225**	*e*P	**Pn**	**14 18 43.0**	**+0.7**
RBDL	**Robledal**	**1.50**	**143**	⇑*e*P	**Pn**	**14 18 42.2**	**-1.5**
THIG		**1.65**	**256**	P	**Pn**	**14 18 45.7**	**+0.1**
THIG				S	**Sb**	**14 19 09.3**	**+0.3**
RTR	**El Retiro**	**1.70**	**147**	*e*P	**Pn**	**14 18 45.5**	**-0.9**
SNJE	**San Jose**	**1.75**	**146**	*e*P	**Pn**	**14 18 46.2**	**-0.9**
CCIG	**Comitan**	**1.75**	**303**	P	**Pn**	**14 18 46.8**	**-0.4**
CCIG				S	**Sb**	**14 19 13.9**	**+1.9**
SBLS	**San Blas**	**1.76**	**147**	*e*P	**Pn**	**14 18 46.3**	**-1.0**
BOQS	**Boqueron**	**2.04**	**141**	*e*P	**Pn**	**14 18 50.5**	**-0.6**
SNET	**Serv Nac Est T**	**2.11**	**141**	*e*P	**Pn**	**14 18 51.6**	**-0.4**
SNET				*e*S	**Sb**	**14 19 24.0**	**+1.8**
SNET				AML	AML	14 19 31.7	
	comp=Z,12μm,0.8s						
LFU	**La Fuente**	**2.13**	**137**	*e*P	**Pn**	**14 18 52.0**	**-0.4**
LFU				*e*S	**Sb**	**14 19 24.7**	**+1.7**
LBRS	**Las Brisas**	**2.19**	**136**	⇑*e*P	**Pn**	**14 18 52.8**	**-0.3**
LFRS	**El Faro**	**2.26**	**138**	*e*P	**Pn**	**14 18 53.0**	**-1.1**
SNVI	**San Vicente**	**2.42**	**135**	*e*P	**Pn**	**14 18 56.2**	**-0.1**
SNVI				*e*S	**Sb**	**14 19 32.5**	**+1.4**
PCIG		**2.54**	**279**	P	**Pn**	**14 18 58.0**	**+0.1**
PCIG				S	**Sb**	**14 19 33.5**	**-1.1**
CAHU	**Cacacuatique**	**2.79**	**123**	*e*P	**Pn**	**14 19 00.9**	**-0.6**
TGIG		**2.81**	**301**	P	**Pn**	**14 19 00.9**	**-0.7**
TGIG				S	**Sb**	**14 19 42.2**	**-0.2**
VSM	**San Miguel**	**2.95**	**130**	*e*P	**Pn**	**14 19 03.4**	**-0.3**
TGUH	**Tegucigalpa,Un**	**3.47**	**111**	*e*P	**Pn**	**14 19 09.9**	**-0.7**
TGUH				*e*Sg	**Sb**	**14 20 04.8**	**+3.6**
SCIG	**Sabancuy**	**3.66**	**351**	P	**Pn**	**14 19 11.7**	**-1.6**
SCIG				S	**Sn**	**14 19 55.4**	**-0.1**
TUIG	**Tuzandepetl**	**4.54**	**307**	P	Pn	14 19 29.2	+3.9
HUIG	**Huatulco**	**5.32**	**275**	P	**Pn**	**14 19 34.0**	**-2.1**
TEIG	**Tepich**	**5.36**	**24**	*e*Pn	**Pn**	**14 19 35.2**	**-1.4**
TEIG				Sn	**Sn**	**14 20 34.8**	**-2.4**
TEIG				eSg	Sb	14 21 01.9	+6.5
TEIG	**Tepich**	**5.36**	**24**	Pn	**Pn**	**14 19 35.1**	**-1.4**
	comp=Z,630nm,0.3s,baz=198,slow=2.2,SNR=1784						
TEIG				Sn	**Sn**	**14 20 34.8**	**-2.4**
	comp=Z,442nm,0.3s,baz=49,slow=23,SNR=9.5						
TEIG				LR	LR	14 22 04.9	
	comp=Z,7μm,18.1s,baz=203,slow=44						
LVIG	**Laguna Verde**	**7.06**	**309**	P	**Pn**	**14 19 57.4**	**-2.6**
TPIG	**Tehuac#an**	**7.16**	**296**	P	**Pn**	**14 19 59.3**	**-2.2**
PNIG	**Pinotepa**	**7.31**	**279**	P	**Pn**	**14 20 03.0**	**-0.4**
JTS	**JuntasAbangare**	**7.45**	**132**	*e*Pn	**Pn**	**14 20 07.4**	**+2.0**
JCR	**Jicaral**	**7.64**	**135**	*e*P	Pn	14 20 10.8	+2.7
CGA2	**Cerro Gallo 2**	**7.99**	**131**	*e*P	**Pn**	**14 20 15.0**	**+2.1**
PPM	**Popocatepetl**	**8.52**	**297**	P	**Pn**	**14 20 19.4**	**-1.0**
QCR	**Quepos**	**8.60**	**132**	*e*P	Pn	14 20 24.1	+2.9
URSC	**Urasca**	**8.62**	**129**	*e*P	**Pn**	**14 20 23.9**	**+2.3**
YAIG	**Yautepec**	**8.82**	**295**	P	**Pn**	**14 20 23.5**	**-0.8**
MEIG	**Mezcala**	**9.02**	**288**	P	**Pn**	**14 20 25.7**	**-1.2**
PLIG	**Platanillo**	**9.04**	**291**	P	**Pn**	**14 20 26.4**	**-0.9**
DEIG	**Demacu**	**9.43**	**303**	P	**Pn**	**14 20 34.7**	**+2.0**
ACR	**Cerro Adams**	**9.85**	**132**	*e*P	Pn	14 20 41.0	+2.7
SOR	**Soroa**	**10.33**	**43**	*e*P	Pn	14 20 41.7	-3.2
MOIG	**Morelia**	**10.98**	**295**	P	Pn	14 20 57.3	+3.3
BCIP	**Isla Barro Col**	**12.18**	**119**	*e*Pn	**Pn**	**14 21 12.2**	**+2.0**
LNIG	**Linares**	**12.64**	**320**	P	**Pn**	**14 21 14.9**	**-1.5**
MTDJ	**Mount Denham**	**12.85**	**75**	*e*P	**Pn**	**14 21 21.0**	**+1.5**
STH	**Stony Hill**	**13.50**	**76**	*i* P	**Pn**	**14 21 30.0**	**+1.7**
ZAIG	**Zacatecas**	**13.51**	**305**	P	**Pn**	**14 21 29.3**	**+0.7**
HOJ	**Hope**	**13.55**	**77**	*e*P	Pn	14 21 25.6	-3.2
GWJ	**Greenwich**	**13.58**	**76**	*i* P	**Pn**	**14 21 30.0**	**+0.6**
LMGC	**Las Mercedes**	**13.79**	**68**	*e*P	**Pn**	**14 21 33.2**	**+1.0**
ANIG	**Ahuacatlan**	**14.39**	**295**	P	**P**	**14 21 48.7**	**+1.7**
RCC	**Rio Carpintero**	**14.95**	**70**	*e*P	**Pn**	**14 21 49.4**	**+1.4**
GTBY	**Guantanamo Bay**	**15.46**	**71**	*e*P	**Pn**	**14 21 55.2**	**+0.5**
	comp=Z,97nm,0.9s						
MOAC	**Moa**	**15.80**	**68**	*e*P	**P**	**14 22 00.9**	**-1.7**
732A	**Laxson Ranch,** baz=16,SNR=21	**15.90**	**329**	P	**Pn**	**14 21 59.4**	**-0.9**
MASC	**Masc**	**16.33**	**70**	*e*P	**Pn**	**14 22 05.7**	**-0.1**
631A	**Perdido Creek** baz=17,SNR=44	**16.76**	**328**	P	**Pn**	**14 22 09.9**	**-1.4**
VBMS	**Vicksburg** comp=Z,113nm,0.6s	**16.82**	**0**	*e*P	**P**	**14 22 13.3**	**-0.5**
532A	**Rocksprings** baz=17,SNR=48	**17.03**	**331**	P	**P**	**14 22 14.9**	**-1.4**
TIGA	**Tifton** baz=17,SNR=9.3	**17.27**	**21**	⇑P	**P**	**14 22 17.8**	**-1.1**
JCT	**Junction City** comp=Z,40nm,0.8s	**17.28**	**332**	*e*P	**Pn**	**14 22 17.4**	**-0.5**
JCT				*e*Sn	Sn	14 25 10.8	-18
JCT	**Junction City** baz=17,SNR=10	**17.28**	**332**	P	**P**	**14 22 18.0**	**-1.1**
531A	**Rocksprings** baz=17,SNR=34	**17.36**	**330**	⇓P	**Pn**	**14 22 17.9**	**-1.0**
432A	**Menard** baz=18,SNR=26	**17.62**	**333**	P	**Pn**	**14 22 21.5**	**-0.5**
WHTX	**Lake Whitney** baz=18,SNR=18	**17.73**	**341**	P	**P**	**14 22 24.9**	**+1.0**
530A	**J-C Ranch, Com** baz=18,SNR=25	**17.75**	**328**	P	**P**	**14 22 24.6**	**+0.4**
431A	**Sonora** baz=18,SNR=43	**17.82**	**331**	P	**P**	**14 22 24.3**	**-0.7**
LRAL	**Lakeview Retre** comp=Z,31nm,0.8s	**17.93**	**10**	*e*P	**P**	**14 22 25.0**	**-1.2**
332A	**Millersview**	**18.03**	**334**	⇑P	**P**	**14 22 27.5**	**+0.2**
	baz=18,SNR=36						
628A	**Black Gap, Mar** baz=18,SNR=41	**18.07**	**323**	P	**P**	**14 22 28.9**	**+1.1**
HPIG		**18.16**	**312**	P	**P**	**14 22 29.9**	**+0.9**
529A	**Stev Forest Ra** baz=18,SNR=31	**18.19**	**326**	P	**P**	**14 22 29.5**	**+0.4**
430A	**Baggett Ranch,** baz=18,SNR=20	**18.21**	**329**	P	**P**	**14 22 31.1**	**+1.7**
331A	**San Angelo** baz=18,SNR=26	**18.27**	**332**	P	**Pn**	**14 22 31.3**	**+1.4**
627A	**Terlingua Ranc** baz=18,SNR=48	**18.34**	**322**	P	**Pn**	**14 22 31.8**	**+0.9**
429A	**Davenport Ranc** baz=18,SNR=56	**18.41**	**328**	P	**Pn**	**14 22 32.5**	**+0.7**
TXAR	**Lajitas Array**	**18.42**	**321**	P	**Pn**	**14 22 32.7**	**+0.8**
TXAR	**Lajitas Array** comp=Z,0.5nm,0.3s,baz=140,slow=7.8,SNR=64	**18.42**	**321**	P	**Pn**	**14 22 32.7**	**+0.8**
TXAR				LR	LR	14 30 49.3	
	comp=Z,629nm,18.0s,baz=110,slow=41						
232A	**Coleman** baz=18,SNR=19	**18.43**	**335**	P	**Pn**	**14 22 32.9**	**+1.0**
528A	**Cox Ranch, San** baz=19,SNR=25	**18.53**	**325**	P	**Pn**	**14 22 33.3**	**+0.1**
330A	**Mertzon** baz=19,SNR=49	**18.69**	**331**	P	**Pn**	**14 22 35.4**	**+0.2**
231A	**Bronte** baz=19,SNR=28	**18.75**	**334**	P	**Pn**	**14 22 35.6**	**-0.3**
SDDR	**Presa de Saban** comp=Z,47nm,0.8s	**18.82**	**76**	*e*P	**Pn**	**14 22 37.7**	**+0.9**
626A	**Big Bend Ranch** baz=19,SNR=14	**18.86**	**321**	P	**Pn**	**14 22 38.5**	**+1.3**
428A	**Kincaid Ranch,** baz=19,SNR=17	**18.91**	**326**	P	**Pn**	**14 22 38.7**	**+0.9**
527A	**Woodward Ranch** baz=19,SNR=42	**18.98**	**323**	P	**Pn**	**14 22 40.0**	**+1.2**
ABTX	**Abilene, Hawle** baz=19,SNR=19	**19.08**	**336**	P	**Pn**	**14 22 39.2**	**-0.5**
ROSC	**El Rosal**	**19.09**	**121**	*e*P	**Pn**	**14 22 41.3**	**+0.9**
ROSC	**El Rosal** comp=Z,1.6nm,0.3s,baz=286,slow=23,SNR=22	**19.09**	**121**	P	**Pn**	**14 22 40.9**	**+0.6**
ROSC				LR	LR	14 30 30.0	
	comp=Z,1μm,20.4s,baz=358,slow=39						
329A	**Wagon Wheel Ra** baz=19,SNR=38	**19.15**	**329**	P	**Pn**	**14 22 40.6**	**-0.1**
526A	**Mary Lane Ranc** baz=19,SNR=64	**19.20**	**322**	P	**Pn**	**14 22 42.0**	**+0.6**
OTAV	**Otavalo** comp=Z,104nm,1.6s	**19.21**	**140**	*e*P	**Pn**	**14 22 43.0**	**+1.1**
MIAR	**Mount Ida** comp=Z,64nm,0.9s	**19.32**	**353**	*e*P	**Pn**	**14 22 42.1**	**-0.5**
427A	**Hayter Ranch,** baz=20,SNR=23	**19.39**	**325**	P	**Pn**	**14 22 44.9**	**+1.2**
131A	**Roby** baz=20,SNR=12	**19.42**	**334**	P	**Pn**	**14 22 43.9**	**0.0**
UALR	**University of** comp=Z,86nm,0.9s	**19.43**	**356**	*e*P	**Pn**	**14 22 43.1**	**-0.8**
229A	**Bryant Ranch,** baz=20,SNR=14	**19.46**	**330**	P	**Pn**	**14 22 44.5**	**+0.1**
328A	**Wristen Ranch,** baz=20,SNR=101	**19.49**	**327**	P	**Pn**	**14 22 45.7**	**+1.0**
130A	**Snyder** baz=20,SNR=29	**19.60**	**333**	P	**Pn**	**14 22 45.2**	**-0.8**
426A	**McDonald Obser** baz=20,SNR=54	**19.61**	**323**	P	**Pn**	**14 22 48.0**	**+1.7**
Z32A	**Haskell** baz=20,SNR=42	**19.62**	**337**	P	**Pn**	**14 22 45.6**	**-0.7**
Z31A	**Sharp Cattle R** baz=20,SNR=52	**19.89**	**336**	P	**Pn**	**14 22 47.9**	**-1.6**
228A	**UT Block 9, Go** baz=20,SNR=22	**19.96**	**329**	P	**Pn**	**14 22 49.7**	**-0.7**
129A	**Stewart Farms,** baz=20,SNR=21	**20.04**	**331**	P	Pn	14 22 50.6	-0.6
326A	**Caldwell Ranch** baz=20,SNR=42	**20.07**	**325**	P	Pn	14 22 51.3	-0.4
NHSC	**New Hope** comp=Z,116nm,0.9s	**20.07**	**26**	*e*P	Pn	14 22 51.6	+0.1
Y32A	**R-V Farms, Ver** baz=20,SNR=49	**20.23**	**338**	P	**P**	**14 22 51.6**	**+0.2**
227A	**Bennet, Jal** baz=20,SNR=16	**20.24**	**327**	P	Pn	14 22 53.2	-0.4
425A	**Indio Mountain** baz=20,SNR=63	**20.26**	**322**	P	Pn	14 22 52.9	-1.0
Z30A	**Sanderson Ranc** baz=20,SNR=30	**20.26**	**334**	P	**P**	**14 22 51.5**	**-0.3**
128A	**Castleberry Fa** baz=20,SNR=108	**20.32**	**330**	P	Pn	14 22 52.8	-1.8
Z29A	**Hungry Hill Ra** baz=21,SNR=78	**20.49**	**333**	P	**P**	**14 22 53.6**	**-0.6**
Y31A	**Rekieta Farm,** baz=21,SNR=196	**20.50**	**337**	P	**P**	**14 22 54.5**	**+0.1**
GNAR	**Gosnell** comp=Z,3μm,1.3s	**20.56**	**1**	*e*P	Pn	14 22 56.2	-1.0
325A	**Bean Ranch, Si** baz=21,SNR=55	**20.67**	**323**	P	**P**	**14 22 56.8**	**+0.4**
Y30A	**Stafford Cattl** baz=21,SNR=37	**20.68**	**335**	P	**P**	**14 22 56.4**	**+0.1**
WMOK	**Wichita Mounta** comp=Z,75nm,1.1s	**20.68**	**341**	*e*P	**P**	**14 22 56.0**	**-0.2**
CLNB	**Carlsbad** comp=Z,8.8nm,0.9s	**20.74**	**327**	*e*P	Pn	14 22 58.5	-1.1
226B	**Tecolote Peak,** baz=21,SNR=17	**20.75**	**326**	P	Pn	14 22 58.0	-1.6
CPCT	**Cooper Cave**	**20.77**	**14**	*e*P	Pn	14 22 57.9	-1.8
127A	**Arkansas Junct** baz=21,SNR=23	**20.80**	**328**	P	Pn	14 22 58.2	-1.9
Z28A	**Tucker Farm, M** baz=21,SNR=55	**20.82**	**331**	P	**P**	**14 22 57.7**	**-0.2**
WVT	**Waverly** comp=Z,33nm,0.7s	**20.87**	**6**	*e*P	Pn	14 22 59.0

baz=22,SNR=5.5
Y26A Elida 22.03 330 P P 14 23 11.1 +0.2
baz=22,SNR=43
TZTN Tazewell 22.05 15 eP P 14 23 11.8 +0.9
comp=Z,65nm,1.0s
W29A Amraillo 22.06 335 P P 14 23 11.6 +0.4
baz=22,SNR=18
V30A Spur Ranch, Mi 22.26 338 P P 14 23 14.6 +1.3
baz=22,SNR=9.4
X27A F and S Farms, 22.28 332 P P 14 23 13.6 0.0
baz=22,SNR=8.0
SIUC Southern Illin 22.33 3 eP P 14 23 14.7 +0.7
comp=Z,191nm,0.8s
Z24A Sheeppen Canyo 22.36 326 P P 14 23 15.4 +0.9
baz=22,SNR=54
Y25A Mesa, Roswell 22.46 328 P P 14 23 16.8 +1.3
baz=22,SNR=74
U31A Nine Bar Ranch 22.52 340 P P 14 23 16.3 +0.3
baz=23
X26A CR and CF Fran 22.53 331 P P 14 23 16.2 0.0
baz=23,SNR=20
W27A Bowe Ranch, En 22.61 333 P P 14 23 16.4 -0.7
baz=23,SNR=33
USIN University of 22.70 6 eP P 14 23 17.7 -0.1
comp=Z,331nm,1.1s
Z23A Rita Site, Whi 22.79 324 P P 14 23 20.7 +1.7
baz=23,SNR=34
221A Mesquite Ranch 22.82 320 P P 14 23 21.6 +2.3
baz=23,SNR=16
122A Conniff Cattle 22.82 322 P P 14 23 20.6 +1.3
baz=23
V28A Channing 22.84 335 P P 14 23 20.7 +1.2
baz=23
320A Kipp Ranch, An 22.85 317 P P 14 23 22.0 +2.3
baz=23
Y24A Capitan 22.85 327 P P 14 23 21.1 +1.4
baz=23,SNR=97
CNNC Cliffs of the 22.88 28 eP P 14 23 19.9 +0.2
comp=Z,45nm,0.9s
X25A Clemmons Ranch 22.93 329 P P 14 23 20.7 +0.3
baz=23,SNR=23
LRS Lares 22.94 79 eP P 14 23 21.9 +1.4
U30A WK&E Inc. Balk 22.94 339 P P 14 23 21.1 +0.7
baz=23,SNR=11
U29A Oasis Ranch, S 23.09 338 P P 14 23 23.4 +1.4
baz=23,SNR=7.3
WCI Wyandotte Cave 23.13 9 eP P 14 23 22.0 -0.4
comp=Z,278nm,1.3s
T31A Randall Ranch, 23.13 341 P P 14 23 22.5 +0.1
baz=23
CELP Cerrillos 23.18 80 P P 14 23 27.0 +4.0
121A Cookes Peak, D 23.18 321 P P 14 23 24.9 +1.8
baz=23,SNR=54
Y23A Lovelace Mesa, 23.19 326 P P 14 23 24.6 +1.4
baz=23,SNR=33
HSIG 23.20 309 P P 14 23 24.5 +1.5
Z22A Elephant Butte 23.20 323 P P 14 23 24.4 +1.2
baz=23,SNR=12
220A Playas Peak, P 23.22 318 P P 14 23 25.3 +1.9
baz=23,SNR=35
SLM Saint Louis 23.22 1 P P 14 23 22.3 -0.9
comp=Z,76nm,0.7s
T30A Plains 23.37 340 P P 14 23 25.4 +0.7
baz=23
319A Douglas 23.37 316 P P 14 23 26.9 +2.0
baz=23,SNR=58
W25A X Bar L Ranch, 23.38 330 P P 14 23 25.5 +0.5
baz=24,SNR=43
U28A Mallet 23.39 336 P P 14 23 24.8 -0.2
baz=24,SNR=10
OLIL Olney 23.42 5 eP P 14 23 25.1 0.0
comp=Z,134nm,1.0s
V26A Tequesquite Ra 23.55 332 P P 14 23 27.0 +0.4
baz=24,SNR=38
S31A Mullinville 23.56 342 P P 14 23 26.9 +0.4
baz=24
SJG San Juan 23.58 80 P P 14 23 28.2 +1.3
comp=Z,21nm,0.8s
BLA Blacksburg 23.60 21 eP P 14 23 26.9 -0.1
comp=Z,43nm,0.8s
Z21A St. Cloud Mine 23.65 322 P P 14 23 28.5 +0.8
baz=24,SNR=16
U27A Thompson Grove 23.66 335 P P 14 23 28.1 +0.4
baz=24,SNR=18
BNM Barren Site 23.67 325 eP P 14 23 29.0 +1.1
Y22A Socorro 23.70 324 P P 14 23 30.7 +2.6
baz=24,SNR=43
120A U Bar Ranch, L 23.71 319 P P 14 23 29.9 +1.6
baz=24
T29A Hugoton 23.72 338 P P 14 23 28.4 +0.2
baz=24
VWCC Virginia Weste 23.79 21 eP P 14 23 28.9 +0.2
LPM Los Pinos Moun 23.79 326 eP P 14 23 30.2 +1.3
CPD Cerro la Pandu 23.80 80 eP P 14 23 30.6 +1.5
W24A Lazy 6 Ranch, 23.84 329 P P 14 23 30.3 +0.8
baz=24,SNR=69
CBYP Canovanas 23.87 79 eP P 14 23 34.6 +4.8
comp=Z,46nm,1.1s
S30A Montezuma 23.88 340 P P 14 23 30.2 +0.5
baz=24
V25A Rancho No Teng 23.96 331 P P 14 23 32.2 +1.6
baz=24,SNR=27
T28A Walsh 23.99 337 P P 14 23 31.9 +1.1
baz=24
BLO Bloomington 24.02 8 eP P 14 23 31.3 +0.4
comp=Z,233nm,1.8s
U26A Atchley Ranch, 24.03 333 P P 14 23 31.9 +0.7
baz=24,SNR=34
Z20A Nine Sixteen R 24.07 321 P P 14 23 33.8 +2.2
baz=24,SNR=16
S29A Ulysses 24.08 339 P P 14 23 33.1 +1.6
baz=24,SNR=9.2
LAZ Ladron 24.14 325 eP P 14 23 33.5 +1.3
X22A Bernardo 24.14 325 P P 14 23 33.8 +1.5
baz=24
MTP Monte Pirata 24.15 80 eP P 14 23 33.4 +1.1
comp=Z,58nm,0.8s
Y21A Point of Rocks 24.15 323 P P 14 23 34.2 +1.7
baz=24,SNR=13
ANMO Albuquerque 24.18 327 eP P 14 23 33.0 +0.4
comp=Z,11nm,0.9s
ANMO Albuquerque 24.18 327 P P 14 23 33.6 +1.0
comp=Z,5.3nm,0.8s,baz=150,slow=12,SNR=18
ANMO LR LR 14 35 30.4
comp=Z,353nm,19.7s,baz=254,slow=43
W23A Werner Place, 24.18 328 P P 14 23 34.8 +2.1
baz=24,SNR=30
V24A Rampart Ranch, 24.18 330 P P 14 23 34.2 +1.5
baz=24,SNR=11
R31A Burdett 24.19 343 P P 14 23 32.8 +0.3
baz=24,SNR=16
KSU1 Kansas State U 24.26 349 eP P 14 23 31.7 -1.4
comp=Z,50nm,0.8s
S28A Manter 24.33 338 P P 14 23 34.8 +0.9
baz=24
U25A Circle Dot Ran 24.33 332 P P 14 23 34.5 +0.5
baz=24,SNR=20
R30A Dighton 24.41 341 P P 14 23 35.6 +1.1
baz=24,SNR=14
Y20A Horse Springs, 24.49 322 P P 14 23 37.1 +1.6
baz=24,SNR=27
X21A Alamocita Cree 24.53 324 P P 14 23 36.9 +1.0
baz=25,SNR=21
T26A Comanche Natio 24.63 334 P P 14 23 38.0 +1.3
baz=25,SNR=11
V23A Ortiz Mt. (NFS 24.65 328 P P 14 23 39.1 +2.1
baz=25,SNR=25
STVI Saint Thomas 24.73 79 eP P 14 23 38.7 +1.1
comp=Z,68nm,0.9s
U24A Moreno Valley 24.74 331 P P 14 23 38.9 +1.0
baz=25
S27A Las Animas 24.79 336 P P 14 23 38.8 +0.8
baz=25,SNR=6.2
R29A Marienthal 24.81 340 P P 14 23 38.8 +0.6
baz=25
Q31A Ellis 24.82 344 P P 14 23 38.6 +0.4
baz=25,SNR=6.9
T25A Trinidad 24.95 333 P P 14 23 40.7 +1.1
baz=25,SNR=43
TUC Tucson 24.95 316 eP P 14 23 39.8 +0.2
comp=Z,123nm,1.0s
S26A Kim 24.96 335 P P 14 23 40.1 +0.5
baz=25,SNR=13
R28A Tribune 24.97 339 P P 14 23 39.5 -0.1
baz=25,SNR=18
JSRW J. Sargeant Re 24.97 24 eP P 14 23 39.3 -0.2
URVA University of 25.00 25 eP P 14 23 40.1 +0.3
X20A Quemado 25.01 323 P P 14 23 42.3 +2.1
baz=25,SNR=22
Q30A Quinter 25.03 342 P P 14 23 41.2 +1.1
baz=25,SNR=11
U23A El Rito 25.11 329 P P 14 23 42.1 +1.0
baz=25,SNR=61
SFIN Scholer Farm 25.15 6 P P 14 23 41.8 +0.7
baz=25,SNR=12
V22A San Miguel Ran 25.15 328 P P 14 23 42.0 +0.5
baz=25,SNR=25
HDIL Hopedale 25.16 2 eP P 14 23 41.7 +0.5
comp=Z,46nm,0.9s
R27A Eads 25.27 337 P P 14 23 42.7 +0.2
baz=25,SNR=7.1
P31A Stockton 25.30 344 P P 14 23 42.8 +0.3
baz=25
ATAH Atahualpa 25.39 151 P P 14 23 46.3 +2.3
ATAH Atahualpa 25.39 151 P P 14 23 46.3 +2.3
comp=Z,21nm,0.9s,baz=344,slow=6.4,SNR=20
ATAH LR LR 14 32 46.7
comp=Z,702nm,18.5s,baz=328,slow=34
S25A Robets Cordova 25.39 334 P P 14 23 44.6 +1.0
baz=26
W20A Ramah 25.43 324 P P 14 23 46.1 +2.1
baz=26,SNR=21
V21A Milan 25.45 326 P P 14 23 45.8 +1.6
baz=26,SNR=14
U22A Lives 25.48 328 P P 14 23 45.9 +1.4
baz=26,SNR=19
P30A Selden 25.56 343 P P 14 23 46.0 +1.1
baz=26,SNR=9.9
CBN Corbin 25.61 25 eP P 14 23 45.4 0.0
comp=Z,91nm,0.7s
Q28A Sharon Springs 25.62 339 P P 14 23 45.9 +0.4
baz=26,SNR=8.4
ACSO Alum Creek Sta 25.69 14 eP P 14 23 45.5 -0.5
comp=Z,38nm,0.8s
S24A Houchin Ranch, 25.72 333 P P 14 23 46.6 0.0
baz=26
R25A Fountain Ranch 25.74 335 P P 14 23 47.8 +1.1
baz=26,SNR=22
P29A Atwood 25.82 341 P P 14 23 48.1 +0.7
baz=26
X18A Snowflake 25.86 321 P P 14 23 47.4 -0.5
baz=26,SNR=15
V20A Brimhall 25.90 325 P P 14 23 48.4 +0.1
baz=26,SNR=7.8
U21A Nageezi 25.93 327 P P 14 23 50.1 +1.5
baz=26,SNR=30
T22A Edith 26.00 329 P P 14 23 50.6 +1.4
baz=26
P28A Saint Francis 26.05 340 P P 14 23 50.3 +0.8
baz=26
O30A MW Ranch, Wils 26.10 343 P P 14 23 50.7 +0.9
baz=26
Q26A Hugo 26.11 337 P P 14 23 51.0 +1.0
baz=26
214A Organ Pipe Nat 26.14 313 P P 14 23 51.3 +1.1
baz=26
R24A Sanders Place, 26.16 333 P P 14 23 52.1 +1.5
baz=26
T21A Navajo Lake 26.30 328 P P 14 23 54.5 +2.6
baz=26,SNR=11
U20A Newcomb 26.35 326 P P 14 23 53.7 +1.4
baz=26,SNR=9.2
Q25A Bedland, Calha 26.38 336 P P 14 23 53.8 +1.2
baz=26,SNR=6.2
R23A Moffat 26.44 332 P P 14 23 54.8 +1.6
baz=26,SNR=11
S22A 4UR Ranch, Cre 26.55 330 P P 14 23 55.0 +0.8
baz=27,SNR=17
SCIA State Center 26.58 356 eP P 14 23 53.2 -0.9
comp=Z,49nm,1.3s
P26A Davis Ranch, A 26.60 338 P P 14 23 55.8 +1.3
baz=27
X16A Lo Mia Camp, P 26.71 319 P P 14 23 56.9 +1.4
baz=27,SNR=14
O27A Beecher Island 26.85 340 P P 14 23 57.2 +0.6
baz=27
SDMD Soldier's Deli 26.86 24 eP P 14 23 55.4 -1.2
comp=Z,24nm,0.7s
S21A Coal Bank Pass 26.95 329 P P 14 23 58.0 +0.1
baz=27
113A Mohawk Valley, 27.26 314 P P 14 24 01.3 +1.0
baz=27,SNR=15
WUAZ Wupatki 27.39 321 eP P 14 24 02.8 +1.2
comp=Z,22nm,1.0s
WUAZ Wupatki 27.39 321 P P 14 24 03.2 +1.5
baz=27,SNR=13
Y14A Wickenburg 27.42 317 P P 14 24 03.2 +1.4
baz=28
N27A Arnerson Farm, 27.42 340 P P 14 24 02.6 +0.8
baz=28
P23A Jefferson 27.43 334 P P 14 24 02.7 +0.5
baz=28
Q22A Crested Butte, 27.48 332 P P 14 24 02.6 0.0
baz=28
JFWS Jewell Farm 27.50 1 eP P 14 24 01.6 -0.7
comp=Z,31nm,0.7s
AAM Ann Arbor 27.54 11 P P 14 24 03.1 +0.4
comp=Z,22nm,0.8s
MVL Millersville 27.56 24 eP P 14 24 03.5 +0.6
comp=Z,11nm,0.8s
R20A Redvale 27.65 329 P P 14 24 04.0 0.0
baz=28,SNR=11
N26A Koester Ranch, 27.68 339 P P 14 24 04.0 -0.1
baz=28
ISCO Idaho Springs 27.69 335 eP P 14 24 03.6 -0.8
comp=Z,7.1nm,0.9s
ISCO Idaho Springs 27.69 335 P P 14 24 04.4 0.0
baz=28
PV01 Paradox Valley 27.71 328 eP P 14 24 06.3 +1.8
SMCO Snowmass 27.77 332 eP P 14 24 05.1 -0.1
comp=Z,10nm,0.9s
PV04 Paradox Valley 28.07 328 eP P 14 24 08.2 +0.4
S18A Hurst Farm, Bl 28.12 326 P P 14 24 09.2 +0.9
baz=28,SNR=29
PV10 Paradox Valley 28.13 328 eP P 14 24 08.4 +0.1
GLA Glamis 28.16 313 eP P 14 24 08.8 +0.3
comp=Z,29nm,1.0s
GLA Glamis 28.16 313 P P 14 24 09.1 +0.7
baz=28,SNR=6.5
O22A Kremmling 28.39 334 P P 14 24 10.8 +0.2
baz=28
LUPA Lehigh Univers 28.46 25 eP P 14 24 11.3 +0.3
comp=Z,13nm,0.7s
U15A North Rim 28.55 321 P P 14 24 12.6 +0.5
baz=29,SNR=7.0
ECSD EROS Data Cent 28.77 351 eP P 14 24 12.1 -1.6
comp=Z,16nm,0.8s
N22A Wattenberg Ran 28.88 335 P P 14 24 15.5 +0.5
baz=29
PHWY Pilot Hill 28.91 336 eP P 14 24 15.3 0.0
comp=Z,7.1nm,0.9s
BC3 Big Chuckawall 28.93 314 P P 14 24 16.9 +1.6
baz=29,SNR=22
IRM Iron Mountain 29.00 315 P P 14 24 16.8 +0.9
baz=29,SNR=5.7
O20A White River Ci 29.12 331 P P 14 24 17.4 +0.4
baz=29
MONP Monument Peak 29.21 311 P P 14 24 20.4 +2.4
baz=29,SNR=8.2
J28A Allard Ranch, 29.44 344 P P 14 24 20.3 +0.6
baz=30
LDFC Landfair 29.50 316 eP P 14 24 22.1 +1.7
comp=Z,34nm,1.0s
BELC Belle Mtn. Jos 29.50 314 P P 14 24 22.4 +2.0
baz=30,SNR=9.7
BINY Binghamton 29.60 22 eP P 14 24 20.3 -0.7
comp=Z,16nm,0.8s
PFO Pinyon Flat Ob 29.61 313 eP P 14 24 23.5 +2.1
PFO Pinyon Flat Ob 29.61 313 P P 14 24 22.8 +1.4
comp=Z,8.9nm,0.9s,baz=107,slow=5.4,SNR=12
PFO LR LR 14 36 53.4
comp=Z,1µm,20.4s,baz=153,slow=38
PFO Pinyon Flat Ob 29.61 313 P P 14 24 22.3 +0.9
baz=30,SNR=6.5
O19A Miners Draw (B 29.66 331 P P 14 24 22.1 +0.3
baz=30
N20A Spence Gulch, 29.69 332 P P 14 24 22.8 +0.7
baz=30,SNR=10
GMRC Granite Mounta 29.69 315 P P 14 24 22.6 +0.5
baz=30,SNR=19
L23A Garrett 29.70 337 P P 14 24 22.6 +0.5
baz=30,SNR=9.9
SPMN St. Paul 29.86 357 P P 14 24 23.1 -0.2
baz=30,SNR=15
BRSD Miller 29.88 348 P P 14 24 23.0 -0.5
baz=30
MSU Marysvale 29.91 325 eP P 14 24 25.4 +1.3
M21A Separation Pea 29.93 334 P P 14 24 24.8 +0.5
baz=30
CCUT Cedar City 29.93 322 eP P 14 24 25.3 +0.9
comp=Z,4.8nm,0.9s
ARUT Antelope Range 30.14 322 eP P 14 24 26.9 +0.9
comp=Z,9.2nm,0.7s
MURC Murrieta 30.14 312 P P 14 24 26.7 +0.8
baz=30
L21A Rawlins 30.23 335 P P 14 24 27.5 +0.6
baz=30,SNR=10.0
K22A Casper 30.47 336 P P 14 24 29.6 +0.6
baz=30,SNR=6.7
L20A Wamsutter 30.67 334 P P 14 24 30.6 -0.2
baz=31
MPU Maple Canyon 30.69 327 eP P 14 24 31.2 +0.2
comp=Z,6.4nm,0.9s
COWI Conover 30.70 2 eP P 14 24 29.7 -1.1
comp=Z,35nm,0.8s
GSC Goldstone 30.77 315 eP P 14 24 33.9 +2.3
comp=Z,10.0nm,1.1s
GSC Goldstone 30.77 315 P P 14 24 32.2 +0.7
baz=31
DAU Daniels Canyon 30.79 328 eP P 14 24 32.5 +0.5
I24A Kuemmerle Ranc 30.85 340 P P 14 24 32.1 -0.1
baz=31
TRY Troy 30.94 25 eP P 14 24 33.5 +0.6
JLU Jordanelle 31.03 328 P P 14 24 34.7 +0.6
comp=Z,4.2nm,0.9s
MWC Mount Wilson 31.07 312 eP P 14 24 35.9 +1.6
comp=Z,16nm,0.9s
J22A Midwest 31.11 337 P P 14 24 35.0 +0.4
baz=31,SNR=5.4
K20A Yellowstone Ra 31.21 334 P P 14 24 35.5 0.0
baz=31
M17A Scullys Gap (B 31.30 330 P P 14 24 36.1 -0.3
baz=31
EDW2 Edwards Air Fo 31.36 313 P P 14 24 38.2 +1.4
baz=31,SNR=9.0
J21A Lysite 31.42 336 P P 14 24 38.4 +1.0
baz=32,SNR=13
DUG Dugway 31.45 326 P P 14 24 37.3 -0.3
comp=Z,3.7nm,0.8s
ACCN Adirondack Com 31.49 24 eP P 14 24 37.0 -0.7
comp=Z,8.3nm,0.9s
I22A 9 Mile Ranch, 31.52 338 P P 14 24 38.8 +0.6
baz=32,SNR=6.8
K19A Absolon Red Bu 31.56 334 P P 14 24 38.1 -0.4
baz=32
H24A Dirks Ranch, A 31.61 341 P P 14 24 39.6 +0.7
baz=32,SNR=12
MPMC Manual Prospec 31.65 316 P P 14 24 41.2 +1.8
baz=32,SNR=19
J20A Shoshoni 31.68 335 P P 14 24 40.1 +0.6
baz=32
OSI Osito Adit 31.74 312 eP P 14 24 41.5 +1.4
comp=Z,19nm,0.8s
NCB Newcomb 31.78 23 eP P 14 24 39.3 -0.9
comp=Z,13nm,0.8s
R11A Troy Canyon, C 31.79 321 P P 14 24 41.8 +1.2
baz=32,SNR=8.6
PDAR Pinedale Array 31.82 333 P P 14 24 40.1 -0.7
PDAR ScP ScP 14 31 15.4 +2.6
PDAR Pinedale Array 31.82 333 P P 14 24 40.1 -0.7
comp=Z,1.8nm,0.8s,baz=110,slow=13,SNR=11
PDAR ScP ScP 14 31 15.4 +2.6
comp=Z,0.9nm,0.8s,baz=190,slow=0.9,SNR=4.0
PDAR LR LR 14 42 09.7
comp=Z,484nm,18.2s,baz=142,slow=45
HWUT Hardware Ranch 31.84 329 eP P 14 24 42.7 +1.6
comp=Z,5.3nm,0.8s
ARVC Arvin 32.07 313 P P 14 24 43.8 +0.8
baz=32,SNR=11
H22A Clearmont 32.08 339 P P 14 24 43.1 0.0
baz=32
G24A Alzada 32.09 342 P P 14 24 43.6 +0.5
baz=32
ISA Isabella 32.10 314 eP P 14 24 45.0 +1.7
comp=Z,17nm,1.3s
ISA Isabella 32.10 314 P P 14 24 44.9 +1.6
baz=32
I20A Worland 32.19 336 P P 14 24 44.7 +0.6
baz=32,SNR=13
LONY Lake Ozonia 32.20 22 eP P 14 24 43.1 -0.9
comp=Z,77nm,1.8s
CWC Cottonwood Cre 32.26 316 P P 14 24 45.9 +1.2
baz=32
G23A Biddle 32.29 340 P P 14 24 44.9 +0.1
baz=32
H21A Big Horn, Sher 32.36 338 P P 14 24 45.6 +0.1
baz=32,SNR=5.2
EYMN Ely 32.53 359 eP P 14 24 45.5 -1.4
comp=Z,37nm,1.6s
F24A Ekalaka 32.57 342 P P 14 24 47.7 +0.4
baz=33
HVU Hansel Valley 32.57 328 eP P 14 24 47.7 +0.3
comp=Z,6.9nm,0.9s
E26A Carlson Angus 32.59 345 P P 14 24 47.6 +0.1
baz=33
H20A Greybull 32.59 337 P P 14 24 47.6 +0.1
baz=33,SNR=8.7
I19A Meeteetse 32.61 335 P P 14 24 48.8 +1.0
baz=33
VES Vestal, Richgr 32.62 314 P P 14 24 48.6 +0.8
baz=33,SNR=12
PKM Peak Mountain 32.66 312 P P 14 24 50.7 +2.4
baz=33,SNR=8.3
I18A Diamond G Ranc 32.68 334 P P 14 24 48.7 +0.2
baz=33
FRNY Flat Rock 32.75 23 eP P 14 24 47.2 -1.5
comp=Z,10nm,1.0s
F23A Volborg 32.76 341 P P 14 24 48.9 0.0
baz=33,SNR=8.5
E25A Miller Ranch, 32.87 344 P P 14 24 50.4 +0.5
baz=33
SNOW Snow King Moun 32.90 333 eP P 14 24 50.5 0.0
comp=Z,34nm,0.9s
LOHW Long Hollow 32.95 333 eP P 14 24 49.5 -1.3
comp=Z,8.3nm,0.8s
RCTC Rector, Farmer 32.97 315 P P 14 24 52.7 +1.9
baz=33
TPAW Teton Pass 33.01 332 eP P 14 24 51.5 +0.1
comp=Z,14nm,0.8s
RRI2 Red Ridge 33.06 332 eP P 14 24 51.9 0.0
comp=Z,11nm,0.8s
F22A Rosebud 33.09 340 P P 14 24 52.0 +0.3
baz=33
MOOW Moose Ponds 33.12 333 eP P 14 24 52.0 -0.3
comp=Z,6.3nm,0.8s
H19A Powell 33.13 336 P P 14 24 52.5 +0.2
baz=33
ELK Elko 33.16 325 eP P 14 24 55.8 +3.2
comp=Z,4.0nm,1.1s
AGMN Agassiz Nation 33.16 354 eP P 14 24 51.6 -0.8
comp=Z,14nm,1.0s
E24A Baker 33.18 343 P P 14 24 53.6 +1.0
baz=33
MDND Maddock 33.27 349 P P 14 24 53.4 +0.1
baz=33
G20A Bridger 33.30 337 P P 14 24 52.8 -0.9
baz=33
IMW Indian Meadow 33.33 333 eP P 14 24 53.1 -1.0
comp=Z,5.2nm,0.6s
H18A Shoshone NF, C 33.41 335 P P 14 24 55.0 +0.2
baz=34,SNR=27
E23A Ismay 33.42 341 P P 14 24 55.0 +0.3
baz=34,SNR=12
NVAR Mina Array Bea 33.53 319 P P 14 24 57.4 +1.5
NVAR PcP PcP 14 27 36.2 -0.1
NVAR Mina Array Bea 33.53 319 P P 14 24 57.4 +1.5
comp=Z,6.5nm,0.7s,baz=133,slow=8.8,SNR=44
NVAR PcP PcP 14 27 36.2 -0.1
comp=Z,1.2nm,0.7s,baz=134,slow=2.6,SNR=2.0
NVAR LR LR 14 39 13.5
comp=Z,901nm,20.6s,baz=232,slow=38
I16A Newdale 33.55 332 P P 14 24 56.7 +0.7
baz=34
H17A Grant Village 33.56 334 P P 14 24 57.1 +0.9
baz=34
RLMT Red Lodge 33.62 336 eP P 14 24 56.3 -0.4
comp=Z,4.5nm,0.6s
D24A Glendive 33.69 343 P P 14 24 58.1 +1.1
baz=34,SNR=6.6
G18A Lazy EL Ranch, 33.90 336 P P 14 24 59.1 +0.1
baz=34,SNR=18
D23A Lindsay 33.99 342 P P 14 25 00.7 +1.0
baz=34,SNR=7.5
E21A Keefer Ranch, 34.03 340 P P 14 25 00.1 +0.1

baz=34,SNR=14
C24A Savage 34.09 343 P P 14 25 01.7 +1.2
baz=34
F19A Roth Farm, Mol 34.11 337 P P 14 25 00.3 -0.4
baz=34
D22A Cohagen 34.27 341 P P 14 25 02.2 +0.1
baz=34,SNR=29
GCMT Greycliff 34.33 336 eP P 14 25 02.8 0.0
E20A Meyer Farm, Mu 34.36 338 P P 14 25 03.2 +0.4
baz=34,SNR=22
F18A Big Timber 34.45 336 P P 14 25 04.0 +0.3
baz=34,SNR=17
D21A La Casta Ranch 34.46 340 P P 14 25 03.9 +0.2
baz=34,SNR=8.3
I14A Mackay 34.50 330 P P 14 25 04.9 +0.6
baz=35,SNR=7.3
C23A Lambert 34.56 343 P P 14 25 05.5 +0.9
baz=35,SNR=5.6
E19A Rath Farm, Rou 34.56 338 P P 14 25 04.7 +0.1
baz=35,SNR=12
CMB Columbia Colle 34.67 316 eP P 14 25 06.5 +0.9
comp=Z,7.3nm,1.1s
HLID Hailey 34.70 329 eP P 14 25 05.8 -0.2
comp=Z,3.6nm,0.9s
HLID Hailey 34.70 329 P P 14 25 06.4 +0.4
baz=35
C22A Vida 34.71 342 P P 14 25 06.5 +0.7
baz=35
SAO San Andreas Ge 34.73 314 eP P 14 25 06.9 +0.8
comp=Z,9.1nm,1.0s
F17A Fitzpatrick Pl 34.82 335 P P 14 25 07.6 +0.6
baz=35,SNR=8.0
D20A Manuel Ranch, 34.87 339 P P 14 25 07.8 +0.5
baz=35,SNR=14
MCMT McKenzie Canyo 34.91 332 eP P 14 25 08.5 +0.7
BOZ Bozeman (W) 35.01 334 eP P 14 25 07.8 -0.8
comp=Z,3.6nm,0.9s
E18A Harlowton 35.07 337 P P 14 25 09.4 +0.3
baz=35,SNR=18
ULM Lac du Bonnet 35.09 354 P P 14 25 08.2 -0.8
ULM PcP PcP 14 27 39.7 -0.5
ULM Lac du Bonnet 35.09 354 P P 14 25 08.2 -0.8
comp=Z,12nm,0.8s,baz=175,slow=7.6,SNR=11
ULM PcP PcP 14 27 39.7 -0.5
comp=Z,6.4nm,0.6s,baz=159,slow=5.4,SNR=3.0
ULM LR LR 14 44 05.7
comp=Z,653nm,18.2s,baz=5.6,slow=44
C21A Desert Coulee 35.16 341 P P 14 25 10.5 +0.8
baz=35,SNR=18
D19A Cripps Ranch, 35.19 338 P P 14 25 09.8 -0.3
baz=35,SNR=17
DLMT Dillon 35.21 333 eP P 14 25 10.6 +0.3
comp=Z,15nm,1.4s
I12A Atlanta 35.23 329 P P 14 25 11.1 +0.6
baz=35,SNR=7.8
B22A Reddig Ranch S 35.24 342 P P 14 25 11.0 +0.6
baz=35,SNR=9.4
A24A Westby 35.26 345 P P 14 25 10.9 +0.4
baz=35
MFID Camas Ranch 35.31 328 eP P 14 25 12.3 +1.1
comp=Z,3.7nm,0.8s
E17A Martinsdale 35.35 336 P P 14 25 11.8 +0.2
baz=35
C20A Veseth Ranch, 35.36 340 P P 14 25 11.9 +0.5
baz=35,SNR=17
LRM Limekiln Ridge 35.50 333 eP P 14 25 12.9 -0.1
F15A Butte 35.54 333 P P 14 25 13.4 +0.3
baz=36,SNR=12
D18A Linhart Farms, 35.56 337 P P 14 25 13.5 +0.3
baz=36
H12A Diamond D Ranc 35.64 330 P P 14 25 14.1 0.0
baz=36,SNR=9.0
BEKR Beckworth 35.66 319 eP P 14 25 16.0 +1.7
comp=Z,3.8nm,0.9s
B21A Ellsworth Farm 35.67 341 P P 14 25 14.1 0.0
baz=36,SNR=9.8
C19A Slack Wire Ran 35.74 339 P P 14 25 15.2 +0.5
baz=36,SNR=13
E16A East Helena 35.74 335 P P 14 25 15.3 +0.4
baz=36,SNR=9.6
A22A Carney Farms, 35.84 343 P P 14 25 15.7 +0.1
baz=36,SNR=6.7
D17A Six Diamond Ra 35.85 336 P P 14 25 16.0 +0.2
baz=36,SNR=18
D16A Dana Ranch, Ca 36.09 335 P P 14 25 18.0 +0.1
baz=36
WVOR Wild Horse Val 36.18 324 eP P 14 25 19.1 +0.4
comp=Z,8.8nm,1.0s
EGMT Eagleton 36.24 338 eP P 14 25 18.8 -0.2
comp=Z,18nm,0.6s
EGMT Eagleton 36.24 338 P P 14 25 19.4 +0.4
baz=36,SNR=11
C17A Wharram Farm, 36.28 337 P P 14 25 19.5 +0.1
baz=36,SNR=16
G12A Big Creek, Yel 36.29 330 P P 14 25 19.3 -0.3
baz=36
B19A Brinkman Farms 36.32 339 P P 14 25 20.1 +0.4
baz=36,SNR=17
SAML Samuel 36.34 130 P P 14 25 15.9 -4.2
comp=Z,15nm,1.0s
D15A Lincoln 36.50 335 P P 14 25 21.7 +0.4
baz=37,SNR=8.1
B18A Beardsley Farm 36.56 338 P P 14 25 22.4 +0.7
baz=37,SNR=8.2
A19A Klindworth Far 36.66 340 P P 14 25 23.1 +0.5
baz=37,SNR=6.2
CHMT Chamberlain Mo 36.70 334 eP P 14 25 21.5 -1.7
F12A Elk City 36.72 331 P P 14 25 22.8 -0.5
baz=37,SNR=28
C16A Fuhringer Ranc 36.80 336 P P 14 25 23.4 -0.4
baz=37,SNR=9.0
MSO Missoula 36.94 333 eP P 14 25 25.7 +0.7
comp=Z,4.7nm,1.0s
MSO Missoula 36.94 333 P P 14 25 24.9 -0.1
baz=37
D14A Greenough 36.95 334 P P 14 25 24.4 -0.7
baz=37
A18A Metzger Ranch, 37.03 339 P P 14 25 25.8 +0.1
baz=37,SNR=12
SLMT Seeley Lake 37.06 334 eP P 14 25 24.9 -1.3
BMO Blue Mountains 37.08 328 eP P 14 25 25.1 -1.2
comp=Z,3.6nm,0.9s
C15A Salmond Ranch, 37.12 335 P P 14 25 26.6 0.0
baz=37,SNR=7.8
A17A Triple J Farms 37.35 338 P P 14 25 28.4 0.0
baz=37,SNR=8.6
E12A Beaver Dam Sad 37.36 331 P P 14 25 27.9 -0.7
baz=37,SNR=9.0
D13A Huson 37.37 333 P P 14 25 28.2 -0.5
baz=37
SWMT Swartz Lake 37.49 334 eP P 14 25 28.1 -1.6
SWMT e 14 25 46.8
B15A Bradely Ranch, 37.53 336 P P 14 25 29.8 -0.3
baz=38,SNR=9.0
C14A Swan Lake 37.58 334 P P 14 25 30.2 -0.3
baz=38
KCPM Cahto Peak 37.66 317 eP P 14 25 34.2 +3.0
comp=Z,12nm,1.4s
A16A West Butte Ran 37.68 337 P P 14 25 31.1 -0.3
baz=38
D12A Red Ives Fores 37.73 332 P P 14 25 30.9 -0.8
baz=38
JTMT Jette 37.79 334 eP P 14 25 32.3 0.0
JTMT ePcP PcP 14 27 49.2 +0.6
B14A Marquette Ranc 37.86 335 P P 14 25 32.5 -0.3
baz=38
C13A Hot Springs 37.87 333 P P 14 25 32.4 -0.5
baz=38
A15A Johnson Ranch, 38.14 336 P P 14 25 34.6 -0.6
baz=38,SNR=12
YBH Yreka Blue Hor 38.19 320 P P 14 25 38.3 +2.7
YBH Yreka Blue Hor 38.19 320 P P 14 25 38.3 +2.7
comp=Z,1.4nm,0.7s,baz=99,slow=6.0,SNR=8.9
YBH LR LR 14 42 45.1
comp=Z,886nm,21.3s,baz=152,slow=38
B13A Whitefish 38.36 334 P P 14 25 36.3 -0.7
baz=38,SNR=7.0
KHMM Horse Mountain 38.37 318 P P 14 25 38.6 +1.4
comp=Z,128nm,2.9s
A14A Double T Ranch 38.41 336 P P 14 25 37.6 +0.2
baz=38,SNR=18
LPAZ La Paz 38.46 144 eP P 14 25 39.3 +0.6
LPAZ La Paz 38.46 144 P P 14 25 38.8 0.0
comp=Z,3.2nm,0.7s,baz=320,slow=8.2,SNR=19
LPAZ LR LR 14 42 09.6
comp=Z,677nm,18.7s,baz=313,slow=37
WALA Waterton Lakes 38.67 335 eP P 14 25 39.4 -0.3
C11A Tepee Creek (N 38.73 332 P P 14 25 40.0 -0.1
baz=39
KRMB Red Mountain 38.83 319 P P 14 25 41.1 0.0
NEW Newport 39.44 332 eP P 14 25 47.5 +1.5
NEW Newport 39.44 332 P P 14 25 45.5 -0.4
comp=Z,2.3nm,0.6s,baz=146,slow=8.1,SNR=5.3
NEW Newport 39.44 332 P P 14 25 46.5 +0.5
baz=40
KEBM Edson Butte 39.82 320 eP P 14 25 50.1 +0.8
comp=Z,35nm,0.9s
FFC Flin Flon 40.30 350 eP P 14 25 52.7 -0.3
comp=Z,8.3nm,1.0s
LON Longmire 40.69 327 P P 14 25 54.8 -1.6
comp=Z,4.7nm,0.8s
LVC Limon Verde 43.28 150 eP P 14 26 20.1 +2.1
comp=Z,45nm,1.7s
SCHQ Schefferville 43.52 20 eP P 14 26 19.0 -0.3
comp=Z,17nm,0.9s
SCHQ PcP PcP 14 28 06.7 -0.1
SCHQ Schefferville 43.52 20 P P 14 26 19.2 -0.1
comp=Z,13nm,0.9s,baz=220,slow=5.6,SNR=12
SCHQ PcP PcP 14 28 06.7 -0.1
comp=Z,5.3nm,0.6s,baz=206,slow=3.9,SNR=5.3
SCHQ LR LR 14 45 14.7
comp=Z,1μm,19.8s,baz=316,slow=37
YKA Yellowknife Ar 50.06 346 P P 14 27 09.4 -0.9
YKA PcP PcP 14 28 30.5 +0.8
YKA ScP ScP 14 32 26.2 +2.8
YKA Yellowknife Ar 50.06 346 P P 14 27 09.4 -0.9
comp=Z,29nm,0.6s,baz=146,slow=7.5,SNR=376
YKA PcP PcP 14 28 30.5 +0.8
comp=Z,3.6nm,0.7s,baz=147,slow=3.6,SNR=4.9
YKA ScP ScP 14 32 26.2 +2.8
comp=Z,0.6nm,0.8s,baz=145,slow=3.8,SNR=4.1
YKW3 Yellowknife Ar 50.13 346 eP P 14 27 09.6 -1.2
comp=Z,0.5nm,0.6s
DLBC Dease Lake 52.01 335 eP P 14 27 25.7 +0.5
BDFB Brasilia 52.12 124 P P 14 27 24.3 -2.4
BDFB Brasilia 52.12 124 P P 14 27 24.3 -2.4
comp=Z,0.8nm,0.4s,baz=70,slow=7.2,SNR=3.1
BDFB LR LR 14 50 49.7
comp=Z,512nm,19.9s,baz=92,slow=38
CPUP Villa Florida 52.55 142 eP P 14 27 29.4 0.0
CPUP Villa Florida 52.55 142 P P 14 27 28.4 -1.1
comp=Z,0.5nm,0.4s,baz=303,slow=12,SNR=4.2
CPUP LR LR 14 51 13.3
comp=Z,399nm,20.0s,baz=310,slow=38
RKT Rikitea 57.83 230 eLR LR 14 45 32.3
comp=Z,859nm,26.0s
SFJD Kangerlussuaq 57.85 17 *i* P P 14 28 08.8 +1.7
comp=Z,5.9nm,1.0s
PLCA Paso Flores 58.80 162 LR LR 14 48 14.4
comp=Z,353nm,19.4s,baz=356,slow=31
INK Inuvik 59.56 343 P P 14 28 19.2 +0.2
INK Inuvik 59.56 343 P P 14 28 19.2 +0.2
comp=Z,4.7nm,0.7s,baz=132,slow=7.6,SNR=34
EGAK Eagle 60.00 338 eP P 14 28 21.8 -0.3
MENT Mentasta 60.10 335 eP P 14 28 22.9 0.0
DOT Dot Lake 60.56 336 eP P 14 28 26.2 +0.2
PAX Paxson 60.83 335 eP P 14 28 27.8 -0.2
comp=Z,13nm,0.7s
SML Sawmill 61.59 333 eP P 14 28 33.0 0.0
comp=Z,3.7nm,1.0s
PMR Palmer 61.86 332 eP P 14 28 34.7 0.0
comp=Z,7.6nm,0.8s
ILAR Eielson Array 62.17 336 P P 14 28 36.5 -0.4
ILAR Eielson Array 62.17 336 P P 14 28 36.5 -0.4
comp=Z,3.6nm,0.6s,baz=163,slow=4.8,SNR=91
ILAR LR LR 15 00 11.0
comp=Z,360nm,18.2s,baz=332,slow=40
KDAK Kodiak Island 62.31 328 P P 14 28 38.2 +0.4
KDAK Kodiak Island 62.31 328 P P 14 28 38.2 +0.4
comp=Z,4.3nm,0.6s,baz=110,slow=3.1,SNR=8.2
MCK McKinley 62.57 335 eP P 14 28 39.6 0.0
comp=Z,34nm,1.7s
COLA College 62.58 336 eP P 14 28 39.0 -0.5
comp=Z,12nm,0.8s
TRF Thorofare Moun 63.03 334 eP P 14 28 42.1 -0.7
SPU Mount Spurr 63.05 331 eP P 14 28 43.8 +1.0
RSO Redoubt South 63.16 331 eP P 14 28 44.2 +0.4
PPLA Purkeypile 63.65 333 eP P 14 28 46.4 -0.5
comp=Z,8.4nm,0.8s
COLD Coldfoot 64.40 338 eP P 14 28 52.7 +1.1
SUMG Summit 64.61 15 eP P 14 28 54.2 +0.9
comp=Z,11nm,0.9s
SUMG Summit 64.61 15 *i* P P 14 28 53.9 +0.6
comp=Z,11nm,1.0s
SVW2 Sparrevohn 64.67 331 eP P 14 28 51.7 -1.7
comp=Z,11nm,1.0s
CHGN Chignik 65.09 325 eP P 14 28 55.8 -0.4
SDPT Sand Point 66.09 324 eP P 14 29 02.3 -0.4
PPT Papeete 66.69 243 LR LR 14 52 18.8
comp=Z,326nm,19.2s,baz=73,slow=31
PPT2 Papeete2 66.70 243 eLR LR 14 49 10.3
comp=Z,626nm,26.5s
FALS False Pass 67.71 323 eP P 14 29 12.2 -0.8
SCO Scoresbysund 68.57 20 *i* P P 14 29 20.9 +2.8
comp=Z,2.8nm,0.8s
TBI Tubuai 69.19 237 eLR LR 14 50 33.3
comp=Z,604nm,27.8s
DAG Danmarks Havn 71.07 13 *i* P P 14 29 32.1 -1.3
comp=Z,5.9nm,0.8s
EVOP Sao Brissos 74.82 54 eP P 14 29 53.9 -2.4
comp=Z,25nm,1.1s
EVO Evora 74.90 54 eP P 14 29 53.9 -2.9
comp=Z,25nm,1.1s
EVO eR
comp=Z,407nm,18.8s
ROSF Rostrenen 76.96 43 eP P 14 30 07.2 -1.2
ROSF Rostrenen 76.96 43 eP P 14 30 07.2 -1.2
QUIF Quistinic 77.10 44 eP P 14 30 07.9 -1.2
comp=Z,32nm,1.2s
QUIF Quistinic 77.10 44 eP P 14 30 07.9 -1.2
comp=Z,32nm,1.2s
PAB San Pablo 77.57 52 eP P 14 30 12.0 -0.1
ESDC Sonseca Array 77.84 52 P P 14 30 12.6 -1.0
ESDC Sonseca Array 77.84 52 P P 14 30 12.6 -1.0
comp=Z,1.2nm,0.5s,baz=283,slow=5.1,SNR=15
ESDC LR LR 14 58 57.1
comp=Z,258nm,21.4s,baz=285,slow=31
ESLA Sonseca Array 77.84 52 eP P 14 30 12.4 -1.1
comp=Z,5.7nm,1.4s
GRR Gorron 78.55 43 eP P 14 30 15.4 -1.8
comp=Z,16nm,0.8s
GRR Gorron 78.55 43 eP P 14 30 15.4 -1.8
comp=Z,16nm,0.8s
FLN La Foliniere 78.72 42 eP P 14 30 17.0 -1.2
comp=Z,9.8nm,0.7s
FLN eR
comp=Z,686nm,20.2s
FLN La Foliniere 78.72 42 eP P 14 30 17.0 -1.2
comp=Z,9.8nm,0.6s
LDF La Druitiere 78.99 43 eP P 14 30 18.3 -1.3
LDF La Druitiere 78.99 43 eP P 14 30 18.3 -1.3
SJPF Ste Jean 79.25 48 eP P 14 30 18.9 -2.3
SJPF Ste Jean 79.25 48 eP P 14 30 18.9 -2.3
ETSF Etsaut 79.77 48 eP P 14 30 21.9 -2.2
ETSF Etsaut 79.77 48 eP P 14 30 21.9 -2.2
LFF La Frestale 80.28 46 eP P 14 30 25.5 -1.2
LFF La Frestale 80.28 46 eP P 14 30 25.5 -1.2
EPF Esparros 80.39 48 eP P 14 30 26.3 -1.2
comp=Z,36nm,1.6s
EPF Esparros 80.39 48 eP P 14 30 26.3 -1.2
comp=Z,36nm,1.6s
RJF Les Rejaudoux 80.75 46 eP P 14 30 27.9 -1.3
RJF eR
comp=Z,527nm,21.8s
RJF Les Rejaudoux 80.75 46 eP P 14 30 27.9 -1.3
TCF Toulx Ste Croi 81.01 45 eP P 14 30 29.4 -1.2
TCF Toulx Ste Croi 81.01 45 eP P 14 30 29.4 -1.2
CAF Calviac 81.21 46 eP P 14 30 30.4 -1.3
CAF Calviac 81.21 46 eP P 14 30 30.4 -1.3
BGF Bois d'Agland 81.38 44 eP P 14 30 31.0 -1.6
comp=Z,12nm,0.8s
BGF Bois d'Agland 81.38 44 eP P 14 30 31.0 -1.6
comp=Z,12nm,0.8s
BAIF Baives 81.45 41 eP P 14 30 30.8 -2.1
BAIF Baives 81.45 41 eP P 14 30 30.8 -2.1
FX1 Attu Island--F 81.63 322 eP P 14 30 33.3 -0.5
AVF Avril sur Loir 81.66 44 eP P 14 30 32.4 -1.6
comp=Z,5.1nm,0.8s
AVF Avril sur Loir 81.66 44 eP P 14 30 32.4 -1.6
comp=Z,5.1nm,0.8s
MTLF Montolieu 81.67 47 eP P 14 30 32.8 -1.4
MTLF Montolieu 81.67 47 eP P 14 30 32.8 -1.4
PYM Petit Puy Mans 81.67 45 eP P 14 30 32.1 -2.1
SSF Saint Saulge 81.70 44 eP P 14 30 32.5 -1.8
comp=Z,5.8nm,0.8s
SSF Saint Saulge 81.70 44 eP P 14 30 32.5 -1.8
comp=Z,5.8nm,0.8s
GIVF Givet 81.83 40 eP P 14 30 32.7 -2.2
GIVF Givet 81.83 40 eP P 14 30 32.7 -2.2
LOR Lormes 81.89 43 eP P 14 30 33.9 -1.4
LOR eR
comp=Z,427nm,21.8s
LOR Lormes 81.89 43 eP P 14 30 33.9 -1.4
LBL Lubilhac 81.95 45 eP P 14 30 34.9 -0.8
SMF Signal de Mont 82.02 44 eP P 14 30 34.2 -1.8
comp=Z,7.0nm,0.8s
SMF Signal de Mont 82.02 44 eP P 14 30 34.2 -1.8
comp=Z,7.0nm,0.8s
BCLA Clavier 82.05 40 P P 14 30 35.7 -0.3
NB2 NORSAR Subarra 82.34 29 P P 14 30 39.2 +1.8
comp=Z,9.8nm,1.1s,baz=290,slow=5.6
NOA NORSAR Array B 82.34 29 P P 14 30 39.0 +1.6
NOA NORSAR Array B 82.34 29 P P 14 30 39.0 +1.6
comp=Z,4.5nm,1.0s,baz=290,slow=5.2,SNR=6.1
MEZF Maizieres J'vi 82.37 42 eP P 14 30 36.8 -0.9
comp=Z,16nm,0.9s
MEZF Maizieres J'vi 82.37 42 eP P 14 30 36.8 -0.9
comp=Z,16nm,0.9s
SFTF Sexfontaines 82.43 42 eP P 14 30 37.0 -1.1
SFTF Sexfontaines 82.43 42 eP P 14 30 37.0 -1.1
LASF Ste Croix 82.65 46 eP P 14 30 37.0 -2.3
comp=Z,33nm,1.4s
LASF Ste Croix 82.65 46 eP P 14 30 37.0 -2.3
comp=Z,33nm,1.4s
WLF Walferdange 82.77 41 eP P 14 30 39.4 -0.4
comp=Z,21nm,1.5s
PAGF Fort de Pagny 82.79 42 eP P 14 30 39.2 -0.7
comp=Z,5.1nm,0.9s
PAGF Fort de Pagny 82.79 42 eP P 14 30 39.2 -0.7
comp=Z,5.1nm,0.9s
BUG Bochum--Univer 82.99 39 eP P 14 30 41.1 +0.2
comp=Z,16nm,1.3s
VIVF Saint-Julien-l 83.02 46 eP P 14 30 39.0 -2.3
comp=Z,33nm,1.4s
VIVF Saint-Julien-l 83.02 46 eP P 14 30 39.0 -2.3
comp=Z,33nm,1.4s
THEF They Montfort 83.04 42 eP P 14 30 41.9 +0.6
IBBN Ibbenburen 83.04 38 eP P 14 30 41.3 +0.2
comp=Z,31nm,1.7s
CABF La Chapelle 83.53 44 eP P 14 30 42.0 -1.9
CABF La Chapelle 83.53 44 eP P 14 30 42.0 -1.9
HINF Hinteralfeld 83.71 42 eP P 14 30 43.5 -1.3
comp=Z,11nm,0.9s
HINF Hinteralfeld 83.71 42 eP P 14 30 43.5 -1.3
comp=Z,11nm,0.9s
ECH Echery 83.80 42 eP P 14 30 43.7 -1.5
comp=Z,8.1nm,1.1s
ECH Echery 83.80 42 eP P 14 30 44.5 -0.7
CDF Champ du Feu 83.82 42 eP P 14 30 44.4 -1.0
comp=Z,17nm,1.2s
CDF Champ du Feu 83.82 42 eP P 14 30 44.4 -1.0
comp=Z,17nm,1.2s
LOMF Lomont 83.82 43 eP P 14 30 44.3 -1.1
ORIF Oris-en-Rattie 83.84 45 eP P 14 30 43.4 -2.1
comp=Z,14nm,1.0s
ORIF eR
comp=Z,445nm,21.0s
ORIF Oris-en-Rattie 83.84 45 eP P 14 30 43.4 -2.1
comp=Z,14nm,1.0s
SMRF Simiane la Rot 83.88 46 eP P 14 30 44.0 -1.7
comp=Z,26nm,1.4s
SMRF Simiane la Rot 83.88 46 eP P 14 30 44.0 -1.7
comp=Z,26nm,1.4s
MOF Molkenrain 83.88 42 eP P 14 30 45.2 -0.5
LANF Langenberg 84.00 41 eP P 14 30 46.2 0.0
TNS Taunus Mts 84.05 40 eP P 14 30 46.0 -0.4
comp=Z,10.0nm,1.4s
BSEG Bad Segeberg 84.05 36 eP P 14 30 46.8 +0.6
comp=Z,31nm,1.5s
LIC Lamto 84.14 85 eP P 14 30 46.8 -0.7
comp=Z,5.8nm,0.5s,baz=271
LIC eR
comp=Z,227nm,22.5s
LIC Lamto 84.14 85 eP P 14 30 46.8 -0.7
comp=Z,5.8nm,0.5s
DBIC Dimbokro 84.19 85 P P 14 30 46.9 -0.8
DBIC Dimbokro 84.19 85 P P 14 30 46.9 -0.8
comp=Z,3.0nm,0.6s,baz=244,slow=11,SNR=5.2
DBIC LR LR 15 04 25.7
comp=Z,132nm,19.1s,baz=270,slow=33
LPL La Plagne 84.26 44 eP P 14 30 46.1 -1.7
LPL La Plagne 84.26 44 eP P 14 30 46.1 -1.7
LPG La Plagne 84.27 45 eP P 14 30 46.3 -1.7
LPG La Plagne 84.27 45 eP P 14 30 46.3 -1.7
NRDL Niedersach Rie 84.37 37 eP P 14 30 48.3 +0.5
comp=Z,16nm,1.3s
SENIN Lac Senin/Sane 84.40 44 eP P 14 30 48.2 -0.3
ARCES ARCESS Array B 84.46 18 P P 14 30 48.2 +0.1
ARCES ARCESS Array B 84.46 18 P P 14 30 48.2 +0.1
comp=Z,4.7nm,0.6s,baz=282,slow=4.2,SNR=16
ARCES LR LR 15 07 10.7
comp=Z,203nm,21.1s,baz=296,slow=35
ARE0 ARCESS Array S 84.46 18 P P 14 30 48.8 +0.7
LMR La Mourre 84.70 47 eP P 14 30 47.4 -2.4
comp=Z,22nm,1.1s
LMR La Mourre 84.70 47 eP P 14 30 47.4 -2.4
comp=Z,22nm,1.1s
CLZ Clausthal 84.72 38 eP P 14 30 50.3 +0.5
comp=Z,38nm,1.9s
FRF La Foret Royal 84.73 46 eP P 14 30 48.2 -1.8
comp=Z,30nm,1.1s
FRF La Foret Royal 84.73 46 eP P 14 30 48.2 -1.8
comp=Z,30nm,1.1s
TUE Stuetta 85.73 43 eP P 14 30 55.6 +0.5
NEUB Neuenburg 85.76 38 eP P 14 30 55.1 +0.2
comp=Z,27nm,1.5s
DAVA Damuels 85.83 42 ǁ *i* PcP P 14 30 55.8 +0.2
comp=Z,19nm,1.2s,SNR=7.1
MOX Moxa 85.84 39 eP P 14 30 55.5 +0.1
comp=Z,19nm,1.4s
MOX *e* 14 31 04.5
MOX eL L 15 05 36.5
comp=Z,232nm,21.6s
GRF Grafenberg Arr 85.91 40 eP P 14 30 56.1 +0.3
comp=Z,63nm,2.3s
GRF *e* 14 31 05.0
GRF eL L 15 05 59.3
comp=Z,347nm,19.9s
GRFO Grafenberg 85.91 40 eP P 14 30 56.0 +0.2
comp=Z,7.0nm,1.0s
PLN Plauen 86.22 39 eP P 14 30 57.4 +0.1
comp=Z,107nm,1.3s
FUORN Ofenpass-Fuorn 86.28 43 eP P 14 30 57.9 -0.1
WERD Werda 86.33 39 eP P 14 30 57.9 +0.1
comp=Z,21nm,1.3s
RETA Reutte 86.33 42 *i* PcP P 14 30 58.4 +0.4
comp=Z,24nm,1.3s,SNR=14
MANZ Manzenberg 86.36 39 eP P 14 30 58.1 +0.1
comp=Z,14nm,1.3s
GUNZ Gunzen 86.37 39 eP P 14 30 58.2 +0.2
comp=Z,27nm,1.4s
WERN Wernitzgruen 86.42 39 eP P 14 30 58.8 +0.5
comp=Z,30nm,1.2s
TANN Tannenbergstha 86.43 39 eP P 14 30 58.5 +0.1
comp=Z,30nm,1.4s
CLL Collm 86.45 38 eP P 14 30 58.5 +0.1
comp=Z,25nm,1.4s
CLL Collm 86.45 38 *i* P P 14 30 58.4 +0.1
comp=Z,24nm,1.4s
CLL *i* 14 31 03.6
CLL *e* 14 31 06.0
CLL ePP PP 14 34 26.0 +6.4
CLL LmV 15 07 00.0
comp=Z,200nm,21.2s
FETA Feichten 86.46 42 *i* PcP P 14 30 59.2 +0.4
comp=Z,11nm,1.3s,SNR=5.8
NKC Novy Kostel 86.48 39 eP P 14 30 59.4 +0.8
NKC *ex* x 14 31 04.6
NKC epP pP 14 31 08.4 -0.2
NKC AMS AMS 15 12 00.0
comp=Z,200nm,16.0s
ROTZ Rotzenmuhle 86.49 39 eP P 14 30 59.1 +0.5
comp=Z,22nm,1.5s
RUE Ruedersdorf 86.49 36 eP P 14 30 58.6 +0.1
comp=Z,16nm,0.6s
PGF Pioggiola 86.68 47 eP P 14 30 57.6 -2.2
comp=Z,22nm,1.1s
PGF Pioggiola 86.68 47 eP P 14 30 57.6 -2.2
comp=Z,22nm,1.1s
FBE Freiberg 86.79 38 eP P 14 31 00.4 +0.4
comp=Z,19nm,1.2s

WET	**Wettzell**	**87.12**	**40**	*e*P		**P**	**14 31 02.0**	**+0.3**
	comp=Z,31nm,1.3s							
BRG	**Berggiesshubel**	**87.16**	**38**	*i* P		**P**	**14 31 02.5**	**+0.7**
	comp=Z,18nm,1.3s							
BRG				*e*			14 31 11.3	
	comp=Z,7.1nm,1.0s							
BRG				*e*			14 31 26.2	
	comp=Z,7.6nm,1.0s							
BRG	**Berggiesshubel**	**87.16**	**38**	*e*P		**P**	**14 31 02.5**	**+0.7**
	comp=Z,18nm,1.3s							
RJOB	**Jochberg**	**87.55**	**41**	*e*P		**P**	**14 31 03.8**	**-0.1**
	comp=Z,18nm,1.4s							
KHC	**Kasperske Hory**	**87.55**	**40**	*e*P		**P**	**14 31 03.6**	**-0.2**
KHC				*ex*		x	14 31 09.7	
KHC				*e*pP		**pP**	**14 31 13.4**	**-0.4**
KHC				AMS		AMS	15 08 00.0	
	comp=Z,300nm,18.0s							
KHC	**Kasperske Hory**	**87.55**	**40**	*e*P		**P**	**14 31 02.7**	**-1.2**
	comp=Z,15nm,1.2s							
ABTA	**Abfaltersbach**	**87.70**	**42**	⇑*i* PcP		**P**	**14 31 04.8**	**+0.2**
	comp=Z,20nm,1.1s,SNR=8.7							
GEC2	**GERESS Array S**	**87.73**	**40**	*e*P		**P**	**14 31 04.8**	**0.0**
	comp=Z,18nm,1.3s							
GERES	**GERESS Array B**	**87.73**	**40**	P		**P**	**14 31 04.3**	**-0.5**
GERES	**GERESS Array B**	**87.73**	**40**	P		**P**	**14 31 04.3**	**-0.5**
	comp=Z,3.5nm,0.8s,baz=288,slow=1.3,SNR=28							
GERES				LR		LR	15 06 21.8	
	comp=Z,373nm,20.9s,baz=279,slow=33							
PRU	**Pruhonice**	**87.83**	**39**	AMS		AMS	15 15 10.0	
	comp=Z,300nm,18.3s							
KBA	**Koelnbreinsper**	**88.12**	**42**	*i* PcP		**P**	**14 31 07.2**	**+0.5**
	comp=Z,15nm,1.1s,SNR=8.4							
MOA	**Molln**	**88.44**	**41**	⇓*i* PcP		**P**	**14 31 07.5**	**-0.6**
	comp=Z,3.5nm,0.8s							
MYKA	**Terra Mystica**	**88.47**	**42**	⇑*i* PcP		**P**	**14 31 08.9**	**+0.6**
	comp=Z,13nm,1.2s							
UPC	**Upice**	**88.52**	**38**	*e*P		**P**	**14 31 09.6**	**+1.3**
UPC				*e*pP		**pP**	**14 31 19.4**	**+1.1**
TREC	**Trest**	**88.66**	**39**	*e*P		**P**	**14 31 09.0**	**-0.1**
TREC				AMS		AMS	15 07 00.0	
	comp=Z,400nm,22.9s							
FINES	**FINESS Array B**	**88.73**	**25**	P		**P**	**14 31 10.8**	**+1.8**
FINES	**FINESS Array B**	**88.73**	**25**	P		**P**	**14 31 10.8**	**+1.8**
	comp=Z,5.3nm,0.8s,baz=352,slow=7.7,SNR=5.8							
FINES				LR		LR	15 08 54.9	
	comp=Z,149nm,19.0s,baz=346,slow=34							
DPC	**Dobruska-Polom**	**88.76**	**38**	*e*P		**P**	**14 31 09.4**	**-0.1**
DPC				*e*pP		**pP**	**14 31 19.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**88.76**	**77**	P		**P**	**14 31 07.9**	**-2.3**
TORD	**Torodi Ar. Bea**	**88.76**	**77**	P		**P**	**14 31 07.9**	**-2.3**
	comp=Z,0.8nm,0.8s,baz=302,slow=4.5,SNR=4.5							
TORD				LR		LR	15 08 42.5	
	comp=Z,194nm,19.3s,baz=305,slow=34							
KEST	**Kesra**	**89.03**	**53**	P		**P**	**14 31 10.9**	**-0.2**
KEST	**Kesra**	**89.03**	**53**	P		**P**	**14 31 10.9**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=243,slow=6.8,SNR=3.5							
SOKA	**Soboth**	**89.35**	**42**	⇑*i* PcP		**P**	**14 31 12.9**	**+0.5**
	comp=Z,14nm,1.4s							
CONA	**Conrad Observa**	**89.40**	**40**	*i* PcP		**P**	**14 31 12.9**	**+0.3**
	comp=Z,7.5nm,1.1s,SNR=6.3							
TAM	**Tamanrasset**	**89.65**	**67**	*e*P		**P**	**14 31 14.8**	**+0.3**
MORC	**Moravsky Berou**	**89.71**	**38**	*e*P		**P**	**14 31 15.1**	**+1.1**
OKC	**Ostrava-Krasne**	**90.04**	**38**	*e*P		**P**	**14 31 16.5**	**+1.0**
OKC				*ex*		x	14 31 21.5	
OKC				AMS		AMS	15 20 10.0	
	comp=Z,300nm,18.6s							
PSZ	**Piszkesteto**	**91.89**	**39**	*e*P		**P**	**14 31 25.8**	**+1.6**
	comp=Z,24nm,1.5s							
CUC	**Castrocucco**	**92.38**	**48**	*e*P		**P**	**14 31 25.0**	**-1.6**
	comp=Z,5.9nm,1.0s							
AKASG	**Malin Array Be**	**95.89**	**34**	P		**P**	**14 31 41.5**	**-0.9**
AKASG	**Malin Array Be**	**95.89**	**34**	P		**P**	**14 31 41.5**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=316,slow=3.9,SNR=5.4							
AKASG				LR		LR	15 12 19.3	
	comp=Z,230nm,21.5s,baz=275,slow=34							
APE	**Apeiranthos**	**100.51**	**47**	⇑*i* P		PP	14 36 15.9	+5.8
DZM	**Mont Dzumac**	**107.38**	**251**	*e*LR		LR	15 09 09.5	
	comp=Z,270nm,22.9s							
CN2	**Changchun**	**112.56**	**333**	*e*PKP		**PKiKP**	**14 36 55.1**	**+2.9**
BJI	**Beijing**	**119.53**	**337**	PKP		**PKPdf**	**14 37 06.1**	**+0.4**
BJI				LR		LR		
	comp=N,190nm,18.7s							
BJI				LR		LR		
	comp=E,140nm,17.4s							
BJI				LR		LR		
	comp=Z,150nm,22.5s							
HHC	**Hu-ho-hao-te**	**120.44**	**341**	*e*PKP		**PKPdf**	**14 37 09.4**	**+1.8**
HHC				PP		**PP**	**14 38 36.5**	**+3.4**
HHC				PKS		**PKSdf**	**14 40 44.8**	**+0.4**
HHC				SKS		**SKSdf**	**14 44 16.9**	**-0.8**
HHC				SKKS		**SKKSac**	**14 45 29.8**	**-2.2**
HHC				AMB		AMB		
	comp=Z,160nm,7.1s							
HHC				LR		LR		
	comp=N,350nm,20.1s							
HHC				LR		LR		
	comp=E,290nm,19.9s							
HHC				LR		LR		
	comp=Z,510nm,19.0s							
WMQ	**Urumqi**	**121.12**	**1**	*e*PKP		**PKPdf**	**14 37 04.8**	**-4.0**
WMQ				sPKP			14 37 33.0	
WMQ				*e*PP		**PP**	**14 38 40.0**	**+2.6**
WMQ				PKS		PKSdf	14 40 40.0	-5.5
WMQ				AMB		AMB		
	comp=Z,120nm,6.7s							
WMQ				LR		LR		
	comp=N,280nm,15.6s							
WMQ				LR		LR		
	comp=E,240nm,21.2s							
WMQ				LR		LR		
	comp=Z,190nm,21.2s							
CD2	**Chengdu**	**132.00**	**343**	*e*PKP		**PKPdf**	**14 37 28.0**	**-1.9**
GYA	**Guiyang**	**135.20**	**338**	*e*Pdif		**Pdif**	**14 34 36.0**	**-2.2**
GYA				PKP		**PKPdf**	**14 37 33.5**	**-2.6**
GYA				PP		**PP**	**14 40 13.3**	**+3.0**
GYA				AMB		AMB		
	comp=Z,90nm,7.8s							
WRA	**Warramunga Arr**	**137.01**	**257**	PKPpre		PKPpre	14 37 32.2	
WRA				PKP		**PKPdf**	**14 37 38.5**	**-1.0**
WRA	**Warramunga Arr**	**137.01**	**257**	PKhKP		PKPpre	14 37 32.2	
	comp=Z,0.3nm,0.7s,baz=90,slow=3.2,SNR=6.5							
WRA				PKP		**PKPdf**	**14 37 38.5**	**-1.0**
	comp=Z,2.8nm,0.9s,baz=16,slow=0.9,SNR=17							
ASAR	**Alice Springs**	**137.37**	**252**	PKPpre		PKPpre	14 37 30.2	
ASAR				PKP		**PKiKP**	**14 37 41.2**	**-0.7**
ASAR	**Alice Springs**	**137.37**	**252**	PKhKP		PKPpre	14 37 30.2	
	comp=Z,0.5nm,0.6s,baz=100,slow=3.3,SNR=8.6							
ASAR				PKP		**PKiKP**	**14 37 41.2**	**-0.7**
	comp=Z,1.5nm,0.9s,baz=108,slow=1.9,SNR=10.0							
KMI	**Kunming**	**137.74**	**342**	PKP		**PKPdf**	**14 37 41.3**	**+0.3**
KMI				PP		**PP**	**14 40 29.3**	**+3.0**
KMI				LR		LR		
	comp=N,180nm,19.9s							
KMI				LR		LR		
	comp=E,160nm,27.8s							
KMI				LR		LR		
	comp=Z,250nm,23.8s							
CHTO	**Chiang Mai**	**144.79**	**344**	*e*PKP		**PKPab**	**14 37 50.8**	**-1.5**
CM31	**Chiang Mai Arr**	**145.13**	**344**	*e*PKP		**PKPdf**	**14 37 53.3**	**-0.8**
CMAR	**Chiang Mai Arr**	**145.13**	**344**	PKPbc		**PKPab**	**14 37 53.2**	**-0.4**
CMAR	**Chiang Mai Arr**	**145.13**	**344**	PKPbc		**PKPab**	**14 37 53.2**	**-0.4**
	comp=Z,13nm,0.7s,baz=338,slow=3.3,SNR=96							
FITZ	**Fitzroy Crossi**	**145.21**	**260**	*e*PKP		**PKPbc**	**14 37 53.3**	**-0.5**
HYB	**Hyderabad**	**145.75**	**19**	*i* PKP		**PKPdf**	**14 37 53.0**	**-2.2**

*ISCJB **14** 14:20:32.8±0.5, 24.5°N±0.03×122.26°E±0.02, h70^{km}±6^{km}, Error ellipse: s-maj=5.3km s-min=3.1km az=167.6*
*JMA **14** 14:20:32.7±0.2, 24.67°N×122.28°E, h76^{km}±2^{km}, M2.0*
*TAP **14** 14:20:32.2, 24.59°N×122.23°E, h77^{km}, ML3.2, C*
ISC 14 14:20:33.4±1.3, 24.56°N±0.04×122.25°E±0.03, h67^{km}±10^{km}, n36, σ0.82/70, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWC	**Suao**	**0.37**	**278**	P	**Pn**	**14 20 44.5**	**-0.2**
	baz=273						
TWC				S	**Sn**	**14 20 53.1**	**+0.1**
	baz=273						
ENA	**Nanau**	**0.48**	**254**	P	**Pn**	**14 20 45.8**	**+0.1**
	baz=249						
ENA				*e*S	**Sn**	**14 20 55.8**	**+1.0**
	baz=249						
ILA	**Ilan**	**0.50**	**294**	*e*P	**Pn**	**14 20 46.0**	**+0.1**
	baz=291						
ILA				*e*S	**Sn**	**14 20 55.8**	**+0.7**
	baz=291						
TWB1	**Santiao Chiao**	**0.51**	**332**	*e*P	**Pn**	**14 20 45.5**	**-0.5**
	baz=333						
TWB1				S	**Sn**	**14 20 54.6**	**-0.6**
	baz=333						
TWE	**Neicheng**	**0.56**	**287**	P	**Pn**	**14 20 46.4**	**-0.1**
	baz=284						
TWE				*e*S	**Sn**	**14 20 56.3**	**+0.3**
	baz=284						
ENTT	**Nioudou**	**0.63**	**277**	P	**Pn**	**14 20 47.5**	**+0.2**
	baz=276						
ENTT				*e*S	**Sn**	**14 20 58.4**	**+0.9**
	baz=276						
NWF	**Wu-fen Shan**	**0.67**	**320**	*e*P	**Pn**	**14 20 47.1**	**-0.6**
	baz=311						
NWF				S	**Sn**	**14 20 57.9**	**-0.4**
	baz=311						
YOJ	**Yonaguni jima**	**0.70**	**98**	P	**Pn**	**14 20 48.1**	**+0.1**
YOJ				S	**Sn**	**14 20 59.4**	**+0.6**
TWD	**Chiawan**	**0.77**	**232**	*e*P	**Pn**	**14 20 48.3**	**-0.6**
	baz=228						
TWD				*e*S	**Sn**	**14 21 00.3**	**+0.1**
	baz=228						
NNS	**Nan Shan**	**0.81**	**262**	P	**Pn**	**14 20 49.2**	**-0.3**
	baz=252						
NNS				*e*S	**Sn**	**14 21 01.4**	**0.0**
	baz=252						
NSK	**Sanguang**	**0.82**	**278**	P	**Pn**	**14 20 49.5**	**-0.1**
	baz=275						
NSK				S	**Sn**	**14 21 01.6**	**+0.1**
	baz=275						
HWA	**Hwalien**	**0.83**	**226**	*e*P	**Pn**	**14 20 49.4**	**-0.2**
	baz=216						
HWA				*e*S	**Sn**	**14 21 02.9**	**+1.3**
	baz=216						
TWY	**Chenhua**	**0.93**	**320**	*e*P	**Pn**	**14 20 50.4**	**-0.4**
	baz=312						
TWY				*e*S	**Sn**	**14 21 03.2**	**-0.5**
	baz=312						
TWS1	**Kuangyinshan**	**0.93**	**306**	*i* P	**Pn**	**14 20 50.3**	**-0.6**
	baz=309						
TWS1				*e*S	**Sn**	**14 21 03.2**	**-0.5**
	baz=309						
WHF	**Hehuan Shan**	**0.99**	**246**	P	**Pn**	**14 20 51.6**	**-0.5**
	baz=237						
WHF				*e*S	**Sn**	**14 21 05.0**	**-0.8**
	baz=237						
TWT	**Tachien**	**1.03**	**253**	*e*P	**Pn**	**14 20 52.6**	**+0.3**
	baz=243						
TWT				*e*S	**Sn**	**14 21 06.5**	**+0.3**
	baz=243						
NCU	**National Centr**	**1.05**	**293**	*e*S	**Sn**	**14 21 07.1**	**+0.6**
	baz=291						
ESL	**Shilin**	**1.05**	**225**	*e*P	**Pn**	**14 20 52.3**	**-0.1**
	baz=231						
ESL				*e*S	**Sn**	**14 21 06.0**	**-0.6**
	baz=231						
PCYT	**Pengchaiyu**	**1.08**	**351**	*e*P	**Pn**	**14 20 52.5**	**-0.2**
	baz=345						
NSTT	**Nanjuang**	**1.14**	**274**	*e*P	**Pn**	**14 20 53.3**	**-0.3**
	baz=271						
NSTT				*e*S	**Sn**	**14 21 08.4**	**-0.2**
	baz=271						
HSN	**Hsinchu**	**1.19**	**282**	*e*P	**Pn**	**14 20 53.9**	**-0.3**
	baz=282						
HSN				*e*S	**Sn**	**14 21 09.5**	**-0.2**
	baz=282						
EHY	**Hungye**	**1.35**	**219**	*e*P	**Pn**	**14 20 55.0**	**-1.3**
	baz=226						
EHY				*e*S	**Sn**	**14 21 11.2**	**-2.3**
	baz=226						
IRIF	**Iriomote-Funau**	**1.36**	**99**	P	**Pn**	**14 20 56.0**	**-0.4**
IRIF				S	**Sn**	**14 21 13.8**	**0.0**
SMLT	**Sun Moon Lake**	**1.41**	**242**	*e*P	**Pn**	**14 20 57.8**	**+0.6**
	baz=233						
SMLT				*e*S	**Sn**	**14 21 17.2**	**+2.3**
	baz=233						
TYC	**Yuchr**	**1.43**	**243**	*e*P	**Pn**	**14 20 58.0**	**+0.6**
	baz=241						
TYC				*e*S	**Sn**	**14 21 16.6**	**+1.2**
	baz=241						
TWF1	**Yuli**	**1.49**	**216**	*e*P	**Pn**	**14 20 56.7**	**-1.4**
	baz=223						
TWF1				*e*S	**Sn**	**14 21 14.7**	**-2.0**
	baz=223						
HATJ	**Hateruma jima**	**1.50**	**109**	P	**Pn**	**14 20 58.5**	**+0.2**
HATJ				*e*S	**Sn**	**14 21 18.0**	**+1.0**
YUS	**Yu-Shan**	**1.60**	**228**	*e*P	**Pn**	**14 21 00.2**	**+0.2**
	baz=220						
YUS				*e*S	**Sn**	**14 21 19.4**	**-0.6**
	baz=220						
JKRS	**Kuro-shima**	**1.63**	**101**	P	**Pn**	**14 21 00.1**	**+0.1**
JKRS				S	**Sn**	**14 21 20.6**	**+0.5**
ALS	**Alishan**	**1.69**	**232**	*e*P	**Pn**	**14 21 01.5**	**+0.5**
	baz=223						
ALS				*e*S	**Sn**	**14 21 22.4**	**+0.5**
	baz=223						
CHN5	**Tsauling**	**1.73**	**237**	*e*P	**Pn**	**14 21 02.0**	**+0.6**
	baz=246						
CHN5				*e*S	**Sn**	**14 21 23.9**	**+1.3**
	baz=246						
JIJ	**Ishigaki jima**	**1.73**	**96**	P	**Pn**	**14 21 01.1**	**-0.3**
JIJ				*e*S	**Sn**	**14 21 21.9**	**-0.7**
CHN4	**Tsaushan**	**1.94**	**232**	*e*P	**Pn**	**14 21 04.6**	**+0.5**
	baz=230						
CHN4				*e*S	**Sn**	**14 21 28.9**	**+1.4**
	baz=230						
TWG	**Pinlang**	**2.04**	**212**	*e*P	**Pn**	**14 21 05.1**	**-0.4**
	baz=210						
TWG				*e*S	**Sn**	**14 21 27.6**	**-2.4**
	baz=210						
CHN1	**Nanshi**	**2.09**	**229**	*e*P	**Pn**	**14 21 07.4**	**+1.2**
	baz=227						
CHN1				*e*S	**Sn**	**14 21 31.8**	**+0.5**
	baz=227						
JTJ	**Tarama**	**2.23**	**87**	P	**Pn**	**14 21 08.3**	**+0.2**
JTJ				*e*S	**Sn**	**14 21 34.9**	**+0.3**

NNC 14 14:28:05.4±2.1, 49.83N×88.06E, h0^{km}, mb3.8, mpv3.4, 3C-6D, Error ellipse: s-maj=18.6km s-min=10.7km az=51.0, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**4.90**	**234**	⇓P	Pn	14 29 21.1	+0.7
	1.3nm,0.3s,baz=43,slow=11,SNR=88						
MK31				⇑Pg	Pb	14 29 33.8	+1.6
	8.3nm,0.7s,baz=55,slow=20,SNR=11						
MK31				⇓Lg	Lg	14 30 41.2	
	9.7nm,0.6s,baz=53,slow=30,SNR=6.4						
KURK	**Kurchatov**	**6.11**	**282**	⇑Pn	Pn	14 29 36.3	-0.7
	3.1nm,0.7s						
KURK				⇑Sn	Sn	14 30 48.1	+0.6
	11nm,0.7s						
KURK				⇓Lg	Lg	14 31 21.3	
KUR16	**Kurchatov Arra**	**6.18**	**281**	⇓Pn	Pn	14 29 38.1	+0.2
	1.0nm,0.4s						
KUR16				⇓Sn	Sn	14 30 51.0	+1.8
	3.3nm,0.8s						
KUR16				⇓Lg	Lg	14 31 21.3	

*IDC **14** 14:33:02.5±0.6, 34.66°N×73.17°E, h0^{km}, mb4.2/16, mb1 4.3/21, mb1mx4.1/30, mbtmp4.1/21, ML4.0/5, MS3.1/3, Ms1 3.1/3, ms1mx2.4/30, Error ellipse: s-maj=16.1km s-min=14.1km az=113.0*
*NDI **14** 14:33:03.1±2.3, 34.85°N×72.92°E, h10^{km}, ML4.2*
*ISCJB **14** 14:33:07.0±0.5, 34.77°N±0.03×73.29°E±0.04, h44^{km}±6^{km}, mb4.3/21, MS2.8/1, Error ellipse: s-maj=5.9km s-min=4.3km az=162.1*
*BJI **14** 14:33:08.5, 35.10°N×72.70°E, h100^{km}, mB4.4/5, mb4.1/9*
*NNC **14** 14:33:16.9±2.1, 35.22°N×72.78°E, h76^{km}±19^{km}, mb3.9, mpv4.3, Error ellipse: s-maj=15.8km s-min=12.2km az=30.0*
ISC 14 14:33:07.3±1.8, 34.77°N±0.04×73.17°E±0.05, h31^{km}±13^{km}, n70, σ1.975/72, mb4.3/21, 6C-8D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHCP	**Chirah Chowk**	**1.11**	**176**	⇓P	**Pn**	**14 33 25.6**	**-1.2**
CEP	**Cherat**	**1.40**	**228**	⇑P	**Pn**	**14 33 30.9**	**0.0**
CEP				S	**Sb**	**14 33 51.0**	**+0.4**
THW	**Thamme Wali**	**2.30**	**212**	P	**Pn**	**14 33 45.4**	**+2.3**
JMU	**Jammu**	**2.50**	**144**	*ex*	Pn	14 33 52.5	+6.6
JMU				*e*S	**Sb**	**14 34 19.5**	**-2.4**
SARP	**Sargodha**	**2.87**	**188**	P	**Pn**	**14 33 52.1**	**+1.2**
THN	**Thein Dam**	**3.15**	**137**	*i* P	**Pn**	**14 33 54.6**	**-0.2**
THN				*e*S	**Sn**	**14 34 33.3**	**+1.9**
DLH	**Dalhousie**	**3.22**	**133**	*e*PKP	**Pn**	**14 33 56.0**	**0.0**
DLH				*e*S	**Sn**	**14 34 36.0**	**+2.6**
DHRM	**DHARAMSHALA**	**3.62**	**133**	*e*PKP	**Pn**	**14 34 03.0**	**+1.4**
DHRM				*e*S	**Sn**	**14 34 46.0**	**+2.6**
DHRM				AML	AML	14 34 47.6	
	comp=E,855nm,0.5s						
DHRM				AML	AML	14 34 47.8	
	comp=N,925nm,0.6s						
BHK	**Bhakra**	**4.31**	**140**	*e*4	x	14 34 22.8	
BHK				*e*S	**Sn**	**14 35 02.2**	**+2.1**
SDNR	**Sundarnagar**	**4.56**	**135**	*e*PKP	**Pn**	**14 34 15.0**	**+0.8**
SDNR				*e*S	**Sn**	**14 35 07.0**	**+0.8**
SMLA	**Simla**	**4.95**	**136**	*i* P	**Pn**	**14 34 20.9**	**+1.4**
SMLA				*i* S	**Sn**	**14 35 16.2**	**+0.5**
SMLA				AML	AML	14 35 40.2	
	comp=E,547nm,0.5s						
SMLA				AML	AML	14 35 40.8	
	comp=N,638nm,0.5s						
KSH	**Kashi**	**5.25**	**24**	P	**Pn**	**14 34 22.8**	**-0.9**
KSH				S	**Sn**	**14 35 18.0**	**-5.2**
KSH				smax	smax		
	comp=N,260nm,0.4s						
KSH				smax	smax		
	comp=E,190nm,0.3s						
DDI	**Dehra Dun**	**6.05**	**136**	*ex*	**Pn**	**14 34 35.0**	**+0.2**
DDI				*e*PKP	**Pn**	**14 34 36.2**	**+1.4**
DDI				*e*S	**Sn**	**14 35 41.4**	**-1.7**
NDI	**New Delhi**	**6.97**	**149**	*e*PKP	**Pn**	**14 34 47.0**	**-0.4**
AAK	**Ala-Archa**	**7.92**	**7**	Pn	**Pn**	**14 35 03.3**	**+2.8**
	comp=E,2.2nm,0.3s,baz=205,slow=6.4,SNR=5.2						
AAK				Sn	**Sn**	**14 36 31.9**	**+2.7**
	comp=E,1.0nm,0.3s,baz=328,slow=18,SNR=7.0						
AAK				LR	LR	14 38 30.9	
	comp=E,113nm,20.1s,baz=164,slow=41						
LGTI	**Lohaghat**	**8.01**	**129**	*e*4	x	14 35 18.1	
AJM	**Ajmer**	**8.36**	**171**	*i* x	**Pn**	**14 35 05.0**	**-1.4**
AJM				*i* S	**Sn**	**14 36 35.0**	**-4.8**
TKM2	**Tokmak 2**	**8.36**	**12**	⇓P	Pn	14 35 10.1	+3.5
	comp=E,7.0nm,0.8s						
TKM2				⇑S	**Sn**	**14 36 39.7**	**-0.3**
	comp=E,15nm,0.6s						
KK31	**Karatay Array**	**8.58**	**347**	P	**Pn**	**14 35 11.8**	**+2.5**
	comp=E,12nm,0.5s,baz=157,slow=12,SNR=224						
KK31				⇑S	**Sn**	**14 36 42.1**	**-3.0**
	comp=E,14nm,0.4s,baz=154,slow=22,SNR=10						
DANN	**Dangsing**	**11.06**	**122**	*e*P	**Pn**	**14 35 41.4**	**-2.4**
	comp=E,23nm,0.3s						
KOLN	**Koldanda**	**11.32**	**125**	*e*P	**Pn**	**14 35 45.0**	**-2.2**
	comp=E,18nm,0.3s						
KOLN				*e*S	Sn	14 37 44.2	-8.6
BHPL	**Bhopal**	**12.07**	**161**	*e*PKP	**Pn**	**14 35 55.4**	**-1.9**
BHPL				*ex*	x	14 38 01.0	
DMN	**Daman**	**12.46**	**122**	*e*P	Pn	14 36 00.0	-2.8
	comp=E,40nm,0.6s						
DMN				*e*S	Sn	14 38 11.4	-9.5
KKN	**Kakani**	**12.47**	**121**	*e*P	Pn	14 35 59.2	-3.7
	comp=E,26nm,0.5s						
PKIN	**Phulchoki**	**12.68**	**121**	*e*P	Pn	14 36 02.8	-3.0
	comp=E,17nm,0.3s						
PKI	**Pulchoki**	**12.69**	**121**	*e*P	Pn	14 36 03.0	-3.1
PKI				*e*S	Sn	14 38 16.1	-11
GUN	**Gumba**	**12.83**	**119**	*e*P	Pn	14 36 04.4	-3.5
	comp=E,33nm,0.5s						
JBP	**Jabalpur**	**13.00**	**151**	⇓*i* x	x	14 36 36.4	
JBP				*e*S	Sn	14 38 23.8	-10
MK31	**Makanchi Array**	**13.85**	**27**	P	**P**	**14 36 26.9**	**-2.5**
	comp=E,1.0nm,0.6s,baz=214,slow=12,SNR=19						
MKAR	**Makanchi Array**	**13.85**	**27**	P	**Pn**	**14 36 21.6**	**+0.2**
	comp=E,0.1nm,0.3s,baz=205,slow=14,SNR=8.6						
RAMN	**Ramite**	**13.91**	**120**	*e*P	Pn	14 36 18.5	-4.1
	comp=E,38nm,0.5s						
TAPN	**Taplejung**	**14.48**	**117**	*e*P	Pn	14 36 26.2	-4.2
	comp=E,21nm,0.3s						
TAPN				*e*S	Sn	14 38 58.0	-12
ODAN	**Odare**	**14.53**	**119**	*e*P	Pn	14 36 26.4	-4.7
	comp=E,36nm,0.5s						
POO	**Poona**	**16.18**	**178**	*e*4	**Sn**	**14 39 50.0**	**-1.2**
KUR16	**Kurchatov Arra**	**16.32**	**12**	⇑P	**P**	**14 36 56.4**	**-0.4**
	comp=E,2.4nm,0.9s						
KURBB	**Kurchatov Arra**	**16.32**	**12**	Pn	**Pn**	**14 36 52.6**	**-1.5**
	comp=E,0.1nm,0.3s,baz=199,slow=12,SNR=7.9						
KURK	**Kurchatov**	**16.43**	**12**	⇑P	**P**	**14 36 59.3**	**+1.4**
	comp=E,8.0nm,0.9s						
AB31	**Akbulak array**	**17.46**	**330**	⇓P	**Pn**	**14 37 06.7**	**-1.7**
	comp=E,1.2nm,0.3s,baz=146,slow=11,SNR=86						
AB31				⇑S	**Sn**	**14 40 16.3**	**-5.4**
	comp=E,1.8nm,0.6s,baz=150,slow=24,SNR=5.0						
VOSK	**Vostochnaya**	**18.02**	**356**	⇓P	**P**	**14 37 16.0**	**+0.5**
	comp=E,2.8nm,0.6s						
BVA0	**Borovoye Array**	**18.36**	**355**	⇓P	**Pn**	**14 37 20.1**	**+0.6**
	comp=E,2.8nm,0.5s,baz=22,slow=9.4,SNR=28						
BVAR	**Borovoye Array**	**18.36**	**355**	P	**Pn**	**14 37 20.8**	**+1.4**
	comp=E,1.7nm,0.3s,baz=163,slow=9.8,SNR=28						
BVAR				LR	LR	14 44 41.7	
	comp=E,76nm,18.9s,baz=351,slow=38						
ZRNK	**Zerenda**	**18.42**	**352**	⇓P	**Pn**	**14 37 20.7**	**+0.6**
	comp=E,6.1nm,0.5s						
SHL	**Shillong**	**18.58**	**115**	*e*4		14 37 10.0	
SHL				*e*4		14 40 30.0	
AKTO	**Aktyubinsk**	**19.16**	**329**	⇓P	**P**	**14 37 28.3**	**+0.2**
	comp=E,13nm,0.6s						
AKTO	**Aktyubinsk**	**19.16**	**329**	P	**Pn**	**14 37 29.4**	**+0.2**
	comp=E,1.5nm,0.3s,baz=132,slow=11,SNR=22						
AKTO				S	Sn	14

DDA ***14*** *14:35:54.3,39˚.10N×29˚.01E,h11km,MD3.2*
ISK ***14*** *14:35:54.1,39˚.10N×29˚.03E,h5km,ML3.5*
CSEM ***14*** *14:35:55.3±0.1,39˚.10N×29˚.04E,h2km,MD3.2,Error ellipse: s-maj=2.0km s-min=1.8km az=74.0*

ISC 14 14:35:54.8±1.0,**39˚.12N**±0˚.01×**29˚.01E**±0˚.01,**h7**km±8km, **n161,σ0§96/191,1C-6D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.24**	**252**	*i* P	**Pg**	**14 36 00.1**	**+0.5**
DEMI				*i* S	**Sg**	**14 36 03.6**	**+0.8**
DEMI	**Demirci**	**0.24**	**252**	*i* P	**Pg**	**14 36 00.1**	**+0.5**
DEMI				*i* S	**Sg**	**14 36 03.6**	**+0.8**
GDZ	**Gediz**	**0.37**	**94**	*i* P	**Pg**	**14 36 01.7**	**-0.4**
GDZ				*i* S	**Sg**	**14 36 06.7**	**-0.2**
GDZ	**Gediz**	**0.37**	**94**	*i* P	**Pg**	**14 36 01.7**	**-0.4**
GDZ				*i* S	**Sg**	**14 36 06.7**	**-0.2**
TVSB	**Tavsanli**	**0.48**	**47**	*e*PG	**Pg**	**14 36 04.0**	**-0.2**
TVSB	**Tavsanli**	**0.48**	**47**	*e*Pg	**Pg**	**14 36 04.0**	**-0.2**
DST	**Dursunbey**	**0.57**	**328**	*e*PG	**Pb**	**14 36 06.3**	**-0.9**
DST	**Dursunbey**	**0.57**	**328**	*e*Pg	**Pb**	**14 36 06.3**	**-0.9**
DURS	**Dursunbey**	**0.64**	**320**	*i* P	**Pb**	**14 36 07.4**	**-0.9**
DURS				*i* S	**Sg**	**14 36 15.5**	**+0.1**
DURS	**Dursunbey**	**0.64**	**320**	*i* P	**Pb**	**14 36 07.4**	**-0.9**
DURS				*i* S	**Sg**	**14 36 15.5**	**+0.1**
MANT	**Manisa**	**0.72**	**209**	*i* P	**Pg**	**14 36 08.4**	**-0.2**
MANT				*i* S	**Sg**	**14 36 18.0**	**0.0**
MANT	**Manisa**	**0.72**	**209**	*i* P	**Pg**	**14 36 08.4**	**-0.2**
MANT				*i* S	**Sg**	**14 36 18.0**	**0.0**
KHAL	**Karahalli**	**0.84**	**153**	*i* P	**Pg**	**14 36 10.6**	**-0.3**
KHAL	**Karahalli**	**0.84**	**153**	*i* P	**Pg**	**14 36 10.6**	**-0.3**
ALT	**Altintas**	**0.86**	**94**	*e*PG	**Pb**	**14 36 11.6**	**-0.5**
ALT				*e*SG	**Sb**	**14 36 24.0**	**+0.1**
ALT	**Altintas**	**0.86**	**94**	*e*Pg	**Pb**	**14 36 11.6**	**-0.5**
ALT				*e*Sg	**Sb**	**14 36 24.0**	**+0.1**
KHL	**Karahalli**	**0.89**	**153**	*e*PG	**Pb**	**14 36 12.0**	**-0.6**
KHL	**Karahalli**	**0.89**	**153**	*e*Pg	**Pb**	**14 36 12.0**	**-0.6**
ORLT	**Orhaneli**	**0.93**	**355**	*e*PG	**Pb**	**14 36 12.9**	**-0.4**
ORLT				*e*SG	**Sn**	**14 36 27.7**	**-0.3**
ORLT	**Orhaneli**	**0.93**	**355**	*e*Pg	**Pb**	**14 36 12.9**	**-0.4**
ORLT				*e*Sg	**Sn**	**14 36 27.7**	**-0.3**
AKHS	**Akhisar**	**0.96**	**256**	*i* P	**Pb**	**14 36 13.9**	**+0.1**
AKHS				*i* S	**Sb**	**14 36 26.8**	**+0.1**
AKHS	**Akhisar**	**0.96**	**256**	*i* P	**Pb**	**14 36 13.9**	**+0.1**
AKHS				*i* S	**Sb**	**14 36 26.8**	**+0.1**
BALB	**Balikesir**	**1.02**	**301**	*e*PG	**Pn**	**14 36 15.6**	**+0.1**
BALB				*e*SG	**Sn**	**14 36 29.7**	**-0.3**
BALB	**Balikesir**	**1.02**	**301**	*e*Pg	**Pn**	**14 36 15.6**	**+0.1**
BALB				*e*Sg	**Sn**	**14 36 29.7**	**-0.3**
ULDT	**Uludag**	**1.03**	**5**	*i* P	**Pg**	**14 36 13.9**	**-0.7**
ULDT				*i* S	**Sb**	**14 36 28.3**	**-0.5**
ULDT	**Uludag**	**1.03**	**5**	*i* P	**Pg**	**14 36 13.9**	**-0.7**
ULDT				*i* S	**Sb**	**14 36 28.3**	**-0.5**
BALY	**Balya**	**1.24**	**300**	*i* P	**Pn**	**14 36 18.8**	**+0.2**
BALY				*i* S	**Sn**	**14 36 36.4**	**+0.8**
BALY	**Balya**	**1.24**	**300**	*i* P	**Pn**	**14 36 18.8**	**+0.2**
BALY				*i* S	**Sn**	**14 36 36.4**	**+0.8**
KCTX	**Karacabey (Bur**	**1.25**	**337**	*e*PN	**Pn**	**14 36 19.9**	**+1.1**
KCTX	**Karacabey (Bur**	**1.25**	**337**	*e*Pn	**Pn**	**14 36 19.9**	**+1.1**
MDNY	**Mudanya-Bursa**	**1.25**	**356**	*e*PN	**Pn**	**14 36 18.8**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.25**	**356**	*e*Pn	**Pn**	**14 36 18.8**	**+0.1**
CAVI	**Cavuskoy**	**1.26**	**30**	*e*PN	**Pn**	**14 36 19.4**	**+0.5**
CAVI	**Cavuskoy**	**1.26**	**30**	*e*Pn	**Pn**	**14 36 19.4**	**+0.5**
GEMT	**Gemlik**	**1.32**	**6**	*e*PN	**Pg**	**14 36 20.8**	**+0.6**
GEMT	**Gemlik**	**1.32**	**6**	*e*Pn	**Pg**	**14 36 20.8**	**+0.6**
SHUT	**Suhut-Afyon**	**1.33**	**115**	*e*PN	**Pg**	**14 36 20.2**	**-0.1**
SHUT	**Suhut-Afyon**	**1.33**	**115**	*e*Pn	**Pg**	**14 36 20.2**	**-0.1**
BORA	**Eskisehir**	**1.35**	**55**	*i* P	**Pn**	**14 36 19.6**	**-0.6**
BORA				*i* S	**Sb**	**14 36 37.5**	**-0.6**
BORA	**Eskisehir**	**1.35**	**55**	*i* P	**Pn**	**14 36 19.6**	**-0.6**
BORA				*i* S	**Sb**	**14 36 37.5**	**-0.6**
DENT	**Denizli**	**1.36**	**179**	*e*PN	**Pg**	**14 36 20.7**	**-0.2**
DENT	**Denizli**	**1.36**	**179**	*e*Pn	**Pg**	**14 36 20.7**	**-0.2**
GONE	**Gonen-Balikesi**	**1.38**	**313**	*e*PN	**Pg**	**14 36 21.2**	**-0.1**
GONE	**Gonen-Balikesi**	**1.38**	**313**	*e*Pn	**Pg**	**14 36 21.2**	**-0.1**
DNZL	**Cakiroluk**	**1.43**	**179**	*i* P	**Pn**	**14 36 20.4**	**-0.9**
DNZL				*i* S	**Sg**	**14 36 41.5**	**+0.8**
DNZL	**Cakiroluk**	**1.43**	**179**	*i* P	**Pn**	**14 36 20.4**	**-0.9**
DNZL				*i* S	**Sg**	**14 36 41.5**	**+0.8**
ADVT	**Abdulvahap**	**1.43**	**23**	*e*PN	**Pg**	**14 36 22.4**	**+0.2**
ADVT	**Abdulvahap**	**1.43**	**23**	*e*Pn	**Pg**	**14 36 22.4**	**+0.2**
ARMT	**Armutlu**	**1.45**	**356**	*e*PN	**Pg**	**14 36 22.9**	**+0.3**
ARMT	**Armutlu**	**1.45**	**356**	*e*Pn	**Pg**	**14 36 22.9**	**+0.3**
YLV	**Yalova**	**1.47**	**11**	*e*PN	**Pg**	**14 36 23.2**	**+0.1**
YLV	**Yalova**	**1.47**	**11**	*e*Pn	**Pg**	**14 36 23.2**	**+0.1**
SEYT	**Eskypehyr**	**1.48**	**74**	*i* P	**Pb**	**14 36 22.1**	**-0.7**
SEYT	**Eskypehyr**	**1.48**	**74**	*i* P	**Pb**	**14 36 22.1**	**-0.7**
BNT	**Bandirma**	**1.49**	**326**	*e*PN	**Pg**	**14 36 23.7**	**+0.2**
BNT	**Bandirma**	**1.49**	**326**	*e*Pn	**Pg**	**14 36 23.7**	**+0.2**
GPA	**Golpazari**	**1.54**	**40**	*e*PN	**Pg**	**14 36 23.9**	**-0.5**
GPA	**Golpazari**	**1.54**	**40**	*e*Pn	**Pg**	**14 36 23.9**	**-0.5**
IZM	**Izmir**	**1.54**	**243**	*e*PN	**Pg**	**14 36 24.0**	**-0.4**
IZM	**Izmir**	**1.54**	**243**	*e*Pn	**Pg**	**14 36 24.0**	**-0.4**
BLCB	**Balcova**	**1.70**	**245**	*e*PN	**Pb**	**14 36 26.4**	**0.0**
BLCB	**Balcova**	**1.70**	**245**	*e*Pn	**Pb**	**14 36 26.4**	**0.0**
AYDN	**Tasoluk**	**1.70**	**212**	*i* P	**Pn**	**14 36 24.8**	**-0.2**
AYDN				*i* S	**Sg**	**14 36 48.8**	**-0.8**
AYDN	**Tasoluk**	**1.70**	**212**	*i* P	**Pn**	**14 36 24.8**	**-0.2**
AYDN				*i* S	**Sg**	**14 36 48.8**	**-0.8**
BUY	**Buyukada**	**1.73**	**3**	*e*PN	**Pb**	**14 36 26.7**	**-0.3**
BUY	**Buyukada**	**1.73**	**3**	*i* P	**Pg**	**14 36 27.5**	**-0.6**
BUY				*i* S	**Sn**	**14 36 48.0**	**+0.3**
BUY	**Buyukada**	**1.73**	**3**	*e*Pn	**Pb**	**14 36 26.7**	**-0.3**
BUY	**Buyukada**	**1.73**	**3**	*i* P	**Pg**	**14 36 27.5**	**-0.6**
BUY				*i* S	**Sn**	**14 36 48.0**	**+0.3**
GULT	**Gulveren**	**1.75**	**41**	*e*PN	**Pb**	**14 36 27.0**	**-0.3**
GULT	**Gulveren**	**1.75**	**41**	*e*Pn	**Pb**	**14 36 27.0**	**-0.3**
ISP	**Isparta**	**1.76**	**137**	*e*PN	**Pb**	**14 36 26.6**	**-0.8**
ISP	**Isparta**	**1.76**	**137**	‖ *i*P	**Pb**	**14 36 27.0**	**-0.4**
ISP	**Isparta**	**1.76**	**137**	*e*Pn	**Pb**	**14 36 26.6**	**-0.8**
ISP	**Isparta**	**1.76**	**137**	‖ *i*P	**Pb**	**14 36 27.0**	**-0.4**
HRT	**Hereke**	**1.78**	**16**	*e*PN	**Pb**	**14 36 27.4**	**-0.3**
HRT	**Hereke**	**1.78**	**16**	*e*Pn	**Pb**	**14 36 27.4**	**-0.3**
AYVA	**Ayvalik**	**1.81**	**277**	*i* P	**Pg**	**14 36 28.7**	**-0.8**
AYVA				*i* S	**Sg**	**14 36 54.3**	**+1.3**
AYVA	**Ayvalik**	**1.81**	**277**	*i* P	**Pg**	**14 36 28.7**	**-0.8**
AYVA				*i* S	**Sg**	**14 36 54.3**	**+1.3**
KRBG	**Karabiga-Canak**	**1.83**	**315**	*e*PN	**Pb**	**14 36 28.3**	**-0.3**
KRBG	**Karabiga-Canak**	**1.83**	**315**	*e*Pn	**Pb**	**14 36 28.3**	**-0.3**
SPNC	**Sapanca-Adapaz**	**1.86**	**32**	*e*PN	**Pb**	**14 36 28.5**	**-0.6**
SPNC	**Sapanca-Adapaz**	**1.86**	**32**	*e*Pn	**Pb**	**14 36 28.5**	**-0.6**
ISK	**Istanbul-Kandi**	**1.95**	**1**	*e*PN	**Pb**	**14 36 30.0**	**-0.6**
ISK	**Istanbul-Kandi**	**1.95**	**1**	*e*Pn	**Pb**	**14 36 30.0**	**-0.6**
SVRH	**Sivrihisar-ESK**	**1.98**	**80**	*e*PN	**Pb**	**14 36 29.8**	**-1.4**
SVRH	**Sivrihisar-ESK**	**1.98**	**80**	*e*Pn	**Pb**	**14 36 29.8**	**-1.4**
GLHS	**Glhisar (BURDU**	**2.00**	**169**	*e*PN	**Pb**	**14 36 30.2**	**-1.3**
GLHS	**Glhisar (BURDU**	**2.00**	**169**	*e*Pn	**Pb**	**14 36 30.2**	**-1.3**
YER	**Yerkesik**	**2.06**	**196**	*e*PN	**Pb**	**14 36 31.1**	**-1.4**
YER	**Yerkesik**	**2.06**	**196**	*e*Pn	**Pb**	**14 36 31.2**	**-1.4**
MLSB	**Milas**	**2.06**	**208**	*e*PN	**Pb**	**14 36 31.3**	**-1.3**
MLSB	**Milas**	**2.06**	**208**	*e*Pn	**Pb**	**14 36 31.3**	**-1.3**
BGKT	**Bogazkoy**	**2.07**	**355**	*e*PN	**Pb**	**14 36 31.4**	**-1.3**
BGKT	**Bogazkoy**	**2.07**	**355**	*e*Pn	**Pb**	**14 36 31.4**	**-1.3**
ELBA	**Catalca**	**2.07**	**348**	*i* P	**Pg**	**14 36 34.6**	**0.0**
ELBA				*i* S	**Sn**	**14 36 56.9**	**+0.7**
SILT	**Sile**	**2.09**	**13**	*e*PN	**Pb**	**14 36 31.8**	**-1.2**
SILT	**Sile**	**2.09**	**13**	*e*Pn	**Pb**	**14 36 31.8**	**-1.2**
RKY	**Sarkoy-Tekirda**	**2.11**	**319**	*e*PN	**Pb**	**14 36 32.3**	**-1.1**
RKY	**Sarkoy-Tekirda**	**2.11**	**319**	*e*Pn	**Pb**	**14 36 32.3**	**-1.1**
SART	**Tekirdag**	**2.11**	**319**	*i* P	**Pg**	**14 36 34.0**	**-1.2**
SART				*i* S	**Sg**	**14 37 02.5**	**0.0**
SART	**Tekirdag**	**2.11**	**319**	*i* P	**Pg**	**14 36 34.0**	**-1.2**
MFT	**Murefte**	**2.13**	**322**	*e*PN	**Pb**	**14 36 33.4**	**-0.4**
MFT	**Murefte**	**2.13**	**322**	*e*Pn	**Pb**	**14 36 33.4**	**-0.4**
PRK	**Paraskevi**	**2.13**	**274**	*e*P	**Pn**	**14 36 31.5**	**+0.7**
KLYT	**Kilyos**	**2.13**	**1**	*e*PN	**Pb**	**14 36 32.5**	**-1.3**
KLYT	**Kilyos**	**2.13**	**1**	*e*Pn	**Pb**	**14 36 32.5**	**-1.3**
LPK	**Lapseki**	**2.14**	**307**	*e*PN	**Pb**	**14 36 32.8**	**-1.1**
LPK	**Lapseki**	**2.14**	**307**	*e*Pn	**Pb**	**14 36 32.8**	**-1.1**
CTKS	**Kestanelik-??a**	**2.15**	**350**	*e*PN	**Pb**	**14 36 32.8**	**-1.3**
CTKS	**Kestanelik-??a**	**2.15**	**350**	*e*Pn	**Pb**	**14 36 32.8**	**-1.3**
TKR	**Tekirdag**	**2.19**	**329**	*e*PN	**Pb**	**14 36 33.5**	**-1.2**
TKR	**Tekirdag**	**2.19**	**329**	*e*Pn	**Pb**	**14 36 33.5**	**-1.2**
EZN	**Ezine**	**2.19**	**290**	*e*PN	**Pb**	**14 36 33.5**	**-1.3**
EZN	**Ezine**	**2.19**	**290**	*e*Pn	**Pb**	**14 36 33.5**	**-1.3**
SLVT	**Silivri**	**2.20**	**344**	*e*PN	**Pb**	**14 36 33.6**	**-1.2**
SLVT	**Silivri**	**2.20**	**344**	*e*Pn	**Pb**	**14 36 33.6**	**-1.2**
SMG	**Samos**	**2.21**	**231**	*e*P	**Pg**	**14 36 36.0**	**-1.2**
KIZT	**Kizilcal**	**2.25**	**95**	*e*PN	**Pn**	**14 36 33.6**	**+1.1**
KIZT	**Kizilcal**	**2.25**	**95**	*e*Pn	**Pn**	**14 36 33.6**	**+1.1**
DALY	**Dalyan (Mu˘la**	**2.31**	**187**	*e*PN	**Pn**	**14 36 34.8**	**+1.5**
DALY	**Dalyan (Mu˘la**	**2.31**	**187**	*e*Pn	**Pn**	**14 36 34.8**	**+1.5**
GELI	**Tayfur-Gelibol**	**2.33**	**304**	*e*PN	**Pb**	**14 36 35.5**	**-1.7**
GELI	**Tayfur-Gelibol**	**2.33**	**304**	*e*Pn	**Pb**	**14 36 35.5**	**-1.7**
CTYL	**Yal??k??y-??at**	**2.42**	**347**	*e*PN	**Pb**	**14 36 36.8**	**-1.8**
CTYL	**Yal??k??y-??at**	**2.42**	**347**	*e*Pn	**Pb**	**14 36 36.8**	**-1.8**
CHOS	**Chios island**	**2.42**	**253**	*e*P	**Pn**	**14 36 35.0**	**+0.1**
BODT	**Bodrum**	**2.45**	**214**	*e*PN	**Pn**	**14 36 36.9**	**+1.7**
BODT	**Bodrum**	**2.45**	**214**	*e*Pn	**Pn**	**14 36 36.9**	**+1.7**
ERIK	**Erikli-Kesan**	**2.47**	**310**	*e*PN	**Pb**	**14 36 37.4**	**-2.0**
ERIK	**Erikli-Kesan**	**2.47**	**310**	*e*Pn	**Pb**	**14 36 37.4**	**-2.0**
FETY	**Fethiye**	**2.48**	**179**	*e*PN	**Pn**	**14 36 37.1**	**+1.5**
FETY	**Fethiye**	**2.48**	**179**	*e*Pn	**Pn**	**14 36 37.1**	**+1.5**
DAT	**Datca**	**2.64**	**206**	*e*PN	**Pn**	**14 36 39.4**	**+1.5**
DAT	**Datca**	**2.64**	**206**	*e*Pn	**Pn**	**14 36 39.4**	**+1.5**
ENEZ	**Enez**	**2.73**	**307**	*e*PN	**Pn**	**14 36 40.9**	**+1.9**
ENEZ	**Enez**	**2.73**	**307**	*e*Pn	**Pn**	**14 36 40.9**	**+1.9**
LADK	**Ladik-KONYA**	**2.78**	**108**	*e*PN	**Pn**	**14 36 41.4**	**+1.5**
LADK	**Ladik-KONYA**	**2.78**	**108**	*e*Pn	**Pn**	**14 36 41.4**	**+1.5**
KDZE	**Karadeniz Ereo**	**2.88**	**40**	*e*PN	**Pn**	**14 36 42.9**	**+1.8**
KDZE	**Karadeniz Ereo**	**2.88**	**40**	*e*Pn	**Pn**	**14 36 42.9**	**+1.8**
KONT	**Konya--Tatoy**	**2.88**	**113**	*e*PN	**Pn**	**14 36 42.7**	**+1.6**
KONT	**Konya--Tatoy**	**2.88**	**113**	*e*Pn	**Pn**	**14 36 42.7**	**+1.6**
ALN	**Alexandroupoli**	**2.89**	**309**	*e*P	**Pn**	**14 36 43.0**	**+1.8**
SMTH	**Samothraki Isl**	**3.00**	**298**	*e*P	**Pn**	**14 36 43.0**	**+0.2**
LOD	**Lodumlu**	**3.01**	**74**	*e*PN	**Pn**	**14 36 44.5**	**+1.7**
LOD	**Lodumlu**	**3.01**	**74**	*e*Pn	**Pn**	**14 36 44.6**	**+1.7**
LIA	**Limnos Island**	**3.06**	**286**	*e*P	**Pn**	**14 36 44.0**	**+0.4**
EDRB	**Edirne**	**3.23**	**328**	*e*PN	**Pn**	**14 36 47.6**	**+1.7**
EDRB	**Edirne**	**3.23**	**328**	*e*Pn	**Pn**	**14 36 47.6**	**+1.7**
SAFT	**Safranbolu**	**3.53**	**52**	*e*PN	**Pn**	**14 36 52.0**	**+2.0**
SAFT	**Safranbolu**	**3.53**	**52**	*e*Pn	**Pn**	**14 36 52.0**	**+2.0**
KDZ	**Kurdzhali**	**3.73**	**314**	P	Pg	14 37 12.0	+5.7
NVR	**Nevrokopi**	**4.53**	**301**	*e*P	**Pn**	**14 37 04.5**	**+0.7**
MMB	**Musomiste**	**4.73**	**303**	P	**Pn**	**14 37 07.6**	**+1.0**
MMB	**Musomiste**	**4.73**	**303**	P	**Pn**	**14 37 07.6**	**+1.0**
TIRR	**Tirgusor**	**5.35**	**355**	‖ *i*P	**Pn**	**14 37 15.9**	**+0.8**
TIRR	**Tirgusor**	**5.35**	**355**	‖ *i*P	**Pn**	**14 37 15.9**	**+0.8**
MPEP	**Malo Peshtene**	**5.80**	**319**	P	**Pn**	**14 37 22.6**	**+1.3**
CFR	**Carcaliu**	**6.09**	**354**	‖ *i*P	**Pn**	**14 37 25.7**	**+0.5**
CFR	**Carcaliu**	**6.09**	**354**	‖ *i*P	**Pn**	**14 37 25.7**	**+0.5**
VOIR		**6.96**	**336**	‖ *i*P	Pn	14 37 41.7	+4.4

ISCJB ***14*** *14:43:43.8±0.8,57˚.5S±0˚.2×14˚.7E±˚,h10km,mb4.4/6, MS4.0/13,Error ellipse: s-maj=93.1km s-min=10.9km az=167.7*
IDC ***14*** *14:43:44.4±2.0,57˚.46S×147˚.19E,h0km,mb4.2/5, mb1 4.5/5,mb1mx4.2/13,mbtmp4.3/5,MS4.1/13, Ms1 4.1/13,ms1mx3.8/21,Error ellipse: s-maj=181.4km s-min=18.7km az=80.0*
NEIC ***14*** *14:43:45.9±1.0,57˚.47S×147˚.32E,h10km,mb4.8/4,Error ellipse: s-maj=97.1km s-min=12.4km az=79.0*
GCMT ***14*** *14:43:47.4±0.3,57˚.42S×147˚.55E,h14km±2km,MW5.0, Moment Tensor Solution. s24,c27; s65,c100; Moment tensor: Scale 10^16Nm; Mrr=0.28±.15; Mθθ=1.53±.12; Mφφ=-1.26±.12; Mrθ=0.73±.28; Mrφ=-3.19±.13; Mθφ=0.01±.26; Best double couple: M0=3.60000×10^16 NP1:φs=348.00000°, δ79.00000°,λ1.00000°. NP2:φs=258.00000°,δ89.00000°, λ169.00000°. Principal axes: T 3.7100, Plg9.0000°, Azm213.0000°; N -0.3200, Plg79.0000°, Azm72.0000°; P -3.4000, Plg7.0000°, Azm304.0000°; Data Used: II IU G IC CN.*

ISC 14 14:43:46.0±1.0,**57˚.4S**±0˚.1×**147˚.5E**±0˚.5,**h10**km,**n33, σ1§06/22,mb4.4/6,MS4.2/13,West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**20.17**	**57**	LR	LR	14 54 46.2	
	comp=Z,549nm,18.4s,baz=35,slow=33						
VNDA	**Vanda**	**20.77**	**171**	*e*P	**P**	**14 48 25.4**	**-1.3**
	90nm,2.3s						
VNDA	**Vanda**	**20.77**	**171**	P	**P**	**14 48 25.6**	**-1.0**
	2.5nm,0.8s,baz=340,slow=15,SNR=8.6						
SBA	**Scott Base**	**21.53**	**169**	*e*P	**P**	**14 48 34.3**	**-0.5**
BBOO	**Buckeboo**	**25.84**	**338**	*e*P	**P**	**14 49 19.2**	**+1.7**
STKA	**Stephens Creek**	**25.88**	**348**	*e*P	**P**	**14 49 19.6**	**+1.8**
	4.2nm,1.1s						
STKA	**Stephens Creek**	**25.88**	**348**	P	**P**	**14 49 18.1**	**+0.3**
	7.7nm,0.9s,baz=192,slow=8.8,SNR=8.6						
STKA				LR	LR	14 57 22.9	
	comp=Z,406nm,18.2s,baz=184,slow=32						
URZ	**Urewera**	**27.28**	**58**	LR	LR	15 00 09.2	
	comp=Z,543nm,18.6s,baz=217,slow=36						
NWAO	**Narrogin (SRO)**	**32.01**	**307**	LR	LR	14 58 42.2	
	comp=Z,34nm,21.5s,baz=123,slow=28						
QSPA	**South Pole Qui**	**32.66**	**180**	*e*P	**P**	**14 50 20.3**	**+2.3**
QSPA	**South Pole Qui**	**32.66**	**180**	P	**P**	**14 50 18.4**	**+0.4**
	1.8nm,1.0s,baz=333,slow=10.0,SNR=3.5						
ASAR	**Alice Springs**	**35.14**	**338**	P	**P**	**14 50 39.0**	**-0.7**
ASAR	**Alice Springs**	**35.14**	**338**	P	**P**	**14 50 39.0**	**-0.7**
	3.8nm,0.9s,baz=163,slow=10,SNR=19						
ASAR				LR	LR	15 03 23.2	
	comp=Z,34nm,20.1s,baz=167,slow=34						
AS31	**Alice Springs**	**35.15**	**338**	*e*P	**P**	**14 50 39.2**	**-0.5**
MAW	**Mawson**	**37.21**	**219**	LR	LR	15 05 18.4	
	comp=Z,518nm,19.9s,baz=85,slow=35						
CTAO	**Charters Tower**	**37.31**	**358**	*e*P	**P**	**14 50 58.3**	**0.0**
	23nm,1.2s						
WRA	**Warramunga Arr**	**38.68**	**340**	P	**P**	**14 51 08.9**	**-1.0**
WRA	**Warramunga Arr**	**38.68**	**340**	P	**P**	**14 51 08.9**	**-1.0**
	12nm,1.0s,baz=167,slow=7.6,SNR=44						
WRAB	**Tennant Creek**	**38.69**	**340**	*e*P	**P**	**14 51 08.9**	**-1.0**
	25nm,1.1s						
PMG	**Port Moresby**	**47.92**	**360**	LR	LR	15 11 20.6	
	comp=Z,357nm,19.5s,baz=1.5,slow=35						
HNR	**Honiara**	**48.86**	**16**	LR	LR	15 08 04.9	
	comp=Z,200nm,21.2s,baz=216,slow=30						
AFI	**Afiamalu**	**53.22**	**52**	LR	LR	15 10 23.4	
	comp=Z,219nm,20.5s,baz=102,slow=30						
KAPI	**Kappang**	**56.63**	**326**	LR	LR	15 15 33.9	
	comp=Z,222nm,18.5s,baz=4.4,slow=34						
PPT	**Papeete**	**60.86**	**77**	LR	LR	15 14 38.1	
	comp=Z,220nm,19.2s,baz=179,slow=30						
BOSA	**Boshof**	**81.53**	**229**	LR	LR	15 27 17.4	
	comp=Z,232nm,19.2s,baz=230,slow=32						
CMAR	**Chiang Mai Arr**	**85.69**	**314**	LR	LR	15 31 26.1	
	comp=Z,101nm,20.5s,baz=214,slow=33						
AKASG	**Malin Array Be**	**144.29**	**286**	PKP	**PKPab**	**15 03 18.2**	**-0.8**
AKASG	**Malin Array Be**	**144.29**	**286**	PKP	**PKPab**	**15 03 18.2**	**-0.8**
	0.3nm,0.4s,baz=114,slow=2.3,SNR=3.5						
FINES	**FINESS Array B**	**150.82**	**303**	PKPbc	**PKPbc**	**15 03 37.3**	**+0.2**
FINES	**FINESS Array B**	**150.82**	**303**	PKPbc	**PKPbc**	**15 03 37.3**	**+0.2**
	5.3nm,0.9s,baz=131,slow=10,SNR=3.4						
GERES	**GERESS Array B**	**151.48**	**273**	PKPbc	**PKPbc**	**15 03 38.5**	**-0.7**
GERES	**GERESS Array B**	**151.48**	**273**	PKPbc	**PKPbc**	**15 03 38.5**	**-0.7**
	0.8nm,0.8s,baz=114,slow=1.6,SNR=7.2						
CLL	**Collm**	**153.21**	**276**	*e*PKPab	**PKPab**	**15 03 55.0**	**+0.2**

IDC 14 15:00:18.5±1.9,**3˚.37N×127˚.26E,h0**km,**mb3.5/4, mb1 3.8/4,mb1mx3.5/23,mbtmp3.6/4,Error ellipse: s-maj=109.4km s-min=23.4km az=70.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.40**	**184**	P	P	15 05 08.7	+0.6
	6.3nm,1.2s,baz=9.5,slow=12,SNR=2.6						
WRA	**Warramunga Arr**	**24.19**	**164**	P	P	15 05 37.1	+0.1
	1.4nm,0.5s,baz=342,slow=11,SNR=25						
ASAR	**Alice Springs**	**27.64**	**167**	P	P	15 06 08.2	0.0
	0.3nm,0.5s,baz=349,slow=7.9,SNR=13						
MKAR	**Makanchi Array**	**58.15**	**325**	P	P	15 10 13.7	-0.5
	0.2nm,0.5s,baz=117,slow=7.5,SNR=4.0						

IDC 14 15:08:02.7±5.5,**5˚.13S×151˚.00E,h125**km±38km,**mb3.7/4, mb1 3.9/5,mb1mx3.3/18,mbtmp3.7/5,Error ellipse: s-maj=74.1km s-min=28.1km az=109.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.71**	**222**	P	Pn	15 09 25.6	+0.3
	3.5nm,0.3s,baz=53,slow=8.3,SNR=21						
PMG				S	Sn	15 10 29.5	-0.2
	8.7nm,0.3s,baz=120,slow=20,SNR=14						
WRA	**Warramunga Arr**	**21.90**	**226**	P	P	15 12 45.9	-0.2
	3.7nm,0.5s,baz=51,slow=10,SNR=66						
ASAR	**Alice Springs**	**24.72**	**220**	P	P	15 13 13.1	+0.4
	2.5nm,0.4s,baz=54,slow=9.2,SNR=147						
FITZ	**Fitzroy Crossi**	**27.93**	**240**	P	P	15 13 42.1	+0.6
	2.6nm,0.3s,baz=57,slow=10,SNR=30						
SONM	**Songino Array**	**65.66**	**329**	P	P	15 18 34.2	+0.4
	0.2nm,0.3s,baz=129,slow=3.9,SNR=2.5						
TORD	**Torodi Ar. Bea**	**148.69**	**287**	PKPbc	PKPdf	15 27 34.4	+1.9
	0.2nm,0.8s,baz=93,slow=1.8,SNR=3.0						

ISK ***14*** *15:26:41.9,37˚.90N×29˚.17E,h6km,MD2.9*
ISCJB ***14*** *15:26:42.2±0.5,37˚.89N±0˚.02×29˚.20E±0˚.03,h2km±6km, Error ellipse: s-maj=4.7km s-min=3.4km az=18.9*
DDA ***14*** *15:26:42.4±0.1,37˚.88N×29˚.23E,h7km,MD2.8*
CSEM ***14*** *15:26:42.4±0.1,37˚.88N×29˚.21E,h8km,MD2.9,Error ellipse: s-maj=2.8km s-min=2.3km az=110.0*

ISC 14 15:26:42.6±1.0,**37˚.88N**±0˚.02×**29˚.21E**±0˚.02,**h7**km±10km, **n37,σ0§49/56,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DENT	**Denizli**	**0.19**	**228**	*e*PG	**Pg**	**15 26 46.2**	**-0.3**
DENT	**Denizli**	**0.19**	**228**	*e*Pg	**Pg**	**15 26 46.2**	**-0.3**
DNZL	**Cakiroluk**	**0.23**	**214**	*i* P	**Pg**	**15 26 47.

STKA	**Stephens Creek**	**39.65**	**159**	P	**P**	**16 30 19.2**	**+0.4**
	1.1nm,0.3s,baz=351,slow=8.9,SNR=6.6						
MKAR	**Makanchi Array**	**56.12**	**325**	P	**P**	**16 32 25.7**	**-0.3**
	0.6nm,0.3s,baz=120,slow=7.3,SNR=29						
MKAR				ScP	**ScP**	**16 37 18.4**	**+1.9**
	0.2nm,0.6s,baz=132,slow=4.3,SNR=2.6						
ZALV	**Zalesovo Beam**	**59.10**	**333**	P	**P**	**16 32 45.7**	**-1.0**
	0.3nm,0.3s,baz=111,slow=6.3,SNR=3.2						
ILAR	**Eielson Array**	**83.94**	**25**	P	**P**	**16 35 15.8**	**-0.1**
	0.2nm,0.5s,baz=248,slow=5.4,SNR=4.6						
ARCES	**ARCESS Array B**	**88.93**	**340**	P	**P**	**16 35 40.5**	**+0.3**
	2.5nm,0.8s,baz=74,slow=8.9,SNR=6.9						
FINES	**FINESS Array B**	**90.35**	**332**	P	**P**	**16 35 47.1**	**+0.2**
	2.3nm,0.8s,baz=115,slow=6.6,SNR=3.5						
TORD	**Torodi Ar. Bea**	**122.08**	**289**	PKP	**PKPdf**	**16 41 39.7**	**-1.7**
	0.2nm,0.3s,baz=78,slow=1.5,SNR=5.2						

*IDC **14** 16:32:06.5±1.7, 5°.57N×126°.81E, h0km, mb3.5/5, mb1 3.7/5, mb1mx3.5/23, mbtmp3.5/5, Error ellipse: s-maj=119.6km s-min=21.1km az=70.0*
*ISCJB **14** 16:32:14.7±0.9, 5°.3N±0°.1×126°.4E±0°.2, h66km, mb3.4/5, Error ellipse: s-maj=30.3km s-min=10.2km az=156.5*

ISC 14 16:32:16.7±1.1, 5°.12N±0°.09×126°.3E±0°.2, h66km, n9, σ2§62/9, mb3.5/5, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.81**	**358**	*e*P	**Pn**	**16 32 42.7**	**-3.1**
MATI				*e*S	**Sn**	**16 33 12.6**	**+4.7**
CTBH	**Cotabato--PC H**	**2.94**	**315**	⇓*i*P	**Pn**	**16 33 00.2**	**-0.9**
BUKP	**Musuan**	**3.02**	**335**	*e*P	**Pn**	**16 33 01.2**	**-1.0**
IPIL	**Ipil**	**4.58**	**306**	*e*P	**Pn**	**16 33 21.9**	**-1.5**
FITZ	**Fitzroy Crossi**	**23.09**	**182**	P	**P**	**16 37 18.4**	**+1.4**
	1.6nm,0.8s,baz=0,slow=10,SNR=3.0						
WRA	**Warramunga Arr**	**26.12**	**163**	P	**P**	**16 37 45.4**	**+0.7**
	0.9nm,0.6s,baz=344,slow=10,SNR=10						
ASAR	**Alice Springs**	**29.55**	**166**	P	**P**	**16 38 16.0**	**+0.7**
	0.3nm,0.6s,baz=352,slow=7.3,SNR=4.3						
MKAR	**Makanchi Array**	**56.19**	**325**	P	**P**	**16 41 48.4**	**-1.5**
	0.2nm,0.4s,baz=115,slow=7.1,SNR=6.8						
ZALV	**Zalesovo Beam**	**59.18**	**333**	P	P	16 42 06.8	-3.9
	0.3nm,0.4s,baz=126,slow=7.3,SNR=2.5						

*ISCJB **14** 16:42:07.5±0.6, 5°.21N±0°.08×126°.4E±0°.1, h66km, mb3.7/12, Error ellipse: s-maj=22.6km s-min=7.1km az=157.7*
*IDC **14** 16:42:09.8±1.7, 5°.30N×126°.38E, h74km±14km, mb3.6/12, mb1 3.7/12, mb1mx3.6/24, mbtmp3.6/12, MS3.3/2, Ms1 3.3/2, ms1mx2.2/25, Error ellipse: s-maj=40.2km s-min=11.5km az=71.0*

ISC 14 16:42:09.0±0.7, 5°.16N±0°.08×126°.3E±0°.1, h66km, n20, σ1§54/22, mb3.9/12, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.78**	**359**	*e*P	**Pn**	**16 42 38.1**	**+0.5**
MATI				*e*S	**Sn**	**16 43 04.1**	**+4.8**
DAV	**Davao City (W)**	**2.03**	**339**	P	**Pn**	**16 42 42.4**	**+1.4**
	42nm,0.3s,baz=90,slow=20,SNR=4.9						
DAV				S	**Sn**	**16 43 04.4**	**-1.0**
	39nm,0.3s,baz=140,slow=23,SNR=7.5						
DAV				LR	LR	16 43 38.7	
	comp=Z,433nm,18.6s,baz=174,slow=46						
CTBH	**Cotabato--PC H**	**2.90**	**315**	⇑*i*P	**Pn**	**16 42 53.1**	**+0.3**
BUKP	**Musuan**	**2.97**	**336**	*e*P	**Pn**	**16 42 54.3**	**+0.5**
PAGZ	**Pagadian**	**3.95**	**313**	*e*P	**Pn**	**16 43 09.3**	**+2.2**
FITZ	**Fitzroy Crossi**	**23.12**	**182**	P	**P**	**16 47 10.3**	**+0.7**
	2.1nm,0.9s,baz=6.3,slow=9.2,SNR=2.9						
WRA	**Warramunga Arr**	**26.16**	**163**	P	**P**	**16 47 38.6**	**+1.2**
	1.9nm,0.6s,baz=343,slow=10.0,SNR=21						
ASAR	**Alice Springs**	**29.59**	**166**	P	**P**	**16 48 09.5**	**+1.5**
	0.8nm,0.6s,baz=351,slow=6.9,SNR=16						
ASAR				PcP	**PcP**	**16 51 11.6**	**-0.1**
	0.3nm,0.5s,baz=349,slow=2.0,SNR=5.2						
CMAR	**Chiang Mai Arr**	**29.80**	**299**	P	**P**	**16 48 09.7**	**-0.2**
	0.5nm,0.7s,baz=121,slow=7.0,SNR=5.1						
KSRS	**Korea Array**	**32.18**	**2**	LR	LR	17 00 07.4	
	comp=Z,32nm,20.0s,baz=195,slow=34						
HNR	**Honiara**	**36.53**	**113**	LR	LR	17 02 04.6	
	comp=Z,79nm,19.5s,baz=74,slow=33						
USRK	**Ussuriysk Arra**	**39.21**		P	**P**	**16 49 28.7**	**-2.0**
	1.6nm,0.6s,baz=173,slow=8.8,SNR=4.1						
STKA	**Stephens Creek**	**39.61**	**159**	P	**P**	**16 49 34.1**	**-0.1**
	1.8nm,0.8s,baz=333,slow=11,SNR=1.8						
SONM	**Songino Array**	**45.82**	**341**	P	**P**	**16 50 22.7**	**-1.8**
	0.5nm,0.5s,baz=151,slow=8.9,SNR=2.6						
MKAR	**Makanchi Array**	**56.15**	**325**	P	**P**	**16 51 41.7**	**-0.2**
	0.7nm,0.5s,baz=121,slow=7.2,SNR=15						
MKAR				PcP	**PcP**	**16 52 39.0**	**-0.1**
	0.8nm,0.7s,baz=110,slow=5.4,SNR=4.8						
ZALV	**Zalesovo Beam**	**59.13**	**333**	P	**P**	**16 52 01.6**	**-1.0**
	0.3nm,0.3s,baz=123,slow=5.5,SNR=3.6						
KURBB	**Kurchatov Arra**	**60.32**	**327**	P	**P**	**16 52 10.2**	**-0.6**
	1.6nm,0.7s,baz=123,slow=6.8,SNR=22						
ILAR	**Eielson Array**	**84.00**	**25**	P	**P**	**16 54 31.5**	**-0.5**
	0.2nm,0.7s,baz=260,slow=5.4,SNR=3.2						
ARCES	**ARCESS Array B**	**88.97**	**340**	P	**P**	**16 54 56.6**	**+0.4**
	2.9nm,0.8s,baz=74,slow=6.7,SNR=3.3						
TORD	**Torodi Ar. Bea**	**122.06**	**289**	PKP	**PKPdf**	**17 00 57.1**	**0.0**
	0.4nm,0.7s,baz=89,slow=1.4,SNR=4.4						

*ISCJB **14** 16:43:24.9±0.7, 32°.25N±0°.05×104°.71E±0°.06, h15km, mb3.3/5, Error ellipse: s-maj=7.7km s-min=7.1km az=13.2*
*IDC **14** 16:43:24.6±1.0, 32°.18N×104°.66E, h0km, mb3.4/5, mb1 3.5/7, mb1mx3.3/28, mbtmp3.3/7, ML3.7/2, Error ellipse: s-maj=39.0km s-min=18.9km az=56.0*

ISC 14 16:43:26.5±0.9, 32°.25N±0°.06×104°.76E±0°.06, h15km, n9, σ2§37/13, mb3.5/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LZH	**Lanzhou**	**3.90**	**349**	Pg	**Pg**	**16 44 42.5**	**+1.3**
LZH				Sn	**Sb**	**16 45 18.8**	**-3.4**
LZH				Sg	**Sg**	**16 45 33.8**	**+2.0**
LZH				*s*max	*s*max		
	comp=N,120nm,1.0s						
LZH				*s*max	*s*max		
	comp=E,110nm,0.9s						
LZH				LR	LR		
	comp=N,180nm,6.6s						
LZH				LR	LR		
	comp=E,200nm,6.4s						
LZH				LR	LR		
	comp=Z,210nm,8.0s						
XAN	**Xi'an**	**3.92**	**62**	Pn	**Pb**	**16 44 33.1**	**-2.2**
XAN				Pg	Pg	16 44 44.5	+2.9
XAN				Sn	**Sb**	**16 45 19.3**	**-3.3**
XAN				Sg	**Sg**	**16 45 37.1**	**+4.7**
XAN				*s*max	*s*max		
	comp=N,92nm,0.9s						
XAN				*s*max	*s*max		
	comp=E,41nm,0.7s						
XAN				LR	LR		
	comp=N,52nm,6.2s						
XAN				LR	LR		
	comp=E,25nm,4.9s						
XAN				LR	LR		
	comp=Z,33nm,10.2s						
CMAR	**Chiang Mai Arr**	**14.70**	**202**	Pn	**Pn**	**16 46 54.0**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=17,slow=9.6,SNR=3.1						
KSRS	**Korea Array**	**19.69**	**68**	P	**Pn**	**16 47 56.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=257,slow=10,SNR=3.4						
MKAR	**Makanchi Array**	**22.51**	**317**	P	**P**	**16 48 25.8**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=118,slow=12,SNR=7.3						
ZALV	**Zalesovo Beam**	**25.95**	**333**	P	**P**	**16 48 58.5**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=122,slow=11,SNR=4.9						
KURBB	**Kurchatov Arra**	**26.68**	**321**	P	**P**	**16 49 05.4**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=128,slow=10,SNR=4.7						
WRA	**Warramunga Arr**	**59.12**	**147**	P	**P**	**16 53 26.7**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=340,slow=7.4,SNR=4.6						
ASAR	**Alice Springs**	**62.19**	**150**	P	**P**	**16 53 47.8**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=329,slow=6.4,SNR=3.7						

*ISCJB **14** 16:57:21.7±0.5, 39°.30N±0°.02×27°.89E±0°.03, h4km±4km, Error ellipse: s-maj=3.7km s-min=3.1km az=174.1*
*ISK **14** 16:57:21.1, 39°.30N×27°.82E, h7km, MD2.9*
*CSEM **14** 16:57:21.7±0.2, 39°.31N×27°.85E, h5km, MD2.9, Error ellipse: s-maj=4.2km s-min=3.1km az=82.0*
*DDA **14** 16:57:22.1, 39°.29N×27°.95E, h7km, MD2.9*

ISC 14 16:57:22.0±1.2, 39°.31N±0°.02×27°.88E±0°.02, h1km±10km, n64, σ0§89/87, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.43**	**187**	*i*P	**Pg**	**16 57 30.6**	**+0.3**
AKHS				*i*S	**Sg**	**16 57 37.7**	**+1.8**
AKHS	**Akhisar**	**0.43**	**187**	*i*P	**Pg**	**16 57 30.6**	**+0.3**
AKHS				*i*S	**Sg**	**16 57 37.7**	**+1.8**
BALY	**Balya**	**0.47**	**335**	*i*P	**Pg**	**16 57 32.5**	**+1.4**
BALY				*i*S	**Sb**	**16 57 40.4**	**-0.3**
BALY	**Balya**	**0.47**	**335**	*i*P	**Pg**	**16 57 32.5**	**+1.4**
DURS	**Dursunbey**	**0.54**	**58**	*i*P	**Pg**	**16 57 30.4**	**-2.0**
DURS				*i*S	**Sg**	**16 57 40.2**	**+0.7**
DURS	**Dursunbey**	**0.54**	**58**	*i*P	**Pg**	**16 57 30.4**	**-2.0**
DURS				*i*S	**Sg**	**16 57 40.2**	**+0.7**
DST	**Dursunbey**	**0.64**	**63**	*e*PG	**Pg**	**16 57 34.8**	**+0.5**
DST				*e*SG	**Sg**	**16 57 44.2**	**+1.6**
DST	**Dursunbey**	**0.64**	**63**	*e*Pg	**Pg**	**16 57 34.8**	**+0.5**
DST				*e*Sg	**Sg**	**16 57 44.2**	**+1.6**
DEMI	**Demirci**	**0.70**	**112**	*i*P	**Pg**	**16 57 35.0**	**-0.4**
DEMI				*i*S	**Sg**	**16 57 43.4**	**-1.1**
DEMI	**Demirci**	**0.70**	**112**	*i*P	**Pg**	**16 57 35.0**	**-0.4**
DEMI				*i*S	**Sg**	**16 57 43.4**	**-1.1**
GONE	**Gonen-Balikesi**	**0.75**	**348**	*e*PG	**Pg**	**16 57 36.0**	**-0.4**
GONE				*e*SG	**Sg**	**16 57 47.1**	**+1.0**
GONE	**Gonen-Balikesi**	**0.75**	**348**	*e*Pg	**Pg**	**16 57 36.0**	**-0.4**
GONE				*e*Sg	**Sg**	**16 57 47.1**	**+1.0**
AYVA	**Ayvalik**	**0.92**	**270**	*i*P	**Pn**	**16 57 42.0**	**-0.1**
AYVA				*i*S	**Sn**	**16 57 56.8**	**+0.8**
MANT	**Manisa**	**0.97**	**147**	*e*P	**Pg**	**16 57 40.5**	**-0.1**
MANT				*i*S	**Sg**	**16 57 52.4**	**-0.9**
MANT	**Manisa**	**0.97**	**147**	*e*P	**Pg**	**16 57 40.5**	**-0.1**
MANT				*i*S	**Sg**	**16 57 52.4**	**-0.9**
KULA	**Kula-Manisa**	**1.00**	**142**	*e*PG	**Pg**	**16 57 40.8**	**-0.4**
KULA	**Kula-Manisa**	**1.00**	**142**	*e*Pg	**Pg**	**16 57 40.8**	**-0.4**
KCTX	**Karacabey (Bur**	**1.02**	**21**	*e*PG	**Pg**	**16 57 41.5**	**-0.1**
KCTX				*e*SG	**Sb**	**16 57 57.1**	**+0.6**
KCTX	**Karacabey (Bur**	**1.02**	**21**	*e*Pg	**Pg**	**16 57 41.5**	**-0.1**
KCTX				*e*Sg	**Sb**	**16 57 57.1**	**+0.6**
IZM	**Izmir**	**1.03**	**208**	*e*PG	**Pg**	**16 57 41.2**	**-0.5**
IZM				*e*SG	**Sg**	**16 57 55.1**	**0.0**
IZM	**Izmir**	**1.03**	**208**	*e*Pg	**Pg**	**16 57 41.2**	**-0.5**
IZM				*e*Sg	**Sg**	**16 57 55.1**	**0.0**
BNT	**Bandirma**	**1.04**	**2**	*e*PG	**Pg**	**16 57 41.1**	**-0.9**
BNT	**Bandirma**	**1.04**	**2**	*e*Pg	**Pg**	**16 57 41.1**	**-0.9**
BLCB	**Balcova**	**1.13**	**216**	*e*PN	**Pg**	**16 57 42.2**	**-1.5**
BLCB	**Balcova**	**1.13**	**216**	*e*Pn	**Pg**	**16 57 42.2**	**-1.5**
KRBG	**Karabiga-Canak**	**1.17**	**338**	*e*PN	**Pg**	**16 57 43.5**	**-1.0**
KRBG	**Karabiga-Canak**	**1.17**	**338**	*e*Pn	**Pg**	**16 57 43.5**	**-1.0**
GDZ	**Gediz**	**1.26**	**100**	*i*P	**Pg**	**16 57 46.2**	**0.0**
GDZ				*i*S	**Sg**	**16 58 02.3**	**-0.2**
GDZ	**Gediz**	**1.26**	**100**	*i*P	**Pg**	**16 57 46.2**	**0.0**
GDZ				*i*S	**Sg**	**16 58 02.3**	**-0.2**
ARMT	**Armutlu**	**1.46**	**31**	*e*PN	**Pn**	**16 57 48.8**	**-0.8**
ARMT	**Armutlu**	**1.46**	**31**	*e*Pn	**Pn**	**16 57 48.8**	**-0.8**
GEMT	**Gemlik**	**1.51**	**41**	*e*PN	**Pn**	**16 57 49.8**	**-0.4**
GEMT	**Gemlik**	**1.51**	**41**	*e*Pn	**Pn**	**16 57 49.8**	**-0.4**
BOZC	**Bozcaada**	**1.51**	**291**	*i*P	**Pn**	**16 57 50.7**	**+0.5**
BOZC				*i*S	**Sn**	**16 58 11.0**	**+0.6**
GELI	**Tayfur-Gelibol**	**1.53**	**316**	*e*PN	**Pn**	**16 57 48.8**	**-1.7**
GELI	**Tayfur-Gelibol**	**1.53**	**316**	*e*Pn	**Pn**	**16 57 48.8**	**-1.7**
KHL	**Karahalli**	**1.62**	**127**	*e*PN	**Pn**	**16 57 51.4**	**-0.3**
KHL	**Karahalli**	**1.62**	**127**	*e*Pn	**Pn**	**16 57 51.4**	**-0.3**
AYDN	**Tasoluk**	**1.65**	**180**	*i*P	**Pn**	**16 57 53.0**	**+0.9**
AYDN				*i*S	**Sn**	**16 58 13.8**	**-0.1**
AYDN	**Tasoluk**	**1.65**	**180**	*i*P	**Pn**	**16 57 53.0**	**+0.9**
AYDN				*i*S	**Sn**	**16 58 13.8**	**-0.1**
ERIK	**Erikli-Kesan**	**1.72**	**323**	*e*PN	**Pn**	**16 57 51.8**	**-1.2**
ERIK	**Erikli-Kesan**	**1.72**	**323**	*e*Pn	**Pn**	**16 57 51.8**	**-1.2**
ALT	**Altintas**	**1.75**	**98**	*e*PN	**Pn**	**16 57 53.4**	**-0.2**
ALT	**Altintas**	**1.75**	**98**	*e*Pn	**Pn**	**16 57 53.4**	**-0.2**
CAVI	**Cavuskoy**	**1.75**	**59**	*e*PN	**Pn**	**16 57 53.3**	**-0.3**
CAVI	**Cavuskoy**	**1.75**	**59**	*e*Pn	**Pn**	**16 57 53.3**	**-0.3**
ADVT	**Abdulvahap**	**1.82**	**51**	*e*PN	**Pn**	**16 57 54.4**	**0.0**
ADVT	**Abdulvahap**	**1.82**	**51**	*e*Pn	**Pn**	**16 57 54.4**	**0.0**
ENEZ	**Enez**	**1.95**	**318**	*e*PN	**Pn**	**16 57 54.4**	**-1.7**
ENEZ	**Enez**	**1.95**	**318**	*e*Pn	**Pn**	**16 57 54.4**	**-1.7**
CTKS	**Kestanelik-??a**	**1.98**	**14**	*e*PN	**Pn**	**16 57 56.7**	**+0.1**
CTKS	**Kestanelik-??a**	**1.98**	**14**	*e*Pn	**Pn**	**16 57 56.7**	**+0.1**
BGKT	**Bogazkoy**	**1.99**	**20**	*e*PN	**Pn**	**16 57 56.1**	**-0.7**
BGKT	**Bogazkoy**	**1.99**	**20**	*e*Pn	**Pn**	**16 57 56.1**	**-0.7**
HRT	**Hereke**	**2.04**	**42**	*e*PN	**Pn**	**16 57 57.1**	**-0.4**
HRT	**Hereke**	**2.04**	**42**	*e*Pn	**Pn**	**16 57 57.1**	**-0.4**
CTYL	**Yal??k??y-??at**	**2.19**	**8**	*e*PN	**Pn**	**16 57 59.1**	**-0.3**
CTYL	**Yal??k??y-??at**	**2.19**	**8**	*e*Pn	**Pn**	**16 57 59.1**	**-0.3**
GULT	**Gulveren**	**2.32**	**60**	*e*PN	**Pn**	**16 58 02.0**	**+0.7**
GULT	**Gulveren**	**2.32**	**60**	*e*Pn	**Pn**	**16 58 02.1**	**+0.7**
EDRB	**Edirne**	**2.68**	**341**	*e*PN	**Pn**	**16 58 05.4**	**-0.8**
EDRB	**Edirne**	**2.68**	**341**	*e*Pn	**Pn**	**16 58 05.4**	**-0.8**
SVRH	**Sivrihisar-ESK**	**2.83**	**86**	*e*PN	**Pn**	**16 58 09.0**	**+0.7**
SVRH	**Sivrihisar-ESK**	**2.83**	**86**	*e*Pn	**Pn**	**16 58 09.0**	**+0.7**

IDC 14 16:57:40.1±2.0, 12°.85S×168°.45E, h399km±21km, mb3.4/17, mb1 3.5/19, mb1mx3.5/24, mbtmp3.4/19, Error ellipse: s-maj=15.3km s-min=13.8km az=90.0, Santa Cruz Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**9.01**	**291**	P	P	16 59 47.7	+0.9
	3.7nm,0.3s,baz=152,slow=2.6,SNR=5.0						
DZM	**Mont Dzumac**	**9.37**	**192**	P	Pn	16 59 51.7	+0.9
	2.0nm,0.3s,baz=46,slow=21,SNR=25						
CTA	**Charters Tower**	**22.45**	**248**	P	P	17 02 06.8	-0.2
	1.8nm,0.6s,baz=60,slow=16,SNR=2.2						
URZ	**Urewera**	**26.45**	**165**	P	P	17 02 42.0	-0.5
	5.9nm,0.5s,baz=336,slow=5.5,SNR=8.0						
RPZ	**Rata Peaks**	**30.84**	**176**	P	P	17 03 21.1	+0.1
	8.7nm,0.7s,baz=76,slow=6.8,SNR=5.5						
STKA	**Stephens Creek**	**31.09**	**228**	P	P	17 03 23.5	+0.2
	2.7nm,0.5s,baz=58,slow=9.4,SNR=11						
WRA	**Warramunga Arr**	**33.43**	**253**	P	P	17 03 42.9	-0.9
	0.2nm,0.3s,baz=81,slow=7.8,SNR=13						
WRA				S	S	17 08 31.7	-3.8
	0.3nm,0.7s,baz=84,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**34.44**	**247**	P	P	17 03 51.9	-0.4
	1.4nm,0.4s,baz=70,slow=9.7,SNR=63						
ASAR				S	S	17 08 47.0	-3.9
	0.4nm,0.6s,baz=82,slow=17,SNR=3.9						
ASAR				ScP	ScP	17 09 24.8	+0.8
	0.5nm,0.7s,baz=84,slow=4.2,SNR=7.2						
FITZ	**Fitzroy Crossi**	**41.52**	**257**	P	P	17 04 51.1	+0.4
	2.2nm,1.0s,baz=88,slow=7.2,SNR=3.8						
KSRS	**Korea Array**	**62.87**	**324**	P	P	17 07 25.8	+0.5
	1.0nm,1.1s,baz=136,slow=7.3,SNR=4.4						
VNDA	**Vanda**	**64.75**	**182**	P	P	17 07 37.1	+0.3
	1.3nm,0.6s,baz=355,slow=5.9,SNR=6.6						
PETK	**Petropavlovsk-**	**66.34**	**353**	P	P	17 07 47.6	+0.5
	2.3nm,0.5s,baz=122,slow=1.9,SNR=5.5						
CMAR	**Chiang Mai Arr**	**75.26**	**293**	P	P	17 08 40.9	-0.1
	0.6nm,0.7s,baz=147,slow=4.1,SNR=4.3						
SONM	**Songino Array**	**81.69**	**323**	P	P	17 09 15.1	-0.2
	0.3nm,0.4s,baz=102,slow=6.1,SNR=3.7						
ILAR	**Eielson Array**	**84.40**	**18**	P	P	17 09 27.4	-0.9
	3.3nm,0.6s,baz=240,slow=5.1,SNR=82						
NVAR	**Mina Array Bea**	**85.18**	**49**	P	P	17 09 33.3	+0.1
	0.4nm,0.7s,baz=219,slow=7.3,SNR=4.0						
TXAR	**Lajitas Array**	**94.37**	**61**	P	P	17 10 16.4	+0.3
	0.1nm,0.4s,baz=186,slow=2.7,SNR=2.7						
YKA	**Yellowknife Ar**	**95.36**	**27**	P	P	17 10 18.8	-0.8
	0.3nm,0.6s,baz=255,slow=4.6,SNR=5.3						
MKAR	**Makanchi Array**	**96.65**	**316**	P	P	17 10 25.9	0.0
	0.9nm,0.6s,baz=80,slow=6.8,SNR=12						
GERES	**GERESS Array B**	**138.47**	**335**	SKPbc	SKPbc	17 19 14.4	-0.9
	0.1nm,0.3s,baz=56,slow=5.2,SNR=4.8						

*ISCJB **14** 17:07:43.5±0.5, 39°.08N±0°.03×29°.03E±0°.03, h6km±5km, Error ellipse: s-maj=4.6km s-min=3.6km az=178.9*
*DDA **14** 17:07:43.5, 39°.09N×29°.04E, h7km, ML3.0*
*ISK **14** 17:07:43.7, 39°.01N×29°.02E, h22km, MD2.8*
*CSEM **14** 17:07:43.7±0.1, 39°.08N×29°.02E, h8km, ML3.0, Error ellipse: s-maj=2.4km s-min=2.3km az=54.0*

ISC 14 17:07:43.7±1.0, 39°.09N±0°.03×29°.02E±0°.02, h6km±9km, n34, σ0§37/56, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.24**	**259**	*i*P	**Pg**	**17 07 48.7**	**+0.3**
DEMI				*i*S	**Sg**	**17 07 52.2**	**+0.7**
DEMI	**Demirci**	**0.24**	**259**	*i*P	**Pg**	**17 07 48.7**	**+0.3**
DEMI				*i*S	**Sg**	**17 07 52.2**	**+0.7**
GDZ	**Gediz**	**0.36**	**90**	*i*P	**Pg**	**17 07 50.4**	**-0.4**
GDZ				*i*S	**Sg**	**17 07 55.1**	**-0.5**
GDZ	**Gediz**	**0.36**	**90**	*i*P	**Pg**	**17 07 50.4**	**-0.4**
GDZ				*i*S	**Sg**	**17 07 55.1**	**-0.5**
KULA	**Kula-Manisa**	**0.64**	**206**	*e*PG	**Pg**	**17 07 55.6**	**-0.4**
KULA				*e*SG	**Sg**	**17 08 04.3**	**0.0**
KULA	**Kula-Manisa**	**0.64**	**206**	*e*Pg	**Pg**	**17 07 55.6**	**-0.4**
KULA				*e*Sg	**Sg**	**17 08 04.3**	**0.0**
DURS	**Dursunbey**	**0.66**	**321**	*i*P	**Pb**	**17 07 57.4**	**-0.3**
DURS				*i*S	**Sg**	**17 08 04.9**	**-0.1**
DURS	**Dursunbey**	**0.66**	**321**	*i*P	**Pb**	**17 07 57.4**	**-0.3**
DURS				*i*S	**Sg**	**17 08 04.9**	**-0.1**
MANT	**Manisa**	**0.70**	**211**	*i*P	**Pg**	**17 07 57.1**	**0.0**
MANT				*i*S	**Sg**	**17 08 06.4**	**+0.2**
MANT	**Manisa**	**0.70**	**211**	*i*P	**Pg**	**17 07 57.1**	**0.0**
MANT				*i*S	**Sg**	**17 08 06.4**	**+0.2**
KHAL	**Karahalli**	**0.81**	**152**	*i*P	**Pg**	**17 07 59.2**	**0.0**
KHAL				*i*S	**Sg**	**17 08 09.9**	**+0.2**
KHAL	**Karahalli**	**0.81**	**152**	*i*P	**Pg**	**17 07 59.2**	**0.0**
KHAL				*i*S	**Sg**	**17 08 09.9**	**+0.2**
ALT	**Altintas**	**0.85**	**92**	*e*PG	**Pb**	**17 08 01.4**	**+0.4**
ALT				*e*SG	**Sb**	**17 08 13.3**	**+0.6**
ALT	**Altintas**	**0.85**	**92**	*e*Pg	**Pb**	**17 08 01.4**	**+0.4**
ALT				*e*Sg	**Sb**	**17 08 13.3**	**+0.6**
KHL	**Karahalli**	**0.86**	**152**	*e*PG	**Pg**	**17 08 00.1**	**-0.1**
KHL				*e*SG	**Sg**	**17 08 11.0**	**-0.4**
KHL	**Karahalli**	**0.86**	**152**	*e*Pg	**Pg**	**17 08 00.1**	**-0.1**
KHL				*e*Sg	**Sg**	**17 08 11.0**	**-0.4**
AKHS	**Akhisar**	**0.96**	**258**	*i*P	**Pn**	**17 08 03.2**	**-0.5**
AKHS				*i*S	**Sb**	**17 08 14.9**	**-0.7**
AKHS	**Akhisar**	**0.96**	**258**	*i*P	**Pn**	**17 08 03.2**	**-0.5**
AKHS				*i*S	**Sb**	**17 08 14.9**	**-0.7**
BALY	**Balya**	**1.26**	**301**	*i*P	**Pg**	**17 08 07.9**	**0.0**
BALY				*i*S	**Sn**	**17 08 25.7**	**+0.6**
BALY	**Balya**	**1.26**	**301**	*i*P	**Pg**	**17 08 07.9**	**0.0**
BALY				*i*S	**Sn**	**17 08 25.7**	**+0.6**
KCTX	**Karacabey (Bur**	**1.28**	**337**	*e*PN	**Pn**	**17 08 08.0**	**-0.1**
KCTX	**Karacabey (Bur**	**1.28**	**337**	*e*Pn	**Pn**	**17 08 08.0**	**-0.1**
CAVI	**Cavuskoy**	**1.28**	**30**	*e*PN	**Pn**	**17 08 08.0**	**-0.1**
CAVI				*e*SN	**Sb**	**17 08 24.9**	**0.0**
CAVI	**Cavuskoy**	**1.28**	**30**	*e*Pn	**Pn**	**17 08 08.0**	**-0.1**
CAVI				*e*Sn	**Sb**	**17 08 24.9**	**0.0**
GEMT	**Gemlik**	**1.35**	**6**	*e*PN	**Pn**	**17 08 08.7**	**-0.4**
GEMT	**Gemlik**	**1.35**	**6**	*e*Pn	**Pn**	**17 08 08.7**	**-0.4**
GONE	**Gonen-Balikesi**	**1.40**	**313**	*e*PN	**Pn**	**17 08 09.3**	**-0.4**
GONE	**Gonen-Balikesi**	**1.40**	**313**	*e*Pn	**Pn**	**17 08 09.3**	**-0.4**
ARMT	**Armutlu**	**1.48**	**355**	*e*PN	**Pn**	**17 08 10.6**	**-0.2**
ARMT	**Armutlu**	**1.48**	**355**	*e*Pn	**Pn**	**17

KPT	**Kopyto**	**2.38**	**340**	P	Pn	17 13 25.3	+1.7	
KPT				*i* S	Sb	17 13 55.1	-1.9	
LGNR	**Loginova**	**2.42**	**347**	*e*P	Pb	17 13 26.6	-1.7	
LGNR				*i* S	Sb	17 13 56.7	-1.7	
CIRR	**Tsirk**	**2.44**	**348**	P	Pn	17 13 25.8	+1.3	
MTVR	**Mutnovka**	**2.45**	**240**	*e*P	Pn	17 13 26.0	+1.4	
MTVR				*i* S	Sn	17 13 56.0	+1.3	
GRL	**Gorelyy**	**2.47**	**243**	P	Pn	17 13 26.5	+1.6	
KOZ	**Kozyrevsk**	**2.54**	**337**	P	Pb	17 13 28.3	-1.9	
KOZ				*i* S	Sb	17 13 59.8	-1.7	
KRSR	**Krestovskiy**	**2.56**	**346**	P	Pn	17 13 27.8	+1.7	
KRSR				*i* S	Sn	17 13 59.2	+1.8	
KLY	**Klyuchi**	**2.65**	**348**	P	Pn	17 13 28.0	+0.9	
KLY				*i* S	Sn	17 13 59.4	+0.2	
ASAK	**Asacha**	**2.65**	**241**	*e*P	Pn	17 13 29.3	+2.0	
ASAK				*i* S	Sb	17 14 02.4	-2.3	
ESO	**Esso**	**2.78**	**323**	*e*P	Pn	17 13 30.2	+1.2	
ESO				*e*S	Sn	17 14 03.1	+0.4	
SRDR	**Sredinnyy**	**2.82**	**337**	P	Pn	17 13 30.7	+1.2	
SRDR				*i* S	Sn	17 14 04.8	+1.2	
APC	**Apacha**	**2.83**	**255**	P	Pb	17 13 32.5	-2.4	
APC				*i* S	Sb	17 14 06.9	-2.6	
BDR	**Baidarnaya**	**2.85**	**355**	P	Pb	17 13 33.0	-2.4	
SMKR	**Semkarok**	**2.85**	**358**	P	Pn	17 13 31.6	+1.6	
SMKR				*i* S	Sn	17 14 06.0	+1.5	
SRKR	**Sorokina**	**2.94**	**355**	P	Pn	17 13 34.0	+2.8	
MIPR	**Malaya Ipel'ka**	**3.31**	**246**	P	Pn	17 13 38.6	+2.4	

KRSC 14 17:20:54.2±0.5, 53°66'N×161°95'E, h11km±10km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.91**	**352**	*e*P	Pg	17 21 10.8	-0.9
MKZ				*e*S	Sg	17 21 23.6	+0.1
SPN	**Mys Shipunski**	**1.28**	**245**	*e*P	Pn	17 21 18.1	0.0
SPN				S	Sn	17 21 35.2	0.0
KII	**Karymskiy**	**1.53**	**285**	*e*P	Pn	17 21 20.8	-0.7
KII				S	Sn	17 21 40.8	-0.7
NLC	**Nalytchevo**	**1.63**	**254**	*e*P	Pn	17 21 22.9	+0.1
NLC				*e*S	Sn	17 21 43.9	+0.1
SDLR	**Sedlovina**	**1.87**	**259**	*e*P	Pn	17 21 26.7	+0.4
SDLR				S	Sn	17 21 50.3	+0.2
SMAR	**Somma**	**1.92**	**259**	*e*P	Pn	17 21 27.5	+0.3
UGLR	**Uglovaya**	**1.92**	**258**	*e*P	Pn	17 21 27.8	+0.8
TUMR	**Tumrok**	**1.94**	**328**	*e*P	Pn	17 21 27.1	-0.1
TUMR				*e*S	Sn	17 21 51.2	-0.5
KRER	**Koryakskii**	**1.95**	**261**	*e*P	Pn	17 21 28.1	+0.7
AVH	**Avacha**	**1.96**	**260**	*e*P	Pn	17 21 28.5	+1.0
AVH				*e*S	Sn	17 21 52.9	+0.8
KOK	**Koryaka**	**2.02**	**261**	P	Pn	17 21 28.7	+0.5
PET	**Petropavlovsk**	**2.08**	**253**	*e*P	Pn	17 21 29.4	+0.5
PET				*e*S	Sn	17 21 55.0	+0.2
KMNR	**Kamenistaya**	**2.32**	**335**	*e*P	Pn	17 21 33.4	+0.9
KMNR				*e*S	Sn	17 22 01.4	+0.2
GNL	**Ganaly**	**2.38**	**272**	*e*P	Pn	17 21 34.6	+1.2
GNL				*e*S	Sn	17 22 03.7	+1.0
BZGR	**Bezymyannyi-Gr**	**2.40**	**343**	P	Pn	17 21 34.8	+1.3
BZGR				S	Sn	17 22 04.4	+1.4
RUS	**Russkaya**	**2.41**	**241**	P	Pn	17 21 34.3	+0.8
RUS				*e*S	Sn	17 22 03.0	0.0
BZMR	**Bezymyannaya**	**2.43**	**340**	P	Pn	17 21 35.8	+1.8
ZLN	**Zelenaya**	**2.45**	**345**	P	Pn	17 21 35.6	+1.3
ZLN				S	Sn	17 22 05.7	+1.3
BZWR	**Bezymyannyi-We**	**2.46**	**341**	P	Pn	17 21 36.0	+1.6
KPT	**Kopyto**	**2.52**	**337**	P	Pn	17 21 36.2	+1.0
KPT				S	Sn	17 22 06.3	+0.4
LGNR	**Loginova**	**2.54**	**344**	P	Pn	17 21 37.4	+1.8
CIRR	**Tsirk**	**2.56**	**345**	P	Pn	17 21 37.4	+1.6
MTVR	**Mutnovka**	**2.56**	**244**	*e*P	Pn	17 21 36.9	+1.1
MTVR				*e*S	Sn	17 22 07.8	+0.7
GRL	**Gorelyy**	**2.59**	**246**	P	Pn	17 21 38.1	+2.0
KRSR	**Krestovskiy**	**2.68**	**343**	S	Sn	17 22 09.5	-0.5
KOZ	**Kozyrevsk**	**2.69**	**334**	P	Pn	17 21 39.4	+2.0
ASAK	**Asacha**	**2.76**	**244**	*e*P	Pn	17 21 40.7	+2.2
ASAK				*e*S	Sn	17 22 14.1	+2.2
KLY	**Klyuchi**	**2.76**	**345**	P	Pn	17 21 39.0	+0.6
KLY				S	Sn	17 22 11.9	+0.2
BKI	**Bering**	**2.81**	**55**	P	Pn	17 21 38.0	-1.0
BKI				*e*S	Sn	17 22 09.3	-3.6
SMKR	**Semkarok**	**2.94**	**355**	P	Pn	17 21 42.4	+1.4
SMKR				S	Sn	17 22 17.5	+1.2
SRDR	**Sredinnyy**	**2.96**	**335**	P	Pn	17 21 42.1	+0.9
APC	**Apacha**	**2.97**	**258**	P	Pn	17 21 43.3	+2.1
APC				S	Sn	17 22 18.9	+2.1
MIPR	**Malaya Ipel'ka**	**3.43**	**248**	P	Pn	17 21 50.3	+2.7

*IDC **14** 17:27:25.1±4.0, 31°.95S×179°.83E, h380km±39km, mb3.2/4, mb1 3.3/5, mb1mx3.1/18, mbtmp3.2/5, Error ellipse: s-maj=41.5km s-min=25.7km az=33.0*
*ISCJB **14** 17:27:27.7±0.8, 32°.26S±0°.06×179°.8E±0°.2, h439km, mb3.4/4, Error ellipse: s-maj=22.1km s-min=7.3km az=11.6*

ISC 14 17:27:30.0±1.2, 32°33S±0°.09×179°6E±0°.2, h439km, n45, σ0$92/54, mb3.4/4, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**5.84**	**191**	PN	**P**	**17 29 01.8**	**-0.2**
PUZ				SN	S	17 30 10.2	-7.3
MWZ	**Matawai**	**6.23**	**195**	PN	**P**	**17 29 05.7**	**-0.5**
MWZ				SN	**S**	**17 30 24.4**	**-0.5**
CNGZ	**Carnagh Statio**	**6.25**	**190**	*e*PN	**P**	**17 29 06.6**	**+0.3**
URZ	**Urewera**	**6.26**	**199**	PN	**P**	**17 29 05.1**	**-1.4**
URZ				SN	**S**	**17 30 23.9**	**-1.6**
URZ	**Urewera** 7.4nm,0.3s,baz=286,slow=3.1,SNR=82	**6.26**	**199**	P	**P**	**17 29 05.0**	**-1.4**
URZ				S	**S**	**17 30 24.5**	**-0.9**
	8.4nm,0.3s,baz=57,slow=23,SNR=21						
KNZ	**Kokohu**	**6.86**	**193**	*e*PN	**P**	**17 29 12.4**	**-0.5**
KNZ				SN	**S**	**17 30 36.6**	**-0.5**
RAHZ	**Arahi**	**6.89**	**197**	PN	**P**	**17 29 14.4**	**+1.1**
MHGZ	**Mahia Peninsul**	**6.95**	**191**	*e*PN	**P**	**17 29 15.6**	**+1.8**
BKZ	**Black Stump Fm**	**7.28**	**200**	*e*PN	**P**	**17 29 16.4**	**-1.1**
BKZ				SN	**S**	**17 30 45.0**	**-0.5**
FWVZ	**Far West T-bar**	**7.66**	**204**	PN	**P**	**17 29 23.0**	**+1.2**
WHVZ	**Whangaehu Hut**	**7.67**	**204**	PN	**P**	**17 29 22.6**	**+0.7**
TRVZ	**Turoa**	**7.70**	**204**	PN	**P**	**17 29 22.5**	**+0.3**
BHHZ	**Black Hill Sta**	**7.70**	**201**	*e*PN	**P**	**17 29 21.9**	**-0.2**
KAHZ	**Kahuranaki**	**7.77**	**196**	*e*PN	**P**	**17 29 24.3**	**+1.5**
WPHZ	**Waipukurau**	**8.13**	**198**	*e*PN	**P**	**17 29 27.4**	**+0.8**
TSZ	**Takapari Road**	**8.26**	**200**	*e*PN	**P**	**17 29 27.4**	**-0.7**
PRHZ	**Porangahau**	**8.28**	**196**	PN	**P**	**17 29 29.8**	**+1.6**
ANWZ	**Angora Road**	**8.50**	**197**	PN	**P**	**17 29 32.0**	**+1.4**
ANWZ				SN	**S**	**17 31 09.9**	**+0.2**
BFZ	**Birch Farm**	**8.77**	**197**	PN	**P**	**17 29 35.6**	**+2.1**
MRZ	**Mangatainoka R**	**8.93**	**200**	*e*PN	**P**	**17 29 34.2**	**-1.0**
MRZ				SN	**S**	**17 31 17.3**	**-1.1**
TIWZ	**Tintock**	**8.95**	**199**	*e*PN	**P**	**17 29 35.6**	**+0.1**
HOWZ	**Holdsworth Sta**	**9.16**	**200**	*e*PN	**P**	**17 29 38.3**	**+0.4**
HOWZ				SN	**S**	**17 31 22.0**	**-1.2**
OGWZ	**Otaki Gorge**	**9.20**	**202**	*e*PN	**P**	**17 29 37.7**	**-0.5**
KIW	**Kapiti Island**	**9.32**	**203**	*e*PN	**P**	**17 29 39.5**	**0.0**
MTW	**Mount Morrison**	**9.41**	**199**	*e*PN	**P**	**17 29 41.2**	**+0.7**
CAW	**Cannon Point**	**9.49**	**201**	*e*PN	**P**	**17 29 41.6**	**+0.2**
SNZO	**South Karori**	**9.79**	**202**	*e*PN	**P**	**17 29 44.7**	**+0.1**
SNZO				SN	**S**	**17 31 35.9**	**+0.3**
TCW	**Tory Channel**	**9.85**	**204**	*e*PN	**P**	**17 29 44.8**	**-0.5**
TCW				SN	**S**	**17 31 35.6**	**-1.2**
PLWZ	**Palliser**	**9.86**	**200**	*e*PN	**P**	**17 29 46.3**	**+0.8**
TUWZ	**Tuamarina**	**10.16**	**205**	*e*PN	**P**	**17 29 47.7**	**-1.0**
NNZ	**Nelson**	**10.18**	**208**	*e*PN	**P**	**17 29 49.5**	**+0.6**
NNZ				SN	**S**	**17 31 43.6**	**0.0**
THZ	**Tophouse**	**10.84**	**208**	*e*PN	**P**	**17 29 56.6**	**+0.4**
KHZ	**Kahutara**	**11.17**	**204**	PN	**P**	**17 29 59.8**	**+0.1**
KHZ				SN	**S**	**17 32 04.5**	**+1.3**
OXZ	**Oxford**	**12.50**	**206**	*e*PN	**P**	**17 30 15.2**	**+0.9**
MQZ	**McQueen's Vall**	**12.61**	**204**	SN	**S**	**17 32 32.7**	**+0.7**
ODZ	**Otahua Downs**	**14.49**	**206**	SN	S	17 33 19.3	+10
ASAR	**Alice Springs** 0.3nm,0.6s,baz=104,slow=7.0,SNR=13	**41.04**	**270**	P	**P**	**17 34 34.4**	**+0.7**
WRA	**Warramunga Arr** 0.9nm,0.3s,baz=111,slow=8.1,SNR=59	**42.21**	**276**	P	**P**	**17 34 43.6**	**+0.6**
QSPA	**South Pole Qui** 0.9nm,0.9s,baz=0.0,slow=20,SNR=3.6	**57.78**	**180**	P	P	17 36 40.9	+3.4
PETK	**Petropavlovsk-** 2.5nm,0.8s,baz=152,slow=6.4,SNR=3.8	**87.21**	**347**	P	**P**	**17 39 28.1**	**+0.1**
MKAR	**Makanchi Array**	**117.46**	**310**	PKP	**PKPdf**	**17 45 24.3**	**-0.2**
	0.1nm,0.4s,baz=101,slow=3.1,SNR=2.6						
JOF	**Joensuu**	**143.42**	**336**	*e*p	PKPbc	17 46 10.7	-0.1
KAF	**Kangasniemi**	**145.64**	**338**	*e*p	**PKPbc**	**17 46 17.1**	**-0.7**
FINES	**FINESS Array B** 2.6nm,0.5s,baz=32,slow=5.6,SNR=13	**146.21**	**337**	PKPbc	**PKPbc**	**17 46 18.9**	**-0.6**
NOA	**NORSAR Array B** 1.1nm,0.8s,baz=18,slow=4.2,SNR=3.3	**150.30**	**349**	PKPbc	**PKPbc**	**17 46 29.1**	**-0.8**

IDC 14 17:41:23.6±6.2, 19°.11N×39°.14E, h76km±53km, mb3.5/11, mb1 3.6/12, mb1mx3.5/26, mbtmp3.6/12, ML3.2/1, MS3.3/10, Ms1 3.3/10, ms1mx3.0/35, Error ellipse: s-maj=35.3km s-min=18.6km az=170.0, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EIL	**Elat**	**11.18**	**341**	P	Pn	17 44 00.8	+0.2
	0.2nm,0.3s,baz=346,slow=6.5,SNR=4.8						
EIL				LR	LR	17 47 33.6	
	comp=Z,104nm,18.8s,baz=252,slow=33						
ASF	**Jabal al Asfar**	**13.16**	**352**	LR	LR	17 49 03.1	
	comp=Z,94nm,18.5s,baz=206,slow=35						
MMAI	**Mount Meron Ar**	**14.24**	**347**	LR	LR	17 49 35.9	
	comp=Z,91nm,21.3s,baz=175,slow=35						
BRTR	**Keskin Array B**	**21.08**	**348**	P	P	17 46 02.8	+0.8
	6.5nm,1.0s,baz=164,slow=14,SNR=28						
GNI	**Garni**	**21.51**	**12**	LR	LR	17 54 58.0	
	comp=Z,100nm,19.2s,baz=288,slow=38						
KBZ	**Khabaz**	**24.75**	**7**	LR	LR	17 57 09.7	
	comp=Z,78nm,18.4s,baz=210,slow=38						
KEST	**Kesra**	**31.03**	**308**	LR	LR	18 03 22.4	
	comp=Z,41nm,19.1s,baz=186,slow=42						
AKASG	**Malin Array Be**	**32.49**	**348**	P	P	17 47 46.4	-0.5
	1.9nm,0.8s,baz=170,slow=8.4,SNR=4.1						
GERES	**GERESS Array B**	**36.06**	**331**	P	P	17 48 18.1	+0.2
	1.2nm,0.9s,baz=141,slow=8.6,SNR=12						
KHC	**Kasperske Hory**	**36.32**	**331**	*e*P	P	17 48 20.3	+0.2
KHC				*e*pP	pP	17 48 28.0	-10
TORD	**Torodi Ar. Bea**	**36.40**	**266**	P	P	17 48 21.4	+0.3
	2.9nm,0.9s,baz=77,slow=7.3,SNR=15						
BRG	**Berggiesshubel**	**37.45**	**334**	*e*P	P	17 48 28.7	-0.8
	7.3nm,1.3s						
ESDC	**Sonseca Array**	**42.28**	**308**	P	P	17 49 08.8	-1.0
	0.2nm,0.4s,baz=94,slow=5.9,SNR=6.8						
DBIC	**Dimbokro**	**44.50**	**260**	LR	LR	18 08 29.0	
	comp=Z,68nm,20.3s,baz=60,slow=36						
MKAR	**Makanchi Array**	**44.73**	**42**	P	P	17 49 29.7	+0.2
	2.1nm,0.9s,baz=240,slow=8.9,SNR=13						
MKAR				LR	LR	18 09 36.5	
	comp=Z,29nm,20.4s,baz=179,slow=38						
NOA	**NORSAR Array B**	**46.29**	**342**	P	P	17 49 40.7	-0.8
	2.5nm,1.0s,baz=139,slow=8.4,SNR=2.5						
ZALV	**Zalesovo Beam**	**49.23**	**34**	P	P	17 50 04.1	-0.2
	3.0nm,1.0s,baz=251,slow=9.0,SNR=14						
ZALV				LR	LR	18 15 01.6	
	comp=Z,32nm,21.2s,baz=86,slow=41						
BOSA	**Boshof**	**49.31**	**196**	LR	LR	18 11 25.9	
	comp=Z,76nm,18.9s,baz=345,slow=37						
CMAR	**Chiang Mai Arr**	**56.37**	**80**	P	P	17 50 56.4	-1.2
	0.4nm,0.8s,baz=277,slow=7.7,SNR=4.5						
CMAR				PcP	PcP	17 51 54.4	+0.4
	0.3nm,0.8s,baz=270,slow=5.4,SNR=3.1						
SONM	**Songino Array**	**60.87**	**45**	P	P	17 51 28.1	-0.4
	0.6nm,0.4s,baz=258,slow=5.7,SNR=5.4						
KSRS	**Korea Array**	**77.70**	**55**	P	P	17 53 13.3	+0.9
	0.8nm,1.0s,baz=295,slow=3.8,SNR=3.8						

IDC 14 17:44:02.4±3.6, 16°.84S×173°.72W, h78km±42km, mb3.3/4, mb1 3.7/6, mb1mx3.4/21, mbtmp3.6/6, Error ellipse: s-maj=51.5km s-min=30.3km az=139.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.46**	**33**	P	Pn	17 44 54.0	-0.1
	11nm,0.3s,baz=150,slow=0.6,SNR=27						
AFI				S	Sn	17 45 29.1	-5.0
	25nm,0.3s,baz=280,slow=19,SNR=9.1						
RAR	**Rarotonga**	**13.88**	**110**	P	Pn	17 47 15.7	0.0
	1.6nm,0.3s,baz=268,slow=1.0,SNR=4.0						
STKA	**Stephens Creek**	**43.07**	**241**	P	P	17 51 55.4	+0.6
	0.8nm,0.4s,baz=78,slow=9.3,SNR=2.8						
WRA	**Warramunga Arr**	**49.23**	**258**	P	P	17 52 43.0	-0.4
	0.2nm,0.5s,baz=97,slow=6.6,SNR=8.2						
ASAR	**Alice Springs**	**49.39**	**253**	P	P	17 52 44.2	-0.3
	0.8nm,0.5s,baz=90,slow=7.9,SNR=33						
ILAR	**Eielson Array**	**83.91**	**11**	P	P	17 56 23.3	+0.1
	0.1nm,0.4s,baz=214,slow=4.7,SNR=3.3						

*ISCJB **14** 18:02:00.0±0.6, 6°.84N±0°.07×72°.96W±0°.09, h166km, mb3.6/2, Error ellipse: s-maj=14.4km s-min=7.0km az=37.6*
*IDC **14** 18:02:01.9±3.8, 6°.75N×73°.11W, h176km±26km, mb3.3/2, mb1 3.5/3, mb1mx3.0/23, mbtmp3.4/3, Error ellipse: s-maj=113.6km s-min=31.1km az=104.0*
*FUNV **14** 18:02:04.8, 6°.90N×72°.82W, h135km, MW3.2*

ISC 14 18:02:00.3±1.0, 6°.84N±0°.07×72°.90W±0°.08, h166km, n18, σ1$80/22, 2C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.17**	**30**	*i*P	**Pn**	**18 02 29.2**	**+0.9**
CAPV				*e*S	**Sn**	**18 02 45.6**	**-4.2**
ROSC	**El Rosal**	**2.43**	**216**	P	**Pn**	**18 02 41.2**	**-0.6**
	35nm,0.3s,baz=77,slow=18,SNR=73						
ROSC				S	**Sn**	**18 03 13.2**	**-0.7**
	30nm,0.3s,baz=76,slow=23,SNR=12						
SOCV	**Socops**	**2.48**	**55**	*e*P	**Pn**	**18 02 43.4**	**+1.4**
SOCV				*e*S	**Sn**	**18 03 11.2**	**-3.2**
VIGV	**El Vigia**	**2.50**	**37**	*e*P	**Pn**	**18 02 43.6**	**+1.4**
VIGV				*e*S	**Sn**	**18 03 11.4**	**-3.5**
ELOV	**Elorza**	**3.40**	**87**	*e*P	**Pn**	**18 02 54.7**	**+1.4**
QARV	**Quebrada Arrib**	**4.09**	**35**	*e*P	**Pn**	**18 03 03.0**	**+0.9**
CURV	**Curarigua**	**4.29**	**43**	*e*P	**Pn**	**18 03 06.3**	**+1.5**
DABV	**Dabajuro**	**4.63**	**29**	*e*P	**Pn**	**18 03 11.0**	**+1.8**
TEPV	**Terepaima**	**4.81**	**50**	*e*P	**Pn**	**18 03 13.0**	**+1.5**
SIQV	**Siquisique**	**4.86**	**39**	*e*P	**Pn**	**18 03 12.7**	**+0.4**
BAUV	**El Baul**	**5.25**	**66**	*e*P	**Pn**	**18 03 17.6**	**+0.4**
MAPV	**Macapo**	**5.31**	**56**	*e*P	**Pn**	**18 03 19.2**	**+1.1**
PAYV	**Puerto Ayacuch**	**5.41**	**105**	*e*P	**Pn**	**18 03 20.0**	**+0.7**
IMOV	**Isla Los Monje**	**5.83**	**20**	*e*P	**Pn**	**18 03 25.2**	**+0.4**
MONV	**Montecano**	**5.85**	**29**	*e*P	**Pn**	**18 03 25.6**	**+0.5**
SCHQ	**Schefferville**	**48.10**	**5**	P	**P**	**18 10 24.7**	**+1.7**
	1.3nm,0.5s,baz=192,slow=9.3,SNR=4.5						
YKA	**Yellowknife Ar**	**63.32**	**340**	P	**P**	**18 12 11.8**	**+0.6**
	0.4nm,0.5s,baz=133,slow=6.6,SNR=9.2						
ASAR	**Alice Springs**	**149.30**	**234**	PKPbc	**PKPbc**	**18 21 29.7**	**-0.6**
	0.3nm,1.0s,baz=131,slow=2.8,SNR=3.0						

*IDC **14** 18:04:07.1±1.6, 35°.87N×26°.89E, h0km, mb3.2/3, mb1 3.4/4, mb1mx3.2/24, mbtmp3.2/4, ML3.5/1, Error ellipse: s-maj=42.1km s-min=27.5km az=159.0*
*ISK **14** 18:04:15.3, 36°.12N×27°.19E, h7km, MD3.5*
*CSEM **14** 18:04:15.1±0.8, 36°.06N×27°.18E, h2km, MD3.5, Error ellipse: s-maj=17.0km s-min=7.1km az=50.0*

ISC 14 18:04:12.3±2.1, 35°.99N±0°.08×27°.09E±0°.07, h4km±10km, n45, σ1$45/51, mb3.2/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**1.08**	**9**	*e*PG	**Pb**	**18 04 34.2**	**+0.6**
BODT				*e*SG	**Sb**	**18 04 47.4**	**-0.8**
BODT	**Bodrum**	**1.08**	**9**	*e*Pg	**Pb**	**18 04 34.2**	**+0.6**
BODT				*e*Sg	**Sb**	**18 04 47.4**	**-0.8**
MLSB	**Milas**	**1.41**	**23**	*e*PN	**Pg**	**18 04 39.9**	**+0.5**
MLSB				*e*SN	**Sn**	**18 04 57.8**	**-0.1**
MLSB	**Milas**	**1.41**	**23**	*e*Pn	**Pg**	**18 04 39.9**	**+0.5**
MLSB				*e*Sn	**Sn**	**18 04 57.8**	**-0.1**
YER	**Yerkesik**	**1.49**	**40**	*e*PN	**Pg**	**18 04 41.2**	**+0.3**
YER				*e*SN	**Sn**	**18 04 60.0**	**+0.2**
YER	**Yerkesik**	**1.49**	**40**	*e*Pn	**Pg**	**18 04 41.2**	**+0.3**
YER				*e*Sn	**Sn**	**18 05 00.0**	**+0.2**
TURN	**Turunc**	**1.50**	**54**	*i* P	Pn	18 04 35.5	-4.5
FETY	**Fethiye**	**1.73**	**68**	*e*PN	**Pn**	**18 04 44.5**	**+1.3**
FETY				*e*SN	**Sg**	**18 05 06.6**	**-1.3**
FETY	**Fethiye**	**1.73**	**68**	*e*Pn	**Pn**	**18 04 44.5**	**+1.3**
FETY				*e*Sn	**Sg**	**18 05 06.6**	**-1.3**
AYDN	**Tasoluk**	**1.78**	**20**	*i* P	**Pg**	**18 04 46.7**	**+0.2**
AYDN				*i* S	**Sg**	**18 05 08.0**	**-1.6**
AYDN	**Tasoluk**	**1.78**	**20**	*i* P	**Pg**	**18 04 46.7**	**+0.2**
AYDN				*i* S	**Sg**	**18 05 08.0**	**-1.6**
AKAS	**Kas**	**2.05**	**82**	*i* P	**Pn**	**18 04 48.7**	**+1.1**
AKAS				*i* S	**Sb**	**18 05 15.1**	**-0.9**
AKAS	**Kas**	**2.05**	**82**	*i* P	**Pn**	**18 04 48.7**	**+1.1**
AKAS				*i* S	**Sb**	**18 05 15.1**	**-0.9**
GLHS	**Glhisar (BURDU**	**2.26**	**58**	*e*PN	**Pn**	**18 04 51.9**	**+1.4**
GLHS	**Glhisar (BURDU**	**2.26**	**58**	*e*Pn	**Pn**	**18 04 51.9**	**+1.4**
DNZL	**Cakiroluk**	**2.31**	**42**	*i* P	**Pn**	**18 04 52.8**	**+1.5**
DNZL	**Cakiroluk**	**2.31**	**42**	*i* P	**Pn**	**18 04 52.8**	**+1.5**
GOLH	**Golhisar**	**2.34**	**57**	*e*P	**Pb**	**18 04 55.0**	**-0.1**
GOLH	**Golhisar**	**2.34**	**57**	*e*P	**Pb**	**18 04 55.0**	**-0.1**
DENT	**Denizli**	**2.35**	**41**	*e*PN	**Pn**	**18 04 52.9**	**+1.2**
DENT	**Denizli**	**2.35**	**41**	*e*Pn	**Pn**	**18 04 52.9**	**+1.2**
BLCB	**Balcova**	**2.39**	**359**	*e*PN	**Pn**	**18 04 54.2**	**+2.0**
BLCB	**Balcova**	**2.39**	**359**	*e*Pn	**Pn**	**18 04 54.2**	**+2.0**
IZM	**Izmir**	**2.41**	**3**	*e*PN	**Pb**	**18 04 55.0**	**-1.2**
IZM	**Izmir**	**2.41**	**3**	*e*Pn	**Pb**	**18 04 55.0**	**-1.2**
KORT	**Korkueli**	**2.81**	**68**	*i* P	**Pn**	**18 05 00.2**	**+2.1**
KORT	**Korkueli**	**2.81**	**68**	*i* P	**Pn**	**18 05 00.2**	**+2.1**
KULA	**Kula-Manisa**	**2.81**	**26**	*e*PN	**Pn**	**18 04 59.3**	**+1.2**
KULA	**Kula-Manisa**	**2.81**	**26**	*e*Pn	**Pn**	**18 04 59.3**	**+1.2**
ANTB	**Antalya**	**3.01**	**71**	*e*PN	**Pn**	**18 05 03.1**	**+2.4**
ANTB	**Antalya**	**3.01**	**71**	*e*Pn	**Pn**	**18 05 03.1**	**+2.4**
KHL	**Karahalli**	**3.03**	**39**	*e*PN	**Pn**	**18 05 02.8**	**+1.7**
KHL	**Karahalli**	**3.03**	**39**	*e*Pn	**Pn**	**18 05 02.8**	**+1.7**
BCK	**Bucak**	**3.17**	**61**	*e*PN	**Pn**	**18 05 05.6**	**+2.6**
BCK	**Bucak**	**3.17**	**61**	*e*Pn	**Pn**	**18 05 05.6**	**+2.6**
GAZI	**Gazipasa**	**4.23**	**85**	*i* P	**Pn**	**18 05 17.6**	**0.0**
GAZI	**Gazipasa**	**4.23**	**85**	*i* P	**Pn**	**18 05 17.6**	**0.0**
KDHN	**Kadinhani**	**4.74**	**56**	*i* P	**Pn**	**18 05 27.0**	**+2.4**
KDHN	**Kadinhani**	**4.74**	**56**	*i* P	**Pn**	**18 05 27.0**	**+2.4**
ERMK	**Ermenek**	**4.74**	**80**	*e*P	Pn	18 05 28.3	+3.6
ERMK	**Ermenek**	**4.74**	**80**	*e*P	Pn	18 05 28.3	+3.6
GERES	**GERESS Array B** 0.1nm,0.3s,baz=144,slow=12,SNR=2.6	**16.18**	**327**	Pn	**Pn**	**18 07 58.4**	**-2.1**
ESDC	**Sonseca Array** 0.2nm,0.3s,baz=65,slow=10,SNR=3.2	**24.74**	**288**	P	P	18 09 28.2	-6.6
TORD	**Torodi Ar. Bea** 0.2nm,0.3s,baz=31,slow=9.0,SNR=4.4	**32.23**	**232**	P	P	18 10 36.0	-5.8
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=287,slow=5.6,SNR=2.7	**42.00**	**57**	P	P	18 12 01.5	-3.1

IDC 14 18:09:54.6±2.6, 19°.01N×39°.24E, h0km, mb3.3/3, Error ellipse: s-maj=73.4km s-min=28.6km az=152.0, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRTR	**Keskin Array B**	**21.20**	**348**	P	P	18 14 41.9	-0.1
	0.6nm,0.8s,baz=164,slow=14,SNR=4.8						
TORD	**Torodi Ar. Bea** baz=88,slow=6.9	**36.49**	**267**	P	P	18 17 01.8	-0.1
MKAR	**Makanchi Array** 0.5nm,0.7s,baz=239,slow=7.6,SNR=6.0	**44.74**	**42**	P	P	18 18 09.2	-0.5
ZALV	**Zalesovo Beam** 0.3nm,0.5s,baz=238,slow=8.5,SNR=3.6	**49.26**	**34**	P	P	18 18 45.3	+0.4

**WEL 14 18:13:07.2±0.5

DCPH Dipolog City 4.42 317⇑ *e*P Pn 18 25 35.8 +7.3
ZMPH Zamboanga City 4.59 291⇑ *i*P **Pn 18 25 31.2 +0.4**
ZMPH *i*S **Sn 18 26 22.9 -0.1**
TNTI Ternate 4.62 168 P **Pn 18 25 30.5 -0.7**
TBP Tagbilaran 5.01 330 *e*P **Pn 18 25 39.6 +3.1**
SNPH Sibulan 5.07 322⇑ *e*P Pn 18 25 29.7 -7.8
KMSI Cibinong 5.29 207 P **Pn 18 25 43.3 +2.9**
664nm,0.9s,10µm3.7nm
PLP Palo 5.97 347⇓ *e*P **Pn 18 25 51.2 +1.5**
PLP *e*S Sn 18 27 03.8 +7.0
LBMI Labuha 6.02 169 P **Pn 18 25 51.7 +1.3**
201nm,0.9s,5µm1.8nm
MRSI Marisa 6.55 223 P **Pn 18 25 58.6 +1.0**
297nm,1.0s,5µm1.9nm
RCP Roxas 7.17 330⇑ *e*P **Pn 18 26 08.3 +2.2**
LUWI Luwuk 7.28 210 P **Pn 18 26 10.0 +2.4**
698nm,1.1s,6µm2.2nm
MYLDM Lahad Datu 7.86 269 P **Pn 18 26 14.6 -0.9**
MYLDM Lahad Datu 7.86 269 P **Pn 18 26 17.2 +1.7**
200nm,1.1s,2µm
TSM Tawau 8.55 264 P **Pn 18 26 24.2 -0.8**
MSAI Masohi 8.97 164 P Pn 18 26 39.3 +8.5
SDKM Sandakan 9.16 272 P **Pn 18 26 32.7 -0.7**
FAKI Fak Fak 10.06 144 P **Pn 18 26 45.0 -0.7**
baz=10.0,SNR=9.1
KKM Kota Kinabalu 10.15 275 P **Pn 18 26 45.2 -1.8**
TGY Tagaytay City 10.24 329 P Pn 18 26 52.9 +4.7
TGY Tagaytay City 10.24 329 P Pn 18 26 52.9 +4.7
18nm,0.3s,baz=204,slow=18,SNR=2.1
RKPI Ransiki, Papua 10.32 131 P **Pn 18 26 48.4 -0.9**
71nm,0.9s,2µm
TTSI Tana Toraja 10.59 218 P **Pn 18 26 55.9 +3.0**
62nm,1.1s,745nm
BAKI Biak 11.67 123 P **Pn 18 27 07.1 -0.5**
228nm,1.3s,4µm
KAPI Kappang 12.22 213 *e*Pn **Pn 18 27 14.4 -0.7**
KAPI *e*Sn **Sn 18 29 28.4 -1.5**
KAPI Kappang 12.22 213 P Pn 18 27 19.4 +4.2
42nm,1.2s
KAPI Kappang 12.22 213 P **Pn 18 27 14.7 -0.5**
0.6nm,0.3s,baz=61,slow=11,SNR=6.5
BTM Bintulu 13.43 262 P **Pn 18 27 30.9 -0.8**
SBUM Sibu 14.42 259 P **Pn 18 27 44.5 -0.4**
SBUM Sibu 14.42 259 P **P 18 27 49.7 -0.5**
54nm,1.3s,846nm
BBKI Banjar Baru 14.46 233 P **P 18 27 53.4 +2.8**
STKI Sintang 15.78 251 P **P 18 28 06.9 +1.6**
28nm,1.2s
KSM Kuching 16.50 257 *e*Pn **Pn 18 28 11.9 +0.4**
55nm,1.0s
KSM *e*Sn **Sn 18 31 12.0 -1.9**
KSM Kuching 16.50 257 P **P 18 28 12.5 -0.8**
KSM Kuching 16.50 257 P **P 18 28 17.1 +3.9**
51nm,1.7s,670nm
KSM Kuching 16.50 257 P **P 18 28 17.1 +3.9**
baz=17,SNR=9.4
PBKI Pangkalan Bun 16.72 242 P P 18 28 20.6 +4.8
87nm,1.0s,1µm
JAGI Jajag, Banyuwa 18.34 222 P Pn 18 28 40.3 +6.0
baz=19,SNR=3.8
MTN Manton Dam 18.65 165 P **Pn 18 28 37.5 -0.4**
baz=19,SNR=5.8
TPUB Ta-pu 18.72 343 *e*P **P 18 28 35.8 -1.9**
63nm,1.2s
TPUB *e*Sn **Sn 18 32 04.6 -2.9**
KDU Kakadu 18.88 161 P **P 18 28 38.3 -1.2**
baz=19,SNR=15
SSLB Suanglung 19.09 345 *e*P **P 18 28 41.0 -0.8**
29nm,1.1s
YHNB Yeheng 19.83 346 *e*P **P 18 28 46.9 -3.0**
33nm,0.9s
YHNB *e*pP **Pn 18 28 54.2 +2.3**
BJII Banjamegara 20.86 233 P Pn 18 29 18.8 +15
QZH Quanzhou 20.90 340 P Pn 18 29 03.1 -1.3
QZH LR LR
comp=Z,2µm,32.4s
KNRA Kununurra 20.99 174 P **P 18 29 01.6 -0.8**
baz=21,SNR=35
QIZ Qiongzhong 21.12 312 P **P 18 29 03.9 +0.1**
QIZ sP **sP 18 29 20.1 -4.2**
QIZ S **S 18 32 55.8 +0.2**
QIZ sS **sS 18 33 15.5 -1.4**
QIZ pmax pmax
comp=Z,9.0nm,1.2s
QIZ pmax pmax
comp=Z,87nm,4.9s
QIZ LR LR
comp=E,190nm,20.5s
QIZ LR LR
comp=Z,760nm,22.1s
QIZ Qiongzhong 21.12 312 *e*P **P 18 29 02.1 -1.7**
JOW Kunigami 21.47 5 *e*P **P 18 29 09.9 +2.5**
comp=Z,109nm,2.1s
PPBI Pangkal Pinang 21.55 250 P **P 18 29 11.4 +2.9**
comp=Z,34nm,1.4s,comp=Z,566nm
LEM Lembang 22.28 237 P P 18 29 22.7 +6.2
comp=Z,36nm,1.1s
MYKOM Kota Tinggi 22.76 262 P **P 18 29 21.1 -0.3**
UBPT Khong Chiam 22.81 297 P **P 18 29 22.6 +0.7**
comp=Z,33nm,1.0s
BTDF Bukit Timah Da 22.91 261 P **P 18 29 24.5 +1.5**
baz=23,SNR=13
BTDF P **P 18 29 24.5 +1.5**
baz=23,SNR=13
KTGM Kuala Trenggan 23.15 271 P **P 18 29 24.3 -1.1**
KGM Kluang 23.25 263 P **P 18 29 25.1 -1.3**
FITZ Fitzroy Crossi 23.29 182 *e*P **P 18 29 26.4 -0.1**
comp=Z,34nm,1.1s
FITZ *e*pP pP 18 29 32.5 -7.7
FITZ *e*sP sP 18 29 35.9 -12
FITZ Fitzroy Crossi 23.29 182 P **P 18 29 26.6 0.0**
comp=Z,6.2nm,0.5s,baz=11,slow=12,SNR=17
FITZ Fitzroy Crossi 23.29 182 P **P 18 29 27.2 +0.6**
baz=24,SNR=18
FRIM Kepong 24.78 266 P **P 18 29 38.9 -1.5**
IPM Ipoh 25.28 269 *e*P **P 18 29 43.5 -1.4**
comp=Z,57nm,1.4s
IPM *e*pP pP 18 29 51.9 -7.6
IPM Ipoh 25.28 269 P **P 18 29 44.2 -0.8**
PMG Port Moresby 25.35 125 LR LR 18 39 32.2
comp=Z,56nm,19.0s,baz=290,slow=36
KSI Kapahiang 25.38 250 P P 18 29 51.3 +5.4
COEN Coen 25.39 139 P **P 18 29 47.0 +1.2**
baz=25,SNR=7.5
KULM Kulim 25.63 271 *e*P **P 18 29 48.6 +0.6**
comp=Z,31nm,1.1s
KULM *e*pP pP 18 29 55.1 -7.5
KULM Kulim 25.63 271 P **P 18 29 46.6 -1.5**
BKNI Bangkinang 25.79 260 S S 18 34 24.7 +10
baz=26,SNR=3.4
SSE Sheshan 26.10 350 P **P 18 29 52.5 +0.4**
SSE sP **sP 18 30 14.8 +1.0**
SSE S **S 18 34 20.9 +1.5**
SSE sS **sS 18 34 46.6 +2.2**
SSE pmax pmax
comp=Z,52nm,0.9s
SSE pmax pmax
comp=Z,170nm,4.7s
SSE LR LR
comp=N,140nm,22.4s
SSE LR LR
comp=E,170nm,22.4s
SSE LR LR
comp=Z,220nm,16.7s
WRAB Tennant Creek 26.29 163 *e*P **P 18 29 53.0 -1.0**
comp=Z,61nm,1.0s
WRAB *e*pP pP 18 30 00.1 -8.5
WRA Warramunga Arr 26.30 163 P **P 18 29 53.0 -1.0**
WRA ScP **ScP 18 36 54.9 +0.8**
WRA Warramunga Arr 26.30 163 P **P 18 29 53.0 -1.0**
comp=Z,6.1nm,0.5s,baz=341,slow=10,SNR=17
WRA ScP **ScP 18 36 54.9 +0.8**
comp=Z,0.6nm,0.5s,baz=343,slow=2.7,SNR=5.3
NJ2 Nanjing 27.51 346 *e*P **P 18 30 05.4 +0.6**
NJ2 pP **pP 18 30 18.0 -1.5**
NJ2 sP **sP 18 30 25.0 -1.5**
NJ2 S **S 18 34 43.0 +1.3**
NJ2 sS **sS 18 35 06.5 -0.2**
NJ2 pmax pmax
comp=Z,20nm,0.7s
NJ2 pmax pmax
comp=Z,160nm,4.8s
NJ2 LR LR
comp=N,260nm,22.4s
NJ2 LR LR
comp=E,550nm,27.2s
NJ2 LR LR
comp=Z,270nm,26.9s
JNU Nakatsue 27.98 8 *e*P **P 18 30 07.0 -2.0**
comp=Z,11nm,0.9s
JNU *e*pP pP 18 30 14.9 -8.8
JNU Nakatsue 27.98 8 P **P 18 30 07.7 -1.3**
comp=Z,21nm,0.9s,baz=142,slow=6.0,SNR=12
JNU LR LR 18 41 28.3
comp=Z,189nm,19.2s,baz=314,slow=36
GYA Guiyang 28.23 320 P **P 18 30 11.3 -0.1**
GYA pP **pP 18 30 27.5 +1.4**
GYA sP **sP 18 30 33.3 +0.2**
GYA PP **PnPn 18 31 04.8 +2.3**
GYA PcP **PcP 18 33 24.0 +0.1**
GYA S **S 18 34 52.3 -1.0**
GYA sS **sS 18 35 17.9 -0.4**
GYA ScP **ScP 18 36 58.8 -1.3**
GYA ScS **ScS 18 40 50.4 -2.7**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.8s
ENH Enshi 29.49 329 *e*P **P 18 30 22.1 -0.4**
comp=Z,22nm,0.9s
ENH *e*pP pP 18 30 27.6 -10
ENH *e*sP sP 18 30 31.9 -12
ASAR Alice Springs 29.73 166 P **P 18 30 24.1 -0.5**
ASAR PcP **PcP 18 33 28.5 +0.9**
ASAR Alice Springs 29.73 166 P **P 18 30 24.1 -0.5**
comp=Z,1.3nm,0.6s,baz=343,slow=6.9,SNR=27
ASAR PcP **PcP 18 33 28.5 +0.9**
comp=Z,1.3nm,0.7s,baz=346,slow=2.3,SNR=4.4
CM31 Chiang Mai Arr 29.80 298 *e*P **P 18 30 24.3 -1.1**
comp=Z,12nm,1.1s
CM31 *e*pP pP 18 30 31.7 -8.4
CM31 *e*sP sP 18 30 35.7 -11
CMAR Chiang Mai Arr 29.80 298 P **P 18 30 25.0 -0.4**
CMAR PcP **PcP 18 33 28.9 +1.0**
CMAR ScP **ScP 18 37 06.0 +1.0**
CMAR Chiang Mai Arr 29.80 298 P **P 18 30 25.0 -0.4**
comp=Z,1.6nm,0.7s,baz=117,slow=7.2,SNR=13
CMAR PcP **PcP 18 33 28.9 +1.0**
comp=Z,1.7nm,0.9s,baz=118,slow=3.3,SNR=5.8
CMAR ScP **ScP 18 37 06.0 +1.0**
comp=Z,2.6nm,1.1s,baz=128,slow=1.5,SNR=8.6
CMAR LR LR 18 42 44.7
comp=Z,308nm,19.3s,baz=118,slow=37
CHTO Chiang Mai 29.94 299 *e*P **P 18 30 24.9 -1.7**
comp=Z,13nm,1.2s
CHTO *e*pP pP 18 30 32.6 -8.7
CHTO *e*sP sP 18 30 36.4 -12
KMI Kunming 30.03 313 P **P 18 30 28.8 +1.2**
KMI pP **pP 18 30 43.5 +1.2**
KMI sP **sP 18 30 50.5 +1.1**
KMI PP **PnPn 18 31 28.6 +2.0**
KMI PcP **PcP 18 33 29.5 +0.9**
KMI S **S 18 35 20.8 -1.2**
KMI sS **sS 18 35 47.5 +0.5**
KMI SS **SnSn 18 37 02.0 +2.8**
KMI pmax pmax
comp=Z,11nm,1.1s
KMI LR LR
comp=N,250nm,15.0s
KMI LR LR
comp=E,310nm,14.2s
KMI LR LR
comp=Z,570nm,21.8s
JHJ Hachijo jima 2 30.34 23 LR LR 18 41 18.6
comp=Z,314nm,20.9s,baz=93,slow=33
CTA Charters Tower 31.92 143 P **P 18 30 45.2 +1.2**
CTA Charters Tower 31.92 143 P **P 18 30 45.2 +1.2**
comp=Z,1.1nm,0.4s,baz=330,slow=8.7,SNR=4.0
KSAR Wonju Array Be 32.00 2 P **P 18 30 44.8 +0.3**
KSRS Korea Array 32.01 2 P **P 18 30 44.8 +0.2**
comp=Z,6.9nm,1.0s,baz=179,slow=9.1,SNR=26
KSRS LR LR 18 45 18.1
comp=Z,185nm,19.1s,baz=194,slow=39
MEEK Meekatharra 32.65 193 P **P 18 30 51.4 +1.0**
baz=33,SNR=5.4
XAN Xi'an 32.85 333 P **P 18 30 51.1 -1.0**
XAN pmax pmax
comp=Z,5.0nm,1.1s
XAN LR LR
comp=N,330nm,27.5s
XAN LR LR
comp=E,63nm,23.5s
XAN LR LR
comp=Z,150nm,30.6s
CD2 Chengdu 33.17 323 *e*P **P 18 30 55.3 +0.4**
CD2 pP **pP 18 31 10.0 +0.3**
CD2 sP **sP 18 31 17.1 +0.4**
CD2 PP **PnPn 18 32 08.0 +1.3**
CD2 S **S 18 36 09.9 -0.6**
CD2 sS **sS 18 36 35.0 -0.7**
CD2 pmax pmax
comp=Z,20nm,1.1s
CD2 pmax pmax
comp=Z,80nm,4.9s
CD2 LR LR
comp=N,560nm,17.8s
CD2 LR LR
comp=E,520nm,15.5s
CD2 LR LR
comp=Z,500nm,16.7s
DL2 Dalian 33.71 353 ⇑P **P 18 31 00.5 +1.1**
DL2 *e*pP **pP 18 31 13.6 -0.6**
DL2 S **S 18 36 21.3 +2.8**
DL2 pmax pmax
comp=Z,100nm,1.0s
DL2 pmax pmax
comp=Z,240nm,3.5s
DL2 LR LR
comp=E,190nm,10.3s
DL2 LR LR
comp=Z,130nm,12.8s
MORW Morawa 35.61 196 P **P 18 31 15.4 -0.5**
baz=36,SNR=5.4
BJT Baijiatuan 35.75 347 *e*P **P 18 31 15.1 -1.9**
comp=Z,111nm,1.3s
HNR Honiara 36.52 114 LR LR 18 45 16.2
comp=Z,343nm,21.9s,baz=33,slow=34
KMBL Kambalda 36.73 186 P **P 18 31 26.1 +0.6**
baz=37,SNR=7.2
LZH Lanzhou 36.97 329 *e*P **P 18 31 28.5 +0.8**
LZH pP **pP 18 31 43.8 +1.1**
LZH sP **sP 18 31 50.8 +1.2**
LZH PP **PnPn 18 32 56.5 +2.8**
LZH PcP **PcP 18 33 49.0 +1.1**
LZH *e*S **S 18 37 09.1 +0.1**
LZH sS **sS 18 37 35.0 +0.6**
LZH pmax pmax
comp=Z,25nm,1.3s
LZH pmax pmax
comp=Z,130nm,5.2s
LZH LR LR
comp=N,520nm,13.5s
LZH LR LR
comp=E,310nm,12.7s
LZH LR LR
comp=Z,560nm,16.5s
HHC Hu-ho-hao-te 37.79 342 *e*P **P 18 31 35.3 +0.8**
HHC pP **pP 18 31 49.4 -0.1**
HHC PP **PnPn 18 33 05.5 +2.0**
HHC S **S 18 37 23.3 +2.1**
HHC sS **sS 18 37 47.4 +0.8**
HHC SS **SnSn 18 40 01.8 -4.8**
HHC pmax pmax
comp=Z,42nm,0.9s
HHC pmax pmax
comp=Z,340nm,5.2s
HHC LR LR
comp=N,310nm,13.1s
HHC LR LR
comp=E,210nm,14.3s
HHC LR LR
comp=Z,410nm,14.3s
CN2 Changchun 38.33 359 *e*P **P 18 31 39.3 +0.4**
CN2 *e*sP **sP 18 32 01.8 +1.0**
CN2 *e*S **S 18 37 29.4 +0.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,17.0s
CN2 LR LR
comp=E,200nm,17.0s
CN2 LR LR
comp=Z,200nm,18.0s
RMQ Roma 38.34 147 S S 18 37 38.5 +9.0
baz=38,SNR=11
SHL Shillong 38.68 305 *e*PKP **P 18 31 42.0 -0.3**
SHL *e*S **S 18 37 40.0 +4.8**
EIDS Eidsvold 38.81 143 *e*P **P 18 31 42.0 -1.2**
comp=Z,20nm,1.3s
BBOO Buckleboo 39.02 167 P P 18 31 50.0 +5.2
baz=39,SNR=5.3
USRK Ussuriysk Arra 39.04 6 P **P 18 31 45.1 +0.4**
comp=Z,13nm,0.8s,baz=191,slow=7.7,SNR=29
MDJ Mudanjiang 39.24 4 P **P 18 31 47.4 +1.0**
MDJ pP **pP 18 32 00.3 -1.2**
MDJ sP **sP 18 32 06.3 -2.1**
MDJ PcP **PcP 18 33 49.5 -5.0**
MDJ S **S 18 37 45.8 +3.1**
MDJ sS **sS 18 38 08.3 +0.1**
MDJ pmax pmax
comp=Z,70nm,1.0s
MDJ pmax pmax
comp=Z,76nm,4.1s
MDJ LR LR
comp=N,120nm,18.6s
MDJ LR LR
comp=E,140nm,18.6s
MDJ LR LR
comp=Z,240nm,23.2s
MDJ Mudanjiang 39.24 4 *e*P **P 18 31 44.6 -1.8**
comp=Z,70nm,1.0s
STKA Stephens Creek 39.73 160 *e*P **P 18 31 51.5 +0.8**
STKA Stephens Creek 39.73 160 P **P 18 31 51.2 +0.5**
comp=Z,4.7nm,0.5s,baz=30,slow=7.9,SNR=7.7
STKA LR LR 18 49 46.0
comp=Z,196nm,21.5s,baz=134,slow=38
STKA Stephens Creek 39.73 160 P **P 18 31 51.0 +0.3**
baz=40,SNR=8.7
LSA Lhasa 41.15 310 P **P 18 32 03.3 +0.2**
LSA Lhasa 41.15 310 *e*P **P 18 32 01.9 -1.2**
comp=Z,13nm,1.2s
ASAJ Asahikawa 41.19 18 P **P 18 32 03.4 +0.8**
ASAJ Asahikawa 41.19 18 P **P 18 32 03.4 +0.8**
comp=Z,14nm,0.8s,baz=220,slow=18,SNR=10
GTA Gaotai 41.57 329 *e*P **P 18 32 06.1 +0.1**
GTA pP **pP 18 32 21.4 +0.3**
GTA sP **sP 18 32 28.5 +0.5**
GTA S **S 18 38 17.6 -0.3**
GTA sS **sS 18 38 44.3 +0.7**
GTA pmax pmax
comp=Z,8.0nm,1.2s
GTA pmax pmax
comp=Z,82nm,7.4s
GTA LR LR
comp=N,150nm,17.8s
GTA LR LR
comp=E,170nm,18.3s
GTA LR LR
comp=Z,210nm,17.3s
TAPN Taplejung 42.82 305 *e*P **P 18 32 16.5 0.0**
ODAN Odare 42.88 304 *e*P **P 18 32 17.0 0.0**
comp=Z,42nm,0.7s
ARMA Armidale 42.98 147 *e*P **P 18 32 15.5 -2.0**
comp=Z,23nm,1.0s
ARMA Armidale 42.98 147 P **P 18 32 17.7 +0.2**
baz=43,SNR=4.2
RAMN Ramite 43.57 304 *e*P **P 18 32 23.4 +0.9**
comp=Z,19nm,0.7s
HIA Hailar 44.15 354 *e*P **P 18 32 24.3 -2.3**
comp=Z,56nm,1.2s
GUN Gumba 44.53 305 *e*P **P 18 32 30.3 0.0**
comp=Z,35nm,0.7s
PKI Pulchoki 44.79 304 *e*P **P 18 32 32.5 +0.1**
PKIN Phulchoki 44.80 304 *e*P **P 18 32 32.9 +0.5**
KKN Kakani 44.97 304 *e*P **P 18 32 32.9 -0.8**
DMN Daman 45.05 304 *e*P **P 18 32 34.2 -0.2**
comp=Z,23nm,1.0s
ULN Ulaanbaatar 45.51 342 *e*P **P 18 32 37.2 -0.3**
comp=Z,29nm,1.0s
SONM Songino Array 45.69 341 P **P 18 32 38.9 -0.1**
SONM Songino Array 45.69 341 P **P 18 32 38.9 -0.1**
comp=Z,8.0nm,0.8s,baz=156,slow=8.3,SNR=23
SONM LR LR 18 52 47.2
comp=Z,175nm,20.7s,baz=344,slow=37
KOLN Koldanda 46.35 304 *e*P **P 18 32 43.5 -1.1**
comp=Z,17nm,0.4s
DANN Dangsing 46.43 305 *e*P **P 18 32 44.3 -1.0**
comp=Z,36nm,0.7s
PYUN Piuhan 46.97 304 *e*P **P 18 32 48.3 -1.2**
comp=Z,24nm,0.6s
HYB Hyderabad 48.27 289 *i*P **P 18 33 00.0 +0.5**
WMQ Urumqi 51.24 325 P **P 18 33 21.8 +0.2**
WMQ pP **pP 18 33 37.0 -0.2**
WMQ sP **sP 18 33 44.0 0.0**
WMQ PcP **PcP 18 34 37.0 +0.8**
WMQ *e*S **S 18 40 35.0 -1.0**
WMQ sS **sS 18 41 02.6 +0.2**
WMQ pmax pmax
comp=Z,11nm,1.0s
WMQ pmax pmax
comp=Z,99nm,4.3s
WMQ LR LR
comp=N,490nm,16.8s
WMQ LR LR
comp=E,440nm,19.2s
WMQ LR LR
comp=Z,580nm,29.3s
PEA0B Petropavlovsk- 54.10 23 *e*P **P 18 33 42.1 -0.4**
PETK Petropavlovsk- 54.10 23 P **P 18 33 43.3 +0.8**
PETK Petropavlovsk- 54.10 23 P **P 18 33 43.3 +0.8**
comp=Z,10nm,0.9s,baz=186,slow=4.5,SNR=12
PETK LR LR 18 54 18.2
comp=Z,69nm,19.6s,baz=220,slow=33
MK31 Makanchi Array 56.06 325 *e*P **P 18 33 54.3 -2.6**
MKAR Makanchi Array 56.06 325 *e*P **P 18 33 55.9 -1.0**
MKAR ScP **ScP 18 38 48.3 -0.4**
MKAR Makanchi Array 56.06 325 P **P 18 33 55.7 -1.2**
comp=Z,5.6nm,0.6s,baz=120,slow=8.5,SNR=51
MKAR ScP **ScP 18 38 48.3 -0.4**
comp=Z,0.5nm,0.6s,baz=110,slow=5.2,SNR=3.1
KSH Kashi 56.69 314 P **P 18 34 02.0 +0.5**
KSH *e*pP **pP 18 34 17.9 +0.5**
KSH *e*sP **sP 18 34 24.9 +0.8**
KSH *e*PcP **PcP 18 34 57.6 +0.5**
KSH *e*PP **PP 18 36 10.1 +1.9**
KSH *e*S **S 18 41 46.5 -3.4**
KSH *e*sS **sS 18 42 14.8 -1.8**
KSH pmax pmax
comp=Z,32nm,1.0s
KSH pmax pmax
comp=Z,340nm,5.1s
KSH LR LR
comp=N,220nm,5.1s
KSH LR LR
comp=E,120nm,4.2s
KSH LR LR
comp=Z,250nm,4.5s
ULHL Ulahol 57.62 318 P **P 18 34 08.3 +0.1**
SNR=13
KZA Kyzart 58.22 317 P **P 18 34 13.2 +0.6**
SNR=15
TKM2 Tokmak 2 58.34 318 *e*P **P 18 34 10.6 -2.6**
comp=Z,16nm,1.3s
TKM2 Tokmak 2 58.34 318 P **P 18 34 13.3 +0.1**
SNR=6.8
KBK Karagaybulak 58.66 318 P **P 18 34 15.8 +0.4**
SNR=8.8
CHMS Chumysh 58.94 318 P **P 18 34 16.5 -0.6**
SNR=7.0
AAK Ala-Archa 58.96 317 *e*P **P 18 34 17.2 -0.2**
comp=Z,22nm,1.7s
ZAA0 Zalesovo Array 59.02 333 *e*P **P 18 34 15.3 -2.2**
ZALV Zalesovo Beam 59.02 333 P **P 18 34 15.7 -1.8**
ZALV Zalesovo Beam 59.02 333 P **P 18 34 15.7 -1.8**
comp=Z,1.2nm,0.3s,baz=116,slow=6.8,SNR=11
ZALV LR LR 19 01 14.7
comp=Z,100nm,21.1s,baz=249,slow=37
USP Ospenovka 59.21 318 P **P 18 34 19.0 -0.1**
SNR=14
AML Almayashu 59.30 317 P **P 18 34 20.6 +0.4**
SNR=14
EKS2 Erkin-Say 59.46 317 *e*P **P 18 34 19.2 -1.6**
comp=Z,17nm,1.1s
EKS2 Erkin-Say 59.46 317 P **P 18 34 21.3 +0.5**

	SNR=17									
KURK	**Kurchatov**	**60.23**	**327**	*e*P		**P**		18 34 24.4	**-1.4**
	comp=Z,22nm,0.9s									
FX1	**Attu Island--F**	**60.89**	**30**	*e*P		**P**		**18 34 31.2**	**+0.9**
KKAR	**Karatay Array**	**61.85**	**317**	*e*P		**P**		**18 34 34.7**	**-2.3**
KHZ	**Kahutara**	**63.93**	**143**	*e*P		P		18 34 55.1	+4.4
	comp=Z,120nm,1.4s									
BVAR	**Borovoye Array**	**65.81**	**327**	LR		LR		19 06 08.3		
	comp=Z,129nm,20.8s,baz=339,slow=38									
BRVK	**Borovoye**	**65.88**	**327**	*e*P		**P**		**18 35 01.8**	**-1.5**
	comp=Z,18nm,0.9s									
ABKAR	**Akbulak array**	**70.71**	**320**	*e*P		**P**		**18 35 31.3**	**-2.3**
SPIA	**Saint Paul Isl**	**71.32**	**31**	*e*pP		P		18 35 44.3	+7.3
SDPT	**Sand Point**	**76.08**	**34**	*e*P		**P**		**18 36 04.3**	**-0.7**
RAYN	**Ar Rayn**	**79.55**	**293**	*e*P		**P**		**18 36 23.8**	**-1.2**
	comp=Z,6.2nm,1.1s									
SVW2	**Sparrevohn**	**79.58**	**29**	*e*pP		P		18 36 31.1	+6.7
KDAK	**Kodiak Island**	**80.74**	**32**	P		**P**		**18 36 30.4**	**-0.2**
KDAK	**Kodiak Island**	**80.74**	**32**	P		**P**		**18 36 30.4**	**-0.2**
	comp=Z,8nm,0.6s,baz=292,slow=5.4,SNR=5.0									
TRF	**Thorofare Moun**	**82.28**	**27**	*e*P		**P**		**18 36 36.3**	**-2.7**
	comp=Z,8.5nm,1.0s									
COLD	**Coldfoot**	**82.57**	**23**	*e*P		**P**		**18 36 39.3**	**-0.8**
	comp=Z,7.1nm,0.8s									
PMR	**Palmer**	**82.72**	**29**	*e*P		**P**		**18 36 41.0**	**0.0**
	comp=Z,12nm,1.2s									
MCK	**McKinley**	**82.90**	**27**	*e*P		**P**		**18 36 40.5**	**-1.5**
	comp=Z,13nm,0.9s									
SML	**Sawmill**	**83.11**	**28**	*e*P		**P**		**18 36 41.8**	**-1.3**
	comp=Z,5.5nm,1.2s									
COLA	**College**	**83.41**	**25**	*e*P		**P**		**18 36 44.5**	**0.0**
	comp=Z,5.7nm,0.8s									
ILAR	**Eielson Array**	**83.82**	**25**	P		**P**		**18 36 45.7**	**-0.9**
ILAR	**Eielson Array**	**83.82**	**25**	P		**P**		**18 36 45.7**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=250,slow=5.4,SNR=18									
DIV	**Divide**	**84.33**	**29**	*e*P		**P**		**18 36 47.3**	**-2.1**
VNDA	**Vanda**	**85.04**	**173**	P		**P**		**18 36 52.8**	**+0.3**
VNDA	**Vanda**	**85.04**	**173**	P		**P**		**18 36 52.8**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=324,slow=5.3,SNR=7.5									
VNDA				LR		LR		19 10 56.1		
	comp=Z,93nm,22.0s,baz=327,slow=33									
MAW	**Mawson**	**85.12**	**200**	P		**P**		**18 36 52.3**	**-0.7**
MAW	**Mawson**	**85.12**	**200**	P		**P**		**18 36 52.3**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=354,slow=7.4,SNR=1.9									
PPT	**Papeete**	**85.93**	**108**	LR		LR		19 14 20.4		
	comp=Z,70nm,18.7s,baz=301,slow=35									
EGAK	**Eagle**	**86.28**	**25**	*e*P		**P**		**18 36 57.7**	**-1.2**
	comp=Z,8.4nm,1.3s									
JOF	**Joensuu**	**87.62**	**333**	*e*p		**P**		**18 37 04.4**	**-1.0**
BRTR	**Keskin Array B**	**88.75**	**310**	P		**P**		**18 37 12.2**	**+0.7**
BRTR	**Keskin Array B**	**88.75**	**310**	P		**P**		**18 37 12.2**	**+0.7**
	comp=Z,1.2nm,0.9s,baz=114,slow=5.5,SNR=6.2									
ARCES	**ARCESS Array B**	**88.85**	**340**	P		**P**		**18 37 10.2**	**-1.0**
ARCES	**ARCESS Array B**	**88.85**	**340**	P		**P**		**18 37 10.2**	**-1.0**
	comp=Z,5.3nm,0.8s,baz=91,slow=5.8,SNR=16									
ARCES				LR		LR		19 21 54.4		
	comp=Z,79nm,18.5s,baz=173,slow=39									
ARE0	**ARCESS Array S**	**88.85**	**340**	*e*P		**P**		**18 37 10.3**	**-0.9**
SPITS	**Spitsbergen Ar**	**88.86**	**349**	LR		LR		19 20 44.4		
	comp=Z,92nm,21.9s,baz=290,slow=38									
KAF	**Kangasniemi**	**90.04**	**332**	*e*p		**P**		**18 37 16.0**	**-0.9**
FINES	**FINESS Array B**	**90.28**	**332**	P		**P**		**18 37 16.8**	**-1.2**
FINES	**FINESS Array B**	**90.28**	**332**	P		**P**		**18 37 16.8**	**-1.2**
	comp=Z,1.9nm,0.4s,baz=45,slow=8.4,SNR=8.0									
FINES				LR		LR		19 21 08.8		
	comp=Z,143nm,20.6s,baz=36,slow=38									
AKASG	**Malin Array Be**	**90.45**	**321**	P		**P**		**18 37 18.8**	**-0.2**
AKASG	**Malin Array Be**	**90.45**	**321**	P		**P**		**18 37 18.8**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=66,slow=5.2,SNR=3.3									
AKASG				LR		LR		19 22 32.8		
	comp=Z,88nm,21.7s,baz=65,slow=39									
MLR	**Muntele Rosu**	**93.53**	**316**	LR		LR		19 24 53.2		
	comp=Z,34nm,21.5s,baz=63,slow=39									
BUR08	**Bucovina Ar. S**	**93.60**	**318**	*e*P		**P**		**18 37 33.1**	**-0.7**
SYO	**Syowa Base**	**93.78**	**201**	*e*pP		pP		18 37 49.6	-1.2
HFS	**Hagfors**	**96.46**	**332**	P		**P**		**18 37 44.7**	**-1.8**
HFS	**Hagfors**	**96.46**	**332**	P		**P**		**18 37 44.7**	**-1.8**
	comp=Z,1.3nm,0.5s,baz=163,slow=10,SNR=4.1									
HFS				LR		LR		19 24 49.7		
	comp=Z,92nm,20.2s,baz=241,slow=38									
NB2	**NORSAR Subarra**	**97.22**	**334**	P		P		18 37 43.8	-6.2	
	comp=Z,1.8nm,0.7s,baz=66,slow=4.6									
NOA	**NORSAR Array B**	**97.22**	**334**	P		**P**		**18 37 47.9**	**-2.1**
NOA	**NORSAR Array B**	**97.22**	**334**	P		**P**		**18 37 47.9**	**-2.1**
	comp=Z,1.5nm,0.6s,baz=66,slow=4.5,SNR=3.6									
NOA				LR		LR		19 25 45.4		
	comp=Z,118nm,20.8s,baz=55,slow=38									
YKA	**Yellowknife Ar**	**98.20**	**24**	P		Pdif		18 37 54.8	+0.5	
YKA	**Yellowknife Ar**	**98.20**	**24**	P		Pdif		18 37 54.7	+0.5	
	comp=Z,0.8nm,0.8s,baz=301,slow=4.7,SNR=9.1									
VRAC	**Vranov**	**98.69**	**321**	LR		LR		19 28 01.7		
	comp=Z,56nm,19.0s,baz=68,slow=39									
GERES	**GERESS Array B**	**100.63**	**322**	P		**Pdif**		**18 38 06.9**	**+1.3**
GERES	**GERESS Array B**	**100.63**	**322**	P		**Pdif**		**18 38 06.9**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=101,slow=5.1,SNR=2.6									
NVAR	**Mina Array Bea**	**106.10**	**48**	Pdif		**Pdif**		**18 38 30.0**	**-0.3**
NVAR	**Mina Array Bea**	**106.10**	**48**	Pdiff		**Pdif**		**18 38 30.0**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=280,slow=5.4,SNR=2.3									
PDAR	**Pinedale Array**	**110.38**	**41**	PKKPab		PKKPab		18 54 00.8	-1.6	
PDAR	**Pinedale Array**	**110.38**	**41**	PKKPab		PKKPab		18 54 00.8	-1.6	
	comp=Z,0.6nm,0.6s,baz=120,slow=8.8,SNR=5.6									
SCHQ	**Schefferville**	**119.06**	**9**	PKP		**PKPdf**		**18 43 06.0**	**0.0**
SCHQ	**Schefferville**	**119.06**	**9**	PKP		**PKPdf**		**18 43 06.0**	**0.0**
	comp=Z,1.7nm,0.9s,baz=333,slow=16,SNR=2.0									
TXAR	**Lajitas Array**	**120.89**	**51**	PKP		**PKPdf**		**18 43 09.3**	**-1.0**
TXAR				PKKPbc		**PKKPab**		**18 53 16.2**	**+0.3**
TXAR	**Lajitas Array**	**120.89**	**51**	PKP		**PKPdf**		**18 43 09.3**	**-1.0**
	comp=Z,0.7nm,1.1s,baz=180,slow=1.8,SNR=3.2									
TXAR				PKKPbc		**PKKPab**		**18 53 16.2**	**+0.3**
	comp=Z,0.1nm,0.6s,baz=122,slow=6.4,SNR=3.5									
TORD	**Torodi Ar. Bea**	**122.09**	**289**	PKP		**PKPdf**		**18 43 11.9**	**-0.9**
TORD	**Torodi Ar. Bea**	**122.09**	**289**	PKP		**PKPdf**		**18 43 11.9**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=84,slow=1.6,SNR=9.9									
MIAR	**Mount Ida**	**125.31**	**41**	*e*PKPdf		**PKPdf**		**18 43 22.4**	**+3.8**
DBIC	**Dimbokro**	**129.90**	**283**	PKP		**PKPdf**		**18 43 30.2**	**+2.4**
DBIC				SKPbc		SKPbc		18 46 45.8	+0.3	
DBIC	**Dimbokro**	**129.90**	**283**	PKP		**PKPdf**		**18 43 30.2**	**+2.4**
	comp=Z,1.9nm,0.8s,baz=98,slow=7.1,SNR=3.0									
DBIC				SKPbc		SKPbc		18 46 45.8	+0.3	
	comp=Z,3.4nm,0.8s,baz=102,slow=5.6,SNR=4.4									
TKL	**Tuckaleechee C**	**130.37**	**32**	PKP		**PKPdf**		**18 43 29.4**	**+1.2**
TKL	**Tuckaleechee C**	**130.37**	**32**	PKP		**PKPdf**		**18 43 29.4**	**+1.2**
	comp=Z,2.7nm,0.8s,baz=324,slow=19,SNR=3.2									
PLCA	**Paso Flores**	**141.60**	**159**	PKP		**PKPdf**		**18 43 49.1**	**+0.2**
PLCA	**Paso Flores**	**141.60**	**159**	PKP		**PKPdf**		**18 43 49.1**	**+0.2**
	comp=Z,1.1nm,0.5s,baz=219,slow=4.7,SNR=3.2									
JTS	**JuntasAbangare**	**145.15**	**64**	*e*PKPdf		**PKPdf**		**18 43 56.0**	**+0.2**
CFAA	**Coronel Fontan**	**150.47**	**154**	PKPbc		**PKPbc**		**18 44 09.3**	**-0.2**
CFAA	**Coronel Fontan**	**150.47**	**154**	PKPbc		**PKPbc**		**18 44 09.3**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=215,slow=2.3,SNR=11									
LCO	**Las Campanas**	**151.42**	**147**	*e*PKPdf		**PKPdf**		**18 44 07.9**	**+1.9**
LCO				*e*PKPbc		**PKiKP**		**18 44 12.7**	**+0.1**
LPAZ	**La Paz**	**162.07**	**129**	PKP		**PKPdf**		**18 44 20.6**	**+0.2**
LPAZ	**La Paz**	**162.07**	**129**	PKP		**PKPdf**		**18 44 20.6**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=228,slow=10,SNR=2.6									

DJA 14 18:25:50.3±1.1, 9°S±5°×11°1E±°, h11km±10km, M3.5/6, MLv3.5/6, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.89**	**350**	P	Pg	18 26 06.5	-1.0
PCJI				S	Sb	18 26 20.1	+0.4
PWJI	**Pagerwojo**	**1.15**	**24**	P	Pb	18 26 10.3	-1.9
PWJI				S	Sb	18 26 25.2	-2.0
SJI	**Sawahan**	**1.41**	**18**	P	Pn	18 26 14.6	-1.4
SJI				S	Sn	18 26 34.6	0.0
UGM	**Wanagama**	**1.41**	**325**	P	Pn	18 26 14.6	-1.4
YOGI	**Yogyakarta**	**1.62**	**321**	P	Pn	18 26 17.3	-1.5
GMJI	**Gumukmas**	**2.24**	**69**	P	Pn	18 26 28.0	+0.7

IDC 14 18:31:20.1±2.5, 6°69N×73°09W, h170km±20km, mb3.3/3, mb1 3.6/4, mb1mx3.2/23, mbtmp3.4/4, Error ellipse: s-maj=48.5km s-min=24.0km az=94.0, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROSC	**El Rosal**	**2.20**	**214**	P	Pn	18 32 00.2	**+0.9**
	92nm,0.3s,baz=357,slow=1.4,SNR=388						
ROSC				S	Sn	18 32 29.7	0.0
	64nm,0.3s,baz=93,slow=17,SNR=12						
TXAR	**Lajitas Array**	**36.57**	**312**	P	P	18 38 10.3	+0.3
	0.1nm,0.5s,baz=114,slow=9.0,SNR=3.0						
SCHQ	**Schefferville**	**48.27**	**5**	P	P	18 39 43.6	-0.1
	1.5nm,0.7s,baz=203,slow=6.9,SNR=6.4						
YKA	**Yellowknife Ar**	**63.40**	**340**	P	P	18 41 30.7	-0.4
	0.9nm,0.5s,baz=133,slow=6.7,SNR=20						
ASAR	**Alice Springs**	**149.06**	**234**	PKPbc	PKPbc	18 50 48.6	-0.5
	0.2nm,0.6s,baz=115,slow=3.7,SNR=6.1						
WRA	**Warramunga Arr**	**150.30**	**241**	PKPbc	PKPbc	18 50 51.8	-0.4
	0.3nm,0.6s,baz=106,slow=2.6,SNR=4.0						
CMAR	**Chiang Mai Arr**	**153.80**	**17**	PKPbc	PKPbc	18 51 00.3	+0.3
	0.2nm,0.6s,baz=324,slow=2.6,SNR=4.4						

*CSEM **14** 18:32:05.8±0.1, 39.°11N×29.°05E, h2km, ML3.3, Error ellipse: s-maj=2.0km s-min=1.9km az=107.0*
*ISK **14** 18:32:05.4, 39.°12N×29.°06E, h5km, MD3.0*
*DDA **14** 18:32:05.1, 39.°09N×29.°01E, h7km, ML3.3*
ISC 14 18:32:05.3±1.0, 39.°11N±0.°02×29.°02E±0.°02, h5km±10km, n102, σ0.9 90/114, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DEMI	**Demirci**	**0.24**	**255**	*i* P	**Pg**	**18 32 30.3**	**+0.2**
DEMI				*i* S	**Sg**	**18 32 13.7**	**+0.4**
DEMI	**Demirci**	**0.24**	**255**	*i* P	**Pg**	**18 32 10.3**	**+0.2**
DEMI				*i* S	**Sg**	**18 32 13.7**	**+0.4**
GDZ	**Gediz**	**0.36**	**93**	*e*P	Pg	18 32 09.1	-3.3
GDZ				*i* S	**Sg**	**18 32 16.8**	**-0.3**
TVSB	**Tavsanli**	**0.49**	**45**	*e*PG	**Pg**	**18 32 14.1**	**-0.6**
TVSB				*e*SG	**Sg**	**18 32 20.6**	**-0.4**
TVSB	**Tavsanli**	**0.49**	**45**	*e*Pg	**Pg**	**18 32 14.1**	**-0.6**
TVSB				*e*Sg	**Sg**	**18 32 20.6**	**-0.4**
DST	**Dursunbey**	**0.58**	**328**	*e*PG	**Pb**	**18 32 17.3**	**-0.7**
DST	**Dursunbey**	**0.58**	**328**	*e*Pg	**Pb**	**18 32 17.3**	**-0.7**
DURS	**Dursunbey**	**0.65**	**320**	*i* P	**Pg**	**18 32 17.8**	**0.0**
DURS	**Dursunbey**	**0.65**	**320**	*i* P	**Pg**	**18 32 17.8**	**0.0**
KULA	**Kula-Manisa**	**0.65**	**205**	*e*PG	**Pb**	**18 32 18.8**	**-0.4**
KULA	**Kula-Manisa**	**0.65**	**205**	*e*Pg	**Pb**	**18 32 18.8**	**-0.4**
MANT	**Manisa**	**0.71**	**210**	*i* P	Pn	18 32 25.6	+2.8
MANT				*i* S	**Sg**	**18 32 28.2**	**0.0**
ALT	**Altintas**	**0.85**	**93**	*e*PG	**Pg**	**18 32 21.8**	**+0.1**
ALT	**Altintas**	**0.85**	**93**	*e*Pg	**Pg**	**18 32 21.8**	**+0.1**
KHL	**Karahalli**	**0.88**	**153**	*e*PG	**Pb**	**18 32 22.8**	**-0.2**
KHL	**Karahalli**	**0.88**	**153**	*e*Pg	**Pb**	**18 32 22.8**	**-0.2**
AKHS	**Akhisar**	**0.96**	**257**	*i* P	**Pb**	**18 32 24.2**	**-0.3**
AKHS				*i* S	**Sb**	**18 32 37.1**	**-0.4**
AKHS	**Akhisar**	**0.96**	**257**	*i* P	**Pb**	**18 32 24.2**	**-0.3**
AKHS				*i* S	**Sb**	**18 32 37.1**	**-0.4**
BALB	**Balikesir**	**1.03**	**301**	*e*PG	**Pn**	**18 32 26.0**	**-0.4**
BALB	**Balikesir**	**1.03**	**301**	*e*Pg	**Pn**	**18 32 26.0**	**-0.4**
BALY	**Balya**	**1.25**	**301**	*i* P	**Pb**	**18 32 29.1**	**-0.3**
BALY				*i* S	**Sn**	**18 32 46.8**	**0.0**
BALY	**Balya**	**1.25**	**301**	*i* P	**Pb**	**18 32 29.1**	**-0.3**
BALY				*i* S	**Sn**	**18 32 46.8**	**0.0**
KCTX	**Karacabey (Bur**	**1.26**	**336**	*e*PN	**Pg**	**18 32 29.9**	**+0.3**
KCTX	**Karacabey (Bur**	**1.26**	**336**	*e*Pn	**Pg**	**18 32 29.9**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.27**	**355**	*e*PN	**Pg**	**18 32 30.0**	**+0.5**
MDNY	**Mudanya-Bursa**	**1.27**	**355**	*e*Pn	**Pg**	**18 32 30.0**	**+0.5**
CAVI	**Cavuskoy**	**1.27**	**30**	*e*PN	**Pb**	**18 32 29.5**	**-0.1**
CAVI	**Cavuskoy**	**1.27**	**30**	*e*Pn	**Pb**	**18 32 29.5**	**-0.1**
SHUT	**Suhut-Afyon**	**1.32**	**114**	*e*PN	**Pg**	**18 32 30.6**	**0.0**
SHUT	**Suhut-Afyon**	**1.32**	**114**	*e*Pn	**Pg**	**18 32 30.6**	**0.0**
GONE	**Gonen-Balikesi**	**1.39**	**313**	*e*PN	**Pb**	**18 32 31.6**	**-0.2**
GONE	**Gonen-Balikesi**	**1.39**	**313**	*e*Pn	**Pb**	**18 32 31.6**	**-0.2**
DNZL	**Cakiroluk**	**1.42**	**179**	*i* P	Pn	18 32 31.4	-0.5
DNZL				*i* S	**Sg**	**18 32 52.8**	**+2.0**
DNZL	**Cakiroluk**	**1.42**	**179**	*i* P	Pn	18 32 31.4	-0.5
DNZL				*i* S	**Sg**	**18 32 52.8**	**+2.0**
ADVT	**Abdulvahap**	**1.44**	**23**	*e*PN	**Pb**	**18 32 32.1**	**-0.4**
ADVT	**Abdulvahap**	**1.44**	**23**	*e*Pn	**Pb**	**18 32 32.1**	**-0.4**
ARMT	**Armutlu**	**1.46**	**355**	*e*PN	**Pb**	**18 32 33.0**	**0.0**
ARMT	**Armutlu**	**1.46**	**355**	*e*Pn	**Pb**	**18 32 33.0**	**0.0**
YLV	**Yalova**	**1.48**	**11**	*e*PN	**Pb**	**18 32 33.4**	**0.0**
YLV	**Yalova**	**1.48**	**11**	*e*Pn	**Pb**	**18 32 33.4**	**0.0**
BNT	**Bandirma**	**1.51**	**326**	*e*PN	**Pg**	**18 32 34.5**	**+0.4**
BNT	**Bandirma**	**1.51**	**326**	*e*Pn	**Pg**	**18 32 34.5**	**+0.4**
IZM	**Izmir**	**1.54**	**243**	*e*PN	**Pg**	**18 32 34.4**	**-0.5**
IZM	**Izmir**	**1.54**	**243**	*e*Pn	**Pg**	**18 32 34.4**	**-0.5**
GPA	**Golpazari**	**1.54**	**40**	*e*PN	**Pb**	**18 32 34.5**	**+0.1**
GPA	**Golpazari**	**1.54**	**40**	*e*Pn	**Pb**	**18 32 34.5**	**+0.1**
AYDN	**Tasoluk**	**1.70**	**212**	*i* P	**Pg**	**18 32 37.7**	**-0.1**
AYDN				*i* S	**Sg**	**18 33 01.6**	**+1.8**
AYDN	**Tasoluk**	**1.70**	**212**	*i* P	**Pg**	**18 32 37.7**	**-0.1**
AYDN				*i* S	**Sg**	**18 33 01.6**	**+1.8**
BLCB	**Balcova**	**1.70**	**246**	*e*PN	**Pg**	**18 32 37.3**	**-0.6**
BLCB	**Balcova**	**1.70**	**246**	*e*Pn	**Pg**	**18 32 37.3**	**-0.6**
ISP	**Isparta**	**1.74**	**137**	*e*PN	**Pb**	**18 32 37.0**	**-0.8**
ISP	**Isparta**	**1.74**	**137**	*e*Pn	**Pb**	**18 32 37.0**	**-0.8**
BUY	**Buyukada**	**1.75**	**3**	*e*PN	**Pb**	**18 32 37.2**	**-0.6**
BUY	**Buyukada**	**1.75**	**3**	*e*Pn	**Pb**	**18 32 37.2**	**-0.6**
GULT	**Gulveren**	**1.76**	**41**	*e*PN	**Pb**	**18 32 37.5**	**-0.5**
GULT	**Gulveren**	**1.76**	**41**	*e*Pn	**Pb**	**18 32 37.5**	**-0.5**
HRT	**Hereke**	**1.78**	**16**	*e*PN	**Pb**	**18 32 37.9**	**-0.6**
HRT	**Hereke**	**1.78**	**16**	*e*Pn	**Pb**	**18 32 37.9**	**-0.6**
KRBG	**Karabiga-Canak**	**1.85**	**315**	*e*PN	**Pb**	**18 32 39.1**	**-0.4**
KRBG	**Karabiga-Canak**	**1.85**	**315**	*e*Pn	**Pb**	**18 32 39.1**	**-0.4**
SPNC	**Sapanca-Adapaz**	**1.86**	**32**	*e*PN	**Pb**	**18 32 38.9**	**-0.9**
SPNC	**Sapanca-Adapaz**	**1.86**	**32**	*e*Pn	**Pb**	**18 32 38.9**	**-0.9**
ISK	**Istanbul-Kandi**	**1.96**	**1**	*e*PN	**Pb**	**18 32 40.2**	**-1.2**
ISK	**Istanbul-Kandi**	**1.96**	**1**	*e*Pn	**Pb**	**18 32 40.2**	**-1.2**
SVRH	**Sivrihisar-ESK**	**1.98**	**79**	*e*PN	**Pb**	**18 32 40.3**	**-1.4**
SVRH	**Sivrihisar-ESK**	**1.98**	**79**	*e*Pn	**Pb**	**18 32 40.3**	**-1.4**
YER	**Yerkesik**	**2.05**	**197**	*e*PN	**Pb**	**18 32 41.8**	**-1.3**
YER	**Yerkesik**	**2.05**	**197**	*e*Pn	**Pb**	**18 32 41.8**	**-1.3**
MLSB	**Milas**	**2.06**	**209**	*e*PN	**Pb**	**18 32 41.9**	**-1.2**
MLSB	**Milas**	**2.06**	**209**	*e*Pn	**Pb**	**18 32 41.9**	**-1.2**
BGKT	**Bogazkoy**	**2.08**	**355**	*e*PN	**Pb**	**18 32 42.0**	**-1.5**
BGKT	**Bogazkoy**	**2.08**	**355**	*e*Pn	**Pb**	**18 32 42.0**	**-1.5**
SILT	**Sile**	**2.10**	**13**	*e*PN	**Pn**	**18 32 42.1**	**+1.0**
SILT	**Sile**	**2.10**	**13**	*e*Pn	**Pn**	**18 32 42.1**	**+1.0**
RKY	**Sarkoy-Tekirda**	**2.12**	**319**	*e*PN	**Pb**	**18 32 42.8**	**-1.4**
RKY	**Sarkoy-Tekirda**	**2.12**	**319**	*e*Pn	**Pb**	**18 32 42.8**	**-1.4**
MFT	**Murefte**	**2.14**	**322**	*e*PN	**Pb**	**18 32 43.2**	**-1.4**
MFT	**Murefte**	**2.14**	**322**	*e*Pn	**Pb**	**18 32 43.3**	**-1.4**
KLYT	**Kilyos**	**2.14**	**1**	*e*PN	**Pb**	**18 32 42.9**	**-1.7**
KLYT	**Kilyos**	**2.14**	**1**	*e*Pn	**Pb**	**18 32 42.9**	**-1.7**
LPK	**Lapseki**	**2.15**	**307**	*e*PN	**Pb**	**18 32 43.3**	**-1.4**
LPK	**Lapseki**	**2.15**	**307**	*e*Pn	**Pb**	**18 32 43.3**	**-1.4**
CTKS	**Kestanelik-??a**	**2.16**	**350**	*e*PN	**Pn**	**18 32 42.7**	**+0.8**
CTKS	**Kestanelik-??a**	**2.16**	**350**	*e*Pn	**Pn**	**18 32 42.7**	**+0.8**
MDUB	**Mudurnu**	**2.16**	**50**	*e*PN	**Pn**	**18 32 42.4**	**+0.3**
MDUB	**Mudurnu**	**2.16**	**50**	*e*Pn	**Pn**	**18 32 42.4**	**+0.3**
EZN	**Ezine**	**2.20**	**290**	*e*PN	**Pb**	**18 32 44.1**	**-1.5**
EZN	**Ezine**	**2.20**	**290**	*e*Pn	**Pb**	**18 32 44.1**	**-1.5**
SLVT	**Silivri**	**2.21**	**344**	*e*PN	**Pn**	**18 32 43.6**	**+1.0**
SLVT	**Silivri**	**2.21**	**344**	*e*Pn	**Pn**	**18 32 43.6**	**+1.0**
GELI	**Tayfur-Gelibol**	**2.35**	**304**	*e*PN	**Pb**	**18 32 46.0**	**-2.0**
GELI	**Tayfur-Gelibol**	**2.35**	**304**	*e*Pn	**Pb**	**18 32 46.0**	**-2.0**
CTYL	**Yal??k??y-??at**	**2.43**	**347**	*e*PN	**Pn**	**18 32 46.6**	**+1.0**
CTYL	**Yal??k??y-??at**	**2.43**	**347**	*e*Pn	**Pn**	**18 32 46.6**	**+1.0**
ERIK	**Erikli-Kesan**	**2.48**	**310**	*e*PN	**Pn**	**18 32 47.6**	**+1.3**
ERIK	**Erikli-Kesan**	**2.48**	**310**	*e*Pn	**Pn**	**18 32 47.6**	**+1.3**
LADK	**Ladik-KONYA**	**2.77**	**108**	*e*PN	**Pn**	**18 32 51.1**	**+0.7**
LADK	**Ladik-KONYA**	**2.77**	**108**	*e*Pn	**Pn**	**18 32 51.1**	**+0.7**
KONT	**Konya--Tatoy**	**2.87**	**113**	*e*PN	**Pn**	**18 32 52.5**	**+0.8**
KONT	**Konya--Tatoy**	**2.87**	**113**	*e*Pn	**Pn**	**18 32 52.5**	**+0.8**
LOD	**Lodumlu**	**3.00**	**74**	*e*PN	**Pn**	**18 32 54.3**	**+0.7**
LOD	**Lodumlu**	**3.00**	**74**	*e*Pn	**Pn**	**18 32 54.3**	**+0.7**

*NIED **14** 18:32:00, 40.°90N×141.°90E, h98km, Mw4.3 Best double couple: M0 2.82000×10^15 NP1:φs132.00000°, δ86.00000°, λ-108.00000°. NP2:φs31.00000°, δ19.00000°, λ-12.00000°.*
*MOS **14** 18:32:13.5±1.5, 40.°66N×141.°71E, h33km, mb4.5/17, Error ellipse: s-maj=15.0km s-min=9.0km az=84.5*
*ISCJB **14** 18:32:21.2±0.3, 40.°92N±0.°03×141.°91E±0.°05, h100km±2km, mb4.2/27, Error ellipse: s-maj=6.6km s-min=3.3km az=29.9*
*NEIC **14** 18:32:21.9±0.5, 40.°86N×141.°91E, h93km±5km, mb4.7/1, MW4.2(NIED), Error ellipse: s-maj=8.1km s-min=4.8km az=134.0*
NEIC Recorded [2 JMA] in Aomori and [1 JMA] in Iwate.
Recorded [1 JMA] in southwestern Hokkaido.
*IDC **14** 18:32:21.4±1.4, 40.°88N×141.°90E, h86km±12km, mb3.8/23, mb1 4.0/29, mb1mx3.9/38, mbtmp3.9/29, MS3.7/2, Ms1 3.7/2, ms1mx2.4/39, Error ellipse: s-maj=13.5km s-min=9.1km az=117.0*

*JMA **14** 18:32:22.1±0.1, 40.°92N×141.°91E, h93km±1km, M4.0*
Broadband fault plane solution: P waves. NP1: φs184.00000°, δ77.00000°, λ-90.00000°. NP2:φs4.00000°, δ13.00000°, λ-90.00000°. Principal axes: T Plg32.0000°, Azm274.0000°; N Plg0.0000°, Azm4.0000°; P Plg58.0000°, Azm94.0000°;
JMA Felt II J1.
ISC 14 18:32:22.1±0.7, 40.°91N±0.°03×141.°96E±0.°04, h93km±6km, n110, σ1.9 14/130, mb4.2/27, 3C-11D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JANG	**Nango**	**0.63**	**213**	⇓P	**Pn**	**18 32 38.1**	**-0.2**
JANG				S	**Sn**	**18 32 50.3**	**-0.1**
JTM	**Tenmabayashi**	**0.69**	**260**	⇓P	**Pn**	**18 32 38.4**	**-0.3**
JTM				S	**Sn**	**18 32 50.5**	**-0.7**
JOT	**Ohata**	**0.84**	**305**	⇓P	**Pn**	**18 32 39.7**	**-0.5**
JOT				S	**Sn**	**18 32 53.2**	**-0.6**
JKB	**Kayabe**	**1.20**	**325**	⇓P	**Pn**	**18 32 44.0**	**-0.3**
JKB				S	**Sn**

KKN	Kakani	47.83	273	*eP*		P		18 40 50.0	-0.6
	comp=Z,22nm,0.8s								
DMN	Daman	48.05	273	*eP*		P		18 40 52.3	-0.1
	comp=Z,25nm,1.0s								
BVAR	Borovoye Array	48.35	310	P		P		18 40 53.8	-0.2
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.4s								
BVAR	Borovoye Array	48.35	310	P		P		18 40 53.8	-0.2
BVAR	Borovoye Array	48.35	310	P		P		18 40 53.8	-0.2
	comp=Z,0.6nm,0.4s,baz=78,slow=9.3,SNR=8.9								
DANN	Dangsing	48.69	274	*eP*		P		18 40 57.2	-0.1
	comp=Z,45nm,0.7s								
KOLN	Koldanda	49.11	274	*eP*		P		18 40 59.4	-1.0
	comp=Z,12nm,0.8s								
PYUN	Piuthan	49.40	274	*eP*		P		18 41 02.1	-0.5
	comp=Z,22nm,0.9s								
AKTO	Aktyubinsk	56.45	310	P		P		18 41 53.7	-0.2
AKTO				pmax		pmax			
	comp=Z,1.0nm,0.3s								
AKTO	Aktyubinsk	56.45	310	P		P		18 41 53.7	-0.2
AKTO	Aktyubinsk	56.45	310	P		P		18 41 53.7	-0.2
	comp=Z,0.6nm,0.3s,baz=36,slow=8.7,SNR=2.3								
SPITS	Spitsbergen Ar	56.81	348	P		P		18 41 56.2	+0.1
SPITS	Spitsbergen Ar	56.81	348	P		P		18 41 56.2	+0.1
	comp=Z,6.2nm,1.1s,baz=79,slow=10,SNR=3.6								
YKA	Yellowknife Ar	60.26	31	P		P		18 42 20.6	+0.5
YKA	Yellowknife Ar	60.26	31	P		P		18 42 20.6	+0.5
	comp=Z,1.0nm,0.6s,baz=300,slow=6.6,SNR=11								
ARCES	ARCESS Array B	60.53	339	P		P		18 42 22.1	+0.1
ARCES	ARCESS Array B	60.53	339	P		P		18 42 22.1	+0.1
	comp=Z,3.0nm,0.9s,baz=50,slow=8.4,SNR=3.6								
FITZ	Fitzroy Crossi	60.64	198	P		P		18 42 22.7	-0.5
FITZ	Fitzroy Crossi	60.64	198	P		P		18 42 22.7	-0.5
	comp=Z,4.9nm,1.1s,baz=6.3,slow=9.2,SNR=3.7								
WRA	Warramunga Arr	60.95	188	P		P		18 42 24.4	-0.9
WRA	Warramunga Arr	60.95	188	P		P		18 42 24.4	-0.9
	comp=Z,7.2nm,0.6s,baz=6.9,slow=6.9,SNR=41								
JOF	Joensuu	62.76	331	*eP*		P		18 42 37.2	+0.2
JOF	Joensuu	62.76	331	*ep*		P		18 42 37.2	+0.2
ASAR	Alice Springs	64.68	188	P		P		18 42 49.8	-0.2
ASAR	Alice Springs	64.68	188	P		P		18 42 49.8	-0.2
	comp=Z,4.8nm,0.7s,baz=8.0,slow=8.1,SNR=77								
KAF	Kangasniemi	65.08	332	*eP*		P		18 42 52.1	0.0
KAF	Kangasniemi	65.08	332	*ep*		P		18 42 52.1	0.0
FINES	FINESS Array B	65.60	332	P		P		18 42 55.7	+0.1
FINES	FINESS Array B	65.60	332	P		P		18 42 55.7	+0.1
	comp=Z,5.5nm,0.7s,baz=46,slow=8.2,SNR=14								
HFS	Hagfors	70.74	335	P		P		18 43 27.8	+0.1
HFS	Hagfors	70.74	335	P		P		18 43 27.8	+0.1
	comp=Z,5.1nm,1.1s,baz=54,slow=7.5,SNR=7.3								
NB2	NORSAR Subarra	70.79	337	P		P		18 43 28.4	+0.4
	comp=Z,1.1nm,0.6s,baz=36,slow=6.5								
NOA	NORSAR Array B	70.79	337	P		P		18 43 28.7	+0.7
NOA	NORSAR Array B	70.79	337	P		P		18 43 28.7	+0.7
	comp=Z,1.3nm,0.7s,baz=39,slow=5.8,SNR=3.7								
LRM	Limekiln Ridge	71.10	45	*eP*		P		18 43 29.7	-0.8
	comp=Z,43nm,1.3s								
AKASG	Malin Array Be	71.51	322	P		P		18 43 32.6	+0.1
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.5s								
AKASG	Malin Array Be	71.51	322	P		P		18 43 32.5	+0.1
AKASG	Malin Array Be	71.51	322	P		P		18 43 32.6	+0.1
	comp=Z,0.5nm,0.5s,baz=43,slow=6.0,SNR=3.9								
NVAR	Mina Array Bea	72.35	54	P		P		18 43 39.8	+1.7
NVAR	Mina Array Bea	72.35	54	P		P		18 43 39.8	+1.7
	comp=Z,1.0nm,0.7s,baz=295,slow=5.9,SNR=9.1								
FRB	Frobisher Bay	72.91	14	P		P		18 43 40.5	0.0
FRB	Frobisher Bay	72.91	14	P		P		18 43 40.5	0.0
	comp=Z,6.3nm,0.8s,baz=343,slow=6.7,SNR=11								
PDAR	Pinedale Array	74.67	46	P		P		18 43 52.2	+0.7
PDAR	Pinedale Array	74.67	46	P		P		18 43 52.2	+0.7
	comp=Z,1.1nm,0.7s,baz=294,slow=1.5,SNR=6.9								
KHC	Kasperske Hory	79.47	328	*eP*		PcP		18 44 29.0	+3.2
KHC	Kasperske Hory	79.47	328	*ePCP*		PcP		18 44 29.0	+3.2
ASF	Jabal al Asfar	79.71	304	LR		LR		19 20 32.5	
	comp=Z,43nm,21.3s,baz=304,slow=36								
MMAI	Mount Meron Ar	80.08	305	LR		LR		19 20 15.9	
	comp=Z,49nm,19.6s,baz=130,slow=36								
TXAR	Lajitas Array	87.43	53	P		P		18 45 00.2	+1.0
TXAR	Lajitas Array	87.43	53	P		P		18 45 00.2	+1.0
	comp=Z,0.4nm,0.6s,baz=292,slow=2.7,SNR=5.7								
SNAA	Sanae	144.57	198	*ePKPdf*		PKPab		18 51 44.7	-0.5
SIV	San Ignacio	148.15	45	PKPbc		PKPbc		18 51 57.6	+0.2
SIV	San Ignacio	148.15	45	PKPbc		PKPbc		18 51 57.6	+0.2
	comp=Z,2.3nm,0.6s,baz=292,slow=4.6,SNR=11								

IDC 14 18:50:28.3±1.6, 2°32S×139°39E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.5/18, mbtmpg3.5/6, ML3.5/1, Error ellipse: s-maj=67.6km s-min=24.6km az=92.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.20	195	P	Pn	18 54 42.3	-0.4
	0.2nm,0.3s,baz=18,slow=12,SNR=4.7						
ASAR	Alice Springs	21.88	194	P	P	18 55 23.7	+0.7
	0.9nm,0.6s,baz=28,slow=11,SNR=11						
MKAR	Makanchi Array	69.90	322	P	P	19 01 41.0	-0.4
	0.3nm,0.6s,baz=101,slow=6.3,SNR=5.1						
KURBB	Kurchatov Arra	73.80	325	P	P	19 02 04.5	-0.1
	0.3nm,0.7s,baz=113,slow=5.0,SNR=4.5						
BVAR	Borovoye Array	79.38	325	P	P	19 02 36.2	0.0
	0.7nm,0.6s,baz=111,slow=8.1,SNR=5.0						
ILAR	Eielson Array	85.20	24	P	P	19 03 06.8	+0.4
	0.3nm,0.7s,baz=261,slow=4.5,SNR=4.1						

ATH 14 19:18:36.8,39°35N×28°04E,h11km, MD3.5/10
ISK 14 19:18:37.7,39°28N×27°90E,h2km, MD3.2
ISCJB 14 19:18:38.6±0.4,39°28N±0°02×27°92E±0°02,h2km±3km, Error ellipse: s-maj=3.0km s-min=2.6km az=44.4
DDA 14 19:18:38.5,39°30N×27°95E,h7km, MD3.3
CSEM 14 19:18:38.8±0.1,39°28N×27°92E,h2km, MD3.2, Error ellipse: s-maj=1.9km s-min=1.7km az=53.0

ISC 14 19:18:38.9±1.0, 39°29N±0°02×27°93E±0°02, h6km±9km, n127, σ0s62/160, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	Balikesir	0.36	354	*ePG*	Pg	19 18 46.1	+0.2
BALB				*eSG*	Sb	19 18 52.1	-1.5
BALB	Balikesir	0.36	354	*ePg*	Pg	19 18 46.1	+0.2
BALB				*eSg*	Sb	19 18 52.1	-1.5
AKHS	Akhisar	0.41	192	*iP*	Pg	19 18 47.0	0.0
AKHS				*iS*	Sb	19 18 54.4	-0.8
AKHS	Akhisar	0.41	192	*iP*	Pg	19 18 47.0	0.0
AKHS				*iS*	Sb	19 18 54.4	-0.8
BALY	Balya	0.51	333	*iP*	Pg	19 18 48.9	+0.1
BALY				*iS*	Sg	19 18 55.6	+0.1
BALY	Balya	0.51	333	*iP*	Pg	19 18 48.9	+0.1
BALY				*iS*	Sg	19 18 55.6	+0.1
DURS	Dursunbey	0.53	53	*iP*	Pg	19 18 48.7	-0.4
DURS				*iS*	Sg	19 18 56.5	+0.5
DURS	Dursunbey	0.53	53	*iP*	Pg	19 18 48.7	-0.4
DURS				*iS*	Sg	19 18 56.5	+0.5
DST	Dursunbey	0.62	59	*ePG*	Pg	19 18 51.3	+0.3
DST				*eSG*	Sb	19 19 00.7	-0.7
DST	Dursunbey	0.62	59	*ePg*	Pg	19 18 51.3	+0.3
DST				*eSg*	Sb	19 19 00.6	-0.7
DEMI	Demirci	0.66	111	*iP*	Pg	19 18 51.4	-0.2
DEMI				*iS*	Sg	19 19 01.1	+0.8
DEMI	Demirci	0.66	111	*iP*	Pg	19 18 51.4	-0.2
DEMI				*iS*	Sg	19 19 01.1	+0.8
GONE	Gonen-Balikesi	0.78	346	*ePG*	Pg	19 18 53.6	-0.3
GONE				*eSG*	Sb	19 19 05.2	-0.6
GONE	Gonen-Balikesi	0.78	346	*ePg*	Pg	19 18 53.7	-0.3
GONE				*eSg*	Sb	19 19 05.2	-0.6
MANT	Manisa	0.94	148	*iP*	Pg	19 18 56.7	-0.2
MANT				*iS*	Sg	19 19 08.9	-0.1
MANT	Manisa	0.94	148	*iP*	Pg	19 18 56.7	-0.2
MANT				*iS*	Sg	19 19 08.9	-0.1
AYVA	Ayvalik	0.96	272	*iP*	Pb	19 18 57.9	0.0
AYVA				*iS*	Sn	19 19 13.3	+0.4
AYVA	Ayvalik	0.96	272	*iP*	Pb	19 18 57.9	0.0
AYVA				*iS*	Sn	19 19 13.3	+0.4
KULA	Kula-Manisa	0.96	143	*ePG*	Pg	19 18 56.9	-0.4
KULA	Kula-Manisa	0.96	143	*ePg*	Pg	19 18 56.9	-0.4
IZM	Izmir	1.03	210	*ePG*	Pg	19 18 58.3	-0.3
IZM	Izmir	1.03	210	*ePg*	Pg	19 18 58.3	-0.3
KCTX	Karacabey (Bur	1.03	19	*ePG*	Pg	19 18 58.1	-0.7
KCTX	Karacabey (Bur	1.03	19	*ePg*	Pg	19 18 58.1	-0.7
ORLT	Orhaneli	1.07	44	*ePN*	Pb	19 18 59.5	-0.3
ORLT	Orhaneli	1.07	44	*ePn*	Pb	19 18 59.5	-0.3
BNT	Bandirma	1.07	360	*ePG*	Pg	19 18 59.0	-0.5
BNT	Bandirma	1.07	360	*ePg*	Pg	19 18 59.0	-0.5
BLCB	Balcova	1.13	218	*ePN*	Pg	19 18 59.9	-0.7
BLCB	Balcova	1.13	218	*ePn*	Pg	19 18 59.9	-0.7
TVSB	Tavsanli	1.20	82	*ePN*	Pg	19 19 01.6	-0.4
TVSB	Tavsanli	1.20	82	*ePn*	Pg	19 19 01.6	-0.4
KRBG	Karabiga-Canak	1.21	337	*ePN*	Pg	19 19 01.9	-0.2
KRBG	Karabiga-Canak	1.21	337	*ePn*	Pg	19 19 01.9	-0.2
GDZ	Gediz	1.23	99	*iP*	Pn	19 19 02.6	-0.1
GDZ				*iS*	Sb	19 19 18.6	-0.1
GDZ	Gediz	1.23	99	*iP*	Pn	19 19 02.6	-0.1
GDZ				*iS*	Sb	19 19 18.6	-0.1
ULDT	Uludag	1.27	47	*iP*	Pg	19 19 02.6	-0.6
ULDT				*iS*	Sg	19 19 19.4	-0.3
ULDT	Uludag	1.27	47	*iP*	Pg	19 19 02.6	-0.6
ULDT				*iS*	Sg	19 19 19.4	-0.3
PRK	Paraskevi	1.28	269	*ePB*	Pn	19 19 02.8	-0.6
PRK				*eSB*	Sn	19 19 21.6	+0.7
PRK	Paraskevi	1.28	269	*ePb*	Pn	19 19 02.8	-0.6
PRK				*eSb*	Sn	19 19 21.6	+0.7
MDNY	Mudanya-Bursa	1.31	34	*ePN*	Pn	19 19 03.5	-0.3
MDNY	Mudanya-Bursa	1.31	34	*ePn*	Pn	19 19 03.5	-0.3
EZN	Ezine	1.35	294	*ePN*	Pn	19 19 03.3	-1.0
EZN	Ezine	1.35	294	*ePn*	Pn	19 19 03.3	-1.0
LPK	Lapseki	1.41	321	*ePN*	Pn	19 19 05.0	-0.1
LPK	Lapseki	1.41	321	*ePn*	Pn	19 19 05.0	-0.1
ARMT	Armutlu	1.47	29	*ePN*	Pn	19 19 05.6	-0.3
ARMT	Armutlu	1.47	29	*ePn*	Pn	19 19 05.6	-0.3
GEMT	Gemlik	1.50	40	*ePN*	Pb	19 19 06.9	-0.4
GEMT	Gemlik	1.50	40	*ePn*	Pb	19 19 06.9	-0.4
RKY	Sarkoy-Tekirda	1.51	338	*ePN*	Pb	19 19 07.2	-0.2
RKY	Sarkoy-Tekirda	1.51	338	*ePn*	Pb	19 19 07.2	-0.2
KHAL	Karahalli	1.53	126	*iP*	Pn	19 19 06.9	0.0
KHAL				*iS*	Sn	19 19 26.8	-0.3
KHAL	Karahalli	1.53	126	*iP*	Pn	19 19 06.9	0.0
KHAL				*iS*	Sn	19 19 26.8	-0.3
BOZC	Bozcaada	1.55	292	*iP*	Pn	19 19 07.2	+0.1
BOZC				*iS*	Sn	19 19 27.7	+0.3
GELI	Tayfur-Gelibol	1.58	315	*ePN*	Pn	19 19 07.6	+0.2
GELI	Tayfur-Gelibol	1.58	315	*ePn*	Pn	19 19 07.6	+0.2
KHL	Karahalli	1.58	127	*ePN*	Pn	19 19 07.8	+0.3
KHL	Karahalli	1.58	127	*ePn*	Pn	19 19 07.8	+0.3
ALT	Altintas	1.71	97	*ePN*	Pb	19 19 10.4	-0.5
ALT	Altintas	1.71	97	*ePn*	Pb	19 19 10.4	-0.5
CHOS	Chios island	1.71	239	*ePN*	Pn	19 19 10.0	+0.6
CHOS				*eSN*	Sg	19 19 34.5	+0.5
CHOS	Chios island	1.71	239	*ePn*	Pn	19 19 10.0	+0.6
CHOS				*eSn*	Sg	19 19 34.5	+0.5
TKR	Tekirdag	1.73	350	*ePN*	Pb	19 19 10.6	-0.5
TKR	Tekirdag	1.73	350	*ePn*	Pb	19 19 10.6	-0.5
CAVI	Cavuskoy	1.74	58	*ePN*	Pn	19 19 10.2	+0.5
CAVI	Cavuskoy	1.74	58	*ePn*	Pn	19 19 10.2	+0.5
ERIK	Erikli-Kesan	1.76	322	*ePN*	Pn	19 19 10.2	+0.3
ERIK	Erikli-Kesan	1.76	322	*ePn*	Pn	19 19 10.2	+0.3
DENT	Denizli	1.76	150	*ePN*	Pn	19 19 10.2	+0.2
DENT	Denizli	1.76	150	*ePn*	Pn	19 19 10.2	+0.2
SMG	Samos	1.79	209	*ePN*	Pn	19 19 11.2	+0.8
SMG	Samos	1.79	209	*ePn*	Pn	19 19 11.2	+0.8
ADVT	Abdulvahap	1.81	50	*ePN*	Pb	19 19 11.9	-0.5
ADVT	Abdulvahap	1.81	50	*ePn*	Pb	19 19 11.9	-0.5
SLVT	Silivri	1.95	6	*ePN*	Pn	19 19 13.6	+1.0
SLVT	Silivri	1.95	6	*ePn*	Pn	19 19 13.6	+1.0
ISK	Istanbul-Kandi	1.98	26	*ePN*	Pn	19 19 13.9	+0.9
ISK	Istanbul-Kandi	1.98	26	*ePn*	Pn	19 19 13.9	+0.9
ENEZ	Enez	1.99	317	*ePN*	Pn	19 19 13.2	+0.1
ENEZ	Enez	1.99	317	*ePn*	Pn	19 19 13.2	+0.1
MLSB	Milas	1.99	183	*ePN*	Pn	19 19 13.2	+0.1
MLSB	Milas	1.99	183	*ePn*	Pn	19 19 13.2	+0.1
CTKS	Kestanelik-??a	2.00	13	*ePN*	Pn	19 19 13.9	+0.7
CTKS	Kestanelik-??a	2.00	13	*ePn*	Pn	19 19 13.9	+0.7
BGKT	Bogazkoy	2.00	19	*ePN*	Pn	19 19 14.2	+0.9
BGKT	Bogazkoy	2.00	19	*ePn*	Pn	19 19 14.2	+0.9
HRT	Hereke	2.04	41	*ePN*	Pn	19 19 14.6	+0.8
HRT	Hereke	2.04	41	*ePn*	Pn	19 19 14.6	+0.8
KLYT	Kilyos	2.14	23	*ePN*	Pn	19 19 16.2	+1.0
KLYT	Kilyos	2.14	23	*ePn*	Pn	19 19 16.2	+1.0
ALN	Alexandroupoli	2.16	319	*ePN*	Pn	19 19 15.6	+0.1
ALN				*eSN*	Sn	19 19 43.0	+0.5
ALN	Alexandroupoli	2.16	319	*ePn*	Pn	19 19 15.6	+0.1
ALN				*eSn*	Sn	19 19 43.0	+0.5
YER	Yerkesik	2.17	172	*ePN*	Pn	19 19 15.9	+0.3
YER	Yerkesik	2.17	172	*ePn*	Pn	19 19 15.9	+0.3
SHUT	Suhut-Afyon	2.17	109	*ePN*	Pn	19 19 16.2	+0.4
SHUT	Suhut-Afyon	2.17	109	*ePn*	Pn	19 19 16.2	+0.4
SMTH	Samothraki Isl	2.19	303	*ePN*	Pn	19 19 16.0	+0.1
SMTH				*eSN*	Sn	19 19 44.6	+1.3
SMTH	Samothraki Isl	2.19	303	*ePn*	Pn	19 19 16.0	+0.1
SMTH				*eSn*	Sn	19 19 44.6	+1.3
CTYL	Yal??k??y-??at	2.21	7	*ePN*	Pn	19 19 17.2	+1.1
CTYL	Yal??k??y-??at	2.21	7	*ePn*	Pn	19 19 17.2	+1.1
LIA	Limnos Island	2.21	287	*ePN*	Pn	19 19 16.3	+0.2
LIA	Limnos Island	2.21	287	*ePn*	Pn	19 19 16.3	+0.2
BODT	Bodrum	2.27	193	*ePN*	Pn	19 19 17.2	+0.2
BODT	Bodrum	2.27	193	*ePn*	Pn	19 19 17.2	+0.2
SILT	Sile	2.28	35	*ePN*	Pn	19 19 18.2	+1.1
SILT	Sile	2.28	35	*ePn*	Pn	19 19 18.2	+1.1
GULT	Gulveren	2.30	59	*ePN*	Pn	19 19 18.2	+0.8
GULT	Gulveren	2.30	59	*ePn*	Pn	19 19 18.2	+0.8
ISP	Isparta	2.51	125	*ePN*	Pn	19 19 21.4	+1.2
ISP	Isparta	2.51	125	*ePn*	Pn	19 19 21.5	+1.2
RDO	Rodhopi	2.61	316	*ePN*	Pn	19 19 21.6	0.0
RDO	Rodhopi	2.61	316	*ePn*	Pn	19 19 21.6	0.0
EDRB	Edirne	2.71	341	*ePN*	Pn	19 19 24.5	+1.5
EDRB	Edirne	2.71	341	*ePn*	Pn	19 19 24.5	+1.5
MDUB	Mudurnu	2.78	64	*ePN*	Pn	19 19 25.2	+1.1
MDUB	Mudurnu	2.78	64	*ePn*	Pn	19 19 25.2	+1.1
SVRH	Sivrihisar-ESK	2.79	86	*ePN*	Pn	19 19 25.2	+0.9
SVRH	Sivrihisar-ESK	2.79	86	*ePn*	Pn	19 19 25.2	+0.9
FETY	Fethiye	2.80	161	*ePN*	Pn	19 19 25.0	+0.7
FETY	Fethiye	2.80	161	*ePn*	Pn	19 19 25.0	+0.7
AOS	Alonnisos	3.14	269	*ePN*	Pn	19 19 29.8	+0.8
AOS	Alonnisos	3.14	269	*ePn*	Pn	19 19 29.8	+0.8
PLG	Polygyros	3.62	289	*ePN*	Pn	19 19 35.7	+0.2
PLG	Polygyros	3.62	289	*ePn*	Pn	19 19 35.7	+0.2
NVR	Nevrokopi	3.73	305	*ePN*	Pn	19 19 37.6	+0.5
NVR	Nevrokopi	3.73	305	*ePn*	Pn	19 19 37.6	+0.5

ISCJB 14 19:22:01.3±0.2,62°27N±0°02×147°41W±0°05, h71km±5km, mb3.6/1, Error ellipse: s-maj=3.6km s-min=3.3km az=162.6
IDC 14 19:22:01.8±2.1,62°30N×147°64W,h62km±20km, mb3.3/1, Error ellipse: s-maj=23.1km s-min=15.1km az=83.0
NEIC 14 19:22:03.0,62°25N×147°42W,h55km, ML3.4(AEIC), After AEIC.

ISC 14 19:22:02.2±0.9, 62°25N±0°03×147°41W±0°03, h59km±9km, n74, σ0s87/87, 1C, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SML	Sawmill	0.62	225	P	Pn	19 22 15.3	-0.1
SML				S	Sn	19 22 25.7	+0.6
DHY	Denali Highway	0.83	1	P	Pn	19 22 17.7	-0.3
DHY				S	Sn	19 22 29.5	-0.2
KLU	Klutina	1.04	137	P	Pn	19 22 20.8	+0.1
PMR	Palmer	1.05	232	*ePn*	Pn	19 22 20.6	-0.1
PMR				*eSn*	Sn	19 22 34.3	-0.2
PMR				S		19 22 35.3	
HARP	HAARP	1.06	81	P	Pn	19 22 21.4	+0.4
PAX	Paxson	1.15	50	*ePn*	Pn	19 22 22	0.0
PAX				*eSn*	Sn	19 22 36.6	-0.5
PAX				S		19 22 37.7	
VLZ	Valdez	1.24	155	P	Pn	19 22 22.8	-0.4
VLZ				S	Sn	19 22 39.0	+0.1
RND	Reindeer	1.33	331	P	Pn	19 22 24.8	+0.2
RND				S	Sn	19 22 42.5	+1.0
CUT	Chulitna	1.35	278	P	Pn	19 22 25.1	+0.4
DIV	Divide	1.37	145	P	Pn	19 22 24.8	-0.3
DIV				S	Sn	19 22 42.8	+0.5
WASW	Wrangell South	1.56	101	P	Pn	19 22 28.6	+0.8
WANC	Wrangell North	1.59	98	P	Pn	19 22 29.6	+1.2
MCK	McKinley	1.64	335	P	Pn	19 22 29.4	+0.7
SUA	Susitna One	1.77	245	P	Pn	19 22 31.2	+0.7
TRF	Thorofare Moun	1.79	314	P	Pn	19 22 30.5	-0.4
MENT	Mentasta	1.84	66	P	Pn	19 22 31.4	0.0
EYAK	Cordova Ski Ar	1.89	154	P	Pn	19 22 32.3	+0.3
GLB	Gilahina Butte	1.89	114	P	Pn	19 22 32.6	+0.5
RIDG	Independ'e Rid	1.90	37	P	Pn	19 22 32.9	+0.7
SKT	Skwentna	1.96	264	P	Pn	19 22 33.6	+0.6
DOT	Dot Lake	2.07	46	P	Pn	19 22 34.8	+0.2
VRDI	Verde Repeater	2.14	117	P	Pn	19 22 35.9	+0.2
SLKM	Skilak Lake	2.21	219	P	Pn	19 22 37.5	+1.0
STLK	Strandline Lak	2.23	252	P	Pn	19 22 37.2	+0.5
WRH	Wood River Hil	2.25	352	P	Pn	19 22 37.4	+0.5
MCARA	McCarthy VSAT	2.26	111	P	Pn	19 22 37.7	+0.7
PPLA	Purkeypile	2.31	288	P	Pn	19 22 38.3	+0.5
SCRK	Sand Creek	2.33	40	P	Pn	19 22 37.9	-0.2
CCB	Clear Creek Bu	2.41	356	P	Pn	19 22 39.5	+0.4
NEA	Nenana	2.45	343	P	Pn	19 22 39.6	-0.1
SPU	Mount Spurr	2.46	246	P	Pn	19 22 40.5	+0.7
ILAR	Eielson Array	2.54	5	P	Pn	19 22 40.8	-0.1
ILAR				S	Sn	19 23 10.5	-0.6
ILAR	Eielson Array	2.54	5	P	Pn	19 22 40.8	-0.1
	8.3nm,0.3s,baz=188,slow=14,SNR=411						
ILAR				S	Sn	19 23 10.0	-0.6
	baz=190,slow=20						
IL1	Eielson Array	2.54	5	P	Pn	19 22 40.9	0.0
BGL	Barrier Glacie	2.57	249	P	Pn	19 22 42.8	+1.4
CKL	Chakachamna La	2.58	248	P	Pn	19 22 42.2	+0.7
BERG	Berg Lake	2.58	135	P	Pn	19 22 41.7	+0.2
PTPK	Patty Peak	2.58	112	P	Pn	19 22 42.2	+0.5
NICHA	Nichawak Mount	2.62	139	P	Pn	19 22 42.2	+0.2
COLA	College	2.64	356	P	Pn	19 22 42.6	+0.4
KHIT	Khitrov Hills	2.70	130	P	Pn	19 22 44.6	+1.4
BALM	Baldy	2.71	115	P	Pn	19 22 43.2	-0.1
BCA3	Beaver Creek A	2.72	70	P	Pn	19 22 43.5	+0.1
MDM	Murphy Dome	2.74	353	P	Pn	19 22 44.0	+0.3
GLM	Gilmore Dome	2.75	0	P	Pn	19 22 44.0	+0.2
KIAG	Kiagna River	2.76	117	P	Pn	19 22 43.6	-0.4
GRIN	Grindle Hills	2.79	133	P	Pn	19 22 45.7	+1.3
BARN	Barnard Glacie	2.99	111	P	Pn	19 22 47.7	+0.5
BARK	Barkley Ridge	3.01	126	P	Pn	19 22 47.8	+0.4
GRNC	Granite Creek	3.11	117	P	Pn	19 22 48.7	-0.2
RSO	Redoubt South	3.14	237	*ePn*	Pn	19 22 50.0	+0.7
RSO				*eSn*	Sn	19 23 26.0	+0.4
RDWB	Redoubt West	3.16	238	P	Pn	19 22 49.8	+0.3
MLY	Manley	3.16	333	P	Pn	19 22 49.6	+0.2
EGAK	Eagle	3.77	45	*ePn*	Pn	19 22 57.6	-0.1
EGAK				*eSn*	Sn	19 23 40.9	0.0
TT01	Tatalina	4.04	283	P	Pn	19 23 00.8	-0.5
DAWY	Dawson	4.06	60	P	Pn	19 23 02.0	+0.3
IM3	Indian Mountai	4.66	326	P	Pn	19 23 09.9	0.0
PNL	Peninsula	4.68	120	*ePn*	Pn	19 23 11.0	+0.8
HYT	Haines Junctio	4.95	102	P	Pn	19 23 13.0	-0.9
COLD	Coldfoot	5.14	348	*ePn*	Pn	19 23 17.0	+0.6
COLD				P		19 23 17.4	
COLD				*eSn*	Sn	19 24 15.0	+0.8
KDAK	Kodiak Island	5.18

TVSB	**Tavsanli**	**3.01**	**31**	*e*PN	**Pn**	**20 02 29.2**	**+1.0**
TVSB	**Tavsanli**	**3.01**	**31**	*e*Pn	**Pn**	**20 02 29.2**	**+1.0**
SMTH	**Samothraki Isl**	**3.90**	**338**	*e*P	**Pn**	**20 02 39.8**	**-0.6**
SMTH	**Samothraki Isl**	**3.90**	**338**	*e*P	**Pn**	**20 02 39.8**	**-0.6**

IDC ***14*** *20:17:48.2±0.9,27˚.52N×66˚.59E, h0km, mb3.7/9, mb1 4.0/9, mb1mx3.7/29, mbtmp3.7/9, Error ellipse: s-maj=25.3km s-min=23.9km az=80.0*

ISCJB ***14*** *20:17:51.3±0.8,27˚.6N±0˚.1×66˚.3E±0˚.1, h33km, mb3.9/14, Error ellipse: s-maj=21.0km s-min=15.1km az=4.9*

ISC 14 20:17:53.5±1.1,**27.6N**±0˚.2×**66.5E**±0˚.2,**h35km**,**n18**, σ0**s85**/18,**mb3.9**/14,**Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**22.86**	**29**	P	**P**	**20 22 53.2**	**-0.5**
	1.3nm,0.6s,baz=213,slow=9.4,SNR=26						
KURBB	**Kurchatov Arra**	**24.77**	**19**	P	**P**	**20 23 11.8**	**0.0**
	1.2nm,0.7s,baz=211,slow=9.0,SNR=17						
BVAR	**Borovoye Array**	**25.58**	**5**	P	**P**	**20 23 19.4**	**+0.3**
	2.1nm,0.7s,baz=170,slow=10,SNR=16						
GERES	**GERESS Array B**	**45.53**	**313**	P	**P**	**20 26 10.4**	**+0.7**
	0.3nm,0.6s,baz=96,slow=9.5,SNR=5.1						
SBF	**Sospel**	**49.58**	**305**	*e*P	**P**	**20 26 40.5**	**-0.7**
	17nm,0.9s						
LPL	**La Plagne**	**50.06**	**308**	*e*P	**P**	**20 26 44.1**	**-0.9**
	3.6nm,0.8s						
LMR	**La Mourre**	**50.27**	**305**	*e*P	**P**	**20 26 44.6**	**-1.8**
VIVF	**Saint-Julien-l**	**51.53**	**307**	*e*P	**P**	**20 26 55.1**	**-0.8**
	4.3nm,0.9s						
LOR	**Lormes**	**52.02**	**310**	*e*P	**P**	**20 26 58.6**	**-0.9**
SMF	**Signal de Mont**	**52.05**	**309**	*e*P	**P**	**20 26 59.1**	**-0.6**
	8.3nm,0.8s						
SSF	**Saint Saulge**	**52.27**	**310**	*e*P	**P**	**20 27 00.6**	**-0.7**
	3.3nm,0.7s						
AVF	**Avril sur Loir**	**52.38**	**309**	*e*P	**P**	**20 27 01.2**	**-0.9**
ROSF	**Rostrenen**	**56.76**	**312**	*e*P	**P**	**20 27 33.0**	**-0.9**
TORD	**Torodi Ar. Bea**	**61.80**	**271**	P	**P**	**20 28 10.0**	**+0.8**
	1.9nm,0.7s,baz=58,slow=6.5,SNR=17						
WRA	**Warramunga Arr**	**80.88**	**118**	P	**P**	**20 30 04.0**	**-0.3**
	1.1nm,0.6s,baz=315,slow=4.8,SNR=8.4						
ASAR	**Alice Springs**	**82.62**	**121**	P	**P**	**20 30 13.1**	**-0.4**
	0.6nm,0.7s,baz=308,slow=5.5,SNR=11						
ILAR	**Eielson Array**	**84.35**	**14**	P	**P**	**20 30 22.0**	**+0.3**
	0.2nm,0.9s,baz=318,slow=1.9,SNR=4.2						
YKA	**Yellowknife Ar**	**90.23**	**1**	P	**P**	**20 30 51.0**	**+0.9**
	0.1nm,0.6s,baz=355,slow=5.0,SNR=3.2						

ISCJB ***14*** *20:18:45.0±1.8,36˚.86N±0˚.08×27˚.52E±0˚.06, h6km±14km, Error ellipse: s-maj=14.0km s-min=7.2km az=11.6*

CSEM ***14*** *20:18:45.1±0.6,36˚.85N×27˚.52E, h2km, MD2.4, Error ellipse: s-maj=10.4km s-min=4.8km az=12.0*

ISK ***14*** *20:18:45.1,36˚.92N×27˚.51E, h12km, MD2.4*

DDA ***14*** *20:18:45.9,36˚.88N×27˚.52E, h7km, MD2.6*

ISC 14 20:18:43.3±1.8,**36.79N**±0˚.09×**27.51E**±0˚.07,**h16**km±9km, **n14**, σ1**s06**/22,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.31**	**330**	*e*Pg	**Pg**	**20 18 50.0**	**+0.1**
BODT				*e*Sg	**Sg**	**20 18 53.8**	**-0.7**
BODT	**Bodrum**	**0.31**	**330**	*e*Pg	**Pg**	**20 18 50.1**	**+0.1**
BODT				*e*Sg	**Sg**	**20 18 53.8**	**-0.7**
MLSB	**Milas**	**0.55**	**23**	*e*PG	**Pg**	**20 18 54.2**	**-0.1**
MLSB				*e*SG	**Sb**	**20 19 00.8**	**-1.5**
MLSB	**Milas**	**0.55**	**23**	*e*Pg	**Pg**	**20 18 54.2**	**-0.1**
MLSB				*e*Sg	**Sb**	**20 19 00.8**	**-1.5**
YER	**Yerkesik**	**0.71**	**61**	*e*PG	**Pb**	**20 18 58.4**	**+1.0**
YER				*e*SG	**Sb**	**20 19 08.0**	**+1.1**
YER	**Yerkesik**	**0.71**	**61**	*e*Pg	**Pb**	**20 18 58.4**	**+1.0**
YER				*e*Sg	**Sb**	**20 19 08.0**	**+1.1**
TURN	**Turunc**	**0.89**	**84**	*i* P	Pg	20 18 56.9	-3.6
TURN				*i* S	Sg	20 19 06.4	-5.7
TURN	**Turunc**	**0.89**	**84**	*i* P	Pg	20 18 56.9	-3.6
TURN				*i* S	Sg	20 19 06.4	-5.7
AYDN	**Tasoluk**	**0.92**	**19**	*i* P	**Pb**	**20 19 01.2**	**+0.3**
AYDN				*i* S	**Sb**	**20 19 12.9**	**0.0**
AYDN	**Tasoluk**	**0.92**	**19**	*i* P	**Pb**	**20 19 01.2**	**+0.3**
AYDN				*i* S	**Sb**	**20 19 12.9**	**0.0**
GCAM	**G?zelcaml?**	**0.94**	**347**	*i* P	**Pn**	**20 19 02.6**	**+0.9**
GCAM				*i* S	**Sn**	**20 19 14.4**	**-0.3**
GCAM	**G?zelcaml?**	**0.94**	**347**	*i* P	**Pn**	**20 19 02.6**	**+0.9**
GCAM				*i* S	**Sn**	**20 19 14.4**	**-0.3**
AKAS	**Kas**	**1.78**	**108**	*i* P	**Sn**	**20 19 33.8**	**-2.0**
AKAS	**Kas**	**1.78**	**108**	*i* P	**Sn**	**20 19 33.8**	**-2.0**

SZGRF ***14*** *20:25:08.2, 58˚.34S×30˚.79W, h33km, mb4.8, South Sandwich Islands region*

BJI ***14*** *20:25:12.2, 59˚.00S×25˚.00W, h10km, mB5.3/21, Ms5.4/22, Ms7 5.2/23*

IDC ***14*** *20:25:13.5±0.3, 58˚.91S×25˚.02W, h0km, mb5.1/24, mb1 5.1/26, mb1mx5.1/27, mbtmp5.1/26, ML5.5/2, MS4.5/16, Ms1 4.5/16, ms1mx4.4/27, Error ellipse: s-maj=13.1km s-min=10.5km az=23.0*

ISCJB ***14*** *20:25:14.6±0.2, 58˚.97S±0˚.05×25˚.04W±0˚.08, h18km, mb5.3/56, MS4.8/31, Error ellipse: s-maj=7.0km s-min=5.7km az=20.7*

MOS ***14*** *20:25:17.6±1.1, 58˚.98S×24˚.90W, h34km, mb5.5/39, MS4.5/9, Error ellipse: s-maj=21.6km s-min=10.3km az=98.8*

NEIC ***14*** *20:25:18.0±2.0, 58˚.97S×24˚.98W, h30km±13km, mb5.4/30, Error ellipse: s-maj=6.3km s-min=4.9km az=210.0*

DJA ***14*** *20:25:19.0±7.0, 59˚S±17˚×2˚5W±3˚0, h17km±45km, M5.3/9, mB5.5/1, mb5.3/9, Mw(mB)5.0/1*

GCMT ***14*** *20:25:21.3±0.2, 59˚.17S×24˚.62W, h28km, MW5.1, Moment Tensor Solution. s60,c87; s68,c110; Moment tensor: Scale 10^{16}Nm; M_{rr}5.27±.19; $M_{\theta\theta}$-5.46±.15; $M_{\phi\phi}$0.18±.17; $M_{r\theta}$0.73±.26; $M_{\theta\phi}$2.58±.12; $M_{\phi r}$-2.34±.32; Best double couple: $M_0$6.40000×10^{16} NP1:ϕ_s271.00000°, δ41.00000°, λ.58.00000° NP2:ϕ_s131.00000°, δ56.00000°, λ115.00000°. Principal axes: T 6.1900, Plg68.0000°, Azm94.0000°; N 0.4700, Plg20.0000°, Azm296.0000°; P -6.6700, Plg8.0000°, Azm203.0000°; Data Used: II IU G IC CN.*

ISC 14 20:25:16.2±0.2,**58˚.90S**±0˚.05×**25˚.07W**±0˚.05,**h18km**,**n627**, σ1**s22**/663,**mb5.4**/53,**MS4.7**/31,**137C-93D**,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.72**	**156**	*e*Pn	**Pn**	**20 28 27.7**	**-1.7**
VNA1	**Neumayer--Stat**	**13.72**	**156**	*ep*Pn	**Pn**	**20 28 30.5**	**+1.1**
VNA1	**Neumayer--Stat**	**13.72**	**156**	*e*P	**P**	**20 28 37.5**	**-0.5**
VNA1	**Neumayer--Stat**	**13.72**	**156**	*e*Sn	**Sn**	**20 31 04.5**	**+3.5**
SNAA	**Sanae**	**15.67**	**154**	*e*Pn	**Pn**	**20 28 53.2**	**-2.5**
SNAA	**Sanae**	**15.67**	**154**	*e*Sn	Sn	20 31 31.7	-17
SNAA	**Sanae**	**15.67**	**154**	⇑*i*P	**Pn**	**20 28 53.8**	**-2.0**
SNAA	**Sanae**	**15.67**	**154**	Pn	**Pn**	**20 28 53.7**	**-2.0**
	8.1nm,0.5s						
SNAA				Sn	Sn	20 31 34.1	-15
SNAA	**Sanae**	**15.67**	**154**	Pn	**Pn**	**20 28 53.7**	**-2.0**
	11nm,0.3s,baz=330,slow=14,SNR=1201						
SNAA				Sn	Sn	20 31 34.1	-15
	0.7nm,0.3s,baz=351,slow=21,SNR=4.1						
SNAA				LR	LR	20 33 43.8	
	comp=Z,622nm,19.8s,baz=164,slow=33						
PMSA	**Palmer Station**	**19.06**	**236**	P	**P**	**20 29 37.8**	**+0.8**
PMSA				ScP	**ScP**	**20 37 36.7**	**+1.3**
PMSA	**Palmer Station**	**19.06**	**236**	P	**P**	**20 29 37.8**	**+0.8**
	3.0nm,0.3s,baz=82,slow=7.9,SNR=15						
PMSA				LR	LR	20 35 46.5	
	comp=Z,3μm,21.0s,baz=90,slow=33						
PMSA				ScP	**ScP**	**20 37 36.7**	**+1.3**
	1.0nm,0.3s,baz=64,slow=1.8,SNR=7.6						
MAIT	**Maitri**	**19.24**	**143**	*e*P	P	20 29 29.2	-10
EFI	**East Falkland**	**19.97**	**277**	Pn	Pn	20 29 49.5	+0.7
	997nm,0.6s,SNR=12						
EFI	**East Falkland**	**19.97**	**277**	*e*P	Pn	20 29 49.4	+0.7
EFI				pmax	pmax		
	comp=Z,166nm,0.9s						
EFI	**East Falkland**	**19.97**	**277**	*e*P	Pn	20 29 49.4	+0.7
	comp=Z,166nm,0.9s						
USHA	**Ushuaia**	**23.73**	**261**	P	**P**	**20 30 28.6**	**+1.8**
USHA				PcP	**PcP**	**20 34 09.2**	**-0.9**
USHA	**Ushuaia**	**23.73**	**261**	P	**P**	**20 30 28.6**	**+1.8**
	comp=Z,33nm,0.7s,baz=109,slow=9.9,SNR=25						
USHA				PcP	**PcP**	**20 34 09.2**	**-0.9**
	comp=Z,11nm,0.7s,baz=163,slow=3.8,SNR=3.1						
USHA				LR	LR	20 37 04.5	
	comp=Z,989nm,19.9s,baz=130,slow=30						
SYO	**Syowa Base**	**28.67**	**137**	*e*P	**P**	**20 31 08.4**	**-3.0**
SYO	**Syowa Base**	**28.67**	**137**	*es*P	sP	20 31 14.0	-5.1
QSPA	**South Pole Qui**	**31.34**	**180**	P	**P**	**20 31 36.3**	**+1.1**
QSPA				PKiKP	**PKiKP**	**20 41 56.4**	**-1.0**
QSPA	**South Pole Qui**	**31.34**	**180**	P	**P**	**20 31 36.3**	**+1.1**
	comp=Z,31nm,0.9s,baz=205,slow=4.4,SNR=76						
QSPA				PKiKP	**PKiKP**	**20 41 56.4**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=214,slow=1.5,SNR=5.2						
QSPA				LR	LR	20 44 09.7	
	comp=Z,2μm,18.3s,baz=14,slow=36						
TRQA	**Tornquist**	**31.53**	**295**	*e*P	**P**	**20 31 35.9**	**-1.1**
	comp=Z,69nm,0.7s						
TRQA				*e*PcP	**PcP**	**20 34 29.9**	**+0.6**
PLCA	**Paso Flores**	**33.68**	**282**	P	**P**	**20 31 56.7**	**+0.8**
	comp=Z,302nm,2.8s						
PLCA				PcP	**PcP**	**20 34 36.4**	**+1.1**
PLCA				ScP	**ScP**	**20 38 16.9**	**-1.8**
PLCA	**Paso Flores**	**33.68**	**282**	P	**P**	**20 31 56.7**	**+0.8**
	comp=Z,13nm,0.7s,baz=147,slow=7.8,SNR=21						
PLCA				PcP	**PcP**	**20 34 36.4**	**+1.1**
	comp=Z,5.4nm,0.8s,baz=138,slow=4.7,SNR=3.7						
PLCA				ScP	**ScP**	**20 38 16.9**	**-1.8**
	comp=Z,2.7nm,0.8s,baz=126,slow=0.9,SNR=3.4						
PLCA				LR	LR	20 46 10.8	
	comp=Z,629nm,19.1s,baz=159,slow=37						
MAW	**Mawson**	**37.19**	**141**	P	**P**	**20 32 25.1**	**-0.5**
MAW				PcP	**PcP**	**20 34 45.2**	**+0.2**
MAW	**Mawson**	**37.19**	**141**	P	**P**	**20 32 25.1**	**-0.5**
	comp=Z,37nm,0.9s,baz=238,slow=8.9,SNR=47						
MAW				PcP	**PcP**	**20 34 45.2**	**+0.2**
	comp=Z,15nm,0.8s,baz=253,slow=3.5,SNR=6.9						
MAW				LR	LR	20 46 00.1	
	comp=Z,723nm,18.3s,baz=254,slow=34						
ELIM	**Elim**	**38.11**	**70**	⇑*i*P	**P**	**20 32 34.5**	**+0.8**
ELIM				AMB	AMB	20 32 35.0	
	comp=Z,239nm,1.2s						
CAM4	**Nova Friburgo**	**38.60**	**334**	⇓*i*P	**P**	**20 32 40.3**	**+2.1**
CAM4				*i*		20 32 48.0	
CAM4				*i*		20 32 50.3	
CAM4				*i*		20 33 02.7	
SPB	**Sao Paulo**	**38.69**	**326**	*e*P	**P**	**20 32 39.6**	**+0.9**
	comp=Z,20nm,0.6s						
CPUP	**Villa Florida**	**39.56**	**311**	P	**P**	**20 32 45.2**	**-0.7**
CPUP				PcP	**PcP**	**20 34 53.8**	**+0.8**
CPUP				ScP	**ScP**	**20 38 41.4**	**+0.9**
CPUP	**Villa Florida**	**39.56**	**311**	P	**P**	**20 32 45.2**	**-0.7**
	comp=Z,2.7nm,0.4s,baz=132,slow=7.9,SNR=18						
CPUP				PcP	**PcP**	**20 34 53.8**	**+0.8**
	comp=Z,2.8nm,0.5s,baz=121,slow=3.8,SNR=4.9						
CPUP				ScP	**ScP**	**20 38 41.4**	**+0.9**
	comp=Z,5.9nm,0.8s,baz=121,slow=3.8,SNR=11						
CPUP				LR	LR	20 47 56.3	
	comp=Z,441nm,21.1s,baz=138,slow=34						
CFAA	**Coronel Fontan**	**39.76**	**294**	P	**P**	**20 32 46.9**	**-0.8**
CFAA				PcP	**PcP**	**20 34 53.4**	**-0.3**
CFAA	**Coronel Fontan**	**39.76**	**294**	P	**P**	**20 32 46.9**	**-0.8**
	comp=Z,3.1nm,0.6s,baz=150,slow=8.0,SNR=68						
CFAA				PcP	**PcP**	**20 34 53.4**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=170,slow=2.6,SNR=6.6						
SUR	**Sutherland**	**40.42**	**70**	P	**P**	**20 32 54.3**	**+1.0**
	comp=Z,436nm,0.8s,SNR=11						
SUR	**Sutherland**	**40.42**	**70**	*e*P	**P**	**20 32 54.0**	**+0.7**
SUR				AMB	AMB	20 32 54.2	
	comp=Z,77nm,2.9s						
SUR	**Sutherland**	**40.42**	**70**	*e*P	**P**	**20 32 54.4**	**+1.1**
	comp=Z,70nm,0.9s						
SUR				*e*PcP	**PcP**	**20 34 56.5**	**+0.5**
SUR				PcP	**PcP**	**20 34 56.6**	**+0.5**
SUR	**Sutherland**	**40.42**	**70**	P	**P**	**20 32 52.8**	**-0.5**
	comp=Z,21nm,1.2s,baz=124,slow=19,SNR=3.1						
SUR				PcP	**PcP**	**20 34 56.6**	**+0.5**
	comp=Z,27nm,0.9s,baz=271,slow=3.3,SNR=5.5						
SUR				LR	LR	20 45 28.7	
	comp=Z,869nm,19.1s,baz=202,slow=30						
CVNA	**Calvinia**	**40.65**	**68**	⇑*i*P	**P**	**20 32 56.4**	**+1.3**
CVNA				AMB	AMB	20 32 57.0	
	comp=Z,136nm,1.2s						
BUFB	**Buffelsbos**	**40.94**	**75**	*e*P	**P**	**20 32 57.7**	**+0.3**
BUFB				AMB	AMB	20 32 59.0	
	comp=Z,65nm,0.8s						
KOMG	**Komaggas**	**40.98**	**64**	⇑*i*P	**P**	**20 32 57.7**	**0.0**
KOMG				AMB	AMB	20 32 59.4	
	comp=Z,67nm,1.2s						
LCO	**Las Campanas**	**43.09**	**294**	*e*P	**P**	**20 33 15.4**	**+0.1**
	comp=Z,20nm,0.8s						
SBA	**Scott Base**	**43.30**	**184**	*e*P	**P**	**20 33 17.8**	**+1.7**
SBA				pmax	pmax		
	comp=Z,40nm,1.0s						
SBA	**Scott Base**	**43.30**	**184**	*e*P	**P**	**20 33 17.8**	**+1.7**
	comp=Z,40nm,1.0s						
VNDA	**Vanda**	**43.77**	**182**	*e*P	**P**	**20 33 21.2**	**+1.3**
	comp=Z,38nm,1.0s						
VNDA				PcP	**PcP**	**20 35 08.8**	**+2.7**
VNDA	**Vanda**	**43.77**	**182**	P	**P**	**20 33 21.4**	**+1.5**
	comp=Z,29nm,0.9s,baz=188,slow=6.5,SNR=126						
VNDA				PcP	**PcP**	**20 35 08.8**	**+2.7**
	comp=Z,7.4nm,1.0s,baz=212,slow=5.5,SNR=3.9						
VNDA				LR	LR	20 51 41.5	
	comp=Z,358nm,18.4s,baz=168,slow=36						
SHEL	**Horse Pasture**	**45.19**	**27**	*e*P	**P**	**20 33 33.3**	**+1.4**
SHEL				pmax	pmax		
	comp=Z,260nm,1.0s						
SHEL	**Horse Pasture**	**45.19**	**27**	*e*P	**P**	**20 33 33.2**	**+1.4**
	comp=Z,260nm,1.0s						
SHEL	**Horse Pasture**	**45.19**	**27**	P	**P**	**20 33 34.1**	**+2.2**
	comp=Z,1μm,1.0s,SNR=5.1						
BOSA	**Boshof**	**45.69**	**71**	⇑*i*P	**P**	**20 33 35.7**	**-0.2**
BOSA				AML	AML	20 33 36.3	
	comp=Z,100nm,0.8s						
BOSA				*e*P	**pP**	**20 33 38.9**	**-2.6**
BOSA	**Boshof**	**45.69**	**71**	*e*P	**P**	**20 33 35.6**	**-0.2**
	comp=Z,91nm,0.8s						
BOSA				PcP	**PcP**	**20 35 13.6**	**0.0**
BOSA	**Boshof**	**45.69**	**71**	P	**P**	**20 33 35.6**	**-0.2**
	comp=Z,83nm,0.7s,baz=211,slow=7.1,SNR=202						
BOSA				PcP	**PcP**	**20 35 13.6**	**0.0**
	comp=Z,17nm,0.8s,baz=198,slow=5.0,SNR=4.9						
BOSA				LR	LR	20 49 16.0	
	comp=Z,781nm,18.6s,baz=217,slow=32						
KSD	**Kokstad**	**46.19**	**77**	*e*P	**P**	**20 33 39.7**	**-0.1**
KSD				AMB	AMB	20 33 41.4	
	comp=Z,86nm,1.3s						
BDFB	**Brasilia**	**46.41**	**329**	P	**P**	**20 33 42.8**	**+1.2**
BDFB				PcP	**PcP**	**20 35 17.1**	**+0.8**
BDFB	**Brasilia**	**46.41**	**329**	P	**P**	**20 33 42.8**	**+1.2**
	comp=Z,21nm,0.7s,baz=150,slow=7.2,SNR=42						
BDFB				PcP	**PcP**	**20 35 17.1**	**+0.8**
	comp=Z,17nm,0.7s,baz=130,slow=4.1,SNR=6.2						
MIR	**Mirnyy**	**46.72**	**151**	⇑*i*P	**P**	**20 33 44.0**	**+0.6**
MIR				*i*		20 33 53.0	
MIR				*i*		20 33 58.0	
MIR				pmax	pmax		
	comp=Z,63nm,1.0s						
SWZ	**Schweizer**	**46.91**	**70**	⇑*i*P	**P**	**20 33 44.9**	**-0.6**
SWZ				AMB	AMB	20 33 45.8	
	comp=Z,151nm,0.7s						
SEK	**Senekal**	**47.10**	**73**	⇑*i*P	**P**	**20 33 47.1**	**+0.1**
SEK				AMB	AMB	20 33 47.7	
	comp=Z,110nm,0.8s						
LVC	**Limon Verde**	**47.72**	**300**	*e*P	**P**	**20 33 52.0**	**-0.1**
	comp=Z,12nm,0.8s						
LVC				PcP	**PcP**	**20 35 21.2**	**+0.1**
LVC	**Limon Verde**	**47.72**	**300**	P	**P**	**20 33 52.1**	**+0.1**
	comp=Z,8.0nm,0.6s,baz=133,slow=5.1,SNR=10						
LVC				PcP	**PcP**	**20 35 21.2**	**+0.1**
	comp=Z,18nm,0.8s,baz=262,slow=1.3,SNR=6.4						
PRYS	**Parys**	**48.12**	**72**	⇑*i*P	**P**	**20 33 54.2**	**-0.8**
PRYS				AMB	AMB	20 33 55.5	
	comp=Z,101nm,1.2s						
KSR	**Koster**	**48.79**	**71**	⇑*i*P	**P**	**20 33 59.8**	**-0.3**
KSR				AMB	AMB	20 34 00.5	
	comp=Z,68nm,0.9s						
LBTB	**Lobatse**	**48.86**	**69**	⇑*i*P	**P**	**20 34 00.3**	**-0.3**
LBTB				AMB	AMB	20 34 01.0	
	comp=Z,84nm,0.9s						
LBTB	**Lobatse**	**48.86**	**69**	*e*P	**P**	**20 34 00.3**	**-0.3**
	comp=Z,84nm,0.8s						
LBTB	**Lobatse**	**48.86**	**69**	P	**P**	**20 34 00.3**	**-0.3**
	comp=Z,72nm,0.8s,baz=221,slow=8.6,SNR=97						
ERPM	**east rand prop**	**49.04**	**72**	⇑*i*P	**P**	**20 34 02.1**	**0.0**
ERPM				AMB	AMB	20 34 02.9	
	comp=Z,112nm,0.9s						
SLR	**Silverton**	**49.57**	**72**	⇑*i*P	**P**	**20 34 05.4**	**-0.6**
SLR				AMB	AMB	20 34 06.5	
	comp=Z,96nm,1.4s						
POGA	**Pongola**	**49.88**	**76**	⇑*i*P	**P**	**20 34 08.6**	**+0.3**
POGA				AMB	AMB	20 34 09.5	
	comp=Z,79nm,0.7s						
TSUM	**Tsumeb**	**50.19**	**56**	⇑*i*P	**P**	**20 34 11.4**	**+0.5**
TSUM	**Tsumeb**	**50.19**	**56**	*e*P	**P**	**20 34 11.5**	**+0.6**
	comp=Z,48nm,0.9s						
CASY	**Casey**	**50.83**	**159**	*e*P	**P**	**20 34 15.2**	**+0.3**
	comp=Z,27nm,0.8s						
LPAZ	**La Paz**	**52.95**	**305**	*e*P	**P**	**20 34 32.5**	**+0.4**
LPAZ				PcP	**PcP**	**20 35 40.1**	**-0.7**
LPAZ				ScP	**ScP**	**20 39 38.0**	**+1.0**
LPAZ	**La Paz**	**52.95**	**305**	P	**P**	**20 34 31.9**	**-0.1**
	comp=Z,6.9nm,0.5s,baz=158,slow=5.5,SNR=34						
LPAZ				PcP	**PcP**	**20 35 40.1**	**-0.7**
	comp=Z,8.5nm,0.4s,baz=99,slow=3.7,SNR=12						
LPAZ				ScP	**ScP**	**20 39 38.0**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=212,slow=3.0,SNR=3.7						
DRV	**Dumont d'Urvil**	**54.25**	**173**	S	S	20 42 05.0	-11
DRV				SS	SS	20 46 14.0	+17
DRV				L	L	20 51 00.0	
DRV				R		20 55 00.0	
ARE	**Arequipa**	**54.26**	**301**	*e*P	**P**	**20 34 42.0**	**+0.7**
ARE	**Arequipa**	**54.26**	**301**	*e*P	**P**	**20 34 42.0**	**+0.7**
SAML	**Samuel**	**57.62**	**314**	*e*P	**P**	**20 35 03.9**	**-1.1**
	comp=Z,54nm,1.1s						
LSZ	**Lusaka**	**58.43**	**65**	*e*P	**P**	**20 35 10.8**	**-0.1**
LSZ	**Lusaka**	**58.43**	**65**	*e*P	**P**	**20 35 10.0**	**-0.8**
	comp=Z,56nm,0.8s						
LSZ	**Lusaka**	**58.43**	**65**	P	**P**	**20 35 10.3**	**-0.6**
	comp=Z,39nm,0.7s,baz=201,slow=7.6,SNR=125						
NNA	**Nana**	**60.62**	**298**	*e*P	**P**	**20 35 25.8**	**0.0**
ABPO	**Ambohimpanom**	**64.78**	**85**	*e*P	**P**	**20 35 52.2**	**-1.5**
ABPO				pmax	pmax		
	comp=Z,22nm,1.3s						
ABPO	**Ambohimpanom**	**64.78**	**85**	*e*P	**P**	**20 35 52.2**	**-1.5**
	comp=Z,22nm,1.3s						
OPO	**Ambohidratompo**	**65.13**	**85**	P	**P**	**20 35 56.5**	**+0.6**
OPO	**Ambohidratompo**	**65.13**	**85**	P	**P**	**20 35 56.5**	**+0.6**
	comp=Z,8.4nm,0.9s,baz=204,slow=5.6,SNR=11						
LIC	**Lamto**	**66.88**	**22**	⇑*i*P	**P**	**20 36 08.0**	**+1.1**
	comp=Z,76nm,0.6s,baz=202						
LIC	**Lamto**	**66.88**	**22**	⇑*i*P	**P**	**20 36 08.0**	**+1.1**
	comp=Z,76nm,0.6s						
DBIC	**Dimbokro**	**67.34**	**22**	⇑*i*P	**P**	**20 36 10.7**	**+0.8**
DBIC	**Dimbokro**	**67.34**	**22**	*e*P	**P**	**20 36 10.9**	**+1.0**
	comp=Z,67nm,1.0s						
DBIC	**Dimbokro**	**67.34**	**22**	P	**P**	**20 36 10.9**	**+1.0**
	comp=Z,43nm,0.8s,baz=168,slow=7.5,SNR=44						
DBIC				LR	LR	21 00 50.4	
	comp=Z,162nm,18.1s,baz=137,slow=32						
OTAV	**Otavalo**	**72.18**	**303**	*e*P	**P**	**20 36 40.4**	**+0.1**
	comp=Z,16nm,1.1s						
MBAR	**Mbarara**	**72.51**	**60**	*e*P	**P**	**20 36 43.4**	**+1.5**
ROSC	**El Rosal**	**74.59**	**308**	P	**P**	**20 36 55.2**	**+0.8**
ROSC	**El Rosal**	**74.59**	**308**	P	**P**	**20 36 55.2**	**+0.8**
	comp=Z,4.6nm,0.5s,baz=91,slow=15,SNR=5.1						
ROSC				LR	LR	21 10 05.9	
	comp=Z,293nm,21.4s,baz=192,slow=36						
TOAO	**Torodi Ar. Sit**	**75.03**	**27**	*e*P	**P**	**20 36 57.7**	**+1.3**
TORD	**Torodi Ar. Bea**	**75.03**	**27**	P	**P**	**20 36 57.6**	**+1.2**
TORD				P'P'ab		21 04 06.6	
TORD	**Torodi Ar. Bea**	**75.03**	**27**	P	**P**	**20 36 57.6**	**+1.2**
	comp=Z,208nm,0.7s,baz=200,slow=6.4,SNR=2192						
TORD				PKP2ab		21 04 06.6	
	comp=Z,0.5nm,0.8s,baz=253,slow=5.0,SNR=9.1						
TORD				LR	LR	21 04 52.1	
	comp=Z,349nm,19.1s,baz=220,slow=32						
KMBO	**Kilima Mbogo**	**75.06**	**66**	*e*P	P	20 37 00.8	+3.8
KMBO	**Kilima Mbogo**	**75.06**	**66**	*e*P	P	20 37 00.3	+3.3
	comp=Z,14nm,1.1s						
KMBO	**Kilima Mbogo**	**75.06**	**66**	P	P	20 37 00.3	+3.3
	comp=Z,11nm,1.1s,baz=192,slow=6.6,SNR=13						
KMBO				LR	LR	21 07 03.3	
	comp=Z,1μm,19.

429A	**Davenport Ranc**	**109.35**	**297**	P			20 43 45.1			
	baz=110									
BRTR	**Keskin Array B**	**109.64**	**44**	Pdiff		**Pdif**	**20 39 49.1**	**+6.6**		
	comp=Z,0.7nm,0.8s,baz=229,slow=7.5,SNR=4.2									
BRTR				PP		**PP**	**20 44 14.4**	**-2.7**		
	comp=Z,1.9nm,0.9s,baz=187,slow=5.0,SNR=4.0									
BRTR				PKKPbc		**PKKPbc**	**20 54 48.5**	**+0.5**		
	comp=Z,1.7nm,0.9s,baz=130,slow=3.0,SNR=8.3									
BRTR				PKKPab		**PKKPdf**	**20 55 03.6**	**-0.8**		
	comp=Z,1.0nm,0.8s,baz=120,slow=3.4,SNR=4.7									
330A	**Mertzon**	**109.67**	**298**	⇓P			20 43 45.4			
	baz=110									
231A	**Bronte**	**109.73**	**299**	P			20 43 45.7			
	baz=110									
428A	**Kincaid Ranch,**	**109.80**	**297**	⇓P			20 43 46.2			
	baz=110									
426A	**McDonald Obser**	**110.38**	**296**	⇑P			20 43 47.3			
	baz=111									
Z31A	**Sharp Cattle R**	**110.81**	**300**	⇓P			20 43 47.9			
	baz=111									
326A	**Caldwell Ranch**	**110.89**	**296**	⇓P			20 43 48.3			
	baz=111									
425A	**Indio Mountain**	**110.92**	**295**	⇓P			20 43 47.7			
	baz=111									
Y31A	**Rekieta Farm,**	**111.41**	**300**	⇑P			20 43 49.3			
	baz=112									
X31A	**McDonald Ranch**	**111.84**	**301**	⇓P			20 43 49.9			
	baz=112									
GERES	**GERESS Array B**	**111.98**	**26**	Pdif		**Pdif**	**20 39 56.4**	**+3.9**		
GERES				PKiKP		**PKiKP**	**20 43 48.8**	**-0.3**		
GERES	**GERESS Array B**	**111.98**	**26**	Pdiff		**Pdif**	**20 39 56.4**	**+3.9**		
	comp=Z,0.1nm,0.3s,baz=119,slow=4.9,SNR=3.4									
GERES				PKiKP		**PKiKP**	**20 43 48.8**	**-0.3**		
	comp=Z,0.5nm,0.6s,baz=180,slow=1.3,SNR=7.3									
GERES				PP		**PP**	**20 44 32.4**	**-1.3**		
	comp=Z,3.3nm,1.0s,baz=187,slow=6.7,SNR=11									
Z27A	**Tatum**	**112.21**	**298**	P			20 43 50.5			
	baz=112									
KHC	**Kasperske Hory**	**112.22**	**26**	*e*PP		PP	20 44 32.2	-3.2		
KHC				*e*PS		PS	20 54 18.5	+11		
KHC				*ex*		x	21 00 55.8			
GRF	**Grafenberg Arr**	**112.23**	**25**	*e*PP		PP	20 44 33.9	-1.5		
GRF				*e*L		L	21 26 50.1			
	comp=Z,211nm,20.6s									
224A	**Cornudas Mount**	**112.25**	**295**	⇑P			20 43 50.5			
	baz=112									
125A	**Gardner Draw,**	**112.33**	**296**	⇓P			20 43 50.6			
	baz=113									
X29A	**Tulia**	**112.46**	**300**	⇑P			20 43 51.1			
	baz=113									
Z26A	**Caprock**	**112.52**	**297**	⇑P			20 43 50.5			
	baz=113									
MSTX	**Muleshoe**	**112.55**	**298**	P			20 43 51.0			
	baz=113									
Y27A	**Causey**	**112.66**	**298**	⇑P			20 43 51.1			
	baz=113									
124A	**Stringfield Ra**	**112.73**	**296**	⇓P			20 43 52.0			
	baz=113									
TREC	**Trest**	**112.83**	**28**	AMS		AMS	21 26 40.0			
	comp=Z,200nm,18.1s									
Y26A	**Elida**	**113.00**	**298**	⇑P			20 43 52.1			
	baz=113									
NKC	**Novy Kostel**	**113.00**	**25**	AMS		AMS	21 28 10.0			
	comp=Z,200nm,16.9s									
320A	**Kipp Ranch, An**	**113.06**	**292**	⇑P			20 43 52.8			
	baz=113									
V30A	**Spur Ranch, Mi**	**113.11**	**301**	P			20 43 52.8			
	baz=113									
MOX	**Moxa**	**113.21**	**24**	*e*L		L	21 27 17.2			
	comp=Z,227nm,20.0s									
Z24A	**Sheeppen Canyo**	**113.22**	**296**	P			20 43 52.9			
	baz=114									
PRU	**Pruhonice**	**113.25**	**27**	*e*PP		PP	20 44 33.9	-8.7		
PRU				*e*PS		**PS**	**20 54 24.6**	**+7.4**		
PRU				AMS		AMS	21 29 50.0			
	comp=Z,200nm,18.7s									
319A	**Douglas**	**113.46**	**292**	⇑P			20 43 53.7			
	baz=114									
W27A	**Bowe Ranch, En**	**113.59**	**299**	⇑P			20 43 53.0			
	baz=114									
121A	**Cookes Peak, D**	**113.69**	**294**	P			20 43 54.2			
	baz=114,SNR=6.2									
Y24A	**Capitan**	**113.74**	**296**	⇑P			20 43 53.5			
	baz=114									
T31A	**Randall Ranch,**	**113.78**	**303**	P			20 43 53.7			
	baz=114									
Z22A	**Elephant Butte**	**113.90**	**295**	⇑P			20 43 54.0			
	baz=114									
OKC	**Ostrava-Krasne**	**113.98**	**29**	*e*PP		**PP**	**20 44 46.4**	**-1.4**		
OKC				*e*PKKP		PKKPab	20 54 47.2	+9.3		
DPC	**Dobruska-Polom**	**114.01**	**28**	*e*PP		**PP**	**20 44 46.6**	**-1.5**		
DPC				*e*PKKP		PKKPab	20 54 43.9	+6.0		
Y23A	**Lovelace Mesa,**	**114.03**	**296**	⇓P		PKPdf	20 43 54.2	+0.6		
	baz=114									
S31A	**Mullinville**	**114.13**	**303**	⇓P		PKPdf	20 43 54.2	+0.7		
	baz=114									
Z21A	**St. Cloud Mine**	**114.28**	**294**	⇑P		PKPdf	20 43 55.3	+1.1		
	baz=115,SNR=7.3									
W25A	**X Bar L Ranch,**	**114.36**	**298**	⇑P		PKPdf	20 43 55.1	+0.9		
	baz=115									
KIS	**Kishinev**	**114.44**	**37**	*e*P		PKPdf	20 43 52.0	-1.7		
Y22A	**Socorro**	**114.47**	**295**	⇓P		PKPdf	20 43 55.1	+0.6		
	baz=115									
V26A	**Tequesquite Ra**	**114.53**	**299**	⇑P		PKPdf	20 43 55.0	+0.6		
	baz=115									
Z20A	**Nine Sixteen R**	**114.56**	**294**	P		PKPdf	20 43 55.5	+0.8		
	baz=115									
R31A	**Burdett**	**114.71**	**303**	⇓P		PKPdf	20 43 55.0	+0.4		
	baz=115									
W24A	**Lazy 6 Ranch,**	**114.79**	**297**	⇑P		PKPdf	20 43 55.7	+0.6		
	baz=115									
W23A	**Werner Place,**	**115.09**	**297**	⇑P		**PKPdf**	**20 43 56.7**	**+1.0**		
	baz=115									
Y20A	**Horse Springs,**	**115.11**	**294**	⇑P		**PKPdf**	**20 43 56.6**	**+0.8**		
	baz=115									
V24A	**Rampart Ranch,**	**115.15**	**298**	⇑P		**PKPdf**	**20 43 56.6**	**+0.8**		
	baz=116									
X21A	**Alamocita Cree**	**115.27**	**295**	P		**PKPdf**	**20 43 56.8**	**+0.8**		
	baz=116									
U25A	**Circle Dot Ran**	**115.31**	**299**	⇑P		**PKPdf**	**20 43 56.4**	**+0.4**		
	baz=116									
Q30A	**Quinter**	**115.58**	**303**	⇑P		**PKPdf**	**20 43 56.9**	**+0.6**		
	baz=116									
T26A	**Comanche Natio**	**115.58**	**300**	⇑P		**PKPdf**	**20 43 57.1**	**+0.6**		
	baz=116									
R28A	**Tribune**	**115.75**	**302**	⇑P		**PKPdf**	**20 43 57.1**	**+0.4**		
	baz=116									
Q29A	**Oakley**	**115.84**	**303**	P		**PKPdf**	**20 43 57.1**	**+0.3**		
	baz=116									
S26A	**Kim**	**115.89**	**300**	⇑P		**PKPdf**	**20 43 57.6**	**+0.5**		
	baz=116									
T25A	**Trinidad**	**115.92**	**299**	⇑P		**PKPdf**	**20 43 58.1**	**+0.9**		
	baz=116									
V22A	**San Miguel Ran**	**116.06**	**297**	⇓P		**PKPdf**	**20 43 58.6**	**+1.1**		
	baz=116									
U23A	**El Rito**	**116.07**	**297**	⇓P		**PKPdf**	**20 43 58.5**	**+1.0**		
	baz=116									
R27A	**Eads**	**116.14**	**301**	⇑P		**PKPdf**	**20 43 57.9**	**+0.5**		
	baz=116									
Q28A	**Sharon Springs**	**116.35**	**302**	P		**PKPdf**	**20 43 58.5**	**+0.6**		
	baz=117									
S25A	**Robets Cordova**	**116.36**	**299**	⇓P		**PKPdf**	**20 43 58.8**	**+0.8**		
	baz=117									
X18A	**Snowflake**	**116.36**	**293**	⇑P		**PKPdf**	**20 43 59.1**	**+1.0**		
	baz=117									
R26A	**Arlington**	**116.44**	**301**	P		**PKPdf**	**20 43 58.7**	**+0.7**		
	baz=117									
O30A	**MW Ranch, Wils**	**116.51**	**304**	⇑P		**PKPdf**	**20 43 58.4**	**+0.3**		
	baz=117									
R25A	**Fountain Ranch**	**116.69**	**300**	⇓P		**PKPdf**	**20 43 59.1**	**+0.5**		
	baz=117									
S24A	**Houchin Ranch,**	**116.70**	**299**	⇑P		**PKPdf**	**20 43 59.8**	**+1.0**		
	baz=117									
KIV	**Kislovodsk**	**116.70**	**48**	*i* PKIKP		**PKPdf**	**20 43 55.3**	**-3.0**		
KIV				*e*PS		**PS**	**20 54 49.6**	**+0.5**		
KIV				*e*SS		SS	21 01 08.6	-4.0		
KIV				*e*SSS		SSS	21 05 36.2			
KIV				pmax		pmax				
	comp=Z,13nm,1.1s									
KIV				MLR		MLR				
	comp=Z,148nm,20.0s									
P28A	**Saint Francis**	**116.74**	**303**	⇑P		**PKPdf**	**20 43 59.3**	**+0.7**		
	baz=117									
113A	**Mohawk Valley,**	**116.78**	**289**	⇑P		**PKPdf**	**20 43 59.4**	**+0.8**		
	baz=117									
U21A	**Nageezi**	**116.83**	**296**	⇑P		**PKPdf**	**20 44 00.1**	**+1.1**		
	baz=117									
Z14A	**Wintersburg**	**116.86**	**290**	⇓P		**PKPdf**	**20 43 59.7**	**+0.8**		
	baz=117									
T22A	**Edith**	**116.96**	**297**	⇑P		**PKPdf**	**20 44 00.3**	**+1.0**		
	baz=117,SNR=8.1									
X16A	**Lo Mia Camp, P**	**116.98**	**292**	⇑P		**PKPdf**	**20 43 59.8**	**+0.5**		
	baz=117									
Q26A	**Hugo**	**116.99**	**301**	⇓P		**PKPdf**	**20 44 00.1**	**+1.0**		
	baz=117									
COWI	**Conover**	**117.13**	**315**	*e*PKPdf		**PKPdf**	**20 43 59.0**	**0.0**		
R24A	**Sanders Place,**	**117.13**	**299**	⇑P		**PKPdf**	**20 44 00.3**	**+0.8**		
	baz=117									
U20A	**Newcomb**	**117.19**	**296**	⇑P		**PKPdf**	**20 44 00.8**	**+1.2**		
	baz=118									
N29A	**Votaw Ranch, W**	**117.28**	**304**	⇑P		**PKPdf**	**20 44 00.2**	**+0.7**		
	baz=118									
Q25A	**Bedland, Calha**	**117.30**	**300**	⇑P		**PKPdf**	**20 44 00.6**	**+0.8**		
	baz=118									
Y14A	**Wickenburg**	**117.35**	**291**	⇑P		**PKPdf**	**20 44 00.6**	**+0.8**		
	baz=118									
R23A	**Moffat**	**117.42**	**299**	⇓P		**PKPdf**	**20 44 00.6**	**+0.5**		
	baz=118									
P26A	**Davis Ranch, A**	**117.43**	**301**	⇑P		**PKPdf**	**20 44 00.6**	**+0.6**		
	baz=118									
S22A	**4UR Ranch, Cre**	**117.52**	**298**	P		**PKPdf**	**20 44 01.5**	**+1.1**		
	baz=118,SNR=6.1									
GLA	**Glamis**	**117.53**	**289**	P		**PKPdf**	**20 44 01.4**	**+1.2**		
	baz=118									
P25A	**Willow Gulch B**	**117.76**	**301**	P		**PKPdf**	**20 44 01.9**	**+1.3**		
	baz=118									
MAK	**Makhachkala**	**117.80**	**52**	*e*PKIKP		**PKPdf**	**20 44 00.5**	**+0.2**		
MAK				MLR		MLR				
	comp=Z,189nm,18.0s									
AKASG	**Malin Array Be**	**117.84**	**36**	PKIKP		**PKPdf**	**20 43 59.4**	**-0.7**		
AKASG				pmax		pmax				
	comp=Z,5.0nm,0.8s									
AKASG				pmax		pmax				
	comp=Z,1.0nm,0.5s									
AKASG	**Malin Array Be**	**117.84**	**36**	PKP		**PKPdf**	**20 43 59.4**	**-0.7**		
AKASG				PP		**PP**	**20 45 11.1**	**-3.8**		
AKASG				PKKPab		**PKKPbc**	**20 54 20.4**	**+0.3**		
AKASG	**Malin Array Be**	**117.84**	**36**	PKP		**PKPdf**	**20 43 59.4**	**-0.7**		
	comp=Z,4.9nm,0.8s,baz=240,slow=1.6,SNR=14									
AKASG				PP		**PP**	**20 45 11.1**	**-3.8**		
	comp=Z,0.5nm,0.5s,baz=212,slow=8.2,SNR=7.2									
AKASG				PKKPab		**PKKPbc**	**20 54 20.4**	**+0.3**		
	comp=Z,0.2nm,0.3s,baz=35,slow=4.5,SNR=4.1									
WUAZ	**Wupatki**	**117.84**	**293**	⇑P		**PKPdf**	**20 44 01.7**	**+0.8**		
	baz=118									
R22A	**Saguache, Gunn**	**117.88**	**298**	P		**PKPdf**	**20 44 02.4**	**+1.4**		
	baz=118									
S21A	**Coal Bank Pass**	**117.90**	**297**	⇓P		**PKPdf**	**20 44 01.9**	**+0.8**		
	baz=118,SNR=11									
SWSC	**Sam W. Stewart**	**117.91**	**288**	⇓P		**PKPdf**	**20 44 01.7**	**+0.9**		
	baz=118									
Y12C	**Blythe**	**117.94**	**289**	⇑P		**PKPdf**	**20 44 02.0**	**+1.1**		
	baz=118									
OGNE	**Ogilala**	**117.99**	**303**	⇓P		**PKPdf**	**20 44 01.5**	**+0.6**		
	baz=118									
ECSD	**EROS Data Cent**	**118.02**	**309**	*e*PKPdf		**PKPdf**	**20 44 00.2**	**-0.6**		
MONP	**Monument Peak**	**118.18**	**287**	⇑P		**PKPdf**	**20 44 02.0**	**+0.3**		
	baz=118									
PDMCI	**Parker Dam,Lak**	**118.20**	**290**	⇓P		**PKPdf**	**20 44 02.2**	**+0.8**		
	baz=118									
O25A	**Wiggins**	**118.22**	**301**	⇑P		**PKPdf**	**20 44 02.2**	**+0.7**		
	baz=118									
SCHQ	**Schefferville**	**118.24**	**334**	PKP		**PKPdf**	**20 44 00.4**	**-0.4**		
SCHQ				*e*PKPdf		**PKiKP**	**20 44 00.6**	**-0.2**		
SCHQ	**Schefferville**	**118.24**	**334**	PKP		**PKPdf**	**20 44 00.4**	**-0.4**		
	comp=Z,11nm,0.8s,baz=150,slow=1.3,SNR=16									
BC3	**Big Chuckawall**	**118.32**	**289**	⇑P		**PKPdf**	**20 44 02.8**	**+1.0**		
	baz=119									
R21A	**Cimarron**	**118.36**	**298**	⇓P		**PKPdf**	**20 44 02.5**	**+0.6**		
	baz=119									
P23A	**Jefferson**	**118.39**	**300**	⇑P		**PKPdf**	**20 44 03.1**	**+1.1**		
	baz=119									
Q22A	**Crested Butte,**	**118.46**	**298**	⇓P		**PKPdf**	**20 44 03.1**	**+0.9**		
	baz=119,SNR=7.6									
IRM	**Iron Mountain**	**118.58**	**289**	⇑P		**PKPdf**	**20 44 03.3**	**+1.1**		
	baz=119									
R20A	**Redvale**	**118.59**	**297**	⇑P		**PKPdf**	**20 44 03.2**	**+0.9**		
	baz=119									
ISCO	**Idaho Springs**	**118.64**	**300**	*e*PKIKP		**PKPdf**	**20 44 02.7**	**+0.2**		
ISCO	**Idaho Springs**	**118.64**	**300**	*e*PKPdf		**PKPdf**	**20 44 02.7**	**+0.2**		
ISCO	**Idaho Springs**	**118.64**	**300**	⇑P		**PKPdf**	**20 44 03.1**	**+0.7**		
	baz=119									
W13A	**Hualapai Mount**	**118.72**	**291**	⇑P		**PKPdf**	**20 44 03.8**	**+1.2**		
	baz=119									
Q21A	**Lamborn Mesa,**	**118.75**	**298**	P		**PKPdf**	**20 44 03.7**	**+1.1**		
	baz=119									
SMCO	**Snowmass**	**118.75**	**299**	*e*PKPdf		**PKPdf**	**20 44 02.8**	**0.0**		
PFO	**Pinyon Flat Ob**	**118.78**	**288**	P		**PKPdf**	**20 44 03.9**	**+1.2**		
	baz=119									
BELC	**Belle Mtn. Jos**	**118.86**	**288**	⇑P		**PKPdf**	**20 44 03.8**	**+0.9**		
	baz=119									
S18A	**Hurst Farm, Bl**	**118.94**	**295**	⇓P		**PKPdf**	**20 44 03.5**	**+0.4**		
	baz=119									
P22A	**Eagle**	**118.99**	**299**	⇑P		**PKPdf**	**20 44 04.0**	**+1.0**		
	baz=119									
U15A	**North Rim**	**119.02**	**293**	⇑P		**PKPdf**	**20 44 03.8**	**+0.5**		
	baz=119									
O23A	**Lake Granby, G**	**119.11**	**300**	⇑P		**PKPdf**	**20 44 04.3**	**+0.9**		
	baz=119									
Q20A	**Ridgley Place,**	**119.17**	**298**	⇑P		**PKPdf**	**20 44 04.3**	**+1.0**		
	baz=120									
P21A	**Newcastle**	**119.25**	**299**	⇓P		**PKPdf**	**20 44 04.7**	**+1.2**		
	baz=120									
GMRC	**Granite Mounta**	**119.33**	**289**	⇑P		**PKPdf**	**20 44 04.9**	**+1.2**		
	baz=120									
O22A	**Kremmling**	**119.35**	**300**	⇑P		**PKPdf**	**20 44 03.9**	**+0.1**		
	baz=120,SNR=6.8									
EYMN	**Ely**	**119.55**	**315**	*e*PKPdf		**PKPdf**	**20 44 03.2**	**-0.4**		
CIS	**Catalina Islan**	**119.58**	**286**	⇑P		**PKPdf**	**20 44 05.3**	**+1.1**		
	baz=120									
M24A	**Cheyenne**	**119.64**	**302**	⇓P		**PKPdf**	**20 44 04.6**	**+0.4**		
	baz=120									
P20A	**De Beque**	**119.66**	**298**	⇑P		**PKPdf**	**20 44 04.9**	**+0.6**		
	baz=120									
N23A	**Red Feather La**	**119.67**	**301**	⇑P		**PKPdf**	**20 44 05.0**	**+0.6**		
	baz=120									
J28A	**Allard Ranch,**	**119.67**	**305**	⇑P		**PKPdf**	**20 44 04.7**	**+0.7**		
	baz=120									
PHWY	**Pilot Hill**	**119.78**	**301**	*e*PKPdf		**PKPdf**	**20 44 04.2**	**-0.4**		
L25A	**Engebretsen Ra**	**119.81**	**303**	⇑P		**PKPdf**	**20 44 05.4**	**+0.9**		
	baz=120									
N22A	**Wittenberg Ran**	**119.83**	**300**	⇑P		**PKPdf**	**20 44 05.6**	**+0.9**		
	baz=120									
BFSC	**Mount Baldy Ra**	**119.88**	**287**	⇓P		**PKPdf**	**20 44 05.4**	**+0.6**		
	baz=120									
TUQ	**Turquoise Moun**	**119.98**	**290**	⇑P		**PKPdf**	**20 44 06.1**	**+1.2**		
	baz=120									
M23A	**Laramie**	**120.03**	**301**	⇓P		**PKPdf**	**20 44 04.9**	**-0.1**		
	baz=120									
P19A	**Cripple Cowboy**	**120.03**	**298**	⇓P		**PKPdf**	**20 44 05.9**	**+0.8**		
	baz=120,SNR=5.8									
O20A	**White River Ci**	**120.10**	**298**	P		**PKPdf**	**20 44 05.6**	**+0.5**		
	baz=120,SNR=8.2									
L24A	**Wheatland**	**120.15**	**302**	⇑P		**PKPdf**	**20 44 05.7**	**+0.6**		
	baz=120									
N21A	**Black Mountain**	**120.27**	**299**	⇓P		**PKPdf**	**20 44 06.2**	**+0.7**		
	baz=121,SNR=11									
GSC	**Goldstone**	**120.30**	**289**	*e*PKIKP		**PKPdf**	**20 44 06.0**	**+0.4**		
GSC	**Goldstone**	**120.30**	**289**	*e*PKPdf		**PKPdf**	**20 44 06.0**	**+0.4**		
GSC	**Goldstone**	**120.30**	**289**	⇑P		**PKPdf**	**20 44 06.7**	**+1.2**		
	baz=121									
SRU	**San Rafael**	**120.33**	**296**	⇓P		**PKPdf**	**20 44 05.9**	**+0.4**		
	baz=121									
CCUT	**Cedar City**	**120.43**	**293**	*e*PKPdf		**PKPdf**	**20 44 06.7**	**+0.9**		
Q16A	**Castle Valley**	**120.48**	**295**	⇓P		**PKPdf**	**20 44 06.8**	**+0.9**		
	baz=121									
SHOC	**Shoshone**	**120.52**	**290**	⇓P		**PKPdf**	**20 44 07.0**	**+1.2**		
	baz=121									
L23A	**Garrett**	**120.55**	**302**	⇓P		**PKPdf**	**20 44 06.4**	**+0.4**		
	baz=121									
EDW2	**Edwards Air Fo**	**120.55**	**288**	⇑P		**PKPdf**	**20 44 07.1**	**+1.1**		
	baz=121									
MSU	**Marysvale**	**120.63**	**294**	*e*PKIKP		**PKPdf**	**20 44 07.2**	**+0.9**		
MSU	**Marysvale**	**120.63**	**294**	*e*PKPdf		**PKPdf**	**20 44 07.2**	**+0.9**		
O19A	**Miners Draw (B**	**120.63**	**298**	P		**PKPdf**	**20 44 06.7**	**+0.6**		
	baz=121,SNR=13									
N20A	**Spence Gulch,**	**120.67**	**299**	⇑P		**PKPdf**	**20 44 06.7**	**+0.5**		
	baz=121,SNR=5.2									
J25A	**Sunshine Ranch**	**120.74**	**304**	⇓P		**PKPdf**	**20 44 06.3**	**+0.1**		
	baz=121									
L22A	**Ellis Ranch, M**	**120.80**	**301**	⇑P		**PKPdf**	**20 44 07.0**	**+0.6**		
	baz=121									
LRMC	**Laurel Mountai**	**120.88**	**288**	⇓P		**PKPdf**	**20 44 07.9**	**+1.2**		
	baz=121									
M21A	**Separation Pea**	**120.88**	**300**	P		**PKPdf**	**20 44 06.9**	**+0.3**		
	baz=121,SNR=9.9									
K23A	**Bowen Ranch, D**	**121.03**	**302**	⇓P		**PKPdf**	**20 44 06.7**	**-0.1**		
	baz=121									
M20A	**Sweetwater, Wa**	**121.16**	**299**	⇓P		**PKPdf**	**20 44 07.9**	**+0.7**		
	baz=122									
ARVC	**Arvin**	**121.17**	**287**	⇓P		**PKPdf**	**20 44 07.9**	**+0.8**		
	baz=121									
L21A	**Rawlins**	**121.17**	**300**	P		**PKPdf**	**20 44 07.3**	**+0.1**		
	baz=122,SNR=11									
MPMC	**Manual Prospec**	**121.24**	**289**	⇓P		**PKPdf**	**20 44 08.4**	**+0.9**		
	baz=122									
FURC	**Furnace Creek,**	**121.26**	**290**	⇑P		**PKPdf**	**20 44 08.4**	**+1.2**		
	baz=122									
K22A	**Casper**	**121.34**	**301**	⇓P		**PKPdf**	**20 44 07.5**	**+0.1**		
	baz=122									
VORD	**Divnogorie**	**121.34**	**42**	*e*PKIKP		**PKPdf**	**20 44 06.3**	**-0.5**		
VORD				pmax		pmax				
	comp=Z,8.0nm,0.8s									
VORD				pmax		pmax				
	comp=N,10.0nm,0.4s									
VORD				pmax		pmax				
	comp=E,10.0nm,0.6s									
ISA	**Isabella**	**121.41**	**288**	*e*PKIKP		**PKPdf**	**20 44 07.9**	**+0.2**		
ISA	**Isabella**	**121.41**	**288**	*e*PKPdf		**PKPdf**	**20 44 07.9**	**+0.2**		
ISA	**Isabella**	**121.41**	**288**	⇓P		**PKPdf**	**20 44 08.9**	**+1.2**		
	baz=122									
RSSD	**Black Hills**	**121.43**	**304**	*e*PKIKP		**PKPdf**	**20 44 07.3**	**-0.3**		
RSSD	**Black Hills**	**121.43**	**304**	*e*PKPdf		**PKPdf**	**20 44 07.3**	**-0.3**		
PKM	**Peak Mountain**	**121.47**	**286**	⇑P		**PKPdf**	**20 44 09.6**	**+1.7**		
	baz=122									
I24A	**Kuemmerle Ranc**	**121.47**	**303**	⇑P		**PKPdf**	**20 44 07.4**	**-0.1**		
	baz=122									
AGMN	**Agassiz Nation**	**121.48**	**312**	*e*PKPdf		**PKPdf**	**20 44 06.6**	**-0.6**		
VSR	**Storozhevoye**	**121.51**	**42**	*e*PKIKP		**PKPdf**	**20 44 06.3**	**-0.9**		
VSR				pmax		pmax				
	comp=Z,10.0nm,1.2s									
VSR				pmax		pmax				
	comp=N,5.0nm,0.8s									
VSR				pmax		pmax				
	comp=E,5.0nm,0.8s									
M19A	**Rock Springs**	**121.61**	**299**	⇓P		**PKPdf**	**20 44 08.8**	**+0.8**		
	baz=122									
L20A	**Wamsutter**	**121.64**	**300**	P		**PKPdf**	**20 44 08.8**	**+0.8**		
	baz=122,SNR=10									
K21A	**Alcova**	**121.65**	**301**	⇑P		**PKPdf**	**20 44 08.1**	**+0.1**		
	baz=122									
CWC	**Cottonwood Cre**	**121.83**	**289**	⇓P		**PKPdf**	**20 44 09.7**	**+1.2**		
	baz=122									
J22A	**Midwest**	**121.93**	**302**	⇓P		**PKPdf**	**20 44 08.0**	**-0.4**		
	baz=122									
GRAC	**Grapevine Rang**	**121.93**	**290**	⇑P		**PKPdf**	**20 44 10.1**	**+1.5**		
	baz=122									
R11A	**Troy Canyon, C**	**122.13**	**292**	⇑P		**PKPdf**	**20 44 10.2**	**+1.1**		
	baz=122									
H24A	**Dirks Ranch, A**	**122.15**	**304**	⇑P		**PKPdf**	**20 44 08.8**	**0.0**		
	baz=122									
K20A	**Yellowstone Ra**	**122.16**	**300**	P		**PKPdf**	**20 44 08.9**	**-0.1**		
	baz=122,SNR=7.2									
DUG	**Dugway**	**122.26**	**295**	⇓P		**PKPdf**	**20 44 10.3**

TPAW Teton Pass 123.99 299 ePKPdf PKPdf 20 44 12.9 +0.3
H19A Powell 124.03 301 ⇑P PKPdf 20 44 13.1 +0.6
baz=124,SNR=5.4
RRI2 Red Ridge 124.05 299 ePKPdf PKPdf 20 44 12.8 +0.1
E22A Miles City 124.09 304 ⇑P PKPdf 20 44 12.6 +0.2
baz=124
MOOW Moose Ponds 124.10 299 ePKPdf PKPdf 20 44 12.8 +0.1
G20A Bridger 124.12 302 ⇓P PKPdf 20 44 12.8 +0.2
baz=124
ODAN Odare 124.14 94 eP PKPdf 20 44 12.6 -0.8
comp=Z,73nm,0.9s
DCID1 Drake Creek 124.18 299 ePKPdf PKPdf 20 44 13.1 +0.3
GUN Gumba 124.21 92 eP PKPdf 20 44 12.7 -0.9
comp=Z,86nm,1.0s
CMB Columbia Colle 124.22 288 ePKIKP PKPdf 20 44 13.2 +0.3
CMB Columbia Colle 124.22 288 ePKPdf PKPdf 20 44 13.2 +0.3
IMW Indian Meadow 124.30 299 ePKPdf PKPdf 20 44 13.9 +0.7
C24A Savage 124.30 306 ⇓P PKPdf 20 44 13.5 +0.7
baz=125
H18A Shoshone NF, C 124.34 301 P PKPdf 20 44 13.3 +0.1
baz=125,SNR=5.4
D23A Lindsay 124.35 305 ⇑P PKPdf 20 44 13.6 +0.7
baz=125
RLMT Red Lodge 124.51 301 ePKPdf PKPdf 20 44 13.8 +0.3
I16A Newdale 124.53 299 P PKPdf 20 44 15.3 +1.9
baz=125
BMN Battle Mountai 124.55 292 ePKIKP PKPdf 20 44 14.3 +0.7
BMN Battle Mountai 124.55 292 ePKPdf PKPdf 20 44 14.3 +0.7
E21A Keefer Ranch, 124.65 304 ⇓P PKPdf 20 44 14.3 +0.8
baz=125
YFT Old Faithful 124.69 300 ePKPdf PKPdf 20 44 13.5 -0.4
TAPN Taplejung 124.71 94 eP PKPdf 20 44 13.2 -1.3
comp=Z,50nm,1.3s
D22A Cohagen 124.75 305 ⇑P PKPdf 20 44 14.5 +0.9
baz=125
G18A Lazy EL Ranch, 124.79 301 ⇓P PKPdf 20 44 14.5 +0.6
baz=125
C23A Lambert 124.84 306 ⇓P PKPdf 20 44 14.6 +0.9
baz=125
F19A Roth Farm, Mol 124.93 302 ⇓P PKPdf 20 44 14.6 +0.5
baz=125
DGMT Dagmar 124.95 307 ePKPdf PKPdf 20 44 13.8 -0.1
DGMT Dagmar 124.95 307 ⇓P PKPdf 20 44 14.5 +0.5
baz=125
D21A La Casta Ranch 125.03 304 ⇓P PKPdf 20 44 14.7 +0.5
baz=125
H16A Russell Place, 125.07 300 P PKPdf 20 44 15.6 +1.1
baz=125
E20A Meyer Farm, Mu 125.08 303 ⇑P PKPdf 20 44 15.0 +0.7
baz=125
C22A Vida 125.09 305 ⇓P PKPdf 20 44 14.9 +0.7
baz=125
GCMT Greycliff 125.20 302 ePKPdf PKPdf 20 44 14.9 +0.2
A24A Westby 125.22 308 ⇑P PKPdf 20 44 15.0 +0.6
baz=126
QLMT Earthquake Lak 125.25 300 ePKPdf PKPdf 20 44 14.8 0.0
F18A Big Timber 125.31 302 P PKPdf 20 44 15.7 +0.8
baz=126,SNR=17
G17A Pierce Place, 125.32 300 ⇓P PKPdf 20 44 16.5 +1.6
baz=126
E19A Rath Farm, Rou 125.33 303 ⇑P PKPdf 20 44 15.4 +0.6
baz=126
SHL Shillong 125.41 99 ePKP PKPdf 20 44 16.0 +0.3
I14A Mackay 125.47 298 ⇑P PKPdf 20 44 17.1 +1.7
baz=126
D20A Manuel Ranch, 125.54 304 ⇓P PKPdf 20 44 16.0 +0.9
baz=126
B22A Reddig Ranch S 125.57 306 ⇓P PKPdf 20 44 16.2 +1.0
baz=126
BEKR Beckworth 125.63 289 ePKPdf PKPdf 20 44 16.2 +0.5
HLID Hailey 125.64 297 ePKPdf PKPdf 20 44 15.7 0.0
HLID Hailey 125.64 297 ⇑P PKPdf 20 44 17.1 +1.4
baz=126
C21A Desert Coulee 125.66 305 ⇑P PKPdf 20 44 16.0 +0.6
baz=126
F17A Fitzpatrick Pl 125.73 301 ⇓P PKPdf 20 44 16.8 +1.2
baz=126,SNR=15
MCMT McKenzie Canyo 125.89 299 ePKPdf PKPdf 20 44 16.5 +0.3
E18A Harlowton 125.91 302 P PKPdf 20 44 16.9 +0.9
baz=126,SNR=9.4
D19A Cripps Ranch, 125.92 303 ⇑P PKPdf 20 44 16.6 +0.7
baz=126
C20A Veseth Ranch, 125.97 304 ⇓P PKPdf 20 44 16.6 +0.7
baz=126
A22A Carney Farms, 126.07 306 ⇓P PKPdf 20 44 17.1 +1.0
baz=126
F16A Kennard Place, 126.07 300 ⇑P PKPdf 20 44 17.6 +1.3
baz=126
B21A Ellsworth Farm 126.09 305 ⇑P PKPdf 20 44 17.2 +1.0
baz=126
I12A Atlanta 126.15 296 ⇓P PKPdf 20 44 18.1 +1.5
baz=126
MFID Camas Ranch 126.18 295 ePKPdf PKPdf 20 44 16.6 0.0
MFID Camas Ranch 126.18 295 ⇓P PKPdf 20 44 17.8 +1.2
baz=126
DLMT Dillon 126.19 299 ePKPdf PKPdf 20 44 17.6 +1.0
E17A Martinsdale 126.25 301 P PKPdf 20 44 18.2 +1.5
baz=127,SNR=16
HOPS Hopland 126.30 287 ePKPdf PKPdf 20 44 18.4 +1.6
D18A Linhart Farms, 126.35 303 ⇓P PKPdf 20 44 18.0 +1.3
baz=127
FINES FINESS Array B 126.38 28 PKP PKPdf 20 44 16.2 +0.1
FINES FINESS Array B 126.38 28 PKP PKPdf 20 44 16.2 +0.1
comp=Z,8.3nm,0.6s,baz=95,slow=2.1,SNR=35
C19A Slack Wire Ran 126.43 303 ⇓P PKPdf 20 44 17.9 +1.1
baz=127
LRM Limekiln Ridge 126.47 300 ePKPdf PKPdf 20 44 17.7 +0.5
F15A Butte 126.50 300 ⇓P PKPdf 20 44 18.6 +1.4
baz=127
B20A Solberg Farm, 126.53 305 ⇑P PKPdf 20 44 18.0 +1.0
baz=127
H12A Diamond D Ranc 126.60 297 ⇑P PKPdf 20 44 18.9 +1.5
baz=127
E16A East Helena 126.67 301 ⇓P PKPdf 20 44 18.4 +1.0
baz=127
D17A Six Diamond Ra 126.70 302 ⇑P PKPdf 20 44 18.5 +1.0
baz=127,SNR=24
WVOR Wild Horse Val 126.76 293 ePKIKP PKPdf 20 44 19.4 +1.7
WVOR Wild Horse Val 126.76 293 ePKPdf PKPdf 20 44 19.4 +1.7
A20A Cobblestone Ra 126.83 305 ⇓P PKPdf 20 44 18.8 +1.2
baz=127
LBCM Butte Creek Ri 126.86 290 P PKPdf 20 44 19.4 +1.4
B19A Brinkman Farms 126.94 304 ⇑P PKPdf 20 44 18.9 +1.2
baz=127
EGMT Eagleton 126.96 303 ePKPdf PKPdf 20 44 18.7 +0.8
EGMT Eagleton 126.96 303 ⇓P PKPdf 20 44 18.8 +1.0
baz=127
D16A Dana Ranch, Ca 126.99 301 P PKPdf 20 44 19.5 +1.5
baz=127,SNR=15
SFJD Kangerlussuaq 127.01 348 i P PKPdf 20 44 16.7 -0.5
comp=Z,9.4nm,1.1s
KAF Kangasniemi 127.02 27 ePKIKP PKPdf 20 44 17.2 -0.2
KAF pmax pmax
comp=Z,25nm,0.8s
KAF Kangasniemi 127.02 27 ep PKPdf 20 44 17.2 -0.2
comp=Z,25nm,0.8s
C17A Wharram Farm, 127.10 302 P PKPdf 20 44 18.8 +0.6
baz=127,SNR=22
A19A Klindworth Far 127.21 305 ⇓P PKPdf 20 44 19.4 +1.1
baz=128
WDC Whiskeytown Da 127.25 288 ePKIKP PKPdf 20 44 18.5 -0.1
WDC Whiskeytown Da 127.25 288 ePKPdf PKPdf 20 44 18.4 -0.1
B18A Beardsley Farm 127.25 304 ⇓P PKPdf 20 44 19.5 +1.1
baz=128
G12A Big Creek, Yel 127.25 297 ⇑P PKPdf 20 44 19.6 +0.9
baz=128
D15A Lincoln 127.43 301 ⇓P PKPdf 20 44 20.0 +1.1
baz=128,SNR=14
B17A L&G Farms, Che 127.62 303 ⇓P PKPdf 20 44 19.9 +0.8
baz=128,SNR=12
C16A Fuhringer Ranc 127.66 302 P PKPdf 20 44 19.8 +0.6
baz=128,SNR=40
A18A Metzger Ranch, 127.68 304 ⇓P PKPdf 20 44 20.0 +0.8
baz=128
F12A Elk City 127.70 298 ⇑P PKPdf 20 44 20.1 +0.7
baz=128
D14A Greenough 127.90 300 ⇑P PKPdf 20 44 20.4 +0.6
baz=128
MSO Missoula 127.91 300 ePKPdf PKPdf 20 44 20.5 +0.8
MSO Missoula 127.91 300 ⇑P PKPdf 20 44 20.9 +1.1
baz=128
BMO Blue Mountains 127.97 296 ePKIKP PKPdf 20 44 20.4 +0.5
BMO Blue Mountains 127.97 296 ePKPdf PKPdf 20 44 20.4 +0.5
C15A Salmond Ranch, 128.02 301 P PKPdf 20 44 20.2 +0.2
baz=128,SNR=14
ABKAR Akbulak array 128.04 56 ePKPdf PKPdf 20 44 19.5 -0.2

KHMM Horse Mountain 128.06 288 ePKPdf PKPdf 20 44 21.5 +1.2
A17A Triple J Farms 128.07 303 ⇑P PKPdf 20 44 21.1 +1.2
baz=128
B16A M & M Farms, S 128.11 302 P PKPdf 20 44 20.1 0.0
baz=128,SNR=16
AKTO Aktyubinsk 128.11 54 PKIKP PKPdf 20 44 19.7 -0.2
AKTO pmax pmax
comp=Z,27nm,0.9s
AKTO Aktyubinsk 128.11 54 PKP PKPdf 20 44 19.7 -0.2
AKTO Aktyubinsk 128.11 54 PKP PKPdf 20 44 19.7 -0.2
comp=Z,27nm,0.9s,baz=178,slow=1.9,SNR=60
YBH Yreka Blue Hor 128.21 289 ePKPdf PKPdf 20 44 20.8 +0.4
KKAR Karatay Array 128.24 68 ePKIKP PKPdf 20 44 19.9 -0.5
KKAR Karatay Array 128.24 68 ePKPdf PKPdf 20 44 19.9 -0.5
E12A Beaver Dam Sad 128.34 298 ⇑P PKPdf 20 44 20.6 -0.1
baz=129
D13A Huson 128.34 299 ⇑P PKPdf 20 44 21.2 +0.7
baz=129
LSA Lhasa 128.38 95 PKP PKPdf 20 44 21.4 -0.2
LSA Lhasa 128.38 95 ePKIKP PKPdf 20 44 21.5 -0.2
LSA Lhasa 128.38 95 ePKPdf PKPdf 20 44 21.5 -0.2
B15A Bradely Ranch, 128.41 302 ⇑P PKPdf 20 44 20.4 -0.2
baz=129,SNR=6.6
SWMT Swartz Lake 128.44 300 ePKPdf PKPdf 20 44 20.8 +0.1
A16A West Butte Ran 128.46 303 ⇓P PKPdf 20 44 21.4 +0.7
baz=129
C14A Swan Lake 128.53 300 ⇓P PKPdf 20 44 21.5 +0.6
baz=129
D12A Red Ives Fores 128.72 299 ⇑P PKPdf 20 44 21.5 +0.2
baz=129
YBMT Yellow Bay 128.72 300 ePKPdf PKPdf 20 44 21.7 +0.4
JTMT Jette 128.75 300 ePKPdf PKPdf 20 44 21.8 +0.4
B14A Marquette Ranc 128.76 301 ⇓P PKPdf 20 44 21.7 +0.3
baz=129,SNR=11
C13A Hot Springs 128.83 300 ⇓P PKPdf 20 44 21.9 +0.5
baz=129
FFC Flin Flon 128.91 313 ePKIKP PKPdf 20 44 20.9 -0.3
FFC Flin Flon 128.91 313 ePKPdf PKPdf 20 44 20.9 -0.3
JOF Joensuu 128.94 29 ePKIKP PKPdf 20 44 21.2 +0.2
JOF pmax pmax
comp=Z,34nm,0.8s
JOF Joensuu 128.94 29 ep PKPdf 20 44 21.2 +0.2
comp=Z,34nm,0.8s
A15A Johnson Ranch, 128.98 302 P PKPdf 20 44 22.1 +0.4
baz=129,SNR=15
HUMO Hull Mountain 128.98 290 ePKPdf PKPdf 20 44 21.6 -0.3
BSMT Bassoo Peak 129.06 300 ePKPdf PKPdf 20 44 22.2 +0.1
AML Almayashu 129.06 71 P PKPdf 20 44 22.7 +0.3
SNR=11
BBOR Butler Butte 129.06 290 P PKPdf 20 44 22.8 +0.6
A14A Double T Ranch 129.28 302 ⇓P PKPdf 20 44 23.1 +0.8
baz=130,SNR=27
B13A Whitefish 129.30 301 ⇓P PKPdf 20 44 22.9 +0.6
baz=130
EKS2 Erkin-Say 129.50 71 ePKIKP PKPdf 20 44 22.8 -0.1
EKS2 Erkin-Say 129.50 71 ePKPdf PKPdf 20 44 22.8 -0.1
EKS2 Erkin-Say 129.50 71 P PKPdf 20 44 22.8 -0.1
SNR=13
KLMR Klimovskoe 129.51 35 ePKIKP PKPdf 20 44 21.0 -1.2
KLMR pmax pmax
comp=Z,72nm,1.4s
WALA Waterton Lakes 129.56 301 ePKPdf PKPdf 20 44 22.4 -0.5
A13A Flathead Natio 129.69 301 ⇑P PKPdf 20 44 24.2 +1.1
baz=130
C11A Tepee Creek (N 129.71 299 ⇑P PKPdf 20 44 23.0 -0.1
baz=130
KZA Kyzart 129.78 72 P PKPdf 20 44 24.2 +0.3
SNR=15
AAK Ala-Archa 129.83 71 c iPKIKP PKPdf 20 44 23.4 -0.2
AAK Ala-Archa 129.83 71 ePKPdf PKPdf 20 44 23.6 0.0
AAK Ala-Archa 129.83 71 P PKPdf 20 44 24.0 +0.3
SNR=11
KBK Karagaybulak 130.07 72 P PKPdf 20 44 24.3 +0.2
SNR=11
HAWA Hanford 130.16 295 ePKPdf PKPdf 20 44 24.6 +0.7
CHMS Chumysh 130.22 71 P PKPdf 20 44 23.7 -0.5
SNR=5.8
USP Ospenovka 130.30 71 P PKPdf 20 44 24.2 -0.1
SNR=12
ULHL Ulahol 130.40 73 P PKPdf 20 44 25.0 +0.2
SNR=9.5
NEW Newport 130.42 299 ePKPdf PKPdf 20 44 24.4 0.0
NEW Newport 130.42 299 ⇓P PKPdf 20 44 24.5 0.0
baz=131
KMI Kunming 130.49 110 PKP PKPdf 20 44 25.1 -0.4
KMI sPKP 20 44 31.3
KMI PP PP 20 46 44.9 +4.8
KMI SS SS 21 04 10.8 +3.5
KMI AMB AMB
comp=Z,55nm,6.7s
KMI LR LR
comp=N,130nm,18.7s
KMI LR LR
comp=E,100nm,17.5s
KMI LR LR
comp=Z,120nm,16.2s
TKM2 Tokmak 2 130.58 72 ePKIKP PKPdf 20 44 24.0 -1.1
TKM2 Tokmak 2 130.58 72 ePKPdf PKPdf 20 44 24.0 -1.1
TKM2 Tokmak 2 130.58 72 P PKPdf 20 44 24.7 -0.4
SNR=7.5
MPOR Mary's Peak 130.68 291 P PKPdf 20 44 26.6 +1.5
LON Longmire 131.49 294 ePKIKP PKPdf 20 44 26.6 +0.1
LON Longmire 131.49 294 ePKPdf PKPdf 20 44 26.6 +0.1
SUMG Summit 131.52 355 ePKIKP PKPdf 20 44 26.7 +0.5
SUMG Summit 131.52 355 ePKPdf PKPdf 20 44 26.7 +0.5
SUMG Summit 131.52 355 i P PKPdf 20 44 26.9 +0.7
comp=Z,10nm,0.9s
SUMG Summit 131.52 355 i P SKPbc 20 47 51.6 +1.4
comp=Z,12nm,0.8s
HTW Haystack Looko 132.23 295 P PKPdf 20 44 28.5 +0.6
ARU Arti 132.74 49 i PKIKP PKPdf 20 44 29.0 +0.6
ARU 20 46 54.9
ARU SS SS 21 04 35.8 +1.7
ARCES ARCESS Array B 133.17 22 PKP PKPdf 20 44 26.5 -2.4
ARCES SKPbc SKPab 20 47 59.2 +1.7
ARCES ARCESS Array B 133.17 22 PKhKP PKPpre 20 44 14.2
comp=Z,2.0nm,0.7s,baz=165,slow=1.9,SNR=10
ARCES PKP PKPdf 20 44 26.5 -2.4
comp=Z,13nm,0.7s,baz=195,slow=1.1,SNR=22
ARCES SKPbc SKPab 20 47 59.2 +1.7
comp=Z,2.8nm,0.6s,baz=200,slow=3.2,SNR=7.7
APA Apatity 133.25 27 ⇑i PKIKP PKPdf 20 44 29.2 +0.2
APA i 20 44 44.0
APA pmax pmax
comp=Z,15nm,0.9s
APA MLR MLR
comp=Z,300nm,20.0s
GYA Guiyang 133.51 113 Pdif Pdif 20 41 29.0 0.0
GYA PKP PKPdf 20 44 31.0 -0.1
GYA PP PP 20 47 04.3 +4.9
GYA PKS PKSdf 20 48 06.5 -1.1
GYA SKKS 20 53 53.3
GYA SS SS 21 04 45.8 +2.0
GYA AMB AMB
comp=Z,140nm,8.0s
GYA LR LR
comp=N,240nm,23.9s
GYA LR LR
comp=E,160nm,24.0s
GYA LR LR
comp=Z,220nm,22.5s
KEV Kevo 133.65 22 ePKIKP PKPdf 20 44 26.4 -3.3
KEV Kevo 133.65 22 ep PKPdf 20 44 26.4 -3.3
BRVK Borovoye 135.29 59 c iPKIKP PKPdf 20 44 32.3 -1.0
BRVK pmax pmax
comp=Z,19nm,0.8s
BRVK Borovoye 135.29 59 ePKPdf PKPdf 20 44 32.5 -0.8
BVAR Borovoye Array 135.32 59 PKIKP PKPdf 20 44 31.9 -1.5
BVAR Borovoye Array 135.32 59 PKP PKPdf 20 44 31.9 -1.5
BVAR Borovoye Array 135.32 59 PKhKP PKPpre 20 44 18.8
comp=Z,1.7nm,0.7s,baz=230,slow=4.0,SNR=9.5
BVAR PKP PKPdf 20 44 31.9 -1.5
comp=Z,25nm,0.8s,baz=206,slow=1.9,SNR=25
DAG Danmarks Havn 135.48 2 i PKIKP PKPdf 20 44 32.9 -0.1
DAG pmax pmax
comp=Z,8.0nm,0.9s
DAG Danmarks Havn 135.48 2 i P PKPdf 20 44 32.9 -0.1
comp=Z,10.0nm,0.9s
DAG Danmarks Havn 135.48 2 i P SKPbc 20 48 02.4 -0.5
comp=Z,2.1nm,1.0s
CD2 Chengdu 135.78 106 ePKP PKPdf 20 44 35.8 +0.7
CD2 PP PP 20 47 18.8 +5.1
CD2 SKS SKSdf 20 51 44.3 -0.6
CD2 SKKS SKKSac 20 54 08.1 +0.7
CD2 SS SS 21 05 14.5 +3.5

CD2 AMB AMB
comp=Z,170nm,8.2s
CD2 LR LR
comp=N,410nm,19.2s
CD2 LR LR
comp=Z,290nm,17.8s
MKAR Makanchi Array 136.67 73 i PKHKP PKPpre 20 44 22.4
MKAR 20 44 34.5
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR pmax pmax
comp=Z,5.0nm,0.8s
MKAR Makanchi Array 136.67 73 PKP PKPdf 20 44 34.5 -1.7
MKAR Makanchi Array 136.67 73 PKhKP PKPpre 20 44 22.4
comp=Z,1.0nm,0.6s,baz=231,slow=3.9,SNR=12
MKAR PKP PKPdf 20 44 34.5 -1.7
comp=Z,5.2nm,0.8s,baz=247,slow=2.9,SNR=14
WMQ Urumqi 137.32 80 PKP PKPdf 20 44 35.0 -2.5
WMQ ePP PP 20 47 24.0 +0.5
WMQ PKS PKSdf 20 48 10.0 -3.6
WMQ SKKS 20 54 10.0
WMQ AMB AMB
comp=Z,78nm,4.5s
WMQ LR LR
comp=N,760nm,21.0s
WMQ LR LR
comp=E,450nm,28.0s
WMQ LR LR
comp=Z,480nm,25.6s
KURBB Kurchatov Arra 137.45 66 PKhKP PKPpre 20 44 25.4
comp=Z,2.6nm,0.7s,baz=231,slow=3.7,SNR=19
KURBB PKP PKPdf 20 44 38.3 +0.9
comp=Z,9.9nm,0.8s,baz=234,slow=2.8,SNR=23
KURK Kurchatov 137.55 66 ePKIKP PKPdf 20 44 37.2 -0.4
KURK Kurchatov 137.55 66 ePKPdf PKPdf 20 44 37.1 -0.4
KURK PKP PKiKP 20 44 38.3 -1.2
YKA Yellowknife Ar 139.03 315 PKP PKPdf 20 44 39.8 -0.1
YKA PP PP 20 47 33.0 -0.8
YKA SKPbc SKPbc 20 48 12.2 -1.5
YKA PKKP PKKPdf 20 54 07.2 -0.9
YKA Yellowknife Ar 139.03 315 PKhKP PKPpre 20 44 29.4
comp=Z,1.6nm,0.6s,baz=126,slow=3.5,SNR=25
YKA PKP PKPdf 20 44 39.8 -0.1
comp=Z,18nm,0.7s,baz=127,slow=2.3,SNR=68
YKA PP PP 20 47 33.0 -0.8
comp=Z,2.3nm,0.9s,baz=118,slow=7.1,SNR=5.1
YKA SKPbc SKPbc 20 48 12.2 -1.5
comp=Z,4.3nm,0.9s,baz=122,slow=1.8,SNR=8.1
YKA PKKP PKKPdf 20 54 07.2 -0.9
comp=Z,0.5nm,0.8s,baz=301,slow=2.7,SNR=4.3
YKW3 Yellowknife Ar 139.08 315 ePKPdf PKPdf 20 44 40.1 +0.1
LZH Lanzhou 139.94 102 ePKP PKPdf 20 44 40.0 -2.7
LZH sPKP 20 44 44.5
LZH PP PP 20 47 41.3 +1.5
LZH PKS PKSdf 20 48 14.8 -4.0
LZH SS SS 21 05 59.3 -1.3
LZH AMB AMB
comp=Z,140nm,6.0s
LZH LR LR
comp=N,250nm,18.5s
LZH LR LR
comp=E,260nm,19.0s
LZH LR LR
comp=Z,380nm,20.1s
GTA Gaotai 140.39 95 ePKP PKPdf 20 44 38.8 -4.6
GTA PP PP 20 47 42.8 +0.2
GTA PKS PKSdf 20 48 12.3 -7.1
GTA SKS SKSdf 20 51 47.0 -5.5
GTA SKKS SKKSac 20 54 31.1 -3.5
GTA SS SS 21 06 04.9 -1.0
GTA AMB AMB
comp=Z,74nm,4.3s
GTA LR LR
comp=N,110nm,16.9s
GTA LR LR
comp=E,170nm,17.8s
GTA LR LR
comp=Z,220nm,20.9s
XAN Xi'an 140.86 109 PKP PKPdf 20 44 37.1 -7.2
NVS Novosibirsk 142.33 64 ePKHKP PKPpre 20 44 41.2
NVS e 20 47 53.9
NVS pmax pmax
comp=Z,20nm,1.2s
NVS pmax pmax
comp=N,6.0nm,0.9s
ZALV Zalesovo Beam 142.54 66 i PKHKP PKPpre 20 44 41.3
ZALV pmax pmax
comp=Z,8.0nm,0.6s
ZALV Zalesovo Beam 142.54 66 PKhKP PKPpre 20 44 41.3
comp=Z,7.6nm,0.6s,baz=230,slow=3.2,SNR=29
WRAK Wrangell Islan 142.78 299 ePKPdf PKPdf 20 44 45.8 -1.1
DLBC Dease Lake 142.88 303 ePKPdf PKPdf 20 44 44.3 -2.8
NJ2 Nanjing 143.87 122 ePKP PKPbc 20 44 47.6 +0.2
NJ2 pPKP PKiKP 20 44 52.5 -0.6
NJ2 sPKP 20 44 55.1
NJ2 PP PP 20 48 04.5 +1.3
NJ2 SKKS 20 54 55.0
NJ2 SS SS 21 06 46.5 +1.1
NJ2 AMB AMB
comp=Z,50nm,9.8s
NJ2 LR LR
comp=N,510nm,18.8s
NJ2 LR LR
comp=E,900nm,25.2s
NJ2 LR LR
comp=Z,740nm,20.6s
HVS Khovu-Aksy 145.20 75 d iPKIKP PKPbc 20 44 50.4 -0.8
SKAG Skagway 145.76 302 ePKPdf PKPdf 20 44 52.2 +0.2
HHC Hu-ho-hao-te 147.48 104 ePKPbc PKPbc 20 44 57.9 -0.4
HHC PKS PKSdf 20 48 31.1 +0.2
HHC SKS SKSdf 20 52 01.9 -1.2
HHC SKKS SKKSac 20 55 15.8 +0.8
HHC SS SS 21 07 31.1 +4.0
HHC AMB AMB
comp=Z,230nm,7.8s
HHC LR LR
comp=N,240nm,18.5s
HHC LR LR
comp=E,440nm,19.0s
HHC LR LR
comp=Z,490nm,18.5s
PNL Peninsula 147.67 300 ePKPbc PKPbc 20 44 58.1 0.0
BJT Baijiatuan 149.12 110 ePKPbc PKPbc 20 45 02.0 -0.4
BJT ePKPab PKPab 20 45 06.4 -0.4
BJI Beijing 149.14 110 P PKPbc 20 45 02.3 -0.1
BJI pmax pmax
comp=Z,90nm,0.7s
BJI Beijing 149.14 110 PKPbc PKPdf 20 44 57.8 -0.4
BJI PP PP 20 48 35.6 +1.1
BJI SS SS 21 07 48.8 +3.3
BJI AMB AMB
comp=Z,92nm,7.8s
BJI LR LR
comp=N,180nm,15.2s
BJI LR LR
comp=E,140nm,16.3s
BJI LR LR
comp=Z,180nm,21.0s
MOY Mondy 149.21 80 ePKIKP PKPdf 20 44 57.9 -0.2
MOY pmax pmax
comp=Z,131nm,1.6s
JNU Nakatsue 149.61 137 ePKPbc PKPbc 20 45 03.3 -0.6
ZAK Zakamensk 149.63 83 ePKP2 PKPbc 20 45 03.1 -0.4
ZAK pmax pmax
comp=Z,76nm,1.2s
SONM Songino Array 149.68 90 PKP PKPdf 20 44 58.6 -0.4
SONM PKPbc PKPbc 20 45 03.3 -0.5
SONM Songino Array 149.68 90 PKP PKPdf 20 44 58.6 -0.4
comp=Z,18nm,1.0s,baz=207,slow=2.1,SNR=16
SONM PKPbc PKPbc 20 45 03.3 -0.5
comp=Z,68nm,0.9s,baz=217,slow=2.6,SNR=153
ULN Ulaanbaatar 150.04 90 ePKPdf PKPdf 20 44 58.9 -0.8
ULN ePKPbc PKPbc 20 45 04.2 -0.4
EGAK Eagle 150.47 309 ePKPbc PKPbc 20 45 05.2 +0.2
DIV Divide 151.16 300 ePKPbc PKPbc 20 45 07.5 +0.7
IRK Irkutsk 151.21 81 ePKIKP PKPbc 20 45 05.2 -1.9
IRK pmax pmax
comp=Z,118nm,1.7s
DOT Dot Lake 151.30 306 ePKPbc PKPbc 20 45 08.1 +1.1
PAX Paxson 151.68 304 ePKIKP PKPbc 20 45 08.3 +0.3
PAX Paxson 151.68 304 ePKPbc PKPbc 20 45 08.3 +0.3
INCN Inchon 151.82 127 ePKPbc PKPbc 20 45 08.6 -0.3
KSAR Wonju Array Be 152.30 129 PKP PKPdf 20 45 02.7 -0.5
KSAR PKPbc PKPbc 20 45 09.7 -0.4

KSAR				PKPab	**PKPab**	**20 45 20.2**	**+0.2**
KSRS	**Korea Array**	**152.33**	**129**	PKP	**PKPdf**	**20 45 02.7**	**-0.5**
	comp=Z,2.6nm,1.1s,baz=185,slow=2.0,SNR=8.3						
KSRS				PKPbc	**PKPbc**	**20 45 09.7**	**-0.4**
	comp=Z,20nm,1.0s,baz=196,slow=2.2,SNR=50						
KSRS				PKPab	**PKPab**	**20 45 20.2**	**+0.1**
	comp=Z,16nm,0.9s,baz=210,slow=4.0,SNR=21						
SML	**Sawmill**	**152.55**	**301**	*e*PKIKP	**PKPbc**	**20 45 10.3**	**+0.4**
SML	**Sawmill**	**152.55**	**301**	*e*PKPbc	**PKPbc**	**20 45 10.3**	**+0.4**
ILAR	**Eielson Array**	**152.82**	**307**	PKPbc	**PKPbc**	**20 45 10.5**	**+0.2**
ILAR				PKPab	**PKPab**	**20 45 19.9**	**-1.7**
ILAR	**Eielson Array**	**152.82**	**307**	PKPbc	**PKPbc**	**20 45 10.5**	**+0.2**
	comp=Z,58nm,1.0s,baz=142,slow=1.8,SNR=174						
ILAR				PKPab	**PKPab**	**20 45 19.9**	**-1.7**
	comp=Z,22nm,0.9s,baz=137,slow=2.0,SNR=15						
KDAK	**Kodiak Island**	**153.01**	**291**	*e*PKPbc	**PKPbc**	**20 45 11.6**	**+0.7**
OHAK	**Old Harbor**	**153.11**	**289**	*e*PKPbc	**PKPbc**	**20 45 11.5**	**+0.4**
COLA	**College**	**153.24**	**307**	*e*PKIKP	**PKPbc**	**20 45 11.4**	**+0.2**
COLA	**College**	**153.24**	**307**	*e*PKPbc	**PKPbc**	**20 45 11.4**	**+0.2**
MCK	**McKinley**	**153.40**	**304**	*e*PKIKP	**PKPbc**	**20 45 11.9**	**+0.3**
MCK	**McKinley**	**153.40**	**304**	*e*PKPbc	**PKPbc**	**20 45 11.9**	**+0.3**
TRF	**Thorofare Moun**	**153.91**	**303**	*e*PKPbc	**PKPbc**	**20 45 12.8**	**-0.2**
PPLA	**Purkeypile**	**154.59**	**302**	*e*PKPbc	**PKPbc**	**20 45 14.8**	**+0.4**
COLD	**Coldfoot**	**154.63**	**312**	*e*PKPbc	**PKPbc**	**20 45 14.8**	**+0.6**
MAJO	**Matsushiro**	**155.10**	**147**	*e*PKIKP	PKPdf	20 45 15.5	+8.2
MAJO				*e*		20 45 31.6	
MAJO	**Matsushiro**	**155.10**	**147**	*e*PKPbc	PKPdf	20 45 15.5	+8.2
MAJO				*e*PKPab	**PKPab**	**20 45 31.6**	**-0.3**
MAT	**Matsushiro**	**155.10**	**147**	PKP	PKPdf	20 45 15.2	+7.9
SDPT	**Sand Point**	**155.88**	**281**	*e*PKPdf	**PKPdf**	**20 45 07.7**	**+0.1**
SDPT				*e*PKPbc	PKPab	20 45 16.7	-18
CN2	**Changchun**	**156.45**	**117**	*e*PKP	**PKPdf**	**20 45 06.8**	**-2.0**
CN2				PP	**PP**	**20 49 16.8**	**+0.9**
CN2				LR	LR		
	comp=N,200nm,18.0s						
CN2				LR	LR		
	comp=E,200nm,18.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
USRK	**Ussuriysk Arra**	**159.66**	**126**	PKPab	**PKPab**	**20 45 50.2**	**-1.2**
	comp=Z,2.6nm,0.6s,baz=236,slow=5.6,SNR=7.3						
KLR	**Kul'dur**	**163.39**	**116**	*e*PKIKP	**PKPdf**	**20 45 11.6**	**-4.8**
KLR				pmax	pmax		
	comp=Z,40nm,1.6s						
CLNS	**Chul'man**	**163.95**	**84**	*e*PKIKP	**PKPdf**	**20 45 14.9**	**-1.9**
CLNS				pmax	pmax		
	comp=Z,13nm,1.0s						
CLNS				pmax	pmax		
	comp=N,3.0nm,1.4s						
CLNS				pmax	pmax		
	comp=E,4.0nm,1.5s						
YAK	**Yakutsk**	**167.19**	**65**	*e*PKP2	**PKPab**	**20 46 23.4**	**-0.7**
YAK				pmax	pmax		
	comp=Z,21nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.2s						
BILL	**Bilibino**	**169.54**	**336**	PKIKP	**PKPdf**	**20 45 16.0**	**-4.6**
BILL				pmax	pmax		
	comp=Z,35nm,1.2s						
BILL				pmax	pmax		
	comp=Z,41nm,1.4s						
PETK	**Petropavlovsk-**	**173.99**	**196**	PKIKP	**PKPdf**	**20 45 22.3**	**-0.9**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PETK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PETK	**Petropavlovsk-**	**173.99**	**196**	PKP	**PKPdf**	**20 45 22.3**	**-0.9**
PETK				PKPab	**PKPab**	**20 46 55.1**	**+0.8**
PETK	**Petropavlovsk-**	**173.99**	**196**	PKP	**PKPdf**	**20 45 22.3**	**-0.9**
	comp=Z,3.8nm,0.9s,baz=162,slow=0.5,SNR=5.4						
PETK				PKPab	**PKPab**	**20 46 55.1**	**+0.8**
	comp=Z,6.2nm,0.9s,baz=164,slow=7.7,SNR=4.4						

CSEM ***14*** *20:42:31.6±0.3, 34.˚43N×23.˚91E, h10km, MD3.8, Error ellipse: s-maj=10.5km s-min=3.5km az=40.0*

ATH 14 20:42:34.6, 34.˚70N×23.˚89E, h26km±1km, MD3.8/28, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.21**	**49**	*e*Pb	Pb	20 42 40.5	-0.1
GVD	**Gavdhos**	**0.21**	**49**	*e*Pb	Pb	20 42 40.5	-0.1
VAM	**Vamos**	**0.75**	**20**	*e*Pn	Pn	20 42 49.6	+0.1
VAM	**Vamos**	**0.75**	**20**	*e*Pn	Pn	20 42 49.6	+0.1
SIVA	**Sivas**	**0.82**	**67**	*e*Pn	Pn	20 42 50.6	+0.1
SIVA				*e*Sn	Sn	20 43 02.4	+0.6
SIVA	**Sivas**	**0.82**	**67**	*e*Pn	Pn	20 42 50.6	+0.1
SIVA				*e*Sn	Sn	20 43 02.4	+0.6
ANKY	**Antikythira Is**	**1.26**	**338**	*e*PN	Pb	20 42 59.0	+1.3
ANKY	**Antikythira Is**	**1.26**	**338**	*e*Pn	Pb	20 42 59.0	+1.3
LAST	**Lasithi**	**1.38**	**70**	*e*PN	Pb	20 43 00.1	+0.2
LAST	**Lasithi**	**1.38**	**70**	*e*Pn	Pb	20 43 00.1	+0.2
NPS	**Neapolis**	**1.52**	**68**	*e*PN	Pb	20 43 02.2	0.0
NPS	**Neapolis**	**1.52**	**68**	*e*Pn	Pb	20 43 02.2	0.0
KYTH	**Kithira**	**1.72**	**336**	*e*PN	Pb	20 43 05.0	-0.7
KYTH	**Kithira**	**1.72**	**336**	*e*Pn	Pb	20 43 05.0	-0.7
ZKR	**Zakros**	**1.96**	**77**	*e*PB	Pb	20 43 08.1	-1.5
ZKR	**Zakros**	**1.96**	**77**	*e*Pb	Pb	20 43 08.1	-1.5
VLI	**Veliai**	**2.16**	**339**	*e*PB	Pb	20 43 11.3	-1.7
VLI	**Veliai**	**2.16**	**339**	*e*Pb	Pb	20 43 11.3	-1.7
DYR	**Agios Nikonas**	**2.42**	**329**	*e*PB	Pb	20 43 15.5	-1.9
DYR	**Agios Nikonas**	**2.42**	**329**	*e*Pb	Pb	20 43 15.5	-1.9
APE	**Apeiranthos**	**2.71**	**29**	*e*PN	Pn	20 43 18.8	+2.2
APE	**Apeiranthos**	**2.71**	**29**	*e*Pn	Pn	20 43 18.8	+2.2
PYL	**PYLOS**	**2.80**	**322**	*e*PN	Pn	20 43 19.5	+1.8
PYL	**PYLOS**	**2.80**	**322**	*e*Pn	Pn	20 43 19.5	+1.8
KARP	**Karpathos**	**2.81**	**72**	*e*PN	Pn	20 43 20.0	+2.1
KARP	**Karpathos**	**2.81**	**72**	*e*Pn	Pn	20 43 20.0	+2.1
DID	**Didima**	**2.85**	**349**	*e*PN	Pn	20 43 19.7	+1.2
DID	**Didima**	**2.85**	**349**	*e*Pn	Pn	20 43 19.7	+1.2
VLX	**Vlachokerasia**	**2.93**	**336**	*e*PN	Pn	20 43 22.3	+2.6
VLX	**Vlachokerasia**	**2.93**	**336**	*e*Pn	Pn	20 43 22.3	+2.6
ITM	**Ithomi**	**2.94**	**328**	*e*PN	Pn	20 43 22.2	+2.5
ITM	**Ithomi**	**2.94**	**328**	*e*Pn	Pn	20 43 22.2	+2.5
NAIG	**Nisos Aigina**	**3.07**	**354**	*e*PN	Pn	20 43 22.8	+1.4
NAIG	**Nisos Aigina**	**3.07**	**354**	*e*Pn	Pn	20 43 22.8	+1.4
AMT	**Artemida-Makis**	**3.33**	**329**	*e*PN	Pn	20 43 28.0	+2.9
AMT	**Artemida-Makis**	**3.33**	**329**	*e*Pn	Pn	20 43 28.0	+2.9
LTK	**Loutraki**	**3.40**	**348**	*e*PN	Pn	20 43 27.7	+1.7
LTK	**Loutraki**	**3.40**	**348**	*e*Pn	Pn	20 43 27.7	+1.7
GUR	**Goura**	**3.46**	**339**	*e*PN	Pn	20 43 29.2	+2.2
GUR	**Goura**	**3.46**	**339**	*e*Pn	Pn	20 43 29.2	+2.2
KLV	**Kalavryta, Ach**	**3.62**	**338**	*e*PN	Pn	20 43 31.9	+2.8
KLV	**Kalavryta, Ach**	**3.62**	**338**	*e*Pn	Pn	20 43 31.9	+2.8
TRIZ	**Trizonia**	**3.94**	**339**	*e*PN	Pn	20 43 35.5	+2.1
TRIZ	**Trizonia**	**3.94**	**339**	*e*Pn	Pn	20 43 35.5	+2.1
LKR	**Lokris**	**4.01**	**350**	*e*PN	Pn	20 43 35.8	+1.5
LKR	**Lokris**	**4.01**	**350**	*e*Pn	Pn	20 43 35.8	+1.5
EFP	**Efpalio**	**4.05**	**337**	*e*PN	Pn	20 43 38.0	+3.1
EFP	**Efpalio**	**4.05**	**337**	*e*Pn	Pn	20 43 38.0	+3.1
AOS	**Alonnisos**	**4.46**	**360**	*e*PN	Pn	20 43 43.1	+2.5
AOS	**Alonnisos**	**4.46**	**360**	*e*Pn	Pn	20 43 43.1	+2.5
AGG	**Agios Georgios**	**4.49**	**344**	*e*PN	Pn	20 43 43.4	+2.4
AGG	**Agios Georgios**	**4.49**	**344**	*e*Pn	Pn	20 43 43.4	+2.4
EVR	**Evrytania**	**4.53**	**339**	*e*PN	Pn	20 43 43.7	+2.1
EVR	**Evrytania**	**4.53**	**339**	*e*Pn	Pn	20 43 43.7	+2.1
NEO	**Neokhori**	**4.63**	**354**	*e*PN	Pn	20 43 45.5	+2.6
NEO	**Neokhori**	**4.63**	**354**	*e*Pn	Pn	20 43 45.5	+2.6
LKD2	**Lefkada island**	**4.84**	**328**	*e*PN	Pn	20 43 48.6	+2.9
LKD2	**Lefkada island**	**4.84**	**328**	*e*Pn	Pn	20 43 48.6	+2.9
KSL	**Kastellorizon**	**4.87**	**71**	*e*PN	Pn	20 43 49.2	+3.1
KSL	**Kastellorizon**	**4.87**	**71**	*e*Pn	Pn	20 43 49.2	+3.1
THL	**Klokotos Trika**	**5.08**	**343**	*e*PN	Pn	20 43 51.5	+2.4
THL	**Klokotos Trika**	**5.08**	**343**	*e*Pn	Pn	20 43 51.5	+2.4
KEK	**Kerkira**	**5.97**	**328**	*e*PN	Pn	20 44 04.1	+2.8
KEK	**Kerkira**	**5.97**	**328**	*e*Pn	Pn	20 44 04.1	+2.8
HNTI	**Hanita**	**9.52**	**97**	Sn	Sn	20 46 26.9	-9.3
KZIT	**Kziot**	**9.62**	**110**	Pn	Pn	20 44 48.1	-3.3
KZIT				Sn	Sn	20 46 25.6	-13
SLTI	**Sal'it**	**9.63**	**102**	Pn	Pn	20 44 49.9	-1.7
SLTI				Sn	Sn	20 46 27.6	-11
MMA0	**Mount Meron ar**	**9.72**	**97**	Pn	Pn	20 44 50.6	-2.3
MMA0				Sn	Sn	20 46 30.6	-11
RTMI	**Retamim**	**9.78**	**109**	Sn	Sn	20 46 30.6	-12
MMLI	**Mount Malkishu**	**9.88**	**100**	Pn	Pn	20 44 52.1	-2.9
MMLI				Sn	Sn	20 46 34.1	-11
KSDI	**Kefar Szold**	**9.89**	**95**	Pn	Pn	20 44 52.8	-2.3
KSDI				Sn	Sn	20 46 35.6	-10
HMDT	**Nahal Hemdat**	**10.02**	**101**	Pn	Pn	20 44 54.5	-2.4
HMDT				Sn	Sn	20 46 37.9	-11
DSI	**Dead Sea**	**10.13**	**105**	Pn	Pn	20 44 55.8	-2.5
DSI				Sn	Sn	20 46 39.4	-12
MZDA	**Masada**	**10.21**	**106**	Sn	Sn	20 46 41.6	-11
KRMI	**Paran Flat**	**10.23**	**114**	Pn	Pn	20 44 57.4	-2.4
KRMI				Sn	Sn	20 46 40.6	-13
PRNI	**Paran**	**10.33**	**112**	Pn	Pn	20 44 57.7	-3.5
PRNI				Sn	Sn	20 46 43.1	-13
ZFRI	**Zfri**	**10.38**	**110**	Sn	Sn	20 46 44.9	-12
HRFI	**Mount Harif**	**10.51**	**113**	Pn	Pn	20 45 00.7	-2.9
HRFI				Sn	Sn	20 46 46.9	-14
MBRI	**Mt Berech**	**10.54**	**115**	Pn	Pn	20 45 00.3	-3.7
MBRI				Sn	Sn	20 46 47.4	-14
EIL	**Elat**	**10.63**	**115**	Pn	Pn	20 45 02.1	-3.1
EIL				Sn	Sn	20 46 50.4	-13

ISCJB ***14*** *20:49:48.9±0.7, 19.˚90S±0.˚09×175.˚3W±0.˚1, h137km, mb4.3/8, Error ellipse: s-maj=20.5km s-min=8.8km az=31.9*

IDC ***14*** *20:49:51.9±3.0, 20.˚05S×175.˚55W, h124km±29km, mb4.0/6, mb1 4.1/8, mb1mx3.7/22, mbtmp4.1/8, Error ellipse: s-maj=27.1km s-min=19.7km az=116.0*

NEIC ***14*** *20:49:52.8±1.8, 19.˚98S×175.˚47W, h144km±19km, mb4.9/3, Error ellipse: s-maj=20.0km s-min=13.6km az=115.0*

ISC 14 20:49:51.7±0.7, 20.˚0S±0.˚1×175.˚3W±0.˚1, h137km, n28, σ1§72/32, mb4.4/8, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.88**	**30**	P	**Pn**	**20 51 33.2**	**+3.1**
AFI				S	**Sn**	**20 52 44.4**	**-2.8**
AFI	**Afiamalu**	**6.88**	**30**	P	**Pn**	**20 51 33.2**	**+3.1**
	4.6nm,0.3s,baz=221,slow=24,SNR=6.6						
AFI				S	**Sn**	**20 52 44.4**	**-2.8**
	28nm,0.3s,baz=360,slow=24,SNR=8.9						
DZM	**Mont Dzumac**	**17.20**	**260**	P	**Pn**	**20 53 46.9**	**+3.0**
DZM	**Mont Dzumac**	**17.20**	**260**	P	**Pn**	**20 53 46.9**	**+3.0**
	1.6nm,0.3s,baz=71,slow=17,SNR=18						
URZ	**Urewera**	**19.41**	**198**	P	**P**	**20 54 05.6**	**-1.5**
URZ	**Urewera**	**19.41**	**198**	P	**P**	**20 54 05.6**	**-1.5**
	5.1nm,0.3s,baz=96,slow=6.8,SNR=18						
RPZ	**Rata Peaks**	**26.32**	**203**	P	**P**	**20 55 14.7**	**+0.1**
RPZ	**Rata Peaks**	**26.32**	**203**	P	**P**	**20 55 14.7**	**+0.1**
	8.9nm,0.6s,baz=344,slow=12,SNR=6.1						
CTA	**Charters Tower**	**36.10**	**263**	P	**P**	**20 56 40.7**	**+0.1**
CTA	**Charters Tower**	**36.10**	**263**	P	**P**	**20 56 40.7**	**+0.1**
	7.4nm,0.4s,baz=91,slow=11,SNR=29						
CTAO	**Charters Tower**	**36.10**	**263**	*e*P	**P**	**20 56 39.4**	**-1.3**
	6.6nm,0.4s						
COEN	**Coen**	**40.12**	**272**	*e*P	**P**	**20 57 13.3**	**-1.0**
	44nm,1.1s						
STKA	**Stephens Creek**	**40.33**	**244**	P	**P**	**20 57 14.5**	**-1.4**
STKA	**Stephens Creek**	**40.33**	**244**	P	**P**	**20 57 14.5**	**-1.4**
	1.8nm,0.6s,baz=74,slow=6.3,SNR=6.3						
ASAR	**Alice Springs**	**47.14**	**256**	P	**P**	**20 58 09.2**	**-1.4**
ASAR				PcP	**PcP**	**20 59 40.0**	**-0.1**
ASAR	**Alice Springs**	**47.14**	**256**	P	**P**	**20 58 09.2**	**-1.4**
	1.9nm,0.5s,baz=92,slow=8.1,SNR=38						
ASAR				PcP	**PcP**	**20 59 40.0**	**-0.1**
	1.7nm,0.7s,baz=102,slow=4.2,SNR=12						
WRA	**Warramunga Arr**	**47.22**	**261**	P	**P**	**20 58 10.2**	**-0.9**
WRA	**Warramunga Arr**	**47.22**	**261**	P	**P**	**20 58 10.2**	**-0.9**
	1.6nm,0.3s,baz=96,slow=7.6,SNR=35						
FITZ	**Fitzroy Crossi**	**55.64**	**261**	*e*P	**P**	**20 59 11.8**	**-2.0**
	14nm,0.9s						
SBA	**Scott Base**	**58.60**	**184**	*e*P	**P**	**20 59 33.7**	**0.0**
VNDA	**Vanda**	**58.69**	**186**	P	**P**	**20 59 35.5**	**+1.2**
VNDA	**Vanda**	**58.69**	**186**	P	**P**	**20 59 35.5**	**+1.2**
	1.0nm,0.8s,baz=358,slow=7.6,SNR=5.9						
SML	**Sawmill**	**84.28**	**12**	*e*P	**P**	**21 02 05.9**	**-1.8**
CLL	**Collm**	**148.04**	**350**	*e*PKPbc	**PKPbc**	**21 09 22.0**	**+1.1**
BRTR	**Keskin Array B**	**148.32**	**315**	PKPbc	**PKPbc**	**21 09 23.2**	**+1.0**
BRTR	**Keskin Array B**	**148.32**	**315**	PKPbc	**PKPbc**	**21 09 23.2**	**+1.0**
	0.7nm,0.7s,baz=145,slow=4.5,SNR=5.9						
GERES	**GERESS Array B**	**150.28**	**348**	PKPbc	**PKPbc**	**21 09 28.2**	**+1.4**
GERES	**GERESS Array B**	**150.28**	**348**	PKPbc	**PKPbc**	**21 09 28.2**	**+1.4**
	1.0nm,0.6s,baz=27,slow=2.5,SNR=12						

MAN ***14*** *20:53:56, 4.˚76N×126.˚76E, h51km, mb4.9, ML3.8, MS3.8*

BJI ***14*** *20:53:57.5, 5.˚60N×127.˚00E, h10km, mB5.0/3, mb4.6/5*

DJA ***14*** *20:54:04.8±0.5, 5.˚N±5.˚×12.˚6E±.˚, h10km, M4.9/6, mb5.0/6, mB5.4/5, MLv4.9/6, Mw(mB)4.8/5*

ISCJB ***14*** *20:54:05.1±0.3, 5.˚37N±0.˚04×126.˚38E±0.˚06, h66km, mb4.0/23, Error ellipse: s-maj=8.7km s-min=4.6km az=160.5*

NEIC ***14*** *20:54:06.8±1.5, 5.˚37N×126.˚29E, h69km±13km, mb4.3/4, Error ellipse: s-maj=16.9km s-min=8.2km az=75.0*

IDC ***14*** *20:54:07.2±1.4, 5.˚31N×126.˚21E, h70km±12km, mb3.8/20, mb1 3.9/20, mb1mx3.9/27, mbtmp3.8/20, MS4.3/1, Ms1 4.3/1, ms1mx2.9/41, Error ellipse: s-maj=27.8km s-min=9.7km az=73.0*

ISC 14 20:54:06.8±0.4, 5.˚36N±0.˚05×126.˚37E±0.˚08, h66km, n78, σ1§09/86, mb4.2/23, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.58**	**356**	*e*P	**Pn**	**20 54 30.8**	**-2.1**
DAV	**Davao City (W)**	**1.88**	**335**	*e*Pn	**Pn**	**20 54 36.0**	**-0.8**
DAV				P		20 54 36.6	
DAV				S	**Sn**	**20 55 00.5**	**+1.0**
DAV	**Davao City (W)**	**1.88**	**335**	P	**Pn**	**20 54 37.6**	**+0.8**
DAV	**Davao City (W)**	**1.88**	**335**	P	**Pn**	**20 54 36.6**	**-0.2**
	43nm,0.3s,baz=143,slow=1.3,SNR=15						
DAV				S	**Sn**	**20 55 00.5**	**+1.0**
	114nm,0.3s,baz=231,slow=22,SNR=5.2						
DAV				LR	LR	20 55 32.5	
	comp=Z,1µm,20.6s,baz=184,slow=46						
KCP	**Kidapawan**	**2.08**	**322**	*e*P	**Pn**	**20 54 41.1**	**+1.5**
KCP				*i* S	Sn	20 55 12.4	+7.9
CTBH	**Cotabato--PC H**	**2.81**	**311**	*i*P	**Pn**	**20 54 48.7**	**-0.7**
BUKP	**Musuan**	**2.82**	**333**	*e*P	**Pn**	**20 54 49.8**	**+0.1**
BUTP	**Butuan**	**3.67**	**348**	*e*P	**Pn**	**20 55 02.8**	**+1.7**
PAGZ	**Pagadian**	**3.87**	**310**	*e*P	**Pn**	**20 55 04.5**	**+0.6**
MNI	**Manado**	**4.18**	**202**	P	**Pn**	**20 55 08.9**	**+0.8**
TNTI	**Ternate**	**4.66**	**168**	P	**Pn**	**20 55 14.3**	**-0.5**
KMSI	**Cibinong**	**5.32**	**207**	P	Pn	20 55 35.9	+12
LBMI	**Labuha**	**6.06**	**169**	P	**Pn**	**20 55 36.2**	**+2.3**
	91nm,1.0s,2µm0.7nm						
MRSI	**Marisa**	**6.56**	**223**	P	**Pn**	**20 55 40.4**	**-0.4**
	111nm,0.8s,1µm0.4nm						
LUWI	**Luwuk**	**7.30**	**210**	P	Pn	20 55 56.0	+5.1
	224nm,1.2s,2µm0.9nm						
RKPI	**Ransiki, Papua**	**10.36**	**131**	P	**Pn**	**20 56 34.5**	**+1.8**
	50nm,0.7s,10µm						
TTSI	**Tana Toraja**	**10.61**	**218**	P	Pn	20 56 40.6	+4.5
	47nm,1.0s						
BAKI	**Biak**	**11.70**	**124**	P	**Pn**	**20 56 51.8**	**+0.8**
KAPI	**Kappang**	**12.24**	**213**	P	**Pn**	**20 57 00.2**	**+1.8**
KAPI	**Kappang**	**12.24**	**213**	P	**Pn**	**20 57 00.2**	**+1.8**
	0.3nm,0.3s,baz=143,slow=8.5,SNR=3.4						
KSM	**Kuching**	**16.49**	**257**	*e*P	**Pn**	**20 57 53.6**	**-0.6**
	20nm,1.0s						
FITZ	**Fitzroy Crossi**	**23.32**	**182**	P	**P**	**20 59 08.8**	**-0.6**
FITZ	**Fitzroy Crossi**	**23.32**	**182**	P	**P**	**20 59 08.8**	**-0.6**
	12nm,0.8s,baz=28,slow=4.2,SNR=12						
WRAB	**Tennant Creek**	**26.33**	**163**	*e*P	**P**	**20 59 36.3**	**-0.4**
	8.0nm,0.8s						
WRA	**Warramunga Arr**	**26.33**	**163**	P	**P**	**20 59 36.3**	**-0.5**
WRA				PcP	**PcP**	**21 03 01.2**	**-0.4**
WRA				ScP	**ScP**	**21 06 36.4**	**+0.6**
WRA	**Warramunga Arr**	**26.33**	**163**	P	**P**	**20 59 36.3**	**-0.5**
	6.4nm,0.8s,baz=345,slow=10,SNR=17						
WRA				PcP	**PcP**	**21 03 01.2**	**-0.4**
	0.8nm,0.9s,baz=324,slow=2.2,SNR=3.0						
WRA				ScP	**ScP**	**21 06 36.4**	**+0.6**
	0.8nm,0.9s,baz=336,slow=3.5,SNR=4.0						
ASAR	**Alice Springs**	**29.77**	**166**	P	**P**	**21 00 07.5**	**+0.1**
ASAR				PcP	**PcP**	**21 03 09.3**	**-0.6**
ASAR				ScP	**ScP**	**21 06 47.7**	**+1.3**
ASAR	**Alice Springs**	**29.77**	**166**	P	**P**	**21 00 07.5**	**+0.1**
	0.9nm,0.7s,baz=344,slow=7.2,SNR=14						
ASAR				PcP	**PcP**	**21 03 09.3**	**-0.6**
	0.7nm,0.6s,baz=347,slow=2.8,SNR=4.7						
ASAR				ScP	**ScP**	**21 06 47.7**	**+1.3**
	1.1nm,1.0s,baz=346,slow=2.6,SNR=4.4						
CMAR	**Chiang Mai Arr**	**29.77**	**298**	P	**P**	**21 00 08.2**	**+0.7**
CMAR	**Chiang Mai Arr**	**29.77**	**298**	P	**P**	**21 00 08.2**	**+0.7**
	0.3nm,0.4s,baz=104,slow=7.4,SNR=4.3						
KSAR	**Wonju Array Be**	**31.97**	**2**	P	**P**	**21 00 27.4**	**+0.8**
KSRS	**Korea Array**	**31.98**	**2**	P	**P**	**21 00 27.4**	**+0.7**
	0.2nm,0.3s,baz=106,slow=31,SNR=4.8						
USRK	**Ussuriysk Arra**	**39.00**	**6**	P	**P**	**21 01 28.0**	**+1.2**
	1.5nm,0.7s,baz=186,slow=5.3,SNR=3.8						
STKA	**Stephens Creek**	**39.77**	**160**	*e*P	**P**	**21 01 32.9**	**-0.5**
STKA	**Stephens Creek**	**39.77**	**160**	P	**P**	**21 01 33.1**	**-0.3**
	4.4nm,0.7s,baz=332,slow=6.5,SNR=9.4						
TAPN	**Taplejung**	**42.78**	**305**	*e*P	**P**	**21 01 58.7**	**+0.1**
ODAN	**Odare**	**42.85**	**304**	*e*P	**P**	**21 01 58.8**	**-0.3**
	11nm,0.8s						
RAMN	**Ramite**	**43.54**	**304**	*e*P	**P**	**21 02 04.8**	**+0.1**
	7.7nm,0.6s						
GUN	**Gumba**	**44.50**	**305**	*e*P	**P**	**21 02 12.2**	**-0.2**
	19nm,0.7s						
PKIN	**Phulchoki**	**44.77**	**304**	*e*P	**P**	**21 02 14.0**	**-0.5**
DMN	**Daman**	**45.02**	**304**	*e*P	**P**	**21 02 16.3**	**-0.2**
ULN	**Ulaanbaatar**	**45.47**	**342**	*e*P	**P**	**21 02 17.3**	**-2.4**
	3.0nm,0.8s						
SONM	**Songino Array**	**45.65**	**341**	P	**P**	**21 02 21.0**	**0.0**
SONM	**Songino Array**	**45.65**	**341**	P	**P**	**21 02 21.0**	**0.0**
	1.0nm,0.7s,baz=152,slow=6.7,SNR=4.8						
KOLN	**Koldanda**	**46.32**	**304**	*e*P	**P**	**21 02 26.5**	**-0.2**
	11nm,0.6s						
DANN	**Dangsing**	**46.40**	**305**	*e*P	**P**	**21 02 26.9**	**-0.5**
	17nm,0.7s						
PYUN	**Piuthan**	**46.94**	**304**	*e*P	**P**	**21 02 31.3**	**-0.3**
PETK	**Petropavlovsk-**	**54.07**	**23**	P	**P**	**21 03 25.4**	**+0.8**
PETK	**Petropavlovsk-**	**54.07**	**23**	P	**P**	**21 03 25.4**	**+0.8**
	3.4nm,0.8s,baz=213,slow=6.7,SNR=4.9						
MK31	**Makanchi Array**	**56.03**	**325**	*e*P	**P**	**21 03 37.7**	**-1.2**
MK31				*e*		21 03 45.4	
MKAR	**Makanchi Array**	**56.03**	**325**	P	**P**	**21 03 38.2**	**-0.7**
MKAR				PcP	**PcP**	**21 04 36.0**	**-0.5**
MKAR	**Makanchi Array**	**56.03**	**325**	P	**P**	**21 03 38.2**	**-0.7**
	1.8nm,0.5s,baz=120,slow=7.9,SNR=40						
MKAR				PcP	**PcP**	**21 04 36.0**	**-0.5**
	1.5nm,0.7s,baz=110,slow=4.1,SNR=4.9						
ZALV	**Zalesovo Beam**	**58.99**	**333**	P	**P**	**21 03 57.8**	**-1.7**
ZALV	**Zalesovo Beam**	**58.99**	**333**	P	**P**	**21 03 57.8**	**-1.7**
	0.9nm,0.6s,baz=121,slow=5.9,SNR=4.5						
KURBB	**Kurchatov Array**	**60.19**	**327**	P	**P**	**21 04 06.6**	**-1.2**
	0.2nm,0.7s,baz=124,slow=6.7,SNR=42						
KURK	**Kurchatov**	**60.19**	**327**	P	**P**	**21 04 06.6**	**-1.2**
KKAR	**Karatay Array**	**61.81**	**317**	*e*P	**P**	**21 04 17.1**	**-2.0**
	2.7nm,0.9s						
BVAR	**Borovoye Array**	**65.77**	**327**	P	**P**	**21 04 43.8**	**-1.1**

Azm101.0000°; Data Used: II IU IC G CN.
*ISCJB **14** 21:08:26.2±0.3,5°.39N±0'.02×126°.56E±0'.03,h74$^{km}_{\pm 2}$,3^{km}, mb5.2/160 Error ellipse: s-maj=4.5km s-min=2.6km az=164.4*
*NEIC **14** 21:08:26.7±0.7,5°.38N×126°.42E,h61$^{km}_{\pm 6}$,6^{km}, mb5.2/60, Error ellipse: s-maj=6.0km s-min=3.6km az=74.0*
ISC 14 21:08:27.5±0.3,5°.42N±0'.03×126°.50E±0'.04,h64$^{km}_{\pm 2}$,n719,σ1⅛62/827,mb5.3/169,34C-24D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
MATI	**Mati**	**1.54**	**351**	*eP*		**Pn**	**21 08 53.4**	**+0.6**
DAV	**Davao City (W)**	**1.88**	**331**	*ePn*		**Pn**	**21 08 57.1**	**-0.4**
DAV				*eSn*		**Sn**	**21 09 24.4**	**+4.2**
DAV	**Davao City (W)**	**1.88**	**331**	P		**Pn**	**21 08 56.3**	**-1.1**
DAV	**Davao City (W)**	**1.88**	**331**	Pn		**Pn**	**21 08 56.1**	**-1.3**
	199nm,0.3s,baz=321,slow=0.4,SNR=53							
DAV				Sn		**Sn**	**21 09 21.3**	**+1.1**
	838nm,0.3s,baz=317,slow=19,SNR=6.2							
DAV				LR		LR	21 09 56.0	
	comp=Z,19μm,18.3s,baz=181,slow=50							
DMPH	**Davao City--Mi**	**1.92**	**329**	*eP*		**Pn**	**21 08 57.5**	**-0.6**
DMPH				*eS*		**Sn**	**21 09 23.0**	**+1.8**
KCP	**Kidapawan**	**2.11**	**319**	*eP*		**Pn**	**21 09 01.4**	**+0.8**
KCP				*i* S		**Sn**	**21 09 29.9**	**+4.0**
BUKP	**Musuan**	**2.83**	**330**	*eP*		**Pn**	**21 09 10.7**	**+0.3**
CTBH	**Cotabato--PC H**	**2.87**	**309**	*i* P		**Pn**	**21 09 09.9**	**-0.9**
CGP	**Cagayan de Oro**	**3.51**	**329**	*eP*		**Pn**	**21 09 19.6**	**0.0**
CGP				*i* S		**Sn**	**21 10 03.7**	**+3.8**
BUTP	**Butuan**	**3.63**	**346**	*eP*		**Pn**	**21 09 23.0**	**+1.6**
GAMI	**Galela, Maluku**	**3.78**	**160**	P		**Pn**	**21 09 20.7**	**-2.8**
PAGZ	**Pagadian**	**3.92**	**308**	*eP*		**Pn**	**21 09 24.8**	**-0.6**
MNI	**Manado**	**4.28**	**203**	P		**Pn**	**21 09 28.2**	**-2.1**
DCPH	**Dipolog City**	**4.43**	**315**	*eP*		**Pn**	**21 09 33.0**	**+0.7**
ZMPH	**Zamboanga City**	**4.66**	**289**	*i* P		**Pn**	**21 09 34.0**	**-1.4**
ZMPH				*i* S		**Sn**	**21 10 26.4**	**-2.0**
TNTI	**Ternate**	**4.70**	**169**	P		**Pn**	**21 09 33.5**	**-2.5**
MSLP	**Maasin**	**4.96**	**341**	*eP*		**Pn**	**21 09 41.1**	**+1.6**
TBP	**Tagbilaran**	**4.98**	**329**	*eP*		**Pn**	**21 09 40.1**	**+0.3**
SNPH	**Sibulan**	**5.07**	**321**	*i* P		Pn	21 09 30.1	-11
KMSI	**Cibinong**	**5.43**	**208**	P		**Pn**	**21 09 47.1**	**+1.1**
	2μm,0.9s,26μm12nm							
LLP	**Lapu-Lapu**	**5.47**	**333**	*eP*		**Pn**	**21 09 45.6**	**-1.0**
LLP				*eS*		**Sn**	**21 10 52.5**	**+4.2**
OCLP	**Ormoc**	**5.90**	**342**	*eP*		**Pn**	**21 09 55.1**	**+2.8**
PLP	**Palo**	**5.90**	**345**	*eP*		**Pn**	**21 09 54.5**	**+2.0**
PLP				*eS*		**Sn**	**21 11 00.3**	**+1.6**
LBMI	**Labuha**	**6.10**	**171**	P		**Pn**	**21 09 53.4**	**-1.8**
	817nm,0.9s,12μm4.5nm							
GUIM	**Jordan**	**6.46**	**323**	*eP*		**Pn**	**21 10 02.3**	**+2.2**
MRSI	**Marisa**	**6.69**	**223**	P		**Pn**	**21 10 01.1**	**-2.2**
RCP	**Roxas**	**7.14**	**329**	*eP*		**Pn**	**21 10 09.9**	**+0.5**
LUWI	**Luwuk**	**7.42**	**210**	P		**Pn**	**21 10 14.5**	**+1.3**
LUWI	**Luwuk**	**7.42**	**210**	P		**Pn**	**21 10 14.5**	**+1.3**
	baz=7.7,SNR=55							
MYLDM	**Lahad Datu**	**7.97**	**269**	P		**Pn**	**21 10 23.1**	**+2.4**
MYLDM	**Lahad Datu**	**7.97**	**269**	P		**Pn**	**21 10 21.7**	**+1.0**
	385nm,1.4s,4μm							
OTRP	**Odiongan**	**8.19**	**328**	*eP*		**Pn**	**21 10 26.9**	**+3.1**
TSM	**Tawau**	**8.67**	**263**	P		**Pn**	**21 10 31.6**	**+1.3**
SJMP	**San Jose**	**8.78**	**323**	*eP*		**Pn**	**21 10 33.7**	**+1.8**
PPR	**Puerto Princes**	**8.83**	**300**	*i* P		Pn	21 10 37.5	+5.0
MSAI	**Masohi**	**9.04**	**164**	P		**Pn**	**21 10 35.7**	**+0.3**
	47nm,0.7s,1μm							
ENPP	**El Nido**	**9.05**	**310**	*eP*		**Pn**	**21 10 36.1**	**+0.5**
SDKM	**Sandakan**	**9.26**	**272**	P		**Pn**	**21 10 41.0**	**+2.5**
GQP	**Guinayangan**	**9.33**	**335**	*eP*		**Pn**	**21 10 41.9**	**+2.5**
LQP	**Lukban**	**9.92**	**331**	*eP*		Pn	21 10 56.1	+8.5
FAKI	**Fak Fak**	**10.08**	**145**	P		**Pn**	**21 10 48.2**	**-1.4**
FAKI	**Fak Fak**	**10.08**	**145**	P		**Pn**	**21 10 47.6**	**-2.0**
	baz=9.9,SNR=36							
TGY	**Tagaytay City**	**10.22**	**328**	Pn		**Pn**	**21 10 54.6**	**+3.1**
TGY	**Tagaytay City**	**10.22**	**328**	Pn		**Pn**	**21 10 54.6**	**+3.1**
	baz=112,slow=23,SNR=2.1							
KKM	**Kota Kinabalu**	**10.25**	**274**	*ePn*		**Pn**	**21 10 52.4**	**+0.3**
KKM	**Kota Kinabalu**	**10.25**	**274**	P		**Pn**	**21 10 52.8**	**+0.7**
	141nm,1.3s,2μm							
KKM	**Kota Kinabalu**	**10.25**	**274**	P		**Pn**	**21 10 53.1**	**+1.0**
	baz=11,SNR=3.8							
RKPI	**Ransiki, Papua**	**10.31**	**132**	P		**Pn**	**21 10 53.6**	**+0.9**
TTSI	**Tana Toraja**	**10.73**	**219**	P		**Pn**	**21 10 58.7**	**+0.1**
	271nm,1.0s,2μm							
SMKI	**Samarinda**	**10.96**	**238**	P		**Pn**	**21 10 59.0**	**-2.6**
BALP	**Baler**	**11.34**	**335**	*eP*		Pn	21 11 10.4	+3.6
BAKI	**Biak**	**11.63**	**124**	P		**Pn**	**21 11 12.1**	**+1.3**
BKB	**Balikpapan**	**11.66**	**236**	P		Pn	21 11 20.7	+9.5
SCZP	**Santa Cruz**	**12.15**	**328**	*eP*		**P**	**21 11 26.4**	**-1.9**
CAUP	**Cauayan**	**12.33**	**339**	*eP*		**Pn**	**21 11 22.4**	**+2.0**
KAPI	**Kappang**	**12.36**	**213**	Pn		**Pn**	**21 11 19.4**	**-1.4**
	648nm,0.9s,SNR=5.8							
KAPI	**Kappang**	**12.36**	**213**	*ePn*		**Pn**	**21 11 19.1**	**-1.7**
KAPI	**Kappang**	**12.36**	**213**	P		**Pn**	**21 11 19.6**	**-1.2**
	127nm,0.9s,2μm							
KAPI	**Kappang**	**12.36**	**213**	Pn		**Pn**	**21 11 19.0**	**-1.8**
	baz=22,slow=9.0,SNR=13							
KAPI				LR		LR	21 16 56.7	
	comp=Z,2μm,18.5s,baz=247,slow=42							
BKSI	**Bulukumba**	**12.43**	**211**	P		**Pn**	**21 11 24.0**	**+2.3**
	44nm,1.4s,796nm							
BOLP	**Bolinao**	**12.66**	**330**	*eP*		P	21 11 29.9	-4.1
MTKI	**Muara Teweh, K**	**13.20**	**242**	P		**P**	**21 11 42.4**	**+2.4**
APYP	**Conner**	**13.39**	**338**	*eP*		**P**	**21 11 39.6**	**-2.5**
KBKI	**Kotabaru**	**13.47**	**230**	P		**Pn**	**21 11 37.9**	**+2.0**
	193nm,0.9s,2μm							
SBUM	**Sibu**	**14.54**	**259**	P		**P**	**21 11 52.9**	**-2.1**
SBUM	**Sibu**	**14.54**	**259**	P		**P**	**21 11 52.9**	**-2.1**
	173nm,1.4s,3μm							
MMRI	**Maumere**	**14.60**	**197**	P		P	21 11 58.8	+3.3
BBKI	**Banjar Baru**	**14.61**	**233**	P		**P**	**21 11 54.9**	**-0.8**
	393nm,1.4s,5μm							
STKI	**Sintang**	**15.91**	**251**	P		**P**	**21 12 11.5**	**+1.3**
	107nm,1.4s,2μm							
WSI	**Waingapu**	**16.21**	**202**	P		**P**	**21 12 16.1**	**+2.7**
	389nm,0.7s,5μm							
JAY	**Jayapura**	**16.23**	**119**	P		**P**	**21 12 13.2**	**-0.5**
WBSI	**Waikabubak, Su**	**16.55**	**205**	P		**Pn**	**21 12 15.1**	**-0.6**
BASI	**Baing, Sumba**	**16.62**	**201**	P		**P**	**21 12 22.0**	**+4.1**
KSM	**Kuching**	**16.63**	**257**	*eP*		**P**	**21 12 18.8**	**+0.7**
	84nm,0.9s							
KSM	**Kuching**	**16.63**	**257**	P		**P**	**21 12 20.7**	**+2.6**
KSM	**Kuching**	**16.63**	**257**	P		**P**	**21 12 19.4**	**+1.3**
	120nm,1.2s,2μm							
KSM	**Kuching**	**16.63**	**257**	P		**P**	**21 12 18.0**	**-0.1**
	baz=17,SNR=16							
PBKI	**Pangkalan Bun**	**16.87**	**242**	P		**P**	**21 12 24.3**	**+3.6**
	189nm,0.8s							
KHKI	**Kahang-Kahang**	**17.48**	**218**	P		**P**	**21 12 29.4**	**+2.0**
	123nm,0.9s,1μm							
DNP	**Denpasar**	**17.97**	**219**	P		**Pn**	**21 12 37.3**	**+4.2**
	502nm,1.2s							
TWG	**Pinlang**	**18.08**	**344**	*ePn*		**P**	**21 12 33.9**	**-0.1**
	132nm,0.6s							
IGBI	**Denpasar**	**18.11**	**219**	P		**Pn**	**21 12 38.2**	**+3.3**
	62nm,0.9s							
BYJI	**Banyuwangi**	**18.17**	**222**	P		Pn	21 12 42.1	+6.6
BLJI	**Banyuglugur**	**18.35**	**225**	P		**Pn**	**21 12 41.3**	**+3.6**
	89nm,0.8s							
JAGI	**Jajag, Banyuwa**	**18.49**	**222**	P		**Pn**	**21 12 42.5**	**+3.1**
	167nm,1.1s,2μm							
JAGI	**Jajag, Banyuwa**	**18.49**	**222**	P		**Pn**	**21 12 39.9**	**+0.5**
	baz=19,SNR=12							
YULB	**Yu-li**	**18.56**	**345**	*eP*		**P**	**21 12 38.2**	**-1.1**
	16nm,0.6s							
YULB				*eS*		**S**	**21 16 10.3**	**+2.9**
TPUB	**Ta-pu**	**18.66**	**343**	*eP*		**P**	**21 12 39.6**	**-0.8**
	169nm,1.3s							
MTN	**Manton Dam**	**18.72**	**166**	P		**P**	**21 12 37.3**	**-3.8**
	baz=19,SNR=94							
GMJI	**Gumukmas**	**18.83**	**224**	P		**Pn**	**21 12 46.7**	**+3.2**
	127nm,0.9s							
KDU	**Kakadu**	**18.94**	**162**	P		**P**	**21 12 40.3**	**-3.3**
	baz=19,SNR=25							
SSLB	**Suanglung**	**19.03**	**344**	*ePn*		**P**	**21 12 44.9**	**+0.4**
	46nm,0.8s							
NACB	**Ninganchiao**	**19.23**	**346**	*ePn*		**Pn**	**21 12 48.0**	**-0.3**
	33nm,1.0s							
SJI	**Sawahan**	**19.66**	**228**	P		**Pn**	**21 12 55.3**	**+1.8**
	86nm,1.5s							
YHNB	**Yeheng**	**19.76**	**346**	*ePn*		**Pn**	**21 12 54.9**	**+0.4**
	53nm,0.8s							
PWJI	**Pagerwojo**	**19.83**	**228**	P		**Pn**	**21 12 56.9**	**+1.6**
	79nm,2.0s							
TATO	**Taipei**	**20.03**	**347**	*eP*		**P**	**21 12 55.9**	**+0.5**
SMRI	**Semarang**	**20.25**	**232**	P		Pn	21 13 02.0	+1.6
	251nm,1.7s							
SMRI	**Semarang**	**20.25**	**232**	P		Pn	21 12 59.1	-1.2
	baz=21,SNR=4.8							
TPI	**Tanjungpandan**	**20.50**	**247**	P		Pn	21 13 03.4	+0.1
	74nm,1.1s,660nm							
UGM	**Wanagama**	**20.72**	**230**	P		**P**	**21 13 03.8**	**+0.8**
	baz=21,SNR=6.5							
QZH	**Quanzhou**	**20.84**	**339**	P		**P**	**21 13 04.1**	**0.0**
QZH				S		**S**	**21 16 54.0**	**+0.9**
QZH				pmax		pmax		
	comp=Z,160nm,0.9s							
QZH				pmax		pmax		
	comp=Z,930nm,4.0s							
QZH				LR		LR		
	comp=N,4μm,24.7s							
QZH				LR		LR		
	comp=E,3μm,24.9s							
QZH				LR		LR		
	comp=Z,2μm,20.8s							
BJI	**Banjamegara**	**21.00**	**233**	P		**P**	**21 13 09.7**	**+3.7**
	comp=Z,148nm,1.7s,comp=Z,2μm							
KNRA	**Kununurra**	**21.08**	**174**	P		**P**	**21 13 04.6**	**-2.1**
	baz=21,SNR=142							
KNRA				S		**S**	**21 17 00.1**	**+2.2**
	baz=21,SNR=5.1							
QIZ	**Qiongzhong**	**21.13**	**311**	P		**P**	**21 13 06.6**	**-0.7**
QIZ				S		**S**	**21 16 58.0**	**-1.1**
QIZ				pmax		pmax		
	comp=Z,19nm,1.3s							
QIZ				pmax		pmax		
	comp=Z,210nm,4.2s							
QIZ				LR		LR		
	comp=N,830nm,18.5s							
QIZ				LR		LR		
	comp=Z,2μm,20.9s							
QIZ	**Qiongzhong**	**21.13**	**311**	*eP*		**P**	**21 13 06.2**	**-1.1**
	comp=Z,107nm,1.2s							
JOW	**Kunigami**	**21.36**	**4**	*eP*		**P**	**21 13 12.0**	**+2.4**
	comp=Z,30nm,0.8s							
GZH	**Guangzhou**	**21.67**	**325**	P		**P**	**21 13 15.6**	**+2.6**
GZH				S		**S**	**21 17 13.8**	**+4.2**
GZH				LR		LR		
	comp=Z,2μm,17.7s							
PPBI	**Pangkal Pinang**	**21.69**	**250**	P		**P**	**21 13 13.2**	**-0.1**
	comp=Z,97nm,1.1s,comp=Z,1μm							
LEM	**Lembang**	**22.43**	**237**	P		**P**	**21 13 23.6**	**+2.2**
	comp=Z,117nm,0.8s							
LEM	**Lembang**	**22.43**	**237**	P		**P**	**21 13 23.6**	**+2.2**
	baz=23,SNR=4.6							
CISI	**Cisompet, Garu**	**22.66**	**236**	P		**P**	**21 13 25.5**	**+1.7**
	comp=Z,110nm,1.2s							
CISI	**Cisompet, Garu**	**22.66**	**236**	P		**P**	**21 13 26.7**	**+2.9**
	baz=23,SNR=4.1							
UBPT	**Khong Chiam**	**22.86**	**297**	P		**P**	**21 13 24.7**	**-1.1**
	comp=Z,97nm,1.1s							
MYKOM	**Kota Tinggi**	**22.89**	**262**	P		**P**	**21 13 28.4**	**+2.3**
MYKOM	**Kota Tinggi**	**22.89**	**262**	P		**P**	**21 13 26.8**	**+0.7**
	comp=Z,192nm,1.2s,comp=Z,2μm							
DBJI	**Dramaga**	**23.02**	**239**	P		**P**	**21 13 31.0**	**+3.5**
	comp=Z,95nm,1.9s,comp=Z,3μm							
BTDF	**Bukit Timah Da**	**23.04**	**261**	P		**P**	**21 13 28.4**	**+0.8**
	baz=23,SNR=8.0							
BTDF				P		**P**	**21 13 28.4**	**+0.8**
	baz=23,SNR=8.0							
KTGM	**Kuala Trenggan**	**23.26**	**271**	P		**P**	**21 13 30.5**	**+0.7**
SBJI	**Serang**	**23.34**	**241**	P		**P**	**21 13 33.3**	**+2.8**
	comp=Z,152nm,1.0s,comp=Z,4μm							
KGM	**Kluang**	**23.37**	**263**	P		**P**	**21 13 33.0**	**+2.1**
FITZ	**Fitzroy Crossi**	**23.39**	**182**	P		**P**	**21 13 28.8**	**-2.1**
FITZ				ScP		**ScP**	**21 20 50.6**	**+1.9**
FITZ	**Fitzroy Crossi**	**23.39**	**182**	P		**P**	**21 13 28.8**	**-2.1**
	comp=Z,52nm,0.8s,baz=19,slow=8.6,SNR=105							
FITZ				ScP		**ScP**	**21 20 50.6**	**+1.9**
	comp=Z,5.8nm,0.8s,baz=90,slow=2.0,SNR=4.0							
FITZ	**Fitzroy Crossi**	**23.39**	**182**	P		**P**	**21 13 28.7**	**-2.1**
	baz=24,SNR=36							
KASI	**Kota Agung**	**24.51**	**244**	P		**P**	**21 13 44.5**	**+3.3**
	comp=Z,88nm,1.0s							
LWLI	**Liwa**	**24.69**	**246**	P		**P**	**21 13 43.9**	**+0.9**
	comp=Z,290nm,1.0s,comp=Z,2μm							
FRIM	**Kepong**	**24.89**	**266**	P		**P**	**21 13 45.6**	**+0.9**
CHBT	**CHBT**	**24.93**	**289**	P		**P**	**21 13 45.6**	**+0.6**
	comp=Z,136nm,1.3s,comp=Z,9μm							
PMG	**Port Moresby**	**25.32**	**125**	P		**P**	**21 13 47.4**	**-1.1**
PMG				PcP		**PcP**	**21 17 23.2**	**+3.0**
PMG	**Port Moresby**	**25.32**	**125**	P		**P**	**21 13 47.4**	**-1.1**
	comp=Z,14nm,0.7s,baz=128,slow=9.2,SNR=4.4							
PMG				PcP		**PcP**	**21 17 23.2**	**+3.0**
	comp=Z,7.5nm,0.8s,baz=45,slow=5.7,SNR=2.4							
PMG				LR		LR	21 24 35.2	
	comp=Z,503nm,20.6s,baz=334,slow=38							
COEN	**Coen**	**25.39**	**139**	*eP*		**P**	**21 13 47.7**	**-1.4**
	comp=Z,3μm,2.2s							
COEN	**Coen**	**25.39**	**139**	P		**P**	**21 13 47.6**	**-1.5**
	baz=25,SNR=34							
IPM	**Ipoh**	**25.39**	**269**	*eP*		**P**	**21 13 48.0**	**-1.2**
	comp=Z,317nm,1.8s							
IPM	**Ipoh**	**25.39**	**269**	P		**P**	**21 13 50.3**	**+1.1**
IPM	**Ipoh**	**25.39**	**269**	P		**P**	**21 13 49.7**	**+0.4**
	comp=Z,86nm,1.2s,comp=Z,916nm							
MNAI	**Manna**	**25.44**	**248**	P		P	21 13 56.4	+6.7
KSI	**Kapahiang**	**25.52**	**250**	P		**P**	**21 13 53.1**	**+2.6**
	comp=Z,429nm,1.0s,comp=Z,5μm							
KULM	**Kulim**	**25.73**	**271**	*eP*		**P**	**21 13 51.6**	**-0.7**
	comp=Z,73nm,1.1s							
KULM	**Kulim**	**25.73**	**271**	P		**P**	**21 13 52.3**	**-0.1**
KULM	**Kulim**	**25.73**	**271**	P		**P**	**21 13 53.4**	**+1.1**
	comp=Z,72nm,1.5s,comp=Z,943nm							
BKNI	**Bangkinang**	**25.92**	**260**	P		**P**	**21 13 56.0**	**+2.0**
	comp=Z,233nm,1.1s,comp=Z,2μm							
BKNI	**Bangkinang**	**25.92**	**260**	P		**P**	**21 13 58.0**	**+4.0**
	baz=26,SNR=3.2							
SSE	**Sheshan**	**26.02**	**350**	P		**P**	**21 13 54.1**	**-0.6**
SSE				pP		**pP**	**21 14 08.9**	**-1.3**
SSE				S		**S**	**21 18 23.3**	**+2.2**
SSE				pmax		pmax		
	comp=Z,44nm,1.0s							
SSE				pmax		pmax		
	comp=Z,210nm,7.5s							
SSE				LR		LR		
	comp=N,450nm,19.7s							
SSE				LR		LR		
	comp=E,300nm,19.7s							
SSE				LR		LR		
	comp=Z,610nm,18.3s							
WRAB	**Tennant Creek**	**26.35**	**163**	P		**P**	**21 13 55.7**	**-2.0**
	comp=Z,776nm,1.1s,SNR=29							
WRAB	**Tennant Creek**	**26.35**	**163**	*eP*		**P**	**21 13 55.8**	**-2.0**
WRAB				pmax		pmax		
	comp=Z,314nm,1.4s							
WRAB	**Tennant Creek**	**26.35**	**163**	*eP*		**P**	**21 13 55.8**	**-2.0**
	comp=Z,314nm,1.4s							
WRA	**Warramunga Arr**	**26.36**	**163**	P		**P**	**21 13 55.8**	**-2.1**
WRA				ScP		**ScP**	**21 20 60.0**	**+2.9**
WRA	**Warramunga Arr**	**26.36**	**163**	P		**P**	**21 13 55.8**	**-2.1**
	comp=Z,87nm,0.9s,baz=342,slow=10,SNR=86							
WRA				ScP		**ScP**	**21 20 60.0**	**+2.9**
	comp=Z,3.0nm,0.8s,baz=342,slow=3.0,SNR=4.7							
PPI	**Padang Panjang**	**26.71**	**258**	P		**P**	**21 14 01.8**	**+0.7**
	comp=Z,106nm,1.0s,comp=Z,1μm							
PPI	**Padang Panjang**	**26.71**	**258**	P		**P**	**21 14 02.3**	**+1.2**
	baz=27,SNR=6.4							
MBWA	**Marble Bar**	**27.24**	**194**	*eP*		**P**	**21 14 03.9**	**-1.8**
	comp=Z,55nm,0.9s							
MNSI	**Mandailing Nat**	**27.26**	**261**	P		**P**	**21 14 09.0**	**+2.9**
	comp=Z,53nm,0.9s,comp=Z,1μm							
PBKT	**Sadao Pong**	**27.36**	**296**	P		**P**	**21 14 06.4**	**-0.5**
	comp=Z,35nm,0.8s							
NJ2	**Nanjing**	**27.44**	**346**	*eP*		**P**	**21 14 08.6**	**+1.1**
NJ2				pP		**pP**	**21 14 23.3**	**+0.3**
NJ2				sP		**sP**	**21 14 31.0**	**+0.4**
NJ2				S		**S**	**21 18 47.5**	**+4.0**
NJ2				sS		**sS**	**21 19 14.0**	**+3.9**
NJ2				pmax		pmax		
	comp=Z,30nm,1.0s							
NJ2				pmax		pmax		
	comp=Z,260nm,8.3s							
NJ2				LR		LR		
	comp=N,520nm,20.4s							
NJ2				LR		LR		
	comp=E,900nm,25.3s							
NJ2				LR		LR		
	comp=Z,730nm,20.6s							
WHN	**Wuhan**	**27.48**	**337**	⇑P		**P**	**21 14 08.6**	**+0.7**
WHN				S		S	21 18 51.9	+7.7
WHN				LR		LR		
	comp=N,2μm,22.8s							
WHN				LR		LR		
	comp=E,3μm,18.6s							
WHN				LR		LR		
	comp=Z,3μm,19.7s							
JNU	**Nakatsue**	**27.86**	**8**	*eP*		**P**	**21 14 11.6**	**+0.3**
JNU	**Nakatsue**	**27.86**	**8**	P		**P**	**21 14 11.2**	**0.0**
	comp=Z,26nm,0.9s,baz=168,slow=4.7,SNR=8.0							
GYA	**Guiyang**	**28.22**	**320**	P		**P**	**21 14 15.0**	**+0.3**
GYA				pP		**pP**	**21 14 32.4**	**+2.2**
GYA				sP		**sP**	**21 14 40.5**	**+2.7**
GYA				PP		**PnPn**	**21 15 07.9**	**+1.8**
GYA				PcP		**PcP**	**21 17 26.5**	**-0.5**
GYA				S		**S**	**21 18 55.0**	**-1.2**
GYA				ScS		**ScS**	**21 24 52.0**	**-3.8**
GYA				pmax		pmax		
	comp=Z,20nm,0.7s							
GYA				pmax		pmax		
	comp=Z,130nm,4.8s							
GYA				LR		LR		
	comp=N,1μm,15.9s							
GYA				LR		LR		
	comp=E,1μm,16.0s							
GYA				LR		LR		
	comp=Z,1μm,15.5s							
KCSI	**Kotacane, Aceh**	**28.70**	**267**	P		**P**	**21 14 17.3**	**-1.6**
	comp=Z,72nm,1.0s,comp=Z,758nm							
QIS	**Mount Isa**	**28.85**	**154**	P		**P**	**21 14 18.9**	**-1.2**
	baz=29,SNR=51							
MTSU	**Mount Surprise**	**29.27**	**143**	P		**P**	**21 14 23.1**	**-0.8**
	baz=29,SNR=23							
ENH	**Enshi**	**29.46**	**329**	*eP*		**P**	**21 14 24.0**	**-1.5**
	comp=Z,79nm,1.2s							
ENH				*ePcP*		**PcP**	**21 17 30.7**	**+0.7**
ASAR	**Alice Springs**	**29.80**	**166**	P		**P**	**21 14 26.7**	**-1.9**
ASAR				PcP		**PcP**	**21 17 30.9**	**-0.1**
ASAR				ScP		**ScP**	**21 21 09.3**	**+1.7**
ASAR	**Alice Springs**	**29.80**	**166**	P		**P**	**21 14 26.7**	**-1.9**
	comp=Z,17nm,0.7s,baz=343,slow=7.0,SNR=78							
ASAR				PcP		**PcP**	**21 17 30.9**	**-0.1**
	comp=Z,7.0nm,0.8s,baz=5.8,slow=3.1,SNR=4.3							
ASAR				ScP		**ScP**	**21 21 09.3**	**+1.7**
	comp=Z,6.9nm,1.0s,baz=347,slow=3.4,SNR=7.3							
CM31	**Chiang Mai Arr**	**29.85**	**298**	*eP*		**P**	**21 14 28.0**	**-1.1**
	comp=Z,17nm,0.9s							
CMAR	**Chiang Mai Arr**	**29.85**	**298**	P		**P**	**21 14 28.1**	**-1.0**
CMAR				PcP		**PcP**	**21 17 31.9**	**+0.8**
CMAR				ScP		**ScP**	**21 21 09.7**	**+1.8**
CMAR	**Chiang Mai Arr**	**29.85**	**298**	P		**P**	**21 14 28.1**	**-1.0**
	comp=Z,4.7nm,0.8s,baz=92,slow=7.0,SNR=19							
CMAR				PcP		**PcP**	**21 17 31.9**	**+0.8**
	comp=Z,4.4nm,0.9s,baz=80,slow=0.9,SNR=6.6							
CMAR				ScP		**ScP**	**21 21 09.7**	**+1.8**
	comp=Z,3.3nm,0.9s,baz=133,slow=1.5,SNR=15							
CMAR				LR		LR	21 26 57.0	
	comp=Z,1μm,18.3s,baz=122,slow=38							
CMMT	**Chiang Mai**	**29.98**	**299**	P		**P**	**21 14 30.0**	**-0.2**
	comp=Z,19nm,1.0s,comp=Z,513nm							
CHTO	**Chiang Mai**	**29.98**	**299**	*eP*		**P**	**21 14 28.5**	**-1.8**
CHTO				*e*			21 17 31.3	
CHTO				pmax		pmax		
	comp=Z,17nm,0.9s							
CHTO	**Chiang Mai**	**29.98**	**299**	*eP*		**P**	**21 14 28.5**	**-1.8**
	comp=Z,16nm,0.9s							
CHTO				*ePcP*		**PcP**	**21 17 31.3**	**-0.2**
CHTO	**Chiang Mai**	**29.98**	**299**	P		**P**	**21 14 29.4**	**-0.9**
	comp=Z,20nm,1.0s							
KMI	**Kunming**	**30.05**	**313**	⇓P		**P**	**21 14 31.8**	**+0.8**
KMI				pP		**pP**	**21 14 48.4**	**+1.8**
KMI				sP		**sP**	**21 14 56.1**	**+1.9**
KMI				PP		**PnPn**	**21 15 33.0**	**+2.7**
KMI				S		**S**	**21 19 25.3**	**+0.2**
KMI				sS		**sS**	**21 19 52.9**	**+1.2**
KMI				pmax		pmax		
	comp=Z,21nm,0.9s							
KMI				pmax		pmax		
	comp=Z,130nm,4.0s							
KMI				LR		LR		
	comp=N,790nm

comp=Z,120nm,1.1s
BJI LR LR
comp=N,470nm,19.9s
BJI LR LR
comp=E,180nm,20.3s
BJI LR LR
comp=Z,330nm,20.8s
MORW Morawa 35.73 196 P **P** **21 15 18.5 -1.7**
baz=36,SNR=14
FORT Forrest 36.02 178 *e*P **P** **21 15 21.2 -1.5**
comp=Z,120nm,0.7s
FORT Forrest 36.02 178 P **P** **21 15 21.2 -1.5**
baz=36,SNR=25
QLP Quilpie 36.16 152 P **P** **21 15 22.5 -1.4**
baz=36,SNR=16
HNR Honiara 36.45 114 LR LR 21 28 42.9
comp=Z,783nm,21.7s,baz=109,slow=33
KMBL Kambalda 36.84 187 P **P** **21 15 28.2 -1.5**
baz=37,SNR=33
LZH Lanzhou 36.94 329 ⇑P **P** **21 15 30.8 +0.1**
LZH pP **pP** **21 15 46.0 -0.6**
LZH sP **sP** **21 15 53.1 -1.0**
LZH PP **PnPn** **21 16 59.0 +2.2**
LZH S **S** **21 21 11.8 +0.3**
LZH ScP **ScP** **21 21 31.0 -1.5**
LZH ScS ScS 21 25 31.5 -8.5
LZH pmax pmax
comp=Z,150nm,1.2s
LZH pmax pmax
comp=Z,220nm,5.2s
LZH LR LR
comp=N,990nm,13.0s
LZH LR LR
comp=E,880nm,12.7s
LZH LR LR
comp=Z,2µm,17.0s
HHC Hu-ho-hao-te 37.73 341 *e*P **P** **21 15 37.8 +0.5**
HHC pP **pP** **21 15 53.1 -0.1**
HHC sP **sP** **21 16 00.3 -0.4**
HHC PP **PnPn** **21 16 07.9 +1.7**
HHC S **S** **21 21 24.0 +0.8**
HHC ScS **ScS** **21 25 42.3 -1.9**
HHC pmax pmax
comp=Z,84nm,0.9s
HHC pmax pmax
comp=Z,640nm,4.0s
HHC LR LR
comp=N,680nm,16.4s
HHC LR LR
comp=E,430nm,14.0s
HHC LR LR
comp=Z,670nm,14.6s
KLBR Kellerberrin 37.74 192 P **P** **21 15 35.8 -1.5**
baz=38,SNR=16
CN2 Changchun 38.24 359 *e*P **P** **21 15 41.4 +0.1**
CN2 *ep*P **pP** **21 15 56.5 -0.8**
CN2 *es*P **sP** **21 16 04.0 -0.7**
CN2 *e*S **S** **21 21 30.9 +0.4**
CN2 pmax pmax
comp=Z,10.0nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,16.0s
CN2 LR LR
comp=E,300nm,16.0s
CN2 LR LR
comp=Z,400nm,19.0s
RMQ Roma 38.36 147 P **P** **21 15 41.5 -1.1**
baz=38,SNR=18
RMQ S S 21 21 42.2 +9.4
baz=38,SNR=9.3
EIDS Eidsvold 38.83 143 *e*P **P** **21 15 45.1 -1.4**
comp=Z,106nm,1.1s
EIDS Eidsvold 38.83 143 P **P** **21 15 45.3 -1.2**
baz=39,SNR=6.0
USRK Ussuriysk Arra 38.92 6 P **P** **21 15 47.9 +0.8**
comp=Z,16nm,0.9s,baz=189,slow=7.8,SNR=17
USRK PcP **PcP** **21 17 57.0 +0.3**
comp=Z,3.2nm,0.5s,baz=158,slow=1.9,SNR=6.7
USRK ScP **S** **21 21 42.5 +1.6**
comp=Z,4.2nm,1.1s,baz=116,slow=4.4,SNR=5.5
USRK LR LR 21 31 24.4
comp=Z,237nm,21.4s,baz=308,slow=35
BBOO Buckleboo 39.09 167 *e*P **P** **21 15 48.0 -0.5**
comp=Z,2µm,1.3s
BBOO Buckleboo 39.09 167 P **P** **21 15 48.1 -0.5**
baz=39,SNR=21
MDJ Mudanjiang 39.13 4 P **P** **21 15 50.0 +1.2**
MDJ pP **pP** **21 16 04.9 +0.1**
MDJ sP **sP** **21 16 12.3 0.0**
MDJ S **S** **21 21 47.3 +3.3**
MDJ pmax pmax
comp=Z,69nm,1.1s
MDJ pmax pmax
comp=Z,65nm,4.8s
MDJ LR LR
comp=N,230nm,21.9s
MDJ LR LR
comp=E,150nm,15.0s
MDJ LR LR
comp=Z,330nm,20.4s
MDJ Mudanjiang 39.13 4 *e*P **P** **21 15 48.7 -0.1**
comp=Z,73nm,1.0s
MDJ *e*PcP **PcP** **21 17 57.2 -0.2**
NWAO Narrogin (SRO) 39.14 192 *e*P **P** **21 15 47.7 -1.3**
comp=Z,38nm,0.7s
NWAO Narrogin (SRO) 39.14 192 P **P** **21 15 47.9 -1.1**
comp=Z,40nm,0.6s,baz=22,slow=7.9,SNR=45
STKA Stephens Creek 39.78 160 *e*P **P** **21 15 53.4 -1.0**
STKA Stephens Creek 39.78 160 P **P** **21 15 53.2 -1.2**
comp=Z,31nm,0.6s,baz=335,slow=9.2,SNR=61
STKA LR LR 21 34 12.4
comp=Z,47nm,20.1s,baz=339,slow=39
STKA Stephens Creek 39.78 160 P **P** **21 15 53.1 -1.2**
baz=40,SNR=54
ASAJ Asahikawa 41.06 18 *e*P **P** **21 16 05.8 +1.1**
ASAJ Asahikawa 41.06 18 P **P** **21 16 05.0 +0.2**
comp=Z,21nm,0.8s,baz=224,slow=18,SNR=15
ASAJ LR LR 21 32 45.8
comp=Z,578nm,19.5s,baz=212,slow=36
CMSA Cobar Meteorol 41.06 155 P **P** **21 16 04.0 -0.9**
baz=41,SNR=28
LSA Lhasa 41.17 310 P **P** **21 16 06.4 -0.1**
LSA S S 21 22 08.8 -7.0
LSA LR LR
comp=N,170nm,21.2s
LSA LR LR
comp=E,480nm,24.5s
LSA LR LR
comp=Z,450nm,22.8s
LSA Lhasa 41.17 310 *e*P **P** **21 16 06.3 -0.2**
LSA *e* 21 18 03.5
LSA pmax pmax
comp=Z,14nm,0.7s
LSA Lhasa 41.17 310 *e*P **P** **21 16 06.3 -0.2**
comp=Z,14nm,0.7s
LSA *e*PcP **PcP** **21 18 03.5 -1.4**
LSA *e*ScP **ScP** **21 21 48.4 -1.0**
GTA Gaotai 41.54 328 *e*P **P** **21 16 08.4 -0.6**
GTA pP **pP** **21 16 24.0 -1.1**
GTA sP **sP** **21 16 30.8 -1.7**
GTA S **S** **21 22 20.6 +0.2**
GTA pmax pmax
comp=Z,18nm,1.1s
GTA pmax pmax
comp=Z,81nm,6.9s
GTA LR LR
comp=N,430nm,22.3s
GTA LR LR
comp=E,380nm,24.2s
GTA LR LR
comp=Z,810nm,21.9s
YUK Yuzh-Kuril'sk 42.06 21 P P 21 16 09.4 -3.5
YUK *i* S **S** **21 22 23.6 -4.0**
YUK *e*SS **SS** **21 25 32.6 -4.5**
YUK MLR MLR
comp=Z,317nm,20.0s
TAPN Taplejung 42.85 305 *e*P **P** **21 16 19.5 -0.5**
comp=Z,29nm,0.4s
ODAN Odare 42.92 304 *e*P **P** **21 16 19.8 -0.7**
comp=Z,95nm,0.8s
ARMA Armidale 43.00 147 *e*P **P** **21 16 20.5 -0.4**
comp=Z,60nm,1.0s
ARMA Armidale 43.00 147 P **P** **21 16 20.6 -0.4**
baz=43,SNR=23

HABR Khabarovsk 43.52 8 *e*P **P** **21 16 22.8 -1.8**
HABR *e**SP sP 21 16 40.1 -8.2
HABR *e* 21 18 09.8
HABR *e*S **S** **21 22 46.1 -2.7**
HABR *e**SS sS 21 23 06.7 -10
HABR *e*SS **SS** **21 25 58.6 -6.8**
HABR *e* 21 26 16.3
HABR pmax pmax
comp=Z,96nm,1.5s
HABR pmax pmax
comp=N,22nm,1.1s
HABR pmax pmax
comp=E,57nm,1.5s
HABR MLR MLR
comp=Z,293nm,20.0s
RAMN Ramite 43.61 304 *e*P **P** **21 16 25.6 -0.5**
comp=Z,72nm,0.7s
YSS Yuzh-Sakhalins 43.69 16 *e*P **P** **21 16 26.0 -0.1**
YSS *e* 21 16 45.0
YSS pmax pmax
comp=Z,30nm,1.0s
KLR Kul'dur 43.88 5 *e*P P 21 16 24.3 -3.3
KLR *e* 21 26 09.5
KLR pmax pmax
comp=Z,47nm,1.2s
HIA Hailar 44.07 354 *e*P **P** **21 16 29.7 +0.5**
comp=Z,54nm,1.0s
HIA *e*PP **PP** **21 18 13.1 +0.2**
GUN Gumba 44.56 305 *e*P **P** **21 16 33.1 -0.7**
comp=Z,129nm,0.7s
PKI Pulchoki 44.82 304 *e*P **P** **21 16 34.6 -1.3**
PKIN Phulchoki 44.83 304 *e*P **P** **21 16 35.4 -0.5**
comp=Z,30nm,0.9s
MGCD Mangrove Creek 44.95 150 P **P** **21 16 36.9 +0.5**
baz=45,SNR=4.8
KKN Kakani 45.01 304 *e*P **P** **21 16 36.2 -1.0**
comp=Z,40nm,0.9s
DMN Daman 45.09 304 *e*P **P** **21 16 36.5 -1.4**
comp=Z,48nm,0.8s
ULN Ulaanbaatar 45.45 342 *e*P **P** **21 16 40.2 -0.1**
comp=Z,38nm,0.9s
ULN *e*PcP **PcP** **21 18 18.2 -0.3**
ULN Ulaanbaatar 45.45 342 P **P** **21 16 40.0 -0.3**
comp=Z,37nm,1.0s,comp=Z,380nm
SONM Songino Array 45.63 341 P **P** **21 16 41.8 0.0**
SONM PcP **PcP** **21 18 19.7 +0.6**
SONM ScP **ScP** **21 22 08.8 +2.2**
SONM Songino Array 45.63 341 P **P** **21 16 41.8 0.0**
comp=Z,9.8nm,0.6s,baz=163,slow=8.4,SNR=31
SONM PcP **PcP** **21 18 19.7 +0.6**
comp=Z,9.4nm,0.7s,baz=158,slow=3.3,SNR=6.2
SONM ScP **ScP** **21 22 08.8 +2.2**
comp=Z,1.4nm,0.9s,baz=176,slow=3.3,SNR=3.5
SONM LR LR 21 36 58.4
comp=Z,343nm,21.4s,baz=262,slow=38
CAN Canberra 45.72 154 *e*P **P** **21 16 42.4 -0.1**
CAN pmax pmax
comp=Z,55nm,1.0s
CAN Canberra 45.72 154 *e*P **P** **21 16 42.4 -0.1**
comp=Z,55nm,1.0s
CNB Canberra Magne 45.88 154 P **P** **21 16 44.2 +0.5**
baz=46,SNR=7.8
TOO Toolangi 46.29 159 P **P** **21 16 47.0 +0.1**
baz=46,SNR=7.3
KOLN Koldanda 46.39 304 *e*P **P** **21 16 47.3 -0.8**
comp=Z,129nm,0.6s
DANN Dangsing 46.46 304 *e*P **P** **21 16 47.8 -1.0**
comp=Z,110nm,0.7s
PYUN Piuthan 47.01 304 *e*P **P** **21 16 52.3 -0.7**
comp=Z,131nm,0.7s
CIT Chita 47.67 349 *e*P **P** **21 16 58.4 +0.9**
CIT *e* 21 17 08.6
DZM Mont Dzumac 47.70 126 *e*P **P** **21 16 57.5 -0.8**
comp=Z,120nm,1.1s
DZM *e*S S 21 24 05.8 +16
comp=Z,336nm,29.4s
DZM *e*LR LR 21 31 48.2
comp=Z,2µm,31.4s
DZM Mont Dzumac 47.70 126 *e*P **P** **21 16 56.5 -1.7**
DZM Mont Dzumac 47.70 126 *e*P **P** **21 16 57.3 -1.0**
comp=Z,49nm,0.9s
HYB Hyderabad 48.35 288 *i* P **P** **21 17 02.0 -1.3**
ZAK Zakamensk 48.86 340 *e*P **P** **21 17 06.2 -0.6**
ZAK *e* 21 18 31.7
ZAK pmax pmax
comp=Z,6.0nm,1.4s
TLY Talaya 49.86 342 *e*P **P** **21 17 14.8 +0.5**
TLY *e* 21 27 03.6
TLY pmax pmax
comp=Z,29nm,1.1s
TLY MLR MLR
comp=Z,171nm,19.5s
TLY Talaya 49.86 342 P **P** **21 17 15.0 +0.7**
comp=Z,103nm,0.6s,SNR=6.2
IRK Irkutsk 50.16 342 *e*P P 21 17 11.9 -4.6
IRK pmax pmax
comp=Z,60nm,1.1s
MOY Mondy 50.73 340 *e*P **P** **21 17 21.2 +0.3**
WMQ Urumqi 51.22 324 P **P** **21 17 24.3 -0.4**
WMQ pP **pP** **21 17 40.0 -1.3**
WMQ sP **sP** **21 17 47.0 -1.6**
WMQ PcP **PcP** **21 18 40.0 +0.7**
WMQ *e*S **S** **21 24 37.0 -1.6**
WMQ pmax pmax
comp=Z,16nm,1.1s
WMQ pmax pmax
comp=Z,140nm,3.6s
WMQ LR LR
comp=N,1µm,18.0s
WMQ LR LR
comp=E,540nm,15.0s
WMQ LR LR
comp=Z,860nm,27.0s
CLNS Chul'man 51.29 359 *e*P **P** **21 17 26.1 +1.1**
CLNS *e* 21 18 36.6
CLNS *e* 21 19 26.8
CLNS *e*PPP PPP 21 20 19.4
CLNS *e*S S 21 24 30.4 -8.7
CLNS pmax pmax
comp=E,5.0nm,0.8s
CLNS pmax pmax
comp=N,26nm,1.1s
CLNS pmax pmax
comp=Z,31nm,1.0s
CLNS pmax pmax
comp=Z,14nm,1.4s
CLNS pmax pmax
comp=N,13nm,1.1s
CLNS pmax pmax
comp=E,12nm,1.8s
CLNS smax smax
comp=E,318nm,17.2s
CLNS smax smax
comp=N,361nm,18.2s
CLNS MLR MLR
comp=Z,135nm,19.0s
CLNS MLR MLR
comp=N,86nm,19.0s
CLNS MLR MLR
comp=E,165nm,24.0s
NFK Norfolk Island 52.54 133 P **P** **21 17 35.3 +0.7**
baz=52,SNR=3.5
SMLA Simla 52.80 305 *i* P **P** **21 17 35.9 -0.7**
HVS Khovu-Aksy 53.12 335 *c i* P **P** **21 17 38.1 -0.6**
HVS pmax pmax
comp=Z,99nm,0.9s
PEA0B Petropavlovsk- 53.97 23 *e*P **P** **21 17 43.9 -0.8**
PEA0B *e*PcP **PcP** **21 18 49.7 +0.4**
PETK Petropavlovsk- 53.97 23 P **P** **21 17 45.6 +0.9**
PETK 21 18 49.2
PETK Petropavlovsk- 53.97 23 P **P** **21 17 45.6 +0.9**
PETK PcP **PcP** **21 18 49.2 -0.1**
PETK ScP **ScP** **21 22 44.6 +2.6**
PETK Petropavlovsk- 53.97 23 P **P** **21 17 45.6 +0.9**
comp=Z,30nm,0.8s,baz=196,slow=6.3,SNR=29
PETK PcP **PcP** **21 18 49.2 -0.1**
comp=Z,8.3nm,0.7s,baz=213,slow=3.9,SNR=2.7
PETK ScP **ScP** **21 22 44.6 +2.6**
comp=Z,2.1nm,0.8s,baz=212,slow=5.3,SNR=3.5
PETK LR LR 21 41 07.3
comp=Z,205nm,20.2s,baz=208,slow=36
PET Petropavlovsk 54.27 23 *e*P **P** **21 17 47.1 +0.2**
PET *e*S S 21 25 30.4 +11
PET pmax pmax
comp=Z,200nm,3.7s
PET pmax pmax
comp=Z,100nm,5.7s
PET pmax pmax
comp=Z,54nm,1.2s
PET MLR MLR
comp=Z,300nm,19.0s
PET MLR MLR
comp=Z,300nm,20.0s
MSVF Nonsavu 55.83 116 P **P** **21 17 59.6 +0.7**
comp=Z,422nm,1.0s,SNR=5.6
MSVF Nonsavu 55.83 116 *e*P **P** **21 17 59.0 +0.1**
MSVF Nonsavu 55.83 116 *e*P **P** **21 17 59.0 +0.1**
MK31 Makanchi Array 56.05 325 *e*P **P** **21 17 58.7 -1.2**
MK31 *e* 21 18 57.6
MK31 Makanchi Array 56.05 325 *e*P **P** **21 17 58.7 -1.2**
MK31 *e*PcP **PcP** **21 18 57.6 +0.1**
MKAR Makanchi Array 56.05 325 *e*P **P** **21 17 59.0 -1.0**
MKAR 21 18 58.1
MKAR Makanchi Array 56.05 325 *e*P **P** **21 17 59.0 -1.0**
MKAR PcP **PcP** **21 18 58.1 +0.6**
MKAR ScP **ScP** **21 22 52.8 +1.5**
MKAR Makanchi Array 56.05 325 P **P** **21 17 58.8 -1.2**
comp=Z,17nm,0.7s,baz=125,slow=8.0,SNR=169
MKAR PcP **PcP** **21 18 58.1 +0.6**
comp=Z,12nm,0.7s,baz=126,slow=3.6,SNR=6.4
MKAR ScP **ScP** **21 22 52.8 +1.5**
comp=Z,4.4nm,0.8s,baz=120,slow=4.8,SNR=7.1
MKAR LR LR 21 42 45.6
comp=Z,698nm,21.7s,baz=119,slow=37
YAK Yakutsk 56.54 2 *d i* P **P** **21 18 03.1 0.0**
YAK *e**PP pP 21 18 14.6 -5.3
YAK *e* 21 18 59.1
YAK *e* 21 20 05.6
YAK *e*PPP PPP 21 21 26.6
YAK *e*S **S** **21 25 53.5 +3.9**
YAK *e**SS sS 21 26 09.8 -8.3
YAK *e* 21 27 46.7
YAK *e*SS **SS** **21 29 38.3 +0.4**
YAK pmax pmax
comp=Z,155nm,0.9s
YAK pmax pmax
comp=N,53nm,1.1s
YAK pmax pmax
comp=E,10.0nm,1.0s
YAK pmax pmax
comp=Z,14nm,0.9s
YAK pmax pmax
comp=E,8.0nm,1.3s
YAK pmax pmax
comp=N,6.0nm,1.1s
YAK smax smax
comp=E,129nm,2.2s
YAK smax smax
comp=N,149nm,2.0s
YAK MLR MLR
comp=Z,213nm,22.0s
YAK MLR MLR
comp=N,184nm,20.0s
YAK MLR MLR
comp=E,157nm,24.0s
KSH Kashi 56.70 314 P **P** **21 18 04.8 0.0**
KSH *ep*P **pP** **21 18 20.5 -1.2**
KSH *es*P **sP** **21 18 27.8 -1.1**
KSH *e*PcP **PcP** **21 19 00.3 0.0**
KSH *e*PP **PP** **21 20 12.8 +1.3**
KSH S **S** **21 25 49.0 -3.9**
KSH pmax pmax
comp=Z,66nm,1.1s
KSH LR LR
comp=N,220nm,5.1s
KSH LR LR
comp=E,200nm,6.8s
KSH LR LR
comp=Z,960nm,15.7s
ULHL Ulahol 57.62 317 P **P** **21 18 10.6 -0.8**
SNR=30
KZA Kyzart 58.23 317 P **P** **21 18 15.3 -0.5**
SNR=46
TKM2 Tokmak 2 58.34 318 *i* P **P** **21 18 14.8 -1.6**
TKM2 pmax pmax
comp=Z,31nm,1.4s
TKM2 Tokmak 2 58.34 318 P **P** **21 18 15.4 -1.0**
SNR=24
KBK Karagaybulak 58.66 317 P **P** **21 18 17.9 -0.7**
SNR=27
UCH Uchtor 58.79 317 P **P** **21 18 19.7 -0.2**
SNR=8.2
CHMS Chumysh 58.94 318 P **P** **21 18 19.1 -1.3**
SNR=19
AAK Ala-Archa 58.96 317 P **P** **21 18 19.0 -1.7**
comp=Z,90nm,1.2s,SNR=5.2
AAK Ala-Archa 58.96 317 P **P** **21 18 19.9 -0.8**
AAK 21 19 09.7
AAK Ala-Archa 58.96 317 P **P** **21 18 19.9 -0.8**
AAK PcP **PcP** **21 19 09.7 +0.4**
AAK Ala-Archa 58.96 317 P **P** **21 18 19.1 -1.6**
SNR=8.6
AAK Ala-Archa 58.96 317 P **P** **21 18 19.9 -0.8**
comp=Z,13nm,1.0s,baz=159,slow=8.0,SNR=16
AAK PcP **PcP** **21 19 09.7 +0.4**
comp=Z,10nm,0.8s,baz=108,slow=3.2,SNR=4.4
ZALV Zalesovo Beam 58.99 333 P **P** **21 18 18.6 -1.8**
ZALV 21 19 07.5
ZALV Zalesovo Beam 58.99 333 P **P** **21 18 18.6 -1.8**
ZALV PcP **PcP** **21 19 07.5 -1.4**
ZALV Zalesovo Beam 58.99 333 P **P** **21 18 18.6 -1.8**
comp=Z,16nm,0.8s,baz=126,slow=7.4,SNR=28
ZALV PcP **PcP** **21 19 07.5 -1.4**
comp=Z,9.4nm,0.7s,baz=132,slow=4.4,SNR=3.9
ZALV LR LR 21 46 13.7
comp=Z,264nm,18.8s,baz=249,slow=38
USP Ospenovka 59.21 318 P **P** **21 18 21.1 -1.2**
SNR=42
AML Almayashu 59.31 316 P **P** **21 18 22.7 -0.7**
SNR=37
EKS2 Erkin-Say 59.46 317 *e*P **P** **21 18 23.4 -0.6**
EKS2 pmax pmax
comp=Z,32nm,1.0s
EKS2 Erkin-Say 59.46 317 *e*P **P** **21 18 23.4 -0.6**
comp=Z,32nm,1.0s
EKS2 Erkin-Say 59.46 317 P **P** **21 18 23.5 -0.6**
SNR=41
KURK Kurchatov 60.20 327 *c e*P **P** **21 18 27.5 -1.3**
KURK pmax pmax
comp=Z,53nm,1.2s
KURK Kurchatov 60.20 327 *e*P **P** **21 18 27.6 -1.3**
comp=Z,40nm,0.8s
KURK Kurchatov 60.20 327 P **P** **21 18 27.1 -1.7**
comp=Z,283nm,0.6s,SNR=51
NVS Novosibirsk 60.27 333 *e*P **P** **21 18 27.3 -1.9**
NVS *e*S **S** **21 26 38.3 -0.2**
NVS *e* 21 28 08.2
NVS pmax pmax
comp=Z,29nm,1.0s
NVS pmax pmax
comp=N,12nm,0.9s
NVS pmax pmax
comp=E,13nm,0.9s
NVS smax smax
comp=N,16nm,2.1s
NVS smax smax
comp=E,21nm,2.0s
KBL Kabul 60.32 307 *e*P **P** **21 18 28.9 -1.4**
KBL pmax pmax
comp=Z,15nm,0.8s
KBL Kabul 60.32 307 *e*P **P** **21 18 28.9 -1.4**
comp=Z,15nm,0.8s
KBL Kabul 60.32 307 P **P** **21 18 28.9 -1.4**
baz=61,SNR=6.1
RPZ Rata Peaks 63.27 145 *e*P **P** **21 18 49.3 -0.3**
RPZ Rata Peaks 63.27 145 P **P** **21 18 48.5 -1.1**
comp=Z,46nm,0.9s,baz=164,slow=2.8,SNR=7.9
RPZ LR LR 21 44 42.8
comp=Z,684nm,18.4s,baz=286,slow=34
URZ Urewera 63.93 137 P **P** **21 18 53.0 -1.0**
URZ Urewera 63.93 137 P **P** **21 18 53.0 -1.0**
comp=Z,9.2nm,0.5s,baz=86,slow=13,SNR=3.3
URZ LR LR 21 45 02.6
comp=Z,663nm,21.6s,baz=307,slow=34
AFI Afiamalu 64.18 108 LR LR 21 42 16.9
comp=Z,445nm,19.4s,baz=284,slow=32
BVAR Borovoye Array 65.79 327 P **P** **21 19 03.9 -2.0**
BVAR Borovoye Array 65.79 327 P **P** **21 19 03.9 -2.0**
BVAR Borovoye Array 65.79 327 P **P** **21 19 03.9 -2.0**
comp=Z,22nm,1.0s,baz=122,slow=7.9,SNR=78
BRVK Borovoye 65.86 327 *c i* P **P** **21 19 05.2 -1.1**
BRVK pmax pmax

comp=Z,53nm,1.4s
BRVK Borovoye 65.86 327 *e*P **P** 21 19 05.0 -1.3
comp=Z,36nm,0.8s
BRVK Borovoye 65.86 327 P **P** 21 19 05.7 -0.6
comp=Z,287nm,0.9s,SNR=16
TIXI Tiksi 66.17 1⇑*i*P **P** 21 19 07.7 -0.2
TIXI pmax pmax
comp=Z,37nm,1.3s
ATKA Atka Island 67.25 35 *e*P **P** 21 19 14.1 -1.1
comp=Z,101nm,1.0s
BILL Bilibino 67.99 15*e i*P **P** 21 19 19.7 +0.1
BILL *e* 21 19 34.1
BILL 21 19 45.0
BILL 21 21 56.0
BILL pmax pmax
comp=Z,84μm,1.2s
AB31 Akbulak array 70.71 320 *i* P **P** 21 19 35.0 -1.7
AB31 pmax pmax
comp=Z,12nm,0.6s
ABKAR Akbulak array 70.71 320 *e*P **P** 21 19 35.0 -1.7
UNV Unalaska Valle 72.18 35 *e*P **P** 21 19 44.5 -1.0
comp=Z,48nm,0.9s
AKTO Aktyubinsk 72.20 321 P **P** 21 19 44.2 -1.6
AKTO Aktyubinsk 72.20 321 P **P** 21 19 44.1 -1.6
AKTO Aktyubinsk 72.20 321 P **P** 21 19 44.1 -1.6
comp=Z,7.1nm,0.4s,baz=99,slow=7.7,SNR=68
CASY Casey 72.46 187 *e*P **P** 21 19 46.6 -0.2
comp=Z,21nm,0.8s
DRV Dumont d'Urvil 72.57 174 S **S** 21 29 11.0 +4.2
DRV SS SS 21 33 38.0 -9.2
DRV L L 21 37 00.0
DRV R 21 43 00.0
AKUT Akutan 72.67 35 *e*P **P** 21 19 48.3 -0.1
comp=Z,48nm,0.8s
ARU Arti 73.39 328*c i*P **P** 21 19 50.7 -1.9
ARU 21 22 32.2
ARU PPP PPP 21 24 19.6
ARU S **S** 21 29 13.5 -3.3
ARU SS **SS** 21 33 55.5 -4.5
ARU SSS SSS 21 37 15.8
ARU pmax pmax
comp=Z,19nm,0.6s
ARU Arti 73.39 328 P **P** 21 19 50.0 -2.6
comp=Z,172nm,0.7s,SNR=18
MIR Mirnyy 75.74 193⇑*i*P **P** 21 20 07.0 +1.1
MIR *i* 21 20 21.0
MIR pmax pmax
comp=Z,42nm,1.0s
SDPT Sand Point 75.94 34 *e*P **P** 21 20 07.0 -0.3
RAR Rarotonga 76.91 113 LR LR 21 46 47.8
comp=Z,297nm,21.9s,baz=270,slow=30
UMR Umm Al-Rimmam 77.60 299 *e*P **P** 21 20 16.0 -1.3
RDF Al-Radifah 77.73 298 *e*P **P** 21 20 16.6 -1.5
RDF AMb AMB 21 20 22.4
comp=Z,22nm,0.7s
MIB Mutribah 77.93 299 *e*P **P** 21 20 17.1 -2.0
MIB AMb AMB 21 20 22.8
comp=Z,32nm,0.8s
NAY Al-Naaiem 78.01 299 *e*P **P** 21 20 17.0 -2.6
NAY AMb AMB 21 20 26.3
comp=Z,13nm,0.7s
MAK Makhachkala 78.27 313 *e*P **P** 21 20 18.5 -2.2
MAK *e*S **S** 21 30 07.6 -3.4
MAK pmax pmax
comp=Z,80nm,1.5s
MAK MLR MLR
comp=Z,271nm,17.0s
IBDR Badra 79.17 303 *e*P **pP** 21 20 40.6 -2.9
IBDR *e*SKS x 21 30 47.1
IBDR *e*S x 21 30 55.0
RAYN Ar Rayn 79.61 293 P **P** 21 20 26.5 -2.1
comp=Z,57nm,0.8s,SNR=7.2
OHAK Old Harbor 80.17 33 *e*P **P** 21 20 31.3 +0.5
comp=Z,24nm,0.8s
GNI Garni 80.23 310 P **P** 21 20 32.2 +0.4
comp=Z,1.6nm,1.4s
GNI Garni 80.23 310 P **P** 21 20 32.2 +0.4
comp=Z,2.6nm,0.8s,baz=199,slow=16,SNR=2.7
GNI LR LR 22 01 59.8
comp=Z,92nm,20.1s,baz=239,slow=40
BHD Baghdad 80.47 303 *e*P **pP** 21 20 51.0 +0.4
BHD *e*SKS x 21 31 03.3
BHD *e*S x 21 31 14.7
KDAK Kodiak Island 80.59 32 P **P** 21 20 33.0 0.0
comp=Z,255nm,0.7s,SNR=13
KDAK Kodiak Island 80.59 32 *e*P **P** 21 20 33.7 +0.7
comp=Z,24nm,0.8s
RSO Redoubt South 80.75 30 *e*P **P** 21 20 33.7 -0.4
SPU Mount Spurr 81.15 29 *e*P **P** 21 20 36.0 0.0
PPLA Purkeypile 81.24 27 *e*P **P** 21 20 36.1 -0.5
comp=Z,47nm,1.3s
KBZ Khabaz 81.66 313 LR LR 22 00 12.1
comp=Z,156nm,21.7s,baz=284,slow=38
ABPO Ambohimpanom 81.66 250 *e*P **P** 21 20 37.5 -2.2
ABPO pmax pmax
comp=Z,16nm,0.9s
ABPO Ambohimpanom 81.66 250 *e*P **P** 21 20 37.5 -2.2
comp=Z,16nm,0.9s
KIV Kislovodsk 81.81 313 *e*P **P** 21 20 42.7 +2.7
KIV pmax pmax
comp=Z,19nm,0.9s
KIV MLR MLR
comp=Z,174nm,19.0s
TRF Thorofare Moun 82.14 27 *e*P **P** 21 20 40.0 -1.3
comp=Z,43nm,1.1s
COLD Coldfoot 82.44 23 *e*P **P** 21 20 44.1 +1.5
comp=Z,21nm,0.8s
PMR Palmer 82.58 29 *e*P **P** 21 20 42.8 -0.7
PMR pmax pmax
comp=Z,54nm,1.2s
PMR Palmer 82.58 29 *e*P **P** 21 20 42.8 -0.7
comp=Z,54nm,1.2s
ATD Arta Tunnel 82.73 281 LR LR 21 53 08.9
comp=Z,94nm,21.9s,baz=82,slow=32
MCK McKinley 82.76 27 *e*P **P** 21 20 44.2 -0.2
MCK pmax pmax
comp=Z,103nm,1.2s
MCK McKinley 82.76 27 *e*P **P** 21 20 44.2 -0.2
comp=Z,104nm,1.2s
SML Sawmill 82.97 28 *e*P **P** 21 20 45.7 +0.2
SML pmax pmax
comp=Z,21nm,1.2s
SML Sawmill 82.97 28 *e*P **P** 21 20 45.7 +0.2
comp=Z,21nm,1.2s
COLA College 83.28 25 *e*P **P** 21 20 47.3 +0.3
COLA pmax pmax
comp=Z,14nm,0.9s
COLA College 83.28 25 *e*P **P** 21 20 47.3 +0.3
comp=Z,14nm,0.9s
ILAR Eielson Array 83.69 25 P **P** 21 20 48.1 -1.0
ILAR Eielson Array 83.69 25 P **P** 21 20 48.1 -1.0
comp=Z,17nm,1.0s,baz=254,slow=4.5,SNR=73
ILAR LR LR 21 56 08.4
comp=Z,212nm,21.2s,baz=264,slow=34
KLMR Klimovskoe 83.83 331 *e*P **P** 21 20 48.7 -1.2
KLMR pmax pmax
comp=Z,93nm,1.4s
KLMR MLR MLR
comp=Z,466nm,21.0s
VORD Divnogorie 84.07 321 *e*P **P** 21 20 49.2 -2.1
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VORD pmax pmax
comp=Z,8.0nm,0.6s
VSR Storozhevoye 84.14 321 *e*P **P** 21 20 51.1 -0.6
VSR pmax pmax
comp=Z,8.0nm,0.5s
VSR pmax pmax
comp=N,3.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.0s
DIV Divide 84.19 29 *e*P **P** 21 20 51.1 -0.7
comp=E,120nm,1.2s
PAX Paxson 84.31 27 *e*P **P** 21 20 52.2 -0.3
PAX pmax pmax
comp=Z,48nm,1.3s
PAX Paxson 84.31 27 *e*P **P** 21 20 52.2 -0.3
comp=Z,48nm,1.3s
MOS Moscow 84.92 325 *e*P P 21 20 50.7 -4.8
MOS *e**PP **PcP** 21 21 02.9 +4.1
MOS *e*S S 21 31 10.9 -8.2
MOS pmax pmax
comp=Z,51nm,1.0s
DOT Dot Lake 84.93 27 *e*P **P** 21 20 54.9 -0.7
comp=Z,29nm,1.1s
VNDA Vanda 85.12 173 *e*P **P** 21 20 55.7 -0.3
VNDA Vanda 85.12 173 P **P** 21 20 55.2 -0.9
comp=Z,8.9nm,0.9s,baz=316,slow=6.4,SNR=20
MALT Malatya 85.16 308⇓P P 21 21 05.1 +7.8
MALT Malatya 85.16 308 *e*P **P** 21 20 57.3 0.0
comp=Z,8.2nm,0.8s
MAW Mawson 85.25 200 *e*P **P** 21 20 56.2 -0.6
MAW Mawson 85.25 200 P **P** 21 20 56.1 -0.7
comp=Z,7.3nm,0.9s,baz=26,slow=5.0,SNR=11
MAW Mawson 85.25 200 P **P** 21 20 56.6 -0.2
baz=86,SNR=7.8
OBN Obninsk 85.56 325⇓*i*P **P** 21 20 55.5 -3.2
OBN *e* 21 21 05.9
OBN *e* 21 21 08.4
OBN *e*S **S** 21 31 26.0 +0.7
OBN *e* 21 32 19.1
OBN pmax pmax
comp=Z,60nm,1.1s
OBN MLR MLR
comp=Z,200nm,17.0s
OBN Obninsk 85.56 325 P **P** 21 20 57.3 -1.4
comp=Z,334nm,0.6s,SNR=6.4
ANN Anapa 85.56 314 *e*P **P** 21 20 56.9 -2.0
ANN *e**PP pP 21 21 10.7 -6.1
ANN *e*S S 21 31 14.8 -11
ANN pmax pmax
comp=Z,92nm,1.0s
ANN MLR MLR
comp=Z,219nm,21.0s
SBA Scott Base 86.03 172 *e*P **P** 21 21 00.5 -0.1
SBA pmax pmax
comp=Z,48nm,1.6s
SBA Scott Base 86.03 172 *e*P **P** 21 21 00.5 -0.1
comp=Z,48nm,1.6s
EGAK Eagle 86.14 25 *e*P **P** 21 21 00.4 -1.1
APA Apatity 86.21 337⇑*i*P P 21 20 58.4 -3.3
APA *e*S S 21 31 24.0 -7.4
APA pmax pmax
comp=Z,26nm,1.0s
APA MLR MLR
comp=Z,600nm,22.0s
ROOS tl alroos 86.34 304 *e*P **P** 21 21 06.1 +2.9
ZALF Zalf 86.39 303 *e*P **P** 21 21 01.0 -2.4
DRWC Darouich 86.67 306 *e*P **P** 21 21 03.7 -1.0
ASF Jabal al Asfar 86.81 302 P **P** 21 21 06.1 +0.5
ASF Jabal al Asfar 86.81 302 P **P** 21 21 06.1 +0.5
comp=Z,7.0nm,0.8s,baz=117,slow=2.3,SNR=7.8
ASF LR LR 22 01 41.9
comp=Z,98nm,21.8s,baz=312,slow=37
SALA Sala 86.91 302 *e*P P 21 21 10.7 +4.5
WRDH Warideh 86.96 305 *e*P **P** 21 21 07.8 +1.6
TOTH TOTAH 87.11 303 *e*P P 21 21 10.2 +3.2
JOF Joensuu 87.58 333 *e*P **P** 21 21 07.5 -0.9
JOF pmax pmax
comp=Z,24nm,0.6s
JOF Joensuu 87.58 333 *ep* **P** 21 21 07.5 -0.9
comp=Z,24nm,0.6s
SIM Simferopol' 87.90 315 P **P** 21 21 09.8 -0.6
SIM pmax pmax
comp=Z,10.0nm,0.9s
SIM pmax pmax
comp=Z,100nm,13.0s
SIM MLR MLR
comp=Z,260nm,21.6s
MMAI Mount Meron Ar 88.00 303 P **P** 21 21 11.8 +0.6
MMAI Mount Meron Ar 88.00 303 P **P** 21 21 11.8 +0.6
comp=Z,2.2nm,0.6s,baz=86,slow=6.1,SNR=6.7
KEV Kevo 88.23 340 *e*P **P** 21 21 11.2 -0.2
KEV Kevo 88.23 340 *ep* **P** 21 21 11.2 -0.2
EIL Elat 88.69 300 P **P** 21 21 14.6 +0.1
EIL Elat 88.69 300 P **P** 21 21 14.6 +0.1
comp=Z,3.0nm,0.7s,baz=68,slow=21,SNR=2.1
EIL LR LR 22 03 02.2
comp=Z,106nm,21.9s,baz=81,slow=37
BR131 Keskin Array S 88.77 310 *e*P **P** 21 21 11.7 -3.1
comp=Z,5.9nm,0.8s
BRTR Keskin Array B 88.77 310 P **P** 21 21 13.3 -1.5
BRTR Keskin Array B 88.77 310 P **P** 21 21 13.3 -1.5
comp=Z,5.5nm,0.9s,baz=134,slow=4.6,SNR=6.8
BRTR LR LR 22 09 59.3
comp=Z,94nm,20.0s,baz=266,slow=42
SPA0 Spitsbergen Ar 88.79 349 *e*P **P** 21 21 13.8 -0.2
SPITS Spitsbergen Ar 88.79 349 P **P** 21 21 13.2 -0.7
SPITS Spitsbergen Ar 88.79 349 P **P** 21 21 13.2 -0.7
comp=Z,18nm,0.7s,baz=88,slow=8.4,SNR=34
ARCES ARCESS Array B 88.79 340 P **P** 21 21 13.4 -0.6
ARCES ARCESS Array B 88.79 340 P **P** 21 21 13.4 -0.6
comp=Z,15nm,0.5s,baz=83,slow=6.3,SNR=122
ARCES LR LR 22 05 57.3
comp=Z,216nm,18.2s,baz=80,slow=39
ARE0 ARCESS Array S 88.79 340 *e*P **P** 21 21 13.5 -0.5
ARE0 ARCESS Array S 88.79 340 *e*P **P** 21 21 13.6 -0.5
KBS Kingsbay 89.31 350 *e*P **P** 21 21 15.7 -0.6
KBS AMB AMB 21 21 17.4
comp=Z,14nm,1.2s
KBS Kingsbay 89.31 350 *e*P **P** 21 21 15.5 -0.8
KBS Kingsbay 89.31 350 *e*P **P** 21 21 15.5 -0.8
KMBO Kilima Mbogo 89.35 269 P **P** 21 21 17.0 -1.2
KMBO Kilima Mbogo 89.35 269 P **P** 21 21 17.0 -1.2
comp=Z,0.6nm,0.3s,baz=232,slow=23,SNR=3.6
KMBO LR LR 21 57 09.8
comp=Z,149nm,21.2s,baz=274,slow=33
KTK1 Kautokeino 89.70 339 *e*P **P** 21 21 17.6 -0.7
KTK1 AMB AMB 21 21 19.3
comp=Z,229nm,1.0s
KAF Kangasniemi 90.00 332 *e*P **P** 21 21 19.2 -0.7
KAF Kangasniemi 90.00 332 *ep* **P** 21 21 19.2 -0.7
FINES FINESS Array B 90.24 332 P **P** 21 21 19.7 -1.3
FINES FINESS Array B 90.24 332 P **P** 21 21 19.7 -1.3
comp=Z,9.8nm,0.4s,baz=72,slow=6.2,SNR=68
FINES LR LR 22 05 19.4
comp=Z,312nm,19.3s,baz=336,slow=38
AKASG Malin Array Be 90.44 321 P **P** 21 21 20.0 -2.2
AKASG Malin Array Be 90.44 321 P **P** 21 21 20.0 -2.2
AKASG Malin Array Be 90.44 321 P **P** 21 21 20.0 -2.2
comp=Z,3.4nm,0.6s,baz=62,slow=5.4,SNR=7.3
AKASG LR LR 22 04 07.1
comp=Z,268nm,21.9s,baz=80,slow=37
AK01 Malin Array Si 90.45 321 *e*P **P** 21 21 20.8 -1.4
KIEV Kiev 90.45 321 *e*P **P** 21 21 19.7 -2.5
KIEV pmax pmax
comp=Z,8.0nm,0.9s
KIEV Kiev 90.45 321 *e*P **P** 21 21 19.7 -2.5
comp=Z,8.3nm,0.9s
AK02 Malin Array Si 90.46 321 *e*P P 21 21 19.0 -3.2
TRO Tromso 90.99 340 *e*P **P** 21 21 24.9 +0.6
TRO AMB AMB 21 21 25.6
comp=Z,46nm,1.4s
TLCR 91.59 315⇑*i*P **P** 21 21 28.6 +0.9
TLCR 91.59 315⇑*i*P **P** 21 21 28.5 +0.9
WRAK Wrangell Islan 91.66 33 *e*P **P** 21 21 28.0 +0.3
comp=Z,15nm,1.1s
TIRR Tirgusor 91.99 315⇑P **P** 21 21 31.5 +2.0
TIRR Tirgusor 91.99 315⇑*i*P **P** 21 21 31.5 +2.0
CFR Carcaliu 92.07 316⇓P **P** 21 21 32.6 +2.8
CFR Carcaliu 92.07 316⇓*i*P **P** 21 21 32.6 +2.8
STEI Steigen 92.84 339 *e*P **P** 21 21 31.5 -1.4
STEI AMB AMB 21 21 32.8
comp=Z,20nm,1.2s
TESR Tescani 92.85 317⇑*i*P **P** 21 21 32.1 -1.4
VRI Vrincioaia 92.92 316⇓P **P** 21 21 31.5 -2.3
VRI Vrincioaia 92.92 316⇓*i*P **P** 21 21 31.5 -2.3
PLOR Plostina 92.97 316⇓P P 21 21 38.2 +4.1
PLOR Plostina 92.97 316⇓*i*P P 21 21 38.2 +4.1
SUW Suwalki 93.42 325 *e*P **P** 21 21 34.6 -1.2
SUW pmax pmax
comp=Z,20nm,0.3s
SUW Suwalki 93.42 325 *e*P **P** 21 21 34.6 -1.2
comp=Z,20nm,0.3s
SUW Suwalki 93.42 325 *e*P **P** 21 21 34.3 -1.5
SULR 93.47 315⇓*i*P **P** 21 21 36.3 0.0
MLR Muntele Rosu 93.53 316⇑*i*P **P** 21 21 35.7 -1.1
BURAR Bucovina Array 93.59 318⇑*i*P **P** 21 21 36.0 -1.0
BUR08 Bucovina Ar. S 93.60 318 *e*P **P** 21 21 36.2 -0.8
SYO Syowa Base 93.91 201⇑*e*P **P** 21 21 36.4 -1.3
SYO Syowa Base 93.91 201⇓*e*PcP **PcP** 21 21 40.0 +1.9
VOIR 94.16 316⇑P P 21 21 35.1 -4.5
VOIR 94.16 316⇑*i*P P 21 21 35.1 -4.5
ARR Arges 94.46 316⇑*i*P **P** 21 21 39.7 -1.3
KWP Kalwaria Pacla 94.76 321 *e*P **P** 21 21 41.1 -1.1
KWP pmax pmax
comp=Z,10.0nm,1.0s
KWP Kalwaria Pacla 94.76 321 *e*P **P** 21 21 41.1 -1.1
comp=Z,10nm,1.0s
KWP Kalwaria Pacla 94.76 321 *e*P **P** 21 21 41.3 -0.9
UZH Uzhgorod 95.27 320 *e*P **P** 21 21 43.3 -1.2
UZH *e* 21 21 51.9
QSPA South Pole Qui 95.31 180 P **P** 21 21 44.6 +0.2
QSPA South Pole Qui 95.31 180 P **P** 21 21 44.6 +0.2
comp=Z,10.0nm,0.9s,baz=315,slow=2.3,SNR=15
DRGR 95.44 318⇑P **P** 21 21 42.9 -2.5
DRGR 95.44 318⇑*i*P **P** 21 21 42.9 -2.5
DAG Danmarks Havn 95.56 352⇓*i*P **P** 21 21 44.2 -1.0
DAG pmax pmax
comp=Z,19nm,0.9s
DAG Danmarks Havn 95.56 352⇓*i*P **P** 21 21 44.2 -1.0
comp=Z,23nm,0.9s
CRVS Cervenica-Dubn 95.73 320 *e*P P 21 21 43.2 -3.4
CRVS Cervenica-Dubn 95.73 320 *e*P P 21 21 43.2 -3.4
STHS Stebnicka Huta 95.74 321 *e*P **P** 21 21 45.9 -0.8
STHS Stebnicka Huta 95.74 321 *e*P **P** 21 21 45.9 -0.8
OJC Ojcow 96.42 322 *e*P **P** 21 21 52.9 +3.2
OJC Ojcow 96.42 322 *e*P **P** 21 21 52.9 +3.2
HFS Hagfors 96.42 332 P **P** 21 21 47.9 -1.6
HFS Hagfors 96.42 332 P **P** 21 21 47.9 -1.6
comp=Z,11nm,0.8s,baz=97,slow=3.4,SNR=27
KECS Kecovo 96.47 320 *e*P **P** 21 21 52.7 +2.7
KECS Kecovo 96.47 320 *e*P **P** 21 21 52.7 +2.7
NB2 NORSAR Subarra 97.18 334 P **P** 21 21 50.8 -2.1
comp=Z,9.7nm,0.7s,baz=66,slow=4.6
NB2 NORSAR Subarra 97.18 334 P **P** 21 21 50.8 -2.1
baz=66,slow=4.6
NOA NORSAR Array B 97.18 334 P **P** 21 21 51.3 -1.7
NOA NORSAR Array B 97.18 334 P **P** 21 21 51.3 -1.7
comp=Z,9.0nm,0.7s,baz=66,slow=4.6,SNR=22
NOA LR LR 22 09 37.6
comp=Z,366nm,21.8s,baz=60,slow=38
NAO01 NORSAR Array S 97.41 334 *e*P **P** 21 21 51.7 -2.3
comp=Z,7.8nm,0.7s
YKA Yellowknife Ar 98.06 24 P **P** 21 21 56.3 -0.5
YKA PKiKP **PKiKP** 21 26 31.7 +2.1
YKA PKKPbc **PKKPbc** 21 38 28.2 -3.9
YKA Yellowknife Ar 98.06 24 P **P** 21 21 56.3 -0.5
comp=Z,3.0nm,0.9s,baz=297,slow=4.7,SNR=28
YKA PKiKP **PKiKP** 21 26 31.7 +2.1
comp=Z,0.5nm,0.6s,baz=310,slow=2.0,SNR=5.3
YKA PKKPbc **PKKPbc** 21 38 28.2 -3.9
comp=Z,0.7nm,0.7s,baz=119,slow=3.1,SNR=4.0
KSP Ksiaz 98.36 323 *e*P **P** 21 21 57.6 -0.8
KSP Ksiaz 98.36 323 *e*P **P** 21 21 57.8 -0.6
DPC Dobruska-Polom 98.51 323 *e*P Pdif 21 22 01.9 +2.7
DPC Dobruska-Polom 98.51 323 *e*PDIFF Pdif 21 22 01.9 +2.7
VRAC Vranov 98.68 321 P Pdif 21 21 59.9 0.0
VRAC Vranov 98.68 321 P Pdif 21 21 59.9 0.0
comp=Z,4.8nm,0.8s,baz=84,slow=7.8,SNR=6.5
TREC Trest 99.37 322 *e*P **Pdif** 21 22 06.5 +3.5
TREC MLR MLR
comp=Z,200nm,21.7s
TREC Trest 99.37 322 *e*PDIFF **Pdif** 21 22 06.5 +3.5
TREC AMS AMS 22 10 50.0
comp=Z,200nm,21.7s
PRU Pruhonice 99.71 323 *e*P **Pdif** 21 22 07.7 +3.2
PRU MLR MLR
comp=Z,200nm,16.9s
PRU Pruhonice 99.71 323 *e*PDIFF **Pdif** 21 22 07.7 +3.2
PRU AMS AMS 22 09 50.0
comp=Z,200nm,16.9s
BRG Berggiesshubel 99.75 324 *e*P **Pdif** 21 22 03.0 -1.7
comp=Z,5.4nm,1.0s
BRG Berggiesshubel 99.75 324 *e*P **Pdif** 21 22 03.0 -1.7
BRG pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 100.14 324 *e*P **Pdif** 21 22 04.0 -2.4
CLL *e*S Sdif 21 33 25.0 -11
CLL pmax pmax
comp=Z,4.0nm,1.3s
CLL MLR MLR
comp=Z,300nm,21.2s
CLL Collm 100.14 324 *e*Pdif **Pdif** 21 22 04.0 -2.4
comp=Z,4.0nm,1.3s
CLL *e*(Sdif) 21 33 25.0
CLL *e*SS SS 21 40 54.0 +23
CLL Lm MLR 22 10 00.0
comp=Z,300nm,21.2s
PERS Pernice 100.49 319 *i* P **Pdif** 21 22 13.0 +4.9
KHC Kasperske Hory 100.60 322 *e*P **Pdif** 21 22 11.6 +3.1
KHC MLR MLR
comp=Z,200nm,22.5s
KHC Kasperske Hory 100.60 322 *e*PDIFF **Pdif** 21 22 11.6 +3.1
KHC AMS AMS 22 11 20.0
comp=Z,200nm,22.5s
GERES GERESS Array B 100.62 322 P **Pdif** 21 22 07.9 -0.8
GERES PP **PP** 21 26 15.1 -1.0
GERES GERESS Array B 100.62 322 P **Pdif** 21 22 07.9 -0.8
comp=Z,2.5nm,0.9s,baz=69,slow=4.4,SNR=16
GERES PP **PP** 21 26 15.1 -1.0
comp=Z,0.8nm,0.9s,baz=60,slow=6.3,SNR=4.6
NKC Novy Kostel 100.87 323 AMS AMS 22 08 10.0
comp=Z,300nm,23.4s
JAVS Javornik 101.43 319 *i* P **Pdif** 21 22 22.3 +10
SUMG Summit 101.55 355 *i* P **Pdif** 21 22 13.7 +1.0
SUMG pmax pmax
comp=Z,4.0nm,1.0s
SUMG Summit 101.55 355 *i* P **Pdif** 21 22 13.7 +1.0
comp=Z,3.7nm,1.0s
GRF Grafenberg Arr 101.81 323 *e*Pdif **Pdif** 21 22 15.6 +1.7
GRF Grafenberg Arr 101.81 323 *e*P **Pdif** 21 22 15.6 +1.7
BOSA Boshof 102.44 242 PKKPbc PKKPbc 21 38 17.4 -1.4
BOSA Boshof 102.44 242 PKKPbc PKKPbc 21 38 17.4 -1.4
comp=Z,2.9nm,0.9s,baz=96,slow=18,SNR=4.5
NEW Newport 103.05 38 *e*Pdif **Pdif** 21 22 18.9 -0.6
comp=Z,4.3nm,1.1s
NEW Newport 103.05 38 P **Pdif** 21 22 19.5 +0.1
baz=103
C11A Tepee Creek (N 103.75 38 P **Pdif** 21 22 22.8 +0.2
baz=104
D12A Red Ives Fores 104.64 39 P **Pdif** 21 22 26.6 0.0
baz=105
E12A Beaver Dam Sad 104.77 39 P **Pdif** 21 22 27.1 -0.2
baz=105
NVAR Mina Array Bea 105.95 48 Pdif **Pdif** 21 22 33.3 +0.5
NVAR PKiKP **PKiKP** 21 26 46.1 +1.1
NVAR PKKPbc **PKKPbc** 21 38 10.1 +1.5
NVAR Mina Array Bea 105.95 48 Pdiff **Pdif** 21 22 33.3 +0.5
comp=Z,1.2nm,0.7s,baz=268,slow=5.4,SNR=9.8
NVAR PKiKP **PKiKP** 21 26 46.1 +1.1
comp=Z,0.5nm,0.7s,baz=327,slow=4.1,SNR=3.8
NVAR PKKPbc **PKKPbc** 21 38 10.1 +1.5
comp=Z,0.8nm,0.8s,baz=136,slow=3.5,SNR=5.3
LPG La Plagne 106.30 320 *e*PKiKP **PKiKP** 21 26 42.4 -3.1
comp=Z,7.7nm,1.1s
LPG La Plagne 106.30 320 *e*PKPdf **PKiKP** 21 26 42.4 -3.1
LPL La Plagne 106.31 321 *e*PKiKP **PKiKP** 21 26 42.3 -3.1
comp=Z,11nm,1.1s
LPL La Plagne 106.31 321 *e*PKPdf **PKiKP** 21 26 42.3 -3.1
EKA Eskdalemuir Ar 106.62 333 Pdif **Pdif** 21 22 35.0 -0.1
EKA Eskdalemuir Ar 106.62 333 Pdiff **Pdif** 21 22 35.0 -0.1
comp=Z,1.1nm,0.9s,baz=79,slow=4.4,SNR=4.1
FRF La Foret Royal 107.21 319 *e*PKiKP **PKiKP** 21 26 44.7 -2.1
comp=Z,19nm,1.5s
FRF La Foret Royal 107.21 319 *e*PKPdf **PKiKP** 21 26 44.7 -2.1
LMR La Mourre 107.39 319 *e*PKiKP **PKiKP** 21 26 44.7 -2.5
comp=Z,11nm,1.3s
LMR La Mourre 107.39 319 *e*PKPdf **PKiKP** 21 26 44.7 -2.5
SMF Signal de Mont 107.58 323 *e*PKiKP **PKiKP** 21 26 44.7 -2.8
SMF Signal de Mont 107.58 323 *e*PKPdf **PKiKP** 21 26 44.7 -2.8
SMRF Simiane la Rot 107.72 319 *e*PKiKP **PKiKP** 21 26 44.9 -2.9
comp=Z,25nm,1.6s
SMRF Simiane la Rot 107.72 319 *e*PKPdf **PKiKP** 21 26 44.9 -2.9
C21A Desert Coulee 109.20 35 P 21 26 50.8
baz=109
I20A Worland 110.57 39 P 21 26 53.8
baz=110
J20A Shoshoni 110.90 40 P 21 26 54.4
baz=111
E23A Ismay 110.94 36 P 21 26 54.7
baz=111
J22A Midwest 111.88 39 P 21 26 54.9
baz=112
N20A Spence Gulch, 112.01 42 P 21 26 56.4
baz=112
L21A Rawlins 112.04 41 P 21 26 56.4
baz=112
M21A Separation Pea 112.22 41 P 21 26 56.8
baz=112
K22A Casper 112.24 40 P 21 26 56.7
baz=112
S18A Hurst Farm, Bl 112.27 46 P 21 26 57.6

baz=112
O20A **White River Ci** 112.36 43 P 21 26 57.8
baz=112
N21A **Black Mountain** 112.54 42 P 21 26 58.0
baz=112
S20A **Disappointment** 113.36 45 P 21 27 00.1
baz=113
S21A **Coal Bank Pass** 113.83 45 P 21 27 01.4
baz=114
ISCO **Idaho Springs** 114.28 42 *e*PKIKP PKPdf 21 27 00.2 -0.5
ISCO **Idaho Springs** 114.28 42 *e*PKiKP PKPdf 21 27 00.2 -0.5
ISCO **Idaho Springs** 114.28 42 P PKPdf 21 27 01.5 +0.7
baz=114
R22A **Saguache, Gunn** 114.28 44 P PKPdf 21 27 01.9 +1.1
baz=114
W20A **Ramah** 114.48 48 P PKPdf 21 27 02.4 +1.2
baz=114
U21A **Nageezi** 114.50 46 P PKPdf 21 27 02.6 +1.4
baz=114
J28A **Allard Ranch,** 115.06 37 P **PKPdf** **21 27 01.9 +0.1**
baz=115
U22A **Llaves** 115.10 46 P **PKPdf** **21 27 02.9 +0.6**
baz=115
V22A **San Miguel Ran** 115.28 46 P **PKPdf** **21 27 03.8 +1.1**
baz=115
Z20A **Nine Sixteen R** 115.29 50 P **PKPdf** **21 27 04.0 +1.4**
baz=115
X21A **Alamocita Cree** 115.31 48 P **PKPdf** **21 27 03.7 +0.9**
baz=115
Q25A **Bedland, Calha** 115.64 42 P **PKPdf** **21 27 03.4 +0.1**
baz=116
P26A **Davis Ranch, A** 115.90 41 P **PKPdf** **21 27 04.2 +0.6**
baz=116
ESDC **Sonseca Array** 116.04 319 PKP **PKPdf** **21 27 05.8 +2.0**
ESDC **Sonseca Array** 116.04 319 PKP **PKPdf** **21 27 05.8 +2.0**
comp=Z,0.1nm,0.3s,baz=222,slow=2.0,SNR=4.2
T25A **Trinidad** 116.44 44 P **PKPdf** **21 27 05.3 +0.4**
baz=116
Z22A **Elephant Butte** 116.45 49 P **PKPdf** **21 27 05.7 +0.8**
baz=116
R26A **Arlington** 116.50 42 P **PKPdf** **21 27 05.5 +0.7**
baz=116
V24A **Rampart Ranch,** 116.54 46 P **PKPdf** **21 27 06.2 +1.1**
baz=116
W24A **Lazy 6 Ranch,** 116.69 46 P **PKPdf** **21 27 06.1 +0.7**
baz=117
Y23A **Lovelace Mesa,** 116.82 48 P **PKPdf** **21 27 06.2 +0.5**
baz=117
S26A **Kim** 116.84 43 P **PKPdf** **21 27 06.2 +0.7**
baz=117
R27A **Eads** 116.94 42 P **PKPdf** **21 27 06.0 +0.4**
baz=117
V25A **Rancho No Teng** 116.94 45 P **PKPdf** **21 27 06.7 +0.8**
baz=117
T26A **Comanche Natio** 116.98 43 P **PKPdf** **21 27 06.7 +0.9**
baz=117
Q28A **Sharon Springs** 117.16 41 P **PKPdf** **21 27 06.5 +0.5**
baz=117
EYMN **Ely** 117.26 28 *e*PKPdf **PKPdf** **21 27 05.0 -0.8**
Y24A **Capitan** 117.28 47 P **PKPdf** **21 27 07.4 +0.9**
baz=117
U26A **Atchley Ranch,** 117.28 44 P **PKPdf** **21 27 07.3 +0.8**
baz=117
W25A **X Bar L Ranch,** 117.36 46 P **PKPdf** **21 27 07.4 +0.8**
baz=117
ECSD **EROS Data Cent** 117.53 34 *e*PKPdf **PKPdf** **21 27 05.7 -0.8**
V26A **Tequesquite Ra** 117.55 45 P **PKPdf** **21 27 07.1 +0.2**
baz=118
R28A **Tribune** 117.56 41 P **PKPdf** **21 27 07.4 +0.6**
baz=118
Z24A **Sheeppen Canyo** 117.61 48 P **PKPdf** **21 27 08.2 +1.0**
baz=118
T27A **Campo** 117.64 43 P **PKPdf** **21 27 08.3 +1.2**
baz=118
Q29A **Oakley** 117.81 41 P **PKPdf** **21 27 07.6 +0.3**
baz=118
Y25A **Mesa, Roswell** 117.82 47 P **PKPdf** **21 27 08.3 +0.8**
baz=118
124A **Stringfield Ra** 117.83 49 P **PKPdf** **21 27 08.3 +0.6**
baz=118
U27A **Thompson Grove** 117.90 44 P **PKPdf** **21 27 08.0 +0.4**
baz=118
P30A **Selden** 117.91 40 P **PKPdf** **21 27 08.0 +0.6**
baz=118
T28A **Walsh** 118.02 43 P **PKPdf** **21 27 08.2 +0.5**
baz=118
Z25A **Roswell** 118.11 48 P **PKPdf** **21 27 08.9 +0.9**
baz=118
X26A **CR and CF Fran** 118.16 46 P **PKPdf** **21 27 08.9 +0.8**
baz=118
U28A **Mallet** 118.33 44 P **PKPdf** **21 27 08.9 +0.5**
baz=118
324A **Moseley Ranch,** 118.39 50 P **PKPdf** **21 27 09.5 +0.8**
baz=118
S29A **Ulysses** 118.42 42 P **PKPdf** **21 27 09.2 +0.7**
baz=118
W27A **Bowe Ranch, En** 118.43 45 P **PKPdf** **21 27 09.7 +1.1**
baz=118
125A **Gardner Draw,** 118.45 48 P **PKPdf** **21 27 09.4 +0.7**
baz=118
Y26A **Elida** 118.45 47 P **PKPdf** **21 27 09.4 +0.7**
baz=118
P31A **Stockton** 118.47 39 P **PKPdf** **21 27 08.3 -0.1**
baz=118
T29A **Hugoton** 118.55 42 P **PKPdf** **21 27 09.5 +0.8**
baz=118
225A **Deer Hill, Car** 118.58 49 P **PKPdf** **21 27 09.4 +0.4**
baz=119
325A **Bean Ranch, Si** 118.81 50 P **PKPdf** **21 27 09.9 +0.3**
baz=119
126A **Clayton Basin,** 118.93 48 P **PKPdf** **21 27 09.7 +0.1**
baz=119
SCHQ **Schefferville** 118.94 9 PKP **PKPdf** **21 27 09.5 +0.6**
SCHQ **Schefferville** 118.94 9 PKP **PKPdf** **21 27 09.5 +0.6**
comp=Z,2.2nm,0.5s,baz=339,slow=2.6,SNR=8.3
Y27A **Causey** 118.95 46 ⇓P **PKPdf** **21 27 09.8 +0.2**
baz=119,SNR=9.1
425A **Indio Mountain** 119.06 50 P **PKPdf** **21 27 10.2 +0.2**
baz=119
R31A **Burdett** 119.08 40 P **PKPdf** **21 27 09.4 -0.3**
baz=119
226B **Tecolote Peak,** 119.09 49 ⇑P **PKPdf** **21 27 10.2 +0.2**
baz=119,SNR=6.2
T30A **Plains** 119.12 42 P **PKPdf** **21 27 10.9 +1.1**
baz=119
MSTX **Muleshoe** 119.19 46 ⇓P **PKPdf** **21 27 10.2 +0.1**
baz=119,SNR=8.1
Z27A **Tatum** 119.19 47 ⇑P **PKPdf** **21 27 10.5 +0.3**
baz=119,SNR=14
X28A **Dimmitt** 119.32 45 P **PKPdf** **21 27 11.2 +0.9**
baz=119
U30A **WK&E Inc. Balk** 119.33 43 P **PKPdf** **21 27 10.8 +0.6**
baz=119
326A **Caldwell Ranch** 119.59 49 P **PKPdf** **21 27 11.1 +0.1**
baz=120
T31A **Randall Ranch,** 119.66 42 P **PKPdf** **21 27 11.2 +0.4**
baz=120
X29A **Tulia** 119.71 45 ⇑P **PKPdf** **21 27 11.6 +0.6**
baz=120,SNR=6.2
COWI **Conover** 119.71 28 *e*PKPdf **PKPdf** **21 27 10.1 -0.5**
Y29A **Porterfield Fa** 120.03 46 ⇓P **PKPdf** **21 27 12.3 +0.6**
baz=120,SNR=11
MDT **Midelt** 120.04 313 PKP **PKPdf** **21 27 11.8 0.0**
MDT **Midelt** 120.04 313 PKP **PKPdf** **21 27 11.8 0.0**
comp=Z,1.7nm,1.0s,baz=228,slow=4.9,SNR=4.2
128A **Castleberry Fa** 120.07 47 P **PKPdf** **21 27 11.8 0.0**
baz=120
526A **Mary Lane Ranc** 120.08 51 ⇑P **PKPdf** **21 27 12.6 +0.6**
baz=120,SNR=6.9
228A **UT Block 9, Go** 120.24 48 P **PKPdf** **21 27 12.2 +0.1**
baz=120
427A **Hayter Ranch,** 120.24 50 ⇑P **PKPdf** **21 27 12.8 +0.6**
baz=120,SNR=6.3
626A **Big Bend Ranch** 120.28 51 P **PKPdf** **21 27 12.2 -0.1**
baz=120
Z29A **Hungry Hill Ra** 120.31 46 ⇓P **PKPdf** **21 27 12.7 +0.5**
baz=120,SNR=11
527A **Woodward Ranch** 120.41 50 P **PKPdf** **21 27 13.2 +0.6**
baz=120,SNR=11
328A **Wristen Ranch,** 120.43 49 P **PKPdf** **21 27 13.0 +0.5**
baz=120,SNR=12
129A **Stewart Farms,** 120.52 47 P **PKPdf** **21 27 13.2 +0.5**
baz=120,SNR=5.3
W31A **Holland Ranch,** 120.54 44 P **PKPdf** **21 27 12.8 +0.3**
baz=120
Y30A **Stafford Cattl** 120.57 45 P **PKPdf** **21 27 13.7 +1.0**
baz=120,SNR=5.1
Z30A **Sanderson Ranc** 120.72 46 P **PKPdf** **21 27 13.3 +0.3**
baz=121,SNR=10
TXAR **Lajitas Array** 120.74 51 PKP **PKPdf** **21 27 13.8 +0.6**
TXAR PKKPbc **PKKPbc** **21 37 18.4 +0.1**
TXAR **Lajitas Array** 120.74 51 PKP **PKPdf** **21 27 13.8 +0.6**
comp=Z,2.1nm,0.7s,baz=206,slow=1.1,SNR=33
TXAR PKKPbc **PKKPbc** **21 37 18.4 +0.1**
comp=Z,1.8nm,0.8s,baz=126,slow=6.4,SNR=3.7
X31A **McDonald Ranch** 120.82 44 P **PKPdf** **21 27 13.4 +0.3**
baz=121
428A **Kincaid Ranch,** 120.84 49 P **PKPdf** **21 27 14.7 +1.4**
baz=121,SNR=11
627A **Terlingua Ranc** 120.90 51 P **PKPdf** **21 27 14.3 +0.8**
baz=121,SNR=14
Y31A **Rekieta Farm,** 120.98 45 P **PKPdf** **21 27 13.6 +0.1**
baz=121
329A **Wagon Wheel Ra** 121.00 48 P **PKPdf** **21 27 13.6 0.0**
baz=121
528A **Cox Ranch, San** 121.03 50 P **PKPdf** **21 27 14.7 +0.9**
baz=121,SNR=6.5
628A **Black Gap, Mar** 121.27 51 P **PKPdf** **21 27 14.8 +0.6**
baz=121
Z31A **Sharp Cattle R** 121.40 46 P **PKPdf** **21 27 14.6 +0.3**
baz=121
230A **Sterling City** 121.44 47 P **PKPdf** **21 27 14.6 +0.2**
baz=121
529A **Stev Forest Ra** 121.48 50 P **PKPdf** **21 27 15.1 +0.5**
baz=122,SNR=16
429A **Davenport Ranc** 121.49 49 ⇓P **PKPdf** **21 27 14.8 +0.2**
baz=122,SNR=16
131A **Roby** 121.56 46 P **PKPdf** **21 27 15.0 +0.4**
baz=122
WMOK **Wichita Mounta** 121.58 43 *e*PKIKP **PKPdf** **21 27 14.5 0.0**
WMOK **Wichita Mounta** 121.58 43 *e*PKPdf **PKPdf** **21 27 14.5 0.0**
330A **Mertzon** 121.64 48 P **PKPdf** **21 27 14.7 -0.1**
baz=122
Z32A **Haskell** 121.88 45 P **PKPdf** **21 27 15.6 +0.4**
baz=122
430A **Baggett Ranch,** 121.90 49 P **PKPdf** **21 27 15.6 +0.2**
baz=122
231A **Bronte** 122.00 47 P **PKPdf** **21 27 15.5 +0.1**
baz=122
530A **J-C Ranch, Com** 122.14 49 P **PKPdf** **21 27 16.1 +0.3**
baz=122
TOA0 **Torodi Ar. Sit** 122.16 289 *e*PKPdf **PKPdf** **21 27 16.0 -0.2**
TORD **Torodi Ar. Bea** 122.16 289 PKP **PKPdf** **21 27 15.8 -0.4**
TORD PKKPbc **PKKPbc** **21 37 12.6 +0.1**
TORD **Torodi Ar. Bea** 122.16 289 PKP **PKPdf** **21 27 15.8 -0.4**
comp=Z,6.1nm,0.7s,baz=75,slow=1.8,SNR=19
TORD PKKPbc **PKKPbc** **21 37 12.6 +0.1**
comp=Z,2.4nm,1.0s,baz=267,slow=3.3,SNR=6.9
331A **San Angelo** 122.24 48 P **PKPdf** **21 27 16.3 +0.4**
baz=122
431A **Sonora** 122.42 48 P **PKPdf** **21 27 16.7 +0.3**
baz=122
232A **Coleman** 122.51 47 P **PKPdf** **21 27 16.6 +0.2**
baz=122
332A **Millersview** 122.70 47 P **PKPdf** **21 27 16.9 +0.1**
baz=123
531A **Rocksprings** 122.73 49 P **PKPdf** **21 27 17.2 +0.3**
baz=123
TUL1 **Tulsa** 122.89 41 P **PKPdf** **21 27 17.4 +0.4**
baz=123
432A **Menard** 122.93 48 P **PKPdf** **21 27 17.5 +0.2**
baz=123
JCT **Junction City** 123.12 48 *e*PKIKP **PKPdf** **21 27 17.7 0.0**
JCT **Junction City** 123.12 48 *e*PKPdf **PKPdf** **21 27 17.7 0.0**
JCT **Junction City** 123.12 48 P **PKPdf** **21 27 18.2 +0.5**
baz=123
532A **Rocksprings** 123.23 49 P **PKPdf** **21 27 18.2 +0.3**
baz=123
632A **Uvalde** 123.63 49 P **PKPdf** **21 27 19.3 +0.6**
baz=124
732A **Laxson Ranch,** 123.87 50 P **PKPdf** **21 27 19.8 +0.8**
baz=124
WHTX **Lake Whitney** 124.02 45 P **PKPdf** **21 27 20.1 +0.8**
baz=124
MIAR **Mount Ida** 125.16 41 *e*PKIKP **PKPdf** **21 27 21.1 -0.3**
MIAR **Mount Ida** 125.16 41 *e*PKPdf **PKPdf** **21 27 21.1 -0.3**
OLIL **Olney** 125.63 33 *e*PKPdf **PKPdf** **21 27 21.9 -0.3**
BLO **Bloomington** 126.15 32 *e*PKIKP **PKPdf** **21 27 22.3 -0.8**
BLO **Bloomington** 126.15 32 *e*PKPdf **PKPdf** **21 27 22.3 -0.8**
WCI **Wyandotte Cave** 126.96 32 *e*PKIKP **PKPdf** **21 27 24.6 -0.2**
WCI **Wyandotte Cave** 126.96 32 *e*PKPdf **PKPdf** **21 27 24.6 -0.2**
ACSO **Alum Creek Sta** 127.10 28 *e*PKPdf **PKPdf** **21 27 25.8 +0.8**
NCB **Newcomb** 127.40 19 *e*PKPdf **PKPdf** **21 27 24.8 -0.6**
WVT **Waverly** 127.63 35 *e*PKIKP **PKPdf** **21 27 26.1 +0.1**
WVT *e* 21 29 23.9
WVT **Waverly** 127.63 35 *e*PKPdf **PKPdf** **21 27 26.1 +0.1**
WVT *e*PP **PP** **21 29 23.9 -2.9**
MDV **Middlebury** 127.70 18 *e*PKPdf **PKPdf** **21 27 25.2 -0.8**
OXF **Oxford** 127.81 38 *e*PKIKP **PKPdf** **21 27 25.6 -0.8**
OXF **Oxford** 127.81 38 *e*PKPdf **PKPdf** **21 27 25.6 -0.8**
BINY **Binghamton** 128.37 21 *e*PKPdf **PKPdf** **21 27 27.4 +0.1**
TZTN **Tazewell** 129.67 32 *e*PKPdf **PKPdf** **21 27 29.9 -0.1**
DBIC **Dimbokro** 129.98 283 PKP **PKPdf** **21 27 32.1 +1.0**
DBIC **Dimbokro** 129.98 283 PKP **PKPdf** **21 27 32.1 +1.0**
comp=Z,3.6nm,0.6s,baz=67,slow=4.0,SNR=6.5
LIC **Lamto** 130.25 283 *e*PKIKP **PKPdf** **21 27 30.9 -0.7**
comp=Z,9.8nm,0.5s
LIC **Lamto** 130.25 283 *e*PKPdf **PKPdf** **21 27 30.9 -0.7**
LRAL **Lakeview Retre** 130.28 37 *e*PKPdf **PKPdf** **21 27 29.9 -1.3**
JSRW **J. Sargeant Re** 131.47 26 *e*PKPdf **PKPdf** **21 27 33.2 -0.1**
KMSC **Kings Mountain** 131.90 31 P **PKPdf** **21 27 35.1 +0.9**
baz=132
PLCA **Paso Flores** 141.66 159 PKP **PKPdf** **21 27 52.5 +0.4**
PLCA **Paso Flores** 141.66 159 PKP **PKPdf** **21 27 52.5 +0.4**
comp=Z,6.4nm,0.7s,baz=218,slow=8.1,SNR=9.8
JTS **JuntasAbangare** 145.00 64 *e*PKP **PKPdf** **21 27 58.5 -0.2**
TRQA **Tornquist** 146.61 168 *e*PKPdf **PKPdf** **21 28 00.9 +0.1**
MTDJ **Mount Denham** 146.62 45 *e*PKPdf **PKPdf** **21 28 02.0 +0.6**
GTBY **Guantanamo Bay** 147.04 40 *e*PKPdf **PKPdf** **21 28 02.0 +0.1**
GTBY *e*PKPbc **PKPbc** **21 28 04.3 +0.2**
BCIP **Isla Barro Col** 150.02 61 *e*PKPdf **PKPdf** **21 28 07.0 +0.1**
BCIP *e*PKPbc **PKPbc** **21 28 11.8 -0.2**
SDDR **Presa de Saban** 150.08 35 *e*PKPdf **PKPdf** **21 28 07.8 +0.8**
SDDR *e*PKPbc **PKPbc** **21 28 12.1 0.0**
CFAA **Coronel Fontan** 150.51 154 PKPbc **PKPbc** **21 28 12.8 0.0**
CFAA **Coronel Fontan** 150.51 154 PKPbc **PKPbc** **21 28 12.8 0.0**
comp=Z,2.9nm,0.5s,baz=228,slow=2.4,SNR=21
LCO **Las Campanas** 151.44 147 *e*PKPdf **PKPdf** **21 28 09.8 +0.6**
LCO *e*PKPbc **PiKiKP** **21 28 15.9 +0.1**
LRS **Lares** 153.01 29 *e*PKPbc **PKPbc** **21 28 18.4 -0.4**
MTP **Monte Pirata** 153.78 27 *e*PKPbc **PKPbc** **21 28 20.6 +0.2**
STVI **Saint Thomas** 153.82 25 *e*PKPbc **PKPbc** **21 28 20.1 -0.4**
OTAV **Otavalo** 154.46 78 *e*PKPdf **PKPdf** **21 28 13.8 -0.4**
OTAV *e*PKPbc **PKiKP** **21 28 23.0 +0.3**
ATAH **Atahualpa** 155.20 95 PKP **PKPdf** **21 28 17.1 +1.9**
ATAH PKPab **PKPab** **21 28 42.5 +2.3**
ATAH **Atahualpa** 155.20 95 PKP **PKPdf** **21 28 17.1 +1.9**
comp=Z,6.9nm,1.0s,baz=217,slow=5.7,SNR=6.2
ATAH PKPab **PKPab** **21 28 42.5 +2.3**
comp=Z,37nm,1.1s,baz=295,slow=3.6,SNR=12
ROSC **El Rosal** 156.83 64 PKP **PKPdf** **21 28 18.5 +1.2**
ROSC PKPab **PKPab** **21 28 49.5 +2.3**
ROSC **El Rosal** 156.83 64 PKP **PKPdf** **21 28 18.5 +1.2**
comp=Z,3.7nm,0.3s,baz=99,slow=18,SNR=4.1
ROSC PKPab **PKPab** **21 28 49.5 +2.3**
comp=Z,18nm,0.9s,baz=96,slow=22,SNR=9.2
LVC **Limon Verde** 157.33 140 PKP **PKPdf** **21 28 18.6 +1.1**
LVC **Limon Verde** 157.33 140 PKP **PKPdf** **21 28 18.6 +1.1**
comp=Z,3.5nm,0.8s,baz=223,slow=3.7,SNR=4.8
CPUP **Villa Florida** 158.89 170 PKP **PKPdf** **21 28 19.8 +0.8**
CPUP PKPab **PKPab** **21 28 58.4 +3.4**
CPUP **Villa Florida** 158.89 170 PKP **PKPdf** **21 28 19.8 +0.8**
comp=Z,0.4nm,0.4s,baz=274,slow=8.4,SNR=3.4
CPUP PKPab **PKPab** **21 28 58.4 +3.4**
comp=Z,9.9nm,0.8s,baz=179,slow=3.6,SNR=15
LPAZ **La Paz** 162.04 128 PKP **PKPdf** **21 28 24.6 +1.2**
LPAZ PKPab **PKPab** **21 29 12.2 +2.2**
LPAZ **La Paz** 162.04 128 PKP **PKPdf** **21 28 24.6 +1.2**
comp=Z,4.2nm,0.9s,baz=346,slow=2.2,SNR=16
LPAZ PKPab **PKPab** **21 29 12.2 +2.2**
comp=Z,7.0nm,0.9s,baz=259,slow=3.1,SNR=6.6
SIV **San Ignacio** 167.13 145 PKP **PKPdf** **21 28 28.4 +1.2**
SIV PKPab **PKPab** **21 29 32.1 +0.6**
SIV **San Ignacio** 167.13 145 PKP **PKPdf** **21 28 28.4 +1.2**
comp=Z,8.5nm,0.9s,baz=220,slow=1.9,SNR=21
SIV PKPab **PKPab** **21 29 32.1 +0.6**
comp=Z,2.8nm,0.8s,baz=237,slow=6.9,SNR=4.4
BDFB **Brasilia** 168.50 208 PKP **PKPdf** **21 28 30.2 +2.0**
BDFB PKPab **PKPab** **21 29 36.3 -1.3**
BDFB **Brasilia** 168.50 208 PKP **PKPdf** **21 28 30.2 +2.0**
comp=Z,0.9nm,0.4s,baz=79,slow=7.0,SNR=3.4
BDFB PKPab **PKPab** **21 29 36.3 -1.3**
comp=Z,5.9nm,0.9s,baz=356,slow=4.5,SNR=6.0
SAML **Samuel** 169.78 111 *e*PKPdf **PKPdf** **21 28 28.5 -0.5**
SAML *e*PKPab **PKPab** **21 29 42.6 -0.8**

ISCJB ***14*** *21:14:13.1±0.3,19.˚73S±0.˚03×68.˚52W±0.˚06,h130km, mb4.2/36, Error ellipse: s-maj=7.9km s-min=4.6km az=176.2*
NEIC ***14*** *21:14:14.8±0.7, 19.˚57S×68.˚43W,h126km±7km, mb4.4/28, Error ellipse: s-maj=7.6km s-min=5.7km az=68.0*
BJI ***14*** *21:14:14.4, 19.˚60S×68.˚30W, h121km, mB5.3/4*
IDC ***14*** *21:14:15.1±0.8, 19.˚66S×68.˚52W, h131km±8km, mb4.0/13, mb1 4.2/18, mb1mx4.1/24, mbtmp4.1/18, MS3.5/3, Ms1 3.5/3, ms1mx2.9/32, Error ellipse: s-maj=15.2km s-min=7.5km az=92.0*

ISC 14 21:14:14.5±0.4, 19.˚70S±0.˚04×68.˚56W±0.˚08, h130km, n238, σ1$25/253, mb4.3/37, 6C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.92**	**186**	*e*Pn	**Pn**	**21 15 02.0**	**+1.6**
LVC				*e*Sn	**Sn**	**21 15 33.9**	**-1.8**
LVC	**Limon Verde**	**2.92**	**186**	P	**Pn**	**21 15 02.1**	**+1.7**
	30nm,0.3s,baz=23,slow=13,SNR=30						
LVC				S	**Sn**	**21 15 36.7**	**+1.0**
	58nm,0.3s,baz=79,slow=23,SNR=6.0						
LPAZ	**La Paz**	**3.42**	**7**	*e*Pn	**Pn**	**21 15 08.7**	**+1.4**
LPAZ				S	**Sn**	**21 15 48.7**	**+0.9**
LPAZ	**La Paz**	**3.42**	**7**	P	**Pn**	**21 15 08.6**	**+1.4**
	31nm,0.3s,baz=204,slow=6.4,SNR=271						
LPAZ				S	**Sn**	**21 15 48.7**	**+0.9**
	baz=28,slow=18,SNR=1.7						
LPAZ				LR	LR	21 16 16.9	
	comp=Z,193nm,18.3s,baz=286,slow=36						
ARE	**Arequipa**	**4.26**	**319**	*e*P	**Pn**	**21 15 16.0**	**-2.0**
ARE				*e*S	Sn	21 16 01.0	-6.3
SIV	**San Ignacio**	**8.03**	**64**	P	**Pn**	**21 16 07.1**	**-1.3**
SIV	**San Ignacio**	**8.03**	**64**	P	**Pn**	**21 16 07.1**	**-1.3**
	30nm,0.3s,baz=261,slow=12,SNR=120						
SIV				LR	LR	21 19 36.9	
	comp=Z,160nm,18.8s,slow=40						
LCO	**Las Campanas**	**9.48**	**191**	*e*Pn	Pn	21 16 24.4	-3.7
LCO				*e*Sn	Sn	21 18 05.5	-7.5
NNA	**Nana**	**11.05**	**313**	*e*Pn	Pn	21 16 46.0	-3.1
	12nm,0.7s						
NNA	**Nana**	**11.05**	**313**	P	Pn	21 16 46.0	-3.1
	2.7nm,0.3s,baz=126,slow=14,SNR=6.1						
CFAA	**Coronel Fontan**	**11.86**	**179**	P	**Pn**	**21 16 56.7**	**-2.9**
CFAA				S	**Sn**	**21 19 06.0**	**-4.4**
CFAA	**Coronel Fontan**	**11.86**	**179**	P	**Pn**	**21 16 56.7**	**-2.9**
	0.2nm,0.3s,baz=356,slow=14,SNR=12						
CFAA				S	**Sn**	**21 19 06.0**	**-4.4**
	0.2nm,0.3s,baz=179,slow=10.0,SNR=6.0						
SAML	**Samuel**	**11.88**	**27**	*e*Pn	**Pn**	**21 16 57.1**	**-2.9**
	3.6nm,0.8s						
SAML				Sn	**Sn**	**21 19 09.2**	**-1.9**
CPUP	**Villa Florida**	**12.27**	**125**	P	**Pn**	**21 17 04.9**	**0.0**
CPUP	**Villa Florida**	**12.27**	**125**	P	**Pn**	**21 17 04.9**	**0.0**
	2.0nm,0.3s,baz=285,slow=13,SNR=7.0						
TRQA	**Tornquist**	**19.17**	**164**	*e*P	**P**	**21 18 28.9**	**+0.9**
	510nm,2.3s						
BDFB	**Brasilia**	**19.98**	**82**	P	**P**	**21 18 37.5**	**+0.5**
BDFB	**Brasilia**	**19.98**	**82**	P	**P**	**21 18 37.5**	**+0.5**
	1.8nm,0.3s,baz=256,slow=12,SNR=31						
SPB	**Sao Paulo**	**20.02**	**105**	*e*P	**P**	**21 18 36.9**	**-0.3**
	9.3nm,0.4s						
PLCA	**Paso Flores**	**21.04**	**184**	P	**P**	**21 18 50.9**	**+2.8**
	24nm,1.0s						
PLCA	**Paso Flores**	**21.04**	**184**	P	**P**	**21 18 50.9**	**+2.8**
	15nm,0.8s,baz=1.8,slow=11,SNR=18						
OTAV	**Otavalo**	**22.06**	**333**	*e*P	**P**	**21 19 00.4**	**+0.9**
	13nm,1.3s						
CPCT	**Cooper Cave**	**56.90**	**344**	*e*P	**P**	**21 23 45.6**	**-0.3**
732A	**Laxson Ranch,**	**56.91**	**327**	P	**P**	**21 23 45.8**	**-0.3**
	baz=57						
632A	**Uvalde**	**57.44**	**328**	P	**P**	**21 23 49.8**	**-0.1**
	baz=58						
PLAL	**Pickwick Lake**	**57.45**	**341**	*e*P	**P**	**21 23 47.8**	**-2.0**
	8.4nm,1.1s						
532A	**Rocksprings**	**58.01**	**328**	P	**P**	**21 23 53.8**	**-0.1**
	baz=58						
JCT	**Junction City**	**58.24**	**328**	P	**P**	**21 23 55.6**	**+0.1**
	baz=58						
432A	**Menard**	**58.56**	**328**	P	**P**	**21 23 57.4**	**-0.3**
	baz=59,SNR=5.1						
530A	**J-C Ranch, Com**	**58.75**	**327**	P	**P**	**21 23 58.9**	**-0.2**
	baz=59,SNR=6.2						
431A	**Sonora**	**58.81**	**328**	P	**P**	**21 23 59.2**	**-0.3**
	baz=59,SNR=5.1						
332A	**Millersview**	**58.95**	**329**	P	**P**	**21 24 00.2**	**-0.2**
	baz=59,SNR=5.8						
MIAR	**Mount Ida**	**58.96**	**336**	*e*P	**P**	**21 23 59.8**	**-0.5**
	90nm,3.0s						
628A	**Black Gap, Mar**	**59.05**	**325**	P	**P**	**21 24 01.4**	**+0.3**
	baz=59						
529A	**Stev Forest Ra**	**59.19**	**326**	P	**P**	**21 24 02.2**	**+0.1**
	baz=59,SNR=11						
430A	**Baggett Ranch,**	**59.21**	**327**	P	**P**	**21 24 01.8**	**-0.4**
	baz=59,SNR=6.8						
331A	**San Angelo**	**59.23**	**328**	P	**P**	**21 24 01.9**	**-0.4**
	baz=59						
627A	**Terlingua Ranc**	**59.29**	**325**	⇑P	**P**	**21 24 02.7**	**-0.2**
	baz=60						
232A	**Coleman**	**59.32**	**329**	P	**P**	**21 24 02.5**	**-0.4**
	baz=60,SNR=7.2						
TXAR	**Lajitas Array**	**59.35**	**324**	P	**P**	**21 24 02.7**	**-0.5**
TXAR	**Lajitas Array**	**59.35**	**324**	P	**P**	**21 24 02.7**	**-0.5**
	0.5nm,0.5s,baz=151,slow=8.3,SNR=11						
429A	**Davenport Ranc**	**59.42**	**327**	P	**P**	**21 24 03.5**	**-0.2**
	baz=60,SNR=11						
528A	**Cox Ranch, San**	**59.52**	**326**	⇑P	**P**	**21 24 04.2**	**-0.3**
	baz=60						
330A	**Mertzon**	**59.68**	**328**	P	**P**	**21 24 04.7**	**-0.7**
	baz=60						
626A	**Big Bend Ranch**	**59.78**	**324**	P	**P**	**21 24 06.4**	**+0.2**
	baz=60,SNR=8.4						
428A	**Kincaid Ranch,**	**59.91**	**326**	⇓P	**P**	**21 24 06.8**	**-0.2**
	baz=60						
ABTX	**Abilene, Hawle**	**59.92**	**330**	P	**P**	**21 24 07.0**	**-0.1**
	baz=60						
527A	**Woodward Ranch**	**59.95**	**325**	P	**P**	**21 24 07.1**	**-0.4**
	baz=60,SNR=5.2						
526A	**Mary Lane Ranc**	**60.15**	**324**	P	**P**	**21 24 08.7**	**-0.1**
	baz=60,SNR=8.6						
329A	**Wagon Wheel Ra**	**60.15**	**327**	P	**P**	**21 24 08.4**	**-0.2**
	baz=60,SNR=7.2						
131A	**Roby**	**60.32**	**329**	P	**P**	**21 24 09.3**	**-0.4**
	baz=60						
427A	**Hayter Ranch,**	**60.39**	**326**	⇑P	**P**	**21 24 10.2**	**-0.1**
	baz=61						
Z32A	**Haskell**	**60.41**	**330**	P	**P**	**21 24 09.9**	**-0.4**
	baz=61						
229A	**Bryant Ranch,**	**60.45**	**328**	P	**P**	**21 24 10.3**	**-0.4**
	baz=61						
328A	**Wristen Ranch,**	**60.50**	**326**	⇓P	**P**	**21 24 10.9**	**-0.1**
	baz=61						
130A	**Snyder**	**60.54**	**329**	P	**P**	**21 24 10.9**	**-0.3**
	baz=61						
426A	**McDonald Obser**	**60.59**	**325**	P	**P**	**21 24 11.6**	**-0.2**
	baz=61,SNR=6.4						
Z31A	**Sharp Cattle R**	**60.73**	**330**	P	**P**	**21 24 12.3**	**-0.2**
	baz=61,SNR=7.3						
Y32A	**R-V Farms, Ver**	**60.97**	**331**	P	**P**	**21 24 13.9**	**-0.2**
	baz=61						
129A	**Stewart Farms,**	**61.01**	**328**	P	**P**	**21 24 14.1**	**-0.3**
	baz=61						
326A	**Caldwell Ranch**	**61.06**	**325**	P	**P**	**21 24 14.7**	**-0.2**
	baz=61,SNR=5.2						
Z30A	**Sanderson Ranc**	**61.18**	**329**	P	**P**	**21 24 14.8**	**-0.8**
	baz=61,SNR=6.8						
425A	**Indio Mountain**	**61.20**	**324**	P	**P**	**21 24 15.6**	**-0.2**
	baz=61,SNR=7.3						
Y31A	**Rekieta Farm,**	**61.32**	**330**	P	**P**	**21 24 16.6**	**+0.1**
	baz=62						
325A	**Bean Ranch, Si**	**61.64**	**325**	P	**P**	**21 24 18.6**	**-0.3**
	baz=62,SNR=13						
X31A	**McDonald Ranch**	**61.74**	**331**	P	**P**	**21 24 18.7**	**-0.6**
	baz=62,SNR=6.5						
226B	**Tecolote Peak,**	**61.75**	**326**	⇑P	**P**	**21 24 19.7**	**+0.2**
	baz=62						
Y29A	**Porterfield Fa**	**61.91**	**329**	P	**P**	**21 24 20.1**	**-0.4**
	baz=62						
324A	**Moseley Ranch,**	**61.97**	**324**	P	**P**	**21 24 20.1**	**-1.0**

Z27A	Tatum	62.23	327	P		P	21 24 22.0	-0.8
	baz=62,SNR=6.6							
125A	Gardner Draw,	62.47	326	P		P	21 24 23.6	-0.6
	baz=63							
224A	Cornudas Mount	62.48	325	P		P	21 24 23.6	-0.8
	baz=63,SNR=7.6							
MSTX	Muleshoe	62.53	328	P		P	21 24 24.3	-0.4
	baz=63,SNR=7.0							
Z26A	Caprock	62.59	327	P		P	21 24 24.7	-0.4
	baz=63							
Y27A	Causey	62.66	328	P		P	21 24 24.7	-0.8
	baz=63,SNR=6.7							
Z25A	Roswell	62.98	326	P		P	21 24 27.2	-0.5
	baz=63							
W28A	Vega	63.30	329	P		P	21 24 29.4	-0.3
	baz=64							
Z24A	Sheeppen Canyo	63.36	326	P		P	21 24 30.0	-0.3
	baz=64,SNR=6.2							
Y25A	Mesa, Roswell	63.47	327	P		P	21 24 30.1	-0.8
	baz=64							
X26A	CR and CF Fran	63.52	328	P		P	21 24 30.7	-0.5
	baz=64							
W27A	Bowe Ranch, En	63.55	329	P		P	21 24 31.1	-0.3
	baz=64							
T31A	Randall Ranch,	63.66	333	P		P	21 24 31.9	0.0
	baz=64							
SNAA	Sanae	63.87	161	eP		P	21 24 34.3	+1.4
SNAA	Sanae	63.87	161	P		P	21 24 33.9	+0.9
	1.7nm,0.8s,baz=292,slow=6.1,SNR=13							
220A	Playas Peak, P	64.03	323	P		P	21 24 35.1	+0.4
	baz=64							
Z22A	Elephant Butte	64.16	325	P		P	21 24 36.4	+0.9
	baz=64,SNR=6.1							
X24A	Lazy VL Ranch,	64.35	327	P		P	21 24 36.7	-0.1
	baz=65							
W25A	X Bar L Ranch,	64.37	328	P		P	21 24 36.5	-0.3
	baz=65							
V26A	Tequesquite Ra	64.49	329	P		P	21 24 37.5	-0.1
	baz=65							
Z20A	Nine Sixteen R	64.96	323	P		P	21 24 41.3	+0.7
	baz=65							
T27A	Campo	65.00	330	P		P	21 24 40.7	-0.1
	baz=65							
ANMO	Albuquerque	65.18	326	eP		P	21 24 42.4	+0.2
	2.1nm,0.7s							
Q30A	Quinter	65.47	333	P		P	21 24 43.7	0.0
	baz=66							
V23A	Ortiz Mt. (NFS	65.66	327	P		P	21 24 46.0	+0.8
	baz=66							
S26A	Kim	65.80	330	P		P	21 24 46.6	+0.6
	baz=66							
T25A	Trinidad	65.87	329	P		P	21 24 47.1	+0.6
	baz=66							
U23A	El Rito	66.11	327	P		P	21 24 48.8	+0.7
	baz=66							
V22A	San Miguel Ran	66.16	327	P		P	21 24 49.3	+0.9
	baz=66							
S25A	Robets Cordova	66.29	329	P		P	21 24 49.6	+0.4
	baz=66							
W20A	Ramah	66.41	325	P		P	21 24 50.9	+0.8
	baz=67							
S24A	Houchin Ranch,	66.65	329	P		P	21 24 52.4	+0.8
	baz=67							
V20A	Brimhall	66.89	325	P		P	21 24 53.5	+0.5
	baz=67							
U21A	Nageezi	66.94	326	P		P	21 24 53.9	+0.5
	baz=67							
R24A	Sanders Place,	67.07	329	P		P	21 24 55.0	+0.9
	baz=67							
R23A	Moffat	67.38	329	P		P	21 24 56.8	+0.6
	baz=68							
S22A	4UR Ranch, Cre	67.53	328	P		P	21 24 57.2	0.0
	baz=68							
Q24A	Divide	67.67	330	P		P	21 24 58.6	+0.6
	baz=68							
DBIC	Dimbokro	67.92	74	eP		P	21 24 59.3	-0.4
	18nm,0.6s							
DBIC	Dimbokro	67.92	74	P		P	21 24 59.3	-0.4
	16nm,0.6s,baz=226,slow=6.4,SNR=43							
S21A	Coal Bank Pass	67.95	327	P		P	21 25 00.5	+0.6
	baz=68							
ECSD	EROS Data Cent	68.17	338	eP		P	21 24 59.7	-0.9
	9.8nm,1.4s							
WUAZ	Wupatki	68.28	323	P		P	21 25 02.8	+1.0
	baz=68							
R21A	Cimarron	68.37	328	P		P	21 25 02.8	+0.4
	baz=69							
S20A	Disappointment	68.37	327	P		P	21 25 03.3	+0.9
	baz=69							
Q22A	Crested Butte,	68.44	329	P		P	21 25 03.5	+0.7
	baz=69							
ISCO	Idaho Springs	68.55	330	eP		P	21 25 04.0	+0.5
	3.6nm,0.9s							
ISCO	Idaho Springs	68.55	330	P		P	21 25 04.1	+0.6
	baz=69,SNR=5.1							
R20A	Redvale	68.66	327	P		P	21 25 05.3	+1.2
	baz=69							
P22A	Eagle	68.93	329	P		P	21 25 06.1	+0.3
	baz=69							
O23A	Lake Granby, G	69.02	330	P		P	21 25 07.2	+0.8
	baz=69							
S18A	Hurst Farm, Bl	69.12	326	⇑P		P	21 25 07.9	+0.9
	baz=69,SNR=7.9							
P21A	Newcastle	69.22	329	P		P	21 25 08.6	+1.1
	baz=69,SNR=7.2							
O22A	Kremmling	69.28	330	P		P	21 25 08.6	+0.6
	baz=70,SNR=5.9							
BC3	Big Chuckawall	69.38	319	P		P	21 25 09.4	+0.9
	baz=70							
W13A	Hualapai Mount	69.43	321	P		P	21 25 10.4	+1.5
	baz=70							
U15A	North Rim	69.45	323	P		P	21 25 10.7	+1.6
	baz=70,SNR=6.1							
IRM	Iron Mountain	69.53	320	P		P	21 25 10.8	+1.4
	baz=70							
P19A	Cripple Cowboy	70.06	328	P		P	21 25 13.7	+1.0
	baz=70,SNR=5.0							
O20A	White River Ci	70.07	329	P		P	21 25 13.6	+0.9
	baz=70							
GMRC	Granite Mounta	70.26	320	P		P	21 25 15.1	+1.2
	baz=70							
EYMN	Ely	70.41	344	eP		P	21 25 13.5	-0.8
QSPA	South Pole Qui	70.49	180	P		P	21 25 16.6	+1.7
QSPA	South Pole Qui	70.49	180	P		P	21 25 16.5	+1.7
	3.1nm,0.6s,baz=132,slow=2.8,SNR=11							
O19A	Miners Draw (B	70.63	328	P		P	21 25 16.9	+0.8
	baz=71							
Q16A	Castle Valley	70.65	326	P		P	21 25 17.3	+1.0
	baz=71							
CCUT	Cedar City	70.85	324	eP		P	21 25 19.3	+1.8
	7.7nm,0.9s							
MSU	Marysvale	70.89	325	eP		P	21 25 18.9	+1.2
M20A	Sweetwater, Wa	71.09	330	P		P	21 25 19.5	+0.6
	baz=71							
GSC	Goldstone	71.31	320	eP		P	21 25 21.7	+1.5
	4.4nm,1.0s							
GSC	Goldstone	71.31	320	P		P	21 25 21.6	+1.4
	baz=72							
K21A	Alcova	71.54	331	P		P	21 25 22.6	+1.0
	baz=72							
MPU	Maple Canyon	71.70	326	eP		P	21 25 23.9	+1.3
	7.1nm,0.9s							
AGMN	Agassiz Nation	71.96	341	eP		P	21 25 23.3	-0.4
	5.0nm,0.7s							
JLU	Jordanelle	72.04	327	eP		P	21 25 25.9	+1.3
	4.8nm,0.8s							
K20A	Yellowstone Ra	72.06	330	P		P	21 25 24.9	+0.2
	baz=72							
L19A	Farson	72.12	329	P		P	21 25 25.5	+0.4
	baz=72							
J21A	Lysite	72.19	331	P		P	21 25 26.5	+1.1
	baz=72							
MPMC	Manual Prospec	72.23	320	P		P	21 25 26.7	+0.9
	baz=72							
M17A	Scullys Gap (B	72.29	328	P		P	21 25 26.3	+0.3
	baz=72							
DUG	Dugway	72.45	326	eP		P	21 25 28.4	+1.4
	7.7nm,1.2s							
DUG	Dugway	72.45	326	P		P	21 25 28.0	+1.1
	baz=73							
I21A	Big Trails, Te	72.48	332	P		P	21 25 27.7	+0.5
	baz=73							
R11A	Troy Canyon, C	72.66	323	⇓P		P	21 25 29.6	+1.3
	baz=73,SNR=5.8							
PDAR	Pinedale Array	72.72	330	P		P	21 25 28.8	+0.1
PDAR	Pinedale Array	72.72	330	P		P	21 25 28.8	+0.1
	1.4nm,0.9s,baz=98,slow=13,SNR=5.3							
HWUT	Hardware Ranch	72.84	328	eP		P	21 25 29.7	+0.4
	4.5nm,0.8s							
J19A	Crowheart	72.87	330	P		P	21 25 29.8	+0.4
	baz=73							
E24A	Baker	73.43	335	P		P	21 25 33.2	+0.6
	baz=74							
HVU	Hansel Valley	73.58	327	eP		P	21 25 34.8	+1.2
	8.5nm,1.3s							
ULM	Lac du Bonnet	73.71	342	P		P	21 25 33.0	-1.0
ULM	Lac du Bonnet	73.71	342	P		P	21 25 33.0	-1.0
	5.7nm,0.8s,baz=150,slow=6.5,SNR=4.6							
TPAW	Teton Pass	73.94	329	eP		P	21 25 36.8	+1.0
	3.8nm,0.8s							
RRI2	Red Ridge	74.01	329	eP		P	21 25 37.3	+1.1
	9.5nm,0.9s							
H18A	Shoshone NF, C	74.23	331	P		P	21 25 37.9	+0.5
	baz=74							
IMW	Indian Meadow	74.24	330	eP		P	21 25 38.4	+0.8
	10nm,1.3s							
SCHQ	Schefferville	74.24	1	P		P	21 25 36.4	-0.6
SCHQ	Schefferville	74.24	1	P		P	21 25 36.4	-0.6
	3.7nm,0.8s,baz=185,slow=2.5,SNR=6.2							
NVAR	Mina Array Bea	74.29	321	P		P	21 25 38.3	+0.4
NVAR	Mina Array Bea	74.29	321	P		P	21 25 38.3	+0.4
	1.6nm,0.8s,baz=151,slow=7.1,SNR=9.1							
G18A	Lazy EL Ranch,	74.68	331	P		P	21 25 40.7	+0.8
	baz=75							
D21A	La Casta Ranch	74.93	334	P		P	21 25 42.1	+0.9
	baz=75							
H16A	Russell Place,	74.99	330	P		P	21 25 43.1	+1.3
	baz=75							
F18A	Big Timber	75.19	332	P		P	21 25 43.6	+0.7
	baz=75							
E19A	Rath Farm, Rou	75.22	333	P		P	21 25 43.6	+0.7
	baz=75,SNR=5.3							
D20A	Manuel Ranch,	75.43	333	P		P	21 25 44.2	+0.1
	baz=76							
I14A	Mackay	75.48	328	P		P	21 25 46.1	+1.5
	baz=76,SNR=8.7							
HLID	Hailey	75.70	327	eP		P	21 25 47.1	+1.3
	6.6nm,0.9s							
HLID	Hailey	75.70	327	P		P	21 25 47.2	+1.3
	baz=76,SNR=10							
MCMT	McKenzie Canyo	75.84	329	eP		P	21 25 47.0	+0.2
	4.0nm,1.2s							
DLMT	Dillon	76.12	330	eP		P	21 25 49.3	+1.2
	9.0nm,1.4s							
MFID	Camas Ranch	76.32	327	eP		P	21 25 50.8	+1.5
	9.3nm,1.1s							
MFID	Camas Ranch	76.32	327	⇑P		P	21 25 50.6	+1.3
	baz=76,SNR=6.5							
F15A	Butte	76.42	330	P		P	21 25 50.6	+0.7
	baz=77							
TOA0	Torodi Ar. Sit	76.45	71	eP		P	21 25 50.0	-0.5
TORD	Torodi Ar. Bea	76.45	71	P		P	21 25 49.8	-0.7
TORD	Torodi Ar. Bea	76.45	71	P		P	21 25 49.8	-0.7
	4.4nm,0.4s,baz=253,slow=5.4,SNR=203							
H12A	Diamond D Ranc	76.63	328	P		P	21 25 52.2	+1.1
	baz=77							
F14A	Wisdom	76.82	330	P		P	21 25 53.1	+1.0
	baz=77							
B19A	Brinkman Farms	76.83	334	P		P	21 25 52.5	+0.6
	baz=77							
EGMT	Eagleton	76.84	333	P		P	21 25 52.6	+0.5
	baz=77							
D16A	Dana Ranch, Ca	76.88	331	P		P	21 25 53.8	+1.4
	baz=77,SNR=6.4							
A19A	Klindworth Far	77.12	334	P		P	21 25 53.6	0.0
	baz=77							
B18A	Beardsley Farm	77.14	333	P		P	21 25 54.4	+0.7
	baz=77							
G12A	Big Creek, Yel	77.28	328	P		P	21 25 55.3	+0.7
	baz=78							
D15A	Lincoln	77.33	331	P		P	21 25 56.1	+1.2
	baz=78,SNR=5.6							
F12A	Elk City	77.69	329	P		P	21 25 58.0	+1.1
	baz=78,SNR=5.1							
MSO	Missoula	77.83	330	eP		P	21 25 58.9	+1.3
	3.1nm,1.1s							
MSO	Missoula	77.83	330	P		P	21 25 58.8	+1.2
	baz=78							
C15A	Salmond Ranch,	77.91	331	P		P	21 25 59.2	+1.1
	baz=78,SNR=11							
A17A	Triple J Farms	77.95	333	P		P	21 25 58.4	+0.2
	baz=78							
BMO	Blue Mountains	78.09	327	eP		P	21 25 59.3	+0.2
	7.9nm,1.1s							
D13A	Huson	78.27	330	P		P	21 26 00.7	+0.7
	baz=78,SNR=7.6							
B15A	Bradely Ranch,	78.29	332	P		P	21 26 00.2	+0.1
	baz=78,SNR=6.4							
E12A	Beaver Dam Sad	78.31	329	P		P	21 26 01.0	+0.7
	baz=78							
A16A	Wet Butte Ran	78.34	333	P		P	21 26 01.1	+0.7
	baz=78							
C14A	Swan Lake	78.42	331	P		P	21 26 01.7	+0.9
	baz=79							
D12A	Red Ives Fores	78.66	329	P		P	21 26 03.0	+0.8
	baz=79							
C13A	Hot Springs	78.74	330	P		P	21 26 03.6	+1.0
	baz=79							
A15A	Johnson Ranch,	78.86	332	P		P	21 26 03.0	-0.2
	baz=79							
BSMT	Bassoo Peak	78.97	330	eP		P	21 26 04.9	+0.9
B13A	Whitefish	79.20	331	P		P	21 26 05.7	+0.7
	baz=79							
A13A	Flathead Natio	79.58	331	P		P	21 26 07.8	+0.6
	baz=80							
C11A	Tepee Creek (N	79.65	330	P		P	21 26 08.2	+0.7
	baz=80							
BOSA	Boshof	84.00	118	P		P	21 26 31.4	+0.4
BOSA	Boshof	84.00	118	P		P	21 26 31.4	+0.4
	2.3nm,0.6s,baz=267,slow=21,SNR=3.6							
ESDC	Sonseca Array	84.32	44	P		P	21 26 34.0	+1.9
ESDC	Sonseca Array	84.32	44	P		P	21 26 34.0	+1.9
	0.2nm,0.3s,baz=256,slow=5.2,SNR=4.3							
YKA	Yellowknife Ar	89.60	340	P		P	21 26 57.0	+0.1
YKA				pP		pP	21 27 32.2	+1.9
YKA	Yellowknife Ar	89.60	340	P		P	21 26 57.0	+0.1
	5.8nm,0.7s,baz=133,slow=4.7,SNR=74							
YKA				pP		pP	21 27 32.2	+1.9
	1.7nm,0.8s,baz=135,slow=4.8,SNR=4.4							
YKW3	Yellowknife Ar	89.66	341	eP		P	21 26 56.8	-0.4
	0.3nm,1.2s							
GERES	GERESS Array B	99.66	42	LR		LR	22 10 32.0	
	comp=Z,162nm,21.6s,baz=269,slow=34							
ABKAR	Akbulak array	129.60	42	ePKPdf		PKPdf	21 33 08.1	+0.1
ASAR	Alice Springs	131.65	208	PKP		PKPdf	21 33 12.9	+0.1
ASAR	Alice Springs	131.65	208	PKP		PKPdf	21 33 12.9	+0.1
	1.1nm,0.8s,baz=159,slow=3.9,SNR=4.2							
WMQ	Urumqi	148.81	34	ePKPbc		PKPdf	21 33 44.8	+1.8
USRK	Ussuriysk Arra	150.15	330	PKPbc		PKPbc	21 33 50.7	+0.5
	4.8nm,0.7s,baz=24,slow=0.9,SNR=14							
SONM	Songino Array	151.63	7	PKPbc		PKPbc	21 33 54.2	+0.5
SONM	Songino Array	151.63	7	PKPbc		PKPbc	21 33 54.2	+0.5
	2.5nm,0.5s,baz=24,slow=1.1,SNR=7.6							
CN2	Changchun	153.25	337	ePKPbc		PKPdf	21 33 49.8	+0.2
KSRS	Korea Array	157.20	324	PKPab		PKPab	21 34 27.2	+0.7
	1.1nm,0.7s,baz=54,slow=4.9,SNR=5.7							
KSAR	Wonju Array Be	157.23	324	PKPab		PKPab	21 34 27.2	+0.5
HHC	Hu-ho-hao-te	158.91	360	ePKP		PKPdf	21 33 58.8	+1.5
HHC				pPKP		pPKPdf	21 34 25.3	-7.1
HHC				PKS		PKSdf	21 37 30.8	-0.2
HHC				PP		PP	21 38 17.1	+3.1
HHC				SKS		SKSdf	21 40 53.4	+2.3
HHC				SKKS		SKKSac	21 44 55.4	+3.8
HHC				SS		SS	21 58 13.3	+7.1
HHC				AMB		AMB		
	comp=Z,400nm,10.6s							
LZH	Lanzhou	162.36	21	ePKP		PKPdf	21 33 59.5	-1.8
LZH				pPKP		pPKPdf	21 34 30.6	-5.8
LZH				sPKP			21 34 42.9	
LZH				LR		LR		
	comp=N,110nm,18.2s							
LZH				LR		LR		
	comp=E,100nm,18.0s							
LZH				LR		LR		
	comp=Z,150nm,20.2s							
NJ2	Nanjing	166.01	333	ePKP		PKPdf	21 34 05.1	+0.6
CD2	Chengdu	166.86	30	ePKP		PKPdf	21 34 04.3	-0.9
KMI	Kunming	170.31	55	PKP		PKPdf	21 34 07.6	-0.3
GYA	Guiyang	171.96	32	ePKP		PKPdf	21 34 07.0	-1.6
GYA				pPKP		pPKPdf	21 34 40.8	-2.9
GYA				sPKP			21 34 52.3	
GYA				PKPab		PKPab	21 35 31.0	-0.8
GYA				PKS		PKSdf	21 37 37.8	-3.3
GYA				PP		PP	21 39 23.3	+1.0
GYA				AMB		AMB		
	comp=Z,80nm,8.0s							

BJI **14** *21:22:29.9,4.˝75N×126˚.74E,h46km,mB5.1/17,mb4.7/30, Ms4.6/15,Ms7 4.3/15*

NEIC **14** *21:22:37.9±1.2,5.˝37N×126˚.35E,h57km±10km,mb4.6/15, Error ellipse: s-maj=13.4km s-min=5.6km az=70.0*

ISCJB **14** *21:22:37.9±0.7,5.˝36N±0˝.03×126˚.52E±0˝.06,h73km±5km, mb4.4/51, Error ellipse: s-maj=10.9km s-min=5.2km az=166.4*

IDC **14** *21:22:38.9±1.8,5.˝27N×126˚.14E,h63km±15km,mb4.0/24, mb1 4.1/24,mb1mx4.1/29,mbtmp4.0/24,MS4.4/2, Ms1 4.4/2,ms1mx3.3/39,Error ellipse: s-maj=22.7km s-min=9.3km az=76.0*

MAN **14** *21:22:43,5.˝93N×126˚.44E,h93km,mb5.3,ML4.3,MS4.5*

DJA **14** *21:22:48.3±0.6,5.˝N±5˝×12˚7E±˚,h128km±6km,M4.8/12, mB5.2/2,mb4.5/12,MLv4.9/4,Mw(mB)4.6/2*

ISC 14 21:22:36.5±0.5,5.˝42N±0˝.04×126˚.61E±0˝.07,h44km±3km, n123,σ1ŝ58/147,mb4.5/50,MS4.3/4,3C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	1.55	347	eP	Pn	21 23 04.5	+2.8
DAV	Davao City (W)	1.93	328	ePn	Pn	21 23 06.3	-0.5
DAV				eSn	Sn	21 23 25.1	-4.8
DAV				S		21 23 36.5	
DAV	Davao City (W)	1.93	328	P	Pn	21 23 25.8	+19
DAV	Davao City (W)	1.93	328	P	Pn	21 23 09.1	+2.3
	27nm,0.3s,baz=246,slow=8.7,SNR=7.4						
DAV				S	Sn	21 23 36.5	+6.5
	116nm,0.3s,baz=274,slow=21,SNR=12						
DMPH	Davao City--Mi	1.98	327⇑	eP	Pn	21 23 09.4	+1.9
DMPH				eS	Sn	21 23 34.9	+3.8
KCP	Kidapawan	2.18	316⇑	eP	Pn	21 23 13.2	+2.8
KCP				*i* S	Sn	21 23 40.5	+4.2
BUKP	Musuan	2.88	328	eP	Pn	21 23 22.3	+2.3
CTBH	Cotabato--PC H	2.95	307⇑	iP	Pn	21 23 21.5	+0.6
CGP	Cagayan de Oro	3.56	328	eP	Pn	21 23 31.1	+1.9
CGP				*i* S	Sn	21 24 18.9	+8.8
GAMI	Galela, Maluku	3.75	162	P	Pn	21 23 39.5	+7.6
PAGZ	Pagadian	4.01	307	eP	Pn	21 23 38.1	+2.7
MNI	Manado	4.33	204	P	Pn	21 23 40.7	+0.8
IPIL	Ipil	4.65	301	eP	Pn	21 23 45.9	+1.7
TNTI	Ternate	4.68	171	P	Pn	21 23 54.0	+9.3
KMSI	Cibinong	5.48	209	P	Pn	21 24 03.2	+7.5
	364nm,0.8s,5μm3.5nm						
LBMI	Labuha	6.09	172	P	Pn	21 24 12.8	+8.8
	130nm,1.1s,2μm0.6nm						
MRSI	Marisa	6.77	224	P	Pn	21 24 13.1	-0.3
LUWI	Luwuk	7.48	211	P	Pn	21 24 26.7	+3.6
MYLDM	Lahad Datu	8.08	269	P	Pn	21 24 33.1	+1.8
TGY	Tagaytay City	10.27	327	P	Pn	21 25 09.1	+7.6
TGY	Tagaytay City	10.27	327	P	Pn	21 25 09.1	+7.6
	135nm,0.3s,baz=192,slow=7.2,SNR=4.2						
KAPI	Kappang	12.43	214	ePn	Pn	21 25 31.6	+0.7
KAPI	Kappang	12.43	214	P	Pn	21 25 35.2	+4.4
	35nm,1.0s						
KAPI	Kappang	12.43	214	P	Pn	21 25 31.3	+0.4
	0.7nm,0.3s,baz=31,slow=12,SNR=7.0						
SBUM	Sibu	14.65	259	P	P	21 26 05.2	-1.3
	27nm,1.3s						
BBKI	Banjar Baru	14.70	233	P	P	21 26 07.2	+0.1
	64nm,1.1s						
STKI	Sintang	16.02	251	P	P	21 26 26.8	+5.1
	16nm,1.3s						
KSM	Kuching	16.73	257	ePn	P	21 26 31.4	+1.7
	12nm,0.7s						
KSM	Kuching	16.73	257	P	P	21 26 31.2	+1.5
	18nm,1.1s						
TPUB	Ta-pu	18.68	343	eP	P	21 26 48.1	-3.0
	138nm,2.1s						
UGM	Wanagama	20.81	231	eP	P	21 27 16.1	+1.7
	737nm,2.0s						
BJII	Banjamegara	21.09	233	P	P	21 27 24.9	+7.4
QIZ	Qiongzhong	21.21	311	P	P	21 27 19.1	+0.4
QIZ				sP	sP	21 27 31.1	-3.9
QIZ				S	S	21 31 11.9	-0.4
QIZ				pmax	pmax		
	comp=Z,6.0nm,1.8s						
UBPT	Khong Chiam	22.96	297	P	P	21 27 40.7	+3.4
	comp=Z,14nm,1.1s						
MYKOM	Kota Tinggi	22.99	262	P	P	21 27 42.1	+4.4
	comp=Z,25nm,1.6s						
FITZ	Fitzroy Crossi	23.40	182	eP	P	21 27 40.5	-1.1
	comp=Z,13nm,1.0s						
FITZ	Fitzroy Crossi	23.40	182	P	P	21 27 40.8	-0.8
	comp=Z,3.7nm,0.4s,baz=12,slow=9.0,SNR=38						
COEN	Coen	25.32	140	eP	P	21 27 58.7	-0.6
	comp=Z,220nm,1.6s						
KSI	Kapahiang	25.62	250	P	P	21 28 07.6	+5.4
WRAB	Tennant Creek	26.32	163	eP	P	21 28 08.8	+0.5
	comp=Z,30nm,1.0s						
WRA	Warramunga Arr	26.33	163	P	P	21 28 07.9	-0.5
WRA				ScP	ScP	21 35 10.9	+0.6
WRA	Warramunga Arr	26.33	163	P	P	21 28 07.9	-0.5
	comp=Z,8.7nm,0.5s,baz=341,slow=10,SNR=28						
WRA				ScP	ScP	21 35 10.9	+0.6
	comp=Z,0.8nm,1.0s,baz=342,slow=3.2,SNR=4.5						
MBWA	Marble Bar	27.27	194	eP	P	21 28 15.0	-1.8
	comp=Z,92nm,1.8s						
NJ2	Nanjing	27.47	346	eP	P	21 28 19.3	+0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA	Guiyang	28.29	320	eP	P	21 28 27.4	+1.3
GYA				pP	pP	21 28 38.8	+0.9
GYA				sP	sP	21 28 44.3	+1.1
GYA				PP	PnPn	21 29 19.0	+2.8
GYA				S	S	21 33 08.6	-1.0
GYA				sS	sS	21 33 30.9	+1.5
GYA				ScP	ScP	21 35 14.3	-2.0
GYA				ScS	ScS	21 39 06.5	-2.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ASAR	Alice Springs	29.78	166	P	P	21 28 38.7	-0.5
ASAR				PcP	PcP	21 31 42.3	0.0
ASAR				ScP	ScP	21 35 19.2	-1.7
ASAR	Alice Springs	29.78	166	P	P	21 28 38.7	-0.5
	comp=Z,1.7nm,0.6s,baz=340,slow=6.9,SNR=28						
ASAR				PcP	PcP	21 31 42.3	0.0
	comp=Z,1.9nm,0.6s,baz=347,slow=2.6,SNR=8.9						
ASAR				ScP	ScP	21 35 19.2	-1.7
	comp=Z,0.9nm,0.6s,baz=347,slow=3.1,SNR=6.4						
CMAR	Chiang Mai Arr	29.94	298	P	P	21

LZH	**Lanzhou**	**37.00**	**329**	*e*P		**P**	**21 29 42.5**	**+0.4**
LZH				pmax		pmax		
	comp=Z,17nm,1.0s							
HHC	**Hu-ho-hao-te**	**37.76**	**341**	*e*P		**P**	**21 29 47.8**	**-0.6**
HHC				pP		**pP**	**21 29 57.8**	**-2.7**
HHC				sP		sP	21 30 01.9	-3.8
HHC				S		**S**	**21 35 37.3**	**+1.1**
HHC				pmax		pmax		
	comp=Z,25nm,0.8s							
HHC				pmax		pmax		
	comp=Z,430nm,6.2s							
HHC				LR		LR		
	comp=N,150nm,15.5s							
HHC				LR		LR		
	comp=E,440nm,14.3s							
HHC				LR		LR		
	comp=Z,490nm,15.5s							
CN2	**Changchun**	**38.23**	**359**	*e*P		**P**	**21 29 52.5**	**+0.3**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
EIDS	**Eidsvold**	**38.76**	**143**	*e*P		**P**	**21 29 56.1**	**-0.8**
	comp=Z,11nm,1.2s							
USRK	**Ussuriysk Arra**	**38.91**	**6**	P		P	21 30 01.6	+3.7
	comp=Z,1.6nm,0.6s,baz=201,slow=9.2,SNR=4.6							
MDJ	**Mudanjiang**	**39.12**	**3**	P		**P**	**21 29 59.3**	**-0.4**
MDJ				pP		**pP**	**21 30 10.3**	**-1.4**
MDJ				sP		**sP**	**21 30 15.3**	**-1.7**
MDJ				pmax		pmax		
	comp=Z,4.0nm,0.6s							
MDJ				pmax		pmax		
	comp=Z,34nm,5.1s							
NWAO	**Narrogin (SRO)**	**39.16**	**193**	P		**P**	**21 29 59.4**	**-0.8**
NWAO	**Narrogin (SRO)**	**39.16**	**193**	P		**P**	**21 29 59.4**	**-0.8**
	comp=Z,12nm,0.6s,baz=4.2,slow=8.6,SNR=13							
STKA	**Stephens Creek**	**39.75**	**160**	*e*P		**P**	**21 30 07.3**	**+2.2**
	comp=Z,37nm,2.6s							
STKA				PcP		**PcP**	**21 32 10.9**	**0.0**
STKA	**Stephens Creek**	**39.75**	**160**	P		**P**	**21 30 07.2**	**+2.2**
	comp=Z,3.4nm,0.4s,baz=335,slow=8.9,SNR=9.1							
STKA				PcP		**PcP**	**21 32 10.9**	**0.0**
	comp=Z,1.4nm,0.4s,baz=347,slow=5.8,SNR=3.2							
ASAJ	**Asahikawa**	**41.02**	**18**	P		P	21 30 18.7	+3.3
ASAJ	**Asahikawa**	**41.02**	**18**	P		P	21 30 18.7	+3.3
	comp=Z,4.4nm,0.7s,baz=164,slow=20,SNR=4.2							
GTA	**Gaotai**	**41.60**	**328**	*e*P		**P**	**21 30 17.9**	**-2.5**
GTA				pmax		pmax		
	comp=Z,2.0nm,0.8s							
ARMA	**Armidale**	**42.95**	**148**	*e*P		**P**	**21 30 32.9**	**+1.4**
	comp=Z,8.5nm,0.8s							
ULN	**Ulaanbaatar**	**45.48**	**342**	*e*P		**P**	**21 30 52.0**	**+0.4**
	comp=Z,4.8nm,0.8s							
SONM	**Songino Array**	**45.67**	**341**	P		**P**	**21 30 53.9**	**+0.9**
SONM				PcP		**PcP**	**21 32 30.4**	**-0.2**
SONM	**Songino Array**	**45.67**	**341**	P		**P**	**21 30 53.9**	**+0.9**
	comp=Z,1.0nm,0.5s,baz=146,slow=8.8,SNR=4.1							
SONM				PcP		**PcP**	**21 32 30.4**	**-0.2**
	comp=Z,1.7nm,0.5s,baz=164,slow=5.9,SNR=5.8							
WMQ	**Urumqi**	**51.28**	**324**	*e*P		**P**	**21 31 37.0**	**+0.8**
WMQ				pP		**pP**	**21 31 47.0**	**-1.6**
WMQ				pmax		pmax		
	comp=Z,7.0nm,0.8s							
WMQ				pmax		pmax		
	comp=Z,92nm,3.6s							
PETK	**Petropavlovsk-**	**53.92**	**23**	P		**P**	**21 31 57.7**	**+2.2**
PETK	**Petropavlovsk-**	**53.92**	**23**	P		**P**	**21 31 57.7**	**+2.2**
	comp=Z,2.2nm,0.8s,baz=260,slow=4.2,SNR=3.0							
MK31	**Makanchi Array**	**56.11**	**325**	*e*P		**P**	**21 32 10.2**	**-1.3**
MK31				*e*PcP		**PcP**	**21 33 08.9**	**-0.2**
MKAR	**Makanchi Array**	**56.11**	**325**	*e*P		**P**	**21 32 10.2**	**-1.3**
MKAR				PcP		**PcP**	**21 33 08.8**	**-0.3**
MKAR	**Makanchi Array**	**56.11**	**325**	P		**P**	**21 32 10.4**	**-1.1**
	comp=Z,1.8nm,0.6s,baz=115,slow=7.4,SNR=31							
MKAR				PcP		**PcP**	**21 33 08.8**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=116,slow=4.0,SNR=7.3							
KSH	**Kashi**	**56.77**	**314**	*e*P		**P**	**21 32 16.5**	**+0.1**
KSH				*e*pP		**pP**	**21 32 26.6**	**-2.4**
KSH				*e*sP		sP	21 32 30.6	-3.5
KSH				*e*PcP		**PcP**	**21 33 12.6**	**+0.6**
KSH				*e*PP		**PP**	**21 34 24.3**	**+1.2**
KSH				*e*S		**S**	**21 40 03.3**	**-3.3**
KSH				pmax		pmax		
	comp=Z,5.0nm,0.4s							
KSH				pmax		pmax		
	comp=Z,190nm,7.2s							
KSH				LR		LR		
	comp=N,220nm,5.1s							
KSH				LR		LR		
	comp=E,200nm,6.8s							
KSH				LR		LR		
	comp=Z,530nm,9.9s							
TKM2	**Tokmak 2**	**58.41**	**318**	*e*P		**P**	**21 32 27.6**	**-0.5**
	comp=Z,10nm,1.7s							
ZAA0	**Zalesovo Array**	**59.03**	**333**	*e*P		**P**	**21 32 30.4**	**-1.5**
ZALV	**Zalesovo Beam**	**59.03**	**333**	P		**P**	**21 32 30.6**	**-1.3**
ZALV				PcP		**PcP**	**21 33 19.3**	**-1.1**
ZALV	**Zalesovo Beam**	**59.03**	**333**	P		**P**	**21 32 30.6**	**-1.3**
	comp=Z,1.8nm,0.7s,baz=115,slow=6.3,SNR=7.4							
ZALV				PcP		**PcP**	**21 33 19.3**	**-1.1**
	comp=Z,1.8nm,0.7s,baz=170,slow=3.9,SNR=4.6							
EKS2	**Erkin-Say**	**59.53**	**317**	*e*P		**P**	**21 32 35.4**	**-0.3**
	comp=Z,3.8nm,1.0s							
KURK	**Kurchatov**	**60.26**	**327**	*e*P		**P**	**21 32 39.2**	**-1.1**
	comp=Z,4.3nm,0.7s							
KBL	**Kabul**	**60.41**	**307**	*e*P		**P**	**21 32 41.2**	**-0.8**
KKAR	**Karatay Array**	**61.92**	**316**	*e*P		**P**	**21 32 50.7**	**-1.2**
RAO	**Raoul Island**	**63.42**	**126**	LR		LR	21 57 09.1	
	comp=Z,966nm,18.1s,baz=276,slow=32							
BVAR	**Borovoye Array**	**65.84**	**327**	P		**P**	**21 33 15.9**	**-1.5**
BVAR	**Borovoye Array**	**65.84**	**327**	P		**P**	**21 33 15.9**	**-1.5**
	comp=Z,1.6nm,0.7s,baz=126,slow=7.5,SNR=12							
BRVK	**Borovoye**	**65.92**	**327**	*e*P		**P**	**21 33 17.1**	**-0.7**
	comp=Z,7.2nm,1.0s							
ABKAR	**Akbulak array**	**70.77**	**320**	*e*P		**P**	**21 33 46.6**	**-1.7**
AKTO	**Aktyubinsk**	**72.27**	**321**	P		**P**	**21 33 56.3**	**-1.0**
AKTO	**Aktyubinsk**	**72.27**	**321**	P		**P**	**21 33 56.3**	**-1.0**
	comp=Z,3.2nm,0.7s,baz=106,slow=9.4,SNR=12							
RAYN	**Ar Rayn**	**79.71**	**293**	*e*P		**P**	**21 34 39.5**	**-0.8**
	comp=Z,3.9nm,1.1s							
ILAR	**Eielson Array**	**83.64**	**25**	P		**P**	**21 35 01.2**	**+1.1**
ILAR	**Eielson Array**	**83.64**	**25**	P		**P**	**21 35 01.2**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=246,slow=5.0,SNR=13							
VNDA	**Vanda**	**85.11**	**173**	*e*P		**P**	**21 35 07.8**	**+0.5**
VNDA	**Vanda**	**85.11**	**173**	P		**P**	**21 35 06.8**	**-0.5**
	comp=Z,2.7nm,1.1s,baz=305,slow=4.4,SNR=5.5							
SPITS	**Spitsbergen Ar**	**88.81**	**349**	P		**P**	**21 35 25.6**	**+0.3**
SPITS	**Spitsbergen Ar**	**88.81**	**349**	P		**P**	**21 35 25.6**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=88,slow=7.7,SNR=6.8							
ARCES	**ARCESS Array B**	**88.83**	**340**	P		**P**	**21 35 25.4**	**-0.2**
ARCES	**ARCESS Array B**	**88.83**	**340**	P		**P**	**21 35 25.4**	**-0.2**
	comp=Z,6.5nm,0.8s,baz=78,slow=5.9,SNR=20							
BRTR	**Keskin Array B**	**88.85**	**310**	P		**P**	**21 35 24.6**	**-1.8**
BRTR	**Keskin Array B**	**88.85**	**310**	P		**P**	**21 35 24.6**	**-1.8**
	comp=Z,0.7nm,0.8s,baz=102,slow=5.2,SNR=5.5							
FINES	**FINESS Array B**	**90.29**	**332**	P		**P**	**21 35 31.3**	**-1.2**
FINES	**FINESS Array B**	**90.29**	**332**	P		**P**	**21 35 31.3**	**-1.2**
	comp=Z,3.1nm,0.8s,baz=256,slow=3.9,SNR=4.7							
NOA	**NORSAR Array B**	**97.22**	**334**	P		**P**	**21 36 03.4**	**-1.1**
NOA	**NORSAR Array B**	**97.22**	**334**	P		**P**	**21 36 03.4**	**-1.1**
	comp=Z,1.4nm,0.7s,baz=66,slow=4.5,SNR=4.0							
YKA	**Yellowknife Ar**	**98.02**	**24**	P		Pdif	21 36 08.7	+0.8
YKA	**Yellowknife Ar**	**98.02**	**24**	P		Pdif	21 36 08.7	+0.8
	comp=Z,0.2nm,0.6s,baz=290,slow=3.9,SNR=3.2							
SCHQ	**Schefferville**	**118.92**	**9**	PKP		**PKPdf**	**21 41 21.1**	**+0.9**
SCHQ	**Schefferville**	**118.92**	**9**	PKP		**PKPdf**	**21 41 21.1**	**+0.9**
	comp=Z,1.8nm,0.7s,baz=342,slow=3.2,SNR=3.4							
TXAR	**Lajitas Array**	**120.65**	**51**	PKP		**PKPdf**	**21 41 26.0**	**+1.6**
TXAR	**Lajitas Array**	**120.65**	**51**	PKP		**PKPdf**	**21 41 26.0**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=0.0,slow=1.8,SNR=3.3							
TORD	**Torodi Ar. Bea**	**122.27**	**289**	PKP		**PKPdf**	**21 41 27.3**	**-0.4**
TORD	**Torodi Ar. Bea**	**122.27**	**289**	PKP		**PKPdf**	**21 41 27.3**	**-0.4**
	comp=Z,1.4nm,0.8s,baz=45,slow=2.5,SNR=7.7							
LCO	**Las Campanas**	**151.38**	**147**	*e*PKPbc		**PKPbc**	**21 42 27.0**	**+0.5**
SIV	**San Ignacio**	**167.07**	**145**	PKP		**PKPdf**	**21 42 39.6**	**+1.0**
SIV	**San Ignacio**	**167.07**	**145**	PKP		**PKPdf**	**21 42 39.6**	**+1.0**
	comp=Z,0.8nm,0.7s,baz=285,slow=2.9,SNR=3.8							

IDC 14 21:24:51.3±2.1, 31.07S×178.49W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.7/18, mbtmp3.8/3, Error ellipse: s-maj=61.2km s-min=41.5km az=42.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.66**	**268**	P	P	21 32 49.0	-0.9
	0.6nm,0.4s,baz=107,slow=7.1,SNR=4.6						
WRA	**Warramunga Arr**	**43.71**	**273**	P	P	21 32 58.9	+0.5
	0.8nm,0.4s,baz=112,slow=8.0,SNR=8.2						
QSPA	**South Pole Qui**	**59.04**	**180**	P	P	21 34 52.5	-0.4
	0.9nm,0.9s,baz=131,slow=0.7,SNR=3.2						
FINES	**FINESS Array B**	**145.63**	**339**	PKPbc	PKPdf	21 44 30.5	-0.3
	9.3nm,1.2s,baz=66,slow=3.5,SNR=6.1						

PGC 14 21:28:17.6±0.0, 56.53N×122.05W, h1km, ML3.5/7, 14D, British Columbia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FNBB	**Fort Nelson**	**2.42**	**348**	⇓Pn	Pn	21 29 57.5	-0.9
FNBB				⇓Sn	Sn	21 29 27.9	-0.8
FSB	**Fort Saint Jam**	**2.43**	**213**	⇓Pg	Pb	21 29 02.0	-0.1
FSB				⇑Sg	Sb	21 29 32.5	-0.1
CLSB	**Cack Lake**	**3.79**	**185**	⇓Pg	Pb	21 29 25.6	+0.3
UBRB	**Upper Baezaeko**	**3.83**	**199**	⇓Pn	Pn	21 29 17.1	-0.6
UBRB				⇓Sg	Sb	21 30 15.3	+2.3
ALRB	**Anaheim Lake**	**4.40**	**205**	⇓Sg	Sb	21 30 33.6	+4.3
DLBC	**Dease Lake**	**4.71**	**297**	⇑Pg	Pb	21 29 41.9	+0.9
DLBC				⇓Sg	Sb	21 30 41.9	+3.6
BLBC	**Blue River**	**4.78**	**159**	⇓Sg	Sb	21 30 46.0	+5.2
RUBB	**Prince Rupert**	**5.17**	**248**	⇑Pn	Pn	21 29 35.0	-1.0
DOWB	**Downie Slide**	**5.43**	**156**	⇓Sg	Sg	21 31 06.4	-5.7
LLLB	**Lillooet**	**5.93**	**179**	⇓Sg	Sg	21 31 22.1	-6.0
YKW3	**Yellowknife Ar**	**7.13**	**29**	⇑Pn	Pn	21 30 01.6	-1.3
YKW3				⇑Sn	Sn	21 31 18.4	-5.9
GALN	**Gameti Lake**	**7.97**	**15**	⇑Pn	Pn	21 30 12.5	-1.9
GALN				⇑Sn	Sn	21 31 37.8	-7.2
ILKN	**Indian Lake**	**8.44**	**21**	⇑Pn	Pn	21 30 19.1	-1.8
ILKN				⇑Sn	Sn	21 31 49.4	-7.3
CTLN	**Castor Lake**	**8.46**	**18**	⇓Pn	Pn	21 30 19.5	-1.7
CTLN				⇓Sn	Sn	21 31 50.0	-7.3
JERN	**Jeri Cho Mine,**	**10.78**	**24**	⇑Pn	Pn	21 30 50.3	-2.6
JERN				⇑Sn	Sn	21 32 44.4	-10

ISK 14 22:06:16.1, 36.99N×28.28E, h16km, MD2.6
CSEM 14 22:06:16.8±0.2, 36.94N×28.26E, h2km, MD2.6, Error ellipse: s-maj=4.9km s-min=2.9km az=27.0
DDA 14 22:06:17.3, 36.98N×28.23E, h7km, MD2.4

ISC 14 22:06:15.5±1.0, 36.95N±0.04×28.22E±0.03, h11km±6km, n16, σ0.56/28, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.19**	**15**	*e*Pg	**Pb**	**22 06 20.4**	**-0.6**
YER				*e*Sg	**Sb**	**22 06 23.5**	**+0.9**
YER	**Yerkesik**	**0.19**	**15**	*e*Pg	**Pb**	**22 06 20.4**	**-0.6**
YER				*e*Sg	**Sb**	**22 06 23.5**	**+0.9**
TURN	**Turunc**	**0.32**	**104**	*i* P	**Pg**	**22 06 21.5**	**-0.3**
TURN				*i* S	**Sg**	**22 06 25.1**	**-0.9**
TURN	**Turunc**	**0.32**	**104**	*i* P	**Pg**	**22 06 21.5**	**-0.3**
TURN				*i* S	**Sg**	**22 06 25.1**	**-0.9**
MLSB	**Milas**	**0.49**	**314**	*e*PG	**Pb**	**22 06 26.7**	**+0.5**
MLSB				*e*SG	**Sb**	**22 06 34.0**	**+0.6**
MLSB	**Milas**	**0.49**	**314**	*e*Pg	**Pb**	**22 06 26.7**	**+0.5**
MLSB				*e*Sg	**Sb**	**22 06 34.0**	**+0.6**
BODT	**Bodrum**	**0.74**	**279**	*e*PG	**Pn**	**22 06 31.8**	**0.0**
BODT				*e*SG	**Sn**	**22 06 42.7**	**-0.3**
BODT	**Bodrum**	**0.74**	**279**	*e*Pg	**Pn**	**22 06 31.8**	**0.0**
BODT				*e*Sg	**Sn**	**22 06 42.7**	**-0.3**
AYDN	**Tasoluk**	**0.76**	**339**	*i* P	**Pn**	**22 06 32.1**	**0.0**
AYDN				*i* S	**Sb**	**22 06 41.1**	**0.0**
AYDN	**Tasoluk**	**0.76**	**339**	*i* P	**Pn**	**22 06 32.1**	**0.0**
AYDN				*i* S	**Sb**	**22 06 41.1**	**0.0**
FETY	**Fethiye**	**0.76**	**114**	*e*PG	**Pb**	**22 06 31.1**	**+0.4**
FETY				*e*SG	**Sb**	**22 06 41.4**	**+0.4**
FETY	**Fethiye**	**0.76**	**114**	*e*Pg	**Pb**	**22 06 31.1**	**+0.4**
FETY				*e*Sg	**Sb**	**22 06 41.4**	**+0.4**
DNZL	**Cakiroluk**	**0.99**	**41**	*e*P	**Pn**	**22 06 36.0**	**+0.6**
DNZL				*i* S	**Sn**	**22 06 49.7**	**+0.3**
DNZL	**Cakiroluk**	**0.99**	**41**	*e*P	**Pn**	**22 06 36.0**	**+0.6**
DNZL				*i* S	**Sn**	**22 06 49.7**	**+0.3**
AKAS	**Kas**	**1.32**	**122**	*i* P	Pg	22 06 44.6	+3.7
AKAS				*i* S	Sg	22 07 05.5	+7.4
AKAS	**Kas**	**1.32**	**122**	*i* P	Pg	22 06 44.6	+3.7

BJI 14 22:10:04.1, 56.10S×27.80W, h30km, mB5.3/9, Ms5.2/9, Ms7 4.9/10
NEIC 14 22:10:04.9±0.3, 56.12S×27.62W, h35km, mb5.0/19, Error ellipse: s-maj=11.0km s-min=9.1km az=197.0
IDC 14 22:10:10.2±0.6, 56.04S×27.60W, h88km±4km, mb4.4/12, mb1 4.5/13, mb1mx4.3/19, mbtmp4.4/13, MS3.6/5, Ms1 3.6/5, ms1mx3.4/19, Error ellipse: s-maj=18.3km s-min=9.9km az=60.0
ISCJB 14 22:10:12.5±0.3, 56.20S±0.06×27.78W±0.07, h121km, mb4.8/24, Error ellipse: s-maj=9.5km s-min=7.4km az=36.6

ISC 14 22:10:14.6±0.3, 56.17S±0.06×27.93W±0.07, h121km, n102, σ1$64/121, mb4.7/24, 1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.84**	**157**	*e*Pn	**Pn**	**22 14 00.3**	**-2.4**
EFI	**East Falkland**	**18.23**	**272**	*e*P	**P**	**22 14 17.9**	**-0.1**
	210nm,1.4s						
SNAA	**Sanae**	**18.80**	**155**	*e*Pn	**P**	**22 14 22.1**	**-2.2**
SNAA	**Sanae**	**18.80**	**155**	*e*Pn	**P**	**22 14 21.9**	**-2.4**
	54nm,0.8s						
SNAA				S	**Sn**	**22 17 57.5**	**+0.6**
SNAA				ScP	**ScP**	**22 22 10.5**	**+0.7**
SNAA	**Sanae**	**18.80**	**155**	P	**P**	**22 14 22.1**	**-2.2**
	1.9nm,0.3s,baz=309,slow=9.8,SNR=557						
SNAA				S	**Sn**	**22 17 54.7**	**-2.2**
	0.0nm,0.3s,baz=232,slow=16,SNR=2.2						
SNAA				LR	LR	22 20 41.8	
	comp=Z,43nm,19.0s,baz=202,slow=34						
SNAA				ScP	**ScP**	**22 22 10.5**	**+0.7**
	0.0nm,0.3s,baz=329,slow=1.8,SNR=9.9						
PMSA	**Palmer Station**	**19.51**	**229**	*e*Pn	**P**	**22 14 30.9**	**-1.0**
	605nm,2.8s						
PMSA	**Palmer Station**	**19.51**	**229**	P	**Pn**	**22 14 36.4**	**+2.0**
	1.2nm,0.3s,baz=212,slow=6.9,SNR=6.6						
MAIT	**Maitri**	**22.37**	**146**	*e*P	P	22 14 49.8	-12
USHA	**Ushuaia**	**22.76**	**256**	P	**P**	**22 15 06.4**	**+0.2**
USHA	**Ushuaia**	**22.76**	**256**	P	**P**	**22 15 06.4**	**+0.2**
	12nm,0.8s,baz=66,slow=4.3,SNR=3.8						
TRQA	**Tornquist**	**28.99**	**294**	*e*P	**P**	**22 16 02.0**	**-0.7**
	262nm,1.8s						
TRQA				*e*		22 16 22.8	
PLCA	**Paso Flores**	**31.62**	**281**	*e*P	**P**	**22 16 24.7**	**-1.1**
	117nm,2.5s						
PLCA	**Paso Flores**	**31.62**	**281**	P	**P**	**22 16 25.0**	**-0.8**
	3.1nm,0.8s,baz=155,slow=8.2,SNR=6.1						
PLCA				LR	LR	22 28 01.8	
	comp=Z,125nm,18.0s,baz=174,slow=34						
SYO	**Syowa Base**	**31.75**	**141**	⇓*e*P	P	22 16 22.8	-3.8
CAM4	**Nova Friburgo**	**35.46**	**336**	(P)	**P**	**22 16 59.3**	**-0.1**
CAM4				*i*		22 17 01.9	
CAM4				*i*		22 17 05.9	
CAM4				*i*		22 17 15.8	
SPB	**Sao Paulo**	**35.55**	**328**	*e*P	**P**	**22 16 59.4**	**-0.5**
	40nm,1.2s						
CPUP	**Villa Florida**	**36.58**	**312**	P	**P**	**22 17 08.4**	**-0.3**
CPUP				pP	pP	22 17 27.1	-8.4
CPUP				PcP	**PcP**	**22 19 28.9**	**-0.4**
CPUP				ScP	**ScP**	**22 23 04.7**	**+0.3**
CPUP	**Villa Florida**	**36.58**	**312**	P	**P**	**22 17 08.4**	**-0.3**
	7.8nm,0.7s,baz=133,slow=7.7,SNR=36						
CPUP				pP	pP	22 17 27.1	-8.4
	9.2nm,0.9s,baz=132,slow=7.8,SNR=8.1						
CPUP				PcP	**PcP**	**22 19 28.9**	**-0.4**
	0.5nm,0.4s,baz=163,slow=4.4,SNR=3.2						
CPUP				ScP	**ScP**	**22 23 04.7**	**+0.3**
	2.1nm,1.0s,baz=256,slow=18,SNR=3.5						
MAW	**Mawson**	**40.30**	**144**	*e*P	**P**	**22 17 36.6**	**-2.6**
	2.9nm,0.9s						
MAW				ScP	**ScP**	**22 23 18.3**	**+0.4**
MAW	**Mawson**	**40.30**	**144**	P	**P**	**22 17 37.4**	**-1.8**
	9.6nm,0.8s,baz=226,slow=8.2,SNR=18						
MAW				ScP	**ScP**	**22 23 18.3**	**+0.4**
	8.0nm,0.8s,baz=269,slow=6.3,SNR=13						
MAW				LR	LR	22 32 02.5	
	comp=Z,141nm,19.1s,baz=270,slow=33						
LCO	**Las Campanas**	**40.57**	**294**	*e*P	**P**	**22 17 41.7**	**-0.7**
	9.8nm,0.8s						

SUR	**Sutherland**	**41.07**	**76**	*e*P		**P**	**22 17 44.7**	**-1.6**
BDFB	**Brasilia**	**43.26**	**331**	P		**P**	**22 18 04.5**	**+0.4**
	7.6nm,0.6s,baz=137,slow=5.8,SNR=20							
LVC	**Limon Verde**	**45.00**	**301**	*e*P		**P**	**22 18 18.5**	**+0.4**
	21nm,0.7s							
SBA	**Scott Base**	**45.93**	**184**	*e*P		**P**	**22 18 25.8**	**+1.4**
	12nm,1.1s							
BOSA	**Boshof**	**46.40**	**76**	*e*P		**P**	**22 18 29.4**	**+0.6**
	200nm,3.0s							
BOSA	**Boshof**	**46.40**	**76**	LR		LR	22 34 46.3	
	comp=Z,146nm,18.7s,baz=74,slow=32							
VNDA	**Vanda**	**46.44**	**183**	*e*P		**P**	**22 18 29.3**	**+0.9**
	10.0nm,0.8s							
VNDA				ScP		**ScP**	**22 23 43.6**	**+0.8**
VNDA	**Vanda**	**46.44**	**183**	P		**P**	**22 18 28.9**	**+0.5**
	8.7nm,0.7s,baz=190,slow=6.1,SNR=56							
VNDA				ScP		**ScP**	**22 23 43.6**	**+0.8**
	1.4nm,0.9s,baz=232,slow=3.9,SNR=4.8							
VNDA				LR		LR	22 35 54.9	
	comp=Z,75nm,21.9s,baz=188,slow=33							
LBTB	**Lobatse**	**49.44**	**74**	*e*P		**P**	**22 18 51.4**	**-0.9**
	147nm,1.8s							
TSUM	**Tsumeb**	**50.10**	**61**	*e*P		**P**	**22 18 56.1**	**-1.2**
	1.9nm,0.7s							
LPAZ	**La Paz**	**50.11**	**306**	*e*P		**P**	**22 18 58.5**	**+0.4**
	19nm,0.8s							
LPAZ	**La Paz**	**50.11**	**306**	P		**P**	**22 18 58.4**	**+0.4**
	13nm,0.6s,baz=120,slow=6.1,SNR=68							
ARE	**Arequipa**	**51.51**	**302**	*e*P		**P**	**22 19 09.0**	**+0.9**
CASY	**Casey**	**53.94**	**161**	*e*P		**P**	**22 19 24.4**	**-0.6**
SAML	**Samuel**	**54.59**	**316**	*e*P		**P**	**22 19 29.8**	**-0.6**
	16nm,1.0s							
SAML				*e*PcP		**PcP**	**22 20 31.6**	**-0.4**
LSZ	**Lusaka**	**58.80**	**69**	*e*P		**P**	**22 20 00.4**	**+0.2**
	13nm,1.5s							
MSKU	**Masuku**	**63.75**	**48**	P		**P**	**22 20 33.0**	**-0.5**
DBIC	**Dimbokro**	**65.45**	**25**	*e*P		**P**	**22 20 42.7**	**-1.6**
	8.5nm,1.0s							
DBIC	**Dimbokro**	**65.45**	**25**	P		**P**	**22 20 42.8**	**-1.6**
	4.4nm,0.7s,baz=171,slow=8.8,SNR=6.3							
OTAV	**Otavalo**	**69.38**	**304**	*e*P		**P**	**22 21 10.7**	**+0.9**
	13nm,0.9s							
TOA0	**Torodi Ar. Sit**	**73.36**	**30**	*e*P		**P**	**22 21 31.3**	**-1.7**
TORD	**Torodi Ar. Bea**	**73.36**	**30**	P		**P**	**22 21 31.7**	**-1.3**
TORD				pP		**PcP**	**22 21 52.3**	**+3.7**
TORD	**Torodi Ar. Bea**	**73.36**	**30**	P		**P**	**22 21 31.7**	**-1.3**
	14nm,1.0s,baz=199,slow=6.4,SNR=51							
TORD				pP		**PcP**	**22 21 52.3**	**+3.7**
	3.3nm,0.6s,baz=199,slow=6.4,SNR=3.0							
TAM	**Tamanrasset**	**83.60**	**31**	*e*P		**P**	**22 22 29.9**	**+0.7**
	3.7nm,1.1s							
TEIG	**Tepich**	**91.44**	**305**	P		**P**	**22 23 06.9**	**+0.1**
TEIG	**Tepich**	**91.44**	**305**	P		**P**	**22 23 06.9**	**+0.1**
	13nm,0.9s,baz=164,slow=5.5,SNR=5.0							
STKA	**Stephens Creek**	**91.85**	**171**	P		**P**	**22 23 10.1**	**+1.3**
	3.1nm,1.0s,baz=218,slow=9.1,SNR=2.9							
ESLA	**Sonseca Array**	**97.62**	**18**	*e*P		Pdif	22 23 35.0	+0.3
COCO	**West Island**	**97.93**	**126**	*e*P		**P**	**22 23 35.5**	**-1.2**
	655nm,0.4s							
ASAR	**Alice Springs**	**99.00**	**163**	P		**Pdif**	**22 23 40.0**	**-1.5**
ASAR	**Alice Springs**	**99.00**	**163**	P		**Pdif**	**22 23 40.0**	**-1.5**
	0.8nm,0.7s,baz=186,slow=4.6,SNR=4.7							
WRA	**Warramunga Arr**	**102.72**	**163**	P		**Pdif**	**22 23 57.6**	**-0.5**
WRA	**Warramunga Arr**	**102.72**	**163**	P		**Pdif**	**22 23 57.6**	**-0.5**
	0.2nm,0.6s,baz=195,slow=4.3,SNR=3.1							
NVAR	**Mina Array Bea**	**121.06**	**294**	PKP		**PKPdf**	**22 28 50.

HHC				SKKS	SKKSac	22 40 13.8	+11
HHC				SS	SS	22 52 39.4	+11
HHC				AMB	AMB		
	comp=Z,260nm,10.6s						
HHC				LR	LR		
	comp=N,150nm,18.2s						
HHC				LR	LR		
	comp=E,170nm,19.2s						
HHC				LR	LR		
	comp=Z,170nm,19.4s						
SML	**Sawmill**	**149.76 306**	*e*PKPdf	**PKPbc**		**22 29 46.6**	**-2.2**
ILAR	**Eielson Array**	**149.89 312**	PKPbc	**PKPbc**		**22 29 48.3**	**-0.6**
ILAR	**Eielson Array**	**149.89 312**	PKPbc	**PKPbc**		**22 29 48.3**	**-0.6**
	comp=Z,17nm,0.9s,baz=129,slow=1.7,SNR=119						
COLA	**College**	**150.31 312**	*e*PKPdf	**PKPdf**		**22 29 47.2**	**+2.7**
KDAK	**Kodiak Island**	**150.50 297**	*e*PKPdf	**PKPdf**		**22 29 46.8**	**+1.7**
KDAK			PKPbc	**PKPbc**		**22 29 50.7**	**+0.2**
KDAK			pPKPbc	pPKPbc		22 30 13.4	-10
KDAK	**Kodiak Island**	**150.50 297**	PKPbc	**PKPbc**		**22 29 50.7**	**+0.2**
	comp=Z,11nm,0.7s,baz=112,slow=1.0,SNR=11						
KDAK			pPKPbc	pPKPbc		22 30 13.4	-10
	comp=Z,4.1nm,0.5s,baz=196,slow=4.1,SNR=2.8						
MCK	**McKinley**	**150.53 309**	*e*PKPdf	**PKPdf**		**22 29 46.7**	**+1.7**
TRF	**Thorofare Moun**	**151.05 308**	*e*PKPdf	**PKPbc**		**22 29 49.1**	**-2.8**
SONM	**Songino Array**	**151.15 87**	PKPbc	**PKPbc**		**22 29 51.5**	**-1.1**
SONM	**Songino Array**	**151.15 87**	PKPbc	**PKPbc**		**22 29 51.5**	**-1.1**
	comp=Z,4.5nm,0.8s,baz=220,slow=3.1,SNR=7.0						
RSO	**Redoubt South**	**151.44 302**	*e*PKPdf	**PKPdf**		**22 29 49.1**	**+2.3**
ULN	**Ulaanbaatar**	**151.53 88**	*e*PKPdf	**PKPdf**		**22 29 48.3**	**+1.1**
COLD	**Coldfoot**	**151.62 316**	*e*PKPdf	**PKPdf**		**22 29 49.0**	**+2.5**
PPLA	**Purkeypile**	**151.78 307**	*e*PKPdf	**PKPbc**		**22 29 50.7**	**-2.9**
CN2	**Changchun**	**159.03 115**	*e*PKP	**PKPdf**		**22 29 58.8**	**+1.5**
CN2			PP	**PP**		**22 34 20.1**	**+3.8**
CN2			LR	LR			
	comp=N,200nm,19.0s						
CN2			LR	LR			
	comp=E,200nm,19.0s						
CN2			LR	LR			
	comp=Z,200nm,19.0s						

IDC 14 22:20:22.1±1.2, 42.88S×72.77W, h0km, mb3.7/5, mb1 4.0/6, mb1mx3.8/20, mbtmp3.8/6, ML4.0/1, MS3.5/1, Ms1 3.7/1, ms1mx2.8/24, Error ellipse: s-maj=40.4km s-min=23.3km az=106.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**2.71**	**39**	Pn	Pn	22 21 08.7	+1.6
	6.5nm,0.3s,baz=223,slow=16,SNR=46						
PLCA				Sn	Sb	22 21 43.2	-2.2
	43nm,0.3s,baz=122,slow=11,SNR=21						
LVC	**Limon Verde**	**20.46**	**10**	P	P	22 25 02.3	+0.7
	3.1nm,0.8s,baz=150,slow=13,SNR=3.8						
CPUP	**Villa Florida**	**20.78**	**42**	P	P	22 25 04.1	-0.6
	0.7nm,0.6s,baz=191,slow=5.9,SNR=5.2						
LPAZ	**La Paz**	**26.80**	**10**	LR	LR	22 38 12.2	
	comp=Z,115nm,21.4s,baz=353,slow=40						
SIV	**San Ignacio**	**28.61**	**24**	P	P	22 26 18.2	-1.9
	1.1nm,0.7s,baz=220,slow=10,SNR=5.1						
SNAA	**Sanae**	**43.70**	**155**	P	P	22 28 28.7	+0.2
	2.8nm,1.3s,baz=258,slow=4.0,SNR=4.8						
TXAR	**Lajitas Array**	**77.27**	**333**	P	P	22 32 19.1	+0.9
	0.3nm,0.7s,baz=154,slow=9.5,SNR=5.8						
GERES	**GERESS Array B**	**118.62**	**49**	PKP	PKPdf	22 39 11.4	0.0
	0.2nm,0.4s,baz=331,slow=7.9,SNR=3.3						
ILAR	**Eielson Array**	**121.76**	**331**	PKP	PKPdf	22 39 15.7	-1.2
	0.3nm,0.8s,baz=198,slow=1.5,SNR=4.3						

JMA 14 22:34:55.5±0.2, 27.02N×127.24E, h86km±2km, M3.6, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAGN	**Aguni-jima**	**0.43**	**180**	P	Pn	22 35 09.2	-0.1
JAGN				S	Sn	22 35 19.3	-0.2
JIH	**Iheya**	**0.65**	**89**	P	Pn	22 35 11.4	+0.3
JIH				S	Sn	22 35 22.8	0.0
JKE	**Kume jima 2**	**0.80**	**211**	P	Pn	22 35 12.7	0.0
JKE				S	Sn	22 35 25.4	-0.1
JOW	**Kunigami**	**0.94**	**101**	P	Pn	22 35 14.1	-0.2
JOW				*e*S	Sn	22 35 27.6	-0.7
JJT2	**Tamagusuku 2**	**0.99**	**152**	P	Pn	22 35 14.9	+0.1
JJT2				*e*S	Sn	22 35 29.5	+0.3
JTK	**Tokunoshima**	**1.70**	**63**	P	Pn	22 35 23.4	-0.3
JTK				*e*S	Sn	22 35 44.7	-0.3
JAM	**Amami Oshima**	**2.51**	**56**	P	Pn	22 35 34.4	0.0
JAM				*e*S	Sn	22 36 03.5	-0.7
JZK	**Kikaishima**	**2.75**	**61**	P	Pn	22 35 37.5	0.0
JZK				*e*S	Sn	22 36 09.5	-0.3
JOGS	**Gusukube**	**2.79**	**217**	P	Pn	22 35 38.0	-0.1
JTJ	**Tarama**	**3.29**	**225**	P	Pn	22 35 44.0	-0.9
JNN	**Nakanoshima**	**3.65**	**39**	P	Pn	22 35 50.1	+0.4
JMZ	**Minamidaito 2**	**3.76**	**108**	P	Pn	22 35 48.3	-3.0
JMZ				*e*S	Sn	22 36 27.0	-7.5
JIJ	**Ishigaki jima**	**3.85**	**227**	P	Pn	22 35 50.9	-1.5
JKRS	**Kuro-shima**	**4.02**	**227**	P	Pn	22 35 53.8	-1.0
IRIF	**Iriomote-Funau**	**4.14**	**231**	P	Pn	22 35 55.3	-1.2
HATJ	**Hateruma jima**	**4.28**	**227**	P	Pn	22 35 57.1	-1.2
YOJ	**Yonaguni jima**	**4.59**	**237**	P	Pn	22 36 02.1	-0.4

MAN 14 22:48:08, 10.54N×124.54E, h5km, mb4.6, ML3.5, MS3.4, 3D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.51**	**142**	*e*P	Pb	22 48 19.5	0.0
MSLP				*e*S	Sb	22 48 27.6	+0.5
OCLP	**Ormoc**	**0.51**	**7**	*e*P	Pb	22 48 19.6	+0.1
OCLP				*e*S	Sn	22 48 29.6	-1.6
LLP	**Lapu-Lapu**	**0.61**	**249**	*i*/P	Pb	22 48 20.8	-0.4
LLP				*i* S	Sb	22 48 29.8	-0.3
PLP	**Palo**	**0.76**	**35**	*e*P	Pb	22 48 23.9	+0.2
TBP	**Tagbilaran**	**1.08**	**219**	*e*P	Pb	22 48 29.5	+0.3
TBP				*e*S	Sb	22 48 43.9	+0.4
RCP	**Roxas**	**2.04**	**300**	*e*P	Pb	22 48 44.4	-1.1
DCPH	**Dipolog City**	**2.27**	**211**	*e*P	Pb	22 48 47.9	-1.6
DCPH				*e*S	Sb	22 49 16.3	-1.6
PAGZ	**Pagadian**	**2.91**	**203**	*e*P	Pn	22 48 57.3	+2.3
OTRP	**Odiongan**	**3.06**	**306**	*e*P	Pn	22 48 58.6	+1.5

MAN 15 00:44:26, 11.25N×126.14E, h10km, mb4.4, ML3.3, MS3.2, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.77**	**297**	*e*P	Pg	00 44 41.1	+0.1
BESP				*e*S	Sn	00 44 54.3	-0.4
PLP	**Palo**	**1.14**	**266**	*e*P	Pb	00 44 46.3	-1.6
PLP				*e*S	Sb	00 44 59.6	-3.2
OCLP	**Ormoc**	**1.52**	**263**	*e*P	Pb	00 44 54.2	-0.1
MSLP	**Maasin**	**1.68**	**229**	*e*P	Pn	00 44 55.6	+0.2
MSLP				*e*S	Sb	00 45 18.5	+0.3
CNP	**Catarman**	**1.92**	**311**	*e*P	Pn	00 44 59.1	+0.4
BUTP	**Butuan**	**2.32**	**193**	*e*P	Pb	00 45 07.0	-1.0
BUTP				*e*S	Sg	00 45 40.5	-0.1
LLP	**Lapu-Lapu**	**2.33**	**247**	*e*P	Pn	00 45 04.4	0.0
RCP	**Roxas**	**3.34**	**276**	*e*P	Pn	00 45 20.3	+1.9
BUKP	**Musuan**	**3.51**	**198**	*e*P	Pn	00 45 21.4	+0.6
BUKP				*e*S	Sb	00 46 08.0	-3.2
PAGZ	**Pagadian**	**4.34**	**219**	*e*P	Pn	00 45 33.3	+1.3

*BJI **15** 00:44:51.1, 5.88S×151.83E, h69km, mB4.9/24, mb4.8/31, Ms4.7/23, Ms7 4.3/24*

*AUST **15** 00:44:54.4, 5.19S×151.60E, h60km*

*ISCJB **15** 00:44:55.0±0.2, 5.37S±0.03×151.28E±0.04, h57km, mb4.7/54, MS3.9/18, Error ellipse: s-maj=5.1km s-min=4.6km az=7.1*

*IDC **15** 00:44:58.6±1.8, 5.44S×151.26E, h79km±15km, mb4.3/20, mb1 4.4/22, mb1mx4.4/23, mbtmp4.3/22, MS3.8/11, Ms1 3.9/11, ms1mx3.6/19, Error ellipse: s-maj=16.1km s-min=8.7km az=120.0*

*NEIC **15** 00:44:58.1±1.0, 5.38S×151.26E, h75km±9km, mb4.8/31, Error ellipse: s-maj=7.5km s-min=7.2km az=96.0*

*GCMT **15** 00:44:59.1±0.3, 5.67S×151.33E, h61km±1km, MW4.9, Moment Tensor Solution. s40,c54; s45,c56; Moment tensor: Scale 10^16Nm; Mrr2.65±.16; Mθθ-2.95±.11; Mφφ0.30±.13; Mrθ-0.13±.10; Mrφ-1.12±.13; Mθφ0.16±.10; Best double couple: Mo3.00000×10^16 NP1:φ67.00000°, δ45.00000°, λ82.00000°. NP2:φ258.00000°, δ46.00000°, λ97.00000°. Principal axes: T 2.6700, Plg85.0000°, Azm245.0000°; N 0.6300, Plg5.0000°, Azm73.0000°; P -3.3000, Plg1.0000°, Azm343.0000°; Data Used: II IU IC G CN.*

*DJA **15** 00:45:01.8±1.5, 5.5S±6.6×15.1E±1.2, h85km±13km, M5.2/9, mB5.7/1, mb4.7/9, MLv5.4/1, Mw(mB)5.2/1*

ISC 15 00:44:56.5±0.3, 5.44S±0.04×151.35E±0.05, h57km, n252, σ1.958/298, mb4.8/56, MS3.8/19, 4C-3D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.73**	**226**	*e*Pn	**Pn**	**00 46 20.5**	**+1.6**
PMG				*e*Sn	**Sn**	**00 47 23.9**	**+0.5**
PMG	**Port Moresby**	**5.73**	**226**	P	**Pn**	**00 46 21.6**	**+2.6**
	223nm,1.1s,8μm2.3nm						
PMG	**Port Moresby**	**5.73**	**226**	P	**Pn**	**00 46 21.5**	**+2.6**
	16nm,0.3s,baz=39,slow=6.1,SNR=32						
PMG				S	**Sn**	**00 47 23.6**	**+0.2**
	101nm,0.3s,baz=94,slow=9.5,SNR=17						
HNR	**Honiara**	**9.40**	**115**	*e*Pn	**Pn**	**00 47 11.1**	**+1.7**
HNR				*e*Sn	**Sn**	**00 48 56.8**	**+3.1**
HNR	**Honiara**	**9.40**	**115**	LR	LR	00 49 28.5	
	comp=Z,55nm,20.9s,baz=280,slow=28						
COEN	**Coen**	**11.68**	**223**	*e*Pn	**Pn**	**00 47 41.1**	**+0.5**
	116nm,1.1s						
COEN				*e*Sn	**Sn**	**00 49 45.6**	**-3.9**
COEN	**Coen**	**11.68**	**223**	P	**Pn**	**00 47 41.3**	**+0.8**
	baz=12,SNR=7.2						
MTSU	**Mount Surprise**	**14.37**	**208**	P	**P**	**00 48 25.0**	**+2.6**
	baz=15,SNR=5.3						
CTA	**Charters Tower**	**15.38**	**198**	P	**P**	**00 48 32.0**	**-1.6**
CTA	**Charters Tower**	**15.38**	**198**	P	**P**	**00 48 32.0**	**-1.6**
	0.4nm,0.3s,baz=21,slow=14,SNR=6.1						
CTAO	**Charters Tower**	**15.38**	**198**	*e*Pn	**Pn**	**00 48 31.8**	**+1.7**
	28nm,1.4s						
FAKI	**Fak Fak**	**19.21**	**277**	P	**Pn**	**00 49 20.2**	**+2.7**
	baz=19,SNR=3.3						
EIDS	**Eidsvold**	**19.82**	**181**	*e*P	**P**	**00 49 22.9**	**+0.4**
	15nm,1.0s						
EIDS	**Eidsvold**	**19.82**	**181**	P	**P**	**00 49 23.5**	**+1.0**
	baz=20,SNR=5.1						
GUMO	**Guam**	**19.97**	**341**	*e*P	**P**	**00 49 25.2**	**+1.0**
	276nm,1.1s						
KDU	**Kakadu**	**19.97**	**248**	P	**P**	**00 49 23.9**	**-0.3**
	baz=20,SNR=41						
RMQ	**Roma**	**21.08**	**186**	P	**P**	**00 49 37.4**	**+1.3**
	baz=22,SNR=5.5						
MTN	**Manton Dam**	**21.26**	**248**	P	**P**	**00 49 38.3**	**+0.1**
	baz=22,SNR=32						
WRA	**Warramunga Arr**	**21.95**	**227**	P	**P**	**00 49 45.2**	**-0.4**
WRA				S	**S**	**00 53 42.9**	**-2.0**
WRA				ScP	**ScP**	**00 57 14.5**	**-1.0**
WRA	**Warramunga Arr**	**21.95**	**227**	P	**P**	**00 49 45.2**	**-0.4**
	39nm,0.8s,baz=52,slow=9.8,SNR=37						
WRA				S	**S**	**00 53 42.9**	**-2.0**
	16nm,1.1s,baz=54,slow=20,SNR=20						
WRA				ScP	**ScP**	**00 57 14.5**	**-1.0**
	1.2nm,0.6s,baz=53,slow=2.6,SNR=3.8						
WRA				LR	LR	00 58 28.9	
	comp=Z,157nm,18.2s,baz=30,slow=37						
DZM	**Mont Dzumac**	**22.06**	**140**	P	**P**	**00 49 47.6**	**+0.8**
DZM	**Mont Dzumac**	**22.06**	**140**	P	**P**	**00 49 47.6**	**+0.8**
	4.5nm,0.9s,baz=313,slow=18,SNR=3.3						
DZM				LR	LR	00 57 11.2	
	comp=Z,722nm,21.0s,baz=18,slow=33						
QLP	**Quilpie**	**22.10**	**197**	P	**P**	**00 49 48.2**	**+1.2**
	baz=22,SNR=11						
KNRA	**Kununurra**	**24.39**	**244**	P	**P**	**00 50 09.5**	**-0.2**
	baz=25,SNR=8.3						
KNRA				S	**S**	**00 54 32.6**	**+6.9**
	baz=25,SNR=4.6						
ASAR	**Alice Springs**	**24.71**	**221**	P	**P**	**00 50 12.6**	**0.0**
ASAR				PcP	**PcP**	**00 53 48.6**	**0.0**
ASAR				S	**S**	**00 54 29.1**	**-1.7**
ASAR				ScP	**ScP**	**00 57 23.3**	**+0.5**
ASAR	**Alice Springs**	**24.71**	**221**	P	**P**	**00 50 12.6**	**0.0**
	32nm,0.8s,baz=51,slow=8.9,SNR=85						
ASAR				PcP	**PcP**	**00 53 48.6**	**0.0**
	2.3nm,0.9s,baz=43,slow=3.1,SNR=5.1						
ASAR				S	**S**	**00 54 29.1**	**-1.7**
	0.5nm,0.7s,baz=36,slow=13,SNR=2.9						
ASAR				ScP	**ScP**	**00 57 23.3**	**+0.5**
	2.2nm,0.7s,baz=46,slow=4.0,SNR=5.4						
ARMA	**Armidale**	**24.85**	**179**	P	**P**	**00 50 15.2**	**+1.4**
	baz=25,SNR=3.6						
STKA	**Stephens Creek**	**27.84**	**198**	P	**P**	**00 50 41.1**	**+0.4**
STKA	**Stephens Creek**	**27.84**	**198**	P	**P**	**00 50 41.1**	**+0.4**
	6.4nm,0.9s,baz=22,slow=4.8,SNR=5.7						
STKA				LR	LR	01 00 06.7	
	comp=Z,290nm,21.0s,baz=120,slow=33						
FITZ	**Fitzroy Crossi**	**28.09**	**241**	*e*P	**P**	**00 50 42.3**	**-0.7**
	56nm,1.3s						
FITZ	**Fitzroy Crossi**	**28.09**	**241**	P	**P**	**00 50 42.3**	**-0.7**
	46nm,1.0s,baz=68,slow=6.0,SNR=36						
FITZ	**Fitzroy Crossi**	**28.09**	**241**	P	**P**	**00 50 42.4**	**-0.7**
	baz=28,SNR=20						
DAV	**Davao City (W)**	**28.56**	**296**	LR	LR	01 00 54.7	
	comp=Z,117nm,21.6s,baz=125,slow=34						
YNG	**Young**	**28.85**	**185**	P	**P**	**00 50 51.5**	**+1.8**
	baz=29,SNR=4.8						
AFI	**Afiamalu**	**37.27**	**106**	LR	LR	01 04 54.7	
	comp=Z,165nm,19.4s,baz=323,slow=32						
MEEK	**Meekatharra**	**37.67**	**232**	P	**P**	**00 52 05.6**	**-0.9**
	baz=38,SNR=19						
JOW	**Kunigami**	**39.09**	**326**	*e*P	**P**	**00 52 17.8**	**-0.5**
	70nm,1.1s						
MORW	**Morawa**	**40.82**	**231**	P	**P**	**00 52 32.6**	**-0.2**
	baz=41,SNR=3.7						
YHNB	**Yeheng**	**41.79**	**317**	*e*P	**P**	**00 52 40.6**	**-0.2**
	68nm,1.5s						
JNU	**Nakatsue**	**42.99**	**335**	*e*P	**P**	**00 52 49.3**	**-1.0**
	19nm,0.9s						
QIZ	**Qiongzhong**	**47.56**	**302**	P	**P**	**00 53 27.1**	**+0.3**
QIZ				sP	**sP**	**00 53 49.5**	**+1.2**
QIZ				S	**S**	**01 00 15.8**	**-2.4**
QIZ				LR	LR		
	comp=E,65nm,23.2s						
QIZ				LR	LR		
	comp=Z,220nm,26.7s						
KSRS	**Korea Array**	**47.94**	**335**	P	**P**	**00 53 30.2**	**+0.9**
	comp=Z,0.8nm,0.3s,baz=159,slow=8.9,SNR=7.8						
KSAR	**Wonju Array Be**	**47.94**	**335**	P	**P**	**00 53 30.2**	**+0.8**
NJ2	**Nanjing**	**48.45**	**322**	*e*P	**P**	**00 53 33.6**	**+0.2**
NJ2				pP	**pP**	**00 53 51.3**	**+2.9**
NJ2				sP	**sP**	00 54 01.1	+6.2
NJ2				PP	**PP**	**00 55 26.3**	**-0.3**
NJ2				S	**S**	**01 00 26.0**	**-4.3**
NJ2				sS	**sS**	**01 00 59.5**	**+4.0**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,70nm,8.8s						
NJ2				LR	LR		
	comp=N,350nm,22.0s						
NJ2				LR	LR		
	comp=E,210nm,20.5s						
NJ2				LR	LR		
	comp=Z,80nm,21.0s						
ASAJ	**Asahikawa**	**49.95**	**352**	P	**P**	**00 53 44.7**	**0.0**
ASAJ	**Asahikawa**	**49.95**	**352**	P	**P**	**00 53 44.7**	**0.0**
	comp=Z,2.3nm,0.3s,baz=162,slow=16,SNR=2.1						
USRK	**Ussuriysk Arra**	**52.40**	**342**	P	**P**	**00 54 03.0**	**+0.1**
	comp=Z,4.0nm,0.9s,baz=175,slow=10,SNR=5.8						
USRK				LR	LR	01 14 44.7	
	comp=Z,80nm,20.2s,baz=236,slow=34						
GYA	**Guiyang**	**53.64**	**308**	*e*P	**P**	**00 54 12.8**	**+0.1**
GYA				pP	**pP**	**00 54 31.6**	**+3.7**
GYA				sP	sP	00 54 40.3	+5.9
GYA				PP	**PP**	**00 56 16.3**	**+2.2**
GYA				ScP	**ScP**	**00 59 09.5**	**-2.3**
GYA				S	**S**	**01 01 40.8**	**-1.8**
GYA				sS	**sS**	**01 02 11.9**	**+3.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,5.1s						
CN2	**Changchun**	**54.30**	**337**	*e*P	**P**	**00 54 19.5**	**+2.5**
BJI	**Beijing**	**55.64**	**328**	P	**P**	**00 54 27.9**	**+1.2**
BJI				S	**S**	**01 02 10.5**	**+1.9**
BJI				SS	**SS**	**01 05 58.3**	**+3.5**
BJI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BJI				pmax	pmax		
	comp=Z,53nm,6.2s						
BJI				LR	LR		
	comp=N,120nm,27.7s						
BJI				LR	LR		
	comp=E,100nm,29.0s						
BJI				LR	LR		
	comp=Z,120nm,35.0s						
XAN	**Xi'an**	**56.10**	**318**	P	**P**	**00 54 29.8**	**-0.4**
XAN				pP	**pP**	**00 54 45.3**	**-0.2**
XAN				S	**S**	**01 02 12.8**	**-2.3**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,18nm,10.0s						
XAN				LR	LR		
	comp=N,50nm,16.3s						
XAN				LR	LR		
	comp=E,34nm,20.4s						
XAN				LR	LR		
	comp=Z,24nm,18.3s						
KMI	**Kunming**	**56.15**	**305**	P	**P**	**00 54 32.4**	**+1.4**
KMI				pP	**pP**	**00 54 50.1**	**+3.8**
KMI				sP	sP	00 54 59.9	+7.1
KMI				PP	**PP**	**00 56 40.1**	**+3.4**
KMI				S	**S**	**01 02 14.9**	**-1.6**
KMI				SS	**SS**	**01 06 02.4**	**-1.5**
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI				pmax	pmax		
	comp=Z,120nm,5.6s						
KMI				LR	LR		
	comp=N,110nm,22.9s						
KMI				LR	LR		
	comp=E,120nm,20.5s						
KMI				LR	LR		
	comp=Z,190nm,26.5s						
CMAR	**Chiang Mai Arr**	**56.85**	**296**	P	**P**	**00 54 34.9**	**-0.9**
CMAR	**Chiang Mai Arr**	**56.85**	**296**	P	**P**	**00 54 34.9**	**-0.9**
	comp=Z,3.2nm,0.8s,baz=115,slow=5.7,SNR=13						
CMAR				LR	LR	01 17 19.3	
	comp=Z,70nm,19.6s,baz=309,slow=34						
CD2	**Chengdu**	**58.06**	**312**	*e*P	**P**	**00 54 44.9**	**+0.7**
CD2				pP	**pP**	**00 55 03.3**	**+3.8**
CD2				sP	sP	00 55 11.3	+5.3
CD2				PP	**PP**	**00 56 56.0**	**+2.6**
CD2				S	**S**	**01 02 38.8**	**-2.3**
CD2				sS	**sS**	**01 03 09.8**	**+2.8**
CD2				SS	**SS**	**01 06 32.5**	**-1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CD2				pmax	pmax		
	comp=Z,30nm,4.8s						
CD2				LR	LR		
	comp=N,140nm,16.7s						
CD2				LR	LR		
	comp=Z,90nm,16.6s						
PETK	**Petropavlovsk-**	**58.57**	**4**	P	**P**	**00 54 45.6**	**-1.6**
PETK	**Petropavlovsk-**	**58.57**	**4**	P	**P**	**00 54 45.6**	**-1.6**
	comp=Z,4.6nm,0.9s,baz=180,slow=7.4,SNR=5.4						
PETK				LR	LR	01 16 24.0	
	comp=Z,60nm,20.2s,baz=207,slow=32						
HHC	**Hu-ho-hao-te**	**58.73**	**325**	*e*P	**P**	**00 54 47.9**	**-0.8**
HHC				pP	**pP**	**00 55 09.0**	**+4.9**
HHC				sP	sP	00 55 18.3	+7.7
HHC				PP	**PP**	**00 57 02.3**	**+3.1**
HHC				S	**S**	**01 02 47.1**	**-2.5**
HHC				sS	sS	01 03 21.3	+5.8
HHC				SS	**SS**	**01 06 43.8**	**+0.1**
HHC				pmax	pmax		
	comp=Z,33nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,5.5s						
HHC				LR	LR		
	comp=N,180nm,15.5s						
HHC				LR	LR		
	comp=E,360nm,16.7s						
HHC				LR	LR		
	comp=Z,290nm,16.7s						
LZH	**Lanzhou**	**60.69**	**317**	*e*P	**P**	**00 55 03.0**	**+0.7**
LZH				pP	pP	00 55 23.1	+5.3
LZH				sP	sP	00 55 32.6	+8.4
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
GTA	**Gaotai**	**65.15**	**318**	*e*P	**P**	**00 55 32.3**	**+0.4**
GTA				pP	**pP**	**00 55 48.8**	**+1.3**
GTA				sP	**sP**	**00 55 56.1**	**+2.2**
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ULN	**Ulaanbaatar**	**65.78**	**329**	*e*P	**P**	**00 55 35.6**	**-0.2**
	comp=Z,7.8nm,0.9s						
ULN	**Ulaanbaatar**	**65.78**	**329**	P	**P**	**00 55 36.4**	**+0.6**
	comp=Z,8.9nm,1.0s						
SONM	**Songino Array**	**66.10**	**329**	P	**P**	**00 55 38.3**	**+0.5**
SONM	**Songino Array**	**66.10**	**329**	P	**P**	**00 55 38.3**	**+0.5**
	comp=Z,6.0nm,0.8s,baz=129,slow=5.6,SNR=15						
TAPN	**Taplejung**	**69.50**	**302**	*e*P	**P**	**00 55 59.2**	**-0.7**
	comp=Z,34nm,1.1s						
ODAN	**Odare**	**69.62**	**301**	*e*P	**P**	**00 55 59.9**	**-0.7**
	comp=Z,44nm,1.0s						
RAMN	**Ramite**	**70.33**	**301**	*e*P	**P**	**00 56 04.3**	**-0.6**
	comp=Z,27nm,1.2s						
GUN	**Gumba**	**71.22**	**302**	*e*P	**P**	**00 56 09.6**	**-0.8**
	comp=Z,39nm,0.9s						
PKI	**Pulchoki**	**71.52**	**301**	*e*P	**P**	**00 56 11.3**	**-0.9**
	comp=Z,40nm,1.1s						
KKN	**Kakani**	**71.69**	**301**	*e*P	**P**	**00 56 12.1**	**-1.0**
	comp=Z,20nm,0.9s						
DMN	**Daman**	**71.79**	**301**	*e*P	**P**	**00 56 13.0**	**-0.7**
	comp=Z,58nm,1.0s						
VNDA	**Vanda**	**72.25**	**178**	*e*P	**P**	**00 56 15.6**	**+0.3**
	comp=Z,20nm,1.8s						
VNDA	**Vanda**	**72.25**	**178**	P	**P**	**00 56 15.2**	**0.0**
	comp=Z,1.2nm,0.9s,baz=330,slow=6.7,SNR=5.4						
SBA	**Scott Base**	**72.82**	**177**	*e*P	**P**	**00 56 20.1**	**+1.5**
	comp=Z,140nm,3.0s						
KOLN	**Koldanda**	**73.12**	**301**	*e*P	**P**	**00 56 20.4**	**-1.2**
	comp=Z,24nm,0.8s						
DANN	**Dangsing**	**73.14**	**302**	*e*P	**P**	**00 56 20.6**	**-1.2**
	comp=Z,31nm,0.9s						
PYUN	**Piuthan**	**73.72**	**301**	*e*P	**P**	**00 56 23.7**	**-1.5**
	comp=Z,54nm,0.

comp=N,150nm,4.6s
KSH LR LR
comp=E,120nm,5.5s
KSH LR LR
comp=Z,270nm,5.1s
COLA College 82.98 22 *e*P **P** 00 57 13.1 **-2.0**
comp=Z,7.0nm,0.8s
PAX Paxson 83.02 24 *e*PcP P 00 57 08.8 -6.8
ILAR Eielson Array 83.29 22 P **P** **00 57 14.1 -2.7**
ILAR Eielson Array 83.29 22 P **P** **00 57 14.1 -2.7**
comp=Z,5.0nm,0.8s,baz=252,slow=5.2,SNR=55
ILAR LR LR 01 30 26.3
comp=Z,76nm,21.3s,baz=283,slow=33
TKM2 Tokmak 2 83.33 314 *e*P **P** **00 57 17.1 -0.7**
comp=Z,2.9nm,0.8s
KURK Kurchatov 83.38 322 *e*P **P** **00 57 16.1 -1.4**
comp=Z,9.2nm,1.1s
DOT Dot Lake 83.89 24 *e*P **P** **00 57 18.9 -1.0**
AAK Ala-Archa 84.06 314 *e*P **P** **00 57 21.3 -0.1**
MAW Mawson 84.43 203 *e*P **P** **00 57 22.4 -0.2**
comp=Z,1.6nm,1.0s
MAW Mawson 84.43 203 P **P** **00 57 20.6 -1.9**
comp=Z,2.7nm,0.6s,baz=67,slow=5.5,SNR=7.7
MAW LR LR 01 32 19.2
comp=Z,116nm,19.9s,baz=86,slow=34
MAW Mawson 84.43 203 P **P** **00 57 22.7 +0.2**
baz=85,SNR=4.4
EKS2 Erkin-Say 84.58 314 *e*P **P** **00 57 24.0 0.0**
EGAK Eagle 85.51 23 *e*P **P** **00 57 27.3 -0.7**
comp=Z,6.0nm,0.8s
KKAR Karatay Array 87.02 314 *e*P **P** **00 57 34.2 -1.7**
DLBC Dease Lake 88.67 31 P **P** **00 57 43.5 0.0**
DLBC Dease Lake 88.67 31 P **P** **00 57 43.5 0.0**
comp=Z,0.8nm,0.5s,baz=321,slow=13,SNR=3.0
BRVK Borovoye 88.95 323 *e*P **P** **00 57 42.1 -2.7**
comp=Z,2.9nm,0.9s
KBO Bosley Butte 89.50 48 *e*P **P** **00 57 48.5 +0.7**
comp=Z,14nm,1.0s
KRMB Red Mountain 89.64 48 *e*P **P** **00 57 50.2 +1.6**
comp=Z,45nm,3.0s
KCPM Cahto Peak 89.65 50 *e*P **P** **00 57 49.4 +0.7**
comp=Z,4.7nm,1.0s
KHMM Horse Mountain 89.69 49 *e*P **P** **00 57 50.0 +1.1**
comp=Z,6.3nm,1.1s
KIPM Iron Peak 89.74 50 *e*P **P** **00 57 49.2 +0.1**
comp=Z,5.2nm,1.0s
NLWA Neilton Lookou 90.43 43 *e*P **P** **00 57 52.0 0.0**
comp=Z,10nm,1.0s
HUMO Hull Mountain 90.48 47 *e*P **P** **00 57 52.5 +0.2**
comp=Z,14nm,0.9s
WDC Whiskeytown Da 90.55 49 *e*P **P** **00 57 52.6 -0.1**
comp=Z,4.7nm,1.2s
YBH Yreka Blue Hor 90.56 48 *e*P **P** **00 57 52.6 -0.2**
comp=Z,12nm,1.1s
YBH Yreka Blue Hor 90.56 48 P **P** **00 57 52.2 -0.6**
comp=Z,8.6nm,1.0s,baz=196,slow=1.7,SNR=24
CMB Columbia Colle 91.95 52 *e*P **P** **00 57 59.0 -0.2**
BEKR Beckworth 92.14 50 *e*P **P** **00 58 00.3 0.0**
MWC Mount Wilson 93.51 56 *e*P **P** **00 58 06.7 -0.1**
comp=Z,31nm,1.2s
NVAR Mina Array Bea 93.61 52 P **P** **00 58 07.4 +0.2**
NVAR Mina Array Bea 93.61 52 P **P** **00 58 07.4 +0.2**
comp=Z,10nm,1.0s,baz=258,slow=6.0,SNR=51
WVOR Wild Horse Val 93.64 48 *e*P **P** **00 58 07.1 0.0**
comp=Z,4.8nm,1.0s
GSC Goldstone 94.61 55 *e*P **P** **00 58 12.2 +0.5**
PFO Pinyon Flat Ob 94.80 57 P **P** **00 58 13.7 +1.0**
PFO Pinyon Flat Ob 94.80 57 P **P** **00 58 13.7 +1.0**
comp=Z,7.2nm,1.1s,baz=280,slow=1.3,SNR=5.0
YKA Yellowknife Ar 96.66 28 P **P** **00 58 19.0 -1.2**
YKA PKKPbc **PKKPbc** **01 15 01.8 -4.2**
YKA Yellowknife Ar 96.66 28 P **P** **00 58 19.0 -1.2**
comp=Z,0.4nm,0.5s,baz=269,slow=4.9,SNR=7.1
YKA PKKPbc **PKKPbc** **01 15 01.8 -4.2**
comp=Z,0.2nm,0.6s,baz=108,slow=2.0,SNR=4.8
WALA Waterton Lakes 97.18 41 *e*P Pdif 00 58 23.3 +0.1
PDAR Pinedale Array 100.34 48 P **Pdif** **00 58 36.1 -1.4**
PDAR Pinedale Array 100.34 48 P **Pdif** **00 58 36.1 -1.4**
comp=Z,2.3nm,1.0s,baz=263,slow=2.5,SNR=11
PV10 Paradox Valley 100.89 52 *e*Pdif **Pdif** **00 58 40.9 +0.8**
SMCO Snowmass 102.47 51 *e*Pdif **Pdif** **00 58 46.5 -0.8**
AKASG Malin Array Be 114.16 324 PKP PKPdf 01 03 27.6 -1.9
AKASG Malin Array Be 114.16 324 PKP PKPdf 01 03 27.6 -1.9
comp=Z,1.3nm,0.8s,baz=72,slow=1.5,SNR=5.8
BRTR Keskin Array B 114.64 311 PKP PKPdf 01 03 29.6 -1.4
BRTR Keskin Array B 114.64 311 PKP PKPdf 01 03 29.6 -1.4
comp=Z,1.1nm,0.9s,baz=119,slow=5.8,SNR=5.6
NOA NORSAR Array B 117.01 340 PKP **PKPdf** **01 03 32.2 -2.6**
NOA NORSAR Array B 117.01 340 PKP **PKPdf** **01 03 32.2 -2.6**
comp=Z,0.8nm,0.8s,baz=47,slow=1.7,SNR=3.2
VYHS Vyhne 121.15 325 *e*PKP **PKPdf** **01 03 41.5 -1.6**
DPC Dobruska-Polom 121.56 328 *e*PKPdf **PKPdf** **01 03 43.6 -0.3**
UPC Upice 121.64 328 *e*PKPdf **PKPdf** **01 03 42.8 -1.1**
BRG Berggiesshubel 122.49 329 *i* P **PKPdf** **01 03 44.2 -1.3**
comp=Z,5.5nm,1.0s
BRG Berggiesshubel 122.49 329 *e*PKPdf **PKPdf** **01 03 44.6 -0.9**
TREC Trest 122.61 327 *e*PKPdf **PKPdf** **01 03 45.0 -0.9**
CLL Collm 122.70 330 *e*PKPdf **PKPdf** **01 03 44.9 -1.0**
CLL Collm 122.70 330 ⇓ *i* PKPdf **PKPdf** **01 03 44.8 -1.1**
comp=Z,5.0nm,0.9s
FBE Freiberg 122.76 330 *e*PKPdf **PKPdf** **01 03 45.8 -0.3**
CSNA Conrad Observa 123.17 326 ⇑ *i* PKiKP **PKPdf** **01 03 46.2 -0.8**
TANN Tannenbergstha 123.52 330 *e*PKPdf **PKPdf** **01 03 46.8 -0.8**
WERD Werda 123.58 330 *e*PKPdf **PKPdf** **01 03 46.6 -1.1**
GUNZ Gunzen 123.62 330 *e*PKPdf **PKPdf** **01 03 47.3 -0.5**
CLZ Clausthal 123.62 332 *e*PKPdf **PKPdf** **01 03 47.1 -0.6**
PLN Plauen 123.63 330 *e*PKPdf **PKPdf** **01 03 47.2 -0.6**
NKC Novy Kostel 123.64 330 *e*PKPdf **PKPdf** **01 03 47.4 -0.4**
WERN Wernitzgruen 123.64 330 *e*PKPdf **PKPdf** **01 03 47.6 -0.2**
KHC Kasperske Hory 123.72 328 *e*PKPdf **PKPdf** **01 03 46.8 -1.2**
KHC *ex* x 01 04 02.2
MOX Moxa 123.80 330 *e*PKPdf **PKPdf** **01 03 47.4 -0.7**
GEC2 GERESS Array S 123.83 328 *e*PKPdf **PKPdf** **01 03 47.0 -1.3**
GERES GERESS Array B 123.83 328 PKP **PKPdf** **01 03 47.2 -1.1**
GERES GERESS Array B 123.83 328 PKP **PKPdf** **01 03 47.2 -1.1**
comp=Z,2.6nm,0.7s,baz=70,slow=1.6,SNR=34
MANZ Manzenberg 123.96 329 *e*PKPdf **PKPdf** **01 03 47.5 -1.0**
ROTZ Rotzenmuhle 124.05 329 *e*PKPdf **PKPdf** **01 03 47.3 -1.3**
WET Wettzell 124.08 328 *e*PKPdf **PKPdf** **01 03 48.5 -0.2**
SOKA Soboth 124.33 325 ⇓ PKPdf **PKPdf** **01 03 47.7 -1.7**
comp=Z,3.6nm,0.9s
GRF Grafenberg Arr 124.59 330 *e*PKPdf **PKPdf** **01 03 48.9 -0.8**
BOJS Bojanci 124.85 324 *i* PKPdf **PKPdf** **01 03 49.5 -0.7**
VISS Visnje 124.92 324 *i* PKPdf **PKPdf** **01 03 49.5 -0.9**
RJOB Jochberg 124.97 327 *e*PKPdf **PKPdf** **01 03 49.5 -1.0**
LJU Ljubljana 124.97 324 *e*PKPdf **PKPdf** **01 03 49.7 -0.8**
BUG Bochum--Univer 125.31 333 *e*PKPdf **PKPdf** **01 03 49.8 -1.1**
TNS Taunus Mts 125.61 332 *e*PKPdf **PKPdf** **01 03 51.4 -0.2**
ABTA Abfaltersbach 125.71 326 ⇑ *i* PKPdf **PKPdf** **01 03 50.4 -1.6**
comp=Z,4.7nm,0.8s
MOTA Moosalm 126.12 327 ⇑ *i* PKPdf **PKPdf** **01 03 51.0 -1.8**
comp=Z,7.0nm,0.9s
STU Stuttgart 126.20 330 *e*PKPdf **PKPdf** **01 03 51.7 -1.0**
MEM Membach 126.46 333 PKP **PKPdf** **01 03 52.8 -0.4**
FETA Feichten 126.52 327 ⇓ *i* PKiKP **PKPdf** **01 03 52.6 -1.0**
comp=Z,7.2nm,1.1s
DAVA Damuels 126.81 328 ⇑ *i* PKiKP **PKPdf** **01 03 53.4 -0.8**
comp=Z,4.8nm,0.9s
BCLA Clavier 126.91 333 PKP **PKPdf** **01 03 53.5 -0.5**
BFO Black Forest 126.93 330 *e*PKPdf **PKPdf** **01 03 52.6 -1.6**
GIVF Givet 127.36 333 *e*PKIKP **PKPdf** **01 03 53.9 -1.0**
GIVF Givet 127.36 333 *e*PKPdf **PKPdf** **01 03 53.9 -1.0**
CDF Champ du Feu 127.39 331 *e*PKIKP **PKPdf** **01 03 53.5 -1.7**
comp=Z,6.3nm,1.1s
CDF Champ du Feu 127.39 331 *e*PKPdf **PKPdf** **01 03 53.5 -1.7**
DOU Dourbes 127.46 334 PKP **PKPdf** **01 03 54.9 -0.2**
BAIF Baives 127.66 334 *e*PKIKP **PKPdf** **01 03 54.5 -1.0**
comp=Z,7.1nm,1.0s
BAIF Baives 127.66 334 *e*PKPdf **PKPdf** **01 03 54.5 -1.0**
HINF Hinteralfeld 128.01 330 *e*PKIKP **PKPdf** **01 03 54.6 -1.7**
comp=Z,21nm,1.2s
HINF Hinteralfeld 128.01 330 *e*PKPdf **PKPdf** **01 03 54.6 -1.7**
PAGF Fort de Pagny 128.04 332 *e*PKIKP **PKPdf** **01 03 55.2 -1.1**
comp=Z,1.7nm,0.9s
PAGF Fort de Pagny 128.04 332 *e*PKPdf **PKPdf** **01 03 55.2 -1.1**
HAU Haudompre 128.13 331 *e*PKIKP **PKPdf** **01 03 55.0 -1.5**
comp=Z,13nm,1.0s
HAU Haudompre 128.13 331 *e*PKPdf **PKPdf** **01 03 55.0 -1.5**
MEZF Maizieres J'vi 128.40 332 *e*PKIKP **PKPdf** **01 03 56.2 -0.7**
MEZF Maizieres J'vi 128.40 332 *e*PKPdf **PKPdf** **01 03 56.2 -0.7**
SFTF Sexfontaines 128.62 332 *e*PKIKP **PKPdf** **01 03 56.2 -1.2**
comp=Z,6.6nm,0.7s
SFTF Sexfontaines 128.62 332 *e*PKPdf **PKPdf** **01 03 56.2 -1.2**
CABF La Chapelle 129.21 330 *e*PKIKP **PKPdf** **01 03 57.8 -0.9**
comp=Z,14nm,1.1s
CABF La Chapelle 129.21 330 *e*PKPdf **PKPdf** **01 03 57.8 -0.9**
LPL La Plagne 129.62 328 *e*PKIKP **PKPdf** **01 03 59.5 -0.2**
comp=Z,8.1nm,0.9s
LPL La Plagne 129.62 328 *e*PKPdf **PKPdf** **01 03 59.5 -0.2**
LPG La Plagne 129.62 328 *e*PKIKP **PKPdf** **01 03 59.6 -0.1**
comp=Z,8.7nm,0.9s
LPG La Plagne 129.62 328 *e*PKPdf **PKPdf** **01 03 59.6 -0.1**
LOR Lormes 129.84 332 *e*PKIKP **PKPdf** **01 03 58.6 -1.2**
comp=Z,11nm,1.2s
LOR Lormes 129.84 332 *e*PKPdf **PKPdf** **01 03 58.6 -1.2**
SSF Saint Saulge 130.16 332 *e*PKIKP **PKPdf** **01 03 59.5 -0.8**
comp=Z,9.4nm,1.0s
SSF Saint Saulge 130.16 332 *e*PKPdf **PKPdf** **01 03 59.5 -0.8**
PGF Pioggiola 130.23 324 *e*PKIKP **PKPdf** **01 03 59.3 -1.5**
comp=Z,17nm,1.1s
PGF Pioggiola 130.23 324 *e*PKPdf **PKPdf** **01 03 59.3 -1.5**
SMF Signal de Mont 130.30 331 *e*PKIKP **PKPdf** **01 03 59.6 -1.0**
comp=Z,6.3nm,0.9s
SMF Signal de Mont 130.30 331 *e*PKPdf **PKPdf** **01 03 59.6 -1.0**
SBF Sospel 130.31 326 *e*PKIKP **PKPdf** **01 03 59.3 -1.5**
comp=Z,15nm,1.0s
SBF Sospel 130.31 326 *e*PKPdf **PKPdf** **01 03 59.3 -1.5**
AVF Avril sur Loir 130.43 331 *e*PKIKP **PKPdf** **01 03 59.7 -1.1**
comp=Z,3.6nm,1.0s
AVF Avril sur Loir 130.43 331 *e*PKPdf **PKPdf** **01 03 59.7 -1.1**
ORIF Oris-en-Rattie 130.46 328 *e*PKIKP **PKPdf** **01 03 59.9 -1.2**
comp=Z,7.0nm,0.8s
ORIF Oris-en-Rattie 130.46 328 *e*PKPdf **PKPdf** **01 03 59.9 -1.2**
FLN La Foliniere 130.64 336 *e*PKIKP **PKPdf** **01 04 00.2 -1.0**
comp=Z,13nm,1.0s
FLN La Foliniere 130.64 336 *e*PKPdf **PKPdf** **01 04 00.2 -1.0**
FRF La Foret Royal 130.94 326 *e*PKIKP **PKPdf** **01 04 00.8 -1.1**
comp=Z,8.6nm,1.0s
FRF La Foret Royal 130.94 326 *e*PKPdf **PKPdf** **01 04 00.8 -1.1**
GRR Gorron 131.09 336 *e*PKIKP **PKPdf** **01 04 00.7 -1.3**
GRR Gorron 131.09 336 *e*PKPdf **PKPdf** **01 04 00.7 -1.3**
VIVF Saint-Julien-l 131.13 329 *e*PKIKP **PKPdf** **01 04 01.5 -0.8**
comp=Z,5.4nm,0.9s
VIVF Saint-Julien-l 131.13 329 *e*PKPdf **PKPdf** **01 04 01.5 -0.8**
LMR La Mourre 131.17 326 *e*PKIKP **PKPdf** **01 04 01.1 -1.2**
comp=Z,11nm,1.1s
LMR La Mourre 131.17 326 *e*PKPdf **PKPdf** **01 04 01.1 -1.2**
SMRF Simiane la Rot 131.25 327 *e*PKIKP **PKPdf** **01 04 01.6 -1.0**
comp=Z,27nm,1.4s
SMRF Simiane la Rot 131.25 327 *e*PKPdf **PKPdf** **01 04 01.6 -1.0**
TCF Toulx Ste Croi 131.33 332 *e*PKIKP **PKPdf** **01 04 01.4 -1.2**
comp=Z,6.2nm,1.0s
TCF Toulx Ste Croi 131.33 332 *e*PKPdf **PKPdf** **01 04 01.4 -1.2**
LASF Ste Croix 132.09 329 *e*PKIKP **PKPdf** **01 04 03.2 -0.9**
comp=Z,15nm,1.2s
LASF Ste Croix 132.09 329 *e*PKPdf **PKPdf** **01 04 03.2 -0.9**
MFF Saint Martin d 132.18 334 *e*PKIKP **PKPdf** **01 04 03.2 -1.0**
comp=Z,14nm,1.1s
MFF Saint Martin d 132.18 334 *e*PKPdf **PKPdf** **01 04 03.2 -1.0**
RJF Les Rejaudoux 132.39 331 *e*PKIKP **PKPdf** **01 04 04.1 -0.5**
RJF Les Rejaudoux 132.39 331 *e*PKPdf **PKPdf** **01 04 04.1 -0.5**
CAF Calviac 132.40 331 *e*PKIKP **PKPdf** **01 04 04.4 -0.3**
comp=Z,7.3nm,1.1s
CAF Calviac 132.40 331 *e*PKPdf **PKPdf** **01 04 04.4 -0.3**
MTLF Montolieu 133.46 329 *e*PKIKP **PKPdf** **01 04 05.0 -1.7**
comp=Z,9.2nm,1.3s
MTLF Montolieu 133.46 329 *e*PKPdf **PKPdf** **01 04 05.0 -1.7**
KEST Kesra 133.87 316 PKP **PKPdf** **01 04 06.6 -1.2**
KEST Kesra 133.87 316 PKP **PKPdf** **01 04 06.6 -1.2**
comp=Z,1.5nm,0.9s,baz=299,slow=4.1,SNR=5.5
CPUP Villa Florida 137.93 140 PKP **PKPdf** **01 04 16.0 +0.5**
CPUP Villa Florida 137.93 140 PKP **PKPdf** **01 04 16.0 +0.5**
comp=Z,1.8nm,0.9s,baz=241,slow=4.1,SNR=4.7
ESDC Sonseca Array 139.29 330 PP PP 01 07 09.2 -1.7
ESDC Sonseca Array 139.29 330 PP PP 01 07 09.2 -1.7
comp=Z,0.7nm,0.8s,baz=40,slow=5.0,SNR=5.1
EVO Evora 142.10 333 *e*PKIKP **PKPdf** **01 04 21.5 -1.2**
comp=Z,21nm,1.3s
TORD Torodi Ar. Bea 149.11 287 PKPbc **PKPbc** **01 04 38.0 -1.5**
TORD PP PP **01 08 10.3 -1.0**
TORD Torodi Ar. Bea 149.11 287 PKPbc **PKPbc** **01 04 38.0 -1.5**
comp=Z,11nm,0.7s,baz=65,slow=2.4,SNR=54
TORD PP PP **01 08 10.3 -1.0**
comp=Z,0.7nm,0.9s,baz=60,slow=4.4,SNR=4.0
BDFB Brasilia 151.60 138 PKPbc **PKPbc** **01 04 44.8 -0.8**
BDFB Brasilia 151.60 138 PKPbc **PKPbc** **01 04 44.8 -0.8**
comp=Z,5.9nm,0.7s,baz=226,slow=2.5,SNR=14
LIC Lamto 156.49 273 *e*PKIKP **PKPdf** **01 04 45.8 -0.4**

CSEM ***15*** *00:47:13.1±1.2, 50.32N×18.94E, h1km, Error ellipse: s-maj=17.0km s-min=13.2km az=52.0*

PRU 15 00:47:14.1, 50.26N×18.95E, h0km, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.55**	**94**	*e*Pg	Pg	00 47 24.5	-0.1
OJC				*e*Sg	Sg	00 47 30.3	-1.4
OKC	**Ostrava-Krasne**	**0.67**	**231**	*e*PG	Pg	00 47 27.4	+0.5
OKC				*e*SG	Sg	00 47 34.1	-1.5
OKC	**Ostrava-Krasne**	**0.67**	**231**	Pg	Pg	00 47 27.4	+0.5
OKC				Sg	Sg	00 47 34.1	-1.5
MORC	**Moravsky Berou**	**1.03**	**242**	*e*Sg	Sg	00 47 48.0	+0.7
NIE	**Niedzica**	**1.22**	**133**	*e*Pg	Pg	00 47 37.7	+0.1
NIE				*e*Sg	Sb	00 47 54.5	0.0
KRLC	**Kraliky**	**1.41**	**263**	*e*PG	Pn	00 47 40.0	-1.1
KRLC				*e*SG	Sg	00 47 59.3	-0.2
KRLC	**Kraliky**	**1.41**	**263**	Pg	Pn	00 47 40.0	-1.1
KRLC				Sg	Sg	00 47 59.3	-0.2
DPC	**Dobruska-Polom**	**1.69**	**274**	*e*PG	Pn	00 47 44.8	-0.1
DPC				*e*SG	Sb	00 48 07.8	-0.1
DPC	**Dobruska-Polom**	**1.69**	**274**	Pg	Pn	00 47 44.8	-0.1
DPC				Sg	Sb	00 48 07.8	-0.1
UPC	**Upice**	**1.90**	**279**	*e*SG	Sg	00 48 15.2	+0.1
UPC	**Upice**	**1.90**	**279**	Sg	Sg	00 48 15.2	+0.1
PRU	**Pruhonice**	**2.85**	**266**	*e*SG	Sg	00 48 44.4	-1.3
PRU	**Pruhonice**	**2.85**	**266**	Sg	Sg	00 48 44.4	-1.3
KHC	**Kasperske Hory**	**3.67**	**254**	*e*SG	Sg	00 49 09.9	-2.1
KHC	**Kasperske Hory**	**3.67**	**254**	Sg	Sg	00 49 09.9	-2.1

IDC 15 00:50:33.5±1.9, 0.51N×126.56E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.7/20, mbtmp4.0/3, MS3.9/2, Ms1 3.9/2, ms1mx3.0/18, Error ellipse: s-maj=170.1km s-min=23.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.71**	**160**	P	P	00 55 25.3	-1.0
	3.0nm,0.6s,baz=338,slow=11,SNR=7.2						
ASAR	**Alice Springs**	**25.07**	**164**	P	P	00 56 00.5	+0.7
	1.6nm,0.5s,baz=348,slow=12,SNR=9.7						
MKAR	**Makanchi Array**	**60.11**	**326**	P	P	01 00 42.6	-0.1
	1.4nm,0.5s,baz=119,slow=8.0,SNR=17						
ARCES	**ARCESS Array B**	**93.39**	**340**	LR	LR	01 49 19.0	
	comp=Z,59nm,21.3s,baz=257,slow=38						
FINES	**FINESS Array B**	**94.57**	**332**	LR	LR	01 47 58.5	
	comp=Z,48nm,21.7s,baz=339,slow=36						

IDC 15 00:57:37.5±2.5, 6.57S×130.80E, h0km, mb3.4/1, mb1 3.8/4, mb1mx3.6/18, mbtmp3.6/4, ML3.9/3, Error ellipse: s-maj=106.9km s-min=28.3km az=79.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.52**	**203**	Pn	Pn	01 00 36.5	-0.6
	0.7nm,0.3s,baz=29,slow=12,SNR=29						
FITZ				Sn	Sn	01 02 42.4	-15
	0.2nm,0.3s,baz=67,slow=38,SNR=2.4						
WRA	**Warramunga Arr**	**13.73**	**166**	Pn	Pn	01 00 54.7	+1.1
	0.6nm,0.3s,baz=352,slow=13,SNR=6.1						
ASAR	**Alice Springs**	**17.26**	**170**	P	Pn	01 01 39.8	-0.4
	0.3nm,0.3s,baz=338,slow=9.2,SNR=9.4						
MKAR	**Makanchi Array**	**68.31**	**326**	P	P	01 08 40.6	0.0
	0.2nm,0.5s,baz=110,slow=7.1,SNR=2.8						

IDC ***15*** *01:40:42.3±3.6, 37.88N×65.99E, h0km, mb3.4/3, mb1 3.4/4, mb1mx3.3/27, mbtmp3.4/4, ML3.3/1, Error ellipse: s-maj=122.1km s-min=21.3km az=153.0*

NNC ***15*** *01:40:44.1±2.6, 38.82N×65.62E, h0km, mb3.8, mpv3.6, Error ellipse: s-maj=21.5km s-min=13.8km az=8.0*

ISCJB ***15*** *01:40:46.2±1.1, 38.87N±0.07×65.74E±0.08, h33km, mb3.5/2, Error ellipse: s-maj=11.2km s-min=8.3km az=38.7*

ISC 15 01:40:49.5±1.4, 38.86N±0.09×65.71E±0.09, h35km, n17, σ1s84/20, 13C-4D, Southeastern Uzbekistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.58**	**39**	⇑ Pn	**Pn**	**01 42 09.7**	**-0.4**
	1.5nm,0.3s,baz=221,slow=14,SNR=4.6						
KK31				⇑ Sn	**Sn**	**01 43 17.7**	**+4.8**
	4.8nm,0.4s,baz=218,slow=22,SNR=4.6						
KK31				⇑ Lg	Lg	01 43 47.3	
	7.9nm,0.5s,baz=225,slow=30,SNR=3.8						
AML	**Almayashu**	**6.90**	**59**	P	**Pn**	**01 42 28.0**	**-0.5**
	SNR=6.8						
EKS2	**Erkin-Say**	**7.20**	**56**	P	**Pn**	**01 42 32.4**	**0.0**
	SNR=6.6						
KZA	**Kyzart**	**7.95**	**63**	P	**Pn**	**01 42 40.0**	**-2.9**
	SNR=5.2						
KBK	**Karagaybulak**	**7.97**	**59**	P	**Pn**	**01 42 43.7**	**+0.8**
	SNR=7.1						
TKM2	**Tokmak 2**	**8.51**	**58**	⇓ Pn	**Pn**	**01 42 49.8**	**-0.6**
	1.5nm,0.4s						
TKM2				⇑ Lg	Lg	01 45 12.7	
	7.9nm,1.0s						
TKM2	**Tokmak 2**	**8.51**	**58**	P	**Pn**	**01 42 50.4**	**-0.1**
	SNR=5.2						
AB31	**Akbulak array**	**11.18**	**340**	⇓ Pn	**Pn**	**01 43 26.5**	**-0.3**
	0.3nm,0.3s,baz=158,slow=13,SNR=5.2						
AB31				Sn	Sn	01 45 35.1	+4.7
	0.5nm,0.3s,baz=154,slow=22,SNR=3.2						
AB31				⇑ Lg	Lg	01 46 40.6	
	1.8nm,0.6s						
AKTO	**Aktyubinsk**	**12.79**	**337**	⇑ Pn	**Pn**	**01 43 48.6**	**-0.2**
	1.4nm,0.9s						
AKTO				⇑ Sn	**Sn**	**01 46 11.1**	**+1.3**
	1.6nm,0.7s						
AKTO				⇑ Lg	Lg	01 47 28.9	
	4.4nm,0.9s						
ZRNK	**Zerenda**	**14.27**	**8**	⇑ Pn	Pn	01 44 05.9	-3.1
	1.0nm,0.5s						
ZRNK				⇑ Sn	**Sn**	**01 46 44.1**	**-1.8**
	1.5nm,0.5s						
VOSK	**Vostochnaya**	**14.34**	**13**	⇑ Pn	Pn	01 44 07.0	-2.8
	1.1nm,0.7s						
VOSK				⇓ Sn	**Sn**	**01 46 46.5**	**-0.9**
	1.7nm,0.7s						
MK31	**Makanchi Array**	**14.50**	**52**	⇓ Pn	**Pn**	**01 44 10.2**	**-1.9**
	0.4nm,0.7s,baz=241,slow=12,SNR=5.0						
MK31				Lg	Lg	01 48 28.0	
	0.7nm,0.7s,baz=245,slow=26,SNR=3.8						
MKAR	**Makanchi Array**	**14.50**	**52**	Pn	**Pn**	**01 44 10.6**	**-1.5**
	0.1nm,0.3s,baz=237,slow=13,SNR=6.3						
BVA0	**Borovoye Array**	**14.53**	**11**	⇑ Pn	**Pn**	**01 44 11.7**	**-0.7**
	2.3nm,0.6s,baz=183,slow=11,SNR=3.7						
BVA0				⇑ Sn	**Sn**	**01 46 53.2**	**+1.1**
	1.6nm,0.6s,baz=211,slow=17,SNR=4.3						
ZALV	**Zalesovo Beam**	**19.93**	**35**	P	**Pn**	**01 45 22.6**	**+2.7**
	1.1nm,0.6s,baz=218,slow=9.1,SNR=4.9						
BRTR	**Keskin Array B**	**24.77**	**282**	P	**P**	**01 46 09.8**	**+1.7**
	1.3nm,0.8s,baz=95,slow=9.4,SNR=7.6						
TORD	**Torodi Ar. Bea**	**61.68**	**264**	P	**P**	**01 51 03.2**	**-1.1**
	0.2nm,0.5s,baz=66,slow=5.1,SNR=4.1						

IDC ***15*** *02:01:13.9±0.6, 14.20S×166.54E, h0km, mb4.3/18, mb1 4.5/19, mb1mx4.4/23, mbtmp4.3/19, ML4.3/1, MS4.0/9, Ms1 4.0/9, ms1mx3.5/26, Error ellipse: s-maj=21.0km s-min=14.6km az=119.0*

ISCJB ***15*** *02:01:18.6±0.4, 14.22S±0.05×166.43E±0.07, h43km, mb4.5/23, MS4.1/8, Error ellipse: s-maj=9.5km s-min=6.8km az=168.1*

NEIC ***15*** *02:01:20.2±1.3, 14.19S×166.52E, h44km±11km, mb4.7/10, Error ellipse: s-maj=10.3km s-min=8.1km az=93.0*

ISC 15 02:01:20.3±0.4, 14.20S±0.06×166.52E±0.08, h43km, n84, σ0s92/85, mb4.5/23, MS4.1/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**7.83**	**181**	*e*P	**Pn**	**02 03 11.6**	**-0.1**
DZM				*e*S	**Sn**	**02 04 40.4**	**+1.3**
DZM				*e*LR	LR	02 05 06.8	
	706nm,25.2s						
DZM				*e*T	T	02 12 34.2	
DZM	**Mont Dzumac**	**7.83**	**181**	*e*P	**Pn**	**02 03 11.1**	**-0.6**
DZM				*e*S	**Sn**	**02 04 36.5**	**-2.6**
DZM	**Mont Dzumac**	**7.83**	**181**	*e*Pn	**Pn**	**02 03 10.9**	**-0.8**
	23nm,0.5s						
DZM				*e*S	**Sn**	**02 04 41.1**	**+1.9**
DZM	**Mont Dzumac**	**7.83**	**181**	Pn	**Pn**	**02 03 11.0**	**-0.8**
	4.1nm,0.3s,baz=5.4,slow=20,SNR=28						
DZM				Sn	**Sn**	**02 04 38.7**	**-0.4**
	0.5nm,0.3s,baz=343,slow=19,SNR=2.2						
HNR	**Honiara**	**7.99**	**306**	*e*Pn	**Pn**	**02 03 14.4**	**+0.5**
	179nm,0.8s						
HNR				*e*S	**Sn**	**02 04 42.7**	**-0.3**
EIDS	**Eidsvold**	**18.27**	**230**	*e*Pn	**Pn**	**02 05 31.2**	**+0.6**
	16nm,1.0s						
PMG	**Port Moresby**	**19.54**	**282**	LR	LR	02 11 40.2	
	comp=Z,160nm,18.8s,baz=36,slow=32						
CTA	**Charters Tower**	**20.23**	**250**	P	**P**	**02 05 52.3**	**+0.4**
CTA	**Charters Tower**	**20.23**	**250**	P	**P**	**02 05 52.3**	**+0.4**
	1.5nm,0.8s,baz=80,slow=13,SNR=13						
CTAO	**Charters Tower**	**20.23**	**250**	*e*P	**P**	**02 05 52.4**	**+0.4**
	14nm,1.0s						
AFI	**Afiamalu**	**21.05**	**92**	LR	LR	02 12 27.7	
	comp=Z,314nm,18.8s,baz=286,slow=32						
STKA	**Stephens Creek**	**28.80**	**228**	*e*P	**P**	**02 07 14.6**	**+0.3**
	2.6nm,1.2s						
STKA	**Stephens Creek**	**28.80**	**228**	P	**P**	**

NVAR LR LR 02 48 27.2
comp=Z,137nm,18.6s,baz=165,slow=32
PDAR Pinedale Array 95.12 47 LR LR 02 52 22.8
comp=Z,50nm,20.4s,baz=139,slow=32
MK31 Makanchi Array 96.32 317 *eP* **P 02 14 44.4 0.0**
MKAR Makanchi Array 96.32 317 P **P 02 14 44.3 -0.1**
MKAR Makanchi Array 96.32 317 P **P 02 14 44.3 -0.1**
1.6nm,0.9s,baz=99,slow=6.6,SNR=10
ZALV Zalesovo Beam 96.54 324 P **P 02 14 43.4 -1.8**
ZALV Zalesovo Beam 96.54 324 P **P 02 14 43.4 -1.8**
1.0nm,0.7s,baz=120,slow=5.3,SNR=5.8
TXAR Lajitas Array 96.66 62 P **P 02 14 46.0 -0.5**
TXAR Lajitas Array 96.66 62 P **P 02 14 46.0 -0.5**
0.2nm,0.8s,baz=224,slow=3.3,SNR=3.2
TXAR LR LR 02 49 45.8
comp=Z,75nm,20.6s,baz=180,slow=30
YKA Yellowknife Ar 97.41 27 P **P 02 14 47.9 -1.1**
YKA Yellowknife Ar 97.41 27 P **P 02 14 47.8 -1.1**
0.3nm,0.8s,baz=248,slow=4.6,SNR=7.4
ARCES ARCESS Array B 119.56 345 PKP **PKPdf 02 20 04.4 -0.4**
ARCES ARCESS Array B 119.56 345 PKP **PKPdf 02 20 04.4 -0.4**
2.4nm,0.7s,baz=82,slow=2.3,SNR=12
CPUP Villa Florida 121.34 133 PKP **PKPdf 02 20 09.4 -0.1**
CPUP Villa Florida 121.34 133 PKP **PKPdf 02 20 09.4 -0.1**
0.3nm,0.4s,baz=15,slow=1.4,SNR=3.7
SCHQ Schefferville 122.26 33 PKP **PKPdf 02 20 09.8 -0.6**
SCHQ Schefferville 122.26 33 PKP **PKPdf 02 20 09.8 -0.6**
1.6nm,0.8s,baz=278,slow=7.1,SNR=3.3
SIV San Ignacio 124.22 121 PKP **PKPdf 02 20 15.2 -0.1**
SIV San Ignacio 124.22 121 PKP **PKPdf 02 20 15.2 -0.1**
0.4nm,0.6s,baz=233,slow=5.5,SNR=3.9
BDFB Brasilia 134.78 130 PKP **PKPdf 02 20 35.9 +0.4**
BDFB Brasilia 134.78 130 PKP **PKPdf 02 20 35.9 +0.4**
1.4nm,0.5s,baz=153,slow=5.7,SNR=3.4
GERES GERESS Array B 138.84 333 PKPpre PKPpre 02 20 33.7
GERES SKPbc **SKiKP 02 24 19.3 +2.3**
GERES GERESS Array B 138.84 333 PKhKP PKPpre 02 20 33.7
0.1nm,0.5s,baz=1.9,slow=5.9,SNR=2.4
GERES SKPbc **SKiKP 02 24 19.3 +2.3**
0.7nm,0.9s,baz=60,slow=4.7,SNR=5.5
CEL Celeste 144.65 318 *e*PKPdf PKPbc 02 20 51.5 0.0
BNI Bardonecchia 144.81 335 *e*PKPdf **PKPdf 02 20 52.6 -0.3**
SAOF Saorge 145.30 333 PKP **PKPbc 02 20 53.0 -0.4**
AGO Saint Agoulin 145.30 340 PKP **PKPdf 02 20 53.7 +0.2**
AUTN L'Aution 145.35 333 PKP **PKPbc 02 20 53.6 -0.2**
TOUF Mont Tournerai 145.41 333 PKP **PKPdf 02 20 54.0 0.0**
SSB Saint Sauveur 145.46 337 *e*PKPbc **PKPab 02 20 54.5 +0.4**
MVIF Mont Vial 145.54 333 PKP **PKPdf 02 20 54.1 -0.1**
REVF Revere 145.57 333 PKP **PKPdf 02 20 54.1 0.0**
PYM Petit Puy Mans 145.61 339 PKP **PKPab 02 20 54.9 +0.2**
CALN Calern 145.78 333 PKP **PKPbc 02 20 54.9 -0.1**
LBL Lubilhac 145.97 339 PKP **PKPbc 02 20 55.6 +0.1**
KEST Kesra 150.34 320 PKPbc **PKPbc 02 21 08.5 +1.0**
KEST Kesra 150.34 320 PKPbc **PKPbc 02 21 08.5 +1.0**
2.3nm,0.9s,baz=202,slow=3.8,SNR=8.1
ESDC Sonseca Array 153.28 344 PKPbc **PKPbc 02 21 14.7 +0.7**
ESDC Sonseca Array 153.28 344 PKPbc **PKPbc 02 21 14.7 +0.7**
0.2nm,0.4s,baz=13,slow=2.4,SNR=6.9
TORD Torodi Ar. Bea 165.22 268 PKP **PKPdf 02 21 20.9 0.0**
TORD PKPab **PKPab 02 22 18.7 +0.3**
TORD Torodi Ar. Bea 165.22 268 PKP **PKPdf 02 21 21.0 0.0**
0.7nm,1.0s,baz=353,slow=2.3,SNR=3.5
TORD PKPab **PKPab 02 22 18.7 +0.3**
0.5nm,0.9s,baz=92,slow=5.5,SNR=2.6

SZGRF ***15*** *02:08:38.9, 19.°04S×179.°51E, h33km, South of Fiji Islands*
ISCJB ***15*** *02:09:45.6±1.1, 17.°05S±0.°5×179.°2E±0.°3, h600km, mb3.5/8, Error ellipse: s-maj=76.3km s-min=13.6km az=149.8*
IDC ***15*** *02:09:45.1±4.1, 17.°25S×179.°37E, h584km±48km, mb3.1/8, mb1 3.4/9, mb1mx3.2/20, mbtmp3.1/9, Error ellipse: s-maj=77.1km s-min=21.0km az=152.0*

ISC 15 02:09:46.5±1.2, 17.°0S±0.°4×179.°2E±0.°3, h600km, n30, σ0.°87/31, mb3.5/8, 3C, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.02**	**245**	P		**P**	**P**	**02 12 35.1**	**-0.5**
0.7nm,0.3s,baz=82,slow=20,SNR=5.6									
STKA	**Stephens Creek**	**37.07**	**239**	P		**P**	**P**	**02 16 07.6**	**+0.1**
2.3nm,0.7s,baz=125,slow=3.3,SNR=3.7									
WRA	**Warramunga Arr**	**42.55**	**259**	P		**P**	**P**	**02 16 50.7**	**-0.6**
0.5nm,0.6s,baz=96,slow=8.4,SNR=4.6									
ASAR	**Alice Springs**	**42.84**	**253**	P		**P**	**P**	**02 16 53.7**	**+0.2**
4.2nm,0.6s,baz=87,slow=8.3,SNR=56									
ASAR						PcP	**PcP**	**02 18 30.9**	**+0.3**
0.4nm,0.5s,baz=90,slow=5.3,SNR=3.7									
FITZ	**Fitzroy Crossi**	**50.92**	**260**	P		**P**	**P**	**02 17 55.1**	**+0.9**
3.5nm,1.1s,baz=61,slow=8.0,SNR=2.8									
NVAR	**Mina Array Bea**	**80.41**	**45**	P		**P**	**P**	**02 20 57.7**	**+0.6**
1.2nm,0.7s,baz=224,slow=8.7,SNR=12									
ILAR	**Eielson Array**	**85.58**	**14**	P		**P**	**P**	**02 21 22.1**	**+0.1**
0.7nm,0.7s,baz=225,slow=5.8,SNR=9.6									
TXAR	**Lajitas Array**	**88.31**	**58**	P		**P**	**P**	**02 21 30.8**	**-1.1**
0.6nm,0.9s,baz=234,slow=4.3,SNR=3.6									
PDAR	**Pinedale Array**	**88.31**	**44**	P		**P**	**P**	**02 21 36.0**	**+0.4**
0.3nm,0.5s,baz=191,slow=4.1,SNR=3.2									
ARCES	**ARCESS Array B**	**125.05**	**349**	PKP		**PKPdf**	**PKPdf**	**02 27 38.8**	**-0.1**
2.5nm,0.9s,baz=19,slow=5.7,SNR=5.5									
BRTR	**Keskin Array B**	**142.55**	**314**	PKP		**PKPdf**	**PKPdf**	**02 28 11.3**	**-1.2**
1.6nm,0.8s,baz=128,slow=2.4,SNR=11									
NRDL	**Niedersach Rie**	**143.59**	**349**	*e*PKPbc		**PKPdf**	**PKPdf**	**02 28 13.8**	**+0.1**
CLL	**Collm**	**144.08**	**345**	*e*PKPbc		**PKPdf**	**PKPdf**	**02 28 15.7**	**+1.0**
CLL	**Collm**	**144.08**	**345**	⇑*i*PKP		**PKPdf**	**PKPdf**	**02 28 15.6**	**+0.9**
comp=Z,11nm,0.5s									
CLZ	**Clausthal**	**144.16**	**348**	*e*PKPbc		**PKPdf**	**PKPdf**	**02 28 16.1**	**+1.2**
BRG	**Berggiesshubel**	**144.24**	**344**	*e*PKPbc		**PKPab**	**PKPab**	**02 28 16.1**	**+0.8**
MOX	**Moxa**	**145.03**	**346**	*e*PKPbc		**PKPab**	**PKPab**	**02 28 18.4**	**+0.1**
TANN	**Tannenbergstha**	**145.04**	**345**	*e*PKPbc		**PKPab**	**PKPab**	**02 28 18.6**	**+0.1**
UBBA	**Unterbreizbach**	**145.21**	**348**	*e*PKPbc		**PKPab**	**PKPab**	**02 28 19.0**	**+0.1**
ROTZ	**Rotzenmuhle**	**145.70**	**345**	*e*PKPbc		**PKPab**	**PKPab**	**02 28 20.3**	**-0.7**
TNS	**Taunus Mts**	**146.07**	**349**	*e*PKPbc		**PKPab**	**PKPab**	**02 28 21.7**	**-0.8**
WET	**Wettzell**	**146.10**	**344**	*e*PKPbc		**PKPab**	**PKPab**	**02 28 21.5**	**-1.2**
GEC2	**GERESS Array S**	**146.15**	**343**	*e*PKPbc		**PKPab**	**PKPab**	**02 28 21.6**	**-1.4**
GERES	**GERESS Array B**	**146.15**	**343**	PKPbc		**PKPab**	**PKPab**	**02 28 21.6**	**-1.4**
comp=Z,1.8nm,0.5s,baz=27,slow=3.4,SNR=23									
WLF	**Walferdange**	**146.97**	**352**	*e*PKPbc		**PKPab**	**PKPab**	**02 28 24.3**	**-1.8**
RJOB	**Jochberg**	**147.41**	**343**	*e*PKPbc		**PKPbc**	**PKPbc**	**02 28 24.9**	**+0.9**
FUR	**Furstenfeldbru**	**147.42**	**345**	*e*PKPbc		**PKPbc**	**PKPbc**	**02 28 24.6**	**+0.7**
BFO	**Black Forest**	**147.91**	**348**	*e*PKPbc		**PKPbc**	**PKPbc**	**02 28 26.1**	**+0.9**
WTTA	**Wattenberg**	**148.16**	**344**	⇑*i*PKPbc		**PKPbc**	**PKPbc**	**02 28 26.8**	**+0.8**
comp=Z,3.3nm,0.4s									
FETA	**Feichten**	**148.62**	**345**	⇑*i*PKiKP		**PKiKP**	**PKiKP**	**02 28 28.0**	**-0.2**
comp=Z,4.3nm,1.0s									

DJA ***15*** *02:37:17.9±0.5, 2.°5±6.°×12.°1E±.°, h10km, M4.3/7, mb4.5/1, MLv4.1/7*
IDC ***15*** *02:37:17.2±1.1, 2.°12S×121.°20E, h0km, mb3.7/5, mb1 3.9/6, mb1mx3.6/23, mbtmp3.7/6, ML3.9/1, Error ellipse: s-maj=40.8km s-min=19.5km az=69.0*
ISCJB ***15*** *02:37:20.8±0.6, 2.°04S±0.°07×120.°91E±0.°08, h33km, mb3.7/5, Error ellipse: s-maj=13.0km s-min=5.9km az=38.7*

ISC 15 02:37:22.0±1.0, 2.°04S±0.°07×120.°91E±0.°08, h35km, n14, σ1.°94/15, mb3.7/5, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.48**	**227**	P		P	**Pn**	**02 37 46.1**	**-0.1**
TTSI				S		Sn		02 37 56.7	-7.6
LUWI	**Luwuk**	**2.11**	**62**	P		P	**Pn**	**02 37 53.2**	**-1.6**
LUWI				S			**Sn**	**02 38 21.4**	**+1.5**
SPSI	**Sidrap Palu**	**2.23**	**211**	P		P	**Pn**	**02 37 55.6**	**-0.9**
MRSI	**Marisa**	**2.70**	**22**	P		P	**Pn**	**02 38 02.2**	**-0.8**
KAPI	**Kappang**	**3.18**	**201**	P		P	**Pn**	**02 38 10.1**	**+0.6**
KAPI	**Kappang**	**3.18**	**201**	Pn		Pn	**Pn**	**02 38 09.3**	**-0.3**
12nm,0.3s,baz=17,slow=9.7,SNR=14									
KAPI						Sn	**Sn**	**02 38 47.8**	**+1.5**
3.5nm,0.3s,baz=132,slow=22,SNR=3.7									
BKSI	**Bulukumba**	**3.36**	**193**	P		P	**Pn**	**02 38 11.9**	**-0.1**
BBSI	**Bau Bau**	**3.81**	**154**	P		Pn		02 38 32.5	+14
NLAI	**Namlea**	**6.30**	**101**	P		P	**Pn**	**02 38 54.9**	**+2.4**
WRA	**Warramunga Arr**	**22.11**	**145**	P		P	**P**	**02 42 10.2**	**-4.5**
1.4nm,0.9s,baz=323,slow=11,SNR=7.6									
ASAR	**Alice Springs**	**24.92**	**151**	P		P	**P**	**02 42 40.8**	**-1.2**
1.6nm,0.9s,baz=334,slow=8.4,SNR=9.7									
STKA	**Stephens Creek**	**35.52**	**149**	P		P	**P**	**02 44 14.8**	**-0.9**
3.0nm,0.8s,baz=303,slow=8.7,SNR=4.2									
MKAR	**Makanchi Array**	**59.28**	**330**	P		P	**P**	**02 47 22.6**	**+2.4**
0.5nm,0.6s,baz=148,slow=6.6,SNR=4.0									
KURBB	**Kurchatov Arra**	**63.70**	**331**	P		P	**P**	**02 47 51.3**	**+1.4**
0.4nm,0.6s,baz=144,slow=6.3,SNR=5.2									

IDC 15 02:49:01.6±2.1, 5.°31N×126.°22E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/23, mbtmp3.6/4, 1C, Error ellipse: s-maj=211.8km s-min=22.1km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**2.73**	**314**	⇑*i*P		Pg		02 49 58.6	+4.7
BUKP	**Musuan**	**2.80**	**336**	*e*P		Pg		02 49 54.8	-0.5
BUKP				*e*S		Sg		02 50 34.2	+2.7
PAGZ	**Pagadian**	**3.78**	**312**	*e*P		Pn		02 50 03.4	+2.3
WRA	**Warramunga Arr**	**26.34**	**163**	P		P		02 54 38.0	-1.4
1.3nm,0.6s,baz=341,slow=10,SNR=6.1									
ASAR	**Alice Springs**	**29.76**	**166**	P		P		02 55 11.6	+1.5
0.5nm,0.8s,baz=349,slow=7.3,SNR=5.3									
MKAR	**Makanchi Array**	**55.98**	**325**	P		P		02 58 41.9	0.0
0.3nm,0.4s,baz=117,slow=8.5,SNR=6.6									
KURBB	**Kurchatov Arra**	**60.14**	**327**	P		P		02 59 10.8	-0.1
0.5nm,0.6s,baz=126,slow=6.5,SNR=7.9									

AUST ***15*** *03:25:21.6, 5.°25S×148.°59E, h0km*
ISCJB ***15*** *03:25:40.3±1.3, 6.°29S±0.°09×147.°8E±0.°2, h77km, mb3.7/4, Error ellipse: s-maj=21.7km s-min=12.1km az=168.3*
IDC ***15*** *03:25:41.3±2.9, 6.°30S×147.°76E, h73km±27km, mb3.6/4, mb1 3.9/6, mb1mx3.5/18, mbtmp3.7/6, MS3.5/2, Ms1 3.5/2, ms1mx2.8/17, Error ellipse: s-maj=51.7km s-min=18.9km az=108.0*

ISC 15 03:25:41.5±1.5, 6.°3S±0.°1×147.°8E±0.°2, h77km, n19, σ0.°72/16, mb4.0/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.17**	**191**	P		P	**Pn**	**03 26 28.3**	**-0.9**
15nm,0.3s,baz=5.2,slow=8.0,SNR=76									
PMG				S			**Sn**	**03 27 05.8**	**-0.2**
10nm,0.3s,baz=37,slow=20,SNR=6.0									
COEN	**Coen**	**8.87**	**210**	P		P	**Pn**	**03 27 46.3**	**-0.7**
baz=10,SNR=5.5									
MTSU	**Mount Surprise**	**12.26**	**196**	P		P	**Pn**	**03 28 33.3**	**+0.1**
baz=14,SNR=4.9									
KDU	**Kakadu**	**16.36**	**246**	P		P	**P**	**03 29 28.0**	**-0.1**
baz=18,SNR=6.5									
WRA	**Warramunga Arr**	**18.83**	**223**	P		P	**P**	**03 29 54.7**	**-0.6**
0.2nm,0.3s,baz=48,slow=11,SNR=16									
EIDS	**Eidsvold**	**19.26**	**171**	P		P	**Pn**	**03 30 01.6**	**-0.1**
baz=20,SNR=4.1									
RMQ	**Roma**	**20.13**	**177**	P		Pn		03 30 11.6	-0.3
baz=21,SNR=4.8									
QLP	**Quilpie**	**20.48**	**189**	P		P	**P**	**03 30 14.3**	**+1.2**
baz=22,SNR=10									
KNRA	**Kununurra**	**20.84**	**242**	P		Pn		03 30 19.2	-1.1
baz=22,SNR=3.1									
ASAR	**Alice Springs**	**21.84**	**216**	P		P	**P**	**03 30 27.6**	**-0.2**
3.6nm,0.6s,baz=52,slow=8.9,SNR=70									
ASAR				S			**S**	**03 34 25.5**	**+0.5**
0.5nm,0.6s,baz=29,slow=23,SNR=4.2									
FITZ	**Fitzroy Crossi**	**24.57**	**239**	P		P	**P**	**03 30 55.4**	**+1.0**
3.1nm,0.6s,baz=49,slow=9.3,SNR=12									
FITZ	**Fitzroy Crossi**	**24.57**	**239**	P		P	**P**	**03 30 55.1**	**+0.7**
baz=26,SNR=8.0									
STKA	**Stephens Creek**	**26.12**	**192**	P		P	**P**	**03 31 08.1**	**-0.3**
3.6nm,0.7s,baz=358,slow=9.3,SNR=8.6									
STKA	**Stephens Creek**	**26.12**	**192**	P		P	**P**	**03 31 09.7**	**+1.3**
baz=27,SNR=4.8									
WSI	**Waingapu**	**27.40**	**261**	S		S		03 36 07.5	+13
baz=28,SNR=7.3									
AFI	**Afiamalu**	**40.51**	**104**	LR		LR		03 48 07.7	
comp=Z,140nm,20.5s,baz=57,slow=33									
KSRS	**Korea Array**	**47.27**	**338**	LR		LR		03 52 43.0	
comp=Z,21nm,20.7s,baz=235,slow=34									
MKAR	**Malanchi Array**	**78.18**	**320**	P		P	**P**	**03 37 32.2**	**-0.4**
0.1nm,0.4s,baz=103,slow=8.6,SNR=3.1									
TORD	**Torodi Ar. Bea**	**145.88**	**284**	PKPbc		**PKPbc**	**PKPbc**	**03 45 13.2**	**0.0**
1.8nm,0.6s,baz=73,slow=3.2,SNR=22									

CSEM ***15*** *03:41:01.6, 36.°08N×9.°19E, h22km, MD3.1, After SBS TUN* ***15*** *03:41:01.6, 36.°08N×9.°19E, h22km, MD3.1*
ISCJB ***15*** *03:41:03.3±0.7, 36.°02N±0.°05×8.°98E±0.°08, h10km, Error ellipse: s-maj=9.6km s-min=7.1km az=6.8*
CRAAG ***15*** *03:41:22.3, 36.°42N×7.°43E, Ml3.1*

ISC 15 03:41:01.9±1.2, 36.°01N±0.°05×9.°1E±0.°1, h10km, n20, σ0.°65/19, Tunisia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KRIT	**Krib**	**0.33**	**357**	*i* P		P	**Pb**	**03 41 10.2**	**+0.2**
THTN	**Thala**	**0.55**	**217**	*i* P		Pg		03 41 09.3	-3.4
BLIT	**Baltah**	**0.71**	**351**	*i* P		P	**Pn**	**03 41 17.7**	**-0.4**
GHAT	**Ghardimaou**	**0.80**	**308**	*e*P		P	**Pn**	**03 41 19.4**	**0.0**
SYA	**Sidi Yaiche**	**1.28**	**191**	*e*P		P	**Pg**	**03 41 27.5**	**+0.9**
KCHT	**Kechabta**	**1.29**	**31**	*i* P		P	**Pg**	**03 41 27.1**	**+0.3**
ABSA	**Djebel Ababsia**	**1.34**	**282**	P		P	**Pn**	**03 41 27.1**	**+0.4**
ABSA	**Djebel Ababsia**	**1.34**	**282**	P		P	**Pn**	**03 41 27.1**	**+0.4**
CMAH	**Djebel Manchou**	**1.49**	**295**	P		P	**Pn**	**03 41 27.4**	**-1.4**
CMAH	**Djebel Manchou**	**1.49**	**295**	P		P	**Pn**	**03 41 27.4**	**-1.4**
OAR	**Oum El Arais**	**1.58**	**201**	*e*P		P	**Pg**	**03 41 32.2**	**0.0**
BERT	**Berda**	**1.76**	**182**	*i* P		P	**Pb**	**03 41 33.9**	**-0.5**
CKFL	**Kef-Lekhel**	**1.96**	**282**	P		P	**Pn**	**03 41 34.8**	**-0.6**
CKFL	**Kef-Lekhel**	**1.96**	**282**	P		P	**Pn**	**03 41 34.8**	**-0.6**
CAEH	**'Ain El Ouahch**	**1.97**	**294**	P		P	**Pn**	**03 41 35.7**	**+0.3**
CAEH	**'Ain El Ouahch**	**1.97**	**294**	P		P	**Pn**	**03 41 35.7**	**+0.3**
CASM	**Ain Smara**	**2.12**	**278**	P		P	**Pn**	**03 41 37.7**	**+0.2**
CASM	**Ain Smara**	**2.12**	**278**	P		P	**Pn**	**03 41 37.7**	**+0.2**
DFRA	**Djebel Bou Aff**	**2.66**	**283**	P		P	**Pn**	**03 41 44.5**	**-0.4**
DFRA	**Djebel Bou Aff**	**2.66**	**283**	P		P	**Pn**	**03 41 44.5**	**-0.4**

ISCJB ***15*** *03:41:27.7±0.4, 59.°37S±0.°06×26.°2W±0.°1, h61km, mb4.7/22, Error ellipse: s-maj=10.5km s-min=7.6km az=135.7*
BJI ***15*** *03:41:30.7, 59.°40S×26.°30W, h75km, mB5.2/9, Ms5.2/4, Ms7 5.0/7*
NEIC ***15*** *03:41:31.3±1.3, 59.°41S×26.°26W, h82km±11km, mb5.0/13, Error ellipse: s-maj=7.6km s-min=5.3km az=218.0*
IDC ***15*** *03:41:31.3±1.9, 59.°39S×26.°28W, h80km±15km, mb4.3/15, mb1 4.4/16, mb1mx4.3/19, mbtmp4.4/16, MS3.7/11, Ms1 3.7/11, ms1mx3.6/22, Error ellipse: s-maj=15.2km s-min=12.5km az=56.0*

ISC 15 03:41:29.3±0.3, 59.°37S±0.°08×26.°39W±0.°07, h61km, n110, σ1.°38/127, mb4.7/21, 1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.58**	**154**	*e*Pn		P	**Pn**	**03 44 37.5**	**-1.1**
VNA1	**Neumayer--Stat**	**13.58**	**154**	*e*Sn		Sn		03 46 51.5	-16
SNAA	**Sanae**	**15.56**	**152**	*e*Pn		P	**Pn**	**03 45 03.6**	**-0.9**
SNAA	**Sanae**	**15.56**	**152**	*e*Sn		Sn		03 47 38.9	-17
SNAA	**Sanae**	**15.56**	**152**	*e*Pn		P	**Pn**	**03 45 03.7**	**-0.9**
110nm,0.6s									
SNAA				S		Sn		03 47 37.6	-18
SNAA				*e*S		S		03 47 39.2	-29
SNAA	**Sanae**	**15.56**	**152**	P		P	**Pn**	**03 45 03.7**	**-0.9**
9.7nm,0.3s,baz=322,slow=13,SNR=734									
SNAA				S		Sn		03 47 37.6	-18
1.1nm,0.3s,baz=308,slow=19,SNR=6.8									
SNAA				LR		LR		03 49 46.6	
comp=Z,86nm,22.0s,baz=353,slow=32									
PMSA	**Palmer Station**	**18.23**	**237**	*e*P		P	**P**	**03 45 37.3**	**+0.2**
PMSA	**Palmer Station**	**18.23**	**237**	LR		LR		03 51 25.2	
comp=Z,425nm,19.0s,baz=108,slow=32									
MAIT	**Maitri**	**19.28**	**142**	*e*P		P		03 45 37.9	-11
MAIT	**Maitri**	**19.28**	**142**	*e*P		P		03 45 38.0	-11
EFI	**East Falkland**	**19.36**	**279**	Pn		Pn	**Pn**	**03 45 52.4**	**+1.2**
829nm,0.7s,SNR=16									
EFI	**East Falkland**	**19.36**	**279**	*e*Pn		Pn	**Pn**	**03 45 52.7**	**+1.5**
470nm,1.7s									
USHA	**Ushuaia**	**22.99**	**263**	P		P	**P**	**03 46 29.7**	**+1.2**
USHA	**Ushuaia**	**22.99**	**263**	P		P	**P**	**03 46 29.7**	**+1.2**
60nm,0.7s,baz=95,slow=9.0,SNR=32									
SYO	**Syowa Base**	**28.79**	**137**	⇓*e*pP		pP		03 47 36.0	+0.2
QSPA	**South Pole Qui**	**30.87**	**180**	*e*P		P	**P**	**03 47 40.0**	**+0.4**
31nm,1.4s									
QSPA				*e*PcP		PcP	**PcP**	**03 50 34.3**	**-0.3**
QSPA	**South Pole Qui**	**30.87**	**180**	P		P	**P**	**03 47 39.9**	**+0.4**
13nm,1.0s,baz=200,slow=3.8,SNR=38									
QSPA				PcP		PcP	**PcP**	**03 50 34.3**	**-0.3**
6.7nm,0.9s,baz=166,slow=4.2,SNR=3.3									
TRQA	**Tornquist**	**31.13**	**297**	*e*P		P	**P**	**03 47 43.2**	**+1.3**
123nm,1.0s									

PLCA Paso Flores 33.13 284 *e*P **P 03 47 59.5 0.0**
9.6nm,0.9s
PLCA PcP **PcP 03 50 40.4 -0.7**
PLCA Paso Flores 33.13 284 P **P 03 47 60.0 +0.5**
7.7nm,0.5s,baz=149,slow=7.1,SNR=28
PLCA PcP **PcP 03 50 40.4 -0.7**
2.3nm,0.8s,baz=196,slow=1.7,SNR=3.5
PLCA LR LR 03 59 29.4
comp=Z,181nm,19.4s,baz=183,slow=32
MAW Mawson 37.25 141 *e*P **P 03 48 33.7 -0.7**
1.1nm,1.1s
MAW Mawson 37.25 141 P **P 03 48 33.6 -0.9**
2.9nm,0.9s,baz=217,slow=12,SNR=4.6
MAW LR LR 04 01 49.2
comp=Z,116nm,20.0s,baz=270,slow=33
CPUP Villa Florida 39.37 313 P **P 03 48 52.9 +0.2**
CPUP Villa Florida 39.37 313 P **P 03 48 52.9 +0.2**
3.2nm,0.5s,baz=138,slow=7.3,SNR=15
CPUP LR LR 04 02 35.4
comp=Z,128nm,21.2s,baz=147,slow=32
SUR Sutherland 41.22 70 P **P 03 49 07.6 -0.6**
SUR Sutherland 41.22 70 P **P 03 49 07.6 -0.6**
13nm,1.2s,baz=196,slow=7.4,SNR=4.7
LCO Las Campanas 42.66 295 *e*P **P 03 49 21.2 +1.1**
29nm,0.8s
SBA Scott Base 42.79 184 *e*P **P 03 49 21.3 +1.2**
VNDA Vanda 43.26 183 *e*P **P 03 49 24.8 +0.8**
13nm,1.4s
VNDA PcP **PcP 03 51 12.4 +0.6**
VNDA Vanda 43.26 183 P **P 03 49 24.7 +0.7**
3.5nm,0.8s,baz=190,slow=6.6,SNR=20
VNDA PcP **PcP 03 51 12.4 +0.6**
2.7nm,0.9s,baz=158,slow=5.4,SNR=3.8
VNDA LR LR 04 08 43.9
comp=Z,54nm,18.0s,baz=164,slow=38
BDFB Brasilia 46.47 331 P **P 03 49 50.6 +0.3**
BDFB Brasilia 46.47 331 P **P 03 49 50.6 +0.3**
6.1nm,0.7s,baz=152,slow=7.3,SNR=16
BDFB LR LR 04 08 05.2
comp=Z,49nm,18.5s,baz=344,slow=34
BOSA Boshof 46.48 72 P **P 03 49 49.2 -1.1**
BOSA Boshof 46.48 72 P **P 03 49 49.2 -1.1**
3.8nm,0.6s,baz=176,slow=5.2,SNR=11
LPAZ La Paz 52.68 306 *e*P **P 03 50 38.6 +0.5**
17nm,0.8s
ARE Arequipa 53.94 303 *e*P **P 03 50 47.0 +0.1**
SAML Samuel 57.47 315 *e*P **P 03 51 11.1 -0.7**
20nm,0.7s
LSZ Lusaka 59.25 66 *e*P **P 03 51 24.2 -0.2**
4.6nm,0.8s
NNA Nana 60.25 300 *e*P **P 03 51 31.7 +0.5**
31nm,1.4s
DBIC Dimbokro 68.04 23 *e*P **P 03 52 22.2 +0.1**
7.8nm,0.8s
DBIC Dimbokro 68.04 23 P **P 03 52 22.6 +0.5**
7.9nm,0.9s,baz=163,slow=6.3,SNR=10.0
OTAV Otavalo 71.87 304 *e*P **P 03 52 46.6 +0.5**
16nm,0.9s
ROSC El Rosal 74.36 310 *e*P **P 03 53 00.8 0.0**
ROSC El Rosal 74.36 310 P **P 03 53 00.8 0.0**
7.2nm,0.7s,baz=276,slow=19,SNR=15
ROSC LR LR 04 25 51.6
comp=Z,54nm,20.8s,baz=47,slow=36
TOA0 Torodi Ar. Sit 75.77 28 *e*P **P 03 53 09.0 +0.7**
TORD Torodi Ar. Bea 75.77 28 P **P 03 53 08.9 +0.6**
TORD Torodi Ar. Bea 75.77 28 P **P 03 53 08.9 +0.6**
12nm,0.7s,baz=198,slow=6.2,SNR=224
TORD LR LR 04 20 25.0
comp=Z,50nm,18.6s,baz=215,slow=31
KMBO Kilima Mbogo 75.87 67 LR LR 04 22 44.9
comp=Z,91nm,18.6s,baz=276,slow=33
STKA Stephens Creek 88.54 170 P **P 03 54 14.3 -0.8**
STKA Stephens Creek 88.54 170 P **P 03 54 14.3 -0.8**
3.0nm,0.9s,baz=54,slow=8.0,SNR=3.8
ASAR Alice Springs 95.69 162 P **P 03 54 47.0 -1.3**
ASAR PKKPbc **PKKPbc 04 11 35.8 +0.6**
ASAR Alice Springs 95.69 162 P **P 03 54 47.0 -1.3**
1.1nm,0.6s,baz=180,slow=4.1,SNR=12
ASAR PKKPbc **PKKPbc 04 11 35.8 +0.6**
0.3nm,0.8s,baz=26,slow=2.4,SNR=6.7
ASAR LR LR 04 32 31.3
comp=Z,112nm,21.1s,baz=174,slow=32
WRA Warramunga Arr 99.41 162 P **Pd

YKA				PP	PP	04 03 34.8	-5.9	
YKA				SKPbc	**SKPbc**	**04 04 13.2**	**-3.1**	
YKA	**Yellowknife Ar**	**138.89**	**315**	PKhKP	PKPpre	04 00 36.3		
	comp=Z,0.2nm,0.4s,baz=126,slow=3.9,SNR=3.4							
YKA				PKP	**PKPdf**	**04 00 46.6**	**-0.4**	
	comp=Z,5.8nm,0.9s,baz=126,slow=2.1,SNR=6.8							
YKA				PP	PP	04 03 34.8	-5.9	
	comp=Z,0.6nm,0.8s,baz=126,slow=5.8,SNR=5.8							
YKA				SKPbc	**SKPbc**	**04 04 13.2**	**-3.1**	
	comp=Z,1.8nm,0.8s,baz=127,slow=2.3,SNR=12							
YKW3	**Yellowknife Ar**	**138.93**	**315**	*e*PKPdf	**PKPdf**	**04 00 45.8**	**-1.3**	
LZH	**Lanzhou**	**140.50**	**104**	*e*PKP	PKPdf	04 00 44.0	-7.1	
LZH				sPKP		04 00 57.5		
ZALV	**Zalesovo Beam**	**143.35**	**67**	PKPpre	PKPpre	04 00 51.0		
ZALV	**Zalesovo Beam**	**143.35**	**67**	PKhKP	PKPpre	04 00 51.0		
	comp=Z,1.1nm,0.3s,baz=241,slow=2.8,SNR=8.5							
NJ2	**Nanjing**	**144.18**	**124**	*e*PKP	**PKPdf**	**04 00 59.9**	**+2.4**	
HHC	**Hu-ho-hao-te**	**148.00**	**106**	*e*PKPbc	**PKPbc**	**04 01 05.6**	**-1.5**	
HHC				PKS	**PKSdf**	**04 04 39.3**	**+0.3**	
HHC				SKS	**SKSdf**	**04 08 08.4**	**+1.7**	
HHC				SKKS	**SKKSac**	**04 11 23.8**	**+2.7**	
HHC				SS	**SS**	**04 23 41.6**	**+4.6**	
HHC				AMB	AMB			
	comp=Z,90nm,6.9s							
HHC				LR	LR			
	comp=Z,210nm,18.5s							
JNU	**Nakatsue**	**149.70**	**140**	PKPbc	**PKPbc**	**04 01 11.3**	**-0.2**	
JNU	**Nakatsue**	**149.70**	**140**	PKPbc	**PKPbc**	**04 01 11.3**	**-0.2**	
	comp=Z,6.2nm,0.9s,baz=3.7,slow=2.9,SNR=4.3							
EGAK	**Eagle**	**150.23**	**308**	*e*PKPbc	**PKPbc**	**04 01 10.5**	**-1.2**	
EGAK				*e*PKPab	**PKPab**	**04 01 17.5**	**-0.7**	
SONM	**Songino Array**	**150.35**	**92**	PKPbc	**PKPbc**	**04 01 12.0**	**-0.7**	
SONM	**Songino Array**	**150.35**	**92**	PKPbc	**PKPbc**	**04 01 12.0**	**-0.7**	
	comp=Z,10nm,0.8s,baz=222,slow=2.4,SNR=25							
DOT	**Dot Lake**	**151.03**	**305**	*e*PKPbc	**PKPbc**	**04 01 13.4**	**-0.2**	
DL2	**Dalian**	**151.18**	**121**	PKPbc	**PKPbc**	**04 01 14.3**	**-0.4**	
SML	**Sawmill**	**152.20**	**300**	*e*PKPbc	**PKPbc**	**04 01 15.8**	**-0.6**	
SML				*e*PKPab	**PKPab**	**04 01 25.9**	**-0.7**	
KSAR	**Wonju Array Be**	**152.51**	**132**	PKPbc	**PKPbc**	**04 01 16.9**	**-1.0**	
KDAK	**Kodiak Island**	**152.54**	**290**	*e*PKPbc	**PKPbc**	**04 01 16.3**	**-0.9**	
KSRS	**Korea Array**	**152.54**	**132**	PKPbc	**PKPbc**	**04 01 16.9**	**-1.0**	
	comp=Z,2.0nm,0.8s,baz=195,slow=1.9,SNR=8.5							
ILAR	**Eielson Array**	**152.56**	**307**	PKPbc	**PKPbc**	**04 01 16.0**	**-1.1**	
ILAR	**Eielson Array**	**152.56**	**307**	PKPbc	**PKPbc**	**04 01 16.0**	**-1.1**	
	comp=Z,4.1nm,0.7s,baz=326,slow=1.9,SNR=51							
COLA	**College**	**152.98**	**307**	*e*PKPbc	**PKPbc**	**04 01 17.1**	**-0.9**	
CN2	**Changchun**	**156.82**	**120**	*e*PKP	**PKPdf**	**04 01 19.5**	**+2.9**	
MDJ	**Mudanjiang**	**159.27**	**125**	PKP	**PKPdf**	**04 01 21.1**	**+1.5**	
PETK	**Petropavlovsk-**	**173.32**	**202**	PKPab	**PKPab**	**04 02 57.5**	**-1.4**	
PETK	**Petropavlovsk-**	**173.32**	**202**	PKPab	**PKPab**	**04 02 57.5**	**-1.4**	
	comp=Z,1.5nm,0.6s,baz=159,slow=5.0,SNR=4.1							

KRSC 15 03:44:51.4±0.8, 48°.86N×155°.74E, h5km±5km, ML4.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.84**	**7**	P	Pn	03 45 23.4	-0.2
SKR				S	Sn	03 45 46.3	-1.0
MIPR	**Malaya Ipel'ka**	**3.48**	**10**	P	Pn	03 45 46.5	+0.3
MIPR				S	Sn	03 46 27.2	-0.6
ASAK	**Asacha**	**3.79**	**20**	P	Pn	03 45 52.0	+1.5
ASAK				S	Sn	03 46 36.2	+0.7
MTVR	**Mutnovka**	**3.95**	**22**	P	Pn	03 45 54.0	+1.2
MTVR				S	Sn	03 46 39.6	0.0
RUS	**Russkaya**	**3.99**	**25**	P	Pn	03 45 53.4	+0.3
RUS				S	Sn	03 46 39.9	-0.3
UGLR	**Uglovaya**	**4.77**	**23**	P	Pn	03 46 06.2	+2.2
KOK	**Koryaka**	**4.80**	**21**	P	Pn	03 46 06.6	+2.2
AVH	**Avacha**	**4.80**	**22**	P	Pn	03 46 06.2	+1.8
SMAR	**Somma**	**4.81**	**22**	P	Pn	03 46 07.2	+2.4
SDLR	**Sedlovina**	**4.85**	**23**	P	Pn	03 46 06.4	+1.3
NLC	**Nalytchevo**	**4.88**	**26**	S	Sn	03 47 00.8	-1.3
SPN	**Mys Shipunski**	**5.03**	**31**	S	Sn	03 47 06.4	+0.5
GNL	**Ganaly**	**5.04**	**15**	P	Pn	03 46 09.7	+2.0
MKZ	**Mys Kozlova**	**6.81**	**31**	P	Pn	03 46 31.4	-0.4
MKZ				S	Sn	03 47 45.5	-4.1

IDC 15 03:45:22.9±1.9, 5°.92S×152°.86E, h0km, mb3.8/4, mb1 4.1/5, mb1mx3.7/19, mbtmp3.9/5, ML3.1/1, Error ellipse: s-maj=103.6km s-min=25.2km az=132.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.63**	**238**	Pn	Pn	03 46 60.0	-1.7
	2.2nm,0.3s,baz=57,slow=9.2,SNR=5.7						
PMG				Sn	Sn	03 48 07.2	-11
	1.1nm,0.3s,baz=18,slow=20,SNR=3.5						
WRA	**Warramunga Arr**	**22.77**	**231**	P	P	03 50 26.4	-0.8
	0.7nm,0.6s,baz=56,slow=10,SNR=9.3						
ASAR	**Alice Springs**	**25.38**	**224**	P	P	03 50 52.5	+0.3
	1.3nm,0.7s,baz=61,slow=8.6,SNR=15						
FITZ	**Fitzroy Crossi**	**29.20**	**243**	P	P	03 51 27.6	+1.2
	3.3nm,0.9s,baz=74,slow=6.5,SNR=12						
ILAR	**Eielson Array**	**83.17**	**22**	P	P	03 57 51.0	+0.3
	0.9nm,0.7s,baz=246,slow=5.5,SNR=5.3						
TORD	**Torodi Ar. Bea**	**150.70**	**286**	PKPbc	PKPbc	04 05 17.2	-1.1
	0.5nm,0.9s,baz=84,slow=2.4,SNR=7.0						

*PGC **15** 03:50:49.9±10.0, 65°.51N×143°.04W, h10km, ML3.3/3, 230km east of Fairbanks, Ak Alaska*

NEIC 15 03:50:48.3, 65°.56N×143°.02W, h13km, ML3.0(AEIC), 7D, After AEIC., Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EGAK	**Eagle**	**1.11**	**134**	*e*Pg	Pb	03 51 09.2	-0.1
EGAK				*e*S	Sn	03 51 24.7	0.0
SCRK	**Sand Creek**	**1.64**	**195**	P	Pn	03 51 17.4	+0.4
SCRK				S	Sn	03 51 38.1	+0.1
IL1	**Eielson Array**	**1.81**	**246**	P	Pn	03 51 18.5	-0.7
IL1				S	Sn	03 51 43.0	+0.9
GLM	**Gilmore Dome**	**1.92**	**255**	P	Pn	03 51 21.0	+0.2
DOT	**Dot Lake**	**1.97**	**194**	*e*Pn	Pb	03 51 22.8	-1.2
DOT				*e*S	Sb	03 51 49.3	+0.8
RIDG	**Independ'e Rid**	**1.98**	**204**	P	Pn	03 51 21.9	+0.2
RIDG				S	Sb	03 51 49.3	+0.3
COLA	**College**	**2.15**	**254**	P	Pn	03 51 23.8	+0.1
COLA				S	Sn	03 51 51.8	+1.6
DAWY	**Dawson**	**2.16**	**132**	P	Pn	03 51 24.7	+0.6
DAWY	**Dawson**	**2.16**	**132**	⇓Pn	Pn	03 51 24.5	+0.5
DAWY				⇓Sg	Sb	03 51 55.7	+1.7
CCB	**Clear Creek Bu**	**2.22**	**248**	P	Pn	03 51 23.5	-1.3
CCB				S	Sn	03 51 53.3	+1.2
MDM	**Murphy Dome**	**2.27**	**257**	P	Pn	03 51 25.3	-0.2
WRH	**Wood River Hil**	**2.41**	**245**	P	Pn	03 51 26.8	-0.7
BCA3	**Beaver Creek A**	**2.56**	**167**	P	Pn	03 51 29.5	0.0
MENT	**Mentasta**	**2.65**	**187**	*e*Pn	Pn	03 51 30.2	-0.5
MENT				*e*S	Sg	03 52 12.1	-1.3
NEA	**Nenana**	**2.75**	**252**	P	Pn	03 51 33.5	+1.5
PAX	**Paxson**	**2.81**	**203**	*e*Pn	Pn	03 51 28.6	-4.4
PAX				*e*Pg	Pb	03 51 39.6	+1.2
PAX				*e*S	Sb	03 52 14.1	+1.3
MCK	**McKinley**	**3.13**	**237**	*e*Pn	Pn	03 51 38.6	+1.2
MCK				*e*S	Sg	03 52 31.4	+2.4
COLD	**Coldfoot**	**3.34**	**303**	P	Pn	03 51 40.8	+0.6
TRF	**Thorofare Moun**	**3.79**	**239**	P	Pn	03 51 45.5	-1.1
VRDI	**Verde Repeater**	**4.35**	**183**	P	Pn	03 51 53.5	-0.8
IM3	**Indian Mountai**	**4.44**	**280**	P	Pn	03 51 55.0	-0.3
SML	**Sawmill**	**4.44**	**215**	*e*Pn	Pn	03 51 57.6	+2.2
SML				*e*S	Sg	03 53 08.4	-2.5
INK	**Inuvik**	**4.65**	**49**	P	Pn	03 51 59.5	+1.4
INK	**Inuvik**	**4.65**	**49**	⇓Pn	Pn	03 51 59.8	+1.7
INK				⇓Sn	Sn	03 52 51.5	-0.3
KIAG	**Kiagna River**	**4.66**	**176**	P	Pn	03 52 00.9	+2.3
GRNC	**Granite Creek**	**4.88**	**173**	P	Pn	03 52 01.7	+0.1
BARK	**Barkley Ridge**	**5.18**	**177**	P	Pn	03 52 08.7	+3.1
HYT	**Haines Junctio**	**5.36**	**150**	⇓Pn	Pn	03 52 09.0	+0.9
HYT				⇑Sg	Sg	03 53 35.6	-5.1
WHY	**Whitehorse**	**6.14**	**139**	⇓Sg	Sg	03 54 00.1	-5.6
DLBC	**Dease Lake**	**9.38**	**133**	⇓Sg	Sn	03 55 40.2	+52

GUC 15 03:56:14.9±0.7, 30°.38S×71°.54W, h15km±6km, MD3.7, ML3.3, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMCH	**Combarbala**	**0.92**	**150**	⇑*i*P	Pb	03 56 31.1	-1.5
CMCH				*i* S	Sb	03 56 44.2	-0.6
CMCH				AML	AML	03 56 45.9	
	comp=N,2μm,0.4s						
CHNG	**Los Chungos**	**1.50**	**179**	*e*P	Pn	03 56 40.3	-1.0
CHNG				*i* S	Sn	03 56 59.9	-0.6
CHNG				AML	AML	03 57 04.3	
	comp=E,228nm,0.7s						
ROCH	**El Roble**	**2.62**	**170**	AML	AML	03 57 40.8	
	comp=N,135nm,0.6s						
PEL	**Peldehue**	**2.85**	**165**	*e*P	Pn	03 57 01.0	+1.1
PEL				AML	AML	03 57 45.7	
	comp=E,154nm,0.3s						
CLCH	**Cerro Calan**	**3.13**	**164**	*e*P	Pn	03 57 06.1	+2.3
CLCH				*i* S	Sn	03 57 43.7	+2.8
CLCH				AML	AML	03 57 58.7	
	comp=E,95nm,0.5s						
LMEL	**Las Melosas**	**3.64**	**162**	*e*P	Pn	03 57 12.3	+1.3
LMEL				*i* S	Sn	03 57 55.1	+1.3
LMEL				AML	AML	03 58 06.7	
	comp=N,47nm,0.6s						

IDC 15 04:02:38.2±2.4, 4°.67S×150°.75E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/18, mbtmp3.7/4, Error ellipse: s-maj=52.1km s-min=36.1km az=7.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.05**	**225**	P	P	04 07 35.1	+0.3
	0.3nm,0.3s,baz=52,slow=9.8,SNR=8						
DZM	**Mont Dzumac**	**23.03**	**140**	P	P	04 07 45.6	+0.3
	2.2nm,0.8s,baz=303,slow=10,SNR=3.1						
ASAR	**Alice Springs**	**24.92**	**219**	P	P	04 08 02.9	-0.4
	0.3nm,0.3s,baz=49,slow=8.4,SNR=5.9						
FITZ	**Fitzroy Crossi**	**27.95**	**239**	P	P	04 08 30.8	+0.1
	2.7nm,0.8s,baz=62,slow=9.5,SNR=13						
TORD	**Torodi Ar. Bea**	**148.32**	**287**	PKPbc	PKPbc	04 22 26.9	-0.8
	0.2nm,0.7s,baz=98,slow=2.8,SNR=5.1						

IDC 15 04:19:48.4±2.1, 15°.77S×176°.77W, h361km±26km, mb3.3/8, mb1 3.7/9, mb1mx3.4/20, mbtmp3.4/9, Error ellipse: s-maj=87.7km s-min=13.1km az=152.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.17**	**70**	P	Pn	04 21 10.4	-0.1
	16nm,0.3s,baz=44,slow=2.8,SNR=21						
STKA	**Stephens Creek**	**41.05**	**239**	P	P	04 26 57.3	-0.8
	0.9nm,0.4s,baz=72,slow=9.5,SNR=3.8						
WRA	**Warramunga Arr**	**46.60**	**257**	P	P	04 27 41.8	-0.2
	1.2nm,0.2s,baz=96,slow=7.8,SNR=48						
ASAR	**Alice Springs**	**46.91**	**252**	P	P	04 27 44.2	-0.1
	8.2nm,0.4s,baz=87,slow=8.1,SNR=134						
FITZ	**Fitzroy Crossi**	**54.95**	**259**	P	P	04 28 43.9	+0.3
	3.6nm,1.0s,baz=69,slow=8.6,SNR=3.0						
NVAR	**Mina Array Bea**	**76.80**	**43**	P	P	04 31 01.9	+0.4
	0.5nm,0.6s,baz=225,slow=8.7,SNR=4.5						
ILAR	**Eielson Array**	**83.47**	**12**	P	P	04 31 35.6	-0.2
	0.3nm,0.4s,baz=224,slow=5.7,SNR=11						
TXAR	**Lajitas Array**	**83.53**	**57**	P	P	04 31 38.1	+1.0
	0.3nm,0.6s,baz=216,slow=4.0,SNR=5.9						
PDAR	**Pinedale Array**	**84.73**	**43**	P	P	04 31 41.7	-1.3
	0.3nm,0.5s,baz=227,slow=3.6,SNR=2.7						
ARCES	**ARCESS Array B**	**124.48**	**351**	PKP	PKPdf	04 38 03.7	-0.7
	4.7nm,1.1s,baz=15,slow=3.7,SNR=4.3						

*IDC **15** 04:30:19.5±0.8, 22°.32S×173°.94E, h0km, mb4.1/10, mb1 4.3/11, mb1mx4.2/18, mbtmp4.1/11, ML3.8/1, MS3.7/6, Ms1 3.7/6, ms1mx3.4/25, Error ellipse: s-maj=28.6km s-min=19.1km az=145.0*

*ISCJB **15** 04:30:23.4±0.5, 22°.34S±0°.09×173°.86E±0°.07, h35km, mb4.1/14, MS3.7/3, Error ellipse: s-maj=13.8km s-min=6.6km az=152.5*

*NEIC **15** 04:30:26.1±1.5, 22°.35S×173°.87E, h46km±13km, mb4.4/4, Error ellipse: s-maj=18.9km s-min=9.7km az=148.0*

ISC 15 04:30:25.0±0.5, 22°.4S±0°.1×173°.91E±0°.07, h35km, n41, σ1s00/41, mb4.2/14, MS3.7/3, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**6.05**	**41**	*e*Pn	**Pn**	**04 31 52.8**	**+0.6**
	28nm,0.4s						
MSVF				*e*S	**Sn**	**04 33 00.1**	**-0.3**
DZM	**Mont Dzumac**	**6.92**	**271**	*e*P	Pn	04 32 10.6	+6.5
DZM				*e*S	**Sn**	**04 33 22.6**	**+0.9**
DZM				*e*LR	LR	04 33 46.1	
	650nm,22.7s						
DZM	**Mont Dzumac**	**6.92**	**271**	*e*P	**Pn**	**04 32 04.3**	**+0.3**
DZM				*e*S	**Sn**	**04 33 22.1**	**+0.4**
DZM	**Mont Dzumac**	**6.92**	**271**	*e*Pn	**Pn**	**04 32 04.4**	**+0.3**
	8.1nm,0.6s						
DZM				*e*S	**Sn**	**04 33 21.3**	**-0.4**
DZM	**Mont Dzumac**	**6.92**	**271**	Pn	**Pn**	**04 32 04.7**	**+0.6**
	1.6nm,0.3s,baz=122,slow=15,SNR=13						
DZM				Sn	**Sn**	**04 33 20.7**	**-0.9**
	1.5nm,0.3s,baz=94,slow=21,SNR=6.4						
RAO	**Raoul Island**	**10.04**	**135**	LR	LR	04 35 22.7	
	comp=Z,312nm,20.9s,baz=255,slow=30						
AFI	**Afiamalu**	**16.00**	**61**	LR	LR	04 38 51.9	
	comp=Z,262nm,18.0s,baz=248,slow=32						
URZ	**Urewera**	**16.05**	**171**	LR	LR	04 38 43.6	
	comp=Z,260nm,18.8s,baz=355,slow=31						
EIDS	**Eidsvold**	**21.07**	**257**	*e*P	**P**	**04 35 07.1**	**+0.7**
	7.4nm,0.7s						
CTA	**Charters Tower**	**25.86**	**270**	P	**P**	**04 35 54.4**	**+0.8**
CTA	**Charters Tower**	**25.86**	**270**	P	**P**	**04 35 54.4**	**+0.8**
	3.8nm,0.6s,baz=83,slow=8.1,SNR=5.2						
STKA	**Stephens Creek**	**30.17**	**245**	P	**P**	**04 36 32.3**	**+0.3**
STKA	**Stephens Creek**	**30.17**	**245**	P	**P**	**04 36 32.3**	**+0.3**
	2.2nm,0.6s,baz=78,slow=9.3,SNR=4.5						
STKA				LR	LR	04 47 37.8	
	comp=Z,164nm,20.4s,baz=31,slow=34						
PPT	**Papeete**	**34.60**	**89**	LR	LR	04 46 59.6	
	comp=Z,102nm,20.4s,baz=209,slow=29						
ASAR	**Alice Springs**	**36.75**	**260**	P	**P**	**04 37 28.9**	**-0.5**
ASAR	**Alice Springs**	**36.75**	**260**	P	**P**	**04 37 28.9**	**-0.5**
	3.2nm,0.8s,baz=98,slow=8.7,SNR=17						
WRA	**Warramunga Arr**	**36.91**	**266**	P	**P**	**04 37 29.2**	**-1.6**
WRA	**Warramunga Arr**	**36.91**	**266**	P	**P**	**04 37 29.2**	**-1.6**
	0.4nm,0.4s,baz=100,slow=8.5,SNR=5.5						
VNDA	**Vanda**	**55.49**	**183**	P	**P**	**04 39 56.7**	**+0.7**
VNDA	**Vanda**	**55.49**	**183**	P	**P**	**04 39 56.7**	**+0.7**
	0.4nm,0.5s,baz=3.8,slow=7.3,SNR=3.2						
VNDA				LR	LR	04 59 01.4	
	comp=Z,69nm,18.9s,baz=347,slow=31						
QSPA	**South Pole Qui**	**67.68**	**180**	*e*P	**P**	**04 41 18.2**	**-0.4**
	5.8nm,1.0s						
PETK	**Petropavlovsk-**	**76.49**	**350**	P	**P**	**04 42 12.2**	**+1.2**
PETK	**Petropavlovsk-**	**76.49**	**350**	P	**P**	**04 42 12.2**	**+1.2**
	3.5nm,0.7s,baz=141,slow=7.6,SNR=7.0						
MAW	**Mawson**	**77.14**	**202**	P	**P**	**04 42 15.0**	**+0.3**
MAW	**Mawson**	**77.14**	**202**	P	**P**	**04 42 15.0**	**+0.3**
	4.2nm,0.7s,baz=114,slow=9.2,SNR=22						
CMB	**Columbia Colle**	**86.09**	**46**	*e*P	**P**	**04 43 03.5**	**+1.2**
	2.0nm,1.0s						
SNAA	**Sanae**	**86.16**	**181**	P	**P**	**04 43 00.9**	**-1.4**
	2.4nm,0.7s						
NVAR	**Mina Array Bea**	**87.69**	**47**	P	**P**	**04 43 10.6**	**+0.1**
NVAR	**Mina Array Bea**	**87.69**	**47**	P	**P**	**04 43 10.6**	**+0.1**
	0.4nm,0.7s,baz=232,slow=6.6,SNR=5.1						
ILAR	**Eielson Array**	**92.00**	**16**	P	**P**	**04 43 28.3**	**-1.3**
ILAR	**Eielson Array**	**92.00**	**16**	P	**P**	**04 43 28.3**	**-1.3**
	1.1nm,0.8s,baz=232,slow=4.5,SNR=5.9						
TXAR	**Lajitas Array**	**94.48**	**60**	P	**P**	**04 43 42.9**	**+0.8**
TXAR	**Lajitas Array**	**94.48**	**60**	P	**P**	**04 43 42.9**	**+0.8**
	0.1nm,0.7s,baz=224,slow=7.0,SNR=4.2						
ARCES	**ARCESS Array B**	**129.18**	**346**	PKP	**PKPdf**	**04 49 26.8**	**-2.0**
ARCES	**ARCESS Array B**	**129.18**	**346**	PKP	**PKPdf**	**04 49 26.8**	**-2.0**
	4.8nm,1.0s,baz=349,slow=3.7,SNR=4.4						
EKA	**Eskdalemuir Ar**	**147.03**	**357**	PKPbc	**PKPdf**	**04 50 02.4**	**+0.7**
EKA	**Eskdalemuir Ar**	**147.03**	**357**	PKPbc	**PKPdf**	**04 50 02.4**	**+0.7**
	1.9nm,0.7s,baz=356,slow=2.4,SNR=11						
GERES	**GERESS Array B**	**149.27**	**334**	PKPbc	**PKPbc**	**04 50 08.5**	**-1.5**
GERES	**GERESS Array B**	**149.27**	**334**	PKPbc	**PKPbc**	**04 50 08.5**	**-1.5**
	0.7nm,0.8s,baz=104,slow=2.0,SNR=5.7						
TORD	**Torodi Ar. Bea**	**168.19**	**220**	PKPab	**PKPab**	**04 51 37.8**	**+0.9**
TORD	**Torodi Ar. Bea**	**168.19**	**220**	PKPab	**PKPab**	**04 51 37.8**	**+0.9**
	0.4nm,0.8s,baz=104,slow=4.6,SNR=3.8						

*IDC **15** 05:04:37.1±1.4, 47°.81N×155°.37E, h0km, mb3.9/14, mb1 4.0/16, mb1mx3.9/27, mbtmp3.9/16, ML3.2/2, Error ellipse: s-maj=37.3km s-min=17.3km az=166.0*

*MOS **15** 05:04:39.7±0.8, 47°.95N×155°.33E, h30km, mb4.4/11, Error ellipse: s-maj=13.4km s-min=7.3km az=76.2*

*ISCJB **15** 05:04:40.1±0.6, 48°.00N±0°.06×155°.4E±0°.1, h27km, mb4.0/19, Error ellipse: s-maj=12.5km s-min=4.1km az=38.3*

*KRSC **15** 05:04:40.5±1.6, 47°.91N×156°.87E, h10km±10km, ML4.5*

*NEIC **15** 05:04:41.6±1.7, 47°.76N×155°.39E, h32km±12km, mb4.5/3, Error ellipse: s-maj=13.2km s-min=5.5km az=149.0*

ISC 15 05:04:41.7±0.7, 48°.01N±0°.08×155°.34E±0°.08, h27km, n75, σ1s67/85, mb4.0/19, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.73**	**10**	*e*PN	**Pn**	**05 05 23.5**	**-0.1**
SKR				*e*S	**Sn**	**05 05 57.5**	**+1.8**
SKR				pmax	pmax		
	comp=Z,60nm,0.3s						
SKR				smax	smax		
	comp=N,210nm,0.3s						
SKR				smax	smax		
	comp=E,410nm,0.3s						
SKR				smax	smax		
	comp=Z,70nm,0.5s						
SKR	**Severo-Kuril's**	**2.73**	**10**	*e*P	**Pn**	**05 05 25.3**	**+1.7**
SKR				*e*S	**Sn**	**05 05 58.1**	**+2.4**
MIPR	**Malaya Ipel'ka**	**4.37**	**11**	*e*P	**Pn**	**05 05 48.8**	**+2.6**
ASAK	**Asacha**	**4.68**	**20**	*e*P	**Pn**	**05 05 52.8**	**+2.3**
ASAK				*e*S	**Sn**	**05 06 44.6**	**+0.7**
MTVR	**Mutnovka**	**4.84**	**21**	*e*P	**Pn**	**05 05 54.5**	**+1.7**
MTVR				*e*S	**Sn**	**05 06 48.0**	**+0.1**
GRL	**Gorelyy**	**4.88**	**20**	*e*P	**Pn**	**05 05 55.8**	**+2.5**
GRL				S	**Sn**	**05 06 49.8**	**+1.0**
RUS	**Russkaya**	**4.88**	**23**	PN	**Pn**	**05 05 53.9**	**+0.8**
RUS	**Russkaya**	**4.88**	**23**	*e*P	**Pn**	**05 05 53.9**	**+0.8**
RUS				*e*S	**Sn**	**05 06 47.2**	**-1.4**
APC	**Apacha**	**5.06**	**13**	P	**Pn**	**05 05 58.7**	**+3.0**
PEA0B	**Petropavlovsk-**	**5.32**	**15**	*e*Pn	**Pn**	**05 06 02.4**	**+3.1**
PEA0B				*e*Sn	**Sn**	**05 06 58.6**	**-1.1**
PETK	**Petropavlovsk-**	**5.32**	**15**	PN	**Pn**	**05 06 02.3**	**+3.0**
PETK						05 07 13.9	
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				smax	smax		
	comp=N,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**5.32**	**15**	Pn	**Pn**	**05 06 02.3**	**+3.0**
PETK				Sn	**Sb**	**05 07 13.8**	**-3.4**
PETK	**Petropavlovsk-**	**5.32**	**15**	Pn	**Pn**	**05 06 02.3**	**+3.0**
	comp=N,1.6nm,0.3s,baz=177,slow=14,SNR=27						
PETK				Sn	**Sb**	**05 07 13.8**	**-3.4**
	comp=N,0.5nm,0.3s,baz=145,slow=13,SNR=1.2						
PET	**Petropavlovsk**	**5.45**	**22**	*e*PN	**Pn**	**05 05 59.7**	**-1.3**
PET	**Petropavlovsk**	**5.45**	**22**	S	**Sn**	**05 07 01.9**	**-0.8**
SDLR	**Sedlovina**	**5.74**	**22**	P	**Pn**	**05 06 05.3**	**+0.2**
KUR	**Kuril'sk**	**5.85**	**244**	PN	**Pn**	**05 06 06.2**	**-0.3**
KUR				pmax	pmax		
	comp=E,18nm,0.1s						
KUR				pmax	pmax		
	comp=N,16nm,0.1s						
KUR				pmax	pmax		
	comp=Z,28nm,0.9s						
SPN	**Mys Shipunski**	**5.90**	**29**	PN	**Pn**	**05 06 08.0**	**+0.7**
SPN	**Mys Shipunski**	**5.90**	**29**	P	**Pn**	**05 06 08.0**	**+0.7**
SPN				*e*S	**Sn**	**05 07 10.4**	**-3.6**
GNL	**Ganaly**	**5.93**	**15**	P	**Pn**	**05 06 10.9**	**+3.2**
MKZ	**Mys Kozlova**	**7.68**	**29**	PN	**Pn**	**05 06 31.5**	**-0.1**
MKZ	**Mys Kozlova**	**7.68**	**29**	P	**Pn**	**05 06 31.5**	**-0.1**
MKZ				*e*S	**Sn**	**05 07 52.5**	**-5.1**
TUMR	**Tumrok**	**7.87**	**20**	P	**Pn**	**05 06 34.9**	**+0.5**
ASAJ	**Asahikawa**	**9.68**	**251**	Pn	**Pn**	**05 06 58.5**	**-0.5**
ASAJ	**Asahikawa**	**9.68**	**251**	Pn	**Pn**	**05 06 58.5**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=84,slow=18,SNR=2.8						
BKI

NSSC ***15*** *05:07:45.6±2.0, 35°.65N×35°.09E, h8km±12km, MD1.2, ML2.5*
ISCJB ***15*** *05:07:46.9±0.9, 35°.65N±0°.04×35°.18E±0°.04, h7km±6km, Error ellipse: s-maj=6.2km s-min=5.3km az=1.3*
ISK ***15*** *05:07:46.3, 35°.75N×35°.10E, h4km, MD3.1*
CSEM ***15*** *05:07:46.9±0.4, 35°.64N×35°.20E, h5km, MD3.0, Error ellipse: s-maj=11.7km s-min=5.3km az=152.0*
DDA ***15*** *05:07:48, 35°.84N×35°.15E, h26km, MD3.0*

ISC 15 05:07:46.2±1.1**, 35°.66N**±0°.03×**35°.14E**±0°.02**, h10**km±10km**, n26**, σ0**°66/43**, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARNB	**Al Arnab**	**0.70**	**73**	*e*P	**Pb**	**05 08 00.2**	**-0.4**
ARNB				*e*S	**Sb**	**05 08 10.5**	**+0.1**
ARNB				AML	AML	05 08 11.3	
	comp=N,330nm,0.2s						
ARNB				AML	AML	05 08 11.7	
	comp=E,414nm,0.2s						
ARNB				AML	AML	05 08 15.3	
	comp=Z,94nm,0.4s						
YAYL	**Yayladag**	**0.87**	**64**	*i* P	**Pb**	**05 08 03.6**	**+0.2**
YAYL				*i* S	**Sg**	**05 08 14.2**	**-0.1**
YAYL	**Yayladag**	**0.87**	**64**	*i* P	**Pb**	**05 08 03.6**	**+0.2**
YAYL				*i* S	**Sg**	**05 08 14.2**	**-0.1**
HTY	**Hatay**	**0.93**	**60**	*e*PG	**Pb**	**05 08 04.3**	**-0.1**
HTY				*e*SG	**Sn**	**05 08 18.4**	**-0.3**
HTY	**Hatay**	**0.93**	**60**	*e*Pg	**Pb**	**05 08 04.3**	**-0.1**
HTY				*e*Sg	**Sn**	**05 08 18.4**	**-0.3**
KRTS	**Karatas**	**0.94**	**12**	*e*PG	**Pg**	**05 08 03.6**	**-0.6**
KRTS	**Karatas**	**0.94**	**12**	*e*Pg	**Pg**	**05 08 03.6**	**-0.6**
WRDH	**Warideh**	**1.04**	**98**	*e*P	**Pg**	**05 08 05.9**	**-0.3**
WRDH				*e*S	**Sg**	**05 08 20.1**	**+0.2**
WRDH				AML	AML	05 08 22.0	
	comp=E,163nm,0.4s						
WRDH				AML	AML	05 08 23.0	
	comp=N,184nm,0.5s						
WRDH				AML	AML	05 08 23.0	
	comp=Z,75nm,0.4s						
BIDA	**Albida**	**1.16**	**123**	*e*P	**Pb**	**05 08 08.3**	**+0.1**
BIDA				*e*S	**Sb**	**05 08 22.9**	**-0.5**
BIDA				AML	AML	05 08 25.1	
	comp=E,144nm,0.4s						
BIDA				AML	AML	05 08 27.4	
	comp=Z,128nm,0.4s						
BIDA				AML	AML	05 08 29.9	
	comp=N,52nm,0.7s						
YURE	**YUREGIR**	**1.23**	**19**	*i* P	**Pg**	**05 08 11.4**	**+1.5**
YURE				*i* S	**Sn**	**05 08 27.4**	**+1.2**
YURE	**YUREGIR**	**1.23**	**19**	*i* P	**Pg**	**05 08 11.4**	**+1.5**
YURE				*i* S	**Sn**	**05 08 27.4**	**+1.2**
COBT	**Iskenderun**	**1.25**	**46**	*i* P	**Pg**	**05 08 10.0**	**-0.1**
COBT				*i* S	**Sn**	**05 08 26.9**	**+0.1**
COBT	**Iskenderun**	**1.25**	**46**	*i* P	**Pg**	**05 08 10.0**	**-0.1**
COBT				*i* S	**Sn**	**05 08 26.9**	**+0.1**
LFK	**Lefkose**	**1.37**	**255**	*e*PN	**Pg**	**05 08 12.7**	**+0.3**
LFK	**Lefkose**	**1.37**	**255**	*e*Pn	**Pg**	**05 08 12.7**	**+0.3**
CEYT	**Ceyhan**	**1.44**	**20**	*e*PN	**Pb**	**05 08 12.7**	**-0.3**
CEYT				*e*SN	**Sg**	**05 08 32.2**	**-0.2**
CEYT	**Ceyhan**	**1.44**	**20**	*e*Pn	**Pb**	**05 08 12.7**	**-0.3**
CEYT				*e*Sn	**Sg**	**05 08 32.3**	**-0.2**
CSS	**Prodhromos**	**1.64**	**246**	*e*PN	**Pg**	**05 08 17.2**	**-0.3**
CSS	**Prodhromos**	**1.64**	**246**	*e*Pn	**Pg**	**05 08 17.2**	**-0.3**
GULE	**Gulek**	**1.65**	**350**	*i* P	**Pg**	**05 08 17.1**	**-0.8**
GULE				*i* S	**Sn**	**05 08 35.0**	**-1.8**
GULE	**Gulek**	**1.65**	**350**	*i* P	**Pg**	**05 08 17.1**	**-0.8**
KOZT	**Kozan**	**1.90**	**17**	*e*PN	**Pn**	**05 08 19.2**	**+0.5**
KOZT	**Kozan**	**1.90**	**17**	*e*Pn	**Pn**	**05 08 19.2**	**+0.5**
ERMK	**Ermenek**	**2.06**	**299**	*i* P	**Pb**	**05 08 23.7**	**0.0**
ERMK				*i* S	**Sg**	**05 08 52.5**	**+0.2**
ERMK	**Ermenek**	**2.06**	**299**	*i* P	**Pb**	**05 08 23.7**	**0.0**
ERMK				*i* S	**Sg**	**05 08 52.5**	**+0.2**
AYKD	**Aykdinkavak**	**2.21**	**37**	*i* P	**Pn**	**05 08 23.2**	**+0.3**
AYKD				*i* S	**Sn**	**05 08 48.8**	**-1.4**

IDC 15 05:10:11.7±2.2**, 5°.52N×126°.54E, h0**km**, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.6**/22**, mbtmp3.6**/4**, Error ellipse: s-maj=180.8km s-min=25.8km az=65.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**26.44**	**163**	P	P	05 15 50.2	-0.3
	1.0nm,0.6s,baz=341,slow=10,SNR=9.3						
ASAR	**Alice Springs**	**29.88**	**166**	P	P	05 16 22.3	+1.0
	0.3nm,0.6s,baz=353,slow=6.8,SNR=3.0						
STKA	**Stephens Creek**	**39.86**	**160**	P	P	05 17 46.5	-0.7
	0.8nm,0.5s,baz=342,slow=9.6,SNR=2.8						
MKAR	**Makanchi Array**	**55.99**	**325**	P	P	05 19 52.0	-0.1
	0.3nm,0.4s,baz=115,slow=7.2,SNR=4.7						

ISCJB ***15*** *05:16:23.8±1.6, 10°.48N±0°.07×86°.37W±0°.03, h11km±11km, mb4.3/32, MS3.8/8, Error ellipse: s-maj=11.4km s-min=4.1km az=3.1*
CASC ***15*** *05:16:25.6±1.5, 10°.43N×86°.20W, h0km±20km, MD4.1, mb4.5(NEIC)*
NEIC ***15*** *05:16:30.5±0.9, 10°.98N×85°.67W, h35km, mb4.5/23, Error ellipse: s-maj=25.5km s-min=12.6km az=53.0*
NEIC Felt at Santa Cruz.
IDC ***15*** *05:16:35.0±6.3, 11°.21N×85°.71W, h75km±55km, mb3.7/9, mb1 4.0/9, mb1mx3.7/23, mbtmp3.7/9, MS3.6/9, Ms1 3.6/9, ms1mx3.3/30, Error ellipse: s-maj=42.4km s-min=17.2km az=51.0*

ISC 15 05:16:23.6±1.9**, 10°.44N**±0°.06×**86°.28W**±0°.05**, h1**km±12km**, n244**, σ1**°01/237**, mb4.4/32**, MS3.7/8**, 92C-86D, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VCR	**Vista de Mar**	**0.71**	**116**	*e*P	**Pb**	**05 16 39.3**	**+0.4**
NY14	**Universidad de**	**0.77**	**74**	*i* P	**Pb**	**05 16 40.8**	**+1.0**
NY14				*i* S	**Sn**	**05 16 52.9**	**-0.9**
GBS3	**Finca Las Im¯¡**	**0.88**	**67**	⇓*i*P	**Pb**	**05 16 42.1**	**+0.4**
GBS3				*i* S	**Sb**	**05 16 54.8**	**+0.7**
LAPC	**Finca la Perla**	**0.90**	**68**	*i* P	**Pb**	**05 16 42.2**	**+0.1**
GBS2	**Las Lilas**	**0.91**	**64**	*i* P	**Pb**	**05 16 42.4**	**+0.2**
BUEV	**Buena Vista**	**0.93**	**67**	*i* P	**Pb**	**05 16 43.0**	**+0.3**
GB1A	**Borinquen Arri**	**0.95**	**66**	*i* P	**Pb**	**05 16 43.0**	**+0.1**
GB1A				*i* S	**Sb**	**05 16 56.1**	**+0.1**
GPS3	**Bodega del ICE**	**0.96**	**71**	*i* P	**Pb**	**05 16 43.2**	**+0.2**
GPS3				*i* S	**Sb**	**05 16 57.0**	**+0.8**
GPS2	**Hotel Rinc¯‡n**	**0.97**	**71**	*i* P	**Pb**	**05 16 43.4**	**+0.2**
GPS1	**Guardaparques**	**0.98**	**70**	*i* P	**Pb**	**05 16 43.5**	**+0.1**
GPS1				*i* S	**Sb**	**05 16 56.9**	**0.0**
LIM1	**Limonal**	**1.05**	**76**	*i* P	**Pb**	**05 16 44.6**	**0.0**
LIM1				*i* S	**Sb**	**05 16 59.4**	**+0.5**
GUAB	**Guayabo de Bag**	**1.07**	**75**	*i* P	**Pb**	**05 16 44.8**	**-0.2**
GUAB				*i* S	**Sb**	**05 16 59.9**	**+0.3**
COLC	**Colonia**	**1.08**	**78**	*i* P	**Pb**	**05 16 45.0**	**-0.2**
MESS	**Mesas**	**1.11**	**74**	⇑*i*P	**Pb**	**05 16 45.6**	**-0.1**
MESS				*i* S	**Sb**	**05 17 00.4**	**-0.3**
HORNC	**Hornillas**	**1.12**	**76**	*i* P	**Pb**	**05 16 45.7**	**-0.2**
HORNC				*i* S	**Sb**	**05 17 00.7**	**-0.3**
CUI	**Cuipilapa**	**1.12**	**79**	*i* P	**Pb**	**05 16 45.7**	**-0.1**
AMAS	**Alto Masis**	**1.28**	**82**	*i* P	**Pg**	**05 16 47.9**	**-0.3**
JCR	**Jicaral**	**1.29**	**117**	*e*P	**Pg**	**05 16 48.6**	**+0.2**
PTEN	**Parque Tenorio**	**1.30**	**78**	⇑*i*P	**Pg**	**05 16 48.6**	**0.0**
JTS	**JuntasAbangare**	**1.32**	**96**	*e*Pn	**Pg**	**05 16 48.2**	**-0.6**
JTS				*e*Sn	**Sn**	**05 17 12.3**	**+4.8**
CEDE	**Laguna Cede¯–o**	**1.56**	**88**	*i* P	**Pn**	**05 16 52.6**	**+0.1**
CGA2	**Cerro Gallo 2**	**1.84**	**103**	*e*P	**Pn**	**05 16 56.4**	**-0.1**
SJS	**Escuela Geolog**	**2.25**	**103**	*e*P	**Pb**	**05 17 04.3**	**-0.8**
URSC	**Urasca**	**2.54**	**103**	*e*P	**Pn**	**05 17 07.1**	**+1.0**
TGUH	**Tegucigalpa,Un**	**3.73**	**345**	*e*Pn	**Pn**	**05 17 24.0**	**+1.7**
ROSC	**El Rosal**	**13.08**	**114**	LR	LR	05 23 53.5	
	comp=Z,94nm,21.2s,baz=189,slow=34						
ATAH	**Atahualpa**	**19.14**	**155**	LR	LR	05 27 16.7	
	comp=Z,225nm,21.0s,baz=213,slow=33						
TIGA	**Tifton**	**21.05**	**6**	⇓P	**P**	**05 21 06.1**	**-3.0**
	baz=20						
732A	**Laxson Ranch,**	**22.26**	**327**	⇑P	**P**	**05 21 23.1**	**+0.9**
	baz=22,SNR=8.4						
LRAL	**Lakeview Retre**	**22.50**	**358**	*e*P	P	05 21 19.4	-5.4
	21nm,1.0s						
632A	**Uvalde**	**22.79**	**328**	⇓P	**P**	**05 21 28.5**	**+0.7**
	baz=23						
GOGA	**Godfrey**	**23.01**	**6**	*e*P	**P**	**05 21 29.8**	**-0.3**
	105nm,2.5s						
631A	**Perdido Creek**	**23.13**	**327**	⇓P	**P**	**05 21 31.7**	**+0.3**
	baz=23						
532A	**Rocksprings**	**23.34**	**329**	⇓P	**P**	**05 21 34.0**	**+0.3**
	baz=23						
JCT	**Junction City**	**23.58**	**330**	*e*P	**P**	**05 21 35.4**	**-0.5**
	3.7nm,0.7s						
JCT	**Junction City**	**23.58**	**330**	⇓P	**P**	**05 21 36.1**	**+0.1**
	baz=24						
531A	**Rocksprings**	**23.70**	**328**	⇓P	**P**	**05 21 37.5**	**+0.2**
	baz=24						
WHTX	**Lake Whitney**	**23.81**	**336**	⇓P	**P**	**05 21 37.8**	**-0.3**
	baz=24						
432A	**Menard**	**23.90**	**330**	⇓P	**P**	**05 21 39.2**	**+0.1**
	baz=24,SNR=5.1						
530A	**J-C Ranch, Com**	**24.11**	**327**	⇓P	**P**	**05 21 40.8**	**-0.4**
	baz=24						
OXF	**Oxford**	**24.13**	**354**	*e*P	**P**	**05 21 38.8**	**-2.4**
	52nm,1.1s						
431A	**Sonora**	**24.15**	**329**	⇑P	**P**	**05 21 40.5**	**-0.9**
	baz=24						
332A	**Millersview**	**24.29**	**331**	⇓P	**P**	**05 21 41.8**	**-1.0**
	baz=24,SNR=11						
PLAL	**Pickwick Lake**	**24.49**	**356**	*e*P	**P**	**05 21 42.5**	**-2.0**
	11nm,0.8s						
628A	**Black Gap, Mar**	**24.49**	**323**	⇓P	**P**	**05 21 45.0**	**+0.4**
	baz=24						
331A	**San Angelo**	**24.56**	**330**	⇑P	**P**	**05 21 44.6**	**-0.6**
	baz=24,SNR=9.8						
529A	**Stev Forest Ra**	**24.58**	**325**	⇑P	**P**	**05 21 46.1**	**+0.6**
	baz=25						
232A	**Coleman**	**24.67**	**332**	⇑P	**P**	**05 21 46.2**	**0.0**
	baz=25,SNR=11						
627A	**Terlingua Ranc**	**24.77**	**322**	⇑P	**P**	**05 21 47.3**	**+0.1**
	baz=25,SNR=5.9						
429A	**Davenport Ranc**	**24.78**	**326**	⇓P	**P**	**05 21 47.6**	**+0.3**
	baz=25						
TXAR	**Lajitas Array**	**24.85**	**322**	P	**P**	**05 21 47.8**	**-0.1**
	5.2nm,0.9s,baz=140,slow=9.6,SNR=42						
TXAR				PcP	**PcP**	**05 25 25.7**	**+1.4**
	0.8nm,0.8s,baz=131,slow=3.5,SNR=6.8						
UALR	**University of**	**24.85**	**348**	*e*P	**P**	**05 21 45.9**	**-1.8**
	15nm,0.8s						
MIAR	**Mount Ida**	**24.91**	**346**	*e*P	**P**	**05 21 46.4**	**-1.8**
	13nm,0.8s						
528A	**Cox Ranch, San**	**24.93**	**324**	⇓P	**P**	**05 21 49.3**	**+0.6**
	baz=25						
CPCT	**Cooper Cave**	**24.95**	**3**	*e*P	**P**	**05 21 47.7**	**-0.9**
KMSC	**Kings Mountain**	**25.00**	**10**	⇓P	**P**	**05 21 48.1**	**-1.0**
	baz=24,SNR=5.6						
330A	**Mertzon**	**25.02**	**329**	⇓P	**P**	**05 21 48.6**	**-0.8**
	baz=25,SNR=6.4						
231A	**Bronte**	**25.02**	**331**	⇓P	**P**	**05 21 49.8**	**+0.4**
	baz=25						
TKL	**Tuckaleechee C**	**25.21**	**5**	P	**P**	**05 21 48.3**	**-2.7**
	3.3nm,0.6s,baz=184,slow=12,SNR=7.7						
TKL				LR	LR	05 31 33.5	
	comp=Z,105nm,18.5s,baz=87,slow=37						
ABTX	**Abilene, Hawle**	**25.29**	**333**	⇑P	**P**	**05 21 51.8**	**+0.1**
	baz=25						
626A	**Big Bend Ranch**	**25.29**	**321**	⇑P	**P**	**05 21 52.7**	**+0.7**
	baz=25						
428A	**Kincaid Ranch,**	**25.30**	**325**	⇑P	**P**	**05 21 52.7**	**+0.8**
	baz=25						
230A	**Sterling City**	**25.38**	**329**	⇓P	**P**	**05 21 52.8**	**+0.2**
	baz=25						
527A	**Woodward Ranch**	**25.40**	**323**	⇓P	**P**	**05 21 53.7**	**+0.7**
	baz=25						
329A	**Wagon Wheel Ra**	**25.50**	**328**	⇓P	**P**	**05 21 53.0**	**-0.7**
	baz=26,SNR=8.1						
526A	**Mary Lane Ranc**	**25.62**	**322**	⇑P	**P**	**05 21 55.5**	**+0.5**
	baz=26						
131A	**Roby**	**25.67**	**332**	⇑P	**P**	**05 21 56.0**	**+0.8**
	baz=26						
Z32A	**Haskell**	**25.79**	**334**	⇓P	**P**	**05 21 57.4**	**+1.1**
	baz=26,SNR=9.5						
427A	**Hayter Ranch,**	**25.80**	**324**	⇑P	**P**	**05 21 57.3**	**+0.8**
	baz=26						
328A	**Wristen Ranch,**	**25.87**	**326**	⇓P	**P**	**05 21 57.8**	**+0.7**
	baz=26						
426A	**McDonald Obser**	**26.03**	**323**	⇓P	**P**	**05 21 59.6**	**+0.9**
	baz=26						
Z31A	**Sharp Cattle R**	**26.09**	**333**	⇓P	**P**	**05 22 00.1**	**+1.0**
	baz=26,SNR=5.4						
PARMO	**Parma**	**26.30**	**354**	*e*P	**P**	**05 21 58.9**	**-1.9**
228A	**UT Block 9, Go**	**26.32**	**327**	⇑P	**P**	**05 22 01.2**	**0.0**
	baz=26						
129A	**Stewart Farms,**	**26.35**	**329**	⇓P	**P**	**05 22 01.5**	**+0.1**
	baz=26						
Y32A	**R-V Farms, Ver**	**26.38**	**335**	⇑P	**P**	**05 22 01.0**	**-0.6**
	baz=26						
326A	**Caldwell Ranch**	**26.47**	**324**	⇓P	**P**	**05 22 03.4**	**+0.8**
	baz=26						
Z30A	**Sanderson Ranc**	**26.52**	**331**	⇓P	**P**	**05 22 03.1**	**+0.1**
	baz=26						
128A	**Castleberry Fa**	**26.66**	**328**	⇓P	**P**	**05 22 04.1**	**-0.1**
	baz=27						
425A	**Indio Mountain**	**26.68**	**322**	⇑P	**P**	**05 22 04.6**	**+0.1**
	baz=27						
Y31A	**Rekieta Farm,**	**26.69**	**333**	⇑P	**P**	**05 22 04.5**	**0.0**
	baz=27						
WMOK	**White Mounta**	**26.75**	**337**	*e*P	**P**	**05 22 06.6**	**+1.6**
	11nm,0.9s						
TUL1	**Tulsa**	**26.79**	**343**	⇑P	**P**	**05 22 04.1**	**-1.2**
	baz=27						
Y30A	**Stafford Cattl**	**26.90**	**332**	⇑P	**P**	**05 22 06.0**	**-0.4**
	baz=27						
325A	**Bean Ranch, Si**	**27.09**	**323**	⇑P	**P**	**05 22 09.1**	**+0.8**
	baz=27						
Z28A	**Tucker Farm, M**	**27.14**	**329**	⇓P	**P**	**05 22 08.2**	**-0.4**
	baz=27						
X31A	**McDonald Ranch**	**27.14**	**335**	⇑P	**P**	**05 22 07.9**	**-0.6**
	baz=27						
226B	**Tecolote Peak,**	**27.15**	**325**	⇓P	**P**	**05 22 09.1**	**+0.4**
	baz=27,SNR=6.9						
127A	**Arkansas Junct**	**27.16**	**327**	⇓P	**P**	**05 22 09.6**	**+0.8**
	baz=27						
Y29A	**Porterfield Fa**	**27.25**	**331**	⇑P	**P**	**05 22 09.4**	**-0.2**
	baz=27						
X30A	**Coker Ranch, T**	**27.37**	**333**	⇑P	**P**	**05 22 10.4**	**-0.2**
	baz=27						
324A	**Moseley Ranch,**	**27.45**	**322**	⇑P	**P**	**05 22 12.1**	**+0.7**
	baz=28						
126A	**Clayton Basin,**	**27.49**	**326**	⇑P	**P**	**05 22 13.1**	**+1.3**
	baz=28						
225A	**Deer Hill, Car**	**27.54**	**324**	⇑P	**P**	**05 22 13.9**	**+1.6**
	baz=28						
Z27A	**Tatum**	**27.58**	**328**	⇑P	**P**	**05 22 11.4**	**-1.1**
	baz=28						
WCI	**Wyndotte Cave**	**27.67**	**360**	*e*P	**P**	**05 22 11.1**	**-2.2**
	13nm,0.8s						
125A	**Gardner Draw,**	**27.86**	**325**	⇑P	**P**	**05 22 14.6**	**-0.4**
	baz=28						
MSTX	**Muleshoe**	**27.87**	**330**	⇑P	**P**	**05 22 14.6**	**-0.6**
	baz=28,SNR=5.9						
224A	**Cornudas Mount**	**27.93**	**323**	⇓P	**P**	**05 22 15.9**	**+0.2**
	baz=28						
Y27A	**Causey**	**28.00**	**329**	⇑P	**P**	**05 22 15.7**	**-0.7**
	baz=28,SNR=5.4						
V31A	**Spring Creek L**	**28.07**	**336**	⇑P	**P**	**05 22 18.1**	**+1.2**
	baz=28						
OLIL	**Olney**	**28.22**	**357**	*e*P	P	05 22 16.2	-1.9
	9.1nm,0.8s						
124A	**Stringfield Ra**	**28.34**	**324**	⇑P	**P**	**05 22 20.5**	**+1.0**
	baz=28,SNR=5.8						
Z25A	**Roswell**	**28.36**	**326**	⇓P	**P**	**05 22 20.5**	**+1.0**
	baz=28						
BLO	**Bloomington**	**28.61**	**360**	*e*P	P	05 22 19.4	-2.2
	8.4nm,0.8s						
Y25A	**Mesa, Roswell**	**28.83**	**327**	⇓P	**P**	**05 22 24.5**	**+0.8**
	baz=29						
X26A	**CR and CF Fran**	**28.86**	**329**	⇓P	**P**	**05 22 23.8**	**-0.2**
	baz=29						
W27A	**Bowe Ranch, En**	**28.89**	**331**	⇑P	**P**	**05 22 24.3**	**0.0**
	baz=29						
Y24A	**Capitan**	**29.23**	**326**	⇑P	**P**	**05 22 27.8**	**+0.4**
	baz=29						
Y23A	**Lovelace Mesa,**	**29.58**	**325**	⇑P	**P**	**05 22 31.6**	**+1.1**
	baz=30						
121A	**Cookes Peak, D**	**29.61**	**321**	⇑P	**P**	**05 22 32.2**	**+1.5**
	baz=30						
W25A	**X Bar L Ranch,**	**29.71**	**329**	⇑P	**P**	**05 22 31.5**	**0.0**
	baz=30						
319A	**Douglas**	**29.80**	**318**	⇑P	**P**	**05 22 34.2**	**+1.8**
	baz=30						
V26A	**Tequesquite Ra**	**29.83**	**331**	⇑P	**P**	**05 22 33.1**	**+0.4**
	baz=30						
U27A	**Thompson Grove**	**29.89**	**333**	⇓P	**P**	**05 22 32.9**	**-0.3**
	baz=30						
Y22A	**Socorro**	**30.10**	**324**	⇓P	**P**	**05 22 36.1**	**+1.0**
	baz=30						
HDIL	**Hopedale**	**30.11**	**355**	*e*P	P	05 22 32.5	-2.4
	18nm,0.9s						
R30A	**Dighton**	**30.44**	**338**	⇓P	**P**	**05 22 36.8**	**-1.1**
	baz=30						
Z20A	**Nine Sixteen R**	**30.50**	**321**	⇑P	**P**	**05 22 40.0**	**+1.4**
	baz=30						
W23A	**Werner Place,**	**30.55**	**327**	⇓P	**P**	**05 22 39.4**	**+0.3**
	baz=30						
ANMO	**Albuquerque**	**30.56**	**326**	*e*P	**P**	**05 22 40.8**	**+1.7**
	0.8nm,0.7s						
U25A	**Circle Dot Ran**	**30.62**	**330**	⇑P	**P**	**05 22 40.5**	**+0.9**
	baz=30						
Q31A	**Ellis**	**30.77**	**340**	⇓P	**P**	**05 22 41.0**	**+0.3**
	baz=31						
W22A	**Albuquerque**	**30.88**	**326**	⇑P	**P**	**05 22 43.1**	**+1.2**
	baz=31						
Y20A	**Horse Springs,**	**30.91**	**322**	⇑P	**P**	**05 22 43.7**	**+1.3**
	baz=31						
X21A	**Alamocita Cree**	**30.94**	**324**	⇑P	**P**	**05 22 44.1**	**+1.5**
	baz=31						
S26A	**Kim**	**31.17**	**333**	⇓P	**P**	**05 22 44.7**	**+0.2**
	baz=31						
T25A	**Trinidad**	**31.21**	**331**	⇓P	**P**	**05 22 45.6**	**+0.6**
	baz=31						
U23A	**El Rito**	**31.46**	**328**	⇑P	**P**	**05 22 47.7**	**+0.6**
	baz=31,SNR=8.4						
V21A	**Milan**	**31.84**	**326**	⇓P	**P**	**05 22 52.1**	**+1.6**
	baz=32						
U22A	**Llaves**	**31.84**	**327**	⇑P	**P**	**05 22 51.3**	**+0.9**
	baz=32						
S24A	**Houchin Ranch,**	**32.00**	**331**	⇓P	**P**	**05 22 52.7**	**+0.8**
	baz=32						
Q26A	**Hugo**	**32.28**	**334**	⇑P	**P**	**05 22 54.0**	**-0.2**
	baz=32						
JFWS	**Jewell Farm**	**32.54**	**355**	*e*P	P	05 22 53.3	-3.0
	8.0nm,0.9s						
R23A	**Moffat**	**32.73**	**331**	⇓P	**P**	**05 22 58.6**	**+0.3**
	baz=33						
U20A	**Newcomb**	**32.74**	**326**	⇑P	**P**	**05 22 59.6**	**+1.3**
	baz=33						
S22A	**4UR Ranch, Cre**	**32.87**	**329**	⇑P	**P**	**05 23 00.4**	**+0.8**
	baz=33						
P25A	**Willow Gulch B**	**33.05**	**334**	⇓P	**P**	**05 23 00.7**	**-0.2**
	baz=33						
R22A	**Saguache, Gunn**	**33.21**	**330**	⇑P	**P**	**05 23 02.6**	**0.0**
	baz=33						
S20A	**Disappointment**	**33.73**	**328**	⇑P	**P**	**05 23 07.6**	**+0.6**
	baz=34						
Q22A	**Crested Butte,**	**33.78**	**330**	⇑P	**P**	**05 23 07.9**	**+0.4**
	baz=34						
R20A	**Redvale**	**34.00**	**328**	⇑P	**P**	**05 23 09.7**	**+0.4**
	baz=34						
ECSD	**EROS Data Cent**	**34.36**	**347**	*e*P	P	05 23 08.9	-3.3
	3.8nm,1.0s						
S18A	**Hurst Farm, Bl**	**34.51**	**326**	⇑P	**P**	**05 23 14.5**	**+0.7**
	baz=34						
O22A	**Kremmling**	**34.63**	**332**	⇓P	**P**	**05 23 14.5**	**-0.4**
	baz=34						
PDMCI	**Parker Dam,Lak**	**34.82**	**317**	⇓P	**P**	**05 23 17.3**	**+1.1**
	baz=35						
P20A	**De Beque**	**35.00**	**329**	⇓P	**P**	**05 23 18.3**	**+0.4**
	baz=35						
SPMN	**St. Paul**	**35.11**	**352**	⇓P	P	05 23 14.8	-3.8
	baz=35,SNR=5.5						
W13A	**Hualapai Mount**	**35.13**	**319**	⇓P	**P**	**05 23 21.3**	**+2.0**
	baz=35						
DVTC	**Desert V Tower**	**35.26**	**313**	⇓P	P	05 23 18.8	-1.3
	baz=35,SNR=9.7						
O20A	**White River Ci**	**35.41**	**330**	⇑P	**P**	**05 23 21.8**	**+0.3**
	baz=35						
N21A	**Black Mountain**	**35.56**	**332**	⇓P	**P**	**05 23 22.8**	**0.0**
	baz=36						
SRU	**San Rafael**	**35.82**	**327**	⇓P	**P**	**05 23 25.2**	**+0.2**
	baz=36						
BELC	**Belle Mtn. Jos**	**35.91**	**315**	⇑P	**P**	**05 23 27.6**	**+1.7**
	baz=36						
N20A	**Spence Gulch,**	**35.97**	**331**	⇓P	**P**	**05 23 26.8**	**+0.5**
	baz=36						
SIV	**San Ignacio**	**36.23**	**136**	P	P	05 23 33.9	+5.4
	0.9nm,0.7s,baz=320,slow=7.9,SNR=3.7						
SIV				LR	LR	05 38 50.8	
	comp=Z,95nm,18.2s,slow=37						
L21A	**Rawlins**	**36.45**	**333**	⇑P	**P**	**05 23 29.8**	**-0.6**
	baz=36						
J24A	**Dixon Ranch, L**	**36.46**	**337**	⇓P	**P**	**05 23 30.7**	**+0.4**
	baz=36						
K20A	**Yellowstone Ra**	**37.44**	**333**	⇑P	**P**	**05 23 38.2**	**-0.6**
	baz=37						
J21A	**Lysite**	**37.60**	**334**	⇓P	**P**	**05 23 39.9**	**-0.3**
	baz=38						
M17A	**Scullys Gap (B**	**37.63**	**329**	⇓P	**P**	**05 23 40.4**	**0.0**
	baz=38						
H24A	**Dirks Ranch, A**	**37.64**	**339**	⇓P	**P**	**05 23 39.5**	**-0.8**
	baz=38						
EDW2	**Edwards Air Fo**	**37.77**	**315**	⇑P	**P**	**

A24A	**Westby**	**41.12**	**342**	⇑P	**P**	**05 24 08.1**	**-1.2**
	baz=41						
MCMT	**McKenzie Canyo**	**41.19**	**331**	*e*P	**P**	**05 24 11.2**	**+1.0**
	0.8nm,0.8s						
MCMT				*e*pP		05 24 18.6	
B22A	**Reddig Ranch S**	**41.21**	**340**	⇑P	**P**	**05 24 08.8**	**-1.2**
	baz=41						
E18A	**Harlowton**	**41.23**	**335**	⇓P	**P**	**05 24 10.0**	**-0.4**
	baz=41						
D19A	**Cripps Ranch,**	**41.30**	**337**	⇓P	**P**	**05 24 09.8**	**-1.1**
	baz=41						
E17A	**Martinsdale**	**41.54**	**334**	⇓P	**P**	**05 24 11.9**	**-1.1**
	baz=41						
I12A	**Atlanta**	**41.58**	**328**	⇑P	**P**	**05 24 13.3**	**-0.1**
	baz=42						
MFID	**Camas Ranch**	**41.68**	**327**	⇑P	**P**	**05 24 13.9**	**-0.2**
	baz=42						
A22A	**Carney Farms,**	**41.78**	**341**	⇑P	**P**	**05 24 13.5**	**-1.3**
	baz=42						
F15A	**Butte**	**41.79**	**332**	⇑P	**P**	**05 24 14.3**	**-0.7**
	baz=42						
C19A	**Slack Wire Ran**	**41.83**	**337**	⇑P	**P**	**05 24 14.4**	**-0.8**
	baz=42						
E16A	**East Helena**	**41.95**	**334**	⇓P	**P**	**05 24 15.6**	**-0.7**
	baz=42						
D17A	**Six Diamond Ra**	**42.02**	**335**	⇑P	**P**	**05 24 15.7**	**-1.1**
	baz=42,SNR=6.3						
BEKR	**Beckworth**	**42.10**	**320**	*e*P	**P**	**05 24 19.7**	**+2.1**
	1.1nm,0.7s						
D16A	**Dana Ranch, Ca**	**42.29**	**334**	⇓P	**P**	**05 24 18.6**	**-0.3**
	baz=42						
C17A	**Wharram Farm,**	**42.43**	**335**	⇓P	**P**	**05 24 18.8**	**-1.3**
	baz=42						
G12A	**Big Creek, Yel**	**42.62**	**329**	⇓P	**P**	**05 24 20.7**	**-1.1**
	baz=42						
B18A	**Beardsley Farm**	**42.66**	**337**	⇓P	**P**	**05 24 20.9**	**-1.0**
	baz=42						
D15A	**Lincoln**	**42.71**	**334**	⇑P	**P**	**05 24 22.0**	**-0.5**
	baz=43						
F12A	**Elk City**	**43.03**	**330**	⇓P	**P**	**05 24 24.8**	**-0.3**
	baz=43						
MSO	**Missoula**	**43.19**	**332**	⇓P	**P**	**05 24 25.1**	**-1.2**
	baz=43						
C15A	**Salmond Ranch,**	**43.32**	**334**	⇓P	**P**	**05 24 26.8**	**-0.5**
	baz=43						
A17A	**Triple J Farms**	**43.46**	**337**	⇑P	**P**	**05 24 27.2**	**-1.2**
	baz=43						
D13A	**Huson**	**43.62**	**332**	⇓P	**P**	**05 24 29.0**	**-0.7**
	baz=44						
E12A	**Beaver Dam Sad**	**43.65**	**331**	⇑P	**P**	**05 24 29.2**	**-0.9**
	baz=44						
B15A	**Bradely Ranch,**	**43.71**	**335**	⇑P	**P**	**05 24 29.5**	**-1.0**
	baz=44						
D12A	**Red Ives Fores**	**44.01**	**331**	⇑P	**P**	**05 24 32.2**	**-0.7**
	baz=44						
B14A	**Marquette Ranc**	**44.05**	**334**	⇓P	**P**	**05 24 32.5**	**-0.8**
	baz=44						
KIPM	**Iron Peak**	**44.08**	**318**	*e*P	**P**	**05 24 35.9**	**+2.2**
	7.4nm,1.1s						
KIPM				*e*pP		05 24 47.6	
A15A	**Johnson Ranch,**	**44.30**	**335**	⇓P	**P**	**05 24 34.1**	**-1.1**
	baz=44						
B13A	**Whitefish**	**44.58**	**333**	⇑P	**P**	**05 24 37.0**	**-0.4**
	baz=44						
A14A	**Double T Ranch**	**44.59**	**335**	⇑P	P	05 24 36.0	-1.5
	baz=44,SNR=5.1						
KHMM	**Horse Mountain**	**44.80**	**319**	*e*P	**P**	**05 24 40.8**	**+1.4**
	4.2nm,0.8s						
C11A	**Tepee Creek (N**	**45.00**	**332**	⇓P	**P**	**05 24 39.9**	**-0.9**
	baz=45						
KBO	**Bosley Butte**	**45.83**	**320**	*e*P	**P**	**05 24 48.8**	**+1.4**
	49nm,1.9s						
BDFB	**Brasilia**	**45.91**	**124**	P	**P**	**05 24 48.5**	**+0.1**
	2.3nm,0.9s,baz=280,slow=6.1,SNR=4.3						
BDFB				LR	LR	05 46 32.1	
	comp=Z,110nm,20.1s,baz=227,slow=39						
SCHQ	**Schefferville**	**46.89**	**15**	P	P	05 24 51.0	-4.5
	4.1nm,0.8s,baz=201,slow=6.3,SNR=5.5						
SCHQ				LR	LR	05 45 37.4	
	comp=Z,80nm,19.1s,baz=73,slow=38						
YKA	**Yellowknife Ar**	**55.84**	**345**	P	P	05 25 58.5	-4.0
	2.3nm,1.1s,baz=137,slow=7.4,SNR=18						
YKA				PcP	**PcP**	**05 27 00.0**	**-1.3**
	0.2nm,0.5s,baz=145,slow=4.1,SNR=4.1						
ILAR	**Eielson Array**	**68.31**	**336**	P	P	05 27 24.0	-2.3
	1.7nm,1.1s,baz=131,slow=4.2,SNR=12						
ILAR				LR	LR	05 59 21.1	
	comp=Z,48nm,19.6s,baz=146,slow=38						
NOA	**NORSAR Array B**	**84.56**	**29**	LR	LR	06 02 04.0	
	comp=Z,18nm,19.9s,baz=130,slow=33						
GERES	**GERESS Array B**	**88.71**	**41**	LR	LR	06 05 38.8	
	comp=Z,40nm,18.2s,baz=274,slow=34						
MKAR	**Makanchi Array**	**122.12**	**9**	PKP	**PKPdf**	**05 35 18.8**	**-1.7**
	0.1nm,0.5s,baz=18,slow=2.3,SNR=3.0						
KSRS	**Korea Array**	**122.58**	**328**	PKP	**PKPdf**	**05 35 21.0**	**-0.5**
	1.0nm,0.7s,baz=29,slow=2.8,SNR=4.3						
HHC	**Hu-ho-hao-te**	**126.37**	**343**	*e*PKP	**PKPdf**	**05 35 26.6**	**-2.3**
HHC				sPKP		05 35 42.5	
HHC				PP	**PP**	**05 37 23.8**	**+1.2**
HHC				PKS	**PKSdf**	**05 39 03.6**	**-2.0**
HHC				SKS	SKSdf	05 42 34.3	-8.0
HHC				SKKS	SKKSac	05 44 16.9	-6.5
HHC	**Hu-ho-hao-te**	**126.37**	**343**	SS	SS	05 54 31.3	+4.4
HHC				AMB	AMB		
	comp=Z,220nm,7.7s						
HHC				LR	LR		
	comp=N,270nm,19.8s						
HHC				LR	LR		
	comp=E,140nm,20.6s						
HHC				LR	LR		
	comp=Z,130nm,19.2s						
ASAR	**Alice Springs**	**139.54**	**246**	PKP	**PKPdf**	**05 35 56.3**	**+2.3**
	comp=Z,0.3nm,0.7s,baz=101,slow=2.9,SNR=3.5						
WRA	**Warramunga Arr**	**139.77**	**251**	PKP	**PKPdf**	**05 35 54.6**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=106,slow=1.7,SNR=4.6						

IDC 15 05:16:37.6±1.9, 17.73S×176.79W, h0km, mb3.9/4, mb1 4.2/4, mb1mx3.8/18, mbtmp3.9/4, Error ellipse: s-maj=169.4km s-min=32.4km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**40.07**	**241**	P	P	05 24 15.5	+0.6
	0.9nm,0.3s,baz=75,slow=12,SNR=5.0						
WRA	**Warramunga Arr**	**46.18**	**259**	P	P	05 25 03.9	-0.7
	0.6nm,0.5s,baz=97,slow=6.2,SNR=18						
ASAR	**Alice Springs**	**46.32**	**254**	P	P	05 25 05.5	-0.2
	3.9nm,0.5s,baz=90,slow=8.5,SNR=76						
TXAR	**Lajitas Array**	**84.60**	**57**	P	P	05 29 13.5	+0.1
	0.4nm,1.1s,baz=298,slow=2.7,SNR=3.6						

IDC 15 05:31:46.0±1.0, 22.74S×66.09W, h235km±14km, mb3.4/2, mb1 3.2/8, mb1mx3.1/21, mbtmp3.1/8, Error ellipse: s-maj=21.2km s-min=18.3km az=152.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.61**	**272**	P	Pn	05 32 35.0	+1.2
	28nm,0.3s,baz=93,slow=5.8,SNR=302						
LVC				S	S	05 33 11.2	0.0
	62nm,0.3s,baz=245,slow=19,SNR=47						
SIV	**San Ignacio**	**8.21**	**36**	P	Pn	05 33 42.5	+0.4
	0.6nm,0.3s,baz=229,slow=12,SNR=13						
CPUP	**Villa Florida**	**8.74**	**116**	P	Pn	05 33 49.0	+0.4
	0.2nm,0.3s,baz=293,slow=15,SNR=2.6						
CFAA	**Coronel Fontan**	**9.04**	**192**	P	Pn	05 33 51.4	-1.1
	0.1nm,0.3s,baz=17,slow=15,SNR=24						
CFAA				S	S	05 35 24.9	-10
	0.2nm,0.3s,baz=105,slow=22,SNR=8.3						
PLCA	**Paso Flores**	**18.34**	**191**	P	P	05 35 44.5	+1.3
	0.1nm,0.3s,baz=350,slow=9.3,SNR=3.1						
BDFB	**Brasilia**	**18.46**	**71**	P	P	05 35 45.8	+1.0
	0.5nm,0.3s,baz=240,slow=12,SNR=5.3						
TORD	**Torodi Ar. Bea**	**75.33**	**69**	P	P	05 43 02.7	-1.3
	1.1nm,0.3s,baz=254,slow=5.1,SNR=45						
ESDC	**Sonseca Array**	**84.91**	**43**	P	P	05 43 54.9	+0.2
	0.2nm,0.3s,baz=242,slow=5.5,SNR=4.3						
MKAR	**Makanchi Array**	**145.02**	**39**	PKPbc	PKPdf	05 50 55.2	0.0
	1.9nm,0.6s,baz=309,slow=3.0,SNR=24						

MAN 15 05:33:09, 13.47N×120.44E, h43km, mb3.7, ML2.5, MS2.0, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.50**	**87**	⇑*i*P	Pn	05 33 21.7	+1.7
SJMP	**San Jose**	**1.21**	**146**	*e*P	Pn	05 33 31.2	+1.8
SJMP				*e*S	Sn	05 33 49.4	+4.8
BOAC	**Boac**	**1.37**	**90**	*e*P	Pn	05 33 32.6	+1.0
BOAC				*e*S	Sn	05 33 50.4	+1.8
OTRP	**Odiongan**	**1.90**	**125**	*e*P	Pn	05 33 39.3	+0.3
OTRP				*e*S	Sn	05 34 02.9	+1.2

WEL 15 06:09:06.8±0.4, 39.15S×174.95E, h210km±3km, ML3.6/18, 2C-3D, Error ellipse: s-maj=3.4km s-min=3.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PKVZ	**Pokaka**	**0.34**	**115**	PN	Pn	06 09 34.4	-0.3
PKVZ				SN	S	06 09 56.0	-0.5
TRVZ	**Turoa**	**0.49**	**108**	PN	Pn	06 09 35.0	-0.3
TUVZ	**Tukino**	**0.56**	**103**	PN	Pn	06 09 35.3	-0.2
WAZ	**Wanganui**	**0.61**	**177**	⇓PN	Pn	06 09 35.9	+0.4
MOVZ	**Moawhango**	**0.68**	**113**	PN	Pn	06 09 35.5	-0.5
MOVZ				SN	S	06 09 56.8	-1.7
PKE	**Pukeiti**	**0.75**	**266**	PN	Pn	06 09 35.6	-0.6
BHHZ	**Black Hill Sta**	**0.93**	**112**	PN	Pn	06 09 36.8	-0.5
BHHZ				SN	S	06 09 59.0	-1.9
TSZ	**Takapari Road**	**1.20**	**140**	PN	Pn	06 09 39.2	+0.2
TSZ				AML	AML	06 10 04.3	
TSZ				AML	AML	06 10 06.0	
BKZ	**Black Stump Fm**	**1.20**	**91**	PN	Pn	06 09 38.2	-0.9
PNHZ	**Pukenui**	**1.24**	**129**	PN	Pn	06 09 39.4	+0.1
PNHZ				SN	S	06 10 04.1	-0.4
MCHZ	**McNeill Hill**	**1.39**	**103**	PN	Pn	06 09 40.8	+0.3
NMHZ	**Naumai**	**1.45**	**89**	⇓PN	Pn	06 09 41.0	-0.1
WPHZ	**Waipukurau**	**1.47**	**129**	PN	Pn	06 09 41.3	+0.1
WPHZ				SN	S	06 10 07.7	0.0
MRZ	**Mangatainoka R**	**1.59**	**162**	PN	Pn	06 09 41.5	-0.6
MRZ				AML	AML	06 10 09.4	
MRZ				AML	AML	06 10 09.5	
KAHZ	**Kahuranaki**	**1.63**	**114**	PN	Pn	06 09 42.7	+0.1
OGWZ	**Otaki Gorge**	**1.68**	**174**	PN	Pn	06 09 42.9	-0.1
KIW	**Kapiti Island**	**1.71**	**181**	⇑PN	Pn	06 09 42.9	-0.4
PXZ	**Pawanui**	**1.72**	**121**	PN	Pn	06 09 43.2	-0.1
DUWZ	**D'Urville Isla**	**1.83**	**205**	PN	Pn	06 09 43.8	-0.7
URZ	**Urewera**	**1.91**	**63**	PN	Pn	06 09 42.7	-2.5
CAW	**Cannon Point**	**1.96**	**177**	PN	Pn	06 09 45.2	-0.5
CAW				AML	AML	06 10 15.2	
CAW				AML	AML	06 10 16.6	
MTW	**Mount Morrison**	**2.05**	**168**	PN	Pn	06 09 45.9	-0.7
TMWZ	**Te Maipa**	**2.09**	**160**	PN	Pn	06 09 46.3	-0.7
TCW	**Tory Channel**	**2.12**	**194**	PN	Pn	06 09 46.8	-0.4
KNZ	**Kokohu**	**2.13**	**87**	PN	Pn	06 09 46.2	-1.1
SNZO	**South Karori**	**2.17**	**185**	PN	Pn	06 09 46.9	-0.8
MWZ	**Matawai**	**2.18**	**69**	⇓PN	Pn	06 09 45.8	-2.2
BHW	**Baring Head**	**2.26**	**181**	PN	Pn	06 09 47.9	-0.8
PAWZ	**Paruwai Farm**	**2.26**	**171**	AML	AML	06 10 21.6	
MSWZ	**Moikau Station**	**2.28**	**174**	PN	Pn	06 09 48.0	-0.9
MHGZ	**Mahia Peninsul**	**2.30**	**91**	PN	Pn	06 09 48.4	-0.8
NNZ	**Nelson**	**2.39**	**210**	⇑PN	Pn	06 09 48.3	-1.2
TUWZ	**Tuamarina**	**2.41**	**198**	PN	Pn	06 09 48.5	-0.7
TUWZ				AML	AML	06 09 50.0	
PLWZ	**Palliser**	**2.43**	**175**	PN	Pn	06 09 49.5	-1.1
QRZ	**Quartz Range**	**2.50**	**227**	PN	Pn	06 09 49.2	-2.2
CNGZ	**Carnagh Statio**	**2.63**	**76**	PN	Pn	06 09 51.4	-1.4
BSWZ	**Blackbirch Sta**	**2.69**	**197**	PN	Pn	06 09 52.9	-0.5
PUZ	**Puketiti**	**2.81**	**69**	PN	Pn	06 09 52.1	-2.7
THZ	**Tophouse**	**3.04**	**210**	PN	Pn	06 09 55.8	-1.7
KHZ	**Kahutara**	**3.44**	**198**	PN	Pn	06 10 00.7	-1.3
LTZ	**Lake Taylor**	**4.16**	**208**	PN	Pn	06 10 08.7	-2.2
MQZ	**McQueen's Vall**	**4.87**	**200**	PN	Pn	06 10 16.5	-3.3
WVZ	**Waitaha Valley**	**5.05**	**218**	PN	Pn	06 10 19.1	-2.9

NNC 15 06:27:24.1±5.6, 54.12N×87.44E, h0km, mb3.8, mpv3.5, 4C-7D, Error ellipse: s-maj=44.1km s-min=37.4km az=89.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**6.38**	**241**	⇑Pn	Pn	06 28 59.1	-0.2
	5.3nm,0.7s						
KURK				⇓Sn	Sn	06 30 14.7	+2.0
	2.3nm,0.7s						
KURK				⇓Lg	Lg	06 30 48.9	
	26nm,1.0s						
KUR14	**Kurchatov Arra**	**6.45**	**241**	⇑Pn	Pn	06 29 00.1	-0.2
	1.5nm,0.6s,baz=56,slow=14						
KUR14				⇓Sn	Sn	06 30 13.9	-0.7
	0.7nm,0.7s						
KUR14				⇑Lg	Lg	06 30 51.1	
	8.9nm,1.2s,baz=62,slow=31						
MK31	**Makanchi Array**	**8.03**	**206**	⇓Pn	Pn	06 29 25.2	+3.2
	1.2nm,0.7s,baz=32,slow=14,SNR=6.6						
MK31				⇓Sn	Sn	06 30 55.5	+2.0
	0.8nm,0.5s,baz=26,slow=28,SNR=3.8						
MK31				⇓Lg	Lg	06 31 43.4	
	9.8nm,0.9s,baz=27,slow=30,SNR=6.0						
VOSK	**Vostochnaya**	**9.93**	**269**	⇓Pn	Pn	06 29 46.4	-1.6
	1.7nm,0.5s						
ZRNK	**Zerenda**	**11.03**	**271**	⇑Pn	Pn	06 30 01.0	-2.1
	0.6nm,0.5s						

WEL 15 06:38:15.9±0.4, 36.83S×177.23E, h187km±3km, ML3.6/14, Error ellipse: s-maj=4.3km s-min=3.8km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.13**	**131**	PN	Pn	06 38 45.1	-0.2
MXZ				AML	AML	06 39 15.1	
MXZ				AML	AML	06 39 17.1	
URZ	**Urewera**	**1.43**	**184**	PN	Pn	06 38 48.0	+0.2
URZ				SN	Sn	06 39 13.0	+0.3
URZ				AML	AML	06 39 20.9	
PUZ	**Puketiti**	**1.49**	**147**	PN	Pn	06 38 48.1	-0.2
PUZ				SN	Sn	06 39 12.4	-1.3
MWZ	**Matawai**	**1.52**	**171**	PN	Pn	06 38 49.0	+0.3
MWZ				SN	Sn	06 39 14.0	-0.3
MWZ				AML	AML	06 39 23.4	
MWZ				AML	AML	06 39 23.4	
CNGZ	**Carnagh Statio**	**1.83**	**155**	PN	Pn	06 38 52.1	+0.5
CNGZ				SN	Sn	06 39 14.6	-5.0
KNZ	**Kokohu**	**2.21**	**171**	PN	Pn	06 38 55.6	-0.2
NMHZ	**Naumai**	**2.29**	**188**	PN	Pn	06 38 57.5	+0.8
MHGZ	**Mahia Peninsul**	**2.38**	**167**	PN	Pn	06 38 57.8	+0.1
BKZ	**Black Stump Fm**	**2.40**	**194**	PN	Pn	06 38 57.8	-0.1
BKZ				SN	Sn	06 39 29.9	-1.0
MCHZ	**McNeill Hill**	**2.64**	**189**	PN	Pn	06 39 01.1	+0.5
FWVZ	**Far West T-bar**	**2.76**	**208**	PN	Pn	06 39 03.1	+0.8
TRVZ	**Turoa**	**2.80**	**208**	PN	Pn	06 39 03.5	+0.7
BHHZ	**Black Hill Sta**	**2.81**	**199**	PN	Pn	06 39 02.3	-0.3
MOVZ	**Moawhango**	**2.82**	**204**	PN	Pn	06 39 02.9	0.0
KAHZ	**Kahuranaki**	**2.97**	**185**	PN	Pn	06 39 04.2	-0.4
PNHZ	**Pukenui**	**3.18**	**194**	PN	Pn	06 39 06.2	-1.0
PNHZ				SN	Sn	06 39 46.6	-0.7
PXZ	**Pawanui**	**3.21**	**185**	PN	Pn	06 39 06.4	-1.0
PXZ				SN	Sn	06 39 44.0	-3.7
WPHZ	**Waipukurau**	**3.29**	**191**	PN	Pn	06 39 07.5	-0.8
TSZ	**Takapari Road**	**3.37**	**197**	PN	Pn	06 39 08.4	-1.0
PRHZ	**Porangahau**	**3.46**	**188**	PN	Pn	06 39 09.6	-0.9
DVHZ	**Dannevirke**	**3.56**	**193**	PN	Pn	06 39 10.3	-1.5
OGWZ	**Otaki Gorge**	**4.29**	**201**	PN	Pn	06 39 18.9	-2.1
TMWZ	**Te Maipa**	**4.40**	**193**	PN	Pn	06 39 19.9	-2.3
KIW	**Kapiti Island**	**4.41**	**203**	PN	Pn	06 39 20.3	-2.2
MTW	**Mount Morrison**	**4.53**	**197**	PN	Pn	06 39 21.2	-2.7
CAW	**Cannon Point**	**4.59**	**201**	PN	Pn	06 39 22.2	-2.5
SNZO	**South Karori**	**4.88**	**203**	PN	Pn	06 39 25.6	-2.8
TCW	**Tory Channel**	**4.94**	**207**	PN	Pn	06 39 26.6	-2.6
PLWZ	**Palliser**	**4.97**	**197**	PN	Pn	06 39 26.4	-3.3
TUWZ	**Tuamarina**	**5.25**	**208**	PN	Pn	06 39 30.5	-2.8
NNZ	**Nelson**	**5.31**	**213**	PN	Pn	06 39 32.3	-1.7
THZ	**Tophouse**	**5.96**	**213**	PN	Pn	06 39 40.5	-2.0
KHZ	**Kahutara**	**6.26**	**206**	PN	Pn	06 39 43.2	-3.1

NIED ***15*** *06:40:00.24˚.90N×125˚.40E, h53km, Mw4.2 Best double couple: M₀2.56000×10¹⁵ NP1:φ₁59.00000°, δ80.00000°, λ97.00000°. NP2:φ₂205.00000°, δ12.00000°, λ57.00000°.*
ISCJB ***15*** *06:40:08.4±0.4, 24˚.80N±0˚.06×125˚.41E±0˚.04, h52km±3km, mb4.0/20, MS3.2/3, Error ellipse: s-maj=11.8km s-min=3.3km az=151.8*
JMA ***15*** *06:40:09.6±0.1, 24˚.82N×125˚.38E, h46km±1km, M4.2*
JMA Felt II J1.
NEIC ***15*** *06:40:10.0±0.8, 24˚.78N×125˚.35E, h51km±7km, mb4.2/5, Error ellipse: s-maj=12.3km s-min=7.0km az=146.0*
NEIC Recorded [2 JMA] on Miyako-jima and [1 JMA] on Tarama-shima.
IDC ***15*** *06:40:12.6±4.4, 24˚.88N×125˚.32E, h71km±41km, mb3.8/16, mb1 4.0/17, mb1mx3.8/26, mbtmp3.8/17, ML3.5/1, MS3.2/4, Ms1 3.2/4, ms1mx2.5/31, Error ellipse: s-maj=20.9km s-min=16.0km az=77.0*

ISC 15 06:40:08.5±0.8, 24˚.63N±0˚.08×125˚.50E±0˚.05, h46km±6km, n66, σ1°30/81, mb4.2/20, MS3.4/3, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.16**	**329**	P	**Pn**	**06 40 16.6**	**+0.4**
JOGS				S	**Sn**	**06 40 22.0**	**+0.4**
JMJ	**Miyako jima 2**	**0.26**	**316**	P	**Pn**	**06 40 16.7**	**-0.3**
JMJ				S	**Sn**	**06 40 21.9**	**-1.0**
JTJ	**Tarama**	**0.72**	**271**	P	**Pn**	**06 40 22.4**	**0.0**
JTJ				S	**Sn**	**06 40 31.9**	**-0.5**
JIJ	**Ishigaki jima**	**1.26**	**258**	P	**Pn**	**06 40 30.0**	**+0.3**
JIJ				*e*S	**Sn**	**06 40 44.6**	**-0.9**
JKRS	**Kuro-shima**	**1.41**	**254**	P	**Pn**	**06 40 32.7**	**+1.0**
JKRS				*e*S	**Sn**	**06 40 50.0**	**+0.9**
IRIF	**Iriomote-Funau**	**1.64**	**260**	P	**Pn**	**06 40 35.2**	**+0.4**
IRIF				*e*S	**Sn**	**06 40 54.2**	**-0.5**
HATJ	**Hateruma jima**	**1.64**	**250**	P	**Pn**	**06 40 35.7**	**+0.8**
JKE	**Kume jima 2**	**2.06**	**34**	P	**Pn**	**06 40 40.6**	**0.0**
JKE				*e*S	**Sn**	**06 41 03.8**	**-1.2**
YOJ	**Yonaguni jima**	**2.27**	**266**	P	**Pn**	**06 40 43.2**	**-0.3**
YOJ				*e*S	**Sn**	**06 41 09.5**	**-0.8**
JAGN	**Aguni-jima**	**2.51**	**39**	P	**Pn**	**06 40 47.3**	**+0.5**
JAGN				S	**Sn**	**06 41 15.5**	**-0.7**
JIH	**Iheya**	**3.27**	**42**	P	**Pn**	**06 40 58.3**	**+1.0**
JOW	**Kunigami**	**3.33**	**48**	*e*Pn	**Pn**	**06 40 58.6**	**+0.5**
JOW				*e*Sn	**Sn**	**06 41 40.3**	**+3.8**
JOW	**Kunigami**	**3.33**	**48**	P	**Pn**	**06 40 58.7**	**+0.5**
NACB	**Ninganchiao**	**3.58**	**264**	*e*Pn	**Pn**	**06 41 01.3**	**-0.3**
NACB				*e*Sn	**Sn**	**06 41 43.7**	**+1.0**
TATO	**Taipei**	**3.66**	**276**	*e*Pn	**Pn**	**06 41 04.0**	**+1.4**
TATO				*e*Sn	**Sn**	**06 41 46.9**	**+2.4**
YHNB	**Yeheng**	**3.75**	**272**	*e*Pn	**Pn**	**06 41 05.2**	**+1.3**
YHNB				*e*Sn	**Sn**	**06 41 44.9**	**-2.0**
YULB	**Yu-li**	**4.03**	**253**	*e*Pn	**Pn**	**06 41 06.3**	**-1.5**
YULB				*e*Sn	**Sn**	**06 41 50.3**	**-3.5**
SSLB	**Suanglung**	**4.23**	**260**	*e*Pn	**Pn**	**06 41 10.4**	**-0.1**
SSLB				*e*Sn	**Sn**	**06 42 00.8**	**+2.1**
JTK	**Tokunoshima**	**4.42**	**44**	P	**Pn**	**06 41 12.4**	**-0.7**
JTK				*e*S	**Sn**	**06 42 01.3**	**-2.0**
TWG	**Pinlang**	**4.43**	**247**	*e*Pn	**Pn**	**06 41 11.8**	**-1.5**
TWG				*e*Sn	**Sn**	**06 42 01.4**	**-2.3**
TPUB	**Ta-pu**	**4.64**	**254**	*e*Pn	**Pn**	**06 41 17.0**	**+0.8**
TPUB				*e*Sn	**Sn**	**06 42 09.9**	**+1.1**
JAMN	**Amaminishikomi**	**4.88**	**42**	P	**Pn**	**06 41 17.9**	**-1.5**
JAM	**Amami Oshima**	**5.27**	**43**	P	**Pn**	**06 41 23.7**	**-1.0**
JMZ	**Minamidaito 2**	**5.32**	**76**	P	**Pn**	**06 41 24.0**	**-1.4**
KSAR	**Wonju Array Be**	**12.94**	**9**	P	**Pn**	**06 43 11.3**	**+1.6**
KSRS	**Korea Array**	**12.95**	**9**	P	**Pn**	**06 43 11.3**	**+1.4**
	0.2nm,0.3s,baz=193,slow=13,SNR=6.2						
KSRS				LR	LR	06 48 16.4	
	comp=Z,40nm,18.9s,baz=245,slow=38						
MAJO	**Matsushiro**	**16.13**	**40**	*e*Pn	**Pn**	**06 43 52.8**	**+0.7**
ASAJ	**Asahikawa**	**23.94**	**31**	LR	LR	06 54 49.0	
	comp=Z,39nm,19.4s,baz=354,slow=37						
CMAR	**Chiang Mai Arr**	**25.43**	**261**	P	**P**	**06 45 33.7**	**+1.6**
CMAR	**Chiang Mai Arr**	**25.43**	**261**	P	**P**	**06 45 33.7**	**+1.6**
	1.8nm,0.6s,baz=74,slow=8.1,SNR=5.7						
SONM	**Songino Array**	**27.67**	**332**	P	**P**	**06 45 51.0**	**-1.2**
SONM	**Songino Array**	**27.67**	**332**	P	**P**	**06 45 51.0**	**-1.2**
	0.9nm,0.4s,baz=152,slow=9.4,SNR=2.6						
SONM				LR	LR	06 58 25.3	
	comp=Z,103nm,18.7s,baz=110,slow=40						
PETK	**Petropavlovsk-**	**37.35**	**32**	P	**P**	**06 47 17.0**	**+0.5**
PETK	**Petropavlovsk-**	**37.35**	**32**	P	**P**	**06 47 17.0**	**+0.5**
	1.4nm,0.6s,baz=227,slow=3.3,SNR=3.7						
MK31	**Makanchi Array**	**40.81**	**314**	*e*P	**P**	**06 47 44.3**	**-1.2**
MKAR	**Makanchi Array**	**40.81**	**314**	P	**P**	**06 47 43.8**	**-1.7**
MKAR	**Makanchi

DALY	**Dalyan (Mu˘la**	**0.31**	**18**	*e*Pg	**Pb**	**06 47 46.0**	**-0.2**
DALY				*e*Sg	**Sn**	**06 47 52.5**	**+0.4**
TURN	**Turunc**	**0.35**	**9**	*i* P	**Pn**	**06 47 47.0**	**-0.3**
TURN				*i* S	**Sn**	**06 47 53.1**	**-0.1**
TURN	**Turunc**	**0.35**	**9**	*i* P	**Pn**	**06 47 47.0**	**-0.3**
TURN				*i* S	**Sn**	**06 47 53.1**	**-0.1**
ARG	**Arkhangelos**	**0.45**	**227**	*e*PB	**Pn**	**06 47 49.0**	**+0.3**
ARG				*e*SB	**Sn**	**06 47 56.2**	**+0.5**
ARG	**Arkhangelos**	**0.45**	**227**	*e*Pb	**Pn**	**06 47 49.0**	**+0.3**
ARG				*e*Sb	**Sn**	**06 47 56.2**	**+0.5**
FETY	**Fethiye**	**0.45**	**76**	*e*PG	**Pb**	**06 47 48.0**	**-0.3**
FETY				*e*SG	**Sn**	**06 47 56.1**	**+0.4**
FETY	**Fethiye**	**0.45**	**76**	*e*Pg	**Pb**	**06 47 48.0**	**-0.3**
FETY				*e*Sg	**Sn**	**06 47 56.1**	**+0.4**
YER	**Yerkesik**	**0.64**	**341**	*e*PG	**Pn**	**06 47 51.8**	**+0.4**
YER	**Yerkesik**	**0.64**	**341**	*e*Pg	**Pn**	**06 47 51.8**	**+0.4**
DAT	**Datca**	**0.80**	**285**	*e*PG	**Pb**	**06 47 53.9**	**-0.1**
DAT	**Datca**	**0.80**	**285**	*e*Pg	**Pb**	**06 47 53.9**	**-0.1**
AKAS	**Kas**	**0.91**	**108**	*i* P	**Pn**	**06 47 54.3**	**-0.8**
AKAS				*i* S	**Sn**	**06 48 07.6**	**+0.4**
AKAS	**Kas**	**0.91**	**108**	*i* P	**Pn**	**06 47 54.3**	**-0.8**
AKAS				*i* S	**Sn**	**06 48 07.6**	**+0.4**
KSL	**Kastellorizon**	**0.92**	**114**	*e*PN	**Pn**	**06 47 54.9**	**-0.3**
MLSB	**Milas**	**0.98**	**322**	*e*PG	**Pb**	**06 47 57.3**	**+0.3**
MLSB	**Milas**	**0.98**	**322**	*e*Pg	**Pb**	**06 47 57.3**	**+0.3**
GLHS	**Gihisar (BURDU**	**0.99**	**50**	*e*PG	**Pb**	**06 47 57.4**	**+0.1**
GLHS	**Gihisar (BURDU**	**0.99**	**50**	*e*Pg	**Pb**	**06 47 57.4**	**+0.1**
BODT	**Bodrum**	**1.12**	**299**	*e*PN	**Pn**	**06 47 58.7**	**+0.8**
BODT	**Bodrum**	**1.12**	**299**	*e*Pn	**Pn**	**06 47 58.7**	**+0.8**
ELL	**Elmali**	**1.12**	**78**	*e*PN	**Pb**	**06 47 58.8**	**-0.7**
ELL	**Elmali**	**1.12**	**78**	*e*Pn	**Pb**	**06 47 58.8**	**-0.7**
DNZL	**Cakiroluk**	**1.23**	**19**	*i* P	**Pn**	**06 48 00.2**	**+0.6**
DNZL				*i* S	**Sb**	**06 48 17.5**	**+0.5**
DNZL	**Cakiroluk**	**1.23**	**19**	*i* P	**Pn**	**06 48 00.2**	**+0.6**
DNZL				*i* S	**Sb**	**06 48 17.5**	**+0.5**
AYDN	**Tasoluk**	**1.25**	**335**	*i* P	**Pb**	**06 48 01.2**	**-0.4**
AYDN				*i* S	**Sb**	**06 48 17.7**	**+0.3**
AYDN	**Tasoluk**	**1.25**	**335**	*i* P	**Pb**	**06 48 01.2**	**-0.4**
AYDN				*i* S	**Sb**	**06 48 17.7**	**+0.3**
DENT	**Denizli**	**1.29**	**18**	*e*PN	**Pb**	**06 48 01.5**	**-0.7**
DENT	**Denizli**	**1.29**	**18**	*e*Pn	**Pb**	**06 48 01.5**	**-0.7**
KARP	**Karpathos**	**1.48**	**229**	*e*PN	**Pn**	**06 48 03.5**	**+0.6**
KARP				*e*SN	**Sb**	**06 48 23.0**	**-0.9**
KARP	**Karpathos**	**1.48**	**229**	*e*Pn	**Pn**	**06 48 03.5**	**+0.6**
KARP				*e*Sn	**Sb**	**06 48 23.0**	**-0.9**
KORT	**Korkueli**	**1.53**	**71**	*i* P	**Pb**	**06 48 06.2**	**-0.1**
KORT				*i* S	**Sb**	**06 48 28.5**	**+3.1**
KORT	**Korkueli**	**1.53**	**71**	*i* P	**Pb**	**06 48 06.2**	**-0.1**
GCAM	**G?zelcaml?**	**1.57**	**319**	*i* P	**Pn**	**06 48 04.9**	**+0.8**
GCAM				*i* S	**Sb**	**06 48 25.6**	**-0.8**
GCAM	**G?zelcaml?**	**1.57**	**319**	*i* P	**Pn**	**06 48 04.9**	**+0.8**
GCAM				*i* S	**Sb**	**06 48 25.6**	**-0.8**
SMG	**Samos**	**1.80**	**312**	*e*PN	**Pn**	**06 48 08.3**	**+1.0**
SMG				*e*SN	**Sb**	**06 48 31.6**	**-1.4**
SMG	**Samos**	**1.80**	**312**	*e*Pn	**Pn**	**06 48 08.3**	**+1.0**
SMG				*e*Sn	**Sb**	**06 48 31.6**	**-1.4**
KULA	**Kula-Manisa**	**1.99**	**3**	*e*PN	**Pb**	**06 48 12.3**	**-1.8**
KULA	**Kula-Manisa**	**1.99**	**3**	*e*Pn	**Pb**	**06 48 12.3**	**-1.8**
KHAL	**Karahalli**	**1.99**	**22**	*i* P	**Pn**	**06 48 10.1**	**+0.1**
KHAL				*i* S	**Sn**	**06 48 33.1**	**-0.8**
KHAL	**Karahalli**	**1.99**	**22**	*i* P	**Pn**	**06 48 10.1**	**+0.1**
KHAL				*i* S	**Sn**	**06 48 33.1**	**-0.8**
IZM	**Izmir**	**2.13**	**332**	*e*PN	**Pn**	**06 48 12.7**	**+0.9**
IZM	**Izmir**	**2.13**	**332**	*e*Pn	**Pn**	**06 48 12.7**	**+0.9**
BLCB	**Balcova**	**2.21**	**328**	*e*PN	**Pn**	**06 48 13.9**	**+1.1**
BLCB	**Balcova**	**2.21**	**328**	*e*Pn	**Pn**	**06 48 13.9**	**+1.1**
AKHS	**Akhisar**	**2.42**	**346**	*i* P	**Pn**	**06 48 16.3**	**+0.5**
AKHS				*i* S	**Sn**	**06 48 44.5**	**+0.2**
AKHS	**Akhisar**	**2.42**	**346**	*i* P	**Pn**	**06 48 16.3**	**+0.5**
AKHS				*i* S	**Sn**	**06 48 44.5**	**+0.2**
NPS	**Neapolis**	**2.69**	**243**	*e*PN	**Pn**	**06 48 19.8**	**+0.3**
NPS	**Neapolis**	**2.69**	**243**	*e*Pn	**Pn**	**06 48 19.8**	**+0.3**

IDC ***15*** *06:49:59.1±0.6, 11˚.44N×140˚.23E, h0km, mb4.5/17, mb1 4.6/17, mb1mx4.4/27, mbtmp4.5/17, MS3.9/14, Ms1 3.9/14, ms1mx3.6/35, Error ellipse: s-maj=25.2km s-min=12.4km az=77.0*

BJI ***15*** *06:50:02.9, 10˚.88N×140˚.52E, h75km, mB5.0/20, mb4.7/26, Ms4.4/15, Ms7 4.3/16*

ISCJB ***15*** *06:50:06.0±1.2, 11˚.33N±0˚.06×140˚.00E±0˚.05, h57km±10km, mb4.7/63, MS3.9/19, Error ellipse: s-maj=9.7km s-min=7.7km az=28.1*

NEIC ***15*** *06:50:09.4±1.2, 11˚.34N×140˚.02E, h76km±11km, mb4.7/37, Error ellipse: s-maj=7.7km s-min=6.6km az=67.0*

ISC 15 06:50:09.6±0.5, 11˚.32N±0˚.07×140˚.13E±0˚.06, h80km±2km, n195, σ1$02/213, mb4.6/62, 53C-40D, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GUMO	**Guam**	**5.15**	**64**	*e*Pn		**Pn**	**06 51 25.0**	**+0.7**
GUMO				*e*Sn		**Sn**	**06 52 21.0**	**-1.4**
PMG	**Port Moresby** 24nm,1.0s	**21.75**	**161**	*e*P		**P**	**06 54 54.9**	**+0.1**
PMG	**Port Moresby** 11nm,0.6s,baz=315,slow=7.4,SNR=5.4	**21.75**	**161**	P		**P**	**06 54 54.3**	**-0.4**
SSLB	**Suanglung** 16nm,0.9s	**22.05**	**307**	*e*P		**P**	**06 54 59.6**	**+1.6**
TPUB	**Ta-pu** 18nm,0.9s	**22.07**	**305**	*e*P		**P**	**06 54 58.3**	**+0.2**
JNU	**Nakatsue** 16nm,0.8s	**23.30**	**340**	*e*P		**P**	**06 55 09.6**	**-1.0**
JNU	**Nakatsue** 17nm,0.8s,baz=166,slow=3.7,SNR=13	**23.30**	**340**	P		**P**	**06 55 09.2**	**-1.5**
JNU				LR		LR	07 02 56.8	
	comp=Z,234nm,18.4s,baz=162,slow=34							
COEN	**Coen** 494nm,2.0s	**25.30**	**173**	*e*P		**P**	**06 55 30.5**	**+1.6**
KSRS	**Korea Array** 1.6nm,0.7s,baz=165,slow=10,SNR=6.8	**28.24**	**339**	P		**P**	**06 55 54.0**	**-1.0**
KSRS				LR		LR	07 06 06.0	
	comp=Z,234nm,19.1s,baz=176,slow=34							
KSAR	**Wonju Array Be**	**28.24**	**339**	P		**P**	**06 55 54.0**	**-1.0**
NJ2	**Nanjing**	**28.46**	**320**	*e*P		P	06 56 01.1	+4.0
NJ2				pP		pP	06 56 18.3	+2.6
NJ2				sP		sP	06 56 27.3	+2.2
NJ2				PP		**PnPn**	**06 56 54.3**	**+3.5**
NJ2				S		**S**	**07 00 41.5**	**+2.6**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
NJ2				pmax		pmax		
	comp=Z,100nm,5.2s							
NJ2				LR		LR		
	comp=N,450nm,23.0s							
NJ2				LR		LR		
	comp=E,730nm,22.6s							
NJ2				LR		LR		
	comp=Z,80nm,23.4s							
WHN	**Wuhan**	**30.62**	**313**	P		**P**	**06 56 14.9**	**-1.3**
WRA	**Warramunga Arr**	**31.59**	**190**	P		**P**	**06 56 23.9**	**-1.0**
WRA	**Warramunga Arr**	**31.59**	**190**	P		**P**	**06 56 23.9**	**-1.0**
	comp=Z,2.8nm,0.9s,baz=5.5,slow=9.7,SNR=15							
WRA				LR		LR	07 09 01.9	
	comp=Z,254nm,19.0s,baz=35,slow=36							
CTA	**Charters Tower**	**31.79**	**169**	P		**P**	**06 56 27.1**	**+0.4**
CTA	**Charters Tower**	**31.79**	**169**	P		**P**	**06 56 27.1**	**+0.4**
	comp=Z,3.7nm,0.6s,baz=337,slow=12,SNR=7.4							
CTAO	**Charters Tower**	**31.79**	**169**	*e*P		**P**	**06 56 27.0**	**+0.4**
	comp=Z,3.9nm,0.6s							
USRK	**Ussuriysk Arra**	**33.50**	**349**	LR		LR	07 08 24.9	
	comp=Z,164nm,18.8s,baz=102,slow=33							
CN2	**Changchun**	**34.76**	**341**	*e*P		**P**	**06 56 51.0**	**-1.3**
CN2				pmax		pmax		
	comp=Z,10.0nm,1.0s							
GYA	**Guiyang**	**34.92**	**300**	P		**P**	**06 56 54.5**	**+0.4**
GYA				pP		**pP**	**06 57 13.4**	**+0.5**
GYA				sP		**sP**	**06 57 23.0**	**+0.8**
GYA				PP		**PP**	**06 58 13.6**	**-1.1**
GYA				PcP		**PcP**	**06 59 25.8**	**+0.6**
GYA				S		**S**	**07 02 19.8**	**-0.2**
GYA				sS		**sS**	**07 02 51.3**	**-1.2**
GYA				ScP		**ScP**	**07 03 04.0**	**+0.2**
GYA				ScS		**ScS**	**07 07 05.6**	**-2.2**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
GYA				pmax		pmax		
	comp=Z,90nm,4.8s							
ASAR	**Alice Springs**	**35.30**	**190**	P		**P**	**06 56 57.0**	**-0.2**
ASAR				PcP		**PcP**	**06 59 27.7**	**+1.5**
ASAR	**Alice Springs**	**35.30**	**190**	P		**P**	**06 56 57.0**	**-0.2**
	comp=Z,1.4nm,0.7s,baz=16,slow=12,SNR=21							
ASAR				PcP		**PcP**	**06 59 27.7**	**+1.5**
	comp=Z,0.6nm,0.8s,baz=350,slow=3.0,SNR=4.1							
BJI	**Beijing**	**35.60**	**328**	P		**P**	**06 57 00.6**	**+1.1**
BJI				S		**S**	**07 02 31.8**	**+2.1**
BJI				pmax		pmax		
	comp=Z,9.0nm,0.6s							
BJI				pmax		pmax		
	comp=Z,130nm,5.7s							
BJI				LR		LR		
	comp=N,160nm,17.8s							
BJI				LR		LR		
	comp=E,140nm,21.8s							
BJI				LR		LR		
	comp=Z,110nm,19.4s							
KMI	**Kunming**	**37.93**	**296**	P		**P**	**06 57 21.4**	**+1.6**
KMI				pmax		pmax		
	comp=Z,6.0nm,0.8s							
HHC	**Hu-ho-hao-te**	**38.69**	**325**	*e*P		**P**	**06 57 26.9**	**+1.1**
HHC				pP		**pP**	**06 57 44.6**	**-0.3**
HHC				sP		**sP**	**06 57 54.8**	**+0.6**
HHC				PP		**PnPn**	**06 59 01.3**	**+2.6**
HHC				S		**ScP**	**07 03 18.5**	**+1.0**
HHC				sS		**sS**	**07 03 51.8**	**+2.1**
HHC				ScS		**ScS**	**07 07 25.3**	**-3.0**
HHC				pmax		pmax		
	comp=Z,72nm,0.7s							
HHC				pmax		pmax		
	comp=Z,150nm,6.4s							
HHC				LR		LR		
	comp=N,270nm,14.3s							
HHC				LR		LR		
	comp=E,710nm,14.5s							
HHC				LR		LR		
	comp=Z,490nm,13.1s							
CD2	**Chengdu**	**38.88**	**306**	*e*P		**P**	**06 57 27.4**	**-0.1**
CD2				pP		**pP**	**06 57 46.3**	**-0.3**
CD2				sP		**sP**	**06 57 55.0**	**-0.9**
CD2				PP		**PnPn**	**06 59 02.1**	**+1.0**
CD2				S		**S**	**07 03 19.5**	**-0.5**
CD2				pmax		pmax		
	comp=Z,30nm,0.8s							
CD2				pmax		pmax		
	comp=Z,120nm,4.8s							
CD2				LR		LR		
	comp=N,160nm,19.0s							
CD2				LR		LR		
	comp=Z,280nm,13.4s							
CMAR	**Chiang Mai Arr**	**40.36**	**285**	P		**P**	**06 57 40.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**40.36**	**285**	P		**P**	**06 57 40.4**	**+0.6**
	comp=Z,7.1nm,0.9s,baz=96,slow=6.7,SNR=21							
LZH	**Lanzhou**	**40.99**	**313**	*e*P		**P**	**06 57 45.0**	**-0.1**
LZH				pP		**pP**	**06 58 03.0**	**-1.3**
LZH				sP		**sP**	**06 58 11.6**	**-1.9**
LZH				pmax		pmax		
	comp=Z,15nm,1.4s							
STKA	**Stephens Creek**	**42.98**	**178**	P		**P**	**06 58 00.5**	**-0.5**
STKA	**Stephens Creek**	**42.98**	**178**	P		**P**	**06 58 00.5**	**-0.5**
	comp=Z,4.8nm,0.9s,baz=6.3,slow=9.4,SNR=5.2							
PETK	**Petropavlovsk-**	**44.00**	**15**	LR		LR	07 13 11.5	
	comp=Z,52nm,20.8s,baz=99,slow=32							
GTA	**Gaotai**	**45.35**	**315**	*e*P		**P**	**06 58 20.0**	**-0.1**
GTA				pP		**pP**	**06 58 38.4**	**-1.3**
GTA				sP		**sP**	**06 58 47.5**	**-1.3**
GTA				S		**S**	**07 04 52.3**	**-3.0**
GTA				pmax		pmax		
	comp=Z,5.0nm,1.1s							
GTA				pmax		pmax		
	comp=Z,110nm,7.4s							
GTA				LR		LR		
	comp=N,140nm,20.0s							
GTA				LR		LR		
	comp=E,210nm,17.8s							
GTA				LR		LR		
	comp=Z,96nm,13.3s							
SONM	**Songino Array**	**46.08**	**329**	P		**P**	**06 58 25.3**	**-0.4**
SONM	**Songino Array**	**46.08**	**329**	P		**P**	**06 58 25.3**	**-0.4**
	comp=Z,3.7nm,0.9s,baz=139,slow=7.9,SNR=9.6							
NWAO	**Narrogin (SRO)**	**49.13**	**206**	LR		LR	07 20 34.3	
	comp=Z,176nm,18.9s,baz=282,slow=37							
WMQ	**Urumqi**	**55.43**	**316**	P		**P**	**06 59 36.6**	**+0.6**
WMQ				pP		**pP**	**06 59 56.0**	**-0.2**
WMQ				sP		**sP**	**07 00 04.0**	**-1.1**
WMQ				*e*S		**S**	**07 07 13.0**	**-1.9**
WMQ				pmax		pmax		
	comp=Z,16nm,0.8s							
WMQ				pmax		pmax		
	comp=Z,120nm,5.0s							
WMQ				LR		LR		
	comp=N,170nm,18.8s							
WMQ				LR		LR		
	comp=E,290nm,17.2s							
WMQ				LR		LR		
	comp=Z,210nm,19.2s							
MK31	**Makanchi Array**	**59.97**	**318**	*e*P		**P**	**07 00 07.8**	**+0.1**
MKAR	**Makanchi Array**	**59.97**	**318**	*e*P		**P**	**07 00 07.7**	**-0.1**
MKAR	**Makanchi Array**	**59.97**	**318**	P		**P**	**07 00 07.6**	**-0.2**
	comp=Z,4.3nm,0.8s,baz=98,slow=9.2,SNR=43							
MKAR				LR		LR	07 27 05.3	
	comp=Z,60nm,18.1s,baz=273,slow=37							
ZALV	**Zalesovo Beam**	**60.84**	**326**	P		**P**	**07 00 12.2**	**-1.3**
ZALV	**Zalesovo Beam**	**60.84**	**326**	P		**P**	**07 00 12.2**	**-1.3**
	comp=Z,1.5nm,0.4s,baz=115,slow=6.7,SNR=8.8							
ZALV				LR		LR	07 27 53.8	
	comp=Z,90nm,18.0s,baz=249,slow=37							
KSH	**Kashi**	**62.98**	**309**	*e*P		**P**	**07 00 30.6**	**+2.3**
KSH				*e*pP		**pP**	**07 00 49.6**	**+0.8**
KSH				*e*sP		**sP**	**07 00 58.8**	**+1.1**
KSH				*e*PcP		**PcP**	**07 01 08.3**	**+2.7**
KSH				*e*PP		**PP**	**07 02 51.1**	**+3.5**
KSH				*e*S		**S**	**07 08 50.8**	**-1.8**
KSH				pmax		pmax		
	comp=Z,6.0nm,0.5s							
KSH				pmax		pmax		
	comp=Z,330nm,4.5s							
KSH				LR		LR		
	comp=N,350nm,5.8s							
KSH				LR		LR		
	comp=E,170nm,4.4s							
KSH				LR		LR		
	comp=Z,310nm,6.3s							
KURK	**Kurchatov**	**63.38**	**321**	*e*P		**P**	**07 00 29.6**	**-1.0**
	comp=Z,16nm,0.8s							
TKM2	**Tokmak 2**	**63.76**	**312**	*e*P		**P**	**07 00 33.5**	**+0.1**
	comp=Z,2.6nm,0.8s							
EKS2	**Erkin-Say**	**65.04**	**312**	*e*P		**P**	**07 00 41.8**	**0.0**
	comp=Z,3.8nm,0.9s							
BVAR	**Borovoye Array**	**68.86**	**323**	P		**P**	**07 01 05.2**	**-0.4**
BVAR	**Borovoye Array**	**68.86**	**323**	P		**P**	**07 01 05.2**	**-0.4**
	comp=Z,7.5nm,0.8s,baz=109,slow=6.9,SNR=34							
BVAR				LR		LR	07 30 59.4	
	comp=Z,73nm,20.8s,baz=240,slow=36							
BRVK	**Borovoye**	**68.93**	**323**	*e*P		**P**	**07 01 05.8**	**-0.2**
	comp=Z,12nm,0.9s							
TRF	**Thorofare Moun**	**70.85**	**26**	*e*P		**P**	**07 01 15.9**	**-2.0**
	comp=Z,25nm,1.8s							
PMR	**Palmer**	**70.97**	**29**	*e*P		P	07 01 10.8	-7.6
	comp=Z,6.0nm,0.8s							
SML	**Sawmill**	**71.39**	**28**	*e*P		**P**	**07 01 20.7**	**-0.2**
	comp=Z,2.1nm,1.0s							
COLD	**Coldfoot**	**71.80**	**23**	*e*P		**P**	**07 01 24.2**	**+0.9**
	comp=Z,6.5nm,0.9s							
ILAR	**Eielson Array**	**72.59**	**25**	P		**P**	**07 01 26.1**	**-1.9**
ILAR	**Eielson Array**	**72.59**	**25**	P		**P**	**07 01 26.1**	**-1.9**
	comp=Z,2.7nm,0.6s,baz=246,slow=5.8,SNR=58							
PAX	**Paxson**	**72.90**	**27**	*e*P		**P**	**07 01 29.7**	**-0.3**
	comp=Z,3.7nm,0.6s							
PAX				*e*S		**SKiKP**	**07 10 54.9**	**-0.7**
DOT	**Dot Lake**	**73.63**	**27**	*e*P		**P**	**07 01 34.0**	**-0.2**
	comp=Z,5.7nm,0.8s							
EGAK	**Eagle**	**75.02**	**26**	*e*P		**P**	**07 01 42.0**	**-0.2**
	comp=Z,57nm,2.6s							
ABKAR	**Akbulak array**	**75.11**	**318**	*e*P		**P**	**07 01 42.4**	**-0.6**
	comp=Z,6.4nm,0.6s							
DLBC	**Dease Lake**	**80.37**	**32**	*e*P		**P**	**07 02 13.1**	**+0.9**
NLWA	**Neilton Lookou**	**85.79**	**43**	*e*P		**P**	**07 02 41.6**	**+1.2**
	comp=Z,14nm,1.2s							
KEBM	**Edson Butte**	**86.41**	**47**	*e*P		**P**	**07 02 45.2**	**+1.7**
	comp=Z,17nm,1.1s							
CMW	**Cultus Mountai**	**86.71**	**41**	P		**P**	**07 02 46.1**	**+1.1**
COR	**Corvallis**	**86.77**	**45**	*e*P		P	07 02 48.6	+3.4
	comp=Z,61nm,1.8s							
JCW	**Jim Creek**	**86.89**	**42**	P		**P**	**07 02 46.7**	**+1.0**
YKW3	**Yellowknife Ar**	**86.94**	**27**	*e*P		**P**	**07 02 45.9**	**+0.3**
	comp=Z,0.1nm,0.9s							
YKA	**Yellowknife Ar**	**86.97**	**27**	P		**P**	**07 02 45.5**	**-0.2**
	comp=Z,3.0nm,0.6s,baz=292,slow=5.2,SNR=57							
KRMB	**Red Mountain**	**87.00**	**48**	*e*P		**P**	**07 02 47.9**	**+1.4**
	comp=Z,36nm,2.9s							
FL2	**Flat Top 2**	**87.07**	**44**	P		**P**	**07 02 47.7**	**+1.0**
TDL	**Tradedollar La**	**87.12**	**43**	P		**P**	**07 02 48.0**	**+1.0**
KHMM	**Horse Mountain**	**87.27**	**49**	*e*P		**P**	**07 02 48.9**	**+1.1**
	comp=Z,8.6nm,0.7s							
KBZ	**Khabaz**	**87.43**	**314**	LR		LR	07 45 03.0	
	comp=Z,41nm,18.5s,baz=202,slow=38							
HUMO	**Hull Mountain**	**87.46**	**47**	*e*P		**P**	**07 02 49.7**	**+1.1**
	comp=Z,5.9nm,0.8s							
KCPM	**Cahto Peak**	**87.64**	**50**	*e*P		**P**	**07 02 50.9**	**+1.3**
	comp=Z,4.4nm,0.8s							
ARCES	**ARCESS Array B**	**87.77**	**341**	P		**P**	**07 02 48.4**	**-1.1**
ARCES	**ARCESS Array B**	**87.77**	**341**	P		**P**	**07 02 48.4**	**-1.1**
	comp=Z,5.9nm,0.8s,baz=60,slow=7.4,SNR=9.4							
ARCES				LR		LR	07 44 44.8	
	comp=Z,70nm,21.8s,baz=262,slow=38							
YBH	**Yreka Blue Hor**	**87.83**	**48**	*e*P		**P**	**07 02 51.6**	**+1.1**
	comp=Z,6.0nm,0.9s							
WDC	**Whiskeytown Da**	**88.22**	**49**	*e*P		**P**	**07 02 53.2**	**+1.0**
	comp=Z,5.9nm,1.1s							
CROR	**Criterion Ridg**	**88.28**	**45**	P		**P**	**07 02 53.2**	**+0.7**
LTIM	**Timbered Crate**	**88.85**	**48**	P		**P**	**07 02 56.4**	**+1.0**
NEW	**Newport**	**89.97**	**41**	*e*P		**P**	**07 03 01.6**	**+1.3**
	comp=Z,5.0nm,1.3s							
NEW	**Newport** baz=90	**89.97**	**41**	⇓P		**P**	**07 03 01.0**	**+0.7**
BEKR	**Beckworth** comp=Z,4.1nm,0.8s	**90.01**	**49**	*e*P		**P**	**07 03 01.6**	**+0.7**
CMB	**Columbia Colle** comp=Z,3.3nm,0.8s	**90.45**	**51**	*e*P		**P**	**07 03 03.7**	**+0.9**
WVOR	**Wild Horse Val** comp=Z,5.0nm,0.9s	**90.59**	**47**	*e*P		**P**	**07 03 04.3**	**+0.9**
FINES	**FINESS Array B**	**91.20**	**334**	P		**P**	**07 03 03.8**	**-1.9**
FINES	**FINESS Array B**	**91.20**	**334**	P		**P**	**07 03 03.8**	**-1.9**
	comp=Z,5.9nm,0.8s,baz=48,slow=5.7,SNR=6.7							
FINES				LR		LR	07 48 52.8	
	comp=Z,78nm,19.5s,baz=42,slow=39							
D12A	**Red Ives Fores** baz=91	**91.48**	**41**	⇓P		**P**	**07 03 07.3**	**-0.1**
E12A	**Beaver Dam Sad** baz=92	**91.53**	**42**	⇑P		**P**	**07 03 07.9**	**+0.1**
BSMT	**Bassoo Peak** comp=Z,3.5nm,1.1s	**91.59**	**41**	*e*P		**P**	**07 03 08.7**	**+0.6**
B13A	**Whitefish** baz=92	**91.62**	**40**	⇑P		**P**	**07 03 09.0**	**+1.0**
C13A	**Hot Springs** baz=92	**91.78**	**41**	⇓P		**P**	**07 03 09.1**	**+0.3**
NVAR	**Mina Array Bea**	**91.93**	**50**	P		**P**	**07 03 11.0**	**+1.1**
NVAR	**Mina Array Bea**	**91.93**	**50**	P		**P**	**07 03 11.0**	**+1.1**
	comp=Z,2.7nm,0.7s,baz=263,slow=6.1,SNR=25							
F12A	**Elk City** baz=92	**91.95**	**43**	⇑P		**P**	**07 03 10.3**	**+0.6**
D13A	**Huson** baz=92	**92.04**	**41**	⇓P		**P**	**07 03 10.8**	**+0.8**
A14A	**Double T Ranch** baz=92	**92.08**	**39**	⇓P		**P**	**07 03 10.8**	**+0.6**
G12A	**Big Creek, Yel** baz=92	**92.10**	**43**	⇓P		**P**	**07 03 10.5**	**0.0**
C14A	**Swan Lake** baz=92	**92.28**	**40**	⇓P		**P**	**07 03 11.4**	**+0.3**
MFID	**Camas Ranch** comp=Z,4.7nm,0.8s	**92.28**	**45**	*e*P		**P**	**07 03 12.1**	**+0.8**
MFID	**Camas Ranch** baz=92,SNR=5.8	**92.28**	**45**	⇑P		**P**	**07 03 11.9**	**+0.7**
B14A	**Marquette Ranc** baz=92	**92.38**	**40**	⇑P		**P**	**07 03 12.0**	**+0.3**
A15A	**Johnson Ranch,** baz=92	**92.50**	**39**	⇑P		**P**	**07 03 12.3**	**+0.1**
ISA	**Isabella** baz=92	**92.56**	**53**	⇓P		**P**	**07 03 12.4**	**-0.3**
I12A	**Atlanta** baz=93	**92.65**	**45**	⇓P		**P**	**07 03 13.0**	**0.0**
D14A	**Greenough** baz=93	**92.66**	**41**	⇑P		**P**	**07 03 12.8**	**-0.2**
B15A	**Bradely Ranch,** baz=93	**92.84**	**40**	⇓P		**P**	**07 03 13.8**	**+0.1**
C15A	**Salmond Ranch,** baz=93	**93.00**	**40**	⇓P		**P**	**07 03 14.6**	**+0.1**
HLID	**Hailey** comp=Z,3.8nm,1.0s	**93.21**	**45**	*e*P		**P**	**07 03 16.5**	**+0.8**
HLID	**Hailey** baz=93,SNR=8.4	**93.21**	**45**	⇓P		**P**	**07 03 16.8**	**+1.2**
A16A	**West Butte Ran** baz=93	**93.22**	**39**	⇑P		**P**	**07 03 15.9**	**+0.5**
MPMC	**Manual Prospec** baz=93	**93.22**	**52**	⇓P		**P**	**07 03 16.1**	**+0.3**
CIS	**Catalina Islan** baz=93	**93.22**	**55**	⇑P		**P**	**07 03 15.7**	**0.0**
ELK	**Elko** comp=Z,3.6nm,1.1s	**93.52**	**47**	*e*P		**P**	**07 03 18.2**	**+1.0**
C16A	**Fuhringer Ranc** baz=94,SNR=5.2	**93.53**	**40**	⇑P		**P**	**07 03 16.8**	**-0.1**
FURC	**Furnace Creek,** baz=94	**93.59**	**52**

F19A	Roth Farm, Mol	96.05	41	⇑P		P	07 03 28.8	+0.3
	baz=96							
D20A	Manuel Ranch,	96.07	40	⇑P		P	07 03 28.8	+0.3
	baz=96,SNR=5.6							
Y12C	Blythe	96.22	54	⇑P		P	07 03 30.0	+0.6
	baz=96							
W13A	Hualapai Mount	96.31	52	⇑P		P	07 03 30.5	+0.5
	baz=96							
E20A	Meyer Farm, Mu	96.31	40	⇓P		P	07 03 29.8	+0.3
	baz=96							
C21A	Desert Coulee	96.42	39	⇓P		P	07 03 30.4	+0.4
	baz=96							
H19A	Powell	96.48	42	⇑P		P	07 03 31.0	+0.5
	baz=96							
G20A	Bridger	96.77	41	⇓P		P	07 03 32.2	+0.4
	baz=97							
B22A	Reddig Ranch S	96.88	38	⇓P		P	07 03 32.2	+0.1
	baz=97							
J19A	Crowheart	96.97	43	⇑P			07 03 33.2	
	baz=97							
U15A	North Rim	97.10	51	⇓P		Pdif	07 03 34.3	+0.6
	baz=97							
113A	Mohawk Valley,	97.13	55	⇓P		Pdif	07 03 34.4	+0.8
	baz=97							
C22A	Vida	97.19	38	⇑P		P	07 03 33.1	-0.4
	baz=97							
D22A	Cohagen	97.26	39	⇑P		Pdif	07 03 34.7	+0.8
	baz=97							
Y14A	Wickenburg	97.36	53	⇓P		Pdif	07 03 35.7	+1.0
	baz=97							
NOA	NORSAR Array B	97.44	338		LR	LR	07 49 37.0	
	comp=Z,40nm,19.6s,baz=125,slow=37							
SRU	San Rafael	97.48	48	⇑P		P	07 03 35.2	0.0
	baz=97							
C23A	Lambert	97.59	38	⇑P		Pdif	07 03 35.9	+0.6
	baz=98							
K20A	Yellowstone Ra	97.69	44	⇓P		P	07 03 36.1	0.0
	baz=98							
D23A	Lindsay	97.85	39	⇑P		Pdif	07 03 36.8	+0.3
	baz=98							
I21A	Big Trails, Te	97.94	42	⇑P		P	07 03 36.9	-0.2
	baz=98							
WUAZ	Wupatki	98.11	51	*e*P		Pdif	07 03 39.7	+1.6
	comp=Z,2.6nm,0.8s							
WUAZ	Wupatki	98.11	51	⇑P		Pdif	07 03 38.9	+0.8
	baz=98							
214A	Organ Pipe Nat	98.16	55	⇑P		Pdif	07 03 38.6	+0.4
	baz=98							
S18A	Hurst Farm, Bl	98.38	49	⇑Pdiff		P	07 03 39.4	0.0
	baz=98							
P19A	Cripple Cowboy	98.40	47	⇑Pdiff		Pdif	07 03 39.7	+0.3
	baz=98							
G23A	Biddle	98.59	41	⇑Pdiff		P	07 03 39.5	-0.4
	baz=98							
Q20A	Ridgley Place,	99.15	47	⇑Pdiff		Pdif	07 03 42.6	-0.1
	baz=99							
H24A	Dirks Ranch, A	99.33	41	⇑Pdiff		Pdif	07 03 42.5	-0.7
	baz=99							
R20A	Redvale	99.38	48	⇑Pdiff		Pdif	07 03 43.4	-0.4
	baz=99							
L23A	Garrett	99.70	44	⇑Pdiff		Pdif	07 03 44.7	-0.4
	baz=100							
R21A	Cimarron	99.92	48	⇑Pdiff		Pdif	07 03 46.5	+0.3
	baz=100							
R22A	Saguache, Gunn	100.55	47	⇓Pdiff		Pdif	07 03 50.0	+1.0
	baz=100							
M24A	Cheyenne	100.57	44	⇑Pdiff		Pdif	07 03 49.8	+0.9
	baz=100							
Z20A	Nine Sixteen R	101.11	53	⇑Pdiff		Pdif	07 03 52.4	+0.9
	baz=101							
120A	U Bar Ranch, L	101.28	53	⇑Pdiff		Pdif	07 03 52.7	+0.4
	baz=101							
Z21A	St. Cloud Mine	101.75	52	⇓Pdiff		Pdif	07 03 54.9	+0.5
	baz=102							
Z22A	Elephant Butte	102.32	52	⇑Pdiff		Pdif	07 03 57.3	+0.4
	baz=102							
TORD	Torodi Ar. Bea	132.12	299	PKP		PKPdf	07 09 14.2	-1.0
TORD	Torodi Ar. Bea	132.12	299	PKP		PKPdf	07 09 14.2	-1.0
	comp=Z,0.5nm,0.8s,baz=36,slow=4.8,SNR=4.5							
LPAZ	La Paz	152.13	103	*e*PKPbc		PKPbc	07 09 58.8	+1.1
LPAZ	La Paz	152.13	103	PKPbc		PKPbc	07 09 58.5	+0.9
	comp=Z,2.3nm,0.8s,baz=262,slow=2.4,SNR=10							

IDC ***15*** *07:44:26.2±0.8,34.°54N×23.°49E,h0km,mb4.2/14, mb1 4.2/21,mb1mx4.1/35,mbtmp4.1/21,ML4.2/7,MS3.0/2, Ms1 3.1/2,ms1mx2.5/42,Error ellipse: s-maj=18.4km s-min=15.4km az=158.0*

ATH ***15*** *07:44:27.6,34.°44N×23.°23E,h21km±3km,MD3.6/17, ML3.7*

HLW ***15*** *07:44:30.1,34.°79N×23.°70E,h31km±15km,Md3.9,Ml3.9*

CSEM ***15*** *07:44:31.0±0.2,34.°51N×23.°37E,h30km,ML3.6/8,Error ellipse: s-maj=6.8km s-min=2.9km az=52.0*

THE ***15*** *07:44:34.5,34.°75N×23.°44E,h76km±2km,ML3.6/8,Error ellipse: s-maj=2.5km s-min=0.5km az=46.0*

ISC 15 07:44:27.5±0.7,34.41N±0.04×23.18E±0.03,h20km±5km, n187,σ1§58/202,mb4.3/15,2C,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAM	Vamos	1.30	40	P		Pb	07 44 51.4	+0.2
VAM				S		Sn	07 45 05.3	-2.0
VAM	Vamos	1.30	40	*e*PN		Pb	07 44 51.5	+0.2
VAM				*e*SN		Sb	07 45 09.1	+1.6
VAM	Vamos	1.30	40	P		Pb	07 44 51.4	+0.2
VAM				S		Sn	07 45 05.3	-2.0
VAM				*e*Sn		Sb	07 45 09.1	+1.6
ANKY	Antikythira Is	1.46	4	*e*PN		Pb	07 44 54.5	+0.6
ANKY				*e*SN		Sb	07 45 14.0	+2.0
ANKY	Antikythira Is	1.46	4	*e*Pn		Pb	07 44 54.5	+0.6
ANKY				*e*Sn		Sb	07 45 14.0	+2.0
KYTH	Kithira	1.87	356	P		Pb	07 45 00.0	-0.9
KYTH	Kithira	1.87	356	*e*PN		Pb	07 45 00.9	0.0
KYTH	Kithira	1.87	356	P		Pb	07 45 00.0	-0.9
KYTH	Kithira	1.87	356	*e*Pn		Pb	07 45 00.9	0.0
NPS	Neapolis	2.17	66	P		Pb	07 45 04.7	-1.4
NPS				S		Sn	07 45 27.4	-1.5
NPS	Neapolis	2.17	66	*e*PB		Pb	07 45 04.9	-1.2
NPS	Neapolis	2.17	66	P		Pb	07 45 04.7	-1.4
NPS				S		Sn	07 45 27.4	-1.5
VLI	Veliai	2.31	355	P		Pb	07 45 06.3	-2.1
VLI				S		Sn	07 45 30.8	-1.4
VLI	Veliai	2.31	355	*e*PB		Pb	07 45 07.2	-1.2
VLI	Veliai	2.31	355	P		Pb	07 45 06.3	-2.1
VLI	Veliai	2.31	355	*e*Pb		Pb	07 45 07.2	-1.2
VLI				S		Sn	07 45 30.8	-1.4
DYR	Agios Nikonas	2.44	344	P		Pb	07 45 08.8	-2.0
DYR				S		Sn	07 45 36.5	-0.1
DYR	Agios Nikonas	2.44	344	*e*PB		Pb	07 45 08.7	-2.0
DYR	Agios Nikonas	2.44	344	*e*Pb		Pb	07 45 08.7	-2.0
DYR				S		Sn	07 45 35.5	-0.1
THR6	Thira Island,	2.66	42	P		Pn	07 45 09.9	+0.8
THR6	Thira Island,	2.66	42	P		Pn	07 45 09.9	+0.8
THR3	Thira Island,	2.70	42	P		Pn	07 45 10.2	+0.5
THR3	Thira Island,	2.70	42	P		Pn	07 45 10.2	+0.5
PYL	PYLOS	2.74	335	P		Pb	07 45 13.2	-2.6
PYL				S		Sn	07 45 43.9	+1.1
PYL	PYLOS	2.74	335	*e*PN		Pn	07 45 12.1	+1.8
PYL	PYLOS	2.74	335	*e*Pn		Pn	07 45 12.1	+1.8
PYL	PYLOS	2.74	335	P		Pb	07 45 13.2	-2.6
PYL				S		Sn	07 45 43.9	+1.1
ITM	Ithomi	2.94	340	P		Pb	07 45 15.7	-3.6
ITM				S		Sn	07 45 48.0	+0.1
ITM	Ithomi	2.94	340	*e*PB		Pb	07 45 16.6	-2.7
ITM				*e*SN		Sb	07 45 52.5	-2.3
ITM	Ithomi	2.94	340	P		Pb	07 45 15.7	-3.6
ITM	Ithomi	2.94	340	*e*Pb		Pb	07 45 16.6	-2.7
ITM				S		Sn	07 45 48.0	+0.1
ITM				*e*Sn		Sb	07 45 52.5	-2.3
VLX	Vlachokerasia	3.02	348	P		Pn	07 45 16.1	+1.8
VLX				S		Sn	07 45 48.9	-1.1
VLX	Vlachokerasia	3.02	348	*e*PB		Pb	07 45 18.6	-2.1
VLX	Vlachokerasia	3.02	348	P		Pn	07 45 16.1	+1.8
VLX	Vlachokerasia	3.02	348	*e*Pb		Pb	07 45 18.6	-2.1
VLX				S		Sn	07 45 48.9	-1.1
DIDY	Didyma	3.06	0	P		Pn	07 45 16.0	+1.2
DIDY	Didyma	3.06	0	P		Pn	07 45 16.0	+1.2
DID	Didima	3.09	1	P		Pn	07 45 16.8	+1.7
DID				S		Sn	07 45 48.9	-2.6
DID	Didima	3.09	1	*e*PN		Pn	07 45 17.1	+2.0
DID				*e*SN		Sn	07 45 52.5	+1.0
DID	Didima	3.09	1	P		Pn	07 45 16.8	+1.7
DID				S		Sn	07 45 48.9	-2.6
DID				*e*Sn		Sn	07 45 52.5	+1.0
NAIG	Nisos Aigina	3.35	4	*e*PN		Pn	07 45 19.9	+1.2
NAIG	Nisos Aigina	3.35	4	*e*Pn		Pn	07 45 19.9	+1.2
SLUM		3.38	149	P		Pb	07 45 22.9	-3.7
SLUM				S		Sn	07 46 00.8	+2.3
KARP	Karpathos	3.46	70	P		Pn	07 45 21.6	+1.4
KARP				S		Sn	07 45 58.6	-2.0
KARP	Karpathos	3.46	70	*e*PN		Pn	07 45 21.7	+1.5
KARP	Karpathos	3.46	70	P		Pn	07 45 21.6	+1.4
KARP				S		Sn	07 45 58.6	-2.0
ATH	Athens Observa	3.58	7	*e*PN		Pn	07 45 23.0	+1.2
ATH	Athens Observa	3.58	7	*e*Pn		Pn	07 45 23.0	+1.2
ATHU	Athens Univers	3.58	8	P		Pn	07 45 22.6	+0.7
ATHU	Athens Univers	3.58	8	P		Pn	07 45 22.6	+0.7
GUR	Goura	3.58	349	P		Pn	07 45 24.4	+2.4
GUR				S		Sn	07 46 02.3	-1.4
GUR	Goura	3.58	349	*e*PN		Pn	07 45 24.8	+2.8
GUR	Goura	3.58	349	P		Pn	07 45 24.4	+2.4
GUR				S		Sn	07 46 02.3	-1.4
LTK	Loutraki	3.61	357	P		Pn	07 45 24.0	+1.8
LTK				S		Sn	07 46 01.9	-2.4
LTK	Loutraki	3.61	357	*e*PN		Pn	07 45 24.3	+2.1
LTK	Loutraki	3.61	357	P		Pn	07 45 24.0	+1.8
LTK	Loutraki	3.61	357	*e*Pn		Pn	07 45 24.3	+2.1
LTK				S		Sn	07 46 01.9	-2.4
PTL	Penteli	3.67	8	P		Pn	07 45 23.7	+0.6
PTL				S		Sn	07 46 02.6	-3.3
PTL	Penteli	3.67	8	*e*PN		Pn	07 45 23.6	+0.5
PTL	Penteli	3.67	8	P		Pn	07 45 23.7	+0.6
PTL				S		Sn	07 46 02.6	-3.3
KLV	Kalavryta, Ach	3.72	347	*e*PN		Pn	07 45 26.5	+2.7
MRMA	Marmari	3.77	15	P		Pn	07 45 24.4	0.0
MRMA	Marmari	3.77	15	P		Pn	07 45 24.4	0.0
RLS	Riolos of Patr	3.89	340	P		Pn	07 45 29.1	+2.9
RLS	Riolos of Patr	3.89	340	*e*PN		Pn	07 45 29.0	+2.9
RLS	Riolos of Patr	3.89	340	*e*Pn		Pn	07 45 29.0	+2.9
LAKA	Lakka	3.94	346	*e*PN		Pn	07 45 28.0	+1.2
DSF	Desfina	4.03	353	P		Pn	07 45 29.4	+1.4
DSF				S		Sn	07 46 12.8	-1.8
DSF	Desfina	4.03	353	P		Pn	07 45 29.4	+1.4
DSF				S		Sn	07 46 12.8	-1.8
TRIZ	Trizonia	4.05	348	P		Pn	07 45 29.8	+1.6
TRIZ				S		Sn	07 46 13.6	-1.4
TRIZ	Trizonia	4.05	348	*e*PN		Pn	07 45 30.0	+1.8
TRIZ	Trizonia	4.05	348	*e*Pn		Pn	07 45 30.0	+1.8
TRIZ				S		Sn	07 46 13.6	-1.4
AXS	Araxos	4.05	339	P		Pn	07 45 30.9	+2.6
AXS	Araxos	4.05	339	P		Pn	07 45 30.9	+2.6
KALE	Kalithea	4.06	348	P		Pn	07 45 30.3	+1.8
KALE	Kalithea	4.06	348	P		Pn	07 45 30.3	+1.8
EFP	Efpalio	4.14	346	P		Pn	07 45 32.0	+2.5
EFP				S		Sn	07 46 16.3	-0.9
EFP	Efpalio	4.14	346	*e*PN		Pn	07 45 33.6	+4.1
EFP	Efpalio	4.14	346	P		Pn	07 45 32.0	+2.5
EFP	Efpalio	4.14	346	*e*Pn		Pn	07 45 33.6	+4.1
EFP				S		Sn	07 46 16.3	-0.9
LKR	Lokris	4.23	358	P		Pn	07 45 32.0	+1.2
LKR				S		Sn	07 46 17.2	-2.4
LKR	Lokris	4.23	358	P		Pn	07 45 32.0	+1.2
LKR				S		Sn	07 46 17.2	-2.4
ATAL	Atalanti	4.28	358	P		Pn	07 45 32.7	+1.3
ATAL	Atalanti	4.28	358	P		Pn	07 45 32.7	+1.3
MRKA	Markates	4.30	4	P		Pn	07 45 32.5	+0.8
MRKA	Markates	4.30	4	P		Pn	07 45 32.5	+0.8
AXAR	Agios Charalam	4.37	355	P		Pn	07 45 34.4	+1.7
AXAR	Agios Charalam	4.37	355	P		Pn	07 45 34.4	+1.7
ARG	Arkhangelos	4.43	65	P		Pn	07 45 34.8	+1.3
ARG	Arkhangelos	4.43	65	*e*PN		Pn	07 45 34.8	+1.3
ARG	Arkhangelos	4.43	65	P		Pn	07 45 34.8	+1.3
SMIA	Simia	4.46	0	P		Pn	07 45 35.2	+1.3
SMIA	Simia	4.46	0	P		Pn	07 45 35.2	+1.3
EVR	Evrytania	4.63	347	*e*PN		Pn	07 45 39.9	+3.5
EVR	Evrytania	4.63	347	*e*Pn		Pn	07 45 39.9	+3.5
AGG	Agios Georgios	4.65	352	P		Pn	07 45 38.5	+1.8
AGG	Agios Georgios	4.65	352	*e*PN		Pn	07 45 38.4	+1.8
AGG	Agios Georgios	4.65	352	*e*Pn		Pn	07 45 38.4	+1.8
MAKR	Makrakomi, Fth	4.67	350	P		Pn	07 45 39.1	+2.3
MAKR				S		Sn	07 46 28.7	-1.7
MAKR	Makrakomi, Fth	4.67	350	P		Pn	07 45 39.1	+2.3
MAKR				S		Sn	07 46 28.7	-1.7
HMAT	Matruh	4.67	134	P		Pn	07 45 39.0	+2.1
	baz=141							
HMAT				S		Sn	07 46 27.3	-3.2
	baz=141							
HMAT	Matruh	4.67	134	P		Pn	07 45 39.0	+2.1
SKIA	Skiathos	4.75	3	P		Pn	07 45 38.8	+0.9
SKIA	Skiathos	4.75	3	P		Pn	07 45 38.8	+0.9
AOS	Alonnisos	4.78	7	P		Pn	07 45 38.2	-0.2
AOS	Alonnisos	4.78	7	*e*PN		Pn	07 45 40.2	+1.8
AOS	Alonnisos	4.78	7	P		Pn	07 45 38.2	-0.2
AOS	Alonnisos	4.78	7	*e*Pn		Pn	07 45 40.2	+1.8
LKD2	Lefkada island	4.82	336	*e*PN		Pn	07 45 41.1	+2.2
NEO	Neokhori	4.89	0	*e*PN		Pn	07 45 41.0	+1.2
NEO	Neokhori	4.89	0	*e*Pn		Pn	07 45 41.0	+1.2
XOR	Xorichti	4.95	0	P		Pn	07 45 41.6	+1.0
XOR	Xorichti	4.95	0	P		Pn	07 45 41.6	+1.0
AYDN	Tasoluk	5.00	48	*i* P		Pn	07 45 42.4	+1.0
AYDN	Tasoluk	5.00	48	*i* P		Pn	07 45 42.4	+1.0
TURN	Turunc	5.05	59	*i* P		Pn	07 45 38.3	-3.8
TURN				*i* S		Sn	07 46 27.4	-12
TURN	Turunc	5.05	59	*i* P		Pn	07 45 38.3	-3.8
THL	Klokotos Trika	5.23	350	P		Pn	07 45 45.7	+1.2
THL	Klokotos Trika	5.23	350	*e*PN		Pn	07 45 46.9	+2.4
THL	Klokotos Trika	5.23	350	P		Pn	07 45 45.7	+1.2
THL	Klokotos Trika	5.23	350	*e*Pn		Pn	07 45 46.9	+2.4
SWA2		5.50	159	P		Pn	07 45 52.4	+4.1
	baz=164							
SWA2				AMP			07 47 00.0	
	comp=E,100μm,0.5s,logA/T=5.3,baz=164							
AKAS	Kas	5.56	69	*i* P		Pn	07 45 48.7	-0.4
AKAS				*i* S		Sn	07 46 45.5	-7.0
AKAS	Kas	5.56	69	*i* P		Pn	07 45 48.7	-0.4
AKAS				*i* S		Sn	07 46 45.5	-7.0
DNZL	Cakiroluk	5.77	54	*i* P		Pn	07 45 53.7	+1.6
DNZL	Cakiroluk	5.77	54	*i* P		Pn	07 45 53.7	+1.6
KORT	Korkueli	6.38	64	*i* P		Pn	07 46 00.2	-0.2
KORT				*i* S		Sn	07 47 06.5	-6.3
KORT	Korkueli	6.38	64	*i* P		Pn	07 46 00.2	-0.2
HBRG	Burj al 'Arab	6.80	122	P		Pn	07 46 06.5	+0.4
	baz=127							
GAZI	Gazipasa	7.69	74	*i* P		Pn	07 46 15.8	-2.5
GAZI				*i* S		Sn	07 47 34.6	-10
AWBH		7.80	140	P		Pn	07 46 22.7	+2.9
	baz=144							
AWBH		7.80	140	P		Pn	07 46 22.7	+2.9
HNAT	Natroun	7.91	125	P		Pn	07 46 22.7	+1.4
	baz=129							
HNAT	Natroun	7.91	125	P		Pn	07 46 22.7	+1.4
HSAF	As Saff	8.56	122	P		Pn	07 46 30.4	+0.1
	baz=125							
HSAF	As Saff	8.56	122	P		Pn	07 46 30.4	+0.1
GLL	Jalalah	8.70	121	P		Pn	07 46 32.6	+0.4
	baz=125							
GLL	Jalalah	8.70	121	P		Pn	07 46 32.6	+0.4
KIZK	Mersin	9.18	74	*i* P		Pn	07 46 39.0	+0.2
KIZK	Mersin	9.18	74	*i* P		Pn	07 46 39.0	+0.2
AMAG	Maghara	9.26	111	P		Pn	07 46 39.6	-0.3
	baz=114							
AMAG	Maghara	9.26	111	P		Pn	07 46 39.6	-0.3
RSH		9.53	108	P		Pn	07 46 42.5	-1.0
	baz=111							
RSH		9.53	108	P		Pn	07 46 42.5	-1.0
GULE	Gulek	9.84	70	*i* P		Pn	07 46 48.0	0.0
GULE	Gulek	9.84	70	*i* P		Pn	07 46 48.0	0.0
BRTR	Keskin Array B	9.90	55	Pn		Pn	07 46 47.2	-1.4
	comp=E,0.4nm,0.3s,baz=229,slow=15,SNR=14							
HNKL	Nakhl	10.18	113	P		Pn	07 46 52.5	0.0
	baz=116							
HNKL	Nakhl	10.18	113	P		Pn	07 46 52.5	0.0
MMAI	Mount Meron Ar	10.28	94	Pn		Pn	07 46 51.9	-2.0
	comp=E,2.1nm,0.3s,baz=290,slow=10,SNR=7.0							
MMAI				Sn		Sn	07 48 36.5	-12
	comp=E,2.3nm,0.3s,baz=266,slow=23,SNR=3.5							
EIL	Elat	11.05	112	Pn		Pn	07 47 03.4	-1.0
	comp=E,0.9nm,0.3s,baz=357,slow=19,SNR=5.7							
EIL				Sn		Sn	07 48 59.3	-8.0
	comp=E,1.4nm,0.3s,baz=342,slow=20,SNR=4.2							
KEST	Kesra	11.41	281	Sn		Sn	07 49 13.9	-2.4
	comp=E,0.1nm,0.3s,baz=259,slow=19,SNR=2.1							
ASF	Jabal al Asfar	11.70	97	Pn		Pn	07 47 12.8	-0.5
	comp=E,0.4nm,0.3s,baz=333,slow=14,SNR=3.1							
ASF				Sn		Sn	07 49 14.4	-8.9
	comp=E,0.2nm,0.3s,baz=278,slow=19,SNR=3.1							
MOA	Molln	15.00	336	⇑*i*P		P	07 48 05.8	+2.3
	comp=E,7.7nm,0.5s							
MOA	Molln	15.00	336	P		P	07 48 05.8	+2.3
	comp=E,7.7nm,0.5s							
FETA	Feichten	15.71	327	⇑*i*P		P	07 48 13.3	+1.6
	comp=E,4.0nm,1.2s							
FETA	Feichten	15.71	327	P		P	07 48 13.3	+1.6
	comp=E,4.0nm,1.2s							
GERES	GERESS Array B	16.05	337	Pn		P	07 48 13.6	-1.7
	comp=E,0.9nm,0.3s,baz=152,slow=11,SNR=12							
KHC	Kasperske Hory	16.34	337	*e*P		P	07 48 20.7	+2.3
KHC				AMS		AMS	07 54 10.0	
	comp=E,100nm,18.9s							
KHC	Kasperske Hory	16.34	337	P		P	07 48 20.7	+2.3
DPC	Dobruska-Polom	16.70	345	*e*P		P	07 48 23.8	+1.4
DPC	Dobruska-Polom	16.70	345	P		P	07 48 23.8	+1.4
PRU	Pruhonice	16.81	340	*e*P		Pn	07 48 21.0	-0.5
AKASG	Malin Array Be	16.87	13	Pn		P	07 48 22.4	-1.8
	comp=E,4.3nm,0.3s,baz=208,slow=9.9,SNR=8.3							
UPC	Upice	16.92	344	*e*P		P	07 48 26.3	+1.5
UPC	Upice	16.92	344	P		P	07 48 26.3	+1.5
KBZ	Khabaz	17.88	53	Pn		P	07 48 35.1	-0.3
	comp=E,0.4nm,0.3s,baz=262,slow=9.2,SNR=4.3							
GNI	Garni	18.07	65	LR		LR	07 55 56.7	
	comp=E,19nm,21.5s,baz=119,slow=39							
CLL	Collm	18.43	339	*e*P		Pn	07 48 43.0	+1.4
	comp=Z,8.0nm,1.0s							
CLL				LV			07 57 00.0	
	comp=Z,100nm,19.2s							
MIB	Mutribah	20.96	96	*e*P		Pn	07 49 09.8	-2.0
MIB				AMb		AMB	07 49 10.7	
	comp=Z,49nm,0.5s							
NAY	Al-Naaiem	21.06	98	*e*P		P	07 49 10.8	+0.5
NAY				AMb		AMB	07 49 12.5	
	comp=Z,8.3nm,0.7s							
HFS	Hagfors	26.47	349	P		P	07 50 04.0	+1.0
	comp=Z,2.5nm,0.4s,baz=156,slow=11,SNR=16							
NB2	NORSAR Subarra	27.74	347	P		P	07 50 17.4	+3.0
	comp=Z,0.7nm,0.5s,baz=157,slow=10							
NB2	NORSAR Subarra	27.74	347	P		P	07 50 17.4	+3.0
	comp=Z,0.7nm,0.5s,SNR=3.5							
NOA	NORSAR Array B	27.74	347	P		P	07 50 16.8	+2.3
	comp=Z,1.2nm,0.6s,baz=150,slow=12,SNR=6.7							
EKA	Eskdalemuir Ar	27.74	327	P		P	07 50 18.7	+4.2
	comp=Z,3.4nm,0.4s,baz=123,slow=8.0,SNR=48							
TORD	Torodi Ar. Bea	28.77	228	P		P	07 50 28.6	+4.6
	comp=Z,1.6nm,0.6s,baz=38,slow=8.6,SNR=12							
AKTO	Aktyubinsk	29.95	47	P		P	07 50 33.0	-1.2
	comp=Z,1.5nm,0.4s,baz=247,slow=8.5,SNR=7.8							
ARCES	ARCESS Array B	35.20	1	P		P	07 51 18.5	-1.3
	comp=Z,2.2nm,0.8s,baz=180,slow=8.8,SNR=12							
ARCES				LR		LR	08 06 56.1	
	comp=Z,77nm,19.7s,baz=166,slow=38							
DBIC	Dimbokro	37.83	230	P		P	07 51 46.4	+3.6
	comp=Z,2.8nm,0.9s,baz=56,slow=11,SNR=2.9							
MKAR	Makanchi Array	45.54	56	P		P	07 52 45.7	-0.1
	comp=Z,7.8nm,0.4s,baz=268,slow=7.4,SNR=144							
ZALV	Zalesovo Beam	46.70	46	P		P	07 52 53.7	-0.9
	comp=Z,3.7nm,0.4s,baz=269,slow=10.0,SNR=12							
SONM	Songino Array	61.22	50	P		P	07 54 41.3	+0.4
	comp=Z,1.2nm,0.4s,baz=278,slow=5.9,SNR=4.1							
YKA	Yellowknife Ar	77.65	341	P		P	07 56 23.1	+1.1
	comp=Z,0.2nm,0.7s,baz=38,slow=6.4,SNR=5.0							
USRK	Ussuriysk Arra	78.52	44	P		P	07 56 27.3	+0.1
	comp=Z,1.5nm,0.4s,baz=293,slow=3.6,SNR=5.7							
KSRS	Soreq Array	80.03	51	P		P	07 56 36.1	+0.5
	comp=Z,1.3nm,0.4s,baz=309,slow=4.2,SNR=4.6							
ILAR	Eielson Array	80.84	356	P		P	07 56 41.0	+1.5
	comp=Z,0.2nm,0.4s,baz=338,slow=4.0,SNR=4.4							

**IDC 15

SALA	**Sala**		**1.27**	**121**	*e*P		**Pg**	08 14 13.6	**-0.2**
	SNR=57								
SALA					*e*S		**Sn**	08 14 32.0	**+0.6**
	comp=Z,14nm,0.4s,SNR=49								
ZALF	**Zalf**		**1.65**	**105**	*e*P		**Pb**	08 14 20.6	**+0.3**
ZALF					*e*S		**Sg**	08 14 44.4	**+2.0**
ZALF					AML		AML	08 14 47.5	
	comp=Z,9.4nm,0.9s								
ZALF	**Zalf**		**1.65**	**105**	*e*P		**Pb**	08 14 20.6	**+0.3**
	SNR=45								
ZALF					*e*S		**Sg**	08 14 44.4	**+2.0**
	comp=Z,9.4nm,0.9s,SNR=40								

IDC 15 08:26:27.1±2.6, 5.°33N×126.°61E, *h*64km±23km, mb3.7/7, mb1 3.8/8, mb1mx3.5/25, mbtmp3.7/8, 1D, Error ellipse: s-maj=52.2km s-min=12.8km az=75.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**2.01**	**329**	P	Pn	08 27 00.1	+1.4
	67nm,0.3s,baz=228,slow=3.5,SNR=4.4						
DAV				S	Sn	08 27 23.2	+0.3
	50nm,0.3s,baz=227,slow=20,SNR=4.3						
CTBH	**Cotabato--PC H**	**3.01**	**309**	⇓*i*P	Pn	08 27 10.8	-1.6
FITZ	**Fitzroy Crossi**	**23.30**	**182**	P	P	08 31 28.5	-1.1
	2.5nm,0.6s,baz=356,slow=7.5,SNR=9.3						
WRA	**Warramunga Arr**	**26.24**	**163**	P	P	08 31 56.4	+0.1
	2.1nm,0.7s,baz=344,slow=10,SNR=16						
ASAR	**Alice Springs**	**29.69**	**166**	P	P	08 32 27.1	0.0
	0.6nm,0.5s,baz=341,slow=7.1,SNR=13						
ASAR				PcP	PcP	08 35 30.9	+0.8
	0.6nm,0.6s,baz=350,slow=2.1,SNR=8.3						
NWAO	**Narrogin (SRO)**	**39.08**	**193**	P	P	08 33 48.1	+0.1
	3.0nm,0.5s,baz=34,slow=10.0,SNR=5.0						
MKAR	**Makanchi Array**	**56.18**	**325**	P	P	08 35 59.8	-0.7
	0.6nm,0.5s,baz=118,slow=7.5,SNR=5.3						
MKAR				PcP	PcP	08 36 57.9	+0.3
	0.6nm,0.6s,baz=107,slow=4.2,SNR=4.0						
ILAR	**Eielson Array**	**83.72**	**25**	P	P	08 38 48.3	-0.6
	0.4nm,0.9s,baz=245,slow=5.9,SNR=3.8						
ARCES	**ARCESS Array B**	**88.91**	**340**	P	P	08 39 14.4	+0.2
	2.0nm,0.8s,baz=79,slow=6.3,SNR=6.4						
TORD	**Torodi Ar. Bea**	**122.30**	**289**	PKP	PKPdf	08 45 15.6	-0.3
	0.5nm,0.9s,baz=146,slow=0.5,SNR=2.5						

IDC 15 08:45:10.4±2.1, 3.°48S×129.°45E, *h*0km, mb3.7/3, mb1 4.0/4, mb1mx3.6/21, mbtmp3.8/4, ML3.3/1, Error ellipse: s-maj=164.3km s-min=25.1km az=70.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.05**	**164**	P	Pn	08 49 08.9	-1.4
	0.1nm,0.3s,baz=346,slow=12,SNR=11						
ASAR	**Alice Springs**	**20.53**	**168**	P	P	08 49 51.1	+0.7
	6.0nm,0.7s,baz=349,slow=11,SNR=87						
MKAR	**Makanchi Array**	**65.00**	**326**	P	P	08 55 53.7	+1.3
	0.3nm,0.6s,baz=117,slow=8.3,SNR=6.6						
KURBB	**Kurchatov Arra**	**69.25**	**328**	P	P	08 56 17.9	-1.3
	0.6nm,0.7s,baz=132,slow=6.0,SNR=4.1						

*TIF **15** 08:55:05.9, 41.°56N×43.°45E, h12km±3km*
*ISCJB **15** 08:55:06.1±0.7, 41.°46N±0.°06×43.°40E±0.°06, h19km±8km, Error ellipse: s-maj=11.5km s-min=5.6km az=152.3*
*DDA **15** 08:55:06.7, 41.°32N×43.°30E, h7km, MD2.6*
ISC 15 08:55:05.5±1.0, 41.°50N±0.°08×43.°38E±0.°05, h16km±8km, n6, σ0°28/12, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKH	**Akhalkalaki**	**0.12**	**138**	P	**Pg**	**08 55 09.4**	**0.0**
AKH				S	**Sg**	**08 55 12.0**	**0.0**
TBLG	**Delisi**	**1.04**	**77**	P	**Pb**	**08 55 25.1**	**0.0**
TBLG				S	**Sn**	**08 55 39.5**	**-0.1**
ONI	**Oni**	**1.09**	**3**	P	**Pn**	**08 55 26.1**	**0.0**
ONI				S	**Sn**	**08 55 41.1**	**+0.2**
DAGI	**Agillar**	**1.19**	**250**	*i* P	**Pn**	**08 55 27.1**	**-0.3**
DAGI				*i* S	**Sb**	**08 55 42.3**	**-0.4**
DBOC	**Borcka**	**1.30**	**264**	*i* P	**Pn**	**08 55 28.8**	**-0.2**
DBOC				*i* S	**Sg**	**08 55 47.5**	**0.0**
DDEM	**Demirkent**	**1.37**	**244**	*i* P	**Pn**	**08 55 30.4**	**+0.4**
DDEM				*i* S	**Sb**	**08 55 48.6**	**+0.5**

*BUC **15** 09:15:44.3±0.5, 43.°96N×28.°96E, h10km±1km, MD2.7/2, Error ellipse: s-maj=4.2km s-min=0.9km az=100.0*
*SOF **15** 09:15:45.1, 43.°97N×28.°91E, h15km, MD2.7*
ISC 15 09:15:43.5±3.4, 43.°95N±0.°05×29.°0E±0.°2, h10km, n11, σ0°23/15, 4C-4D, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFOR	**EFORIE**	**0.31**	**296**	⇑*i*P	**Pb**	**09 15 51.2**	**+0.1**
EFOR	**EFORIE**	**0.31**	**296**	⇑P	**Pb**	**09 15 51.2**	**+0.1**
MANR	**Mangalia**	**0.34**	**248**	⇓*i*P	**Pb**	**09 15 51.4**	**-0.2**
MANR	**Mangalia**	**0.34**	**248**	⇓*i*P	**Pb**	**09 15 51.4**	**-0.2**
PSN	**Preselentsi**	**0.66**	**247**	*i* P	**Pb**	**09 15 57.7**	**+0.6**
TIRR	**Tirgusor**	**0.67**	**320**	⇓*i*P	**Pb**	**09 15 57.2**	**-0.1**
TIRR				S	**Sb**	**09 16 06.7**	**0.0**
TIRR	**Tirgusor**	**0.67**	**320**	⇓*i*P	**Pb**	**09 15 57.2**	**-0.1**
TIRR				*i* S	**Sb**	**09 16 06.7**	**0.0**
CFR	**Carcaliu**	**1.38**	**333**	⇑*i*P	**Pb**	**09 16 09.6**	**+0.1**
CFR				S	**Sg**	**09 16 28.2**	**+0.2**
CFR	**Carcaliu**	**1.38**	**333**	⇑*i*P	**Pb**	**09 16 09.6**	**+0.1**
CFR				*i* S	**Sg**	**09 16 28.2**	**+0.2**
PRD	**Provadia**	**1.39**	**238**	*i* P	**Pg**	**09 16 10.0**	**-0.2**
ROIA	**ROIAK**	**1.47**	**235**	*i* P	**Pb**	**09 16 11.0**	**+0.1**

*IDC **15** 09:38:25.0±1.0, 1.°61N×96.°85E, h0km, mb4.2/13, mb1 4.3/14, mb1mx4.1/27, mbtmp4.2/14, ML4.4/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/34, Error ellipse: s-maj=32.8km s-min=17.1km az=51.0*
*ISCJB **15** 09:38:27.6±0.7, 1.°68N±0.°10×96.°92E±0.°08, h28km, mb4.2/17, MS3.5/1, Error ellipse: s-maj=15.1km s-min=10.1km az=29.5*
*NEIC **15** 09:38:30.4±0.5, 1.°68N×96.°93E, h35km, mb4.3/4, Error ellipse: s-maj=10.4km s-min=6.9km az=211.0*
ISC 15 09:38:29.5±0.9, 1.°7N±0.°1×96.°9E±0.°1, h28km, n38, σ0°49/36, mb4.3/17, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IPM	**Ipoh**	**4.97**	**56**	*e*Pn	**Pn**	**09 39 42.6**	**+0.3**
KULM	**Kulim**	**5.18**	**46**	*e*Pn	**Pn**	**09 39 45.4**	**+0.1**
	64nm,1.0s						
KSM	**Kuching**	**13.40**	**91**	Pn	**Pn**	**09 41 38.1**	**0.0**
	7.1nm,0.7s						
CMAR	**Chiang Mai Arr**	**16.79**	**7**	Pn	**Pn**	**09 42 21.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**16.79**	**7**	Pn	**Pn**	**09 42 21.8**	**-1.0**
	0.5nm,0.3s,baz=195,slow=12,SNR=8.2						
WRA	**Warramunga Arr**	**42.54**	**122**	P	**P**	**09 46 22.4**	**-0.7**
WRA	**Warramunga Arr**	**42.54**	**122**	P	**P**	**09 46 22.4**	**-0.7**
	0.6nm,0.5s,baz=301,slow=9.2,SNR=3.0						
ASAR	**Alice Springs**	**43.92**	**127**	P	**P**	**09 46 33.8**	**-0.5**
ASAR	**Alice Springs**	**43.92**	**127**	P	**P**	**09 46 33.7**	**-0.5**
	1.4nm,0.7s,baz=302,slow=7.7,SNR=12						
JNU	**Nakatsue**	**44.65**	**42**	P	**P**	**09 46 40.3**	**+0.4**
JNU	**Nakatsue**	**44.65**	**42**	P	**P**	**09 46 40.3**	**+0.4**
	7.5nm,0.9s,baz=250,slow=4.5,SNR=5.0						
KSAR	**Wonju Array Be**	**45.59**	**35**	P	**P**	**09 46 47.4**	**+0.1**
KSRS	**Korea Array**	**45.62**	**35**	P	**P**	**09 46 47.4**	**-0.1**
	1.8nm,0.6s,baz=222,slow=8.6,SNR=7.2						
KSRS				LR	LR	10 09 42.0	
	comp=Z,53nm,18.6s,baz=85,slow=41						
EKS2	**Erkin-Say**	**45.75**	**336**	*e*P	**P**	**09 46 49.2**	**+0.6**
	2.3nm,0.7s						
SONM	**Songino Array**	**46.70**	**9**	P	**P**	**09 46 56.3**	**+0.2**
SONM	**Songino Array**	**46.70**	**9**	P	**P**	**09 46 56.3**	**+0.2**
	2.1nm,0.6s,baz=186,slow=10,SNR=5.4						
MK31	**Makanchi Array**	**46.70**	**346**	*e*P	**P**	**09 46 55.9**	**-0.1**
MKAR	**Makanchi Array**	**46.70**	**346**	P	**P**	**09 46 56.2**	**+0.3**
MKAR	**Makanchi Array**	**46.70**	**346**	P	**P**	**09 46 56.2**	**+0.3**
	5.1nm,0.7s,baz=161,slow=7.7,SNR=72						
KKAR	**Karatay Array**	**47.49**	**334**	*e*P	**P**	**09 47 02.7**	**+0.5**
	1.6nm,0.6s						
KURK	**Kurchatov**	**51.25**	**345**	*e*P	**P**	**09 47 30.0**	**-0.6**
	3.8nm,0.9s						
USRK	**Ussuriysk Arra**	**52.52**	**31**	P	**P**	**09 47 40.4**	**+0.2**
	3.4nm,0.8s,baz=271,slow=3.7,SNR=8.5						
CTA	**Charters Tower**	**52.99**	**117**	P	**P**	**09 47 44.6**	**+0.4**
CTA	**Charters Tower**	**52.99**	**117**	P	**P**	**09 47 44.6**	**+0.4**
	2.1nm,0.6s,baz=290,slow=8.4,SNR=4.1						
ZAA0	**Zalesovo Array**	**53.04**	**351**	*e*P	**P**	**09 47 43.8**	**-0.1**
ZALV	**Zalesovo Beam**	**53.04**	**351**	P	**P**	**09 47 44.2**	**+0.3**
ZALV	**Zalesovo Beam**	**53.04**	**351**	P	**P**	**09 47 44.2**	**+0.3**
	17nm,0.7s,baz=178,slow=6.8,SNR=64						
ABKAR	**Akbulak array**	**56.95**	**332**	*e*P	**P**	**09 48 11.9**	**-0.4**
	4.8nm,0.7s						
BRTR	**Keskin Array B**	**68.57**	**312**	P	**P**	**09 49 29.6**	**-0.6**
BRTR	**Keskin Array B**	**68.57**	**312**	P	**P**	**09 49 29.6**	**-0.6**
	0.6nm,0.6s,baz=137,slow=5.9,SNR=3.9						
FINES	**FINESS Array B**	**79.44**	**333**	P	**P**	**09 50 33.7**	**+0.7**
FINES	**FINESS Array B**	**79.44**	**333**	P	**P**	**09 50 33.7**	**+0.7**
	2.1nm,0.6s,baz=130,slow=4.3,SNR=3.4						
ARCES	**ARCESS Array B**	**81.98**	**340**	P	**P**	**09 50 46.5**	**0.0**
ARCES	**ARCESS Array B**	**81.98**	**340**	P	**P**	**09 50 46.5**	**0.0**
	1.8nm,0.8s,baz=93,slow=4.5,SNR=5.7						
GERES	**GERESS Array B**	**84.25**	**319**	P	**P**	**09 50 59.2**	**+0.3**
GERES	**GERESS Array B**	**84.25**	**319**	P	**P**	**09 50 59.2**	**+0.3**
	0.4nm,0.4s,baz=81,slow=4.5,SNR=5.6						
TXAR	**Lajitas Array**	**143.41**	**31**	PKP	PKPbc	09 58 00.6	+1.1
TXAR	**Lajitas Array**	**143.41**	**31**	PKP	PKPbc	09 58 00.6	+1.1
	0.3nm,0.7s,baz=11,slow=1.3,SNR=4.3						

*IDC **15** 09:39:21.2±1.3, 5.°47N×126.°50E, h0km, mb3.9/6, mb1 4.0/6, mb1mx3.7/23, mbtmp3.9/6, Error ellipse: s-maj=93.0km s-min=20.4km az=71.0*
ISC 15 09:39:30.3±1.0, 5.°3N±0.°2×126.°3E±0.°3, h66km, n9, σ1s24/10, mb3.9/6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KCP	**Kidapawan**	**2.11**	**326**	⇓*e*P	**Pn**	**09 40 04.8**	**+1.3**
KCP				*i* S	Sn	09 40 35.8	+7.0
CTBH	**Cotabato--PC H**	**2.82**	**314**	⇑*i*P	**Pn**	**09 40 12.1**	**-1.0**
BUKP	**Musuan**	**2.88**	**335**	*e*P	**Pn**	**09 40 12.7**	**-1.3**
BUKP				*e*S	**Sn**	**09 40 49.3**	**+1.9**
FITZ	**Fitzroy Crossi**	**23.22**	**182**	P	**P**	**09 44 32.2**	**+0.3**
	2.2nm,0.8s,baz=6.8,slow=8.1,SNR=8.3						
WRA	**Warramunga Arr**	**26.26**	**163**	P	**P**	**09 44 59.4**	**-0.3**
	1.5nm,0.4s,baz=344,slow=10,SNR=20						
ASAR	**Alice Springs**	**29.69**	**166**	P	**P**	**09 45 29.9**	**-0.3**
	0.2nm,0.5s,baz=344,slow=6.9,SNR=8.4						
STKA	**Stephens Creek**	**39.70**	**159**	P	**P**	**09 46 57.5**	**+1.2**
	3.9nm,1.1s,baz=336,slow=11,SNR=5.0						
MKAR	**Makanchi Array**	**56.06**	**325**	P	**P**	**09 49 01.8**	**-0.8**
	0.5nm,0.4s,baz=127,slow=8.0,SNR=5.9						
ARCES	**ARCESS Array B**	**88.88**	**340**	P	**P**	**09 52 16.3**	**-0.8**
	4.2nm,1.1s,baz=75,slow=5.1,SNR=6.0						

*CSEM **15** 09:50:17.8±0.2, 41.°33N×22.°70E, h10km, ML2.1/7, Error ellipse: s-maj=3.8km s-min=2.3km az=172.0*
*ISCJB **15** 09:50:18.1±0.8, 41.°33N±0.°05×22.°72E±0.°04, h8km±4km, Error ellipse: s-maj=7.7km s-min=4.6km az=176.9*
*ATH **15** 09:50:18.2, 41.°34N×22.°72E, h4km, MD3.0/5*
*SKO **15** 09:50:18.2, 41.°32N×22.°70E, h11km, M1.5, ML1.8*
*THE **15** 09:50:18.5, 41.°31N×22.°72E, h10km, ML2.1/7, Error ellipse: s-maj=0.8km s-min=0.3km az=328.0*
ISC 15 09:50:18.1±0.9, 41.°33N±0.°04×22.°72E±0.°03, h11km±7km, n27, σ0°42/50, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**267**	P	**Pg**	**09 50 20.9**	**-0.1**
VAY				S	**Sg**	**09 50 23.3**	**+0.2**
VAY	**Valandovo**	**0.11**	**267**	*i* Pg	**Pg**	**09 50 21.0**	**0.0**
VAY				*i* Sg	**Sg**	**09 50 23.3**	**+0.2**
VAY				*e*Lg	Lg	09 50 23.4	
	comp=E,309nm,0.2s						
VAY				*e*Lg	Lg	09 50 23.4	
	comp=N,836nm,0.4s						
VAY	**Valandovo**	**0.11**	**267**	P	**Pg**	**09 50 20.9**	**-0.1**
VAY				S	**Sg**	**09 50 23.3**	**+0.2**
KNT	**Kendrikon**	**0.21**	**140**	P	**Pg**	**09 50 22.9**	**+0.3**
KNT				S	**Sg**	**09 50 25.7**	**0.0**
KNT	**Kendrikon**	**0.21**	**140**	P	**Pg**	**09 50 22.9**	**+0.3**
KNT				S	**Sg**	**09 50 25.7**	**0.0**
GRG	**Griva**	**0.44**	**213**	P	**Pg**	**09 50 26.8**	**0.0**
GRG				S	**Sg**	**09 50 33.1**	**+0.5**
GRG	**Griva**	**0.44**	**213**	*e*PG	**Pg**	**09 50 26.9**	**+0.1**
GRG				*e*SG	**Sg**	**09 50 33.1**	**+0.5**
GRG	**Griva**	**0.44**	**213**	P	**Pg**	**09 50 26.8**	**0.0**
GRG				S	**Sg**	**09 50 33.1**	**+0.5**
SRS	**Serrai**	**0.69**	**107**	P	**Pg**	**09 50 31.5**	**0.0**
SRS				S	**Sb**	**09 50 41.6**	**-0.1**
SRS	**Serrai**	**0.69**	**107**	P	**Pg**	**09 50 31.5**	**0.0**
SRS				S	**Sb**	**09 50 41.6**	**-0.1**
SOH	**Sokhos**	**0.70**	**136**	P	**Pg**	**09 50 31.6**	**0.0**
SOH				S	**Sg**	**09 50 41.5**	**+0.7**
SOH	**Sokhos**	**0.70**	**136**	*e*PG	**Pg**	**09 50 31.4**	**-0.2**
SOH				*e*SG	**Sg**	**09 50 41.4**	**+0.7**
SOH	**Sokhos**	**0.70**	**136**	P	**Pg**	**09 50 31.6**	**0.0**
SOH				*e*Sg	**Sg**	**09 50 41.4**	**+0.7**
THE	**Thessaloniki**	**0.72**	**165**	P	**Pg**	**09 50 31.7**	**-0.3**
THE	**Thessaloniki**	**0.72**	**165**	P	**Pg**	**09 50 31.7**	**-0.3**
HORT	**Hortiatis**	**0.78**	**158**	P	**Pg**	**09 50 33.1**	**-0.2**
HORT				S	**Sg**	**09 50 44.2**	**+0.7**
HORT	**Hortiatis**	**0.78**	**158**	P	**Pg**	**09 50 33.1**	**-0.2**
HORT				S	**Sg**	**09 50 44.2**	**+0.7**
NVR	**Nevrokopi**	**0.86**	**88**	P	**Pb**	**09 50 34.9**	**-0.2**
NVR				S	**Sb**	**09 50 47.4**	**+0.8**
NVR	**Nevrokopi**	**0.86**	**88**	*e*PB	**Pb**	**09 50 34.9**	**-0.2**
NVR				*e*SG	**Sg**	**09 50 46.2**	**+0.2**
NVR	**Nevrokopi**	**0.86**	**88**	P	**Pb**	**09 50 34.9**	**-0.2**
NVR				*e*Sg	**Sg**	**09 50 46.2**	**+0.2**
NVR				S	**Sb**	**09 50 47.4**	**+0.8**
PLG	**Polygyros**	**1.10**	**150**	P	**Pb**	**09 50 38.4**	**-0.7**
PLG	**Polygyros**	**1.10**	**150**	*e*PB	**Pb**	**09 50 38.3**	**-0.8**
PLG				*e*SB	**Sg**	**09 50 54.2**	**+0.6**
PLG	**Polygyros**	**1.10**	**150**	P	**Pb**	**09 50 38.4**	**-0.7**
PLG				*e*Sb	**Sg**	**09 50 54.2**	**+0.6**
FNA	**Florina**	**1.15**	**242**	*e*PB	**Pb**	**09 50 40.0**	**0.0**
FNA	**Florina**	**1.15**	**242**	*e*Pb	**Pb**	**09 50 40.0**	**0.0**
OUR	**Ouranopolis**	**1.38**	**136**	P	**Pn**	**09 50 42.8**	**-0.4**
OUR				S	**Sb**	**09 51 01.9**	**+0.5**
OUR	**Ouranopolis**	**1.38**	**136**	P	**Pn**	**09 50 42.8**	**-0.4**
OUR				S	**Sb**	**09 51 01.9**	**+0.5**

*ISCJB **15** 09:56:44.0±0.3, 41.°32N±0.°01×22.°76E±0.°02, h7km±2km, mb3.6/5, Error ellipse: s-maj=2.4km s-min=1.8km az=22.6*
*IDC **15** 09:56:43.4±1.1, 41.°15N×22.°81E, h0km, mb3.7/5, mb1 3.7/9, mb1mx3.6/30, mbtmp3.6/9, ML3.3/4, Error ellipse: s-maj=19.4km s-min=15.7km az=145.0*
*SKO **15** 09:56:43.6, 41.°31N×22.°69E, h19km, M3.0, ML3.7*
*SOF **15** 09:56:44.0, 41.°31N×22.°76E, h5km, MD3.9*
*THE **15** 09:56:44.8, 41.°30N×22.°73E, h7km, ML3.8/17, Error ellipse: s-maj=0.4km s-min=0.3km az=12.0*
*ATH **15** 09:56:44.0, 41.°32N×22.°71E, h19km, MD3.6/20*
*CSEM **15** 09:56:44.4±0.1, 41.°30N×22.°74E, h5km, ML3.8/17, Error ellipse: s-maj=2.1km s-min=1.8km az=30.0*
*PDG **15** 09:56:44.3±0.7, 41.°31N×22.°77E, h14km±1km, ML3.2/8, Error ellipse: s-maj=0.9km s-min=0.8km az=90.0*
*TIR **15** 09:56:46.6±3.0, 41.°27N×22.°65E, h7km±12km, ML3.9*
ISC 15 09:56:44.8±0.8, 41.°30N±0.°02×22.°74E±0.°01, h8km±6km, n197, σ0°90/268, mb3.5/5, 16C-13D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.13**	**281**	P	**Pg**	**09 56 47.1**	**-0.5**
VAY	**Valandovo**	**0.13**	**281**	*i* Pg	**Pg**	**09 56 47.1**	**-0.5**
VAY				*i* Sg	**Sg**	**09 56 49.5**	**0.0**
VAY				*e*Lg	Lg	09 56 49.5	
	comp=E,24μm,0.7s						
VAY				*e*Lg	Lg	09 56 49.6	
	comp=N,72μm,0.5s						
VAY	**Valandovo**	**0.13**	**281**	P	**Pg**	**09 56 47.1**	**-0.5**
KNT	**Kendrikon**	**0.18**	**137**	P	**Pg**	**09 56 49.1**	**+0.6**
KNT				S	**Sg**	**09 56 52.0**	**+0.9**
KNT	**Kendrikon**	**0.18**	**137**	P	**Pg**	**09 56 49.1**	**+0.6**
KNT				S	**Sg**	**09 56 52.0**	**+0.9**
GRG	**Griva**	**0.42**	**217**	P	**Pg**	**09 56 53.0**	**0.0**
GRG				S	**Sg**	**09 56 59.2**	**+0.6**
GRG	**Griva**	**0.42**	**217**	*e*PB	**Pg**	**09 56 53.0**	**0.0**
GRG				*e*SB	**Sg**	**09 56 59.0**	**+0.4**
GRG	**Griva**	**0.42**	**217**	P	**Pg**	**09 56 53.0**	**0.0**
GRG				*e*Sb	**Sg**	**09 56 59.0**	**+0.4**
KKB	**Krupnik**	**0.63**	**25**	*i* P	**Pg**	**09 56 56.2**	**-0.7**
KKB	**Krupnik**	**0.63**	**25**	*i* P	**Pg**	**09 56 56.2**	**-0.7**
SOH	**Sokhos**	**0.67**	**135**	P	**Pg**	**09 56 57.4**	**-0.2**
SOH				S	**Sg**	**09 57 07.4**	**+1.1**
SOH	**Sokhos**	**0.67**	**135**	*e*PN	**Pg**	**09 56 57.4**	**-0.2**
SOH				*e*SN	**Sg**	**09 57 07.2**	**+0.9**
SOH	**Sokhos**	**0.67**	**135**	P	**Pg**	**09 56 57.4**	**-0.2**
SOH				*e*Sn	**Sg**	**09 57 07.2**	**+0.9**
SRS	**Serrai**	**0.67**	**105**	P	**Pg**	**09 56 57.5**	**-0.2**
SRS				S	**Sg**	**09 57 07.7**	**+1.2**
SRS	**Serrai**	**0.67**	**105**	P	**Pg**	**09 56 57.5**	**-0.2**
SRS				S	**Sg**	**09 57 07.7**	**+1.2**
THE	**Thessaloniki**	**0.69**	**165**	P	**Pg**	**09 56 57.6**	**-0.4**
THE				S	**Sg**	**09 57 07.8**	**+0.9**
THE	**Thessaloniki**	**0.69**	**165**	P	**Pg**	**09 56 57.6**	**-0.4**
THE				S	**Sg**	**09 57 07.8**	**+0.9**
HORT	**Hortiatis**	**0.75**	**158**	P	**Pg**	**09 56 59.0**	**-0.2**
HORT				S	**Sg**	**09 57 09.9**	**+0.9**
HORT	**Hortiatis**	**0.75**	**158**	P	**Pg**	**09 56 59.0**	**-0.2**
HORT				S	**Sg**	**09 57 09.9**	**+0.9**
MMB	**Musomiste**	**0.80**	**68**	*i* P	**Pg**	**09 56 59.9**	**-0.3**
MMB	**Musomiste**	**0.80**	**68**	*i* P	**Pg**	**09 56 59.9**	**-0.3**
NVR	**Nevrokopi**	**0.85**	**86**	P	**Pg**	**09 57 00.8**	**-0.3**
NVR				S	**Sg**	**09 57 13.2**	**+1.0**
NVR	**Nevrokopi**	**0.85**	**86**	*e*PN	**Pg**	**09 57 00.8**	**-0.3**
NVR				*e*SN	**Sg**	**09 57 12.7**	**+0.5**
NVR	**Nevrokopi**	**0.85**	**86**	P	**Pg**	**09 57 00.8**	**-0.3**
NVR				*e*Sn	**Sg**	**09 57 12.7**	**+0.5**
NVR				S	**Sg**	**09 57 13.2**	**+1.0**
PLG	**Polygyros**	**1.07**	**149**	P	**Pg**	**09 57 04.8**	**-0.5**
PLG				S	**Sn**	**09 57 20.8**	**-0.3**
PLG	**Polygyros**	**1.07**	**149**	*e*PN	**Pg**	**09 57 04.7**	**-0.5**
PLG				*e*SN	**Sg**	**09 57 19.7**	**+0.5**
PLG	**Polygyros**	**1.07**	**149**	P	**Pg**	**09 57 04.8**	**-0.5**
PLG				*e*Sn	**Sg**	**09 57 19.7**	**+0.5**
PLG				S	**Sn**	**09 57 20.8**	**-0.3**
BIA	**Bitola**	**1.10**	**256**	P	**Pg**	**09 57 05.3**	**-0.6**
BIA	**Bitola**	**1.10**	**256**	*e*Pg	**Pg**	**09 57 04.5**	**-1.4**
BIA				*e*Sg	**Sg**	**09 57 19.9**	**-0.3**
BIA	**Bitola**	**1.10**	**256**	P	**Pg**	**09 57 05.3**	**-0.6**
FNA	**Florina**	**1.15**	**244**	P	**Pb**	**09 57 06.2**	**-0.7**
FNA				S	**Sb**	**09 57 22.6**	**+0.6**
FNA	**Florina**	**1.15**	**244**	*e*PN	**Pb**	**09 57 05.8**	**-1.1**
FNA	**Florina**	**1.15**	**244**	*e*Pn	**Pb**	**09 57 05.8**	**-1.1**
FNA	**Florina**	**1.15**	**244**	P	**Pb**	**09 57 06.2**	**-0.7**
FNA				S	**Sb**	**09 57 22.6**	**+0.6**
SKO	**Skopje**	**1.18**	**305**	P	**Pb**	**09 57 05.9**	**-1.6**
SKO	**Skopje**	**1.18**	**305**	*e*Pg	**Pb**	**09 57 06.2**	**-1.2**
SKO				*e*Sg	**Sb**	**09 57 22.6**	**-0.3**
SKO				*e*Lg	Lg	09 57 23.3	
	comp=Z,620nm,1.0s						
SKO				*e*Lg	Lg	09 57 23.4	
	comp=N,565nm,0.7s						
SKO	**Skopje**	**1.18**	**305**	P	**Pb**	**09 57 05.9**	**-1.6**
LIT	**Litokhoron**	**1.21**	**189**	P	**Pb**	**09 57 07.3**	**-0.6**
LIT				S	**Sn**	**09 57 24.7**	**+0.1**
LIT	**Litokhoron**	**1.21**	**189**	*e*PN	**Pb**	**09 57 06.8**	**-1.1**
LIT	**Litokhoron**	**1.21**	**189**	*e*Pn	**Pb**	**09 57 06.8**	**-1.1**
LIT	**Litokhoron**	**1.21**	**189**	P	**Pb**	**09 57 07.3**	**-0.6**
LIT				S	**Sn**	**09 57 24.7**	**+0.1**
KZN	**Kozani**	**1.23**	**217**	P	**Pn**	**09 57 07.6**	**-0.7**
KZN				S	**Sn**	**09 57 25.3**	**+0.1**
KZN	**Kozani**	**1.23**	**217**	*e*PN	**Pn**	**09 57 07.7**	**-0.6**
KZN				*e*SN	**Sn**	**09 57 25.3**	**+0.1**
KZN	**Kozani**	**1.23**	**217**	P	**Pn**	**09 57 07.6**	**-0.7**
KZN				S	**Sn**	**09 57 25.3**	**+0.1**
OUR	**Ouranopolis**	**1.35**	**135**	P	**Pn**	**09 57 09.5**	**-0.4**
OUR				S	**Sn**	**09 57 28.2**	**+0.2**
OUR	**Ouranopolis**	**1.35**	**135**	P	**Pn**	**09 57 09.5**	**-0.4**
OUR				S	**Sn**	**09 57 28.2**	**+0.2**
**RZ

IVA				*e*Sn	**Sn**	09 58 01.2	+1.3	
ENEZ	**Enez**	**2.65**	**101**	*e*P	**Pn**	09 57 29.1	+1.4	
LKR	**Lokris**	**2.65**	**176**	*e*PN	**Pn**	09 57 27.9	+0.1	
LKR	**Lokris**	**2.65**	**176**	*e*PN	**Pn**	09 57 27.9	+0.1	
MRKA	**Markates**	**2.67**	**166**	P	**Pn**	09 57 27.6	-0.5	
MRKA	**Markates**	**2.67**	**166**	P	**Pn**	09 57 27.6	-0.5	
ULC	**Ulcinj**	**2.70**	**285**	ǁ *i* Pn	**Pn**	09 57 29.8	+1.3	
ULC				*e*Sn	**Sn**	09 58 03.1	+1.7	
ULC	**Ulcinj**	**2.70**	**285**	ǁ *i* Pn	**Pn**	09 57 29.8	+1.3	
ULC				*e*Sn	**Sn**	09 58 03.1	+1.7	
PVL	**Pavlikeni**	**2.72**	**44**	*i* P	**Pn**	09 57 26.7	-2.0	
PVL	**Pavlikeni**	**2.72**	**44**	*i* P	**Pn**	09 57 26.7	-2.0	
PDG	**Podgorica**	**2.83**	**295**	ǁ *i* Pn	**Pn**	09 57 31.5	+1.2	
PDG				*e*Sn	**Sn**	09 58 06.5	+1.9	
TTG	**Podgorica**	**2.83**	**295**	ǁ *i* Pn	**Pn**	09 57 31.5	+1.2	
TTG				*e*Sn	**Sn**	09 58 06.5	+1.9	
ERIK	**Erikli-Kesan**	**2.93**	**101**	*e*P	**Pn**	09 57 29.9	-1.7	
KALE	**Kalithea**	**2.94**	**189**	P	**Pn**	09 57 31.5	-0.3	
KALE	**Kalithea**	**2.94**	**189**	*e*PN	**Pn**	09 57 32.0	+0.2	
KALE	**Kalithea**	**2.94**	**189**	P	**Pn**	09 57 31.5	-0.3	
KALE	**Kalithea**	**2.94**	**189**	*e*Pn	**Pn**	09 57 32.0	+0.2	
LKD2	**Lefkada island**	**2.97**	**213**	*e*PN	**Pn**	09 57 33.3	+1.1	
LKD2	**Lefkada island**	**2.97**	**213**	*e*Pn	**Pn**	09 57 33.3	+1.1	
TRIZ	**Trizonia**	**2.97**	**190**	P	**Pn**	09 57 32.3	+0.1	
TRIZ	**Trizonia**	**2.97**	**190**	*e*PN	**Pn**	09 57 32.3	+0.1	
TRIZ	**Trizonia**	**2.97**	**190**	P	**Pn**	09 57 32.3	+0.1	
GELI	**Tayfur-Gelibol**	**2.98**	**106**	*e*P	**Pn**	09 57 33.3	+1.1	
BUM	**Brajici-Budva**	**3.04**	**291**	ǁ *i* Pn	**Pn**	09 57 35.9	+2.7	
BUM				*e*Sn	**Sn**	09 58 11.4	+1.5	
BUM	**Brajici-Budva**	**3.04**	**291**	ǁ *i* Pn	**Pn**	09 57 35.9	+2.7	
BUM				*e*Sn	**Sn**	09 58 11.4	+1.5	
EDIB	**Edirne**	**3.06**	**78**	*e*P	**Pn**	09 57 32.9	-0.5	
SZH	**Strazhica**	**3.08**	**49**	*i* P	**Pn**	09 57 33.9	+0.1	
SZH	**Strazhica**	**3.08**	**49**	*i* P	**Pn**	09 57 33.9	+0.1	
LAKA	**Lakka**	**3.11**	**191**	*e*PN	**Pn**	09 57 34.3	+0.2	
LAKA	**Lakka**	**3.11**	**191**	*e*Pn	**Pn**	09 57 34.3	+0.2	
SIGR	**SIGRI**	**3.17**	**130**	P	**Pn**	09 57 35.0	+0.1	
SIGR	**SIGRI**	**3.17**	**130**	P	**Pn**	09 57 35.0	+0.1	
NKY	**Niksic**	**3.17**	**300**	ǁ *i* Pn	**Pn**	09 57 34.5	-0.6	
NKY				*e*Sn	**Sn**	09 58 13.8	+0.7	
NKY	**Niksic**	**3.17**	**300**	ǁ *i* Pn	**Pn**	09 57 34.5	-0.6	
NKY				*e*Sn	**Sn**	09 58 13.8	+0.7	
LPK	**Lapseki**	**3.19**	**105**	*e*P	**Pn**	09 57 37.2	+2.0	
KLV	**Kalavryta, Ach**	**3.28**	**188**	*e*PN	**Pn**	09 57 36.8	+0.3	
KLV	**Kalavryta, Ach**	**3.28**	**188**	*e*Pn	**Pn**	09 57 36.8	+0.3	
HCY	**Herceg Novi**	**3.37**	**291**	ǁ *i* Pn	**Pn**	09 57 38.9	+1.2	
HCY				*e*Sn	**Sn**	09 58 19.5	+1.7	
HCY	**Herceg Novi**	**3.37**	**291**	ǁ *i* Pn	**Pn**	09 57 38.9	+1.2	
HCY				*e*Sn	**Sn**	09 58 19.5	+1.7	
PRK	**Paraskevi**	**3.39**	**126**	*e*PN	**Pn**	09 57 39.4	+1.4	
PRK	**Paraskevi**	**3.39**	**126**	*e*Pn	**Pn**	09 57 39.4	+1.4	
RKY	**Sarkoy-Tekirda**	**3.42**	**99**	*e*P	**Pn**	09 57 38.3	-0.1	
UPM	**Unac-Piva**	**3.42**	**305**	ǁ *i* Pn	**Pn**	09 57 39.4	+0.8	
UPM				*e*Sn	**Sn**	09 58 19.8	+0.4	
UPM	**Unac-Piva**	**3.42**	**305**	ǁ *i* Pn	**Pn**	09 57 39.4	+0.8	
UPM				*e*Sn	**Sn**	09 58 19.8	+0.4	
DIVS	**Divibare**	**3.45**	**325**	P	**Pn**	09 57 38.1	-0.8	
DIVS	**Divibare**	**3.45**	**325**	P	**Pn**	09 57 38.1	-0.8	
MFT	**Murefte**	**3.48**	**97**	*e*P	**Pn**	09 57 40.3	+1.1	
BRY	**Bratogost**	**3.51**	**299**	ǁ *i* Pn	**Pn**	09 57 40.2	+0.5	
BRY				*e*Sn	**Sn**	09 58 22.8	+1.3	
BRY	**Bratogost**	**3.51**	**299**	ǁ *i* Pn	**Pn**	09 57 40.2	+0.5	
BRY				*e*Sn	**Sn**	09 58 22.8	+1.3	
KRBG	**Karabiga-Canak**	**3.58**	**103**	*e*P	**Pn**	09 57 40.3	-0.3	
HUMR	**Humele**	**3.63**	**26**	S	**Sg**	09 58 41.7	+0.5	
CHOS	**Chios island**	**3.87**	**138**	P	**Pn**	09 57 45.0	+0.4	
CHOS	**Chios island**	**3.87**	**138**	*e*PN	**Pn**	09 57 45.0	+0.4	
CHOS	**Chios island**	**3.87**	**138**	P	**Pn**	09 57 45.0	+0.4	
BNT	**Bandirma**	**4.04**	**102**	*e*P	**Pn**	09 57 46.3	-0.7	
GZR	**Gura Zlata**	**4.09**	**0**	ǁ *i* P	**Pn**	09 57 49.8	+2.1	
LOT	**Lotru**	**4.22**	**10**	ǁ *i* P	**Pn**	09 57 48.5	-0.9	
CTKS	**Kestanelik-??a**	**4.35**	**89**	*e*P	**Pb**	09 57 58.6	-2.8	
BZS	**Buzias**	**4.39**	**350**	ǁ *i* P	**Pn**	09 57 53.5	+1.7	
ARMT	**Armutlu**	**4.70**	**97**	*e*P	**Pn**	09 57 55.6	-0.4	
ISR	**Istrita**	**4.73**	**35**	ǁ *i* P	**Pn**	09 57 57.7	+1.3	
KLYT	**Kilyos**	**4.75**	**88**	*e*P	**Pn**	09 57 56.6	-0.1	
ISK	**Istanbul-Kandi**	**4.78**	**91**	*e*P	**Pn**	09 57 56.1	-0.9	
DST	**Dursunbey**	**4.80**	**109**	*e*P	**Pn**	09 57 58.6	+1.3	
MLR	**Muntele Rosu**	**4.80**	**28**	Pn	**Pn**	09 58 00.2	+2.8	
	comp=N,0.6nm,0.3s,baz=215,slow=6.5,SNR=23							
MLR				Lg	Lg	09 59 19.2		
	comp=N,0.6nm,0.3s,baz=282,slow=21,SNR=7.5							
BUY	**Buyukada**	**4.84**	**93**	*e*P	**Pn**	09 57 57.8	-0.1	
HRT	**Hereke**	**5.26**	**93**	*e*P	**Pn**	09 58 03.2	-0.6	
PLOR	**Plostina**	**5.37**	**31**	ǁ *i* P	**Pn**	09 58 06.6	+1.4	
VRI	**Vrincioaia**	**5.41**	**31**	ǁ *i* P	**Pn**	09 58 06.8	+1.1	
TVSB	**Tavsanli**	**5.46**	**108**	*e*P	**Pn**	09 58 07.3	+0.8	
DRGR		**5.49**	**360**	ǁ *i* P	**Pn**	09 58 07.8	+0.9	
CFR	**Carcaliu**	**5.53**	**44**	ǁ *i* P	**Pn**	09 58 07.3	-0.1	
PKSM	**Moragy**	**5.74**	**330**	ǁ *i* P	**Pn**	09 58 09.9	-0.3	
GULT	**Gulveren**	**5.96**	**96**	*e*P	**Pn**	09 58 13.2	-0.2	
OBKA	**Obir**	**7.88**	**314**	ǁ *i* Pn	**Pn**	09 58 39.1	-0.5	
OBKA	**Obir**	**7.88**	**314**	Pn	**Pn**	09 58 39.1	-0.5	
BRTR	**Keskin Array B**	**8.46**	**97**	Pn	**Pn**	09 58 47.8	+0.1	
	comp=N,0.1nm,0.3s,baz=259,slow=13,SNR=4.4							
GERES	**GERESS Array B**	**9.88**	**323**	Pn	**Pn**	**09 59 09.9**	**+2.7**	
	comp=N,0.2nm,0.3s,baz=153,slow=15,SNR=5.6							
FETA	**Feichten**	**10.35**	**308**	ǁ *i* Pn	**Pn**	**09 59 13.4**	**-0.2**	
FETA	**Feichten**	**10.35**	**308**	Pn	**Pn**	**09 59 13.4**	**-0.2**	
DAVOX	**Davos/Dischmat**	**10.75**	**305**	Pn	Pn	09 59 22.4	+3.3	
	comp=N,0.3nm,0.3s,baz=140,slow=7.9,SNR=2.8							
EKA	**Eskdalemuir Ar**	**22.05**	**318**	P	**P**	**10 01 41.9**	**+2.3**	
	comp=N,1.8nm,0.8s,baz=112,slow=11,SNR=6.7							
TORD	**Torodi Ar. Bea**	**33.52**	**219**	P	**P**	**10 03 24.3**	**-0.7**	
	comp=N,2.2nm,0.7s,baz=29,slow=9.2,SNR=14							
MKAR	**Makanchi Array**	**42.27**	**62**	P	**P**	**10 04 38.4**	**-0.2**	
	comp=N,0.7nm,0.7s,baz=274,slow=7.2,SNR=9.7							
ZALV	**Zalesovo Beam**	**42.37**	**51**	P	**P**	**10 04 39.0**	**-0.2**	
	comp=N,1.8nm,0.7s,baz=294,slow=9.3,SNR=4.5							
YKA	**Yellowknife Ar**	**71.03**	**341**	P	**P**	**10 08 02.1**	**-0.6**	
	comp=N,0.2nm,0.6s,baz=36,slow=5.4,SNR=5.4							

*ATH **15** 10:00:22.7, 41°.33N×22°.72E, h22km±2km, MD2.8/8*
*CSEM **15** 10:00:22.7±0.1, 41°.34N×22°.71E, h8km, ML2.7/9, Error ellipse: s-maj=3.0km s-min=2.2km az=152.0*
*SKO **15** 10:00:22.7, 41°.32N×22°.72E, h15km, M2.1, ML2.5*
*ISCJB **15** 10:00:22.8±0.6, 41°.34N±0°.03×22°.73E±0°.03, h11km±3km, Error ellipse: s-maj=5.7km s-min=4.0km az=167.7*
*SOF **15** 10:00:22.7, 41°.30N×22°.70E, h16km, MD2.9*
*THE **15** 10:00:23.5, 41°.31N×22°.72E, h7km, ML2.7/9, Error ellipse: s-maj=0.8km s-min=0.3km az=317.0*

ISC 15 10:00:22.9±0.8, 41°.34N±0°.03×22°.73E±0°.02, h11km±6km, n45, σ0°.33/74, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**263**	P	**Pg**	**10 00 25.8**	**-0.1**
VAY				S	**Sg**	**10 00 28.2**	**+0.1**
VAY	**Valandovo**	**0.12**	**263**	*i* Pg	**Pg**	**10 00 25.9**	**-0.1**
VAY				*i* Sg	**Sg**	**10 00 28.2**	**+0.1**
VAY				*e*Lg	Lg	10 00 28.3	
	comp=E,2μm,0.2s						
VAY				*e*Lg	Lg	10 00 28.3	
	comp=N,4μm,0.5s						
VAY	**Valandovo**	**0.12**	**263**	P	**Pg**	**10 00 25.8**	**-0.1**
VAY				S	**Sg**	**10 00 28.2**	**+0.1**
KNT	**Kendrikon**	**0.22**	**143**	P	**Pg**	**10 00 27.8**	**+0.3**
KNT				S	**Sg**	**10 00 30.8**	**+0.2**
KNT	**Kendrikon**	**0.22**	**143**	P	**Pg**	**10 00 27.8**	**+0.3**
KNT				S	**Sg**	**10 00 30.8**	**+0.2**
GRG	**Griva**	**0.45**	**213**	P	**Pg**	**10 00 31.8**	**0.0**
GRG				S	**Sg**	**10 00 38.0**	**+0.2**
GRG	**Griva**	**0.45**	**213**	*e*PB	**Pg**	**10 00 32.0**	**+0.2**
GRG				*e*SB	**Sg**	**10 00 38.0**	**+0.2**
GRG	**Griva**	**0.45**	**213**	P	**Pg**	**10 00 31.8**	**0.0**
GRG				S	**Sg**	**10 00 38.0**	**+0.2**
KKB	**Krupnik**	**0.59**	**27**	*i* P	**Pb**	**10 00 35.1**	**-0.2**
KKB	**Krupnik**	**0.59**	**27**	*i* P	**Pb**	**10 00 35.1**	**-0.2**
SRS	**Serrai**	**0.69**	**108**	P	**Pg**	**10 00 36.2**	**0.0**
SRS				S	**Sb**	**10 00 46.4**	**0.0**
SRS	**Serrai**	**0.69**	**108**	P	**Pg**	**10 00 36.2**	**0.0**
SRS				S	**Sb**	**10 00 46.4**	**0.0**
SOH	**Sokhos**	**0.70**	**137**	P	**Pg**	**10 00 36.4**	**-0.1**
SOH				S	**Sb**	**10 00 46.4**	**-0.3**
SOH	**Sokhos**	**0.70**	**137**	*e*PN	**Pg**	**10 00 36.4**	**-0.1**
SOH				*e*SN	**Sb**	**10 00 46.3**	**-0.4**
SOH	**Sokhos**	**0.70**	**137**	P	**Pg**	**10 00 36.4**	**-0.1**
SOH				*e*Sn	**Sb**	**10 00 46.3**	**-0.4**
THE	**Thessaloniki**	**0.72**	**166**	P	**Pg**	**10 00 36.5**	**-0.5**
THE				S	**Sg**	**10 00 46.8**	**+0.4**
THE	**Thessaloniki**	**0.72**	**166**	P	**Pg**	**10 00 36.5**	**-0.5**
THE				S	**Sg**	**10 00 46.8**	**+0.4**
HORT	**Hortiatis**	**0.79**	**159**	P	**Pg**	**10 00 38.0**	**-0.2**
HORT				S	**Sb**	**10 00 49.2**	**-0.2**
HORT	**Hortiatis**	**0.79**	**159**	P	**Pg**	**10 00 38.0**	**-0.2**
HORT				S	**Sb**	**10 00 49.2**	**-0.2**
MMB	**Musomiste**	**0.79**	**71**	*i* P	**Pg**	**10 00 38.4**	**+0.1**
MMB	**Musomiste**	**0.79**	**71**	*i* P	**Pg**	**10 00 38.4**	**+0.1**
NVR	**Nevrokopi**	**0.85**	**89**	P	**Pg**	**10 00 39.5**	**+0.1**
NVR				S	**Sb**	**10 00 51.9**	**+0.7**
NVR	**Nevrokopi**	**0.85**	**89**	*e*PN	**Pg**	**10 00 39.6**	**+0.1**
NVR				*e*SN	**Sb**	**10 00 51.2**	**0.0**
NVR	**Nevrokopi**	**0.85**	**89**	P	**Pg**	**10 00 39.5**	**+0.1**
NVR				*e*Sn	**Sb**	**10 00 51.2**	**0.0**
PLG	**Polygyros**	**1.10**	**150**	P	**Pb**	**10 00 43.6**	**-0.5**
PLG				S	**Sn**	**10 00 59.8**	**+0.2**
PLG	**Polygyros**	**1.10**	**150**	*e*PN	**Pb**	**10 00 43.5**	**-0.5**
PLG				*e*SN	**Sn**	**10 00 59.8**	**+0.2**
PLG	**Polygyros**	**1.10**	**150**	P	**Pb**	**10 00 43.6**	**-0.5**
PLG				S	**Sn**	**10 00 59.8**	**+0.2**
FNA	**Florina**	**1.16**	**242**	P	**Pb**	**10 00 44.8**	**-0.2**
FNA				S	**Sn**	**10 01 01.3**	**+0.3**
FNA	**Florina**	**1.16**	**242**	*e*PN	**Pb**	**10 00 44.8**	**-0.2**
FNA				*e*SN	**Sg**	**10 01 00.5**	**+0.1**
FNA	**Florina**	**1.16**	**242**	P	**Pb**	**10 00 44.8**	**-0.2**
FNA				*e*Sn	**Sg**	**10 01 00.5**	**+0.1**
FNA				S	**Sn**	**10 01 01.3**	**+0.3**
LIT	**Litokhoron**	**1.25**	**188**	P	**Pn**	**10 00 46.0**	**-0.3**
LIT	**Litokhoron**	**1.25**	**188**	*e*PN	**Pn**	**10 00 45.9**	**-0.3**
LIT	**Litokhoron**	**1.25**	**188**	P	**Pn**	**10 00 46.0**	**-0.3**
KZN	**Kozani**	**1.26**	**216**	*e*PN	**Pb**	**10 00 46.5**	**-0.2**
KZN	**Kozani**	**1.26**	**216**	*e*Pn	**Pb**	**10 00 46.5**	**-0.2**
OUR	**Ouranopolis**	**1.38**	**136**	P	**Pb**	**10 00 48.6**	**-0.1**
OUR				S	**Sg**	**10 01 07.3**	**0.0**
OUR	**Ouranopolis**	**1.38**	**136**	P	**Pb**	**10 00 48.6**	**-0.1**
OUR				S	**Sg**	**10 01 07.3**	**0.0**
RZN	**Rozhen**	**1.53**	**76**	*i* P	**Pn**	**10 00 49.9**	**-0.5**
RZN	**Rozhen**	**1.53**	**76**	*i* P	**Pn**	**10 00 49.9**	**-0.5**
THL	**Klokotos Trika**	**1.85**	**197**	*e*PN	**Pn**	**10 00 55.4**	**+0.9**
THL	**Klokotos Trika**	**1.85**	**197**	*e*Pn	**Pn**	**10 00 55.4**	**+0.9**
NEO	**Neokhori**	**2.06**	**169**	*e*PB	**Pn**	**10 00 57.0**	**-0.5**
NEO	**Neokhori**	**2.06**	**169**	*e*Pb	**Pn**	**10 00 57.0**	**-0.5**
AOS	**Alonnisos**	**2.34**	**157**	*e*PN	**Pn**	**10 01 02.0**	**+0.8**
AOS	**Alonnisos**	**2.34**	**157**	*e*Pn	**Pn**	**10 01 02.0**	**+0.8**

MEX 15 10:22:27.6±0.9, 17°.24N×101°.30W, h16km±10km, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.40**	**336**	*e*P	Pg	10 22 34.5	-1.3
ZIIG				*i* S	Sg	10 22 40.3	-1.0
CAIG	**El Cayaco**	**1.00**	**101**	*e*P	Pb	10 22 43.3	-3.3
CAIG				*e*S	Sb	10 22 55.0	-4.5
ARIG	**Puente Sto Nin**	**1.37**	**41**	*e*P	Pn	10 22 47.8	-4.5
ARIG				*i* S	Sn	10 23 04.3	-5.8
PLIG	**Platanillo**	**2.06**	**56**	*i* P	Pn	10 22 59.4	-2.3
PLIG				*i* S	Sn	10 23 21.7	-5.4
MMIG	**Aquila**	**2.21**	**298**	*i* P	Pn	10 23 00.2	-3.5
MMIG				*i* S	Sn	10 23 26.9	-3.9
YAIG	**Yautepec**	**2.66**	**52**	*e*P	Pn	10 23 07.6	-2.6
YAIG				*i* S	Sn	10 23 38.8	-3.5
PPM	**Popocatepetl**	**3.12**	**54**	*i* P	Pn	10 23 13.9	-3.0
PPM				*i* S	Sn	10 23 49.4	-4.9
PNIG	**Pinotepa**	**3.15**	**105**	*e*P	Pn	10 23 14.7	-1.9
PNIG				*i* S	Sn	10 23 51.3	-2.6

IDC 15 10:22:37.4±8.8, 5°.46N×95°.20E, h207km±80km, mb3.5/10, mb1 3.6/11, mb1mx3.3/29, mbtmp3.5/11, Error ellipse: s-maj=63.6km s-min=12.3km az=56.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.42**	**15**	P	Pn	10 25 40.9	+0.9
	0.9nm,0.3s,baz=211,slow=12,SNR=6.7						
AAK	**Ala-Archa**	**41.32**	**337**	P	P	10 30 03.3	+0.3
	1.1nm,0.3s,baz=180,slow=4.1,SNR=2.8						
MKAR	**Makanchi Array**	**42.66**	**347**	P	P	10 30 12.6	-1.0
	0.7nm,0.4s,baz=174,slow=7.2,SNR=9.1						
SONM	**Songino Array**	**43.29**	**11**	P	P	10 30 18.9	+0.1
	1.7nm,0.5s,baz=188,slow=8.7,SNR=2.3						
WRA	**Warramunga Arr**	**46.03**	**124**	P	P	10 30 40.6	-0.1
	1.2nm,0.6s,baz=304,slow=9.2,SNR=11						
KURBB	**Kurchatov Arra**	**47.13**	**346**	P	P	10 30 48.4	-0.3
	1.8nm,0.6s,baz=167,slow=6.9,SNR=12						
ASAR	**Alice Springs**	**47.58**	**129**	P	P	10 30 52.5	-0.2
	0.6nm,0.4s,baz=300,slow=7.8,SNR=17						
ZALV	**Zalesovo Beam**	**49.07**	**352**	P	P	10 31 03.4	-0.2
	2.2nm,0.4s,baz=184,slow=6.9,SNR=15						
BVAR	**Borovoye Array**	**51.60**	**341**	P	P	10 31 22.1	-0.4
	0.6nm,0.4s,baz=146,slow=10,SNR=4.5						
ARCES	**ARCESS Array B**	**77.88**	**340**	P	P	10 34 12.7	+0.8
	2.3nm,0.9s,baz=72,slow=4.0,SNR=4.8						
GERES	**GERESS Array B**	**80.31**	**318**	P	P	10 34 25.7	+0.1
	0.4nm,0.5s,baz=104,slow=4.1,SNR=2.6						
TXAR	**Lajitas Array**	**140.94**	**27**	PKP	PKPdf	10 41 43.1	-0.5
	0.1nm,0.6s,baz=329,slow=3.1,SNR=2.4						

*IDC **15** 10:44:33.0±0.9, 48°.18N×155°.10E, h0km, mb3.4/6, mb1 3.8/7, mb1mx3.5/26, mbtmp3.5/7, ML3.1/1, Error ellipse: s-maj=51.3km s-min=19.5km az=133.0*
*KRSC **15** 10:44:39.0±1.1, 48°.50N×155°.69E, h5km±5km, ML3.7*
*MOS **15** 10:44:41.7±2.9, 48°.63N×154°.46E, h77km, mb3.7/4, Error ellipse: s-maj=45.8km s-min=12.9km az=62.1*

ISC 15 10:44:38.2±3.6, 48°.4N±0°.1×155°.2E±0°.2, h31km±26km, n26, σ1°.91/31, mb3.5/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.37**	**14**	*e*PN	**Pn**	**10 45 15.0**	**+0.2**
SKR				*e*S	**Sn**	**10 45 41.5**	**-1.2**
SKR				pmax	pmax		
	comp=Z,60nm,0.5s						
SKR				smax	smax		
	comp=N,80nm,0.5s						
SKR				smax	smax		
	comp=E,80nm,0.5s						
SKR	**Severo-Kuril's**	**2.37**	**14**	*e*P	**Pn**	**10 45 16.4**	**+1.6**
SKR				*e*S	**Sn**	**10 45 43.3**	**+0.6**
PAU	**Pauzhetka**	**3.25**	**18**	P	**Pn**	**10 45 28.1**	**+1.2**
PAU				S	**Sn**	**10 46 03.8**	**-0.6**
MIPR	**Malaya Ipel'ka**	**4.01**	**14**	P	**Pn**	**10 45 39.1**	**+1.7**
ASAK	**Asacha**	**4.35**	**22**	*e*P	**Pn**	**10 45 44.2**	**+2.1**
MTVR	**Mutnovka**	**4.52**	**24**	*e*P	**Pn**	**10 45 45.9**	**+1.4**
MTVR				S	**Sn**	**10 46 35.3**	**-0.6**
RUS	**Russkaya**	**4.57**	**27**	*e*P	**Pn**	**10 45 45.3**	**+0.3**
RUS				S	**Sn**	**10 46 34.9**	**-2.0**
PETK	**Petropavlovsk-**	**4.98**	**18**	PN	**Pn**	**10 45 53.4**	**+2.7**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**4.98**	**18**	Pn	**Pn**	**10 45 53.4**	**+2.7**
	comp=Z,0.6nm,0.3s,baz=182,slow=15,SNR=18						
PETK				Sn	**Sb**	**10 47 02.2**	**-1.7**
	baz=207,slow=35,SNR=2.5						
PET	**Petropavlovsk**	**5.13**	**24**	*e*PN	Pb	10 46 03.6	-3.4
PET				*e*S	Sn	10 46 59.2	+8.4
PET				smax	smax		
	comp=E,27nm,0.6s						
PET				smax	smax		
	comp=N,20nm,0.8s						
UGLR	**Uglovaya**	**5.34**	**24**	P	**Pn**	**10 45 57.2**	**+1.5**
KOK	**Koryaka**	**5.37**	**23**	P	**Pn**	**10 45 58.7**	**+2.6**
AVH	**Avacha**	**5.37**	**23**	P	**Pn**	**10 45 58.2**	**+2.1**
SMAR	**Somma**	**5.38**	**24**	P	**Pn**	**10 45 58.8**	**+2.4**
KRER	**Koryakskii**	**5.41**	**23**	P	**Pn**	**10 45 58.7**	**+2.0**
SDLR	**Sedlovina**	**5.42**	**24**	P	**Pn**	**10 45 58.9**	**+2.1**
GNL	**Ganaly**	**5.58**	**17**	P	**Pn**	**10 46 01.3**	**+2.2**
SPN	**Mys Shipunski**	**5.62**	**31**	S	**Sn**	**10 46 58.4**	**-4.4**
KUR	**Kuril'sk**	**5.94**	**241**	*i* PN	**Pn**	**10 46 04.8**	**+1.0**
KUR				*e*S	**Sn**	**10 47 10.9**	**+0.2**
KUR				pmax	pmax		
	comp=N,17nm,0.1s						
KUR				pmax	pmax		
	comp=E,17nm,0.1s						
KUR				pmax	pmax		
	comp=Z,21nm,0.7s						
KUR				smax	smax		
	comp=N,14nm,0.1s						
KUR				smax	smax		
	comp=E,25nm,0.1s						
ASAJ	**Asahikawa**	**9.71**	**249**	Pn	**Pn**	**10 46 55.5**	**-0.1**
	comp=E,0.3nm,0.3s,baz=63,slow=12,SNR=3.1						
KSRS	**Korea Array**	**22.64**	**251**	P	**P**	**10 49 34.1**	**-2.3**
	comp=E,0.7nm,0.6s,baz=45,slow=10,SNR=3.6						
YKA	**Yellowknife Ar**	**48.76**	**38**	P	**P**	**10 53 20.3**	**+0.8**
	comp=E,0.1nm,0.4s,baz=296,slow=7.1,SNR=3.1						
PDAR	**Pinedale Array**	**62.65**	**56**	P	**P**	**10 55 00.3**	**+0.6**
	comp=E,0.9nm,1.1s,baz=308,slow=4.4,SNR=3.0						
WRA	**Warramunga Arr**	**70.54**	**201**	P	P	10 55 48.3	-1.6
	comp=E,0.7nm,0.9s,baz=12,slow=6.8,SNR=4.8						
ASAR	**Alice Springs**	**74.23**	**200**	P	**P**	**10 56 10.9**	**-0.9**
	comp=E,0.3nm,0.9s,baz=14,slow=5.3,SNR=4.1						
TXAR	**Lajitas Array**	**75.47**	**62**	P	**P**	**10 56 19.9**	**+0.7**
	comp=E,0.5nm,0.7s,baz=323,slow=3.6,SNR=6.8						

*CSEM **15** 10:47:20.4, 40°.59N×21°.51E, h23km, MD3.0, After ATH*
*SKO **15** 10:47:21.9, 40°.60N×21°.51E, h9km*

ATH 15 10:47:20.4, 40°.59N×21°.51E, h23km±1km, MD3.0/5, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FNA	**Florina**	**0.22**	**332**	*e*PB	Pb	10 47 26.3	+0.1
FNA				*e*SB	Sb	10 47 30.3	+0.1
FNA	**Florina**	**0.22**	**332**	*e*Pb	Pb	10 47 26.3	+0.1
FNA				*e*Sb	Sb	10 47 30.3	+0.1
KZN	**Kozani**	**0.35**	**145**	*e*PB	Pb	10 47 28.1	0.0
KZN				*e*SB	Sb	10 47 34.1	+0.7
KZN	**Kozani**	**0.35**	**145**	*e*Pb	Pb	10 47 28.1	0.0
KZN				*e*Sb	Sb	10 47 34.1	+0.7
BIA	**Bitola**	**0.45**	**342**	*i* Pg	Pb	10 47 29.6	-0.2
BIA				*e*Sg	Sb	10 47 37.3	+1.0
BIA				*e*Lg	Lg	10 47 37.7	
	comp=N,32nm,0.2s						
BIA				*e*Lg	Lg	10 47 37.7	
	comp=E,78nm,0.2s						
GRG	**Griva**	**0.77**	**61**	*e*PN	Pb	10 47 35.5	+0.3
GRG				*e*SN	Sn	10 47 46.4	-0.4
GRG	**Griva**	**0.77**	**61**	*e*Pn	Pb	10 47 35.5	+0.3
GRG				*e*Sn	Sn	10 47 46.4	-0.4
LIT	**Litokhoron**	**0.89**	**123**	*e*PN	Pb	10 47 50.2	+0.3
LIT				*e*SN	Sn	10 47 50.2	+0.3
LIT	**Litokhoron**	**0.89**	**

*ISCJB **15** 11:24:57.3±0.9, 41°.32N±0°.10×22°.74E±0°.08, h14km±9km, Error ellipse: s-maj=17.3km s-min=7.3km az=157.3*
*SKO **15** 11:24:58.0, 41°.32N×22°.70E, h15km, M2.0, ML2.3*
*ATH **15** 11:24:58.1, 41°.32N×22°.70E, h17km±7km, MD2.7/6*
*CSEM **15** 11:24:58.1, 41°.32N×22°.70E, h17km, MD2.7, After ATH*

ISC 15 11:24:58.0±1.1, 41°.34N±0°.05×22°.70E±0°.03, h15km±8km, n14, σ0942/24, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**260**	*i*	Pg	**Pg**	**11 25 01.1**		**-0.2**
VAY				*i*	Sg	**Sg**	**11 25 03.5**		**0.0**
VAY	comp=E,1μm,0.2s			*e*	Lg	Lg	11 25 03.5		
VAY	comp=N,3μm,0.5s			*e*	Lg	Lg	11 25 03.5		
GRG	**Griva**	**0.44**	**211**	*e*	PB	**Pg**	**11 25 06.9**		**0.0**
GRG				*e*	SB	**Sg**	**11 25 13.1**		**+0.2**
GRG	**Griva**	**0.44**	**211**	*e*	Pb	**Pg**	**11 25 06.9**		**0.0**
GRG				*e*	Sb	**Sg**	**11 25 13.1**		**+0.2**
SOH	**Sokhos**	**0.71**	**136**	*e*	PN	**Pg**	**11 25 11.7**		**-0.2**
SOH				*e*	SN	**Sg**	**11 25 21.6**		**+0.2**
SOH	**Sokhos**	**0.71**	**136**	*e*	Pn	**Pg**	**11 25 11.7**		**-0.2**
SOH				*e*	Sn	**Sg**	**11 25 21.6**		**+0.2**
NVR	**Nevrokopi**	**0.88**	**89**	*e*	PN	**Pb**	**11 25 14.8**		**-0.1**
NVR				*e*	SN	**Sg**	**11 25 27.0**		**+0.5**
NVR	**Nevrokopi**	**0.88**	**89**	*e*	Pn	**Pb**	**11 25 14.8**		**-0.1**
NVR				*e*	Sn	**Sg**	**11 25 27.0**		**+0.5**
BIA	**Bitola**	**1.09**	**253**	*e*	Pg	**Pg**	**11 25 19.0**		**0.0**
BIA				*e*	Sg	**Sg**	**11 25 34.0**		**+0.9**
PLG	**Polygyros**	**1.12**	**149**	*e*	PN	**Pb**	**11 25 18.7**		**-0.3**
PLG				*e*	SB	**Sg**	**11 25 35.0**		**+0.9**
PLG	**Polygyros**	**1.12**	**149**	*e*	Pn	**Pb**	**11 25 18.7**		**-0.3**
PLG				*e*	Sb	**Sg**	**11 25 35.0**		**+0.9**
FNA	**Florina**	**1.14**	**241**	*e*	PN	**Pg**	**11 25 20.0**		**-0.1**
FNA	**Florina**	**1.14**	**241**	*e*	Pn	**Pg**	**11 25 20.0**		**-0.1**
LIT	**Litokhoron**	**1.25**	**187**	*e*	PB	**Pn**	**11 25 20.6**		**-0.2**
LIT	**Litokhoron**	**1.25**	**187**	*e*	Pb	**Pn**	**11 25 20.6**		**-0.2**

*IDC **15** 11:26:07.3±0.6, 58°.65S×25°.13W, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.0/21, mbtmp4.0/11, ML3.8/1, MS2.5/1, Ms1 2.5/1, ms1mx2.5/22, Error ellipse: s-maj=21.2km s-min=17.6km az=49.0*
*ISCJB **15** 11:26:09.6±0.6, 58°.75S±0°.1×25°.1W±0°.1, h28km, n23, σ0972/24, mb4.2/10, South Sandwich Islands region*

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.92**	**156**	*e*	Pn	**Pn**	**11 29 26.0**		**-0.4**
SNAA	**Sanae**	**15.87**	**154**	*e*	Pn	**Pn**	**11 29 51.8**		**-0.7**
SNAA	**Sanae**	**15.87**	**154**	*e*	Sn	Sn	11 32 33.6		-14
SNAA	**Sanae**	**15.87**	**154**		Pn	**Pn**	**11 29 51.1**		**-1.4**
SNAA	0.4nm,0.3s,baz=323,slow=15,SNR=77				LR	LR	11 33 35.3		
USHA	**Ushuaia**	**23.74**	**260**		P	**P**	**11 31 21.4**		**+0.6**
QSPA	**South Pole Qui**	**31.56**	**180**		P	**P**	**11 32 31.2**		**+0.2**
QSPA	7.0nm,0.8s,baz=131,slow=11,SNR=3.3 2.8nm,0.7s,baz=213,slow=4.3,SNR=10				PcP	**PcP**	**11 35 22.2**		**-0.5**
PLCA	**Paso Flores**	**33.62**	**282**		P	**P**	**11 32 49.0**		**-0.2**
CPUP	**Villa Florida**	**39.40**	**311**		P	**P**	**11 33 38.1**		**-0.3**
CFAA	**Coronel Fontan**	**39.65**	**294**		P	**P**	**11 33 40.1**		**-0.5**
VNDA	**Vanda**	**43.98**	**182**		P	**P**	**11 34 16.7**		**+1.4**
VNDA	1.9nm,0.9s,baz=304,slow=4.6,SNR=3.3 2.6nm,0.7s,baz=188,slow=6.1,SNR=17				PcP	**PcP**	**11 36 01.3**		**+0.8**
BOSA	**Boshof**	**45.63**	**71**		P	**P**	**11 34 29.3**		**0.0**
LPAZ	**La Paz**	**52.81**	**305**		P	**P**	**11 35 24.4**		**-0.4**
TORD	**Torodi Ar. Bea**	**74.85**	**27**		P	**P**	**11 37 50.2**		**+1.2**
ASAR	**Alice Springs**	**96.13**	**161**		P	**P**	**11 39 35.5**		**-0.9**
CMAR	**Chiang Mai Arr**	**123.09**	**110**		PKP	**PKPdf**	**11 45 05.3**		**+0.4**
NVAR	**Mina Array Bea**	**123.42**	**290**		PKP	**PKPdf**	**11 45 06.1**		**+0.8**
YBH	**Yreka Blue Hor**	**128.12**	**289**		PKP	**PKPdf**	**11 45 14.4**		**+0.4**
ARCES	**ARCESS Array B**	**132.98**	**22**		PKP	**PKPdf**	**11 45 21.1**		**-1.1**
KURBB	**Kurchatov Arra**	**137.38**	**66**		PKP	**PKPdf**	**11 45 30.4**		**-0.5**
YKA	**Yellowknife Ar**	**138.86**	**315**		PKhKP	PKPpre	11 45 23.2		
YKA	0.1nm,0.5s,baz=123,slow=3.2,SNR=6.3 0.8nm,0.5s,baz=128,slow=2.1,SNR=29				PKP	**PKPdf**	**11 45 33.4**		**+0.1**
INK	**Inuvik**	**148.54**	**317**		PKPbc	**PKPbc**	**11 45 53.4**		**-0.3**
ILAR	**Eielson Array**	**152.67**	**307**		PKPbc	**PKPbc**	**11 46 03.6**		**0.0**
KDAK	**Kodiak Island**	**152.91**	**291**		PKPbc	**PKPbc**	**11 46 04.4**		**+0.1**
	11nm,0.7s,baz=74,slow=2.2,SNR=19 5.2nm,0.8s,baz=147,slow=2.9,SNR=56 5.2nm,0.7s,baz=189,slow=4.3,SNR=6.4								

IDC 15 11:28:00.7±2.4, 18°.73S×178°.00W, h419km±28km, mb3.4/6, mb1 3.5/8, mb1mx3.2/22, mbtmp3.4/8, Error ellipse: s-maj=36.7km s-min=17.1km az=162.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.66**	**52**		P	P	11 29 51.3		-1.2
DZM	**Mont Dzumac**	**14.95**	**255**		P	P	11 31 13.9		+1.6
STKA	**Stephens Creek**	**38.58**	**242**		P	P	11 34 46.6		+0.8
WRA	**Warramunga Arr**	**44.87**	**260**		P	P	11 35 35.3		-0.8
WRA	2.4nm,0.4s,baz=86,slow=8.9,SNR=17 1.0nm,0.5s,baz=98,slow=6.6,SNR=28 0.3nm,0.6s,baz=92,slow=3.5,SNR=3.3				PcP	PcP	11 37 08.5		-1.0
ASAR	**Alice Springs**	**44.94**	**255**		P	P	11 35 36.5		-0.2
ASAR	9.2nm,0.5s,baz=90,slow=8.6,SNR=332 0.6nm,0.7s,baz=104,slow=4.0,SNR=4.7				PcP	PcP	11 37 09.0		-0.7
FITZ	**Fitzroy Crossi**	**53.28**	**261**		P	P	11 36 38.8		-0.1
QSPA	**South Pole Qui**	**71.33**	**180**		P	P	11 38 36.0		-0.3
TXAR	**Lajitas Array**	**86.11**	**57**		P	P	11 39 57.7		+1.4
	3.0nm,0.9s,baz=83,slow=8.1,SNR=5.5 1.0nm,0.6s,baz=29,slow=3.5,SNR=7.0 0.2nm,0.7s,baz=198,slow=5.7,SNR=3.1								

IDC 15 11:33:41.3±281.0, 48°.49N×152°.90E, h0km, Error ellipse: s-maj=84.6km s-min=52.4km az=53.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
I44RU	**PETROPAVLOVSK-**	**5.54**	**32**	*i*				12 09 20.0	
	baz=214,slow=313,SNR=4.8								
I45RU	**USSURIYSK INFR**	**15.06**	**261**	*i*				12 57 00.0	
	baz=65,slow=320,SNR=4.3								
I30JP	**ISUMI INFRASON**	**16.14**	**220**	*i*				13 05 40.0	
	baz=32,slow=318,SNR=2.6								
I46RU	**ZALESOVO INFRA**	**41.50**	**304**	*i*				15 54 00.0	
	baz=68,slow=324,SNR=1.8								

*IDC **15** 11:36:09.8±1.1, 5°.33N×126°.15E, h0km, mb3.9/10, mb1 4.1/10, mb1mx3.8/26, mbtmp4.0/10, Error ellipse: s-maj=73.9km s-min=15.5km az=72.0*
*MAN **15** 11:36:13, 5°.09N×126°.66E, h33km, mb5.0, ML3.9, MS4.0*

ISC 15 11:36:17.8±0.8, 5°.34N±0°.09×126°.7E±0°.2, h66km, n15, σ1962/17, mb4.0/10, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.67**	**343**	*e*	P	**Pn**	**11 36 44.5**		**-0.5**
MATI				*e*	S	**Sn**	**11 37 07.1**		**+1.6**
DAV	**Davao City (W)**	**2.07**	**326**		Lg	Lg	11 37 15.1		
	49nm,0.3s,baz=252,slow=19,SNR=4.5								
BUKP	**Musuan**	**3.02**	**327**	*e*	P	**Pn**	**11 37 02.6**		**-0.8**
BUKP				*e*	S	**Sn**	**11 37 40.4**		**+1.8**
CTBH	**Cotabato--PC H**	**3.10**	**307**	*i*	P	**Pn**	**11 37 02.4**		**-2.0**
PAGZ	**Pagadian**	**4.16**	**307**	*e*	P	**Pn**	**11 37 21.7**		**+2.8**
FITZ	**Fitzroy Crossi**	**23.31**	**183**		P	**P**	**11 41 19.5**		**-0.8**
	8.0nm,0.6s,baz=16,slow=11,SNR=10								
WRA	**Warramunga Arr**	**26.21**	**164**		P	**P**	**11 41 48.8**		**+2.1**
	1.0nm,0.6s,baz=342,slow=10,SNR=3.2								
ASAR	**Alice Springs**	**29.66**	**167**		P	**P**	**11 42 18.1**		**+0.7**
	0.8nm,0.8s,baz=339,slow=7.2,SNR=4.2								
ASAR	0.2nm,0.5s,baz=353,slow=2.2,SNR=4.7				PcP	**PcP**	**11 45 21.9**		**+1.3**
NWAO	**Narrogin (SRO)**	**39.11**	**193**		P	**P**	**11 43 38.5**		**-0.3**
	3.4nm,0.5s,baz=37,slow=10,SNR=3.8								
STKA	**Stephens Creek**	**39.62**	**160**		P	**P**	**11 43 45.0**		**+1.8**
	2.1nm,0.8s,baz=339,slow=13,SNR=3.5								
MKAR	**Makanchi Array**	**56.25**	**325**		P	**P**	**11 45 50.1**		**-1.4**
	0.3nm,0.4s,baz=118,slow=7.4,SNR=6.2								
KURBB	**Kurchatov Arra**	**60.40**	**327**		P	**P**	**11 46 18.9**		**-1.4**
	0.4nm,0.4s,baz=127,slow=6.6,SNR=7.1								
BVAR	**Borovoye Array**	**65.99**	**327**		P	**P**	**11 46 56.4**		**-0.9**
	0.5nm,0.4s,baz=147,slow=8.6,SNR=3.1								
MAW	**Mawson**	**85.25**	**200**		P	**P**	**11 48 45.3**		**-1.6**
	1.0nm,0.6s,baz=60,slow=4.5,SNR=6.7								
ARCES	**ARCESS Array B**	**88.95**	**340**		P	**P**	**11 49 04.5**		**-0.4**
	2.3nm,0.8s,baz=66,slow=7.0,SNR=5.5								

IDC 15 11:36:37.9±7.6, 4.78S×143.99E, h116km±44km, mb3.6/4, mb1 3.8/6, mb1mx3.4/18, mbtmp3.6/6, Error ellipse: s-maj=77.2km s-min=29.0km az=13.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.57**	**146**		P	P	Pn	11 37 59.1	+0.6
	2.6nm,0.3s,baz=345,slow=23,SNR=8.4								
PMG	0.5nm,0.3s,baz=323,slow=20,SNR=2.6				S	Sn		11 39 01.4	0.0
WRA	**Warramunga Arr**	**17.77**	**211**		P	P		11 40 36.7	-0.5
	0.5nm,0.3s,baz=33,slow=10.0,SNR=25								
WRA	baz=25,slow=22,SNR=2.9				S	S		11 43 46.5	-9.3
ASAR	**Alice Springs**	**21.15**	**206**		P	P		11 41 13.3	-0.6
	1.6nm,0.5s,baz=36,slow=7.0,SNR=42								
FITZ	**Fitzroy Crossi**	**22.30**	**232**		P	P		11 41 25.8	-0.2
	8.0nm,0.6s,baz=46,slow=9.6,SNR=29								
STKA	**Stephens Creek**	**27.05**	**184**		P	P		11 42 10.3	+0.9
	2.0nm,0.9s,baz=6.0,slow=11,SNR=5.9								
VNDA	**Vanda**	**73.31**	**176**		P	P		11 47 56.2	-0.1
	0.9nm,0.7s,baz=332,slow=8.2,SNR=6.1								

*ISCJB **15** 11:44:47.6±0.6, 50°.32N±0°.04×18°.71E±0°.03, h0km, Error ellipse: s-maj=6.4km s-min=2.8km az=7.6*
*IPEC **15** 11:44:48.8±0.4, 50°.22N×18°.84E, h1km±1km, ML1.9/3, Error ellipse: s-maj=10.3km s-min=1.2km az=161.0*
*CSEM **15** 11:44:48.4±0.3, 50°.31N×18°.72E, h2km, ML2.7/7, Error ellipse: s-maj=6.7km s-min=3.0km az=11.0*
*WAR **15** 11:44:48.7, 50°.28N×18°.83E*
*PRU **15** 11:44:49.2, 50°.23N×18°.75E, h0km*

ISC 15 11:44:48.6±0.9, 50°.32N±0°.05×18°.79E±0°.02, h0km, n24, σ1904/42, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.63**	**221**	*e*	PG	**Pg**	**11 45 00.2**		**-0.5**
OKC	comp=Z,22nm,0.3s			*e*	SG	**Sg**	**11 45 08.2**		**-0.7**
OKC	**Ostrava-Krasne**	**0.63**	**221**		Pg	**Pg**	**11 45 00.2**		**-0.5**
OKC	22nm,0.3s				Sg	**Sg**	**11 45 08.2**		**-0.7**
OJC	**Ojcow**	**0.66**	**98**	*e*	Pg	**Pg**	**11 45 00.8**		**-0.3**
OJC				*e*	Sg	**Sb**	**11 45 11.2**		**-1.4**
MORC	**Moravsky Berou**	**0.97**	**236**	*e*	Pg	**Pg**	**11 45 06.5**		**-0.6**
MORC	baz=62 18nm,0.3s,baz=62			*e*	Sg	**Sg**	**11 45 18.6**		**-1.0**
KRLC	**Kraliky**	**1.31**	**260**	*e*	PG	**Pg**	**11 45 12.6**		**-1.1**
KRLC				*e*	SG	**Sg**	**11 45 30.1**		**-0.6**
KRLC	**Kraliky**	**1.31**	**260**		Pg	**Pg**	**11 45 12.6**		**-1.1**
KRLC					Sg	**Sg**	**11 45 30.1**		**-0.6**
NIE	**Niedzica**	**1.34**	**132**	*e*	Pg	**Pg**	**11 45 13.6**		**-0.5**
NIE				*e*	Sg	**Sn**	**11 45 32.7**		**-0.3**
NIE	**Niedzica**	**1.34**	**132**	*e*	Pg	**Pg**	**11 45 13.6**		**-0.5**
NIE				*e*	Sg	**Sn**	**11 45 32.7**		**-0.3**
DPC	**Dobruska-Polom**	**1.58**	**272**	*e*	PG	**Pn**	**11 45 17.1**		**-0.8**
DPC				*e*	SG	**Sn**	**11 45 38.8**		**-0.2**
DPC	**Dobruska-Polom**	**1.58**	**272**		Pg	**Pn**	**11 45 17.1**		**-0.8**
DPC					Sg	**Sn**	**11 45 38.8**		**-0.2**
KSP	**Ksiaz**	**1.67**	**289**	*e*	Pn	**Pb**	**11 45 20.5**		**+0.3**
KSP				*e*	Sn	**Sg**	**11 45 42.9**		**+0.6**
KSP	**Ksiaz**	**1.67**	**289**	*e*	Pg	**Pb**	**11 45 20.5**		**+0.3**
KSP				*e*	Sg	**Sg**	**11 45 42.9**		**+0.6**
VRAC	**Vranov**	**1.74**	**235**	*e*	Pn	**Pn**	**11 45 19.9**		**-0.2**
VRAC	14nm,0.4s,baz=57			*e*	Sg	**Sn**	**11 45 42.4**		**-0.6**
UPC	**Upice**	**1.79**	**277**	*e*	PG	**Pn**	**11 45 20.7**		**+0.1**
UPC	comp=Z,3.4nm,0.3s			*e*	SG	**Sg**	**11 45 45.7**		**-0.2**
UPC	**Upice**	**1.79**	**277**		Pg	**Pn**	**11 45 20.7**		**+0.1**
UPC	3.4nm,0.3s				Sg	**Sg**	**11 45 45.7**		**-0.2**
STHS	**Stebnicka Huta**	**1.83**	**119**	*e*	PN	**Pn**	**11 45 21.4**		**+0.2**
STHS				*e*	SN	**Sg**	**11 45 47.3**		**+0.1**
STHS	**Stebnicka Huta**	**1.83**	**119**	*e*	Pn	**Pn**	**11 45 21.4**		**+0.2**
STHS				*e*	Sn	**Sg**	**11 45 47.3**		**+0.1**
KRUC	**Moravsky**	**2.00**	**232**	*e*	Pn	**Pn**	**11 45 23.5**		**-0.1**
KRUC	baz=53 7.5nm,0.3s,baz=53			*e*	Sn	**Sn**	**11 45 49.3**		**0.0**
CRVS	**Cervenica-Dubn**	**2.24**	**128**	*e*	PG	**Pn**	**11 45 27.8**		**+0.8**
CRVS	**Cervenica-Dubn**	**2.24**	**128**	*e*	Pg	**Pn**	**11 45 27.8**		**+0.8**
PRU	**Pruhonice**	**2.75**	**265**	*e*	SG	**Sg**	**11 46 15.1**		**-1.8**
	comp=Z,4.6nm,0.3s								
PRU	**Pruhonice**	**2.75**	**265**		Sg	**Sg**	**11 46 15.1**		**-1.8**
	4.6nm,0.3s								
KHC	**Kasperske Hory**	**3.58**	**253**	*e*	SG	**Sb**	**11 46 40.2**		**+3.4**
	comp=Z,4.8nm,0.4s								
KHC	**Kasperske Hory**	**3.58**	**253**		Sg	**Sb**	**11 46 40.2**		**+3.4**
	4.8nm,0.4s								

*BJI **15** 12:05:23.8, 9°.20N×93°.70E, h20km, mB5.2/48, mb5.1/62, Ms5.0/68, Ms7 4.8/64*
*MOS **15** 12:05:24.6±0.9, 9°.17N×93°.62E, h33km, mb5.7/100, MS4.6/18, Error ellipse: s-maj=7.5km s-min=3.8km az=123.3*
*SZGRF **15** 12:05:24.7, 8°.35N×93°.28E, h33km, mb5.5, Nicobar Islands, India, region*
*DJA **15** 12:05:25.8±0.4, 9°.9N±3°×9°.4E±°, h10km, M5.0/19, mB5.4/15, mb5.0/19, MLv5.2/3, Mw(mB)4.8/15*
*ISCJB **15** 12:05:25.2±0.4, 9°.04N±0°.02×93°.62E±0°.02, h42km±3km, mb5.3/243, MS4.5/68, Error ellipse: s-maj=3.8km s-min=3.2km az=34.8*
*NEIC **15** 12:05:26.8±0.6, 9°.05N×93°.62E, h43km±4km, mb5.4/98, Error ellipse: s-maj=4.6km s-min=3.2km az=208.0*
*TEH **15** 12:05:26.0, 9°.10N×93°.67E, h35km, ML5.4*
*IDC **15** 12:05:27.0±1.7, 9°.12N×93°.78E, h43km±14km, mb4.7/30, mb1 4.8/30, mb1mx4.8/30, mbtmp4.7/30, MS4.4/31, Ms1 4.4/31, ms1mx4.3/36, Error ellipse: s-maj=13.4km s-min=9.7km az=44.0*
*GCMT **15** 12:05:27.3±0.1, 9°.12N×93°.80E, h12km, MW5.2, Moment Tensor Solution. s72,c111; s88,c177; Moment tensor: Scale 10^16^Nm; Mrr=8.12±.13; Mθθ=-0.12±.13; Mφφ=8.24±.12; Mrθ=2.62±.40; Mrφ=1.66±.11; Mθφ=-3.04±.34; Best double couple: Mo=9.30000×10^16^ NP1:φs=208.00000°, δ40.00000°, λ-61.00000°. NP2:φs=352.00000°, δ56.00000°, λ-112.00000°. Principal axes: T 8.9500, Plg9.0000°, Azm98.0000°; N 0.6000, Plg18.0000°, Azm5.0000°; P -9.5500, Plg70.0000°, Azm213.0000°; Data Used: II IU IC G CN.*
*BGS **15** 12:05:38.5±1.5, 11°.20N×92°.15E, h33km, mb5.2*

ISC 15 12:05:25.6±0.3, 9°.05N±0°.03×93°.60E±0°.03, h32km±1km, n31km: pP-P, n1197, σ1919/1320, mb5.4/243, MS4.6/69, 146C-324D, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMBY	**CAMPBELL BAY**	**2.05**	**171**	*e*	PKP	**Pn**		**12 05 58.0**	**+0.1**
CMBY				*e*	S	**Sn**		**12 06 24.0**	**+1.6**
PBA	**Port Blair**	**2.73**	**342**	*e*	PKP	Pn		12 06 08.1	+0.9
PBA				*e*	S	Sn		12 06 39.8	+0.6
BSI	**Banda Aceh**	**3.91**	**154**		P	**Pn**		**12 06 24.5**	**+1.0**
DGPR	**DIGLIPUR**	**4.16**	**351**	*e*	PKP	**Pn**		**12 06 28.8**	**+1.8**
DGPR				*e*	S	**Sn**		**12 07 15.5**	**+1.0**
LHMI	**Lhok Sumawe**	**5.04**	**139**		P	Pn		12 06 42.3	+3.2
PHET	**Kaeng Krachan**	**7.05**	**56**		P	Pn		**12 07 06.7**	**-0.1**
	4μm,0.5s,42μm								
TSI	**Tuntungan**	**7.39**	**138**		P	Pn		12 07 15.6	+4.2
	420nm,1.4s,7μm1.6nm								
KULM	**Kulim**	**7.93**	**118**	*e*	Pn	**Pn**		**12 07 16.6**	**-2.1**
KULM				*e*	Sn	**Sn**		**12 08 44.2**	**-3.2**
KULM	**Kulim**	**7.93**	**118**		P	**Pn**		**12 07 21.1**	**+2.4**
KULM	**Kulim**	**7.93**	**118**		P	**Pn**		**12 07 16.7**	**-2.1**
	105nm,1.0s,1μm								
IPM	**Ipoh**	**8.65**	**121**	*e*	Pn	**Pn**		**12 07 26.4**	**-2.4**
IPM				*e*	Sn	Sn		12 08 57.6	-7.8
IPM	**Ipoh**	**8.65**	**121**		P	**Pn**		**12 07 30.8**	**+2.0**
IPM	**Ipoh**	**8.65**	**121**		P	**Pn**		**12 07 26.2**	**-2.6**
	96nm,0.9s,1μm								
CHBT	**CHBT**	**9.33**	**66**		P	**Pn**		**12 07 38.1**	**+0.1**
	177nm,0.6s								
FRIM	**Kepong**	**9.84**	**125**		P	**Pn**		**12 07 47.2**	**+2.2**
KTGM	**Kuala Trenggan**	**10.15**	**111**		P	**Pn**		**12 07 49.9**	**+0.6**
PBKT	**Sadao Pong**	**10.37**	**43**		P	**Pn**		**12 07 54.0**	**+1.8**
	88nm,1.0s,2μm								
CM31	**Chiang Mai Arr**	**10.70**	**28**	*e*	Pn	**Pn**		**12 07 59.9**	**+3.2**
	26nm,0.5s								
CMAR	**Chiang Mai Arr**	**10.70**	**28**		P	Pn		12 08 00.1	+3.3
CMAR	**Chiang Mai Arr**	**10.70**	**28**		P	Pn		12 08 00.1	+3.3
	6.3nm,0.3s,baz=213,slow=14,SNR=118								
CMAR	comp=Z,2μm,20.1s,baz=212,slow=36				LR	LR		12 11 50.7	
CHTO	**Chiang Mai**	**11.01**	**28**	*e*	P	**Pn**		**12 08 04.1**	**+3.1**
CHTO	**Chiang Mai**	**11.01**	**28**		Pn	Pn		12 08 05.2	+4.3
	SNR=15								
CHTO	**Chiang Mai**	**11.01**	**28**	*e*	Pn	**Pn**		**12 08 04.1**	**+3.1**
CHTO	**Chiang Mai**	**11.01**	**28**		P	Pn		12 08 04.5	+3.5
	56nm,0.9s,930nm								
CMMT	**Chiang Mai**	**11.01**	**28**		P	Pn		12 08 05.3	+4.3
	51nm,0.9s,832nm								
BKNI	**Bangkinang**	**11.40**	**139**		P	**Pn**		**12 08 05.1**	**-1.2**
	149nm,1.4s,2μm								
PPI	**Padang Panjang**	**11.62**	**144**		P	**Pn**		**12 08 08.3**	**-1.0**
	55nm,1.9s,1μm								
KGM	**Kluang**	**11.93**	**125**		P	**Pn**		**12 08 15.8**	**+2.2**
MYKOM	**Kota Tinggi**	**12.49**	**125**		P	**Pn**		**12 08 23.3**	**+2.1**
MYKOM	**Kota Tinggi**	**12.49**	**125**		P	**Pn**		**12 08 19.3**	**-2.0**
	62nm,1.3s								
PALK	**Pallekele**	**12.89**	**263**	*e*	Pn	**Pn**		**12 08 26.8**	**0.0**
PALK				*e*	Sn	Sn		12 10 41.9	-7.4
PALK	**Pallekele**	**12.89**	**263**		P	Pn		12 08 30.3	+3.5
	75nm,1.7s,1μm								
UBPT	**Khong Chiam**	**13.15**	**61**		P	**Pn**		**12 08 31.4**	**+1.1**
	89nm,1.8s,2μm								
VIS	**Vishakhapatnam**	**13.19**	**312**	*e*	PKP	**Pn**		**12 08 30.6**	**-0.3**
VIS	comp=Z,344nm,1.3s				AMB	AMB		12 08 44.3	
MDRS	**Chennai**	**13.70**	**288**	*i*	PKP	x		12 09 05.2	
MDRS				*e*	S	**S**		**12 11 28.2**	**-2.8**
KSI	**Kapahiang**	**15.47**	**144**		P	**P**		**12 09 06.8**	**+0.9**
IMP	**Imphal**	**15.65**	**1**	*e*	PKP	**P**		**12 09 07.0**	**-0.9**
IMP				*ex*		**Sn**		**12 12 01.0**	**+4.3**
BOK	**Bokaro**	**16.42**	**334**	*e*	PKP	**Pn**		**12 09 14.7**	**+0.9**
BOK	comp=Z,294nm,2.7s				AMB	AMB		12 09 19.3	
SHL	**Shillong**	**16.51**	**355**	*e*	PKP	**Pn**		**12 09 15.0**	**-0.1**
SHL				*ex*		Sn		12 12 05.0	-13
PPBI	**Pangkal Pinang**	**16.73**	**131**		P	**P**		**12 09 19.1**	**-0.8**
	comp=Z,110nm,1.6s								
HYB	**Hyderabad**	**16.84**	**301**		P	**Pn**		**12 09 19.0**	**-0.2**
HYB	**Hyderabad**	**16.84**	**301**	*i*	P	**Pn**		**12 09 19.0**	**-0.2**
HYB				*e*	PP	**pP**		**12 09 30.0**	**+0.6**
HYB				*e*	S	**S**		**12 12 36.0**	**+0.7**
HYB	**Hyderabad**	**16.84**	**301**	*e*	PKP	**Pn**		**12 09 18.7**	**-0.5**
HYB	comp=Z,114nm,1.9s				AMB	AMB		12 09 27.0	
HYB	**Hyderabad**	**16.84**	**301**		P	**Pn**		**12 09 19.0**	**-0.2**
HYB				*e*	S	**S**		**12 12 38.0**	**+2.7**
KMI	**Kunming**	**18.20**	**27**		P	**P**		**12 09 39.3**	**+3.0**
KMI					pP	**pP**		**12 09 46.0**	**+1.4**
KMI					sP	**sP**		**12 09 49.4**	**+0.7**
KMI					PP	**PnPn**		**12 09 54.6**	**+6.7**
KMI					S	**Sn**		**12 13 00.4**	**+1.7**
KMI					SS	**SnSn**		**12 13 20.8**	**+7.9**
KMI	comp=Z,94nm,1.3s				pmax	pmax			
KMI	comp=Z,850nm,6.1s				pmax	pmax			
KMI	comp=N,1μm,16.8s				LR	LR			
KMI	comp=E,2μm,14.0s				LR	LR			
KMI	comp=Z,2μm,16.4s				LR	LR			
KSM	**Kuching**	**18.25**	**113**	*e*	Pn	**Pn**		**12 09 37.7**	**+1.1**
	comp=Z,118nm,1.2s								
KSM	**Kuching**	**18.25**	**113**		P	**Pn**		**12 09 38.3**	**+1.7**
KSM	**Kuching**	**18.25**	**113**		P	**Pn**		**12 09 37.8**	**+1.1**
	comp=Z,99nm,1.2s,comp=Z,2μm								
TPI	**Tanjungpandan**	**18.27**	**129**		P	**Pn**		**12 09 37.9**	**+1.1**
	comp=Z,32nm,1.1s,comp=Z,917nm								
NGP	**Nagpur**	**18.48**	**312**

GYA PP PnPn 12 10 35.0 +4.9
GYA S S 12 14 01.3 -3.6
GYA SS SnSn 12 14 35.0 +6.6
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,130nm,4.7s
GYA LR LR
comp=N,850nm,17.8s
GYA LR LR
comp=E,740nm,18.2s
GYA LR LR
comp=Z,880nm,16.5s
DANN Dangsing 21.32 336 *e*P P 12 10 11.5 +1.2
comp=Z,448nm,0.6s
POO Poona 21.35 298 *e*PKP P 12 10 10.9 +0.4
POO *i* PP PnPn 12 10 32.5 +1.6
PYUN Piuthan 21.43 334 *e*P P 12 10 12.7 +1.3
comp=Z,1µm,1.0s
KKM Kota Kinabalu 22.61 96 *e*P P 12 10 24.5 +0.4
comp=Z,261nm,1.7s
KKM Kota Kinabalu 22.61 96 P P 12 10 26.4 +2.3
GZH Guangzhou 23.51 51 P P 12 10 39.0 +6.0
GZH S Sn 12 14 56.0 -10
GZH LR LR
comp=N,2µm,10.5s
GZH LR LR
comp=E,2µm,12.0s
SDKM Sandakan 23.64 97 P P 12 10 38.0 +3.5
CD2 Chengdu 23.73 22 P P 12 10 34.8 -0.3
CD2 pP pP 12 10 44.6 +0.6
CD2 sP sP 12 10 48.8 +0.9
CD2 PP PnPn 12 11 08.4 +5.1
CD2 PcP PcP 12 14 19.4 +0.7
CD2 S S 12 14 44.6 -3.8
CD2 sS sS 12 15 00.5 -2.9
CD2 SS SnSn 12 15 34.9 +6.9
CD2 pmax pmax
comp=Z,90nm,1.1s
CD2 pmax pmax
comp=Z,610nm,5.3s
CD2 LR LR
comp=N,2µm,14.2s
CD2 LR LR
comp=E,2µm,11.6s
CD2 LR LR
comp=Z,3µm,9.5s
PTH Pithoragarh 23.95 330 *ex* P 12 10 30.8 -6.5
PTH *eS* S 12 14 55.3 +3.1
TSM Tawau 24.56 99 P P 12 10 46.6 +3.8
NDI New Delhi 24.88 324 *e*PKP P 12 10 45.0 -0.7
NDI *ex* x 12 15 13.0
AJM Ajmer 24.97 316 *i* P P 12 10 49.0 +2.5
MYLDM Lahad Datu 25.00 97 P P 12 10 51.2 +4.3
DDI Dehra Dun 25.67 328 *ex* P 12 10 53.8 +0.9
DDI *e*PKP pP 12 10 54.1 -7.9
ENH Enshi 25.82 33 *e*P P 12 10 52.7 -1.5
comp=Z,49nm,0.8s
SMLA Simla 26.78 327 *i* P P 12 11 04.2 +1.5
SMLA AMB AMB 12 11 05.2
comp=Z,171nm,0.7s
SDNR Sundarnagar 27.17 328 *e*PKP P 12 11 08.6 +2.2
TGY Tagaytay City 27.23 77 P P 12 11 06.7 -0.5
TGY Tagaytay City 27.23 77 P P 12 11 06.7 -0.5
comp=Z,81nm,0.3s,baz=183,slow=9.7,SNR=3.1
TGY LR LR 12 21 12.1
comp=Z,6.8nm,18.1s,baz=66,slow=35
BHK Bhakra 27.40 327 *e*PKP P 12 11 09.8 +1.3
DHRM DHARAMSHALA 28.11 328 *e*PKP P 12 11 15.8 +0.7
DHRM AMB AMB 12 11 20.3
comp=Z,189nm,1.1s
LZH Lanzhou 28.49 18 *e*P P 12 11 18.3 0.0
LZH pP pP 12 11 25.8 -1.6
LZH sP sP 12 11 29.9 -1.4
LZH PP PnPn 12 12 11.4 +3.0
LZH PcP PcP 12 14 31.0 +1.3
LZH *e*S S 12 16 02.3 -1.8
LZH sS sS 12 16 17.1 -2.1
LZH SS SnSn 12 17 27.3 +2.9
LZH pmax pmax
comp=Z,57nm,1.1s
LZH pmax pmax
comp=Z,200nm,4.0s
LZH LR LR
comp=N,1µm,11.6s
LZH LR LR
comp=E,880nm,12.0s
LZH LR LR
comp=Z,2µm,12.6s
DLH Dalhousie 28.52 328 *e*PKP P 12 11 19.0 +0.4
THN Thein Dam 28.57 327 *ex* P 12 11 16.5 -2.3
QZH Quanzhou 28.57 53⇑ *i*P P 12 11 19.6 +0.7
QZH *eS* S 12 16 06.1 +0.8
QZH pmax pmax
comp=Z,90nm,0.9s
QZH LR LR
comp=N,3µm,12.2s
QZH LR LR
comp=E,2µm,11.5s
QZH LR LR
comp=Z,3µm,12.7s
XAN Xi'an 28.59 27 P P 12 11 17.9 -1.1
XAN pP pP 12 11 25.5 -2.7
XAN sP sP 12 11 29.3 -2.7
XAN pmax pmax
comp=Z,10.0nm,0.8s
XAN pmax pmax
comp=Z,50nm,7.5s
XAN LR LR
comp=N,1µm,13.5s
XAN LR LR
comp=E,420nm,15.8s
XAN LR LR
comp=Z,820nm,14.7s
WHN Wuhan 28.85 39⇑ P P 12 11 22.3 +0.9
WHN pP pP 12 11 33.5 +3.0
WHN LR LR
comp=N,2µm,9.7s
WHN LR LR
comp=E,4µm,10.5s
WHN LR LR
comp=Z,3µm,14.3s
KAPI Kappang 29.57 117 P P 12 11 29.9 +1.9
KAPI Kappang 29.57 117 P P 12 11 29.9 +1.9
comp=Z,5.5nm,0.4s,baz=300,slow=16,SNR=3.1
KAPI LR LR 12 23 04.5
comp=Z,1µm,21.2s,baz=145,slow=36
TWG Pinlang 29.68 59 *e*P P 12 11 27.6 -1.2
YULB Yu-li 30.10 58 *e*P P 12 11 33.0 +0.4
comp=Z,44nm,1.3s
YHNB Yeheng 30.69 56 *e*P P 12 11 38.0 +0.2
comp=Z,55nm,1.2s
GTA Gaotai 30.74 9 P P 12 11 38.5 +0.3
GTA pP pP 12 11 47.8 +0.5
GTA sP sP 12 11 51.9 +0.7
GTA PcP PcP 12 14 36.5 +1.1
GTA S S 12 16 39.3 0.0
GTA sS sS 12 16 55.3 +0.8
GTA PcS PcS 12 18 19.8 +0.5
GTA SS SnSn 12 18 22.3 +3.2
GTA pmax pmax
comp=Z,34nm,0.9s
GTA pmax pmax
comp=Z,170nm,7.8s
GTA LR LR
comp=N,590nm,13.8s
GTA LR LR
comp=E,690nm,12.3s
GTA LR LR
comp=Z,650nm,13.3s
DAV Davao City (W) 31.72 91 LR LR 12 24 57.7
comp=Z,691nm,19.9s,baz=182,slow=37
NJ2 Nanjing 32.74 42 *e*P P 12 11 56.5 +0.8
NJ2 pP pP 12 12 06.9 +2.0
NJ2 sP sP 12 12 10.0 +1.3
NJ2 PP PnPn 12 13 05.5 +1.0
NJ2 S S 12 17 07.0 -3.5
NJ2 sS sS 12 17 25.5 -0.2
NJ2 pmax pmax
comp=Z,20nm,0.7s
NJ2 pmax pmax
comp=Z,180nm,7.1s
NJ2 LR LR
comp=N,1µm,13.2s
NJ2 LR LR
comp=E,1µm,12.4s
NJ2 LR LR
comp=Z,1µm,10.9s
SSE Sheshan 33.77 46 P P 12 12 04.8 +0.1
SSE pP pP 12 12 15.8 +1.9
SSE S S 12 17 26.3 -0.1
SSE pmax pmax
comp=Z,47nm,0.7s
SSE pmax pmax
comp=Z,150nm,7.8s
SSE LR LR
comp=N,790nm,13.9s
SSE LR LR
comp=E,920nm,13.9s
SSE LR LR
comp=Z,1µm,12.3s
KSH Kashi 34.19 335 P P 12 12 07.3 -1.1
KSH *e*pP pP 12 12 16.8 -0.8
KSH *e*sP sP 12 12 19.8 -1.6
KSH *e*PP PnPn 12 13 20.8 -2.1
KSH *e*PcP PcP 12 14 46.1 +1.2
KSH *e*S S 12 17 27.3 -5.8
KSH *e*sS sS 12 17 43.6 -4.7
KSH pmax pmax
comp=Z,170nm,0.8s
KSH LR LR
comp=N,310nm,8.1s
KSH LR LR
comp=E,2µm,15.1s
KSH LR LR
comp=Z,1µm,14.4s
WMQ Urumqi 35.02 353 P P 12 12 16.3 +0.9
WMQ pP pP 12 12 26.0 +1.3
WMQ sP sP 12 12 30.0 +1.5
WMQ PP PP 12 13 35.0 -0.2
WMQ S S 12 17 45.0 -0.6
WMQ sS sS 12 18 01.0 +0.1
WMQ SS SnSn 12 20 01.0 -1.8
WMQ pmax pmax
comp=Z,50nm,0.8s
WMQ pmax pmax
comp=Z,200nm,5.1s
WMQ LR LR
comp=N,560nm,14.8s
WMQ LR LR
comp=E,1µm,22.2s
WMQ LR LR
comp=Z,640nm,24.4s
HHC Hu-ho-hao-te 35.46 24 *e*P P 12 12 19.8 +0.5
HHC pP pP 12 12 29.4 +0.9
HHC sP sP 12 12 35.3 +3.0
HHC PP PP 12 13 40.8 +0.7
HHC S S 12 17 55.1 +2.6
HHC pmax pmax
comp=Z,45nm,0.9s
HHC pmax pmax
comp=Z,450nm,5.3s
HHC LR LR
comp=N,2µm,11.4s
HHC LR LR
comp=E,1µm,12.9s
HHC LR LR
comp=Z,2µm,11.4s
WBK Wadi Bani Khal 35.84 296 P P 12 12 27.2 +4.6
SNR=6.6
ULHL Ulahol 36.43 338 P P 12 12 28.6 +0.9
SNR=35
JMDO Jabal Madar 36.54 295 P P 12 12 32.8 +4.2
SNR=6.7
KZA Kyzart 36.66 337 P P 12 12 30.8 +0.9
SNR=32
SMDO Samad 36.78 297 P P 12 12 35.1 +4.3
SNR=12
BJT Baijiatuau 36.82 29 *e*P P 12 12 31.2 +0.4
comp=Z,21nm,0.6s
BJI Beijing 36.84 29 P P 12 12 31.4 +0.4
BJI S S 12 18 14.3 +0.9
BJI pmax pmax
comp=Z,38nm,0.8s
BJI pmax pmax
comp=Z,270nm,6.2s
BJI LR LR
comp=N,1µm,13.7s
BJI LR LR
comp=E,920nm,14.9s
BJI LR LR
comp=Z,560nm,26.9s
UCH Uchtor 37.07 336 P P 12 12 34.9 +1.4
SNR=10
TKM2 Tokmak 2 37.25 338 *i* P P 12 12 35.2 +0.5
TKM2 Tokmak 2 37.25 338 *e*P P 12 12 34.9 +0.2
comp=Z,21nm,0.6s
TKM2 Tokmak 2 37.25 338 P P 12 12 35.2 +0.5
SNR=35
KBK Karagaybulak 37.27 337 P P 12 12 36.2 +1.4
SNR=24
AML Almayashu 37.33 335 P P 12 12 36.7 +1.2
SNR=153
AAK Ala-Archa 37.42 337 P P 12 12 37.0 +0.9
comp=Z,536nm,1.2s,SNR=28
AAK Ala-Archa 37.42 337 *e*P P 12 12 37.2 +1.1
AAK pmax pmax
comp=Z,82nm,0.9s
AAK Ala-Archa 37.42 337 *e*P P 12 12 37.2 +1.1
comp=Z,82nm,0.9s
AAK Ala-Archa 37.42 337 P P 12 12 37.3 +1.1
SNR=40
BSY Bisya 37.44 296 P P 12 12 40.6 +4.2
SNR=23
HOQ Hoqain 37.57 297 P P 12 12 41.8 +4.3
SNR=11
CHMS Chumysh 37.63 337 P P 12 12 38.3 +0.6
SNR=25
EKS2 Erkin-Say 37.73 336 *e*P P 12 12 39.3 +0.6
EKS2 pmax pmax
comp=Z,64nm,0.8s
EKS2 Erkin-Say 37.73 336 *e*P P 12 12 39.3 +0.6
comp=Z,64nm,0.8s
EKS2 Erkin-Say 37.73 336 P P 12 12 40.0 +1.3
SNR=42
USP Ospenovka 37.96 337 P P 12 12 41.2 +0.7
SNR=51
ARQ Araqi 38.20 296 P P 12 12 47.0 +4.3
SNR=12
MK31 Makanchi Array 38.84 348 *i* P P 12 12 47.2 -0.6
MK31 pmax pmax
comp=Z,29nm,1.0s
MKAR Makanchi Array 38.84 348 *ce*P P 12 12 47.2 -0.5
MKAR pmax pmax
comp=Z,10.0nm,0.7s
MKAR Makanchi Array 38.84 348 *e*P P 12 12 47.3 -0.5
MKAR PcP PcP 12 14 58.2 -0.3
MKAR ScP S 12 18 42.9 -0.6
MKAR Makanchi Array 38.84 348 P P 12 12 47.3 -0.5
comp=Z,9.9nm,0.7s,baz=166,slow=8.0,SNR=136
MKAR PcP PcP 12 14 58.2 -0.3
comp=Z,4.0nm,0.7s,baz=151,slow=3.7,SNR=4.1
MKAR ScP S 12 18 42.9 -0.6
comp=Z,0.8nm,0.8s,baz=163,slow=5.6,SNR=3.3
MKAR LR LR 12 32 41.0
comp=Z,347nm,18.3s,baz=166,slow=42
DL2 Dalian 38.92 36 P P 12 12 48.8 +0.2
DL2 PP PnPn 12 14 26.3 +5.7
DL2 S S 12 18 45.8 +0.8
DL2 pmax pmax
comp=Z,44nm,0.9s
DL2 pmax pmax
comp=Z,170nm,4.7s
DL2 LR LR
comp=N,370nm,10.5s
DL2 LR LR
comp=E,430nm,12.1s
DL2 LR LR
comp=Z,550nm,11.5s
IDAH Dahanechah 39.07 312 *e*P P 12 12 52.1 +1.9
IBND Bandar-abas 39.46 303 *e*P P 12 12 56.5 +3.3
KK31 Karatay Array 39.48 333 *i* P P 12 12 53.3 +0.1
KK31 pmax pmax
comp=Z,21nm,0.6s
KKAR Karatay Array 39.48 333 *e*P P 12 12 53.7 +0.5
KKAR Karatay Array 39.48 333 *e*P P 12 12 53.7 +0.5
ASUD Al Ashush, Dub 39.60 298 P P 12 12 58.8 +4.3
SNR=12
ITEG Tejag 39.97 312 *e*P P 12 12 59.3 +1.6
SONM Songino Array 40.15 13 P P 12 12 58.5 -0.3
SONM PcP PcP 12 15 03.4 +0.6
comp=Z,5.4nm,0.7s,baz=201,slow=3.5,SNR=3.1
SONM LR LR 12 31 10.3
comp=Z,1µm,20.0s,baz=55,slow=38
ULN Ulaanbaatar 40.33 14 P P 12 13 00.2 -0.1
SNR=9.3
ULN Ulaanbaatar 40.33 14 *e*P P 12 12 59.8 -0.5
comp=Z,12nm,0.9s
IMYA Miami 40.78 317 *e*P P 12 13 04.4 +0.1
IMOG Moghan 41.18 316 *e*P P 12 13 08.8 +1.1
ISRO Mashad 41.19 317 *e*P P 12 13 07.6 0.0
FITZ Fitzroy Crossi 41.57 131 LR LR 12 34 18.0
comp=Z,22nm,18.2s,baz=313,slow=42
IBAF Bafgh 41.81 308 *e*P P 12 13 14.4 +1.6
IAKL Akhelmad 41.84 316 *e*P P 12 13 14.1 +1.0
JNU Nakatsue 41.88 50 *e*P P 12 13 12.6 -0.6
KSAR Wonju Array Be 41.91 42 P P 12 13 13.5 +0.2
KSRS Korea Array 41.95 42 P P 12 13 13.5 -0.1
comp=Z,2.3nm,0.6s,baz=256,slow=8.6,SNR=11
KSRS LR LR 12 32 07.9
comp=Z,591nm,18.0s,baz=51,slow=38
HVS Khovu-Aksy 41.96 0*d* *i*P P 12 13 14.0 +0.4
HVS pmax pmax
comp=Z,467nm,1.5s
ZAK Zakamensk 41.98 9⇑ *i*P P 12 13 12.6 -1.2
ZAK *e* 12 15 08.6
ZAK pmax pmax
comp=Z,10.0nm,1.2s
IKRD Kardeh 42.09 316 *e*P P 12 13 10.4 -4.8
IEMG Emamgholi 42.34 317 *e*P P 12 13 18.7 +1.5
IMEH Mehriz 42.48 307 *e*P P 12 13 17.5 -0.9
ISFR Sfrayin 42.59 317 *e*P P 12 13 20.3 +1.1
ABKT Ailbek 42.98 318 P P 12 13 24.2 +2.1
comp=Z,1µm,0.6s,SNR=33
ICHK Chekchek 42.98 308 *e*P P 12 13 23.3 +0.9
TLY Talaya 43.30 9⇑ *i*P P 12 13 25.6 +1.2
TLY *e* 12 13 32.3
TLY *e* 12 15 11.8
TLY *eS* S 12 19 52.0 +2.2
TLY pmax pmax
comp=Z,20nm,1.4s
TLY MLR MLR
comp=Z,404nm,14.4s
ISAD Sadrabad 43.41 307 *e*P P 12 13 27.3 +1.3
CN2 Changchun 44.34 33 ⇓P P 12 13 33.1 +0.3
CN2 *e*pP pP 12 13 41.3 -1.0
CN2 PcP PP 12 15 16.1 -0.5
CN2 *e*S S 12 20 04.4 -0.7
CN2 *e*SS SS 12 23 18.8 -5.6
CN2 pmax pmax
comp=Z,20nm,0.7s
CN2 pmax pmax
comp=Z,300nm,6.0s
CN2 LR LR
comp=N,500nm,13.0s
CN2 LR LR
comp=E,900nm,13.0s
CN2 LR LR
comp=Z,800nm,13.0s
IANJ Anjilo 44.71 312 *e*P P 12 13 37.5 +1.2
IZEF Zefreh 44.85 308 *e*P P 12 13 37.4 0.0
IGAR Gharneh 44.89 307 *e*P P 12 13 38.6 +0.9
IKIA Kiasar 45.21 313 *e*P P 12 13 42.6 +2.4
ISHM Shahmirzad 45.31 312 *e*P P 12 13 42.4 +1.3
ZAA0 Zalesovo Array 45.33 353 *e*P P 12 13 40.4 -0.2
ZALV Zalesovo Beam 45.33 353 P P 12 13 40.6 0.0
ZALV 12 15 18.6
ZALV Zalesovo Beam 45.33 353 P P 12 13 40.6 0.0
ZALV PcP PcP 12 15 18.6 -1.2
ZALV Zalesovo Beam 45.33 353 P P 12 13 40.6 0.0
comp=Z,62nm,0.7s,baz=169,slow=8.5,SNR=235
ZALV PcP PcP 12 15 18.6 -1.2
comp=Z,8.9nm,0.8s,baz=177,slow=1.7,SNR=4.0
ZALV LR LR 12 36 32.4
comp=Z,150nm,19.4s,baz=251,slow=41
ILAS Lasjerd 45.38 312 *e*P P 12 13 43.2 +1.6
IFIR Firoozkooh 45.64 312 *e*P P 12 13 45.0 +1.3
HIA Hailar 45.66 24 *e*P P 12 13 43.2 -0.1
comp=Z,54nm,1.0s
HIA *e*pP pP 12 13 50.4 -2.4
IALA Alasht 45.79 312 *e*P P 12 13 46.6 +1.7
IVRN Varamin 46.13 311 *e*P P 12 13 48.0 +0.6
IVRN *e*P P 12 13 48.3 +0.9
IDMV Damavand 46.14 311 *e*P P 12 13 48.5 +0.8
IPRN Peran 46.20 312 *e*P P 12 13 49.9 +2.0
NVS Novosibirsk 46.41 352⇓ *i*P P 12 13 48.4 -0.7
NVS pmax pmax
comp=N,46nm,1.1s
NVS pmax pmax
comp=E,27nm,1.1s
NVS pmax pmax
comp=Z,92nm,1.1s
IR3 Iran Long-Peri 46.85 311 *e*P P 12 13 54.3 +1.3
MDJ Mudanjiang 47.15 35 P P 12 13 55.3 +0.2
MDJ pP pP 12 14 04.3 -0.2
MDJ sP sP 12 14 08.1 -0.2
MDJ PcP PcP 12 15 26.4 0.0
MDJ PP PP 12 15 45.8 -0.4
MDJ ScP ScP 12 19 17.9 -0.3
MDJ PcS PcS 12 19 21.6 +0.2
MDJ S S 12 20 42.8 -2.8
MDJ ScS ScS 12 23 46.8 -0.3
MDJ pmax pmax
comp=Z,10.0nm,1.2s
MDJ pmax pmax
comp=Z,130nm,5.8s
MDJ LR LR
comp=N,790nm,13.7s
MDJ LR LR
comp=E,270nm,17.2s
MDJ LR LR
comp=Z,800nm,16.0s
VOSK Vostochnaya 47.27 341 P P 12 13 55.2 -0.7
VOSK pmax pmax
comp=Z,41nm,0.7s
KBD Kabd 47.41 301 *e*P P 12 13 58.1 +0.8
KBD AMb AMB 12 13 59.8
comp=Z,217nm,1.0s
RDF Al-Radifah 47.46 301 *e*P P 12 13 59.3 +1.6
RDF AMb AMB 12 14 00.7
comp=Z,589nm,1.0s
UMR Umm Al-Rimmam 47.49 302 *e*P P 12 13 59.0 +1.1
UMR AMb AMB 12 14 00.1
comp=Z,232nm,1.2s
IRAZ Razeghan 47.65 310 *e*P P 12 14 00.4 +1.0
BVA0 Borovoye Array 47.72 341 P P 12 13 58.6 -0.7
BVA0 pmax pmax
comp=Z,30nm,1.1s
BRVK Borovoye 47.78 341 *e*P P 12 13 59.7 0.0
BRVK pmax pmax
comp=Z,33nm,1.0s
BRVK Borovoye 47.78 341 *e*P P 12 13 59.7 0.0
comp=Z,33nm,1.0s
BRVK Borovoye 47.78 341 P P 12 13 59.8 0.0
comp=Z,228nm,0.6s,SNR=6.5
NAY Al-Naaiem 47.81 301 *e*P P 12 14 01.1 +0.7
NAY AMb AMB 12 14 02.5
comp=Z,310nm,1.1s
MIB Mutribah 47.87 302 *e*P P 12 14 01.8 +0.9
MIB AMb AMB 12 14 03.2
comp=Z,495nm,0.9s
ZRNK Zerenda 48.10 340 *i* P P 12 14 01.9 -0.4
ZRNK pmax pmax
comp=Z,29nm,0.7s
RAYN Ar Rayn 48.13 293 P P 12 14 05.5 +2.4
comp=Z,1µm,1.1s,SNR=62
RAYN Ar Rayn 48.13 293 *e*P P 12 14 04.3 +1.2
comp=Z,194nm,0.9s
USRK Ussuriysk Arra 48.29 37 P P 12 14 03.3 -0.6
comp=Z,4.9nm,0.8s,baz=235,slow=7.3,SNR=11
USRK PcP PcP 12 15 29.6 -0.9
comp=Z,2.5nm,0.7s,baz=234,slow=3.6,SNR=2.7
MAJO Matsushiro 48.78 49 *e*P P 12 14 07.9 0.0
MAJO pmax pmax
comp=Z,113nm,2.3s
MAJO Matsushiro 48.78 49 *e*P P 12 14 07.8 0.0
comp=Z,113nm,2.3s
MAT Matsushiro 48.78 49 P P 12 14 08.3 +0.4
MAT S S 12 21 13.0 +4.0
AB31 Akbulak array 48.95 331 P P 12 14 09.3 +0.4
AB31 pmax pmax
comp=Z,45nm,0.6s

ABKAR **Akbulak array** 48.95 331 *e*P P 12 14 09.4 +0.5
comp=Z,29nm,0.6s
WRA Warramunga Arr 49.37 126 P P 12 14 10.4 -2.1
WRA pP **pP** 12 14 24.1 +1.9
WRA PcP **PcP** 12 15 34.5 -0.4
WRA ScP **ScP** 12 19 24.7 -3.4
WRA Warramunga Arr 49.37 126 P P 12 14 10.4 -2.1
comp=Z,6.7nm,0.9s,baz=306,slow=9.1,SNR=36
WRA pP **pP** 12 14 24.1 +1.9
comp=Z,11nm,0.6s,baz=305,slow=8.5,SNR=15
WRA PcP **PcP** 12 15 34.5 -0.4
comp=Z,2.1nm,0.8s,baz=299,slow=3.5,SNR=5.0
WRA ScP **ScP** 12 19 24.7 -3.4
comp=Z,1.6nm,0.8s,baz=316,slow=3.9,SNR=6.7
WRA LR LR 12 38 05.6
comp=Z,432nm,18.4s,baz=295,slow=40
IBDR Badra 49.97 306 *e*P **P** 12 14 14.9 -2.1
IBDR *e*S S 12 21 19.5 -6.2
IDHR Dehrash 50.11 308 *e*P **P** 12 14 16.5 -1.8
AKTO Aktyubinsk 50.67 331 P **P** 12 14 21.8 -0.2
AKTO pmax pmax
comp=Z,29nm,0.7s
ASAR Alice Springs 51.07 130 P P 12 14 23.1 -2.3
ASAR PcP **PcP** 12 15 40.3 -0.8
ASAR ScP **ScP** 12 19 32.5 -2.9
ASAR Alice Springs 51.07 130 P P 12 14 23.1 -2.3
comp=Z,8.4nm,0.9s,baz=311,slow=7.3,SNR=46
ASAR PcP **PcP** 12 15 40.3 -0.8
comp=Z,3.3nm,0.7s,baz=310,slow=3.8,SNR=8.4
ASAR ScP **ScP** 12 19 32.5 -2.9
comp=Z,1.5nm,0.9s,baz=316,slow=4.4,SNR=4.8
ASAR LR LR 12 38 40.1
comp=Z,347nm,21.1s,baz=297,slow=39
KLR Kul'dur 51.16 31 *e*P P 12 14 22.0 -3.7
BHD Baghdad 51.26 306 *e*P P 12 14 23.3 -3.4
BHD *e*S S 12 21 31.5 -12
IAZR Azarshahr 51.44 311 *e*P **P** 12 14 28.5 +0.2
ISHB Shabestar 51.93 312 *e*P **P** 12 14 32.0 +0.1
IMRD Marand 52.02 313 *e*P **P** 12 14 33.1 +0.6
HABR Khabarovsk 52.46 34 *de*P **P** 12 14 35.0 -0.4
HABR *e**PP **pP** 12 14 44.9 -0.1
HABR *e**SP **sP** 12 14 49.1 +0.4
HABR *e* 12 16 34.2
HABR PPP PPP 12 17 38.1
HABR *e*S **S** 12 22 00.2 +0.6
HABR *e**SS **sS** 12 22 17.1 +1.7
HABR *e* 12 24 22.1
HABR *e*SS **SS** 12 25 39.7 +1.8
HABR pmax pmax
comp=Z,33nm,1.2s
HABR pmax pmax
comp=N,7.0nm,1.2s
HABR pmax pmax
comp=E,14nm,0.9s
HABR MLR MLR
comp=Z,580nm,17.0s
MAK Makhachkala 52.49 318 *e*P P 12 14 32.1 -3.6
MAK MLR MLR
comp=Z,538nm,23.0s
GNI Garni 53.24 314 P **P** 12 14 43.1 +1.5
SNR=17
GNI Garni 53.24 314 *e*P **P** 12 14 42.4 +0.8
comp=Z,157nm,1.4s
DGRG David-gareji 53.30 316 P **P** 12 14 43.3 +1.5
CLNS Chul'man 53.53 21 *e*P **P** 12 14 43.3 +0.1
CLNS *e* 12 15 48.9
CLNS *e* 12 16 38.7
CLNS *e*PPP PPP 12 17 49.7
CLNS *e*S **S** 12 22 17.7 +3.6
CLNS pmax pmax
comp=Z,19nm,1.0s
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=E,12nm,1.0s
CLNS pmax pmax
comp=Z,5.0nm,1.2s
CLNS pmax pmax
comp=N,9.0nm,1.3s
CLNS pmax pmax
comp=E,8.0nm,1.1s
CLNS smax smax
comp=E,80nm,14.4s
CLNS smax smax
comp=N,78nm,15.1s
CLNS MLR MLR
comp=N,726nm,15.0s
CLNS MLR MLR
comp=E,726nm,14.0s
CLNS MLR MLR
comp=Z,1μm,15.0s
ABPO Ambohimpanom 53.55 238 *e*P **P** 12 14 46.6 +2.5
ABPO pmax pmax
comp=Z,85nm,1.3s
ABPO Ambohimpanom 53.55 238 *e*P **P** 12 14 46.6 +2.5
comp=Z,85nm,1.3s
TBLG Delisi 53.85 316 P **P** 12 14 46.7 +0.9
TBLG Delisi 53.85 316 P **P** 12 14 46.7 +0.9
SVE Sverdlovsk 54.12 338 *d*P **P** 12 14 47.6 +0.2
SVE *e*S S 12 22 10.3 -12
SVE pmax pmax
comp=Z,115nm,1.0s
SVE MLR MLR
comp=Z,902nm,25.0s
GUDG Gudauri 54.31 316 P **P** 12 14 50.6 +1.2
GOR Gori 54.38 316 P **P** 12 14 52.0 +2.3
WNDE Wendo Genet 54.42 272 *i*P P 12 14 54.4 +3.8
AKH Akhalkalaki 54.59 315 P **P** 12 14 53.0 +1.6
ARU Arti 54.61 337 *d*P **P** 12 14 50.6 -0.4
ARU 12 15 50.2
ARU 12 16 52.4
ARU S **S** 12 22 29.2 +0.7
ARU SSS SSS 12 28 02.7
ARU pmax pmax
comp=Z,51nm,1.0s
ARU MLR MLR
comp=Z,526nm,21.0s
ARU Arti 54.61 337 P **P** 12 14 50.0 -1.0
comp=Z,282nm,0.8s,SNR=12
ASAJ Asahikawa 54.89 42 *e*P **P** 12 14 53.5 +0.3
ONI Oni 55.06 316 P P 12 14 49.0 -5.6
KBZ Khabaz 55.87 317 P **P** 12 15 00.6 +0.3
KBZ 12 15 59.3
KBZ Khabaz 55.87 317 P **P** 12 15 00.6 +0.3
KBZ PcP **PcP** 12 15 59.3 +0.5
KBZ Khabaz 55.87 317 P **P** 12 15 00.6 +0.3
comp=Z,28nm,0.9s,baz=115,slow=6.6,SNR=27
KBZ PcP **PcP** 12 15 59.3 +0.5
comp=Z,22nm,0.9s,baz=175,slow=3.5,SNR=4.4
KBZ LR LR 12 44 26.9
comp=Z,111nm,19.2s,baz=5.5,slow=42
CHVG Ch'k'valeri 56.05 316 P P 12 14 53.4 -8.3
KIV Kislovodsk 56.10 318 *e*P **P** 12 15 02.5 +0.4
KIV *e* 12 17 08.3
KIV *e*S **S** 12 22 49.2 +0.1
KIV pmax pmax
comp=Z,114nm,1.0s
KIV pmax pmax
comp=Z,40nm,3.3s
KIV MLR MLR
comp=Z,247nm,18.0s
KIV Kislovodsk 56.10 318 P **P** 12 15 02.1 0.0
comp=Z,619nm,0.8s,SNR=8.0
YSS Yuzh-Sakhalins 56.20 39 *e*P **P** 12 15 04.1 +1.5
YSS *e* 12 15 12.0
YSS *e**SP **sP** 12 15 20.2 +4.2
YSS *e* 12 15 59.2
YSS *e*S **S** 12 22 50.0 0.0
YSS *e* 12 26 38.0
YSS pmax pmax
comp=Z,20nm,0.7s
YSS MLR MLR
comp=N,4μm,13.0s
YSS MLR MLR
comp=Z,4μm,13.0s
PMG Port Moresby 56.39 108 *e*P **P** 12 15 03.9 -0.6
comp=Z,31nm,0.9s
PMG Port Moresby 56.39 108 P **P** 12 15 04.3 -0.2
comp=Z,30nm,0.8s,baz=275,slow=12
YUK Yuzh-Kuril'sk 57.03 43 *d*P P 12 15 04.0 -4.5
YUK *e* 12 17 12.1
YUK *i*S **S** 12 22 58.1 -3.0
YUK pmax pmax
comp=Z,1μm,1.4s
YUK MLR MLR
comp=E,305nm,22.0s
YUK MLR MLR
comp=Z,360nm,22.0s
KMBO Kilima Mbogo 57.03 263 P P 12 15 13.0 +3.6
SNR=10.0
KMBO Kilima Mbogo 57.03 263 *e*P **P** 12 15 11.0 +1.6
KMBO Kilima Mbogo 57.03 263 P **P** 12 15 12.4 +3.0
comp=Z,22nm,0.9s,baz=52,slow=11,SNR=25
KMBO LR LR 12 38 36.8
comp=Z,706nm,18.6s,baz=95,slow=35
MALT Malatya 57.30 310 *i*P P 12 15 20.6 +10
SOKR Solikamsk 57.54 339 *d*P **P** 12 15 12.0 +0.2
SOKR pmax pmax
comp=Z,60nm,1.0s
SOKR MLR MLR
comp=Z,1μm,30.0s
KUR Kuril'sk 58.79 42 *i*P **P** 12 15 19.1 -1.8
KUR *i*SS SS 12 27 17.2 -0.5
KUR pmax pmax
comp=Z,99nm,1.7s
KUR MLR MLR
comp=N,287nm,18.0s
KUR MLR MLR
comp=Z,331nm,18.0s
YAK Yakutsk 59.06 19 *e*P **P** 12 15 19.6 -2.9
YAK *e**PP **pP** 12 15 27.3 -4.8
YAK *e* 12 16 10.1
YAK *e* 12 17 28.8
YAK *e*S **S** 12 23 21.7 -5.4
YAK *e* 12 25 05.5
YAK *e*SS **SS** 12 27 15.0 -6.3
YAK pmax pmax
comp=N,16nm,1.2s
YAK pmax pmax
comp=E,22nm,1.4s
YAK pmax pmax
comp=Z,688nm,16.0s
YAK pmax pmax
comp=Z,5.0nm,0.6s
YAK smax smax
comp=N,30nm,1.8s
YAK smax smax
comp=E,25nm,1.5s
YAK MLR MLR
comp=E,432nm,13.0s
YAK MLR MLR
comp=Z,709nm,17.0s
YAK MLR MLR
comp=E,381nm,13.0s
CTA Charters Tower 59.35 120 P **P** 12 15 24.6 -0.6
CTA Charters Tower 59.35 120 P **P** 12 15 24.6 -0.6
comp=E,19nm,1.0s,baz=294,slow=10,SNR=5.2
CTAO Charters Tower 59.35 120 *e*P **P** 12 15 24.8 -0.4
CTAO Charters Tower 59.35 120 *e*P **P** 12 15 24.8 -0.4
ANN Anapa 59.92 317 *e*P **P** 12 15 29.9 +1.2
ANN pmax pmax
comp=Z,57nm,1.4s
CSS Prodhromos 60.57 305 *e*P **P** 12 15 33.1 -0.3
comp=Z,47nm,1.1s
VORD Divnogorie 60.96 324 *e*P **P** 12 15 35.0 -0.7
VORD pmax pmax
comp=N,40nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VORD pmax pmax
comp=Z,50nm,0.6s
VSR Storozhevoye 61.13 324 *e*P **P** 12 15 35.7 -1.2
VSR *e*S **S** 12 23 51.1 -3.0
VSR pmax pmax
comp=Z,50nm,0.9s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,40nm,0.8s
VSR smax smax
comp=Z,40nm,2.8s
VSR smax smax
comp=N,110nm,2.5s
VSR smax smax
comp=E,70nm,3.0s
BR131 Keskin Array S 61.27 310 *e*P **P** 12 15 37.2 -1.0
comp=E,25nm,0.7s
BRTR Keskin Array B 61.27 310 P **P** 12 15 37.2 -1.0
BRTR Keskin Array B 61.27 310 P **P** 12 15 37.2 -1.0
comp=E,30nm,0.7s,baz=124,slow=7.1,SNR=131
BRTR LR LR 12 44 31.8
comp=E,199nm,21.9s,baz=96,slow=38
STKA Stephens Creek 61.30 134 P **P** 12 15 36.4 -1.9
STKA Stephens Creek 61.30 134 P **P** 12 15 36.4 -1.9
comp=E,7.8nm,1.0s,baz=319,slow=8.9,SNR=7.2
STKA LR LR 12 43 40.3
comp=E,394nm,21.4s,baz=299,slow=38
ANTO Ankara 61.93 310 *e*P **P** 12 15 41.6 -1.0
ANTO Ankara 61.93 310 P **P** 12 15 42.4 -0.2
SNR=14
ANTO Ankara 61.93 310 *e*P **P** 12 15 41.6 -1.0
ISP Isparta 63.29 308 *e*P **P** 12 15 51.3 -0.4
ISP pmax pmax
comp=Z,44nm,1.0s
ISP Isparta 63.29 308 *e*P **P** 12 15 51.3 -0.4
comp=Z,44nm,1.0s
MOS Moscow 63.81 329 *e*P P 12 15 48.9 -5.8
MOS *e* 12 16 24.2
MOS pmax pmax
comp=Z,138nm,1.4s
MOS pmax pmax
comp=Z,400nm,2.2s
OBN Obninsk 64.11 328 *i*P **P** 12 15 56.1 -0.5
OBN *e* 12 16 31.6
OBN *e* 12 18 16.6
OBN *e*S **S** 12 24 31.5 +0.2
OBN pmax pmax
comp=Z,99nm,1.3s
OBN MLR MLR
comp=Z,400nm,20.0s
KLMR Klimovskoe 65.17 334 *e*P **P** 12 16 01.8 -1.7
KLMR pmax pmax
comp=Z,60nm,1.3s
EIDS Eidsvold 65.56 123 *e*P **P** 12 16 06.2 -0.4
KARP Karpathos 65.65 305 *e*P **P** 12 16 06.9 -0.2
TIRR Tirgusor 66.06 315 P **P** 12 16 09.1 -0.4
TIRR Tirgusor 66.06 315 *e*P **P** 12 16 08.3 -1.2
comp=Z,25nm,1.0s
TIRR Tirgusor 66.06 315 *i*P **P** 12 16 09.1 -0.4
KIS Kishinev 66.30 317 *e*P **P** 12 16 09.0 -2.1
KIS *e* 12 16 19.0
KIS pmax pmax
comp=Z,140nm,1.2s
KIS Kishinev 66.30 317 *e*P **P** 12 16 09.0 -2.1
KIS XM 12 16 10.0
comp=Z,100nm,1.2s
CFR Carcaliu 66.39 315 P **P** 12 16 11.4 -0.2
CFR Carcaliu 66.39 315 *i*P **P** 12 16 11.4 -0.2
PRD Provadia 66.55 313 *e*P **P** 12 16 12.3 -0.4
LEOM Leova 66.58 317 P **P** 12 16 13.0 +0.2
LEOM Leova 66.58 317 *i*P **P** 12 16 13.0 +0.2
PRK Paraskevi 66.79 309 *e*P **P** 12 16 13.4 -0.9
CHOS Chios island 66.86 308 *e*P **P** 12 16 14.7 -0.2
AKASG Malin Array Be 66.91 321 P **P** 12 16 13.6 -1.3
AKASG 12 18 39.1
AKASG Malin Array Be 66.91 321 P **P** 12 16 13.6 -1.3
AKASG PP **PP** 12 18 39.1 -3.3
AKASG Malin Array Be 66.91 321 P **P** 12 16 13.6 -1.3
comp=Z,21nm,0.7s,baz=89,slow=5.2,SNR=51
AKASG PP **PP** 12 18 39.1 -3.3
comp=Z,5.9nm,1.0s,baz=96,slow=7.1,SNR=9.1
AKASG LR LR 12 47 56.6
comp=Z,228nm,21.8s,baz=115,slow=38
AK02 Malin Array Si 66.91 321 P **P** 12 16 13.4 -1.4
AK01 Malin Array Si 66.92 321 P **P** 12 16 13.4 -1.4
KIEV Kiev 66.92 321 P **P** 12 16 12.2 -2.7
KIEV pmax pmax
comp=Z,24nm,0.9s
KIEV Kiev 66.92 321 P **P** 12 16 12.2 -2.7
comp=Z,24nm,0.9s
JMB Yambol 67.02 312 *e*P **P** 12 16 16.0 +0.3
ALN Alexandroupoli 67.19 311 P **P** 12 16 16.0 -0.8
ALN Alexandroupoli 67.19 311 *e*P **P** 12 16 16.3 -0.5
PETK Petropavlovsk- 67.37 36 P **P** 12 16 16.0 -1.8
PETK Petropavlovsk- 67.37 36 P **P** 12 16 16.0 -1.8
PETK *e* 12 44 45.2
PETK Petropavlovsk- 67.37 36 P **P** 12 16 16.0 -1.8
comp=Z,2.5nm,0.8s,baz=193,slow=6.1,SNR=4.0
PETK PKP2bc 12 44 45.2
comp=Z,2.3nm,0.7s,baz=110,slow=6.3,SNR=7.4
PETK LR LR 12 47 46.8
comp=Z,185nm,18.3s,baz=246,slow=38
ISR Istrita 67.49 315 *i*P **P** 12 16 19.9 +1.2
ISR Istrita 67.49 315 *i*P **P** 12 16 19.9 +1.2
VRI Vrincioaia 67.49 316 P **P** 12 16 19.4 +0.7
VRI Vrincioaia 67.49 316 *i*P **P** 12 16 19.4 +0.7
PLOR Plostina 67.54 316 P **P** 12 16 19.5 +0.4
PLOR Plostina 67.54 316 *i*P **P** 12 16 19.5 +0.4
SZH Strazhica 67.61 313 *e*P **P** 12 16 18.5 -1.0
TESR Tescani 67.67 317 *i*P **P** 12 16 19.7 -0.1
LIA Limnos Island 67.71 309 *e*P **P** 12 16 18.8 -1.3
KDZ Kurdzhali 67.76 311 *e*P **P** 12 16 20.2 -0.3
PET Petropavlovsk 67.91 36 *e*P **P** 12 16 19.7 -1.4
PET *e*S **S** 12 25 15.3 -2.3
PET *e*SS **SS** 12 29 41.6 +2.0
PET pmax pmax
comp=Z,19nm,0.8s
PET MLR MLR
comp=Z,400nm,14.0s
MLR Muntele Rosu 67.97 315 *i*P **P** 12 16 22.0 +0.2
VAM Vamos 68.04 304 *e*P **P** 12 16 22.9 +0.6
PRAR RASCA 68.11 317 *i*P **P** 12 16 22.3 -0.2
MTUR Matau 68.54 315 P **P** 12 16 25.6 +0.2
MTUR Matau 68.54 315 *i*P **P** 12 16 25.6 +0.2
HNR Honiara 68.56 104 P **P** 12 16 24.6 -1.3
HNR Honiara 68.56 104 P **P** 12 16 24.6 -1.3
comp=Z,36nm,0.8s,baz=141,slow=3.3,SNR=5.1
VOIR 68.58 315 P **P** 12 16 25.2 -0.4
VOIR 68.58 315 *i*P **P** 12 16 25.2 -0.4
AOS Alonnisos 68.63 308 *e*P **P** 12 16 24.3 -1.7
MICGM Minsk 68.67 325 P **P** 12 16 23.0 -2.9
MNK Minsk 68.69 325 *i*P **P** 12 16 23.0 -3.0
MNK pmax pmax
comp=Z,220nm,1.0s
PGB Panagyurishte 68.80 312 *e*P **P** 12 16 26.5 -0.5
ANKY Antikythira Is 68.80 305 *e*P **P** 12 16 26.8 -0.3
BURAR Bucovina Array 68.83 318 *i*P **P** 12 16 27.3 +0.2
BUR08 Bucovina Ar. S 68.84 318 *e*P **P** 12 16 27.2 0.0
NVR Nevrokopi 68.88 311 *e*P **P** 12 16 26.9 -0.6
DID Didima 68.98 307 *e*P **P** 12 16 26.0 -2.2
MMB Musomiste 69.01 311 *e*P **P** 12 16 27.0 -1.3
PLG Polygyros 69.09 310 *e*P **P** 12 16 28.0 -0.8
LSZ Lusaka 69.16 250 P **P** 12 16 32.1 +2.3
SNR=7.7
LSZ Lusaka 69.16 250 *e*P **P** 12 16 31.2 +1.5
comp=Z,31nm,1.1s
SOH Sokhos 69.20 310 *e*P **P** 12 16 28.4 -1.2
MPEP Malo Peshtene 69.21 313 *e*P **P** 12 16 29.1 -0.4
LTK Loutraki 69.24 307 *e*P **P** 12 16 27.9 -1.9
LKR Lokris 69.27 308 *e*P **P** 12 16 27.4 -2.5
KKB Krupnik 69.52 311 *e*P **P** 12 16 30.3 -1.1
JOF Joensuu 69.57 334 *e*P **P** 12 16 31.2 -0.1
JOF pmax pmax
comp=Z,39nm,0.7s
JOF Joensuu 69.57 334 *e*p **P** 12 16 31.2 -0.1
comp=Z,39nm,0.7s
DYR Agios Nikonas 69.65 306 P **P** 12 16 31.6 -0.7
DYR Agios Nikonas 69.65 306 *e*P **P** 12 16 31.6 -0.7
VLX Vlachokerasia 69.65 306 *e*P **P** 12 16 31.5 -1.0
GUR Goura 69.72 307 P **P** 12 16 31.3 -1.6
GUR Goura 69.72 307 *e*P **P** 12 16 31.2 -1.6
LIT Litokhoron 69.79 309 *e*P **P** 12 16 31.9 -1.3
AGG Agios Georgios 69.82 308 P **P** 12 16 30.5 -2.9
AGG Agios Georgios 69.82 308 *e*P **P** 12 16 31.3 -2.1
VAY Valandovo 69.84 311 *e*P **P** 12 16 31.5 -1.9
KLV Kalavryta, Ach 69.88 307 *e*P **P** 12 16 32.0 -1.8
KALE Kalithea 69.92 308 P **P** 12 16 32.3 -1.8
KALE Kalithea 69.92 308 *e*P **P** 12 16 32.2 -1.8
GRG Griva 69.94 310 P **P** 12 16 33.1 -1.0
GRG Griva 69.94 310 *e*P **P** 12 16 32.6 -1.5
TRIZ Trizonia 69.97 307 P **P** 12 16 32.6 -1.6
TRIZ Trizonia 69.97 307 *e*P **P** 12 16 32.3 -1.9
ITM Ithomi 70.00 306 P **P** 12 16 33.1 -1.4
ITM Ithomi 70.00 306 *e*P **P** 12 16 33.3 -1.2
LAKA Lakka 70.03 307 P **P** 12 16 33.1 -1.6
LAKA Lakka 70.03 307 *e*P **P** 12 16 33.5 -1.2
EFP Efpalio 70.10 308 *e*P **P** 12 16 33.6 -1.5
THL Klokotos Trika 70.11 309 *e*P **P** 12 16 33.0 -2.1
PYL PYLOS 70.13 306 *e*P **P** 12 16 33.7 -1.6
DEV Deva 70.13 315 P **P** 12 16 35.8 +0.7
DEV Deva 70.13 315 *i*P **P** 12 16 35.8 +0.7
EVR Evrytania 70.22 308 *e*P **P** 12 16 34.0 -1.9
DRGR 70.39 316 P **P** 12 16 37.1 +0.3
DRGR 70.39 316 *i*P **P** 12 16 37.1 +0.3
RLS Riolos of Patr 70.42 307 *e*P **P** 12 16 36.5 -0.5
APA Apatity 70.57 339 *i*P **P** 12 16 37.0 -0.3
APA *i* 12 16 43.4
APA *i* 12 16 57.5
APA pmax pmax
comp=Z,60nm,1.0s
APA MLR MLR
comp=Z,800nm,20.0s
TRPA Tarpa 70.69 318 *i*P **P** 12 16 38.7 +0.3
TRPA Tarpa 70.69 318 *e*P **P** 12 16 38.4 0.0
FNA Florina 70.69 310 *e*P **P** 12 16 37.0 -1.7
SKO Skopje 70.75 311 *e*P P 12 16 30.0 -9.0
KWP Kalwaria Pacla 70.80 319 *e*P **P** 12 16 38.9 -0.2
KWP pmax pmax
comp=Z,86nm,1.0s
KWP Kalwaria Pacla 70.80 319 *e*P **P** 12 16 38.9 -0.2
comp=Z,86nm,1.0s
KWP Kalwaria Pacla 70.80 319 *e*P **P** 12 16 39.2 +0.1
UZH Uzhgorod 70.92 318 *e*P **P** 12 16 39.3 -0.5
UZH *i* 12 16 49.7
KFL Anninata 70.96 307 P **P** 12 16 39.1 -1.2
BZS Buzias 70.99 315 P **P** 12 16 40.3 -0.1
BZS Buzias 70.99 315 *i*P **P** 12 16 40.3 -0.1
JAN Janina 71.01 309 *e*P **P** 12 16 39.7 -0.9
LKD2 Lefkada island 71.10 308 P **P** 12 16 39.8 -1.4
LKD2 Lefkada island 71.10 308 *e*P **P** 12 16 40.3 -0.9
VLS Valsamata 71.12 307 *e*P **P** 12 16 40.0 -1.3
SUW Suwalki 71.25 324 *e*P **P** 12 16 40.9 -0.8
SUW Suwalki 71.25 324 *e*P **P** 12 16 40.9 -0.8
SUW Suwalki 71.25 324 *e*P **P** 12 16 41.0 -0.8
FIA1 FINESS Array S 71.43 332 *e*P **P** 12 16 41.8 -0.8
FINES FINESS Array B 71.43 332 P **P** 12 16 42.1 -0.5
FINES FINESS Array B 71.43 332 P **P** 12 16 42.1 -0.5
comp=Z,25nm,0.8s,baz=72,slow=6.2,SNR=28
FINES LR LR 12 54 10.3
comp=Z,312nm,20.1s,baz=144,slow=41
CRVS Cervenica-Dubn 71.50 319 *e*P **P** 12 16 41.0 -2.4
CRVS pmax pmax
comp=Z,51nm,1.1s
CRVS Cervenica-Dubn 71.50 319 *e*P **P** 12 16 41.0 -2.4
KAF Kangasniemi 71.51 333 *e*P **P** 12 16 43.2 +0.1
KAF pmax pmax
comp=Z,21nm,0.6s
KAF Kangasniemi 71.51 333 *e*p **P** 12 16 43.2 +0.1
comp=Z,21nm,0.6s,baz=104,slow=5.7
STHS Stebnicka Huta 71.71 319 *e*P **P** 12 16 45.1 +0.4
STHS pmax pmax
comp=Z,10.0nm,0.7s
STHS Stebnicka Huta 71.71 319 *e*P **P** 12 16 45.1 +0.4
KEK Kerkira 71.82 309 *e*P **P** 12 16 44.2 -1.3
DIVS Divibare 71.99 313 P **P** 12 16 45.5 -1.1
KECS Kecovo 72.09 318 *e*P **P** 12 16 46.8 -0.1
KECS Kecovo 72.09 318 *e*P **P** 12 16 46.8 -0.1
NIE Niedzica 72.32 319 *i*P **P** 12 16 49.1 +0.8
NIE *e**PP **pP** 12 16 58.3 +0.1
NIE *e* 12 19 30.7
NIE Niedzica 72.32 319 *i*P **P** 12 16 49.1 +0.8
NIE *e*pP **pP** 12 16 58.3 +0.1
NIE *e*PP **PP** 12 19 30.7 +1.5
BEL Belsk 72.33 322 *e*P **P** 12 16 48.6 +0.4
PSZ Piszkesteto 72.42 317 P **P** 12 16 49.1 +0.1
PSZ Piszkesteto 72.42 317 *e*P **P** 12 16 48.7 -0.3
PSZ Piszkesteto 72.42 317 *i*P **P** 12 16 49.1 +0.1
PSZ Piszkesteto 72.42 317 *e*P **P** 12 16 48.9 -0.1
OJC Ojcow 72.74 320 *i*P **P** 12 16 50.5 -0.3
OJC *e**PP **pP** 12 16 59.8 -0.9
OJC *e* 12 19 31.4
OJC *e*S **S** 12 26 12.8 -1.5
OJC Ojcow 72.74 320 *e*P **P** 12 16 50.4 -0.4
OJC Ojcow 72.74 320 *i*P **P** 12 16 50.5 -0.3
OJC *e*pP **pP** 12 16 59.8 -0.9
OJC *e*PP **PP** 12 19 31.4 -1.4
OJC *e*S **S** 12 26 12.8 -1.5
OJC L L 12 54 57.1
comp=Z,200nm,20.3s
PKSM Moragy 73.12 316 *i*P **P** 12 16 52.7 -0.4
PKSM Moragy 73.12 316 *i*P **P** 12 16 52.7 -0.4

PKSM Moragy 73.12 316⇓eP P 12 16 52.5 -0.6
VYHS Vyhne 73.19 318 eP P 12 16 53.3 -0.2
VYHS pmax pmax
comp=Z,11nm,0.9s
VYHS Vyhne 73.19 318 eP P 12 16 53.3 -0.2
PKSG 73.39 317⇓eP P 12 16 54.6 0.0
CSKK Cs^ţkako 73.47 317⇓eP P 12 16 55.0 -0.2
KEV Kevo 73.56 341 eP P 12 16 55.6 +0.4
KEV pmax pmax
comp=Z,35nm,0.7s
KEV Kevo 73.56 341 ep P 12 16 55.6 +0.4
comp=Z,35nm,0.7s
KEV Kevo 73.56 341 eP P 12 16 54.5 -0.6
comp=Z,18nm,0.6s
PKST T"'s 73.62 317⇓eP P 12 16 55.8 -0.2
OKC Ostrava-Krasne 73.76 319 eP P 12 16 57.1 +0.3
OKC e 12 17 03.3
OKC Ostrava-Krasne 73.76 319⇓eP P 12 16 57.1 +0.3
OKC ex x 12 17 00.6
OKC ex x 12 17 03.3
ARCES ARCESS Array B 73.99 340 P P 12 16 57.9 +0.2
ARCES ARCESS Array B 73.99 340 P P 12 16 57.9 +0.2
comp=Z,20nm,0.6s,baz=91,slow=6.1,SNR=97
ARCES LR LR 12 52 11.1
comp=Z,506nm,21.3s,baz=108,slow=38
ARE0 ARCESS Array S 73.99 340 eP P 12 16 57.5 -0.2
MORC Moravsky Berou 74.14 319 ⇓P P 12 16 59.2 +0.1
MORC Moravsky Berou 74.14 319 eP P 12 16 58.6 -0.5
comp=Z,67nm,1.2s
MORC Moravsky Berou 74.14 319⇓iP P 12 16 59.2 +0.1
TIP Timpagrande 74.16 308 eP P 12 16 59.1 -0.4
comp=Z,66nm,1.3s
BEHE Becsehely 74.43 316⇓eP P 12 17 01.1 +0.3
SOP Sopron 74.65 317⇓eP P 12 17 01.9 -0.1
GKP Gorka Klasztor 74.65 323 eP P 12 17 01.9 0.0
KOGS Kog 74.79 316 iP P 12 17 02.8 0.0
CEL Celeste 74.82 307 eP P 12 17 03.6 +0.4
CEL epP pP 12 17 10.1 -3.1
CUC Castrocucco 74.90 309 eP P 12 17 02.9 -0.8
comp=Z,8.1nm,0.6s
DPC Dobruska-Polom 74.97 320⇓iP P 12 17 04.6 +0.7
DPC e 12 17 10.1
DPC Dobruska-Polom 74.97 320⇓iP P 12 17 04.6 +0.7
DPC ex x 12 17 08.1
DPC ex x 12 17 10.1
KSP Ksiaz 75.03 320⇓iP P 12 17 04.4 +0.3
KSP Ksiaz 75.03 320 eP P 12 17 04.5 +0.3
CONA Conrad Observa 75.13 317⇓iP P 12 17 04.7 -0.2
comp=Z,18nm,1.0s,SNR=11
UPC Upice 75.18 320 eP P 12 17 05.6 +0.5
UPC e 12 17 11.4
UPC Upice 75.18 320⇓eP P 12 17 05.6 +0.5
UPC ex x 12 17 09.8
UPC ex x 12 17 11.4
BILL Bilibino 75.20 22⇑iP P 12 17 04.5 -0.3
BILL eSS SS 12 31 32.2 +1.3
BILL pmax pmax
comp=Z,140nm,0.8s
BILL MLR MLR
comp=Z,200nm,16.0s
ARSA Arzberg 75.32 316⇓iP P 12 17 06.3 +0.3
comp=Z,50nm,1.6s,SNR=12
MIR Mirnyy 75.40 180 eP P 12 17 07.0 +1.2
MIR e 12 17 26.0
MIR pmax pmax
comp=Z,44nm,1.2s
BOJS Bojanci 75.44 315 iP P 12 17 06.3 -0.3
TREC Trest 75.45 319 eP P 12 17 06.7 +0.1
TREC e 12 17 13.0
TREC MLR MLR
comp=Z,200nm,22.1s
TREC Trest 75.45 319⇓eP P 12 17 06.7 +0.1
TREC ex x 12 17 13.0
TREC AMS AMS 12 54 30.0
comp=Z,200nm,22.1s
PERS Pernice 75.58 316 iP P 12 17 07.6 +0.1
SOKA Soboth 75.64 316⇓eP P 12 17 08.0 +0.2
comp=Z,61nm,1.3s
BOSA Boshof 75.76 237 P P 12 17 10.3 +1.4
BOSA Boshof 75.76 237 P P 12 17 10.3 +1.4
comp=Z,21nm,0.6s,baz=82,slow=5.3,SNR=31
BOSA LR LR 12 45 22.3
comp=Z,356nm,20.4s,baz=71,slow=32
OBKA Obir 75.97 316⇓iP P 12 17 10.0 +0.2
comp=Z,56nm,1.3s,SNR=13
LJU Ljubljana 75.97 315 iP P 12 17 09.9 +0.2
PRU Pruhonice 76.10 319 eP P 12 17 10.7 +0.4
PRU e 12 17 16.5
PRU MLR MLR
comp=Z,200nm,18.6s
PRU Pruhonice 76.10 319⇓eP P 12 17 10.7 +0.4
PRU ex x 12 17 14.2
PRU ex x 12 17 16.5
PRU AMS AMS 12 56 50.0
comp=Z,200nm,18.6s
CASY Casey 76.15 173 eP P 12 17 08.6 -1.5
comp=Z,18nm,1.4s
BSD Bornholm Skovb 76.16 325⇓iP P 12 17 09.5 -1.0
BSD pmax pmax
comp=Z,27nm,0.9s
BSD Bornholm Skovb 76.16 325⇓iP P 12 17 09.5 -1.0
comp=Z,27nm,0.9s
PRA Prague 76.17 319 ⇓P P 12 17 11.0 +0.3
MOA Molln 76.20 317⇓iP P 12 17 10.6 -0.3
comp=Z,30nm,1.3s,SNR=14
VOY Vojsko 76.41 315 eP P 12 17 10.9 -1.4
VOY e 12 17 16.9
VOY e 12 17 26.8
BRG Berggiesshubel 76.52 320⇓iP P 12 17 12.8 +0.2
comp=Z,70nm,1.6s
BRG Berggiesshubel 76.52 320 eP P 12 17 13.1 +0.5
comp=Z,29nm,1.0s
BRG Berggiesshubel 76.52 320⇓iP P 12 17 12.9 +0.2
BRG pmax pmax
comp=Z,70nm,1.6s
CADS Cadrg 76.52 315 eP P 12 17 12.5 -0.3
MYKA Terra Mystica 76.59 316⇓eP P 12 17 13.1 -0.1
comp=Z,48nm,1.4s
GEC2 GERESS Array S 76.60 318 eP P 12 17 13.5 +0.2
comp=Z,71nm,1.3s
GEC2 GERESS Array S 76.60 318 eP P 12 17 13.5 +0.2
GEC2 pmax pmax
comp=Z,71nm,1.3s
GERES GERESS Array B 76.60 318 P P 12 17 13.5 +0.2
GERES PP PP 12 19 59.8 -5.8
GERES GERESS Array B 76.60 318 P P 12 17 13.5 +0.2
comp=Z,21nm,0.7s,baz=89,slow=5.5,SNR=146
GERES PP PP 12 19 59.8 -5.8
comp=Z,0.6nm,0.2s,baz=85,slow=8.2,SNR=3.5
GERES LR LR 12 57 11.5
comp=Z,108nm,19.0s,baz=283,slow=40
RUE Ruedersdorf 76.68 322 eP P 12 17 13.7 +0.2
comp=Z,166nm,1.4s
RUE Ruedersdorf 76.68 322 eP P 12 17 13.5 0.0
comp=Z,82nm,0.9s
KHC Kasperske Hory 76.69 318⇓iP P 12 17 13.9 +0.2
KHC e 12 17 19.3
KHC Kasperske Hory 76.69 318⇓iP P 12 17 13.9 +0.2
KHC ex x 12 17 16.8
KHC ex x 12 17 19.3
KHC Kasperske Hory 76.69 318 eP P 12 17 13.7 0.0
comp=Z,7.6nm,0.7s
KBA Koelnbreinsper 76.81 316⇓iP P 12 17 14.0 -0.6
comp=Z,17nm,0.8s,SNR=9.7
FBE Freiberg 76.89 320 eP P 12 17 15.4 +0.7
comp=Z,90nm,1.4s
CLL Collm 77.12 321 eP P 12 17 16.0 -0.1
comp=Z,22nm,0.9s
CLL Collm 77.12 321⇓iP P 12 17 15.9 -0.1
CLL eS S 12 27 02.0 -1.0
CLL pmax pmax
comp=Z,22nm,0.9s
CLL MLR MLR
comp=Z,200nm,19.9s
CLL Collm 77.12 321⇓iP P 12 17 15.9 -0.1
comp=Z,22nm,0.9s
CLL i 12 17 19.5
CLL i PcP pP 12 17 25.3 -0.7
CLL ePP PP 12 20 08.0 -1.8
CLL eS S 12 27 02.0 -1.0
CLL eSP ScS 12 27 34.0 +2.8
CLL ePPS PPS 12 27 59.0
CLL e(SS) 12 32 18.0
CLL eSSS SSS 12 35 30.0
CLL e 12 36 48.0
CLL LmV 12 58 00.0
comp=Z,200nm,19.9s
WET Wettzell 77.15 318 eP P 12 17 16.6 +0.3
comp=Z,47nm,1.3s
WET Wettzell 77.15 318 eP P 12 17 16.6 +0.3
WET pmax pmax
comp=Z,47nm,1.3s
RJOB Jochberg 77.19 317 eP P 12 17 16.1 -0.5
comp=Z,26nm,1.0s
ABTA Abfaltersbach 77.37 316⇓eP P 12 17 16.8 -0.9
comp=Z,25nm,1.3s,SNR=11
TANN Tannenbergstha 77.44 320 eP P 12 17 18.2 +0.2
comp=Z,34nm,1.5s
NKC Novy Kostel 77.45 319 eP P 12 17 18.4 +0.4
NKC e 12 17 22.8
NKC Novy Kostel 77.45 319⇓eP P 12 17 18.4 +0.4
NKC ex x 12 17 22.8
WERN Wernitzgruen 77.50 320 eP P 12 17 18.6 +0.4
comp=Z,51nm,1.9s
GUNZ Gunzen 77.53 320 eP P 12 17 18.7 +0.3
comp=Z,37nm,1.3s
WERD Werda 77.55 320 eP P 12 17 18.6 +0.1
comp=Z,38nm,1.5s
ROTZ Rotzenmuhle 77.60 319 eP P 12 17 19.6 +0.8
comp=Z,54nm,1.3s
PLN Plauen 77.64 320 eP P 12 17 19.3 +0.3
comp=Z,83nm,0.9s
MANZ Manzenberg 77.67 319 eP P 12 17 19.9 +0.7
comp=Z,69nm,1.4s
DZM Mont Dzumac 77.77 115 P P 12 17 19.9 -0.4
DZM Mont Dzumac 77.77 115 P P 12 17 19.9 -0.4
comp=Z,6.9nm,0.9s,baz=351,slow=9.1,SNR=4.9
DZM LR LR 12 53 21.4
comp=Z,261nm,18.9s,baz=41,slow=37
NEUB Neuenburg 77.89 320 eP P 12 17 20.4 +0.1
comp=Z,50nm,1.3s
WTTA Wattenberg 77.97 316⇓eP P 12 17 20.4 -0.8
comp=Z,33nm,0.8s,SNR=18
MOX Moxa 77.99 320 eP P 12 17 21.2 +0.3
comp=Z,20nm,1.0s
MOX Moxa 77.99 320 eP P 12 17 21.2 +0.3
MOX pmax pmax
comp=Z,20nm,1.0s
FUR Furstenfeldbru 78.21 317 eP P 12 17 22.0 -0.2
comp=Z,140nm,1.8s
FUR Furstenfeldbru 78.21 317 eP P 12 17 22.0 -0.2
FUR pmax pmax
comp=Z,140nm,1.8s
GRF Grafenberg Arr 78.24 319 eP P 12 17 23.0 +0.6
comp=Z,44nm,1.0s
GRF Grafenberg Arr 78.24 319 eP P 12 17 23.0 +0.6
GRF pmax pmax
comp=Z,44nm,1.0s
GRFO Grafenberg 78.24 319 eP P 12 17 22.9 +0.5
GRFO pmax pmax
comp=Z,38nm,1.0s
GRFO Grafenberg 78.24 319 eP P 12 17 22.9 +0.5
comp=Z,38nm,1.0s
MOTA Moosalm 78.33 316⇓eP P 12 17 22.3 -0.8
comp=Z,37nm,1.0s
NB2 NORSAR Subarra 78.45 331 P P 12 17 22.7 -0.6
comp=Z,12nm,0.8s,baz=96,slow=5.3
NB2 NORSAR Subarra 78.45 331 P P 12 17 22.7 -0.6
baz=96,slow=5.3
NOA NORSAR Array B 78.45 331 P P 12 17 22.6 -0.8
NOA PP PP 12 20 16.5 -4.2
NOA NORSAR Array B 78.45 331 P P 12 17 22.6 -0.8
comp=Z,18nm,0.7s,baz=92,slow=5.6,SNR=39
NOA PP PP 12 20 16.5 -4.2
comp=Z,1.7nm,0.8s,baz=89,slow=7.5,SNR=3.2
NOA LR LR 12 59 32.6
comp=Z,204nm,20.1s,baz=65,slow=41
RETA Reutte 78.56 317⇓iP P 12 17 23.8 -0.5
comp=Z,38nm,0.8s,SNR=27
FETA Feichten 78.59 316⇓iP P 12 17 24.2 -0.4
comp=Z,47nm,1.4s,SNR=18
NAO01 NORSAR Array S 78.61 330 eP P 12 17 23.4 -0.8
comp=Z,32nm,0.9s
CLZ Clausthal 78.77 321 eP P 12 17 25.5 +0.2
comp=Z,39nm,0.9s
CLZ Clausthal 78.77 321 eP P 12 17 25.5 +0.2
CLZ pmax pmax
comp=Z,39nm,0.9s
BSEG Bad Segeberg 78.80 323 eP P 12 17 25.8 +0.5
comp=Z,134nm,1.1s
BSEG Bad Segeberg 78.80 323 eP P 12 17 25.8 +0.5
BSEG pmax pmax
comp=Z,134nm,1.1s
NRDL Niedersach Rie 78.93 322 eP P 12 17 26.7 +0.7
comp=Z,95nm,1.6s
DAVA Damuels 79.17 316⇓iP P 12 17 27.5 -0.2
comp=Z,67nm,1.5s,SNR=16
KONO Kongsberg 79.22 329 eP P 12 17 26.9 -0.6
KONO pmax pmax
comp=Z,28nm,1.0s
KONO Kongsberg 79.22 329 eP P 12 17 26.9 -0.6
comp=Z,28nm,1.0s
MUD Monsted U'grnd 79.45 326⇓iP P 12 17 29.2 +0.4
MUD pmax pmax
comp=Z,34nm,0.9s
MUD Monsted U'grnd 79.45 326⇓iP P 12 17 29.2 +0.4
comp=Z,34nm,0.9s
TUE Stuetta 79.56 316 eP P 12 17 29.6 -0.3
comp=Z,81nm,1.4s
MAW Mawson 79.57 191 P P 12 17 29.7 +0.6
MAW Mawson 79.57 191 P P 12 17 29.7 +0.6
comp=Z,12nm,1.0s,baz=19,slow=7.2,SNR=14
MAW LR LR 12 48 03.1
comp=Z,249nm,19.5s,baz=32,slow=32
STU Stuttgart 79.58 318 eP P 12 17 29.7 0.0
STU Stuttgart 79.58 318 eP P 12 17 29.1 -0.6
STU Stuttgart 79.58 318 eP P 12 17 29.1 -0.6
TOD Tromm 79.81 319 eP P 12 17 30.7 -0.3
TOD Tromm 79.81 319 eP P 12 17 30.7 -0.3
SPAK Spaichingen-Ko 79.88 317 eP P 12 17 31.0 -0.4
TSUM Tsumeb 79.95 249 eP P 12 17 33.9 +1.5
comp=Z,48nm,1.6s
PGF Pioggiola 79.98 312⇓iP P 12 17 31.5 -0.7
comp=Z,95nm,1.3s
PGF Pioggiola 79.98 312⇓iP P 12 17 31.5 -0.7
PGF pmax pmax
comp=Z,95nm,1.3s
PGF Pioggiola 79.98 312⇓iP P 12 17 31.5 -0.7
comp=Z,95nm,1.3s
TNS Taunus Mts 80.02 319 eP P 12 17 32.4 +0.3
comp=Z,22nm,0.9s
TNS Taunus Mts 80.02 319 eP P 12 17 32.4 +0.3
TNS pmax pmax
comp=Z,22nm,0.9s
KEST Kesra 80.14 305 P P 12 17 33.5 +0.4
KEST Kesra 80.14 305 P P 12 17 33.5 +0.4
comp=Z,4.7nm,0.6s,baz=97,slow=1.6,SNR=24
KEST LR LR 12 53 47.8
comp=Z,72nm,20.7s,baz=353,slow=36
BFO Black Forest 80.17 318 eP P 12 17 32.7 -0.3
comp=Z,34nm,1.3s
BFO Black Forest 80.17 318 eP P 12 17 32.7 -0.3
BFO pmax pmax
comp=Z,34nm,1.3s
BFO Black Forest 80.17 318 eP P 12 17 32.0 -0.9
comp=Z,28nm,1.2s
BFO Black Forest 80.17 318 P P 12 17 32.3 -0.7
comp=Z,106nm,1.2s,SNR=5.8
IBBN Ibbenburen 80.37 322 eP P 12 17 34.3 +0.4
comp=Z,92nm,1.1s
FELD Feldberg im Sc 80.41 317 eP P 12 17 34.0 -0.4
LANF Langenberg 80.49 318 eP P 12 17 34.6 0.0
LANF Langenberg 80.49 318 eP P 12 17 34.6 0.0
LANF Langenberg 80.49 318 eP P 12 17 34.6 0.0
SUR Sutherland 80.56 235 P P 12 17 38.5 +3.0
comp=Z,282nm,0.7s,SNR=10.0
SUR Sutherland 80.56 235 eP P 12 17 37.2 +1.7
comp=Z,20nm,0.7s
ABH Alteburg 80.61 319 eP P 12 17 35.1 -0.2
LIBD Limburg 80.67 317 eP P 12 17 35.6 0.0
LIBD Limburg 80.67 317 eP P 12 17 35.6 0.0
BUG Bochum--Univer 80.71 321 eP P 12 17 36.0 +0.3
comp=Z,62nm,1.1s
BBS Basel-Blauen 80.77 317 eP P 12 17 35.6 -0.6
BBS Basel-Blauen 80.77 317 eP P 12 17 35.6 -0.6
CDF Champ du Feu 80.87 318⇓iP P 12 17 35.9 -0.9
comp=Z,39nm,1.0s
CDF Champ du Feu 80.87 318⇓iP P 12 17 35.9 -0.9
CDF pmax pmax
comp=Z,39nm,1.0s
RUP Ruppelstein 80.94 319 eP P 12 17 37.0 -0.1
RUP Ruppelstein 80.94 319 eP P 12 17 37.0 -0.1
SAOF Saorge 80.95 313 eP P 12 17 36.6 -0.7
SAOF Saorge 80.95 313 eP P 12 17 36.6 -0.7
SAOF Saorge 80.95 313 eP P 12 17 36.6 -0.7
ECH Echery 80.96 317 eP P 12 17 36.8 -0.4
ECH pmax pmax
comp=Z,13nm,1.1s
ECH Echery 80.96 317 eP P 12 17 36.8 -0.4
comp=Z,13nm,1.1s
ECH Echery 80.96 317 eP P 12 17 36.5 -0.7
MOF Molkenrain 81.00 317 eP P 12 17 36.4 -1.1
MOF Molkenrain 81.00 317 eP P 12 17 36.4 -1.1
MOF Molkenrain 81.00 317 eP P 12 17 36.4 -1.1
AUTN L'Aution 81.04 313 eP P 12 17 37.5 -0.5
AUTN L'Aution 81.04 313 eP P 12 17 37.5 -0.5
AUTN L'Aution 81.04 313 eP P 12 17 37.5 -0.5
SBF Sospel 81.05 313⇓iP P 12 17 37.3 -0.5
comp=Z,143nm,1.2s
SBF Sospel 81.05 313⇓iP P 12 17 37.3 -0.5
SBF pmax pmax
comp=Z,143nm,1.2s
SBF Sospel 81.05 313⇓iP P 12 17 37.3 -0.5
comp=Z,143nm,1.2s
TOUF Mont Tournerai 81.17 313 eP P 12 17 37.9 -0.7
TOUF Mont Tournerai 81.17 313 eP P 12 17 37.9 -0.7
TOUF Mont Tournerai 81.17 313 eP P 12 17 37.9 -0.7
HINF Hinteralfeld 81.19 317 eP P 12 17 37.6 -0.9
HINF Hinteralfeld 81.19 317 eP P 12 17 37.6 -0.9
HINF Hinteralfeld 81.19 317 eP P 12 17 37.6 -0.9
LOMF Lomont 81.24 317 eP P 12 17 38.2 -0.6
LOMF Lomont 81.24 317 eP P 12 17 38.2 -0.6
LOMF Lomont 81.24 317 eP P 12 17 38.2 -0.6
MVIF Mont Vial 81.25 313 eP P 12 17 38.0 -1.0
MVIF Mont Vial 81.25 313 eP P 12 17 38.0 -1.0
MVIF Mont Vial 81.25 313 eP P 12 17 38.0 -1.0
LPG La Plagne 81.42 315⇓iP P 12 17 39.8 -0.2
comp=Z,77nm,0.8s
LPG La Plagne 81.42 315⇓iP P 12 17 39.8 -0.2
LPG pmax pmax
comp=Z,77nm,0.8s
LPG La Plagne 81.42 315⇓iP P 12 17 39.8 -0.2
comp=Z,77nm,0.8s
LPL La Plagne 81.43 315⇓iP P 12 17 39.8 -0.2
comp=Z,131nm,0.9s
LPL La Plagne 81.43 315⇓iP P 12 17 39.8 -0.2
LPL pmax pmax
comp=Z,131nm,0.9s
LPL La Plagne 81.43 315⇓iP P 12 17 39.8 -0.2
comp=Z,131nm,0.9s
CALN Calern 81.45 313 eP P 12 17 39.9 -0.1
CALN Calern 81.45 313 eP P 12 17 39.9 -0.1
CALN Calern 81.45 313 eP P 12 17 39.9 -0.1
SURF Saint Ours 81.45 314 eP P 12 17 40.0 -0.1
SURF Saint Ours 81.45 314 eP P 12 17 40.0 -0.1
MBDF Montbardon 81.46 314⇓iP P 12 17 39.0 -1.1
comp=Z,67nm,1.1s
MBDF Montbardon 81.46 314⇓iP P 12 17 39.0 -1.1
MBDF pmax pmax
comp=Z,67nm,1.1s
MBDF Montbardon 81.46 314⇓iP P 12 17 39.0 -1.1
comp=Z,67nm,1.1s
HAU Haudompre 81.52 317⇓iP P 12 17 39.4 -0.8
comp=Z,100nm,1.0s
HAU eR
comp=Z,76nm,20.0s
HAU Haudompre 81.52 317⇓iP P 12 17 39.4 -0.8
HAU pmax pmax
comp=Z,101nm,1.0s
HAU Haudompre 81.52 317⇓iP P 12 17 39.4 -0.8
comp=Z,100nm,1.0s
WLF Walferdange 81.53 319 eP P 12 17 40.9 +0.8
comp=Z,73nm,1.6s
MEM Membach 81.56 320 P P 12 17 40.5 +0.2
comp=Z,14nm,1.3s
ABSA Djebel Ababsia 81.61 305 P P 12 17 41.8 +0.8
CMAH Djebel Manchou 81.62 306 P P 12 17 40.0 -1.0
FRF La Foret Royal 81.64 313⇓iP P 12 17 40.5 -0.4
comp=Z,120nm,1.2s
FRF La Foret Royal 81.64 313⇓iP P 12 17 40.5 -0.4
FRF pmax pmax
comp=Z,120nm,1.2s
FRF La Foret Royal 81.64 313⇓iP P 12 17 40.5 -0.4
comp=Z,120nm,1.2s
LMR La Mourre 81.76 313⇓iP P 12 17 41.1 -0.4
comp=Z,39nm,0.9s
LMR La Mourre 81.76 313⇓iP P 12 17 41.1 -0.4
LMR pmax pmax
comp=Z,39nm,0.9s
LMR La Mourre 81.76 313⇓iP P 12 17 41.1 -0.4
comp=Z,39nm,0.9s
CABF La Chapelle 81.80 316⇓iP P 12 17 41.5 -0.2
comp=Z,105nm,1.3s
CABF La Chapelle 81.80 316⇓iP P 12 17 41.5 -0.2
CABF pmax pmax
comp=Z,105nm,1.3s
CABF La Chapelle 81.80 316⇓iP P 12 17 41.5 -0.2
comp=Z,105nm,1.3s
GDM Grand'Maison 81.89 314 eP P 12 17 42.2 -0.1
GDM Grand'Maison 81.89 314 eP P 12 17 42.2 -0.1
PAGF Fort de Pagny 81.89 318⇓iP P 12 17 41.5 -0.6
comp=Z,7.5nm,0.9s
PAGF Fort de Pagny 81.89 318⇓iP P 12 17 41.5 -0.6
comp=Z,7.5nm,0.9s
BCLA Clavier 82.02 320 P P 12 17 43.2 +0.5
comp=Z,16nm,1.6s
ORIF Oris-en-Rattie 82.08 314⇓iP P 12 17 43.1 -0.2
comp=Z,25nm,0.7s
ORIF eR
comp=Z,188nm,22.5s
ORIF Oris-en-Rattie 82.08 314⇓iP P 12 17 43.1 -0.2
ORIF pmax pmax
comp=Z,25nm,0.7s
ORIF Oris-en-Rattie 82.08 314⇓iP P 12 17 43.1 -0.2
comp=Z,25nm,0.7s
GRN Grenoble 82.15 315 eP P 12 17 43.5 -0.1
GRN Grenoble 82.15 315 eP P 12 17 43.5 -0.1
GRN Grenoble 82.15 315 eP P 12 17 43.5 -0.1
CKFL Kef-Lekhel 82.20 306 P P 12 17 45.3 +1.2
MEZF Maizieres J'vi 82.34 318⇓iP P 12 17 43.9 -0.5
MEZF Maizieres J'vi 82.34 318⇓iP P 12 17 43.9 -0.5
GIVF Givet 82.35 319⇓iP P 12 17 44.1 -0.4
comp=Z,54nm,1.2s
GIVF Givet 82.35 319⇓iP P 12 17 44.1 -0.4
GIVF pmax pmax
comp=Z,54nm,1.2s
GIVF Givet 82.35 319⇓iP P 12 17 44.1 -0.4
comp=Z,54nm,1.2s
SFTF Sexfontaines 82.38 318⇓iP P 12 17 44.1 -0.5
comp=Z,109nm,1.1s
SFTF Sexfontaines 82.38 318⇓iP P 12 17 44.1 -0.5
comp=Z,109nm,1.1s
SMRF Simiane la Rot 82.38 313⇓iP P 12 17 44.9 +0.1
comp=Z,51nm,1.1s
SMRF Simiane la Rot 82.38 313⇓iP P 12 17 44.9 +0.1
comp=Z,51nm,1.1s
CASM Ain Smara 82.40 305 P P 12 17 44.9 -0.2
CTEI Djebel Teioual 82.49 305 P P 12 17 46.7 +1.0
DOU Dourbes 82.50 319 P P 12 17 45.7 +0.4
comp=Z,11nm,1.3s
BAIF Baives 82.75 319⇓iP P 12 17 46.4 -0.1
comp=Z,77nm,1.1s
BAIF Baives 82.75 319⇓iP P 12 17 46.4 -0.1
BAIF pmax pmax
comp=Z,77nm,1.1s
BAIF Baives 82.75 319⇓iP P 12 17 46.4 -0.1
comp=Z,77nm,1.1s
DFRA Djebel Bou Aff 82.87 306 P P 12 17 48.8 +1.2
VIVF Saint-Julien-l 82.94 314⇓iP P 12 17 47.3 -0.4
comp=Z,45nm,1.0s
VIVF Saint-Julien-l 82.94 314⇓iP P 12 17 47.3 -0.4
VIVF pmax pmax
comp=Z,45nm,1.0s
VIVF Saint-Julien-l 82.94 314⇓iP P 12 17 47.3 -0.4
comp=Z,45nm,1.0s
SSB Saint Sauveur 82.99 315 eP P 12 17 47.6 -0.4
SSB pmax pmax
comp=Z,17nm,0.9s
SSB Saint Sauveur 82.99 315 eP P 12 17 47.6 -0.4
comp=Z,17nm,0.9s
SSB Saint Sauveur 82.99 315 eP P 12 17 47.5 -0.4
LOR Lormes 83.26 317⇓iP P 12 17 48.6 -0.7
comp=Z,74nm,1.0s

LOR eR
comp=Z,207nm,22.0s
LOR Lormes 83.26 317⇓iP P 12 17 48.6 -0.7
comp=Z,74nm,1.0s
SMF Signal de Mont 83.33 316⇓iP P 12 17 48.9 -0.8
comp=Z,49nm,0.9s
SMF Signal de Mont 83.33 316⇓iP P 12 17 48.9 -0.8
SMF pmax pmax
comp=Z,49nm,0.9s
SMF Signal de Mont 83.33 316⇓iP P 12 17 48.9 -0.8
comp=Z,49nm,0.9s
SSF Saint Saulge 83.52 317⇓iP P 12 17 50.0 -0.6
comp=Z,22nm,0.9s
SSF Saint Saulge 83.52 317⇓iP P 12 17 50.0 -0.6
SSF pmax pmax
comp=Z,22nm,0.9s
SSF Saint Saulge 83.52 317⇓iP P 12 17 50.0 -0.6
comp=Z,22nm,0.9s
LASF Ste Croix 83.60 314⇓iP P 12 17 51.1 0.0
comp=Z,92nm,1.4s
LASF Ste Croix 83.60 314⇓iP P 12 17 51.1 0.0
comp=Z,92nm,1.4s
AVF Avril sur Loir 83.65 316⇓iP P 12 17 50.6 -0.7
comp=Z,50nm,1.1s
AVF Avril sur Loir 83.65 316⇓iP P 12 17 50.6 -0.7
AVF pmax pmax
comp=Z,50nm,1.1s
AVF Avril sur Loir 83.65 316⇓iP P 12 17 50.6 -0.7
comp=Z,50nm,1.1s
AGO Saint Agoulin 83.89 316 eP P 12 17 52.5 0.0
AGO Saint Agoulin 83.89 316 eP P 12 17 52.5 0.0
LBL Lubilhac 83.90 315 eP P 12 17 52.3 -0.4
LBL Lubilhac 83.90 315 eP P 12 17 52.3 -0.4
LBL Lubilhac 83.90 315 eP P 12 17 52.3 -0.4
PYM Petit Puy Mans 84.01 315 eP P 12 17 53.2 0.0
PYM Petit Puy Mans 84.01 315 eP P 12 17 53.2 0.0
PYM Petit Puy Mans 84.01 315 eP P 12 17 53.2 0.0
BGF Bois d'Agland 84.03 316⇓iP P 12 17 52.9 -0.3
comp=Z,69nm,1.1s
BGF Bois d'Agland 84.03 316⇓iP P 12 17 52.9 -0.3
BGF pmax pmax
comp=Z,69nm,1.1s
BGF Bois d'Agland 84.03 316⇓iP P 12 17 52.9 -0.3
comp=Z,69nm,1.1s
TCF Toulx Ste Croi 84.50 316⇓iP P 12 17 55.3 -0.3
comp=Z,38nm,1.2s
TCF Toulx Ste Croi 84.50 316⇓iP P 12 17 55.3 -0.3
TCF pmax pmax
comp=Z,38nm,1.2s
TCF Toulx Ste Croi 84.50 316⇓iP P 12 17 55.3 -0.3
comp=Z,38nm,1.2s
AKET Djebel Ketaf 84.52 306 P P 12 17 57.7 +1.6
CAF Calviac 84.77 315⇓iP P 12 17 56.9 -0.2
comp=Z,35nm,1.1s
CAF Calviac 84.77 315⇓iP P 12 17 56.9 -0.2
CAF pmax pmax
comp=Z,35nm,1.1s
CAF Calviac 84.77 315⇓iP P 12 17 56.9 -0.2
comp=Z,35nm,1.1s
TAM Tamanrasset 84.79 292 eP P 12 17 58.7 +1.0
TAM pmax pmax
comp=Z,25nm,1.3s
TAM Tamanrasset 84.79 292 eP P 12 17 58.7 +1.0
comp=Z,25nm,1.3s
ADJB Djebel Djouab 84.87 306 P P 12 17 59.0 +1.2
MTLF Montolieu 84.87 313⇓iP P 12 17 57.3 -0.2
comp=Z,58nm,1.2s
MTLF Montolieu 84.87 313⇓iP P 12 17 57.3 -0.2
MTLF pmax pmax
comp=Z,58nm,1.2s
MTLF Montolieu 84.87 313⇓iP P 12 17 57.3 -0.2
comp=Z,58nm,1.2s
RJF Les Rejaudoux 85.11 315⇓iP P 12 17 58.7 0.0
comp=Z,57nm,1.1s
RJF eR
comp=Z,128nm,22.2s
RJF Les Rejaudoux 85.11 315⇓iP P 12 17 58.7 0.0
RJF pmax pmax
comp=Z,57nm,1.1s
RJF Les Rejaudoux 85.11 315⇓iP P 12 17 58.7 0.0
comp=Z,57nm,1.1s
SKP1 Kophill 85.70 322⇓eP P 12 18 01.7 +0.2
SKP1 Kophill 85.70 322 P P 12 18 01.7 +0.2
LFF La Frestale 85.70 315⇓iP P 12 18 01.6 0.0
comp=Z,50nm,1.1s
LFF La Frestale 85.70 315⇓iP P 12 18 01.6 0.0
LFF pmax pmax
comp=Z,50nm,1.1s
LFF La Frestale 85.70 315⇓iP P 12 18 01.6 0.0
comp=Z,50nm,1.1s
LDF La Druitiere 85.74 318⇓iP P 12 18 01.3 -0.5
comp=Z,56nm,1.0s
LDF La Druitiere 85.74 318⇓iP P 12 18 01.3 -0.5
LDF pmax pmax
comp=Z,57nm,1.0s
LDF La Druitiere 85.74 318⇓iP P 12 18 01.3 -0.5
comp=Z,56nm,1.0s
KBI1 Birley Grange 85.88 323 eP P 12 18 02.5 +0.1
KBI1 Birley Grange 85.88 323 P P 12 18 02.5 +0.1
FLN La Foliniere 85.95 319⇓iP P 12 18 02.3 -0.5
comp=Z,52nm,1.0s
FLN eR
comp=Z,171nm,20.8s
FLN La Foliniere 85.95 319⇓iP P 12 18 02.3 -0.5
FLN pmax pmax
comp=Z,52nm,1.0s
FLN La Foliniere 85.95 319⇓iP P 12 18 02.3 -0.5
comp=Z,52nm,1.0s
ESY Stoneypath 86.05 326⇓eP P 12 18 02.8 -0.3
ESY Stoneypath 86.05 326 P P 12 18 02.8 -0.3
MFF Saint Martin d 86.06 316⇓iP P 12 18 02.9 -0.5
comp=Z,57nm,1.1s
MFF Saint Martin d 86.06 316⇓iP P 12 18 02.9 -0.5
MFF pmax pmax
comp=Z,57nm,1.1s
MFF Saint Martin d 86.06 316⇓iP P 12 18 02.9 -0.5
comp=Z,57nm,1.1s
MCD Coleburn Disti 86.09 328 eP P 12 18 03.1 -0.2
MCD Coleburn Disti 86.09 328 P P 12 18 03.1 -0.2
DAG Danmarks Havn 86.22 348⇓iP P 12 18 02.2 -1.4
DAG pmax pmax
comp=Z,8.0nm,0.9s
DAG Danmarks Havn 86.22 348⇓iP P 12 18 02.2 -1.4
comp=Z,9.9nm,0.9s
GRR Gorron 86.26 318⇓iP P 12 18 03.7 -0.6
comp=Z,26nm,0.9s
GRR Gorron 86.26 318⇓iP P 12 18 03.7 -0.6
GRR pmax pmax
comp=Z,27nm,0.9s
GRR Gorron 86.26 318⇓iP P 12 18 03.7 -0.6
comp=Z,26nm,0.9s
SYO Syowa Base 86.36 197⇓iP P 12 18 04.2 0.0
SYO Syowa Base 86.36 197⇓ePcP PcP 12 18 09.0 +2.3
ECK Cauldkaine Hil 86.47 325⇓eP P 12 18 05.2 0.0
ECK Cauldkaine Hil 86.47 325 P P 12 18 05.2 0.0
ESK Eskdalemuir 86.49 325 P P 12 18 05.6 +0.3
comp=Z,224nm,0.7s,SNR=7.8
ESK Eskdalemuir 86.49 325 eP P 12 18 05.3 0.0
ESK AMB AMB 12 18 06.2
comp=Z,37nm,0.9s
ESK Eskdalemuir 86.49 325 P P 12 18 05.3 0.0
ESK AMB AMB 12 18 06.2
comp=Z,37nm,0.9s
ESK Eskdalemuir 86.49 325 iP P 12 18 05.9 +0.6
ESK Eskdalemuir 86.49 325 eP P 12 18 04.9 -0.4
comp=Z,25nm,0.8s
MVH1 Achvaich 86.52 328 eP P 12 18 04.6 -0.7
MVH1 Achvaich 86.52 328 P P 12 18 04.6 -0.7
EAU Auchinoon 86.53 326 eP P 12 18 06.2 +0.7
EAU Auchinoon 86.53 326 P P 12 18 06.2 +0.7
ELO Logie Almond 86.55 327 eP P 12 18 05.8 +0.2
ELO Logie Almond 86.55 327 P P 12 18 05.8 +0.2
KESW Keswick, Cumbr 86.57 325 eP P 12 18 05.5 -0.2
KESW AMB AMB 12 18 12.7
comp=Z,47nm,1.3s
KESW Keswick, Cumbr 86.57 325 P P 12 18 05.5 -0.2
KESW AMB AMB 12 18 12.7
comp=Z,47nm,1.3s
MDO Dochfour 86.71 328 eP P 12 18 06.2 -0.2
MDO Dochfour 86.71 328 P P 12 18 06.2 -0.2
HLM1 Long Mynd 86.82 323 eP P 12 18 06.9 -0.1
HLM1 AMB AMB 12 18 08.5
comp=Z,35nm,2.2s
HLM1 Long Mynd 86.82 323 P P 12 18 06.9 -0.1
HLM1 AMB AMB 12 18 08.5
comp=Z,35nm,2.2s
JQE Queens East 86.89 319 eP P 12 18 06.6 -0.8
JQE Queens East 86.89 319 P P 12 18 06.6 -0.8
FOEL Foel Wylfa 86.94 323 eP P 12 18 07.8 +0.2
FOEL AMB AMB 12 18 08.6
comp=Z,41nm,0.9s
FOEL Foel Wylfa 86.94 323 P P 12 18 07.8 +0.2
FOEL AMB AMB 12 18 08.6
comp=Z,41nm,0.9s
ETSF Etsaut 86.95 313⇓iP P 12 18 07.9 0.0
comp=Z,26nm,0.9s
ETSF Etsaut 86.95 313⇓iP P 12 18 07.9 0.0
ETSF pmax pmax
comp=Z,26nm,0.9s
ETSF Etsaut 86.95 313⇓iP P 12 18 07.9 0.0
comp=Z,26nm,0.9s
EAB Aberfoyle 86.95 326 eP P 12 18 07.8 +0.3
EAB Aberfoyle 86.95 326 P P 12 18 07.8 +0.3
MCH1 Michaelchurch 86.99 322⇓eP P 12 18 07.2 -0.6
MCH1 AMB AMB 12 18 10.9
comp=Z,45nm,1.4s
MCH1 Michaelchurch 86.99 322 P P 12 18 07.2 -0.6
MCH1 AMB AMB 12 18 10.9
comp=Z,45nm,1.4s
KAC Achnashellach 87.19 328 eP P 12 18 08.9 +0.2
KAC Achnashellach 87.19 328 P P 12 18 08.9 +0.2
RPZ Rata Peaks 87.25 135 LR LR 12 53 28.7
comp=Z,347nm,21.9s,baz=281,slow=33
WPM1 Penmaenmawr 87.29 323⇓eP P 12 18 09.6 +0.4
WPM1 Penmaenmawr 87.29 323 P P 12 18 09.6 +0.4
KSB Sheil Bridge 87.32 327 eP P 12 18 09.5 +0.2
KSB Sheil Bridge 87.32 327 P P 12 18 09.5 +0.2
SJPF Ste Jean 87.39 313⇓iP P 12 18 10.0 0.0
comp=Z,39nm,1.0s
SJPF Ste Jean 87.39 313⇓iP P 12 18 10.0 0.0
SJPF pmax pmax
comp=Z,39nm,1.0s
SJPF Ste Jean 87.39 313⇓iP P 12 18 10.0 0.0
comp=Z,39nm,1.0s
SGMF Saint Gilles 87.40 318⇓iP P 12 18 09.4 -0.5
comp=Z,34nm,1.1s
SGMF Saint Gilles 87.40 318⇓iP P 12 18 09.4 -0.5
SGMF pmax pmax
comp=Z,35nm,1.1s
SGMF Saint Gilles 87.40 318⇓iP P 12 18 09.4 -0.5
comp=Z,34nm,1.1s
KPL Plockton 87.41 328 eP P 12 18 10.0 +0.2
KPL AMB AMB 12 18 11.4
comp=Z,63nm,2.6s
KPL Plockton 87.41 328 P P 12 18 10.0 +0.2
KPL AMB AMB 12 18 11.4
comp=Z,63nm,2.6s
YLL Llanberis 87.47 323⇓eP P 12 18 10.3 +0.2
YLL Llanberis 87.47 323 P P 12 18 10.3 +0.2
WME Mynydd Eilian 87.49 324⇓eP P 12 18 10.6 +0.4
WME Mynydd Eilian 87.49 324 P P 12 18 10.6 +0.4
WLF1 Llynfaes 87.57 323 eP P 12 18 11.1 +0.6
WLF1 AMB AMB 12 18 18.5
comp=Z,48nm,1.1s
WLF1 Llynfaes 87.57 323 P P 12 18 11.1 +0.6
WLF1 AMB AMB 12 18 18.5
comp=Z,48nm,1.1s
YRE Yr Eifl 87.65 323⇓eP P 12 18 11.2 +0.2
YRE Yr Eifl 87.65 323 P P 12 18 11.2 +0.2
YRC Rhoscolyn 87.68 323 eP P 12 18 11.6 +0.5
YRC Rhoscolyn 87.68 323 P P 12 18 11.6 +0.5
ROSF Rostrenen 87.85 318⇓iP P 12 18 11.7 -0.4
comp=Z,82nm,1.4s
ROSF Rostrenen 87.85 318⇓iP P 12 18 11.7 -0.4
ROSF pmax pmax
comp=Z,82nm,1.4s
ROSF Rostrenen 87.85 318⇓iP P 12 18 11.7 -0.4
comp=Z,82nm,1.4s
DYA Yadsworthy 87.86 321 eP P 12 18 12.1 0.0
DYA AMB AMB 12 18 17.7
comp=Z,42nm,2.6s
DYA Yadsworthy 87.86 321 P P 12 18 12.1 0.0
DYA AMB AMB 12 18 17.7
comp=Z,42nm,2.6s
QUIF Quistinic 87.86 318⇓iP P 12 18 11.4 -0.7
comp=Z,32nm,1.0s
QUIF Quistinic 87.86 318⇓iP P 12 18 11.4 -0.7
QUIF pmax pmax
comp=Z,32nm,1.0s
QUIF Quistinic 87.86 318⇓iP P 12 18 11.4 -0.7
comp=Z,32nm,1.0s
SCO Scoresbysund 89.77 342 iP P 12 18 21.4 +0.8
SCO pmax pmax
comp=Z,8.0nm,1.0s
SCO Scoresbysund 89.77 342 iP P 12 18 21.4 +0.8
comp=Z,7.5nm,1.0s
TOA0 Torodi Ar. Sit 89.81 283 eP P 12 18 22.2 +0.3
TORD Torodi Ar. Bea 89.81 283 P P 12 18 22.6 +0.7
TORD PP PP 12 21 55.9 +1.3
TORD Torodi Ar. Bea 89.81 283 P P 12 18 22.6 +0.7
comp=Z,12nm,0.7s,baz=92,slow=4.9,SNR=96
TORD PP PP 12 21 55.9 +1.3
comp=Z,5.0nm,0.9s,baz=66,slow=7.7,SNR=11
TORD LR LR 12 57 00.9
comp=Z,256nm,21.9s,baz=90,slow=34
ESDC Sonseca Array 90.06 310 P P 12 18 23.1 +0.4
ESDC Sonseca Array 90.06 310 P P 12 18 23.1 +0.4
comp=Z,4.3nm,0.6s,baz=55,slow=4.4,SNR=20
ESDC LR LR 13 03 07.2
comp=Z,110nm,21.1s,baz=165,slow=38
ESLA Sonseca Array 90.06 310 eP P 12 18 22.6 -0.2
comp=Z,6.7nm,1.2s
PAB San Pablo 90.38 310 eP P 12 18 23.5 -0.7
PAB pmax pmax
comp=Z,12nm,0.9s
PAB San Pablo 90.38 310 eP P 12 18 23.5 -0.7
comp=Z,12nm,0.9s
URZ Urewera 90.48 129 LR LR 12 56 01.8
comp=Z,364nm,21.6s,baz=282,slow=34
COLD Coldfoot 91.48 20 eP P 12 18 28.8 +0.1
comp=Z,25nm,1.4s
SDPT Sand Point 91.52 33 eP P 12 18 27.8 -1.3
comp=Z,131nm,1.5s
PBRG Bragança 91.65 313 eP P 12 18 39.6 +10
CHGN Chignik 92.31 32 eP P 12 18 30.2 -2.5
POLO Lamas de Olo 92.52 312 eP P 12 18 35.0 +0.8
comp=Z,16nm,1.4s
MTE Manteigas 92.58 311 eP P 12 18 35.7 +1.3
comp=Z,47nm,1.6s
PCAB Cabril 92.61 313 eP P 12 18 35.4 +0.9
comp=Z,42nm,1.3s
PCBR Castelo Branco 92.66 311 eP P 12 18 35.5 +0.8
comp=Z,26nm,1.5s
PBAR Barrancos 92.73 309 eP P 12 18 35.7 +0.6
comp=Z,61nm,1.5s
SUMG Summit 92.89 347 eP P 12 18 35.8 +0.2
SUMG pmax pmax
comp=Z,27nm,1.0s
SUMG Summit 92.89 347 eP P 12 18 35.8 +0.2
comp=Z,27nm,1.0s
SUMG Summit 92.89 347 iP P 12 18 35.7 +0.2
comp=Z,24nm,1.0s
TRF Thorofare Moun 93.20 24 eP P 12 18 35.9 -1.0
comp=Z,12nm,0.8s
EVO Evora 93.39 310 eP P 12 18 37.5 -0.6
comp=Z,26nm,1.9s
PVAQ Vaqueiros 93.43 309 eP P 12 18 39.0 +0.7
comp=Z,32nm,1.6s
COLA College 93.46 22 eP P 12 18 37.2 -0.6
COLA pmax pmax
comp=Z,7.0nm,0.9s
COLA College 93.46 22 eP P 12 18 37.2 -0.6
comp=Z,7.0nm,0.9s
RSO Redoubt South 93.47 27 eP P 12 18 37.9 -0.3
comp=Z,39nm,0.8s
MCK McKinley 93.60 23 eP P 12 18 38.4 -0.2
MCK pmax pmax
comp=Z,39nm,1.1s
MCK McKinley 93.60 23 eP P 12 18 38.4 -0.2
comp=Z,39nm,1.1s
ILAR Eielson Array 93.86 22 P P 12 18 38.4 -1.3
ILAR PP PP 12 22 26.1 +1.1
ILAR PKKP PKKPdf 12 35 43.0 -0.6
ILAR Eielson Array 93.86 22 P P 12 18 38.4 -1.3
comp=Z,9.3nm,0.8s,baz=301,slow=4.3,SNR=91
ILAR PP PP 12 22 26.1 +1.1
comp=Z,0.6nm,0.8s,baz=287,slow=6.1,SNR=4.4
ILAR PKKP PKKPdf 12 35 43.0 -0.6
comp=Z,1.8nm,0.8s,baz=169,slow=2.6,SNR=14
ILAR LR LR 13 05 08.2
comp=Z,242nm,18.0s,baz=144,slow=38
VNDA Vanda 94.18 168 P P 12 18 40.0 -0.8
VNDA Vanda 94.18 168 P P 12 18 40.0 -0.8
comp=Z,1.7nm,0.9s,baz=292,slow=7.4,SNR=5.9
VNDA LR LR 12 56 08.2
comp=Z,292nm,20.5s,baz=305,slow=32
PMR Palmer 94.54 25 eP P 12 18 42.6 -0.2
PMR e*PP pP 12 18 50.1 -2.9
PMR pmax pmax
comp=Z,27nm,0.9s
PMR Palmer 94.54 25 eP P 12 18 42.6 -0.2
comp=Z,27nm,0.9s
PMR epP pP 12 18 50.1 -2.9
OHAK Old Harbor 94.58 30 eP P 12 18 42.2 -0.9
comp=Z,23nm,0.9s
KDAK Kodiak Island 94.69 29 eP P 12 18 42.8 -0.8
comp=Z,27nm,1.2s
SML Sawmill 94.77 25 eP P 12 18 44.0 0.0
SML pmax pmax
comp=Z,9.0nm,1.0s
SML Sawmill 94.77 25 eP P 12 18 44.0 0.0
comp=Z,8.7nm,1.0s
PAX Paxson 95.34 23 eP P 12 18 46.5 -0.1
PAX pmax pmax
comp=Z,6.0nm,1.0s
PAX Paxson 95.34 23 eP P 12 18 46.5 -0.1
comp=Z,6.4nm,1.0s
DOT Dot Lake 95.51 22 eP P 12 18 47.0 -0.3
comp=Z,5.7nm,0.8s
EGAK Eagle 95.92 21 eP P 12 18 48.7 -0.4
comp=Z,5.7nm,1.0s
MENT Mentasta 96.03 23 eP P 12 18 50.1 +0.4
AFI Afiamalu 96.58 103 LR LR 12 57 53.8
comp=Z,188nm,20.4s,baz=229,slow=33
DBIC Dimbokro 97.25 278 P Pdif 12 18 57.5 +1.2
DBIC Dimbokro 97.25 278 P Pdif 12 18 57.5 +1.2
comp=Z,4.1nm,0.6s,baz=60,slow=4.4,SNR=7.5
DBIC LR LR 13 01 39.3
comp=Z,218nm,19.7s,baz=59,slow=35
QSPA South Pole Qui 98.94 180 P Pdif 12 19 03.6 +0.9
QSPA South Pole Qui 98.94 180 P Pdif 12 19 03.6 +0.9
comp=Z,0.8nm,1.0s,baz=348,slow=2.9,SNR=2.1
YKA Yellowknife Ar 105.41 13 Pdif Pdif 12 19 31.1 -0.5
YKA PP PP 12 23 49.3 -3.3
YKA PKKPbc PKKPbc 12 35 09.4 -3.3
YKA Yellowknife Ar 105.41 13 Pdiff Pdif 12 19 31.1 -0.5
comp=Z,1.1nm,1.0s,baz=328,slow=4.3,SNR=13
YKA PP PP 12 23 49.3 -3.3
comp=Z,1.3nm,0.9s,baz=336,slow=7.9,SNR=8.9
YKA PKKPbc PKKPbc 12 35 09.4 -3.3
comp=Z,1.9nm,0.8s,baz=153,slow=2.6,SNR=29
SCHQ Schefferville 114.27 348 PKiKP PKiKP 12 24 01.9 -0.1
SCHQ PP PP 12 24 56.1 -0.6
SCHQ Schefferville 114.27 348 PKiKP PKiKP 12 24 01.9 -0.1
comp=Z,4.6nm,0.9s,baz=31,slow=5.8,SNR=5.6
SCHQ PP PP 12 24 56.1 -0.6
comp=Z,4.3nm,0.9s,baz=12,slow=8.2,SNR=5.0
FFC Flin Flon 115.13 10 iPKiKP PKPdf 12 24 04.7 +1.0
NEW Newport 116.82 22 ⇓PKiKP PKPdf 12 24 06.5 -0.7
baz=117
B13A Whitefish 117.69 21 ⇑PKiKP PKPdf 12 24 08.4 -0.5
baz=118
A15A Johnson Ranch, 117.76 19 ⇓PKiKP PKPdf 12 24 08.2 -0.9
baz=118
BSMT Bassoo Peak 118.02 21 ePKPdf PKPdf 12 24 09.7 0.0
B14A Marquette Ranc 118.11 20 ⇓PKiKP PKPdf 12 24 08.9 -1.0
baz=118
C13A Hot Springs 118.24 21 ⇓PKiKP PKPdf 12 24 09.3 -0.7
baz=118
B15A Bradely Ranch, 118.39 20 ⇓PKiKP PKPdf 12 24 09.5 -0.8
baz=118
A17A Triple J Farms 118.43 18 ⇓PKiKP PKPdf 12 24 09.7 -0.6
baz=118
D12A Red Ives Fores 118.49 22 ⇓PKiKP PKPdf 12 24 09.8 -0.7
baz=118
B16A M & M Farms, S 118.58 19 ⇓PKiKP PKPdf 12 24 09.9 -0.7
baz=118
SWMT Swartz Lake 118.59 21 ePKPdf PKPdf 12 24 10.1 -0.6
A18A Metzger Ranch, 118.71 17 ⇓PKiKP PKPdf 12 24 10.1 -0.8
baz=118
HUMO Hull Mountain 118.71 30 ePKPdf PKPdf 12 24 11.1 +0.1
D13A Huson 118.78 22 ⇓PKiKP PKPdf 12 24 10.1 -1.0
baz=119
C15A Salmond Ranch, 118.84 20 ⇓PKiKP PKPdf 12 24 10.5 -0.7
baz=119
B17A L&G Farms, Che 118.98 18 ⇓PKiKP PKPdf 12 24 10.7 -0.7
baz=119
SLMT Seeley Lake 119.00 21 ePKPdf PKPdf 12 24 10.8 -0.8
A19A Klindworth Far 119.02 17 ⇓PKiKP PKPdf 12 24 10.8 -0.6
baz=119
C16A Fuhringer Ranc 119.11 19 ⇓PKiKP PKPdf 12 24 10.8 -0.9
baz=119
D14A Greenough 119.13 21 ⇓PKiKP PKPdf 12 24 11.0 -0.8
baz=119
MSO Missoula 119.19 21 ePKPdf PKPdf 12 24 11.1 -0.8
MSO Missoula 119.19 21 ⇓PKiKP PKPdf 12 24 11.1 -0.8
baz=119
B18A Beardsley Farm 119.20 18 ⇓PKiKP PKPdf 12 24 10.9 -0.9
baz=119
CHMT Chamberlain Mo 119.37 21 ePKPdf PKPdf 12 24 11.5 -0.9
B19A Brinkman Farms 119.39 17 ⇓PKiKP PKPdf 12 24 11.5 -0.6
baz=119
D15A Lincoln 119.51 20 ⇑PKiKP PKPdf 12 24 11.9 -0.7
baz=119
EGMT Eagleton 119.53 18 ePKPdf PKPdf 12 24 12.0 -0.4
EGMT Eagleton 119.53 18 ⇓PKiKP PKPdf 12 24 11.9 -0.6
baz=119
C17A Wharram Farm, 119.57 19 ⇑PKiKP PKPdf 12 24 11.8 -0.7
baz=119
KHMM Horse Mountain 119.59 32 ePKPdf PKPdf 12 24 12.9 0.0
F12A Elk City 119.61 23 ⇓PKiKP PKPdf 12 24 11.8 -1.0
baz=119
B20A Solberg Farm, 119.67 16 ⇓PKiKP PKPdf 12 24 12.1 -0.5
baz=119
A22A Carney Farms, 119.71 15 ⇑PKiKP PKPdf 12 24 12.5 -0.3
baz=120
D16A Dana Ranch, Ca 119.84 20 ⇑PKiKP PKPdf 12 24 12.6 -0.6
baz=120
B21A Ellsworth Farm 119.95 16 ⇑PKiKP PKPdf 12 24 12.9 -0.3
baz=120
C19A Slack Wire Ran 120.01 17 ⇑PKiKP PKPdf 12 24 13.2 -0.2
baz=120
D17A Six Diamond Ra 120.02 19 ⇓PKiKP PKPdf 12 24 13.1 -0.5
baz=120
G12A Big Creek, Yel 120.11 23 ⇑PKiKP PKPdf 12 24 13.1 -0.7
baz=120
A24A Westby 120.24 13 ⇓PKiKP PKPdf 12 24 13.5 -0.3
baz=120
E16A East Helena 120.24 20 ⇓PKiKP PKPdf 12 24 13.4 -0.5
baz=120
C20A Veseth Ranch, 120.33 17 ⇓PKiKP PKPdf 12 24 13.5 -0.5
baz=120
ULM Lac du Bonnet 120.38 7 PKP PKPdf 12 24 12.9 -1.0
ULM Lac du Bonnet 120.38 7 PKP PKPdf 12 24 12.9 -1.0
comp=Z,5.8nm,0.7s,baz=336,slow=2.9,SNR=6.0
C21A Desert Coulee 120.48 16 ⇑PKiKP PKPdf 12 24 13.9 -0.4
baz=120
D19A Cripps Ranch, 120.57 18 ⇓PKiKP PKPdf 12 24 14.2 -0.3
baz=120
E17A Martinsdale 120.57 19 ⇑PKiKP PKPdf 12 24 14.1 -0.5
baz=120
H12A Diamond D Ranc 120.78 23 ⇓PKiKP PKPdf 12 24 14.6 -0.5
baz=121
D20A Manuel Ranch, 120.85 17 ⇓PKiKP PKPdf 12 24 14.8 -0.2
baz=121
C22A Vida 120.88 15 ⇓PKiKP PKPdf 12 24 14.9 -0.1
baz=121
WVOR Wild Horse Val 120.90 27 ePKiKP PKPdf 12 24 14.8 -0.5
WVOR Wild Horse Val 120.90 27 ePKPdf PKPdf 12 24 14.8 -0.5
DLMT Dillon 120.93 21 ePKPdf PKPdf 12 24 15.0 -0.3
C23A Lambert 121.00 15 ⇓PKiKP PKPdf 12 24 15.1 -0.1
baz=121
BOZ Bozeman (W) 121.03 20 ePKiKP PKPdf 12 24 15.5 0.0
BOZ Bozeman (W) 121.03 20 ePKPdf PKPdf 12 24 15.5 0.0
F17A Fitzpatrick Pl 121.13 20 ⇓PKiKP PKPdf 12 24 15.5 -0.2
baz=121
D21A La Casta Ranch 121.20 16 ⇓PKiKP PKPdf 12 24 15.6 -0.1
baz=121
E19A Rath Farm, Rou 121.23 18 ⇑PKiKP PKPdf 12 24 15.8 0.0
baz=121
I12A Atlanta 121.30 24 ⇓PKiKP PKPdf 12 24 15.8 -0.3
baz=121
MCMT McKenzie Canyo 121.30 22 ePKPdf PKPdf 12 24 15.7 -0.5
MFID Camas Ranch 121.33 25 ePKPdf PKPdf 12 24 16.1 0.0
MFID Camas Ranch 121.33 25 ⇓PKiKP PKPdf 12 24 15.9 -0.2
baz=121
D22A Cohagen 121.35 16 ⇑PKiKP PKPdf 12 24 15.9 0.0
baz=121

E20A	Meyer Farm, Mu	121.39	17	⇓PKiKP	PKPdf	12 24 15.9	-0.1		
	baz=121								
G17A	Pierce Place,	121.61	20	⇓PKiKP	PKiKP	12 24 16.8	0.0		
	baz=121								
E21A	Keefer Ranch,	121.66	17	⇑PKiKP	PKPdf	12 24 16.4	-0.1		
	baz=121								
F19A	Roth Farm, Mol	121.72	18	⇓PKiKP	PKPdf	12 24 16.8	0.0		
	baz=122								
HLID	Hailey	121.78	24	ePKPdf	PKPdf	12 24 17.1	0.0		
HLID	Hailey	121.78	24	⇓PKiKP	PKPdf	12 24 16.9	-0.2		
	baz=122								
I14A	Mackay	121.84	23	⇓PKiKP	PKPdf	12 24 17.1	-0.1		
	baz=122								
D24A	Glendive	121.85	14	⇓PKiKP	PKPdf	12 24 16.8	-0.1		
	baz=122								
H16A	Russell Place,	121.98	21	⇑PKiKP	PKPdf	12 24 17.5	0.0		
	baz=122								
E22A	Miles City	122.06	16	⇑PKiKP	PKiKP	12 24 17.7	+0.1		
	baz=122								
MDND	Maddock	122.16	10	⇓PKiKP	PKPdf	12 24 17.4	0.0		
	baz=122								
E23A	Ismay	122.18	15	⇓PKiKP	PKiKP	12 24 17.7	-0.1		
	baz=122								
AGMN	Agassiz Nation	122.30	7	ePKPdf	PKPdf	12 24 16.2	-1.5		
YFT	Old Faithful	122.34	21	ePKPdf	PKPdf	12 24 19.5	+1.3		
E24A	Baker	122.38	15	⇓PKiKP	PKiKP	12 24 18.2	+0.1		
	baz=122								
H17A	Grant Village	122.48	20	⇓PKiKP	PKiKP	12 24 19.3	+0.7		
	baz=122								
G20A	Bridger	122.52	18	⇑PKiKP	PKPdf	12 24 18.4	0.0		
	baz=122								
H18A	Shoshone NF, C	122.54	20	⇓PKiKP	PKiKP	12 24 18.7	-0.1		
	baz=122								
F22A	Rosebud	122.58	16	⇑PKiKP	PKiKP	12 24 18.6	0.0		
	baz=122								
I16A	Newdale	122.62	21	⇓PKiKP	PKiKP	12 24 18.8	-0.1		
	baz=122								
H19A	Powell	122.77	19	⇑PKiKP	PKPdf	12 24 18.9	+0.1		
	baz=122								
IMW	Indian Meadow	122.79	21	ePKPdf	PKPdf	12 24 19.1	0.0		
G21A	Lodge Grass	122.82	17	⇓PKiKP	PKPdf	12 24 18.8	-0.1		
	baz=123								
F23A	Volborg	122.87	16	⇑PKiKP	PKPdf	12 24 18.9	0.0		
	baz=123								
MOOW	Moose Ponds	122.99	21	ePKPdf	PKPdf	12 24 19.2	-0.2		
F24A	Ekalaka	123.01	15	⇑PKiKP	PKiKP	12 24 19.4	-0.1		
	baz=123								
EYMN	Ely	123.08	4	ePKPdf	PKPdf	12 24 18.8	-0.5		
G22A	Birney	123.09	17	⇓PKiKP	PKiKP	12 24 19.6	-0.1		
	baz=123								
RRI2	Red Ridge	123.14	22	ePKPdf	PKPdf	12 24 19.7	-0.1		
TPAW	Teton Pass	123.14	21	ePKPdf	PKPdf	12 24 20.0	+0.2		
LOHW	Long Hollow	123.16	21	ePKPdf	PKPdf	12 24 19.2	-0.5		
SNOW	Snow King Moun	123.24	21	ePKPdf	PKPdf	12 24 19.6	-0.4		
H20A	Greybull	123.25	18	⇓PKiKP	PKiKP	12 24 20.0	0.0		
	baz=123								
I19A	Meeteetse	123.33	19	⇓PKiKP	PKPdf	12 24 19.9	-0.2		
	baz=123								
G23A	Biddle	123.36	16	⇓PKiKP	PKPdf	12 24 19.7	-0.2		
	baz=123								
G24A	Alzada	123.50	15	⇓PKiKP	PKPdf	12 24 20.2	0.0		
	baz=123								
H22A	Clearmont	123.64	17	⇑PKiKP	PKPdf	12 24 20.5	0.0		
	baz=123								
I20A	Worland	123.69	19	⇑PKiKP	PKiKP	12 24 20.9	0.0		
	baz=124								
ELK	Elko	123.77	26	ePKPdf	PKPdf	12 24 21.1	+0.1		
H23A	Clabaugh Cattl	123.94	16	⇑PKiKP	PKPdf	12 24 21.0	-0.1		
	baz=124								
J19A	Crowheart	124.00	20	⇑PKiKP	PKPdf	12 24 21.1	-0.2		
	baz=124								
H24A	Dirks Ranch, A	124.00	16	⇑PKiKP	PKPdf	12 24 21.1	-0.1		
	baz=124								
I21A	Big Trails, Te	124.07	18	⇓PKiKP	PKPdf	12 24 21.2	-0.3		
	baz=124								
NVAR	Mina Array Bea	124.19	30	PKP	PKPdf	12 24 22.4	+0.5		
NVAR				PKKPbc	PKKPbc	12 34 08.0	+0.5		
NVAR	Mina Array Bea	124.19	30	PKP	PKPdf	12 24 22.4	+0.5		
	comp=Z,3.2nm,0.8s,baz=305,slow=2.0,SNR=27								
NVAR				PKKPbc	PKKPbc	12 34 08.0	+0.5		
	comp=Z,0.5nm,0.7s,baz=143,slow=3.7,SNR=4.9								
I22A	9 Mile Ranch,	124.25	17	⇓PKiKP	PKPdf	12 24 21.5	-0.2		
	baz=124								
BW06	Boulder Array	124.27	21	ePKPdf	PKPdf	12 24 21.4	-0.5		
PDAR	Pinedale Array	124.27	21	PKP	PKPdf	12 24 21.2	-0.7		
PDAR				PKKPbc	PKKPab	12 34 06.6	-0.5		
PDAR	Pinedale Array	124.27	21	PKP	PKPdf	12 24 21.2	-0.7		
	comp=Z,6.5nm,0.9s,baz=48,slow=2.2,SNR=36								
PDAR				PKKPbc	PKKPab	12 34 06.6	-0.5		
	comp=Z,0.3nm,0.6s,baz=138,slow=7.1,SNR=4.3								
J21A	Lysite	124.45	19	⇓PKiKP	PKPdf	12 24 21.8	-0.5		
	baz=124								
K19A	Absolon Red Bu	124.46	20	⇑PKiKP	PKPdf	12 24 21.8	-0.5		
	baz=124								
HWUT	Hardware Ranch	124.55	23	ePKPdf	PKPdf	12 24 22.4	-0.1		
RSSD	Black Hills	124.72	15	ePKIKP	PKPdf	12 24 21.9	-0.9		
RSSD	Black Hills	124.72	15	ePKPdf	PKPdf	12 24 21.9	-0.9		
K20A	Yellowstone Ra	124.78	20	⇑PKiKP	PKPdf	12 24 22.0	-0.8		
	baz=124								
I24A	Kuemmerle Ranc	124.81	16	⇑PKiKP	PKPdf	12 24 22.1	-0.7		
	baz=125								
L18A	Fontenelle, Gr	124.84	21	⇓PKiKP	PKPdf	12 24 22.0	-1.1		
	baz=125								
L19A	Farson	124.92	21	⇑PKiKP	PKPdf	12 24 22.8	-0.4		
	baz=125								
M17A	Scullys Gap (B	125.00	22	⇑PKiKP	PKPdf	12 24 22.8	-0.5		
	baz=125								
DUG	Dugway	125.25	25	ePKIKP	PKPdf	12 24 24.0	+0.2		
DUG	Dugway	125.25	25	ePKPdf	PKPdf	12 24 24.0	+0.2		
DUG	Dugway	125.25	25	⇑PKiKP	PKPdf	12 24 23.3	-0.5		
	baz=125								
L20A	Wamsutter	125.36	20	⇑PKiKP	PKPdf	12 24 23.6	-0.4		
	baz=125								
K22A	Casper	125.36	18	⇑PKiKP	PKPdf	12 24 23.5	-0.5		
	baz=125								
M19A	Rock Springs	125.52	21	⇑PKiKP	PKPdf	12 24 24.4	0.0		
	baz=125								
LONV	Lake Ozonia	125.53	350	ePKPdf	PKPdf	12 24 23.7	-0.3		
R11A	Troy Canyon, C	125.56	28	⇓PKiKP	PKPdf	12 24 24.5	0.0		
	baz=125								
DAU	Daniels Canyon	125.69	23	ePKIKP	PKPdf	12 24 24.6	-0.2		
DAU	Daniels Canyon	125.69	23	ePKPdf	PKPdf	12 24 24.6	-0.2		
L21A	Rawlins	125.72	19	⇓PKiKP	PKPdf	12 24 24.4	-0.3		
	baz=126								
MDV	Middlebury	125.86	348	ePKPdf	PKPdf	12 24 24.3	-0.3		
M21A	Separation Pea	126.04	19	⇓PKiKP	PKPdf	12 24 25.1	-0.3		
	baz=126								
J28A	Allard Ranch,	126.06	13	⇑PKiKP	PKPdf	12 24 25.0	-0.2		
	baz=126								
L23A	Garrett	126.10	18	⇓PKiKP	PKPdf	12 24 25.2	-0.2		
	baz=126								
K25A	Mack Ranch, Ha	126.17	16	⇓PKiKP	PKPdf	12 24 25.2	-0.2		
	baz=126								
ISA	Isabella	126.22	32	⇓PKiKP	PKPdf	12 24 25.1	-0.5		
	baz=126								
K26A	Motz Farm, Whi	126.27	15	⇑PKiKP	PKPdf	12 24 25.5	-0.1		
	baz=126								
MPMC	Manual Prospec	126.43	31	⇑PKiKP	PKPdf	12 24 26.3	+0.1		
	baz=126								
N20A	Spence Gulch,	126.43	21	⇓PKiKP	PKPdf	12 24 26.0	-0.1		
	baz=126								
L25A	Engebretsen Ra	126.57	16	⇑PKiKP	PKPdf	12 24 26.0	-0.2		
	baz=126								
O19A	Miners Draw (B	126.60	22	⇓PKiKP	PKPdf	12 24 25.9	-0.5		
	baz=126								
ECSD	EROS Data Cent	126.66	9	ePKPdf	PKPdf	12 24 25.9	-0.3		
K28A	Ten Mile Ranch	126.70	14	⇑PKiKP	PKPdf	12 24 26.2	-0.2		
	baz=126								
N21A	Black Mountain	126.75	20	⇑PKiKP	PKPdf	12 24 26.5	-0.3		
	baz=126								
LRMC	Laurel Mountai	126.77	32	⇑PKiKP	PKPdf	12 24 26.7	-0.1		
	baz=127								
MSU	Marysvale	126.93	25	ePKIKP	PKPdf	12 24 28.2	+1.0		
MSU	Marysvale	126.93	25	ePKPdf	PKPdf	12 24 28.2	+1.0		
M24A	Cheyenne	126.96	17	⇓PKiKP	PKPdf	12 24 27.0	-0.1		
	baz=127								
Q16A	Castle Valley	127.01	24	⇑PKiKP	PKPdf	12 24 27.2	-0.1		
	baz=127								
O20A	White River Ci	127.06	21	⇓PKiKP	PKPdf	12 24 27.3	0.0		
	baz=127								
N22A	Wattenberg Ran	127.06	19	⇑PKiKP	PKPdf	12 24 27.2	-0.2		
	baz=127								
EDW2	Edwards Air Fo	127.07	33	⇓PKiKP	PKiKP	12 24 27.6	-0.2		
	baz=127								
SRU	San Rafael	127.10	23	⇓PKiKP	PKPdf	12 24 27.2	-0.2		
	baz=127								
N23A	Red Feather La	127.14	19	⇑PKiKP	PKPdf	12 24 27.3	-0.3		
	baz=127								
P19A	Cripple Cowboy	127.23	22	⇑PKiKP	PKPdf	12 24 27.6	-0.1		
	baz=127								
GSC	Goldstone	127.37	31	⇓PKiKP	PKPdf	12 24 28.1	+0.2		
	baz=127								
L29A	Maesberg Ranch	127.53	13	⇑PKiKP	PKPdf	12 24 28.0	0.0		
	baz=127								
N24A	Carr	127.53	18	⇑PKiKP	PKPdf	12 24 28.1	-0.1		
	baz=127								
P20A	De Beque	127.56	21	⇑PKiKP	PKPdf	12 24 28.3	+0.1		
	baz=127								
O22A	Kremmling	127.61	19	⇓PKiKP	PKPdf	12 24 28.3	-0.2		
	baz=127								
TUQ	Turquoise Moun	127.71	31	⇑PKiKP	PKPdf	12 24 28.8	+0.2		
	baz=128								
O23A	Lake Granby, G	127.77	19	⇓PKiKP	PKPdf	12 24 28.8	0.0		
	baz=128								
P21A	Newcastle	127.88	21	⇓PKiKP	PKPdf	12 24 29.0	+0.1		
	baz=128								
P22A	Eagle	128.05	20	⇓PKiKP	PKPdf	12 24 29.4	+0.1		
	baz=128								
Q20A	Ridgley Place,	128.08	22	⇑PKiKP	PKPdf	12 24 29.2	0.0		
	baz=128								
BINY	Binghamton	128.12	350	ePKPdf	PKPdf	12 24 28.6	-0.5		
JFWS	Jewell Farm	128.17	4	ePKIKP	PKPdf	12 24 27.7	-1.4		
JFWS	Jewell Farm	128.17	4	ePKPdf	PKPdf	12 24 27.7	-1.4		
ISCO	Idaho Springs	128.24	19	⇓PKiKP	PKiKP	12 24 30.1	-0.2		
	baz=128								
SMCO	Snowmass	128.35	20	ePKPdf	PKPdf	12 24 30.1	0.0		
GMRC	Granite Mounta	128.36	31	⇑PKiKP	PKiKP	12 24 30.5	0.0		
	baz=128								
Q21A	Lamborn Mesa,	128.45	21	⇑PKiKP	PKiKP	12 24 30.4	-0.2		
	baz=128								
O26A	Horse Wrangler	128.52	17	⇓PKiKP	PKPdf	12 24 30.1	+0.1		
	baz=128								
S18A	Hurst Farm, Bl	128.53	24	⇑PKiKP	PKPdf	12 24 30.5	+0.3		
	baz=128								
N28A	Pribbeno Ranch	128.58	15	⇑PKiKP	PKiKP	12 24 30.4	-0.3		
	baz=128								
U15A	North Rim	128.63	27	⇑PKiKP	PKiKP	12 24 31.0	-0.2		
	baz=128								
BGNE	Belgrade	128.64	11	⇑PKiKP	PKPdf	12 24 30.3	+0.3		
	baz=128								
Q22A	Crested Butte,	128.66	21	⇓PKiKP	PKPdf	12 24 30.6	+0.1		
	baz=128								
N29A	Votaw Ranch, W	128.68	14	⇑PKiKP	PKPdf	12 24 30.5	+0.3		
	baz=128								
PV01	Paradox Valley	128.70	22	ePKPdf	PKPdf	12 24 30.0	-0.6		
BELC	Belle Mtn. Jos	128.79	32	⇑PKiKP	PKPdf	12 24 30.9	+0.2		
	baz=129								
O27A	Beecher Island	128.80	16	⇓PKiKP	PKPdf	12 24 30.7	+0.2		
	baz=129								
PFO	Pinyon Flat Ob	128.86	32	⇓PKiKP	PKiKP	12 24 31.2	-0.3		
	baz=129								
R21A	Cimarron	128.87	21	⇓PKiKP	PKPdf	12 24 31.1	+0.2		
	baz=129								
P25A	Willow Gulch B	128.95	18	⇓PKiKP	PKPdf	12 24 31.1	+0.2		
	baz=129								
W13A	Hualapai Mount	128.98	29	⇓PKiKP	PKPdf	12 24 31.4	+0.2		
	baz=129								
S20A	Disappointment	129.05	22	⇓PKiKP	PKPdf	12 24 31.3	+0.1		
	baz=129								
P26A	Davis Ranch, A	129.15	17	⇓PKiKP	PKiKP	12 24 31.6	-0.3		
	baz=129								
Q24A	Divide	129.15	19	⇓PKiKP	PKPdf	12 24 31.6	+0.1		
	baz=129								
R22A	Saguache, Gunn	129.28	21	⇑PKiKP	PKiKP	12 24 32.4	-0.1		
	baz=129								
O29A	4D Ranch, Culb	129.29	14	⇓PKiKP	PKiKP	12 24 32.0	-0.2		
	baz=129								
BC3	Big Chuckawall	129.35	32	⇑PKiKP	PKiKP	12 24 32.6	+0.2		
	baz=129								
P27A	Ficken Ranch,	129.37	16	⇓PKiKP	PKPdf	12 24 32.0	+0.3		
	baz=129								
S21A	Coal Bank Pass	129.41	22	⇑PKiKP	PKPdf	12 24 32.3	+0.3		
	baz=129								
Q25A	Bedland, Calha	129.48	18	⇓PKiKP	PKPdf	12 24 32.1	+0.1		
	baz=129								
PDMCI	Parker Dam,Lak	129.50	30	⇓PKiKP	PKiKP	12 24 32.8	+0.2		
	baz=129								
R23A	Moffat	129.63	20	⇑PKiKP	PKPdf	12 24 32.7	+0.3		
	baz=129								
S22A	4UR Ranch, Cre	129.68	21	⇑PKiKP	PKPdf	12 24 32.8	+0.3		
	baz=130								
Q26A	Hugo	129.69	17	⇓PKiKP	PKPdf	12 24 32.6	+0.3		
	baz=129								
R24A	Sanders Place,	129.83	19	⇑PKiKP	PKPdf	12 24 33.0	+0.4		
	baz=130								
T21A	Navajo Lake	130.09	22	⇓PKiKP	PKPdf	12 24 33.4	+0.2		
	baz=130								
GLA	Glamis	130.14	32	⇑PKiKP	PKiKP	12 24 33.8	-0.2		
	baz=130								
R25A	Fountain Ranch	130.17	18	⇓PKiKP	PKPdf	12 24 33.4	+0.2		
	baz=130								
P31A	Stockton	130.20	13	⇓PKiKP	PKPdf	12 24 33.2	+0.1		
	baz=130								
U20A	Newcomb	130.26	23	⇑PKiKP	PKiKP	12 24 34.1	-0.3		
	baz=130								
R26A	Arlington	130.28	18	⇑PKiKP	PKPdf	12 24 33.6	+0.2		
	baz=130								
T22A	Edith	130.31	22	⇓PKiKP	PKPdf	12 24 33.8	+0.1		
	baz=130								
S24A	Houchin Ranch,	130.33	20	⇑PKiKP	PKPdf	12 24 33.8	0.0		
	baz=130								
Q29A	Oakley	130.42	15	⇓PKiKP	PKPdf	12 24 33.9	+0.3		
	baz=130								
R27A	Eads	130.49	17	⇑PKiKP	PKPdf	12 24 34.0	+0.2		
	baz=130								
Q30A	Quinter	130.52	14	⇓PKiKP	PKPdf	12 24 34.1	+0.3		
	baz=130								
U21A	Nageezi	130.54	23	⇑PKiKP	PKPdf	12 24 34.3	+0.2		
	baz=130								
T23A	Casias Ranch,	130.60	21	⇑PKiKP	PKPdf	12 24 34.5	+0.3		
	baz=130								
X16A	Lo Mia Camp, P	130.69	27	⇓PKiKP	PKiKP	12 24 34.9	-0.4		
	baz=130								
Q31A	Ellis	130.69	13	⇓PKiKP	PKiKP	12 24 34.6	-0.3		
	baz=130								
R28A	Tribune	130.71	16	⇓PKiKP	PKPdf	12 24 34.4	+0.3		
	baz=130								
SFIN	Scholer Farm	130.82	1	⇑PKiKP	PKiKP	12 24 34.6	-0.4		
	baz=131								
S26A	Kim	130.90	18	⇑PKiKP	PKPdf	12 24 34.7	+0.1		
	baz=131								
T25A	Trinidad	131.05	19	⇑PKiKP	PKPdf	12 24 35.4	+0.4		
	baz=131								
R30A	Dighton	131.16	15	⇓PKiKP	PKiKP	12 24 35.5	-0.4		
	baz=131								
X18A	Snowflake	131.25	26	⇓PKiKP	PKPdf	12 24 35.8	+0.3		
	baz=131								
T26A	Comanche Natio	131.28	18	⇓PKiKP	PKPdf	12 24 35.6	+0.2		
	baz=131								
V22A	San Miguel Ran	131.28	22	⇓PKiKP	PKiKP	12 24 36.0	-0.4		
	baz=131								
R31A	Burdett	131.34	14	⇑PKiKP	PKiKP	12 24 35.9	-0.4		
	baz=131								
W20A	Ramah	131.35	24	⇓PKiKP	PKiKP	12 24 36.2	-0.4		
	baz=131								
S28A	Manter	131.39	16	⇑PKiKP	PKiKP	12 24 36.2	-0.2		
	baz=131								
T27A	Campo	131.65	18	⇑PKiKP	PKiKP	12 24 36.9	-0.1		
	baz=131								
V23A	Ortiz Mt. (NFS	131.70	22	⇑PKiKP	PKiKP	12 24 37.2	-0.1		
	baz=132								
U25A	Circle Dot Ran	131.72	20	⇓PKiKP	PKiKP	12 24 36.9	-0.4		
	baz=132								
T28A	Walsh	131.77	17	⇑PKiKP	PKiKP	12 24 36.9	-0.3		
	baz=132								
V24A	Rampart Ranch,	132.04	21	⇑PKiKP	PKiKP	12 24 37.9	-0.1		
	baz=132								
214A	Organ Pipe Nat	132.04	31	⇑PKiKP	PKiKP	12 24 37.6	-0.2		
	baz=132								
X21A	Alamocita Cree	132.23	24	⇓PKiKP	PKPdf	12 24 37.6	+0.3		
	baz=132								
ANMO	Albuquerque	132.31	22	ePKPdf	PKPdf	12 24 38.1	+0.7		
Y20A	Horse Springs,	132.46	25	⇑PKiKP	PKiKP	12 24 38.6	-0.3		
	baz=132								
W24A	Lazy 6 Ranch,	132.46	21	⇑PKiKP	PKiKP	12 24 38.7	-0.1		
	baz=132								
LAZ	Ladron	132.53	23	ePKPdf	PKPdf	12 24 38.6	+0.8		
U30A	WK&E Inc. Balk	132.73	16	⇑PKiKP	PKiKP	12 24 38.9	-0.3		
	baz=132								
TUC	Tucson	132.74	28	ePKIKP	PKPdf	12 24 39.4	+1.2		
TUC	Tucson	132.74	28	ePKPdf	PKPdf	12 24 39.4	+1.2		
W25A	X Bar L Ranch,	132.78	20	⇓PKiKP	PKiKP	12 24 38.9	-0.5		
	baz=133								
LPM	Los Pinos Moun	132.80	23	ePKPdf	PKPdf	12 24 39.0	+0.6		
JSRW	J. Sargeant Re	132.83	351	ePKPdf	PKPdf	12 24 38.2	+0.1		
BNM	Barren Site	132.95	23	ePKPdf	PKPdf	12 24 38.9	+0.2		
Y22A	Socorro	133.00	24	⇑PKiKP	PKPdf	12 24 39.2	+0.5		
	baz=133								
X24A	Lazy VL Ranch,	133.03	22	⇑PKiKP	PKiKP	12 24 39.4	-0.6		
	baz=133								
X25A	Clemmons Ranch	133.34	21	⇓PKiKP	PKPdf	12 24 39.9	+0.6		
	baz=133								
Y23A	Lovelace Mesa,	133.36	23	⇓PKiKP	PKiKP	12 24 40.1	-0.5		
	baz=133								
W27A	Bowe Ranch, En	133.38	19	⇓PKiKP	PKPdf	12 24 39.9	+0.5		
	baz=133								
120A	U Bar Ranch, L	133.52	26	⇑PKiKP	PKPdf	12 24 40.2	+0.4		
	baz=133								
Y24A	Capitan	133.60	22	⇓PKiKP	PKPdf	12 24 40.3	+0.4		
	baz=133								
Z22A	Elephant Butte	133.60	24	⇓PKiKP	PKPdf	12 24 40.5	+0.6		
	baz=133								
X26A	CR and CF Fran	133.61	20	⇑PKiKP	PKPdf	12 24 40.3	+0.4		
	baz=133								
Y25A	Mesa, Roswell	133.87	21	⇑PKiKP	PKPdf	12 24 40.8	+0.4		
	baz=134								
Z24A	Sheeppen Canyo	134.16	22	⇓PKiKP	PKPdf	12 24 41.5	+0.6		
	baz=134								
Z25A	Roswell	134.44	22	⇑PKiKP	PKPdf	12 24 41.9	+0.6		
	baz=134								
MSTX	Muleshoe	134.48	19	⇑PKiKP	PKPdf	12 24 41.8	+0.3		
	baz=134								
Z26A	Caprock	134.71	21	⇓PKiKP	PKPdf	12 24 42.2	+0.3		
	baz=134								
Z27A	Tatum	134.94	20	⇓PKiKP	PKPdf	12 24 42.7	+0.4		
	baz=135								
125A	Gardner Draw,	135.02	22	⇓PKiKP	PKPdf	12 24 42.7	+0.2		
	baz=135								
WVT	Waverly	135.05	2	ePKIKP	PKPdf	12 24 41.7	-0.6		
WVT	Waverly	135.05	2	ePKPdf	PKPdf	12 24 41.6	-0.6		
Y32A	R-V Farms, Ver	135.43	15	⇑PKiKP	PKPdf	12 24 43.5	+0.4		
	baz=135								
MNTX	Cornudas Mount	135.60	23	ePKPdf	PKPdf	12 24 42.6	-0.9		
Z30A	Sanderson Ranc	135.63	18	⇑PKiKP	PKPdf	12 24 44.0	+0.4		
	baz=135								
226B	Tecolote Peak,	135.72	22	⇑PKiKP	PKPdf	12 24 44.3	+0.5		
	baz=136								
324A	Moseley Ranch,	135.79	24	⇑PKiKP	PKPdf	12 24 44.2	+0.2		
	baz=136								
KMSC	Kings Mountain	135.79	354	⇓PKiKP	PKPdf	12 24 44.1	+0.4		
	baz=136								
128A	Castleberry Fa	135.81	20	⇓PKiKP	PKPdf	12 24 44.1	+0.2		
	baz=136								
Z31A	Sharp Cattle R	135.89	17	⇓PKiKP	PKPdf	12 24 44.4	+0.4		
	baz=136								
129A	Stewart Farms,	136.01	19	⇑PKiKP	PKPdf	12 24 44.5	+0.2		
	baz=136								
325A	Bean Ranch, Si	136.05	23	⇓PKiKP	PKPdf	12 24 44.6	0.0		
	baz=136								
Z32A	Haskell	136.08	16	⇓PKiKP	PKPdf	12 24 44.8	+0.5		
	baz=136								
227A	Bennet, Jal	136.09	21	⇑PKiKP	PKPdf	12 24 45.1	+0.7		
	baz=136								
MIAR	Mount Ida	136.12	9	ePKIKP	PKPdf	12 24 44.2	-0.1		
MIAR	Mount Ida	136.12	9	ePKPdf	PKPdf	12 24 44.2	-0.1		
228A	UT Block 9, Go	136.24	20	⇓PKiKP	PKPdf	12 24 45.3	+0.6		
	baz=136								
131A	Roby	136.42	17	⇓PKiKP	PKPdf	12 24 45.5	+0.5		
	baz=136								
326A	Caldwell Ranch	136.47	22	⇓PKiKP	PKPdf	12 24 45.5	+0.3		
	baz=136								
425A	Indio Mountain	136.56	24	⇑PKiKP	PKPdf	12 24 45.8	+0

LMEL	**Las Melosas**	**151.16 209**	*i*P	**PKPbc**	**12 25 17.2**	**+0.7**
LMEL	**Las Melosas**	**151.16 209**	*i*P	**PKPbc**	**12 25 17.2**	**+0.7**
LCO	**Las Campanas**	**155.26 214**	*e*PKPdf	**PKPdf**	**12 25 17.1**	**+0.3**
SAML	**Samuel**	**157.07 268**	*e*PKPdf	**PKPdf**	**12 25 18.8**	**-0.5**
LVC	**Limon Verde**	**158.47 229**	*e*PKPdf	**PKPdf**	**12 25 21.9**	**+0.8**
LPAZ	**La Paz**	**160.79 246**	PKP	**PKPdf**	**12 25 25.0**	**+0.7**
LPAZ			PKPab	**PKPab**	**12 26 07.0**	**+0.5**
LPAZ	**La Paz**	**160.79 246**	PKP	**PKPdf**	**12 25 25.0**	**+0.7**
	comp=Z,8.2nm,1.0s,baz=49,slow=2.9,SNR=14					
LPAZ			PKPab	**PKPab**	**12 26 07.0**	**+0.5**
	comp=Z,9.9nm,0.7s,baz=84,slow=3.6,SNR=17					
ROSC	**El Rosal**	**161.68 318**	*e*PKPdf	**PKPdf**	**12 25 25.3**	**+0.2**
ROSC			PKP	**PKPdf**	**12 25 26.0**	**+0.8**
ROSC			PKPab	**PKPab**	**12 26 10.6**	**+0.5**
ROSC	**El Rosal**	**161.68 318**	PKP	**PKPdf**	**12 25 26.0**	**+0.8**
	comp=Z,15nm,0.8s,baz=252,slow=6.4,SNR=9.8					
ROSC			PKPab	**PKPab**	**12 26 10.6**	**+0.5**
	comp=Z,4.3nm,0.5s,baz=98,slow=20,SNR=4.1					
OTAV	**Otavalo**	**167.85 319**	*e*PKPdf	**PKPdf**	**12 25 30.9**	**+0.4**

*NEIC **15** 12:07:28.9, 16°.31N×98°.49W, h10km, MD4.0(MEX), After MEX.*

MEX 15 12:07:28.7±0.4, 16°.23N×98°.49W, h18km±41km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.39**	**65**	*i* P	Pg	12 07 35.3	-1.4
PNIG				*i* S	Sg	12 07 40.9	-1.3
PNIG	**Pinotepa**	**0.39**	**65**	*i* P	Pg	12 07 35.4	-1.4
PNIG				*i* S	Sg	12 07 40.7	-1.5
CAIG	**El Cayaco**	**1.89**	**296**	*e*P	Pn	12 07 57.0	-3.1
CAIG				*i* S	Sn	12 08 19.7	-3.7
CAIG	**El Cayaco**	**1.89**	**296**	*e*P	Pn	12 07 57.0	-3.1
CAIG				*i* S	Sn	12 08 18.6	-4.9
PLIG	**Platanillo**	**2.36**	**336**	*i* P	Pn	12 08 04.3	-2.4
PLIG				*i* S	Sn	12 08 30.8	-4.5
PLIG	**Platanillo**	**2.36**	**336**	*i* P	Pn	12 08 04.3	-2.4
PLIG				*i* S	Sn	12 08 30.9	-4.4
YAIG	**Yautepec**	**2.68**	**348**	*i* P	Pn	12 08 08.6	-2.6
YAIG				*i* S	Sn	12 08 39.2	-4.1
YAIG	**Yautepec**	**2.68**	**348**	*i* P	Pn	12 08 08.6	-2.6
YAIG				*i* S	Sn	12 08 39.2	-4.1
ARIG	**Puente Sto Nin**	**2.71**	**319**	*e*P	Pn	12 08 09.3	-2.1
ARIG				*i* S	Sn	12 08 39.4	-4.3
PPM	**Popocatepetl**	**2.83**	**357**	*e*P	Pn	12 08 09.5	-4.2
PPM				*i* S	Sn	12 08 42.5	-5.3
PPM	**Popocatepetl**	**2.83**	**357**	*i* P	Pn	12 08 11.1	-2.6
PPM				*i* S	Sn	12 08 42.9	-4.9
ZIIG	**Zihuatanejo**	**3.16**	**296**	*i* P	Pn	12 08 14.7	-2.9
ZIIG				*i* S	Sn	12 08 51.5	-3.4
ZIIG	**Zihuatanejo**	**3.16**	**296**	*i* P	Pn	12 08 14.7	-2.9
ZIIG				*i* S	Sn	12 08 51.5	-3.4

*IDC **15** 12:20:53.9±0.8, 0°.27S×125°.17E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.7/23, mbtmp3.9/7, ML3.2/2, Error ellipse: s-maj=39.7km s-min=18.4km az=76.0*

*DJA **15** 12:20:57.3±0.3, 0°.5S±3°×12°.5E±°, h10km, M4.5/6, mb4.9/2, mB5.1/1, MLv4.3/6, Mw(mB)4.5/1*

*ISCJB **15** 12:20:59.6±0.5, 0°.44S±0°.04×125°.19E±0°.04, h52km, mb3.9/5, Error ellipse: s-maj=6.5km s-min=5.6km az=22.3*

ISC 15 12:21:01.1±0.7, 0°.39S±0°.06×125°.20E±0°.05, h52km, n18, σ1§27/23, mb4.0/5, Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMSI	**Cibinong**	**1.55**	**308**	P	**Pn**	**12 21 24.5**	**-1.8**
KMSI				S	**Sn**	**12 21 46.1**	**+0.9**
MNI	**Manado**	**1.85**	**349**	P	**Pn**	**12 21 30.0**	**-0.5**
MNI				S	**Sn**	**12 21 55.0**	**+2.2**
LBMI	**Labuha**	**2.32**	**96**	P	**Pn**	**12 21 36.7**	**-0.1**
LBMI				S	**Sn**	**12 22 03.1**	**-1.0**
LUWI	**Luwuk**	**2.51**	**255**	P	Pn	12 21 44.8	+5.3
LUWI				S	Sn	12 22 19.9	+11
MRSI	**Marisa**	**3.37**	**285**	P	**Pn**	**12 21 49.4**	**-1.8**
SKSI	**Soroako, Sulaw**	**4.41**	**241**	P	**Pn**	**12 22 06.7**	**+1.1**
MSAI	**Masohi**	**4.75**	**128**	P	**Pn**	**12 22 11.3**	**+1.1**
TTSI	**Tana Toraja**	**5.99**	**244**	P	**Pn**	**12 22 28.7**	**+1.5**
	61nm,0.6s,2μm						
SPSI	**Sidrap Palu**	**6.49**	**237**	P	**Pn**	**12 22 35.3**	**+1.3**
KAPI	**Kappang**	**7.12**	**230**	Pn	**Pn**	**12 22 42.3**	**-0.4**
	0.6nm,0.3s,baz=63,slow=9.0,SNR=2.5						
KAPI				Sn	**Sn**	**12 24 01.3**	**-1.1**
	2.3nm,0.3s,baz=105,slow=20,SNR=3.3						
KSM	**Kuching**	**15.00**	**277**	P	**P**	**12 24 35.9**	**+1.4**
FITZ	**Fitzroy Crossi**	**17.61**	**179**	P	**Pn**	**12 25 02.9**	**0.0**
	0.0nm,0.3s,baz=349,slow=10,SNR=2.0						
WRA	**Warramunga Arr**	**21.40**	**156**	P	**P**	**12 25 43.3**	**-1.3**
	0.9nm,0.5s,baz=336,slow=12,SNR=14						
WRA				PcP	**PcP**	**12 29 47.7**	**+0.7**
	0.4nm,1.0s,baz=340,slow=1.9,SNR=4.7						
ASAR	**Alice Springs**	**24.64**	**161**	P	**P**	**12 26 17.4**	**+0.4**
	1.0nm,0.9s,baz=341,slow=8.7,SNR=16						
ASAR				PcP	**PcP**	**12 29 54.5**	**+0.8**
	0.4nm,0.4s,baz=352,slow=2.0,SNR=11						
PETK	**Petropavlovsk-**	**59.79**	**22**	P	**P**	**12 31 01.4**	**+0.6**
	1.7nm,0.7s,baz=187,slow=10,SNR=5.5						
MKAR	**Makanchi Array**	**60.11**	**327**	P	**P**	**12 31 01.8**	**-1.3**
	2.2nm,0.5s,baz=119,slow=8.4,SNR=29						
ZALV	**Zalesovo Beam**	**63.59**	**335**	P	**P**	**12 31 24.4**	**-1.9**
	0.5nm,0.3s,baz=130,slow=3.8,SNR=4.0						
TORD	**Torodi Ar. Bea**	**122.63**	**285**	PKP	**PKPdf**	**12 39 52.2**	**+0.1**
	0.4nm,0.6s,baz=49,slow=1.7,SNR=3.7						

*NSSC **15** 12:23:19.2±2.1, 37°.31N×38°.64E, h17km±22km, MD1.5, ML2.0*

*CSEM **15** 12:23:20.8±0.5, 36°.92N×38°.55E, h1km, MD2.7, Error ellipse: s-maj=12.5km s-min=8.6km az=41.0*

*ISCJB **15** 12:23:21.9±0.5, 37°.04N±0°.03×38°.76E±0°.04, h0km, Error ellipse: s-maj=6.0km s-min=3.6km az=138.5*

*DDA **15** 12:23:24.5, 37°.16N×38°.71E, h7km, MD2.7*

ISC 15 12:23:20.7±0.8, 37°.01N±0°.03×38°.66E±0°.03, h0km, n16, σ1§58/32, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAB	**Bozova**	**0.54**	**328**	*e*P	**Pb**	**12 23 33.1**	**0.0**
ATAB				*e*S	**Sb**	**12 23 40.8**	**-0.7**
ATAB	**Bozova**	**0.54**	**328**	*e*P	**Pb**	**12 23 33.1**	**0.0**
ATAB				*e*S	**Sb**	**12 23 40.8**	**-0.7**
GZT	**Gaziantep**	**0.94**	**292**	*i* P	**Pn**	**12 23 42.2**	**+0.9**
GZT				*i* S	**Sn**	**12 23 56.3**	**+0.8**
SFNV	**Sufian**	**1.31**	**116**	*e*P	**Pn**	**12 23 46.5**	**+0.2**
SFNV				*e*S	**Sn**	**12 24 04.6**	**+0.1**
SFNV				AML	AML	12 24 07.6	
	comp=Z,66nm,0.2s						
SFNV	**Sufian**	**1.31**	**116**	*e*P	**Pn**	**12 23 46.5**	**+0.2**
	SNR=51						
SFNV				*e*S	**Sn**	**12 24 04.6**	**+0.1**
	comp=Z,66nm,0.2s,SNR=49						
JHLN	**Al Jahlan**	**1.35**	**188**	*e*P	**Pb**	**12 23 47.5**	**+0.7**
JHLN				*e*S	**Sn**	**12 24 08.0**	**+2.6**
JHLN				AML	AML	12 24 12.4	
	comp=Z,30nm,0.2s						
JHLN	**Al Jahlan**	**1.35**	**188**	*e*P	**Pb**	**12 23 47.5**	**+0.7**
	SNR=51						
JHLN				*e*S	**Sn**	**12 24 08.0**	**+2.6**
	comp=Z,30nm,0.2s,SNR=49						
AKCD	**Akcadag**	**1.41**	**336**	*e*P	**Pb**	**12 23 49.4**	**+1.4**
AKCD				*i* S	**Sn**	**12 24 07.3**	**+0.2**
AKCD	**Akcadag**	**1.41**	**336**	*e*P	**Pb**	**12 23 49.4**	**+1.4**
AKCD				*i* S	**Sn**	**12 24 07.3**	**+0.2**
ELZG	**Elazig**	**1.51**	**10**	*e*P	**Pg**	**12 23 50.7**	**+1.1**
ELZG				*e*S	**Sg**	**12 24 08.2**	**-1.0**
ELZG	**Elazig**	**1.51**	**10**	*e*P	**Pg**	**12 23 50.7**	**+1.1**
ELZG				*e*S	**Sg**	**12 24 08.2**	**-1.0**
AYKD	**Aykdinkavak**	**1.53**	**286**	*e*P	**Pg**	**12 23 51.4**	**+1.3**
AYKD				*e*S	**Sg**	**12 24 11.5**	**+1.5**
DRWC	**Darouich**	**1.65**	**257**	*e*P	**Pn**	**12 23 48.5**	**-2.4**
DRWC				*e*S	**Sn**	**12 24 09.9**	**-3.0**
DRWC				AML	AML	12 24 14.4	
	comp=Z,14nm,0.4s						
DRWC	**Darouich**	**1.65**	**257**	*e*P	**Pn**	**12 23 48.5**	**-2.4**
	SNR=51						
DRWC				*e*S	**Sn**	**12 24 09.9**	**-3.0**
	comp=Z,14nm,0.4s,SNR=49						
MZRK	**Al-Mazaregh**	**2.00**	**126**	*e*P	**Pn**	**12 23 53.7**	**-2.0**
MZRK				*e*S	**Sn**	**12 24 19.7**	**-1.7**
MZRK	**Al-Mazaregh**	**2.00**	**126**	*e*P	**Pn**	**12 23 53.7**	**-2.0**
	SNR=51						
MZRK				*e*S	**Sn**	**12 24 19.7**	**-1.7**
	SNR=49						

IDC 15 12:26:41.5±1.8, 5°.64S×150°.06E, h106km±12km, mb3.6/6, mb1 3.7/7, mb1mx3.5/19, mbtmp3.6/7, Error ellipse: s-maj=24.4km s-min=19.6km az=113.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.72**	**217**	P	Pn	12 27 52.0	+1.5
	4.9nm,0.3s,baz=57,slow=5.0,SNR=28						
PMG				S	Sn	12 28 44.3	+0.1
	32nm,0.3s,baz=19,slow=22,SNR=13						
CTA	**Charters Tower**	**14.83**	**194**	P	P	12 30 09.9	+0.8
	0.3nm,0.3s,baz=26,slow=12,SNR=4.0						
WRA	**Warramunga Arr**	**20.87**	**226**	P	P	12 31 15.4	0.0
	3.2nm,0.5s,baz=51,slow=11,SNR=114						
WRA				pP	pP	12 31 35.1	-0.3
	3.5nm,0.6s,baz=48,slow=11,SNR=8.9						
DZM	**Mont Dzumac**	**22.76**	**137**	P	P	12 31 34.6	-0.7
	2.9nm,0.4s,baz=297,slow=9.0,SNR=14						
ASAR	**Alice Springs**	**23.73**	**219**	P	P	12 31 44.6	+0.4
	2.5nm,0.6s,baz=55,slow=8.6,SNR=60						
ASAR				pP	pP	12 32 06.5	+0.3
	1.2nm,0.7s,baz=53,slow=9.8,SNR=2.8						
ASAR				S	S	12 35 49.8	-2.0
	0.3nm,0.8s,baz=45,slow=13,SNR=4.7						
FITZ	**Fitzroy Crossi**	**26.87**	**240**	P	P	12 32 12.0	-0.6
	1.8nm,0.4s,baz=65,slow=12,SNR=22						
FITZ				pP	pP	12 32 35.6	-0.3
	2.8nm,0.6s,baz=56,slow=9.0,SNR=3.2						
STKA	**Stephens Creek**	**27.28**	**196**	P	P	12 32 16.7	+0.6
	1.3nm,0.7s,baz=13,slow=16,SNR=3.4						
MKAR	**Makanchi Array**	**79.18**	**320**	P	P	12 38 35.6	+0.7
	0.2nm,0.7s,baz=91,slow=5.9,SNR=2.4						
TORD	**Torodi Ar. Bea**	**147.94**	**286**	PKPbc	PKPbc	12 46 14.1	-1.5
	0.3nm,0.5s,baz=98,slow=2.2,SNR=5.2						

WEL 15 12:31:01.4±0.4, 38°.21S×176°.05E, h173km±3km, ML3.9/17, 18C-4D, Error ellipse: s-maj=2.3km s-min=2.0km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TOZ	**Tahuroa Road**	**0.65**	**318**	↑PN	Pn	12 31 26.1	+0.1
TOZ				SN	Sn	12 31 44.9	-0.1
URZ	**Urewera**	**0.83**	**94**	↓PN	Pn	12 31 26.5	-0.7
URZ				SN	Sn	12 31 45.1	-1.9
URZ				AML	AML	12 31 45.5	
WTVZ	**West Tongariro**	**0.97**	**202**	↑PN	Pn	12 31 28.3	0.0
TWVZ	**Taurewa**	**0.99**	**209**	↑PN	Pn	12 31 28.4	0.0
HIZ	**Hauiti**	**0.99**	**252**	↑PN	Pn	12 31 28.4	+0.1
OTVZ	**Oturere**	**1.00**	**198**	PN	Pn	12 31 28.8	+0.3
BKZ	**Black Stump Fm**	**1.01**	**160**	↑PN	Pn	12 31 28.3	-0.3
BKZ				SN	Sn	12 31 47.6	-2.1
BKZ				AML	AML	12 31 49.8	
NGZ	**Ngauruhoe**	**1.03**	**200**	PN	Pn	12 31 28.8	+0.1
NMHZ	**Naumai**	**1.06**	**147**	PN	Pn	12 31 29.6	+0.7
WPVZ	**Whakapapa**	**1.07**	**202**	PN	Pn	12 31 29.1	0.0
RAHZ	**Arahi**	**1.07**	**131**	PN	Pn	12 31 29.4	+0.5
RAHZ				SN	Sn	12 31 49.7	-0.6
TUVZ	**Tukino**	**1.10**	**196**	↑PN	Pn	12 31 29.4	0.0
FWVZ	**Far West T-bar**	**1.11**	**200**	PN	Pn	12 31 29.4	-0.2
DRZ	**Dome Shelter**	**1.13**	**200**	PN	Pn	12 31 30.2	+0.4
TRVZ	**Turoa**	**1.16**	**200**	PN	Pn	12 31 29.9	-0.1
TRVZ				SN	Sn	12 31 51.1	-1.0
MWZ	**Matawai**	**1.17**	**97**	PN	Pn	12 31 29.4	-0.4
MWZ				SN	Sn	12 31 50.9	-0.8
MWZ				AML	AML	12 31 51.3	
MWZ				AML	AML	12 31 51.3	
MWZ				AML	AML	12 31 51.3	
WNVZ	**Wahianoa**	**1.17**	**198**	PN	Pn	12 31 30.0	0.0
PKVZ	**Pokaka**	**1.21**	**207**	↑PN	Pn	12 31 30.1	-0.1
MOVZ	**Moawhango**	**1.22**	**191**	↑PN	Pn	12 31 29.8	-0.5
MTVZ	**Mangateitei**	**1.26**	**201**	PN	Pn	12 31 30.5	-0.1
BHHZ	**Black Hill Sta**	**1.28**	**180**	↑PN	Pn	12 31 30.4	-0.4
MCHZ	**McNeill Hill**	**1.33**	**158**	PN	Pn	12 31 31.7	+0.6
MCHZ				SN	Sn	12 31 54.1	-0.2
VRZ	**Vera Road**	**1.36**	**228**	PN	Pn	12 31 31.7	+0.2
KNZ	**Kokohu**	**1.51**	**123**	↓PN	Pn	12 31 32.6	-0.1
PNHZ	**Pukenui**	**1.71**	**176**	PN	Pn	12 31 34.3	-0.5
KAHZ	**Kahuranaki**	**1.71**	**158**	↑PN	Pn	12 31 35.0	+0.1
CNGZ	**Carnagh Statio**	**1.72**	**100**	PN	Pn	12 31 35.0	+0.1
MHGZ	**Mahia Peninsul**	**1.73**	**124**	PN	Pn	12 31 35.2	+0.1
PUZ	**Puketiti**	**1.74**	**86**	↓PN	Pn	12 31 34.4	-0.8
PUZ				AML	AML	12 32 01.9	
PUZ				AML	AML	12 32 03.1	
WAZ	**Wanganui**	**1.75**	**208**	↑PN	Pn	12 31 35.0	-0.3
TSZ	**Takapari Road**	**1.85**	**182**	↑PN	Pn	12 31 35.7	-0.6
TSZ				AML	AML	12 32 03.8	
TSZ				AML	AML	12 32 04.1	
WPHZ	**Waipukurau**	**1.88**	**171**	PN	Pn	12 31 36.2	-0.5
MXZ	**Matakaoa Point**	**1.90**	**71**	PN	Pn	12 31 36.5	-0.3
MXZ				AML	AML	12 32 04.6	
PXZ	**Pawanui**	**1.93**	**161**	↑PN	Pn	12 31 36.8	-0.3
PXZ				AML	AML	12 32 05.8	
PXZ				AML	AML	12 32 06.0	
PXZ				AML	AML	12 32 06.1	
PXZ				AML	AML	12 32 07.4	
PRHZ	**Porangahau**	**2.10**	**168**	↑PN	Pn	12 31 38.6	-0.5
POWZ	**Post Office Ro**	**2.19**	**186**	PN	Pn	12 31 39.0	-1.0
BFZ	**Birch Farm**	**2.47**	**177**	↓PN	Pn	12 31 42.1	-1.3
MRZ	**Mangatainoka R**	**2.48**	**188**	↑PN	Pn	12 31 41.9	-1.5
MRZ				AML	AML	12 32 15.0	
MRZ				AML	AML	12 32 15.0	
TIWZ	**Tintock**	**2.57**	**183**	PN	Pn	12 31 43.0	-1.5
OGWZ	**Otaki Gorge**	**2.69**	**194**	↑PN	Pn	12 31 44.3	-1.6
HOWZ	**Holdsworth Sta**	**2.72**	**189**	↑PN	Pn	12 31 44.3	-1.9
KIW	**Kapiti Island**	**2.79**	**198**	PN	Pn	12 31 45.1	-2.0
KIW				AML	AML	12 32 20.7	
TMWZ	**Te Maipa**	**2.90**	**182**	PN	Pn	12 31 46.6	-1.8
MTW	**Mount Morrison**	**2.98**	**188**	↑PN	Pn	12 31 47.1	-2.2
MTW				AML	AML	12 32 25.0	
MTW				AML	AML	12 32 25.5	
CAW	**Cannon Point**	**2.99**	**194**	PN	Pn	12 31 47.5	-2.1
CAW				AML	AML	12 32 25.2	
CAW				AML	AML	12 32 26.1	
DUWZ	**D'Urville Isla**	**3.07**	**212**	PN	Pn	12 31 48.4	-2.2
TRWZ	**Traveller**	**3.20**	**185**	PN	Pn	12 31 50.0	-2.1
TRWZ				AML	AML	12 32 29.4	
TRWZ				AML	AML	12 32 30.2	
PAWZ	**Paruwai Farm**	**3.20**	**188**	PN	Pn	12 31 49.7	-2.5
WEL	**Wellington**	**3.23**	**197**	PN	Pn	12 31 50.0	-2.5
MSWZ	**Moikau Station**	**3.26**	**191**	PN	Pn	12 31 50.4	-2.5
MSWZ				AML	AML	12 32 29.2	
SNZO	**South Karori**	**3.27**	**198**	PN	Pn	12 31 50.3	-2.6
SNZO				AML	AML	12 32 31.5	
TCW	**Tory Channel**	**3.30**	**204**	PN	Pn	12 31 50.9	-2.4
TCW				AML	AML	12 32 31.0	
TCW				AML	AML	12 32 31.4	
BHW	**Baring Head**	**3.32**	**196**	PN	Pn	12 31 51.0	-2.6
PLWZ	**Palliser**	**3.41**	**190**	PN	Pn	12 31 52.0	-2.8
TUWZ	**Tuamarina**	**3.60**	**206**	PN	Pn	12 31 54.5	-2.6
TUWZ				AML	AML	12 32 37.9	
NNZ	**Nelson**	**3.64**	**214**	PN	Pn	12 31 54.7	-3.0
QRZ	**Quartz Range**	**3.77**	**225**	PN	Pn	12 31 56.0	-3.3
BSWZ	**Blackbirch Sta**	**3.88**	**205**	PN	Pn	12 31 58.2	-2.5
THZ	**Tophouse**	**4.29**	**213**	PN	Pn	12 32 03.0	-3.0
KHZ	**Kahutara**	**4.62**	**204**	PN	Pn	12 32 07.0	-3.1
KHZ				AML	AML	12 33 00.7	
DSZ	**Denniston Nort**	**4.81**	**221**	PN	Pn	12 32 08.8	-3.9
LTZ	**Lake Taylor**	**5.40**	**211**	PN	Pn	12 32 15.8	-4.6
MQZ	**McQueen's Vall**	**6.06**	**204**	PN	Pn	12 32 24.0	-5.0
WVZ	**Waitaha Valley**	**6.32**	**218**	PN	Pn	12 32 29.9	-2.5
FOZ	**Fox Glacier**	**7.20**	**220**	PN	Pn	12 32 39.2	-4.8
ODZ	**Otahua Downs**	**7.94**	**209**	PN	Pn	12 32 49.4	-4.3
JCZ	**Jackson Bay**	**8.04**	**221**	PN	Pn	12 32 51.5	-3.7

IDC 15 12:34:14.1±1.9, 5°.52N×126°.15E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.4/23, mbtmp3.4/4, Error ellipse: s-maj=113.2km s-min=24.0km az=69.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**23.48**	**181**	P	P	12 39 26.0	+0.4
	2.4nm,0.8s,baz=0.0,slow=12,SNR=2.7						
WRA	**Warramunga Arr**	**26.55**	**163**	P	P	12 39 54.9	+1.0
	0.5nm,0.4s,baz=342,slow=10,SNR=7.9						
ASAR	**Alice Springs**	**29.98**	**166**	P	P	12 40 23.2	-1.4
	0.4nm,1.1s,baz=346,slow=6.6,SNR=3.0						
MKAR	**Makanchi Array**	**55.77**	**325**	P	P	12 43 52.9	-0.1
	0.2nm,0.5s,baz=111,slow=7.9,SNR=2.8						

*IDC **15** 12:45:28.1±0.8, 5°.25N×125°.77E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.7/22, mbtmp3.8/7, Error ellipse: s-maj=58.0km s-min=15.8km az=78.0*

*ISCJB **15** 12:45:34.9±0.6, 5°.24N±0°.06×126°.34E±0°.09, h66km, mb3.8/8, Error ellipse: s-maj=13.8km s-min=6.5km az=156.2*

*MAN **15** 12:45:35, 5°.50N×126°.20E, h2km, mb4.7, ML3.6, MS3.6*

ISC 15 12:45:36.3±0.7, 5°.25N±0°.07×126°.4E±0°.1, h66km, n17, σ1§99/22, mb3.9/8, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.69**	**355**	*e*P	**Pn**	**12 46 01.8**	**-1.9**
MATI				*e*S	**Sn**	**12 46 25.4**	**+1.0**
DAV	**Davao City (W)**	**1.98**	**336**	Sn	Sn	12 46 20.3	-11
	51nm,0.3s,baz=223,slow=18,SNR=2.4						
KCP	**Kidapawan**	**2.18**	**323**	↓*e*P	**Pn**	**12 46 11.8**	**+1.3**
KCP				*i* S	**Sn**	**12 46 41.5**	**+5.1**
CTBH	**Cotabato--PC H**	**2.90**	**312**	↓*i* P	**Pn**	**12 46 18.5**	**-1.7**
BUKP	**Musuan**	**2.93**	**333**	*e*P	**Pn**	**12 46 19.3**	**-1.3**
BUKP				*e*S	**Sn**	**12 46 51.8**	**-2.9**
BUTP	**Butuan**	**3.77**	**348**	*e*P	**Pn**	**12 46 34.7**	**+2.6**
BUTP				*e*S	Sn	12 47 26.1	+11
IPIL	**Ipil**	**4.57**	**304**	*e*P	**Pn**	**12 46 43.2**	**+0.2**
IPIL				*e*S	**Sn**	**12 47 34.8**	**+0.1**
FITZ	**Fitzroy Crossi**	**23.22**	**182**	P	**P**	**12 50 38.1**	**+0.2**
	1.0nm,0.3s,baz=8.5,slow=11,SNR=11						
WRA	**Warramunga Arr**	**26.23**	**163**	P	**P**	**12 51 06.0**	**+0.7**
	1.8nm,0.5s,baz=343,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**29.66**	**166**	P	**P**	**12 51 37.1**	**+1.1**
	0.4nm,0.4s,baz=342,slow=6.8,SNR=9.8						
KSRS	**Korea Array**	**32.08**	**2**	P	**P**	**12 51 58.3**	**+1.2**
	0.6nm,0.5s,baz=180,slow=11,SNR=3.5						
USRK	**Ussuriysk Arra**	**39.10**	**6**	P	**P**	**12 52 57.3**	**+0.2**
	1.5nm,0.5s,baz=202,slow=4.4,SNR=3.6						
STKA	**Stephens Creek**	**39.66**	**160**	P	**P**	**12 53 00.6**	**-1.4**
	1.3nm,0.7s,baz=335,slow=11,SNR=3.6						
STKA				PcP	**PcP**	**12 55 10.3**	**+2.4**
	1.3nm,0.7s,baz=333,slow=4.5,SNR=3.1						
MKAR	**Makanchi Array**	**56.13**	**325**	P	**P**	**12 55 06.9**	**-2.2**
	0.7nm,0.5s,baz=123,slow=7.6,SNR=12						
MKAR				PcP	**PcP**	**12 56 05.5**	**-0.9**
	0.5nm,0.7s,baz=114,slow=5.4,SNR=3.8						
ZALV	**Zalesovo Beam**	**59.09**	**333**	P	**P**	**12 55 27.5**	**-2.2**
	0.4nm,0.3s,baz=104,slow=6.1,SNR=3.1						
TORD	**Torodi Ar. Bea**	**122.13**	**289**	PKP	**PKPdf**	**13 04 24.5**	**-0.2**
	0.6nm,0.8s,baz=25,slow=0.9,SNR=4.9						
CFAA	**Coronel Fontan**	**150.41**	**154**	PKPbc	**PKPbc**	**13 05 22.1**	**+1.0**
	0.2nm,0.4s,baz=218,slow=3.8,SNR=4.6						

*SOF **15** 12:52:44.4, 43°.21N×27°.57E, h2km, MD2.6*

ISC 15 12:52:44.4±1.7, 43°.3N±0°.1×27°.5E±0°.1, h3km±23km, n5, σ0§58/6, 1D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PRD	**Provadia**	**0.12**	**236**	*i* P	**Pg**	**12 52 46.6**	**-0.1**
ROIA	**ROIAK**	**0.21**	**213**	*i* P	**Pg**	**12 52 48.7**	**+0.3**
PSN	**Preselentsi**	**0.63**	**49**	*e*P	**Pg**	**12 52 56.5**	**0.0**
TIRR	**Tirgusor**	**1.35**	**28**	↓*i* P	**Pn**	**12 53 09.8**	**-0.3**
TIRR				S	**Sb**	**12 53 28.0**	**0.0**
CFR	**Carcaliu**	**1.96**	**13**	S	**Sn**	**12 53 46.2**	**+0.7**

*IDC **15** 12:55:40.6±1.2, 5°.33N×126°.39E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.7/24, mbtmp3.9/7, Error ellipse: s-maj=72.3km s-min=19.7km az=73.0*

*MAN **15** 12:55:42, 4°.87N×126°.61E, h24km, mb5.2, ML4.1, MS4.3*

*ISCJB **15** 12

-1.5900, Plg16.0000°, Azm257.0000°; Data Used: II IU IC G CN,

ISC 15 13:04:35.7±0.3,**13°67S**±0°04×**76°23W**±0°06,**h42**km±2km, **h41**km:**pP-P,n955,**σ0699/1071,**mb5.4**/212,**MS4.7**/86, **205C-219D,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
NNA	**Nana**	**1.77**	**340**	Pn	**Pn**	**13 05 02.0**	**-1.9**
	80µm,0.6s						
NNA	**Nana**	**1.77**	**340**	*e*Pn	**Pn**	**13 05 02.8**	**-1.2**
NNA				S	**Sn**	**13 05 26.8**	**+1.5**
NNA	**Nana**	**1.77**	**340**	P	**Pn**	**13 05 02.4**	**-1.5**
	261nm,0.3s,baz=168,slow=13,SNR=249						
NNA				S	**Sn**	**13 05 26.8**	**+1.5**
	4µm,0.3s,baz=229,slow=20,SNR=11						
NNA				LR	LR	13 05 49.6	
	comp=Z,16µm,18.2s,baz=139,slow=43						
ARE	**Arequipa**	**5.35**	**122**	P	**Pn**	**13 05 56.0**	**+2.6**
ARE				*e*S	**Sn**	**13 06 56.0**	**+2.0**
ARE	**Arequipa**	**5.35**	**122**	P	**Pn**	**13 05 56.0**	**+2.6**
ARE				*e*		13 06 00.0	
ARE				*e*S	**Sn**	**13 06 56.0**	**+2.0**
ATAH	**Atahualpa**	**6.83**	**342**	P	**Pn**	**13 06 15.6**	**+1.8**
ATAH				S	**Sn**	**13 07 33.6**	**+3.1**
ATAH	**Atahualpa**	**6.83**	**342**	P	**Pn**	**13 06 15.6**	**+1.8**
	23nm,0.3s,baz=226,slow=2.2,SNR=89						
ATAH				S	**Sn**	**13 07 33.6**	**+3.1**
	26nm,0.3s,baz=203,slow=15,SNR=1.8						
ATAH				LR	LR	13 08 51.1	
	comp=Z,4µm,20.2s,baz=182,slow=38						
LPAZ	**La Paz**	**8.25**	**109**	P	Pn	13 06 37.9	+4.5
LPAZ				S	Sn	13 08 14.2	+8.6
LPAZ	**La Paz**	**8.25**	**109**	P	Pn	13 06 37.9	+4.5
	21nm,0.3s,baz=293,slow=11,SNR=168						
LPAZ				S	Sn	13 08 14.2	+8.6
	0.9nm,0.3s,baz=184,slow=19,SNR=2.1						
LVC	**Limon Verde**	**11.29**	**143**	*e*P	**Pn**	**13 07 15.9**	**+1.1**
	120nm,0.8s						
LVC				S	**Sn**	**13 09 20.6**	**+0.9**
LVC	**Limon Verde**	**11.29**	**143**	P	**Pn**	**13 07 16.3**	**+1.6**
	5.7nm,0.3s,baz=313,slow=10.0,SNR=58						
LVC				S	**Sn**	**13 09 20.6**	**+0.9**
	3.8nm,0.3s,baz=114,slow=20,SNR=2.9						
LVC				LR	LR	13 11 24.7	
	comp=Z,4µm,20.8s,baz=324,slow=36						
SAML	**Samuel**	**13.62**	**71**	*e*P	**Pn**	**13 07 43.6**	**-2.9**
	89nm,0.8s						
OTAV	**Otavalo**	**13.99**	**351**	*e*P	**Pn**	**13 07 54.0**	**+2.2**
	154nm,1.1s						
SIV	**San Ignacio**	**14.84**	**101**	P	**Pn**	**13 08 02.2**	**-0.6**
SIV	**San Ignacio**	**14.84**	**101**	P	**Pn**	**13 08 02.2**	**-0.6**
	4.4nm,0.3s,baz=287,slow=13,SNR=57						
SIV				LR	LR	13 14 13.3	
	comp=Z,5µm,20.2s,slow=39						
LCO	**Las Campanas**	**16.11**	**162**	*e*P	**Pn**	**13 08 20.2**	**+0.7**
	136nm,1.1s						
ROSC	**El Rosal**	**18.50**	**6**	*e*P	**Pn**	**13 08 52.3**	**+3.0**
ROSC				PcP	**PcP**	**13 13 18.7**	**+0.7**
ROSC	**El Rosal**	**18.50**	**6**	P	**Pn**	**13 08 51.6**	**+2.3**
	1.3nm,0.3s,baz=107,slow=4.2,SNR=13						
ROSC				PcP	**PcP**	**13 13 18.7**	**+0.7**
	1.3nm,0.3s,baz=240,slow=20,SNR=4.0						
ROSC				LR	LR	13 17 16.6	
	comp=Z,3µm,19.2s,baz=190,slow=41						
PAYG	**Puerto Ayora**	**18.98**	**312**	P	**Pn**	**13 08 56.0**	**+1.2**
	106nm,1.0s						
CFAA	**Coronel Fontan**	**19.30**	**159**	P	**Pn**	**13 08 59.1**	**+0.5**
CFAA				PcP	**PcP**	**13 13 19.0**	**+0.3**
CFAA	**Coronel Fontan**	**19.30**	**159**	P	**Pn**	**13 08 59.1**	**+0.5**
	0.3nm,0.3s,baz=335,slow=13,SNR=54						
CFAA				PcP	**PcP**	**13 13 19.0**	**+0.3**
	0.0nm,0.3s,baz=27,slow=4.5,SNR=3.3						
CFAA				LR	LR	13 15 30.5	
	comp=Z,230nm,20.6s,baz=346,slow=34						
LMEL	**Las Melosas**	**20.82**	**166**	⇑*i*P	Pn	13 09 16.1	-0.5
LMEL	**Las Melosas**	**20.82**	**166**	⇑*i*P	Pn	13 09 16.1	-0.5
CPUP	**Villa Florida**	**21.74**	**128**	P	**P**	**13 09 23.9**	**+0.4**
CPUP				PcP	**PcP**	**13 13 23.9**	**+0.6**
CPUP	**Villa Florida**	**21.74**	**128**	P	**P**	**13 09 23.9**	**+0.4**
	31nm,1.0s,baz=294,slow=10,SNR=41						
CPUP				PcP	**PcP**	**13 13 23.9**	**+0.6**
	8.4nm,0.9s,baz=153,slow=4.5,SNR=2.9						
CPUP				LR	LR	13 19 53.3	
	comp=Z,3µm,19.7s,baz=298,slow=42						
BCIP	**Isla Barro Col**	**22.97**	**351**	*e*P	**P**	**13 09 37.6**	**+1.0**
	858nm,1.6s						
BCIP				LR	LR		
	comp=Z,2µm,21.0s						
JTS	**JuntasAbangare**	**25.33**	**340**	P	pP	13 10 12.1	+2.1
	comp=Z,1µm,1.1s,SNR=14						
JTS	**JuntasAbangare**	**25.33**	**340**	P	**P**	**13 10 01.7**	**+2.9**
JTS				LR	LR		
	comp=Z,5µm,22.0s						
BDFB	**Brasilia**	**27.36**	**98**	P	**P**	**13 10 17.0**	**-0.3**
BDFB	**Brasilia**	**27.36**	**98**	P	**P**	**13 10 17.0**	**-0.3**
	comp=Z,5.1nm,0.8s,baz=263,slow=11,SNR=5.8						
BDFB				LR	LR	13 22 17.8	
	comp=Z,4µm,18.5s,baz=77,slow=39						
TRQA	**Tornquist**	**27.39**	**155**	*e*P	**P**	**13 10 16.1**	**-1.2**
	comp=Z,42nm,1.3s						
TRQA				LR	LR		
	comp=Z,3µm,22.0s						
PLCA	**Paso Flores**	**27.42**	**171**	P	**P**	**13 10 18.1**	**+0.6**
PLCA				PcP	**PcP**	**13 13 35.7**	**+0.1**
PLCA	**Paso Flores**	**27.42**	**171**	P	**P**	**13 10 18.1**	**+0.6**
	comp=Z,17nm,0.7s,baz=341,slow=10,SNR=22						
PLCA				PcP	**PcP**	**13 13 35.7**	**+0.1**
	comp=Z,5.3nm,0.9s,baz=21,slow=5.8,SNR=4.1						
PLCA				LR	LR	13 18 58.3	
	comp=Z,644nm,21.7s,baz=344,slow=31						
SPB	**Sao Paulo**	**28.97**	**114**	*e*P	**P**	**13 10 31.0**	**-0.4**
	comp=Z,34nm,0.9s						
GRGR	**Grenville**	**29.43**	**30**	*e*P	**P**	**13 10 34.9**	**-0.6**
	comp=Z,322nm,0.9s						
GRGR				LR	LR		
	comp=Z,2µm,22.0s						
TGUH	**Tegucigalpa,Un**	**29.64**	**338**	P	**P**	**13 10 37.2**	**-0.1**
	comp=Z,225nm,1.1s						
TGUH				*e*pP	**pP**	**13 10 49.5**	**+0.7**
BBGH	**Gun Hill**	**31.34**	**32**	PFAKE		13 11 00.0	+7.5
BBGH				LR	LR		
	comp=Z,4µm,22.0s						
OBIP	**Obispado Ponce**	**32.91**	**17**	*e*P	**P**	**13 11 05.2**	**-0.9**
	comp=Z,55nm,1.1s						
CELP	**Cerrillos**	**32.95**	**17**	*e*P	**P**	**13 11 06.0**	**-0.5**
LRS	**Lares**	**33.08**	**16**	*e*P	**P**	**13 11 05.7**	**-1.9**
CAM4	**Nova Friburgo**	**33.10**	**110**	⇑*i*P	P	13 11 02.0	-6.1
CAM4				*i*		13 11 07.4	
CAM4				*i*		13 11 10.2	
CAM4				*i*		13 11 13.1	
CAM4				*i*		13 11 23.6	
CAM4				*i*		13 11 31.8	
CAM4				*i*		13 11 55.6	
CAM4				*i*		13 13 51.5	
CAM4				*i*		13 14 04.2	
CAM4				*i*		13 14 36.2	
SJG	**San Juan**	**33.11**	**18**	*e*P	**P**	**13 11 07.0**	**-0.9**
	comp=Z,8.4nm,0.3s						
SJG				*e*pP	**pP**	**13 11 19.6**	**+0.3**
SJG				*es*P	**sP**	**13 11 25.1**	**+0.9**
CBYP	**Canovanas**	**33.34**	**18**	*e*P	**P**	**13 11 07.2**	**-2.8**
	comp=Z,25nm,0.9s						
CBYP				*e*pP	**pP**	**13 11 21.7**	**+0.2**
GTBY	**Guantanamo Bay**	**33.40**	**2**	PFAKE		13 11 20.0	+10
GTBY				LR	LR		
	comp=Z,669nm,19.0s						
ANWB	**Willy Bob**	**34.24**	**25**	*e*P	P	13 11 14.5	-3.3
	comp=Z,163nm,0.9s						
ANWB				pP	pP	13 11 28.9	-0.3
ANWB				LR	LR		
	comp=Z,840nm,19.0s						
TEIG	**Tepich**	**35.70**	**340**	*e*P	**P**	**13 11 30.3**	**0.0**
	comp=Z,481nm,1.4s						
TEIG				*e*pP	**pP**	**13 11 41.2**	**-0.6**
RCBR	**Riachuelo**	**40.45**	**83**	P	**P**	**13 12 10.9**	**+0.3**
RCBR	**Riachuelo**	**40.45**	**83**	P	**P**	**13 12 10.9**	**+0.3**
	comp=Z,31nm,1.2s,baz=246,slow=7.2,SNR=3.5						
USHA	**Ushuaia**	**41.52**	**173**	P	**P**	**13 12 20.0**	**+1.2**
USHA	**Ushuaia**	**41.52**	**173**	P	**P**	**13 12 20.0**	**+1.2**
	comp=Z,62nm,0.9s,baz=314,slow=4.6,SNR=22						
TIGA	**Tifton**	**45.40**	**351**	⇓P	**P**	**13 12 50.2**	**-0.1**
	baz=46						
BRAL	**Brewton**	**45.62**	**347**	PFAKE		13 13 00.0	+8.0
BRAL				LR	LR		
	comp=Z,786nm,21.0s						
BBSR	**BB Station**	**47.09**	**13**	PFAKE		13 13 10.0	+6.5
BBSR				LR	LR		
	comp=Z,530nm,19.0s						
VBMS	**Vicksburg**	**47.63**	**344**	*e*P	**P**	**13 13 07.3**	**-0.5**
VBMS				*e*pP	**pP**	**13 13 19.3**	**-0.3**
732A	**Laxson Ranch,**	**48.00**	**332**	⇑P	**P**	**13 13 11.0**	**+0.4**
	baz=48,SNR=5.4						
632A	**Uvalde**	**48.57**	**332**	⇓P	**P**	**13 13 15.8**	**+0.6**
	baz=49,SNR=12						
CNNC	**Cliffs of the**	**48.66**	**358**	PFAKE		13 13 30.0	+14
CNNC				LR	LR		
	comp=Z,768nm,22.0s						
KMSC	**Kings Mountain**	**48.78**	**354**	⇓P	**P**	**13 13 16.0**	**-0.6**
	baz=49,SNR=6.0						
631A	**Perdido Creek**	**48.85**	**331**	⇓P	**P**	**13 13 17.2**	**-0.1**
	baz=49,SNR=14						
532A	**Rocksprings**	**49.16**	**333**	⇑P	**P**	**13 13 20.1**	**+0.5**
	baz=49,SNR=15						
JCT	**Junction City**	**49.41**	**333**	*e*P	**P**	**13 13 21.5**	**-0.1**
JCT				*e**P	**pP**	**13 13 33.3**	**-0.1**
JCT				pmax	pmax		
	comp=Z,28nm,1.0s						
JCT	**Junction City**	**49.41**	**333**	*e*P	**P**	**13 13 21.5**	**-0.1**
	comp=Z,28nm,1.0s						
JCT				*e*pP	**pP**	**13 13 33.3**	**-0.1**
JCT	**Junction City**	**49.41**	**333**	⇑P	**P**	**13 13 21.8**	**+0.3**
	baz=50						
531A	**Rocksprings**	**49.48**	**332**	⇓P	**P**	**13 13 22.8**	**+0.7**
	baz=50,SNR=13						
CPCT	**Cooper Cave**	**49.48**	**351**	*e*P	**P**	**13 13 21.0**	**-0.9**
CPCT				*e*pP	**pP**	**13 13 32.0**	**-1.8**
OXF	**Oxford**	**49.52**	**346**	*e*P	**P**	**13 13 21.8**	**-0.4**
OXF				*e**PP	**pP**	**13 13 33.7**	**-0.5**
OXF				pmax	pmax		
	comp=Z,122nm,1.3s						
OXF	**Oxford**	**49.52**	**346**	*e*P	**P**	**13 13 21.8**	**-0.4**
	comp=Z,122nm,1.3s						
OXF				*e*pP	**pP**	**13 13 33.6**	**-0.5**
432A	**Menard**	**49.75**	**333**	⇓P	**P**	**13 13 24.3**	**+0.2**
	baz=50						
WHTX	**Lake Whitney**	**49.75**	**336**	⇓P	**P**	**13 13 24.2**	**+0.2**
	baz=50						
530A	**J-C Ranch, Com**	**49.83**	**331**	⇓P	**P**	**13 13 25.1**	**+0.3**
	baz=50,SNR=9.1						
431A	**Sonora**	**49.94**	**332**	⇓P	**P**	**13 13 25.8**	**+0.1**
	baz=50,SNR=11						
628A	**Black Gap, Mar**	**50.03**	**329**	⇓P	**P**	**13 13 27.1**	**+0.9**
	baz=50,SNR=18						
332A	**Millersview**	**50.16**	**334**	⇑P	**P**	**13 13 27.2**	**0.0**
	baz=50,SNR=12						
529A	**Stev Forest Ra**	**50.23**	**330**	⇑P	**P**	**13 13 28.3**	**+0.5**
	baz=50,SNR=35						
627A	**Terlingua Ranc**	**50.25**	**329**	⇑P	**P**	**13 13 28.3**	**+0.2**
	baz=50,SNR=15						
TXAR	**Lajitas Array**	**50.29**	**328**	P	**P**	**13 13 28.5**	**+0.2**
TXAR				pP	**pP**	**13 13 40.1**	**-0.1**
TXAR	**Lajitas Array**	**50.29**	**328**	P	**P**	**13 13 28.5**	**+0.2**
	comp=Z,8.3nm,0.8s,baz=145,slow=7.6,SNR=41						
TXAR				pP	**pP**	**13 13 40.1**	**-0.1**
	comp=Z,13nm,0.8s,baz=155,slow=8.6,SNR=16						
TXAR				LR	LR	13 33 51.7	
	comp=Z,607nm,19.9s,baz=355,slow=35						
430A	**Baggett Ranch,**	**50.32**	**332**	⇑P	**P**	**13 13 28.3**	**-0.1**
	baz=50,SNR=10						
331A	**San Angelo**	**50.40**	**333**	⇓P	**P**	**13 13 28.9**	**-0.1**
	baz=51						
TZTN	**Tazewell**	**50.41**	**352**	*e*P	**P**	**13 13 27.8**	**-1.2**
	comp=Z,102nm,1.3s						
429A	**Davenport Ranc**	**50.49**	**331**	⇓P	**P**	**13 13 30.1**	**+0.3**
	baz=51,SNR=10						
528A	**Cox Ranch, San**	**50.53**	**330**	⇑P	**P**	**13 13 30.3**	**+0.2**
	baz=51,SNR=13						
UALR	**University of**	**50.55**	**343**	*e*P	**P**	**13 13 28.5**	**-1.5**
	comp=Z,117nm,1.3s						
UALR				*e*pP	**pP**	**13 13 41.7**	**-0.3**
232A	**Coleman**	**50.55**	**334**	⇑P	**P**	**13 13 30.2**	**0.0**
	baz=51,SNR=9.6						
MIAR	**Mount Ida**	**50.70**	**341**	*e*P	**P**	**13 13 30.7**	**-0.5**
MIAR				*e**PP	**pP**	**13 13 41.9**	**-1.2**
MIAR				pmax	pmax		
	comp=Z,74nm,1.3s						
MIAR				MLR	MLR		
	comp=Z,440nm,20.0s						
MIAR	**Mount Ida**	**50.70**	**341**	*e*P	**P**	**13 13 30.7**	**-0.5**
	comp=Z,74nm,1.3s						
MIAR				*e*pP	**pP**	**13 13 41.9**	**-1.2**
MIAR				LR	LR		
	comp=Z,440nm,20.0s						
626A	**Big Bend Ranch**	**50.71**	**328**	⇑P	**P**	**13 13 32.3**	**+0.8**
	baz=51,SNR=93						
WVT	**Waverly**	**50.73**	**348**	*e*P	**P**	**13 13 29.5**	**-1.8**
WVT				*e**PP	**pP**	**13 13 40.8**	**-2.5**
WVT				pmax	pmax		
	comp=Z,6.0nm,0.5s						
WVT	**Waverly**	**50.73**	**348**	*e*P	**P**	**13 13 29.5**	**-1.8**
	comp=Z,6.1nm,0.5s						
WVT				*e*pP	**pP**	**13 13 40.8**	**-2.5**
BLA	**Blacksburg**	**50.76**	**356**	*e*P	**P**	**13 13 30.8**	**-0.8**
BLA				pmax	pmax		
	comp=Z,94nm,1.3s						
BLA				MLR	MLR		
	comp=Z,834nm,21.0s						
BLA	**Blacksburg**	**50.76**	**356**	*e*P	**P**	**13 13 30.8**	**-0.8**
	comp=Z,94nm,1.3s						
BLA				LR	LR		
	comp=Z,834nm,21.0s						
VWCC	**Virginia Weste**	**50.76**	**356**	*e*P	**P**	**13 13 31.6**	**0.0**
330A	**Mertzon**	**50.81**	**332**	⇑P	**P**	**13 13 32.4**	**+0.2**
	baz=51						
HBAR	**Harrisburg**	**50.83**	**345**	P	**P**	**13 13 31.1**	**-0.9**
HBAR				*e*pP	**pP**	**13 13 43.7**	**-0.3**
231A	**Bronte**	**50.88**	**333**	⇑P	**P**	**13 13 32.7**	**0.0**
	baz=51						
527A	**Woodward Ranch**	**50.92**	**329**	⇓P	**P**	**13 13 33.4**	**+0.2**
	baz=51,SNR=23						
428A	**Kincaid Ranch,**	**50.95**	**330**	⇑P	**P**	**13 13 33.7**	**+0.5**
	baz=51,SNR=7.0						
526A	**Mary Lane Ranc**	**51.10**	**329**	⇑P	**P**	**13 13 34.9**	**+0.5**
	baz=51,SNR=15						
JSRW	**J. Sargeant Re**	**51.11**	**358**	*e*P	**P**	**13 13 34.3**	**+0.1**
UTMT	**University of**	**51.15**	**347**	*e*P	**P**	**13 13 33.9**	**-0.6**
	comp=Z,88nm,0.5s						
UTMT				*e*pP	**pP**	**13 13 45.8**	**-0.7**
ABTX	**Abilene, Hawle**	**51.19**	**335**	⇑P	**P**	**13 13 35.2**	**+0.3**
	baz=51						
230A	**Sterling City**	**51.19**	**333**	⇑P	**P**	**13 13 35.0**	**0.0**
	baz=51						
329A	**Wagon Wheel Ra**	**51.25**	**332**	⇓P	**P**	**13 13 35.8**	**+0.3**
	baz=51,SNR=6.7						
427A	**Hayter Ranch,**	**51.40**	**330**	⇑P	**P**	**13 13 36.7**	**+0.1**
	baz=52,SNR=8.2						
131A	**Roby**	**51.55**	**334**	⇓P	**P**	**13 13 37.7**	**+0.1**
	baz=52						
328A	**Wristen Ranch,**	**51.55**	**331**	⇓P	**P**	**13 13 38.0**	**+0.2**
	baz=52,SNR=14						
426A	**McDonald Obser**	**51.56**	**329**	⇓P	**P**	**13 13 38.3**	**+0.3**
	baz=52,SNR=11						
229A	**Bryant Ranch,**	**51.58**	**332**	⇑P	**P**	**13 13 37.8**	**-0.1**
	baz=52						
CBN	**Corbin**	**51.61**	**359**	PFAKE		13 13 50.0	+12
CBN				LR	LR		
	comp=Z,444nm,21.0s						
PARMO	**Parma**	**51.66**	**346**	*e*P	**P**	**13 13 36.8**	**-1.5**
Z32A	**Haskell**	**51.71**	**335**	⇑P	**P**	**13 13 39.3**	**+0.5**
	baz=52						
130A	**Snyder**	**51.73**	**333**	⇑P	**P**	**13 13 38.9**	**-0.1**
	baz=52						
327A	**Balmorhea Ranc**	**51.87**	**330**	⇓P	**P**	**13 13 39.8**	**-0.3**
	baz=52						
Z31A	**Sharp Cattle R**	**52.00**	**334**	⇓P	**P**	**13 13 41.2**	**+0.2**
	baz=52,SNR=20						
228A	**UT Block 9, Go**	**52.06**	**331**	⇑P	**P**	**13 13 41.3**	**-0.3**
	baz=52						
326A	**Caldwell Ranch**	**52.06**	**330**	⇓P	**P**	**13 13 41.9**	**+0.4**
	baz=52,SNR=12						
425A	**Indio Mountain**	**52.14**	**328**	⇓P	**P**	**13 13 42.4**	**+0.2**
	baz=52,SNR=27						
129A	**Stewart Farms,**	**52.16**	**332**	⇑P	**P**	**13 13 42.2**	**-0.1**
	baz=52						
227A	**Bennet, Jal**	**52.30**	**331**	⇓P	**P**	**13 13 43.5**	**+0.2**
	baz=52						
Y32A	**R-V Farms, Ver**	**52.31**	**336**	⇑P	**P**	**13 13 43.4**	**+0.2**
	baz=52						
Z30A	**Sanderson Ranc**	**52.39**	**334**	⇑P	**P**	**13 13 43.8**	**-0.1**
	baz=53,SNR=19						
USIN	**University of**	**52.47**	**349**	*e*P	**P**	**13 13 42.0**	**-2.3**
	comp=Z,27nm,0.7s						
USIN				*e*pP	**pP**	**13 13 54.6**	**-1.7**
WCI	**Wyandotte Cave**	**52.48**	**350**	*e*P	**P**	**13 13 43.0**	**-1.5**
WCI				*e**PP	**pP**	**13 13 55.2**	**-1.2**
WCI				pmax	pmax		
	comp=Z,170nm,1.3s						
WCI	**Wyandotte Cave**	**52.48**	**350**	*e*P	**P**	**13 13 43.0**	**-1.5**
	comp=Z,170nm,1.3s						
WCI				*e*pP	**pP**	**13 13 55.2**	**-1.2**
SIUC	**Southern Illin**	**52.55**	**347**	*e*P	**P**	**13 13 43.8**	**-1.1**
	comp=Z,154nm,1.1s						
SIUC				*e*pP	**pP**	**13 13 55.3**	**-1.6**
325A	**Bean Ranch, Si**	**52.60**	**329**	⇓P	**P**	**13 13 45.8**	**+0.1**
	baz=53,SNR=24						
Y31A	**Rekieta Farm,**	**52.60**	**335**	⇓P	**P**	**13 13 45.6**	**+0.1**
	baz=53,SNR=9.6						
Z29A	**Hungry Hill Ra**	**52.62**	**333**	⇓P	**P**	**13 13 45.4**	**-0.2**
	baz=53,SNR=5.9						
TUL1	**Tulsa**	**52.67**	**340**	⇓P	**P**	**13 13 45.3**	**-0.5**
	baz=53,SNR=9.6						
WMOK	**Wichita Mounta**	**52.69**	**337**	*e*P	**P**	**13 13 45.4**	**-0.7**
WMOK				*e**PP	**pP**	**13 13 57.5**	**-0.6**
WMOK				pmax	pmax		
	comp=Z,33nm,1.0s						
WMOK	**Wichita Mounta**	**52.69**	**337**	*e*P	**P**	**13 13 45.4**	**-0.7**
	comp=Z,34nm,1.0s						
WMOK				*e*pP	**pP**	**13 13 57.5**	**-0.6**
226B	**Tecolote Peak,**	**52.77**	**330**	⇑P	**P**	**13 13 47.4**	**+0.6**
	baz=53,SNR=15						
Y30A	**Stafford Cattl**	**52.80**	**334**	⇑P	**P**	**13 13 46.8**	**-0.1**
	baz=53,SNR=6.7						
SDMD	**Soldier's Deli**	**52.80**	**359**	*e*P	**P**	**13 13 46.5**	**-0.3**
	comp=Z,7.3nm,0.7s						
127A	**Arkansas Junct**	**52.88**	**331**	⇓P	**P**	**13 13 47.8**	**+0.2**
	baz=53						
324A	**Moseley Ranch,**	**52.92**	**328**	⇑P	**P**	**13 13 47.6**	**-0.3**
	baz=53,SNR=16						
Z28A	**Tucker Farm, M**	**52.95**	**332**	⇓P	**P**	**13 13 47.8**	**-0.3**
	baz=53						
GDL2	**Guadalupe Moun**	**52.97**	**330**	*e*P	**P**	**13 13 48.8**	**+0.5**
	comp=Z,3.5nm,0.6s						
X31A	**McDonald Ranch**	**53.07**	**335**	⇑P	**P**	**13 13 48.5**	**-0.4**
	baz=53,SNR=12						
MNTX	**Cornudas Mount**	**53.07**	**329**	*e*P	**P**	**13 13 48.5**	**-0.4**
	comp=Z,64nm,1.5s						
MNTX				*e*pP	**pP**	**13 14 01.2**	**+0.3**
Y29A	**Porterfield Fa**	**53.12**	**333**	⇑P	**P**	**13 13 49.0**	**-0.3**
	baz=53						
225A	**Deer Hill, Car**	**53.12**	**329**	⇓P	**P**	**13 13 49.8**	**+0.3**
	baz=53						
126A	**Clayton Basin,**	**53.17**	**331**	⇓P	**P**	**13 13 50.2**	**+0.5**
	baz=53,SNR=7.4						
X30A	**Coker Ranch, T**	**53.28**	**335**	⇓P	**P**	**13 13 50.2**	**-0.2**
	baz=54						
OLIL	**Olney**	**53.30**	**348**	*e*P	**P**	**13 13 49.2**	**-1.2**
	comp=Z,278nm,1.1s						
Z27A	**Tatum**	**53.35**	**332**	⇓P	**P**	**13 13 50.7**	**-0.4**
	baz=54,SNR=9.4						
Y28A	**McKinney Farm,**	**53.41**	**333**	⇑P	**P**	**13 13 51.1**	**-0.4**
	baz=54						
BLO	**Bloomington**	**53.44**	**350**	*e*P	**P**	**13 13 50.4**	**-1.0**
BLO				pmax	pmax		
	comp=Z,224nm,1.2s						
BLO	**Bloomington**	**53.44**	**350**	*e*P	**P**	**13 13 50.4**	**-1.0**
	comp=Z,224nm,1.2s						
224A	**Cornudas Mount**	**53.44**	**329**	⇑P	**P**	**13 13 51.8**	**-0.1**
	baz=54,SNR=14						
125A	**Gardner Draw,**	**53.49**	**330**	⇓P	**P**	**13 13 52.0**	**-0.1**
	baz=54,SNR=13						
W31A	**Holland Ranch,**	**53.54**	**336**	⇑P	**P**	**13 13 51.9**	**-0.5**
	baz=54						
X29A	**Tulia**	**53.63**	**334**	⇑P	**P**	**13 13 52.7**	**-0.4**
	baz=54						
SLM	**Saint Louis**	**53.66**	**346**	*e*P	**P**	**13 13 51.1**	**-2.0**
SLM				*e**PP	**pP**	**13 14 03.6**	**-1.5**
SLM				pmax	pmax		
	comp=Z,193nm,1.3s						
SLM	**Saint Louis**	**53.66**	**346**	*e*P	**P**	**13 13 51.1**	**-2.0**
	comp=Z,193nm,1.3s						
SLM				*e*pP	**pP**	**13 14 03.6**	**-1.5**
Z26A	**Caprock**	**53.67**	**331**	⇑P	**P**	**13 13 53.6**	**+0.2**
	baz=54,SNR=12						
MSTX	**Muleshoe**	**53.69**	**333**	⇓P	**P**	**13 13 53.2**	**-0.4**
	baz=54,SNR=6.3						
W30A	**Crocket Farms**	**53.79**	**335**	⇑P	**P**	**13 13 54.2**	**0.0**
	baz=54						
Y27A	**Causey**	**53.80**	**332**	⇓P	**P**	**13 13 54.2**	**-0.2**
	baz=54,SNR=15						
223A	**Chaparral, Ant**	**53.85**	**328**	⇓P	**P**	**13 13 54.6**	**-0.1**
	baz=54						
X28A	**Dimmitt**	**53.90**	**333**	⇓P	**P**	**13 13 54.6**	**-0.5**
	baz=54						
124A	**Stringfield Ra**	**53.91**	**329**	⇑P	**P**	**13 13 55.8**	**+0.5**
	baz=54,SNR=23						
ACSO	**Alum Creek Sta**	**53.99**	**354**	*e*P	**P**	**13 13 54.2**	**-1.3**
	comp=Z,175nm,1.2s						
ACSO				*e*pP	**pP**	**13 14 05.9**	**-1.6**
ACSO				LR	LR		
	comp=Z,855nm,19.0s						
AMTX	**Amarillo**	**53.99**	**334**	*e*P	**P**	**13 13 56.2**	**+0.5**
	comp=Z,99nm,1.5s						
AMTX				*e*pP	**pP**	**13 14 07.9**	**+0.1**
AMTX				LR	LR		
	comp=Z,453nm

baz=55
Y23A Lovelace Mesa, 55.20 330 ⇑P P 13 14 05.0 +0.3
baz=55,SNR=8.6
V27A Dan Oppiter Fa 55.23 334 ⇓P P 13 14 04.8 +0.1
baz=55
HDIL Hopedale 55.29 348 eP P 13 14 03.5 -1.5
comp=Z,19nm,0.7s
T30A Plains 55.40 336 ⇓P P 13 14 06.0 +0.2
baz=56
X24A Lazy VL Ranch, 55.42 331 ⇑P P 13 14 06.2 0.0
baz=56
120A U Bar Ranch, L 55.43 327 ⇓P P 13 14 07.0 +0.7
baz=56
BRYW Bryant College 55.48 4 eP P 13 14 05.7 -0.6
comp=Z,26nm,0.9s
S31A Mullinville 55.50 338 ⇑P P 13 14 06.2 -0.3
baz=56
U28A Mallet 55.50 335 ⇑P P 13 14 06.1 -0.6
baz=56,SNR=5.8
W25A X Bar L Ranch, 55.50 332 ⇑P P 13 14 06.6 -0.1
baz=56,SNR=12
Z21A St. Cloud Mine 55.52 328 ⇑P P 13 14 07.8 +0.9
baz=56,SNR=17
BINY Binghamton 55.59 0 eP P 13 14 06.9 -0.1
comp=Z,96nm,1.1s
BINY epP pP 13 14 18.6 -0.5
BINY LR LR
comp=Z,476nm,21.0s
ERPA Erie 55.61 357 eP P 13 14 05.2 -2.0
comp=Z,176nm,1.3s
ERPA epP pP 13 14 17.2 -2.0
ERPA LR LR
comp=Z,563nm,22.0s
Y22A Socorro 55.66 329 ⇓P P 13 14 08.5 +0.5
baz=56,SNR=5.9
BNM Barren Site 55.66 329 eP P 13 14 08.1 +0.1
comp=Z,71nm,1.8s
BNM epP pP 13 14 20.1 +0.1
V26A Tequesquite Ra 55.68 333 ⇓P P 13 14 07.9 0.0
baz=56,SNR=8.9
Y22D IRIS PASSCAL I 55.74 329 ⇑P P 13 14 08.5 0.0
baz=56
U27A Thompson Grove 55.79 334 ⇑P P 13 14 08.5 -0.2
baz=56
T29A Hugoton 55.79 336 ⇓P P 13 14 08.5 -0.1
baz=56
LPM Los Pinos Moun 55.79 330 eP P 13 14 09.8 +0.9
comp=Z,4.6nm,0.9s
LPM epP pP 13 14 21.4 +0.4
X23A Hourglass Bar 55.79 330 ⇑P P 13 14 09.1 +0.2
baz=56
KSU1 Kansas State U 55.84 341 P P 13 14 08.0 -0.9
comp=Z,21nm,0.8s
Z20A Nine Sixteen R 55.84 327 ⇓P P 13 14 10.1 +0.8
baz=56,SNR=18
S30A Montezuma 55.88 337 ⇓P P 13 14 09.2 -0.1
baz=56
W24A Lazy 6 Ranch, 55.93 331 ⇑P P 13 14 09.8 -0.1
baz=56,SNR=9.0
HRV Adam Dziewonsk 56.06 4 eP P 13 14 10.6 +0.2
HRV e*PP pP 13 14 22.8 +0.4
HRV pmax pmax
comp=Z,26nm,1.0s
HRV Adam Dziewonsk 56.06 4 eP P 13 14 10.6 +0.2
comp=Z,26nm,1.0s
HRV epP pP 13 14 22.8 +0.4
Y21A Point of Rocks 56.07 329 ⇑P P 13 14 11.9 +0.9
baz=56,SNR=6.7
T28A Walsh 56.09 335 ⇓P P 13 14 10.3 -0.5
baz=56
R31A Burdett 56.10 338 ⇓P P 13 14 11.0 +0.1
baz=56
AAM Ann Arbor 56.11 353 P P 13 14 09.9 -0.8
AAM e*PP pP 13 14 20.9 -1.9
AAM MLR MLR
comp=Z,1μm,21.0s
AAM Ann Arbor 56.11 353 P P 13 14 09.8 -0.8
AAM epP pP 13 14 20.9 -1.9
AAM LR LR
comp=Z,1μm,21.0s
LAZ Ladron 56.11 329 eP P 13 14 11.8 +0.6
comp=Z,40nm,1.4s
LAZ epP pP 13 14 23.7 +0.4
S29A Ulysses 56.12 336 ⇑P P 13 14 11.3 +0.2
baz=56
X22A Bernardo 56.13 329 ⇓P P 13 14 11.4 +0.1
baz=56
U26A Atchley Ranch, 56.16 333 ⇑P P 13 14 11.1 -0.4
baz=56,SNR=10
TRY Troy 56.17 2 eP P 13 14 12.0 +0.8
comp=Z,129nm,1.1s
ANMO Albuquerque 56.22 330 eP P 13 14 12.1 +0.2
comp=Z,63nm,1.4s
ANMO LR LR
comp=Z,496nm,19.0s
RKT Rikitea 56.22 251 eS S 13 22 08.5 +9.5
RKT eLR LR 13 30 31.7
comp=Z,2μm,27.0s
RKT Rikitea 56.22 251 eT T 14 14 27.0
W23A Werner Place, 56.24 331 ⇓P P 13 14 12.6 +0.5
baz=56
T27A Campo 56.29 335 ⇓P P 13 14 11.9 -0.4
baz=56,SNR=5.1
V24A Rampart Ranch, 56.29 332 ⇓P P 13 14 12.2 -0.3
baz=56,SNR=9.8
Y20A Horse Springs, 56.35 328 ⇓P P 13 14 13.7 +0.7
baz=56,SNR=11
R30A Dighton 56.38 337 ⇓P P 13 14 12.6 -0.2
baz=57,SNR=8.7
S28A Manter 56.40 336 ⇑P P 13 14 12.7 -0.3
baz=57,SNR=6.4
TUC Tucson 56.43 325 eP P 13 14 13.6 +0.3
TUC pmax pmax
comp=Z,21nm,1.0s
TUC Tucson 56.43 325 eP P 13 14 13.6 +0.3
comp=Z,21nm,1.0s
U25A Circle Dot Ran 56.46 333 ⇓P P 13 14 13.5 -0.1
baz=57,SNR=9.5
X21A Alamocita Cree 56.47 329 ⇑P P 13 14 14.6 +0.8
baz=57,SNR=17
W22A Albuquerque 56.52 330 ⇑P P 13 14 14.8 +0.7
baz=57
Q31A Ellis 56.69 338 ⇑P P 13 14 15.0 0.0
baz=57
V23A Ortiz Mt. (NFS 56.73 331 ⇑P P 13 14 15.8 +0.2
baz=57
T26A Comanche Natio 56.75 334 ⇓P P 13 14 15.4 -0.3
baz=57,SNR=8.1
ACCN Adirondack Com 56.82 2 eP P 13 14 16.3 +0.5
comp=Z,123nm,1.2s
ACCN epP pP 13 14 26.9 -1.0
R29A Marienthal 56.83 337 ⇑P P 13 14 15.9 -0.1
baz=57,SNR=6.2
U24A Moreno Valley 56.86 332 ⇑P P 13 14 16.3 -0.2
baz=57
S27A Las Animas 56.89 335 ⇑P P 13 14 16.7 +0.1
baz=57
X20A Quemado 56.91 328 ⇑P P 13 14 17.6 +0.7
baz=57,SNR=6.2
W21A San Fidel 56.94 329 ⇑P P 13 14 17.8 +0.8
baz=57
Q30A Quinter 56.97 338 ⇑P P 13 14 17.2 +0.2
baz=57,SNR=9.6
R28A Tribune 57.02 336 ⇑P P 13 14 17.4 0.0
baz=57
T25A Trinidad 57.07 333 ⇑P P 13 14 18.3 +0.3
baz=57,SNR=16
S26A Kim 57.08 334 ⇓P P 13 14 18.4 +0.5
baz=57,SNR=36
P31A Stockton 57.15 339 ⇓P P 13 14 18.0 -0.2
baz=57,SNR=8.1
HNH Hanover 57.21 3 eP P 13 14 19.0 +0.5
comp=Z,93nm,1.2s
V22A San Miguel Ran 57.21 330 ⇓P P 13 14 19.5 +0.5
baz=57,SNR=26
214A Organ Pipe Nat 57.33 323 ⇓P P 13 14 20.7 +1.0
baz=58
R27A Eads 57.36 335 ⇓P P 13 14 19.9 0.0
baz=58
W20A Ramah 57.37 329 ⇓P P 13 14 20.8 +0.7
baz=58,SNR=13
NCB Newcomb 57.39 2 eP P 13 14 19.3 -0.5
comp=Z,165nm,1.6s
MDV Middlebury 57.45 3 eP P 13 14 20.4 +0.2
SCIA State Center 57.47 345 eP P 13 14 19.5 -0.9
comp=Z,36nm,0.4s
SCIA epP pP 13 14 31.1 -1.4

P30A Selden 57.48 338 ⇓P P 13 14 20.3 -0.3
baz=58,SNR=7.0
V21A Milan 57.48 330 ⇓P P 13 14 21.7 +0.8
baz=58,SNR=10
R26A Arlington 57.64 335 ⇓P P 13 14 21.8 -0.1
baz=58,SNR=12
Q28A Sharon Springs 57.65 337 ⇓P P 13 14 21.7 -0.2
baz=58
X18A Snowflake 57.65 327 ⇓P P 13 14 23.0 +0.9
baz=58
T23A Casias Ranch, 57.72 332 ⇓P P 13 14 22.9 +0.3
baz=58
JFWS Jewell Farm 57.75 348 P P 13 14 20.8 -1.6
JFWS e*PP pP 13 14 32.4 -2.1
JFWS pmax pmax
comp=Z,78nm,1.2s
JFWS Jewell Farm 57.75 348 P P 13 14 20.8 -1.6
comp=Z,78nm,1.2s
JFWS epP pP 13 14 32.4 -2.1
LBNH Lisbon 57.76 4 eP P 13 14 22.0 -0.4
LBNH pmax pmax
comp=Z,40nm,1.1s
LBNH Lisbon 57.76 4 eP P 13 14 22.0 -0.4
comp=Z,40nm,1.1s
P29A Atwood 57.78 338 ⇓P P 13 14 22.4 -0.3
baz=58,SNR=5.6
S24A Houchin Ranch, 57.84 333 ⇑P P 13 14 24.1 +0.6
baz=58
R25A Fountain Ranch 57.87 334 ⇑P P 13 14 23.8 +0.3
baz=58
V20A Brimhall 57.88 329 ⇓P P 13 14 24.2 +0.5
baz=58
KSCO Kaye Shedlock' 57.92 336 ⇓P P 13 14 23.9 +0.1
baz=58
O30A MW Ranch, Wils 57.97 339 ⇑P P 13 14 23.9 -0.1
baz=58
U21A Nageezi 57.99 330 ⇑P P 13 14 24.8 +0.4
baz=58,SNR=7.2
W18A Petrified Fore 58.00 328 ⇓P P 13 14 25.0 +0.5
baz=58
LONY Lake Ozonia 58.03 1 eP P 13 14 23.9 -0.4
comp=Z,101nm,1.4s
T22A Edith 58.10 331 ⇑P P 13 14 25.5 +0.3
baz=58
O29A 4D Ranch, Culb 58.19 338 ⇓P P 13 14 25.6 +0.1
baz=58,SNR=7.0
Q26A Hugo 58.20 335 ⇑P P 13 14 26.1 +0.3
baz=58
S23A Nye Farm, Mont 58.25 332 ⇑P P 13 14 26.6 +0.3
baz=58
FRNY Flat Rock 58.27 2 eP P 13 14 26.1 +0.2
comp=Z,164nm,1.2s
R24A Sanders Place, 58.29 333 ⇓P P 13 14 27.3 +0.8
baz=58
U20A Newcomb 58.37 330 ⇑P P 13 14 27.3 +0.3
baz=58,SNR=12
P27A Ficken Ranch, 58.37 336 ⇑P P 13 14 27.2 +0.3
baz=59
X16A Lo Mia Camp, P 58.37 326 ⇓P P 13 14 27.9 +0.8
baz=58,SNR=22
T21A Navajo Lake 58.38 331 ⇑P P 13 14 27.3 +0.1
baz=59
MSNY Massena 58.40 1 eP P 13 14 27.1 +0.3
comp=Z,354nm,0.9s
BGNE Belgrade 58.42 341 ⇑P P 13 14 26.7 -0.5
baz=59
Z14A Wintersburg 58.43 324 ⇑P P 13 14 28.1 +0.8
baz=59
113A Mohawk Valley, 58.47 323 ⇓P P 13 14 28.5 +0.9
baz=59,SNR=5.5
Q25A Bedland, Calha 58.49 335 ⇑P P 13 14 28.3 +0.3
baz=59
N30A Hueftle Ranch, 58.53 339 ⇑P P 13 14 27.8 -0.1
baz=59
O28A Krutsinger Ran 58.55 337 ⇓P P 13 14 28.4 +0.3
baz=59
R23A Moffat 58.57 333 ⇓P P 13 14 28.8 +0.2
baz=59,SNR=8.8
EMMW East Machias 58.64 7 eP P 13 14 28.4 -0.1
comp=Z,212nm,1.7s
EMMW epP pP 13 14 41.1 +0.4
S22A 4UR Ranch, Cre 58.66 332 ⇑P P 13 14 29.4 +0.2
baz=59,SNR=12
P26A Davis Ranch, A 58.67 336 ⇑P P 13 14 29.3 +0.2
baz=59,SNR=8.0
N29A Votaw Ranch, W 58.74 338 ⇓P P 13 14 29.4 0.0
baz=59
O27A Beecher Island 58.88 337 ⇓P P 13 14 31.0 +0.6
baz=59
Y14A Wickenburg 58.88 324 ⇑P P 13 14 31.4 +0.8
baz=59,SNR=8.5
Q24A Divide 58.92 334 ⇓P P 13 14 31.2 +0.2
baz=59
N28A Pribbeno Ranch 58.95 338 ⇓P P 13 14 31.3 +0.4
baz=59
P25A Willow Gulch B 58.97 335 ⇓P P 13 14 31.2 0.0
baz=59,SNR=9.5
R22A Saguache, Gunn 59.02 332 ⇓P P 13 14 32.1 +0.4
baz=59
S21A Coal Bank Pass 59.04 331 ⇓P P 13 14 31.9 0.0
baz=59,SNR=6.9
M30A Dale-Ortello V 59.11 339 ⇓P P 13 14 31.8 -0.1
baz=59
WUAZ Wupatki 59.16 327 eP P 13 14 33.5 +0.8
comp=Z,57nm,1.3s
WUAZ Wupatki 59.16 327 ⇓P P 13 14 33.4 +0.8
baz=59,SNR=15
Q23A Hartsel 59.16 333 ⇑P P 13 14 33.1 +0.4
baz=59
O26A Horse Wrangler 59.24 336 ⇑P P 13 14 33.3 +0.2
baz=59
P24A Kohler Place, 59.28 334 ⇓P P 13 14 33.6 +0.3
baz=60
GLA Glamis 59.30 322 ⇑P P 13 14 34.1 +0.6
baz=60
OGNE Ogallala 59.36 337 eP P 13 14 33.5 -0.3
comp=Z,195nm,1.5s
OGNE Ogallala 59.36 337 ⇓P P 13 14 33.5 -0.3
baz=60,SNR=8.0
N27A Anderson Farm, 59.43 337 ⇓P P 13 14 34.3 +0.1
baz=60,SNR=7.3
S20A Disappointment 59.44 331 ⇓P P 13 14 35.2 +0.6
baz=60,SNR=13
O25A Wiggins 59.46 335 ⇑P P 13 14 34.8 +0.3
baz=60
M28A Bar X Bar Ranc 59.51 338 ⇓P P 13 14 35.2 +0.4
baz=60
Q22A Crested Butte, 59.61 332 ⇓P P 13 14 36.1 +0.3
baz=60
Y12C Blythe 59.62 323 ⇓P P 13 14 36.4 +0.9
baz=60
N26A Koester Ranch, 59.71 336 ⇑P P 13 14 36.6 +0.4
baz=60
R20A Redvale 59.74 331 ⇓P P 13 14 37.3 +0.8
baz=60,SNR=8.8
L29A Maesberg Ranch 59.79 339 ⇑P P 13 14 36.6 0.0
baz=60
PDMCI Parker Dam,Lak 59.79 324 ⇓P P 13 14 37.8 +1.1
baz=60
ISCO Idaho Springs 59.81 334 eP P 13 14 37.1 -0.1
ISCO pmax pmax
comp=Z,47nm,1.5s
ISCO Idaho Springs 59.81 334 eP P 13 14 37.1 -0.1
comp=Z,47nm,1.5s
ISCO Idaho Springs 59.81 334 ⇓P P 13 14 37.3 +0.1
baz=60,SNR=8.1
O24A Longmont 59.86 335 ⇓P P 13 14 37.7 +0.4
baz=60
Q21A Lamborn Mesa, 59.88 332 ⇓P P 13 14 38.0 +0.4
baz=60
SMCO Snowmass 59.89 333 eP P 13 14 38.2 +0.3
comp=Z,73nm,1.6s
M27A Reverse DX Ran 60.00 338 ⇑P P 13 14 38.4 +0.3
baz=60,SNR=7.1
N25A Grover 60.04 336 ⇓P P 13 14 39.1 +0.6
baz=60
ECSD EROS Data Cent 60.08 343 eP P 13 14 37.2 -1.4
comp=Z,274nm,1.6s
ECSD epP pP 13 14 49.2 -1.5
ECSD LR LR
comp=Z,415nm,21.0s
BC3 Big Chuckawall 60.09 323 ⇑P P 13 14 39.8 +0.8
baz=60,SNR=7.9
S18A Hurst Farm, Bl 60.12 329 ⇓P P 13 14 39.9 +0.6
baz=60,SNR=17
P22A Eagle 60.14 333 ⇑P P 13 14 39.9 +0.6
baz=60
MONP Monument Peak 60.14 321 ⇑P P 13 14 40.4 +1.0

baz=60
W13A Hualapai Mount 60.22 325 ⇑P P 13 14 40.8 +0.8
baz=60
M26A McRoberts Ranc 60.23 337 ⇑P P 13 14 40.2 +0.4
baz=60
IRM Iron Mountain 60.27 323 ⇓P P 13 14 41.2 +1.1
baz=60,SNR=10
O23A Lake Granby, G 60.28 334 ⇓P P 13 14 40.8 +0.4
baz=60,SNR=15
Q20A Ridgley Place, 60.31 332 ⇓P P 13 14 40.6 +0.2
baz=60
U15A North Rim 60.34 327 ⇑P P 13 14 41.7 +0.9
baz=60,SNR=10
K29A Lazy Trails An 60.35 340 ⇓P P 13 14 41.0 +0.5
baz=60,SNR=5.7
N24A Carr 60.37 335 ⇓P P 13 14 41.5 +0.7
baz=61
P21A Newcastle 60.39 333 ⇓P P 13 14 41.5 +0.5
baz=61
NEE2 Needles Airpor 60.40 324 ⇓P P 13 14 41.9 +1.0
baz=61
L27A T5 Ranch, Ells 60.45 338 ⇑P P 13 14 41.8 +0.6
baz=61
SPMN St. Paul 60.51 347 ⇑P P 13 14 41.0 -0.5
baz=61
PQI Presque Isle 60.51 6 eP P 13 14 41.5 +0.1
comp=Z,45nm,0.9s
O22A Kremmling 60.51 334 ⇑P P 13 14 41.8 -0.2
baz=61,SNR=5.4
BELC Belle Mtn. Jos 60.66 322 ⇑P P 13 14 43.7 +0.9
baz=61
PFO Pinyon Flat Ob 60.66 322 eP P 13 14 43.7 +0.8
comp=Z,31nm,1.2s
PFO Pinyon Flat Ob 60.66 322 P P 13 14 43.7 +0.8
comp=Z,5.1nm,0.8s,baz=137,slow=7.3,SNR=7.9
PFO Pinyon Flat Ob 60.66 322 ⇓P P 13 14 44.1 +1.2
baz=61
K28A Ten Mile Ranch 60.67 339 ⇑P P 13 14 43.2 +0.5
baz=61,SNR=5.8
L26A Underwood Farm 60.70 337 ⇓P P 13 14 43.5 +0.5
baz=61
N23A Red Feather La 60.87 335 ⇑P P 13 14 44.4 +0.1
baz=61,SNR=5.8
M24A Cheyenne 60.89 336 ⇑P P 13 14 44.9 +0.5
baz=61
ASCN Ascension 60.91 92 PFAKE 13 15 00.0 +15
ASCN LR LR
comp=Z,507nm,20.0s
O21A Pagoda 60.96 333 ⇓P P 13 14 45.8 +0.8
baz=61
K27A Flueckinger Fa 60.97 338 ⇓P P 13 14 45.3 +0.6
baz=61
N22A Wattenberg Ran 61.00 334 ⇓P P 13 14 45.9 +0.6
baz=61
PHWY Pilot Hill 61.00 335 eP P 13 14 45.6 +0.4
comp=Z,5.2nm,0.9s
PHWY epP pP 13 14 57.9 +0.4
GMRC Granite Mounta 61.01 323 ⇑P P 13 14 46.3 +1.1
baz=61,SNR=7.0
MURC Murrieta 61.10 321 ⇓P P 13 14 46.9 +1.2
baz=61
L25A Engebretsen Ra 61.13 337 ⇓P P 13 14 46.7 +0.8
baz=61
P19A Cripple Cowboy 61.17 332 ⇑P P 13 14 47.0 +0.7
baz=61
O20A White River Ci 61.24 332 ⇓P P 13 14 47.1 +0.3
baz=61,SNR=6.9
J28A Allard Ranch, 61.25 339 ⇓P P 13 14 46.8 +0.2
baz=61
M23A Laramie 61.25 335 ⇓P P 13 14 47.0 +0.1
baz=61,SNR=12
K26A Motz Farm, Whi 61.31 338 ⇓P P 13 14 47.6 +0.6
baz=62
BBRC Big Bear Solar 61.39 322 ⇓P P 13 14 49.1 +1.1
baz=62
L24A Wheatland 61.42 336 ⇑P P 13 14 48.3 +0.4
baz=62
BRSD Miller 61.42 342 ⇓P P 13 14 46.8 -0.9
baz=62,SNR=6.9
N21A Black Mountain 61.43 333 ⇓P P 13 14 48.7 +0.7
baz=62,SNR=9.4
HEC Hector,Ludlow 61.43 323 ⇑P P 13 14 49.5 +1.4
baz=62
K25A Mack Ranch, Ha 61.49 337 ⇓P P 13 14 49.0 +0.7
baz=62
SRU San Rafael 61.49 330 ⇓P P 13 14 48.8 +0.3
baz=62,SNR=12
M22A Cedar Creek Ra 61.56 334 ⇓P P 13 14 49.6 +0.6
baz=62
TUQ Turquoise Moun 61.62 324 ⇑P P 13 14 50.3 +0.9
baz=62
Q16A Castle Valley 61.66 329 ⇓P P 13 14 50.4 +0.8
baz=62
CIS Catalina Islan 61.71 320 ⇑P P 13 14 51.2 +1.3
baz=62
CCUT Cedar City 61.74 327 eP P 13 14 51.0 +0.8
comp=Z,29nm,1.1s
CCUT epP pP 13 15 03.6 +1.1
O19A Miners Draw (B 61.77 332 ⇓P P 13 14 51.0 +0.7
baz=62,SNR=10
L23A Garrett 61.78 335 ⇑P P 13 14 50.4 -0.1
baz=62,SNR=6.8
N20A Spence Gulch, 61.81 333 ⇓P P 13 14 50.9 +0.2
baz=62,SNR=13
BFSC Mount Baldy Ra 61.82 322 ⇑P P 13 14 51.6 +0.9
baz=62
FMP Fort Macarthur 61.85 321 ⇑P P 13 14 51.6 +0.9
baz=62
MSU Marysvale 61.85 329 eP P 13 14 51.7 +0.7
MSU e*PP pP 13 15 03.7 +0.5
MSU pmax pmax
comp=Z,29nm,1.0s
MSU Marysvale 61.85 329 eP P 13 14 51.7 +0.7
comp=Z,29nm,1.0s
MSU epP pP 13 15 03.7 +0.5
RRX Edison Barstow 61.86 322 ⇓P P 13 14 51.9 +1.0
baz=62
K24A Anderson Ranch 61.95 336 ⇑P P 13 14 51.9 +0.5
baz=62
ARUT Antelope Range 61.96 327 eP P 13 14 52.5 +0.9
ARUT pmax pmax
comp=Z,42nm,1.0s
ARUT Antelope Range 61.96 327 eP P 13 14 52.5 +0.9
comp=Z,42nm,1.0s
L22A Ellis Ranch, M 62.01 335 ⇑P P 13 14 52.5 +0.5
baz=62,SNR=8.9
GSC Goldstone 62.04 323 eP P 13 14 52.6 +0.5
GSC pmax pmax
comp=Z,11nm,0.9s
GSC Goldstone 62.04 323 eP P 13 14 52.6 +0.5
comp=Z,11nm,0.9s
GSC Goldstone 62.04 323 ⇓P P 13 14 52.9 +0.8
baz=62
MWC Mount Wilson 62.05 321 eP P 13 14 52.6 +0.3
MWC pmax pmax
comp=Z,15nm,1.0s
MWC Mount Wilson 62.05 321 eP P 13 14 52.6 +0.3
comp=Z,15nm,1.0s
M21A Separation Pea 62.05 334 ⇑P P 13 14 52.4 +0.1
baz=62,SNR=31
J25A Sunshine Ranch 62.13 338 ⇓P P 13 14 53.0 +0.4
baz=62
SHOC Shoshone 62.16 324 ⇓P P 13 14 53.9 +1.1
baz=62
DECC Green Verdugo 62.23 321 ⇓P P 13 14 54.4 +1.0
baz=62
L21A Rawlins 62.35 334 ⇓P P 13 14 54.2 -0.1
baz=62,SNR=13
J24A Dixon Ranch, L 62.41 337 ⇑P P 13 14 55.2 +0.7
baz=63
EDW2 Edwards Air Fo 62.45 322 ⇓P P 13 14 55.5 +0.6
baz=63
K22A Casper 62.57 335 ⇑P P 13 14 55.7 +0.1
baz=63,SNR=17
LRMC Laurel Mountai 62.68 323 ⇑P P 13 14 57.1 +0.6
baz=63
OSI Osito Adit 62.72 321 eP P 13 14 55.6 -1.0
comp=Z,58nm,1.2s
OSI Osito Adit 62.72 321 ⇑P P 13 14 57.3 +0.7
baz=63
TAOE Nuku Hiva Isla 62.73 267 eT T 14 22 30.1
comp=Z,139nm,0.3s
MPU Maple Canyon 62.73 330 eP P 13 14 57.3 +0.5
comp=Z,30nm,1.0s
MPU epP pP 13 15 10.9 +1.8
M19A Rock Springs 62.75 333 ⇑P P 13 14 57.4 +0.5
baz=63
L20A Wamsutter 62.80 334 ⇑P P 13 14 57.3 0.0

baz=63,SNR=13
J23A Dilts Ranch, B 62.81 336 ⇓P P 13 14 57.5 +0.3
baz=63
EYMN Ely 62.83 349 eP P 13 14 55.0 -2.0
comp=Z,75nm,1.2s
EYMN epP pP 13 15 08.2 -1.0
EYMN LR LR
comp=Z,430nm,20.0s
I24A Kuemmerle Ranc 62.84 337 ⇑P P 13 14 57.8 +0.4
baz=63
RSSD Black Hills 62.85 338 eP P 13 14 57.3 -0.2
RSSD pmax pmax
comp=Z,52nm,1.4s
RSSD Black Hills 62.85 338 eP P 13 14 57.3 -0.2
comp=Z,52nm,1.4s
DAU Daniels Canyon 62.86 330 eP P 13 14 58.4 +0.6
DAU e*PP pP 13 15 10.5 +0.5
DAU pmax pmax
comp=Z,90nm,1.4s
DAU Daniels Canyon 62.86 330 eP P 13 14 58.4 +0.6
comp=Z,90nm,1.4s
DAU epP pP 13 15 10.5 +0.5
FURC Furnace Creek, 62.89 324 ⇑P P 13 14 58.7 +1.1
baz=63,SNR=7.8
MPMC Manual Prospec 62.97 323 ⇓P P 13 14 59.0 +0.5
baz=63,SNR=8.1
JLU Jordanelle 63.10 331 eP P 13 14 59.6 +0.3
comp=Z,40nm,1.0s
ARVC Arvin 63.13 322 ⇓P P 13 15 00.2 +0.9
baz=63
ISA Isabella 63.28 322 eP P 13 15 01.1 +0.8
ISA e*PP pP 13 15 13.2 +0.6
ISA pmax pmax
comp=Z,27nm,1.2s
ISA Isabella 63.28 322 eP P 13 15 01.1 +0.8
comp=Z,27nm,1.2s
ISA epP pP 13 15 13.2 +0.6
ISA Isabella 63.28 322 ⇓P P 13 15 01.3 +0.9
baz=63,SNR=7.3
L19A Farson 63.32 333 ⇓P P 13 15 01.0 +0.3
baz=64
K20A Yellowstone Ra 63.33 334 ⇓P P 13 15 00.3 -0.4
baz=64,SNR=15
M17A Scullys Gap (B 63.41 332 ⇓P P 13 15 01.1 -0.2
baz=64,SNR=28
DUG Dugway 63.45 329 eP P 13 15 02.2 +0.8
DUG e*PP pP 13 15 15.0 +1.2
DUG pmax pmax
comp=Z,69nm,0.9s
DUG MLR MLR
comp=Z,572nm,20.0s
DUG Dugway 63.45 329 eP P 13 15 02.2 +0.8
comp=Z,69nm,0.9s
DUG epP pP 13 15 15.0 +1.2
DUG LR LR
comp=Z,572nm,20.0s
DUG Dugway 63.45 329 ⇓P P 13 15 02.3 +0.8
baz=64,SNR=9.3
L18A Fontenelle, Gr 63.48 332 ⇓P P 13 15 02.4 +0.7
baz=64
R11A Troy Canyon, C 63.52 326 ⇑P P 13 15 03.0 +0.9
baz=64,SNR=16
J21A Lysite 63.52 335 ⇓P P 13 15 02.0 +0.1
baz=64,SNR=28
GRAC Grapevine Rang 63.55 324 ⇑P P 13 15 03.1 +1.0
baz=64
CWC Cottonwood Cre 63.58 323 ⇓P P 13 15 03.3 +0.8
baz=64
H24A Dirks Ranch, A 63.58 338 ⇑P P 13 15 01.7 -0.5
baz=64,SNR=11
PKM Peak Mountain 63.58 321 ⇑P P 13 15 03.2 +0.7
baz=64,SNR=6.2
I22A 9 Mile Ranch, 63.59 336 ⇑P P 13 15 02.0 -0.3
baz=64,SNR=21
K19A Absolon Red Bu 63.68 334 ⇑P P 13 15 02.4 -0.7
baz=64,SNR=8.6
H23A Clabaugh Cattl 63.73 337 ⇑P P 13 15 03.6 +0.4
baz=64
VES Vestal, Richgr 63.76 322 ⇑P P 13 15 04.3 +0.9
baz=64
J20A Shoshoni 63.79 335 ⇓P P 13 15 04.1 +0.4
baz=64,SNR=15
I21A Big Trails, Te 63.84 335 ⇑P P 13 15 03.6 -0.4
baz=64,SNR=35
HWUT Hardware Ranch 63.94 331 eP P 13 15 04.6 -0.1
comp=Z,50nm,0.9s
HWUT epP pP 13 15 17.1 +0.1
HWUT LR LR
comp=Z,671nm,19.0s
BW06 Boulder Array 63.95 333 eP P 13 15 03.9 -0.9
comp=Z,19nm,1.2s
BW06 LR LR
comp=Z,708nm,21.0s
PDAR Pinedale Array 63.95 333 P P 13 15 04.3 -0.5
PDAR Pinedale Array 63.95 333 P P 13 15 04.3 -0.5
comp=Z,4.1nm,0.7s,baz=138,slow=7.8,SNR=30
PDAR LR LR 13 44 18.7
comp=Z,233nm,18.4s,baz=139,slow=37
SMMC Simmler 63.96 321 ⇑P P 13 15 05.4 +0.6
baz=64
G24A Alzada 64.03 338 ⇓P P 13 15 04.7 -0.4
baz=64,SNR=8.1
TIN Tinemaha 64.08 323 ⇑P P 13 15 06.1 +0.5
baz=64
AGMN Agassiz Nation 64.11 346 eP P 13 15 05.0 -0.5
comp=Z,87nm,0.9s
AGMN epP pP 13 15 17.4 -0.3
AGMN LR LR
comp=Z,490nm,22.0s
H22A Clearmont 64.12 337 ⇓P P 13 15 05.4 -0.4
baz=64,SNR=5.6
J19A Crowheart 64.13 334 ⇑P P 13 15 05.7 -0.2
baz=64,SNR=7.8
G23A Biddle 64.27 338 ⇓P P 13 15 06.5 -0.3
baz=64,SNR=11
I20A Worland 64.30 335 ⇓P P 13 15 06.9 0.0
baz=64,SNR=21
H21A Big Horn, Sher 64.42 336 ⇓P P 13 15 07.4 -0.4
baz=65
F24A Ekalaka 64.48 339 ⇑P P 13 15 07.8 -0.3
baz=65,SNR=21
G22A Birney 64.63 337 ⇑P P 13 15 08.6 -0.5
baz=65,SNR=11
HVU Hansel Valley 64.64 330 eP P 13 15 09.4 +0.1
HVU e*PP pP 13 15 21.5 -0.1
HVU pmax pmax
comp=Z,48nm,1.0s
HVU Hansel Valley 64.64 330 eP P 13 15 09.4 +0.1
comp=Z,48nm,1.0s
HVU epP pP 13 15 21.5 -0.1
H20A Greybull 64.69 335 ⇓P P 13 15 08.8 -0.7
baz=65,SNR=22
MDND Maddock 64.69 343 ⇑P P 13 15 09.4 +0.1
baz=65,SNR=28
F23A Volborg 64.72 338 ⇓P P 13 15 09.3 -0.3
baz=65,SNR=16
I19A Meeteetse 64.73 334 ⇓P P 13 15 09.8 0.0
baz=65,SNR=6.8
I18A Diamond G Ranc 64.81 334 ⇑P P 13 15 10.4 0.0
baz=65,SNR=13
MLAC Mammoth Lakes 64.83 324 ⇑P P 13 15 10.9 +0.2
baz=65
G21A Lodge Grass 64.98 336 ⇑P P 13 15 11.4 0.0
baz=65,SNR=12
SNOW Snow King Moun 65.03 333 eP P 13 15 12.2 +0.3
comp=Z,9.4nm,0.7s
E24A Baker 65.05 339 ⇓P P 13 15 11.8 0.0
baz=65,SNR=7.6
LOHW Long Hollow 65.08 333 eP P 13 15 12.1 -0.1
comp=Z,15nm,1.0s
NVAR Mina Array Bea 65.08 325 P P 13 15 13.3 +1.0
NVAR pP pP 13 15 25.2 +0.6
NVAR P'P' 13 43 52.9
NVAR Mina Array Bea 65.08 325 P P 13 15 13.3 +1.0
comp=Z,5.6nm,0.7s,baz=142,slow=6.4,SNR=58
NVAR pP pP 13 15 25.2 +0.6
comp=Z,9.0nm,0.7s,baz=143,slow=6.4,SNR=18
NVAR LR LR 13 40 13.5
comp=Z,555nm,21.7s,baz=230,slow=33
NVAR PKPPKP P'P'df 13 43 52.9 -0.8
comp=Z,0.3nm,0.6s,baz=262,slow=1.0,SNR=4.3
F22A Rosebud 65.09 337 ⇑P P 13 15 11.5 -0.5
baz=65,SNR=10
ELK Elko 65.09 328 eP P 13 15 12.5 +0.2
comp=Z,29nm,1.0s
ELK epP pP 13 15 24.7 +0.1
TPAW Teton Pass 65.14 333 eP P 13 15 12.5 -0.1
comp=Z,25nm,1.1s
RRI2 Red Ridge 65.19 332 eP P 13 15 13.2 +0.2
comp=Z,33nm,0.8s
H19A Powell 65.24 335 ⇑P P 13 15 13.1 -0.1
baz=65
MOOW Moose Ponds 65.25 333 eP P 13 15 13.2 -0.1
comp=Z,24nm,1.4s
I17A Pilgrim Ck. 65.31 333 ⇑P P 13 15 14.1 +0.4
baz=66
DCID1 Drake Creek 65.32 333 eP P 13 15 14.5 +0.8
comp=Z,39nm,0.9s
E23A Ismay 65.35 338 ⇑P P 13 15 13.7 +0.1
baz=66
G20A Bridger 65.38 336 ⇓P P 13 15 13.1 -0.9
baz=66,SNR=15
F21A Absaloka Mine, 65.45 337 ⇓P P 13 15 14.4 0.0
baz=66
IMW Indian Meadow 65.45 333 eP P 13 15 14.7 +0.1
comp=Z,55nm,1.4s
IMW epP pP 13 15 27.4 +0.4
H18A Shoshone NF, C 65.53 334 ⇓P P 13 15 14.6 -0.5
baz=66,SNR=19
E22A Miles City 65.53 338 ⇑P P 13 15 14.1 -0.7
baz=66,SNR=8.3
D24A Glendive 65.53 339 ⇓P P 13 15 15.3 +0.4
baz=66,SNR=12
I16A Newdale 65.68 333 ⇑P P 13 15 16.5 +0.5
baz=66,SNR=15
H17A Grant Village 65.69 334 ⇓P P 13 15 16.9 +0.7
baz=66
RLMT Red Lodge 65.73 335 eP P 13 15 16.4 +0.1
comp=Z,26nm,1.0s
LKWY Lake 65.75 334 eP P 13 15 17.5 +0.9
LKWY pmax pmax
comp=Z,44nm,1.2s
LKWY Lake 65.75 334 eP P 13 15 17.5 +0.9
comp=Z,44nm,1.2s
SAO San Andreas Ge 65.80 321 eP P 13 15 17.8 +1.1
SAO pmax pmax
comp=Z,3.0nm,0.9s
SAO San Andreas Ge 65.80 321 eP P 13 15 17.8 +1.1
comp=Z,3.0nm,0.9s
D23A Lindsay 65.89 339 ⇑P P 13 15 17.7 +0.6
baz=66,SNR=15
BMN Battle Mountai 65.90 327 eP P 13 15 18.2 +0.8
BMN e*PP pP 13 15 30.4 +0.6
BMN pmax pmax
comp=Z,7.0nm,0.9s
BMN MLR MLR
comp=Z,528nm,21.0s
BMN Battle Mountai 65.90 327 eP P 13 15 18.2 +0.8
comp=Z,6.6nm,0.9s
BMN epP pP 13 15 30.4 +0.6
BMN LR LR
comp=Z,528nm,21.0s
C24A Savage 65.93 339 ⇓P P 13 15 18.0 +0.6
baz=66
ULM Lac du Bonnet 65.94 346 P P 13 15 16.6 -0.7
ULM Lac du Bonnet 65.94 346 P P 13 15 16.6 -0.7
comp=Z,51nm,0.8s,baz=158,slow=6.0,SNR=52
ULM LR LR 13 42 07.2
comp=Z,259nm,20.1s,baz=294,slow=34
CMB Columbia Colle 66.01 323 eP P 13 15 18.5 +0.4
CMB e*PP pP 13 15 30.5 +0.1
CMB pmax pmax
comp=Z,32nm,1.1s
CMB Columbia Colle 66.01 323 eP P 13 15 18.5 +0.4
comp=Z,32nm,1.1s
CMB epP pP 13 15 30.5 +0.1
G18A Lazy EL Ranch, 66.01 335 ⇓P P 13 15 18.4 +0.4
baz=66,SNR=60
E21A Keefer Ranch, 66.03 337 ⇑P P 13 15 17.9 -0.1
baz=66,SNR=8.3
F19A Roth Farm, Mol 66.19 336 ⇑P P 13 15 19.3 +0.2
baz=66,SNR=39
D22A Cohagen 66.22 338 ⇑P P 13 15 19.8 +0.6
baz=66,SNR=82
H16A Russell Place, 66.23 333 ⇓P P 13 15 20.7 +1.1
baz=66,SNR=28
E20A Meyer Farm, Mu 66.41 337 ⇑P P 13 15 21.1 +0.6
baz=67,SNR=37
QLMT Earthquake Lak 66.41 333 eP P 13 15 21.8 +1.1
comp=Z,15nm,1.8s
QLMT epP pP 13 15 34.4 +1.4
C23A Lambert 66.42 339 ⇓P P 13 15 20.9 +0.3
baz=67,SNR=8.6
GCMT Cycliff 66.43 335 eP P 13 15 20.8 +0.1
comp=Z,33nm,1.0s
GCMT epP pP 13 15 32.9 -0.2
D21A La Casta Ranch 66.44 338 ⇑P P 13 15 21.4 +0.7
baz=67,SNR=29
G17A Pierce Place, 66.50 334 ⇓P P 13 15 22.5 +1.3
baz=67,SNR=6.8
I14A Mackay 66.61 332 ⇑P P 13 15 22.9 +0.9
baz=67,SNR=40
C22A Vida 66.62 339 ⇓P P 13 15 22.1 +0.3
baz=67,SNR=19
E19A Rath Farm, Rou 66.63 336 ⇑P P 13 15 22.1 +0.2
baz=67,SNR=11
DGMT Dagmar 66.67 340 eP P 13 15 21.8 -0.2
comp=Z,47nm,0.9s
DGMT epP pP 13 15 34.6 +0.3
DGMT LR LR
comp=Z,507nm,22.0s
DGMT Dagmar 66.67 340 ⇓P P 13 15 22.7 +0.7
baz=67,SNR=7.3
HLID Hailey 66.78 331 eP P 13 15 23.7 +0.6
comp=Z,15nm,0.9s
HLID LR LR
comp=Z,495nm,19.0s
HLID Hailey 66.78 331 ⇓P P 13 15 23.9 +0.8
baz=67,SNR=27
D20A Manuel Ranch, 66.90 337 ⇑P P 13 15 24.0 +0.4
baz=67,SNR=18
F17A Fitzpatrick Pl 66.94 335 ⇓P P 13 15 24.6 +0.6
baz=67,SNR=21
A24A Westby 67.00 340 ⇓P P 13 15 25.1 +1.0
baz=67,SNR=32
MCMT McKenzie Canyo 67.03 333 eP P 13 15 25.4 +0.7
comp=Z,5.6nm,0.8s
C21A Desert Coulee 67.12 338 ⇓P P 13 15 25.2 +0.2
baz=67,SNR=31
B22A Reddig Ranch S 67.13 339 ⇓P P 13 15 25.6 +0.6
baz=67,SNR=23
BOZ Bozeman (W) 67.14 334 eP P 13 15 25.3 0.0
BOZ e*PP pP 13 15 37.7 +0.1
BOZ pmax pmax
comp=Z,2.0nm,0.6s
BOZ MLR MLR
comp=Z,337nm,20.0s
BOZ Bozeman (W) 67.14 334 eP P 13 15 25.3 0.0
comp=Z,1.8nm,0.6s
BOZ epP pP 13 15 37.7 +0.1
BOZ LR LR
comp=Z,337nm,20.0s
E18A Harlowton 67.16 335 ⇓P P 13 15 25.7 +0.3
baz=67,SNR=11
BEKR Beckworth 67.23 324 eP P 13 15 26.7 +0.7
comp=Z,20nm,1.2s
D19A Cripps Ranch, 67.24 336 ⇓P P 13 15 26.1 +0.3
baz=67,SNR=17
F16A Kennard Place, 67.25 334 ⇓P P 13 15 26.4 +0.5
baz=67,SNR=11
I12A Atlanta 67.30 330 ⇑P P 13 15 27.1 +0.7
baz=68,SNR=12
A23A Redstone 67.31 340 ⇑P P 13 15 26.5 +0.3
baz=68
DLMT Dillon 67.34 333 eP P 13 15 26.7 +0.1
comp=Z,30nm,1.1s
MFID Camas Ranch 67.36 330 eP P 13 15 27.1 +0.4
comp=Z,40nm,0.8s
MFID epP pP 13 15 40.1 +1.1
MFID Camas Ranch 67.36 330 ⇓P P 13 15 27.6 +0.9
baz=68,SNR=33
C20A Veseth Ranch, 67.36 337 ⇓P P 13 15 26.5 -0.1
baz=68,SNR=9.8
E17A Martinsdale 67.47 335 ⇑P P 13 15 27.7 +0.3
baz=68,SNR=8.5
B21A Ellsworth Farm 67.60 338 ⇓P P 13 15 28.5 +0.5
baz=68
D18A Linhart Farms, 67.63 336 ⇓P P 13 15 28.9 +0.6
baz=68
LRM Limekiln Ridge 67.63 333 eP P 13 15 28.8 +0.3
comp=Z,138nm,1.1s
LRM epP pP 13 15 41.1 +0.2
F15A Butte 67.67 333 ⇑P P 13 15 29.1 +0.5
baz=68,SNR=9.2
A22A Carney Farms, 67.69 339 ⇑P P 13 15 29.2 +0.6
baz=68,SNR=42
H12A Diamond D Ranc 67.74 331 ⇓P P 13 15 29.8 +0.7
baz=68,SNR=16
C19A Slack Wire Ran 67.78 337 ⇓P P 13 15 29.4 +0.3
baz=68,SNR=28
E16A East Helena 67.86 334 ⇓P P 13 15 29.9 +0.1
baz=68,SNR=12
D17A Six Diamond Ra 67.95 335 ⇑P P 13 15 30.5 +0.2
baz=68,SNR=23
B20A Solberg Farm, 67.97 338 ⇑P P 13 15 30.6 +0.2
baz=68,SNR=32
F14A Wisdom 68.03 333 ⇓P P 13 15 31.4 +0.5
baz=68
WVOR Wild Horse Val 68.07 327 eP P 13 15 31.0 -0.2
WVOR pmax pmax
comp=Z,20nm,1.1s
WVOR Wild Horse Val 68.07 327 eP P 13 15 31.0 -0.2
comp=Z,20nm,1.1s
D16A Dana Ranch, Ca 68.21 335 ⇑P P 13 15 32.5 +0.6
baz=68,SNR=9.9
HOPS Hopland 68.22 322 P P 13 15 33.9 +1.8
comp=Z,38nm,1.3s
HOPS epP pP 13 15 45.0 +0.6
EGMT Eagleton 68.29 336 eP P 13 15 32.2 -0.1
comp=Z,58nm,1.0s
EGMT epP pP 13 15 44.8 +0.1
EGMT LR LR
comp=Z,430nm,20.0s
EGMT Eagleton 68.29 336 ⇑P P 13 15 32.4 +0.1
baz=68,SNR=19
A20A Cobblestone Ra 68.31 338 ⇑P P 13 15 33.0 +0.6
baz=68
B19A Brinkman Farms 68.33 337 ⇓P P 13 15 32.8 +0.2
baz=68,SNR=20
C17A Wharram Farm, 68.37 336 ⇓P P 13 15 33.1 +0.3
baz=68,SNR=25
G12A Big Creek, Yel 68.40 331 ⇑P P 13 15 33.3 0.0
baz=69
B18A Beardsley Farm 68.60 337 ⇓P P 13 15 34.7 +0.5
baz=69,SNR=21
D15A Lincoln 68.62 334 ⇓P P 13 15 35.0 +0.4
baz=69,SNR=6.5
A19A Klindworth Far 68.65 338 ⇓P P 13 15 35.0 +0.5
baz=69,SNR=6.1
SCHQ Schefferville 68.69 6 eP P 13 15 33.8 -0.9
SCHQ pP pP 13 15 47.3 +0.3
SCHQ Schefferville 68.69 6 P P 13 15 34.1 -0.5
comp=Z,18nm,0.8s,baz=188,slow=4.1,SNR=31
SCHQ pP pP 13 15 47.3 +0.3
comp=Z,17nm,0.8s,baz=237,slow=4.5,SNR=8.6
SCHQ LR LR 13 47 00.7
comp=Z,313nm,20.1s,baz=12,slow=37
CHMT Chamberlain Mo 68.83 334 eP P 13 15 36.3 +0.3
comp=Z,6.4nm,0.9s
CHMT epP pP 13 15 48.7 +0.3
F12A Elk City 68.84 332 ⇓P P 13 15 36.4 +0.4
baz=69,SNR=23
C16A Fuhringer Ranc 68.90 335 ⇓P P 13 15 36.8 +0.6
baz=69,SNR=18
B17A L&G Farms, Che 68.91 336 ⇓P P 13 15 36.3 +0.1
baz=69
WDC Whiskeytown Da 68.95 324 eP P 13 15 35.4 -1.1
WDC pmax pmax
comp=Z,8.0nm,0.8s
WDC Whiskeytown Da 68.95 324 eP P 13 15 35.4 -1.1
comp=Z,7.6nm,0.8s
KCPM Cahto Peak 68.97 323 eP P 13 15 38.2 +1.3
comp=Z,34nm,1.3s
KCPM epP pP 13 15 50.0 +0.7
A18A Metzger Ranch, 69.05 337 ⇑P P 13 15 37.0 -0.1
baz=69,SNR=12
MSO Missoula 69.07 333 eP P 13 15 37.9 +0.7
comp=Z,26nm,1.0s
MSO Missoula 69.07 333 ⇑P P 13 15 38.4 +1.1
baz=69,SNR=14
D14A Greenough 69.07 334 ⇑P P 13 15 37.9 +0.5
baz=69,SNR=9.8
BMO Blue Mountains 69.14 330 eP P 13 15 37.2 -0.5
BMO e*PP pP 13 15 50.2 +0.1
BMO pmax pmax
comp=Z,47nm,1.6s
BMO MLR MLR
comp=Z,591nm,19.0s
BMO Blue Mountains 69.14 330 eP P 13 15 37.2 -0.5
comp=Z,47nm,1.6s
BMO epP pP 13 15 50.2 +0.1
BMO LR LR
comp=Z,591nm,19.0s
SLMT Seeley Lake 69.19 334 eP P 13 15 38.5 +0.4
comp=Z,21nm,1.0s
C15A Salmond Ranch, 69.23 335 ⇑P P 13 15 39.5 +1.2
baz=69,SNR=19
B16A M & M Farms, S 69.37 336 ⇓P P 13 15 39.2 +0.1
baz=70,SNR=9.9
A17A Triple J Farms 69.40 337 ⇑P P 13 15 39.5 +0.3
baz=70,SNR=26
E12A Beaver Dam Sad 69.48 332 ⇑P P 13 15 40.3 +0.4
baz=70,SNR=25
D13A Huson 69.50 333 ⇓P P 13 15 40.6 +0.7
baz=70,SNR=11
TBI Tubuai 69.50 250 eS S 13 24 54.6 +9.2
TBI Tubuai 69.50 250 eLR LR 13 36 39.3
comp=Z,2µm,27.0s,baz=91
TBI Tubuai 69.50 250 eT T 14 31 11.4
comp=Z,38nm,0.3s
SWMT Swartz Lake 69.62 334 eP P 13 15 41.2 +0.5
comp=Z,8.7nm,0.9s
B15A Bradely Ranch, 69.64 335 ⇓P P 13 15 40.9 +0.1
baz=70,SNR=8.6
YBH Yreka Blue Hor 69.80 325 eP P 13 15 41.0 -0.9
comp=Z,17nm,0.9s
YBH epP pP 13 15 53.5 -0.9
YBH Yreka Blue Hor 69.80 325 P P 13 15 41.2 -0.7
comp=Z,4.1nm,0.8s,baz=78,slow=5.3,SNR=26
KHMM Horse Mountain 69.82 323 eP P 13 15 43.0 +0.8
comp=Z,51nm,1.2s
KHMM epP pP 13 15 55.2 +0.6
YBMT Yellow Bay 69.89 334 eP P 13 15 43.0 +0.6
comp=Z,15nm,1.0s
YBMT epP pP 13 15 55.0 +0.2
F10A Beach Ranch, E 69.92 331 P P 13 15 43.3 +0.8
JTMT Jette 69.92 334 eP P 13 15 43.2 +0.6
comp=Z,35nm,1.3s
JTMT epP pP 13 15 55.3 +0.3
VNA1 Neumayer--Stat 69.95 161 eP P 13 15 44.0 +1.8
VNA1 Neumayer--Stat 69.95 161 epP pP 13 15 57.1 +2.5
VNA1 Neumayer--Stat 69.95 161 enear PcP 13 16 02.8 -1.6
B14A Marquette Ranc 69.97 335 ⇓P P 13 15 43.3 +0.4
baz=70,SNR=17
TIAR Tiarei 70.14 256 eT T 14 31 54.9
comp=Z,30nm,0.2s
BLMT Blacktail Moun 70.16 334 eP P 13 15 44.9 +0.7
comp=Z,34nm,1.3s
BLMT epP pP 13 15 56.7 +0.1
BSMT Bassoo Peak 70.22 334 eP P 13 15 45.0 +0.5
comp=Z,38nm,1.0s
A15A Johnson Ranch, 70.23 335 ⇑P P 13 15 44.3 -0.2
baz=70,SNR=7.1
KRMB Red Mountain 70.34 324 eP P 13 15 45.9 +0.6
comp=Z,21nm,1.1s
KRMB epP pP 13 15 57.5 -0.2
PPT2 Papeete2 70.35 256 eS S 13 24 59.3 +3.6
comp=Z,374nm,24.8s
PPT2 Papeete2 70.35 256 eLR LR 13 36 57.0
baz=101
PPT Papeete 70.36 256 LR LR 13 38 55.9
comp=Z,363nm,18.2s,baz=173,slow=29
C12B Naegeli Ranch, 70.41 333 ⇑P P 13 15 46.6 +1.1
baz=71
B13A Whitefish 70.48 334 ⇓P P 13 15 46.8 +0.9
baz=71
A14A Double T Ranch 70.51 335 ⇑P P 13 15 46.5 +0.3
baz=71,SNR=8.2
HUMO Hull Mountain 70.52 325 eP P 13 15 46.1 -0.1
comp=Z,13nm,1.2s
VIPM Ingram Point 70.55 328 P P 13 15 47.7 +1.1
VIPM Ingram Point 70.55 328 P P 13 15 47.7 +1.1
WALA Waterton Lakes 70.78 335 eP P 13 15 48.2 +0.4
comp=Z,1.3nm,1.0s
WALA epP pP 13 16 00.0 -0.2
KBO Bosley Butte 70.97 324 eP P 13 15 49.9 +0.9
comp=Z,39nm,1.7s
KBO epP pP 13 16 01.9 +0.4
B12A Libby 71.04 333 ⇓P P 13 15 50.4 +1.1
baz=71,SNR=5.9
HAWA Hanford 71.33 330 eP P 13 15 51.7 +0.7

comp=Z,26nm,0.9s
HAWA epP pP 13 16 03.9 +0.4
BROR Big Rock Looko 71.35 327 P P 13 15 51.4 +0.2
A12A Yaak River Ran 71.42 334 ⇓P P 13 15 52.7 +1.1
baz=72,SNR=9.2
SNIWA Snively Ranch 71.44 330 P P 13 15 53.1 +1.5
KEBM Edson Butte 71.46 325 eP P 13 15 53.1 +1.1
comp=Z,5.6nm,0.8s
KEBM epP pP 13 16 05.1 +0.8
FFC Flin Flon 71.54 345 P P 13 15 51.0 -1.1
comp=Z,83nm,0.9s,SNR=10
FFC Flin Flon 71.54 345 i P P 13 15 51.9 -0.2
FFC Flin Flon 71.54 345 eP P 13 15 51.5 -0.5
comp=Z,26nm,1.0s
FFC epP pP 13 16 04.1 -0.4
FFC LR LR
comp=Z,349nm,21.0s
VFP Flag Point 71.54 328 P P 13 15 53.6 +1.0
NEW Newport 71.56 333 eP P 13 15 52.5 +0.1
comp=Z,40nm,0.9s
NEW epP pP 13 16 05.3 +0.5
NEW Newport 71.56 333 ⇓P P 13 15 52.9 +0.5
baz=72,SNR=17
OD2 Odessa Site #2 71.65 331 P P 13 15 54.1 +1.1
SNAA Sanae 71.90 161 eP P 13 15 55.2 +1.0
SNAA Sanae 71.90 161 epP pP 13 16 07.7 +1.0
SNAA Sanae 71.90 161 enear PcP 13 16 14.0 +1.2
SNAA Sanae 71.90 161 eP P 13 15 54.9 +0.6
comp=Z,131nm,1.4s
MPOR Mary's Peak 72.09 326 P P 13 15 57.0 +1.2
SAW Saint Andrews 72.20 331 P P 13 15 57.5 +1.2
ETW Entiat 72.57 330 P P 13 15 59.5 +0.8
LON Longmire 72.70 329 eP P 13 15 59.6 +0.3
LON e*PP pP 13 16 12.2 +0.5
LON pmax pmax
comp=Z,11nm,0.9s
LON Longmire 72.70 329 eP P 13 15 59.6 +0.3
comp=Z,11nm,0.9s
LON epP pP 13 16 12.2 +0.5
LIC Lamto 73.37 79⇑iP P 13 16 04.0 +0.1
comp=Z,91nm,0.9s,baz=257
LIC eR
comp=Z,1µm,22.5s
LIC Lamto 73.37 79⇑iP P 13 16 04.0 +0.1
comp=Z,91nm,0.9s
DBIC Dimbokro 73.66 79 P P 13 16 05.8 +0.3
DBIC Dimbokro 73.66 79 P P 13 16 05.8 +0.3
comp=Z,58nm,0.8s,baz=234,slow=5.9,SNR=73
DBIC LR LR 13 46 57.7
comp=Z,571nm,18.2s,baz=217,slow=34
JCW Jim Creek 73.75 330 P P 13 16 05.8 +0.4
NLWA Neilton Lookou 74.17 329 eP P 13 16 09.3 +1.3
comp=Z,52nm,0.9s
PGC Sidney 74.81 330 eP P 13 16 12.3 +0.8
comp=Z,2.2nm,0.9s
PGC epP PcP 13 16 25.6 +0.3
PFVI Vila Bisbo 80.95 48 eP P 13 16 47.3 +1.4
comp=Z,65nm,1.5s
MORF Marmelete 81.15 48 eP P 13 16 48.8 +1.7
comp=Z,61nm,1.3s
MORF Marmelete 81.15 48 eP P 13 16 45.7 -1.4
PTEO Sao Teotonio 81.19 48 eP P 13 16 47.9 +0.7
comp=Z,97nm,1.9s
LIS Lisbon 81.38 47 eP P 13 16 47.5 -0.7
LIS AMb AMB 13 17 05.5
comp=Z,109nm,2.4s
LIS Lisbon 81.38 47 eP P 13 16 47.5 -0.7
comp=Z,109nm,2.4s
LIS Lisbon 81.38 47 eP P 13 16 47.5 -0.7
PNCL Nicolau / Gran 81.57 48 eP P 13 16 51.0 +1.8
comp=Z,52nm,1.4s
YKA Yellowknife Ar 81.61 343 P P 13 16 48.4 -0.5
YKA PP PP 13 19 52.0 -4.1
YKA PKKPbc PKKPbc 13 35 21.9 -2.9
YKA Yellowknife Ar 81.61 343 P P 13 16 48.4 -0.5
comp=Z,13nm,0.8s,baz=138,slow=5.6,SNR=205
YKA PP PP 13 19 51.9 -4.1
comp=Z,2.6nm,1.0s,baz=137,slow=10,SNR=4.6
YKA PKKPbc PKKPbc 13 35 21.9 -2.9
comp=Z,0.2nm,0.8s,baz=322,slow=2.5,SNR=3.8
PBDV Barranco-do-Ve 81.64 49 eP P 13 16 50.3 +0.6
comp=Z,38nm,1.5s
TOA0 Torodi Ar. Sit 81.66 74 eP P 13 16 50.4 +0.2
TORD Torodi Ar. Bea 81.66 74 P P 13 16 50.7 +0.5
TORD Torodi Ar. Bea 81.66 74 P P 13 16 50.7 +0.5
comp=Z,63nm,0.7s,baz=259,slow=4.8,SNR=289
TORD LR LR 13 54 14.9
comp=Z,462nm,18.4s,baz=245,slow=36
MESJ Messejana 81.68 48 eP P 13 16 48.4 -1.4
MESJ AMb AMB 13 17 01.8
comp=Z,32nm,1.7s
MESJ eS S 13 26 57.5 -1.9
MESJ Messejana 81.68 48 eP P 13 16 48.4 -1.4
comp=Z,32nm,1.7s
MESJ eS S 13 26 57.5 -1.9
MESJ Messejana 81.68 48 eP P 13 16 48.3 -1.4
MESJ eS S 13 26 57.5 -1.9
PCVE Castro Verde 81.72 48 eP P 13 16 51.9 +1.9
comp=Z,50nm,1.3s
PVAQ Vaqueiros 81.86 48 eP P 13 16 53.0 +2.2
comp=Z,31nm,1.1s
PVAQ eLR LR 13 42 49.0
comp=Z,237nm,18.0s
PBEJ Beja 82.01 48 eP P 13 16 53.6 +2.1
comp=Z,29nm,1.1s
EVOP Sao Brissos 82.03 47⇑iP P 13 16 53.1 +1.5
EVOP pmax pmax
comp=Z,83nm,1.1s
EVOP Sao Brissos 82.03 47⇑iP P 13 16 53.1 +1.5
comp=Z,83nm,1.1s
EVO Evora 82.11 47⇑iP P 13 16 53.1 +1.0
comp=Z,83nm,1.1s
EVO eR
comp=Z,425nm,22.8s
EVO Evora 82.11 47 eP P 13 16 52.1 0.0
comp=Z,36nm,1.4s
PMTG Montargil 82.18 47 eP P 13 16 54.0 +1.6
comp=Z,72nm,1.1s
SBA Scott Base 82.19 191 eP P 13 16 53.4 +1.6
SBA pmax pmax
comp=Z,62nm,1.4s
SBA Scott Base 82.19 191 eP P 13 16 53.4 +1.6
comp=Z,62nm,1.4s
PESTR Estremoz 82.55 47 eP P 13 16 54.7 +0.3
comp=Z,30nm,1.3s
SFJD Kangerlussuaq 82.61 10 i P P 13 16 53.2 -0.8
comp=Z,11nm,0.9s
PBAR Barrancos 82.67 48 eP P 13 16 56.0 +1.0
comp=Z,23nm,1.1s
PMRV Marv??o 82.92 47 eP P 13 16 56.7 +0.4
comp=Z,25nm,1.1s
PMRV eLR LR 13 42 08.3
comp=Z,237nm,20.0s
PCBR Castelo Branco 83.03 46 eP P 13 16 56.8 0.0
comp=Z,35nm,1.1s
PVIS Viseu 83.10 45 eP P 13 16 57.6 +0.4
comp=Z,54nm,1.1s
MTE Manteigas 83.21 46 eP P 13 16 57.7 -0.1
comp=Z,38nm,1.1s
MTE eLR LR 13 37 01.3
comp=Z,207nm,20.0s
MTE Manteigas 83.21 46 eP P 13 16 58.1 +0.3
comp=Z,38nm,1.2s
VNDA Vanda 83.26 191 P P 13 16 58.8 +1.4
VNDA pP pP 13 17 11.1 +1.0
VNDA Vanda 83.26 191 P P 13 16 58.8 +1.4
comp=Z,3.5nm,1.0s,baz=119,slow=4.1,SNR=13
VNDA pP pP 13 17 11.1 +1.0
comp=Z,18nm,1.1s,baz=231,slow=2.9,SNR=29
VNDA LR LR 13 46 42.9
comp=Z,673nm,20.0s,baz=121,slow=30
PCAB Cabril 83.42 44 eP P 13 16 58.0 -0.8
comp=Z,48nm,1.6s
POLO Lamas de Olo 83.44 45 eP P 13 17 00.2 +1.2
comp=Z,26nm,1.3s
PVRL Vila Real 83.45 45 eP P 13 16 58.7 -0.3
comp=Z,37nm,1.3s
MVO Moncorvo 83.88 45 eP P 13 17 02.3 +1.1
comp=Z,38nm,1.1s
MVO eLR LR 13 36 39.1
comp=Z,277nm,22.0s
DLBC Dease Lake 84.13 335 eP P 13 17 02.6 +0.5
DLBC epP pP 13 17 15.3 +0.5
PAB San Pablo 85.13 48 P P 13 17 07.0 -0.7
PAB pmax pmax
comp=Z,7.0nm,0.8s
PAB San Pablo 85.13 48 P P 13 17 07.0 -0.7
comp=Z,7.5nm,0.8s
ESDC Sonseca Array 85.46 48 P P 13 17 10.0 +0.8
ESDC Sonseca Array 85.46 48 P P 13 17 10.0 +0.8
comp=Z,3.8nm,0.7s,baz=254,slow=4.8,SNR=12
ESDC LR LR 13 54 41.5
comp=Z,259nm,20.2s,baz=245,slow=35
SYO Syowa Base 86.19 161⇓iP P 13 17 11.0 -1.2
SYO Syowa Base 86.19 161⇓ipP pP 13 17 23.6 -1.3
SKAG Skagway 86.96 334 eP P 13 17 16.4 +0.4
comp=Z,23nm,1.0s
SKAG epP pP 13 17 29.3 +0.5
TAM Tamanrasset 87.81 66 eP P 13 17 22.5 +1.3
TAM pmax pmax
comp=Z,28nm,1.0s
TAM Tamanrasset 87.81 66 eP P 13 17 22.5 +1.3
comp=Z,28nm,1.0s
SJPF Ste Jean 88.61 45 eP P 13 17 23.9 -0.5
comp=Z,34nm,1.3s
SJPF Ste Jean 88.61 45 eP P 13 17 23.9 -0.5
SJPF pmax pmax
comp=Z,34nm,1.3s
SJPF Ste Jean 88.61 45 eP P 13 17 23.9 -0.5
comp=Z,34nm,1.3s
PNL Peninsula 88.83 333 P P 13 17 26.5 +1.4
comp=Z,30nm,1.1s
PNL epP pP 13 17 37.9 +0.1
ETSF Etsaut 89.00 45 eP P 13 17 26.7 +0.4
comp=Z,4.4nm,0.6s
ETSF Etsaut 89.00 45 eP P 13 17 26.7 +0.4
ETSF pmax pmax
comp=Z,4.0nm,0.6s
ETSF Etsaut 89.00 45 eP P 13 17 26.7 +0.4
comp=Z,4.4nm,0.6s
TSUM Tsumeb 89.10 109 eP P 13 17 27.5 +0.1
comp=Z,26nm,1.2s
ROSF Rostrenen 89.13 40 eP P 13 17 26.5 -0.1
ROSF Rostrenen 89.13 40 eP P 13 17 26.5 -0.1
ROSF Rostrenen 89.13 40 eP P 13 17 26.5 -0.1
SGMF Saint Gilles 89.54 40 eP P 13 17 29.3 +0.7
SGMF Saint Gilles 89.54 40 eP P 13 17 29.3 +0.7
SGMF Saint Gilles 89.54 40 eP P 13 17 29.3 +0.7
SUMG Summit 89.56 11⇑iP P 13 17 29.2 +0.5
SUMG i *PP pP 13 17 41.2 -0.2
SUMG pmax pmax
comp=Z,54nm,1.0s
SUMG Summit 89.56 11 eP P 13 17 29.2 +0.5
comp=Z,92nm,1.0s
SUMG Summit 89.56 11⇑iP P 13 17 29.2 +0.5
comp=Z,54nm,1.0s
SUMG i pP pP 13 17 41.2 -0.2
EPF Esparros 89.66 45 eP P 13 17 29.7 +0.3
comp=Z,5.8nm,0.6s
EPF Esparros 89.66 45 eP P 13 17 29.7 +0.3
EPF pmax pmax
comp=Z,6.0nm,0.6s
EPF Esparros 89.66 45 eP P 13 17 29.7 +0.3
comp=Z,5.8nm,0.6s
MFF Saint Martin d 90.51 42 eP P 13 17 33.1 -0.1
comp=Z,24nm,1.0s
MFF Saint Martin d 90.51 42 eP P 13 17 33.1 -0.1
MFF pmax pmax
comp=Z,24nm,1.0s
MFF Saint Martin d 90.51 42 eP P 13 17 33.1 -0.1
comp=Z,24nm,1.0s
LFF La Frestale 90.55 44 eP P 13 17 33.5 +0.1
comp=Z,39nm,1.0s
LFF La Frestale 90.55 44 eP P 13 17 33.5 +0.1
LFF pmax pmax
comp=Z,39nm,1.0s
LFF La Frestale 90.55 44 eP P 13 17 33.5 +0.1
comp=Z,39nm,1.0s
GRR Gorron 90.65 40 eP P 13 17 33.5 -0.3
comp=Z,12nm,0.8s
GRR Gorron 90.65 40 eP P 13 17 33.5 -0.3
GRR pmax pmax
comp=Z,12nm,0.8s
GRR Gorron 90.65 40 eP P 13 17 33.5 -0.3
comp=Z,12nm,0.8s
FLN La Foliniere 91.01 40 eP P 13 17 35.3 -0.1
comp=Z,13nm,0.8s
FLN eR
comp=Z,202nm,21.5s
FLN La Foliniere 91.01 40 eP P 13 17 35.3 -0.1
FLN pmax pmax
comp=Z,13nm,0.8s
FLN La Foliniere 91.01 40 eP P 13 17 35.3 -0.1
comp=Z,13nm,0.8s
MTLF Montolieu 91.06 46 eP P 13 17 35.7 -0.1
comp=Z,14nm,1.0s
MTLF Montolieu 91.06 46 eP P 13 17 35.7 -0.1
MTLF pmax pmax
comp=Z,14nm,1.0s
MTLF Montolieu 91.06 46 eP P 13 17 35.7 -0.1
comp=Z,14nm,1.0s
LDF La Druitiere 91.18 40 eP P 13 17 36.0 -0.2
comp=Z,16nm,0.8s
LDF La Druitiere 91.18 40 eP P 13 17 36.0 -0.2
LDF pmax pmax
comp=Z,16nm,0.8s
LDF La Druitiere 91.18 40 eP P 13 17 36.0 -0.2
comp=Z,16nm,0.8s
RJF Les Rejaudoux 91.19 44 eP P 13 17 36.3 -0.1
comp=Z,32nm,1.1s
RJF eR
comp=Z,299nm,20.0s
RJF Les Rejaudoux 91.19 44 eP P 13 17 36.3 -0.1
RJF pmax pmax
comp=Z,32nm,1.1s
RJF Les Rejaudoux 91.19 44 eP P 13 17 36.3 -0.1
comp=Z,32nm,1.1s
CAF Calviac 91.44 44 eP P 13 17 37.5 -0.1
comp=Z,16nm,0.9s
CAF Calviac 91.44 44 eP P 13 17 37.5 -0.1
CAF pmax pmax
comp=Z,16nm,0.9s
CAF Calviac 91.44 44 eP P 13 17 37.5 -0.1
comp=Z,16nm,0.9s
SCO Scoresbysund 91.74 16 i P P 13 17 39.1 +0.8
SCO i 13 17 49.7
SCO pmax pmax
comp=Z,24nm,0.9s
SCO Scoresbysund 91.74 16 i P P 13 17 39.1 +0.8
comp=Z,24nm,0.9s
SCO i 13 17 49.7
ESK Eskdalemuir 91.74 33 PFAKE 13 17 50.0 +11
ESK LR LR
comp=Z,230nm,21.0s
TCF Toulx Ste Croi 91.95 43 eP P 13 17 39.6 -0.3
comp=Z,7.4nm,0.8s
TCF Toulx Ste Croi 91.95 43 eP P 13 17 39.6 -0.3
TCF pmax pmax
comp=Z,7.0nm,0.8s
TCF Toulx Ste Croi 91.95 43 eP P 13 17 39.6 -0.3
comp=Z,7.4nm,0.8s
AFI Afiamalu 92.02 255 LR LR 13 50 29.8
comp=Z,350nm,18.7s,baz=80,slow=30
EGAK Eagle 92.04 337 eP P 13 17 39.5 -0.4
comp=Z,40nm,1.0s
EGAK epP pP 13 17 52.5 -0.1
EGAK LR LR
comp=Z,440nm,20.0s
LASF Ste Croix 92.42 45 eP P 13 17 42.4 +0.3
comp=Z,25nm,1.1s
LASF Ste Croix 92.42 45 eP P 13 17 42.4 +0.3
comp=Z,25nm,1.1s
BGF Bois d'Agland 92.45 43 eP P 13 17 42.0 -0.2
comp=Z,19nm,0.8s
BGF Bois d'Agland 92.45 43 eP P 13 17 42.0 -0.2
BGF pmax pmax
comp=Z,19nm,0.8s
BGF Bois d'Agland 92.45 43 eP P 13 17 42.0 -0.2
comp=Z,19nm,0.8s
DOT Dot Lake 92.66 336 eP P 13 17 42.7 -0.1
comp=Z,36nm,0.9s
DOT epP pP 13 17 55.6 0.0
AVF Avril sur Loir 92.86 43 eP P 13 17 43.6 -0.4
comp=Z,8.7nm,0.9s
AVF Avril sur Loir 92.86 43 eP P 13 17 43.6 -0.4
AVF pmax pmax
comp=Z,9.0nm,0.9s
AVF Avril sur Loir 92.86 43 eP P 13 17 43.6 -0.4
comp=Z,8.7nm,0.9s
PAX Paxson 92.95 335 eP P 13 17 43.2 -1.0
PAX e*PP pP 13 17 56.8 -0.2
PAX pmax pmax
comp=Z,44nm,0.9s
PAX Paxson 92.95 335 eP P 13 17 43.2 -1.0
comp=Z,44nm,0.9s
PAX epP pP 13 17 56.8 -0.2
SSF Saint Saulge 93.03 42 eP P 13 17 44.4 -0.5
comp=Z,8.3nm,1.0s
SSF Saint Saulge 93.03 42 eP P 13 17 44.4 -0.5
SSF pmax pmax
comp=Z,8.0nm,1.0s
SSF Saint Saulge 93.03 42 eP P 13 17 44.4 -0.5
comp=Z,8.3nm,1.0s
SMF Signal de Mont 93.14 43 eP P 13 17 45.2 -0.2
comp=Z,13nm,0.8s
SMF Signal de Mont 93.14 43 eP P 13 17 45.2 -0.2
SMF pmax pmax
comp=Z,13nm,0.8s
SMF Signal de Mont 93.14 43 eP P 13 17 45.2 -0.2
comp=Z,13nm,0.8s
VIVF Saint-Julien-l 93.19 45 eP P 13 17 46.1 +0.4
comp=Z,14nm,0.9s
VIVF Saint-Julien-l 93.19 45 eP P 13 17 46.1 +0.4
VIVF pmax pmax
comp=Z,14nm,0.9s
VIVF Saint-Julien-l 93.19 45 eP P 13 17 46.1 +0.4
comp=Z,14nm,0.9s
RAO Raoul Island 93.32 239 LR LR 13 49 26.3
comp=Z,407nm,19.3s,baz=215,slow=29
LOR Lormes 93.32 42 eP P 13 17 45.6 -0.6
LOR eR
comp=Z,246nm,20.8s
LOR Lormes 93.32 42 eP P 13 17 45.6 -0.6
BOSA Boshof 93.34 120 P P 13 17 46.8 -0.2
BOSA Boshof 93.34 120 P P 13 17 46.8 -0.2
comp=Z,8.2nm,0.9s,baz=253,slow=6.0,SNR=6.6
BOSA LR LR 13 57 41.0
comp=Z,832nm,19.9s,baz=258,slow=34
MAW Mawson 93.71 165 P P 13 17 47.7 +0.1
MAW Mawson 93.71 165 P P 13 17 47.7 +0.1
comp=Z,11nm,0.9s,baz=221,slow=5.9,SNR=14
MAW LR LR 13 56 23.4
comp=Z,513nm,21.9s,baz=227,slow=33
SML Sawmill 93.71 333 eP P 13 17 46.8 -0.9
SML pmax pmax
comp=Z,10.0nm,0.9s
SML Sawmill 93.71 333 eP P 13 17 46.8 -0.9
comp=Z,9.6nm,0.9s
ORIF Oris-en-Rattie 94.04 45 eP P 13 17 50.4 +0.7
comp=Z,18nm,0.9s
ORIF eR
comp=Z,239nm,19.0s
ORIF Oris-en-Rattie 94.04 45 eP P 13 17 50.4 +0.7
ORIF pmax pmax
comp=Z,18nm,0.9s
ORIF Oris-en-Rattie 94.04 45 eP P 13 17 50.4 +0.7
comp=Z,18nm,0.9s
LMR La Mourre 94.07 47 eP P 13 17 49.8 +0.1
LMR La Mourre 94.07 47 eP P 13 17 49.8 +0.1
LMR La Mourre 94.07 47 eP P 13 17 49.8 +0.1
FRF La Foret Royal 94.22 46 eP P 13 17 50.6 +0.2
FRF La Foret Royal 94.22 46 eP P 13 17 50.6 +0.2
FRF La Foret Royal 94.22 46 eP P 13 17 50.6 +0.2
ILAR Eielson Array 94.25 336 P P 13 17 49.1 -1.0
ILAR pP pP 13 18 02.4 -0.4
ILAR PP PP 13 21 42.1 +4.7
ILAR Eielson Array 94.25 336 P P 13 17 49.1 -1.0
comp=Z,2.2nm,0.8s,baz=146,slow=3.2,SNR=27
ILAR pP pP 13 18 02.4 -0.4
comp=Z,9.9nm,0.8s,baz=139,slow=5.5,SNR=40
ILAR PP PP 13 21 42.1 +4.7
comp=Z,1.6nm,1.0s,baz=107,slow=7.2,SNR=4.1
ILAR LR LR 14 02 13.4
comp=Z,420nm,18.7s,baz=317,slow=37
URZ Urewera 94.28 229 LR LR 13 50 03.3
comp=Z,602nm,21.2s,baz=120,slow=29
KDAK Kodiak Island 94.33 329 pP pP 13 18 03.7 +0.5
KDAK Kodiak Island 94.33 329 pP pP 13 18 03.7 +0.5
comp=Z,5.8nm,0.9s,baz=98,slow=7.1,SNR=4.9
KEST Kesra 94.33 54 P P 13 17 51.2 0.0
KEST Kesra 94.33 54 P P 13 17 51.2 0.0
comp=Z,2.5nm,0.9s,baz=126,slow=3.5,SNR=5.1
KEST LR LR 14 02 11.7
comp=Z,102nm,18.3s,baz=220,slow=37
SFTF Sexfontaines 94.35 42 eP P 13 17 50.6 -0.3
SFTF Sexfontaines 94.35 42 eP P 13 17 50.6 -0.3
CABF La Chapelle 94.62 43 eP P 13 17 52.2 -0.1
comp=Z,15nm,1.0s
CABF La Chapelle 94.62 43 eP P 13 17 52.2 -0.1
CABF pmax pmax
comp=Z,15nm,1.0s
CABF La Chapelle 94.62 43 eP P 13 17 52.2 -0.1
comp=Z,15nm,1.0s
COLA College 94.67 336 eP P 13 17 51.1 -0.8
COLA e*PP pP 13 18 04.9 +0.2
COLA pmax pmax
comp=Z,41nm,0.9s
COLA MLR MLR
comp=Z,358nm,19.0s
COLA College 94.67 336 eP P 13 17 51.1 -0.8
comp=Z,41nm,0.9s
COLA epP pP 13 18 04.9 +0.2
COLA LR LR
comp=Z,358nm,19.0s
GIVF Givet 94.72 40 eP P 13 17 52.4 -0.1
GIVF Givet 94.72 40 eP P 13 17 52.4 -0.1
GIVF Givet 94.72 40 eP P 13 17 52.4 -0.1
LPL La Plagne 94.77 44 eP P 13 17 53.9 +0.7
comp=Z,8.9nm,0.6s
LPL La Plagne 94.77 44 eP P 13 17 53.9 +0.7
LPL pmax pmax
comp=Z,9.0nm,0.6s
LPL La Plagne 94.77 44 eP P 13 17 53.9 +0.7
comp=Z,8.9nm,0.6s
LPG La Plagne 94.78 44 eP P 13 17 54.1 +0.8
LPG La Plagne 94.78 44 eP P 13 17 54.1 +0.8
LPG La Plagne 94.78 44 eP P 13 17 54.1 +0.8
TRF Thorofare Moun 95.15 334 eP P 13 17 53.5 -0.9
comp=Z,13nm,0.7s
TRF epP pP 13 18 06.0 -1.2
RSO Redoubt South 95.26 331 P P 13 17 55.4 +0.4
comp=Z,50nm,0.7s
RSO epP pP 13 18 07.7 -0.1
ECH Echery 95.72 42 PFAKE 13 18 10.0 +13
ECH LR LR
comp=Z,176nm,20.0s
CDF Champ du Feu 95.84 42 eP P 13 17 57.5 -0.3
comp=Z,6.5nm,0.8s
CDF Champ du Feu 95.84 42 eP P 13 17 57.5 -0.3
CDF pmax pmax
comp=Z,7.0nm,0.8s
CDF Champ du Feu 95.84 42 eP P 13 17 57.5 -0.3
comp=Z,6.5nm,0.8s
COLD Coldfoot 96.42 338 eP P 13 17 59.8 -0.1
comp=Z,13nm,1.0s
BFO Black Forest 96.51 42 PFAKE 13 18 10.0 +9.2
BFO LR LR
comp=Z,161nm,19.0s
DAVA Damuels 97.30 43⇑iP P 13 18 03.7 -0.8
comp=Z,15nm,1.4s
FETA Feichten 97.81 44⇑ePcP Pdif 13 18 07.2 +0.3
comp=Z,8.3nm,1.0s
RETA Reutte 97.93 43⇑ePcP Pdif 13 18 07.5 +0.2
comp=Z,7.7nm,0.9s
MOTA Moosalm 98.13 43⇑iPcP Pdif 13 18 08.5 +0.2
comp=Z,14nm,0.8s
WTTA Wattenberg 98.47 43⇑iPdiff Pdif 13 18 10.3 +0.4
comp=Z,18nm,0.9s
AQU L'Aquila 98.80 49 PFAKE 13 18 20.0 +8.7
AQU LR LR
comp=Z,251nm,19.0s
ABTA Abfaltersbach 98.96 44⇑iPdiff Pdif 13 18 12.4 +0.4
comp=Z,17nm,0.9s
KBA Koelnbreinsper 99.58 44⇓ePdiff Pdif 13 18 14.0 -0.9
comp=Z,6.6nm,1.1s
MYKA Terra Mystica 99.71 44⇑ePdiff Pdif 13 18 14.4 -0.8
comp=Z,4.5nm,0.8s
CEL Celeste 99.97 53 PFAKE 13 18 30.0 +13
CEL LR LR
comp=Z,194nm,20.0s
CLL Collm 100.06 40 eSdif Sdif 13 30 01.0 +13
CLL ePS PS 13 31 29.0 +6.8
CLL ePPS PPS 13 32 13.0
CLL eSS SS 13 36 48.0 +5.5
CLL eSSS SSS 13 40 54.0
CLL e 13 42 24.0
CLL LV 14 07 00.0
comp=Z,200nm,19.5s

KHC	**Kasperske Hory**	**100.07**	**42**	AMS	AMS	14 05 50.0		
	comp=Z,200nm,23.3s							
GERES	**GERESS Array B**	**100.11**	**42**	P	**Pdif**	**13 18 17.3**	**+0.3**	
GERES				pP	pP	13 18 30.3	+0.4	
GERES	**GERESS Array B**	**100.11**	**42**	P	**Pdif**	**13 18 17.3**	**+0.3**	
	comp=Z,2.2nm,1.0s,baz=242,slow=2.9,SNR=10							
GERES				pP	pP	13 18 30.3	+0.4	
	comp=Z,0.5nm,0.2s,baz=208,slow=2.6,SNR=2.4							
CASY	**Casey**	**100.12**	**183**	PFAKE		13 18 30.0	+13	
CASY				LR	LR			
	comp=Z,669nm,22.0s							
CUC	**Castrocucco**	**100.19**	**51**	PFAKE		13 18 30.0	+12	
CUC				LR	LR			
	comp=Z,161nm,20.0s							
MOA	**Molin**	**100.32**	**43**⇑	*e*Pdiff	**Pdif**	**13 18 17.2**	**-0.7**	
	comp=Z,7.8nm,1.1s							
NOA	**NORSAR Array B**	**100.60**	**30**	P	**Pdif**	**13 18 20.1**	**+1.3**	
NOA	**NORSAR Array B**	**100.60**	**30**	P	**Pdif**	**13 18 20.1**	**+1.3**	
	comp=Z,1.9nm,1.0s,baz=263,slow=4.3,SNR=2.8							
PRU	**Pruhonice**	**100.82**	**41**	AMS	AMS	13 59 30.0		
	comp=Z,100nm,22.4s							
TREC	**Trest**	**101.33**	**42**	AMS	AMS	14 08 30.0		
	comp=Z,200nm,20.3s							
CONA	**Conrad Observa**	**101.40**	**43**⇑	*e*Pdiff	**Pdif**	**13 18 22.6**	**-0.1**	
	comp=Z,4.8nm,1.1s							
FUNA	**Funafuti**	**101.97**	**258**	PFAKE		13 18 40.0	+14	
FUNA				LR	LR			
	comp=Z,13μm,19.0s							
DZM	**Mont Dzumac**	**109.04**	**241**	*e*LQ	LQ	13 52 06.3		
	comp=Z,731nm,25.9s							
DZM				*e*LR	LR	13 55 29.2		
	comp=Z,927nm,30.3s							
ISP	**Isparta**	**111.42**	**55**	PFAKE		13 23 20.0		
ISP				LR	LR			
	comp=Z,173nm,20.0s							
ANTO	**Ankara**	**113.19**	**52**	PFAKE		13 23 20.0		
ANTO				LR	LR			
	comp=Z,154nm,22.0s							
CSS	**Prodhromos**	**113.66**	**58**	PFAKE		13 23 20.0		
CSS				LR	LR			
	comp=Z,160nm,21.0s							
BRTR	**Keskin Array B**	**113.84**	**52**	PKiKP	**PKiKP**	**13 23 09.8**	**-0.7**	
BRTR				PP	**PP**	**13 24 01.8**	**-2.4**	
BRTR				PKKP	**PKKPdf**	**13 34 12.2**	**-3.8**	
BRTR	**Keskin Array B**	**113.84**	**52**	PKiKP	**PKiKP**	**13 23 09.8**	**-0.7**	
	comp=Z,0.6nm,0.6s,baz=228,slow=1.5,SNR=4.7							
BRTR				PP	**PP**	**13 24 01.8**	**-2.4**	
	comp=Z,0.5nm,0.5s,baz=212,slow=5.1,SNR=4.3							
BRTR				PKKP	**PKKPdf**	**13 34 12.2**	**-3.8**	
	comp=Z,1.7nm,1.0s,baz=131,slow=3.4,SNR=7.0							
OBN	**Obninsk**	**114.12**	**35**	*e*PKiKP	PKPdf	13 23 11.1	+0.9	
OBN				*e*PS	**PS**	**13 33 43.7**	**+0.5**	
OBN				pmax	pmax			
	comp=Z,7.0nm,1.0s							
CAN	**Canberra**	**115.13**	**220**	PFAKE		13 23 30.0	+17	
CAN				LR	LR			
	comp=Z,904nm,19.0s							
ABPO	**Ambohimpanom**	**115.53**	**119**	PFAKE		13 23 30.0	+16	
ABPO				LR	LR			
	comp=Z,609nm,20.0s							
VSR	**Storozhevoye**	**116.41**	**39**	*e*PKiKP	**PKPdf**	**13 23 13.0**	**-1.7**	
KBZ	**Khabaz**	**120.31**	**47**	PKiKP	**PKPdf**	**13 23 22.8**	**+0.3**	
KBZ	**Khabaz**	**120.31**	**47**	PKP	**PKPdf**	**13 23 22.8**	**+0.3**	
KBZ	**Khabaz**	**120.31**	**47**	PKP	**PKPdf**	**13 23 22.8**	**+0.3**	
	comp=Z,6.0nm,0.9s,baz=319,slow=3.2,SNR=8.9							
STKA	**Stephens Creek**	**121.99**	**218**	PKP	**PKPdf**	**13 23 25.1**	**-1.1**	
STKA	**Stephens Creek**	**121.99**	**218**	PKP	**PKPdf**	**13 23 25.1**	**-1.1**	
	comp=Z,0.9nm,0.5s,baz=45,slow=1.4,SNR=2.8							
PETK	**Petropavlovsk-**	**122.17**	**325**	PKiKP	**PKPdf**	**13 23 24.5**	**-1.3**	
PETK	**Petropavlovsk-**	**122.17**	**325**	PKP	**PKPdf**	**13 23 24.5**	**-1.3**	
PETK	**Petropavlovsk-**	**122.17**	**325**	PKP	**PKPdf**	**13 23 24.5**	**-1.3**	
	comp=Z,1.7nm,0.8s,baz=101,slow=3.0,SNR=4.0							
GNI	**Garni**	**122.29**	**51**	PFAKE		13 23 40.0	+13	
GNI				LR	LR			
	comp=Z,163nm,21.0s							
ARU	**Arti**	**125.15**	**29**	*i* PKiKP	**PKPdf**	**13 23 31.5**	**+0.1**	
ARU						13 25 22.6		
ARU						13 30 31.5		
CTA	**Charters Tower**	**126.41**	**232**	PKP	**PKPdf**	**13 23 35.0**	**0.0**	
CTA	**Charters Tower**	**126.41**	**232**	PKP	**PKPdf**	**13 23 35.0**	**0.0**	
	comp=Z,2.0nm,0.3s,baz=79,slow=0.4,SNR=6.3							
CTAO	**Charters Tower**	**126.41**	**232**	PFAKE		13 23 50.0	+15	
CTAO				LR	LR			
	comp=Z,576nm,20.0s							
YAK	**Yakutsk**	**128.26**	**345**	*e*PKiKP	**PKPdf**	**13 23 35.7**	**-1.5**	
YAK				*e*		13 23 50.1		
YAK				pmax	pmax			
	comp=Z,24nm,0.9s							
ABKAR	**Akbulak array**	**129.56**	**36**	*e*PKPdf	**PKPdf**	**13 23 40.4**	**+0.4**	
ABKAR				*ep*PKPdf	**pPKPdf**	**13 23 54.2**	**+1.0**	
BRVK	**Borovoye**	**132.57**	**27**	PFAKE		13 24 00.0	+14	
BRVK				LR	LR			
	comp=Z,321nm,21.0s							
ASAR	**Alice Springs**	**132.62**	**219**	PKP	**PKPdf**	**13 23 46.2**	**-0.5**	
ASAR	**Alice Springs**	**132.62**	**219**	PKP	**PKPdf**	**13 23 46.2**	**-0.5**	
	comp=Z,2.9nm,1.0s,baz=135,slow=2.1,SNR=15							
YSS	**Yuzh-Sakhalins**	**133.52**	**324**	*e*PKiKP	PKPdf	13 24 04.1	+17	
WRA	**Warramunga Arr**	**135.05**	**223**	PKP	**PKPdf**	**13 23 51.2**	**-0.2**	
WRA	**Warramunga Arr**	**135.05**	**223**	PKP	**PKPdf**	**13 23 51.2**	**-0.2**	
	comp=Z,5.4nm,0.8s,baz=133,slow=1.6,SNR=28							
ASAJ	**Asahikawa**	**135.10**	**320**	PKP	**PKPdf**	**13 23 50.6**	**0.0**	
ASAJ	**Asahikawa**	**135.10**	**320**	PKP	**PKPdf**	**13 23 50.6**	**0.0**	
	comp=Z,7.6nm,1.0s,baz=68,slow=6.1,SNR=3.8							
ERM	**Erimo**	**135.76**	**317**	PFAKE		13 24 00.0	+8.1	
ERM				LR	LR			
	comp=Z,436nm,21.0s							
NVS	**Novosibirsk**	**135.90**	**17**	*e*PKiKP	**PKPdf**	**13 23 51.7**	**-0.1**	
NVS				pmax	pmax			
	comp=Z,14nm,1.6s							
NVS				pmax	pmax			
	comp=E,4.0nm,1.2s							
ZAA0	**Zalesovo Array**	**137.12**	**16**	*e*PKPpre	PKPpre	13 23 45.4		
ZALV	**Zalesovo Beam**	**137.12**	**16**	PKHKP	PKPpre	13 23 46.3		
ZALV						13 23 52.4		
ZALV						13 24 07.2		
ZALV	**Zalesovo Beam**	**137.12**	**16**	PKPpre	PKPpre	13 23 46.2		
ZALV				PKP	**PKPdf**	**13 23 52.4**	**-1.7**	
ZALV				pPKP	pPKPdf	13 24 07.2	-0.1	
ZALV	**Zalesovo Beam**	**137.12**	**16**	PKhKP	PKPpre	13 23 46.2		
	comp=E,5.4nm,0.8s,baz=302,slow=3.3,SNR=9.3							
ZALV				PKP	**PKPdf**	**13 23 52.4**	**-1.7**	
	comp=E,18nm,0.9s,baz=300,slow=2.1,SNR=25							
ZALV				pPKP	pPKPdf	13 24 07.2	-0.1	
	comp=E,23nm,1.0s,baz=279,slow=2.9,SNR=8.5							
KLR	**Kul'dur**	**137.74**	**333**	*e*PKiKP	**PKPdf**	**13 23 52.2**	**-3.2**	
KURK	**Kurchatov**	**137.78**	**24**	*e*PKiKP	**PKPdf**	**13 23 56.0**	**+0.6**	
KURK	**Kurchatov**	**137.78**	**24**	*e*PKPdf	**PKPdf**	**13 23 56.0**	**+0.6**	
USRK	**Ussuriysk Arra**	**141.19**	**327**	PKhKP	PKPpre	13 23 55.5		
	comp=E,1.7nm,0.7s,baz=66,slow=0.6,SNR=7.2							
USRK				PKP	**PKPdf**	**13 24 01.9**	**0.0**	
	comp=E,2.9nm,0.9s,baz=239,slow=2.2,SNR=5.7							
AAK	**Ala-Archa**	**141.64**	**36**	PKiKP	**PKPdf**	**13 24 01.4**	**-1.5**	
AAK				MLR	MLR			
	comp=Z,221nm,21.0s							
AAK	**Ala-Archa**	**141.64**	**36**	PKP	**PKPdf**	**13 24 01.4**	**-1.5**	
AAK				LR	LR			
	comp=Z,221nm,21.0s							
AAK	**Ala-Archa**	**141.64**	**36**	PKP	**PKPdf**	**13 24 01.4**	**-1.5**	
	comp=Z,4.8nm,0.7s,baz=164,slow=1.3,SNR=9.3							
HVS	**Khovu-Aksy**	**141.75**	**10**	*i* PKHKP	PKPpre	13 23 56.5		
FITZ	**Fitzroy Crossi**	**141.77**	**215**	PKPdf	**PKPdf**	**13 24 03.6**	**-0.1**	
TLY	**Talaya**	**142.09**	**0**	*e*PKiKP	**PKPdf**	**13 23 58.8**	**-4.5**	
TLY				*i*		13 24 12.3		
TLY				pmax	pmax			
	comp=Z,4.0nm,0.6s							
MDJ	**Mudanjiang**	**142.12**	**330**	PKP	**PKPdf**	**13 24 03.1**	**-0.4**	
MK31	**Makanchi Array**	**142.38**	**24**	*e*PKiKP	**PKPdf**	**13 24 03.6**	**-0.4**	
MK31	**Makanchi Array**	**142.38**	**24**	*e*PKPdf	**PKPdf**	**13 24 03.6**	**-0.4**	
MKAR	**Makanchi Array**	**142.38**	**24**	PKHKP	PKPpre	13 23 58.7		
MKAR						13 24 03.5		
MKAR	**Makanchi Array**	**142.38**	**24**	PKPpre	PKPpre	13 23 58.7		
MKAR				PKP	**PKPdf**	**13 24 03.5**	**-0.4**	
MKAR	**Makanchi Array**	**142.38**	**24**	PKhKP	PKPpre	13 23 58.7		
	comp=Z,3.6nm,0.8s,baz=325,slow=4.3,SNR=15							
MKAR				PKP	**PKPdf**	**13 24 03.5**	**-0.4**	
	comp=Z,4.4nm,0.8s,baz=24,slow=3.2,SNR=20							
ZAK	**Zakamensk**	**143.38**	**1**	*e*PKiKP	PKPab	13 24 02.2	+0.4	
ZAK				*e*		13 27 24.1		
ZAK				pmax	pmax			
	comp=Z,7.0nm,1.2s							
KSH	**Kashi**	**144.48**	**38**	PKP	**PKPdf**	**13 24 07.8**	**-0.2**	
KSH				*ep*PKP	**pPKPdf**	**13 24 18.6**	**-2.6**	
KSH				*es*PKP		13 24 22.3		
KSH				*e*SKS	**SKSdf**	**13 31 12.0**	**-2.4**	
KSH				*e*SKKS	**SKKSac**	**13 34 08.8**	**-4.8**	
KSH				AMB	AMB			
	comp=Z,350nm,5.7s							
CN2	**Changchun**	**144.69**	**332**	*e*PKP	**PKPab**	**13 24 05.8**	**-1.0**	
CN2				*ep*PKP	**PKiKP**	**13 24 16.3**	**+4.5**	
CN2				LR	LR			
	comp=Z,200nm,20.0s							
ULN	**Ulaanbaatar**	**145.80**	**356**	*e*PKP	**PKPab**	**13 24 10.8**	**-0.1**	
SONM	**Songino Array**	**145.87**	**357**	PKPbc	**PKPbc**	**13 24 10.9**	**+0.2**	
SONM				pPKPbc	pPKPbc	13 24 23.6	-0.2	
SONM	**Songino Array**	**145.87**	**357**	PKPbc	**PKPbc**	**13 24 10.9**	**+0.2**	
	comp=Z,22nm,0.8s,baz=339,slow=2.7,SNR=18							
SONM				pPKPbc	pPKPbc	13 24 23.6	-0.2	
	comp=Z,82nm,1.0s,baz=338,slow=2.2,SNR=21							
WMQ	**Urumqi**	**146.94**	**22**	PKPbc	**PKPdf**	**13 24 13.0**	**+1.0**	
WMQ				pPKP	**pPKPdf**	**13 24 24.0**	**-1.2**	
WMQ				sPKP		13 24 28.0		
WMQ				PP	PP	13 27 43.0	+5.4	
WMQ				SKS	**SKSdf**	**13 31 17.0**	**-0.6**	
WMQ				SKKS	**SKKSac**	**13 34 27.0**	**0.0**	
WMQ				AMB	AMB			
	comp=Z,170nm,4.6s							
WMQ				LR	LR			
	comp=Z,350nm,23.4s							
SNY	**Shenyang**	**147.09**	**332**	⇑PKPbc	**PKPdf**	**13 24 12.4**	**+0.2**	
KSRS	**Korea Array**	**148.00**	**322**	PKPbc	**PKPdf**	**13 24 14.2**	**+0.3**	
	comp=Z,8.8nm,0.9s,baz=36,slow=1.2,SNR=24							
KSAR	**Wonju Array Be**	**148.03**	**322**	PKPbc	**PKPdf**	**13 24 14.2**	**+0.3**	
THN	**Thein Dam**	**148.29**	**49**	*e*PKP	**PKPdf**	**13 24 15.5**	**+1.0**	
JNU	**Nakatsue**	**148.63**	**313**	*e*PKPbc	**PKPbc**	**13 24 17.6**	**-1.2**	
POO	**Poona**	**150.87**	**76**	*ex*	**PKPdf**	**13 24 16.0**	**-3.0**	
KAD	**Karad**	**151.27**	**79**	*i* x	**PKPbc**	**13 24 25.7**	**0.0**	
BJI	**Beijing**	**151.56**	**340**	PKPbc	**PKPdf**	**13 24 18.6**	**-0.8**	
BJI				LR	LR			
	comp=N,140nm,16.5s							
BJI				LR	LR			
	comp=E,150nm,19.0s							
BJI				LR	LR			
	comp=Z,120nm,24.3s							
BJT	**Baijiatuan**	**151.58**	**340**	*e*PKPbc	**PKPbc**	**13 24 25.6**	**-0.1**	
BJT				LR	LR			
	comp=Z,250nm,21.0s							
HHC	**Hu-ho-hao-te**	**152.07**	**347**	*e*PKPbc	**PKPbc**	**13 24 27.3**	**+0.4**	
HHC				pPKP	**PKPab**	**13 24 37.8**	**+1.4**	
HHC				sPKP		13 24 41.8		
HHC				PKS	**PKSdf**	**13 27 58.5**	**+3.6**	
HHC				PP	PP	13 28 15.1	+7.9	
HHC				SKS	**SKSdf**	**13 31 29.0**	**+4.4**	
COCO	**West Island**	**153.41**	**165**	PFAKE		13 24 30.0	-0.4	
COCO				LR	LR			
	comp=Z,1μm,20.0s							
GTA	**Gaotai**	**154.12**	**7**	PKPbc	**PKPdf**	**13 24 24.4**	**+1.0**	
GTA				pPKP	**pPKPdf**	**13 24 34.8**	**-1.8**	
GTA				sPKP		13 24 39.3		
GTA				PKS	**PKSdf**	**13 27 57.8**	**+0.1**	
GTA				SKS	**SKSdf**	**13 31 27.0**	**-0.1**	
GTA				AMB	AMB			
	comp=Z,100nm,6.2s							
GTA				LR	LR			
	comp=N,110nm,21.4s							
GTA				LR	LR			
	comp=E,100nm,21.1s							
GTA				LR	LR			
	comp=Z,270nm,26.1s							
HYB	**Hyderabad**	**155.43**	**78**	*i* PKP	**PKPab**	**13 24 52.0**	**+0.7**	
KAPI	**Kappang**	**155.58**	**222**	PFAKE		13 24 40.0	-12	
KAPI				LR	LR			
	comp=Z,433nm,21.0s							
DANN	**Dangsing**	**156.34**	**49**	*e*P	**PKPab**	**13 24 55.6**	**+0.4**	
	comp=Z,78nm,0.9s							
KOLN	**Koldanga**	**156.54**	**50**	*e*P	**PKPab**	**13 24 55.6**	**-0.4**	
	comp=Z,26nm,0.8s							
NJ2	**Nanjing**	**157.07**	**325**	*e*PKP	**PKPdf**	**13 24 27.9**	**+0.6**	
NJ2				pPKP	**pPKPdf**	**13 24 37.6**	**-3.0**	
NJ2				sPKP		13 24 41.3		
NJ2				PKS	**PKSdf**	**13 28 00.0**	**-1.2**	
NJ2				AMB	AMB			
	comp=Z,80nm,8.8s							
NJ2				LR	LR			
	comp=N,160nm,29.6s							
NJ2				LR	LR			
	comp=E,160nm,26.2s							
NJ2				LR	LR			
	comp=Z,180nm,20.5s							
DAV	**Davao City (W)**	**157.58**	**255**	PFAKE		13 24 40.0	+11	
DAV				LR	LR			
	comp=Z,449nm,21.0s							
LZH	**Lanzhou**	**157.68**	**360**	*e*PKP	**PKPdf**	**13 24 28.3**	**+0.1**	
LZH				pPKP	**pPKPdf**	**13 24 39.9**	**-1.6**	
LZH				sPKP		13 24 43.3		
LZH				PKS	**PKSdf**	**13 28 01.3**	**-0.9**	
LZH				PP	PP	**13 28 41.1**	**+2.6**	
LZH				SKKS		13 35 21.4		
LZH				AMB	AMB			
	comp=Z,150nm,4.3s							
DMN	**Daman**	**157.74**	**49**	*e*P	**PKPab**	**13 25 01.5**	**+0.3**	
	comp=Z,86nm,0.9s							
KKN	**Kakani**	**157.76**	**48**	*e*P	**PKPab**	**13 25 01.6**	**+0.4**	
	comp=Z,77nm,0.9s							
PKIN	**Phulchoki**	**157.97**	**48**	*e*P	**PKPab**	**13 25 02.1**	**-0.1**	
	comp=Z,21nm,0.8s							
PKI	**Pulchoki**	**157.98**	**48**	*e*P	**PKPab**	**13 25 02.2**	**-0.1**	
	comp=Z,51nm,0.9s							
GUN	**Gumba**	**158.12**	**47**	*e*P	**PKPab**	**13 25 03.6**	**+0.7**	
	comp=Z,162nm,1.0s							
XAN	**Xi'an**	**159.19**	**348**	PKP	**PKPdf**	**13 24 29.3**	**-0.7**	
XAN				pPKP	**pPKPdf**	**13 24 39.3**	**-3.9**	
XAN				LR	LR			
	comp=N,170nm,24.4s							
XAN				LR	LR			
	comp=E,53nm,19.4s							
XAN				LR	LR			
	comp=Z,75nm,22.4s							
RAMN	**Ramite**	**159.20**	**48**	*e*P	**PKPab**	**13 25 07.1**	**-0.4**	
	comp=Z,46nm,0.9s							
ODAN	**Odare**	**159.82**	**47**	*e*P	**PKPab**	**13 25 09.9**	**-0.3**	
	comp=Z,22nm,1.0s							
WHN	**Wuhan**	**160.58**	**332**	PKPbc	PKPab	13 25 25.6	+13	
ENH	**Enshi**	**162.65**	**343**	PFAKE		13 24 40.0	+6.2	
ENH				LR	LR			
	comp=Z,268nm,22.0s							
CD2	**Chengdu**	**162.84**	**0**	*e*PKP	**PKPdf**	**13 24 32.8**	**-1.2**	
CD2				pPKP	**pPKPdf**	**13 24 45.8**	**-1.4**	
CD2				sPKP		13 24 50.6		
CD2				PKPab	**PKPab**	**13 25 23.6**	**+0.8**	
CD2				PP	**PP**	**13 29 08.9**	**+2.7**	
CD2				SKS	**SKSdf**	**13 31 31.5**	**-4.2**	
CD2				SKKS	**SKKSac**	**13 35 50.9**	**-1.6**	
CD2				AMB	AMB			
	comp=Z,210nm,7.2s							
CD2				LR	LR			
	comp=N,470nm,22.2s							
CD2				LR	LR			
	comp=Z,290nm,19.0s							
GYA	**Guiyang**	**166.99**	**348**	PKP	**PKPdf**	**13 24 36.0**	**-1.7**	
GYA				pPKP	**pPKPdf**	**13 24 49.8**	**-1.2**	
GYA				sPKP		13 24 56.4		
GYA				PKPab	**PKPab**	**13 25 41.3**	**0.0**	
GYA				PKS	**PKSdf**	**13 28 08.0**	**-2.7**	
GYA				PP	**PP**	**13 29 30.4**	**+2.4**	
GYA				SKKS		13 36 11.3		
GYA				AMB	AMB			
	comp=Z,140nm,7.8s							
GYA				LR	LR			
	comp=N,250nm,22.8s							
GYA				LR	LR			
	comp=E,190nm,23.2s							
GYA				LR	LR			
	comp=Z,280nm,21.5s							
KMI	**Kunming**	**168.56**	**5**	PKP	**PKPdf**	**13 24 38.5**	**-0.5**	
KMI				pPKP	**pPKPdf**	**13 24 52.1**	**-0.2**	
KMI				sPKP		13 24 55.9		
QIZ	**Qiongzhong**	**172.10**	**313**	PKP	**PKPdf**	**13 24 39.8**	**-1.0**	
QIZ				PP	**PP**	**13 29 54.8**	**-0.1**	
QIZ				AMB	AMB			
	comp=Z,140nm,9.4s							
QIZ				LR	LR			
	comp=N,260nm,21.1s							
QIZ				LR	LR			
	comp=Z,310nm,20.7s							
CHTO	**Chiang Mai**	**173.10**	**42**	PFAKE		13 24 50.0	+8.7	
CHTO				LR	LR			
	comp=Z,361nm,20.0s							
CMAR	**Chiang Mai Arr**	**173.35**	**44**	PKP	**PKPdf**	**13 24 41.0**	**-0.4**	
CMAR				PKPab	**PKPab**	**13 26 09.8**	**+0.2**	
CMAR				PP	**PP**	**13 30 01.8**	**+0.9**	
CMAR	**Chiang Mai Arr**	**173.35**	**44**	PKP	**PKPdf**	**13 24 41.0**	**-0.4**	
	comp=Z,4.7nm,1.0s,baz=264,slow=1.6,SNR=21							
CMAR				PKPab	**PKPab**	**13 26 09.8**	**+0.2**	
	comp=Z,5.1nm,1.1s,baz=302,slow=5.3,SNR=10							
CMAR				PP	**PP**	**13 30 01.8**	**+0.9**	
	comp=Z,1.1nm,0.8s,baz=342,slow=5.7,SNR=4.4							

MAN 15 13:07:52.7±37.7N×124.9±49.7E,h31km,mb3.8,ML2.6,MS2.2,
1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**0.28**	**238**⇑	*i*P	Pn	13 08 01.6	+1.5
CTBH				*i* S	Sn	13 08 07.7	+2.5
BUKP	**Musuan**	**0.76**	**48**	*e*P	Pb	13 08 06.9	+0.1
BUKP				*e*S	Sn	13 08 18.4	+1.3
PAGZ	**Pagadian**	**1.19**	**293**	*e*P	Pn	13 08 12.3	-0.3
PAGZ				*e*S	Sn	13 08 28.3	+0.5
PAGZ	**Pagadian**	**1.19**	**293**	*e*P	Pn	13 08 12.9	+0.3
PAGZ				*e*S	Sn	13 08 28.3	+0.5

IDC 15 13:11:59.9±2.4,21.04S×174.57W,h0km,mb3.8/4,
mb1 4.1/5,mb1mx3.9/20,mbtmp3.9/5,ML2.0/1,Error
ellipse: s-maj=108.0km s-min=25.5km az=144.0,Tonga
Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.57**	**21**	Pn	Pn	13 13 50.9	-0.8
	1.4nm,0.3s,baz=197,slow=12,SNR=2.2						
AFI				Sn	Sn	13 15 08.4	-10
	1.2nm,0.3s,baz=216,slow=19,SNR=2.3						
ASAR	**Alice Springs**	**47.52**	**257**	P	P	13 20 37.6	+0.3
	0.9nm,0.8s,baz=100,slow=7.6,SNR=12						
WRA	**Warramunga Arr**	**47.70**	**262**	P	P	13 20 38.7	-0.1
	1.5nm,1.0s,baz=101,slow=7.2,SNR=7.0						
NVAR	**Mina Array Bea**	**79.25**	**42**	P	P	13 24 07.5	+0.1
	0.4nm,0.7s,baz=230,slow=8.1,SNR=3.6						
ILAR	**Eielson Array**	**88.16**	**11**	P	P	13 24 53.5	+1.3
	2.0nm,1.3s,baz=216,slow=5.6,SNR=3.4						
AKASG	**Malin Array Be**	**144.98**	**333**	PKP	PKPbc	13 31 38.5	+0.4
	0.2nm,0.3s,baz=34,slow=3.9,SNR=4.0						
BRTR	**Keskin Array B**	**149.55**	**314**	PKPbc	PKPdf	13 31 49.3	+2.2
	0.2nm,0.4s,baz=101,slow=1.5,SNR=2.2						

ISCJB ***15*** *13:45:33.8±0.3,26.21S±0.05×177.20W±0.06,h98km,*
mb4.7/4,Error ellipse: s-maj=8.2km s-min=6.4km
az=35.1
AUST ***15*** *13:45:33.7,25.38S×176.70W,h100km*
IDC ***15*** *13:45:35.0±3.3,25.99S×177.23W,h94km±29km,mb4.2/14,*
mb1 4.4/14,mb1mx4.3/17,mbtmp4.2/14,MS4.2/4,
Ms1 4.1/4,ms1mx3.2/26,Error ellipse: s-maj=18.7km
s-min=18.3km az=67.0
BJI ***15*** *13:45:35.3,25.89S×177.00W,h112km,mB5.2/14,*
mb5.1/19
NEIC ***15*** *13:45:36.3±1.0,26.19S×177.28W,h112km±9km,mb4.7/23,*
Error ellipse: s-maj=9.8km s-min=7.1km az=103.0
ISC 15 13:45:34.9±0.4,26.13S±0.05×177.08W±0.07,h98km,
n122,σ1884/141,mb4.6/41,2C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.20**	**193**	*e*Pn	**Pn**	**13 46 24.4**	**+1.1**
RAO				*e*S	**Sn**	**13 47 05.3**	**+4.7**
RAO				S		13 47 05.5	
RAO	**Raoul Island**	**3.20**	**193**	P	**Pn**	**13 46 23.8**	**+0.5**
	650nm,0.3s,baz=69,slow=17,SNR=18						
RAO				S	**Sn**	**13 47 05.5**	**+4.9**
	910nm,0.3s,baz=65,slow=22,SNR=9.2						
MSVF	**Nonsavu**	**9.50**	**331**	*e*Pn	**Pn**	**13 47 49.6**	**+0.7**
NIUE	**Niue**	**9.64**	**45**	P	Pn	13 47 44.5	-6.3
	baz=8.9,SNR=11						
OUZ	**Omahuta**	**12.10**	**219**	*e*Pn	**Pn**	**13 48 23.1**	**-0.8**
URZ	**Urewera**	**13.05**	**201**	*e*Pn	**Pn**	**13 48 36.1**	**-0.4**
URZ				S	Sn	13 50 49.1	-11
URZ	**Urewera**	**13.05**	**201**	P	Pn	13 48 27.7	-8.8
	0.3nm,0.3s,baz=11,slow=2.4,SNR=3.4						
URZ				S	Sn	13 50 49.1	-11
	2.4nm,0.3s,baz=214,slow=21,SNR=11						
AFI	**Afiamalu**	**13.13**	**23**	P	Pn	13 48 29.1	-8.6
AFI				S	Sn	13 50 41.4	-21
AFI	**Afiamalu**	**13.13**	**23**	P	Pn	13 48 29.1	-8.6
	2.7nm,0.3s,baz=254,slow=20,SNR=4.8						
AFI				S	Sn	13 50 41.4	-21
	6.0nm,0.3s,baz=60,slow=20,SNR=4.3						
DZM	**Mont Dzumac**	**15.57**	**282**	P	**P**	**13 49 12.3**	**+1.0**
DZM	**Mont Dzumac**	**15.57**	**282**	P	**P**	**13 49 12.3**	**+1.0**
	0.2nm,0.3s,baz=98,slow=17,SNR=5.6						
RAR	**Rarotonga**	**16.59**	**76**	P	**Pn**	**13 49 19.8**	**-1.9**
RAR				S	Sn	13 52 08.0	-18
RAR	**Rarotonga**	**16.59**	**76**	P	**Pn**	**13 49 19.7**	**-1.9**
	2.2nm,0.3s,baz=270,slow=7.5,SNR=3.3						
RAR				S	Sn	13 52 07.9	-18
	3.1nm,0.

MORW	**Morawa**	**58.62**	**251**	P		**P**	**13 55 20.7**	**-1.3**
	baz=59,SNR=4.8							
CASY	**Casey**	**59.30**	**207**	*e*P		**P**	**13 55 25.3**	**-0.7**
	15nm,0.6s							
JAGI	**Jajag, Banyuwa**	**67.28**	**272**	P		**P**	**13 56 18.3**	**-1.3**
	baz=68,SNR=3.5							
MAW	**Mawson**	**76.58**	**200**	*e*P		**P**	**13 57 15.1**	**+0.9**
	1.4nm,0.6s							
MAW	**Mawson**	**76.58**	**200**	P		**P**	**13 57 15.3**	**+1.1**
	7.4nm,0.5s,baz=136,slow=7.0,SNR=36							
MAW				LR		LR	14 31 37.0	
	comp=Z,111nm,20.1s,baz=174,slow=36							
MAW	**Mawson**	**76.58**	**200**	P		**P**	**13 57 15.5**	**+1.3**
	baz=77,SNR=14							
SYO	**Syowa Base**	**81.44**	**193**‖	*e*P		**P**	**13 57 39.6**	**-1.1**
SYO	**Syowa Base**	**81.44**	**193**‖	*e*PcP		**PcP**	**13 57 44.2**	**-2.3**
KSRS	**Korea Array**	**81.65**	**319**	P		**P**	**13 57 42.0**	**-0.3**
	1.7nm,0.8s,baz=143,slow=6.4,SNR=8.6							
KSAR	**Wonju Array Be**	**81.67**	**319**	P		**P**	**13 57 42.0**	**-0.4**
PETK	**Petropavlovsk-**	**81.90**	**345**	P		**P**	**13 57 42.5**	**-0.6**
PETK	**Petropavlovsk-**	**81.90**	**345**	P		**P**	**13 57 42.5**	**-0.6**
	5.4nm,0.5s,baz=124,slow=8.4,SNR=21							
PETK				LR		LR	14 28 22.7	
	comp=Z,105nm,21.9s,baz=67,slow=31							
SNAA	**Sanae**	**82.39**	**178**	*e*P		**P**	**13 57 46.3**	**+0.5**
SNAA	**Sanae**	**82.39**	**178**	*e*pP		pP	13 58 11.5	+0.2
SNAA	**Sanae**	**82.39**	**178**	*e*P		**P**	**13 57 45.9**	**+0.1**
	8.9nm,0.9s							
ISA	**Isabella**	**82.70**	**44**	*e*P		**P**	**13 57 49.0**	**+1.2**
	4.9nm,0.9s							
VNA1	**Neumayer--Stat**	**83.17**	**176**	*e*P		**P**	**13 57 50.5**	**+0.8**
VNA1	**Neumayer--Stat**	**83.17**	**176**	*e*pP		pP	13 58 15.8	+0.6
GSC	**Goldstone**	**83.53**	**46**	*e*P		**P**	**13 57 52.9**	**+0.7**
	5.2nm,0.9s							
CHGN	**Chignik**	**83.62**	**10**	*e*P		**P**	**13 57 51.7**	**-0.3**
USRK	**Ussuriysk Arra**	**84.07**	**326**	P		**P**	**13 57 54.9**	**+0.3**
	3.7nm,0.7s,baz=170,slow=3.3,SNR=10							
NJ2	**Nanjing**	**84.11**	**310**	*e*P		**P**	**13 57 57.1**	**+2.0**
NJ2				pmax		pmax		
	comp=Z,130nm,1.0s							
YBH	**Yreka Blue Hor**	**84.17**	**38**	*e*P		**P**	**13 57 56.0**	**+0.7**
	comp=Z,1.8nm,0.8s							
NVAR	**Mina Array Bea**	**84.56**	**42**	P		**P**	**13 57 58.7**	**+1.2**
NVAR	**Mina Array Bea**	**84.56**	**42**	P		**P**	**13 57 58.7**	**+1.2**
	comp=Z,3.1nm,0.8s,baz=222,slow=8.9,SNR=30							
HUMO	**Hull Mountain**	**84.63**	**37**	*e*P		**P**	**13 57 58.2**	**+0.7**
	comp=Z,8.2nm,1.4s							
MDJ	**Mudanjiang**	**85.59**	**325**	P		**P**	**13 58 02.4**	**+0.2**
MDJ				pP		**pP**	**13 58 30.8**	**+2.9**
MDJ				sP		**sP**	**13 58 42.8**	**+4.5**
MDJ				PP		**PP**	**14 01 20.8**	**-1.8**
MDJ				S		**S**	**14 08 30.3**	**+4.3**
MDJ				SS		**SS**	**14 14 01.9**	**-2.9**
MDJ				pmax		pmax		
	comp=Z,8.0nm,1.2s							
MDJ				pmax		pmax		
	comp=Z,73nm,7.1s							
MDJ				LR		LR		
	comp=N,62nm,19.7s							
MDJ				LR		LR		
	comp=E,110nm,22.7s							
MDJ				LR		LR		
	comp=Z,130nm,21.5s							
TUC	**Tucson**	**85.81**	**51**	*e*P		**P**	**13 58 04.9**	**+1.2**
	comp=Z,9.1nm,1.3s							
CN2	**Changchun**	**87.25**	**322**	*e*P		**P**	**13 58 09.9**	**-0.4**
CN2				*e*pP		**pP**	**13 58 38.8**	**+2.7**
CN2				*e*S		**S**	**14 08 39.3**	**-2.8**
CN2				pmax		pmax		
	comp=Z,10.0nm,1.0s							
TXAR	**Lajitas Array**	**89.39**	**57**	P		**P**	**13 58 22.4**	**+1.4**
TXAR	**Lajitas Array**	**89.39**	**57**	P		**P**	**13 58 22.4**	**+1.4**
	comp=Z,1.3nm,0.9s,baz=219,slow=5.8,SNR=8.6							
LAZ	**Ladron**	**89.51**	**51**	*e*P		**P**	**13 58 23.3**	**+1.8**
	comp=Z,1.5nm,1.0s							
HLID	**Hailey**	**90.04**	**40**	*e*P		**P**	**13 58 23.7**	**0.0**
	comp=Z,1.9nm,1.0s							
GYA	**Guiyang**	**90.15**	**299**	*e*P		**P**	**13 58 25.0**	**+0.4**
GYA				pP		**pP**	**13 58 55.3**	**+4.8**
GYA				sP		sP	13 59 07.4	+6.5
GYA				PP		**PP**	**14 02 02.0**	**+2.3**
GYA				SKS		**SKSac**	**14 08 42.3**	**-4.7**
GYA				S		**S**	**14 09 06.8**	**-3.6**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
ANMO	**Albuquerque**	**90.27**	**51**	*e*P		**P**	**13 58 26.3**	**+1.2**
	comp=Z,4.0nm,1.1s							
BJI	**Beijing**	**90.47**	**315**	P		**P**	**13 58 26.8**	**+1.3**
BJI				S		**S**	**14 09 12.8**	**+0.4**
BJI				SS		**SS**	**14 15 17.6**	**+1.7**
BJI				pmax		pmax		
	comp=Z,15nm,0.5s							
BJI				pmax		pmax		
	comp=Z,140nm,7.2s							
BJI				LR		LR		
	comp=N,210nm,16.9s							
BJI				LR		LR		
	comp=E,140nm,16.7s							
BJI				LR		LR		
	comp=Z,200nm,25.2s							
MCMT	**McKenzie Canyo**	**91.70**	**40**	*e*P		**P**	**13 58 32.3**	**+0.8**
	comp=Z,0.8nm,0.8s							
TRF	**Thorofare Moun**	**91.76**	**12**	*e*P		**P**	**13 58 29.6**	**-1.6**
	comp=Z,9.3nm,0.8s							
PDAR	**Pinedale Array**	**92.48**	**43**	P		**P**	**13 58 35.4**	**+0.2**
PDAR	**Pinedale Array**	**92.48**	**43**	P		**P**	**13 58 35.4**	**+0.2**
	comp=Z,1.4nm,0.8s,baz=222,slow=2.0,SNR=11							
KMI	**Kunming**	**92.63**	**297**	P		**P**	**13 58 36.0**	**-0.3**
KMI				pmax		pmax		
	comp=Z,6.0nm,1.0s							
CMAR	**Chiang Mai Arr**	**92.77**	**289**	P		**P**	**13 58 37.6**	**+0.9**
CMAR	**Chiang Mai Arr**	**92.77**	**289**	P		**P**	**13 58 37.6**	**+0.9**
	comp=Z,2.1nm,0.9s,baz=132,slow=3.0,SNR=12							
ILAR	**Eielson Array**	**93.59**	**12**	P		**P**	**13 58 38.5**	**-0.9**
ILAR	**Eielson Array**	**93.59**	**12**	P		**P**	**13 58 38.5**	**-0.9**
	comp=Z,1.0nm,0.8s,baz=224,slow=5.4,SNR=5.9							
HHC	**Hu-ho-hao-te**	**93.86**	**314**	*e*P		**P**	**13 58 43.0**	**+1.6**
HHC				pP		**pP**	**13 59 12.3**	**+5.0**
HHC				sP		sP	13 59 24.5	+6.8
HHC				PP		**PP**	**14 02 33.0**	**+4.3**
HHC				SKS		**SKSac**	**14 09 06.0**	**-1.2**
HHC				S		**S**	**14 09 40.0**	**-3.0**
HHC				sS		**sS**	**14 10 31.8**	**+4.0**
HHC				SS		**SS**	**14 16 06.8**	**+1.9**
HHC				pmax		pmax		
	comp=Z,30nm,1.0s							
HHC				pmax		pmax		
	comp=Z,120nm,5.2s							
CD2	**Chengdu**	**94.51**	**302**	*e*P		**P**	**13 58 44.5**	**0.0**
CD2				pmax		pmax		
	comp=Z,20nm,0.8s							
CD2				pmax		pmax		
	comp=Z,40nm,5.8s							
WMQ	**Urumqi**	**111.19**	**309**	*e*PKP		**PKiKP**	**14 03 57.3**	**+0.1**
WMQ				LR		LR		
	comp=Z,190nm,23.6s							
ZALV	**Zalesovo Beam**	**115.35**	**320**	PKP		**PKPdf**	**14 04 03.4**	**-1.3**
ZALV	**Zalesovo Beam**	**115.35**	**320**	PKP		**PKPdf**	**14 04 03.4**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=292,slow=3.9,SNR=3.6							
MKAR	**Makanchi Array**	**115.61**	**312**	PKP		**PKPdf**	**14 04 03.9**	**-1.6**
MKAR	**Makanchi Array**	**115.61**	**312**	PKP		**PKPdf**	**14 04 03.9**	**-1.6**
	comp=Z,0.5nm,0.6s,baz=132,slow=1.3,SNR=8.7							
ARCES	**ARCESS Array B**	**134.58**	**349**	PKPpre		PKPpre	14 04 33.3	
ARCES				PKP		**PKPdf**	**14 04 40.7**	**-0.3**
ARCES	**ARCESS Array B**	**134.58**	**349**	PKhKP		PKPpre	14 04 33.3	
	comp=Z,1.7nm,0.9s,baz=29,slow=4.1,SNR=3.2							
ARCES				PKP		**PKPdf**	**14 04 40.7**	**-0.3**
	comp=Z,1.2nm,0.6s,baz=27,slow=1.4,SNR=6.1							
FINES	**FINESS Array B**	**141.38**	**342**	PKPpre		PKPpre	14 04 47.1	
FINES	**FINESS Array B**	**141.38**	**342**	PKhKP		PKPpre	14 04 47.1	
	comp=Z,6nm,0.7s,baz=96,slow=2.8,SNR=3.2							
NB2	**NORSAR Subarra**	**144.64**	**353**	PKP		**PKPab**	**14 04 57.7**	**-0.8**
	comp=Z,23nm,0.9s,baz=13,slow=3.4							
NOA	**NORSAR Array B**	**144.64**	**353**	PKP		**PKPab**	**14 04 57.6**	**-0.8**
NOA	**NORSAR Array B**	**144.64**	**353**	PKP		**PKPab**	**14 04 57.6**	**-0.8**
	comp=Z,10nm,0.7s,baz=9.6,slow=2.3,SNR=24							
NAO01	**NORSAR Array S**	**144.87**	**353**	*e*PKP		**PKPab**	**14 04 58.5**	**-0.7**
AKASG	**Malin Array Be**	**148.27**	**328**	PKPbc		**PKPbc**	**14 05 08.0**	**-1.3**
AKASG	**Malin Array Be**	**148.27**	**328**	PKPbc		**PKPbc**	**14 05 08.0**	**-1.3**
	comp=Z,4.7nm,0.6s,baz=44,slow=4.1,SNR=14							
AK01	**Malin Array Si**	**148.28**	**328**	*e*PKPbc		**PKPbc**	**14 05 08.4**	**-1.0**
KIEV	**Kiev**	**148.28**	**328**	*e*PKPbc		**PKPbc**	**14 05 08.4**	**-1.0**
AK02	**Malin Array Si**	**148.30**	**328**	*e*PKPbc		**PKPbc**	**14 05 08.1**	**-1.3**
BR131	**Keskin Array S**	**151.03**	**306**	*e*PKPbc		**PKPbc**	**14 05 15.9**	**-0.8**
BRTR	**Keskin Array B**	**151.03**	**306**	PKP		**PKPdf**	**14 05 06.8**	**-4.1**
BRTR				PKPbc		**PKPbc**	**14 05 15.9**	**-0.8**
BRTR	**Keskin Array B**	**151.03**	**306**	PKP		**PKPdf**	**14 05 06.8**	**-4.1**
	comp=Z,0.2nm,0.4s,baz=296,slow=4.6,SNR=3.7							
BRTR				PKPbc		**PKPbc**	**14 05 15.9**	**-0.8**
	comp=Z,3.8nm,1.0s,baz=134,slow=3.6,SNR=12							
KWP	**Kalwaria Pacla**	**151.98**	**332**	*e*PKPbc		**PKPbc**	**14 05 18.1**	**-0.3**
BUR08	**Bucovina Ar. S**	**152.27**	**327**	*e*PKPbc		**PKPbc**	**14 05 20.2**	**+0.9**
CLL	**Colim**	**153.71**	**346**	*i* PKPbc		**PKPbc**	**14 05 21.9**	**-0.2**
	comp=Z,7.0nm,0.8s							
CLL				*i* (PKiKP)			14 05 24.8	
CLL				*i* PKPab		**PKPab**	**14 05 34.4**	**-0.8**
BRG	**Berggiesshubel**	**153.89**	**344**	*e*PKP		**PKPbc**	**14 05 22.7**	**+0.2**
	comp=Z,2.7nm,0.6s							
BRG				*e*			14 05 25.5	
	comp=Z,4.6nm,0.8s							
BRG				*e*			14 05 35.5	
	comp=Z,5.7nm,0.7s							
KHC	**Kasperske Hory**	**155.58**	**343**	*e*PKPAB		**PKPab**	**14 05 43.0**	**-0.3**
KHC	**Kasperske Hory**	**155.58**	**343**	*e*PKPab		**PKPab**	**14 05 43.5**	**+0.2**
GERES	**GERESS Array B**	**155.81**	**342**	PKPab		**PKPab**	**14 05 44.0**	**-0.4**
GERES	**GERESS Array B**	**155.81**	**342**	PKPab		**PKPab**	**14 05 44.0**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=35,slow=4.9,SNR=6.0							
TORD	**Torodi Ar. Bea**	**167.04**	**175**	PKPab		**PKPab**	**14 06 34.4**	**+0.4**
TORD	**Torodi Ar. Bea**	**167.04**	**175**	PKPab		**PKPab**	**14 06 34.4**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=188,slow=2.9,SNR=10.0							

PRU 15 13:45:44.1,50.19N×19.29E,h0km,M4.7,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.33**	**85**	*e*Pg	Pg	13 45 51.2	+0.8
OJC				*e*Sg	Sg	13 45 55.1	+0.4
DPC	**Dobruska-Polom**	**1.91**	**276**	*e*SG	Sb	13 46 45.0	+0.6

MEX 15 13:49:59.7±0.4,15.56N×94.71W,h23km±18km,MD4.1, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.36**	**279**	*i* P	Pn	13 50 20.7	-2.5
HUIG				*i* S	Sn	13 50 36.5	-4.1
PCIG		**1.45**	**84**	*e*P	Pn	13 50 21.6	-2.9
PCIG				*i* S	Sn	13 50 39.1	-3.6
TGIG		**1.95**	**51**	*i* P	Pn	13 50 28.8	-2.6
TGIG				*i* S	Sn	13 50 52.0	-3.3
CCIG	**Comitan**	**2.58**	**74**	*i* P	Pn	13 50 37.7	-2.6
CCIG				*i* S	Sn	13 51 08.3	-2.8
PNIG	**Pinotepa**	**3.39**	**285**	*i* P	Pn	13 50 50.0	-1.2
PNIG				*i* S	Sn	13 51 27.3	-3.4
YAIG	**Yautepec**	**5.30**	**309**	*i* P	Pn	13 51 15.1	-2.5
YAIG				*i* S	Sn	13 52 15.7	-2.4

*IDC **15** 14:03:16.6±2.2,5.49N×126.62E,h0km,mb3.5/4, mb1 3.6/4,mb1mx3.4/23,mbtmp3.5/4,Error ellipse: s-maj=135.8km s-min=25.1km az=69.0*

ISC 15 14:03:25.5±1.4,5.3N±0.2×126.5E±0.4,h66km,n6,σ1$22/7, mb3.5/4,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUKP	**Musuan**	**2.93**	**331**	*e*P	**Pn**	**14 04 09.1**	**-0.7**
BUKP				*e*S	**Sn**	**14 04 45.7**	**+1.9**
CTBH	**Cotabato--PC H**	**2.94**	**310**‖	*i*P	**Pn**	**14 04 09.2**	**-0.7**
FITZ	**Fitzroy Crossi**	**23.28**	**182**	P	**P**	**14 08 28.2**	**+0.6**
	3.1nm,1.0s,baz=4.8,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**26.25**	**163**	P	**P**	**14 08 55.0**	**+0.3**
	0.8nm,0.8s,baz=341,slow=10,SNR=5.0						
ASAR	**Alice Springs**	**29.69**	**166**	P	**P**	**14 09 25.7**	**+0.3**
	0.2nm,0.8s,baz=346,slow=7.3,SNR=5.1						
MKAR	**Makanchi Array**	**56.14**	**325**	P	**P**	**14 12 57.4**	**-0.9**
	0.3nm,0.4s,baz=121,slow=7.7,SNR=5.9						

IDC 15 14:13:25.2±4.3,10.64S×166.19E,h162km±31km,mb3.4/5, mb1 3.6/7,mb1mx3.3/21,mbtmp3.5/7,Error ellipse: s-maj=48.2km s-min=26.1km az=66.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.27**	**280**	P	Pn	14 14 55.5	-0.1
	4.7nm,0.3s,baz=158,slow=6.3,SNR=5.7						
DZM	**Mont Dzumac**	**11.37**	**179**	P	Pn	14 16 04.0	+0.9
	0.9nm,0.3s,baz=127,slow=21,SNR=29						
DZM				S	Sn	14 18 06.8	-2.4
	0.4nm,0.3s,baz=148,slow=23,SNR=10						
WRA	**Warramunga Arr**	**32.03**	**249**	P	P	14 19 37.1	+0.3
	0.4nm,0.7s,baz=80,slow=9.0,SNR=5.3						
ASAR	**Alice Springs**	**33.37**	**243**	P	P	14 19 48.3	-0.1
	0.5nm,0.7s,baz=65,slow=10,SNR=16						
FITZ	**Fitzroy Crossi**	**39.31**	**255**	P	P	14 20 43.6	-0.1
	1.4nm,0.6s,baz=90,slow=9.5,SNR=5.1						
CMAR	**Chiang Mai Arr**	**72.36**	**293**	P	P	14 24 33.6	-0.4
	0.7nm,0.6s,baz=108,slow=4.9,SNR=4.4						
MKAR	**Makanchi Array**	**93.53**	**317**	P	P	14 26 22.8	0.0
	0.4nm,0.6s,baz=86,slow=7.6,SNR=6.3						

IDC 15 14:26:03.6±2.9,5.47N×94.22E,h0km,mb3.8/3,mb1 4.0/4, mb1mx3.6/26,mbtmp3.8/4,ML3.9/1,Error ellipse: s-maj=108.3km s-min=26.1km az=63.0,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KULM	**Kulim**	**6.41**	**91**	P	Pb	14 27 48.0	-8.0
IPM	**Ipoh**	**6.85**	**98**	P	Pb	14 27 56.9	-6.7
FRIM	**Kepong**	**7.71**	**106**	P	Pb	14 28 11.0	-7.2
MYKOM	**Kota Tinggi**	**10.28**	**110**	P	Pn	14 28 49.3	+17
CMAR	**Chiang Mai Arr**	**13.71**	**19**	Pn	Pn	14 29 19.5	+0.1
	0.2nm,0.3s,baz=214,slow=12,SNR=6.1						
SDKM	**Sandakan**	**22.87**	**88**	P	P	14 31 18.7	+10
MKAR	**Makanchi Array**	**42.44**	**348**	P	P	14 34 00.1	-0.1
	0.2nm,0.5s,baz=164,slow=8.3,SNR=2.7						
WRA	**Warramunga Arr**	**46.84**	**124**	P	P	14 34 34.8	-0.9
	1.9nm,0.3s,baz=301,slow=10,SNR=6.9						
ASAR	**Alice Springs**	**48.35**	**128**	P	P	14 34 48.0	+0.6
	1.4nm,0.4s,baz=305,slow=7.4,SNR=3.8						

*BJI **15** 14:27:15.0,7.98S×124.12E,h563km,mB4.6/24,mb4.5/39*
*DJA **15** 14:27:20.5±0.2,8°S±4°×12°±4E±°,h559km±3km,M4.5/29, mB5.0/17,mb4.9/29,MLv4.7/12,Mw(mB)4.3/17*
*AUST **15** 14:27:20.2±0.0,7.33S×123.91E,h558km,Error ellipse: s-maj=0.9km s-min=0.7km az=24.0*
*ISCJB **15** 14:27:20.1±0.2,7.37S±0.03×123.95E±0.03,h567km±3km, mb4.4/44,Error ellipse: s-maj=5.6km s-min=3.7km az=136.6*
*IDC **15** 14:27:20.9±0.8,7.38S×123.94E,h561km±8km,mb3.9/23, mb1 3.9/27,mb1mx3.8/31,mbtmp3.9/27,Error ellipse: s-maj=12.1km s-min=6.2km az=63.0*
*NEIC **15** 14:27:21.1±0.5,7.35S×123.95E,h565km±6km,mb4.5/12, Error ellipse: s-maj=9.2km s-min=5.0km az=54.0*

ISC 15 14:27:20.5±0.3,7.44S±0.04×123.91E±0.05,h556km±3km, n185,σ1$24/244,mb4.4/42,1C,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	**2.04**	**234**	P	**P**	**14 28 31.5**	**+0.6**
MMRI				S	**S**	**14 29 27.3**	**-0.8**
BBSI	**Bau Bau**	**2.36**	**325**	P	**P**	**14 28 35.2**	**+2.7**
BSSI	**Bau Bau, Buton**	**3.64**	**291**	P	**P**	**14 28 42.5**	**+2.3**
WSI	**Waingapu**	**4.21**	**238**	P	P	14 28 58.3	+14
WSI				S	**S**	**14 29 49.3**	**-3.3**
WSI	**Waingapu**	**4.21**	**238**	P	**P**	**14 28 44.7**	**+0.4**
	baz=4.3,SNR=5.5						
WSI				S	**S**	**14 29 49.4**	**-3.2**
	baz=4.3,SNR=20						
BKSI	**Bulukumba**	**4.32**	**299**	P	**P**	**14 28 47.1**	**+1.9**
KAPI	**Kappang**	**4.79**	**300**	*e*P	**P**	**14 28 50.5**	**+1.6**
KAPI				S	**S**	**14 30 02.0**	**+0.9**
KAPI	**Kappang**	**4.79**	**300**	P	**P**	**14 28 50.7**	**+1.7**
KAPI	**Kappang**	**4.79**	**300**	P	**P**	**14 28 50.6**	**+1.6**
	41nm,0.3s,baz=153,slow=5.1,SNR=123						
KAPI				S	**S**	**14 30 02.0**	**+0.9**
	baz=272,slow=23,SNR=14						
WBSI	**Waikabubak, Su**	**4.98**	**244**	P	**P**	**14 28 50.3**	**-0.2**
SPSI	**Sidrap Palu**	**5.38**	**310**	P	**P**	**14 28 54.8**	**+0.9**
	92nm,0.7s,973nm0.3nm						
SKSI	**Soroako, Sulaw**	**5.52**	**332**	P	**P**	**14 28 56.9**	**+1.7**
	72nm,0.9s,598nm0.2nm						

AAI	**Ambon**	**5.66**	**49**	P		**P**	**14 28 56.6**	**+0.2**
	335nm,0.7s,5μm1.4nm							
AAI	**Ambon**	**5.66**	**49**	P		P	**14 28 56.6**	**+0.2**
	baz=5.6,SNR=25							
AAI				S		S	**14 30 10.5**	**-4.2**
	baz=5.6,SNR=4.1							
MSAI	**Masohi**	**6.44**	**51**	P		P	**14 29 02.8**	**-0.7**
	14nm,0.5s,806nm0.2nm							
LUWI	**Luwuk**	**6.46**	**350**	S		S	**14 30 30.0**	**+2.0**
	baz=6.4,SNR=5.2							
LBMI	**Labuha**	**7.65**	**28**	P		P	**14 29 15.9**	**+0.9**
	126nm,1.2s,1μm0.5nm							
KMSI	**Cibinong**	**7.96**	**0**	P		P	14 29 22.1	+4.0
	146nm,0.9s							
MRSI	**Marisa**	**8.11**	**346**	P		P	**14 29 20.1**	**+0.6**
	76nm,0.7s,671nm							
KHKI	**Kahang-Kahang**	**8.28**	**263**	P		P	**14 29 20.5**	**-0.7**
	361nm,0.8s,3μm							
DNP	**Denpasar**	**8.71**	**261**	P		P	**14 29 25.5**	**+0.1**
	803nm,0.7s,21μm							
IGBI	**Denpasar**	**8.79**	**260**	P		P	**14 29 25.5**	**-0.8**
	126nm,0.8s							
MTN	**Manton Dam**	**8.90**	**128**	P		P	**14 29 28.2**	**+0.8**
	baz=9.0,SNR=86							
MTN				S		S	**14 31 09.3**	**-2.3**
	baz=9.0,SNR=5.0							
FAKI	**Fak Fak**	**9.44**	**62**	P		P	**14 29 31.1**	**-1.8**
	598nm,0.8s,4μm							
FAKI	**Fak Fak**	**9.44**	**62**	P		P	**14 29 30.8**	**-2.0**
	baz=9.4,SNR=90							
FAKI				S		S	14 31 14.2	-7.3
	baz=9.4,SNR=6.9							
KNRA	**Kununurra**	**9.46**	**150**	P		P	**14 29 34.4**	**+1.4**
	baz=9.6,SNR=15							
KNRA				S		S	**14 31 22.5**	**+0.7**
	baz=9.6,SNR=8.0							
BYJI	**Banyuwangi**	**9.50**	**265**	P		P	**14 29 33.6**	**+0.1**
JAGI	**Jajag, Banyuwa**	**9.72**	**263**	P		P	**14 29 33.2**	**-2.5**
	292nm,0.5s,4μm							
JAGI	**Jajag, Banyuwa**	**9.72**	**263**	P		P	**14 29 34.5**	**-1.3**
	baz=8.7,SNR=59							
BBKI	**Banjar Baru**	**9.86**	**293**	P		P	**14 29 40.0**	**+2.9**
	226nm,1.3s							
KDU	**Kakadu**	**9.91**	**122**	P		P	**14 29 37.5**	**-0.1**
	baz=10.0,SNR=58							
BLJI	**Banyuglugur**	**10.23**	**268**	P		P	**14 29 41.4**	**+0.5**
	202nm,0.7s,3μm							
GMJI	**Gumukmas**	**10.40**	**265**	P		P	**14 29 42.3**	**-0.4**
	54nm,1.1s							
FITZ	**Fitzroy Crossi**	**10.73**	**171**	P		P	**14 29 47.1**	**+1.1**
FITZ				S		S	**14 31 45.4**	**-0.1**
FITZ	**Fitzroy Crossi**	**10.73**	**171**	P		P	**14 29 47.1**	**+1.1**
	1.7nm,0.3s,baz=16,slow=9.7,SNR=56							
FITZ				S		S	**14 31 45.4**	**-0.1**
	1.9nm,0.3s,baz=18,slow=16,SNR=10							
FITZ	**Fitzroy Crossi**	**10.73**	**171**	P		P	**14 29 47.2**	**+1.2**
	baz=11,SNR=11							
FITZ				S		S	**14 31 45.9**	**+0.4**
	baz=11,SNR=11							
SJI	**Sawahan**	**12.04**	**268**	P		P	**14 29 58.9**	**-0.8**
	67nm,0.6s							
PBKI	**Pangkalan Bun**	**13.07**	**290**	P		P	**14 30 11.3**	**+1.1**
	332nm,1.1s,3μm							
UGM	**Wanagama**	**13.28**	**267**	P		P	**14 30 12.0**	**-0.4**
	baz=13,SNR=16							
BAKI	**Biak**	**13.65**	**64**	P		P	**14 30 18.1**	**+2.0**
	111nm,1.0s,970nm							
BJII	**Banjamegara**	**14.09**	**270**	P		P	**14 30 20.6**	**-0.1**
	84nm,0.7s							
TGJI	**Tegal**	**14.69**	**271**	P		P	**14 30 25.4**	**-1.4**
	108nm,1.1s							
WAMI	**Wamena**	**15.14**	**77**	P		P	**14 30 32.9**	**+1.5**
	299nm,0.7s,3μm							
CISI	**Cisompet, Garu**	**15.96**	**269**	P		P	**14 30 37.5**	**-2.1**
	290nm,0.7s,3μm							
CISI	**Cisompet, Garu**	**15.96**	**269**	P		P	**14 30 37.1**	**-2.5**
	baz=16,SNR=11							
CISI				S		S	**14 33 20.0**	**-2.3**
	baz=16,SNR=14							
WRA	**Warramunga Arr**	**16.02**	**142**	P		P	**14 30 39.8**	**-0.3**
WRA				S		S	**14 33 21.6**	**-1.4**
WRA	**Warramunga Arr**	**16.02**	**142**	P		P	**14 30 39.8**	**-0.3**
	5.5nm,0.3s,baz=325,slow=8.2,SNR=162							
WRA				S		S	**14 33 21.6**	**-1.4**
	0.7nm,0.3s,baz=318,slow=18,SNR=14							
LEM	**Lembang**	**16.18**	**271**	P		P	**14 30 41.2**	**-

NJ2	**Nanjing**	**39.57**	**353**	*e*P		**P**		**14 34 04.0**	**-0.2**
NJ2					pmax	pmax			
	comp=Z,30nm,0.9s								
ENH	**Enshi**	**39.98**	**340**	*e*P		**P**		**14 34 06.3**	**-1.2**
	comp=Z,6.4nm,0.7s								
JNU	**Nakatsue**	**40.88**	**9**	P		**P**		**14 34 13.6**	**-1.1**
JNU	**Nakatsue**	**40.88**	**9**	P		**P**		**14 34 13.6**	**-1.1**
	comp=Z,10nm,0.8s,baz=283,slow=6.3,SNR=7.8								
CD2	**Chengdu**	**42.74**	**334**	*e*P		**P**		**14 34 29.3**	**-0.2**
CD2					pP	**pP**		**14 36 10.3**	**+1.8**
CD2					PP	**PP**		**14 36 22.3**	**+0.7**
CD2					sP	**sP**		**14 37 11.8**	**+0.9**
CD2					S	**S**		**14 40 13.8**	**+0.3**
CD2					sS	**sS**		**14 43 14.0**	**+0.1**
CD2					SS	**SS**		**14 43 38.6**	**-3.4**
CD2					pmax	pmax			
	comp=Z,20nm,0.6s								
CD2					pmax	pmax			
	comp=Z,40nm,4.6s								
XAN	**Xi'an**	**43.63**	**342**	P		**P**		**14 34 35.0**	**-1.3**
XAN					pmax	pmax			
	comp=Z,9.0nm,0.7s								
KSAR	**Wonju Array Be**	**44.80**	**4**	P		**P**		**14 34 45.0**	**-0.1**
KSAR					PcP	**PcP**		**14 36 15.1**	**0.0**
KSRS	**Korea Array**	**44.82**	**5**	P		**P**		**14 34 45.0**	**-0.2**
	comp=Z,5.6nm,0.6s,baz=179,slow=7.9,SNR=40								
KSRS					PcP	**PcP**		**14 36 15.1**	**-0.1**
	comp=Z,2.5nm,0.7s,baz=181,slow=3.5,SNR=8.5								
MAJO	**Matsushiro**	**45.76**	**16**	*e*P		**P**		**14 34 51.1**	**-1.5**
	comp=Z,15nm,0.8s								
MAT	**Matsushiro**	**45.76**	**16**	P		**P**		**14 34 51.2**	**-1.4**
LZH	**Lanzhou**	**47.23**	**338**	*e*P		**P**		**14 35 04.4**	**+0.5**
LZH					PcP	**PcP**		**14 36 24.3**	**+0.2**
LZH					pP	**pP**		**14 36 46.9**	**+1.0**
LZH					PP	**PP**		**14 37 02.1**	**-0.3**
LZH					sP	**sP**		**14 37 46.9**	**-0.4**
LZH				*e*S		**S**		**14 41 15.4**	**-1.2**
LZH					sS	**sS**		**14 44 19.4**	**-1.7**
LZH					pmax	pmax			
	comp=Z,29nm,1.0s								
LZH					pmax	pmax			
	comp=Z,93nm,4.0s								
BJI	**Beijing**	**47.78**	**352**	P		**P**		**14 35 08.4**	**+0.7**
BJI				S		**S**		**14 41 25.0**	**+1.4**
BJI				SS		**SS**		**14 45 04.8**	**+2.9**
BJI					pmax	pmax			
	comp=Z,12nm,0.5s								
BJI					pmax	pmax			
	comp=Z,110nm,3.8s								
LSA	**Lhasa**	**48.54**	**321**	*e*P		**P**		**14 35 14.8**	**+0.7**
	comp=Z,9.9nm,0.4s								
ODAN	**Odare**	**49.15**	**315**	*e*P		**P**		**14 35 18.5**	**+0.1**
	comp=Z,68nm,0.5s								
TAPN	**Taplejung**	**49.23**	**316**	*e*P		**P**		**14 35 19.3**	**+0.2**
	comp=Z,64nm,0.4s								
HHC	**Hu-ho-hao-te**	**49.38**	**348**	*e*P		**P**		**14 35 21.0**	**+1.3**
HHC					pP	**pP**		**14 37 05.5**	**+2.5**
HHC					sP	**sP**		**14 38 05.0**	**+0.9**
HHC					S	**S**		**14 41 48.6**	**+2.9**
HHC					sS	**sS**		**14 44 51.3**	**-1.0**
HHC					SS	**SS**		**14 45 31.3**	**+3.9**
HHC					pmax	pmax			
	comp=Z,32nm,1.0s								
HHC					pmax	pmax			
	comp=Z,360nm,5.7s								
RAMN	**Ramite**	**49.76**	**315**	*e*P		**P**		**14 35 23.2**	**+0.3**
	comp=Z,152nm,0.6s								
GUN	**Gumba**	**50.85**	**315**	*e*P		**P**		**14 35 31.1**	**+0.1**
	comp=Z,110nm,0.5s								
PKI	**Pulchoki**	**50.98**	**315**	*e*P		**P**		**14 35 31.6**	**-0.3**
	comp=Z,75nm,0.5s								
PKIN	**Phulchoki**	**50.99**	**315**	*e*P		**P**		**14 35 31.8**	**-0.1**
	comp=Z,27nm,0.4s								
CN2	**Changchun**	**51.02**	**1**	*e*P		P		14 35 35.5	+4.0
KKN	**Kakani**	**51.20**	**315**	*e*P		**P**		**14 35 33.3**	**-0.1**
	comp=Z,46nm,0.7s								
DMN	**Daman**	**51.21**	**314**	*e*P		**P**		**14 35 33.5**	**0.0**
	comp=Z,40nm,0.6s								
GTA	**Gaotai**	**51.69**	**336**	*e*P		**P**		**14 35 36.9**	**+0.3**
GTA					pP	**pP**		**14 37 20.5**	**-0.8**
GTA					sP	**sP**		**14 38 17.9**	**-4.0**
GTA					pmax	pmax			
	comp=Z,14nm,0.5s								
USRK	**Ussuriysk Arra**	**51.92**	**7**	P		**P**		**14 35 37.4**	**-0.5**
	comp=Z,14nm,0.5s,baz=190,slow=7.0,SNR=32								
MDJ	**Mudanjiang**	**52.07**	**5**	P		**P**		**14 35 39.0**	**0.0**
MDJ					pmax	pmax			
	comp=Z,27nm,0.8s								
MDJ					pmax	pmax			
	comp=Z,77nm,8.0s								
MDJ	**Mudanjiang**	**52.07**	**5**	*e*P		**P**		**14 35 38.5**	**-0.5**
	comp=Z,23nm,0.9s								
KOLN	**Koldanda**	**52.38**	**314**	*e*P		**P**		**14 35 41.9**	**+0.1**
	comp=Z,104nm,0.6s								
DANN	**Dangsing**	**52.61**	**314**	*e*P		**P**		**14 35 43.5**	**-0.1**
	comp=Z,114nm,0.5s								
ASAJ	**Asahikawa**	**54.03**	**17**	P		**P**		**14 35 51.1**	**-1.8**
ASAJ	**Asahikawa**	**54.03**	**17**	P		**P**		**14 35 51.1**	**-1.8**
	comp=Z,9.5nm,0.7s,baz=211,slow=12,SNR=13								
ULN	**Ulaanbaatar**	**57.05**	**347**	*e*P		**P**		**14 36 13.5**	**-0.5**
	comp=Z,8.7nm,1.0s								
SONM	**Songino Array**	**57.17**	**346**	P		**P**		**14 36 14.5**	**-0.4**
SONM					PcP	**PcP**		**14 37 00.8**	**-0.8**
SONM	**Songino Array**	**57.17**	**346**	P		**P**		**14 36 14.5**	**-0.4**
	comp=Z,7.4nm,0.6s,baz=166,slow=8.7,SNR=37								
SONM					PcP	**PcP**		**14 37 00.8**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=160,slow=2.4,SNR=3.6								
WMQ	**Urumqi**	**60.64**	**331**	P		**P**		**14 36 38.3**	**+0.2**
WMQ					pmax	pmax			
	comp=Z,10.0nm,0.8s								
WMQ					pmax	pmax			
	comp=Z,200nm,6.4s								
KSH	**Kashi**	**64.38**	**320**	P		**P**		**14 37 02.4**	**0.0**
KSH				*e*PcP		**PcP**		**14 37 33.0**	**+1.8**
KSH				*e*pP		**pP**		**14 38 52.5**	**-1.5**
KSH				*e*PP		**PP**		**14 39 33.3**	**-0.5**
KSH				*e*sP		**sP**		**14 39 49.4**	**-3.3**
KSH					pmax	pmax			
	comp=Z,25nm,0.6s								
KSH					pmax	pmax			
	comp=Z,230nm,6.9s								
MK31	**Makanchi Array**	**65.43**	**330**	*e*P		**P**		**14 37 08.5**	**-0.3**
MK31				*e*PcP		**PcP**		**14 37 34.6**	**-0.6**
MKAR	**Makanchi Array**	**65.43**	**330**	P		**P**		**14 37 08.5**	**-0.2**
MKAR					PcP	**PcP**		**14 37 34.9**	**-0.3**
MKAR	**Makanchi Array**	**65.43**	**330**	P		**P**		**14 37 08.5**	**-0.2**
	comp=Z,14nm,0.6s,baz=132,slow=7.7,SNR=195								
MKAR					PcP	**PcP**		**14 37 34.9**	**-0.3**
	comp=Z,2.5nm,0.6s,baz=122,slow=6.2,SNR=5.1								
KZA	**Kyzart**	**66.31**	**322**	P		**P**		**14 37 15.3**	**+0.4**
	SNR=6.6								
KBL	**Kabul**	**66.52**	**313**	P		**P**		**14 37 15.8**	**-0.2**
	baz=67,SNR=5.6								
TKM2	**Tokmak 2**	**66.60**	**323**	P		**P**		**14 37 16.3**	**-0.1**
	SNR=5.7								
PETK	**Petropavlovsk-**	**66.78**	**21**	P		**P**		**14 37 17.0**	**+0.1**
PETK					PcP	**PcP**		**14 37 39.5**	**-1.2**
PETK	**Petropavlovsk-**	**66.78**	**21**	P		**P**		**14 37 17.0**	**+0.1**
	comp=Z,7.5nm,0.5s,baz=208,slow=4.4,SNR=49								
PETK					PcP	**PcP**		**14 37 39.5**	**-1.2**
	comp=Z,2.0nm,0.5s,baz=208,slow=4.6,SNR=6.2								
AAK	**Ala-Archa**	**67.09**	**323**	*e*P		**P**		**14 37 19.2**	**-0.1**
	comp=Z,8.1nm,0.7s								
AAK	**Ala-Archa**	**67.09**	**323**	P		**P**		**14 37 19.7**	**+0.4**
	SNR=8.0								
AML	**Almayashu**	**67.29**	**322**	P		**P**		**14 37 21.1**	**+0.2**
	SNR=13								
USP	**Ospenovka**	**67.45**	**323**	P		**P**		**14 37 21.3**	**-0.1**
	SNR=7.7								
EKS2	**Erkin-Say**	**67.54**	**322**	*e*P		**P**		**14 37 22.1**	**+0.1**
	comp=Z,8.7nm,1.1s								
EKS2	**Erkin-Say**	**67.54**	**322**	P		**P**		**14 37 22.3**	**+0.3**
	SNR=7.2								
ZAA0	**Zalesovo Array**	**69.44**	**337**	*e*P		**P**		**14 37 31.6**	**-1.4**
ZALV	**Zalesovo Beam**	**69.44**	**337**	P		**P**		**14 37 31.8**	**-1.3**
ZALV	**Zalesovo Beam**	**69.44**	**337**	P		**P**		**14 37 31.8**	**-1.3**
	comp=Z,12nm,0.7s,baz=136,slow=4.6,SNR=56								
KURBB	**Kurchatov Arra**	**69.85**	**331**	P		**P**		**14 37 35.1**	**-0.5**
	comp=Z,7.6nm,0.7s,baz=140,slow=5.0,SNR=41								
KURK	**Kurchatov**	**69.87**	**331**	*e*P		**P**		**14 37 35.0**	**-0.7**
	comp=Z,14nm,0.8s								
MAW	**Mawson**	**72.37**	**201**	P		**P**		**14 37 50.1**	**+0.1**
MAW	**Mawson**	**72.37**	**201**	P		**P**		**14 37 50.1**	**+0.1**
	comp=Z,1.1nm,0.4s,baz=324,slow=6.1,SNR=3.4								
VNDA	**Vanda**	**72.80**	**172**	P		**P**		**14 37 52.3**	**-0.1**
VNDA	**Vanda**	**72.80**	**172**	P		**P**		**14 37 52.3**	**-0.1**
	comp=Z,1.8nm,0.5s,baz=321,slow=7.4,SNR=16								
OPO	**Ambohidratompo**	**75.12**	**253**	P		**P**		**14 38 06.9**	**0.0**
OPO	**Ambohidratompo**	**75.12**	**253**	P		**P**		**14 38 06.9**	**0.0**
	comp=Z,2.2nm,0.9s,baz=87,slow=8.7,SNR=4.1								
BVAR	**Borovoye Array**	**75.31**	**330**	P		**P**		**14 38 06.6**	**-0.4**
BVAR	**Borovoye Array**	**75.31**	**330**	P		**P**		**14 38 06.6**	**-0.4**
	comp=Z,7.5nm,0.7s,baz=132,slow=6.6,SNR=44								
BRVK	**Borovoye**	**75.38**	**330**	*e*P		**P**		**14 38 07.0**	**-0.4**
	comp=Z,20nm,1.1s								
ABKAR	**Akbulak array**	**79.17**	**323**	*e*P		**P**		**14 38 26.8**	**-1.1**
	comp=Z,4.3nm,0.6s								
AKTO	**Aktyubinsk**	**80.79**	**324**	P		**P**		**14 38 36.0**	**-0.4**
AKTO	**Aktyubinsk**	**80.79**	**324**	P		**P**		**14 38 36.0**	**-0.4**
	comp=Z,8.3nm,0.6s,baz=108,slow=7.7,SNR=36								
SYO	**Syowa Base**	**81.06**	**201**	*e*X		**P**		**14 38 36.0**	**-1.5**
KBZ	**Khabaz**	**88.65**	**314**	P		**P**		**14 39 15.1**	**+0.3**
KBZ	**Khabaz**	**88.65**	**314**	P		**P**		**14 39 15.1**	**+0.3**
	comp=Z,4.4nm,0.8s,baz=127,slow=4.8,SNR=7.0								
SNAA	**Sanae**	**93.77**	**195**	*e*P		**P**		**14 39 38.8**	**+0.8**
SNAA	**Sanae**	**93.77**	**195**	*e*pP		pP		14 41 39.9	-0.2
BRTR	**Keskin Array B**	**94.91**	**309**	P		**P**		**14 39 42.6**	**-1.4**
BRTR	**Keskin Array B**	**94.91**	**309**	P		**P**		**14 39 42.6**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=122,slow=6.0,SNR=5.7								
AKASG	**Malin Array Be**	**98.68**	**320**	P		Pdif		14 39 58.3	-2.0
AKASG	**Malin Array Be**	**98.68**	**320**	P		Pdif		14 39 58.3	-2.0
	comp=Z,0.5nm,0.4s,baz=76,slow=5.0,SNR=4.3								
ARCES	**ARCESS Array B**	**99.87**	**339**	P		**Pdif**		**14 40 03.5**	**-1.8**
ARCES	**ARCESS Array B**	**99.87**	**339**	P		**Pdif**		**14 40 03.5**	**-1.8**
	comp=Z,2.2nm,0.8s,baz=74,slow=5.2,SNR=6.6								
INK	**Inuvik**	**101.52**	**22**	P		**Pdif**		**14 40 12.5**	**-0.1**
INK	**Inuvik**	**101.52**	**22**	P		**Pdif**		**14 40 12.5**	**-0.1**
	comp=Z,1.6nm,0.8s,baz=161,slow=5.9,SNR=3.1								
YKA	**Yellowknife Ar**	**110.76**	**25**	PKiKP		**PKiKP**		**14 44 49.1**	**-1.0**
YKA	**Yellowknife Ar**	**110.76**	**25**	PKiKP		**PKiKP**		**14 44 49.1**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=304,slow=1.7,SNR=11								
BSMT	**Bassoo Peak**	**116.24**	**40**	*e*PKPdf		**PKPdf**		**14 45 00.1**	**-1.3**
NVAR	**Mina Array Bea**	**116.28**	**51**	PKP		**PKPdf**		**14 45 00.7**	**-1.1**
NVAR	**Mina Array Bea**	**116.28**	**51**	PKP		**PKPdf**		**14 45 00.7**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=264,slow=2.5,SNR=6.2								
HLID	**Hailey**	**117.83**	**44**	*e*PKPdf		**PKPdf**		**14 45 05.1**	**+0.6**
EGMT	**Eagleton**	**119.33**	**38**	PKPdf		**PKPdf**		**14 45 06.8**	**-0.3**
DUG	**Dugway**	**119.97**	**48**	*e*PKPdf		**PKPdf**		**14 45 09.1**	**+0.4**
PDAR	**Pinedale Array**	**121.45**	**44**	PKP		**PKPdf**		**14 45 11.2**	**-0.4**
PDAR	**Pinedale Array**	**121.45**	**44**	PKP		**PKPdf**		**14 45 11.2**	**-0.4**
	comp=Z,1.1nm,0.8s,baz=288,slow=1.4,SNR=7.0								
TORD	**Torodi Ar. Bea**	**122.97**	**281**	PKP		**PKPdf**		**14 45 14.3**	**-0.6**
TORD	**Torodi Ar. Bea**	**122.97**	**281**	PKP		**PKPdf**		**14 45 14.3**	**-0.6**
	comp=Z,4.2nm,0.7s,baz=40,slow=1.7,SNR=27								
DBIC	**Dimbokro**	**129.18**	**273**	PKP		**PKPdf**		**14 45 26.9**	**0.0**
DBIC	**Dimbokro**	**129.18**	**273**	PKP		**PKPdf**		**14 45 26.9**	**0.0**
	comp=Z,1.6nm,0.6s,baz=230,slow=18,SNR=4.0								
TXAR	**Lajitas Array**	**130.30**	**58**	PKP		**PKPdf**		**14 45 29.6**	**+0.8**
TXAR					SKPbc	**SKPbc**		**14 48 00.2**	**-0.4**
TXAR	**Lajitas Array**	**130.30**	**58**	PKP		**PKPdf**		**14 45 29.6**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=298,slow=2.7,SNR=5.2								
TXAR					SKPbc	**SKPbc**		**14 48 00.2**	**-0.4**
	comp=Z,1.0nm,0.8s,baz=307,slow=4.6,SNR=8.4								
SCHQ	**Schefferville**	**131.96**	**8**	PKP		**PKPdf**		**14 45 31.6**	**+0.6**
SCHQ	**Schefferville**	**131.96**	**8**	PKP		**PKPdf**		**14 45 31.6**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=5.9,slow=1.9,SNR=8.8								
JCT	**Junction City**	**133.13**	**55**	*e*PKPdf		**PKPdf**		**14 45 35.1**	**+1.1**
BLA	**Blacksburg**	**143.02**	**33**	*e*PKPpre		PKPpre		14 45 48.8	
JSRW	**J. Sargeant Re**	**143.98**	**30**	*e*PKPdf		PKPbc		14 45 51.7	-1.1
CPUP	**Villa Florida**	**146.41**	**178**	PKPbc		**PKPbc**		**14 46 00.5**	**+0.3**
CPUP	**Villa Florida**	**146.41**	**178**	PKPbc		**PKPbc**		**14 46 00.5**	**+0.3**
	comp=Z,6.2nm,0.6s,baz=177,slow=1.9,SNR=20								
LPAZ	**La Paz**	**153.58**	**153**	PKPbc		**PKPbc**		**14 46 18.2**	**0.0**
LPAZ					PKPab	**PKPab**		**14 46 34.6**	**+1.2**
LPAZ	**La Paz**	**153.58**	**153**	PKPbc		**PKPbc**		**14 46 18.2**	**0.0**
	comp=Z,1.2nm,0.5s,baz=16,slow=4.1,SNR=7.2								
LPAZ					PKPab	**PKPab**		**14 46 34.6**	**+1.2**
	comp=Z,2.6nm,0.6s,baz=162,slow=2.3,SNR=8.9								

IDC 15 14:30:40.6±0.8, 18.73N×145.77E, h0km, mb3.9/8, mb1 4.2/8, mb1mx3.8/26, mbtmp3.9/8, Error ellipse: s-maj=44.7km s-min=18.3km az=113.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**40.03**	**197**	P	P	14 38 17.0	-0.6
	1.0nm,0.4s,baz=27,slow=8.7,SNR=7.3						
FITZ	**Fitzroy Crossi**	**41.60**	**210**	P	P	14 38 30.9	+0.4
	1.7nm,0.5s,baz=34,slow=9.2,SNR=10						
ASAR	**Alice Springs**	**43.70**	**196**	P	P	14 38 47.4	-0.2
	0.6nm,0.5s,baz=19,slow=12,SNR=5.0						
ILAR	**Eielson Array**	**63.59**	**26**	P	P	14 41 13.0	0.0
	0.6nm,0.7s,baz=246,slow=5.0,SNR=3.9						
BVAR	**Borovoye Array**	**66.50**	**320**	P	P	14 41 32.0	0.0
	0.5nm,0.5s,baz=81,slow=8.9,SNR=3.6						
YKA	**Yellowknife Ar**	**77.94**	**28**	P	P	14 42 40.3	0.0
	0.6nm,0.6s,baz=291,slow=5.4,SNR=7.8						
NVAR	**Mina Array Bea**	**83.07**	**52**	P	P	14 43 09.3	+0.5
	1.3nm,0.6s,baz=266,slow=6.5,SNR=16						
PDAR	**Pinedale Array**	**87.76**	**45**	P	P	14 43 31.3	-0.8
	0.3nm,0.4s,baz=141,slow=2.2,SNR=3.7						

*TIR **15** 14:43:08.1±2.7, 40.12N×20.03E, h26km±11km, ML3.4*
*ATH **15** 14:43:08.0, 40.17N×19.62E, h17km±1km, MD3.3/13*
*ROM **15** 14:43:09.9±0.5, 40.07N×19.95E, h10km, Ml3.1/10, Error ellipse: s-maj=7.0km s-min=3.7km az=76.0*
*THE **15** 14:43:10.9, 40.07N×19.84E, h0km±1km, ML3.0/10, Error ellipse: s-maj=1.2km s-min=0.5km az=259.0*
*CSEM **15** 14:43:11.0±0.1, 40.06N×19.83E, h2km, ML3.0/10, Error ellipse: s-maj=2.9km s-min=2.4km az=58.0*
*PDG **15** 14:43:11.2±0.5, 40.10N×19.91E, h8km±1km, ML2.9/8, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*SKO **15** 14:43:12.5, 40.10N×19.98E, h9km*

ISC 15 14:43:11.1±1.0, 40.06N±0.01×19.85E±0.02, h6km±8km, n121, o095/186, 6C-12D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRN	**Sarande**	**0.22**	**147**	*e*PG	**Pg**	**14 43 15.1**	**-0.3**
SRN				*i* SG	**Sg**	**14 43 19.6**	**+1.3**
SRN	**Sarande**	**0.22**	**147**	P	**Pg**	**14 43 15.1**	**-0.3**
SRN				S	**Sg**	**14 43 18.7**	**+0.4**
SRN	**Sarande**	**0.22**	**147**	P	**Pg**	**14 43 15.1**	**-0.3**
SRN				S	**Sg**	**14 43 18.7**	**+0.4**
KEK	**Kerkira**	**0.35**	**186**	P	**Pg**	**14 43 17.9**	**0.0**
KEK				S	**Sg**	**14 43 23.6**	**+1.0**
KEK	**Kerkira**	**0.35**	**186**	*e*PB	**Pg**	**14 43 18.0**	**0.0**
KEK				*e*SB	**Sb**	**14 43 25.1**	**-0.4**
KEK	**Kerkira**	**0.35**	**186**	Pg	**Pg**	**14 43 18.0**	**0.0**
KEK				Sg	**Sb**	**14 43 24.4**	**-1.1**
	1µm,0.3s						
KEK	**Kerkira**	**0.35**	**186**	P	**Pg**	**14 43 17.9**	**0.0**
KEK				S	**Sg**	**14 43 23.6**	**+1.0**
KEK				Sg	**Sb**	**14 43 24.4**	**-1.1**
	1µm,0.3s						
KEK				*e*Sb	Sb	14 43 25.1	-0.5
VLO	**Vlora**	**0.49**	**327**	*e*PG	**Pg**	**14 43 20.3**	**-0.2**
VLO	**Vlora**	**0.49**	**327**	P	**Pg**	**14 43 20.3**	**-0.2**
VLO				S	**Sg**	**14 43 27.2**	**+0.3**
VLO	**Vlora**	**0.49**	**327**	P	**Pg**	**14 43 20.3**	**-0.2**
VLO				S	**Sg**	**14 43 27.2**	**+0.3**
IGT	**Igoumenitsa**	**0.65**	**145**	P	**Pg**	**14 43 23.1**	**-0.5**
IGT				S	**Sb**	**14 43 33.4**	**-0.7**
IGT	**Igoumenitsa**	**0.65**	**145**	P	**Pg**	**14 43 23.1**	**-0.5**
IGT				S	**Sb**	**14 43 33.4**	**-0.7**
JAN	**Janina**	**0.87**	**117**	P	**Pg**	**14 43 27.7**	**-0.2**
JAN				S	**Sb**	**14 43 40.6**	**0.0**
JAN	**Janina**	**0.87**	**117**	*e*PB	**Pg**	**14 43 27.7**	**-0.2**
JAN				*e*SN	**Sn**	**14 43 42.6**	**-0.3**
JAN	**Janina**	**0.87**	**117**	P	**Pg**	**14 43 27.7**	**-0.2**
JAN				S	**Sb**	**14 43 40.6**	**0.0**
JAN				*e*Sn	**Sn**	**14 43 42.6**	**-0.3**
KBN	**Korca**	**0.91**	**52**	*e*PG	**Pg**	**14 43 27.2**	**-1.4**
KBN	**Korca**	**0.91**	**52**	P	**Pg**	**14 43 27.6**	**-1.0**
KBN				S	**Sb**	**14 43 41.6**	**-0.2**
KBN	**Korca**	**0.91**	**52**	P	**Pg**	**14 43 27.6**	**-1.0**
KBN				S	**Sb**	**14 43 41.6**	**-0.2**
NEST	**Nestorio**	**0.98**	**69**	P	**Pg**	**14 43 29.6**	**-0.4**
NEST				S	**Sb**	**14 43 44.2**	**+0.3**
NEST	**Nestorio**	**0.98**	**69**	P	**Pg**	**14 43 29.6**	**-0.4**
NEST				S	**Sb**	**14 43 44.2**	**+0.3**
SCTE	**Santa Cesarea**	**1.06**	**271**	Pn	**Pg**	**14 43 31.2**	**-0.2**
SCTE				Sg	**Sn**	**14 43 47.0**	**-0.4**
TIR	**Tirane**	**1.28**	**1**	*e*PN	**Pn**	**14 43 35.2**	**-0.4**
TIR				*i* SN	**Sn**	**14 43 54.7**	**+1.6**
TIR	**Tirane**	**1.28**	**1**	P	**Pb**	**14 43 35.4**	**-0.3**
TIR	**Tirane**	**1.28**	**1**	Pn	**Pn**	**14 43 35.0**	**-0.6**
	335nm,0.6s						
TIR	**Tirane**	**1.28**	**1**	Pn	**Pn**	**14 43 35.0**	**-0.6**
	335nm,0.6s						
TIR	**Tirane**	**1.28**	**1**	P	**Pb**	**14 43 35.4**	**-0.3**
FNA	**Florina**	**1.37**	**58**	P	**Pn**	**14 43 36.3**	**-0.5**
FNA				S	**Sg**	**14 43 56.3**	**+1.1**
FNA	**Florina**	**1.37**	**58**	*e*PN	**Pn**	**14 43 35.0**	**-1.8**
FNA				*e*SN	**Sg**	**14 43 56.9**	**+1.7**
FNA	**Florina**	**1.37**	**58**	*e*Pn	**Pn**	**14 43 35.0**	**-1.8**
FNA	**Florina**	**1.37**	**58**	P	**Pn**	**14 43 36.3**	**-0.5**
FNA				S	**Sg**	**14 43 56.3**	**+1.1**
LKD2	**Lefkada island**	**1.42**	**153**	P	**Pn**	**14 43 37.6**	**+0.2**
LKD2				S	**Sg**	**14 43 58.1**	**+1.4**
LKD2	**Lefkada island**	**1.42**	**153**	*e*PN	**Pg**	**14 43 38.2**	**-0.1**
LKD2				*e*SN	**Sg**	**14 43 58.8**	**+2.1**
LKD2	**Lefkada island**	**1.42**	**153**	P	**Pn**	**14 43 37.6**	**+0.2**
LKD2	**Lefkada island**	**1.42**	**153**	*e*Pn	**Pg**	**14 43 38.2**	**-0.1**
LKD2				S	**Sg**	**14 43 58.1**	**+1.4**
BIA	**Bitola**	**1.48**	**49**	P	**Pn**	**14 43 36.7**	**-1.6**
BIA				S	**Sg**	**14 43 59.0**	**+0.4**
BIA	**Bitola**	**1.48**	**49**	*e*Pn	**Pn**	**14 43 36.4**	**-1.9**
BIA				*e*Sg	**Sn**	**14 43 56.6**	**-1.3**
BIA	**Bitola**	**1.48**	**49**	P	**Pn**	**14 43 36.7**	**-1.6**
BIA				S	**Sg**	**14 43 59.0**	**+0.4**
KZN	**Kozani**	**1.49**	**80**	P	**Pn**	**14 43 38.2**	**-0.3**
KZN				S	**Sg**	**14 43 59.3**	**+0.2**
KZN	**Kozani**	**1.49**	**80**	*e*PN	**Pn**	**14 43 37.7**	**-0.8**
KZN				*e*SN	**Sg**	**14 44 01.2**	**+2.1**
KZN	**Kozani**	**1.49**	**80**	*e*Pn	**Pn**	**14 43 37.7**	**-0.8**
KZN	**Kozani**	**1.49**	**80**	P	**Pn**	**14 43 38.2**	**-0.3**
KZN				S	**Sg**	**14 43 59.3**	**+0.2**
KZN				*e*Sn	**Sg**	**14 44 01.2**	**+2.1**
MESG	**Mesagne**	**1.61**	**290**	Pn	**Pn**	**14 43 38.9**	**-1.2**
	399nm,0.6s						
PHP	**Peshkopia**	**1.68**	**15**	*e*PN	**Pn**	**14 43 40.8**	**-0.3**
PHP				*i* SN	**Sg**	**14 44 06.0**	**+0.8**
PHP	**Peshkopia**	**1.68**	**15**	P	**Pn**	**14 43 40.8**	**-0.3**
PHP				S	**Sb**	**14 44 04.1**	**+0.2**
PHP	**Peshkopia**	**1.68**	**15**	P	**Pn**	**14 43 40.8**	**-0.3**
PHP				S	**Sb**	**14 44 04.1**	**+0.2**
THL	**Klokotos Trika**	**1.74**	**106**	P	**Pn**	**14 43 42.1**	**+0.3**
THL				S	**Sb**	**14 44 06.1**	**+0.5**
THL	**Klokotos Trika**	**1.74**	**106**	*e*PN	**Pn**	**14 43 42.4**	**+0.6**
THL				*e*SN	**Sg**	**14 44 06.7**	**-0.4**
THL	**Klokotos Trika**	**1.74**	**106**	P	**Pn**	**14 43 42.1**	**+0.3**
THL	**Klokotos Trika**	**1.74**	**106**	*e*Pn	**Pn**

IDC 15 14:50:09.0±1.2, 11°88N×58°22E, h0km, mb3.6/5, mb1 3.7/5, mb1mx3.4/25, mbtmp3.6/5, Error ellipse: s-maj=40.7km s-min=28.6km az=119.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KMBO	**Kilima Mbogo**	**24.52**	**240**	P	P	14 55 30.8	0.0
	1.4nm,0.6s,baz=50,slow=22,SNR=3.9						
MKAR	**Makanchi Array**	**40.29**	**26**	P	P	14 57 48.3	+0.3
	0.2nm,0.8s,baz=215,slow=7.5,SNR=3.4						
ZALV	**Zalesovo Beam**	**46.97**	**21**	P	P	14 58 41.1	-0.5
	0.9nm,0.5s,baz=218,slow=6.7,SNR=5.5						
WRA	**Warramunga Arr**	**81.28**	**112**	P	P	15 02 27.4	-0.4
	0.2nm,0.8s,baz=296,slow=4.7,SNR=2.8						
ASAR	**Alice Springs**	**81.94**	**116**	P	P	15 02 31.7	+0.5
	0.6nm,1.1s,baz=294,slow=5.1,SNR=3.1						

*ISCJB **15** 15:11:56.9±0.6, 39°37N±0°03×40°12E±0°04, h4km±6km, Error ellipse: s-maj=5.3km s-min=4.5km az=24.5*
*ISK **15** 15:11:56.2, 39°37N×40°14E, h13km, MD2.7*
*CSEM **15** 15:11:56.7±0.2, 39°36N×40°12E, h12km, MD2.7, Error ellipse: s-maj=4.5km s-min=3.2km az=128.0*
*DDA **15** 15:11:57.2, 39°36N×40°05E, h7km, MD3.1*

ISC 15 15:11:57.3±1.1, 39°38N±0°02×40°11E±0°03, h9km±10km, n24, σ0°89/39, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERZN	**Erzincan**	**0.36**	**305**	*e*PG	**Pg**	**15 12 04.9**	**+0.4**
ERZN				*e*SG	**Sg**	**15 12 10.5**	**+1.2**
BINT	**Bingol**	**0.58**	**149**	*e*Pg	**Pg**	**15 12 07.8**	**-0.7**
BNGB	**Bing¶ll**	**0.59**	**131**	*e*PG	**Pg**	**15 12 07.8**	**-0.9**
KOPT	**Kop Dagi**	**0.71**	**25**	*e*P	**Pg**	**15 12 11.5**	**+0.5**
KOPT				*e*S	**Sb**	**15 12 22.1**	**+0.2**
KOPT	**Kop Dagi**	**0.71**	**25**	*e*P	**Pg**	**15 12 11.5**	**+0.5**
KOPT				*e*S	**Sb**	**15 12 22.1**	**+0.2**
PTK	**Pertek**	**0.74**	**229**	*e*PG	**Pg**	**15 12 11.2**	**-0.3**
PTK				*e*SG	**Sg**	**15 12 21.8**	**+0.7**
PTK	**Pertek**	**0.74**	**229**	*e*Pg	**Pg**	**15 12 11.2**	**-0.3**
PTK				*e*Sg	**Sg**	**15 12 21.8**	**+0.7**
KELT	**Kelkit**	**1.01**	**320**	*e*P	**Pg**	**15 12 16.7**	**-0.1**
KELT				*e*S	**Sb**	**15 12 31.0**	**+0.4**
KELT	**Kelkit**	**1.01**	**320**	*e*P	**Pg**	**15 12 16.7**	**-0.1**
KELT				*e*S	**Sb**	**15 12 31.0**	**+0.4**
BAYT	**Ayd¯–ntepe-Bay**	**1.02**	**1**	*e*PG	**Pg**	**15 12 15.7**	**-1.1**
BAYT	**Ayd¯–ntepe-Bay**	**1.02**	**1**	*e*Pg	**Pg**	**15 12 15.7**	**-1.1**
EZM	**Erzurum**	**1.10**	**61**	*e*PN	**Pb**	**15 12 17.3**	**-1.4**
ERZM	**Erzurum**	**1.11**	**61**	*e*P	**Pb**	**15 12 18.2**	**-0.5**
ERZM				*e*S	**Sn**	**15 12 36.5**	**+1.8**
ERZM	**Erzurum**	**1.11**	**61**	*e*P	**Pb**	**15 12 18.2**	**-0.5**
ERZM				*e*S	**Sn**	**15 12 36.5**	**+1.8**
GUMT	**Gumushane**	**1.19**	**336**	*e*PN	**Pb**	**15 12 18.9**	**-1.1**
GUMT	**Gumushane**	**1.19**	**336**	*e*Pn	**Pb**	**15 12 18.9**	**-1.1**
ILIC	**ilic-Erzincan**	**1.20**	**274**	*e*PN	**Pb**	**15 12 19.8**	**-0.3**
ILIC	**ilic-Erzincan**	**1.20**	**274**	*e*Pn	**Pb**	**15 12 19.8**	**-0.3**
ELZG	**Elazig**	**1.24**	**225**	*e*P	**Pn**	**15 12 19.7**	**-1.2**
ELZG				*e*S	**Sb**	**15 12 36.5**	**-0.6**
ELZG	**Elazig**	**1.24**	**225**	*e*P	**Pn**	**15 12 19.7**	**-1.2**
ELZG				*e*S	**Sb**	**15 12 36.5**	**-0.6**
KEMA	**Kemaliye**	**1.26**	**266**	*e*P	**Pn**	**15 12 20.6**	**-0.5**
KEMA				*e*S	**Sb**	**15 12 37.4**	**-0.1**
KEMA	**Kemaliye**	**1.26**	**266**	*e*P	**Pn**	**15 12 20.6**	**-0.5**
KEMA				*e*S	**Sb**	**15 12 37.4**	**-0.1**
DIYA	**Diyarbakir**	**1.45**	**180**	*e*P	**Pg**	**15 12 26.1**	**+1.0**
DIYA				*e*S	**Sg**	**15 12 45.0**	**+1.1**
DIYA	**Diyarbakir**	**1.45**	**180**	*e*P	**Pg**	**15 12 26.1**	**+1.0**
DIYA				*e*S	**Sg**	**15 12 45.0**	**+1.1**

IDC 15 15:21:27.3±1.9, 2°04N×126°20E, h0km, mb3.2/4, mb1 3.4/4, mb1mx3.3/21, mbtmp3.2/4, Error ellipse: s-maj=116.9km s-min=23.4km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.02**	**182**	P	Pn	15 26 02.9	-0.8
	2.0nm,1.1s,baz=355,slow=11,SNR=2.8						
WRA	**Warramunga Arr**	**23.26**	**160**	P	P	15 26 35.9	-0.8
	0.2nm,0.3s,baz=338,slow=10,SNR=17						
ASAR	**Alice Springs**	**26.63**	**164**	P	P	15 27 08.0	+0.1
	0.1nm,0.5s,baz=345,slow=9.7,SNR=5.2						
MKAR	**Makanchi Array**	**58.64**	**326**	P	P	15 31 26.5	0.0
	0.2nm,0.6s,baz=124,slow=6.6,SNR=4.0						

*NEIC **15** 15:33:48.8, 37°77S×177°22E, h78km, ML4.5(WEL), After WEL.*

WEL 15 15:33:49.1±0.2, 37°77S×177°21E, h76km±1km, ML4.5/20, 21C-8D, Error ellipse: s-maj=1.3km s-min=1.1km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WIZ	**White Island**	**0.24**	**356**	P*	Pn	15 34 00.3	-0.2
WIZ				S*	Sn	15 34 07.2	-1.8
WIZ	**White Island**	**0.24**	**356**	P*	Pn	15 34 00.4	-0.1
WIZ				S*	Sn	15 34 07.2	-1.8
MARZ	**Manawahe**	**0.48**	**243**	↑P*	Pn	15 34 02.2	-0.1
MARZ	**Manawahe**	**0.48**	**243**	P*	Pn	15 34 02.2	-0.1
URZ	**Urewera**	**0.49**	**189**	P*	Pn	15 34 01.6	-0.8
URZ				S*	Sn	15 34 12.4	+0.2
URZ					AML	15 34 17.7	
URZ	**Urewera**	**0.49**	**189**	P*	Pn	15 34 01.6	-0.8
URZ				S*	Sn	15 34 12.4	+0.2
EDRZ	**Edgecumbe**	**0.50**	**228**	P*	Pn	15 34 02.5	-0.1
EDRZ	**Edgecumbe**	**0.50**	**228**	P*	Pn	15 34 02.5	-0.1
OPRZ	**Ohinepanea**	**0.53**	**262**	↓P*	Pn	15 34 02.4	-0.2
OPRZ				S*	Sn	15 34 12.8	+0.1
OPRZ	**Ohinepanea**	**0.53**	**262**	P*	Pn	15 34 02.4	-0.2
OPRZ				S*	Sn	15 34 12.8	+0.1
MWZ	**Matawai**	**0.62**	**156**	P*	Pn	15 34 03.0	-0.6
MWZ				S*	Sn	15 34 15.3	+0.8
MWZ					AML	15 34 16.6	
MWZ					AML	15 34 20.8	
MWZ					AML	15 34 20.8	
MWZ	**Matawai**	**0.62**	**156**	P*	Pn	15 34 03.0	-0.6
MWZ				S*	Sn	15 34 15.3	+0.8
LIRZ	**Lichensteins R**	**0.69**	**250**	↑P*	Pn	15 34 04.4	0.0
LIRZ	**Lichensteins R**	**0.69**	**250**	P*	Pn	15 34 04.4	0.0
TARZ	**Mount Tarawera**	**0.72**	**230**	P*	Pn	15 34 04.9	+0.1
TARZ	**Mount Tarawera**	**0.72**	**230**	P*	Pn	15 34 04.9	+0.1
OMRZ	**Omania**	**0.74**	**243**	P*	Pn	15 34 04.9	-0.1
OMRZ	**Omania**	**0.74**	**243**	P*	Pn	15 34 04.9	-0.1
TGRZ	**Tauranga**	**0.75**	**273**	↑P*	Pn	15 34 04.8	-0.2
TGRZ	**Tauranga**	**0.75**	**273**	P*	Pn	15 34 04.8	-0.2
RRRZ	**Republican Roa**	**0.79**	**224**	↑P*	Pn	15 34 05.3	-0.2
RRRZ	**Republican Roa**	**0.79**	**224**	P*	Pn	15 34 05.3	-0.2
KARZ	**Kaharoa**	**0.81**	**252**	↑P*	Pn	15 34 05.5	-0.1
KARZ	**Kaharoa**	**0.81**	**252**	P*	Pn	15 34 05.5	-0.1
PUZ	**Puketiti**	**0.88**	**110**	↑PN	Pn	15 34 06.3	-0.2
PUZ					AML	15 34 24.0	
PUZ					AML	15 34 24.6	
PUZ	**Puketiti**	**0.88**	**110**	Pn	Pn	15 34 06.3	-0.2
MXZ	**Matakaoa Point**	**0.89**	**77**	↓P*	Pn	15 34 07.0	+0.4
MXZ				S*	Sn	15 34 20.7	+1.0
MXZ					AML	15 34 25.9	
MXZ					AML	15 34 26.9	
MXZ					AML	15 34 26.9	
MXZ	**Matakaoa Point**	**0.89**	**77**	P*	Pn	15 34 07.0	+0.4
MXZ				S*	Sn	15 34 20.7	+1.0
MYRZ	**Mayor Island**	**0.91**	**302**	P*	Pn	15 34 06.9	0.0
HRRZ	**Handcock Road**	**0.96**	**229**	↑P*	Pn	15 34 07.3	-0.2
HRRZ	**Handcock Road**	**0.96**	**229**	P*	Pn	15 34 07.3	-0.1
PRRZ	**Plateau Road**	**0.97**	**221**	↑P*	Pn	15 34 07.4	-0.2
PRRZ	**Plateau Road**	**0.97**	**221**	P*	Pn	15 34 07.4	-0.2
ALRZ	**Allen Road**	**1.05**	**221**	↑P*	Pn	15 34 08.3	-0.2
ALRZ	**Allen Road**	**1.05**	**221**	P*	Pn	15 34 08.3	-0.2
CNGZ	**Carnagh Statio**	**1.06**	**133**	PN	Pn	15 34 08.7	0.0
CNGZ	**Carnagh Statio**	**1.06**	**133**	Pn	Pn	15 34 08.7	0.0
RAHZ	**Arahi**	**1.15**	**185**	↑PN	Pn	15 34 10.1	+0.3
RAHZ	**Arahi**	**1.15**	**185**	Pn	Pn	15 34 10.1	+0.3
PRGZ	**Paritu Road**	**1.27**	**156**	PN	Pn	15 34 10.9	-0.4
PRGZ	**Paritu Road**	**1.27**	**156**	Pn	Pn	15 34 10.9	-0.4
KNZ	**Kokohu**	**1.30**	**164**	↑PN	Pn	15 34 10.8	-0.8
KNZ	**Kokohu**	**1.30**	**164**	Pn	Pn	15 34 10.8	-0.8
WHTZ	**Whakaora**	**1.33**	**227**	P*	Pn	15 34 12.5	+0.4
WHTZ	**Whakaora**	**1.33**	**227**	P*	Pn	15 34 12.6	+0.4
TOZ	**Tahuroa Road**	**1.35**	**271**	P*	Pn	15 34 12.2	-0.1
TOZ	**Tahuroa Road**	**1.35**	**271**	P*	Pn	15 34 12.1	-0.3
NMHZ	**Naumai**	**1.36**	**193**	↑PN	Pn	15 34 13.0	+0.4
HATZ	**Hinemaiaia**	**1.42**	**218**	↑P*	Pn	15 34 13.0	-0.3
HATZ	**Hinemaiaia**	**1.42**	**218**	P*	Pn	15 34 13.0	-0.3
MHGZ	**Mahia Peninsul**	**1.49**	**159**	PN	Pn	15 34 13.4	-0.7
MHGZ	**Mahia Peninsul**	**1.49**	**159**	Pn	Pn	15 34 13.4	-0.6
WATZ	**Wairara**	**1.49**	**231**	↑P*	Pn	15 34 14.2	0.0
WATZ	**Wairara**	**1.49**	**231**	P*	Pn	15 34 14.2	0.0
BKZ	**Black Stump Fm**	**1.50**	**202**	↑P*	Pn	15 34 13.9	-0.5
BKZ					AML	15 34 41.0	
BKZ					AML	15 34 43.3	
BKZ	**Black Stump Fm**	**1.50**	**202**	P*	Pn	15 34 13.9	-0.5
KUZ	**Kuaotunu**	**1.57**	**310**	↓PN	Pn	15 34 14.6	-0.5
KUZ	**Kuaotunu**	**1.57**	**310**	Pn	Pn	15 34 14.6	-0.5
RATZ	**Rangitukua**	**1.58**	**225**	P*	Pn	15 34 14.6	-0.8
RATZ	**Rangitukua**	**1.58**	**225**	P*	Pn	15 34 14.6	-0.8
RITZ	**Rihia Road**	**1.61**	**221**	P*	Pn	15 34 15.8	+0.1
RITZ	**Rihia Road**	**1.61**	**221**	P*	Pn	15 34 15.9	+0.2
KATZ	**Kakaramea**	**1.69**	**224**	P*	Pn	15 34 18.1	+1.1
MCHZ	**McNeill Hill**	**1.72**	**193**	PN	Pn	15 34 16.7	-0.4
MCHZ	**McNeill Hill**	**1.72**	**193**	Pn	Pn	15 34 16.8	-0.3
MKAZ	**Moumakai**	**1.75**	**291**	PN	Pn	15 34 17.7	+0.1
MKAZ	**Moumakai**	**1.75**	**291**	Pn	Pn	15 34 17.7	+0.1
KRVZ	**Karewarewa**	**1.81**	**222**	PN	Pn	15 34 18.9	+0.4
KRVZ	**Karewarewa**	**1.81**	**222**	Pn	Pn	15 34 19.0	+0.5
OTVZ	**Oturere**	**1.85**	**221**	↑PN	Pn	15 34 19.2	+0.2
OTVZ	**Oturere**	**1.85**	**221**	Pn	Pn	15 34 19.2	+0.2
WTVZ	**West Tongariro**	**1.85**	**223**	PN	Pn	15 34 19.2	+0.1
CKHZ	**Cape Kidnapper**	**1.89**	**183**	PN	Pn	15 34 18.2	-1.2
CKHZ	**Cape Kidnapper**	**1.89**	**183**	Pn	Pn	15 34 18.2	-1.2
NGZ	**Ngauruhoe**	**1.89**	**221**	↓PN	Pn	15 34 20.0	+0.4
NGZ	**Ngauruhoe**	**1.89**	**221**	P*	Pn	15 34 20.0	+0.4
TWVZ	**Taurewa**	**1.91**	**226**	PN	Pn	15 34 20.0	+0.3
TWVZ	**Taurewa**	**1.91**	**226**	Pn	Pn	15 34 20.0	+0.3
TUVZ	**Tukino**	**1.93**	**219**	PN	Pn	15 34 20.3	+0.1
TUVZ	**Tukino**	**1.93**	**219**	Pn	Pn	15 34 20.3	+0.1
BHHZ	**Black Hill Sta**	**1.94**	**207**	↑PN	Pn	15 34 19.4	-0.7
BHHZ	**Black Hill Sta**	**1.94**	**207**	Pn	Pn	15 34 19.4	-0.7
WPVZ	**Whakapapa**	**1.94**	**222**	PN	Pn	15 34 20.6	+0.4
WPVZ	**Whakapapa**	**1.94**	**222**	Pn	Pn	15 34 20.6	+0.4
FWVZ	**Far West T-bar**	**1.97**	**221**	↑PN	Pn	15 34 20.9	0.0
FWVZ	**Far West T-bar**	**1.97**	**221**	Pn	Pn	15 34 20.9	0.0
DRZ	**Dome Shelter**	**1.98**	**220**	PN	Pn	15 34 20.9	-0.1
MOVZ	**Moawhango**	**2.00**	**214**	↓PN	Pn	15 34 20.3	-0.6
MOVZ	**Moawhango**	**2.00**	**214**	Pn	Pn	15 34 20.3	-0.6
HIZ	**Hauiti**	**2.00**	**247**	PN	Pn	15 34 21.3	+0.5
HIZ	**Hauiti**	**2.00**	**247**	Pn	Pn	15 34 21.3	+0.5
WNVZ	**Wahianoa**	**2.00**	**219**	↓PN	Pn	15 34 21.0	-0.1
WNVZ	**Wahianoa**	**2.00**	**219**	Pn	Pn	15 34 21.0	-0.1
TRVZ	**Turoa**	**2.01**	**220**	↓PN	Pn	15 34 21.2	-0.1
TRVZ	**Turoa**	**2.01**	**220**	Pn	Pn	15 34 21.2	-0.1
KAHZ	**Kahuranaki**	**2.04**	**187**	PN	Pn	15 34 20.1	-1.4
KAHZ	**Kahuranaki**	**2.04**	**187**	Pn	Pn	15 34 20.1	-1.4
PKVZ	**Pokaka**	**2.11**	**223**	PN	Pn	15 34 22.6	+0.2
PKVZ	**Pokaka**	**2.11**	**223**	Pn	Pn	15 34 22.6	+0.2
MTVZ	**Mangateitei**	**2.11**	**220**	PN	Pn	15 34 22.1	-0.4
MTVZ	**Mangateitei**	**2.11**	**220**	Pn	Pn	15 34 22.1	-0.4
PXZ	**Pawanui**	**2.27**	**187**	PN	Pn	15 34 22.3	-2.3
PXZ					AML	15 34 50.1	
PXZ					AML	15 34 50.1	
PXZ					AML	15 34 50.1	
PXZ					AML	15 34 50.1	
PXZ	**Pawanui**	**2.27**	**187**	Pn	Pn	15 34 22.3	-2.3
PNHZ	**Pukenui**	**2.28**	**200**	↑PN	Pn	15 34 22.7	-2.0
PNHZ	**Pukenui**	**2.28**	**200**	Pn	Pn	15 34 22.7	-2.0
RVAZ	**Riverhead Bore**	**2.32**	**295**	PN	Pn	15 34 25.6	+0.4
VRZ	**Vera Road**	**2.35**	**234**	PN	Pn	15 34 26.3	+0.7
VRZ	**Vera Road**	**2.35**	**234**	Pn	Pn	15 34 26.4	+0.8
WPHZ	**Waipukurau**	**2.37**	**194**	PN	Pn	15 34 24.2	-1.7
WPHZ	**Waipukurau**	**2.37**	**194**	Pn	Pn	15 34 24.2	-1.7
TSZ	**Takapari Road**	**2.49**	**203**	PN	Pn	15 34 25.1	-2.4
TSZ					AML	15 35 07.6	
TSZ					AML	15 35 08.8	
TSZ	**Takapari Road**	**2.49**	**203**	Pn	Pn	15 34 25.1	-2.4
PRHZ	**Porangahau**	**2.53**	**190**	PN	Pn	15 34 25.3	-2.7
PRHZ	**Porangahau**	**2.53**	**190**	Pn	Pn	15 34 25.4	-2.7
MHEZ	**Mangahewa**	**2.62**	**239**	PN	Pn	15 34 31.0	+1.8
WAZ	**Wanganui**	**2.64**	**221**	↓PN	Pn	15 34 29.2	-0.3
WAZ	**Wanganui**	**2.64**	**221**	Pn	Pn	15 34 29.2	-0.3
DVHZ	**Dannevirke**	**2.65**	**198**	PN	Pn	15 34 27.2	-2.5
RAEZ	**Rainy Point**	**2.68**	**235**	PN	Pn	15 34 31.7	+1.7
POWZ	**Post Office Ro**	**2.85**	**203**	PN	Pn	15 34 29.9	-2.4
POWZ	**Post Office Ro**	**2.85**	**203**	Pn	Pn	15 34 29.9	-2.4
NEZ	**North Egmont**	**2.87**	**238**	PN	Pn	15 34 34.4	+1.8
NEZ	**North Egmont**	**2.87**	**238**	Pn	Pn	15 34 34.5	+1.8
DFE	**Dawson Falls**	**2.89**	**237**	PN	Pn	15 34 34.5	+1.7
PKE	**Pukeiti**	**2.90**	**240**	PN	Pn	15 34 34.8	+1.8
PKE	**Pukeiti**	**2.90**	**240**	Pn	Pn	15 34 34.9	+1.8
BFZ	**Birch Farm**	**3.00**	**194**	PN	Pn	15 34 31.5	-2.9
BFZ	**Birch Farm**	**3.00**	**194**	Pn	Pn	15 34 31.4	-3.0
MRZ	**Mangatainoka R**	**3.15**	**203**	PN	Pn	15 34 33.1	-3.4
MRZ					AML	15 35 09.3	
MRZ					AML	15 35 27.3	
MRZ	**Mangatainoka R**	**3.15**	**203**	Pn	Pn	15 34 33.1	-3.4
TIWZ	**Tintock**	**3.17**	**198**	PN	Pn	15 34 33.9	-2.9
TIWZ	**Tintock**	**3.17**	**198**	Pn	Pn	15 34 33.9	-2.9
HOWZ	**Holdsworth Sta**	**3.39**	**202**	PN	Pn	15 34 35.8	-3.9
HOWZ	**Holdsworth Sta**	**3.39**	**202**	Pn	Pn	15 34 35.8	-3.9
OGWZ	**Otaki Gorge**	**3.43**	**207**	PN	Pn	15 34 36.8	-3.4
OGWZ	**Otaki Gorge**	**3.43**	**207**	Pn	Pn	15 34 36.8	-3.4
TMWZ	**Te Maipa**	**3.49**	**197**	PN	Pn	15 34 37.5	-3.5
TMWZ	**Te Maipa**	**3.49**	**197**	Pn	Pn	15 34 37.5	-3.5
KIW	**Kapiti Island**	**3.57**	**209**	PN	Pn	15 34 38.2	-3.3
KIW					AML	15 35 36.2	
KIW					AML	15 35 36.6	
KIW	**Kapiti Island**	**3.57**	**209**	Pn	Pn	15 34 38.7	-3.3
MTW	**Mount Morrison**	**3.63**	**201**	PN	Pn	15 34 39.0	-4.0
MTW					AML	15 35 19.9	
MTW					AML	15 35 46.0	
MTW	**Mount Morrison**	**3.63**	**201**	Pn	Pn	15 34 39.0	-4.0
CAW	**Cannon Point**	**3.72**	**206**	PN	Pn	15 34 40.3	-3.9
CAW					AML	15 35 40.4	
CAW					AML	15 35 43.5	
CAW	**Cannon Point**	**3.72**	**206**	Pn	Pn	15 34 40.3	-3.9
TRWZ	**Traveller**	**3.81**	**198**	PN	Pn	15 34 41.3	-4.1
TRWZ					AML	15 35 24.9	
TRWZ					AML	15 35 32.8	
TRWZ	**Traveller**	**3.81**	**198**	Pn	Pn	15 34 41.3	-4.1
PAWZ	**Paruwai Farm**	**3.86**	**200**	PN	Pn	15 34 41.8	-4.2
PAWZ					AML	15 35 52.2	
PAWZ					AML	15 35 52.2	
PAWZ	**Paruwai Farm**	**3.86**	**200**	Pn	Pn	15 34 41.8	-4.2
MSWZ	**Moikau Station**	**3.94**	**202**	PN	Pn	15 34 42.7	-4.5
MSWZ					AML	15 35 31.5	
MSWZ					AML	15 35 55.7	
MSWZ	**Moikau Station**	**3.94**	**202**	Pn	Pn	15 34 42.7	-4.5
DUWZ	**D'Urville Isla**	**3.96**	**219**	PN	Pn	15 34 43.9	-3.5
DUWZ	**D'Urville Isla**	**3.96**	**219**	Pn	Pn	15 34 43.9	-3.5
WEL	**Wellington**	**3.99**	**208**	PN	Pn	15 34 43.3	-4.4
WEL	**Wellington**	**3.99**	**208**	Pn	Pn	15 34 43.3	-4.4
SNZO	**South Karori**	**4.03**	**208**	PN	Pn	15 34 43.7	-4.6
SNZO					AML	15 35 50.1	
SNZO					AML	15 35 51.0	
SNZO	**South Karori**	**4.03**	**208**	Pn	Pn	15 34 43.7	-4.6
BHW	**Baring Head**	**4.06**	**206**	PN	Pn	15 34 44.2	-4.5
BHW					AML	15 35 51.8	
BHW					AML	15 35 53.0	
BHW	**Baring Head**	**4.06**	**206**	Pn	Pn	15 34 44.2	-4.5
PLWZ	**Palliser**	**4.08**	**201**	PN	Pn	15 34 44.1	-5.1
PLWZ	**Palliser**	**4.08**	**201**	Pn	Pn	15 34 44.1	-5.1
TCW	**Tory Channel**	**4.12**	**213**	PN	Pn	15 34 45.5	-4.1
TCW					AML	15 35 50.8	
TCW					AML	15 35 51.6	
TCW	**Tory Channel**	**4.12**	**213**	Pn	Pn	15 34 45.5	-4.1
TUWZ	**Tuamarina**	**4.44**	**214**	PN	Pn	15 34 49.7	-4.2
TUWZ					AML	15 35 58.6	
TUWZ					AML	15 36 01.9	
TUWZ	**Tuamarina**	**4.44**	**214**	Pn	Pn	15 34 49.7	-4.2
NNZ	**Nelson**	**4.54**	**220**	PN	Pn	15 34 51.4	-3.9
NNZ	**Nelson**	**4.54**	**220**	Pn	Pn	15 34 51.4	-3.9
BSWZ	**Blackbirch Sta**	**4.70**	**212**	PN	Pn	15 34 52.9	-4.7
BSWZ					AML	15 36 27.4	
BSWZ	**Blackbirch Sta**	**4.70**	**212**	Pn	Pn	15 34 52.9	-4.7
QRZ	**Quartz Range**	**4.74**	**228**	PN	Pn	15 34 54.5	-3.6
QRZ	**Quartz Range**	**4.74**	**228**	Pn	Pn	15 34 54.5	-3.6
THZ	**Tophouse**	**5.19**	**218**	↑PN	Pn	15 34 59.9	-4.3
THZ	**Tophouse**	**5.19**	**218**	Pn	Pn	15 34 59.9	-4.3
KHZ	**Kahutara**	**5.43**	**210**	PN	Pn	15 35 02.0	-5.3
KHZ					AML	15 37 33.5	
KHZ	**Kahutara**	**5.43**	**210**	Pn	Pn	15 35 02.0	-5.3
DSZ	**Denniston Nort**	**5.75**	**225**	PN	Pn	15 35 06.8	-5.1
LTZ	**Lake Taylor**	**6.27**	**215**	PN	Pn	15 35 12.9	-6.1
LTZ	**Lake Taylor**	**6.27**	**215**	Pn	Pn	15 35 12.9	-6.1
CRLZ	**Canterbury Las**	**6.77**	**210**	PN	Pn	15 35 19.4	-6.3
MQZ	**McQueen's Vall**	**6.87**	**209**	↑PN	Pn	15 35 20.3	-6.7
MQZ	**McQueen's Vall**	**6.87**	**209**	Pn	Pn	15 35 20.3	-6.7
WVZ	**Waitaha Valley**	**7.24**	**221**	PN	Pn	15 35 30.7	-1.5
CTZ	**Chatham Island**	**7.58**	**144**	PN	Pn	15 35 36.0	-0.8
CTZ	**Chatham Island**	**7.58**	**144**	Pn	Pn	15 35 36.0	-0.8
FOZ	**Fox Glacier**	**8.13**	**222**	PN	Pn	15 35 37.1	-7.2
LBZ	**Lake Benmore**	**8.47**	**217**	PN	Pn	15 35 45.1	-3.9
ODZ	**Otahua Downs**	**8.78**	**212**	PN	Pn	15 35 46.3	-6.9
ODZ	**Otahua Downs**	**8.78**	**212**	Pn	Pn	15 35 46.3	-6.9
JCZ	**Jackson Bay**	**8.97**	**223**	PN	Pn	15 35 49.3	-6.7

JMA 15 15:54:25.3±0.1, 27°11N×130°02E, h45km, M3.5, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTK	**Tokunoshima**	**1.17**	**306**	P	Pn	15 54 45.6	+0.4
JTK				S	Sn	15 55 00.1	+0.2
JZK	**Kikaishima**	**1.20**	**358**	P	Pn	15 54 46.5	+0.8
JAM	**Amami Oshima**	**1.35**	**344**	P	Pn	15 54 48.1	+0.4
JAM				S	Sn	15 55 04.4	0.0
JAMN	**Amaminishikomi**	**1.35**	**327**	P	Pn	15 54 47.9	+0.1
JAMN				S	Sn	15 55 04.2	-0.4
JOW	**Kunigami**	**1.58**	**260**	P	Pn	15 54 52.0	+1.1
JOW				S	Sn	15 55 11.3	+1.1
JMZ	**Minamidaito 2**	**1.68**	**140**	P	Pn	15 54 52.5	+0.3
JMZ				S	Sn	15 55 12.5	0.0
JIH	**Iheya**	**1.83**	**268**	P	Pn	15 54 55.7	+1.4
JIH				S	Sn	15 55 17.3	+1.0
JJT2	**Tamagusuku 2**	**2.25**	**245**	P	Pn	15 55 01.3	+1.2
JJT2				S	Sn	15 55 28.2	+1.6
JAGN	**Aguni-jima**	**2.54**	**259**	P	Pn	15 55 05.0	+1.1
JAGN				S	Sn	15 55 33.9	+0.3
JNN	**Nakanoshima**	**2.72**	**357**	P	Pn	15 55 07.8	+1.2
JNN				S	Sn	15 55 37.8	-0.5
JKE	**Kume jima 2**	**3.00**	**256**	P	Pn	15 55 10.8	+0.5
JKE				S	Sn	15 55 45.7	+0.7

*IDC **15** 15:56:57.7±0.8, 5°26N×126°01E, h0km, mb3.9/10, mb1 4.0/10, mb1mx3.9/23, mbtmp3.9/10, Error ellipse:

SNET AML AML 16 02 49.5
comp=Z,10µm,0.8s
SNJE San Jose 3.42 224 *e*P Pb 16 01 51.4 -3.1
RTR El Retiro 3.42 224 *e*P **Pb 16 01 53.1 -1.5**
SBLS San Blas 3.45 223 *e*P Pb 16 01 52.6 -2.5
NBG Las Nubes 3.53 240 *e*P **Pn 16 01 47.2 -1.5**
IXG Ixpaco 3.84 236 *e*P **Pn 16 01 54.5 +1.7**
TEIG Tepich 3.97 345 *e*P **Pn 16 01 54.6 +0.1**
TEIG Sn **Sn 16 02 39.0 -1.8**
TEIG Tepich 3.97 345 Pn **Pn 16 01 54.0 -0.5**
comp=Z,92nm,0.3s,baz=335,slow=1.6,SNR=263
TEIG Sn **Sn 16 02 39.0 -1.8**
comp=Z,391nm,0.3s,baz=266,slow=19,SNR=23
TEIG LR LR 16 03 47.3
comp=Z,3µm,21.7s,baz=10,slow=43
FUG Fuego 3 4.01 242 *e*P **Pn 16 01 53.8 -1.4**
JAT Jato 4.76 245 *e*P **Pn 16 02 04.8 -0.5**
JTS JuntasAbangare 6.42 160 *e*P **Pn 16 02 29.2 +1.1**
comp=Z,1µm,0.8s
MTDJ Mount Denham 9.40 77 *e*P **Pn 16 03 09.6 +0.4**
comp=Z,50nm,0.7s
PCJ Portland Cotta 9.69 80⇑*i*P **Pn 16 03 13.6 +0.6**
STH Stony Hill 10.06 79 *i* P **Pn 16 03 18.8 +0.7**
HOJ Hope 10.10 79⇑*i*P **Pn 16 03 18.8 +0.1**
BCIP Isla Barro Col 10.13 134 *e*P **Pn 16 03 16.1 -2.9**
comp=Z,44nm,0.7s
GWJ Greenwich 10.13 79 *i* P **Pn 16 03 19.8 +0.6**
GTBY Guantanamo Bay 12.01 71 *e*P **Pn 16 03 45.3 +0.5**
comp=Z,22nm,0.8s
BRAL Brewton 14.58 0 P **Pn 16 04 22.4 +2.5**
comp=Z,78nm,0.7s
TIGA Tifton 15.35 12⇑P **Pn 16 04 29.2 -1.1**
baz=15
SDDR Presa de Saban 15.37 78 *e*P **Pn 16 04 31.6 +1.0**
comp=Z,25nm,0.9s
LRAL Lakeview Retre 16.59 1 *e*P **Pn 16 04 45.7 -0.5**
comp=Z,29nm,0.8s
ROSC El Rosal 17.03 131 *e*P **P 16 04 54.5 +0.4**
ROSC El Rosal 17.03 131 Pn **Pn 16 04 50.9 -1.3**
comp=Z,0.5nm,0.3s,baz=93,slow=16,SNR=13
ROSC LR LR 16 12 00.2
comp=Z,791nm,20.0s,baz=352,slow=40
732A Laxson Ranch, 17.03 318⇑P Pn 16 04 48.2 -3.6
baz=17,SNR=7.5
732A ⇑S Sn 16 07 42.1 -19
baz=17
632A Uvalde 17.46 321⇓P **Pn 16 04 54.1 -3.1**
baz=18,SNR=43
NHSC New Hope 17.83 20 P **P 16 05 03.2 +0.9**
comp=Z,173nm,1.1s
631A Perdido Creek 17.89 319⇓P Pn 16 04 58.9 -3.5
baz=18,SNR=40
532A Rocksprings 17.98 322⇓P **Pn 16 05 01.9 -1.8**
baz=18,SNR=33
WHTX Lake Whitney 18.14 331⇓P **Pn 16 05 05.1 -0.3**
baz=18,SNR=39
OXF Oxford 18.18 354 *e*P **Pn 16 05 04.5 -1.4**
comp=Z,51nm,0.5s
JCT Junction City 18.18 323 *e*P **Pn 16 05 03.7 -2.3**
comp=Z,48nm,0.7s
JCT Junction City 18.18 323⇑P **Pn 16 05 04.2 -1.9**
baz=18
531A Rocksprings 18.39 321⇓P **P 16 05 07.3 -1.4**
baz=19
432A Menard 18.47 324⇓P **P 16 05 08.1 -1.4**
baz=19,SNR=15
431A Sonora 18.80 322⇓P **P 16 05 12.7 -0.5**
baz=19,SNR=24
332A Millersview 18.82 325⇓P **P 16 05 13.6 +0.3**
baz=19,SNR=26
530A J-C Ranch, Com 18.87 319⇓P **P 16 05 13.3 -0.6**
baz=19,SNR=43
UALR University of 18.90 347 *e*P **Pn 16 05 16.7 +1.9**
comp=Z,51nm,0.8s
MIAR Mount Ida 18.99 344 *e*P **P 16 05 16.3 +1.2**
comp=Z,51nm,0.8s
CPCT Cooper Cave 19.15 7 *e*P **P 16 05 17.3 +0.4**
331A San Angelo 19.15 323⇑P **P 16 05 18.4 +1.5**
baz=19,SNR=8.7
232A Coleman 19.16 326⇑P **P 16 05 17.7 +0.6**
baz=19,SNR=20
430A Baggett Ranch, 19.25 321⇓P **P 16 05 19.6 +1.5**
baz=19,SNR=22
KMSC Kings Mountain 19.41 15⇑P **P 16 05 20.5 +0.7**
baz=20,SNR=22
529A Stev Forest Ra 19.42 317⇓P **P 16 05 20.6 +0.6**
baz=20,SNR=36
TKL Tuckaleechee C 19.45 8 P **P 16 05 21.5 +1.3**
TKL S S 16 08 50.9 -8.7
TKL Tuckaleechee C 19.45 8 P **P 16 05 21.5 +1.3**
comp=Z,0.6nm,0.3s,baz=180,slow=13,SNR=26
TKL S S 16 08 50.9 -8.7
comp=Z,0.6nm,0.3s,baz=288,slow=20,SNR=3.6
TKL LR LR 16 12 55.9
comp=Z,402nm,18.3s,baz=56,slow=37
628A Black Gap, Mar 19.45 315⇑P **P 16 05 21.7 +1.4**
baz=20,SNR=51
429A Davenport Ranc 19.55 319⇓P **P 16 05 23.0 +1.6**
baz=20,SNR=39
231A Bronte 19.56 325⇓P **P 16 05 23.0 +1.6**
baz=20,SNR=15
330A Mertzon 19.66 322⇑P **P 16 05 23.9 +1.4**
baz=20,SNR=28
WVT Waverly 19.69 358 *e*P **P 16 05 23.7 +1.0**
comp=Z,27nm,0.8s
ABTX Abilene, Hawle 19.73 327⇓P **P 16 05 25.0 +1.7**
baz=20,SNR=10
CELP Cerrillos 19.75 82 *e*P **Pn 16 05 26.1 +0.9**
627A Terlingua Ranc 19.78 314⇓P **P 16 05 26.0 +2.1**
baz=20,SNR=44
528A Cox Ranch, San 19.82 317⇓P **P 16 05 26.0 +1.6**
baz=20,SNR=24
TXAR Lajitas Array 19.90 313 P **Pn 16 05 27.8 +0.9**
TXAR S S 16 08 58.1 -11
TXAR Lajitas Array 19.90 313 P **Pn 16 05 27.8 +0.9**
comp=Z,32nm,1.0s,baz=128,slow=12,SNR=93
TXAR S S 16 08 58.1 -11
comp=Z,1.5nm,0.4s,baz=165,slow=4.5,SNR=7.1
230A Sterling City 19.97 323⇓P **P 16 05 27.3 +1.3**
baz=20,SNR=11
428A Kincaid Ranch, 20.12 318⇓P **P 16 05 29.3 +1.7**
baz=20,SNR=19
131A Roby 20.16 326⇑P **P 16 05 29.7 +1.7**
baz=20,SNR=9.6
Z32A Haskell 20.19 329⇑P Pn 16 05 30.7 +0.5
baz=20,SNR=29
329A Wagon Wheel Ra 20.20 321⇑P **P 16 05 29.6 +1.2**
baz=20,SNR=11
TZTN Tazewell 20.35 8 *e*P **P 16 05 31.8 +1.8**
comp=Z,162nm,1.4s
527A Woodward Ranch 20.36 315⇓P **P 16 05 32.1 +1.9**
baz=20,SNR=111
626A Big Bend Ranch 20.36 313⇓P Pn 16 05 32.8 +0.5
baz=20,SNR=180
130A Snyder 20.42 325⇑P **P 16 05 32.2 +1.4**
baz=21,SNR=15
229A Bryant Ranch, 20.44 322⇑P **P 16 05 32.5 +1.5**
baz=21
Z31A Sharp Cattle R 20.53 328⇑P **P 16 05 33.7 +1.7**
baz=21,SNR=42
526A Mary Lane Ranc 20.63 314⇓P **P 16 05 35.5 +2.2**
baz=21,SNR=66
328A Wristen Ranch, 20.64 319⇑P **P 16 05 34.6 +1.4**
baz=21,SNR=30
427A Hayter Ranch, 20.66 317⇑P **P 16 05 35.2 +1.6**
baz=21,SNR=23
Y32A R-V Farms, Ver 20.74 330⇓P **P 16 05 36.0 +1.8**
baz=21
TUL1 Tulsa 20.92 340⇑P **P 16 05 37.0 +0.9**
baz=21
129A Stewart Farms, 20.95 323⇓P **P 16 05 37.8 +1.2**
baz=21,SNR=9.5
426A McDonald Obser 20.96 316⇓P **P 16 05 38.4 +1.5**
baz=21,SNR=37
228A UT Block 9, Go 21.01 321⇓P **P 16 05 38.4 +1.1**
baz=21,SNR=17
Z30A Sanderson Ranc 21.03 326⇑P **P 16 05 38.8 +1.4**
baz=21,SNR=29
WMOK Wichita Mounta 21.04 333 *e*P **P 16 05 38.1 +0.6**
comp=Z,79nm,1.2s
327A Balmorhea Ranc 21.06 318⇓P **P 16 05 39.6 +1.8**
baz=21
Y31A Rekieta Farm, 21.10 329⇓P **P 16 05 40.2 +2.0**
baz=21,SNR=39
Z29A Hungry Hill Ra 21.32 325⇑P **P 16 05 41.4 +0.7**
baz=22,SNR=10
SIUC Southern Illin 21.34 356 *e*P **P 16 05 42.7 +2.1**
comp=Z,62nm,0.8s
326A Caldwell Ranch 21.34 317⇓P **P 16 05 42.1 +1.3**
baz=22,SNR=5.7
Y30A Stafford Cattl 21.36 327⇑P **P 16 05 42.2 +1.3**
baz=22,SNR=9.5
227A Bennet, Jal 21.37 320⇓P **P 16 05 42.6 +1.5**
baz=22,SNR=9.8
X31A McDonald Ranch 21.50 330⇑P **P 16 05 44.7 +2.3**
baz=22,SNR=35
USIN University of 21.52 359 *e*P **P 16 05 44.1 +1.6**
comp=Z,240nm,0.9s
BLA Blacksburg 21.61 15 *e*P **P 16 05 45.4 +1.8**
comp=Z,138nm,1.3s
425A Indio Mountain 21.68 315⇑P **P 16 05 45.7 +1.2**
baz=22,SNR=61
Z28A Tucker Farm, M 21.73 324⇑P **P 16 05 46.0 +1.0**
baz=22
VWCC Virginia Weste 21.75 16 *e*P **P 16 05 47.0 +1.9**
Y29A Porterfield Fa 21.76 326⇑P **P 16 05 46.4 +1.1**
baz=22
WCI Wyandotte Cave 21.79 2 *e*P **P 16 05 46.6 +1.1**
comp=Z,156nm,0.8s
X30A Coker Ranch, T 21.80 328⇑P **P 16 05 47.3 +1.7**
baz=22,SNR=14
127A Arkansas Junct 21.86 321⇓P **P 16 05 47.1 +0.6**
baz=22
W31A Holland Ranch, 21.94 331⇓P **P 16 05 47.8 +0.6**
baz=22
226B Tecolote Peak, 21.96 318⇑P **P 16 05 49.2 +1.7**
baz=22,SNR=24
325A Bean Ranch, Si 22.03 316⇑P **P 16 05 49.2 +0.9**
baz=22,SNR=58
Y28A McKinney Farm, 22.11 325⇑P **P 16 05 49.5 +0.4**
baz=22
GDL2 Guadalupe Moun 22.17 318 P **P 16 05 51.6 +1.8**
comp=Z,3.2nm,0.4s
X29A Tulia 22.22 327⇑P **P 16 05 50.8 +0.6**
baz=22
Z27A Tatum 22.23 322⇑P **P 16 05 50.7 +0.3**
baz=22,SNR=24
W30A Crocket Farms 22.24 330⇓P **P 16 05 50.6 +0.3**
baz=22
126A Clayton Basin, 22.25 320⇑P **P 16 05 50.8 +0.2**
baz=22
OLIL Olney 22.29 358 *e*P **P 16 05 52.8 +1.9**
comp=Z,99nm,0.9s
SLM Saint Louis 22.34 354 *e*P **P 16 05 53.1 +1.7**
comp=Z,106nm,1.1s
225A Deer Hill, Car 22.40 318⇓P **P 16 05 53.4 +1.1**
baz=23,SNR=20
324A Moseley Ranch, 22.42 315⇑P **P 16 05 53.0 +0.5**
baz=23,SNR=47
MSTX Muleshoe 22.45 324⇓P **P 16 05 52.5 -0.2**
baz=23,SNR=5.7
MNTX Comudas Mount 22.51 316 *e*P **P 16 05 53.5 +0.2**
comp=Z,35nm,1.2s
X28A Dimmitt 22.54 326⇓P **P 16 05 54.1 +0.4**
baz=23
AMTX Amarillo 22.55 328 *e*P **P 16 05 55.0 +1.2**
comp=Z,44nm,0.8s
Y27A Causey 22.61 323⇑P **P 16 05 54.7 +0.3**
baz=23,SNR=9.6
Z26A Caprock 22.65 321⇑P **P 16 05 55.5 +0.6**
baz=23,SNR=12
125A Gardner Draw, 22.66 319⇓P **P 16 05 55.5 +0.5**
baz=23,SNR=10
W29A Amraillo 22.72 328⇓P **P 16 05 56.0 +0.4**
baz=23
BLO Bloomington 22.72 1 *e*P **P 16 05 56.9 +1.4**
comp=Z,145nm,1.3s
V30A Spur Ranch, Mi 22.76 331⇑P **P 16 05 56.2 +0.2**
baz=23
JSRW J. Irgeant Re 22.77 19 *e*P **P 16 05 56.6 +0.6**
224A Cornudas Mount 22.84 317⇓P **P 16 05 57.5 +0.5**
baz=23,SNR=15
U31A Nine Bar Ranch 22.88 333⇓P **P 16 05 57.1 -0.1**
baz=23
Y26A Elida 23.02 322⇑P **P 16 05 58.6 -0.2**
baz=23
Z25A Roswell 23.11 320⇓P **P 16 06 00.2 +0.5**
baz=23,SNR=11
W28A Vega 23.11 327⇓P **P 16 06 00.1 +0.4**
baz=23
X27A F and S Farms, 23.13 325⇓P **P 16 06 00.5 +0.6**
baz=23
124A Stringfield Ra 23.19 318⇓P **P 16 06 01.8 +1.2**
baz=23,SNR=20
V29A Stinnett 23.25 329⇑P **P 16 06 01.6 +0.6**
baz=23
U30A WK&E Inc. Balk 23.37 332⇑P **P 16 06 03.2 +1.0**
baz=24,SNR=8.8
223A Chaparral, Ant 23.40 315⇑P **P 16 06 03.9 +1.2**
baz=24
W27A Bowe Ranch, En 23.42 326⇓P **P 16 06 03.8 +1.0**
baz=24
T31A Randall Ranch, 23.42 334⇓P **P 16 06 03.3 +0.6**
baz=24,SNR=12
X26A CR and CF Fran 23.46 324⇑P **P 16 06 04.0 +0.9**
baz=24,SNR=5.7
V28A Channing 23.50 328⇓P **P 16 06 04.6 +1.0**
baz=24
Y25A Mesa, Roswell 23.53 321⇓P **P 16 06 04.9 +1.0**
baz=24,SNR=16
Z24A Sheeppen Canyo 23.54 319⇑P **P 16 06 05.4 +1.3**
baz=24,SNR=7.5
U29A Oasis Ranch, S 23.59 331⇓P **P 16 06 05.6 +1.1**
baz=24
123A Bell Site, Whi 23.68 317⇓P **P 16 06 06.2 +0.9**
baz=24
T30A Plains 23.75 333⇑P **P 16 06 06.9 +0.9**
baz=24
S31A Mullinville 23.79 335⇓P **P 16 06 07.0 +0.7**
baz=24
V27A Dan Oppiter Fa 23.82 327⇑P **P 16 06 07.7 +1.0**
baz=24
W26A Owens Ranch, T 23.82 325⇑P **P 16 06 07.7 +1.0**
baz=24,SNR=7.0
222A Williams Famil 23.92 315⇓P **P 16 06 08.4 +0.7**
baz=24,SNR=6.8
SFIN Scholer Farm 23.92 0⇓P **P 16 06 07.5 +0.1**
baz=24,SNR=7.2
X25A Clemmons Ranch 23.93 322⇑P **P 16 06 09.0 +1.2**
baz=24
Y24A Capitan 23.98 320⇑P **P 16 06 09.6 +1.2**
baz=24,SNR=36
U28A Mallet 24.00 329⇓P **P 16 06 08.8 +0.5**
baz=24
Z23A Rita Site, Whi 24.05 318⇓P **P 16 06 09.7 +0.7**
baz=24
ACSO Alum Creek Sta 24.05 8 *e*P **P 16 06 10.6 +1.9**
comp=Z,64nm,0.9s
KSU1 Kansas State U 24.10 342 *e*P **P 16 06 10.0 +0.8**
comp=Z,39nm,0.8s
HDIL Hopedale 24.17 356 *e*P **P 16 06 09.9 +0.2**
comp=Z,55nm,0.7s
T29A Hugoton 24.18 332⇑P **P 16 06 10.9 +0.9**
baz=24
122A Conniff Cattle 24.21 316⇓P **P 16 06 11.9 +1.6**
baz=24
S30A Montezuma 24.21 334⇓P **P 16 06 10.9 +0.6**
baz=24,SNR=6.6
W25A X Bar L Ranch, 24.31 324⇑P **P 16 06 12.4 +1.1**
baz=24,SNR=11
U27A Thompson Grove 24.33 328⇑P **P 16 06 12.1 +0.7**
baz=24,SNR=8.8
221A Mesquite Ranch 24.33 314⇑P **P 16 06 12.9 +1.4**
baz=24
V26A Tequesquite Ra 24.36 326⇑P **P 16 06 12.9 +1.2**
baz=24,SNR=11
Y23A Lovelace Mesa, 24.37 319⇓P **P 16 06 13.5 +1.5**
baz=24,SNR=12
R31A Burdett 24.39 336⇑P **P 16 06 12.2 +0.4**
baz=25,SNR=9.4
X24A Lazy VL Ranch, 24.42 321⇑P **P 16 06 14.2 +1.9**
baz=25
S29A Ulysses 24.48 333⇑P **P 16 06 13.7 +1.0**
baz=25,SNR=5.3
320A Kipp Ranch, An 24.49 311⇓P **P 16 06 14.6 +1.6**
baz=25,SNR=12
Z22A Elephant Butte 24.52 317⇑P **P 16 06 15.2 +2.0**
baz=25,SNR=22
T28A Walsh 24.53 330⇑P **P 16 06 14.8 +1.5**
baz=25
121A Cookes Peak, D 24.64 315⇓P **P 16 06 16.3 +2.0**
baz=25,SNR=19
R30A Dighton 24.68 335⇓P **P 16 06 15.0 +0.5**
baz=25,SNR=24
U26A Atchley Ranch, 24.78 327⇓P **P 16 06 16.8 +1.1**
baz=25,SNR=6.7
220A Playas Peak, P 24.80 312⇑P **P 16 06 17.8 +2.0**
baz=25,SNR=31
S28A Manter 24.81 331⇑P **P 16 06 16.7 +1.0**
baz=25,SNR=8.0
W24A Lazy 6 Ranch, 24.85 322⇑P **P 16 06 17.8 +1.6**
baz=25,SNR=16
BNM Barren Site 24.88 319 *e*P **P 16 06 18.7 +2.2**
comp=Z,18nm,0.9s
X23A Hourglass Bar 24.89 320⇓P **P 16 06 17.9 +1.3**
baz=25
ATAH Atahualpa 24.92 159 P **P 16 06 16.9 -0.4**
ATAH Atahualpa 24.92 159 P **P 16 06 16.9 -0.4**
comp=Z,2.0nm,0.5s,baz=346,slow=4.2,SNR=2.0
ATAH LR LR 16 14 43.9
comp=Z,374nm,21.8s,baz=154,slow=34
Y22A Socorro 24.95 318⇓P **P 16 06 19.3 +2.1**
baz=25,SNR=31
Q31A Ellis 24.96 337⇓P **P 16 06 18.8 +1.8**
baz=25
LPM Los Pinos Moun 24.98 319 *e*P **P 16 06 20.1 +2.6**
comp=Z,12nm,0.9s
Z21A St. Cloud Mine 25.02 316⇑P **P 16 06 19.9 +2.0**
baz=25,SNR=8.0
319A Douglas 25.06 311⇓P **P 16 06 20.1 +2.0**
baz=25,SNR=6.1
LENM Lemitar 25.10 319 P **P 16 06 21.7 +3.2**
comp=Z,26nm,1.1s
V24A Rampart Ranch, 25.13 323⇑P **P 16 06 20.4 +1.6**
baz=25
U25A Circle Dot Ran 25.14 326⇑P **P 16 06 21.0 +2.1**
baz=25,SNR=8.8
R29A Marienthal 25.16 334⇑P **P 16 06 20.6 +1.8**
baz=25,SNR=6.4
120A U Bar Ranch, L 25.23 314⇓P **P 16 06 21.7 +2.0**
baz=25,SNR=18
Q30A Quinter 25.25 336⇓P **P 16 06 21.0 +1.3**
baz=25,SNR=5.6
ANMO Albuquerque 25.29 321 *e*P **P 16 06 22.1 +1.9**
comp=Z,22nm,1.1s
ANMO Albuquerque 25.29 321 P **P 16 06 22.1 +1.9**
comp=Z,4.3nm,0.9s,baz=142,slow=11,SNR=10
T26A Comanche Natio 25.30 328⇑P **P 16 06 22.2 +1.8**
baz=26
S27A Las Animas 25.36 330⇑P **P 16 06 22.0 +1.3**
baz=26
LAZ Ladron 25.36 319 P **P 16 06 23.3 +2.4**
comp=Z,4.9nm,0.8s
R28A Tribune 25.39 332⇑P **P 16 06 21.8 +0.9**
baz=26,SNR=20
Y21A Point of Rocks 25.45 317⇑P **P 16 06 23.5 +1.8**
baz=26,SNR=26
Q29A Oakley 25.48 334⇑P **P 16 06 23.1 +1.3**
baz=26,SNR=7.6
Z20A Nine Sixteen R 25.53 315⇑P **P 16 06 24.7 +2.3**
baz=26,SNR=13
S26A Kim 25.59 329⇓P **P 16 06 24.0 +1.2**
baz=26,SNR=19
V23A Ortiz Mt. (NFS 25.67 322⇑P **P 16 06 25.6 +1.9**
baz=26
T25A Trinidad 25.70 327⇑P **P 16 06 25.8 +1.9**
baz=26,SNR=12
P30A Selden 25.75 336⇑P **P 16 06 25.6 +1.4**
baz=26
R27A Eads 25.79 331⇓P **P 16 06 25.8 +1.2**
baz=26,SNR=8.3
X21A Alamocita Cree 25.80 318⇓P **P 16 06 27.2 +2.3**
baz=26,SNR=17
Y20A Horse Springs, 25.85 316⇓P **P 16 06 27.3 +1.8**
baz=26,SNR=19
ALLY Alegheny Colle 25.91 12 *e*P **P 16 06 27.5 +2.0**
comp=Z,16nm,0.4s
SCIA State Center 25.97 350 *e*P **P 16 06 26.9 +0.8**
comp=Z,29nm,0.6s
Q28A Sharon Springs 25.99 333⇓P **P 16 06 27.9 +1.4**
baz=26
P29A Atwood 26.07 335⇓P **P 16 06 28.6 +1.5**
baz=26
U23A El Rito 26.09 323⇑P **P 16 06 29.1 +1.7**
baz=26
S25A Roberts Cordova 26.10 328⇑P **P 16 06 29.1 +1.6**
baz=26
R26A Arlington 26.11 330⇓P **P 16 06 29.1 +1.5**
baz=26
W21A San Fidel 26.14 319⇑P **P 16 06 29.3 +1.3**
baz=26
V22A San Miguel Ran 26.22 322⇓P **P 16 06 30.5 +1.8**
baz=26
O30A MW Ranch, Wils 26.23 337⇑P **P 16 06 29.8 +1.3**
baz=26
KSCO Eye Shedlock' 26.30 332⇓P **P 16 06 31.0 +1.8**
baz=26
X20A Quemado 26.32 317⇑P **P 16 06 32.0 +2.4**
baz=26,SNR=35
ERPA Erie 26.39 12 *e*P **P 16 06 31.7 +1.8**
comp=Z,142nm,1.2s
R25A Fountain Ranch 26.40 329⇓P **P 16 06 32.3 +2.1**
baz=27,SNR=7.3
O29A 4D Ranch, Culb 26.47 336⇑P **P 16 06 32.2 +1.6**
baz=27
S24A Houchin Ranch, 26.49 327⇑P **P 16 06 33.2 +1.9**
baz=27
U22A Llaves 26.50 322⇓P **P 16 06 33.2 +1.9**
baz=27,SNR=5.3
JFWS Jewell Farm 26.59 355 P **P 16 06 32.3 +0.7**
comp=Z,56nm,0.8s
V21A Milan 26.59 321⇑P **P 16 06 34.2 +2.2**
baz=27
TUC Tucson 26.63 311 *e*P **P 16 06 32.6 +0.3**
comp=Z,19nm,1.0s
Q26A Hugo 26.64 331⇑P **P 16 06 34.4 +2.1**
baz=27,SNR=8.0
W20A Ramah 26.68 318⇑P **P 16 06 35.2 +2.3**
baz=27
BGNE Belgrade 26.69 341⇑P **P 16 06 34.2 +1.6**
baz=27
P27A Ficken Ranch, 26.72 333⇑P **P 16 06 34.8 +1.7**
baz=27
O28A Krutsinger Ran 26.86 335⇑P **P 16 06 35.5 +1.3**
baz=27
R24A Sanders Place, 26.88 328⇓P **P 16 06 36.4 +1.8**
baz=27
T22A Edith 26.97 323⇑P **P 16 06 37.4 +1.9**
baz=27
Q25A Bedland, Calha 26.98 330⇑P **P 16 06 37.2 +1.7**
baz=27
U21A Nageezi 27.01 322⇓P **P 16 06 37.8 +1.9**
baz=27,SNR=5.8
P26A Davis Ranch, A 27.07 332⇓P **P 16 06 38.3 +2.0**
baz=27
V20A Brimhall 27.09 320⇑P **P 16 06 37.7 +1.2**
baz=27
R23A Moffat 27.23 327⇓P **P 16 06 40.3 +2.4**
baz=27
N28A Pribbeno Ranch 27.24 336⇑P **P 16 06 39.1 +1.4**
baz=27
X18A Snowflake 27.27 316⇓P **P 16 06 40.2 +2.0**
baz=27
T21A Navajo Lake 27.32 323⇓P **P 16 06 41.2 +2.6**
baz=28
P25A Willow Gulch B 27.41 331⇑P **P 16 06 41.3 +2.0**
baz=28,SNR=5.9
S22A 4UR Ranch, Cre 27.45 325⇑P **P 16 06 42.0 +2.2**
baz=28,SNR=7.2
Q24A Divide 27.46 329⇑P **P 16 06 42.2 +2.2**
baz=28
BINY Binghamton 27.48 18 *e*P **P 16 06 41.4 +1.7**
comp=Z,60nm,1.5s
W18A Petrified Fore 27.48 317⇑P **P 16 06 42.9 +2.9**
baz=28
U20A Newcomb 27.50 321⇓P **P 16 06 42.7 +2.6**
baz=28
M29A Burnside Ranch 27.57 338⇑P **P 16 06 41.8 +1.2**
baz=28
O26A Horse Wrangler 27.61 333⇑P **P 16 06 43.3 +2.2**
baz=28
OGNE Ogallala 27.66 335⇓P **P 16 06 43.4 +2.0**
baz=28
N27A Anderson Farm, 27.74 334⇓P **P 16 06 44.2 +1.9**
baz=28
R22A Saguache, Gunn 27.75 325⇓P **P 16 06 45.1 +2.5**
baz=28
O25A Wiggins 27.87 331⇓P **P 16 06 45.7 +2.3**
baz=28
S21A Coal Bank Pass 27.93 323⇓P **P 16 06 46.5 +2.3**
baz=28
214A Organ Pipe Nat 27.96 308⇑P **P 16 06 45.6 +1.5**
baz=28

X16A **Lo Mia Camp, P** 28.22 314 ⇓P P 16 06 49.4 +2.7
baz=28
Q22A **Crested Butte,** 28.30 326 ⇑P P 16 06 50.1 +2.7
baz=28
ISCO **Idaho Springs** 28.33 329 eP P 16 06 49.9 +2.1
comp=Z,20nm,1.5s
ISCO **Idaho Springs** 28.33 329 ⇑P P 16 06 49.7 +1.9
baz=28,SNR=7.1
ECSD **EROS Data Cent** 28.43 346 eP P 16 06 48.0 -0.2
comp=Z,13nm,0.8s
SMCO **Snowmass** 28.56 327 eP P 16 06 52.4 +2.6
comp=Z,15nm,1.3s
K29A **Lazy Trails An** 28.60 340 ⇓P P 16 06 51.7 +1.9
baz=29
R20A **Redvale** 28.63 324 ⇑P P 16 06 51.9 +1.6
baz=29
P22A **Eagle** 28.76 327 ⇑P P 16 06 53.3 +1.9
baz=29
N24A **Carr** 28.79 331 ⇓P P 16 06 53.7 +2.1
baz=29
WUAZ **Wupatki** 28.79 316 eP P 16 06 52.8 +1.1
comp=Z,37nm,1.3s
WUAZ **Wupatki** 28.79 316 ⇓P P 16 06 54.0 +2.2
baz=29
O23A **Lake Granby, G** 28.80 329 ⇓P P 16 06 53.7 +1.9
baz=29
L26A **Underwood Farm** 29.00 335 ⇑P P 16 06 54.9 +1.5
baz=29
113A **Mohawk Valley,** 29.05 309 ⇓P P 16 06 56.0 +2.2
baz=29
P21A **Newcastle** 29.07 327 ⇓P P 16 06 55.9 +1.7
baz=29
Y14A **Wickenburg** 29.07 312 ⇑P P 16 06 55.4 +1.4
baz=29
O22A **Kremmling** 29.07 328 ⇓P P 16 06 55.5 +1.2
baz=29
PV04 **Paradox Valley** 29.07 323 eP P 16 06 56.5 +2.3
SADO **Sadowa** 29.11 12 P P 16 06 55.5 +1.4
SADO **Sadowa** 29.11 12 P P 16 06 55.5 +1.4
comp=Z,41nm,0.7s,baz=249,slow=6.5,SNR=47
SADO LR LR 16 19 33.9
comp=Z,435nm,18.5s,baz=183,slow=38
Q20A **Ridgley Place,** 29.12 325 ⇓P P 16 06 56.8 +2.3
baz=29
S18A **Hurst Farm, Bl** 29.25 321 ⇑P P 16 06 58.3 +2.5
baz=29
M24A **Cheyenne** 29.27 332 ⇓P P 16 06 58.2 +2.3
baz=29
N23A **Red Feather La** 29.34 330 ⇑P P 16 06 58.6 +2.0
baz=30
N22A **Wattenberg Ran** 29.51 329 ⇓P P 16 07 00.3 +2.2
baz=30
NCB **Newcomb** 29.63 19 eP P 16 06 59.5 +0.7
comp=Z,11nm,1.2s
M23A **Laramie** 29.68 331 ⇓P P 16 07 02.1 +2.5
baz=30
O20A **White River Ci** 29.93 326 ⇑P P 16 07 04.1 +2.4
baz=30
U15A **North Rim** 29.93 317 ⇑P P 16 07 04.8 +2.9
baz=30
GLA **Glamis** 29.98 309 ⇓P P 16 07 04.5 +2.4
baz=30
N21A **Black Mountain** 30.01 328 ⇓P P 16 07 05.5 +3.0
baz=30
LONY **Lake Ozonia** 30.10 18 eP P 16 07 04.4 +1.4
comp=Z,104nm,1.6s
W13A **Hualapai Mount** 30.28 313 ⇑P P 16 07 08.2 +3.2
baz=30
J25A **Sunshine Ranch** 30.42 336 ⇑P P 16 07 08.2 +2.2
baz=31
N20A **Spence Gulch,** 30.45 327 ⇑P P 16 07 08.7 +2.3
baz=31,SNR=9.2
L22A **Ellis Ranch, M** 30.45 331 ⇑P P 16 07 08.8 +2.4
baz=31
SRU **San Rafael** 30.49 323 ⇓P P 16 07 09.5 +2.8
baz=31
O19A **Miners Draw (B** 30.52 326 ⇓P P 16 07 09.6 +2.6
baz=31
M21A **Separation Pea** 30.57 329 ⇑P P 16 07 09.4 +2.0
baz=31,SNR=7.6
FRNY **Flat Rock** 30.60 19 eP P 16 07 08.6 +1.2
comp=Z,46nm,1.4s
K23A **Bowen Ranch, D** 30.66 333 ⇑P P 16 07 10.3 +2.1
baz=31
BC3 **Big Chuckawall** 30.72 309 ⇑P P 16 07 11.3 +2.6
baz=31
IRM **Iron Mountain** 30.73 310 ⇓P P 16 07 11.5 +2.8
baz=31
L21A **Rawlins** 30.84 330 ⇑P P 16 07 11.5 +1.7
baz=31,SNR=10
M20A **Sweetwater, Wa** 30.89 328 ⇑P P 16 07 12.5 +2.2
baz=31
K22A **Casper** 30.98 332 ⇓P P 16 07 12.8 +1.8
baz=31
MSU **Marysvale** 31.10 320 eP P 16 07 14.6 +2.4
comp=Z,6.9nm,0.8s
MONP **Monument Peak** 31.11 307 ⇑P P 16 07 14.9 +2.6
baz=31
BELC **Belle Mtn. Jos** 31.28 310 ⇓P P 16 07 15.8 +2.1
baz=31
L20A **Wamsutter** 31.35 329 ⇑P P 16 07 16.4 +2.0
baz=32
GMRC **Granite Mounta** 31.39 311 ⇓P P 16 07 16.8 +2.2
baz=32
PFO **Pinyon Flat Ob** 31.44 309 ⇑P P 16 07 17.2 +2.1
baz=32
ARUT **Antelope Range** 31.46 318 P P 16 07 17.5 +2.2
comp=Z,4.1nm,0.7s
J22A **Midwest** 31.56 333 ⇓P P 16 07 17.7 +1.6
baz=32,SNR=9.5
EYMN **Ely** 31.69 354 eP P 16 07 16.4 -0.6
comp=Z,9.7nm,0.8s
K20A **Yellowstone Ra** 31.84 330 ⇑P P 16 07 19.8 +1.3
baz=32,SNR=6.3
TUQ **Turquoise Moun** 31.90 312 ⇓P P 16 07 21.6 +2.5
baz=32
HEC **Hector,Ludlow** 31.90 311 ⇓P P 16 07 21.5 +2.4
baz=32
L19A **Farson** 31.93 328 ⇑P P 16 07 21.5 +2.1
baz=32
J21A **Lysite** 31.95 331 ⇑P P 16 07 21.6 +2.1
baz=32,SNR=12
I22A **9 Mile Ranch,** 31.95 333 ⇓P P 16 07 21.4 +2.0
baz=32
K19A **Absolon Red Bu** 32.21 329 ⇓P P 16 07 23.7 +1.8
baz=32
I21A **Big Trails, Te** 32.24 332 ⇓P P 16 07 23.6 +1.5
baz=32,SNR=7.0
J20A **Shoshoni** 32.25 331 ⇑P P 16 07 24.5 +2.4
baz=32,SNR=8.5
H22A **Clearmont** 32.46 334 ⇑P P 16 07 25.5 +1.6
baz=33
PDAR **Pinedale Array** 32.52 329 P P 16 07 25.7 +1.1
PDAR **Pinedale Array** 32.52 329 P P 16 07 25.7 +1.1
comp=Z,3.2nm,0.6s,baz=132,slow=10,SNR=28
BW06 **Boulder Array** 32.52 329 eP P 16 07 25.8 +1.2
comp=Z,10nm,1.2s
DUG **Dugway** 32.54 322 eP P 16 07 28.2 +3.5
comp=Z,5.6nm,1.0s
DUG **Dugway** 32.54 322 ⇑P P 16 07 26.9 +2.2
baz=33
G23A **Biddle** 32.56 336 ⇓P P 16 07 26.2 +1.4
baz=33
AGMN **Agassiz Nation** 32.63 349 eP P 16 07 25.2 0.0
comp=Z,22nm,0.8s
J19A **Crowheart** 32.64 330 ⇓P P 16 07 27.2 +1.6
baz=33,SNR=8.1
I20A **Worland** 32.73 331 ⇑P P 16 07 28.0 +1.7
baz=33,SNR=17
HWUT **Hardware Ranch** 32.76 325 eP P 16 07 28.7 +2.1
comp=Z,5.5nm,0.8s
H21A **Big Horn, Sher** 32.78 333 ⇑P P 16 07 28.0 +1.3
baz=33
CIS **Catalina Islan** 32.84 307 ⇑P P 16 07 27.6 +0.3
baz=33
G22A **Birney** 32.94 335 ⇑P P 16 07 29.2 +1.1
baz=33,SNR=5.1
F23A **Volborg** 33.00 336 ⇓P P 16 07 29.5 +0.9
baz=33
MDND **Maddock** 33.02 345 ⇓P P 16 07 29.2 +0.6
baz=33
H20A **Greybull** 33.08 332 ⇓P P 16 07 30.9 +1.5
baz=33
EDW2 **Edwards Air Fo** 33.14 310 ⇑P P 16 07 31.5 +1.5
baz=33
R11A **Troy Canyon, C** 33.17 317 ⇓P P 16 07 32.8 +2.4
baz=33
LRMC **Laurel Mountai** 33.19 311 ⇓P P 16 07 32.5 +2.1
baz=33
I19A **Meeteetse** 33.19 331 ⇓P P 16 07 32.5 +2.0
baz=33,SNR=11
E24A **Baker** 33.30 338 ⇑P P 16 07 32.8 +1.5
baz=34
MPMC **Manual Prospec** 33.31 312 ⇓P P 16 07 34.0 +2.4
baz=34
G21A **Lodge Grass** 33.32 334 ⇑P P 16 07 33.1 +1.6
baz=34
I18A **Diamond G Ranc** 33.34 329 ⇑P P 16 07 33.5 +1.8
baz=34,SNR=8.6
F22A **Rosebud** 33.38 335 ⇑P P 16 07 33.3 +1.4
baz=34
REDW **Red Top Meadow** 33.60 328 eP P 16 07 36.2 +2.2
comp=Z,0.4nm,0.9s
E23A **Ismay** 33.61 337 ⇓P P 16 07 35.3 +1.4
baz=34
SNOW **Snow King Moun** 33.63 328 eP P 16 07 36.7 +2.4
comp=Z,25nm,0.9s
LOHW **Long Hollow** 33.66 329 eP P 16 07 36.5 +1.9
comp=Z,38nm,1.5s
H19A **Powell** 33.67 331 ⇑P P 16 07 36.4 +1.8
baz=34
TPAW **Teton Pass** 33.75 328 eP P 16 07 37.1 +1.7
comp=Z,56nm,1.4s
G20A **Bridger** 33.75 333 ⇑P P 16 07 35.8 +0.6
baz=34,SNR=15
D24A **Glendive** 33.79 339 ⇓P P 16 07 36.4 +1.0
baz=34
E22A **Miles City** 33.81 336 ⇑P P 16 07 36.9 +1.3
baz=34
MOOW **Moose Ponds** 33.83 329 eP P 16 07 37.8 +1.8
comp=Z,36nm,1.4s
RRI2 **Red Ridge** 33.83 328 eP P 16 07 36.6 +0.4
comp=Z,47nm,1.3s
ISA **Isabella** 33.84 311 ⇑P P 16 07 38.7 +2.7
baz=34
ARVC **Arvin** 33.87 309 ⇑P P 16 07 38.0 +1.8
baz=34
I17A **Pilgrim Ck.** 33.87 329 ⇓P P 16 07 38.7 +2.4
baz=34,SNR=5.8
H18A **Shoshone NF, C** 33.99 331 ⇓P P 16 07 38.6 +1.2
baz=34,SNR=11
IMW **Indian Meadow** 34.03 329 eP P 16 07 39.7 +1.8
comp=Z,11nm,1.1s
RLMT **Red Lodge** 34.15 332 eP P 16 07 40.3 +1.5
comp=Z,9.1nm,0.9s
H17A **Grant Village** 34.22 330 ⇑P P 16 07 41.7 +2.3
baz=34
I16A **Newdale** 34.29 328 ⇑P P 16 07 41.7 +1.7
baz=34
E21A **Keefer Ranch,** 34.33 335 ⇓P P 16 07 41.6 +1.5
baz=34
ELK **Elko** 34.33 321 eP P 16 07 42.1 +1.7
comp=Z,5.6nm,0.9s
G18A **Lazy EL Ranch,** 34.43 332 ⇓P P 16 07 42.5 +1.3
baz=35,SNR=21
D22A **Cohagen** 34.49 337 ⇑P P 16 07 43.2 +1.7
baz=35
PKM **Peak Mountain** 34.51 309 ⇓P P 16 07 43.1 +1.1
baz=35
ULM **Lac du Bonnet** 34.52 350 P P 16 07 41.1 -0.5
ULM **Lac du Bonnet** 34.52 350 P P 16 07 41.1 -0.5
comp=Z,12nm,0.6s,baz=171,slow=8.5,SNR=12
ULM LR LR 16 24 18.4
comp=Z,173nm,18.3s,baz=198,slow=41
F19A **Roth Farm, Mol** 34.57 333 ⇓P P 16 07 43.4 +1.2
baz=35,SNR=6.1
C23A **Lambert** 34.68 339 ⇑P P 16 07 44.5 +1.4
baz=35
E20A **Meyer Farm, Mu** 34.73 334 ⇓P P 16 07 45.6 +2.0
baz=35
H16A **Russell Place,** 34.77 329 ⇑P P 16 07 46.3 +2.1
baz=35
C22A **Vida** 34.88 338 ⇑P P 16 07 46.4 +1.5
baz=35
NV11 **Mina Array Sit** 34.93 315 eP P 16 07 47.5 +1.9
QLMT **Earthquake Lak** 34.95 329 eP P 16 07 48.0 +2.2
comp=Z,1.8nm,1.1s
E19A **Rath Farm, Rou** 34.98 334 ⇑P P 16 07 47.8 +2.0
baz=35
G17A **Pierce Place,** 34.98 331 ⇑P P 16 07 48.0 +2.1
baz=35
NVAR **Mina Array Bea** 35.03 315 P P 16 07 48.9 +2.4
NVAR **Mina Array Bea** 35.03 315 P P 16 07 48.9 +2.4
comp=Z,3.2nm,0.8s,baz=120,slow=7.8,SNR=24
D20A **Manuel Ranch,** 35.21 335 ⇑P P 16 07 49.2 +1.5
baz=35,SNR=7.9
I14A **Mackay** 35.35 326 ⇑P P 16 07 51.4 +2.3
baz=36
F17A **Fitzpatrick Pl** 35.38 331 ⇑P P 16 07 50.7 +1.4
baz=36,SNR=11
BMN **Battle Mountai** 35.38 319 P P 16 07 52.0 +2.6
comp=Z,14nm,1.1s
C21A **Desert Coulee** 35.40 337 ⇓P P 16 07 50.2 +0.9
baz=36,SNR=5.1
E18A **Harlowton** 35.55 333 ⇓P P 16 07 52.5 +1.8
baz=36
D19A **Cripps Ranch,** 35.57 334 ⇓P P 16 07 52.6 +1.8
baz=36
HLID **Hailey** 35.62 325 eP P 16 07 53.5 +2.0
comp=Z,6.3nm,1.2s
HLID **Hailey** 35.62 325 ⇓P P 16 07 53.6 +2.1
baz=36
BOZ **Bozeman (W)** 35.64 330 eP P 16 07 53.4 +1.8
comp=Z,18nm,1.1s
C20A **Veseth Ranch,** 35.66 336 ⇑P P 16 07 53.1 +1.5
baz=36
MCMT **McKenzie Canyo** 35.66 328 eP P 16 07 54.3 +2.5
comp=Z,16nm,1.3s
F16A **Kennard Place,** 35.74 330 ⇓P P 16 07 54.2 +1.8
baz=36,SNR=6.3
E17A **Martinsdale** 35.89 332 ⇑P P 16 07 55.0 +1.2
baz=36,SNR=8.5
DLMT **Dillon** 35.91 329 eP P 16 07 56.0 +2.1
comp=Z,35nm,1.4s
A22A **Carney Farms,** 35.95 339 ⇓P P 16 07 55.7 +1.7
baz=36
D18A **Linhart Farms,** 35.99 333 ⇓P P 16 07 56.5 +2.0
baz=36
C19A **Slack Wire Ran** 36.09 335 ⇑P P 16 07 56.8 +1.5
baz=36,SNR=6.9
LRM **Limekiln Ridge** 36.17 330 eP P 16 07 57.9 +1.7
comp=Z,196nm,1.0s
I12A **Atlanta** 36.17 325 ⇓P P 16 07 58.1 +1.9
baz=36
F15A **Butte** 36.20 330 ⇓P P 16 07 58.4 +2.0
baz=36,SNR=29
B20A **Solberg Farm,** 36.25 336 ⇓P P 16 07 58.5 +1.8
baz=36
E16A **East Helena** 36.32 331 ⇓P P 16 07 58.7 +1.4
baz=36,SNR=10
MFID **Camas Ranch** 36.32 324 ⇑P P 16 07 59.1 +1.7
baz=36
D17A **Six Diamond Ra** 36.34 333 ⇓P P 16 07 59.0 +1.5
baz=36,SNR=14
H12A **Diamond D Ranc** 36.52 326 ⇓P P 16 08 01.4 +2.3
baz=37,SNR=14
F14A **Wisdom** 36.61 329 ⇑P P 16 08 01.9 +2.0
baz=37
EGMT **Eagleton** 36.61 334 eP P 16 08 00.8 +1.1
comp=Z,16nm,1.0s
EGMT **Eagleton** 36.61 334 ⇑P P 16 08 01.2 +1.4
baz=37,SNR=5.9
B19A **Brinkman Farms** 36.63 336 ⇓P P 16 08 01.3 +1.5
baz=37,SNR=5.0
D16A **Dana Ranch, Ca** 36.63 332 ⇓P P 16 08 02.0 +2.0
baz=37,SNR=14
C17A **Wharram Farm,** 36.74 333 ⇓P P 16 08 02.1 +1.2
baz=37,SNR=14
B18A **Beardsley Farm** 36.91 335 ⇓P P 16 08 04.0 +1.7
baz=37
D15A **Lincoln** 37.09 331 ⇓P P 16 08 05.4 +1.5
baz=37,SNR=11
BEKR **Beckworth** 37.13 316 eP P 16 08 06.3 +1.9
comp=Z,3.5nm,1.1s
C16A **Fuhringer Ranc** 37.30 332 ⇑P P 16 08 07.0 +1.3
baz=38,SNR=6.0
CHMT **Chamberlain Mo** 37.34 330 eP P 16 08 07.1 +1.0
comp=Z,7.1nm,1.1s
A18A **Metzger Ranch,** 37.36 335 ⇑P P 16 08 07.1 +1.0
baz=38,SNR=6.7
WVOR **Wild Horse Val** 37.39 320 eP P 16 08 08.6 +2.1
LPAZ **La Paz** 37.50 149 LR LR 16 24 58.4
comp=Z,387nm,20.4s,baz=0.8,slow=39
F12A **Elk City** 37.53 327 ⇓P P 16 08 09.2 +1.5
baz=38,SNR=14
D14A **Greenough** 37.58 330 ⇓P P 16 08 09.3 +1.2
baz=38,SNR=5.5
MSO **Missoula** 37.61 330 eP P 16 08 09.7 +1.4
comp=Z,8.5nm,0.9s
MSO **Missoula** 37.61 330 ⇑P P 16 08 10.0 +1.7
baz=38
C15A **Salmond Ranch,** 37.66 332 ⇓P P 16 08 10.3 +1.5
baz=38,SNR=12
SLMT **Seeley Lake** 37.69 330 eP P 16 08 10.2 +1.2
comp=Z,11nm,1.1s
A17A **Triple J Farms** 37.73 335 ⇓P P 16 08 10.4 +1.2
baz=38,SNR=6.6
B15A **Bradely Ranch,** 38.04 332 ⇑P P 16 08 13.8 +1.8
baz=38
D13A **Huson** 38.05 329 ⇓P P 16 08 13.0 +1.1
baz=38,SNR=10
BMO **Blue Mountains** 38.05 325 eP P 16 08 12.6 +0.6
comp=Z,13nm,1.4s
A16A **West Butte Ran** 38.10 334 ⇑P P 16 08 13.8 +1.4
baz=38
SWMT **Swartz Lake** 38.12 330 eP P 16 08 14.2 +1.6
comp=Z,2.2nm,0.7s
E12A **Beaver Dam Sad** 38.14 328 ⇓P P 16 08 14.3 +1.5
baz=38
YBMT **Yellow Bay** 38.38 331 eP P 16 08 16.6 +1.8
comp=Z,0.8nm,0.3s
B14A **Marquette Ranc** 38.40 332 ⇓P P 16 08 16.8 +1.8
baz=39
JTMT **Jette** 38.42 330 eP P 16 08 16.7 +1.5
comp=Z,4.9nm,1.0s
D12A **Red Ives Fores** 38.46 329 ⇑P P 16 08 16.5 +1.0
baz=39
A15A **Johnson Ranch,** 38.62 333 ⇑P P 16 08 18.2 +1.4
baz=39,SNR=6.8
BSMT **Bassoo Peak** 38.74 330 eP P 16 08 19.4 +1.5
comp=Z,5.3nm,1.0s
A14A **Double T Ranch** 38.92 332 ⇑P P 16 08 20.6 +1.4
baz=39,SNR=9.2
B13A **Whitefish** 38.96 331 ⇓P P 16 08 21.1 +1.5
baz=39
WALA **Waterton Lakes** 39.20 332 eP P 16 08 23.3 +1.7
comp=Z,0.4nm,1.0s
KIPM **Iron Peak** 39.23 314 eP P 16 08 24.4 +2.3
comp=Z,14nm,1.4s
KCPM **Cahto Peak** 39.25 314 eP P 16 08 24.0 +1.8
comp=Z,8.9nm,1.2s
A13A **Flathead Natio** 39.33 332 ⇑P P 16 08 24.4 +1.6
baz=40
C11A **Tepee Creek (N** 39.45 329 ⇑P P 16 08 25.5 +1.8
baz=40,SNR=16
B12A **Libby** 39.55 330 ⇓P P 16 08 25.8 +1.3
baz=40
FFC **Flin Flon** 39.95 347 eP P 16 08 27.5 -0.2
comp=Z,4.9nm,1.0s
NEW **Newport** 40.16 329 ⇑P P 16 08 30.7 +1.1
baz=40
SIV **San Ignacio** 41.20 140 P P 16 08 36.7 -1.8
SIV **San Ignacio** 41.20 140 P P 16 08 36.7 -1.8
comp=Z,1.4nm,0.8s,baz=301,slow=10,SNR=7.2
KEBM **Edson Butte** 41.20 318 eP P 16 08 40.0 +1.7
comp=Z,47nm,1.3s
SCHQ **Schefferville** 41.48 18 eP P 16 08 40.2 -0.1
comp=Z,15nm,1.1s
SCHQ PcP PcP 16 10 37.9 +0.1
SCHQ **Schefferville** 41.48 18 P P 16 08 40.5 +0.1
comp=Z,6.6nm,0.6s,baz=216,slow=6.9,SNR=16
SCHQ PcP PcP 16 10 37.9 +0.1
comp=Z,2.5nm,0.5s,baz=238,slow=6.0,SNR=6.5
SCHQ LR LR 16 25 28.9
comp=Z,350nm,19.1s,baz=98,slow=36
LVC **Limon Verde** 42.67 155 eP P 16 08 52.5 +1.8
comp=Z,9.0nm,1.0s
LVC **Limon Verde** 42.67 155 P P 16 08 49.4 -1.3
comp=Z,3.7nm,0.3s,baz=101,slow=21,SNR=14
NLWA **Neilton Lookou** 43.23 324 eP P 16 08 56.4 +1.7
comp=Z,31nm,1.4s
YKA **Yellowknife Ar** 49.93 344 P P 16 09 47.2 +0.2
YKA **Yellowknife Ar** 49.93 344 P P 16 09 47.2 +0.2
comp=Z,3.7nm,0.6s,baz=138,slow=7.7,SNR=71
YKW3 **Yellowknife Ar** 49.99 344 eP P 16 09 47.3 -0.1
comp=Z,0.2nm,0.9s
BDFB **Brasilia** 50.06 127 LR LR 16 31 05.7
comp=Z,479nm,21.8s,baz=121,slow=36
CPUP **Villa Florida** 51.42 145 LR LR 16 34 18.4
comp=Z,235nm,18.1s,baz=310,slow=39
DLBC **Dease Lake** 52.52 333 eP P 16 10 08.7 +2.1
PLCA **Paso Flores** 58.88 165 P P 16 10 52.0 -0.4
PLCA **Paso Flores** 58.88 165 P P 16 10 52.0 -0.4
comp=Z,6.1nm,0.9s,baz=350,slow=6.6,SNR=7.3
ILAR **Eielson Array** 62.57 335 P P 16 11 17.6 +0.4
ILAR **Eielson Array** 62.57 335 P P 16 11 17.6 +0.4
comp=Z,1.8nm,0.7s,baz=125,slow=5.1,SNR=13
ILAR LR LR 16 40 27.0
comp=Z,169nm,20.5s,baz=303,slow=38
SUMG **Summit** 62.75 15 eP P 16 11 18.4 -0.3
comp=Z,12nm,1.1s
TRF **Thorofare Moun** 63.55 333 eP P 16 11 23.9 0.0
comp=Z,13nm,0.9s
CHGN **Chignik** 66.13 325 eP P 16 11 41.1 +0.5
PPT **Papeete** 70.10 244 LR LR 16 34 14.4
comp=Z,202nm,20.1s,baz=176,slow=28
PPT2 **Papeete2** 70.11 244 eS S 16 21 08.3 -9.0
PPT2 eLQ LQ 16 31 05.5
PPT2 eLR LR 16 33 41.5
comp=Z,152nm,22.5s
EVOP **Sao Brissos** 71.54 54 eP P 16 12 14.2 -0.5
comp=Z,16nm,0.9s
EVO **Evora** 71.62 54 eP P 16 12 14.2 -1.0
comp=Z,16nm,0.9s
EVO eR
comp=Z,130nm,19.8s
ROSF **Rostrenen** 73.94 44 eP P 16 12 27.8 -1.0
ROSF **Rostrenen** 73.94 44 eP P 16 12 27.8 -1.0
QUIF **Quistinic** 74.06 44 eP P 16 12 28.7 -0.8
comp=Z,19nm,0.8s
QUIF **Quistinic** 74.06 44 eP P 16 12 28.7 -0.8
comp=Z,19nm,0.8s
ESDC **Sonseca Array** 74.60 53 P P 16 12 33.7 +0.8
ESDC **Sonseca Array** 74.60 53 P P 16 12 33.7 +0.8
comp=Z,4.3nm,0.7s,baz=286,slow=5.5,SNR=19
ESLA **Sonseca Array** 74.60 53 eP P 16 12 33.4 +0.6
comp=Z,1.2nm,0.9s
GRR **Gorron** 75.53 43 eP P 16 12 37.1 -0.9
comp=Z,10nm,0.7s
GRR **Gorron** 75.53 43 eP P 16 12 37.1 -0.9
comp=Z,10nm,0.7s
FLN **La Foliniere** 75.72 43 eP P 16 12 38.3 -0.8
FLN eR
comp=Z,207nm,19.8s
FLN **La Foliniere** 75.72 43 eP P 16 12 38.3 -0.8
LDF **La Druitiere** 75.99 43 eP P 16 12 39.7 -0.9
comp=Z,13nm,0.9s
LDF **La Druitiere** 75.99 43 eP P 16 12 39.7 -0.9
comp=Z,13nm,0.9s
SJPF **Ste Jean** 76.09 49 eP P 16 12 41.0 -0.3
comp=Z,47nm,1.4s
SJPF **Ste Jean** 76.09 49 eP P 16 12 41.0 -0.3
comp=Z,47nm,1.4s
MFF **Saint Martin d** 76.28 45 eP P 16 12 41.5 -0.8
comp=Z,8.4nm,0.8s
MFF **Saint Martin d** 76.28 45 eP P 16 12 41.5 -0.8
comp=Z,8.4nm,0.8s
ETSF **Etsaut** 76.61 49 eP P 16 12 43.2 -1.2
comp=Z,4.7nm,0.7s
ETSF **Etsaut** 76.61 49 eP P 16 12 43.2 -1.2
comp=Z,4.7nm,0.7s
RJF **Les Rejaudoux** 77.65 46 eP P 16 12 49.3 -0.8
RJF eR
comp=Z,201nm,22.2s
RJF **Les Rejaudoux** 77.65 46 eP P 16 12 49.3 -0.8
TCF **Toulx Ste Croi** 77.94 45 eP P 16 12 50.5 -1.2
comp=Z,10nm,0.9s
TCF **Toulx Ste Croi** 77.94 45 eP P 16 12 50.5 -1.2
comp=Z,10nm,0.9s
BAIF **Baives** 78.51 41 eP P 16 12 53.8 -0.9
comp=Z,6.1nm,0.7s
BAIF **Baives** 78.51 41 eP P 16 12 53.8 -0.9
comp=Z,6.1nm,0.7s
MTLF **Montolieu** 78.53 48 eP P 16 12 54.3 -0.7
MTLF **Montolieu** 78.53 48 eP P 16 12 54.3 -0.7
SSF **Saint Saulge** 78.67 44 eP P 16 12 54.2 -1.4
comp=Z,6.4nm,0.9s
SSF **Saint Saulge** 78.67 44 eP P 16 12 54.2 -1.4
comp=Z,6.4nm,0.9s
LOR **Lormes** 78.86 44 eP P 16 12 55.5 -1.2
comp=Z,4.8nm,0.7s
LOR eR
comp=Z,141nm,22.2s

LOR	**Lormes**	**78.86**	**44**	*e*P	**P**	**16 12 55.5**	**-1.2**
	comp=Z,4.8nm,0.7s							
NB2	**NORSAR Subarra**	**79.84**	**29**	P	**P**	**16 13 02.3**	**+0.5**
	comp=Z,29nm,1.7s,baz=288,slow=5.6							
NB2	**NORSAR Subarra**	**79.84**	**29**	P	**P**	**16 13 02.3**	**+0.5**
	baz=288,slow=5.6							
NOA	**NORSAR Array B**	**79.84**	**29**	P	**P**	**16 13 02.2**	**+0.4**
NOA	**NORSAR Array B**	**79.84**	**29**	P	**P**	**16 13 02.2**	**+0.4**
	comp=Z,2.9nm,0.7s,baz=287,slow=5.4,SNR=6.0							
NOA				LR	LR	16 44 12.8		
	comp=Z,78nm,20.8s,baz=315,slow=33							
VIVF	**Saint-Julien-l**	**79.93**	**46**	*e*P	**P**	**16 13 02.3**	**-0.4**
	comp=Z,12nm,0.8s							
VIVF	**Saint-Julien-l**	**79.93**	**46**	*e*P	**P**	**16 13 02.3**	**-0.4**
	comp=Z,12nm,0.8s							
HAU	**Haudompre**	**80.34**	**43**	*e*P	**P**	**16 13 03.6**	**-1.2**
	comp=Z,7.9nm,0.6s							
HAU				*e*R				
	comp=Z,148nm,22.2s							
HAU	**Haudompre**	**80.34**	**43**	*e*P	**P**	**16 13 03.6**	**-1.2**
	comp=Z,7.9nm,0.6s							
HINF	**Hinteralfeld**	**80.71**	**43**	*e*P	**P**	**16 13 05.3**	**-1.5**
HINF	**Hinteralfeld**	**80.71**	**43**	*e*P	**P**	**16 13 05.3**	**-1.5**
LIC	**Lamto**	**80.77**	**86**	*e*P	**P**	**16 13 06.4**	**-1.3**
	comp=Z,22nm,1.0s							
LIC				*e*R				
	comp=Z,94nm,21.2s							
LIC	**Lamto**	**80.77**	**86**	*e*P	**P**	**16 13 06.4**	**-1.3**
	comp=Z,22nm,1.0s							
DBIC	**Dimbokro**	**80.81**	**86**	LR	LR	16 42 33.0		
	comp=Z,76nm,19.0s,baz=270,slow=31							
TNS	**Taunus Mts**	**81.13**	**40**	*e*P	**P**	**16 13 09.1**	**+0.1**
	comp=Z,4.0nm,0.6s							
CLZ	**Clausthal**	**81.87**	**38**	*e*P	**P**	**16 13 13.1**	**+0.2**
	comp=Z,7.0nm,1.1s							
ARCES	**ARCESS Array B**	**82.42**	**19**	P	**P**	**16 13 16.0**	**+0.7**
ARCES	**ARCESS Array B**	**82.42**	**19**	P	**P**	**16 13 16.0**	**+0.7**
	comp=Z,3.1nm,0.6s,baz=291,slow=4.7,SNR=25							
MOX	**Moxa**	**82.96**	**39**	*e*P	**P**	**16 13 18.4**	**-0.2**
	comp=Z,10.0nm,1.8s							
MOX				*e*L	L	16 51 14.0		
	comp=Z,98nm,19.5s							
GRF	**Grafenberg Arr**	**83.00**	**40**	*e*P	**P**	**16 13 18.8**	**0.0**
	comp=Z,12nm,1.5s							
GRF				*e*L	L	16 45 13.1		
	comp=Z,148nm,20.6s							
TANN	**Tannenbergstha**	**83.55**	**39**	*e*P	**P**	**16 13 21.8**	**+0.2**
	comp=Z,4.0nm,1.0s							
ROTZ	**Rotzenmuhle**	**83.59**	**40**	*e*P	**P**	**16 13 22.1**	**+0.3**
	comp=Z,4.0nm,1.2s							
CLL	**Collm**	**83.60**	**38**	*e*P	**P**	**16 13 21.8**	**0.0**
	comp=Z,4.0nm,0.8s							
CLL	**Collm**	**83.60**	**38**	*i* P	**P**	**16 13 21.5**	**-0.3**
	comp=Z,5.0nm,0.8s							
CLL				*es*P	**sP**	**16 13 28.0**	**-0.9**
CLL				*e*		16 13 34.0		
CLL				Lm	MLR	16 53 00.0		
	comp=Z,100nm,19.3s							
WET	**Wettzell**	**84.20**	**41**	*e*P	**P**	**16 13 25.0**	**0.0**
	comp=Z,7.0nm,1.0s							
BRG	**Berggiesshubel**	**84.30**	**39**	*e*P	**P**	**16 13 26.0**	**+0.6**
	comp=Z,3.4nm,0.9s							
BRG	**Berggiesshubel**	**84.30**	**39**	*e*P	**P**	**16 13 25.6**	**+0.2**
	comp=Z,27nm,2.2s							
KHC	**Kasperske Hory**	**84.64**	**40**	*e*P	**P**	**16 13 25.5**	**-1.7**
KHC				*ex*	x	16 13 39.0		
GEC2	**GERESS Array S**	**84.81**	**41**	*e*P	**P**	**16 13 27.9**	**-0.2**
	comp=Z,16nm,1.7s							
GERES	**GERESS Array B**	**84.81**	**41**	P	**P**	**16 13 27.4**	**-0.7**
GERES	**GERESS Array B**	**84.81**	**41**	P	**P**	**16 13 27.4**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=298,slow=2.9,SNR=12							
GERES				LR	LR	16 46 35.6		
	comp=Z,122nm,20.6s,baz=107,slow=32							
TORD	**Torodi Ar. Bea**	**85.32**	**78**	P	**P**	**16 13 30.0**	**-1.2**
TORD	**Torodi Ar. Bea**	**85.32**	**78**	P	**P**	**16 13 30.0**	**-1.2**
	comp=Z,0.9nm,0.7s,baz=288,slow=4.2,SNR=5.8							
TORD				LR	LR	16 51 11.5		
	comp=Z,108nm,18.2s,baz=280,slow=35							
KEST	**Kesra**	**85.75**	**54**	P	**P**	**16 13 33.7**	**+0.6**
KEST	**Kesra**	**85.75**	**54**	P	**P**	**16 13 33.7**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=3.1,slow=1.4,SNR=4.1							
KEST				LR	LR	16 46 32.5		
	comp=Z,45nm,20.9s,baz=265,slow=32							
FINES	**FINESS Array B**	**86.36**	**26**	P	**P**	**16 13 36.8**	**+1.3**
FINES	**FINESS Array B**	**86.36**	**26**	P	**P**	**16 13 36.8**	**+1.3**
	comp=Z,3.3nm,0.7s,baz=343,slow=6.0,SNR=4.8							
FINES				LR	LR	16 54 14.4		
	comp=Z,134nm,18.4s,baz=355,slow=37							
PETK	**Petropavlovsk-**	**91.27**	**327**	LR	LR	16 57 07.2		
	comp=Z,82nm,21.5s,baz=183,slow=37							
ZALV	**Zalesovo Beam**	**109.63**	**5**	PP	PP	16 19 50.6	**-3.5**
ZALV	**Zalesovo Beam**	**109.63**	**5**	PP	PP	16 19 50.6	**-3.5**
	comp=Z,0.2nm,0.3s,baz=15,slow=6.4,SNR=3.6							
SONM	**Songino Array**	**114.94**	**350**	PP	**PP**	**16 20 32.4**	**+0.1**
SONM	**Songino Array**	**114.94**	**350**	PP	**PP**	**16 20 32.4**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=355,slow=7.4,SNR=4.6							
WMQ	**Urumqi**	**119.92**	**4**	*e*PKP	**PKPdf**	**16 19 43.6**	**-0.7**
WMQ				LR	LR			
	comp=N,250nm,29.8s							
WMQ				LR	LR			
	comp=E,260nm,28.2s							
WMQ				LR	LR			
	comp=Z,260nm,29.8s							
HHC	**Hu-ho-hao-te**	**120.47**	**344**	*e*PKP	PKPdf	16 19 40.0	-5.5	
HHC				sPKP		16 19 55.5		
HHC				PP	**PP**	**16 21 07.8**	**-3.0**	
HHC				PKS	PKSdf	16 23 16.6	-5.7	
HHC				SKS	SKSdf	16 26 49.3	-8.0	
HHC				SKKS	SKKSac	16 27 58.3	-13	
HHC	**Hu-ho-hao-te**	**120.47**	**344**	SS	SS	16 37 30.3	-8.2	
HHC				AMB	AMB			
	comp=Z,150nm,8.1s							
HHC				LR	LR			
	comp=N,150nm,19.8s							
HHC				LR	LR			
	comp=E,170nm,19.9s							
HHC				LR	LR			
	comp=Z,220nm,19.6s							
NJ2	**Nanjing**	**125.77**	**333**	*e*PKP	**PKPdf**	**16 19 53.6**	**-2.1**	
LZH	**Lanzhou**	**126.80**	**349**	*e*PKP	**PKPdf**	**16 19 56.0**	**-1.8**	
CD2	**Chengdu**	**131.83**	**347**	*e*PKP	**PKPdf**	**16 20 07.0**	**-0.4**	
CD2				PP	**PP**	**16 22 30.8**	**+4.6**	
CD2				SKS	**SKSdf**	**16 27 15.5**	**-3.2**	
CD2				SKKS	**SKKSac**	**16 29 20.3**	**-3.5**	
CD2				SS	**SS**	**16 40 01.3**	**+0.8**	
CD2				AMB	AMB			
	comp=Z,90nm,10.2s							
CD2				LR	LR			
	comp=N,120nm,22.4s							
CD2				LR	LR			
	comp=Z,100nm,24.2s							
GYA	**Guiyang**	**135.35**	**342**	*e*Pdif	**Pdif**	**16 17 15.4**	**-1.2**	
GYA				PKP	**PKPdf**	**16 20 14.0**	**-0.2**	
GYA				AMB	AMB			
	comp=Z,90nm,7.8s							
KMI	**Kunming**	**137.64**	**347**	PKP	**PKPdf**	**16 20 18.8**	**+0.2**	
KMI				LR	LR			
	comp=Z,120nm,22.0s							
WRA	**Warramunga Arr**	**140.46**	**258**	PKPpre	PKPpre	16 20 15.9		
WRA				PKP	**PKPdf**	**16 20 24.0**	**+0.4**	
WRA	**Warramunga Arr**	**140.46**	**258**	PKhKP	PKPpre	16 20 15.9		
	comp=Z,0.9nm,0.8s,baz=88,slow=3.4,SNR=9.0							
WRA				PKP	**PKPdf**	**16 20 24.0**	**+0.4**	
	comp=Z,1.5nm,0.8s,baz=83,slow=2.8,SNR=8.1							
ASAR	**Alice Springs**	**140.82**	**253**	PKPpre	PKPpre	16 20 15.0		
ASAR				PKP	**PKPdf**	**16 20 24.1**	**-0.1**	
ASAR	**Alice Springs**	**140.82**	**253**	PKhKP	PKPpre	16 20 15.0		
	comp=Z,1.7nm,1.0s,baz=108,slow=2.7,SNR=12							
ASAR				PKP	**PKPdf**	**16 20 24.1**	**-0.1**	
	comp=Z,1.5nm,0.9s,baz=102,slow=3.1,SNR=12							
CMAR	**Chiang Mai Arr**	**144.87**	**350**	PKP	**PKPab**	**16 20 30.3**	**-0.1**	
CMAR	**Chiang Mai Arr**	**144.87**	**350**	PKP	**PKPab**	**16 20 30.3**	**-0.1**	
	comp=Z,1.1nm,0.6s,baz=340,slow=3.6,SNR=9.7							

MAN 15 16:09:21,17.68N×121.11E,h8km,mb4.3,ML3.2,MS3.0, 1C-1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
APYP	**Conner**	**0.22**	**35**	*e*P		Pg	16 09 26.2	+0.7
APYP				*e*S		Sg	16 09 30.5	+2.0
ABRA	**Dolores**	**0.38**	**265**	*e*P		Pg	16 09 29.1	+0.7
ABRA				*e*S		Sb	16 09 35.3	-0.8
CVP	**Callao Caves**	**0.68**	**88**	*e*P		Pg	16 09 33.7	-0.4
PIP	**Pasuquin**	**0.79**	**324**	↓*i*P		Pb	16 09 37.0	-0.1
CAUP	**Cauayan**	**1.00**	**137**	*e*P		Pb	16 09 40.6	0.0
CAUP				*e*S		Sn	16 09 57.2	+1.6
BCPH	**Baguio City Da**	**1.39**	**201**	↑*i*P		Pn	16 09 45.6	-1.3
PALP	**Palanan**	**1.40**	**116**	*e*P		Pn	16 09 45.7	-1.1
PALP				*e*S		Sg	16 10 06.7	+0.7
BOLP	**Bolinao**	**1.73**	**222**	*e*P		Pn	16 09 50.7	-0.6
BOLP				*e*S		Sg	16 10 16.0	-0.6
BALP	**Baler**	**1.98**	**167**	*e*P		Pn	16 09 55.3	+0.5
BALP				*e*S		Sn	16 10 20.2	+0.4

NIED ***15*** *16:19:00,23.90N×123.20E,h41km,Mw3.9 Best double couple: M₀8.67000×10¹⁴ NP1:φ₈47.00000°,δ87.00000°, λ128.00000°. NP2:φ₈140.00000°,δ38.00000°,λ5.00000°.*
IDC ***15*** *16:19:45.8±0.8,23.89N×123.12E,h0km,mb3.8/11, mb1 3.9/12,mb1mx3.7/28,mbtmp3.8/12,ML3.0/1,Error ellipse: s-maj=46.2km s-min=15.3km az=66.0*
JMA ***15*** *16:19:51.0±0.2,23.88N×123.25E,h45km±4km,M3.9*
ISC 15 16:19:48.1±2.6,23.87N±0.08×123.22E±0.05,h16km±16km, n29,σ1s11/34,mb3.9/11,Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
HATJ	**Hateruma jima**	**0.57**	**71**	P		**Pn**	**16 20 02.3**	**+0.7**
HATJ				S		**Sn**	**16 20 11.0**	**+0.3**
YOJ	**Yonaguni jima**	**0.62**	**342**	P		**Pn**	**16 20 03.5**	**+1.2**
YOJ				S		**Sn**	**16 20 12.2**	**+0.3**
IRIF	**Iriomote-Funau**	**0.66**	**46**	P		**Pn**	**16 20 03.5**	**+0.7**
IRIF				S		**Sn**	**16 20 12.4**	**-0.5**
JKRS	**Kuro-shima**	**0.81**	**63**	P		**Pn**	**16 20 06.0**	**+1.1**
JKRS				S		**Sn**	**16 20 17.4**	**+0.7**
JIJ	**Ishigaki jima**	**0.98**	**60**	P		**Pn**	**16 20 08.0**	**+0.8**
JIJ				S		**Sg**	**16 20 20.5**	**+0.6**
JTJ	**Tarama**	**1.56**	**60**	P		**Pb**	**16 20 16.2**	**-0.4**
JMJ	**Miyako jima 2**	**2.12**	**63**	P		**Pn**	**16 20 24.3**	**+1.4**
JOGS	**Gusukube**	**2.19**	**66**	P		**Pn**	**16 20 25.4**	**+1.6**
JKE	**Kume jima 2**	**4.05**	**52**	P		**Pn**	**16 20 49.5**	**-0.1**
QZH	**Quanzhou**	**4.35**	**285**	Pn		Pn	16 20 57.3	+3.7
QZH				Sn		**Sn**	**16 21 43.1**	**-0.9**
QZH				smax		smax		
	comp=N,80nm,0.9s							
QZH				smax		smax		
	comp=E,90nm,0.7s							
JAGN	**Aguni-jima**	**4.54**	**53**	P		**Pn**	**16 20 56.3**	**+0.1**
JIH	**Iheya**	**5.33**	**53**	P		**Pn**	**16 21 06.8**	**-0.2**
JOW	**Kunigami**	**5.44**	**56**	P		**Pn**	**16 21 08.2**	**-0.5**
JTK	**Tokunoshima**	**6.47**	**52**	P		**Pn**	**16 21 21.4**	**-1.4**
JAMN	**Amaminishikomi**	**6.90**	**50**	P		**Pn**	**16 21 26.6**	**-2.1**
JAM	**Amami Oshima**	**7.31**	**50**	P		**Pn**	**16 21 32.2**	**-2.0**
JMZ	**Minamidaito 2**	**7.53**	**73**	P		**Pn**	**16 21 34.4**	**-2.9**
KSRS	**Korea Array**	**14.13**	**16**	Pn		**Pn**	**16 23 07.9**	**+0.3**
	comp=E,0.1nm,0.3s,baz=189,slow=15,SNR=2.9							
SONM	**Songino Array**	**27.41**	**335**	P		**P**	**16 25 32.1**	**-1.0**
	comp=E,1.7nm,0.8s,baz=146,slow=9.4,SNR=13							
MKAR	**Makanchi Array**	**39.86**	**315**	P		**P**	**16 27 20.0**	**-1.1**
	comp=E,0.6nm,0.8s,baz=98,slow=8.8,SNR=9.7							
ZALV	**Zalesovo Beam**	**41.52**	**326**	P		**P**	**16 27 33.1**	**-1.5**
	comp=E,0.3nm,0.3s,baz=113,slow=13,SNR=2.9							
KURBB	**Kurchatov Arra**	**43.55**	**319**	P		**P**	**16 27 50.7**	**-0.4**
	comp=E,0.4nm,0.4s,baz=116,slow=6.6,SNR=7.6							
WRA	**Warramunga Arr**	**44.88**	**165**	P		**P**	**16 28 02.1**	**+0.1**
	comp=E,1.7nm,0.8s,baz=348,slow=9.0,SNR=10							
ASAR	**Alice Springs**	**48.38**	**167**	P		**P**	**16 28 29.6**	**+0.1**
	comp=E,0.4nm,0.4s,baz=353,slow=6.9,SNR=21							
BVAR	**Borovoye Array**	**49.09**	**320**	P		**P**	**16 28 34.0**	**-0.7**
	comp=E,0.6nm,0.5s,baz=92,slow=6.8,SNR=3.7							
STKA	**Stephens Creek**	**58.16**	**162**	P		**P**	**16 29 41.9**	**+0.6**
	comp=E,1.7nm,0.9s,baz=6.3,slow=9.2,SNR=3.7							
BRTR	**Keskin Array B**	**74.85**	**307**	P		**P**	**16 31 29.4**	**+1.1**
	comp=E,0.9nm,0.6s,baz=112,slow=5.4,SNR=4.8							
YKA	**Yellowknife Ar**	**82.53**	**23**	P		**P**	**16 32 10.3**	**+0.4**
	comp=E,0.7nm,0.7s,baz=317,slow=4.7,SNR=7.1							
GERES	**GERESS Array B**	**84.25**	**321**	P		**P**	**16 32 19.9**	**+0.6**
	comp=E,0.5nm,0.6s,baz=48,slow=2.0,SNR=5.8							

GUC 15 16:21:44.2±0.6,23.86S×67.29W,h231km±15km,ML4.2, 2C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
LVC	**Limon Verde**	**1.94**	**309**	↓*i*P		Pn	16 22 26.2	+1.4
LVC				*i* S		S	16 22 58.4	+1.8
PB04	**Plate Boundary**	**2.57**	**308**	↓*i*P		Pn	16 22 38.2	+7.4
PB04				*i* S		S	16 23 18.8	+12
PB04				AML	AML		16 23 21.1	
	comp=N,199nm,0.5s							
PB09	**Plate Boundary**	**2.73**	**318**	↑*i*P		Pn	16 22 35.1	+2.3
PB09				*i* S		S	16 23 13.4	+2.6
PB09				AML	AML		16 23 15.5	
	comp=N,592nm,0.3s							
ANCH	**Antofagasta**	**2.86**	**273**	↑*i*P		Pn	16 22 35.9	+1.9
ANCH				*i* S		S	16 23 15.1	+2.2
ANCH				AML	AML		16 23 17.2	
	comp=E,278nm,0.2s							
PB07	**Plate Boundary**	**3.20**	**311**	↓*i*P		Pn	16 22 39.7	+1.6
PB07				*i* S		S	16 23 21.6	+1.3
PB07				AML	AML		16 23 23.4	
	comp=E,176nm,0.2s							

IDC 15 16:41:23.9±280.0,48.55N×152.44E,h0km,Error ellipse: s-maj=84.5km s-min=49.9km az=51.0,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
I44RU	**PETROPAVLOVSK-**	**5.65**	**34**	*i*			17 18 48.5	
	baz=216,slow=314,SNR=3.2							
I45RU	**USSURIYSK INFR**	**14.77**	**261**	*i*			18 02 30.0	
	baz=64,slow=308,SNR=2.1							
I30JP	**ISUMI INFRASON**	**15.99**	**219**	*i*			18 10 50.0	
	baz=31,slow=318,SNR=2.6							
I34MN	**SONGINO INFRAS**	**30.35**	**286**	*i*			19 49 20.0	
	baz=70,slow=319,SNR=1.4							
I46RU	**ZALESOVO INFRA**	**41.20**	**304**	*i*			20 57 30.0	
	baz=68,slow=324,SNR=2.1							
I31KZ	**AKTYUBINSK INF**	**57.20**	**311**	*i*			22 32 20.0	
	baz=50,slow=334,SNR=2.3							

IDC ***15*** *16:53:46.0±2.6,5.32N×126.04E,h0km,mb3.3/3, mb1 3.5/3,mb1mx3.3/22,mbtmp3.3/3,Error ellipse: s-maj=235.8km s-min=26.7km az=65.0*
MAN ***15*** *16:53:50,5.27N×126.33E,h11km,mb4.6,ML3.5,MS3.4*
ISCJB ***15*** *16:53:52.8±0.9,5.22N±0.07×126.3E±0.2,h66km,mb3.2/3, Error ellipse: s-maj=23.5km s-min=8.6km az=163.9*
ISC 15 16:53:54.2±1.3,5.4N±0.1×126.5E±0.2,h66km,n8,σ1s34/8, mb3.3/3,1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
MATI	**Mati**	**1.59**	**353**	*e*P		**Pn**	**16 54 20.1**	**-0.2**
MATI				*e*S		Sn	16 54 43.0	+3.0
BUKP	**Musuan**	**2.86**	**331**	*e*P		**Pn**	**16 54 37.1**	**-0.5**
BUKP				*e*S		**Sn**	**16 55 12.6**	**+1.6**
CTBH	**Cotabato--PC H**	**2.87**	**310**	↓*i*P		**Pn**	**16 54 36.0**	**-1.7**
PAGZ	**Pagadian**	**3.93**	**309**	*e*P		**Pn**	**16 54 53.2**	**+1.1**
MSLP	**Maasin**	**5.00**	**342**	*e*P		Pn	16 55 02.2	-4.6
WRA	**Warramunga Arr**	**26.31**	**163**	P		**P**	**16 59 24.2**	**+0.2**
	0.5nm,0.6s,baz=341,slow=10,SNR=2.5							
ASAR	**Alice Springs**	**29.75**	**166**	P		**P**	**16 59 55.5**	**+0.8**
	0.3nm,0.7s,baz=344,slow=7.2,SNR=4.2							
MKAR	**Makanchi Array**	**56.07**	**325**	P		**P**	**17 03 25.4**	**-1.2**
	0.2nm,0.5s,baz=113,slow=8.0,SNR=6.2							

ISCJB ***15*** *17:05:28.6±0.4,4.31S±0.04×143.45E±0.06,h103km, mb4.2/13,Error ellipse: s-maj=9.0km s-min=5.4km az=166.4*
AUST ***15*** *17:05:29.3±0.8,4.15S×143.50E,h112km,Error ellipse: s-maj=2.0km s-min=1.0km az=32.0*
IDC ***15*** *17:05:32.6±0.8,4.47S×143.38E,h129km±7km,mb4.0/13, mb1 4.2/15,mb1mx4.1/19,mbtmp4.0/15,MS3.3/2, Ms1 3.3/2,ms1mx2.8/21,Error ellipse: s-maj=16.7km s-min=8.4km az=93.0*
ISC 15 17:05:30.7±0.5,4.38S±0.06×143.36E±0.08,h103km,n50, σ1s79/54,mb4.3/13,New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PMG	**Port Moresby**	**6.26**	**143**	P		**Pn**	**17 07 01.9**	**+1.3**
	12nm,0.3s,baz=35,slow=4.6,SNR=75							
PMG				S		**Sn**	**17 08 09.4**	**-1.4**
	5.8nm,0.3s,baz=313,slow=22,SNR=5.7							
COEN	**Coen**	**9.52**	**181**	P		**Pn**	**17 07 48.1**	**+3.1**
	baz=9.8,SNR=6.3							
FAKI	**Fak Fak**	**11.19**	**277**	P		**Pn**	**17 08 09.9**	**+2.3**
	baz=11,SNR=5.1							
KDU	**Kakadu**	**13.56**	**232**	P		**Pn**	**17 08 38.6**	**-0.4**
	baz=14,SNR=58							
MTSU	**Mount Surprise**	**13.71**	**176**	P		**P**	**17 08 47.7**	**+1.7**
	baz=14,SNR=3.9							
MTN	**Manton Dam**	**14.72**	**234**	P		**Pn**	**17 08 55.2**	**+1.3**
	baz=15,SNR=18							
CTA	**Charters Tower**	**15.87**	**170**	P		**P**	**17 09 10.3**	**+0.3**
	0.2nm,0.3s,baz=354,slow=13,SNR=5.9							
QIS	**Mount Isa**	**16.50**	**192**	P		**P**	**17 09 17.5**	**+0.6**
	baz=17,SNR=7.2							
HNR	**Honiara**	**17.21**	**108**	LR		LR	17 14 53.0	
	comp=Z,38nm,19.6s,baz=235,slow=33							
WRA	**Warramunga Arr**	**17.80**	**209**	P		**P**	**17 09 31.8**	**+0.5**
	5.9nm,0.3s,baz=31,slow=12,SNR=82							
WRA				S		**Sn**	**17 12 43.8**	**-6.8**
	0.2nm,0.3s,baz=27,slow=24,SNR=4.0							
KNRA	**Kununurra**	**18.23**	**231**	P		**P**	**17 09 36.4**	**+0.4**
	baz=18,SNR=54							
ASAR	**Alice Springs**	**21.24**	**205**	P		**P**	**17 10 08.5**	**-0.2**
	5.1nm,0.4s,baz=28,slow=13,SNR=134							
ASAR				S		**S**	**17 13 56.3**	**-2.8**
	1.1nm,0.8s,baz=24,slow=22,SNR=3.8							
FITZ	**Fitzroy Crossi**	**22.06**	**230**	P		**P**	**17 10 16.4**	**-1.0**
	14nm,0.5s,baz=47,slow=9.3,SNR=64							
FITZ	**Fitzroy Crossi**	**22.06**	**230**	P		**P**	**17 10 16.5**	**-0.9**
	baz=22,SNR=19							
QLP	**Quilpie**	**22.10**	**178**	P		**P**	**17 10 18.1**	**+0.5**
	baz=22,SNR=11							
EIDS	**Eidsvold**	**22.15**	**161**	P		**P**	**17 10 16.2**	**-2.1**
	baz=22,SNR=6.3							
RMQ	**Roma**	**22.59**	**167**	P		**P**	**17 10 25.3**	**+2.5**
	baz=23,SNR=22							
KAPI	**Kappang**	**23.54**	**268**	P		**P**	**17 10 31.6**	**-0.4**
	7.3nm,0.5s,baz=76,slow=14,SNR=6.1							
STKA	**Stephens Creek**	**27.41**	**183**	P		**P**	**17 11 06.9**	**+0.2**
	5.6nm,0.7s,baz=357,slow=9.6,SNR=21							
STKA	**Stephens Creek**	**27.41**	**183**	P		**P**	**17 11 07.0**	**+0.3**
	baz=28,SNR=14							
BBOO	**Buckleboo**	**29.10**	**193**	P		**P**	**17 11 21.8**	**+0.1**
	baz=30,SNR=21							
FORT	**Forrest**	**29.96**	**207**	P		**P**	**17 11 29.9**	**+0.5**
	baz=30,SNR=8.7							
ARPS	**Mount Arapiles**	**32.27**	**182**	P		**P**	**17 11 50.7**	**+1.1**
	baz=33,SNR=5.4							
MEEK	**Meekatharra**	**32.40**	**224**	P		**P**	**17 11 51.3**	**+0.3**
	baz=33,SNR=15							
KMBL	**Kambalda**	**33.60**	**214**	P		**P**	**17 12 01.6**	**+0.3**
	baz=34,SNR=8.0							
MORW	**Morawa**	**35.69**	**224**	P		**P**	**17 12 19.8**	**+0.5**
	baz=36,SNR=12							
KLBR	**Kellerberrin**	**36.21**	**219**	P		**P**	**17 12 23.9**	**+0.1**
	baz=37,SNR=12							
KSRS	**Korea Array**	**44.03**	**342**	P		**P**	**17 13 28.4**	**+0.2**
	7.4nm,0.7s,baz=163,slow=9.3,SNR=31							
CMAR	**Chiang Mai Arr**	**49.30**	**299**	P		**P**	**17 14 10.2**	**+0.5**
	4.1nm,0.7s,baz=119,slow=6.3,SNR=34							
USRK	**Ussuriysk Arra**	**49.42**	**349**	P		**P**	**17 14 08.7**	**-1.4**
	2.6nm,0.7s,baz=138,slow=43,SNR=6.7							
PETK	**Petropavlovsk-**	**58.53**	**10**	P		**P**	**17 15 15.8**	**-0.5**
	2.7nm,0.7s,baz=180,slow=8.7,SNR=6.2							
PETK				pP		**pP**	**17 15 45.7**	**+4.2**
	1.4nm,0.6s,baz=142,slow=7.5,SNR=3.2							
SONM	**Songino Array**	**61.27**	**332**	P		**P**	**17 15 34.6**	**-0.7**
	1.5nm,0.6s,baz=155,slow=8.6,SNR=5.5							
TAPN	**Taplejung**	**62.24**	**304**	*e*P		**P**	**17 15 42.8**	**+0.4**
	3.6nm,0.3s							
ODAN	**Odare**	**62.33**	**303**	*e*P		**P**	**17 15 43.1**	**+0.2**
RAMN	**Ramite**	**63.02**	**303**	*e*P		**P**	**17 15 47.9**	**+0.4**
	9.4nm,0.5s							
GUN	**Gumba**	**63.96**	**304**	*e*P		**P**	**17 15 54.1**	**+0.3**
	16nm,0.8s							
PKI	**Pulchoki**	**64.23**	**303**	*e*P		**P**	**17 15 55.5**	**-0.1**
PKIN	**Phulchoki**	**64.24**	**303**	*e*P		**P**	**17 15 55.9**	**+0.3**
KKN	**Kakani**	**64.41**	**304**	*e*P		**P**	**17 15 56.6**	**0.0**
	12nm,0.8s							
DMN	**Daman**	**64.49**	**303**	*e*P

TREC				*e*SG	**Sg**	17 07 18.0	+0.5	
	comp=Z,18nm,0.4s							
TREC	**Trest**	**2.19**	**190**	Pg	**Pb**	17 06 47.3	-0.4	
TREC				Sg	**Sg**	17 07 18.0	+0.5	
	comp=Z,18nm,0.4s							
NKC	**Novy Kostel**	**2.60**	**244**	*e*PN	**Pn**	17 06 50.1	-0.5	
NKC				*e*PG	**Pb**	17 06 54.9	+0.1	
NKC				*e*SG	**Sg**	17 07 30.9	+0.1	
	comp=Z,48nm,0.3s							
NKC	**Novy Kostel**	**2.60**	**244**	Pn	**Pn**	17 06 50.1	-0.5	
OJC	**Ojcow**	**2.66**	**116**	*e*Pg	**Pb**	17 06 56.0	+0.2	
OJC				*e*SG	**Sg**	17 07 31.8	-0.9	
OJC	**Ojcow**	**2.66**	**116**	*e*Pg	**Pb**	17 06 56.0	+0.2	
OJC				*e*SG	**Sg**	17 07 31.8	-0.9	
KHC	**Kasperske Hory**	**2.82**	**216**	*e*PN	**Pn**	17 06 53.0	-0.6	
KHC				*e*PG	**Pb**	17 06 58.6	+0.1	
KHC				*e*SN	**Sn**	17 07 28.4	+0.2	
KHC				*e*SG	**Sg**	17 07 37.8	+0.1	
	comp=Z,12nm,0.4s							
KHC	**Kasperske Hory**	**2.82**	**216**	Pn	**Pn**	17 06 53.0	-0.6	
KHC				Sn	**Sn**	17 07 28.4	+0.2	
KHC				Sg	**Sg**	17 07 37.8	+0.1	
	comp=Z,12nm,0.4s							
CONA	**Conrad Observa**	**3.52**	**182**	⇓*i*Pn	**Pn**	17 07 03.6	+0.2	
	comp=Z,0.5nm,0.2s							
CONA				⇑Sg	**Sg**	17 07 59.6	-0.8	
	comp=Z,11nm,0.3s							
CONA	**Conrad Observa**	**3.52**	**182**	Pn	**Pn**	17 07 03.6	+0.2	
	comp=Z,0.5nm,0.2s							
CONA				Sg	**Sg**	17 07 59.6	-0.8	
	comp=Z,11nm,0.3s							
MOA	**Molln**	**3.79**	**199**	⇑*i*Pn	**Pn**	17 07 06.8	-0.1	
	comp=Z,1.2nm,0.2s							
MOA				⇓*e*Sg	**Sg**	17 08 09.5	+0.7	
	comp=Z,5.5nm,0.4s							
MOA	**Molln**	**3.79**	**199**	Pn	**Pn**	17 07 06.8	-0.1	
	comp=Z,1.2nm,0.2s							
MOA				Sg	**Sg**	17 08 09.5	+0.7	
	comp=Z,5.5nm,0.4s							
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*PG	**Pg**	17 07 22.2	+0.6	
STHS				*e*SG	**Sg**	17 08 13.5	+1.7	
STHS	**Stebnicka Huta**	**3.88**	**120**	*e*Pg	**Pg**	17 07 22.2	+0.6	
STHS				*e*Sg	**Sg**	17 08 13.5	+1.7	

GUC 15 17:23:32.5±0.8, 22°50S×68°72W, h101km±5km, ML3.8, 4C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.21**	**237**	⇓*i*P	Pn	17 23 47.6	+0.4
LVC				*i* S	Sn	17 23 58.6	+0.4
SPCH	**San Pedro de A**	**0.63**	**130**	*e*P	Pn	17 23 50.3	+0.5
SPCH				*i* S	Sn	17 24 04.1	+1.3
SPCH				AML	AML	17 24 04.9	
	comp=N,6μm,0.6s						
PB04	**Plate Boundary**	**0.74**	**288**	⇑*i*P	Pn	17 23 57.4	+7.0
PB04				*i* S	Sn	17 24 17.1	+13
PB04				AML	AML	17 24 20.8	
	comp=E,2μm,0.5s						
PB09	**Plate Boundary**	**0.85**	**325**	⇑*i*P	Pn	17 23 52.4	+0.7
PB09				*i* S	Sn	17 24 07.3	+1.2
PB09				AML	AML	17 24 09.1	
	comp=N,4μm,0.5s						
MACH	**Maria Elena**	**1.00**	**287**	⇑*i*P	Pn	17 23 53.9	+0.5
MACH				*i* S	Sn	17 24 10.2	+1.1
PB07	**Plate Boundary**	**1.33**	**305**	⇑*i*P	Pn	17 23 57.4	+0.5
PB07				*i* S	Sn	17 24 16.4	+1.0
PB07				AML	AML	17 24 17.3	
	comp=N,2μm,0.3s						
PB01	**Plate Boundary**	**1.61**	**334**	⇓*i*P	Pn	17 24 00.6	+0.2
PB01				*i* S	Sn	17 24 22.3	+0.7
PB01				AML	AML	17 24 23.2	
	comp=N,2μm,0.3s						
ANCH	**Antofagasta**	**1.95**	**233**	*e*P	Pn	17 24 05.1	+0.7
ANCH				*i* S	Sn	17 24 29.5	+0.7
ANCH				AML	AML	17 24 36.3	
	comp=N,620nm,0.1s						
HMBC	**Humberstone**	**2.46**	**334**	⇓*i*P	Pn	17 24 10.4	-1.0
HMBC				*i* S	Sn	17 24 41.1	-0.1
HMBC				AML	AML	17 24 44.5	
	comp=E,526nm,0.2s						

IDC 15 17:33:12.9±0.9, 9°17S×157°91E, h0km, mb3.9/6, mb1 4.1/7, mb1mx3.8/18, mbtmp3.9/7, ML4.1/1, MS4.0/1, Ms1 4.0/1, ms1mx2.2/28, Error ellipse: s-maj=33.7km s-min=18.8km az=160.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**2.03**	**98**	Pn	Pn	17 33 48.4	0.0
	67nm,0.3s,baz=232,slow=4.3,SNR=77						
HNR				Sn	Sn	17 34 13.4	-1.0
	99nm,0.3s,baz=170,slow=17,SNR=12						
WRA	**Warramunga Arr**	**25.17**	**242**	P	P	17 38 40.6	+0.3
	1.7nm,0.7s,baz=67,slow=9.5,SNR=10						
ASAR	**Alice Springs**	**27.10**	**235**	P	P	17 38 57.0	-0.8
	0.8nm,0.9s,baz=62,slow=10,SNR=9.2						
STKA	**Stephens Creek**	**27.20**	**212**	P	P	17 38 58.9	+0.4
	2.2nm,0.8s,baz=27,slow=8.8,SNR=3.4						
RAO	**Raoul Island**	**30.21**	**135**	LR	LR	17 48 49.1	
	comp=Z,231nm,18.1s,baz=215,slow=31						
ILAR	**Eielson Array**	**84.35**	**21**	P	P	17 45 46.3	-0.3
	0.5nm,0.4s,baz=255,slow=5.2,SNR=5.3						
MKAR	**Makanchi Array**	**86.94**	**318**	P	P	17 45 59.6	-0.4
	0.7nm,0.6s,baz=96,slow=6.2,SNR=9.9						
NVAR	**Mina Array Bea**	**90.80**	**51**	P	P	17 46 19.6	+0.9
	0.5nm,0.8s,baz=233,slow=8.9,SNR=3.4						

*ISCJB **15** 17:34:24.2±0.8, 51°49N±0°04×16°09E±0°04, h0km, Error ellipse: s-maj=5.8km s-min=3.2km az=13.3*
*CSEM **15** 17:34:25.1±0.3, 51°52N×16°07E, h2km, ML3.4/6, Error ellipse: s-maj=5.4km s-min=4.8km az=9.0*
*WAR **15** 17:34:26.6, 51°51N×16°12E*
*PRU **15** 17:34:27.1, 51°46N×16°07E, h0km*
*VIE **15** 17:34:28.9±0.9, 51°30N×15°97E, h0km, mb2.2/4, ML2.6/4, Error ellipse: s-maj=6.7km s-min=4.5km az=20.0 76 km WNW of Wroclaw Suspected Mining induced.*

ISC 15 17:34:26.4±1.1, 51°49N±0°05×16°08E±0°03, h0km, n30, σ0s77/60, 4C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.66**	**168**	*e*Pg	**Pg**	17 34 39.2	+0.2
KSP				*e*Sg	**Sg**	17 34 48.5	+0.9
KSP	**Ksiaz**	**0.66**	**168**	⇓*i*Pg	**Pg**	17 34 39.3	+0.2
KSP				*e*Sg	**Sg**	17 34 48.5	+0.9
UPC	**Upice**	**0.98**	**182**	*e*PG	**Pg**	17 34 45.2	0.0
UPC				*e*SG	**Sg**	17 34 58.1	+0.2
	comp=Z,34nm,0.3s						
UPC	**Upice**	**0.98**	**182**	Pg	**Pg**	17 34 45.2	0.0
UPC				Sg	**Sg**	17 34 58.1	+0.2
	34nm,0.3s						
DPC	**Dobruska-Polom**	**1.15**	**172**	*e*PG	**Pg**	17 34 48.1	-0.3
DPC				*e*SG	**Sg**	17 35 03.4	+0.1
DPC	**Dobruska-Polom**	**1.15**	**172**	Pg	**Pg**	17 34 48.1	-0.3
DPC				Sg	**Sg**	17 35 03.4	+0.1
BRG	**Berggiesshubel**	**1.48**	**246**	PG	**Pn**	17 34 54.5	+0.3
BRG				SG	**Sn**	17 35 14.7	+0.5
	62nm,0.4s						
PRU	**Pruhonice**	**1.79**	**214**	*e*PN	**Pn**	17 34 58.4	-0.1
PRU				*e*PG	**Pn**	17 34 59.3	+0.8
PRU				*e*SG	**Sb**	17 35 23.8	+0.8
	comp=Z,42nm,0.3s						
PRU	**Pruhonice**	**1.79**	**214**	Pn	**Pn**	17 34 58.4	-0.1
PRU	**Pruhonice**	**1.79**	**214**	Pg	**Pn**	17 34 59.3	+0.8
PRU				Sg	**Sb**	17 35 23.8	+0.8
	42nm,0.3s						
CLL	**Collm**	**1.93**	**266**	*e*Pg	**Pg**	17 35 03.0	-0.4
CLL				*e*		17 35 05.0	
CLL				*e*Sg	**Sg**	17 35 28.0	-0.5
	comp=Z,31nm,0.8s						
MORC	**Moravsky Berou**	**1.95**	**151**	*e*Pn	**Pn**	17 34 59.6	-1.2
MORC				*e*Sg	**Sb**	17 35 29.0	+1.3
OKC	**Ostrava-Krasne**	**2.11**	**141**	*e*PG	**Pb**	17 35 05.5	-0.1
OKC				*e*SG	**Sg**	17 35 34.2	-0.1
	comp=Z,12nm,0.4s						
OKC	**Ostrava-Krasne**	**2.11**	**141**	Pg	**Pb**	17 35 05.5	-0.1
OKC				Sg	**Sg**	17 35 34.2	-0.1
	comp=Z,12nm,0.4s						
VRAC	**Vranov**	**2.21**	**171**	*e*Pn	**Pn**	17 35 03.6	-0.7
VRAC				*e*Sg	**Sb**	17 35 34.4	-0.6
TREC	**Trest**	**2.23**	**190**	*e*PG	**Pb**	17 35 07.1	-0.4
TREC				*e*SG	**Sb**	17 35 37.3	+1.7
	comp=Z,15nm,0.2s						
TREC	**Trest**	**2.23**	**190**	Pg	**Pb**	17 35 07.1	-0.4
TREC				Sg	**Sb**	17 35 37.3	+1.7
	comp=Z,15nm,0.2s						
NKC	**Novy Kostel**	**2.62**	**243**	*e*PN	**Pn**	17 35 10.0	0.0
NKC				*e*PG	**Pb**	17 35 14.4	+0.2
NKC				*e*SG	**Sg**	17 35 50.4	-0.1
	comp=Z,54nm,0.3s						
NKC	**Novy Kostel**	**2.62**	**243**	Pn	**Pn**	17 35 10.0	0.0
OJC	**Ojcow**	**2.68**	**117**	*e*Pg	**Pb**	17 35 16.1	+0.9
OJC				*e*SG	**Sg**	17 35 51.9	-0.5
OJC	**Ojcow**	**2.68**	**117**	*e*Pg	**Pb**	17 35 16.1	+0.9
OJC				*e*SG	**Sg**	17 35 51.9	-0.5
KHC	**Kasperske Hory**	**2.85**	**215**	*e*PN	**Pn**	17 35 13.0	-0.2
KHC				*e*PG	**Pb**	17 35 18.5	+0.3
KHC				*e*SN	**Sn**	17 35 47.8	-0.4
KHC				*e*SG	**Sg**	17 35 57.0	-0.9
	comp=Z,9.8nm,0.4s						
KHC	**Kasperske Hory**	**2.85**	**215**	Pn	**Pn**	17 35 13.0	-0.2
KHC	**Kasperske Hory**	**2.85**	**215**	Pg	**Pb**	17 35 18.5	+0.3
KHC				Sn	**Sn**	17 35 47.8	-0.4
KHC				Sg	**Sg**	17 35 57.0	-0.9
	comp=Z,9.8nm,0.4s						
CONA	**Conrad Observa**	**3.56**	**182**	⇑*i*Pn	**Pn**	17 35 23.6	+0.6
	comp=Z,1.0nm,0.2s						
CONA				⇑Sg	**Sg**	17 36 19.0	-1.9
	comp=Z,12nm,0.5s						
CONA	**Conrad Observa**	**3.56**	**182**	Pn	**Pn**	17 35 23.6	+0.6
	comp=Z,1.0nm,0.2s						
CONA				Sg	**Sg**	17 36 19.0	-1.9
	comp=Z,12nm,0.5s						
MOA	**Molln**	**3.83**	**199**	⇑*i*Pn	**Pn**	17 35 26.7	+0.1
	comp=Z,1.0nm,0.2s						
MOA				⇑Sg	**Sg**	17 36 27.8	-1.5
	comp=Z,0.1nm,0.1s						
MOA	**Molln**	**3.83**	**199**	Pn	**Pn**	17 35 26.7	+0.1
	comp=Z,1.0nm,0.2s						
MOA				Sg	**Sg**	17 36 27.8	-1.5
	comp=Z,0.1nm,0.1s						
STHS	**Stebnicka Huta**	**3.90**	**120**	*e*PG	**Pg**	17 35 40.3	-0.8
STHS	**Stebnicka Huta**	**3.90**	**120**	*e*Pg	**Pg**	17 35 40.3	-0.8

*IDC **15** 17:41:24.2±1.0, 6°23N×128°06E, h0km, mb3.9/8, mb1 4.0/9, mb1mx3.8/25, mbtmp4.0/9, ML4.4/1, MS3.4/4, Ms1 3.4/4, ms1mx2.9/37, Error ellipse: s-maj=61.6km s-min=16.4km az=65.0*
*MAN **15** 17:41:30, 5°25N×126°35E, h4km, mb5.0, ML4.0, MS4.1*
*ISCJB **15** 17:41:36.9±1.0, 5°40N±0°10×126°4E±0°1, h112km±9km, mb3.9/8, Error ellipse: s-maj=19.7km s-min=12.8km az=137.0*

ISC 15 17:41:37.6±1.7, 5°4N±0°1×126°4E±0°1, h100km±15km, n19, σ1s40/22, mb3.9/8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.57**	**357**	*e*P	Pn	17 41 60.0	-4.8
MATI				*e*S	**Sn**	17 42 25.9	+0.4
DAV	**Davao City (W)**	**1.86**	**336**	Pn	**Pn**	17 42 07.8	-0.6
	79nm,0.3s,baz=106,slow=4.8,SNR=4.2						
DAV				Sn	**Sn**	17 42 32.8	+1.0
	82nm,0.3s,baz=294,slow=15,SNR=6.3						
DAV				LR	LR	17 42 59.1	
	comp=Z,314nm,20.4s,baz=204,slow=36						
DMPH	**Davao City--Mi**	**1.90**	**334**	⇑*e*P	**Pn**	17 42 09.4	+0.5
DMPH				*e*S	**Sn**	17 42 34.3	+1.5
KCP	**Kidapawan**	**2.06**	**323**	⇓*e*P	**Pn**	17 42 10.5	-0.5
KCP				*i* S	**Sn**	17 42 37.3	+0.9
CTBH	**Cotabato--PC H**	**2.78**	**312**	⇓*i*P	**Pn**	17 42 17.6	-2.9
BUKP	**Musuan**	**2.80**	**333**	*e*P	**Pn**	17 42 18.5	-2.3
BUKP				*e*S	**Sn**	17 42 54.4	+0.4
BUTP	**Butuan**	**3.65**	**349**	*e*P	**Pn**	17 42 31.2	-0.9
BUTP				*e*S	Sn	17 43 24.6	+10
PAGZ	**Pagadian**	**3.84**	**310**	*e*P	**Pn**	17 42 32.4	-2.3
IPIL	**Ipil**	**4.46**	**303**	*e*P	**Pn**	17 42 43.0	0.0
IPIL				*e*S	**Sn**	17 43 35.8	+2.0
KAPI	**Kappang**	**12.24**	**213**	LR	LR	17 49 46.0	
	comp=Z,174nm,19.8s,baz=230,slow=36						
WRA	**Warramunga Arr**	**26.35**	**163**	P	**P**	17 47 04.7	+0.2
	2.0nm,0.8s,baz=343,slow=10.0,SNR=3.0						
ASAR	**Alice Springs**	**29.78**	**166**	P	P	17 47 38.0	+3.0
	0.4nm,0.4s,baz=342,slow=7.8,SNR=5.1						
ASAR				PcP	**PcP**	17 50 38.1	+1.6
	0.5nm,0.6s,baz=342,slow=1.6,SNR=4.3						
STKA	**Stephens Creek**	**39.79**	**160**	P	**P**	17 49 00.7	-0.2
	0.8nm,0.6s,baz=322,slow=16,SNR=2.9						
STKA				LR	LR	18 05 27.1	
	comp=Z,123nm,20.4s,baz=24,slow=36						
ASAJ	**Asahikawa**	**41.15**	**18**	LR	LR	18 05 06.8	
	comp=Z,38nm,19.3s,baz=340,slow=36						
MKAR	**Makanchi Array**	**56.00**	**325**	P	**P**	17 51 06.8	+0.9
	0.7nm,0.5s,baz=119,slow=7.0,SNR=9.3						
ZALV	**Zalesovo Beam**	**58.97**	**333**	P	**P**	17 51 25.4	-1.0
	1.1nm,0.5s,baz=124,slow=7.4,SNR=3.8						
KURBB	**Kurchatov Arra**	**60.16**	**327**	P	**P**	17 51 34.8	+0.1
	1.4nm,0.8s,baz=125,slow=6.3,SNR=11						
BVAR	**Borovoye Array**	**65.75**	**327**	P	**P**	17 52 12.7	+1.0
	1.4nm,1.0s,baz=132,slow=8.8,SNR=5.6						
ARCES	**ARCESS Array B**	**88.79**	**340**	P	**P**	17 54 19.1	-0.8
	1.9nm,0.7s,baz=54,slow=7.9,SNR=3.7						

*IDC **15** 17:42:35.0±0.7, 21°85N×120°29E, h0km, mb3.7/13, mb1 3.9/14, mb1mx3.8/27, mbtmp3.7/14, ML3.1/1, Error ellipse: s-maj=25.9km s-min=16.1km az=73.0*
*TAP **15** 17:42:36.9, 21°47N×120°12E, h66km, ML4.2, C*

ISC 15 17:42:36.0±1.4, 21°44N±0°06×120°05E±0°05, h20km±5km, n65, σ0s96/100, mb3.8/13, 14C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HEN	**Hengchun**	**0.86**	**49**	⇑*i*P	**Pn**	17 42 53.1	+0.2
	baz=56						
HEN				S	**Sn**	17 43 04.6	-0.3
	baz=56						
TWK1	**Hengchun**	**0.87**	**54**	⇑*i*P	**Pn**	17 42 53.0	-0.1
	baz=54						
TWK1				*i* S	**Sn**	17 43 05.0	-0.2
	baz=54						
TSEB	**Hengchuen, Pin**	**0.92**	**60**	*i* P	**Pg**	17 42 53.2	-0.7
	baz=58						
TSEB				S	**Sn**	17 43 05.5	-0.9
	baz=58						
TWP	**Hsiaoliuchiu**	**0.95**	**18**	⇑*i*P	**Pg**	17 42 54.9	+0.4
	baz=15						
TWP				*e*S	**Sn**	17 43 08.7	+1.4
	baz=15						
SCZT	**Fangliau**	**1.07**	**30**	⇑*i*P	**Pb**	17 42 55.9	0.0
	baz=37						
SCZT				*i* S	**Sn**	17 43 09.9	-0.3
	baz=37						
KAU	**Kaohsiung**	**1.15**	**12**	*e*P	**Pb**	17 42 57.5	+0.2
	baz=9.0						
KAU				S	**Sg**	17 43 13.3	-0.2
	baz=9.0						
EAST	**Anshuo**	**1.20**	**38**	⇑*i*P	**Pn**	17 42 57.8	0.0
	baz=46						
EAST				*e*S	**Sb**	17 43 12.4	-0.8
	baz=46						
TAW	**Tawu**	**1.21**	**41**	P	**Pn**	17 42 57.6	-0.2
	baz=47						
TAW				S	**Sb**	17 43 12.6	-0.8
	baz=47						
SGLT	**Jiouru**	**1.35**	**18**	P	**Pb**	17 43 00.7	+0.2
	baz=16						
SGLT				*e*S	**Sg**	17 43 19.1	-0.5
	baz=16						
TWM1	**Shoushan**	**1.42**	**14**	*e*P	**Pb**	17 43 01.6	-0.2
	baz=12						
TWM1				*e*S	**Sb**	17 43 20.9	+1.3
	baz=12						
ECL	**Taimali**	**1.43**	**36**	⇑*i*P	**Pn**	17 43 00.8	0.0
	baz=27						
ECL				*e*S	**Sn**	17 43 17.7	-1.4
	baz=27						
LAY	**Lan-yu**	**1.52**	**67**	*e*P	**Pn**	17 43 00.6	-1.5
	baz=67						
LAY				*e*S	**Sn**	17 43 18.5	-2.9
	baz=67						
TAI1	**Yung-k'ang**	**1.60**	**6**	*e*P	**Pb**	17 43 04.4	-0.5
	baz=4.0						
TAI1				*e*S	**Sn**	17 43 22.8	-0.5
	baz=4.0						
CHN3	**Shinhua**	**1.66**	**10**	*e*P	**Pn**	17 43 04.4	+0.4
	baz=8.0						
CHN3				*e*S	**Sb**	17 43 26.0	-0.4
	baz=8.0						
TTN	**Taitung**	**1.66**	**38**	P	**Pn**	17 43 04.5	+0.5
	baz=46						
TTN				*e*S	**Sb**	17 43 26.9	+0.4
	baz=46						
TWG	**Pinlang**	**1.67**	**34**	⇑*i*P	**Pn**	17 43 04.3	+0.1
	baz=33						
TWG				S	**Sn**	17 43 24.1	-1.0
	baz=33						
SCLT	**Jiali**	**1.73**	**4**	*e*P	**Pn**	17 43 05.7	+0.7
	baz=3.0						
SCLT				*e*S	**Sn**	17 43 25.8	-0.8
	baz=3.0						
CHN1	**Nanshi**	**1.79**	**14**	⇑*i*P	**Pn**	17 43 06.0	+0.1
	baz=12						
CHN1				*e*S	**Sn**	17 43 26.1	-2.0
	baz=12						
WDGT	**Dungji**	**1.85**	**349**	*e*P	**Pn**	17 43 04.8	-1.8
	baz=357						
WDGT				*e*S	**Sn**	17 43 27.0	-2.4
	baz=357						
WTP	**Ta-pu**	**1.88**	**16**	⇑*i*P	**Pn**	17 43 07.0	0.0
	baz=15						
WTP				*e*S	**Sn**	17 43 29.7	-0.5
	baz=15						
ELDTW	**Lidau**	**1.96**	**27**	⇑*i*P	**Pn**	17 43 08.7	+0.4
	baz=26						
CHN4	**Tsaushan**	**1.97**	**15**	⇑*i*P	**Pn**	17 43 08.3	0.0
	baz=13						
CHN4				S	**Sn**	17 43 31.6	-0.9
	baz=13						
CHKT	**Chengkung**	**2.06**	**36**	P	**Pn**	17 43 09.9	+0.4
	baz=45						
CHKT				*e*S	**Sn**	17 43 33.5	-1.0
	baz=45						
CHY	**Chiayi**	**2.08**	**10**	*e*P	**Pn**	17 43 10.6	+0.8
	baz=8.0						
PNG	**Penghu**	**2.17**	**348**	*e*P	**Pn**	17 43 08.5	-2.5
	baz=354						
PNG				*e*S	**Sn**	17 43 34.9	-2.4
	baz=354						
ALS	**Alishan**	**2.18**	**19**	*e*P	**Pn**	17 43 11.6	+0.1
	baz=10.0						
ALS				*e*S	**Sn**	17 43 36.5	-1.5
	baz=10.0						
YUS	**Yu-Shan**	**2.21**	**22**	⇑P	**Pn**	17 43 12.4	+0.5
	baz=12						
YUS				*e*S	**Sn**	17 43 38.2	-0.8
	baz=12						
CHN5	**Tsauling**	**2.23**	**15**	*i* P	**Pn**	17 43 11.8	-0.1
	baz=14						
CHN5				S	**Sn**	17 43 38.0	-1.0
	baz=14						
TWF1	**Yuli**	**2.23**	**31**	*e*P	**Pn**	17 43 11.9	+0.1
	baz=30						
TWF1				*e*S	**Sn**	17 43 38.0	-0.8
	baz=30						
WGK	**Gukeng**	**2.29**	**12**	⇑*i*P	**Pn**	17 43 12.8	+0.2
	baz=11						
WGK				S	**Sn**	17 43 39.8	-0.5
	baz=11						
EHY	**Hungye**	**2.37**	**30**	*e*P	**Pn**	17 43 13.6	-0.2
	baz=20						
EHY				*e*S	**Sn**	17 43 43.0	+0.6
	baz=20						
WNT	**Mingjian**	**2.50**	**13**	*e*P	**Pn**	17 43 15.1	-0.4
	baz=21						
WNT				*e*S	**Sn**	17 43 44.0	-1.5
	baz=21						
SMLT	**Sun Moon Lake**	**2.56**	**18**	⇑P	**Pn**	17 43 16.8	+0.3
	baz=17						
SMLT				*e*S	**Sn**	17 43 46.5	-0.6
	baz=17						
TYC	**Yuchr**	**2.57**	**17**	P	**Pn**	17 43 16.7	+0.2
	baz=16						
TYC				*e*S	**Sn**	17 43 47.1	-0.1
	baz=16						
ESL	**Shilin**	**2.69**	**28**	*e*P	**Pn**	17 43 18.4	+0.2
	baz=39						
ESL				*e*S	**Sn**	17 43 49.7	-0.5
	baz=39						
TCU	**Taichung**	**2.76**	**12**	*e*P	**Pn**	17 43 19.0	-0.2
	baz=19						
TCU				*e*S	**Sn**	17 43 50.7	-1.2
	baz=19						
WHF	**Hehuan Shan**	**2.92**	**22**	P	**Pn**	17 43 22.6	+0.8
	baz=11						
WHF				*e*S	**Sn**	17 43 57.0	+0.5
	baz=11						
TWQ1	**Liyutan**	**2.97**	**13**	*e*P	**Pn**	17 43 22.3	+0.2
	baz=12						
TWQ1				*e*S	**Sn**	17 43 56.1	-1.1
	baz=12						
TWT	**Tachien**	**2.99**	**20**	P	**Pn**	17 43 23.1	+0.6
	baz=13						
TWT				*e*S	**Sn**	17 43 57.7	-0.2
	baz=13						
TWD	**Chiawan**	**2.99**	**28**	*e*P	**Pn**	17 43 22.9	+0.5
	baz=37						
NSY	**Sanyi**	**3.04**	**12**	*e*P	**Pn**	17 43 22.3	-0.7
	baz=12						
NNS	**Nan Shan**	**3.23**	**22**	*e*P	**Pn**	17 43 26.9	+1.2
	baz=21						
NNS				*e*S	**Sn**	17 44 03.5	-0.2
	baz=21						
NSTT	**Nanjuang**	**3.30**	**15**	P	**Pn**	17 43 26.4	-0.2
	baz=15						
NSTT				*e*S	**Sn**	17 44 04.0	-1.2
	baz=15						
ENA	**Nanau**	**3.36**	**27**	*e*P	**Pn**	17 43 27.6	+0.2
	baz=36						
NSK	**Sanguang**	**3.44**	**20**	*e*P	**Pn**	17 43 29.7	+1.1
	baz=20						
ENTT	**Nioudou**	**3.48**	**23**	*e*P	**Pn**	17 43 30.5	+1.4
	baz=14						
ENTT				*e*S	**Sn**	17 44 10.2	+0.5
	baz=14						
TWC	**Suao**	**3.57**	**27**	*e*P	**Pn**	17 43 30.8	+0.5
	baz=35						
TWE	**Neicheng**	**3.59**	**24**	*e*P	**Pn**	17 43 31.7	+1.1
	baz=34						
YOJ	**Yonaguni jima**	**4.06**	**42**	*e*P	**Pn**	17 43 37.9	+0.9
	baz=50						
KSRS	**Korea Array**	**17.36**	**21**	Pn	Pn	17 46 31.0

ellipse: s-maj=30.2km s-min=15.4km az=66.0

ISC 15 17:44:04.8±0.6,**24°59N**±0.04×**122°80E**±0.02,**h112**km±5km, **n102**,σ1**33**/181,**mb3.9**/12,**5C-23D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.23**	**123**	⇑*i*P	**Pn**	**17 44 20.7**	**+0.2**
	baz=127						
YOJ				*i* S	**Sn**	**17 44 31.5**	**-0.7**
	baz=127						
YOJ	**Yonaguni jima**	**0.23**	**123**	P	**Pn**	**17 44 20.4**	**-0.1**
YOJ				S	**Sn**	**17 44 31.8**	**-0.5**
TWB1	**Santiao Chiao**	**0.85**	**300**	⇓*i*P	**Pn**	**17 44 25.3**	**+0.6**
	baz=296						
TWB1				S	**Sn**	**17 44 38.5**	**-1.1**
	baz=296						
TWC	**Suao**	**0.87**	**272**	⇓*i*P	**Pn**	**17 44 25.0**	**+0.2**
	baz=271						
TWC				S	**Sn**	**17 44 38.5**	**-1.5**
	baz=271						
IRIF	**Iriomote-Funau**	**0.88**	**106**	P	**Pn**	**17 44 25.4**	**+0.5**
IRIF				S	**Sn**	**17 44 40.3**	**+0.2**
ILA	**Ilan**	**0.98**	**281**	P	**Pn**	**17 44 26.5**	**+0.7**
	baz=274						
ILA				S	**Sn**	**17 44 41.3**	**-0.5**
	baz=274						
ENA	**Nanau**	**0.98**	**261**	P	**Pn**	**17 44 26.2**	**+0.3**
	baz=255						
ENA				*e*S	**Sn**	**17 44 41.4**	**-0.5**
	baz=255						
EHP	**Heping Village**	**1.01**	**254**	*e*P	**Pn**	**17 44 26.3**	**+0.1**
	baz=253						
EHP				*e*S	**Sn**	**17 44 42.0**	**-0.4**
	baz=253						
TWE	**Neicheng**	**1.04**	**278**	⇓*i*P	**Pn**	**17 44 27.1**	**+0.6**
	baz=274						
TWE				*e*S	**Sn**	**17 44 42.0**	**-1.0**
	baz=274						
NWF	**Wu-fen Shan**	**1.05**	**298**	⇓*i*P	**Pn**	**17 44 27.6**	**+0.9**
	baz=291						
NWF				*e*S	**Sn**	**17 44 43.0**	**-0.3**
	baz=291						
HATJ	**Hateruma jima**	**1.05**	**120**	P	**Pn**	**17 44 27.9**	**+1.2**
HATJ				S	**Sn**	**17 44 44.0**	**+0.8**
ENTT	**Nioudou**	**1.13**	**273**	⇓P	**Pn**	**17 44 28.3**	**+0.8**
	baz=268						
ENTT				*e*S	**Sn**	**17 44 44.4**	**-0.3**
	baz=268						
JKRS	**Kuro-shima**	**1.15**	**107**	P	**Pn**	**17 44 29.0**	**+1.3**
JKRS				S	**Sn**	**17 44 45.7**	**+0.6**
TWD	**Chiawan**	**1.21**	**246**	⇓*i*P	**Pn**	**17 44 28.5**	**+0.1**
	baz=244						
TWD				S	**Sn**	**17 44 45.3**	**-0.9**
	baz=244						
PCYT	**Pengchaiyu**	**1.23**	**328**	⇑*i*P	**Pn**	**17 44 30.1**	**+1.5**
	baz=327						
PCYT				*e*S	**Sn**	**17 44 47.3**	**+0.6**
	baz=327						
JIJ	**Ishigaki jima**	**1.24**	**100**	P	**Pn**	**17 44 29.5**	**+0.8**
JIJ				S	**Sn**	**17 44 46.5**	**-0.3**
TAP1	**Taipei**	**1.25**	**291**	*e*P	**Pn**	**17 44 29.4**	**+0.6**
	baz=281						
TAP1				*e*S	**Sn**	**17 44 45.9**	**-1.1**
	baz=281						
HWA	**Hwalien**	**1.25**	**241**	⇓*i*P	**Pn**	**17 44 29.2**	**+0.4**
	baz=240						
HWA				*e*S	**Sn**	**17 44 46.2**	**-0.8**
	baz=240						
TAP	**Taipei**	**1.26**	**291**	*e*P	**Pn**	**17 44 29.5**	**+0.6**
	baz=281						
TAP				*e*S	**Sn**	**17 44 46.4**	**-0.8**
	baz=281						
TWY	**Chenhua**	**1.29**	**302**	⇑P	**Pn**	**17 44 30.3**	**+1.0**
	baz=302						
TWY				*e*S	**Sn**	**17 44 48.0**	**+0.1**
	baz=302						
NNS	**Nan Shan**	**1.31**	**264**	*e*P	**Pn**	**17 44 30.1**	**+0.5**
	baz=256						
NNS				*e*S	**Sn**	**17 44 47.6**	**-0.9**
	baz=256						
NSK	**Sanguang**	**1.32**	**274**	⇓*i*P	**Pn**	**17 44 30.6**	**+0.9**
	baz=267						
NSK				*e*S	**Sn**	**17 44 47.9**	**-0.7**
	baz=267						
TWS1	**Kuangyinshan**	**1.36**	**292**	⇓*i*P	**Pn**	**17 44 30.9**	**+0.9**
	baz=286						
TWS1				S	**Sn**	**17 44 49.0**	**-0.2**
	baz=286						
ESF	**Shoufeng Towns**	**1.38**	**239**	*e*P	**Pn**	**17 44 30.2**	**-0.1**
	baz=243						
ESF				*e*S	**Sn**	**17 44 48.8**	**-0.8**
	baz=243						
TEGC	**Jichi Village**	**1.45**	**233**	*e*P	**Pn**	**17 44 31.5**	**+0.5**
	baz=229						
TEGC				*e*S	**Sn**	**17 44 50.5**	**-0.5**
	baz=229						
ESL	**Shilin**	**1.47**	**239**	⇓*i*P	**Pn**	**17 44 31.4**	**0.0**
	baz=242						
ESL				*e*S	**Sn**	**17 44 50.3**	**-1.2**
	baz=242						
WHF	**Hehuan Shan**	**1.47**	**253**	⇓*i*P	**Pn**	**17 44 32.4**	**+0.6**
	baz=256						
WHF				S	**Sn**	**17 44 51.5**	**-0.8**
	baz=256						
NCU	**National Centr**	**1.52**	**285**	P	**Pn**	**17 44 33.1**	**+1.2**
	baz=293						
NCU				*e*S	**Sn**	**17 44 53.1**	**+0.5**
	baz=293						
TWT	**Tachien**	**1.52**	**258**	⇓*i*P	**Pn**	**17 44 33.5**	**+1.4**
	baz=253						
TWT				*e*S	**Sn**	**17 44 52.5**	**-0.3**
	baz=253						
NSTT	**Nanjuang**	**1.64**	**272**	⇓*i*P	**Pn**	**17 44 34.4**	**+1.0**
	baz=271						
NSTT				S	**Sn**	**17 44 55.0**	**-0.2**
	baz=271						
HSN	**Hsinchu**	**1.68**	**278**	*e*P	**Pn**	**17 44 34.5**	**+0.7**
	baz=278						
HSN				*e*S	**Sn**	**17 44 55.3**	**-0.8**
	baz=278						
JTJ	**Tarama**	**1.73**	**88**	P	**Pn**	**17 44 35.9**	**+1.5**
JTJ				S	**Sn**	**17 44 57.4**	**+0.4**
EHY	**Hungye**	**1.73**	**232**	⇓*i*P	**Pn**	**17 44 34.5**	**0.0**
	baz=230						
EHY				*e*S	**Sn**	**17 44 55.5**	**-1.6**
	baz=230						
TWF1	**Yuli**	**1.85**	**229**	⇓*i*P	**Pn**	**17 44 36.3**	**+0.4**
	baz=235						
TWF1				*e*S	**Sn**	**17 44 57.5**	**-2.2**
	baz=235						
TWQ1	**Liyutan**	**1.87**	**263**	⇓*i*P	**Pn**	**17 44 37.3**	**+1.2**
	baz=261						
TWQ1				*e*S	**Sn**	**17 44 59.4**	**-0.7**
	baz=261						
NSY	**Sanyi**	**1.87**	**265**	⇓P	**Pn**	**17 44 37.6**	**+1.4**
	baz=264						
NSY				S	**Sn**	**17 45 00.9**	**+0.6**
	baz=264						
SMLT	**Sun Moon Lake**	**1.87**	**248**	⇓P	**Pn**	**17 44 37.6**	**+1.2**
	baz=243						
SMLT				*e*S	**Sn**	**17 45 00.4**	**-0.1**
	baz=243						
TYC	**Yuchr**	**1.90**	**249**	⇓P	**Pn**	**17 44 37.9**	**+1.3**
	baz=243						
TYC				*e*S	**Sn**	**17 45 01.1**	**+0.2**
	baz=243						
CHKT	**Chengkung**	**1.98**	**222**	⇓*i*P	**Pn**	**17 44 37.5**	**-0.1**
	baz=217						
CHKT				*e*S	**Sn**	**17 45 00.4**	**-2.3**
	baz=217						
TCU	**Taichung**	**1.99**	**258**	*e*P	**Pn**	**17 44 38.8**	**+1.1**
	baz=265						
TCU				*e*S	**Sn**	**17 45 03.1**	**+0.3**
	baz=265						
YUS	**Yu-Shan**	**2.02**	**238**	⇓*i*P	**Pn**	**17 44 39.7**	**+1.2**
	baz=235						
YUS				*e*S	**Sn**	**17 45 03.4**	**-0.9**
	baz=235						
WNT	**Mingjian**	**2.06**	**250**	⇓P	**Pn**	**17 44 40.4**	**+1.8**
	baz=248						
WNT				*e*S	**Sn**	**17 45 05.9**	**+1.4**
	baz=248						
ALS	**Alishan**	**2.12**	**240**	P	**Pn**	**17 44 41.1**	**+1.5**
	baz=233						
ALS				*e*S	**Sn**	**17 45 06.8**	**+0.5**
	baz=233						
ELDTW	**Lidau**	**2.15**	**230**	⇓*i*P	**Pn**	**17 44 40.2**	**+0.3**
	baz=223						
ELDTW				*e*S	**Sn**	**17 45 05.4**	**-1.3**
	baz=223						
CHN5	**Tsauling**	**2.18**	**244**	*e*P	**Pn**	**17 44 41.9**	**+1.7**
	baz=235						
CHN5				*e*S	**Sn**	**17 45 08.9**	**+1.6**
	baz=235						
WGK	**Gukeng**	**2.24**	**247**	*e*P	**Pn**	**17 44 42.7**	**+1.8**
	baz=245						
WGK				*e*S	**Sn**	**17 45 10.5**	**+2.0**
	baz=245						
JMJ	**Miyako jima 2**	**2.28**	**84**	*e*P	**Pn**	**17 44 43.5**	**+2.2**
	baz=85						
JMJ				*e*S	**Sn**	**17 45 09.7**	**+0.3**
	baz=85						
JMJ	**Miyako jima 2**	**2.28**	**84**	S	**Sn**	**17 45 09.8**	**+0.4**
CHN4	**Tsaushan**	**2.37**	**239**	P	**Pn**	**17 44 44.5**	**+1.9**
	baz=237						
CHN4				S	**Sn**	**17 45 13.3**	**+1.7**
	baz=237						
TWG	**Pinlang**	**2.37**	**222**	*e*P	**Pn**	**17 44 42.5**	**-0.1**
	baz=226						
TWG				*e*S	**Sn**	**17 45 10.1**	**-1.5**
	baz=226						
TTN	**Taitung**	**2.37**	**220**	*e*P	**Pn**	**17 44 43.2**	**+0.6**
	baz=214						
TTN				*e*S	**Sn**	**17 45 11.1**	**-0.5**
	baz=214						
JOGS	**Gusukube**	**2.37**	**85**	P	**Pn**	**17 44 44.7**	**+2.1**
JOGS				S	**Sn**	**17 45 12.3**	**+0.7**
WTP	**Ta-pu**	**2.41**	**237**	*e*P	**Pn**	**17 44 45.0**	**+1.8**
	baz=228						
WTP				*e*S	**Sn**	**17 45 14.0**	**+1.4**
	baz=228						
WTCT	**Ta-ch'eng**	**2.41**	**253**	*e*P	**Pn**	**17 44 44.1**	**+0.9**
	baz=251						
WTCT				*e*S	**Sn**	**17 45 12.5**	**0.0**
	baz=251						
CHY	**Chiayi**	**2.43**	**244**	*e*P	**Pn**	**17 44 45.4**	**+2.0**
	baz=253						
CHY				*e*S	**Sn**	**17 45 14.3**	**+1.4**
	baz=253						
CHN1	**Nanshi**	**2.51**	**237**	*e*P	**Pn**	**17 44 46.4**	**+2.0**
	baz=244						
CHN1				*e*S	**Sn**	**17 45 16.3**	**+1.5**
	baz=244						
WSF	**Szhu**	**2.54**	**249**	*e*P	**Pn**	**17 44 46.0**	**+1.2**
	baz=255						
WSF				*e*S	**Sn**	**17 45 16.0**	**+0.4**
	baz=255						
ECL	**Taimali**	**2.61**	**221**	*e*P	**Pn**	**17 44 45.5**	**-0.2**
	baz=225						
CHN8	**Yiju**	**2.67**	**243**	*e*P	**Pn**	**17 44 47.9**	**+1.4**
	baz=240						
CHN8				*e*S	**Sn**	**17 45 19.9**	**+1.3**
	baz=240						
CHN3	**Shinhua**	**2.69**	**237**	*e*P	**Pn**	**17 44 49.1**	**+2.3**
	baz=243						
CHN3				*e*S	**Sn**	**17 45 21.6**	**+2.5**
	baz=243						
SCLT	**Jiali**	**2.77**	**240**	*e*P	**Pn**	**17 44 49.7**	**+1.9**
	baz=237						
SCLT				*e*S	**Sn**	**17 45 22.4**	**+1.5**
	baz=237						
LAY	**Lan-yu**	**2.79**	**205**	P	**Pn**	**17 44 47.9**	**-0.1**
	baz=197						
LAY				*e*S	**Sn**	**17 45 18.6**	**-2.8**
	baz=197						
TWM1	**Shoushan**	**2.80**	**232**	*e*P	Pn	17 44 51.8	+3.6
	baz=240						
SGLT	**Jiouru**	**2.82**	**229**	*e*P	**Pn**	**17 44 51.1**	**+2.7**
	baz=228						
TAW	**Tawu**	**2.83**	**219**	*e*P	**Pn**	**17 44 49.0**	**+0.4**
	baz=221						
TAW				*e*S	**Sn**	**17 45 20.2**	**-2.0**
	baz=221						
EAST	**Anshuo**	**2.83**	**220**	*e*P	**Pn**	**17 44 49.1**	**+0.4**
	baz=218						
SCZT	**Fangliau**	**2.98**	**223**	*e*P	**Pn**	**17 44 52.4**	**+1.8**
	baz=216						
PNG	**Penghu**	**3.14**	**252**	*e*P	**Pn**	**17 44 52.4**	**-0.2**
	baz=249						
PNG				*e*S	**Sn**	**17 45 27.6**	**-2.0**
	baz=249						
TWP	**Hsiaoliuchiu**	**3.16**	**226**	*e*P	Pn	17 44 57.1	+4.1
	baz=224						
WDGT	**Dungji**	**3.17**	**246**	⇑P	**Pn**	**17 44 53.7**	**+0.7**
	baz=243						
WDGT				*e*S	**Sn**	**17 45 28.8**	**-1.4**
	baz=243						
HEN	**Hengchun**	**3.19**	**217**	*e*P	**Pn**	**17 44 56.1**	**+2.7**
	baz=215						
TSEB	**Hengchuen, Pin**	**3.20**	**214**	*e*P	**Pn**	**17 44 55.4**	**+1.9**
	baz=217						
TSEB				*e*S	**Sn**	**17 45 32.3**	**+1.3**
	baz=217						
TWK1	**Hengchun**	**3.21**	**215**	*e*P	**Pn**	**17 44 55.4**	**+1.8**
	baz=212						
TWK1				*e*S	**Sn**	**17 45 30.5**	**-0.8**
	baz=212						
QZH	**Quanzhou**	**3.85**	**276**	⇑*i*Pn	**Pn**	**17 45 03.0**	**+0.9**
QZH				Sn	**Sn**	**17 45 43.8**	**-2.7**
QZH				smax	smax		
	comp=N,220nm,0.5s						
QZH				smax	smax		
	comp=E,170nm,0.9s						
KNM	**Kinmen**	**3.98**	**268**	*e*P	**Pn**	**17 45 05.9**	**+2.0**
	baz=267						
JKE	**Kume jima 2**	**4.00**	**63**	P	**Pn**	**17 45 04.8**	**+0.7**
JKE				S	**Sn**	**17 45 50.1**	**+0.1**
JAGN	**Aguni-jima**	**4.48**	**63**	P	**Pn**	**17 45 11.0**	**+0.5**
JAGN				S	**Sn**	**17 46 00.9**	**-0.7**
JJT2	**Tamagusuku 2**	**4.73**	**70**	P	**Pn**	**17 45 13.7**	**-0.3**
JJT2				S	**Sn**	**17 46 07.8**	**0.0**
JIH	**Iheya**	**5.25**	**61**	P	**Pn**	**17 45 21.0**	**0.0**
JIH				S	**Sn**	**17 46 17.9**	**-2.5**
JOW	**Kunigami**	**5.42**	**64**	*e*P	**Pn**	**17 45 22.7**	**-0.5**
	baz=66						
JOW				*e*S	**Sn**	**17 46 22.9**	**-1.5**
	baz=66						
JOW	**Kunigami**	**5.42**	**64**	P	**Pn**	**17 45 22.6**	**-0.7**
JOW				S	**Sn**	**17 46 21.1**	**-3.3**
JTK	**Tokunoshima**	**6.38**	**59**	P	**Pn**	**17 45 34.7**	**-1.5**
JTK				S	**Sn**	**17 46 44.1**	**-3.5**
JAMN	**Amaminishikomi**	**6.77**	**56**	P	**Pn**	**17 45 39.7**	**-1.9**
JAMN				S	**Sn**	**17 46 53.4**	**-3.8**
JAM	**Amami Oshima**	**7.18**	**57**	P	**Pn**	**17 45 45.1**	**-2.1**
JAM				S	**Sn**	**17 47 02.8**	**-4.4**
JZK	**Kikaishima**	**7.42**	**58**	P	**Pn**	**17 45 48.9**	**-1.5**
JZK				S	**Sn**	**17 47 09.6**	**-3.4**
JMZ	**Minamidaito 2**	**7.72**	**79**	P	**Pn**	**17 45 51.6**	**-2.9**
JMZ				S	Sn	17 47 12.0	-8.3
JNU	**Nakatsue**	**11.06**	**38**	P	**Pn**	**17 46 40.6**	**+0.9**
	comp=E,0.3nm,0.3s,baz=146,slow=7.6,SNR=3.6						
KSRS	**Korea Array**	**13.55**	**18**	P	**Pn**	**17 47 13.6**	**+1.2**
	comp=E,0.4nm,0.3s,baz=196,slow=12,SNR=8.0						
USRK	**Ussuriysk Arra**	**20.96**	**19**	P	**P**	**17 48 38.8**	**+0.1**
	comp=E,5.1nm,0.7s,baz=203,slow=11,SNR=9.2						
SONM	**Songino Array**	**26.60**	**335**	P	**P**	**17 49 32.8**	**+0.2**
	comp=E,2.7nm,0.7s,baz=153,slow=9.8,SNR=12						
MKAR	**Makanchi Array**	**39.09**	**315**	P	**P**	**17 51 20.0**	**-1.0**
	comp=E,1.2nm,0.7s,baz=104,slow=7.4,SNR=10.0						
MKAR				PcP	**PcP**	**17 53 28.8**	**+0.3**
	comp=E,0.9nm,0.7s,baz=89,slow=4.4,SNR=5.8						
KURBB	**Kurchatov Arra**	**42.76**	**319**	P	**P**	**17 51 50.6**	**-0.3**
	comp=E,0.5nm,0.3s,baz=110,slow=8.0,SNR=15						
KURBB				PcP	**PcP**	**17 53 40.1**	**-0.3**
	comp=E,0.6nm,0.6s,baz=112,slow=4.0,SNR=5.3						
WRA	**Warramunga Arr**	**45.66**	**165**	P	**P**	**17 52 15.0**	**+0.6**
	comp=E,1.1nm,0.4s,baz=346,slow=8.7,SNR=5.4						
BVAR	**Borovoye Array**	**48.31**	**320**	P	**P**	**17 52 33.3**	**-1.3**
	comp=E,1.3nm,0.6s,baz=102,slow=8.1,SNR=6.1						
BVAR				PcP	**PcP**	**17 53 59.8**	**+0.1**
	comp=E,1.6nm,0.4s,baz=119,slow=2.7,SNR=8.5						
ASAR	**Alice Springs**	**49.16**	**167**	P	**P**	**17 52 43.1**	**+1.6**
	comp=E,0.4nm,0.7s,baz=353,slow=6.4,SNR=5.0						
ASAR				pP	**pP**	**17 53 08.1**	**+0.3**
	comp=E,0.5nm,0.7s,baz=342,slow=7.0,SNR=4.0						
JOF	**Joensuu**	**69.08**	**331**	*ep*	**P**	**17 54 58.7**	**+0.4**
	comp=E,1.9nm,0.4s						
KEV	**Kevo**	**69.15**	**338**	*ep*	**P**	**17 54 57.3**	**-1.3**
ARCES	**ARCESS Array B**	**69.72**	**338**	P	**P**	**17 55 01.4**	**-0.8**
	comp=E,2.9nm,1.0s,baz=58,slow=6.7,SNR=3.8						
ARCES				PcP	**PcP**	**17 55 23.1**	**-1.1**
	comp=E,2.0nm,0.9s,baz=57,slow=4.5,SNR=3.6						
KAF	**Kangasniemi**	**71.53**	**330**	*ep*	**P**	**17 55 12.9**	**-0.4**
	comp=E,1.5nm,0.4s,baz=67,slow=6.1						
FINES	**FINESS Array B**	**71.84**	**330**	P	**P**	**17 55 15.1**	**0.0**
	comp=E,1.8nm,0.4s,baz=70,slow=6.3,SNR=13						
BRTR	**Keskin Array B**	**74.12**	**307**	P	**P**	**17 55 29.0**	**-0.2**
	comp=E,0.9nm,0.8s,baz=62,slow=3.7,SNR=5.4						
YKA	**Yellowknife Ar**	**82.02**	**23**	P	**P**	**17 56 12.7**	**+0.6**
	comp=E,0.8nm,0.6s,baz=311,slow=5.0,SNR=11						

IDC 15 18:07:21.9±10.0,**1°08N**×**124°20E**,**h0**km,**mb3.3**/3, **mb1 3.6**/3,**mb1mx3.2**/21,**mbtmp3.4**/3,**Error ellipse: s-maj=207.2km s-min=154.6km az=61.0**,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.13**	**155**	P	P	18 12 30.4	+0.5
	0.4nm,0.5s,baz=332,slow=11,SNR=4.5						
ASAR	**Alice Springs**	**26.34**	**160**	P	P	18 13 00.6	+0.7
	1.5nm,1.4s,baz=341,slow=7.5,SNR=3.2						
STKA	**Stephens Creek**	**36.69**	**155**	P	P	18 14 29.2	-1.5
	1.5nm,0.8s,baz=348,slow=9.3,SNR=2.8						

*ISCJB **15** 18:11:20.6±0.5,11°35S±0.05×118°17E±0.05,h33km, mb4.1/7,Error ellipse: s-maj=8.9km s-min=5.1km az=139.7*

*IDC **15** 18:11:20.9±0.9,11°08S×118°04E,h0km,mb4.1/7, mb1 4.1/11,mb1mx3.9/23,mbtmp4.0/11,ML3.8/4,Error ellipse: s-maj=36.7km s-min=16.4km az=65.0*

*AUST **15** 18:11:21.9,11°48S×117°93E,h10km*

ISC 15 18:11:24.1±0.7,**11°36S**±0.07×**117°98E**±0.07,**h36**km,**n21**, σ2**31**/22,**mb4.2/7**,**South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.83**	**54**	P	**Pn**	**18 12 10.0**	**+3.2**
	baz=3.0,SNR=7.3						
KAPI	**Kappang**	**6.54**	**16**	Pn	**Pn**	**18 12 56.1**	**-1.8**
	1.8nm,0.3s,baz=167,slow=16,SNR=2.6						
KAPI				Sn	**Sn**	**18 14 09.2**	**-2.0**
	9.4nm,0.3s,baz=90,slow=22,SNR=13						
UGM	**Wanagama**	**8.11**	**294**	P	**Pn**	**18 13 19.6**	**+0.2**
	baz=8.1,SNR=19						
UGM				S	**Sn**	**18 14 49.6**	**-0.2**
	baz=8.1,SNR=4.2						
FITZ	**Fitzroy Crossi**	**9.99**	**133**	Pn	**Pn**	**18 13 46.9**	**+1.7**
	1.4nm,0.3s,baz=280,slow=5.7,SNR=50						
FITZ				Sn	**Sn**	**18 15 30.9**	**-5.2**
	3.8nm,0.3s,baz=171,slow=17,SNR=11						
FITZ	**Fitzroy Crossi**	**9.99**	**133**	P	**Pn**	**18 13 46.6**	**+1.3**
	baz=10.0,SNR=30						
FITZ				S	**Sn**	**18 15 34.8**	**-1.4**
	baz=10.0,SNR=3.3						
CISI	**Cisompet, Garu**	**10.71**	**290**	P	**Pn**	**18 13 53.4**	**-1.8**
	baz=11,SNR=4.3						
KNRA	**Kununurra**	**11.33**	**113**	P	**Pn**	**18 14 05.6**	**+2.0**
	baz=11,SNR=11						
MTN	**Manton Dam**	**12.95**	**98**	P	Pn	18 14 13.0	-13
	baz=13,SNR=6.3						
MTN				S	**Sn**	**18 16 43.3**	**-5.3**
	baz=13,SNR=4.4						
KDU	**Kakadu**	**14.24**	**97**	P	Pn	18 14 33.9	-9.5
	baz=14,SNR=6.1						
MEEK	**Meekatharra**	**15.21**	**178**	P	**Pn**	**18 14 54.6**	**-1.8**
	baz=15,SNR=49						
MEEK				S	Sn	18 17 26.3	-18
	baz=15,SNR=9.9						
MORW	**Morawa**	**17.72**	**186**	P	**Pn**	**18 15 26.7**	**-1.4**
	baz=18,SNR=34						
MORW				S	Sn	18 18 24.3	-20
	baz=18,SNR=8.2						
WRA	**Warramunga Arr**	**17.91**	**120**	P	**P**	**18 15 31.6**	**+0.7**
	0.2nm,0.3s,baz=292,slow=13,SNR=4.3						
WRA				S	Sn	18 18 39.9	-9.4
	0.3nm,0.3s,baz=290,slow=24,SNR=5.1						
ASAR	**Alice Springs**	**19.48**	**131**	P	**Pn**	**18 15 51.6**	**+2.0**
	0.3nm,0.3s,baz=309,slow=12,SNR=25						
ASAR				S	S	18 19 17.5	-9.0
	0.3nm,0.3s,baz=311,slow=24,SNR=7.9						
KLBR	**Kellerberrin**	**20.14**	**181**	P	Pn	18 15 59.6	+2.3
	baz=20,SNR=22						
KLBR				S	S	18 19 24.9	-15
	baz=20,SNR=5.5						
NWAO	**Narrogin (SRO)**	**21.48**	**182**	P	P	18 16 15.2	+5.5
	8.4nm,0.5s,baz=8.0,slow=14,SNR=21						
CMAR	**Chiang Mai Arr**	**35.08**	**327**	P	**P**	**18 18 14.6**	**+0.6**
	0.8nm,0.6s,baz=152,slow=6.4,SNR=7.8						
SONM	**Songino Array**	**59.82**	**351**	P	**P**	**18 21 26.8**	**+0.8**
	1.2nm,0.8s,baz=162,slow=6.9,SNR=3.7						
MKAR	**Makanchi Array**	**66.10**	**334**	P	**P**	**18 22 07.5**	**-0.1**
	0.9nm,0.4s,baz=148,slow=6.9,SNR=29						
KURBB	**Kurchatov Arra**	**70.64**	**335**	P	**P**	**18 22 37.4**	**+1.5**
	1.5nm,0.6s,baz=140,slow=6.0,SNR=30						
ZALV	**Zalesovo Beam**	**70.88**	**340**	P	**P**	**18 22 37.9**	**+0.6**
	2.8nm,0.5s,baz=146,slow=4.6,SNR=18						
BVAR	**Borovoye Array**	**75.90**	**333**	P	**P**	**18 23 07.8**	**+0.9**
	0.8nm,0.7s,baz=243,slow=38,SNR=3.8						

*IDC **15** 18:24:17.5±0.5,60°07S×24°91W,h0km,mb4.3/13, mb1 4.3/13,mb1mx4.3/19,mbtmp4.3/13,MS3.6/7, Ms1 3.6/7,ms1mx3.4/25,Error ellipse: s-maj=19.8km s-min=15.6km az=45.0*

*NEIC **15** 18:24:20.6±5.4,60°11S×24°85W,h22km±37km,mb4.6/3, Error ellipse: s-maj=12.8km s-min=8.9km az=47.0*

ISC 15 18:24:19.0±0.5,**60°1S**±0°1×**24°8W**±0°1,**h10**km,**n63**, σ0**99**/59,**mb4.4**/14,**MS3.6**/6,**South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**12.60**	**154**	*e*Pn	Pn	18 27 13.1	-4.8
VNA1	**Neumayer--Stat**	**12.60**	**154**	*e*Sn	Sn	18 29 20.3	-18
SNAA	**Sanae**	**14.56**	**152**	*e*Pn	Pn	18 27 39.2	-5.6
SNAA	**Sanae**	**14.56**	**152**	*e*Sn	Sn	18 30 04.9	-21
SNAA	**Sanae**	**14.56**	**152**	Pn	Pn	18 27 39.2	-5.6
SNAA				Sn	Sn	18 30 04.7	-21
SNAA	**Sanae**	**14.56**	**152**	Pn	Pn	18 27 39.2	-5.6
	5.1nm,0.3s,baz=324,slow=14,SNR=230						
SNAA				Sn	Sn	18 30 04.7	-21
	0.5nm,0.3s,baz=327,slow=16,SNR=3.9						
SNAA				LR	LR	18 31 49.2	
	comp=Z,87nm,20.1s,baz=2.4,slow=31						
MAIT	**Maitri**	**18.24**	**141**	*e*P	Pn	18 28 17.0	-15
USHA	**Ushuaia**	**23.68**	**263**	P	**P**	**18 29 30.0**	**-0.3**
USHA	**Ushuaia**	**23.68**	**263**	P	**P**	**18 29 30.0**	**-0.3**
	10nm,0.8s,baz=134,slow=6.4,SNR=6.2						
QSPA	**

3.4nm,0.8s
LPAZ PcP PcP 18 34 49.6 +1.8
LPAZ La Paz 53.73 305 P P 18 33 39.7 -2.1
3.7nm,0.8s,baz=139,slow=5.6,SNR=6.5
LPAZ PcP PcP 18 34 49.6 +1.8
2.7nm,0.9s,baz=168,slow=3.0,SNR=3.5
LPAZ LR LR 18 55 02.6
comp=Z,63nm,21.9s,baz=114,slow=34
DBIC Dimbokro 68.40 21 P P 18 35 20.8 +0.2
DBIC Dimbokro 68.40 21 P P 18 35 20.8 +0.2
2.4nm,0.7s,baz=164,slow=13,SNR=4.6
TOA0 Torodi Ar. Sit 76.03 27 *eP* P 18 36 06.6 +0.4
TORD Torodi Ar. Bea 76.03 27 P P 18 36 07.4 +1.2
TORD Torodi Ar. Bea 76.03 27 P P 18 36 07.4 +1.2
2.8nm,0.5s,baz=201,slow=6.4,SNR=26
STKA Stephens Creek 87.70 168 *eP* P 18 37 06.7 -0.9
STKA Stephens Creek 87.70 168 P P 18 37 07.1 -0.5
2.7nm,1.0s,baz=200,slow=4.6,SNR=3.3
ASAR Alice Springs 94.76 161 P P 18 37 38.9 -1.7
ASAR Alice Springs 94.76 161 P P 18 37 38.9 -1.7
1.1nm,0.9s,baz=196,slow=3.2,SNR=8.4
SCHQ Schefferville 119.35 334 PKP PKPdf 18 43 06.7 -0.3
SCHQ Schefferville 119.35 334 PKP PKPdf 18 43 06.7 -0.3
1.4nm,0.5s,baz=36,slow=14,SNR=4.6
PDAR Pinedale Array 123.47 298 PKP PKPdf 18 43 15.2 -0.5
PDAR Pinedale Array 123.47 298 PKP PKPdf 18 43 15.2 -0.5
0.5nm,0.5s,baz=149,slow=6.1,SNR=3.7
NVAR Mina Array Bea 124.01 289 PKP PKPdf 18 43 18.5 +1.6
NVAR Mina Array Bea 124.01 289 PKP PKPdf 18 43 18.5 +1.6
0.4nm,0.5s,baz=113,slow=4.3,SNR=4.6
ABKAR Akbulak array 128.59 57 *eP* PKPdf 18 43 24.3 -0.7
AKTO Aktyubinsk 128.71 54 PKP PKPdf 18 43 24.9 -0.2
AKTO Aktyubinsk 128.71 54 PKP PKPdf 18 43 24.9 -0.2
1.5nm,0.8s,baz=138,slow=3.2,SNR=6.1
BVAR Borovoye Array 135.82 60 PKP PKPdf 18 43 36.9 -1.5
BVAR Borovoye Array 135.82 60 PKP PKPdf 18 43 36.9 -1.5
0.4nm,0.5s,baz=343,slow=1.5,SNR=3.1
MKAR Makanchi Array 136.90 74 PKP PKPdf 18 43 40.0 -0.7
MKAR Makanchi Array 136.90 74 PKP PKPdf 18 43 40.0 -0.7
0.7nm,0.8s,baz=267,slow=2.4,SNR=5.6
KURBB Kurchatov Arra 137.80 67 PKP PKPdf 18 43 41.9 -0.3
0.4nm,0.8s,baz=226,slow=2.8,SNR=5.5
KURK Kurchatov 137.91 67 PKP PKPdf 18 43 41.9 -0.5
YKA Yellowknife Ar 139.94 314 PKPpre PKPpre 18 43 42.3
YKA PKP PKPdf 18 43 46.5 +0.8
YKA Yellowknife Ar 139.94 314 PKhKP PKPpre 18 43 42.3
0.4nm,0.6s,baz=127,slow=2.2,SNR=4.1
YKA PKP PKPdf 18 43 46.5 +0.8
1.2nm,0.6s,baz=127,slow=2.3,SNR=12
ZALV Zalesovo Beam 142.90 67 PKPpre PKPpre 18 43 46.1
ZALV PKP PKPdf 18 43 52.5 +1.2
ZALV Zalesovo Beam 142.90 67 PKhKP PKPpre 18 43 46.1
0.4nm,0.5s,baz=205,slow=3.0,SNR=3.2
ZALV PKP PKPdf 18 43 52.5 +1.2
0.5nm,0.6s,baz=259,slow=0.7,SNR=2.5
SKAG Skagway 146.47 300 *eP* PKPbc PKPab 18 44 00.8 +1.0
SONM Songino Array 149.54 92 PKPbc PKPbc 18 44 06.9 -0.6
SONM Songino Array 149.54 92 PKPbc PKPbc 18 44 06.9 -0.6
3.1nm,0.8s,baz=213,slow=3.7,SNR=17
KSAR Wonju Array Be 151.46 130 PKPbc PKPbc 18 44 11.5 -0.7
KSRS Korea Array 151.48 130 PKPbc PKPbc 18 44 11.5 -0.7
0.7nm,0.7s,baz=207,slow=4.2,SNR=4.2
ILAR Eielson Array 153.61 305 PKPbc PKPbc 18 44 17.0 +0.8
ILAR Eielson Array 153.61 305 PKPbc PKPbc 18 44 17.0 +0.8
6.1nm,1.1s,baz=154,slow=2.0,SNR=14

*ISCJB **15** 18:26:06.8±1.1,39.˚25N±0.˚08×73.˚54E±0.˚10,h10km, mb3.7/3,Error ellipse: s-maj=11.5km s-min=10.5km az=157.4*
*IDC **15** 18:26:09.3±1.8,39.˚56N×73.˚41E,h0km,mb3.8/3, mb1 3.6/8,mb1mx3.4/31,mbtmp3.6/8,ML3.2/6,MS2.7/1, Ms1 2.7/1,ms1mx1.8/45,Error ellipse: s-maj=30.6km s-min=13.5km az=134.0*
*NNC **15** 18:26:12.9±3.7,39.˚72N×73.˚46E,h0km,mb3.7,mpv3.4, Error ellipse: s-maj=31.9km s-min=16.2km az=176.0*

ISC 15 18:26:09.4±1.1,39.˚45N±0.˚08×73.˚53E±0.˚06,h10km,n28, σ1°91/29,mb3.7/3,7C-6D,Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.89**	**87**	Pg	**Pn**	**18 26 41.9**	**+0.1**
KSH				Sg	**Sn**	**18 27 05.9**	**+0.1**
KSH				smax	smax		
	comp=N,490nm,0.5s						
KSH				smax	smax		
	comp=E,300nm,1.0s						
AML	**Almayashu**	**2.69**	**3**	P	**Pn**	**18 26 54.0**	**+0.9**
	SNR=162						
UCH	**Uchtor**	**2.88**	**15**	P	**Pb**	**18 27 02.2**	**+1.1**
	SNR=13						
KZA	**Kyzart**	**2.94**	**26**	P	**Pb**	**18 27 02.5**	**+0.4**
	SNR=11						
EKS2	**Erkin-Say**	**3.22**	**3**	P	**Pn**	**18 27 02.2**	**+2.1**
	SNR=7.6						
AAK	**Ala-Archa**	**3.27**	**13**	P	**Pn**	**18 27 03.5**	**+2.7**
	SNR=27						
AAK	**Ala-Archa**	**3.27**	**13**	Pn	**Pn**	**18 27 03.5**	**+2.7**
	comp=E,13nm,0.3s,baz=175,slow=9.8,SNR=20						
AAK				Sn	**Sb**	**18 27 44.1**	**-3.3**
	comp=E,8.3nm,0.3s,baz=324,slow=19,SNR=9.2						
AAK				Lg	Lg	18 27 50.1	
	comp=E,20nm,0.3s,baz=70,slow=16,SNR=12						
KBK	**Karagaybulak**	**3.38**	**18**	P	**Pb**	**18 27 08.2**	**-1.3**
	SNR=56						
ULHL	**Ulahol**	**3.47**	**35**	P	**Pb**	**18 27 11.1**	**0.0**
	SNR=8.0						
CHMS	**Chumysh**	**3.67**	**14**	P	Pn	18 27 10.4	+4.2
	SNR=8.4						
TKM2	**Tokmak 2**	**3.81**	**23**	⇑Pn	Pn	18 27 11.8	+3.5
	comp=E,1.9nm,0.5s						
TKM2				⇓Pg	**Pb**	**18 27 18.3**	**+1.5**
	comp=E,9.7nm,0.5s						
TKM2				⇓Lg	Lg	18 28 05.7	
	comp=E,26nm,0.5s						
TKM2	**Tokmak 2**	**3.81**	**23**	P	Pb	18 27 13.0	-3.7
	SNR=7.8						
USP	**Ospenovka**	**3.89**	**10**	P	**Pn**	**18 27 11.1**	**+1.9**
	SNR=8.2						
KK31	**Karatay Array**	**4.31**	**329**	Pn	**Pn**	**18 27 17.2**	**+2.2**
	comp=E,3.1nm,0.5s,baz=143,slow=10,SNR=93						
KK31				⇑Pg	**Pb**	**18 27 24.3**	**-0.9**
	comp=E,7.5nm,0.5s,baz=140,slow=14,SNR=18						
KK31				⇓Sn	**Sn**	**18 28 07.4**	**+2.2**
	comp=E,21nm,0.5s,baz=136,slow=18,SNR=2.8						
KK31				⇓Lg	Lg	18 28 18.5	
	comp=E,12nm,0.3s,baz=144,slow=31,SNR=5.1						
KNDC	**Almaty**	**4.57**	**33**	⇓Pg	Pb	18 27 33.4	+3.8
KNDC				⇑Lg	Lg	18 28 31.1	
MKAR	**Makanchi Array**	**9.74**	**38**	Pn	**Pn**	**18 28 31.5**	**+2.0**
	comp=E,0.0nm,0.3s,baz=231,slow=16,SNR=2.9						
MKAR				Lg	Lg	18 31 13.9	
	comp=E,0.1nm,0.3s,baz=218,slow=23,SNR=4.6						
KURBB	**Kurchatov Arra**	**11.72**	**16**	Pn	**Pn**	**18 28 56.5**	**-0.1**
	comp=E,0.0nm,0.3s,baz=212,slow=13,SNR=4.1						
KURBB				Lg	Lg	18 32 14.2	
	comp=E,0.0nm,0.3s,baz=204,slow=31,SNR=7.6						
VOSK	**Vostochnaya**	**13.40**	**353**	⇑P	**Pn**	**18 29 18.7**	**-0.7**
	comp=E,0.3nm,0.4s						
BVA0	**Borovoye Array**	**13.76**	**352**	⇑P	**Pn**	**18 29 22.8**	**-1.5**
	comp=E,0.5nm,0.5s,baz=161,slow=7.3,SNR=4.1						
BVAR	**Borovoye Array**	**13.76**	**352**	Pn	**Pn**	**18 29 22.1**	**-2.2**
	comp=E,0.2nm,0.3s,baz=160,slow=9.3,SNR=5.0						
BVAR				LR	LR	18 35 29.2	
	comp=E,33nm,20.9s,baz=350,slow=41						
AB31	**Akbulak array**	**13.79**	**320**	⇑P	**Pn**	**18 29 22.5**	**-2.4**
	comp=E,0.3nm,0.5s,baz=129,slow=14,SNR=8.1						
ZRNK	**Zerenda**	**13.86**	**348**	⇓P	**Pn**	**18 29 24.5**	**-1.3**
	comp=E,0.6nm,0.6s						
AKTO	**Aktyubinsk**	**15.50**	**320**	⇑P	**Pn**	**18 29 45.2**	**-2.8**
	comp=E,1.3nm,0.6s						
AKTO	**Aktyubinsk**	**15.50**	**320**	Pn	**Pn**	**18 29 44.2**	**-3.8**
	comp=E,0.1nm,0.3s,baz=117,slow=6.8,SNR=1.9						
ZALV	**Zalesovo Beam**	**16.41**	**24**	Pn	**P**	**18 30 01.6**	**-0.8**
	comp=E,0.2nm,0.3s,baz=198,slow=14,SNR=6.3						
BRTR	**Keskin Array B**	**30.57**	**283**	P	**P**	**18 32 23.8**	**+0.4**
	comp=E,0.7nm,0.7s,baz=87,slow=8.7,SNR=5.3						
ARCES	**ARCESS Array B**	**39.24**	**336**	P	**P**	**18 33 39.2**	**+1.7**
	comp=E,1.4nm,0.8s,baz=118,slow=9.4,SNR=3.1						
TORD	**Torodi Ar. Bea**	**67.78**	**269**	P	**P**	**18 37 07.5**	**-0.2**
	comp=E,0.6nm,0.6s,baz=46,slow=5.6,SNR=4.5						

*IDC **15** 18:39:49.8±2.0,5.˚64N×126.˚68E,h0km,mb3.3/4,*

mb1 3.4/4,mb1mx3.3/23,mbtmp3.3/4,Error ellipse: s-maj=176.0km s-min=21.8km az=66.0

ISC 15 18:40:02.3±1.7,5.˚4N±0.˚2×127.˚0E±0.˚5,h84km,n6,σ1°42/6, mb3.3/4,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.71**	**334**	*eP*	**Pn**	**18 40 31.0**	**+0.5**
MATI				*eS*	**Sn**	**18 40 51.3**	**-0.7**
BUKP	**Musuan**	**3.14**	**322**	*eP*	**Pn**	**18 40 50.9**	**+1.3**
BUKP				*eS*	**Sn**	**18 41 25.0**	**-1.1**
WRA	**Warramunga Arr**	**26.19**	**164**	P	**P**	**18 45 30.4**	**+1.1**
	0.4nm,0.5s,baz=344,slow=10,SNR=2.9						
ASAR	**Alice Springs**	**29.66**	**167**	P	**P**	**18 45 59.1**	**-1.1**
	0.2nm,0.9s,baz=343,slow=7.5,SNR=6.2						
MKAR	**Makanchi Array**	**56.37**	**324**	P	P	18 49 30.6	-4.2
	0.3nm,0.5s,baz=117,slow=8.2,SNR=6.2						
KURBB	**Kurchatov Arra**	**60.50**	**327**	P	P	18 49 58.5	-5.0
	0.2nm,0.5s,baz=125,slow=7.0,SNR=7.3						

GUC 15 18:58:54.0±0.6,23.˚94S×67.˚48W,h223km±13km,ML4.7, 4C-2D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.86**	**315**	⇓*iP*	Pn	18 59 34.6	+1.3
LVC				*i* S	S	19 00 05.8	+1.8
PB04	**Plate Boundary**	**2.49**	**312**	*eP*	Pn	18 59 46.2	+7.0
PB04				*i* S	S	19 00 25.8	+11
PB04				AML	AML	19 00 35.1	
	comp=N,772nm,0.1s						
PB09	**Plate Boundary**	**2.68**	**322**	⇑*iP*	Pn	18 59 43.7	+2.1
PB09				*i* S	S	19 00 21.5	+2.8
PB09				AML	AML	19 00 23.2	
	comp=N,2μm,0.4s						
ANCH	**Antofagasta**	**2.70**	**275**	⇑*iP*	Pn	18 59 43.2	+1.7
ANCH				*i* S	S	19 00 20.6	+2.1
ANCH				AML	AML	19 00 22.9	
	comp=N,971nm,0.1s						
PB07	**Plate Boundary**	**3.13**	**314**	⇑*iP*	Pn	18 59 48.6	+2.0
PB07				*i* S	S	19 00 29.7	+2.0
PB07				AML	AML	19 00 33.6	
	comp=N,760nm,0.3s						
PB01	**Plate Boundary**	**3.43**	**327**	⇓*iP*	Pn	18 59 51.5	+1.4
PB01				*i* S	S	19 00 35.9	+2.0
PB01				AML	AML	19 00 38.7	
	comp=E,457nm,0.3s						
HMBC	**Humberstone**	**4.27**	**328**	⇑*iP*	Pn	19 00 00.9	+0.7
HMBC				*i* S	S	19 00 53.3	+1.0

IDC 15 19:00:28.7±2.0,5.˚65S×150.˚89E,h0km,mb3.9/6, mb1 4.1/6,mb1mx3.8/17,mbtmp3.9/6,MS2.9/1,Ms1 2.9/1, ms1mx2.7/27,Error ellipse: s-maj=68.6km s-min=23.7km az=105.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.25**	**225**	Pn	Pn	19 01 52.9	+4.3
	12nm,0.3s,baz=46,slow=6.9,SNR=61						
PMG				Sn	Sb	19 02 58.9	-6.4
	5.9nm,0.3s,baz=139,slow=20,SNR=7.6						
HNR	**Honiara**	**9.73**	**113**	LR	LR	19 05 21.6	
	comp=Z,70nm,18.7s,baz=150,slow=30						
WRA	**Warramunga Arr**	**21.47**	**227**	P	P	19 05 19.8	+0.7
	4.3nm,0.7s,baz=51,slow=10,SNR=18						
ASAR	**Alice Springs**	**24.26**	**221**	P	P	19 05 48.4	+0.5
	3.8nm,0.6s,baz=57,slow=8.3,SNR=85						
STKA	**Stephens Creek**	**27.50**	**197**	P	P	19 06 16.0	-1.1
	1.2nm,0.7s,baz=10,slow=11,SNR=2.6						
FITZ	**Fitzroy Crossi**	**27.59**	**241**	P	P	19 06 17.3	-0.6
	2.2nm,0.6s,baz=60,slow=9.7,SNR=12						
MKAR	**Makanchi Array**	**79.72**	**319**	P	P	19 12 38.5	-0.2
	0.2nm,0.6s,baz=98,slow=4.4,SNR=3.1						
ZALV	**Zalesovo Beam**	**80.81**	**327**	P	P	19 12 43.7	-0.6
	0.6nm,0.5s,baz=136,slow=6.3,SNR=3.1						
TORD	**Torodi Ar. Bea**	**148.74**	**286**	PKP	PKPdf	19 20 15.4	0.0
	0.6nm,0.7s,baz=77,slow=3.1,SNR=2.5						
TORD				PKPbc	PKPbc	19 20 19.8	+0.5
	1.6nm,0.6s,baz=70,slow=3.3,SNR=9.9						

*ISCJB **15** 19:04:02.3±0.2,43.˚75N±0.˚01×105.˚31W±0.˚02,h0km, mb3.9/3,Error ellipse: s-maj=2.0km s-min=1.6km az=152.2*
*NEIC **15** 19:04:02.8±0.3,43.˚79N×105.˚19W,h0km,ML3.4,Error ellipse: s-maj=4.9km s-min=4.4km az=182.0,Suspected Mining explosion.*
NEIC 60 km [40 miles] SSE of Gillette.
*IDC **15** 19:04:04.2±0.9,44.˚03N×105.˚69W,h0km,mb3.8/3, mb1 3.8/9,mb1mx3.6/31,mbtmp3.6/9,ML3.1/5,Error ellipse: s-maj=23.6km s-min=8.3km az=146.0*

ISC 15 19:04:02.8±0.5,43.˚75N±0.˚01×105.˚32W±0.˚01,h0km,n219, σ0°83/276,mb3.9/3,104C-108D,Wyoming

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
I23A	**Meade Ranch, G**	**0.23**	**334**	P	**Pg**	**19 04 08.6**	**+1.4**
	baz=0.3,SNR=179						
I23A				⇓S	**Sg**	**19 04 10.9**	**+0.7**
	baz=0.3						
I23A	**Meade Ranch, G**	**0.23**	**334**	P	**Pg**	**19 04 08.6**	**+1.4**
	baz=0.3,SNR=179						
I23A				⇓S	**Sg**	**19 04 10.9**	**+0.7**
	baz=0.3						
J23A	**Dilts Ranch, B**	**0.39**	**206**	P	**Pg**	**19 04 10.7**	**+0.5**
	baz=0.5,SNR=261						
J23A				⇓S	**Sg**	**19 04 15.7**	**+0.6**
	baz=0.5						
J23A	**Dilts Ranch, B**	**0.39**	**206**	P	**Pg**	**19 04 10.7**	**+0.5**
	baz=0.5,SNR=261						
J23A				⇓S	**Sg**	**19 04 15.7**	**+0.6**
	baz=0.5						
I24A	**Kuemmerle Ranc**	**0.52**	**78**	P	**Pg**	**19 04 13.1**	**+0.4**
	baz=0.4,SNR=328						
I24A				⇑S	**Sg**	**19 04 20.4**	**+1.0**
	baz=0.4						
I24A	**Kuemmerle Ranc**	**0.52**	**78**	P	**Pg**	**19 04 13.1**	**+0.4**
	baz=0.4,SNR=328						
I24A				⇑S	**Sg**	**19 04 20.4**	**+1.0**
	baz=0.4						
J24A	**Dixon Ranch, L**	**0.64**	**131**	⇓P	**Pg**	**19 04 15.1**	**+0.1**
	baz=0.6,SNR=17						
J24A				⇑S	**Sg**	**19 04 23.6**	**+0.3**
	baz=0.6						
J24A	**Dixon Ranch, L**	**0.64**	**131**	⇓P	**Pg**	**19 04 15.1**	**+0.1**
	baz=0.6,SNR=17						
J24A				⇑S	**Sg**	**19 04 23.6**	**+0.3**
	baz=0.6						
H23A	**Clabaugh Cattl**	**0.81**	**356**	P	**Pg**	**19 04 18.6**	**+0.2**
	baz=0.8,SNR=23						
H23A				⇓S	**Sg**	**19 04 28.6**	**-0.2**
	baz=0.8						
H23A	**Clabaugh Cattl**	**0.81**	**356**	P	**Pg**	**19 04 18.6**	**+0.2**
	baz=0.8,SNR=23						
H23A				⇓S	**Sg**	**19 04 28.6**	**-0.2**
	baz=0.8						
I22A	**9 Mile Ranch,**	**0.85**	**280**	⇑P	**Pg**	**19 04 19.4**	**+0.3**
	baz=0.9,SNR=657						
I22A				⇑S	**Sg**	**19 04 30.7**	**+0.6**
	baz=0.9						
I22A	**9 Mile Ranch,**	**0.85**	**280**	⇑P	**Pg**	**19 04 19.4**	**+0.3**
	baz=0.9,SNR=657						
I22A				⇑S	**Sg**	**19 04 30.7**	**+0.6**
	baz=0.9						
J22A	**Midwest**	**0.91**	**248**	P	**Pg**	**19 04 19.8**	**-0.3**
	baz=1.0,SNR=212						
J22A				⇓S	**Sg**	**19 04 32.1**	**+0.3**
	baz=1.0						
J22A	**Midwest**	**0.91**	**248**	P	**Pg**	**19 04 19.8**	**-0.3**
	baz=1.0,SNR=212						
J22A				⇓S	**Sg**	**19 04 32.1**	**+0.3**
	baz=1.0						
RSSD	**Black Hills**	**1.00**	**68**	*e*Pn	**Pg**	**19 04 21.5**	**-0.5**
K23A	**Bowen Ranch, D**	**1.02**	**193**	⇓P	**Pg**	**19 04 22.1**	**-0.2**
	baz=1.1,SNR=23						
K23A	**Bowen Ranch, D**	**1.02**	**193**	⇓P	**Pg**	**19 04 22.1**	**-0.2**
	baz=1.1,SNR=23						
K24A	**Anderson Ranch**	**1.09**	**160**	⇑P	**Pg**	**19 04 23.4**	**-0.4**
	baz=1.1,SNR=29						
K24A				⇓S	**Sg**	**19 04 38.3**	**+0.4**
	baz=1.1						
K24A	**Anderson Ranch**	**1.09**	**160**	⇑P	**Pg**	**19 04 23.4**	**-0.4**
	baz=1.1,SNR=29						
K24A				⇓S	**Sg**	**19 04 38.3**	**+0.4**
	baz=1.1						
H22A	**Clearmont**	**1.12**	**319**	⇓P	**Pg**	**19 04 24.4**	**+0.1**
	baz=1.2,SNR=49						
H22A	**Clearmont**	**1.12**	**319**	⇓P	**Pg**	**19 04 24.4**	**+0.1**
	baz=1.2,SNR=49						
H24A	**Dirks Ranch, A**	**1.14**	**29**	⇑P	**Pg**	**19 04 24.0**	**-0.6**
	baz=1.1						
H24A				⇓S	**Sb**	**19 04 40.6**	**-0.2**
	baz=1.1						
H24A	**Dirks Ranch, A**	**1.14**	**29**	⇑P	**Pg**	**19 04 24.0**	**-0.6**
	baz=1.1						
H24A				⇓S	**Sb**	**19 04 40.6**	**-0.2**
	baz=1.1						
J25A	**Sunshine Ranch**	**1.16**	**108**	⇑P	**Pg**	**19 04 24.5**	**-0.5**
	baz=1.1,SNR=284						
J25A				⇓S	**Sg**	**19 04 40.6**	**+0.5**
	baz=1.1						
J25A	**Sunshine Ranch**	**1.16**	**108**	⇑P	**Pg**	**19 04 24.5**	**-0.5**
	baz=1.1,SNR=284						
J25A				⇓S	**Sg**	**19 04 40.6**	**+0.5**
	baz=1.1						
K22A	**Casper**	**1.41**	**219**	P	**Pn**	**19 04 28.8**	**-1.0**
	baz=1.5,SNR=316						
K22A				⇑S	**Sg**	**19 04 48.1**	**+0.1**
	baz=1.5						
K22A	**Casper**	**1.41**	**219**	P	**Pn**	**19 04 28.8**	**-1.0**
	baz=1.5,SNR=316						
K22A				⇑S	**Sg**	**19 04 48.1**	**+0.1**
	baz=1.5						
I21A	**Big Trails, Te**	**1.43**	**273**	⇑P	**Pn**	**19 04 28.6**	**-1.5**
	baz=1.5						
I21A				⇓S	**Sg**	**19 04 48.0**	**-0.6**
	baz=1.5						
I21A	**Big Trails, Te**	**1.43**	**273**	⇑P	**Pn**	**19 04 28.6**	**-1.5**
	baz=1.5						
I21A				⇓S	**Sg**	**19 04 48.0**	**-0.6**
	baz=1.5						
G23A	**Biddle**	**1.45**	**358**	⇓P	**Pn**	**19 04 29.6**	**-0.7**
	baz=1.4						
G23A	**Biddle**	**1.45**	**358**	⇓P	**Pn**	**19 04 29.6**	**-0.7**
	baz=1.4						
H21A	**Big Horn, Sher**	**1.52**	**306**	⇓Pb	**Pn**	**19 04 31.3**	**+0.1**
	baz=1.6,SNR=38						
H21A				⇑S	**Sg**	**19 04 50.6**	**-0.8**
	baz=1.6						
H21A	**Big Horn, Sher**	**1.52**	**306**	⇓Pb	**Pn**	**19 04 31.3**	**+0.1**
	baz=1.6,SNR=38						
H21A				⇑S	**Sg**	**19 04 50.6**	**-0.8**
	baz=1.6						
K25A	**Mack Ranch, Ha**	**1.56**	**137**	⇑Pb	**Pn**	**19 04 32.0**	**+0.1**
	baz=1.5,SNR=45						
K25A				⇓S	**Sn**	**19 04 52.1**	**-0.8**
	baz=1.5						
K25A	**Mack Ranch, Ha**	**1.56**	**137**	⇑Pb	**Pn**	**19 04 32.0**	**+0.1**
	baz=1.5,SNR=45						
K25A				⇓S	**Sn**	**19 04 52.1**	**-0.8**
	baz=1.5						
J21A	**Lysite**	**1.60**	**256**	P	**Pn**	**19 04 31.7**	**-0.7**
	baz=1.7,SNR=100						
J21A				⇑S	**Sn**	**19 04 53.1**	**-0.8**
	baz=1.7						
J21A	**Lysite**	**1.60**	**256**	P	**Pn**	**19 04 31.7**	**-0.7**
	baz=1.7,SNR=100						
J21A				⇑S	**Sn**	**19 04 53.1**	**-0.8**
	baz=1.7						
G22A	**Birney**	**1.62**	**335**	⇑Pb	**Pn**	**19 04 33.1**	**+0.4**
	baz=1.6,SNR=121						
G22A				⇓Sg	**Sg**	**19 04 57.2**	**+2.3**
	baz=1.6						
G22A	**Birney**	**1.62**	**335**	⇑Pb	**Pn**	**19 04 33.1**	**+0.4**
	baz=1.6,SNR=121						
G22A				⇓Sg	**Sg**	**19 04 57.2**	**+2.3**
	baz=1.6						
G24A	**Alzada**	**1.70**	**22**	⇓Pb	**Pn**	**19 04 34.3**	**+0.5**
	baz=1.6,SNR=64						
G24A				⇑Sb	**Sg**	**19 04 57.8**	**+0.3**
	baz=1.6						
G24A	**Alzada**	**1.70**	**22**	⇓Pb	**Pn**	**19 04 34.3**	**+0.5**
	baz=1.6,SNR=64						
G24A				⇑Sb	**Sg**	**19 04 57.8**	**+0.3**
	baz=1.6						
L24A	**Wheatland**	**1.73**	**170**	⇑Pb	**Pn**	**19 04 34.3**	**+0.1**
	baz=1.8,SNR=38						
L24A				⇑Sb	**Sb**	**19 04 57.9**	**0.0**
	baz=1.8						
L24A	**Wheatland**	**1.73**	**170**	⇑Pb	**Pn**	**19 04 34.3**	**+0.1**
	baz=1.8,SNR=38						
L24A				⇑Sb	**Sb**	**19 04 57.9**	**0.0**
	baz=1.8						
L25A	**Engebretsen Ra**	**1.88**	**148**	⇑Pb	**Pn**	**19 04 37.3**	**+1.0**
	baz=1.9,SNR=159						
L25A				⇓Sb	**Sb**	**19 05 02.6**	**+0.4**
	baz=1.9						
L25A	**Engebretsen Ra**	**1.88**	**148**	⇑Pb	**Pn**	**19 04 37.3**	**+1.0**
	baz=1.9,SNR=159						
L25A				⇓Sb	**Sb**	**19 05 02.6**	**+0.4**
	baz=1.9						
K26A	**Motz Farm, Whi**	**1.89**	**123**	⇓Pb	**Pn**	**19 04 37.2**	**+0.9**
	baz=1.8,SNR=65						
K26A				⇑Sb	**Sb**	**19 05 02.7**	**+0.4**
	baz=1.8						
K26A	**Motz Farm, Whi**	**1.89**	**123**	⇓Pb	**Pn**	**19 04 37.2**	**+0.9**
	baz=1.8,SNR=65						
K26A				⇑Sb	**Sb**	**19 05 02.7**	**+0.4**
	baz=1.8						
L22A	**Ellis Ranch, M**	**1.91**	**206**	⇓Pb	**Pn**	**19 04 37.4**	**+0.7**
	baz=2.0,SNR=60						
L22A				⇓Sb	**Sb**	**19 05 02.9**	**0.0**
	baz=2.0						
L22A	**Ellis Ranch, M**	**1.91**	**206**	⇓Pb	**Pn**	**19 04 37.4**	**+0.7**
	baz=2.0,SNR=60						
L22A				⇓Sb	**Sb**	**19 05 02.9**	**0.0**
	baz=2.0						
G21A	**Lodge Grass**	**2.00**	**318**	⇑P	**Pn**	**19 04 38.3**	**+0.5**
	baz=2.0,SNR=41						
G21A				⇓Sb	**Sb**	**19 05 06.2**	**+0.7**
	baz=2.0						
G21A	**Lodge Grass**	**2.00**	**318**	⇑P	**Pn**	**19 04 38.3**	**+0.5**
	baz=2.0,SNR=41						
G21A				⇓Sb	**Sb**	**19 05 06.2**	**+0.7**
	baz=2.0						
I20A	**Worland**	**2.04**	**277**	P	**Pn**	**19 04 39.3**	**+0.8**
	baz=2.1,SNR=220						
I20A				⇑Sb	**

M24A **Cheyenne** 2.31 171 ⇑P Pn 19 04 43.0 +0.7
baz=2.3
M24A **Cheyenne** 2.31 171 ⇑P Pn 19 04 43.0 +0.7
baz=2.3
L21A **Rawlins** 2.34 221 ⇓P Pn 19 04 43.4 +0.7
baz=2.4,SNR=41
L21A ⇓Sb Sb 19 05 15.0 -0.4
baz=2.4
L21A **Rawlins** 2.34 221 ⇓P Pn 19 04 43.4 +0.7
baz=2.4,SNR=41
L21A ⇓Sb Sb 19 05 15.0 -0.4
baz=2.4
L26A **Underwood Farm** 2.38 135 ⇑Pb Pb 19 04 45.5 -1.1
baz=2.3
L26A **Underwood Farm** 2.38 135 ⇑Pb Pb 19 04 45.5 -1.1
baz=2.3
F21A **Absaloka Mine,** 2.44 329 ⇓P Pn 19 04 43.5 -0.4
baz=2.5
F21A **Absaloka Mine,** 2.44 329 ⇓P Pn 19 04 43.5 -0.4
baz=2.5
PHWY **Pilot Hill** 2.45 182 *e*Pn Pn 19 04 44.9 +0.6
K20A **Yellowstone Ra** 2.46 245 ⇓Pb Pb 19 04 46.9 -1.2
baz=2.6
K20A **Yellowstone Ra** 2.46 245 ⇓Pb Pb 19 04 46.9 -1.2
baz=2.6
K27A **Flueckinger Fa** 2.49 114 ⇑P Pn 19 04 44.6 -0.1
baz=2.4,SNR=33
K27A **Flueckinger Fa** 2.49 114 ⇑P Pn 19 04 44.6 -0.1
baz=2.4,SNR=33
M25A **Palm-Egli Farm** 2.50 158 ⇑P Pn 19 04 45.7 +0.9
baz=2.5
M25A **Palm-Egli Farm** 2.50 158 ⇑P Pn 19 04 45.7 +0.9
baz=2.5
M22A **Cedar Creek Ra** 2.53 202 ⇓P Pn 19 04 46.8 +1.5
baz=2.6
M22A **Cedar Creek Ra** 2.53 202 ⇓P Pn 19 04 46.8 +1.5
baz=2.6
G20A **Bridger** 2.54 306 P Pn 19 04 45.2 -0.1
baz=2.6,SNR=194
G20A **Bridger** 2.54 306 P Pn 19 04 45.2 -0.1
baz=2.6,SNR=194
M21A **Separation Pea** 2.62 216 ⇑P Pn 19 04 48.0 +1.4
baz=2.7
M21A **Separation Pea** 2.62 216 ⇑P Pn 19 04 48.0 +1.4
baz=2.7
I19A **Meeteetse** 2.67 277 ⇓P Pn 19 04 48.2 +1.0
baz=2.8,SNR=34
I19A **Meeteetse** 2.67 277 ⇓P Pn 19 04 48.2 +1.0
baz=2.8,SNR=34
E22A **Miles City** 2.72 351 ⇑P Pn 19 04 47.4 -0.4
baz=2.7,SNR=16
E22A **Miles City** 2.72 351 ⇑P Pn 19 04 47.4 -0.4
baz=2.7,SNR=16
K19A **Absolon Red Bu** 2.73 251 ⇑P Pn 19 04 49.2 +1.1
baz=2.8
K19A **Absolon Red Bu** 2.73 251 ⇑P Pn 19 04 49.2 +1.1
baz=2.8
E23A **Ismay** 2.75 0 ⇑P Pn 19 04 48.3 +0.2
baz=2.7,SNR=18
E23A **Ismay** 2.75 0 ⇑P Pn 19 04 48.3 +0.2
baz=2.7,SNR=18
J19A **Crowheart** 2.76 261 ⇓P Pn 19 04 49.8 +1.4
baz=2.9
J19A **Crowheart** 2.76 261 ⇓P Pn 19 04 49.8 +1.4
baz=2.9
H19A **Powell** 2.79 290 ⇑P Pn 19 04 49.3 +0.5
baz=2.9,SNR=17
H19A **Powell** 2.79 290 ⇑P Pn 19 04 49.3 +0.5
baz=2.9,SNR=17
M26A **McRoberts Ranc** 2.79 144 ⇓P Pn 19 04 49.0 +0.2
baz=2.8
M26A **McRoberts Ranc** 2.79 144 ⇓P Pn 19 04 49.0 +0.2
baz=2.8
L20A **Wamsutter** 2.82 233 ⇓P Pn 19 04 51.3 +2.0
baz=2.9
L20A **Wamsutter** 2.82 233 ⇓P Pn 19 04 51.3 +2.0
baz=2.9
N23A **Red Feather La** 2.89 189 ⇓P Pn 19 04 51.4 +1.0
baz=2.9
N23A **Red Feather La** 2.89 189 ⇓P Pn 19 04 51.4 +1.0
baz=2.9
E24A **Baker** 2.90 14 ⇓P Pn 19 04 51.0 +0.8
baz=2.8,SNR=41
E24A **Baker** 2.90 14 ⇓P Pn 19 04 51.0 +0.8
baz=2.8,SNR=41
N24A **Carr** 2.94 173 ⇑Sb Sb 19 05 34.3 +1.5
baz=3.0
N24A **Carr** 2.94 173 ⇑Sb Sb 19 05 34.3 +1.5
baz=3.0
RLMT **Red Lodge** 3.14 297 *e*Pn Pn 19 04 54.2 +0.5
PDAR **Pinedale Array** 3.25 254 Pn Pn 19 04 57.1 +1.9
PDAR Lg Lg 19 05 41.9
PDAR **Pinedale Array** 3.25 254 Pn Pn 19 04 57.1 +1.9
9.8nm,0.3s,baz=67,slow=16,SNR=47
PDAR Lg Lg 19 05 41.9
8.8nm,0.3s,baz=77,slow=33,SNR=11
H18A **Shoshone NF, C** 3.25 288 ⇑P Pn 19 04 55.3 0.0
baz=3.3,SNR=7.9
H18A **Shoshone NF, C** 3.25 288 ⇑P Pn 19 04 55.3 0.0
baz=3.3,SNR=7.9
I18A **Diamond G Ranc** 3.26 271 ⇓P Pn 19 04 57.2 +1.9
baz=3.3
I18A **Diamond G Ranc** 3.26 271 ⇓P Pn 19 04 57.2 +1.9
baz=3.3
F19A **Roth Farm, Mol** 3.32 310 ⇑P Pn 19 04 56.7 +0.5
baz=3.4,SNR=18
F19A **Roth Farm, Mol** 3.32 310 ⇑P Pn 19 04 56.7 +0.5
baz=3.4,SNR=18
N21A **Black Mountain** 3.41 209 ⇑P Pn 19 04 58.8 +1.5
baz=3.5
N21A **Black Mountain** 3.41 209 ⇑P Pn 19 04 58.8 +1.5
baz=3.5
G18A **Lazy EL Ranch,** 3.41 299 ⇓P Pn 19 04 57.9 +0.5
baz=3.5,SNR=36
G18A **Lazy EL Ranch,** 3.41 299 ⇓P Pn 19 04 57.9 +0.5
baz=3.5,SNR=36
D23A **Lindsay** 3.42 1 ⇑P Pn 19 04 58.1 +0.7
baz=3.4,SNR=12
D23A **Lindsay** 3.42 1 ⇑P Pn 19 04 58.1 +0.7
baz=3.4,SNR=12
D24A **Glendive** 3.44 11 ⇓P Pn 19 04 58.5 +1.0
baz=3.4,SNR=38
D24A **Glendive** 3.44 11 ⇓P Pn 19 04 58.5 +1.0
baz=3.4,SNR=38
D22A **Cohagen** 3.45 350 ⇓P Pn 19 04 58.2 +0.4
baz=3.4,SNR=16
D22A **Cohagen** 3.45 350 ⇓P Pn 19 04 58.2 +0.4
baz=3.4,SNR=16
N27A **Anderson Farm,** 3.60 144 ⇓P Pn 19 05 00.6 +0.7
baz=3.6,SNR=22
N27A **Anderson Farm,** 3.60 144 ⇓P Pn 19 05 00.6 +0.7
baz=3.6,SNR=22
E19A **Rath Farm, Rou** 3.65 319 ⇓P Pn 19 05 00.1 -0.6
baz=3.7,SNR=13
E19A **Rath Farm, Rou** 3.65 319 ⇓P Pn 19 05 00.1 -0.6
baz=3.7,SNR=13
GCMT **Greycliff** 3.70 305 *e*Pn Pn 19 05 02.0 +0.6
OGNE **Ogallala** 3.72 138 *e*Pn Pn 19 05 02.2 +0.7
OGNE **Ogallala** 3.72 138 ⇓P Pn 19 05 01.8 +0.3
baz=3.7,SNR=18
OGNE **Ogallala** 3.72 138 ⇓P Pn 19 05 01.8 +0.3
baz=3.7,SNR=18
LKWY **Lake** 3.74 284 *e*Pn Pn 19 05 03.8 +1.8
C24A **Savage** 3.83 9 ⇓P Pn 19 05 04.0 +1.0
baz=3.8,SNR=14
C24A **Savage** 3.83 9 ⇓P Pn 19 05 04.0 +1.0
baz=3.8,SNR=14
LOHW **Long Hollow** 3.83 270 *e*Pn Pn 19 05 04.6 +1.4
D20A **Manuel Ranch,** 3.88 330 ⇑P Pn 19 05 03.3 -0.4
baz=3.9,SNR=18
D20A **Manuel Ranch,** 3.88 330 ⇑P Pn 19 05 03.3 -0.4
baz=3.9,SNR=18
MOOW **Moose Ponds** 3.93 272 *e*Pn Pn 19 05 06.2 +1.6
SNOW **Snow King Moun** 3.96 268 P Pn 19 05 05.7 +0.7
ISCO **Idaho Springs** 3.96 183 *e*Pn Pn 19 05 05.8 +0.8
C22A **Vida** 4.01 355 ⇑P Pn 19 05 06.2 +0.7
baz=4.0,SNR=18
C22A **Vida** 4.01 355 ⇑P Pn 19 05 06.2 +0.7
baz=4.0,SNR=18
C23A **Lambert** 4.05 1 ⇑P Pn 19 05 07.2 +1.2
baz=4.0,SNR=26
C23A **Lambert** 4.05 1 ⇑P Pn 19 05 07.2 +1.2
baz=4.0,SNR=26
IMW **Indian Meadow** 4.07 274 *e*Pn Pn 19 05 08.4 +1.9
TPAW **Teton Pass** 4.09 268 *e*Pn Pn 19 05 08.1 +1.2
O27A **Beecher Island** 4.14 148 ⇓P Pn 19 05 08.0 +0.6
baz=4.1,SNR=14
O27A **Beecher Island** 4.14 148 ⇓P Pn 19 05 08.0 +0.6
baz=4.1,SNR=14
E18A **Harlowton** 4.30 313 ⇑P Pn 19 05 10.1 +0.6
baz=4.3,SNR=16
E18A **Harlowton** 4.30 313 ⇑P Pn 19 05 10.1 +0.6
baz=4.3,SNR=16
F17A **Fitzpatrick Pl** 4.36 301 ⇑P Pn 19 05 11.4 +1.0
baz=4.4,SNR=25
F17A **Fitzpatrick Pl** 4.36 301 ⇑P Pn 19 05 11.4 +1.0
baz=4.4,SNR=25
RRI2 **Red Ridge** 4.38 267 *e*Pn Pn 19 05 11.6 +0.9
P26A **Davis Ranch, A** 4.44 160 ⇓P Pn 19 05 11.7 +0.2
baz=4.4,SNR=21
P26A **Davis Ranch, A** 4.44 160 ⇓P Pn 19 05 11.7 +0.2
baz=4.4,SNR=21
BOZ **Bozeman (W)** 4.88 295 *e*Pn Pn 19 05 17.2 -0.3
Q25A **Bedland, Calha** 4.90 170 ⇑P Pn 19 05 17.7 -0.2
baz=4.9,SNR=6.2
Q25A **Bedland, Calha** 4.90 170 ⇑P Pn 19 05 17.7 -0.2
baz=4.9,SNR=6.2
HWUT **Hardware Ranch** 5.08 247 *e*Pn Pn 19 05 20.6 +0.3
15nm,0.6s
D17A **Six Diamond Ra** 5.08 314 ⇑P Pn 19 05 20.5 +0.2
baz=5.1,SNR=25
D17A **Six Diamond Ra** 5.08 314 ⇑P Pn 19 05 20.5 +0.2
baz=5.1,SNR=25
EGMT **Eagleton** 5.27 326 *e*Pn Pn 19 05 23.3 +0.4
18nm,0.7s
E16A **East Helena** 5.28 304 ⇑P Pn 19 05 23.4 +0.3
baz=5.3,SNR=11
E16A **East Helena** 5.28 304 ⇑P Pn 19 05 23.4 +0.3
baz=5.3,SNR=11
Q28A **Sharon Springs** 5.37 150 ⇑P Pn 19 05 23.8 -0.5
baz=5.4,SNR=8.6
Q28A **Sharon Springs** 5.37 150 ⇑P Pn 19 05 23.8 -0.5
baz=5.4,SNR=8.6
C17A **Wharram Farm,** 5.44 317 ⇑P Pn 19 05 25.2 +0.1
baz=5.5,SNR=7.0
C17A **Wharram Farm,** 5.44 317 ⇑P Pn 19 05 25.2 +0.1
baz=5.5,SNR=7.0
DLMT **Dillon** 5.44 290 *e*Pn Pn 19 05 26.8 +1.6
7.7nm,0.7s
LRM **Limekiln Ridge** 5.48 295 *e*Pn Pn 19 05 26.6 +0.7
44nm,0.5s
MCMT **McKenzie Canyo** 5.51 284 *e*Pn Pn 19 05 29.6 +3.4
3.2nm,0.5s
DAU **Daniels Canyon** 5.53 235 *e*Pn Pn 19 05 28.3 +1.6
12nm,0.6s
B18A **Beardsley Farm** 5.58 328 ⇑P Pn 19 05 27.0 0.0
baz=5.6,SNR=8.8
B18A **Beardsley Farm** 5.58 328 ⇑P Pn 19 05 27.0 0.0
baz=5.6,SNR=8.8
R26A **Arlington** 5.63 165 ⇓P Pn 19 05 27.9 +0.1
baz=5.6,SNR=19
R26A **Arlington** 5.63 165 ⇓P Pn 19 05 27.9 +0.1
baz=5.6,SNR=19
R25A **Fountain Ranch** 5.66 172 ⇓P Pn 19 05 28.2 0.0
baz=5.7,SNR=6.6
R25A **Fountain Ranch** 5.66 172 ⇓P Pn 19 05 28.2 0.0
baz=5.7,SNR=6.6
HVU **Hansel Valley** 5.83 253 *e*Pn Pn 19 05 31.6 +1.1
9.3nm,0.7s
PV04 **Paradox Valley** 6.00 208 *e*Pn Pn 19 05 32.3 -0.6
R28A **Tribune** 6.02 153 ⇑P Pn 19 05 32.7 -0.4
baz=6.0,SNR=20
R28A **Tribune** 6.02 153 ⇑P Pn 19 05 32.7 -0.4
baz=6.0,SNR=20
SRU **San Rafael** 6.06 222 ⇑P Pn 19 05 34.3 +0.4
baz=6.2,SNR=8.9
SRU **San Rafael** 6.06 222 ⇑P Pn 19 05 34.3 +0.4
baz=6.2,SNR=8.9
S25A **Robets Cordova** 6.12 173 ⇑P Pn 19 05 34.3 -0.4
baz=6.2,SNR=6.3
S25A **Robets Cordova** 6.12 173 ⇑P Pn 19 05 34.3 -0.4
baz=6.2,SNR=6.3
PV01 **Paradox Valley** 6.13 205 *e*Pn Pn 19 05 36.0 +1.3
682nm,0.6s
ECSD **EROS Data Cent** 6.31 87 *e*Pn Pn 19 05 36.1 -0.9
9.1nm,0.6s
CHMT **Chamberlain Mo** 6.42 302 *e*Pn Pn 19 05 39.4 +0.6
5.9nm,1.0s
B16A **M & M Farms, S** 6.43 319 ⇑P Pn 19 05 38.5 -0.3
baz=6.5,SNR=21
B16A **M & M Farms, S** 6.43 319 ⇑P Pn 19 05 38.5 -0.3
baz=6.5,SNR=21
DUG **Dugway** 6.62 240 *e*Pn Pn 19 05 41.7 +0.3
3.5nm,0.6s
DUG **Dugway** 6.62 240 ⇓P Pn 19 05 41.5 +0.2
baz=6.7,SNR=8.0
DUG **Dugway** 6.62 240 ⇓P Pn 19 05 41.5 +0.2
baz=6.7,SNR=8.0
D14A **Greenough** 6.65 303 ⇓P Pn 19 05 42.1 +0.3
baz=6.7,SNR=11
D14A **Greenough** 6.65 303 ⇓P Pn 19 05 42.1 +0.3
baz=6.7,SNR=11
SLMT **Seeley Lake** 6.72 304 *e*Pn Pn 19 05 43.1 +0.4
5.8nm,0.5s
S18A **Hurst Farm, Bl** 7.02 212 ⇓P Pn 19 05 47.0 0.0
baz=7.1,SNR=13
S18A **Hurst Farm, Bl** 7.02 212 ⇓P Pn 19 05 47.0 0.0
baz=7.1,SNR=13
YBMT **Yellow Bay** 7.33 307 *e*Pn Pn 19 05 52.1 +1.0
3.6nm,0.3s
MSU **Marysvale** 7.36 227 *e*Pn Pn 19 05 52.2 +0.6
163nm,0.6s
ULM **Lac du Bonnet** 9.15 41 Pn Pn 19 06 15.2 -0.8
ULM Lg Lg 19 08 46.9
ULM **Lac du Bonnet** 9.15 41 Pn Pn 19 06 15.2 -0.8
0.9nm,0.3s,baz=238,slow=11,SNR=4.3
ULM Lg Lg 19 08 46.9
0.6nm,0.3s,baz=126,slow=19,SNR=2.6
NVAR **Mina Array Bea** 11.14 246 Pn Pn 19 06 44.4 +0.9
NVAR **Mina Array Bea** 11.14 246 Pn Pn 19 06 44.4 +0.9
0.1nm,0.3s,baz=50,slow=13,SNR=8.8
YBH **Yreka Blue Hor** 12.94 267 Pn Pn 19 07 11.0 +3.0
YBH **Yreka Blue Hor** 12.94 267 Pn Pn 19 07 11.0 +3.0
0.1nm,0.3s,baz=80,slow=7.6,SNR=7.4
TXAR **Lajitas Array** 14.45 174 Pn P 19 07 36.9 +1.1
TXAR **Lajitas Array** 14.45 174 Pn P 19 07 36.9 +1.1
0.0nm,0.3s,baz=359,slow=8.1,SNR=3.4
YKA **Yellowknife Ar** 19.54 347 P P 19 08 30.9 -0.7
YKA **Yellowknife Ar** 19.54 347 P P 19 08 30.9 -0.7
0.1nm,0.3s,baz=163,slow=13,SNR=4.3
ZALV **Zalesovo Beam** 82.29 354 P P 19 16 24.7 -1.1
ZALV **Zalesovo Beam** 82.29 354 P P 19 16 24.7 -1.1
0.8nm,0.6s,baz=354,slow=5.6,SNR=5.1
SONM **Songino Array** 84.61 339 P P 19 16 38.3 +0.3
SONM **Songino Array** 84.61 339 P P 19 16 38.3 +0.3
0.3nm,0.7s,baz=28,slow=6.5,SNR=3.0
MKAR **Makanchi Array** 89.59 355 P P 19 17 01.4 -0.7
MKAR **Makanchi Array** 89.59 355 P P 19 17 01.4 -0.7
0.5nm,0.6s,baz=9.5,slow=4.2,SNR=8.4

IDC ***15*** *19:14:02.9±0.6,22.°91S×175.°22W,h0km,mb4.3/18, mb1 4.5/18,mb1mx4.4/23,mbtmp4.3/18,MS4.1/19, Ms1 4.1/19,ms1mx3.9/34,Error ellipse: s-maj=29.0km s-min=15.2km az=146.0*

ISCJB ***15*** *19:14:06.3±0.4,22.°98S±0.°09×175.°18W±0.°08,h30km, mb4.4/25,MS4.1/17,Error ellipse: s-maj=13.8km s-min=9.9km az=150.3*

NEIC ***15*** *19:14:14.9±2.6,22.°93S×175.°29W,h91km±21km,mb4.5/8, Error ellipse: s-maj=20.7km s-min=12.0km az=137.0*

AUST ***15*** *19:14:15.5,21.°71S×174.°92W,h100km*

ISC 15 19:14:07.8±0.5,23.°0S±0.°1×175.°0W±0.°1,h30km,n92, σ1§21/72,mb4.4/24,MS4.2/17,5C,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	6.16	52	P	Pn	Pn	19 15 29.2	-7.5
	baz=5.4,SNR=14							
MSVF	**Nonsavu**	8.34	308	*e*P	Pn	Pn	19 16 09.2	+2.4
	228nm,1.1s							
AFI	**Afiamalu**	9.55	19	Pn	Pn	Pn	19 16 15.9	-7.5
AFI	**Afiamalu**	9.55	19	Pn	Pn	Pn	19 16 15.9	-7.5
	15nm,0.3s,baz=29,slow=2.4,SNR=12							
AFI					LR	LR	19 19 35.0	
	comp=Z,878nm,20.4s,baz=202,slow=35							
RAR	**Rarotonga**	14.25	86	LR		LR	19 21 10.0	
	comp=Z,725nm,18.0s,baz=132,slow=30							
NFK	**Norfolk Island**	16.45	245	P		P	19 18 11.7	+13
	baz=17,SNR=3.9							
URZ	**Urewera**	16.64	202	*e*P		Pn	19 17 53.7	-5.1
DZM	**Mont Dzumac**	17.15	269	*e*P		P	19 18 13.0	+6.2
DZM				*e*LR		LR	19 21 28.2	
	2µm,25.9s							
DZM	**Mont Dzumac**	17.15	269	*e*P		P	19 18 09.7	+2.8
	78nm,1.7s							
DZM	**Mont Dzumac**	17.15	269	Pn		P	19 18 07.2	+0.4
	0.2nm,0.3s,baz=81,slow=19,SNR=6.2							
TBI	**Tubuai**	23.50	96	*e*LQ		LQ	19 23 35.2	
	1µm,27.2s							
TBI				*e*LR		LR	19 24 34.2	
	790nm,26.2s							
PAE	**Paea**	24.43	82	*e*T		T	19 44 48.7	
	4.8nm,0.3s							
PPT2	**Papeete2**	24.45	82	*e*LQ		LQ	19 24 00.5	
	1µm,25.2s							
PPT2				*e*S		S	19 24 07.7	+25
PPT2				*e*LR		LR	19 25 10.7	
	654nm,24.8s							
PPT	**Papeete**	24.46	82	LR		LR	19 26 22.5	
	comp=Z,509nm,20.1s,baz=359,slow=30							
HNR	**Honiara**	27.50	295	LR		LR	19 29 05.4	
	comp=Z,84nm,20.1s,baz=123,slow=33							
RMQ	**Roma**	33.01	256	P		P	19 20 43.5	+3.1
	baz=33,SNR=5.6							
RKT	**Rikitea**	36.77	98	*e*LR		LR	19 30 41.6	
	487nm,26.5s							
QLP	**Quilpie**	37.05	256	P		P	19 21 15.1	-0.2
	baz=37,SNR=4.4							
MTSU	**Mount Surprise**	38.29	270	P		P	19 21 26.1	+0.2
	baz=38,SNR=4.1							
STKA	**Stephens Creek**	39.29	247	P		P	19 21 34.0	-0.1
STKA	**Stephens Creek**	39.29	247	P		P	19 21 34.0	-0.1
	2.8nm,0.8s,baz=91,slow=10,SNR=4.3							
STKA				LR		LR	19 37 01.7	
	comp=Z,248nm,19.3s,baz=299,slow=35							
AS31	**Alice Springs**	46.69	259	*e*P		P	19 22 31.4	-2.7
ASAR	**Alice Springs**	46.69	259	P		P	19 22 31.7	-2.5
ASAR	**Alice Springs**	46.69	259	P		P	19 22 31.7	-2.5
	3.4nm,0.9s,baz=96,slow=7.5,SNR=27							
ASAR				LR		LR	19 40 48.7	
	comp=Z,270nm,19.4s,baz=292,slow=34							
WRAB	**Tennant Creek**	47.03	264	*e*P		P	19 22 33.6	-3.2
	7.7nm,0.8s							
WRA	**Warramunga Arr**	47.04	264	P		P	19 22 33.6	-3.3
WRA	**Warramunga Arr**	47.04	264	P		P	19 22 33.6	-3.3
	2.6nm,0.6s,baz=96,slow=8.5,SNR=12							
KNRA	**Kununurra**	53.28	267	P		P	19 23 22.0	-2.2
	baz=53,SNR=5.8							
FITZ	**Fitzroy Crossi**	55.46	263	P		P	19 23 37.6	-2.5
FITZ	**Fitzroy Crossi**	55.46	263	P		P	19 23 37.6	-2.5
	2.1nm,0.6s,baz=11,slow=21,SNR=7.3							
FITZ	**Fitzroy Crossi**	55.46	263	P		P	19 23 38.8	-1.3
	baz=56,SNR=5.1							
VNDA	**Vanda**	55.70	186	P		P	19 23 41.2	+0.3
VNDA	**Vanda**	55.70	186	P		P	19 23 41.2	+0.3
	1.5nm,0.9s,baz=9.3,slow=6.6,SNR=7.2							
VNDA				LR		LR	19 43 25.4	
	comp=Z,93nm,18.2s,baz=0.3,slow=32							
QSPA	**South Pole Qui**	67.08	180	*e*P		P	19 24 59.2	+1.0
	5.7nm,0.9s							
ASAJ	**Asahikawa**	77.25	330	*e*P		P	19 25 58.0	-1.0
	15nm,1.3s							
PFO	**Pinyon Flat Ob**	79.22	46	P		P	19 26 10.3	-0.1
PFO	**Pinyon Flat Ob**	79.22	46	P		P	19 26 10.3	-0.1
	1.7nm,0.4s,baz=161,slow=11,SNR=9.5							
PFO				LR		LR	19 53 51.7	
	comp=Z,56nm,21.1s,baz=286,slow=30							
PETK	**Petropavlovsk-**	79.41	344	P		P	19 26 10.3	-0.4
PETK	**Petropavlovsk-**	79.41	344	P		P	19 26 10.3	-0.4
	4.6nm,0.8s,baz=126,slow=7.5,SNR=7.1							
PETK				LR		LR	19 58 32.6	
	comp=Z,44nm,18.7s,baz=262,slow=34							
MAW	**Mawson**	80.14	199	P		P	19 26 15.4	+0.7
MAW	**Mawson**	80.14	199	P		P	19 26 15.4	+0.7
	3.8nm,0.8s,baz=126,slow=4.4,SNR=4.1							
MAW				LR		LR	20 02 07.5	
	comp=Z,204nm,18.6s,baz=212,slow=36							
YBH	**Yreka Blue Hor**	80.56	37	*e*P		P	19 26 17.3	-0.1
	1.8nm,0.8s							
YBH	**Yreka Blue Hor**	80.56	37	P		P	19 26 17.2	-0.2
	2.1nm,0.8s,baz=297,slow=2.9,SNR=8.3							
YBH				LR		LR	19 54 20.3	
	comp=Z,81nm,18.5s,baz=209,slow=30							
NVAR	**Mina Array Bea**	80.99	42	P		P	19 26 19.8	-0.1
NVAR	**Mina Array Bea**	80.99	42	P		P	19 26 19.8	-0.1
	2.0nm,0.8s,baz=226,slow=8.7,SNR=13							
USRK	**Ussuriysk Arra**	82.58	325	P		P	19 26 28.2	+0.5
	5.0nm,0.9s,baz=139,slow=4.1,SNR=11							
WVOR	**Wild Horse Val**	83.31	38	*e*P		P	19 26 32.2	+0.3
	6.1nm,1.3s							
ELK	**Elko**	84.28	41	P		P	19 26 37.8	+0.8
ELK	**Elko**	84.28	41	P		P	19 26 37.8	+0.8
	1.2nm,0.7s,baz=243,slow=4.2,SNR=6.4							
BBB	**Bella Bella**	85.33	27	LR		LR	20 01 14.8	
	comp=Z,97nm,18.1s,baz=66,slow=33							
SNAA	**Sanae**	85.43	178	*e*P		P	19 26 42.4	+0.2
PLCA	**Paso Flores**	85.56	132	LR		LR	19 54 37.9	
	comp=Z,231nm,21.2s,baz=185,slow=28							
TXAR	**Lajitas Array**	86.11	56	P		P	19 26 46.4	+0.2
TXAR	**Lajitas Array**	86.11	56	P		P	19 26 46.4	+0.2
	1.4nm,1.1s,baz=209,slow=7.2,SNR=7.8							
TXAR				LR		LR	19 58 58.6	
	comp=Z,185nm,19.9s,baz=350,slow=31							
VNA1	**Neumayer--Stat**	86.14	176	*e*P		P	19 26 47.4	+1.8
ANMO	**Albuquerque**	86.84	50	P		P	19 26 51.4	+1.5
ANMO	**Albuquerque**	86.84	50	P		P	19 26 51.4	+1.5
	1.0nm,0.6s,baz=342,slow=3.2,SNR=4.1							
ANMO				LR		LR	19 58 26.0	
	comp=Z,163nm,18.6s,baz=231,slow=31							
SML	**Sawmill**	87.19	12	*e*P		P	19 26 49.1	-1.5
	1.5nm,0.7s							
NEW	**Newport**	87.81	35	LR		LR	19 57 33.2	
	comp=Z,84nm,19.7s,baz=184,slow=30							
PDAR	**Pinedale Array**	88.92	42	P		P	19 26 58.7	-0.9
PDAR	**Pinedale Array**	88.92	42	P		P	19 26 58.7	-0.9
	0.7nm,0.7s,baz=261,slow=3.4,SNR=4.3							
PDAR				LR		LR	20 00 33.7	
	comp=Z,88nm,18.2s,baz=146,slow=31							
ILAR	**Eielson Array**	90.16	12	P		P	19 27 04.3	-0.2
ILAR	**Eielson Array**	90.16	12	P		P	19 27 04.3	-0.2
	4.3nm,1.2s,baz=217,slow=4.2,SNR=10							
ILAR				LR		LR	20 03 06.0	
	comp=Z,65nm,18.6s,baz=180,slow=33							
EGAK	**Eagle**	91.33	14	*e*P		P	19 27 10.7	+0.7
	11nm,0.1s							
CMAR	**Chiang Mai Arr**	93.54	288	P		P	19 27 21.8	+0.5
CMAR	**Chiang Mai Arr**	93.54	288	P		P	19 27 21.8	+0.5
	3.9nm,1.1s,baz=114,slow=2.7,SNR=15							
CHTO	**Chiang Mai**	93.68	289	*e*P		P	19 27 21.0	-1.0
	14nm,1.6s							
YKA	**Yellowknife Ar**	97.64	24	P		Pdif	19 27 39.1	+0.1
YKA	**Yellowknife Ar**	97.64	24	P		Pdif	19 27 39.1	+0.1
	0.1nm,0.3s,baz=226,slow=3.8,SNR=3.7							
LPAZ	**La Paz**	98.56	112	LR		LR	20 01 07.9	
	comp=Z,97nm,21.8s,baz=303,slow=29							
MKAR	**Makanchi Array**	114.92	312	PKP		PKPdf	19 32 44.2	-1.4
MKAR	**Makanchi Array**	114.92	312	PKP		PKPdf	19 32 44.2	-1.4
	0.1nm,0.4s,baz=46,slow=4.2,SNR=2.9							
SUW	**Suwalki**	146.12	341	*e*PKPbc		PKPab	19 33 44.8	-0.5
AKASG	**Malin Array Be**	146.52	332	PKPbc		PKPdf	19 33 44.5	0.0
AKASG	**Malin Array Be**	146.52	332	PKPbc		PKPdf	19 33 44.5	0.0
	1.4nm,0.6s,baz=39,slow=3.7,SNR=8.3							
AK01	**Malin Array Si**	146.53	332	*e*PKPdf		PKPdf	19 33 44.7	+0.2
KIEV	**Kiev**	146.53	332	*e*PKPdf		PKPbc	19 33 45.0	-0.9
AK02	**Malin Array Si**	146.56	332	*e*PKPdf		PKPdf	19 33 45.0	+0.4
BR131	**Keskin Array S**	150.56	311	*e*PKPbc		PKPbc	19 33 54.5	-2.5
BRTR	**Keskin Array B**	150.56	311	PKPbc		PKPbc	19 33 56.1	-0.9
BRTR	**Keskin Array B**	150.56	311	PKPbc		PKPbc	19 33 56.1	-0.9
	2.4nm,1.1s,baz=111,slow=2.8,SNR=7.0							
BUR08	**Bucovina Ar. S**	150.56	332	*e*PKPbc		PKPbc	19 33 56.9	+0.1
UPC	**Upice**	151.22	345	*e*PKP		PKPbc	19 33 58.7	+0.7
UPC				*e*PKPAB		PKPab	19 34 07.2	+1.3
OKC	**Ostrava-Krasne**	151.28	342	*e*PKP		PKPbc	19 33 58.6	+0.4
OKC				*ex*		x	19 34 10.1	
DPC	**Dobruska-Polom**	151.29	345	*e*PKP		PKPbc	19 33 59.0	+0.7
DPC				*e*PKPAB		PKPab	19 34 07.8	+1.5
DPC				*ep*PKP		pPKPdf	19 34 15.6	+13
BRG	**Berggiesshubel**	151.31	348	*e*P		PKPbc	19 33 58.6	+0.3
	3.2nm,0.8s							
BRG				*e*			19 34 07.8	
	5.3nm,0.8s							
MORC	**Moravsky Berou**	151.50	343	*e*PKPbc		PKPbc	19 33 58.7	-0.1
PRU	**Pruhonice**	152.03	347	*e*PKP		PKP

0.4nm,0.9s,baz=45,slow=1.5,SNR=4.1

IDC 15 19:16:02.8±2.1, 16.15N×87.34W, h0km, mb4.1/6, mb1 4.3/9, mb1mx3.9/26, mbtmp4.0/9, ML3.9/2, MS3.3/1, Ms1 3.4/1, ms1mx2.6/36, Error ellipse: s-maj=41.2km s-min=37.5km az=124.0, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**4.15**	**348**	Pn	Pn	19 17 07.0	-0.4
	16nm,0.3s,baz=168,slow=1.7,SNR=94						
TEIG				Sn	Sn	19 17 55.0	-1.7
	28nm,0.3s,baz=260,slow=24,SNR=16						
TKL	**Tuckaleechee C**	**19.69**	**9**	P	P	19 20 34.2	+0.6
	0.2nm,0.3s,baz=198,slow=16,SNR=1.7						
TXAR	**Lajitas Array**	**19.94**	**314**	P	P	19 20 36.5	0.0
	0.1nm,0.3s,baz=138,slow=8.4,SNR=26						
SADO	**Sadowa**	**29.36**	**12**	P	P	19 22 07.2	-0.2
	2.6nm,0.7s,baz=266,slow=13,SNR=2.5						
NVAR	**Mina Array Bea**	**35.08**	**315**	P	P	19 22 59.0	+0.9
	0.6nm,0.7s,baz=82,slow=9.2,SNR=5.3						
LPAZ	**La Paz**	**37.39**	**149**	LR	LR	19 41 05.3	
	comp=Z,41nm,18.5s,baz=240,slow=40						
SCHQ	**Schefferville**	**41.73**	**18**	P	P	19 23 54.3	+0.8
	2.4nm,0.9s,baz=194,slow=4.9,SNR=4.1						
YKA	**Yellowknife Ar**	**50.10**	**344**	P	P	19 24 58.9	-0.5
	1.2nm,0.5s,baz=139,slow=7.7,SNR=12						
DLBC	**Dease Lake**	**52.65**	**333**	P	P	19 25 19.2	+0.5
	7.0nm,0.8s,baz=166,slow=8.3,SNR=6.8						
ILAR	**Eielson Array**	**62.71**	**335**	P	P	19 26 28.6	-0.6
	1.7nm,0.9s,baz=103,slow=6.1,SNR=13						
WRA	**Warramunga Arr**	**140.26**	**258**	PKP	PKPdf	19 35 33.7	-0.9
	1.0nm,0.9s,baz=82,slow=1.9,SNR=4.3						
ASAR	**Alice Springs**	**140.61**	**252**	PKP	PKPdf	19 35 33.6	-1.5
	0.5nm,0.6s,baz=105,slow=2.1,SNR=7.7						
CMAR	**Chiang Mai Arr**	**145.06**	**350**	PKPbc	PKPbc	19 35 41.0	-1.4
	0.5nm,0.7s,baz=344,slow=4.3,SNR=3.7						

MAN 15 19:39:24, 18.61N×121.03E, h12km, mb3.9, ML2.7, MS2.3, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**0.48**	**234**	↑*iP*	Pg	19 39 33.4	-0.1
APYP	**Conner**	**0.77**	**165**	*eP*	Pg	19 39 39.0	0.0
APYP				*eS*	Sn	19 39 52.4	+0.2
ABRA	**Dolores**	**1.00**	**198**	*eP*	Pb	19 39 43.1	-0.2
ABRA				*eS*	Sn	19 39 59.7	+1.8

*IDC **15** 19:47:50.6±1.1, 2.94N×127.85E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.6/23, mbtmp3.8/6, Error ellipse: s-maj=85.3km s-min=17.7km az=71.0*
*AUST **15** 19:47:57.4±2.7, 3.60N×127.87E, h124km, Error ellipse: s-maj=3.5km s-min=1.8km az=359.0*
ISC 15 19:47:60.0±0.8, 2.64N±0.09×127.3E±0.2, h49km, n20, σ2.9 09/19, mb3.5/5, 1C, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**4.40**	**347**	*eP*	**Pn**	**19 49 05.4**	**+1.1**
MATI				*eS*	**Sn**	**19 49 54.5**	**+0.2**
CTBH	**Cotabato--PC H**	**5.47**	**326**	↑*iP*	**Pn**	**19 49 20.8**	**+1.8**
LUWI	**Luwuk**	**5.81**	**231**	P	Pn	19 49 37.7	+14
	baz=6.9,SNR=7.9						
PAGZ	**Pagadian**	**6.47**	**323**	*eP*	**Pn**	**19 49 34.3**	**+1.5**
IPIL	**Ipil**	**6.95**	**318**	*eP*	**Pn**	**19 49 41.6**	**+2.4**
IPIL				*eS*	**Sn**	**19 50 56.9**	**0.0**
FAKI	**Fak Fak**	**7.42**	**138**	P	**Pn**	**19 49 48.1**	**+2.4**
	baz=7.9,SNR=14						
WSI	**Waingapu**	**14.07**	**210**	S	S	19 54 37.5	+27
	baz=15,SNR=3.1						
MTN	**Manton Dam**	**15.85**	**166**	P	**P**	**19 51 47.1**	**+4.1**
	baz=17,SNR=4.6						
KDU	**Kakadu**	**16.07**	**161**	P	**P**	**19 51 47.0**	**+1.6**
	baz=17,SNR=4.8						
KNRA	**Kununurra**	**18.26**	**175**	P	**Pn**	**19 52 10.7**	**+0.8**
	baz=19,SNR=5.6						
FITZ	**Fitzroy Crossi**	**20.67**	**184**	P	**P**	**19 52 36.4**	**+0.5**
	3.2nm,0.9s,baz=5.3,slow=7.8,SNR=10						
FITZ	**Fitzroy Crossi**	**20.67**	**184**	P	Pn	19 52 37.4	-1.3
	baz=22,SNR=5.6						
WRA	**Warramunga Arr**	**23.48**	**163**	P	**P**	**19 53 03.7**	**-1.9**
	1.0nm,0.6s,baz=344,slow=11,SNR=9.1						
ASAR	**Alice Springs**	**26.93**	**167**	P	**P**	**19 53 35.0**	**-1.8**
	0.2nm,0.4s,baz=344,slow=7.2,SNR=14						
ASAR				PcP	**PcP**	**19 56 55.2**	**-2.9**
	0.3nm,0.4s,baz=351,slow=2.0,SNR=11						
MEEK	**Meekatharra**	**30.29**	**196**	P	**P**	**19 54 06.6**	**-0.1**
	baz=32,SNR=3.2						
BBOO	**Buckleboo**	**36.22**	**167**	P	**P**	**19 54 56.5**	**-1.8**
	baz=37,SNR=6.4						
STKA	**Stephens Creek**	**36.92**	**160**	P	**P**	**19 55 02.2**	**-2.1**
	2.1nm,0.5s,baz=333,slow=7.8,SNR=14						
STKA	**Stephens Creek**	**36.92**	**160**	P	**P**	**19 55 02.2**	**-2.1**
	baz=38,SNR=9.4						
SONM	**Songino Array**	**48.50**	**341**	P	P	19 56 34.7	-3.4
	0.3nm,0.6s,baz=152,slow=5.9,SNR=4.4						
MKAR	**Makanchi Array**	**58.76**	**325**	P	**P**	**19 57 51.3**	**-1.9**
	0.9nm,0.5s,baz=119,slow=7.7,SNR=15						

IDC 15 19:48:06.4±3.1, 24.16S×70.41W, h0km, mb4.2/1, mb1 4.1/3, mb1mx3.7/18, mbtmp3.9/3, ML4.0/2, Error ellipse: s-maj=79.5km s-min=49.4km az=56.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**8.12**	**16**	Pn	Pn	19 50 06.7	+0.3
	0.4nm,0.3s,baz=203,slow=5.2,SNR=5.9						
CPUP	**Villa Florida**	**12.04**	**103**	Pn	Pn	19 51 01.0	+1.7
	0.5nm,0.3s,baz=270,slow=20,SNR=12						
TORD	**Torodi Ar. Bea**	**79.55**	**70**	P	P	20 00 14.7	-1.0
	1.5nm,0.6s,baz=251,slow=5.3,SNR=9.7						
MKAR	**Makanchi Array**	**148.58**	**37**	PKPbc	PKPbc	20 07 55.6	+0.3
	0.2nm,0.7s,baz=321,slow=2.0,SNR=2.6						

IDC 15 19:52:58.7±60.0, 17.05S×178.84W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=1101.0km s-min=172.2km az=78.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.69**	**240**	P	P	20 00 24.8	+0.4
	0.7nm,0.8s,baz=85,slow=11,SNR=3.6						
WRA	**Warramunga Arr**	**44.32**	**259**	P	P	20 01 10.8	-0.6
	0.3nm,0.6s,baz=97,slow=7.2,SNR=3.0						
ASAR	**Alice Springs**	**44.63**	**253**	P	P	20 01 13.2	-0.1
	1.1nm,0.6s,baz=88,slow=8.8,SNR=24						

WEL 15 19:56:34.5±0.2, 40.56S×173.42E, h166km±1km, ML4.1/17, 10C-9D, Error ellipse: s-maj=1.2km s-min=0.7km az=90.0, Cook Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DUWZ	**D'Urville Isla**	**0.46**	**123**	↑Pn	Pn	19 56 57.7	+0.2
DUWZ				SN	Sn	19 57 14.7	-0.4
NNZ	**Nelson**	**0.66**	**183**	PN	Pn	19 56 58.5	0.0
NNZ				SN	Sn	19 57 16.0	-0.9
QRZ	**Quartz Range**	**0.73**	**248**	↑Pn	Pn	19 56 58.7	-0.2
QRZ				SN	Sn	19 57 16.1	-1.5
TCW	**Tory Channel**	**0.92**	**136**	PN	Pn	19 57 00.6	+0.4
TCW				SN	Sn	19 57 18.7	-1.3
TCW				AML	AML	19 57 21.1	
TUWZ	**Tuamarina**	**0.96**	**156**	PN	Pn	19 57 00.8	+0.3
TUWZ				SN	Sn	19 57 19.4	-1.1
TUWZ				AML	AML	19 57 20.0	
KIW	**Kapiti Island**	**1.17**	**106**	PN	Pn	19 57 02.2	-0.1
KIW				AML	AML	19 57 22.9	
KIW				AML	AML	19 57 23.1	
BSWZ	**Blackbirch Sta**	**1.21**	**164**	PN	Pn	19 57 02.9	+0.4
BSWZ				SN	Sn	19 57 23.5	-0.8
BSWZ				AML	AML	19 57 24.7	
SNZO	**South Karori**	**1.23**	**128**	PN	Pn	19 57 02.7	0.0
SNZO				AML	AML	19 57 24.7	
SNZO				AML	AML	19 57 24.8	
WEL	**Wellington**	**1.26**	**126**	↓PN	Pn	19 57 03.1	+0.2
THZ	**Tophouse**	**1.27**	**198**	PN	Pn	19 57 03.1	0.0
THZ				SN	Sn	19 57 23.6	-1.7
OGWZ	**Otaki Gorge**	**1.36**	**102**	↑PN	Pn	19 57 03.9	+0.1
CAW	**Cannon Point**	**1.37**	**114**	↓PN	Pn	19 57 04.0	0.0
CAW				AML	AML	19 57 27.1	
CAW				AML	AML	19 57 27.6	
NEZ	**North Egmont**	**1.38**	**22**	PN	Pn	19 57 03.8	-0.5
BHW	**Baring Head**	**1.39**	**128**	PN	Pn	19 57 04.1	-0.1
BHW				AML	AML	19 57 26.9	
BHW				AML	AML	19 57 27.0	
PKE	**Pukeiti**	**1.43**	**18**	PN	Pn	19 57 04.4	-0.2
WAZ	**Wanganui**	**1.44**	**57**	↑PN	Pn	19 57 05.0	+0.3
RAEZ	**Rainy Point**	**1.47**	**31**	PN	Pn	19 57 05.8	+0.8
HOWZ	**Holdsworth Sta**	**1.63**	**103**	↑PN	Pn	19 57 06.4	-0.2
MSWZ	**Moikau Station**	**1.63**	**122**	PN	Pn	19 57 06.4	-0.2
MSWZ				AML	AML	19 57 29.5	
MSWZ				AML	AML	19 57 29.7	
MRZ	**Mangatainoka R**	**1.65**	**94**	↑PN	Pn	19 57 06.5	-0.3
MRZ				AML	AML	19 57 31.7	
MRZ				AML	AML	19 57 31.8	
MTW	**Mount Morrison**	**1.69**	**112**	↑PN	Pn	19 57 07.0	-0.2
MTW				AML	AML	19 57 30.5	
MTW				AML	AML	19 57 31.4	
DSZ	**Denniston Nort**	**1.71**	**225**	PN	Pn	19 57 07.1	-0.4
PLWZ	**Palliser**	**1.72**	**127**	PN	Pn	19 57 07.3	-0.3
PAWZ	**Paruwai Farm**	**1.73**	**119**	PN	Pn	19 57 07.4	-0.2
PAWZ				AML	AML	19 57 32.0	
PAWZ				AML	AML	19 57 32.9	
VRZ	**Vera Road**	**1.76**	**36**	↑PN	Pn	19 57 07.2	-0.8
POWZ	**Post Office Ro**	**1.80**	**86**	PN	Pn	19 57 08.1	-0.3
KHZ	**Kahutara**	**1.86**	**177**	↓PN	Pn	19 57 08.8	-0.2
KHZ				AML	AML	19 57 34.6	
KHZ				AML	AML	19 57 34.8	
TIWZ	**Tintock**	**1.89**	**98**	↑PN	Pn	19 57 09.2	-0.2
TRWZ	**Traveller**	**1.91**	**117**	PN	Pn	19 57 09.4	-0.2
TRWZ				AML	AML	19 57 36.9	
TRWZ				AML	AML	19 57 37.4	
PKVZ	**Pokaka**	**1.95**	**50**	↓PN	Pn	19 57 09.6	-0.5
TMWZ	**Te Maipa**	**1.96**	**107**	↑PN	Pn	19 57 09.9	-0.2
MTVZ	**Mangateitei**	**1.96**	**54**	PN	Pn	19 57 09.9	-0.4
TSZ	**Takapari Road**	**2.01**	**77**	PN	Pn	19 57 10.2	-0.6
TSZ				AML	AML	19 57 38.9	
TSZ				AML	AML	19 57 39.1	
TRVZ	**Turoa**	**2.06**	**53**	PN	Pn	19 57 10.7	-0.9
WNVZ	**Wahianoa**	**2.08**	**55**	PN	Pn	19 57 10.9	-0.8
FWVZ	**Far West T-bar**	**2.09**	**52**	PN	Pn	19 57 10.8	-1.1
DVHZ	**Dannevirke**	**2.11**	**84**	PN	Pn	19 57 11.3	-0.6
WPVZ	**Whakapapa**	**2.12**	**51**	PN	Pn	19 57 11.3	-0.9
MOVZ	**Moawhango**	**2.13**	**58**	PN	Pn	19 57 11.0	-1.2
TUVZ	**Tukino**	**2.15**	**54**	PN	Pn	19 57 11.7	-0.7
TWVZ	**Taurewa**	**2.15**	**47**	PN	Pn	19 57 11.6	-0.8
BFZ	**Birch Farm**	**2.16**	**94**	↓PN	Pn	19 57 12.0	-0.4
NGZ	**Ngauruhoe**	**2.17**	**51**	↓PN	Pn	19 57 11.8	-1.0
WTVZ	**West Tongariro**	**2.20**	**50**	↓PN	Pn	19 57 12.1	-1.0
OTVZ	**Oturere**	**2.22**	**52**	PN	Pn	19 57 12.4	-0.9
PNHZ	**Pukenui**	**2.22**	**74**	PN	Pn	19 57 12.5	-0.7
KRVZ	**Karewarewa**	**2.25**	**50**	PN	Pn	19 57 12.4	-1.2
BHHZ	**Black Hill Sta**	**2.29**	**63**	PN	Pn	19 57 12.9	-1.2
HIZ	**Hauiti**	**2.32**	**29**	PN	Pn	19 57 13.4	-0.9
WPHZ	**Waipukurau**	**2.36**	**79**	PN	Pn	19 57 14.4	-0.4
LTZ	**Lake Taylor**	**2.39**	**201**	↓PN	Pn	19 57 14.4	-0.7
PRHZ	**Porangahau**	**2.47**	**84**	PN	Pn	19 57 15.8	-0.3
PXZ	**Pawanui**	**2.69**	**80**	PN	Pn	19 57 18.0	-0.6
PXZ				AML	AML	19 57 54.5	
PXZ				AML	AML	19 57 55.4	
PXZ				AML	AML	19 57 55.5	
BKZ	**Black Stump Fm**	**2.74**	**61**	PN	Pn	19 57 17.9	-1.5
BKZ				AML	AML	19 57 52.0	
BKZ				AML	AML	19 57 52.4	
KAHZ	**Kahuranaki**	**2.75**	**75**	PN	Pn	19 57 19.2	-0.3
NMHZ	**Naumai**	**2.99**	**62**	PN	Pn	19 57 21.8	-0.6
CRLZ	**Canterbury Las**	**3.08**	**191**	PN	Pn	19 57 21.6	-1.8
MQZ	**McQueen's Vall**	**3.20**	**190**	PN	Pn	19 57 22.8	-2.1
WVZ	**Waitaha Valley**	**3.22**	**218**	PN	Pn	19 57 23.9	-1.3
RPZ	**Rata Peaks**	**3.62**	**208**	↓PN	Pn	19 57 28.8	-1.4
KNZ	**Kokohu**	**3.62**	**66**	PN	Pn	19 57 28.6	-1.6
URZ	**Urewera**	**3.66**	**52**	PN	Pn	19 57 28.6	-2.3
URZ				AML	AML	19 58 11.1	
URZ				AML	AML	19 58 11.5	
MHGZ	**Mahia Peninsul**	**3.73**	**69**	PN	Pn	19 57 30.5	-1.2
MWZ	**Matawai**	**3.88**	**56**	PN	Pn	19 57 31.7	-2.0
FOZ	**Fox Glacier**	**4.09**	**221**	PN	Pn	19 57 33.0	-3.3
LBZ	**Lake Benmore**	**4.51**	**211**	PN	Pn	19 57 40.0	-1.9
JCZ	**Jackson Bay**	**4.93**	**223**	PN	Pn	19 57 44.7	-2.6
ODZ	**Otahua Downs**	**4.93**	**204**	PN	Pn	19 57 45.5	-1.7
TUZ	**Tuapeka**	**6.06**	**206**	PN	Pn	19 58 02.2	+0.1

*JMA **15** 19:59:08.9±0.1, 47.06N×142.11E, h24km, M3.0*
*SKHL **15** 19:59:09.6±0.5, 46.80N×142.04E, h10km, mb3.6/2*
*ISCJB **15** 19:59:11.3±0.9, 46.87N±0.04×142.09E±0.09, h12km, Error ellipse: s-maj=9.1km s-min=5.6km az=5.2*
ISC 15 19:59:11.6±1.2, 46.78N±0.05×142.20E±0.10, h12km, n4, σ0.86 /7, 1C, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**0.42**	**65**	↑*i*Pg	**Pb**	**19 59 20.6**	**-0.4**
YSS				AMB	AMB	19 59 20.9	
	30nm,0.4s						
YSS				*e*Sg	**Sb**	**19 59 27.6**	**+0.3**
YSS				A	A	19 59 28.4	
	830nm,0.4s						
YSS				A	A	19 59 28.4	
	2μm,0.4s						
YSS				AMS	AMS	19 59 42.0	
	500nm,4.0s						
JWK2	**Keihoku**	**1.48**	**188**	P	**Pb**	**19 59 38.6**	**-0.4**
JWK2				*e*S	**Sg**	**19 59 59.9**	**+0.8**
UGL	**Uglegorsk**	**2.31**	**358**	*e*Pg	**Pg**	**19 59 55.0**	**-0.8**
UGL				*e*Sg	**Sg**	**20 00 26.8**	**+1.1**
UGL				A	A	20 00 27.5	
	80nm,0.6s						
TYV	**Tymovskoe**	**4.10**	**4**	*e*Pg	**Pg**	**20 00 30.3**	**+0.1**
TYV				AMB	AMB	20 00 34.0	
	7.0nm,0.7s						

IDC 15 20:25:36.2±3.8, 28.31S×178.30W, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/16, mbtmp3.6/3, MS3.7/1, Ms1 3.7/1, ms1mx3.1/14, Error ellipse: s-maj=86.2km s-min=19.1km az=49.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.00**	**160**	Pn	Pn	20 25 57.5	-0.1
	356nm,0.3s,baz=110,slow=9.3,SNR=31						
RAO				Sn	Sn	20 26 14.2	+1.8
	677nm,0.3s,baz=69,slow=19,SNR=10.0						
RAR	**Rarotonga**	**18.24**	**71**	LR	LR	20 34 29.2	
	comp=Z,225nm,19.3s,baz=99,slow=29						
STKA	**Stephens Creek**	**34.74**	**254**	P	P	20 32 27.1	-1.2
	0.8nm,0.5s,baz=103,slow=14,SNR=5.6						
ASAR	**Alice Springs**	**42.99**	**265**	P	P	20 33 37.9	+0.3
	0.2nm,0.4s,baz=118,slow=7.2,SNR=4.2						
WRA	**Warramunga Arr**	**43.79**	**270**	P	P	20 33 44.8	+0.8
	0.6nm,0.5s,baz=110,slow=8.1,SNR=6.1						
FINES	**FINESS Array B**	**143.09**	**341**	PKP	PKPbc	20 45 09.3	+1.0
	3.6nm,0.9s,baz=61,slow=9.0,SNR=4.1						

*ATH **15** 20:34:53.9, 39.38N×28.03E, h11km±4km, MD3.5/7*
*ISCJB **15** 20:34:55.6±0.4, 39.27N±0.02×27.90E±0.02, h5km±3km, Error ellipse: s-maj=3.2km s-min=2.7km az=154.6*
*DDA **15** 20:34:55.5, 39.29N×27.92E, h7km, MD3.3*
*ISK **15** 20:34:55.2, 39.27N×27.90E, h8km, MD3.5*
*CSEM **15** 20:34:56.1±0.1, 39.28N×27.91E, h8km, MD3.5, Error ellipse: s-maj=2.1km s-min=1.7km az=74.0*
ISC 15 20:34:55.9±1.1, 39.30N±0.01×27.93E±0.02, h7km±9km, n128, σ0.58 /165, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.34**	**353**	PG	**Pg**	**20 35 03.0**	**+0.5**
BALB				SG	**Sb**	**20 35 09.2**	**-0.8**
BALB	**Balikesir**	**0.34**	**353**	*i*Pg	**Pg**	**20 35 03.1**	**+0.5**
BALB				*i*Sg	**Sb**	**20 35 09.2**	**-0.8**
AKHS	**Akhisar**	**0.43**	**193**	*i*P	**Pg**	**20 35 04.0**	**-0.2**
AKHS				*i*S	**Sb**	**20 35 14.0**	**+1.5**
AKHS	**Akhisar**	**0.43**	**193**	*i*P	**Pg**	**20 35 04.0**	**-0.2**
AKHS				*i*S	**Sb**	**20 35 14.0**	**+1.5**
BALY	**Balya**	**0.50**	**331**	*i*P	**Pb**	**20 35 06.5**	**-0.6**
BALY				*i*S	**Sb**	**20 35 14.3**	**-0.4**
BALY	**Balya**	**0.50**	**331**	*i*P	**Pb**	**20 35 06.5**	**-0.6**
BALY				*i*S	**Sb**	**20 35 14.3**	**-0.4**
DURS	**Dursunbey**	**0.52**	**54**	*i*P	**Pb**	**20 35 07.2**	**-0.1**
DURS				*i*S	**Sb**	**20 35 14.5**	**-0.6**
DURS	**Dursunbey**	**0.52**	**54**	*i*P	**Pb**	**20 35 07.2**	**-0.1**
DURS				*i*S	**Sb**	**20 35 14.5**	**-0.6**
DST	**Dursunbey**	**0.61**	**60**	PG	**Pg**	**20 35 08.0**	**+0.3**
DST				SG	**Sb**	**20 35 17.5**	**-0.3**
DST	**Dursunbey**	**0.61**	**60**	*i*Pg	**Pg**	**20 35 08.0**	**+0.3**
DST				*i*Sg	**Sb**	**20 35 17.5**	**-0.3**
DEMI	**Demirci**	**0.66**	**113**	*i*P	**Pg**	**20 35 09.1**	**+0.5**
DEMI				*i*S	**Sb**	**20 35 19.3**	**+0.1**
DEMI	**Demirci**	**0.66**	**113**	*i*P	**Pg**	**20 35 09.1**	**+0.5**
DEMI				*i*S	**Sb**	**20 35 19.3**	**+0.1**
GONE	**Gonen-Balikesi**	**0.77**	**346**	PG	**Pg**	**20 35 10.6**	**-0.1**
GONE				SG	**Sb**	**20 35 22.0**	**-0.3**
GONE	**Gonen-Balikesi**	**0.77**	**346**	*i*Pg	**Pg**	**20 35 10.6**	**-0.1**
GONE				*i*Sg	**Sb**	**20 35 22.0**	**-0.3**
MANT	**Manisa**	**0.94**	**149**	*i*P	**Pb**	**20 35 15.1**	**+0.4**
MANT	**Manisa**	**0.94**	**149**	*i*P	**Pb**	**20 35 15.1**	**+0.4**
KULA	**Kula-Manisa**	**0.97**	**144**	*e*PG	**Pg**	**20 35 13.9**	**-0.6**
KULA	**Kula-Manisa**	**0.97**	**144**	*e*Pg	**Pg**	**20 35 13.9**	**-0.6**
KCTX	**Karacabey (Bur**	**1.02**	**19**	*e*PG	**Pg**	**20 35 15.4**	**0.0**
KCTX				*e*SG	**Sn**	**20 35 31.5**	**+0.3**
KCTX	**Karacabey (Bur**	**1.02**	**19**	*e*Pg	**Pg**	**20 35 15.4**	**0.0**
KCTX				*e*Sg	**Sn**	**20 35 31.5**	**+0.3**
IZM	**Izmir**	**1.04**	**210**	*e*PG	**Pg**	**20 35 14.9**	**-1.0**
IZM	**Izmir**	**1.04**	**210**	*e*Pg	**Pg**	**20 35 14.9**	**-1.0**
ORLT	**Orhaneli**	**1.05**	**45**	*e*PN	**Pb**	**20 35 16.7**	**+0.2**
ORLT	**Orhaneli**	**1.05**	**45**	*e*Pn	**Pb**	**20 35 16.7**	**+0.2**
BNT	**Bandirma**	**1.05**	**359**	*e*PG	**Pg**	**20 35 15.8**	**-0.4**
BNT	**Bandirma**	**1.05**	**359**	*e*Pg	**Pg**	**20 35 15.8**	**-0.4**
BLCB	**Balcova**	**1.15**	**218**	*e*PN	**Pg**	**20 35 17.6**	**-0.3**
BLCB	**Balcova**	**1.15**	**218**	*e*Pn	**Pg**	**20 35 17.6**	**-0.3**
TVSB	**Tavsanli**	**1.19**	**82**	*e*PN	**Pn**	**20 35 19.0**	**-0.1**
TVSB	**Tavsanli**	**1.19**	**82**	*e*Pn	**Pn**	**20 35 19.0**	**-0.1**
KRBG	**Karabiga-Canak**	**1.20**	**336**	*e*PN	**Pg**	**20 35 18.4**	**-0.4**
KRBG	**Karabiga-Canak**	**1.20**	**336**	*e*Pn	**Pg**	**20 35 18.5**	**-0.4**
GDZ	**Gediz**	**1.22**	**99**	*i*P	**Pg**	**20 35 18.8**	**-0.5**
GDZ				*i*S	**Sb**	**20 35 35.8**	**+0.4**
GDZ	**Gediz**	**1.22**	**99**	*i*P	**Pg**	**20 35 18.8**	**-0.5**
GDZ				*i*S	**Sb**	**20 35 35.8**	**+0.4**
ULDT	**Uludag**	**1.25**	**47**	*i*P	**Pb**	**20 35 19.5**	**-0.4**
ULDT				*i*S	**Sn**	**20 35 36.9**	**-0.3**
ULDT	**Uludag**	**1.25**	**47**	*i*P	**Pb**	**20 35 19.5**	**-0.4**
ULDT				*i*S	**Sn**	**20 35 36.9**	**-0.3**
PRK	**Paraskevi**	**1.29**	**268**	*e*PB	**Pn**	**20 35 20.0**	**-0.3**
PRK				*e*SB	**Sn**	**20 35 38.7**	**+0.8**
PRK	**Paraskevi**	**1.29**	**268**	*e*Pn	**Pn**	**20 35 20.0**	**-0.3**
PRK				*e*Sb	**Sn**	**20 35 38.7**	**+0.8**
MDNY	**Mudanya-Bursa**	**1.29**	**34**	*e*PN	**Pn**	**20 35 20.2**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.29**	**34**	*e*Pn	**Pn**	**20 35 20.2**	**-0.2**
LPK	**Lapseki**	**1.40**	**320**	*e*PN	**Pn**	**20 35 21.6**	**-0.3**
LPK	**Lapseki**	**1.40**	**320**	*e*Pn	**Pn**	**20 35 21.6**	**-0.3**
ARMT	**Armutlu**	**1.45**	**29**	*e*PN	**Pn**	**20 35 22.6**	**0.0**
ARMT	**Armutlu**	**1.45**	**29**	*e*Pn	**Pn**	**20 35 22.6**	**0.0**
GEMT	**Gemlik**	**1.49**	**40**	*e*PN	**Pn**	**20 35 23.0**	**-0.1**
GEMT	**Gemlik**	**1.49**	**40**	*e*Pn	**Pn**	**20 35 23.0**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.50**	**338**	*e*PN	**Pn**	**20 35 23.3**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.50**	**338**	*e*Pn	**Pn**	**20 35 23.3**	**0.0**
SART	**Tekirdag**	**1.50**	**338**	*i*P	**Pn**	**20 35 23.3**	**0.0**
SART				*i*S	**Sb**	**20 35 43.5**	**0.0**
SART	**Tekirdag**	**1.50**	**338**	*i*P	**Pn**	**20 35 23.3**	**0.0**
SART				*i*S	**Sb**	**20 35 43.5**	**0.0**
KHAL	**Karahalli**	**1.53**	**127**	*i*P	**Pn**	**20 35 23.8**	**+0.1**
KHAL				*i*S	**Sn**	**20 35 43.3**	**-0.6**
KHAL	**Karahalli**	**1.53**	**127**	*i*P	**Pn**	**20 35 23.8**	**+0.1**
KHAL				*i*S	**Sn**	**20 35 43.3**	**-0.6**
MFT	**Murefte**	**1.57**	**342**	*e*PN	**Pb**	**20 35 25.0**	**-0.3**
MFT	**Murefte**	**1.57**	**342**	*e*Pn	**Pb**	**20 35 25.0**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.57**	**315**	*e*PN	**Pn**	**20 35 24.3**	**+0.1**
GELI	**Tayfur-Gelib

mb1 4.0/18,mb1mx3.8/32,mbtmp3.9/18,MS3.1/1, Ms1 3.1/1,ms1mx2.5/35,Error ellipse: s-maj=13.3km s-min=9.9km az=101.0

*ISCJB **15** 20:37:02.2±0.2,59°30N±0°03×152°94W±0°05,h98km±2km, mb4.0/16,Error ellipse: s-maj=4.7km s-min=3.1km az=140.8*

*NEIC **15** 20:37:04.7,59°34N×153°06W,h82km,mb4.3/2,After AEIC.*

NEIC Felt at Homer and Sterling.

ISC 15 20:37:03.7±0.6,59°31N±0°04×153°01W±0°04,h92km±5km, n121,σ1°10/133,mb4.1/16,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUP	**Augustine Pinn**	**0.22**	**284**	P	**Pn**	**20 37 16.7**	**-0.3**
AUP				S	**Sn**	**20 37 25.3**	**-1.6**
AUL	**Augustine Lava**	**0.23**	**288**	P	**Pn**	**20 37 16.7**	**-0.3**
AUL				S	**Sn**	**20 37 26.2**	**-0.6**
AUW	**Augustine West**	**0.24**	**284**	P	**Pn**	**20 37 16.8**	**-0.2**
OPT	**Oil Point**	**0.36**	**342**	P	**Pn**	**20 37 17.3**	**-0.3**
ILIM	**Iliamna**	**0.77**	**2**	P	**Pn**	**20 37 20.6**	**-0.5**
HOM	**Homer**	**0.78**	**63**	P	**Pn**	**20 37 21.7**	**+0.7**
HOM				S	**Sn**	**20 37 35.1**	**+1.1**
RDWB	**Redoubt West**	**1.18**	**4**	P	**Pn**	**20 37 24.7**	**-1.0**
DFR	**Drift River**	**1.29**	**7**	P	**Pn**	**20 37 26.9**	**-0.1**
KAWH	**Katmai**	**1.32**	**226**	P	**Pn**	**20 37 26.9**	**-0.3**
KAKN	**Katmai Knife C**	**1.48**	**227**	P	**Pn**	**20 37 28.8**	**-0.4**
KDAK	**Kodiak Island**	**1.55**	**172**	P	**Pn**	**20 37 29.6**	**-0.4**
KDAK				S	**Sn**	**20 37 48.3**	**-1.7**
KDAK	**Kodiak Island**	**1.55**	**172**	P	**Pn**	**20 37 29.6**	**-0.4**
	157nm,0.3s,baz=14,slow=6.9,SNR=1012						
KDAK				S	**Sn**	**20 37 48.4**	**-1.7**
	467nm,0.3s,baz=312,slow=23,SNR=52						
KDAK				LR	LR	20 37 55.9	
	comp=Z,1μm,19.8s,baz=316,slow=33						
KCE	**Katmai Mt Cerb**	**1.56**	**228**	P	**Pn**	**20 37 30.4**	**+0.2**
KABR	**Katmai Barrier**	**1.56**	**222**	P	**Pn**	**20 37 30.1**	**-0.2**
KABU	**Katmai Buttres**	**1.58**	**230**	P	**Pn**	**20 37 30.6**	**+0.1**
KELA	**Mount Kelaz**	**1.67**	**240**	P	**Pn**	**20 37 31.3**	**-0.3**
SLKM	**Skilak Lake**	**1.85**	**48**	P	**Pn**	**20 37 33.9**	**0.0**
CKL	**Chakachamna La**	**1.92**	**10**	P	**Pn**	**20 37 35.2**	**+0.3**
SPU	**Mount Spurr**	**1.94**	**14**	P	**Pn**	**20 37 35.3**	**+0.2**
BGL	**Barrier Glacie**	**1.98**	**9**	P	**Pn**	**20 37 36.1**	**+0.4**
OHAK	**Old Harbor**	**2.10**	**184**	P	**Pn**	**20 37 36.3**	**-0.8**
OHAK				S	**Sn**	**20 38 00.2**	**-2.5**
SVW2	**Sparrevohn**	**2.20**	**325**	P	**Pn**	**20 37 38.3**	**-0.2**
STLK	**Strandline Lak**	**2.27**	**14**	P	**Pn**	**20 37 39.9**	**+0.4**
PLK5	**Peulik 5**	**2.41**	**239**	P	**Pn**	**20 37 41.9**	**+0.6**
SUA	**Susitna One**	**2.44**	**27**	P	**Pn**	**20 37 42.1**	**+0.4**
SUA				S	**Sn**	**20 38 11.2**	**+0.4**
PMR	**Palmer**	**2.99**	**38**	P	**Pn**	**20 37 48.4**	**-0.5**
TRAP	**Trapper Creek**	**3.32**	**23**	P	**Pn**	**20 37 53.9**	**+0.5**
SML	**Sawmill**	**3.41**	**41**	*e*P	**Pn**	**20 37 53.8**	**-0.9**
MID	**Middleton Isla**	**3.42**	**85**	P	**Pn**	**20 37 54.4**	**-0.2**
MID				S	**Sn**	**20 38 31.1**	**-3.0**
ANNW	**Aniakchak Nort**	**3.62**	**232**	P	**Pn**	**20 37 58.3**	**+0.7**
VLZ	**Valdez**	**3.80**	**58**	P	**Pn**	**20 37 59.3**	**-0.6**
EYAK	**Cordova Ski Ar**	**3.86**	**68**	P	**Pn**	**20 37 59.8**	**-0.9**
EYAK				S	**Sn**	**20 38 42.1**	**-2.8**
TT01	**Tatalina**	**3.89**	**339**	P	**Pn**	**20 38 01.1**	**-0.1**
DIV	**Divide**	**4.04**	**60**	P	**Pn**	**20 38 02.6**	**-0.7**
CAST	**Castle Rocks**	**4.15**	**6**	P	**Pn**	**20 38 05.0**	**+0.4**
CHGN	**Chignik**	**4.18**	**226**	*e*P	**Pn**	**20 38 04.4**	**-0.6**
TRF	**Thorofare Moun**	**4.36**	**16**	P	**Pn**	**20 38 06.8**	**-0.8**
VNHG	**Veniaminof 1**	**4.52**	**229**	P	**Pn**	**20 38 11.3**	**+1.5**
DHY	**Denali Highway**	**4.56**	**93**	P	**Pn**	**20 38 11.8**	**+0.1**
NICHA	**Nichawak Mount**	**4.66**	**75**	P	**Pn**	**20 38 11.4**	**-0.2**
BERG	**Berg Lake**	**4.82**	**73**	P	**Pn**	**20 38 13.6**	**-0.1**
MCK	**McKinley**	**4.84**	**22**	P	**Pn**	**20 38 14.4**	**+0.3**
HARP	**HAARP**	**4.94**	**48**	P	**Pn**	**20 38 15.1**	**-0.2**
GRIN	**Grindle Hills**	**4.99**	**75**	P	**Pn**	**20 38 16.2**	**+0.1**
BGLC	**Bering Glacier**	**4.99**	**76**	P	**Pn**	**20 38 16.3**	**+0.3**
BGLC				S	**Sn**	**20 39 10.8**	**-1.6**
KHIT	**Khitrov Hills**	**5.05**	**73**	P	**Pn**	**20 38 16.0**	**-0.9**
VRDI	**Verde Repeater**	**5.13**	**64**	P	**Pn**	**20 38 17.4**	**-0.7**
PAX	**Paxson**	**5.18**	**42**	P	**Pn**	**20 38 18.4**	**-0.3**
KULT	**Kultieth River**	**5.28**	**75**	P	**Pn**	**20 38 20.0**	**0.0**
MCARA	**McCarthy VSAT**	**5.38**	**63**	P	**Pn**	**20 38 21.6**	**+0.3**
BARK	**Barkley Ridge**	**5.41**	**74**	P	**Pn**	**20 38 22.2**	**+0.3**
BARK				S	**Sn**	**20 39 19.6**	**-3.2**
KIAG	**Kiagna River**	**5.57**	**69**	P	**Pn**	**20 38 23.9**	**-0.1**
PTPK	**Patty Peak**	**5.58**	**66**	P	**Pn**	**20 38 23.8**	**-0.4**
BALM	**Baldy**	**5.60**	**67**	P	**Pn**	**20 38 23.6**	**-0.8**
NEA	**Nenana**	**5.60**	**18**	P	**Pn**	**20 38 24.0**	**-0.3**
SDPT	**Sand Point**	**5.67**	**229**	*e*P	**Pn**	**20 38 24.8**	**-0.4**
	41nm,0.6s						
WRH	**Wood River Hil**	**5.67**	**22**	P	**Pn**	**20 38 24.5**	**-0.8**
GCSA	**Galena City Sc**	**5.75**	**343**	P	**Pn**	**20 38 26.5**	**+0.2**
MENT	**Mentasta**	**5.79**	**47**	*e*P	**Pn**	**20 38 26.9**	**+0.1**
GRNC	**Granite Creek**	**5.82**	**71**	P	**Pn**	**20 38 27.1**	**-0.5**
MLY	**Manley**	**5.84**	**10**	P	**Pn**	**20 38 27.4**	**-0.1**
CCB	**Clear Creek Bu**	**5.89**	**22**	P	**Pn**	**20 38 27.1**	**-1.0**
RIDG	**Independ'e Rid**	**5.91**	**38**	P	**Pn**	**20 38 28.5**	**-0.2**
BARN	**Barnard Glacie**	**5.93**	**68**	P	**Pn**	**20 38 27.9**	**-1.1**
BARN				S	Sn	20 39 30.1	-5.3
COLA	**College**	**6.08**	**21**	P	**Pn**	**20 38 30.2**	**-0.6**
MDM	**Murphy Dome**	**6.09**	**20**	P	**Pn**	**20 38 30.7**	**-0.3**
DOT	**Dot Lake**	**6.10**	**41**	P	**Pn**	**20 38 31.2**	**0.0**
IL1	**Eielson Array**	**6.19**	**25**	P	**Pn**	**20 38 31.3**	**-0.9**
ILAR	**Eielson Array**	**6.19**	**25**	P	**Pn**	**20 38 31.4**	**-0.9**
ILAR				S	**Sn**	**20 39 38.6**	**-2.9**
ILAR	**Eielson Array**	**6.19**	**25**	P	**Pn**	**20 38 31.4**	**-0.9**
	8.3nm,0.3s,baz=207,slow=13,SNR=247						
ILAR				S	**Sn**	**20 39 38.6**	**-2.9**
	12nm,0.3s,baz=208,slow=24,SNR=11						
SAMH	**Samovar Hills**	**6.24**	**77**	P	**Pn**	**20 38 33.9**	**+0.8**
GLM	**Gilmore Dome**	**6.27**	**22**	P	**Pn**	**20 38 32.6**	**-0.9**
SCRK	**Sand Creek**	**6.35**	**39**	P	**Pn**	**20 38 33.9**	**-0.8**
DT1	**Dutton Round H**	**6.56**	**234**	P	**Pn**	**20 38 38.3**	**+0.8**
BCA3	**Beaver Creek A**	**6.60**	**50**	P	**Pn**	**20 38 37.5**	**-0.5**
DRIA	**Deer Island**	**6.66**	**233**	P	**Pn**	**20 38 39.1**	**+0.4**
IM3	**Indian Mountai**	**6.71**	**357**	P	**Pn**	**20 38 39.5**	**+0.2**
COLD	**Coldfoot**	**8.05**	**8**	*e*P	**Pn**	**20 38 57.3**	**-0.2**
	29nm,0.5s						
SKAG	**Skagway**	**9.02**	**81**	*e*P	**Pn**	**20 39 10.8**	**-0.1**
	24nm,0.4s						
WRAK	**Wrangell Islan**	**11.37**	**96**	*e*P	**Pn**	**20 39 45.2**	**+2.5**
	25nm,0.4s						
CRAG	**Craig**	**11.38**	**101**	*e*P	**Pn**	**20 39 41.1**	**-1.9**
	16nm,0.3s						
DLBC	**Dease Lake**	**11.91**	**84**	P	**Pn**	**20 39 51.5**	**+1.4**
DLBC	**Dease Lake**	**11.91**	**84**	P	**Pn**	**20 39 51.5**	**+1.4**
	baz=256,slow=10						
INK	**Inuvik**	**12.40**	**35**	P	**Pn**	**20 39 56.8**	**+0.4**
INK	**Inuvik**	**12.40**	**35**	P	**Pn**	**20 39 56.8**	**+0.4**
	0.6nm,0.3s,baz=224,slow=15,SNR=9.7						
YKW3	**Yellowknife Ar**	**18.74**	**64**	*e*P	**P**	**20 41 15.1**	**+0.3**
YKA	**Yellowknife Ar**	**18.75**	**64**	P	**Pn**	**20 41 16.3**	**-0.1**
YKA	**Yellowknife Ar**	**18.75**	**64**	P	**Pn**	**20 41 16.3**	**-0.1**
	0.4nm,0.3s,baz=276,slow=12,SNR=11						
FX1	**Attu Island--F**	**19.77**	**266**	*e*P	**P**	**20 41 26.3**	**+0.2**
NEW	**Newport**	**23.60**	**102**	LR	LR	20 50 56.5	
	comp=Z,47nm,19.0s,baz=16,slow=35						
YBH	**Yreka Blue Hor**	**25.74**	**120**	P	**P**	**20 42 28.6**	**+3.2**
YBH	**Yreka Blue Hor**	**25.74**	**120**	P	**P**	**20 42 28.6**	**+3.2**
	0.4nm,0.5s,baz=45,slow=2.9,SNR=3.8						
PETK	**Petropavlovsk-**	**27.55**	**279**	P	**P**	**20 42 41.4**	**-0.1**
PETK	**Petropavlovsk-**	**27.55**	**279**	P	**P**	**20 42 41.4**	**-0.1**
	5.5nm,0.6s,baz=86,slow=11,SNR=15						
NVAR	**Mina Array Bea**	**30.40**	**118**	P	**P**	**20 43 09.7**	**+2.6**
NVAR	**Mina Array Bea**	**30.40**	**118**	P	**P**	**20 43 09.7**	**+2.6**
	0.3nm,0.5s,baz=306,slow=7.7,SNR=3.0						
TXAR	**Lajitas Array**	**44.75**	**110**	P	**P**	**20 45 09.3**	**+1.5**
TXAR	**Lajitas Array**	**44.75**	**110**	P	**P**	**20 45 09.3**	**+1.5**
	0.5nm,0.8s,baz=316,slow=8.8,SNR=5.3						
USRK	**Ussuriysk Arra**	**46.22**	**286**	P	**P**	**20 45 18.1**	**-0.9**
	2.7nm,0.6s,baz=55,slow=8.1,SNR=16						
KSRS	**Korea Array**	**53.33**	**283**	P	**P**	**20 46 13.9**	**+0.9**
	4.8nm,0.5s,baz=40,slow=6.8,SNR=19						
KSAR	**Wonju Array Be**	**53.36**	**283**	P	**P**	**20 46 13.9**	**+0.7**
ULN	**Ulaanbaatar**	**54.90**	**306**	*e*P	**P**	**20 46 24.4**	**-0.2**
	3.5nm,0.7s						
SONM	**Songino Array**	**55.19**	**306**	P	**P**	**20 46 27.1**	**+0.5**
SONM	**Songino Array**	**55.19**	**306**	P	**P**	**20 46 27.1**	**+0.5**
	7.0nm,0.7s,baz=42,slow=6.9,SNR=67						
ZALV	**Zalesovo Beam**	**57.93**	**324**	P	**P**	**20 46 45.2**	**-0.5**
ZALV	**Zalesovo Beam**	**57.93**	**324**	P	**P**	**20 46 45.2**	**-0.5**
	2.9nm,0.4s,baz=36,slow=6.9,SNR=16						
KURK	**Kurchatov**	**62.60**	**326**	*e*P	**P**	**20 47 17.0**	**-0.6**
	1.0nm,0.4s						
EKA	**Eskdalemuir Ar**	**63.19**	**19**	P	**P**	**20 47 21.5**	**+0.1**
EKA	**Eskdalemuir Ar**	**63.19**	**19**	P	**P**	**20 47 21.5**	**+0.1**
	0.5nm,0.4s,baz=330,slow=5.3,SNR=8.2						
MKAR	**Makanchi Array**	**64.97**	**321**	P	**P**	**20 47 32.1**	**-1.1**
MKAR	**Makanchi Array**	**64.97**	**321**	P	**P**	**20 47 32.1**	**-1.1**
	0.3nm,0.3s,baz=32,slow=6.8,SNR=11						
AKTO	**Aktyubinsk**	**67.73**	**339**	P	**P**	**20 47 49.4**	**-1.5**
AKTO	**Aktyubinsk**	**67.73**	**339**	P	**P**	**20 47 49.4**	**-1.5**
	0.8nm,0.4s,baz=22,slow=6.3,SNR=6.1						
ESDC	**Sonseca Array**	**78.09**	**24**	P	**P**	**20 48 52.6**	**+0.5**
ESDC	**Sonseca Array**	**78.09**	**24**	P	**P**	**20 48 52.6**	**+0.5**
	0.2nm,0.3s,baz=348,slow=6.2,SNR=4.5						
CMAR	**Chiang Mai Arr**	**83.15**	**295**	P	**P**	**20 49 17.6**	**-1.9**
CMAR	**Chiang Mai Arr**	**83.15**	**295**	P	**P**	**20 49 17.6**	**-1.9**
	0.6nm,0.7s,baz=22,slow=4.4,SNR=5.1						
MDT	**Midelt**	**84.54**	**26**	P	**P**	**20 49 26.8**	**+0.3**
MDT	**Midelt**	**84.54**	**26**	P	**P**	**20 49 26.8**	**+0.3**
	3.6nm,0.9s,baz=359,slow=12,SNR=5.9						
BOSA	**Boshof**	**149.29**	**3**	PKPbc	**PKPbc**	**20 56 41.3**	**0.0**
BOSA	**Boshof**	**149.29**	**3**	PKPbc	**PKPbc**	**20 56 41.3**	**0.0**
	4.5nm,0.6s,baz=22,slow=5.1,SNR=17						

GUC 15 21:08:57.6±1.0,34°58S×70°36W,h3km±3km,MD3.6, ML3.1,4C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CACH	**El Canelo**	**0.50**	**336**	↑*i*P	Pg	21 09 07.8	+0.4
CACH				*i* S	Sg	21 09 15.3	+1.2
CHCH	**Chadas Angostu**	**0.69**	**339**	↓*i*P	Pg	21 09 11.4	+0.5
CHCH				*i* S	Sb	21 09 21.8	-0.5
LMEL	**Las Melosas**	**0.74**	**10**	↓*i*P	Pg	21 09 11.9	-0.2
LMEL				*i* S	Sg	21 09 22.4	+0.5
LMEL				AML	AML	21 09 26.8	
	comp=N,976nm,0.3s						
SJCH	**San Jose de Ma**	**0.94**	**0**	*e*P	Pg	21 09 14.9	-0.8
SJCH				*i* S	Sg	21 09 27.9	0.0
SJCH				AML	AML	21 09 28.8	
	comp=N,962nm,0.3s						
PCH	**Pirque**	**0.96**	**352**	↓*i*P	Pg	21 09 16.1	-0.2
PCH				*i* S	Sb	21 09 30.1	-0.3
ANTU	**Antumapu**	**1.03**	**347**	*e*P	Pg	21 09 17.6	+0.1
ANTU				*i* S	Sb	21 09 32.2	0.0
ANTU				AML	AML	21 09 32.7	
	comp=E,834nm,0.2s						
TACH	**Talagante**	**1.04**	**332**	↑*i*P	Pg	21 09 17.0	-0.7
TACH				*i* S	Sb	21 09 32.6	+0.1
LNV	**Longovilo**	**1.07**	**305**	*i* P	Pg	21 09 17.8	-0.4
LNV				*i* S	Sb	21 09 33.0	-0.2
FSR	**Penalolen**	**1.11**	**353**	*i* S	Sb	21 09 34.4	0.0
SAN	**Santiago**	**1.15**	**347**	*e*P	Pg	21 09 18.9	-0.8
SAN				*i* S	Sb	21 09 35.6	0.0
SAN				AML	AML	21 09 36.3	
	comp=N,797nm,0.2s						
CLCH	**Cerro Calan**	**1.19**	**353**	*e*P	Pg	21 09 19.9	-0.6
CLCH				*i* S	Sb	21 09 37.0	+0.2
CLCH				AML	AML	21 09 38.2	
	comp=E,901nm,0.2s						
CLCH				AML	AML	21 09 38.5	
	comp=E,1μm,0.5s						
PEL	**Peldehue**	**1.46**	**349**	↑*i*P	Pn	21 09 24.1	-0.9
PEL				*i* S	Sg	21 09 45.1	+0.5
PEL				AML	AML	21 09 46.4	
	comp=N,958nm,0.2s						
ROCH	**El Roble**	**1.69**	**341**	↑*i*P	Pn	21 09 28.7	+0.3
ROCH				*i* S	Sg	21 09 52.1	-0.5
ROCH				AML	AML	21 09 52.8	
	comp=E,456nm,0.5s						

GUC 15 21:24:04.9±0.6,33°14S×70°30W,h15km±1km,MD3.6, ML2.5,5C-3D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLCH	**Cerro Calan**	**0.33**	**218**	↑*i*P	Pg	21 24 12.1	+0.3
CLCH				*i* S	Sb	21 24 17.5	-0.3
CLCH				AML	AML	21 24 19.1	
	comp=N,2μm,0.4s						
CLCH				AML	AML	21 24 19.7	
	comp=N,2μm,0.4s						
PEL	**Peldehue**	**0.33**	**269**	↓*i*P	Pg	21 24 11.9	+0.1
PEL				*i* S	Sg	21 24 16.8	+0.3
PEL				AML	AML	21 24 22.9	
	comp=N,911nm,0.7s						
SAN	**Santiago**	**0.44**	**224**	*e*P	Pg	21 24 13.8	0.0
PCH	**Pirque**	**0.51**	**201**	↓*i*P	Pg	21 24 15.3	0.0
PCH				*i* S	Sb	21 24 22.8	-0.3
JACH	**Jahuel**	**0.52**	**331**	↑*i*P	Pg	21 24 15.2	-0.2
ROCH	**El Roble**	**0.62**	**285**	↑*i*P	Pg	21 24 17.3	-0.2
ROCH				*i* S	Sb	21 24 26.7	+0.1
ROCH				AML	AML	21 24 28.0	
	comp=N,482nm,0.5s						
LMEL	**Las Melosas**	**0.71**	**174**	↑*i*P	Pg	21 24 18.3	-0.7
LMEL				*i* S	Sg	21 24 28.2	-0.4
LMEL				AML	AML	21 24 31.0	
	comp=N,215nm,0.2s						
CACH	**El Canelo**	**1.01**	**195**	↑*i*P	Pb	21 24 24.2	-0.1
CACH				*i* S	Sn	21 24 38.5	-0.3
LNV	**Longovilo**	**1.24**	**229**	↓*i*P	Pn	21 24 27.6	-0.1
LNV				*i* S	Sn	21 24 44.1	0.0

GUC 15 21:27:38.7±0.7,32°63S×71°06W,h1km±2km,MD3.7, ML2.1,2C-3D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	**0.35**	**173**	↑*i*P	Pg	21 27 46.1	+0.4
ROCH				*i* S	Sg	21 27 51.7	+1.3
ROCH				AML	AML	21 27 55.5	
	comp=N,197nm,0.4s						
PEL	**Peldehue**	**0.60**	**148**	↑*i*P	Pg	21 27 51.0	+0.6
PEL				*i* S	Sb	21 28 00.3	-1.0
PEL				AML	AML	21 28 06.7	
	comp=E,218nm,0.4s						
CHNG	**Los Chungos**	**0.83**	**333**	↓*i*P	Pb	21 27 55.3	-0.6
CHNG				*i* S	Sb	21 28 07.5	-0.1
CHNG				AML	AML	21 28 09.1	
	comp=E,151nm,0.4s						
CHCH	**Chadas Angostu**	**1.35**	**165**	*i* P	Pg	21 28 03.9	-0.8
CHCH				*i* S	Sb	21 28 23.0	+0.3
LMEL	**Las Melosas**	**1.41**	**150**	↓*i*P	Pn	21 28 05.0	-0.9
LMEL				*i* S	Sg	21 28 24.7	+0.1
LMEL				AML	AML	21 28 26.0	
	comp=N,107nm,0.2s						
CACH	**El Canelo**	**1.54**	**165**	↓*i*P	Pn	21 28 07.1	-0.4
CACH				*i* S	Sg	21 28 28.7	+0.3

MAN 15 21:28:04,15°24N×122°55E,h26km,mb4.1,ML2.9,MS2.7, 1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
POLP	**Polilio Island**	**0.78**	**229**	*e*P	Pb	21 28 18.6	-0.3
POLP				*e*S	Sn	21 28 30.0	0.0
BALP	**Baler**	**1.06**	**298**	*e*P	Pn	21 28 22.9	-0.3
BALP				*e*S	Sb	21 28 37.9	+0.7
GQP	**Guinayangan**	**1.33**	**184**	↓*i*P	Pn	21 28 26.6	-0.4
PALP	**Palanan**	**1.82**	**356**	*e*P	Pn	21 28 33.7	+0.1
PALP				*e*S	Sn	21 28 55.5	-0.3
CAUP	**Cauayan**	**1.83**	**338**	*e*P	Pn	21 28 34.9	+1.0
CAUP				*e*S	Sb	21 28 58.4	-1.0
APYP	**Conner**	**2.89**	**335**	*e*P	Pn	21 28 49.9	+1.4
APYP				*e*S	Sn	21 29 22.3	-0.1

NEIC 15 21:44:44.1±3.2,43°33N×127°42W,h10km,mb3.7/1,Error ellipse: s-maj=36.7km s-min=9.2km az=70.0,Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**2.30**	**100**	*e*Pn	Pn	21 45 20.5	-1.7
RNO	**Roman Nose**	**2.73**	**76**	P	Pn	21 45 27.6	-0.6
HEBO	**Mount Hebo**	**3.24**	**53**	P	Pn	21 45 34.1	-0.9
HUMO	**Hull Mountain**	**3.35**	**101**	*e*Pn	Pn	21 45 36.9	+0.3
HUMO				*e*S	Sn	21 46 16.4	-0.1
KMOR	**Kings Mountain**	**3.64**	**49**	P	Pn	21 45 39.6	-1.0
BROR	**Big Rock Looko**	**3.72**	**74**	P	Pn	21 45 41.8	+0.3
F03A	**Seaside**	**3.79**	**45**	P	Pn	21 45 41.4	-1.1
YBH	**Yreka Blue Hor**	**3.83**	**113**	*e*Pn	Pn	21 45 43.6	+0.4
YBH				*e*S	Sn	21 46 29.6	+1.3
FRIS	**Frissel Point**	**3.95**	**75**	P	Pn	21 45 45.4	+0.4
NLO	**Nicolai Mounta**	**3.95**	**44**	P	Pn	21 45 44.8	-0.1
F04A	**Amboy**	**4.42**	**52**	P	Pn	21 45 51.3	+0.2
LVP	**Lakeview Peak**	**4.50**	**51**	P	Pn	21 45 52.7	+0.3
MTMW	**Mount Mitchell**	**4.59**	**52**	P	Pn	21 45 53.8	+0.2
FL2	**Flat Top 2**	**4.61**	**50**	P	Pn	21 45 54.3	+0.3
SHW	**Mount Saint He**	**4.67**	**50**	P	Pn	21 45 55.7	+0.9
VFP	**Flag Point**	**4.71**	**63**	P	Pn	21 45 56.6	+1.2
NLWA	**Neilton Lookou**	**4.77**	**30**	*e*Pn	Pn	21 45 55.5	-0.6
NLWA				*e*Sg	Sn	21 46 49.8	-1.6
TDL	**Tradedollar La**	**4.78**	**49**	P	Pn	21 45 56.5	+0.2
ASR	**Mount Adams--S**	**5.02**	**54**	P	Pn	21 46 00.2	+0.6
LON	**Longmire**	**5.24**	**47**	*e*Pn	Pn	21 46 02.7	+0.1
LON				Sn	Sb	21 47 12.9	-6.1
REMR	**Mount Rainier-**	**5.27**	**47**	P	Pn	21 46 03.4	+0.3
D05A	**Enumclaw**	**5.44**	**43**	P	Pn	21 46 05.9	+0.8
PGC	**Sidney**	**6.00**	**26**	*e*Pn	Pn	21 46 12.2	-0.6
PGC				*e*Sg	Sn	21 47 15.9	-5.5
HAWA	**Hanford**	**6.39**	**59**	*e*Pn	Pn	21 46 18.2	0.0
BMO	**Blue Mountains**	**7.44**	**75**	*e*Pn	Pn	21 46 32.4	-0.4
CMB	**Columbia Colle**	**7.52**	**132**	*e*Pn	Pn	21 46 38.3	+4.5
NEW	**Newport**	**8.72**	**52**	Pn	Pn	21 46 48.2	-2.1
BSMT	**Bassoo Peak**	**9.94**	**59**	Pn	Pn	21 47 07.3	+0.1
	20nm,1.9s						
FFC	**Flin Flon**	**20.08**	**47**	*e*P	Pn	21 49 18.8	-0.5
	4.0nm,1.0s						

IDC 15 21:47:49.3±1.3,0°29N×126°09E,h0km,mb3.6/4, mb1 3.8/4,mb1mx3.5/21,mbtmp3.6/4,Error ellipse: s-maj=135.8km s-min=21.0km az=68.0,Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.67**	**159**	P	P	21 52 40.9	-0.9
	0.8nm,0.4s,baz=338,slow=11,SNR=14						
ASAR	**Alice Springs**	**24.99**	**163**	P	P	21 53 15.7	+0.6
	0.6nm,0.3s,baz=343,slow=12,SNR=12						
SONM	**Songino Array**	**50.35**	**343**	P	P	21 56 48.7	+0.4
	0.3nm,0.4s,baz=149,slow=4.7,SNR=3.6						
MKAR	**Makanchi Array**	**60.03**	**327**	P	P	21 57 57.4	-0.6
	0.5nm,0.6s,baz=122,slow=7.8,SNR=6.5						

IDC 15 22:01:44.1±2.8,11°97N×85°86W,h0km,mb3.7/6, mb1 4.1/6,mb1mx3.8/22,mbtmp3.7/6,MS3.2/1,Ms1 3.2/1, ms1mx2.6/28,Error ellipse: s-maj=84.8km s-min=56.1km az=58.0,Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**20.38**	**158**	LR	LR	22 12 00.7	
	comp=Z,66nm,20.9s,baz=196,slow=30						
TXAR	**Lajitas Array**	**23.94**	**319**	P	P	22 06 59.7	-0.6
	2.0nm,0.8s,baz=136,slow=9.6,SNR=21						
TXAR				PcP	PcP	22 10 42.5	-0.5
	0.2nm,0.4s,baz=134,slow=3.9,SNR=3.6						
PDAR	**Pinedale Array**	**36.94**	**330**	P	P	22 08 56.0	+0.6
	0.8nm,0.7s,baz=119,slow=12,SNR=4.8						
ULM	**Lac du Bonnet**	**39.05**	**350**	P	P	22 09 13.0	+0.4
	2.4nm,0.4s,baz=157,slow=6.1,SNR=3.7						
NVAR	**Mina Array Bea**	**39.09**	**318**	P	P	22 09 13.6	+0.1
	0.5nm,0.7s,baz=124,slow=8.1,SNR=2.9						
NVAR				PcP	PcP	22 11 23.5	0.0
	0.7nm,0.8s,baz=134,slow=5.2,SNR=3.9						
YKA	**Yellowknife Ar**	**54.49**	**344**	P	P	22 11 12.3	-1.0
	0.6nm,0.8s,baz=137,slow=7.1,SNR=4.7						
ILAR	**Eielson Array**	**67.08**	**336**	P	P	22 12 39.1	-0.1

PLCA Paso Flores 25.49 207 P P 22 21 17.3 +3.7
2.8nm,1.1s,baz=32,slow=13,SNR=3.6
ROSC El Rosal 29.59 320 eP P 22 21 50.8 -0.2
ROSC El Rosal 29.59 320 P P 22 21 51.9 +0.9
9.7nm,0.7s,baz=180,slow=2.0,SNR=8.3
DBIC Dimbokro 56.12 68 P P 22 25 23.9 -1.3
DBIC Dimbokro 56.12 68 P P 22 25 23.9 -1.3
7.0nm,1.0s,baz=199,slow=8.2,SNR=3.6
TIGA Tifton 56.42 331 ⇓P P 22 25 27.7 +0.7
baz=57
GOGA Godfrey 58.04 333 eP P 22 25 38.1 -0.3
6.7nm,1.0s
LRAL Lakeview Retre 59.34 330 eP P 22 25 45.5 -1.9
10.0nm,1.0s
TKL Tuckaleechee C 60.09 334 P P 22 25 51.6 -1.0
TKL Tuckaleechee C 60.09 334 P P 22 25 51.6 -1.0
5.0nm,0.8s,baz=146,slow=9.2,SNR=8.5
CPCT Cooper Cave 60.23 333 eP P 22 25 53.1 -0.5
SNAA Sanae 61.26 163 eP P 22 26 00.1 -0.1
SNAA Sanae 61.26 163 eP P 22 26 00.3 +0.2
11nm,1.3s
PLAL Pickwick Lake 61.45 330 eP P 22 26 00.2 -1.6
5.4nm,0.7s
WVT Waverly 62.27 331 eP P 22 26 05.3 -2.1
8.2nm,0.6s
BINY Binghamton 63.27 343 eP P 22 26 13.9 0.0
12nm,0.8s
ACSO Alum Creek Sta 63.74 337 eP P 22 26 17.0 -0.1
23nm,0.8s
MIAR Mount Ida 63.88 326 eP P 22 26 16.4 -1.7
20nm,1.8s
632A Uvalde 63.91 318 ⇑P P 22 26 17.7 -0.7
baz=64,SNR=5.8
WHTX Lake Whitney 64.19 321 ⇓P P 22 26 19.6 -0.6
baz=64
631A Perdido Creek 64.35 317 ⇓P P 22 26 20.4 -0.9
baz=64
532A Rocksprings 64.40 318 ⇓P P 22 26 20.8 -0.9
baz=65
JCT Junction City 64.58 318 eP P 22 26 23.8 +0.9
40nm,1.9s
JCT Junction City 64.58 318 ⇓P P 22 26 22.0 -0.9
baz=65
TOA0 Torodi Ar. Sit 64.83 65 eP P 22 26 24.4 -0.2
TOA0 eP cP P 22 26 58.4 +0.3
TORD Torodi Ar. Bea 64.83 65 P P 22 26 24.7 0.0
TORD Torodi Ar. Bea 64.83 65 P P 22 26 24.7 0.0
8.8nm,0.8s,baz=257,slow=7.0,SNR=100
531A Rocksprings 64.84 318 ⇑P P 22 26 23.5 -1.0
baz=65,SNR=7.2
432A Menard 64.84 319 ⇓P P 22 26 23.7 -0.8
baz=65
332A Millersview 65.16 319 ⇑P P 22 26 25.5 -1.0
baz=65
431A Sonora 65.22 318 ⇓P P 22 26 26.3 -0.8
baz=65
530A J-C Ranch, Com 65.33 317 ⇓P P 22 26 26.7 -1.0
baz=66
232A Coleman 65.45 320 ⇑P P 22 26 27.2 -1.3
baz=66
SFIN Scholer Farm 65.48 334 ⇓P P 22 26 27.3 -1.1
baz=66
331A San Angelo 65.53 319 ⇑P P 22 26 27.7 -1.3
baz=66
430A Baggett Ranch, 65.69 318 ⇓P P 22 26 28.3 -1.8
baz=66
231A Bronte 65.89 319 ⇑P P 22 26 30.2 -1.2
baz=66
529A Stev Forest Ra 65.89 317 ⇓P P 22 26 30.5 -0.9
baz=66,SNR=8.0
628A Black Gap, Mar 65.92 316 ⇓P P 22 26 30.6 -1.0
baz=66,SNR=9.4
429A Davenport Ranc 66.01 317 ⇓P P 22 26 30.3 -1.9
baz=66,SNR=8.7
330A Mertzon 66.07 318 ⇑P P 22 26 31.2 -1.4
baz=66
TUL1 Tulsa 66.10 325 ⇑P P 22 26 31.6 -0.9
baz=66
627A Terlingua Ranc 66.23 315 ⇓P P 22 26 32.8 -0.9
baz=66,SNR=9.6
528A Cox Ranch, San 66.29 316 ⇓P P 22 26 32.9 -1.1
baz=66,SNR=6.4
Z32A Haskell 66.33 321 ⇓P P 22 26 33.0 -1.1
baz=66
TXAR Lajitas Array 66.34 315 P P 22 26 33.5 -0.8
TXAR Lajitas Array 66.34 315 P P 22 26 33.5 -0.8
1.8nm,1.1s,baz=122,slow=6.1,SNR=10
230A Sterling City 66.36 319 ⇓P P 22 26 33.4 -1.0
baz=66
131A Roby 66.44 320 ⇓P P 22 26 34.0 -0.9
baz=67
428A Kincaid Ranch, 66.59 317 ⇓P P 22 26 35.0 -0.9
baz=67,SNR=7.8
329A Wagon Wheel Ra 66.64 318 ⇓P P 22 26 35.1 -1.0
baz=67
Z31A Sharp Cattle R 66.73 320 ⇑P P 22 26 35.9 -0.8
baz=67
130A Snyder 66.74 319 ⇓P P 22 26 35.9 -0.9
baz=67
626A Big Bend Ranch 66.79 315 ⇓P P 22 26 36.6 -0.6
baz=67,SNR=13
527A Woodward Ranch 66.82 316 ⇓P P 22 26 36.4 -1.0
baz=67,SNR=7.9
229A Bryant Ranch, 66.85 318 ⇑P P 22 26 36.7 -0.8
baz=67
526A Mary Lane Ranc 67.08 315 ⇓P P 22 26 38.4 -0.8
baz=67
328A Wristen Ranch, 67.10 317 ⇓P P 22 26 38.2 -0.9
baz=67
427A Hayter Ranch, 67.14 316 ⇑P P 22 26 37.9 -1.5
baz=67
Y31A Rekieta Farm, 67.25 321 ⇓P P 22 26 39.0 -0.9
baz=67
Z30A Sanderson Ranc 67.31 320 ⇑P P 22 26 39.0 -1.4
baz=68
426A McDonald Obser 67.43 316 ⇓P P 22 26 40.5 -0.9
baz=68,SNR=9.8
228A UT Block 9, Go 67.44 318 ⇑P P 22 26 40.0 -1.3
baz=68
X31A McDonald Ranch 67.55 322 ⇑P P 22 26 41.6 -0.3
baz=68
Y30A Stafford Cattl 67.58 320 ⇓P P 22 26 41.6 -0.5
baz=68
326A Caldwell Ranch 67.81 316 ⇓P P 22 26 42.5 -1.2
baz=68,SNR=6.6
227A Bennet, Jal 67.82 317 ⇑P P 22 26 43.2 -0.4
baz=68
W31A Holland Ranch, 67.91 322 ⇑P P 22 26 44.0 -0.2
baz=68
X30A Coker Ranch, T 67.95 321 ⇓P P 22 26 43.9 -0.5
baz=68
Y29A Portefield Fa 68.03 320 ⇑P P 22 26 43.8 -1.2
baz=68
Z28A Tucker Farm, M 68.09 319 ⇑P P 22 26 43.9 -1.5
baz=68
425A Indio Mountain 68.14 315 ⇑P P 22 26 44.4 -1.4
baz=68
226B Tecolote Peak, 68.43 317 ⇑P P 22 26 46.9 -0.6
baz=69
X29A Tulia 68.45 320 ⇓P P 22 26 47.0 -0.6
baz=69
325A Bean Ranch, Si 68.50 316 ⇑P P 22 26 47.0 -1.1
baz=69,SNR=7.8
Z27A Tatum 68.63 319 ⇓P P 22 26 46.9 -1.9
baz=69,SNR=6.1
126A Clayton Basin, 68.70 318 ⇑P P 22 26 48.5 -0.7
baz=69
MSTX Muleshoe 68.78 319 ⇓P P 22 26 49.2 -0.5
baz=69
225A Deer Hill, Car 68.87 317 ⇑P P 22 26 49.4 -1.0
baz=69
324A Moseley Ranch, 68.89 316 ⇑P P 22 26 49.1 -1.4
baz=69
TSUM Tsumeb 68.90 104 eP P 22 26 52.2 +1.4
8.9nm,1.1s
JFWS Jewell Farm 68.90 334 eP P 22 26 49.4 -0.7
15nm,0.8s
KSU1 Kansas State U 68.91 327 eP P 22 26 47.6 -2.6
19nm,0.9s
Y27A Causey 68.97 319 ⇑P P 22 26 49.6 -1.3
baz=69
MNTX Cornudas Mount 68.98 316 eP P 22 26 48.4 -2.4
9.3nm,1.3s
MNTX eP cP P 22 27 14.1 -1.0
Z26A Caprock 69.08 318 ⇑P P 22 26 51.0 -0.6
baz=69
224A Cornudas Mount 69.31 316 ⇑P P 22 26 51.6 -1.5
baz=70,SNR=7.0

Y26A Elida 69.41 319 ⇑P P 22 26 53.3 -0.3
baz=70
Z25A Roswell 69.56 318 ⇑P P 22 26 54.1 -0.5
baz=70
124A Stringfield Ra 69.66 317 ⇓P P 22 26 54.7 -0.7
baz=70
W27A Bowe Ranch, En 69.69 320 ⇑P P 22 26 54.5 -0.8
baz=70
S30A Montezuma 69.93 324 ⇓P P 22 26 56.3 -0.4
baz=70
Y25A Mesa, Roswell 69.96 318 ⇑P P 22 26 56.4 -0.6
baz=70,SNR=6.0
Z24A Sheeppen Canyo 70.00 317 ⇓P P 22 26 56.6 -0.8
baz=70
S29A Ulysses 70.29 323 ⇓P P 22 26 59.1 +0.2
baz=70
Q31A Ellis 70.31 325 ⇓P P 22 26 59.1 +0.1
baz=70
X25A Clemmons Ranch 70.33 319 ⇑P P 22 26 59.3 0.0
baz=70
Y24A Capitan 70.43 318 ⇓P P 22 26 59.7 -0.3
baz=71
U27A Thompson Grove 70.46 321 ⇑P P 22 26 59.9 -0.2
baz=71
Z23A Rita Site, Whi 70.52 317 ⇓P P 22 26 60.0 -0.5
baz=71
V26A Tequesquite Ra 70.62 320 ⇑P P 22 27 00.4 -0.6
baz=71
W25A X Bar L Ranch, 70.65 319 ⇓P P 22 27 00.7 -0.5
baz=71
S28A Manter 70.72 323 ⇓P P 22 27 01.2 -0.3
baz=71
Y23A Lovelace Mesa, 70.83 317 ⇓P P 22 27 02.2 -0.2
baz=71
T27A Campo 70.83 322 ⇑P P 22 27 02.5 +0.2
baz=71
X24A Lazy VL Ranch, 70.84 318 ⇓P P 22 27 02.3 -0.2
baz=71
R29A Marienthal 70.86 324 ⇑P P 22 27 01.9 -0.5
baz=71
320A Kipp Ranch, An 70.87 314 ⇓P P 22 27 02.2 -0.5
baz=71
U26A Atchley Ranch, 70.99 321 ⇓P P 22 27 02.3 -1.0
baz=71
Z22A Elephant Butte 71.00 316 ⇑P P 22 27 02.8 -0.6
baz=71
121A Cookes Peak, D 71.09 315 ⇓P P 22 27 04.2 +0.2
baz=71,SNR=5.2
Q29A Oakley 71.10 324 ⇑P P 22 27 03.4 -0.5
baz=71
V25A Rancho No Teng 71.16 320 ⇑P P 22 27 04.0 -0.4
baz=71,SNR=7.2
R28A Tribune 71.19 323 ⇑P P 22 27 04.0 -0.4
baz=71
220A Playas Peak, P 71.21 314 ⇑P P 22 27 03.8 -0.9
baz=71
W24A Lazy 6 Ranch, 71.24 319 ⇓P P 22 27 04.2 -0.7
baz=71,SNR=5.4
X23A Hourglass Bar 71.33 318 ⇓P P 22 27 04.9 -0.6
baz=72
U25A Circle Dot Ran 71.40 320 ⇓P P 22 27 05.9 +0.1
baz=72
319A Douglas 71.41 313 ⇓P P 22 27 05.5 -0.4
baz=72
Y22A Socorro 71.42 317 ⇓P P 22 27 05.8 -0.2
baz=72
T26A Comanche Natio 71.42 321 ⇓P P 22 27 05.7 -0.3
baz=72
LPM Los Pinos Moun 71.44 317 eP P 22 27 06.4 +0.3
V24A Rampart Ranch, 71.49 319 ⇓P P 22 27 06.6 +0.2
baz=72
Z21A St. Cloud Mine 71.49 316 ⇑P P 22 27 06.3 -0.2
baz=72
P29A Atwood 71.57 325 ⇓P P 22 27 07.0 +0.3
baz=72
S26A Kim 71.65 322 ⇑P P 22 27 07.5 +0.2
baz=72
120A U Bar Ranch, L 71.67 315 ⇑P P 22 27 07.2 -0.3
baz=72
W23A Werner Place, 71.67 318 ⇓P P 22 27 07.3 -0.2
baz=72
R27A Eads 71.71 323 ⇓P P 22 27 08.0 +0.4
baz=72
ANMO Albuquerque 71.73 318 eP P 22 27 08.0 +0.1
11nm,1.2s
X22A Bernardo 71.81 317 ⇑P P 22 27 08.4 +0.1
baz=72
T25A Trinidad 71.89 321 ⇓P P 22 27 09.0 +0.2
baz=72
Y21A Point of Rocks 71.93 317 ⇓P P 22 27 09.3 +0.2
baz=72
Z20A Nine Sixteen R 71.98 315 ⇓P P 22 27 09.4 0.0
baz=72
V23A Ortiz Mt. (NFS 72.06 319 ⇓P P 22 27 09.7 -0.2
baz=72
W22A Albuquerque 72.07 318 ⇑P P 22 27 09.5 -0.4
baz=72
R26A Arlington 72.09 322 ⇓P P 22 27 10.1 +0.2
baz=72
S25A Robets Cordova 72.25 321 ⇑P P 22 27 11.1 +0.2
baz=72
X21A Alamocita Cree 72.27 317 ⇑P P 22 27 11.4 +0.3
baz=72,SNR=13
Y20A Horse Springs, 72.33 316 ⇑P P 22 27 11.2 -0.3
baz=72
ECSD EROS Data Cent 72.40 330 eP P 22 27 10.1 -1.3
4.4nm,0.9s
O28A Krutsinger Ran 72.40 325 ⇓P P 22 27 12.3 +0.7
baz=73
U23A El Rito 72.44 319 ⇓P P 22 27 12.5 +0.3
baz=73
V22A San Miguel Ran 72.63 319 ⇑P P 22 27 13.7 +0.4
baz=73,SNR=8.1
TAM Tamanrasset 72.63 58 eP P 22 27 13.9 +0.4
4.6nm,1.0s
S24A Houchin Ranch, 72.70 321 ⇓P P 22 27 13.9 +0.2
baz=73
X20A Quemado 72.79 317 ⇑P P 22 27 14.5 +0.2
baz=73
U22A Llaves 72.89 319 ⇑P P 22 27 15.0 +0.2
baz=73,SNR=7.7
TUC Tucson 72.99 313 eP P 22 27 15.3 0.0
19nm,1.0s
V21A Milan 73.02 318 ⇑P P 22 27 15.6 0.0
baz=73
W20A Ramah 73.15 317 ⇓P P 22 27 16.3 -0.1
baz=73,SNR=6.3
N27A Anderson Farm, 73.29 325 ⇑P P 22 27 17.1 +0.1
baz=74
T22A Edith 73.32 319 ⇑P P 22 27 17.3 0.0
baz=74,SNR=7.3
P25A Willow Gulch B 73.33 323 ⇓P P 22 27 17.5 +0.2
baz=74
U21A Nageezi 73.42 319 ⇑P P 22 27 17.9 -0.1
baz=74,SNR=10
R23A Moffat 73.42 321 ⇓P P 22 27 18.2 +0.2
baz=74
K29A Lazy Trails An 73.50 327 ⇓P P 22 27 18.9 +0.8
baz=74
Q24A Divide 73.53 322 ⇓P P 22 27 18.6 0.0
baz=74
V20A Brimhall 73.54 318 ⇑P P 22 27 19.1 +0.4
baz=74
N26A Koester Ranch, 73.69 324 ⇓P P 22 27 20.2 +1.0
baz=74
SCHQ Schefferville 73.70 353 P P 22 27 17.4 -1.4
SCHQ Schefferville 73.70 353 P P 22 27 17.4 -1.4
2.3nm,0.9s,baz=233,slow=3.4,SNR=3.9
T21A Navajo Lake 73.70 319 ⇓P P 22 27 19.6 +0.1
baz=74
BOSA Boshof 73.70 115 P P 22 27 20.3 +0.5
BOSA Boshof 73.70 115 P P 22 27 20.3 +0.5
8.2nm,0.8s,baz=220,slow=5.9,SNR=8.9
X18A Snowflake 73.74 316 ⇓P P 22 27 19.9 +0.1
baz=74
S22A 4UR Ranch, Cre 73.74 320 ⇓P P 22 27 20.4 +0.5
baz=74
U20A Newcomb 73.93 318 ⇑P P 22 27 21.1 +0.2
baz=74
W18A Petrified Fore 73.95 316 ⇑P P 22 27 21.3 +0.2
baz=74
214A Organ Pipe Nat 74.20 312 ⇓P P 22 27 23.0 +0.6
baz=74
S21A Coal Bank Pass 74.28 319 ⇑P P 22 27 23.2 +0.1
baz=74,SNR=8.2
ISCO Idaho Springs 74.35 322 eP P 22 27 24.3 +0.9
6.0nm,1.4s
ISCO Idaho Springs 74.35 322 ⇓P P 22 27 23.8 +0.4
baz=74

R21A Cimarron 74.58 320 ⇑P P 22 27 25.4 +0.7
baz=75
X16A Lo Mia Camp, P 74.67 315 ⇓P P 22 27 25.5 +0.3
baz=75
S20A Disappointment 74.73 319 ⇓P P 22 27 26.2 +0.5
baz=75
LBTB Lobatse 74.81 112 eP P 22 27 27.8 +1.5
17nm,1.2s
Q21A Lamborn Mesa, 74.89 321 ⇓P P 22 27 27.1 +0.7
baz=75
P22A Eagle 74.89 322 ⇓P P 22 27 27.1 +0.7
baz=75
M24A Cheyenne 75.01 324 ⇓P P 22 27 27.9 +0.9
baz=75
Z14A Wintersburg 75.09 313 ⇑P P 22 27 27.8 +0.3
baz=75
O22A Kremmling 75.13 322 ⇑P P 22 27 28.0 +0.1
baz=75
P21A Newcastle 75.25 321 ⇑P P 22 27 29.0 +0.4
baz=75
N23A Red Feather La 75.26 323 ⇑P P 22 27 29.1 +0.5
baz=75
WUAZ Wupatki 75.26 316 ⇓P P 22 27 28.7 +0.1
baz=75
113A Mohawk Valley, 75.33 312 ⇑P P 22 27 28.5 -0.3
baz=76
ESDC Sonseca Array 75.44 39 P P 22 27 29.0 -0.4
ESDC Sonseca Array 75.44 39 P P 22 27 29.0 -0.4
0.5nm,0.5s,baz=240,slow=6.0,SNR=7.5
Y14A Wickenburg 75.45 314 ⇓P P 22 27 30.1 +0.5
baz=76
S18A Hurst Farm, Bl 75.67 318 ⇑P P 22 27 31.4 +0.4
baz=76,SNR=12
O21A Pagoda 75.70 322 ⇑P P 22 27 32.2 +1.0
baz=76
J25A Sunshine Ranch 75.76 326 ⇑P P 22 27 31.5 +0.3
baz=76
N21A Black Mountain 76.08 322 ⇑P P 22 27 34.1 +0.8
baz=76
O20A White River Ci 76.11 321 ⇓P P 22 27 34.0 +0.6
baz=76
GLA Glamis 76.22 312 eP P 22 27 35.3 +1.2
8.9nm,0.9s
GLA Glamis 76.22 312 ⇑P P 22 27 34.2 +0.2
baz=76
P19A Cripple Cowboy 76.24 320 ⇑P P 22 27 34.6 +0.4
baz=76
U15A North Rim 76.40 316 ⇑P P 22 27 35.1 -0.1
baz=76
PDMCI Parker Dam,Lak 76.43 314 ⇑P P 22 27 35.6 +0.5
baz=77
M21A Separation Pea 76.53 323 ⇓P P 22 27 36.3 +0.5
baz=77
N20A Spence Gulch, 76.56 322 ⇓P P 22 27 36.5 +0.4
baz=77
W13A Hualapai Mount 76.70 314 ⇓P P 22 27 37.3 +0.3
baz=77
O19A Miners Draw (B 76.74 321 ⇑P P 22 27 36.9 0.0
baz=77
K22A Casper 76.74 324 ⇓P P 22 27 37.1 +0.2
baz=77
L21A Rawlins 76.77 323 ⇓P P 22 27 37.5 +0.4
baz=77
SRU San Rafael 76.86 319 ⇑P P 22 27 37.9 +0.2
baz=77
MDND Maddock 76.86 331 ⇑P P 22 27 37.9 +0.7
baz=77
M20A Sweetwater, Wa 76.94 322 ⇑P P 22 27 37.9 -0.2
baz=77
BC3 Big Chuckawall 76.99 312 ⇑P P 22 27 38.2 -0.3
baz=77
I23A Meade Ranch, G 77.03 326 ⇓P P 22 27 38.2 -0.3
baz=77
IRM Iron Mountain 77.05 313 ⇓P P 22 27 38.8 +0.1
baz=77
H24A Dirks Ranch, A 77.08 327 ⇓P P 22 27 38.5 -0.2
baz=77
J22A Midwest 77.22 325 ⇓P P 22 27 39.8 +0.3
baz=77
MONP Monument Peak 77.27 311 ⇑P P 22 27 39.8 -0.3
baz=77
L20A Wamsutter 77.35 323 ⇑P P 22 27 40.8 +0.4
baz=78
I22A 9 Mile Ranch, 77.53 325 ⇓P P 22 27 41.0 -0.3
baz=78
MSU Marysvale 77.54 318 eP P 22 27 41.6 0.0
BELC Belle Mtn. Jos 77.56 312 ⇓P P 22 27 41.6 0.0
baz=78
J21A Lysite 77.70 324 ⇑P P 22 27 42.3 0.0
baz=78
CCUT Cedar City 77.75 317 eP P 22 27 44.6 +1.9
15nm,1.5s
GMRC Granite Mounta 77.75 313 ⇓P P 22 27 42.4 -0.2
baz=78
K20A Yellowstone Ra 77.77 323 ⇑P P 22 27 42.7 +0.1
baz=78
G23A Biddle 77.82 327 ⇑P P 22 27 42.9 +0.1
baz=78
I21A Big Trails, Te 77.92 325 ⇓P P 22 27 43.3 -0.2
baz=78
H22A Clearmont 77.93 326 ⇓P P 22 27 43.4 0.0
baz=78
ARUT Antelope Range 77.93 317 eP P 22 27 43.5 -0.2
9.6nm,1.2s
J20A Shoshoni 78.07 324 ⇑P P 22 27 43.8 -0.5
baz=78
K19A Absolon Red Bu 78.16 323 ⇓P P 22 27 44.3 -0.6
baz=78
F23A Volborg 78.18 327 ⇑P P 22 27 44.6 -0.1
baz=78
JLU Jordanelle 78.33 320 eP P 22 27 45.7 -0.3
10nm,0.9s
I20A Worland 78.47 324 ⇑P P 22 27 45.9 -0.6
baz=79
BW06 Boulder Array 78.53 323 eP P 22 27 46.0 -1.0
7.8nm,1.2s
PDAR Pinedale Array 78.53 323 P P 22 27 46.0 -0.9
PDAR Pinedale Array 78.53 323 P P 22 27 46.0 -0.9
5.5nm,1.0s,baz=130,slow=6.6,SNR=17
J19A Crowheart 78.56 323 ⇑P P 22 27 46.1 -0.9
baz=79,SNR=8.4
D24A Glendive 78.58 329 ⇑P P 22 27 47.0 +0.1
baz=79
H20A Greybull 78.75 325 ⇓P P 22 27 48.1 +0.1
baz=79
GSC Goldstone 78.82 313 eP P 22 27 50.1 +1.5
8.3nm,1.3s
GSC Goldstone 78.82 313 ⇓P P 22 27 48.3 -0.2
baz=79
DUG Dugway 78.92 319 eP P 22 27 49.7 +0.6
12nm,1.1s
DUG Dugway 78.92 319 ⇑P P 22 27 49.2 +0.1
baz=79,SNR=9.3
I19A Meeteetse 79.01 324 ⇑P P 22 27 49.7 +0.2
baz=79
SJPF Ste Jean 79.19 37 eP P 22 27 51.1 +0.8
40nm,1.5s
SJPF Ste Jean 79.19 37 eP P 22 27 51.1 +0.8
40nm,1.5s
ETSF Etsaut 79.45 38 eP P 22 27 52.5 +0.7
24nm,1.6s
ETSF Etsaut 79.45 38 eP P 22 27 52.5 +0.7
24nm,1.5s
DGMT Dagmar 79.46 330 ⇑P P 22 27 52.2 +0.5
baz=80
C23A Lambert 79.48 329 ⇓P P 22 27 52.4 +0.6
baz=80
D22A Cohagen 79.54 328 ⇑P P 22 27 52.8 +0.6
baz=80
R11A Troy Canyon, C 79.65 316 ⇓P P 22 27 53.4 +0.3
baz=80
LOHW Long Hollow 79.66 323 eP P 22 27 53.0 -0.1
12nm,1.0s
A24A Westby 79.68 330 ⇑P P 22 27 53.5 +0.6
baz=80
LSZ Lusaka 79.69 103 eP P 22 27 55.5 +1.7
9.7nm,1.3s
MPMC Manual Prospec 79.69 314 ⇑P P 22 27 53.4 -0.1
baz=80
TPAW Teton Pass 79.78 323 eP P 22 27 54.6 +0.8
5.0nm,1.0s
H18A Shoshone NF, C 79.79 324 ⇓P P 22 27 53.6 -0.3
baz=80
C22A Vida 79.79 328 ⇓P P 22 27 54.2 +0.7
baz=80
MOOW Moose Ponds 79.82 323 eP P 22 27 54.6 +0.6
6.6nm,0.9s

RRI2	**Red Ridge**	79.91	322	*e*P		P	22 27 55.2	+0.7		
	6.4nm,0.9s									
IMW	**Indian Meadow**	80.02	323	*e*P		P	22 27 55.2	0.0		
	13nm,0.9s									
EPF	**Esparros**	80.05	38	*e*P		P	22 27 55.3	+0.2		
	12nm,1.2s									
EPF	**Esparros**	80.05	38	*e*P		P	22 27 55.3	+0.2		
	12nm,1.2s									
E20A	**Meyer Farm, Mu**	80.12	326	⇑P		P	22 27 55.0	-0.3		
	baz=80									
G18A	**Lazy EL Ranch,**	80.13	325	⇓P		P	22 27 55.4	-0.2		
	baz=80									
F19A	**Roth Farm, Mol**	80.14	325	⇑P		P	22 27 54.7	-0.8		
	baz=80									
B22A	**Reddig Ranch S**	80.22	329	⇑P		P	22 27 55.9	0.0		
	baz=80									
I16A	**Newdale**	80.32	323	⇓P		P	22 27 56.8	+0.1		
	baz=80									
E19A	**Rath Farm, Rou**	80.44	326	⇓P		P	22 27 57.5	+0.4		
	baz=81									
D20A	**Manuel Ranch,**	80.50	327	⇓P		P	22 27 57.4	-0.1		
	baz=81									
F18A	**Big Timber**	80.59	325	⇑P		P	22 27 57.9	-0.1		
	baz=81									
A22A	**Carney Farms,**	80.65	329	⇓P		P	22 27 58.3	+0.2		
	baz=81									
VES	**Vestal, Richgr**	80.68	313	⇓P		P	22 27 58.3	-0.2		
	baz=81									
H16A	**Russell Place,**	80.69	323	⇓P		P	22 27 58.5	-0.2		
	baz=81									
PKM	**Peak Mountain**	80.72	312	⇑P		P	22 27 58.4	-0.6		
	baz=81									
ELK	**Elko**	80.76	318	*e*P		P	22 27 59.7	+0.6		
	5.4nm,0.9s									
B21A	**Ellsworth Farm**	80.81	328	⇓P		P	22 27 58.6	-0.3		
	baz=81									
C20A	**Veseth Ranch,**	80.84	327	⇓P		P	22 27 59.3	+0.1		
	baz=81									
D19A	**Cripps Ranch,**	80.94	326	⇓P		P	22 27 59.0	-0.7		
	baz=81,SNR=9.9									
F17A	**Fitzpatrick Pl**	81.10	325	⇓P		P	22 28 00.4	-0.4		
	baz=81,SNR=9.9									
E18A	**Harlowton**	81.11	326	⇑P		P	22 28 00.3	-0.5		
	baz=81									
B20A	**Solberg Farm,**	81.32	328	⇑P		P	22 28 00.7	-1.0		
	baz=82,SNR=5.9									
MTLF	**Montolieu**	81.34	39	*e*P		P	22 28 01.5	-0.4		
MTLF	**Montolieu**	81.34	39	*e*P		P	22 28 01.5	-0.4		
NV11	**Mina Array Sit**	81.39	315	*e*P		P	22 28 00.6	-1.9		
C19A	**Slack Wire Ran**	81.39	327	⇓P		P	22 28 01.7	-0.5		
	baz=82,SNR=12									
LFF	**La Frestale**	81.43	37	*e*P		P	22 28 02.5	+0.2		
LFF	**La Frestale**	81.43	37	*e*P		P	22 28 02.5	+0.2		
MLAC	**Mammoth Lakes**	81.43	314	⇓P		P	22 28 01.7	-1.1		
	baz=82									
D18A	**Linhart Farms,**	81.45	326	⇓P		P	22 28 02.5	0.0		
	baz=82									
BOZ	**Bozeman (W)**	81.48	324	*e*P		P	22 28 01.8	-1.0		
	3.5nm,1.2s									
NVAR	**Mina Array Bea**	81.49	315	P		P	22 28 03.6	+0.6		
NVAR	**Mina Array Bea**	81.49	315	P		P	22 28 03.6	+0.6		
	4.9nm,0.8s,baz=141,slow=5.0,SNR=14									
I14A	**Mackay**	81.50	322	⇑P		P	22 28 02.8	-0.1		
	baz=82,SNR=7.1									
E17A	**Martinsdale**	81.55	325	⇓P		P	22 28 03.2	+0.1		
	baz=82									
F16A	**Kennard Place,**	81.56	324	⇑P		P	22 28 02.9	-0.3		
	baz=82									
VNDA	**Vanda**	81.65	188	P		P	22 28 04.5	+1.5		
VNDA	**Vanda**	81.65	188	P		P	22 28 04.5	+1.5		
	1.8nm,0.9s,baz=157,slow=5.6,SNR=9.1									
MCMT	**McKenzie Canyo**	81.68	323	*e*P		P	22 28 04.0	+0.1		
	4.5nm,1.2s									
DLMT	**Dillon**	81.85	323	*e*P		P	22 28 05.6	+0.9		
	16nm,1.5s									
HLID	**Hailey**	81.85	321	*e*P		P	22 28 05.5	+0.7		
	13nm,0.9s									
HLID	**Hailey**	81.85	321	⇑P		P	22 28 04.8	0.0		
	baz=82									
D17A	**Six Diamond Ra**	81.89	326	⇑P		P	22 28 04.0	-0.9		
	baz=82,SNR=8.2									
KEST	**Kesra**	81.91	48	LR		LR	23 05 39.5			
	comp=Z,30nm,20.4s,baz=216,slow=37									
EGMT	**Eagleton**	81.94	327	*e*P		P	22 28 05.2	+0.1		
	17nm,1.0s									
EGMT	**Eagleton**	81.94	327	⇓P		P	22 28 05.1	0.0		
	baz=82									
MFF	**Saint Martin d**	81.94	35	*e*P		P	22 28 05.1	+0.1		
MFF	**Saint Martin d**	81.94	35	*e*P		P	22 28 05.1	+0.1		
A19A	**Klindworth Far**	82.00	328	⇑P		P	22 28 05.4	+0.1		
	baz=82									
LRM	**Limekiln Ridge**	82.04	324	*e*P		P	22 28 06.3	+0.4		
E16A	**East Helena**	82.05	325	⇑P		P	22 28 05.0	-0.7		
	baz=82,SNR=7.9									
F15A	**Butte**	82.08	324	⇑P		P	22 28 05.2	-0.8		
	baz=82									
CAF	**Calviac**	82.18	37	*e*P		P	22 28 06.4	+0.1		
	7.8nm,1.0s									
CAF	**Calviac**	82.18	37	*e*P		P	22 28 06.4	+0.1		
	7.8nm,1.0s									
B18A	**Beardsley Farm**	82.19	327	⇑P		P	22 28 05.9	-0.5		
	baz=82									
C17A	**Wharram Farm,**	82.23	326	⇑P		P	22 28 06.4	-0.2		
	baz=82									
D16A	**Dana Ranch, Ca**	82.28	325	⇑P		P	22 28 05.8	-1.1		
	baz=82,SNR=8.8									
I12A	**Atlanta**	82.41	321	⇑P		P	22 28 07.6	-0.1		
	baz=83									
F14A	**Wisdom**	82.56	323	⇑P		P	22 28 08.5	+0.1		
	baz=83									
A18A	**Metzger Ranch,**	82.56	327	⇑P		P	22 28 07.9	-0.3		
	baz=83									
MFID	**Camas Ranch**	82.61	320	*e*P		P	22 28 09.4	+0.6		
	12nm,0.9s									
MFID	**Camas Ranch**	82.61	320	⇑P		P	22 28 08.8	0.0		
	baz=83									
B17A	**L&G Farms, Che**	82.66	327	⇑P		P	22 28 09.0	+0.3		
	baz=83									
H12A	**Diamond D Ranc**	82.68	322	⇑P		P	22 28 09.1	0.0		
	baz=83									
D15A	**Lincoln**	82.81	325	⇓P		P	22 28 09.3	-0.4		
	baz=83,SNR=16									
C16A	**Fuhringer Ranc**	82.86	326	⇑P		P	22 28 09.5	-0.3		
	baz=83									
FFC	**Flin Flon**	82.92	335	*e*P		P	22 28 09.7	-0.2		
	7.8nm,1.0s									
A17A	**Triple J Farms**	83.01	327	⇑P		P	22 28 10.3	-0.3		
	baz=83,SNR=7.6									
TCF	**Toulx Ste Croi**	83.06	36	*e*P		P	22 28 10.8	-0.1		
	14nm,1.3s									
TCF	**Toulx Ste Croi**	83.06	36	*e*P		P	22 28 10.8	-0.1		
	14nm,1.3s									
CHMT	**Chamberlain Mo**	83.14	324	*e*P		P	22 28 12.3	+0.8		
LDF	**La Druitiere**	83.18	34	*e*P		P	22 28 11.1	-0.3		
	77nm,1.8s									
LDF	**La Druitiere**	83.18	34	*e*P		P	22 28 11.1	-0.3		
	77nm,1.8s									
MAW	**Mawson**	83.23	160	P		P	22 28 11.4	-0.1		
MAW	**Mawson**	83.23	160	P		P	22 28 11.4	-0.1		
	3.2nm,0.9s,baz=279,slow=7.5,SNR=5.0									
G12A	**Big Creek, Yel**	83.28	322	⇓P		P	22 28 11.6	-0.6		
	baz=83									
C15A	**Salmond Ranch,**	83.30	325	⇓P		P	22 28 11.8	-0.4		
	baz=84,SNR=6.9									
D14A	**Greenough**	83.38	324	⇓P		P	22 28 12.2	-0.4		
	baz=84,SNR=6.4									
SLMT	**Seeley Lake**	83.47	325	*e*P		P	22 28 13.2	+0.1		
MSO	**Missoula**	83.47	324	*e*P		P	22 28 13.8	+0.7		
MSO	**Missoula**	83.47	324	⇑P		P	22 28 12.7	-0.4		
	baz=84									
BGF	**Bois d'Agland**	83.58	36	*e*P		P	22 28 13.4	-0.1		
	25nm,1.4s									
BGF	**Bois d'Agland**	83.58	36	*e*P		P	22 28 13.4	-0.1		
	25nm,1.4s									
BEKR	**Beckworth**	83.60	316	*e*P		P	22 28 13.9	-0.1		
	5.2nm,1.3s									
B15A	**Bradely Ranch,**	83.60	326	⇑P		P	22 28 13.0	-0.7		
	baz=84									
SWMT	**Swartz Lake**	83.90	325	*e*P		P	22 28 15.9	+0.7		
D13A	**Huson**	83.92	324	⇓P		P	22 28 14.8	-0.5		
	baz=84									
C14A	**Swan Lake**	83.92	325	⇓P		P	22 28 14.9	-0.4		
	baz=84,SNR=6.4									
AVF	**Avril sur Loir**	84.00	36	*e*P		P	22 28 15.5	-0.1		
AVF	**Avril sur Loir**	84.00	36	*e*P		P	22 28 15.5	-0.1		
B14A	**Marquette Ranc**	84.01	326	⇑P		P	22 28 15.7	-0.2		
	baz=84									
A15A	**Johnson Ranch,**	84.09	326	⇓P		P	22 28 16.1	-0.1		
	baz=84									
YBMT	**Yellow Bay**	84.12	325	*e*P		P	22 28 15.4	-1.0		
	4.7nm,1.0s									
E12A	**Beaver Dam Sad**	84.15	323	⇓P		P	22 28 16.1	-0.5		
	baz=84									
SMF	**Signal de Mont**	84.19	37	*e*P		P	22 28 16.8	+0.2		
	17nm,1.0s									
SMF	**Signal de Mont**	84.19	37	*e*P		P	22 28 16.8	+0.2		
	17nm,1.0s									
SSF	**Saint Saulge**	84.24	36	*e*P		P	22 28 16.5	-0.3		
	12nm,1.1s									
SSF	**Saint Saulge**	84.24	36	*e*P		P	22 28 16.5	-0.3		
	12nm,1.1s									
BMO	**Blue Mountains**	84.30	321	*e*P		P	22 28 16.2	-1.1		
	16nm,1.4s									
ORIF	**Oris-en-Rattie**	84.41	39	*e*P		P	22 28 18.5	+0.6		
	11nm,1.0s									
ORIF				*e*R						
	77nm,20.0s									
ORIF	**Oris-en-Rattie**	84.41	39	*e*P		P	22 28 18.5	+0.6		
	11nm,1.0s									
A14A	**Double T Ranch**	84.45	326	⇑P		P	22 28 17.8	-0.3		
	baz=85									
BSMT	**Bassoo Peak**	84.53	325	*e*P		P	22 28 18.8	+0.2		
LOR	**Lormes**	84.55	36	*e*P		P	22 28 18.1	-0.4		
	20nm,1.3s									
LOR				*e*R						
	47nm,21.8s									
LOR	**Lormes**	84.55	36	*e*P		P	22 28 18.1	-0.4		
	20nm,1.3s									
B13A	**Whitefish**	84.66	325	⇓P		P	22 28 18.9	-0.1		
	baz=85									
SBF	**Sospel**	84.79	40	*e*P		P	22 28 20.0	+0.2		
	32nm,1.1s									
SBF	**Sospel**	84.79	40	*e*P		P	22 28 20.0	+0.2		
	32nm,1.1s									
C12B	**Naegeli Ranch,**	84.83	324	⇓P		P	22 28 19.7	-0.3		
	baz=85									
MBDF	**Montbardon**	84.84	39	*e*P		P	22 28 20.6	+0.4		
MBDF	**Montbardon**	84.84	39	*e*P		P	22 28 20.6	+0.4		
LPL	**La Plagne**	85.24	39	*e*P		P	22 28 22.7	+0.5		
	13nm,1.2s									
LPL	**La Plagne**	85.24	39	*e*P		P	22 28 22.7	+0.5		
	13nm,1.2s									
LPG	**La Plagne**	85.24	39	*e*P		P	22 28 22.9	+0.6		
LPG	**La Plagne**	85.24	39	*e*P		P	22 28 22.9	+0.6		
B12A	**Libby**	85.33	325	⇑P		P	22 28 22.0	-0.4		
	baz=86									
CABF	**La Chapelle**	85.45	38	*e*P		P	22 28 23.1	0.0		
	24nm,1.3s									
CABF	**La Chapelle**	85.45	38	*e*P		P	22 28 23.1	0.0		
	24nm,1.3s									
A12A	**Yaak River Ran**	85.63	325	⇓P		P	22 28 23.8	-0.1		
	baz=86									
SFTF	**Sexfontaines**	85.74	36	*e*P		P	22 28 24.2	-0.2		
SFTF	**Sexfontaines**	85.74	36	*e*P		P	22 28 24.2	-0.2		
PAGF	**Fort de Pagny**	86.31	36	*e*P		P	22 28 26.9	-0.3		
	10nm,1.5s									
PAGF	**Fort de Pagny**	86.31	36	*e*P		P	22 28 26.9	-0.3		
	10nm,1.5s									
KHMM	**Horse Mountain**	86.34	315	*e*P		P	22 28 27.4	-0.3		
	6.6nm,1.1s									
HAU	**Haudompre**	86.36	37	*e*P		P	22 28 27.0	-0.5		
HAU				*e*R						
	57nm,20.5s									
HAU	**Haudompre**	86.36	37	*e*P		P	22 28 27.0	-0.5		
HINF	**Hinteralfeld**	86.55	37	*e*P		P	22 28 28.1	-0.3		
HINF	**Hinteralfeld**	86.55	37	*e*P		P	22 28 28.1	-0.3		
GIVF	**Givet**	86.68	34	*e*P		P	22 28 28.7	-0.3		
GIVF	**Givet**	86.68	34	*e*P		P	22 28 28.7	-0.3		
KRMB	**Red Mountain**	86.76	316	*e*P		P	22 28 30.2	+0.5		
	6.8nm,1.2s									
LON	**Longmire**	87.97	321	*e*P		P	22 28 37.0	+1.7		
	3.0nm,0.8s									
TIP	**Timpagrande**	88.72	48	*e*P		P	22 28 39.4	+0.3		
NLWA	**Neilton Lookou**	89.52	321	*e*P		P	22 28 43.6	+1.0		
	10nm,0.9s									
CLL	**Collm**	91.76	36	*e*P		P	22 28 54.0	+1.1		
PRU	**Pruhonice**	92.03	37	*e*P		P	22 28 54.5	+0.3		
YKA	**Yellowknife Ar**	92.99	337	P		P	22 28 57.7	-0.6		
YKA	**Yellowknife Ar**	92.99	337	P		P	22 28 57.7	-0.6		
	1.1nm,0.7s,baz=104,slow=5.1,SNR=11									
DPC	**Dobruska-Polom**	93.22	38	*e*P		P	22 29 00.3	+0.6		
NOA	**NORSAR Array B**	95.50	27	LR		LR	23 06 39.6			
	comp=Z,24nm,20.4s,baz=105,slow=32									
ABKAR	**Akbulak array**	120.58	43	*e*PKPdf		PKPdf	22 34 36.1	-0.9		
ZAA0	**Zalesovo Array**	133.51	31	*e*PKPdf		PKPdf	22 35 01.1	-0.4		
ZALV	**Zalesovo Beam**	133.51	31	PKP		PKPdf	22 35 01.1	-0.5		
ZALV	**Zalesovo Beam**	133.51	31	PKP		PKPdf	22 35 01.1	-0.5		
	3.1nm,0.7s,baz=265,slow=2.1,SNR=12									
KSH	**Kashi**	133.56	53	PKPbc		PKPdf	22 35 03.8	+1.5		
KSH				*es*PKP			22 35 18.3			
KSH				*e*PP		PP	22 37 32.4	+1.6		
KSH				*e*SKS		SKSdf	22 42 09.1	-4.8		
KSH				*e*SKKS		SKKSac	22 44 29.6	+2.8		
KSH				AMB		AMB				
	comp=Z,150nm,3.9s									
KSH				LR		LR				
	comp=N,620nm,8.7s									
KSH				LR		LR				
	comp=E,330nm,6.5s									
KSH				LR		LR				
	comp=Z,240nm,10.1s									
KSH	**Kashi**	133.56	53	PKP		PKPdf	22 35 03.8	+1.5		
KSH				*e*PP		PP	22 37 32.4	+1.6		
KSH				*e*SKS		SKSdf	22 42 09.1	-4.8		
KSH				AMB		AMB				
	comp=Z,150nm,3.9s									
KSH				LR		LR				
	comp=N,620nm,8.7s									
KSH				LR		LR				
	comp=E,330nm,6.5s									
KSH				LR		LR				
	comp=Z,240nm,10.1s									
MK31	**Makanchi Array**	135.62	41	*e*PKPdf		PKPdf	22 35 05.2	-0.6		
MKAR	**Makanchi Array**	135.62	41	PKP		PKPdf	22 35 05.6	-0.2		
MKAR	**Makanchi Array**	135.62	41	PKP		PKPdf	22 35 05.6	-0.2		
	comp=Z,2.6nm,0.9s,baz=301,slow=2.5,SNR=18									
ASAR	**Alice Springs**	136.99	193	PKPpre	PKPpre		22 35 00.7			
ASAR				PKP		PKPdf	22 35 08.8	-0.3		
ASAR	**Alice Springs**	136.99	193	PKhKP	PKPpre		22 35 00.7			
	comp=Z,0.5nm,0.7s,baz=197,slow=3.8,SNR=5.0									
ASAR				PKP		PKPdf	22 35 08.8	-0.3		
	comp=Z,1.0nm,0.6s,baz=154,slow=1.8,SNR=8.4									
WMQ	**Urumqi**	140.36	42	*e*PKP		PKPdf	22 35 13.0	-1.7		
WMQ				LR		LR				
	comp=Z,140nm,27.0s									
WRA	**Warramunga Arr**	140.47	195	PKPpre	PKPpre		22 35 08.3			
WRA				PKP		PKPdf	22 35 16.4	+0.9		
WRA	**Warramunga Arr**	140.47	195	PKhKP	PKPpre		22 35 08.3			
	comp=Z,1.5nm,0.8s,baz=214,slow=2.1,SNR=7.2									
WRA				PKP		PKPdf	22 35 16.4	+0.9		
	comp=Z,1.9nm,0.9s,baz=208,slow=1.6,SNR=8.1									
SONM	**Songino Array**	147.37	22	PKPbc		PKPdf	22 35 27.5	+0.7		
SONM	**Songino Array**	147.37	22	PKPbc		PKPdf	22 35 27.5	+0.7		
	comp=Z,7.5nm,0.8s,baz=285,slow=1.7,SNR=29									
ULN	**Ulaanbaatar**	147.58	22	*e*PKPdf		PKPdf	22 35 27.6	+0.3		
LSA	**Lhasa**	147.95	63	*e*PKPdf		PKPdf	22 35 29.1	+0.2		
GTA	**Gaotai**	150.37	40	PKPbc		PKPdf	22 35 34.3	+2.3		
GTA				PP		PP	22 39 18.4	+6.0		
GTA				SKS		SKSdf	22 42 39.4	-0.8		
GTA				SKKS		SKKSac	22 46 07.0	+2.9		
GTA				SS		SS	22 58 37.6	+6.4		
GTA				AMB		AMB				
	comp=Z,130nm,9.0s									
GTA				LR		LR				
	comp=N,65nm,11.4s									
GTA				LR		LR				
	comp=E,75nm,11.6s									
GTA				LR		LR				
	comp=Z,67nm,11.4s									
CN2	**Changchun**	154.81	358	*e*PKP		PKPdf	22 35 35.8	-2.4		
HHC	**Hu-ho-hao-te**	155.26	23	*e*PKP		PKPdf	22 35 33.9	-5.2		
HHC				pPKP		pPKPdf	22 35 45.3	+2.8		
HHC				PKS		PKSdf	22 39 07.6	-5.6		
HHC				SKS		SKSdf	22 42 36.9	-9.0		
HHC				AMB		AMB				
	comp=Z,170nm,8.0s									
HHC				LR		LR				
	comp=N,120nm,18.4s									
HHC				LR		LR				
	comp=E,140nm,19.8s									
HHC				LR		LR				
	comp=Z,190nm,20.6s									
CMAR	**Chiang Mai Arr**	156.03	86	PKP		PKPdf	22 35 40.5	-0.1		
	comp=Z,1.2nm,0.3s,baz=273,slow=3.4,SNR=4.3									
CD2	**Chengdu**	157.76	53	*e*PKP		PKPdf	22 35 41.3	-1.3		
CD2				PKPab		PKPab	22 36 16.3	+1.3		
CD2				PP		PP	22 39 57.0	+2.7		
CD2				SKKS			22 46 42.8			
CD2				AMB		AMB				
	comp=Z,100nm,10.2s									
CD2				LR		LR				
	comp=N,100nm,19.2s									
CD2				LR		LR				
	comp=Z,150nm,22.2s									
KMI	**Kunming**	159.03	68	PKP		PKPdf	22 35 43.8	-0.7		
KMI				pPKP		pPKPdf	22 35 46.3	-1.6		
KMI				sPKP			22 35 47.8			
KMI				LR		LR				
	comp=Z,93nm,21.5s									
GYA	**Guiyang**	161.99	61	*e*PKP		PKPdf	22 35 46.5	-1.1		
GYA				PKPab		PKPab	22 36 33.0	-0.7		
GYA				PKS		PKSdf	22 39 17.8	-3.2		
GYA				PP		PP	22 40 19.5	+1.9		
GYA				AMB		AMB				
	comp=Z,90nm,7.8s									

ISCJB ***15*** *22:39:45.6±0.9, 44.07N±0.04×128.81W±0.10, h15km, mb3.7/5, MS3.3/4, Error ellipse: s-maj=10.5km s-min=6.0km az=164.2*
NEIC ***15*** *22:39:45.4±1.1, 44.01N×128.97W, h10km, mb3.9/7, Error ellipse: s-maj=13.0km s-min=7.0km az=70.0*
IDC ***15*** *22:39:45.2±2.4, 44.10N×128.74W, h0km, mb3.4/4, mb1 3.8/9, mb1mx3.6/31, mbtmp3.6/9, ML3.7/5, MS3.4/6, Ms1 3.4/6, ms1mx3.1/22, Error ellipse: s-maj=41.3km s-min=17.1km az=56.0*

ISC 15 22:39:47.6±1.1, 44.06N±0.05×128.81W±0.10, h15km, n221, σ1$47/212, mb4.1/5, MS3.3/4, 75C-78D, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEBM	**Edson Butte**	3.47	109	*e*Pn	Pn	22 40 37.5	-3.5
KEBM				*e*Sn	Sn	22 41 15.3	-6.6
RNO	**Roman Nose**	3.66	91	P	Pn	22 40 43.2	-0.4
COR	**Corvallis**	3.98	81	*e*Pn	Pn	22 40 49.8	+1.7
DBO	**Dodson Butte**	4.15	101	P	Pn	22 40 48.9	-1.6
HSO	**Harness Mounta**	4.17	95	P	Pn	22 40 50.2	-0.6
NLO	**Nicolai Mounta**	4.30	60	P	Pn	22 40 52.3	-0.2
HUMO	**Hull Mountain**	4.51	107	*e*Pn	Pn	22 40 53.5	-1.9
HUMO				*e*Sn	Sn	22 41 46.4	-1.1
BROR	**Big Rock Looko**	4.58	85	P	Pn	22 40 55.2	-1.0
SSOR	**Sweet Springs**	4.61	78	P	Pn	22 40 57.3	+0.5
H04A	**Detroit Lake**	4.79	80	P	Pn	22 40 59.4	+0.3
NLWA	**Neilton Lookou**	4.80	44	*e*Pn	Pn	22 40 58.1	-1.2
NLWA				*e*Sn	Sn	22 41 54.0	-0.6
KHMM	**Horse Mountain**	4.92	129	*e*Pn	Pn	22 41 01.0	-0.1
KHMM				*e*Sn	Sn	22 41 54.8	-3.1
WIFE	**Three Sisters-**	5.04	88	P	Pn	22 41 03.5	+0.8
YBH	**Yreka Blue Hor**	5.05	115	Pn	Pn	22 41 01.9	-0.9
YBH				Sn	Sn	22 41 57.1	-3.7
YBH	**Yreka Blue Hor**	5.05	115	Pn	Pn	22 41 01.9	-0.9
	0.7nm,0.3s,baz=307,slow=6.8,SNR=11						
YBH				Sn	Sn	22 41 57.1	-3.7
	0.2nm,0.3s,baz=243,slow=2.3,SNR=1.4						
BKCOR	**Black Crater**	5.12	85	P	Pn	22 41 04.3	+0.5
TDL	**Tradedollar La**	5.19	62	P	Pn	22 41 05.4	+0.6
LON	**Longmire**	5.61	59	*e*Pn	Pn	22 41 10.5	0.0
KIPM	**Iron Peak**	5.82	135	*e*Pn	Pn	22 41 11.8	-1.6
PGC	**Sidney**	5.90	37	*e*Pn	Pn	22 41 12.3	-2.0
PGC				*e*Sn	Sn	22 42 17.1	-4.4
HAWA	**Hanford**	6.95	67	*e*Pn	Pn	22 41 29.2	+0.4
G08A	**Pilot Rock**	7.13	77	P	Pn	22 41 31.6	+0.3
WVOR	**Wild Horse Val**	7.60	99	*e*Pn	Pn	22 41 36.9	-1.0
BBB	**Bella Bella**	8.14	3	Pn	Pn	22 41 45.0	0.0
BBB	**Bella Bella**	8.14	3	Pn	Pn	22 41 45.0	0.0
	0.3nm,0.3s,baz=199,slow=16,SNR=4.0						
BMO	**Blue Mountains**	8.27	81	*e*Pn	Pn	22 41 46.4	-0.5
CMB	**Columbia Colle**	8.76	131	*e*Pn	Pn	22 41 54.5	+0.9
NEW	**Newport**	9.13	59	*e*Pn	Pn	22 41 57.9	-0.8
NEW	**Newport**	9.13	59	Pn	Pn	22 41 57.9	-0.8
	0.3nm,0.3s,baz=253,slow=7

RRI2	Red Ridge	12.68	87	*e*Pn	Pn	22 42 47.4	-0.1
GSC	Goldstone	12.72	129	*e*Pn	Pn	22 42 49.6	+1.7
GSC	Goldstone baz=13	12.72	129	⇓P	Pn	22 42 50.7	+2.8
A16A	West Butte Ran baz=13	12.82	62	⇓P	Pn	22 42 50.1	+0.9
E17A	Martinsdale baz=13	12.87	73	⇑P	Pn	22 42 51.5	+1.5
TPAW	Teton Pass	12.92	86	*e*Pn	Pn	22 42 49.2	-1.6
F17A	Fitzpatrick Pl baz=13,SNR=5.4	12.98	76	⇑P	Pn	22 42 52.3	+0.7
D17A	Six Diamond Ra baz=13,SNR=7.1	13.06	70	⇓P	Pn	22 42 53.0	+0.4
BFSC	Mount Baldy Ra baz=13	13.07	135	⇑P	Pn	22 42 52.2	-0.5
B17A	L&G Farms, Che baz=13	13.17	65	⇑P	Pn	22 42 54.6	+0.6
HEC	Hector,Ludlow baz=13	13.33	130	⇓P	Pn	22 42 57.2	+0.9
A17A	Triple J Farms baz=14,SNR=6.1	13.39	62	⇓P	Pn	22 42 56.5	-0.5
E18A	Harlowton baz=14	13.53	73	⇑P	Pn	22 42 59.5	+0.5
F18A	Big Timber baz=14	13.64	76	⇓P	Pn	22 43 02.0	+1.5
GCMT	Greycliff	13.67	76	*e*Pn	Pn	22 43 02.5	+1.5
H18A	Shoshone NF, C baz=14	13.71	81	⇓P	Pn	22 43 02.6	+1.0
EGMT	Eagleton	13.81	67	*e*Pn	Pn	22 43 04.2	+1.5
L18A	Fontenelle, Gr baz=14	13.91	92	⇓P	Pn	22 43 05.3	+1.1
A18A	Metzger Ranch, baz=14	13.93	63	⇓P	Pn	22 43 05.3	+1.0
PDAR	Pinedale Array	14.05	89	Pn	Pn	22 43 08.9	+2.7
PDAR	Pinedale Array 0.1nm,0.3s,baz=283,slow=13,SNR=5.5	14.05	89	Pn	Pn	22 43 08.9	+2.7
BELC	Belle Mtn. Jos baz=14	14.13	131	⇓P	Pn	22 43 08.5	+1.3
F19A	Roth Farm, Mol baz=14	14.18	76	⇑P	Pn	22 43 09.4	+1.6
C19A	Slack Wire Ran baz=14	14.23	68	⇓P	Pn	22 43 08.6	+0.1
I19A	Meeteetse baz=14	14.25	83	⇓P	Pn	22 43 09.6	+0.6
DLBC	Dease Lake comp=Z,180nm,18.7s,baz=184,slow=35	14.41	357	LR	LR	22 48 03.0	
W13A	Hualapai Mount baz=15	14.56	123	⇑P	Pn	22 43 13.7	+0.5
BC3	Big Chuckawall baz=15	14.68	131	⇑P	Pn	22 43 15.0	+0.1
U15A	North Rim baz=15,SNR=7.1	14.72	116	⇓P	Pn	22 43 17.9	+2.4
E20A	Meyer Farm, Mu baz=15	14.76	73	⇑P	Pn	22 43 16.0	+0.3
MONP	Monument Peak baz=15	14.76	135	⇑P	Pn	22 43 16.3	+0.3
H20A	Greybull baz=15	14.91	81	⇓P	Pn	22 43 19.7	+1.8
C20A	Veseth Ranch, baz=15	14.93	69	⇑P	Pn	22 43 18.5	+0.5
K20A	Yellowstone Ra baz=15	14.95	88	⇓P	Pn	22 43 19.7	+1.2
J20A	Shoshoni baz=15	15.01	86	⇓P	Pn	22 43 20.4	+1.3
B20A	Solberg Farm, baz=15	15.02	66	⇓P	Pn	22 43 19.9	+0.7
SWSC	Sam W. Stewart baz=15	15.05	133	⇑P	Pn	22 43 18.9	-0.7
L20A	Wamsutter baz=15	15.11	91	⇓P	Pn	22 43 20.9	+0.3
J21A	Lysite baz=16,SNR=7.3	15.46	85	⇑P	Pn	22 43 26.7	+1.4
N20A	Spence Gulch, baz=16	15.50	95	⇑P	Pn	22 43 26.6	+0.9
S18A	Hurst Farm, Bl baz=16,SNR=11	15.57	108	⇑P	P	22 43 30.5	-0.5
L21A	Rawlins baz=16	15.82	90	⇓P	Pn	22 43 29.1	-0.7
WUAZ	Wupatki 11nm,1.1s	15.87	117	*e*Pn	Pn	22 43 31.9	+1.5
WUAZ	Wupatki baz=16	15.87	117	⇓P	Pn	22 43 30.2	-0.3
N21A	Black Mountain baz=16	16.06	94	⇓P	Pn	22 43 32.6	-0.4
B22A	Reddig Ranch S baz=16	16.34	67	⇑P	Pn	22 43 35.8	-0.5
A22A	Carney Farms, baz=17	16.48	65	⇑P	Pn	22 43 37.8	-0.4
D23A	Lindsay baz=17	16.79	71	⇑P	Pn	22 43 41.4	-0.6
O22A	Kremmling baz=17	16.96	96	⇑P	Pn	22 43 45.2	+0.7
S21A	Coal Bank Pass baz=17	17.11	105	⇓P	Pn	22 43 47.3	+0.8
N23A	Red Feather La baz=17	17.15	93	⇓P	Pn	22 43 46.4	-0.5
H24A	Dirks Ranch, A baz=17,SNR=7.2	17.33	79	⇓P	Pn	22 43 49.1	+0.2
R22A	Saguache, Gunn baz=18	17.58	102	⇑P	Pn	22 43 52.4	+0.2
V20A	Brimhall baz=18	17.62	111	⇓P	Pn	22 43 53.4	+0.8
A24A	Westby baz=18	17.72	65	⇑P	Pn	22 43 54.4	+0.7
ISCO	Idaho Springs 2.6nm,0.8s	17.76	96	*e*P	P	22 43 56.2	+0.9
U21A	Nageezi baz=18,SNR=15	17.83	108	⇑P	Pn	22 43 55.9	+0.6
W20A	Ramah baz=18	17.98	113	⇑P	Pn	22 43 57.9	+0.7
T22A	Edith baz=18	18.05	105	⇑P	Pn	22 43 58.0	0.0
J25A	Sunshine Ranch baz=18	18.07	83	⇓P	P	22 43 59.2	+0.8
V21A	Milan baz=18	18.17	110	⇑P	P	22 44 00.8	+1.0
K25A	Mack Ranch, Ha baz=18	18.18	86	⇓P	Pn	22 43 60.0	+0.5
R23A	Moffat baz=18	18.25	101	⇑P	Pn	22 44 01.1	+0.6
X20A	Quemado baz=18	18.33	114	⇑P	Pn	22 44 00.5	-0.9
U22A	Llaves baz=18	18.40	107	⇑P	P	22 44 04.3	+2.0
V22A	San Miguel Ran baz=19	18.61	108	⇓P	Pn	22 44 06.6	+1.7
O25A	Wiggins baz=19	18.72	94	⇓P	Pn	22 44 07.4	+1.3
Y20A	Horse Springs, baz=19	18.80	116	⇓P	P	22 44 07.7	+1.1
X21A	Alamocita Cree baz=19	18.86	113	⇑P	P	22 44 08.3	+1.0
Y21A	Point of Rocks baz=19	19.19	114	⇓P	Pn	22 44 12.9	+1.0
R25A	Fountain Ranch baz=19	19.37	99	⇑P	Pn	22 44 14.7	+0.8
ANMO	Albuquerque 2.6nm,0.9s	19.45	110	*e*P	P	22 44 13.5	-0.3
ANMO	Albuquerque 0.1nm,0.3s,baz=312,slow=9.7,SNR=6.4	19.45	110	P	Pn	22 44 17.8	+2.8
S25A	Robets Cordova baz=20	19.47	101	⇓P	Pn	22 44 15.6	+0.4
120A	U Bar Ranch, L baz=20	19.51	119	⇑P	Pn	22 44 16.9	+1.3
W23A	Werner Place, baz=20	19.54	109	⇑P	Pn	22 44 17.4	+1.3
Y22A	Socorro baz=20	19.70	113	⇑P	Pn	22 44 18.4	+0.4
T25A	Trinidad baz=20	19.73	102	⇑P	Pn	22 44 18.9	+0.6
BNM	Barren Site 2.5nm,0.7s	19.80	112	*e*P	P	22 44 17.0	-0.6
V24A	Rampart Ranch, baz=20,SNR=5.8	19.84	107	⇓P	P	22 44 19.6	+1.6
X23A	Hourglass Bar baz=20	19.84	111	⇓P	P	22 44 19.7	+1.6
R26A	Arlington baz=20	19.90	98	⇓P	P	22 44 19.9	+1.3
319A	Douglas baz=20	19.91	123	⇓P	P	22 44 20.3	+1.6
220A	Playas Peak, P baz=20	20.01	121	⇓P	Pn	22 44 22.1	+0.6
W24A	Lazy 6 Ranch, baz=20,SNR=8.1	20.02	108	⇑P	Pn	22 44 22.1	+0.4
121A	Cookes Peak, D baz=20	20.06	118	⇑P	P	22 44 22.0	+1.7
U25A	Circle Dot Ran baz=20	20.09	104	⇑P	P	22 44 22.1	+1.4
S26A	Kim baz=20	20.18	100	⇓P	Pn	22 44 23.6	+0.1
V25A	Rancho No Teng baz=20,SNR=10.0	20.23	106	⇑P	Pn	22 44 24.4	+0.1
YKA	Yellowknife Ar	20.23	19	P	P	22 44 20.8	-1.0
YKA	Yellowknife Ar 1.4nm,0.8s,baz=210,slow=10,SNR=9.9	20.23	19	P	P	22 44 20.8	-1.0
T26A	Comanche Natio baz=20	20.29	101	⇓P	Pn	22 44 25.0	0.0
Y23A	Lovelace Mesa, baz=20	20.31	112	⇑P	P	22 44 23.7	+0.5
FFC	Flin Flon 7.4nm,0.7s	20.33	49	*e*P	P	22 44 22.8	-0.2
R27A	Eads baz=20	20.37	97	⇓P	P	22 44 25.0	+1.3
W25A	X Bar L Ranch, baz=21	20.67	107	⇑P	P	22 44 27.5	+0.6
K29A	Lazy Trails An baz=21	20.70	84	⇑P	P	22 44 28.7	+1.6
Y24A	Capitan baz=21	20.73	111	⇑P	P	22 44 28.9	+1.3
V26A	Tequesquite Ra baz=21	20.83	105	⇓P	Pn	22 44 31.3	0.0
X25A	Clemmons Ranch baz=21,SNR=8.0	20.91	109	⇓P	Pn	22 44 32.2	0.0
Z24A	Sheeppen Canyo baz=21	21.13	113	⇓P	P	22 44 34.5	+2.5
U27A	Thompson Grove baz=21	21.19	102	⇓P	P	22 44 35.3	+2.7
P29A	Atwood baz=21	21.20	92	⇑P	P	22 44 35.5	+2.9
W26A	Owens Ranch, T baz=21	21.22	106	⇑P	P	22 44 35.3	+2.4
Y25A	Mesa, Roswell baz=21	21.23	110	⇑P	P	22 44 35.9	+2.8
T28A	Walsh baz=21	21.37	100	⇑P	P	22 44 37.0	+2.6
Q29A	Oakley baz=22	21.43	94	⇓P	P	22 44 37.2	+2.2
124A	Stringfield Ra baz=22	21.46	114	⇓P	P	22 44 38.4	+2.8
X26A	CR and CF Fran baz=22	21.48	108	⇑P	P	22 44 38.9	+3.2
R29A	Marienthal baz=22	21.50	96	⇓P	P	22 44 38.4	+2.6
Z25A	Roswell baz=22	21.60	112	⇓P	P	22 44 40.3	+3.3
O30A	MW Ranch, Wils baz=22	21.62	90	⇓P	P	22 44 39.5	+2.4
U28A	Mallet baz=22	21.64	102	⇑P	P	22 44 38.9	+1.6
224A	Cornudas Mount baz=22	21.81	115	⇑P	P	22 44 41.1	+1.8
125A	Gardner Draw, baz=22	22.01	113	⇑P	P	22 44 43.2	+1.8
R30A	Dighton baz=22	22.18	95	⇓P	P	22 44 45.1	+2.1
P31A	Stockton baz=22	22.34	92	⇓P	P	22 44 46.5	+1.7
Z27A	Tatum baz=23	22.59	110	⇑P	P	22 44 48.4	+0.9
325A	Bean Ranch, Si baz=23	22.62	116	⇓P	P	22 44 50.1	+2.1
425A	Indio Mountain baz=23	23.00	117	⇓P	P	22 44 53.4	+1.5
ILAR	Eielson Array	23.09	340	P	P	22 44 51.2	-1.2
ILAR	Eielson Array 0.7nm,0.7s,baz=156,slow=8.4,SNR=7.6	23.09	340	P	P	22 44 51.2	-1.2
ILAR	comp=Z,66nm,19.8s,baz=93,slow=32			LR	LR	22 51 52.7	
AGMN	Agassiz Nation 4.7nm,0.8s	23.09	68	*e*P	P	22 44 52.4	-0.2
ULM	Lac du Bonnet	23.10	63	P	P	22 44 53.0	+0.3
ULM	Lac du Bonnet 5.5nm,0.8s,baz=262,slow=3.1,SNR=4.8	23.10	63	P	P	22 44 53.0	+0.3
ULM	comp=Z,91nm,19.2s,baz=180,slow=37			LR	LR	22 53 52.7	
ECSD	EROS Data Cent 5.3nm,0.8s	23.13	80	*e*P	P	22 44 52.3	-0.7
426A	McDonald Obser baz=24	23.69	116	⇑P	P	22 45 00.4	+1.5
427A	Hayter Ranch, baz=24	23.98	115	⇑P	P	22 45 02.8	+1.2
526A	Mary Lane Ranc baz=24	24.06	117	⇓P	P	22 45 04.0	+1.7
527A	Woodward Ranch baz=24	24.31	116	⇓P	P	22 45 05.9	+1.3
626A	Big Bend Ranch baz=24	24.37	118	⇓P	P	22 45 06.4	+1.2
INK	Inuvik comp=Z,89nm,18.9s,baz=78,slow=36	24.43	356	LR	LR	22 54 23.3	
428A	Kincaid Ranch, baz=25	24.53	114	⇑P	P	22 45 08.5	+1.8
TXAR	Lajitas Array	24.82	118	P	P	22 45 08.9	-0.4
TXAR	Lajitas Array 0.6nm,0.8s,baz=290,slow=6.3,SNR=6.6	24.82	118	P	P	22 45 08.9	-0.4
528A	Cox Ranch, San baz=25	24.83	115	⇓P	P	22 45 08.7	-0.7
627A	Terlingua Ranc baz=25	24.92	117	⇓P	P	22 45 09.6	-0.5
330A	Mertzon baz=25	25.11	111	⇑P	P	22 45 13.1	+1.3
429A	Davenport Ranc baz=25	25.12	113	⇑P	P	22 45 13.9	+2.0
Z32A	Haskell baz=25	25.16	105	⇑P	P	22 45 14.1	+1.9
628A	Black Gap, Mar baz=25	25.22	117	⇓P	P	22 45 15.4	+2.7
529A	Stev Forest Ra baz=25,SNR=6.9	25.23	115	⇑P	P	22 45 15.8	+2.9
530A	J-C Ranch, Com baz=26	25.79	113	⇓P	P	22 45 20.8	+2.8
232A	Coleman baz=26	25.86	108	⇓P	P	22 45 20.9	+2.3
SCHQ	Schefferville comp=Z,60nm,18.1s,baz=349,slow=36	40.42	52	LR	LR	23 03 43.9	

IDC 15 22:42:02.4±1.1,14°11N×53°67E,h0km,mb3.7/7, mb1 3.8/7,mb1mx3.6/25,mbtmp3.7/7,MS3.5/9,Ms1 3.5/9, ms1mx3.2/34,Error ellipse: s-maj=38.3km s-min=21.8km az=146.0,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	Arta Tunnel	10.86	258	LR	LR	22 47 47.2	
KMBO	comp=Z,540nm,18.0s,baz=178,slow=32 Kilima Mbogo 0.6nm,0.2s,baz=233,slow=20,SNR=2.8	22.22	228	P	P	22 47 01.3	+0.2
KMBO	comp=Z,125nm,19.4s,baz=94,slow=36			LR	LR	22 55 31.7	
EIL	Elat	23.21	315	LR	LR	22 56 03.7	
GNI	comp=Z,480nm,21.8s,baz=95,slow=36 Garni	27.09	345	LR	LR	23 00 24.1	
KBZ	comp=Z,90nm,18.2s,baz=318,slow=41 Khabaz	30.92	345	LR	LR	23 03 22.6	
MKAR	comp=Z,48nm,18.3s,baz=339,slow=41 Makanchi Array 0.3nm,0.6s,baz=230,slow=8.9,SNR=4.3	40.43	30	P	P	22 49 42.5	-0.1
MKAR	comp=Z,66nm,20.7s,baz=195,slow=38			LR	LR	23 08 00.3	
BVAR	Borovoye Array	41.03	15	LR	LR	23 08 34.6	
AKASG	comp=Z,62nm,18.0s,baz=261,slow=39 Malin Array Be 0.3nm,0.4s,baz=138,slow=8.2,SNR=4.5	41.52	337	P	P	22 49 54.6	+3.2
ZALV	Zalesovo Beam 0.9nm,0.7s,baz=232,slow=7.3,SNR=4.8	46.67	25	P	P	22 50 31.1	-1.5
ZALV	comp=Z,56nm,19.3s,baz=248,slow=40			LR	LR	23 13 13.1	
TORD	Torodi Ar. Bea 1.8nm,0.9s,baz=81,slow=7.3,SNR=8.9	50.43	275	P	P	22 51 02.5	+0.3
TORD	comp=Z,60nm,18.7s,baz=80,slow=34			LR	LR	23 10 36.8	
SONM	Songino Array 0.9nm,0.8s,baz=232,slow=7.3,SNR=4.9	54.91	41	P	P	22 51 37.0	+1.9
ESDC	Sonseca Array 0.2nm,0.3s,baz=88,slow=7.2,SNR=4.4	56.29	308	P	P	22 51 44.4	-0.7
ASAR	Alice Springs 0.7nm,0.9s,baz=286,slow=5.2,SNR=5.5	86.90	115	P	P	22 54 49.0	-0.8

DDA 15 22:46:37.0,38°56N×39°78E,h7km,MD2.5
ISCJB 15 22:46:37.6±0.8,38°63N±0°04×39°76E±0.05,h10km±7km, Error ellipse: s-maj=7.9km s-min=5.1km az=135.6
ISK 15 22:46:37.7,38°64N×39°73E,h6km,MD2.6
CSEM 15 22:46:37.0±0.3,38°67N×39°80E,h2km,MD2.6,Error ellipse: s-maj=6.5km s-min=2.9km az=58.0

ISC 15 22:46:36.7±1.2,38°65N±0°04×39°78E±0°03,h11km±13km, n17,σ0°973/27,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	Pertek	0.39	309	PG	Pg	22 46 44.7	+0.2
PTK				SG	Sb	22 46 51.2	-0.6
PTK	Pertek	0.39	309	*i* Pg	Pg	22 46 44.7	+0.2
PTK				*i* Sg	Sb	22 46 51.2	-0.6
SVRC	Sivrice-ELAZID	0.46	234	*e*PG	Pb	22 46 46.2	-0.6
SVRC				*e*SG	Sb	22 46 52.5	-1.2
SVRC	Sivrice-ELAZID	0.46	234	*e*Pg	Pb	22 46 46.2	-0.6
SVRC				*e*Sg	Sb	22 46 52.5	-1.2
DIYA	Diyarbakir	0.77	159	*i* P	Pb	22 46 52.2	+0.1
DIYA				*i* S	Sb	22 47 02.6	0.0
DIYA	Diyarbakir	0.77	159	*i* P	Pb	22 46 52.2	+0.1
DIYA				*i* S	Sb	22 47 02.6	0.0
BNGB	Bing˜¶l	0.78	64	*e*PG	Pn	22 46 54.1	+0.3
MALT	Malatya	1.11	253	*e*PG	Pn	22 46 59.4	+1.1
MALT	Malatya	1.11	253	*e*Pg	Pn	22 46 59.4	+1.1
KEMA	Kemaliye	1.18	302	*i* P	Pn	22 46 59.7	+0.5
KEMA				*i* S	Sg	22 47 14.0	-0.7
KEMA	Kemaliye	1.18	302	*i* P	Pn	22 46 59.7	+0.5
KEMA				*i* S	Sg	22 47 14.0	-0.7
ILIC	ilic-Erzincan	1.24	311	*e*PN	Pg	22 47 01.5	+1.0
ILIC	ilic-Erzincan	1.24	311	*e*Pn	Pg	22 47 01.5	+1.0
BEST	Besiri	1.40	122	*i* P	Pg	22 47 02.7	-0.8
BEST				*i* S	Sg	22 47 22.2	+0.6
URFA	Urfa	1.42	212	*e*PN	Pg	22 47 04.3	+0.4
URFA	Urfa	1.42	212	*e*Pn	Pg	22 47 04.3	+0.4
MARD	Mardin	1.55	149	*i* P	Pb	22 47 04.9	-0.5
MARD				*i* S	Sb	22 47 24.7	-0.4

IDC 15 23:00:36.2±0.8,14°26N×53°72E,h0km,mb4.0/17, mb1 4.1/17,mb1mx4.0/28,mbtmp4.0/17,MS3.6/16, Ms1 3.6/16,ms1mx3.4/33,Error ellipse: s-maj=20.8km s-min=16.3km az=177.0
ISCJB 15 23:00:37.8±0.6,14°3N±0°1×53°69E±0°08,h22km, mb3.9/23,MS3.5/15,Error ellipse: s-maj=14.8km s-min=10.8km az=167.9
NEIC 15 23:00:37.9±0.5,14°29N×53°69E,h10km,mb4.1/6,Error ellipse: s-maj=12.3km s-min=9.2km az=167.0

ISC 15 23:00:39.8±0.7,14°3N±0°1×53°69E±0°09,h22km,n53, σ0°91/41,mb4.1/23,MS3.5/15,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	Arta Tunnel	10.92	257	LR	LR	23 06 11.8	
KMBO	comp=Z,374nm,20.4s,baz=93,slow=31 Kilima Mbogo 3.6nm,0.9s	22.36	228	*e*P	P	23 05 36.3	-0.5
KMBO	Kilima Mbogo 2.1nm,0.7s,baz=230,slow=24,SNR=5.3	22.36	228	P	P	23 05 36.5	-0.3
KMBO	comp=Z,223nm,18.8s,baz=273,slow=37			LR	LR	23 14 27.1	
EIL	Elat	23.09	315	P	P	23 05 43.7	-0.5
EIL	Elat 2.2nm,0.8s,baz=22,slow=17,SNR=2.4	23.09	315	P	P	23 05 43.7	-0.5
EIL	comp=Z,98nm,18.1s,baz=98,slow=37			LR	LR	23 14 45.1	
ASF	Jabal al Asfar comp=Z,47nm,19.8s,baz=196,slow=38	23.49	322	LR	LR	23 15 40.9	
KBL	Kabul 5.5nm,0.9s	24.46	32	*e*P	P	23 05 58.2	+0.7
GNI	Garni comp=Z,106nm,21.5s,baz=88,slow=41	26.92	345	LR	LR	23 18 58.2	
CSS	Prodhromos 5.1nm,1.0s	27.57	322	*e*P	P	23 06 24.6	-0.7
KBZ	Khabaz comp=Z,111nm,18.3s,baz=84,slow=41	30.75	345	LR	LR	23 21 46.6	
BRTR	Keskin Array B	30.84	329	P	P	23 06 53.7	-0.8
BRTR	Keskin Array B 0.8nm,0.8s,baz=149,slow=13,SNR=5.0	30.84	329	P	P	23 06 53.7	-0.8
OPO	Ambohidratompo comp=Z,85nm,21.2s,baz=208,slow=30	33.29	191	LR	LR	23 16 57.9	
ABKAR	Akbulak array 5.6nm,1.1s	35.23	7	*e*P	P	23 07 32.2	-0.3
MK31	Makanchi Array	40.26	31	*e*P	P	23 08 15.1	0.0
MKAR	Makanchi Array	40.26	31	P	P	23 08 15.7	+0.6
MKAR	Makanchi Array 1.3nm,0.7s,baz=224,slow=8.1,SNR=15	40.26	31	P	P	23 08 15.7	+0.6
MKAR	comp=Z,78nm,18.4s,baz=228,slow=40			LR	LR	23 27 06.5	
BVAR	Borovoye Array	40.84	15	P	P	23 08 20.5	+0.7
BVAR	Borovoye Array 3.0nm,0.7s,baz=189,slow=5.8,SNR=16	40.84	15	P	P	23 08 20.5	+0.7
AKASG	Malin Array Be	41.36	337	P	P	23 08 24.6	+0.6
AKASG	Malin Array Be 0.2nm,0.3s,baz=138,slow=7.4,SNR=4.8	41.36	337	P	P	23 08 24.6	+0.6
KURBB	Kurchatov Arra 1.2nm,0.8s,baz=224,slow=8.3,SNR=19	41.45	24	P	P	23 08 25.0	+0.2
KURK	Kurchatov 1.5nm,0.9s	41.55	24	P	P	23 08 24.6	-1.0
CMAR	Chiang Mai Arr	43.53	78	P	P	23 08 42.8	+0.5
CMAR	Chiang Mai Arr 1.2nm,0.4s,baz=272,slow=8.5,SNR=9.0	43.53	78	P	P	23 08 42.8	+0.5
KEST	Kesra	45.03	306	*e*P	P	23 08 54.5	+0.4
KEST	Kesra 1.5nm,0.8s,baz=92,slow=1.1,SNR=5.3	45.03	306	P	P	23 08 58.0	+3.9
TAM	Tamanrasset 1.5nm,0.9s	46.27	288	*e*P	P	23 09 04.5	+0.2
ZALV	Zalesovo Beam	46.49	25	P	P	23 09 04.7	-0.5
ZALV	Zalesovo Beam 2.0nm,0.8s,baz=237,slow=8.1,SNR=8.2	46.49	25	P	P	23 09 04.7	-0.5
ZALV	comp=Z,102nm,19.5s,baz=250,slow=38			LR	LR	23 30 22.5	
GERES	GERESS Array B	47.55	325	LR	LR	23 32 49.8	
TORD	comp=Z,44nm,18.9s,baz=312,slow=41 Torodi Ar. Bea	50.44	275	P	P	23 09 36.9	+0.6
TORD	Torodi Ar. Bea 2.0nm,0.9s,baz=90,slow=7.5,SNR=11	50.44	275	P	P	23 09 36.9	+0.6
BOSA	Boshof comp=Z,95nm,18.4s,baz=239,slow=39	50.76	213	LR	LR	23 33 50.7	
FINES	FINESS Array B comp=Z,42nm,19.9s,baz=160,slow=40	51.09	343	LR	LR	23 34 42.5	
SONM	Songino Array	54.75	41	P	P	23 10 08.6	+0.7
SONM	Songino Array 2.1nm,1.0s,baz=246,slow=6.1,SNR=9.8	54.75	41	P	P	23 10 08.6	+0.7
NOA	NORSAR Array B comp=Z,27nm,21.1s,baz=120,slow=40	55.78	337	LR	LR	23 37 19.9	
ESDC	Sonseca Array	56.19	308	P	P	23 10 18.7	+0.4
ESDC	Sonseca Array 1.7nm,0.7s,baz=93,slow=6.7,SNR=12	56.19	308	P	P	23 10 18.7	+0.4
DBIC	Dimbokro comp=Z,25nm,18.0s,baz=76,slow=34	57.94	269	LR	LR	23 33 42.3	
ARCES	ARCESS Array B	57.97	349	P	P	23 10 28.5	-1.8
ARCES	ARCESS Array B 2.0nm,0.9s,baz=178,slow=8.1,SNR=4.8	57.97	349	P	P	23 10 28.5	-1.8
ARCES	comp=Z,58nm,21.6s,baz=77,slow=39			LR	LR	23 38 33.2	
KSAR	Wonju Array Be	68.97	55	P	P	23 11 43.4	-0.3
KSRS	Korea Array 0.8nm,0.7s,baz=271,slow=8.2,SNR=4.3	69.00	55	P	P	23 11 43.4	-0.5
USRK	Ussuriysk Arra 0.7nm,0.3s,baz=304,slow=14,SNR=6.2	71.83	48	P	P	23 11 59.8	-1.2
MAW	Mawson comp=Z,107nm,18.5s,baz=197,slow=33	81.95	176	LR	LR	23 45 22.7	
WRA	Warramunga Arr	86.28	112	P	P	23 13 18.9	-1.6
WRA	Warramunga Arr 0.9nm,0.6s,baz=298,slow=3.9,SNR=7.4	86.28	112	P	P	23 13 18.9	-1.6
ASAR	Alice Springs	86.96	115	P	P	23 13 23.6	-0.2
ASAR	Alice Springs 0.8nm,0.6s,baz=286,slow=4.7,SNR=12	86.96	115	P	P	23 13 23.6	-0.2
NVAR	Mina Array Bea	127.01	352	PKP	PKPdf	23 19 44.9	+2.0
NVAR	Mina Array Bea 0.3nm,0.6s,baz=8.5,slow=1.8,SNR=4.1	127.01	352	PKP	PKPdf	23 19 44.9	+2.0

IDC 15 23:11:33.2±1.6,14°14N×53°73E,h0km,mb3.6/5, mb1 3.7/5,mb1mx3.4/26,mbtmp3.6/5,MS3.5/3,Ms1 3.5/3, ms1mx2.8/32,Error ellipse: s-maj=46.3km s-min=32.7km az=143.0,Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATD	Arta Tunnel	10.92	257	LR	LR	23 17 18.3	
KMBO	comp=Z,296nm,18.3s,baz=61,slow=32 Kilima Mbogo	22.28	228	LR	LR	23 25 02.3	
KBZ	comp=Z,102nm,19.5s,baz=96,slow=36 Khabaz	30.91	345	LR	LR	23 33 14.4	
MKAR	comp=Z,88nm,19.2s,baz=162,slow=42 Makanchi Array 0.6nm,0.7s,baz=224,slow=6.8,SNR=6.8	40.38	30	P	P	23 19 13.1	+0.2

BVAR	**Borovoye Array**	**40.99**	**15**	P		P	23 19 17.7	0.0
	baz=194,slow=5.3							
ZALV	**Zalesovo Beam**	**46.62**	**25**	P		P	23 20 01.2	-1.8
	0.8nm,0.6s,baz=239,slow=7.5,SNR=4.5							
TORD	**Torodi Ar. Bea**	**50.49**	**275**	P		P	23 20 33.5	+0.1
	1.3nm,1.1s,baz=86,slow=7.4,SNR=3.6							
SONM	**Songino Array**	**54.85**	**41**	P		P	23 21 06.6	+1.1
	0.2nm,0.3s,baz=260,slow=4.2,SNR=3.7							
ASAR	**Alice Springs**	**86.86**	**115**	P		P	23 24 20.0	-0.3
	0.3nm,0.6s,baz=292,slow=4.7,SNR=4.1							

ISCJB ***15*** *23:28:02.3±0.7,24.86N±0.04×121.93E±0.03, h107km±5km, Error ellipse: s-maj=6.3km s-min=3.8km az=158.4*

JMA ***15*** *23:28:02.3±0.3,24.99N×121.95E, h103km, M2.7*

TAP ***15*** *23:28:02.0,24.89N×121.91E, h109km, ML3.3, C*

ISC 15 23:28:02.5±1.7,24.87N±0.06×121.92E±0.04, h107km±10km, n37, σ0§48/70, 5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.15**	**24**	*i* P	**Pn**	**23 28 17.4**	**-0.1**
	baz=45						
TWB1				S	**Sn**	**23 28 28.2**	**-0.4**
	baz=45						
NWF	**Wu-fen Shan**	**0.24**	**328**	P	**Pn**	**23 28 17.5**	**-0.3**
	baz=331						
NWF				S	**Sn**	**23 28 27.9**	**-1.4**
	baz=331						
TWC	**Suao**	**0.27**	**194**	P	**Pn**	**23 28 18.1**	**+0.3**
	baz=185						
TWC				S	**Sn**	**23 28 29.3**	**0.0**
	baz=185						
TWE	**Neicheng**	**0.27**	**238**	P	**Pn**	**23 28 18.2**	**+0.4**
	baz=223						
TWE				*e*S	**Sn**	**23 28 30.0**	**+0.7**
	baz=223						
ENTT	**Nioudou**	**0.39**	**235**	P	**Pn**	**23 28 18.7**	**+0.2**
	baz=239						
ENTT				S	**Sn**	**23 28 31.2**	**+0.8**
	baz=239						
TAP1	**Taipei**	**0.40**	**295**	*i* P	**Pn**	**23 28 18.4**	**0.0**
	baz=293						
TAP1				S	**Sn**	**23 28 30.5**	**+0.2**
	baz=293						
ENA	**Nanau**	**0.47**	**200**	*e*P	**Pn**	**23 28 19.2**	**+0.3**
	baz=189						
ENA				*e*S	**Sn**	**23 28 32.1**	**+0.9**
	baz=189						
TWY	**Chenhua**	**0.50**	**325**	⇓P	**Pn**	**23 28 18.8**	**-0.3**
	baz=332						
TWY				*e*S	**Sn**	**23 28 31.6**	**+0.1**
	baz=332						
TWS1	**Kuangyinshan**	**0.51**	**297**	P	**Pn**	**23 28 19.3**	**+0.1**
	baz=285						
TWS1				S	**Sn**	**23 28 32.0**	**+0.4**
	baz=285						
NSK	**Sanguang**	**0.54**	**250**	⇓*i*P	**Pn**	**23 28 19.2**	**-0.3**
	baz=235						
NSK				*e*S	**Sn**	**23 28 31.3**	**-0.9**
	baz=235						
NNS	**Nan Shan**	**0.65**	**230**	⇓P	**Pn**	**23 28 20.5**	**+0.1**
	baz=223						
NNS				*e*S	**Sn**	**23 28 33.9**	**+0.1**
	baz=223						
NCU	**National Centr**	**0.67**	**279**	P	**Pn**	**23 28 20.2**	**-0.2**
	baz=267						
NCU				S	**Sn**	**23 28 33.7**	**-0.1**
	baz=267						
TWD	**Chiawan**	**0.84**	**201**	P	**Pn**	**23 28 21.3**	**-0.6**
	baz=203						
TWD				*e*S	**Sn**	**23 28 35.6**	**-0.8**
	baz=203						
NSTT	**Nanjuang**	**0.87**	**254**	⇓*i*P	**Pn**	**23 28 22.1**	**-0.1**
	baz=244						
NSTT				*e*S	**Sn**	**23 28 36.6**	**-0.4**
	baz=244						
TWT	**Tachien**	**0.91**	**228**	P	**Pn**	**23 28 23.5**	**+0.7**
	baz=218						
TWT				*e*S	**Sn**	**23 28 38.9**	**+0.9**
	baz=218						
HWA	**Hwalien**	**0.93**	**198**	*e*P	**Pn**	**23 28 22.7**	**-0.2**
	baz=205						
WHF	**Hehuan Shan**	**0.93**	**220**	P	**Pn**	**23 28 23.6**	**+0.2**
	baz=209						
WHF				S	**Sn**	**23 28 39.2**	**+0.3**
	baz=209						
YOJ	**Yonaguni jima**	**1.07**	**112**	P	**Pn**	**23 28 24.1**	**-0.2**
YOJ				*e*S	**Sn**	**23 28 40.7**	**0.0**
ESL	**Shilin**	**1.14**	**203**	*e*P	**Pn**	**23 28 24.5**	**-0.5**
	baz=198						
NSY	**Sanyi**	**1.15**	**247**	*e*P	**Pn**	**23 28 25.1**	**0.0**
	baz=243						
NSY				*e*S	**Sn**	**23 28 42.7**	**+0.5**
	baz=243						
TWQ1	**Liyutan**	**1.16**	**244**	*e*P	**Pn**	**23 28 25.4**	**+0.1**
	baz=232						
TWQ1				*e*S	**Sn**	**23 28 42.0**	**-0.5**
	baz=232						
SMLT	**Sun Moon Lake**	**1.35**	**224**	P	**Pn**	**23 28 27.8**	**+0.3**
	baz=227						
SMLT				*e*S	**Sn**	**23 28 46.9**	**+0.4**
	baz=227						
TYC	**Yuchr**	**1.36**	**225**	⇓*i*P	**Pn**	**23 28 27.8**	**+0.3**
	baz=229						
TYC				*e*S	**Sn**	**23 28 46.7**	**+0.2**
	baz=229						
EHY	**Hungye**	**1.46**	**202**	*e*P	**Pn**	**23 28 28.3**	**-0.4**
	baz=192						
EHY				*e*S	**Sn**	**23 28 47.6**	**-1.0**
	baz=192						
TWF1	**Yuli**	**1.61**	**201**	*e*P	**Pn**	**23 28 30.4**	**-0.2**
	baz=196						
TWF1				*e*S	**Sn**	**23 28 51.4**	**-0.4**
	baz=196						
ALS	**Alishan**	**1.69**	**217**	P	**Pn**	**23 28 32.4**	**+0.5**
	baz=212						
ALS				*e*S	**Sn**	**23 28 54.0**	**-0.1**
	baz=212						
CHN5	**Tsauling**	**1.70**	**222**	P	**Pn**	**23 28 32.0**	**+0.2**
	baz=217						
CHN5				S	**Sn**	**23 28 54.4**	**+0.5**
	baz=217						
IRIF	**Iriomote-Funau**	**1.73**	**107**	P	**Pn**	**23 28 31.8**	**-0.2**
IRIF				*e*S	**Sn**	**23 28 54.7**	**+0.3**
CHKT	**Chengkung**	**1.83**	**196**	*e*P	**Pn**	**23 28 33.6**	**+0.3**
	baz=194						
CHKT				*e*S	**Sn**	**23 28 55.9**	**-0.8**
	baz=194						
HATJ	**Hateruma jima**	**1.90**	**115**	P	**Pn**	**23 28 34.5**	**+0.4**
CHN4	**Tsaushan**	**1.94**	**219**	*e*P	**Pn**	**23 28 34.8**	**+0.2**
	baz=213						
CHN4				*e*S	**Sn**	**23 28 58.7**	**-0.4**
	baz=213						
JKRS	**Kuro-shima**	**2.00**	**108**	P	**Pn**	**23 28 35.8**	**+0.4**
JKRS				*e*S	**Sn**	**23 29 00.8**	**+0.2**
WTP	**Ta-pu**	**2.01**	**217**	*e*P	**Pn**	**23 28 35.4**	**-0.2**
	baz=216						
JIJ	**Ishigaki jima**	**2.08**	**103**	P	**Pn**	**23 28 36.3**	**-0.2**
JIJ				*e*S	**Sn**	**23 29 01.5**	**-0.9**
CHN1	**Nanshi**	**2.10**	**217**	*e*P	**Pn**	**23 28 36.4**	**-0.3**
	baz=212						
CHN1				*e*S	**Sn**	**23 29 02.2**	**-0.7**
	baz=212						
TWG	**Pinlang**	**2.18**	**201**	*e*P	**Pn**	**23 28 38.2**	**+0.5**
	baz=193						
TWG				*e*S	**Sn**	**23 29 04.7**	**0.0**
	baz=193						
JTJ	**Tarama**	**2.54**	**95**	P	**Pn**	**23 28 42.9**	**+0.5**
JTJ				*e*S	**Sn**	**23 29 13.2**	**+0.2**

NIED ***15*** *23:33:00,38.90N×142.10E,h20km,Mw3.5 Best double couple: M0 1.72000×10^14 NP1:φs12.00000°,δ53.00000°, λ-75.00000°. NP2:φs168.00000°,δ40.00000°, λ-109.00000°.*

JMA 15 23:33:04.7±0.1,38.91N×142.11E,h44km±1km, M3.7, 8D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.38**	**296**	⇓P	Pn	23 33 14.4	+0.2
OFUJ				S	Sn	23 33 20.9	0.0
JMK	**Ichinoseki**	**0.70**	**274**	⇓P	Pn	23 33 18.2	0.0
JMK				S	Sn	23 33 27.8	-0.1
JIO	**Ouri**	**0.75**	**233**	⇓P	Pn	23 33 18.7	-0.2
JIO				S	Sn	23 33 28.2	-0.9
JOM	**Ohasama**	**0.85**	**312**	⇓P	Pn	23 33 20.5	+0.2
JOM				S	Sn	23 33 31.7	+0.1
JTH	**Tanohata**	**1.04**	**350**	⇓P	Pn	23 33 22.7	-0.2
JRG	**Rokugo**	**1.25**	**293**	⇓P	Pn	23 33 26.0	+0.3
JOU	**Okura**	**1.26**	**245**	⇓P	Pn	23 33 25.9	+0.1
JOU				S	Sn	23 33 42.1	+0.5
JYK	**Kaneyama**	**1.37**	**271**	⇓P	Pn	23 33 27.6	+0.3
JYK				S	Sn	23 33 45.6	+1.4
JMM	**Marumori**	**1.47**	**225**	P	Pn	23 33 28.4	-0.3
JANG	**Nango**	**1.53**	**343**	P	Pn	23 33 29.6	0.0
JANG				*e*S	Sn	23 33 48.9	+0.6
MAT	**Matsushiro**	**3.89**	**234**	P	Pn	23 34 04.1	+2.1
MAT				*e*S	Sn	23 34 53.5	+7.0

GUC 15 23:44:41.4±0.8,31.05S×71.99W,h12km±8km, MD3.5, ML3.0,2C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	**Cambarbala**	**0.86**	**99**	⇑*i*P	Pg	23 44 57.4	-0.8
CMCH				*i* S	Sg	23 45 09.3	-0.2
CMCH				AML	AML	23 45 11.5	
	comp=E,2μm,0.5s						
CHNG	**Los Chungos**	**0.93**	**153**	*e*P	Pg	23 44 59.1	-0.3
CHNG				*i* S	Sb	23 45 12.4	+0.5
CHNG				AML	AML	23 45 17.1	
	comp=N,214nm,0.3s						
TLL	**Tololo Astrono**	**1.35**	**50**	⇑*i*P	Pn	23 45 05.3	-1.1
TLL				*i* S	Sb	23 45 23.9	-0.5
TLL				AML	AML	23 45 29.5	
	comp=E,602nm,0.5s						
LCO	**Las Campanas**	**2.32**	**29**	AML	AML	23 45 58.3	
	comp=E,114nm,0.3s						
CLCH	**Cerro Calan**	**2.65**	**153**	⇓*i*P	Pb	23 45 27.9	-0.9
CLCH				*e*S	Sb	23 46 00.5	-0.9
CLCH				AML	AML	23 46 09.2	
	comp=N,153nm,0.5s						
LMEL	**Las Melosas**	**3.18**	**152**	*e*P	Pn	23 45 32.6	+1.2
LMEL				*i* S	Sn	23 46 11.2	+1.9
LMEL				AML	AML	23 46 26.7	
	comp=N,62nm,0.3s						

MEX 16 00:00:13.0±0.3,15.86N×98.72W,h19km±19km, MD4.0, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.78**	**47**	*e*P	Pb	00 00 25.5	-2.5
PNIG				*i* S	Sb	00 00 35.2	-3.0
CAIG	**El Cayaco**	**1.89**	**309**	*i* P	Pn	00 00 41.6	-2.7
CAIG				*i* S	Sn	00 01 03.0	-4.6
PLIG	**Platanillo**	**2.62**	**344**	*e*P	Pn	00 00 52.0	-2.5
PLIG				*i* S	Sn	00 01 22.2	-3.8
ARIG	**Puente Sto Nin**	**2.86**	**327**	*e*P	Pn	00 00 54.5	-3.2
ARIG				*i* S	Sn	00 01 27.5	-4.2
YAIG	**Yautepec**	**3.00**	**354**	*i* P	Pn	00 00 57.9	-1.9
YAIG				*i* S	Sn	00 01 32.1	-3.2
PPM	**Popocatepetl**	**3.19**	**2**	*i* P	Pn	00 00 59.6	-3.2
PPM				*i* S	Sn	00 01 36.8	-4.0

ISCJB ***16*** *00:01:07.8±0.4,32.25N±0.03×105.01E±0.05,h14km, mb4.0/13,MS3.6/1,Error ellipse: s-maj=6.6km s-min=3.9km az=21.0*

IDC ***16*** *00:01:07.2±0.7,32.18N×104.80E,h0km,mb4.0/13, mb1 4.1/15,mb1mx4.0/30,mbtmp4.0/15,ML4.2/2,MS3.6/1, Ms1 3.6/1,ms1mx2.6/37,Error ellipse: s-maj=36.3km s-min=13.9km az=54.0*

BJI ***16*** *00:01:10.0,32.32N×104.94E,h5km,mb4.1/3,ML3.8/17, Ms3.9/4,Ms7 3.4/4*

ISC 16 00:01:09.7±0.5,32.22N±0.04×104.92E±0.05,h14km,n31, σ1§67/40,mb4.1/13,1C,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.64**	**218**	⇑*i*Pn	**Pg**	**00 01 40.9**	**-0.4**
CD2				Pg	Pb	00 01 45.3	+5.5
CD2				Sn	**Sg**	**00 02 01.6**	**-1.0**
CD2				Sg	**Sb**	**00 02 06.3**	**+5.9**
CD2				smax	smax		
	comp=N,8μm,0.7s						
CD2				smax	smax		
	comp=E,3μm,1.3s						
XAN	**Xi'an**	**3.81**	**61**	Pn	**Pn**	**00 02 07.9**	**-0.2**
XAN				Pg	**Pb**	**00 02 18.9**	**+2.1**
XAN				Sg	**Sb**	**00 03 03.8**	**+0.9**
XAN				smax	smax		
	comp=N,290nm,0.8s						
XAN				smax	smax		
	comp=E,190nm,0.7s						
LZH	**Lanzhou**	**3.96**	**347**	*e*Pn	**Pn**	**00 02 11.6**	**+1.4**
LZH				Pg	**Pb**	**00 02 19.3**	**-0.1**
LZH				Sn	**Sn**	**00 02 56.1**	**-0.4**
LZH				Sg	**Sb**	**00 03 09.9**	**+2.7**
LZH				smax	smax		
	comp=N,580nm,0.7s						
LZH				smax	smax		
	comp=E,850nm,0.8s						
LZH				LR	LR		
	comp=N,680nm,4.6s						
LZH				LR	LR		
	comp=E,1μm,5.8s						
LZH				LR	LR		
	comp=Z,780nm,6.8s						
GYA	**Guiyang**	**5.94**	**165**	Pn	Pn	00 02 41.9	+4.5
GYA				Sn	**Sn**	**00 03 46.1**	**+0.8**
GYA				Sg	**Sg**	**00 04 15.8**	**-4.6**
GYA				smax	smax		
	comp=N,210nm,0.9s						
GYA				smax	smax		
	comp=E,140nm,0.7s						
KMI	**Kunming**	**7.33**	**196**	Pn	**Pn**	**00 02 58.0**	**+1.5**
KMI				Sn	**Sn**	**00 04 21.0**	**+1.4**
KMI				smax	smax		
	comp=N,28nm,1.2s						
KMI				smax	smax		
	comp=E,30nm,1.1s						
KMI				LR	LR		
	comp=N,280nm,9.6s						
KMI				LR	LR		
	comp=E,190nm,7.0s						
KMI				LR	LR		
	comp=Z,150nm,9.2s						
GTA	**Gaotai**	**8.29**	**331**	*e*P	Pn	00 03 16.0	+6.4
GTA				pP	Pb	00 03 20.3	-13
GTA				sP		00 03 23.8	
GTA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
HHC	**Hu-ho-hao-te**	**10.13**	**30**	*e*P	**Pn**	**00 03 35.8**	**+1.0**
HHC				pP		00 03 42.8	
HHC				sP		00 03 47.6	
HHC				S	**Sn**	**00 05 29.6**	**+1.3**
HHC				sS		00 05 41.6	
HHC				pmax	pmax		
	comp=Z,38nm,0.9s						
HHC				LR	LR		
	comp=N,270nm,7.6s						
HHC				LR	LR		
	comp=E,250nm,7.2s						
HHC				LR	LR		
	comp=Z,250nm,8.7s						
CMAR	**Chiang Mai Arr**	**14.73**	**203**	Pn	**Pn**	**00 04 37.4**	**-0.3**
	comp=Z,0.5nm,0.3s,baz=19,slow=12,SNR=7.5						
SONM	**Songino Array**	**15.64**	**4**	Pn	**P**	**00 04 54.2**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=185,slow=11,SNR=5.5						
TAPN	**Taplejung**	**15.71**	**256**	*e*P	**P**	**00 04 53.7**	**-1.3**
	comp=Z,19nm,1.1s						
ODAN	**Odare**	**16.16**	**255**	*e*P	**P**	**00 05 01.4**	**+1.5**
RAMN	**Ramite**	**16.77**	**256**	*e*P	**P**	**00 05 06.6**	**-0.1**
GUN	**Gumba**	**17.03**	**260**	*e*P	**Pn**	**00 05 06.5**	**-1.4**
	comp=Z,7.1nm,0.6s						
KKN	**Kakani**	**17.57**	**261**	*e*P	**Pn**	**00 05 13.4**	**-1.1**
DMN	**Daman**	**17.78**	**260**	*e*P	**Pn**	**00 05 16.5**	**-0.6**
DANN	**Dangsing**	**18.67**	**264**	*e*P	**P**	**00 05 27.2**	**-0.6**
KOLN	**Koldanda**	**18.99**	**262**	*e*P	**Pn**	**00 05 32.0**	**+0.2**
	comp=Z,12nm,0.9s						
KSRS	**Korea Array**	**19.57**	**68**	P	**Pn**	**00 05 38.8**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=259,slow=10.0,SNR=4.9						
MKAR	**Makanchi Array**	**22.62**	**317**	P	**P**	**00 06 10.5**	**+0.4**
	comp=Z,3.0nm,0.9s,baz=118,slow=9.8,SNR=16						
ZALV	**Zalesovo Beam**	**26.04**	**332**	P	**P**	**00 06 42.5**	**+0.2**
	comp=Z,1.0nm,0.5s,baz=136,slow=11,SNR=7.2						
KURBB	**Kurchatov Arra**	**26.79**	**321**	P	**P**	**00 06 50.0**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=127,slow=9.2,SNR=14						
BVAR	**Borovoye Array**	**32.37**	**320**	P	**P**	**00 07 38.9**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=120,slow=10,SNR=6.9						
ARCES	**ARCESS Array B**	**56.53**	**336**	P	**P**	**00 10 50.4**	**-0.8**
	comp=Z,1.2nm,0.6s,baz=91,slow=7.3,SNR=7.8						
BRTR	**Keskin Array B**	**56.80**	**299**	P	**P**	**00 10 53.6**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=108,slow=8.2,SNR=6.3						
BRTR				LR	LR	00 36 33.8	
	comp=Z,48nm,20.2s,baz=200,slow=38						
FINES	**FINESS Array B**	**57.03**	**326**	P	**P**	**00 10 54.3**	**-0.5**
	comp=Z,4.4nm,1.0s,baz=116,slow=9.4,SNR=4.2						
AKASG	**Malin Array Be**	**57.13**	**313**	P	**P**	**00 10 53.1**	**-2.6**
	comp=Z,0.2nm,0.3s,baz=72,slow=5.9,SNR=2.3						
WRA	**Warramunga Arr**	**59.02**	**147**	P	**P**	**00 11 09.5**	**+0.2**
	comp=Z,3.0nm,0.6s,baz=340,slow=7.4,SNR=9.7						
ASAR	**Alice Springs**	**62.09**	**150**	P	**P**	**00 11 30.3**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=338,slow=7.1,SNR=13						
HFS	**Hagfors**	**63.24**	**326**	P	**P**	**00 11 35.4**	**-2.0**
	comp=Z,1.5nm,0.7s,baz=83,slow=12,SNR=2.7						
NOA	**NORSAR Array B**	**64.10**	**327**	P	**P**	**00 11 41.9**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=71,slow=6.7,SNR=4.2						
STKA	**Stephens Creek**	**72.57**	**148**	P	**P**	**00 12 35.6**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=350,slow=11,SNR=3.4						

NIED ***16*** *00:03:00,46.70N×145.90E,h480km,Mw5.1 Best double couple: M0 4.64000×10^16 NP1:φs66.00000°, δ64.00000°,λ-56.00000°. NP2:φs190.00000°,δ42.00000°, λ-139.00000°.*

DJA ***16*** *00:03:49.2±5.7,47.16N±16.14×145.36E±3.0,h348km±56km, M5.0/8,mB5.2/3,mb5.1/8,Mw(mB)4.6/3*

MOS ***16*** *00:03:53.8±0.8,47.24N×145.60E,h386km,mb5.3/123, Error ellipse: s-maj=6.8km s-min=4.0km az=102.7*

JMA ***16*** *00:03:54.1±0.3,46.73N×145.92E,h438km,M5.1*

JMA Felt I J1.

BJI ***16*** *00:03:54.1,47.35N×145.66E,h393km,mB4.6/25, mb4.8/46*

ISCJB ***16*** *00:03:54.5±0.2,47.20N±0.02×145.60E±0.02, h393km±2km,mb5.1/371,Error ellipse: s-maj=3.2km s-min=2.2km az=150.2*

SKHL ***16*** *00:03:54.9±2.1,47.17N×145.90E,h391km±6km,mb5.4/3, mbh5.5/2,Ms4.3/1,msh5.4/7*

NEIC ***16*** *00:03:55.4±0.4,47.22N×145.54E,h389km±4km, mb5.2/182,Error ellipse: s-maj=3.2km s-min=2.1km az=159.0*

NEIC Recorded [1 JMA] in Aomori, Honshu.

TEH ***16*** *00:03:56.0,47.23N×145.48E,h393km,ML5.1*

IDC ***16*** *00:03:56.4±0.3,47.19N×145.64E,h401km±3km,mb4.7/53, mb1 4.7/59,mb1mx4.7/60,mbtmp4.6/59,Error ellipse: s-maj=5.9km s-min=5.0km az=120.0*

BGS ***16*** *00:03:58.5±1.2,47.78N×145.45E,h389km,mb5.1*

SZGRF ***16*** *00:04:06.9,48.68N×145.24E,h404km,mb5.7,Sea of Okhotsk*

ISC 16 00:03:55.6±0.2,47.16N±0.03×145.62E±0.03,h396km±1km, h395km:pP-P,n1667,σ1§07/2000,mb5.2/381,247C-519D, Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YSS	**Yuzh-Sakhalins**	**1.97**	**265**	*i*PN	**Pn**	**00 04 53.4**	**+2.4**
YSS				*e*S	**S**	**00 05 37.2**	**+1.5**
YSS				pmax	pmax		
	comp=Z,470nm,0.5s						
YSS				smax	smax		
	comp=N,15μm,3.0s						
YSS				smax	smax		
	comp=E,13μm,2.0s						
YSS				smax	smax		
	comp=E,3.0nm,0.9s						
YSS	**Yuzh-Sakhalins**	**1.97**	**265**	⇓*i*P	**Pn**	**00 04 53.4**	**+2.4**
YSS				AMB	AMB	00 04 54.2	
	comp=E,470nm,0.5s						
YSS				*e*S	**S**	**00 05 37.2**	**+1.5**
YSS				A	A	00 05 40.0	
	comp=E,15μm,3.0s						
YSS				A	A	00 05 40.0	
	comp=E,13μm,2.0s						
YSS				A	A	00 05 41.0	
	comp=E,3μm,0.9s						
YSS				AMS	AMS	00 06 30.0	
	comp=E,1μm,10.0s						
KUR	**Kuril'sk**	**2.48**	**140**	*d i*PN	**Pn**	**00 04 53.8**	**-0.7**
KUR				*i* S	**S**	**00 05 40.6**	**-1.4**
KUR				pmax	pmax		
	comp=N,122nm,1.0s						
KUR				pmax	pmax		
	comp=Z,590nm,1.0s						
KUR				pmax	pmax		
	comp=E,122nm,1.0s						
KUR				smax	smax		
	comp=N,89nm,0.7s						
KUR				smax	smax		
	comp=E,245nm,1.4s						
KUR	**Kuril'sk**	**2.48**	**140**	⇓*i*P	**Pn**	**00 04 53.9**	**-0.6**
KUR				AMB	AMB	00 04 54.5	
	comp=E,2μm,0.8s						
KUR				*i* S	**S**	**00 05 40.7**	**-1.3**
KUR				A	A	00 05 42.0	
	comp=E,12μm,2.0s						
KUR				A	A	00 05 42.0	
	comp=E,8μm,3.0s						
KUR				A	A	00 05 42.4	
	comp=E,243nm,1.0s						
KUR				A	A	00 05 42.4	
	comp=E,4μm,1.0s						
JSE	**Soyaes**	**3.05**	**225**	⇓P	**Pn**	**00 04 59.9**	**+1.0**
JSE				*e*S	**S**	**00 05 50.3**	**+0.1**
UGL	**Uglegorsk**	**3.06**	**310**	*e*PN	**Pn**	**00 05 00.5**	**+1.7**
UGL				*e*S	**S**	**00 05 51.0**	**+0.8**
UGL				pmax	pmax		
	comp=Z,7μm,0.8s						
UGL				pmax	pmax		
	comp=N,2μm,0.7s						
UGL				pmax	pmax		
	comp=E,3μm,0.7s						
UGL				smax	smax		
	comp=N,930nm,0.5s						
UGL				smax	smax		
	comp=E,1μm,0.7s						
UGL				smax	smax		
	comp=Z,598nm,0.7s						
UGL				smax	smax		
	comp=N,8μm,2.0s						
UGL				smax	smax		
	comp=E,6μm,2.0s						
UGL	**Uglegorsk**	**3.06**	**310**	*e*P	**Pn**	**00 05 00.5**	**+1.7**
UGL				AMB	AMB	00 05 02.0	
	comp=E,2μm,0.7s						
UGL				AMB	AMB	00 05 02.0	
	comp=E,3μm,0.7s						
UGL				AMB	AMB	00 05 02.0	
	comp=E,7μm,0.8s						
UGL				*e*S	**S**	**00 05 51.0**	**+0.8**
UGL				A	A	00 05 53.5	
	comp=E,930nm,0.7s						
UGL				A	A	00 05 53.5	
	comp=E,1μm,0.7s						
UGL				A	A	00 05 53.5	
	comp=E,598nm,0.7s						
UGL				A	A	00 05 55.0	
	comp=E,8μm,2.0s						
UGL				A	A	00 05 55.0	
	comp=E,6μm,2.0s						
YUK	**Yuzh-Kuril'sk**	**3.13**	**177**	*i*PN	**Pn**	**00 04 58.2**	**-1.4**
YUK				*i* S	**S**	**00 05 49.4**	**-2.0**
YUK				pmax	pmax		
	comp=N,314nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1μm,0.3s						
YUK				pmax	pmax		
	comp=E,619nm,0.2s						
YUK				smax	smax		
	comp=E,994nm,0.7s						
YUK				smax	smax		
	comp=N,2.0nm,0.7s						
YUK				smax	smax		
	comp=N,5μm,2.6s						
YUK	**Yuzh-Kuril'sk**	**3.13**	**177**	⇓*i*P	**Pn**	**00 04 58.2**	**-1.4**
YUK				AMB	AMB	00 05 04.3	
	comp=N,314nm,0.2s						

YUK				AMB	AMB	00 05 04.3			
	comp=N,619nm,0.2s								
YUK			*i* S		**S**	**00 05 49.4**	**-2.0**		
YUK				A	A	00 05 54.9			
	comp=N,5μm,2.2s								
YUK				A	A	00 05 59.7			
	comp=N,2μm,0.7s								
YUK				A	A	00 05 59.7			
	comp=N,990nm,0.7s								
JWK2	**Keihoku**	**3.17 236**	⇓P		**Pn**	**00 05 01.8**	**+1.8**		
JWK2			*e*S		**S**	**00 05 53.5**	**+1.5**		
JRA	**Rausu**	**3.24 186**	⇓P		**Pn**	**00 04 59.6**	**-1.0**		
JRA			*e*S		**S**	**00 05 52.1**	**-1.0**		
JTKR	**Abashiri--Toko**	**3.41 201**	⇓P		**Pn**	**00 05 01.7**	**-0.3**		
JTKR			*e*S		**S**	**00 05 55.6**	**-0.2**		
JMP	**Maruseppu**	**3.53 208**	⇓P		**Pn**	**00 05 02.9**	**-0.3**		
JNK	**Nakash**	**3.63 190**	⇓P		**Pn**	**00 05 02.8**	**-1.3**		
ASAJ	**Asahikawa**	**3.71 216**	*e*Pn		**Pn**	**00 05 05.1**	**+0.4**		
ASAJ			*e*S		**S**	**00 05 59.1**	**-1.7**		
ASAJ			S		S	00 06 00.2	-0.6		
ASAJ	**Asahikawa**	**3.71 216**	⇓P		**Pn**	**00 05 05.1**	**+0.4**		
ASAJ	**Asahikawa**	**3.71 216**	P		**Pn**	**00 05 05.2**	**+0.4**		
	comp=N,136nm,0.3s,baz=25,slow=4.4,SNR=747								
ASAJ			S		**S**	**00 06 00.2**	**-0.5**		
	baz=156,slow=19,SNR=3.8								
NEM2	**Nemuro 2**	**3.79 179**	⇓P		Pn	00 05 02.3	-3.3		
NEM2			*e*S		S	00 05 55.5	-6.7		
JSS	**Shosan**	**3.81 225**	⇓P		**Pn**	**00 05 07.0**	**+1.3**		
JKK2	**Kamakawa 2**	**3.86 213**	⇓P		**Pn**	**00 05 06.1**	**-0.1**		
JKK2			*e*S		**S**	**00 06 03.2**	**-0.1**		
JYG	**Yagishiri**	**4.01 229**	⇓P		**Pn**	**00 05 07.9**	**+0.4**		
JAR	**Ashorobuto**	**4.08 199**	⇓P		**Pn**	**00 05 07.2**	**-1.0**		
JAK	**Akkeshi**	**4.21 189**	⇓P		**Pn**	**00 05 06.9**	**-2.6**		
JAK			*e*S		S	00 06 03.3	-6.2		
JAB	**Ashibetsu**	**4.37 214**	⇓P		**Pn**	**00 05 11.5**	**+0.4**		
JHR	**Hokuryu**	**4.38 220**	⇓P		**Pn**	**00 05 11.5**	**+0.3**		
JHR			*e*S		**S**	**00 06 12.7**	**+0.2**		
JOB	**Onbets**	**4.44 197**	⇓P		**Pn**	**00 05 10.0**	**-1.8**		
JFR	**Furan**	**4.53 209**	⇓P		**Pn**	**00 05 12.5**	**-0.2**		
JFR			*e*S		**S**	**00 06 13.5**	**-1.8**		
JCH	**Churui**	**4.82 200**	⇓P		**Pn**	**00 05 13.0**	**-2.6**		
JCH			*e*S		S	00 06 14.1	-6.5		
JBT2	**Biratori 2**	**4.95 209**	⇓P		**Pn**	**00 05 16.1**	**-0.9**		
JEW	**Eniwo**	**5.23 216**	⇓P		**Pn**	**00 05 19.8**	**-0.1**		
JEW			*e*S		**S**	**00 06 24.9**	**-3.5**		
JSK	**Shakotan**	**5.26 226**	P		**Pn**	**00 05 20.3**	**+0.2**		
JSK			*e*S		**S**	**00 06 27.1**	**-1.8**		
JNBK	**Urakawa-nobuka**	**5.29 204**	⇓P		**Pn**	**00 05 18.0**	**-2.5**		
JNBK			*e*S		S	00 06 23.3	-6.2		
ERM	**Erimo**	**5.43 200**	Pn		**Pn**	**00 05 20.3**	**-1.7**		
	comp=N,49μm,0.6s								
ERM	**Erimo**	**5.43 200**	*e*PN		**Pn**	**00 05 20.3**	**-1.7**		
ERM	**Erimo**	**5.43 200**	*e*Pn		**Pn**	**00 05 20.3**	**-1.7**		
ERM			*e*S		S	00 06 22.4	-10		
JNB	**Noboribetsu**	**5.71 216**	⇓P		**Pn**	**00 05 24.4**	**-0.6**		
JSH	**Shimam**	**6.00 223**	⇓P		**Pn**	**00 05 28.1**	**0.0**		
JKB	**Kayabe**	**6.21 214**	⇓P		**Pn**	**00 05 28.3**	**-2.0**		
JKB			*e*S		S	00 06 40.0	-7.6		
TEY	**Ternei**	**6.62 255**	*i* P		**Pn**	**00 05 35.0**	**+0.2**		
TEY				AMB	AMB	00 05 35.7			
	comp=N,2μm,4.0s								
TEY				AMB	AMB	00 05 35.7			
	comp=N,39nm,0.8s								
TEY				AMB	AMB	00 05 35.7			
	comp=N,800nm,2.0s								
TEY				AMB	AMB	00 05 35.7			
	comp=N,181nm,1.0s								
TEY				AMB	AMB	00 05 35.7			
	comp=N,275nm,1.1s								
OKH	**Okha**	**6.63 346**	*i* PN		**P**	**00 05 36.6**	**+1.2**		
OKH				pmax	pmax				
	comp=Z,2μm,6.0s								
OKH	**Okha**	**6.63 346**	⇑*i* P		**P**	**00 05 36.6**	**+1.2**		
OKH			⇑*i* P		**Pn**	**00 05 37.0**	**+2.3**		
OKH				AMB	AMB	00 05 37.6			
	comp=Z,2μm,6.0s								
OKH				AMB	AMB	00 05 37.8			
	comp=Z,900nm,0.9s								
OKH			*e*S		**S**	**00 06 59.5**	**+3.8**		
OKH			⇓*i* S		S	00 06 59.9	+4.2		
OKH				A	A	00 07 01.8			
	comp=Z,8μm,8.0s								
OKH				A	A	00 07 01.8			
	comp=Z,2μm,6.0s								
OKH				A	A	00 07 03.0			
	comp=Z,200nm,0.9s								
OKH			*e*L		L	00 07 29.4			
JOT	**Ohata**	**6.64 211**	⇓P		**Pn**	**00 05 32.4**	**-2.8**		
JOT			*e*S		S	00 06 48.4	-8.0		
JOSM	**Okushiri--Mats**	**6.71 223**	P		**Pn**	**00 05 34.3**	**-1.6**		
JOSM			*e*S		S	00 06 51.1	-6.6		
JSR	**Shiriuchi**	**6.75 215**	⇓P		**Pn**	**00 05 34.3**	**-2.1**		
NKL	**Nikolayevsk**	**6.79 334**	*i* P		**Pn**	**00 05 36.0**	**-0.5**		
NKL				AMB	AMB	00 05 36.5			
	comp=Z,160nm,0.8s								
NKL				AMB	AMB	00 05 36.5			
	comp=Z,80nm,0.8s								
NKL				AMB	AMB	00 05 36.5			
	comp=Z,360nm,0.8s								
NKL				AMB	AMB	00 05 37.0			
	comp=Z,800nm,4.0s								
NKL				AMB	AMB	00 05 37.0			
	comp=Z,500nm,4.0s								
NKL				AMB	AMB	00 05 37.0			
	comp=Z,1μm,4.0s								
NKL			*i* S		**S**	**00 06 58.0**	**-1.0**		
NKL				A	A	00 07 01.0			
	comp=Z,5μm,6.0s								
NKL				A	A	00 07 01.0			
	comp=Z,3μm,6.0s								
NKL			*e*L		L	00 08 06.0			
NKL				AMS	AMS	00 09 06.0			
	comp=Z,500nm,5.0s								
JSI2	**Shiura 2**	**7.16 213**	P		**Pn**	**00 05 38.8**	**-2.2**		
HABR	**Khabarovsk**	**7.24 284**	*c i* PN		**P**	**00 05 43.9**	**+1.6**		
HABR				pmax	pmax				
	comp=Z,335nm,1.0s								
HABR				pmax	pmax				
	comp=N,11nm,0.5s								
HABR				pmax	pmax				
	comp=E,223nm,1.0s								
HABR				MLR	MLR				
	comp=Z,160nm,14.0s								
JANG	**Nango**	**7.40 205**	⇓P		**Pn**	**00 05 40.7**	**-3.1**		
JANG			*e*S		S	00 07 03.3	-8.9		
SKR	**Severo-Kuril's**	**7.76 59**	*e*PN		**Pn**	**00 05 45.0**	**-2.6**		
SKR				pmax	pmax				
	comp=N,60nm,0.5s								
SKR				pmax	pmax				
	comp=E,60nm,0.5s								
SKR				pmax	pmax				
	comp=Z,170nm,0.5s								
SKR				pmax	pmax				
	comp=Z,1μm,4.0s								
SKR				MLR	MLR				
	comp=Z,600nm,14.0s								
SKR	**Severo-Kuril's**	**7.76 59**	*e*P		**Pn**	**00 05 45.0**	**-2.6**		
SKR				AMB	AMB	00 05 47.0			
	comp=Z,60nm,0.5s								
SKR				AMB	AMB	00 05 47.0			
	comp=Z,170nm,0.5s								
SKR				AMB	AMB	00 05 47.0			
	comp=Z,1μm,4.0s								
SKR			*e*S		S	00 07 13.0	-6.3		
SKR				A	A	00 07 22.5			
	comp=Z,220nm,0.8s								
SKR				A	A	00 07 22.5			
	comp=Z,140nm,0.8s								
SKR				A	A	00 07 30.0			
	comp=Z,1μm,12.0s								
SKR				A	A	00 07 30.0			
	comp=Z,1μm,12.0s								
SKR				AMS	AMS	00 09 40.0			
	comp=Z,600nm,14.0s								
JOM	**Ohasama**	**8.30 204**	P		**Pn**	**00 05 51.7**	**-2.3**		
JOM			*e*S		S	00 07 23.9	-7.2		
JMK	**Ichinoseki**	**8.81 203**	P		**Pn**	**00 05 57.9**	**-2.0**		
JMK			*e*S		S	00 07 34.3	-7.5		
KLR	**Kul'dur**	**9.49 288**	*e*PN		**P**	**00 06 06.0**	**-1.5**		
KLR			*e*S		**S**	**00 07 51.0**	**-5.0**		
KLR				pmax	pmax				
	comp=E,55nm,1.4s								
KLR				pmax	pmax				
	comp=Z,67nm,1.4s								
PETK	**Petropavlovsk-**	**9.77 48**	PN		**P**	**00 06 10.4**	**-0.1**		
PETK			S		**S**	**00 07 59.5**	**-2.1**		
PETK				pmax	pmax				
	comp=Z,7.0nm,0.3s								
PETK				smax	smax				
	comp=N,1.0nm,0.3s								
PETK	**Petropavlovsk-**	**9.77 48**	P		**P**	**00 06 10.4**	**-0.1**		
PETK			S		**S**	**00 07 59.5**	**-2.1**		
PETK			ScP		**ScP**	**00 14 35.3**	**-1.1**		
PETK	**Petropavlovsk-**	**9.77 48**	P		**P**	**00 06 10.4**	**-0.1**		
	comp=N,6.5nm,0.3s,baz=224,slow=8.3,SNR=31								
PETK			S		**S**	**00 07 59.5**	**-2.1**		
	comp=N,1.2nm,0.3s,baz=193,slow=5.9,SNR=2.8								
PETK			ScP		**ScP**	**00 14 35.3**	**-1.1**		
	comp=N,0.3nm,0.3s,baz=132,slow=4.1,SNR=3.5								
JAW	**Awa shima**	**9.87 211**	P		**P**	**00 06 11.9**	**0.0**		
JAW			S		**S**	**00 07 58.7**	**-5.3**		
USRK	**Ussuriysk Arra**	**9.99 258**	P		**Pn**	**00 06 13.8**	**+0.4**		
	comp=N,1.9nm,0.3s,baz=62,slow=12,SNR=43								
USRK			S		**S**	**00 08 03.4**	**-2.9**		
	baz=67,slow=20,SNR=5.2								
PET	**Petropavlovsk**	**10.22 50**	*e*PN		**P**	**00 06 14.5**	**-1.0**		
PET			*e*S		**S**	**00 08 06.1**	**-4.6**		
PET				pmax	pmax				
	comp=Z,200nm,12.0s								
PET				smax	smax				
	comp=N,147nm,0.6s								
PET				MLR	MLR				
	comp=Z,200nm,14.0s								
PET				MLR	MLR				
	comp=Z,200nm,10.0s								
JNS	**Sasagawa**	**10.43 209**	P		**P**	**00 06 18.2**	**+0.2**		
JSD	**Sado**	**10.60 213**	P		**P**	**00 06 19.8**	**-0.2**		
JSD			S		**S**	**00 08 14.6**	**-4.3**		
JHK	**Hiroka**	**11.04 209**	P		**Pn**	**00 06 25.8**	**+0.1**		
JHK			S		**S**	**00 08 27.3**	**-0.7**		
JHO	**Hitachi**	**11.19 201**	P		**P**	**00 06 26.5**	**0.0**		
JHO			S		**S**	**00 08 27.9**	**-3.1**		
JKT	**Katashina**	**11.41 207**	P		**Pn**	**00 06 30.5**	**+0.4**		
MDJ	**Mudanjiang**	**11.46 263**	P		**P**	**00 06 29.6**	**+0.3**		
MDJ			S		**S**	**00 08 35.4**	**-0.9**		
MDJ			PcP		**PcP**	**00 11 40.8**	**-3.7**		
MDJ			ScP		**ScP**	**00 14 39.0**	**+0.3**		
MDJ			ScS		**ScS**	**00 18 14.9**	**+0.6**		
MDJ				pmax	pmax				
	comp=Z,20nm,0.9s								
MDJ				pmax	pmax				
	comp=Z,60nm,8.2s								
MDJ				LR	LR				
	comp=N,120nm,18.6s								
MDJ				LR	LR				
	comp=E,70nm,16.9s								
MDJ				LR	LR				
	comp=Z,45nm,16.9s								
MDJ	**Mudanjiang**	**11.46 263**	*e*P		**P**	**00 06 28.3**	**-1.0**		
	comp=Z,17nm,0.8s								
MDJ			*e*S		**S**	**00 08 35.8**	**-0.4**		
JJN	**Nakama**	**11.46 211**	P		**Pn**	**00 06 31.3**	**+0.7**		
JAG	**Ashikaga**	**11.66 205**	P		**P**	**00 06 32.2**	**+0.5**		
MAJO	**Matsushiro**	**11.95 210**	*e*PN		**Pn**	**00 06 35.7**	**-0.6**		
MAJO			*e*S		**S**	**00 08 45.5**	**-1.1**		
MAJO	**Matsushiro**	**11.95 210**	*e*P		**Pn**	**00 06 35.7**	**-0.6**		
MAJO			*e*S		**S**	**00 08 45.5**	**-1.1**		
MAT	**Matsushiro**	**11.95 210**	P		**P**	**00 06 35.6**	**+0.6**		
MAT			S		**S**	**00 08 46.6**	**0.0**		
MAT	**Matsushiro**	**11.95 210**	P		**P**	**00 06 35.5**	**+0.6**		
MAT			S		**S**	**00 08 46.8**	**+0.2**		
JNG	**Nsakai**	**12.11 210**	P		**P**	**00 06 37.2**	**+0.4**		
JNG			S		**S**	**00 08 51.2**	**+1.2**		
JRY	**Ryogami san**	**12.21 207**	P		**P**	**00 06 38.1**	**+0.3**		
JRY			S		**S**	**00 08 51.0**	**-0.8**		
JGN	**Niukaw**	**12.56 212**	P		**P**	**00 06 42.2**	**+0.6**		
JGN			S		**S**	**00 09 03.3**	**+4.4**		
JNT	**Takato**	**12.58 209**	P		**P**	**00 06 42.8**	**+0.8**		
JNY	**Yasuok**	**13.14 209**	S		**S**	**00 09 11.3**	**+0.5**		
JGM	**Miyama**	**13.24 213**	P		**P**	**00 06 49.9**	**+0.8**		
ZEA	**Zeya**	**13.41 306**	*e*P		**P**	**00 06 48.3**	**-2.3**		
ZEA				AMB	AMB	00 06 49.4			
	comp=Z,45nm,0.7s								
ZEA			*e*S		**S**	**00 09 12.0**	**-3.5**		
ZEA			A		A	00 09 17.0			
	comp=Z,400nm,6.0s								
CN2	**Changchun**	**14.54 264**	*e*P		**P**	**00 07 03.8**	**+0.7**		
CN2			*e*SP			00 08 32.1			
CN2			*e*S		**S**	**00 09 35.3**	**-3.0**		
CN2			ScP		**ScP**	**00 14 47.8**	**+4.1**		
CN2			ScS		**ScS**	**00 18 24.3**	**+2.9**		
CN2				pmax	pmax				
	comp=Z,50nm,0.7s								
CN2				pmax	pmax				
	comp=Z,200nm,5.0s								
CN2				LR	LR				
	comp=N,500nm,10.0s								
CN2				LR	LR				
	comp=E,300nm,10.0s								
CN2				LR	LR				
	comp=Z,300nm,12.0s								
JHJ	**Hachijo jima 2**	**14.71 200**	P		**P**	**00 07 06.2**	**+1.1**		
	comp=Z,14nm,0.3s,baz=222,slow=16,SNR=5.1								
JHJ			S		**S**	**00 09 47.0**	**+5.1**		
	comp=Z,4.4nm,0.3s,baz=60,slow=20,SNR=4.3								
CLNS	**Chul'man**	**15.96 315**	*e*P		**P**	**00 07 19.1**	**+0.8**		
CLNS			*e*S		**S**	**00 10 06.9**	**+0.8**		
CLNS				pmax	pmax				
	comp=Z,88nm,1.0s								
CLNS				pmax	pmax				
	comp=E,45nm,1.0s								
CLNS				pmax	pmax				
	comp=N,48nm,1.2s								
CLNS				smax	smax				
	comp=N,72nm,1.2s								
CLNS				smax	smax				
	comp=E,86nm,1.0s								
KSRS	**Korea Array**	**16.26 240**	P		**Pn**	**00 07 23.6**	**-1.8**		
	comp=E,1.9nm,0.3s,baz=43,slow=10,SNR=91								
KSRS			PcP		**PcP**	**00 11 51.8**	**+0.9**		
	comp=E,0.4nm,0.3s,baz=9.4,slow=1.3,SNR=5.4								
KSRS			ScP		**ScP**	**00 14 48.0**	**+1.0**		
	comp=E,0.4nm,0.3s,baz=2.4,slow=1.3,SNR=36								
KSAR	**Wonju Array Be**	**16.29 240**	P		**P**	**00 07 23.6**	**+1.6**		
KSAR			PcP		**PcP**	**00 11 51.8**	**+0.8**		
KSAR			ScP		**ScP**	**00 14 48.0**	**+1.0**		
SNY	**Shenyang**	**16.59 259**	⇑P		**P**	**00 07 26.8**	**+1.7**		
SNY			S		S	00 10 25.9	+7.4		
SNY				pmax	pmax				
	comp=Z,27nm,0.7s								
SNY				LR	LR				
	comp=N,450nm,7.8s								
SNY				LR	LR				
	comp=E,320nm,7.5s								
SNY				LR	LR				
	comp=Z,210nm,10.2s								
HIA	**Hailar**	**17.35 287**	*e*P		**P**	**00 07 31.7**	**-1.6**		
	comp=Z,30nm,0.6s								
YAK	**Yakutsk**	**17.45 334**	*i* P		**P**	**00 07 33.3**	**-0.7**		
YAK			*e*S		**S**	**00 10 31.5**	**-3.4**		
YAK				pmax	pmax				
	comp=N,143nm,1.0s								
YAK				pmax	pmax				
	comp=E,171nm,1.3s								
YAK				pmax	pmax				
	comp=Z,505nm,1.1s								
YAK				smax	smax				
	comp=E,2μm,3.0s								
YAK				smax	smax				
	comp=N,2μm,2.3s								
JNU	**Nakatsue**	**17.94 224**	*e*P		**P**	**00 07 40.4**	**+0.6**		
	comp=N,29nm,0.9s								
JNU			S		**S**	**00 10 43.9**	**-1.3**		
JNU			ScP		**ScP**	**00 14 50.8**	**+0.1**		
JNU	**Nakatsue**	**17.94 224**	P		**P**	**00 07 40.3**	**+0.6**		
JNU	**Nakatsue**	**17.94 224**	P		**P**	**00 07 40.3**	**+0.6**		
	comp=N,3.1nm,0.3s,baz=45,slow=7.5,SNR=28								
JNU			S		**S**	**00 10 43.9**	**-1.3**		
	comp=N,0.1nm,0.3s,baz=216,slow=19,SNR=3.3								
JNU			ScP		**ScP**	**00 14 50.8**	**+0.1**		
	comp=N,0.2nm,0.3s,baz=333,slow=9.0,SNR=3.5								
FX1	**Attu Island--F**	**18.54 62**	*e*P		**P**	**00 07 46.4**	**+0.7**		
DL2	**Dalian**	**19.33 253**	P		**P**	**00 07 54.5**	**+0.6**		
DL2			*e*sP		**sP**	**00 09 37.8**	**-2.8**		
DL2			S		**S**	**00 11 09.4**	**+0.4**		
DL2				pmax	pmax				
	comp=Z,44nm,1.0s								
CIT	**Chita**	**21.24 295**	*e*P		**P**	**00 08 09.3**	**-2.1**		
CIT				pmax	pmax				
	comp=Z,196nm,1.3s								
BJI	**Beijing**	**22.39 262**	P		**P**	**00 08 21.4**	**-0.5**		
BJI			sP		**sP**	**00 10 09.9**	**-4.3**		
BJI			S		**S**	**00 11 58.9**	**+0.6**		
BJI				pmax	pmax				
	comp=Z,9.0nm,0.9s								
BJT	**Baijiatuan**	**22.40 262**	*e*P		**P**	**00 08 22.4**	**+0.3**		
	comp=Z,58nm,0.6s								
BILL	**Bilibino**	**23.44 19**	⇓*i* P		**P**	**00 08 29.8**	**-1.2**		
BILL			*i* S		**S**	**00 12 12.5**	**-1.8**		
BILL				pmax	pmax				
	comp=Z,354nm,1.1s								
JOW	**Kunigami**	**24.46 220**	*e*P		**P**	**00 08 40.9**	**+0.2**		
	comp=Z,30nm,1.2s								
HHC	**Hu-ho-hao-te**	**25.16 268**	*e*P		**P**	**00 08 46.6**	**-0.3**		
HHC			sP		**sP**	**00 10 44.1**	**+0.2**		
HHC			PcP		**PcP**	**00 12 06.1**	**-2.1**		
HHC			S		**S**	**00 12 41.8**	**-0.4**		
HHC			PcS		**PcS**	**00 15 44.8**	**-4.3**		
HHC				pmax	pmax				
	comp=Z,140nm,0.8s								
HHC				pmax	pmax				
	comp=Z,200nm,6.1s								
NJ2	**Nanjing**	**25.39 243**	*e*P		**P**	**00 08 50.0**	**+1.2**		
NJ2				pmax	pmax				
	comp=Z,20nm,0.9s								
ULN	**Ulaanbaatar**	**25.88 286**	*e*P		**P**	**00 08 53.3**	**0.0**		
	comp=Z,31nm,0.7s								
ULN			*e*ScP		**ScP**	**00 15 11.4**	**+0.5**		
ULN	**Ulaanbaatar**	**25.88 286**	P		**P**	**00 08 53.3**	**0.0**		
	comp=Z,48nm,1.0s,comp=Z,447nm								
SONM	**Songino Array**	**26.32 286**	P		**P**	**00 08 57.4**	**+0.3**		
SONM			pP		**PP**	**00 10 08.6**	**+1.9**		
SONM			PcP		**PcP**	**00 12 11.2**	**+0.3**		
SONM			ScP		**ScP**	**00 15 12.3**	**+0.2**		
SONM			ScS		**ScS**	**00 19 01.4**	**-1.6**		
SONM	**Songino Array**	**26.32 286**	P		**P**	**00 08 57.4**	**+0.3**		
	comp=Z,20nm,1.0s,baz=74,slow=8.6,SNR=37								
SONM			pP		**PP**	**00 10 08.6**	**+1.9**		
	comp=Z,1.9nm,0.7s,baz=100,slow=10,SNR=1.2								
SONM			PcP		**PcP**	**00 12 11.2**	**+0.3**		
	comp=Z,3.5nm,0.6s,baz=122,slow=2.2,SNR=5.5								
SONM			ScP		**ScP**	**00 15 12.3**	**+0.2**		
	comp=Z,6.1nm,0.7s,baz=112,slow=2.4,SNR=16								
SONM			ScS		**ScS**	**00 19 01.4**	**-1.6**		
	comp=Z,0.7nm,0.9s,baz=45,slow=25,SNR=3.0								
ZAK	**Zakamensk**	**27.82 292**	*e*P		**P**	**00 09 10.1**	**-0.2**		
ZAK				pmax	pmax				
	comp=Z,15nm,1.2s								
YHNB	**Yeheng**	**29.60 229**	*e*P		**P**	**00 09 24.7**	**-1.5**		
	comp=Z,12nm,0.8s								
TNA	**Tin City**	**30.65 36**	*e*P		**P**	**00 09 34.2**	**-0.5**		
TNA			*e*pP		**pP**	**00 10 43.8**	**-3.3**		
YULB	**Yu-li**	**30.69 228**	*e*P		**P**	**00 09 36.1**	**+0.5**		
	comp=Z,7.4nm,0.5s								
TPUB	**Ta-pu**	**31.11 229**	*e*P		**P**	**00 09 39.2**	**-0.1**		
	comp=Z,42nm,0.9s								
TWG	**Pinlang**	**31.28 228**	*e*P		**P**	**00 09 41.1**	**+0.3**		
	comp=Z,130nm,0.9s								
LZH	**Lanzhou**	**32.77 266**	*e*P		**P**	**00 09 55.3**	**+1.7**		
LZH			pP		**pP**	**00 11 08.5**	**+1.8**		
LZH			sP		**sP**	**00 11 50.3**	**-2.2**		
LZH			*e*S		**S**	**00 14 41.0**	**+0.1**		
LZH			sS		sS	00 16 49.5	-5.4		
LZH			*e*SS		**SS**	**00 17 15.5**	**-7.2**		
LZH				pmax	pmax				
	comp=Z,48nm,1.0s								
LZH				pmax	pmax				
	comp=Z,220nm,6.4s								
LZH				LR	LR				
	comp=N,200nm,14.2s								
LZH				LR	LR				
	comp=E,160nm,15.1s								
LZH				LR	LR				
	comp=Z,260nm,16.8s								
KRAR	**Krasnoyarsk**	**33.20 305**	*i* P		**P**	**00 09 55.2**	**-1.6**		
KRAR				pmax	pmax				
	comp=Z,61nm,0.6s								
GTA	**Gaotai**	**33.83 274**	P		**P**	**00 10 04.3**	**+1.7**		
GTA			pP		**pP**	**00 11 21.1**	**+5.1**		
GTA			sP		**sP**	**00 12 00.1**	**-1.6**		
GTA			S		**S**	**00 14 57.8**	**+0.8**		
GTA			sS		**sS**	**00 17 06.6**	**-4.8**		
GTA			SS		**SS**	**00 17 38.5**	**-5.3**		
GTA			ScS		**ScS**	**00 19 41.3**	**+1.4**		
GTA				pmax	pmax				
	comp=Z,53nm,0.8s								
GTA				pmax	pmax				
	comp=Z,180nm,6.2s								
GTA				LR	LR				
	comp=N,170nm,10.7s								
GTA				LR	LR				
	comp=E,130nm,13.1s								
GTA				LR	LR				
	comp=Z,140nm,12.1s								
CHGN	**Chignik**	**34.94 54**	*e*P		**P**	**00 10 10.9**	**-0.6**		
SVW2	**Sparrevohn**	**35.84 45**	*e*P		**P**	**00 10 19.9**	**+0.8**		
	comp=Z,66nm,1.1s								
SVW2			*e*ScP		**ScP**	**00 15 44.4**	**+0.6**		
CD2	**Chengdu**	**35.86 258**	P		**P**	**00 10 19.3**	**-0.4**		
CD2			pP		**pP**	**00 11 34.3**	**+0.4**		
CD2			PP		**PP**	**00 11 53.8**	**+2.2**		
CD2			sP		**sP**	**00 12 18.0**	**-1.4**		
CD2			S		**S**	**00 15 27.3**	**-0.5**		
CD2			sS		**sS**	**00 17 39.8**	**-3.4**		
CD2			SS		**SS**	**00 18 18.8**	**-5.6**		
CD2				pmax	pmax				
	comp=Z,20nm,0.8s								
CD2				pmax	pmax				
	comp=Z,100nm,4.8s								
GYA	**Guiyang**	**36.90 250**	P		**P**	**00 10 28.5**	**-0.1**		
GYA			pP		**pP**	**00 11 42.6**	**-0.5**		
GYA			PP		**PnPn**	**00 12 06.4**	**-2.6**		
GYA			sP		**sP**	**00 12 27.9**	**-0.6**		
GYA			PcP		**PcP**	**00 12 42.0**	**+1.8**		
GYA			S		**S**	**00 15 44.3**	**+0.6**		
GYA			ScP		**ScP**	**00 15 51.5**	**+3.1**		
GYA			PcS		**PcS**	**00 16 29.0**

ZALV pP **pP** **00 11 55.7 +2.3**
comp=Z,1.0nm,0.5s,baz=73,slow=5.0,SNR=1.1
ZALV PcP **PcP** **00 12 43.6 +0.2**
comp=Z,15nm,0.7s,baz=81,slow=2.6,SNR=16
ZALV ScP **ScP** **00 15 52.0 -0.5**
comp=Z,3.8nm,0.7s,baz=62,slow=4.2,SNR=7.7
ZALV ScS **ScS** **00 20 01.6 -1.6**
comp=Z,0.4nm,0.6s,baz=4.6,slow=7.2,SNR=2.2
MCK **McKinley** **38.67 40** *eP* **P** **00 10 42.4 -0.1**
MCK pmax pmax
comp=Z,51nm,0.9s
MCK **McKinley** **38.67 40** *eP* **P** **00 10 42.4 -0.1**
comp=Z,51nm,0.9s
NVS **Novosibirsk** **38.81 305** ⇓*iP* **P** **00 10 43.5 -0.2**
NVS *i* 00 12 02.0
NVS *i* 00 12 45.3
NVS *e* 00 16 09.0
NVS *i* 00 20 05.0
NVS pmax pmax
comp=Z,43nm,1.0s
NVS pmax pmax
comp=N,5.0nm,0.6s
NVS pmax pmax
comp=E,22nm,0.8s
PMR **Palmer** **38.87 44** *eP* **P** **00 10 43.5 -0.6**
PMR pmax pmax
comp=Z,29nm,0.8s
PMR **Palmer** **38.87 44** *eP* **P** **00 10 43.5 -0.6**
comp=Z,30nm,0.8s
TGY **Tagaytay City** **38.87 220** P **P** **00 10 46.4 +1.6**
TGY **Tagaytay City** **38.87 220** P **P** **00 10 46.4 +1.6**
comp=Z,163nm,0.3s,baz=28,slow=16,SNR=2.9
COLA **College** **39.01 38** *eP* **P** **00 10 44.9 -0.3**
COLA pmax pmax
comp=Z,99nm,0.7s
COLA **College** **39.01 38** *eP* **P** **00 10 44.9 -0.3**
comp=Z,99nm,0.7s
SML **Sawmill** **39.21 43** *eP* **P** **00 10 46.8 -0.2**
SML pmax pmax
comp=Z,39nm,1.1s
SML **Sawmill** **39.21 43** *eP* **P** **00 10 46.8 -0.2**
comp=Z,39nm,1.1s
ILAR **Eielson Array** **39.43 39** P **P** **00 10 47.7 -1.0**
ILAR pP **pP** **00 12 04.8 +0.6**
ILAR PcP **PcP** **00 12 46.1 -1.2**
ILAR ScP **ScP** **00 15 56.1 -1.2**
ILAR **Eielson Array** **39.43 39** P **P** **00 10 47.7 -1.0**
comp=Z,47nm,0.6s,baz=269,slow=7.0,SNR=339
ILAR pP **pP** **00 12 04.8 +0.6**
comp=Z,0.9nm,0.6s,baz=278,slow=8.0,SNR=0.8
ILAR PcP **PcP** **00 12 46.1 -1.2**
comp=Z,1.3nm,0.6s,baz=289,slow=3.4,SNR=2.9
ILAR ScP **ScP** **00 15 56.1 -1.2**
comp=Z,2.3nm,0.7s,baz=281,slow=3.9,SNR=9.1
WMQ **Urumqi** **39.95 287** ⇓*iP* **P** **00 10 54.5 +1.2**
WMQ pP **pP** **00 12 09.0 0.0**
WMQ S **S** **00 16 31.0 +2.6**
WMQ sS **sS** **00 18 42.0 -3.9**
WMQ pmax pmax
comp=Z,48nm,0.6s
WMQ pmax pmax
comp=Z,130nm,3.6s
PAX **Paxson** **40.32 41** *eP* **P** **00 10 55.0 -1.1**
PAX pmax pmax
comp=Z,11nm,0.6s
PAX **Paxson** **40.32 41** *eP* **P** **00 10 55.0 -1.1**
comp=Z,10nm,0.6s
PAX *e*ScP **ScP** **00 16 02.0 +1.1**
KMI **Kunming** **40.37 252** P **P** **00 10 58.1 +1.0**
KMI pP **pP** **00 12 15.3 +2.3**
KMI sP **sP** **00 12 58.5 +0.4**
KMI S **S** **00 16 35.8 +0.6**
KMI sS **sS** **00 18 51.9 -1.1**
KMI pmax pmax
comp=Z,8.0nm,0.7s
KMI pmax pmax
comp=Z,130nm,6.9s
KMI LR LR
comp=N,130nm,16.2s
KMI LR LR
comp=E,180nm,16.2s
KMI LR LR
comp=Z,150nm,14.8s
DIV **Divide** **40.54 44** *eP* **P** **00 10 58.0 +0.1**
comp=Z,202nm,1.4s
MID **Middleton Isla** **40.65 47** *eP* **P** **00 10 59.1 +0.5**
MID pmax pmax
comp=Z,149nm,1.4s
MID **Middleton Isla** **40.65 47** *eP* **P** **00 10 59.1 +0.5**
comp=Z,149nm,1.4s
DOT **Dot Lake** **40.83 40** *eP* P 00 10 55.8 -4.3
comp=Z,30nm,0.7s
MENT **Mentasta** **41.12 41** *eP* **P** **00 11 02.1 -0.3**
EGAK **Eagle** **41.85 38** *eP* **P** **00 11 07.3 -0.9**
comp=Z,101nm,0.6s
MK31 **Makanchi Array** **42.13 294** *eP* **P** **00 11 11.0 +0.2**
MK31 **Makanchi Array** **42.13 294** *eP* **P** **00 11 11.0 +0.2**
MKAR **Makanchi Array** **42.13 294** P **P** **00 11 11.0 +0.2**
MKAR *PP **pP** **00 12 29.9 +2.5**
MKAR 00 12 57.0
MKAR 00 20 24.6
MKAR pmax pmax
comp=Z,43nm,0.6s
MKAR **Makanchi Array** **42.13 294** *eP* **P** **00 11 11.3 +0.5**
MKAR pP **pP** **00 12 29.9 +2.5**
MKAR PcP **PcP** **00 12 57.0 +0.3**
MKAR ScP **ScP** **00 16 08.2 -0.2**
MKAR ScS **SS** **00 20 24.6 +1.4**
MKAR **Makanchi Array** **42.13 294** P **P** **00 11 11.0 +0.2**
comp=Z,42nm,0.6s,baz=70,slow=7.6,SNR=494
MKAR pP **pP** **00 12 29.9 +2.5**
comp=Z,6.9nm,1.0s,baz=64,slow=9.8,SNR=2.0
MKAR PcP **PcP** **00 12 57.0 +0.3**
comp=Z,4.1nm,0.6s,baz=77,slow=2.6,SNR=3.9
MKAR ScP **ScP** **00 16 08.2 -0.2**
comp=Z,1.7nm,0.6s,baz=58,slow=3.6,SNR=4.7
MKAR ScS **SS** **00 20 24.6 +1.4**
comp=Z,0.2nm,0.7s,baz=46,slow=10,SNR=4.3
KURK **Kurchatov** **42.80 301** P **P** **00 11 16.4 +0.5**
comp=Z,633nm,0.6s,SNR=41
KURK **Kurchatov** **42.80 301** P **P** **00 11 16.4 +0.5**
KURK *PP **pP** **00 12 35.0 +2.2**
KURK 00 12 59.3
KURK S **S** **00 17 09.2 -0.3**
KURK pmax pmax
comp=Z,76nm,0.7s
KURK smax smax
comp=N,2.0nm,0.8s
KURK **Kurchatov** **42.80 301** *eP* **P** **00 11 15.7 -0.2**
comp=N,77nm,0.9s
KURK pP **pP** **00 12 35.0 +2.2**
KURK PcP **PcP** **00 12 59.3 +0.6**
KURK ScP **ScP** **00 16 10.9 0.0**
KURK S **S** **00 17 09.2 -0.3**
KURBB **Kurchatov Arra** **42.89 300** P **P** **00 11 16.4 -0.2**
comp=N,76nm,0.7s,baz=71,slow=8.8,SNR=277
KURBB pP **pP** **00 12 35.0 +1.5**
comp=N,2.8nm,0.7s,baz=66,slow=8.4,SNR=1.8
KURBB PcP **PcP** **00 12 59.3 +0.3**
comp=N,18nm,0.7s,baz=72,slow=3.3,SNR=16
KURBB ScP **ScP** **00 16 10.9 -0.4**
comp=N,1.5nm,0.5s,baz=68,slow=3.5,SNR=5.6
KURBB S **S** **00 17 09.2 -1.6**
comp=N,2.0nm,0.8s,baz=68,slow=12,SNR=8.3
PNL **Peninsula** **43.98 45** *eP* **P** **00 11 24.9 -0.3**
comp=N,12nm,0.7s
INK **Inuvik** **44.04 32** P **P** **00 11 24.6 -0.8**
INK ScP **ScP** **00 16 16.0 +0.4**
INK S **S** **00 17 25.7 -1.2**
INK ScS **ScS** **00 20 37.7 -1.1**
INK **Inuvik** **44.04 32** P **P** **00 11 24.6 -0.8**
comp=N,53nm,0.5s,baz=304,slow=7.2,SNR=87
INK ScP **ScP** **00 16 16.0 +0.4**
comp=N,7.6nm,0.9s,baz=260,slow=11,SNR=5.2
INK S **S** **00 17 25.7 -1.2**
comp=N,2.5nm,0.7s,baz=152,slow=17,SNR=2.4
INK ScS **ScS** **00 20 37.7 -1.1**
comp=N,2.8nm,0.7s,baz=167,slow=11,SNR=6.7
LSA **Lhasa** **45.14 267** P **P** **00 11 37.3 +2.2**
LSA pmax pmax
comp=Z,20nm,0.5s
LSA **Lhasa** **45.14 267** *eP* **P** **00 11 35.2 0.0**
LSA pmax pmax
comp=Z,25nm,0.6s
LSA **Lhasa** **45.14 267** *eP* **P** **00 11 35.2 0.0**
comp=Z,25nm,0.6s
SKAG **Skagway** **46.00 44** *eP* **P** **00 11 40.6 -0.2**
comp=Z,11nm,0.7s
BVA0 **Borovoye Array** **46.56 306** *i* P **P** **00 11 44.9 -0.3**
BVA0 pmax pmax
comp=Z,60nm,0.9s
BVAR **Borovoye Array** **46.56 306** P **P** **00 11 45.2 0.0**
BVAR *PP **pP** **00 13 05.6 +2.0**
BVAR 00 13 12.1
BVAR S S 00 17 55.6 -7.4
BVAR pmax pmax
comp=Z,43nm,0.8s
BVAR smax smax
comp=N,1.0nm,0.7s
BVAR **Borovoye Array** **46.56 306** P **P** **00 11 45.2 0.0**
BVAR pP **pP** **00 13 05.6 +2.0**
BVAR PcP **PcP** **00 13 12.1 +0.3**
BVAR ScP **ScP** **00 16 26.1 -0.4**
BVAR S S 00 17 55.6 -7.4
BVAR **Borovoye Array** **46.56 306** P **P** **00 11 45.2 0.0**
comp=N,43nm,0.8s,baz=40,slow=7.7,SNR=224
BVAR pP **pP** **00 13 05.6 +2.0**
comp=N,3.3nm,0.7s,baz=51,slow=11,SNR=1.5
BVAR PcP **PcP** **00 13 12.1 +0.3**
comp=N,8.5nm,0.7s,baz=49,slow=2.6,SNR=6.1
BVAR ScP **ScP** **00 16 26.1 -0.4**
comp=N,4.0nm,0.6s,baz=61,slow=4.7,SNR=6.7
BVAR S S 00 17 55.6 -7.4
comp=N,1.0nm,0.7s,baz=74,slow=6.8,SNR=4.5
BRVK **Borovoye** **46.60 307** *eP* **P** **00 11 45.1 -0.4**
BRVK pmax pmax
comp=Z,82nm,0.7s
BRVK **Borovoye** **46.60 307** *eP* **P** **00 11 45.1 -0.4**
comp=Z,82nm,0.7s
BRVK **Borovoye** **46.60 307** P **P** **00 11 45.1 -0.4**
comp=Z,781nm,0.6s,SNR=68
CHTO **Chiang Mai** **47.33 250** *eP* **P** **00 11 52.5 +1.0**
CHTO **Chiang Mai** **47.33 250** *eP* **P** **00 11 52.5 +1.0**
comp=Z,6.8nm,0.8s
CHTO **Chiang Mai** **47.33 250** P **P** **00 11 51.5 0.0**
comp=Z,12nm,1.1s
CMAR **Chiang Mai Arr** **47.59 249** P **P** **00 11 55.0 +1.6**
CMAR pP **pP** **00 13 13.9 +1.5**
CMAR ScP **ScP** **00 16 33.2 +1.9**
CMAR **Chiang Mai Arr** **47.59 249** P **P** **00 11 55.0 +1.6**
comp=Z,1.9nm,0.6s,baz=37,slow=7.1,SNR=11
CMAR pP **pP** **00 13 13.9 +1.5**
comp=Z,0.8nm,0.3s,baz=30,slow=7.9,SNR=1.8
CMAR ScP **ScP** **00 16 33.2 +1.9**
comp=Z,1.9nm,0.4s,baz=33,slow=3.3,SNR=10
SDKM **Sandakan** **48.04 220** P **P** **00 11 57.4 +0.5**
ULHL **Ulahol** **48.08 291** P **P** **00 11 58.4 +1.2**
SNR=17
TKM2 **Tokmak 2** **48.15 292** *i* P **P** **00 11 58.7 +1.0**
TKM2 **Tokmak 2** **48.15 292** *eP* **P** **00 11 58.6 +1.0**
comp=Z,76nm,1.5s
TKM2 **Tokmak 2** **48.15 292** P **P** **00 11 58.7 +1.0**
SNR=24
CHMS **Chumysh** **48.64 293** P **P** **00 12 02.0 +0.9**
SNR=6.7
USP **Ospenovka** **48.66 293** P **P** **00 12 02.3 +1.0**
SNR=26
WRAK **Wrangell Islan** **48.68 47** *eP* **P** **00 12 02.4 +1.3**
comp=Z,39nm,1.3s
KBK **Karagaybulak** **48.69 292** P **P** **00 12 02.8 +1.1**
SNR=32
CRAG **Craig** **48.70 49** *eP* **P** **00 12 01.6 +0.2**
comp=Z,66nm,1.4s
KZA **Kyzart** **48.80 291** P **P** **00 12 04.5 +1.7**
SNR=43
DLBC **Dease Lake** **48.93 44** *eP* **P** **00 12 03.2 +0.1**
DLBC **Dease Lake** **48.93 44** P **P** **00 12 04.5 +1.4**
comp=Z,25nm,0.8s,baz=292,slow=7.8,SNR=34
TSM **Tawau** **48.96 218** P **P** **00 12 04.5 +0.7**
TAPN **Taplejung** **48.97 267** *eP* **P** **00 12 05.2 +1.1**
comp=Z,23nm,0.4s
AAK **Ala-Archa** **48.99 292** P **P** **00 12 04.0 0.0**
comp=Z,214nm,0.9s,SNR=8.0
AAK **Ala-Archa** **48.99 292** P **P** **00 12 04.8 +0.9**
AAK pmax pmax
comp=Z,28nm,0.8s
AAK **Ala-Archa** **48.99 292** *eP* **P** **00 12 04.8 +0.9**
comp=Z,24nm,0.8s
AAK **Ala-Archa** **48.99 292** P **P** **00 12 04.8 +0.9**
SNR=15
AAK **Ala-Archa** **48.99 292** P **P** **00 12 04.8 +0.9**
comp=Z,28nm,0.8s,baz=95,slow=4.3,SNR=38
EKS2 **Erkin-Say** **49.43 293** *eP* **P** **00 12 08.2 +1.0**
EKS2 pmax pmax
comp=Z,39nm,0.8s
EKS2 **Erkin-Say** **49.43 293** *eP* **P** **00 12 08.2 +1.0**
comp=Z,39nm,0.8s
EKS2 **Erkin-Say** **49.43 293** P **P** **00 12 08.2 +1.0**
SNR=44
ODAN **Odare** **49.50 267** *eP* **P** **00 12 09.0 +1.0**
comp=Z,22nm,0.5s
KSH **Kashi** **49.70 288** P P 00 12 13.8 +4.6
KSH *ePcP pP 00 13 28.5 -0.4
KSH *epP pwP 00 13 31.6 +2.7
KSH *esP sP 00 14 13.3 +0.3
KSH *eS **S** **00 18 51.6 +4.4**
KSH *esS sS 00 21 10.6 +0.4
KSH pmax pmax
comp=Z,380nm,6.9s
KSH LR LR
comp=N,680nm,10.1s
KSH LR LR
comp=E,440nm,9.9s
KSH LR LR
comp=Z,310nm,4.6s
AML **Almayashu** **49.76 292** P **P** **00 12 11.0 +1.1**
SNR=17
ALE **Alert** **49.80 5** P **P** **00 12 07.7 -1.5**
comp=Z,256nm,1.0s,SNR=5.3
GUN **Gumba** **49.86 269** *eP* **P** **00 12 11.6 +0.8**
comp=Z,29nm,0.3s
SVE **Sverdlovsk** **49.95 314** *c iP* **P** **00 12 11.0 +0.3**
SVE *e* 00 13 34.0
SVE *e* 00 14 08.6
SVE *eS **S** **00 18 48.7 -1.2**
SVE pmax pmax
comp=Z,183nm,0.6s
RAMN **Ramite** **49.98 268** *eP* **P** **00 12 12.4 +0.8**
comp=Z,66nm,0.6s
KKN **Kakani** **50.34 270** *eP* **P** **00 12 15.2 +0.9**
comp=Z,20nm,0.3s
PKI **Pulchoki** **50.40 269** *eP* **P** **00 12 15.1 +0.3**
comp=Z,18nm,0.5s
PKIN **Phulchoki** **50.40 269** *eP* **P** **00 12 15.2 +0.5**
comp=Z,9.5nm,0.4s
SOKR **Solikamsk** **50.47 319** *d iP* **P** **00 12 14.3 -0.1**
SOKR pmax pmax
comp=Z,120nm,1.0s
DMN **Daman** **50.58 270** *eP* **P** **00 12 17.3 +1.3**
comp=Z,22nm,0.4s
DANN **Dangsing** **51.03 271** *eP* **P** **00 12 20.9 +1.5**
comp=Z,65nm,0.4s
ARU **Arti** **51.15 315** *d iP* **P** **00 12 19.3 -0.2**
ARU *e* 00 13 27.4
ARU *e*PP **pP** **00 13 40.5 +0.8**
ARU 00 14 19.2
ARU S **S** **00 19 05.6 -0.6**
ARU 00 21 22.8
ARU pmax pmax
comp=Z,134nm,0.6s
ARU **Arti** **51.15 315** P **P** **00 12 19.4 -0.1**
comp=Z,2μm,0.5s,SNR=91
SPA0 **Spitsbergen Ar** **51.23 348** ⇓*iP* **P** **00 12 18.8 -1.0**
SPITS **Spitsbergen Ar** **51.23 348** P **P** **00 12 18.8 -1.0**
SPITS PcP **PcP** **00 13 28.6 +0.1**
SPITS **Spitsbergen Ar** **51.23 348** P **P** **00 12 18.8 -1.0**
comp=Z,7.9nm,0.4s,baz=58,slow=8.0,SNR=56
SPITS PcP **PcP** **00 13 28.6 +0.1**
comp=Z,4.6nm,0.4s,baz=97,slow=6.8,SNR=6.4
KK31 **Karatay Array** **51.23 295** *i* P **P** **00 12 20.5 +0.1**
KK31 pmax pmax
comp=Z,26nm,0.6s
KKAR **Karatay Array** **51.23 295** *eP* **P** **00 12 20.8 +0.4**
KKAR **Karatay Array** **51.23 295** *eP* **P** **00 12 20.8 +0.4**
KBS **Kingsbay** **51.24 350** *eP* **P** **00 12 19.6 -0.2**
KBS AMB AMB 00 12 20.3
comp=Z,74nm,0.8s
KBS **Kingsbay** **51.24 350** *eP* **P** **00 12 19.1 -0.8**
KBS **Kingsbay** **51.24 350** *eP* **P** **00 12 19.1 -0.8**
KOLN **Koldanda** **51.50 271** *eP* **P** **00 12 23.9 +1.1**
comp=Z,33nm,0.6s
PYUN **Piuthan** **51.71 272** *eP* **P** **00 12 25.4 +1.1**
RES **Resolute Bay** **52.02 17** P **P** **00 12 25.0 -0.6**
RES PcP **PcP** **00 13 31.9 +0.5**
RES **Resolute Bay** **52.02 17** P **P** **00 12 25.0 -0.6**
comp=Z,232nm,0.6s,baz=308,slow=7.3,SNR=172
RES PcP **PcP** **00 13 31.9 +0.5**
comp=Z,14nm,0.6s,baz=294,slow=10.0,SNR=2.4
SBUM **Sibu** **53.11 223** P **P** **00 12 35.8 +1.6**
SBUM **Sibu** **53.11 223** P **P** **00 12 36.0 +1.7**
comp=Z,41nm,0.8s
BJO **Bjornoya** **53.48 344** *eP* **P** **00 12 35.9 -0.2**
YKW3 **Yellowknife Ar** **53.55 35** *eP* **P** **00 12 36.0 -0.8**
comp=Z,1.2nm,0.7s
YKW3 *ePcP **PcP** **00 13 37.9 +0.5**
YKW3 *epP **pP** **00 13 58.8 +1.0**
YKW3 *eScP **ScP** **00 16 55.1 -1.2**
YKA **Yellowknife Ar** **53.59 35** P **P** **00 12 36.5 -0.5**
YKA PcP **PcP** **00 13 38.0 +0.4**
YKA pP **pP** **00 13 59.2 +1.1**
YKA ScP **ScP** **00 16 57.0 +0.5**
YKA **Yellowknife Ar** **53.59 35** P **P** **00 12 36.5 -0.5**
comp=Z,53nm,0.6s,baz=304,slow=6.9,SNR=438
YKA PcP **PcP** **00 13 38.0 +0.4**
comp=Z,5.2nm,0.5s,baz=306,slow=3.7,SNR=12
YKA pP **pP** **00 13 59.2 +1.1**
comp=Z,1.2nm,0.6s,baz=304,slow=7.4,SNR=2.0
YKA ScP **ScP** **00 16 56.9 +0.5**
comp=Z,3.6nm,0.7s,baz=302,slow=4.3,SNR=15
AB31 **Akbulak array** **54.13 306** *i* P **P** **00 12 41.2 0.0**
AB31 pmax pmax
comp=Z,39nm,0.4s
ABKAR **Akbulak array** **54.13 306** *eP* **P** **00 12 41.5 +0.3**
LVZ **Lovozero** **54.26 334** P **P** **00 12 41.2 -0.6**
comp=Z,264nm,0.6s,SNR=11
AKTO **Aktyubinsk** **54.54 308** P **P** **00 12 43.9 -0.1**
AKTO 00 13 41.4
AKTO pmax pmax
comp=Z,25nm,0.7s
AKTO **Aktyubinsk** **54.54 308** P **P** **00 12 43.9 -0.1**
AKTO PcP **PcP** **00 13 41.5 -0.1**
AKTO **Aktyubinsk** **54.54 308** P **P** **00 12 43.9 -0.1**
comp=Z,25nm,0.7s,baz=68,slow=8.6,SNR=66
AKTO PcP **PcP** **00 13 41.4 -0.1**
comp=Z,8.9nm,0.7s,baz=45,slow=13,SNR=2.4
APA **Apatity** **54.83 334** ⇑*iP* **P** **00 12 45.0 -0.8**
APA *i* 00 14 44.4
APA pmax pmax
comp=Z,31nm,0.6s
KSM **Kuching** **54.88 225** *eP* **P** **00 12 48.4 +1.5**
comp=Z,33nm,0.9s
KSM **Kuching** **54.88 225** P **P** **00 12 47.8 +0.9**
comp=Z,44nm,0.9s
KEV **Kevo** **55.15 338** *eP* **P** **00 12 47.8 -0.2**
KEV pmax pmax
comp=Z,53nm,0.5s
KEV **Kevo** **55.15 338** *ep* **P** **00 12 47.7 -0.2**
comp=Z,41nm,0.4s
KEV **Kevo** **55.15 338** *eP* **P** **00 12 47.8 -0.2**
comp=Z,52nm,0.5s
ARCES **ARCESS Array B** **55.68 338** P **P** **00 12 51.4 -0.4**
ARCES PcP **PcP** **00 13 45.8 +0.1**
ARCES **ARCESS Array B** **55.68 338** P **P** **00 12 51.4 -0.4**
comp=Z,17nm,0.4s,baz=46,slow=7.7,SNR=226
ARCES PcP **PcP** **00 13 45.8 +0.1**
comp=Z,14nm,0.8s,baz=51,slow=6.4,SNR=7.0
ARE0 **ARCESS Array S** **55.68 338** *eP* **P** **00 12 51.4 -0.4**
DAG **Danmarks Havn** **55.94 356** *i* P **P** **00 12 51.9 -1.6**
PMG **Port Moresby** **56.33 178** *eP* **P** **00 12 56.9 0.0**
comp=Z,27nm,0.9s
PMG **Port Moresby** **56.33 178** P **P** **00 12 57.4 +0.4**
comp=Z,16nm,0.7s,baz=7.7,slow=6.8,SNR=6.3
KTK1 **Kautokeino** **56.62 339** ⇓*iP* **P** **00 12 57.1 -1.3**
KTK1 AMB AMB 00 12 57.8
comp=Z,318nm,0.7s
KAPI **Kappang** **56.75 211** *eP* **P** **00 12 59.6 -0.4**
comp=Z,33nm,0.7s
KAPI **Kappang** **56.75 211** P **P** **00 12 59.5 -0.4**
comp=Z,58nm,0.8s
KAPI **Kappang** **56.75 211** P **P** **00 12 59.5 -0.4**
comp=Z,27nm,0.6s,baz=353,slow=2.0,SNR=19
KLMR **Klimovskoe** **56.99 326** *d iP* **P** **00 13 00.5 -0.5**
KLMR pmax pmax
comp=Z,132nm,1.5s
KBL **Kabul** **57.09 287** *eP* **P** **00 13 02.1 -0.3**
KBL pmax pmax
comp=Z,53nm,0.8s
KBL **Kabul** **57.09 287** *eP* **P** **00 13 02.1 -0.3**
comp=Z,53nm,0.8s
TRO **Tromso** **57.18 340** ⇓*iP* **P** **00 13 04.0 +1.8**
TRO AMB AMB 00 13 04.6
comp=Z,132nm,0.6s
PGC **Sidney** **57.33 52** *eP* **P** **00 13 04.5 +0.9**
comp=Z,3.3nm,0.6s
OBC **Olympics--Boni** **57.35 53** P **P** **00 13 05.2 +1.3**
HNR **Honiara** **57.77 163** P **P** **00 13 07.1 +0.2**
HNR **Honiara** **57.77 163** P **P** **00 13 07.1 +0.2**
comp=Z,34nm,0.3s,baz=238,slow=13,SNR=3.1
NLWA **Neilton Lookou** **57.85 53** *eP* **P** **00 13 08.8 +1.6**
comp=Z,110nm,1.3s
MBW **Mount Baker** **58.08 51** P **P** **00 13 09.8 +0.8**
JCW **Jim Creek** **58.42 52** P **P** **00 13 12.2 +1.1**
E03A **Lebam** **58.52 54** P **P** **00 13 13.2 +1.5**
JOF **Joensuu** **58.58 331** *eP* **P** **00 13 12.0 +0.1**
JOF pmax pmax
comp=Z,44nm,0.4s
JOF **Joensuu** **58.58 331** *ep* **P** **00 13 12.0 +0.1**
comp=Z,44nm,0.4s
D05A **Enumclaw** **58.99 53** P **P** **00 13 16.7 +1.7**
LON **Longmire** **59.36 53** *eP* **P** **00 13 18.4 +0.9**
LON pmax pmax
comp=Z,11nm,0.8s
LON **Longmire** **59.36 53** *eP* **P** **00 13 18.4 +0.9**
comp=Z,11nm,0.8s
STEI **Steigen** **59.36 340** *eP* **P** **00 13 16.5 -0.5**
STEI AMB AMB 00 13 17.3
comp=Z,35nm,0.7s
TWW **Teanaway** **59.63 52** P **P** **00 13 20.9 +1.5**
ETW **Entiat** **59.63 51** P **P** **00 13 20.3 +0.8**
TBM **Table Mountain** **59.76 52** P **P** **00 13 21.3 +1.0**
WTV **Waterville** **59.77 51** P **P** **00 13 20.9 +0.6**
COR **Corvallis** **59.85 56** *eP* **P** **00 13 21.3 +0.5**
COR pmax pmax
comp=Z,82nm,0.8s
COR **Corvallis** **59.85 56** *eP* **P** **00 13 21.3 +0.5**
comp=Z,82nm,0.8s
RNO **Roman Nose** **60.02 57** P **P** **00 13 24.1 +2.0**
VLL **Laurance Lake** **60.22 54** P **P** **00 13 25.2 +1.7**
KEBM **Edson Butte** **60.32 58** *eP* **P** **00 13 26.2 +2.2**
comp=Z,54nm,1.1s
SUMG **Summit** **60.53 1** *eP* **P** **00 13 25.2 -0.2**
SUMG **Summit** **60.53 1** *eP* **P** **00 13 25.2 -0.2**
SUMG **Summit** **60.53 1** ⇓*iP* **P** **00 13 25.8 +0.4**
comp=Z,171nm,0.7s
FRIS **Frissel Point** **60.76 55** P **P** **00 13 28.7 +1.5**
WRD **Warden** **60.76 52** P **P** **00 13 27.1 +0.2**
KAF **Kangasniemi** **60.79 332** *eP* **P** **00 13 26.3 -0.5**
KAF pmax pmax
comp=Z,55nm,0.5s
KAF **Kangasniemi** **60.79 332** *ep* **P** **00 13 26.3 -0.5**
comp=Z,55nm,0.5s
KBO **Bosley Butte** **60.80 58** *eP* **P** **00 13 28.7 +1.4**
comp=Z,50nm,1.1s
HAWA **Hanford** **60.81 52** *eP* **P** **00 13 28.3 +1.0**
comp=Z,212nm,1.8s
COEN **Coen** **60.87 183** *eP* **P** **00 13 28.2 +0.3**
comp=Z,487nm,0.9s
NEW **Newport** **60.91 49** *eP* **P** **00 13 28.5 +0.6**
comp=Z,32nm,0.7s
NEW **Newport** **60.91 49** P **P** **00 13 28.5 +0.6**
comp=Z,28nm,0.7s,baz=313,slow=6.1,SNR=45
NEW **Newport** **60.91 49** ⇓P **P** **00 13 28.5 +0.6**
baz=61,SNR=26
MOS **Moscow** **61.08 322** *eP* P 00 13 23.8 -5.0
MOS *e*PP pP 00 14 48.8 -3.7
MOS *eS S 00 21 08.6 -6.9
MOS pmax pmax
comp=Z,66nm,0.9s
MOS pmax pmax
comp=Z,100nm,0.9s
FLOS **Flostrand** **61.08 340** *eP* **P** **00 13 27.9 -0.8**
FLOS AMB AMB 00 13 31.7
comp=Z,107nm,1.2s
STOK **Stokkvaagen** **61.17 340** *e* **P** **00 13 28.5 -0.7**
A12A **Yaak River Ran** **61.23 48** ⇑P **P** **00 13 31.0 +1.0**
baz=61

HUMO **Hull Mountain** 61.28 57 *e*P P 00 13 32.0 +1.5
comp=Z,53nm,1.5s
FIA1 **FINESS Array S** 61.35 332 *e*P P 00 13 30.1 -0.5
FIA1 *e*pP PcP 00 14 07.1 -1.3
FINES **FINESS Array B** 61.36 332 P P 00 13 30.1 -0.4
FINES **FINESS Array B** 61.36 332 P P 00 13 30.1 -0.4
comp=Z,152nm,0.5s,baz=40,slow=10.0,SNR=566
B12A **Libby** 61.56 48 ⇑P P 00 13 33.0 +0.8
baz=61
IMYA **Miami** 61.69 294 *e*P P 00 13 34.1 +0.7
A13A **Flathead Natio** 61.86 47 ⇓P P 00 13 34.9 +0.7
baz=62
ABKT **Ailbek** 61.90 296 P P 00 13 35.1 +0.5
comp=Z,366nm,0.6s,SNR=14
KHMM **Horse Mountain** 61.92 59 *e*P P 00 13 36.7 +1.9
comp=Z,62nm,1.3s
OBN **Obninsk** 61.95 322 ⇓*i*P P 00 13 33.9 -0.6
OBN *e* 00 15 58.3
OBN *e*S S 00 21 17.8 -8.4
OBN pmax pmax
comp=Z,70nm,0.8s
YBH **Yreka Blue Hor** 61.98 58 *e*P P 00 13 36.7 +1.6
comp=Z,39nm,1.1s
YBH **Yreka Blue Hor** 61.98 58 P P 00 13 36.7 +1.6
comp=Z,16nm,0.6s,baz=360,slow=3.6,SNR=78
WALA **Waterton Lakes** 62.03 47 *e*P P 00 13 35.8 +0.4
comp=Z,1.6nm,0.8s
WALA *e*PcP PcP 00 14 12.6 +1.0
ISRO **Mashad** 62.10 294 *e*P P 00 13 34.9 -1.1
C12B **Naegeli Ranch,** 62.11 49 ⇑P P 00 13 36.8 +1.0
baz=62,SNR=16
B13A **Whitefish** 62.20 48 ⇓P P 00 13 37.3 +0.9
baz=62,SNR=52
IPAY **Payeh** 62.30 295 *e*P P 00 13 37.9 +0.4
SCO **Scoresbysund** 62.33 355 ⇓*i*P P 00 13 36.8 +0.1
comp=Z,26nm,1.0s
A14A **Double T Ranch** 62.33 47 ⇑P P 00 13 37.8 +0.5
baz=62,SNR=69
IAKL **Akhelmad** 62.35 295 *e*P P 00 13 38.9 +1.0
BSMT **Bassoo Peak** 62.37 49 *e*P P 00 13 38.7 +1.0
IKRD **Kardeh** 62.39 295 *e*P P 00 13 35.7 -2.4
BLMT **Blacktail Moun** 62.49 48 *e*P P 00 13 39.4 +0.9
comp=Z,82nm,0.5s
ISFR **Sfrayin** 62.53 296 *e*P P 00 13 39.5 +0.4
D12A **Red Ives Fores** 62.60 50 ⇑P P 00 13 39.6 +0.5
baz=62
A15A **Johnson Ranch,** 62.67 47 ⇓P P 00 13 39.6 +0.1
baz=62,SNR=82
JTMT **Jette** 62.70 48 *e*P P 00 13 40.8 +1.0
KIPM **Iron Peak** 62.75 60 *e*P P 00 13 41.0 +0.8
comp=Z,31nm,1.1s
YBMT **Yellow Bay** 62.76 48 *e*P P 00 13 40.8 +0.6
comp=Z,22nm,0.7s
KCPM **Cahto Peak** 62.77 60 *e*P P 00 13 40.8 +0.4
comp=Z,18nm,1.1s
KCPM PcP PcP 00 14 16.6 +1.9
B14A **Marquette Ranc** 62.81 47 ⇓P P 00 13 41.1 +0.6
baz=62,SNR=44
WDC **Whiskeytown Da** 62.81 59 *e*P P 00 13 40.5 +0.1
WDC pmax pmax
comp=Z,25nm,1.1s
WDC **Whiskeytown Da** 62.81 59 *e*P P 00 13 40.5 +0.1
comp=Z,25nm,1.1s
E12A **Beaver Dam Sad** 62.91 50 ⇓P P 00 13 42.0 +0.9
baz=63,SNR=139
BMO **Blue Mountains** 63.00 52 *e*P P 00 13 42.5 +0.7
comp=Z,36nm,1.0s
SWMT **Swartz Lake** 63.00 48 *e*P P 00 13 42.7 +1.0
D13A **Huson** 63.04 49 ⇑P P 00 13 42.6 +0.7
baz=63,SNR=112
B15A **Bradely Ranch,** 63.20 47 ⇓P P 00 13 43.3 +0.3
baz=63,SNR=81
LBCM **Butte Creek Ri** 63.34 58 P P 00 13 45.1 +1.0
VSU **Vasula** 63.35 329 *d*iP P 00 13 43.2 -0.4
VSU pmax pmax
comp=Z,124nm,0.9s
SLMT **Seeley Lake** 63.44 48 *e*P P 00 13 45.3 +0.7
VSR **Storozhevoye** 63.47 318 *e*P P 00 13 44.2 -0.3
VSR pmax pmax
comp=Z,100nm,0.5s
VSR pmax pmax
comp=N,40nm,0.7s
VSR pmax pmax
comp=E,40nm,0.7s
MSO **Missoula** 63.48 49 *e*P P 00 13 45.5 +0.7
comp=E,52nm,1.2s
MSO **Missoula** 63.48 49 ⇑P P 00 13 45.5 +0.7
baz=63,SNR=55
HOPS **Hopland** 63.52 61 *e*P P 00 13 45.4 +0.3
comp=E,20nm,1.1s
C15A **Salmond Ranch,** 63.53 48 ⇓P P 00 13 46.4 +1.2
baz=63,SNR=147
D14A **Greenough** 63.53 49 ⇓P P 00 13 45.9 +0.7
baz=63,SNR=108
B16A **M & M Farms, S** 63.55 47 ⇑P P 00 13 45.6 +0.4
baz=63,SNR=111
VORD **Divnogorie** 63.58 317 *e*P P 00 13 44.9 -0.3
VORD pmax pmax
comp=Z,70nm,0.6s
VORD pmax pmax
comp=N,20nm,0.4s
VORD pmax pmax
comp=E,20nm,0.7s
FFC **Flin Flon** 63.61 37 P P 00 13 45.1 -0.3
comp=E,492nm,1.1s,SNR=44
FFC **Flin Flon** 63.61 37 *e*P P 00 13 45.4 +0.1
FFC pmax pmax
comp=Z,80nm,1.0s
FFC **Flin Flon** 63.61 37 *e*P P 00 13 45.4 +0.1
comp=Z,80nm,1.0s
A17A **Triple J Farms** 63.69 46 ⇑P P 00 13 46.6 +0.4
baz=63,SNR=192
CHMT **Chamberlain Mo** 63.78 49 *e*P P 00 13 47.3 +0.5
WVOR **Wild Horse Val** 63.84 55 *e*P P 00 13 48.0 +0.7
WVOR pmax pmax
comp=Z,44nm,1.0s
WVOR **Wild Horse Val** 63.84 55 *e*P P 00 13 48.0 +0.7
comp=Z,44nm,1.0s
G12A **Big Creek, Yel** 63.88 51 ⇓P P 00 13 47.9 +0.4
baz=64,SNR=20
C16A **Fuhringer Ranc** 63.95 47 ⇑P P 00 13 48.6 +0.7
baz=64,SNR=133
D15A **Lincoln** 64.06 48 ⇓P P 00 13 49.4 +0.7
baz=64,SNR=52
B17A **L&G Farms, Che** 64.08 46 ⇓P P 00 13 49.3 +0.6
baz=64,SNR=27
A18A **Metzger Ranch,** 64.12 45 ⇑P P 00 13 49.2 +0.3
baz=64,SNR=69
IDAH **Dahanechah** 64.15 291 *e*P P 00 13 49.8 +0.2
OHCM **Honcut** 64.23 59 *e*P P 00 13 50.1 +0.4
POO **Poona** 64.31 270 *ex* P 00 13 48.0 -2.5
F14A **Wisdom** 64.45 50 ⇓P P 00 13 51.7 +0.5
baz=64,SNR=7.8
ROTU **Roteberg** 64.48 336 P P 00 13 50.1 -0.7
IGGU **Iggoen** 64.50 335 P P 00 13 50.3 -0.6
H12A **Diamond D Ranc** 64.51 51 ⇓P P 00 13 52.1 +0.5
baz=64,SNR=76
B18A **Beardsley Farm** 64.52 46 ⇓P P 00 13 52.2 +0.8
baz=64,SNR=58
BEKR **Beckworth** 64.54 58 *e*P P 00 13 52.6 +0.7
comp=Z,16nm,0.8s
BEKR *e*PcP PcP 00 14 22.3 +0.1
C17A **Wharram Farm,** 64.55 47 ⇑P P 00 13 52.0 +0.3
baz=64,SNR=120
D16A **Dana Ranch, Ca** 64.56 48 ⇑P P 00 13 52.6 +0.8
baz=64,SNR=53
A19A **Klindworth Far** 64.65 45 ⇓P P 00 13 53.1 +0.8
baz=64,SNR=70
MFID **Camas Ranch** 64.75 53 *e*P P 00 13 53.9 +0.9
comp=Z,24nm,0.7s
MFID **Camas Ranch** 64.75 53 ⇑P P 00 13 54.0 +0.9
baz=64,SNR=39
EGMT **Eagleton** 64.78 46 *e*P P 00 13 53.9 +0.7
comp=Z,165nm,1.2s
EGMT **Eagleton** 64.78 46 ⇓P P 00 13 53.8 +0.7
baz=64,SNR=62
E16A **East Helena** 64.83 48 ⇑P P 00 13 54.5 +0.9
baz=65,SNR=11
I12A **Atlanta** 64.87 52 ⇓P P 00 13 54.9 +1.0
baz=65,SNR=68
F15A **Butte** 64.89 49 ⇓P P 00 13 54.9 +0.9
baz=65,SNR=65
D17A **Six Diamond Ra** 64.91 47 ⇓P P 00 13 54.6 +0.5
baz=65,SNR=42
LRM **Limekiln Ridge** 64.92 49 *e*P P 00 13 55.0 +0.8
FLYU **Flymyra** 64.93 334 ⇓P P 00 13 53.1 -0.6
OSTU **Oestervaala** 65.07 334 ⇓P P 00 13 54.0 -0.6
A20A **Cobblestone Ra** 65.07 44 ⇓P P 00 13 55.7 +0.8
baz=65,SNR=12
DLMT **Dillon** 65.16 50 *e*P P 00 13 56.4 +0.7
comp=Z,77nm,0.8s
UPP **Uppsala** 65.23 334 P P 00 13 55.0 -0.6
FALU **Falun** 65.23 335 ⇓P P 00 13 55.2 -0.4
E17A **Martinsdale** 65.30 48 ⇓P P 00 13 57.8 +1.2
baz=65,SNR=82
C19A **Slack Wire Ran** 65.32 46 ⇓P P 00 13 57.7 +1.1
baz=65,SNR=66
D18A **Linhart Farms,** 65.32 47 ⇑P P 00 13 57.6 +0.9
baz=65,SNR=11
B20A **Solberg Farm,** 65.33 45 ⇑P P 00 13 57.1 +0.5
baz=65,SNR=6.6
F16A **Kennard Place,** 65.37 49 ⇓P P 00 13 57.9 +0.9
baz=65,SNR=52
BACU **Backbrunna** 65.38 334 P P 00 13 56.0 -0.6
MCMT **McKenzie Canyo** 65.39 50 *e*P P 00 13 57.5 +0.3
comp=Z,8.3nm,0.7s
HLID **Hailey** 65.41 52 *e*P P 00 13 58.4 +1.1
comp=Z,18nm,1.1s
HLID **Hailey** 65.41 52 ⇑P P 00 13 58.4 +1.1
baz=65,SNR=29
BOZ **Bozeman (W)** 65.46 49 *e*P P 00 13 58.6 +1.0
BOZ pmax pmax
comp=Z,69nm,0.8s
BOZ **Bozeman (W)** 65.46 49 *e*P P 00 13 58.6 +1.0
comp=Z,69nm,0.8s
SFJD **Kalussuaq** 65.50 7 *e*P P 00 13 56.3 -1.0
comp=Z,56nm,0.8s
SFJD *e*PcP PcP 00 14 25.2 -0.2
SFJD **Kangerlussuaq** 65.50 7 ⇓*i*P P 00 13 56.5 -0.7
comp=Z,49nm,0.9s
MOL **Molde** 65.62 340 *e*P P 00 13 58.1 +0.1
MOL AMB AMB 00 13 58.7
comp=Z,42nm,0.7s
I14A **Mackay** 65.68 51 ⇓P P 00 13 59.8 +0.8
baz=65,SNR=36
E18A **Harlowton** 65.70 47 ⇑P P 00 14 00.1 +1.0
baz=65,SNR=26
DOMB **Dombas** 65.72 339 *e*P P 00 13 58.8 +0.1
DOMB AMB AMB 00 13 59.2
comp=Z,43nm,0.6s
CMB **Columbia Colle** 65.73 60 *e*P P 00 14 00.0 +0.7
CMB pmax pmax
comp=Z,40nm,1.1s
CMB **Columbia Colle** 65.73 60 *e*P P 00 14 00.0 +0.7
comp=Z,40nm,1.1s
F17A **Fitzpatrick Pl** 65.78 48 ⇓P P 00 14 00.6 +1.0
baz=66,SNR=47
D19A **Cripps Ranch,** 65.80 46 ⇓P P 00 14 00.3 +0.7
baz=66,SNR=48
NYNU **Nynaeshamn** 65.80 333 P P 00 13 58.7 -0.5
B21A **Ellsworth Farm** 65.82 44 ⇑P P 00 14 00.2 +0.5
baz=66,SNR=6.2
C20A **Veseth Ranch,** 65.85 45 ⇑P P 00 14 01.0 +1.1
baz=66,SNR=96
A22A **Carney Farms,** 65.94 43 ⇓P P 00 14 01.0 +0.6
baz=66,SNR=91
BMN **Battle Mountai** 65.97 56 *e*P P 00 14 02.2 +1.3
BMN pmax pmax
comp=Z,29nm,0.6s
BMN **Battle Mountai** 65.97 56 *e*P P 00 14 02.2 +1.3
comp=Z,29nm,0.6s
NACGM **Naroch** 66.01 326 *e*P P 00 13 57.0 -3.7
NB2 **NORSAR Subarra** 66.04 338 P P 00 14 00.4 -0.4
comp=Z,124nm,0.5s,baz=32,slow=6.9
NB2 **NORSAR Subarra** 66.04 338 P P 00 14 00.4 -0.4
baz=32,slow=6.9
NOA **NORSAR Array B** 66.04 338 P P 00 14 00.5 -0.3
NOA **NORSAR Array B** 66.04 338 P P 00 14 00.5 -0.3
comp=Z,153nm,0.4s,baz=32,slow=6.5,SNR=854
ESKU **Eskilstuna** 66.10 334 P P 00 14 00.4 -0.7
QLMT **Earthquake Lak** 66.12 49 *e*P P 00 14 02.8 +0.9
HFS **Hagfors** 66.13 336 P P 00 14 00.8 -0.5
HFS **Hagfors** 66.13 336 P P 00 14 00.8 -0.5
comp=Z,206nm,0.5s,baz=52,slow=5.8,SNR=1153
G17A **Pierce Place,** 66.14 49 ⇓P P 00 14 03.2 +1.3
baz=66,SNR=43
UDD **Uddeholm** 66.19 336 P P 00 14 01.2 -0.5
C21A **Desert Coulee** 66.21 45 ⇑P P 00 14 02.9 +0.8
baz=66,SNR=85
NC602 **NORSAR Array S** 66.21 337 ⇓*i*P P 00 14 01.1 -0.7
D20A **Manuel Ranch,** 66.22 46 ⇑P P 00 14 03.4 +1.1
baz=66,SNR=65
ISHM **Shahmirzad** 66.22 297 *e*P P 00 14 04.2 +1.5
NRAU **Nora** 66.22 335 P P 00 14 01.4 -0.5
F18A **Big Timber** 66.26 48 ⇓P P 00 14 03.7 +1.1
baz=66,SNR=81
NAO01 **NORSAR Array S** 66.29 338 *e*P P 00 14 01.5 -0.9
comp=Z,45nm,0.6s
NAO01 *e*PcP PcP 00 14 28.3 -0.5
H16A **Russell Place,** 66.31 49 ⇑P P 00 14 04.0 +1.0
baz=66,SNR=36
E19A **Rath Farm, Rou** 66.34 47 ⇑P P 00 14 04.0 +1.0
baz=66,SNR=11
GCMT **Greycliff** 66.36 48 *e*P P 00 14 04.2 +0.9
comp=Z,37nm,0.7s
B22A **Reddig Ranch S** 66.39 44 ⇑P P 00 14 03.9 +0.6
baz=66,SNR=23
A23A **Redstone** 66.45 43 ⇓P P 00 14 04.0 +0.4
baz=66,SNR=5.8
YMR **Madison River** 66.47 49 *e*P P 00 14 04.9 +0.9
comp=Z,70nm,0.9s
E20A **Meyer Farm, Mu** 66.63 46 ⇓P P 00 14 05.8 +1.0
baz=66,SNR=41
F19A **Roth Farm, Mol** 66.68 47 ⇓P P 00 14 06.1 +0.9
baz=66,SNR=41
NVAR **Mina Array Bea** 66.69 58 P P 00 14 06.6 +1.1
NVAR **Mina Array Bea** 66.69 58 P P 00 14 06.6 +1.1
comp=Z,23nm,0.8s,baz=296,slow=6.2,SNR=171
YFT **Old Faithful** 66.69 49 *e*P P 00 14 07.7 +2.2
comp=Z,64nm,0.8s
KIV **Kislovodsk** 66.72 310 *d*iP P 00 14 06.4 +1.0
KIV *e* 00 14 31.8
KIV *e**PP pP 00 15 31.0 +0.1
KIV *e*S S 00 22 26.2 +1.5
KIV pmax pmax
comp=Z,227nm,0.7s
KIV MLR MLR
comp=Z,49nm,18.0s
KIV **Kislovodsk** 66.72 310 P P 00 14 06.6 +1.2
comp=Z,2µm,0.7s,SNR=63
G18A **Lazy EL Ranch,** 66.74 48 ⇓P P 00 14 06.0 +0.4
baz=66,SNR=17
I16A **Newdale** 66.75 50 ⇑P P 00 14 07.4 +1.7
baz=66,SNR=39
KBZ **Khabaz** 66.76 310 P P 00 14 06.7 +1.2
KBZ pmax pmax
comp=Z,115nm,0.8s
KBZ **Khabaz** 66.76 310 P P 00 14 06.7 +1.2
KBZ **Khabaz** 66.76 310 P P 00 14 06.7 +1.2
comp=Z,115nm,0.8s,baz=65,slow=4.0,SNR=124
NV11 **Mina Array Sit** 66.77 58 *e*P P 00 14 06.6 +0.6
GUDG **Gudauri** 66.79 308 P P 00 14 07.0 +0.9
D21A **La Casta Ranch** 66.79 45 ⇑P P 00 14 06.4 +0.6
baz=66,SNR=22
C22A **Vida** 66.84 44 ⇑P P 00 14 06.4 +0.4
baz=67,SNR=22
H17A **Grant Village** 66.86 49 ⇓P P 00 14 09.0 +2.4
baz=67,SNR=11
ELK **Elko** 66.87 55 *e*P P 00 14 07.9 +1.3
comp=Z,12nm,0.6s
A24A **Westby** 66.88 42 ⇑P P 00 14 06.7 +0.5
baz=67,SNR=28
MLAC **Mammoth Lakes** 66.92 59 ⇑P P 00 14 08.3 +1.3
baz=67
CTA **Charters Tower** 66.93 179 P P 00 14 06.5 -0.3
CTA **Charters Tower** 66.93 179 P P 00 14 06.5 -0.3
comp=Z,11nm,0.7s,baz=359,slow=7.5,SNR=12
CTAO **Charters Tower** 66.93 179 *e*P P 00 14 06.7 -0.1
CTAO pmax pmax
comp=Z,26nm,1.0s
CTAO **Charters Tower** 66.93 179 *e*P P 00 14 06.7 -0.1
comp=Z,26nm,1.0s
DGRG **David-gareji** 67.00 307 P P 00 14 08.1 +0.9
IMW **Indian Meadow** 67.02 50 *e*P P 00 14 09.1 +1.6
RLMT **Red Lodge** 67.03 48 *e*P P 00 14 08.4 +0.8
comp=Z,44nm,0.6s
FINU **Finntorp** 67.08 336 P P 00 14 06.6 -0.6
DCID1 **Drake Creek** 67.10 50 *e*P P 00 14 09.8 +1.9
comp=Z,79nm,0.9s
DGMT **Dagmar** 67.11 43 *e*P P 00 14 08.2 +0.5
comp=Z,195nm,0.6s
DGMT **Dagmar** 67.11 43 ⇑P P 00 14 08.3 +0.5
baz=67,SNR=31
E21A **Keefer Ranch,** 67.12 46 ⇑P P 00 14 08.6 +0.8
baz=67,SNR=11
D22A **Cohagen** 67.12 45 ⇑P P 00 14 08.5 +0.7
baz=67,SNR=34
C23A **Lambert** 67.13 44 ⇓P P 00 14 08.6 +0.8
baz=67,SNR=34
H18A **Shoshone NF, C** 67.14 48 ⇓P P 00 14 09.2 +0.9
baz=67,SNR=25
TBLG **Delisi** 67.15 307 *e*P P 00 14 09.3 +1.2
TBLG **Delisi** 67.15 307 P P 00 14 09.3 +1.2
HYA **Hoyanger** 67.17 340 ⇓*i*P P 00 14 07.7 0.0
HYA AMB AMB 00 14 08.5
comp=Z,121nm,0.7s
I17A **Pilgrim Ck.** 67.19 50 ⇓P P 00 14 10.6 +2.0
baz=67,SNR=8.8
LNKU **Linkoeping** 67.20 334 P P 00 14 07.5 -0.5
RRI2 **Red Ridge** 67.20 50 *e*P P 00 14 10.3 +1.6
comp=Z,127nm,0.7s
MOOW **Moose Ponds** 67.23 50 *e*P P 00 14 10.2 +1.5
comp=Z,78nm,1.3s
ONI **Oni** 67.25 308 P P 00 14 10.2 +1.4
MTUM **Tungsten Hills** 67.26 59 *e*P P 00 14 10.1 +1.0
NASU **Vaermlandsnaes** 67.29 335 P P 00 14 07.9 -0.6
TPAW **Teton Pass** 67.30 50 *e*P P 00 14 10.9 +1.6
comp=Z,113nm,1.3s
GOR **Gori** 67.32 308 P P 00 14 10.5 +1.3
VSTU **Vaestervik** 67.35 333 P P 00 14 08.4 -0.5
LOHW **Long Hollow** 67.39 50 *e*P P 00 14 11.2 +1.4
FITZ **Fitzroy Crossi** 67.40 201 *e*P P 00 14 09.9 +0.2
comp=Z,36nm,1.0s
FITZ **Fitzroy Crossi** 67.40 201 P P 00 14 09.6 -0.1
comp=Z,20nm,0.8s,baz=14,slow=6.6,SNR=29
SNOW **Snow King Moun** 67.42 50 *e*P P 00 14 11.6 +1.6
comp=Z,91nm,1.4s
PTRM **Twissleman Ran** 67.43 62 *e*P P 00 14 17.1 +7.2
REDW **Red Top Meadow** 67.44 50 *e*P P 00 14 11.8 +1.7
H19A **Powell** 67.49 48 ⇑P P 00 14 11.2 +0.9
baz=67,SNR=13
G20A **Bridger** 67.49 47 ⇓P P 00 14 10.4 +0.2
baz=67,SNR=34
BYXU **Byxelkrok** 67.50 333 P P 00 14 09.3 -0.6
WRAB **Tennant Creek** 67.55 191 P P 00 14 10.0 -0.6
comp=Z,394nm,0.9s,SNR=13
WRAB **Tennant Creek** 67.55 191 *e*P P 00 14 10.3 -0.3
WRAB pmax pmax
comp=Z,48nm,0.8s
WRAB **Tennant Creek** 67.55 191 *e*P P 00 14 10.3 -0.3
comp=Z,48nm,0.8s
WRA **Warramunga Arr** 67.56 191 P P 00 14 10.3 -0.4
WRA pP pP 00 15 36.0 -0.5
WRA ⇑*e* 00 42 30.0
WRA **Warramunga Arr** 67.56 191 P P 00 14 10.3 -0.4
comp=Z,39nm,0.6s,baz=10,slow=6.6,SNR=97
WRA pP pP 00 15 36.0 -0.5
comp=Z,2.8nm,0.8s,baz=8.5,slow=6.6,SNR=3.2
WRA PKP2bc 00 42 30.0
comp=Z,3.0nm,0.8s,baz=197,slow=2.8,SNR=11
KZR **Kazreti** 67.57 307 P P 00 14 11.1 +0.4
RCTC **Rector, Farmer** 67.57 60 ⇑P P 00 14 11.1 +0.4
baz=67
SUE **Sulen** 67.59 341 ⇓*i*P P 00 14 10.5 +0.1
SUE AMB AMB 00 14 11.2
comp=Z,52nm,0.7s
F21A **Absaloka Mine,** 67.61 46 ⇓P P 00 14 11.5 +0.6
baz=67,SNR=30
IBAF **Bafgh** 67.64 293 *e*P P 00 14 11.3 -0.1
KONO **Kongsberg** 67.65 338 ⇓*i*P P 00 14 10.7 -0.1
KONO AMB AMB 00 14 11.3
comp=Z,35nm,1.0s
KONO **Kongsberg** 67.65 338 *e*P P 00 14 10.3 -0.4
KONO pmax pmax
comp=Z,12nm,0.7s
KONO **Kongsberg** 67.65 338 *e*P P 00 14 10.3 -0.4
comp=Z,12nm,0.7s
TIN **Tinemaha** 67.66 59 ⇓P P 00 14 12.5 +1.1
baz=68
C24A **Savage** 67.69 44 ⇓P P 00 14 11.9 +0.6
baz=67
IVRN **Varamin** 67.71 298 *e*P P 00 14 12.5 +0.8
I18A **Diamond G Ranc** 67.74 49 ⇓P P 00 14 13.3 +1.3
baz=68,SNR=18
E22A **Miles City** 67.74 45 ⇑P P 00 14 12.2 +0.5
baz=68,SNR=9.0
STRU **Stroemstad** 67.75 336 P P 00 14 11.3 -0.1
SMMC **Simmler** 67.79 62 ⇓P P 00 14 13.3 +1.1
baz=68
EKSU **Eksjoe** 67.80 334 P P 00 14 10.8 -0.9
OSKU **Oskarshamn** 67.87 333 P P 00 14 11.6 -0.5
I19A **Meeteetse** 67.93 49 ⇑P P 00 14 14.0 +0.9
baz=68,SNR=21
BORG **Borgarnes** 67.97 354 *e*P P 00 14 14.4 +1.8
comp=Z,61nm,0.9s
VANU **Vaeneberg** 67.97 336 P P 00 14 12.2 -0.5
VES **Vestal, Richgr** 67.98 61 ⇑P P 00 14 13.3 0.0
baz=68
G21A **Lodge Grass** 67.99 47 ⇑P P 00 14 13.7 +0.4
baz=68,SNR=20
ASK **Askoy** 68.00 340 ⇓*i*P P 00 14 12.1 -0.8
ASK AMB AMB 00 14 12.9
comp=Z,137nm,0.9s
E23A **Ismay** 68.01 45 ⇓P P 00 14 14.1 +0.8
baz=68,SNR=33
RUND **Rundenannen** 68.02 340 *e*P P 00 14 12.4 -0.8
RUND AMB AMB 00 14 13.2
comp=Z,194nm,0.7s
D24A **Glendive** 68.03 44 ⇑P P 00 14 14.5 +1.0
baz=68,SNR=22
SUW **Suwalki** 68.04 328 *e*P P 00 14 12.2 -1.0
SUW pmax pmax
comp=Z,62nm,0.8s
SUW **Suwalki** 68.04 328 *e*P P 00 14 12.2 -1.0
comp=Z,62nm,0.8s
SUW **Suwalki** 68.04 328 *i*P P 00 14 12.6 -0.6
AKH **Akhalkalaki** 68.05 308 P P 00 14 16.0 +2.1
BER **Bergen** 68.06 340 ⇓*i*P P 00 14 12.6 -0.7
BER AMB AMB 00 14 13.2
comp=Z,117nm,0.7s
F22A **Rosebud** 68.06 46 ⇑P P 00 14 14.2 +0.5
baz=68
H20A **Greybull** 68.12 48 ⇓P P 00 14 14.4 +0.3
baz=68,SNR=14
ODD1 **Odda** 68.17 339 ⇓*i*P P 00 14 11.3 -2.8
ODD1 AMB AMB 00 14 11.9
comp=Z,71nm,0.7s
CWC **Cottonwood Cre** 68.17 60 ⇓P P 00 14 15.5 +0.9
baz=68
PKM **Peak Mountain** 68.18 62 ⇓P P 00 14 15.9 +1.1
baz=68,SNR=12
EGD **Espegrend** 68.18 340 *e*P P 00 14 13.3 -0.7
EGD AMB AMB 00 14 15.5
comp=Z,107nm,1.6s
ISRB **Sarab** 68.19 302 *e*P P 00 14 15.8 +1.0
GRAC **Grapevine Rang** 68.20 59 ⇑P P 00 14 16.0 +1.3
baz=68,SNR=5.5
AKASG **Malin Array Be** 68.21 322 P P 00 14 13.9 -0.5
AKASG *PP pP 00 15 41.6 +1.3
AKASG pmax pmax
comp=Z,61nm,0.4s
AKASG **Malin Array Be** 68.21 322 P P 00 14 13.9 -0.5
AKASG pP pP 00 15 41.6 +1.3
AKASG **Malin Array Be** 68.21 322 P P 00 14 13.9 -0.5
comp=Z,61nm,0.4s,baz=36,slow=6.4,SNR=340
AKASG pP pP 00 15 41.6 +1.3
comp=Z,7.2nm,0.8s,baz=38,slow=6.3,SNR=3.1
KIEV **Kiev** 68.22 322 *e*P P 00 14 13.4 -1.0
KIEV pmax pmax
comp=Z,98nm,0.7s
KIEV **Kiev** 68.22 322 *e*P P 00 14 13.4 -1.0
comp=Z,98nm,0.7s
AK01 **Malin Array Si** 68.22 322 *e*P P 00 14 14.2 -0.3
GNI **Garni** 68.24 306 *e*P P 00 14 16.5 +1.5
comp=Z,23nm,0.6s
GNI **Garni** 68.24 306 P P 00 14 17.0 +2.0
comp=Z,15nm,0.6s,baz=335,slow=2.6,SNR=19
AK02 **Malin Array Si** 68.25 322 *e*P P 00 14 14.2 -0.5
HWUT **Hardware Ranch** 68.28 52 *e*P P 00 14 16.1 +0.8
comp=Z,46nm,0.9s
R11A **Troy Canyon, C** 68.31 57 ⇓P P 00 14 16.3 +0.8
baz=68,SNR=44
IMEH **Mehriz** 68.37 293 *e*P P 00 14 15.6 -0.4
I20A **Worland** 68.43 48 ⇑P P 00 14 17.2 +1.1
baz=68,SNR=35
E24A **Baker** 68.44 44 ⇑P P 00 14 16.6 +0.6
baz=68
J19A **Crowheart** 68.44 49 ⇓P P 00 14 17.2 +1.0

baz=68,SNR=46
G22A Birney 68.45 46 ⇑P P 00 14 16.6 +0.5
baz=68,SNR=27
VXJU Vaexsjoe 68.45 333 P P 00 14 14.7 -1.0
ISA Isabella 68.46 61 *e*P P 00 14 16.5 +0.2
ISA Isabella 68.46 61 *e*P P 00 14 16.5 +0.2
ISA Isabella 68.46 61 ⇓P P 00 14 16.3 0.0
baz=68,SNR=7.6
BORU Boraas 68.50 335 P P 00 14 15.1 -0.9
H21A Big Horn, Sher 68.50 47 ⇑P P 00 14 17.1 +0.6
baz=68,SNR=21
SOC Sochi 68.52 311 *d*iP P 00 14 16.9 +0.5
SOC *e* 00 17 01.6
SOC *e*S S 00 22 45.3 -0.3
SOC pmax pmax
comp=Z,128nm,0.6s
F23A Volborg 68.52 45 ⇑P P 00 14 17.0 +0.5
baz=68,SNR=51
BW06 Boulder Array 68.53 50 *e*P P 00 14 17.5 +0.6
comp=Z,56nm,0.6s
BW06 *e*pP pP 00 15 41.6 -1.3
PDAR Pinedale Array 68.53 50 P P 00 14 17.4 +0.5
PDAR pP pP 00 15 45.0 +2.1
PDAR Pinedale Array 68.53 50 P P 00 14 17.4 +0.5
comp=Z,66nm,0.6s,baz=350,slow=0.7,SNR=284
PDAR pP pP 00 15 45.0 +2.1
comp=Z,3.3nm,0.9s,baz=329,slow=6.3,SNR=3.8
SBC Santa Barbara 68.55 62 ⇓P P 00 14 18.0 +1.2
baz=68
DUG Dugway 68.59 54 *e*P P 00 14 18.4 +1.3
DUG pmax pmax
comp=Z,45nm,0.9s
DUG Dugway 68.59 54 *e*P P 00 14 18.4 +1.3
comp=Z,45nm,0.9s
DUG Dugway 68.59 54 ⇑P P 00 14 18.2 +1.1
baz=68,SNR=51
ISAD Sadrabad 68.60 294 *e*P P 00 14 18.0 +0.5
ARVC Arvin 68.62 61 ⇑P P 00 14 17.4 +0.2
baz=68
BLS5 Blasjo 68.64 339 ⇓*i*P P 00 14 15.9 -1.0
BLS5 AMB AMB 00 14 16.7
comp=Z,31nm,0.6s
IZEF Zefreh 68.77 296 *e*P P 00 14 18.6 +0.1
MPMC Manual Prospec 68.77 60 ⇑P P 00 14 19.0 +0.6
baz=69,SNR=27
ANN Anapa 68.80 313 *e*P P 00 14 16.6 -1.5
ANN *e**PP pP 00 15 46.4 +2.3
ANN *e* 00 16 56.6
ANN *e*S S 00 22 47.8 -1.1
ANN *e*SS SS 00 27 19.7 -2.3
ANN pmax pmax
comp=Z,108nm,0.6s
M17A Scullys Gap (B 68.86 52 ⇓P P 00 14 19.4 +0.5
baz=69,SNR=14
K19A Absolon Red Bu 68.86 49 ⇑P P 00 14 18.7 -0.1
baz=69,SNR=23
FURC Furnace Creek, 68.86 59 ⇑P P 00 14 19.7 +1.1
baz=69,SNR=25
H22A Clearmont 68.87 47 ⇑P P 00 14 19.0 +0.3
baz=69,SNR=5.6
L18A Fontenelle, Gr 68.88 51 ⇑P P 00 14 19.8 +0.8
baz=69,SNR=5.3
J20A Shoshoni 68.88 49 ⇓P P 00 14 19.6 +0.7
baz=69,SNR=50
F24A Ekalaka 68.89 45 ⇓P P 00 14 19.3 +0.5
baz=69,SNR=64
G23A Biddle 68.90 46 ⇓P P 00 14 19.2 +0.3
baz=69,SNR=22
BSC Santa Cruz Isl 68.91 63 ⇑P P 00 14 19.8 +0.8
baz=69
SOFL Sornfelli, Far 68.92 347 *e*P P 00 14 18.6 0.0
SOFL Sornfelli, Far 68.92 347 P P 00 14 18.6 0.0
IKLH Kolahrood 68.94 296 *e*Pn P 00 14 19.6 +0.1
I21A Big Trails, Te 68.95 48 ⇑P P 00 14 20.0 +0.7
baz=69,SNR=176
ISHB Shabestar 69.04 304 *e*P P 00 14 21.0 +1.0
FABU Falkenberg 69.05 335 P P 00 14 18.3 -1.1
JLU Jordanelle 69.05 53 *e*P P 00 14 21.0 +1.0
comp=Z,50nm,1.4s
LRMC Laurel Mountai 69.06 60 ⇑P P 00 14 20.3 +0.3
baz=69
L19A Farson 69.11 50 ⇓P P 00 14 20.7 +0.4
baz=69,SNR=12
DEL Delary 69.15 334 P P 00 14 21.8 +1.8
BLG Laguna Peak 69.17 62 ⇑P P 00 14 20.8 +0.2
baz=69
J21A Lysite 69.21 48 ⇑P P 00 14 21.3 +0.4
baz=69,SNR=20
K20A Yellowstone Ra 69.24 49 ⇓P P 00 14 20.8 -0.3
baz=69,SNR=24
STAV Stavanger 69.25 339 *e*P P 00 14 21.3 +0.8
IAZR Azarshahr 69.25 303 *e*P P 00 14 22.5 +1.2
G24A Alzada 69.28 45 ⇑P P 00 14 21.1 -0.1
baz=69
EDW2 Edwards Air Fo 69.29 61 ⇑P P 00 14 22.0 +0.7
baz=69,SNR=15
I22A 9 Mile Ranch, 69.31 47 ⇑P P 00 14 21.9 +0.5
baz=69,SNR=28
MPU Maple Canyon 69.36 53 *e*P P 00 14 23.0 +1.1
comp=Z,42nm,0.6s
H23A Clabaugh Catti 69.36 46 ⇑P P 00 14 21.6 -0.1
baz=69
ULM Lac du Bonnet 69.43 37 P P 00 14 21.4 -0.4
ULM Lac du Bonnet 69.43 37 P P 00 14 21.4 -0.4
comp=Z,45nm,0.6s,baz=317,slow=6.9,SNR=57
DECC Green Verdugo 69.52 62 ⇑P P 00 14 23.0 +0.3
baz=69
SHOC Shoshone 69.59 59 ⇑P P 00 14 23.9 +0.8
baz=69
M19A Rock Springs 69.64 51 ⇓P P 00 14 23.9 +0.3
baz=69
H24A Dirks Ranch, A 69.64 46 ⇓P P 00 14 23.3 0.0
baz=69,SNR=63
J22A Midwest 69.65 48 ⇓P P 00 14 23.8 +0.3
baz=69,SNR=48
MDND Maddock 69.66 41 ⇓P P 00 14 23.9 +0.6
baz=69,SNR=29
LRW Lerwick 69.69 343 *e*P P 00 14 22.8 -0.4
LRW AMB AMB 00 14 23.7
comp=Z,74nm,1.7s
LRW Lerwick 69.69 343 P P 00 14 22.8 -0.4
LRW AMB AMB 00 14 23.7
comp=Z,74nm,1.7s
GSC Goldstone 69.70 60 *e*P P 00 14 24.5 +0.7
GSC pmax pmax
comp=Z,44nm,1.4s
GSC Goldstone 69.70 60 *e*P P 00 14 24.5 +0.7
comp=Z,44nm,1.4s
GSC Goldstone 69.70 60 ⇑P P 00 14 24.4 +0.6
baz=70,SNR=15
MWC Mount Wilson 69.70 61 *e*P P 00 14 24.4 +0.4
MWC pmax pmax
comp=Z,18nm,1.1s
MWC Mount Wilson 69.70 61 *e*P P 00 14 24.4 +0.4
comp=Z,18nm,1.1s
L20A Wamsutter 69.71 50 ⇓P P 00 14 24.4 +0.4
baz=69,SNR=21
K21A Alcova 69.82 49 ⇓P P 00 14 24.9 +0.2
baz=70
RRX Edison Barstow 69.88 60 ⇓P P 00 14 26.1 +1.2
baz=70
FMP Fort Macarthur 69.91 62 ⇑P P 00 14 25.5 +0.5
baz=70
ARUT Antelope Range 69.92 56 *e*P P 00 14 24.1 -1.1
ARUT pmax pmax
comp=Z,8.0nm,0.6s
ARUT Antelope Range 69.92 56 *e*P P 00 14 24.1 -1.1
comp=Z,8.5nm,0.6s
BFSC Mount Baldy Ra 69.93 61 ⇑P P 00 14 25.7 +0.4
baz=70,SNR=12
BSD Bornholm Skovb 69.97 332 ⇓*i*P P 00 14 24.7 -0.2
comp=Z,97nm,0.7s
LUNU Lund 69.99 333 P P 00 14 24.7 -0.4
CIS Catalina Islan 70.05 62 ⇑P P 00 14 26.4 +0.4
baz=70
MSU Marysvale 70.12 55 *e*P P 00 14 27.9 +1.4
MSU Marysvale 70.12 55 *e*P P 00 14 27.9 +1.4
J23A Dilts Ranch, B 70.12 47 ⇑P P 00 14 26.3 0.0
baz=70
TUQ Turquoise Moun 70.12 59 ⇑P P 00 14 27.4 +0.9
baz=70,SNR=12
CCUT Cedar City 70.13 56 *e*P P 00 14 27.7 +1.1
comp=Z,42nm,1.5s
M20A Sweetwater, Wa 70.16 50 ⇓P P 00 14 27.5 +0.8
baz=70,SNR=25
K22A Casper 70.18 48 ⇑P P 00 14 26.9 +0.1
baz=70,SNR=24
L21A Rawlins 70.24 49 ⇓P P 00 14 27.5 +0.3
baz=70,SNR=18
I24A Kuemmerle Ranc 70.25 46 ⇓P P 00 14 26.9 -0.2
baz=70,SNR=11
SCI San Clemente I 70.26 63 ⇑P P 00 14 27.5 +0.3
baz=70
SIM Simferopol' 70.30 315 *c*iP P 00 14 27.9 +0.7
SIM *e* 00 14 45.0
SIM pmax pmax
comp=Z,119nm,0.9s
HEC Hector,Ludlow 70.31 60 ⇑P P 00 14 28.5 +0.9
baz=70,SNR=21
BBRC Big Bear Solar 70.35 61 ⇑P P 00 14 28.7 +0.7
baz=70
RSSD Black Hills 70.35 46 *e*P P 00 14 27.4 -0.4
RSSD Black Hills 70.35 46 *e*P P 00 14 27.4 -0.4
Q16A Castle Valley 70.39 54 ⇓P P 00 14 29.0 +0.9
baz=70,SNR=14
M21A Separation Pea 70.50 50 ⇑P P 00 14 29.0 +0.2
baz=70,SNR=36
O19A Miners Draw (B 70.52 52 ⇓P P 00 14 29.0 +0.2
baz=70,SNR=20
MUD Monsted U'grnd 70.53 336 ⇓*i*P P 00 14 28.3 0.0
comp=Z,35nm,0.7s
K23A Bowen Ranch, D 70.56 48 ⇓P P 00 14 28.6 -0.4
baz=70,SNR=8.5
N20A Spence Gulch, 70.59 51 ⇓P P 00 14 30.2 +0.9
baz=70,SNR=43
SRU San Rafael 70.60 53 ⇓P P 00 14 30.1 +0.7
baz=70,SNR=41
LLD Lille Linde 70.61 334 *i*P P 00 14 29.0 +0.2
comp=Z,78nm,0.8s
J24A Dixon Ranch, L 70.62 47 ⇓P P 00 14 29.3 0.0
baz=70
MURC Murrieta 70.64 61 ⇓P P 00 14 29.7 +0.2
baz=70
BEL Belsk 70.64 327 *i*P P 00 14 29.8 +0.7
L22A Ellis Ranch, M 70.67 49 ⇑P P 00 14 30.4 +0.7
baz=70,SNR=7.8
GKP Gorka Klasztor 70.74 330 *i*P P 00 14 29.7 +0.1
GMRC Granite Mounta 70.74 60 ⇑P P 00 14 30.9 +0.7
baz=70,SNR=19
IKOM Komasi 70.80 300 *e*P P 00 14 30.9 +0.3
RGN Rugen 70.94 333 *e*P P 00 14 31.4 +0.6
comp=Z,92nm,0.7s
K24A Anderson Ranch 70.99 47 ⇑P P 00 14 30.7 -0.8
baz=71,SNR=5.9
J25A Sunshine Ranch 71.00 46 ⇓P P 00 14 31.2 -0.4
baz=71,SNR=8.1
LVV L'vov 71.01 324 *i*P P 00 14 31.2 -0.1
LVV *e* 00 15 59.6
N21A Black Mountain 71.03 50 ⇓P P 00 14 32.3 +0.4
baz=71,SNR=35
M22A Cedar Creek Ra 71.05 49 ⇑P P 00 14 32.2 +0.2
baz=71,SNR=6.3
P19A Cripple Cowboy 71.07 52 ⇑P P 00 14 32.4 +0.3
baz=71,SNR=37
BELC Belle Mtn. Jos 71.08 60 ⇑P P 00 14 32.4 +0.2
baz=71,SNR=11
PFO Pinyon Flat Ob 71.08 61 P P 00 14 32.0 -0.2
comp=Z,70nm,1.4s,SNR=5.3
PFO Pinyon Flat Ob 71.08 61 P P 00 14 32.6 +0.4
PFO Pinyon Flat Ob 71.08 61 P P 00 14 32.6 +0.4
comp=Z,6.5nm,0.8s,baz=321,slow=5.5,SNR=11
PFO Pinyon Flat Ob 71.08 61 ⇑P P 00 14 32.4 +0.2
baz=71,SNR=6.2
IDHR Dehrash 71.09 301 *e*P P 00 14 32.1 -0.3
O20A White River Ci 71.10 51 ⇑P P 00 14 32.6 +0.3
baz=71,SNR=30
109C Camp Elliot, M 71.20 62 ⇑P P 00 14 33.2 +0.5
baz=71
KIS Kishinev 71.20 320 κ *i*P P 00 14 31.0 -1.5
KIS *i* 00 14 52.5
KIS *e* 00 15 59.0
KIS pmax pmax
comp=Z,220nm,1.2s
KIS pmax pmax
comp=N,130nm,1.4s
KIS pmax pmax
comp=E,110nm,1.4s
KIS Kishinev 71.20 320 ⇓*i*P P 00 14 31.0 -1.5
KIS XM 00 14 32.0
comp=E,300nm,1.2s
KIS Kishinev 71.20 320 ⇑*i*P P 00 14 32.4 -0.1
AS31 Alice Springs 71.28 191 *e*P P 00 14 34.1 +1.0
ASAR Alice Springs 71.28 191 P P 00 14 34.0 +0.9
ASAR pP pP 00 16 02.2 +2.1
ASAR P'P' 00 42 16.6
ASAR Alice Springs 71.28 191 P P 00 14 34.0 +0.9
comp=E,25nm,0.6s,baz=5.4,slow=5.3,SNR=215
ASAR pP pP 00 16 02.2 +2.1
comp=E,3.4nm,0.9s,baz=4.0,slow=5.3,SNR=4.4
ASAR PKPPKP P'P'df 00 42 16.6 -1.4
comp=E,0.6nm,0.7s,baz=182,slow=4.4,SNR=3.4
NEE2 Needles Airpor 71.36 59 ⇓P P 00 14 34.3 +0.6
baz=71
DZM Mont Dzumac 71.42 160 P P 00 14 35.7 +1.6
comp=E,1.6nm,0.9s
DZM Mont Dzumac 71.42 160 P P 00 14 35.7 +1.6
comp=E,20nm,0.8s,baz=38,slow=9.3,SNR=19
L24A Wheatland 71.43 48 ⇑P P 00 14 34.4 +0.2
baz=71
M23A Laramie 71.45 49 ⇑P P 00 14 34.4 +0.1
baz=71,SNR=13
O21A Pagoda 71.45 51 ⇓P P 00 14 34.9 +0.4
baz=71
IRM Iron Mountain 71.47 60 ⇑P P 00 14 35.4 +1.0
baz=71,SNR=34
P20A De Beque 71.48 52 ⇓P P 00 14 34.7 +0.2
baz=71,SNR=9.7
U15A North Rim 71.52 56 ⇑P P 00 14 36.1 +1.1
baz=71,SNR=60
K25A Mack Ranch, Ha 71.54 47 ⇓P P 00 14 34.7 -0.1
baz=71
W13A Hualapai Mount 71.55 58 ⇑P P 00 14 35.7 +0.7
baz=71,SNR=20
N22A Wattenberg Ran 71.56 50 ⇓P P 00 14 36.0 +0.9
baz=71,SNR=29
IAS Iasi 71.60 321 ⇓P P 00 14 35.0 +0.2
IAS Iasi 71.60 321 ⇓*i*P P 00 14 35.0 +0.2
MONP Monument Peak 71.61 61 ⇑P P 00 14 35.8 +0.4
baz=71
BC3 Big Chuckawall 71.65 60 ⇓P P 00 14 36.0 +0.5
baz=71,SNR=9.8
KWP Kalwaria Pacla 71.69 325 *e*P P 00 14 35.5 +0.2
KWP *e**PP pP 00 15 58.5 -3.7
KWP pmax pmax
comp=Z,168nm,1.0s
KWP Kalwaria Pacla 71.69 325 *e*P P 00 14 35.5 +0.2
comp=Z,168nm,1.0s
KWP *e*pP pP 00 15 58.5 -3.7
KWP Kalwaria Pacla 71.69 325 ⇓*i*P P 00 14 36.1 +0.8
KWP Kalwaria Pacla 71.69 325 *i*P P 00 14 36.1 +0.8
N23A Red Feather La 71.75 49 ⇑P P 00 14 37.0 +0.8
baz=72,SNR=17
K26A Motz Farm, Whi 71.82 46 ⇓P P 00 14 36.2 -0.2
baz=72,SNR=7.1
L25A Engebretsen Ra 71.83 47 ⇓P P 00 14 36.6 +0.1
baz=72
LEOM Leova 71.85 320 ⇓P P 00 14 36.8 +0.5
LEOM Leova 71.85 320 ⇓*i*P P 00 14 36.8 +0.5
MBWA Marble Bar 71.90 205 *e*P P 00 14 37.0 +0.2
M24A Cheyenne 71.91 48 ⇑P P 00 14 37.7 +0.7
baz=72,SNR=20
S18A Hurst Farm, BI 71.91 54 ⇑P P 00 14 37.6 +0.4
baz=72,SNR=49
Q20A Ridgley Place, 71.92 52 ⇑P P 00 14 37.5 +0.3
baz=72,SNR=18
SWSC Sam W. Stewart 71.94 61 ⇓P P 00 14 37.6 +0.4
baz=72
DVTC Desert V Tower 71.96 61 ⇑P P 00 14 37.8 +0.5
baz=72
P21A Newcastle 71.96 51 ⇑P P 00 14 38.2 +0.7
baz=72,SNR=32
PDMCI Parker Dam,Lak 71.97 59 ⇓P P 00 14 37.9 +0.7
baz=72,SNR=15
O22A Kremmling 71.98 50 ⇑P P 00 14 38.0 +0.4
baz=72,SNR=47
PRAR RASCA 72.04 321 ⇓*i*P P 00 14 37.5 0.0
Y12C Blythe 72.13 60 ⇓P P 00 14 39.2 +1.0
baz=72,SNR=6.4
J28A Allard Ranch, 72.23 45 ⇓P P 00 14 39.3 +0.6
baz=72,SNR=44
BUR08 Bucovina Ar. S 72.25 322 *e*P P 00 14 39.4 +0.6
BURAR Bucovina Array 72.27 322 ⇓*i*P P 00 14 39.4 +0.5
O23A Lake Granby, G 72.27 50 ⇓P P 00 14 40.4 +1.1
baz=72,SNR=39
P22A Eagle 72.28 51 ⇑P P 00 14 40.1 +0.8
baz=72,SNR=26
OJC Ojcow 72.33 327 ⇓*i*P P 00 14 39.5 +0.4
OJC *e* 00 14 54.4
OJC *e**PP pP 00 16 08.0 +1.9
OJC Ojcow 72.33 327 *i*P P 00 14 39.5 +0.4
OJC *e*PcP PcP 00 14 54.4 -0.2
OJC *e*pP pP 00 16 08.0 +1.9
MVH1 Achvaich 72.33 344 ⇓*e*P P 00 14 38.7 -0.5
MVH1 Achvaich 72.33 344 *i*P P 00 14 38.7 -0.5
N24A Carr 72.35 49 ⇓P P 00 14 40.5 +0.9
baz=72,SNR=8.4
L26A Underwood Farm 72.36 47 ⇑P P 00 14 39.6 0.0
baz=72
PV01 Paradox Valley 72.37 53 *e*P P 00 14 39.8 0.0
comp=Z,1μm,0.5s
PV01 *e*PcP PcP 00 14 56.1 +0.8
BSEG Bad Segeberg 72.38 334 *e*P P 00 14 39.7 +0.4
comp=Z,100nm,0.9s
BSEG Bad Segeberg 72.38 334 *e*P P 00 14 39.7 +0.4
BSEG pmax pmax
comp=Z,100nm,0.9s
Q21A Lamborn Mesa, 72.40 52 ⇑P P 00 14 40.7 +0.8
baz=72,SNR=11
STHS Stebnicka Huta 72.43 326 *e*P P 00 14 40.7 +1.0
STHS pmax pmax
comp=Z,38nm,0.7s
STHS Stebnicka Huta 72.43 326 *e*P P 00 14 40.7 +1.0
R20A Redvale 72.43 53 ⇑P P 00 14 41.0 +0.8
baz=72,SNR=22
GLA Glamis 72.44 60 *e*P P 00 14 41.4 +1.3
GLA pmax pmax
comp=Z,81nm,1.6s
GLA Glamis 72.44 60 *e*P P 00 14 41.4 +1.3
comp=Z,81nm,1.6s
GLA Glamis 72.44 60 ⇓P P 00 14 41.0 +0.9
baz=72,SNR=6.7
MCD Coleburn Disti 72.47 343 ⇓*i*P P 00 14 39.5 -0.2
MCD Coleburn Disti 72.47 343 P P 00 14 39.5 -0.2
TESR Tescani 72.52 321 ⇓*i*P P 00 14 40.6 +0.3
BRSD Miller 72.53 43 ⇑P P 00 14 40.6 +0.2
baz=72,SNR=7.2
RUE Ruedersdorf 72.55 331 *e*P P 00 14 40.7 +0.4
comp=Z,109nm,1.2s
RUE *e*pP pP 00 16 09.8 +2.4
RUE Ruedersdorf 72.55 331 *e*P P 00 14 40.0 -0.3
comp=Z,74nm,1.0s
TLCR 72.59 319 ⇑P P 00 14 41.1 +0.4
TLCR 72.59 319 ⇑*i*P P 00 14 41.1 +0.4
UZH Uzhgorod 72.65 324 ⇑*i*P P 00 14 40.7 -0.2
UZH *i* 00 14 53.6
MME1 Meikle Cairn 72.66 343 ⇓*e*P P 00 14 40.3 -0.6
MME1 Meikle Cairn 72.66 343 P P 00 14 40.3 -0.6
WUAZ Wupatki 72.69 56 *e*P P 00 14 42.3 +0.6
comp=Z,27nm,0.9s
WUAZ Wupatki 72.69 56 ⇑P P 00 14 42.9 +1.2
baz=72,SNR=17
K28A Ten Mile Ranch 72.70 45 ⇑P P 00 14 42.2 +0.7
baz=72
S20A Disappointment 72.70 53 ⇑P P 00 14 42.4 +0.6
baz=72,SNR=35
L27A T5 Ranch, Ells 72.71 46 ⇑P P 00 14 41.9 +0.3
baz=72
ISCO Idaho Springs 72.73 50 ⇓P P 00 14 42.8 +0.8
baz=72,SNR=30
Q22A Crested Butte, 72.73 51 ⇓P P 00 14 42.9 +0.9
baz=72,SNR=20
R21A Cimarron 72.75 52 ⇑P P 00 14 43.1 +1.1
baz=72,SNR=29
M26A McRoberts Ranc 72.76 47 ⇓P P 00 14 42.8 +0.9
baz=72
CRVS Cervenica-Dubn 72.76 325 *e*P P 00 14 40.0 -1.6
CRVS pmax pmax
comp=Z,25nm,0.7s
CRVS Cervenica-Dubn 72.76 325 *e*P P 00 14 40.0 -1.6
N25A Grover 72.77 48 ⇑P P 00 14 43.0 +1.0
baz=72
O24A Longmont 72.77 49 ⇓P P 00 14 43.2 +1.2
baz=72,SNR=7.2
NIE Niedzica 72.78 326 ⇓*i*P P 00 14 43.2 +1.4
NIE *e**PP pP 00 16 11.8 +2.8
NIE Niedzica 72.78 326 *i*P P 00 14 43.2 +1.4
NIE *e*pP pP 00 16 11.8 +2.8
KBSD Kabsdagh 72.79 306 *e*P P 00 14 39.8 -2.2
MDO Dochfour 72.82 344 ⇓*i*P P 00 14 41.5 -0.3
MDO Dochfour 72.82 344 P P 00 14 41.5 -0.3
PETR Petresti 72.88 320 ⇓*i*P P 00 14 44.0 +1.7
Y14A Wickenburg 72.88 59 ⇓P P 00 14 43.6 +0.9
baz=73,SNR=35
CFR Carcaliu 72.90 319 ⇓P P 00 14 42.8 +0.3
CFR Carcaliu 72.90 319 ⇓*i*P P 00 14 42.8 +0.3
BMR Baia Mare 72.93 323 ⇓P P 00 14 43.6 +0.9
BMR Baia Mare 72.93 323 ⇓*i*P P 00 14 43.5 +0.9
DRUM Mains of Drumt 72.94 342 ⇓*e*P P 00 14 42.2 -0.3
DRUM AMB AMB 00 14 48.7
comp=Z,63nm,0.8s
DRUM Mains of Drumt 72.94 342 P P 00 14 42.2 -0.3
DRUM AMB AMB 00 14 48.7
comp=Z,63nm,0.8s
KAC Achnashellach 72.94 344 ⇓*i*P P 00 14 42.4 -0.1
KAC Achnashellach 72.94 344 P P 00 14 42.4 -0.1
TRPA Tarpa 72.95 324 ⇓*i*P P 00 14 43.6 +0.9
TRPA Tarpa 72.95 324 ⇓*e* P 00 14 43.6 +0.9
MALT Malatya 72.99 308 ⇑P P 00 14 49.9 +6.6
MALT Malatya 72.99 308 ⇑*i*P PcP 00 14 55.0 -2.8
VRI Vrincioaia 72.99 320 ⇓P P 00 14 43.8 +0.8
VRI Vrincioaia 72.99 320 ⇓*i*P P 00 14 43.8 +0.8
EYMN Ely 73.02 36 *e*P P 00 14 42.9 -0.3
comp=Z,125nm,0.6s
RAC Raciborz 73.03 328 *e*P P 00 14 44.1 +1.0
PLOR Plostina 73.04 320 ⇓P P 00 14 44.0 +0.7
PLOR Plostina 73.04 320 ⇓*i*P P 00 14 44.0 +0.7
KSP Ksiaz 73.08 329 ⇓*i*P P 00 14 43.8 +0.4
KSP *e**PP pP 00 16 12.2 +1.5
KSP Ksiaz 73.08 329 *i*P P 00 14 43.8 +0.4
M27A Reverse DX Ran 73.09 47 ⇑P P 00 14 44.3 +0.6
baz=73
S21A Coal Bank Pass 73.14 53 ⇓P P 00 14 45.6 +1.2
baz=73,SNR=92
KPL Plockton 73.16 344 ⇓*e*P P 00 14 43.8 0.0
KPL AMB AMB 00 14 44.3
comp=Z,66nm,0.7s
KPL Plockton 73.16 344 P P 00 14 43.8 0.0
KPL AMB AMB 00 14 44.3
comp=Z,66nm,0.7s
K29A Lazy Trails An 73.17 45 ⇓P P 00 14 44.7 +0.6
baz=73,SNR=9.7
N26A Koester Ranch, 73.19 48 ⇓P P 00 14 44.9 +0.5
baz=73
KSB Sheil Bridge 73.24 344 ⇓*e*P P 00 14 43.7 -0.5
KSB Sheil Bridge 73.24 344 P P 00 14 43.7 -0.5
OKC Ostrava-Krasne 73.25 328 ⇓*i*P P 00 14 45.0 +0.6
OKC *e**PP pP 00 16 13.8 +2.1
OKC Ostrava-Krasne 73.25 328 ⇓*i*P P 00 14 45.0 +0.6
OKC *e*pP pP 00 16 13.8 +2.1
GRER 73.26 320 ⇓*i*P P 00 14 46.4 +1.8
O25A Wiggins 73.27 49 ⇓P P 00 14 45.5 +0.6
baz=73,SNR=8.3
113A Mohawk Valley, 73.27 60 ⇑P P 00 14 45.2 +0.4
baz=73
Q23A Hartsel 73.27 51 ⇑P P 00 14 45.8 +0.7
baz=73
R22A Saguache, Gunn 73.28 52 ⇓P P 00 14 46.5 +1.3
baz=73,SNR=12
P24A Kohler Place, 73.31 50 ⇑P P 00 14 46.2 +1.0
baz=73,SNR=7.5
Z14A Wintersburg 73.33 59 ⇓P P 00 14 46.0 +0.8
baz=73,SNR=9.6
TIRR Tirgusor 73.34 318 ⇑P P 00 14 45.5 +0.5
TIRR Tirgusor 73.34 318 ⇑*i*P P 00 14 45.5 +0.5
HARR Harsova 73.37 319 ⇑P P 00 14 46.0 +0.8
HARR Harsova 73.37 319 ⇑*i*P P 00 14 46.0 +0.8
X16A Lo Mia Camp, P 73.44 57 ⇑P P 00 14 47.5 +1.4
baz=73,SNR=45
UPC Upice 73.46 329 ⇓*i*P P 00 14 46.1 +0.5
UPC Upice 73.46 329 ⇓*i*P P 00 14 46.1 +0.5
KECS Kecovo 73.48 325 *e*P P 00 14 46.2 +0.4
KECS pmax pmax
comp=Z,17nm,0.9s
KECS Kecovo 73.48 325 *e*P P 00 14 46.2 +0.4
DPC Dobruska-Polom 73.48 329 ⇓*i*P P 00 14 46.6 +0.8
DPC *e**PP pP 00 16 15.7 +2.5
DPC Dobruska-Polom 73.48 329 ⇓*i*P P 00 14 46.6 +0.8

DPC epP pP 00 16 15.7 +2.5
DOPR Dopca 73.49 321⇑*i*P P 00 14 47.3 +1.4
MORC Moravsky Berou 73.52 328⇓P P 00 14 46.6 +0.6
MORC Moravsky Berou 73.52 328⇓*i*P P 00 14 46.6 +0.6
N27A Anderson Farm, 73.55 47⇓P P 00 14 47.1 +0.6
baz=73,SNR=5.3
MZRK Al-Mazaregh 73.58 305 *e*P P 00 14 48.3 +1.7
O26A Horse Wrangler 73.58 48⇓P P 00 14 46.9 +0.2
baz=73
Q24A Divide 73.59 50⇓P P 00 14 47.4 +0.4
baz=73,SNR=15
S22A 4UR Ranch, Cre 73.59 52⇑P P 00 14 48.1 +1.1
baz=73,SNR=35
ELO Logie Almond 73.60 343 *e*P P 00 14 45.9 -0.4
ELO Logie Almond 73.60 343 P P 00 14 45.9 -0.4
CVD Cernavoda 73.62 318⇓P P 00 14 48.1 +1.4
CVD Cernavoda 73.62 318⇓*i*P P 00 14 48.0 +1.4
L29A Maesberg Ranch 73.62 45⇓P P 00 14 46.9 +0.1
baz=73
MLR Muntele Rosu 73.63 320 P P 00 14 47.3 +0.5
MLR Muntele Rosu 73.63 320⇓*i*P P 00 14 47.4 +0.5
MLR Muntele Rosu 73.63 320 P P 00 14 47.3 +0.5
comp=Z,13nm,0.7s,baz=230,slow=7.9
PGOR Pogoanele 73.63 319⇓*i*P P 00 14 47.9 +1.2
CJR Cluj-Napoca 73.66 323⇑*i*P P 00 14 48.0 +1.1
ISR Istrita 73.66 320⇓P P 00 14 48.2 +1.3
ISR Istrita 73.66 320⇓*i*P P 00 14 48.2 +1.3
U20A Newcomb 73.67 54⇓P P 00 14 48.0 +0.6
baz=73,SNR=6.9
P25A Willow Gulch B 73.69 49⇓P P 00 14 48.0 +0.6
baz=73,SNR=22
NRDL Niedersach Rie 73.69 333 *e*P P 00 14 47.1 +0.3
comp=Z,40nm,0.8s
OGNE Ogallala 73.70 47 *e*P P 00 14 47.7 +0.4
comp=Z,191nm,1.3s
OGNE Ogallala 73.70 47⇓P P 00 14 47.7 +0.4
baz=73,SNR=11
AMRR Amara 73.70 319⇑P P 00 14 48.3 +1.2
AMRR Amara 73.70 319⇑*i*P P 00 14 48.3 +1.2
MANR Mangalia 73.75 318⇓*i*P P 00 14 48.1 +0.7
T21A Navajo Lake 73.76 53⇑P P 00 14 48.8 +0.9
baz=74,SNR=15
CLL Collm 73.80 331 *e*P P 00 14 47.6 0.0
comp=Z,134nm,1.1s
CLL *e*pP pP 00 16 16.8 +1.8
CLL Collm 73.80 331⇓*i*P P 00 14 47.5 0.0
CLL *e**PP pP 00 16 17.0 +2.0
CLL pmax pmax
comp=Z,133nm,1.1s
CLL Collm 73.80 331⇓*i*P P 00 14 47.5 0.0
comp=Z,133nm,1.1s
CLL *e*pP pP 00 16 17.0 +2.0
CLL *e* 00 16 22.0
CLL *e*PP PP 00 17 39.0 +1.2
CLL *e* 00 33 24.0
CLL *e*SSSS 00 34 30.0
R23A Moffat 73.80 51⇑P P 00 14 49.3 +1.1
baz=74,SNR=27
BRG Berggiesshubel 73.86 330⇓*i*P P 00 14 48.0 +0.1
comp=Z,30nm,1.0s
BRG *e* 00 14 56.7
comp=Z,5.5nm,0.8s
BRG Berggiesshubel 73.86 330 *e*P P 00 14 48.0 +0.1
comp=Z,40nm,1.3s
BRG *e*pP pP 00 16 17.3 +1.9
BRG Berggiesshubel 73.86 330⇓*i*P P 00 14 48.0 +0.1
BRG *e* 00 14 56.7
BRG pmax pmax
comp=Z,30nm,1.0s
ESY Stoneypath 73.89 342⇓*e*P P 00 14 47.8 -0.2
ESY Stoneypath 73.89 342 P P 00 14 47.8 -0.2
W18A Petrified Fore 73.91 56⇑P P 00 14 49.8 +1.1
baz=74,SNR=5.4
UMR Umm Al-Rimmam 73.92 296 *e*P P 00 14 48.8 +0.1
UMR AMb AMB 00 14 49.5
comp=Z,134nm,0.4s
SECR 73.93 320⇑*i*P P 00 14 49.2 +0.8
PVCC Panska Ves 73.94 330⇓*i*P P 00 14 49.0 +0.6
PVCC Panska Ves 73.94 330⇓*i*P P 00 14 49.0 +0.6
DRGR 73.96 323⇓P P 00 14 49.2 +0.5
DRGR 73.96 323⇓*i*P P 00 14 49.2 +0.5
MIB Mutribah 73.98 297 *e*P P 00 14 49.2 +0.3
MIB AMb AMB 00 14 49.8
comp=Z,82nm,0.6s
M29A Burnside Ranch 73.99 46⇑P P 00 14 48.6 -0.3
baz=74
EAB Aberfoyle 73.99 343⇓*e*P P 00 14 48.4 -0.2
EAB Aberfoyle 73.99 343 P P 00 14 48.4 -0.2
FBE Freiberg 74.01 331 *e*P P 00 14 49.2 +0.4
comp=Z,50nm,0.8s
FBE *e*pP pP 00 16 18.4 +2.1
O27A Beecher Island 74.05 48⇓P P 00 14 49.4 +0.1
baz=74
VOIR 74.06 321⇓P P 00 14 50.2 +1.0
VOIR 74.06 321⇓*i*P P 00 14 50.2 +1.0
S23A Nye Farm, Mont 74.07 52⇑P P 00 14 51.0 +1.4
baz=74
P26A Davis Ranch, A 74.08 49⇑P P 00 14 49.6 +0.1
baz=74,SNR=5.6
T22A Edith 74.09 53⇑P P 00 14 50.9 +1.1
baz=74,SNR=39
Q25A Bedland, Calha 74.09 50⇓P P 00 14 50.0 +0.2
baz=74,SNR=18
VYHS Vyhne 74.10 326 *e*P P 00 14 49.9 +0.5
VYHS pmax pmax
comp=Z,24nm,0.9s
VYHS Vyhne 74.10 326 *e*P P 00 14 49.9 +0.5
U21A Nageezi 74.11 53⇓P P 00 14 50.8 +0.9
baz=74,SNR=34
V20A Brimhall 74.12 54⇓P P 00 14 50.5 +0.5
baz=74,SNR=8.4
SULR 74.13 320⇓*i*P P 00 14 50.3 +0.8
EAU Auchinoon 74.13 342⇓*i*P P 00 14 49.4 0.0
EAU Auchinoon 74.13 342 P P 00 14 49.4 0.0
R24A Sanders Place, 74.15 51⇓P P 00 14 50.9 +0.8
baz=74,SNR=36
PSZ Piszkesteto 74.17 325⇓P P 00 14 50.7 +0.9
PSZ Piszkesteto 74.17 325⇓*i*P P 00 14 50.7 +0.9
PSZ Piszkesteto 74.17 325⇓*e* P 00 14 50.7 +0.9
CLZ Clausthal 74.18 333 *e*P P 00 14 50.5 +0.7
comp=Z,200nm,1.6s
CLZ Clausthal 74.18 333 *e*P P 00 14 50.5 +0.7
CLZ pmax pmax
comp=Z,200nm,1.6s
X18A Snowflake 74.21 56⇓P P 00 14 51.6 +1.1
baz=74,SNR=11
VRAC Vranov 74.25 328 P P 00 14 51.1 +0.9
VRAC pP pP 00 16 19.2 +1.4
VRAC Vranov 74.25 328⇓*i*P P 00 14 51.1 +0.9
VRAC Vranov 74.25 328 P P 00 14 51.1 +0.9
comp=Z,42nm,0.7s,baz=39,slow=5.4,SNR=101
VRAC pP pP 00 16 19.2 +1.4
comp=Z,11nm,1.0s,baz=18,slow=7.5,SNR=4.3
VRAC Vranov 74.25 328 *e*P P 00 14 50.9 +0.7
NEUB Neuenburg 74.28 332 *e*P P 00 14 50.5 +0.2
comp=Z,99nm,1.0s
NEUB *e*pP pP 00 16 20.1 +2.2
ARR Arges 74.29 321⇑*i*P P 00 14 52.1 +1.5
M30A Dale-Ortello V 74.31 45⇓P P 00 14 50.6 -0.2
baz=74
PGBU Glenifferbraes 74.37 343 *e*P P 00 14 50.8 +0.1
PGBU AMB AMB 00 14 52.6
comp=Z,76nm,1.1s
PGBU Glenifferbraes 74.37 343 P P 00 14 50.8 +0.1
PGBU AMB AMB 00 14 52.6
comp=Z,76nm,1.1s
PRA Prague 74.37 330⇓P P 00 14 51.6 +0.8
comp=Z,104nm,1.6s
PRA pP pP 00 16 21.0 +2.5
PRU Pruhonice 74.40 330⇓*i*P P 00 14 51.5 +0.5
PRU *e**PP pP 00 16 21.1 +2.4
PRU Pruhonice 74.40 330⇓*i*P P 00 14 51.5 +0.5
PRU *e*pP pP 00 16 21.1 +2.4
214A Organ Pipe Nat 74.42 60⇑P P 00 14 52.3 +0.8
baz=74,SNR=15
WIT Witteveen 74.42 336 *e*P P 00 14 52.2 +1.1
comp=Z,312nm,0.5s
NAY Al-Naaiem 74.43 296 *e*P P 00 14 51.6 0.0
NAY AMb AMB 00 14 52.3
comp=Z,32nm,0.8s
BRTR Keskin Array B 74.44 312 P P 00 14 52.4 +0.8
BRTR Keskin Array B 74.44 312 P P 00 14 52.4 +0.8
comp=Z,26nm,0.7s,baz=83,slow=3.7,SNR=30
O28A Krutsinger Ran 74.45 47⇓P P 00 14 51.3 -0.3
baz=74,SNR=7.7

Q26A Hugo 74.47 49⇑P P 00 14 52.0 +0.2
baz=74,SNR=6.1
RDF Al-Radifah 74.47 296 *e*P P 00 14 52.6 +0.8
RDF AMb AMB 00 14 53.4
comp=Z,93nm,0.8s
P27A Ficken Ranch, 74.47 48⇑P P 00 14 51.5 -0.3
baz=74,SNR=5.2
CIOR Ciorogarla 74.48 320⇓*i*P P 00 14 51.7 +0.2
N29A Votaw Ranch, W 74.49 46⇓P P 00 14 51.6 -0.2
baz=74
S24A Houchin Ranch, 74.53 51⇓P P 00 14 53.1 +0.7
baz=74,SNR=24
T23A Casias Ranch, 74.54 52⇓P P 00 14 53.4 +1.0
baz=74,SNR=8.8
EKA Eskdalemuir Ar 74.55 342 P P 00 14 51.8 +0.1
EKA Eskdalemuir Ar 74.55 342 P P 00 14 51.8 +0.1
comp=Z,38nm,0.7s,baz=21,slow=4.8,SNR=106
IBBN Ibbenburen 74.56 335 *e*P P 00 14 52.1 +0.3
comp=Z,96nm,0.6s
IBBN *e*pP pP 00 16 21.5 +2.0
ESK Eskdalemuir 74.57 342 P P 00 14 52.0 +0.1
comp=Z,260nm,0.9s,SNR=9.9
ESK Eskdalemuir 74.57 342⇓*e*P P 00 14 51.8 -0.1
ESK AMB AMB 00 14 52.4
comp=Z,39nm,0.9s
ESK Eskdalemuir 74.57 342 P P 00 14 51.8 -0.1
ESK AMB AMB 00 14 52.4
comp=Z,39nm,0.9s
ESK Eskdalemuir 74.57 342 *i* P P 00 14 52.2 +0.3
V21A Milh 74.58 54⇓P P 00 14 53.4 +0.9
baz=74,SNR=13
U22A Llaves 74.58 53⇓P P 00 14 53.7 +1.1
baz=74,SNR=10
LOT Lotru 74.59 322⇓*i*P P 00 14 52.7 +0.3
W20A Ramah 74.60 55⇓P P 00 14 53.4 +0.7
baz=74,SNR=14
R25A Fountain Ranch 74.65 50⇑P P 00 14 53.1 +0.3
baz=74,SNR=37
SPMN St. Paul 74.66 39⇓P P 00 14 52.2 -0.4
baz=74
TREC Trest 74.66 329⇓*i*P P 00 14 53.2 +0.7
TREC *e**PP pP 00 16 22.2 +2.0
TREC Trest 74.66 329⇓*i*P P 00 14 53.2 +0.7
TREC *e*pP pP 00 16 22.2 +2.0
ECK Cauldkaine Hil 74.68 342⇓*i*P P 00 14 52.5 0.0
ECK Cauldkaine Hil 74.68 342 P P 00 14 52.5 0.0
TANN Tannenbergstha 74.74 331 *e*P P 00 14 53.2 +0.2
comp=Z,18nm,1.0s
TANN *e*pP pP 00 16 22.7 +1.9
SCHQ Schefferville 74.75 19 P P 00 14 52.4 -0.5
SCHQ Schefferville 74.75 19 P P 00 14 52.4 -0.5
comp=Z,16nm,0.5s,baz=354,slow=6.1,SNR=71
ANTO Ankara 74.75 313 *e*P P 00 14 53.8 +0.5
ANTO pmax pmax
comp=Z,71nm,0.8s
ANTO Ankara 74.75 313 *e*P P 00 14 53.8 +0.5
comp=Z,71nm,0.8s
WERD Werda 74.77 331 *e*P P 00 14 53.4 +0.3
comp=Z,26nm,0.9s
WERD *e*pP pP 00 16 22.9 +2.0
N30A Hueftle Ranch, 74.77 46⇓P P 00 14 52.9 -0.5
baz=74
PLN Plauen 74.78 331 *e*P P 00 14 53.5 +0.3
comp=Z,172nm,1.1s
HUMR Humele 74.81 320⇓*i*P P 00 14 52.9 -0.5
MOX Moxa 74.82 332 *e*P P 00 14 53.7 +0.3
comp=Z,36nm,0.9s
MOX *e*pP pP 00 16 23.2 +2.0
MOX Moxa 74.82 332 *e*P P 00 14 53.7 +0.3
MOX *e**PP pP 00 16 23.2 +2.0
MOX pmax pmax
comp=Z,36nm,0.9s
GUNZ Gunzen 74.83 331 *e*P P 00 14 53.9 +0.4
comp=Z,32nm,0.8s
GUNZ *e*pP pP 00 16 23.4 +2.2
KSCO Kaye Shedlock' 74.86 49⇑P P 00 14 54.0 0.0
baz=75
BUD Budapest 74.86 326⇓*e* P 00 14 54.7 +1.1
WERN Wernitzgruen 74.88 331 *e*P P 00 14 54.3 +0.5
comp=Z,36nm,0.7s
WERN *e*pP pP 00 16 23.6 +2.1
V22A San Miguel Ran 74.90 53⇓P P 00 14 55.1 +0.7
baz=75,SNR=13
NKC Novy Kostel 74.90 331⇓*i*P P 00 14 54.1 +0.2
NKC *e**PP pP 00 16 24.0 +2.3
NKC Novy Kostel 74.90 331⇓*i*P P 00 14 54.1 +0.2
NKC *e*pP pP 00 16 24.0 +2.3
S25A Robets Cordova 74.93 51⇓P P 00 14 54.3 -0.2
baz=75,SNR=35
R26A Arlington 74.97 50⇑P P 00 14 54.9 +0.3
baz=75,SNR=42
U23A El Rito 74.98 53⇑P P 00 14 56.1 +1.2
baz=75,SNR=19
ZST Bratislava 75.00 327 *e*P P 00 14 54.6 +0.2
ZST pmax pmax
comp=Z,29nm,0.8s
ZST Bratislava 75.00 327 *e*P P 00 14 54.6 +0.2
PKSN Nyarlorinc 75.01 325⇑*e* P 00 14 56.1 +1.6
X20A Quemado 75.02 55⇓P P 00 14 56.4 +1.3
baz=75,SNR=18
GZR Gura Zlata 75.06 322⇓P P 00 14 55.2 +0.3
GZR Gura Zlata 75.06 322⇓*i*P P 00 14 55.2 +0.3
W21A San Fidel 75.08 54⇑P P 00 14 56.2 +0.8
baz=75,SNR=7.0
WTSB Winterswijk 75.14 335 *e*P P 00 14 55.2 +0.1
comp=Z,81nm,0.6s
PKS7 Kunszentmiklos 75.17 325⇓*e* P 00 14 56.2 +0.8
DRWC Darouich 75.18 308 *e*P P 00 14 55.3 -0.5
PKSG 75.18 326⇓*e* P 00 14 56.3 +0.8
UBBA Unterbreizbach 75.19 333 *e*P P 00 14 55.6 +0.3
comp=Z,34nm,0.7s
UBBA *e*pP pP 00 16 25.3 +2.2
Q28A Sharon Springs 75.22 48⇑P P 00 14 55.8 -0.2
baz=75,SNR=5.2
MANZ Manzenberg 75.23 331 *e*P P 00 14 56.0 +0.3
comp=Z,40nm,1.3s
MANZ *e*pP pP 00 16 25.7 +2.1
KESW Keswick, Cumbr 75.23 342⇓*e*P P 00 14 55.7 +0.1
KESW AMB AMB 00 14 57.0
comp=Z,89nm,1.0s
KESW Keswick, Cumbr 75.23 342 P P 00 14 55.7 +0.1
KESW AMB AMB 00 14 57.0
comp=Z,89nm,1.0s
BGNE Belgrade 75.24 44⇓P P 00 14 55.9 -0.1
baz=75,SNR=9.3
CSKK Cs˝ákako 75.25 326⇓*e* P 00 14 56.8 +0.9
O30A MW Ranch, Wils 75.26 46⇑P P 00 14 55.8 -0.3
baz=75,SNR=8.9
P29A Atwood 75.27 47⇑P P 00 14 56.0 -0.2
baz=75
R27A Eads 75.32 49⇑P P 00 14 56.5 0.0
baz=75,SNR=40
ZIMR 75.33 320⇑P P 00 14 56.7 +0.4
ZIMR 75.33 320⇑*i*P P 00 14 56.7 +0.4
T25A Trinidad 75.33 51⇑P P 00 14 57.2 +0.4
baz=75,SNR=33
TUC Tucson 75.35 58 *e*P P 00 14 57.7 +0.9
TUC Tucson 75.35 58 *e*P P 00 14 57.6 +0.9
BZS Buzias 75.36 323⇓P P 00 14 56.7 +0.2
BZS Buzias 75.36 323⇓*i*P P 00 14 56.7 +0.2
ROTZ Rotzenmuhle 75.38 331 *e*P P 00 14 57.2 +0.6
comp=Z,34nm,1.0s
U24A Moreno Valley 75.42 52⇑P P 00 14 58.7 +1.3
baz=75,SNR=7.7
V23A Ortiz Mt. (NFS 75.42 53⇑P P 00 14 59.1 +1.7
baz=75,SNR=11
PKST T˝s 75.42 326⇓*e* P 00 14 57.5 +0.6
COWI Conover 75.46 36 *e*P P 00 14 56.7 -0.4
comp=Z,68nm,0.7s
KHC Kasperske Hory 75.47 330⇓*i*P P 00 14 57.8 +0.7
KHC *e**PP pP 00 16 27.6 +2.6
KHC Kasperske Hory 75.47 330⇓*i*P P 00 14 57.8 +0.7
KHC *e*pP pP 00 16 27.6 +2.6
KHC Kasperske Hory 75.47 330 *e*P P 00 14 56.7 -0.4
comp=Z,64nm,0.8s
S26A Kim 75.47 50⇑P P 00 14 57.4 -0.1
baz=75,SNR=41
BUG Bochum--Univer 75.47 335 *e*P P 00 14 57.2 +0.2
comp=Z,82nm,1.0s
BUG *e*pP pP 00 16 27.1 +2.2
X21A Alamocita Cree 75.49 55⇑P P 00 14 59.1 +1.3
baz=75,SNR=34
W22A Albuquerque 75.54 54⇑P P 00 14 59.3 +1.3
baz=75
Y20A Horse Springs, 75.56 56⇑P P 00 14 59.5 +1.4
baz=75,SNR=29

PKS2 Kecel 75.60 325⇓*e* P 00 14 58.4 +0.6
SOP Sopron 75.62 327⇓*e* P 00 14 59.3 +1.3
P30A Selden 75.65 47⇑P P 00 14 57.9 -0.5
baz=75,SNR=6.1
GEC2 GERESS Array S 75.67 330 *e*P P 00 14 58.5 +0.2
comp=Z,31nm,0.6s
GEC2 GERESS Array S 75.67 330 *e*P P 00 14 58.5 +0.2
GEC2 pmax pmax
comp=Z,31nm,0.6s
GERES GERESS Array B 75.67 330 P P 00 14 58.5 +0.2
GERES pP pP 00 16 28.2 +2.0
GERES GERESS Array B 75.67 330 P P 00 14 58.5 +0.2
comp=Z,22nm,0.6s,baz=38,slow=6.0,SNR=125
GERES pP pP 00 16 28.2 +2.0
comp=Z,2.6nm,0.7s,baz=27,slow=4.5,SNR=4.2
CONA Conrad Observa 75.67 328⇓*i*P P 00 14 59.4 +1.1
comp=Z,47nm,0.7s,SNR=64
CONA ⇓*i*pP pP 00 16 28.9 +2.6
comp=Z,22nm,1.3s
WET Wettzell 75.69 330 *e*P P 00 14 59.2 +0.8
comp=Z,78nm,1.0s
WET *e*pP pP 00 16 28.5 +2.2
WET Wettzell 75.69 330 *e*P P 00 14 59.2 +0.8
WET *e**PP pP 00 16 28.5 +2.2
WET pmax pmax
comp=Z,78nm,1.0s
S27A Las Animas 75.72 50⇑P P 00 14 58.7 -0.2
baz=76,SNR=6.3
BTCH Batrach 75.72 308 *e*P P 00 14 59.9 +1.0
T26A Comanche Natio 75.74 50⇓P P 00 14 59.0 -0.1
baz=76,SNR=40
GRF Grafenberg Arr 75.77 331 *e*P P 00 14 59.6 +0.8
comp=Z,116nm,0.7s
GRF *e*pP pP 00 16 29.0 +2.2
GRF Grafenberg Arr 75.77 331 *e*P P 00 14 59.6 +0.8
GRF *e**PP pP 00 16 29.0 +2.2
GRF pmax pmax
comp=Z,116nm,0.7s
GRFO Grafenberg 75.77 331 *e*P P 00 14 59.3 +0.5
GRFO pmax pmax
comp=Z,102nm,0.8s
GRFO Grafenberg 75.77 331 *e*P P 00 14 59.3 +0.5
comp=Z,102nm,0.8s
R28A Tribune 75.78 49⇓P P 00 14 58.8 -0.4
baz=76,SNR=6.7
Q29A Oakley 75.79 48⇑P P 00 14 58.8 -0.3
baz=76,SNR=8.3
ANMO Albuquerque 75.86 54 *e*P P 00 15 00.6 +0.8
W23A Werner Place, 75.87 53⇓P P 00 15 00.8 +1.0
baz=76,SNR=8.7
Y21A Point of Rocks 75.88 55⇑P P 00 15 01.4 +1.5
baz=76,SNR=12
X22A Bernardo 75.88 54⇑P P 00 15 01.7 +1.8
baz=76,SNR=8.1
LAZ Ladron 75.89 55 *e*P P 00 15 00.4 +0.5
comp=Z,13nm,1.0s
LAZ *e*pP pP 00 16 26.6 -1.3
U25A Circle Dot Ran 75.89 51⇓P P 00 15 00.3 +0.4
baz=76,SNR=5.3
PKS9 Tamasi 75.89 326⇓*e* P 00 14 59.5 0.0
V24A Rampart Ranch, 75.93 52⇑P P 00 15 01.4 +1.2
baz=76,SNR=11
Z20A Nine Sixteen R 76.02 56⇑P P 00 15 01.9 +1.3
baz=76,SNR=39
PKSM Moragy 76.06 325⇓*e* P 00 15 00.3 -0.1
R29A Marienthal 76.06 48⇑P P 00 15 00.4 -0.3
baz=76,SNR=14
ARNB Al Arnab 76.12 308 *e*P P 00 15 02.1 +1.1
KBI1 Birley Grange 76.12 340⇓*i*P P 00 15 00.7 +0.1
KBI1 Birley Grange 76.12 340 P P 00 15 00.7 +0.1
EDRB Edirne 76.14 318 P P 00 15 00.5 -0.4
TNS Taunus Mts 76.19 333 *e*P P 00 15 01.5 +0.4
comp=Z,64nm,1.0s
TNS *e*pP pP 00 16 31.3 +2.0
TNS Taunus Mts 76.19 333 *e*P P 00 15 01.5 +0.4
TNS *e**PP pP 00 16 31.3 +2.0
TNS pmax pmax
comp=Z,64nm,1.0s
V25A Rancho No Teng 76.20 52⇑P P 00 15 02.5 +0.8
baz=76,SNR=10
LPM Los Pinos Moun 76.23 54 *e*P P 00 15 02.9 +1.0
W24A Lazy 6 Ranch, 76.24 53⇑P P 00 15 03.2 +1.3
baz=76,SNR=24
U26A Atchley Ranch, 76.25 51⇓P P 00 15 02.1 +0.2
baz=76,SNR=13
Y22D IRIS PASSCAL I 76.25 55⇑P P 00 15 03.1 +1.2
baz=76
X23A Hourglass Bar 76.28 54⇑P P 00 15 03.2 +1.1
baz=76,SNR=12
T27A Campo 76.28 50⇓P P 00 15 02.0 0.0
baz=76,SNR=5.7
S28A Manter 76.31 49⇑P P 00 15 02.2 +0.1
baz=76,SNR=15
MOA Molln 76.31 329⇓*i*P P 00 15 02.4 +0.6
comp=Z,28nm,0.7s,SNR=42
MOA ⇓*i*pP pP 00 16 32.1 +2.1
comp=Z,9.6nm,1.2s
Y22A Socorro 76.33 55⇓P P 00 15 03.4 +1.0
baz=76,SNR=9.8
BNM Barren Site 76.36 54 *e*P P 00 15 02.9 +0.3
comp=Z,19nm,1.0s
ARSA Arzberg 76.37 328⇓*i*P P 00 15 03.0 +0.8
comp=Z,12nm,0.6s,SNR=19
ARSA ⇓*e*pP pP 00 16 32.8 +2.5
comp=Z,11nm,1.4s
Z21A St. Cloud Mine 76.39 56⇓P P 00 15 04.1 +1.3
baz=76,SNR=27
120A U Bar Ranch, L 76.41 57⇑P P 00 15 04.2 +1.3
baz=76,SNR=33
HGN Heimansgroeve 76.46 335 *e*P P 00 15 02.6 +0.1
comp=Z,52nm,0.7s
Q31A Ellis 76.49 47⇑P P 00 15 02.4 -0.6
baz=76,SNR=5.1
BEBN Eben Emael 76.50 335 P P 00 15 02.9 +0.1
comp=Z,36nm,0.9s
BIDA Albida 76.56 307 *e*P P 00 15 02.8 -0.7
MEM Membach 76.57 335 P P 00 15 03.3 +0.1
comp=Z,61nm,1.1s
WME Myndd Eilian 76.60 342⇓*i*P P 00 15 03.1 -0.2
WME Myndd Eilian 76.60 342 P P 00 15 03.1 -0.2
R30A Dighton 76.60 48⇑P P 00 15 03.1 -0.6
baz=76,SNR=9.0
TOD Tromm 76.62 333 *e*P P 00 15 03.6 +0.1
TOD Tromm 76.62 333 *e*P P 00 15 03.6 +0.1
WPM1 Penmaenmawr 76.65 342⇓*i*P P 00 15 03.5 -0.1
WPM1 Penmaenmawr 76.65 342 P P 00 15 03.5 -0.1
V26A Tequesquite Ra 76.67 51⇓P P 00 15 04.3 +0.1
baz=76,SNR=21
S29A Ulysses 76.69 49⇑P P 00 15 03.6 -0.6
baz=76
X24A Lazy VL Ranch, 76.70 53⇑P P 00 15 05.9 +1.4
baz=76,SNR=30
U27A Thompson Grove 76.71 50⇓P P 00 15 04.5 +0.1
baz=76,SNR=8.8
ALT Altintas 76.71 314 P P 00 15 04.9 +0.6
WLF1 Llynfaes 76.72 342⇓*e*P P 00 15 03.5 -0.4
WLF1 Llynfaes 76.72 342 P P 00 15 03.5 -0.4
W25A X Bar L Ranch, 76.75 52⇑P P 00 15 05.5 +0.9
baz=76,SNR=39
ABH Alteburg 76.76 334 *e*P P 00 15 04.4 +0.1
YRC Rhoscolyn 76.79 342 *e*P P 00 15 03.9 -0.4
YRC Rhoscolyn 76.79 342 P P 00 15 03.9 -0.4
YLL Llanberis 76.81 342⇓*i*P P 00 15 04.2 -0.2
YLL Llanberis 76.81 342 P P 00 15 04.2 -0.2
Z22A Elephant Butte 76.83 55⇑P P 00 15 06.2 +1.1
baz=77,SNR=9.1
Y23A Lovelace Mesa, 76.84 54⇑P P 00 15 06.3 +1.1
baz=77,SNR=26
FOEL Foel Wylfa 76.84 341⇓*e*P P 00 15 04.9 +0.3
FOEL AMB AMB 00 15 05.6
comp=Z,82nm,0.8s
FOEL Foel Wylfa 76.84 341 P P 00 15 04.9 +0.3
FOEL AMB AMB 00 15 05.6
comp=Z,82nm,0.8s
PLD Plovdiv 76.86 319 P P 00 15 05.6 +0.7
HAWK Hawaek 76.89 307 *e*P P 00 15 04.3 -1.0
319A Douglas 76.90 58⇓P P 00 15 06.5 +1.0
baz=77,SNR=19
121A Cookes Peak, D 76.90 56⇑P P 00 15 06.8 +1.2
baz=77,SNR=35
RJOB Jochberg 76.93 329 *e*P P 00 15 06.1 +0.8
comp=Z,50nm,0.9s
RJOB *e*pP pP 00 16 36.0 +2.4
220A Playas Peak, P 76.94 57⇓P P 00 15 06.7 +0.9
baz=77,SNR=17

BCLA Clavier 76.95 335 P P 00 15 05.3 +0.1
comp=Z,38nm,1.2s
T29A Hugoton 76.95 49 ⇑P P 00 15 05.3 -0.3
baz=77
R31A Burdett 76.98 47 ⇑P P 00 15 04.8 -1.0
baz=77,SNR=12
GDZ Gediz 77.00 314 *i* P P 00 15 06.3 +0.3
S30A Montezuma 77.00 48 ⇑P P 00 15 05.7 -0.2
baz=77,SNR=23
YRE Yr Eifl 77.02 342 ⇓*i*P P 00 15 05.5 0.0
YRE Yr Eifl 77.02 342 P P 00 15 05.5 0.0
SOKA Soboth 77.03 328 ⇓*e*P P 00 15 06.5 +0.5
comp=Z,70nm,1.2s
SOKA ⇓*e*pP pP 00 16 36.5 +2.2
comp=Z,16nm,1.4s
PERS Pernice 77.04 327 *i* P P 00 15 06.3 +0.4
U28A Mallet 77.06 50 ⇓P P 00 15 06.0 -0.3
baz=77
RUP Ruppelstein 77.07 334 *e*P P 00 15 06.0 0.0
RUP Ruppelstein 77.07 334 *e*P P 00 15 06.0 0.0
FUR Furstenfeldbru 77.08 331 *e*P P 00 15 06.7 +0.6
comp=Z,144nm,1.1s
FUR Furstenfeldbru 77.08 331 *e*P P 00 15 06.7 +0.6
FUR pmax pmax
comp=Z,144nm,1.1s
DURS Dursunbey 77.08 315 *i* P P 00 15 06.7 +0.3
KTD Kalmit 77.10 333 *e*P P 00 15 06.3 +0.1
KTD Kalmit 77.10 333 *e*P P 00 15 06.3 +0.1
HLM1 Long Mynd 77.11 341 ⇓*e*P P 00 15 06.3 +0.2
HLM1 AMB AMB 00 15 06.9
comp=Z,45nm,0.9s
HLM1 Long Mynd 77.11 341 P P 00 15 06.3 +0.2
HLM1 AMB AMB 00 15 06.9
comp=Z,45nm,0.9s
SCIA State Center 77.13 41 *e*P P 00 15 06.9 +0.5
comp=Z,94nm,0.8s
ERMK Ermenek 77.15 310 *i* P P 00 15 07.1 +0.2
X25A Clemmons Ranch 77.16 53 ⇓P P 00 15 08.0 +1.1
baz=77,SNR=23
Y24A Capitan 77.18 54 ⇑P P 00 15 07.9 +0.7
baz=77,SNR=17
V27A Dan Oppiter Fa 77.21 51 ⇓P P 00 15 07.3 +0.1
baz=77,SNR=7.3
ALN Alexandroupoli 77.21 317 P P 00 15 04.0 -2.9
W26A Owens Ranch, T 77.22 52 ⇓P P 00 15 08.2 +1.0
baz=77,SNR=14
122A Conniff Cattle 77.22 56 ⇓P P 00 15 08.7 +1.4
baz=77
STU Stuttgart 77.23 332 *e*P P 00 15 07.2 +0.4
comp=Z,90nm,0.9s
Z23A Rita Site, Whi 77.24 55 ⇑P P 00 15 08.4 +1.0
baz=77,SNR=5.0
DIVS Divibare 77.26 323 P P 00 15 07.3 +0.1
221A Mesquite Ranch 77.30 57 ⇓P P 00 15 08.7 +1.0
baz=77
KBA Koelnbreinsper 77.30 329 ⇓*i*P P 00 15 08.3 +0.8
comp=Z,138nm,1.2s,SNR=42
KBA ⇑*i*pP pP 00 16 38.5 +2.6
comp=Z,30nm,1.1s
OBKA Obir 77.35 328 ⇓*i*P P 00 15 08.0 +0.3
comp=Z,22nm,0.6s,SNR=10
OBKA ⇓*e*pP pP 00 16 38.1 +2.0
comp=Z,11nm,1.2s
320A Kipp Ranch, An 77.36 58 ⇓P P 00 15 09.1 +1.0
baz=77,SNR=9.3
GIVF Givet 77.37 335 ⇓*i*P P 00 15 07.5 -0.1
comp=Z,50nm,0.7s
GIVF Givet 77.37 335 ⇓*i*P P 00 15 07.5 -0.1
GIVF pmax pmax
comp=Z,50nm,0.7s
GIVF Givet 77.37 335 ⇓*i*P P 00 15 07.5 -0.1
comp=Z,50nm,0.7s
SKP1 Kophill 77.37 339 ⇓*e*P P 00 15 07.3 -0.2
SKP1 Kophill 77.37 339 P P 00 15 07.3 -0.2
WLF Walferdange 77.37 334 P P 00 15 07.9 +0.3
GOLS Golise 77.38 327 *i* P P 00 15 08.1 +0.3
BALY Balya 77.38 316 *i* P P 00 15 08.6 +0.7
SSW Stow on the Wo 77.39 340 ⇓*i*P P 00 15 08.0 +0.4
SSW Stow on the Wo 77.39 340 P P 00 15 08.0 +0.4
ARMA Armidale 77.41 175 *e*P P 00 15 10.2 +2.2
comp=Z,27nm,1.1s
ELSH Elham, Standar 77.42 338 *e*P P 00 15 07.6 -0.2
ELSH AMB AMB 00 15 08.7
comp=Z,197nm,0.9s
ELSH Elham, Standar 77.42 338 P P 00 15 07.6 -0.2
ELSH AMB AMB 00 15 08.7
comp=Z,197nm,0.9s
T30A Plains 77.42 49 ⇑P P 00 15 07.9 -0.3
baz=77
DOU Dourbes 77.44 335 P P 00 15 07.9 0.0
comp=Z,22nm,1.5s
LANF Langenberg 77.48 333 *e*P P 00 15 08.3 0.0
LANF Langenberg 77.48 333 *e*P P 00 15 08.3 0.0
LANF Langenberg 77.48 333 *e*P P 00 15 08.3 0.0
U29A Oasis Ranch, S 77.50 49 ⇓P P 00 15 08.1 -0.5
baz=77
S31A Mullinville 77.52 48 ⇑P P 00 15 08.0 -0.7
baz=77,SNR=8.5
V28A Channing 77.53 50 ⇓P P 00 15 08.8 -0.2
baz=77
KHAL Karahalli 77.55 314 *i* P P 00 15 09.3 +0.4
ZALF Zalf 77.57 305 *e*P P 00 15 10.2 +1.2
MYKA Terra Mystica 77.58 328 ⇓*e*P P 00 15 08.8 -0.1
comp=Z,34nm,0.9s
MYKA ⇓*e*pP pP 00 16 39.0 +1.7
comp=Z,12nm,1.1s
BAIF Baives 77.58 336 ⇓*i*P P 00 15 08.7 0.0
comp=Z,44nm,0.6s
BAIF Baives 77.58 336 ⇓*i*P P 00 15 08.7 0.0
BAIF pmax pmax
comp=Z,44nm,0.6s
BAIF Baives 77.58 336 ⇓*i*P P 00 15 08.7 0.0
comp=Z,44nm,0.6s
Y25A Mesa, Roswell 77.59 53 ⇑P P 00 15 09.9 +0.6
baz=77,SNR=12
X26A CR and CF Fran 77.60 52 ⇓P P 00 15 10.0 +0.7
baz=77,SNR=26
222A Williams Famil 77.61 56 ⇑P P 00 15 10.3 +0.9
baz=77,SNR=5.4
W27A Bowe Ranch, En 77.61 51 ⇑P P 00 15 09.9 +0.6
baz=77,SNR=16
MCH1 Michaelchurch 77.62 341 ⇓*e*P P 00 15 08.8 -0.1
MCH1 AMB AMB 00 15 09.6
comp=Z,74nm,0.9s
MCH1 Michaelchurch 77.62 341 P P 00 15 08.8 -0.1
MCH1 AMB AMB 00 15 09.6
comp=Z,74nm,0.9s
Z24A Sheeppen Canyo 77.67 54 ⇑P P 00 15 10.6 +0.8
baz=77,SNR=15
123A Bell Site, Whi 77.69 55 ⇓P P 00 15 10.8 +1.0
baz=78
MENF Mencas 77.69 337 *e*P P 00 15 04.6 -4.7
MENF Mencas 77.69 337 *e*P P 00 15 04.6 -4.7
WATA Walderalm 77.69 330 ⇓*i*P P 00 15 10.3 +0.7
comp=Z,54nm,0.5s,SNR=57
WATA ⇑*e*pP pP 00 16 40.6 +2.5
comp=Z,21nm,1.1s
WTTA Wattenberg 77.73 330 ⇓*e*P P 00 15 10.7 +0.8
comp=Z,74nm,0.6s,SNR=55
WTTA ⇑*i*pP pP 00 16 40.8 +2.5
comp=Z,33nm,1.2s
TOTH TOTAH 77.74 306 *e*P P 00 15 11.0 +1.0
LJU Ljubljana 77.76 328 *i* pP pP 00 16 36.5 -1.9
U30A WK&E Inc. Balk 77.76 49 ⇑P P 00 15 09.9 -0.1
baz=78
SWN1 Swindon 77.80 340 ⇓*e*P P 00 15 10.5 +0.6
SWN1 AMB AMB 00 15 11.0
comp=Z,215nm,0.6s
SWN1 Swindon 77.80 340 P P 00 15 10.5 +0.6
SWN1 AMB AMB 00 15 11.0
comp=Z,215nm,0.6s
V29A Stinnett 77.81 50 ⇑P P 00 15 10.2 -0.2
baz=78
T31A Randall Ranch, 77.82 48 ⇓P P 00 15 10.1 -0.3
baz=78,SNR=11
RETA Reute 77.84 331 ⇓*i*P P 00 15 10.8 +0.5
comp=Z,60nm,1.1s,SNR=30
NVR Nevrokopi 77.84 319 P P 00 15 11.0 +0.6
NVR Nevrokopi 77.84 319 *e*P P 00 15 10.9 +0.6
KULA Kula-Manisa 77.84 314 P P 00 15 10.2 -0.3
STR Strasbourg 77.84 333 *e*P P 00 15 10.8 +0.6
STR Strasbourg 77.84 333 *e*P P 00 15 10.8 +0.6
STR Strasbourg 77.84 333 *e*P P 00 15 10.8 +0.6
MOTA Moosalm 77.85 330 ⇓*i*P P 00 15 11.0 +0.5
comp=Z,96nm,0.9s,SNR=59
MOTA ⇓*i*pP pP 00 16 41.0 +2.0
comp=Z,12nm,0.9s
WOL Wolverton 77.85 339 ⇓*e*P P 00 15 10.3 +0.1
WOL AMB AMB 00 15 10.8
comp=Z,162nm,0.6s
WOL Wolverton 77.85 339 P P 00 15 10.3 +0.1
WOL AMB AMB 00 15 10.8
comp=Z,162nm,0.6s
ABTA Abfaltersbach 77.88 329 ⇓*e*P P 00 15 10.0 -0.5
comp=Z,22nm,0.8s,SNR=12
ABTA ⇑*e*pP pP 00 16 41.3 +2.2
comp=Z,8.5nm,1.0s
HMNX Herstmonceux 77.88 338 ⇓*e*P P 00 15 11.2 +1.0
HMNX Herstmonceux 77.88 338 P P 00 15 11.2 +1.0
BFO Black Forest 77.89 332 P P 00 15 10.9 +0.4
comp=Z,314nm,1.0s,SNR=23
BFO Black Forest 77.89 332 *e*P P 00 15 10.7 +0.2
comp=Z,68nm,1.2s
BFO Black Forest 77.89 332 *e*P P 00 15 10.7 +0.2
BFO pmax pmax
comp=Z,68nm,1.2s
BFO Black Forest 77.89 332 *e*P P 00 15 10.5 0.0
comp=Z,66nm,1.1s
X27A F and S Farms, 77.91 52 ⇑P P 00 15 12.0 +1.0
baz=78,SNR=17
W28A Vega 77.92 51 ⇑P P 00 15 11.6 +0.6
baz=78,SNR=5.6
BOJS Bojanci 77.95 327 *i* P P 00 15 10.8 0.0
BOJS *i* pP pP 00 16 40.9 +1.5
BOJS *e*PP PP 00 18 27.9 +15
BOJS *e*SKSac SKSac 00 24 45.1 -0.9
SPAK Spaichingen-Ko 77.95 332 *e*P P 00 15 11.1 +0.2
JAVS Javornik 78.05 328 *i* P P 00 15 10.7 -0.8
JAVS *i* pP pP 00 16 41.4 +1.3
SALA Sala 78.06 305 *e*P P 00 15 13.0 +1.1
Z25A Roswell 78.06 54 ⇑P P 00 15 12.8 +0.9
baz=78,SNR=20
223A Chaparral, Ant 78.06 56 ⇓P P 00 15 13.0 +1.1
baz=78
Y26A Elida 78.06 53 ⇑P P 00 15 12.5 +0.7
baz=78,SNR=10.0
124A Stringfield Ra 78.09 55 ⇓P P 00 15 12.7 +0.6
baz=78,SNR=8.2
PLE Pljevlja 78.14 323 ⇓*i*P P 00 15 12.4 +0.3
SRS Serrai 78.15 319 P P 00 15 11.9 -0.1
CDF Champ du Feu 78.15 333 ⇓*i*P P 00 15 12.1 +0.1
comp=Z,141nm,0.9s
CDF *e*pP pP 00 16 41.9 +1.3
CDF Champ du Feu 78.15 333 ⇓*i*P P 00 15 12.1 +0.1
CDF *e**PP pP 00 16 41.9 +1.3
CDF pmax pmax
comp=Z,141nm,0.9s
CDF Champ du Feu 78.15 333 ⇓*i*P P 00 15 12.1 +0.1
comp=Z,141nm,0.9s
CDF *e*pP pP 00 16 41.9 +1.3
KORT Korkueli 78.18 312 *i* P P 00 15 13.1 +0.6
CSS Prodhromos 78.21 309 P P 00 15 12.9 +0.5
CSS Prodhromos 78.21 309 *e*P P 00 15 13.0 +0.5
comp=Z,21nm,0.6s
FETA Feichten 78.25 330 ⇓*i*P P 00 15 13.2 +0.5
comp=Z,56nm,1.1s,SNR=30
FETA ⇑*e*pP pP 00 16 44.1 +2.8
comp=Z,15nm,1.1s
LIBD Limburg 78.28 333 *e*P P 00 15 12.7 +0.1
LIBD Limburg 78.28 333 *e*P P 00 15 12.7 +0.1
U31A Nisar Ranch 78.29 49 ⇑P P 00 15 13.4 +0.4
baz=78,SNR=11
DAVA Damuels 78.31 331 ⇑*i*P P 00 15 13.4 +0.4
comp=Z,52nm,0.7s,SNR=23
DAVA ⇑*e*pP pP 00 16 43.1 +1.5
comp=Z,11nm,0.8s
IVA Berane 78.31 322 *e*P P 00 15 13.5 +0.5
W29A Amraillo 78.32 51 ⇓P P 00 15 13.6 +0.4
baz=78
TRI Trieste 78.32 328 *e*P P 00 15 12.2 -0.7
TRI Trieste 78.32 328 *e*P P 00 15 12.2 -0.7
V30A Spur Ranch, Mi 78.33 50 ⇓P P 00 15 13.3 +0.1
baz=78
ECH Echery 78.36 333 *e*P P 00 15 12.8 -0.2
ECH *e**PP pP 00 16 39.4 -2.3
ECH pmax pmax
comp=Z,57nm,0.8s
ECH Echery 78.36 333 *e*P P 00 15 12.8 -0.2
comp=Z,57nm,0.8s
ECH *e*pP pP 00 16 39.4 -2.3
ECH Echery 78.36 333 *e*P P 00 15 12.9 -0.2
ASF Jabal al Asfar 78.37 305 P P 00 15 14.7 +1.2
ASF pP pP 00 16 44.2 +2.0
ASF Jabal al Asfar 78.37 305 P P 00 15 14.7 +1.2
comp=Z,4.6nm,0.5s,baz=255,slow=5.1,SNR=17
ASF pP pP 00 16 44.2 +2.0
comp=Z,1.7nm,0.7s,baz=224,slow=5.2,SNR=3.1
FELD Feldberg im Sc 78.39 332 *e*P P 00 15 13.1 -0.3
SKO Skopje 78.40 321 *e*P P 00 15 14.7 +1.3
LIA Limnos Island 78.40 317 P P 00 15 13.2 -0.2
LIA Limnos Island 78.40 317 *e*P P 00 15 12.8 -0.6
KNT Kendrikon 78.42 320 P P 00 15 13.6 +0.1
VAY Valandovo 78.44 320 P P 00 15 13.4 -0.1
VAY Valandovo 78.44 320 *i* P P 00 15 13.6 +0.1
UPM Unac-Piva 78.45 323 ⇓*i*P P 00 15 13.7 -0.1
Y27A Causey 78.45 52 ⇓P P 00 15 14.5 +0.5
baz=78,SNR=13
Z26A Caprock 78.47 53 ⇑P P 00 15 14.9 +0.9
baz=78,SNR=29
AMTX Amarillo 78.48 51 *e*P P 00 15 14.2 +0.2
comp=Z,49nm,0.7s
X28A Dimmitt 78.49 51 ⇑P P 00 15 14.4 +0.3
baz=78
PAGF Fort de Pagny 78.49 334 ⇓*i*P P 00 15 14.2 +0.5
comp=Z,38nm,0.6s
PAGF Fort de Pagny 78.49 334 ⇓*i*P P 00 15 14.2 +0.5
comp=Z,38nm,0.6s
PVY Plav 78.51 322 ⇓*i*P P 00 15 13.9 -0.2
224A Cornudas Mount 78.52 55 ⇑P P 00 15 15.2 +0.8
baz=78,SNR=17
125A Gardner Draw, 78.56 54 ⇑P P 00 15 15.4 +0.9
baz=78,SNR=34
MMAI Mount Meron Ar 78.57 306 P P 00 15 15.6 +1.1
MMAI Mount Meron Ar 78.57 306 P P 00 15 15.6 +1.1
comp=Z,20nm,0.5s,baz=42,slow=6.7,SNR=48
MSTX Muleshoe 78.60 52 ⇑P P 00 15 14.6 -0.1
baz=78,SNR=5.1
OUR Ouranopolis 78.60 318 P P 00 15 13.3 -1.1
HEX Exmoor 78.67 341 ⇓*i*P P 00 15 14.8 +0.2
HEX Exmoor 78.67 341 P P 00 15 14.8 +0.2
MOF Molkenrain 78.69 333 *e*P P 00 15 14.7 -0.2
MOF Molkenrain 78.69 333 *e*P P 00 15 14.7 -0.2
MOF Molkenrain 78.69 333 *e*P P 00 15 14.7 -0.2
THEF They Montfort 78.71 334 *e*P P 00 15 14.8 -0.1
THEF They Montfort 78.71 334 *e*P P 00 15 14.8 -0.1
THEF They Montfort 78.71 334 *e*P P 00 15 14.8 -0.1
NKY Niksic 78.73 323 ⇓*i*P P 00 15 15.0 -0.3
MEZF Maizieres J'vi 78.74 334 ⇓*i*P P 00 15 15.4 +0.4
comp=Z,91nm,0.8s
MEZF Maizieres J'vi 78.74 334 ⇓*i*P P 00 15 15.4 +0.4
comp=Z,91nm,0.8s
DAVOX Davos/Dischmat 78.75 331 P P 00 15 15.9 +0.6
DAVOX pP pP 00 16 45.1 +0.9
DAVOX Davos/Dischmat 78.75 331 P P 00 15 15.9 +0.6
comp=Z,26nm,0.6s,baz=13,slow=3.3,SNR=40
DAVOX pP pP 00 16 45.1 +0.9
comp=Z,7.8nm,0.9s,baz=299,slow=2.4,SNR=3.7
STKA Stephens Creek 78.75 183 *e*P P 00 15 16.1 +1.0
STKA Stephens Creek 78.75 183 P P 00 15 15.7 +0.5
comp=Z,16nm,0.8s,baz=340,slow=7.2,SNR=30
HORT Hortiatis 78.79 319 P P 00 15 14.5 -1.1
HAU Haudompre 78.80 333 ⇓*i*P P 00 15 15.2 -0.2
comp=Z,57nm,0.9s
HAU *e*R
comp=Z,55nm,20.2s
HAU Haudompre 78.80 333 ⇓*i*P P 00 15 15.2 -0.2
HAU pmax pmax
comp=Z,57nm,0.9s
HAU Haudompre 78.80 333 ⇓*i*P P 00 15 15.2 -0.2
comp=Z,57nm,0.9s
GRG Griva 78.81 320 P P 00 15 15.8 +0.2
HINF Hinteralfeld 78.81 333 ⇓*i*P P 00 15 15.1 -0.4
comp=Z,40nm,0.7s
HINF Hinteralfeld 78.81 333 ⇓*i*P P 00 15 15.1 -0.4
HINF pmax pmax
comp=Z,40nm,0.7s
HINF Hinteralfeld 78.81 333 ⇓*i*P P 00 15 15.1 -0.4
comp=Z,40nm,0.7s
X29A Tulia 78.81 51 ⇓P P 00 15 16.2 +0.4
baz=78,SNR=16
PLG Polygyros 78.81 319 P P 00 15 15.6 -0.1
PLG Polygyros 78.81 319 *e*P P 00 15 15.4 -0.3
W30A Crocket Farms 78.83 50 ⇓P P 00 15 16.4 +0.5
baz=79
BRY Bratogost 78.85 323 ⇓*i*P P 00 15 15.1 -0.8
Z27A Tatum 78.86 53 ⇓P P 00 15 16.5 +0.4
baz=79,SNR=46
MNTX Cornudas Mount 78.88 55 *e*P P 00 15 16.4 +0.3
comp=Z,22nm,1.1s
225A Deer Hill, Car 78.88 55 ⇑P P 00 15 17.0 +0.6
baz=79,SNR=11
NVLJ Novalja 78.89 327 P P 00 15 14.5 -1.4
AYDN Tasoluk 78.89 314 *i* P P 00 15 17.3 +1.1
HTL Hartland 78.89 341 ⇓*e*P P 00 15 16.1 +0.3
HTL AMB AMB 00 15 18.5
comp=Z,85nm,0.8s
HTL Hartland 78.89 341 P P 00 15 16.1 +0.3
HTL AMB AMB 00 15 18.5
comp=Z,85nm,0.8s
BBS Basel-Blauen 78.92 333 *e*P P 00 15 15.9 -0.2
BBS Basel-Blauen 78.92 333 *e*P P 00 15 15.9 -0.2
126A Clayton Basin, 78.92 54 ⇓P P 00 15 16.8 +0.3
baz=79,SNR=14
Y28A McKinney Farm, 78.93 52 ⇓P P 00 15 17.1 +0.6
baz=79
PDG Podgorica 78.94 323 P P 00 15 16.3 +0.1
TTG Podgorica 78.94 323 ⇓*i*P P 00 15 16.0 -0.2
SFTF Sexfontaines 79.01 334 ⇓*i*P P 00 15 16.7 +0.2
comp=Z,116nm,0.6s
SFTF Sexfontaines 79.01 334 ⇓*i*P P 00 15 16.7 +0.2
comp=Z,116nm,0.6s
324A Moseley Ranch, 79.02 55 ⇓P P 00 15 17.5 +0.4
baz=79,SNR=13
PHP Peshkopia 79.06 321 P P 00 15 16.9 -0.1
AKAS Kas 79.16 312 *i* P P 00 15 17.5 -0.2
TURN Turunc 79.16 313 *i* P P 00 15 19.9 +2.5
W31A Holland Ranch, 79.16 49 ⇓P P 00 15 18.1 +0.5
baz=79,SNR=16
FORT Forrest 79.18 195 *e*P P 00 15 18.0 +0.6
TUE Stuetta 79.20 331 *e*P P 00 15 18.1 +0.2
BUM Brajici-Budva 79.20 323 *e*P P 00 15 17.4 -0.3
STON Ston 79.21 324 P P 00 15 16.4 -1.2
BIA Bitola 79.23 320 *e*P P 00 15 17.2 -0.6
LOMF Lomont 79.23 333 *e*P P 00 15 17.8 0.0
LOMF Lomont 79.23 333 *e*P P 00 15 17.8 0.0
LOMF Lomont 79.23 333 *e*P P 00 15 17.8 0.0
HCY Herceg Novi 79.24 323 ⇓*i*P P 00 15 17.2 -0.7
X30A Coker Ranch, T 79.24 50 ⇑P P 00 15 18.1 0.0
baz=79,SNR=7.4
127A Arkansas Junct 79.26 53 ⇓P P 00 15 18.3 0.0
baz=79,SNR=5.6
Y29A Porterfield Fa 79.27 51 ⇓P P 00 15 18.5 +0.2
baz=79
226B Tecolote Peak, 79.27 54 ⇓P P 00 15 19.0 +0.6
baz=79,SNR=70
DYA Yadsworthy 79.30 341 ⇓*e*P P 00 15 18.0 0.0
DYA AMB AMB 00 15 18.6
comp=Z,63nm,1.0s
DYA Yadsworthy 79.30 341 P P 00 15 18.0 0.0
DYA AMB AMB 00 15 18.6
comp=Z,63nm,1.0s
Z28A Tucker Farm, M 79.33 52 ⇑P P 00 15 18.6 0.0
baz=79
ULC Ulcinj 79.33 322 ⇓*i*P P 00 15 17.6 -0.8
325A Bean Ranch, Si 79.36 55 ⇓P P 00 15 19.5 +0.6
baz=79,SNR=18
FNA Florina 79.40 320 P P 00 15 17.8 -1.0
FNA Florina 79.40 320 *e*P P 00 15 18.6 -0.2
LIT Litokhoron 79.46 319 P P 00 15 18.6 -0.5
LIT Litokhoron 79.46 319 *e*P P 00 15 18.2 -0.9
X31A McDonald Ranch 79.57 50 ⇑P P 00 15 20.1 +0.3
baz=79,SNR=19
TIR Tirane 79.58 322 P P 00 15 19.9 +0.2
AOS Alonnisos 79.59 318 P P 00 15 18.7 -1.1
AOS Alonnisos 79.59 318 *e*P P 00 15 19.9 +0.1
KZN Kozani 79.61 320 P P 00 15 19.4 -0.6
KZN Kozani 79.61 320 *e*P P 00 15 19.9 -0.1
RAYN Ar Rayn 79.63 293 P P 00 15 20.0 -0.3
comp=Z,130nm,1.1s,SNR=16
Y30A Stafford Cattl 79.67 51 ⇓P P 00 15 20.6 +0.2
baz=79,SNR=5.3
Z29A Hungry Hill Ra 79.71 52 ⇑P P 00 15 21.2 +0.5
baz=80,SNR=34
XOR Xorichti 79.74 318 P P 00 15 19.5 -1.1
NEO Neokhori 79.78 318 P P 00 15 20.4 -0.4
NEO Neokhori 79.78 318 *e*P P 00 15 20.4 -0.4
SKIA Skiathos 79.78 318 P P 00 15 20.4 -0.4
KBN Korca 79.78 321 P P 00 15 20.7 -0.2
425A Indio Mountain 79.79 56 ⇑P P 00 15 21.9 +0.7
baz=80,SNR=37
227A Bennet, Jal 79.80 54 ⇑P P 00 15 21.7 +0.6
baz=80
NEST Nestorio 79.84 320 P P 00 15 20.8 -0.4
ARG Arkhangelos 79.91 313 P P 00 15 21.1 -0.4
ARG Arkhangelos 79.91 313 *e*P P 00 15 22.0 +0.5
Y31A Rekieta Farm, 79.94 50 ⇓P P 00 15 21.8 +0.1
baz=80
326A Caldwell Ranch 79.95 55 ⇑P P 00 15 22.7 +0.7
baz=80,SNR=8.6
JLP Les Platons 79.98 339 ⇓*e*P P 00 15 21.9 +0.2
JLP Les Platons 79.98 339 P P 00 15 21.9 +0.2
Z30A Sanderson Ranc 80.00 51 ⇓P P 00 15 22.3 +0.1
baz=80,SNR=18
JQE Queens East 80.01 339 ⇓*i*P P 00 15 21.9 +0.2
JQE Queens East 80.01 339 P P 00 15 21.9 +0.2
FLN La Foliniere 80.02 338 ⇓*i*P P 00 15 21.9 0.0
comp=Z,93nm,0.5s
FLN *e*R
comp=Z,46nm,21.0s
FLN La Foliniere 80.02 338 ⇓*i*P P 00 15 21.9 0.0
FLN pmax pmax
comp=Z,93nm,0.5s
FLN La Foliniere 80.02 338 ⇓*i*P P 00 15 21.9 0.0
comp=Z,93nm,0.5s
JRS Jersey 80.03 339 ⇓*i*P P 00 15 22.0 +0.2
JRS Jersey 80.03 339 P P 00 15 22.0 +0.2
JSA Saint Aubin 80.05 339 *e*P P 00 15 21.7 -0.3
JSA AMB AMB 00 15 23.2
comp=Z,80nm,1.2s
JSA Saint Aubin 80.05 339 P P 00 15 21.7 -0.3
JSA AMB AMB 00 15 23.2
comp=Z,80nm,1.2s
BBOO Buckleboo 80.07 188 *e*P P 00 15 23.1 +1.0
comp=Z,455nm,0.9s
LDF La Druitiere 80.09 338 ⇓*i*P P 00 15 22.1 -0.1
comp=Z,62nm,0.7s
LDF La Druitiere 80.09 338 ⇓*i*P P 00 15 22.1 -0.1
LDF pmax pmax
comp=Z,62nm,0.7s
LDF La Druitiere 80.09 338 ⇓*i*P P 00 15 22.1 -0.1
comp=Z,62nm,0.7s
MRKA Markates 80.09 318 P P 00 15 22.2 -0.3
228A UT Block 9, Go 80.11 53 ⇓P P 00 15 23.3 +0.5
baz=80,SNR=9.6
129A Stewart Farms, 80.11 52 ⇓P P 00 15 22.9 +0.1
baz=80
WMOK Wichita Mounta 80.11 49 *e*P P 00 15 22.1 -0.6
WMOK pmax pmax
comp=Z,26nm,1.0s
WMOK Wichita Mounta 80.11 49 *e*P P 00 15 22.1 -0.6
comp=Z,26nm,1.0s
THL Klokotos Trika 80.11 319 P P 00 15 21.0 -1.6
THL Klokotos Trika 80.11 319 *e*P P 00 15 20.9 -1.6
CABF La Chapelle 80.12 333 ⇓*i*P P 00 15 22.6 0.0
comp=Z,29nm,0.8s
CABF La Chapelle 80.12 333 ⇓*i*P P 00 15 22.6 0.0
CABF pmax pmax
comp=Z,29nm,0.8s
CABF La Chapelle 80.12 333 ⇓*i*P P 00 15 22.6 0.0
comp=Z,29nm,0.8s
SMIA Simia 80.13 318 P P 00 15 21.7 -1.0
327A Balmorhea Ranc 80.18 54 ⇓P P 00 15 24.5 +1.3
baz=80
LOR Lormes 80.20 335 ⇓*i*P P 00 15 22.8 -0.1
comp=Z,77nm,0.7s
LOR *e*pP pP 00 16 53.1 +1.1
LOR *e*R
comp=Z,48nm,19.5s
LOR Lormes 80.20 335 ⇓*i*P P 00 15 22.8 -0.1
comp=Z,77nm,0.7s
LOR *e*pP pP 00 16 53.1 +1.1
Y32A R-V Farms, Ver 80.34 50 ⇑P P 00 15 24.0 +0.1
baz=80,SNR=6.8
ATAL Atalanti 80.36 318 P P 00 15 22.5 -1.4
LKR Lokris 80.41 318 P P 00 15 23.4 -0.7
LKR Lokris 80.41 318 *e*P P 00 15 23.6 -0.5

AGG Agios Georgios 80.41 319 eP P 00 15 22.2 -2.0
426A McDonald Obser 80.42 55 ⇑P P 00 15 25.0 +0.4
baz=80,SNR=29
GRR Gorron 80.47 338⇓iP P 00 15 24.5 +0.3
comp=Z,136nm,0.5s
GRR Gorron 80.47 338⇓iP P 00 15 24.5 +0.3
GRR pmax pmax
comp=Z,136nm,0.5s
GRR Gorron 80.47 338⇓iP P 00 15 24.5 +0.3
comp=Z,136nm,0.5s
AXAR Agios Charalam 80.47 318 P P 00 15 23.7 -0.8
SSF Saint Saulge 80.49 335⇓iP P 00 15 24.3 -0.1
comp=Z,36nm,0.7s
SSF Saint Saulge 80.49 335⇓iP P 00 15 24.3 -0.1
SSF pmax pmax
comp=Z,36nm,0.7s
SSF Saint Saulge 80.49 335⇓iP P 00 15 24.3 -0.1
comp=Z,36nm,0.7s
PTL Penteli 80.50 317 eP P 00 15 23.8 -0.8
Z31A Sharp Cattle R 80.50 51 ⇓P P 00 15 24.8 0.0
baz=80,SNR=22
MAKR Makrakomi, Fth 80.51 319 P P 00 15 24.2 -0.5
328A Wristen Ranch, 80.55 54 ⇓P P 00 15 25.8 +0.7
baz=80,SNR=37
HYF Humbligny 80.55 335⇓iP P 00 15 25.1 +0.4
HYF Humbligny 80.55 335⇓iP P 00 15 25.1 +0.4
JAN Janina 80.55 320 P P 00 15 25.2 +0.3
JAN Janina 80.55 320 eP P 00 15 25.4 +0.5
130A Snyder 80.62 52 ⇑P P 00 15 25.4 0.0
baz=80
427A Hayter Ranch, 80.63 54 ⇓P P 00 15 26.2 +0.7
baz=80,SNR=30
229A Bryant Ranch, 80.65 53 ⇓P P 00 15 26.2 +0.6
baz=80,SNR=7.2
TUL1 Tulsa 80.69 46 ⇓P P 00 15 26.0 +0.4
baz=80,SNR=26
EVR Evrytania 80.73 319 P P 00 15 25.0 -0.9
EVR Evrytania 80.73 319 eP P 00 15 25.2 -0.7
SRN Sarande 80.74 321 P P 00 15 25.0 -0.8
SMF Signal de Mont 80.77 334⇓iP P 00 15 25.9 0.0
comp=Z,107nm,0.8s
SMF epP pP 00 16 56.5 +1.4
SMF Signal de Mont 80.77 334⇓iP P 00 15 25.9 0.0
SMF e*PP pP 00 16 56.5 +1.4
SMF pmax pmax
comp=Z,107nm,0.8s
SMF Signal de Mont 80.77 334⇓iP P 00 15 25.9 0.0
comp=Z,107nm,0.8s
SMF epP pP 00 16 56.5 +1.4
AVF Avril sur Loir 80.78 335⇓iP P 00 15 26.0 +0.1
comp=Z,92nm,0.8s
AVF epP pP 00 16 56.5 +1.3
AVF Avril sur Loir 80.78 335⇓iP P 00 15 26.0 +0.1
AVF e*PP pP 00 16 56.5 +1.3
AVF pmax pmax
comp=Z,92nm,0.8s
AVF Avril sur Loir 80.78 335⇓iP P 00 15 26.0 +0.1
comp=Z,92nm,0.8s
AVF epP pP 00 16 56.5 +1.3
AAM Ann Arbor 80.80 35 eP P 00 15 26.3 +0.2
AAM pmax pmax
comp=Z,88nm,0.6s
AAM Ann Arbor 80.80 35 eP P 00 15 26.3 +0.2
comp=Z,88nm,0.6s
DSF Desfina 80.82 318 P P 00 15 24.2 -2.2
526A Mary Lane Ranc 80.84 55 ⇑P P 00 15 27.8 +1.1
baz=81,SNR=46
Z32A Haskell 80.86 50 ⇑P P 00 15 26.7 +0.1
baz=81,SNR=25
131A Roby 80.87 51 ⇓P P 00 15 26.9 +0.2
baz=81
IGT Igoumenitsa 80.88 320 P P 00 15 25.7 -0.9
LPL La Plagne 80.89 332⇓iP P 00 15 27.4 +0.6
comp=Z,96nm,1.0s
LPL epP pP 00 16 58.0 +1.9
LPL La Plagne 80.89 332⇓iP P 00 15 27.4 +0.6
LPL e*PP pP 00 16 58.0 +1.9
LPL pmax pmax
comp=Z,96nm,1.0s
LPL La Plagne 80.89 332⇓iP P 00 15 27.4 +0.6
comp=Z,96nm,1.0s
LPL epP pP 00 16 58.0 +1.9
LPG La Plagne 80.90 332⇓iP P 00 15 27.6 +0.6
comp=Z,80nm,0.7s
LPG La Plagne 80.90 332⇓iP P 00 15 27.6 +0.6
LPG pmax pmax
comp=Z,80nm,0.7s
LPG La Plagne 80.90 332⇓iP P 00 15 27.6 +0.6
comp=Z,80nm,0.7s
KARP Karpathos 80.92 313 eP P 00 15 26.7 -0.2
329A Wagon Wheel Ra 80.92 53 ⇓P P 00 15 27.5 +0.4
baz=81,SNR=15
KEK Kerkira 80.96 321 P P 00 15 26.7 -0.3
KEK Kerkira 80.96 321 eP P 00 15 25.8 -1.2
KALE Kalithea 81.01 318 P P 00 15 26.4 -1.0
KALE Kalithea 81.01 318 eP P 00 15 26.4 -1.0
SGMF Saint Gilles 81.01 339⇓iP P 00 15 27.5 +0.4
comp=Z,86nm,0.6s
SGMF Saint Gilles 81.01 339⇓iP P 00 15 27.5 +0.4
SGMF pmax pmax
comp=Z,86nm,0.6s
SGMF Saint Gilles 81.01 339⇓iP P 00 15 27.5 +0.4
comp=Z,86nm,0.6s
SFIN Scholer Farm 81.03 38 ⇑P P 00 15 27.1 -0.2
baz=81,SNR=18
527A Woodward Ranch 81.05 55 ⇓P P 00 15 28.4 +0.6
baz=81,SNR=18
TRIZ Trizonia 81.06 318 P P 00 15 26.6 -0.9
TRIZ Trizonia 81.06 318 eP P 00 15 26.6 -0.9
230A Sterling City 81.09 52 ⇑P P 00 15 28.2 +0.3
baz=81,SNR=14
EFP Efpalio 81.09 319 P P 00 15 26.8 -0.9
EFP Efpalio 81.09 319 eP P 00 15 27.7 0.0
ROSF Rostrenen 81.11 340⇓iP P 00 15 28.0 +0.4
comp=Z,89nm,0.8s
ROSF Rostrenen 81.11 340⇓iP P 00 15 28.0 +0.4
ROSF pmax pmax
comp=Z,89nm,0.8s
ROSF Rostrenen 81.11 340⇓iP P 00 15 28.0 +0.4
comp=Z,89nm,0.8s
428A Kincaid Ranch, 81.12 54 ⇑P P 00 15 29.4 +1.3
baz=81,SNR=63
BGF Bois d'Agland 81.14 335⇓iP P 00 15 27.9 +0.1
comp=Z,39nm,0.6s
BGF Bois d'Agland 81.14 335⇓iP P 00 15 27.9 +0.1
BGF pmax pmax
comp=Z,39nm,0.6s
BGF Bois d'Agland 81.14 335⇓iP P 00 15 27.9 +0.1
comp=Z,39nm,0.6s
626A Big Bend Ranch 81.20 56 ⇓P P 00 15 29.3 +0.7
baz=81,SNR=40
LAKA Lakka 81.21 318 P P 00 15 30.5 +2.2
LAKA Lakka 81.21 318 eP P 00 15 27.9 -0.4
DID Didima 81.23 317 eP P 00 15 26.2 -2.3
GUR Goura 81.29 318 P P 00 15 27.4 -1.5
KLV Kalavryta, Ach 81.29 318 eP P 00 15 28.1 -0.7
ABTX Abilene, Hawle 81.30 51 ⇓P P 00 15 29.2 +0.2
baz=81,SNR=9.3
AQU L'Aquila 81.33 326 eP P 00 15 29.8 +0.9
AQU L'Aquila 81.33 326⇓iP P 00 15 29.7 +0.8
LKD2 Lefkada island 81.35 320 P P 00 15 27.5 -1.6
LKD2 Lefkada island 81.35 320 eP P 00 15 28.7 -0.4
EIL Elat 81.35 305 P P 00 15 30.3 +1.1
EIL pP pP 00 16 59.1 +0.4
EIL Elat 81.35 305 P P 00 15 30.3 +1.1
comp=Z,16nm,0.6s,baz=10,slow=5.2,SNR=38
EIL pP pP 00 16 59.1 +0.4
comp=Z,3.0nm,0.8s,baz=84,slow=17,SNR=1.8
330A Mertzon 81.42 53 ⇑P P 00 15 29.8 +0.1
baz=81,SNR=13
QUIF Quistinic 81.47 339⇓iP P 00 15 29.8 +0.3
comp=Z,60nm,0.7s
QUIF Quistinic 81.47 339⇓iP P 00 15 29.8 +0.3
QUIF pmax pmax
comp=Z,60nm,0.7s
QUIF Quistinic 81.47 339⇓iP P 00 15 29.8 +0.3
comp=Z,60nm,0.7s
231A Bronte 81.48 52 ⇓P P 00 15 29.8 -0.1
baz=81,SNR=8.0
528A Cox Ranch, San 81.49 55 ⇑P P 00 15 31.2 +1.1
baz=81,SNR=42
AGO Saint Agoulin 81.51 335 eP P 00 15 30.2 +0.4
AGO Saint Agoulin 81.51 335 eP P 00 15 30.2 +0.4
MSNY Massena 81.56 28 eP P 00 15 29.1 -0.9
comp=Z,952nm,1.0s
TCF Toulx Ste Croi 81.56 335⇓iP P 00 15 30.4 +0.3
comp=Z,34nm,0.7s
TCF epP pP 00 17 01.0 +1.5
TCF Toulx Ste Croi 81.56 335⇓iP P 00 15 30.4 +0.3
TCF e*PP pP 00 17 01.0 +1.5
TCF pmax pmax
comp=Z,34nm,0.7s
TCF Toulx Ste Croi 81.56 335⇓iP P 00 15 30.4 +0.3
comp=Z,34nm,0.7s
TCF epP pP 00 17 01.0 +1.5
MBDF Montbardon 81.58 332⇓iP P 00 15 30.2 -0.1
comp=Z,47nm,0.6s
MBDF Montbardon 81.58 332⇓iP P 00 15 30.2 -0.1
MBDF pmax pmax
comp=Z,47nm,0.6s
MBDF Montbardon 81.58 332⇓iP P 00 15 30.2 -0.1
comp=Z,47nm,0.6s
RLS Riolos of Patr 81.59 319 P P 00 15 29.5 -0.8
429A Davenport Ranc 81.63 54 ⇑P P 00 15 30.9 +0.1
baz=81,SNR=17
TXAR Lajitas Array 81.63 56 P P 00 15 31.6 +0.8
TXAR PP PP 00 18 44.0 +0.6
TXAR Lajitas Array 81.63 56 P P 00 15 31.6 +0.8
comp=Z,22nm,0.7s,baz=295,slow=3.9,SNR=332
TXAR PP PP 00 18 44.0 +0.6
comp=Z,1.1nm,0.8s,baz=318,slow=3.9,SNR=3.9
ORIF Oris-en-Rattie 81.70 332⇓iP P 00 15 31.3 +0.4
comp=Z,62nm,0.6s
ORIF epP pP 00 17 02.1 +1.7
ORIF eR
comp=Z,46nm,18.5s
ORIF Oris-en-Rattie 81.70 332⇓iP P 00 15 31.3 +0.4
ORIF e*PP pP 00 17 02.1 +1.7
ORIF pmax pmax
comp=Z,62nm,0.6s
ORIF Oris-en-Rattie 81.70 332⇓iP P 00 15 31.3 +0.4
comp=Z,62nm,0.6s
ORIF epP pP 00 17 02.1 +1.7
627A Terlingua Ranc 81.70 55 ⇓P P 00 15 31.9 +0.7
baz=82,SNR=46
ZKR Zakros 81.73 314 eP P 00 15 26.7 -4.4
SSB Saint Sauveur 81.79 333 eP P 00 15 31.5 +0.2
SSB e*PP pP 00 17 00.1 -0.7
SSB pmax pmax
comp=Z,37nm,1.0s
SSB Saint Sauveur 81.79 333 eP P 00 15 31.5 +0.2
comp=Z,37nm,1.0s
SSB epP pP 00 17 00.1 -0.7
PYM Petit Puy Mans 81.82 335 eP P 00 15 31.5 0.0
PYM Petit Puy Mans 81.82 335 eP P 00 15 31.5 0.0
PYM Petit Puy Mans 81.82 335 eP P 00 15 31.5 0.0
529A Stev Forest Ra 81.84 54 ⇓P P 00 15 32.5 +0.7
baz=82,SNR=80
430A Baggett Ranch, 81.87 53 ⇓P P 00 15 32.2 +0.3
baz=82,SNR=26
232A Coleman 81.87 51 ⇓P P 00 15 32.1 +0.2
baz=82,SNR=32
VLS Valsamata 81.88 319 P P 00 15 31.2 -0.6
VLS Valsamata 81.88 319 eP P 00 15 31.2 -0.6
331A San Angelo 81.90 52 ⇑P P 00 15 32.3 +0.2
baz=82,SNR=8.6
NPS Neapolis 81.91 314 eP P 00 15 30.8 -1.2
AMT Artemida-Makis 81.91 318 eP P 00 15 31.7 -0.3
MFF Saint Martin d 81.93 337⇓iP P 00 15 32.4 +0.5
comp=Z,66nm,0.5s
MFF Saint Martin d 81.93 337⇓iP P 00 15 32.4 +0.5
MFF pmax pmax
comp=Z,66nm,0.5s
MFF Saint Martin d 81.93 337⇓iP P 00 15 32.4 +0.5
comp=Z,66nm,0.5s
628A Black Gap, Mar 81.95 55 ⇓P P 00 15 33.0 +0.6
baz=82,SNR=28
SAOF Saorge 81.98 331 eP P 00 15 31.6 -0.7
SAOF Saorge 81.98 331 eP P 00 15 31.6 -0.7
SAOF Saorge 81.98 331 eP P 00 15 31.6 -0.7
VLI Velia 82.01 317 eP P 00 15 29.3 -3.2
AUTN L'Aution 82.02 331 eP P 00 15 32.3 -0.4
AUTN L'Aution 82.02 331 eP P 00 15 32.3 -0.4
AUTN L'Aution 82.02 331 eP P 00 15 32.3 -0.4
PQI Presque Isle 82.02 23 eP P 00 15 31.2 -1.2
comp=Z,36nm,0.8s
LAST Lasithi 82.05 314 P P 00 15 33.3 +0.5
LAST Lasithi 82.05 314 eP P 00 15 33.1 +0.3
TOUF Mont Tournerai 82.06 331 eP P 00 15 32.3 -0.6
TOUF Mont Tournerai 82.06 331 eP P 00 15 32.3 -0.6
TOUF Mont Tournerai 82.06 331 eP P 00 15 32.3 -0.6
ITM Ithomi 82.10 318 P P 00 15 31.5 -1.4
ITM Ithomi 82.10 318 eP P 00 15 32.2 -0.8
VIVF Saint-Julien-l 82.13 333⇓iP P 00 15 33.4 +0.4
comp=Z,53nm,0.8s
VIVF epP pP 00 17 04.3 +1.7
VIVF Saint-Julien-l 82.13 333⇓iP P 00 15 33.4 +0.4
VIVF e*PP pP 00 17 04.3 +1.7
VIVF pmax pmax
comp=Z,53nm,0.8s
VIVF Saint-Julien-l 82.13 333⇓iP P 00 15 33.4 +0.4
comp=Z,53nm,0.8s
VIVF epP pP 00 17 04.3 +1.7
SBF Sospel 82.14 331⇓iP P 00 15 32.6 -0.5
comp=Z,40nm,0.5s
SBF Sospel 82.14 331⇓iP P 00 15 32.6 -0.5
SBF pmax pmax
comp=Z,40nm,0.5s
SBF Sospel 82.14 331⇓iP P 00 15 32.6 -0.5
comp=Z,40nm,0.5s
MVIF Mont Vial 82.20 331 eP P 00 15 32.9 -0.6
MVIF Mont Vial 82.20 331 eP P 00 15 32.9 -0.6
MVIF Mont Vial 82.20 331 eP P 00 15 32.9 -0.6
332A Millersview 82.21 52 ⇑P P 00 15 34.0 +0.3
baz=82,SNR=20
LBL Lubilhac 82.22 334 eP P 00 15 32.1 -1.4
LBL Lubilhac 82.22 334 eP P 00 15 32.1 -1.4
LBL Lubilhac 82.22 334 eP P 00 15 32.1 -1.4
DYR Agios Nikonas 82.25 317 P P 00 15 30.2 -3.6
DYR Agios Nikonas 82.25 317 eP P 00 15 32.8 -1.0
REVF Revere 82.27 331 eP P 00 15 33.2 -0.5
REVF Revere 82.27 331 eP P 00 15 33.2 -0.5
REVF Revere 82.27 331 eP P 00 15 33.2 -0.5
BLO Bloomington 82.28 38 eP P 00 15 33.9 +0.1
BLO pmax pmax
comp=Z,28nm,0.7s
BLO Bloomington 82.28 38 eP P 00 15 33.9 +0.1
comp=Z,28nm,0.7s
431A Sonora 82.29 53 ⇑P P 00 15 34.2 +0.1
baz=82,SNR=20
530A J-C Ranch, Com 82.30 54 ⇓P P 00 15 34.7 +0.6
baz=82,SNR=39
SIUC Southern Illin 82.32 41 eP P 00 15 34.3 +0.2
CALN Calern 82.41 331 eP P 00 15 34.3 -0.3
CALN Calern 82.41 331 eP P 00 15 34.3 -0.3
CALN Calern 82.41 331 eP P 00 15 34.3 -0.3
PYL PYLOS 82.42 318 P P 00 15 33.3 -1.3
PYL PYLOS 82.42 318 eP P 00 15 33.3 -1.3
SIVA Sivas 82.49 315 P P 00 15 35.3 +0.3
SIVA Sivas 82.49 315 eP P 00 15 35.3 +0.3
432A Menard 82.58 52 ⇑P P 00 15 35.8 +0.3
baz=82,SNR=24
SMRF Simiane la Rot 82.64 332⇓iP P 00 15 35.9 +0.3
comp=Z,10nm,0.6s
SMRF Simiane la Rot 82.64 332⇓iP P 00 15 35.9 +0.3
comp=Z,10nm,0.6s
RJF Les Rejaudoux 82.66 335⇓iP P 00 15 36.0 +0.3
comp=Z,25nm,0.7s
RJF eR
comp=Z,54nm,22.2s
RJF Les Rejaudoux 82.66 335⇓iP P 00 15 36.0 +0.3
RJF pmax pmax
comp=Z,25nm,0.7s
RJF Les Rejaudoux 82.66 335⇓iP P 00 15 36.0 +0.3
comp=Z,25nm,0.7s
FRF La Foret Royal 82.66 331⇓iP P 00 15 35.3 -0.4
comp=Z,15nm,0.7s
FRF La Foret Royal 82.66 331⇓iP P 00 15 35.3 -0.4
FRF pmax pmax
comp=Z,15nm,0.6s
FRF La Foret Royal 82.66 331⇓iP P 00 15 35.3 -0.4
comp=Z,15nm,0.6s
NCB Newcomb 82.68 28 eP P 00 15 35.5 -0.3
ALLY Alegheny Colle 82.69 33 eP P 00 15 36.1 +0.2
comp=Z,160nm,0.8s
TIP Timpagrande 82.70 322 P P 00 15 36.2 +0.2
531A Rocksprings 82.72 53 ⇓P P 00 15 36.6 +0.3
baz=82,SNR=34
PGF Pioggiola 82.77 329⇓iP P 00 15 36.0 -0.4
comp=Z,18nm,0.8s
PGF Pioggiola 82.77 329⇓iP P 00 15 36.0 -0.4
PGF pmax pmax
comp=Z,18nm,0.8s
PGF Pioggiola 82.77 329⇓iP P 00 15 36.0 -0.4
comp=Z,18nm,0.8s
ACSO Alum Creek Sta 82.83 35 eP P 00 15 36.6 -0.1
comp=Z,75nm,0.6s
CAF Calviac 82.85 335⇓iP P 00 15 37.5 +0.8
comp=Z,40nm,0.6s
CAF Calviac 82.85 335⇓iP P 00 15 37.5 +0.8
CAF pmax pmax
comp=Z,40nm,0.6s
CAF Calviac 82.85 335⇓iP P 00 15 37.5 +0.8
comp=Z,40nm,0.6s
JCT Junction City 82.88 52 ⇓P P 00 15 37.4 +0.3
baz=83,SNR=10
LMR La Mourre 82.91 331⇓iP P 00 15 36.9 0.0
comp=Z,63nm,0.8s
LMR epP pP 00 17 07.9 +1.2
LMR La Mourre 82.91 331⇓iP P 00 15 36.9 0.0
LMR e*PP pP 00 17 07.9 +1.2
LMR pmax pmax
comp=Z,63nm,0.8s
LMR La Mourre 82.91 331⇓iP P 00 15 36.9 0.0
comp=Z,63nm,0.8s
LMR epP pP 00 17 07.9 +1.2
WHTX Lake Whitney 82.94 50 ⇑P P 00 15 37.7 +0.4
baz=83,SNR=8.6
LASF Ste Croix 83.09 333⇓iP P 00 15 38.6 +0.7
comp=Z,26nm,0.7s
LASF Ste Croix 83.09 333⇓iP P 00 15 38.6 +0.7
comp=Z,26nm,0.7s
532A Rocksprings 83.10 53 ⇓P P 00 15 38.5 +0.2
baz=83,SNR=55
LBNH Lisbon 83.15 26 eP P 00 15 38.3 +0.2
LBNH pmax pmax
comp=Z,28nm,0.6s
LBNH Lisbon 83.15 26 eP P 00 15 38.3 +0.2
comp=Z,28nm,0.6s
LFF La Frestale 83.22 336⇓iP P 00 15 39.3 +0.9
comp=Z,94nm,0.8s
LFF La Frestale 83.22 336⇓iP P 00 15 39.3 +0.9
LFF pmax pmax
comp=Z,94nm,0.8s
LFF La Frestale 83.22 336⇓iP P 00 15 39.3 +0.9
comp=Z,94nm,0.8s
631A Perdido Creek 83.29 53 ⇓P P 00 15 39.6 +0.5
baz=83,SNR=90
ACCN Adirondack Com 83.38 28 eP P 00 15 39.0 -0.3
comp=Z,66nm,0.9s
HBAR Harrisburg 83.44 43 eP P 00 15 40.0 +0.2
632A Uvalde 83.65 53 ⇓P P 00 15 41.4 +0.4
baz=83,SNR=25
BINY Binghamton 83.68 30 eP P 00 15 40.2 -0.7
comp=Z,62nm,1.0s
NWAO Narrogin (SRO) 83.72 204 P P 00 15 41.4 +0.5
NWAO Narrogin (SRO) 83.72 204 P P 00 15 41.4 +0.5
comp=Z,13nm,0.5s,baz=18,slow=5.6,SNR=18
FFD Franklin Falls 83.93 26 eP P 00 15 42.5 +0.5
comp=Z,38nm,0.4s
TRY Troy 83.97 28 eP P 00 15 42.1 -0.2
comp=Z,82nm,1.1s
732A Laxson Ranch, 84.15 54 ⇑P P 00 15 44.3 +0.9
baz=84,SNR=40
MTLF Montolieu 84.25 334⇓iP P 00 15 44.5 +0.8
comp=Z,37nm,0.8s
MTLF Montolieu 84.25 334⇓iP P 00 15 44.5 +0.8
MTLF pmax pmax
comp=Z,37nm,0.8s
MTLF Montolieu 84.25 334⇓iP P 00 15 44.5 +0.8
comp=Z,37nm,0.8s
WVT Waverly 84.26 41 eP P 00 15 43.9 +0.1
WVT pmax pmax
comp=Z,47nm,0.6s
WVT Waverly 84.26 41 eP P 00 15 43.9 +0.1
comp=Z,47nm,0.6s
LRDF Laroque-de-Fa 84.52 334 eP P 00 15 46.1 +1.1
LRDF Laroque-de-Fa 84.52 334 eP P 00 15 46.1 +1.1
HRV Adam Dziewonsk 84.83 27 eP P 00 15 46.7 +0.1
HRV pmax pmax
comp=Z,47nm,1.0s
HRV Adam Dziewonsk 84.83 27 eP P 00 15 46.7 +0.1
comp=Z,46nm,1.0s
CARF Carcanieres 84.86 334 eP P 00 15 47.5 +0.7
CARF Carcanieres 84.86 334 eP P 00 15 47.5 +0.7
FILF Fillols 84.86 334 eP P 00 15 47.6 +0.8
FILF Fillols 84.86 334 eP P 00 15 47.6 +0.8
OXF Oxford 84.88 43 eP P 00 15 46.0 -0.9
OXF pmax pmax
comp=Z,117nm,1.1s
OXF Oxford 84.88 43 eP P 00 15 46.0 -0.9
comp=Z,117nm,1.1s
MLS Moulis 84.93 335 eP P 00 15 47.6 +0.5
MLS Moulis 84.93 335 eP P 00 15 47.6 +0.5
WES Weston 85.02 27 eP P 00 15 47.6 +0.2
WES pmax pmax
comp=Z,88nm,0.8s
WES Weston 85.02 27 eP P 00 15 47.6 +0.2
comp=Z,88nm,0.8s
EPF Esparros 85.08 335⇓iP P 00 15 47.9 0.0
comp=Z,32nm,0.8s
EPF Esparros 85.08 335⇓iP P 00 15 47.9 0.0
EPF pmax pmax
comp=Z,33nm,0.8s
EPF Esparros 85.08 335⇓iP P 00 15 47.9 0.0
comp=Z,32nm,0.8s
VALF Valcebollere 85.17 334 eP P 00 15 49.4 +1.0
VALF Valcebollere 85.17 334 eP P 00 15 49.4 +1.0
REYF Montagne du Re 85.25 336 eP P 00 15 47.8 -0.9
REYF Montagne du Re 85.25 336 eP P 00 15 47.8 -0.9
RESF Ens 85.29 335 eP P 00 15 50.2 +1.2
RESF Ens 85.29 335 eP P 00 15 50.2 +1.2
BRYW Bryant College 85.38 27 eP P 00 15 49.0 -0.3
comp=Z,37nm,0.7s
SJPF Ste Jean 85.45 336 eP P 00 15 49.8 +0.2
comp=Z,17nm,0.6s
SJPF Ste Jean 85.45 336 eP P 00 15 49.8 +0.2
SJPF pmax pmax
comp=Z,17nm,0.6s
SJPF Ste Jean 85.45 336 eP P 00 15 49.8 +0.2
comp=Z,17nm,0.6s
ETSF Etsaut 85.46 336⇓iP P 00 15 50.4 +0.7
comp=Z,77nm,0.6s
ETSF Etsaut 85.46 336⇓iP P 00 15 50.4 +0.7
ETSF pmax pmax
comp=Z,77nm,0.6s
ETSF Etsaut 85.46 336⇓iP P 00 15 50.4 +0.7
comp=Z,77nm,0.6s
VBMS Vicksburg 86.24 45 eP P 00 15 53.1 -0.5
comp=Z,59nm,0.8s
BLA Blacksburg 86.45 35 eP P 00 15 54.4 -0.2
BLA pmax pmax
comp=Z,54nm,1.1s
BLA Blacksburg 86.45 35 eP P 00 15 54.4 -0.2
comp=Z,54nm,1.1s
CBN Corbin 86.73 33 eP P 00 15 55.9 +0.1
comp=Z,28nm,0.3s
JSRW J. Sargeant Re 87.00 33 eP P 00 15 56.9 -0.2
LRAL Lakeview Retre 87.22 42 eP P 00 15 57.7 -0.5
comp=Z,14nm,0.8s
KMSC Kings Mountain 87.87 37 ⇑P P 00 16 01.2 -0.1
baz=88,SNR=16
PBRG Braganca 88.08 340 eP P 00 16 01.4 -0.8
comp=Z,16nm,1.8s
GOGA Godfrey 88.47 39 eP P 00 16 04.0 0.0
GOGA pmax pmax
comp=Z,23nm,0.8s
GOGA Godfrey 88.47 39 eP P 00 16 04.0 0.0
comp=Z,23nm,0.8s
KEST Kesra 88.64 326 eP P 00 16 04.8 -0.2
KEST Kesra 88.64 326 P P 00 16 04.7 -0.3
comp=Z,3.1nm,0.6s,baz=293,slow=3.5,SNR=19
POLO Lamas de Olo 88.74 340 eP P 00 16 04.4 -0.9
comp=Z,10nm,0.9s
MVO Moncorvo 88.76 340 eP P 00 16 04.5 -0.9
comp=Z,24nm,1.6s
PVRL Vila Real 88.81 340 eP P 00 16 04.8 -0.8
comp=Z,22nm,1.5s
PTO Porto 89.15 341 eP P 00 16 06.1 -1.0
CNNC Cliffs of the 89.16 34 eP P 00 16 07.9 +0.7
comp=Z,57nm,0.4s
PVIS Viseu 89.39 340 eP P 00 16 07.5 -0.8
comp=Z,24nm,1.6s
ESDC Sonseca Array 89.39 337 P P 00 16 07.8 -0.5
ESDC pP pP 00 17 42.3 +2.7
ESDC Sonseca Array 89.39 337 P P 00 16 07.8 -0.5

comp=Z,4.1nm,0.5s,baz=18,slow=4.0,SNR=33
ESDC pP **pP** 00 17 42.3 +2.7
comp=Z,1.2nm,0.5s,baz=23,slow=4.7,SNR=3.2
ESLA Sonseca Array 89.39 337 *eP* **P** 00 16 07.7 -0.7
comp=Z,5.5nm,1.2s
MTE Manteigas 89.61 340 *eP* **P** 00 16 08.6 -0.8
comp=Z,21nm,0.9s
TIGA Tifton 90.10 40 ⇓P **P** 00 16 12.5 +0.8
baz=90,SNR=5.7
PCBR Castelo Branco 90.12 340 *eP* **P** 00 16 10.7 -1.0
comp=Z,14nm,1.3s
ATD Arta Tunnel 90.16 287 P **P** 00 16 13.5 +1.2
ATD Arta Tunnel 90.16 287 P **P** 00 16 13.5 +1.2
comp=Z,14nm,0.8s,baz=283,slow=23,SNR=4.6
PBAR Barrancos 91.60 339 *eP* **P** 00 16 17.5 -1.0
comp=Z,16nm,1.6s
PNCL Nicolau / Gran 92.02 340 *eP* **P** 00 16 19.5 -0.9
comp=Z,32nm,2.0s
PVAQ Vaqueiros 92.50 339 *eP* **P** 00 16 21.9 -0.8
comp=Z,25nm,1.7s
MDT Midelt 96.00 335 P **P** 00 16 38.5 -0.4
MDT Midelt 96.00 335 P **P** 00 16 38.5 -0.4
comp=Z,3.5nm,0.6s,baz=14,slow=3.7,SNR=15
TORD Torodi Ar. Bea 111.84 322 Pdif **Pdif** 00 17 50.3 +0.8
TORD *e* 00 19 22.6
TORD PKiKP **PKiKP** 00 21 43.5 -0.9
TORD PP PP 00 22 26.6 -6.6
TORD SKP 00 24 39.9
TORD PKKPbc **PKKPbc** 00 32 37.0 +0.8
TORD PKKPab **PKKPab** 00 32 48.5 -1.9
TORD SKKPbc SKKPbc 00 35 40.1 +2.0
TORD Torodi Ar. Bea 111.84 322 Pdiff **Pdif** 00 17 50.3 +0.8
comp=Z,0.5nm,0.7s,baz=16,slow=4.4,SNR=3.4
TORD pPdiff **pPdif** 00 19 22.6 +0.9
comp=Z,2.6nm,1.2s,baz=359,slow=7.9,SNR=3.9
TORD PKiKP **PKiKP** 00 21 43.5 -0.9
comp=Z,1.8nm,0.5s,baz=19,slow=2.2,SNR=57
TORD PP PP 00 22 26.6 -6.6
comp=Z,2.8nm,0.7s,baz=15,slow=8.3,SNR=9.9
TORD SKP 00 24 39.9
comp=Z,0.3nm,0.5s,baz=357,slow=1.4,SNR=4.8
TORD PKKPbc **PKKPbc** 00 32 37.0 +0.8
comp=Z,0.3nm,0.5s,baz=252,slow=0.9,SNR=9.9
TORD PKKPab **PKKPab** 00 32 48.5 -1.9
comp=Z,1.8nm,1.0s,baz=192,slow=2.6,SNR=8.6
TORD SKKPbc SKKPbc 00 35 40.1 +2.0
comp=Z,0.5nm,0.6s,baz=206,slow=3.2,SNR=6.1
LSZ Lusaka 119.66 280 PKP **PKPdf** 00 21 59.5 0.0
LSZ Lusaka 119.66 280 PKP **PKPdf** 00 21 59.5 0.0
comp=Z,2.3nm,0.5s,baz=23,slow=4.9,SNR=9.9
DBIC Dimbokro 120.36 325 PKP **PKPdf** 00 22 00.1 -0.7
DBIC PP PP 00 23 23.5 -8.8
DBIC Dimbokro 120.36 325 PKP **PKPdf** 00 22 00.1 -0.7
comp=Z,4.9nm,0.5s,baz=239,slow=1.2,SNR=17
DBIC PP PP 00 23 23.5 -8.8
comp=Z,4.5nm,1.0s,baz=344,slow=7.8,SNR=3.7
VNDA Vanda 124.81 176 PKP **PKPdf** 00 22 07.7 +0.3
VNDA Vanda 124.81 176 PKP **PKPdf** 00 22 07.7 +0.3
comp=Z,1.2nm,0.8s,baz=267,slow=4.5,SNR=7.0
LBTB Lobatse 128.11 273 PKP **PKPdf** 00 22 15.6 +0.3
LBTB Lobatse 128.11 273 PKP **PKPdf** 00 22 15.6 +0.3
comp=Z,3.4nm,0.6s,baz=328,slow=1.6,SNR=9.4
MAW Mawson 129.95 210 PKP **PKPdf** 00 22 17.9 +0.5
MAW Mawson 129.95 210 PKP **PKPdf** 00 22 17.9 +0.5
comp=Z,1.6nm,0.6s,baz=57,slow=4.8,SNR=4.0
BOSA Boshof 130.66 270 PKPpre PKPpre 00 22 15.0
BOSA SKPbc **SKPab** 00 25 06.3 -0.2
BOSA Boshof 130.66 270 PKhKP PKPpre 00 22 15.0
comp=Z,1.3nm,0.6s,baz=76,slow=4.2,SNR=3.7
BOSA SKPbc **SKPab** 00 25 06.3 -0.2
comp=Z,4.0nm,0.6s,baz=39,slow=2.5,SNR=9.4
QSPA South Pole Qui 136.89 180 PKPpre PKPpre 00 22 17.9
QSPA PKP **PKiKP** 00 22 31.9 -0.5
QSPA pPKP pPKPdf 00 24 04.0 -3.4
QSPA SKPbc **SKPbc** 00 25 24.4 -0.7
QSPA South Pole Qui 136.89 180 PKhKP PKPpre 00 22 18.0
comp=Z,1.1nm,0.4s,baz=310,slow=0.5,SNR=22
QSPA PKP **PKiKP** 00 22 31.9 -0.5
comp=Z,1.8nm,0.6s,baz=354,slow=1.7,SNR=7.3
QSPA pPKP pPKPdf 00 24 03.9 -3.4
comp=Z,3.1nm,0.9s,baz=258,slow=3.3,SNR=3.5
QSPA SKPbc **SKPbc** 00 25 24.4 -0.7
comp=Z,4.9nm,0.9s,baz=310,slow=4.6,SNR=6.3
LPAZ La Paz 138.47 54 PKP **PKPdf** 00 22 35.7 0.0
LPAZ SKPbc **SKPbc** 00 25 31.5 -0.4
LPAZ La Paz 138.47 54 PKP **PKPdf** 00 22 35.7 0.0
comp=Z,1.3nm,0.6s,baz=343,slow=2.9,SNR=6.0
LPAZ SKPbc **SKPbc** 00 25 31.5 -0.4
comp=Z,2.5nm,0.9s,baz=334,slow=2.6,SNR=3.9
BDFB Brasilia 146.59 24 PKPbc **PKPdf** 00 22 49.8 +0.4
BDFB Brasilia 146.59 24 PKPbc **PKPdf** 00 22 49.8 +0.4
comp=Z,52nm,0.8s,baz=311,slow=1.7,SNR=34
MAIT Maitri 147.82 207 *eP* PKPdf 00 22 43.0 -6.6
MAIT Maitri 147.82 207 *eP* pPKPdf 00 24 24.5 -2.1
CFAA Coronel Fontan 149.85 71 PKPbc **PKPbc** 00 22 58.8 -0.6
CFAA PKPab **PKPab** 00 23 06.8 +0.3
CFAA pPKPab **pPKPab** 00 24 38.9 -0.6
CFAA Coronel Fontan 149.85 71 PKPbc **PKPbc** 00 22 58.8 -0.6
comp=Z,0.8nm,0.6s,baz=278,slow=1.7,SNR=17
CFAA PKPab **PKPab** 00 23 06.8 +0.3
comp=Z,0.2nm,0.5s,baz=277,slow=4.4,SNR=5.7
CFAA pPKPab **pPKPab** 00 24 38.9 -0.6
comp=Z,0.4nm,0.7s,baz=284,slow=6.7,SNR=2.9
SNAA Sanae 151.33 200 *e*PKPdf **PKPbc** 00 23 01.6 0.0
SNAA Sanae 151.33 200 *e*PKPbc **PKPab** 00 23 12.0 +0.4
SNAA Sanae 151.33 200 *e*P pPKPab 00 24 42.7 -1.8
SNAA Sanae 151.33 200 *e*PKPdf **PKPdf** 00 22 56.0 +0.8
SNAA *e*PKPbc **PKPbc** 00 23 01.3 -0.4
SNAA PKPbc **PKPbc** 00 23 01.4 -0.3
SNAA *e*PKPab **PKPab** 00 23 12.0 +0.4
SNAA pPKP **pPKPdf** 00 24 34.4 +2.0
SNAA pPKPab **pPKPab** 00 24 43.0 -1.4
SNAA Sanae 151.33 200 PKPbc **PKPbc** 00 23 01.4 -0.3
comp=Z,1.4nm,0.4s,baz=194,slow=2.0,SNR=95
SNAA PKPab **PKPab** 00 23 12.1 +0.4
comp=Z,4.9nm,0.8s,baz=148,slow=4.7,SNR=23
SNAA pPKP **pPKPdf** 00 24 34.4 +2.0
comp=Z,1.3nm,1.0s,baz=93,slow=12,SNR=2.0
SNAA pPKPab **pPKPab** 00 24 43.0 -1.4
comp=Z,4.9nm,1.1s,baz=85,slow=4.2,SNR=10
CPUP Villa Florida 152.43 49 PKPbc **PKPbc** 00 23 04.6 -0.8
CPUP Villa Florida 152.43 49 PKPbc **PKPbc** 00 23 04.6 -0.8
comp=Z,1.5nm,0.5s,baz=281,slow=1.2,SNR=11
VNA1 Neumayer--Stat 153.30 199 *e*PKPdf **PKPbc** 00 23 06.7 +0.8
VNA1 Neumayer--Stat 153.30 199 *e*PKPbc **PKPab** 00 23 20.4 +0.5
VNA1 Neumayer--Stat 153.30 199 *eP* pPKiKP 00 24 47.6 +5.1
PLCA Paso Flores 153.35 89 PKPbc **PKPbc** 00 23 07.2 +0.1
PLCA Paso Flores 153.35 89 PKPbc **PKPbc** 00 23 07.1 +0.1
comp=Z,2.5nm,0.8s,baz=9.1,slow=5.1,SNR=6.9
CAM4 Nova Friburgo 154.39 18 (P) **PKPab** 00 23 25.2 -0.8
CAM4 *i* 00 23 28.5
CAM4 *i* 00 23 30.3
CAM4 *i* 00 23 37.1
CAM4 *i* 00 23 44.0
CAM4 *i* 00 23 57.1

*THE **16** 00:11:48.7,39°.31′N×28°.03′E,h3km±6km,ML3.6/5,Error ellipse: s-maj=6.9km s-min=1.6km az=73.0*
*ISK **16** 00:11:48.5,39°.30′N×27°.91′E,h6km,MD3.6,ML3.6*
*ISCJB **16** 00:11:48.5±0.4,39°.29′N±0°.01′×27°.89′E±0°.02,h3km±3km, Error ellipse: s-maj=2.3km s-min=2.1km az=138.7*
*CSEM **16** 00:11:48.7±0.1,39°.30′N×27°.89′E,h2km,MD3.6,Error ellipse: s-maj=2.0km s-min=1.9km az=45.0*
*ATH **16** 00:11:49.0,39°.30′N×27°.90′E,h23km±2km,MD3.7/15*
*DDA **16** 00:11:49.3,39°.29′N×27°.94′E,h6km,MD3.7*
ISC 16 00:11:49.2±1.0,39°.29′N±0°.01′×27°.92′E±0°.01,h8km±8km, n198,σ0°78′/261,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.35**	**355**	PG	**Pg**	**00 11 56.1**	**-0.1**
BALB				SG	**Sg**	**00 12 01.3**	**+0.4**
BALB	**Balikesir**	**0.35**	**355**	*i* Pg	**Pg**	**00 11 56.1**	**-0.1**
BALB				*i* Sg	**Sg**	**00 12 01.3**	**+0.4**
AKHS	**Akhisar**	**0.41**	**191**	*i* P	**Pg**	**00 11 57.3**	**+0.1**
AKHS				*i* S	**Sb**	**00 12 04.4**	**-0.8**
AKHS	**Akhisar**	**0.41**	**191**	*i* P	**Pg**	**00 11 57.3**	**+0.1**
AKHS				*i* S	**Sb**	**00 12 04.4**	**-0.8**
BALY	**Balya**	**0.51**	**333**	*i* P	**Pg**	**00 11 59.0**	**0.0**
BALY				*i* S	**Sb**	**00 12 07.8**	**-0.2**
BALY	**Balya**	**0.51**	**333**	*i* P	**Pg**	**00 11 59.0**	**0.0**
BALY				*i* S	**Sb**	**00 12 07.8**	**-0.2**
DURS	**Dursunbey**	**0.53**	**54**	*i* P	**Pg**	**00 11 59.8**	**+0.2**
DURS				*i* S	**Sb**	**00 12 07.9**	**-0.8**
DURS	**Dursunbey**	**0.53**	**54**	*i* P	**Pg**	**00 11 59.8**	**+0.2**
DURS				*i* S	**Sb**	**00 12 07.9**	**-0.8**
DST	**Dursunbey**	**0.63**	**59**	PG	**Pg**	**00 12 00.5**	**-0.8**
DST				SG	**Sg**	**00 12 10.2**	**+0.6**
DST	**Dursunbey**	**0.63**	**59**	*i* Pg	**Pg**	**00 12 00.5**	**-0.8**
DST				*i* Sg	**Sg**	**00 12 10.2**	**+0.6**
DEMI	**Demirci**	**0.67**	**111**	*i* P	**Pg**	**00 12 01.7**	**-0.4**
DEMI				*i* S	**Sb**	**00 12 12.0**	**-0.5**
DEMI	**Demirci**	**0.67**	**111**	*i* P	**Pg**	**00 12 01.7**	**-0.4**
DEMI				*i* S	**Sb**	**00 12 12.0**	**-0.5**
GONE	**Gonen-Balikesi**	**0.78**	**347**	PG	**Pg**	**00 12 03.7**	**-0.5**
GONE	**Gonen-Balikesi**	**0.78**	**347**	*i* Pg	**Pg**	**00 12 03.7**	**-0.5**
MANT	**Manisa**	**0.94**	**148**	*i* P	**Pg**	**00 12 06.8**	**-0.4**
MANT				*i* S	**Sg**	**00 12 19.0**	**-0.4**
MANT	**Manisa**	**0.94**	**148**	*i* P	**Pg**	**00 12 06.8**	**-0.4**
MANT				*i* S	**Sg**	**00 12 19.0**	**-0.4**
AYVA	**Ayvalik**	**0.95**	**272**	*i* P	**Pg**	**00 12 07.2**	**-0.3**
AYVA				*i* S	**Sn**	**00 12 24.4**	**+1.8**
AYVA	**Ayvalik**	**0.95**	**272**	*i* P	**Pg**	**00 12 07.2**	**-0.3**
AYVA				*i* S	**Sn**	**00 12 24.4**	**+1.8**
KULA	**Kula-Manisa**	**0.96**	**143**	*e*PG	**Pg**	**00 12 07.3**	**-0.5**
KULA	**Kula-Manisa**	**0.96**	**143**	P	**Pg**	**00 12 07.2**	**-0.5**
KULA				S	**Sg**	**00 12 19.8**	**-0.4**
KULA	**Kula-Manisa**	**0.96**	**143**	P	**Pg**	**00 12 07.2**	**-0.5**
KULA				S	**Sg**	**00 12 19.8**	**-0.4**
IZM	**Izmir**	**1.02**	**210**	*e*PG	**Pb**	**00 12 08.7**	**-0.5**
IZM				*e*SG	**Sn**	**00 12 23.1**	**-1.3**
IZM	**Izmir**	**1.02**	**210**	*e*Pg	**Pb**	**00 12 08.7**	**-0.5**
IZM				*e*Sg	**Sn**	**00 12 23.1**	**-1.3**
KCTX	**Karacabey (Bur**	**1.03**	**19**	*e*PG	**Pb**	**00 12 08.4**	**-0.9**
KCTX				*e*SG	**Sg**	**00 12 22.8**	**+0.3**
KCTX	**Karacabey (Bur**	**1.03**	**19**	*e*Pg	**Pb**	**00 12 08.5**	**-0.9**
KCTX				*e*Sg	**Sg**	**00 12 22.8**	**+0.3**
BNT	**Bandirma**	**1.07**	**0**	*e*PG	**Pb**	**00 12 08.7**	**-1.2**
BNT	**Bandirma**	**1.07**	**0**	*e*Pg	**Pb**	**00 12 08.7**	**-1.2**
ORLT	**Orhaneli**	**1.07**	**45**	*e*PG	**Pb**	**00 12 09.6**	**-0.4**
ORLT	**Orhaneli**	**1.07**	**45**	*e*Pg	**Pb**	**00 12 09.6**	**-0.4**
BLCB	**Balcova**	**1.13**	**218**	*e*PN	**Pb**	**00 12 10.6**	**-0.3**
BLCB	**Balcova**	**1.13**	**218**	*e*Pn	**Pb**	**00 12 10.6**	**-0.3**
KRBG	**Karabiga-Canak**	**1.21**	**337**	*e*PN	**Pn**	**00 12 11.6**	**-0.7**
KRBG	**Karabiga-Canak**	**1.21**	**337**	*e*Pn	**Pn**	**00 12 11.6**	**-0.7**
TVSB	**Tavsanli**	**1.21**	**82**	*e*PN	**Pg**	**00 12 12.4**	**0.0**
TVSB	**Tavsanli**	**1.21**	**82**	*e*Pn	**Pg**	**00 12 12.4**	**0.0**
GDZ	**Gediz**	**1.23**	**99**	*i* P	**Pn**	**00 12 11.9**	**-0.9**
GDZ				*i* S	**Sn**	**00 12 29.1**	**-0.6**
GDZ	**Gediz**	**1.23**	**99**	*i* P	**Pn**	**00 12 11.9**	**-0.9**
GDZ				*i* S	**Sn**	**00 12 29.1**	**-0.6**
ULDT	**Uludag**	**1.27**	**47**	*i* P	**Pn**	**00 12 12.5**	**-0.9**
ULDT				*i* S	**Sg**	**00 12 30.5**	**+0.4**
ULDT	**Uludag**	**1.27**	**47**	*i* P	**Pn**	**00 12 12.5**	**-0.9**
ULDT				*i* S	**Sg**	**00 12 30.5**	**+0.4**
PRK	**Paraskevi**	**1.28**	**269**	P	**Pb**	**00 12 13.1**	**-0.4**
PRK				S	**Sg**	**00 12 31.6**	**+1.3**
PRK	**Paraskevi**	**1.28**	**269**	*e*PN	**Pb**	**00 12 13.2**	**-0.3**
PRK				*e*SN	**Sg**	**00 12 31.1**	**+0.8**
PRK	**Paraskevi**	**1.28**	**269**	*e*Pn	**Pb**	**00 12 13.2**	**-0.3**
PRK				*e*Sn	**Sg**	**00 12 31.1**	**+0.8**
MDNY	**Mudanya-Bursa**	**1.31**	**34**	*e*PN	**Pn**	**00 12 13.3**	**-0.5**
MDNY	**Mudanya-Bursa**	**1.31**	**34**	*e*Pn	**Pn**	**00 12 13.3**	**-0.5**
EZN	**Ezine**	**1.34**	**294**	*e*PN	**Pb**	**00 12 14.1**	**-0.5**
EZN	**Ezine**	**1.34**	**294**	*e*Pn	**Pb**	**00 12 14.1**	**-0.5**
URLA	**Izmir**	**1.39**	**229**	*i* P	**Pn**	**00 12 14.3**	**-0.5**
URLA				*i* S	**Sg**	**00 12 34.6**	**+0.9**
URLA	**Izmir**	**1.39**	**229**	*i* P	**Pn**	**00 12 14.3**	**-0.5**
URLA				*i* S	**Sg**	**00 12 34.6**	**+0.9**
LPK	**Lapseki**	**1.40**	**321**	*e*PN	**Pb**	**00 12 15.4**	**-0.2**
LPK	**Lapseki**	**1.40**	**321**	*e*Pn	**Pb**	**00 12 15.4**	**-0.2**
ARMT	**Armutlu**	**1.47**	**29**	*e*PN	**Pn**	**00 12 15.7**	**-0.3**
ARMT	**Armutlu**	**1.47**	**29**	*e*Pn	**Pn**	**00 12 15.7**	**-0.3**
GEMT	**Gemlik**	**1.51**	**40**	*e*PN	**Pn**	**00 12 16.0**	**-0.5**
GEMT	**Gemlik**	**1.51**	**40**	*e*Pn	**Pn**	**00 12 16.0**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.51**	**338**	*e*PN	**Pb**	**00 12 16.7**	**-0.8**
RKY				*e*SN	**Sb**	**00 12 36.7**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.51**	**338**	*e*Pn	**Pb**	**00 12 16.7**	**-0.8**
RKY				*e*Sn	**Sb**	**00 12 36.7**	**-0.1**
SART	**Tekirdag**	**1.51**	**338**	*i* P	**Pn**	**00 12 16.4**	**-0.2**
SART				*i* S	**Sg**	**00 12 37.5**	**-0.3**
SART	**Tekirdag**	**1.51**	**338**	*i* P	**Pn**	**00 12 16.4**	**-0.2**
SART				*i* S	**Sg**	**00 12 37.5**	**-0.3**
KHAL	**Karahalli**	**1.53**	**126**	*i* P	**Pn**	**00 12 16.9**	**0.0**
KHAL				*i* S	**Sg**	**00 12 39.3**	**+0.9**
KHAL	**Karahalli**	**1.53**	**126**	*i* P	**Pn**	**00 12 16.9**	**0.0**
KHAL				*i* S	**Sg**	**00 12 39.2**	**+0.8**
BOZC	**Bozcaada**	**1.54**	**292**	*i* P	**Pb**	**00 12 17.0**	**-0.1**
BOZC				*i* S	**Sb**	**00 12 37.8**	**+0.1**
BOZC				*i* S	**Sb**	**00 12 37.8**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.57**	**315**	*e*PN	**Pn**	**00 12 17.2**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.57**	**315**	*e*Pn	**Pn**	**00 12 17.2**	**-0.1**
MFT	**Murefte**	**1.58**	**342**	*e*PN	**Pb**	**00 12 17.9**	**-0.7**
MFT	**Murefte**	**1.58**	**342**	*e*Pn	**Pb**	**00 12 17.9**	**-0.7**
KHL	**Karahalli**	**1.58**	**127**	*e*PN	**Pb**	**00 12 18.0**	**-0.7**
KHL	**Karahalli**	**1.58**	**127**	*e*Pn	**Pb**	**00 12 18.0**	**-0.7**
SIGR	**SIGRI**	**1.60**	**268**	P	**Pn**	**00 12 17.2**	**-0.6**
SIGR				S	**Sg**	**00 12 41.0**	**+0.3**
SIGR	**SIGRI**	**1.60**	**268**	P	**Pn**	**00 12 17.2**	**-0.6**
SIGR				S	**Sg**	**00 12 41.0**	**+0.3**
AYDN	**Tasoluk**	**1.62**	**181**	*i* P	**Pn**	**00 12 17.2**	**-0.9**
AYDN				*i* S	**Sb**	**00 12 40.5**	**+0.5**
AYDN	**Tasoluk**	**1.62**	**181**	*i* P	**Pn**	**00 12 17.2**	**-0.9**
AYDN				*i* S	**Sb**	**00 12 40.5**	**+0.5**
YLV	**Yalova**	**1.70**	**41**	*e*PN	**Pn**	**00 12 18.4**	**-0.8**
YLV	**Yalova**	**1.70**	**41**	*e*Pn	**Pn**	**00 12 18.4**	**-0.8**
CHOS	**Chios island**	**1.71**	**239**	P	**Pn**	**00 12 18.6**	**-0.8**
CHOS				S	**Sg**	**00 12 44.7**	**+0.6**
CHOS	**Chios island**	**1.71**	**239**	*e*PB	**Pn**	**00 12 18.5**	**-0.8**
CHOS				*e*SN	**Sn**	**00 12 41.0**	**-0.4**
CHOS	**Chios island**	**1.71**	**239**	P	**Pn**	**00 12 18.6**	**-0.8**
CHOS				*e*Sn	**Sn**	**00 12 41.0**	**-0.4**
CHOS				S	**Sg**	**00 12 44.7**	**+0.6**
ALT	**Altintas**	**1.72**	**97**	*e*PN	**Pn**	**00 12 19.3**	**-0.2**
ALT	**Altintas**	**1.72**	**97**	*i* P	**Pb**	**00 12 20.9**	**-0.1**
ALT				*i* S	**Sg**	**00 12 44.6**	**+0.1**
ALT	**Altintas**	**1.72**	**97**	*e*Pn	**Pn**	**00 12 19.3**	**-0.2**
TKR	**Tekirdag**	**1.73**	**350**	*e*PN	**Pn**	**00 12 19.1**	**-0.4**
TKR	**Tekirdag**	**1.73**	**350**	*e*Pn	**Pn**	**00 12 19.1**	**-0.4**
CAVI	**Cavuskoy**	**1.74**	**58**	*e*PN	**Pb**	**00 12 20.4**	**-1.0**
CAVI	**Cavuskoy**	**1.74**	**58**	*e*Pn	**Pb**	**00 12 20.4**	**-1.0**
ERIK	**Erikli-Kesan**	**1.75**	**323**	*e*PN	**Pn**	**00 12 20.0**	**+0.1**
ERIK	**Erikli-Kesan**	**1.75**	**323**	*e*Pn	**Pn**	**00 12 20.0**	**+0.1**
DENT	**Denizli**	**1.76**	**150**	*e*PN	**Pb**	**00 12 21.1**	**-0.7**
DENT	**Denizli**	**1.76**	**150**	*e*Pn	**Pb**	**00 12 21.1**	**-0.7**
SMG	**Samos**	**1.79**	**209**	*e*PN	**Pb**	**00 12 21.6**	**-0.6**
SMG				*e*SN	**Sb**	**00 12 44.0**	**-0.8**
SMG	**Samos**	**1.79**	**209**	*e*Pn	**Pb**	**00 12 21.6**	**-0.6**
SMG				*e*Sn	**Sb**	**00 12 44.0**	**-0.8**
ADVT	**Abdulvahap**	**1.81**	**50**	*e*PN	**Pn**	**00 12 21.0**	**+0.3**
ADVT	**Abdulvahap**	**1.81**	**50**	*e*Pn	**Pn**	**00 12 21.0**	**+0.3**
BUY	**Buyukada**	**1.82**	**30**	*e*PN	**Pn**	**00 12 21.0**	**+0.3**
BUY	**Buyukada**	**1.82**	**30**	*i* P	**Pn**	**00 12 20.0**	**-0.7**
BUY	**Buyukada**	**1.82**	**30**	*i* P	**Pn**	**00 12 20.0**	**-0.7**
BUY	**Buyukada**	**1.82**	**30**	*e*Pn	**Pn**	**00 12 21.0**	**+0.3**
DNZL	**Cakiroluk**	**1.82**	**151**	*i* P	**Pn**	**00 12 20.9**	**-0.1**
DNZL				*i* S	**Sn**	**00 12 44.5**	**+0.1**
DNZL	**Cakiroluk**	**1.82**	**151**	*i* P	**Pn**	**00 12 20.9**	**-0.1**
DNZL				*i* S	**Sn**	**00 12 44.5**	**+0.1**
SLVT	**Silivri**	**1.96**	**6**	*e*PN	**Pn**	**00 12 23.2**	**+0.5**
SLVT	**Silivri**	**1.96**	**6**	*e*Pn	**Pn**	**00 12 23.2**	**+0.5**
ISK	**Istanbul-Kandi**	**1.98**	**26**	*e*PN	**Pn**	**00 12 22.3**	**-0.7**
ISK	**Istanbul-Kandi**	**1.98**	**26**	*e*Pn	**Pn**	**00 12 22.3**	**-0.7**
ENEZ	**Enez**	**1.98**	**317**	*e*PN	**Pn**	**00 12 22.9**	**-0.1**
ENEZ	**Enez**	**1.98**	**317**	*e*Pn	**Pn**	**00 12 22.9**	**-0.1**
MLSB	**Milas**	**1.99**	**183**	*e*PN	**Pn**	**00 12 23.3**	**+0.1**
MLSB	**Milas**	**1.99**	**183**	*e*Pn	**Pn**	**00 12 23.3**	**+0.1**
CTKS	**Kestanelik-??a**	**2.00**	**13**	*e*PN	**Pn**	**00 12 22.6**	**-0.7**
CTKS	**Kestanelik-??a**	**2.00**	**13**	*e*Pn	**Pn**	**00 12 22.6**	**-0.7**
BGKT	**Bogazkoy**	**2.00**	**19**	*e*PN	**Pn**	**00 12 23.7**	**+0.4**
BGKT	**Bogazkoy**	**2.00**	**19**	*e*Pn	**Pn**	**00 12 23.7**	**+0.4**
HRT	**Hereke**	**2.04**	**41**	*e*PN	**Pn**	**00 12 24.2**	**+0.4**
HRT	**Hereke**	**2.04**	**41**	*e*Pn	**Pn**	**00 12 24.2**	**+0.4**
BORA	**Eskisehir**	**2.05**	**72**	*i* P	**Pn**	**00 12 23.8**	**-0.2**
BORA				*i* S	**Sg**	**00 12 55.5**	**+0.5**
BORA	**Eskisehir**	**2.05**	**72**	*i* P	**Pn**	**00 12 23.8**	**-0.2**
GPA	**Golpazari**	**2.10**	**61**	*e*PN	**Pn**	**00 12 25.4**	**+0.7**
GPA	**Golpazari**	**2.10**	**61**	*e*Pn	**Pn**	**00 12 25.4**	**+0.7**
KLYT	**Kilyos**	**2.15**	**23**	*e*PN	**Pn**	**00 12 24.9**	**-0.3**
KLYT	**Kilyos**	**2.15**	**23**	*e*Pn	**Pn**	**00 12 24.9**	**-0.3**
ALN	**Alexandroupoli**	**2.16**	**319**	P	**Pn**	**00 12 25.4**	**+0.1**
ALN				S	**Sn**	**00 12 52.2**	**-0.1**
ALN	**Alexandroupoli**	**2.16**	**319**	*e*PB	**Pn**	**00 12 25.5**	**+0.1**
ALN				*e*SN	**Sn**	**00 12 52.1**	**-0.2**
ALN	**Alexandroupoli**	**2.16**	**319**	*e*Pb	**Pn**	**00 12 25.5**	**+0.1**
ALN				*e*Sn	**Sn**	**00 12 52.1**	**-0.2**
YER	**Yerkesik**	**2.17**	**172**	*e*PN	**Pn**	**00 12 26.4**	**+0.9**
YER	**Yerkesik**	**2.17**	**172**	*e*Pn	**Pn**	**00 12 26.5**	**+0.9**
SHUT	**Suhut-Afyon**	**2.18**	**109**	*e*PN	**Pn**	**00 12 26.5**	**+0.6**
SHUT	**Suhut-Afyon**	**2.18**	**109**	*e*Pn	**Pn**	**00 12 26.5**	**+0.6**
SMTH	**Samothraki Isl**	**2.19**	**304**	*e*PB	**Pn**	**00 12 25.9**	**+0.1**
SMTH				*e*SN	**Sn**	**00 12 52.9**	**-0.2**
SMTH	**Samothraki Isl**	**2.19**	**304**	*e*Pb	**Pn**	**00 12 25.9**	**+0.1**
SMTH				*e*Sn	**Sn**	**00 12 52.9**	**-0.2**
LIA	**Limnos Island**	**2.20**	**287**	P	**Pn**	**00 12 26.2**	**+0.3**
LIA				S	**Sb**	**00 12 55.8**	**-0.8**
LIA	**Limnos Island**	**2.20**	**287**	*e*PB	**Pn**	**00 12 26.3**	**+0.3**
LIA				*e*SN	**Sn**	**00 12 54.1**	**+0.8**
LIA	**Limnos Island**	**2.20**	**287**	*e*Pb	**Pn**	**00 12 26.3**	**+0.3**
LIA				*e*Sn	**Sn**	**00 12 54.1**	**+0.8**
LIA				S	**Sb**	**00 12 55.8**	**-0.8**
CTYL	**Yal??k??y-??at**	**2.21**	**7**	*e*PN	**Pn**	**00 12 27.1**	**+1.0**
CTYL	**Yal??k??y-??at**	**2.21**	**7**	*e*Pn	**Pn**	**00 12 27.1**	**+1.0**
BODT	**Bodrum**	**2.27**	**192**	*e*PN	**Pn**	**00 12 28.1**	**+1.1**
BODT	**Bodrum**	**2.27**	**192**	*e*Pn	**Pn**	**00 12 28.1**	**+1.1**
SEYT	**Eskypehyr**	**2.28**	**83**	*i* P	**Pn**	**00 12 28.2**	**+0.9**
SEYT				*i* S	**Sg**	**00 13 05.0**	**+2.4**
SEYT	**Eskypehyr**	**2.28**	**83**	*i* P	**Pn**	**00 12 28.2**	**+0.9**
SILT	**Sile**	**2.29**	**35**	*e*PN	**Pn**	**00 12 27.5**	**+0.3**
SILT	**Sile**	**2.29**	**35**	*e*Pn	**Pn**	**00 12 27.5**	**+0.3**
GULT	**Gulveren**	**2.30**	**59**	*e*PN	**Pn**	**00 12 28.1**	**+0.6**
GULT	**Gulveren**	**2.30**	**59**	*e*Pn	**Pn**	**00 12 28.1**	**+0.6**
SPNC	**Sapanca-Adapaz**	**2.31**	**52**	*e*PN	**Pn**	**00 12 28.6**	**+1.1**
SPNC	**Sapanca-Adapaz**	**2.31**	**52**	*e*Pn	**Pn**	**00 12 28.6**	**+1.1**
GLHS	**Glhisar (BURDU**	**2.46**	**149**	*e*PN	**Pn**	**00 12 30.7**	**+1.0**
GLHS	**Glhisar (BURDU**	**2.46**	**149**	*e*Pn	**Pn**	**00 12 30.7**	**+1.0**
ISP	**Isparta**	**2.51**	**125**	*e*PN	**Pn**	**00 12 31.8**	**+1.4**
ISP	**Isparta**	**2.51**	**125**	*e*Pn	**Pn**	**00 12 31.8**	**+1.4**
DALY	**Dalyan (Mu˘la**	**2.53**	**166**	*e*PN	**Pn**	**00 12 31.7**	**+1.2**
DALY	**Dalyan (Mu˘la**	**2.53**	**166**	*e*Pn	**Pn**	**00 12 31.7**	**+1.2**
DAT	**Datca**	**2.57**	**186**	*e*PN	**Pn**	**00 12 32.4**	**+1.2**
DAT	**Datca**	**2.57**	**186**	*e*Pn	**Pn**	**00 12 32.4**	**+1.2**
EDRB	**Edirne**	**2.71**	**341**	*e*PN	**Pn**	**00 12 34.3**	**+1.3**
EDRB	**Edirne**	**2.71**	**341**	P	**Pn**	**00 12 32.9**	**-0.1**
EDRB	**Edirne**	**2.71**	**341**	P	**Pn**	**00 12 32.9**	**-0.1**
EDRB

IDC 16 01:48:35.7±4.1, 19°12'S×172°63'W, h0km, mb4.2/4, mb1 4.4/4, mb1mx3.9/21, mbtmp4.2/4, Error ellipse: s-maj=268.3km s-min=35.7km az=154.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**38.67**	**262**	P	P	01 56 01.8	+0.3
	3.1nm,0.5s,baz=103,slow=10.0,SNR=3.7						
ASAR	**Alice Springs**	**49.75**	**255**	P	P	01 57 30.2	-0.1
	5.9nm,0.8s,baz=92,slow=8.1,SNR=4.7						
WRA	**Warramunga Arr**	**49.81**	**260**	P	P	01 57 30.1	-0.7
	1.2nm,0.8s,baz=98,slow=8.3,SNR=3.0						
PDAR	**Pinedale Array**	**84.55**	**41**	P	P	02 01 11.1	0.0
	0.5nm,0.7s,baz=201,slow=4.7,SNR=2.5						

FUNV 16 01:49:13.5, 8°75'N×70°77'W, h10km, MW3.6, 1C-1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOCV	**Socops**	**0.47**	**190**	↑*iP*	Pg	01 49 22.7	-0.1
SOCV				*eS*	Sg	01 49 29.5	+0.3
VIGV	**El Vigia**	**0.59**	**278**	↓*iP*	Pg	01 49 24.5	-0.6
VIGV				*eS*	Sg	01 49 32.7	-0.3
SANV	**Sanarito**	**1.43**	**59**	*eP*	Pn	01 49 39.0	-0.6
SANV				*eS*	Sn	01 49 57.9	-0.6
QARV	**Quebrada Arrib**	**1.47**	**10**	*eP*	Pn	01 49 40.0	0.0
QARV				*eS*	Sn	01 49 58.7	-0.7
CURV	**Curarigua**	**1.48**	**32**	*eP*	Pn	01 49 39.0	-1.4
CAPV	**Capacho**	**1.76**	**240**	*eS*	Sn	01 50 06.3	-0.8
TEPV	**Terepaima**	**1.97**	**52**	*eP*	Pn	01 49 46.9	-0.1
SIQV	**Siquisique**	**2.11**	**27**	*eP*	Pn	01 49 49.1	+0.2
SIQV				*eS*	Sn	01 50 13.9	-1.3
DABV	**Dabajuro**	**2.16**	**3**	*eP*	Pn	01 49 49.1	-0.4
DABV				*eS*	Sn	01 50 15.2	-1.2
MAPV	**Macapo**	**2.52**	**65**	*eP*	Pn	01 49 53.6	-1.0
MAPV				*eS*	Sn	01 50 23.5	-1.9
BAUV	**El Baul**	**2.70**	**86**	*eP*	Pn	01 49 55.5	-1.6
BAUV				*eS*	Sn	01 50 27.6	-2.2
JACV	**Jacura**	**3.01**	**39**	*eP*	Pn	01 50 00.5	-0.8
JACV				*eS*	Sn	01 50 35.0	-2.4
MONV	**Montecano**	**3.28**	**14**	*eP*	Pn	01 50 03.8	-1.1
TURV	**Turiamo**	**3.34**	**59**	*eP*	Pn	01 50 05.5	-0.4
CUPV	**Cœpira**	**5.08**	**75**	*eP*	Pn	01 50 28.0	-1.9

*ISK **16** 02:05:15.5, 39°45N×33°18E, h7km, MD2.8*
*ISCJB **16** 02:05:16.7±0.7, 39°45N±0°05×33°13E±0°07, h10km±4km, Error ellipse: s-maj=9.7km s-min=7.8km az=18.3*
*CSEM **16** 02:05:16.5±0.2, 39°46N×33°13E, h10km, MD2.8, Error ellipse: s-maj=6.5km s-min=6.2km az=119.0*
*DDA **16** 02:05:17.5, 39°52N×32°99E, h5km, MD2.9*
ISC 16 02:05:16.7±0.9, 39°44N±0°04×33°12E±0°04, h7km±6km, n21, σ0°98/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFSR	**Afˇar-Bala (A**	**0.04**	**286**	PG	**Pg**	**02 05 18.2**	**-0.1**
AFSR				SG	**Sg**	**02 05 19.8**	**+0.1**
AFSR	**Afˇar-Bala (A**	**0.04**	**286**	*i* Pg	**Pg**	**02 05 18.2**	**-0.1**
AFSR				*i* Sg	**Sg**	**02 05 19.3**	**-0.1**
BBAL	**Bala**	**0.11**	**359**	*i* P	**Pg**	**02 05 19.9**	**+0.7**
BBAL				*i* S	**Sg**	**02 05 22.0**	**+1.1**
BBAL	**Bala**	**0.11**	**359**	*i* P	**Pg**	**02 05 19.9**	**+0.7**
BBAL				*i* S	**Sg**	**02 05 22.0**	**+1.1**
ANTO	**Ankara**	**0.50**	**330**	*e*PG	**Pg**	**02 05 26.4**	**0.0**
ANTO				*e*SG	**Sg**	**02 05 33.8**	**+0.8**
ANTO	**Ankara**	**0.50**	**330**	*e*Pg	**Pg**	**02 05 26.6**	**0.0**
ANTO				*e*Sg	**Sg**	**02 05 33.8**	**+0.8**
LOD	**Lodumlu**	**0.53**	**329**	*e*PG	**Pg**	**02 05 26.6**	**-0.4**
LOD	**Lodumlu**	**0.53**	**329**	*e*Pg	**Pg**	**02 05 26.6**	**-0.4**
CDAG	**Cicekdag**	**0.98**	**79**	*i* P	**Pn**	**02 05 36.7**	**-0.3**
CDAG				*i* S	**Sn**	**02 05 53.9**	**+2.7**
CDAG	**Cicekdag**	**0.98**	**79**	*i* P	**Pn**	**02 05 36.7**	**-0.3**
KIZT	**Kizilcal**	**1.11**	**241**	*e*PN	**Pn**	**02 05 38.5**	**-0.3**
KIZT	**Kizilcal**	**1.11**	**241**	*e*Pn	**Pn**	**02 05 38.6**	**-0.3**
KDHN	**Kadinhani**	**1.20**	**221**	*e*P	**Pn**	**02 05 40.6**	**+0.5**
KDHN	**Kadinhani**	**1.20**	**221**	*e*P	**Pn**	**02 05 40.6**	**+0.5**
CANT	**Cankiri**	**1.23**	**18**	*e*PN	**Pn**	**02 05 38.6**	**-1.8**
SVRH	**Sivrihisar-ESK**	**1.24**	**271**	*e*PN	**Pn**	**02 05 40.2**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.24**	**271**	*e*Pn	**Pn**	**02 05 40.2**	**-0.3**
SULT	**Sultanhani-AKS**	**1.27**	**166**	*e*PN	**Pb**	**02 05 39.9**	**-1.1**
SULT	**Sultanhani-AKS**	**1.27**	**166**	*e*Pn	**Pb**	**02 05 39.9**	**-1.1**
CORM	**Corum**	**1.38**	**57**	*e*PN	**Pn**	**02 05 41.0**	**-1.5**
CORM	**Corum**	**1.38**	**57**	*e*Pn	**Pn**	**02 05 41.0**	**-1.5**

IDC 16 02:12:21.3±7.0, 1°96N×128°25E, h140km±66km, mb3.6/7, mb1 3.7/7, mb1mx3.4/20, mbtmp3.6/7, Error ellipse: s-maj=154.6km s-min=15.1km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.57**	**165**	P	P	02 17 09.8	-0.3
	1.1nm,0.4s,baz=348,slow=10,SNR=10						
ASAR	**Alice Springs**	**26.06**	**168**	P	P	02 17 41.8	-0.1
	0.5nm,0.4s,baz=356,slow=8.2,SNR=14						
ASAR				PcP	PcP	02 21 06.2	-0.2
	0.4nm,0.4s,baz=2.3,slow=2.2,SNR=4.9						
STKA	**Stephens Creek**	**35.95**	**160**	P	P	02 19 08.9	+0.3
	4.9nm,0.4s,baz=339,slow=8.0,SNR=26						
SONM	**Songino Array**	**49.46**	**341**	P	P	02 20 56.7	-0.7
	0.8nm,0.7s,baz=156,slow=8.5,SNR=3.0						
MKAR	**Makanchi Array**	**59.87**	**325**	P	P	02 22 12.6	+0.2
	1.6nm,0.4s,baz=115,slow=8.1,SNR=37						
ZALV	**Zalesovo Beam**	**62.85**	**333**	P	P	02 22 32.2	0.0
	0.3nm,0.3s,baz=101,slow=7.5,SNR=2.6						
VNDA	**Vanda**	**81.49**	**173**	P	P	02 24 22.2	-0.3
	0.2nm,0.4s,baz=300,slow=7.3,SNR=8.5						
TORD	**Torodi Ar. Bea**	**124.90**	**287**	PKP	PKPdf	02 31 05.4	-0.5
	0.1nm,0.3s,baz=81,slow=1.7,SNR=8.9						

CASC 16 02:12:22.2±1.4, 13°32N×89°90W, h32km±4km, MD3.6, ML3.6, 1C-6D, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SBLS	**San Blas**	**0.58**	**27**	↓*eP*	Pb	02 12 34.2	-0.2
SBLS				*eS*	Sn	02 12 43.7	+0.5
SNJE	**San Jose**	**0.61**	**27**	↓*eP*	Pb	02 12 34.6	-0.3
RTR	**El Retiro**	**0.62**	**23**	↓*iP*	Pb	02 12 34.9	-0.1
BOQS	**Boqueron**	**0.73**	**55**	↑*iP*	Pn	02 12 36.4	-0.2
BOQS				*eS*	Sn	02 12 47.6	+0.8
SNET	**Serv Nac Est T**	**0.74**	**60**	*eP*	Pn	02 12 36.0	-0.5
SNET				AML	AML	02 12 54.2	
	comp=Z,2μm,0.2s						
RBDL	**Robledal**	**0.82**	**14**	↓*iP*	Pn	02 12 37.5	-0.2
LFRS	**El Faro**	**0.87**	**69**	↓*eP*	Pn	02 12 37.7	-0.6
LFU	**La Fuente**	**0.87**	**61**	*eP*	Pn	02 12 38.4	0.0
LBRS	**Las Brisas**	**0.93**	**63**	↓*eP*	Pn	02 12 39.1	-0.1
SNVI	**San Vicente**	**1.07**	**74**	*eP*	Pn	02 12 41.0	-0.2
PCG	**Pacaya**	**1.27**	**327**	*eP*	Pb	02 12 45.6	-0.4
PCG				*eS*	Sn	02 12 59.9	-0.5
NBG	**Las Nubes**	**1.34**	**341**	*eP*	Pn	02 12 45.8	+0.8
NBG				*eS*	Sb	02 13 03.3	-0.8
FUG	**Fuego 3**	**1.45**	**321**	*eP*	Pn	02 12 46.0	-0.5
VSM	**San Miguel**	**1.58**	**86**	*eP*	Pn	02 12 48.6	+0.2
CAHU	**Cacacuatique**	**1.70**	**74**	*eP*	Pn	02 12 49.7	-0.2
MRL	**Marmol**	**1.75**	**6**	*eP*	Pn	02 12 51.5	+1.0
JAT	**Jato**	**1.96**	**301**	*eP*	Pn	02 12 53.6	+0.3
CNCH	**Conchagua**	**2.01**	**91**	*eP*	Pn	02 12 53.9	-0.2

IDC 16 02:14:08.8±1.8, 18°76S×172°64W, h0km, mb3.9/7, mb1 4.3/8, mb1mx4.0/21, mbtmp4.0/8, ML3.8/1, MS3.6/1, Ms1 3.6/1, ms1mx3.1/23, Error ellipse: s-maj=118.4km s-min=19.1km az=151.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.89**	**10**	Pn	Pn	02 15 19.4	-4.4
	2.1nm,0.3s,baz=186,slow=10,SNR=2.0						
AFI				Sn	Sn	02 16 10.5	-11
	8.4nm,0.3s,baz=118,slow=22,SNR=4.1						
RAR	**Rarotonga**	**12.34**	**104**	LR	LR	02 20 43.2	
	comp=Z,316nm,20.3s,baz=89,slow=32						
DZM	**Mont Dzumac**	**19.88**	**257**	P	Pn	02 18 43.3	-0.2
	0.3nm,0.3s,baz=89,slow=19,SNR=7.2						
STKA	**Stephens Creek**	**43.08**	**243**	P	P	02 22 09.8	-1.1
	2.0nm,1.0s,baz=69,slow=8.6,SNR=2.9						
ASAR	**Alice Springs**	**49.84**	**255**	P	P	02 23 04.3	+0.1
	8.1nm,0.9s,baz=87,slow=8.4,SNR=53						
WRA	**Warramunga Arr**	**49.87**	**259**	P	P	02 23 03.7	-0.6
	1.2nm,0.4s,baz=91,slow=6.1,SNR=11						
NVAR	**Mina Array Bea**	**76.35**	**41**	P	P	02 25 58.7	-1.5
	0.6nm,0.6s,baz=212,slow=8.5,SNR=3.9						
TXAR	**Lajitas Array**	**81.89**	**55**	P	P	02 26 32.4	+1.8
	0.5nm,0.9s,baz=204,slow=8.8,SNR=5.3						
PDAR	**Pinedale Array**	**84.28**	**41**	P	P	02 26 42.8	-0.1
	1.0nm,0.9s,baz=180,slow=3.0,SNR=6.1						
ILAR	**Eielson Array**	**85.59**	**11**	P	P	02 26 49.3	+0.6
	0.5nm,0.8s,baz=225,slow=3.7,SNR=5.2						

*ISCJB **16** 02:22:37.6±0.4, 41°28N×0°02×22°73E±0°02, h1km±4km, Error ellipse: s-maj=3.4km s-min=2.9km az=16.0*
*SKO **16** 02:22:37.3, 41°28N×22°72E, h15km, M1.3, ML1.7*
*SOF **16** 02:22:37.7, 41°32N×22°76E, h2km, MD2.5*
*THE **16** 02:22:38.1, 41°28N×22°73E, h2km±1km, ML2.3/9, Error ellipse: s-maj=1.6km s-min=0.4km az=353.0*
*ATH **16** 02:22:38.4, 41°26N×22°76E, h6km±3km, MD2.6/7*
*CSEM **16** 02:22:38.1±0.2, 41°27N×22°75E, h2km, ML2.3/9, Error ellipse: s-maj=3.7km s-min=3.6km az=109.0*
*BEO **16** 02:22:38.7±1.1, 41°23N×22°69E, h0km, ML2.0/4*
ISC 16 02:22:38.1±0.9, 41°26N±0°02×22°75E±0°02, h6km±7km, n48, σ0°81/83, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.14**	**294**	P	**Pg**	**02 22 40.5**	**-0.5**
VAY				S	**Sg**	**02 22 42.6**	**-0.4**
VAY	**Valandovo**	**0.14**	**294**	*i* Pg	**Pg**	**02 22 40.7**	**-0.3**
VAY				*i* Sg	**Sg**	**02 22 42.8**	**-0.2**
VAY				*e*Lg	Lg	02 22 42.8	
	comp=N,857nm,0.6s						
VAY				*e*Lg	Lg	02 22 43.0	
	comp=E,294nm,0.3s						
VAY	**Valandovo**	**0.14**	**294**	P	**Pg**	**02 22 40.5**	**-0.5**
VAY				S	**Sg**	**02 22 42.6**	**-0.4**
KNT	**Kendrikon**	**0.15**	**131**	P	**Pg**	**02 22 41.9**	**+0.7**
KNT				S	**Sg**	**02 22 44.4**	**+1.1**
KNT	**Kendrikon**	**0.15**	**131**	P	**Pg**	**02 22 41.9**	**+0.7**
KNT				S	**Sg**	**02 22 44.4**	**+1.1**
GRG	**Griva**	**0.40**	**220**	P	**Pg**	**02 22 45.5**	**-0.3**
GRG				S	**Sg**	**02 22 50.0**	**+0.9**
GRG	**Griva**	**0.40**	**220**	*e*PG	**Pg**	**02 22 46.0**	**+0.2**
GRG				*e*SB	**Sg**	**02 22 51.8**	**+0.7**
GRG	**Griva**	**0.40**	**220**	P	**Pg**	**02 22 45.5**	**-0.3**
GRG	**Griva**	**0.40**	**220**	*e*Pg	**Pg**	**02 22 46.0**	**+0.2**
GRG				*e*Sb	**Sg**	**02 22 51.8**	**+0.7**
SOH	**Sokhos**	**0.64**	**134**	P	**Pg**	**02 22 50.6**	**+0.2**
SOH				S	**Sb**	**02 22 59.6**	**-1.2**
SOH	**Sokhos**	**0.64**	**134**	*e*PB	**Pg**	**02 22 50.5**	**+0.2**
SOH				*e*SB	**Sg**	**02 22 58.8**	**+0.2**
SOH	**Sokhos**	**0.64**	**134**	P	**Pg**	**02 22 50.6**	**+0.2**
SOH				*e*Sb	**Sg**	**02 22 58.8**	**+0.2**
SOH				S	**Sb**	**02 22 59.6**	**-1.2**
THE	**Thessaloniki**	**0.65**	**165**	P	**Pg**	**02 22 50.8**	**+0.2**
THE				S	**Sb**	**02 22 59.9**	**-1.3**
THE	**Thessaloniki**	**0.65**	**165**	P	**Pg**	**02 22 50.8**	**+0.2**
THE				S	**Sb**	**02 22 59.9**	**-1.3**
KKB	**Krupnik**	**0.65**	**23**	*i* P	**Pg**	**02 22 49.3**	**-1.4**
KKB	**Krupnik**	**0.65**	**23**	*i* P	**Pg**	**02 22 49.3**	**-1.4**
SRS	**Serrai**	**0.66**	**103**	P	**Pg**	**02 22 50.7**	**0.0**
SRS				S	**Sb**	**02 23 00.2**	**-1.1**
SRS	**Serrai**	**0.66**	**103**	P	**Pg**	**02 22 50.7**	**0.0**
SRS				S	**Sb**	**02 23 00.2**	**-1.1**
HORT	**Hortiatis**	**0.72**	**158**	P	**Pg**	**02 22 52.1**	**+0.3**
HORT				S	**Sb**	**02 23 02.6**	**-0.6**
HORT	**Hortiatis**	**0.72**	**158**	P	**Pg**	**02 22 52.1**	**+0.3**
HORT				S	**Sb**	**02 23 02.6**	**-0.6**
MMB	**Musomiste**	**0.81**	**66**	*i* P	**Pg**	**02 22 53.4**	**-0.2**
MMB	**Musomiste**	**0.81**	**66**	*i* P	**Pg**	**02 22 53.4**	**-0.2**
NVR	**Nevrokopi**	**0.85**	**84**	P	**Pg**	**02 22 54.1**	**-0.2**
NVR				S	**Sb**	**02 23 06.2**	**-0.6**
NVR	**Nevrokopi**	**0.85**	**84**	*e*PB	**Pg**	**02 22 54.2**	**-0.1**
NVR				*e*SB	**Sb**	**02 23 06.1**	**-0.7**
NVR	**Nevrokopi**	**0.85**	**84**	*e*Pb	**Pg**	**02 22 54.2**	**-0.1**
NVR				*e*Sb	**Sb**	**02 23 06.1**	**-0.7**
PLG	**Polygyros**	**1.04**	**149**	P	**Pg**	**02 22 57.6**	**-0.4**
PLG				S	**Sn**	**02 23 12.9**	**-1.1**
PLG	**Polygyros**	**1.04**	**149**	*e*PG	**Pg**	**02 22 57.5**	**-0.4**
PLG				*e*SB	**Sb**	**02 23 11.6**	**-0.7**
PLG	**Polygyros**	**1.04**	**149**	P	**Pg**	**02 22 57.6**	**-0.4**
PLG				*e*Sb	**Sb**	**02 23 11.6**	**-0.7**
PLG				S	**Sn**	**02 23 12.9**	**-1.1**
BIA	**Bitola**	**1.10**	**258**	*e*Pg	**Pg**	**02 22 58.2**	**-0.9**
BIA				*e*Sg	**Sg**	**02 23 13.3**	**-0.1**
FNA	**Florina**	**1.14**	**246**	P	**Pg**	**02 22 59.4**	**-0.5**
FNA				S	**Sb**	**02 23 15.6**	**+0.3**
FNA	**Florina**	**1.14**	**246**	*e*PG	**Pg**	**02 22 59.7**	**-0.2**
FNA				*e*SB	**Sb**	**02 23 16.2**	**+0.9**
FNA	**Florina**	**1.14**	**246**	P	**Pg**	**02 22 59.4**	**-0.5**
FNA	**Florina**	**1.14**	**246**	*e*Pg	**Pg**	**02 22 59.7**	**-0.2**
FNA				S	**Sb**	**02 23 15.6**	**+0.3**
FNA				*e*Sb	**Sb**	**02 23 16.2**	**+0.9**
LIT	**Litokhoron**	**1.18**	**190**	*e*PN	**Pg**	**02 23 00.1**	**-0.5**
LIT	**Litokhoron**	**1.18**	**190**	*e*Pn	**Pg**	**02 23 00.1**	**-0.5**
OUR	**Ouranopolis**	**1.32**	**134**	P	**Pn**	**02 23 02.7**	**-0.3**
OUR				S	**Sn**	**02 23 22.6**	**+1.7**
OUR	**Ouranopolis**	**1.32**	**134**	P	**Pn**	**02 23 02.7**	**-0.3**
OUR				S	**Sn**	**02 23 22.6**	**+1.7**
VTS	**Vitosha**	**1.37**	**14**	*i* P	**Pn**	**02 23 03.8**	**-0.1**
VTS	**Vitosha**	**1.37**	**14**	*i* P	**Pn**	**02 23 03.8**	**-0.1**
PLD	**Plovdiv**	**1.69**	**60**	*e*Sg	**Sg**	**02 23 33.8**	**+1.4**
PLD	**Plovdiv**	**1.69**	**60**	*e*Sg	**Sg**	**02 23 33.8**	**+1.4**
THL	**Klokotos Trika**	**1.79**	**198**	*e*PN	**Pg**	**02 23 12.0**	**-0.3**
THL	**Klokotos Trika**	**1.79**	**198**	*e*Pn	**Pg**	**02 23 12.0**	**-0.3**
ZAPS	**Zavoj**	**2.01**	**358**	*e*Pn	**Pb**	**02 23 15.2**	**+0.1**
ZAPS				*e*Sg	**Sg**	**02 23 43.9**	**+1.2**
LIA	**Limnos Island**	**2.30**	**126**	*e*PN	**Pb**	**02 23 18.8**	**-1.2**
LIA	**Limnos Island**	**2.30**	**126**	*e*Pn	**Pb**	**02 23 18.8**	**-1.2**
GRUS	**Gruza**	**3.02**	**331**	*e*Pn	**Pn**	**02 23 28.0**	**+1.6**
GRUS				*e*Sn	**Sn**	**02 24 04.1**	**+1.2**
GRUS	**Gruza**	**3.02**	**331**	*e*Pn	**Pn**	**02 23 28.0**	**+1.6**
GRUS				*e*Sn	**Sn**	**02 24 04.1**	**+1.2**

*DDA **16** 02:37:18.8, 39°45N×33°05E, h9km, MD3.3*
*ISCJB **16** 02:37:19.5±0.5, 39°44N±0°03×33°06E±0°03, h3km±3km, Error ellipse: s-maj=4.4km s-min=4.1km az=145.9*
*CSEM **16** 02:37:19.5±0.1, 39°44N×33°08E, h2km, MD3.6, Error ellipse: s-maj=4.0km s-min=3.6km az=162.0*
*ISK **16** 02:37:19.0, 39°46N×33°09E, h4km, MD3.6*
ISC 16 02:37:19.8±0.9, 39°44N±0°02×33°07E±0°02, h1km±4km, n67, σ0°65/83, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFSR	**Afˇar-Bala (A**	**0.00**	**346**	*e*PG	**Pg**	**02 37 19.7**	**-0.5**
AFSR				*e*SG	**Sg**	**02 37 21.1**	**+0.5**
AFSR	**Afˇar-Bala (A**	**0.00**	**346**	*e*Pg	**Pg**	**02 37 19.7**	**-0.5**
AFSR				*e*Sg	**Sg**	**02 37 21.1**	**+0.5**
BBAL	**Bala**	**0.11**	**22**	*i* P	**Pg**	**02 37 21.4**	**-0.5**
BBAL				*i* S	**Sg**	**02 37 23.9**	**+0.6**
BBAL	**Bala**	**0.11**	**22**	*i* P	**Pg**	**02 37 21.4**	**-0.5**
BBAL				*i* S	**Sg**	**02 37 23.9**	**+0.6**
ANTO	**Ankara**	**0.47**	**333**	*e*PG	**Pg**	**02 37 28.1**	**-0.8**
ANTO				*e*SG	**Sg**	**02 37 35.7**	**+0.6**
ANTO	**Ankara**	**0.47**	**333**	*e*Pg	**Pg**	**02 37 28.1**	**-0.8**
ANTO				*e*Sg	**Sg**	**02 37 35.7**	**+0.6**
LOD	**Lodumlu**	**0.50**	**332**	*e*PG	**Pg**	**02 37 28.7**	**-0.7**
LOD				*e*SG	**Sg**	**02 37 36.5**	**+0.5**
LOD	**Lodumlu**	**0.50**	**332**	*e*Pg	**Pg**	**02 37 28.7**	**-0.7**
LOD				*e*Sg	**Sg**	**02 37 36.5**	**+0.5**
CDAG	**Cicekdag**	**1.02**	**79**	*i* P	**Pg**	**02 37 38.5**	**-0.9**
CDAG				*i* S	**Sg**	**02 37 53.5**	**+0.9**
CDAG	**Cicekdag**	**1.02**	**79**	*i* P	**Pg**	**02 37 38.5**	**-0.9**
CDAG				*i* S	**Sg**	**02 37 53.5**	**+0.9**
KIZT	**Kizilcal**	**1.08**	**239**	PN	**Pg**	**02 37 40.8**	**+0.2**
KIZT	**Kizilcal**	**1.08**	**239**	*i* Pn	**Pg**	**02 37 40.8**	**+0.2**
KDHN	**Kadinhani**	**1.19**	**219**	*i* P	**Pg**	**02 37 41.0**	**-1.5**
KDHN				*i* S	**Sg**	**02 37 57.5**	**-0.3**
KDHN	**Kadinhani**	**1.19**	**219**	*i* P	**Pg**	**02 37 41.0**	**-1.5**
KDHN				*i* S	**Sg**	**02 37 57.5**	**-0.3**
SVRH	**Sivrihisar-ESK**	**1.20**	**271**	*e*PN	**Pg**	**02 37 42.7**	**0.0**
SVRH	**Sivrihisar-ESK**	**1.20**	**271**	*e*Pn	**Pg**	**02 37 42.7**	**0.0**
CANT	**Cankiri**	**1.23**	**20**	*e*PN	**Pg**	**02 37 43.0**	**-0.4**
SULT	**Sultanhani-AKS**	**1.29**	**164**	*e*PN	**Pg**	**02 37 43.9**	**-0.6**
SULT	**Sultanhani-AKS**	**1.29**	**164**	*e*Pn	**Pg**	**02 37 43.9**	**-0.6**
LADK	**Ladik-KONYA**	**1.36**	**204**	*e*PN	**Pg**	**02 37 45.7**	**-0.1**
LADK	**Ladik-KONYA**	**1.36**	**204**	*e*Pn	**Pg**	**02 37 45.7**	**-0.1**
CORM	**Corum**	**1.41**	**58**	*e*PN	**Pn**	**02 37 45.7**	**-0.9**
CORM	**Corum**	**1.41**	**58**	*e*Pn	**Pn**	**02 37 45.7**	**-0.9**
AVNT	**Avonos**	**1.54**	**115**	*i* P	**Pn**	**02 37 48.5**	**0.0**
AVNT				*i* S	**Sg**	**02 38 10.6**	**+1.4**
AVNT	**Avonos**	**1.54**	**115**	*i* P	**Pn**	**02 37 48.5**	**0.0**
AVNT				*i* S	**Sg**	**02 38 10.6**	**+1.4**
KONT	**Konya--Tatoy**	**1.60**	**201**	*e*PN	**Pn**	**02 37 48.6**	**-0.5**
KONT	**Konya--Tatoy**	**1.60**	**201**	*e*Pn	**Pn**	**02 37 48.6**	**-0.5**
ILGA	**Ilgaz**	**1.68**	**17**	*i* P	**Pn**	**02 37 50.4**	**-0.1**
ILGA				*i* S	**Sb**	**02 38 13.4**	**0.0**
ILGA	**Ilgaz**	**1.68**	**17**	*i* P	**Pn**	**02 37 50.4**	**-0.1**
ILGA				*i* S	**Sb**	**02 38 13.4**	**0.0**
ESKT	**Eskisehir**	**1.72**	**273**	*e*PN	**Pn**	**02 37 50.8**	**-0.1**
ESKT	**Eskisehir**	**1.72**	**273**	*e*Pn	**Pn**	**02 37 50.8**	**-0.1**
SEYT	**Eskypehyr**	**1.72**	**273**	*i* P	**Pn**	**02 37 51.4**	**+0.4**
SEYT	**Eskypehyr**	**1.72**	**273**	*i* P	**Pn**	**02 37 51.4**	**+0.4**
TOS	**Tosya**	**1.75**	**24**	*e*PN	**Pn**	**02 37 50.8**	**-0.5**
TOS	**Tosya**	**1.75**	**24**	*e*Pn	**Pn**	**02 37 50.8**	**-0.5**
YOZ	**Yozgat**	**1.75**	**83**	*e*PN	**Pn**	**02 37 50.9**	**-0.4**
YOZ	**Yozgat**	**1.75**	**83**	*e*Pn	**Pn**	**02 37 50.9**	**-0.4**
MDUB	**Mudurnu**	**1.77**	**306**	*e*PN	**Pn**	**02 37 51.3**	**-0.3**
MDUB	**Mudurnu**	**1.77**	**306**	*e*Pn	**Pn**	**02 37 51.3**	**-0.3**
NIG	**Nigde**	**1.79**	**137**	*e*PN	**Pn**	**02 37 51.6**	**-0.5**
NIG	**Nigde**	**1.79**	**137**	*e*Pn	**Pn**	**02 37 51.6**	**-0.5**
BOLV	**Bolvadin**	**1.80**	**247**	*e*P	**Pb**	**02 37 53.4**	**-0.2**
BOLV	**Bolvadin**	**1.80**	**247**	*e*P	**Pb**	**02 37 53.4**	**-0.2**
SAFT	**Safranbolu**	**1.82**	**351**	PN	**Pn**	**02 37 51.9**	**-0.3**
SAFT	**Safranbolu**	**1.82**	**351**	*i* Pn	**Pn**	**02 37 51.9**	**-0.3**
BALT	**Daday**	**2.10**	**6**	*e*P	**Pn**	**02 37 55.7**	**-0.6**
BALT	**Daday**	**2.10**	**6**	*e*P	**Pn**	**02 37 55.7**	**-0.6**
SHUT	**Suhut-Afyon**	**2.16**	**246**	*e*PN	**Pn**	**02 37 57.5**	**+0.6**
SHUT	**Suhut-Afyon**	**2.16**	**246**	*e*Pn	**Pn**	**02 37 57.5**	**+0.6**
GULT	**Gulveren**	**2.20**	**297**	*e*PN	**Pn**	**02 37 58.3**	**+0.8**
GULT	**Gulveren**	**2.20**	**297**	*e*Pn	**Pn**	**02 37 58.3**	**+0.8**
BNN	**Bunyan**	**2.24**	**104**	*e*PN	**Pn**	**02 37 57.2**	**-0.9**
BNN	**Bunyan**	**2.24**	**104**	*e*Pn	**Pn**	**02 37 57.2**	**-0.9**
ALT	**Altintas**	**2.33**	**261**	*e*PN	**Pn**	**02 37 59.6**	**+0.3**
ALT	**Altintas**	**2.33**	**261**	*e*Pn	**Pn**	**02 37 59.6**	**+0.3**
BYBT	**Boyabat**	**2.40**	**32**	*e*PN	**Pn**	**02 38 00.0**	**-0.1**
BYBT	**Boyabat**	**2.40**	**32**	*e*Pn	**Pn**	**02 38 00.0**	**-0.1**
DIKM	**Dikmen**	**2.76**	**36**	*e*PN	**Pn**	**02 38 05.0**	**-0.2**
DIKM	**Dikmen**	**2.76**	**36**	*e*Pn	**Pn**	**02 38 05.0**	**-0.2**
SARI	**SarD1z-Kayseri**	**2.81**	**111**	*e*PN	**Pn**	**02 38 05.8**	**-0.2**
SARI	**SarD1z-Kayseri**	**2.81**	**111**	*e*Pn	**Pn**	**02 38 05.8**	**-0.2**
**KOZ

ECAL	**Calabor**	**10.27**	**306**	P		**Pn**	**02 44 17.5**	**+1.9**
	1.1nm,0.3s,SNR=7.9								

*DDA **16** 02:51:32.0, 36°.61N × 36°.08E, h7km, ML3.2*
*NSSC **16** 02:51:32.6 ± 1.3, 36°.63N × 36°.13E, h0km ± 7km, MD1.1, ML2.1*
*CSEM **16** 02:51:32.8 ± 0.4, 36°.58N × 35°.97E, h2km, ML3.2, Error ellipse: s-maj=9.3km s-min=6.8km az=75.0*

ISC 16 02:51:32.6 ± 1.1, **36°.62N** ± 0°.02 × **36°.08E** ± 0°.02, **h4km** ± 11km, **n38**, σ1**9**00/55, **Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COBT	**Iskenderun**	**0.17**	**124**	*i* P	**Pg**	**02 51 35.9**	**-0.1**
COBT	**Iskenderun**	**0.17**	**124**	*i* P	**Pg**	**02 51 35.9**	**-0.1**
YURE	**YUREGIR**	**0.42**	**301**	*i* P	**Pg**	**02 51 40.4**	**-0.3**
YURE				*i* S	**Sg**	**02 51 47.4**	**+1.3**
YURE	**YUREGIR**	**0.42**	**301**	*i* P	**Pg**	**02 51 40.4**	**-0.3**
YURE				*i* S	**Sg**	**02 51 47.4**	**+1.3**
DRWC	**Darouich**	**0.47**	**89**	*e*P	**Pg**	**02 51 40.5**	**-1.2**
DRWC				*e*S	**Sg**	**02 51 47.4**	**-0.5**
DRWC				AMP		02 51 48.1	
DRWC				AML	AML	02 51 49.2	
	comp=N,270nm,0.8s						
YAYL	**Yayladag**	**0.58**	**178**	*i* P	**Pg**	**02 51 43.0**	**-0.8**
YAYL				*i* S	**Sg**	**02 51 51.9**	**+0.6**
YAYL	**Yayladag**	**0.58**	**178**	*i* P	**Pg**	**02 51 43.0**	**-0.8**
YAYL				*i* S	**Sg**	**02 51 51.9**	**+0.6**
BTCH	**Batrach**	**0.65**	**152**	*e*P	**Pg**	**02 51 45.2**	**0.0**
BTCH				*e*S	**Sb**	**02 51 55.0**	**-1.1**
BTCH				AML	AML	02 51 58.8	
	comp=N,169nm,0.2s						
BTCH				AML	AML	02 52 00.5	
	comp=E,204nm,0.5s						
BTCH	**Batrach**	**0.65**	**152**	*e*P	**Pg**	**02 51 45.3**	**+0.2**
BTCH	**Batrach** SNR=91	**0.65**	**152**	*e*P	**Pg**	**02 51 45.3**	**+0.1**
ARNB	**Al Arnab**	**0.76**	**187**	*e*P	**Pg**	**02 51 47.3**	**+0.2**
ARNB				*e*S	**Sb**	**02 51 58.6**	**-0.5**
ARNB				AML	AML	02 52 04.4	
	comp=E,130nm,0.4s						
ARNB				AML	AML	02 52 05.4	
	comp=N,87nm,0.2s						
ARNB	**Al Arnab**	**0.76**	**187**	*e*P	**Pg**	**02 51 47.4**	**+0.2**
ARNB	**Al Arnab** SNR=90	**0.76**	**187**	*e*P	**Pg**	**02 51 47.4**	**+0.3**
KUZU	**Kuzuini**	**0.82**	**79**	*i* P	**Pg**	**02 51 48.0**	**-0.3**
KUZU				*i* S	**Sb**	**02 52 01.4**	**+0.5**
KUZU	**Kuzuini**	**0.82**	**79**	*i* P	**Pg**	**02 51 48.0**	**-0.3**
KUZU				*i* S	**Sb**	**02 52 01.4**	**+0.5**
ANDN	**Andirin**	**0.99**	**12**	*i* P	**Pb**	**02 51 52.7**	**+0.3**
ANDN				*i* S	**Sb**	**02 52 07.1**	**+1.3**
ANDN	**Andirin**	**0.99**	**12**	*i* P	**Pb**	**02 51 52.7**	**+0.3**
ANDN				*i* S	**Sb**	**02 52 07.1**	**+1.3**
AYKD	**Aykdinkavak**	**0.99**	**36**	*e*P	**Pg**	**02 51 50.6**	**-1.0**
AYKD				*i* S	**Sg**	**02 52 04.9**	**+0.5**
AYKD	**Aykdinkavak**	**0.99**	**36**	*e*P	**Pg**	**02 51 50.6**	**-1.0**
AYKD				*i* S	**Sg**	**02 52 04.9**	**+0.5**
WRDH	**Warideh**	**1.14**	**166**	*e*P	**Pg**	**02 51 54.0**	**-0.5**
WRDH				AML	AML	02 52 12.8	
	comp=Z,99nm,0.4s						
WRDH	**Warideh**	**1.14**	**166**	*e*P	**Pg**	**02 51 53.9**	**-0.5**
WRDH	**Warideh** SNR=72	**1.14**	**166**	*e*P	**Pg**	**02 51 53.9**	**-0.5**
GULE	**Gulek**	**1.24**	**303**	*e*P	**Pg**	**02 51 54.1**	**-2.3**
GULE	**Gulek**	**1.24**	**303**	*e*P	**Pg**	**02 51 54.1**	**-2.3**
GZT	**Gaziantep**	**1.40**	**58**	*i* P	**Pn**	**02 51 58.9**	**-0.3**
GZT				*i* S	**Sn**	**02 52 18.7**	**+0.6**
SLMH	**Al Salmeh**	**1.54**	**104**	*e*P	**Pn**	**02 52 00.4**	**-0.6**
SLMH				AML	AML	02 52 25.2	
	comp=Z,76nm,0.4s						
BIDA	**Albida**	**1.61**	**173**	*e*P	**Pn**	**02 52 01.9**	**-0.1**
BIDA				*e*S	**Sb**	**02 52 23.7**	**0.0**
BIDA	**Albida**	**1.61**	**173**	*e*P	**Pn**	**02 52 02.0**	**0.0**
BIDA	**Albida** SNR=61	**1.61**	**173**	*e*P	**Pn**	**02 52 02.0**	**+0.1**
ATAB	**Bozova**	**1.97**	**64**	*e*P	**Pb**	**02 52 09.7**	**+0.6**
ATAB				*i* S	**Sg**	**02 52 37.3**	**+1.4**
ATAB	**Bozova**	**1.97**	**64**	*e*P	**Pb**	**02 52 09.7**	**+0.6**
ATAB				*i* S	**Sg**	**02 52 37.3**	**+1.4**
HAWK	**Haweek**	**2.11**	**173**	*e*P	**Pn**	**02 52 09.2**	**+0.4**
HAWK	**Haweek** SNR=47	**2.11**	**173**	*e*P	**Pn**	**02 52 09.2**	**+0.4**
JHLN	**Al Jahlan**	**2.13**	**115**	*e*P	**Pb**	**02 52 11.5**	**-0.4**
JHLN	**Al Jahlan** SNR=47	**2.13**	**115**	*e*P	**Pb**	**02 52 11.5**	**-0.3**
ROOS	**tl_alroos**	**2.63**	**158**	*e*P	**Pn**	**02 52 17.6**	**+1.6**
SFNV	**Sufian**	**3.25**	**92**	*e*P	**Pb**	**02 52 28.3**	**-2.8**
SFNV	**Sufian** SNR=47	**3.25**	**92**	*e*P	**Pb**	**02 52 28.3**	**-2.8**

IDC 16 03:10:18.6 ± 50.0, **17°.04S** × **172°.55W**, **h0km**, **mb3.9**/3, **mb1 4.1**/3, **mb1mx3.6**/20, **mbtmp3.9**/3, **Error ellipse: s-maj=962.5km s-min=189.5km az=81.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**43.95**	**242**	P	P	03 18 28.3	+0.7
	0.4nm,0.3s,baz=106,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**50.29**	**258**	P	P	03 19 16.8	-0.5
	0.7nm,0.4s,baz=97,slow=8.0,SNR=7.6						
ASAR	**Alice Springs**	**50.40**	**253**	P	P	03 19 17.8	-0.4
	1.0nm,0.5s,baz=89,slow=8.0,SNR=16						

*MOS **16** 03:24:57.1 ± 1.0, 46°.21N × 149°.30E, h152km, mb3.6/9, Error ellipse: s-maj=21.2km s-min=12.3km az=71.9*
*JMA **16** 03:24:59.5 ± 0.4, 45°.12N × 149°.66E, h173km, M3.4*
*IDC **16** 03:24:59.2 ± 2.6, 46°.21N × 149°.38E, h155km ± 22km, mb3.4/12, mb1 3.6/13, mb1mx3.4/27, mbtmp3.4/13, Error ellipse: s-maj=38.5km s-min=15.9km az=167.0*

ISC 16 03:24:55.9 ± 0.8, **45°.8N** ± 0°.1 × **149°.5E** ± 0°.1, **h141**km, **n36**, σ1**9**91/38, **mb3.6**/14, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.29**	**244**	*i* PN	Pn	03 25 26.2	+3.7
KUR				*e*S	**Sn**	**03 25 48.1**	**+5.3**
KUR				pmax	pmax		
	comp=Z,116nm,0.5s						
KUR				pmax	pmax		
	comp=N,33nm,0.5s						
KUR				pmax	pmax		
	comp=E,14nm,0.1s						
KUR				smax	smax		
	comp=N,219nm,0.8s						
KUR				smax	smax		
	comp=E,84nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.14**	**237**	*i* PN	**Pn**	**03 25 47.2**	**+2.6**
YUK				*i* S	**Sn**	**03 26 26.0**	**+3.7**
YUK				pmax	pmax		
	comp=E,20nm,0.3s						
YUK				pmax	pmax		
	comp=N,10.0nm,0.3s						
YUK				pmax	pmax		
	comp=Z,53nm,0.3s						
YUK				smax	smax		
	comp=E,104nm,0.5s						
YUK				smax	smax		
	comp=N,74nm,0.5s						
NEM2	**Nemuro 2**	**3.64**	**229**	P	**Pn**	**03 25 52.1**	**+1.0**
NEM2				*e*S	**Sn**	**03 26 32.7**	**-1.1**
JRA	**Rausu**	**3.64**	**241**	P	**Pn**	**03 25 54.2**	**+3.1**
JNK	**Nakash**	**4.08**	**239**	P	**Pn**	**03 25 59.6**	**+2.7**
JTKR	**Abashiri--Toko**	**4.38**	**247**	P	**Pn**	**03 26 03.9**	**+3.0**
JAK	**Akkeshi**	**4.45**	**232**	P	**Pn**	**03 26 02.8**	**+1.0**
JAK				*e*S	**Sn**	**03 26 51.9**	**-1.1**
JOB	**Onbets**	**5.00**	**236**	*e*S	**Sn**	**03 27 06.3**	**+0.2**
JKK2	**Kamakawa 2**	**5.18**	**250**	P	Pn	03 26 15.6	+4.1
ASAJ	**Asahikawa**	**5.19**	**253**	P	Pn	03 26 15.8	+4.2
	comp=N,0.3nm,0.3s,baz=102,slow=15,SNR=4.5						
JCH	**Churui**	**5.45**	**236**	P	**Pn**	**03 26 16.5**	**+1.4**
JCH				*e*S	**Sn**	**03 27 15.4**	**-1.5**
JEM	**Erimo**	**5.95**	**233**	P	**Pn**	**03 26 23.2**	**+1.4**
JNBK	**Urakawa-nobuka**	**6.01**	**236**	P	**Pn**	**03 26 22.9**	**+0.3**
JNBK				*e*S	**Sn**	**03 27 27.0**	**-3.4**
JKB	**Kayabe**	**7.27**	**240**	*e*S	**Sn**	**03 27 57.5**	**-3.2**
JTM	**Tenmabayashi**	**7.94**	**234**	*e*S	Sn	03 28 10.3	-6.5
JANG	**Nango**	**7.98**	**230**	P	**Pn**	**03 26 47.3**	**-1.7**
JANG				*e*S	Sn	03 28 10.5	-7.3
JTH	**Tanohata**	**8.12**	**226**	*e*S	Sn	03 28 14.4	-6.7
PETK	**Petropavlovsk-**	**9.04**	**33**	PN	**Pn**	**03 27 02.2**	**-0.8**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**9.04**	**33**	P	**Pn**	**03 27 02.2**	**-0.8**
	comp=Z,1.1nm,0.3s,baz=203,slow=10,SNR=5.6						
TIXI	**Tiksi**	**27.72**	**346**	*e*P	**P**	**03 30 28.3**	**-2.1**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ILAR	**Eielson Array**	**38.83**	**38**	P	**P**	**03 32 06.7**	**+0.1**
	comp=Z,0.8nm,0.7s,baz=278,slow=8.5,SNR=10.0						
MKAR	**Makanchi Array**	**45.14**	**297**	P	**P**	**03 32 58.1**	**+0.1**
MKAR						03 34 37.0	
MKAR	**Makanchi Array**	**45.14**	**297**	P	**P**	**03 32 58.1**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=64,slow=7.4,SNR=4.8						
MKAR				PcP	**PcP**	**03 34 37.0**	**+1.0**
	comp=Z,0.4nm,0.7s,baz=76,slow=6.1,SNR=3.4						
KURK	**Kurchatov**	**45.79**	**303**	*e*P	**P**	**03 33 02.5**	**-0.5**
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YKA	**Yellowknife Ar**	**53.15**	**35**	P	**P**	**03 33 59.3**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=298,slow=7.1,SNR=5.0						
FFC	**Flin Flon**	**63.04**	**38**	*i* P	**P**	**03 35 08.8**	**+1.3**
FINES	**FINESS Array B**	**63.79**	**333**	P	**P**	**03 35 11.2**	**-1.1**
	comp=Z,3.7nm,0.9s,baz=90,slow=7.6,SNR=4.2						
PDAR	**Pinedale Array**	**67.30**	**52**	P	**P**	**03 35 36.2**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=316,slow=3.8,SNR=3.3						
NOA	**NORSAR Array B**	**68.27**	**340**	P	**P**	**03 35 40.3**	**-0.7**
	comp=Z,0.8nm,0.7s,baz=29,slow=6.5,SNR=3.9						
HFS	**Hagfors**	**68.42**	**339**	P	**P**	**03 35 40.6**	**-1.3**
	comp=Z,1.0nm,0.7s,baz=355,slow=6.7,SNR=4.5						
AKASG	**Malin Array Be**	**70.89**	**324**	P	**P**	**03 35 55.7**	**-1.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**70.89**	**324**	P	**P**	**03 35 55.7**	**-1.5**
	comp=Z,0.6nm,0.4s,baz=40,slow=6.9,SNR=2.9						
EKA	**Eskdalemuir Ar**	**76.61**	**344**	P	**P**	**03 36 30.4**	**0.0**
	comp=Z,0.4nm,0.4s,baz=20,slow=5.2,SNR=5.5						
BRTR	**Keskin Array B**	**77.31**	**315**	P	**P**	**03 36 35.3**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=83,slow=3.5,SNR=3.4						
GERES	**GERESS Array B**	**78.15**	**332**	P	**P**	**03 36 39.1**	**-0.2**
	comp=Z,0.5nm,0.4s,baz=42,slow=6.1,SNR=7.7						
TXAR	**Lajitas Array**	**80.12**	**58**	P	**P**	**03 36 50.7**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=298,slow=4.5,SNR=13						

*ISCJB **16** 03:41:05.7 ± 0.2, 8°.56S ± 0°.03 × 118°.36E ± 0°.02, h152km, mb4.3/13, Error ellipse: s-maj=4.6km s-min=3.4km az=15.1*
*AUST **16** 03:41:05.0, 8°.99S × 118°.46E, h100km*
*NEIC **16** 03:41:06.0 ± 1.1, 8°.57S × 118°.40E, h133km ± 9km, mb4.7/3, Error ellipse: s-maj=17.0km s-min=8.2km az=73.0*
*DJA **16** 03:41:07.4 ± 0.5, 9°S × 11°.8E°, h105km ± 12km, M4.9/19, mb4.7/7, mB5.0/3, MLv5.0/19, Mw(mB)4.3/3*
*IDC **16** 03:41:08.0 ± 1.7, 8°.48S × 118°.55E, h147km ± 13km, mb3.8/11, mb1 4.0/13, mb1mx3.9/23, mbtmp3.9/13, Error ellipse: s-maj=20.2km s-min=8.7km az=62.0*

ISC 16 03:41:07.4 ± 0.4, **8°.59S** ± 0°.04 × **118°.43E** ± 0°.03, **h152**km, **n94**, σ1**9**61/101, **mb4.1**/13, **Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**1.41**	**138**	P	Pn	03 41 33.0	-3.3
WSI	**Waingapu**	**2.14**	**120**	P	**Pn**	**03 41 41.8**	**-2.5**
WSI				S	**Sn**	**03 42 12.4**	**-0.2**
WSI	**Waingapu** baz=1.9,SNR=6.6	**2.14**	**120**	S	**Sn**	**03 42 14.7**	**+2.1**
BASI	**Baing, Sumba**	**2.67**	**127**	P	**Pn**	**03 41 48.9**	**-1.8**
KHKI	**Kahang-Kahang**	**2.80**	**274**	P	Pn	03 41 48.4	-3.9
BSSI	**Bau Bau, Buton**	**3.18**	**40**	P	**Pn**	**03 41 55.8**	**-1.4**
DNP	**Denpasar**	**3.18**	**268**	P	**Pn**	**03 41 56.0**	**-1.2**
SRBI	**Singaraja**	**3.22**	**279**	P	Pn	03 41 54.2	-3.4
EDFI	**Ende, Flores**	**3.23**	**93**	P	Pn	03 41 53.1	-4.8
IGBI	**Denpasar**	**3.25**	**266**	P	**Pn**	**03 41 56.0**	**-2.0**
BKSI	**Bulukumba**	**3.66**	**28**	P	**Pn**	**03 42 02.2**	**-1.1**
MMRI	**Maumere**	**3.77**	**91**	P	**Pn**	**03 42 03.4**	**-1.3**
MMRI				S	**Sn**	**03 42 48.8**	**-0.4**
KAPI	**Kappang**	**3.79**	**20**	P	**Pn**	**03 42 03.4**	**-1.6**
KAPI				S	**Sn**	**03 42 47.4**	**-2.4**
KAPI	**Kappang**	**3.79**	**20**	P	**Pn**	**03 42 02.8**	**-2.2**
KAPI	**Kappang** 42nm,0.3s,baz=204,slow=7.5,SNR=164	**3.79**	**20**	P	**Pn**	**03 42 03.4**	**-1.6**
KAPI				S	**Sn**	**03 42 47.4**	**-2.4**
	4.9nm,0.3s,baz=192,slow=20,SNR=2.7						
ABJI	**Asem Bagus**	**4.22**	**280**	P	**Pn**	**03 42 08.2**	**-2.5**
JAGI	**Jajag, Banyuwa**	**4.23**	**271**	P	Pn	03 42 07.3	-3.4
JAGI	**Jajag, Banyuwa** baz=4.3,SNR=17	**4.23**	**271**	S	**Sn**	**03 42 55.1**	**-4.9**
SPSI	**Sidrap Palu**	**4.79**	**16**	P	**Pn**	**03 42 16.5**	**-1.6**
BLJI	**Banyuglugur**	**4.86**	**280**	P	**Pn**	**03 42 17.1**	**-1.9**
GMJI	**Gumukmas**	**4.94**	**273**	P	**Pn**	**03 42 17.9**	**-2.2**
BBSI	**Bau Bau** 136nm,0.8s,1μm0.4nm	**5.14**	**53**	P	**Pn**	**03 42 23.8**	**+1.0**
BATI	**Baumata**	**5.41**	**108**	P	Pn	03 42 16.6	-10
TTSI	**Tana Toraja**	**5.68**	**14**	P	**Pn**	**03 42 32.0**	**+2.1**
BBKI	**Banjar Baru** 74nm,0.9s,0.5nm	**6.22**	**325**	P	**Pn**	**03 42 38.0**	**+0.9**
PWJI	**Pagerwojo** 86nm,0.6s	**6.58**	**274**	P	**Pn**	**03 42 40.4**	**-1.5**
SJI	**Sawahan** 75nm,0.6s,7μm1.2nm	**6.65**	**277**	P	**Pn**	**03 42 41.4**	**-1.5**
SKSI	**Soroako, Sulaw** 52nm,0.7s,665nm0.2nm	**6.68**	**26**	P	**Pn**	**03 42 45.4**	**+2.0**
PCJI	**Pacitan** 89nm,1.1s,0.8nm	**7.18**	**273**	P	**Pn**	**03 42 48.7**	**-1.3**
UGM	**Wanagama** baz=7.9,SNR=6.5	**7.85**	**274**	P	**Pn**	**03 42 59.7**	**+0.8**
BJII	**Banjamegara**	**8.72**	**278**	P	**Pn**	**03 43 09.6**	**-1.0**
CISI	**Cisompet, Garu** baz=11,SNR=4.1	**10.56**	**275**	S	Sn	03 45 25.4	-6.5
FITZ	**Fitzroy Crossi**	**11.77**	**144**	P	**Pn**	**03 43 49.2**	**-1.5**
FITZ				S	Sn	03 45 52.1	-8.8
FITZ	**Fitzroy Crossi** 1.2nm,0.3s,baz=350,slow=8.0,SNR=40	**11.77**	**144**	P	**Pn**	**03 43 49.2**	**-1.5**
FITZ				S	Sn	03 45 52.1	-8.8
	8.0nm,0.3s,baz=164,slow=18,SNR=19						
FITZ	**Fitzroy Crossi** baz=12,SNR=22	**11.77**	**144**	P	**Pn**	**03 43 48.6**	**-2.1**
FITZ				S	Sn	03 45 50.1	-11
	baz=12,SNR=9.0						
KNRA	**Kununurra** baz=12,SNR=30	**12.31**	**126**	P	**Pn**	**03 43 55.6**	**-2.2**
MBWA	**Marble Bar** 23nm,0.6s	**12.56**	**174**	*e*Pn	**P**	**03 43 58.4**	**-2.5**
MBWA				*e*S	Sn	03 46 05.9	-14
MTN	**Manton Dam** baz=13,SNR=84	**13.18**	**110**	P	Pn	03 44 06.1	-2.9
MTN				S	Sn	03 46 24.5	-10
	baz=13,SNR=6.7						
KDU	**Kakadu** baz=14,SNR=32	**14.39**	**108**	P	**Pn**	**03 44 21.9**	**-2.4**
KDU				S	Sn	03 46 54.1	-10
	baz=14,SNR=4.2						
KKM	**Kota Kinabalu**	**14.70**	**351**	*e*Pn	**P**	**03 44 31.9**	**+1.5**
FAKI	**Fak Fak** baz=15,SNR=11	**14.86**	**69**	P	**Pn**	**03 44 28.0**	**-2.1**
FAKI				S	**Sn**	**03 47 12.4**	**-2.9**
	baz=15,SNR=4.3						
MEEK	**Meekatharra** baz=18,SNR=5.0	**17.95**	**179**	P	**Pn**	**03 45 07.2**	**-0.4**
MEEK				S	S	03 48 05.2	-19
	baz=18,SNR=12						
WRA	**Warramunga Arr**	**19.09**	**128**	P	**P**	**03 45 18.3**	**-0.2**
WRA				S	**S**	**03 48 46.9**	**-0.3**
WRA				ScP	**ScP**	**03 52 59.7**	**+1.2**
WRA	**Warramunga Arr** 4.7nm,0.3s,baz=302,slow=12,SNR=168	**19.09**	**128**	P	**P**	**03 45 18.3**	**-0.2**
WRA				S	**S**	**03 48 46.9**	**-0.3**
	1.3nm,0.3s,baz=299,slow=20,SNR=5.7						
WRA				ScP	**ScP**	**03 52 59.7**	**+1.2**
	0.1nm,0.3s,baz=324,slow=2.1,SNR=5.4						
WRAB	**Tennant Creek** 30nm,0.8s	**19.09**	**128**	*e*P	**P**	**03 45 18.4**	**-0.1**
WRAB				*e*S	**S**	**03 48 45.9**	**-1.3**
MORW	**Morawa** baz=20,SNR=4.1	**20.49**	**186**	P	Pn	03 45 34.7	-2.8
MORW				S	**S**	**03 49 12.3**	**-2.4**
	baz=20,SNR=7.2						
AS31	**Alice Springs**	**21.08**	**137**	*e*P	**P**	**03 45 40.4**	**+0.5**
AS31				*e*S	S	03 49 34.0	+8.0
ASAR	**Alice Springs**	**21.08**	**137**	P	**P**	**03 45 40.5**	**+0.6**
ASAR				S	**S**	**03 49 27.8**	**+1.7**
ASAR				ScP	**ScP**	**03 53 05.2**	**+2.0**
ASAR	**Alice Springs** 16nm,0.5s,baz=309,slow=9.1,SNR=339	**21.08**	**137**	P	**P**	**03 45 40.5**	**+0.6**
ASAR				S	**S**	**03 49 27.8**	**+1.7**
	2.0nm,0.7s,baz=306,slow=16,SNR=4.9						
ASAR				ScP	**ScP**	**03 53 05.2**	**+2.0**
	2.8nm,0.6s,baz=323,slow=2.0,SNR=9.2						
KMBL	**Kambalda** baz=23,SNR=5.1	**22.89**	**172**	P	**P**	**03 45 58.7**	**+0.6**
QIS	**Mount Isa** baz=23,SNR=9.5	**23.66**	**122**	P	**P**	**03 46 06.1**	**+0.8**
FORT	**Forrest** 48nm,0.6s	**23.84**	**159**	*e*P	**P**	**03 46 07.0**	**+0.4**
FORT	**Forrest** baz=24,SNR=38	**23.84**	**159**	P	**P**	**03 46 07.5**	**+0.8**
COEN	**Coen** 275nm,0.6s	**24.84**	**105**	*e*P	**P**	**03 46 16.1**	**+0.2**
COEN	**Coen** baz=25,SNR=41	**24.84**	**105**	P	**P**	**03 46 16.5**	**+0.6**
MTSU	**Mount Surprise** baz=27,SNR=19	**26.88**	**113**	P	**P**	**03 46 35.8**	**+1.4**
BBOO	**Buckleboo** baz=29,SNR=7.8	**29.11**	**148**	P	**P**	**03 46 54.6**	**+0.7**
CTA	**Charters Tower**	**29.23**	**116**	P	**P**	**03 46 56.6**	**+1.4**
CTA	**Charters Tower** 3.8nm,0.4s,baz=276,slow=7.5,SNR=6.1	**29.23**	**116**	P	**P**	**03 46 56.6**	**+1.4**
CTAO	**Charters Tower** 6.3nm,0.8s	**29.23**	**116**	*e*P	**P**	**03 46 56.2**	**+1.1**
QLP	**Quilpie** baz=30,SNR=7.2	**30.31**	**129**	P	**P**	**03 47 06.7**	**+2.1**
STKA	**Stephens Creek**	**31.63**	**140**	P	**P**	**03 47 17.4**	**+1.3**
STKA				PcP	**PcP**	**03 50 06.2**	**+1.4**
STKA				ScP	**ScP**	**03 53 35.4**	**+1.4**
STKA	**Stephens Creek** 8.4nm,0.5s,baz=315,slow=9.1,SNR=35	**31.63**	**140**	P	**P**	**03 47 17.4**	**+1.3**
STKA				PcP	**PcP**	**03 50 06.2**	**+1.4**
	3.1nm,0.4s,baz=348,slow=5.1,SNR=4.7						
STKA				ScP	**ScP**	**03 53 35.4**	**+1.4**
	1.5nm,0.6s,baz=312,slow=4.2,SNR=4.1						
STKA	**Stephens Creek** baz=31,SNR=23	**31.63**	**140**	P	**P**	**03 47 17.5**	**+1.3**
RMQ	**Roma** baz=34,SNR=6.3	**33.82**	**126**	P	**P**	**03 47 37.9**	**+2.5**
CMSA	**Cobar Meteorol** baz=34,SNR=6.9	**34.12**	**136**	P	**P**	**03 47 39.6**	**+1.8**
ARPS	**Mount Arapiles** baz=35,SNR=9.5	**35.20**	**146**	P	**P**	**03 47 49.0**	**+2.0**
YNG	**Young** baz=37,SNR=7.5	**37.58**	**137**	P	**P**	**03 48 09.8**	**+2.5**
TOO	**Toolangi** baz=38,SNR=4.8	**37.83**	**144**	P	P	03 48 12.3	+3.0
KSAR	**Wonju Array Be**	**46.64**	**10**	P	**P**	**03 49 21.5**	**+1.0**
KSRS	**Korea Array**	**46.66**	**10**	P	**P**	**03 49 21.5**	**+0.9**
	1.0nm,0.6s,baz=181,slow=9.6,SNR=5.3						
USRK	**Ussuriysk Arra** 1.1nm,0.3s,baz=195,slow=6.2,SNR=7.6	**53.96**	**12**	P	**P**	**03 50 15.6**	**+0.2**
SONM	**Songino Array**	**57.18**	**350**	P	**P**	**03 50 38.7**	**+0.2**
SONM	**Songino Array** 0.7nm,0.5s,baz=169,slow=8.0,SNR=7.4	**57.18**	**350**	P	**P**	**03 50 38.7**	**+0.2**
MKAR	**Makanchi Array**	**63.84**	**333**	P	**P**	**03 51 23.2**	**-0.4**
MKAR	**Makanchi Array** 0.8nm,0.5s,baz=156,slow=8.1,SNR=8.9	**63.84**	**333**	P	**P**	**03 51 23.2**	**-0.4**
ZALV	**Zalesovo Beam**	**68.46**	**339**	P	**P**	**03 51 51.8**	**-1.0**
ZALV	**Zalesovo Beam** 1.0nm,0.4s,baz=137,slow=4.8,SNR=6.1	**68.46**	**339**	P	**P**	**03 51 51.8**	**-1.0**
MAW	**Mawson**	**69.43**	**200**	P	P	03 52 01.4	+2.7
MAW	**Mawson** 1.6nm,0.9s,baz=56,slow=15,SNR=2.8	**69.43**	**200**	P	P	03 52 01.4	+2.7
PETK	**Petropavlovsk-**	**69.93**	**24**	P	**P**	**03 52 03.2**	**+1.3**
PETK	**Petropavlovsk-** 2.0nm,0.6s,baz=230,slow=11,SNR=3.7	**69.93**	**24**	P	**P**	**03 52 03.2**	**+1.3**
VNDA	**Vanda**	**72.48**	**171**	*e*P	**P**	**03 52 18.9**	**+2.0**
VNDA	**Vanda** 1.1nm,0.4s,baz=317,slow=7.1,SNR=32	**72.48**	**171**	P	**P**	**03 52 18.8**	**+1.9**
TORD	**Torodi Ar. Bea**	**117.83**	**280**	PKP	**PKPdf**	**03 59 36.9**	**+0.1**
TORD	**Torodi Ar. Bea** 0.5nm,0.5s,baz=62,slow=1.8,SNR=20	**117.83**	**280**	PKP	**PKPdf**	**03 59 36.9**	**+0.1**
NVAR	**Mina Array Bea**	**121.19**	**50**	PKP	**PKPdf**	**03 59 44.7**	**+1.7**
NVAR	**Mina Array Bea** 0.3nm,0.4s,baz=226,slow=1.7,SNR=3.6	**121.19**	**50**	PKP	**PKPdf**	**03 59 44.7**	**+1.7**
TXAR	**Lajitas Array**	**135.49**	**57**	SKPbc	**SKPbc**	**04 03 28.4**	**+0.9**
TXAR	**Lajitas Array** 0.4nm,0.9s,baz=235,slow=4.4,SNR=4.1	**135.49**	**57**	SKPbc	**SKPbc**	**04 03 28.4**	**+0.9**
CPUP	**Villa Florida**	**145.04**	**187**	PKPbc	**PKPdf**	**04 00 28.9**	**+1.4**
CPUP	**Villa Florida** 4.5nm,0.7s,baz=166,slow=3.7,SNR=18	**145.04**	**187**	PKPbc	**PKPdf**	**04 00 28.9**	**+1.4**
LPAZ	**La Paz**	**154.44**	**165**	PKPab	**PKPab**	**04 01 08.7**	**+2.3**
LPAZ	**La Paz** 0.9nm,0.4s,baz=145,slow=4.2,SNR=6.6	**154.44**	**165**	PKPab	**PKPab**	**04 01 08.7**	**+2.3**

MEX 16 03:42:15.6 ± 0.

*NEIC **16** 04:14:07.0±0.3,21.18S×174.57W,h35km,mb4.4/8,Error ellipse: s-maj=15.3km s-min=8.9km az=139.0*

ISC 16 04:14:06.1±0.5,21.2S±0.1×174.4W±0.1,h27km,n70, σ1s20/65,mb4.3/23,MS4.1/7,4C-1D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.69**	**19**	Pn	Pn	04 15 50.5	-6.0
AFI				Sn	Sn	04 17 11.9	-11
AFI	**Afiamalu**	**7.69**	**19**	Pn	Pn	04 15 50.5	-6.0
	2.6nm,0.3s,baz=232,slow=12,SNR=2.5						
AFI				Sn	Sn	04 17 11.9	-11
	2.1nm,0.3s,baz=196,slow=20,SNR=3.3						
AFI				LR	LR	04 17 38.1	
	comp=Z,99nm,21.8s,baz=205,slow=28						
MSVF	**Nonsavu**	**7.92**	**295**	*e*Pn	Pn	04 16 06.4	+6.9
	110nm,1.0s						
RAR	**Rarotonga**	**13.64**	**93**	LR	LR	04 21 33.7	
	comp=Z,220nm,21.3s,baz=292,slow=33						
DZM	**Mont Dzumac**	**17.83**	**264**	*e*P	**Pn**	**04 18 11.9**	**-0.5**
	34nm,1.5s						
DZM				*e*LQ	LQ	04 22 02.0	
	963nm,25.1s						
DZM				*e*LR	LR	04 23 02.5	
	289nm,21.2s						
DZM	**Mont Dzumac**	**17.83**	**264**	P	**P**	**04 18 15.8**	**+2.8**
DZM	**Mont Dzumac**	**17.83**	**264**	P	**P**	**04 18 15.8**	**+2.8**
	0.2nm,0.3s,baz=74,slow=18,SNR=8.3						
DZM				LR	LR	04 23 12.7	
	comp=Z,183nm,19.6s,baz=46,slow=31						
TBI	**Tubuai**	**23.17**	**100**	*e*LR	LR	04 24 31.4	
	370nm,26.5s						
PPT2	**Papeete2**	**23.68**	**86**	*e*LR	LR	04 24 38.4	
	391nm,27.5s						
PPT	**Papeete**	**23.69**	**85**	LR	LR	04 26 59.8	
	comp=Z,285nm,18.4s,baz=207,slow=33						
HNR	**Honiara**	**27.32**	**291**	LR	LR	04 28 52.9	
	comp=Z,183nm,18.9s,baz=128,slow=33						
RKT	**Rikitea**	**36.49**	**100**	*e*LR	LR	04 30 34.5	
	253nm,28.0s						
PMG	**Port Moresby**	**38.78**	**282**	LR	LR	04 35 54.4	
	comp=Z,255nm,18.6s,baz=92,slow=34						
STKA	**Stephens Creek**	**40.53**	**245**	P	**P**	**04 21 41.5**	**-1.6**
STKA	**Stephens Creek**	**40.53**	**245**	P	**P**	**04 21 41.5**	**-1.6**
	4.7nm,1.1s,baz=57,slow=8.2,SNR=5.1						
AS31	**Alice Springs**	**47.63**	**257**	*e*P	**P**	**04 22 38.8**	**-1.4**
ASAR	**Alice Springs**	**47.63**	**257**	P	**P**	**04 22 38.5**	**-1.7**
ASAR	**Alice Springs**	**47.63**	**257**	P	**P**	**04 22 38.5**	**-1.7**
	4.7nm,0.9s,baz=90,slow=8.3,SNR=42						
ASAR				LR	LR	04 42 09.4	
	comp=Z,252nm,20.9s,baz=221,slow=36						
WRAB	**Tennant Creek**	**47.82**	**262**	*e*P	**P**	**04 22 39.7**	**-2.0**
	2.8nm,0.7s						
WRA	**Warramunga Arr**	**47.83**	**262**	P	**P**	**04 22 39.6**	**-2.2**
WRA	**Warramunga Arr**	**47.83**	**262**	P	**P**	**04 22 39.6**	**-2.2**
	4.0nm,0.9s,baz=90,slow=6.0,SNR=23						
VNDA	**Vanda**	**57.52**	**186**	P	**P**	**04 23 53.3**	**+0.8**
VNDA	**Vanda**	**57.52**	**186**	P	**P**	**04 23 53.3**	**+0.8**
	1.6nm,0.9s,baz=6.1,slow=6.3,SNR=7.4						
QSPA	**South Pole Qui**	**68.85**	**180**	*e*P	**P**	**04 25 08.1**	**0.0**
	4.4nm,1.1s						
QSPA	**South Pole Qui**	**68.85**	**180**	P	**P**	**04 25 08.1**	**0.0**
	2.5nm,0.9s,baz=295,slow=1.8,SNR=6.2						
QSPA				LR	LR	04 50 26.1	
	comp=Z,112nm,19.6s,baz=22,slow=32						
CMB	**Columbia Colle**	**77.76**	**41**	*e*P	**P**	**04 26 00.7**	**-0.1**
	4.4nm,1.3s						
PETK	**Petropavlovsk-**	**77.88**	**343**	P	**P**	**04 26 01.3**	**+0.3**
PETK	**Petropavlovsk-**	**77.88**	**343**	P	**P**	**04 26 01.3**	**+0.3**
	1.1nm,0.6s,baz=161,slow=9.2,SNR=3.4						
WDC	**Whiskeytown Da**	**78.13**	**38**	*e*P	**P**	**04 26 02.0**	**-0.7**
	3.6nm,1.2s						
NVAR	**Mina Array Bea**	**79.28**	**42**	P	**P**	**04 26 09.3**	**-0.1**
NVAR	**Mina Array Bea**	**79.28**	**42**	P	**P**	**04 26 09.3**	**-0.1**
	2.4nm,0.9s,baz=222,slow=7.6,SNR=13						
NV11	**Mina Array Sit**	**79.38**	**42**	*e*P	**P**	**04 26 09.9**	**+0.1**
KSRS	**Korea Array**	**79.68**	**317**	P	**P**	**04 26 12.0**	**+0.7**
	5.1nm,1.1s,baz=134,slow=5.7,SNR=12						
KSRS				LR	LR	04 57 23.8	
	comp=Z,62nm,19.1s,baz=185,slow=33						
KSAR	**Wonju Array Be**	**79.70**	**317**	P	**P**	**04 26 12.0**	**+0.6**
MAW	**Mawson**	**82.00**	**199**	P	**P**	**04 26 23.3**	**0.0**
MAW	**Mawson**	**82.00**	**199**	P	**P**	**04 26 23.3**	**0.0**
	2.2nm,0.8s,baz=80,slow=7.8,SNR=4.6						
TXAR	**Lajitas Array**	**84.64**	**56**	P	**P**	**04 26 37.8**	**+0.1**
TXAR	**Lajitas Array**	**84.64**	**56**	P	**P**	**04 26 37.8**	**+0.1**
	0.7nm,1.0s,baz=209,slow=6.7,SNR=5.7						
HLID	**Hailey**	**84.72**	**39**	*e*P	**P**	**04 26 38.7**	**+0.9**
	2.2nm,1.0s						
ANMO	**Albuquerque**	**85.26**	**50**	*e*P	**P**	**04 26 41.8**	**+1.0**
	2.2nm,1.0s						
TRF	**Thorofare Moun**	**86.49**	**11**	*e*P	**P**	**04 26 44.4**	**-1.8**
	8.2nm,0.8s						
SNAA	**Sanae**	**87.17**	**177**	P	**P**	**04 26 49.3**	**-0.1**
SNAA	**Sanae**	**87.17**	**177**	P	**P**	**04 26 49.3**	**-0.1**
	0.7nm,1.0s,baz=197,slow=8.5,SNR=2.8						
PDAR	**Pinedale Array**	**87.22**	**42**	P	**P**	**04 26 51.2**	**+1.0**
PDAR	**Pinedale Array**	**87.22**	**42**	P	**P**	**04 26 51.2**	**+1.0**
	0.4nm,0.6s,baz=242,slow=3.2,SNR=4.3						
COLA	**College**	**88.23**	**11**	*e*P	**P**	**04 26 53.1**	**-1.1**
	5.1nm,1.1s						
ILAR	**Eielson Array**	**88.31**	**11**	P	**P**	**04 26 54.3**	**-0.4**
ILAR	**Eielson Array**	**88.31**	**11**	P	**P**	**04 26 54.3**	**-0.4**
	3.0nm,1.2s,baz=218,slow=4.7,SNR=9.6						
KMI	**Kunming**	**92.68**	**296**	P	**P**	**04 27 17.6**	**+1.3**
KMI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CMAR	**Chiang Mai Arr**	**93.53**	**288**	P	**P**	**04 27 21.7**	**+1.7**
CMAR	**Chiang Mai Arr**	**93.53**	**288**	P	**P**	**04 27 21.7**	**+1.7**
	comp=Z,1.5nm,0.3s,baz=116,slow=3.2,SNR=10						
YKA	**Yellowknife Ar**	**95.79**	**24**	P	**P**	**04 27 29.2**	**-0.1**
YKA	**Yellowknife Ar**	**95.79**	**24**	P	**P**	**04 27 29.3**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=241,slow=4.7,SNR=4.3						
LPAZ	**La Paz**	**98.67**	**111**	LR	LR	05 06 26.8	
	comp=Z,72nm,18.5s,baz=357,slow=32						
AKASG	**Malin Array Be**	**145.22**	**333**	PKPbc	**PKPbc**	**04 33 39.9**	**-0.8**
AKASG	**Malin Array Be**	**145.22**	**333**	PKPbc	**PKPbc**	**04 33 39.9**	**-0.8**
	comp=Z,6.6nm,0.9s,baz=37,slow=4.0,SNR=22						
KIEV	**Kiev**	**145.23**	**333**	*e*PKPdf	**PKPbc**	**04 33 39.5**	**-1.3**
AK01	**Malin Array Si**	**145.23**	**333**	*e*PKPdf	**PKPbc**	**04 33 40.1**	**-0.6**
BUR08	**Bucovina Ar. S**	**149.26**	**334**	*e*PKPbc	**PKPbc**	**04 33 52.2**	**-0.2**
CLL	**Collm**	**149.42**	**351**	*i*PKPbc	**PKPbc**	**04 33 52.5**	**+0.1**
	comp=Z,9.0nm,1.4s						
CLL				*i* PKPab	**PKPab**	**04 33 56.9**	**-0.3**
	comp=Z,6.0nm,0.8s						
CLL				*i* pPKPbc	**pPKPbc**	**04 34 03.5**	**+2.1**
UPC	**Upice**	**149.64**	**347**	*e*PKP	**PKPbc**	**04 33 51.3**	**-1.8**
BRG	**Berggiesshubel**	**149.69**	**350**	*i* P	**PKPab**	**04 33 58.2**	**-0.1**
	comp=Z,11nm,1.4s						
BRG				*e*		04 34 09.2	
	comp=Z,6.0nm,1.1s						
DPC	**Dobruska-Polom**	**149.72**	**346**	*e*PKP	**PKPbc**	**04 33 54.1**	**+0.8**
DPC				*e*PKPAB	**PKPab**	**04 33 59.4**	**+0.8**
DPC				*ep*PKP	pPKPdf	04 34 04.9	+7.2
BR131	**Keskin Array S**	**149.79**	**314**	*e*PKPbc	**PKPbc**	**04 33 53.5**	**-0.5**
BRTR	**Keskin Array B**	**149.79**	**314**	PKPbc	**PKPbc**	**04 33 53.5**	**-0.5**
BRTR				PKPab	**PKPab**	**04 33 59.9**	**+0.5**
BRTR	**Keskin Array B**	**149.79**	**314**	PKPbc	**PKPbc**	**04 33 53.5**	**-0.5**
	comp=Z,2.5nm,0.9s,baz=116,slow=2.9,SNR=10						
BRTR				PKPab	**PKPab**	**04 33 59.9**	**+0.5**
	comp=Z,3.5nm,0.9s,baz=98,slow=2.5,SNR=9.4						
PVCC	**Panska Ves**	**149.91**	**349**	*e*PKP	**PKPbc**	**04 33 54.4**	**+0.7**
KHC	**Kasperske Hory**	**151.43**	**349**	*e*PKP	**PKPbc**	**04 33 57.6**	**+0.2**
KHC				*e*PKPAB	**PKPab**	**04 34 01.8**	**-3.8**
GERES	**GERESS Array B**	**151.69**	**349**	PKPbc	**PKPbc**	**04 33 58.1**	**0.0**
GERES	**GERESS Array B**	**151.69**	**349**	PKPbc	**PKPbc**	**04 33 58.1**	**0.0**
	comp=Z,1.4nm,1.0s,baz=45,slow=2.3,SNR=7.6						

*SZGRF **16** 04:30:42.1,22.52S×175.17W,h33km, Tonga Islands region*

*IDC **16** 04:30:52.2±4.2,22.99S×176.72W,h121km±36km, mb4.3/16,mb1 4.5/18,mb1mx4.3/23,mbtmp4.3/18,MS3.6/1, Ms1 3.6/1,ms1mx3.0/23,Error ellipse: s-maj=15.9km s-min=13.7km az=150.0*

*NEIC **16** 04:30:54.6±1.2,23.07S×176.75W,h145km±10km, mb4.6/33,Error ellipse: s-maj=9.0km s-min=6.1km az=151.0*

*AUST **16** 04:30:54.1,22.80S×175.89W,h200km*

*BJI **16** 04:30:56.6,23.10S×176.80W,h174km,mB4.9/5, mb4.8/11*

ISC 16 04:30:58.0±0.5,23.00S±0.07×176.84W±0.07, h173km±3km,h173km;pP-P,n413,σ0s83/444,mb4.5/52, 125C-112D,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSVF	**Nonsavu**	**7.10**	**317**	*e*Pn	**Pn**	**04 32 38.7**	**-1.0**
NIUE	**Niue**	**7.54**	**60**	P	Pn	04 32 30.9	-14
	baz=6.7,SNR=13						
NIUE				S	Sn	04 33 43.8	-26
	baz=6.7,SNR=8.7						
DZM	**Mont Dzumac**	**15.48**	**270**	P	**Pn**	**04 34 26.3**	**-1.2**
DZM	**Mont Dzumac**	**15.48**	**270**	P	**Pn**	**04 34 26.3**	**-1.2**
	0.4nm,0.3s,baz=110,slow=17,SNR=12						
RAR	**Rarotonga**	**15.92**	**87**	P	Pn	04 34 27.0	-5.7
RAR				S	S	04 37 07.0	-23
RAR	**Rarotonga**	**15.92**	**87**	P	Pn	04 34 27.0	-5.7
	7.8nm,0.3s,baz=271,slow=6.1,SNR=12						
RAR				S	S	04 37 07.0	-23
	2.5nm,0.3s,baz=248,slow=19,SNR=3.5						
PPT	**Papeete**	**26.11**	**83**	LR	LR	04 44 34.1	
	comp=Z,113nm,18.6s,baz=304,slow=32						
CMSA	**Cobar Meteorol**	**34.24**	**247**	P	**P**	**04 37 26.8**	**-0.7**
	baz=35,SNR=7.4						
CTA	**Charters Tower**	**34.40**	**268**	P	**P**	**04 37 29.7**	**+0.7**
CTA	**Charters Tower**	**34.40**	**268**	P	**P**	**04 37 29.7**	**+0.7**
	20nm,0.5s,baz=98,slow=11,SNR=26						
CTAO	**Charters Tower**	**34.40**	**268**	*e*P	**P**	**04 37 29.6**	**+0.7**
	22nm,0.6s						
MCQ	**Macquarie Isla**	**36.31**	**204**	S	**S**	**04 43 14.9**	**+2.4**
	baz=37,SNR=3.2						
MTSU	**Mount Surprise**	**36.62**	**270**	P	**P**	**04 37 48.5**	**+0.6**
	baz=38,SNR=13						
PMG	**Port Moresby**	**37.00**	**285**	P	**P**	**04 37 52.0**	**+0.8**
	25nm,0.9s						
PMG	**Port Moresby**	**37.00**	**285**	P	**P**	**04 37 52.0**	**+0.8**
	25nm,0.9s,baz=122,slow=9.4,SNR=6.3						
STKA	**Stephens Creek**	**37.75**	**247**	*e*P	**P**	**04 37 55.9**	**-1.5**
	13nm,2.5s						
STKA	**Stephens Creek**	**37.75**	**247**	P	**P**	**04 37 56.2**	**-1.1**
	3.5nm,0.6s,baz=96,slow=9.4,SNR=17						
STKA	**Stephens Creek**	**37.75**	**247**	P	**P**	**04 37 56.5**	**-0.8**
	baz=39,SNR=14						
COEN	**Coen**	**38.87**	**276**	P	**P**	**04 38 07.9**	**+1.0**
	baz=40,SNR=4.4						
BBOO	**Buckleboo**	**42.47**	**246**	P	**P**	**04 38 34.2**	**-1.9**
	baz=43,SNR=5.9						
AS31	**Alice Springs**	**45.05**	**259**	*e*P	**P**	**04 38 56.2**	**-0.8**
ASAR	**Alice Springs**	**45.05**	**259**	P	**P**	**04 38 56.1**	**-0.8**
ASAR				PcP	**PcP**	**04 40 35.5**	**+0.7**
ASAR	**Alice Springs**	**45.05**	**259**	P	**P**	**04 38 56.1**	**-0.8**
	7.0nm,0.8s,baz=93,slow=7.8,SNR=43						
ASAR				PcP	**PcP**	**04 40 35.5**	**+0.7**
	1.8nm,0.6s,baz=106,slow=4.0,SNR=9.0						
WRAB	**Tennant Creek**	**45.37**	**264**	*e*P	**P**	**04 38 58.1**	**-1.4**
	6.4nm,0.6s						
WRA	**Warramunga Arr**	**45.38**	**264**	P	**P**	**04 38 58.5**	**-1.0**
WRA				PcP	**PcP**	**04 40 36.9**	**+0.9**
WRA	**Warramunga Arr**	**45.38**	**264**	P	**P**	**04 38 58.5**	**-1.0**
	9.5nm,0.6s,baz=100,slow=8.5,SNR=115						
WRA				PcP	**PcP**	**04 40 36.9**	**+0.9**
	1.8nm,0.7s,baz=96,slow=3.8,SNR=5.3						
KDU	**Kakadu**	**49.12**	**273**	P	**P**	**04 39 27.5**	**-0.9**
	baz=50,SNR=5.5						
FORT	**Forrest**	**49.34**	**249**	*e*P	**P**	**04 39 27.2**	**-2.7**
	373nm,3.0s						
FORT	**Forrest**	**49.34**	**249**	P	**P**	**04 39 28.1**	**-1.9**
	baz=50,SNR=16						
MTN	**Manton Dam**	**50.30**	**272**	P	**P**	**04 39 36.0**	**-1.4**
	baz=51,SNR=4.4						
KNRA	**Kununurra**	**51.61**	**268**	P	**P**	**04 39 46.6**	**-0.5**
	baz=52,SNR=7.2						
FITZ	**Fitzy Crossi**	**53.80**	**264**	P	**P**	**04 40 02.8**	**-0.4**
	baz=55,SNR=16						
SBA	**Scott Base**	**55.47**	**184**	*e*P	**P**	**04 40 15.6**	**+1.3**
	10nm,0.8s						
VNDA	**Vanda**	**55.53**	**186**	*e*P	**P**	**04 40 15.7**	**+0.9**
VNDA	**Vanda**	**55.53**	**186**	P	**P**	**04 40 15.3**	**+0.6**
	2.2nm,0.8s,baz=355,slow=6.3,SNR=18						
KLBR	**Kellerberrin**	**58.01**	**246**	P	**P**	**04 40 31.8**	**-1.2**
	baz=59,SNR=5.3						
MORW	**Morawa**	**59.91**	**249**	P	**P**	**04 40 44.8**	**-1.2**
	baz=61,SNR=7.1						
CASY	**Casey**	**62.19**	**206**	*e*P	**P**	**04 41 00.1**	**-0.6**
	9.5nm,0.7s						
QSPA	**South Pole Qui**	**67.08**	**180**	*e*P	**P**	**04 41 32.7**	**0.0**
	18nm,1.0s						
QSPA	**South Pole Qui**	**67.08**	**180**	P	**P**	**04 41 32.6**	**0.0**
	13nm,0.7s,baz=41,slow=1.6,SNR=82						
PKM	**Peak Mountain**	**78.98**	**45**	⇓P	**P**	**04 42 43.0**	**0.0**
	baz=79						
MAW	**Mawson**	**79.59**	**200**	P	**P**	**04 42 46.2**	**+0.7**
MAW	**Mawson**	**79.59**	**200**	P	**P**	**04 42 46.2**	**+0.7**
	11nm,0.8s,baz=121,slow=7.6,SNR=24						
BFSC	**Mount Baldy Ra**	**80.00**	**46**	⇓P	**P**	**04 42 47.9**	**-0.5**
	baz=80						
VES	**Vestal, Richgr**	**80.04**	**44**	⇑P	**P**	**04 42 48.3**	**-0.1**
	baz=80						
MONP	**Monument Peak**	**80.05**	**48**	⇑P	**P**	**04 42 48.9**	**+0.1**
	baz=80						
EDW2	**Edwards Air Fo**	**80.17**	**46**	⇑P	**P**	**04 42 49.1**	**-0.1**
	baz=80,SNR=7.9						
ISA	**Isabella**	**80.32**	**45**	*e*P	**P**	**04 42 50.1**	**+0.1**
	6.8nm,0.8s						
ISA	**Isabella**	**80.32**	**45**	⇑P	**P**	**04 42 50.1**	**+0.1**
	baz=80,SNR=6.8						
PFO	**Pinyon Flat Ob**	**80.44**	**47**	P	**P**	**04 42 50.7**	**-0.1**
PFO	**Pinyon Flat Ob**	**80.44**	**47**	P	**P**	**04 42 50.7**	**-0.1**
	1.6nm,0.8s,baz=275,slow=4.2,SNR=2.2						
PFO	**Pinyon Flat Ob**	**80.44**	**47**	⇓P	**P**	**04 42 51.0**	**+0.2**
	baz=81						
CMB	**Columbia Colle**	**80.57**	**42**	*e*P	**P**	**04 42 51.0**	**-0.3**
	5.5nm,1.4s						
LRMC	**Laurel Mountai**	**80.72**	**45**	⇑P	**P**	**04 42 52.5**	**+0.3**
	baz=81						
CWC	**Cottonwood Cre**	**81.05**	**44**	⇑P	**P**	**04 42 54.3**	**+0.4**
	baz=81						
BC3	**Big Chuckawall**	**81.15**	**48**	⇓P	**P**	**04 42 54.8**	**+0.3**
	baz=81						
GSC	**Goldstone**	**81.20**	**46**	P	**P**	**04 42 54.2**	**-0.5**
	1.4nm,0.5s						
GSC	**Goldstone**	**81.20**	**46**	⇑P	**P**	**04 42 54.9**	**+0.2**
	baz=81						
MPMC	**Manual Prospec**	**81.20**	**45**	⇓P	**P**	**04 42 54.6**	**-0.2**
	baz=81,SNR=5.4						
HEC	**Hector,Ludlow**	**81.24**	**46**	⇑P	**P**	**04 42 54.9**	**0.0**
	baz=81						
YBH	**Yreka Blue Hor**	**81.57**	**38**	*e*P	**P**	**04 42 57.0**	**+0.4**
	3.2nm,0.9s						
IRM	**Iron Mountain**	**81.65**	**48**	⇓P	**P**	**04 42 57.3**	**+0.3**
	baz=82						
GMRC	**Granite Mounta**	**81.66**	**47**	⇓P	**P**	**04 42 57.6**	**+0.5**
	baz=82						
113A	**Mohawk Valley,**	**81.82**	**49**	⇓P	**P**	**04 42 57.9**	**+0.1**
	baz=82						
GRAC	**Grapevine Rang**	**81.84**	**44**	⇓P	**P**	**04 42 58.5**	**+0.5**
	baz=82						
Y12C	**Blythe**	**81.84**	**48**	⇑P	**P**	**04 42 58.4**	**+0.5**
	baz=82						
FURC	**Furnace Creek,**	**81.85**	**45**	⇑P	**P**	**04 42 58.1**	**+0.2**
	baz=82						
TUQ	**Turquoise Moun**	**81.86**	**46**	⇑P	**P**	**04 42 58.2**	**0.0**
	baz=82						
HUMO	**Hull Mountain**	**82.01**	**37**	*e*P	**P**	**04 42 59.4**	**+0.7**
	5.9nm,1.1s						
NVAR	**Mina Array Bea**	**82.11**	**43**	P	**P**	**04 42 59.7**	**+0.1**
NVAR	**Mina Array Bea**	**82.11**	**43**	P	**P**	**04 42 59.7**	**+0.1**
	3.6nm,0.9s,baz=222,slow=8.1,SNR=20						
LDFC	**Landfair**	**82.20**	**47**	*e*P	**P**	**04 43 00.3**	**+0.4**
	37nm,1.5s						
NJ2	**Nanjing**	**82.30**	**309**	*e*P	**P**	**04 43 01.6**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
Z14A	**Wintersburg**	**82.72**	**49**	⇓P	**P**	**04 43 03.1**	**+0.5**
	baz=83						
Y14A	**Wickenburg**	**83.00**	**49**	⇑P	**P**	**04 43 04.2**	**+0.1**
	baz=83,SNR=7.8						
W13A	**Hualapai Mount**	**83.04**	**47**	⇓P	**P**	**04 43 04.6**	**+0.2**
	baz=83,SNR=7.6						
MDJ	**Mudanjiang**	**83.17**	**325**	P	**P**	**04 43 05.4**	**+0.8**
MDJ				pmax	pmax		
	comp=Z,9.0nm,2.2s						
MDJ				pmax	pmax		
	comp=Z,53nm,6.7s						
TUC	**Tucson**	**83.68**	**51**	*e*P	**P**	**04 43 08.2**	**+0.6**
	comp=Z,34nm,0.9s						
R11A	**Troy Canyon, C**	**83.78**	**44**	⇑P	**P**	**04 43 07.8**	**-0.3**
	baz=84						
BMN	**Battle Mountai**	**83.98**	**41**	*e*P	**P**	**04 43 09.4**	**+0.3**
	comp=Z,7.3nm,0.8s						
319A	**Douglas**	**84.28**	**53**	⇑P	**P**	**04 43 11.2**	**+0.5**
	baz=84						
X16A	**Lo Mia Camp, P**	**84.34**	**49**	⇓P	**P**	**04 43 11.5**	**+0.5**
	baz=84,SNR=14						
WVOR	**Wild Horse Val**	**84.36**	**39**	*e*P	**P**	**04 43 10.8**	**0.0**
	comp=Z,7.4nm,1.0s						
NLWA	**Neilton Lookou**	**84.72**	**33**	*e*P	**P**	**04 43 13.4**	**+0.9**
	comp=Z,11nm,1.1s						
CCUT	**Cedar City**	**84.76**	**46**	*e*P	**P**	**04 43 13.6**	**+0.4**
	comp=Z,6.3nm,1.0s						
320A	**Kipp Ranch, An**	**84.81**	**53**	⇓P	**P**	**04 43 13.8**	**+0.4**
	baz=85						
ARUT	**Antelope Range**	**84.84**	**45**	*e*P	**P**	**04 43 13.8**	**+0.3**
	comp=Z,3.5nm,1.0s						
U15A	**North Rim**	**84.85**	**47**	⇑P	**P**	**04 43 14.2**	**+0.5**
	baz=85,SNR=16						
WUAZ	**Wupatki**	**84.98**	**48**	⇓P	**P**	**04 43 14.6**	**+0.4**
	baz=85						
220A	**Playas Peak, P**	**85.11**	**52**	⇑P	**P**	**04 43 15.4**	**+0.5**
	baz=85,SNR=9.4						
120A	**U Bar Ranch, L**	**85.36**	**52**	⇑P	**P**	**04 43 16.4**	**+0.3**
	baz=86,SNR=5.4						
X18A	**Snowflake**	**85.44**	**50**	⇑P	**P**	**04 43 17.0**	**+0.4**
	baz=86,SNR=5.9						
SNAA	**Sanae**	**85.49**	**178**	*e*P	**P**	**04 43 15.2**	**-0.9**
SNAA	**Sanae**	**85.49**	**178**	*e*PcP	**P**	**04 43 17.3**	**+1.2**
SNAA	**Sanae**	**85.49**	**178**	*e*P	**P**	**04 43 15.0**	**-1.1**
	comp=Z,2.5nm,0.8s						
Z20A	**Nine Sixteen R**	**85.67**	**51**	⇑P	**P**	**04 43 18.1**	**+0.4**
	baz=86,SNR=10						
121A	**Cookes Peak, D**	**85.97**	**52**	⇑P	**P**	**04 43 19.5**	**+0.4**
	baz=86						
Y20A	**Horse Springs,**	**86.24**	**51**	⇑P	**P**	**04 43 21.1**	**+0.6**
	baz=86,SNR=9.5						
SPU	**Mount Spurr**	**86.24**	**12**	*e*P	**P**	**04 43 19.4**	**-0.2**
222A	**Williams Famil**	**86.25**	**53**	⇑P	**P**	**04 43 21.0**	**+0.5**
	baz=86						
VNA1	**Neumayer--Stat**	**86.26**	**176**	*e*P	**P**	**04 43 19.5**	**-0.2**
VNA1	**Neumayer--Stat**	**86.26**	**176**	*e*PcP	**PcP**	**04 43 21.6**	**-0.5**
Z21A	**St. Cloud Mine**	**86.44**	**52**	⇑P	**P**	**04 43 22.1**	**+0.5**
	baz=87,SNR=6.4						
X20A	**Quemado**	**86.47**	**50**	⇓P	**P**	**04 43 22.1**	**+0.5**
	baz=87						
MFID	**Camas Ranch**	**86.59**	**40**	⇓P	**P**	**04 43 21.9**	**0.0**
	baz=87						
BMO	**Blue Mountains**	**86.60**	**38**	*e*P	**P**	**04 43 21.1**	**-0.8**
	comp=Z,1.7nm,1.1s						
122A	**Conniff Cattle**	**86.62**	**52**	⇑P	**P**	**04 43 23.2**	**+0.9**
	baz=87						
W20A	**Ramah**	**86.77**	**50**	⇓P	**P**	**04 43 23.5**	**+0.4**
	baz=87,SNR=8.6						
PLCA	**Paso Flores**	**86.78**	**133**	P	**P**	**04 43 21.0**	**-2.1**
PLCA	**Paso Flores**	**86.78**	**133**	P	**P**	**04 43 21.0**	**-2.1**
	comp=Z,3.2nm,1.0s,baz=249,slow=7.0,SNR=2.9						
Y21A	**Point of Rocks**	**86.79**	**51**	⇓P	**P**	**04 43 23.6**	**+0.3**
	baz=87,SNR=8.2						
Z22A	**Elephant Butte**	**86.92**	**52**	⇑P	**P**	**04 43 24.0**	**+0.2**
	baz=87						
X21A	**Alamocita Cree**	**86.93**	**51**	⇑P	**P**	**04 43 24.1**	**+0.2**
	baz=87,SNR=5.3						
Q16A	**Castle Valley**	**86.95**	**45**	⇓P	**P**	**04 43 24.3**	**+0.5**
	baz=87						
324A	**Moseley Ranch,**	**87.13**	**54**	⇑P	**P**	**04 43 24.5**	**-0.3**
	baz=87,SNR=9.2						
123A	**Bell Site, Whi**	**87.13**	**53**	⇓P	**P**	**04 43 25.0**	**+0.2**
	baz=87						
V20A	**Brimhall**	**87.14**	**49**	⇓P	**P**	**04 43 24.4**	**-0.4**
	baz=87						
425A	**Indio Mountain**	**87.18**	**55**	⇑P	**P**	**04 43 24.9**	**-0.1**
	baz=87,SNR=8.1						
I12A	**Atlanta**	**87.23**	**40**	⇑P	**P**	**04 43 25.3**	**+0.3**
	baz=88						
626A	**Big Bend Ranch**	**87.25**	**56**	⇓P	**P**	**04 43 25.3**	**-0.1**
	baz=87,SNR=12						
Y22A	**Socorro**	**87.26**	**51**	⇑P	**P**	**04 43 25.6**	**+0.

Y25A	Mesa, Roswell baz=89,SNR=5.3	88.90	52	⇑P		P	04 43 32.7	-0.5	
C11A	Tepee Creek (N baz=89,SNR=10.0	88.98	36	⇓P		P	04 43 33.0	-0.1	
529A	Stev Forest Ra baz=89	88.98	57	⇓P		P	04 43 33.8	+0.3	
U23A	El Rito baz=89	89.00	50	⇓P		P	04 43 33.9	+0.3	
D12A	Red Ives Fores baz=89	89.01	37	⇓P		P	04 43 34.2	+0.9	
W24A	Lazy 6 Ranch, baz=89	89.01	51	⇓P		P	04 43 33.8	+0.1	
O19A	Miners Draw (B baz=89	89.03	45	⇑P		P	04 43 33.8	+0.2	
R21A	Cimarron baz=89	89.08	47	⇓P		P	04 43 34.2	+0.2	
P20A	De Beque baz=89	89.09	46	⇑P		P	04 43 34.0	+0.1	
Z26A	Caprock baz=89,SNR=8.0	89.12	53	⇓P		P	04 43 33.8	-0.3	
MCK	McKinley comp=Z,14nm,0.9s	89.17	12	eP		P	04 43 33.5	0.0	
S22A	4UR Ranch, Cre baz=89	89.26	48	⇑P		P	04 43 35.3	+0.4	
127A	Arkansas Junct baz=89	89.30	54	⇑P		P	04 43 35.3	+0.3	
Q21A	Lamborn Mesa, baz=90	89.30	47	⇑P		P	04 43 35.0	0.0	
F14A	Wisdom baz=90	89.41	39	⇓P		P	04 43 35.4	+0.1	
429A	Davenport Ranc baz=90,SNR=5.7	89.46	56	⇑P		P	04 43 35.1	-0.6	
O20A	White River Ci baz=90	89.52	46	⇓P		P	04 43 35.9	-0.1	
D13A	Huson baz=90	89.53	37	⇑P		P	04 43 36.2	+0.6	
Y26A	Elida baz=90	89.54	53	⇑P		P	04 43 35.9	-0.2	
R22A	Saguache, Gunn baz=90	89.55	48	⇑P		P	04 43 36.6	+0.3	
M19A	Rock Springs baz=90	89.63	44	⇑P		P	04 43 36.4	-0.1	
530A	J-C Ranch, Com baz=90	89.67	57	⇓P		P	04 43 37.2	+0.5	
W25A	X Bar L Ranch, baz=90,SNR=6.8	89.69	51	⇓P		P	04 43 36.2	-0.6	
Z27A	Tatum baz=90	89.70	53	⇓P		P	04 43 36.7	-0.2	
Q22A	Crested Butte, baz=90	89.76	47	⇑P		P	04 43 37.2	0.0	
329A	Wagon Wheel Ra baz=90	89.79	56	⇑P		P	04 43 37.3	0.0	
L19A	Farson baz=90	89.82	43	⇓P		P	04 43 37.4	+0.1	
N20A	Spence Gulch, baz=90	89.86	45	⇓P		P	04 43 37.7	+0.1	
V25A	Rancho No Teng baz=90,SNR=5.4	89.88	51	⇓P		P	04 43 37.2	-0.5	
DLBC	Dease Lake	89.92	23	eP		P	04 43 37.7	+0.5	
128A	Castleberry Fa baz=90	89.92	54	⇑P		P	04 43 37.9	+0.1	
631A	Perdido Creek baz=90,SNR=5.4	89.94	58	⇓P		P	04 43 37.2	-0.7	
F15A	Butte baz=90	89.94	39	⇓P		P	04 43 37.8	+0.1	
Y27A	Causey baz=90,SNR=5.9	90.01	53	⇓P		P	04 43 37.6	-0.7	
430A	Baggett Ranch, baz=90	90.04	56	⇑P		P	04 43 37.7	-0.7	
BW06	Boulder Array comp=Z,2.8nm,1.1s	90.04	43	eP		P	04 43 37.3	-1.1	
PDAR	Pinedale Array	90.04	43	P		P	04 43 37.9	-0.5	
PDAR	Pinedale Array comp=Z,2.3nm,0.9s,baz=204,slow=3.3,SNR=14	90.04	43	P		P	04 43 37.9	-0.5	
H16A	Russell Place, baz=90	90.05	40	⇓P		P	04 43 38.7	+0.4	
D14A	Greenough baz=90	90.06	38	⇑P		P	04 43 37.6	-0.5	
732A	Laxson Ranch, baz=90	90.11	59	⇓P		P	04 43 38.7	0.0	
DOT	Dot Lake comp=Z,8.5nm,0.9s	90.11	14	eP		P	04 43 38.3	+0.4	
W26A	Owens Ranch, T baz=90	90.13	52	⇓P		P	04 43 38.8	0.0	
M20A	Sweetwater, Wa baz=90	90.25	44	⇓P		P	04 43 39.1	-0.2	
531A	Rocksprings baz=90	90.29	57	⇑P		P	04 43 39.3	-0.2	
U25A	Circle Dot Ran baz=90	90.29	50	⇓P		P	04 43 39.3	-0.3	
Z28A	Tucker Farm, M baz=90	90.31	54	⇑P		P	04 43 39.9	+0.3	
C14A	Swan Lake baz=90	90.31	37	⇓P		P	04 43 39.3	0.0	
S24A	Houchin Ranch, baz=90	90.32	49	⇑P		P	04 43 40.1	+0.2	
BOZ	Bozeman (W) comp=Z,3.9nm,0.8s	90.33	40	eP		P	04 43 39.8	+0.3	
MSTX	Muleshoe baz=90,SNR=5.1	90.33	53	⇑P		P	04 43 39.2	-0.6	
COLA	College comp=Z,11nm,0.9s	90.41	12	eP		P	04 43 38.5	-0.7	
X27A	F and S Farms, baz=91	90.41	52	⇑P		P	04 43 40.3	+0.2	
F16A	Kennard Place, baz=91	90.41	39	⇑P		P	04 43 40.2	+0.3	
L20A	Wamsutter baz=91	90.42	44	⇑P		P	04 43 40.4	+0.3	
V26A	Tequesquite Ra baz=91	90.45	51	⇓P		P	04 43 40.3	0.0	
ILAR	Eielson Array	90.50	12	P		P	04 43 39.0	-0.7	
ILAR	Eielson Array comp=Z,4.9nm,1.0s,baz=220,slow=5.5,SNR=32	90.50	12	P		P	04 43 39.0	-0.7	
D15A	Lincoln baz=91	90.59	38	⇑P		P	04 43 41.0	+0.3	
632A	Uvalde baz=91	90.59	58	⇑P		P	04 43 41.1	+0.1	
J19A	Crowheart baz=91	90.62	43	⇑P		P	04 43 40.9	-0.1	
W27A	Bowe Ranch, En baz=91	90.63	52	⇓P		P	04 43 41.1	0.0	
G17A	Pierce Place, baz=91	90.68	40	⇓P		P	04 43 41.8	+0.6	
Y28A	McKinney Farm, baz=91	90.69	53	⇑P		P	04 43 41.2	-0.2	
K20A	Yellowstone Ra baz=91	90.75	43	⇑P		P	04 43 41.0	-0.6	
U26A	Atchley Ranch, baz=91	90.76	51	⇓P		P	04 43 41.5	-0.4	
532A	Rocksprings baz=91,SNR=6.1	90.77	58	⇓P		P	04 43 41.4	-0.4	
E16A	East Helena baz=91	90.79	39	⇑P		P	04 43 41.7	+0.1	
M21A	Separation Pea baz=91	90.84	45	⇓P		P	04 43 41.9	-0.2	
S25A	Robets Cordova baz=91	90.87	49	⇑P		P	04 43 42.1	-0.2	
B14A	Marquette Ranc baz=91	90.91	37	⇓P		P	04 43 42.1	0.0	
C15A	Salmond Ranch, baz=91	90.95	37	⇑P		P	04 43 42.3	-0.1	
H18A	Shoshone NF, C baz=91	90.98	41	⇑P		P	04 43 42.9	+0.2	
JCT	Junction City baz=91	91.01	57	⇓P		P	04 43 42.9	0.0	
X28A	Dimmitt baz=91	91.01	53	⇓P		P	04 43 42.8	-0.1	
L21A	Rawlins baz=91	91.02	44	⇑P		P	04 43 43.1	+0.2	
F17A	Fitzpatrick Pl baz=91,SNR=5.6	91.04	40	⇓P		P	04 43 43.0	+0.2	
I19A	Meeteetse baz=91	91.06	42	⇓P		P	04 43 43.4	+0.4	
Y29A	Porterfield Fa baz=91,SNR=5.6	91.10	54	⇑P		P	04 43 42.5	-0.7	
ISCO	Idaho Springs baz=91	91.10	47	⇓P		P	04 43 42.9	-0.5	
D16A	Dana Ranch, Ca baz=91,SNR=5.6	91.14	38	⇑P		P	04 43 43.2	0.0	
A14A	Double T Ranch baz=91,SNR=5.2	91.17	36	⇑P		P	04 43 42.8	-0.5	
432A	Menard baz=91	91.19	57	⇓P		P	04 43 43.4	-0.4	
E17A	Martinsdale baz=91	91.23	39	⇓P		P	04 43 43.8	+0.1	
Z30A	Sanderson Ranc baz=91	91.24	54	⇑P		P	04 43 43.8	-0.2	
231A	Bronte	91.25	56	⇓P		P	04 43 43.6	-0.4	
J20A	Shoshoni baz=92	91.27	43	⇑P		P	04 43 44.1	+0.2	
B15A	Bradely Ranch, baz=92	91.28	37	⇓P		P	04 43 44.4	+0.6	
X29A	Tulia baz=92	91.34	53	⇓P		P	04 43 44.2	-0.2	
G18A	Lazy EL Ranch, baz=92	91.38	41	⇓P		P	04 43 44.8	+0.3	
H19A	Powell baz=92	91.39	41	⇓P		P	04 43 44.9	+0.5	
U27A	Thompson Grove baz=92	91.43	51	⇓P		P	04 43 44.5	-0.3	
K21A	Alcova baz=92	91.43	44	⇓P		P	04 43 44.5	-0.3	
KMI	Kunming KMI	91.44	297		P pmax	P pmax	04 43 41.8	-3.4	
C16A	comp=Z,5.0nm,0.9s Fuhringer Ranc baz=92	91.45	38	⇑P		P	04 43 44.7	+0.1	
332A	Millersview baz=92	91.45	57	⇑P		P	04 43 44.7	-0.2	
S26A	Kim baz=92	91.53	50	⇑P		P	04 43 45.3	0.0	
I20A	Worland baz=92	91.55	42	⇓P		P	04 43 45.4	+0.2	
A15A	Johnson Ranch, baz=92	91.55	36	⇑P		P	04 43 44.6	-0.5	
F18A	Big Timber baz=92	91.60	40	⇓P		P	04 43 46.0	+0.7	
L22A	Ellis Ranch, M baz=92	91.66	45	⇓P		P	04 43 46.2	+0.4	
J21A	Lysite baz=92,SNR=6.1	91.67	43	⇑P		P	04 43 45.5	-0.3	
Y30A	Stafford Cattl baz=92	91.68	54	⇓P		P	04 43 45.7	-0.3	
W29A	Amraillo baz=92	91.69	52	⇑P		P	04 43 45.8	-0.2	
D17A	Six Diamond Ra baz=92,SNR=6.4	91.70	39	⇓P		P	04 43 45.6	-0.2	
EGAK	Eagle comp=Z,6.4nm,0.9s	91.73	14	eP		P	04 43 45.6	+0.3	
232A	Coleman baz=92	91.74	56	⇓P		P	04 43 46.2	-0.1	
E18A	Harlowton baz=92	91.83	39	⇓P		P	04 43 47.1	+0.6	
HHC	Hu-ho-hao-te	91.86	314	eP		P	04 43 45.5	-1.2	
HHC					pP	pP	04 44 29.9	-0.1	
HHC					sP	sP	04 44 47.8	-0.2	
HHC					PP	PP	04 47 30.3	+1.7	
HHC					S	S	04 54 28.8	-4.3	
HHC					sS	sS	04 55 45.8	-2.9	
HHC					SS	SS	05 00 46.4	+0.4	
R26A	Arlington baz=92	91.86	49	⇑P		P	04 43 45.9	-0.9	
H20A	Greybull baz=92	91.90	42	⇓P		P	04 43 46.6	-0.1	
K22A	Casper baz=92	91.90	44	⇑P		P	04 43 47.0	+0.1	
C17A	Wharram Farm, baz=92,SNR=6.7	91.91	38	⇓P		P	04 43 46.3	-0.4	
CMAR	Chiang Mai Arr	91.96	289		P	P	04 43 49.7	+2.2	
CMAR	Chiang Mai Arr comp=Z,1.4nm,0.4s,baz=125,slow=3.1,SNR=7.6	91.96	289		P	P	04 43 49.7	+2.2	
Z31A	Sharp Cattle R baz=92	92.00	55	⇑P		P	04 43 46.7	-0.7	
I21A	Big Trails, Te baz=92,SNR=7.4	92.00	43	⇓P		P	04 43 46.6	-0.7	
F19A	Roth Farm, Mol baz=92	92.03	40	⇑P		P	04 43 47.5	+0.1	
ABTX	Abilene, Hawle baz=92	92.07	55	⇓P		P	04 43 47.7	-0.1	
Q26A	Hugo baz=92	92.11	48	⇑P		P	04 43 47.7	-0.3	
COLD	Coldfoot	92.13	10	eP		P	04 43 47.7	+0.5	
A16A	West Butte Ran baz=92	92.16	37	⇑P		P	04 43 47.7	-0.2	
Y31A	Rekieta Farm, baz=92	92.19	54	⇓P		P	04 43 48.3	0.0	
B17A	L&G Farms, Che baz=92	92.25	38	⇓P		P	04 43 47.9	-0.3	
R27A	Eads baz=92	92.31	49	⇑P		P	04 43 48.3	-0.5	
J22A	Midwest baz=92,SNR=6.8	92.31	43	⇑P		P	04 43 48.1	-0.7	
E19A	Rath Farm, Rou baz=93,SNR=5.4	92.44	40	⇓P		P	04 43 49.1	0.0	
Z32A	Haskell baz=93	92.49	55	⇓P		P	04 43 49.7	+0.1	
K23A	Bowen Ranch, D baz=93	92.53	44	⇑P		P	04 43 50.3	+0.5	
I22A	9 Mile Ranch, baz=93	92.55	43	⇓P		P	04 43 50.0	+0.2	
H21A	Big Horn, Sher baz=93	92.56	42	⇑P		P	04 43 50.0	+0.2	
A17A	Triple J Farms baz=93	92.66	37	⇑P		P	04 43 50.1	0.0	
Y32A	R-V Farms, Ver baz=93	92.82	54	⇑P		P	04 43 50.8	-0.4	
E20A	Meyer Farm, Mu baz=93	92.85	40	⇓P		P	04 43 51.7	+0.7	
C19A	Slack Wire Ran baz=93	92.95	39	⇓P		P	04 43 52.1	+0.6	
W31A	Holland Ranch, baz=93	92.96	53	⇓P		P	04 43 51.7	-0.1	
H22A	Clearmont baz=93	92.97	42	⇓P		P	04 43 52.0	+0.3	
CD2	Chengdu	93.03	302	eP		P	04 43 52.5	+0.2	
CD2	comp=Z,10.0nm,0.8s				pmax	pmax			
CD2	comp=Z,40nm,6.2s				pmax	pmax			
D20A	Manuel Ranch, baz=93	93.15	40	⇓P		P	04 43 53.2	+0.8	
N27A	Anderson Farm, baz=94	93.65	47	⇑P		P	04 43 54.8	-0.1	
G23A	Biddle baz=94	93.87	42	⇑P		P	04 43 55.9	+0.1	
B20A	Solberg Farm, baz=94	93.90	38	⇑P		P	04 43 56.2	+0.3	
K26A	Motz Farm, Whi baz=94	94.09	45	⇓P		P	04 43 57.3	+0.4	
F23A	Volborg baz=94	94.11	42	⇓P		P	04 43 57.1	+0.2	
H24A	Dirks Ranch, A baz=94,SNR=7.2	94.17	43	⇑P		P	04 43 56.3	-0.9	
RSSD	Black Hills comp=Z,6.2nm,0.8s	94.20	44	eP		P	04 43 56.8	-0.8	
N28A	Pribbeno Ranch baz=94	94.27	48	⇓P		P	04 43 57.9	+0.2	
D22A	Cohagen baz=94	94.34	40	⇑P		P	04 43 58.0	+0.2	
F24A	Ekalaka baz=95	94.76	42	⇓P		P	04 44 00.0	+0.2	
LZH	Lanzhou	95.13	307	eP		P	04 44 04.0	+2.1	
LZH					pP	pP	04 44 48.5	+3.2	
LZH					sP	sP	04 45 06.3	+3.0	
LZH	comp=Z,13nm,1.0s				pmax	pmax			
YKA	Yellowknife Ar	98.32	25	P		P	04 44 15.1	-0.3	
YKA	Yellowknife Ar comp=Z,0.9nm,0.8s,baz=242,slow=4.3,SNR=15	98.32	25	P		P	04 44 15.1	-0.3	
LPAZ	La Paz	100.11	112	P		Pdif	04 44 25.3	-0.1	
LPAZ	La Paz comp=Z,0.6nm,0.9s,baz=232,slow=7.1,SNR=2.8	100.11	112	P		Pdif	04 44 25.3	-0.1	
WMQ	Urumqi	109.36	310	eP		PKiKP	04 49 09.3	+1.5	
ZALV	Zalesovo Beam	113.10	321		PKiKP	PKiKP	04 49 13.7	-0.8	
ZALV	Zalesovo Beam comp=Z,1.1nm,0.4s,baz=141,slow=1.7,SNR=6.2	113.10	321		PKiKP	PKiKP	04 49 13.7	-0.8	
MK31	Makanchi Array	113.68	313	ePKPdf		PKiKP	04 49 15.4	-0.4	
MKAR	Makanchi Array	113.68	313		PKiKP	PKiKP	04 49 15.2	-0.6	
MKAR	Makanchi Array comp=Z,0.8nm,0.6s,baz=64,slow=3.1,SNR=8.2	113.68	313		PKiKP	PKiKP	04 49 15.2	-0.6	
BDFB	Brasilia	116.90	123		PP	PP	04 50 32.9	-1.0	
BDFB	Brasilia comp=Z,0.9nm,0.5s,baz=202,slow=11,SNR=3.2	116.90	123		PP	PP	04 50 32.9	-1.0	
BOSA	Boshof	124.44	204		PKP	PKPdf	04 49 36.5	-0.8	
BOSA	Boshof comp=Z,3.7nm,0.8s,baz=150,slow=12,SNR=3.5	124.44	204		PKP	PKPdf	04 49 36.5	-0.8	
ARCES	ARCESS Array B	131.56	350		PKP	PKPdf	04 49 49.5	+0.1	
ARCES	ARCESS Array B comp=Z,4.1nm,0.8s,baz=41,slow=1.3,SNR=16	131.56	350		PKP	PKPdf	04 49 49.5	+0.1	
FINES	FINESS Array B	138.46	344		PKPpre	PKPpre	04 49 55.2		
FINES	FINESS Array B comp=Z,1.0nm,0.5s,baz=18,slow=4.8,SNR=3.6	138.46	344		PKhKP	PKPpre	04 49 55.2		
NB2	NORSAR Subarra comp=Z,1.7nm,0.7s,baz=10,slow=2.5	141.57	354		PKP	PKPdf	04 50 02.2	-6.0	
NOA	NORSAR Array B	141.57	354		PKPpre	PKPpre	04 50 01.5		
NOA	NORSAR Array B comp=Z,2.1nm,0.9s,baz=22,slow=3.9,SNR=4.6	141.57	354		PKhKP	PKPpre	04 50 01.5		
MBAR	Mbarara	144.36	233		PKP	PKPbc	04 50 14.1	+0.5	
MBAR	Mbarara comp=Z,8.8nm,0.6s,baz=121,slow=5.9,SNR=15	144.36	233		PKP	PKPbc	04 50 14.1	+0.5	
SUW	Suwalki	145.55	339	ePKPbc		PKPab	04 50 16.4	+0.2	
AKASG	Malin Array Be	145.71	330		PKPbc	PKPdf	04 50 15.9	+0.3	
AKASG	Malin Array Be comp=Z,10nm,0.4s,baz=42,slow=4.0,SNR=103	145.71	330		PKPbc	PKPdf	04 50 15.9	+0.3	
AK01	Malin Array Si	145.72	330	ePKPbc		PKPdf	04 50 16.1	+0.5	
KIEV	Kiev	145.72	330	ePKPbc		PKPdf	04 50 15.9	+0.3	
AK02	Malin Array Si	145.75	330	ePKPbc		PKPdf	04 50 16.1	+0.4	
MALT	Malatya	146.27	305	⇓iP		PKPab	04 50 29.2	+9.5	
DRWC	Darouich	148.09	303	eP		PKPdf	04 50 21.0	+0.8	
DRWC	Darouich SNR=157	148.09	303	eP		PKPdf	04 50 21.0	+0.8	
ROOS	tl_alroos	148.17	298	eP		PKPbc	04 50 24.7	+0.8	
ZALF	Zalf	148.36	296	eP		PKPbc	04 50 25.1	+0.7	
ZALF	Zalf SNR=154	148.36	296	eP		PKPbc	04 50 25.1	+0.7	
WRDH	Warideh	148.58	301	eP		PKPbc	04 50 24.7	-0.2	
WRDH	Warideh SNR=158	148.58	301	eP		PKPbc	04 50 24.7	-0.2	
BSEG	Bad Segeberg	148.64	352	ePKPbc		PKPbc	04 50 24.9	+0.6	
BSEG				ePKPab		PKPab	04 50 28.6	+0.2	
BIDA	Albida	148.77	300	eP		PKPdf	04 50 21.6	+0.2	
BIDA	Albida SNR=158	148.77	300	eP		PKPdf	04 50 21.6	+0.2	
ARNB	Al Arnab	148.83	302	eP		PKPbc	04 50 25.4	-0.2	
ARNB	Al Arnab SNR=155	148.83	302	eP		PKPbc	04 50 25.4	-0.2	
SALA	Sala	148.89	296	eP		PKPbc	04 50 26.8	+0.9	
SALA	Sala SNR=150	148.89	296	eP		PKPbc	04 50 26.8	+0.9	
TOTH	TOTAH	149.03	297	eP		PKPbc	04 50 26.6	+0.5	
TOTH	TOTAH SNR=152	149.03	297	eP		PKPbc	04 50 26.6	+0.5	
BR131	Keskin Array S	149.29	310	ePKPbc		PKPbc	04 50 26.8	+0.2	
BRTR	Keskin Array B	149.29	310		PKPbc	PKPbc	04 50 26.7	+0.1	
BRTR	Keskin Array B comp=Z,5.2nm,0.7s,baz=138,slow=4.4,SNR=32	149.29	310		PKPbc	PKPbc	04 50 26.7	+0.1	
RUE	Ruedersdorf	149.46	347	ePKPbc		PKPbc	04 50 27.2	+0.8	
BUR08	Bucovina Ar. S	149.74	330	ePKPdf		PKPbc	04 50 29.1	+1.6	
BURAR	Bucovina Array	149.75	330	⇑iP		PKPbc	04 50 29.3	+1.8	
CFR	Carcaliu	149.93	323	⇑iP		PKPbc	04 50 28.9	+1.1	
NRDL	Niedersach Rie	150.07	351	ePKPbc		PKPbc	04 50 28.4	+0.6	
TIRR	Tirgusor	150.22	322	⇓iP		PKPbc	04 50 28.4	-0.1	
VRI	Vrincioaia	150.24	326	⇑iP		PKPbc	04 50 29.3	+0.7	
PLOR	Plostina	150.28	326	⇓iP		PKPbc	04 50 29.0	+0.3	
IBBN	Ibbenburen	150.53	354	ePKPbc		PKPbc	04 50 29.5	+0.5	
CLZ	Clausthal	150.67	351	ePKPbc		PKPbc	04 50 30.2	+0.8	
CLL	Collm	150.73	347	ePKPbc		PKPbc	04 50 30.1	+0.6	
CLL				ePKPab		PKPab	04 50 37.2	+0.1	
CLL	Collm comp=Z,33nm,0.8s	150.73	347	⇑iPKPbc		PKPbc	04 50 30.1	+0.6	
CLL	comp=Z,16nm,0.8s			⇓iPKPab		PKPab	04 50 37.1	0.0	
CLL				e			04 50 45.0		
OKC	Ostrava-Krasne	150.74	340	⇑ePKP		PKPbc	04 50 29.9	+0.3	
UPC	Upice	150.76	343	⇑ePKP		PKPbc	04 50 30.8	+1.2	
UPC				ePKPAB		PKPab	04 50 38.2	+0.9	
DPC	Dobruska-Polom	150.82	343	⇑ePKP		PKPbc	04 50 30.6	+0.8	
DPC				ePKPAB		PKPab	04 50 38.6	+1.0	
MLR	Muntele Rosu	150.89	326	⇓iP		PKPbc	04 50 30.1	-0.2	
BRG	Berggiesshubel comp=Z,2.7nm,0.9s	150.94	346	i PKP		PKPdf	04 50 24.9	+0.7	
BRG				i			04 50 30.7		
BRG	comp=Z,25nm,0.8s			i			04 50 38.4		
BRG	comp=Z,11nm,0.7s				pPKP	pPKPdf	04 51 01.2	-8.4	
BRG	comp=Z,7.4nm,1.0s Berggiesshubel	150.94	346	ePKPbc		PKPbc	04 50 30.8	+0.8	
BRG				ePKPab		PKPab	04 50 38.3	+0.3	
MORC	Moravsky Berou	150.98	341	ePKPbc		PKPbc	04 50 30.6	+0.4	
MORC	Moravsky Berou	150.98	341	⇑iP		PKPbc	04 50 31.2	+1.0	
FBE	Freiberg	151.02	347	ePKPbc		PKPbc	04 50 31.3	+1.1	
FBE				ePKPab		PKPab	04 50 38.7	+0.4	
NEUB	Neuenburg	151.06	349	ePKPbc		PKPbc	04 50 31.2	+0.9	
PVCC	Panska Ves	151.11	345	⇑ePKP		PKPbc	04 50 31.2	+0.8	
PVCC				ePKPAB		PKPab	04 50 39.4	+0.7	
BUG	Bochum--Univer	151.43	355	ePKPbc		PKPbc	04 50 31.5	+0.4	
PRU	Pruhonice	151.62	344	⇑ePKP		PKPbc	04 50 32.2	+0.6	
PRU				ePKPAB		PKPab	04 50 41.6	+0.8	
MOX	Moxa	151.62	349	ePKPbc		PKPbc	04 50 32.2	+0.6	
MOX				ePKPab		PKPab	04 50 41.0	+0.1	
ARR	Arges	151.65	327	⇑iP		PKPbc	04 50 33.8	+1.9	
PLN	Plauen	151.68	348	ePKPbc		PKPbc	04 50 32.3	+0.6	
TANN	Tannenbergstha	151.68	347	ePKPbc		PKPbc	04 50 32.4	+0.6	
TANN				ePKPab		PKPab	04 50 41.3	+0.1	
WERD	Werda	151.68	348	ePKPbc		PKPbc	04 50 32.4	+0.6	
GUNZ	Gunzen	151.76	348	ePKPbc		PKPbc	04 50 32.8	+0.8	
GUNZ				ePKPab		PKPab	04 50 41.7	+0.2	
WERN	Wernitzgruen	151.82	347	ePKPbc		PKPbc	04 50 33.0	+0.9	
WERN				ePKPab		PKPab	04 50 42.2	+0.5	
NKC	Novy Kostel	151.86	347	⇑ePKP		PKPbc	04 50 33.1	+0.9	
NKC				ePKPAB		PKPab	04 50 42.2	+0.3	
MANZ	Manzenberg	152.16	348	ePKPbc		PKPbc	04 50 33.6	+0.7	
ROTZ	Rotzenmuhle	152.35	347	ePKPbc		PKPbc	04 50 34.3	+1.0	
ROTZ				ePKPab		PKPab	04 50 44.4	+0.5	
TNS	Taunus Mts	152.51	353	ePKPbc		PKPbc	04 50 34.5	+0.8	
TNS				ePKPab		PKPab	04 50 44.7	+0.1	
GRF	Grafenberg Arr	152.61	349	ePKPbc		PKPbc	04 50 34.9	+1.0	
GRF				ePKPab		PKPab	04 50 45.5	+0.5	
KHC	Kasperske Hory	152.65	345	⇑ePKP		PKPbc	04 50 34.5	+0.4	
KHC				ePKPAB		PKPab	04 50 45.8	+0.6	
KHC				epPKP		pPKPdf	04 51 06.4	-5.9	
KHC	Kasperske Hory	152.65	345	ePKPbc		PKPbc	04 50 34.4	+0.4	
KHC				ePKPab		PKPab	04 50 46.0	+0.8	
WET	Wettzell	152.80	346	ePKPbc		PKPab	04 50 46.5	+0.6	
GEC2	GERESS Array S	152.88	345	ePKPbc		PKPbc	04 50 35.1	+0.5	
GERES	GERESS Array B	152.88	345		PKP	PKPdf	04 50 26.7	-0.6	
GERES					PKPbc	PKPbc	04 50 35.1	+0.5	
GERES					PKPab	PKPab	04 50 46.4	0.0	
GERES	GERESS Array B comp=Z,0.8nm,0.8s,baz=90,slow=4.0,SNR=5.0	152.88	345		PKP	PKPdf	04 50 26.7	-0.6	
GERES	comp=Z,2.8nm,0.8s,baz=18,slow=3.4,SNR=18				PKPb

MSZ					AML	AML	04 50 54.6	
MSZ					AML	AML	04 50 55.2	
MSZ					AML	AML	04 50 55.2	
DCZ	**Deep Cove**	**0.49**	**207**		PN	Pn	04 50 39.8	-0.4
DCZ					SN	Sn	04 50 52.5	-1.0
DCZ					AML	AML	04 50 53.5	
DCZ					AML	AML	04 50 53.6	
DCZ					AML	AML	04 50 53.8	
MLZ	**Mavora Lakes**	**0.58**	**122**	⇑	PN	Pn	04 50 40.6	-0.3
MLZ					SN	Sn	04 50 54.3	-0.4
MLZ					AML	AML	04 50 55.5	
WHZ	**Wether Hill Ro**	**0.92**	**159**	⇓	PN	Pn	04 50 43.5	-0.1
WHZ					SN	Sn	04 50 59.0	-0.4
WHZ					AML	AML	04 50 59.7	
WKZ	**Wanaka**	**1.11**	**80**	⇑	PN	Pn	04 50 45.5	-0.1
WKZ					AML	AML	04 51 03.3	
WKZ					AML	AML	04 51 03.3	
WKZ					AML	AML	04 51 04.5	
WKZ					AML	AML	04 51 04.5	
PYZ	**Puysegur Point**	**1.26**	**206**		PN	Pn	04 50 47.4	+0.3
EAZ	**Earnscleugh**	**1.31**	**99**	⇓	PN	Pn	04 50 47.4	-0.3
EAZ					AML	AML	04 51 05.4	
EAZ					AML	AML	04 51 05.5	
EAZ					AML	AML	04 51 05.5	
EAZ					AML	AML	04 51 05.5	
JCZ	**Jackson Bay**	**1.33**	**44**	⇓	PN	Pn	04 50 47.4	-0.6
JCZ					AML	AML	04 51 08.0	
JCZ					AML	AML	04 51 10.4	
TUZ	**Tuapeka**	**1.77**	**122**	⇓	PN	Pn	04 50 52.7	-0.3
TUZ					AML	AML	04 51 15.2	
TUZ					AML	AML	04 51 15.7	
APZ	**The Paps**	**1.83**	**169**	⇑	PN	Pn	04 50 53.4	-0.4
APZ					SN	Sn	04 51 17.3	-0.3
SYZ	**Scrubby Hill**	**1.90**	**143**	⇓	PN	Pn	04 50 54.4	-0.1
LBZ	**Lake Benmore**	**2.04**	**72**	⇑	PN	Pn	04 50 54.7	-1.7
LBZ					AML	AML	04 51 19.4	
LBZ					AML	AML	04 52 25.5	
FOZ	**Fox Glacier**	**2.17**	**48**		PN	Pn	04 50 57.0	-1.0
ODZ	**Otahua Downs**	**2.25**	**91**		PN	Pn	04 50 57.7	-1.3
WVZ	**Waitaha Valley**	**3.06**	**51**		PN	Pn	04 51 07.0	-2.5
LTZ	**Lake Taylor**	**4.13**	**59**		PN	Pn	04 51 20.6	-3.3

MOS ***16*** *04:56:06.5±1.1,53°.60N×160°.68E,h56km,mb4.2/12,Error ellipse: s-maj=15.3km s-min=7.3km az=75.0*

ISCJB ***16*** *04:56:07.6±0.4,53°.61N±0°.03×160°.62E±0°.07,h65km±4km, mb3.8/21,Error ellipse: s-maj=7.7km s-min=2.3km az=28.4*

KRSC ***16*** *04:56:08.2±0.3,53°.63N×160°.61E,h40km±30km,ML4.3*

IDC ***16*** *04:56:11.2±1.7,53°.78N×160°.43E,h77km±15km,mb3.5/18, mb1 3.8/18,mb1mx3.7/26,mbtmp3.5/18,MS3.6/1, Ms1 3.6/1,ms1mx2.8/29,Error ellipse: s-maj=18.5km s-min=13.3km az=151.0*

ISC 16 04:56:06.5±1.1,53°.54N±0°.03×160°.83E±0°.04,h41km±10km, n83,σ1°.36/127,mb3.8/21,1D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.66**	**228**	PN	**Pn**	**04 56 19.8**	**+0.5**
SPN				S	**Sn**	**04 56 27.6**	**-0.8**
SPN	**Mys Shipunski**	**0.66**	**228**	*i* P	**Pn**	**04 56 19.8**	**+0.5**
SPN				*i* S	**Sn**	**04 56 27.6**	**-0.8**
KII	**Karymskiy**	**0.96**	**302**	*i* P	**Pn**	**04 56 23.4**	**-0.1**
NLC	**Nalytchevo**	**0.96**	**248**	PN	**Pn**	**04 56 23.8**	**+0.3**
NLC				S	**Sn**	**04 56 35.3**	**-0.6**
NLC	**Nalytchevo**	**0.96**	**248**	*i* P	**Pn**	**04 56 23.8**	**+0.3**
NLC				*i* S	**Sn**	**04 56 35.3**	**-0.6**
MKZ	**Mys Kozlova**	**1.15**	**27**	PN	**Pn**	**04 56 26.1**	**+0.1**
MKZ				S	**Sn**	**04 56 39.0**	**-1.5**
MKZ	**Mys Kozlova**	**1.15**	**27**	P	**Pn**	**04 56 26.1**	**+0.1**
MKZ				*i* S	**Sn**	**04 56 39.0**	**-1.5**
SDLR	**Sedlovina**	**1.19**	**258**	P	**Pn**	**04 56 27.4**	**+0.6**
SDLR				*i* S	**Sn**	**04 56 41.2**	**-0.6**
SMAR	**Somma**	**1.25**	**258**	P	**Pn**	**04 56 28.1**	**+0.5**
SMAR				*i* S	**Sn**	**04 56 42.7**	**-0.5**
UGLR	**Uglovaya**	**1.25**	**255**	P	**Pn**	**04 56 28.4**	**+0.9**
UGLR				*i* S	**Sn**	**04 56 43.0**	**-0.1**
KRER	**Koryakskii**	**1.27**	**260**	*i* P	**Pn**	**04 56 28.8**	**+1.0**
KRER				*i* S	**Sn**	**04 56 43.4**	**-0.3**
AVH	**Avacha**	**1.28**	**258**	P	**Pn**	**04 56 28.9**	**+1.0**
AVH				*i* S	**Sn**	**04 56 43.4**	**-0.5**
KOK	**Koryaka**	**1.33**	**260**	P	**Pn**	**04 56 29.5**	**+0.8**
KOK				*i* S	**Sn**	**04 56 44.8**	**-0.5**
PET	**Petropavlovsk**	**1.40**	**249**	PN	**Pn**	**04 56 30.4**	**+0.9**
PET				S	**Sn**	**04 56 46.2**	**-0.6**
PET	**Petropavlovsk**	**1.40**	**249**	*i* P	**Pn**	**04 56 30.4**	**+0.9**
PET				*i* S	**Sn**	**04 56 46.2**	**-0.6**
INSR	**Institute**	**1.42**	**251**	P	**Pn**	**04 56 31.8**	**+2.1**
INSR				*i* S	**Sn**	**04 56 48.4**	**+1.3**
GNL	**Ganaly**	**1.73**	**276**	P	**Pn**	**04 56 35.3**	**+1.2**
RUS	**Russkaya**	**1.79**	**233**	PN	**Pn**	**04 56 35.5**	**+0.8**
RUS				S	**Sn**	**04 56 56.1**	**-0.1**
RUS	**Russkaya**	**1.79**	**233**	P	**Pn**	**04 56 35.5**	**+0.8**
RUS				*i* S	**Sn**	**04 56 56.1**	**-0.1**
TUMR	**Tumrok**	**1.79**	**347**	*i* P	**Pn**	**04 56 36.2**	**+1.2**
TUMR				*i* S	**Sn**	**04 56 56.1**	**-0.5**
MTVR	**Mutnovka**	**1.92**	**238**	*e*P	**Pn**	**04 56 38.1**	**+1.4**
MTVR				*i* S	**Sn**	**04 56 59.8**	**+0.2**
PETK	**Petropavlovsk-**	**1.93**	**258**	PN	**Pn**	**04 56 38.1**	**+1.4**
PETK				S	**Sn**	**04 57 02.3**	**+2.6**
PETK				pmax	pmax		
	comp=Z,62nm,0.3s						
PETK				smax	smax		
	comp=N,55nm,0.3s						
PETK	**Petropavlovsk-**	**1.93**	**258**	P	**Pn**	**04 56 38.0**	**+1.4**
	comp=N,62nm,0.3s,baz=89,slow=18,SNR=209						
PETK				S	**Sn**	**04 57 02.2**	**+2.6**
	comp=N,55nm,0.3s,baz=91,slow=21,SNR=11						
GRL	**Gorelyy**	**1.94**	**240**	*e*P	**Pn**	**04 56 38.5**	**+1.6**
GRL				*i* S	**Sn**	**04 57 00.2**	**+0.1**
ASAK	**Asacha**	**2.12**	**238**	*e*P	**Pn**	**04 56 41.4**	**+2.0**
ASAK				*i* S	**Sn**	**04 57 05.4**	**+0.9**
KMNR	**Kamenistaya**	**2.25**	**351**	*e*P	**Pn**	**04 56 43.1**	**+1.9**
KMNR				*i* S	**Sn**	**04 57 08.5**	**+0.7**
APC	**Apacha**	**2.29**	**256**	*e*P	**Pn**	**04 56 43.9**	**+2.2**
APC				*i* S	**Sn**	**04 57 09.7**	**+1.1**
BZGR	**Bezymyannyi-Gr**	**2.41**	**358**	*i* P	**Pn**	**04 56 45.5**	**+2.1**
BZGR				*i* S	**Sn**	**04 57 12.2**	**+0.5**
BZMR	**Bezymyannaya**	**2.41**	**355**	*i* P	**Pn**	**04 56 45.6**	**+2.1**
BZMR				*i* S	**Sn**	**04 57 12.6**	**+0.8**
KIRR	**Kirishev**	**2.44**	**354**	*i* P	**Pn**	**04 56 45.7**	**+1.9**
KIRR				*i* S	**Sn**	**04 57 12.9**	**+0.5**
BZWR	**Bezymyannyi-We**	**2.44**	**356**	*e*P	**Pn**	**04 56 46.0**	**+2.1**
BZWR				*i* S	**Sn**	**04 57 13.1**	**+0.6**
KPT	**Kopyto**	**2.46**	**352**	*e*P	**Pn**	**04 56 45.7**	**+1.6**
KPT				*i* S	**Sn**	**04 57 13.1**	**+0.2**
ZLN	**Zelenaya**	**2.48**	**360**	*i* P	**Pn**	**04 56 46.7**	**+2.2**
ZLN				*i* S	**Sn**	**04 57 14.6**	**+1.0**
LGNR	**Loginova**	**2.55**	**358**	*i* P	**Pn**	**04 56 48.2**	**+2.7**
LGNR				*i* S	**Sn**	**04 57 17.1**	**+1.6**
CIRR	**Tsirk**	**2.58**	**359**	*e*P	**Pn**	**04 56 48.1**	**+2.3**
CIRR				*i* S	**Sn**	**04 57 17.2**	**+1.2**
KOZ	**Kozyrevsk**	**2.58**	**348**	*e*P	**Pn**	**04 56 47.2**	**+1.4**
KOZ				*i* S	**Sn**	**04 57 15.8**	**-0.1**
KOZR	**Kozyr**	**2.59**	**348**	PN	**Pn**	**04 56 47.2**	**+1.4**
KOZR				S	**Sn**	**04 57 15.8**	**-0.2**
KRSR	**Krestovskiy**	**2.69**	**357**	*e*P	**Pn**	**04 56 48.8**	**+1.5**
KRSR				*i* S	**Sn**	**04 57 17.8**	**-0.8**
ESO	**Esso**	**2.69**	**334**	PN	**Pn**	**04 56 48.1**	**+0.9**
ESO	**Esso**	**2.69**	**334**	*e*P	**Pn**	**04 56 48.1**	**+0.9**
MIPR	**Malaya Ipel'ka**	**2.77**	**244**	P	**Pn**	**04 56 49.6**	**+1.3**
KLY	**Klyuchi**	**2.78**	**358**	PN	**Pn**	**04 56 50.4**	**+2.0**
KLY				S	**Sn**	**04 57 21.0**	**+0.3**
KLY	**Klyuchi**	**2.78**	**358**	*e*P	**Pn**	**04 56 50.4**	**+2.0**
KLY				*i* S	**Sn**	**04 57 21.0**	**+0.3**
SRDR	**Sredinnyy**	**2.86**	**347**	*e*P	**Pn**	**04 56 50.5**	**+1.0**
SRDR				*i* S	**Sn**	**04 57 20.9**	**-1.8**
KBG	**Krutoberegovo**	**2.93**	**21**	PN	**Pn**	**04 56 52.5**	**+2.1**
KBG				S	**Sn**	**04 57 23.7**	**-0.6**
KBG	**Krutoberegovo**	**2.93**	**21**	*e*P	**Pn**	**04 56 52.5**	**+2.1**
KBG				*i* S	**Sn**	**04 57 23.7**	**-0.6**
BDR	**Baidarnaya**	**3.04**	**4**	*e*P	**Pn**	**04 56 54.4**	**+2.3**
BDR				*i* S	**Sn**	**04 57 28.0**	**+0.7**
SMKR	**Semkarok**	**3.07**	**7**	*e*P	**Pn**	**04 56 54.2**	**+1.7**
SMKR				*i* S	**Sn**	**04 57 27.9**	**-0.1**
SRKR	**Sorokina**	**3.13**	**3**	*e*P	**Pn**	**04 56 54.9**	**+1.6**
SRKR				*i* S	**Sn**	**04 57 28.7**	**-0.7**
BKI	**Bering**	**3.44**	**59**	PN	**Pn**	**04 56 58.6**	**+1.2**
BKI	**Bering**	**3.44**	**59**	*e*P	**Pn**	**04 56 58.6**	**+1.2**
BKI				*i* S	**Sn**	**04 57 34.4**	**-2.5**
SKR	**Severo-Kuril's**	**4.08**	**227**	*e*PN	Pn	04 57 09.2	+3.0
SKR				*e*S	**Sn**	**04 57 52.4**	**-0.2**
SKR				smax	smax		
	comp=N,150nm,0.5s						
SKR				smax	smax		
	comp=E,200nm,0.9s						
SKR	**Severo-Kuril's**	**4.08**	**227**	P	Pn	04 57 09.2	+3.0
BILL	**Bilibino**	**14.78**	**8**	⇓ *e*P	**P**	**04 59 37.6**	**-0.1**
BILL				*e*S	Sn	05 02 21.1	+6.5
BILL				pmax	pmax		
	comp=Z,9.0nm,2.5s						
ERM	**Erimo**	**16.50**	**233**	*e*P	**Pn**	**04 59 53.9**	**-0.8**
ERM				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ILAR	**Eielson Array**	**28.19**	**46**	P	**P**	**05 01 55.0**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=261,slow=8.2,SNR=11						
SONM	**Songino Array**	**34.23**	**283**	P	**P**	**05 02 47.0**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=85,slow=6.2,SNR=2.9						
SONM				PcP	**PcP**	**05 05 24.1**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=48,slow=2.2,SNR=3.5						
YKA	**Yellowknife Ar**	**42.53**	**43**	P	**P**	**05 03 58.6**	**+1.1**
	comp=Z,0.5nm,0.6s,baz=298,slow=8.0,SNR=7.2						
ZALV	**Zalesovo Beam**	**42.91**	**303**	P	**P**	**05 03 58.0**	**-2.6**
ZALV	**Zalesovo Beam**	**42.91**	**303**	P	**P**	**05 03 58.0**	**-2.6**
	comp=Z,0.3nm,0.3s,baz=44,slow=11,SNR=2.6						
KURK	**Kurchatov**	**47.87**	**302**	*e*P	**P**	**05 04 37.4**	**-2.6**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MKAR	**Makanchi Array**	**48.36**	**296**	*i* P	**P**	**05 04 41.4**	**-2.4**
MKAR	**Makanchi Array**	**48.36**	**296**	P	**P**	**05 04 40.8**	**-3.1**
	comp=Z,0.3nm,0.4s,baz=52,slow=6.3,SNR=6.2						
ARCES	**ARCESS Array B**	**53.00**	**342**	P	**P**	**05 05 17.3**	**-1.2**
	comp=Z,4.5nm,0.9s,baz=45,slow=8.7,SNR=7.0						
NVAR	**Mina Array Bea**	**55.18**	**71**	P	**P**	**05 05 37.8**	**+2.8**
	comp=Z,0.8nm,0.9s,baz=291,slow=8.7,SNR=4.1						
PDAR	**Pinedale Array**	**56.92**	**62**	P	**P**	**05 05 49.4**	**+2.0**
	comp=Z,0.4nm,0.6s,baz=316,slow=4.1,SNR=3.7						
CMAR	**Chiang Mai Arr**	**58.70**	**258**	P	**P**	**05 06 00.2**	**+0.2**
	comp=Z,0.6nm,0.3s,baz=23,slow=6.7,SNR=4.2						
KAF	**Kangasniemi**	**59.25**	**337**	*e*P	**P**	**05 06 02.5**	**-0.6**
KAF				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KAF	**Kangasniemi**	**59.25**	**337**	*e*p	**P**	**05 06 02.5**	**-0.6**
	comp=Z,2.6nm,0.4s						
FINES	**FINESS Array B**	**59.88**	**337**	P	**P**	**05 06 06.0**	**-1.5**
	comp=Z,1.9nm,0.5s,baz=46,slow=5.5,SNR=6.1						
FINES				LR	LR	05 34 06.3	
	comp=Z,45nm,18.6s,baz=344,slow=38						
NB2	**NORSAR Subarra**	**63.23**	**344**	P	**P**	**05 06 29.1**	**-1.0**
	comp=Z,1.9nm,0.7s,baz=25,slow=6.9						
NOA	**NORSAR Array B**	**63.23**	**344**	P	**P**	**05 06 29.2**	**-0.9**
	comp=Z,2.4nm,0.7s,baz=21,slow=6.7,SNR=8.3						
AKASG	**Malin Array Be**	**68.46**	**329**	P	**P**	**05 07 02.2**	**-1.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKASG	**Malin Array Be**	**68.46**	**329**	P	**P**	**05 07 02.2**	**-1.6**
	comp=Z,1.2nm,0.5s,baz=30,slow=6.8,SNR=4.3						
TXAR	**Lajitas Array**	**70.06**	**68**	P	**P**	**05 07 15.9**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=296,slow=4.8,SNR=16						
CLL	**Collm**	**72.09**	**339**	*i* P	**P**	**05 07 25.4**	**-0.6**
CLL				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CLL	**Collm**	**72.09**	**339**	*i* P	**P**	**05 07 25.4**	**-0.6**
	comp=Z,9.0nm,1.4s						
GERES	**GERESS Array B**	**74.26**	**338**	P	**P**	**05 07 38.7**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=10,slow=6.0,SNR=5.9						
BRTR	**Keskin Array B**	**76.56**	**321**	P	**P**	**05 07 51.6**	**-0.8**
	comp=Z,0.4nm,0.5s,baz=56,slow=8.8,SNR=2.8						
WRA	**Warramunga Arr**	**76.67**	**206**	P	**P**	**05 07 53.3**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=24,slow=6.2,SNR=6.6						
ASAR	**Alice Springs**	**80.35**	**205**	P	**P**	**05 08 14.4**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=15,slow=5.6,SNR=7.7						
STKA	**Stephens Creek**	**86.69**	**196**	P	**P**	**05 08 46.8**	**+1.3**
	comp=Z,0.6nm,0.5s,baz=27,slow=6.8,SNR=2.2						
TORD	**Torodi Ar. Bea**	**111.22**	**338**	PP	PP	05 15 12.1	-2.6
	comp=Z,0.2nm,0.7s,baz=357,slow=5.6,SNR=3.5						

MEX 16 05:05:15.8±1.0,18°.48N×99°.73W,h5km,MD3.5,Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLIG	**Platanillo**	**0.23**	**112**	*e*P	Pg	05 05 19.3	-1.2
PLIG				*i* S	Sg	05 05 23.9	+0.3
MEIG	**Mezcala**	**0.56**	**169**	*e*P	Pg	05 05 23.5	-3.2
MEIG				*i* S	Sg	05 05 31.2	-2.9
ARIG	**Puente Sto Nin**	**0.62**	**251**	*e*P	Pg	05 05 22.3	-5.5
ARIG				*i* S	Sg	05 05 29.5	-6.4
YAIG	**Yautepec**	**0.73**	**59**	*e*P	Pg	05 05 28.2	-1.9
YAIG				*i* S	Sg	05 05 39.1	-0.7
MZVM		**0.85**	**34**	*e*P	Pg	05 05 30.3	-1.9
MZVM				*i* S	Sg	05 05 41.3	-1.9
AZVM	**Cuida Lopez Ma**	**1.18**	**21**	*e*P	Pg	05 05 35.1	-3.7
AZVM				*i* S	Sg	05 05 50.9	-3.5
PTVM	**Pico Tres Padr**	**1.25**	**28**	*i* P	Pg	05 05 37.0	-3.2
PTVM				*i* S	Sg	05 05 53.3	-3.4
CAIG	**El Cayaco**	**1.52**	**200**	*e*P	Pn	05 05 39.0	-4.6
CAIG				*i* S	Sn	05 05 59.5	-4.2
ACP2	**Acapulco**	**1.60**	**185**	*i* P	Pn	05 05 41.6	-3.3
ACP2				*i* S	Sn	05 06 01.7	-4.3
ACX	**Acapulco**	**1.61**	**184**	*i* P	Pn	05 05 41.3	-3.6
ACX				*i* S	Sn	05 06 01.7	-4.4
ZIIG	**Zihuatanejo**	**1.87**	**243**	*i* P	Pn	05 05 44.0	-4.4
ZIIG				*i* S	Sn	05 06 06.8	-5.6
UTMO	**Huajuapan**	**1.94**	**109**	*i* P	Pn	05 05 46.9	-2.9
UTMO				*i* S	Sn	05 06 10.6	-4.2
TPIG	**Tehuac#an**	**2.25**	**91**	*i* P	Pn	05 05 51.2	-2.7
TPIG				*i* S	Sn	05 06 17.2	-5.1
PNIG	**Pinotepa**	**2.58**	**143**	*i* P	Pn	05 05 55.4	-2.9
PNIG				*i* S	Sn	05 06 26.4	-3.7

IDC 16 05:29:32.1±2.9,18°.82N×39°.29E,h0km,mb3.5/3, mb1 3.6/3,mb1mx3.4/24,mbtmp3.6/3,Error ellipse: s-maj=72.9km s-min=33.5km az=149.0,Red Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**21.40**	**348**	P	P	05 34 21.6	-0.1
	1.6nm,0.9s,baz=165,slow=13,SNR=8.0						
TORD	**Torodi Ar. Bea**	**36.53**	**267**	P	P	05 36 39.6	-0.1
	1.3nm,1.1s,baz=90,slow=8.2,SNR=4.7						
MKAR	**Makanchi Array**	**44.85**	**42**	P	P	05 37 48.0	-0.1
	0.5nm,0.8s,baz=240,slow=9.7,SNR=4.7						

ISCJB ***16*** *05:49:21.9±0.3,24°.26N±0°.02×122°.29E±0°.02,h49km±7km, Error ellipse: s-maj=4.1km s-min=2.4km az=164.6*

JMA ***16*** *05:49:21.8±0.2,24°.44N×122°.28E,h67km±2km,M3.3*

TAP ***16*** *05:49:21.8,24°.26N×122°.26E,h51km,ML4.0,B*

ISC 16 05:49:22.2±1.1,24°.25N±0°.03×122°.28E±0°.02,h45km±13km, n64,σ1°.06/109,6C-12D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.49**	**277**	*e*P	**Pn**	**05 49 33.6**	**+0.6**
	baz=279						
EHP				*e*S	**Sn**	**05 49 42.1**	**+1.2**
	baz=279						
ENA	**Nanau**	**0.52**	**290**	⇓ *i*P	**Pn**	**05 49 33.5**	**0.0**
	baz=298						
ENA				*e*S	**Sn**	**05 49 41.6**	**+0.2**
	baz=298						
TWC	**Suao**	**0.53**	**313**	*e*P	**Pn**	**05 49 33.4**	**-0.1**
	baz=314						
TWC				S	**Sn**	**05 49 40.9**	**-0.7**
	baz=314						
TWD	**Chiawan**	**0.64**	**255**	⇓ *i*P	**Pn**	**05 49 34.6**	**-0.4**
	baz=246						
TWD				*i* S	**Sn**	**05 49 44.0**	**-0.2**
	baz=246						
HWA	**Hwalien**	**0.67**	**247**	⇓ P	**Pn**	**05 49 35.2**	**-0.1**
	baz=245						
HWA				*e*S	**Sn**	**05 49 45.4**	**+0.6**
	baz=245						
YOJ	**Yonaguni jima**	**0.70**	**72**	⇓ *i*P	**Pn**	**05 49 36.1**	**+0.3**
	baz=73						
YOJ				*i* S	**Sn**	**05 49 46.4**	**+0.8**
	baz=73						
YOJ	**Yonaguni jima**	**0.70**	**72**	P	**Pn**	**05 49 36.1**	**+0.3**
YOJ				*e*S	**Sn**	**05 49 46.6**	**+1.0**
ILA	**Ilan**	**0.71**	**317**	*e*P	**Pn**	**05 49 36.4**	**+0.5**
	baz=327						
ILA				*e*S	**Sn**	**05 49 47.3**	**+1.6**
	baz=327						
TWE	**Neicheng**	**0.73**	**310**	⇑ *e*P	**Pn**	**05 49 36.4**	**+0.3**
	baz=305						
TWE				*e*S	**Sn**	**05 49 46.7**	**+0.5**
	baz=305						
ENTT	**Nioudou**	**0.76**	**301**	⇑ P	**Pn**	**05 49 36.8**	**+0.2**
	baz=301						
ENTT				S	**Sn**	**05 49 47.3**	**+0.4**
	baz=301						
TWB1	**Santiao Chiao**	**0.80**	**341**	⇓ *i*P	**Pn**	**05 49 36.7**	**-0.4**
	baz=342						
TWB1				S	**Sn**	**05 49 47.0**	**-1.0**
	baz=342						
NNS	**Nan Shan**	**0.85**	**283**	⇑ *i*P	**Pn**	**05 49 37.6**	**-0.3**
	baz=283						
NNS				*e*S	**Sn**	**05 49 48.8**	**-0.5**
	baz=283						
TEGC	**Jichi Village**	**0.86**	**232**	*e*P	**Pn**	**05 49 37.2**	**-0.7**
	baz=223						
ESL	**Shilin**	**0.88**	**241**	⇓ P	**Pn**	**05 49 37.5**	**-0.7**
	baz=239						
WHF	**Hehuan Shan**	**0.93**	**264**	⇓ *i*P	**Pn**	**05 49 38.8**	**-0.5**
	baz=253						
WHF				*e*S	**Sn**	**05 49 50.9**	**-0.8**
	baz=253						
NWF	**Wu-fen Shan**	**0.94**	**331**	P	**Pn**	**05 49 38.9**	**-0.2**
	baz=341						
NWF				*e*S	**Sn**	**05 49 51.1**	**-0.3**
	baz=341						
NSK	**Sanguang**	**0.94**	**297**	⇑ *i*P	**Pn**	**05 49 39.1**	**+0.1**
	baz=297						
NSK				*e*S	**Sn**	**05 49 51.2**	**-0.2**
	baz=297						
TWT	**Tachien**	**1.01**	**271**	*e*P	**Pn**	**05 49 40.5**	**+0.5**
	baz=270						
TWT				S	**Sn**	**05 49 53.4**	**+0.2**
	baz=270						
TAP1	**Taipei**	**1.05**	**319**	*e*P	**Pn**	**05 49 40.8**	**+0.3**
	baz=331						
TAP1				*e*S	**Sn**	**05 49 53.8**	**-0.1**
	baz=331						
TAP	**Taipei**	**1.06**	**318**	*e*P	**Pn**	**05 49 40.5**	**-0.1**
	baz=332						
EHY	**Hungye**	**1.14**	**230**	⇓ *e*P	**Pn**	**05 49 41.0**	**-0.8**
	baz=239						
TWS1	**Kuangyinshan**	**1.16**	**318**	*e*P	**Pn**	**05 49 42.1**	**+0.1**
	baz=328						
TWS1				*e*S	**Sn**	**05 49 56.8**	**+0.2**
	baz=328						
TWY	**Chenhua**	**1.20**	**329**	*e*P	**Pn**	**05 49 42.9**	**+0.4**
	baz=339						
TWY				*e*S	**Sn**	**05 49 57.0**	**-0.5**
	baz=339						
NSTT	**Nanjuang**	**1.23**	**288**	⇑ *i*P	**Pn**	**05 49 43.5**	**+0.6**
	baz=288						
NSTT				S	**Sn**	**05 49 58.9**	**+0.6**
	baz=288						
NCU	**National Centr**	**1.23**	**306**	*e*P	**Pn**	**05 49 43.0**	**0.0**
	baz=306						
NCU				*e*S	**Sn**	**05 49 58.6**	**+0.2**
	baz=306						
TWF1	**Yuli**	**1.27**	**225**	⇓ *i*P	**Pn**	**05 49 42.8**	**-0.6**
	baz=236						
TWF1				*e*S	**Sn**	**05 49 58.2**	**-1.0**
	baz=236						
SMLT	**Sun Moon Lake**	**1.31**	**254**	P	**Pn**	**05 49 44.4**	**+0.2**
	baz=246						
SMLT				*e*S	**Sn**	**05 50 00.2**	**-0.4**
	baz=246						
IRIF	**Iriomote-Funau**	**1.33**	**86**	P	**Pn**	**05 49 44.3**	**0.0**
IRIF				*e*S	**Sn**	**05 50 01.2**	**+0.4**
TYC	**Yuchr**	**1.34**	**256**	*e*P	**Pn**	**05 49 44.7**	**+0.2**
	baz=247						
TYC				*e*S	**Sn**	**05 50 01.0**	**-0.1**
	baz=247						
TWQ1	**Liyutan**	**1.38**	**275**	⇑ P	**Pn**	**05 49 45.7**	**+0.7**
	baz=274						
TWQ1				*e*S	**Sn**	**05 50 03.2**	**+1.2**
	baz=274						
PCYT	**Pengchaiyu**	**1.39**	**352**	P	**Pn**	**05 49 44.9**	**-0.3**
	baz=343						
NSY	**Sanyi**	**1.39**	**277**	*e*P	**Pn**	**05 49 46.3**	**+1.1**
	baz=277						
NSY				*e*S	**Sn**	**05 50 04.1**	**+1.7**
	baz=277						
HATJ	**Hateruma jima**	**1.41**	**97**	P	**Pn**	**05 49 46.2**	**+0.8**
HATJ				*e*S	**Sn**	**05 50 04.3**	**+1.5**
CHKT	**Chengkung**	**1.42**	**216**	⇓ *i*P	**Pn**	**05 49 44.5**	**-1.0**
	baz=207						
YUS	**Yu-Shan**	**1.43**	**238**	⇓ *i*P	**Pn**	**05 49 46.4**	**+0.3**
	baz=238						
YUS				*

JAMN	**Amaminishikomi**	**7.36**	**56**	P		**Pn**	**05 51 05.2**	**-1.9**
JAMN				*e*S		**Sn**	**05 52 27.3**	**-2.0**
JAM	**Amami Oshima**	**7.77**	**56**	P		**Pn**	**05 51 11.1**	**-1.6**

*DDA **16** 05:52:30.0, 39˚.30N×27˚.96E, h7km, MD2.7*
*ISK **16** 05:52:29.2, 39˚.28N×27˚.88E, h20km, MD2.9*
*CSEM **16** 05:52:30.0±0.1, 39˚.29N×27˚.90E, h20km, MD2.9, Error ellipse: s-maj=2.9km s-min=2.3km az=65.0*
ISC 16 05:52:29.5±1.2, **39˚29N**±0˚.02×**27˚91E**±0˚.03, **h10**km±11km, **n50**, σ0⁰**47**/66, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.35**	**357**	*e*PG	**Pb**	**05 52 37.2**	**-0.6**
BALB				*e*SG	**Sb**	**05 52 43.5**	**+0.2**
BALB	**Balikesir**	**0.35**	**357**	*e*Pg	**Pb**	**05 52 37.2**	**-0.6**
BALB				*e*Sg	**Sb**	**05 52 43.5**	**+0.2**
AKHS	**Akhisar**	**0.42**	**190**	*i* P	**Pb**	**05 52 38.2**	**-0.7**
AKHS				*i* S	**Sb**	**05 52 45.0**	**-0.2**
AKHS	**Akhisar**	**0.42**	**190**	*i* P	**Pb**	**05 52 38.2**	**-0.7**
AKHS				*i* S	**Sb**	**05 52 45.0**	**-0.2**
BALY	**Balya**	**0.50**	**334**	*e*P	**Pb**	**05 52 40.1**	**-0.3**
BALY				*e*S	**Sb**	**05 52 47.7**	**-0.1**
BALY	**Balya**	**0.50**	**334**	*e*P	**Pb**	**05 52 40.1**	**-0.3**
BALY				*e*S	**Sb**	**05 52 47.7**	**-0.1**
DURS	**Dursunbey**	**0.54**	**55**	*e*P	**Pg**	**05 52 39.9**	**-0.1**
DURS				*e*S	**Sg**	**05 52 47.8**	**+0.7**
DURS	**Dursunbey**	**0.54**	**55**	*e*P	**Pg**	**05 52 39.9**	**-0.1**
DURS				*e*S	**Sg**	**05 52 47.8**	**+0.7**
DST	**Dursunbey**	**0.64**	**60**	*e*PG	**Pg**	**05 52 41.8**	**0.0**
DST	**Dursunbey**	**0.64**	**60**	*e*Pg	**Pg**	**05 52 41.8**	**0.0**
DEMI	**Demirci**	**0.68**	**111**	*e*P	**Pg**	**05 52 42.5**	**-0.1**
DEMI				*e*S	**Sg**	**05 52 51.5**	**0.0**
DEMI	**Demirci**	**0.68**	**111**	*e*P	**Pg**	**05 52 42.5**	**-0.1**
DEMI				*e*S	**Sg**	**05 52 51.5**	**0.0**
GONE	**Gonen-Balikesi**	**0.77**	**347**	*e*PG	**Pb**	**05 52 44.8**	**-0.2**
GONE				*e*SG	**Sb**	**05 52 55.9**	**+0.3**
GONE	**Gonen-Balikesi**	**0.77**	**347**	*e*Pg	**Pb**	**05 52 44.8**	**-0.2**
GONE				*e*Sg	**Sb**	**05 52 55.9**	**+0.3**
AYVA	**Ayvalik**	**0.94**	**271**	*e*P	**Pn**	**05 52 50.0**	**+1.3**
AYVA				*e*S	**Sn**	**05 53 02.7**	**+0.5**
AYVA	**Ayvalik**	**0.94**	**271**	*e*P	**Pn**	**05 52 50.0**	**+1.3**
AYVA				*e*S	**Sn**	**05 53 02.7**	**+0.5**
KULA	**Kula-Manisa**	**0.97**	**142**	*e*PG	**Pb**	**05 52 48.2**	**-0.2**
KULA	**Kula-Manisa**	**0.97**	**142**	*e*Pg	**Pb**	**05 52 48.2**	**-0.2**
IZM	**Izmir**	**1.02**	**210**	*e*PG	**Pb**	**05 52 48.4**	**-0.8**
IZM	**Izmir**	**1.02**	**210**	*e*Pg	**Pb**	**05 52 48.4**	**-0.8**
KCTX	**Karacabey (Bur**	**1.03**	**20**	*e*PG	**Pb**	**05 52 49.1**	**-0.3**
KCTX	**Karacabey (Bur**	**1.03**	**20**	*e*Pg	**Pb**	**05 52 49.1**	**-0.3**
ORLT	**Orhaneli**	**1.07**	**45**	*e*PN	**Pb**	**05 52 50.0**	**-0.1**
ORLT	**Orhaneli**	**1.07**	**45**	*e*Pn	**Pb**	**05 52 50.0**	**-0.1**
BLCB	**Balcova**	**1.13**	**217**	*e*PN	**Pb**	**05 52 50.6**	**-0.4**
BLCB	**Balcova**	**1.13**	**217**	*e*Pn	**Pb**	**05 52 50.6**	**-0.4**
KRBG	**Karabiga-Canak**	**1.20**	**337**	*e*PN	**Pn**	**05 52 51.3**	**-0.9**
KRBG	**Karabiga-Canak**	**1.20**	**337**	*e*Pn	**Pn**	**05 52 51.3**	**-0.9**
TVSB	**Tavsanli**	**1.22**	**82**	*e*PN	**Pb**	**05 52 52.5**	**-0.1**
TVSB	**Tavsanli**	**1.22**	**82**	*e*Pn	**Pb**	**05 52 52.5**	**-0.1**
GDZ	**Gediz**	**1.24**	**99**	*e*P	**Pg**	**05 52 53.5**	**+0.2**
GDZ				*e*S	**Sg**	**05 53 09.6**	**+0.2**
GDZ	**Gediz**	**1.24**	**99**	*e*P	**Pg**	**05 52 53.5**	**+0.2**
GDZ				*e*S	**Sg**	**05 53 09.6**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.31**	**35**	*e*PN	**Pn**	**05 52 53.4**	**-0.5**
MDNY	**Mudanya-Bursa**	**1.31**	**35**	*e*Pn	**Pn**	**05 52 53.4**	**-0.5**
LPKL	**Lapseki**	**1.40**	**321**	*e*PN	**Pn**	**05 52 54.6**	**-0.3**
LPK	**Lapseki**	**1.40**	**321**	*e*Pn	**Pn**	**05 52 54.6**	**-0.3**
ARMT	**Armutlu**	**1.47**	**30**	*e*PN	**Pn**	**05 52 55.9**	**-0.1**
ARMT	**Armutlu**	**1.47**	**30**	*e*Pn	**Pn**	**05 52 55.9**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.50**	**338**	*e*PN	**Pn**	**05 52 55.9**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.50**	**338**	*e*Pn	**Pn**	**05 52 55.9**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.56**	**316**	*e*PN	**Pn**	**05 52 56.7**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.56**	**316**	*e*Pn	**Pn**	**05 52 56.7**	**-0.5**
KHL	**Karahalli**	**1.59**	**127**	*e*PN	**Pn**	**05 52 57.7**	**0.0**
KHL	**Karahalli**	**1.59**	**127**	*e*Pn	**Pn**	**05 52 57.7**	**0.0**
ALT	**Altintas**	**1.73**	**97**	*e*PN	**Pn**	**05 52 59.8**	**+0.2**
ALT	**Altintas**	**1.73**	**97**	*e*Pn	**Pn**	**05 52 59.8**	**+0.2**
ERIK	**Erikli-Kesan**	**1.75**	**323**	*e*PN	**Pn**	**05 52 59.3**	**-0.4**
ERIK	**Erikli-Kesan**	**1.75**	**323**	*e*Pn	**Pn**	**05 52 59.3**	**-0.4**
GULT	**Gulveren**	**2.31**	**60**	*e*PN	**Pn**	**05 53 07.3**	**-0.3**
GULT	**Gulveren**	**2.31**	**60**	*e*Pn	**Pn**	**05 53 07.3**	**-0.3**

*ISCJB **16** 06:12:19.1±0.5, 24˚.44N×0˚.02×122˚.00E±0˚.02, h5km±4km, Error ellipse: s-maj=3.7km s-min=3.0km az=147.2*
*TAP **16** 06:12:19.9, 24˚.45N×121˚.90E, h21km, ML3.0, B*
*JMA **16** 06:12:20.7±0.1, 24˚.53N×121˚.95E, h37km, M2.2*
ISC 16 06:12:19.5±1.0, **24˚46N**±0˚.02×**121˚96E**±0˚.02, **h14**km±8km, **n36**, σ0⁰**64**/57, **5C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.18**	**326**	⇑*i*P	**Pb**	**06 12 24.8**	**+0.2**
	baz=347						
TWC				*i* S	**Sb**	**06 12 27.7**	**-0.2**
	baz=347						
ENA	**Nanau**	**0.20**	**261**	⇑*i*P	**Pg**	**06 12 24.4**	**+0.3**
	baz=261						
EHP	**Heping Village**	**0.25**	**233**	*e*P	**Pg**	**06 12 24.8**	**-0.1**
	baz=218						
ILA	**Ilan**	**0.36**	**328**	*e*P	**Pb**	**06 12 27.7**	**0.0**
	baz=333						
ILA				S	**Sb**	**06 12 33.4**	**+0.2**
	baz=333						
TWE	**Neicheng**	**0.37**	**314**	⇑*i*P	**Pb**	**06 12 27.6**	**-0.3**
	baz=324						
TWE				*i* S	**Sb**	**06 12 32.5**	**-0.9**
	baz=324						
ENTT	**Nioudou**	**0.40**	**297**	*i* P	**Pg**	**06 12 27.8**	**+0.3**
	baz=303						
ENTT				S	**Sg**	**06 12 33.1**	**+0.1**
	baz=303						
TWD	**Chiawan**	**0.50**	**221**	P	**Pg**	**06 12 29.0**	**-0.4**
	baz=221						
TWD				*e*S	**Sb**	**06 12 38.0**	**+0.8**
	baz=221						
NNS	**Nan Shan**	**0.53**	**268**	P	**Pg**	**06 12 29.7**	**-0.4**
	baz=270						
NNS				*e*S	**Sg**	**06 12 36.3**	**-0.9**
	baz=270						
TWB1	**Santiao Chiao**	**0.55**	**3**	*e*P	**Pb**	**06 12 31.1**	**+0.3**
	baz=1.0						
TWB1				S	**Sb**	**06 12 38.4**	**-0.2**
	baz=1.0						
HWA	**Hwalien**	**0.58**	**214**	*e*P	**Pb**	**06 12 32.0**	**+0.6**
	baz=214						
NSK	**Sanguang**	**0.59**	**292**	⇑*i*P	**Pg**	**06 12 30.9**	**-0.1**
	baz=296						
NSK				S	**Sg**	**06 12 38.1**	**-0.8**
	baz=296						
NWF	**Wu-fen Shan**	**0.63**	**345**	*e*P	**Pb**	**06 12 32.6**	**+0.3**
	baz=343						
NWF				*e*S	**Sb**	**06 12 41.2**	**+0.2**
	baz=343						
TAP1	**Taipei**	**0.70**	**326**	*e*P	**Pn**	**06 12 34.4**	**-0.6**
	baz=320						
WHF	**Hehuan Shan**	**0.71**	**244**	⇑P	**Pg**	**06 12 32.6**	**-0.8**
	baz=250						
WHF				*e*S	**Sg**	**06 12 43.2**	**+0.5**
	baz=250						
ESL	**Shilin**	**0.80**	**217**	*e*P	**Pb**	**06 12 34.4**	**-0.9**
	baz=221						
TWS1	**Kuangyinshan**	**0.80**	**322**	*e*P	**Pn**	**06 12 36.3**	**-0.1**
	baz=321						
TWS1				*e*S	**Sn**	**06 12 47.5**	**-0.7**
	baz=321						
TWY	**Chenhua**	**0.87**	**338**	*e*P	**Pn**	**06 12 37.4**	**+0.1**
	baz=342						
TWY				*e*S	**Sn**	**06 12 48.8**	**-1.0**
	baz=342						
NSTT	**Nanjuang**	**0.89**	**281**	*e*P	**Pn**	**06 12 37.4**	**-0.2**
	baz=283						
NSTT				*e*S	**Sg**	**06 12 48.9**	**+0.5**
	baz=283						
YOJ	**Yonaguni jima**	**0.96**	**90**	P	**Pb**	**06 12 37.8**	**-0.1**
	baz=89						
YOJ	**Yonaguni jima**	**0.96**	**90**	P	**Pg**	**06 12 38.1**	**0.0**
YOJ				*e*S	**Sg**	**06 12 50.6**	**-0.1**
TWQ1	**Liyutan**	**1.09**	**264**	*e*P	**Pg**	**06 12 41.7**	**+1.2**
	baz=266						
TWQ1				*e*S	**Sn**	**06 12 56.1**	**+1.0**
	baz=266						
NSY	**Sanyi**	**1.09**	**268**	*e*P	**Pg**	**06 12 42.0**	**+1.4**
	baz=281						
EHY	**Hungye**	**1.11**	**212**	*e*P	**Pn**	**06 12 40.0**	**-0.7**
	baz=209						
SMLT	**Sun Moon Lake**	**1.12**	**239**	*e*P	**Pn**	**06 12 40.7**	**-0.2**
	baz=229						
TYC	**Yuchr**	**1.15**	**241**	*e*P	**Pn**	**06 12 40.9**	**-0.2**
	baz=251						
TYC				*e*S	**Sn**	**06 12 56.9**	**+0.3**
	baz=251						
TWF1	**Yuli**	**1.26**	**209**	*e*P	**Pn**	**06 12 41.5**	**-1.2**
	baz=219						
YUS	**Yu-Shan**	**1.33**	**224**	*e*P	**Pn**	**06 12 42.9**	**-1.2**
	baz=223						
ALS	**Alishan**	**1.42**	**228**	*e*P	**Pn**	**06 12 45.6**	**+0.5**
	baz=215						
CHN5	**Tsauling**	**1.45**	**234**	*e*P	**Pb**	**06 12 46.4**	**0.0**
	baz=233						
IRIF	**Iriomote-Funau**	**1.62**	**94**	P	**Pn**	**06 12 47.8**	**+0.2**
IRIF				*e*S	**Sn**	**06 13 08.1**	**-0.2**
CHN4	**Tsaushan**	**1.67**	**229**	*e*P	**Pb**	**06 12 50.1**	**+0.1**
	baz=230						
CHN4				*e*S	**Sg**	**06 13 13.3**	**+0.1**
	baz=230						
WTP	**Ta-pu**	**1.73**	**226**	*e*P	**Pn**	**06 12 50.5**	**+1.3**
	baz=225						
CHN1	**Nanshi**	**1.82**	**226**	*e*P	**Pb**	**06 12 52.0**	**-0.7**
	baz=227						
CHN1				*e*S	**Sb**	**06 13 16.3**	**+1.0**
	baz=227						
JKRS	**Kuro-shima**	**1.88**	**96**	P	**Pn**	**06 12 51.7**	**+0.5**
JKRS				*e*S	**Sn**	**06 13 14.6**	**-0.2**
JIJ	**Ishigaki jima**	**1.99**	**92**	P	**Pn**	**06 12 53.3**	**+0.5**
JIJ				*e*S	**Sn**	**06 13 16.3**	**-1.2**
JTJ	**Tarama**	**2.50**	**85**	P	**Pn**	**06 13 00.5**	**+0.7**

*IDC **16** 06:27:00.4±3.8, 51˚.84N×162˚.55E, h0km, mb3.3/3, mb1 3.7/4, mb1mx3.3/27, mbtmp3.3/4, ML3.5/1, Error ellipse: s-maj=117.2km s-min=32.8km az=9.0*
*KRSC **16** 06:27:07.4±0.5, 54˚.43N×161˚.86E, h34km±34km, ML4.0*
*ISCJB **16** 06:27:08.2±0.8, 54˚.42N±0˚.02×161˚.92E±0˚.07, h32km±7km, mb3.2/3, Error ellipse: s-maj=7.2km s-min=2.7km az=17.3*
ISC 16 06:27:08.0±1.1, **54˚45N**±0˚.03×**161˚98E**±0˚.05, **h29**km±7km, **n39**, σ1⁰**06**/71, **mb3.5**/3, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.18**	**308**	P	**Pb**	**06 27 12.7**	**-0.2**
MKZ				S	**Sb**	**06 27 18.4**	**+0.5**
TUMR	**Tumrok**	**1.35**	**309**	P	**Pn**	**06 27 29.8**	**-1.2**
TUMR				S	**Sn**	**06 27 46.4**	**-1.6**
KII	**Karymskiy**	**1.54**	**256**	P	**Pn**	**06 27 33.3**	**-0.2**
KMNR	**Kamenistaya**	**1.65**	**323**	P	**Pn**	**06 27 34.7**	**-0.4**
KMNR				S	**Sn**	**06 27 54.6**	**-0.8**
BZGR	**Bezymyannyi-Gr**	**1.67**	**334**	P	**Pn**	**06 27 35.1**	**-0.2**
BZGR				S	**Sn**	**06 27 55.2**	**-0.6**
ZLN	**Zelenaya**	**1.71**	**337**	P	**Pn**	**06 27 36.3**	**+0.4**
ZLN				S	**Sn**	**06 27 57.0**	**+0.1**
BZMR	**Bezymyannaya**	**1.72**	**331**	P	**Pn**	**06 27 37.1**	**+1.0**
BZMR				S	**Sn**	**06 27 58.5**	**+1.4**
BZWR	**Bezymyannyi-We**	**1.74**	**331**	P	**Pn**	**06 27 36.9**	**+0.5**
BZWR				S	**Sn**	**06 27 57.9**	**+0.2**
KIRR	**Kirishev**	**1.78**	**329**	P	**Pn**	**06 27 37.0**	**+0.1**
KIRR				S	**Sn**	**06 27 58.2**	**-0.4**
SPN	**Mys Shipunski**	**1.78**	**221**	P	**Pn**	**06 27 35.1**	**-1.6**
SPN				S	**Sn**	**06 27 55.0**	**-3.4**
LGNR	**Loginova**	**1.80**	**336**	P	**Pn**	**06 27 38.7**	**+1.4**
LGNR				S	**Sb**	**06 28 01.6**	**-1.1**
CIRR	**Tsirk**	**1.82**	**338**	P	**Pn**	**06 27 39.1**	**+1.7**
CIRR				S	**Sb**	**06 28 02.3**	**-0.7**
KPT	**Kopyto**	**1.83**	**327**	P	**Pn**	**06 27 37.7**	**+0.2**
KPT				S	**Sn**	**06 27 59.7**	**0.0**
KBG	**Krutoberegovo**	**1.86**	**13**	S	**Sb**	**06 28 04.3**	**+0.2**
KRSR	**Krestovskiy**	**1.95**	**336**	P	**Pn**	**06 27 40.2**	**+1.0**
KRSR				S	**Sn**	**06 28 04.3**	**+1.5**
KOZ	**Kozyrevsk**	**2.02**	**324**	P	**Pn**	**06 27 41.1**	**+1.1**
KOZ				S	**Sn**	**06 28 05.7**	**+1.5**
NLC	**Nalytchevo**	**2.02**	**232**	P	**Pn**	**06 27 39.1**	**-0.9**
NLC				S	**Sn**	**06 28 02.4**	**-1.8**
SMKR	**Semkarok**	**2.16**	**352**	P	**Pb**	**06 27 44.9**	**-1.6**
SMKR				S	**Sb**	**06 28 13.0**	**+0.2**
BDR	**Baidarnaya**	**2.17**	**349**	P	**Pb**	**06 27 44.9**	**-1.7**
BDR				S	**Sb**	**06 28 11.9**	**-1.3**
SDLR	**Sedlovina**	**2.17**	**239**	P	**Pn**	**06 27 42.4**	**+0.1**
SDLR				S	**Sn**	**06 28 08.3**	**0.0**
SMAR	**Somma**	**2.22**	**239**	P	**Pn**	**06 27 43.4**	**+0.4**
SMAR				S	**Sn**	**06 28 09.3**	**-0.3**
KRER	**Koryakskii**	**2.23**	**240**	P	**Pn**	**06 27 43.7**	**+0.6**
KRER				S	**Sn**	**06 28 10.0**	**+0.3**
UGLR	**Uglovaya**	**2.24**	**238**	P	**Pn**	**06 27 43.6**	**+0.4**
UGLR				S	**Sn**	**06 28 09.9**	**0.0**
AVH	**Avacha**	**2.25**	**240**	P	**Pn**	**06 27 44.1**	**+0.8**
AVH				S	**Sn**	**06 28 11.2**	**+1.0**
SRKR	**Sorokina**	**2.26**	**349**	P	**Pn**	**06 27 44.7**	**+1.3**
SRKR				S	**Sn**	**06 28 11.2**	**+0.8**
SRDR	**Sredinnyy**	**2.28**	**326**	P	**Pn**	**06 27 43.7**	**+0.1**
SRDR				S	**Sn**	**06 28 10.2**	**-0.5**
KOK	**Koryaka**	**2.29**	**241**	P	**Pn**	**06 27 44.8**	**+0.9**
KOK				S	**Sn**	**06 28 12.1**	**+1.0**
ESO	**Esso**	**2.39**	**310**	P	**Pn**	**06 27 44.8**	**-0.4**
ESO				S	**Sn**	**06 28 12.0**	**-1.6**
BKI	**Bering**	**2.43**	**70**	S	**Sn**	**06 28 13.2**	**-1.2**
PET	**Petropavlovsk**	**2.44**	**236**	P	**Pn**	**06 27 46.0**	**+0.3**
PET				S	**Sn**	**06 28 14.0**	**-0.5**
GNL	**Ganaly**	**2.49**	**254**	P	**Pn**	**06 27 47.3**	**+0.6**
GNL				S	**Sn**	**06 28 17.1**	**+0.9**
PETK	**Petropavlovsk-**	**2.87**	**244**	Pn	**Pn**	**06 27 52.4**	**+0.7**
	4.8nm,0.3s,baz=80,slow=19,SNR=40						
PETK				Sn	**Sn**	**06 28 27.4**	**+2.2**
	8.2nm,0.3s,baz=97,slow=20,SNR=11						
RUS	**Russkaya**	**2.89**	**227**	P	**Pn**	**06 27 52.2**	**+0.2**
RUS				S	**Sn**	**06 28 24.9**	**-0.8**
MTVR	**Mutnovka**	**3.00**	**231**	P	**Pn**	**06 27 55.1**	**+1.4**
MTVR				S	**Sn**	**06 28 29.6**	**+0.9**
ASAK	**Asacha**	**3.20**	**231**	P	**Pn**	**06 27 57.8**	**+1.5**
ASAK				S	**Sn**	**06 28 35.1**	**+1.7**
APC	**Apacha**	**3.25**	**244**	P	**Pn**	**06 27 57.9**	**+1.0**
APC				S	**Sn**	**06 28 34.5**	**0.0**
YKA	**Yellowknife Ar**	**41.41**	**44**	P	P	06 35 01.3	+10
	0.1nm,0.6s,baz=300,slow=7.8,SNR=2.3						
NVAR	**Mina Array Bea**	**54.25**	**72**	P	**P**	**06 36 32.3**	**+1.1**
	0.5nm,0.7s,baz=297,slow=7.6,SNR=5.7						
TXAR	**Lajitas Array**	**69.09**	**69**	P	**P**	**06 38 11.5**	**+0.3**
	0.2nm,0.5s,baz=301,slow=4.4,SNR=4.5						

IDC 16 06:28:37.4±1.9, **1˚44N×126˚70E, h0**km, **mb3.3**/3, **mb1 3.7**/4, **mb1mx3.4**/21, **mbtmp3.5**/4, **ML3.2**/1, **MS3.4**/1, **Ms1 3.4**/1, **ms1mx2.4**/12, **Error ellipse: s-maj=119.7km s-min=23.8km az=69.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.45**	**183**	P	P	06 33 04.5	-1.2
	0.1nm,0.3s,baz=19,slow=6.0,SNR=2.4						
WRA	**Warramunga Arr**	**22.54**	**161**	P	P	06 33 39.5	+0.4
	0.8nm,0.5s,baz=341,slow=12,SNR=17						
ASAR	**Alice Springs**	**25.92**	**165**	P	P	06 34 11.9	+0.4
	0.2nm,0.3s,baz=344,slow=9.8,SNR=4.3						
KSRS	**Korea Array**	**35.85**	**2**	LR	LR	06 50 55.6	
	comp=Z,54nm,18.4s,baz=225,slow=37						
MKAR	**Makanchi Array**	**59.41**	**326**	P	P	06 38 41.8	-0.1
	0.1nm,0.3s,baz=118,slow=6.0,SNR=3.9						

IDC 16 06:33:17.3±10.0, **56˚29S×27˚47W, h146**km±92km, **mb3.3**/3, **mb1 3.4**/3, **mb1mx3.3**/15, **mbtmp3.3**/3, **Error ellipse: s-maj=46.2km s-min=25.3km az=47.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**40.05**	**143**	P	P	06 40 37.4	-0.1
	1.1nm,0.7s,baz=242,slow=9.3,SNR=4.0						
LPAZ	**La Paz**	**50.39**	**306**	P	P	06 42 00.1	-0.2
	0.5nm,0.5s,baz=176,slow=6.2,SNR=4.7						
TORD	**Torodi Ar. Bea**	**73.34**	**30**	P	P	06 44 32.9	0.0
	0.6nm,0.6s,baz=203,slow=6.0,SNR=7.5						
YKA	**Yellowknife Ar**	**136.24**	**318**	PKP	PKPdf	06 52 19.4	-0.3
	0.1nm,0.5s,baz=123,slow=2.6,SNR=4.8						
ILAR	**Eielson Array**	**150.16**	**311**	PKPbc	PKPbc	06 52 48.9	-0.4
	0.9nm,0.9s,baz=96,slow=1.9,SNR=10						
SONM	**Songino Array**	**150.90**	**87**	PKPbc	PKPbc	06 52 51.5	-0.3
	0.3nm,0.5s,baz=251,slow=2.8,SNR=2.8						

*IDC **16** 06:53:58.2±1.4, 5˚.14S×102˚.41E, h0km, mb4.0/11, mb1 4.1/11, mb1mx3.9/25, mbtmp4.0/11, Error ellipse: s-maj=54.7km s-min=15.3km az=57.0*
*DJA **16** 06:54:07.8±1.0, 5˚S±7˚×10˚3E±˚, h22km±7km, M4.3/5, MLv4.3/5*
ISC 16 06:54:07.8±0.9, **4˚9S**±0˚.1×**103˚0E**±0˚.1, **h59**km, **n18**, σ1⁰**36**/22, **mb3.9**/11, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MNAI	**Manna**	**0.53**	**358**	P	**Pn**	**06 54 19.6**	**-0.5**
MNAI				S	**Sn**	**06 54 29.5**	**+0.5**
LWLI	**Liwa**	**1.09**	**96**	P	**Pn**	**06 54 27.5**	**+0.4**
LWLI				S	**Sn**	**06 54 42.9**	**+1.4**
KSI	**Kapahiang**	**1.29**	**343**	P	**Pn**	**06 54 29.9**	**+0.1**
KSI				S	**Sn**	**06 54 47.0**	**+0.8**
MBSI	**MBSI**	**1.33**	**328**	P	**Pn**	**06 54 31.1**	**+1.0**
MBSI				S	**Sn**	**06 54 51.1**	**+4.2**
KASI	**Kota Agung**	**1.64**	**112**	P	**Pn**	**06 54 34.8**	**+0.4**
CMAR	**Chiang Mai Arr**	**23.54**	**350**	P	**P**	**06 59 11.8**	**-1.3**
	1.6nm,0.4s,baz=182,slow=9.1,SNR=7.7						
FITZ	**Fitzroy Crossi**	**25.75**	**122**	P	**P**	**06 59 33.3**	**+0.1**
	3.8nm,0.9s,baz=266,slow=7.2,SNR=4.1						
WRA	**Warramunga Arr**	**33.99**	**119**	P	**P**	**07 00 46.6**	**+0.4**
	0.8nm,0.5s,baz=306,slow=8.6,SNR=18						
WRA				PcP	**PcP**	**07 03 22.9**	**-0.4**
	2.7nm,0.7s,baz=201,slow=9.4,SNR=1.7						
SONM	**Songino Array**	**52.59**	**3**	P	**P**	**07 03 15.5**	**-0.2**
	0.5nm,0.4s,baz=182,slow=7.7,SNR=5.4						
MKAR	**Makanchi Array**	**54.63**	**343**	P	**P**	**07 03 29.3**	**-1.2**
	1.9nm,0.5s,baz=152,slow=9.0,SNR=43						
USRK	**Ussuriysk Arra**	**55.41**	**25**	P	**P**	**07 03 37.2**	**+1.2**
	1.1nm,0.5s,baz=225,slow=5.0,SNR=3.3						
ZALV	**Zalesovo Beam**	**60.58**	**348**	P	**P**	**07 04 10.6**	**-1.5**
	2.4nm,0.5s,baz=167,slow=5.3,SNR=12						
BVAR	**Borovoye Array**	**63.92**	**339**	P	**P**	**07 04 32.9**	**-1.6**
	0.6nm,0.5s,baz=140,slow=12,SNR=3.8						
BDFB	**Brasilia**	**144.76**	**234**	PKP	**PKPdf**	**07 13 38.2**	**-1.1**
	1.7nm,0.6s,baz=127,slow=4.4,SNR=3.4						
TXAR	**Lajitas Array**	**144.99**	**43**	PKPbc	**PKPdf**	**07 13 38.5**	**-0.8**
	0.4nm,0.5s,baz=281,slow=1.2,SNR=16						

*ISCJB **16** 07:08:01.2±0.7, 56˚.27N±0˚.04×162˚.93E±0˚.05, h10km±4km, mb3.3/4, Error ellipse: s-maj=6.0km s-min=4.3km az=8.9*
*KRSC **16** 07:08:01.6±0.0, 56˚.24N×162˚.75E, h5km±5km, ML3.6*
*IDC **16** 07:08:01.6±1.9, 56˚.03N×163˚.44E, h0km, mb3.4/4, mb1 3.8/5, mb1mx3.4/27, mbtmp3.4/5, ML3.1/1, Error ellipse: s-maj=126.3km s-min=30.4km az=141.0*
ISC 16 07:08:01.3±1.0, **56˚22N**±0˚.04×**162˚83E**±0˚.03, **h9**km±6km, **n39**, σ1⁰**46**/51, **mb3.4**/4, **Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBG	**Krutoberegovo**	**0.08**	**299**	P	**Pg**	**07 08 03.6**	**+0.2**
KBG				S	**Sg**	**07 08 05.5**	**+0.5**
SMKR	**Semkarok**	**0.84**	**296**	P	**Pb**	**07 08 17.7**	**-0.4**
SMKR				S	**Sb**	**07 08 29.5**	**0.0**
BDR	**Baidarnaya**	**0.97**	**292**	P	**Pb**	**07 08 20.0**	**-0.2**
BDR				S	**Sb**	**07 08 33.1**	**-0.1**
SRKR	**Sorokina**	**1.02**	**296**	P	**Pb**	**07 08 20.9**	**-0.2**
ZLN	**Zelenaya**	**1.15**	**261**	P	**Pn**	**07 08 24.3**	**+0.7**
CIRR	**Tsirk**	**1.17**	**266**	P	**Pn**	**07 08 24.1**	**+0.2**
CIRR				S	**Sn**	**07 08 39.7**	**-0.3**
LGNR	**Loginova**	**1.21**	**264**	P	**Pn**	**07 08 24.8**	**+0.3**
KLY	**Klyuchi**	**1.22**	**275**	P	**Pg**	**07 08 22.5**	**-2.1**
KLY				S	**Sg**	**07 08 37.6**	**-2.8**
BZGR	**Bezymyannyi-Gr**	**1.23**	**258**	P	**Pn**	**07 08 25.2**	**+0.5**
KRSR	**Krestovskiy**	**1.27**	**271**	P	**Pn**	**07 08 25.2**	**0.0**
**B

IDC 16 07:53:00.8±6.3, 4°45S×125°77E, h440km±82km, mb2.8/4, mb1 3.0/6, mb1mx2.8/23, mbtmp2.8/6, Error ellipse: s-maj=99.2km s-min=29.0km az=58.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**13.57**	**181**	P	P	07 55 55.6	-1.2
	0.4nm,0.3s,baz=10,slow=11,SNR=15						
WRA	**Warramunga Arr**	**17.52**	**152**	P	P	07 56 38.2	-0.8
	0.3nm,0.3s,baz=331,slow=10,SNR=23						
ASAR	**Alice Springs**	**20.66**	**158**	P	P	07 57 09.2	+0.3
	0.9nm,0.4s,baz=341,slow=8.7,SNR=35						
STKA	**Stephens Creek**	**31.07**	**153**	P	P	07 58 41.4	+0.3
	1.1nm,0.6s,baz=336,slow=12,SNR=4.3						
MKAR	**Makanchi Array**	**63.83**	**328**	P	P	08 02 48.5	0.0
	0.2nm,0.6s,baz=138,slow=6.9,SNR=3.5						
KURBB	**Kurchatov Arra**	**68.17**	**330**	P	P	08 03 15.7	0.0
	0.1nm,0.3s,baz=125,slow=5.3,SNR=4.2						

IDC 16 07:55:19.9±1.2, 3°22S×140°98E, h0km, mb3.5/4, mb1 3.9/5, mb1mx3.7/17, mbtmp3.7/5, ML4.0/1, Error ellipse: s-maj=52.7km s-min=24.9km az=109.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.84**	**201**	P	Pn	07 59 29.8	0.0
	0.5nm,0.3s,baz=26,slow=12,SNR=17						
FITZ	**Fitzroy Crossi**	**21.09**	**224**	P	P	08 00 07.8	+1.8
	2.6nm,0.8s,baz=48,slow=14,SNR=3.4						
ASAR	**Alice Springs**	**21.45**	**198**	P	P	08 00 08.1	-1.9
	1.5nm,0.6s,baz=29,slow=9.9,SNR=26						
MKAR	**Makanchi Array**	**71.58**	**322**	P	P	08 06 42.6	-0.5
	0.1nm,0.3s,baz=111,slow=7.9,SNR=4.0						
ILAR	**Eielson Array**	**85.36**	**24**	P	P	08 07 58.7	0.0
	0.3nm,0.7s,baz=252,slow=4.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**138.57**	**286**	PKP	PKPdf	08 14 48.7	-0.1
	0.5nm,0.7s,baz=103,slow=1.2,SNR=2.9						
LPAZ	**La Paz**	**145.31**	**125**	PKPbc	PKPbc	08 15 01.1	-0.1
	1.9nm,0.9s,baz=239,slow=3.5,SNR=7.5						

IDC ***16*** *07:56:14.7±0.9, 3°26S×140°81E, h0km, mb3.8/8, mb1 4.1/10, mb1mx3.9/20, mbtmp4.0/10, ML3.8/2, MS3.6/5, Ms1 3.6/5, ms1mx3.1/29, Error ellipse: s-maj=30.9km s-min=13.5km az=96.0*

ISCJB ***16*** *07:56:16.4±0.6, 3°23S±0°07×140°9E±0°1, h23km, mb3.8/8, MS3.6/4, Error ellipse: s-maj=17.6km s-min=9.5km az=165.1*

NEIC ***16*** *07:56:21.1±1.9, 3°27S×140°91E, h47km±19km, mb4.2/2, Error ellipse: s-maj=15.1km s-min=13.1km az=137.0*

ISC 16 07:56:18.2±0.8, 3°20S±0°08×140°9E±0°1, h23km, n29, σ0s68/29, mb3.9/8, MS3.5/4, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.76**	**135**	Pn	Pn	07 58 24.0	+0.5
PMG	**Port Moresby**	**8.76**	**135**	Pn	Pn	07 58 24.0	+0.5
	0.9nm,0.3s,baz=325,slow=12,SNR=2.7						
COEN	**Coen**	**10.93**	**168**	*e*Pn	Pn	07 58 55.0	+1.7
WRAB	**Tennant Creek**	**17.82**	**201**	*e*P	Pn	08 00 24.9	-0.1
	22nm,0.7s						
WRA	**Warramunga Arr**	**17.84**	**201**	P	Pn	08 00 24.2	-0.9
WRA	**Warramunga Arr**	**17.84**	**201**	P	Pn	08 00 24.2	-0.9
	1.3nm,0.3s,baz=16,slow=13,SNR=8.8						
WRA				LR	LR	08 06 07.7	
	comp=Z,106nm,21.8s,baz=340,slow=33						
FITZ	**Fitzroy Crossi**	**21.05**	**224**	*e*P	P	08 01 02.0	+1.2
	6.0nm,0.7s						
FITZ	**Fitzroy Crossi**	**21.05**	**224**	P	P	08 01 00.0	-0.8
	7.9nm,0.9s,baz=40,slow=11,SNR=5.1						
ASAR	**Alice Springs**	**21.45**	**198**	P	P	08 01 03.8	-1.3
ASAR				S	S	08 05 02.2	+0.1
ASAR	**Alice Springs**	**21.45**	**198**	P	P	08 01 03.8	-1.3
	2.7nm,0.6s,baz=29,slow=11,SNR=7.7						
ASAR				S	S	08 05 02.2	+0.1
	1.0nm,0.9s,baz=20,slow=26,SNR=3.3						
ASAR				LR	LR	08 10 07.8	
	comp=Z,135nm,18.1s,baz=180,slow=39						
EIDS	**Eidsvold**	**24.12**	**157**	*e*P	P	08 01 32.1	-0.5
STKA	**Stephens Creek**	**28.54**	**179**	LR	LR	08 15 15.2	
	comp=Z,174nm,21.4s,baz=23,slow=40						
CMAR	**Chiang Mai Arr**	**46.58**	**299**	P	P	08 04 45.3	+0.5
CMAR	**Chiang Mai Arr**	**46.58**	**299**	P	P	08 04 45.3	+0.5
	0.6nm,0.3s,baz=134,slow=6.4,SNR=4.0						
CMAR				LR	LR	08 27 15.8	
	comp=Z,36nm,18.4s,baz=185,slow=40						
SONM	**Songino Array**	**59.11**	**334**	LR	LR	08 30 15.3	
	comp=Z,103nm,20.9s,baz=183,slow=34						
MKAR	**Makanchi Array**	**71.51**	**322**	P	P	08 07 37.4	0.0
MKAR	**Makanchi Array**	**71.51**	**322**	P	P	08 07 37.4	0.0
	0.3nm,0.5s,baz=103,slow=8.2,SNR=5.2						
ZALV	**Zalesovo Beam**	**73.46**	**329**	P	P	08 07 48.9	+0.1
ZALV	**Zalesovo Beam**	**73.46**	**329**	P	P	08 07 48.9	+0.1
	0.3nm,0.3s,baz=121,slow=5.6,SNR=2.2						
KURK	**Kurchatov**	**75.38**	**324**	P	P	08 08 00.2	+0.3
KURBB	**Kurchatov Arra**	**75.39**	**324**	P	P	08 08 00.2	+0.2
	0.4nm,0.6s,baz=112,slow=5.1,SNR=4.0						
BVAR	**Borovoye Array**	**80.96**	**325**	P	P	08 08 30.8	-0.1
BVAR	**Borovoye Array**	**80.96**	**325**	P	P	08 08 30.8	-0.1
	1.6nm,0.7s,baz=111,slow=6.3,SNR=7.0						
ILAR	**Eielson Array**	**85.37**	**24**	P	P	08 08 53.1	-0.3
ILAR	**Eielson Array**	**85.37**	**24**	P	P	08 08 53.1	-0.3
	0.7nm,0.9s,baz=241,slow=5.6,SNR=5.8						
TORD	**Torodi Ar. Bea**	**138.49**	**286**	PKP	PKPdf	08 15 42.9	-0.3
TORD	**Torodi Ar. Bea**	**138.49**	**286**	PKP	PKPdf	08 15 42.8	-0.3
	0.8nm,0.8s,baz=60,slow=2.7,SNR=4.1						
LPAZ	**La Paz**	**145.38**	**125**	PKPbc	PKPbc	08 15 56.5	+0.5
LPAZ	**La Paz**	**145.38**	**125**	PKPbc	PKPbc	08 15 56.5	+0.5
	3.1nm,0.9s,baz=260,slow=1.8,SNR=10						

ISCJB ***16*** *08:40:00.3±0.7, 10°32N±0°04×61°64W±0°05, h63km±7km, Error ellipse: s-maj=7.7km s-min=7.0km az=40.0*

FUNV ***16*** *08:40:02.0, 10°25N×61°65W, h21km, MW2.9*

TRN ***16*** *08:40:04.4, 10°38N×61°44W, h45km, MD2.9*

ISC 16 08:40:01.1±1.4, 10°31N±0°05×61°64W±0°05, h59km±10km, n13, σ1s11/20, 1C, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**0.18**	**87**	*e*P	Pn	08 40 11.2	+0.9
TPP				*e*S	Sn	08 40 17.7	+0.7
TRN	**Trinidad (W)**	**0.41**	**34**	*e*P	Pn	08 40 12.1	+0.1
TRN				*e*S	Sn	08 40 18.6	-1.4
GUIV	**Guiria**	**0.67**	**300**	↑*e*P	Pn	08 40 15.1	+0.2
GUIV				*e*S	Sn	08 40 23.6	-1.3
TOSP	**Speyside**	**1.46**	**48**	*e*P	Pn	08 40 25.8	+0.6
TOSP				*e*S	Sn	08 40 41.9	-1.5
CRUV	**Carupano**	**1.61**	**283**	*e*P	Pn	08 40 28.7	+1.4
CRUV				*e*S	Sn	08 40 47.2	+0.1
RIOV	**Rio Grande**	**2.23**	**185**	*e*P	Pn	08 40 37.0	+1.3
RIOV				*e*S	Sn	08 41 02.0	-0.2
PCRV	**Puerto La Cruz**	**2.96**	**268**	*e*P	Pn	08 40 45.7	+0.1
SVB	**Belmont**	**2.97**	**7**	*e*S	Sn	08 41 21.0	+0.7
CUPV	**Ccepira**	**4.09**	**267**	*e*P	Pn	08 41 02.0	+0.8
LUEV	**Luepa**	**4.44**	**178**	*e*P	Pn	08 41 05.5	-0.6
BIRV	**Birongo**	**4.56**	**273**	*e*P	Pn	08 41 08.3	+0.7
MERV	**Las Mercedes**	**4.71**	**258**	*e*P	Pn	08 41 10.7	+1.1
MERV				*e*S	Sn	08 42 00.8	-2.2
MAPV	**Macapo**	**6.73**	**267**	*e*P	Pn	08 41 37.9	+0.5

ISCJB ***16*** *08:58:04.6±0.6, 21°89S±0°07×67°24W±0°08, h185km±9km, mb4.0/3, Error ellipse: s-maj=12.5km s-min=11.7km az=2.1*

IDC ***16*** *08:58:05.2±0.8, 21°99S×67°21W, h180km±12km, mb3.9/3, mb1 3.6/7, mb1mx3.3/19, mbtmp3.6/7, Error ellipse: s-maj=24.2km s-min=17.8km az=147.0*

GUC ***16*** *08:58:06.6±0.5, 22°04S×67°65W, h199km±5km, ML4.2*

NEIC ***16*** *08:58:06.6, 22°04S×67°65W, h199km, MG4.2(GUC), After GUC.*

ISC 16 08:58:05.3±0.8, 21°93S±0°06×67°29W±0°08, h185km±9km, n33, σ1s21/46, mb4.2/3, 13C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.65**	**245**	↑*i*P	Pn	08 58 39.9	+0.5
LVC				*i* S	Sn	08 59 05.2	-0.6
LVC	**Limon Verde**	**1.65**	**245**	↑*i*P	Pn	08 58 39.9	+0.5
LVC				*i* S	Sn	08 59 05.2	-0.6
	baz=56,slow=8.4						
LVC				S	Sn	08 59 05.6	-0.2
	21nm,0.3s,baz=287,slow=19,SNR=20						
PB09	**Plate Boundary**	**1.82**	**274**	↑*i*P	Pn	08 58 42.1	+1.0
PB09				*i* S	Sn	08 59 08.8	+0.1
PB09	**Plate Boundary**	**1.82**	**274**	↑*i*P	Pn	08 58 42.1	+1.0
PB09				*i* S	Sn	08 59 08.8	+0.1
PB09				AML	AML	08 59 15.4	
	comp=N,862nm,0.3s						
PB04	**Plate Boundary**	**2.07**	**260**	↑*i*P	Pn	08 58 50.3	+6.9
PB04				*i* S	Sn	08 59 23.5	+11
PB04				AML	AML	08 59 26.3	
	comp=E,598nm,0.4s						
PB01	**Plate Boundary**	**2.23**	**293**	↑*i*P	Pn	08 58 46.0	+0.7
PB01				*i* S	Sn	08 59 16.3	-0.2
PB01	**Plate Boundary**	**2.23**	**293**	↑*i*P	Pn	08 58 46.0	+0.7
PB01				*i* S	Sn	08 59 16.3	-0.2
PB01				AML	AML	08 59 17.1	
	comp=N,1μm,0.4s						
PB07	**Plate Boundary**	**2.42**	**274**	↑*i*P	Pn	08 58 47.7	+0.1
PB07				*i* S	Sn	08 59 18.9	-1.5
PB07	**Plate Boundary**	**2.42**	**274**	↑*i*P	Pn	08 58 47.7	+0.1
PB07				*i* S	Sn	08 59 18.9	-1.5
PB07				AML	AML	08 59 20.2	
	comp=N,983nm,0.2s						
HMBC	**Humberstone**	**2.93**	**304**	↑*i*P	Pn	08 58 53.6	0.0
HMBC				*i* S	Sn	08 59 29.8	-1.3
HMBC	**Humberstone**	**2.93**	**304**	↑*i*P	Pn	08 58 53.6	0.0
HMBC				*i* S	Sn	08 59 29.8	-1.3
HMBC				AML	AML	08 59 30.8	
	comp=N,642nm,0.4s						
CEN1	**Los Morros**	**3.06**	**241**	↑*i*P	Pn	08 58 56.9	+2.0
CEN1				*i* S	Sn	08 59 35.2	+1.5
CEN1	**Los Morros**	**3.06**	**241**	↑*i*P	Pn	08 58 56.9	+2.0
CEN1				*i* S	Sn	08 59 35.2	+1.5
CEN1				AML	AML	08 59 36.6	
	comp=E,357nm,0.3s						
ANCH	**Antofagasta**	**3.37**	**238**	*e*P	Pn	08 58 58.2	-0.4
ANCH				*i* S	Sn	08 59 36.9	-3.4
ANCH	**Antofagasta**	**3.37**	**238**	*e*P	Pn	08 58 58.2	-0.4
ANCH				*i* S	Sn	08 59 36.9	-3.4
ANCH				AML	AML	08 59 40.1	
	comp=N,803nm,0.6s						
LPAZ	**La Paz**	**5.67**	**352**	*e*Pn	Pn	08 59 31.2	+2.4
LPAZ	**La Paz**	**5.67**	**352**	P	Pn	08 59 29.9	+1.1
	comp=N,0.5nm,0.3s,baz=140,slow=9.7,SNR=14						
SIV	**San Ignacio**	**8.34**	**46**	P	Pn	09 00 01.9	-1.2
SIV				S	Sn	09 01 29.5	-7.2
SIV	**San Ignacio**	**8.34**	**46**	P	Pn	09 00 01.9	-1.2
	comp=N,8.9nm,0.3s,baz=243,slow=11,SNR=182						
SIV				S	Sn	09 01 29.5	-7.2
	comp=N,2.8nm,0.3s,baz=309,slow=22,SNR=11						
CFAA	**Coronel Fontan**	**9.67**	**185**	S	Sn	09 01 59.0	-9.4
	comp=N,0.1nm,0.3s,baz=228,slow=16,SNR=4.9						
CPUP	**Villa Florida**	**10.09**	**118**	P	Pn	09 00 25.5	-0.5
CPUP	**Villa Florida**	**10.09**	**118**	P	Pn	09 00 25.5	-0.5
	comp=N,0.6nm,0.3s,baz=280,slow=15,SNR=6.8						
BDFB	**Brasilia**	**19.28**	**74**	P	P	09 02 16.4	+0.1
BDFB	**Brasilia**	**19.28**	**74**	P	P	09 02 16.4	+0.1
	comp=N,0.5nm,0.3s,baz=245,slow=10.0,SNR=6.7						
TORD	**Torodi Ar. Bea**	**76.09**	**70**	P	P	09 09 33.0	0.0
TORD	**Torodi Ar. Bea**	**76.09**	**70**	P	P	09 09 33.0	0.0
	comp=N,6.6nm,0.4s,baz=256,slow=5.6,SNR=173						
BOSA	**Boshof**	**81.91**	**117**	P	P	09 10 04.5	-0.2
BOSA	**Boshof**	**81.91**	**117**	P	P	09 10 04.5	-0.2
	comp=N,4.7nm,1.0s,baz=248,slow=4.9,SNR=3.7						
YKA	**Yellowknife Ar**	**92.10**	**340**	P	P	09 10 53.9	+1.0
YKA	**Yellowknife Ar**	**92.10**	**340**	P	P	09 10 53.9	+1.0
	comp=N,0.1nm,0.3s,baz=133,slow=4.3,SNR=2.8						
MKAR	**Makanchi Array**	**145.08**	**37**	PKPbc	PKPab	09 17 20.6	0.0
MKAR	**Makanchi Array**	**145.08**	**37**	PKPbc	PKPab	09 17 20.6	0.0
	comp=N,0.7nm,0.7s,baz=316,slow=3.3,SNR=4.7						

CSEM ***16*** *09:00:31.6, 39°14N×27°54E, h7km, MD2.6, After DDA*

DDA 16 09:00:31.6, 39°14N×27°54E, h7km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.34**	**141**	*i* P	Pg	09 00 37.8	-0.4
AKHS				*i* S	Sg	09 00 43.9	+1.2
AKHS	**Akhisar**	**0.34**	**141**	*i* P	Pg	09 00 37.8	-0.4
AKHS				*i* S	Sg	09 00 43.9	+1.2
BALY	**Balya**	**0.60**	**6**	*i* P	Pg	09 00 43.5	+0.1
BALY				*i* S	Sb	09 00 53.7	+0.3
BALY	**Balya**	**0.60**	**6**	*i* P	Pg	09 00 43.5	+0.1
BALY				*i* S	Sb	09 00 53.7	+0.3
DURS	**Dursunbey**	**0.86**	**57**	*i* P	Pg	09 00 48.3	0.0
DURS				*i* S	Sb	09 01 01.2	+0.4
DURS	**Dursunbey**	**0.86**	**57**	*i* P	Pg	09 00 48.3	0.0
DURS				*i* S	Sb	09 01 01.2	+0.4
DEMI	**Demirci**	**0.92**	**96**	*i* P	Pg	09 00 49.0	-0.4
DEMI				*i* S	Sn	09 01 03.9	-0.8
DEMI	**Demirci**	**0.92**	**96**	*i* P	Pg	09 00 49.0	-0.4
DEMI				*i* S	Sn	09 01 03.9	-0.8
MANT	**Manisa**	**1.02**	**129**	*i* P	Pb	09 00 52.0	-0.1
MANT				*i* S	Sb	09 01 06.2	+0.3
MANT	**Manisa**	**1.02**	**129**	*i* P	Pb	09 00 52.0	0.0
MANT				*i* S	Sb	09 01 06.2	+0.3

IDC ***16*** *09:40:40.5±7.1, 7°34N×74°11W, h148km±142km, mb1 3.3/1, mb1mx2.8/22, mbtmp3.6/1, ML2.3/1, Error ellipse: s-maj=1099.0km s-min=79.5km az=99.0*

ISCJB ***16*** *09:40:41.0±0.7, 6°9N±0°1×72°9W±0°1, h166km, Error ellipse: s-maj=21.9km s-min=6.7km az=38.9*

FUNV ***16*** *09:40:44.7, 6°89N×72°91W, h151km, MW2.8*

ISC 16 09:40:40.9±1.2, 6°89N±0°10×73°0W±0°1, h166km, n12, σ1s34/16, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.17**	**34**	*e*P	Pn	09 41 10.2	+1.3
CAPV				*e*S	Sn	09 41 29.3	-1.2
ROSC	**El Rosal**	**2.43**	**214**	P	Pn	09 41 21.9	-0.6
	14nm,0.3s,baz=295,slow=12,SNR=45						
ROSC				S	Sn	09 41 54.1	-0.5
	21nm,0.3s,baz=72,slow=20,SNR=17						
VIGV	**El Vigia**	**2.51**	**39**	*e*P	Pn	09 41 24.6	+1.6
VIGV				*e*S	Sn	09 41 54.1	-1.5
SOCV	**Socops**	**2.51**	**56**	*e*P	Pn	09 41 24.4	+1.4
SOCV				*e*S	Sn	09 41 53.9	-1.7
ELOV	**Elorza**	**3.46**	**88**	*e*P	Pn	09 41 36.2	+1.5
CURV	**Curarigua**	**4.30**	**44**	*e*P	Pn	09 41 46.7	+1.1
DABV	**Dabajuro**	**4.62**	**30**	*e*P	Pn	09 41 51.8	+2.1
MAPV	**Macapo**	**5.33**	**56**	*e*P	Pn	09 42 00.0	+0.9
MONV	**Montecano**	**5.84**	**30**	*e*P	Pn	09 42 06.5	+0.8
CUPV	**Ccepira**	**7.77**	**66**	*e*P	Pn	09 42 31.8	+0.4
ASAR	**Alice Springs**	**149.27**	**234**	PKPbc	PKPbc	10 00 10.3	-0.6
	0.2nm,0.5s,baz=126,slow=3.2,SNR=5.1						
WRA	**Warramunga Arr**	**150.50**	**241**	PKPbc	PKPbc	10 00 13.4	-0.5
	0.4nm,0.8s,baz=107,slow=2.6,SNR=6.8						

IDC 16 09:55:51.4±1.4, 42°67S×72°64W, h0km, mb3.9/3, mb1 4.3/4, mb1mx4.0/16, mbtmp3.9/4, ML3.9/1, Error ellipse: s-maj=39.1km s-min=16.6km az=128.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.49**	**40**	Pn	Pn	09 56 33.4	0.0
	6.6nm,0.3s,baz=215,slow=15,SNR=25						
PLCA				Pg	Pb	09 56 37.2	0.0
	8.6nm,0.3s,baz=221,slow=17,SNR=78						
PLCA				Lg	Lg	09 57 10.3	
	28nm,0.3s,baz=123,slow=10,SNR=14						
VNDA	**Vanda**	**55.53**	**192**	P	P	10 05 27.6	-0.1
	3.2nm,1.3s,baz=143,slow=7.2,SNR=4.1						
TXAR	**Lajitas Array**	**77.14**	**333**	P	P	10 07 46.8	0.0
	0.2nm,0.7s,baz=147,slow=8.5,SNR=4.4						
PDAR	**Pinedale Array**	**91.30**	**334**	P	P	10 08 58.7	-0.1
	0.2nm,0.4s,baz=149,slow=7.2,SNR=4.0						

IDC 16 09:58:58.4±1.8, 3°36S×143°23E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.5/18, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=84.3km s-min=26.9km az=120.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.62**	**207**	P	Pn	10 03 17.8	-0.1
	0.2nm,0.3s,baz=30,slow=11,SNR=15						
ASAR	**Alice Springs**	**22.11**	**203**	P	P	10 03 56.2	+0.6
	0.6nm,0.6s,baz=25,slow=10.0,SNR=7.9						
FITZ	**Fitzroy Crossi**	**22.62**	**228**	P	P	10 03 59.9	-1.1
	1.7nm,0.8s,baz=36,slow=14,SNR=5.6						
ILAR	**Eielson Array**	**84.58**	**24**	P	P	10 11 33.5	+0.2
	0.5nm,0.9s,baz=234,slow=5.2,SNR=5.1						

AUST ***16*** *10:06:43.0, 7°49S×128°54E, h60km*

ISCJB ***16*** *10:06:43.1±0.8, 7°52S±0°06×128°4E±0°1, h151km, mb3.5/3, Error ellipse: s-maj=14.5km s-min=8.1km az=172.5*

IDC ***16*** *10:06:43.2±6.0, 7°48S×128°36E, h133km±57km, mb3.4/3, mb1 3.3/6, mb1mx3.2/19, mbtmp3.2/6, Error ellipse: s-maj=77.7km s-min=23.8km az=64.0*

ISC 16 10:06:45.1±1.0, 7°63S±0°08×128°38E±0°09, h151km, n13, σ2s16/18, mb3.6/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MTN	**Manton Dam**	**5.85**	**153**	S	Sn	10 09 17.7	+1.6
	baz=5.9,SNR=3.3						
FAKI	**Fak Fak**	**6.06**	**40**	P	Pn	10 08 08.3	-4.3
	baz=5.9,SNR=9.9						
KDU	**Kakadu**	**6.44**	**142**	P	Pn	10 08 18.6	+0.9
	baz=6.5,SNR=14						
KDU				S	Sn	10 09 28.4	-1.9
	baz=6.5,SNR=9.4						
KNRA	**Kununurra**	**8.01**	**177**	P	Pn	10 08 40.9	+2.3
	baz=8.2,SNR=4.6						
KNRA				S	Sn	10 10 06.3	-1.7
	baz=8.2,SNR=8.1						
FITZ	**Fitzroy Crossi**	**10.75**	**194**	P	Pn	10 09 15.7	+0.7
	0.3nm,0.3s,baz=20,slow=13,SNR=16						
FITZ				S	Sn	10 11 10.6	-3.4
	0.8nm,0.3s,baz=108,slow=18,SNR=4.8						
FITZ	**Fitzroy Crossi**	**10.75**	**194**	P	Pn	10 09 16.9	+1.9
	baz=11,SNR=6.5						
FITZ				S	Sn	10 11 13.4	-0.6
	baz=11,SNR=3.5						
WRA	**Warramunga Arr**	**13.54**	**155**	P	Pn	10 09 51.7	+0.5
	0.1nm,0.3s,baz=332,slow=14,SNR=8.0						
WRA				S	Sn	10 12 15.5	-5.7
	0.5nm,0.3s,baz=322,slow=24,SNR=7.8						
COEN	**Coen**	**15.83**	**115**	P	P	10 10 21.5	+0.9
	baz=16,SNR=5.2						
ASAR	**Alice Springs**	**16.81**	**162**	P	Pn	10 10 32.3	+0.6
	0.2nm,0.3s,baz=342,slow=11,SNR=18						
ASAR				S	S	10 13 39.1	+0.5
	0.1nm,0.3s,baz=325,slow=16,SNR=4.5						
STKA	**Stephens Creek**	**27.09**	**155**	P	P	10 12 15.5	+1.7
	1.3nm,0.7s,baz=325,slow=10.0,SNR=5.4						
SONM	**Songino Array**	**58.54**	**343**	P	P	10 16 24.6	-1.1
	0.3nm,0.5s,baz=161,slow=9.2,SNR=4.4						
MKAR	**Makanchi Array**	**67.88**	**328**	P	P	10 17 26.6	-0.6
	0.4nm,0.4s,baz=117,slow=7.0,SNR=7.8						
TORD	**Torodi Ar. Bea**	**127.35**	**281**	PKP	PKPdf	10 25 32.8	0.0
	0.2nm,0.6s,baz=77,slow=2.5,SNR=2.8						

CSEM ***16*** *10:49:08.6, 53°22N×63°86E, h0km, mb3.5, After NNC*

NNC 16 10:49:08.6±2.4, 53°22N×63°86E, h0km, mb3.5, mpv3.1, 14C-1D, Error ellipse: s-maj=36.3km s-min=10.5km az=157.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZRNK	**Zerenda**	**3.11**	**93**	↑Pn	Pn	10 50 00.4	+1.5
	4.0nm,0.5s						
ZRNK				↑Lg	Lg	10 50 45.7	
	5.4nm,0.5s						
ZRNK	**Zerenda**	**3.11**	**93**	Pn	Pn	10 50 00.4	+1.4
	4.0nm,0.5s						
ZRNK				Lg	Lg	10 50 45.7	
	5.4nm,0.5s						
BRVK	**Borovoye**	**3.87**	**90**	↑Pn	Pn	10 50 11.1	+1.8
	3.3nm,0.4s						
BRVK				↑Lg	Lg	10 51 07.6	
	7.4nm,0.5s						
BRVK	**Borovoye**	**3.87**	**90**	Pn	Pn	10 50 11.1	+1.7
	3.3nm,0.4s						
BRVK				Lg	Lg	10 51 07.6	
	7.4nm,0.5s						
BVA0	**Borovoye Array**	**3.94**	**90**	Pn	Pn	10 50 12.0	+1.7
	5.6nm,0.3s,baz=283,slow=13,SNR=66						
BVA0				↑Lg	Lg	10 51 11.3	
	2.6nm,0.5s,baz=282,slow=39,SNR=4.6						
BVA0	**Borovoye Array**	**3.94**	**90**	Pn	Pn	10 50 12.0	+1.7
	5.6nm,0.3s,SNR=66						
BVA0				Lg	Lg	10 51 11.3	
	2.6nm,0.5s,SNR=4.6						
VOSK	**Vostochnaya**	**4.33**	**94**	↑Pn	Pn	10 50 17.2	+1.4
	0.9nm,0.3s						
VOSK				↑Pg	Pb	10 50 25.9	+0.3
	1.4nm,0.4s						
VOSK				↑Sn	Sn	10 51 06.2	-0.8
	0.9nm,0.3s						
VOSK				↑Lg	Lg	10 51 23.1	
	4.0nm,0.6s						
AKTO	**Aktyubinsk**	**4.57**	**235**	↑Pn	Pn	10 50 20.4	+1.4
	1.2nm,0.8s						
AKTO				↓Pg	Pg	10 50 33.3	-2.9
	0.8nm,0.3s						
AKTO				↑Sn	Sn	10 51 13.5	+0.7
	0.

ISC 16 11:01:52.4±0.8, 55°92N±0°.04×17°21E±0°.04, h0km, n55, σ1°79/56, 2C, Baltic Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BSD	**Bornholm Skovb**	**1.53**	**239**	*e*P	**Pg**	**11 02 21.7**	**0.0**
BSD				*e*S	**Sn**	**11 02 42.4**	**+0.9**
BSD	**Bornholm Skovb**	**1.53**	**239**	*i* P	**Pg**	**11 02 21.9**	**+0.2**
BSD				*i* S	**Sn**	**11 02 42.4**	**+0.9**
BSD				*i* S	**Sb**	**11 02 43.3**	**+1.8**
BSD	**Bornholm Skovb**	**1.53**	**239**	P	**Pg**	**11 02 21.7**	**0.0**
BSD				S	**Sn**	**11 02 42.4**	**+0.9**
VSTU	**Vaestervik**	**1.79**	**348**	*e*P	**Pg**	**11 02 27.4**	**+0.8**
VSTU	**Vaestervik**	**1.79**	**348**	P	**Pg**	**11 02 27.4**	**+0.8**
EKSU	**Eksjoe**	**1.97**	**328**	*e*P	**Pg**	**11 02 29.7**	**-0.3**
EKSU	**Eksjoe**	**1.97**	**328**	P	**Pg**	**11 02 29.7**	**-0.3**
LUNU	**Lund**	**2.15**	**264**	P	**Pn**	**11 02 29.9**	**+0.6**
GNOU	**Gnosjoe**	**2.35**	**307**	*e*P	**Pb**	**11 02 35.0**	**-0.6**
GNOU	**Gnosjoe**	**2.35**	**307**	P	**Pb**	**11 02 35.0**	**-0.6**
BJUU	**Bjuv**	**2.36**	**276**	*e*P	**Pn**	**11 02 33.1**	**+0.8**
BJUU	**Bjuv**	**2.36**	**276**	P	**Pn**	**11 02 33.1**	**+0.8**
FABU	**Falkenberg**	**2.72**	**295**	*e*P	**Pn**	**11 02 38.4**	**+1.2**
FABU	**Falkenberg**	**2.72**	**295**	P	**Pn**	**11 02 38.4**	**+1.2**
LLD	**Lille Linde**	**2.89**	**260**	*i* P	**Pn**	**11 02 40.9**	**+1.3**
LLD	**Lille Linde**	**2.89**	**260**	*e*P	**Pn**	**11 02 40.9**	**+1.3**
BORU	**Boraas**	**2.99**	**307**	*e*P	**Pb**	**11 02 43.4**	**-3.0**
BORU	**Boraas**	**2.99**	**307**	P	**Pb**	**11 02 43.4**	**-3.0**
SLIT	**Slitere, Latvi** SNR=20	**3.28**	**56**	*e*P	**Pb**	**11 02 48.3**	**-3.1**
ESKU	**Eskilstuna**	**3.35**	**353**	*e*P	Pb	11 02 49.1	-3.6
ESKU	**Eskilstuna**	**3.35**	**353**	P	Pb	11 02 49.0	-3.6
NRAU	**Nora**	**3.85**	**343**	*e*P	Pb	11 02 57.0	-4.1
NRAU	**Nora**	**3.85**	**343**	P	Pb	11 02 56.9	-4.1
AAL	**Aland**	**4.52**	**18**	*e*P	**Pn**	**11 03 04.5**	**+2.5**
AAL	**Aland**	**4.52**	**18**	P	Pn	11 03 05.4	+3.4
MTSE	**Matsula**	**4.55**	**49**	*e*P	**Pn**	**11 03 05.5**	**+3.1**
MTSE	**Matsula**	**4.55**	**49**	P	**Pn**	**11 03 05.4**	**+3.1**
HFS	**Hagfors** baz=164,slow=11	**4.62**	**338**	Pn	Pn	11 03 06.6	+3.2
HFS				Sn	**Sn**	**11 03 57.7**	**0.0**
HFS	baz=153,slow=28			Lg	Lg	11 04 18.1	
HFS	baz=157,slow=28 **Hagfors** baz=164,slow=11	**4.62**	**338**	Pn	Pn	11 03 06.6	+3.2
HFS				Sn	**Sn**	**11 03 57.7**	**0.0**
HFS	baz=153,slow=28			Lg	Lg	11 04 18.1	
HFS	baz=157,slow=28						
HFS	**Hagfors** baz=164,slow=10,SNR=1.8	**4.62**	**338**	Pn	Pn	11 03 06.6	+3.2
HFS				Sn	**Sn**	**11 03 57.7**	**0.0**
HFS	baz=153,slow=26,SNR=3.2			Lg	Lg	11 04 18.1	
HFS	baz=157,slow=25,SNR=7.5						
RAF	**Rauma**	**5.65**	**23**	*e*P	**Pn**	**11 03 20.0**	**+2.5**
RAF	comp=Z,2.2nm,0.1s			MPN	Pn	11 03 21.7	+4.2
RAF				*e*S	**Sn**	**11 04 22.5**	**-0.5**
RAF	**Rauma**	**5.65**	**23**	P	**Pn**	**11 03 20.0**	**+2.5**
MEF	**Metsahovi**	**5.76**	**39**	*e*P	Pn	11 03 22.6	+3.6
MEF	comp=Z,3.4nm,0.2s			MPN	Pn	11 03 24.1	+5.2
MEF				*e*S	**Sn**	**11 04 25.9**	**+0.3**
MEF	**Metsahovi**	**5.76**	**39**	P	Pn	11 03 22.5	+3.6
MEF				S	**Sn**	**11 04 25.8**	**+0.3**
NB2	**NORSAR Subarra** baz=147,slow=16	**6.02**	**331**	Pn	**Pn**	**11 03 24.4**	**+1.8**
NB2				Lg	Lg	11 05 01.5	
NB2	baz=149,slow=37 **NORSAR Subarra** baz=147,slow=16	**6.02**	**331**	Pn	**Pn**	**11 03 24.4**	**+1.8**
NB2				Lg	Lg	11 05 01.5	
NB2	baz=149,slow=37 **NORSAR Subarra** baz=147,slow=14,SNR=2.2	**6.02**	**331**	Pn	**Pn**	**11 03 24.4**	**+1.8**
NB2				Lg	Lg	11 05 01.5	
VJF	baz=149,slow=33,SNR=4.0 **Virojoki**	**7.16**	**45**	*e*P	**Pn**	**11 03 39.9**	**+1.7**
VJF	**Virojoki**	**7.16**	**45**	P	**Pn**	**11 03 39.8**	**+1.7**
FIA0	**FINESS Array S** baz=218,slow=12	**7.21**	**36**	Pn	**Pn**	**11 03 41.8**	**+2.8**
FIA0				Sn	**Sn**	**11 05 01.1**	**-0.4**
FIA0	baz=218,slow=28 **FINESS Array S** baz=218,slow=12	**7.21**	**36**	Pn	**Pn**	**11 03 41.8**	**+2.8**
FIA0				Sn	**Sn**	**11 05 01.1**	**-0.4**
FIA0	baz=218,slow=28 **FINESS Array S**	**7.21**	**36**	*e*P	**Pn**	**11 03 41.7**	**+2.8**
FIA0	**FINESS Array S** baz=218,slow=12,SNR=2.1	**7.21**	**36**	Pn	**Pn**	**11 03 41.8**	**+2.8**
KEF	**Keuruu**	**7.41**	**29**	*e*P	Pn	11 03 44.8	+3.2
KEF	comp=Z,1.0nm,0.2s			MPN	Pn	11 03 46.1	+4.5
KEF	**Keuruu**	**7.41**	**29**	P	Pn	11 03 44.7	+3.2
VAF	**Ylistaro**	**7.67**	**19**	*e*P	**Pn**	**11 03 47.8**	**+2.6**
VAF	comp=Z,0.9nm,0.2s			MPN	Pn	11 03 50.5	+5.4
VAF	**Ylistaro**	**7.67**	**19**	P	**Pn**	**11 03 47.7**	**+2.6**
KAF	**Kangasniemi**	**7.78**	**33**	*e*P	**Pn**	**11 03 49.4**	**+2.7**
KAF	comp=Z,0.5nm,0.1s			MPN	Pn	11 03 51.8	+5.0
KAF	**Kangasniemi**	**7.78**	**33**	P	**Pn**	**11 03 49.4**	**+2.7**
KJN	**Kajaani**	**9.72**	**28**	*e*P	**Pn**	**11 04 15.0**	**+1.6**
KJN	comp=Z,0.4nm,0.2s			MPN	Pn	11 04 19.2	+5.9
KJN	**Kajaani**	**9.72**	**28**	P	**Pn**	**11 04 14.9**	**+1.6**
BOO	**Bordano**	**9.95**	**197**↑↑	*e*Pg	**Pn**	**11 04 14.7**	**-1.7**
BOO				*e*Sg	**Pn**	**11 04 15.5**	**-0.9**
BOO	**Bordano**	**9.95**	**197**↑↑	*e*Pg	**Pn**	**11 04 14.7**	**-1.7**
JOF	**Joensuu**	**10.03**	**40**	*e*P	**Pn**	**11 04 18.4**	**+0.9**
OUL	**Oulu**	**10.13**	**21**	*e*P	**Pn**	**11 04 19.2**	**+0.3**

IDC 16 11:35:28.4±1.3, 11°60N×92°65E, h0km, mb3.5/5, mb1 3.7/6, mb1mx3.5/26, mbtmpg3.5/6, ML4.3/1, Error ellipse: s-maj=45.4km s-min=22.8km az=54.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr** 0.9nm,0.3s,baz=235,slow=14,SNR=18	**9.13**	**41**	Pn	Pn	11 37 42.5	+0.9
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=165,slow=9.2,SNR=5.7	**36.15**	**348**	P	P	11 42 32.1	-0.4
ZALV	**Zalesovo Beam** 0.7nm,0.3s,baz=170,slow=8.2,SNR=4.3	**42.70**	**353**	P	P	11 43 26.4	-0.6
WRA	**Warramunga Arr** 0.4nm,0.8s,baz=309,slow=8.1,SNR=5.4	**51.64**	**127**	P	P	11 44 37.1	-0.2
ASAR	**Alice Springs** 0.1nm,0.5s,baz=307,slow=7.1,SNR=3.2	**53.44**	**131**	P	P	11 44 50.6	-0.1
BRTR	**Keskin Array B** 0.9nm,1.0s,baz=109,slow=8.3,SNR=2.4	**58.92**	**309**	P	P	11 45 30.1	+0.3

GUC 16 11:54:06.1±0.5, 32°51S×71°61W, h35km±1km, MD3.6, ML3.4, 7C-6D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IHA	**Instituto Hidr**	**0.52**	**183**↓↓	*i* P	Pn	11 54 16.8	-0.2
IHA				*i* S	Sn	11 54 24.6	0.0
CHNG	**Los Chungos**	**0.63**	**9**↓↓	*i* P	Pn	11 54 18.4	-0.1
CHNG				*i* S	Sb	11 54 27.6	-0.1
CHNG	comp=N,2μm,0.3s			AML	AML	11 54 28.1	
ROCH	**El Roble**	**0.69**	**132**↓↓	*i* P	Pb	11 54 20.0	-0.2
ROCH				*i* S	Sb	11 54 30.2	+0.5
ROCH	comp=E,2μm,0.5s			AML	AML	11 54 31.5	
PEL	**Peldehue**	**1.00**	**129**↑↑	*i* P	Pb	11 54 24.8	-0.4
PEL				*i* S	Sb	11 54 38.7	+0.5
PEL	comp=E,6μm,0.4s			AML	AML	11 54 39.8	
STL	**Santa Lucia**	**1.23**	**139**↑↑	*i* P	Pn	11 54 27.9	+0.9
STL				*i* S	Sb	11 54 44.2	-0.5
SAN	**Santiago**	**1.23**	**140**↑↑	*i* P	Pn	11 54 28.0	+1.0
SAN				*i* S	Sb	11 54 44.3	-0.4
CLCH	**Cerro Calan**	**1.27**	**135**↓↓	*i* P	Pn	11 54 28.5	+1.1
CLCH				↑↑ *i* S	Sb	11 54 45.3	-0.4
CLCH	comp=N,1μm,0.6s			AML	AML	11 54 49.2	
CLCH	comp=N,1μm,0.5s			AML	AML	11 54 49.8	
TACH	**Talagante**	**1.27**	**154**	*i* P	Pb	11 54 28.6	-1.0
TACH				*i* S	Sb	11 54 45.5	-0.4
ANTU	**Antumapu**	**1.34**	**142**	*i* P	Pn	11 54 29.6	+1.1
ANTU				*i* S	Sb	11 54 47.3	-0.5
ANTU	comp=N,1μm,0.4s			AML	AML	11 54 49.5	
CMCH	**Combarbala**	**1.43**	**22**↑↑	*i* P	Pn	11 54 30.1	+0.4
CMCH				*i* S	Sb	11 54 49.1	-1.3
PCH	**Pirque**	**1.44**	**140**↑↑	*i* P	Pn	11 54 30.9	+1.0
PCH				*i* S	Sb	11 54 50.4	-0.3
LNV	**Longovilo**	**1.45**	**173**↓↓	*i* P	Pn	11 54 29.6	-0.3
LNV				*i* S	Sn	11 54 48.5	+0.8
SJCH	**San Jose de Ma**	**1.55**	**137**↑↑	*i* P	Pn	11 54 31.6	+0.2
SJCH				*i* S	Sn	11 54 51.8	+1.5
SJCH	comp=E,547nm,0.5s			AML	AML	11 54 53.0	
CHCH	**Chadas Angostu**	**1.63**	**151**	*e*P	Pn	11 54 33.7	+1.3
CHCH				*i* S	Sb	11 54 55.0	-1.0
LMEL	**Las Melosas**	**1.78**	**139**↓↓	*i* P	Pn	11 54 36.4	+1.7
LMEL				*i* S	Sb	11 54 59.3	-1.3
LMEL	comp=N,1μm,0.1s			AML	AML	11 55 01.7	
CACH	**El Canelo**	**1.81**	**152**	*i* P	Pb	11 54 37.2	-1.7
CACH				*i* S	Sb	11 55 00.8	-0.7
TLL	**Tololo Astrono** comp=N,341nm,0.6s	**2.44**	**17**	AML	AML	11 55 33.4	

*ISCJB **16** 12:24:08.0±0.3, 39°.67N±0°.02×29°.46E±0°.03, h0km, Error ellipse: s-maj=3.2km s-min=2.9km az=4.7*
*DDA **16** 12:24:07.8, 39°.65N×29°.46E, h7km, MD2.8*
*CSEM **16** 12:24:07.8, 39°.65N×29°.46E, h7km, MD2.8, After DDA*

ISC 16 12:24:08.2±0.8, 39°66N±0°.02×29°45E±0°.02, h0km, n32, σ0°62/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.21**	**178**	*e*PG	**Pg**	**12 24 12.9**	**+0.6**
TVSB				*e*SG	**Sg**	**12 24 16.9**	**+1.9**
ULDT	**Uludag**	**0.54**	**333**	*i* P	**Pg**	**12 24 18.5**	**0.0**
ULDT				*i* S	**Sg**	**12 24 26.1**	**+0.6**
ULDT	**Uludag**	**0.54**	**333**	*i* P	**Pg**	**12 24 18.5**	**0.0**
ULDT				*i* S	**Sg**	**12 24 26.1**	**+0.6**
GDZ	**Gediz**	**0.57**	**178**	*i* P	**Pg**	**12 24 17.9**	**-1.3**
GDZ				*i* S	**Sg**	**12 24 26.9**	**+0.3**
GDZ	**Gediz**	**0.57**	**178**	*i* P	**Pg**	**12 24 17.9**	**-1.3**
GDZ				*i* S	**Sg**	**12 24 26.9**	**+0.3**
ORLT	**Orhaneli**	**0.57**	**312**	*e*PG	**Pg**	**12 24 19.6**	**+0.4**
CAVI	**Cavuskoy**	**0.62**	**29**	*e*PG	**Pg**	**12 24 20.1**	**0.0**
CAVI				*e*SG	**Sg**	**12 24 29.3**	**+1.2**
DURS	**Dursunbey**	**0.76**	**266**	*i* P	**Pg**	**12 24 22.2**	**-0.5**
DURS				*i* S	**Sg**	**12 24 31.8**	**-0.7**
DURS	**Dursunbey**	**0.76**	**266**	*i* P	**Pg**	**12 24 22.2**	**-0.5**
DURS				*i* S	**Sg**	**12 24 31.8**	**-0.7**
ALT	**Altintas**	**0.79**	**140**	*e*PG	**Pg**	**12 24 23.5**	**+0.1**
GEMT	**Gemlik**	**0.80**	**346**	*e*PG	**Pg**	**12 24 23.6**	**+0.1**
ADVT	**Abdulvahap**	**0.80**	**16**	*e*PG	**Pg**	**12 24 23.5**	**-0.1**
BORA	**Eskisehir**	**0.80**	**74**	*i* P	**Pg**	**12 24 23.3**	**-0.3**
BORA				*i* S	**Sg**	**12 24 34.9**	**+0.9**
BORA	**Eskisehir**	**0.80**	**74**	*i* P	**Pg**	**12 24 23.3**	**-0.3**
BORA				*i* S	**Sg**	**12 24 34.9**	**+0.9**
MDNY	**Mudanya-Bursa**	**0.83**	**329**	*e*PG	**Pg**	**12 24 24.3**	**+0.1**
DEMI	**Demirci**	**0.84**	**223**	*i* P	**Pg**	**12 24 24.5**	**+0.2**
DEMI				*i* S	**Sb**	**12 24 38.2**	**+0.6**
DEMI	**Demirci**	**0.84**	**223**	*i* P	**Pg**	**12 24 24.5**	**+0.2**
DEMI				*i* S	**Sb**	**12 24 38.2**	**+0.6**
ARMT	**Armutlu**	**1.01**	**334**	*e*PG	**Pg**	**12 24 27.6**	**0.0**
SEYT	**Eskypehyr**	**1.09**	**97**	*i* P	**Pg**	**12 24 28.8**	**-0.3**
SEYT				*i* S	**Sb**	**12 24 44.4**	**-0.5**
SEYT	**Eskypehyr**	**1.09**	**97**	*i* P	**Pg**	**12 24 28.8**	**-0.3**
SEYT				*i* S	**Sb**	**12 24 44.4**	**-0.5**
GULT	**Gulveren**	**1.12**	**46**	*e*PN	**Pg**	**12 24 29.1**	**-0.7**
BALB	**Balikesir**	**1.21**	**270**	*e*PN	**Pb**	**12 24 31.6**	**-0.4**
BUY	**Buyukada**	**1.22**	**348**	*i* P	**Pn**	**12 24 32.2**	**-0.3**
BUY				*i* S	**Sn**	**12 24 49.5**	**-0.2**
BUY	**Buyukada**	**1.22**	**348**	*i* P	**Pn**	**12 24 32.2**	**-0.3**
BUY				*i* S	**Sn**	**12 24 49.5**	**-0.2**
KHL	**Karahalli**	**1.34**	**178**	*e*PN	**Pg**	**12 24 33.9**	**0.0**
GONE	**Gonen-Balikesi**	**1.41**	**286**	*e*PN	**Pn**	**12 24 34.9**	**-0.3**
BALY	**Balya**	**1.42**	**274**	*i* P	**Pn**	**12 24 34.8**	**-0.5**
BALY				*i* S	**Sn**	**12 24 55.6**	**+0.9**
BALY	**Balya**	**1.42**	**274**	*i* P	**Pn**	**12 24 34.8**	**-0.5**
BALY				*i* S	**Sn**	**12 24 55.6**	**+0.9**
ISK	**Istanbul-Kandi**	**1.44**	**348**	*e*PN	**Pn**	**12 24 35.1**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.62**	**97**	*e*PN	**Pn**	**12 24 37.8**	**-0.3**
KLYT	**Kilyos**	**1.62**	**349**	*e*PN	**Pn**	**12 24 37.8**	**-0.3**
CTKS	**Kestanelik-??a**	**1.73**	**336**	*e*PN	**Pn**	**12 24 39.4**	**-0.2**

*ISCJB **16** 12:24:32.4±0.7, 40°.25N±0°.03×38°.04E±0°.05, h9km±5km, Error ellipse: s-maj=6.6km s-min=5.4km az=27.1*
*DDA **16** 12:24:32.9, 40°.26N×38°.09E, h7km, MD2.5*
*ISK **16** 12:24:32.0, 40°.25N×38°.08E, h10km, MD2.7*
*CSEM **16** 12:24:32.5±0.2, 40°.23N×38°.08E, h8km, MD2.5, Error ellipse: s-maj=3.7km s-min=3.2km az=146.0*

ISC 16 12:24:32.6±1.0, 40°24N±0°.03×38°08E±0°.03, h12km±6km, n21, σ0°22/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUSE	**Susehri**	**0.10**	**109**	*i* P	**Pg**	**12 24 35.5**	**-0.2**
SUSE				*i* S	**Sg**	**12 24 38.0**	**+0.2**
SUSE	**Susehri**	**0.10**	**109**	*i* P	**Pg**	**12 24 35.5**	**-0.2**
SUSE				*i* S	**Sg**	**12 24 38.0**	**+0.2**
RSDY	**Resadiye-TOKAT**	**0.59**	**285**	*e*PG	**Pg**	**12 24 44.1**	**-0.1**
RSDY	**Resadiye-TOKAT**	**0.59**	**285**	*e*Pg	**Pg**	**12 24 44.1**	**-0.1**
GRSN	**GIRESUNGRSN**	**0.70**	**12**	*i* P	**Pg**	**12 24 46.1**	**-0.1**
GRSN				*i* S	**Sb**	**12 24 56.3**	**-0.1**
GRSN	**GIRESUNGRSN**	**0.70**	**12**	*i* P	**Pg**	**12 24 46.1**	**-0.1**
GRSN				*i* S	**Sb**	**12 24 56.3**	**-0.1**
ESPY	**Espiye-Giresun**	**0.84**	**36**	*e*PG	**Pg**	**12 24 48.5**	**-0.3**
ESPY				*e*SG	**Sb**	**12 25 00.2**	**-0.1**
ESPY	**Espiye-Giresun**	**0.84**	**36**	*e*Pg	**Pg**	**12 24 48.5**	**-0.3**
ESPY				*e*Sg	**Sb**	**12 25 00.2**	**-0.1**
SVSK	**Karacayir**	**0.89**	**249**	*e*PG	**Pg**	**12 24 49.6**	**-0.2**
SVSK	**Karacayir**	**0.89**	**249**	*e*Pg	**Pg**	**12 24 49.6**	**-0.2**
KELT	**Kelkit**	**0.91**	**96**	*i* P	**Pg**	**12 24 50.1**	**-0.1**
KELT				*i* S	**Sg**	**12 25 02.0**	**0.0**
KELT	**Kelkit**	**0.91**	**96**	*i* P	**Pg**	**12 24 50.1**	**-0.1**
KELT				*i* S	**Sg**	**12 25 02.0**	**0.0**
KEMA	**Kemaliye**	**1.02**	**162**	*i* P	**Pg**	**12 24 52.3**	**0.0**
KEMA				*e*S	**Sg**	**12 25 05.4**	**-0.3**
KEMA	**Kemaliye**	**1.02**	**162**	*i* P	**Pg**	**12 24 52.3**	**0.0**
KEMA				*e*S	**Sg**	**12 25 05.4**	**-0.3**
GUMT	**Gumushane**	**1.09**	**78**	*e*PN	**Pb**	**12 24 53.5**	**-0.1**
GUMT	**Gumushane**	**1.09**	**78**	*e*Pn	**Pb**	**12 24 53.5**	**-0.1**
MACK	**Trabzon**	**1.47**	**61**	*i* P	**Pg**	**12 25 00.4**	**-0.4**
MACK				*i* S	**Sg**	**12 25 20.1**	**+0.3**
MACK	**Trabzon**	**1.47**	**61**	*i* P	**Pg**	**12 25 00.4**	**-0.4**
MACK				*i* S	**Sg**	**12 25 20.1**	**+0.3**
BAYT	**Ayd¯–ntepe-Bay**	**1.59**	**84**	*e*PN	**Pg**	**12 25 01.1**	**+0.4**
BAYT	**Ayd¯–ntepe-Bay**	**1.59**	**84**	*e*Pn	**Pn**	**12 25 01.1**	**+0.4**
DARE	**Darende-Malaty**	**1.73**	**196**	*e*PN	**Pn**	**12 25 02.9**	**+0.3**

*DDA **16** 12:26:29.4, 39°.38N×39°.19E, h16km, MD3.0*
*ISK **16** 12:26:29.3, 39°.39N×39°.15E, h10km, MD2.7*
*ISCJB **16** 12:26:30.2±0.5, 39°.38N±0°.03×39°.16E±0°.03, h9km±5km, Error ellipse: s-maj=4.6km s-min=4.0km az=35.1*
*CSEM **16** 12:26:30.3±0.2, 39°.37N×39°.13E, h15km, MD2.7, Error ellipse: s-maj=4.8km s-min=3.8km az=99.0*

ISC 16 12:26:30.0±0.9, 39°39N±0°.02×39°13E±0°.02, h16km±9km, n25, σ0°75/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZC	**Erzincan**	**0.40**	**26**	*e*Pg	**Pb**	**12 26 39.2**	**+0.3**
EZC				*e*Sg	**Sb**	**12 26 46.4**	**+1.4**
ILIC	**ilic-Erzincan**	**0.44**	**279**	*e*PG	**Pg**	**12 26 38.8**	**0.0**
ILIC				*e*SG	**Sg**	**12 26 45.4**	**+0.5**
ILIC	**ilic-Erzincan**	**0.44**	**279**	*e*Pg	**Pg**	**12 26 38.8**	**0.0**
ILIC				*e*Sg	**Sg**	**12 26 45.4**	**+0.5**
ERZN	**Erzincan**	**0.50**	**66**	*e*PG	**Pg**	**12 26 39.2**	**-0.8**
ERZN				*e*SG	**Sg**	**12 26 46.4**	**-0.4**
KEMA	**Kemaliye**	**0.51**	**257**	*i* P	**Pg**	**12 26 40.2**	**+0.2**
KEMA				*i* S	**Sb**	**12 26 49.0**	**+1.2**
KEMA	**Kemaliye**	**0.51**	**257**	*i* P	**Pg**	**12 26 40.2**	**+0.2**
KEMA				*i* S	**Sb**	**12 26 49.0**	**+1.2**
PTK	**Pertek**	**0.54**	**157**	*e*PG	**Pg**	**12 26 40.2**	**-0.5**
PTK				*e*SG	**Sg**	**12 26 48.2**	**+0.3**
PTK	**Pertek**	**0.54**	**157**	*e*Pg	**Pg**	**12 26 40.2**	**-0.5**
PTK				*e*Sg	**Sg**	**12 26 48.2**	**+0.3**
KELT	**Kelkit**	**0.77**	**7**	*i* P	**Pb**	**12 26 44.5**	**-0.6**
KELT				*i* S	**Sb**	**12 26 55.6**	**+0.2**
KELT	**Kelkit**	**0.77**	**7**	*i* P	**Pb**	**12 26 44.6**	**-0.6**
KELT				*i* S	**Sb**	**12 26 55.6**	**+0.2**
ELZG	**Elazig**	**0.90**	**187**	*i* P	**Pg**	**12 26 47.3**	**-0.1**
ELZG				*i* S	**Sg**	**12 26 59.8**	**+0.6**
ELZG	**Elazig**	**0.90**	**187**	*i* P	**Pg**	**12 26 47.3**	**-0.1**
ELZG				*i* S	**Sg**	**12 26 59.8**	**+0.6**
SUSE	**Susehri**	**1.09**	**319**	*i* P	**Pg**	**12 26 51.4**	**+0.4**
SUSE				*i* S	**Sn**	**12 27 05.4**	**-0.2**
SUSE	**Susehri**	**1.09**	**319**	*i* P	**Pg**	**12 26 51.4**	**+0.4**
SUSE				*i* S	**Sn**	**12 27 05.4**	**-0.2**
BINT	**Bingol**	**1.18**	**115**	*e*Pn	**Pg**	**12 26 53.1**	**+0.4**
MYA	**Malataya**	**1.19**	**208**	*e*PN	**Pb**	**12 26 52.3**	**0.0**
MYA	**Malataya**	**1.19**	**208**	*e*Pn	**Pb**	**12 26 52.3**	**0.0**
BNGB	**Bing¯‖**	**1.27**	**108**	*e*PN	**Pn**	**12 26 53.1**	**-0.2**
BAYT	**Ayd¯–ntepe-Bay**	**1.27**	**38**	*e*PN	**Pb**	**12 26 53.9**	**+0.2**
BAYT	**Ayd¯–ntepe-Bay**	**1.27**	**38**	*e*Pn	**Pb**	**12 26 53.9**	**+0.2**
AKCD	**Akcadag**	**1.44**	**221**	*i* P	**Pn**	**12 26 55.1**	**-0.5**
AKCD				*e*S	**Sg**	**12 27 17.7**	**+1.3**
AKCD	**Akcadag**	**1.44**	**221**	*i* P	**Pn**	**12 26 55.1**	**-0.5**
AKCD				*e*S	**Sg**	**12 27 17.7**	**+1.3**
DARE	**Darende-Malaty**	**1.52**	**238**	*e*PN	**Pb**	**12 26 57.6**	**-0.3**
PINB	**Pinarbasi**	**2.24**	**252**	*e*P	**Pb**	**12 27 08.5**	**-1.7**
PINB				*i* S	**Sg**	**12 27 40.4**	**-1.5**
PINB	**Pinarbasi**	**2.24**	**252**	*e*P	**Pb**	**12 27 08.5**	**-1.7**

NNC 16 12:26:42.0±5.1, 54°08N×87°50E, h0km, mb3.6, mpv3.2, 6C-3D, Error ellipse: s-maj=40.1km s-min=34.8km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KURK	**Kurchatov** 2.9nm,0.8s	**6.39**	**242**	↑↑	Pn	12 28 15.6	-1.8
KURK				↑↑	Sn	12 29 35.0	+4.1
KURK	1.9nm,0.8s			↓↓	Lg	12 30 02.4	
KUR17	**Kurchatov Arra** 1.1nm,0.6s	**6.52**	**242**	↑↑	Pn	12 28 17.6	-1.5
KUR17				↑↑	Sn	12 29 37.1	+3.1
KUR17	0.3nm,0.6s			↓↓	Lg	12 30 06.6	
MK31	**Makanchi Array** 0.5nm,0.6s,baz=28,slow=14,SNR=8.5	**8.01**	**207**	↓↓	Pn	12 28 43.9	+4.2
MK31	2.8nm,0.8s,baz=26,slow=28,SNR=4.7			↑↑	Sn	12 30 16.0	+5.1
MK31	5.7nm,1.1s,baz=118,slow=29,SNR=6.1			Lg	Lg	12 30 49.9	
VOSK	**Vostochnaya** 2.0nm,0.9s	**9.96**	**269**	↑↑	Pn	12 29 01.5	-4.8

*CSEM **16** 12:35:02.9±0.1, 38°.78N×7°.94W, h2km, ML2.2/6, Error ellipse: s-maj=1.5km s-min=1.3km az=89.0*
*ISCJB **16** 12:35:02.5±0.5, 38°.78N±0°.02×7°.94W±0°.03, h4km±4km, Error ellipse: s-maj=4.5km s-min=3.1km az=13.8*
*IGIL **16** 12:35:03.9, 38°.79N×7°.96W, h0km, ML1.5*
*PDA **16** 12:35:03.5±1.6, 38°.78N×7°.95W, h1km±4km, ML1.5, Error ellipse: s-maj=2.8km s-min=1.9km az=94.0*
*INMG **16** 12:35:03.5±1.6, 38°.78N×7°.95W, h1km±4km, ML1.5, Error ellipse: s-maj=2.8km s-min=1.9km az=94.0*
*MDD **16** 12:35:03.7±0.4, 38°.77N×7°.94W, h0km, mbLg1.7/13, Error ellipse: s-maj=4.0km s-min=2.9km az=132.0*

ISC 16 12:35:03.2±1.1, 38°78N±0°.02×7°94W±0°.02, h7km±9km, n55, σ0°49/67, 1D, Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVO	**Evora**	**0.25**	**192**	*e*Pg	**Pg**	**12 35 08.0**	**-0.1**
EVO				*e*Sg	**Sg**	**12 35 12.4**	**+0.9**
EVO	113nm,0.1s			A	A	12 35 12.8	
EVO	**Evora**	**0.25**	**192**	Pg	**Pg**	**12 35 08.0**	**-0.1**
EVO	113nm,0.1s			Lg	Lg	12 35 12.4	
EVO	**Evora**	**0.25**	**192**	*e*Pg	**Pg**	**12 35 08.0**	**-0.1**
EVO	113nm,0.1s			*e*Sg	**Sg**	**12 35 12.4**	**+0.9**
PMTG	**Montargil**	**0.36**	**323**	*e*Pg	**Pg**	**12 35 09.9**	**-0.4**
PMTG				*e*Sg	**Sg**	**12 35 14.9**	**-0.2**
PMTG	10nm,0.1s			A	A	12 35 15.8	
PMTG	**Montargil**	**0.36**	**323**	*e*Pg	**Pg**	**12 35 09.9**	**-0.4**
PMTG	10nm,0.1s			*e*Sg	**

PCBR				A	A	12 35 38.8		
	comp=E,6.5nm,0.2s							
PCBR	**Castelo Branco**	**1.12**	**19**	Lg	Lg	12 35 38.6		
	comp=E,3.2nm,0.2s							
PCBR	**Castelo Branco**	**1.12**	**19**	*e*S	**Sg**	**12 35 38.6**	**-0.6**	
	comp=E,6.5nm,0.2s							
PCVE	**Castro Verde**	**1.15**	**184**	*e*P	**Pg**	**12 35 24.8**	**-0.3**	
PCVE				*e*S	**Sg**	**12 35 39.3**	**-0.7**	
PCVE				A	A	12 35 39.6		
	comp=E,4.5nm,0.3s							
PCVE	**Castro Verde**	**1.15**	**184**	Pg	**Pg**	**12 35 24.8**	**-0.3**	
PCVE				Lg	Lg	12 35 39.3		
	comp=E,4.5nm,0.3s							
PCVE	**Castro Verde**	**1.15**	**184**	*e*P	**Pg**	**12 35 24.8**	**-0.3**	
PCVE				*e*S	**Sg**	**12 35 39.3**	**-0.7**	
	comp=E,4.5nm,0.3s							
EGRO	**El Granado**	**1.29**	**164**	Pg	**Pg**	**12 35 27.2**	**-0.7**	
	comp=E,0.5nm,0.1s,SNR=7.9							
EGRO				Lg	Lg	12 35 44.5		
	comp=E,3.3nm,0.2s,SNR=5.9							
EGRO	**El Granado**	**1.29**	**164**	Pg	**Pg**	**12 35 27.2**	**-0.7**	
	comp=E,0.5nm,0.1s,SNR=7.9							
EGRO				Lg	Lg	12 35 44.5		
	comp=E,3.3nm,0.2s,SNR=5.9							
PTEO	**Sao Teotonio**	**1.38**	**207**	*e*S	**Sg**	**12 35 46.8**	**-0.6**	
PTEO	**Sao Teotonio**	**1.38**	**207**	Lg	Lg	12 35 46.8		
PTEO	**Sao Teotonio**	**1.38**	**207**	*e*S	**Sg**	**12 35 46.8**	**-0.6**	
PVAQ	**Vaqueiros**	**1.38**	**173**	*e*P	**Pn**	**12 35 28.9**	**0.0**	
PVAQ				*e*S	**Sg**	**12 35 46.7**	**-0.9**	
PVAQ				A	A	12 35 48.6		
	comp=E,4.7nm,0.2s							
PVAQ	**Vaqueiros**	**1.38**	**173**	Pg	**Pn**	**12 35 28.9**	**0.0**	
PVAQ				Lg	Lg	12 35 46.7		
	comp=E,4.7nm,0.2s							
PVAQ	**Vaqueiros**	**1.38**	**173**	*e*P	**Pn**	**12 35 28.9**	**0.0**	
PVAQ				Lg	Lg	12 35 46.7		
	comp=E,4.7nm,0.2s							
EMIN	**Mina Concepcio**	**1.42**	**135**	Pg	**Pn**	**12 35 29.2**	**-0.2**	
	comp=E,0.4nm,0.1s,SNR=7.9							
EMIN				Lg	Lg	12 35 48.8		
	comp=E,2.6nm,0.2s,SNR=12							
EMIN	**Mina Concepcio**	**1.42**	**135**	Pg	**Pn**	**12 35 29.2**	**-0.2**	
	comp=E,0.4nm,0.1s,SNR=7.9							
EMIN				Lg	Lg	12 35 48.8		
	comp=E,2.6nm,0.2s,SNR=12							
PBDV	**Barranco-do-Ve**	**1.53**	**180**	*e*P	**Pn**	**12 35 31.5**	**+0.6**	
PBDV				*e*S	**Sn**	**12 35 51.1**	**0.0**	
PBDV				A	A	12 35 57.4		
	comp=E,4.8nm,0.3s							
PBDV	**Barranco-do-Ve**	**1.53**	**180**	Pg	**Pn**	**12 35 31.5**	**+0.6**	
PBDV				Lg	Lg	12 35 51.1		
	comp=E,4.8nm,0.3s							
PBDV	**Barranco-do-Ve**	**1.53**	**180**	*e*P	**Pn**	**12 35 31.5**	**+0.6**	
PBDV				Lg	Lg	12 35 51.1		
	comp=E,4.8nm,0.3s							
MORF	**Marmelete**	**1.57**	**201**	Lg	Lg	12 35 51.1		
MORF	**Marmelete**	**1.57**	**201**	Lg	Lg	12 35 51.1		
MORF				*e*Sn	**Sn**	**12 35 52.0**	**-0.1**	
PFVI	**Vila Bisbo**	**1.79**	**203**	Lg	Lg	12 35 58.4		
	comp=E,1.2nm,0.2s,SNR=7.9							
PFVI	**Vila Bisbo**	**1.79**	**203**	Lg	Lg	12 35 58.4		
	comp=E,1.2nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**1.93**	**48**	Sn	**Sn**	**12 36 02.1**	**+1.1**	
	comp=E,0.9nm,0.2s,SNR=7.9							
EPLA	**Plasencia**	**1.93**	**48**	Sn	**Sn**	**12 36 02.1**	**+1.1**	
	comp=E,0.9nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**2.71**	**102**	Lg	Lg	12 36 30.3		
	comp=E,0.6nm,0.2s,SNR=7.9							
EADA	**Adamuz**	**2.71**	**102**	Lg	Lg	12 36 30.3		
	comp=E,0.6nm,0.2s,SNR=7.9							

*ISCJB **16** 12:35:17.0±0.6,38.°79N±0.'02×7.°92W±0.'05,h10km, Error ellipse: s-maj=5.3km s-min=3.4km az=9.7*
*CSEM **16** 12:35:17.4±0.1,38.°78N×7.°93W,h10km,ML1.4, Error ellipse: s-maj=2.7km s-min=1.9km az=104.0*
*INMG **16** 12:35:18.1±1.9,38.°79N×7.°95W,h5km±6km,ML1.4, Error ellipse: s-maj=5.2km s-min=2.8km az=94.0*
*MDD **16** 12:35:18.1±0.7,38.°78N×7.°93W,h0km,mbLg1.7/11, Error ellipse: s-maj=5.5km s-min=4.0km az=131.0,PROXIMO SIN SOLUCION*
*PDA **16** 12:35:18.1±1.9,38.°79N×7.°95W,h5km±6km,ML1.4, Error ellipse: s-maj=5.2km s-min=2.8km az=94.0*

ISC 16 12:35:17.6±1.0,38.°79N±0.'03×7.°95W±0.'04,h10km,n42, σ0$38/27,Portugal

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EVO	**Evora**	**0.26**	**190**	*e*P	**Pg**	**12 35 23.3**	**+0.4**
EVO				*e*Sg	**Sg**	**12 35 27.0**	**+0.5**
EVO				A	A	12 35 27.4	
	106nm,0.1s						
EVO	**Evora**	**0.26**	**190**	Pg	**Pg**	**12 35 23.3**	**+0.4**
EVO				Lg	Lg	12 35 27.0	
	106nm,0.1s						
EVO	**Evora**	**0.26**	**190**	*e*P	**Pg**	**12 35 23.3**	**+0.4**
EVO				*e*Sg	**Sg**	**12 35 27.0**	**+0.5**
	106nm,0.1s						
PMTG	**Montargil**	**0.35**	**323**	*e*S	**Sg**	**12 35 29.4**	**+0.1**
PMTG				A	A	12 35 30.2	
	8.0nm,0.1s						
PMTG	**Montargil**	**0.35**	**323**	*e*S	**Sg**	**12 35 29.4**	**+0.1**
	8.0nm,0.1s						
MOE	**Montemor**	**0.41**	**230**	*e*Sg	**Sg**	**12 35 31.2**	**+0.1**
MOE	**Montemor**	**0.41**	**230**	Lg	Lg	12 35 31.2	
MOE	**Montemor**	**0.41**	**230**	*e*Sg	**Sg**	**12 35 31.2**	**+0.1**
EBAD	**Badajoz**	**0.73**	**92**	Lg	Lg	12 35 41.4	
	21nm,0.2s,SNR=6.9						
EBAD	**Badajoz**	**0.73**	**92**	Lg	Lg	12 35 41.4	
	21nm,0.2s,SNR=6.9						
PBEJ	**Beja**	**0.76**	**175**	*e*Sg	**Sg**	**12 35 41.8**	**-0.5**
PBEJ	**Beja**	**0.76**	**175**	Lg	Lg	12 35 41.8	
PBEJ	**Beja**	**0.76**	**175**	*e*Sg	**Sg**	**12 35 41.8**	**-0.5**
PMRV	**Marv??o**	**0.77**	**34**	*e*S	**Sg**	**12 35 43.0**	**+0.3**
PMRV	**Marv??o**	**0.77**	**34**	Lg	Lg	12 35 43.0	
PMRV	**Marv??o**	**0.77**	**34**	*e*S	**Sg**	**12 35 43.0**	**+0.3**
PNCL	**Nicolau / Gran**	**0.81**	**214**	*e*S	**Sg**	**12 35 43.9**	**0.0**
PNCL				A	A	12 35 46.1	
	4.1nm,0.1s						
PNCL	**Nicolau / Gran**	**0.81**	**214**	*e*S	**Sg**	**12 35 43.9**	**0.0**
	4.1nm,0.1s						
PBAR	**Barrancos**	**0.94**	**130**	*e*Sg	**Sg**	**12 35 48.2**	**+0.1**
PBAR				A	A	12 35 49.8	
	6.0nm,0.2s						
PBAR	**Barrancos**	**0.94**	**130**	Lg	Lg	12 35 48.2	
	6.0nm,0.2s						
PBAR	**Barrancos**	**0.94**	**130**	*e*Sg	**Sg**	**12 35 48.2**	**+0.1**
PBAR				Lg	Lg	12 35 48.2	
	6.0nm,0.2s						
PMAFR	**Mafra**	**1.05**	**280**	Lg	Lg	12 35 51.7	
	15nm,0.2s,SNR=5.9						
PMAFR	**Mafra**	**1.05**	**280**	Lg	Lg	12 35 51.7	
	15nm,0.2s,SNR=5.9						
PCBR	**Castelo Branco**	**1.11**	**19**	*e*Sg	**Sg**	**12 35 53.2**	**-0.3**
PCBR	**Castelo Branco**	**1.11**	**19**	Lg	Lg	12 35 53.2	
	2.0nm,0.2s						
PCBR	**Castelo Branco**	**1.11**	**19**	*e*Sg	**Sg**	**12 35 53.2**	**-0.3**
	4.0nm,0.2s						
PCVE	**Castro Verde**	**1.16**	**183**	A	A	12 35 55.3	
	4.0nm,0.2s						
EGRO	**El Granado**	**1.31**	**163**	Lg	Lg	12 35 58.9	
	4.2nm,0.2s,SNR=4.6						
EGRO	**El Granado**	**1.31**	**163**	Lg	Lg	12 35 58.9	
	4.2nm,0.2s,SNR=4.6						
PTEO	**Sao Teotonio**	**1.38**	**206**	*e*S	**Sb**	**12 36 00.6**	**-0.6**
PTEO				A	A	12 36 01.7	
	2.9nm,0.2s						
PTEO	**Sao Teotonio**	**1.38**	**206**	Lg	Lg	12 36 00.6	
	1.4nm,0.2s						
PTEO	**Sao Teotonio**	**1.38**	**206**	*e*S	**Sb**	**12 36 00.6**	**-0.6**
PTEO				Lg	Lg	12 36 00.6	
	1.4nm,0.2s						
PVAQ	**Vaqueiros**	**1.40**	**172**	*e*S	**Sn**	**12 36 01.1**	**-0.5**
PVAQ				A	A	12 36 03.5	
	3.7nm,0.2s						
PVAQ	**Vaqueiros**	**1.40**	**172**	Lg	Lg	12 36 01.1	
	3.7nm,0.2s						
PVAQ	**Vaqueiros**	**1.40**	**172**	*e*S	**Sn**	**12 36 01.1**	**-0.5**
PVAQ				Lg	Lg	12 36 01.1	
	3.7nm,0.2s						
EMIN	**Mina Concepcio**	**1.43**	**135**	Pg	**Pn**	**12 35 43.8**	**+0.1**
	SNR=7.9						
EMIN				Lg	Lg	12 36 02.5	
	2.4nm,0.2s,SNR=7.8						
EMIN	**Mina Concepcio**	**1.43**	**135**	Pg	**Pn**	**12 35 43.8**	**+0.1**
	SNR=7.9						
EMIN				Lg	Lg	12 36 02.5	
	2.4nm,0.2s,SNR=7.8						
PBDV	**Barranco-do-Ve**	**1.54**	**179**	*e*S	**Sn**	**12 36 05.5**	**+0.2**
PBDV				A	A	12 36 09.3	
	5.3nm,0.5s						
PBDV	**Barranco-do-Ve**	**1.54**	**179**	Lg	Lg	12 36 05.5	
	5.3nm,0.5s						
PBDV	**Barranco-do-Ve**	**1.54**	**179**	*e*S	**Sn**	**12 36 05.5**	**+0.2**
PBDV				Lg	Lg	12 36 05.5	
	5.3nm,0.5s						
PFVI	**Vila Bisbo**	**1.79**	**203**	Lg	Lg	12 36 13.4	
	1.9nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**1.79**	**203**	Lg	Lg	12 36 13.4	
	1.9nm,0.2s,SNR=7.9						

*DDA **16** 12:42:36.9,38.°70N×36.'09E,h5km,MD2.5*
*ISCJB **16** 12:42:37.4±0.5,38.°70N±0.'04×36.'08E±0.'03,h0km, Error ellipse: s-maj=5.8km s-min=3.4km az=24.4*
*ISK **16** 12:42:37.0,38.°71N×36.'11E,h9km,MD2.6*
*CSEM **16** 12:42:37.4±0.4,38.°71N×36.'09E,h2km,MD2.5, Error ellipse: s-maj=9.8km s-min=6.9km az=13.0*

ISC 16 12:42:37.6±0.8,38.°71N±0.'03×36.'10E±0.'02,h0km,n20, σ0$60/33,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PINB	**Pinarbasi**	**0.24**	**98**	*i* P	**Pg**	**12 42 41.6**	**-0.5**
PINB				*i* S	**Sg**	**12 42 45.1**	**-0.1**
PINB	**Pinarbasi**	**0.24**	**98**	*i* P	**Pg**	**12 42 41.6**	**-0.5**
PINB				*i* S	**Sg**	**12 42 45.1**	**-0.1**
BNN	**Bunyan**	**0.24**	**306**	PG	**Pg**	**12 42 42.3**	**0.0**
BNN				*e*SG	**Sg**	**12 42 46.9**	**+1.5**
SARI	**SarD1z-Kayseri**	**0.39**	**140**	*e*PG	**Pg**	**12 42 44.9**	**-0.1**
SARI				*e*SG	**Sg**	**12 42 51.2**	**+1.1**
SARI	**SarD1z-Kayseri**	**0.39**	**140**	*e*Pg	**Pg**	**12 42 44.9**	**-0.1**
SARI				*e*Sg	**Sg**	**12 42 51.2**	**+1.1**
AVNT	**Avonos**	**0.98**	**275**	*e*P	**Pg**	**12 42 55.8**	**-0.5**
AVNT				*i* S	**Sg**	**12 43 09.3**	**+0.3**
AVNT	**Avonos**	**0.98**	**275**	*e*P	**Pg**	**12 42 55.8**	**-0.5**
AVNT				*i* S	**Sg**	**12 43 09.3**	**+0.3**
DARE	**Darende-Malaty**	**1.09**	**97**	*e*PN	**Pg**	**12 42 58.1**	**-0.4**
ANDN	**Andirin**	**1.14**	**170**	*e*P	**Pb**	**12 43 00.3**	**0.0**
ANDN				*e*S	**Sb**	**12 43 15.4**	**-0.3**
ANDN	**Andirin**	**1.14**	**170**	*e*P	**Pb**	**12 43 00.3**	**0.0**
ANDN				*e*S	**Sb**	**12 43 15.4**	**-0.3**
KOZT	**Kozan**	**1.25**	**190**	*e*PN	**Pg**	**12 43 00.9**	**-0.5**
KOZT	**Kozan**	**1.25**	**190**	*e*Pn	**Pg**	**12 43 00.9**	**-0.5**
SVSK	**Karacayir**	**1.39**	**30**	*e*PN	**Pn**	**12 43 03.4**	**-0.8**
SVSK	**Karacayir**	**1.39**	**30**	*e*Pn	**Pn**	**12 43 03.4**	**-0.8**
AKCD	**Akcadag**	**1.49**	**106**	*e*P	**Pg**	**12 43 06.0**	**-0.1**
AKCD				*e*S	**Sn**	**12 43 26.8**	**+0.9**
AKCD	**Akcadag**	**1.49**	**106**	*e*P	**Pg**	**12 43 06.0**	**-0.1**
AKCD				*e*S	**Sn**	**12 43 26.8**	**+0.9**
CORM	**Corum**	**1.86**	**323**	*e*PN	**Pn**	**12 43 10.2**	**-0.6**
CORM	**Corum**	**1.86**	**323**	*e*Pn	**Pn**	**12 43 10.2**	**-0.6**
KEMA	**Kemaliye**	**1.95**	**73**	*i* P	**Pb**	**12 43 13.9**	**0.0**
KEMA				*i* S	**Sb**	**12 43 39.1**	**+0.3**
KEMA	**Kemaliye**	**1.95**	**73**	*i* P	**Pb**	**12 43 13.9**	**0.0**
KEMA				*i* S	**Sb**	**12 43 39.1**	**+0.3**

*BJI **16** 12:52:10.7,20.°80S×66.'40W,h224km,mB4.9/5*
*ISCJB **16** 12:52:12.5±0.3,20.°73S±0.'04×66.'57W±0.'05,h233km, mb4.2/31,Error ellipse: s-maj=6.5km s-min=5.2km az=12.5*
*NEIC **16** 12:52:13.6±0.6,20.°72S×66.'57W,h229km±6km,mb4.4/19, Error ellipse: s-maj=8.7km s-min=7.2km az=83.0*
*IDC **16** 12:52:13.3±0.7,20.°64S×66.'61W,h229km±7km,mb3.8/12, mb1 4.0/17,mb1mx3.9/23,mbtmp3.8/17, Error ellipse: s-maj=11.9km s-min=8.8km az=91.0*

ISC 16 12:52:13.0±0.4,20.79S±0.°05×66.60W±0.'06,h233km, n318,σ1$18/338,mb4.3/31,130C-111D,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.81**	**229**	*e*Pn	**Pn**	**12 53 04.2**	**+1.5**
LVC				*e*Sn	**S**	**12 53 42.1**	**+0.5**
LVC				S	S	12 53 42.7	+1.0
LVC	**Limon Verde**	**2.81**	**229**	P	**Pn**	**12 53 04.1**	**+1.5**
	75nm,0.3s,baz=38,slow=9.6,SNR=333						
LVC				S	**S**	**12 53 42.7**	**+1.1**
	55nm,0.3s,baz=264,slow=18,SNR=24						
LPAZ	**La Paz**	**4.71**	**342**	*e*Pn	**Pn**	**12 53 25.8**	**+0.4**
LPAZ				*e*Sn	**S**	**12 54 20.6**	**-1.9**
LPAZ	**La Paz**	**4.71**	**342**	P	**Pn**	**12 53 25.6**	**+0.2**
	4.6nm,0.3s,baz=174,slow=15,SNR=83						
LPAZ				S	**S**	**12 54 20.6**	**-1.9**
	2.6nm,0.3s,baz=308,slow=16,SNR=21						
SIV	**San Ignacio**	**7.09**	**49**	P	**Pn**	**12 53 54.3**	**-0.5**
SIV				S	**S**	**12 55 12.1**	**-4.2**
SIV	**San Ignacio**	**7.09**	**49**	P	**Pn**	**12 53 54.3**	**-0.5**
	8.1nm,0.3s,baz=246,slow=14,SNR=145						
SIV				S	**S**	**12 55 12.1**	**-4.2**
	0.4nm,0.3s,baz=311,slow=20,SNR=7.5						
LCO	**Las Campanas**	**8.99**	**204**	*e*Pn	**Pn**	**12 54 18.3**	**-0.8**
LCO				*e*Sn	**S**	**12 55 57.4**	**-3.4**
CPUP	**Villa Florida**	**10.13**	**125**	P	**Pn**	**12 54 35.3**	**+1.8**
CPUP	**Villa Florida**	**10.13**	**125**	P	**Pn**	**12 54 35.3**	**+1.8**
	0.5nm,0.3s,baz=294,slow=14,SNR=9.3						
CFAA	**Coronel Fontan**	**10.87**	**187**	P	**Pn**	**12 54 43.5**	**+0.7**
CFAA				S	**S**	**12 56 38.7**	**-5.9**
CFAA	**Coronel Fontan**	**10.87**	**187**	P	**Pn**	**12 54 43.5**	**+0.7**
	0.2nm,0.3s,baz=9.7,slow=12,SNR=13						
CFAA				S	**S**	**12 56 38.7**	**-5.9**
	0.3nm,0.3s,baz=280,slow=19,SNR=7.0						
SAML	**Samuel**	**12.23**	**16**	*e*Pn	**Pn**	**12 54 59.3**	**-0.7**
SAML				*e*Sn	**S**	**12 57 17.8**	**+2.3**
NNA	**Nana**	**13.15**	**310**	S	S	12 57 30.8	-6.5
	2.3nm,0.3s,baz=218,slow=17,SNR=3.5						
BDFB	**Brasilia**	**18.38**	**77**	P	**P**	**12 56 12.7**	**+1.6**
BDFB	**Brasilia**	**18.38**	**77**	P	**P**	**12 56 12.7**	**+1.6**
	1.6nm,0.3s,baz=246,slow=11,SNR=16						
PLCA	**Paso Flores**	**20.16**	**189**	P	Pn	12 56 33.6	-1.4
PLCA	**Paso Flores**	**20.16**	**189**	P	Pn	12 56 33.6	-1.4
	14nm,0.7s,baz=8.2,slow=13,SNR=22						
RCBR	**Riachuelo**	**33.28**	**68**	*e*P	**P**	**12 58 30.0**	**+1.0**
	27nm,0.8s						
631A	**Perdido Creek**	**59.69**	**326**	⇑P	**P**	**13 01 52.8**	**-0.4**
	baz=60						
532A	**Rocksprings**	**59.91**	**327**	⇑P	**P**	**13 01 54.7**	**0.0**
	baz=60						
WVT	**Waverly**	**60.07**	**340**	*e*P	**P**	**13 01 53.9**	**-1.7**
	8.6nm,0.8s						
JCT	**Junction City**	**60.14**	**327**	⇑P	**P**	**13 01 56.2**	**-0.1**
	baz=60						
WHTX	**Lake Whitney**	**60.23**	**330**	⇓P	**P**	**13 01 57.2**	**+0.5**
	baz=60						
531A	**Rocksprings**	**60.28**	**326**	⇑P	**P**	**13 01 57.2**	**0.0**
	baz=60,SNR=6.8						
432A	**Menard**	**60.46**	**327**	⇓P	**P**	**13 01 58.0**	**-0.4**
	baz=61						
530A	**J-C Ranch, Com**	**60.68**	**326**	⇓P	**P**	**13 01 59.7**	**-0.2**
	baz=61,SNR=6.4						
431A	**Sonora**	**60.72**	**326**	⇓P	**P**	**13 01 59.9**	**-0.4**
	baz=61						
332A	**Millersview**	**60.84**	**328**	⇑P	**P**	**13 02 00.6**	**-0.4**
	baz=61,SNR=5.5						
628A	**Black Gap, Mar**	**61.00**	**324**	⇓P	**P**	**13 02 02.3**	**+0.2**
	baz=61,SNR=10.0						
331A	**San Angelo**	**61.13**	**327**	⇑P	**P**	**13 02 02.7**	**-0.3**
	baz=61						
430A	**Baggett Ranch,**	**61.13**	**326**	⇓P	**P**	**13 02 02.9**	**-0.1**
	baz=61						
529A	**Stev Forest Ra**	**61.13**	**325**	⇑P	**P**	**13 02 02.9**	**-0.1**
	baz=61,SNR=6.4						
232A	**Coleman**	**61.20**	**328**	⇑P	**P**	**13 02 03.0**	**-0.4**
	baz=61						
627A	**Terlingua Ranc**	**61.25**	**323**	⇑P	**P**	**13 02 03.7**	**-0.2**
	baz=61,SNR=6.4						
TXAR	**Lajitas Array**	**61.32**	**323**	P	**P**	**13 02 03.8**	**-0.5**
TXAR	**Lajitas Array**	**61.32**	**323**	P	**P**	**13 02 03.8**	**-0.5**
	1.1nm,0.7s,baz=143,slow=7.9,SNR=16						
429A	**Davenport Ranc**	**61.35**	**325**	⇑P	**P**	**13 02 04.3**	**-0.1**
	baz=62,SNR=7.0						
528A	**Cox Ranch, San**	**61.47**	**324**	⇑P	**P**	**13 02 04.9**	**-0.4**
	baz=62						
231A	**Bronte**	**61.58**	**328**	⇓P	**P**	**13 02 05.6**	**-0.3**
	baz=62						
330A	**Mertzon**	**61.59**	**327**	⇑P	**P**	**13 02 05.6**	**-0.4**
	baz=62						
626A	**Big Bend Ranch**	**61.75**	**323**	⇓P	**P**	**13 02 07.4**	**+0.2**
	baz=62,SNR=11						
428A	**Kincaid Ranch,**	**61.85**	**325**	⇓P	**P**	**13 02 07.7**	**-0.2**
	baz=62						
527A	**Woodward Ranch**	**61.91**	**324**	⇓P	**P**	**13 02 08.0**	**-0.3**
	baz=62						
329A	**Wagon Wheel Ra**	**62.07**	**326**	⇓P	**P**	**13 02 08.9**	**-0.4**
	baz=62,SNR=5.4						
526A	**Mary Lane Ranc**	**62.11**	**323**	⇑P	**P**	**13 02 09.7**	**+0.1**
	baz=62,SNR=7.8						
131A	**Roby**	**62.21**	**328**	⇓P	**P**	**13 02 10.0**	**-0.1**
	baz=62						
SNAA	**Sanae**	**62.25**	**161**	*e*P	**P**	**13 02 12.1**	**+2.2**
Z32A	**Haskell**	**62.28**	**329**	⇓P	**P**	**13 02 10.5**	**0.0**
	baz=62						
427A	**Hayter Ranch,**	**62.34**	**324**	⇓P	**P**	**13 02 10.7**	**-0.4**
	baz=62,SNR=5.7						
328A	**Wristen Ranch,**	**62.43**	**325**	⇑P	**P**	**13 02 11.6**	**0.0**
	baz=63						
130A	**Snyder**	**62.43**	**327**	⇑P	**P**	**13 02 11.1**	**-0.4**
	baz=63						
426A	**McDonald Obser**	**62.54**	**324**	⇓P	**P**	**13 02 11.9**	**-0.6**
	baz=63						
Z31A	**Sharp Cattle R**	**62.61**	**329**	⇑P	**P**	**13 02 12.4**	**-0.3**
	baz=63						
228A	**UT Block 9, Go**	**62.89**	**326**	⇑P	**P**	**13 02 14.5**	**-0.2**
	baz=63						
129A	**Stewart Farms,**	**62.92**	**327**	⇑P	**P**	**13 02 14.7**	**-0.2**
	baz=63						
326A	**Caldwell Ranch**	**63.01**	**324**	⇑P	**P**	**13 02 15.2**	**-0.2**
	baz=63						
Z30A	**Sanderson Ranc**	**63.07**	**328**	⇑P	**P**	**13 02 15.5**	**-0.2**
	baz=63						
425A	**Indio Mountain**	**63.16**	**323**	⇑P	**P**	**13 02 16.2**	**-0.3**
	baz=63,SNR=7.5						
227A	**Bennet, Jal**	**63.18**	**325**	⇓P	**P**	**13 02 16.3**	**-0.2**
	baz=63						
Y31A	**Rekieta Farm,**	**63.19**	**329**	⇑P	**P**	**13 02 16.6**	**+0.1**
	baz=63						
128A	**Castleberry Fa**	**63.23**	**326**	⇓P	**P**	**13 02 16.6**	**-0.2**
	baz=63						
Z29A	**Hungry Hill Ra**	**63.34**	**327**	⇓P	**P**	**13 02 17.3**	**-0.3**
	baz=64						
325A	**Bean Ranch, Si**	**63.60**	**324**	⇓P	**P**	**13 02 19.1**	**-0.4**
	baz=64,SNR=15						
X31A	**McDonald Ranch**	**63.60**	**330**	⇑P	**P**	**13 02 18.9**	**-0.3**
	baz=64,SNR=6.6						
226B	**Tecolote Peak,**	**63.70**	**325**	⇑P	**P**	**13 02 20.2**	**+0.2**
	baz=64,SNR=6.0						
Z28A	**Tucker Farm, M**	**63.70**	**327**	⇓P	**P**	**13 02 19.9**	**-0.1**
	baz=64						
X30A	**Coker Ranch, T**	**63.88**	**329**	⇑P	**P**	**13 02 20.6**	**-0.4**
	baz=64						
324A	**Moseley Ranch,**	**63.94**	**323**	⇓P	**P**	**13 02 20.6**	**-1.0**
	baz=64,SNR=9.5						
W31A	**Holland Ranch,**	**64.03**	**330**	⇑P	**P**	**13 02 21.8**	**-0.2**
	baz=64						
126A	**Clayton Basin,**	**64.06**	**325**	⇑P	**P**	**13 02 22.1**	**-0.2**
	baz=64						
MNTX	**Cornudas Mount**	**64.07**	**324**	*e*P	**P**	**13 02 21.5**	**-0.8**
	37nm,2.1s						
225A	**Deer Hill, Car**	**64.08**	**324**	⇑P	**P**	**13 02 22.3**	**-0.3**
	baz=64						
Y28A	**McKinney Farm,**	**64.12**	**327**	⇑P	**P**	**13 02 22.2**	**-0.5**
	baz=64						
Z27A	**Tatum**	**64.15**	**326**	⇑P	**P**	**13 02 22.2**	**-0.7**
	baz=64,SNR=6.5						
125A	**Gardner Draw,**	**64.41**	**325**	⇑P	**P**	**13 02 24.1**	**-0.5**
	baz=65						
224A	**Cornudas Mount**	**64.44**	**324**	⇑P	**P**	**13 02 24.3**	**-0.5**
	baz=65,SNR=8.9						
MSTX	**Muleshoe**	**64.44**	**327**	⇓P	**P**	**13 02 24.0**	**-0.7**
	baz=65,SNR=6.4						
V31A	**Spring Creek L**	**64.47**	**330**	⇓P	**P**	**13 02 24.8**	**0.0**
	baz=65						
Z26A	**Caprock**	**64.52**	**326**	⇑P	**P**	**13 02 24.7**	**-0.6**
	baz=65,SNR=5.2						
Y27A	**Causey**	**64.57**	**327**	⇑P	**P**	**13 02 24.9**	**-0.7**
	baz=65,SNR=5.0						
W29A	**Amraillo**	**64.79**	**329**	⇑P	**P**	**13 02 27.0**	**0.0**
	baz=65						
124A	**Stringfield Ra**	**64.87**	**324**	⇓P	**P**	**13 02 27.5**	**-0.3**
	baz=65,SNR=6.1						
Z25A	**Roswell**	**64.92**	**325**	⇑P	**P**	**13 02 27.8**	**0.0**
	baz=65						
Y26A	**Elida**	**64.94**	**326**	⇓P	**P**	**13 02 28.0**	**0.0**
	baz=65						
Z24A	**Sheeppen Canyo**	**65.30**	**325**	⇑P	**P**	**13 02 30.1**	**-0.4**
	baz=66,SNR=7.1						
Y25A	**Mesa, Roswell**	**65.40**	**326**	⇓P	**P**	**13 02 30.5**	**-0.5**
	baz=66,SNR=8.3						
X26A	**CR and CF Fran**	**65.

S26A	Kim baz=68,SNR=8.8	67.67	329	⇑P	P	13 02 45.8 +0.6
T25A	Trinidad baz=68,SNR=5.2	67.75	328	⇑P	P	13 02 46.4 +0.6
X20A	Quemado baz=68,SNR=5.6	67.93	323	⇓P	P	13 02 48.2 +1.1
V22A	San Miguel Ran baz=68	68.09	326	⇓P	P	13 02 48.8 +0.7
S25A	Robets Cordova baz=68,SNR=11	68.17	328	⇑P	P	13 02 49.1 +0.6
R26A	Arlington baz=68	68.20	329	⇑P	P	13 02 49.0 +0.4
W20A	Ramah baz=69,SNR=8.1	68.36	324	⇑P	P	13 02 50.6 +0.9
KSCO	Kaye Shedlock' baz=69	68.39	330	⇑P	P	13 02 50.6 +0.9
V21A	Milan baz=69	68.40	325	⇑P	P	13 02 50.7 +0.8
R25A	Fountain Ranch baz=69	68.48	329	⇓P	P	13 02 51.0 +0.7
T23A	Casias Ranch, baz=69	68.49	327	⇓P	P	13 02 51.3 +0.7
S24A	Houchin Ranch, baz=69,SNR=5.7	68.54	328	⇓P	P	13 02 51.9 +1.0
X18A	Snowflake baz=69	68.74	323	⇑P	P	13 02 53.1 +1.1
V20A	Brimhall baz=69	68.84	324	⇑P	P	13 02 53.5 +0.8
U21A	Nageezi baz=69	68.87	325	⇑P	P	13 02 53.7 +0.8
T22A	Edith baz=69,SNR=5.3	68.92	326	⇑P	P	13 02 54.4 +1.2
W18A	Petrified Fore baz=69	69.04	323	⇓P	P	13 02 54.8 +1.0
U20A	Newcomb baz=70,SNR=5.9	69.30	325	⇑P	P	13 02 56.2 +0.8
S22A	4UR Ranch, Cre baz=70	69.44	327	⇓P	P	13 02 57.0 +0.6
P25A	Willow Gulch B baz=70	69.50	330	⇑P	P	13 02 57.8 +1.2
X16A	Lo Mia Camp, P baz=70,SNR=7.9	69.52	322	⇑P	P	13 02 58.0 +1.2
Q24A	Divide baz=70,SNR=6.3	69.54	329	⇑P	P	13 02 57.7 +0.7
OGNE	Ogallala baz=70	69.69	332	⇑P	P	13 02 58.6 +1.1
113A	Mohawk Valley, baz=70	69.76	319	⇑P	P	13 02 59.0 +1.0
R22A	Saguache, Gunn baz=70	69.77	327	⇑P	P	13 02 59.8 +1.3
ECSD	EROS Data Cent 7.0nm,1.3s	69.86	337	*e*P	P	13 02 58.0 -0.5
S21A	Coal Bank Pass baz=70	69.87	326	⇓P	P	13 03 00.1 +1.1
Y14A	Wickenburg baz=70	70.10	320	⇑P	P	13 03 01.7 +1.5
WUAZ	Wupatki 8.0nm,0.9s	70.26	322	*e*P	P	13 03 02.6 +1.3
WUAZ	Wupatki baz=70,SNR=7.3	70.26	322	⇑P	P	13 03 02.7 +1.4
R21A	Cimarron baz=70	70.28	327	⇓P	P	13 03 02.5 +1.1
S20A	Disappointment baz=70,SNR=5.8	70.30	326	⇑P	P	13 03 02.9 +1.4
ISCO	Idaho Springs 4.4nm,1.3s	70.42	329	*e*P	P	13 03 03.4 +1.1
ISCO	Idaho Springs baz=71	70.42	329	⇑P	P	13 03 03.4 +1.1
K29A	Lazy Trails An baz=71	70.46	334	⇓P	P	13 03 02.9 +0.7
R20A	Redvale baz=71	70.57	326	⇓P	P	13 03 04.5 +1.3
GLA	Glamis baz=71	70.61	318	⇑P	P	13 03 04.6 +1.3
PV01	Paradox Valley 572nm,1.0s	70.63	326	*e*P	P	13 03 05.0 +1.5
Q21A	Lamborn Mesa, baz=71	70.65	327	⇓P	P	13 03 04.7 +1.2
P22A	Eagle baz=71	70.82	328	⇑P	P	13 03 05.8 +1.1
O23A	Lake Granby, G baz=71	70.89	329	⇓P	P	13 03 06.2 +1.1
S18A	Hurst Farm, Bl baz=71,SNR=16	71.06	325	⇓P	P	13 03 07.5 +1.3
P21A	Newcastle baz=71,SNR=5.3	71.11	328	⇑P	P	13 03 07.7 +1.3
O22A	Kremmling baz=71,SNR=8.5	71.15	329	⇓P	P	13 03 07.2 +0.5
M24A	Cheyenne baz=72	71.36	331	⇑P	P	13 03 08.8 +1.0
BC3	Big Chuckawall baz=72	71.40	318	⇑P	P	13 03 09.0 +0.9
U15A	North Rim baz=72,SNR=14	71.43	322	⇓P	P	13 03 10.0 +1.6
W13A	Hualapai Mount baz=72,SNR=6.1	71.43	321	⇓P	P	13 03 09.6 +1.2
N23A	Red Feather La baz=72	71.43	330	⇓P	P	13 03 09.4 +1.0
IRM	Iron Mountain baz=72	71.55	319	⇑P	P	13 03 10.0 +1.1
N22A	Wattenberg Ran baz=72	71.60	329	⇑P	P	13 03 10.6 +1.2
M23A	Laramie baz=72	71.77	330	⇑P	P	13 03 11.4 +1.1
P19A	Cripple Cowboy baz=72,SNR=14	71.97	327	⇓P	P	13 03 12.4 +0.9
O20A	White River Ci baz=72	71.97	328	⇓P	P	13 03 12.5 +1.0
BELC	Belle Mtn. Jos baz=72	71.97	318	⇑P	P	13 03 12.5 +1.0
PFO	Pinyon Flat Ob baz=72	72.00	318	⇓P	P	13 03 12.6 +1.0
N21A	Black Mountain baz=72	72.09	328	⇑P	P	13 03 13.2 +1.1
GMRC	Granite Mounta baz=72	72.28	319	⇓P	P	13 03 14.5 +1.2
SRU	San Rafael baz=73,SNR=14	72.38	326	⇓P	P	13 03 14.5 +0.6
N20A	Spence Gulch, baz=73,SNR=5.6	72.51	328	⇓P	P	13 03 15.4 +0.7
Q16A	Castle Valley baz=73	72.59	325	⇓P	P	13 03 16.1 +1.0
M21A	Separation Pea baz=73	72.66	329	⇓P	P	13 03 16.4 +0.9
K23A	Bowen Ranch, D baz=73	72.74	331	⇑P	P	13 03 16.8 +0.9
CCUT	Cedar City 9.0nm,0.8s	72.82	323	*e*P	P	13 03 18.6 +2.0
MSU	Marysvale	72.84	324	*e*P	P	13 03 18.2 +1.6
L21A	Rawlins baz=73,SNR=8.1	72.94	329	⇑P	P	13 03 17.6 +0.5
M20A	Sweetwater, Wa baz=73	72.97	329	⇓P	P	13 03 18.1 +0.8
ARUT	Antelope Range 8.4nm,0.8s	73.03	323	*e*P	P	13 03 19.7 +1.9
K22A	Casper baz=73	73.07	330	⇑P	P	13 03 18.6 +0.8
BFSC	Mount Baldy Ra baz=73	73.17	318	⇑P	P	13 03 19.3 +0.8
I24A	Kuemmerle Ranc baz=73	73.17	332	⇓P	P	13 03 19.4 +1.1
K21A	Alcova baz=74,SNR=9.8	73.39	330	⇑P	P	13 03 20.6 +0.9
L20A	Wamsutter baz=74	73.44	329	⇓P	P	13 03 20.9 +0.8
J22A	Midwest baz=74,SNR=6.5	73.64	331	⇑P	P	13 03 21.4 +0.3
DAU	Daniels Canyon	73.72	326	*e*P	P	13 03 23.6 +1.8
EDW2	Edwards Air Fo baz=74	73.79	318	⇑P	P	13 03 22.4 +0.4
H24A	Dirks Ranch, A baz=74,SNR=6.8	73.85	333	⇓P	P	13 03 22.2 0.0
K20A	Yellowstone Ra baz=74	73.93	329	⇑P	P	13 03 23.3 +0.4
JLU	Jordanelle 6.8nm,0.8s	73.96	326	*e*P	P	13 03 24.8 +1.6
LRMC	Laurel Mountai baz=74	73.99	319	⇑P	P	13 03 24.0 +0.7
L19A	Farson baz=74	74.00	328	⇓P	P	13 03 24.0 +0.7
I22A	9 Mile Ranch, baz=74,SNR=5.4	74.02	331	⇑P	P	13 03 23.6 +0.3
FURC	Furnace Creek, baz=74	74.14	320	⇑P	P	13 03 25.0 +1.1
MPMC	Manual Prospec baz=74	74.25	319	⇓P	P	13 03 25.4 +0.5
G24A	Alzada baz=74	74.25	333	⇑P	P	13 03 24.8 +0.2
K19A	Absolon Red Bu baz=74	74.30	329	⇑P	P	13 03 25.1 +0.1
I21A	Big Trails, Te baz=74,SNR=9.4	74.33	331	⇑P	P	13 03 25.3 +0.2
J20A	Shoshoni baz=75	74.34	330	⇓P	P	13 03 25.9 +0.7
DUG	Dugway 4.1nm,0.9s	74.39	325	*e*P	P	13 03 27.2 +1.7
DUG	Dugway baz=75	74.39	325	⇓P	P	13 03 26.3 +0.8
MDND	Maddock baz=75	74.47	338	⇑P	P	13 03 26.5 +0.9
H22A	Clearmont baz=75	74.51	332	⇑P	P	13 03 26.8 +0.7
G23A	Biddle baz=75	74.57	333	⇑P	P	13 03 27.1 +0.8
ISA	Isabella 5.3nm,0.8s	74.60	318	*e*P	P	13 03 28.5 +1.8
ISA	Isabella baz=75,SNR=5.5	74.60	318	⇓P	P	13 03 28.1 +1.4
PDAR	Pinedale Array	74.60	329	P	P	13 03 27.0 +0.2
PDAR	Pinedale Array 1.1nm,0.6s,baz=130,slow=8.4,SNR=10	74.60	329	P	P	13 03 27.0 +0.2
R11A	Troy Canyon, C baz=75	74.64	322	⇑P	P	13 03 28.3 +1.2
F24A	Ekalaka baz=75	74.68	334	⇓P	P	13 03 27.7 +0.7
J19A	Crowheart baz=75,SNR=5.8	74.73	329	⇑P	P	13 03 28.1 +0.7
I20A	Worland baz=75	74.82	330	⇓P	P	13 03 28.6 +0.8
H21A	Big Horn, Sher baz=75	74.84	331	⇑P	P	13 03 28.4 +0.4
CWC	Cottonwood Cre baz=75	74.86	319	⇓P	P	13 03 29.0 +0.6
PKM	Peak Mountain baz=75	74.95	317	⇓P	P	13 03 29.6 +0.7
G22A	Birney baz=75	74.97	332	⇑P	P	13 03 29.0 +0.3
F23A	Volborg baz=75	74.99	333	⇑P	P	13 03 29.1 +0.3
TOA0	Torodi Ar. Sit	75.09	69	*e*P	P	13 03 29.2 -0.7
TORD	Torodi Ar. Bea	75.09	69	P	P	13 03 29.2 -0.7
TORD				pP	pP	13 04 27.0 +2.2
TORD	Torodi Ar. Bea 7.0nm,0.6s,baz=252,slow=5.7,SNR=48	75.09	69	P	P	13 03 29.2 -0.7
TORD				pP	pP	13 04 27.0 +2.2
	3.4nm,0.9s,baz=250,slow=6.6,SNR=5.9					
VES	Vestal, Richgr baz=75	75.09	318	⇓P	P	13 03 30.0 +0.6
H20A	Greybull baz=75	75.17	331	⇓P	P	13 03 30.1 +0.3
I19A	Meeteetse baz=76	75.29	330	⇑P	P	13 03 31.3 +0.7
ULM	Lac du Bonnet	75.32	341	P	P	13 03 29.6 -0.8
ULM	Lac du Bonnet 3.3nm,0.5s,baz=168,slow=6.3,SNR=3.8	75.32	341	P	P	13 03 29.6 -0.8
I18A	Diamond G Ranc baz=76	75.43	329	⇑P	P	13 03 32.3 +0.8
D24A	Glendive baz=76	75.66	334	⇓P	P	13 03 33.0 +0.6
LOHW	Long Hollow 22nm,1.8s	75.74	329	*e*P	P	13 03 34.5 +1.3
H19A	Powell baz=76	75.76	330	⇑P	P	13 03 33.7 +0.5
G20A	Bridger baz=76	75.83	331	⇑P	P	13 03 33.9 +0.3
RRI2	Red Ridge 11nm,1.2s	75.90	328	*e*P	P	13 03 35.3 +1.1
MOOW	Moose Ponds 8.4nm,1.4s	75.91	329	*e*P	P	13 03 35.3 +1.1
H18A	Shoshone NF, C baz=76	76.09	330	⇑P	P	13 03 35.6 +0.4
IMW	Indian Meadow 6.2nm,0.8s	76.11	329	*e*P	P	13 03 36.9 +1.4
NVAR	Mina Array Bea	76.29	321	P	P	13 03 37.5 +1.1
NVAR	Mina Array Bea 1.7nm,0.8s,baz=153,slow=6.1,SNR=15	76.29	321	P	P	13 03 37.5 +1.1
H17A	Grant Village baz=76	76.31	329	⇓P	P	13 03 37.6 +1.1
E21A	Keefer Ranch, baz=77	76.35	333	⇓P	P	13 03 37.8 +1.4
I16A	Newdale baz=77	76.37	328	⇓P	P	13 03 37.7 +1.0
D22A	Dahagen baz=77	76.45	333	⇑P	P	13 03 37.8 +0.9
G18A	Lazy EL Ranch, baz=77	76.52	330	⇑P	P	13 03 38.1 +0.6
F19A	Roth Farm, Mol baz=77	76.64	331	⇓P	P	13 03 39.0 +0.8
DGMT	Dagmar baz=77	76.70	335	⇓P	P	13 03 39.3 +1.0
D21A	La Casta Ranch baz=77	76.72	333	⇑P	P	13 03 39.4 +0.9
E20A	Meyer Farm, Mu baz=77,SNR=5.6	76.78	332	⇓P	P	13 03 39.4 +0.6
C22A	Vida baz=77	76.80	334	⇑P	P	13 03 39.7 +0.9
H16A	Russell Place, baz=77	76.86	329	⇓P	P	13 03 40.3 +0.8
F18A	Big Timber baz=77	77.03	331	⇓P	P	13 03 40.9 +0.5
E19A	Rath Farm, Rou baz=77,SNR=7.8	77.04	332	⇓P	P	13 03 40.7 +0.4
D20A	Manuel Ranch, baz=77	77.24	332	⇓P	P	13 03 41.9 +0.6
I14A	Mackay baz=78,SNR=5.0	77.38	327	⇓P	P	13 03 43.9 +1.5
F17A	Fitzpatrick Pl baz=78	77.47	330	⇑P	P	13 03 44.0 +1.2
HLID	Hailey baz=78,SNR=9.8	77.62	327	⇑P	P	13 03 45.3 +1.6
D19A	Cripps Ranch, baz=78	77.62	332	⇓P	P	13 03 44.1 +0.6
E18A	Harlowton baz=78	77.62	331	⇓P	P	13 03 43.9 +0.3
C20A	Veseth Ranch, baz=78	77.66	333	⇑P	P	13 03 44.2 +0.5
A22A	Carney Farms, baz=78	77.80	335	⇑P	P	13 03 44.8 +0.4
B21A	Ellsworth Farm baz=78	77.80	334	⇑P	P	13 03 45.1 +0.7
VNDA	Vanda	77.91	190	P	P	13 03 46.6 +2.0
VNDA	Vanda 0.5nm,0.8s,baz=140,slow=3.7,SNR=3.8	77.91	190	P	P	13 03 46.6 +2.0
E17A	Martinsdale baz=78	77.98	330	⇓P	P	13 03 46.3 +0.7
D18A	Linhart Farms, baz=78	78.05	331	⇓P	P	13 03 46.4 +0.5
C19A	Slack Wire Ran baz=78	78.13	332	⇓P	P	13 03 46.7 +0.5
B20A	Solberg Farm, baz=78	78.23	333	⇓P	P	13 03 47.2 +0.4
MFID	Camas Ranch baz=78	78.25	326	⇑P	P	13 03 48.0 +0.9
F15A	Butte baz=78	78.29	329	⇓P	P	13 03 48.0 +0.6
D17A	Six Diamond Ra baz=79	78.42	331	⇓P	P	13 03 48.7 +0.7
B19A	Brinkman Farms baz=79	78.63	333	⇑P	P	13 03 49.5 +0.6
EGMT	Eagleton baz=79	78.66	332	⇑P	P	13 03 49.7 +0.5
D16A	Dana Ranch, Ca baz=79,SNR=8.6	78.72	330	⇓P	P	13 03 50.3 +0.7
A19A	Klindworth Far baz=79	78.91	333	⇓P	P	13 03 51.0 +0.5
B18A	Beardsley Farm baz=79	78.95	332	⇑P	P	13 03 51.4 +0.7
D15A	Lincoln baz=79	79.18	330	⇑P	P	13 03 53.0 +0.9
G12A	Big Creek, Yel baz=79	79.18	327	⇑P	P	13 03 52.9 +0.7
C16A	Fuhringer Ranc baz=80	79.38	331	⇓P	P	13 03 53.6 +0.5
C15A	Salmond Ranch, baz=80	79.75	330	⇑P	P	13 03 55.9 +0.8
A17A	Triple J Farms baz=80	79.76	332	⇓P	P	13 03 55.4 +0.3
BMO	Blue Mountains 8.1nm,1.4s	80.01	326	*e*P	P	13 03 57.9 +1.3
D13A	Huson baz=80	80.14	329	⇓P	P	13 03 57.8 +0.7
E12A	Beaver Dam Sad baz=80	80.20	328	⇑P	P	13 03 58.1 +0.5
C13A	Hot Springs baz=81	80.61	329	⇓P	P	13 04 00.4 +0.8
BSMT	Bassoo Peak	80.83	329	*e*P	P	13 04 02.0 +1.0
YBH	Yreka Blue Hor	81.00	321	P	P	13 04 00.8 -1.1
YBH	Yreka Blue Hor 0.7nm,0.7s,baz=117,slow=9.0,SNR=3.2	81.00	321	P	P	13 04 00.8 -1.1
B13A	Whitefish baz=81	81.05	330	⇑P	P	13 04 02.5 +0.6
BOSA	Boshof	81.87	117	P	P	13 04 08.0 +1.1
BOSA	Boshof 4.2nm,1.0s,baz=225,slow=4.3,SNR=4.0	81.87	117	P	P	13 04 08.0 +1.1
MAW	Mawson	84.38	163	P	P	13 04 20.6 +1.9
MAW	Mawson 1.0nm,0.8s,baz=234,slow=5.4,SNR=12	84.38	163	P	P	13 04 20.6 +1.9
YKA	Yellowknife Ar	91.25	340	P	P	13 04 51.4 0.0
YKA	Yellowknife Ar 1.7nm,0.6s,baz=128,slow=4.4,SNR=41	91.25	340	P	P	13 04 51.4 0.0
ASAR	Alice Springs	131.51	205	PKP	PKPdf	13 10 59.3 +0.7
ASAR	Alice Springs 0.7nm,0.6s,baz=138,slow=2.0,SNR=14	131.51	205	PKP	PKPdf	13 10 59.3 +0.7
WRA	Warramunga Arr	134.63	208	PKP	PKPdf	13 11 05.3 +0.8
WRA	Warramunga Arr 1.0nm,0.6s,baz=153,slow=1.7,SNR=13	134.63	208	PKP	PKPdf	13 11 05.3 +0.8
ZALV	Zalesovo Beam	140.38	26	PKP	PKPdf	13 11 15.4 +1.4
ZALV	Zalesovo Beam 0.8nm,0.5s,baz=318,slow=1.9,SNR=5.6	140.38	26	PKP	PKPdf	13 11 15.4 +1.4
WMQ	Urumqi	148.62	37	*e*PKPbc	PKPdf	13 11 26.9 -1.7
SONM	Songino Array	152.43	10	PKP	PKPdf	13 11 35.8 +1.3
SONM				PKPbc	PKPbc	13 11 42.0 +0.4
SONM	Songino Array 0.5nm,0.6s,baz=333,slow=1.6,SNR=3.5	152.43	10	PKP	PKPdf	13 11 35.8 +1.3
SONM				PKPbc	PKPbc	13 11 42.0 +0.4
	1.3nm,0.6s,baz=321,slow=1.8,SNR=6.9					
MDJ	Mudanjiang	152.71	334	PKPbc	PKPdf	13 11 32.8 -2.0
MDJ				AMB	AMB	
	comp=Z,41nm,4.9s					
HHC	Hu-ho-hao-te	159.94	4	*e*PKP	PKPdf	13 11 41.8 -2.7
HHC				pPKP	pPKPdf	13 12 39.9 -4.6
HHC				sPKP		13 13 03.4
HHC				PKS	PKSdf	13 15 14.5 -3.4
HHC				PP	PP	13 16 07.9 +1.3
HHC				SKS	SKSdf	13 18 23.6 -4.0
HHC				SS	SS	13 35 56.0 +1.0
HHC				AMB	AMB	
	comp=Z,130nm,11.4s					
CD2	Chengdu	166.71	39	*e*PKP	PKPdf	13 11 49.5 -1.5
GYA	Guiyang	171.64	46	*e*PKP	PKPdf	13 11 52.8 -1.5
GYA				pPKP	pPKPdf	13 12 51.9 -2.6
GYA				PKPab	PKPab	13 13 18.0 +0.8
GYA				PKS	PKSdf	13 15 23.4 -3.5
GYA				PP	PP	13 17 10.6 +2.5
GYA				AMB	AMB	
	comp=Z,80nm,7.9s					

IDC 16 12:55:39.2±9.1, 18.13S×178.03W, h572km±108km, mb2.9/5, mb1 3.2/5, mb1mx2.9/18, mbtmp2.9/5, Error ellipse: s-maj=89.1km s-min=35.0km az=147.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.95	260	P	P		13 03 04.2	-0.2
	0.7nm,0.6s,baz=96,slow=7.2,SNR=22							
ASAR	Alice Springs	45.08	254	P	P		13 03 05.2	-0.1
	1.4nm,0.6s,baz=85,slow=8.7,SNR=19							
PETK	Petropavlovsk-	73.99	345	P	P		13 06 17.1	+0.3
	2.4nm,0.9s,baz=112,slow=7.9,SNR=3.6							
NVAR	Mina Array Bea	79.33	44	P	P		13 06 46.9	+0.3
	0.3nm,0.6s,baz=235,slow=7.4,SNR=4.0							
ILAR	Eielson Array	86.02	13	P	P		13 07 18.6	-0.7
	0.3nm,0.4s,baz=218,slow=5.5,SNR=3.6							
BRTR	Keskin Array B	145.20	315	PKPbc	PKPdf		13 14 13.0	+0.3
	0.4nm,0.5s,baz=132,slow=2.1,SNR=3.2							

MAN 16 12:58:03, 10.28N×125.08E, h53km, mb4.0, ML2.8, MS2.5, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.26	238	*e*P		Pn	12 58 15.0	+2.9
MSLP				*e*S		Sn	12 58 21.9	+3.2
PLP	Palo	0.89	353	‖*e*P		Pn	12 58 22.6	+3.3
PLP				*e*S		Sn	12 58 34.1	+2.7
BESP	Borongan	1.36	15	*e*P		Pn	12 58 27.0	+1.3
BESP				*e*S		Sn	12 58 47.2	+4.5

IDC 16 12:59:17.1±1.9, 2.05S×140.72E, h0km, mb3.1/2, mb1 3.4/3, mb1mx3.2/17, mbtmp3.1/3, ML3.0/1, Error ellipse: s-maj=294.2km s-min=29.4km az=110.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.85	199	P		P	13 03 38.1	-0.8
	0.1nm,0.3s,baz=24,slow=12,SNR=3.6							
ASAR	Alice Springs	22.48	197	P		P	13 04 18.9	+0.6
	0.4nm,0.7s,baz=26,slow=9.1,SNR=4.4							
ILAR	Eielson Array	84.41	24	P		P	13 11 51.2	0.0
	0.2nm,0.6s,baz=264,slow=7.2,SNR=3.3							

*IDC **16** 13:06:21.8±1.4, 0.99N×127.55E, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.8/21, mbtmp4.1/5, Error ellipse: s-maj=121.2km s-min=19.3km az=66.0*
*ISCJB **16** 13:06:22.3±0.7, 0.97N±0.07×127.52E±0.08, h10km, mb4.1/5, Error ellipse: s-maj=11.9km s-min=9.9km az=11.8*
*DJA **16** 13:06:24.5±0.5, 1°N±4°×12°7E±°, h10km, M4.2/6, mb4.5/3, MLv4.1/6*

ISC 16 13:06:23.4±1.0, 1.01N±0.08×127.44E±0.10, h10km, n14, σ1°41/13, mb4.2/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
TNTI	Ternate	0.24	197	P		Pg	13 06 28.5	+0.2
GAMI	Galela, Maluku	0.90	23	P		Pn	13 06 41.5	-0.6
LBMI	Labuha	1.63	178	P		Pb	13 06 52.7	-0.9
MNI	Manado	2.63	280	P		Pn	13 07 07.1	+1.2
KMSI	Cibinong	3.48	263	P		Pn	13 07 19.6	+2.0
LUWI	Luwuk	5.09	246	P		Pg	13 07 58.7	-2.2
SKSI	Soroako, Sulaw 24nm,0.6s,0.1nm	7.04	240	P		Pn	13 08 12.7	+6.1
TTSI	Tana Toraja 19nm,1.5s	8.61	242	P		Pn	13 08 29.1	+0.9
SPSI	Sidrap Palu	9.12	237	P		Pn	13 08 37.5	+2.4
WRA	Warramunga Arr 6.2nm,0.6s,baz=342,slow=11,SNR=39	21.89	162	P		P	13 11 16.6	-0.1
ASAR	Alice Springs 5.0nm,0.8s,baz=347,slow=10,SNR=40	25.32	166	P		P	13 11 49.8	-0.7
STKA	Stephens Creek 2.9nm,0.7s,baz=356,slow=9.8,SNR=12	35.35	159	P		P	13 13 18.4	-0.7
MKAR	Makanchi Array 1.0nm,0.6s,baz=125,slow=7.9,SNR=5.2	60.19	326	P		P	13 16 32.5	+0.9
BVAR	Borovoye Array 0.4nm,0.4s,baz=134,slow=6.2,SNR=2.5	69.98	327	P		P	13 17 35.2	+0.2

*ISK **16** 13:19:08.0, 37.89N×29.06E, h23km, MD2.6*
*ISCJB **16** 13:19:09.7±0.5, 37.94N±0.02×29.02E±0.04, h0km, Error ellipse: s-maj=4.7km s-min=3.1km az=8.0*
*CSEM **16** 13:19:09.9±0.1, 37.94N×29.05E, h1km, MD2.6, Error ellipse: s-maj=3.6km s-min=2.3km az=103.0*
*DDA **16** 13:19:09.7, 37.94N×29.01E, h14km, MD2.6*

ISC 16 13:19:09.9±1.1, 37.94N±0.02×29.03E±0.03, h0km, n18, σ0°63/36, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DENT	Denizli	0.19	179	*e*PG		Pg	13 19 13.1	-0.4
DENT				*e*SG		Sg	13 19 16.6	+0.7
DENT	Denizli	0.19	179	*e*Pg		Pg	13 19 13.1	-0.4
DENT				*e*Sg		Sg	13 19 16.7	+0.7
DNZL	Cakiroluk	0.25	177	*i* P		Pg	13 19 15.1	+0.4
DNZL				*i* S		Sg	13 19 18.3	+0.3
DNZL	Cakiroluk	0.25	177	*i* P		Pg	13 19 15.1	+0.4
DNZL				*i* S		Sg	13 19 18.3	+0.3
KHL	Karahalli	0.54	45	*e*PG		Pg	13 19 19.7	-0.7
KHL				*e*SG		Sg	13 19 28.8	+1.4
KHL	Karahalli	0.54	45	*e*Pg		Pg	13 19 19.7	-0.7
KHL				*e*Sg		Sg	13 19 28.8	+1.4
KHAL	Karahalli	0.56	40	*i* P		Pg	13 19 21.1	+0.4
KHAL				*i* S		Sg	13 19 28.0	0.0
KHAL	Karahalli	0.56	40	*i* P		Pg	13 19 21.1	+0.4

KHAL				*i* S	**Sg**	**13 19 28.0**	**0.0**
KULA	**Kula-Manisa**	**0.64**	**333**	*e*PG	**Pg**	**13 19 22.4**	**+0.1**
KULA				*e*SG	**Sb**	**13 19 32.7**	**-0.9**
KULA	**Kula-Manisa**	**0.64**	**333**	*e*Pg	**Pg**	**13 19 22.4**	**+0.1**
KULA				*e*Sg	**Sb**	**13 19 32.7**	**-0.9**
MANT	**Manisa**	**0.66**	**326**	*i* P	**Pg**	**13 19 23.4**	**+0.7**
MANT				*i* S	**Sg**	**13 19 31.2**	**-0.1**
MANT	**Manisa**	**0.66**	**326**	*i* P	**Pg**	**13 19 23.4**	**+0.7**
MANT				*i* S	**Sg**	**13 19 31.2**	**-0.1**
AYDN	**Tasoluk**	**0.95**	**253**	*i* P	**Pg**	**13 19 28.9**	**+0.7**
AYDN				*i* S	**Sg**	**13 19 40.0**	**-0.6**
AYDN	**Tasoluk**	**0.95**	**253**	*i* P	**Pg**	**13 19 28.9**	**+0.7**
AYDN				*i* S	**Sg**	**13 19 40.0**	**-0.6**
DEMI	**Demirci**	**1.13**	**347**	*i* P	**Pg**	**13 19 31.5**	**-0.1**
DEMI				*i* S	**Sg**	**13 19 46.9**	**+0.7**
DEMI	**Demirci**	**1.13**	**347**	*i* P	**Pg**	**13 19 31.5**	**-0.1**
DEMI				*i* S	**Sg**	**13 19 46.9**	**+0.7**
GDZ	**Gediz**	**1.20**	**17**	*e*P	**Pg**	**13 19 32.8**	**-0.2**
GDZ				*i* S	**Sg**	**13 19 49.0**	**+0.5**
GDZ	**Gediz**	**1.20**	**17**	*e*P	**Pg**	**13 19 32.8**	**-0.2**
GDZ				*i* S	**Sg**	**13 19 49.0**	**+0.5**

NNC 16 13:20:55.9±3.3, 38.81N×70.00E, h0km, mb3.8, mpv3.4, 6C-1D, Error ellipse: s-maj=25.3km s-min=24.0km az=158.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**4.31**	**5**	Pn	Pn	13 22 04.5	+1.8
	2.7nm,0.4s,baz=189,slow=14,SNR=35						
KK31				⇑Pg	Pb	13 22 15.4	+2.8
	1.7nm,0.3s,baz=64,slow=68,SNR=11						
KK31				⇑Sn	Sb	13 23 00.4	-4.9
	3.2nm,0.3s						
KK31				⇑Lg	Lg	13 23 13.1	
	21nm,0.6s,baz=188,slow=30,SNR=8.6						
TKM2	**Tokmak 2**	**5.91**	**44**	⇓Pn	Pn	13 22 26.4	+1.4
	4.8nm,0.7s						
TKM2				⇑Sn	Sn	13 23 34.9	+1.3
	11nm,0.7s						
TKM2				⇑Lg	Lg	13 23 59.7	
	7.6nm,0.8s						
AB31	**Akbulak array**	**12.69**	**329**	Pn	Pn	13 23 56.7	-0.9
	1.1nm,0.6s,baz=145,slow=12,SNR=16						
AKTO	**Aktyubinsk**	**14.40**	**328**	⇑Pn	P	13 24 25.5	-2.5
	1.6nm,0.6s						

*AUST **16** 13:22:02.4±7.7, 1.37S×152.69E, h265km, Error ellipse: s-maj=6.2km s-min=1.8km az=359.0*

IDC 16 13:22:08.9±12.0, 2.90S×152.61E, h233km±105km, mb3.5/6, mb1 3.7/6, mb1mx3.2/19, mbtmp3.5/6, Error ellipse: s-maj=66.1km s-min=24.4km az=15.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**1.36**	**199**	P	Pn	13 22 55.4	+11
	baz=2.9,SNR=12						
RABL				S	S	13 23 27.1	+14
	baz=2.9,SNR=6.0						
KDU	**Kakadu**	**22.17**	**243**	P	P	13 26 47.4	+1.3
	baz=23,SNR=4.3						
DZM	**Mont Dzumac**	**23.32**	**146**	P	P	13 26 56.4	-0.1
	3.5nm,0.8s,baz=355,slow=11,SNR=5.7						
WRA	**Warramunga Arr**	**24.60**	**225**	P	P	13 27 08.7	+0.6
	4.1nm,0.3s,baz=47,slow=9.3,SNR=112						
QLP	**Quilpie**	**24.88**	**198**	P	P	13 27 11.3	+0.8
	baz=26,SNR=8.5						
ASAR	**Alice Springs**	**27.45**	**220**	P	P	13 27 33.8	+0.1
	3.5nm,0.5s,baz=50,slow=8.3,SNR=58						
FITZ	**Fitzroy Crossi**	**30.44**	**238**	P	P	13 27 59.4	-0.7
	1.2nm,0.4s,baz=47,slow=11,SNR=9.2						
STKA	**Stephens Creek**	**30.63**	**199**	P	P	13 28 01.2	-0.3
	0.8nm,0.6s,baz=34,slow=13,SNR=5.3						
FORT	**Forrest**	**36.15**	**217**	P	P	13 28 48.9	-0.3
	baz=38,SNR=29						
NIUE	**Niue**	**40.00**	**116**	P	P	13 29 17.2	-4.2
	baz=41,SNR=15						
MEEK	**Meekatharra**	**40.22**	**231**	P	P	13 29 22.7	-0.5
	baz=41,SNR=5.3						
MCQ	**Macquarie Isla**	**51.70**	**175**	P	P	13 31 01.2	+9.3
	baz=53,SNR=3.2						
VNDA	**Vanda**	**74.72**	**178**	P	P	13 33 22.2	-0.4
	0.2nm,0.5s,baz=335,slow=7.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**149.49**	**291**	PKPbc	PKPbc	13 41 31.6	0.0
	0.4nm,0.4s,baz=71,slow=2.5,SNR=5.3						

*IDC **16** 13:22:46.0±6.3, 36.55N×71.32E, h172km±61km, mb3.1/2, mb1 3.3/8, mb1mx3.0/31, mbtmp3.2/8, Error ellipse: s-maj=48.3km s-min=26.9km az=9.0*

*ISCJB **16** 13:22:46.9±0.6, 36.86N±0.04×71.3E±0.1, h150km, mb3.2/2, Error ellipse: s-maj=12.4km s-min=4.9km az=171.9*

*NNC **16** 13:22:54.8±8.1, 37.33N×71.30E, h190km±60km, mb3.0, mpv3.8, Error ellipse: s-maj=80.3km s-min=40.9km az=32.0*

ISC 16 13:22:46.7±0.8, 36.87N±0.06×71.1E±0.1, h150km, n20, σ1§65/22, 8C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.11**	**167**	⇑P	**Pn**	**13 23 36.3**	**+0.6**
CEP				S	**Sn**	**13 24 13.0**	**-0.5**
CHCP	**Chirah Chowk**	**3.67**	**150**	P	**Pn**	**13 23 43.3**	**+0.6**
THW	**Thamme Wali**	**4.10**	**172**	P	**Pn**	**13 23 48.6**	**+0.3**
THN	**Thein Dam**	**5.85**	**138**	*e*PG	Sn	13 25 08.9	-8.7
THN				*e*SG		13 25 13.3	
KK31	**Karatay Array**	**6.24**	**356**	P	Pn	13 24 19.8	+3.2
	5.1nm,0.5s,baz=191,slow=17,SNR=9.5						
KK31				⇑S	**Sn**	**13 25 26.5**	**-0.4**
	35nm,0.8s,baz=190,slow=17,SNR=4.2						
AAK	**Ala-Archa**	**6.33**	**24**	P	**Pn**	**13 24 19.9**	**+2.0**
	2.2nm,0.3s,baz=164,slow=6.2,SNR=3.2						
AAK				S	**Sn**	**13 25 29.0**	**-0.3**
	2.3nm,0.3s,baz=151,slow=23,SNR=7.7						
MK31	**Makanchi Array**	**12.96**	**37**	⇑P	**Pn**	**13 25 42.5**	**-2.8**
	5.8nm,1.1s,baz=209,slow=7.5,SNR=2.7						
MKAR	**Makanchi Array**	**12.96**	**37**	P	**Pn**	**13 25 45.2**	**-0.1**
	0.2nm,0.3s,baz=221,slow=9.5,SNR=6.8						
KUR17	**Kurchatov Arra**	**14.75**	**19**	⇓P	**P**	**13 26 09.8**	**-0.1**
	1.1nm,0.6s						
KURBB	**Kurchatov Arra**	**14.76**	**19**	P	**P**	**13 26 10.2**	**+0.2**
	0.2nm,0.3s,baz=206,slow=10,SNR=18						
AB31	**Akbulak array**	**14.79**	**330**	⇑P	**P**	**13 26 12.2**	**+1.8**
	1.2nm,0.5s,baz=132,slow=14,SNR=12						
AB31				⇑S	**Sn**	**13 28 48.9**	**-3.6**
	0.7nm,0.5s,baz=147,slow=24,SNR=9.2						
KURK	**Kurchatov**	**14.86**	**19**	⇑P	**P**	**13 26 10.7**	**-0.5**
	4.0nm,1.0s						
VOSK	**Vostochnaya**	**15.86**	**360**	⇓P	**P**	**13 26 21.2**	**-1.0**
	1.3nm,0.7s						
ZRNK	**Zerenda**	**16.15**	**355**	⇑P	**P**	**13 26 27.0**	**+1.6**
	1.1nm,0.5s						
BVAR	**Borovoye Array**	**16.16**	**359**	P	**P**	**13 26 27.5**	**+1.9**
	0.3nm,0.3s,baz=156,slow=11,SNR=4.9						
AKTO	**Aktyubinsk**	**16.49**	**329**	⇑P	**Pn**	**13 26 31.2**	**+1.9**
	1.1nm,0.5s						
AKTO				⇓S	**Sn**	**13 29 32.9**	**-0.3**
	2.2nm,0.8s						
AKTO	**Aktyubinsk**	**16.49**	**329**	P	**Pn**	**13 26 31.9**	**+2.6**
	0.4nm,0.3s,baz=132,slow=6.8,SNR=4.0						
ZALV	**Zalesovo Beam**	**19.56**	**25**	P	**P**	**13 27 02.0**	**-0.6**
	0.8nm,0.3s,baz=219,slow=11,SNR=14						
TORD	**Torodi Ar. Bea**	**65.78**	**269**	P	**P**	**13 33 13.9**	**-2.0**
	0.5nm,0.5s,baz=42,slow=5.7,SNR=7.0						
WRA	**Warramunga Arr**	**82.14**	**122**	P	P	13 34 46.1	-4.7
	0.2nm,0.7s,baz=325,slow=4.5,SNR=3.5						

*ISCJB **16** 13:28:42.8±1.9, 15.02N±0.06×97.23W±0.05, h16km±14km, mb3.6/5, MS3.4/2, Error ellipse: s-maj=10.8km s-min=6.8km az=25.1*

*IDC **16** 13:28:42.8±1.4, 14.94N×97.02W, h0km, mb3.7/5, mb1 4.1/7, mb1mx3.9/24, mbtmp3.8/7, ML4.9/1, MS3.2/4, Ms1 3.3/4, ms1mx2.9/30, Error ellipse: s-maj=47.7km s-min=24.0km az=55.0*

*MEX **16** 13:28:44.8±0.7, 14.95N×97.26W, h11km±18km, MD4.0*

ISC 16 13:28:41.6±2.3, 15.06N±0.08×97.20W±0.06, h1km±13km**, n18, σ1§74/23, mb3.7/5, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.27**	**56**	*i* P	**Pg**	**13 29 05.9**	**+0.1**
HUIG				*i* S	**Sn**	**13 29 23.6**	**-0.6**
PNIG	**Pinotepa**	**1.59**	**326**	*e*P	**Pn**	**13 29 10.7**	**-0.3**
PNIG				*i* S	**Sn**	**13 29 29.9**	**-2.4**
OXX	**Oaxaca**	**2.06**	**13**	*e*P	**Pn**	**13 29 18.8**	**+1.2**
OXX				*e*S	**Sn**	**13 29 44.3**	**+0.3**
UTMO	**Huajuapan**	**2.81**	**348**	*e*P	**Pb**	**13 29 31.5**	**-1.3**
UTMO				*i* S	**Sn**	**13 30 05.1**	**+2.5**
TPIG	**Tehuac#an**	**3.34**	**357**	*e*P	**Pn**	**13 29 35.8**	**+0.6**
TPIG				*e*S	**Sn**	**13 30 15.8**	**+0.1**
CAIG	**El Cayaco**	**3.55**	**304**	*e*P	**Pn**	**13 29 37.8**	**0.0**
CAIG				*e*S	**Sn**	**13 30 18.4**	**-2.1**
PCIG		**3.90**	**80**	*e*P	**Pn**	**13 29 42.4**	**-0.2**
PCIG				*i* S	**Sn**	**13 30 28.4**	**-0.7**
PLIG	**Platanillo**	**3.98**	**327**	*e*P	**Pn**	**13 29 44.6**	**+0.7**
PLIG				*e*S	**Sn**	**13 30 30.3**	**-1.0**
TEIG	**Tepich**	**9.94**	**58**	Pn	**Pn**	**13 31 05.0**	**-0.7**
	10nm,0.3s,baz=298,slow=2.1,SNR=21						
TEIG				Sn	**Sn**	**13 32 52.9**	**-5.1**
	0.8nm,0.3s,baz=342,slow=20,SNR=3.0						
TEIG				LR	LR	13 35 16.6	
	comp=Z,122nm,21.2s,baz=300,slow=40						
TXAR	**Lajitas Array**	**15.41**	**338**	Pn	**P**	**13 32 24.7**	**-0.5**
	baz=157,slow=14,SNR=4.4						
TXAR				LR	LR	13 39 03.4	
	comp=Z,60nm,18.0s,baz=165,slow=40						
PDAR	**Pinedale Array**	**29.58**	**341**	P	P	13 34 53.0	+4.6
	0.7nm,0.9s,baz=150,slow=9.3,SNR=4.5						
NVAR	**Mina Array Bea**	**29.80**	**325**	P	P	13 34 54.0	+3.6
	0.9nm,0.9s,baz=149,slow=9.0,SNR=6.1						
LPAZ	**La Paz**	**42.36**	**136**	P	**P**	**13 36 38.7**	**+0.3**
	1.0nm,0.6s,baz=296,slow=9.7,SNR=4.5						
SIV	**San Ignacio**	**47.17**	**129**	LR	LR	13 56 32.7	
	comp=Z,57nm,20.4s,slow=36						
YKA	**Yellowknife Ar**	**48.95**	**349**	P	**P**	**13 37 31.1**	**+1.9**
	0.4nm,0.6s,baz=157,slow=7.1,SNR=8.3						
ILAR	**Eielson Array**	**59.92**	**338**	P	**P**	**13 38 51.3**	**+2.2**
	1.1nm,0.9s,baz=134,slow=5.3,SNR=11						
NOA	**NORSAR Array B**	**85.58**	**28**	LR	LR	14 20 07.4	
	comp=Z,13nm,18.4s,baz=110,slow=36						
WRA	**Warramunga Arr**	**130.75**	**257**	PKP	**PKPdf**	**13 47 55.3**	**-0.2**
	0.7nm,0.8s,baz=358,slow=1.0,SNR=5.1						

DDA 16 13:55:02.1, 37.28N×31.72E, h7km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KONT	**Konya--Tatoy**	**0.83**	**37**	*e*PG	Pg	13 55 18.5	+0.3
KONT				*e*SG	Sg	13 55 29.6	+0.5
LADK	**Ladik-KONYA**	**1.05**	**29**	*e*PG	Pg	13 55 22.2	-0.2
ERMK	**Ermenek**	**1.15**	**124**	*e*P	Pg	13 55 22.8	-1.6
ERMK				*e*S	Sn	13 55 41.0	0.0
GAZI	**Gazipasa**	**1.15**	**155**	*i* P	Pg	13 55 24.2	-0.1
GAZI				*i* S	Sn	13 55 40.4	-0.3
KDHN	**Kadinhani**	**1.27**	**14**	*i* P	Pg	13 55 27.4	+0.6
KDHN				*i* S	Sn	13 55 43.8	-0.2
KIZT	**Kizilcal**	**1.60**	**4**	*e*PG	Pn	13 55 31.3	+0.3

*NIED **16** 14:12:00, 40.00N×142.40E, h35km, Mw3.8 Best double couple: M0 4.83000×10^14 NP1:φ=28.00000°, δ=77.00000°, λ=97.00000°. NP2:φ=181.00000°, δ=15.00000°, λ=63.00000°.*

JMA 16 14:12:37.5±0.1, 39.97N×142.39E, h38km±1km, M3.5, 9D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.41**	**266**	⇓P	Pn	14 12 47.0	+0.3
JTH				*e*S	Sn	14 12 53.6	+0.1
MIYJ	**Miyakonagasawa**	**0.59**	**228**	⇓P	Pn	14 12 49.3	-0.2
MIYJ				S	Sn	14 12 57.6	-0.3
JANG	**Nango**	**0.78**	**301**	⇓P	Pn	14 12 51.8	-0.2
JANG				*e*S	Sn	14 13 01.9	-0.7
JKZ	**Kuzumaki**	**0.81**	**271**	⇓P	Pn	14 12 53.1	+0.6
JKZ				*e*S	Sn	14 13 03.5	0.0
JOM	**Ohasama**	**0.98**	**240**	⇓P	Pn	14 12 55.1	+0.4
JOM				*e*S	Sn	14 13 07.7	+0.3
OFUJ	**Ofunato**	**1.05**	**212**	⇓P	Pn	14 12 55.8	+0.1
JTM	**Tenmabayashi**	**1.30**	**309**	⇓P	Pn	14 12 59.8	+0.7
JTM				*e*S	Sn	14 13 16.1	+0.9
JMK	**Ichinoseki**	**1.36**	**222**	⇓P	Pn	14 13 00.6	+0.7
JAH	**Hinai**	**1.36**	**280**	⇓P	Pn	14 13 01.0	+1.0
JRG	**Rokugo**	**1.47**	**248**	P	Pn	14 13 02.7	+1.2
MAT	**Matsushiro**	**4.75**	**225**	P	Pn	14 13 50.0	+3.5
MAT				S	Sn	14 14 45.7	+5.4

IDC 16 14:21:21.1±2.8, 5.00S×151.50E, h154km±23km, mb3.5/7, mb1 3.6/8, mb1mx3.4/20, mbtmp3.5/8, Error ellipse: s-maj=25.4km s-min=20.1km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.15**	**224**	P	Pn	14 22 51.1	+1.3
	1.4nm,0.3s,baz=12,slow=6.2,SNR=5.1						
PMG				S	Sn	14 23 59.5	+0.2
	3.3nm,0.3s,baz=356,slow=16,SNR=13						
DZM	**Mont Dzumac**	**22.30**	**141**	P	P	14 26 06.4	+0.1
	2.5nm,0.6s,baz=303,slow=14,SNR=7.3						
WRA	**Warramunga Arr**	**22.36**	**227**	P	P	14 26 06.2	-0.5
	4.0nm,0.4s,baz=51,slow=9.9,SNR=63						
WRA				PcP	PcP	14 29 55.8	-0.6
	0.3nm,0.6s,baz=41,slow=1.9,SNR=5.0						
ASAR	**Alice Springs**	**25.15**	**221**	P	P	14 26 32.5	+0.2
	1.5nm,0.7s,baz=56,slow=8.5,SNR=16						
ASAR				ScP	ScP	14 33 27.4	0.0
	0.5nm,0.7s,baz=49,slow=2.6,SNR=6.3						
FITZ	**Fitzroy Crossi**	**28.44**	**241**	P	P	14 27 01.3	-0.4
	1.4nm,0.5s,baz=63,slow=9.4,SNR=12						
SONM	**Songino Array**	**65.81**	**328**	P	P	14 31 50.6	+0.6
	0.6nm,0.5s,baz=137,slow=5.2,SNR=5.1						
ZALV	**Zalesovo Beam**	**80.60**	**327**	P	P	14 33 16.1	-0.3
	0.4nm,0.3s,baz=106,slow=5.1,SNR=4.1						
ILAR	**Eielson Array**	**82.83**	**22**	P	P	14 33 27.1	-0.8
	0.2nm,0.6s,baz=242,slow=5.0,SNR=3.1						
TORD	**Torodi Ar. Bea**	**149.13**	**287**	PKPbc	PKPbc	14 40 52.2	-0.2
	0.6nm,0.4s,baz=76,slow=2.5,SNR=9.2						

NNC 16 14:34:24.7±5.5, 39.95N×72.63E, h0km, mb3.6, mpv3.1, 6C-3D, Error ellipse: s-maj=48.6km s-min=25.1km az=7.0, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**3.53**	**334**	⇑Pn	Pn	14 35 22.6	+1.8
	2.7nm,0.3s,baz=144,slow=12,SNR=35						
KK31				⇓Sn	Sb	14 36 10.6	-0.8
	22nm,0.6s,baz=148,slow=23,SNR=8.8						
TKM2	**Tokmak 2**	**3.71**	**36**	⇑Pn	Pn	14 35 24.1	+0.5
	1.8nm,0.7s						
TKM2				⇑Pg	Pb	14 35 32.8	+1.4
	3.1nm,0.5s						
TKM2				⇑Lg	Lg	14 36 25.3	
	19nm,0.9s						
AB31	**Akbulak array**	**12.95**	**320**	⇑Pn	Pn	14 37 26.2	-3.7
	0.4nm,0.4s,baz=128,slow=14,SNR=17						
AB31				⇑Sn	Sn	14 39 51.5	-3.1
	0.7nm,0.5s,baz=152,slow=21,SNR=2.8						
AKTO	**Aktyubinsk**	**14.67**	**320**	⇓Pn	P	14 37 57.3	-2.5
	2.5nm,0.5s						
AKTO				⇓Sn	Sn	14 40 33.2	-3.3
	2.1nm,1.0s						

IDC 16 14:51:35.5±9.2, 2.54N×127.12E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/21, mbtmp3.4/4, Error ellipse: s-maj=152.0km s-min=110.6km az=136.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.57**	**184**	P	P	14 56 16.2	+0.2
	1.8nm,1.0s,baz=0.0,slow=10,SNR=4.0						
WRA	**Warramunga Arr**	**23.44**	**163**	P	P	14 56 46.6	-0.1
	0.6nm,0.4s,baz=341,slow=10,SNR=20						
ASAR	**Alice Springs**	**26.88**	**166**	P	P	14 57 17.8	-0.5
	0.2nm,0.3s,baz=350,slow=13,SNR=4.8						
STKA	**Stephens Creek**	**36.89**	**159**	P	P	14 58 46.2	+0.2
	0.3nm,0.4s,baz=344,slow=11,SNR=3.9						

*ISCJB **16** 14:59:19.4±0.7, 56.17N±0.05×16.81E±0.08, h0km, Error ellipse: s-maj=8.5km s-min=4.0km az=137.9*

*UPP **16** 14:59:20.8, 56.06N×16.60E, h0km, ML2.4, Mining explosion.*

*CSEM **16** 14:59:20.5±0.2, 56.11N×16.74E, h1km, ML3.0, Error ellipse: s-maj=6.7km s-min=3.2km az=144.0, Mining explosion.*

*HEL **16** 14:59:21.2±0.2, 56.14N×16.68E, h0km, ML3.0, ML2.4(UPP), Explosion*

*BER **16** 14:59:22.9±2.4, 56.16N×16.71E, h0km, ML2.3(NAO), Suspected explosion*

*NAO **16** 14:59:24.6±2.8, 56.34N×16.77E, ML2.3*

*IDC **16** 14:59:24.1±2.4, 56.32N×16.73E, h0km, mb1 3.1/4, mb1mx3.0/27, mbtmp3.0/4, ML2.8/3, Error ellipse: s-maj=22.8km s-min=13.3km az=15.0*

ISC 16 14:59:19.9±0.9, 56.15N±0.04×16.70E±0.04, h0km, n69, σ1§32/82, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VXJU	**Vaexsjoe**	**1.24**	**309**	*e*P	**Pn**	**14 59 44.1**	**-0.4**
VXJU	**Vaexsjoe**	**1.24**	**309**	P	**Pn**	**14 59 44.1**	**-0.4**
BSD	**Bornholm Skovb**	**1.45**	**225**	*e*P	**Pb**	**14 59 47.5**	**-0.2**
BSD				*e*S	**Sg**	**15 00 05.6**	**-0.8**
BSD	**Bornholm Skovb**	**1.45**	**225**	*i* P	**Pb**	**14 59 47.4**	**-0.2**
BSD				*i* S	**Sn**	**15 00 08.2**	**+1.3**
BSD				*i* S	**Sb**	**15 00 08.5**	**+1.9**
BSD	**Bornholm Skovb**	**1.45**	**225**	P	**Pb**	**14 59 47.5**	**-0.2**
BSD				S	**Sg**	**15 00 05.5**	**-0.8**
LUNU	**Lund**	**1.90**	**256**	P	**Pb**	**14 59 53.9**	**-1.5**
GNOU	**Gnosjoe**	**1.98**	**306**	*e*P	**Pb**	**14 59 56.5**	**-0.3**
GNOU	**Gnosjoe**	**1.98**	**306**	P	**Pb**	**14 59 56.5**	**-0.3**
BJUU	**Bjuv**	**2.06**	**269**	*e*P	**Pn**	**14 59 56.0**	**+0.3**
BJUU	**Bjuv**	**2.06**	**269**	P	**Pn**	**14 59 56.0**	**+0.3**
FABU	**Falkenberg**	**2.36**	**293**	*e*P	**Pn**	**15 00 00.5**	**+0.6**
FABU	**Falkenberg**	**2.36**	**293**	P	**Pn**	**15 00 00.5**	**+0.6**
GID	**Gilleleje**	**2.53**	**271**	*i* P	**Pn**	**15 00 03.3**	**+1.1**
	SNR=49						
BORU	**Boraas**	**2.62**	**306**	*e*P	**Pn**	**15 00 04.6**	**+1.2**
BORU	**Boraas**	**2.62**	**306**	P	**Pn**	**15 00 04.6**	**+1.2**
LLD	**Lille Linde**	**2.66**	**254**	*i* P	**Pn**	**15 00 04.4**	**+0.4**
LLD	**Lille Linde**	**2.66**	**254**	*i* P	**Pn**	**15 00 04.4**	**+0.4**
ESKU	**Eskilstuna**	**3.10**	**357**	*e*P	**Pn**	**15 00 12.0**	**+2.0**
ESKU	**Eskilstuna**	**3.10**	**357**	P	**Pn**	**15 00 12.0**	**+2.0**
NASU	**Vaermlandsnaes**	**3.37**	**327**	*e*P	**Pn**	**15 00 16.0**	**+2.2**
NASU	**Vaermlandsnaes**	**3.37**	**327**	P	**Pn**	**15 00 15.9**	**+2.2**
SLIT	**Slitere, Latvi**	**3.41**	**62**	*e*P	**Pn**	**15 00 15.5**	**+1.2**
SLIT	**Slitere, Latvi**	**3.41**	**62**	*e*P	**Pn**	**15 00 15.4**	**+1.1**
	SNR=50						
VANU	**Vaenersborg**	**3.44**	**315**	*e*P	**Pn**	**15 00 16.1**	**+1.5**
VANU	**Vaenersborg**	**3.44**	**315**	P	**Pn**	**15 00 16.1**	**+1.5**
NRAU	**Nora**	**3.54**	**346**	*e*P	**Pn**	**15 00 18.0**	**+1.8**
NRAU	**Nora**	**3.54**	**346**	P	**Pn**	**15 00 17.9**	**+1.8**
BACU	**Backbrunna**	**3.72**	**3**	*e*P	**Pn**	**15 00 20.4**	**+1.7**
BACU	**Backbrunna**	**3.72**	**3**	P	**Pn**	**15 00 20.3**	**+1.7**
FINU	**Finntorp**	**3.97**	**327**	*e*P	**Pn**	**15 00 22.7**	**+0.7**
FINU	**Finntorp**	**3.97**	**327**	P	**Pn**	**15 00 22.7**	**+0.7**
FLYU	**Flymyra**	**4.04**	**8**	*e*P	**Pn**	**15 00 24.0**	**+1.0**
FLYU	**Flymyra**	**4.04**	**8**	P	**Pn**	**15 00 24.0**	**+1.0**
OSTU	**Oestervaala**	**4.10**	**3**	*e*P	**Pn**	**15 00 25.2**	**+1.4**
OSTU	**Oestervaala**	**4.10**	**3**	P	**Pn**	**15 00 25.1**	**+1.4**
STRU	**Stroemstad**	**4.14**	**317**	*e*P	**Pn**	**15 00 24.4**	**0.0**
STRU	**Stroemstad**	**4.14**	**317**	P	**Pn**	**15 00 24.4**	**0.0**
HFS	**Hagfors**	**4.30**	**340**	Pn	**Pn**	**15 00 28.7**	**+2.2**
	baz=157,slow=12						
HFS				Lg	Lg	15 01 35.0	
	baz=158,slow=37						
HFS	**Hagfors**	**4.30**	**340**	Pn	**Pn**	**15 00 28.7**	**+2.2**
	baz=157,slow=12						
HFS				Lg	Lg	15 01 35.0	
	baz=158,slow=37						
HFS	**Hagfors**	**4.30**	**340**	Pn	**Pn**	**15 00 28.0**	**+1.4**
	0.2nm,0.3s,baz=159,slow=12,SNR=21						
HFS				Sn	**Sn**	**15 01 17.4**	**0.0**
	0.5nm,0.3s,baz=160,slow=26,SNR=6.1						
HFS				Lg	Lg	15 01 34.0	
	2.4nm,0.3s,baz=155,slow=32,SNR=18						
HFS	**Hagfors**	**4.30**	**340**	Pn	**Pn**	**15 00 28.7**	**+2.2**
	baz=157,slow=12,SNR=9.0						
HFS				Lg	Lg	15 01 35.0	
	baz=158,slow=29,SNR=6.0						
FALU	**Falun**	**4.38**	**354**	*e*P	**Pn**	**15 00 29.1**	**+1.4**
FALU	**Falun**	**4.38**	**354**	P	**Pn**	**15 00 29.0**	**+1.4**
AAL	**Aland**	**4.40**	**22**	*e*P	**Pn**	**15 00 29.4**	**+1.5**
AAL				*e*S	**Sn**	**15 01 19.4**	**-0.5**
AAL	**Aland**	**4.40**	**22**	P	**Pn**	**15 00 29.4**	**+1.5**
AAL				S	**Sn**	**15 01 19.3**	**-0.5**
IGGU	**Iggoen**	**4.75**	**4**	*e*P	**Pn**	**15 00 34.7**	**+2.0**
IGGU	**Iggoen**	**4.75**	**4**	P	**Pn**	**15 00 34.7**	**+2.0**
ROTU	**Roteberg**	**5.31**	**355**	*e*P	**Pn**	**15 00 41.4**	**+1.0**
ROTU	**Roteberg**	**5.31**	**355**	P	**Pn**	**15 00 41.4**	**+1.0**
RAF	**Rau

*ISCJB **16** 15:09:24.8±0.4,49˙.36N±0˙.02×6˙.80E±0˙.03,h0km, Error ellipse: s-maj=3.1km s-min=2.6km az=170.5*
*STR **16** 15:09:25.7±0.3,49˙.37N×6˙.76E,h1km,Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*BGR **16** 15:09:25.9±0.5,49˙.34N×6˙.82E,h1km,ML1.7/3, Error ellipse: s-maj=7.8km s-min=4.4km az=35.0*
*CSEM **16** 15:09:25.7±0.1,49˙.37N×6˙.81E,h1km,ML2.4/8, Error ellipse: s-maj=2.3km s-min=2.0km az=80.0*
*LDG **16** 15:09:26.2±0.1,49˙.39N×6˙.84E,h1km,Md2.4/1,Ml2.5/9, Error ellipse: s-maj=0.9km s-min=0.7km az=76.0, Suspected Mining induced.*

ISC 16 15:09:25.7±0.8,49˙.37N±0˙.02×6˙.83E±0˙.02,h0km,n33, σ0s51/58,Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RUP	**Ruppelstein**	**0.37**	**24**	Pg	**Pg**	**15 09 33.1**	**+0.3**
RUP				Sg	**Sg**	15 09 37.9	+0.4
WLF	**Walferdange**	**0.53**	**304**	*e*Pg	**Pg**	**15 09 36.1**	**+0.1**
WLF				*e*Sg	**Sg**	15 09 43.2	+0.3
WLF	**Walferdange**	**0.53**	**304**	Pg	**Pg**	**15 09 36.1**	**+0.1**
WLF				Sg	**Sg**	15 09 43.2	+0.3
LANF	**Langenberg**	**0.75**	**121**	Pg	**Pg**	**15 09 40.4**	**+0.4**
LANF				Sg	**Sb**	15 09 52.4	0.0
LANF	**Langenberg**	**0.75**	**121**	Pg	**Pg**	**15 09 40.4**	**+0.4**
LANF				Sg	**Sb**	15 09 52.4	0.0
CDF	**Champ du Feu**	**1.00**	**163**	*e*Pg	**Pg**	**15 09 45.2**	**+0.3**
CDF				*e*Sg	**Sg**	15 09 58.5	+0.7
	7.0nm,0.2s						
CDF	**Champ du Feu**	**1.00**	**163**	*e*Pg	**Pg**	**15 09 45.2**	**+0.3**
CDF				*e*Sg	**Sg**	15 09 58.5	+0.7
	3.5nm,0.2s						
PAGF	**Fort de Pagny**	**1.09**	**222**	*e*Pg	**Pg**	**15 09 47.1**	**+0.5**
PAGF				*e*Sg	**Sg**	15 10 01.5	+0.7
	2.2nm,0.2s						
PAGF	**Fort de Pagny**	**1.09**	**222**	*e*Pg	**Pg**	**15 09 47.1**	**+0.5**
PAGF				*e*Sg	**Sg**	15 10 01.5	+0.7
	1.1nm,0.2s						
ECH	**Echery**	**1.17**	**169**	Pg	**Pb**	**15 09 48.7**	**-0.2**
ECH				Sg	**Sg**	15 10 03.8	+0.4
ECH	**Echery**	**1.17**	**169**	Pg	**Pb**	**15 09 48.7**	**-0.2**
ECH				Sg	**Sg**	15 10 03.8	+0.4
THEF	**They Montfort**	**1.27**	**206**	Pg	**Pg**	**15 09 50.0**	**-0.1**
THEF				Sg	**Sg**	15 10 06.5	0.0
THEF	**They Montfort**	**1.27**	**206**	Pg	**Pg**	**15 09 50.0**	**-0.1**
THEF				Sg	**Sg**	15 10 06.5	0.0
TNS	**Taunus Mts**	**1.35**	**50**	*e*Pg	**Pg**	**15 09 51.5**	**-0.1**
TNS				*e*Sg	**Sg**	15 10 09.7	+0.5
TNS	**Taunus Mts**	**1.35**	**50**	Pg	**Pg**	**15 09 51.5**	**-0.1**
TNS				Sg	**Sg**	15 10 09.7	+0.5
HAU	**Haudompre**	**1.40**	**193**	*e*Pg	**Pn**	**15 09 52.6**	**+0.1**
HAU				*e*Sg	**Sb**	15 10 11.0	-0.2
	15nm,0.3s						
HAU	**Haudompre**	**1.40**	**193**	*e*Pg	**Pn**	**15 09 52.6**	**+0.1**
HAU				*e*Sg	**Sb**	15 10 11.0	-0.2
	7.7nm,0.3s						
BFO	**Black Forest**	**1.43**	**136**	*e*Pg	**Pg**	**15 09 53.4**	**+0.2**
BFO				*e*Sg	**Sg**	15 10 10.6	-1.2
BFO	**Black Forest**	**1.43**	**136**	Pg	**Pg**	**15 09 53.4**	**+0.2**
BFO				Sg	**Sg**	15 10 10.6	-1.2
MEZF	**Maizieres J'vi**	**1.46**	**234**	*e*Sg	**Sb**	**15 10 13.0**	**+0.2**
	6.7nm,0.3s						
MEZF	**Maizieres J'vi**	**1.46**	**234**	*e*Sg	**Sb**	**15 10 13.0**	**+0.2**
	3.3nm,0.3s						
GIVF	**Givet**	**1.50**	**300**	*e*Pg	**Pn**	**15 09 54.1**	**+0.2**
GIVF				*e*Sg	**Sg**	15 10 13.2	-0.6
	9.5nm,0.3s						
GIVF	**Givet**	**1.50**	**300**	*e*Pg	**Pn**	**15 09 54.1**	**+0.2**
GIVF				*e*Sg	**Sg**	15 10 13.2	-0.6
	4.8nm,0.3s						
MOF	**Molkenrain**	**1.53**	**172**	Pg	**Pb**	**15 09 55.1**	**+0.1**
MOF				Sg	**Sn**	15 10 15.4	+0.4
MOF	**Molkenrain**	**1.53**	**172**	Pg	**Pb**	**15 09 55.1**	**+0.1**
MOF				Sg	**Sn**	15 10 15.4	+0.4
HINF	**Hinteralfeld**	**1.55**	**179**	*e*Pg	**Pb**	**15 09 55.4**	**0.0**
HINF				*e*Sg	**Sg**	15 10 15.8	+0.3
	12nm,0.3s						
HINF	**Hinteralfeld**	**1.55**	**179**	*e*Pg	**Pb**	**15 09 55.4**	**0.0**
HINF				*e*Sg	**Sg**	15 10 15.8	+0.3
	6.1nm,0.3s						
SFTF	**Sexfontaines**	**1.66**	**226**	*e*Sg	**Sg**	**15 10 19.1**	**0.0**
	5.1nm,0.2s						
SFTF	**Sexfontaines**	**1.66**	**226**	*e*Sg	**Sg**	**15 10 19.1**	**0.0**
	2.5nm,0.2s						
BAIF	**Baives**	**1.84**	**293**	*e*Sg	**Sb**	**15 10 23.8**	**0.0**
	3.4nm,0.2s						
BAIF	**Baives**	**1.84**	**293**	*e*Sg	**Sb**	**15 10 23.8**	**0.0**
	1.7nm,0.2s						
LOR	**Lormes**	**2.89**	**224**	*e*Pn	**Pn**	**15 10 11.3**	**-1.7**
LOR	**Lormes**	**2.89**	**224**	*e*Pn	**Pn**	**15 10 11.3**	**-1.7**

IDC 16 15:13:49.8±1.5,17˙.70S×178˙.53W,h537km±18km, mb3.3/9,mb1 3.5/11,mb1mx3.3/20,mbtmp3.3/11,Error ellipse: s-maj=31.0km s-min=13.2km az=144.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.51**	**61**	P	P	15 15 42.7	+0.2
	2.4nm,0.3s,baz=82,slow=18,SNR=5.5						
AFI				S	S	15 17 14.9	+0.2
	2.1nm,0.3s,baz=266,slow=19,SNR=3.0						
DZM	**Mont Dzumac**	**14.79**	**250**	P	P	15 16 57.6	+0.2
	0.6nm,0.3s,baz=80,slow=6.1,SNR=12						
STKA	**Stephens Creek**	**38.63**	**241**	P	P	15 20 27.9	+0.5
	4.2nm,0.5s,baz=90,slow=10.0,SNR=33						
WRA	**Warramunga Arr**	**44.56**	**259**	P	P	15 21 13.2	-1.1
	2.3nm,0.7s,baz=91,slow=7.1,SNR=73						
WRA				PcP	PcP	15 22 45.4	-0.5
	0.9nm,0.8s,baz=92,slow=3.3,SNR=4.5						
ASAR	**Alice Springs**	**44.74**	**254**	P	P	15 21 15.4	-0.3
	22nm,0.6s,baz=88,slow=8.2,SNR=99						
ASAR				PcP	PcP	15 22 45.8	-0.7
	0.9nm,0.5s,baz=103,slow=3.8,SNR=6.6						
PETK	**Petropavlovsk-**	**73.45**	**345**	P	P	15 24 27.2	-0.1
	2.1nm,0.7s,baz=167,slow=9.1,SNR=5.9						
KSRS	**Korea Array**	**74.47**	**318**	P	P	15 24 34.2	+0.7
	0.4nm,0.6s,baz=126,slow=7.3,SNR=3.6						
MAW	**Mawson**	**84.02**	**200**	P	P	15 25 23.0	-0.4
	0.8nm,0.5s,baz=170,slow=7.8,SNR=7.4						
ILAR	**Eielson Array**	**85.71**	**13**	P	P	15 25 29.8	-1.8
	0.3nm,0.3s,baz=217,slow=5.6,SNR=5.1						
TXAR	**Lajitas Array**	**85.99**	**58**	P	P	15 25 34.5	+0.6
	0.5nm,0.7s,baz=206,slow=5.5,SNR=6.4						
CMAR	**Chiang Mai Arr**	**88.70**	**290**	P	P	15 25 47.6	+0.9
	0.8nm,0.8s,baz=132,slow=4.9,SNR=5.3						
BRTR	**Keskin Array B**	**144.55**	**315**	PKP	PKPdf	15 32 25.1	-0.6
	2.0nm,0.7s,baz=126,slow=2.1,SNR=12						
GERES	**GERESS Array B**	**147.38**	**345**	PKPbc	PKPbc	15 32 33.1	-0.3
	1.0nm,0.4s,baz=0.0,slow=1.6,SNR=9.5						

*ATH **16** 15:44:40.0,39˙.41N×28˙.04E,h10km±1km, MD3.5/6*
*DDA **16** 15:44:41.8,39˙.31N×27˙.97E,h8km, MD3.3*
*ISCJB **16** 15:44:42.0±0.4,39˙.31N±0˙.02×27˙.92E±0˙.02,h1km±3km, Error ellipse: s-maj=2.9km s-min=2.7km az=41.6*
*ISK **16** 15:44:41.3,39˙.31N×27˙.92E,h5km, MD3.4*
*CSEM **16** 15:44:42.3±0.1,39˙.30N×27˙.91E,h2km, MD3.4, Error ellipse: s-maj=1.9km s-min=1.9km az=20.0*
*THE **16** 15:44:42.6,39˙.33N×27˙.91E,h0km±2km, ML3.2/4, Error ellipse: s-maj=3.0km s-min=1.8km az=36.0*

ISC 16 15:44:42.4±1.0,39˙.30N±0˙.02×27˙.92E±0˙.02,h6km±9km, n134,σ0s70/171,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.34**	**354**	PG	**Pg**	**15 44 49.4**	**+0.4**
BALB				SG	**Sb**	15 44 55.4	-1.2
BALB	**Balikesir**	**0.34**	**354**	*i* Pg	**Pg**	**15 44 49.4**	**+0.4**
BALB				*i* Sg	**Sb**	15 44 55.4	-1.2
AKHS	**Akhisar**	**0.43**	**191**	*i* P	**Pg**	**15 44 49.9**	**-0.9**
AKHS				*i* S	**Sg**	15 44 57.5	+1.0
AKHS	**Akhisar**	**0.43**	**191**	*i* P	**Pg**	**15 44 49.9**	**-0.9**
AKHS				*i* S	**Sg**	15 44 57.5	+1.0
BALY	**Balya**	**0.49**	**332**	*i* P	**Pg**	**15 44 52.0**	**0.0**
BALY				*i* S	**Sg**	15 44 58.6	+0.2
BALY	**Balya**	**0.49**	**332**	*i* P	**Pg**	**15 44 52.0**	**0.0**
BALY				*i* S	**Sg**	15 44 58.6	+0.2
DURS	**Dursunbey**	**0.52**	**55**	*i* P	**Pg**	**15 44 51.7**	**-0.8**
DURS	**Dursunbey**	**0.52**	**55**	*i* P	**Pg**	**15 44 51.7**	**-0.8**
DST	**Dursunbey**	**0.62**	**61**	*e*PG	**Pg**	**15 44 53.9**	**-0.4**
DST				*e*SG	**Sg**	15 45 03.2	+0.9
DST	**Dursunbey**	**0.62**	**61**	*e*Pg	**Pg**	**15 44 53.9**	**-0.4**
DST				*e*Sg	**Sg**	15 45 03.2	+0.9
DEMI	**Demirci**	**0.67**	**113**	*i* P	**Pg**	**15 44 54.4**	**-0.9**
DEMI				*i* S	**Sg**	15 45 03.5	-0.5
DEMI	**Demirci**	**0.67**	**113**	*i* P	**Pg**	**15 44 54.4**	**-0.9**
DEMI				*i* S	**Sg**	15 45 03.5	-0.5
GONE	**Gonen-Balikesi**	**0.76**	**346**	*e*PG	**Pg**	**15 44 56.9**	**-0.2**
GONE				*e*SG	**Sb**	15 45 08.1	-0.7
GONE	**Gonen-Balikesi**	**0.76**	**346**	*e*Pg	**Pg**	**15 44 56.9**	**-0.2**
GONE				*e*Sg	**Sb**	15 45 08.1	-0.7
AYVA	**Ayvalik**	**0.96**	**271**	*i* P	**Pb**	**15 45 01.5**	**+0.1**
AYVA				*i* S	**Sn**	15 45 16.3	-0.1
AYVA	**Ayvalik**	**0.96**	**271**	*i* P	**Pb**	**15 45 01.5**	**+0.1**
AYVA				*i* S	**Sn**	15 45 16.3	-0.1
KULA	**Kula-Manisa**	**0.98**	**144**	*e*PG	**Pg**	**15 45 00.2**	**-0.9**
KULA	**Kula-Manisa**	**0.98**	**144**	P	**Pg**	**15 45 00.1**	**-1.1**
KULA	**Kula-Manisa**	**0.98**	**144**	*e*Pg	**Pg**	**15 45 00.2**	**-0.9**
KCTX	**Karacabey (Bur**	**1.02**	**19**	*e*PG	**Pg**	**15 45 01.6**	**-0.4**
KCTX				*e*SG	**Sb**	15 45 16.2	+0.1
KCTX	**Karacabey (Bur**	**1.02**	**19**	*e*Pg	**Pg**	**15 45 01.6**	**-0.4**
KCTX				*e*Sg	**Sb**	15 45 16.2	+0.1
IZM	**Izmir**	**1.04**	**210**	*e*PG	**Pg**	**15 45 02.4**	**0.0**
IZM	**Izmir**	**1.04**	**210**	*e*Pg	**Pg**	**15 45 02.4**	**0.0**
BNT	**Bandirma**	**1.05**	**360**	*e*PG	**Pg**	**15 45 02.2**	**-0.4**
BNT	**Bandirma**	**1.05**	**360**	*e*Pg	**Pg**	**15 45 02.2**	**-0.4**
ORLT	**Orhaneli**	**1.05**	**45**	*e*PG	**Pb**	**15 45 02.8**	**-0.4**
ORLT	**Orhaneli**	**1.05**	**45**	*e*Pg	**Pb**	**15 45 02.8**	**-0.4**
BLCB	**Balcova**	**1.15**	**217**	*e*PN	**Pg**	**15 45 04.0**	**-0.4**
BLCB	**Balcova**	**1.15**	**217**	*e*Pn	**Pg**	**15 45 04.0**	**-0.4**
KRBG	**Karabiga-Canak**	**1.19**	**336**	*e*PN	**Pg**	**15 45 05.1**	**-0.2**
KRBG	**Karabiga-Canak**	**1.19**	**336**	*e*Pn	**Pg**	**15 45 05.1**	**-0.2**
TVSB	**Tavsanli**	**1.20**	**83**	*e*PN	**Pb**	**15 45 05.5**	**-0.2**
TVSB	**Tavsanli**	**1.20**	**83**	*e*Pn	**Pb**	**15 45 05.5**	**-0.2**
GDZ	**Gediz**	**1.23**	**100**	*i* P	**Pg**	**15 45 05.5**	**-0.5**
GDZ	**Gediz**	**1.23**	**100**	*i* P	**Pg**	**15 45 05.5**	**-0.5**
PRK	**Paraskevi**	**1.28**	**268**	P	**Pg**	**15 45 06.2**	**-0.8**
PRK				S	**Sb**	15 45 24.0	+0.3
PRK	**Paraskevi**	**1.28**	**268**	*e*PB	**Pg**	**15 45 06.2**	**-0.8**
PRK				*e*SB	**Sb**	15 45 24.5	+0.8
PRK	**Paraskevi**	**1.28**	**268**	P	**Pg**	**15 45 06.2**	**-0.8**
PRK				S	**Sb**	15 45 24.0	+0.3
MDNY	**Mudanya-Bursa**	**1.30**	**35**	*e*PN	**Pg**	**15 45 06.4**	**-0.9**
MDNY	**Mudanya-Bursa**	**1.30**	**35**	*e*Pn	**Pg**	**15 45 06.4**	**-0.9**
EZN	**Ezine**	**1.34**	**293**	*e*PN	**Pg**	**15 45 07.5**	**-0.5**
EZN	**Ezine**	**1.34**	**293**	*e*Pn	**Pg**	**15 45 07.6**	**-0.5**
LPK	**Lapseki**	**1.39**	**320**	*e*PN	**Pn**	**15 45 08.7**	**+0.3**
LPK				*e*SN	**Sn**	15 45 28.2	+1.0
LPK	**Lapseki**	**1.39**	**320**	*e*Pn	**Pn**	**15 45 08.7**	**+0.3**
LPK				*e*Sn	**Sn**	15 45 28.2	+1.0
ARMT	**Armutlu**	**1.45**	**30**	*e*PN	**Pn**	**15 45 08.9**	**-0.4**
ARMT	**Armutlu**	**1.45**	**30**	*e*Pn	**Pn**	**15 45 08.9**	**-0.4**
GEMT	**Gemlik**	**1.49**	**40**	*e*PN	**Pn**	**15 45 10.2**	**+0.4**
GEMT	**Gemlik**	**1.49**	**40**	*e*Pn	**Pn**	**15 45 10.2**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.50**	**338**	*e*PN	**Pn**	**15 45 10.2**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.50**	**338**	*e*Pn	**Pn**	**15 45 10.2**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.56**	**315**	*e*PN	**Pn**	**15 45 10.8**	**0.0**
GELI	**Tayfur-Gelibol**	**1.56**	**315**	*e*Pn	**Pn**	**15 45 10.8**	**0.0**
KHL	**Karahalli**	**1.59**	**128**	*e*PN	**Pn**	**15 45 11.7**	**+0.5**
KHL	**Karahalli**	**1.59**	**128**	*e*Pn	**Pn**	**15 45 11.7**	**+0.5**
SIGR	**SIGRI**	**1.61**	**267**	P	**Pn**	**15 45 10.6**	**-0.8**
SIGR				S	**Sn**	15 45 32.3	-0.2
SIGR	**SIGRI**	**1.61**	**267**	P	**Pn**	**15 45 10.6**	**-0.8**
SIGR				S	**Sn**	15 45 32.3	-0.2
YLV	**Yalova**	**1.68**	**41**	*e*PN	**Pb**	**15 45 13.5**	**-0.4**
YLV	**Yalova**	**1.68**	**41**	*e*Pn	**Pb**	**15 45 13.5**	**-0.4**
TKR	**Tekirdag**	**1.71**	**350**	*e*PN	**Pb**	**15 45 13.9**	**-0.3**
TKR	**Tekirdag**	**1.71**	**350**	*e*Pn	**Pb**	**15 45 14.0**	**-0.3**
ALT	**Altintas**	**1.72**	**98**	*e*PN	**Pn**	**15 45 13.6**	**+0.6**
ALT	**Altintas**	**1.72**	**98**	P	**Pb**	**15 45 14.0**	**-0.5**
ALT				S	**Sn**	15 45 35.4	0.0
ALT	**Altintas**	**1.72**	**98**	*e*Pn	**Pn**	**15 45 13.6**	**+0.6**
ALT	**Altintas**	**1.72**	**98**	P	**Pb**	**15 45 14.0**	**-0.5**
ALT				S	**Sn**	15 45 35.4	0.0
CHOS	**Chios island**	**1.72**	**238**	P	**Pn**	**15 45 12.1**	**-0.9**
CHOS	**Chios island**	**1.72**	**238**	*e*PN	**Pn**	**15 45 14.0**	**+0.9**
CHOS				*e*SN	**Sg**	15 45 38.7	+0.9
CHOS	**Chios island**	**1.72**	**238**	P	**Pn**	**15 45 12.1**	**-0.9**
CHOS	**Chios island**	**1.72**	**238**	*e*Pn	**Pn**	**15 45 14.0**	**+0.9**
CHOS				*e*Sn	**Sg**	15 45 38.7	+0.9
CAVI	**Cavuskoy**	**1.73**	**58**	*e*PN	**Pn**	**15 45 13.7**	**+0.6**
CAVI	**Cavuskoy**	**1.73**	**58**	*e*Pn	**Pn**	**15 45 13.7**	**+0.6**
ERIK	**Erikli-Kesan**	**1.74**	**322**	*e*PN	**Pn**	**15 45 13.8**	**+0.6**
ERIK	**Erikli-Kesan**	**1.74**	**322**	*e*Pn	**Pn**	**15 45 13.8**	**+0.6**
DENT	**Denizli**	**1.78**	**150**	*e*PN	**Pn**	**15 45 14.7**	**+0.9**
DENT	**Denizli**	**1.78**	**150**	*e*Pn	**Pn**	**15 45 14.7**	**+0.9**
ADVT	**Abdulvahap**	**1.79**	**51**	*e*PN	**Pn**	**15 45 14.8**	**+0.8**
ADVT	**Abdulvahap**	**1.79**	**51**	*e*Pn	**Pn**	**15 45 14.8**	**+0.8**
SMG	**Samos**	**1.81**	**208**	P	**Pn**	**15 45 14.8**	**+0.7**
SMG				S	**Sg**	15 45 40.4	-0.1
SMG	**Samos**	**1.81**	**208**	*e*PN	**Pn**	**15 45 14.8**	**+0.7**
SMG				*e*SN	**Sg**	15 45 40.8	+0.3
SMG	**Samos**	**1.81**	**208**	P	**Pn**	**15 45 14.8**	**+0.7**
SMG				S	**Sg**	15 45 40.4	-0.1
SLVT	**Silivri**	**1.94**	**6**	*e*PN	**Pn**	**15 45 17.1**	**+1.2**
SLVT	**Silivri**	**1.94**	**6**	*e*Pn	**Pn**	**15 45 17.1**	**+1.2**
ISK	**Istanbul-Kandi**	**1.96**	**26**	*e*PN	**Pn**	**15 45 16.8**	**+0.5**
ISK	**Istanbul-Kandi**	**1.96**	**26**	*e*Pn	**Pn**	**15 45 16.8**	**+0.5**
ENEZ	**Enez**	**1.97**	**317**	*e*PN	**Pn**	**15 45 16.8**	**+0.4**
ENEZ	**Enez**	**1.97**	**317**	*e*Pn	**Pn**	**15 45 16.8**	**+0.4**
CTKS	**Kestanelik-??a**	**1.98**	**13**	*e*PN	**Pn**	**15 45 17.4**	**+0.9**
CTKS	**Kestanelik-??a**	**1.98**	**13**	*e*Pn	**Pn**	**15 45 17.4**	**+0.9**
BGKT	**Bogazkoy**	**1.98**	**19**	*e*PN	**Pn**	**15 45 17.4**	**+0.8**
BGKT	**Bogazkoy**	**1.98**	**19**	*e*Pn	**Pn**	**15 45 17.4**	**+0.8**
MLSB	**Milas**	**2.01**	**183**	*e*PN	**Pn**	**15 45 17.9**	**+1.0**
MLSB	**Milas**	**2.01**	**183**	*e*Pn	**Pn**	**15 45 17.9**	**+1.0**
HRT	**Hereke**	**2.02**	**41**	*e*PN	**Pn**	**15 45 18.2**	**+1.0**
HRT	**Hereke**	**2.02**	**41**	*e*Pn	**Pn**	**15 45 18.2**	**+1.0**
GPA	**Golpazari**	**2.08**	**61**	*e*PN	**Pn**	**15 45 19.0**	**+1.0**
GPA	**Golpazari**	**2.08**	**61**	*e*Pn	**Pn**	**15 45 19.0**	**+1.0**
KLYT	**Kilyos**	**2.13**	**23**	*e*PN	**Pn**	**15 45 19.0**	**+0.5**
KLYT	**Kilyos**	**2.13**	**23**	*e*Pn	**Pn**	**15 45 19.0**	**+0.5**
ALN	**Alexandroupoli**	**2.15**	**318**	P	**Pn**	**15 45 18.5**	**-0.3**
ALN				S	**Sn**	15 45 45.8	0.0
ALN	**Alexandroupoli**	**2.15**	**318**	*e*PN	**Pn**	**15 45 18.0**	**-0.8**
ALN				*e*SN	**Sn**	15 45 45.0	-0.8
ALN	**Alexandroupoli**	**2.15**	**318**	*e*Pn	**Pn**	**15 45 18.0**	**-0.8**
ALN	**Alexandroupoli**	**2.15**	**318**	P	**Pn**	**15 45 18.5**	**-0.3**
ALN				*e*Sn	**Sn**	15 45 45.0	-0.8
SMTH	**Samothraki Isl**	**2.18**	**303**	*e*PN	**Pn**	**15 45 19.0**	**-0.3**
SMTH				*e*SN	**Sn**	15 45 47.0	+0.4
SMTH	**Samothraki Isl**	**2.18**	**303**	*e*Pn	**Pn**	**15 45 19.0**	**-0.3**
SMTH				*e*Sn	**Sn**	15 45 47.0	+0.4
SHUT	**Suhut-Afyon**	**2.18**	**109**	*e*PN	**Pn**	**15 45 20.0**	**+0.6**
SHUT	**Suhut-Afyon**	**2.18**	**109**	*e*Pn	**Pn**	**15 45 20.0**	**+0.6**
YER	**Yerkesik**	**2.19**	**172**	*e*PN	**Pn**	**15 45 20.1**	**+0.7**
YER	**Yerkesik**	**2.19**	**172**	*e*Pn	**Pn**	**15 45 20.1**	**+0.7**
CTYL	**Yal??k??y-??at**	**2.19**	**7**	*e*PN	**Pn**	**15 45 20.3**	**+1.0**
CTYL	**Yal??k??y-??at**	**2.19**	**7**	*e*Pn	**Pn**	**15 45 20.3**	**+1.0**
LIA	**Limnos Island**	**2.20**	**287**	P	**Pn**	**15 45 19.2**	**-0.3**
LIA	**Limnos Island**	**2.20**	**287**	*e*PN	**Pn**	**15 45 19.4**	**-0.1**
LIA				*e*SN	**Sn**	15 45 46.9	-0.1
LIA	**Limnos Island**	**2.20**	**287**	*e*Pn	**Pn**	**15 45 19.4**	**-0.1**
LIA				*e*Sn	**Sn**	15 45 46.9	-0.1
SILT	**Sile**	**2.27**	**35**	*e*PN	**Pn**	**15 45 21.4**	**+0.9**
SILT	**Sile**	**2.27**	**35**	*e*Pn	**Pn**	**15 45 21.4**	**+0.9**
BODT	**Bodrum**	**2.29**	**192**	*e*PN	**Pn**	**15 45 22.2**	**+1.4**
BODT	**Bodrum**	**2.29**	**192**	*e*Pn	**Pn**	**15 45 22.2**	**+1.4**
GULT	**Gulveren**	**2.29**	**60**	*e*PN	**Pn**	**15 45 21.6**	**+0.7**
GULT	**Gulveren**	**2.29**	**60**	*e*Pn	**Pn**	**15 45 21.6**	**+0.7**
DAT	**Datca**	**2.58**	**186**	*e*PN	**Pn**	**15 45 26.1**	**+1.1**
DAT	**Datca**	**2.58**	**186**	*e*Pn	**Pn**	**15 45 26.1**	**+1.1**
EDRB	**Edirne**	**2.69**	**341**	*e*PN	**Pn**	**15 45 27.2**	**+0.9**
EDRB	**Edirne**	**2.69**	**341**	P	**Pn**	**15 45 26.6**	**+0.3**
EDRB	**Edirne**	**2.69**	**341**	P	**Pn**	**15 45 26.6**	**+0.3**
EDRB	**Edirne**	**2.69**	**341**	*e*Pn	**Pn**	**15 45 27.2**	**+0.9**
MDUB	**Mudurnu**	**2.78**	**64**	*e*PN	**Pn**	**15 45 29.1**	**+1.5**
MDUB	**Mudurnu**	**2.78**	**64**	*e*Pn	**Pn**	**15 45 29.1**	**+1.5**
SVRH	**Sivrihisar-ESK**	**2.79**	**86**	*e*PN	**Pn**	**15 45 29.1**	**+1.3**
SVRH	**Sivrihisar-ESK**	**2.79**	**86**	*e*Pn	**Pn**	**15 45 29.1**	**+1.3**
KIZT	**Kizilcal**	**3.11**	**97**	*e*PN	**Pn**	**15 45 33.3**	**+1.1**
KIZT	**Kizilcal**	**3.11**	**97**	*e*Pn	**Pn**	**15 45 33.3**	**+1.1**
PLG	**Polygyros**	**3.61**	**289**	*e*PN	**Pn**	**15 45 39.0**	**0.0**
PLG	**Polygyros**	**3.61**	**289**	*e*Pn	**Pn**	**15 45 39.0**	**0.0**
NVR	**Nevrokopi**	**3.72**	**305**	*e*PN	**Pn**	**15 45 39.9**	**-0.5**
NVR	**Nevrokopi**	**3.72**	**305**	*e*Pn	**Pn**	**15 45 39.9**	**-0.5**

*DDA **16** 16:05:23.9,37˙.68N×36˙.33E,h1km, MD3.1*
*ISK **16** 16:05:23.6,37˙.69N×36˙.31E,h5km, MD3.2*
*CSEM **16** 16:05:24.1±0.3,37˙.70N×36˙.28E,h0km±3km, MD3.1, Error ellipse: s-maj=5.9km s-min=4.5km az=157.0*

ISC 16 16:05:23.6±1.1,37˙.67N±0˙.02×36˙.31E±0˙.02,h2km±10km, n46,σ1s09/66,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.10**	**164**	*i* P	**Pg**	**16 05 25.5**	**0.0**
ANDN				*i* S	**Sg**	16 05 27.3	+0.6
ANDN	**Andirin**	**0.10**	**164**	*i* P	**Pg**	**16 05 25.5**	**0.0**
ANDN				*i* S	**Sg**	16 05 27.3	+0.6
KOZT	**Kozan**	**0.43**	**244**	PG	**Pg**	**16 05 32.6**	**+0.8**
KOZT				SG	**Sb**	16 05 39.3	-1.6
KOZT	**Kozan**	**0.43**	**244**	*i* Pg	**Pg**	**16 05 32.6**	**+0.8**
KOZT				*i* Sg	**Sb**	16 05 39.3	-1.6
AYKD	**Aykdinkavak**	**0.47**	**123**	*i* P	**Pg**	**16 05 32.8**	**+0.2**
AYKD				*i* S	**Sg**	16 05 39.0	+0.3
KMRS	**Kahramanmaras**	**0.50**	**110**	*e*PG	**Pg**	**16 05 33.3**	**+0.2**
KMRS				*e*SG	**Sb**	16 05 40.6	-2.2
KMRS	**Kahramanmaras**	**0.50**	**110**	*e*Pg	**Pg**	**16 05 33.3**	**+0.2**
KMRS				*e*Sg	**Sb**	16 05 40.6	-2.2
SARI	**SarD1z-Kayseri**	**0.74**	**7**	*e*PG	**Pg**	**16 05 37.9**	**+0.2**
SARI				*e*SG	**Sb**	16 05 48.6	-1.3
CEYT	**Ceyhan**	**0.80**	**214**	*e*PG	**Pb**	**16 05 39.8**	**-0.4**
CEYT	**Ceyhan**	**0.80**	**214**	*e*Pg	**Pb**	**16 05 39.8**	**-0.4**
GAZ	**Gaziantep**	**0.87**	**125**	*e*PG	**Pb**	**16 05 41.5**	**-0.1**
GAZ	**Gaziantep**	**0.87**	**125**	*e*Pg	**Pb**	**16 05 41.5**	**-0.1**
PINB	**Pinarbasi**	**1.00**	**4**	*i* P	**Pb**	**16 05 43.0**	**-0.9**
PINB				*i* S	**Sn**	16 05 59.7	-0.2
PINB	**Pinarbasi**

	comp=Z,9μm,0.1s							
ISRB	**Sarab**	**1.25**	**214**	*e*Pg		**Pg**	**16 21 42.9**	**-0.1**
ISRB				*e*Sg		**Sg**	**16 21 58.9**	**-0.4**
IHRS	**Heris**	**1.31**	**246**	*e*Pn		**Pg**	**16 21 44.0**	**-0.1**
IHRS				*e*Sg		**Sg**	**16 22 00.9**	**-0.2**
IHRS				*e*			16 22 01.4	
	comp=Z,46μm,0.2s							
IHRS	**Heris**	**1.31**	**246**	*e*Pn		**Pg**	**16 21 44.0**	**-0.1**
IHRS				*e*Sg		**Sg**	**16 22 00.9**	**-0.2**
BRDA	**Brd**	**1.76**	**323**	⇑P		**Pb**	**16 21 50.5**	**-0.9**
	SNR=4.4							
BRDA				⇑S		**Sg**	**16 22 16.5**	**+1.0**
PQL	**Pirkuli**	**1.92**	**1**	⇓P		**Pb**	**16 21 54.0**	**-0.2**
PQL				⇑S		**Sg**	**16 22 19.8**	**-0.9**
IML	**Ismayilli**	**1.95**	**352**	⇑P		**Pb**	**16 21 54.2**	**-0.4**
	SNR=4.6							
IML				⇑S		**Sg**	**16 22 20.0**	**-1.5**
ITBZ	**Tabriz**	**1.99**	**252**	*e*Pn		**Pn**	**16 21 54.3**	**+1.3**
ITBZ				*e*			16 22 23.6	
	comp=Z,5μm,0.2s							
ITBZ	**Tabriz**	**1.99**	**252**	*e*Pn		**Pn**	**16 21 54.3**	**+1.3**
ZNJK	**Zanjan**	**2.19**	**177**	*e*Pg		**Pn**	**16 21 55.9**	**+0.1**
ZNJK				*e*Sg		**Sn**	**16 22 23.2**	**0.0**
ZNJK				AML		AML	16 22 24.3	
	comp=N,189nm,0.9s							
ZNJK	**Zanjan**	**2.19**	**177**	*e*Pg		**Pn**	**16 21 55.9**	**+0.1**
ZNJK				*e*Sg		**Sn**	**16 22 23.2**	**0.0**
SIZA	**Siyzn**	**2.22**	**7**	⇓P		**Pb**	**16 21 58.8**	**-0.6**
	SNR=8.5							
SIZA				⇑S		**Sb**	**16 22 26.3**	**-0.8**
IAZR	**Azarshahr**	**2.35**	**241**	*e*Pn		**Pn**	**16 21 59.1**	**+1.1**
IAZR				*e*			16 22 13.7	
	comp=Z,6μm,0.2s							
IAZR	**Azarshahr**	**2.35**	**241**	*e*Pn		**Pn**	**16 21 59.1**	**+1.1**
ISHB	**Shabestar**	**2.38**	**257**	*e*Pn		**Pn**	**16 21 59.6**	**+1.3**
ISHB				*e*			16 22 16.2	
	comp=Z,4μm,0.3s							
ISHB	**Shabestar**	**2.38**	**257**	*e*Pn		**Pn**	**16 21 59.6**	**+1.3**
NAX	**Nakhchivan**	**2.41**	**278**	⇑P		**Pb**	**16 22 01.5**	**-1.0**
	SNR=23							
NAX				⇓S		**Sb**	**16 22 32.6**	**+0.3**
GANJ	**Ganja**	**2.48**	**317**	⇓P		**Pn**	**16 22 01.2**	**+1.7**
	SNR=9.2							
GANJ				⇓S		**Sb**	**16 22 33.4**	**-0.9**
QUBA	**Quba, Azerbaij**	**2.49**	**359**	⇑P		**Pb**	**16 22 01.9**	**-1.9**
QUBA				⇓S		**Sn**	**16 22 32.3**	**+2.2**
SEKA	**Sheki**	**2.56**	**336**	⇑P		**Pb**	**16 22 03.3**	**-1.8**
	SNR=9.5							
SEKA				⇑S		**Sb**	**16 22 35.5**	**-1.3**
IGZV	**Ghazvin**	**2.80**	**151**	*e*Pn		**Pn**	**16 22 03.8**	**-0.3**
IGZV				*e*			16 22 38.3	
	comp=Z,6μm,0.1s							
IGZV	**Ghazvin**	**2.80**	**151**	*e*Pn		**Pn**	**16 22 03.8**	**-0.3**
THKV	**Tehran--Karaj**	**3.47**	**147**	*e*Pn		**Pn**	**16 22 14.2**	**+0.8**
THKV				AML		AML	16 22 55.9	
	comp=E,326nm,0.2s							
THKV				AML		AML	16 22 56.0	
	comp=N,170nm,0.3s							
THKV	**Tehran--Karaj**	**3.47**	**147**	*e*Pn		**Pn**	**16 22 14.2**	**+0.8**
CHTH	**Charan**	**3.59**	**145**	*e*P		**Pn**	**16 22 15.8**	**+0.8**
CHTH	**Charan**	**3.59**	**145**	*e*P		**Pn**	**16 22 15.8**	**+0.8**
IMHD	**Mahdasht**	**3.59**	**151**	*e*Pn		**Pn**	**16 22 15.0**	**+0.1**
IMHD				*e*			16 23 00.9	
	comp=Z,1μm,0.1s							
IMHD	**Mahdasht**	**3.59**	**151**	*e*Pn		**Pn**	**16 22 15.0**	**+0.1**
IPRN	**Peran**	**3.98**	**130**	*e*Pn		**Pn**	**16 22 20.2**	**-0.1**
IPRN				*e*			16 23 06.1	
	comp=Z,8μm,0.0s							
DAMV	**Damavand**	**4.22**	**139**	*e*Pn		**Pn**	**16 22 25.3**	**+1.6**
DAMV	**Damavand**	**4.22**	**139**	*e*Pn		**Pn**	**16 22 25.3**	**+1.6**
IDMV	**Damavand**	**4.29**	**139**	*e*Pn		**Pn**	**16 22 26.7**	**+2.0**
IDMV				*e*			16 22 27.4	
	comp=Z,643nm,0.2s							
IDMV	**Damavand**	**4.29**	**139**	*e*Pn		**Pn**	**16 22 26.7**	**+2.0**
IALA	**Alasht**	**4.37**	**128**	*e*Pn		**Pn**	**16 22 25.0**	**-0.8**
IALA				*e*			16 22 25.7	
	comp=Z,2μm,0.1s							
IALA	**Alasht**	**4.37**	**128**	*e*Pn		**Pn**	**16 22 25.0**	**-0.8**
ASAO	**Ashtian**	**4.47**	**164**	*e*Pn		**Pn**	**16 22 26.8**	**-0.2**
ASAO	**Ashtian**	**4.47**	**164**	*e*Pn		**Pn**	**16 22 26.8**	**-0.2**
IDHR	**Dehrash**	**4.51**	**203**	*e*Pn		**Pn**	**16 22 29.7**	**+2.1**
IDHR				*e*			16 22 58.2	
	comp=Z,343nm,0.3s							
IDHR	**Dehrash**	**4.51**	**203**	*e*Pn		**Pn**	**16 22 29.7**	**+2.1**
IFIR	**Firoozkooh**	**4.64**	**133**	*e*Pn		**Pn**	**16 22 31.3**	**+1.9**
IFIR				*e*			16 22 32.4	
	comp=Z,1μm,0.1s							
IFIR	**Firoozkooh**	**4.64**	**133**	*e*Pn		**Pn**	**16 22 31.3**	**+1.9**
ISHM	**Shahmirzad**	**4.85**	**128**	*e*Pn		**Pn**	**16 22 33.4**	**+1.1**
ISHM				*e*			16 22 33.9	
	comp=Z,2μm,0.2s							
ISHM	**Shahmirzad**	**4.85**	**128**	*e*Pn		**Pn**	**16 22 33.4**	**+1.1**
IKIA	**Kiasar**	**4.86**	**122**	*e*Pn		**Pn**	**16 22 33.3**	**+0.9**
IKIA				*e*			16 22 34.7	
	comp=Z,2μm,0.1s							
IKIA	**Kiasar**	**4.86**	**122**	*e*Pn		**Pn**	**16 22 33.3**	**+0.9**
AB31	**Akbulak array**	**13.21**	**34**	⇓Pn		**Pn**	**16 24 28.0**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=211,slow=12,SNR=8.8							
AB31				⇓Sn		Sn	16 26 45.0	-8.5
	comp=Z,1.1nm,0.7s,baz=221,slow=24,SNR=4.3							
AB31	**Akbulak array**	**13.21**	**34**	Pn		**Pn**	**16 24 28.0**	**+1.4**
	comp=Z,0.9nm,0.8s,baz=211,SNR=8.8							
AKTO	**Aktyubinsk**	**13.37**	**27**	⇑Pn		**Pn**	**16 24 27.4**	**-1.3**
	comp=Z,2.3nm,0.9s							
AKTO				⇑Sn		Sn	16 26 48.3	-9.1
	comp=Z,3.2nm,0.8s							
AKTO	**Aktyubinsk**	**13.37**	**27**	Pn		**Pn**	**16 24 27.4**	**-1.3**
	comp=Z,2.3nm,0.9s							
KK31	**Karatay Array**	**17.09**	**69**	Pn		**Pn**	**16 25 17.2**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=273,slow=14,SNR=7.8							
KK31	**Karatay Array**	**17.09**	**69**	Pn		**Pn**	**16 25 17.2**	**-0.9**
	comp=Z,0.6nm,0.5s,SNR=7.8							

IDC 16 16:22:37.9±7.2, 30°.67S×178°.80W, h0km, mb3.6/2, mb1 3.8/2, mb1mx3.5/16, mbtmp3.6/2, Error ellipse: s-maj=298.7km s-min=58.1km az=156.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.41**	**268**	P	P	16 30 33.9	-0.6
	0.3nm,0.6s,baz=105,slow=7.3,SNR=9.6						
WRA	**Warramunga Arr**	**43.42**	**273**	P	P	16 30 42.8	+0.2
	0.5nm,0.3s,baz=111,slow=8.1,SNR=21						
FINES	**FINESS Array B**	**145.15**	**339**	PKPbc	PKPbc	16 42 15.4	-0.8
	1.3nm,0.6s,baz=40,slow=2.4,SNR=5.4						

IDC 16 16:43:49.8±1.1, 21°.25S×68°.27W, h127km±14km, mb3.4/2, mb1 3.5/4, mb1mx3.3/18, mbtmp3.3/4, Error ellipse: s-maj=39.9km s-min=18.5km az=112.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.48**	**204**	P	Pn	16 44 17.8	0.0
	63nm,0.3s,baz=26,slow=9.8,SNR=564						
LVC				S	Sn	16 44 39.0	-0.1
	18nm,0.3s,baz=95,slow=23,SNR=24						
LPAZ	**La Paz**	**4.94**	**2**	P	Pn	16 45 03.4	+0.5
	1.0nm,0.3s,baz=185,slow=8.0,SNR=20						
SIV	**San Ignacio**	**8.60**	**54**	P	Pn	16 45 50.1	-1.4
	1.4nm,0.3s,baz=264,slow=14,SNR=3.9						
TORD	**Torodi Ar. Bea**	**76.71**	**70**	P	P	16 55 27.4	-0.1
	0.4nm,0.7s,baz=247,slow=5.6,SNR=4.8						
YKA	**Yellowknife Ar**	**91.15**	**340**	P	P	16 56 38.4	-1.5
	0.1nm,0.3s,baz=147,slow=3.5,SNR=5.4						
MKAR	**Makanchi Array**	**145.08**	**36**	PKPbc	PKPdf	17 03 12.8	+0.6
	0.3nm,0.5s,baz=328,slow=2.3,SNR=4.8						

MEX 16 16:56:20.1±0.3, 17°.32N×100°.82W, h4km±3km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.59**	**117**	*e*P	Pg	16 56 31.1	-0.3
CAIG				*i* S	Sg	16 56 39.7	+0.5
ZIIG	**Zihuatanejo**	**0.68**	**295**	*i* P	Pg	16 56 32.3	-0.9
ZIIG				*i* S	Sg	16 56 42.0	-0.1
ACX	**Acapulco**	**1.02**	**116**	*i* P	Pg	16 56 36.0	-3.8
ACX				*i* S	Sg	16 56 49.0	-4.1
ARIG	**Puente Sto Nin**	**1.05**	**25**	*i* P	Pg	16 56 37.6	-2.7
ARIG				*i* S	Sg	16 56 51.4	-2.7
PLIG	**Platanillo**	**1.64**	**49**	*i* P	Pn	16 56 46.2	-3.7
PLIG				*i* S	Sn	16 57 06.7	-4.9
YAIG	**Yautepec**	**2.26**	**47**	*i* P	Pn	16 56 55.1	-3.3
YAIG				*i* S	Sn	16 57 21.7	-5.2
PNIG	**Pinotepa**	**2.74**	**109**	*i* P	Pn	16 57 01.3	-3.6
PNIG				*i* S	Sn	16 57 34.5	-3.9
UTMO	**Huajuapan**	**2.92**	**80**	*i* P	Pn	16 57 03.7	-3.9

*ISCJB **16** 17:01:06.1±0.7, 38°.32N±0°.05×21°.77E±0°.05, h13km±4km, Error ellipse: s-maj=7.7km s-min=6.3km az=172.2*
*CSEM **16** 17:01:06.5±0.1, 38°.33N×21°.78E, h5km, MD2.5, Error ellipse: s-maj=2.9km s-min=2.5km az=2.0*
*THE **16** 17:01:06.9, 38°.32N×21°.79E, h8km±2km, ML1.6/2, Error ellipse: s-maj=2.2km s-min=0.5km az=31.0*
*ATH **16** 17:01:06.3, 38°.33N×21°.77E, h11km±1km, MD2.5/7*

ISC 16 17:01:06.1±1.0, 38°.33N±0°.03×21°.77E±0°.03, h14km±7km, n26, σ0s27/44, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EFP	**Efpalio**	**0.15**	**47**	P	Pg	17 01 09.9	0.0
EFP				S	Sg	17 01 12.4	0.0
EFP	**Efpalio**	**0.15**	**47**	*e*Pg	Pg	17 01 09.9	0.0
EFP				*e*SG	Sg	17 01 12.3	-0.1
EFP	**Efpalio**	**0.15**	**47**	P	Pg	17 01 09.9	0.0
EFP				S	Sg	17 01 12.4	0.0
LAKA	**Lakka**	**0.19**	**117**	P	Pg	17 01 10.5	0.0
LAKA				S	Sg	17 01 13.0	-0.4
LAKA	**Lakka**	**0.19**	**117**	*e*Pg	Pg	17 01 10.5	0.0
LAKA				*e*SG	Sg	17 01 13.1	-0.4
LAKA	**Lakka**	**0.19**	**117**	P	Pg	17 01 10.5	0.0
LAKA				*e*Sg	Sg	17 01 13.1	-0.4
TRIZ	**Trizonia**	**0.24**	**80**	P	Pg	17 01 11.4	0.0
TRIZ				S	Sg	17 01 15.4	+0.5
TRIZ	**Trizonia**	**0.24**	**80**	*e*Pg	Pg	17 01 11.4	0.0
TRIZ				*e*SG	Sg	17 01 15.2	+0.3
TRIZ	**Trizonia**	**0.24**	**80**	P	Pg	17 01 11.4	0.0
TRIZ				S	Sg	17 01 15.4	+0.5
KALE	**Kalithea**	**0.30**	**77**	P	Pg	17 01 12.5	0.0
KALE				S	Sg	17 01 17.1	+0.4
KALE	**Kalithea**	**0.30**	**77**	*e*PB	Pg	17 01 12.4	0.0
KALE	**Kalithea**	**0.30**	**77**	*e*Pb	Pg	17 01 12.4	0.0
KALE				S	Sg	17 01 17.1	+0.4
AXS	**Araxos**	**0.33**	**247**	P	Pb	17 01 13.8	0.0
AXS	**Araxos**	**0.33**	**247**	P	Pb	17 01 13.8	0.0
RLS	**Riolos of Patr**	**0.35**	**221**	*e*PB	Pg	17 01 13.4	+0.1
RLS	**Riolos of Patr**	**0.35**	**221**	*e*Pb	Pg	17 01 13.4	+0.1
KLV	**Kalavryta, Ach**	**0.41**	**133**	*e*PB	Pg	17 01 14.7	+0.3
KLV				*e*SB	Sg	17 01 19.8	-0.2
KLV	**Kalavryta, Ach**	**0.41**	**133**	*e*Pb	Pg	17 01 14.7	+0.3
KLV				*e*Sb	Sg	17 01 19.8	-0.2
EVR	**Evrytania**	**0.59**	**3**	*e*PB	Pg	17 01 17.6	-0.1
EVR	**Evrytania**	**0.59**	**3**	*e*Pb	Pg	17 01 17.6	-0.1
GUR	**Goura**	**0.60**	**130**	P	Pg	17 01 17.8	0.0
GUR				S	Sb	17 01 26.4	-0.3
GUR	**Goura**	**0.60**	**130**	*e*PB	Pg	17 01 17.3	-0.5
GUR				*e*SB	Sg	17 01 26.3	+0.5
GUR	**Goura**	**0.60**	**130**	*e*Pb	Pg	17 01 17.3	-0.5
GUR	**Goura**	**0.60**	**130**	P	Pg	17 01 17.8	0.0
GUR				*e*Sb	Sg	17 01 26.3	+0.5
DSF	**Desfina**	**0.60**	**82**	P	Pg	17 01 17.8	-0.2
DSF				S	Sb	17 01 26.9	0.0
DSF	**Desfina**	**0.60**	**82**	P	Pg	17 01 17.8	-0.2
DSF				S	Sb	17 01 26.9	0.0

*ISCJB **16** 17:05:31.8±1.3, 51°.42N±0°.06×16°.11E±0°.06, h0km, Error ellipse: s-maj=8.9km s-min=4.4km az=21.8*
*CSEM **16** 17:05:32.0±0.8, 51°.46N×16°.15E, h2km, ML2.7/4, Error ellipse: s-maj=13.0km s-min=7.0km az=11.0*
*WAR **16** 17:05:32.0, 51°.53N×16°.09E*
*PRU **16** 17:05:33.1, 51°.43N×16°.20E, h0km*

ISC 16 17:05:32.8±1.9, 51°.45N±0°.09×16°.15E±0°.05, h0km, n19, σ0s78/34, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.61**	**171**	*e*Pg	Pg	17 05 45.0	+0.5
KSP				*e*Sg	Sg	17 05 53.0	+0.5
KSP	**Ksiaz**	**0.61**	**171**	*e*Pg	Pg	17 05 45.1	+0.5
KSP				*e*Sg	Sg	17 05 53.0	+0.5
UPC	**Upice**	**0.95**	**185**	*e*PG	Pg	17 05 51.0	+0.1
UPC	**Upice**	**0.95**	**185**	Pg	Pg	17 05 51.0	+0.1
DPC	**Dobruska-Polom**	**1.11**	**174**	*e*PG	Pg	17 05 53.7	-0.3
DPC				*e*SG	Sg	17 06 08.2	-0.1
DPC	**Dobruska-Polom**	**1.11**	**174**	Pg	Pg	17 05 53.7	-0.3
DPC				Sg	Sg	17 06 08.2	-0.1
PVCC	**Panska Ves**	**1.36**	**228**	*e*PG	Pb	17 05 58.8	-0.3
PVCC				*e*SG	Sb	17 06 17.2	+0.2
	comp=Z,19nm,0.2s						
PVCC	**Panska Ves**	**1.36**	**228**	Pg	Pb	17 05 58.8	-0.3
PVCC				Sg	Sb	17 06 17.2	+0.2
	19nm,0.2s						
KRLC	**Kraliky**	**1.43**	**163**	*e*PG	Pn	17 05 59.3	-0.8
KRLC				*e*SG	Sg	17 06 18.2	-0.6
KRLC	**Kraliky**	**1.43**	**163**	Pg	Pn	17 05 59.3	-0.8
KRLC				Sg	Sg	17 06 18.2	-0.6
BRG	**Berggiesshubel**	**1.50**	**248**	PG	Pg	17 06 02.1	+0.5
BRG				SG	Sn	17 06 21.4	+0.1
	10.0nm,0.4s						
PRU	**Pruhonice**	**1.78**	**216**	*e*PG	Pb	17 06 05.7	-0.6
PRU				*e*SG	Sn	17 06 28.9	+0.7
	comp=Z,7.9nm,0.5s						
PRU	**Pruhonice**	**1.78**	**216**	Pg	Pb	17 06 05.7	-0.6
PRU				Sg	Sn	17 06 28.9	+0.7
	7.9nm,0.5s						
MORC	**Moravsky Berou**	**1.90**	**152**	*e*Pn	Pn	17 06 05.8	-0.6
MORC				*e*Sg	Sn	17 06 29.4	-1.6
CLL	**Collm**	**1.98**	**267**	*e*Sg	Sg	17 06 36.0	-0.3
	comp=Z,5.0nm,0.4s						
OKC	**Ostrava-Krasne**	**2.05**	**141**	*e*SG	Sn	17 06 36.9	+2.0
	comp=Z,6.5nm,0.5s						
OKC	**Ostrava-Krasne**	**2.05**	**141**	Sg	Sn	17 06 36.9	+2.0
	comp=Z,6.5nm,0.5s						
KHC	**Kasperske Hory**	**2.85**	**216**	*e*PN	Pn	17 06 19.3	-0.2
KHC				*e*PG	Pb	17 06 25.3	+0.8
KHC				*e*SN	Sn	17 06 53.5	-1.0
KHC				*e*SG	Sg	17 07 04.8	+0.6
	comp=Z,1.9nm,0.4s						
KHC	**Kasperske Hory**	**2.85**	**216**	Pn	Pn	17 06 19.3	-0.2

*BJI **16** 17:52:32.6, 4°.87S×127°.02E, h25km, mB5.0/33, mb4.8/48, Ms4.6/37, Ms7 4.3/37*
*AUST **16** 17:52:38.2±1.4, 4°.15S×126°.42E, h0km, Error ellipse: s-maj=0.8km s-min=0.5km az=41.0*
*ISCJB **16** 17:52:39.3±0.8, 4°.11S±0°.02×126°.40E±0°.02, h22km±5km, mb4.9/91, MS4.2/38, Error ellipse: s-maj=3.9km s-min=3.1km az=149.2*
*GCMT **16** 17:52:41.8±0.2, 4°.05S×126°.29E, h18km, MW5.1, Moment Tensor Solution. s42,c58; s88,c151; Moment tensor: Scale 10^16^Nm; Mrr=0.94±.16; Mθθ=2.69±.11; Mφφ=3.62±.14; Mrθ=0.92±.29; Mθφ=5.25±.11; Mφr=0.94±.28; Best double couple: M=6.20000×10^16^ NP1:φs=344.00000°, δ80.00000°, λ176.00000°. NP2:φs75.00000°, δ86.00000°, λ10.00000°. Principal axes: T 6.8000, Plg9.0000°, Azm300.0000°; N -1.1200, Plg80.0000°, Azm95.0000°; P -5.6800, Plg4.0000°, Azm209.0000°; Data Used: IU II CC G CN.*
*MOS **16** 17:52:41.1±1.2, 4°.04S×126°.37E, h33km, mb5.2/34, MS4.1/5 Error ellipse: s-maj=13.0km s-min=6.2km az=115.4*
*DJA **16** 17:52:41.9±0.7, 4°.5±2°×12°.6E±°, h15km±7km, M5.3/44, mB5.6/13, mb5.2/44, MLv5.6/2, Mw(mB)5.2/13*
*NEIC **16** 17:52:43.0±1.2, 4°.04S×126°.35E, h39km±11km, mb5.0/36, Error ellipse: s-maj=9.2km s-min=4.9km az=59.0*
*IDC **16** 17:52:44.4±2.1, 4°.15S×126°.24E, h51km±19km, mb4.6/21, mb1 4.7/22, mb1mx4.6/26, mbtmp4.7/22, ML4.7/1, MS4.2/21, Ms1 4.2/21, ms1mx4.0/33, Error ellipse: s-maj=14.6km s-min=9.9km az=55.0*

ISC 16 17:52:41.5±0.3, 4°.14S±0°.03×126°.38E±0°.03, h25km±1km, h25km:pP-P,n307, σ1s67/353, mb5.0/91, MS4.2/38, 7C-4D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**2.67**	**73**	P	**Pn**	**17 53 23.0**	**+0.1**
MSAI				S	**Sn**	**17 53 53.0**	**-1.4**
LBMI	**Labuha**	**3.66**	**18**	P	**Pn**	**17 53 37.6**	**+1.0**
LBMI				S	**Sn**	**17 54 21.4**	**+2.5**
BBSI	**Bau Bau**	**4.02**	**250**	P	**Pn**	**17 53 43.1**	**+1.5**
BBSI				S	**Sn**	**17 54 27.3**	**-0.6**
LUWI	**Luwuk**	**4.74**	**310**	P	**Pn**	**17 53 49.5**	**-1.9**
LUWI	**Luwuk**	**4.74**	**310**	P	**Pn**	**17 53 49.3**	**-2.1**
	baz=4.8,SNR=529						
TNTI	**Ternate**	**4.98**	**11**	P	**Pn**	**17 53 55.6**	**+0.9**
TNTI				S	**Sn**	**17 54 54.3**	**+2.7**
KMSI	**Cibinong**	**5.26**	**333**	P	**Pn**	**17 53 57.7**	**-0.9**
KMSI				S	**Sn**	**17 54 57.7**	**-0.8**
SKSI	**Soroako, Sulaw**	**5.29**	**288**	P	**Pn**	**17 53 57.6**	**-1.4**
MNI	**Manado**	**5.76**	**344**	P	**Pn**	**17 54 06.0**	**+0.5**
	410nm,0.7s,7μm2.3nm						
MNI				S	**Sn**	**17 55 10.1**	**-0.7**
	410nm,0.7s,7μm2.3nm						
FAKI	**Fak Fak**	**5.98**	**78**	P	**Pn**	**17 54 09.1**	**+0.6**
FAKI				S	**Sn**	**17 55 16.8**	**+0.5**
FAKI	**Fak Fak**	**5.98**	**78**	P	**Pn**	**17 54 09.2**	**+0.7**
	baz=6.0,SNR=203						
MMRI	**Maumere**	**6.07**	**222**	P	**Pn**	**17 54 10.8**	**+1.1**
GAMI	**Galela, Maluku**	**6.11**	**13**	P	**Pn**	**17 54 12.8**	**+2.6**
BSSI	**Bau Bau, Buton**	**6.19**	**251**	P	**Pn**	**17 54 11.3**	**-0.1**
BKSI	**Bukumamba**	**6.34**	**259**	P	**Pn**	**17 54 15.1**	**+1.6**
MRSI	**Marisa**	**6.38**	**316**	P	**Pn**	**17 54 12.9**	**-1.1**
TTSI	**Tana Toraja**	**6.64**	**279**	P	**Pn**	**17 54 18.3**	**+0.8**
KAPI	**Kappang**	**6.66**	**262**	Pn	**Pn**	**17 54 18.0**	**+0.1**
	1μm,0.7s,SNR=43						
KAPI	**Kappang**	**6.66**	**262**	*e*P	**Pn**	**17 54 17.6**	**-0.3**
	149nm,0.7s						
KAPI				S	**Sn**	**17 55 30.2**	**-2.8**
KAPI				*e*Sn	**Sn**	**17 55 31.4**	**-1.6**
KAPI	**Kappang**	**6.66**	**262**	P	**Pn**	**17 54 18.2**	**+0.3**
	18nm,0.3s,baz=108,slow=5.1,SNR=111						
KAPI				S	**Sn**	**17 55 30.3**	**-2.8**
	18nm,0.3s,baz=313,slow=22,SNR=12						
WSI	**Waingapu**	**8.16**	**227**	P	**Pn**	**17 54 41.0**	**+2.6**
	554nm,1.3s,7μm						
WSI	**Waingapu**	**8.16**	**227**	P	Pn	17 54 43.0	+4.6
	baz=8.2,SNR=4.0						
BASI	**Baing, Sumba**	**8.34**	**223**	P	Pn	17 54 45.3	+4.4
	405nm,1.2s,8μm1.6nm						
WBSI	**Waikabubak, Su**	**8.83**	**231**	P	**Pn**	**17 54 48.3**	**+0.7**
	230nm,0.9s,2μm						
MTN	**Manton Dam**	**9.84**	**152**	P	**Pn**	**17 55 01.3**	**-0.2**
	baz=9.9,SNR=64						
SMKI	**Samarinda**	**9.87**	**292**	P	**Pn**	**17 55 02.6**	**+0.7**
BAKI	**Biak**	**10.15**	**73**	P	**Pn**	**17 55 06.0**	**+0.3**
	178nm,0.7s,2μm						
KBKI	**Kotabaru**	**10.22**	**274**	P	Pn	17 55 18.5	+12
KDU	**Kakadu**	**10.41**	**145**	P	**Pn**	**17 55 08.7**	**-0.6**
	baz=10,SNR=33						
MATI	**Mati**	**11.02**	**359**	*e*P	**Pn**	**17 55 17.5**	**-0.1**
MATI				*e*S	**Sn**	**17 57 21.7**	**+1.6**
CTBH	**Cotabato--PC H**	**11.49**	**349**	⇑ *i* P	**Pn**	**17 55 26.7**	**+2.6**
KHKI	**Kahang-Kahang**	**11.50**	**248**	P	Pn	17 55 31.1	+6.9
	106nm,1.0s						
BBKI	**Banjar Baru**	**11.53**	**273**	P	Pn	17 55 29.8	+5.1
	55nm,1.0s						
KNRA	**Kununurra**	**11.70**	**169**	P	**Pn**	**17 55 26.1**	**-0.9**
	baz=12,SNR=13						
TSM	**Tawau**	**11.94**	**315**	P	**Pn**	**17 55 29.1**	**-1.1**
BUKP	**Musuan**	**12.02**	**354**	*e*P	**Pn**	**17 55 31.3**	**-0.1**
MYLDM	**Lahad Datu**	**12.15**	**320**	P	**Pn**	**17 55 34.9**	**+1.7**
MYLDM	**Lahad Datu**	**12.15**	**320**	P	**Pn**	**17 55 33.5**	**+0.3**
	597nm,0.8s,4μm						
PAGZ	**Pagadian**	**12.28**	**346**	*e*P	**Pn**	**17 55 36.1**	**+1.2**
IPIL	**Ipil**	**12.45**	**342**	*e*P	**Pn**	**17 55 37.0**	**-0.1**
JAGI	**Jajag, Banyuwa**	**12.89**	**250**	P	P	17 55 48.8	-5.0
	161nm,1.3s						
SDKM	**Sandakan**	**13.36**	**317**	P	**Pn**	**17 55 51.4**	**+1.6**
FITZ	**Fitzroy Crossi**	**13.89**	**183**	*e*Pn	**Pn**	**17 55 54.2**	**-2.7**
	11nm,0.6s						
FITZ				*e*Sn	Sn	17 58 20.2	-10
FITZ	**Fitzroy Crossi**	**13.89**	**183**	P	**Pn**	**17 55 54.7**	**-2.2**
	0.5nm,0.3s,baz=21,slow=8.4,SNR=15						
FITZ	**Fitzroy Crossi**	**13.89**	**183**	P	**Pn**	**17 55 54.7**	**-2.2**
	baz=14,SNR=5.6						
MSLP	**Maasin**	**14.26**	**354**	*e*P	**Pn**	**17 56 01.8**	**-0.2**
KKM	**Kota Kinabalu**	**14.33**	**315**	*e*P	**Pn**	**17 56 02.2**	**-0.9**
	63nm,0.8s						

CTA	**Charters Tower**	**25.02**	**131**	P	**P**	**17**	**58**	**05.5 +1.7**
CTA	**Charters Tower**	**25.02**	**131**	P	**P**	**17**	**58**	**05.5 +1.7**
	comp=Z,130nm,1.1s,baz=310,slow=12,SNR=51							
CTA				LR	LR	18	08	22.2
	comp=Z,649nm,21.7s,baz=328,slow=37							
CTAO	**Charters Tower**	**25.02**	**131** ⇑	*i*P	**P**	**17**	**58**	**05.2 +1.4**
CTAO				pmax	pmax			
	comp=Z,151nm,1.0s							
CTAO	**Charters Tower**	**25.02**	**131** ⇑	*i*P	**P**	**17**	**58**	**05.2 +1.4**
	comp=Z,151nm,1.0s							
KTGM	**Kuala Trenggan**	**25.05**	**292**	P	**P**	**17**	**58**	**06.1 +2.0**
BKNI	**Bangkinang**	**25.70**	**279**	P	P	17	58	17.7 +7.7
RABL	**Rabaul**	**25.72**	**91**	P	**P**	**17**	**58**	**11.4 +1.2**
	baz=26,SNR=12							
FRIM	**Kepong**	**25.80**	**286**	P	**P**	**17**	**58**	**13.6 +2.7**
PPI	**Padang Panjang**	**26.21**	**277**	P	**P**	**17**	**58**	**17.5 +2.9**
	comp=Z,74nm,1.3s							
PPI	**Padang Panjang**	**26.21**	**277**	P	P	17	58	19.9 +5.3
	baz=26,SNR=4.1							
FORT	**Forrest**	**26.54**	**177**	*e*P	**P**	**17**	**58**	**17.3 -0.1**
	comp=Z,86nm,0.7s							
FORT	**Forrest**	**26.54**	**177**	P	**P**	**17**	**58**	**17.6 +0.2**
	baz=27,SNR=22							
MORW	**Morawa**	**26.66**	**200**	P	**P**	**17**	**58**	**18.2 -0.3**
	baz=27,SNR=6.0							
IPM	**Ipoh**	**26.74**	**288**	*e*P	**P**	**17**	**58**	**19.7 +0.3**
	comp=Z,49nm,1.0s							
IPM	**Ipoh**	**26.74**	**288**	P	**P**	**17**	**58**	**21.2 +1.8**
IPM	**Ipoh**	**26.74**	**288**	P	**P**	**17**	**58**	**22.7 +3.3**
IPM	**Ipoh**	**26.74**	**288**	P	**P**	**17**	**58**	**20.8 +1.4**
	comp=Z,53nm,1.0s							
KULM	**Kulim**	**27.35**	**290**	*e*P	**P**	**17**	**58**	**24.4 -0.6**
	comp=Z,17nm,0.8s							
KULM	**Kulim**	**27.35**	**290**	P	**P**	**17**	**58**	**26.8 +1.9**
KULM	**Kulim**	**27.35**	**290**	P	**P**	**17**	**58**	**26.1 +1.2**
	comp=Z,33nm,1.8s							
TPUB	**Ta-pu**	**27.85**	**349**	*e*P	**P**	**17**	**58**	**27.0 -2.2**
	comp=Z,97nm,1.1s							
QLP	**Quilpie**	**28.10**	**144**	P	**P**	**17**	**58**	**32.5 +1.0**
	baz=28,SNR=11							
QIZ	**Qiongzhong**	**28.20**	**325**	P	**P**	**17**	**58**	**32.4 0.0**
QIZ				sP	**sP**	**17**	**58**	**42.1 -0.9**
QIZ				S	**S**	**18**	**03**	**18.8 +2.0**
QIZ				pmax	pmax			
	comp=Z,7.0nm,1.2s							
QIZ				pmax	pmax			
	comp=Z,130nm,3.6s							
QIZ				LR	LR			
	comp=N,380nm,17.7s							
QIZ				LR	LR			
	comp=Z,380nm,19.2s							
QIZ	**Qiongzhong**	**28.20**	**325**	P	**P**	**17**	**58**	**30.9 -1.5**
SSLB	**Suanglung**	**28.26**	**349**	*e*P	**P**	**17**	**58**	**30.0 -2.9**
	comp=Z,19nm,0.8s							
UBPT	**Khong Chiam**	**28.31**	**313**	P	**P**	**17**	**58**	**34.4 +1.0**
	comp=Z,22nm,1.3s							
KLBR	**Kellerberrin**	**28.48**	**196**	P	**P**	**17**	**58**	**34.7 -0.1**
	baz=29,SNR=8.1							
YHNB	**Yeheng**	**29.05**	**351**	*e*P	**P**	**17**	**58**	**38.7 -1.3**
NWAO	**Narrogin (SRO)**	**29.89**	**196**	*e*P	**P**	**17**	**58**	**46.8 -0.5**
	comp=Z,13nm,0.7s							
NWAO	**Narrogin (SRO)**	**29.89**	**196**	P	**P**	**17**	**58**	**46.7 -0.6**
	comp=Z,111nm,0.8s,baz=25,slow=5.1,SNR=12							
NWAO				LR	LR	18	11	14.1
	comp=Z,260nm,20.2s,baz=16,slow=37							
BBOO	**Buckleboo**	**29.92**	**164**	*e*P	**P**	**17**	**58**	**48.6 +1.0**
	comp=Z,465nm,0.9s							
BBOO	**Buckleboo**	**29.92**	**164**	P	**P**	**17**	**58**	**49.7 +2.1**
	baz=30,SNR=10.0							
STKA	**Stephens Creek**	**31.07**	**154**	*e*P	**P**	**17**	**58**	**58.1 +0.3**
	comp=Z,5.1nm,0.7s							
STKA	**Stephens Creek**	**31.07**	**154**	P	**P**	**17**	**58**	**58.3 +0.6**
	comp=Z,9.4nm,0.8s,baz=335,slow=8.6,SNR=34							
STKA				LR	LR	18	12	48.5
	comp=Z,473nm,19.6s,baz=326,slow=39							
STKA	**Stephens Creek**	**31.07**	**154**	P	**P**	**17**	**58**	**58.4 +0.6**
	baz=31,SNR=24							
PBKT	**Sadao Pong**	**32.47**	**310**	P	**P**	**17**	**59**	**10.6 +0.4**
	comp=Z,5.2nm,0.8s							
CMSA	**Cobar Meteorol**	**32.74**	**149**	P	**P**	**17**	**59**	**13.4 +1.0**
	baz=33,SNR=45							
HNR	**Honiara**	**33.73**	**101**	*e*P	**P**	**17**	**59**	**20.9 -0.4**
	comp=Z,68nm,0.9s							
HNR	**Honiara**	**33.73**	**101**	P	**P**	**17**	**59**	**21.4 +0.1**
	comp=Z,23nm,0.7s,baz=182,slow=6.4,SNR=4.6							
CM31	**Chiang Mai Arr**	**35.15**	**311**	*e*P	**P**	**17**	**59**	**33.5 +0.1**
	comp=Z,21nm,1.1s							
CMAR	**Chiang Mai Arr**	**35.15**	**311**	P	**P**	**17**	**59**	**34.4 +0.9**
CMAR				PcP	**PcP**	**18**	**02**	**05.2 +0.4**
CMAR	**Chiang Mai Arr**	**35.15**	**311**	P	**P**	**17**	**59**	**34.4 +0.9**
	comp=Z,11nm,0.8s,baz=136,slow=6.8,SNR=39							
CMAR				PcP	**PcP**	**18**	**02**	**05.2 +0.4**
	comp=Z,1.7nm,0.8s,baz=162,slow=2.8,SNR=6.1							
CMAR				LR	LR	18	14	23.0
	comp=Z,495nm,20.7s,baz=140,slow=37							
CMMT	**Chiang Mai**	**35.36**	**311**	P	**P**	**17**	**59**	**36.7 +1.4**
	comp=Z,28nm,0.9s							
CHTO	**Chiang Mai**	**35.36**	**311**	*e*P	**P**	**17**	**59**	**35.2 -0.1**
CHTO				pmax	pmax			
	comp=Z,22nm,0.9s							
CHTO	**Chiang Mai**	**35.36**	**311**	*e*P	**P**	**17**	**59**	**35.2 -0.1**
	comp=Z,22nm,0.9s							
CHTO	**Chiang Mai**	**35.36**	**311**	P	**P**	**17**	**59**	**36.3 +1.0**
	comp=Z,31nm,1.1s							
ARMA	**Armidale**	**35.37**	**140**	P	**P**	**17**	**59**	**36.8 +1.4**
	baz=35,SNR=6.5							
ARPS	**Mount Arapiles**	**35.44**	**158**	P	**P**	**17**	**59**	**37.5 +1.8**
	baz=36,SNR=64							
GYA	**Guiyang**	**35.91**	**329**	P	**P**	**17**	**59**	**41.3 +1.2**
GYA				pP	**pP**	**17**	**59**	**47.9 +0.3**
GYA				PP	**PP**	**18**	**01**	**04.3 +2.3**
GYA				S	**S**	**18**	**05**	**18.0 +0.9**
GYA				ScS	**ScS**	**18**	**09**	**56.8 -0.5**
GYA				pmax	pmax			
	comp=Z,20nm,1.0s							
GYA				pmax	pmax			
	comp=Z,120nm,4.8s							
GYA				LR	LR			
	comp=N,540nm,16.8s							
GYA				LR	LR			
	comp=E,510nm,17.5s							
GYA				LR	LR			
	comp=Z,620nm,16.9s							
YNG	**Young**	**36.31**	**148**	P	**P**	**17**	**59**	**45.0 +1.6**
	baz=36,SNR=36							
WHN	**Wuhan**	**36.36**	**342**	P	**P**	**17**	**59**	**45.3 +1.6**
NJ2	**Nanjing**	**36.70**	**349**	*e*P	**P**	**17**	**59**	**47.3 +0.7**
NJ2				pP	**pP**	**17**	**59**	**53.1 -1.0**
NJ2				sP	**sP**	**17**	**59**	**56.0 -1.2**
NJ2				PP	**PnPn**	**18**	**01**	**10.3 -0.1**
NJ2				S	**S**	**18**	**05**	**31.0 +2.3**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.8s							
NJ2				pmax	pmax			
	comp=Z,40nm,4.2s							
NJ2				LR	LR			
	comp=N,190nm,24.0s							
NJ2				LR	LR			
	comp=E,360nm,22.4s							
NJ2				LR	LR			
	comp=Z,290nm,24.9s							
KMI	**Kunming**	**37.06**	**323**	P	P	17	59	54.0 +3.9
KMI				pP	pP	18	00	01.9 +4.3
KMI				sP	sP	18	00	04.5 +3.8
KMI				PP	**PnPn**	**18**	**01**	**21.0 +5.8**
KMI				S	**S**	**18**	**05**	**39.3 +4.4**
KMI				sS	**ScP**	**18**	**05**	**55.4 -0.8**
KMI				SS	**SS**	**18**	**08**	**16.8 -1.0**
KMI				pmax	pmax			
	comp=Z,7.0nm,1.0s							
KMI				pmax	pmax			
	comp=Z,74nm,5.4s							
KMI				LR	LR			
	comp=N,270nm,13.8s							
KMI				LR	LR			
	comp=E,200nm,15.8s							
KMI				LR	LR			
	comp=Z,320nm,21.3s							
CAN	**Canberra**	**37.42**	**149**	*e*P	**P**	**17**	**59**	**54.3 +1.5**
CAN				pmax	pmax			
	comp=Z,26nm,0.7s							
CAN	**Canberra**	**37.42**	**149**	*e*P	**P**	**17**	**59**	**54.3 +1.5**
	comp=Z,26nm,0.7s							
TOO	**Toolangi**	**37.59**	**155**	P	**P**	**17**	**59**	**56.7 +2.6**
	baz=38,SNR=5.4							
ENH	**Enshi**	**37.85**	**336**	*e*P	**P**	**17**	**59**	**56.3 -0.1**
	comp=Z,17nm,0.8s							
CD2	**Chengdu**	**41.01**	**330**	*e*P	**P**	**18**	**00**	**23.8 +1.0**
CD2				pP	**pP**	**18**	**00**	**34.0 +3.6**
CD2				sP	**sP**	**18**	**00**	**38.3 +4.8**
CD2				PP	**PnPn**	**18**	**02**	**02.0 -0.1**
CD2				PcP	**PcP**	**18**	**02**	**23.5 +0.8**
CD2				S	**S**	**18**	**06**	**33.8 0.0**
CD2				sS	**sS**	**18**	**06**	**51.0 +4.7**
CD2				ScS	**ScS**	**18**	**10**	**23.3 -3.1**
CD2				pmax	pmax			
	comp=Z,30nm,1.1s							
CD2				pmax	pmax			
	comp=Z,180nm,6.8s							
CD2				LR	LR			
	comp=E,470nm,17.8s							
CD2				LR	LR			
	comp=Z,300nm,16.6s							
KSAR	**Wonju Array Be**	**41.40**	**2**	P	**P**	**18**	**00**	**25.6 -0.2**
XAN	**Xi'an**	**41.40**	**338**	P	**P**	**18**	**00**	**25.4 -0.6**
XAN				pmax	pmax			
	comp=Z,11nm,0.8s							
XAN				LR	LR			
	comp=N,170nm,20.2s							
XAN				LR	LR			
	comp=Z,80nm,18.5s							
KSRS	**Korea Array**	**41.41**	**2**	P	**P**	**18**	**00**	**25.6 -0.3**
	comp=Z,7.6nm,0.7s,baz=180,slow=9.2,SNR=48							
KSRS				LR	LR	18	16	18.6
	comp=Z,191nm,18.7s,baz=189,slow=34							
MAJO	**Matsushiro**	**41.96**	**14**	*e*P	**P**	**18**	**00**	**28.5 -2.0**
MAJO				pmax	pmax			
	comp=Z,25nm,0.8s							
MAJO	**Matsushiro**	**41.96**	**14**	*e*P	**P**	**18**	**00**	**28.5 -2.0**
	comp=Z,25nm,0.8s							
MAT	**Matsushiro**	**41.96**	**14**	P	**P**	**18**	**00**	**28.8 -1.7**
MAT				S	S	18	06	40.4 -7.3
DZM	**Mont Dzumac**	**42.70**	**118**	*e*S	**sS**	**18**	**07**	**10.8 -1.1**
DZM				*e*LQ	LQ	18	10	09.1
DZM				*e*LR	LR	18	14	17.6
	comp=Z,873nm,29.1s							
DZM	**Mont Dzumac**	**42.70**	**118**	P	**P**	**18**	**00**	**37.3 +0.4**
DZM	**Mont Dzumac**	**42.70**	**118**	P	**P**	**18**	**00**	**37.3 +0.4**
	comp=Z,4.6nm,0.5s,baz=267,slow=9.0,SNR=13							
TAU	**Tasmania Unive**	**42.85**	**157**	*e*P	**P**	**18**	**00**	**38.7 +1.1**
TAU	**Tasmania Unive**	**42.85**	**157**	*e*P	**P**	**18**	**00**	**38.7 +1.1**
SHL	**Shillong**	**44.63**	**313**	*e*PKP	**P**	**18**	**00**	**53.0 +0.6**
BJT	**Baijiatuan**	**44.94**	**349**	P	**P**	**18**	**00**	**52.8 -1.6**
BJI	**Beijing**	**44.96**	**349**	P	**P**	**18**	**00**	**53.1 -1.4**
BJI				PP	**PP**	**18**	**02**	**40.8 +0.8**
BJI				S	**S**	**18**	**07**	**31.8 +0.4**
BJI				SS	**SS**	**18**	**10**	**55.8 +2.1**
BJI				pmax	pmax			
	comp=Z,14nm,1.1s							
BJI				pmax	pmax			
	comp=Z,91nm,5.6s							
BJI				LR	LR			
	comp=N,160nm,17.4s							
BJI				LR	LR			
	comp=E,110nm,17.4s							
BJI				LR	LR			
	comp=Z,92nm,19.9s							
LZH	**Lanzhou**	**45.24**	**334**	*e*P	**P**	**18**	**00**	**59.3 +2.2**
LZH				pP	**pP**	**18**	**01**	**05.5 +0.7**
LZH				sP	**sP**	**18**	**01**	**08.0 +0.2**
LZH				S	**S**	**18**	**07**	**38.0 +2.0**
LZH				pmax	pmax			
	comp=Z,44nm,1.1s							
LZH				pmax	pmax			
	comp=Z,150nm,4.0s							
LZH				LR	LR			
	comp=N,420nm,15.6s							
LZH				LR	LR			
	comp=E,400nm,16.4s							
LZH				LR	LR			
	comp=Z,460nm,15.6s							
HHC	**Hu-ho-hao-te**	**46.79**	**345**	*e*P	**P**	**18**	**01**	**10.1 +1.0**
HHC				sP	**sP**	**18**	**01**	**18.9 -1.0**
HHC				PP	**PP**	**18**	**03**	**00.8 +1.3**
HHC				S	**S**	**18**	**07**	**59.3 +1.3**
HHC				SS	**SS**	**18**	**11**	**19.9 -5.0**
HHC				pmax	pmax			
	comp=Z,26nm,0.8s							
HHC				pmax	pmax			
	comp=Z,290nm,5.8s							
HHC				LR	LR			
	comp=N,390nm,12.6s							
HHC				LR	LR			
	comp=E,400nm,14.9s							
HHC				LR	LR			
	comp=Z,500nm,14.7s							
VLA	**Vladivostok**	**47.31**	**5**	*e*P	**P**	**18**	**01**	**12.7 -0.3**
VLA				pmax	pmax			
	comp=Z,11nm,0.9s							
LSA	**Lhasa**	**47.66**	**317**	P	**P**	**18**	**01**	**18.0 +1.4**
LSA				pmax	pmax			
	comp=Z,10.0nm,0.7s							
LSA	**Lhasa**	**47.66**	**317**	*e*P	**P**	**18**	**01**	**17.6 +1.0**
LSA				pmax	pmax			
	comp=Z,28nm,0.7s							
LSA	**Lhasa**	**47.66**	**317**	*e*P	**P**	**18**	**01**	**17.6 +1.0**
	comp=Z,28nm,0.7s							
CN2	**Changchun**	**47.73**	**359**	*e*P	**P**	**18**	**01**	**15.8 -0.5**
CN2				*e*pP	**pP**	**18**	**01**	**24.8 +0.8**
USRK	**Ussuriysk Arra**	**48.39**	**5**	P	**P**	**18**	**01**	**20.9 -0.5**
	comp=Z,12nm,0.6s,baz=189,slow=6.9,SNR=43							
ERM	**Erimo**	**48.41**	**17**	*e*P	**P**	**18**	**01**	**22.5 +0.9**
ERM				pmax	pmax			
	comp=Z,15nm,1.0s							
MDJ	**Mudanjiang**	**48.62**	**3**	P	**P**	**18**	**01**	**22.5 -0.7**
MDJ				pP	**pP**	**18**	**01**	**31.3 +0.4**
MDJ				PcP	**PcP**	**18**	**02**	**47.1 -1.4**
MDJ				PP	**PP**	**18**	**03**	**15.4 -1.0**
MDJ				PcS	**PcS**	**18**	**06**	**43.9 -0.5**
MDJ				S	**S**	**18**	**08**	**22.8 -0.9**
MDJ				SS	**SS**	**18**	**11**	**57.4 +3.1**
MDJ				pmax	pmax			
	comp=Z,12nm,1.4s							
MDJ				pmax	pmax			
	comp=Z,61nm,8.9s							
MDJ				LR	LR			
	comp=Z,230nm,26.8s							
MDJ	**Mudanjiang**	**48.62**	**3**	*e*P	**P**	**18**	**01**	**22.1 -1.1**
	comp=Z,8.0nm,0.9s							
ODAN	**Odare**	**48.68**	**312**	*e*P	**P**	**18**	**01**	**24.4 +0.2**
	comp=Z,61nm,0.8s							
TAPN	**Taplejung**	**48.71**	**312**	*e*P	**P**	**18**	**01**	**24.7 +0.2**
	comp=Z,61nm,0.8s							
RAMN	**Ramite**	**49.32**	**311**	*e*P	**P**	**18**	**01**	**29.6 +0.5**
	comp=Z,63nm,0.7s							
GTA	**Gaotai**	**49.78**	**333**	*e*P	**P**	**18**	**01**	**32.8 +0.5**
GTA				pP	**pP**	**18**	**01**	**38.8 -1.2**
GTA				sP	**sP**	**18**	**01**	**41.5 -1.6**
GTA				S	**S**	**18**	**08**	**40.4 0.0**
GTA				SS	**SS**	**18**	**12**	**11.6 -1.7**
GTA				pmax	pmax			
	comp=Z,6.0nm,1.2s							
GTA				pmax	pmax			
	comp=Z,78nm,6.9s							
GTA				LR	LR			
	comp=N,120nm,13.3s							
GTA				LR	LR			
	comp=E,170nm,17.1s							
GTA				LR	LR			
	comp=Z,170nm,17.8s							
ASAJ	**Asahikawa**	**50.21**	**15**	*e*P	**P**	**18**	**01**	**34.5 -0.7**
	comp=Z,7.4nm,0.8s							
GUN	**Gumba**	**50.37**	**312**	*e*P	**P**	**18**	**01**	**37.3 0.0**
	comp=Z,75nm,0.8s							
PKI	**Pulchoki**	**50.54**	**311**	*e*P	**P**	**18**	**01**	**38.1 -0.5**
	comp=Z,44nm,1.1s							
PKIN	**Phulchoki**	**50.56**	**311**	*e*P	**P**	**18**	**01**	**38.4 -0.2**
	comp=Z,13nm,0.7s							
KKN	**Kakani**	**50.76**	**311**	*e*P	**P**	**18**	**01**	**40.0 0.0**
	comp=Z,30nm,0.9s							
DMN	**Daman**	**50.79**	**311**	*e*P	**P**	**18**	**01**	**40.3 0.0**
	comp=Z,60nm,1.1s							
YUK	**Yuzh-Kuril'sk**	**51.06**	**18**	*i* P	P	18	01	31.9 -10
YUK				*i*		18	03	33.7
YUK				*i* PPP	PPP	18	04	40.4
YUK				*i* S	S	18	08	50.2 -7.5
YUK				pmax	pmax			
	comp=E,104nm,1.0s							
YUK				pmax	pmax			
	comp=Z,126nm,1.0s							
YUK				pmax	pmax			
	comp=N,97nm,1.0s							
YUK				MLR	MLR			
	comp=E,104nm,21.0s							
YUK				MLR	MLR			
	comp=N,52nm,21.0s							
YUK				MLR	MLR			
	comp=Z,110nm,21.0s							
HYB	**Hyderabad**	**51.83**	**296**	*i* P	**P**	**18**	**01**	**47.0 -1.0**
KOLN	**Koldanda**	**52.02**	**310**	*e*P	**P**	**18**	**01**	**49.5 0.0**
	comp=Z,44nm,0.7s							
DANN	**Dangsing**	**52.19**	**311**	*e*P	**P**	**18**	**01**	**50.8 -0.1**
	comp=Z,104nm,0.8s							
MSVF	**Nonsavu**	**52.32**	**109**	P	**P**	**18**	**01**	**52.8 +1.1**
	comp=Z,170nm,0.9s,SNR=5.2							
MSVF	**Nonsavu**	**52.32**	**109**	*e*P	**P**	**18**	**01**	**52.4 +0.7**
MSVF				pmax	pmax			
	comp=Z,25nm,0.9s							
MSVF	**Nonsavu**	**52.32**	**109**	*e*P	**P**	**18**	**01**	**52.4 +0.7**
	comp=Z,25nm,0.9s							
PYUN	**Piuthan**	**52.65**	**310**	*e*P	**P**	**18**	**01**	**54.1 -0.1**
	comp=Z,81nm,0.9s							
YSS	**Yuzh-Sakhalins**	**52.90**	**14**	*e*P	**P**	**18**	**01**	**55.0 -0.3**
YSS				*e*		18	09	34.0
HABR	**Khabarovsk**	**52.95**	**7**	*c*e*P	**P**	**18**	**01**	**54.6 -1.1**
HABR				*e*		18	03	02.6
HABR				*e*		18	03	54.5
HABR				*e*PPP	PPP	18	04	59.5
HABR				*e*S	**S**	**18**	**09**	**25.6 +2.2**
HABR				*e**SS	**sS**	**18**	**09**	**31.5 -4.8**
HABR				*i*		18	09	40.3
HABR				*e*		18	11	44.3
HABR				MLR	MLR			
	comp=Z,149nm,19.0s							
KLR	**Kul'dur**	**53.36**	**4**	*e*P	P	18	01	53.8 -4.9
HIA	**Hailar**	**53.51**	**355**	P	P	18	01	56.1 -3.7
ULN	**Ulaanbaatar**	**54.50**	**344**	*e*P	**P**	**18**	**02**	**06.6 -0.7**
	comp=Z,12nm,0.9s							
ULN	**Ulaanbaatar**	**54.50**	**344**	P	**P**	**18**	**02**	**06.7 -0.6**
SONM	**Songino Array**	**54.65**	**344**	P	**P**	**18**	**02**	**07.9 -0.5**
SONM	**Songino Array**	**54.65**	**344**	P	**P**	**18**	**02**	**07.9 -0.5**
	comp=Z,8.1nm,0.9s,baz=154,slow=8.2,SNR=27							
SONM				LR	LR	18	25	28.6
	comp=Z,130nm,20.0s,baz=163,slow=36							
RPZ	**Rata Peaks**	**55.69**	**142**	P	**P**	**18**	**02**	**15.7 -0.2**
RPZ	**Rata Peaks**	**55.69**	**142**	P	**P**	**18**	**02**	**15.7 -0.2**
	comp=Z,42nm,0.9s,baz=180,slow=20,SNR=4.6							
POO	**Poona**	**56.42**	**295**	*ex*	**P**	**18**	**02**	**20.0 -1.5**
ZAK	**Zakamensk**	**57.84**	**343**	*e*P	**P**	**18**	**02**	**30.1 -1.0**
ZAK				*e*		18	03	20.3
ZAK				pmax	pmax			
	comp=Z,3.0nm,1.0s							
WMQ	**Urumqi**	**59.07**	**328**	P	**P**	**18**	**02**	**40.5 +0.8**
WMQ				pP	**pP**	**18**	**02**	**48.0 +0.4**
WMQ				sP	**sP**	**18**	**02**	**51.5 +0.9**
WMQ				PcP	**PcP**	**18**	**03**	**29.0 +0.6**
WMQ				PP	**PP**	**18**	**04**	**53.0 +2.5**
WMQ				S	**S**	**18**	**10**	**45.0 -0.3**
WMQ				ScS	**ScS**	**18**	**12**	**26.0 -2.3**
WMQ				pmax	pmax			
	comp=Z,31nm,0.8s							
WMQ				pmax	pmax			
	comp=Z,90nm,4.6s							
WMQ				LR	LR			
	comp=N,530nm,22.6s							
WMQ				LR	LR			
	comp=E,400nm,22.6s							
WMQ				LR	LR			
	comp=Z,470nm,29.8s							
MOY	**Mondy**	**59.66**	**342**	*e*P	**P**	**18**	**02**	**45.9 +2.2**
PEA0B	**Petropavlovsk-**	**62.84**	**21**	*e*P	**P**	**18**	**03**	**04.7 -0.4**
PETK	**Petropavlovsk-**	**62.84**	**21**	P	**P**	**18**	**03**	**05.0 -0.1**
PETK	**Petropavlovsk-**	**62.84**	**21**	P	**P**	**18**	**03**	**05.0 -0.1**
PETK	**Petropavlovsk-**	**62.84**	**21**	P	**P**	**18**	**03**	**05.0 -0.1**
	comp=Z,6.3nm,0.7s,baz=198,slow=7.2,SNR=14							
CASY	**Casey**	**63.01**	**187**	*e*P	**P**	**18**	**03**	**06.0 0.0**
	comp=Z,12nm,0.8s							
KSH	**Kashi**	**63.50**	**318**	*e*P	**P**	**18**	**03**	**10.8 +0.9**
KSH				*e*pP	**pP**	**18**	**03**	**15.3 -2.5**
KSH				*e*sP	**sP**	**18**	**03**	**17.6 -3.2**
KSH				*e*PcP	**PcP**	**18**	**03**	**48.3 +1.9**
KSH				*e*PP	**PP**	**18**	**05**	**30.8 +1.0**
KSH				*e*PcS		18	07	50.6
KSH				*e*S	**S**	**18**	**11**	**39.1 -2.8**
KSH				pmax	pmax			
	comp=Z,46nm,1.0s							
KSH				LR	LR			
	comp=N,610nm,7.0s							
KSH				LR	LR			
	comp=E,600nm,9.8s							
KSH				LR	LR			
	comp=Z,270nm,7.1s							
MK31	**Makanchi Array**	**63.89**	**328**	*e*P	**P**	**18**	**03**	**11.5 -0.7**
MK31				pmax	pmax			
	comp=Z,17nm,0.7s							
MK31	**Makanchi Array**	**63.89**	**328**	*e*P	**P**	**18**	**03**	**11.0 -1.2**
MKAR	**Makanchi Array**	**63.89**	**328**	P	**P**	**18**	**03**	**11.5 -0.7**
MKAR	**Makanchi Array**	**63.89**	**328**	P	**P**	**18**	**03**	**11.5 -0.7**
MKAR	**Makanchi Array**	**63.89**	**328**	P	**P**	**18**	**03**	**11.5 -0.7**
	comp=Z,21nm,0.7s,baz=115,slow=8.5,SNR=60							
MKAR				LR	LR	18	30	36.7
	comp=Z,103nm,20.2s,baz=232,slow=36							
KZA	**Kyzart**	**65.29**	**320**	P	P	18	03	18.7 -3.2
	SNR=15							
TKM2	**Tokmak 2**	**65.51**	**321**	*e*P	**P**	**18**	**03**	**23.4 +0.3**
TKM2				pmax	pmax			
	comp=Z,16nm,0.8s							
TKM2	**Tokmak 2**	**65.51**	**321**	*e*P	**P**	**18**	**03**	**23.4 +0.3**
	comp=Z,16nm,0.8s							
TKM2	**Tokmak 2**	**65.51**	**321**	P	**P**	**18**	**03**	**23.1 0.0**
	SNR=16							
KBK	**Karagaybulak**	**65.78**	**321**	P	**P**	**18**	**03**	**23.4 -1.4**
	SNR=6.8							
KRAR	**Krasnoyarsk**	**65.94**	**340**	*e*P	**P**	**18**	**03**	**27.4 +2.1**
KRAR				pmax	pmax			
	comp=Z,3.0nm,1.0s							
YAK	**Yakutsk**	**66.04**	**2**	*e*P	**P**	**18**	**03**	**25.0 -0.8**
YAK				pmax	pmax			
	comp=Z,48nm,0.8s							
AAK	**Ala-Archa**	**66.05**	**321**	*e*P	**P**	**18**	**03**	**27.7 +1.2**
AAK				pmax	pmax			
	comp=Z,13nm,0.8s							
AAK	**Ala-Archa**	**66.05**	**321**	*e*P	**P**	**18**	**03**	**27.7 +1.2**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NVS				pmax	pmax		
	comp=Z,14nm,1.0s						
NVS				smax	smax		
	comp=N,7.0nm,2.3s						
NVS				smax	smax		
	comp=E,14nm,2.3s						
KK31	**Karatay Array**	**68.84**	**319**	*i* P	**P**	**18 03 44.2**	**+0.2**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KKAR	**Karatay Array**	**68.84**	**319**	*e*P	**P**	**18 03 44.4**	**+0.4**
KKAR	**Karatay Array**	**68.84**	**319**	*e*P	**P**	**18 03 44.4**	**+0.4**
FX1	**Attu Island--F**	**69.10**	**28**	*e*P	**P**	**18 03 45.1**	**-0.2**
BVA0	**Borovoye Array**	**73.75**	**329**	*i* P	**P**	**18 04 12.6**	**-0.9**
BVA0				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BRVK	**Borovoye**	**73.82**	**329**	*e*P	**P**	**18 04 12.9**	**-1.0**
BRVK				pmax	pmax		
	comp=Z,12nm,1.0s						
BRVK	**Borovoye**	**73.82**	**329**	*e*P	**P**	**18 04 12.6**	**-1.3**
	comp=Z,9.9nm,0.9s						
TIXI	**Tiksi**	**75.67**	**1**	*e*P	**P**	**18 04 23.2**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,27nm,2.5s						
TIXI				MLR	MLR		
	comp=Z,241nm,19.0s						
VNDA	**Vanda**	**75.71**	**173**	*e*P	**P**	**18 04 25.0**	**+0.6**
	comp=Z,4.6nm,0.8s						
VNDA	**Vanda**	**75.71**	**173**	P	**P**	**18 04 24.1**	**-0.3**
	comp=Z,5.1nm,0.8s,baz=313,slow=6.7,SNR=37						
VNDA				LR	LR	18 39 16.1	
	comp=Z,237nm,18.4s,baz=327,slow=37						
MAW	**Mawson**	**76.30**	**201**	P	**P**	**18 04 26.8**	**-1.1**
MAW	**Mawson**	**76.30**	**201**	P	**P**	**18 04 26.8**	**-1.1**
	comp=Z,3.4nm,0.6s,baz=76,slow=12,SNR=16						
MAW				LR	LR	18 33 32.7	
	comp=Z,208nm,21.0s,baz=60,slow=32						
SBA	**Scott Base**	**76.64**	**172**	*e*P	**P**	**18 04 32.3**	**+2.6**
SBA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SBA	**Scott Base**	**76.64**	**172**	*e*P	**P**	**18 04 32.3**	**+2.6**
	comp=Z,5.9nm,0.9s						
BILL	**Bilibino**	**77.21**	**14**	⇓*e*P	**P**	**18 04 33.5**	**+0.5**
BILL				*e*		18 07 23.7	
BILL				pmax	pmax		
	comp=Z,15nm,0.8s						
BILL				MLR	MLR		
	comp=Z,100nm,23.0s						
AB31	**Akbulak array**	**78.05**	**322**	*i* P	**P**	**18 04 38.2**	**+0.1**
ABKAR	**Akbulak array**	**78.05**	**322**	*e*P	**P**	**18 04 36.1**	**-1.9**
	comp=Z,3.5nm,0.7s						
AKTO	**Aktyubinsk**	**79.63**	**323**	P	**P**	**18 04 45.7**	**-1.0**
AKTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SVE	**Sverdlovsk**	**80.48**	**329**	*e*P	**P**	**18 04 50.1**	**-1.1**
SVE				*e*		18 07 58.0	
SVE				*e*S	**S**	**18 14 54.2**	**-1.9**
SVE				pmax	pmax		
	comp=Z,15nm,0.9s						
ARU	**Arti**	**81.40**	**329**	*d i*P	**P**	**18 04 56.6**	**+0.5**
ARU						18 08 02.2	
ARU				S	**S**	**18 15 08.4**	**+2.8**
ARU				pmax	pmax		
	comp=Z,11nm,1.0s						
RAYN	**Ar Rayn**	**83.30**	**294**	P	**P**	**18 05 06.0**	**-0.8**
	comp=Z,86nm,1.0s,SNR=11						
SOKR	**Solikamsk**	**83.38**	**331**	*e*P	**P**	**18 05 08.1**	**+1.8**
SOKR				pmax	pmax		
	comp=Z,20nm,1.0s						
QSPA	**South Pole Qui**	**85.81**	**180**	*e*P	**P**	**18 05 17.4**	**-1.4**
	comp=Z,6.6nm,0.8s						
KBZ	**Khabaz**	**88.13**	**314**	P	**P**	**18 05 31.3**	**+1.0**
KBZ	**Khabaz**	**88.13**	**314**	P	**P**	**18 05 31.3**	**+1.0**
KBZ	**Khabaz**	**88.13**	**314**	P	**P**	**18 05 31.3**	**+1.0**
	comp=Z,2.9nm,0.8s,baz=187,slow=3.7,SNR=4.3						
KBZ				LR	LR	18 52 17.7	
	comp=Z,70nm,20.2s,baz=343,slow=41						
KIV	**Kislovodsk**	**88.31**	**314**	*e*P	**P**	**18 05 31.1**	**-0.2**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KMBO	**Kilima Mbogo**	**89.05**	**269**	LR	LR	18 38 22.7	
	comp=Z,123nm,21.9s,baz=95,slow=31						
MALT	**Malatya**	**90.93**	**308**	P	**P**	**18 05 46.3**	**+2.6**
MALT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MALT	**Malatya**	**90.93**	**308**	P	**P**	**18 05 46.3**	**+2.6**
	comp=Z,5.0nm,0.9s						
COLD	**Coldfoot**	**91.24**	**23**	*e*P	**P**	**18 05 43.3**	**-1.1**
	comp=Z,2.4nm,0.8s						
VORD	**Divnogorie**	**91.35**	**321**	*e*P	**P**	**18 05 43.2**	**-1.9**
VORD				pmax	pmax		
	comp=Z,20nm,0.5s						
VORD				pmax	pmax		
	comp=N,20nm,0.8s						
VORD				pmax	pmax		
	comp=E,110nm,0.6s						
VSR	**Storozhevoye**	**91.45**	**321**	*e*P	**P**	**18 05 45.0**	**-0.6**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR				pmax	pmax		
	comp=N,6.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.4s						
KLMR	**Klimovskoe**	**92.05**	**331**	P	**P**	**18 05 47.5**	**-0.7**
KLMR				pmax	pmax		
	comp=Z,18nm,1.8s						
ANN	**Anapa**	**92.14**	**315**	*e*P	P	18 05 55.1	+6.1
ANN				*e**PP	pP	18 06 04.7	+7.5
ANN				pmax	pmax		
	comp=Z,34nm,1.1s						
ILAR	**Eielson Array**	**92.32**	**25**	P	P	18 05 46.2	-3.2
ILAR				PP	**PP**	**18 09 27.5**	**-2.6**
ILAR	**Eielson Array**	**92.32**	**25**	P	P	18 05 46.2	-3.2
	comp=Z,0.7nm,0.9s,baz=305,slow=4.9,SNR=5.3						
ILAR				PP	**PP**	**18 09 27.5**	**-2.6**
	comp=Z,0.9nm,0.9s,baz=254,slow=6.5,SNR=5.5						
ILAR				LR	LR	18 48 23.1	
	comp=Z,88nm,18.7s,baz=286,slow=36						
OBN	**Obninsk**	**93.26**	**325**	⇑*e*P	**P**	**18 05 53.8**	**-0.1**
OBN				*e*		18 09 35.1	
OBN				*e*S	**SKSac**	**18 16 22.3**	**-4.1**
OBN				*e*SS	SS	18 23 28.9	+14
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,100nm,24.0s						
BRTR	**Keskin Array B**	**94.73**	**309**	P	**P**	**18 05 59.6**	**-1.6**
BRTR	**Keskin Array B**	**94.73**	**309**	P	**P**	**18 05 59.6**	**-1.6**
	comp=Z,1.0nm,0.7s,baz=128,slow=6.0,SNR=8.3						
BRTR				LR	LR	18 51 56.5	
	comp=Z,71nm,21.1s,baz=100,slow=38						
EGAK	**Eagle**	**94.77**	**25**	*e*P	**P**	**18 05 58.6**	**-2.1**
	comp=Z,5.5nm,1.0s						
APA	**Apatity**	**94.94**	**337**	⇓*e*P	P	18 05 57.4	-4.0
APA				MLR	MLR		
	comp=Z,300nm,19.0s						
MBAR	**Mbarara**	**95.58**	**269**	LR	LR	18 49 48.5	
	comp=Z,103nm,18.2s,baz=105,slow=36						
LSZ	**Lusaka**	**96.80**	**254**	LR	LR	18 45 35.5	
	comp=Z,137nm,18.9s,baz=175,slow=33						
SNAA	**Sanae**	**97.55**	**194**	LR	LR	18 47 07.5	
	comp=Z,100nm,19.1s,baz=27,slow=34						
ARCES	**ARCESS Array B**	**97.66**	**340**	P	**P**	**18 06 11.1**	**-2.6**
ARCES	**ARCESS Array B**	**97.66**	**340**	P	**P**	**18 06 11.1**	**-2.6**
	comp=Z,5.6nm,0.8s,baz=79,slow=4.7,SNR=9.0						
AKASG	**Malin Array Be**	**97.72**	**320**	*i* P	Pdif	18 06 15.0	+0.6
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKASG	**Malin Array Be**	**97.72**	**320**	P	**P**	**18 06 11.7**	**-2.7**
AKASG	**Malin Array Be**	**97.72**	**320**	P	**P**	**18 06 11.7**	**-2.7**
	comp=Z,1.6nm,0.6s,baz=71,slow=4.6,SNR=6.8						
AKASG				LR	LR	18 57 54.7	
	comp=Z,78nm,20.6s,baz=60,slow=40						
BOSA	**Boshof**	**97.76**	**241**	LR	LR	18 46 37.7	
	comp=Z,139nm,18.7s,baz=114,slow=33						
LBTB	**Lobatse**	**98.00**	**244**	LR	LR	18 45 10.6	
	comp=Z,163nm,18.9s,baz=86,slow=32						
BUR08	**Bucovina Ar. S**	**100.58**	**318**	*e*P	**Pdif**	**18 06 26.5**	**-0.8**
GERES	**GERESS Array B**	**107.93**	**320**	PKiKP	**PKiKP**	**18 11 05.8**	**-1.3**
GERES	**GERESS Array B**	**107.93**	**320**	PKiKP	**PKiKP**	**18 11 05.8**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=46,slow=2.8,SNR=3.6						
FFC	**Flin Flon**	**116.29**	**29**	*i* PKIKP	**PKPdf**	**18 11 24.9**	**+2.1**
MNTX	**Cornudas Mount**	**124.32**	**54**	*e*PKPdf	**PKPdf**	**18 11 37.2**	**-1.7**
TORD	**Torodi Ar. Bea**	**124.69**	**283**	PKP	**PKPdf**	**18 11 39.9**	**-0.1**
TORD	**Torodi Ar. Bea**	**124.69**	**283**	PKP	**PKPdf**	**18 11 39.9**	**-0.1**
	comp=Z,2.4nm,0.7s,baz=80,slow=1.8,SNR=14						
TXAR	**Lajitas Array**	**126.46**	**56**	PKP	**PKPdf**	**18 11 44.5**	**+1.2**
TXAR	**Lajitas Array**	**126.46**	**56**	PKP	**PKPdf**	**18 11 44.5**	**+1.2**
	comp=Z,0.7nm,0.9s,baz=321,slow=1.2,SNR=5.3						
DBIC	**Dimbokro**	**131.40**	**275**	PKP	**PKPdf**	**18 11 53.3**	**+0.4**
DBIC	**Dimbokro**	**131.40**	**275**	PKP	**PKPdf**	**18 11 53.3**	**+0.4**
	comp=Z,2.9nm,0.9s,baz=102,slow=6.2,SNR=3.6						
JTS	**JuntasAbangare**	**148.34**	**77**	*e*PKPbc	**PKPbc**	**18 12 26.2**	**-0.7**

IDC 16 18:37:57.0±2.5**, 5°.28N**×**126°.25E, h0**km**, mb3.3**/3**, mb1 3.5**/3**, mb1mx3.3**/22**, mbtmp3.3**/3**, 1D, Error ellipse: s-maj=203.9km s-min=28.0km az=66.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**2.77**	**314**	⇓*i*P	Pg	18 38 49.3	-0.9
WRA	**Warramunga Arr**	**26.29**	**163**	P	P	18 43 34.4	0.0
	0.3nm,0.4s,baz=342,slow=10,SNR=4.7						
ASAR	**Alice Springs**	**29.72**	**166**	P	P	18 44 05.2	0.0
	0.2nm,0.7s,baz=351,slow=6.9,SNR=3.3						
MKAR	**Makanchi Array**	**56.02**	**325**	P	P	18 47 37.5	-0.1
	0.2nm,0.5s,baz=120,slow=8.4,SNR=4.2						

NNC ***16*** *18:51:37.6±4.3, 40°.21N×72°.20E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=35.8km s-min=15.2km az=11.0*

ISC 16 18:51:38.9±2.6**, 40°.3N**±0°.2×**72°.33E**±0°.06**, h10**km**, n13, σ1s.55**/20**, 9C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**2.11**	**29**	P	**Pb**	**18 52 17.2**	**-0.2**
	SNR=47						
EKS2	**Erkin-Say**	**2.61**	**24**	P	**Pb**	**18 52 25.2**	**-0.6**
	SNR=8.5						
KZA	**Kyzart**	**2.83**	**50**	P	**Pn**	**18 52 23.4**	**-1.3**
	SNR=15						
AAK	**Ala-Archa**	**2.85**	**34**	P	**Pn**	**18 52 26.6**	**+1.9**
	SNR=10						
KBK	**Karagaybulak**	**3.08**	**39**	P	**Pn**	**18 52 29.8**	**+2.0**
	SNR=6.9						
KK31	**Karatay Array**	**3.12**	**335**	⇑Pn	**Pb**	**18 52 32.7**	**-1.9**
	2.2nm,0.3s,baz=148,slow=11,SNR=129						
KK31				⇑Pg	**Pg**	**18 52 38.6**	**-0.2**
	6.2nm,0.5s,baz=160,slow=14,SNR=9.2						
KK31				⇑Sn	**Sb**	**18 53 11.8**	**-1.0**
	3.5nm,0.3s						
KK31				⇓Lg	Lg	18 53 20.6	
	19nm,0.6s,baz=148,slow=25,SNR=9.2						
CHMS	**Chumysh**	**3.26**	**33**	P	**Pn**	**18 52 31.8**	**+1.7**
	SNR=12						
USP	**Ospenovka**	**3.39**	**28**	P	**Pn**	**18 52 33.9**	**+1.9**
	SNR=7.8						
ULHL	**Ulahol**	**3.54**	**55**	P	**Pn**	**18 52 32.2**	**-1.9**
	SNR=7.9						
TKM2	**Tokmak 2**	**3.59**	**42**	⇓Pn	**Pn**	**18 52 35.2**	**+0.3**
	1.4nm,0.4s						
TKM2				⇑Pg	**Pb**	**18 52 41.7**	**-1.0**
	4.5nm,0.4s						
TKM2				⇑Sn	**Sb**	**18 53 24.8**	**-1.6**
	6.3nm,0.8s						
TKM2				⇓Lg	Lg	18 53 37.9	
	12nm,0.7s						
KNDC	**Almaty**	**4.54**	**48**	⇑Pn	**Pn**	**18 52 49.6**	**+1.9**
	7.2nm,0.6s						
KNDC				⇑Pg	**Pb**	**18 52 59.0**	**+0.3**
	19nm,0.7s						
KNDC				⇑Lg	Lg	18 54 03.1	
	50nm,0.7s						
AB31	**Akbulak array**	**12.55**	**320**	⇓Pn	**Pn**	**18 54 36.8**	**-0.7**
	0.5nm,0.5s,baz=133,slow=13,SNR=18						
AB31				⇓Sn	**Sn**	**18 56 58.3**	**+1.1**
	1.2nm,0.8s,baz=130,slow=25,SNR=3.6						
AKTO	**Aktyubinsk**	**14.26**	**320**	⇑Pn	**Pn**	**18 55 03.3**	**+2.4**
	0.9nm,0.4s						
AKTO				⇓Sn	**Sn**	**18 57 38.0**	**-1.1**
	0.8nm,0.9s						

BEO ***16*** *18:52:57.2±1.9, 42°.25N×13°.19E, h0km, ML3.2/5*
ROM ***16*** *18:52:57.9±0.1, 42°.29N×13°.40E, h10km, Ml3.1/13, Error ellipse: s-maj=1.1km s-min=0.9km az=77.0*
SZGRF ***16*** *18:52:58.0, 42°.01N×13°.67E, h10km, Central Italy*
ISCJB ***16*** *18:52:58.0±0.2, 42°.29N±0°.02×13°.37E±0°.03, h17km±3km, Error ellipse: s-maj=3.2km s-min=2.9km az=157.4*
CSEM ***16*** *18:52:58.1±0.1, 42°.30N×13°.38E, h5km, ML3.5/11, Error ellipse: s-maj=2.6km s-min=2.3km az=64.0*
LDG ***16*** *18:53:00.5±0.2, 42°.30N×13°.28E, h2km, Ml2.8/5, Error ellipse: s-maj=8.9km s-min=4.1km az=41.0*

ISC 16 18:52:58.4±0.7**, 42°.29N**±0°.02×**13°.37E**±0°.02**, h13**km±4km**, n98, σ1s.26**/134**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**21**	Pg	**Pg**	**18 53 00.7**	**-0.4**
AQU				Sg	**Sg**	**18 53 02.4**	**-0.6**
	22μm,0.6s						
AQU	**L'Aquila**	**0.06**	**21**	Pg	**Pg**	**18 53 00.7**	**-0.4**
AQU				Sg	**Sg**	**18 53 02.4**	**-0.6**
	22μm,0.6s						
FAGN	**Fagnano**	**0.16**	**100**	Pg	**Pg**	**18 53 01.8**	**-0.5**
FAGN				Sg	**Sg**	**18 53 04.4**	**-0.6**
	14μm,0.4s						
FAGN	**Fagnano**	**0.16**	**100**	Pg	**Pg**	**18 53 01.8**	**-0.5**
FAGN				Sg	**Sg**	**18 53 04.4**	**-0.6**
	14μm,0.4s						
FIAM	**Fiamignano**	**0.19**	**262**	Pg	**Pg**	**18 53 03.0**	**+0.3**
FIAM				Sg	**Sg**	**18 53 06.3**	**+0.6**
	3μm,0.6s						
FIAM	**Fiamignano**	**0.19**	**262**	Pg	**Pg**	**18 53 03.0**	**+0.3**
FIAM				Sg	**Sg**	**18 53 06.3**	**+0.6**
	3μm,0.6s						
CAMP	**Campotosto**	**0.24**	**7**	Pg	**Pg**	**18 53 03.3**	**-0.4**
CAMP				Sg	**Sg**	**18 53 08.1**	**+0.9**
	3μm,0.4s						
CAMP	**Campotosto**	**0.24**	**7**	Pg	**Pg**	**18 53 03.3**	**-0.4**
CAMP				Sg	**Sg**	**18 53 08.1**	**+0.9**
	3μm,0.4s						
PTQR	**Pietraquaria**	**0.27**	**175**	Pg	**Pg**	**18 53 04.0**	**-0.1**
PTQR				Sg	**Sg**	**18 53 08.4**	**+0.4**
PTQR	**Pietraquaria**	**0.27**	**175**	Pg	**Pg**	**18 53 04.0**	**-0.1**
PTQR				Sg	**Sg**	**18 53 08.4**	**+0.4**
VCEL	**Villa Celiera**	**0.36**	**74**	Pg	**Pg**	**18 53 05.1**	**-0.6**
VCEL				Sg	**Sg**	**18 53 12.0**	**+1.3**
	4μm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**74**	Pg	**Pg**	**18 53 05.1**	**-0.6**
VCEL				Sg	**Sg**	**18 53 12.0**	**+1.3**
	4μm,0.4s						
TERO	**Teramo**	**0.37**	**28**	Pg	**Pg**	**18 53 05.0**	**-0.9**
TERO				Sg	**Sg**	**18 53 11.5**	**+0.6**
	3μm,0.5s						
TERO	**Teramo**	**0.37**	**28**	Pg	**Pg**	**18 53 05.0**	**-0.9**
TERO				Sg	**Sg**	**18 53 11.5**	**+0.6**
	3μm,0.5s						
LNSS	**Leonessa**	**0.39**	**322**	Pg	**Pg**	**18 53 06.0**	**-0.3**
LNSS				Sg	**Sb**	**18 53 13.7**	**+0.4**
	1μm,0.4s						
LNSS	**Leonessa**	**0.39**	**322**	Pg	**Pg**	**18 53 06.0**	**-0.3**
LNSS				Sg	**Sb**	**18 53 13.7**	**+0.4**
	1μm,0.4s						
CERT	**Cerreto**	**0.45**	**220**	Pg	**Pg**	**18 53 07.1**	**-0.2**
CERT				Sg	**Sb**	**18 53 14.3**	**-0.5**
	2μm,0.6s						
CERT	**Cerreto**	**0.45**	**220**	Pg	**Pg**	**18 53 07.1**	**-0.2**
CERT				Sg	**Sb**	**18 53 14.3**	**-0.5**
	2μm,0.6s						
VVLD	**Villa Vallelon**	**0.46**	**156**	Pg	**Pg**	**18 53 06.9**	**-0.6**
VVLD				Sg	**Sg**	**18 53 13.6**	**-0.1**
	657nm,0.4s						
VVLD	**Villa Vallelon**	**0.46**	**156**	Pg	**Pg**	**18 53 06.9**	**-0.6**
VVLD				Sg	**Sg**	**18 53 13.6**	**-0.1**
	657nm,0.4s						
INTR	**Introdacqua**	**0.49**	**125**	Pg	**Pg**	**18 53 07.3**	**-0.7**
INTR				Sg	**Sg**	**18 53 14.5**	**0.0**
	2μm,0.7s						
INTR	**Introdacqua**	**0.49**	**125**	Pg	**Pg**	**18 53 07.3**	**-0.7**
INTR				Sg	**Sg**	**18 53 14.5**	**0.0**
	2μm,0.7s						
GUAR	**Guarcino**	**0.50**	**185**	Pg	**Pg**	**18 53 07.8**	**-0.4**
	623nm,0.4s						
GUAR	**Guarcino**	**0.50**	**185**	Pg	**Pg**	**18 53 07.8**	**-0.4**
	623nm,0.4s						
MNS	**Montasola**	**0.52**	**280**	Pg	**Pg**	**18 53 08.2**	**-0.4**
	891nm,0.8s						
MNS	**Montasola**	**0.52**	**280**	Pg	**Pg**	**18 53 08.2**	**-0.4**
	891nm,0.8s						
MTCE	**Montecelio**	**0.54**	**240**	Pg	**Pg**	**18 53 08.8**	**-0.2**
	694nm,0.4s						
MTCE	**Montecelio**	**0.54**	**240**	Pg	**Pg**	**18 53 08.8**	**-0.2**
	694nm,0.4s						
NRCA	**Norcia**	**0.57**	**341**	Pg	**Pg**	**18 53 08.9**	**-0.7**
NRCA				Sg	**Sb**	**18 53 18.0**	**-0.4**
	487nm,0.2s						
NRCA	**Norcia**	**0.57**	**341**	Pg	**Pg**	**18 53 08.9**	**-0.7**
NRCA				Sg	**Sb**	**18 53 18.0**	**-0.4**
	487nm,0.2s						
POFI	**Posta Fibreno**	**0.63**	**156**	Pg	**Pg**	**18 53 09.8**	**-0.9**
POFI	**Posta Fibreno**	**0.63**	**156**	Pg	**Pg**	**18 53 09.8**	**-0.9**
TRTR	**Tortoreto Alta**	**0.65**	**38**	Pg	**Pg**	**18 53 11.2**	**+0.1**
TRTR	**Tortoreto Alta**	**0.65**	**38**	Pg	**Pg**	**18 53 11.2**	**+0.1**
CESX	**Cesi**	**0.67**	**299**	Pg	**Pg**	**18 53 11.2**	**-0.1**
CESX	**Cesi**	**0.67**	**299**	Pg	**Pg**	**18 53 11.2**	**-0.1**
SDI	**San Donato**	**0.67**	**151**	Pg	**Pg**	**18 53 10.4**	**-1.0**
SDI	**San Donato**	**0.67**	**151**	Pg	**Pg**	**18 53 10.4**	**-1.0**
OFFI	**Offida**	**0.68**	**20**	Pg	**Pg**	**18 53 11.5**	**-0.1**
OFFI	**Offida**	**0.68**	**20**	Pg	**Pg**	**18 53 11.5**	**-0.1**
RMP	**Rome, Mte Porz**	**0.69**	**226**	Pg	**Pb**	**18 53 12.2**	**-0.1**
RMP	**Rome, Mte Porz**	**0.69**	**226**	Pg	**Pb**	**18 53 12.2**	**-0.1**
RDP	**Rocca di Papa**	**0.72**	**223**	Pg	**Pb**	**18 53 13.1**	**+0.2**
RDP	**Rocca di Papa**	**0.72**	**223**	Pg	**Pb**	**18 53 13.1**	**+0.2**
CAFR	**Castel Frentan**	**0.73**	**95**	Pg	**Pg**	**18 53 11.7**	**-0.8**
CAFR	**Castel Frentan**	**0.73**	**95**	Pg	**Pg**	**18 53 11.7**	**-0.8**
GIUL	**Giuliano Di Ro**	**0.74**	**187**	Pg	**Pg**	**18 53 12.5**	**-0.2**
GIUL	**Giuliano Di Ro**	**0.74**	**187**	Pg	**Pg**	**18 53 12.5**	**-0.2**
FDMO	**Fiordimonte**	**0.77**	**344**	Pg	**Pg**	**18 53 12.3**	**-1.0**
FDMO	**Fiordimonte**	**0.77**	**344**	Pg	**Pg**	**18 53 12.3**	**-1.0**
CESI	**CESI - Serrava**	**0.79**	**334**	Pg	**Pg**	**18 53 12.8**	**-0.9**
CESI	**CESI - Serrava**	**0.79**	**334**	Pg	**Pg**	**18 53 12.8**	**-0.9**
RNI2	**Rionero Sannit**	**0.83**	**135**	Pg	**Pg**	**18 53 13.5**	**-1.0**
RNI2	**Rionero Sannit**	**0.83**	**135**	Pg	**Pg**	**18 53 13.5**	**-1.0**
CERA	**Filignano**	**0.85**	**145**	Pg	**Pg**	**18 53 13.3**	**-1.5**
CERA	**Filignano**	**0.85**	**145**	Pg	**Pg**	**18 53 13.3**	**-1.5**
GUMA	**Gualdo di Mace**	**0.87**	**28**	Pg	**Pb**	**18 53 12.6**	**-2.8**
GUMA	**Gualdo di Mace**	**0.87**	**28**	Pg	**Pb**	**18 53 12.6**	**-2.8**
MIDA	**Miranda**	**0.93**	**134**	Pg	**Pb**	**18 53 14.5**	**-1.8**
MIDA	**Miranda**	**0.93**	**134**	Pg	**Pb**	**18 53 14.5**	**-1.8**
TRIV	**Trivento**	**1.02**	**121**	Pg	**Pb**	**18 53 17.2**	**-0.8**
TRIV	**Trivento**	**1.02**	**121**	Pg	**Pb**	**18 53 17.2**	**-0.8**
TOLF	**Tolfa**	**1.04**	**258**	Pg	**Pn**	**18 53 19.1**	**+0.4**
TOLF	**Tolfa**	**1.04**	**258**	Pg	**Pn**	**18 53 19.1**	**+0.4**
CING	**Cingoli**	**1.09**	**353**	Pg	**Pb**	**18 53 17.9**	**-1.2**
CING	**Cingoli**	**1.09**	**353**	Pg	**Pb**	**18 53 17.9**	**-1.2**
MURB	**Monte Urbino**	**1.15**	**328**	Pg	**Pb**	**18 53 19.5**	**-0.7**
MURB	**Monte Urbino**	**1.15**	**328**	Pg	**Pb**	**18 53 19.5**	**-0.7**
NVLJ	**Novalja**	**2.52**	**25**	*e*Pn	**Pn**	**18 53 39.5**	**+0.6**
NVLJ				Sn	**Sn**	**18 54 10.7**	**+1.3**
NVLJ	**Novalja**	**2.52**	**25**	*e*Pn	**Pn**	**18 53 39.5**	**+0.6**
NVLJ				Sn	**Sn**	**18 54 10.7**	**+1.3**
PGF	**Pioggiola**	**3.25**	**276**	*e*Pn	**Pn**	**18 53 50.0**	**+0.9**
PGF				*e*Sn	**Sn**	**18 54 25.0**	**-2.6**
	5.7nm,0.6s						
PGF	**Pioggiola**	**3.25**	**276**	*e*Pn	**Pn**	**18 53 50.0**	**+0.9**
PGF				*e*Sn	**Sn**	**18 54 25.0**	**-2.6**
	2.8nm,0.6s						
STON	**Ston**	**3.25**	**78**	*e*Pn	**Pn**	**18 53 50.7**	**+1.7**
STON	**Ston**	**3.25**	**78**	*e*Pn	**Pn**	**18 53 50.7**	**+1.7**
PDG	**Podgorica**	**4.36**	**86**	*e*Pn	**Pn**	**18 54 06.5**	**+2.2**
PDG	**Podgorica**	**4.36**	**86**	*e*Pn	**Pn**	**18 54 06.5**	**+2.2**
SBF	**Sospel**	**4.62**	**292**	*e*Pn	**Pn**	**18 54 07.7**	**-0.2**
SBF	**Sospel**	**4.62**	**292**	*e*Pn	**Pn**	**18 54 07.7**	**-0.2**
BBLS	**Lazići**	**4.69**	**68**	*e*Pn	**Pn**	**18 54 10.8**	**+1.9**
BBLS				*e*Sn	**Sn**	**18 55 05.9**	**+2.7**
BBLS	**Lazići**	**4.69**	**68**	*e*Pn	**Pn**	**18 54 10.8**	**+1.9**
BBLS				*e*Sn	**Sn**	**18 55 05.9**	**+2.7**
FRF	**La Foret Royal**	**5.10**	**287**	*e*Pn	**Pn**	**18 54 15.3**	**+0.9**
FRF				*e*Sn	**Sn**	**18 55 09.2**	**-3.9**
	0.6nm,0.3s						
LMR	**La Mourre**	**5.15**	**284**	*e*Pn	**Pn**	**18 54 15.5**	**+0.3**
DIVS	**Divibare**	**5.17**	**67**	*e*Pn	**Pn**	**18 54 17.3**	**+1.9**
DIVS	**Divibare**	**5.17**	**67**	*e*Pn	**Pn**	**18 54 17.3**	**+1.9**
RJOB	**Jochberg**	**5.46**	**356**	*e*Pn	**Pn**	**18 54 21.4**	**+2.0**
RJOB				*e*Sn	**Sn**	**18 55 23.9**	**+1.8**
OBER	**Oberstdorf**	**5.56**	**338**	*e*Pn	Pn	18 54 25.1	+4.3
OBER				*e*Sn	**Sn**	**18 55 27.1**	**+2.5**
GEC2	**GERESS Array S**	**6.56**	**2**	*e*Sn	**Sn**	**18 55 48.1**	**-1.0**
VIVF	**Saint-Julien-l**	**6.82**	**295**	*e*Pn	**Pn**	**18 54 38.1**	**+0.1**
VIVF	**Saint-Julien-l**	**6.82**	**295**	*e*Pn	**Pn**	**18 54 38.1**	**+0.1**
KHC	**Kasperske Hory**	**6.84**	**1**	*e*P	**Sn**	**18 55 54.0**	**-2.0**
KHC				*e*x	x	18 56 01.5	
WET	**Wettzell**	**6.86**	**357**	*e*Pn	**Pn**	**18 54 39.2**	**+0.6**
WET				*e*Sn	**Sn**	**18 55 53.2**	**-3.3**
ZAPS	**Zavoj**	**6.89**	**79**	*e*Pn	**Pn**	**18 54 40.4**	**+1.4**
BFO	**Black Forest**	**7.00**	**331**	*e*Sn	**Sn**	**18 55 58.0**	**-2.0**
HINF	**Hinteralfeld**	**7.19**	**322**	*e*Pn	**Pn**	**18 54 43.6**	**+0.4**
HINF				*e*Sn	**Sn**	**18 56 01.9**	**-2.9**
	1.9nm,0.3s						
CDF	**Champ du Feu**	**7.47**	**327**	*e*Pn	**Pn**	**18 54 47.3**	**+0.2**
CDF				*e*Sn	**Sn**	**18 56 08.5**	**-3.2**
	2.4nm,0.5s						
CDF	**Champ du Feu**	**7.47**	**327**	*e*Pn	**Pn**	**18 54 47.3**	**+0.2**
HAU	**Haudompre**	**7.56**	**321**	*e*Pn	**Pn**	**18 54 48.9**	**+0.6**
HAU				*e*Sn	**Sn**	**18 56 10.3**	**-3.6**
	3.6nm,0.5s						
HAU	**Haudompre**	**7.56**	**321**	*e*Pn	**Pn**	**18 54 48.9**	**+0.6**

IDC 16 19:12:12.7±6.6**, 18°.54S**×**171°.99W, h0**km**, mb4.1**/2**, mb1 4.4**/2**, mb1mx3.7**/20**, mbtmp4.1**/2**, Error ellipse: s-maj=336.4km s-min=58.5km az=146.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**50.50**	**254**	P	P	19 21 12.6	-0.4
	2.2nm,0.5s,baz=93,slow=8.0,SNR=38						
WRA	**Warramunga Arr**	**50.52**	**259**	P	P	19 21 13.2	+0.1
	0.9nm,0.4s,baz=96,slow=7.1,SNR=15						
BRTR	**Keskin Array B**	**149.42**	**319**	PKPbc	PKPbc	19 32 03.7	-0.5
	0.4nm,0.8s,baz=77,slow=3.1,SNR=2.3						

DJA 16 19:28:44.1±2.2**, 10°S**±7°×**11°8E**±°**, h10**km±22km**, M4.4**/11**, mb4.5**/4**, MLv4.3**/11**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.00**	**88**	P	Pg	19 29 02.0	-1.4
WSI	**Waingapu**	**1.89**	**90**	P	Pn	19 29 15.8	-0.7
KHKI	**Kahang-Kahang**	**3.03**	**295**	P	Pn	19 29 32.0	-0.2
DNP	**Denpasar**	**3.28**	**287**	P	Pn	19 29 35.9	+0.2
IGBI	**Denpasar**	**3.31**	**285**	P	Pn	19 29 35.5	-0.4
MMRI	**Maumere**	**3.95**	**75**	P	Pn	19 29 45.5	+0.7
BSSI	**Bau Bau, Buton**	**4.09**	**31**	P	Pn	19 29 46.3	-0.4
JAGI	**Jajag, Banyuwa**	**4.34**	**286**	P	Pn	19 29 49.1	-1.2
BKSI	**Bulukumba**	**4.66**	**22**	P	Pn	19 29 54.3	-0.3
KAPI	**Kappang**	**4.83**	**16**	P	Pn	19 29 55.7	-1.2
GMJI	**Gumukmas**	**5.07**	**286**	P	Pn	19 29 59.8	-0.5
	80nm,0.7s,0.4nm						
BLJI	**Banyuglugur**	**5.11**	**292**	P	Pn	19 30 00.9	+0.2
	93nm,0.7s,0.4nm						
PWJI	**Pagerwojo**	**6.70**	**284**	P	Pn	19 30 23.1	+0.4
	39nm,2.3s						
TTSI	**Tana Toraja**	**6.75**	**12**	P	Pn	19 30 24.5	+1.2

JMA 16 19:44:42.0±0.1**, 30°.09N**×**141°.33E, h44**km**, M4.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.08**	**166**	P	Pn	19 45 29.4	+1.3
CBIJ				*e*S	Sn	19 46 03.0	-0.7
JHJ2	**Mitsune**	**3.28**	**337**	P	Pn	19 45 32.5	+1.7
JHJ2				*e*S	Sn	19 46 08.7	+0.1
JHHJ	**Haha-jima-NKT**	**3.53**	**168**	P	Pn	19 45 36.6	+2.3
BSO1	**Boso 1**	**4.56**	**356**	P	Pn	19 45 50.1	+2.4
BSO3	**Boso 3**	**4.75**	**352**	P	Pn	19 45 52.7	+2.0
BSO4	**Boso 4**	**4.96**	**351**	P	Pn	19 45 56.2	+2.4
JOD2	**Odawara 2**	**5.49**	**340**	P	Pn	19 46 04.2	+2.9
JHU	**Hanno**	**6.00**	**344**	P	Pn	19 46 11.3	+3.1
JRY	**Ryogami san**	**6.25**	**342**	P	Pn	19 46 15.2	+3.5
JAG	**Ashikaga**	**6.51**	**347**	P	Pn	19 46 17.8	+2.6
JHO	**Hitachi**	**6.53**	**355**	P	Pn	19 46 18.7	+3.1
JHO				*e*S	Sn	19 47 30.3	+1.5
MAT	**Matsushiro**	**6.95**	**339**	P	Pn	19 46 26.4	+5.2

ISCJB ***16*** *19:54:03.0±0.3, 23°.35N±0°.01×121°.44E±0°.02, h30km±2km,*

Error ellipse: s-maj=3.0km s-min=2.2km az=35.6
*TAP **16** 19:54:03.2,23˚.36N×121˚.36E,h35km,ML3.3,B*
*JMA **16** 19:54:03.6±0.4,23˚.34N×121˚.42E,h56km*
ISC 16 19:54:03.2±0.9,**23˚.34N**±0˚.02×**121˚.40E**±0˚.02,**h30**km±5km,
n54,σ0**80**/100,**7C-7D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
TWF1	**Yuli**	**0.10**	**276**	⇑*i*P		**Pb**	**19 54 09.1**	**+0.4**
	baz=268							
TWF1				*i* S		**Sb**	**19 54 12.9**	**+0.6**
	baz=268							
EHY	**Hungye**	**0.18**	**336**	⇓*i*P		**Pb**	**19 54 09.4**	**+0.1**
	baz=350							
EHY				*i* S		**Sb**	**19 54 13.3**	**-0.1**
	baz=350							
CHKT	**Chengkung**	**0.24**	**188**	P		**Pn**	**19 54 10.7**	**-0.1**
	baz=175							
CHKT				S		**Sn**	**19 54 16.3**	**+0.8**
	baz=175							
ELDTW	**Lidau**	**0.39**	**247**	⇓*i*P		**Pb**	**19 54 11.7**	**-0.3**
	baz=234							
ELDTW				S		**Sb**	**19 54 17.2**	**-0.8**
	baz=234							
TEGC	**Jichi Village**	**0.39**	**19**	*e*P		**Pn**	**19 54 15.0**	**+2.3**
	baz=28							
YUS	**Yu-Shan**	**0.44**	**290**	⇑*i*P		**Pb**	**19 54 13.4**	**+0.3**
	baz=289							
YUS				*i* S		**Sb**	**19 54 20.0**	**+0.2**
	baz=289							
ESL	**Shilin**	**0.47**	**3**	⇓*i*P		**Pb**	**19 54 12.4**	**-0.8**
	baz=19							
ESL				S		**Sb**	**19 54 18.6**	**-1.4**
	baz=19							
ALS	**Alishan**	**0.57**	**287**	⇑*i*P		**Pb**	**19 54 15.2**	**+0.2**
	baz=286							
ALS				S		**Sb**	**19 54 23.2**	**0.0**
	baz=286							
TWG	**Pinlang**	**0.60**	**210**	⇓*i*P		**Pb**	**19 54 14.0**	**-1.3**
	baz=191							
TWG				*e*S		**Sb**	**19 54 21.9**	**-1.7**
	baz=191							
TTN	**Taitung**	**0.63**	**202**	*e*P		**Pb**	**19 54 15.0**	**-0.8**
	baz=195							
TTN				*e*S		**Sb**	**19 54 24.6**	**+0.2**
	baz=195							
HWA	**Hwalien**	**0.66**	**16**	*e*P		**Pb**	**19 54 15.7**	**-0.6**
	baz=15							
HWA				S		**Sb**	**19 54 25.0**	**-0.2**
	baz=15							
SMLT	**Sun Moon Lake**	**0.71**	**320**	⇓*i*P		**Pb**	**19 54 17.1**	**-0.1**
	baz=325							
SMLT				*i* S		**Sb**	**19 54 26.7**	**0.0**
	baz=325							
CHN5	**Tsauling**	**0.71**	**291**	⇑*i*P		**Pb**	**19 54 17.4**	**+0.2**
	baz=291							
CHN5				*i* S		**Sn**	**19 54 27.4**	**+0.2**
	baz=291							
WTP	**Ta-pu**	**0.73**	**263**	⇑*i*P		**Pn**	**19 54 17.4**	**-0.1**
	baz=259							
WTP				*e*S		**Sb**	**19 54 27.5**	**+0.2**
	baz=259							
CHN4	**Tsaushan**	**0.74**	**271**	⇑*i*P		**Pn**	**19 54 17.8**	**+0.1**
	baz=269							
CHN4				*i* S		**Sn**	**19 54 28.4**	**+0.5**
	baz=269							
TYC	**Yuchr**	**0.75**	**318**	⇓*i*P		**Pn**	**19 54 17.7**	**0.0**
	baz=328							
TYC				*i* S		**Sb**	**19 54 27.7**	**0.0**
	baz=328							
TWD	**Chiawan**	**0.76**	**14**	*e*P		**Pn**	**19 54 16.2**	**-1.6**
	baz=11							
TWD				*e*S		**Sb**	**19 54 27.4**	**-0.5**
	baz=11							
WHF	**Hehuan Shan**	**0.81**	**351**	⇓*i*P		**Pn**	**19 54 17.9**	**-1.1**
	baz=6.0							
WHF				*e*S		**Sb**	**19 54 29.5**	**-0.4**
	baz=6.0							
CHN1	**Nanshi**	**0.82**	**259**	⇑*i*P		**Pn**	**19 54 19.0**	**+0.3**
	baz=256							
CHN1				S		**Sn**	**19 54 30.7**	**+0.9**
	baz=256							
WGK	**Gukeng**	**0.84**	**294**	*e*P		**Pn**	**19 54 19.1**	**+0.1**
	baz=294							
WGK				*e*S		**Sb**	**19 54 30.8**	**+0.5**
	baz=294							
WNT	**Mingjian**	**0.85**	**309**	*e*P		**Pb**	**19 54 19.4**	**0.0**
	baz=299							
WNT				*e*S		**Sn**	**19 54 30.5**	**+0.1**
	baz=299							
ECL	**Taimali**	**0.85**	**209**	*e*P		**Pn**	**19 54 16.6**	**-2.4**
	baz=195							
ECL				*e*S		**Sb**	**19 54 30.7**	**+0.1**
	baz=195							
CHY	**Chiayi**	**0.91**	**280**	*e*P		**Pn**	**19 54 20.0**	**+0.1**
	baz=279							
CHY				*e*S		**Sb**	**19 54 32.7**	**+0.4**
	baz=279							
TWT	**Tachien**	**0.93**	**347**	*e*P		**Pn**	**19 54 20.5**	**+0.1**
	baz=351							
TWT				*e*S		**Sn**	**19 54 32.2**	**-0.6**
	baz=351							
CHN3	**Shinhua**	**0.99**	**255**	*e*P		**Pb**	**19 54 22.1**	**+0.3**
	baz=263							
CHN3				*e*S		**Sb**	**19 54 36.1**	**+1.6**
	baz=263							
TWM1	**Shoushan**	**1.04**	**240**	*e*P		**Pb**	**19 54 23.2**	**+0.6**
	baz=236							
TWM1				*e*S		**Sb**	**19 54 37.6**	**+1.6**
	baz=236							
SGLT	**Jiouru**	**1.04**	**234**	*e*P		**Pn**	**19 54 22.3**	**-0.3**
	baz=230							
TCU	**Taichung**	**1.04**	**320**	*e*P		**Pn**	**19 54 21.9**	**+0.2**
	baz=311							
TCU				*e*S		**Sb**	**19 54 35.9**	**-0.1**
	baz=311							
EAST	**Anshuo**	**1.08**	**208**	*e*P		**Pn**	**19 54 20.8**	**-1.6**
	baz=197							
EAST				*e*S		**Sb**	**19 54 37.4**	**+0.1**
	baz=197							
NNS	**Nan Shan**	**1.09**	**359**	*e*P		**Pn**	**19 54 22.0**	**-0.6**
	baz=11							
NNS				*e*S		**Sn**	**19 54 36.2**	**-0.5**
	baz=11							
CHN8	**Yiju**	**1.09**	**270**	*e*P		**Pn**	**19 54 22.7**	**+0.3**
	baz=268							
CHN8				*e*S		**Sb**	**19 54 37.6**	**+0.1**
	baz=268							
WSF	**Szhu**	**1.12**	**285**	*e*P		**Pn**	**19 54 23.1**	**+0.2**
	baz=285							
WSF				*e*S		**Sn**	**19 54 36.8**	**-0.4**
	baz=285							
ENA	**Nanau**	**1.12**	**16**	*e*P		**Pn**	**19 54 22.8**	**-0.1**
	baz=13							
TWQ1	**Liyutan**	**1.16**	**330**	*e*P		**Pb**	**19 54 24.2**	**-0.4**
	baz=335							
TWQ1				*e*S		**Sb**	**19 54 39.8**	**+0.6**
	baz=335							
SCZT	**Fangliau**	**1.21**	**217**	*e*P		**Pn**	**19 54 24.5**	**+0.5**
	baz=213							
SCZT				*e*S		**Sb**	**19 54 41.4**	**+0.7**
	baz=213							
NSY	**Sanyi**	**1.22**	**331**	*e*P		**Pb**	**19 54 25.2**	**-0.5**
	baz=336							
NSY				*e*S		**Sb**	**19 54 40.8**	**-0.3**
	baz=336							
ENTT	**Nioudou**	**1.30**	**7**	*e*P		**Pn**	**19 54 24.5**	**-0.8**
	baz=22							
ENTT				*e*S		**Sn**	**19 54 41.4**	**-0.3**
	baz=22							
LAY	**Lan-yu**	**1.30**	**174**	*e*P		**Pn**	**19 54 24.0**	**-1.4**
	baz=161							
LAY				*e*S		**Sn**	**19 54 40.4**	**-1.4**
	baz=161							
TWC	**Suao**	**1.33**	**18**	*e*P		**Pn**	**19 54 24.8**	**-0.8**
	baz=14							
TWC				*e*S		**Sn**	**19 54 42.4**	**+0.1**
	baz=14							
NSK	**Sanguang**	**1.33**	**358**	P		**Pn**	**19 54 25.5**	**-0.3**
	baz=17							
NSK				*e*S		**Sn**	**19 54 42.2**	**-0.3**
	baz=17							
NSTT	**Nanjuang**	**1.33**	**344**	*e*P		**Pn**	**19 54 26.0**	**+0.2**
	baz=350							
NSTT				*e*S		**Sn**	**19 54 43.2**	**+0.7**
	baz=350							
TWP	**Hsiaoliuchiu**	**1.38**	**224**	*e*P		**Pb**	**19 54 29.2**	**+0.9**
	baz=220							
TWE	**Neicheng**	**1.39**	**10**	*e*P		**Pn**	**19 54 25.7**	**-0.9**
	baz=24							
TWE				*e*S		**Sn**	**19 54 43.4**	**-0.6**
	baz=24							
HEN	**Hengchun**	**1.47**	**205**	*e*P		**Pb**	**19 54 30.3**	**+0.5**
	baz=193							
TWK1	**Hengchun**	**1.50**	**202**	*e*P		**Pn**	**19 54 28.6**	**+0.6**
	baz=185							
WDGT	**Dungji**	**1.60**	**267**	*e*P		**Pn**	**19 54 28.8**	**-0.7**
	baz=265							
WDGT				*e*S		**Sn**	**19 54 48.2**	**-0.9**
	baz=265							
PNG	**Penghu**	**1.71**	**278**	*e*P		**Pn**	**19 54 30.0**	**-0.9**
	baz=277							
NWF	**Wu-fen Shan**	**1.75**	**11**	*e*P		**Pn**	**19 54 30.7**	**-0.9**
	baz=18							
NWF				*e*S		**Sn**	**19 54 52.2**	**-0.8**
	baz=18							
YOJ	**Yonaguni jima**	**1.85**	**53**	P		**Pn**	**19 54 33.4**	**+0.6**
YOJ				S		**Sn**	**19 54 55.7**	**+0.6**
HATJ	**Hateruma jima**	**2.31**	**72**	*e*S		**Sn**	**19 55 06.6**	**-0.1**
IRIF	**Iriomote-Funau**	**2.35**	**65**	P		**Pn**	**19 54 40.6**	**+0.9**
IRIF				S		**Sn**	**19 55 08.5**	**+1.0**
JKRS	**Kuro-shima**	**2.55**	**69**	P		**Pn**	**19 54 43.7**	**+1.2**
JKRS				*e*S		**Sn**	**19 55 13.8**	**+1.3**
JIJ	**Ishigaki jima**	**2.71**	**67**	P		**Pn**	**19 54 45.2**	**+0.5**
JIJ				S		**Sn**	**19 55 15.7**	**-0.7**
JTJ	**Tarama**	**3.28**	**66**	P		**Pn**	**19 54 53.7**	**+1.1**
JTJ				S		**Sn**	**19 55 32.2**	**+1.6**

*IDC **16** 20:00:07.5±1.3,54˚.58S×5˚.20E,h0km,mb4.0/5,mb1 4.1/6, mb1mx3.9/19,mbtmp4.0/6,ML3.2/1,Error ellipse: s-maj=49.2km s-min=24.3km az=58.0*
*ISCJB **16** 20:00:08.2±1.0,54˚.85S±0˚.10×4˚.9E±0˚.3,h10km,mb4.2/7, Error ellipse: s-maj=24.3km s-min=14.2km az=174.2*
*NEIC **16** 20:00:08.8±0.9,54˚.63S×5˚.21E,h10km,mb4.6/6,Error ellipse: s-maj=31.2km s-min=17.2km az=60.0*
ISC 16 20:00:09.3±1.0,**54˚.8S**±0˚.1×**5˚.0E**±0˚.2,**h10**km,**n19,**
σ1**9**25/19,**mb4.3/7,Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**17.24**	**188**	*e*Pn		**P**	**20 04 12.2**	**+0.7**
	16nm,1.1s							
SNAA				*e*Sn		**Sn**	**20 07 18.9**	**-2.6**
SNAA	**Sanae**	**17.24**	**188**	P		**P**	**20 04 13.6**	**+2.2**
	0.1nm,0.3s,baz=16,slow=15,SNR=19							
QSPA	**South Pole Qui**	**35.41**	**180**	*e*P		**P**	**20 07 05.5**	**+0.4**
	5.3nm,0.8s							
QSPA	**South Pole Qui**	**35.41**	**180**	P		**P**	**20 07 06.1**	**+1.0**
	1.9nm,0.6s,baz=203,slow=3.2,SNR=7.0							
CASY	**Casey**	**46.91**	**148**	P		**P**	**20 08 37.8**	**-1.5**
	6.3nm,1.1s							
SBA	**Scott Base**	**47.10**	**175**	*e*P		P	20 08 44.4	+3.6
	7.2nm,1.2s							
VNDA	**Vanda**	**47.13**	**173**	*e*P		**P**	**20 08 41.5**	**+0.5**
	5.3nm,1.2s							
VNDA	**Vanda**	**47.13**	**173**	P		**P**	**20 08 43.5**	**+2.5**
	2.1nm,1.0s,baz=232,slow=9.6,SNR=7.2							
CPUP	**Villa Florida**	**53.06**	**276**	P		**P**	**20 09 26.5**	**-0.1**
CPUP	**Villa Florida**	**53.06**	**276**	P		**P**	**20 09 26.5**	**-0.1**
	0.8nm,0.5s,baz=102,slow=5.0,SNR=4.9							
LPAZ	**La Paz**	**67.13**	**274**	*e*P		**P**	**20 11 03.4**	**-0.5**
	9.4nm,1.3s							
LPAZ	**La Paz**	**67.13**	**274**	P		**P**	**20 11 03.8**	**-0.1**
	0.9nm,0.6s,baz=140,slow=6.6,SNR=4.9							
ASAR	**Alice Springs**	**90.44**	**134**	P		**P**	**20 13 10.3**	**-0.8**
ASAR	**Alice Springs**	**90.44**	**134**	P		**P**	**20 13 10.3**	**-0.8**
	0.4nm,0.8s,baz=175,slow=4.7,SNR=3.2							
AS31	**Alice Springs**	**90.44**	**134**	P		**P**	**20 13 11.9**	**+0.8**
YKA	**Yellowknife Ar**	**148.77**	**309**	PKPbc		**PKPbc**	**20 19 54.9**	**-0.6**
YKA	**Yellowknife Ar**	**148.77**	**309**	PKPbc		**PKPbc**	**20 19 54.8**	**-0.6**
	0.9nm,0.7s,baz=99,slow=2.8,SNR=7.5							
ILAR	**Eielson Array**	**162.87**	**317**	PKPab		**PKPab**	**20 20 59.6**	**0.0**
ILAR	**Eielson Array**	**162.87**	**317**	PKPab		**PKPab**	**20 20 59.6**	**0.0**
	0.7nm,0.8s,baz=101,slow=0.9,SNR=4.7							

*IDC **16** 20:05:56.2±0.3,54˚.34S×5˚.93E,h0km,mb5.1/26, mb1 5.2/27,mb1mx5.2/27,mbtmp5.1/27,ML5.2/1,MS5.9/24, Ms1 5.9/24,ms1mx5.8/26,Error ellipse: s-maj=13.0km s-min=11.6km az=100.0*
*ISCJB **16** 20:05:57.0±0.2,54˚.36S±0˚.03×5˚.86E±0˚.07,h16km, mb5.6/91,MS5.9/220,Error ellipse: s-maj=6.1km s-min=4.8km az=23.5*
*MOS **16** 20:05:56.2±1.5,54˚.36S×5˚.82E,h10km,mb5.6/35, MS5.8/52,Error ellipse: s-maj=17.8km s-min=8.1km az=89.2*
*NEIC **16** 20:05:57.0±0.2,54˚.37S×5˚.87E,h10km,mb5.8/56, MS5.9/159,MW6.1,MW6.1,Error ellipse: s-maj=7.4km s-min=6.6km az=102.0,Moment Tensor Solution.. s23 Moment tensor: Scale 10¹⁸Nm; Mrr=0.30; Mθθ 1.89; Mφφ-1.58; Mrθ-0.01; Mθφ0.42; Mφr0.00; Best double couple: M₀1.80000×10¹⁸ NP1:φs128.00000°,δ90.00000°, λ0.00000°. NP2:φs218.00000°,δ90.00000°,λ-180.00000°. Principal axes: T 1.9400, Plg0.0000°, Azm173.0000°; N -0.3000, Plg89.0000°, Azm300.0000°; P -1.6300, Plg0.0000°, Azm83.0000°;*
*BJI **16** 20:05:56.1,54˚.40S×5˚.80E,h20km,mB5.9/35,Ms6.1/42, Ms7 5.8/41*
*TEH **16** 20:05:58.0,54˚.36S×5˚.81E,h10km,ML6.0*
*DJA **16** 20:05:58.7±0.7,54˚S±7˚×½2˚1,h10km,M5.7/12,mB6.1/7, mb5.4/12,Mw(mB)5.8/7,Mwp6.4/1*
*GCMT **16** 20:06:01.7±0.1,54˚.37S×6˚.32E,h12km,MW6.1,Moment Tensor Solution. s114,c251; s99,c171; Moment tensor: Scale 10¹⁸Nm; Mrr-0.31±.01; Mθθ2.11±.01; Mφφ-1.80±.01; Mrθ0.06±.03; Mθφ0.53±.01; Mφr-0.01±.03; Best double couple: M₀2.00000×10¹⁸ NP1:φs37.00000°,δ89.00000°, λ179.00000°. NP2:φs127.00000°,δ89.00000°,λ1.00000°. Principal axes: T 2.1800, Plg1.0000°, Azm352.0000°; N -0.3200, Plg88.0000°, Azm151.0000°; P -1.8700, Plg1.0000°, Azm262.0000°; Data Used: II IU CN IC G. Mantle waves from 101 sta. Surface waves: sta=125, comp=282, per= 50.*
*NEIC **16** 20:06:07.5±0.0,53˚.98S×5˚.86E,h10km,Moment Tensor Solution. s152 Moment tensor: Scale 10¹⁸Nm; Mrr-0.19; Mθθ2.06; Mφφ-1.87; Mrθ-0.43; Mθφ0.49; Mφr0.30; Best double couple: M₀2.10000×10¹⁸ NP1:φs218.00000°, δ75.00000°,λ-178.00000°. NP2:φs128.00000°, δ89.00000°,λ-14.00000°. Principal axes: T 2.1800, Plg9.0000°, Azm173.0000°; N -0.1900, Plg75.0000°, Azm302.0000°; P -2.0000, Plg11.0000°, Azm81.0000°;*
ISC 16 20:05:58.4±0.2,**54˚.40S**±0˚.04×**5˚.87E**±0˚.05,**h16**km,**n634,**
σ2**8**02/579,**mb5.7**/89,**MS5.9**/220,**24C-8D,Bouvet Island region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**17.47**	**196**	*e*Pn		**P**	**20 10 02.1**	**0.0**
SNAA	**Sanae**	**17.74**	**189**	*e*Pn		**Pn**	**20 10 04.6**	**+0.3**
SNAA	**Sanae**	**17.74**	**189**	*e*pP		pP	20 10 08.3	-1.3
SNAA	**Sanae**	**17.74**	**189**	*e*P		**Pn**	**20 10 03.6**	**-0.7**
SNAA	**Sanae**	**17.74**	**189**	P		**Pn**	**20 10 04.4**	**+0.1**
SNAA				*e*Sn		Sn	20 13 06.6	-15
SNAA				S		S	20 13 08.1	-20
SNAA	**Sanae**	**17.74**	**189**	P		**Pn**	**20 10 04.4**	**+0.1**
	8.9nm,0.3s,baz=17,slow=14,SNR=299							
SNAA				S		Sn	20 13 08.1	-13
	1.4nm,0.3s,baz=276,slow=19,SNR=3.5							
SNAA				LR		LR	20 15 06.2	
	comp=Z,32μm,21.4s,baz=23,slow=31							
SYO	**Syowa Base**	**21.25**	**147**	⇓*i*P		**P**	**20 10 42.0**	**-1.3**
TRIS	**Tristan da Cun**	**21.38**	**317**	*e*P		**P**	**20 10 42.4**	**-2.5**
ELIM	**Elim**	**22.06**	**32**	*e*P		**P**	**20 10 53.2**	**+0.8**
ELIM					AMB	AMB	20 11 03.9	
	comp=Z,256nm,1.9s							
SUR	**Sutherland**	**24.45**	**32**	*e*P		**P**	**20 11 16.6**	**+0.1**
SUR					AMB	AMB	20 11 31.6	
	comp=Z,147nm,3.0s							
SUR	**Sutherland**	**24.45**	**32**	*e*P		**P**	**20 11 18.3**	**+1.8**
	comp=Z,213nm,1.4s							
SUR	**Sutherland**	**24.45**	**32**	P		**P**	**20 11 20.1**	**+3.6**
	comp=Z,24nm,1.1s,baz=194,slow=7.2,SNR=3.8							
SUR					LR	LR	20 18 52.9	
	comp=Z,26μm,18.6s,baz=202,slow=32							
CVNA	**Calvinia**	**24.97**	**29**	*e*P		**P**	**20 11 20.4**	**-0.8**
CVNA					AMB	AMB	20 11 35.8	
	comp=Z,244nm,3.7s							
GRM	**Grahamstown**	**25.63**	**43**	*e*P		**P**	**20 11 25.9**	**-1.1**
GRM					AMB	AMB	20 11 36.8	
	comp=Z,174nm,2.4s							
SOE	**Somerset East**	**25.79**	**41**	*e*P		**P**	**20 11 26.6**	**-1.9**
SOE					AMB	AMB	20 11 34.4	
	comp=Z,101nm,7.2s							
KOMG	**Komaggas**	**25.99**	**24**	*e*P		**P**	**20 11 30.4**	**+0.2**
KOMG					AMB	AMB	20 11 33.7	
	comp=Z,91nm,3.4s							
KSD	**Kokstad**	**29.24**	**45**	*e*P		P	20 12 05.3	+5.8
KSD					AMB	AMB	20 12 26.0	
	comp=Z,209nm,3.3s							
BOSA	**Boshof**	**29.38**	**37**	*e*P		**P**	**20 11 58.8**	**-1.9**
BOSA					AMB	AMB	20 12 06.6	
	comp=Z,52nm,4.2s							
BOSA	**Boshof**	**29.38**	**37**	*e*P		**P**	**20 11 59.2**	**-1.5**
	comp=Z,31nm,0.9s							
BOSA	**Boshof**	**29.38**	**37**	P		**P**	**20 11 59.7**	**-1.0**
	comp=Z,18nm,1.0s,baz=202,slow=8.1,SNR=17							
BOSA					LR	LR	20 21 43.8	
	comp=Z,18μm,18.1s,baz=201,slow=32							
MAW	**Mawson**	**29.38**	**139**	P		**P**	**20 12 01.1**	**+0.9**
MAW	**Mawson**	**29.38**	**139**	P		**P**	**20 12 01.1**	**+0.9**
	comp=Z,44nm,0.8s,baz=267,slow=13,SNR=85							
MAW					LR	LR	20 21 37.0	
	comp=Z,18μm,18.9s,baz=278,slow=32							
SEK	**Senekal**	**30.50**	**40**	*e*P		**P**	**20 12 10.0**	**-0.7**
SEK					AMB	AMB	20 12 16.8	
	comp=Z,67nm,6.2s							
SWZ	**Schweizer**	**30.72**	**36**	*e*P		**P**	**20 12 10.3**	**-2.3**
SWZ					AMB	AMB	20 12 23.5	
	comp=Z,103nm,1.9s							
PRYS	**Parys**	**31.67**	**39**	*e*P		**P**	**20 12 18.9**	**-2.1**
PRYS					AMB	AMB	20 12 23.1	
	comp=Z,63nm,6.5s							
KSR	**Koster**	**32.48**	**37**	*e*P		**P**	**20 12 27.1**	**-1.0**
KSR					AMB	AMB	20 12 39.4	
	comp=Z,48nm,1.5s							
ERPM	**east rand prop**	**32.52**	**39**	*e*P		**P**	**20 12 27.5**	**-1.0**
ERPM					AMB	AMB	20 12 34.8	
	comp=Z,54nm,5.3s							
LBTB	**Lobatse**	**32.81**	**34**	*e*P		**P**	**20 12 29.6**	**-1.4**
LBTB					AMB	AMB	20 12 39.3	
	comp=Z,56nm,1.9s							
LBTB	**Lobatse**	**32.81**	**34**	*e*P		**P**	**20 12 29.3**	**-1.7**
	comp=Z,49nm,1.0s							
POGA	**Pongola**	**32.93**	**45**	*e*P		**P**	**20 12 29.9**	**-2.0**
POGA					AMB	AMB	20 12 40.6	
	comp=Z,71nm,2.9s							
SLR	**Silverton**	**33.09**	**39**	*e*P		**P**	**20 12 32.3**	**-1.1**
SLR					AMB	AMB	20 12 35.5	
	comp=Z,82nm,3.3s							
PMSA	**Palmer Station**	**35.01**	**225**	*e*P		**P**	**20 12 51.1**	**+1.6**
	comp=Z,118nm,1.0s							
PMSA	**Palmer Station**	**35.01**	**225**	LR		LR	20 23 56.4	
	comp=Z,8μm,18.4s,baz=102,slow=31							
QSPA	**South Pole Qui**	**35.83**	**180**	⇑*e*P		**P**	**20 12 57.4**	**+0.6**
	comp=Z,1μm,1.4s							
QSPA	**South Pole Qui**	**35.83**	**180**	P		**P**	**20 12 57.9**	**+1.1**
	comp=Z,268nm,0.8s,baz=226,slow=4.6,SNR=342							
QSPA					LR	LR	20 26 56.7	
	comp=Z,43μm,20.2s,baz=223,slow=35							
TSUM	**Tsumeb**	**36.27**	**19**	*e*P		**P**	**20 13 00.0**	**-0.9**
TSUM	**Tsumeb**	**36.27**	**19**	*e*P		**P**	**20 12 58.6**	**-2.4**
	comp=Z,148nm,1.3s							
TSUM					LR	LR		
	comp=Z,41μm,21.0s							
TSUM	**Tsumeb**	**36.27**	**19**	P		**P**	**20 13 00.5**	**-0.5**
	comp=Z,35nm,0.9s,baz=183,slow=8.8,SNR=39							
EFI	**East Falkland**	**37.37**	**247**	P		**P**	**20 13 09.6**	**-0.2**
EFI					pmax	pmax		
	comp=Z,96nm,0.9s							
EFI					MLR	MLR		
	comp=Z,8μm,19.0s							
EFI	**East Falkland**	**37.37**	**247**	P		**P**	**20 13 09.6**	**-0.2**
	comp=Z,96nm,0.9s							
EFI					LR	LR		
	comp=Z,8μm,19.0s							
PAF	**Port-aux-Franc**	**38.80**	**110**		PFAKE		20 13 30.0	+8.1
PAF					LR	LR		
	comp=Z,12μm,20.0s							
SHEL	**Horse Pasture**	**39.41**	**342**	P		**P**	**20 13 24.4**	**-3.0**
SHEL					MLR	MLR		
	comp=Z,20μm,20.0s							
SHEL	**Horse Pasture**	**39.41**	**342**	P		**P**	**20 13 24.4**	**-3.0**
SHEL					LR	LR		
	comp=Z,20μm,20.0s							
MIR	**Mirnyy**	**40.96**	**142**	⇓*i*P		**P**	**20 13 41.0**	**+1.3**
MIR				*e*			20 15 25.0	
MIR				*e*S		**S**	**20 19 50.0**	**-0.5**
MIR					pmax	pmax		
	comp=Z,273nm,2.0s							
MIR					pmax	pmax		
	comp=Z,3μm,10.0s							
MIR					MLR	MLR		
	comp=N,14μm,18.0s							
MIR					MLR	MLR		
	comp=E,20μm,18.0s							
MIR					MLR	MLR		
	comp=Z,21μm,18.0s							
USHA	**Ushuaia**	**41.13**	**238**	P		**P**	**20 13 42.8**	**+1.6**
USHA	**Ushuaia**	**41.13**	**238**	P		**P**	**20 13 42.8**	**+1.6**
	comp=Z,35nm,0.9s,baz=68,slow=10,SNR=8.6							
LSZ	**Lusaka**	**42.74**	**33**	*e*P		**P**	**20 13 54.9**	**-0.1**
LSZ	**Lusaka**	**42.74**	**33**	P		**P**	**20 13 55.3**	**+0.4**
	SNR=8.8							
LSZ	**Lusaka**	**42.74**	**33**	*e*P		**P**	**20 13 54.4**	**-0.6**
	comp=Z,42nm,1.1s							
LSZ					LR	LR		
	comp=Z,27μm,20.0s							
LSZ	**Lusaka**	**42.74**	**33**	P		**P**	**20 13 54.7**	**-0.2**
	comp=Z,6.9nm,0.8s,baz=210,slow=16,SNR=8.3							
CASY	**Casey**	**47.00**	**148**	*e*P		**P**	**20 14 28.6**	**+0.5**
	comp=Z,273nm,1.1s							
CASY					LR	LR		
	comp=Z,26μm,20.0s							
ABPO	**Ambohimpanom**	**47.32**	**58**	⇑*e*P		**P**	**20 14 32.5**	**+1.1**
ABPO					pmax	pmax		
	comp=Z,60nm,0.9s							
ABPO					MLR	MLR		
	comp=Z,9μm,20.0s							
ABPO	**Ambohimpanom**	**47.32**	**58**	⇑*e*P		**P**	**20 14 32.5**	**+1.1**
	comp=Z,60nm,0.9s							
ABPO					LR	LR		
	comp=Z,9μm,20.0s							
SBA	**Scott Base**	**47.48**	**175**	⇑*e*P		**P**	**20 14 32.9**	**+1.2**
SBA				*e*			20 16 21.6	
SBA					pmax	pmax		
	comp=Z,362nm,1.1s							
SBA					MLR	MLR		
	comp=Z,14μm,20.0s		

CAM4 *i* 20 15 12.2
CAM4 *i* 20 15 20.8
CAM4 *i* 20 15 23.3
CAM4 *i* 20 15 29.4
ASCN Ascension 49.11 333 PFAKE 20 15 00.0 +15
ASCN LR LR
comp=Z,3µm,22.0s
SPB Sao Paulo 49.95 286 *e*P **P** **20 14 51.1 -0.3**
comp=Z,83nm,1.1s
SPB LR LR
comp=Z,11µm,20.0s
RER Riviere de l'E 50.00 69 *e*P **P** **20 14 52.7 +0.8**
comp=Z,149nm,1.0s
RER LR LR
comp=Z,11µm,20.0s
PLCA Paso Flores 50.83 252 *e*P **P** **20 14 57.7 -0.2**
comp=Z,26nm,0.8s
PLCA Paso Flores 50.83 252 P **P** **20 14 58.5 +0.5**
comp=Z,11nm,0.8s,baz=120,slow=7.2,SNR=6.5
PLCA LR LR 20 32 59.3
comp=Z,5µm,21.0s,baz=131,slow=32
CPUP Villa Florida 53.52 275 P **P** **20 15 17.9 -0.1**
CPUP Villa Florida 53.52 275 P **P** **20 15 17.9 -0.1**
comp=Z,114nm,1.0s,baz=116,slow=6.4,SNR=128
CPUP LR LR 20 34 17.7
comp=Z,4µm,21.4s,baz=124,slow=32
DRV Dumont d'Urvil 54.41 159 PP PP 20 17 19.0 -6.5
DRV S S 20 22 53.0 -8.2
DRV SS **SS** **20 26 42.0 -0.6**
DRV L L 20 28 00.0
DRV P 20 31 00.0
LMEL Las Melosas 55.47 259⇑ *i*P **P** **20 15 33.1 +0.8**
LMEL Las Melosas 55.47 259⇑ *i*P **P** **20 15 33.1 +0.8**
CFAA Coronel Fontan 55.97 262 P **P** **20 15 35.7 0.0**
CFAA Coronel Fontan 55.97 262 P **P** **20 15 35.7 0.0**
comp=Z,5.5nm,0.9s,baz=138,slow=6.9,SNR=49
BDFB Brasilia 56.67 291 P **P** **20 15 41.5 +0.5**
BDFB Brasilia 56.67 291 P **P** **20 15 41.5 +0.5**
comp=Z,37nm,0.8s,baz=123,slow=5.3,SNR=20
BDFB LR LR 20 35 28.0
comp=Z,7µm,18.5s,baz=298,slow=31
MBAR Mbarara 57.39 30 *e*P **P** **20 15 46.2 +0.1**
MBAR Mbarara 57.39 30 LR LR 20 36 50.5
comp=Z,20µm,20.0s,baz=192,slow=32
TLL Tololo Astrono 58.51 261⇑ *i*P **P** **20 15 54.2 +0.2**
TLL Tololo Astrono 58.51 261⇑ *i*P **P** **20 15 54.2 +0.2**
TLL Tololo Astrono 58.51 261⇑ *i*P **P** **20 15 54.2 +0.2**
RCBR Riachuelo 58.96 309 *e*P **P** **20 15 57.5 +0.5**
comp=Z,108nm,1.6s
RCBR LR LR
comp=Z,11µm,20.0s
KMBO Kilima Mbogo 59.01 37 *e*P **P** **20 15 59.7 +2.2**
KMBO Kilima Mbogo 59.01 37 P P 20 16 01.3 +3.8
SNR=10
KMBO Kilima Mbogo 59.01 37 *e*P **P** **20 15 59.7 +2.2**
comp=Z,104nm,1.9s
KMBO Kilima Mbogo 59.01 37 P **P** **20 15 58.2 +0.6**
comp=Z,4.0nm,0.9s,baz=202,slow=12,SNR=8.9
KMBO LR LR 20 40 01.2
comp=Z,16µm,18.1s,baz=193,slow=35
LCO Las Campanas 59.31 262 *e*P **P** **20 15 59.2 -0.4**
comp=Z,103nm,1.1s
LCO LR LR
comp=Z,6µm,20.0s
LIC Lamto 61.09 348 *e*P **P** **20 16 10.3 -1.2**
comp=Z,67nm,0.9s,baz=161
LIC Lamto 61.09 348 *e*P **P** **20 16 10.3 -1.2**
comp=Z,67nm,0.9s
DBIC Dimbokro 61.51 348 *e*P **P** **20 16 13.5 -0.7**
DBIC Dimbokro 61.51 348 *e*P **P** **20 16 13.2 -1.1**
comp=Z,296nm,1.8s
DBIC Dimbokro 61.51 348 P **P** **20 16 13.7 -0.6**
comp=Z,16nm,0.7s,baz=145,slow=8.3,SNR=19
DBIC LR LR 20 38 21.0
comp=Z,10µm,18.8s,baz=95,slow=32
LVC Limon Verde 63.13 268 *e*P **P** **20 16 25.5 0.0**
comp=Z,132nm,1.1s
LVC LR LR
comp=Z,5µm,20.0s
MSEY Mahe Island 63.69 58 PFAKE 20 16 40.0 +11
MSEY LR LR
comp=Z,9µm,21.0s
TOA0 Torodi Ar. Sit 67.38 356 *e*P **P** **20 16 51.2 -1.5**
TORD Torodi Ar. Bea 67.38 356 P **P** **20 16 52.0 -0.6**
TORD ⇑*e* 20 45 24.3
TORD Torodi Ar. Bea 67.38 356 P **P** **20 16 52.0 -0.6**
comp=Z,6.9nm,0.8s,baz=192,slow=5.7,SNR=16
TORD LR LR 20 43 05.1
comp=Z,7µm,19.5s,baz=170,slow=33
TORD PKP2bc 20 45 24.3
comp=Z,1.8nm,1.1s,baz=10,slow=4.0,SNR=4.6
LPAZ La Paz 67.61 273 *e*P **P** **20 16 54.5 -0.5**
comp=Z,108nm,0.8s
LPAZ *e*PP PP 20 19 29.3 +5.4
LPAZ La Paz 67.61 273 P **P** **20 16 55.6 +0.6**
comp=Z,115nm,1.1s,baz=108,slow=5.6,SNR=142
LPAZ LR LR 20 45 14.8
comp=Z,5µm,18.3s,baz=124,slow=35
DGAR Diego Garcia 70.46 75 PFAKE 20 17 20.0 +8.0
DGAR LR LR
comp=Z,12µm,22.0s
SAML Samuel 70.62 282 *e*P **P** **20 17 12.2 -0.8**
comp=Z,116nm,1.0s
SAML LR LR
comp=Z,13µm,19.0s
DESE Dese 71.24 35 *i*P **P** **20 17 19.1 +2.1**
DESE *e*S **SKiKP** **20 26 54.8 -2.0**
SACV Santiago Islan 73.52 330 PFAKE 20 17 40.0 +10
SACV LR LR
comp=Z,4µm,21.0s
NWAO Narrogin (SRO) 74.94 126 *e*P **P** **20 17 37.8 -0.7**
comp=Z,117nm,1.4s
NWAO LR LR
comp=Z,3µm,21.0s
NWAO Narrogin (SRO) 74.94 126 P **P** **20 17 38.5 +0.1**
comp=Z,28nm,0.8s,baz=218,slow=5.9,SNR=15
NNA Nana 76.11 269 *e*P **P** **20 17 45.5 0.0**
comp=Z,46nm,0.9s
NNA *e*PcP **PcP** **20 17 57.5 -0.1**
NNA LR LR
comp=Z,6µm,22.0s
TAM Tamanrasset 76.88 360 *e*P **P** **20 17 49.4 -0.1**
TAM pmax pmax
comp=Z,68nm,1.6s
TAM MLR MLR
comp=Z,3µm,20.0s
TAM Tamanrasset 76.88 360 *e*P **P** **20 17 49.4 -0.1**
comp=Z,68nm,1.6s
TAM LR LR
comp=Z,3µm,20.0s
TAU Tasmania Unive 77.62 152 *e*P **P** **20 17 52.2 -1.2**
TAU pmax pmax
comp=Z,66nm,0.9s
TAU MLR MLR
comp=Z,11µm,21.0s
TAU Tasmania Unive 77.62 152 *e*P **P** **20 17 52.2 -1.2**
comp=Z,66nm,0.9s
TAU LR LR
comp=Z,11µm,21.0s
APZ The Paps 78.00 168 P* **P** **20 17 55.5 -0.1**
MLZ Mavora Lakes 79.49 167 P* **P** **20 18 04.3 +0.6**
ODZ Otahua Downs 80.08 169 P* **P** **20 18 08.1 +1.1**
COCO West Island 80.76 98 PFAKE 20 18 20.0 +9.0
COCO LR LR
comp=Z,4µm,20.0s
JCZ Jackson Bay 80.81 168 P* **P** **20 18 11.2 +0.2**
RPZ Rata Peaks 81.44 169 *e*P **P** **20 18 14.7 +0.5**
comp=Z,74nm,1.1s
RPZ Rata Peaks 81.44 169 P **P** **20 18 16.4 +2.1**
comp=Z,57nm,0.9s,baz=194,slow=5.7,SNR=11
FORT Forrest 81.66 133 *e*P **P** **20 18 15.8 +0.2**
comp=Z,58nm,0.8s
BBOO Buckleboo 83.12 140 *e*P **P** **20 18 22.4 -0.8**
comp=Z,376nm,0.8s
THZ Tophouse 83.56 170 P* **P** **20 18 25.3 -0.2**
SNZO South Karori 84.18 172 PFAKE 20 18 40.0 +12
SNZO LR LR
comp=Z,13µm,19.0s
RAYN Ar Rayn 84.76 36 P **P** **20 18 33.9 +2.4**
comp=Z,304nm,1.5s,SNR=18
CAN Canberra 85.15 150 *e*P **P** **20 18 33.8 +0.2**
CAN pmax pmax
comp=Z,46nm,1.0s
CAN MLR MLR
comp=Z,9µm,22.0s
CAN Canberra 85.15 150 *e*P **P** **20 18 33.8 +0.2**
comp=Z,46nm,1.0s
CAN LR LR
comp=Z,9µm,22.0s
MBWA Marble Bar 85.97 121 *e*P **P** **20 18 37.0 -0.8**
comp=Z,48nm,1.0s
MBWA LR LR
comp=Z,3µm,19.0s
STKA Stephens Creek 85.97 143 *e*P **P** **20 18 37.6 -0.1**
comp=Z,18nm,1.2s
STKA Stephens Creek 85.97 143 P **P** **20 18 37.9 +0.2**
comp=Z,16nm,0.8s,baz=175,slow=4.1,SNR=47
OTAV Otavalo 86.88 275 *e*P **P** **20 18 43.1 +0.2**
comp=Z,136nm,1.4s
OTAV LR LR
comp=Z,5µm,22.0s
BBGH Gun Hill 86.93 297 PFAKE 20 18 50.0 +7.6
BBGH LR LR
comp=Z,7µm,21.0s
GRGR Grenville 87.18 295 *e*P **P** **20 18 45.5 +1.9**
comp=Z,297nm,1.1s
GRGR LR LR
comp=Z,3µm,19.0s
URZ Urewera 87.40 173 *e*P **P** **20 18 42.8 -1.7**
comp=Z,97nm,1.2s
URZ Urewera 87.40 173 P **P** **20 18 46.3 +1.8**
comp=Z,48nm,1.1s,baz=170,slow=1.8,SNR=7.1
ROSC El Rosal 88.23 281 *e*P **P** **20 18 47.7 -1.5**
ROSC El Rosal 88.23 281 P **P** **20 18 51.2 +2.0**
comp=Z,8.9nm,0.5s,baz=77,slow=21,SNR=3.7
ROSC LR LR 20 56 31.5
comp=Z,9µm,18.4s,baz=185,slow=34
BSY Bisya 88.55 46 P **P** **20 18 51.3 +1.3**
SNR=21
RTC Rabat Centre 88.72 349 PFAKE 20 19 00.0 +10
RTC LR LR
comp=Z,25µm,20.0s
SMDO Samad 89.18 47 P **P** **20 18 53.8 +0.7**
SNR=6.2
HOQ Hoqain 89.33 46 P **P** **20 18 54.6 +0.9**
SNR=21
ETRT Tiaret 89.52 356 P P 20 19 00.0 +5.6
KEST Kesra 89.82 3 *e*P P **20 18 56.6 +0.9**
KEST Kesra 89.82 3 P P **20 18 57.7 +2.0**
comp=Z,2.8nm,0.9s,baz=198,slow=4.7,SNR=9.1
KEST PKP2bc 20 44 03.5
comp=Z,0.4nm,0.4s,baz=331,slow=10,SNR=4.5
KEST LR LR 20 57 53.3
comp=Z,3µm,18.7s,baz=297,slow=35
HATD Hatta, Dubai 89.95 44 P **P** **20 18 59.5 +3.0**
SNR=6.6
EANR 'Ain N'Sour 90.08 356 P **P** **20 18 59.0 +2.1**
GOA Goa 90.22 63 *e*PKP **P** **20 18 57.5 -0.4**
GOA AMB AMB 20 19 10.2
comp=Z,82nm,0.0s
GOA AMS AMS 20 53 22.5
comp=Z,5µm,7.0s
EMHD Djebel Mahouad 90.27 358 P P 20 19 03.0 +5.1
ASF Jabal al Asfar 90.29 26 LR LR 20 57 25.7
comp=Z,10µm,19.7s,baz=66,slow=34
ASAR Alice Springs 90.37 134 P **P** **20 18 58.6 -0.2**
ASAR PKKPbc **PKKPbc** **20 36 28.1 +3.7**
ASAR Alice Springs 90.37 134 P **P** **20 18 58.6 -0.2**
comp=Z,9.5nm,0.8s,baz=204,slow=4.8,SNR=68
ASAR PKKPbc **PKKPbc** **20 36 28.1 +3.7**
comp=Z,0.6nm,0.8s,baz=29,slow=3.1,SNR=4.3
ASAR LR LR 20 49 35.2
comp=Z,3µm,21.9s,baz=206,slow=29
AS31 Alice Springs 90.37 134 *e*P **P** **20 18 58.0 -0.9**
NAY Al-Naaiem 90.63 35 *e*P **P** **20 19 00.6 +1.0**
NAY AMb AMB 20 19 11.8
comp=Z,96nm,1.3s
KBD Kabd 90.71 36 *e*P **P** **20 19 01.1 +1.2**
KBD AMb AMB 20 19 12.4
comp=Z,161nm,1.3s
MMAI Mount Meron Ar 90.72 24 LR LR 20 59 17.4
comp=Z,11µm,18.0s,baz=195,slow=35
UMR Umm Al-Rimmam 91.07 36 *e*P **P** **20 19 02.6 +1.0**
UMR AMb AMB 20 19 13.9
comp=Z,330nm,1.3s
MIB Mutribah 91.17 35 *e*P **P** **20 19 03.2 +1.1**
MIB AMb AMB 20 19 12.2
comp=Z,116nm,1.0s
FITZ Fitzroy Crossi 91.46 124 *e*P **P** **20 19 03.2 -0.7**
comp=Z,31nm,1.2s
FITZ Fitzroy Crossi 91.46 124 P **P** **20 19 04.0 +0.1**
comp=Z,5.4nm,0.9s,baz=184,slow=9.3,SNR=9.0
MDRS Chennai 91.65 70 *ex* **S** **20 30 00.2 -4.1**
MDRS *ex* x 20 30 52.2
MDRS *ex* x 21 00 01.2
ANWB Willy Bob 91.88 298 PFAKE 20 19 20.0 +14
ANWB LR LR
comp=Z,2µm,22.0s
SANT Santorini 91.97 16 PFAKE 20 19 20.0 +14
SANT LR LR
comp=Z,5µm,22.0s
PFVI Vila Bisbo 92.05 348 *e*P P 20 19 11.3 +5.4
comp=Z,116nm,1.6s
PFVI *i* SKS S 20 30 24.8 +18
PFVI *i* SS SS 20 36 42.6 +26
PBDV Barranco-do-Ve 92.05 349 *e*P P 20 19 10.9 +4.9
comp=Z,63nm,2.0s
PBDV *i* SKS S 20 30 26.4 +19
PBDV *i* SS SS 20 36 35.4 +18
CSS Prodhromos 92.10 22 *e*P **P** **20 19 03.7 -2.6**
comp=Z,302nm,2.0s
CSS LR LR
comp=Z,7µm,21.0s
PVAQ Vaqueiros 92.19 349 *e*P P 20 19 10.3 +3.7
comp=Z,53nm,1.7s
PVAQ *e*SKS S 20 30 23.0 +15
PVAQ *i* SS SS 20 36 37.0 +18
PVAQ *i* SS SS 20 36 38.3 +19
PVAQ *e*LR LR 20 48 39.2
comp=Z,8µm,20.0s
MORF Marmelete 92.20 348 *e*SKS S 20 30 25.9 +18
MORF Marmelete 92.20 348 *e*P **P** **20 19 06.5 -0.2**
PCVE Castro Verde 92.45 349 *e*P P 20 19 13.6 +5.8
comp=Z,42nm,2.0s
PCVE *e*SKS S 20 30 24.6 +14
MESJ Messejana 92.67 349 *e*P **P** **20 19 09.1 +0.3**
MESJ AMb AMB 20 19 23.8
comp=Z,71nm,1.6s
MESJ *e*S **SKSac** **20 29 42.9 +1.7**
MESJ *e*SS **SS** **20 36 27.7 +1.6**
MESJ Messejana 92.67 349 *e*P **P** **20 19 09.1 +0.3**
comp=Z,71nm,1.6s
MESJ *e*S **SKSac** **20 29 42.9 +1.7**
MESJ *e*SS **SS** **20 36 27.7 +1.6**
MESJ Messejana 92.67 349 *e*P **P** **20 19 09.0 +0.3**
MESJ *e*S **SKSac** **20 29 42.8 +1.7**
CEL Celeste 92.70 8 P **P** **20 19 07.1 -1.9**
comp=Z,22nm,1.1s
CEL LR LR
comp=Z,6µm,19.0s
POO Poona 92.77 62 *e*PKP **P** **20 19 10.8 +1.1**
PBAR Barrancos 92.88 350 *e*P P 20 19 14.3 +4.6
comp=Z,48nm,1.4s
PBAR *e*SKS S 20 30 22.1 +7.9
PBAR *i* SS SS 20 36 43.4 +14
PNCL Nicolau / Gran 92.98 349 *i* SKS S 20 30 37.0 +22
PAYG Puerto Ayora 93.05 265 PFAKE 20 19 20.0 +8.7
PAYG LR LR
comp=Z,4µm,22.0s
EVO Evora 93.33 349 *e*P **P** **20 19 10.9 -0.9**
comp=Z,114nm,1.9s
EVOP Sao Brissos 93.34 349 *e*P **P** **20 19 10.9 -1.0**
EVOP pmax pmax
comp=Z,114nm,1.9s
EVOP Sao Brissos 93.34 349 *e*P **P** **20 19 10.9 -1.0**
comp=Z,114nm,1.9s
BHD Baghdad 93.42 32 *e*P **P** **20 19 12.7 +0.3**
BHD *e*SKS **SKSac** **20 29 40.0 -5.6**
BHD *i* S **S** **20 30 18.3 -0.9**
VSL Villasalto 93.58 3 PFAKE 20 19 20.0 +7.0
VSL LR LR
comp=Z,7µm,20.0s
PESTR Estremoz 93.62 350 *e*P P 20 19 16.4 +3.2
comp=Z,34nm,1.5s
PESTR *i* SKS S 20 30 35.5 +15
PESTR *i* SKS ScS 20 30 41.6 +19
PESTR *i* SS SS 20 36 50.6 +11
LIS Lisbon 93.65 348 *e*P **P** **20 19 13.5 +0.2**
LIS AMb AMB 20 19 28.5
comp=Z,106nm,2.2s
LIS *e*S **SKSac** **20 29 48.6 +2.1**
LIS *e*SS **SS** **20 36 41.7 +1.7**
LIS Lisbon 93.65 348 *e*P **P** **20 19 13.4 +0.2**
LIS *e*S **SKSac** **20 29 48.6 +2.1**
TIP Timpagrande 93.68 8 *e*P **P** **20 19 15.9 +2.4**
comp=Z,68nm,1.3s
TIP LR LR
comp=Z,8µm,19.0s
IBDR Badra 93.76 33 *e*P P 20 19 06.8 -7.1
IBDR *e*SKS SKSac 20 29 36.1 -11
IBDR *e*S SKKSac 20 30 00.0 -7.5
WRA Warramunga Arr 93.85 132 P **P** **20 19 13.8 -1.2**
WRA PKKPbc PKKPbc 20 36 26.1 +11
WRA Warramunga Arr 93.85 132 P **P** **20 19 13.8 -1.2**
comp=Z,2.5nm,0.8s,baz=200,slow=3.5,SNR=6.1
WRA PKKPbc PKKPbc 20 36 26.1 +11
comp=Z,0.4nm,0.7s,baz=17,slow=2.2,SNR=4.8
WRA LR LR 20 57 46.2
comp=Z,2µm,18.6s,baz=200,slow=33
WRAB Tennant Creek 93.86 132 *e*P **P** **20 19 14.4 -0.6**
WRAB MLR MLR
comp=Z,3µm,19.0s
WRAB Tennant Creek 93.86 132 *e*P **P** **20 19 14.4 -0.6**
WRAB LR LR
comp=Z,3µm,19.0s
PMTG Montargil 93.89 349 *e*P P 20 19 19.0 +4.6
comp=Z,51nm,1.8s
PMTG *e*SKS S 20 30 38.5 +15
PMTG *i* SS SS 20 36 59.7 +16
PMTG *i* SS SS 20 36 57.2 +14
PMAFR Mafra 93.90 348 *i* SS SS 20 36 57.2 +14
ESDC Sonseca Array 94.09 352 *e*P **P** **20 19 17.0 +1.6**
ESDC Sonseca Array 94.09 352 P **P** **20 19 17.0 +1.6**
comp=Z,6.1nm,1.1s,baz=173,slow=4.3,SNR=9.8
ESDC LR LR 20 59 57.9
comp=Z,3µm,19.2s,baz=165,slow=34
ESLA Sonseca Array 94.09 352 *e*P **P** **20 19 15.3 0.0**
comp=Z,3.4nm,1.2s
PMRV Marv??o 94.16 350 *e*P P 20 19 20.4 +4.8
comp=Z,67nm,1.7s
PMRV *e*SKS S 20 30 41.1 +16
PMRV *e*SS SS 20 37 02.1 +15
PMRV *e*LR LR 20 49 44.4
comp=Z,7µm,18.0s
ISP Isparta 94.28 19 PFAKE 20 19 30.0 +14
ISP LR LR
comp=Z,9µm,20.0s
HYB Hyderabad 94.31 66 *i* P **P** **20 19 16.5 -0.4**
HYB Hyderabad 94.31 66 *e*PKP **P** **20 19 15.9 -1.0**
HYB AMS AMS 20 54 52.7
comp=Z,3µm,12.4s
CUC Castrocucco 94.41 8 PFAKE 20 19 30.0 +13
CUC LR LR
comp=Z,5µm,19.0s
CMBY CAMPBELL BAY 94.51 84 *ex* P 20 19 14.1 -3.9
CMBY AMS AMS 20 50 27.1
comp=Z,5µm,22.3s
SJG San Juan 94.53 295 PFAKE 20 19 30.0 +12
SJG LR LR
comp=Z,3µm,20.0s
PSMN Pico do Norte, 94.86 336 *e*P P 20 19 25.1 +6.2
comp=Z,107nm,2.1s
PSMN *e*S **SKSac** **20 29 56.1 +2.9**
PSMN *e*SS SS 20 37 20.4 +23
PSMN *e*LQ LQ 20 45 06.0
PSMN *e*LR LR 20 49 51.5
comp=Z,1µm,26.5s
BCIP Isla Barro Col 94.89 279 PFAKE 20 19 30.0 +10
BCIP LR LR
comp=Z,3µm,20.0s
IGHG Ghaleghazi 95.08 33 *e*P P 20 19 26.7 +6.4
EIDS Eidsvold 95.09 149 *e*P **P** **20 19 19.3 -1.3**
comp=Z,26nm,1.3s
MTE Manteigas 95.13 350 *e*SKS S 20 30 53.3 +19
MTE *e*SS SS 20 37 11.8 +10
MTE *i* SS SS 20 37 19.6 +18
MTE *e*LR LR 20 50 01.3
comp=Z,11µm,20.0s
MTE Manteigas 95.13 350 PFAKE 20 19 30.0 +10
MTE LR LR
comp=Z,10µm,20.0s
IGAR Gharneh 95.17 38 *e*P **P** **20 19 23.0 +2.2**
IMEH Mehriz 95.21 40 *e*P **P** **20 19 22.1 +1.1**
ISAD Sadrabad 95.33 39 *e*P **P** **20 19 23.0 +1.4**
IDHR Dehrash 95.37 33 *e*P P 20 19 24.9 +3.3
CMLA Cha da Macela 95.69 335 *e*P **P** **20 19 20.5 -2.2**
comp=Z,96nm,1.1s
CMLA *e*S S 20 30 02.4 -37
CMLA *e*SS **SS** **20 37 15.7 +6.4**
CMLA *e*LQ LQ 20 44 58.7
CMLA *e*LR LR 20 50 07.6
comp=Z,1µm,25.3s
CMLA Cha da Macela 95.69 335 PFAKE 20 19 30.0 +7.3
CMLA LR LR
comp=Z,3µm,22.0s
IZEF Zefreh 95.72 38 *e*P **P** **20 19 25.1 +1.8**
IBAF Bafgh 95.75 41 *e*P **P** **20 19 24.1 +0.8**
PSET Sete Cidades 95.80 335 *e*P **P** **20 19 24.8 +1.6**
comp=Z,204nm,1.6s
PSET *e*S S 20 30 07.2 -33
PSET *e*P **SS** **20 37 05.1 -5.7**
PSET *e*LQ LQ 20 44 51.4
PSET *e*LR LR 20 50 13.4
comp=Z,1µm,24.2s
IKLH Kolahrood 95.84 37 *e*P **P** **20 19 25.6 +1.8**
MVO Moncorvo 95.84 350 *e*SKS S 20 30 58.6 +18
MVO *e*SS SS 20 37 25.1 +14
MVO *e*LR LR 20 50 26.0
comp=Z,6µm,20.0s
POLO Lamas de Olo 96.12 350 *i* SKS S 20 30 57.7 +15
POLO *i* SS SS 20 37 27.6 +12
POLO *i* SS SS 20 37 36.3 +21
TIR Tirane 96.13 11 PFAKE 20 19 40.0 +15
TIR LR LR
comp=Z,4µm,19.0s
PBRG Braganca 96.44 351 *i* SKS S 20 31 08.1 +23
PBRG *i* SS SS 20 37 27.6 +7.8
MALT Malatya 96.50 25 *e*PP PP 20 23 25.1 +3.8
MALT LR LR
comp=Z,18µm,20.0s
AQU L'Aquila 96.60 6 PFAKE 20 19 40.0 +13
AQU LR LR
comp=Z,6µm,20.0s
RAO Raoul Island 96.63 177 PFAKE 20 19 40.0 +13
RAO LR LR
comp=Z,6µm,20.0s
ANTO Ankara 96.71 21 P **P** **20 19 29.4 +2.1**
ANTO pmax pmax
comp=Z,15nm,1.0s
ANTO MLR MLR
comp=Z,8µm,20.0s
ANTO Ankara 96.71 21 P **P** **20 19 29.4 +2.1**
comp=Z,15nm,1.0s
ANTO LR LR
comp=Z,8µm,20.0s
BR131 Keskin Array S 96.75 21 P **P** **20 19 29.0 +1.3**
comp=Z,2.3nm,0.8s
BR131 *e*PP **PP** **20 23 20.5 -2.7**
BRTR Keskin Array B 96.75 21 P **P** **20 19 29.5 +1.9**
BRTR PP **PP** **20 23 21.9 -1.3**
BRTR Keskin Array B 96.75 21 P **P** **20 19 29.5 +1.9**
comp=Z,2.1nm,0.8s,baz=175,slow=8.6,SNR=9.5
BRTR PP **PP** **20 23 21.9 -1.3**
comp=Z,5.2nm,1.2s,baz=172,slow=9.9,SNR=8.2
BRTR LR LR 21 02 45.3
comp=Z,5µm,21.2s,baz=358,slow=35
KULM Kulim 97.06 91 PFAKE 20 19 40.0 +10
KULM LR LR
comp=Z,3µm,19.0s
IRAZ Razeghan 97.16 35 *e*P **P** **20 19 27.1 -2.6**
EPF Esparros 97.18 356 *e*P **P** **20 19 27.5 -1.9**
comp=Z,33nm,1.4s
EPF Esparros 97.18 356 *e*P **P** **20 19 27.5 -1.9**
EPF pmax pmax
comp=Z,33nm,1.4s
EPF Esparros 97.18 356 *e*P **P** **20 19 27.5 -1.9**
comp=Z,33nm,1.4s
ROSA Rosais 97.28 334 *e*P Pdif 20 19 33.2 +3.2
comp=Z,123nm,1.2s
ROSA *e*S **SKSac** **20 30 02.8 -3.1**
ROSA *e*P **SS** **20 37 31.5 -0.2**
ROSA *e*LQ LQ 20 45 11.9

ROSA eLR LR 20 50 36.9
comp=Z,1µm,25.5s
PGRA Graciosa 97.51 334 eP Pdif 20 19 35.9 +5.0
comp=Z,46nm,0.8s
PGRA eS **SKSac 20 30 05.5 -1.5**
PGRA eSS **SS 20 37 38.6 +3.8**
PGRA eP **SS 20 37 39.7 +4.9**
PGRA eLQ LQ 20 45 13.3
PGRA eLR LR 20 50 39.8
comp=Z,2µm,19.7s
PBA Port Blair 97.56 81 ePKP Pdif 20 19 33.2 +1.4
SDDR Presa de Saban 98.01 291 PFAKE 20 19 40.0 +6.2
SDDR LR LR
comp=Z,3µm,19.0s
LASF Ste Croix 98.12 359 eP **P 20 19 33.0 -0.5**
comp=Z,102nm,1.6s
LASF Ste Croix 98.12 359 eP **P 20 19 33.0 -0.5**
comp=Z,102nm,1.6s
VLC Villacollemand 98.26 3 PFAKE 20 19 40.0 +5.8
VLC LR LR
comp=Z,4µm,20.0s
CTAO Charters Tower 98.41 143 P **P 20 19 33.2 -2.5**
CTAO pmax pmax
comp=Z,21nm,1.3s
CTAO MLR MLR
comp=Z,3µm,19.0s
CTAO Charters Tower 98.41 143 P **P 20 19 33.2 -2.5**
comp=Z,20nm,1.3s
CTAO LR LR
comp=Z,3µm,19.0s
BHPL Bhopal 98.52 62 ePKP **P 20 19 35.7 -0.2**
JTS JuntasAbangare 98.76 275 PFAKE 20 19 50.0 +13
JTS LR LR
comp=Z,5µm,19.0s
DGPR DIGLIPUR 98.89 80 ePKP **P 20 19 36.0 -1.7**
DGPR AMS AMS 20 55 16.2
comp=Z,4µm,18.3s
ORIF Oris-en-Rattie 98.95 0 eP **P 20 19 37.1 -0.2**
comp=Z,30nm,1.4s
ORIF Oris-en-Rattie 98.95 0 eP **P 20 19 37.1 -0.2**
ORIF pmax pmax
comp=Z,30nm,1.4s
ORIF Oris-en-Rattie 98.95 0 eP **P 20 19 37.1 -0.2**
comp=Z,30nm,1.4s
CAF Calviac 99.01 357 eP **Pdif 20 19 37.0 -0.5**
comp=Z,52nm,1.7s
CAF Calviac 99.01 357 eP **Pdif 20 19 37.0 -0.5**
CAF pmax pmax
comp=Z,53nm,1.7s
CAF Calviac 99.01 357 eP **Pdif 20 19 37.0 -0.5**
comp=Z,52nm,1.7s
BNI Bardonecchia 99.08 1 PFAKE 20 19 50.0 +12
BNI LR LR
comp=Z,6µm,21.0s
SSB Saint Sauveur 99.31 359 PFAKE 20 19 50.0 +11
SSB LR LR
comp=Z,3µm,19.0s
KAPI Kappang 99.52 113 PFAKE 20 19 50.0 +9.4
KAPI LR LR
comp=Z,4µm,21.0s
LPG La Plagne 99.53 1 eP **Pdif 20 19 40.3 +0.2**
LPG La Plagne 99.53 1 eP **Pdif 20 19 40.3 +0.2**
LPG La Plagne 99.53 1 eP **Pdif 20 19 40.3 +0.2**
LPL La Plagne 99.55 1 eP **Pdif 20 19 40.1 0.0**
comp=Z,23nm,1.1s
LPL La Plagne 99.55 1 eP **Pdif 20 19 40.1 0.0**
LPL pmax pmax
comp=Z,23nm,1.1s
LPL La Plagne 99.55 1 eP **Pdif 20 19 40.1 0.0**
comp=Z,23nm,1.1s
KSM Kuching 99.58 101 PFAKE 20 19 50.0 +9.1
KSM LR LR
comp=Z,4µm,22.0s
GNI Garni 99.91 29 LR LR 21 04 35.8
comp=Z,14µm,20.1s,baz=7.4,slow=35
TCF Toulx Ste Croi 100.37 357 eP **Pdif 20 19 43.3 -0.2**
comp=Z,62nm,1.8s
TCF Toulx Ste Croi 100.37 357 eP **Pdif 20 19 43.3 -0.2**
TCF pmax pmax
comp=Z,62nm,1.8s
TCF Toulx Ste Croi 100.37 357 eP **Pdif 20 19 43.3 -0.2**
comp=Z,62nm,1.8s
TUE Stuetta 100.55 2 PFAKE 20 20 00.0 +15
TUE LR LR
comp=Z,5µm,20.0s
BGF Bois d'Agland 100.62 358 eP **Pdif 20 19 44.5 -0.1**
BGF Bois d'Agland 100.62 358 eP **Pdif 20 19 44.5 -0.1**
BGF Bois d'Agland 100.62 358 eP **Pdif 20 19 44.5 -0.1**
SMF Signal de Mont 100.69 359 eP **Pdif 20 19 44.3 -0.6**
comp=Z,38nm,1.5s
SMF Signal de Mont 100.69 359 eP **Pdif 20 19 44.3 -0.6**
SMF pmax pmax
comp=Z,38nm,1.5s
SMF Signal de Mont 100.69 359 eP **Pdif 20 19 44.3 -0.6**
comp=Z,38nm,1.5s
AKH Akhalkalaki 100.73 28 P **PP 20 23 58.3 +4.6**
PKSM Moragy 100.83 9↑ ePP PP 20 23 53.9 -0.1
AVF Avril sur Loir 100.84 358 eP **Pdif 20 19 45.2 -0.4**
comp=Z,71nm,1.6s
AVF Avril sur Loir 100.84 358 eP **Pdif 20 19 45.2 -0.4**
AVF pmax pmax
comp=Z,71nm,1.6s
AVF Avril sur Loir 100.84 358 eP **Pdif 20 19 45.2 -0.4**
comp=Z,71nm,1.6s
MTDJ Mount Denham 100.86 286 PFAKE 20 20 00.0 +14
MTDJ LR LR
comp=Z,4µm,20.0s
GTBY Guantanamo Bay 100.87 289 PFAKE 20 20 00.0 +14
GTBY LR LR
comp=Z,3µm,21.0s
MLR Muntele Rosu 100.97 14 PP PP 20 23 55.3 0.0
MLR Muntele Rosu 100.97 14 PP PP 20 23 55.3 0.0
comp=Z,0.9nm,0.9s,baz=176,slow=7.8,SNR=4.0
FETA Feichten 101.14 3↓ *i*PP PP 20 24 03.9 +7.3
comp=Z,9.5nm,1.9s
DGRG David-gareji 101.30 29 P **PP 20 23 57.8 0.0**
LOR Lormes 101.31 359 eP **Pdif 20 19 47.1 -0.6**
comp=Z,33nm,1.5s
LOR Lormes 101.31 359 eP **Pdif 20 19 47.1 -0.6**
comp=Z,33nm,1.5s
TBLG Delisi 101.38 29 P PP 20 23 34.6 -24
MOTA Moosalm 101.47 4↓ *i*PP PP 20 24 03.0 +3.8
comp=Z,4.8nm,1.1s
RETA Reutte 101.60 3↑ *i*PP PP 20 24 00.1 +0.1
SOC Sochi 101.80 24 eP **Pdif 20 19 45.4 -4.5**
SOC e 20 23 57.4
SOC e 20 31 36.0
SOC eSS SS 20 38 30.9 -3.8
SOC MLR MLR
comp=Z,5µm,19.0s
ONI Oni 101.82 27 P PP 20 23 20.2 -42
SIM Simferopol' 101.86 20 eP **Pdif 20 19 56.4 +6.3**
SIM *i* 20 24 04.0
SIM eSS SS 20 38 36.0 +0.5
SIM pmax pmax
comp=Z,80nm,9.1s
SIM pmax pmax
comp=Z,240nm,10.2s
SIM MLR MLR
comp=Z,2µm,16.9s
DZM Mont Dzumac 102.03 162 eS **SKSac 20 30 28.2 -2.7**
DZM Mont Dzumac 102.03 162 PP PP 20 24 02.5 +0.2
DZM Mont Dzumac 102.03 162 PP PP 20 24 02.5 +0.2
comp=Z,16nm,1.1s,baz=253,slow=14,SNR=4.1
BUD Budapest 102.12 9↑ ePP PP 20 24 11.8 +8.0
SFTF Sexfontaines 102.24 359 eP **Pdif 20 19 51.6 -0.2**
comp=Z,56nm,1.4s
SFTF Sexfontaines 102.24 359 eP **Pdif 20 19 51.6 -0.2**
comp=Z,56nm,1.4s
ECH Echery 102.25 1 PFAKE 20 20 00.0 +8.2
ECH LR LR
comp=Z,3µm,20.0s
CONA Conrad Observa 102.31 7↑ ePP PP 20 24 04.4 -1.0
comp=Z,14nm,1.4s
BFO Black Forest 102.38 2 PFAKE 20 20 00.0 +7.6
BFO LR LR
comp=Z,3µm,20.0s
ANN Anapa 102.42 22 eP **Pdif 20 19 53.1 +0.5**
ANN *i* 20 24 06.9
ANN eSS SS 20 38 43.1 -0.1
ANN pmax pmax
comp=Z,13nm,0.6s
PSZ Piszkesteto 102.64 10 PFAKE 20 20 00.0 +6.4
PSZ LR LR
comp=Z,2µm,20.0s

PSZ Piszkesteto 102.64 10↑ ePP PP 20 24 04.3 -3.5
KIS Kishinev 102.88 16 eP **Pdif 20 20 02.0 +7.4**
KIS e 20 24 06.0
KIS e 20 30 36.0
KIS ePS **PS 20 33 12.0 -4.7**
KIS ePPS PPS 20 34 05.0
KIS eSS SS 20 38 44.0 -5.6
KIS MLR MLR
comp=Z,4µm,18.0s
KIS Kishinev 102.88 16 eP **Pdif 20 20 02.0 +7.4**
KIS Kishinev 102.88 16 ePP PP 20 24 06.0 -3.5
GERES GERESS Array B 103.09 5 PP PP 20 24 12.7 +1.5
GERES GERESS Array B 103.09 5 PP PP 20 24 12.7 +1.5
comp=Z,0.8nm,0.9s,baz=163,slow=9.8,SNR=3.4
VYHS Vyhne 103.11 9 ePP PP 20 24 08.6 -2.6
TGUH Tegucigalpa,Un 103.11 276 PFAKE 20 20 10.0 +14
TGUH LR LR
comp=Z,4µm,19.0s
TRPA Tarpa 103.13 11↑ ePP PP 20 24 08.3 -3.0
MAK Makhachkala 103.31 30 *i* P **Pdif 20 19 56.7 +0.1**
MAK e 20 24 08.3
MAK ePPP PPP 20 26 24.1
MAK ePS **PS 20 33 26.5 +5.3**
MAK eSS SS 20 38 50.4 -5.1
MAK MLR MLR
comp=Z,9µm,19.0s
KHC Kasperske Hory 103.37 5 eP **PP** 20 24 12.4 -0.8
KHC ePKP **PKiKP 20 24 20.5 +4.9**
KHC ex x 20 24 23.5
KHC eSKS **SKSac 20 30 38.2 +3.0**
KHC ex x 20 31 53.0
KHC eSP **SP 20 33 17.1 -2.7**
KHC eSS **SS 20 38 56.8 +0.5**
KHC AMS AMS 21 05 20.0
comp=Z,5µm,19.9s
BOK Bokaro 103.45 68 ePKP **Pdif 20 19 58.1 +0.3**
BOK AMS AMS 20 56 25.2
comp=Z,5µm,20.7s
TREC Trest 103.64 6 ePP PP 20 24 22.0 +6.8
TREC ePS **PS 20 33 25.8 +1.1**
TREC eSS SS 20 39 00.4 +0.3
TREC AMS AMS 21 05 40.0
comp=Z,4µm,19.2s
RAR Rarotonga 103.69 194 PFAKE 20 20 10.0 +11
RAR LR LR
comp=Z,4µm,19.0s
WLF Walferdange 103.70 0 PFAKE 20 20 10.0 +12
WLF LR LR
comp=Z,6µm,20.0s
GRF Grafenberg Arr 103.82 4 ePdiff **Pdif 20 20 01.0 +2.2**
GRF ePP **PKiKP 20 24 16.4 0.0**
GRF eSdiff 20 31 58.7
GRF eSP **SP 20 33 25.2 +0.7**
GRF eSS **SS 20 39 01.7 -0.8**
GRF eL L 21 06 54.7
comp=Z,5µm,20.6s
GRF Grafenberg Arr 103.82 4 eP **Pdif 20 20 01.0 +2.2**
GRF e 20 24 16.4
GRF eSP SP 20 33 25.2 +0.7
GRF eSS **SS 20 39 01.7 -0.8**
GRF MLR MLR
comp=Z,4µm,20.6s
NIE Niedzica 104.16 10 ePKiKP **PKiKP 20 24 19.0 +1.9**
NIE eSS SS 20 39 13.6 +6.3
PRU Pruhonice 104.28 6 ePP PP 20 24 18.6 -1.3
PRU ex x 20 24 26.8
PRU eSKS 20 30 43.6
PRU ex x 20 32 04.2
PRU ePS **PS 20 33 27.0 -4.2**
PRU eSS **SS 20 39 08.8 +0.1**
PRU AMS AMS 21 05 50.0
comp=Z,3µm,21.1s
PRA Prague 104.35 6 PP PP 20 24 19.0 -1.4
PRA AMS AMS 21 06 00.0
OKC Ostrava-Krasne 104.38 8 ePP PP 20 24 23.5 +2.8
OKC ex x 20 24 35.0
OKC ex x 20 30 52.9
OKC ex x 20 32 07.0
OKC ePS **PS 20 33 35.8 +3.4**
OKC eSS SS 20 39 08.5 -1.6
OKC AMS AMS 21 11 00.0
comp=Z,3µm,18.0s
NKC Novy Kostel 104.41 4 ePP PP 20 24 19.6 -1.3
NKC eSKS 20 30 48.2
NKC ex x 20 32 04.1
NKC eSP **SP 20 33 29.2 -1.5**
NKC eSS **SS 20 39 11.8 +1.2**
NKC AMS AMS 21 10 30.0
comp=Z,3µm,17.7s
KWP Kalwaria Pacla 104.63 11 PFAKE 20 20 10.0 +7.7
KWP LR LR
comp=Z,3µm,21.0s
DDI Dehra Dun 104.65 58 ex **Pdif 20 19 58.4 -4.7**
DDI AMS AMS 20 57 05.5
comp=Z,7µm,5.0s
DPC Dobruska-Polom 104.75 7 ePP PP 20 24 21.8 -1.7
DPC ex x 20 24 37.4
DPC eSKS 20 30 49.0
DPC ex x 20 32 09.0
DPC ePS **PS 20 33 39.0 +2.7**
DPC eSS **SS 20 39 09.4 -5.9**
MOX Moxa 104.79 4 ePdiff **Pdif 20 20 05.3 +2.3**
MOX ePP **PP 20 24 23.6 -0.1**
MOX eSdiff 20 32 10.9
MOX eSP **SP 20 33 35.4 +0.8**
MOX eSS **SS 20 39 14.3 -1.4**
MOX eL L 21 07 42.8
comp=Z,6µm,19.1s
MOX Moxa 104.79 4 eP **Pdif 20 20 05.3 +2.3**
MOX e 20 24 23.6
MOX eSP SP 20 33 35.4 +0.8
MOX eSS **SS 20 39 14.3 -1.4**
MOX MLR MLR
comp=Z,6µm,19.1s
PVCC Panska Ves 104.81 6 ePP PP 20 24 31.7 +7.8
PVCC ex x 20 24 40.5
PVCC eSKS 20 30 48.9
PVCC ex x 20 32 02.9
PVCC ePS **PS 20 33 36.2 -0.7**
PVCC eSS **SS 20 39 13.1 -3.0**
PVCC AMS AMS 21 07 40.0
comp=Z,5µm,19.5s
SMLA Simla 104.87 57 ePKP **Pdif 20 20 02.5 -1.4**
UPC Upice 104.89 7 eP PP 20 24 27.8 +3.4
UPC ex x 20 24 38.1
OJC Ojcow 104.91 9 ePKiKP **PKiKP 20 24 19.5 +1.1**
OJC eSS SS 20 39 22.4 +5.0
OJC L L 21 03 19.6
comp=Z,3µm,24.4s
BRG Berggiesshubel 105.12 5 PDIF **Pdif 20 19 56.4 -8.1**
comp=Z,14nm,1.8s
BRG PP **PP 20 24 27.0 +0.8**
BRG SKS SKSdf 20 30 52.0 -37
BRG SDIF Sdif 20 32 15.0 +17
BRG PS **PS 20 33 47.0 +6.9**
BRG SS **SKKPbc 20 39 26.0 -3.6**
BRG
comp=Z,4µm,16.7s
BRG
comp=N,3µm,18.3s
BRG
comp=E,3µm,18.3s
BRG Berggiesshubel 105.12 5 P **Pdif 20 19 56.4 -8.1**
BRG 20 24 27.0
BRG PS **PS 20 33 47.0 +6.9**
BRG SS SS 20 39 26.0 +5.7
BRG pmax pmax
comp=Z,14nm,1.8s
BRG MLR MLR
comp=Z,4µm,16.7s
BRG MLR MLR
comp=N,3µm,18.3s
BRG MLR MLR
comp=E,3µm,18.3s
DHRM DHARAMSHALA 105.36 56 ePKP **Pdif 20 20 04.9 -1.5**
DHRM AMB AMB 20 20 52.6
comp=Z,11nm,2.6s
DHRM AMS AMS 20 56 54.8
comp=Z,2µm,21.6s
CLL Collm 105.51 5 eP **Pdif 20 20 06.0 -0.2**
CLL e 20 30 51.0
CLL MLR MLR
comp=Z,3µm,18.8s

CLL Collm 105.51 5 ePdif **Pdif 20 20 06.0 -0.2**
CLL ePKiKP **PKiKP 20 24 20.0 +0.6**
CLL ePP **PP 20 24 30.0 +1.0**
CLL ePPP PPP 20 26 48.0
CLL eSKSac **SKSac 20 30 51.0 +6.2**
CLL e(Sdif) 20 32 18.0
CLL ePS **PS 20 33 47.0 +2.9**
CLL ePPS PPS 20 34 42.0
CLL eSS **SS 20 39 27.0 +1.5**
CLL e(SSS) 20 43 06.0
CLL e 20 44 30.0
CLL LV 21 10 00.0
comp=Z,3µm,18.8s
BBSR BB Station 105.53 304 PFAKE 20 24 30.0
BBSR LR LR
comp=Z,2µm,19.0s
KIEV Kiev 106.54 15 PFAKE 20 24 30.0
KIEV LR LR
comp=Z,4µm,21.0s
AKASG Malin Array Be 106.55 15 PP PP 20 24 33.1 -3.6
AKASG Malin Array Be 106.55 15 PP PP 20 24 33.1 -3.6
comp=Z,0.5nm,0.4s,baz=202,slow=8.1,SNR=6.6
CMAR Chiang Mai Arr 106.56 81 PKKPab PKKPab 20 35 57.9 +1.8
CMAR Chiang Mai Arr 106.56 81 PP PP 20 24 30.6 -6.5
comp=Z,1.6nm,1.0s,baz=235,slow=5.4,SNR=4.1
CMAR PKKPab **PKKPab 20 35 57.9 +1.8**
comp=Z,0.9nm,0.8s,baz=22,slow=4.4,SNR=5.0
KKM Kota Kinabalu 106.68 103 PFAKE 20 24 30.0
KKM LR LR
comp=Z,2µm,20.0s
CHTO Chiang Mai 106.84 81 PFAKE 20 24 30.0
CHTO LR LR
comp=Z,3µm,19.0s
MSVF Nonsavu 107.84 172 PFAKE 20 24 40.0
MSVF LR LR
comp=Z,9µm,20.0s
SHL Shillong 108.15 71 ePKP **Pdif 20 20 18.1 -0.8**
SHL AMB AMB 20 20 30.7
comp=Z,7.1nm,2.6s
PMG Port Moresby 108.57 139 PFAKE 20 24 40.0
PMG LR LR
comp=Z,4µm,19.0s
TEIG Tepich 108.57 279 PFAKE 20 24 40.0
TEIG LR LR
comp=Z,2µm,20.0s
ESK Eskdalemuir 109.61 355 PFAKE 20 24 40.0
ESK LR LR
comp=Z,6µm,22.0s
MICGM Minsk 110.05 13 ePKP **PP 20 25 02.0 -0.2**
LSA Lhasa 110.98 68 PKP PKiKP 20 24 25.4 -5.6
LSA LR LR
comp=N,2µm,25.0s
LSA LR LR
comp=E,2µm,28.6s
LSA LR LR
comp=Z,5µm,25.7s
LSA Lhasa 110.98 68 PFAKE 20 24 40.0
LSA LR LR
comp=Z,4µm,21.0s
KSH Kashi 111.12 51 ePKPbc PKiKP 20 24 37.1 +6.6
KSH ePP PP 20 25 40.5 +30
KSH esPKP 20 25 51.0
KSH eSKS **SKSdf 20 31 44.1 +2.5**
KSH eSKKS SKKSac 20 32 36.1 +25
KSH AMB AMB
comp=Z,440nm,6.7s
KSH LR LR
comp=N,3µm,17.8s
KSH LR LR
comp=E,3µm,16.5s
KSH LR LR
comp=Z,6µm,20.0s
KKAR Karatay Array 111.65 45 ePKIKP **PKiKP 20 24 30.5 -0.7**
KKAR Karatay Array 111.65 45 ePKPdf **PKiKP 20 24 30.5 -0.7**
AFI Afiamalu 111.93 182 PFAKE 20 24 40.0
AFI LR LR
comp=Z,4µm,22.0s
OBN Obninsk 112.04 18↑ eP **Pdif 20 20 36.7 +1.6**
OBN eS **SKSac 20 31 14.6 +2.3**
OBN *i* PS **PS 20 34 47.1 -1.5**
OBN *i* SS **SS 20 40 50.8 -2.6**
OBN pmax pmax
comp=Z,9.0nm,1.9s
OBN MLR MLR
comp=Z,2µm,22.0s
EKS2 Erkin-Say 112.68 48 PKIKP **PKiKP 20 24 30.5 -2.9**
EKS2 MLR MLR
comp=Z,3µm,20.0s
EKS2 Erkin-Say 112.68 48 PKPdf **PKiKP 20 24 30.5 -2.9**
EKS2 LR LR
comp=Z,3µm,20.0s
HNR Honiara 112.75 152 PFAKE 20 24 50.0
HNR LR LR
comp=Z,4µm,21.0s
DAV Davao City (W) 112.75 111 PFAKE 20 24 50.0
DAV LR LR
comp=Z,2µm,22.0s
ABKAR Akbulak array 112.84 35 ePKPdf **PKiKP 20 24 33.8 +0.5**
AAK Ala-Archa 112.97 48 ePKIKP **PKiKP 20 24 32.4 -1.6**
AAK MLR MLR
comp=Z,4µm,20.0s
AAK Ala-Archa 112.97 48 ePKPdf **PKiKP 20 24 32.4 -1.6**
AAK LR LR
comp=Z,4µm,20.0s
AKTO Aktyubinsk 113.22 33 PKKPbc PKKPbc 20 35 29.7 +11
AKTO Aktyubinsk 113.22 33 PKKPbc PKKPbc 20 35 29.7 +11
comp=Z,3.0nm,1.0s,baz=27,slow=6.3,SNR=4.8
QIZ Qiongzhong 113.36 90 Pdif **Pdif 20 20 41.9 -0.1**
QIZ S **Sdif 20 33 11.1 +3.2**
QIZ SS **SS 20 41 12.8 +1.2**
QIZ LR LR
comp=N,2µm,22.8s
QIZ LR LR
comp=Z,3µm,24.6s
QIZ Qiongzhong 113.36 90 PFAKE 20 24 50.0
QIZ LR LR
comp=Z,2µm,22.0s
TKM2 Tokmak 2 113.68 49 PFAKE 20 24 50.0
TKM2 LR LR
comp=Z,4µm,22.0s
KONO Kongsberg 113.74 2 PFAKE 20 24 50.0
KONO LR LR
comp=Z,5µm,20.0s
KMI Kunming 113.95 80 PKP **PKiKP 20 24 37.5 +1.0**
KMI pPKP PP 20 24 50.0 -41
KMI PP PP 20 25 35.9 +5.1
KMI SKKS 20 32 32.6
KMI Kunming 113.95 80 SS SS 20 41 25.6 +5.6
KMI AMB AMB
comp=Z,310nm,12.4s
KMI LR LR
comp=N,2µm,23.3s
KMI LR LR
comp=E,460nm,30.1s
KMI LR LR
comp=Z,2µm,23.3s
KMI Kunming 113.95 80 P **PP 20 25 33.9 +3.2**
KMI pmax pmax
comp=Z,3.0nm,1.0s
KMI Kunming 113.95 80 Pdif **Pdif 20 20 40.8 -3.9**
KMI PKP **PKiKP 20 24 37.5 +1.0**
KMI PP **PP 20 25 34.5 +3.8**
KMI LR LR
comp=N,2µm,23.3s
KMI LR LR
comp=E,460nm,30.1s
KMI LR LR
comp=Z,2µm,23.3s
NHSC New Hope 114.03 294 PFAKE 20 24 50.0 +14
NHSC LR LR
comp=Z,2µm,21.0s
CNNC Cliffs of the 114.45 297 PFAKE 20 24 50.0 +13
CNNC LR LR
comp=Z,4µm,22.0s
NOA NORSAR Array B 115.18 3 PKKPbc PKKPbc 20 35 18.3 +5.6
NOA NORSAR Array B 115.18 3 PKKPbc PKKPbc 20 35 18.3 +5.6
comp=Z,0.8nm,0.7s,baz=1.9,slow=4.9,SNR=3.4
BRAL Brewton 116.20 287 PFAKE 20 24 50.0 +10
BRAL LR LR
comp=Z,3µm,20.0s
CBN Corbin 116.45 299 PFAKE 20 24 50.0 +9.5
CBN LR LR
comp=Z,4µm,22.0s
FINES FINESS Array B 116.61 11 PKP **PKPdf 20 24 38.9 -1.2**
FINES FINESS Array B 116.61 11 PKP **PKPdf 20 24 38.9 -1.2**

comp=Z,1.6nm,0.6s,baz=182,slow=3.9,SNR=3.5
FUNA Funafuti 117.06 173 PFAKE 20 24 50.0 +7.5
FUNA LR LR
comp=Z,24µm,19.0s
GYA Guiyang 117.24 82 Pdif **Pdif 20 21 00.4 +1.2**
GYA PKP **PKiKP 20 24 42.8 +0.2**
GYA PP **PP 20 25 57.9 +4.2**
GYA PKS **PKSdf 20 28 18.0 -1.5**
GYA SKKS 20 32 49.5
GYA SS **SS 20 42 06.0 +3.2**
GYA AMB AMB
comp=Z,320nm,7.8s
GYA LR LR
comp=N,3µm,22.8s
GYA LR LR
comp=E,2µm,24.5s
GYA LR LR
comp=Z,3µm,25.9s
BLA Blacksburg 117.28 296 PFAKE 20 24 50.0 +7.7
BLA LR LR
comp=Z,4µm,22.0s
LRAL Lakeview Retre 117.69 289 PFAKE 20 24 50.0 +6.9
LRAL LR LR
comp=Z,3µm,20.0s
KLMR Klimovskoe 117.98 18 *e*PKIKP **PKPdf 20 24 45.3 +2.6**
KLMR *e* 20 26 01.3
KLMR *e*PS **PS 20 35 44.8 +2.1**
KLMR *e*SS SS 20 42 08.5 -2.8
KLMR pmax pmax
comp=Z,34nm,2.7s
KLMR MLR MLR
comp=Z,6µm,22.0s
LBNH Lisbon 118.37 307 PFAKE 20 25 00.0 +16
LBNH LR LR
comp=Z,2µm,20.0s
ARU Arti 118.54 30 *i* PKIKP **PKPdf 20 24 44.9 +1.0**
ARU 20 26 02.3
ARU PPP PPP 20 28 32.8
ARU 20 31 38.9
ARU SP SP 20 35 49.7 +3.9
BINY Binghamton 118.78 303 PFAKE 20 25 00.0 +15
BINY LR LR
comp=Z,3µm,22.0s
CD2 Chengdu 118.92 77 *e*PKP **PKPdf 20 24 46.4 +0.8**
CD2 PP PP 20 26 10.8 +5.5
CD2 PKS **PKSdf 20 28 21.5 -0.9**
CD2 SKS **SKSdf 20 31 56.0 -0.8**
CD2 SKKS **SKKSac 20 33 01.8 -2.5**
CD2 SS **SS 20 42 27.5 +3.0**
CD2 AMB AMB
comp=Z,460nm,10.4s
CD2 LR LR
comp=N,2µm,25.0s
CD2 LR LR
comp=E,2µm,21.4s
CD2 LR LR
comp=Z,2µm,25.0s
VBMS Vicksburg 119.05 286 PFAKE 20 25 00.0 +14
VBMS LR LR
comp=Z,2µm,20.0s
NCB Newcomb 119.25 305 PFAKE 20 25 00.0 +14
NCB LR LR
comp=Z,2µm,21.0s
SVE Sverdlovsk 119.49 31 *i* PKIKP **PKPdf 20 24 49.8 +4.0**
SVE *e* 20 26 12.3
SVE *e* 20 31 50.4
SVE *e* 20 42 33.9
SVE pmax pmax
comp=Z,12nm,1.5s
SVE MLR MLR
comp=Z,4µm,20.0s
BRVK Borovoye 119.63 39 *e*PKIKP **PKPdf 20 24 44.9 -1.3**
BRVK MLR MLR
comp=Z,5µm,22.0s
BRVK Borovoye 119.63 39 *e*PKPdf **PKPdf 20 24 44.9 -1.3**
BRVK LR LR
comp=Z,5µm,22.0s
BVAR Borovoye Array 119.64 39 PKIKP **PKPdf 20 24 46.2 0.0**
BVAR pmax pmax
comp=Z,2.0nm,0.6s
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR Borovoye Array 119.64 39 PKP **PKPdf 20 24 46.2 0.0**
BVAR PKKPbc PKKPbc 20 35 03.0 +6.6
BVAR Borovoye Array 119.64 39 PKP **PKPdf 20 24 46.2 0.0**
comp=Z,1.9nm,0.6s,baz=225,slow=1.9,SNR=15
BVAR PKKPbc PKKPbc 20 35 03.0 +6.6
comp=Z,2.4nm,0.7s,baz=62,slow=3.5,SNR=8.6
MK31 Makanchi Array 119.68 50 *e*PKIKP **PKPdf 20 24 45.6 -1.0**
MK31 Makanchi Array 119.68 50 *e*PKPdf **PKPdf 20 24 45.6 -1.0**
MKAR Makanchi Array 119.68 50 PKIKP **PKPdf 20 24 45.7 -0.8**
MKAR pmax pmax
comp=Z,5.0nm,1.1s
MKAR pmax pmax
comp=Z,1.0nm,1.1s
MKAR Makanchi Array 119.68 50 PKP **PKPdf 20 24 45.7 -0.8**
MKAR PKKP PKKPdf 20 35 20.0 -8.3
MKAR Makanchi Array 119.68 50 PKP **PKPdf 20 24 45.7 -0.8**
comp=Z,5.0nm,1.1s,baz=246,slow=2.3,SNR=16
MKAR PKKP PKKPdf 20 35 20.0 -8.3
comp=Z,1.2nm,1.1s,baz=29,slow=2.8,SNR=3.8
KVTX Kingsville 119.78 276 PFAKE 20 25 00.0 +13
KVTX LR LR
comp=Z,2µm,19.0s
LONY Lake Ozonia 119.91 306 PFAKE 20 25 00.0 +13
LONY LR LR
comp=Z,2µm,21.0s
WMQ Urumqi 119.97 56 PKP **PKPdf 20 24 48.3 +1.0**
WMQ PP **PP 20 26 17.0 +4.5**
WMQ PKS **PKSdf 20 28 23.5 -0.3**
WMQ SKS **SKSdf 20 31 57.0 -1.2**
WMQ SKKS **SKKSac 20 33 08.0 -2.6**
WMQ SS **SKKSdf 20 42 39.0 +0.4**
WMQ AMB AMB
comp=Z,460nm,7.1s
WMQ LR LR
comp=N,2µm,21.7s
WMQ LR LR
comp=E,2µm,19.3s
WMQ LR LR
comp=Z,2µm,23.1s
BORG Borgarnes 120.65 347 PFAKE 20 25 00.0 +12
BORG LR LR
comp=Z,5µm,22.0s
ERPA Erie 120.71 300 PFAKE 20 25 00.0 +11
ERPA LR LR
comp=Z,3µm,20.0s
ACSO Alum Creek Sta 120.86 297 PFAKE 20 25 00.0 +11
ACSO LR LR
comp=Z,4µm,22.0s
KURBB Kurchatov Arra 120.96 45 PKP **PKPdf 20 24 48.5 -0.2**
comp=Z,3.7nm,1.0s,baz=224,slow=2.5,SNR=13
KURBB PP **PP 20 26 17.5 -1.5**
comp=Z,1.0nm,1.1s,baz=219,slow=7.0,SNR=4.4
KURBB PKKPbc PKKPbc 20 34 57.4 +5.9
comp=Z,1.4nm,0.8s,baz=38,slow=3.7,SNR=14
KURK Kurchatov 121.07 45 *e*PKIKP **PKPdf 20 24 47.9 -1.1**
KURK 20 24 48.6
KURK 20 26 17.5
KURK MLR MLR
comp=Z,4µm,21.0s
KURK Kurchatov 121.07 45 *e*PKPdf **PKPdf 20 24 47.9 -1.1**
KURK PKP **PKiKP 20 24 48.5 -0.6**
KURK PP **PP 20 26 17.5 -2.3**
KURK PKKPbc PKKPbc 20 34 57.4 +6.3
KURK LR LR
comp=Z,4µm,21.0s
WCI Wyandotte Cave 121.15 293 *e*PKIKP **PKPdf 20 24 46.9 -2.8**
WCI Wyandotte Cave 121.15 293 *e*PKPdf **PKPdf 20 24 46.9 -2.8**
ENH Enshi 121.74 81 *e*PKPdf **PKPdf 20 24 49.6 -1.5**
ENH LR LR
comp=Z,2µm,20.0s
AAM Ann Arbor 122.71 298 PFAKE 20 25 00.0 +7.5
AAM LR LR
comp=Z,2µm,20.0s
LZH Lanzhou 122.78 73 *e*PKP **PKPdf 20 24 52.5 -0.5**
LZH sPKP 20 24 58.1
LZH PP **PP 20 26 34.0 +2.2**
LZH AMB AMB
comp=Z,330nm,7.8s
LZH LR LR
comp=N,1µm,14.6s
LZH LR LR
comp=E,1µm,17.3s
LZH LR LR
comp=Z,3µm,19.9s
GTA Gaotai 122.97 67 PKP **PKPdf 20 24 53.4 +0.2**
GTA PP **PP 20 26 37.0 +4.0**
GTA PKS **PKSdf 20 28 28.4 -1.5**
GTA SKS **SKSdf 20 32 03.8 -0.5**
GTA SKKS **SKKSac 20 33 27.9 -2.6**
GTA AMB AMB
comp=Z,350nm,8.1s
GTA LR LR
comp=N,1µm,21.1s
GTA LR LR
comp=E,2µm,19.0s
GTA LR LR
comp=Z,3µm,18.8s
JCT Junction City 123.08 277 *e*PKIKP **PKPdf 20 24 53.7 +0.1**
JCT MLR MLR
comp=Z,914nm,21.0s
JCT Junction City 123.08 277 *e*PKPdf **PKPdf 20 24 53.7 +0.1**
JCT *e*PP **PP 20 26 28.9 -4.8**
JCT LR LR
comp=Z,914nm,21.0s
APA Apatity 123.38 12⇑ *i*PKIKP **PKPdf 20 24 49.5 -3.4**
APA *e* 20 26 35.0
APA *e*PS **PS 20 36 37.0 +6.1**
APA pmax pmax
comp=Z,160nm,2.0s
APA MLR MLR
comp=Z,4µm,26.0s
SSLB Suanglung 123.53 96 PKPdf **PKPdf 20 24 54.4 -0.3**
SCHQ Schefferville 124.14 318 *e*PKPdf **PKPdf 20 24 53.2 -1.6**
SCHQ PKP **PKPdf 20 24 54.2 -0.6**
SCHQ Schefferville 124.14 318 PKP **PKPdf 20 24 54.2 -0.6**
comp=Z,10nm,1.0s,baz=158,slow=4.1,SNR=8.1
XAN Xi'an 124.17 78 PKP **PKPdf 20 24 55.4 -0.2**
XAN PP **PP 20 26 41.4 +0.4**
XAN SKS **SKSdf 20 32 00.3 -6.3**
XAN SKKS **SKKSac 20 33 36.6 -1.7**
XAN SS **SS 20 43 28.3 -3.2**
XAN LR LR
comp=N,1µm,22.7s
XAN LR LR
comp=E,320nm,22.7s
XAN LR LR
comp=Z,560nm,20.6s
HDIL Hopedale 124.44 293 PFAKE 20 25 10.0 +14
HDIL LR LR
comp=Z,4µm,22.0s
ARCES ARCESS Array B 124.46 8 PKP **PKPdf 20 24 55.0 0.0**
ARCES ARCESS Array B 124.46 8 PKP **PKPdf 20 24 55.0 0.0**
comp=Z,14nm,0.8s,baz=146,slow=2.4,SNR=16
ARE0 ARCESS Array S 124.46 8 *e*PKPdf **PKPdf 20 24 54.2 -0.8**
YHNB Yeheng 124.46 95 PFAKE 20 25 10.0 +14
YHNB LR LR
comp=Z,3µm,21.0s
TXAR Lajitas Array 124.48 273 PKP **PKPdf 20 24 56.8 +0.4**
TXAR PKKPbc PKKPab 20 34 45.1 +6.9
TXAR Lajitas Array 124.48 273 PKP **PKPdf 20 24 56.8 +0.4**
comp=Z,2.2nm,0.9s,baz=143,slow=2.5,SNR=17
TXAR PKKPbc PKKPab 20 34 45.1 +6.9
comp=Z,0.6nm,0.9s,baz=5.7,slow=1.3,SNR=3.7
TATO Taipei 124.76 95 PFAKE 20 25 10.0 +13
TATO LR LR
comp=Z,2µm,22.0s
WHN Wuhan 124.76 85 PKP **PKPdf 20 24 57.8 +1.0**
WHN PP **PP 20 26 46.0 +1.1**
WHN LR LR
comp=Z,5µm,22.6s
KEV Kevo 124.80 9 PFAKE 20 25 10.0 +14
KEV LR LR
comp=Z,3µm,20.0s
WMOK Wichita Mounta 125.59 282 *e*PKIKP **PKPdf 20 24 57.4 -0.9**
WMOK MLR MLR
comp=Z,2µm,21.0s
WMOK Wichita Mounta 125.59 282 *e*PKPdf **PKPdf 20 24 57.4 -0.9**
WMOK LR LR
comp=Z,2µm,21.0s
NVS Novosibirsk 126.00 44 *e*PKIKP **PKPdf 20 24 58.9 +0.6**
NVS *e* 20 26 57.0
NVS pmax pmax
comp=N,6.0nm,1.8s
NVS pmax pmax
comp=Z,20nm,1.8s
NVS pmax pmax
comp=E,8.0nm,2.0s
ZAA0 Zalesovo Array 126.03 46 *e*PKPdf **PKPdf 20 24 57.1 -1.3**
ZALV Zalesovo Beam 126.03 46 PKIKP **PKPdf 20 24 57.7 -0.7**
ZALV 20 38 29.8
ZALV pmax pmax
comp=Z,2.0nm,0.7s
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV Zalesovo Beam 126.03 46 PKP **PKPdf 20 24 57.7 -0.7**
ZALV ⇑*e* 20 38 29.8
ZALV Zalesovo Beam 126.03 46 PKP **PKPdf 20 24 57.7 -0.7**
comp=Z,1.6nm,0.7s,baz=267,slow=2.9,SNR=8.4
ZALV PKP2bc 20 38 29.8
comp=Z,0.6nm,0.6s,baz=42,slow=2.4,SNR=3.5
XMAS Kiritimati 126.05 201 PFAKE 20 25 10.0 +10
XMAS LR LR
comp=Z,3µm,20.0s
TARA Tarawa 126.06 164 PFAKE 20 25 10.0 +10
TARA LR LR
comp=Z,3µm,20.0s
SCO Scoresbysund 126.18 349 *i* P **PKPdf 20 24 59.5 +1.3**
SCO *i* 20 26 56.7
SCO
comp=Z,2µm,25.0s
JFWS Jewell Farm 126.60 295 PFAKE 20 25 10.0 +10
JFWS LR LR
comp=Z,4µm,22.0s
MNTX Cornudas Mount 127.22 274 *e*PKPdf **PKPdf 20 24 60.0 -1.5**
MNTX LR LR
comp=Z,2µm,21.0s
AMTX Amarillo 127.36 280 *e*PKPdf **PKPdf 20 25 00.4 -1.3**
AMTX LR LR
comp=Z,3µm,22.0s
KSU1 Kansas State U 127.44 287 PKPdf **PKPdf 20 25 00.9 -0.8**
KSU1 LR LR
comp=Z,2µm,19.0s
SCIA State Center 127.50 292 PFAKE 20 25 10.0 +8.3
SCIA LR LR
comp=Z,3µm,21.0s
COWI Conover 128.18 298 *e*PKPdf **PKPdf 20 24 58.9 -3.9**
COWI LR LR
comp=Z,3µm,22.0s
GUMO Guam 128.20 126 PFAKE 20 25 20.0 +16
GUMO LR LR
comp=Z,1µm,21.0s
SFJD Kangerlussuaq 128.25 335 *e*PKPdf **PKPdf 20 25 04.0 +1.7**
SFJD LR LR
comp=Z,3µm,21.0s
SFJD Kangerlussuaq 128.25 335 *i* P **PKPdf 20 25 05.5 +3.2**
SFJD
comp=Z,2µm,19.0s
NJ2 Nanjing 128.49 87 *e*Pdif **Pdif 20 21 48.0 -0.9**
NJ2 sPKP 20 25 09.6
NJ2 PP **PP 20 27 09.5 -0.1**
NJ2 SKS **SKSdf 20 32 14.0 -0.6**
NJ2 SS **SS 20 44 27.5 +2.2**
NJ2 AMB AMB
comp=Z,490nm,10.0s
NJ2 LR LR
comp=N,890nm,28.0s
NJ2 LR LR
comp=E,920nm,23.0s
NJ2 LR LR
comp=Z,560nm,22.0s
SSE Sheshan 129.15 90 PKP PKPdf 20 25 10.8 +5.7
SSE PP PP 20 27 20.3 +6.4
SSE PKS PKSdf 20 28 28.5 -13
SSE SKKS 20 34 12.3
SSE Sheshan 129.15 90 SS SS 20 44 39.9 +6.4
SSE AMB AMB
comp=Z,130nm,7.4s
SSE LR LR
comp=N,2µm,22.9s
SSE LR LR
comp=E,2µm,23.5s
SSE LR LR
comp=Z,1µm,19.2s
BTO Baotou 129.41 73 *e*PKP **PKPdf 20 25 03.9 -1.6**
BNM Barren Site 129.71 275 *e*PKPdf **PKPdf 20 25 07.7 +1.3**
ANMO Albuquerque 130.17 276 *e*PKPdf **PKPdf 20 25 06.7 -0.6**
ANMO PKP **PKPdf 20 25 08.3 +1.1**
ANMO LR LR
comp=Z,2µm,20.0s
ANMO Albuquerque 130.17 276 PKP **PKPdf 20 25 08.3 +1.1**
comp=Z,2.0nm,0.9s,baz=142,slow=5.9,SNR=5.5
LAZ Ladron 130.18 275 *e*PKPdf **PKPdf 20 25 06.8 -0.5**
SUMG Summit 130.36 344 *e*PKIKP **PKPdf 20 25 07.3 +0.6**
SUMG Summit 130.36 344 *e*PKPdf **PKPdf 20 25 07.3 +0.6**
SUMG Summit 130.36 344 *i* P **PKPdf 20 25 08.3 +1.6**
SUMG *i* 20 27 25.5
SUMG
comp=Z,4µm,23.0s
HHC Hu-ho-hao-te 130.43 74 *e*PKP **PKPdf 20 25 08.1 +0.7**
HHC PP **PP 20 27 24.6 +2.2**
HHC PKS **PKSdf 20 28 44.3 +0.4**
HHC AMB AMB
comp=Z,560nm,8.4s
HHC LR LR
comp=N,3µm,19.4s
HHC LR LR
comp=E,2µm,19.2s
HHC LR LR
comp=Z,3µm,19.6s
ECSD EROS Data Cent 130.58 291 *e*PKPpre PKPpre 20 25 04.0
ECSD *e*PKPdf **PKPdf 20 25 07.5 0.0**
ECSD LR LR
comp=Z,3µm,22.0s
EYMN Ely 130.61 299 PFAKE 20 25 20.0 +13
EYMN LR LR
comp=Z,2µm,20.0s
TUC Tucson 130.82 270 *e*PKIKP **PKPdf 20 25 09.9 +1.5**
TUC MLR MLR
comp=Z,1µm,19.0s
TUC Tucson 130.82 270 *e*PKPdf **PKPdf 20 25 09.9 +1.5**
TUC LR LR
comp=Z,1µm,19.0s
KRAR Krasnoyarsk 130.85 48 *i* PKIKP **PKPdf 20 25 09.0 +1.5**
OGNE Ogallala 131.74 285 PFAKE 20 25 20.0 +10
OGNE LR LR
comp=Z,2µm,19.0s
MOY Mondy 131.85 56 *e*PKIKP PKPdf 20 25 19.3 +10
SONM Songino Array 132.18 63 PKP **PKPdf 20 25 10.6 +0.1**
SONM PP PP 20 27 39.3 +5.6
SONM Songino Array 132.18 63 PKP **PKPdf 20 25 10.6 +0.1**
comp=Z,3.5nm,1.0s,baz=217,slow=3.0,SNR=13
SONM PP PP 20 27 39.3 +5.6
comp=Z,1.8nm,1.2s,baz=223,slow=10,SNR=4.1
ZAK Zakamensk 132.18 59 *e*PKIKP **PKPdf 20 25 07.4 -3.0**
ZAK pmax pmax
comp=Z,8.0nm,1.1s
BJT Baijiatuan 132.48 78 PKPdf **PKPdf 20 25 11.2 0.0**
BJT LR LR
comp=Z,2µm,19.0s
BJI Beijing 132.50 78 PKP **PKPdf 20 25 10.4 -0.8**
BJI PP **PP 20 27 36.5 +0.9**
BJI AMB AMB
comp=Z,370nm,9.6s
BJI LR LR
comp=N,2µm,19.0s
BJI LR LR
comp=E,570nm,19.4s
BJI LR LR
comp=Z,1µm,24.6s
ULN Ulaanbaatar 132.54 64 *e*PKPdf **PKPdf 20 25 11.9 +0.6**
ULN LR LR
comp=Z,2µm,21.0s
ISCO Idaho Springs 133.02 281 *e*PKIKP **PKPdf 20 25 13.7 +1.1**
ISCO MLR MLR
comp=Z,2µm,20.0s
ISCO Idaho Springs 133.02 281 *e*PKPdf **PKPdf 20 25 13.7 +1.1**
ISCO LR LR
comp=Z,2µm,20.0s
AGMN Agassiz Nation 133.10 296 *e*PKPdf **PKPdf 20 25 11.3 -0.8**
AGMN LR LR
comp=Z,3µm,20.0s
KBS Kingsbay 133.12 2 PFAKE 20 25 20.0 +8.7
KBS LR LR
comp=Z,4µm,21.0s
TLY Talaya 133.16 58*c* *i*PKIKP PKPdf 20 25 19.9 +7.8
TLY *e* 20 27 37.4
TLY *e*SS SS 20 45 25.4 +3.0
WUAZ Wupatki 133.44 273 *e*PKPdf **PKPdf 20 25 13.5 +0.1**
WUAZ LR LR
comp=Z,2µm,22.0s
IRK Irkutsk 133.81 57 *e*PKIKP PKPdf 20 25 05.8 -7.5
IRK *e* 20 27 40.9
IRK pmax pmax
comp=Z,28nm,1.6s
ULM Lac du Bonnet 134.30 299 PKP **PKPdf 20 25 16.4 +2.2**
ULM P'P'ab 20 40 42.0
ULM Lac du Bonnet 134.30 299 PKP **PKPdf 20 25 16.4 +2.2**
comp=Z,5.4nm,0.7s,baz=118,slow=1.4,SNR=3.7
ULM PKP2ab 20 40 42.0
comp=Z,4.4nm,0.3s,baz=288,slow=2.3,SNR=7.3
RSSD Black Hills 134.93 287 *e*PKIKP **PKPdf 20 25 14.1 -1.9**
RSSD Black Hills 134.93 287 *e*PKPdf **PKPdf 20 25 14.1 -1.9**
MSU Marysvale 135.95 275 *e*PKIKP **PKPdf 20 25 18.3 +0.2**
MSU *e* 20 27 59.0
MSU Marysvale 135.95 275 *e*PKPdf **PKPdf 20 25 18.3 +0.2**
MSU *e*PP **PP 20 27 59.0 +1.1**
CCUT Cedar City 136.00 273 *e*PKPdf **PKPdf 20 25 18.5 +0.4**
CCUT *e*PP **PP 20 27 60.0 +1.8**
ARUT Antelope Range 136.20 273 *e*PKIKP **PKPdf 20 25 15.4 -3.1**
ARUT Antelope Range 136.20 273 *e*PKPdf **PKPdf 20 25 15.4 -3.1**
DAU Daniels Canyon 136.67 278 PKIKP **PKPdf 20 25 18.5 -0.9**
DAU Daniels Canyon 136.67 278 PKPdf **PKPdf 20 25 18.5 -0.9**
INCN Inchon 136.84 88 PFAKE 20 25 30.0 +11
INCN LR LR
comp=Z,2µm,21.0s
JLU Jordanelle 136.91 278 *e*PKPpre PKPpre 20 25 10.0
JLU *e*PP **PP 20 27 58.8 -5.0**
BW06 Boulder Array 137.20 282 *e*PKPdf **PKPdf 20 25 17.8 -2.4**
BW06 *e*PP PP 20 27 59.0 -6.7
BW06 LR LR
comp=Z,3µm,20.0s
PDAR Pinedale Array 137.20 282 PKPpre PKPpre 20 25 11.2
PDAR Pinedale Array 137.20 282 PKiKP PKPpre 20 25 11.2
comp=Z,0.4nm,0.5s,baz=116,slow=3.4,SNR=3.9
DUG Dugway 137.43 277 *e*PKIKP **PKPdf 20 25 20.2 -0.4**
DUG MLR MLR
comp=Z,2µm,20.0s
DUG Dugway 137.43 277 *e*PKPdf **PKPdf 20 25 20.2 -0.4**
DUG LR LR
comp=Z,2µm,20.0s
KSAR Wonju Array Be 137.55 89 PKP **PKPdf 20 25 22.9 +2.2**
KSAR PP PP 20 28 16.5 +9.0
KSRS Korea Array 137.58 89 PKP **PKPdf 20 25 22.9 +2.1**
comp=Z,7.6nm,1.2s,baz=230,slow=2.2,SNR=8.2
KSRS PP PP 20 28 16.5 +8.8
comp=Z,1.4nm,0.9s,baz=249,slow=6.6,SNR=5.3
HWUT Hardware Ranch 137.62 279 *e*PKPpre PKPpre 20 25 13.5
HWUT *e*PKPdf **PKPdf 20 25 21.1 +0.1**
HWUT LR LR
comp=Z,1µm,20.0s
DGMT Dagmar 137.65 292 PFAKE 20 25 30.0 +9.4
DGMT LR LR
comp=Z,3µm,21.0s
ISA Isabella 137.69 267 *e*PKIKP **PKPdf 20 25 22.9 +1.7**
ISA Isabella 137.69 267 *e*PKPdf **PKPdf 20 25 22.9 +1.7**
LOHW Long Hollow 138.32 282 *e*PKPdf **PKPdf 20 25 23.2 +0.9**
LOHW *e*PP **PP 20 28 11.6 -1.1**
CIT Chita 138.38 62 *e*PKIKP **PKPdf 20 25 23.2 +1.3**
CIT *e* 20 28 20.3
HVU Hansel Valley 138.43 278 PKIKP **PKPdf 20 25 23.7 +1.2**
HVU *e* 20 28 11.7
HVU Hansel Valley 138.43 278 PKPdf **PKPdf 20 25 23.7 +1.2**
HVU *e*PP **PP 20 28 11.7 -1.5**
TPAW Teton Pass 138.45 282 *e*PKPdf **PKPdf 20 25 22.0 -0.6**
TPAW *e*PP **PP 20 28 13.3 -0.2**
TPAW *e*SKP 20 28 40.9
RLMT Red Lodge 138.49 285 *e*PKPpre PKPpre 20 25 16.8
RLMT LR LR
comp=Z,3µm,21.0s
MOOW Moose Ponds 138.49 282 *e*PKPdf **PKPdf 20 25 22.5 -0.1**
MOOW *e*PP **PP 20 28 13.4 -0.3**
RRI2 Red Ridge 138.57 281 *e*PKPdf **PKPdf 20 25 23.4 +0.6**
RRI2 *e*PP **PP 20 28 09.3 -4.9**
TPH Tonopah 138.60 271 PFAKE 20 25 30.0 +7.1
TPH LR LR
comp=Z,2µm,19.0s
IMW Indian Meadow 138.69 282 *e*PKPdf **PKPdf 20 25 18.1 -5.0**
IMW *e*PP **PP 20 28 13.8 -1.2**
LKWY Lake 138.79 283 PFAKE 20 25 30.0 +6.9
LKWY LR LR
comp=Z,5µm,22.0s
ELK Elko 139.20 275 *e*PKPdf **PKPdf 20 25 24.5 +0.5**

NV11	**Mina Array Sit**	**139.39**	**270**	*e*PKPdf	**PKPdf**	**20 25 22.5**	**-1.8**
NVAR	**Mina Array Bea**	**139.47**	**270**	PKPpre	PKPpre	20 25 16.9	
NVAR	**Mina Array Bea**	**139.47**	**270**	PKhKP	PKPpre	20 25 16.9	
	comp=Z,0.4nm,0.6s,baz=161,slow=7.4,SNR=4.7						
QLMT	**Earthquake Lak**	**139.54**	**283**	*e*PKPpre	PKPpre	20 25 20.4	
FFC	**Flin Flon**	**139.89**	**301**	*e*PKHKP	PKPpre	20 25 16.6	
FFC				MLR	MLR		
	comp=Z,3μm,20.0s						
FFC	**Flin Flon**	**139.89**	**301**	*e*PKPpre	PKPpre	20 25 16.6	
FFC				LR	LR		
	comp=Z,3μm,20.0s						
BOZ	**Bozeman (W)**	**140.14**	**284**	*e*PKIKP	**PKPdf**	**20 25 22.8**	**-2.6**
BOZ				*e*		20 28 21.1	
BOZ	**Bozeman (W)**	**140.14**	**284**	*e*PKPdf	**PKPdf**	**20 25 22.8**	**-2.6**
BOZ				*e*PP	**PP**	**20 28 21.1**	**-2.7**
BMN	**Battle Mountai**	**140.15**	**274**	PFAKE		20 25 40.0	+14
BMN				LR	LR		
	comp=Z,2μm,21.0s						
HIA	**Hailar**	**140.17**	**69**	PFAKE		20 25 40.0	+15
HIA				LR	LR		
	comp=Z,3μm,20.0s						
CN2	**Changchun**	**140.22**	**80**	PKP	**pPKiKP**	**20 25 35.4**	**+2.0**
CN2				*e*PP	PP	20 28 39.8	+16
CN2				SKKS	**SKKSac**	**20 35 12.1**	**-4.0**
MCMT	**McKenzie Canyo**	**140.35**	**282**	*e*PKPdf	**PKPdf**	**20 25 22.2**	**-3.8**
EGMT	**Eagleton**	**140.45**	**288**	*e*PKPdf	**PKPdf**	**20 25 26.1**	**+0.3**
EGMT				LR	LR		
	comp=Z,2μm,22.0s						
HLID	**Hailey**	**140.48**	**279**	*e*PKPpre	PKPpre	20 25 21.9	
HLID				*e*PP	**PP**	**20 28 22.2**	**-3.7**
HLID				LR	LR		
	comp=Z,2μm,19.0s						
DLMT	**Dillon**	**140.52**	**283**	*e*PKPdf	**PKPdf**	**20 25 21.5**	**-4.6**
LRM	**Limekiln Ridge**	**140.71**	**284**	*e*PKPpre	PKPpre	20 25 18.4	
HRY	**Holter Researc**	**140.87**	**285**	*e*PKPdf	**PKPdf**	**20 25 27.3**	**+0.7**
MFID	**Camas Ranch**	**141.21**	**278**	*e*PKPdf	**PKPdf**	**20 25 22.4**	**-5.0**
CHMT	**Chamberlain Mo**	**141.79**	**285**	*e*PKPdf	**PKPdf**	**20 25 26.4**	**-2.0**
WAKE	**Wake Island**	**141.98**	**150**	PFAKE		20 25 40.0	+11
WAKE				LR	LR		
	comp=Z,2μm,22.0s						
SLMT	**Seeley Lake**	**142.11**	**285**	*e*PKPdf	**PKPdf**	**20 25 27.0**	**-1.9**
MSO	**Missoula**	**142.13**	**284**	*e*PKPdf	**PKPdf**	**20 25 25.0**	**-3.9**
MSO				LR	LR		
	comp=Z,2μm,22.0s						
WVOR	**Wild Horse Val**	**142.24**	**275**	*e*PKIKP	**PKPdf**	**20 25 26.0**	**-3.3**
WVOR				MLR	MLR		
	comp=Z,2μm,20.0s						
WVOR	**Wild Horse Val**	**142.24**	**275**	*e*PKPdf	**PKPdf**	**20 25 26.0**	**-3.3**
WVOR				LR	LR		
	comp=Z,2μm,20.0s						
SWMT	**Swartz Lake**	**142.54**	**285**	*e*PKPdf	**PKPdf**	**20 25 26.4**	**-3.3**
YBMT	**Yellow Bay**	**142.74**	**285**	*e*PKPdf	**PKPdf**	**20 25 26.2**	**-3.8**
JTMT	**Jette**	**142.83**	**285**	*e*PKPdf	**PKPdf**	**20 25 27.2**	**-2.9**
MOD	**Modoc**	**142.88**	**273**	*e*PKPdf	**PKPdf**	**20 25 29.1**	**-1.3**
MOD				*e*PP	**PP**	**20 28 37.1**	**-3.3**
BMO	**Blue Mountains**	**142.92**	**279**	*e*PKIKP	**PKPdf**	**20 25 29.9**	**-0.5**
BMO				MLR	MLR		
	comp=Z,4μm,21.0s						
BMO	**Blue Mountains**	**142.92**	**279**	*e*PKPdf	**PKPdf**	**20 25 29.9**	**-0.5**
BMO				*e*PP	**PP**	**20 28 39.2**	**-1.4**
BMO				LR	LR		
	comp=Z,4μm,21.0s						
MAJO	**Matsushiro**	**142.95**	**99**	*e*PKIKP	**PKPdf**	**20 25 26.6**	**-4.0**
MAJO				MLR	MLR		
	comp=Z,2μm,21.0s						
MAJO	**Matsushiro**	**142.95**	**99**	*e*PKPdf	**PKPdf**	**20 25 26.6**	**-4.0**
MAJO				LR	LR		
	comp=Z,2μm,21.0s						
MAT	**Matsushiro**	**142.95**	**99**	PKP	**PKPdf**	**20 25 25.5**	**-5.1**
BLMT	**Blacktail Moun**	**143.02**	**285**	*e*PKPdf	**PKPdf**	**20 25 29.1**	**-1.5**
MDJ	**Mudanjiang**	**143.10**	**82**	PKP	**PKPdf**	**20 25 30.1**	**-0.4**
MDJ				sPKP		20 25 34.9	
MDJ				PP	**PP**	**20 28 40.6**	**-0.9**
MDJ				PKS	**PKSdf**	**20 29 04.4**	**-1.7**
MDJ				AMB	AMB		
	comp=Z,380nm,11.9s						
MDJ	**Mudanjiang**	**143.10**	**82**	*e*PKPdf	PKPbc	20 25 28.7	+1.2
MDJ				LR	LR		
	comp=Z,2μm,19.0s						
BSMT	**Bassoo Peak**	**143.17**	**285**	*e*PKPdf	PKPab	20 25 26.4	0.0
WALA	**Waterton Lakes**	**143.33**	**287**	*e*PKPdf	PKPbc	20 25 28.9	+0.7
WDC	**Whiskeytown Da**	**143.36**	**270**	*e*PKIKP	PKPab	20 25 27.6	+0.4
WDC	**Whiskeytown Da**	**143.36**	**270**	*e*PKPdf	PKPab	20 25 27.6	+0.4
KIPM	**Iron Peak**	**143.41**	**268**	*e*PKPdf	**PKPdf**	**20 25 31.7**	**+0.2**
YBH	**Yreka Blue Hor**	**144.18**	**271**	*e*PKPdf	**PKPab**	**20 25 29.7**	**-0.8**
YBH				PKP	PKPbc	20 25 30.7	-0.2
YBH	**Yreka Blue Hor**	**144.18**	**271**	PKP	PKPbc	20 25 30.7	-0.2
	comp=Z,2.2nm,0.6s,baz=98,slow=5.7,SNR=7.6						
RES	**Resolute Bay**	**144.21**	**333**	PKP	**PKPab**	**20 25 29.4**	**0.0**
RES	**Resolute Bay**	**144.21**	**333**	PKP	**PKPab**	**20 25 29.4**	**0.0**
	comp=Z,34nm,0.9s,baz=77,slow=2.3,SNR=8.2						
KHMM	**Horse Mountain**	**144.24**	**269**	*e*PKPdf	PKPbc	20 25 31.0	-0.2
USRK	**Ussuriysk Arra**	**144.25**	**84**	PKP	**PKPab**	**20 25 29.4**	**-1.1**
	comp=Z,4.5nm,0.7s,baz=212,slow=4.9,SNR=14						
NEW	**Newport**	**144.72**	**284**	*e*PKPdf	**PKPab**	**20 25 31.2**	**-1.0**
NEW				PKP	PKPbc	20 25 31.5	-0.8
NEW				LR	LR		
	comp=Z,2μm,21.0s						
NEW	**Newport**	**144.72**	**284**	PKP	**PKPab**	**20 25 31.5**	**-0.7**
	comp=Z,8.3nm,0.8s,baz=135,slow=4.1,SNR=16						
HUMO	**Hull Mountain**	**144.87**	**272**	*e*PKPdf	**PKPdf**	**20 25 34.2**	**+0.4**
KIP	**Kipapa**	**144.88**	**207** *c*	*i*PKIKP	**PKPab**	**20 25 33.3**	**-0.1**
KIP				pmax	pmax		
	comp=Z,155nm,1.2s						
KIP	**Kipapa**	**144.88**	**207**	*e*PKPdf	**PKPdf**	**20 25 34.0**	**-0.4**
KIP				LR	LR		
	comp=Z,2μm,20.0s						
HAWA	**Hanford**	**145.08**	**280**	*e*PKPdf	**PKPab**	**20 25 33.6**	**+0.1**
HAWA				LR	LR		
	comp=Z,3μm,22.0s						
DPW	**Davenport**	**145.12**	**283**	PKIKP	**PKPdf**	**20 25 34.1**	**0.0**
DPW	**Davenport**	**145.12**	**283**	P	**PKPdf**	**20 25 34.1**	**0.0**
CROR	**Criterion Ridg**	**145.13**	**277**	P	**PKPdf**	**20 25 34.9**	**+0.7**
OD2	**Odessa Site #2**	**145.16**	**282**	P	**PKPdf**	**20 25 35.3**	**+1.2**
KBO	**Bosley Butte**	**145.37**	**270**	*e*PKPdf	**PKPab**	**20 25 35.2**	**+0.3**
BROR	**Big Rock Looko**	**145.57**	**275**	P	**PKPbc**	**20 25 35.1**	**+0.1**
TRW	**Toppenish Ridg**	**145.61**	**279**	P	**PKPab**	**20 25 36.2**	**+0.6**
SAW	**Saint Andrews**	**145.72**	**282**	P	**PKPbc**	**20 25 35.7**	**+0.2**
VLL	**Laurance Lake**	**145.80**	**277**	P	**PKPab**	**20 25 36.9**	**+0.5**
KEBM	**Edson Butte**	**145.83**	**271**	*e*PKPdf	**PKPab**	**20 25 36.6**	**+0.1**
EBG	**Ellensburg**	**145.96**	**280**	P	**PKPab**	**20 25 37.3**	**+0.5**
RNO	**Roman Nose**	**146.11**	**273**	P	**PKPab**	**20 25 37.5**	**0.0**
TBM	**Table Mountain**	**146.12**	**280**	P	**PKPbc**	**20 25 37.1**	**+0.3**
ETW	**Entiat**	**146.20**	**281**	P	**PKPbc**	**20 25 37.4**	**+0.2**
COR	**Corvallis**	**146.25**	**274**	*e*PKP2	**PKPab**	**20 25 39.5**	**+1.6**
COR	**Corvallis**	**146.25**	**274**	*e*PKPbc	**PKPab**	**20 25 39.5**	**+1.6**
CLNS	**Chul'man**	**146.48**	**60**	*e*PKP2	**PKPbc**	**20 25 37.5**	**0.0**
CLNS				pmax	pmax		
	comp=Z,30nm,0.9s						
CLNS				pmax	pmax		
	comp=E,8.0nm,1.1s						
CLNS				pmax	pmax		
	comp=N,6.0nm,1.0s						
LON	**Longmire**	**146.59**	**279**	*e*PKP2	**PKPdf**	**20 25 37.3**	**+0.7**
LON	**Longmire**	**146.59**	**279**	*e*PKPdf	**PKPdf**	**20 25 37.3**	**+0.7**
KLR	**Kul'dur**	**146.85**	**76**	*e*PKHKP	PKPpre	20 25 32.8	
KLR				pmax	pmax		
	comp=Z,3μm,8.5s						
KLR				MLR	MLR		
	comp=N,600nm,18.0s						
KLR				MLR	MLR		
	comp=E,1μm,18.0s						
NLWA	**Neilton Lookou**	**148.13**	**278**	*e*PKPbc	**PKPdf**	**20 25 40.7**	**+1.6**
NLWA				LR	LR		
	comp=Z,3μm,21.0s						
HABR	**Khabarovsk**	**148.36**	**80**	*e*PKIKP	**PKPdf**	**20 25 39.5**	**+0.2**
HABR				*i*		20 25 45.2	
HABR				*e*		20 25 46.4	
HABR				*e*		20 29 14.6	
HABR				*e*		20 32 48.0	
HABR				*e*SSS	SSS	20 53 57.7	
HABR				pmax	pmax		
	comp=E,21nm,1.8s						
HABR				pmax	pmax		
	comp=Z,16nm,1.8s						
HABR				pmax	pmax		
	comp=N,6.0nm,0.7s						
PGC	**Sidney**	**148.53**	**281**	*e*PKPbc	**PKPbc**	**20 25 43.5**	**+0.2**
YKA	**Yellowknife Ar**	**148.89**	**309**	PKPbc	**PKPbc**	**20 25 43.1**	**-0.7**
YKA	**Yellowknife Ar**	**148.89**	**309**	PKPbc	**PKPbc**	**20 25 43.1**	**-0.7**
	comp=N,18nm,0.7s,baz=102,slow=2.6,SNR=81						
YKW3	**Yellowknife Ar**	**148.91**	**309**	*e*PKPbc	**PKPbc**	**20 25 42.8**	**-1.1**
ERM	**Erimo**	**149.44**	**96**	*e*PKP2	**PKPbc**	**20 25 46.3**	**+0.5**
ERM				MLR	MLR		
	comp=Z,3μm,21.0s						
ERM	**Erimo**	**149.44**	**96**	*e*PKPbc	**PKPbc**	**20 25 46.3**	**+0.5**
ERM				LR	LR		
	comp=Z,3μm,21.0s						
YAK	**Yakutsk**	**150.32**	**52**	*e*PKIKP	**PKPab**	**20 25 51.5**	**-2.3**
YAK				*e*		20 29 29.0	
YAK				*e*SS	SS	20 48 45.2	+3.9
YAK				*e*SSS	SSS	20 54 24.0	
YAK				pmax	pmax		
	comp=Z,46nm,1.8s						
YAK				pmax	pmax		
	comp=E,100nm,3.3s						
YAK				pmax	pmax		
	comp=N,60nm,2.8s						
ASAJ	**Asahikawa**	**150.39**	**92**	*e*PKPbc	**PKPbc**	**20 25 47.4**	**-0.7**
ASAJ	**Asahikawa**	**150.39**	**92**	PKPbc	**PKPbc**	**20 25 47.7**	**-0.3**
	comp=N,10nm,0.8s,baz=269,slow=7.7,SNR=12						
YSS	**Yuzh-Sakhalins**	**152.06**	**88**	*i*PKIKP	**PKPbc**	**20 25 52.5**	**+0.7**
YSS				*e*		20 25 57.5	
YUK	**Yuzh-Kuril'sk**	**152.25**	**95** *d*	PKIKP	**PKPdf**	**20 25 44.6**	**-1.0**
YUK				*i*		20 29 34.8	
YUK				*i* PPP	PPP	20 32 59.8	
YUK				*i* SS	SS	20 49 01.3	-1.8
YUK				*i* SSS	SSS	20 54 45.8	
MIDW	**Midway**	**153.73**	**174**	PFAKE		20 26 00.0	+3.9
MIDW				LR	LR		
	comp=Z,4μm,22.0s						
KUR	**Kuril'sk**	**154.11**	**95**	*i*PKIKP	**PKPdf**	**20 25 51.3**	**+3.1**
KUR				*i*		20 29 42.1	
KUR				*e*PPP	PPP	20 33 18.3	
KUR				*i* SS	SS	20 49 23.7	+0.2
DLBC	**Dease Lake**	**155.62**	**298**	*e*PKPdf	**PKPdf**	**20 25 49.1**	**-0.9**
DLBC				PKP	**PKPdf**	**20 25 49.6**	**-0.4**
DLBC				PKPab	**PKPab**	**20 26 19.8**	**+3.4**
DLBC	**Dease Lake**	**155.62**	**298**	PKP	**PKPdf**	**20 25 49.6**	**-0.4**
	comp=Z,2.0nm,0.8s,baz=176,slow=3.0,SNR=3.4						
DLBC				PKPab	**PKPab**	**20 26 19.8**	**+3.4**
	comp=Z,20nm,1.1s,baz=110,slow=4.1,SNR=6.1						
WRAK	**Wrangell Islan**	**156.46**	**292**	PFAKE		20 26 00.0	+9.0
WRAK				LR	LR		
	comp=Z,3μm,20.0s						
INK	**Inuvik**	**156.66**	**322**	PKP	**PKPdf**	**20 25 53.2**	**+2.2**
INK				PKPab	**PKPab**	**20 26 22.0**	**+1.6**
INK				PP	PP	20 30 05.8	+6.5
INK	**Inuvik**	**156.66**	**322**	PKP	**PKPdf**	**20 25 53.2**	**+2.2**
	comp=Z,2.2nm,0.8s,baz=253,slow=3.7,SNR=4.8						
INK				PKPab	**PKPab**	**20 26 22.0**	**+1.6**
	comp=Z,10nm,0.8s,baz=56,slow=8.2,SNR=8.9						
INK				PP	PP	20 30 05.8	+6.5
	comp=Z,6.2nm,1.2s,baz=67,slow=6.0,SNR=3.9						
EGAK	**Eagle**	**160.60**	**315**	PFAKE		20 26 10.0	+14
EGAK				LR	LR		
	comp=Z,5μm,21.0s						
COLD	**Coldfoot**	**162.81**	**328**	*e*PKPdf	**PKPdf**	**20 25 55.4**	**-2.6**
ILAR	**Eielson Array**	**162.90**	**318**	PKP	**PKPdf**	**20 25 55.8**	**-2.4**
ILAR				PKPab	**PKPab**	**20 26 47.5**	**-0.2**
ILAR				PP	**PP**	**20 30 34.0**	**+0.9**
ILAR	**Eielson Array**	**162.90**	**318**	PKP	**PKPdf**	**20 25 55.8**	**-2.4**
	comp=Z,1.0nm,0.9s,baz=304,slow=0.8,SNR=6.9						
ILAR				PKPab	**PKPab**	**20 26 47.5**	**-0.2**
	comp=Z,8.7nm,0.8s,baz=52,slow=2.7,SNR=18						
ILAR				PP	**PP**	**20 30 34.0**	**+0.9**
	comp=Z,1.4nm,0.9s,baz=71,slow=3.2,SNR=5.0						
COLA	**College**	**163.22**	**319**	PFAKE		20 26 10.0	+12
COLA				LR	LR		
	comp=Z,4μm,20.0s						
PETK	**Petropavlovsk-**	**163.33**	**83**	PKIKP	**PKPdf**	**20 25 58.1**	**-0.9**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PETK	**Petropavlovsk-**	**163.33**	**83**	PKP	**PKPdf**	**20 25 58.1**	**-0.9**
PETK	**Petropavlovsk-**	**163.33**	**83**	PKP	**PKPdf**	**20 25 58.1**	**-0.9**
	comp=Z,1.6nm,0.9s,baz=147,slow=3.4,SNR=2.7						
BILL	**Bilibino**	**163.51**	**26** ↑	*e*PKIKP	**PKPdf**	**20 26 00.0**	**+1.3**
BILL				*e*		20 30 37.9	
BILL				pmax	pmax		
	comp=Z,64nm,1.3s						
BILL	**Bilibino**	**163.51**	**26**	PFAKE		20 26 10.0	+11
BILL				LR	LR		
	comp=Z,2μm,21.0s						
PET	**Petropavlovsk**	**163.87**	**84**	*e*PKIKP	**PKPdf**	**20 25 57.1**	**-2.3**
PET				*e*		20 30 40.4	
PET				*e*SS	SS	20 51 01.9	-5.0
MCK	**McKinley**	**164.14**	**316**	*e*PKIKP	**PKPdf**	**20 25 57.3**	**-2.1**
MCK	**McKinley**	**164.14**	**316**	*e*PKPbc	**PKPdf**	**20 25 57.3**	**-2.1**
TRF	**Thorofare Moun**	**164.81**	**316**	*e*PKPdf	**PKPdf**	**20 25 57.4**	**-2.8**
TRF				*e*PKPab	**PKPab**	**20 26 56.5**	**+0.1**
KDAK	**Kodiak Island**	**167.52**	**294**	PFAKE		20 26 10.0	+7.8
KDAK				LR	LR		
	comp=Z,4μm,20.0s						

IDC 16 20:12:35.1±3.7, 3.17S×151.55E, h0km, mb4.0/2, mb1 4.3/2, mb1mx3.6/17, mbtmp4.0/2, Error ellipse: s-maj=147.8km s-min=49.1km az=115.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.67**	**224**	P	P	20 17 49.5	+1.0
	5.8nm,0.4s,baz=48,slow=9.5,SNR=71						
ASAR	**Alice Springs**	**26.58**	**218**	P	P	20 18 14.4	-0.8
	0.3nm,0.3s,baz=50,slow=8.3,SNR=7.8						
TORD	**Torodi Ar. Bea**	**148.59**	**290**	PKPbc	PKPbc	20 32 24.3	-0.9
	0.1nm,0.4s,baz=83,slow=1.9,SNR=4.0						

*ISCJB **16** 20:43:51.5±0.3, 39.84N×0.03×71.00E×0.04, h10km, mb3.9/24, MS4.7/2, Error ellipse: s-maj=4.8km s-min=3.7km az=152.1*

*IDC **16** 20:43:51.5±0.8, 39.87N×71.21E, h0km, mb3.7/14, mb1 4.0/20, mb1mx3.9/32, mbtmp3.8/20, ML3.7/6, Error ellipse: s-maj=14.3km s-min=9.9km az=157.0*

*NNC **16** 20:43:54.2±4.6, 40.06N×71.31E, h0km, mb4.4, mpv4.3, Error ellipse: s-maj=43.4km s-min=22.6km az=6.0*

*BJI **16** 20:43:54.8, 39.31N×70.76E, h31km, mb3.7/2, ML3.9/3, Ms3.6/1*

*MOS **16** 20:43:55.0±1.1, 39.96N×71.00E, h29km, mb4.1/15, Error ellipse: s-maj=8.9km s-min=5.6km az=67.6*

ISC 16 20:43:53.3±0.5, 39.91N±0.05×71.03E±0.05, h10km, n100, σ1 65/97, mb3.9/24, 24C-10D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op ISC	h m s	ISC
AML	**Almayashu**	**3.00**	**41**	*i* PN	**Pn**	**20 44 42.2**	**+1.0**
AML	**Almayashu**	**3.00**	**41**	P	**Pn**	**20 44 42.2**	**+1.0**
	SNR=64						
KK31	**Karatay Array**	**3.22**	**353**	⇑Pn	**Pn**	**20 44 46.1**	**+2.2**
	8.0nm,0.5s,baz=175,slow=13,SNR=1609						
KK31				⇑Pg	**Pg**	**20 44 53.1**	**-1.8**
	53nm,0.3s,baz=156,slow=17,SNR=98						
KK31				⇑Lg	Lg	20 45 33.9	
	680nm,0.5s,baz=156,slow=27,SNR=16						
EKS2	**Erkin-Say**	**3.44**	**36**	*i* PN	**Pn**	**20 44 48.7**	**+1.6**
EKS2	**Erkin-Say**	**3.44**	**36**	P	**Pn**	**20 44 48.7**	**+1.6**
	SNR=18						
UCH	**Uchtor**	**3.51**	**48**	*i* PN	**Pn**	**20 44 50.4**	**+2.2**
UCH	**Uchtor**	**3.51**	**48**	P	**Pn**	**20 44 50.4**	**+2.2**
	SNR=7.4						
AAK	**Ala-Archa**	**3.77**	**43** *d*	PN	**Pn**	**20 44 53.1**	**+1.5**
AAK	**Ala-Archa**	**3.77**	**43**	P	**Pn**	**20 44 53.3**	**+1.7**
	SNR=28						
AAK	**Ala-Archa**	**3.77**	**43**	Pn	**Pn**	**20 44 53.3**	**+1.7**
	12nm,0.3s,baz=200,slow=6.8,SNR=37						
AAK				Lg	Lg	20 45 49.2	
	34nm,0.3s,baz=318,slow=23,SNR=12						
KSH	**Kashi**	**3.83**	**94**	*e*Pn	**Pn**	**20 44 52.8**	**+0.4**
KSH				Sn	**Sn**	**20 45 33.8**	**-3.8**
KSH				smax	smax		
	comp=N,250nm,0.5s						
KSH				smax	smax		
	comp=E,290nm,0.6s						
KZA	**Kyzart**	**3.86**	**54**	*i* PN	**Pn**	**20 44 54.5**	**+1.5**
KZA	**Kyzart**	**3.86**	**54**	P	**Pn**	**20 44 54.5**	**+1.5**
	SNR=51						
KBK	**Karagaybulak**	**4.03**	**46**	*i* PN	**Pn**	**20 44 57.4**	**+2.2**
KBK	**Karagaybulak**	**4.03**	**46**	P	**Pn**	**20 44 57.4**	**+2.2**
	SNR=84						
CHMS	**Chumysh**	**4.17**	**41**	*i* PN	**Pn**	**20 44 58.5**	**+1.6**
CHMS	**Chumysh**	**4.17**	**41**	P	**Pn**	**20 44 58.5**	**+1.6**
	SNR=67						
USP	**Ospenovka**	**4.25**	**37**	*i* PN	**Pn**	**20 44 59.3**	**+1.2**
USP	**Ospenovka**	**4.25**	**37**	P	**Pn**	**20 44 59.3**	**+1.2**
	SNR=56						
TKM2	**Tokmak 2**	**4.57**	**47**	⇓Pn	**Pn**	**20 45 04.2**	**+1.6**
	comp=E,118nm,0.5s						
TKM2				⇑Sn	**Sn**	**20 45 56.0**	**+0.2**
	comp=E,62nm,0.5s						
TKM2				⇑Lg	Lg	20 46 14.9	
	comp=E,175nm,0.8s						
TKM2	**Tokmak 2**	**4.57**	**47**	*i* PN	**Pn**	**20 45 04.2**	**+1.6**
TKM2	**Tokmak 2**	**4.57**	**47**	P	**Pn**	**20 45 04.3**	**+1.6**
	SNR=238						
ULHL	**Ulahol**	**4.58**	**58**	*i* PN	**Pn**	**20 45 04.4**	**+1.6**
ULHL	**Ulahol**	**4.58**	**58**	P	**Pn**	**20 45 04.4**	**+1.6**
	SNR=6.8						
KNDC	**Almaty**	**5.54**	**51**	⇑Pn	**Pn**	**20 45 17.6**	**+1.7**
	comp=E,48nm,0.6s						
KNDC				⇑Lg	Lg	20 46 46.2	
	comp=E,356nm,1.2s						
AAA	**Alma-Ata**	**5.56**	**51**	*i* PN	**Pn**	**20 45 17.4**	**+1.2**
AAA				*i* S	Sb	20 46 44.3	+7.0
AAA				pmax	pmax		
	comp=Z,92nm,0.4s						
AAA				smax	smax		
	comp=N,198nm,0.9s						
CEP	**Cherat**	**6.11**	**173**	⇑P	Pn	20 45 29.3	+5.5
CEP				S	Sn	20 46 41.0	+7.1
CHCP	**Chirah Chowk**	**6.49**	**163**	P	Pn	20 45 34.6	+5.7
THW	**Thamme Wali**	**7.12**	**175**	P	Pn	20 45 42.0	+4.4
DHRM	**DHARAMSHALA**	**8.75**	**149**	*e*PKP	**Pn**	**20 46 01.3**	**+1.3**
DHRM				*e*S	**Sn**	**20 47 36.1**	**-2.8**
DHRM				AML	AML	20 50 23.5	
	comp=N,11nm,0.6s						
DHRM				AML	AML	20 50 24.4	
	comp=E,9.8nm,0.7s						
SMLA	**Simla**	**10.08**	**148**	*e*PKP	**Pn**	**20 46 19.3**	**+1.2**
SMLA				*e*S	Sn	20 48 05.0	-6.3
SMLA				AML	AML	20 49 15.2	
	comp=N,14nm,0.4s						
SMLA				AML	AML	20 49 17.7	
	comp=E,18nm,0.4s						
MK31	**Makanchi Array**	**10.70**	**46**	Pn	**Pn**	**20 46 26.2**	**-0.3**
	comp=E,2.3nm,0.5s,baz=231,slow=15,SNR=48						
MK31				⇑Lg	Lg	20 49 21.1	
	comp=E,9.9nm,0.7s,baz=242,slow=28						
MKAR	**Makanchi Array**	**10.70**	**46**	P	**Pn**	**20 46 26.5**	**0.0**
MKAR	**Makanchi Array**	**10.70**	**46**	Pn	**Pn**	**20 46 26.5**	**0.0**
	comp=E,0.4nm,0.3s,baz=229,slow=14,SNR=15						
MKAR				Lg	Lg	20 49 28.9	
	comp=E,0.5nm,0.3s,baz=238,slow=23,SNR=6.6						
DDI	**Dehra Dun**	**11.15**	**147**	*e*PKP	**Pn**	**20 46 33.2**	**+0.3**
DDI				*e*S	Sn	20 48 32.6	-5.0
KUR16	**Kurchatov Arra**	**11.93**	**24**	⇓Pn	Pn	20 46 40.6	-2.8
	comp=E,2.6nm,0.8s						
KUR16				⇑Lg	Lg	20 50 05.2	
	comp=E,27nm,1.4s						
KURBB	**Kurchatov Arra**	**11.94**	**24**	Pn	Pn	20 46 40.6	-2.8
	comp=E,0.1nm,0.3s,baz=214,slow=13,SNR=40						
KURBB				Lg	Lg	20 50 08.3	
	comp=E,0.4nm,0.3s,baz=207,slow=29,SNR=7.8						
KURK	**Kurchatov**	**12.05**	**24**	⇑Pn	Pn	20 46 41.7	-3.2
	comp=E,8.1nm,1.1s						
KURK				⇑Lg	Lg	20 50 07.1	
	comp=E,105nm,1.5s						
KURK	**Kurchatov**	**12.05**	**24** *c*	*i* P	Pn	20 46 42.3	-2.6
KURK				pmax	pmax		
	comp=Z,10.0nm,2.5s						
AB31	**Akbulak array**	**12.23**	**323**	Pn	**Pn**	**20 46 46.2**	**-1.2**
	comp=Z,2.7nm,0.5s,baz=139,slow=13,SNR=151						
AB31				⇓Sn	**Sn**	**20 49 02.2**	**-1.4**
	comp=Z,5.4nm,0.5s,baz=137,slow=24,SNR=3.9						
AYAN	**Aya Nagar**	**12.46**	**154**	*e*PKP	**Pn**	**20 46 50.0**	**-0.6**
KUDL	**Kundal**	**12.57**	**157**	*e*PKP	**Pn**	**20 46 50.5**	**-1.7**
KUDL				*e*S	Sn	20 49 04.3	-8.0
KUDL				AML	AML	20 49 10.6	
	comp=E,6.8nm,0.7s						
KUDL				AML	AML	20 49 11.1	
	comp=N,4.8nm,0.7s						
VOSK	**Vostochnaya**	**12.82**	**360**	⇑Pn	**Pn**	**20 46 52.7**	**-2.7**
	comp=N,2.7nm,1.0s						
VOSK				⇑Sn	**Sn**	**20 49 20.4**	**+2.3**
	comp=N,3.9nm,0.7s						
VOSK				⇑Lg	Lg	20 50 36.2	
	comp=N,38nm,1.6s						
ZRNK	**Zerenda**	**13.12**	**355**	⇑Pn	Pn	20 46 55.2	-4.4
	comp=N,1.5nm,0.7s			

KBZ					pmax	pmax			
	comp=Z,2.0nm,0.9s								
KBZ	**Khabaz**	**21.27**	**290**	P	**P**	**20 48 40.3 +0.7**			
	comp=Z,2.3nm,0.9s,baz=114,slow=9.8,SNR=4.5								
KIV	**Kislovodsk**	**21.42**	**290**	*e*P	**P**	**20 48 42.7 +1.3**			
KIV				*e*S	Sn	20 52 44.0 -2.9			
KIV				pmax	pmax				
	comp=Z,4.0nm,0.7s								
KRAR	**Krasnoyarsk**	**21.61**	**35**	*e*P	**P**	**20 48 47.0 +3.8**			
KRAR				pmax	pmax				
	comp=Z,6.0nm,1.0s								
SOKR	**Solikamsk**	**21.64**	**340**	*e*P	**P**	**20 48 45.1 +1.7**			
SOKR				pmax	pmax				
	comp=Z,8.0nm,0.7s								
GTA	**Gaotai**	**22.13**	**82**	*e*P	**P**	**20 48 51.1 +2.0**			
GTA				pmax	pmax				
	comp=Z,2.0nm,0.7s								
VSR	**Storozhevoye**	**24.81**	**308**	*e*P	**P**	**20 49 15.8 +0.5**			
VSR				pmax	pmax				
	comp=Z,9.0nm,0.8s								
VSR				pmax	pmax				
	comp=N,3.0nm,0.7s								
VSR				pmax	pmax				
	comp=E,10.0nm,1.0s								
VSR				MLR	MLR				
	comp=Z,5µm,29.0s								
ZAK	**Zakamensk**	**24.86**	**54**	*e*P	**P**	**20 49 16.5 +0.6**			
ZAK				pmax	pmax				
	comp=Z,3.0nm,1.0s								
SONM	**Songino Array**	**26.51**	**61**	P	**P**	**20 49 30.8 -0.2**			
	comp=Z,0.5nm,0.6s,baz=275,slow=9.5,SNR=5.4								
OBN	**Obninsk**	**27.45**	**315**⇓	*e*P	**P**	**20 49 38.8 -0.3**			
OBN				*e*		20 50 21.7			
OBN				*e*S	**S**	**20 54 15.3 -4.1**			
OBN				pmax	pmax				
	comp=Z,6.0nm,0.6s								
OBN				MLR	MLR				
	comp=Z,2µm,22.0s								
BRTR	**Keskin Array B**	**28.59**	**282**	P	**P**	**20 49 51.6 +2.0**			
	comp=Z,0.8nm,0.6s,baz=80,slow=6.8,SNR=6.5								
AKASG	**Malin Array Be**	**30.93**	**304**	P	**P**	**20 50 10.3 +0.2**			
AKASG	**Malin Array Be**	**30.93**	**304**	*ce*P	**P**	**20 50 12.1 +2.0**			
AKASG	**Malin Array Be**	**30.93**	**304**	P	**P**	**20 50 10.3 +0.2**			
	comp=Z,0.2nm,0.3s,baz=76,slow=8.4,SNR=5.2								
JOF	**Joensuu**	**32.97**	**327**	*e*P	**P**	**20 50 28.6 +0.8**			
JOF	**Joensuu**	**32.97**	**327**	*e*p	**P**	**20 50 28.6 +0.8**			
FINES	**FINESS Array B**	**34.72**	**323**	P	**P**	**20 50 43.9 +0.9**			
	comp=Z,2.4nm,0.6s,baz=92,slow=11,SNR=10								
ARCES	**ARCESS Array B**	**38.03**	**336**	P	**P**	**20 51 12.1 +0.8**			
	comp=Z,2.0nm,0.7s,baz=99,slow=7.6,SNR=8.9								
GERES	**GERESS Array B**	**41.06**	**302**	P	**P**	**20 51 38.6 +1.7**			
	comp=Z,0.3nm,0.5s,baz=57,slow=9.7,SNR=4.4								
NB2	**NORSAR Subarra**	**41.72**	**321**	P	**P**	**20 51 42.7 +0.7**			
	comp=Z,1.4nm,0.8s,baz=92,slow=8.6								
NOA	**NORSAR Array B**	**41.72**	**321**	P	**P**	**20 51 42.7 +0.7**			
	comp=Z,1.8nm,0.7s,baz=91,slow=8.2,SNR=8.3								
TIXI	**Tiksi**	**42.62**	**23**	*ce*P	**P**	**20 51 49.4 +0.2**			
TIXI				pmax	pmax				
	comp=Z,9.0nm,1.0s								
PAGF	**Fort de Pagny**	**46.28**	**303**	*e*P	P	20 52 26.5 +7.7			
SBF	**Sospel**	**46.47**	**297**	*e*P	P	20 52 29.2 +8.7			
	comp=Z,39nm,1.0s								
BILL	**Bilibino**	**55.55**	**27**⇑	*e*P	**P**	**20 53 28.9 +0.6**			
BILL				pmax	pmax				
	comp=Z,3.0nm,1.0s								
ESDC	**Sonseca Array**	**55.94**	**296**	P	**P**	**20 53 32.2 +0.6**			
	comp=Z,0.2nm,0.3s,baz=61,slow=7.4,SNR=3.8								
TORD	**Torodi Ar. Bea**	**65.87**	**267**	P	**P**	**20 54 39.1 -0.3**			
	comp=Z,0.4nm,0.5s,baz=48,slow=5.1,SNR=10								
ILAR	**Eielson Array**	**71.50**	**16**	P	**P**	**20 55 13.1 -0.7**			
	comp=Z,0.9nm,0.8s,baz=327,slow=5.6,SNR=6.8								
YKA	**Yellowknife Ar**	**77.84**	**3**	P	**P**	**20 55 50.7 +0.2**			
	comp=Z,0.9nm,0.7s,baz=351,slow=5.8,SNR=10.0								
WRA	**Warramunga Arr**	**83.78**	**122**	P	**P**	**20 56 22.2 -0.7**			
	comp=Z,0.3nm,0.6s,baz=330,slow=4.8,SNR=2.6								
ASAR	**Alice Springs**	**86.19**	**125**	P	**P**	**20 56 34.2 -0.7**			
	comp=Z,0.3nm,0.7s,baz=313,slow=4.9,SNR=5.8								

*ISCJB **16** 20:45:53.8±0.5,38.32N±0.03×22.01E±0.04,h12km±3km, Error ellipse: s-maj=5.2km s-min=4.6km az=179.0*
*CSEM **16** 20:45:53.6±0.2,38.35N×22.01E,h12km, MD2.6, Error ellipse: s-maj=4.5km s-min=3.6km az=80.0*
*ATH **16** 20:45:54.1,38.33N×22.00E,h9km±2km,MD2.6/8*
*THE **16** 20:45:54.5,38.31N×22.01E,h8km±2km,ML1.4/2, Error ellipse: s-maj=2.0km s-min=0.7km az=346.0*

ISC 16 20:45:53.5±0.9,**38.33N**±0.02×**22.01E**±0.03,**h13**km±5km, **n24**,σ0**s32**/**45**,**Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.06**	**51**	P	**Pg**	**20 45 56.2**	**0.0**
TRIZ				S	**Sg**	**20 45 57.9**	**-0.1**
TRIZ	**Trizonia**	**0.06**	**51**	*e*PG	**Pg**	**20 45 56.2**	**0.0**
TRIZ				*e*SG	**Sg**	**20 45 57.8**	**-0.2**
TRIZ	**Trizonia**	**0.06**	**51**	*e*Pg	**Pg**	**20 45 56.2**	**0.0**
TRIZ				S	**Sg**	**20 45 57.9**	**-0.1**
LAKA	**Lakka**	**0.09**	**197**	P	**Pg**	**20 45 56.4**	**-0.1**
LAKA				S	**Sg**	**20 45 58.2**	**-0.3**
LAKA	**Lakka**	**0.09**	**197**	*e*PG	**Pg**	**20 45 56.3**	**-0.2**
LAKA				*e*SG	**Sg**	**20 45 58.2**	**-0.3**
LAKA	**Lakka**	**0.09**	**197**	*e*Pg	**Pg**	**20 45 56.3**	**-0.2**
LAKA				S	**Sg**	**20 45 58.2**	**-0.3**
KALE	**Kalithea**	**0.12**	**57**	P	**Pg**	**20 45 57.2**	**+0.3**
KALE				S	**Sg**	**20 45 59.8**	**+0.5**
KALE	**Kalithea**	**0.12**	**57**	*e*PG	**Pg**	**20 45 57.2**	**+0.3**
KALE				*e*SG	**Sg**	**20 45 59.4**	**+0.1**
KALE	**Kalithea**	**0.12**	**57**	*e*Pg	**Pg**	**20 45 57.2**	**+0.3**
KALE				*e*Sg	**Sg**	**20 45 59.4**	**+0.1**
EFP	**Efpalio**	**0.13**	**321**	P	**Pg**	**20 45 57.0**	**+0.1**
EFP				S	**Sg**	**20 45 59.4**	**+0.1**
EFP	**Efpalio**	**0.13**	**321**	*e*PG	**Pg**	**20 45 57.1**	**+0.1**
EFP				*e*SG	**Sg**	**20 45 59.5**	**+0.1**
EFP	**Efpalio**	**0.13**	**321**	*e*Pg	**Pg**	**20 45 57.1**	**+0.1**
EFP				*e*Sg	**Sg**	**20 45 59.5**	**+0.1**
KLV	**Kalavryta, Ach**	**0.30**	**159**	*e*PB	**Pg**	**20 46 00.2**	**+0.4**
KLV				*e*SB	**Sb**	**20 46 05.7**	**0.0**
KLV	**Kalavryta, Ach**	**0.30**	**159**	*e*Pb	**Pg**	**20 46 00.2**	**+0.4**
KLV				*e*Sb	**Sb**	**20 46 05.7**	**0.0**
DSF	**Desfina**	**0.41**	**78**	P	**Pb**	**20 46 02.4**	**-0.3**
DSF				S	**Sb**	**20 46 09.5**	**+0.6**
GUR	**Goura**	**0.47**	**146**	P	**Pg**	**20 46 03.1**	**+0.3**
GUR				S	**Sg**	**20 46 09.2**	**+0.1**
GUR	**Goura**	**0.47**	**146**	*e*PG	**Pb**	**20 46 03.2**	**-0.5**
GUR	**Goura**	**0.47**	**146**	*e*Pg	**Pb**	**20 46 03.2**	**-0.5**
GUR				S	**Sg**	**20 46 09.2**	**+0.1**
RLS	**Riolos of Patr**	**0.51**	**238**	P	**Pb**	**20 46 04.4**	**+0.2**
RLS				S	**Sb**	**20 46 11.5**	**0.0**
RLS	**Riolos of Patr**	**0.51**	**238**	P	**Pb**	**20 46 04.4**	**+0.2**
RLS				S	**Sb**	**20 46 11.5**	**0.0**
EVR	**Evrytania**	**0.61**	**345**	*e*PB	**Pg**	**20 46 05.4**	**-0.1**
EVR				*e*SB	**Sb**	**20 46 15.2**	**+0.6**
EVR	**Evrytania**	**0.61**	**345**	*e*Pb	**Pg**	**20 46 05.4**	**-0.1**
EVR				*e*Sb	**Sb**	**20 46 15.2**	**+0.6**
AGG	**Agios Georgios**	**0.74**	**20**	*e*PB	**Pg**	**20 46 07.2**	**-0.7**
AGG	**Agios Georgios**	**0.74**	**20**	*e*Pb	**Pg**	**20 46 07.2**	**-0.7**

*ISCJB **16** 20:51:16.9±0.7,41.32N±0.04×22.67E±0.04,h11km±3km, Error ellipse: s-maj=7.1km s-min=4.9km az=168.6*
*CSEM **16** 20:51:16.6±0.2,41.35N×22.65E,h9km,ML1.8/8, Error ellipse: s-maj=4.3km s-min=2.9km az=168.0*
*SKO **16** 20:51:16.6,41.29N×22.62E,h15km, M1.0,ML1.7*
*THE **16** 20:51:17.9,41.29N×22.69E,h2km±2km,ML1.8/8, Error ellipse: s-maj=2.0km s-min=0.6km az=277.0*
*ATH **16** 20:51:17.4,41.31N×22.67E,h22km±2km,MD3.0/6*

ISC 16 20:51:17.3±0.9,**41.31N**±0.04×**22.66E**±0.02,**h8**km±6km, **n31**,σ0**s37**/**58**,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.07**	**280**	P	**Pg**	**20 51 19.2**	**-0.1**
VAY				S	**Sg**	**20 51 20.8**	**+0.1**
VAY	**Valandovo**	**0.07**	**280**	*i* Pg	**Pg**	**20 51 19.3**	**-0.1**
VAY				*i* Sg	**Sg**	**20 51 20.9**	**+0.1**
VAY				*e*Lg	Lg	20 51 20.9	
	comp=E,664nm,0.5s						
VAY				*e*Lg	Lg	20 51 21.0	
	comp=N,467nm,0.3s						
VAY	**Valandovo**	**0.07**	**280**	P	**Pg**	**20 51 19.2**	**-0.1**
VAY				S	**Sg**	**20 51 20.8**	**+0.1**
KNT	**Kendrikon**	**0.23**	**129**	P	**Pg**	**20 51 22.2**	**+0.2**
KNT				S	**Sg**	**20 51 25.2**	**+0.1**
KNT	**Kendrikon**	**0.23**	**129**	P	**Pg**	**20 51 22.2**	**+0.2**
KNT				S	**Sg**	**20 51 25.2**	**+0.1**
GRG	**Griva**	**0.40**	**209**	P	**Pg**	**20 51 25.5**	**+0.3**
GRG				S	**Sg**	**20 51 31.1**	**+0.6**
GRG	**Griva**	**0.40**	**209**	P	**Pg**	**20 51 25.5**	**+0.3**
GRG				S	**Sg**	**20 51 31.1**	**+0.6**
SOH	**Sokhos**	**0.71**	**133**	P	**Pg**	**20 51 30.8**	**-0.3**
SOH				S	**Sg**	**20 51 40.5**	**+0.1**
SOH	**Sokhos**	**0.71**	**133**	*e*PB	**Pg**	**20 51 30.8**	**-0.3**
SOH				*e*SN	**Sb**	**20 51 42.0**	**0.0**
SOH	**Sokhos**	**0.71**	**133**	P	**Pg**	**20 51 30.8**	**-0.3**
SOH				S	**Sg**	**20 51 40.5**	**+0.1**
SOH				*e*Sn	**Sb**	**20 51 42.0**	**0.0**
THE	**Thessaloniki**	**0.71**	**161**	P	**Pg**	**20 51 31.0**	**-0.1**
THE				S	**Sg**	**20 51 40.1**	**-0.3**
THE	**Thessaloniki**	**0.71**	**161**	P	**Pg**	**20 51 31.0**	**-0.1**
THE				S	**Sg**	**20 51 40.1**	**-0.3**
SRS	**Serrai**	**0.73**	**105**	P	**Pg**	**20 51 31.2**	**-0.1**
SRS				S	**Sg**	**20 51 41.1**	**+0.3**
SRS	**Serrai**	**0.73**	**105**	P	**Pg**	**20 51 31.2**	**-0.1**
SRS				S	**Sg**	**20 51 41.1**	**+0.3**
HORT	**Hortiatis**	**0.78**	**155**	P	**Pg**	**20 51 32.3**	**-0.1**
HORT				S	**Sg**	**20 51 42.8**	**+0.2**
HORT	**Hortiatis**	**0.78**	**155**	P	**Pg**	**20 51 32.3**	**-0.1**
HORT				S	**Sg**	**20 51 42.8**	**+0.2**
NVR	**Nevrokopi**	**0.90**	**87**	P	**Pg**	**20 51 34.6**	**-0.1**
NVR				S	**Sb**	**20 51 47.1**	**-0.4**
NVR	**Nevrokopi**	**0.90**	**87**	*e*PN	**Pb**	**20 51 35.0**	**-0.3**
NVR				*e*SN	**Sb**	**20 51 47.4**	**-0.1**
NVR	**Nevrokopi**	**0.90**	**87**	P	**Pg**	**20 51 34.6**	**-0.1**
NVR	**Nevrokopi**	**0.90**	**87**	*e*Pn	**Pb**	**20 51 35.0**	**-0.3**
NVR				S	**Sb**	**20 51 47.1**	**-0.4**
FNA	**Florina**	**1.10**	**242**	*e*PN	**Pb**	**20 51 38.3**	**-0.4**
FNA				*e*SN	**Sn**	**20 51 54.1**	**-0.5**
FNA	**Florina**	**1.10**	**242**	*e*Pn	**Pb**	**20 51 38.3**	**-0.4**
FNA				*e*Sn	**Sn**	**20 51 54.1**	**-0.5**
PLG	**Polygyros**	**1.11**	**147**	P	**Pb**	**20 51 38.0**	**-0.7**
PLG				S	**Sg**	**20 51 53.1**	**+0.2**
PLG	**Polygyros**	**1.11**	**147**	*e*PN	**Pb**	**20 51 38.2**	**-0.5**
PLG				*e*SN	**Sg**	**20 51 53.1**	**+0.2**
PLG	**Polygyros**	**1.11**	**147**	P	**Pb**	**20 51 38.0**	**-0.7**
PLG				S	**Sg**	**20 51 53.1**	**+0.2**
LIT	**Litokhoron**	**1.21**	**186**	*e*PN	**Pg**	**20 51 40.5**	**-0.1**
LIT	**Litokhoron**	**1.21**	**186**	*e*Pn	**Pg**	**20 51 40.5**	**-0.1**
OUR	**Ouranopolis**	**1.40**	**134**	P	**Pg**	**20 51 43.8**	**-0.3**
OUR				S	**Sg**	**20 52 02.9**	**+0.7**
OUR	**Ouranopolis**	**1.40**	**134**	P	**Pg**	**20 51 43.8**	**-0.3**
OUR				S	**Sg**	**20 52 02.9**	**+0.7**
RDO	**Rodhopi**	**2.17**	**93**	*e*PB	**Pn**	**20 51 54.7**	**+0.9**
RDO	**Rodhopi**	**2.17**	**93**	*e*Pb	**Pn**	**20 51 54.7**	**+0.9**

*BJI **16** 21:16:01.6,38.62N×73.40E,h118km, mb4.1/4*
*MOS **16** 21:16:02.5±0.7,38.47N×73.37E,h126km,mb4.1/17, Error ellipse: s-maj=8.8km s-min=4.8km az=91.9*
*IDC **16** 21:16:02.3±3.9,38.40N×73.43E,h113km±29km,mb3.7/13, mb1 3.8/18,mb1mx3.6/33,mbtmp3.7/18, Error ellipse: s-maj=32.6km s-min=16.1km az=164.0*
*NEIC **16** 21:16:03.1±0.7,38.48N×73.41E,h118km±6km,mb4.5/13, Error ellipse: s-maj=9.0km s-min=7.2km az=128.0*
*NNC **16** 21:16:04.7±6.2,39.10N×73.29E,h0km,mb4.5,mpv4.0, Error ellipse: s-maj=54.5km s-min=31.0km az=9.0*

ISC 16 21:16:03.2±0.6,**38.46N**±0.05×**73.40E**±0.05,**h121**km±5km, **n161**,σ1**s17**/162,**mb4.0**/22,**13C-7D,Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**2.26**	**61**	P	Pn	21 16 34.9	-5.1
KSH				S	Sn	21 16 59.6	-8.7
KSH				smax	smax		
	comp=N,10µm,0.6s						
KSH				smax	smax		
	comp=E,5µm,0.6s						
AML	**Almayashu**	**3.67**	**3**	*i* PN	**Pn**	**21 16 58.9**	**+0.3**
AML	**Almayashu**	**3.67**	**3**	P	**Pn**	**21 16 58.9**	**+0.3**
	SNR=149						
UCH	**Uchtor**	**3.85**	**12**	*i* PN	**Pn**	**21 17 01.7**	**+0.5**
UCH	**Uchtor**	**3.85**	**12**	P	**Pn**	**21 17 01.7**	**+0.5**
	SNR=10						
KZA	**Kyzart**	**3.88**	**21**	*i* PN	**Pn**	**21 17 01.5**	**+0.1**
KZA	**Kyzart**	**3.88**	**21**	P	**Pn**	**21 17 01.5**	**+0.1**
	SNR=38						
EKS2	**Erkin-Say**	**4.20**	**4**	*e*PN	**Pn**	**21 17 06.2**	**+0.7**
EKS2	**Erkin-Say**	**4.20**	**4**	*e*Pn	**Pn**	**21 17 06.2**	**+0.7**
EKS2				*e*Sn	**Sn**	**21 17 51.9**	**-2.0**
EKS2	**Erkin-Say**	**4.20**	**4**	P	**Pn**	**21 17 06.3**	**+0.8**
	SNR=33						
AAK	**Ala-Archa**	**4.25**	**11**	PN	**Pn**	**21 17 07.2**	**+1.1**
AAK				S	**Sn**	**21 17 55.5**	**+0.5**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AAK				smax	smax		
	comp=N,9.0nm,0.3s						
AAK	**Ala-Archa**	**4.25**	**11**	*e*Pn	**Pn**	**21 17 06.5**	**+0.3**
AAK				*e*Sn	**Sn**	**21 17 54.2**	**-0.8**
AAK	**Ala-Archa**	**4.25**	**11**	P	**Pn**	**21 17 06.8**	**+0.7**
	SNR=14						
AAK	**Ala-Archa**	**4.25**	**11**	P	**Pn**	**21 17 07.2**	**+1.1**
	comp=N,4.1nm,0.3s,baz=141,slow=6.3,SNR=13						
AAK				S	**Sn**	**21 17 55.5**	**+0.5**
	comp=N,9.3nm,0.3s,baz=322,slow=19,SNR=34						
KBK	**Karagaybulak**	**4.35**	**15**	*i* PN	**Pn**	**21 17 08.3**	**+0.8**
KBK	**Karagaybulak**	**4.35**	**15**	P	**Pn**	**21 17 08.3**	**+0.8**
	SNR=16						
ULHL	**Ulahol**	**4.36**	**29**	*i* PN	**Pn**	**21 17 08.3**	**+0.7**
ULHL	**Ulahol**	**4.36**	**29**	P	**Pn**	**21 17 08.3**	**+0.7**
	SNR=50						
CHMS	**Chumysh**	**4.64**	**12**	*i* PN	**Pn**	**21 17 11.9**	**+0.6**
CHMS	**Chumysh**	**4.64**	**12**	P	**Pn**	**21 17 11.9**	**+0.6**
	SNR=12						
TKM2	**Tokmak 2**	**4.75**	**20**	⇓Pn	**Pn**	**21 17 13.3**	**+0.3**
	comp=N,6.5nm,0.4s						
TKM2				⇓Sn	**Sn**	**21 18 05.8**	**-1.4**
	comp=N,48nm,0.7s						
TKM2	**Tokmak 2**	**4.75**	**20**	*i* PN	**Pn**	**21 17 13.8**	**+0.9**
TKM2	**Tokmak 2**	**4.75**	**20**	*e*Pn	**Pn**	**21 17 13.4**	**+0.4**
TKM2				*e*Sn	Sn	21 17 60.0	-7.2
TKM2	**Tokmak 2**	**4.75**	**20**	P	**Pn**	**21 17 13.8**	**+0.9**
	SNR=8.4						
CEP	**Cherat**	**4.79**	**195**	P	**Pn**	**21 17 13.3**	**-0.1**
CHCP	**Chirah Chowk**	**4.80**	**181**	P	**Pn**	**21 17 14.0**	**+0.6**
USP	**Ospenovka**	**4.87**	**9**	*i* PN	**Pn**	**21 17 15.7**	**+1.3**
USP	**Ospenovka**	**4.87**	**9**	P	**Pn**	**21 17 15.7**	**+1.3**
	SNR=6.5						
KK31	**Karatay Array**	**5.13**	**336**	⇑Pn	**Pn**	**21 17 17.7**	**-0.1**
	comp=N,18nm,0.3s,baz=130,slow=12,SNR=486						
KK31				⇓Pg	Pn	21 17 24.3	+6.5
	comp=N,7.0nm,0.2s,baz=134,slow=14,SNR=9.5						
KK31				Sn	**Sn**	**21 18 13.1**	**-2.9**
	comp=N,28nm,0.3s,baz=140,slow=23,SNR=18						
KKAR	**Karatay Array**	**5.13**	**336**	*e*PN	**Pn**	**21 17 17.6**	**-0.2**
KKAR				pmax	pmax		
	comp=Z,57nm,0.3s						
KKAR	**Karatay Array**	**5.13**	**336**	*e*Pn	**Pn**	**21 17 17.6**	**-0.2**
	comp=Z,58nm,0.3s						
KKAR				*e*Sn	**Sn**	**21 18 11.2**	**-4.7**
KBL	**Kabul**	**5.26**	**223**	*e*PN	**Pn**	**21 17 19.3**	**-0.5**
KBL				pmax	pmax		
	comp=Z,35nm,0.7s						
KBL	**Kabul**	**5.26**	**223**	*e*Pn	**Pn**	**21 17 19.3**	**-0.5**
	comp=Z,35nm,0.7s						
KBL				*e*Sn	**Sn**	**21 18 17.8**	**-1.7**
KNDC	**Almaty**	**5.46**	**28**	⇑Pn	**Pn**	**21 17 23.9**	**+1.5**
	comp=Z,9.5nm,0.5s						
KNDC				⇓Lg	Lg	21 18 42.7	
	comp=Z,65nm,0.8s						
THW	**Thamme Wali**	**5.82**	**194**	P	**Pn**	**21 17 26.0**	**-1.2**
DHRM	**DHARAMSHALA**	**6.63**	**158**	*e*PKP	Pn	21 17 33.0	-5.4
DHRM				*e*S	Sn	21 18 44.0	-8.7
DHRM				AML	AML	21 18 50.3	
	comp=E,240nm,0.3s						
DHRM				AML	AML	21 18 51.9	
	comp=N,242nm,0.4s						
PONG	**Pong**	**6.82**	**161**	*e*S	Sn	21 18 45.5	-11
SDNR	**Sundarnagar**	**7.54**	**156**	*e*PKP4	**Pn**	**21 17 50.0**	**-0.4**
SDNR				*e*S	Sn	21 19 04.0	-10
SMLA	**Simla**	**7.94**	**156**	*i* P	Pn	21 17 52.5	-3.3
SMLA				*i* S	Sn	21 19 13.1	-11
SMLA				AML	AML	21 19 20.4	
	comp=N,214nm,0.3s						
SMLA				AML	AML	21 19 21.2	
	comp=E,162nm,0.3s						
DDI	**Dehra Dun**	**8.98**	**153**	*e*S	Sn	21 19 36.9	-13
DDI				AML	AML	21 19 45.5	
	comp=N,522nm,0.2s						
DDI				AML	AML	21 19 45.7	
	comp=E,432nm,0.3s						
MK31	**Makanchi Array**	**10.58**	**35**	Pn	**Pn**	**21 18 30.4**	**-1.0**
	comp=E,1.3nm,0.5s,baz=208,slow=12,SNR=16						
MK31	**Makanchi Array**	**10.58**	**35**	*e*P	**Pn**	**21 18 29.5**	**-1.9**
MK31	**Makanchi Array**	**10.58**	**35**	*e*Pn	**Pn**	**21 18 29.5**	**-1.9**
MK31				Sn	Sn	21 20 43.7	+16
MKAR	**Makanchi Array**	**10.58**	**35**	P	**Pn**	**21 18 30.8**	**-0.6**
MKAR	**Makanchi Array**	**10.58**	**35**	P	**Pn**	**21 18 30.8**	**-0.6**
	comp=E,0.3nm,0.3s,baz=210,slow=16,SNR=19						
WMQ	**Urumqi**	**12.03**	**59**	P	**Pn**	**21 18 47.9**	**-2.7**
WMQ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KUR17	**Kurchatov Arra**	**12.69**	**15**	⇑Pn	**Pn**	**21 18 57.6**	**-1.5**
	comp=Z,1.0nm,0.7s						
KUR16	**Kurchatov Arra**	**12.69**	**15**	⇑Lg	Lg	21 22 29.5	
	comp=Z,2.3nm,1.0s						
KURBB	**Kurchatov Arra**	**12.69**	**15**	P	**Pn**	**21 18 56.5**	**-2.6**
	comp=Z,0.0nm,0.3s,baz=204,slow=12,SNR=4.9						
KURK	**Kurchatov**	**12.80**	**15**	⇑Pn	**Pn**	**21 18 58.7**	**-1.9**
	comp=Z,2.4nm,0.8s						
KURK				⇓Lg	Lg	21 22 28.6	
	comp=Z,9.2nm,1.4s						
KURK	**Kurchatov**	**12.80**	**15**	*e*P	**Pn**	**21 19 01.2**	**+0.7**
KURK				*e*		21 21 23.4	
KURK	**Kurchatov**	**12.80**	**15**	*e*Pn	**Pn**	**21 19 01.2**	**+0.7**
KURK				*e*Sn	**Sn**	**21 21 23.4**	**+2.1**
DANN	**Dangsing**	**13.28**	**136**	*e*P	Pn	21 19 00.4	-6.8
	comp=Z,26nm,0.3s						
DANN				*e*S	Sn	21 21 17.6	-16
KOLN	**Koldanda**	**13.65**	**138**	*e*P	Pn	21 19 05.6	-6.4
	comp=Z,13nm,0.3s						
VOSK	**Vostochnaya**	**14.36**	**354**	⇓Pn	**Pn**	**21 19 20.8**	**+0.1**
	comp=Z,3.5nm,0.6s						
AB31	**Akbulak array**	**14.49**	**322**	Pn	**Pn**	**21 19 20.3**	**-2.0**
	comp=Z,4.8nm,0.3s,baz=130,slow=13,SNR=179						
AB31				⇑Sn	Sn	21 21 51.9	-10
	comp=Z,3.5nm,0.6s,baz=126,slow=25,SNR=8.0						
ABKAR	**Akbulak array**	**14.49**	**322**	*e*Pn	**Pn**	**21 19 20.2**	**-2.1**
	comp=Z,11nm,0.4s						
ABKAR				*e*Sn	Sn	21 21 47.9	-14
KKN	**Kakani**	**14.55**	**133**	*e*P	Pn	21 19 16.1	-7.4
	comp=Z,19nm,0.5s						
DMN	**Daman**	**14.60**	**134**	*e*P	Pn	21 19 17.2	-6.9
	comp=Z,10nm,0.3s						
BVAO	**Borovoye Array**	**14.71**	**353**	⇑Pn	**P**	**21 19 28.1**	**+0.1**
	comp=Z,8.3nm,0.5s,baz=165,slow=12,SNR=92						
BVAR	**Borovoye Array**	**14.71**	**353**	P	**Pn**	**21 19 24.0**	**-1.1**
BVAR				S	Sn	21 22 00.0	-7.6
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
BVAR	**Borovoye Array**	**14.71**	**353**	P	**Pn**	**21 19 24.0**	**-1.1**
	comp=Z,3.7nm,0.3s,baz=153,slow=9.7,SNR=60						
BVAR				S	Sn	21 22 00.0	-7.6
	comp=Z,0.2nm,0.3s,baz=166,slow=25,SNR=4.7						
BRVK	**Borovoye**	**14.76**	**353**	⇓Pn	**P**	**21 19 28.3**	**-0.1**
	comp=Z,28nm,0.8s						
BRVK	**Borovoye**	**14.76**	**353**	*ce*P	**Pn**	**21 19 26.1**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRVK	**Borovoye**	**14.76**	**353**	*e*Pn	**Pn**	**21 19 25.0**	**-0.6**
	comp=Z,16nm,0.6s						
PKIN	**Phulchoki**	**14.78**	**134**	*e*P	Pn	21 19 20.1	-6.4
	comp=Z,14nm,0.3s						
PKI	**Pulchoki**	**14.80**	**134**	*e*P	Pn	21 19 20.7	-6.0
	comp=Z,13nm,0.4s						
ZRNK	**Zerenda**	**14.81**	**350**	⇑Pn	**Pn**	**21 19 24.1**	**-2.2**
	comp=Z,13nm,0.6s						
GUN	**Gumba**	**14.81**	**132**	*e*P	Pn	21 19 20.3	-6.6
	comp=Z,12nm,0.3s						
BHPL	**Bhopal**	**15.56**	**166**	*e*4	x	21 22 15.8

HINF	**Hinteralfeld**	**48.07**	**304**	*e*P		**P**	**21 24 30.6**	**+0.3**
HINF	**Hinteralfeld**	**48.07**	**304**	*e*P		**P**	**21 24 30.6**	**+0.3**
HAU	**Haudompre**	**48.35**	**304**	*e*P		**P**	**21 24 32.8**	**+0.3**
HAU	**Haudompre**	**48.35**	**304**	*e*P		**P**	**21 24 32.8**	**+0.3**
HAU	**Haudompre**	**48.35**	**304**	*e*P		**P**	**21 24 32.8**	**+0.3**
LPG	**La Plagne**	**48.76**	**301**	*e*P		**P**	**21 24 35.6**	**-0.4**
LPG	**La Plagne**	**48.76**	**301**	*e*P		**P**	**21 24 35.6**	**-0.4**
LPG	**La Plagne**	**48.76**	**301**	*e*P		**P**	**21 24 35.6**	**-0.4**
LPL	**La Plagne**	**48.77**	**301**	*e*P		**P**	**21 24 36.5**	**+0.6**
	comp=Z,3.9nm,0.4s							
LPL	**La Plagne**	**48.77**	**301**	*e*P		**P**	**21 24 36.5**	**+0.6**
LPL					pmax	pmax		
	comp=Z,4.0nm,0.4s							
LPL	**La Plagne**	**48.77**	**301**	*e*P		**P**	**21 24 36.5**	**+0.6**
	comp=Z,3.9nm,0.4s							
SBF	**Sospel**	**48.78**	**299**	*e*P		**P**	**21 24 36.6**	**+0.8**
	comp=Z,23nm,0.9s							
SBF	**Sospel**	**48.78**	**299**	*e*P		**P**	**21 24 36.6**	**+0.8**
SBF					pmax	pmax		
	comp=Z,23nm,0.9s							
SBF	**Sospel**	**48.78**	**299**	*e*P		**P**	**21 24 36.6**	**+0.8**
	comp=Z,23nm,0.9s							
MEZF	**Maizieres J'vi**	**49.07**	**305**	*e*P		**P**	**21 24 38.8**	**+1.0**
MEZF	**Maizieres J'vi**	**49.07**	**305**	*e*P		**P**	**21 24 38.8**	**+1.0**
BAIF	**Baives**	**49.21**	**307**	*e*P		**P**	**21 24 39.9**	**+1.0**
BAIF	**Baives**	**49.21**	**307**	*e*P		**P**	**21 24 39.9**	**+1.0**
BAIF	**Baives**	**49.21**	**307**	*e*P		**P**	**21 24 39.9**	**+1.0**
SMF	**Signal de Mont**	**50.37**	**303**	*e*P		**P**	**21 24 47.9**	**+0.1**
SMF	**Signal de Mont**	**50.37**	**303**	*e*P		**P**	**21 24 47.9**	**+0.1**
SMF	**Signal de Mont**	**50.37**	**303**	*e*P		**P**	**21 24 47.9**	**+0.1**
AVF	**Avril sur Loir**	**50.65**	**303**	*e*P		**P**	**21 24 50.1**	**+0.3**
	comp=Z,5.1nm,0.6s							
AVF	**Avril sur Loir**	**50.65**	**303**	*e*P		**P**	**21 24 50.1**	**+0.3**
AVF					pmax	pmax		
	comp=Z,5.0nm,0.6s							
AVF	**Avril sur Loir**	**50.65**	**303**	*e*P		**P**	**21 24 50.1**	**+0.3**
	comp=Z,5.1nm,0.6s							
BGF	**Bois d'Agland**	**51.05**	**303**	*e*P		**P**	**21 24 53.3**	**+0.4**
BGF	**Bois d'Agland**	**51.05**	**303**	*e*P		**P**	**21 24 53.3**	**+0.4**
BGF	**Bois d'Agland**	**51.05**	**303**	*e*P		**P**	**21 24 53.3**	**+0.4**
TCF	**Toulx Ste Croi**	**51.55**	**303**	*e*P		**P**	**21 24 57.3**	**+0.7**
	comp=Z,3.4nm,0.6s							
TCF	**Toulx Ste Croi**	**51.55**	**303**	*e*P		**P**	**21 24 57.3**	**+0.7**
TCF					pmax	pmax		
	comp=Z,3.0nm,0.6s							
TCF	**Toulx Ste Croi**	**51.55**	**303**	*e*P		**P**	**21 24 57.3**	**+0.7**
	comp=Z,3.4nm,0.6s							
LDF	**La Druitiere**	**52.34**	**306**	*e*P		**P**	**21 25 02.4**	**0.0**
	comp=Z,6.3nm,0.7s							
LDF	**La Druitiere**	**52.34**	**306**	*e*P		**P**	**21 25 02.4**	**0.0**
LDF					pmax	pmax		
	comp=Z,6.0nm,0.7s							
LDF	**La Druitiere**	**52.34**	**306**	*e*P		**P**	**21 25 02.4**	**0.0**
	comp=Z,6.3nm,0.7s							
MTLF	**Montolieu**	**52.53**	**300**	*e*P		**P**	**21 25 04.4**	**+0.5**
MTLF	**Montolieu**	**52.53**	**300**	*e*P		**P**	**21 25 04.4**	**+0.5**
MTLF	**Montolieu**	**52.53**	**300**	*e*P		**P**	**21 25 04.4**	**+0.5**
GRR	**Gorron**	**52.87**	**306**	*e*P		**P**	**21 25 06.2**	**-0.1**
	comp=Z,4.2nm,0.6s							
GRR	**Gorron**	**52.87**	**306**	*e*P		**P**	**21 25 06.2**	**-0.1**
GRR					pmax	pmax		
	comp=Z,4.0nm,0.6s							
GRR	**Gorron**	**52.87**	**306**	*e*P		**P**	**21 25 06.2**	**-0.1**
	comp=Z,4.2nm,0.6s							
ROSF	**Rostrenen**	**54.40**	**307**	*e*P		**P**	**21 25 17.6**	**+0.1**
ROSF	**Rostrenen**	**54.40**	**307**	*e*P		**P**	**21 25 17.6**	**+0.1**
ROSF	**Rostrenen**	**54.40**	**307**	*e*P		**P**	**21 25 17.6**	**+0.1**
QUIF	**Quistinic**	**54.48**	**306**	*e*P		**P**	**21 25 18.0**	**0.0**
QUIF	**Quistinic**	**54.48**	**306**	*e*P		**P**	**21 25 18.0**	**0.0**
QUIF	**Quistinic**	**54.48**	**306**	*e*P		**P**	**21 25 18.0**	**0.0**
ETSF	**Etsaut**	**54.58**	**300**	*e*P		**P**	**21 25 19.5**	**+0.5**
ETSF	**Etsaut**	**54.58**	**300**	*e*P		**P**	**21 25 19.5**	**+0.5**
ETSF	**Etsaut**	**54.58**	**300**	*e*P		**P**	**21 25 19.5**	**+0.5**
BILL	**Bilibino**	**56.00**	**27**	*e*P		**P**	**21 25 28.7**	**+0.1**
BILL				*e**PP		**pP**	**21 26 00.1**	**+2.8**
BILL				*e*S		**S**	**21 33 11.6**	**+4.5**
BILL					pmax	pmax		
	comp=Z,2.0nm,1.2s							
ESDC	**Sonseca Array**	**58.24**	**298**	P		**P**	**21 25 45.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=54,slow=6.3,SNR=4.5							
TORD	**Torodi Ar. Bea**	**67.67**	**269**	P		**P**	**21 26 46.6**	**-0.9**
	comp=Z,4.4nm,0.5s,baz=48,slow=5.6,SNR=48							
TSUM	**Tsumeb**	**77.63**	**233**	P		**P**	**21 27 46.3**	**-0.1**
YKA	**Yellowknife Ar**	**79.18**	**4**	P		**P**	**21 27 54.6**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=347,slow=5.3,SNR=13							

IDC 16 21:29:59.6±2.5,**6°33S**×130°46E, **h0**km, **mb3.4**/1, **mb1 3.5**/3, **mb1mx3.2**/17, **mbtmp3.3**/3, **ML3.4**/2, **Error ellipse: s-maj=140.0km s-min=32.7km az=70.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.05**	**165**	Pn	Pn	21 33 19.2	-0.9
	0.2nm,0.3s,baz=348,slow=13,SNR=5.9						
WRA				Sn	Sn	21 35 42.6	-14
	0.5nm,0.3s,baz=338,slow=22,SNR=4.9						
ASAR	**Alice Springs**	**17.56**	**169**	P	Pn	21 34 06.5	+0.5
	0.1nm,0.3s,baz=346,slow=11,SNR=6.1						
ASAR				S	Sn	21 37 08.4	-14
	0.1nm,0.3s,baz=350,slow=26,SNR=4.4						
MKAR	**Makanchi Array**	**67.92**	**326**	P	P	21 41 00.2	0.0
	0.2nm,0.3s,baz=122,slow=7.6,SNR=4.3						

*ISCJB **16** 21:43:37.3±0.7, 40°.10N±0°.04×20°.37E±0°.05, h15km±5km, Error ellipse: s-maj=7.6km s-min=3.9km az=41.9*
*ATH **16** 21:43:37.9, 40°.05N×20°.48E, h18km±1km, MD3.0/8*
*THE **16** 21:43:37.4, 40°.08N×20°.44E, h11km±2km, ML2.0/5, Error ellipse: s-maj=2.0km s-min=0.6km az=194.0*
*CSEM **16** 21:43:37.3±0.2, 40°.09N×20°.43E, h8km, ML2.0/5, Error ellipse: s-maj=5.7km s-min=3.2km az=140.0*
*TIR **16** 21:43:38.8±7.1, 39°.90N×20°.42E, h2km±467km*

ISC 16 21:43:37.8±0.9, **40°.07N**±0°.03×**20°.46E**±0°.02, **h11**km±8km, **n34**, σ0°**61**/61, **Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSK	**Leskovik**	**0.14**	**53**	*e*PG	**Pg**	**21 43 40.7**	**-0.5**
LSK				*i* SG	Sg	21 43 53.7	+10
LSK	**Leskovik**	**0.14**	**53**	*e*Pg	**Pg**	**21 43 40.7**	**-0.5**
	SNR=9.0						
SRN	**Sarande**	**0.40**	**242**	*e*PG	**Pg**	**21 43 45.0**	**-0.6**
SRN				*i* SG	**Sg**	**21 43 51.5**	**+0.7**
SRN	**Sarande**	**0.40**	**242**	P	**Pg**	**21 43 45.0**	**-0.6**
SRN				S	**Sg**	**21 43 51.6**	**+0.7**
SRN	**Sarande**	**0.40**	**242**	P	**Pg**	**21 43 45.0**	**-0.6**
SRN				*i* Sg	**Sg**	**21 43 51.5**	**+0.7**
	SNR=9.0						
JAN	**Janina**	**0.51**	**143**	P	**Pg**	**21 43 47.1**	**-0.6**
JAN				S	**Sb**	**21 43 55.8**	**-0.3**
JAN	**Janina**	**0.51**	**143**	*e*PB	**Pg**	**21 43 47.2**	**-0.5**
JAN				*e*SB	**Sg**	**21 43 54.8**	**+0.3**
JAN	**Janina**	**0.51**	**143**	*e*Pb	**Pg**	**21 43 47.2**	**-0.5**
JAN				*e*Sb	**Sg**	**21 43 54.8**	**+0.3**
JAN				S	**Sb**	**21 43 55.8**	**-0.3**
IGT	**Igoumenitsa**	**0.54**	**190**	P	**Pg**	**21 43 47.6**	**-0.7**
IGT				S	**Sg**	**21 43 56.2**	**+0.8**
IGT	**Igoumenitsa**	**0.54**	**190**	P	**Pg**	**21 43 47.6**	**-0.7**
IGT				S	**Sg**	**21 43 56.2**	**+0.8**
NEST	**Nestorio**	**0.57**	**52**	P	**Pg**	**21 43 48.3**	**-0.7**
NEST				S	**Sg**	**21 43 56.8**	**+0.2**
NEST	**Nestorio**	**0.57**	**52**	P	**Pg**	**21 43 48.3**	**-0.7**
NEST				S	**Sg**	**21 43 56.8**	**+0.2**
KEK	**Kerkira**	**0.62**	**235**	P	**Pg**	**21 43 48.5**	**-1.2**
KEK	**Kerkira**	**0.62**	**235**	*e*PN	**Pg**	**21 43 50.1**	**+0.4**
KEK				*e*SN	**Sb**	**21 43 59.2**	**0.0**
KEK	**Kerkira**	**0.62**	**235**	P	**Pg**	**21 43 48.5**	**-1.2**
KEK	**Kerkira**	**0.62**	**235**	*e*Pn	**Pg**	**21 43 50.1**	**+0.4**
KEK				*e*Sn	**Sb**	**21 43 59.2**	**0.0**
VLO	**Vlora**	**0.84**	**299**	*e*PG	Pn	21 44 04.7	+9.3
FNA	**Florina**	**1.00**	**44**	P	**Pg**	**21 43 56.0**	**-1.1**
FNA				S	**Sb**	**21 44 11.2**	**+0.8**
FNA	**Florina**	**1.00**	**44**	*e*PB	**Pg**	**21 43 56.2**	**-0.9**
FNA				*e*SN	**Sb**	**21 44 11.5**	**+1.1**
FNA	**Florina**	**1.00**	**44**	*e*Pb	**Pg**	**21 43 56.2**	**-0.9**
FNA				S	**Sb**	**21 44 11.2**	**+0.8**
KZN	**Kozani**	**1.04**	**76**	*e*PN	**Pg**	**21 43 57.6**	**-0.1**
KZN				*e*SN	**Sg**	**21 44 11.0**	**-0.2**
KZN	**Kozani**	**1.04**	**76**	*e*Pn	**Pg**	**21 43 57.6**	**-0.1**
KZN				*e*Sn	**Sg**	**21 44 11.0**	**-0.2**
LKD2	**Lefkada island**	**1.28**	**173**	P	**Pn**	**21 44 00.7**	**-0.9**
LKD2	**Lefkada island**	**1.28**	**173**	*e*PN	**Pn**	**21 44 01.7**	**+0.1**
LKD2				*e*SN	**Sb**	**21 44 18.8**	**+0.4**
LKD2	**Lefkada island**	**1.28**	**173**	P	**Pn**	**21 44 00.7**	**-0.9**
LKD2	**Lefkada island**	**1.28**	**173**	*e*Pn	**Pn**	**21 44 01.7**	**+0.1**
LKD2				*e*Sn	**Sb**	**21 44 18.8**	**+0.4**
THL	**Klokotos Trika**	**1.30**	**112**	*e*PN	**Pn**	**21 44 02.0**	**+0.2**
THL				*e*SN	**Sg**	**21 44 20.1**	**+0.5**
THL	**Klokotos Trika**	**1.30**	**112**	*e*Pn	**Pn**	**21 44 02.0**	**+0.2**
THL				*e*Sn	**Sg**	**21 44 20.1**	**+0.5**
EVR	**Evrytania**	**1.55**	**137**	*e*PN	**Pb**	**21 44 07.0**	**+0.4**
EVR				*e*SN	**Sb**	**21 44 26.8**	**+0.5**
EVR	**Evrytania**	**1.55**	**137**	*e*Pn	**Pb**	**21 44 07.0**	**+0.4**
EVR				*e*Sn	**Sb**	**21 44 26.8**	**+0.5**
LIT	**Litokhoron**	**1.56**	**88**	*e*PN	**Pb**	**21 44 06.6**	**-0.1**
LIT				*e*SN	**Sb**	**21 44 27.3**	**+0.9**
LIT	**Litokhoron**	**1.56**	**88**	*e*Pn	**Pb**	**21 44 06.6**	**-0.1**
LIT				*e*Sn	**Sb**	**21 44 27.3**	**+0.9**
AGG	**Agios Georgios**	**1.79**	**125**	*e*PN	**Pb**	**21 44 10.1**	**-0.4**
AGG				*e*SN	**Sb**	**21 44 33.1**	**+0.2**
AGG	**Agios Georgios**	**1.79**	**125**	*e*Pn	**Pb**	**21 44 10.1**	**-0.4**
AGG				*e*Sn	**Sb**	**21 44 33.1**	**+0.2**

IDC 16 21:46:50.6±11.0, **7°.34S**×**126°.33E**, **h0**km, **mb3.9**/1, **mb1 3.7**/3, **mb1mx3.3**/18, **mbtmp3.5**/3, **ML3.0**/2, **MS3.5**/1, **Ms1 3.5**/1, **ms1mx3.4**/25, **Error ellipse: s-maj=270.7km s-min=157.0km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.75**	**149**	Pn	Pn	21 50 20.3	-0.4
	0.1nm,0.3s,baz=323,slow=14,SNR=2.7						
ASAR	**Alice Springs**	**17.79**	**157**	P	P	21 51 00.5	-0.3
	0.1nm,0.3s,baz=344,slow=12,SNR=10						
ASAR				LR	LR	21 57 41.4	
	comp=Z,147nm,21.2s,baz=265,slow=37						
STKA	**Stephens Creek**	**28.27**	**152**	P	P	21 52 45.6	-0.1
	0.6nm,0.5s,baz=319,slow=11,SNR=3.7						

IDC 16 21:59:28.9±2.2, **0°.40S**×**133°.07E**, **h0**km, **mb3.8**/3, **mb1 4.0**/4, **mb1mx3.6**/20, **mbtmp3.8**/4, **ML3.8**/1, **MS4.0**/1, **Ms1 4.0**/1, **ms1mx3.6**/30, **Error ellipse: s-maj=118.7km s-min=23.9km az=72.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**19.46**	**176**	P	P	22 03 57.3	-0.1
	0.3nm,0.3s,baz=355,slow=11,SNR=12						
ASAR	**Alice Springs**	**23.14**	**178**	P	P	22 04 37.4	+0.4
	2.0nm,0.4s,baz=355,slow=12,SNR=33						
STKA	**Stephens Creek**	**32.33**	**166**	P	P	22 05 59.6	-0.3
	0.6nm,0.4s,baz=353,slow=11,SNR=4.6						
ASAJ	**Asahikawa**	**45.13**	**10**	LR	LR	22 25 21.3	
	comp=Z,181nm,18.8s,baz=183,slow=34						
MKAR	**Makanchi Array**	**64.57**	**324**	P	P	22 10 08.0	-0.1
	0.3nm,0.8s,baz=124,slow=7.6,SNR=3.2						

*ATH **16** 22:11:53.6, 39°.38N×28°.06E, h8km±1km, MD3.6/10*
*DDA **16** 22:11:55.1, 39°.29N×27°.94E, h26km, MD3.3*
*ISCJB **16** 22:11:55.5±0.4, 39°.28N±0°.01×27°.94E±0°.02, h5km±3km, Error ellipse: s-maj=2.4km s-min=2.1km az=149.5*
*ISK **16** 22:11:55.2, 39°.27N×27°.92E, h8km, MD3.4*
*CSEM **16** 22:11:55.8±0.1, 39°.28N×27°.94E, h5km, MD3.4, Error ellipse: s-maj=1.4km s-min=1.3km az=72.0*
*THE **16** 22:11:56.0, 39°.22N×27°.96E, h0km±1km, ML3.2/3, Error ellipse: s-maj=2.7km s-min=1.2km az=39.0*

ISC 16 22:11:55.3±1.1, **39°.29N**±0°.01×**27°.95E**±0°.01, **h6**km±9km, **n171**, σ0°**76**/234, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BALB	**Balikesir**	**0.36**	**352**	PG	**Pb**	**22 12 03.4**	**-0.7**
BALB				SG	**Sb**	**22 12 09.2**	**-0.9**
BALB	**Balikesir**	**0.36**	**352**	*i* Pg	**Pb**	**22 12 03.4**	**-0.7**
BALB				*i* Sg	**Sb**	**22 12 09.2**	**-0.9**
AKHS	**Akhisar**	**0.42**	**195**	*i* P	**Pb**	**22 12 03.9**	**-1.2**
AKHS				*i* S	**Sb**	**22 12 10.3**	**-1.4**
AKHS	**Akhisar**	**0.42**	**195**	*i* P	**Pb**	**22 12 03.9**	**-1.2**
AKHS				*i* S	**Sb**	**22 12 10.3**	**-1.4**
DURS	**Dursunbey**	**0.52**	**52**	*i* P	**Pg**	**22 12 05.6**	**+0.3**
DURS				*i* S	**Sb**	**22 12 13.7**	**-0.9**
DURS	**Dursunbey**	**0.52**	**52**	*i* P	**Pg**	**22 12 05.6**	**+0.3**
DURS				*i* S	**Sb**	**22 12 13.7**	**-0.9**
BALY	**Balya**	**0.52**	**331**	*i* P	**Pb**	**22 12 06.0**	**-0.9**
BALY				*i* S	**Sb**	**22 12 13.2**	**-1.6**
BALY	**Balya**	**0.52**	**331**	*i* P	**Pb**	**22 12 06.0**	**-0.9**
BALY				*i* S	**Sb**	**22 12 13.2**	**-1.6**
DST	**Dursunbey**	**0.61**	**58**	PG	**Pg**	**22 12 07.5**	**+0.4**
DST				SG	**Sb**	**22 12 17.2**	**-0.1**
DST	**Dursunbey**	**0.61**	**58**	*i* Pg	**Pg**	**22 12 07.5**	**+0.4**
DST				*i* Sg	**Sb**	**22 12 17.2**	**-0.1**
DEMI	**Demirci**	**0.64**	**112**	*i* P	**Pb**	**22 12 08.4**	**-0.6**
DEMI				*i* S	**Sb**	**22 12 17.7**	**-0.6**
DEMI	**Demirci**	**0.64**	**112**	*i* P	**Pb**	**22 12 08.4**	**-0.6**
DEMI				*i* S	**Sb**	**22 12 17.7**	**-0.6**
GONE	**Gonen-Balikesi**	**0.79**	**345**	*e*PG	**Pb**	**22 12 10.6**	**-0.8**
GONE				*e*SG	**Sb**	**22 12 22.2**	**-0.2**
GONE	**Gonen-Balikesi**	**0.79**	**345**	*e*Pg	**Pb**	**22 12 10.6**	**-0.8**
GONE				*e*Sg	**Sb**	**22 12 22.2**	**-0.2**
MANT	**Manisa**	**0.93**	**149**	*i* P	**Pb**	**22 12 13.7**	**-0.2**
MANT				*i* S	**Sb**	**22 12 25.7**	**-0.8**
MANT	**Manisa**	**0.93**	**149**	*i* P	**Pb**	**22 12 13.7**	**-0.2**
MANT				*i* S	**Sb**	**22 12 25.7**	**-0.8**
KULA	**Kula-Manisa**	**0.95**	**144**	*e*PG	**Pb**	**22 12 13.9**	**-0.4**
KULA	**Kula-Manisa**	**0.95**	**144**	P	**Pb**	**22 12 13.9**	**-0.4**
KULA				S	**Sg**	**22 12 26.1**	**+0.2**
KULA	**Kula-Manisa**	**0.95**	**144**	P	**Pb**	**22 12 13.9**	**-0.4**
KULA				S	**Sg**	**22 12 26.1**	**+0.2**
AYVA	**Ayvalik**	**0.98**	**272**	*i* P	**Pb**	**22 12 14.4**	**-0.3**
AYVA				*i* S	**Sn**	**22 12 28.5**	**-1.2**
AYVA	**Ayvalik**	**0.98**	**272**	*i* P	**Pb**	**22 12 14.4**	**-0.3**
AYVA				*i* S	**Sn**	**22 12 28.5**	**-1.2**
KCTX	**Karacabey (Bur**	**1.03**	**18**	*e*PG	**Pb**	**22 12 15.5**	**-0.1**
KCTX				*e*SG	**Sn**	**22 12 30.6**	**-0.5**
KCTX	**Karacabey (Bur**	**1.03**	**18**	*e*Pg	**Pb**	**22 12 15.5**	**-0.1**
KCTX				*e*Sg	**Sn**	**22 12 30.6**	**-0.5**
IZM	**Izmir**	**1.03**	**211**	*e*PG	**Pb**	**22 12 15.1**	**-0.6**
IZM	**Izmir**	**1.03**	**211**	*e*Pg	**Pb**	**22 12 15.1**	**-0.6**
ORLT	**Orhaneli**	**1.05**	**44**	*e*PN	**Pn**	**22 12 16.8**	**0.0**
ORLT	**Orhaneli**	**1.05**	**44**	*e*Pn	**Pn**	**22 12 16.8**	**0.0**
BNT	**Bandirma**	**1.07**	**359**	*e*PG	**Pb**	**22 12 16.1**	**-0.1**
BNT	**Bandirma**	**1.07**	**359**	*e*Pg	**Pb**	**22 12 16.2**	**-0.1**
BLCB	**Balcova**	**1.14**	**219**	*e*PN	**Pg**	**22 12 16.7**	**-0.6**
BLCB	**Balcova**	**1.14**	**219**	*e*Pn	**Pg**	**22 12 16.7**	**-0.6**
TVSB	**Tavsanli**	**1.18**	**82**	*e*PN	**Pn**	**22 12 18.8**	**+0.2**
TVSB	**Tavsanli**	**1.18**	**82**	*e*Pn	**Pn**	**22 12 18.8**	**+0.2**
GDZ	**Gediz**	**1.21**	**99**	*i* P	**Pn**	**22 12 18.8**	**-0.1**
GDZ				*i* S	**Sn**	**22 12 35.2**	**-0.5**
GDZ	**Gediz**	**1.21**	**99**	*i* P	**Pn**	**22 12 18.8**	**-0.1**
GDZ				*i* S	**Sn**	**22 12 35.2**	**-0.5**
KRBG	**Karabiga-Canak**	**1.22**	**336**	*e*PN	**Pn**	**22 12 18.6**	**-0.3**
KRBG	**Karabiga-Canak**	**1.22**	**336**	*e*Pn	**Pn**	**22 12 18.6**	**-0.3**
ULDT	**Uludag**	**1.25**	**47**	*i* P	**Pn**	**22 12 19.9**	**+0.3**
ULDT				*i* S	**Sb**	**22 12 36.2**	**+0.2**
ULDT	**Uludag**	**1.25**	**47**	*i* P	**Pn**	**22 12 19.9**	**+0.3**
ULDT				*i* S	**Sb**	**22 12 36.2**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.30**	**33**	*e*PN	**Pb**	**22 12 20.3**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.30**	**33**	*e*Pn	**Pb**	**22 12 20.3**	**+0.1**
PRK	**Paraskevi**	**1.30**	**269**	P	**Pb**	**22 12 20.1**	**-0.1**
PRK				S	**Sn**	**22 12 38.6**	**+0.8**
PRK	**Paraskevi**	**1.30**	**269**	*e*PB	**Pb**	**22 12 20.2**	**0.0**
PRK				*e*SB	**Sn**	**22 12 38.8**	**+1.0**
PRK	**Paraskevi**	**1.30**	**269**	P	**Pb**	**22 12 20.1**	**-0.1**
PRK				*e*Sb	**Sn**	**22 12 38.8**	**+1.0**
EZN	**Ezine**	**1.37**	**294**	*e*PN	**Pb**	**22 12 20.9**	**-0.4**
EZN	**Ezine**	**1.37**	**294**	*e*Pn	**Pb**	**22 12 20.9**	**-0.4**
LPK	**Lapseki**	**1.42**	**320**	*e*PN	**Pb**	**22 12 22.0**	**-0.2**
LPK	**Lapseki**	**1.42**	**320**	*e*Pn	**Pb**	**22 12 22.0**	**-0.2**
ARMT	**Armutlu**	**1.46**	**28**	*e*PN	**Pn**	**22 12 22.4**	**+0.1**
ARMT	**Armutlu**	**1.46**	**28**	*e*Pn	**Pn**	**22 12 22.4**	**+0.1**
GEMT	**Gemlik**	**1.49**	**39**	*e*PN	**Pb**	**22 12 23.1**	**-0.4**
GEMT	**Gemlik**	**1.49**	**39**	*e*Pn	**Pb**	**22 12 23.1**	**-0.4**
KHAL	**Karahalli**	**1.51**	**127**	*i* P	**Pb**	**22 12 23.3**	**-0.6**
KHAL				*i* S	**Sg**	**22 12 43.6**	**-0.4**
KHAL	**Karahalli**	**1.51**	**127**	*i* P	**Pb**	**22 12 23.3**	**-0.6**
KHAL				*i* S	**Sg**	**22 12 43.6**	**-0.4**
RKY	**Sarkoy-Tekirda**	**1.52**	**337**	*e*PN	**Pb**	**22 12 23.4**	**-0.6**
RKY	**Sarkoy-Tekirda**	**1.52**	**337**	*e*Pn	**Pb**	**22 12 23.4**	**-0.6**
SART	**Tekirdag**	**1.52**	**337**	*i* P	**Pb**	**22 12 23.4**	**-0.6**
SART				*i* S	**Sn**	**22 12 43.0**	**-0.3**
SART	**Tekirdag**	**1.52**	**337**	*i* P	**Pb**	**22 12 23.4**	**-0.6**
SART				*i* S	**Sn**	**22 12 43.0**	**-0.3**
KHL	**Karahalli**	**1.56**	**127**	*e*PN	**Pb**	**22 12 24.5**	**-0.2**
KHL	**Karahalli**	**1.56**	**127**	*e*Pn	**Pb**	**22 12 24.5**	**-0.2**
BOZC	**Bozcaada**	**1.57**	**291**	*i* P	**Pb**	**22 12 23.9**	**-0.8**
BOZC				*i* S	**Sg**	**22 12 44.9**	**-0.8**
MFT	**Murefte**	**1.58**	**341**	*e*PN	**Pg**	**22 12 25.1**	**-0.6**
MFT	**Murefte**	**1.58**	**341**	*e*Pn	**Pg**	**22 12 25.1**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.59**	**315**	*e*PN	**Pb**	**22 12 24.4**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.59**	**315**	*e*Pn	**Pb**	**22 12 24.5**	**-0.6**
AYDN	**Tasoluk**	**1.62**	**182**	*i* P	**Pn**	**22 12 24.3**	**-0.2**
AYDN				*i* S	**Sn**	**22 12 45.2**	**-0.6**
AYDN	**Tasoluk**	**1.62**	**182**	*i* P	**Pn**	**22 12 24.3**	**-0.2**
AYDN				*i* S	**Sn**	**22 12 45.2**	**-0.6**
SIGR	**SIGRI**	**1.63**	**268**	P	**Pn**	**22 12 24.6**	**+0.1**
SIGR				S	**Sg**	**22 12 47.9**	**+0.3**
SIGR	**SIGRI**	**1.63**	**268**	P	**Pn**	**22 12 24.6**	**+0.1**
SIGR				S	**Sg**	**22 12 47.9**	**+0.3**
GCAM	**G?zelcaml?**	**1.68**	**200**	*i* P	**Pb**	**22 12 25.8**	**-0.8**
GCAM				*i* S	**Sg**	**22 12 48.7**	**-0.6**
GCAM	**G?zelcaml?**	**1.68**	**200**	*i* P	**Pb**	**22 12 25.8**	**-0.8**
GCAM				*i* S	**Sg**	**22 12 48.7**	**-0.6**
YLV	**Yalova**	**1.69**	**40**	*e*PN	**Pn**	**22 12 25.8**	**+0.4**
YLV	**Yalova**	**1.69**	**40**	*e*Pn	**Pn**	**22 12 25.8**	**+0.4**
ALT	**Altintas**	**1.70**	**97**	*e*PN	**Pb**	**22 12 26.5**	**-0.6**
ALT	**Altintas**	**1.70**	**97**	P	**Pb**	**22 12 26.4**	**-0.6**
ALT	**Altintas**	**1.70**	**97**	P	**Pb**	**22 12 26.4**	**-0.6**
CAVI	**Cavuskoy**	**1.72**	**57**	*e*PN	**Pb**	**22 12 27.1**	**-0.3**
CAVI	**Cavuskoy**	**1.72**	**57**	*e*Pn	**Pb**	**22 12 27.1**	**-0.3**
CHOS	**Chios island**	**1.73**	**239**	P	**Pb**	**22 12 26.5**	**-1.0**
CHOS				S	**Sb**	**22 12 49.5**	**-0.1**
CHOS	**Chios island**	**1.73**	**239**	*e*PN	**Pb**	**22 12 27.5**	**0.0**
CHOS				*e*SN	**Sg**	**22 12 52.7**	**+1.8**
CHOS	**Chios island**	**1.73**	**239**	P	**Pb**	**22 12 26.5**	**-1.0**
CHOS	**Chios island**	**1.73**	**239**	*e*Pn	**Pb**	**22 12 27.5**	**0.0**
CHOS				S	**Sb**	**22 12 49.5**	**-0.1**
CHOS				*e*Sn	**Sg**	**22 12 52.7**	**+1.8**
TKR	**Tekirdag**	**1.73**	**350**	*e*PN	**Pb**	**22 12 26.7**	**-0.9**
TKR	**Tekirdag**	**1.73**	**350**	*e*Pn	**Pb**	**22 12 26.7**	**-0.9**
DENT	**Denizli**	**1.75**	**151**	*e*PN	**Pn**	**22 12 26.8**	**+0.5**
DENT	**Denizli**

n95,σ1°38/78, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.97**	**342**	*e*PB	**Pn**	**22 16 03.1**	**+0.5**
ARG				*e*SN	**Sn**	**22 16 16.0**	**+0.5**
ARG	**Arkhangelos**	**0.97**	**342**	*e*Pb	**Pn**	**22 16 03.1**	**+0.5**
KARP	**Karpathos**	**1.12**	**284**	*e*PN	**Pn**	**22 16 05.2**	**+0.5**
KARP				*e*SN	**Sn**	**22 16 17.4**	**-1.8**
KARP	**Karpathos**	**1.12**	**284**	*e*Pn	**Pn**	**22 16 05.2**	**+0.5**
KSL	**Kastellorizon**	**1.23**	**45**	*e*PN	Pn	22 16 12.4	+6.3
AKAS	**Kas**	**1.30**	**43**	*i* P	Pn	22 16 07.9	+0.7
AKAS				*i* S	**Sn**	**22 16 23.1**	**-0.5**
AKAS	**Kas**	**1.30**	**43**	*i* P	Pn	22 16 07.9	+0.7
AKAS				*i* S	**Sn**	**22 16 23.1**	**-0.5**
FETY	**Fethiye**	**1.43**	**19**	*e*PN	**Pn**	**22 16 08.8**	**+0.1**
FETY				*e*SN	**Sn**	**22 16 28.2**	**+1.8**
FETY	**Fethiye**	**1.43**	**19**	*e*Pn	**Pn**	**22 16 08.8**	**+0.1**
FETY				*e*Sn	**Sn**	**22 16 28.2**	**+1.8**
DALY	**Dalyan (Mu˘la**	**1.53**	**5**	*e*PN	**Pn**	**22 16 10.8**	**+0.7**
DALY	**Dalyan (Mu˘la**	**1.53**	**5**	*e*Pn	**Pn**	**22 16 10.8**	**+0.7**
TURN	**Turunc**	**1.58**	**3**	*i* P	**Pn**	**22 16 11.3**	**+0.5**
TURN				*i* S	**Sn**	**22 16 29.0**	**-1.2**
TURN	**Turunc**	**1.58**	**3**	*i* P	**Pn**	**22 16 11.3**	**+0.5**
TURN				*i* S	**Sn**	**22 16 29.0**	**-1.2**
DAT	**Datca**	**1.62**	**333**	*e*PN	**Pn**	**22 16 11.8**	**+0.3**
DAT	**Datca**	**1.62**	**333**	*e*Pn	**Pn**	**22 16 11.8**	**+0.3**
NIS1	**Nisyros Isl.**	**1.69**	**321**	*e*PN	Pn	22 16 15.2	+2.8
NIS1	**Nisyros Isl.**	**1.69**	**321**	*e*Pn	Pn	22 16 15.2	+2.8
ELL	**Elmali**	**1.85**	**38**	*e*PN	Pn	22 16 15.0	+0.4
ELL	**Elmali**	**1.85**	**38**	*e*Pn	Pn	22 16 15.0	+0.4
YER	**Yerkesik**	**1.85**	**355**	*e*PN	**Pn**	**22 16 15.3**	**+0.7**
YER	**Yerkesik**	**1.85**	**355**	*e*Pn	**Pn**	**22 16 15.3**	**+0.7**
BODT	**Bodrum**	**2.02**	**332**	*e*PN	**Pn**	**22 16 17.1**	**+0.4**
BODT	**Bodrum**	**2.02**	**332**	*e*Pn	**Pn**	**22 16 17.1**	**+0.4**
GLHS	**Glhisar (BURDU**	**2.03**	**23**	*e*PN	**Pn**	**22 16 17.4**	**+0.3**
GLHS	**Glhisar (BURDU**	**2.03**	**23**	*e*Pn	**Pn**	**22 16 17.4**	**+0.3**
MLSB	**Milas**	**2.09**	**344**	*e*PN	**Pn**	**22 16 17.9**	**+0.2**
MLSB	**Milas**	**2.09**	**344**	*e*Pn	**Pn**	**22 16 18.0**	**+0.2**
KORT	**Korkueli**	**2.27**	**41**	*i* P	Pn	22 16 23.9	+3.5
KORT				*e*S	**Sn**	**22 16 48.1**	**+0.9**
KORT	**Korkueli**	**2.27**	**41**	*i* P	Pn	22 16 23.9	+3.5
KORT				*e*S	**Sn**	**22 16 48.1**	**+0.9**
NPS	**Neapolis**	**2.36**	**270**	*e*PN	**Pn**	**22 16 23.8**	**+2.3**
NPS	**Neapolis**	**2.36**	**270**	*e*Pn	**Pn**	**22 16 23.8**	**+2.3**
ANTB	**Antalya**	**2.37**	**47**	*e*PN	Pn	22 16 22.2	+0.6
ANTB	**Antalya**	**2.37**	**47**	*e*Pn	Pn	22 16 22.2	+0.6
AYDN	**Tasoluk**	**2.42**	**348**	*i* P	**Pn**	**22 16 23.7**	**+1.3**
AYDN				*e*S	**Sn**	**22 16 50.3**	**-0.5**
AYDN	**Tasoluk**	**2.42**	**348**	*i* P	**Pn**	**22 16 23.7**	**+1.3**
AYDN				*e*S	**Sn**	**22 16 50.3**	**-0.5**
DNZL	**Cakiroluk**	**2.44**	**10**	*i* P	**Pn**	**22 16 23.9**	**+1.2**
DNZL				*e*S	**Sn**	**22 16 48.9**	**-2.5**
DNZL	**Cakiroluk**	**2.44**	**10**	*i* P	**Pn**	**22 16 23.9**	**+1.2**
DNZL				*e*S	**Sn**	**22 16 48.9**	**-2.5**
DENT	**Denizli**	**2.50**	**10**	*e*PN	**Pn**	**22 16 24.3**	**+0.9**
DENT	**Denizli**	**2.50**	**10**	*e*Pn	**Pn**	**22 16 24.3**	**+0.9**
GCAM	**G?zelcaml?**	**2.62**	**337**	*e*P	Pn	22 16 28.0	+3.0
GCAM				*e*S	**Sn**	**22 16 52.0**	**-3.4**
GCAM	**G?zelcaml?**	**2.62**	**337**	*e*P	Pn	22 16 28.0	+3.0
GCAM				*e*S	**Sn**	**22 16 52.0**	**-3.4**
BCK	**Bucak**	**2.75**	**37**	*e*PN	Pn	22 16 27.3	+0.5
BCK	**Bucak**	**2.75**	**37**	*e*Pn	Pn	22 16 27.3	+0.5
APE	**Apeiranthos**	**2.99**	**307**	*e*PN	**Pn**	**22 16 30.7**	**+0.6**
APE	**Apeiranthos**	**2.99**	**307**	*e*PN	**Pn**	**22 16 32.0**	**+1.9**
APE	**Apeiranthos**	**2.99**	**307**	*e*Pn	**Pn**	**22 16 32.0**	**+1.9**
KHL	**Karahalli**	**3.14**	**15**	*e*PN	**Pn**	**22 16 33.3**	**+1.1**
KHL	**Karahalli**	**3.14**	**15**	*e*Pn	**Pn**	**22 16 33.3**	**+1.1**
KHAL	**Karahalli**	**3.18**	**14**	*i* P	Pn	22 17 05.6	-3.9
KHAL				*e*S	Sn	22 17 05.6	-3.9
KHAL	**Karahalli**	**3.18**	**14**	*i* P	**Pn**	**22 16 33.1**	**+0.3**
KHAL				*e*S	Sn	22 17 05.6	-3.9
KULA	**Kula-Manisa**	**3.22**	**2**	*e*PN	**Pn**	**22 16 34.2**	**+0.8**
KULA	**Kula-Manisa**	**3.22**	**2**	*e*Pn	**Pn**	**22 16 34.2**	**+0.8**
GAZI	**Gazipasa**	**3.24**	**72**	*e*P	Pn	22 16 34.7	+1.1
GAZI				*e*S	Sn	22 17 06.4	-4.5
GAZI	**Gazipasa**	**3.24**	**72**	*e*P	Pn	22 16 34.7	+1.1
GAZI				*e*S	Sn	22 17 06.4	-4.5
BLCB	**Balcova**	**3.31**	**340**	*e*PN	**Pn**	**22 16 35.6**	**+1.2**
BLCB	**Balcova**	**3.31**	**340**	*e*Pn	**Pn**	**22 16 35.6**	**+1.2**
VAM	**Vamos**	**3.52**	**273**	*e*PN	Pn	22 16 40.6	+3.3
VAM	**Vamos**	**3.52**	**273**	*e*Pn	Pn	22 16 40.6	+3.3
LEF	**Lefka**	**3.60**	**91**	*e*PN	Pn	22 16 37.6	-0.7
LEF	**Lefka**	**3.60**	**91**	*e*Pn	Pn	22 16 37.7	-0.7
DEMI	**Demirci**	**3.75**	**3**	*i* P	**Pn**	**22 16 41.2**	**+0.6**
DEMI				*e*S	**Sn**	**22 17 21.2**	**-2.3**
DEMI	**Demirci**	**3.75**	**3**	*i* P	**Pn**	**22 16 41.2**	**+0.6**
DEMI				*e*S	**Sn**	**22 17 21.2**	**-2.3**
ERMK	**Ermenek**	**3.82**	**68**	*e*PN	Pn	22 16 42.3	+0.6
ERMK				*e*S	Sn	22 17 26.5	+1.0
ERMK	**Ermenek**	**3.82**	**68**	*e*P	Pn	22 16 42.3	+0.6
ERMK				*e*S	Sn	22 17 26.5	+1.0
CSS	**Prodhromos**	**3.97**	**93**	*e*PN	Pn	22 16 43.9	+0.3
CSS	**Prodhromos**	**3.97**	**93**	Pn	Pn	22 16 44.2	+0.6
CSS				Sn	Sn	22 17 28.1	-0.8
ALT	**Altintas**	**3.97**	**18**	*e*PN	**Pn**	**22 16 44.8**	**+1.2**
ALT	**Altintas**	**3.97**	**18**	*e*Pn	**Pn**	**22 16 44.8**	**+1.2**
KONT	**Konya--Tatoy**	**4.08**	**48**	*e*PN	**Pn**	**22 16 46.4**	**+1.3**
KONT	**Konya--Tatoy**	**4.08**	**48**	*e*Pn	**Pn**	**22 16 46.4**	**+1.3**
LFK	**Lefkose**	**4.12**	**89**	*e*PN	Pn	22 16 45.4	-0.2
LFK	**Lefkose**	**4.12**	**89**	*e*Pn	Pn	22 16 45.4	-0.2
TVSB	**Tavsanli**	**4.22**	**10**	*e*PN	**Pn**	**22 16 48.6**	**+1.5**
TVSB	**Tavsanli**	**4.22**	**10**	*e*Pn	**Pn**	**22 16 48.6**	**+1.5**
LADK	**Ladik-KONYA**	**4.25**	**46**	*e*PN	**Pn**	**22 16 48.8**	**+1.3**
LADK	**Ladik-KONYA**	**4.25**	**46**	*e*Pn	**Pn**	**22 16 48.8**	**+1.3**
KDHN	**Kadinhani**	**4.34**	**41**	*i* P	**Pn**	**22 16 50.5**	**+1.8**
KDHN				*i* S	Sn	22 17 37.2	-0.7
KDHN	**Kadinhani**	**4.34**	**41**	*i* P	**Pn**	**22 16 50.5**	**+1.8**
KDHN				*i* S	Sn	22 17 37.2	-0.7
KIZT	**Kizilcal**	**4.49**	**36**	*e*PN	**Pn**	**22 16 52.0**	**+1.3**
KIZT	**Kizilcal**	**4.49**	**36**	*e*Pn	**Pn**	**22 16 52.0**	**+1.3**
BALY	**Balya**	**4.50**	**351**	*e*P	**Pn**	**22 16 51.6**	**+0.8**
BALY				*e*S	Sn	22 17 30.5	-11
BALY	**Balya**	**4.50**	**351**	*e*P	**Pn**	**22 16 51.6**	**+0.8**
HNTI	**Hanita**	**5.95**	**110**	Sn	**Sn**	**22 18 15.9**	**-1.6**
SLTI	**Sal'it**	**6.24**	**117**	Pn	Pn	22 17 15.5	+0.9
KSDI	**Kefar Szold**	**6.29**	**107**	Pn	Pn	22 17 16.2	+0.9
KSDI				Sn	**Sn**	**22 18 24.0**	**-1.7**
MMLI	**Mount Malkishu**	**6.42**	**114**	Sn	**Sn**	**22 18 27.1**	**-2.0**
HMDT	**Nahal Hemdat**	**6.58**	**115**	Sn	**Sn**	**22 18 31.4**	**-1.7**
KZIT	**Kziot**	**6.60**	**130**	Pn	Pn	22 17 20.6	+1.0
RTMI	**Retamim**	**6.69**	**127**	Pn	Pn	22 17 21.1	+0.3
DSI	**Dead Sea**	**6.84**	**121**	Pn	Pn	22 17 24.5	+1.6
DSI				Sn	**Sn**	**22 18 37.6**	**-1.8**
MZDA	**Masada**	**6.98**	**123**	Pn	Pn	22 17 25.6	+0.8
PRNI	**Paran**	**7.36**	**130**	Pn	Pn	22 17 29.8	-0.2
HRFI	**Mount Harif**	**7.60**	**132**	Pn	Pn	22 17 34.5	+1.2
MBRI	**Mt Berech**	**7.70**	**134**	Pn	Pn	22 17 35.3	+0.5
EIL	**Elat**	**7.81**	**134**	Pn	Pn	22 17 36.8	+0.6

IDC 16 22:22:56.6±1.8,6°94S×154°56E,h0km,mb3.5/5, mb1 3.8/5,mb1mx3.6/17,mbtmp3.5/5,MS3.6/1,Ms1 3.6/1, ms1mx2.1/25,Error ellipse: s-maj=60.8km s-min=28.0km az=123.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**5.87**	**115**	LR	LR	22 26 06.6	
	comp=Z,530nm,19.1s,baz=72,slow=32						
WRA	**Warramunga Arr**	**23.50**	**235**	P	P	22 28 08.0	-0.4
	0.6nm,0.6s,baz=56,slow=9.3,SNR=4.7						
ASAR	**Alice Springs**	**25.89**	**228**	P	P	22 28 30.2	-0.3
	0.4nm,0.8s,baz=53,slow=11,SNR=3.7						
SONM	**Songino Array**	**69.06**	**327**	P	P	22 34 04.8	+0.3
	0.2nm,0.3s,baz=145,slow=5.3,SNR=2.3						
MKAR	**Makanchi Array**	**83.08**	**319**	P	P	22 35 24.7	+0.4
	0.7nm,0.8s,baz=94,slow=4.9,SNR=5.7						
NVAR	**Mina Array Bea**	**92.03**	**52**	P	P	22 36 07.8	-0.4
	0.5nm,0.8s,baz=251,slow=2.8,SNR=3.8						

*ISCJB **16** 22:24:23.9±0.5,39°99N±0°03×23°71E±0°08,h25km±6km, Error ellipse: s-maj=10.0km s-min=4.3km az=8.2*
*ATH **16** 22:24:23.3,39°97N×23°67E,h28km±1km,MD2.8/6*
*CSEM **16** 22:24:23.8±0.2,39°98N×23°69E,h23km±2km,ML1.6/3, Error ellipse: s-maj=7.3km s-min=3.2km az=96.0*
*THE **16** 22:24:24.2,39°98N×23°68E,h2km±31km,ML1.6/3,Error ellipse: s-maj=31.7km s-min=0.6km az=59.0*

ISC 16 22:24:23.4±1.1,39°98N±0°02×23°69E±0°04,h19km±4km, n23,σ0°32/38,Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OUR	**Ouranopolis**	**0.42**	**32**	P	**Pb**	**22 24 32.5**	**+0.2**
OUR				S	**Sg**	**22 24 38.4**	**+0.3**
OUR	**Ouranopolis**	**0.42**	**32**	P	**Pb**	**22 24 32.5**	**+0.2**
OUR				S	**Sg**	**22 24 38.4**	**+0.3**
PLG	**Polygyros**	**0.44**	**335**	P	**Pg**	**22 24 32.3**	**-0.2**
PLG				S	**Sg**	**22 24 38.1**	**-0.5**
PLG	**Polygyros**	**0.44**	**335**	*e*PB	**Pg**	**22 24 32.3**	**-0.2**
PLG				*e*SB	**Sg**	**22 24 38.2**	**-0.4**
PLG	**Polygyros**	**0.44**	**335**	*e*Pb	**Pg**	**22 24 32.3**	**-0.2**
PLG				*e*Sb	**Sg**	**22 24 38.2**	**-0.4**
XOR	**Xorichti**	**0.72**	**212**	P	**Pn**	**22 24 38.3**	**-0.2**
XOR				S	**Sn**	**22 24 48.4**	**-0.6**
XOR	**Xorichti**	**0.72**	**212**	P	**Pn**	**22 24 38.3**	**-0.2**
XOR				S	**Sn**	**22 24 48.4**	**-0.6**
NEO	**Neokhori**	**0.76**	**208**	P	**Pb**	**22 24 38.0**	**0.0**
NEO				S	**Sn**	**22 24 49.6**	**-0.4**
NEO	**Neokhori**	**0.76**	**208**	*e*PN	**Pg**	**22 24 38.3**	**0.0**
NEO				*e*SN	**Sg**	**22 24 49.0**	**+0.6**
NEO	**Neokhori**	**0.76**	**208**	P	**Pb**	**22 24 38.0**	**0.0**
NEO	**Neokhori**	**0.76**	**208**	*e*Pn	**Pg**	**22 24 38.3**	**0.0**
NEO				*e*Sn	**Sg**	**22 24 49.0**	**+0.6**
AOS	**Alonnisos**	**0.82**	**169**	P	**Pn**	**22 24 39.8**	**-0.1**
AOS				S	**Sn**	**22 24 51.2**	**-0.2**
AOS	**Alonnisos**	**0.82**	**169**	*e*PN	**Pg**	**22 24 39.5**	**0.0**
AOS				*e*SN	**Sn**	**22 24 51.2**	**-0.2**
AOS	**Alonnisos**	**0.82**	**169**	*e*Pn	**Pg**	**22 24 39.5**	**0.0**
AOS	**Alonnisos**	**0.82**	**169**	P	**Pn**	**22 24 39.8**	**-0.1**
AOS				*e*Sn	**Sn**	**22 24 51.2**	**-0.2**
SKIA	**Skiathos**	**0.83**	**192**	P	**Pn**	**22 24 40.1**	**+0.1**
SKIA	**Skiathos**	**0.83**	**192**	P	**Pn**	**22 24 40.1**	**+0.1**
SOH	**Sokhos**	**0.88**	**343**	*e*PN	**Pn**	**22 24 40.9**	**+0.1**
SOH				*e*SN	**Sn**	**22 24 53.2**	**+0.1**
SOH	**Sokhos**	**0.88**	**343**	*e*Pn	**Pn**	**22 24 40.9**	**+0.1**
SOH				*e*Sn	**Sn**	**22 24 53.2**	**+0.1**
LIT	**Litokhoron**	**0.93**	**278**	*e*PN	**Pg**	**22 24 42.1**	**+0.6**
LIT	**Litokhoron**	**0.93**	**278**	*e*Pn	**Pg**	**22 24 42.1**	**+0.6**
NVR	**Nevrokopi**	**1.38**	**5**	*e*PN	**Pb**	**22 24 48.6**	**0.0**
NVR	**Nevrokopi**	**1.38**	**5**	*e*Pn	**Pb**	**22 24 48.6**	**0.0**

*ISCJB **16** 22:30:27.4±0.5,40°44N±0°03×30°01E±0°03,h8km±4km, Error ellipse: s-maj=6.1km s-min=3.7km az=22.4*
*DDA **16** 22:30:27.4,40°41N×30°00E,h7km,MD2.8*
*ISK **16** 22:30:27.1,40°46N×30°01E,h7km,MD2.8*
*CSEM **16** 22:30:27.5±0.1,40°45N×30°02E,h8km,MD2.8,Error ellipse: s-maj=3.4km s-min=2.2km az=21.0*

ISC 16 22:30:27.8±0.9,40°44N±0°03×30°01E±0°02,h11km±7km, n38,σ0°47/54,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ADVT	**Abdulvahap**	**0.21**	**267**	P	**Pg**	**22 30 32.1**	**-0.2**
ADVT				S	**Sg**	**22 30 35.5**	**+0.2**
ADVT	**Abdulvahap**	**0.21**	**267**	*i* Pg	**Pg**	**22 30 32.1**	**-0.2**
ADVT				*i* Sg	**Sg**	**22 30 35.5**	**+0.2**
CAVI	**Cavuskoy**	**0.27**	**208**	*e*PG	**Pg**	**22 30 33.0**	**-0.5**
CAVI	**Cavuskoy**	**0.27**	**208**	*e*Pg	**Pg**	**22 30 33.0**	**-0.5**
GPA	**Golpazari**	**0.28**	**124**	*e*PG	**Pg**	**22 30 33.1**	**-0.4**
GPA	**Golpazari**	**0.28**	**124**	*e*Pg	**Pg**	**22 30 33.1**	**-0.4**
GULT	**Gulveren**	**0.39**	**92**	*e*PG	**Pg**	**22 30 35.2**	**-0.3**
GULT				*e*SG	**Sg**	**22 30 41.5**	**+0.8**
GULT	**Gulveren**	**0.39**	**92**	*e*Pg	**Pg**	**22 30 35.2**	**-0.3**
GULT				*e*Sg	**Sg**	**22 30 41.5**	**+0.8**
HRT	**Hereke**	**0.46**	**326**	*e*PG	**Pg**	**22 30 36.6**	**-0.3**
HRT				*e*SG	**Sg**	**22 30 42.7**	**-0.3**
HRT	**Hereke**	**0.46**	**326**	*e*Pg	**Pg**	**22 30 36.6**	**-0.3**
HRT				*e*Sg	**Sg**	**22 30 42.7**	**-0.3**
YLV	**Yalova**	**0.50**	**284**	*e*PG	**Pg**	**22 30 37.6**	**0.0**
YLV				*e*SG	**Sg**	**22 30 44.9**	**+0.6**
YLV	**Yalova**	**0.50**	**284**	*e*Pg	**Pg**	**22 30 37.6**	**0.0**
YLV				*e*Sg	**Sg**	**22 30 44.9**	**+0.6**
BORA	**Eskisehir**	**0.66**	**149**	*i* P	**Pg**	**22 30 40.2**	**-0.4**
BORA				*i* S	**Sg**	**22 30 48.5**	**-0.8**
BORA	**Eskisehir**	**0.66**	**149**	*i* P	**Pg**	**22 30 40.2**	**-0.4**
BORA				*i* S	**Sg**	**22 30 48.5**	**-0.8**
ULDT	**Uludag**	**0.73**	**246**	*i* P	**Pg**	**22 30 41.4**	**-0.7**
ULDT				*i* S	**Sg**	**22 30 51.4**	**-0.3**
ULDT	**Uludag**	**0.73**	**246**	*i* P	**Pg**	**22 30 41.4**	**-0.7**
ULDT				*i* S	**Sg**	**22 30 51.4**	**-0.3**
ARMT	**Armutlu**	**0.88**	**278**	*e*PG	**Pg**	**22 30 44.4**	**-0.5**
ARMT				*e*SG	**Sg**	**22 30 56.3**	**-0.1**
ARMT	**Armutlu**	**0.88**	**278**	*e*Pg	**Pg**	**22 30 44.4**	**-0.5**
ARMT				*e*Sg	**Sg**	**22 30 56.3**	**-0.1**
MDUB	**Mudurnu**	**0.91**	**88**	*e*PG	**Pg**	**22 30 44.8**	**-0.5**
MDUB	**Mudurnu**	**0.91**	**88**	*e*Pg	**Pg**	**22 30 44.8**	**-0.5**
TVSB	**Tavsanli**	**1.08**	**203**	*e*PN	**Pg**	**22 30 48.2**	**-0.4**
TVSB	**Tavsanli**	**1.08**	**203**	*e*Pn	**Pg**	**22 30 48.2**	**-0.4**
KLYT	**Kilyos**	**1.09**	**318**	*e*PN	**Pg**	**22 30 48.0**	**-0.8**
KLYT	**Kilyos**	**1.09**	**318**	*e*Pn	**Pg**	**22 30 48.0**	**-0.8**
BGKT	**Bogazkoy**	**1.19**	**309**	*e*PN	**Pb**	**22 30 50.0**	**-0.5**
BGKT	**Bogazkoy**	**1.19**	**309**	*e*Pn	**Pb**	**22 30 50.0**	**-0.5**
KCTX	**Karacabey (Bur**	**1.28**	**263**	*e*PN	**Pn**	**22 30 52.0**	**+0.4**
KCTX	**Karacabey (Bur**	**1.28**	**263**	*e*Pn	**Pn**	**22 30 52.0**	**+0.4**
DST	**Dursunbey**	**1.36**	**232**	*e*PN	**Pb**	**22 30 53.5**	**+0.2**
DST	**Dursunbey**	**1.36**	**232**	*e*Pn	**Pb**	**22 30 53.5**	**+0.2**
CTKS	**Kestanelik-??a**	**1.39**	**305**	*e*PN	**Pn**	**22 30 53.6**	**+0.5**
CTKS	**Kestanelik-??a**	**1.39**	**305**	*e*Pn	**Pn**	**22 30 53.6**	**+0.5**
ALT	**Altintas**	**1.39**	**177**	*e*PN	**Pn**	**22 30 53.7**	**+0.5**
ALT	**Altintas**	**1.39**	**177**	*e*Pn	**Pn**	**22 30 53.7**	**+0.5**
DURS	**Dursunbey**	**1.45**	**235**	*e*P	**Pb**	**22 30 55.2**	**+0.3**
DURS				*i* S	**Sn**	**22 31 13.1**	**+0.1**
DURS	**Dursunbey**	**1.45**	**235**	*e*P	**Pb**	**22 30 55.2**	**+0.3**
DURS				*i* S	**Sn**	**22 31 13.1**	**+0.1**
CTYL	**Yal??k??y-??at**	**1.66**	**309**	*e*PN	**Pn**	**22 30 57.3**	**+0.4**
CTYL	**Yal??k??y-??at**	**1.66**	**309**	*e*Pn	**Pn**	**22 30 57.3**	**+0.4**

*TIR **16** 22:34:10.0±1.3,41°39N×19°43E,h37km±14km,ML3.2*
*CSEM **16** 22:34:11.9±0.3,41°50N×19°40E,h12km,ML1.9,Error ellipse: s-maj=7.2km s-min=5.0km az=63.0*
*ISCJB **16** 22:34:12.4±0.9,41°45N±0°03×19°45E±0°06,h10km±6km, Error ellipse: s-maj=7.8km s-min=4.5km az=155.5*
*THE **16** 22:34:13.4,41°47N×19°48E,h12km±2km,ML2.0/2, Error ellipse: s-maj=3.7km s-min=1.4km az=68.0*
*BEO **16** 22:34:13.5±0.4,41°57N×20°03E,h19km±4km,ML1.9/5*

ISC 16 22:34:12.3±1.1,41°49N±0°03×19°42E±0°03,h16km±8km, n30,σ1°03/53,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.36**	**112**	*e*PG	**Pg**	**22 34 19.7**	**0.0**
TIR				*i* SG	**Sb**	**22 34 25.2**	**-0.6**
TIR	**Tirane**	**0.36**	**112**	P	**Pg**	**22 34 19.7**	**0.0**
TIR				S	**Sb**	**22 34 25.4**	**-0.4**
TIR	**Tirane**	**0.36**	**112**	*e*Pg	**Pg**	**22 34 19.6**	**-0.1**
TIR				*i* Sg	**Sb**	**22 34 25.3**	**-0.6**
TIR	**Tirane**	**0.36**	**112**	P	**Pg**	**22 34 19.7**	**0.0**
TIR				*i* Sg	**Sb**	**22 34 25.2**	**-0.6**
	SNR=13						
PUK	**Puka**	**0.66**	**32**	*e*PG	**Pg**	**22 34 25.0**	**-0.3**
PUK				*i* SG	**Sn**	**22 34 36.1**	**-1.1**
PUK	**Puka**	**0.66**	**32**	*e*Pg	**Pg**	**22 34 25.0**	**-0.3**
	SNR=10.0						
PHP	**Peshkopia**	**0.79**	**75**	*e*PG	**Pb**	**22 34 26.1**	**-1.6**
PHP				*i* SG	**Sg**	**22 34 38.8**	**+0.6**
PHP	**Peshkopia**	**0.79**	**75**	P	**Pb**	**22 34 26.2**	**-1.5**
PHP				S	**Sb**	**22 34 37.8**	**-0.4**
PHP	**Peshkopia**	**0.79**	**75**	P	**Pb**	**22 34 26.2**	**-1.5**
PHP				S	**Sb**	**22 34 37.8**	**-0.4**
PHP				*i* Sg	**Sg**	**22 34 38.8**	**+0.6**
	SNR=10.0						
PDG	**Podgorica**	**0.95**	**353**	P	**Pn**	**22 34 32.1**	**+1.1**
PDG				S	**Sn**	**22 34 46.2**	**+1.9**
PDG	**Podgorica**	**0.95**	**353**	*e*Sg	**Sn**	**22 34 46.4**	**+2.1**
PDG	**Podgorica**	**0.95**	**353**	P	**Pn**	**22 34 32.1**	**+1.1**
PDG				S	**Sn**	**22 34 46.2**	**+1.9**
BCI	**Bajram Curri**	**1.00**	**29**	*e*PG	**Pb**	**22 34 30.8**	**-0.6**
BCI				*i* SG	**Sn**	**22 34 47.5**	**+1.9**
BCI	**Bajram Curri**	**1.00**	**29**	*e*Pg	**Pb**	**22 34 30.8**	**-0.6**
	SNR=9.0						
BCI				*i* Sg	**Sn**	**22 34 47.5**	**+1.9**
	SNR=9.0						
FNA	**Florina**	**1.64**	**115**	P	**Pb**	**22 34 41.4**	**-0.7**
FNA				S	**Sb**	**22 35 02.4**	**-0.1**
FNA	**Florina**	**1.64**	**115**	P	**Pb**	**22 34 41.4**	**-0.7**
FNA				S	**Sb**	**22 35 02.4**	**-0.1**
KEK	**Kerkira**	**1.79**	**171**	P	**Pn**	**22 34 43.1**	**+0.5**
KEK				S	**Sn**	**22 35 05.3**	**+0.3**
KEK	**Kerkira**	**1.79**	**171**	P	**Pn**	**22 34 43.1**	**+0.5**
KEK				S	**Sn**	**22 35 05.3**	**+0.3**
STON	**Ston**	**1.89**	**318**	*e*Pn	**Pg**	**22 34 47.6**	**-0.9**
STON				Sn	**Sg**	**22 35 13.7**	**+0.8**
STON	**Ston**	**1.89**	**318**	*e*Pn	**Pg**	**22 34 48.4**	**-0.1**
STON				*e*Sn	**Sg**	**22 35 15.4**	**+2.5**
STON	**Ston**	**1.89**	**318**	*e*Pn	**Pg**	**22 34 47.6**	**-0.9**
IGT	**Igoumenitsa**	**2.07**	**160**	P	**Pn**	**22 34 47.0**	**+0.6**
IGT				S	**Sn**	**22 35 13.1**	**+1.2**
IGT	**Igoumenitsa**	**2.07**	**160**	P	**Pn**	**22 34 47.0**	**+0.6**
IGT				S	**Sn**	**22 35 13.1**	**+1.2**
BBLS	**Lazići**	**2.38**	**360**	*e*Pn	**Pn**	**22 34 50.2**	**-0.5**
BBLS	**Lazići**	**2.38**	**360**	*e*Pn	**Pn**	**22 34 50.2**	**-0.5**
DIVS	**Divibare**	**2.65**	**9**	*e*Pn	**Pn**	**22 34 54.0**	**-0.4**
DIVS	**Divibare**	**2.65**	**9**	*e*Pn	**Pn**	**22 34 54.0**	**-0.4**
ZAPS	**Zavoj**	**2.98**	**52**	*e*Pn	Pn	22 34 54.6	-4.3
ZAPS				*e*Sg	**Sn**	**22 35 35.4**	**+1.1**
NVLJ	**Novalja**	**4.54**	**314**	*e*Pn	**Pn**	**22 35 18.9**	**-1.3**
NVLJ				Sn	**Sn**	**22 36 12.7**	**0.0**
NVLJ	**Novalja**	**4.54**	**314**	*e*Pn	**Pn**	**22 35 18.9**	**-1.3**
NVLJ				Sn	**Sn**	**22 36 12.6**	**0.0**

*NIED **16** 22:35:00,35°50N×141°20E,h38km,Mw4.2 Best double couple: M0 2.08000×10^15 NP1:φs265.00000°,δ78.00000°, λ-112.00000°. NP2:φs147.00000°,δ25.00000°, λ-30.00000°.*
*IDC **16** 22:35:13.0±0.6,35°53N×141°06E,h0km,mb3.8/19, mb1 4.0/21,mb1mx4.0/31,mbtmp3.9/21,ML4.2/2,MS3.4/1, Ms1 3.4/1,ms1mx2.0/33,Error ellipse: s-maj=17.9km s-min=14.0km az=89.0*
*ISCJB **16** 22:35:16.8±0.6,35°54N±0°03×141°21E±0°06,h45km±4km, mb3.9/26,MS3.6/2,Error ellipse: s-maj=7.7km s-min=4.9km az=8.8*
*JMA **16** 22:35:17.0±0.1,35°53N×141°21E,h40km±1km,M4.0 Broadband fault plane solution: P waves. NP1: φs90.00000°,δ90.00000°,λ105.00000°. NP2: φs181.00000°,δ15.00000°,λ0.00000°. Principal axes: T Plg43.0000°, Azm15.0000°; N Plg15.0000°, Azm270.0000°; P Plg43.0000°, Azm166.0000°;*
*NEIC **16** 22:35:17.9±0.4,35

JOF	**Joensuu**	**67.18 332**	*ep*		**P**	**22 46 08.7**	**+0.6**
	comp=Z,1.0nm,0.4s						
KAF	**Kangasniemi**	**69.53 333**	*ep*		**P**	**22 46 22.3**	**-0.5**
FINES	**FINESS Array B**	**70.03 332**	P		**P**	**22 46 26.2**	**+0.3**
FINES	**FINESS Array B**	**70.03 332**	P		**P**	**22 46 26.2**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=72,slow=6.2,SNR=5.0						
KBZ	**Khabaz**	**71.73 311**	P		**P**	**22 46 37.6**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=194,slow=2.0,SNR=3.7						
NB2	**NORSAR Subarra**	**75.47 337**	P		**P**	**22 46 57.8**	**-0.5**
	comp=Z,1.5nm,1.0s,baz=42,slow=5.9						
NOA	**NORSAR Array B**	**75.47 337**	P		**P**	**22 46 58.0**	**-0.2**
NOA	**NORSAR Array B**	**75.47 337**	P		**P**	**22 46 58.0**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=41,slow=5.7,SNR=4.8						
NVAR	**Mina Array Bea**	**76.02 53**	P		**P**	**22 47 03.4**	**+1.3**
NVAR	**Mina Array Bea**	**76.02 53**	P		**P**	**22 47 03.4**	**+1.3**
	comp=Z,0.2nm,0.6s,baz=316,slow=6.2,SNR=3.2						
PDAR	**Pinedale Array**	**78.83 45**	P		**P**	**22 47 18.9**	**+1.2**
PDAR	**Pinedale Array**	**78.83 45**	P		**P**	**22 47 18.9**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=276,slow=2.5,SNR=2.6						
BRTR	**Keskin Array B**	**79.69 312**	P		**P**	**22 47 20.8**	**-1.6**
BRTR	**Keskin Array B**	**79.69 312**	P		**P**	**22 47 20.8**	**-1.6**
	comp=Z,0.6nm,0.8s,baz=112,slow=6.4,SNR=3.4						
GERES	**GERESS Array B**	**83.87 328**	P		**P**	**22 47 43.8**	**-0.3**
GERES	**GERESS Array B**	**83.87 328**	P		**P**	**22 47 43.8**	**-0.3**
	comp=Z,0.4nm,0.8s,baz=39,slow=6.3,SNR=3.4						
TORD	**Torodi Ar. Bea**	**118.23 314**	PKP		**PKPdf**	**22 54 01.8**	**-0.4**
TORD	**Torodi Ar. Bea**	**118.23 314**	PKP		**PKPdf**	**22 54 01.8**	**-0.4**
	comp=Z,0.5nm,1.0s,baz=70,slow=0.9,SNR=4.1						
LPAZ	**La Paz**	**147.58 61**	PKPbc		**PKPbc**	**22 55 00.6**	**+0.7**
LPAZ	**La Paz**	**147.58 61**	PKPbc		**PKPbc**	**22 55 00.6**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=18,slow=6.9,SNR=5.4						

GUC 16 22:47:48.1±0.5, 31°02S×71°23W, h64km±3km, MD3.9, ML3.7, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMCH	**Comparbala**	**0.25**	**128**	⇓	*iP*		Pn	22 47 58.9	+0.3
CMCH					*i* S		Sn	22 48 06.8	+0.8
CMCH					AML		AML	22 48 08.0	
	comp=E,20μm,0.7s								
TLL	**Tololo Astrono**	**0.93**	**24**		*eP*		Pn	22 48 06.5	+0.7
TLL					*i* S		Sn	22 48 19.8	+1.0
TLL					AML		AML	22 48 22.4	
	comp=N,3μm,0.6s								
ROCH	**El Roble**	**1.96**	**175**		*eP*		Pn	22 48 20.0	+0.7
ROCH					*eS*		Sn	22 48 44.4	+1.3
ROCH					AML		AML	22 48 51.1	
	comp=N,623nm,0.4s								
LCO	**Las Campanas**	**2.05**	**13**		*eP*		Pn	22 48 21.6	+0.9
LCO					*eS*		Sn	22 48 46.8	+1.2
LCO					AML		AML	22 48 51.2	
	comp=E,338nm,0.3s								
PEL	**Peldehue**	**2.17**	**168**		*eP*		Pn	22 48 22.7	+0.6
PEL					*eS*		Sn	22 48 48.8	+0.9
PEL					AML		AML	22 48 59.2	
	comp=E,643nm,0.2s								
CLCH	**Cerro Calan**	**2.44**	**166**		*i* P		Pn	22 48 26.6	+0.9
CLCH					*i* S		Sn	22 48 55.5	+0.9
CLCH					AML		AML	22 49 11.3	
	comp=N,434nm,0.3s								
PCH	**Pirque**	**2.67**	**167**		*eP*		Pn	22 48 29.6	+0.7
PCH					*i* S		Sn	22 49 00.6	+0.6
LNV	**Longovilo**	**2.93**	**183**		*eP*		Pn	22 48 32.6	+0.3
CHCH	**Chadas Angostu**	**2.95**	**171**		*eP*		Pn	22 48 33.1	+0.5
LMEL	**Las Melosas**	**2.95**	**163**		*eP*		Pn	22 48 35.0	+2.2
LMEL					*i* S		Sn	22 49 09.5	+2.2
LMEL					AML		AML	22 49 17.3	
	comp=N,316nm,0.4s								
CACH	**El Canelo**	**3.13**	**170**	⇑	*iP*		Pn	22 48 36.3	+1.0
CACH					*i* S		Sn	22 49 13.2	+1.5

MEX 16 23:20:34.9±0.6, 19°20N×104°12W, h5km±9km, MD3.5, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
R15V		**0.14**	**102**		*eP*		Pg	23 20 37.1	-0.6
R15V					*i* S		Sg	23 20 39.4	-0.3
EZ5V		**0.56**	**60**		*eP*		Pg	23 20 45.1	-1.0
EZ5V					*i* S		Sg	23 20 54.1	+0.3
MMIG	**Aquila**	**1.17**	**141**		*eP*		Pg	23 20 54.4	-2.9
MMIG					*i* S		Sg	23 21 08.8	-3.7
SFJM	**Santa Fe**	**1.64**	**38**		*iP*		Pn	23 21 01.4	-3.2
SFJM					*i* S		Sn	23 21 21.1	-5.2

GUC 16 23:27:01.9±0.5, 33°01S×70°36W, h100km±2km, MD3.4, ML3.6, 11C-3D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PEL	**Peldehue**	**0.30**	**245**	⇓	*iP*		Pn	23 27 16.6	0.0
PEL					*i* S		Sn	23 27 27.5	-0.1
PEL					AML		AML	23 27 28.7	
	comp=N,10μm,0.2s								
JACH	**Jahuel**	**0.39**	**329**	⇓	*iP*		Pn	23 27 17.3	+0.2
JACH					*i* S		Sn	23 27 28.4	0.0
CLCH	**Cerro Calan**	**0.41**	**201**	⇑	*iP*		Pn	23 27 17.2	0.0
CLCH					*i* S		Sn	23 27 28.6	0.0
CLCH					AML		AML	23 27 30.2	
	comp=E,5μm,0.6s								
CLCH					AML		AML	23 27 30.8	
	comp=E,6μm,0.5s								
LACH	**Col Las Americ**	**0.46**	**198**	⇑	*iP*		Pn	23 27 17.4	-0.1
LACH					*i* S		Sn	23 27 29.2	+0.1
LACH					AML		AML	23 27 30.5	
	comp=E,2μm,0.6s								
STL	**Santa Lucia**	**0.48**	**209**	⇑	*iP*		Pn	23 27 17.6	0.0
STL					*i* S		Sn	23 27 29.4	0.0
FSR	**Penalolen**	**0.48**	**197**	⇑	*iP*		Pn	23 27 17.9	+0.2
FSR					*i* S		Sn	23 27 29.6	+0.2
SAN	**Santiago**	**0.51**	**210**	⇑	*iP*		Pn	23 27 17.9	+0.1
SAN					*i* S		Sn	23 27 29.6	0.0
SAN					AML		AML	23 27 30.6	
	comp=N,2μm,0.3s								
ROCH	**El Roble**	**0.55**	**274**	⇑	*iP*		Pn	23 27 18.4	+0.1
ROCH					*i* S		Sn	23 27 31.2	+0.5
ROCH					AML		AML	23 27 32.0	
	comp=E,4μm,0.3s								
ANTU	**Antumapu**	**0.60**	**202**	⇑	*iP*		Pn	23 27 18.6	0.0
ANTU					*i* S		Sn	23 27 31.0	0.0
ANTU					AML		AML	23 27 31.8	
	comp=E,6μm,0.3s								
PCH	**Pirque**	**0.62**	**192**		*eP*		Pn	23 27 18.8	0.0
PCH					*i* S		Sn	23 27 31.6	+0.2
SJCH	**San Jose de Ma**	**0.62**	**180**		*iP*		Pn	23 27 17.8	-1.0
SJCH					*i* S		Sn	23 27 30.4	-1.0
SJCH					AML		AML	23 27 32.5	
	comp=N,1μm,0.3s								
TACH	**Talagante**	**0.80**	**217**		*eP*		Pn	23 27 20.3	0.0
TACH					*i* S		Sn	23 27 34.1	0.0
LMEL	**Las Melosas**	**0.84**	**171**	⇑	*eP*		Pn	23 27 21.0	+0.1
LMEL					*i* S		Sn	23 27 35.6	+0.4
LMEL					AML		AML	23 27 40.4	
	comp=N,1μm,0.1s								
IHA	**Instituto Hidr**	**1.08**	**269**	⇑	*iP*		Pn	23 27 23.2	+0.1
IHA					*i* S		Sn	23 27 39.5	+0.4
CACH	**El Canelo**	**1.12**	**190**	⇑	*iP*		Pn	23 27 24.4	+0.5
CACH					*i* S		Sn	23 27 41.3	+1.0
CHNG	**Los Chungos**	**1.48**	**319**	⇑	*iP*		Pn	23 27 28.8	+0.9
CHNG					*i* S		Sn	23 27 48.8	+1.1
CHNG					AML		AML	23 27 52.9	
	comp=E,717nm,0.5s								
CMCH	**Combarbala**	**1.91**	**343**		*eP*		Pn	23 27 33.8	+0.2
CMCH					*i* S		Sn	23 27 58.0	+0.4
CMCH					AML		AML	23 28 00.5	
	comp=N,1μm,0.4s								
TLL	**Tololo Astrono**	**2.86**	**352**	⇓	*iP*		Pn	23 27 43.8	-2.4
TLL					*i* S		Sn	23 28 17.9	-2.4
TLL					AML		AML	23 28 25.2	
	comp=N,168nm,0.4s								
LCO	**Las Campanas**	**4.00**	**356**		*i* P		Pn	23 28 01.8	+0.3
LCO					*i* S		Sn	23 28 47.6	0.0

MAN 16 23:49:53, 10°14N×121°46E, h19km, mb4.6, ML3.5, MS3.5, 1C-1D, Panay

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RCP	**Roxas**	**1.89**	**42**	⇑	*eP*		Pn	23 50 23.9	-0.4
SNPH	**Sibulan**	**1.92**	**114**	⇓	*eP*		Pn	23 50 10.5	-14
SNPH					*eS*		Sn	23 50 35.3	-13
ENPP	**El Nido**	**2.27**	**298**		*eP*		Pn	23 50 28.4	-1.1
TBP	**Tagbilaran**	**2.40**	**100**		*eP*		Pn	23 50 32.0	+0.6
LLP	**Lapu-Lapu**	**2.47**	**86**		*eP*		Pn	23 50 32.3	+0.1
LLP					*eS*		Sn	23 51 02.2	+0.3
PPR	**Puerto Princes**	**2.72**	**263**		*i* P		Pn	23 50 36.9	+1.3
PPR					*i* S		Sn	23 51 09.4	+1.4
PAGZ	**Pagadian**	**2.96**	**140**		*eP*		Pn	23 50 40.3	+1.3
PAGZ					*eS*		Sn	23 51 15.1	+1.1
MSLP	**Maasin**	**3.34**	**90**		*eP*		Pn	23 50 45.2	+1.0
MSLP					*eS*		Sn	23 51 26.1	+2.6
BUKP	**Musuan**	**4.20**	**122**		*eP*		Pn	23 50 59.2	+3.0

*ISCJB **17** 00:11:58.8±0.6, 16°.81N±0°.04×119°.83E±0°.06, h34km, mb3.7/11, Error ellipse: s-maj=8.7km s-min=6.2km az=175.1*
*MAN **17** 00:12:00, 16°.71N×120°.00E, h24km, mb4.6, ML3.5, MS3.4*
*IDC **17** 00:12:01.0±0.9, 16°.57N×120°.27E, h75km±8km, mb3.4/12, mb1 3.6/12, mb1mx3.5/24, mbtmp3.4/12, MS3.1/1, Ms1 3.1/1, ms1mx2.5/18, Error ellipse: s-maj=26.9km s-min=12.9km az=71.0*

ISC 17 00:11:58.3±0.6, 16°.76N±0°.04×119°.88E±0°.07, h34km, n29, σ1s98/26, mb3.8/11, 5C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BCPH	**Baguio City Da**	**0.77**	**119**	⇑	*iP*		**Pb**	**00 12 14.3**	**+0.7**
SCZP	**Santa Cruz**	**0.98**	**178**		*eP*		**Pb**	**00 12 17.9**	**+1.0**
ABRA	**Dolores**	**1.19**	**42**		*eP*		**Pb**	**00 12 21.0**	**+0.6**
SIPP	**Brgy, Tapao**	**1.28**	**261**	⇑	*eP*		**Pb**	**00 12 22.8**	**+0.9**
APYP	**Conner**	**1.70**	**50**		*eP*		**Pn**	**00 12 27.5**	**+1.8**
PIP	**Pasuquin**	**1.71**	**241**	⇑	*eP*		**Pb**	**00 12 28.2**	**-1.0**
CAUP	**Cauayan**	**1.87**	**84**		*eP*		**Pn**	**00 12 30.5**	**+2.5**
BALP	**Baler**	**1.92**	**122**		*eP*		**Pn**	**00 12 30.3**	**+1.7**
CVP	**Callao Caves**	**2.08**	**63**		*eP*		**Pn**	**00 12 31.5**	**+0.7**
CVP					*eS*		**Sn**	**00 12 56.8**	**+1.2**
PALP	**Palanan**	**2.46**	**83**		*eP*		**Pn**	**00 12 37.3**	**+1.6**
TGY	**Tagaytay City**	**2.83**	**159**	⇑	*iP*		**Pn**	00 12 44.6	+3.3
TGY	**Tagaytay City**	**2.83**	**159**		*P*		**Pn**	**00 12 43.7**	**+2.4**
	390nm,0.3s,baz=316,slow=2.2,SNR=34								
TGY					S		**Sn**	**00 13 17.3**	**+3.0**
	79nm,0.3s,baz=340,slow=22,SNR=3.0								
LQP	**Lukban**	**3.08**	**148**	⇑	*eP*		**Pb**	**00 12 50.4**	**-2.3**
GQP	**Guinayangan**	**3.77**	**139**	⇓	*eP*		**Pn**	**00 12 55.2**	**+1.1**
DAV	**Davao City (W)**	**11.13**	**149**		LR		LR	00 19 57.1	
	comp=Z,108nm,19.8s,baz=37,slow=44								
CMAR	**Chiang Mai Arr**	**20.03**	**278**		P		**Pn**	**00 16 33.8**	**+3.3**
	1.0nm,0.7s,baz=94,slow=8.4,SNR=6.8								
KSRS	**Korea Array**	**21.80**	**17**		P		**P**	**00 16 47.0**	**-0.4**
	1.0nm,0.6s,baz=203,slow=12,SNR=4.3								
SONM	**Songino Array**	**32.91**	**343**		P		**P**	**00 18 31.0**	**+1.4**
	0.9nm,0.6s,baz=166,slow=9.3,SNR=6.9								
SONM					pP		pP	00 18 49.0	+10
	1.0nm,0.7s,baz=164,slow=9.4,SNR=5.2								
WRA	**Warramunga Arr**	**39.14**	**158**		P		P	00 19 17.9	-5.1
	1.1nm,0.6s,baz=341,slow=9.1,SNR=5.9								
WRA					pP		pP	00 19 38.4	+5.5
	1.3nm,0.7s,baz=338,slow=9.6,SNR=4.0								
ASAR	**Alice Springs**	**42.45**	**161**		P		P	00 19 46.2	-4.0
	1.9nm,0.6s,baz=339,slow=6.5,SNR=24								
ASAR					PcP		**PcP**	**00 21 39.0**	**-3.8**
	0.8nm,0.9s,baz=352,slow=2.8,SNR=4.1								
MKAR	**Makanchi Array**	**43.13**	**322**		P		**P**	**00 19 57.2**	**+1.7**
	0.1nm,0.3s,baz=117,slow=8.3,SNR=5.3								
MKAR					PcP		**PcP**	**00 21 43.3**	**-1.5**
	0.5nm,0.7s,baz=101,slow=6.0,SNR=3.0								
ZALV	**Zalesovo Beam**	**45.99**	**332**		P		**P**	**00 20 19.6**	**+1.4**
	0.5nm,0.5s,baz=112,slow=6.4,SNR=2.9								
PETK	**Petropavlovsk-**	**46.77**	**30**		P		**P**	**00 20 23.1**	**-1.3**
	1.7nm,0.7s,baz=207,slow=2.9,SNR=2.8								
STKA	**Stephens Creek**	**52.66**	**157**		P		P	00 21 04.7	-4.6
	0.6nm,0.4s,baz=333,slow=6.8,SNR=4.0								
ILAR	**Eielson Array**	**76.36**	**26**		P		**P**	**00 23 42.0**	**-1.8**
	0.1nm,0.4s,baz=267,slow=5.3,SNR=4.4								
NB2	**NORSAR Subarra**	**84.19**	**332**		P		P	00 24 22.9	-3.2
	comp=Z,1.0nm,0.8s,baz=64,slow=5.1								
NOA	**NORSAR Array B**	**84.19**	**332**		P		**P**	**00 24 24.1**	**-2.0**
	comp=Z,0.5nm,0.9s,baz=62,slow=2.5,SNR=3.4								
NOA					pP		pP	00 24 44.2	+7.3
	comp=Z,0.6nm,0.6s,baz=65,slow=4.7,SNR=3.1								
YKA	**Yellowknife Ar**	**90.26**	**22**		P		P	00 24 52.0	-3.3
	comp=Z,0.5nm,0.8s,baz=289,slow=3.8,SNR=3.9								
LPAZ	**La Paz**	**172.30**	**88**		PKPab		**PKPab**	**00 33 27.6**	**-2.1**
	comp=Z,0.5nm,0.4s,baz=292,slow=3.5,SNR=5.3								

IDC 17 00:41:57.4±1.3, 21°.14S×178°.02E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.7/17, mbtmp3.6/5, MS3.3/1, Ms1 3.3/1, ms1mx2.7/18, Error ellipse: s-maj=43.3km s-min=30.5km az=152.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**17.09**	**182**		LR		LR	00 50 52.1	
	comp=Z,97nm,18.2s,baz=121,slow=31								
STKA	**Stephens Creek**	**34.16**	**244**		P		P	00 48 46.1	+1.6
	1.3nm,0.9s,baz=100,slow=15,SNR=2.3								
ASAR	**Alice Springs**	**40.75**	**258**		P		P	00 49 39.5	-1.0
	0.5nm,0.7s,baz=89,slow=8.7,SNR=7.2								
WRA	**Warramunga Arr**	**40.83**	**264**		P		P	00 49 40.8	-0.4
	0.6nm,0.8s,baz=100,slow=7.3,SNR=3.9								
VNDA	**Vanda**	**56.98**	**184**		P		P	00 51 44.0	-0.3
	0.3nm,0.4s,baz=45,slow=5.7,SNR=5.3								
NVAR	**Mina Array Bea**	**84.07**	**45**		P		P	00 54 30.6	+0.1
	0.1nm,0.3s,baz=218,slow=5.3,SNR=3.9								
GERES	**GERESS Array B**	**149.64**	**339**		PKPbc		PKPbc	01 01 48.7	-0.4
	0.6nm,0.8s,baz=28,slow=4.4,SNR=4.2								

IDC 17 00:45:10.9±7.0, 16°.65S×176°.19W, h0km, mb3.9/3, mb1 4.2/3, mb1mx3.7/18, mbtmp3.9/3, MS2.6/1, Ms1 2.6/1, ms1mx1.7/21, Error ellipse: s-maj=324.7km s-min=34.9km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**5.05**	**58**		LR		LR	00 48 11.0	
	comp=Z,71nm,20.8s,baz=224,slow=36								
WRA	**Warramunga Arr**	**46.96**	**258**		P		P	00 53 42.9	-1.1
	0.3nm,0.3s,baz=92,slow=6.8,SNR=2.8								
ASAR	**Alice Springs**	**47.18**	**253**		P		P	00 53 46.7	+1.0
	4.5nm,0.4s,baz=86,slow=8.4,SNR=75								
ILAR	**Eielson Array**	**84.21**	**12**		P		P	00 57 45.6	+1.8
	0.4nm,0.6s,baz=236,slow=4.9,SNR=4.8								
BRTR	**Keskin Array B**	**145.35**	**318**		PKPbc		PKPbc	01 04 48.7	-2.5
	0.6nm,0.8s,baz=66,slow=5.4,SNR=4.1								
GERES	**GERESS Array B**	**146.89**	**348**		PKPbc		PKPdf	01 04 53.3	-0.3
	0.2nm,0.3s,baz=5.7,slow=2.0,SNR=3.6								

*ISCJB **17** 00:47:56.6±0.4, 38°.08N±0°.03×23°.27E±0°.03, h11km±3km, Error ellipse: s-maj=4.7km s-min=3.3km az=21.5*
*ATH **17** 00:47:56.8, 38°.08N×23°.30E, h25km±1km, MD2.7/11, ML1.5*
*CSEM **17** 00:47:56.8±0.2, 38°.10N×23°.26E, h10km, ML1.4/3, Error ellipse: s-maj=4.2km s-min=2.7km az=22.0*
*THE **17** 00:47:57.0, 38°.10N×23°.27E, h7km±2km, ML1.4/3, Error ellipse: s-maj=2.5km s-min=0.4km az=19.0*

ISC 17 00:47:57.0±0.9, 38°.11N±0°.02×23°.27E±0°.02, h9km±7km, n35, σ0s47/61, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VIL2	**Platees**	**0.11**	**0**		P		**Pg**	**00 47 59.2**	**-0.5**
VIL2					S		**Sg**	**00 48 01.3**	**-0.3**
LTK	**Loutraki**	**0.25**	**251**		P		**Pg**	**00 48 01.6**	**-0.5**
LTK					S		**Sg**	**00 48 05.8**	**+0.3**
LTK	**Loutraki**	**0.25**	**251**		*ePB*		**Pb**	**00 48 03.4**	**-0.3**
LTK	**Loutraki**	**0.25**	**251**		P		**Pg**	**00 48 01.6**	**-0.5**
LTK	**Loutraki**	**0.25**	**251**		*ePb*		**Pb**	**00 48 03.4**	**-0.3**
LTK					S		**Sg**	**00 48 05.8**	**+0.3**
ATH	**Athens Observa**	**0.38**	**110**		P		**Pg**	**00 48 04.3**	**-0.2**
ATH					S		**Sg**	**00 48 09.7**	**+0.2**
ATH	**Athens Observa**	**0.38**	**110**		*ePB*		**Pg**	**00 48 04.3**	**-0.2**
ATH					*eSB*		**Sg**	**00 48 10.0**	**+0.5**
ATH	**Athens Observa**	**0.38**	**110**		P		**Pg**	**00 48 04.3**	**-0.2**
ATH					S		**Sg**	**00 48 09.7**	**+0.2**
ATH					*eSb*		**Sg**	**00 48 10.0**	**+0.5**
NAIG	**Nisos Aigina**	**0.39**	**153**		*ePB*		**Pg**	**00 48 04.6**	**-0.1**
NAIG	**Nisos Aigina**	**0.39**	**153**		*ePb*		**Pg**	**00 48 04.6**	**-0.1**
ATHU	**Athens Univers**	**0.43**	**109**		P		**Pg**	**00 48 05.1**	**-0.4**
ATHU					S		**Sg**	**00 48 11.9**	**+0.7**
ATHU	**Athens Univers**	**0.43**	**109**		P		**Pg**	**00 48 05.1**	**-0.4**
ATHU					S		**Sg**	**00 48 11.9**	**+0.7**
PTL	**Penteli**	**0.47**	**97**		*ePB*		**Pg**	**00 48 05.9**	**-0.4**
PTL					*eSB*		**Sg**	**00 48 12.9**	**+0.4**
PTL	**Penteli**	**0.47**	**97**		*ePb*		**Pg**	**00 48 05.9**	**-0.4**
PTL					*eSb*		**Sg**	**00 48 12.9**	**+0.4**
DID	**Didima**	**0.60**	**182**		P		**Pg**	**00 48 08.1**	**-0.5**
DID					S		**Sb**	**00 48 17.2**	**-1.0**
DID	**Didima**	**0.60**	**182**		*ePN*		**Pg**	**00 48 08.1**	**-0.5**
DID					*eSN*		**Sb**	**00 48 17.6**	**-0.6**
DID	**Didima**	**0.60**	**182**		P		**Pg**	**00 48 08.1**	**-0.5**
DID					S		**Sb**	**00 48 17.2**	**-1.0**
ATAL	**Atalanti**	**0.62**	**342**		P		**Pg**	**00 48 08.5**	**-0.5**
ATAL					S		**Sb**	**00 48 18.3**	**-0.5**
ATAL	**Atalanti**	**0.62**	**342**		P		**Pg**	**00 48 08.5**	**-0.5**
ATAL					S		**Sb**	**00 48 18.3**	**-0.5**
DSF	**Desfina**	**0.66**	**298**		P		**Pg**	**00 48 09.2**	**-0.6**
DSF					S		**Sg**	**00 48 18.9**	**+0.5**
DSF	**Desfina**	**0.66**	**298**		P		**Pg**	**00 48 09.2**	**-0.6**
DSF					S		**Sg**	**00 48 18.9**	**+0.5**
GUR	**Goura**	**0.75**	**257**		P		**Pg**	**00 48 11.4**	**-0.1**
GUR					S		**Sg**	**00 48 21.9**	**+0.6**
GUR	**Goura**	**0.75**	**257**		*ePN*		**Pg**	**00 48 11.7**	**+0.2**
GUR					*eSN*		**Sb**	**00 48 23.0**	**+0.3**
GUR	**Goura**	**0.75**	**257**		P		**Pg**	**00 48 11.4**	**-0.1**
GUR	**Goura**	**0.75**	**257**		*ePn*		**Pg**	**00 48 11.7**	**+0.2**
GUR					S		**Sg**	**00 48 21.9**	**+0.6**
GUR					*eSn*		**Sb**	**00 48 23.0**	**+0.3**
KLV	**Kalavryta, Ach**	**0.88**	**266**		*ePN*		**Pb**	**00 48 14.4**	**-0.2**
KLV	**Kalavryta, Ach**	**0.88**	**266**		*ePn*		**Pb**	**00 48 14.4**	**-0.2**
KALE	**Kalithea**	**0.93**	**288**		*ePN*		**Pn**	**00 48 16.3**	**0.0**
KALE					*eSN*		**Sn**	**00 48 29.3**	**-0.5**
KALE	**Kalithea**	**0.93**	**288**		*ePn*		**Pn**	**00 48 16.3**	**0.0**
KALE					*eSn*		**Sn**	**00 48 29.3**	**-0.5**
TRIZ	**Trizonia**	**0.98**	**286**		*ePN*		**Pg**	**00 48 15.7**	**-0.1**
TRIZ	**Trizonia**	**0.98**	**286**		*ePn*		**Pg**	**00 48 15.7**	**-0.1**
EFP	**Efpalio**	**1.12**	**287**		*ePN*		**Pn**	**00 48 19.4**	**+0.6**
EFP	**Efpalio**	**1.12**	**287**		*ePn*		**Pn**	**00 48 19.4**	**+0.6**
NEO	**Neokhori**	**1.20**	**358**		*ePN*		**Pb**	**00 48 20.0**	**+0.1**
NEO					*eSN*		**Sn**	**00 48 37.1**	**+0.7**
NEO	**Neokhori**	**1.20**	**358**		*ePn*		**Pb**	**00 48 20.0**	**+0.1**
NEO					*eSn*		**Sn**	**00 48 37.1**	**+0.7**

MAN 17 01:17:39, 10°.83N×122°.07E, h2km, mb4.7, ML3.6, MS3.5, Panay

IDC 17 01:25:15.5±10.0, 22°.18S×179°.76W, h622km±96km, mb3.3/6, mb1 3.4/7, mb1mx3.1/18, mbtmp3.3/7, Error ellipse: s-maj=96.9km s-min=35.1km az=111.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.79**	**268**		P		P	01 28 02.4	+0.3
	0.5nm,0.3s,baz=73,slow=19,SNR=6.8								
PMG	**Port Moresby**	**34.18**	**287**		P		P	01 31 11.2	-0.3
	3.8nm,0.5s,baz=160,slow=5.3,SNR=3.7								
STKA	**Stephens Creek**	**35.60**	**246**		P		P	01 31 23.4	+0.4
	1.7nm,0.5s,baz=104,slow=14,SNR=7.5								
ASAR	**Alice Springs**	**42.56**	**259**		P		P	01 32 19.0	+0.1
	4.5nm,0.8s,baz=94,slow=7.9,SNR=34								
WRA	**Warramunga Arr**	**42.77**	**264**		P		P	01 32 20.0	-0.6
	2.1nm,0.3s,baz=95,slow=7.9,SNR=28								
PETK	**Petropavlovsk-**	**77.49**	**346**		P		P	01 36 07.8	-0.3
	2.0nm,0.7s,baz=132,slow=8.2,SNR=5.8								
USRK	**Ussuriysk Arra**	**79.44**	**327**		P		P	01 36 20.

TWC	**Suao**	**0.62**	**329**	P	**Pb**	**02 45 24.1**	**-0.5**
	baz=327						
TWC				S	**Sb**	**02 45 33.1**	**+0.2**
	baz=327						
ENTT	**Nioudou**	**0.81**	**315**	P	**Pn**	**02 45 28.0**	**-0.2**
	baz=323						
ENTT				*e*S	**Sn**	**02 45 39.7**	**+0.3**
	baz=323						
TWE	**Neicheng**	**0.81**	**323**	P	**Pn**	**02 45 27.1**	**-1.1**
	baz=322						
TWE				*e*S	**Sn**	**02 45 38.5**	**-0.8**
	baz=322						
NNS	**Nan Shan**	**0.84**	**296**	*e*P	**Pn**	**02 45 28.0**	**-0.7**
	baz=295						
NNS				*e*S	**Sb**	**02 45 39.2**	**0.0**
	baz=295						
YOJ	**Yonaguni jima**	**0.84**	**62**	P	**Pn**	**02 45 27.6**	**-0.9**
YOJ				S	**Sb**	**02 45 38.5**	**-0.6**
WHF	**Hehuan Shan**	**0.85**	**275**	P	**Pn**	**02 45 28.1**	**-1.0**
	baz=264						
WHF				*e*S	**Sb**	**02 45 39.9**	**-0.1**
	baz=264						
TWB1	**Santiao Chiao**	**0.95**	**349**	*e*P	**Pn**	**02 45 29.7**	**-0.4**
	baz=336						
TWB1				*e*S	**Sb**	**02 45 42.8**	**+0.5**
	baz=336						
NSK	**Sanguang**	**0.97**	**308**	P	**Pn**	**02 45 30.2**	**-0.3**
	baz=307						
NSK				*e*S	**Sb**	**02 45 44.0**	**+1.0**
	baz=307						
EHY	**Hungye**	**0.98**	**235**	*e*P	**Pn**	**02 45 29.3**	**-1.2**
	baz=229						
EHY				*e*S	**Sn**	**02 45 41.7**	**-1.9**
	baz=229						
NWF	**Wu-fen Shan**	**1.07**	**339**	P	**Pn**	**02 45 31.4**	**-0.4**
	baz=351						
NWF				S	**Sb**	**02 45 46.1**	**+0.4**
	baz=351						
TWF1	**Yuli**	**1.09**	**229**	*e*P	**Pn**	**02 45 31.4**	**-0.6**
	baz=246						
TWF1				*e*S	**Sn**	**02 45 45.4**	**-1.0**
	baz=246						
SMLT	**Sun Moon Lake**	**1.20**	**261**	P	**Pn**	**02 45 33.2**	**-0.5**
	baz=251						
SMLT				*e*S	**Sn**	**02 45 49.6**	**+0.4**
	baz=251						
NSTT	**Nanjuang**	**1.23**	**297**	*e*P	**Pn**	**02 45 33.6**	**-0.3**
	baz=297						
NSTT				*e*S	**Sb**	**02 45 50.2**	**0.0**
	baz=297						
TYC	**Yuchr**	**1.24**	**263**	*e*P	**Pn**	**02 45 33.7**	**-0.3**
	baz=262						
TYC				*e*S	**Sb**	**02 45 51.1**	**+0.7**
	baz=262						
TWS1	**Kuangyinshan**	**1.25**	**326**	*e*P	**Pb**	**02 45 34.9**	**-0.2**
	baz=334						
TWS1				*e*S	**Sb**	**02 45 51.9**	**+1.1**
	baz=334						
YUS	**Yu-Shan**	**1.28**	**243**	P	**Pn**	**02 45 34.8**	**-0.3**
	baz=244						
YUS				*e*S	**Sn**	**02 45 51.0**	**-0.7**
	baz=244						
TWQ1	**Liyutan**	**1.33**	**282**	*e*P	**Pn**	**02 45 35.6**	**+0.3**
	baz=280						
TWQ1				*e*S	**Sn**	**02 45 52.7**	**+0.4**
	baz=280						
ALS	**Alishan**	**1.39**	**247**	P	**Pn**	**02 45 36.4**	**0.0**
	baz=247						
ALS				*e*S	**Sn**	**02 45 54.0**	**-0.2**
	baz=247						
ELDTW	**Lidau**	**1.39**	**231**	*e*P	**Pn**	**02 45 34.0**	**-2.3**
	baz=221						
IRIF	**Iriomote-Funau**	**1.42**	**79**	P	**Pn**	**02 45 37.2**	**+0.6**
IRIF				*e*S	**Sn**	**02 45 54.8**	**+0.3**
CHN5	**Tsauling**	**1.47**	**252**	*e*P	**Pn**	**02 45 37.3**	**0.0**
	baz=242						
CHN5				*e*S	**Sn**	**02 45 57.0**	**+1.2**
	baz=242						
HATJ	**Hateruma jima**	**1.47**	**90**	*e*S	**Sb**	**02 45 58.9**	**+1.7**
CHN4	**Tsaushan**	**1.64**	**244**	*e*P	**Pn**	**02 45 40.6**	**+1.1**
	baz=236						
CHN4				*e*S	**Sn**	**02 46 00.7**	**+0.9**
	baz=236						
JKRS	**Kuro-shima**	**1.66**	**84**	P	**Pn**	**02 45 40.0**	**+0.1**
JKRS				*e*S	**Sn**	**02 46 01.6**	**+1.1**
WTP	**Ta-pu**	**1.67**	**241**	*e*P	**Pn**	**02 45 40.8**	**+0.8**
	baz=241						
WTP				*e*S	**Sn**	**02 46 02.1**	**+1.5**
	baz=241						
CHN1	**Nanshi**	**1.77**	**240**	*e*P	**Pn**	**02 45 41.9**	**+0.6**
	baz=241						
CHN1				*e*S	**Sn**	**02 46 05.2**	**+2.2**
	baz=241						
JIJ	**Ishigaki jima**	**1.80**	**80**	P	**Pn**	**02 45 40.8**	**-1.0**
JIJ				S	**Sn**	**02 46 02.9**	**-0.9**

*ISCJB **17** 02:56:05.5±1.1, 42.°61N±0.°06×5.°02E±0.°04, h11km±12km, Error ellipse: s-maj=10.1km s-min=5.0km az=177.6*
*LDG **17** 02:56:08.5±0.2, 42.°62N×5.°01E, h10km, Ml2.4/10, Error ellipse: s-maj=4.5km s-min=2.5km az=158.0*
*CSEM **17** 02:56:09.4±0.6, 42.°64N×5.°07E, h19km, ML2.3/6, Error ellipse: s-maj=9.1km s-min=4.5km az=153.0*

ISC 17 02:56:07.9±1.5, 42.°60N±0.°06×5.°03E±0.°03, h17km±12km, n20, σ1§10/33, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMR	**La Mourre**	**1.31**	**55**	*e*Pg	**Pg**	**02 56 33.6**	**+0.4**
LMR				*e*Sg	**Sb**	**02 56 47.7**	**-1.0**
	19nm,0.2s						
LMR	**La Mourre**	**1.31**	**55**	*e*Pg	**Pg**	**02 56 33.6**	**+0.4**
LMR				*e*Sg	**Sb**	**02 56 47.7**	**-1.0**
	9.5nm,0.2s						
SMRF	**Simiane la Rot**	**1.44**	**16**	*e*Pg	**Pg**	**02 56 35.8**	**+0.3**
SMRF				*e*Sg	**Sg**	**02 56 54.0**	**-0.2**
	2.3nm,0.3s						
SMRF	**Simiane la Rot**	**1.44**	**16**	*e*Pg	**Pg**	**02 56 35.8**	**+0.3**
SMRF				*e*Sg	**Sg**	**02 56 54.0**	**-0.2**
	1.1nm,0.3s						
FRF	**La Foret Royal**	**1.53**	**50**	*e*Pg	**Pg**	**02 56 37.4**	**+0.1**
	20nm,0.2s						
FRF				*e*Sg	**Sb**	**02 56 55.5**	**+0.6**
FRF	**La Foret Royal**	**1.53**	**50**	*e*Pg	**Pg**	**02 56 37.4**	**+0.1**
	10.0nm,0.2s						
FRF				*e*Sg	**Sb**	**02 56 55.5**	**+0.6**
LASF	**Ste Croix**	**1.71**	**330**	*e*Pg	**Pb**	**02 56 39.7**	**+0.8**
LASF				*e*Sg	**Sg**	**02 57 02.6**	**-0.3**
	1.8nm,0.3s						
LASF	**Ste Croix**	**1.71**	**330**	*e*Sg	**Sg**	**02 57 02.6**	**-0.3**
	0.9nm,0.3s						
SBF	**Sospel**	**2.17**	**53**	*e*Pg	**Pb**	**02 56 48.4**	**+1.7**
SBF				*e*Sg	**Sg**	**02 57 16.2**	**-1.4**
	4.0nm,0.2s						
SBF	**Sospel**	**2.17**	**53**	*e*Pg	**Pb**	**02 56 48.4**	**+1.7**
SBF				*e*Sg	**Sg**	**02 57 16.2**	**-1.4**
	2.0nm,0.2s						
MTLF	**Montolieu**	**2.19**	**291**	*e*Pg	**Pb**	**02 56 48.9**	**+1.8**
MTLF				*e*Sg	**Sg**	**02 57 17.5**	**-0.9**
	3.4nm,0.2s						
MTLF	**Montolieu**	**2.19**	**291**	*e*Pg	**Pb**	**02 56 48.9**	**+1.8**
MTLF				*e*Sg	**Sg**	**02 57 17.5**	**-0.9**
	1.7nm,0.2s						
MTLF				Lg	Lg	02 57 17.5	
	0.9nm,0.2s						
VIVF	**Saint-Julien-l**	**2.27**	**354**	*e*Pn	**Pn**	**02 56 44.0**	**-0.7**
VIVF	**Saint-Julien-l**	**2.27**	**354**	*e*Pg	**Pb**	**02 56 50.1**	**+1.6**
VIVF				*e*Sg	**Sg**	**02 57 19.7**	**-1.3**
	1.2nm,0.3s						
VIVF	**Saint-Julien-l**	**2.27**	**354**	*e*Pn	**Pn**	**02 56 44.0**	**-0.7**
VIVF	**Saint-Julien-l**	**2.27**	**354**	*e*Pg	**Pb**	**02 56 50.1**	**+1.6**
VIVF				*e*Sg	**Sg**	**02 57 19.7**	**-1.3**
	0.6nm,0.3s						
VIVF	**Saint-Julien-l**	**2.27**	**354**	*e*Pn	**Pb**	**02 56 50.1**	**+1.6**
PGF	**Pioggiola**	**2.93**	**90**	*e*Pn	**Pn**	**02 56 53.8**	**-0.1**
PGF				*e*Sn	Sn	02 57 21.7	-7.1
	1.3nm,0.3s						
ETOS	**Mallorca**	**3.28**	**211**	Sn	**Sn**	**02 57 36.5**	**-0.8**
	SNR=7.9						
ETOS	**Mallorca**	**3.28**	**211**	Sn	**Sn**	**02 57 36.5**	**-0.8**
	SNR=7.9						

*MDD **17** 02:56:14.8±0.9, 42.°47N×4.°91E, h31km±1km, mbLg1.5/3, Error ellipse: s-maj=9.2km s-min=4.9km az=149.0*

*LDG **17** 02:56:15.6±0.5, 42.°64N×5.°04E, h15km, Ml2.2/10, Error ellipse: s-maj=9.1km s-min=5.0km az=16.0*

ISC 17 02:56:15.7±1.9, 42.°55N±0.°09×5.°03E±0.°04, h29km±18km, n23, σ1§00/22, Western Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LMR	**La Mourre**	**1.34**	**54**	*e*Pg	**Pb**	**02 56 40.1**	**-0.2**
LMR				*e*Sg	**Sn**	**02 56 54.2**	**-1.2**
	11nm,0.2s						
LMR	**La Mourre**	**1.34**	**54**	Lg	Lg	02 56 54.2	
	2.8nm,0.2s						
SMRF	**Simiane la Rot**	**1.48**	**15**	*e*Pg	**Pb**	**02 56 42.5**	**-0.2**
SMRF				*e*Sg	**Sb**	**02 57 00.4**	**-0.8**
	1.8nm,0.2s						
SMRF	**Simiane la Rot**	**1.48**	**15**	Lg	Lg	02 57 00.4	
	0.9nm,0.2s						
FRF	**La Foret Royal**	**1.56**	**49**	*e*Pg	**Pb**	**02 56 43.9**	**-0.1**
FRF				*e*Sg	**Sn**	**02 57 02.0**	**+1.2**
	10nm,0.3s						
FRF	**La Foret Royal**	**1.56**	**49**	Lg	Lg	02 57 02.0	
	2.6nm,0.3s						
EJON	**La Jonquera**	**1.58**	**267**	Pg	**Pn**	**02 56 41.2**	**-0.7**
	0.5nm,0.2s,SNR=7.9						
EJON				Lg	Lg	02 56 59.1	
	1.1nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**1.58**	**267**	Pg	**Pn**	**02 56 41.2**	**-0.7**
	0.5nm,0.2s,SNR=7.9						
EJON				Lg	Lg	02 56 59.1	
	1.1nm,0.1s,SNR=7.9						
LASF	**Ste Croix**	**1.75**	**331**	*e*Pg	**Pb**	**02 56 46.1**	**-1.1**
LASF				*e*Sg	**Sb**	**02 57 08.9**	**+0.1**
	1.6nm,0.3s						
LASF	**Ste Croix**	**1.75**	**331**	Pg	**Pb**	**02 56 46.1**	**-1.1**
LASF				Lg	Lg	02 57 08.9	
	0.4nm,0.3s						
CFON	**Fontmartina**	**2.08**	**249**	Pg	**Pn**	**02 56 47.9**	**-0.8**
	0.2nm,0.3s,SNR=7.9						
CFON				Lg	Lg	02 57 12.8	
	2.2nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**2.08**	**249**	Pg	**Pn**	**02 56 47.9**	**-0.8**
	0.2nm,0.3s,SNR=7.9						
CFON				Lg	Lg	02 57 12.8	
	2.2nm,0.2s,SNR=7.9						
SBF	**Sospel**	**2.20**	**52**	*e*Sg	**Sb**	**02 57 22.7**	**+1.0**
	3.8nm,0.2s						
SBF	**Sospel**	**2.20**	**52**	Lg	Lg	02 57 22.7	
	0.9nm,0.2s						
MTLF	**Montolieu**	**2.21**	**292**	*e*Sg	**Sb**	**02 57 24.0**	**+2.0**
	1.8nm,0.2s						
CLLI	**Llivia**	**2.26**	**269**	Pg	**Pn**	**02 56 51.5**	**+0.3**
	0.5nm,0.4s,SNR=17						
CLLI				Lg	Lg	02 57 18.9	
	0.9nm,0.1s,SNR=6.4						
CLLI	**Llivia**	**2.26**	**269**	Pg	**Pn**	**02 56 51.5**	**+0.3**
	0.5nm,0.4s,SNR=17						
CLLI				Lg	Lg	02 57 18.9	
	0.9nm,0.1s,SNR=6.4						
VIVF	**Saint-Julien-l**	**2.32**	**354**	*e*Sg	**Sb**	**02 57 26.3**	**+1.0**
	0.6nm,0.2s						
VIVF	**Saint-Julien-l**	**2.32**	**354**	Lg	Lg	02 57 26.3	
	0.2nm,0.2s						
CSOR	**Sort**	**2.88**	**268**	Pg	**Pn**	**02 57 01.1**	**+1.3**
	0.7nm,0.4s,SNR=7.9						
CSOR				Lg	Lg	02 57 36.5	
	0.6nm,0.3s,SNR=7.9						
CSOR	**Sort**	**2.88**	**268**	Pg	**Pn**	**02 57 01.1**	**+1.3**
	0.7nm,0.4s,SNR=7.9						
CSOR				Lg	Lg	02 57 36.5	
	0.6nm,0.3s,SNR=7.9						
PGF	**Pioggiola**	**2.94**	**89**	*e*Pn	**Pn**	**02 57 00.4**	**-0.1**
PGF				*e*Sn	Sn	02 57 28.2	-6.7
	0.5nm,0.2s						
PGF	**Pioggiola**	**2.94**	**89**	Pn	**Pn**	**02 57 00.4**	**-0.1**
PGF				Sn	Sn	02 57 28.2	-6.7
	0.1nm,0.2s						

*ISCJB **17** 03:41:12.4±0.3, 10.°61S±0.°04×166.°00E±0.°07, h155km, mb4.4/37, Error ellipse: s-maj=9.2km s-min=5.9km az=5.2*
*IDC **17** 03:41:14.7±2.5, 10.°70S×166.°08E, h167km±22km, mb4.0/21, mb1 4.2/23, mb1mx4.2/24, mbtmp4.1/23, MS3.6/2, Ms1 3.6/2, ms1mx3.0/22, Error ellipse: s-maj=15.4km s-min=11.8km az=91.0*
*BJI **17** 03:41:15.9, 10.°44S×166.°15E, h186km, mB4.8/12, mb4.5/26*
*NEIC **17** 03:41:16.4±1.0, 10.°64S×165.°95E, h182km±9km, mb4.5/11, Error ellipse: s-maj=7.5km s-min=6.6km az=149.0*

ISC 17 03:41:13.5±0.4, 10.°66S±0.°05×166.°05E±0.°08, h155km, n83, σ1§18/101, mb4.5/37, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**6.14**	**281**	*e*Pn	**Pn**	**03 42 42.6**	**+0.4**
HNR	**Honiara**	**6.14**	**281**	P	**Pn**	**03 42 43.2**	**+1.1**
	16nm,0.3s,baz=194,slow=2.5,SNR=16						
DZM	**Mont Dzumac**	**11.35**	**178**	*e*P	**Pn**	**03 43 52.6**	**+1.2**
DZM				*e*S	**Sn**	**03 45 53.1**	**-3.9**
DZM	**Mont Dzumac**	**11.35**	**178**	P	**Pn**	**03 43 52.5**	**+1.2**
DZM				S	**Sn**	**03 45 55.9**	**-1.2**
DZM	**Mont Dzumac**	**11.35**	**178**	P	**Pn**	**03 43 52.5**	**+1.2**
	20nm,0.3s,baz=350,slow=13,SNR=129						
DZM				S	**Sn**	**03 45 55.9**	**-1.2**
	2.2nm,0.3s,baz=320,slow=23,SNR=11						
NOUC	**Port Laguerre**	**11.38**	**179**	*e*P	P	03 43 55.6	-3.6
NOUC				*e*S	**Sn**	**03 45 59.5**	**+2.0**
MSVF	**Nonsavu**	**13.59**	**123**	*e*Pn	**P**	**03 44 25.4**	**+1.5**
EIDS	**Eidsvold**	**20.38**	**222**	*e*P	**P**	**03 45 39.2**	**+0.9**
	16nm,0.8s						
CTA	**Charters Tower**	**21.25**	**241**	P	**P**	**03 45 48.6**	**+0.9**
CTA	**Charters Tower**	**21.25**	**241**	P	**P**	**03 45 48.6**	**+0.9**
	13nm,0.7s,baz=76,slow=13,SNR=13						
CTAO	**Charters Tower**	**21.25**	**241**	*e*P	**P**	**03 45 48.7**	**+1.0**
	18nm,0.8s						
ARMA	**Armidale**	**23.80**	**212**	*e*P	**P**	**03 46 13.8**	**+1.4**
	13nm,0.8s						
URZ	**Urewera**	**29.22**	**162**	*e*P	**P**	**03 47 00.6**	**0.0**
URZ	**Urewera**	**29.22**	**162**	P	**P**	**03 47 00.4**	**-0.2**
	4.0nm,0.3s,baz=271,slow=4.2,SNR=5.8						
URZ				LR	LR	03 56 24.7	
	comp=Z,135nm,20.9s,baz=140,slow=31						
STKA	**Stephens Creek**	**30.93**	**223**	*e*P	**P**	**03 47 16.3**	**+0.5**
	2.2nm,0.8s						
STKA				PcP	**PcP**	**03 50 08.0**	**-0.6**
STKA	**Stephens Creek**	**30.93**	**223**	P	**P**	**03 47 16.7**	**+0.9**
	12nm,0.8s,baz=36,slow=9.2,SNR=32						
STKA				PcP	**PcP**	**03 50 08.0**	**-0.6**
	0.9nm,0.7s,baz=142,slow=5.5,SNR=3.1						
STKA				LR	LR	03 59 12.6	
	comp=Z,127nm,21.3s,baz=205,slow=35						
WRAB	**Tennant Creek**	**31.89**	**249**	*e*P	**P**	**03 47 24.0**	**-0.4**
	16nm,0.9s						
WRA	**Warramunga Arr**	**31.90**	**249**	P	**P**	**03 47 24.2**	**-0.3**
WRA				PcP	**PcP**	**03 50 11.3**	**-0.2**
WRA	**Warramunga Arr**	**31.90**	**249**	P	**P**	**03 47 24.2**	**-0.3**
	10nm,0.8s,baz=82,slow=8.9,SNR=49						
WRA				PcP	**PcP**	**03 50 11.3**	**-0.2**
	0.7nm,0.9s,baz=74,slow=2.9,SNR=6.8						
AS31	**Alice Springs**	**33.23**	**243**	*e*P	**P**	**03 47 35.7**	**-0.5**
ASAR	**Alice Springs**	**33.23**	**243**	P	**P**	**03 47 35.5**	**-0.6**
ASAR				PcP	**PcP**	**03 50 14.6**	**-0.7**
ASAR	**Alice Springs**	**33.23**	**243**	P	**P**	**03 47 35.5**	**-0.6**
	9.9nm,0.8s,baz=74,slow=9.4,SNR=69						
ASAR				PcP	**PcP**	**03 50 14.6**	**-0.7**
	1.6nm,0.7s,baz=62,slow=3.3,SNR=9.5						
BBOO	**Buckleboo**	**35.31**	**227**	*e*P	**P**	**03 47 53.7**	**-0.2**
	209nm,0.8s						
FORT	**Forrest**	**40.51**	**235**	*e*P	**P**	**03 48 37.8**	**+0.3**
	31nm,0.8s						
MBWA	**Maple Bar**	**45.61**	**251**	*e*P	**P**	**03 49 18.8**	**+0.2**
ASAJ	**Asahikawa**	**58.53**	**340**	P	**P**	**03 50 53.7**	**+0.1**
ASAJ	**Asahikawa**	**58.53**	**340**	P	**P**	**03 50 53.7**	**+0.1**
	6.1nm,0.7s,baz=235,slow=7.7,SNR=9.1						
KSRS	**Korea Array**	**59.73**	**325**	P	**P**	**03 51 01.8**	**-0.2**
	1.4nm,0.7s,baz=137,slow=6.8,SNR=7.5						
KSAR	**Wonju Array Be**	**59.75**	**325**	P	**P**	**03 51 01.8**	**-0.3**
NJ2	**Nanjing**	**61.96**	**315**	*e*P	**P**	**03 51 17.8**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
USRK	**Ussuriysk Arra**	**62.74**	**333**	P	**P**	**03 51 22.5**	**+0.4**
	comp=Z,5nm,0.7s,baz=142,slow=5.1,SNR=7.0						
PETK	**Petropavlovsk-**	**63.92**	**354**	P	**P**	**03 51 30.1**	**+0.4**
PETK	**Petropavlovsk-**	**63.92**	**354**	P	**P**	**03 51 30.1**	**+0.4**
	comp=Z,3.5nm,0.9s,baz=134,slow=8.5,SNR=5.9						
CN2	**Changchun**	**65.57**	**329**	*e*P	**P**	**03 51 42.5**	**+1.9**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CASY	**Casey**	**66.84**	**201**	*e*P	**P**	**03 51 48.1**	**-0.3**
VNDA	**Vanda**	**66.88**	**181**	*e*P	**P**	**03 51 47.5**	**-0.9**
	comp=Z,13nm,2.0s						
VNDA	**Vanda**	**66.88**	**181**	P	**P**	**03 51 47.5**	**-0.9**
	comp=Z,1.1nm,0.9s,baz=323,slow=5.9,SNR=5.9						
GYA	**Guiyang**	**68.45**	**304**	*e*P	**P**	**03 52 01.0**	**+1.6**
GYA				pP	pP	03 52 43.6	+6.9
GYA				sP	sP	03 53 03.8	+10
GYA				PP	**PP**	**03 54 35.3**	**+2.7**
GYA				ScP		03 56 08.8	
GYA				PcS		03 56 27.6	
GYA				S	**S**	**04 00 44.5**	**-4.5**
GYA				SKS	**SKiKP**	**04 01 37.3**	**-0.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**70.09**	**312**	P	**P**	**03 52 09.5**	**+0.3**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMI	**Kunming**	**71.18**	**301**	P	**P**	**03 52 16.3**	**+0.1**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**72.24**	**293**	P	**P**	**03 52 23.6**	**+1.3**
CMAR	**Chiang Mai Arr**	**72.24**	**293**	P	**P**	**03 52 23.6**	**+1.3**
	comp=Z,3.0nm,0.3s,baz=114,slow=4.1,SNR=15						
CD2	**Chengdu**	**72.61**	**307**	P	**P**	**03 52 24.4**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,90nm,6.8s						
LZH	**Lanzhou**	**74.72**	**312**	*e*P	**P**	**03 52 36.9**	**+0.1**
LZH				pP	**pP**	**03 53 18.8**	**+4.1**
LZH				sP	sP	03 53 47.0	+16
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
SONM	**Songino Array**	**78.54**	**324**	P	**P**	**03 52 57.8**	**-0.1**
SONM	**Songino Array**	**78.54**	**324**	P	**P**	**03 52 57.8**	**-0.1**
	comp=Z,2.4nm,0.9s,baz=132,slow=6.2,SNR=12						
GTA	**Gaotai**	**79.01**	**314**	P	**P**	**03 53 01.9**	**+1.3**
GTA				pP	pP	03 53 48.1	+9.2
GTA				sP	sP	03 54 08.5	+13
GTA				S	**S**	**04 02 43.3**	**-3.7**
GTA				SKS	SKSac	04 02 54.3	-7.8
GTA				sS	sS	04 04 04.0	+11
GTA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,85nm,6.6s						
GTA				LR	LR		
	comp=N,300nm,20.4s						
GTA				LR	LR		
	comp=E,650nm,19.0s						
GTA				LR	LR		
	comp=Z,830nm,19.2s						
QSPA	**South Pole Qui**	**79.34**	**180**	*e*P	**P**	**03 53 01.3**	**-0.7**
	comp=Z,6.2nm,1.1s						
ILAR	**Eielson Array**	**83.05**	**18**	P	**P**	**03 53 21.0**	**-0.3**
ILAR	**Eielson Array**	**83.05**	**18**	P	**P**	**03 53 21.0**	**-0.3**
	comp=Z,2.7nm,0.7s,baz=231,slow=5.7,SNR=4.1						
YBH	**Yreka Blue Hor**	**83.41**	**46**	P	**P**	**03 53 23.9**	**+0.2**
YBH	**Yreka Blue Hor**	**83.41**	**46**	P	**P**	**03 53 23.9**	**+0.2**
	comp=Z,3.3nm,1.0s,baz=279,slow=3.1,SNR=7.4						
HUMO	**Hull Mountain**	**83.55**	**45**	*e*P	**P**	**03 53 25.0**	**+0.7**
CMB	**Columbia Colle**	**83.86**	**50**	*e*P	**P**	**03 53 25.6**	**-0.5**
	comp=Z,3.0nm,1.0s						
MAW	**Mawson**	**85.19**	**202**	P	**P**	**03 53 32.0**	**-0.1**
MAW	**Mawson**	**85.19**	**202**	P	**P**	**03 53 32.0**	**-0.1**
	comp=Z,5.4nm,0.9s,baz=66,slow=5.8,SNR=8.6						
NVAR	**Mina Array Bea**	**85.55**	**50**	P	**P**	**03 53 34.9**	**+0.1**
NVAR	**Mina Array Bea**	**85.55**	**50**	P	**P**	**03 53 34.9**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=235,slow=8.0,SNR=11						
LDFC	**Landfair**	**87.08**	**54**	*e*P	**P**	**03 53 42.6**	**+0.4**
	comp=Z,14nm,1.3s						
WMQ	**Urumqi**	**89.04**	**315**	*e*P	**P**	**03 53 50.0**	**-1.2**
WMQ				pP	pP	03 54 38.0	+7.7
WMQ				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,93nm,3.9s						
CCUT	**Cedar City**	**89.07**	**52**	*e*P	**P**	**03 53 52.4**	**+0.7**
	comp=Z,22nm,2.2s						
DLMT	**Dillon**	**91.50**	**44**	*e*P	**P**	**03 54 02.9**	**+0.2**
PDAR	**Pinedale Array**	**93.07**	**47**	P	**P**	**03 54 10.1**	**0.0**
PDAR	**Pinedale Array**	**93.07**	**47**	P	**P**	**03 54 10.1**	**0.0**
	comp=Z,0.5nm,0.8s,baz=251,slow=4.5,SNR=4.3						
ZALV	**Zalesovo Beam**	**93.42**	**324**	P	**P**	**03 54 09.8**	**-1.4**
ZALV	**Zalesovo Beam**	**93.42**	**324**	P	**P**	**03 54 09.8**	**-1.4**
	comp=Z,1.5nm,0.7s,baz=108,slow=4.8,SNR=7.5						
MK31	**Makanchi Array**	**93.45**	**317**	*e*P	**P**	**03 54 11.1**	**-0.5**
MKAR	**Makanchi Array**	**93.45**	**317**	P	**P**	**03 54 11.3**	**-0.2**
MKAR	**Makanchi Array**	**93.45**	**317**	P	**P**	**03 54 11.3**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=90,slow=6.5,SNR=19						
YKA	**Yellowknife Ar**	**94.49**	**27**	P	**P**	**03 54 16.7**	**+0.9**
YKA	**Yellowknife Ar**	**94.49**	**27**	P	**P**	**03 54 16.7**	**+0.9**
	comp=Z,3.3nm,0.3s,baz=259,slow=6.2,SNR=4.9						
TXAR	**Lajitas Array**	**95.38**	**61**	P	**P**	**03 54 20.5**	**-0.4**
TXAR	**Lajitas Array**	**95.38**	**61**	P	**P**	**03 54 20.5**	**-0.4**
	comp=Z,0.3nm,0.9s,baz=204,slow=2.7,SNR=3.6						
ARCES	**ARCESS Array B**	**116.04**	**346**	PKP	**PKPdf**	**03 59 36.3**	**-1.3**
ARCES	**ARCESS Array B**	**116.04**	**346**	PKP	**PKPdf**	**03 59 36.3**	**-1.3**
	comp=Z,1.9nm,0.8s,baz=70,slow=2.0,SNR=13						
NOA	**NORSAR Array B**	**126.41**	**345**	PKP	**PKPdf**	**03 59 56.0**	**-1.8**
**

MCK					S	**Sb**	**03 50 01.9 +0.3**		
OPT	**Oil Point**	**2.46**	**187**		P	**Pn**	**03 49 31.2 +1.1**		
AUW	**Augustine West**	**2.76**	**189**		P	**Pn**	**03 49 35.2 +1.0**		
NEA	**Nenana**	**2.96**	**31**		P	**Pn**	**03 49 37.7 +0.7**		
WRH	**Wood River Hil**	**3.15**	**39**		P	**Pn**	**03 49 40.0 +0.5**		
VLZ	**Valdez**	**3.15**	**105**		P	**Pn**	**03 49 41.4 +1.8**		
KLU	**Klutina**	**3.24**	**98**		P	**Pn**	**03 49 42.2 +1.4**		
GCSA	**Galena City Sc**	**3.28**	**326**		P	**Pn**	**03 49 39.2 -2.1**		
CCB	**Clear Creek Bu**	**3.36**	**38**		P	**Pn**	**03 49 42.8 +0.4**		
DIV	**Divide**	**3.41**	**103**		P	**Pn**	**03 49 44.3 +1.1**		
PAX	**Paxson**	**3.43**	**72**		P	Pn	03 49 46.2 +2.7		
HDA	**Harding Lake**	**3.46**	**45**		P	**Pn**	**03 49 44.7 +0.9**		
MDM	**Murphy Dome**	**3.49**	**32**		P	**Pn**	**03 49 45.3 +1.1**		
HARP	**HAARP**	**3.51**	**81**		P	Pn	03 49 47.1 +2.6		
COLA	**College**	**3.52**	**35**		*e*Pn	**Pn**	**03 49 45.4 +0.9**		
COLA					*e*S	**Sg**	**03 50 39.8 -3.0**		
DDM	**Donnelly Dome**	**3.53**	**58**		P	**Pn**	**03 49 46.3 +1.6**		
EYAK	**Cordova Ski Ar**	**3.66**	**112**		P	**Pn**	**03 49 46.7 +0.2**		
IL1	**Eielson Array**	**3.73**	**41**		P	**Pn**	**03 49 48.3 +0.9**		
ILAR	**Eielson Array**	**3.73**	**41**		Pn	**Pn**	**03 49 48.3 +0.9**		
ILAR					Lg	Lg	03 50 45.7		
ILAR	**Eielson Array**	**3.73**	**41**		Pn	**Pn**	**03 49 48.3 +0.9**		
	2.7nm,0.3s,baz=220,slow=14,SNR=158								
ILAR					Lg	Lg	03 50 45.7		
	14nm,0.3s,baz=228,slow=30,SNR=14								
RIDG	**Independ'e Rid**	**3.92**	**62**		P	**Pn**	**03 49 52.3 +2.0**		
IM3	**Indian Mountai**	**3.94**	**353**		P	**Pn**	**03 49 50.8 +0.4**		
KAKN	**Katmai Knife C**	**4.00**	**199**		P	**Pn**	**03 49 52.0 +0.8**		
MID	**Middleton Isla**	**4.08**	**128**		*e*Pn	Pn	03 49 55.5 +3.3		
MENT	**Mentasta**	**4.21**	**74**		*e*Pn	**Pn**	**03 49 56.6 +2.5**		
MENT					*e*S	**Sg**	**03 51 02.3 -2.8**		
DOT	**Dot Lake**	**4.22**	**64**		P	**Pn**	**03 49 55.9 +1.7**		
KDAK	**Kodiak Island**	**4.32**	**180**		*e*Pn	Pn	03 49 58.5 +2.9		
KDAK					Lg	Lg	03 51 01.8		
KDAK	**Kodiak Island**	**4.32**	**180**		Pn	Pn	03 49 58.2 +2.7		
	2.4nm,0.3s,baz=20,slow=7.8,SNR=13								
KDAK					Lg	Lg	03 51 01.8		
	3.0nm,0.3s,baz=308,slow=19,SNR=2.6								
SCRK	**Sand Creek**	**4.36**	**61**		P	**Pn**	**03 49 57.7 +1.4**		
VRDI	**Verde Repeater**	**4.46**	**97**		P	**Pn**	**03 49 59.2 +1.6**		
KHIT	**Khitrov Hills**	**4.82**	**106**		P	**Pn**	**03 50 04.0 +1.5**		
OHAK	**Old Harbor**	**4.89**	**184**		P	**Pn**	**03 50 04.1 +0.7**		
PTPK	**Patty Peak**	**4.93**	**96**		P	**Pn**	**03 50 05.7 +1.6**		
BALM	**Baldy**	**5.03**	**98**		P	**Pn**	**03 50 06.2 +0.8**		
KIAG	**Kiagna River**	**5.05**	**99**		P	**Pn**	**03 50 06.8 +1.0**		
BCA3	**Beaver Creek A**	**5.11**	**74**		P	**Pn**	**03 50 08.2 +1.8**		
KULT	**Kultieth River**	**5.14**	**107**		P	**Pn**	**03 50 08.6 +1.7**		
BARK	**Barkley Ridge**	**5.18**	**105**		P	**Pn**	**03 50 08.7 +1.2**		
COLD	**Coldfoot**	**5.26**	**10**		*e*Pn	**Pn**	**03 50 08.7 +0.1**		
COLD					*e*S	**Sg**	**03 51 38.2 -0.4**		
BARN	**Barnard Glacie**	**5.34**	**96**		P	**Pn**	**03 50 11.6 +1.8**		
GRNC	**Granite Creek**	**5.39**	**100**		P	**Pn**	**03 50 11.7 +1.1**		
EGAK	**Eagle**	**5.81**	**57**		*e*Pn	**Pn**	**03 50 16.6 +0.7**		
	41nm,0.6s								
EGAK					*e*S	**Sg**	**03 51 52.7 -3.4**		
SAMH	**Samovar Hills**	**6.07**	**104**		P	**Pn**	**03 50 21.9 +2.2**		
DAWY	**Dawson**	**6.33**	**66**		P	**Pn**	**03 50 24.9 +1.8**		
PNL	**Peninsula**	**6.89**	**105**		P	**Pn**	**03 50 31.7 +0.7**		
HYT	**Haines Junctio**	**7.35**	**93**		P	**Pn**	**03 50 38.5 +1.2**		
TNA	**Tin City**	**7.60**	**304**		*e*Pn	**Pn**	**03 50 41.7 +1.2**		
	25nm,0.7s								
GAMB	**Gambell**	**8.86**	**289**		*e*Pn	**Pn**	**03 50 58.8 +1.1**		
INK	**Inuvik**	**10.12**	**44**		Pn	Pn	03 51 18.1 +3.0		
INK	**Inuvik**	**10.12**	**44**		Pn	Pn	03 51 18.1 +3.0		
	0.2nm,0.3s,baz=251,slow=16,SNR=3.8								
INK					LR	LR	03 55 40.7		
	comp=Z,78nm,19.5s,baz=352,slow=40								
NVAR	**Mina Array Bea**	**31.63**	**122**		P	P	03 55 20.1 +7.0		
NVAR	**Mina Array Bea**	**31.63**	**122**		P	P	03 55 20.1 +7.0		
	0.3nm,0.5s,baz=327,slow=9.7,SNR=3.7								
SCHQ	**Schefferville**	**42.29**	**59**		P	P	03 56 48.5 +5.3		
SCHQ	**Schefferville**	**42.29**	**59**		P	P	03 56 48.5 +5.3		
	0.8nm,0.4s,baz=326,slow=11,SNR=3.9								
TXAR	**Lajitas Array**	**45.58**	**113**		P	P	03 57 16.5 +6.5		
TXAR	**Lajitas Array**	**45.58**	**113**		P	P	03 57 16.5 +6.5		
	0.5nm,0.6s,baz=320,slow=5.7,SNR=12								
KSRS	**Korea Array**	**52.93**	**281**		P	**P**	**03 58 07.2 +1.3**		
	0.8nm,0.4s,baz=21,slow=7.1,SNR=3.7								
KSAR	**Wonju Array Be**	**52.95**	**281**		P	**P**	**03 58 07.2 +1.1**		

BJI **17** *04:12:43.6,21.˚39N×61.˚27E,h10km,mB4.9/24,mb4.7/44, Ms4.6/37,Ms7 4.4/36*

IDC **17** *04:12:50.1±0.5,21.˚66N×62.˚11E,h0km, mb4.4/34, mb1 4.5/34,mb1mx4.4/39,mbtmp4.4/34,MS4.2/20, Ms1 4.2/20,ms1mx4.0/39,Error ellipse: s-maj=12.5km s-min=10.4km az=144.0*

NEIC **17** *04:12:51.8±0.2,21.˚72N×62.˚04E,h10km,mb4.9/41,Error ellipse: s-maj=5.5km s-min=4.4km az=144.0*

ISCJB **17** *04:12:51.0±0.8,21.˚72N±0.˚03×61.˚99E±0.˚02,h15km±5km, mb4.7/129,MS4.3/37,Error ellipse: s-maj=5.5km s-min=2.8km az=7.2*

TEH **17** *04:12:52.0,21.˚75N×61.˚96E,h10km,ML4.8*

CSEM **17** *04:12:52.0±0.2,21.˚74N×62.˚11E,h10km,mb4.8/59,Ms4.4, Mw5.0,Error ellipse: s-maj=6.0km s-min=4.7km az=159.0*

PDA **17** *04:12:52.3,21.˚80N×61.˚90E,h10km,mb4.7*

MOS **17** *04:12:53.3±0.9,21.˚71N×61.˚99E,h33km,mb5.0/57, MS4.1/6,Error ellipse: s-maj=7.4km s-min=4.6km az=107.9*

DJA **17** *04:12:53.9±0.3,22˚N±6˚×6˚2E±˚,h10km,M4.7/11,mB5.3/6, mb4.8/11,Mw(mB)4.7/6*

GCMT **17** *04:12:53.4±0.3,21.˚67N×62.˚00E,h29km±2km,MW5.0, Moment Tensor Solution. s23,c30; s51,c71; Moment tensor: Scale 10^16^Nm; Mrr1.63±.18; Mθθ0.59±.13; Mϕϕ-2.21±.14; Mrθ-1.78±.32; Mθϕ0.24±.11; Mϕr3.24±.40; Best double couple: M0 4.20000×10^16^ NP1:ϕ±201.00000°, δ18.00000°,λ137.00000°. NP2:ϕ±333.00000°,δ77.00000°, λ76.00000°. Principal axes: T 4.0900, Plg56.0000°, Azm226.0000°; N 0.2300, Plg13.0000°, Azm336.0000°; P -4.3100, Plg31.0000°, Azm75.0000°; Data Used: IU II IC G.*

OMAN **17** *04:12:59.9±0.1,21.˚68N×61.˚60E,h86km±2km Error ellipse: s-maj=4.5km s-min=3.7km az=307.0*

ISC 17 04:12:53.0±0.4,**21.˚71N**±0.˚04×**61.˚98E**±0.˚03,**h16**km±1km, **h16**km:**pP-P**,**n528**,σ1ş**31**/570,**mb4.7**/128,**MS4.2**/38, **30C-15D**,**Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
WBK	**Wadi Bani Khal**	**2.93**	**288**	P	**Pn**	**04 13 38.7**	**-0.1**
	SNR=358						
WBK				⇓S	**Sn**	**04 14 12.1**	**-1.6**
WBK	**Wadi Bani Khal**	**2.93**	**288**	P	**Pn**	**04 13 38.7**	**-0.1**
	SNR=358						
WBK				S	**Sn**	**04 14 12.1**	**-1.6**
JMDO	**Jabal Madar**	**3.65**	**281**	⇑P	**Pn**	**04 13 49.7**	**+0.9**
	SNR=394						
JMDO				⇑S	**Sn**	**04 14 30.3**	**-1.3**
JMDO	**Jabal Madar**	**3.65**	**281**	P	**Pn**	**04 13 49.7**	**+0.9**
	SNR=394						
JMDO				S	**Sn**	**04 14 30.3**	**-1.3**
SMDO	**Samad**	**3.88**	**291**	⇑P	**Pn**	**04 13 52.6**	**+0.7**
	SNR=318						
SMDO				⇑S	**Sn**	**04 14 34.1**	**-3.1**
SMDO	**Samad**	**3.88**	**291**	P	**Pn**	**04 13 52.6**	**+0.7**
	SNR=318						
SMDO				S	**Sn**	**04 14 34.1**	**-3.1**
BSYO	**Bisya**	**4.50**	**284**	P	**Pn**	**04 14 01.6**	**+1.1**
	SNR=38						
BSY	**Bisya**	**4.54**	**284**	⇓P	**Pn**	**04 14 01.6**	**+0.5**
	SNR=38						
HOQ	**Hoqain**	**4.70**	**294**	⇓P	**Pn**	**04 14 04.0**	**+0.8**
	SNR=18						
HOQ	**Hoqain**	**4.70**	**294**	P	**Pn**	**04 14 04.0**	**+0.8**
	SNR=18						
ARQ	**Araqi**	**5.30**	**289**	⇑P	**Pn**	**04 14 12.8**	**+1.3**
	SNR=25						
ARQ	**Araqi**	**5.30**	**289**	P	**Pn**	**04 14 12.8**	**+1.3**
	SNR=25						
ASHO	**Ashiyiah**	**6.20**	**300**	⇓P	**Pn**	**04 14 26.1**	**+2.3**
ASHO				⇓S	**Sn**	**04 15 33.4**	**-1.0**
ASHO	**Ashiyiah**	**6.20**	**300**	P	**Pn**	**04 14 26.1**	**+2.3**
ASHO				S	**Sn**	**04 15 33.4**	**-1.0**
HATD	**Hatta, Dubai**	**6.20**	**301**	P	**Pn**	**04 14 24.0**	**+0.1**
FAQ	**Al Faqa, Dubai**	**6.60**	**298**	P	**Pn**	**04 14 30.8**	**+1.4**
NAZ	**Nazwa, Dubai**	**6.66**	**301**	⇑P	**Pn**	**04 14 31.9**	**+1.8**
	SNR=6.9						
NAZ	**Nazwa, Dubai**	**6.66**	**301**	P	**Pn**	**04 14 31.9**	**+1.8**
	SNR=6.9						
BANOM	**Banah**	**6.68**	**310**	⇓P	**Pn**	**04 14 29.6**	**-0.8**
	SNR=7.8						
BANOM	**Banah**	**6.68**	**310**	P	**Pn**	**04 14 29.6**	**-0.8**
	SNR=7.8						
ASUD	**Al Ashush, Dub**	**6.77**	**297**	P	**Pn**	**04 14 33.6**	**+2.0**
BHJ	**Bhuj**	**7.26**	**76**	*e*PKP	**Pn**	**04 14 35.3**	**-3.1**
BHJ				AMB	AMB	04 14 45.5	
	comp=Z,507nm,1.3s						
IBND	**Bandar-abas**	**7.56**	**320**	*e*P	Pn	04 14 38.7	-3.7
IBND				*e*P	Pn	04 14 39.0	-3.4
RBK	**Rabkut**	**8.44**	**242**	⇑P	**Pn**	**04 14 55.9**	**+1.3**
	SNR=23						
RBK				⇑S	**Sn**	**04 16 26.3**	**-3.3**
RBK	**Rabkut**	**8.44**	**242**	P	**Pn**	**04 14 55.9**	**+1.3**
	SNR=23						
RBK				S	**Sn**	**04 16 26.3**	**-3.3**
ABTO	**Aybut**	**9.26**	**244**	⇑P	**Pn**	**04 15 06.9**	**+1.0**
	SNR=30						
ABTO				⇓S	Sn	04 16 43.1	-6.7
ABTO	**Aybut**	**9.26**	**244**	P	**Pn**	**04 15 06.9**	**+1.0**
	SNR=30						
ABTO				S	Sn	04 16 43.1	-6.7
BHV	**Bhavnagar**	**9.45**	**88**	*e*PKP	**Pn**	**04 15 05.5**	**-2.9**
IBAF	**Bafgh**	**11.38**	**331**	*e*P	**Pn**	**04 15 36.4**	**+1.3**
IBAF	**Bafgh**	**11.38**	**331**	*e*P	**Pn**	**04 15 36.4**	**+1.3**
POO	**Poona**	**11.59**	**104**	*e*PKP	**Pn**	**04 15 38.0**	**+0.1**
	comp=Z,1.5nm,1.0s						
POO				*i* x	x	04 17 31.0	
IMEH	**Mehriz**	**11.67**	**327**	*e*P	**Pn**	**04 15 38.1**	**-1.0**
IMEH	**Mehriz**	**11.67**	**327**	*e*P	**Pn**	**04 15 38.1**	**-1.0**
ICHK	**Chekchek**	**12.47**	**329**	*e*P	**Pn**	**04 15 48.0**	**-2.0**
AJM	**Ajmer**	**12.50**	**65**	*i* P	**Pn**	**04 15 48.0**	**-2.3**
AJM				*i* x	x	04 18 13.0	
ISAD	**Sadrabad**	**12.57**	**326**	*e*P	**Pn**	**04 15 51.4**	**+0.1**
ISAD	**Sadrabad**	**12.57**	**326**	*e*P	**Pn**	**04 15 51.4**	**+0.1**
IGAR	**Gharneh**	**13.84**	**322**	*e*P	**Pn**	**04 16 08.3**	**-0.4**
IZEF	**Zefreh**	**14.05**	**324**	*e*P	**Pn**	**04 16 10.7**	**-0.9**
AKL	**Akola**	**14.06**	**91**	*e*PKP	**Pn**	**04 16 09.3**	**-2.2**
AKL				AMB	AMB	04 16 20.0	
	comp=Z,42nm,1.4s						
LATR	**Latur**	**14.09**	**101**	*e*PKP	**Pn**	**04 16 13.2**	**+1.3**
KBL	**Kabul**	**14.21**	**24**	*e*P	**Pn**	**04 16 13.4**	**-0.4**
KBL				*e*S	**Sn**	**04 18 47.8**	**-3.5**
KBL	**Kabul**	**14.21**	**24**	*e*Pn	**Pn**	**04 16 13.4**	**-0.4**
KBL				*e*S	**Sn**	**04 18 47.8**	**-3.5**
KBL	**Kabul**	**14.21**	**24**	*e*P	**Pn**	**04 16 13.4**	**-0.4**
KBL				*e*S	**Sn**	**04 18 47.8**	**-3.5**
BHPL	**Bhopal**	**14.36**	**81**	*e*PKP	**Pn**	**04 16 14.5**	**-1.2**
BHPL				AMB	AMB	04 16 23.3	
	comp=Z,44nm,1.7s						
IMYA	**Miami**	**14.67**	**354**	*e*P	**Pn**	**04 16 19.3**	**-0.7**
IPIR	**Pirpir**	**14.71**	**320**	*e*P	**Pn**	**04 16 21.2**	**+0.5**
IKLH	**Kolahrood**	**14.78**	**324**	*e*P	**Pn**	**04 16 21.3**	**-0.3**
RDF	**Al-Radifah**	**14.88**	**302**	*e*P	**Pn**	**04 16 21.6**	**-1.2**
RDF				AMb	AMB	04 16 30.2	
	comp=Z,132nm,1.1s						
UMR	**Umm Al-Rimmam**	**15.04**	**304**	*e*P	**Pn**	**04 16 23.0**	**-1.8**
UMR				AMb	AMB	04 16 29.6	
	comp=Z,90nm,0.7s						
NAY	**Al-Naaiem**	**15.27**	**302**	*e*P	**Pn**	**04 16 25.8**	**-2.0**
NAY				AMb	AMB	04 16 35.6	
	comp=Z,136nm,1.2s						
RAYN	**Ar Rayn**	**15.32**	**280**	*e*Pn	**Pn**	**04 16 25.0**	**-3.6**
	comp=Z,42nm,0.9s						
RAYN	**Ar Rayn**	**15.32**	**280**	*e*Pn	**Pn**	**04 16 25.0**	**-3.6**
	comp=Z,42nm,0.9s						
MIB	**Mutribah**	**15.44**	**304**	*e*P	**Pn**	**04 16 28.3**	**-1.9**
MIB				AMb	AMB	04 16 39.2	
	comp=Z,120nm,1.3s						
NGP	**Nagpur**	**15.91**	**89**	*e*PKP	**Pn**	**04 16 36.7**	**+0.4**
ISHM	**Shahmirzad**	**15.96**	**333**	*e*P	**Pn**	**04 16 38.4**	**+1.3**
IVRN	**Varamin**	**16.00**	**328**	*e*P	**Pn**	**04 16 37.4**	**0.0**
HYB	**Hyderabad**	**16.19**	**102**	*i* P	**Pn**	**04 16 41.0**	**+1.0**
HYB				*e*S	**S**	**04 19 52.0**	**-0.3**
HYB	**Hyderabad**	**16.19**	**102**	*e*PKP	**Pn**	**04 16 40.4**	**+0.5**
HYB				AMB	AMB	04 16 42.4	
	comp=Z,32nm,2.0s						
DHRM	**DHARAMSHALA**	**16.51**	**48**	*e*PKP	**Pn**	**04 16 42.4**	**-1.7**
DHRM				AMB	AMB	04 16 42.8	
	comp=Z,107nm,2.0s						
SMLA	**Simla**	**16.51**	**52**	*e*PKP	**Pn**	**04 16 41.9**	**-2.0**
SMLA				AMB	AMB	04 16 50.0	
	comp=Z,82nm,2.2s						
JBP	**Jabalpur**	**16.71**	**82**	*e*PKP	**Pn**	**04 16 45.1**	**-1.4**
JBP				*e*S	**S**	**04 20 05.3**	**+2.5**
IR3	**Iran Long-Peri**	**16.73**	**327**	*e*P	**Pn**	**04 16 47.2**	**+0.4**
IR5	**Iran Long-Peri**	**16.75**	**326**	*e*P	**Pn**	**04 16 47.5**	**+0.4**
DDI	**Dehra Dun**	**16.79**	**56**	*e*PKP	**Pn**	**04 16 47.3**	**-0.2**
IMHD	**Mahdasht**	**17.08**	**327**	*e*P	**P**	**04 16 53.4**	**+0.6**
IMHD	**Mahdasht**	**17.08**	**327**	*e*P	**P**	**04 16 53.4**	**+0.6**
IRAZ	**Razeghan**	**17.25**	**325**	*e*P	**P**	**04 16 54.3**	**-0.5**
IRAZ	**Razeghan**	**17.25**	**325**	*e*P	**P**	**04 16 54.3**	**-0.5**
IKOM	**Komasi**	**17.79**	**317**	*e*P	**Pn**	**04 16 59.5**	**-0.6**
IKOM	**Komasi**	**17.79**	**317**	*e*P	**Pn**	**04 16 59.5**	**-0.6**
IBDR	**Badra**	**18.19**	**312**	*e*P	**Pn**	**04 17 02.3**	**-2.5**
IBDR				*e*S	**Sn**	**04 20 21.6**	**-6.0**
IVIS	**Veis**	**18.44**	**317**	*e*P	**Pn**	**04 17 08.4**	**+0.4**
IVIS	**Veis**	**18.44**	**317**	*e*P	**Pn**	**04 17 08.4**	**+0.4**
IGHG	**Ghaleghazi**	**18.49**	**316**	*e*P	**P**	**04 17 08.2**	**-0.4**
IGHG	**Ghaleghazi**	**18.49**	**316**	*e*P	**P**	**04 17 08.2**	**-0.4**
ILIN	**Lien**	**18.62**	**318**	*e*P	**Pn**	**04 17 10.8**	**+0.5**
ILIN	**Lien**	**18.62**	**318**	*e*P	**Pn**	**04 17 10.8**	**+0.5**
IDHR	**Dehrash**	**18.84**	**317**	*e*P	**Pn**	**04 17 12.7**	**-0.3**
IDHR	**Dehrash**	**18.84**	**317**	*e*P	**Pn**	**04 17 12.7**	**-0.3**
BHD	**Baghdad**	**19.37**	**310**	*i* P	**P**	**04 17 13.7**	**-4.2**
BHD				*i* S	**Sn**	**04 20 49.7**	**-6.3**
PYUN	**Piuthan**	**20.08**	**67**	*e*P	**P**	**04 17 25.3**	**-0.7**
	comp=Z,48nm,0.8s						
ISRB	**Sarab**	**20.26**	**326**	*e*P	**P**	**04 17 28.9**	**+1.0**
ISRB	**Sarab**	**20.26**	**326**	*e*P	**P**	**04 17 28.9**	**+1.0**
KOLN	**Koldanda**	**20.53**	**69**	*e*P	**P**	**04 17 29.9**	**-1.0**
	comp=Z,42nm,0.8s						
DANN	**Dangsing**	**20.80**	**67**	*e*P	**P**	**04 17 33.0**	**-0.9**
	comp=Z,78nm,1.0s						
ATD	**Arta Tunnel**	**20.92**	**244**	P	Pn	04 17 37.0	-0.5
ATD	**Arta Tunnel**	**20.92**	**244**	P	Pn	04 17 37.0	-0.5
	comp=Z,67nm,0.9s,baz=36,slow=8.3,SNR=21						
ATD				LR	LR	04 25 00.0	
	comp=Z,320nm,21.8s,baz=72,slow=35						
ATD	**Arta Tunnel**	**20.92**	**244**	P	Pn	04 17 37.0	-0.6
IHRS	**Heris**	**20.96**	**325**	*e*P	**P**	**04 17 36.4**	**+0.9**
IHRS	**Heris**	**20.96**	**325**	*e*P	**P**	**04 17 36.4**	**+0.9**
KSH	**Kashi**	**21.40**	**31**	P	P	04 17 35.1	-5.0
KSH				*e*pP	pP	04 17 39.3	-5.5
KSH				*e*sP	sP	04 17 42.4	-4.5
KSH				*e*S	S	04 21 20.8	-16
KSH				pmax	pmax		
	comp=Z,110nm,1.1s						
KSH				LR	LR		
	comp=N,2μm,13.0s						
KSH				LR	LR		
	comp=E,1μm,12.3s						
KSH				LR	LR		
	comp=Z,370nm,12.2s						
DMN	**Daman**	**21.81**	**70**	*e*P	**P**	**04 17 44.0**	**-0.8**
	comp=Z,72nm,0.7s						
KKN	**Kakani**	**21.99**	**69**	*e*P	**P**	**04 17 45.8**	**-0.9**
	comp=Z,87nm,0.7s						
PKIN	**Phulchoki**	**22.06**	**70**	*e*P	**P**	**04 17 46.5**	**-0.9**
	comp=Z,39nm,0.5s						
PKI	**Pulchoki**	**22.07**	**70**	*e*P	**P**	**04 17 46.5**	**-1.1**
	comp=Z,64nm,0.6s						
BOK	**Bokaro**	**22.14**	**80**	*e*PKP	**P**	**04 17 46.9**	**-1.2**
BOK				AMB	AMB	04 17 51.9	
	comp=Z,62nm,1.0s						
KK31	**Karatay Array**	**22.49**	**17**	*i* P	**P**	**04 17 50.8**	**-0.9**
KK31				pmax	pmax		
	comp=Z,33nm,1.5s						
KK31	**Karatay Array**	**22.49**	**17**	*i* P	**P**	**04 17 50.8**	**-0.9**
	comp=Z,33nm,1.5s						
KKAR	**Karatay Array**	**22.49**	**17**	*e*P	**P**	**04 17 50.7**	**-1.0**
KKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KKAR	**Karatay Array**	**22.49**	**17**	*e*P	**P**	**04 17 50.7**	**-1.0**
	comp=Z,7.9nm,0.8s						
KKAR	**Karatay Array**	**22.49**	**17**	*e*P	**P**	**04 17 50.7**	**-1.0**
	comp=Z,7.9nm,0.8s						
GUN	**Gumba**	**22.54**	**69**	*e*P	**P**	**04 17 52.2**	**-0.5**
	comp=Z,537nm,1.1s						
AML	**Almayashu**	**22.61**	**23**	P	**P**	**04 17 52.4**	**-1.1**
	SNR=7.2						
AML	**Almayashu**	**22.61**	**23**	P	**P**	**04 17 52.3**	**-1.1**
	SNR=7.3						
RAMN	**Ramite**	**23.02**	**72**	*e*P	**P**	**04 17 56.4**	**-1.2**
	comp=Z,24nm,0.5s						
EKS2	**Erkin-Say**	**23.11**	**23**	*e*P	**P**	**04 17 58.0**	**-0.3**
EKS2				pmax	pmax		
	comp=Z,182nm,2.3s						
EKS2	**Erkin-Say**	**23.11**	**23**	*e*P	**P**	**04 17 58.0**	**-0.3**
	comp=Z,182nm,2.3s						
EKS2	**Erkin-Say**	**23.11**	**23**	P	**P**	**04 17 58.0**	**-0.3**
	SNR=11						
EKS2	**Erkin-Say**	**23.11**	**23**	*e*P	**P**	**04 17 58.0**	**-0.3**
	comp=Z,182nm,2.3s						
KZA	**Kyzart**	**23.17**	**26**	P	**P**	**04 17 59.2**	**0.0**
	SNR=22						
AAK	**Ala-Archa**	**23.35**	**24**	*e*P	**P**	**04 18 00.8**	**+0.1**
AAK				pmax	pmax		
	comp=Z,37nm,1.2s						
AAK	**Ala-Archa**	**23.35**	**24**	*e*P	**P**	**04 18 00.8**	**+0.1**
	comp=Z,37nm,1.2s						
AAK	**Ala-Archa**	**23.35**	**24**	P	**P**	**04 18 00.9**	**+0.1**
	SNR=11						
AAK	**Ala-Archa**	**23.35**	**24**	P	**P**	**04 18 00.8**	**+0.1**
	comp=Z,19nm,1.0s,baz=204,slow=11,SNR=25						
AAK	**Ala-Archa**	**23.35**	**24**	*e*P	**P**	**04 18 00.8**	**+0.1**
	comp=Z,37nm,1.2s						
GNI	**Garni**	**23.51**	**325**	*e*P	**P**	**04 18 03.8**	**+1.4**
	comp=Z,64nm,1.1s						
GNI	**Garni**	**23.51**	**325**	P	**P**	**04 18 04.5**	**+2.1**
	comp=Z,11nm,0.7s,baz=160,slow=3.2,SNR=16						
GNI	**Garni**	**23.51**	**325**	*i* P	**P**	**04 18 03.7**	**+1.3**
	comp=Z,106nm,1.7s						
KBK	**Karagaybulak**	**23.54**	**24**	P	**P**	**04 18 03.3**	**+0.7**
	SNR=7.7						
ODAN	**Odare**	**23.71**	**72**	*e*P	**P**	**04 18 04.0**	**-0.5**
	comp=Z,20nm,0.5s						
USP	**Ospenovka**	**23.90**	**23**	P	**P**	**04 18 05.7**	**-0.2**
	SNR=16						
TKM2	**Tokmak 2**	**24.02**	**25**	*e*P	**P**	**04 18 07.0**	**-0.2**
TKM2				pmax	pmax		
	comp=Z,16nm,1.3s						
TKM2	**Tokmak 2**	**24.02**	**25**	*e*P	**P**	**04 18 07.0**	**-0.2**
	comp=Z,16nm,1.3s						
TKM2	**Tokmak 2**	**24.02**	**25**	*e*P	**P**	**04 18 07.0**	**-0.2**
	comp=Z,16nm,1.3s						
TAPN	**Taplejung**	**24.05**	**71**	*e*P	**P**	**04 18 07.4**	**-0.5**
	comp=Z,126nm,1.2s						
MAK	**Makhachkala**	**24.39**	**334**	*e*P	**P**	**04 18 08.1**	**-2.3**
MAK				*e*		04 21 44.5	
MAK				S	**S**	**04 22 29.4**	**0.0**
MAK				*e*SS	**SnSn**	**04 23 13.5**	**+0.1**
MAK				pmax	pmax		
	comp=Z,27nm,0.6s						
ASF	**Jabal al Asfar**	**24.61**	**300**	P	**P**	**04 18 14.6**	**+1.9**
ASF	**Jabal al Asfar**	**24.61**	**300**	P	**P**	**04 18 14.6**	**+1.9**
	comp=Z,21nm,1.0s,baz=343,slow=2.1,SNR=18						
EIL	**Elat**	**25.57**	**294**	P	**P**	**04 18 22.9**	**+1.6**
EIL	**Elat**	**25.57**	**294**	P	**P**	**04 18 22.9**	**+1.6**
	comp=Z,41nm,1.1s,baz=90,slow=2.7,SNR=18						
EIL				LR	LR	04 29 58.2	
	comp=Z,795nm,19.9s,baz=113,slow=40						
EIL	**Elat**	**25.57**	**294**	P	**P**	**04 18 22.9**	**+1.6**
MMAI	**Mount Meron Ar**	**26.08**	**301**	P	**P**	**04 18 28.3**	**+2.4**
MMAI	**Mount Meron Ar**	**26.08**	**301**	P	**P**	**04 18 28.3**	**+2.4**
	comp=Z,27nm,0.9s,baz=105,slow=11,SNR=21						
MMAI	**Mount Meron Ar**	**26.08**	**301**	P	**P**	**04 18 28.3**	**+2.4**
MALT	**Malatya**	**26.15**	**315**	*e*P	sP	04 18 38.2	+4.6

comp=Z,348nm,19.0s,baz=64,slow=41
BVAR Borovoye Array 31.92 10 P **P** **04 19 17.4 -0.2**
BRVK Borovoye 31.94 9 *e*P **P** **04 19 18.4 +0.6**
BRVK pmax pmax
comp=Z,2.0nm,0.4s
BRVK Borovoye 31.94 9 *e*P **P** **04 19 18.4 +0.6**
comp=Z,1.7nm,0.4s
BRVK Borovoye 31.94 9 *e*P **P** **04 19 18.4 +0.6**
comp=Z,1.7nm,0.4s
KMBO Kilima Mbogo 33.14 230 P **P** **04 19 30.7 +1.7**
KMBO Kilima Mbogo 33.14 230 P **P** **04 19 30.7 +1.7**
comp=Z,0.6nm,0.4s,baz=22,slow=19,SNR=3.5
KMBO LR LR 04 31 41.2
comp=Z,583nm,20.9s,baz=276,slow=34
KMBO Kilima Mbogo 33.14 230 P **P** **04 19 30.7 +1.7**
VORD Divnogorie 34.16 334 *e*P **P** **04 19 37.1 -0.1**
VORD pmax pmax
comp=N,20nm,1.1s
VORD pmax pmax
comp=E,10.0nm,1.1s
VORD pmax pmax
comp=Z,10.0nm,1.1s
VORD Divnogorie 34.16 334 *e*P **P** **04 19 37.1 -0.1**
VSR Storozhevoye 34.41 334 *e*P **P** **04 19 39.5 +0.2**
VSR pmax pmax
comp=N,10.0nm,1.5s
VSR pmax pmax
comp=E,10.0nm,1.5s
VSR pmax pmax
comp=Z,10.0nm,1.5s
VSR Storozhevoye 34.41 334 *e*P **P** **04 19 39.5 +0.2**
CHTO Chiang Mai 34.75 88 *e*P **P** **04 19 41.7 -1.0**
CHTO pmax pmax
comp=Z,28nm,1.5s
CHTO Chiang Mai 34.75 88 *e*P **P** **04 19 41.7 -1.0**
comp=Z,28nm,1.5s
CHTO Chiang Mai 34.75 88 P **P** **04 19 42.8 +0.1**
comp=Z,12nm,1.8s
CHTO Chiang Mai 34.75 88 *e*P **P** **04 19 41.7 -1.0**
comp=Z,28nm,1.5s
ARU Arti 34.77 357 *d i*P **P** **04 19 43.1 +0.7**
ARU 04 20 57.6
ARU S **S** **04 25 15.3 +3.4**
ARU pmax pmax
comp=Z,10.0nm,1.7s
ARU MLR MLR
comp=Z,221nm,17.0s
ARU Arti 34.77 357 *i* P **P** **04 19 43.1 +0.7**
comp=Z,10.0nm,1.7s
CMAR Chiang Mai Arr 34.82 89 P **P** **04 19 42.3 -1.0**
CMAR Chiang Mai Arr 34.82 89 P **P** **04 19 42.3 -1.0**
comp=Z,1.7nm,0.3s,baz=279,slow=9.7,SNR=14
CMAR LR LR 04 33 48.9
comp=Z,302nm,20.5s,baz=292,slow=36
CMAR Chiang Mai Arr 34.82 89 P **P** **04 19 42.3 -1.0**
ZAA0 Zalesovo Array 36.56 23 *e*P **P** **04 19 57.4 -0.4**
ZAA0 Zalesovo Array 36.56 23 *e*P **P** **04 19 57.4 -0.4**
ZALV Zalesovo Beam 36.56 23 P **P** **04 19 57.4 -0.4**
ZALV Zalesovo Beam 36.56 23 P **P** **04 19 57.4 -0.4**
ZALV Zalesovo Beam 36.56 23 P **P** **04 19 57.4 -0.4**
comp=Z,15nm,0.8s,baz=226,slow=9.3,SNR=47
ZALV LR LR 04 37 01.1
comp=Z,380nm,22.0s,baz=69,slow=40
ZALV Zalesovo Beam 36.56 23 P **P** **04 19 57.3 -0.5**
GTA Gaotai 36.73 53 P **P** **04 19 59.4 -0.2**
GTA pP **pP** **04 20 03.9 -0.8**
GTA sP **sP** **04 20 06.5 -0.2**
GTA PP **PP** **04 21 26.3 +3.0**
GTA S **S** **04 25 43.8 +1.0**
GTA pmax pmax
comp=Z,7.0nm,1.3s
GTA pmax pmax
comp=Z,77nm,5.9s
GTA LR LR
comp=N,300nm,20.4s
GTA LR LR
comp=E,650nm,19.2s
GTA LR LR
comp=Z,830nm,19.0s
NVS Novosibirsk 36.74 21 *e*P **P** **04 19 58.8 -0.5**
NVS pmax pmax
comp=N,13nm,1.5s
NVS pmax pmax
comp=Z,17nm,1.5s
NVS pmax pmax
comp=E,3.0nm,1.4s
NVS Novosibirsk 36.74 21 *e*P **P** **04 19 58.8 -0.5**
PBKT Sadao Pong 37.12 91 P **P** **04 20 06.0 +3.0**
comp=E,5.2nm,1.0s,comp=E,966nm
KMI Kunming 37.46 77 P **P** **04 20 06.4 +0.3**
KMI S **S** **04 25 58.0 +3.5**
KMI pmax pmax
comp=Z,12nm,0.6s
KMI LR LR
comp=N,370nm,15.8s
KMI LR LR
comp=E,470nm,18.1s
KMI LR LR
comp=Z,570nm,20.9s
PLOR Plostina 37.51 318 ⇑P **P** **04 20 07.8 +1.8**
PLOR Plostina 37.51 318 ⇑*i*P **P** **04 20 07.8 +1.8**
PLOR Plostina 37.51 318 P **P** **04 20 07.8 +1.8**
MBAR Mbarara 37.70 238 P **P** **04 20 09.6 +1.4**
MBAR Mbarara 37.70 238 P **P** **04 20 09.6 +1.4**
comp=Z,4.0nm,0.2s,baz=292,slow=1.7,SNR=3.0
MBAR Mbarara 37.70 238 P **P** **04 20 09.6 +1.4**
MMB Musomiste 37.72 311 *e*P **P** **04 20 08.4 +0.5**
MLR Muntele Rosu 37.78 318 ⇑*i*P **P** **04 20 11.3 +2.9**
MLR Muntele Rosu 37.78 318 P **P** **04 20 11.3 +2.9**
TESR Tescani 37.82 319 ⇑*i*P **P** **04 20 09.8 +1.2**
SOKR Solikamsk 38.00 356 *e*P P 04 20 16.8 +6.9
SOKR pmax pmax
comp=Z,30nm,1.1s
KKB Krupnik 38.27 311 *e*P **P** **04 20 11.0 -1.5**
VOIR 38.32 317 ⇑P **P** **04 20 14.3 +1.3**
VOIR 38.32 317 ⇑*i*P **P** **04 20 14.3 +1.3**
VOIR 38.32 317 P **P** **04 20 14.3 +1.3**
MPEP Malo Peshtene 38.34 313 *e*P **P** **04 20 12.0 -1.1**
CD2 Chengdu 38.37 67 P **P** **04 20 14.3 +0.7**
CD2 pP **pP** **04 20 18.9 +0.3**
CD2 sP **sP** **04 20 21.5 +0.8**
CD2 PP **PnPn** **04 21 45.4 +2.2**
CD2 S **S** **04 26 05.5 -2.3**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,120nm,6.8s
CD2 LR LR
comp=N,310nm,17.8s
CD2 LR LR
comp=E,480nm,20.2s
CD2 LR LR
comp=Z,320nm,19.0s
OBN Obninsk 38.41 337 ⇑*e*P **P** **04 20 14.5 +1.1**
OBN *i* 04 20 22.5
OBN pmax pmax
comp=Z,33nm,1.6s
OBN Obninsk 38.41 337 *e*P **P** **04 20 14.5 +1.1**
comp=Z,33nm,1.6s
VTS Vitosha 38.43 312 *e*P **P** **04 20 14.0 0.0**
MOS Moscow 38.52 338 *e*P P 04 20 10.1 -4.2
MOS pmax pmax
comp=Z,31nm,0.9s
AK02 Malin Array Si 38.62 326 *e*P **P** **04 20 15.2 -0.1**
AK02 Malin Array Si 38.62 326 *e*P **P** **04 20 15.1 -0.1**
AK01 Malin Array Si 38.63 327 *e*P **P** **04 20 15.0 -0.4**
AK01 Malin Array Si 38.63 327 *e*P **P** **04 20 15.0 -0.4**
AKASG Malin Array Be 38.63 327 *ce*P **P** **04 20 15.8 +0.4**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 38.63 327 P **P** **04 20 14.7 -0.7**
AKASG Malin Array Be 38.63 327 P **P** **04 20 14.7 -0.7**
comp=Z,2.6nm,0.8s,baz=123,slow=7.4,SNR=9.4
AKASG Malin Array Be 38.63 327 P **P** **04 20 14.7 -0.7**
KIEV Kiev 38.64 327 *e*P **P** **04 20 15.4 0.0**
KIEV pmax pmax
comp=Z,19nm,1.5s
KIEV Kiev 38.64 327 *e*P **P** **04 20 15.4 0.0**
comp=Z,19nm,1.5s
KIEV Kiev 38.64 327 *e*P **P** **04 20 15.4 0.0**
comp=Z,19nm,1.5s
LZH Lanzhou 39.05 59 *e*P **P** **04 20 18.8 -0.5**
LZH pP **pP** **04 20 22.8 -1.6**
LZH sP **sP** **04 20 25.4 -1.0**
LZH *e*PP **PnPn** **04 21 54.8 +3.5**
LZH *e*S **ScP** **04 26 14.0 -3.1**
LZH sS **sS** **04 26 29.6 +3.1**
LZH pmax pmax
comp=Z,14nm,1.0s
LZH pmax pmax
comp=Z,110nm,4.5s
LZH LR LR
comp=N,310nm,14.0s
LZH LR LR
comp=E,310nm,13.5s
LZH LR LR
comp=Z,400nm,14.8s
BURAR Bucovina Array 39.21 320 ⇓*i*P **P** **04 20 21.8 +1.4**
BUR08 Bucovina Ar. S 39.23 320 *e*P **P** **04 20 19.4 -1.2**
BUR08 Bucovina Ar. S 39.23 320 *e*P **P** **04 20 19.4 -1.2**
GZR Gura Zlata 39.76 316 ⇓P P 04 20 28.4 +3.4
GZR Gura Zlata 39.76 316 ⇓*i*P P 04 20 28.4 +3.4
DRGR 40.37 318 ⇑P **P** **04 20 31.3 +1.3**
DRGR 40.37 318 ⇑*i*P **P** **04 20 31.3 +1.3**
GRUS Gruza 40.58 313 *e*Pn **P** **04 20 31.2 -0.5**
GYA Guiyang 40.92 74 *e*P **P** **04 20 35.4 +0.5**
GYA PP **PnPn** **04 22 12.8 -0.8**
GYA ScP **ScP** **04 26 23.6 -0.9**
GYA S **S** **04 26 47.0 +0.8**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,110nm,4.9s
GYA LR LR
comp=N,440nm,17.8s
GYA LR LR
comp=E,310nm,18.5s
GYA LR LR
comp=Z,420nm,17.9s
TRPA Tarpa 41.05 320 ⇑*i*P **P** **04 20 36.1 +0.6**
DIVS Divibare 41.14 313 ⇓*i*Pn **P** **04 20 36.4 -0.1**
BBLS Lazići 41.47 312 *e*Pn **P** **04 20 39.0 -0.2**
KLMR Klimovskoe 42.15 344 P **P** **04 20 43.2 -1.1**
KLMR pmax pmax
comp=Z,64nm,1.7s
KLMR MLR MLR
comp=Z,298nm,20.0s
MOY Mondy 42.46 36 *e*P **P** **04 20 48.1 +0.9**
OPO Ambohidratompo 42.57 201 P **P** **04 20 47.9 -0.5**
OPO Ambohidratompo 42.57 201 P **P** **04 20 47.9 -0.5**
comp=Z,4.3nm,0.7s,baz=19,slow=7.8,SNR=9.5
OPO LR LR 04 34 31.7
comp=Z,333nm,21.8s,baz=14,slow=31
OPO Ambohidratompo 42.57 201 P **P** **04 20 47.9 -0.5**
PKSM Moragy 42.75 315 ⇑P **P** **04 20 52.2 +2.7**
PKSM Moragy 42.75 315 ⇑*i*P **P** **04 20 52.2 +2.7**
XAN Xi'an 42.94 63 P **P** **04 20 49.9 -1.3**
XAN pmax pmax
comp=Z,8.0nm,1.2s
XAN LR LR
comp=N,270nm,17.9s
XAN LR LR
comp=Z,97nm,17.2s
ABPO Ambohimpanom 42.97 201 *e*P **P** **04 20 52.4 +0.7**
ABPO pmax pmax
comp=Z,28nm,1.6s
ABPO Ambohimpanom 42.97 201 *e*P **P** **04 20 52.4 +0.7**
comp=Z,28nm,1.6s
ABPO Ambohimpanom 42.97 201 *e*P **P** **04 20 52.4 +0.7**
comp=Z,28nm,1.6s
CUC Castrocucco 43.09 306 *e*P **P** **04 20 52.2 -0.2**
comp=Z,10.0nm,0.8s
CUC Castrocucco 43.09 306 *e*P **P** **04 20 52.2 -0.2**
comp=Z,10.0nm,0.8s
ZAK Zakamensk 43.13 38 *e*P **P** **04 20 52.7 0.0**
ZAK *e* 04 22 34.8
ZAK pmax pmax
comp=Z,5.0nm,1.6s
OJC Ojcow 43.57 321 *e*P **P** **04 20 57.1 +1.0**
OJC pmax pmax
comp=Z,10.0nm,0.7s
OJC Ojcow 43.57 321 *e*P **P** **04 20 57.1 +1.0**
comp=Z,10nm,0.7s
OJC Ojcow 43.57 321 *e*P **P** **04 20 55.9 -0.2**
OJC Ojcow 43.57 321 *e*P **P** **04 20 57.1 +1.0**
comp=Z,10nm,0.7s
TLY Talaya 43.92 37 *e*P **P** **04 20 59.6 +0.7**
TLY *e* 04 22 44.6
TLY *e*S S 04 27 17.3 -12
TLY pmax pmax
comp=Z,16nm,1.6s
TLY MLR MLR
comp=Z,346nm,19.0s
SONM Songino Array 44.01 43 P **P** **04 21 00.4 +0.7**
SONM Songino Array 44.01 43 P **P** **04 21 00.4 +0.7**
comp=Z,8.8nm,0.8s,baz=246,slow=7.7,SNR=37
SONM LR LR 04 42 47.0
comp=Z,332nm,19.8s,baz=250,slow=41
SONM Songino Array 44.01 43 P **P** **04 21 00.4 +0.7**
ULN Ulaanbaatar 44.43 43 *e*P **P** **04 21 03.5 +0.3**
comp=Z,8.2nm,1.1s
ULN Ulaanbaatar 44.43 43 P **P** **04 21 03.5 +0.3**
comp=Z,10nm,1.2s
ULN Ulaanbaatar 44.43 43 *e*P **P** **04 21 03.5 +0.3**
comp=Z,8.2nm,1.1s
VSU Vasula 44.60 334 *e*P **P** **04 21 03.7 -0.4**
VSU pmax pmax
comp=Z,10.0nm,1.0s
MORC Moravsky Berou 44.73 320 ⇑P **P** **04 21 05.7 +0.3**
MORC Moravsky Berou 44.73 320 *e*P **P** **04 21 04.5 -1.0**
comp=Z,13nm,1.4s
MORC Moravsky Berou 44.73 320 ⇑*i*P **P** **04 21 05.7 +0.3**
MORC Moravsky Berou 44.73 320 *e*P **P** **04 21 04.4 -1.0**
comp=Z,13nm,1.4s
QIZ Qiongzhong 44.82 84 P **P** **04 21 06.9 +0.4**
QIZ S **S** **04 27 44.3 +0.8**
QIZ LR LR
comp=N,280nm,15.8s
QIZ LR LR
comp=Z,290nm,21.4s
CONA Conrad Observa 45.11 317 ⇑*e*P **P** **04 21 09.3 +0.7**
comp=Z,5.8nm,1.2s
CONA Conrad Observa 45.11 317 P **P** **04 21 09.3 +0.7**
comp=Z,5.8nm,1.2s
ARSA Arzberg 45.12 316 ⇓*e*P **P** **04 21 08.8 +0.3**
comp=Z,5.8nm,0.9s
ARSA Arzberg 45.12 316 P **P** **04 21 08.8 +0.3**
comp=Z,5.8nm,0.9s
JOF Joensuu 46.12 341 *e*P **P** **04 21 16.1 -0.1**
JOF pmax pmax
comp=Z,2.0nm,0.7s
JOF Joensuu 46.12 341 *ep* **P** **04 21 16.1 -0.1**
comp=Z,2.3nm,0.7s
GEC2 GERESS Array S 46.77 317 *e*P **P** **04 21 20.4 -1.2**
comp=Z,12nm,1.6s
GEC2 GERESS Array S 46.77 317 *e*P **P** **04 21 20.4 -1.2**
GEC2 pmax pmax
comp=Z,12nm,1.6s
GERES GERESS Array B 46.77 317 P **P** **04 21 20.6 -1.0**
GERES PcP **PcP** **04 22 54.4 -0.3**
GERES GERESS Array B 46.77 317 P **P** **04 21 20.6 -1.0**
comp=Z,1.1nm,0.8s,baz=69,slow=7.3,SNR=9.1
GERES PcP **PcP** **04 22 54.4 -0.3**
comp=Z,1.9nm,0.9s,baz=130,slow=4.2,SNR=3.7
GERES GERESS Array B 46.77 317 P **P** **04 21 20.6 -1.0**
FINES FINESS Array B 46.80 337 P **P** **04 21 21.3 -0.2**
FINES FINESS Array B 46.80 337 P **P** **04 21 21.3 -0.2**
comp=Z,3.4nm,0.7s,baz=123,slow=9.8,SNR=4.3
FINES FINESS Array B 46.80 337 P **P** **04 21 21.3 -0.2**
KHC Kasperske Hory 46.93 318 *e*P **P** **04 21 22.2 -0.6**
KHC *e* 04 22 54.7
KHC Kasperske Hory 46.93 318 *e*P **P** **04 21 22.2 -0.6**
KHC *ep*P **pP** **04 21 28.5 +0.5**
KHC *e*PCP **PcP** **04 22 54.7 -0.6**
KHC Kasperske Hory 46.93 318 *e*P **P** **04 21 22.5 -0.3**
comp=Z,11nm,1.1s
KHC Kasperske Hory 46.93 318 *e*P **P** **04 21 22.5 -0.3**
comp=Z,11nm,1.1s
RJOB Jochberg 47.03 316 *e*P **P** **04 21 23.2 -0.4**
comp=Z,22nm,1.5s
KAF Kangasniemi 47.17 338 *e*P **P** **04 21 22.8 -1.6**
KAF pmax pmax
comp=Z,3.0nm,0.8s
KAF Kangasniemi 47.17 338 *ep* **P** **04 21 22.8 -1.6**
comp=Z,3.3nm,0.8s
BRG Berggiesshubel 47.27 320 *e*P P 04 21 19.4 -6.0
BRG *e* 04 21 26.5
BRG pmax pmax
comp=Z,2.7nm,0.6s
BRG pmax pmax
comp=Z,3.0nm,0.6s
BRG pmax pmax
comp=Z,4.0nm,0.8s
BRG Berggiesshubel 47.27 320 *e*P **P** **04 21 24.4 -1.0**
comp=Z,6.0nm,1.3s
BRG Berggiesshubel 47.27 320 *e*P P 04 21 19.4 -6.0
BRG *e* 04 21 26.5
BRG pmax pmax
comp=Z,3.0nm,0.6s
BRG pmax pmax
comp=Z,4.0nm,0.8s
WET Wettzell 47.38 318 *e*P **P** **04 21 24.4 -1.9**
comp=Z,13nm,2.0s
WET Wettzell 47.38 318 *e*P **P** **04 21 24.4 -1.9**
WET pmax pmax
comp=Z,13nm,2.0s
WHN Wuhan 47.49 68 ⇑P **P** **04 21 26.3 -1.0**
WTTA Wattenberg 47.66 315 ⇑*i*P **P** **04 21 28.5 -0.2**
comp=Z,14nm,1.0s
WTTA Wattenberg 47.66 315 P **P** **04 21 28.5 -0.2**
comp=Z,14nm,1.0s
KEST Kesra 47.70 299 P **P** **04 21 30.5 +1.5**
KEST Kesra 47.70 299 P **P** **04 21 30.5 +1.5**
comp=Z,0.9nm,1.0s,baz=66,slow=12,SNR=3.8
KEST LR LR 04 45 36.3
comp=Z,124nm,18.5s,baz=212,slow=41
KEST Kesra 47.70 299 P **P** **04 21 30.5 +1.5**
CLL Collm 47.98 320 *e*P **P** **04 21 31.0 +0.2**
comp=Z,18nm,1.2s
CLL Collm 47.98 320 ⇓*i*P **P** **04 21 31.4 +0.6**
CLL *i* 04 21 37.7
CLL *e*S **S** **04 28 33.0 +5.1**
CLL pmax pmax
comp=Z,22nm,1.5s
CLL Collm 47.98 320 ⇓*i*P **P** **04 21 31.4 +0.6**
comp=Z,22nm,1.5s
CLL *i* (sP) **sP** **04 21 37.7 -0.3**
CLL *e*PP **PP** **04 23 24.0 +1.2**
CLL *e*S **S** **04 28 33.0 +5.1**
CLL *e*SS SS 04 31 42.0 -15
CLL *e* 04 32 24.0
CLL *e*SSS SSS 04 33 05.0
ROTZ Rotzenmuhle 47.98 318 *e*P **P** **04 21 30.7 -0.2**
comp=Z,6.0nm,1.0s
FETA Feichten 48.20 314 ⇑*i*P **P** **04 21 32.9 0.0**
comp=Z,13nm,1.1s
FETA Feichten 48.20 314 P **P** **04 21 32.9 0.0**
comp=Z,13nm,1.1s
GRF Grafenberg Arr 48.57 318 *e*P **P** **04 21 33.9 -1.6**
comp=Z,30nm,1.5s
GRF *e*S **S** **04 28 39.5 +3.1**
GRF Grafenberg Arr 48.57 318 *e*P **P** **04 21 33.9 -1.6**
GRF *e*S **S** **04 28 39.5 +3.1**
GRF pmax pmax
comp=Z,30nm,1.5s
PGF Pioggiola 48.58 308 *e*P **P** **04 21 35.9 +0.1**
comp=Z,30nm,1.2s
PGF Pioggiola 48.58 308 *e*P **P** **04 21 35.9 +0.1**
PGF pmax pmax
comp=Z,30nm,1.2s
PGF Pioggiola 48.58 308 *e*P **P** **04 21 35.9 +0.1**
comp=Z,30nm,1.2s
PGF Pioggiola 48.58 308 *e*P **P** **04 21 35.9 +0.1**
comp=Z,15nm,1.2s
MOX Moxa 48.60 319 *e*P **P** **04 21 35.9 +0.2**
comp=Z,6.0nm,1.2s
MOX *e*S S 04 28 43.1 +6.3
MOX Moxa 48.60 319 *e*P **P** **04 21 35.9 +0.2**
MOX *e*S S 04 28 43.1 +6.3
MOX pmax pmax
comp=Z,6.0nm,1.2s
BJI Beijing 49.21 55 P **P** **04 21 42.3 +1.8**
BJI S **S** **04 28 46.9 +1.3**
BJI pmax pmax
comp=Z,9.0nm,1.1s
BJI LR LR
comp=N,500nm,15.1s
BJI LR LR
comp=E,470nm,15.1s
BJI LR LR
comp=Z,270nm,16.3s
APA Apatity 49.23 346 ⇑*i*P **P** **04 21 40.0 -0.2**
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,400nm,16.0s
LSZ Lusaka 49.49 225 *e*P **P** **04 21 43.7 +0.7**
comp=Z,14nm,1.2s
LSZ Lusaka 49.49 225 P **P** **04 21 43.8 +0.7**
comp=Z,6.5nm,0.9s,baz=40,slow=10,SNR=7.1
LSZ Lusaka 49.49 225 *e*P **P** **04 21 43.7 +0.7**
comp=Z,14nm,1.2s
CLZ Clausthal 49.70 320 *e*P **P** **04 21 45.1 +1.0**
comp=Z,28nm,1.7s
CLZ Clausthal 49.70 320 *e*P **P** **04 21 45.1 +1.0**
CLZ pmax pmax
comp=Z,28nm,1.7s
SBF Sospel 49.90 310 *e*P **P** **04 21 45.3 -0.5**
comp=Z,43nm,1.0s
SBF Sospel 49.90 310 *e*P **P** **04 21 45.3 -0.5**
SBF pmax pmax
comp=Z,43nm,1.0s
SBF Sospel 49.90 310 *e*P **P** **04 21 45.3 -0.5**
comp=Z,43nm,1.0s
SBF Sospel 49.90 310 *e*P **P** **04 21 45.3 -0.5**
comp=Z,22nm,1.0s
NRDL Liedersach Rie 50.05 321 *e*P **P** **04 21 46.9 +0.3**
comp=Z,34nm,1.3s
BSEG Bad Segeberg 50.38 323 *e*P P 04 21 52.8 +3.6
comp=Z,33nm,1.4s
BSEG Bad Segeberg 50.38 323 *e*P P 04 21 52.8 +3.6
BSEG pmax pmax
comp=Z,33nm,1.4s
TNS Taunus Mts 50.44 318 *e*P **P** **04 21 47.3 -2.5**
comp=Z,31nm,2.0s
TNS Taunus Mts 50.44 318 *e*P **P** **04 21 47.3 -2.5**
TNS pmax pmax
comp=Z,31nm,2.0s
MBDF Montbardon 50.49 311 *e*P **P** **04 21 50.5 +0.1**
comp=Z,20nm,1.0s
MBDF Montbardon 50.49 311 *e*P **P** **04 21 50.5 +0.1**
MBDF pmax pmax
comp=Z,21nm,1.0s
MBDF Montbardon 50.49 311 *e*P **P** **04 21 50.5 +0.1**
comp=Z,20nm,1.0s
MBDF Montbardon 50.49 311 *e*P **P** **04 21 50.5 +0.1**
comp=Z,20nm,1.0s
LPG La Plagne 50.62 312 *e*P **P** **04 21 51.1 -0.4**
LPG La Plagne 50.62 312 *e*P **P** **04 21 51.1 -0.4**
LPG La Plagne 50.62 312 *e*P **P** **04 21 51.1 -0.4**
LPG La Plagne 50.62 312 *e*P **P** **04 21 51.1 -0.4**
LPL La Plagne 50.63 312 *e*P **P** **04 21 51.0 -0.6**
comp=Z,12nm,1.0s
LPL La Plagne 50.63 312 *e*P **P** **04 21 51.0 -0.6**
LPL pmax pmax
comp=Z,12nm,1.0s
LPL La Plagne 50.63 312 *e*P **P** **04 21 51.0 -0.6**
comp=Z,12nm,1.0s
LPL La Plagne 50.63 312 *e*P **P** **04 21 51.0 -0.6**
comp=Z,5.8nm,1.0s
ECH Echery 50.82 315 *e*P **P** **04 21 51.7 -0.9**
ECH pmax pmax
comp=Z,9.0nm,1.1s
ECH Echery 50.82 315 *e*P **P** **04 21 51.7 -0.9**
comp=Z,9.2nm,1.1s
ECH Echery 50.82 315 *e*P **P** **04 21 51.7 -0.9**
comp=Z,9.2nm,1.1s
HINF Hinteralfeld 50.94 315 *e*P **P** **04 21 53.4 -0.2**
HINF Hinteralfeld 50.94 315 *e*P **P** **04 21 53.4 -0.2**
HINF Hinteralfeld 50.94 315 *e*P **P** **04 21 53.4 -0.2**
HINF Hinteralfeld 50.94 315 *e*P **P** **04 21 53.4 -0.2**
ORIF Oris-en-Rattie 51.15 311 *e*P **P** **04 21 54.6 -0.7**
comp=Z,23nm,1.2s
ORIF *e*R
comp=Z,584nm,20.0s
ORIF Oris-en-Rattie 51.15 311 *e*P **P** **04 21 54.6 -0.7**
ORIF pmax pmax
comp=Z,23nm,1.2s
ORIF Oris-en-Rattie 51.15 311 *e*P **P** **04 21 54.6 -0.7**
comp=Z,23nm,1.2s
ORIF Oris-en-Rattie 51.15 311 *e*P **P** **04 21 54.6 -0.7**
comp=Z,11nm,1.2s
CABF La Chapelle 51.25 313 *e*P **P** **04 21 55.6 -0.4**
CABF La Chapelle 51.25 313 *e*P **P** **04 21 55.6 -0.4**
CABF La Chapelle 51.25 313 *e*P **P** **04 21 55.6 -0.4**
CABF La Chapelle 51.25 313 *e*P **P** **04 21 55.6 -0.4**
NJ2 Nanjing 51.26 66 *e*P **P** **04 21 56.1 -0.1**
NJ2 pP **pP** **04 21 59.0 -2.4**
NJ2 sP **sP** **04 22 00.0 -3.4**
NJ2 PP **PP** **04 23 51.6 -1.5**

NJ2				S	S	04 29 13.0	-1.5	
NJ2				pmax	pmax			
	comp=Z,70nm,0.6s							
NJ2				pmax	pmax			
	comp=Z,90nm,8.6s							
NJ2				LR	LR			
	comp=N,230nm,12.0s							
NJ2				LR	LR			
	comp=E,290nm,14.6s							
NJ2				LR	LR			
	comp=Z,500nm,19.3s							
IBBN	**Ibbenburen**	**51.38**	**320**	*eP*	**P**	**04 21 58.9**	**+2.2**	
	comp=Z,44nm,1.8s							
VIVF	**Saint-Julien-l**	**51.99**	**311**	*eP*	**P**	**04 22 00.9**	**-0.6**	
VIVF	**Saint-Julien-l**	**51.99**	**311**	*eP*	**P**	**04 22 00.9**	**-0.6**	
VIVF	**Saint-Julien-l**	**51.99**	**311**	*eP*	**P**	**04 22 00.9**	**-0.6**	
VIVF	**Saint-Julien-l**	**51.99**	**311**	*eP*	**P**	**04 22 00.9**	**-0.6**	
KEV	**Kevo**	**52.41**	**345**	*eP*	P	04 22 00.8	-3.3	
KEV				pmax	pmax			
	comp=Z,4.0nm,0.9s							
KEV	**Kevo**	**52.41**	**345**	*ep*	P	04 22 00.8	-3.3	
	comp=Z,3.7nm,0.9s							
LASF	**Ste Croix**	**52.49**	**310**	*eP*	**P**	**04 22 05.2**	**0.0**	
LASF	**Ste Croix**	**52.49**	**310**	*eP*	**P**	**04 22 05.2**	**0.0**	
LASF	**Ste Croix**	**52.49**	**310**	*eP*	**P**	**04 22 05.2**	**0.0**	
NB2	**NORSAR Subarra**	**52.59**	**332**	P	**P**	**04 22 04.3**	**-1.4**	
	comp=Z,9.2nm,1.2s,baz=113,slow=7.9							
NB2	**NORSAR Subarra**	**52.59**	**332**	P	**P**	**04 22 04.3**	**-1.4**	
	comp=Z,9.2nm,1.2s,SNR=8.5							
NOA	**NORSAR Array B**	**52.59**	**332**	P	**P**	**04 22 04.1**	**-1.6**	
NOA				PcP	**PcP**	**04 23 15.1**	**-0.6**	
NOA	**NORSAR Array B**	**52.59**	**332**	P	**P**	**04 22 04.1**	**-1.6**	
	comp=Z,2.1nm,0.8s,baz=114,slow=7.5,SNR=8.6							
NOA				PcP	**PcP**	**04 23 15.1**	**-0.6**	
	comp=Z,0.8nm,0.8s,baz=124,slow=6.9,SNR=2.6							
NOA	**NORSAR Array B**	**52.59**	**332**	P	**P**	**04 22 04.1**	**-1.6**	
ARCES	**ARCESS Array B**	**52.61**	**345**	P	**P**	**04 22 05.4**	**-0.2**	
ARCES	**ARCESS Array B**	**52.61**	**345**	P	**P**	**04 22 05.4**	**-0.2**	
	comp=Z,5.3nm,0.8s,baz=134,slow=10,SNR=12							
ARCES				LR	LR	04 46 28.8		
	comp=Z,153nm,20.6s,baz=280,slow=38							
ARCES	**ARCESS Array B**	**52.61**	**345**	P	**P**	**04 22 05.4**	**-0.2**	
SMF	**Signal de Mont**	**52.79**	**313**	*eP*	**P**	**04 22 07.3**	**-0.1**	
	comp=Z,8.7nm,0.7s							
SMF	**Signal de Mont**	**52.79**	**313**	*eP*	**P**	**04 22 07.3**	**-0.1**	
SMF				pmax	pmax			
	comp=Z,9.0nm,0.7s							
SMF	**Signal de Mont**	**52.79**	**313**	*eP*	**P**	**04 22 07.3**	**-0.1**	
	comp=Z,8.7nm,0.7s							
SMF	**Signal de Mont**	**52.79**	**313**	*eP*	**P**	**04 22 07.3**	**-0.1**	
	comp=Z,4.3nm,0.7s							
SSF	**Saint Saulge**	**53.07**	**313**	*eP*	**P**	**04 22 09.3**	**-0.1**	
	comp=Z,6.8nm,0.8s							
SSF	**Saint Saulge**	**53.07**	**313**	*eP*	**P**	**04 22 09.3**	**-0.1**	
SSF				pmax	pmax			
	comp=Z,7.0nm,0.8s							
SSF	**Saint Saulge**	**53.07**	**313**	*eP*	**P**	**04 22 09.3**	**-0.1**	
	comp=Z,6.8nm,0.8s							
SSF	**Saint Saulge**	**53.07**	**313**	*eP*	**P**	**04 22 09.3**	**-0.1**	
	comp=Z,3.4nm,0.8s							
AVF	**Avril sur Loir**	**53.14**	**313**	*eP*	**P**	**04 22 09.5**	**-0.4**	
	comp=Z,8.3nm,0.9s							
AVF	**Avril sur Loir**	**53.14**	**313**	*eP*	**P**	**04 22 09.5**	**-0.4**	
AVF				pmax	pmax			
	comp=Z,8.0nm,0.9s							
AVF	**Avril sur Loir**	**53.14**	**313**	*eP*	**P**	**04 22 09.5**	**-0.4**	
	comp=Z,8.3nm,0.9s							
AVF	**Avril sur Loir**	**53.14**	**313**	*eP*	**P**	**04 22 09.5**	**-0.4**	
	comp=Z,4.2nm,0.9s							
BGF	**Bois d'Agland**	**53.46**	**313**	*eP*	**P**	**04 22 12.3**	**0.0**	
BGF	**Bois d'Agland**	**53.46**	**313**	*eP*	**P**	**04 22 12.3**	**0.0**	
BGF	**Bois d'Agland**	**53.46**	**313**	*eP*	**P**	**04 22 12.3**	**0.0**	
BGF	**Bois d'Agland**	**53.46**	**313**	*eP*	**P**	**04 22 12.3**	**0.0**	
MTLF	**Montolieu**	**53.62**	**308**	*eP*	**P**	**04 22 13.7**	**+0.2**	
	comp=Z,25nm,1.2s							
MTLF	**Montolieu**	**53.62**	**308**	*eP*	**P**	**04 22 13.7**	**+0.2**	
MTLF				pmax	pmax			
	comp=Z,25nm,1.2s							
MTLF	**Montolieu**	**53.62**	**308**	*eP*	**P**	**04 22 13.7**	**+0.2**	
	comp=Z,25nm,1.2s							
MTLF	**Montolieu**	**53.62**	**308**	*eP*	**P**	**04 22 13.7**	**+0.2**	
	comp=Z,12nm,1.2s							
CAF	**Calviac**	**53.84**	**310**	*eP*	**P**	**04 22 15.1**	**-0.1**	
	comp=Z,19nm,1.2s							
CAF	**Calviac**	**53.84**	**310**	*eP*	**P**	**04 22 15.1**	**-0.1**	
CAF				pmax	pmax			
	comp=Z,19nm,1.2s							
CAF	**Calviac**	**53.84**	**310**	*eP*	**P**	**04 22 15.1**	**-0.1**	
	comp=Z,19nm,1.2s							
CAF	**Calviac**	**53.84**	**310**	*eP*	**P**	**04 22 15.1**	**-0.1**	
	comp=Z,9.6nm,1.2s							
TCF	**Toulx Ste Croi**	**53.87**	**312**	*eP*	**P**	**04 22 15.3**	**0.0**	
	comp=Z,5.1nm,0.7s							
TCF	**Toulx Ste Croi**	**53.87**	**312**	*eP*	**P**	**04 22 15.3**	**0.0**	
TCF				pmax	pmax			
	comp=Z,5.0nm,0.6s							
TCF	**Toulx Ste Croi**	**53.87**	**312**	*eP*	**P**	**04 22 15.3**	**0.0**	
	comp=Z,5.1nm,0.6s							
TCF	**Toulx Ste Croi**	**53.87**	**312**	*eP*	**P**	**04 22 15.3**	**0.0**	
	comp=Z,2.5nm,0.7s							
RJF	**Les Rejaudoux**	**54.26**	**311**	*eP*	**P**	**04 22 18.1**	**-0.1**	
	comp=Z,21nm,1.1s							
RJF				*eR*				
	comp=Z,257nm,19.2s							
RJF	**Les Rejaudoux**	**54.26**	**311**	*eP*	**P**	**04 22 18.1**	**-0.1**	
RJF				pmax	pmax			
	comp=Z,21nm,1.1s							
RJF	**Les Rejaudoux**	**54.26**	**311**	*eP*	**P**	**04 22 18.1**	**-0.1**	
	comp=Z,21nm,1.1s							
RJF	**Les Rejaudoux**	**54.26**	**311**	*eP*	**P**	**04 22 18.1**	**-0.1**	
	comp=Z,11nm,1.1s							
EPF	**Esparros**	**54.97**	**308**	*eP*	**P**	**04 22 24.0**	**+0.6**	
EPF	**Esparros**	**54.97**	**308**	*eP*	**P**	**04 22 24.0**	**+0.6**	
EPF	**Esparros**	**54.97**	**308**	*eP*	**P**	**04 22 24.0**	**+0.6**	
EPF	**Esparros**	**54.97**	**308**	*eP*	**P**	**04 22 24.0**	**+0.6**	
ETSF	**Etsaut**	**55.63**	**308**	*eP*	**P**	**04 22 28.5**	**+0.3**	
	comp=Z,23nm,1.0s							
ETSF	**Etsaut**	**55.63**	**308**	*eP*	**P**	**04 22 28.5**	**+0.3**	
ETSF				pmax	pmax			
	comp=Z,23nm,1.0s							
ETSF	**Etsaut**	**55.63**	**308**	*eP*	**P**	**04 22 28.5**	**+0.3**	
	comp=Z,23nm,1.0s							
ETSF	**Etsaut**	**55.63**	**308**	*eP*	**P**	**04 22 28.5**	**+0.3**	
	comp=Z,12nm,1.0s							
LDF	**La Druitiere**	**55.67**	**315**	*eP*	**P**	**04 22 28.1**	**-0.2**	
	comp=Z,18nm,1.1s							
LDF	**La Druitiere**	**55.67**	**315**	*eP*	**P**	**04 22 28.1**	**-0.2**	
LDF				pmax	pmax			
	comp=Z,18nm,1.1s							
LDF	**La Druitiere**	**55.67**	**315**	*eP*	**P**	**04 22 28.1**	**-0.2**	
	comp=Z,18nm,1.1s							
LDF	**La Druitiere**	**55.67**	**315**	*eP*	**P**	**04 22 28.1**	**-0.2**	
	comp=Z,8.9nm,1.1s							
SJPF	**Ste Jean**	**56.12**	**308**	*eP*	**P**	**04 22 31.5**	**-0.2**	
	comp=Z,33nm,1.4s							
SJPF	**Ste Jean**	**56.12**	**308**	*eP*	**P**	**04 22 31.5**	**-0.2**	
SJPF				pmax	pmax			
	comp=Z,33nm,1.4s							
SJPF	**Ste Jean**	**56.12**	**308**	*eP*	**P**	**04 22 31.5**	**-0.2**	
	comp=Z,33nm,1.4s							
SJPF	**Ste Jean**	**56.12**	**308**	*eP*	**P**	**04 22 31.5**	**-0.2**	
	comp=Z,16nm,1.4s							
CN2	**Changchun**	**56.33**	**51**	*eP*	**P**	**04 22 33.0**	**-0.1**	
CN2				*es*P	**sP**	**04 22 40.0**	**-0.3**	
CN2				*e*S	**S**	**04 30 20.3**	**-2.5**	
CN2				pmax	pmax			
	comp=Z,10.0nm,1.0s							
CN2				pmax	pmax			
	comp=Z,200nm,3.0s							
CN2				LR	LR			
	comp=N,200nm,14.0s							
CN2				LR	LR			
	comp=E,200nm,14.0s							
CN2				LR	LR			
	comp=Z,200nm,13.0s							
ROSF	**Rostrenen**	**57.74**	**314**	*eP*	**P**	**04 22 42.6**	**-0.4**	
ROSF	**Rostrenen**	**57.74**	**314**	*eP*	**P**	**04 22 42.6**	**-0.4**	
ROSF	**Rostrenen**	**57.74**	**314**	*eP*	**P**	**04 22 42.6**	**-0.4**	
ROSF	**Rostrenen**	**57.74**	**314**	*eP*	**P**	**04 22 42.6**	**-0.4**	
TORD	**Torodi Ar. Bea**	**57.85**	**272**	P	**P**	**04 22 43.5**	**-0.8**	
TORD	**Torodi Ar. Bea**	**57.85**	**272**	P	**P**	**04 22 43.5**	**-0.8**	
	comp=Z,7.9nm,0.6s,baz=90,slow=6.0,SNR=114							
TORD				LR	LR	04 49 16.6		
	comp=Z,282nm,18.4s,baz=70,slow=38							
TORD	**Torodi Ar. Bea**	**57.85**	**272**	P	**P**	**04 22 43.5**	**-0.8**	
ESDC	**Sonseca Array**	**58.23**	**304**	P	**P**	**04 22 46.4**	**-0.4**	
	comp=Z,1.2nm,0.6s,baz=75,slow=8.2,SNR=9.2							
ESDC	**Sonseca Array**	**58.23**	**304**	P	**P**	**04 22 46.4**	**-0.3**	
KSAR	**Wonju Array Be**	**58.35**	**59**	P	**P**	**04 22 45.9**	**-1.5**	
KSAR	**Wonju Array Be**	**58.35**	**59**	P	**P**	**04 22 45.9**	**-1.5**	
LBTB	**Lobatse**	**58.36**	**219**	*eP*	**P**	**04 22 48.3**	**+0.6**	
	comp=Z,39nm,1.0s							
LBTB	**Lobatse**	**58.36**	**219**	*eP*	**P**	**04 22 48.3**	**+0.6**	
	comp=Z,39nm,1.0s							
KSRS	**Korea Array**	**58.38**	**59**	P	**P**	**04 22 45.9**	**-1.7**	
	comp=Z,4.3nm,0.7s,baz=269,slow=6.8,SNR=11							
KSRS				LR	LR	04 51 36.6		
	comp=Z,319nm,18.6s,baz=268,slow=40							
PAB	**San Pablo**	**58.54**	**304**	*eP*	**P**	**04 22 48.3**	**-0.6**	
PAB				pmax	pmax			
	comp=Z,23nm,1.5s							
PAB	**San Pablo**	**58.54**	**304**	*eP*	**P**	**04 22 48.3**	**-0.6**	
	comp=Z,23nm,1.5s							
PAB	**San Pablo**	**58.54**	**304**	*eP*	**P**	**04 22 48.3**	**-0.6**	
	comp=Z,23nm,1.5s							
TSUM	**Tsumeb**	**59.49**	**230**	*eP*	**P**	**04 22 56.1**	**+0.4**	
TSUM	**Tsumeb**	**59.49**	**230**	*eP*	**P**	**04 22 56.1**	**+0.4**	
PBRG	**Braganca**	**60.23**	**307**	*eP*	**P**	**04 23 02.8**	**+2.3**	
	comp=Z,32nm,1.9s							
PBRG	**Braganca**	**60.23**	**307**	*eP*	**P**	**04 23 02.8**	**+2.3**	
	comp=Z,32nm,1.9s							
MVO	**Moncorvo**	**60.48**	**306**	*eS*	S	04 31 24.3	+7.1	
MVO				*e*LR	LR	04 50 58.6		
	comp=Z,89nm,20.0s							
MVO	**Moncorvo**	**60.48**	**306**	*eS*	S	04 31 24.3	+7.1	
PBAR	**Barrancos**	**60.74**	**302**	*eP*	**P**	**04 23 04.1**	**+0.2**	
	comp=Z,25nm,1.8s							
PBAR	**Barrancos**	**60.74**	**302**	*eP*	**P**	**04 23 04.1**	**+0.2**	
	comp=Z,25nm,1.8s							
KLR	**Kul'dur**	**60.76**	**45**	*eP*	**P**	**04 23 02.0**	**-1.9**	
PMRV	**Marv??o**	**60.89**	**304**	*e*LR	LR	04 47 00.1		
	comp=Z,128nm,18.0s							
PCBR	**Castelo Branco**	**60.92**	**304**	*eP*	**P**	**04 23 05.2**	**0.0**	
	comp=Z,23nm,1.6s							
PCBR	**Castelo Branco**	**60.92**	**304**	*eP*	**P**	**04 23 05.2**	**0.0**	
	comp=Z,23nm,1.6s							
MTE	**Manteigas**	**60.93**	**305**	*eS*	**S**	**04 31 28.8**	**+5.9**	
MTE				*e*LR	LR	04 49 31.0		
	comp=Z,147nm,18.0s							
MTE	**Manteigas**	**60.93**	**305**	*eS*	**S**	**04 31 28.8**	**+5.9**	
POLO	**Lamas de Olo**	**61.04**	**306**	*eP*	**P**	**04 23 06.3**	**+0.2**	
	comp=Z,14nm,1.7s							
POLO	**Lamas de Olo**	**61.04**	**306**	*eP*	**P**	**04 23 06.3**	**+0.2**	
	comp=Z,14nm,1.7s							
PESTR	**Estremoz**	**61.10**	**303**	*eP*	**P**	**04 23 06.5**	**+0.1**	
	comp=Z,19nm,1.5s							
PESTR	**Estremoz**	**61.10**	**303**	*eP*	**P**	**04 23 06.5**	**+0.1**	
	comp=Z,19nm,1.5s							
JNU	**Nakatsue**	**61.25**	**63**	P	**P**	**04 23 07.7**	**+0.1**	
JNU	**Nakatsue**	**61.25**	**63**	P	**P**	**04 23 07.7**	**+0.1**	
	comp=Z,1.2nm,0.3s,baz=302,slow=8.2,SNR=4.1							
JNU	**Nakatsue**	**61.25**	**63**	P	**P**	**04 23 07.7**	**+0.1**	
BOSA	**Boshof**	**61.31**	**217**	*eP*	**P**	**04 23 07.7**	**-0.2**	
	comp=Z,39nm,1.4s							
BOSA	**Boshof**	**61.31**	**217**	P	**P**	**04 23 07.7**	**-0.2**	
	comp=Z,8.2nm,0.6s,baz=26,slow=7.5,SNR=26							
BOSA				LR	LR	04 45 58.0		
	comp=Z,303nm,20.2s,baz=345,slow=32							
BOSA	**Boshof**	**61.31**	**217**	*eP*	**P**	**04 23 07.7**	**-0.2**	
	comp=Z,39nm,1.4s							
PVAQ	**Vaqueiros**	**61.35**	**302**	*e*LR	LR	04 52 07.8		
	comp=Z,119nm,20.0s							
EVO	**Evora**	**61.46**	**303**	*eP*	**P**	**04 23 09.0**	**+0.1**	
	comp=Z,33nm,1.2s							
EVO				*e*R				
	comp=Z,175nm,18.2s							
EVO	**Evora**	**61.46**	**303**	*eP*	**P**	**04 23 08.9**	**+0.1**	
	comp=Z,26nm,1.1s							
EVO	**Evora**	**61.46**	**303**	*eP*	**P**	**04 23 08.9**	**+0.1**	
	comp=Z,26nm,1.1s							
EVOP	**Sao Brissos**	**61.55**	**303**	*eP*	**P**	**04 23 09.0**	**-0.4**	
EVOP				pmax	pmax			
	comp=Z,33nm,1.2s							
EVOP	**Sao Brissos**	**61.55**	**303**	*eP*	**P**	**04 23 09.0**	**-0.4**	
	comp=Z,33nm,1.2s							
EVOP	**Sao Brissos**	**61.55**	**303**	*eP*	**P**	**04 23 09.0**	**-0.4**	
	comp=Z,16nm,1.2s							
PTEO	**Sao Teotonio**	**62.13**	**302**	*eP*	**P**	**04 23 13.6**	**+0.2**	
	comp=Z,44nm,1.7s							
PTEO	**Sao Teotonio**	**62.13**	**302**	*eP*	**P**	**04 23 13.6**	**+0.2**	
	comp=Z,44nm,1.7s							
PFVI	**Vila Bisbo**	**62.26**	**301**	*eP*	**P**	**04 23 14.8**	**+0.5**	
	comp=Z,102nm,1.7s							
PFVI	**Vila Bisbo**	**62.26**	**301**	*eP*	**P**	**04 23 14.8**	**+0.5**	
	comp=Z,102nm,1.7s							
TIXI	**Tiksi**	**62.33**	**19**	*eP*	**P**	**04 23 14.7**	**+0.6**	
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.7s							
DBIC	**Dimbokro**	**66.06**	**268**	P	**P**	**04 23 38.9**	**-0.7**	
DBIC	**Dimbokro**	**66.06**	**268**	P	**P**	**04 23 38.9**	**-0.7**	
	comp=Z,4.9nm,0.6s,baz=44,slow=7.8,SNR=13							
DBIC				LR	LR	04 53 56.0		
	comp=Z,779nm,18.8s,baz=55,slow=37							
DBIC	**Dimbokro**	**66.06**	**268**	P	**P**	**04 23 38.8**	**-0.7**	
LIC	**Lamto**	**66.37**	**267**	*eP*	**P**	**04 23 40.8**	**-0.8**	
	comp=Z,9.8nm,0.6s							
LIC				*e*R				
	comp=Z,833nm,19.0s							
LIC	**Lamto**	**66.37**	**267**	*eP*	**P**	**04 23 40.8**	**-0.8**	
	comp=Z,9.8nm,0.6s							
LIC	**Lamto**	**66.37**	**267**	*eP*	**P**	**04 23 40.8**	**-0.8**	
	comp=Z,4.9nm,0.6s							
BILL	**Bilibino**	**75.26**	**22**	⇑*iP*	**P**	**04 24 34.9**	**+0.2**	
BILL				*i*		04 24 41.4		
BILL				*i*		04 24 46.4		
BILL				*i*		04 27 22.7		
BILL				pmax	pmax			
	comp=Z,22nm,0.9s							
BILL				MLR	MLR			
	comp=Z,100nm,20.0s							
PETK	**Petropavlovsk-**	**76.26**	**38**	LR	LR	05 02 56.8		
	comp=Z,109nm,19.4s,baz=273,slow=39							
WRA	**Warramunga Arr**	**81.93**	**115**	P	**P**	**04 25 10.8**	**-1.5**	
WRA	**Warramunga Arr**	**81.93**	**115**	P	**P**	**04 25 10.8**	**-1.5**	
	comp=Z,2.2nm,0.8s,baz=305,slow=4.5,SNR=6.5							
WRA	**Warramunga Arr**	**81.93**	**115**	P	**P**	**04 25 10.8**	**-1.5**	
ASAR	**Alice Springs**	**83.24**	**119**	P	**P**	**04 25 17.4**	**-1.7**	
ASAR	**Alice Springs**	**83.24**	**119**	P	**P**	**04 25 17.4**	**-1.7**	
	comp=Z,0.8nm,0.4s,baz=301,slow=5.4,SNR=18							
ASAR	**Alice Springs**	**83.24**	**119**	P	**P**	**04 25 17.4**	**-1.7**	
MAW	**Mawson**	**89.05**	**180**	LR	LR	04 58 37.9		
	comp=Z,106nm,19.1s,baz=165,slow=31							
ILAR	**Eielson Array**	**90.96**	**12**	P	**P**	**04 25 56.1**	**+0.2**	
ILAR				PP	**PP**	**04 29 31.9**	**+0.7**	
ILAR	**Eielson Array**	**90.96**	**12**	P	**P**	**04 25 56.1**	**+0.2**	
	comp=Z,0.1nm,0.6s,baz=304,slow=5.0,SNR=3.0							
ILAR				PP	**PP**	**04 29 31.9**	**+0.7**	
	comp=Z,0.9nm,1.0s,baz=325,slow=4.3,SNR=6.8							
ILAR				LR	LR	05 12 43.0		
	comp=Z,91nm,19.9s,baz=301,slow=40							
ILAR	**Eielson Array**	**90.96**	**12**	P	**P**	**04 25 56.1**	**+0.2**	
ILAR	**Eielson Array**	**90.96**	**12**	PP	PP	04 29 32.0	+0.7	
STKA	**Stephens Creek**	**92.91**	**123**	LR	LR	05 03 38.2		
	comp=Z,234nm,18.1s,baz=208,slow=33							
YKA	**Yellowknife Ar**	**96.04**	**358**	P	**P**	**04 26 19.3**	**0.0**	
YKA	**Yellowknife Ar**	**96.04**	**358**	P	**P**	**04 26 19.3**	**0.0**	
	comp=Z,1.4nm,0.8s,baz=354,slow=5.4,SNR=5.0							
YKA	**Yellowknife Ar**	**96.04**	**358**	P	**P**	**04 26 19.3**	**0.0**	
EIDS	**Eidsvold**	**98.25**	**114**	P	Pdif	04 26 33.3	+3.3	
	comp=Z,11nm,0.8s							
NVAR	**Mina Array Bea**	**120.18**	**0**	PKP	**PKPdf**	**04 31 44.1**	**+0.4**	
NVAR	**Mina Array Bea**	**120.18**	**0**	PKP	**PKPdf**	**04 31 44.2**	**+0.4**	
	comp=Z,0.3nm,0.7s,baz=355,slow=2.1,SNR=2.7							
NVAR	**Mina Array Bea**	**120.18**	**0**	PKIKP	**PKPdf**	**04 31 44.2**	**+0.4**	
TXAR	**Lajitas Array**	**127.40**	**344**	PKP	**PKPdf**	**04 31 57.3**	**-0.4**	
TXAR	**Lajitas Array**	**127.40**	**344**	PKP	**PKPdf**	**04 31 57.3**	**-0.4**	
	comp=Z,0.3nm,0.6s,baz=201,slow=2.8,SNR=5.3							
TXAR	**Lajitas Array**	**127.40**	**344**	PKIKP	**PKPdf**	**04 31 57.3**	**-0.4**	

ISCJB ***17*** *04:12:55.2±1.0, 22°.56S±0°.05×148°.07E±0°.09, h10km, Error ellipse: s-maj=11.7km s-min=7.4km az=165.7*
IDC ***17*** *04:12:55.2±2.4, 22°.42S×148°.19E, h0km, mb1 3.8/4, mb1mx3.6/14, mbtmp3.6/4, ML3.6/4, Error ellipse: s-maj=30.5km s-min=18.3km az=72.0*
AUST ***17*** *04:12:55.9±99.0, 22°.40S×148°.31E, h3km±1km, Error ellipse: s-maj=2.9km s-min=1.1km az=239.0*
ISC 17 04:12:57.2±1.4, 22°.47S±0°.07×148°.1E±0°.1, h10km, n8, σ0s97/12, Queensland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**2.95**	**323**	Pn	**Pn**	**04 13 44.5**	**+0.3**
	11nm,0.3s,baz=132,slow=9.6,SNR=50						
CTA				Pg	**Pb**	**04 13 50.1**	**+0.2**
	13nm,0.3s,baz=144,slow=17,SNR=25						
CTA				Sn	**Sn**	**04 14 19.1**	**-0.5**
	4.4nm,0.3s,baz=85,slow=23,SNR=3.1						
CTA				Lg	Lg	04 14 27.8	
	12nm,0.3s,baz=49,slow=19,SNR=7.3						
EIDS	**Eidsvold**	**3.95**	**138**	P	**Pn**	**04 13 56.8**	**-1.1**
	baz=3.9,SNR=76						
QLP	**Quilpie**	**5.42**	**220**	P	**Pn**	**04 14 19.9**	**+1.9**
	baz=5.6,SNR=8.0						
MTSU	**Mount Surprise**	**5.61**	**320**	P	**Pn**	**04 14 21.1**	**+0.4**
	baz=5.7,SNR=12						
STKA	**Stephens Creek**	**11.03**	**210**	Pn	**Pn**	**04 15 34.7**	**-0.4**
	0.4nm,0.3s,baz=17,slow=11,SNR=4.5						
STKA				Sn	**Sn**	**04 17 37.4**	**-1.1**
	0.3nm,0.3s,baz=323,slow=20,SNR=2.5						
STKA				Lg	Lg	04 18 49.2	
	0.3nm,0.3s,baz=101,slow=22,SNR=2.8						
WRA	**Warramunga Arr**	**13.11**	**279**	Pn	**Pn**	**04 16 02.5**	**-1.2**
	0.2nm,0.3s,baz=99,slow=12,SNR=8.6						
WRA				Lg	Lg	04 19 52.9	
	0.2nm,0.3s,baz=93,slow=29,SNR=12						
ASAR	**Alice Springs**	**13.15**	**262**	Pn	**Pn**	**04 16 04.8**	**+0.5**
	0.2nm,0.3s,baz=92,slow=14,SNR=8.8						
ASAR				Sn	**Sn**	**04 18 30.9**	**+0.1**
	0.1nm,0.3s,baz=76,slow=22,SNR=3.8						
ASAR				Lg	Lg	04 19 56.3	
	0.1nm,0.3s,baz=87,slow=27,SNR=5.4						
TORD	**Torodi Ar. Bea**	**146.80**	**260**	PKPbc	**PKPdf**	**04 32 39.2**	**+0.5**
	1.6nm,1.0s,baz=122,slow=3.0,SNR=9.4						

FUNV ***17*** *04:23:51.8, 6°.76N×73°.19W, h165km, MW3.7*
ISCJB ***17*** *04:23:52.1±0.7, 6°.86N±0°.07×72°.96W±0°.07, h168km±8km, mb3.1/1, Error ellipse: s-maj=14.2km s-min=7.1km az=41.7*
IDC ***17*** *04:23:56.9±7.2, 4°.69N×76°.68W, h96km±76km, mb3.0/1, mb1 3.5/2, mb1mx3.1/22, mbtmp3.2/2, ML2.5/1, Error ellipse: s-maj=95.3km s-min=34.5km az=41.0*
ISC 17 04:23:53.8±1.4, 6°.9N±0°.1×72°.91W±0°.10, h171km±10km, n20, σ0s58/24, 1C, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.10**	**32**	⇑*iP*	**Pn**	**04 24 21.3**	**-0.4**
CAPV				*e*S	**Sn**	**04 24 42.6**	**-0.6**
VIGV	**El Vigia**	**2.44**	**39**	*eP*	**Pn**	**04 24 35.9**	**+0.6**
VIGV				*e*S	**Sn**	**04 25 08.5**	**+1.0**
SOCV	**Socops**	**2.44**	**56**	*eP*	**Pn**	**04 24 35.5**	**+0.2**
ROSC	**El Rosal**	**2.50**	**215**	P	Pn	04 24 33.6	-2.9
	25nm,0.3s,baz=282,slow=19,SNR=40						
ROSC				S	Sn	04 25 03.7	-5.8
	40nm,0.3s,baz=287,slow=19,SNR=18						
ELOV	**Elorza**	**3.40**	**89**	*eP*	**Pn**	**04 24 47.6**	**+0.6**
ELOV				*e*S	**Sn**	**04 25 28.6**	**+0.1**
QARV	**Quebrada Arrib**	**4.02**	**36**	*eS*	**Sn**	**04 25 42.5**	**-0.2**
SANV	**Sanarito**	**4.20**	**52**	*eP*	**Pn**	**04 24 57.7**	**+0.3**
CURV	**Curarigua**	**4.23**	**43**	*eP*	**Pn**	**04 24 58.2**	**+0.5**
CURV				*e*S	**Sn**	**04 25 46.5**	**-1.1**
DABV	**Dabajuro**	**4.55**	**29**	*eP*	**Pn**	**04 25 02.4**	**+0.6**
TEPV	**Terepaima**	**4.75**	**50**	*eP*	**Pn**	**04 25 05.1**	**+0.7**
SIQV	**Siquisique**	**4.80**	**39**	*eP*	**Pn**	**04 25 05.4**	**+0.4**
SIQV				*e*S	**Sn**	**04 26 00.3**	**-0.6**
MAPV	**Macapo**	**5.26**	**57**	*eP*	**Pn**	**04 25 11.5**	**+0.4**
MONV	**Montecano**	**5.77**	**30**	*eP*	**Pn**	**04 25 17.7**	**0.0**
TURV	**Turiamo**	**6.11**	**55**	*eP*	**Pn**	**04 25 22.

WRDH				eS	Sb	04 29 38.0	-0.1		
WRDH	**Warideh**	**0.70**	**153**	⇑eP	Pg	04 29 28.3	-0.4		
	SNR=95								
DRWC	**Darouich**	**0.72**	**47**	⇑eP	Pn	04 29 30.8	+0.4		
DRWC				eS	Sb	04 29 40.3	+1.6		
DRWC				AML	AML	04 29 45.5			
	comp=Z,36µm,0.7s								
DRWC	**Darouich**	**0.72**	**47**	⇑eP	Pn	04 29 30.8	+0.4		
DRWC				AML	AML	04 29 45.4			
	comp=Z,36µm,0.7s								
DRWC	**Darouich**	**0.72**	**47**	⇑eP	Pn	04 29 30.8	+0.4		
DRWC	**Darouich**	**0.72**	**47**	⇑eP	Pn	04 29 30.8	+0.4		
	SNR=94								
YURE	**YUREGIR**	**0.76**	**336**	*i* P	Pb	04 29 28.7	-1.0		
YURE				*i* S	Sg	04 29 40.7	+0.8		
YURE	**YUREGIR**	**0.76**	**336**	*i* P	Pb	04 29 28.7	-1.0		
YURE				*i* S	Sg	04 29 40.7	+0.8		
CEYT	**Ceyhan**	**0.90**	**346**	PG	Pb	04 29 31.4	-0.8		
CEYT				eSG	Sg	04 29 44.9	+0.5		
CEYT	**Ceyhan**	**0.90**	**346**	Pg	Pb	04 29 31.6	-0.5		
CEYT	**Ceyhan**	**0.90**	**346**	Pg	Pb	04 29 31.6	-0.5		
CEYT				eSg	Sg	04 29 44.9	+0.5		
KUZU	**Kuzuini**	**1.07**	**53**	*i* P	Pb	04 29 34.2	-0.8		
KUZU				*i* S	Sb	04 29 48.5	-0.2		
KUZU	**Kuzuini**	**1.07**	**53**	*i* P	Pb	04 29 34.2	-0.8		
KUZU				*i* S	Sb	04 29 48.5	-0.2		
KFRA	**Kufra**	**1.12**	**145**	⇑eP	Pb	04 29 35.4	-0.4		
KFRA				AML	AML	04 29 56.5			
	comp=Z,44µm,0.7s								
KFRA	**Kufra**	**1.12**	**145**	⇑eP	Pb	04 29 35.5	-0.4		
KFRA	**Kufra**	**1.12**	**145**	⇑eP	Pb	04 29 35.4	-0.4		
	SNR=92								
BIDA	**Albida**	**1.14**	**167**	*e*P	Pg	04 29 36.7	-0.3		
BIDA				AML	AML	04 29 59.6			
	comp=Z,46µm,0.5s								
BIDA	**Albida**	**1.14**	**167**	⇑eP	Pg	04 29 36.6	-0.3		
BIDA				AML	AML	04 29 59.6			
	comp=Z,46µm,0.5s								
BIDA	**Albida**	**1.14**	**167**	⇑eP	Pg	04 29 36.8	-0.3		
BIDA	**Albida**	**1.14**	**167**	⇑eP	Pg	04 29 36.7	-0.3		
	SNR=92								
KOZT	**Kozan**	**1.35**	**354**	PN	Pn	04 29 39.2	+0.1		
KOZT				eSN	Sg	04 29 58.8	+0.1		
KOZT	**Kozan**	**1.35**	**354**	*i* Pn	Pn	04 29 39.2	+0.1		
KOZT				eSn	Sg	04 29 58.8	+0.1		
GAZ	**Gaziantep**	**1.41**	**42**	*e*PN	Pn	04 29 40.2	+0.2		
GAZ				eSN	Sb	04 29 59.9	+1.2		
GAZ	**Gaziantep**	**1.41**	**42**	Pn	Pn	04 29 40.5	+0.5		
GAZ	**Gaziantep**	**1.41**	**42**	Pn	Pn	04 29 40.5	+0.5		
GAZ				eSn	Sb	04 29 59.9	+1.2		
AYKD	**Aykdinkavak**	**1.43**	**26**	*i* P	Pn	04 29 38.8	-1.4		
AYKD				*i* S	Sn	04 29 58.2	-0.4		
GULE	**Gulek**	**1.52**	**319**	*i* P	Pn	04 29 41.2	-0.4		
GULE	**Gulek**	**1.52**	**319**	*i* P	Pn	04 29 41.2	-0.4		
KMRS	**Kahramanmaras**	**1.54**	**27**	*e*PN	Pn	04 29 41.9	+0.1		
KMRS				eSN	Sb	04 30 03.2	+0.8		
KMRS	**Kahramanmaras**	**1.54**	**27**	*e*Pn	Pn	04 29 41.9	+0.1		
KMRS				eSn	Sb	04 30 03.2	+0.8		
SLMH	**Al Salmeh**	**1.55**	**86**	⇑eP	Pn	04 29 41.3	-0.6		
SLMH	**Al Salmeh**	**1.55**	**86**	*e*P	Pn	04 29 41.2	-0.6		
SLMH				⇓eP	Pn	04 29 41.2	-0.6		
SLMH	**Al Salmeh**	**1.55**	**86**	⇑eP	Pn	04 29 41.3	-0.6		
	SNR=57								
KIZK	**Mersin**	**1.55**	**283**	*i* P	Pn	04 29 40.6	-1.2		
GZT	**Gaziantep**	**1.74**	**45**	*i* P	Pn	04 29 43.3	-1.3		
HWQ	**Hawqa**	**1.85**	**182**	*e*P	Pn	04 29 46.1	0.0		
HWQ				eS	Sn	04 30 09.1	0.0		
HWQ	**Hawqa**	**1.85**	**182**	*e*P	Pn	04 29 46.0	0.0		
HWQ				eS	Sn	04 30 09.2	+0.1		
HWQ	**Hawqa**	**1.85**	**182**	*e*P	Pn	04 29 46.0	0.0		
HWQ				eS	Sn	04 30 09.2	+0.1		
FKH	**Fakeheh**	**1.91**	**170**	*e*P	Pn	04 29 47.3	+0.5		
PHNC	**Paralimni**	**1.97**	**236**	P	Pn	04 29 48.0	+0.4		
PHNC				S	Sg	04 30 20.5	+2.1		
PHNC	**Paralimni**	**1.97**	**236**	P	Pn	04 29 48.0	+0.4		
JHLN	**Al Jahlan**	**2.02**	**102**	⇓eP	Pn	04 29 47.6	-0.7		
JHLN				AML	AML	04 30 19.6			
	comp=Z,25µm,0.5s								
JHLN	**Al Jahlan**	**2.02**	**102**	⇓eP	Pn	04 29 47.6	-0.7		
JHLN	**Al Jahlan**	**2.02**	**102**	⇓eP	Pn	04 29 47.6	-0.7		
	SNR=57								
LFK	**Lefkose**	**2.19**	**248**	*e*PN	Pn	04 29 49.7	-1.0		
LFK	**Lefkose**	**2.19**	**248**	Pn	Pn	04 29 49.7	-1.0		
LFK	**Lefkose**	**2.19**	**248**	*e*Pn	Pn	04 29 49.7	-1.0		
ROOS	**tl_alroos**	**2.22**	**152**	⇓eP	Pn	04 29 51.7	+0.7		
ROOS	**tl_alroos**	**2.22**	**152**	⇓eP	Pn	04 29 52.6	+1.5		
ROOS	**tl_alroos**	**2.22**	**152**	⇓eP	Pn	04 29 51.7	+0.7		
	SNR=57								
BHL	**Bhannes**	**2.24**	**188**	*e*P	Pn	04 29 51.2	-0.2		
BHL	**Bhannes**	**2.24**	**188**	*e*P	Pn	04 29 51.2	-0.2		
BHL				eS	Sn	04 30 18.4	-0.4		
BHL	**Bhannes**	**2.24**	**188**	*e*P	Pn	04 29 51.2	-0.2		
BHL				eS	Sn	04 30 18.5	-0.2		
BHL	**Bhannes**	**2.24**	**188**	*e*P	Pn	04 29 51.2	-0.2		
BHL				eS	Sn	04 30 18.5	-0.2		
ATAB	**Bozova**	**2.26**	**53**	*i* P	Pn	04 29 50.9	-0.7		
ATAB	**Bozova**	**2.26**	**53**	*i* P	Pn	04 29 50.9	-0.7		
NIG	**Nigde**	**2.27**	**331**	*e*PN	Pn	04 29 52.7	+0.8		
NIG	**Nigde**	**2.27**	**331**	Pn	Pn	04 29 52.8	+0.8		
NIG	**Nigde**	**2.27**	**331**	Pn	Pn	04 29 52.8	+0.8		
SARI	**SarD1z-Kayseri**	**2.29**	**8**	*e*PN	Pn	04 29 52.9	+0.7		
SARI	**SarD1z-Kayseri**	**2.29**	**8**	*e*Pn	Pn	04 29 52.9	+0.7		
BEYL	**Beirut**	**2.30**	**191**	*e*P	Pn	04 29 52.0	0.0		
BEYL	**Beirut**	**2.30**	**191**	*e*P	Pn	04 29 52.0	0.0		
AKIN	**Ak¨–nc¨–lar- K**	**2.36**	**243**	*e*PN	Pn	04 29 52.2	-0.7		
AKIN	**Ak¨–nc¨–lar- K**	**2.36**	**243**	*e*Pn	Pn	04 29 52.2	-0.7		
BSTP	**Nigde**	**2.37**	**321**	*i* P	Pb	04 29 55.6	-1.7		
KSRV	**Kasrt alli**	**2.44**	**95**	*e*P	Pn	04 29 53.6	-0.3		
MAMC	**Mammari**	**2.47**	**248**	P	Pn	04 29 53.1	-1.4		
MAMC	**Mammari**	**2.47**	**248**	P	Pn	04 29 53.1	-1.4		
CSS	**Prodhromos**	**2.48**	**243**	P	Pn	04 29 53.5	-1.1		
	comp=Z,36nm,0.7s								
CSS				S	Sg	04 30 31.2	-3.6		
CSS	**Prodhromos**	**2.48**	**243**	*e*PN	Pn	04 29 54.1	-0.5		
CSS	**Prodhromos**	**2.48**	**243**	P	Pn	04 29 52.3	-2.3		
CSS	**Prodhromos**	**2.48**	**243**	*e*Pn	Pn	04 29 53.0	-1.6		
CSS				eS	Sb	04 30 30.9	+1.5		
CSS	**Prodhromos**	**2.48**	**243**	*e*Pn	Pn	04 29 53.0	-1.6		
CSS	**Prodhromos**	**2.48**	**243**	P	Pn	04 29 53.5	-1.1		
	comp=Z,36nm,0.7s								
CSS				eS	Sb	04 30 30.9	+1.5		
ERMK	**Ermenek**	**2.56**	**282**	*i* P	Pn	04 29 57.2	+1.4		
ERMK	**Ermenek**	**2.56**	**282**	*i* P	Pn	04 29 57.2	+1.4		
PINB	**Pinarbasi**	**2.56**	**7**	*i* P	Pn	04 29 56.4	+0.5		
PINB	**Pinarbasi**	**2.56**	**7**	*i* P	Pn	04 29 56.4	+0.5		
URFA	**Urfa**	**2.60**	**59**	*e*PN	Pn	04 29 56.5	+0.1		
URFA	**Urfa**	**2.60**	**59**	Pn	Pn	04 29 56.5	+0.1		
URFA	**Urfa**	**2.60**	**59**	*e*Pn	Pn	04 29 56.5	+0.1		
AKDN	**Akdeniz- K¨–br**	**2.62**	**252**	*e*PN	Pn	04 29 55.8	-0.7		
AKDN	**Akdeniz- K¨–br**	**2.62**	**252**	*e*Pn	Pn	04 29 55.8	-0.7		
RCY	**Rachaya**	**2.63**	**183**	*e*P	Pn	04 29 57.0	+0.1		
AKCD	**Akcadag**	**2.64**	**35**	*i* P	Pn	04 29 56.5	-0.4		
AKCD	**Akcadag**	**2.64**	**35**	*i* P	Pn	04 29 56.5	-0.4		
MATL	**Matarih**	**2.70**	**192**	*e*P	Pn	04 29 57.4	-0.1		
MATL	**Matarih**	**2.70**	**192**	*e*P	Pn	04 29 57.4	-0.1		
MATL	**Matarih**	**2.70**	**192**	*e*P	Pn	04 29 57.4	-0.1		
DARE	**Darende-Malaty**	**2.70**	**25**	*e*PN	Pn	04 29 58.3	+0.6		
BNN	**Bunyan**	**2.72**	**357**	*e*PN	Pn	04 29 58.6	+0.6		
BNN	**Bunyan**	**2.72**	**357**	Pn	Pn	04 29 58.6	+0.6		
BNN	**Bunyan**	**2.72**	**357**	*e*Pn	Pn	04 29 58.6	+0.6		
LEF	**Lefka**	**2.74**	**249**	*e*PN	Pn	04 29 57.5	-0.6		
LEF	**Lefka**	**2.74**	**249**	Pn	Pn	04 29 57.5	-0.6		
LEF	**Lefka**	**2.74**	**249**	*e*Pn	Pn	04 29 57.5	-0.6		
AVNT	**Avonos**	**2.80**	**341**	*i* P	Pn	04 29 59.3	+0.2		
AVNT	**Avonos**	**2.80**	**341**	*i* P	Pn	04 29 59.3	+0.2		
SULT	**Sultanhani-AKS**	**2.87**	**317**	*e*PN	Pn	04 30 00.5	+0.5		
SULT	**Sultanhani-AKS**	**2.87**	**317**	Pn	Pn	04 30 00.5	+0.5		
SULT	**Sultanhani-AKS**	**2.87**	**317**	*e*Pn	Pn	04 30 00.5	+0.5		
SZAC	**Souni-Zanaja**	**2.90**	**243**	P	Pb	04 30 02.8	-3.5		
SZAC				S	Sn	04 30 36.0	+1.0		
SZAC	**Souni-Zanaja**	**2.90**	**243**	P	Pb	04 30 02.8	-3.5		
SZAC				S	Sn	04 30 36.0	+1.0		
MYA	**Malataya**	**2.91**	**41**	*e*PN	Pn	04 30 01.0	+0.4		
MYA	**Malataya**	**2.91**	**41**	P	Pn	04 30 01.0	+0.4		
MYA	**Malataya**	**2.91**	**41**	Pn	Pn	04 30 01.0	+0.4		
MYA	**Malataya**	**2.91**	**41**	*e*Pn	Pn	04 30 01.0	+0.4		
ALFC	**Alevga**	**2.95**	**252**	⇓P	Pn	04 29 58.9	-2.2		
	comp=Z,50nm,0.7s								
ALFC				S	Sb	04 30 39.8	-3.1		
ALFC	**Alevga**	**2.95**	**252**	⇓P	Pn	04 29 58.9	-2.2		
	comp=Z,50nm,0.7s								
ALFC				S	Sb	04 30 39.8	-3.1		
NAQL	**Naqoura**	**3.09**	**194**	*e*P	Pn	04 30 02.5	-0.5		
MMAI	**Mount Meron Ar**	**3.15**	**189**	Pn	Pn	04 30 04.0	+0.1		
MMAI				Sn	Sn	04 30 39.7	-1.4		
MMAI				Lg	Lg	04 30 53.8			
MMAI	**Mount Meron Ar**	**3.15**	**189**	Pn	Pn	04 30 04.0	+0.1		
	comp=Z,143nm,0.3s,baz=22,slow=14,SNR=278								
MMAI				Sn	Sn	04 30 39.7	-1.4		
	comp=Z,159nm,0.3s,baz=25,slow=24,SNR=9.1								
MMAI				Lg	Lg	04 30 53.8			
	comp=Z,232nm,0.3s,baz=354,slow=31,SNR=5.6								
MMAI	**Mount Meron Ar**	**3.15**	**189**	Pn	Pn	04 30 04.0	+0.1		
MMAI				Sn	Sn	04 30 39.7	-1.4		
AKMC	**Akamas**	**3.20**	**251**	P	Pn	04 30 03.4	-1.1		
AKMC	**Akamas**	**3.20**	**251**	P	Pn	04 30 03.4	-1.1		
PPCY	**Paphos**	**3.24**	**249**	P	Pn	04 30 04.6	-0.5		
PPCY	**Paphos**	**3.24**	**249**	P	Pn	04 30 04.6	-0.5		
KONT	**Konya--Tatoy**	**3.44**	**303**	*e*PN	Pn	04 30 08.6	+0.8		
KONT	**Konya--Tatoy**	**3.44**	**303**	Pn	Pn	04 30 08.6	+0.8		
KONT	**Konya--Tatoy**	**3.44**	**303**	*e*Pn	Pn	04 30 08.6	+0.8		
SVRC	**Sivrice-ELAZID**	**3.45**	**49**	*e*PN	Pn	04 30 08.5	+0.4		
SVRC	**Sivrice-ELAZID**	**3.45**	**49**	*e*Pn	Pn	04 30 08.5	+0.4		
YOZ	**Yozgat**	**3.54**	**351**	*e*PN	Pn	04 30 10.5	+1.1		
YOZ	**Yozgat**	**3.54**	**351**	Pn	Pn	04 30 10.5	+1.1		
YOZ	**Yozgat**	**3.54**	**351**	*e*Pn	Pn	04 30 10.5	+1.1		
LADK	**Ladik-KONYA**	**3.57**	**306**	*e*PN	Pn	04 30 10.6	+0.9		
LADK	**Ladik-KONYA**	**3.57**	**306**	Pn	Pn	04 30 10.6	+0.9		
LADK	**Ladik-KONYA**	**3.57**	**306**	*e*Pn	Pn	04 30 10.6	+0.9		
KAMT	**Kaman**	**3.71**	**331**	*e*PN	Pn	04 30 12.9	+1.3		
KAMT	**Kaman**	**3.71**	**331**	Pn	Pn	04 30 12.9	+1.3		
KAMT	**Kaman**	**3.71**	**331**	*e*Pn	Pn	04 30 12.9	+1.3		
DIY	**Diyarbakir**	**3.80**	**61**	*e*PN	Pn	04 30 13.5	+0.7		
DIY	**Diyarbakir**	**3.80**	**61**	Pn	Pn	04 30 13.5	+0.7		
DIY	**Diyarbakir**	**3.80**	**61**	*e*Pn	Pn	04 30 13.5	+0.7		
PTK	**Pertek**	**3.84**	**43**	*e*PN	Pn	04 30 14.4	+0.9		
PTK	**Pertek**	**3.84**	**43**	Pn	Pn	04 30 14.7	+1.2		
PTK	**Pertek**	**3.84**	**43**	*e*Pn	Pn	04 30 14.4	+0.9		
SVSK	**Karacayir**	**3.86**	**11**	*e*PN	Pn	04 30 14.9	+1.5		
SVSK	**Karacayir**	**3.86**	**11**	Pn	Pn	04 30 14.9	+1.5		
SVSK	**Karacayir**	**3.86**	**11**	*e*Pn	Pn	04 30 14.9	+1.5		
ILIC	**ilic-Erzincan**	**3.88**	**31**	*e*PN	Pn	04 30 15.2	+1.2		
ILIC	**ilic-Erzincan**	**3.88**	**31**	*e*Pn	Pn	04 30 15.2	+1.2		
ASF	**Jabal al Asfar**	**4.02**	**169**	Pn	Pn	04 30 17.0	+1.2		
ASF				Lg	Lg	04 31 18.6			
ASF	**Jabal al Asfar**	**4.02**	**169**	Pn	Pn	04 30 17.0	+1.2		
	comp=Z,6.4nm,0.3s,baz=233,slow=5.0,SNR=40								
ASF				Lg	Lg	04 31 18.6			
	comp=Z,36nm,0.3s,baz=14,slow=22,SNR=8.9								
AFSR	**Af˙ar-Bala (A**	**4.05**	**326**	*e*PN	Pn	04 30 17.6	+1.4		
AFSR	**Af˙ar-Bala (A**	**4.05**	**326**	*e*Pn	Pn	04 30 17.6	+1.4		
BR131	**Keskin Array S**	**4.05**	**333**	*e*PN	Pn	04 30 17.8	+1.5		
BR131	**Keskin Array S**	**4.05**	**333**	*e*Pn	Pn	04 30 17.8	+1.5		
BRTR	**Keskin Array B**	**4.05**	**333**	Pn	Pn	04 30 17.8	+1.5		
BRTR				Sn	Sn	04 30 57.8	-5.6		
BRTR				Lg	Lg	04 31 20.9			
BRTR	**Keskin Array B**	**4.05**	**333**	Pn	Pn	04 30 17.8	+1.5		
	comp=Z,4.0nm,0.3s,baz=168,slow=15,SNR=91								
BRTR				Pg	Pb	04 30 26.6	+0.6		
	comp=Z,11nm,0.3s,baz=159,slow=17,SNR=30								
BRTR				Sn	Sn	04 30 57.8	-5.6		
	comp=Z,9.3nm,0.3s,baz=282,slow=25,SNR=5.7								
BRTR				Lg	Lg	04 31 20.9			
	comp=Z,8.7nm,0.3s,baz=150,slow=26,SNR=2.8								
BRTR	**Keskin Array B**	**4.05**	**333**	P	Pn	04 30 17.8	+1.5		
	comp=Z,11nm,0.3s								
BRTR				Sn	Sn	04 30 57.8	-5.6		
CORM	**Corum**	**4.18**	**345**	*e*PN	Pn	04 30 20.1	+1.9		
CORM	**Corum**	**4.18**	**345**	Pn	Pn	04 30 20.1	+1.9		
CORM	**Corum**	**4.18**	**345**	*e*Pn	Pn	04 30 20.1	+1.9		
TOKT	**Tokat**	**4.20**	**6**	*e*PN	Pn	04 30 19.3	+1.0		
TOKT	**Tokat**	**4.20**	**6**	Pn	Pn	04 30 19.3	+1.0		
TOKT	**Tokat**	**4.20**	**6**	*e*Pn	Pn	04 30 19.3	+1.0		
KIZT	**Kizilcal**	**4.28**	**311**	*e*PN	Pn	04 30 20.7	+1.2		
KIZT	**Kizilcal**	**4.28**	**311**	Pn	Pn	04 30 20.7	+1.2		
KIZT	**Kizilcal**	**4.28**	**311**	*e*Pn	Pn	04 30 20.7	+1.2		
RSDY	**Resadiye-TOKAT**	**4.38**	**13**	*e*PN	Pn	04 30 22.5	+1.8		
RSDY	**Resadiye-TOKAT**	**4.38**	**13**	Pn	Pn	04 30 22.5	+1.8		
RSDY	**Resadiye-TOKAT**	**4.38**	**13**	*e*Pn	Pn	04 30 22.5	+1.8		
ANTB	**Antalya**	**4.39**	**282**	*e*PN	Pn	04 30 21.3	+0.5		
ANTB	**Antalya**	**4.39**	**282**	*e*Pn	Pn	04 30 21.3	+0.5		
BINT	**Bingol**	**4.49**	**51**	*e*Pn	Pn	04 30 26.4	+4.1		
ANTO	**Ankara**	**4.52**	**327**	*e*PN	Pn	04 30 24.1	+1.5		
ANTO	**Ankara**	**4.52**	**327**	*e*P	Pn	04 30 24.9	+2.3		
ANTO	**Ankara**	**4.52**	**327**	*e*Pn	Pn	04 30 24.9	+2.3		
ANTO				eS	Sg	04 31 42.1	+2.2		
ANTO	**Ankara**	**4.52**	**327**	*e*Pn	Pn	04 30 24.1	+1.5		
ANTO	**Ankara**	**4.52**	**327**	*e*P	Pn	04 30 24.9	+2.3		
ANTO				eS	Sg	04 31 42.1	+2.2		
LOD	**Lodumlu**	**4.55**	**327**	*e*PN	Pn	04 30 24.5	+1.5		
LOD	**Lodumlu**	**4.55**	**327**	Pn	Pn	04 30 24.5	+1.5		
LOD	**Lodumlu**	**4.55**	**327**	*e*Pn	Pn	04 30 24.5	+1.5		
BCK	**Bucak**	**4.55**	**289**	*e*PN	Pn	04 30 24.5	+1.4		
BCK	**Bucak**	**4.55**	**289**	P	Pn	04 30 24.5	+1.4		
BCK	**Bucak**	**4.55**	**289**	Pn	Pn	04 30 24.5	+1.4		
BCK	**Bucak**	**4.55**	**289**	*e*Pn	Pn	04 30 24.5	+1.4		
BNGB	**Bing¶ll**	**4.67**	**51**	*e*PN	Pn	04 30 26.4	+1.5		
ISP	**Isparta**	**4.71**	**293**	*e*PN	Pn	04 30 26.7	+1.4		
ISP	**Isparta**	**4.71**	**293**	P	Pn	04 30 27.0	+1.6		
ISP	**Isparta**	**4.71**	**293**	*e*P	Pn	04 30 27.2	+1.8		
ISP	**Isparta**	**4.71**	**293**	*e*Pn	Pn	04 30 27.1	+1.8		
ISP	**Isparta**	**4.71**	**293**	*e*Pn	Pn	04 30 26.7	+1.4		
ISP	**Isparta**	**4.71**	**293**	*e*P	Pn	04 30 27.2	+1.8		
BTMT	**Batman**	**4.83**	**63**	*e*PN	Pn	04 30 26.2	-0.8		
BTMT	**Batman**	**4.83**	**63**	*e*Pn	Pn	04 30 26.2	-0.8		
CANT	**Cankiri**	**4.85**	**338**	*e*PN	Pn	04 30 29.0	+1.8		
CANT	**Cankiri**	**4.85**	**338**	*e*Pn	Pn	04 30 29.0	+1.8		
SVRH	**Sivrihisar-ESK**	**4.86**	**314**	*e*PN	Pn	04 30 29.0	+1.6		
SVRH	**Sivrihisar-ESK**	**4.86**	**314**	Pn	Pn	04 30 29.0	+1.6		
SVRH	**Sivrihisar-ESK**	**4.86**	**314**	*e*Pn	Pn	04 30 29.0	+1.6		
KVT	**Kavak**	**4.94**	**0**	*e*PN	Pn	04 30 30.6	+2.1		
KVT	**Kavak**	**4.94**	**0**	P	Pn	04 30 30.6	+2.1		
KVT	**Kavak**	**4.94**	**0**	Pn	Pn	04 30 30.6	+2.1		
KVT	**Kavak**	**4.94**	**0**	*e*Pn	Pn	04 30 30.6	+2.1		
ELL	**Elmali**	**4.96**	**279**	*e*PN	Pn	04 30 30.2	+1.4		
ELL	**Elmali**	**4.96**	**279**	P	Pn	04 30 30.2	+1.4		
ELL	**Elmali**	**4.96**	**279**	Pn	Pn	04 30 30.2	+1.4		
ELL	**Elmali**	**4.96**	**279**	*e*Pn	Pn	04 30 30.2	+1.4		
SHUT	**Suhut-Afyon**	**4.98**	**301**	*e*PN	Pn	04 30 30.6	+1.5		
SHUT	**Suhut-Afyon**	**4.98**	**301**	*e*Pn	Pn	04 30 30.6	+1.5		
GUMT	**Gumushane**	**5.11**	**31**	*e*PN	Pn	04 30 32.6	+1.8		
GUMT	**Gumushane**	**5.11**	**31**	Pn	Pn	04 30 32.6	+1.8		
GUMT	**Gumushane**	**5.11**	**31**	*e*Pn	Pn	04 30 32.6	+1.8		
TOS	**Tosya**	**5.14**	**343**	*e*PN	Pn	04 30 33.2	+2.0		
TOS	**Tosya**	**5.14**	**343**	Pn	Pn	04 30 33.2	+2.0		
TOS	**Tosya**	**5.14**	**343**	*e*Pn	Pn	04 30 33.2	+2.0		
ESPY	**Espiye-Giresun**	**5.23**	**23**	*e*PN	Pn	04 30 35.0	+2.7		
ESPY	**Espiye-Giresun**	**5.23**	**23**	*e*Pn	Pn	04 30 35.0	+2.7		
GLHS	**Glhisar (BURDU**	**5.34**	**283**	*e*PN	Pn	04 30 35.3	+1.3		
GLHS	**Glhisar (BURDU**	**5.34**	**283**	Pn	Pn	04 30 35.3	+1.3		
GLHS	**Glhisar (BURDU**	**5.34**	**283**	*e*Pn	Pn	04 30 35.3	+1.3		
BYBT	**Boyabat**	**5.42**	**350**	*e*PN	Pn	04 30 37.3	+2.4		
BYBT	**Boyabat**	**5.42**	**350**	Pn	Pn	04 30 37.3	+2.4		
BYBT	**Boyabat**	**5.42**	**350**	*e*Pn	Pn	04 30 37.3	+2.4		
RSH		**5.50**	**201**	P	Pn	04 30 35.6	-0.5		
ALT	**Altintas**	**5.52**	**304**	*e*PN	Pn	04 30 38.2	+1.7		
ALT	**Altintas**	**5.52**	**304**	Pn	Pn	04 30 38.2	+1.7		
ALT	**Altintas**	**5.52**	**304**	*e*Pn	Pn	04 30 38.2	+1.7		
DIKM	**Dikmen**	**5.54**	**354**	*e*PN	Pn	04 30 39.1	+2.4		
DIKM	**Dikmen**	**5.54**	**354**	*e*Pn	Pn	04 30 39.1	+2.4		
FETY	**Fethiye**	**5.62**	**277**	*e*PN	Pn	04 30 39.1	+1.4		
FETY	**Fethiye**	**5.62**	**277**	Pn	Pn	04 30 39.1	+1.4		
FETY	**Fethiye**	**5.62**	**277**	*e*Pn	Pn	04 30 39.1	+1.4		
KHL	**Karahalli**	**5.62**	**295**	*e*PN	Pn	04 30 39.5	+1.6		
KHL	**Karahalli**	**5.62**	**295**	Pn	Pn	04 30 39.5	+1.6		
KHL	**Karahalli**	**5.62**	**295**	*e*Pn	Pn	04 30 39.5	+1.6		
EZM	**Erzurum**	**5.66**	**47**	*e*PN	Pn	04 30 40.4	+1.9		
EZM	**Erzurum**	**5.66**	**47**	Pn	Pn	04 30 40.4	+1.9		
SAFT	**Safranbolu**	**5.73**	**334**	*e*PN	Pn	04 30 41.7	+2.5		
SAFT	**Safranbolu**	**5.73**	**334**	Pn	Pn	04 30 41.7	+2.5		
SAFT	**Safranbolu**	**5.73**	**334**	*e*Pn	Pn	04 30 41.7	+2.5		
MDUB	**Mudurnu**	**5.75**	**320**	*e*PN	Pn	04 30 41.9	+2.2		
MDUB	**Mudurnu**	**5.75**	**320**	Pn	Pn	04 30 41.9	+2.2		
MDUB	**Mudurnu**	**5.75**	**320**	*e*Pn	Pn	04 30 41.9	+2.2		
DENT	**Denizli**	**5.82**	**288**	*e*PN	Pn	04 30 42.3	+1.7		
DENT	**Denizli**	**5.82**	**288**	Pn	Pn	04 30 42.3	+1.7		
DENT	**Denizli**	**5.82**	**288**	*e*Pn	Pn	04 30 42.3	+1.7		
AMAG	**Maghara**	**5.96**	**204**	P	Pn	04 30 41.8	-0.6		
	baz=199								
AMAG	**Maghara**	**5.96**	**204**	P	Pn	04 30 41.8	-0.6		
DALY	**Dalyan (Mu¨la**	**5.97**	**279**	*e*PN	Pn	04 30 44.4	+1.8		
DALY	**Dalyan (Mu¨la**	**5.97**	**279**	*e*Pn	Pn	04 30 44.4	+1.8		
GULT	**Gulveren**	**6.09**	**316**	*e*PN	Pn	04 30 46.3	+2

IHRS Heris 9.06 73 eP Pn 04 31 25.9 +0.7
GUDG Gudauri 9.11 43 P Pn 04 31 28.2 +2.4
HHRG Al Ghardaqah 9.13 194 P Pn 04 31 26.8 +0.9
baz=191
HHRG Al Ghardaqah 9.13 194 P Pn 04 31 26.8 +0.9
ALN Alexandroupoli 9.15 304 P Pn 04 31 28.9 +2.8
ALN Alexandroupoli 9.15 304 P Pn 04 31 28.9 +2.8
EDRB Edirne 9.20 311 ePN Pn 04 31 28.4 +1.6
EDRB Edirne 9.20 311 P Pn 04 31 28.6 +1.8
EDRB Edirne 9.20 311 Pn Pn 04 31 28.8 +1.9
EDRB Edirne 9.20 311 P Pn 04 31 28.6 +1.8
KBZ Khabaz 9.24 33 P Pn 04 31 35.6 +8.2
KBZ MLR MLR
comp=Z,279nm,21.3s
KBZ Khabaz 9.24 33 Pn Pn 04 31 35.6 +8.2
KBZ Khabaz 9.24 33 Pn Pn 04 31 35.6 +8.2
comp=Z,0.2nm,0.3s,baz=219,slow=8.4,SNR=4.6
KBZ LR LR 04 35 32.3
comp=Z,279nm,21.2s,baz=215,slow=41
KBZ Khabaz 9.24 33 Pn Pn 04 31 35.6 +8.2
KIV Kislovodsk 9.33 31 eP Pn 04 31 29.8 +1.0
KIV pmax pmax
comp=Z,9.0nm,1.1s
KIV Kislovodsk 9.33 31 eP Pn 04 31 29.8 +1.0
comp=Z,9.0nm,1.1s
LIA Limnos Island 9.34 297 P Pn 04 31 30.4 +1.7
LIA Limnos Island 9.34 297 P Pn 04 31 30.4 +1.7
ISRB Sarab 9.47 76 eP Pn 04 31 31.9 +1.1
ISRB Sarab 9.47 76 eP Pn 04 31 31.9 +1.1
IKOM Komasi 9.61 98 eP Pn 04 31 27.5 -5.2
AWBH 9.84 220 P Pn 04 31 33.7 -2.0
baz=217
AWBH 9.84 220 P Pn 04 31 33.7 -2.0
KDZ Kurdzhali 9.93 307 iP Pn 04 31 39.6 +2.8
KDZ Kurdzhali 9.93 307 iP Pn 04 31 39.6 +2.8
TIRR Tirgusor 10.14 327 ⇑P Pn 04 31 40.9 +1.2
TIRR Tirgusor 10.14 327 ePn Pn 04 31 45.4 +5.7
TIRR Tirgusor 10.14 327 ⇑P Pn 04 31 40.9 +1.2
TIRR Tirgusor 10.14 327 P Pn 04 31 40.9 +1.2
TIRR Tirgusor 10.14 327 ePn Pn 04 31 45.4 +5.7
OUR Ouranopolis 10.35 298 P Pn 04 31 45.1 +2.5
OUR Ouranopolis 10.35 298 P Pn 04 31 45.1 +2.5
SZH Strazhica 10.54 316 iP Pn 04 31 48.2 +3.1
SZH Strazhica 10.54 316 iP Pn 04 31 48.2 +3.1
LTK Loutraki 10.60 284 P Pn 04 31 46.4 +0.4
LTK Loutraki 10.60 284 P Pn 04 31 46.4 +0.4
PLD Plovdiv 10.62 308 P Pn 04 31 48.7 +2.5
PLD Plovdiv 10.62 308 iP Pn 04 31 48.7 +2.5
PLD Plovdiv 10.62 308 iP Pn 04 31 48.7 +2.5
PLG Polygyros 10.75 297 P Pn 04 31 50.9 +2.7
PLG Polygyros 10.75 297 P Pn 04 31 50.9 +2.7
NVR Nevrokopi 10.83 302 P Pn 04 31 52.1 +3.0
NVR Nevrokopi 10.83 302 P Pn 04 31 52.1 +3.0
CFR Carcaliu 10.83 329 ⇑P Pn 04 31 52.0 +2.8
CFR Carcaliu 10.83 329 ⇑iP Pn 04 31 52.0 +2.8
CFR Carcaliu 10.83 329 P Pn 04 31 52.0 +2.8
SRS Serrai 10.92 301 P Pn 04 31 51.1 +0.7
SRS Serrai 10.92 301 P Pn 04 31 51.1 +0.7
MMB Musomiste 11.02 303 iP Pn 04 31 54.7 +2.9
MMB Musomiste 11.02 303 iP Pn 04 31 54.7 +2.9
DYR Agios Nikonas 11.04 277 P Pn 04 31 53.2 +1.1
DYR Agios Nikonas 11.04 277 P Pn 04 31 53.2 +1.1
HORT Hortiatis 11.08 298 P Pn 04 31 56.0 +3.4
HORT Hortiatis 11.08 298 P Pn 04 31 56.0 +3.4
GUR Goura 11.08 283 P Pn 04 31 52.4 -0.3
GUR Goura 11.08 283 P Pn 04 31 52.4 -0.3
HFRF Wahat Farafira 11.10 218 P Pn 04 31 50.7 -2.2
baz=216
MAK Makhachkala 11.18 49 eP Pn 04 31 57.1 +3.2
MAK eS Sn 04 34 01.2 +2.7
MAK pmax pmax
comp=Z,191nm,1.2s
MAK MLR MLR
comp=Z,2μm,16.0s
MAK Makhachkala 11.18 49 eP Pn 04 31 57.1 +3.2
comp=Z,191nm,1.2s
MAK eS Sn 04 34 01.2 +2.7
comp=Z,2μm,16.0s
PGB Panagyurishte 11.19 309 eP Pn 04 31 57.1 +3.0
PGB Panagyurishte 11.19 309 eP Pn 04 31 57.1 +3.0
SWA2 11.23 235 P Pn 04 31 51.1 -3.6
baz=233
KALE Kalithea 11.29 286 P Pn 04 31 58.4 +2.9
KALE Kalithea 11.29 286 P Pn 04 31 58.4 +2.9
TRIZ Trizonia 11.34 285 P Pn 04 31 57.6 +1.5
TRIZ Trizonia 11.34 285 P Pn 04 31 57.6 +1.5
ITM Ithomi 11.37 279 P Pn 04 31 57.1 +0.5
ITM Ithomi 11.37 279 P Pn 04 31 57.1 +0.5
LAKA Lakka 11.40 285 P Pn 04 31 59.5 +2.5
LAKA Lakka 11.40 285 P Pn 04 31 59.5 +2.5
KNT Kendrikon 11.42 300 P Pn 04 32 00.1 +2.9
KNT Kendrikon 11.42 300 P Pn 04 32 00.1 +2.9
ISR Istrita 11.50 324 ⇓P Pn 04 32 01.1 +2.8
ISR Istrita 11.50 324 ⇓iP Pn 04 32 01.1 +2.8
ISR Istrita 11.50 324 P Pn 04 32 01.1 +2.8
KKB Krupnik 11.57 304 iP Pn 04 32 02.0 +2.6
KKB Krupnik 11.57 304 iP Pn 04 32 02.0 +2.6
THL Klokotos Trika 11.59 291 P Pn 04 32 02.5 +3.0
THL Klokotos Trika 11.59 291 P Pn 04 32 02.5 +3.0
EVR Evrytania 11.62 288 P Pn 04 32 02.0 +1.9
EVR Evrytania 11.62 288 P Pn 04 32 02.0 +1.9
VAY Valandovo 11.71 300 eP Pn 04 32 03.9 +2.8
VTS Vitosha 11.82 307 ⇑P Pn 04 32 06.3 +3.4
VTS Vitosha 11.82 307 iP Pn 04 32 05.7 +2.8
VTS Vitosha 11.82 307 ⇑iP Pn 04 32 06.3 +3.4
VTS Vitosha 11.82 307 P Pn 04 32 06.3 +3.4
HUMR Humele 11.88 318 ⇑iP Pn 04 32 09.5 +6.0
VRI Vrincioaia 11.98 327 ⇑P Pn 04 32 07.0 +2.1
VRI Vrincioaia 11.98 327 ⇑iP Pn 04 32 07.0 +2.1
VRI Vrincioaia 11.98 327 P Pn 04 32 07.0 +2.1
PLOR Plostina 12.01 327 ⇓P Pn 04 32 08.1 +2.8
PLOR Plostina 12.01 327 ⇓iP Pn 04 32 08.1 +2.8
PLOR Plostina 12.01 327 P Pn 04 32 08.1 +2.8
MLR Muntele Rosu 12.06 324 Pn P 04 32 12.4 -6.5
MLR Muntele Rosu 12.06 324 ⇑iP Pn 04 32 12.0 +5.9
MLR Muntele Rosu 12.06 324 Pn P 04 32 12.4 -6.5
comp=Z,0.1nm,0.3s,baz=142,slow=12,SNR=6.7
MLR Muntele Rosu 12.06 324 Pn P 04 32 12.4 -6.5
KIS Kishinev 12.11 336 eP Pn 04 32 09.0 +2.3
KIS pmax pmax
comp=Z,180nm,1.2s
KIS MLR MLR
comp=N,200nm,12.0s
KIS MLR MLR
comp=Z,500nm,12.0s
KIS MLR MLR
comp=Z,400nm,12.0s
KIS Kishinev 12.11 336 eP Pn 04 32 09.0 +2.3
KIS XM 04 32 13.0
comp=Z,200nm,1.2s
KIS eRg Rg 04 36 40.0
KIS Kishinev 12.11 336 ePcP PcP 04 37 54.0 +3.5
KIS eL L 04 38 32.0
KIS LRM MLR 04 39 40.0
comp=Z,400nm,12.0s
KIS Kishinev 12.11 336 eP Pn 04 32 09.0 +2.3
comp=Z,400nm,12.0s
KIS Kishinev 12.11 336 ePcP PcP 04 37 54.0 +3.5
VOIR 12.46 322 ⇑P Pn 04 32 14.5 +3.0
VOIR 12.46 322 ⇑iP Pn 04 32 14.5 +3.0
VOIR 12.46 322 P Pn 04 32 14.5 +3.0
BIA Bitola 12.49 297 eP Pn 04 32 13.9 +2.1
LKD2 Lefkada island 12.49 287 P Pn 04 32 13.2 +1.3
LKD2 Lefkada island 12.49 287 P Pn 04 32 13.2 +1.3
ARR Arges 12.62 320 ⇑iP Pn 04 32 16.2 +2.5
DOPR Dopca 12.67 324 ⇓iP Pn 04 32 19.4 +5.0
SKO Skopje 12.74 302 eP Pn 04 32 19.8 +4.5
PHP Peshkopia 13.33 299 P Pn 04 32 25.3 +1.9
PHP Peshkopia 13.33 299 P Pn 04 32 25.3 +1.9
SELS Selova 13.47 306 ePn Pn 04 32 28.4 +3.1
TIR Tirane 13.64 297 eP Pn 04 32 30.5 +3.0
TIR Tirane 13.64 297 ePn Pn 04 32 30.5 +3.0
TIR Tirane 13.64 297 eP Pn 04 32 30.5 +3.0
BUR08 Bucovina Ar. S 14.03 328 ePn Pn 04 32 35.0 +2.1
BUR08 Bucovina Ar. S 14.03 328 ePn Pn 04 32 35.0 +2.1
GRUS Gruza 14.04 308 ePn Pn 04 32 35.6 +2.6
DRGR 14.57 321 ⇑P P 04 32 46.4 -0.4
DRGR 14.57 321 ⇑iP P 04 32 46.4 -0.4
DRGR 14.57 321 P P 04 32 46.4 -0.4
DIVS Divibare 14.60 308 ePn Pn 04 32 43.4 +2.6
VORD Divnogorie 15.02 8 eP P 04 32 51.0 -0.6
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD pmax pmax
comp=Z,9.0nm,0.6s
VORD Divnogorie 15.02 8 eP P 04 32 51.0 -0.6
ISAD Sadrabad 15.24 101 eP Pn 04 32 50.9 +1.3
VSR Storozhevoye 15.25 8 eP P 04 32 52.3 -1.8
VSR pmax pmax
comp=N,40nm,1.0s
VSR pmax pmax
comp=Z,20nm,1.0s
VSR pmax pmax
comp=E,6.0nm,0.5s
AK02 Malin Array Si 15.33 343 ePn Pn 04 32 50.2 -0.2
AK02 Malin Array Si 15.33 343 ePn Pn 04 32 50.2 -0.2
AK01 Malin Array Si 15.36 343 ePn Pn 04 32 51.7 +0.9
AK01 Malin Array Si 15.36 343 ePn Pn 04 32 51.7 +0.9
KIEV Kiev 15.36 343 eP Pn 04 32 50.8 0.0
KIEV pmax pmax
comp=Z,48nm,0.9s
KIEV Kiev 15.36 343 ePn Pn 04 32 50.8 0.0
comp=Z,48nm,0.9s
KIEV Kiev 15.36 343 ePn Pn 04 32 50.8 0.0
comp=Z,48nm,0.9s
AKASG Malin Array Be 15.37 344 P Pn 04 32 49.5 -1.4
AKASG pmax pmax
comp=Z,6.0nm,0.3s
AKASG Malin Array Be 15.37 344 Pn Pn 04 32 49.5 -1.4
AKASG Malin Array Be 15.37 344 Pn Pn 04 32 49.5 -1.4
comp=Z,5.5nm,0.3s,baz=161,slow=12,SNR=14
AKASG Malin Array Be 15.37 344 Pn Pn 04 32 49.5 -1.4
TIP Timpagrande 15.55 287 ePn Pn 04 32 49.9 -3.6
comp=Z,50nm,0.7s
TIP Timpagrande 15.55 287 ePn Pn 04 32 49.9 -3.6
comp=Z,50nm,0.7s
TRPA Tarpa 15.58 324 ⇓iP P 04 32 59.0 +1.1
TRPA Tarpa 15.58 324 ⇓ePn P 04 32 58.1 +0.2
ICHK Chekchek 15.70 99 eP P 04 33 01.0 +1.4
ICHK Chekchek 15.70 99 eP P 04 33 01.0 +1.4
IMEH Mehriz 16.17 102 eP Pn 04 32 58.9 -2.7
CEL Celeste 16.18 284 ePn Pn 04 33 01.1 -0.4
comp=Z,46nm,1.0s
CEL Celeste 16.18 284 ePn Pn 04 33 01.1 -0.4
comp=Z,46nm,1.0s
LVV L'vov 16.22 331 eP P 04 33 04.3 -0.7
LVV L'vov 16.22 331 eP P 04 33 04.3 -0.7
CUC Castrocucco 16.37 290 ePn Pn 04 33 03.1 -0.8
comp=Z,57nm,0.9s
CUC Castrocucco 16.37 290 ePn Pn 04 33 03.1 -0.8
comp=Z,57nm,0.9s
PKSM Moragy 16.48 313 ⇑ePn P 04 33 08.0 +0.2
KWP Kalwaria Pacla 16.61 328 ⇓P Pn 04 33 07.4 +0.5
KWP Kalwaria Pacla 16.61 328 ePn Pn 04 33 07.5 +0.6
comp=Z,36nm,1.0s
KWP Kalwaria Pacla 16.61 328 ⇓iP Pn 04 33 07.4 +0.5
KWP Kalwaria Pacla 16.61 328 eP Pn 04 33 07.0 +0.1
KWP Kalwaria Pacla 16.61 328 ePn Pn 04 33 07.6 +0.6
comp=Z,36nm,1.0s
PSZ Piszkesteto 16.76 320 eP P 04 33 11.1 +0.1
PSZ pmax pmax
comp=Z,33nm,1.3s
PSZ Piszkesteto 16.76 320 ePn P 04 33 11.1 +0.1
comp=Z,33nm,1.3s
PSZ Piszkesteto 16.76 320 ⇓ePn Pn 04 33 09.3 +0.4
PSZ ⇑ePn P 04 33 11.8 +0.8
PSZ Piszkesteto 16.76 320 eP P 04 33 11.1 +0.1
comp=Z,33nm,1.3s
IBAF Bafgh 16.85 100 eP Pn 04 33 10.7 +0.4
IBAF Bafgh 16.85 100 eP Pn 04 33 10.7 +0.4
BUD Budapest 16.96 317 ⇑ePn P 04 33 17.8 +4.6
NIE Niedzica 17.54 324 eP P 04 33 26.9 +7.3
NIE Niedzica 17.54 324 eP P 04 33 26.9 +7.3
VYHS Vyhne 17.67 320 eP P 04 33 21.9 +0.8
VYHS Vyhne 17.67 320 eP P 04 33 21.9 +0.8
VYHS e 04 33 28.9
VYHS Vyhne 17.67 320 eP P 04 33 21.9 +0.8
BEHE Becsehely 17.72 312 ⇓ePn P 04 33 21.4 -0.2
OJC Ojcow 18.33 325 eP Pn 04 33 27.7 -0.6
OJC Ojcow 18.33 325 ePn P 04 33 32.3 +4.0
OJC Ojcow 18.33 325 eP Pn 04 33 27.7 -0.6
OJC Ojcow 18.33 325 eP Pn 04 33 27.7 -0.6
OJC Ojcow 18.33 325 ePn P 04 33 32.3 +4.0
ZST Bratislava 18.43 317 eP Pn 04 33 33.5 +4.0
ZST Bratislava 18.43 317 epP Pn 04 33 33.5 +4.0
ZST Bratislava 18.43 317 eP Pn 04 33 33.5 +4.0
SOP Sopron 18.46 315 ⇑eP Pn 04 33 30.7 +0.8
AQU L'Aquila 18.56 296 ePn Pn 04 33 32.4 +1.2
AQU L'Aquila 18.56 296 eP Pn 04 33 32.4 +1.2
ARSA Arzberg 18.85 312 ⇓iPP Pn 04 33 35.1 +0.4
comp=Z,17nm,1.0s
ARSA Arzberg 18.85 312 P Pn 04 33 35.1 +0.4
comp=Z,17nm,1.0s
OBN Obninsk 18.99 1 eP Pn 04 33 36.0 -0.2
OBN pmax pmax
comp=Z,20nm,1.0s
OBN MLR MLR
comp=Z,100nm,20.0s
OBN Obninsk 18.99 1 eP Pn 04 33 36.0 -0.2
comp=Z,100nm,20.0s
CONA Conrad Observa 18.99 315 ⇑iPP Pn 04 33 37.2 +0.8
comp=Z,8.2nm,1.1s
CONA Conrad Observa 18.99 315 P Pn 04 33 37.2 +0.8
comp=Z,8.2nm,1.1s
OBKA Obir 19.11 309 ⇑epP Pn 04 33 37.4 -0.5
comp=Z,38nm,1.4s
OBKA Obir 19.11 309 P Pn 04 33 37.4 -0.5
comp=Z,38nm,1.4s
MORC Moravsky Berou 19.13 321 eP P 04 33 36.8 -0.4
MORC pmax pmax
comp=Z,4.0nm,0.9s
MORC Moravsky Berou 19.13 321 eP P 04 33 36.8 -0.4
comp=Z,4.4nm,0.9s
MORC Moravsky Berou 19.13 321 eP P 04 33 36.8 -0.4
comp=Z,4.4nm,0.9s
VRAC Vranov 19.34 319 P P 04 33 39.6 +0.1
VRAC Vranov 19.34 319 P P 04 33 39.6 +0.1
comp=Z,0.3nm,0.3s,baz=136,slow=10.0,SNR=2.7
VRAC Vranov 19.34 319 P P 04 33 39.6 +0.1
VRAC Vranov 19.34 319 ePn Pn 04 33 40.4 -0.2
MOS Moscow 19.64 3 eP P 04 33 40.3 -2.3
MOS pmax pmax
comp=Z,87nm,1.0s
MOS pmax pmax
comp=Z,100nm,1.2s
MYKA Terra Mystica 19.73 309 ⇑iPP P 04 33 44.2 +0.4
comp=Z,43nm,0.9s
MYKA Terra Mystica 19.73 309 P P 04 33 44.2 +0.4
comp=Z,43nm,0.9s
NACGM Naroch 19.82 344 e P 04 33 42.0 -2.6
MOA Molln 19.89 313 ⇓iPn P 04 33 45.6 +0.2
comp=Z,51nm,1.2s,SNR=11
MOA Molln 19.89 313 P P 04 33 45.6 +0.2
comp=Z,51nm,1.2s,SNR=11
SUW Suwalki 19.99 337 eP Pn 04 33 47.6 -0.6
SUW Suwalki 19.99 337 eP Pn 04 33 47.5 -0.6
SUW Suwalki 19.99 337 eP Pn 04 33 47.6 -0.6
KBA Koelnbreinsper 20.10 310 ⇑ePn P 04 33 47.9 0.0
comp=Z,34nm,1.0s
KBA Koelnbreinsper 20.10 310 P P 04 33 47.9 0.0
comp=Z,34nm,1.0s
KSP Ksiaz 20.43 322 ⇑eP P 04 33 50.7 -0.5
KSP Ksiaz 20.43 322 eP P 04 33 50.9 -0.3
KSP Ksiaz 20.43 322 ⇑eP P 04 33 50.7 -0.5
ABTA Abfaltersbach 20.49 306 ⇓iP Pn 04 33 55.2 +0.9
comp=Z,42nm,1.0s,SNR=9.4
ABTA Abfaltersbach 20.49 308 P Pn 04 33 55.2 +0.9
comp=Z,42nm,1.0s,SNR=9.4
GEC2 GERESS Array S 20.70 315 eP P 04 33 54.1 -0.2
comp=Z,44nm,1.3s
GEC2 GERESS Array S 20.70 315 eP P 04 33 54.1 -0.2
GEC2 pmax pmax
comp=Z,44nm,1.3s
GEC2 GERESS Array S 20.70 315 eP P 04 33 53.5 -0.8
comp=Z,4μm,0.7s
GEC2 GERESS Array S 20.70 315 eP P 04 33 53.5 -0.8
comp=Z,4μm,0.7s
GERES GERESS Array B 20.70 315 P P 04 33 53.7 -0.6
GERES GERESS Array B 20.70 315 P P 04 33 53.7 -0.6
comp=Z,7.2nm,0.7s,baz=117,slow=11,SNR=36
GERES GERESS Array B 20.70 315 P P 04 33 53.7 -0.6
comp=Z,7.0nm,0.7s
RJOB Jochberg 20.72 311 eP P 04 33 53.7 -0.8
comp=Z,27nm,0.9s
PRU Pruhonice 20.83 318 eP Pn 04 34 00.4 +2.3
PRU Pruhonice 20.83 318 eP Pn 04 34 00.4 +2.3
KHC Kasperske Hory 20.91 315 eP P 04 33 55.9 -0.6
KHC pmax pmax
comp=Z,20nm,0.8s
KHC Kasperske Hory 20.91 315 eP P 04 33 55.5 -1.0
KHC epP pP 04 34 04.5 +3.2
KHC Kasperske Hory 20.91 315 eP P 04 33 55.9 -0.6
comp=Z,20nm,0.8s
KHC Kasperske Hory 20.91 315 eP P 04 33 55.9 -0.6
comp=Z,20nm,0.8s
VLC Villacollemand 21.11 300 eP P 04 33 57.2 -1.5
comp=Z,56nm,1.1s
VLC Villacollemand 21.11 300 eP P 04 33 57.2 -1.5
comp=Z,56nm,1.1s
WTTA Wattenberg 21.24 309 ⇑iPn P 04 33 59.9 -0.4
comp=Z,51nm,1.1s,SNR=12
WTTA ⇑isP sP 04 34 02.5 -4.8
comp=Z,51nm,1.1s
WTTA Wattenberg 21.24 309 P P 04 33 59.9 -0.4
comp=Z,51nm,1.1s,SNR=12
WATA Walderalm 21.31 309 ⇓isP sP 04 34 03.1 -4.8
comp=Z,48nm,1.0s
WATA Walderalm 21.31 309 P sP 04 34 03.1 -4.8
comp=Z,48nm,1.0s
WET Wettzell 21.32 315 eP P 04 34 00.2 -0.7
comp=Z,62nm,1.2s
WET Wettzell 21.32 315 eP P 04 34 00.2 -0.7
WET pmax pmax
comp=Z,62nm,1.2s
WET Wettzell 21.32 315 eP P 04 34 00.2 -0.7
comp=Z,62nm,1.2s
AKTK Aktyubinsk 21.36 41 P P 04 34 01.4 +0.2
comp=Z,14nm,0.8s
AKTO Aktyubinsk 21.36 41 P P 04 34 01.4 +0.2
AKTO pmax pmax
comp=Z,14nm,0.8s
AKTO Aktyubinsk 21.36 41 P P 04 34 01.4 +0.2
AKTO Aktyubinsk 21.36 41 P P 04 34 01.4 +0.2
comp=Z,14nm,0.8s,baz=250,slow=12,SNR=24
AKTO Aktyubinsk 21.36 41 P P 04 34 01.4 +0.2
KEST Kesra 21.58 277 eP P 04 34 04.7 +0.8
KEST Kesra 21.58 277 P P 04 34 04.7 +0.8
comp=Z,17nm,0.9s,baz=28,slow=0.6,SNR=13
KEST Kesra 21.58 277 eP P 04 34 04.7 +0.8
MOTA Moosalm 21.61 309 ⇑iPP P 04 34 05.3 +1.1
comp=Z,22nm,0.8s,SNR=9.5
MOTA Moosalm 21.61 309 P P 04 34 05.3 +1.1
comp=Z,22nm,0.8s,SNR=9.5
BRG Berggiesshubel 21.64 320 eP P 04 34 04.4 +0.1
comp=Z,13nm,0.9s
BRG e 04 34 14.0
comp=Z,18nm,1.0s
BRG Berggiesshubel 21.64 320 eP P 04 34 03.9 -0.4
comp=Z,13nm,0.9s
BRG Berggiesshubel 21.64 320 eP P 04 34 04.4 +0.1
BRG pmax pmax
comp=Z,13nm,0.9s
BRG pmax pmax
comp=Z,18nm,1.0s
BRG Berggiesshubel 21.64 320 eP P 04 34 04.4 +0.1
comp=Z,18nm,1.0s
FETA Feichten 21.73 308 ⇓isP sP 04 34 07.9 -4.6
comp=Z,26nm,0.9s,SNR=9.6
FETA Feichten 21.73 308 P sP 04 34 07.9 -4.6
comp=Z,26nm,0.9s,SNR=9.6
PGF Pioggiola 21.80 295 eP P 04 34 04.4 -1.8
comp=Z,150nm,1.1s
PGF Pioggiola 21.80 295 eP P 04 34 04.4 -1.8
PGF pmax pmax
comp=Z,151nm,1.1s
PGF Pioggiola 21.80 295 eP P 04 34 04.4 -1.8
comp=Z,150nm,1.1s
PGF Pioggiola 21.80 295 eP P 04 34 04.4 -1.8
comp=Z,75nm,1.1s
AB31 Akbulak array 21.82 46 iP P 04 34 05.9 -0.4
AB31 pmax pmax
comp=Z,6.0nm,0.7s
AB31 Akbulak array 21.82 46 iP P 04 34 05.9 -0.4
comp=Z,6.0nm,0.7s
ABKAR Akbulak array 21.82 46 eP P 04 34 06.4 +0.1
ABKAR Akbulak array 21.82 46 eP P 04 34 06.4 +0.1
RETA Reutte 21.88 309 ⇓iP P 04 34 05.1 -1.9
comp=Z,25nm,1.0s
ROTZ Rotzenmuhle 22.00 316 eP P 04 34 07.4 -0.8
comp=Z,29nm,1.0s
MANZ Manzenberg 22.17 316 eP P 04 34 09.1 -0.9
comp=Z,17nm,1.0s
WERN Wernitzgrien 22.17 317 eP P 04 34 09.2 -0.8
comp=Z,26nm,1.3s
TANN Tannenbergstha 22.19 317 eP P 04 34 09.6 -0.6
comp=Z,24nm,1.0s
DAVOX Davos/Dischmat 22.19 307 P P 04 34 07.8 -2.6
DAVOX Davos/Dischmat 22.19 307 P P 04 34 07.8 -2.6
comp=Z,2.2nm,0.4s,baz=96,slow=9.2,SNR=3.8
GUNZ Gunzen 22.23 317 eP P 04 34 10.0 -0.7
comp=Z,30nm,0.9s
WERD Werda 22.29 317 eP P 04 34 10.4 -0.9
comp=Z,72nm,2.7s
DAVA Damuels 22.36 308 ⇑iP P 04 34 10.5 -1.8
comp=Z,24nm,0.9s,SNR=9.7
CLL Collm 22.38 320 eP P 04 34 12.1 -0.1
comp=Z,14nm,1.0s
CLL Collm 22.38 320 ⇓iP P 04 34 12.1 -0.1
CLL i 04 34 16.3
CLL pmax pmax
comp=Z,12nm,1.0s
CLL Collm 22.38 320 ⇓iP P 04 34 12.1 -0.1
comp=Z,12nm,1.0s
CLL iPP pP 04 34 16.3 -0.7
CLL e 04 34 20.0
CLL Collm 22.38 320 iP P 04 34 12.1 -0.1
comp=Z,12nm,1.0s
PLN Plauen 22.39 317 eP P 04 34 11.6 -0.7
comp=Z,116nm,0.9s
TUE Stuetta 22.44 306 eP P 04 34 13.6 +0.4
comp=Z,14nm,0.9s
TUE Stuetta 22.44 306 eP P 04 34 13.6 +0.4
comp=Z,14nm,0.9s
GRA1 Grafenberg Arr 22.53 315 eP P 04 34 13.1 -0.8
comp=Z,23nm,1.2s
GRF Grafenberg Arr 22.53 315 eP P 04 34 13.1 -0.8
comp=Z,23nm,1.2s
GRF Grafenberg Arr 22.53 315 eP P 04 34 13.1 -0.8
GRF pmax pmax
comp=Z,23nm,1.2s
MOX Moxa 22.77 317 eP P 04 34 15.9 -0.5
comp=Z,20nm,0.9s
MOX Moxa 22.77 317 eP P 04 34 15.9 -0.5
MOX pmax pmax
comp=Z,20nm,0.9s
MOX Moxa 22.77 317 eP P 04 34 15.9 -0.5
comp=Z,20nm,0.9s
CMAH Djebel Manchou 23.00 280 P P 04 34 22.0 +3.0
CMAH Djebel Manchou 23.00 280 P P 04 34 22.0 +3.0
ABSA Djebel Ababsia 23.00 279 P P 04 34 23.0 +4.0
ABSA Djebel Ababsia 23.00 279 P P 04 34 23.0 +4.0
SAOF Saorge 23.07 299 eP P 04 34 22.6 +3.0
SAOF Saorge 23.07 299 eP P 04 34 22.6 +3.0
SBF Sospel 23.14 298 eP P 04 34 19.6 -0.7
comp=Z,126nm,0.9s
SBF Sospel 23.14 298 eP P 04 34 19.6 -0.7
SBF pmax pmax
comp=Z,126nm,0.9s
SBF Sospel 23.14 298 eP P 04 34 19.6 -0.7
comp=Z,126nm,0.9s
SBF Sospel 23.14 298 eP P 04 34 19.6 -0.7
comp=Z,63nm,0.9s
REVF Revere 23.16 298 eP P 04 34 19.1 -1.5
REVF Revere 23.16 298 eP P 04 34 19.1 -1.5
VSU Vasula 23.17 348 eP P 04 34 20.7 +0.4
VSU pmax pmax
comp=Z,11nm,1.2s
TOUF Mont Tournerai 23.30 299 eP P 04 34 22.3 +0.2
TOUF Mont Tournerai 23.30 299 eP P 04 34 22.3 +0.2
STU Stuttgart 23.34 311 eP P 04 34 21.2 -1.0
comp=Z,26nm,1.1s
SPAK Spaichingen-Ko 23.34 309 eP P 04 34 21.2 -1.2
SPAK Spaichingen-Ko 23.34 309 eP P 04 34 21.7 -0.7
CAEH 'Ain El Ouahch 23.43 280 P P 04 34 27.0 +3.7
CAEH 'Ain El Ouahch 23.43 280 P P 04 34 27.0 +3.7
CALN Calern 23.51 298 eP P 04 34 23.0 -1.1
CALN Calern 23.51 298 eP P 04 34 23.0 -1.1
CKFL Kef-Lekhel 23.59 279 P P 04 34 27.5 +2.6
CKFL Kef-Lekhel 23.59 279 P P 04 34 27.5 +2.6
FRF La Foret Royal 23.65 297 eP P 04 34 24.6 -0.8

comp=Z,162nm,1.0s
FRF La Foret Royal 23.65 297 *e*P P 04 34 24.6 -0.8
FRF pmax pmax
comp=Z,162nm,1.0s
FRF La Foret Royal 23.65 297 *e*P P 04 34 24.6 -0.8
comp=Z,162nm,1.0s
FRF La Foret Royal 23.65 297 *e*P P 04 34 24.6 -0.8
comp=Z,81nm,1.0s
SURF Saint Ours 23.69 300 *e*P P 04 34 26.0 +0.1
SURF Saint Ours 23.69 300 *e*P P 04 34 26.0 +0.1
BFO Black Forest 23.71 310 *e*P P 04 34 24.6 -1.3
comp=Z,20nm,1.0s
BFO Black Forest 23.71 310 *e*P P 04 34 24.0 -1.9
BFO pmax pmax
comp=Z,24nm,1.1s
BFO Black Forest 23.71 310 *e*P P 04 34 24.0 -1.9
comp=Z,24nm,1.1s
BFO Black Forest 23.71 310 *e*P P 04 34 24.0 -1.9
comp=Z,24nm,1.1s
LMR La Mourre 23.72 297 *e*P P 04 34 24.7 -1.3
comp=Z,102nm,1.1s
LMR La Mourre 23.72 297 *e*P P 04 34 24.7 -1.3
LMR pmax pmax
comp=Z,102nm,1.1s
LMR La Mourre 23.72 297 *e*P P 04 34 24.7 -1.3
comp=Z,102nm,1.1s
LMR La Mourre 23.72 297 *e*P P 04 34 24.7 -1.3
comp=Z,51nm,1.1s
UBBA Unterbreizbach 23.75 316 *e*P P 04 34 25.2 -0.9
comp=Z,17nm,1.4s
FELD Feldberg im Sc 23.76 308 *e*P P 04 34 25.1 -1.4
MBDF Montbardon 23.76 300 *e*P P 04 34 24.8 -1.8
comp=Z,97nm,0.9s
MBDF Montbardon 23.76 300 *e*P P 04 34 24.8 -1.8
MBDF pmax pmax
comp=Z,97nm,0.9s
MBDF Montbardon 23.76 300 *e*P P 04 34 24.8 -1.8
comp=Z,97nm,0.9s
MBDF Montbardon 23.76 300 *e*P P 04 34 24.8 -1.8
comp=Z,49nm,0.9s
SENIN Lac Senin/Sane 23.77 304 *e*P P 04 34 25.6 -1.1
comp=Z,25nm,0.8s
SENIN Lac Senin/Sane 23.77 304 *e*P P 04 34 25.6 -1.1
comp=Z,25nm,0.8s
CASM Ain Smara 23.79 279 P P 04 34 28.0 +1.2
CASM Ain Smara 23.79 279 P P 04 34 28.0 +1.2
CTEI Djebel Teioual 23.89 279 P P 04 34 33.0 +5.1
CTEI Djebel Teioual 23.89 279 P P 04 34 33.0 +5.1
BNI Bardonecchia 23.89 301 *e*P P 04 34 26.8 -1.0
BNI pmax pmax
comp=Z,32nm,1.0s
BNI Bardonecchia 23.89 301 *e*P P 04 34 26.8 -1.0
comp=Z,32nm,1.0s
BNI Bardonecchia 23.89 301 *e*P P 04 34 26.8 -1.0
comp=Z,32nm,1.0s
TOD Tromm 23.91 313 *e*P P 04 34 26.0 -1.8
TOD Tromm 23.91 313 *e*P P 04 34 26.0 -1.8
TOD Tromm 23.91 313 *e*P P 04 34 26.0 -1.8
LPG La Plagne 23.93 302 *e*P P 04 34 27.1 -1.3
comp=Z,92nm,0.9s
LPG La Plagne 23.93 302 *e*P P 04 34 27.1 -1.3
LPG pmax pmax
comp=Z,92nm,0.9s
LPG La Plagne 23.93 302 *e*P P 04 34 27.1 -1.3
comp=Z,92nm,0.9s
LPG La Plagne 23.93 302 *e*P P 04 34 27.1 -1.3
comp=Z,46nm,0.9s
BBS Basel-Blauen 23.95 307 *e*P P 04 34 26.7 -1.5
LPL La Plagne 23.95 302 *e*P P 04 34 27.2 -1.3
comp=Z,124nm,1.1s
LPL La Plagne 23.95 302 *e*P P 04 34 27.2 -1.3
LPL pmax pmax
comp=Z,124nm,1.1s
LPL La Plagne 23.95 302 *e*P P 04 34 27.2 -1.3
comp=Z,124nm,1.1s
LPL La Plagne 23.95 302 *e*P P 04 34 27.2 -1.3
comp=Z,62nm,1.1s
CLZ Clausthal 24.05 319 *e*P P 04 34 28.1 -1.0
comp=Z,35nm,1.5s
CLZ Clausthal 24.05 319 *e*P P 04 34 28.1 -1.0
CLZ pmax pmax
comp=Z,35nm,1.5s
RSL Roselend 24.06 302 *e*P P 04 34 28.1 -1.3
RSL Roselend 24.06 302 *e*P P 04 34 28.1 -1.3
RSL Roselend 24.06 302 *e*P P 04 34 28.1 -1.3
RSL Roselend 24.06 302 *e*P P 04 34 28.1 -1.3
OG01 Vacheresse 24.17 304 *e*P P 04 34 28.9 -1.5
OG01 Vacheresse 24.17 304 *e*P P 04 34 28.9 -1.5
OG01 Vacheresse 24.17 304 *e*P P 04 34 28.9 -1.5
OG25 Le Caire 24.19 299 *e*P P 04 34 29.2 -1.3
OG25 Le Caire 24.19 299 *e*P P 04 34 29.2 -1.3
OG25 Le Caire 24.19 299 *e*P P 04 34 29.2 -1.3
DFRA Djebel Bou Aff 24.24 280 P P 04 34 32.0 +0.9
DFRA Djebel Bou Aff 24.24 280 P P 04 34 32.0 +0.9
LANF Langenberg 24.27 311 *e*P P 04 34 28.7 -2.4
LANF Langenberg 24.27 311 *e*P P 04 34 28.7 -2.4
LANF Langenberg 24.27 311 *e*P P 04 34 28.7 -2.4
LANF Langenberg 24.27 311 *e*P P 04 34 28.7 -2.4
MOF Molkenrain 24.31 308 *e*P P 04 34 28.5 -3.1
MOF Molkenrain 24.31 308 *e*P P 04 34 28.5 -3.1
GDM Grand'Maison 24.31 301 *e*P P 04 34 30.2 -1.5
GDM Grand'Maison 24.31 301 *e*P P 04 34 30.2 -1.5
GDM Grand'Maison 24.31 301 *e*P P 04 34 30.2 -1.5
LOMF Lomont 24.35 306 *e*P P 04 34 30.2 -1.8
LOMF Lomont 24.35 306 *e*P P 04 34 30.2 -1.8
LOMF Lomont 24.35 306 *e*P P 04 34 30.2 -1.8
LOMF Lomont 24.35 306 *e*P P 04 34 30.2 -1.8
TNS Taunus Mts 24.37 314 *e*P P 04 34 30.8 -1.3
comp=Z,11nm,1.1s
TNS Taunus Mts 24.37 314 *e*P P 04 34 30.8 -1.3
TNS pmax pmax
comp=Z,11nm,1.1s
CDF Champ du Feu 24.40 309 *e*P P 04 34 30.7 -1.7
comp=Z,64nm,1.2s
CDF Champ du Feu 24.40 309 *e*P P 04 34 30.7 -1.7
CDF pmax pmax
comp=Z,64nm,1.2s
CDF Champ du Feu 24.40 309 *e*P P 04 34 30.7 -1.7
comp=Z,64nm,1.2s
CDF Champ du Feu 24.40 309 *e*P P 04 34 30.7 -1.7
comp=Z,32nm,1.2s
ECH Echery 24.41 309 *e*P P 04 34 31.3 -1.1
ECH pmax pmax
comp=Z,35nm,1.0s
ECH Echery 24.41 309 *e*P P 04 34 31.3 -1.1
comp=Z,35nm,1.0s
ECH Echery 24.41 309 *e*P P 04 34 31.5 -0.9
ECH Echery 24.41 309 *e*P P 04 34 31.5 -0.9
ORIF Oris-en-Rattie 24.42 300 *e*P P 04 34 31.0 -1.7
comp=Z,60nm,0.9s
ORIF Oris-en-Rattie 24.42 300 *e*P P 04 34 31.0 -1.7
ORIF pmax pmax
comp=Z,60nm,0.9s
ORIF Oris-en-Rattie 24.42 300 *e*P P 04 34 31.0 -1.7
comp=Z,60nm,0.9s
ORIF Oris-en-Rattie 24.42 300 *e*P P 04 34 31.0 -1.7
comp=Z,30nm,0.9s
HINF Hinteralfeld 24.48 308 *e*P P 04 34 31.4 -1.7
comp=Z,41nm,1.0s
HINF Hinteralfeld 24.48 308 *e*P P 04 34 31.4 -1.7
HINF pmax pmax
comp=Z,41nm,1.0s
HINF Hinteralfeld 24.48 308 *e*P P 04 34 31.4 -1.7
comp=Z,41nm,1.0s
HINF Hinteralfeld 24.48 308 *e*P P 04 34 31.4 -1.7
comp=Z,21nm,1.0s
SMRF Simiane la Rot 24.48 298 *e*P P 04 34 32.6 -0.6
comp=Z,54nm,0.9s
SMRF Simiane la Rot 24.48 298 *e*P P 04 34 32.6 -0.6
comp=Z,54nm,0.9s
SMRF Simiane la Rot 24.48 298 *e*P P 04 34 32.6 -0.6
comp=Z,27nm,0.9s
NRDL Niedersach Rie 24.53 320 *e*P P 04 34 32.6 -0.7
comp=Z,16nm,1.2s
GRN Grenoble 24.57 301 *e*P P 04 34 32.1 -1.9
GRN Grenoble 24.57 301 *e*P P 04 34 32.1 -1.9
GRN Grenoble 24.57 301 *e*P P 04 34 32.1 -1.9
GRN Grenoble 24.57 301 *e*P P 04 34 32.1 -1.9
CKHR Kef el Ahmar 24.61 279 P P 04 34 40.0 +5.5
CKHR Kef el Ahmar 24.61 279 P P 04 34 40.0 +5.5
CABF La Chapelle 24.64 304 *e*P P 04 34 33.3 -1.4
comp=Z,95nm,0.9s
CABF La Chapelle 24.64 304 *e*P P 04 34 33.3 -1.4
CABF pmax pmax
comp=Z,95nm,0.9s
CABF La Chapelle 24.64 304 *e*P P 04 34 33.3 -1.4
comp=Z,95nm,0.9s
CABF La Chapelle 24.64 304 *e*P P 04 34 33.3 -1.4
comp=Z,47nm,0.9s
SET Setif 24.67 279 P P 04 34 37.0 +2.0
SET Setif 24.67 279 P P 04 34 37.0 +2.0
OCF Saint Nazaire 24.77 299 *e*P P 04 34 35.0 -0.8
OCF Saint Nazaire 24.77 299 *e*P P 04 34 35.0 -0.8
OG26 St.-Nazaire-De 24.77 299 *e*P P 04 34 35.0 -0.8
OG26 St.-Nazaire-De 24.77 299 *e*P P 04 34 35.0 -0.8
KLMR Klimovskoe 24.84 4 *e*P P 04 34 35.9 -0.2
KLMR pmax pmax
comp=Z,80nm,1.1s
HAU Haudompre 24.86 308 *e*P P 04 34 34.9 -1.6
comp=Z,54nm,1.0s
HAU Haudompre 24.86 308 *e*P P 04 34 34.9 -1.6
HAU pmax pmax
comp=Z,54nm,1.0s
HAU Haudompre 24.86 308 *e*P P 04 34 34.9 -1.6
comp=Z,54nm,1.0s
HAU Haudompre 24.86 308 *e*P P 04 34 34.9 -1.6
comp=Z,27nm,1.0s
RUP Ruppelstein 24.99 312 *e*P P 04 34 37.5 -0.2
RUP Ruppelstein 24.99 312 *e*P P 04 34 37.5 -0.2
RUP Ruppelstein 24.99 312 *e*P P 04 34 36.9 -0.8
THEF They Montfort 25.16 308 *e*P P 04 34 37.0 -2.2
THEF They Montfort 25.16 308 *e*P P 04 34 37.0 -2.2
THEF They Montfort 25.16 308 *e*P P 04 34 37.0 -2.2
THEF They Montfort 25.16 308 *e*P P 04 34 37.0 -2.2
BSEG Bad Segeberg 25.21 323 *e*P P 04 34 38.9 -0.6
comp=Z,28nm,1.0s
BSEG Bad Segeberg 25.21 323 *e*P P 04 34 38.9 -0.6
BSEG pmax pmax
comp=Z,28nm,1.0s
VIVF Saint-Julien-l 25.25 300 *e*P P 04 34 38.3 -1.8
comp=Z,161nm,1.1s
VIVF Saint-Julien-l 25.25 300 *e*P P 04 34 38.3 -1.8
VIVF pmax pmax
comp=Z,161nm,1.1s
VIVF Saint-Julien-l 25.25 300 *e*P P 04 34 38.3 -1.8
comp=Z,161nm,1.1s
VIVF Saint-Julien-l 25.25 300 *e*P P 04 34 38.3 -1.8
comp=Z,81nm,1.1s
ARU Arti 25.38 30*c i*P P 04 34 41.7 +0.6
ARU 04 35 16.4
ARU S S 04 39 07.9 +1.2
ARU pmax pmax
comp=Z,4.0nm,0.6s
SSB Saint Sauveur 25.42 301 *e*P P 04 34 39.8 -1.8
SSB pmax pmax
comp=Z,32nm,0.8s
SSB Saint Sauveur 25.42 301 *e*P P 04 34 39.8 -1.8
comp=Z,32nm,0.8s
SSB Saint Sauveur 25.42 301 *e*P P 04 34 39.6 -2.0
SSB Saint Sauveur 25.42 301 *e*P P 04 34 39.6 -2.0
PAGF Fort de Pagny 25.42 309 *e*P P 04 34 40.1 -1.5
comp=Z,13nm,1.1s
PAGF Fort de Pagny 25.42 309 *e*P P 04 34 40.1 -1.5
comp=Z,13nm,1.1s
PAGF Fort de Pagny 25.42 309 *e*P P 04 34 40.1 -1.5
comp=Z,6.4nm,1.1s
WLF Walferdange 25.52 311 P P 04 34 41.4 -1.0
comp=Z,9.9nm,1.0s
WLF Walferdange 25.52 311 *e*P P 04 34 41.0 -1.5
comp=Z,20nm,1.0s
IBBN Ibbenburen 25.69 318 *e*P P 04 34 43.8 -0.1
comp=Z,45nm,0.8s
LASF Ste Croix 25.72 298 *e*P P 04 34 43.1 -1.3
comp=Z,78nm,1.0s
LASF Ste Croix 25.72 298 *e*P P 04 34 43.1 -1.3
comp=Z,78nm,1.0s
LASF Ste Croix 25.72 298 *e*P P 04 34 43.1 -1.3
comp=Z,39nm,1.0s
SFTF Sexfontaines 25.75 308 *e*P P 04 34 43.0 -1.6
comp=Z,27nm,0.9s
SFTF Sexfontaines 25.75 308 *e*P P 04 34 43.0 -1.6
comp=Z,27nm,0.9s
MEZF Maizieres J'vi 25.83 308 *e*P P 04 34 44.3 -1.0
comp=Z,109nm,0.9s
MEZF Maizieres J'vi 25.83 308 *e*P P 04 34 44.3 -1.0
comp=Z,109nm,0.9s
MEZF Maizieres J'vi 25.83 308 *e*P P 04 34 44.3 -1.0
comp=Z,54nm,0.9s
MEM Memach 25.96 313 P P 04 34 46.8 +0.4
comp=Z,7.5nm,1.3s
COLF Collangettes 26.05 301 *e*P P 04 34 45.9 -1.4
COLF Collangettes 26.05 301 *e*P P 04 34 45.9 -1.4
COLF Collangettes 26.05 301 *e*P P 04 34 45.9 -1.4
FINES FINESS Array B 26.10 349 P P 04 34 47.5 -0.1
FINES FINESS Array B 26.10 349 P P 04 34 47.5 -0.1
comp=Z,11nm,0.7s,baz=138,slow=12,SNR=10
FINES FINESS Array B 26.10 349 P P 04 34 47.5 -0.1
SMF Signal de Mont 26.16 304 *e*P P 04 34 46.7 -1.6
comp=Z,105nm,0.8s
SMF Signal de Mont 26.16 304 *e*P P 04 34 46.7 -1.6
SMF pmax pmax
comp=Z,105nm,0.8s
SMF Signal de Mont 26.16 304 *e*P P 04 34 46.7 -1.6
comp=Z,105nm,0.8s
SMF Signal de Mont 26.16 304 *e*P P 04 34 46.7 -1.6
comp=Z,52nm,0.8s
LOR Lormes 26.28 305 *e*P P 04 34 47.6 -1.8
comp=Z,42nm,0.9s
LOR Lormes 26.28 305 *e*P P 04 34 47.6 -1.8
comp=Z,42nm,0.9s
LOR Lormes 26.28 305 *e*P P 04 34 47.6 -1.8
comp=Z,21nm,0.9s
SJAF Saint Jean de 26.30 294 *e*P P 04 34 48.3 -1.3
SJAF Saint Jean de 26.30 294 *e*P P 04 34 48.3 -1.3
BCLA Clavier 26.30 312 P P 04 34 52.0 +2.4
comp=Z,6.3nm,1.1s
LBL Lubilhac 26.31 300 *e*P P 04 34 48.5 -1.3
LBL Lubilhac 26.31 300 *e*P P 04 34 48.5 -1.3
LBL Lubilhac 26.31 300 *e*P P 04 34 48.5 -1.3
LBL Lubilhac 26.31 300 *e*P P 04 34 48.5 -1.3
SSF Saint Saulge 26.47 304 *e*P P 04 34 49.6 -1.5
comp=Z,70nm,0.9s
SSF Saint Saulge 26.47 304 *e*P P 04 34 49.6 -1.5
SSF pmax pmax
comp=Z,70nm,0.9s
SSF Saint Saulge 26.47 304 *e*P P 04 34 49.6 -1.5
comp=Z,70nm,0.9s
SSF Saint Saulge 26.47 304 *e*P P 04 34 49.6 -1.5
comp=Z,35nm,0.9s
GIVF Givet 26.48 312 *e*P P 04 34 49.5 -1.6
comp=Z,36nm,1.1s
GIVF Givet 26.48 312 *e*P P 04 34 49.5 -1.6
GIVF pmax pmax
comp=Z,36nm,1.1s
GIVF Givet 26.48 312 *e*P P 04 34 49.5 -1.6
comp=Z,36nm,1.1s
GIVF Givet 26.48 312 *e*P P 04 34 49.5 -1.6
comp=Z,18nm,1.1s
SVE Sverdlovsk 26.49 31⇑ *e*P P 04 34 56.0 +4.8
SVE pmax pmax
comp=Z,30nm,1.1s
AVF Avril sur Loir 26.52 304 *e*P P 04 34 49.7 -1.8
comp=Z,58nm,0.8s
AVF Avril sur Loir 26.52 304 *e*P P 04 34 49.7 -1.8
AVF pmax pmax
comp=Z,58nm,0.8s
AVF Avril sur Loir 26.52 304 *e*P P 04 34 49.7 -1.8
comp=Z,58nm,0.8s
AGO Saint Agoulin 26.53 302 *e*P P 04 34 50.3 -1.3
AGO Saint Agoulin 26.53 302 *e*P P 04 34 50.3 -1.3
AGO Saint Agoulin 26.53 302 *e*P P 04 34 50.3 -1.3
FILF Fillols 26.54 294 *e*P P 04 34 51.6 -0.2
FILF Fillols 26.54 294 *e*P P 04 34 51.6 -0.2
FILF Fillols 26.54 294 *e*P P 04 34 51.6 -0.2
PYM Petit Puy Mans 26.56 301 *e*P P 04 34 50.0 -2.0
PYM Petit Puy Mans 26.56 301 *e*P P 04 34 50.0 -2.0
PYM Petit Puy Mans 26.56 301 *e*P P 04 34 50.0 -2.0
PYM Petit Puy Mans 26.56 301 *e*P P 04 34 50.0 -2.0
LRDF Laroque-de-Fa 26.58 295 *e*P P 04 34 50.7 -1.4
LRDF Laroque-de-Fa 26.58 295 *e*P P 04 34 50.7 -1.4
LRDF Laroque-de-Fa 26.58 295 *e*P P 04 34 50.7 -1.4
DOU Dourbes 26.62 311 P P 04 34 51.0 -1.3
comp=Z,6.9nm,1.2s
KAF Kangasniemi 26.71 350 *e*P P 04 34 50.7 -2.3
KAF pmax pmax
comp=Z,1.0nm,0.4s
KAF Kangasniemi 26.71 350 *e*p P 04 34 50.7 -2.3
comp=Z,0.9nm,0.4s
FRNF Fournols 26.81 301 *e*P P 04 34 53.6 -0.6
FRNF Fournols 26.81 301 *e*P P 04 34 53.6 -0.6
FRNF Fournols 26.81 301 *e*P P 04 34 53.6 -0.6
MTLF Montolieu 26.84 296 *e*P P 04 34 52.9 -1.5
comp=Z,55nm,1.0s
MTLF Montolieu 26.84 296 *e*P P 04 34 52.9 -1.5
MTLF pmax pmax
comp=Z,55nm,1.0s
MTLF Montolieu 26.84 296 *e*P P 04 34 52.9 -1.5
comp=Z,55nm,1.0s
MTLF Montolieu 26.84 296 *e*P P 04 34 52.9 -1.5
comp=Z,27nm,1.0s
BAIF Baives 26.84 311 *e*P P 04 34 52.8 -1.6
comp=Z,37nm,1.0s
BAIF Baives 26.84 311 *e*P P 04 34 52.8 -1.6
BAIF pmax pmax
comp=Z,37nm,1.0s
BAIF Baives 26.84 311 *e*P P 04 34 52.8 -1.6
comp=Z,37nm,1.0s
BAIF Baives 26.84 311 *e*P P 04 34 52.8 -1.6
comp=Z,19nm,1.0s
CARF Carcanieres 26.88 295 *e*P P 04 34 54.2 -0.8
CARF Carcanieres 26.88 295 *e*P P 04 34 54.2 -0.8
CARF Carcanieres 26.88 295 *e*P P 04 34 54.2 -0.8
VALF Valcebollere 26.93 294 *e*P P 04 34 54.9 -0.6
VALF Valcebollere 26.93 294 *e*P P 04 34 54.9 -0.6
VALF Valcebollere 26.93 294 *e*P P 04 34 54.9 -0.6
JOF Joensuu 26.97 355 *e*P P 04 34 54.7 -0.7
JOF pmax pmax
comp=Z,11nm,0.7s
JOF Joensuu 26.97 355 *e*p P 04 34 54.7 -0.7
comp=Z,10nm,0.7s
JOF Joensuu 26.97 355 *e*P P 04 34 54.7 -0.7
comp=Z,10nm,0.7s
HYF Humbligny 27.09 305 *e*P P 04 34 56.1 -0.6
HYF Humbligny 27.09 305 *e*P P 04 34 56.1 -0.6
HYF Humbligny 27.09 305 *e*P P 04 34 56.1 -0.6
CAF Calviac 27.10 299 *e*P P 04 34 55.3 -1.5
comp=Z,28nm,1.0s
CAF Calviac 27.10 299 *e*P P 04 34 55.3 -1.5
CAF pmax pmax
comp=Z,28nm,1.0s
CAF Calviac 27.10 299 *e*P P 04 34 55.3 -1.5
comp=Z,28nm,1.0s
CAF Calviac 27.10 299 *e*P P 04 34 55.3 -1.5
comp=Z,14nm,1.0s
TCF Toulx Ste Croi 27.20 302 *e*P P 04 34 56.3 -1.4
comp=Z,48nm,1.0s
TCF Toulx Ste Croi 27.20 302 *e*P P 04 34 56.3 -1.4
TCF pmax pmax
comp=Z,48nm,1.0s
TCF Toulx Ste Croi 27.20 302 *e*P P 04 34 56.3 -1.4
comp=Z,48nm,1.0s
TCF Toulx Ste Croi 27.20 302 *e*P P 04 34 56.3 -1.4
comp=Z,24nm,1.0s
KK31 Karatay Array 27.33 65 *i*P P 04 34 59.7 +0.8
KK31 pmax pmax
comp=Z,1.0nm,0.3s
KKAR Karatay Array 27.33 65 *e*P P 04 34 59.8 +0.9
KKAR pmax pmax
comp=Z,3.0nm,0.5s
KKAR Karatay Array 27.33 65 *e*P P 04 34 59.8 +0.9
comp=Z,3.0nm,0.5s
KKAR Karatay Array 27.33 65 *e*P P 04 34 59.8 +0.9
comp=Z,3.0nm,0.5s
RJF Les Rejaudoux 27.53 300 *e*P P 04 34 59.8 -0.9
comp=Z,83nm,0.9s
RJF Les Rejaudoux 27.53 300 *e*P P 04 34 59.8 -0.9
RJF pmax pmax
comp=Z,83nm,0.9s
RJF Les Rejaudoux 27.53 300 *e*P P 04 34 59.8 -0.9
comp=Z,83nm,0.9s
RJF Les Rejaudoux 27.53 300 *e*P P 04 34 59.8 -0.9
comp=Z,41nm,0.9s
HFS Hagfors 27.99 336 P P 04 35 03.8 -0.7
HFS Hagfors 27.99 336 P P 04 35 03.8 -0.7
comp=Z,3.2nm,0.6s,baz=146,slow=11,SNR=8.1
HFS Hagfors 27.99 336 P P 04 35 03.8 -0.7
LFF La Frestale 28.04 299 *e*P P 04 35 04.1 -1.0
comp=Z,41nm,1.0s
LFF La Frestale 28.04 299 *e*P P 04 35 04.1 -1.0
LFF pmax pmax
comp=Z,41nm,1.0s
LFF La Frestale 28.04 299 *e*P P 04 35 04.1 -1.0
comp=Z,41nm,1.0s
LFF La Frestale 28.04 299 *e*P P 04 35 04.1 -1.0
comp=Z,20nm,1.0s
RESF Ens 28.19 295 *e*P P 04 35 05.1 -1.6
RESF Ens 28.19 295 *e*P P 04 35 05.1 -1.6
RESF Ens 28.19 295 *e*P P 04 35 05.1 -1.6
EPF Esparros 28.19 295 *e*P P 04 35 06.4 -0.2
comp=Z,25nm,1.1s
EPF Esparros 28.19 295 *e*P P 04 35 06.4 -0.2
EPF pmax pmax
comp=Z,25nm,1.1s
EPF Esparros 28.19 295 *e*P P 04 35 06.4 -0.2
comp=Z,25nm,1.1s
EPF Esparros 28.19 295 *e*P P 04 35 06.4 -0.2
comp=Z,13nm,1.1s
LABF Labassere 28.39 295 *e*P P 04 35 08.2 -0.2
LABF Labassere 28.39 295 *e*P P 04 35 08.2 -0.2
LABF Labassere 28.39 295 *e*P P 04 35 08.2 -0.2
ZRNK Zerenda 28.57 44 *i*P P 04 35 14.8 +5.0
ZRNK pmax pmax
comp=Z,6.0nm,1.2s
ETSF Etsaut 28.85 295 *e*P P 04 35 11.6 -0.9
comp=Z,34nm,1.0s
ETSF Etsaut 28.85 295 *e*P P 04 35 11.6 -0.9
ETSF pmax pmax
comp=Z,34nm,1.0s
ETSF Etsaut 28.85 295 *e*P P 04 35 11.6 -0.9
comp=Z,34nm,1.0s
ETSF Etsaut 28.85 295 *e*P P 04 35 11.6 -0.9
comp=Z,17nm,1.0s
MFF Saint Martin d 28.86 303 *e*P P 04 35 10.6 -1.8
comp=Z,44nm,0.9s
MFF Saint Martin d 28.86 303 *e*P P 04 35 10.6 -1.8
MFF pmax pmax
comp=Z,44nm,0.9s
MFF Saint Martin d 28.86 303 *e*P P 04 35 10.6 -1.8
comp=Z,44nm,0.9s
LDF La Druitiere 29.18 307 *e*P P 04 35 13.7 -1.6
LDF La Druitiere 29.18 307 *e*P P 04 35 13.7 -1.6
LDF La Druitiere 29.18 307 *e*P P 04 35 13.7 -1.6
LDF La Druitiere 29.18 307 *e*P P 04 35 13.7 -1.6
BRVK Borovoye 29.32 44 *e*P P 04 35 16.4 -0.1
BRVK pmax pmax
comp=Z,6.0nm,1.2s
SJPF Ste Jean 29.34 295 *e*P P 04 35 16.0 -0.8
comp=Z,42nm,1.0s
SJPF Ste Jean 29.34 295 *e*P P 04 35 16.0 -0.8
SJPF pmax pmax
comp=Z,42nm,1.0s
SJPF Ste Jean 29.34 295 *e*P P 04 35 16.0 -0.8
comp=Z,42nm,1.0s
SJPF Ste Jean 29.34 295 *e*P P 04 35 16.0 -0.8
comp=Z,21nm,1.0s
BVAR Borovoye Array 29.37 44 P P 04 35 18.0 +1.1
BVAR pmax pmax
comp=Z,2.0nm,0.5s
BVAR MLR MLR
comp=Z,175nm,19.7s
BVAR Borovoye Array 29.37 44 P P 04 35 18.0 +1.1
BVAR Borovoye Array 29.37 44 P P 04 35 18.0 +1.1
comp=Z,1.5nm,0.5s,baz=232,slow=7.3,SNR=7.4
BVAR LR LR 04 48 53.1
comp=Z,174nm,19.7s,baz=50,slow=40
BVAR Borovoye Array 29.37 44 P P 04 35 18.0 +1.1
FLN La Foliniere 29.45 307 *e*P P 04 35 15.0 -2.7
comp=Z,40nm,1.2s
FLN La Foliniere 29.45 307 *e*P P 04 35 15.0 -2.7
FLN pmax pmax
comp=Z,40nm,1.2s
FLN La Foliniere 29.45 307 *e*P P 04 35 15.0 -2.7
comp=Z,40nm,1.2s
FLN La Foliniere 29.45 307 *e*P P 04 35 15.0 -2.7
comp=Z,20nm,1.2s
NB2 NORSAR Subarra 29.48 335 P P 04 35 16.5 -1.4
comp=Z,1.1nm,0.6s,baz=131,slow=9.3
NOA NORSAR Array B 29.48 335 P P 04 35 16.5 -1.4
NOA NORSAR Array B 29.48 335 P P 04 35 16.5 -1.4
comp=Z,1.4nm,0.6s,baz=133,slow=8.7,SNR=11
NOA NORSAR Array B 29.48 335 P P 04 35 16.5 -1.4
TAM Tamanrasset 29.56 252 *e*P P 04 35 20.1 +1.0
TAM pmax pmax
comp=Z,6.0nm,0.9s
TAM Tamanrasset 29.56 252 *e*P P 04 35 20.1 +1.0
comp=Z,6.3nm,0.9s

TAM	**Tamanrasset**	**29.56**	**252**	*e*P		**P**	**04 35 20.1**	**+1.0**
	comp=Z,6.3nm,0.9s								
GRR	**Gorron**	**29.62**	**306**	*e*P		**P**	**04 35 16.9**	**-2.3**
	comp=Z,46nm,0.9s								
GRR	**Gorron**	**29.62**	**306**	*e*P		**P**	**04 35 16.9**	**-2.3**
GRR					pmax	pmax			
	comp=Z,46nm,0.9s								
GRR	**Gorron**	**29.62**	**306**	*e*P		**P**	**04 35 16.9**	**-2.3**
	comp=Z,46nm,0.9s								
AAK	**Ala-Archa**	**30.25**	**66**	*c*eP		**P**	**04 35 25.8**	**+0.8**
AAK					pmax	pmax			
	comp=Z,14nm,1.0s								
AAK	**Ala-Archa**	**30.25**	**66**	*e*P		**P**	**04 35 25.9**	**+0.9**
	comp=Z,3.6nm,0.9s								
AAK	**Ala-Archa**	**30.25**	**66**	P		**P**	**04 35 26.5**	**+1.5**
	comp=Z,3.9nm,0.8s,baz=206,slow=9.9,SNR=4.1								
AAK	**Ala-Archa**	**30.25**	**66**	*e*P		**P**	**04 35 25.9**	**+0.9**
	comp=Z,3.6nm,0.9s								
SGMF	**Saint Gilles**	**30.72**	**305**	*e*P		**P**	**04 35 26.9**	**-2.0**
	comp=Z,53nm,0.9s								
SGMF	**Saint Gilles**	**30.72**	**305**	*e*P		**P**	**04 35 26.9**	**-2.0**
SGMF					pmax	pmax			
	comp=Z,53nm,0.9s								
SGMF	**Saint Gilles**	**30.72**	**305**	*e*P		**P**	**04 35 26.9**	**-2.0**
	comp=Z,53nm,0.9s								
TKM2	**Tokmak 2**	**31.05**	**65**	*e*P		**P**	**04 35 33.4**	**+1.2**
TKM2					pmax	pmax			
	comp=Z,3.0nm,0.7s								
TKM2	**Tokmak 2**	**31.05**	**65**	*e*P		**P**	**04 35 33.4**	**+1.2**
	comp=Z,2.8nm,0.7s								
TKM2	**Tokmak 2**	**31.05**	**65**	*e*P		**P**	**04 35 33.4**	**+1.2**
	comp=Z,2.8nm,0.7s								
QUIF	**Quistinic**	**31.07**	**305**	*e*P		**P**	**04 35 29.8**	**-2.2**
	comp=Z,32nm,0.9s								
QUIF	**Quistinic**	**31.07**	**305**	*e*P		**P**	**04 35 29.8**	**-2.2**
QUIF					pmax	pmax			
	comp=Z,32nm,0.9s								
QUIF	**Quistinic**	**31.07**	**305**	*e*P		**P**	**04 35 29.8**	**-2.2**
	comp=Z,32nm,0.9s								
ROSF	**Rostrenen**	**31.20**	**305**	*e*P		**P**	**04 35 30.9**	**-2.3**
	comp=Z,32nm,0.7s								
ROSF	**Rostrenen**	**31.20**	**305**	*e*P		**P**	**04 35 30.9**	**-2.3**
ROSF					pmax	pmax			
	comp=Z,32nm,0.7s								
ROSF	**Rostrenen**	**31.20**	**305**	*e*P		**P**	**04 35 30.9**	**-2.3**
	comp=Z,32nm,0.7s								
APA	**Apatity**	**31.52**	**358**	⇓*e*P		**P**	**04 35 35.0**	**-0.7**
APA				*i*			04 35 39.4		
APA					MLR	MLR			
	comp=Z,300nm,19.0s								
ESDC	**Sonseca Array**	**31.56**	**289**	P		**P**	**04 35 35.7**	**-0.8**
ESDC	**Sonseca Array**	**31.56**	**289**	P		**P**	**04 35 35.7**	**-0.8**
	comp=Z,6.1nm,0.9s,baz=74,slow=8.8,SNR=11								
ESDC	**Sonseca Array**	**31.56**	**289**	P		**P**	**04 35 35.7**	**-0.8**
ESLA	**Sonseca Array**	**31.56**	**289**	*e*P		**P**	**04 35 35.9**	**-0.7**
	comp=Z,2.8nm,1.0s								
ESLA	**Sonseca Array**	**31.56**	**289**	*e*P		**P**	**04 35 35.9**	**-0.7**
	comp=Z,2.8nm,1.0s								
PAB	**San Pablo**	**31.87**	**288**	*e*P		P	04 35 44.5	+5.2
PAB	**San Pablo**	**31.87**	**288**	*e*P		P	04 35 44.5	+5.2
PAB	**San Pablo**	**31.87**	**288**	*e*P		P	04 35 44.5	+5.2
PBRG	**Braganca**	**33.46**	**293**	*e*P		**P**	**04 35 51.8**	**-1.3**
	comp=Z,28nm,1.6s								
PBRG	**Braganca**	**33.46**	**293**	*e*P		**P**	**04 35 51.8**	**-1.3**
	comp=Z,28nm,1.6s								
KURBB	**Kurchatov Arra**	**33.63**	**51**	P		**P**	**04 35 55.0**	**+0.7**
	comp=Z,3.4nm,0.7s,baz=264,slow=8.7,SNR=30								
KURBB					PcP	**PcP**	**04 38 34.9**	**+0.6**
	comp=Z,0.9nm,0.6s,baz=260,slow=3.7,SNR=4.6								
KURK	**Kurchatov**	**33.70**	**51**	*e*P		**P**	**04 35 56.2**	**+1.2**
KURK							04 38 34.9		
KURK					pmax	pmax			
	comp=Z,3.0nm,0.6s								
KURK	**Kurchatov**	**33.70**	**51**	*e*P		**P**	**04 35 56.2**	**+1.2**
	comp=Z,2.8nm,0.6s								
KURK					PcP	**PcP**	**04 38 34.9**	**+0.4**
KURK	**Kurchatov**	**33.70**	**51**	*e*P		**P**	**04 35 56.2**	**+1.2**
	comp=Z,2.8nm,0.6s								
MVO	**Moncorvo**	**33.73**	**292**	*e*P		**P**	**04 35 55.0**	**-0.5**
	comp=Z,30nm,1.0s								
MVO	**Moncorvo**	**33.73**	**292**	*e*P		**P**	**04 35 55.0**	**-0.5**
	comp=Z,30nm,1.0s								
ARCES	**ARCESS Array B**	**33.95**	**353**	P		**P**	**04 35 57.1**	**+0.1**
ARCES	**ARCESS Array B**	**33.95**	**353**	P		**P**	**04 35 57.1**	**+0.1**
	comp=Z,8.2nm,0.7s,baz=160,slow=7.4,SNR=20								
ARCES	**ARCESS Array B**	**33.95**	**353**	P		**P**	**04 35 57.2**	**+0.1**
PBAR	**Barrancos**	**34.15**	**287**	*e*P		**P**	**04 35 58.9**	**-0.2**
	comp=Z,26nm,1.1s								
PBAR	**Barrancos**	**34.15**	**287**	*e*P		**P**	**04 35 58.9**	**-0.2**
	comp=Z,26nm,1.1s								
MTE	**Manteigas**	**34.21**	**291**	*e*P		**P**	**04 35 59.4**	**-0.3**
	comp=Z,36nm,1.6s								
MTE	**Manteigas**	**34.21**	**291**	*e*P		**P**	**04 35 59.4**	**-0.3**
	comp=Z,36nm,1.6s								
PMRV	**Marv??o**	**34.22**	**289**	*e*P		P	04 36 02.9	+3.2
	comp=Z,14nm,1.9s								
PMRV	**Marv??o**	**34.22**	**289**	*e*P		P	04 36 02.9	+3.2
	comp=Z,14nm,1.9s								
PCBR	**Castelo Branco**	**34.23**	**290**	*e*P		P	04 36 03.5	+3.7
	comp=Z,32nm,1.0s								
PCBR	**Castelo Branco**	**34.23**	**290**	*e*P		P	04 36 03.5	+3.7
	comp=Z,32nm,1.0s								
PVRL	**Vila Real**	**34.24**	**292**	*e*P		**P**	**04 36 01.8**	**+1.9**
	comp=Z,33nm,1.0s								
PVRL	**Vila Real**	**34.24**	**292**	*e*P		**P**	**04 36 01.8**	**+1.9**
	comp=Z,33nm,1.0s								
POLO	**Lamas de Olo**	**34.29**	**292**	*e*P		**P**	**04 36 01.6**	**+1.2**
	comp=Z,18nm,1.0s								
POLO	**Lamas de Olo**	**34.29**	**292**	*e*P		**P**	**04 36 01.6**	**+1.2**
	comp=Z,18nm,1.0s								
PCAB	**Cabril**	**34.43**	**293**	*e*P		**P**	**04 36 01.6**	**+0.1**
	comp=Z,41nm,1.0s								
PCAB	**Cabril**	**34.43**	**293**	*e*P		**P**	**04 36 01.6**	**+0.1**
	comp=Z,41nm,1.0s								
PVIS	**Viseu**	**34.44**	**291**	*e*P		P	04 36 06.6	+5.0
PESTR	**Estremoz**	**34.46**	**288**	*e*P		P	04 36 04.8	+3.0
	comp=Z,20nm,1.5s								
PESTR	**Estremoz**	**34.46**	**288**	*e*P		P	04 36 04.8	+3.0
	comp=Z,20nm,1.5s								
PBEJ	**Beja**	**34.82**	**287**	*e*P		**P**	**04 36 05.3**	**+0.4**
	comp=Z,34nm,1.3s								
PBEJ	**Beja**	**34.82**	**287**	*e*P		**P**	**04 36 05.3**	**+0.4**
	comp=Z,34nm,1.3s								
PVAQ	**Vaqueiros**	**34.83**	**285**	*e*P		**P**	**04 36 03.9**	**-1.0**
	comp=Z,18nm,1.5s								
PVAQ	**Vaqueiros**	**34.83**	**285**	*e*P		**P**	**04 36 03.9**	**-1.0**
	comp=Z,18nm,1.5s								
PTO	**Porto**	**34.92**	**292**	*e*P		P	04 36 09.8	+4.1
PTO	**Porto**	**34.92**	**292**	*e*P		P	04 36 09.8	+4.1
PTOM	**Tomar**	**34.98**	**289**	*e*P		P	04 36 09.9	+3.7
	comp=Z,37nm,1.5s								
PTOM	**Tomar**	**34.98**	**289**	*e*P		P	04 36 09.9	+3.7
	comp=Z,37nm,1.5s								
PBDV	**Barranco-do-Ve**	**35.02**	**285**	*e*P		**P**	**04 36 06.2**	**-0.5**
	comp=Z,30nm,1.6s								
PBDV	**Barranco-do-Ve**	**35.02**	**285**	*e*P		**P**	**04 36 06.2**	**-0.5**
	comp=Z,30nm,1.6s								
PCVE	**Castro Verde**	**35.03**	**286**	*e*P		**P**	**04 36 08.4**	**+1.7**
	comp=Z,24nm,1.2s								
PCVE	**Castro Verde**	**35.03**	**286**	*e*P		**P**	**04 36 08.4**	**+1.7**
	comp=Z,24nm,1.2s								
MK31	**Makanchi Array**	**35.80**	**58**	*i* P		**P**	**04 36 14.0**	**+0.7**
MK31					pmax	pmax			
	comp=Z,4.0nm,0.6s								
MK31	**Makanchi Array**	**35.80**	**58**	*e*P		**P**	**04 36 14.4**	**+1.1**
MK31	**Makanchi Array**	**35.80**	**58**	*e*P		**P**	**04 36 14.4**	**+1.1**
MKAR	**Makanchi Array**	**35.80**	**58**	P		**P**	**04 36 14.5**	**+1.2**
MKAR					pmax	pmax			
	comp=Z,3.0nm,0.6s								
MKAR					MLR	MLR			
	comp=Z,63nm,18.6s								
MKAR	**Makanchi Array**	**35.80**	**58**	P		**P**	**04 36 14.5**	**+1.2**
MKAR	**Makanchi Array**	**35.80**	**58**	P		**P**	**04 36 14.5**	**+1.2**
	comp=Z,3.1nm,0.6s,baz=261,slow=7.5,SNR=20								
MKAR					LR	LR	04 54 26.5		
	comp=Z,63nm,18.6s,baz=175,slow=42								
MKAR	**Makanchi Array**	**35.80**	**58**	P		**P**	**04 36 14.5**	**+1.2**
NVS	**Novosibirsk**	**37.16**	**45**	*e*P		P	04 36 30.3	+5.6
NVS					pmax	pmax			
	comp=Z,13nm,1.3s								
NVS					pmax	pmax			
	comp=N,3.0nm,1.0s								
ZAA0	**Zalesovo Array**	**37.94**	**46**	*e*P		**P**	**04 36 31.3**	**0.0**
ZAA0	**Zalesovo Array**	**37.94**	**46**	*e*P		**P**	**04 36 31.3**	**0.0**
ZALV	**Zalesovo Beam**	**37.94**	**46**	*i* P		**P**	**04 36 31.5**	**+0.2**
ZALV					pmax	pmax			
	comp=Z,2.0nm,0.5s								
ZALV	**Zalesovo Beam**	**37.94**	**46**	P		**P**	**04 36 31.4**	**+0.2**
ZALV	**Zalesovo Beam**	**37.94**	**46**	P		**P**	**04 36 31.4**	**+0.2**
	comp=Z,2.4nm,0.5s,baz=261,slow=8.8,SNR=12								
ZALV					LR	LR	04 55 22.4		
	comp=Z,90nm,18.1s,baz=249,slow=41								
ZALV	**Zalesovo Beam**	**37.94**	**46**	P		**P**	**04 36 31.4**	**+0.2**
TOA0	**Torodi Ar. Sit**	**38.38**	**242**	*e*P		**P**	**04 36 34.9**	**-0.6**
TOA0	**Torodi Ar. Sit**	**38.38**	**242**	*e*P		**P**	**04 36 34.8**	**-0.6**
TORD	**Torodi Ar. Bea**	**38.38**	**242**	P		**P**	**04 36 34.5**	**-0.9**
TORD					PP	**PnPn**	**04 38 06.6**	**+1.5**
TORD	**Torodi Ar. Bea**	**38.38**	**242**	P		**P**	**04 36 34.5**	**-0.9**
	comp=Z,3.8nm,0.8s,baz=41,slow=8.3,SNR=25								
TORD					PP	**PnPn**	**04 38 06.6**	**+1.5**
	comp=Z,3.0nm,0.9s,baz=39,slow=9.5,SNR=4.4								
TORD	**Torodi Ar. Bea**	**38.38**	**242**	P		**P**	**04 36 34.5**	**-0.9**
WMQ	**Urumqi**	**39.79**	**63**	*e*P		**P**	**04 36 48.3**	**+1.2**
WMQ					pP	pP	04 37 00.5	+8.2
WMQ					sP	sP	04 37 06.0	+12
WMQ					PP	**PnPn**	**04 38 25.0**	**+3.4**
WMQ					*e*S	**S**	**04 42 50.0**	**-0.5**
WMQ					sS	sS	04 43 11.0	+12
WMQ					SS	**SS**	**04 45 41.0**	**-5.4**
WMQ					pmax	pmax			
	comp=Z,11nm,0.6s								
WMQ					pmax	pmax			
	comp=Z,130nm,4.1s								
WMQ					LR	LR			
	comp=N,250nm,12.0s								
WMQ					LR	LR			
	comp=E,310nm,10.0s								
WMQ					LR	LR			
	comp=Z,250nm,19.0s								
PYUN	**Piuthan**	**40.26**	**88**	*e*P		**P**	**04 36 51.9**	**+0.5**
	comp=Z,20nm,0.7s								
DANN	**Dangsing**	**40.79**	**87**	*e*P		**P**	**04 36 57.0**	**+1.2**
	comp=Z,39nm,0.7s								
DMN	**Daman**	**42.17**	**87**	*e*P		**P**	**04 37 08.1**	**+1.0**
	comp=Z,24nm,0.7s								
KKN	**Kakani**	**42.24**	**87**	*e*P		**P**	**04 37 08.4**	**+0.8**
	comp=Z,5.9nm,0.2s								
PKIN	**Phulchoki**	**42.42**	**87**	*e*P		**P**	**04 37 09.8**	**+0.6**
PKI	**Pulchoki**	**42.44**	**87**	*e*P		**P**	**04 37 10.1**	**+0.8**
	comp=Z,25nm,0.8s								
GUN	**Gumba**	**42.68**	**86**	*e*P		**P**	**04 37 12.0**	**+0.7**
	comp=Z,32nm,0.9s								
SPITS	**Spitsbergen Ar**	**42.98**	**354**	P		**P**	**04 37 13.2**	**+0.5**
SPITS	**Spitsbergen Ar**	**42.98**	**354**	P		**P**	**04 37 13.2**	**+0.5**
	comp=Z,9.2nm,0.7s,baz=144,slow=10,SNR=13								
SPITS	**Spitsbergen Ar**	**42.98**	**354**	P		**P**	**04 37 13.2**	**+0.5**
RAMN	**Ramite**	**43.66**	**87**	*e*P		**P**	**04 37 19.6**	**+0.5**
	comp=Z,32nm,0.7s								
ODAN	**Odare**	**44.33**	**87**	*e*P		**P**	**04 37 24.7**	**+0.1**
	comp=Z,46nm,1.3s								
TAPN	**Taplejung**	**44.39**	**86**	*e*P		**P**	**04 37 24.9**	**-0.2**
	comp=Z,18nm,0.9s								
DBIC	**Dimbokro**	**47.48**	**242**	*e*P		**P**	**04 37 48.0**	**-1.2**
	comp=Z,4.3nm,0.7s								
DBIC	**Dimbokro**	**47.48**	**242**	P		**P**	**04 37 48.3**	**-0.9**
	comp=Z,3.3nm,0.6s,baz=322,slow=4.4,SNR=7.5								
DBIC	**Dimbokro**	**47.48**	**242**	*e*P		**P**	**04 37 48.0**	**-1.2**
	comp=Z,4.3nm,0.7s								
LIC	**Lamto**	**47.91**	**242**	*e*P		**P**	**04 37 51.3**	**-1.3**
	comp=Z,9.6nm,0.7s								
LIC	**Lamto**	**47.91**	**242**	*e*P		**P**	**04 37 51.3**	**-1.3**
	comp=Z,9.6nm,0.7s								
ZAK	**Zakamensk**	**49.36**	**51**	*e*P		**P**	**04 38 05.1**	**+1.7**
ZAK					pmax	pmax			
	comp=Z,4.0nm,1.0s								
TLY	**Talaya**	**49.36**	**49**	*e*P		P	04 38 10.3	+7.0
TLY					pmax	pmax			
	comp=Z,7.0nm,1.2s								
TLY					MLR	MLR			
	comp=Z,75nm,15.0s								
GTA	**Gaotai**	**49.60**	**66**	*e*P		**P**	**04 38 06.8**	**+1.4**
GTA					pP	pP	04 38 19.1	+8.3
GTA					sP	sP	04 38 24.4	+12
GTA					S	**S**	**04 45 11.8**	**-1.2**
GTA					sS	sS	04 45 32.8	+11
GTA					SS	**SS**	**04 48 41.0**	**-3.9**
GTA					pmax	pmax			
	comp=Z,3.0nm,1.6s								
GTA					pmax	pmax			
	comp=Z,330nm,4.8s								
GTA					LR	LR			
	comp=N,100nm,18.8s								
GTA					LR	LR			
	comp=E,95nm,18.1s								
GTA					LR	LR			
	comp=Z,110nm,18.0s								
SONM	**Songino Array**	**51.90**	**54**	P		**P**	**04 38 23.3**	**+0.6**
SONM	**Songino Array**	**51.90**	**54**	P		**P**	**04 38 23.3**	**+0.6**
	comp=Z,0.8nm,0.6s,baz=295,slow=7.4,SNR=5.2								
SONM					LR	LR	05 03 21.9		
	comp=Z,170nm,18.4s,baz=78,slow=40								
SONM	**Songino Array**	**51.90**	**54**	P		**P**	**04 38 23.3**	**+0.6**
LZH	**Lanzhou**	**53.72**	**69**	*e*P		**P**	**04 38 37.8**	**+1.5**
LZH					pP	pP	04 38 50.4	+8.7
LZH					sP	sP	04 38 55.0	+11
LZH					*e*PP	**PP**	**04 40 40.3**	**+3.2**
LZH					*e*S	**S**	**04 46 06.3**	**-3.6**
LZH					SS	**SKiKP**	**04 49 45.6**	**-4.5**
LZH					pmax	pmax			
	comp=Z,15nm,1.0s								
LZH					pmax	pmax			
	comp=Z,89nm,4.8s								
LZH					LR	LR			
	comp=N,150nm,13.9s								
LZH					LR	LR			
	comp=E,280nm,15.2s								
LZH					LR	LR			
	comp=Z,310nm,16.0s								
CD2	**Chengdu**	**55.69**	**74**	*e*P		**P**	**04 38 51.5**	**+0.9**
CD2					pP	pP	04 39 04.0	+8.1
CD2					sP	sP	04 39 09.1	+11
CD2					PP	**PP**	**04 40 57.3**	**+2.5**
CD2					S	**S**	**04 46 32.8**	**-3.5**
CD2					SS	**SS**	**04 50 18.3**	**-3.2**
CD2					pmax	pmax			
	comp=Z,10.0nm,0.6s								
CD2					pmax	pmax			
	comp=Z,100nm,4.8s								
CD2					LR	LR			
	comp=N,210nm,16.8s								
CD2					LR	LR			
	comp=E,220nm,19.0s								
CD2					LR	LR			
	comp=Z,170nm,14.2s								
KMI	**Kunming**	**57.46**	**81**	P		**P**	**04 39 04.3**	**+0.9**
KMI					pmax	pmax			
	comp=Z,6.0nm,1.0s								
CMAR	**Chiang Mai Arr**	**57.69**	**90**	P		**P**	**04 39 04.8**	**0.0**
CMAR	**Chiang Mai Arr**	**57.69**	**90**	P		**P**	**04 39 04.8**	**0.0**
	comp=Z,4.0nm,0.8s,baz=295,slow=8.4,SNR=12								
CMAR	**Chiang Mai Arr**	**57.69**	**90**	P		**P**	**04 39 04.8**	**0.0**
GYA	**Guiyang**	**59.96**	**78**	*e*P		**P**	**04 39 21.0**	**+0.3**
GYA					pP	pP	04 39 33.3	+7.2
GYA					sP	sP	04 39 40.6	+12
GYA					PP	**PP**	**04 41 35.3**	**+2.5**
GYA					ScP	**ScP**	**04 44 02.9**	**-4.2**
GYA					S	**S**	**04 47 28.8**	**-3.7**
GYA					pmax	pmax			
	comp=Z,10.0nm,1.0s								
BJI	**Beijing**	**61.16**	**60**	P		**P**	**04 39 27.8**	**-0.7**
BJI					pmax	pmax			
	comp=Z,15nm,0.5s								
WHN	**Wuhan**	**64.02**	**70**	P		P	04 39 53.0	+5.3
BOSA	**Boshof**	**65.19**	**190**	P		**P**	**04 39 56.5**	**+1.2**
BOSA	**Boshof**	**65.19**	**190**	P		**P**	**04 39 56.5**	**+1.2**
	comp=Z,6.0nm,0.9s,baz=19,slow=3.5,SNR=7.4								
BOSA	**Boshof**	**65.19**	**190**	P		**P**	**04 39 56.5**	**+1.2**
CN2	**Changchun**	**65.75**	**53**	*e*P		**P**	**04 39 59.4**	**+0.6**
CN2					*e*pP	pP	04 40 12.4	+8.1
CN2					*e*S	**S**	**04 48 39.9**	**-4.5**
CN2					pmax	pmax			
	comp=Z,10.0nm,0.6s								
CN2					pmax	pmax			
	comp=Z,200nm,3.0s								
CN2					LR	LR			
	comp=N,200nm,14.0s								
CN2					LR	LR			
	comp=E,200nm,14.0s								
CN2					LR	LR			
	comp=Z,200nm,13.0s								
NJ2	**Nanjing**	**66.69**	**67**	*e*P		**P**	**04 40 03.6**	**-1.4**
NJ2					pmax	pmax			
	comp=Z,20nm,0.6s								
KLR	**Kul'dur**	**67.03**	**45**	*e*P		**P**	**04 40 03.8**	**-3.1**
SCHQ	**Schefferville**	**68.00**	**323**	P		**P**	**04 40 11.6**	**-1.4**
SCHQ	**Schefferville**	**68.00**	**323**	P		**P**	**04 40 11.6**	**-1.4**
	comp=Z,3.8nm,0.9s,baz=46,slow=2.8,SNR=5.2								
SCHQ	**Schefferville**	**68.00**	**323**	P		**P**	**04 40 11.6**	**-1.4**
BILL	**Bilibino**	**69.68**	**18**	*e*P		**P**	**04 40 24.2**	**+1.0**
BILL				*i*			04 40 50.3		
BILL					pmax	pmax			
	comp=Z,5.0nm,1.2s								
USRK	**Ussuriysk Arra**	**69.69**	**50**	P		**P**	**04 40 22.5**	**-1.1**
	comp=Z,1.0nm,0.6s,baz=252,slow=9.8,SNR=2.7								
KSAR	**Wonju Array Be**	**70.46**	**58**	P		**P**	**04 40 28.0**	**-0.5**
KSAR	**Wonju Array Be**	**70.46**	**58**	P		**P**	**04 40 28.0**	**-0.5**
KSRS	**Korea Array**	**70.48**	**58**	P		**P**	**04 40 28.0**	**-0.6**
	comp=Z,4.3nm,0.9s,baz=292,slow=5.4,SNR=11								
YSS	**Yuzh-Sakhalins**	**74.46**	**43**	*e*P		P	04 40 56.5	+4.4
YKA	**Yellowknife Ar**	**78.91**	**347**	P		**P**	**04 41 16.8**	**-0.2**
YKA	**Yellowknife Ar**	**78.91**	**347**	P		**P**	**04 41 16.8**	**-0.2**
	comp=Z,11nm,0.4s,baz=30,slow=5.5,SNR=1.3								
YKA	**Yellowknife Ar**	**78.91**	**347**	P		**P**	**04 41 16.8**	**-0.2**
ILAR	**Eielson Array**	**79.40**	**1**	P		**P**	**04 41 17.9**	**-1.8**
ILAR	**Eielson Array**	**79.40**	**1**	P		**P**	**04 41 17.9**	**-1.8**
	comp=Z,0.7nm,1.0s,baz=313,slow=3.2,SNR=6.9								
FFC	**Flin Flon**	**82.57**	**337**	*i* P		**P**	**04 41 36.5**	**-0.3**
FFC	**Flin Flon**	**82.57**	**337**	*e*P		**P**	**04 41 35.6**	**-1.2**
	comp=Z,4.4nm,0.9s								
FFC	**Flin Flon**	**82.57**	**337**	*e*P		**P**	**04 41 35.6**	**-1.2**
	comp=Z,4.4nm,0.9s								
ULM	**Lac du Bonnet**	**84.08**	**331**	P		**P**	**04 41 43.2**	**-1.4**
ULM	**Lac du Bonnet**	**84.08**	**331**	P		**P**	**04 41 43.2**	**-1.4**
	comp=Z,2.8nm,0.6s,baz=34,slow=3.9,SNR=3.0								
ULM					LR	LR	05 22 31.7		
	comp=Z,77nm,18.0s,baz=60,slow=38								
ULM	**Lac du Bonnet**	**84.08**	**331**	P		**P**	**04 41 43.2**	**-1.4**
COWI	**Conover**	**84.42**	**325**	P		**P**	**04 41 44.9**	**-1.5**
	comp=Z,4.9nm,1.0s								
COWI	**Conover**	**84.42**	**325**	P		**P**	**04 41 44.9**	**-1.5**
	comp=Z,4.8nm,1.0s								
SWMT	**Swartz Lake**	**92.51**	**340**	*e*P		**P**	**04 42 25.4**	**+0.2**
	comp=Z,2.8nm,1.0s								
SWMT	**Swartz Lake**	**92.51**	**340**	*e*P		**P**	**04 42 25.5**	**+0.2**
	comp=Z,2.8nm,1.0s								
PDAR	**Pinedale Array**	**95.43**	**335**	P		**P**	**04 42 38.1**	**-0.7**
PDAR	**Pinedale Array**	**95.43**	**335**	P		**P**	**04 42 38.1**	**-0.7**
	comp=Z,0.7nm,0.9s,baz=66,slow=7.2,SNR=3.5								
PDAR	**Pinedale Array**	**95.43**	**335**	P		**P**	**04 42 38.2**	**-0.7**

SKO 17 04:29:23.3, 41.31N×22.66E, h15km, M0.8, ML1.3,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.07**	**279**	*e*Pg	Pg	04 29 26.1	-0.2
VAY				*e*Lg	Lg	04 29 27.8	
	comp=N,223nm,0.2s						
VAY				*i* Sg	Sg	04 29 27.8	-0.4
VAY				*e*Lg	Lg	04 29 27.9	
	comp=E,169nm,0.3s						

CSEM ***17*** *04:29:43.3, 14.21N×44.39E, h11km, ML3.8, After DHMR*
DHMR 17 04:29:43.3±0.7, 14.21N×44.39E, h11km±3km, ML3.8,
Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DHBB	**Dhamar BB**	**0.36**	**360**	*i* S	Sg	04 29 56.3	+0.2
UDYN	**Al 'Udayn**	**0.47**	**240**	*i* P	Pg	04 29 51.4	-1.4
UDYN				*i* S	Sg	04 29 58.7	-0.6
UDYN				AML	AML	04 30 02.5	
	comp=Z,4μm,0.7s						
LBOS		**0.90**	**112**	*i* P	Pg	04 30 00.3	-0.7
LBOS				*i* S	Sg	04 30 13.1	+0.1
TRBA	**At Turbah**	**1.00**	**196**	*i* P	Pg	04 30 02.1	-0.9
TRBA				*i* S	Sb	04 30 16.7	+0.2
TRBA				AML	AML	04 30 21.4	
	comp=E,2μm,0.5s						
BDHA	**Al Bayda'**	**1.16**	**101**	*i* P	Pb	04 30 04.5	-1.3
BDHA				AML	AML	04 30 23.7	
	comp=N,2μm,1.0s						
BDHA	**Al Bayda'**	**1.16**	**101**	*i* P	Pb	04 30 04.5	-1.3
	comp=N,854nm,1.0s						
SANA	**San'a**	**1.19**	**351**	*i* P	Pn	04 30 05.6	-0.6
SANA				*i* S	Sg	04 30 22.3	0.0
SANA				AML	AML	04 30 32.7	
	comp=E,5μm,0.6s						
ADEN	**Aden**	**1.53**	**158**	*i* P	Pn	04 30 10.8	+0.2
ADEN				*i* S	Sg	04 30 32.3	-0.4
ADEN	**Aden**	**1.53**	**158**	*i* P	Pn	04 30 10.8	+0.2
ADEN				*i* S	Sg	04 30 32.3	-0.4
HAJJ	**Hajjah**	**1.67**	**333**	*i* P	Pn	04 30 13.0	+0.2
HAJJ				*i* S	Sg	04 30 36.6	-1.0
HAJJ				AML	AML	04

TRQA	Tornquist comp=N,7.7nm,0.9s	14.43	164	*e*Pn	Pn	04 42 09.0	-0.7
SAML	Samuel comp=N,3.6nm,0.8s	15.56	14	*e*P	Pn	04 42 22.8	-0.9
PLCA	Paso Flores comp=N,0.2nm,0.3s,baz=360,slow=11,SNR=3.3	16.78	190	P	Pn	04 42 39.7	+1.3
PLCA	 comp=N,99nm,19.8s,baz=159,slow=36			LR	LR	04 49 03.4	
BDFB	Brasilia comp=N,2.3nm,0.3s,baz=242,slow=11,SNR=44	19.63	68	P	P	04 43 09.5	+0.6
SNAA	Sanae comp=N,1.3nm,0.6s	59.12	161	P	P	04 48 35.8	+0.5
732A	Laxson Ranch, baz=62	61.52	327	⇓P	P	04 48 51.9	-0.1
632A	Uvalde baz=62	62.07	328	⇓P	P	04 48 55.5	-0.1
631A	Perdido Creek baz=63	62.38	327	⇓P	P	04 48 57.4	-0.3
532A	Rocksprings baz=63	62.64	328	⇑P	P	04 48 59.3	-0.1
JCT	Junction City baz=63	62.88	328	⇓P	P	04 49 00.9	-0.1
531A	Rocksprings baz=63	62.99	327	⇓P	P	04 49 01.9	+0.2
WHTX	Lake Whitney baz=63	63.07	331	⇑P	P	04 49 01.1	-1.1
432A	Menard baz=64	63.21	328	⇓P	P	04 49 02.9	-0.3
530A	J-C Ranch, Com baz=64	63.37	327	⇓P	P	04 49 04.4	+0.2
431A	Sonora baz=64	63.44	328	⇑P	P	04 49 04.5	-0.3
332A	Millersview baz=64	63.60	329	⇑P	P	04 49 05.6	-0.2
628A	Black Gap, Mar baz=64,SNR=6.1	63.63	325	⇓P	P	04 49 06.5	+0.5
529A	Stev Forest Ra baz=64,SNR=8.4	63.79	326	⇓P	P	04 49 07.2	+0.1
430A	Baggett Ranch, baz=64	63.84	327	⇑P	P	04 49 07.0	-0.3
627A	Terlingua Ranc baz=64	63.86	325	⇑P	P	04 49 07.9	+0.3
331A	San Angelo baz=64	63.87	328	⇓P	P	04 49 07.2	-0.3
TXAR	Lajitas Array comp=N,0.9nm,0.7s,baz=152,slow=8.7,SNR=16	63.92	324	P	P	04 49 08.2	+0.3
232A	Coleman baz=64	63.98	329	⇓P	P	04 49 08.0	-0.2
429A	Davenport Ranc baz=64	64.03	327	⇑P	P	04 49 08.6	0.0
528A	Cox Ranch, San baz=64	64.11	326	⇑P	P	04 49 09.3	+0.1
231A	Bronte baz=65	64.33	329	⇑P	P	04 49 09.9	-0.6
626A	Big Bend Ranch baz=65,SNR=17	64.34	324	⇓P	P	04 49 11.3	+0.7
428A	Kincaid Ranch, baz=65	64.51	326	⇑P	P	04 49 11.8	0.0
527A	Woodward Ranch baz=65	64.53	325	⇑P	P	04 49 12.0	+0.1
230A	Sterling City baz=65	64.67	328	⇑P	P	04 49 12.2	-0.5
526A	Mary Lane Ranc baz=65,SNR=11	64.72	325	⇓P	P	04 49 13.7	+0.5
329A	Wagon Wheel Ra baz=65	64.77	327	⇓P	P	04 49 13.3	-0.1
131A	Roby baz=65	64.98	329	⇑P	P	04 49 14.5	-0.2
427A	Hayter Ranch, baz=65	64.98	326	⇑P	P	04 49 15.2	+0.3
Z32A	Haskell baz=65	65.08	330	⇑P	P	04 49 15.0	-0.3
328A	Wristen Ranch, baz=65,SNR=5.2	65.10	326	⇓P	P	04 49 15.7	+0.2
426A	McDonald Obser baz=66,SNR=5.9	65.16	325	⇑P	P	04 49 16.4	+0.3
130A	Snyder baz=66	65.19	329	⇓P	P	04 49 15.9	-0.2
Z31A	Sharp Cattle R baz=66	65.40	330	⇑P	P	04 49 17.2	-0.2
228A	UT Block 9, Go baz=66	65.59	327	⇑P	P	04 49 18.2	-0.4
129A	Stewart Farms, baz=66	65.65	328	⇑P	P	04 49 18.7	-0.3
326A	Caldwell Ranch baz=66	65.65	325	⇑P	P	04 49 19.3	+0.2
Y32A	R-V Farms, Ver baz=66	65.65	331	⇓P	P	04 49 18.5	-0.5
TUL1	Tulsa baz=66	65.75	334	⇑P	P	04 49 18.1	-1.4
425A	Indio Mountain baz=66,SNR=7.0	65.76	324	⇑P	P	04 49 20.1	+0.2
Z30A	Sanderson Ranc baz=66	65.83	329	⇑P	P	04 49 19.6	-0.6
227A	Bennet, Jal baz=66	65.85	326	⇓P	P	04 49 20.7	+0.4
128A	Castleberry Fa baz=66	65.94	327	⇓P	P	04 49 20.6	-0.3
Y31A	Rekieta Farm, baz=66	65.99	330	⇓P	P	04 49 20.7	-0.4
QSPA	South Pole Qui comp=N,5.2nm,0.7s	66.01	180	*e*P	P	04 49 21.4	+0.4
QSPA	South Pole Qui comp=N,4.0nm,0.5s,baz=182,slow=1.4,SNR=22	66.01	180	P	P	04 49 21.8	+0.8
Z29A	Hungry Hill Ra baz=66	66.08	328	⇑P	P	04 49 21.5	-0.3
Y30A	Stafford Cattl baz=66	66.21	329	⇑P	P	04 49 22.2	-0.4
325A	Bean Ranch, Si baz=66,SNR=13	66.21	325	⇑P	P	04 49 23.0	+0.2
226B	Tecolote Peak, baz=67,SNR=5.1	66.35	326	⇑P	P	04 49 24.3	+0.7
X31A	McDonald Ranch baz=67	66.42	331	⇓P	P	04 49 23.6	-0.3
Z28A	Tucker Farm, M baz=67	66.44	328	⇑P	P	04 49 23.6	-0.5
324A	Moseley Ranch, baz=67,SNR=7.2	66.54	324	⇑P	P	04 49 24.0	-0.9
Y29A	Porterfield Fa baz=67	66.56	329	⇓P	P	04 49 24.6	-0.3
X30A	Coker Ranch, T baz=67	66.67	330	⇓P	P	04 49 24.8	-0.6
MNTX	Cornudas Mount comp=N,2.7nm,1.2s	66.69	325	*e*P	P	04 49 25.0	-0.6
225A	Deer Hill, Car baz=67,SNR=5.2	66.72	325	⇑P	P	04 49 26.0	0.0
126A	Clayton Basin, baz=67	66.73	326	⇓P	P	04 49 25.9	0.0
Z27A	Tatum baz=67	66.86	327	⇓P	P	04 49 26.4	-0.4
Y28A	McKinney Farm, baz=67	66.87	328	⇑P	P	04 49 26.2	-0.6
SFIN	Scholer Farm baz=67	66.95	343	⇑P	P	04 49 25.2	-1.8
224A	Cornudas Mount baz=67,SNR=12	67.06	325	⇑P	P	04 49 27.9	-0.2
X29A	Tulia baz=67	67.06	329	⇓P	P	04 49 27.6	-0.3
125A	Gardner Draw, baz=67	67.06	326	⇓P	P	04 49 27.6	-0.5
MSTX	Muleshoe baz=68	67.18	328	⇓P	P	04 49 28.4	-0.4
Z26A	Caprock baz=68	67.21	327	⇓P	P	04 49 28.8	-0.2
Y27A	Causey baz=68	67.30	328	⇑P	P	04 49 29.2	-0.4
V31A	Spring Creek L baz=68	67.32	331	⇓P	P	04 49 29.6	0.0
X28A	Dimmitt baz=68	67.35	329	⇓P	P	04 49 29.7	-0.1
124A	Stringfield Ra baz=68,SNR=7.5	67.51	325	⇑P	P	04 49 31.7	+0.7
Z25A	Roswell baz=68	67.59	326	⇓P	P	04 49 31.2	-0.1
Z24A	Sheeppen Canyo baz=68,SNR=6.9	67.96	326	⇑P	P	04 49 33.9	+0.1
Y25A	Mesa, Roswell baz=68	68.08	327	⇓P	P	04 49 34.3	-0.2
320A	Kipp Ranch, An baz=68	68.12	322	⇑P	P	04 49 35.8	+1.0
X26A	CR and CF Fran baz=68	68.15	328	⇑P	P	04 49 35.0	+0.1
W27A	Bowe Ranch, En baz=68	68.20	329	⇑P	P	04 49 35.0	-0.2
Z23A	Rita Site, Whi baz=69	68.35	325	⇑P	P	04 49 36.8	+0.7
T31A	Randall Ranch, baz=69	68.36	332	⇑P	P	04 49 36.0	0.0
220A	Playas Peak, P baz=69	68.55	323	⇑P	P	04 49 38.5	+1.1
W26A	Owens Ranch, T baz=69	68.56	328	⇓P	P	04 49 38.0	+0.6
319A	Douglas baz=69	68.57	322	⇓P	P	04 49 38.8	+1.2
121A	Cookes Peak, D baz=69	68.62	324	⇓P	P	04 49 39.0	+1.1
Z22A	Elephant Butte baz=69	68.73	325	⇑P	P	04 49 39.7	+1.2
Y23A	Lovelace Mesa, baz=69	68.78	326	⇓P	P	04 49 39.1	+0.2
U28A	Mallet baz=69	68.89	330	⇑P	P	04 49 39.3	0.0
W25A	X Bar L Ranch, baz=69	69.00	328	⇓P	P	04 49 40.3	+0.1
120A	U Bar Ranch, L baz=69	69.09	323	⇓P	P	04 49 41.6	+0.8
V26A	Tequesquite Ra baz=70	69.14	328	⇑P	P	04 49 41.2	+0.2
Z21A	St. Cloud Mine baz=69,SNR=7.2	69.15	324	⇓P	P	04 49 42.4	+1.2
U27A	Thompson Grove baz=70	69.20	330	⇑P	P	04 49 41.2	-0.1
R31A	Burdett baz=70	69.31	333	⇓P	P	04 49 41.6	-0.2
T28A	Walsh baz=70	69.45	330	⇑P	P	04 49 42.6	-0.2
W24A	Lazy 6 Ranch, baz=70	69.46	327	⇑P	P	04 49 43.3	+0.2
Z20A	Nine Sixteen R baz=70	69.50	323	⇓P	P	04 49 44.2	+0.9
V25A	Rancho No Teng baz=70	69.58	328	⇓P	P	04 49 44.0	+0.3
U26A	Atchley Ranch, baz=70	69.61	329	⇑P	P	04 49 44.2	+0.3
T27A	Campo baz=70	69.67	330	⇓P	P	04 49 44.1	-0.1
Y21A	Point of Rocks baz=70	69.69	325	⇓P	P	04 49 45.3	+0.8
S28A	Manter baz=70	69.74	331	⇑P	P	04 49 44.6	0.0
W23A	Werner Place, baz=70	69.80	326	⇑P	P	04 49 45.6	+0.5
V24A	Rampart Ranch, baz=70	69.81	327	⇑P	P	04 49 45.5	+0.3
U25A	Circle Dot Ran baz=70	69.93	328	⇓P	P	04 49 46.2	+0.3
Y20A	Horse Springs, baz=70	69.99	324	⇓P	P	04 49 47.3	+0.9
X21A	Alamocita Cree baz=70	70.08	325	⇓P	P	04 49 47.6	+0.7
T26A	Comanche Natio baz=70	70.17	329	⇓P	P	04 49 47.6	+0.3
V23A	Ortiz Mt. (NFS baz=71	70.27	327	⇓P	P	04 49 49.0	+1.0
Q29A	Oakley baz=71	70.42	332	⇓P	P	04 49 48.4	-0.3
T25A	Trinidad baz=71	70.52	329	⇓P	P	04 49 50.0	+0.5
X20A	Quemado baz=71	70.53	324	⇓P	P	04 49 50.7	+1.0
V22A	San Miguel Ran baz=71	70.77	326	⇑P	P	04 49 52.0	+0.9
S25A	Robets Cordova baz=71	70.95	329	⇓P	P	04 49 52.7	+0.6
R26A	Arlington baz=71	71.02	330	⇓P	P	04 49 52.7	+0.4
214A	Organ Pipe Nat baz=71	71.04	320	⇑P	P	04 49 53.9	+1.4
U22A	Llaves baz=71	71.11	327	⇓P	P	04 49 54.2	+1.1
O30A	MW Ranch, Wils baz=72	71.13	334	⇓P	P	04 49 52.9	+0.1
R25A	Fountain Ranch baz=72	71.28	330	⇑P	P	04 49 54.4	+0.5
S24A	Houchin Ranch, baz=72	71.30	329	⇑P	P	04 49 55.2	+0.9
BGNE	Belgrade baz=72	71.44	336	⇑P	P	04 49 54.4	-0.2
V20A	Brimhall baz=72	71.48	325	⇑P	P	04 49 56.2	+0.9
U21A	Nageezi baz=72	71.55	326	⇓P	P	04 49 56.4	+0.7
T22A	Edith baz=72	71.63	327	⇓P	P	04 49 56.9	+0.7
W18A	Petrified Fore baz=72	71.63	324	⇑P	P	04 49 57.5	+1.3
T21A	Navajo Lake baz=72	71.92	327	⇑P	P	04 49 58.7	+0.8
R23A	Moffat baz=72	72.03	329	⇑P	P	04 49 59.4	+0.7
X16A	Lo Mia Camp, P baz=72	72.04	322	⇑P	P	04 49 60.0	+1.3
S22A	4UR Ranch, Cre baz=72	72.17	328	⇑P	P	04 50 00.1	+0.6
P25A	Willow Gulch B baz=73	72.33	331	⇓P	P	04 50 00.9	+0.7
Q24A	Divide baz=73	72.33	330	⇑P	P	04 50 00.9	+0.4
Y14A	Wickenburg baz=73	72.58	321	⇑P	P	04 50 02.8	+1.1
WUAZ	Wupatki baz=73	72.82	323	⇑P	P	04 50 04.7	+1.5
S20A	Disappointment baz=73	72.99	327	⇑P	P	04 50 05.2	+1.0
R21A	Cimarron baz=73	73.01	328	⇑P	P	04 50 05.2	+0.9
GLA	Glamis baz=73	73.01	319	⇑P	P	04 50 05.6	+1.4
ISCO	Idaho Springs baz=74	73.22	330	⇑P	P	04 50 06.4	+0.8
R20A	Redvale baz=74,SNR=5.7	73.28	327	⇑P	P	04 50 07.0	+1.2
Y12C	Blythe baz=74	73.33	320	⇓P	P	04 50 07.6	+1.7
K29A	Lazy Trails An baz=74	73.42	335	⇓P	P	04 50 06.9	+0.4
P22A	Eagle baz=74	73.59	329	⇑P	P	04 50 08.1	+0.4
S18A	Hurst Farm, Bl baz=74	73.71	326	⇑P	P	04 50 09.1	+0.6
BC3	Big Chuckawall baz=74	73.81	319	⇑P	P	04 50 10.3	+1.3
P21A	Newcastle baz=74	73.86	328	⇑P	P	04 50 10.1	+0.8
W13A	Hualapai Mount baz=74	73.92	321	⇑P	P	04 50 10.8	+1.1
O22A	Kremmling baz=74	73.94	329	⇑P	P	04 50 09.8	-0.1
IRM	Iron Mountain baz=74	73.98	320	⇑P	P	04 50 11.2	+1.3
U15A	North Rim baz=74	73.99	323	⇓P	P	04 50 11.5	+1.3
M24A	Cheyenne baz=74	74.21	331	⇑P	P	04 50 12.0	+0.8
N23A	Red Feather La baz=75	74.25	330	⇑P	P	04 50 12.0	+0.5
J28A	Allard Ranch, baz=75	74.34	335	⇓P	P	04 50 12.0	+0.2
BELC	Belle Mtn. Jos baz=75	74.37	319	⇑P	P	04 50 13.3	+1.0
N22A	Wattenberg Ran baz=75	74.41	330	⇑P	P	04 50 13.3	+0.9
VNDA	Vanda comp=N,0.6nm,0.7s,baz=122,slow=4.5,SNR=4.1	74.53	190	P	P	04 50 12.6	+0.2
P19A	Cripple Cowboy baz=75,SNR=6.7	74.69	328	⇓P	P	04 50 15.2	+1.2
GMRC	Granite Mounta baz=75	74.72	320	⇑P	P	04 50 14.8	+0.6
SRU	San Rafael baz=75	75.06	326	⇓P	P	04 50 16.8	+0.7
HEC	Hector,Ludlow baz=75	75.15	320	⇑P	P	04 50 18.1	+1.5
Q16A	Castle Valley baz=76	75.25	326	⇑P	P	04 50 18.0	+0.8
N20A	Spence Gulch, baz=76	75.28	329	⇑P	P	04 50 17.6	+0.2
J25A	Sunshine Ranch baz=76	75.34	333	⇓P	P	04 50 18.0	+0.5
M21A	Separation Pea baz=76	75.46	330	⇓P	P	04 50 18.9	+0.4
L21A	Rawlins baz=76	75.75	330	⇑P	P	04 50 20.8	+0.7
GSC	Goldstone baz=76	75.75	320	⇓P	P	04 50 21.2	+1.1
K21A	Alcova baz=76	76.22	330	⇓P	P	04 50 23.4	+0.7
L20A	Wamsutter baz=76	76.23	329	⇑P	P	04 50 23.1	+0.4
J22A	Midwest baz=77	76.50	331	⇓P	P	04 50 24.2	+0.1
TORD	Torodi Ar. Bea comp=N,1.6nm,0.6s,baz=255,slow=5.5,SNR=31	76.51	69	P	P	04 50 23.6	-1.0
FURC	Furnace Creek, baz=77	76.59	321	⇑P	P	04 50 26.1	+1.5
MPMC	Manual Prospec baz=77	76.68	320	⇓P	P	04 50 26.7	+1.3
K20A	Yellowstone Ra baz=77	76.74	330	⇑P	P	04 50 25.8	+0.3
H24A	Dirks Ranch, A baz=77	76.77	333	⇓P	P	04 50 25.5	-0.1
I22A	9 Mile Ranch, baz=77	76.89	332	⇑P	P	04 50 26.1	-0.2
ISA	Isabella baz=77	76.99	319	⇓P	P	04 50 29.0	+1.9
DUG	Dugway baz=77	77.04	326	⇓P	P	04 50 28.3	+1.0
I21A	Big Trails, Te baz=78	77.18	331	⇑P	P	04 50 27.8	-0.1
R11A	Troy Canyon, C baz=78	77.19	323	⇑P	P	04 50 29.6	+1.4
GRAC	Grapevine Rang baz=78	77.26	321	⇑P	P	04 50 29.4	+1.0
PKM	Peak Mountain baz=78	77.29	318	⇓P	P	04 50 30.6	+1.7
PDAR	Pinedale Array comp=N,0.8nm,0.7s,baz=129,slow=8.3,SNR=5.8	77.39	329	P	P	04 50 29.6	+0.4
G23A	Biddle baz=78	77.48	333	⇑P	P	04 50 29.4	-0.2
MDND	Maddock baz=78	77.52	338	⇓P	P	04 50 30.2	+0.6
J19A	Crowheart baz=78	77.54	330	⇓P	P	04 50 30.7	+0.7
F24A	Ekalaka baz=78	77.62	334	⇓P	P	04 50 30.9	+0.6
I20A	Worland baz=78	77.66	331	⇑P	P	04 50 30.9	+0.3
H21A	Big Horn, Sher baz=78	77.72	332	⇓P	P	04 50 31.7	+0.8
H20A	Greybull baz=78	78.02	331	⇑P	P	04 50 32.8	+0.3
I19A	Meeteetse baz=78	78.11	330	⇑P	P	04 50 33.5	+0.3
I18A	Diamond G Ranc baz=78	78.23	330	⇓P	P	04 50 34.5	+0.7
ULM	Lac du Bonnet comp=N,2.3nm,0.4s,baz=172,slow=5.7,SNR=2.7	78.45	341	P	P	04 50 34.9	+0.2
E23A	Ismay baz=79	78.50	334	⇓P	P	04 50 35.0	0.0
G20A	Bridger baz=79,SNR=5.4	78.69	332	⇑P	P	04 50 36.4	+0.1
SCHQ	Schefferville comp=N,0.7nm,0.4s,baz=196,slow=7.4,SNR=2.8	78.70	0	P	P	04 50 35.6	-0.3
NVAR	Mina Array Bea comp=N,0.6nm,0.6s,baz=151,slow=5.6,SNR=6.9	78.78	321	P	P	04 50 37.7	+0.7
H18A	Shoshone NF, C baz=79	78.91	330	⇑P	P	04 50 38.2	+0.6
C24A	Savage baz=79	79.00	335	⇑P	P	04 50 38.4	+0.7
D23A	Lindsay baz=79	79.02	334	⇓P	P	04 50 38.9	+1.0
I16A	Newdale baz=80	79.14	329	⇑P	P	04 50 39.7	+0.9
E21A	Keefer Ranch, baz=80	79.26	333	⇑P	P	04 50 39.5	+0.3
G18A	Lazy EL Ranch, baz=80	79.36	331	⇑P	P	04 50 40.3	+0.4
D22A	Cohagen baz=80	79.38	334	⇑P	P	04 50 40.7	+0.8
F19A	Roth Farm, Mol baz=80	79.51	332	⇓P	P	04 50 40.7	+0.1
H16A	Russell Place, baz=80	79.66	330	⇓P	P	04 50 42.5	+0.9
E20A	Meyer Farm, Mu baz=80	79.67	332	⇓P	P	04 50 41.8	+0.4
DGMT	Dagmar baz=80	79.69	336	⇑P	P	04 50 41.8	+0.4
F18A	Big Timber baz=80,SNR=5.2	79.89	331	⇓P	P	04 50 43.0	+0.3
E19A	Rath Farm, Rou baz=80,SNR=5.5	79.92	332	⇓P	P	04 50 43.2	+0.4
I14A	Mackay baz=80	80.12	328	⇑P	P	04 50 44.6	+0.5
D20A	Manuel Ranch, baz=80	80.14	333	⇑P	P	04 50 44.3	+0.4
B22A	Reddig Ranch S baz=81	80.24	335	⇑P	P	04 50 45.0	+0.6
C21A	Desert Coulee baz=81	80.30	334	⇑P	P	04 50 45.0	+0.3
F17A	Fitzpatrick Pl baz=81	80.31	331	⇓P	P	04 50 45.8	+0.8
HLID	Hailey baz=81,SNR=10	80.33	327	⇓P	P	04 50 46.8	+1.6
E18A	Harlowton baz=81	80.49	331	⇓P	P	04 50 46.0	+0.2
D19A	Cripps Ranch, baz=81	80.51	332	⇓P	P	04 50 46.4	+0.4
BOSA	Boshof comp=N,2.9nm,0.8s,baz=262,slow=7.1,SNR=3.0	80.52	117	P	P	04 50 46.9	+0.2
C20A	Veseth Ranch, baz=81	80.58	333	⇑P	P	04 50 46.3	+0.1
A22A	Carney Farms, baz=81	80.77	335	⇓P	P	04 50 47.8	+0.6
E17A	Martinsdale baz=81	80.82	331	⇓P	P	04 50 48.4	+0.6
MFID	Camas Ranch baz=81	80.93	326	⇑P	P	04 50 49.4	+1.1
C19A	Slack Wire Ran baz=81	81.03	333	⇓P	P	04 50 48.8	+0.2
F15A	Butte baz=81	81.09	330	⇑P	P	04 50 50.2	+1.0
B20A	Solberg Farm, baz=82	81.16	334	⇑P	P	04 50 49.5	+0.2
MAW	Mawson comp=N,2.5nm,0.6s,baz=224,slow=5.7,SNR=5.5	81.21	163	P	P	04 50 50.2	+0.9
E16A	East Helena baz=82	81.24	330	⇑P	P	04 50 50.6	+0.7
H12A	Diamond D Ranc baz=82	81.26	327	⇓P	P	04 50 51.0	+0.9
D17A	Six Diamond Ra baz=82,SNR=5.8	81.28	331	⇑P	P	04 50 50.4	+0.3
B19A	Brinkman Farms baz=82	81.55	333	⇓P	P	04 50 51.9	+0.5
D16A	Dana Ranch, Ca baz=82,SNR=10	81.56	331	⇑P	P	04 50 52.5	+1.0
C17A	Wharram Farm, baz=82	81.68	332	⇓P	P	04 50 52.6	+0.5
B18A	Beardsley Farm baz=82	81.85	333	⇑P	P	04 50 53.2	+0.3
D15A	Lincoln baz=82	82.01	330	⇑P	P	04 50 54.8	+0.8
B17A	L&G Farms, Che baz=82	82.20	332	⇓P	P	04 50 55.0	+0.2
C16A	Fuhringer Ranc baz=82	82.23	331	⇓P	P	04 50 55.5	+0.5
D14A	Greenough baz=83	82.48	330	⇑P	P	04 50 56.6	+0.2
MSO	Missoula baz=83	82.50	330	⇓P	P	04 50 57.1	+0.6
C15A	Salmond Ranch, baz=83,SNR=6.3	82.60	331	⇓P	P	04 50 57.7	+0.8
B16A	M & M Farms, S baz=83	82.68	332	⇓P	P	04 50 57.8	+0.5
D13A	Huson baz=83	82.93	329	⇓P	P	04 50 59.3	+0.7
E12A	Beaver Dam Sad baz=83	82.96	328	⇓P	P	04 50 59.4	+0.5
B15A	Bradely Ranch, baz=83	82.98	331	⇓P	P	04 50 58.8	-0.1
A16A	West Butte Ran baz=83,SNR=7.4	83.04	332	⇓P	P	04 50 59.5	+0.3
C14A	Swan Lake baz=83	83.10	330	⇓P	P	04 51 00.0	+0.6
D12A	Red Ives Fores baz=84	83.32	329	⇑P	P	04 51 01.5	+0.9
C13A	Hot Springs baz=84	83.42	330	⇓P	P	04 51 02.1	+1.0
B13A	Whitefish baz=84	83.88	330	⇑P	P	04 51 04.0	+0.7
RAR	Rarotonga comp=N,100nm,21.3s,baz=269,slow=29	84.08	250	LR	LR	05 19 46.5	
A13A	Flathead Natio baz=85	84.26	331	⇓P	P	04 51 06.3	+0.9
C11A	Tepee Creek (N baz=85	84.31	329	⇑P	P	04 51 05.9	+0.3

YKA	**Yellowknife Ar**	**94.35**	**340**	P		**P**	**04 51 52.5**	**-0.1**
	comp=N,8.0nm,0.4s,baz=132,slow=4.7,SNR=2.6							
ASAR	**Alice Springs**	**128.34**	**204**	PKP		**PKPdf**	**04 57 39.4**	**-0.6**
	comp=N,1.2nm,0.8s,baz=137,slow=1.7,SNR=12							
WRA	**Warramunga Arr**	**131.52**	**207**	PKP		**PKPdf**	**04 57 45.7**	**-0.3**
	comp=N,0.6nm,0.5s,baz=157,slow=1.7,SNR=21							
PETK	**Petropavlovsk-**	**135.85**	**323**	PKP		**PKPdf**	**04 57 53.5**	**+0.5**
	comp=N,0.6nm,0.5s,baz=93,slow=5.9,SNR=4.0							
ZALV	**Zalesovo Beam**	**143.50**	**28**	PKP	PKPbc		04 58 04.9	+0.2
	comp=N,2.4nm,0.5s,baz=301,slow=5.0,SNR=12							
MKAR	**Makanchi Array**	**146.58**	**40**	PKPbc		**PKPdf**	**04 58 13.0**	**+0.5**
	comp=N,3.3nm,0.6s,baz=324,slow=2.3,SNR=30							

CSEM ***17*** *05:07:28.6±1.1,75.10N×7.59E, h10km, ML2.5, Error ellipse: s-maj=36.6km s-min=9.5km az=79.0*
ISCJB ***17*** *05:07:30.1±0.6, 75.22N±0.04×8.6E±0.3, h10km, mb3.5/10, MS3.3/4, Error ellipse: s-maj=9.7km s-min=5.9km az=4.4*
IDC ***17*** *05:07:30.9±0.7, 75.08N×7.65E, h0km, mb3.4/10, mb1 3.8/13, mb1mx3.6/28, mbtmp3.6/13, ML3.9/3, MS3.2/11, Ms1 3.2/11, ms1mx3.0/38, Error ellipse: s-maj=18.3km s-min=13.5km az=59.0*
BER ***17*** *05:07:31.3±3.2, 75.04N×7.93E, h15km±25km, MD1.7, ML2.5, ML3.5(NAO)*
NAO ***17*** *05:07:33.6±3.1, 75.11N×9.65E, h6km±16km, ML3.5*

ISC 17 05:07:30.8±0.6, 75.15N±0.05×8.42E±0.07, h10km, n39, σ1s82/42, mb3.5/10, MS3.3/4, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**2.54**	**39**	*eP*		**Pn**	**Pn**	**05 08 12.3**	**+0.3**
HSP				*eS*		**Sn**	**Sn**	**05 08 38.9**	**-4.0**
BJO	**Bjornoya**	**2.91**	**98**	*eP*		**Pn**	**Pn**	**05 08 18.2**	**+1.3**
BJO					AML	AML	AML	05 08 56.0	
	comp=Z,37nm,0.4s								
BJO	**Bjornoya**	**2.91**	**98**	*eP*		**Pn**	**Pn**	**05 08 18.2**	**+1.3**
	SNR=55								
SPA0	**Spitsbergen Ar**	**3.56**	**27**	Pn		**Pn**	**Pn**	**05 08 27.1**	**+1.2**
	baz=204,slow=14								
SPA0				Pg		**Pb**	**Pb**	**05 08 33.7**	**+0.1**
	baz=214,slow=16								
SPA0				Sn		**Sn**	**Sn**	**05 09 07.1**	**-0.8**
	baz=221,slow=18								
SPA0	**Spitsbergen Ar**	**3.56**	**27**	Pn		**Pn**	**Pn**	**05 08 27.1**	**+1.2**
	baz=204,slow=14								
SPA0				Pg		**Pb**	**Pb**	**05 08 33.7**	**+0.1**
	baz=214,slow=16								
SPA0				Sn		**Sn**	**Sn**	**05 09 07.1**	**-0.8**
	baz=221,slow=18								
SPA0	**Spitsbergen Ar**	**3.56**	**27**	Pn		**Pn**	**Pn**	**05 08 27.1**	**+1.2**
	baz=204,slow=14,SNR=55								
SPA0				Sn		**Sn**	**Sn**	**05 09 07.1**	**-0.8**
	baz=221,slow=18,SNR=55								
SPITS	**Spitsbergen Ar**	**3.56**	**27**	Pn		**Pn**	**Pn**	**05 08 27.5**	**+1.6**
	baz=210,slow=16,SNR=1062								
SPITS				Sn		**Sn**	**Sn**	**05 09 07.7**	**-0.2**
	baz=221,slow=20,SNR=2.1								
KBS	**Kingsbay**	**3.88**	**10**	Pn		**Pn**	**Pn**	**05 08 30.0**	**-0.3**
KBS				Sn		**Sn**	**Sn**	**05 09 13.8**	**-2.1**
KBS	**Kingsbay**	**3.88**	**10**	Pn		**Pn**	**Pn**	**05 08 30.0**	**-0.3**
KBS				Sn		**Sn**	**Sn**	**05 09 13.8**	**-2.1**
KBS	**Kingsbay**	**3.88**	**10**	Pn		**Pn**	**Pn**	**05 08 30.0**	**-0.3**
	SNR=55								
KBS				Sn		**Sn**	**Sn**	**05 09 13.8**	**-2.1**
	SNR=55								
HOPEN	**Hopen**	**4.29**	**64**	*eP*		**Pn**	**Pn**	**05 08 37.4**	**+1.4**
JMIC	**Jan Mayen**	**6.45**	**238**	Pn		**Pn**	**Pn**	**05 09 02.4**	**-3.2**
	comp=Z,10nm,0.3s,baz=12,slow=3.8,SNR=9.5								
JMIC					LR	LR	LR	05 10 51.8	
	comp=Z,196nm,18.0s,baz=55,slow=32								
ARA0	**ARCESS Array S**	**7.63**	**129**	Pn		**Pn**	**Pn**	**05 09 20.4**	**-1.4**
	baz=333,slow=12								
ARA0				Sn		Sn	Sn	05 10 41.2	-6.9
	baz=334,slow=22								
ARA0	**ARCESS Array S**	**7.63**	**129**	Pn		**Pn**	**Pn**	**05 09 20.4**	**-1.4**
	baz=333,slow=12								
ARA0				Sn		Sn	Sn	05 10 41.2	-6.9
	baz=334,slow=22								
ARA0	**ARCESS Array S**	**7.63**	**129**	Pn		**Pn**	**Pn**	**05 09 20.4**	**-1.4**
	baz=333,slow=12,SNR=55								
ARCES	**ARCESS Array B**	**7.63**	**129**	Pn		**Pn**	**Pn**	**05 09 22.9**	**+1.2**
	comp=Z,0.6nm,0.3s,baz=318,slow=9.7,SNR=25								
ARCES				Sn		**Sn**	**Sn**	**05 10 42.2**	**-5.9**
	comp=Z,1.6nm,0.3s,baz=335,slow=20,SNR=9.0								
ARCES					LR	LR	LR	05 12 20.6	
	comp=Z,132nm,20.8s,baz=276,slow=37								
KEV	**Kevo**	**7.76**	**125**	*ep*		**Pn**	**Pn**	**05 09 25.2**	**+1.7**
	comp=Z,0.8nm,0.4s								
KEV	**Kevo**	**7.76**	**125**	*eP*		**Pn**	**Pn**	**05 09 25.2**	**+1.7**
	comp=Z,0.8nm,0.4s								
NOA	**NORSAR Array B**	**14.21**	**174**	LR		LR	LR	05 15 37.0	
	comp=Z,25nm,21.2s,baz=355,slow=34								
BORG	**Borgarnes**	**14.35**	**239**	LR		LR	LR	05 14 58.7	
	comp=Z,96nm,20.4s,baz=145,slow=32								
FIA0	**FINESS Array S**	**15.11**	**146**	Pn		**Pn**	**Pn**	**05 11 02.3**	**-1.7**
	slow=22								
FIA0	**FINESS Array S**	**15.11**	**146**	Pn		**Pn**	**Pn**	**05 11 02.3**	**-1.7**
	slow=22								
FIA0	**FINESS Array S**	**15.11**	**146**	Pn		**Pn**	**Pn**	**05 11 02.3**	**-1.7**
	slow=20,SNR=55								
FINES	**FINESS Array B**	**15.11**	**146**	Pn		**P**	**P**	**05 11 09.4**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=342,slow=22,SNR=1.9								
FINES					LR	LR	LR	05 17 15.4	
	comp=Z,74nm,18.8s,baz=213,slow=38								
HFS	**Hagfors**	**15.21**	**170**	Pn		**P**	**P**	**05 11 11.6**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=9.8,slow=11,SNR=6.6								
HFS					LR	LR	LR	05 17 20.4	
	comp=Z,38nm,19.3s,baz=166,slow=39								
SFJD	**Kangerlussuaq**	**19.85**	**277**	LR		LR	LR	05 18 32.1	
	comp=Z,90nm,19.8s,baz=98,slow=34								
AKASG	**Malin Array Be**	**25.98**	**149**	P		**P**	**P**	**05 13 04.5**	**+1.5**
	comp=Z,2.4nm,0.6s,baz=346,slow=9.6,SNR=4.2								
GERES	**GERESS Array B**	**26.49**	**172**	P		**P**	**P**	**05 13 10.6**	**+2.7**
	comp=Z,0.2nm,0.3s,baz=1.9,slow=8.0,SNR=3.8								
AKTO	**Aktyubinsk**	**31.82**	**113**	LR		LR	LR	05 27 09.1	
	comp=Z,65nm,19.6s,baz=128,slow=37								
SCHQ	**Schefferville**	**34.31**	**277**	LR		LR	LR	05 27 43.3	
	comp=Z,51nm,18.7s,baz=68,slow=36								
ZALV	**Zalesovo Beam**	**35.40**	**83**	P		P	P	05 14 29.7	+3.5
	comp=Z,0.5nm,0.6s,baz=325,slow=7.0,SNR=2.1								
ZALV					PcP	**PcP**	**PcP**	**05 16 56.9**	**+1.2**
	comp=Z,0.5nm,0.4s,baz=289,slow=4.4,SNR=2.9								
ZALV					LR	LR	LR	05 33 14.7	
	comp=Z,40nm,18.4s,baz=252,slow=43								
BRTR	**Keskin Array B**	**37.35**	**147**	P		P	P	05 14 46.7	+3.6
	comp=Z,0.4nm,0.7s,baz=354,slow=9.2,SNR=2.5								
ILAR	**Eielson Array**	**39.42**	**344**	P		**P**	**P**	**05 15 02.2**	**+2.1**
	comp=Z,0.5nm,0.8s,baz=2.7,slow=5.9,SNR=6.8								
MKAR	**Makanchi Array**	**41.30**	**90**	LR		LR	LR	05 36 18.1	
	comp=Z,76nm,19.5s,baz=354,slow=42								
SONM	**Songino Array**	**46.38**	**67**	P		P	P	05 16 01.0	+4.2
	comp=Z,0.4nm,0.8s,baz=336,slow=6.3,SNR=2.9								
PDAR	**Pinedale Array**	**55.63**	**308**	P		**P**	**P**	**05 17 06.8**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=52,slow=5.8,SNR=3.6								
NVAR	**Mina Array Bea**	**61.52**	**314**	P		**P**	**P**	**05 17 48.4**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=18,slow=6.8,SNR=2.1								
TORD	**Torodi Ar. Bea**	**62.10**	**187**	P		**P**	**P**	**05 17 52.4**	**+1.0**
	comp=Z,0.4nm,0.8s,baz=6.4,slow=6.9,SNR=4.2								
TXAR	**Lajitas Array**	**67.28**	**299**	P		**P**	**P**	**05 18 26.3**	**+1.0**
	comp=Z,0.2nm,0.8s,baz=2.8,slow=3.7,SNR=2.6								

NSSC ***17*** *05:07:53.6±1.7,36.23N×35.86E, h17km±9km, MD0.5, ML2.3, Fault plane solution: NP1:ϕs116.10000°, δ64.34000°, λ-56.31000°.*
ISCJB ***17*** *05:07:57.2±0.8,36.12N±0.03×35.98E±0.06, h15km±8km, Error ellipse: s-maj=8.1km s-min=5.7km az=7.7*
DDA ***17*** *05:07:57.9,36.18N×36.08E, h7km, MD2.9*
CSEM ***17*** *05:07:57.9,36.18N×36.08E, h7km, MD2.9, After DDA*

ISC 17 05:07:56.5±1.1,36.15N±0.03×35.96E±0.05, h16km±8km, n13, σ0s71/26, 2C, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HTY	**Hatay**	**0.15**	**100**	PG		**Pg**	**Pg**	**05 08 00.7**	**+0.3**
HTY				SG		**Sg**	**Sg**	**05 08 03.2**	**+0.1**
YAYL	**Yayladag**	**0.16**	**133**	*i* Pg		**Pg**	**Pg**	**05 08 01.0**	**+0.2**
YAYL				*i* Sg		**Sg**	**Sg**	**05 08 03.6**	**-0.1**
ARNB	**Al Arnab**	**0.28**	**178↑**	*eP*		**Pg**	**Pg**	**05 08 02.2**	**-0.5**
ARNB				*i* S		**Sg**	**Sg**	**05 08 06.5**	**-0.4**
ARNB					AML	AML	AML	05 08 07.6	
	comp=N,208nm,0.4s								
ARNB					AML	AML	AML	05 08 07.8	
	comp=E,282nm,0.8s								
ARNB					AML	AML	AML	05 08 08.2	
	comp=Z,89nm,0.4s								
BTCH	**Batrach**	**0.42**	**105↑**	*eP*		**Pg**	**Pg**	**05 08 05.2**	**+0.1**
BTCH				*i* S		**Sg**	**Sg**	**05 08 11.1**	**+0.3**
BTCH				*eS*		**Sb**	**Sb**	**05 08 11.4**	**-0.4**
BTCH					AML	AML	AML	05 08 11.9	
	comp=Z,247nm,0.3s								
BTCH					AML	AML	AML	05 08 12.6	
	comp=N,186nm,0.2s								
BTCH					AML	AML	AML	05 08 13.5	
	comp=E,218nm,0.4s								
COBT	**Iskenderun**	**0.44**	**33**	*eP*		**Pg**	**Pg**	**05 08 05.7**	**+0.2**
COBT				*eS*		**Sg**	**Sg**	**05 08 11.1**	**-0.6**
COBT	**Iskenderun**	**0.44**	**33**	*eP*		**Pg**	**Pg**	**05 08 05.7**	**+0.2**
COBT				*eS*		**Sg**	**Sg**	**05 08 11.1**	**-0.6**
YURE	**YUREGIR**	**0.73**	**339**	*eP*		**Pn**	**Pn**	**05 08 12.3**	**+0.1**
YURE				*eS*		**Sb**	**Sb**	**05 08 21.1**	**+0.5**
YURE	**YUREGIR**	**0.73**	**339**	*eP*		**Pn**	**Pn**	**05 08 12.3**	**+0.1**
YURE				*eS*		**Sb**	**Sb**	**05 08 21.1**	**+0.5**
DRWC	**Darouich**	**0.74**	**50**	*i* P		Pg	Pg	05 08 07.5	-3.5
DRWC				*i* S		**Sg**	**Sg**	**05 08 18.1**	**-2.8**
DRWC					AML	AML	AML	05 08 18.8	
	comp=N,77nm,0.3s								
DRWC					AML	AML	AML	05 08 19.4	
	comp=Z,70nm,0.4s								
DRWC					AML	AML	AML	05 08 19.9	
	comp=E,134nm,0.5s								
KUZU	**Kuzuini**	**1.10**	**55**	*eP*		**Pn**	**Pn**	**05 08 17.8**	**+0.5**
KUZU				*eS*		**Sb**	**Sb**	**05 08 31.5**	**+0.2**
KUZU	**Kuzuini**	**1.10**	**55**	*eP*		**Pn**	**Pn**	**05 08 17.8**	**+0.5**
KUZU				*eS*		**Sb**	**Sb**	**05 08 31.5**	**+0.2**
AYKD	**Aykdinkavak**	**1.44**	**28**	*eP*		**Pg**	**Pg**	**05 08 24.4**	**+0.2**
AYKD				*eS*		**Sg**	**Sg**	**05 08 42.4**	**-0.5**
AYKD	**Aykdinkavak**	**1.44**	**28**	*eP*		**Pg**	**Pg**	**05 08 24.4**	**+0.2**
AYKD				*eS*		**Sg**	**Sg**	**05 08 42.4**	**-0.5**

ISCJB ***17*** *05:19:20.1±0.6, 12.27N±0.06×46.46E±0.05, h10km, mb3.9/15, MS3.6/13, Error ellipse: s-maj=9.5km s-min=6.0km az=30.9*
IDC ***17*** *05:19:20.0±0.9, 12.03N×46.72E, h0km, mb3.9/15, mb1 4.0/17, mb1mx3.9/31, mbtmp3.9/17, ML3.5/2, MS3.6/15, Ms1 3.6/15, ms1mx3.3/39, Error ellipse: s-maj=21.4km s-min=17.4km az=3.0*
CSEM ***17*** *05:19:22.9, 12.39N×46.32E, h25km, ML4.0, After DHMR*
DHMR ***17*** *05:19:22.9±0.9, 12.39N×46.32E, h26km±10km, ML4.0*

ISC 17 05:19:22.0±0.7, 12.26N±0.07×46.44E±0.07, h10km, n38, σ2s06/33, mb4.0/15, MS3.5/13, Western Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ADEN	**Aden**	**1.51**	**290**	*i* P		**Pn**	**Pn**	**05 19 46.8**	**-2.3**
ADEN				*i* S		**Sn**	**Sn**	**05 20 05.3**	**-3.5**
ADEN					AML	AML	AML	05 20 06.8	
	comp=E,5μm,0.5s								
ADEN	**Aden**	**1.51**	**290**	*i* P		**Pn**	**Pn**	**05 19 46.8**	**-2.3**
ADEN				*i* S		**Sn**	**Sn**	**05 20 05.3**	**-3.5**
	comp=E,3μm,0.5s								
BDHA	**Al Bayda'**	**1.90**	**334**	*i* P		**Pn**	**Pn**	**05 19 53.1**	**-1.7**
BDHA	**Al Bayda'**	**1.90**	**334**	*i* P		**Pn**	**Pn**	**05 19 53.1**	**-1.7**
LBOS		**1.97**	**324**	*i* P		**Pn**	**Pn**	**05 19 53.9**	**-1.9**
LBOS				*i* S		**Sn**	**Sn**	**05 20 18.1**	**-2.7**
TRBA	**At Turbah**	**2.46**	**293**	*i* P		**Pn**	**Pn**	**05 20 01.3**	**-1.1**
TRBA					AML	AML	AML	05 20 42.2	
	comp=N,971nm,0.5s								
UDYN	**Al 'Udayn**	**2.94**	**305**	*i* P		**Pn**	**Pn**	**05 20 08.4**	**-0.6**
DHBB	**Dhamar BB**	**3.04**	**319**	*i* S		**Sn**	**Sn**	**05 20 46.6**	**-0.4**
DHBB	**Dhamar BB**	**3.04**	**319**	*i* S		**Sn**	**Sn**	**05 20 46.7**	**-0.4**
ATD	**Arta Tunnel**	**3.59**	**259**	Pn		**Pn**	**Pn**	**05 20 18.9**	**+1.1**
	comp=N,4.9nm,0.3s,baz=148,slow=20,SNR=5.7								
ATD					LR	LR	LR	05 21 25.3	
	comp=N,224nm,18.7s,baz=114,slow=33								
HAJJ	**Hajjah**	**4.39**	**321**	*i* S		**Sn**	**Sn**	**05 21 19.1**	**-1.1**
HAJJ					AML	AML	AML	05 21 44.1	
	comp=N,444nm,0.4s								
HAJJ	**Hajjah**	**4.39**	**321**	*i* S		**Sn**	**Sn**	**05 21 19.1**	**-1.1**
	comp=N,222nm,0.4s								
KMBO	**Kilima Mbogo**	**16.13**	**215**	Pn		**Pn**	**Pn**	**05 23 08.2**	**-1.1**
	comp=N,0.1nm,0.3s,baz=33,slow=14,SNR=4.3								
KMBO					LR	LR	LR	05 29 10.2	
	comp=N,236nm,19.3s,baz=95,slow=37								
MBAR	**Mbarara**	**20.15**	**232**	LR		LR	LR	05 31 22.6	
	comp=N,119nm,19.9s,baz=49,slow=36								
EIL	**Elat**	**20.34**	**330**	P		Pn	Pn	05 24 01.9	+1.2
	comp=N,9.2nm,1.0s,baz=97,slow=3.2,SNR=4.9								
EIL					LR	LR	LR	05 31 08.0	
	comp=N,196nm,21.6s,baz=277,slow=34								
ASF	**Jabal al Asfar**	**21.67**	**338**	P		**P**	**P**	**05 24 16.7**	**+3.7**
	comp=N,2.1nm,0.7s,baz=260,slow=2.9,SNR=4.8								
MMAI	**Mount Meron Ar**	**23.00**	**336**	P		**P**	**P**	**05 24 31.6**	**+4.4**
	comp=N,0.6nm,0.2s,baz=193,slow=4.4,SNR=2.2								
MMAI					LR	LR	LR	05 33 53.8	
	comp=N,320nm,18.3s,baz=130,slow=38								
GNI	**Garni**	**27.82**	**357**	LR		LR	LR	05 37 39.8	
	comp=N,178nm,19.6s,baz=348,slow=39								
BRTR	**Keskin Array B**	**29.60**	**340**	P		**P**	**P**	**05 25 30.1**	**+2.5**
	comp=N,1.9nm,0.9s,baz=188,slow=7.4,SNR=3.7								
BRTR					LR	LR	LR	05 37 57.8	
	comp=N,108nm,19.2s,baz=10,slow=37								
AKTO	**Aktyubinsk**	**39.23**	**12**	P		P	P	05 26 54.8	+4.3
	comp=N,0.5nm,0.3s,baz=264,slow=7.5,SNR=4.3								
AKTO					LR	LR	LR	05 46 26.3	
	comp=N,165nm,19.0s,baz=193,slow=41								
AKASG	**Malin Array Be**	**40.83**	**343**	P		**P**	**P**	**05 27 06.2**	**+2.4**
	comp=N,0.5nm,0.4s,baz=164,slow=7.7,SNR=6.1								
TORD	**Torodi Ar. Bea**	**43.61**	**276**	P		**P**	**P**	**05 27 28.3**	**+1.3**
	comp=N,3.2nm,0.9s,baz=87,slow=5.8,SNR=9.6								
TORD					PcP	**PcP**	**PcP**	**05 29 15.1**	**+0.5**
	comp=N,0.8nm,1.0s,baz=71,slow=3.6,SNR=4.3								
BVAR	**Borovoye Array**	**44.95**	**20**	P		**P**	**P**	**05 27 38.1**	**+1.0**
	comp=N,0.5nm,0.5s,baz=230,slow=9.3,SNR=4.1								
GERES	**GERESS Array B**	**45.44**	**330**	P		**P**	**P**	**05 27 42.4**	**+1.1**
	comp=N,0.8nm,0.8s,baz=133,slow=10.0,SNR=11								
GERES					LR	LR	LR	05 49 08.3	
	comp=N,32nm,18.8s,baz=120,slow=39								
BOSA	**Boshof**	**45.51**	**206**	LR		LR	LR	05 46 42.2	
	comp=N,147nm,21.2s,baz=345,slow=36								
MKAR	**Makanchi Array**	**45.76**	**34**	P		**P**	**P**	**05 27 42.6**	**-1.2**
	comp=N,2.7nm,0.8s,baz=225,slow=1.2,SNR=8.7								
MKAR					LR	LR	LR	05 47 55.0	
	comp=N,56nm,21.4s,baz=353,slow=38								
KURBB	**Kurchatov Arra**	**46.36**	**28**	P		**P**	**P**	**05 27 47.6**	**-0.7**
	comp=N,1.8nm,0.8s,baz=229,slow=8.2,SNR=8.7								
CMAR	**Chiang Mai Arr**	**50.87**	**76**	P		**P**	**P**	**05 28 21.9**	**-1.7**
	comp=N,4.5nm,0.9s,baz=271,slow=8.9,SNR=22								
FINES	**FINESS Array B**	**51.29**	**348**	LR		LR	LR	05 52 50.1	
	comp=N,31nm,19.1s,baz=159,slow=39								
ZALV	**Zalesovo Beam**	**51.45**	**28**	P		**P**	**P**	**05 28 26.2**	**-1.2**
	comp=N,0.8nm,0.4s,baz=224,slow=8.1,SNR=4.0								
NOA	**NORSAR Array B**	**55.04**	**340**	LR		LR	LR	05 57 04.4	
	comp=N,32nm,18.9s,baz=130,slow=41								
ARCES	**ARCESS Array B**	**58.76**	**352**	LR		LR	LR	05 58 18.3	
	comp=N,53nm,20.8s,baz=104,slow=40								
SONM	**Songino Array**	**60.95**	**42**	P		**P**	**P**	**05 29 35.1**	**-0.5**
	comp=N,1.2nm,0.9s,baz=246,slow=7.2,SNR=7.0								
MAW	**Mawson**	**80.54**	**174**	LR		LR	LR	06 00 33.0	
	comp=N,74nm,20.2s,baz=143,slow=31								
WRA	**Warramunga Arr**	**92.17**	**110**	P		**P**	**P**	**05 32 29.7**	**-2.9**
	comp=N,1.0nm,0.8s,baz=289,slow=3.9,SNR=6.0								
ASAR	**Alice Springs**	**92.56**	**114**	P		**P**	**P**	**05 32 33.2**	**-1.1**
	comp=N,0.6nm,0.7s,baz=270,slow=3.7,SNR=5.3								
NVAR	**Mina Array Bea**	**127.59**	**345**	PKP		**PKPdf**	**P**	**05 38 29.9**	**+1.6**
	comp=N,0.2nm,0.4s,baz=157,slow=4.9,SNR=3.1								
TXAR	**Lajitas Array**	**129.57**	**326**	PKP		**PKPdf**	**P**	**05 38 32.9**	**+0.7**
	comp=N,0.1nm,0.4s,baz=180,slow=3.6,SNR=3.1								

IDC 17 05:41:09.7±1.2, 14.83S×75.72W, h0km, mb3.6/4, mb1 3.9/7, mb1mx3.8/21, mbtmp3.8/7, ML3.4/3, MS3.5/7, Ms1 3.5/7, ms1mx3.2/27, Error ellipse: s-maj=53.8km s-min=18.7km az=56.0, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**7.45**	**102**	Pn		Pn	Pn	05 43 04.8	+4.2
	5.2nm,0.3s,baz=262,slow=8.6,SNR=99								
LPAZ					LR	LR	LR	05 46 16.0	
	comp=Z,199nm,21.7s,baz=144,slow=41								
ATAH	**Atahualpa**	**8.09**	**341**	Pn		Pn	Pn	05 43 19.2	+10
	0.7nm,0.3s,baz=172,slow=9.1,SNR=5.7								
ATAH					LR	LR	LR	05 46 23.5	
	comp=Z,114nm,19.3s,baz=352,slow=39								
LVC	**Limon Verde**	**10.07**	**141**	Pn		Pn	Pn	05 43 35.7	-0.4
	2.9nm,0.3s,baz=301,slow=13,SNR=16								
LVC					Sn	Sn	Sn	05 45 24.8	-5.3
	1.4nm,0.3s,baz=107,slow=20,SNR=5.7								
LVC					Lg	Lg	Lg	05 46 28.0	
	0.9nm,0.3s,baz=238,slow=15,SNR=4.0								
LVC					LR	LR	LR	05 46 55.5	
	comp=Z,164nm,18.6s,baz=315,slow=34								
SIV	**San Ignacio**	**14.17**	**97**	Pn		Pn	Pn	05 44 29.4	-2.5
	0.4nm,0.3s,baz=283,slow=12,SNR=7.9								
SIV					LR	LR	LR	05 50 37.9	
	comp=Z,368nm,19.4s,slow=40								
CFAA	**Coronel Fontan**	**18.05**	**159**	P		P	P	05 45 23.6	+1.0
	0.1nm,0.3s,baz=327,slow=11,SNR=12								
ROSC	**El Rosal**	**19.61**	**4**	P		Pn	Pn	05 45 41.7	+0.1
	1.0nm,0.3s,baz=101,slow=17,SNR=2.5								
CPUP	**Villa Florida**	**20.64**	**127**	P		Pn	Pn	05 45 52.6	-0.7
	1.1nm,0.7s,baz=249,slow=9.6,SNR=3.5								
CPUP					LR	LR	LR	05 53 50.5	
	comp=Z,84nm,19.5s,baz=193,slow=37								
BDFB	**Brasilia**	**26.73**	**95**	LR		LR	LR	05 58 20.9	
	comp=Z,275nm,18.5s,baz=313,slow=39								
TXAR	**Lajitas Array**	**51.54**	**328**	P		P	P	05 50 17.5	-0.2
	0.4nm,0.8s,baz=150,slow=10,SNR=5.1								
PDAR	**Pinedale Array**	**65.20**	**333**	P		P	P	05 51 53.4	+0.2
	0.3nm,0.6s,baz=138,slow=6.2,SNR=3.5								
TORD	**Torodi Ar. Bea**	**81.50**	**74**	P		P	P	05 53 29.0	-0.7
	2.2nm,0.8s,baz=269,slow=5.5,SNR=12								
TORD					LR	LR	LR	06 27 40.7	
	comp=Z,55nm,20.2s,baz=295,slow=34								
WRA	**Warramunga Arr**	**134.53**	**221**	PKP		PKPdf	PKPdf	06 00 29.9	-1.1
	0.4nm,0.9s,baz=131,slow=1.8,SNR=3.8								
ZALV	**Zalesovo Beam**	**138.08**	**17**	PKP		PKPdf	PKPdf	06 00 34.7	-1.8
	0.3nm,0.3s,baz=318,slow=4.0,SNR=3.5								
MKAR	**Makanchi Array**	**143.22**	**25**	PKP		PKPbc	PKPbc	06 00 44.3	+1.4
	0.7nm,0.9s,baz=0.0,slow=1.2,SNR=3.4								
SONM	**Songino Array**	**147.04**	**357**	PKPbc		PKPbc	PKPbc	06 00 54.2	-0.6
	0.7nm,0.6s,baz=352,slow=3.2,SNR=5.9								

ISCJB ***17*** *05:56:22.1±0.6, 30.00N±0.05×138.7E±0.1, h421km±7km, mb3.4/9, Error ellipse: s-maj=18.1km s-min=7.6km az=167.2*
JMA ***17*** *05:56:23.9±0.2, 30.22N×139.50E, h445km, M3.9*
IDC ***17*** *05:56:24.2±0.9, 30.03N×138.61E, h429km±11km, mb3.2/9, mb1 3.3/13, mb1mx3.1/28, mbtmp3.1/13, Error ellipse: s-maj=23.2km s-min=11.8km az=103.0*

ISC 17 05:56:24.0±0.8, 30.11N±0.07×138.9E±0.1, h432km±10km, n23, σ1s89/31, mb3.3/9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**3.10**	**14**	P		**P**	**P**	**05 57 31.2**

KK31					⇑S		Sn	06 10 22.3	-4.4
	9.3nm,0.2s,baz=182,slow=23,SNR=16								
CHMS	**Chumysh**	**6.49**	**19**	P		Pn		06 09 20.3	+1.2
	SNR=11								
TKM2	**Tokmak 2**	**6.67**	**25**	⇓P		Pn		06 09 22.7	+0.9
	2.2nm,0.5s								
TKM2					⇓S		Sn	06 10 35.0	-1.8
	3.8nm,0.6s								
USP	**Ospenovka**	**6.68**	**17**	P		Pn		06 09 22.6	+0.9
	SNR=12								
SDNR	**Sundarnagar**	**6.88**	**140**	*e*PKP		Pn		06 09 28.0	+3.6
SDNR				*e*S		Sn		06 10 41.0	-0.5
AYAN	**Aya Nagar**	**9.52**	**150**	*e*S		Sn		06 11 41.9	-3.2
KUDL	**Kundal**	**9.58**	**154**	*e*PKP		Pn		06 10 01.2	+0.6
KUDL				*e*S		Sn		06 11 41.8	-4.9
KUDL				AML		AML		06 11 46.9	
	comp=E,10nm,0.5s								
KUDL				AML		AML		06 11 48.9	
	comp=N,7.9nm,1.1s								
AGRA	**Agra**	**10.95**	**150**	*e*PKP		Pn		06 10 20.3	+1.5
AGRA				*e*S		Sn		06 12 15.5	-4.3
AGRA				AML		AML		06 12 36.9	
	comp=E,57nm,0.4s								
AGRA				AML		AML		06 12 37.9	
	comp=N,68nm,0.1s								
MKAR	**Makanchi Array**	**12.58**	**35**	P		Pn		06 10 41.7	+1.7
	comp=N,0.0nm,0.3s,baz=221,slow=13,SNR=3.3								
PYUN	**Piuthan**	**12.88**	**130**	*e*P		Pn		06 10 43.9	-0.2
	comp=N,28nm,0.4s								
DANN	**Dangsing**	**13.19**	**127**	*e*P		Pn		06 10 48.3	+0.1
	comp=N,20nm,0.3s								
KOLN	**Koldanda**	**13.49**	**129**	*e*P		Pn		06 10 51.8	-0.2
	comp=N,17nm,0.4s								
KURBB	**Kurchatov Arra**	**14.54**	**17**	P		P		06 11 07.2	-0.2
	comp=N,0.1nm,0.3s,baz=202,slow=10,SNR=9.1								
KKN	**Kakani**	**14.55**	**125**	*e*P		P		06 11 05.8	-2.3
	comp=N,8.8nm,0.4s								
DMN	**Daman**	**14.56**	**126**	*e*P		P		06 11 06.4	-1.8
	comp=N,10nm,0.4s								
PKIN	**Phulchoki**	**14.77**	**125**	*e*P		P		06 11 08.6	-1.9
	comp=N,11nm,0.3s								
PKI	**Pulchoki**	**14.78**	**125**	*e*P		P		06 11 09.0	-1.7
	comp=N,12nm,0.5s								
GUN	**Gumba**	**14.87**	**123**	*e*P		P		06 11 10.4	-1.3
	comp=N,29nm,0.9s								
AB31	**Akbulak array**	**15.06**	**329**	P		P		06 11 12.5	-0.8
	comp=N,0.8nm,0.2s,baz=142,slow=14,SNR=84								
RAMN	**Ramite**	**15.98**	**124**	*e*P		P		06 11 23.5	-0.5
	comp=N,25nm,0.6s								
BVAR	**Borovovoye Array**	**16.15**	**357**	P		P		06 11 24.6	-0.6
	comp=N,0.4nm,0.3s,baz=156,slow=12,SNR=8.9								
TAPN	**Taplejung**	**16.48**	**121**	*e*P		P		06 11 30.4	+1.0
	comp=N,9.5nm,0.5s								
AKTO	**Aktyubinsk**	**16.77**	**328**	⇑P		Pn		06 11 34.9	+2.6
	comp=N,0.9nm,0.3s								
AKTO				⇑S		S		06 14 30.6	-8.5
	comp=N,1.2nm,0.5s								
AKTO	**Aktyubinsk**	**16.77**	**328**	P		Pn		06 11 33.6	+1.3
	comp=N,0.7nm,0.3s,baz=138,slow=9.6,SNR=6.1								
AKTO				S		S		06 14 32.6	-6.5
	comp=N,0.4nm,0.3s,baz=18,slow=19,SNR=5.9								
ZALV	**Zalesovo Beam**	**19.28**	**24**	P		Pn		06 12 00.4	-1.6
	comp=N,0.9nm,0.3s,baz=224,slow=10.0,SNR=19								
SONM	**Songino Array**	**27.57**	**56**	P		P		06 13 21.6	+1.9
	comp=N,0.4nm,0.4s,baz=267,slow=9.9,SNR=3.0								
ARCES	**ARCESS Array B**	**41.02**	**337**	P		P		06 15 16.6	+1.8
	comp=N,1.4nm,0.7s,baz=118,slow=9.5,SNR=9.0								
NB2	**NORSAR Subarra**	**44.45**	**323**	P		P		06 15 43.6	+1.0
	comp=Z,0.6nm,0.5s,baz=93,slow=7.9								
NOA	**NORSAR Array B**	**44.45**	**323**	P		P		06 15 43.7	+1.1
	comp=Z,0.7nm,0.5s,baz=95,slow=7.7,SNR=5.4								
TORD	**Torodi Ar. Bea**	**66.38**	**269**	P		P		06 18 20.4	+0.5
	comp=Z,0.2nm,0.4s,baz=48,slow=5.5,SNR=4.5								
INK	**Inuvik**	**73.40**	**10**	P		P		06 19 03.0	+1.1
	comp=Z,1.1nm,0.5s,baz=342,slow=6.8,SNR=6.5								
WRA	**Warramunga Arr**	**81.65**	**122**	P		P		06 19 49.1	+0.6
	comp=Z,0.6nm,1.0s,baz=329,slow=4.9,SNR=4.4								

TIF 17 06:07:56.2, 42.00N×43.71E, h19km±2km,
Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOR	**Gori**	**0.30**	**93**	P	Pg	06 08 02.2	-0.6
GOR				S	Sb	06 08 08.4	+0.8
AKH	**Akhalkalaki**	**0.61**	**196**	P	Pg	06 08 08.6	0.0
AKH				S	Sg	06 08 17.0	0.0
ONI	**Oni**	**0.62**	**342**	P	Pg	06 08 09.2	+0.5
ONI				S	Sg	06 08 18.2	+1.2
GUDG	**Gudauri**	**0.73**	**51**	P	Pb	06 08 10.6	-0.1
GUDG				S	Sg	06 08 21.7	+0.7
TBLG	**Delisi**	**0.81**	**109**	P	Pn	06 08 23.4	+11
DGRG	**David-gareji**	**1.36**	**113**	P	Pg	06 08 22.9	+0.4
DGRG				S	Sg	06 08 43.2	+2.8
CHVG	**Ch'k'valeri**	**1.40**	**301**	P	Pb	06 08 21.8	0.0

ISCJB 17 06:09:25.8±0.4, 39.46N±0.03×40.19E±0.03, h9km±5km,
Error ellipse: s-maj=4.5km s-min=3.8km az=30.0
ISK 17 06:09:25.1, 39.49N×40.20E, h18km, MD3.0
CSEM 17 06:09:25.8±0.2, 39.46N×40.19E, h15km, MD2.9, Error
ellipse: s-maj=5.5km s-min=4.4km az=143.0
DDA 17 06:09:26.2, 39.51N×40.18E, h9km, MD2.9
ISC 17 06:09:26.4±0.9, 39.49N±0.02×40.18E±0.02, h14km±8km,
n33, σ1s36/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERZN	**Erzincan**	**0.36**	**285**	*e*PG	**Pg**	**06 09 33.5**	**-0.3**
ERZN				*e*SG	**Sg**	**06 09 39.5**	**+0.7**
EUZM	**Uzumlu**	**0.43**	**300**	*i* P	**Pg**	**06 09 34.7**	**-0.2**
EUZM				*i* S	**Sg**	**06 09 41.3**	**+0.6**
EUZM	**Uzumlu**	**0.43**	**300**	*i* P	**Pg**	**06 09 34.7**	**-0.2**
EUZM				*i* S	**Sg**	**06 09 41.3**	**+0.6**
KOPT	**Kop Dagi**	**0.58**	**25**	*i* P	**Pg**	**06 09 37.3**	**-0.6**
KOPT				*i* S	**Sb**	**06 09 47.1**	**+0.4**
KOPT	**Kop Dagi**	**0.58**	**25**	*i* P	**Pg**	**06 09 37.3**	**-0.6**
KOPT				*i* S	**Sb**	**06 09 47.1**	**+0.4**
BNGB	**Bing˜¶l**	**0.64**	**142**	*e*PG	**Pg**	**06 09 37.7**	**-1.1**
BNGB				*e*SG	**Sg**	**06 09 47.0**	**-0.2**
BINT	**Bingol**	**0.66**	**158**	*e*Pg	**Pg**	**06 09 37.7**	**-1.6**
BINT				*e*Sg	**Sg**	**06 09 47.1**	**-1.0**
PTK	**Pertek**	**0.85**	**226**	*e*PG	**Pb**	**06 09 42.3**	**-0.8**
PTK				*e*SG	**Sg**	**06 09 55.3**	**+1.1**
PTK	**Pertek**	**0.85**	**226**	*e*Pg	**Pb**	**06 09 42.3**	**-0.8**
PTK				*e*Sg	**Sg**	**06 09 55.3**	**+1.1**
BNGL	**BINGOL**	**0.93**	**125**	*i* P	**Pn**	**06 09 44.6**	**-0.6**
BNGL				*i* S	**Sn**	**06 10 00.1**	**+1.7**
KELT	**Kelkit**	**0.96**	**313**	*i* P	**Pb**	**06 09 44.3**	**-0.7**
KELT				*i* S	**Sn**	**06 10 00.0**	**+0.6**
KELT	**Kelkit**	**0.96**	**313**	*i* P	**Pb**	**06 09 44.3**	**-0.7**
KELT				*i* S	**Sn**	**06 10 00.0**	**+0.6**
EZM	**Erzurum**	**1.00**	**65**	*e*PG	**Pb**	**06 09 44.5**	**-1.2**
ERZM	**Erzurum**	**1.01**	**65**	*i* P	**Pb**	**06 09 44.9**	**-0.8**
ERZM				*i* S	**Sn**	**06 09 59.8**	**-0.7**
ERZM	**Erzurum**	**1.01**	**65**	*i* P	**Pb**	**06 09 44.9**	**-0.8**
ERZM				*i* S	**Sn**	**06 09 59.8**	**-0.7**
GUMT	**Gumushane**	**1.10**	**331**	*e*PN	**Pn**	**06 09 46.5**	**-1.1**
GUMT	**Gumushane**	**1.10**	**331**	*e*Pn	**Pn**	**06 09 46.5**	**-1.1**
ILIC	**ilic-Erzincan**	**1.25**	**269**	*e*PN	**Pn**	**06 09 48.5**	**-1.0**
ILIC	**ilic-Erzincan**	**1.25**	**269**	*e*Pn	**Pn**	**06 09 48.5**	**-1.0**
SVRC	**Sivrice-ELAZID**	**1.30**	**212**	*e*PN	**Pn**	**06 09 48.9**	**-1.4**
SVRC	**Sivrice-ELAZID**	**1.30**	**212**	*e*Pn	**Pn**	**06 09 48.9**	**-1.4**
KEMA	**Kemaliye**	**1.32**	**261**	*i* P	**Pb**	**06 09 51.2**	**+0.2**
KEMA				*i* S	**Sg**	**06 10 12.5**	**+3.5**
KEMA	**Kemaliye**	**1.32**	**261**	*i* P	**Pb**	**06 09 51.2**	**+0.2**
HOMI	**Horasan**	**1.44**	**67**	*i* P	**Pb**	**06 09 53.2**	**0.0**
HOMI				*i* S	**Sg**	**06 10 18.4**	**+5.5**
MYA	**Malataya**	**1.79**	**230**	*e*PN	**Pn**	**06 09 56.2**	**-0.8**
MYA	**Malataya**	**1.79**	**230**	*e*Pn	**Pn**	**06 09 56.2**	**-0.8**
BEST	**Besiri**	**1.81**	**151**	*i* P	**Pg**	**06 10 03.9**	**+2.7**
BEST				*i* S	**Sg**	**06 10 26.3**	**+1.6**
DDEM	**Demirkent**	**1.85**	**40**	*i* P	**Pb**	**06 09 59.5**	**-0.5**
DDEM				*i* S	**Sg**	**06 10 26.4**	**+0.6**
DDEM	**Demirkent**	**1.85**	**40**	*i* P	**Pb**	**06 09 59.5**	**-0.5**
AGRB	**Hanur-Agry**	**2.18**	**87**	*e*PN	**Pn**	**06 10 01.2**	**-1.2**
AGRB	**Hanur-Agry**	**2.18**	**87**	*e*Pn	**Pn**	**06 10 01.2**	**-1.2**
BCA	**Borcka**	**2.24**	**29**	*e*PN	**Pn**	**06 10 02.3**	**-0.8**
BCA	**Borcka**	**2.24**	**29**	*e*Pn	**Pn**	**06 10 02.3**	**-0.8**

NIED 17 06:11:00, 43.50N×147.80E, h47km, Mw3.9 Best double
couple: M₀8.85000×10¹⁴ NP1:φs52.00000°, δ85.00000°,
λ129.00000°. NP2:φs148.00000°, δ39.00000°, λ8.00000°.
MOS 17 06:11:24.7±0.9, 43.99N×147.93E, h66km, mb4.5/19, Error
ellipse: s-maj=12.2km s-min=10.9km az=131.4
JMA 17 06:11:24.7±0.2, 43.53N×147.83E, h14km, M4.6
ISCJB 17 06:11:25.4±0.8, 43.70N±0.06×147.90E±0.07, h82km±6km,
mb4.1/27, Error ellipse: s-maj=11.7km s-min=7.4km
az=149.2
IDC 17 06:11:27.5±3.2, 43.76N×147.94E, h82km±29km, mb3.8/15,
mb1 3.8/18, mb1mx3.7/29, mbtmpg3.7/18, MS2.3/1,
Ms1 2.3/1, ms1mx2.1/31, Error ellipse: s-maj=54.3km
s-min=15.9km az=173.0
NEIC 17 06:11:27.6±0.4, 43.68N×147.93E, h86km±6km, mb4.4/3,
Error ellipse: s-maj=14.7km s-min=6.0km az=168.0
ISC 17 06:11:26.2±0.7, 43.67N±0.07×147.95E±0.06, h76km±5km,
n88, σ0s99/101, mb4.2/27, 4C-4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YUK	**Yuzh-Kuril'sk**	**1.56**	**284**	*d i* PN	**Pn**	**06 11 51.1**	**-0.9**
YUK				*i* S	**Sn**	**06 12 10.2**	**-1.4**
YUK				pmax	pmax		
	comp=N,25nm,0.1s						
YUK				pmax	pmax		
	comp=Z,575nm,0.3s						
YUK				pmax	pmax		
	comp=E,49nm,0.3s						
YUK				smax	smax		
	comp=N,547nm,0.6s						
YUK				smax	smax		
	comp=E,1μm,0.5s						
KUR	**Kuril'sk**	**1.56**	**358**	*d i* PN	**Pn**	**06 11 50.4**	**-1.8**
KUR				pmax	pmax		
	comp=N,60nm,0.6s						
KUR				pmax	pmax		
	comp=Z,97nm,0.6s						
KUR				pmax	pmax		
	comp=E,45nm,0.6s						
NEM2	**Nemuro 2**	**1.64**	**260**	P	**Pn**	**06 11 52.1**	**-1.0**
NEM2				*e*S	**Sn**	**06 12 11.6**	**-1.8**
JRA	**Rausu**	**2.06**	**278**	P	**Pn**	**06 11 58.8**	**0.0**
JRA				*e*S	**Sn**	**06 12 24.0**	**+0.3**
JNK	**Nakash**	**2.35**	**269**	P	**Pn**	**06 12 02.1**	**-0.5**
JNK				*e*S	**Sn**	**06 12 29.6**	**-0.9**
JAK	**Akkeshi**	**2.47**	**255**	P	**Pn**	**06 12 03.5**	**-0.7**
JAK				*e*S	**Sn**	**06 12 32.1**	**-1.3**
JTKR	**Abashiri--Toko**	**2.94**	**277**	P	**Pn**	**06 12 11.2**	**+0.6**
JAR	**Ashorobuto**	**3.07**	**264**	P	**Pn**	**06 12 12.5**	**+0.2**
JAR				*e*S	**Sn**	**06 12 47.5**	**-0.4**
JOB	**Onbets**	**3.10**	**257**	P	**Pn**	**06 12 12.5**	**-0.3**
JOB				*e*S	**Sn**	**06 12 47.8**	**-1.0**
JMP	**Maruseppu**	**3.34**	**277**	P	**Pn**	**06 12 16.8**	**+0.7**
JCH	**Churui**	**3.52**	**254**	P	**Pn**	**06 12 18.1**	**-0.4**
JCH				*e*S	**Sn**	**06 12 57.2**	**-1.8**
JKK2	**Kamakawa 2**	**3.77**	**275**	P	**Pn**	**06 12 23.1**	**+1.1**
ERM	**Erimo**	**3.89**	**246**	*c i* PN	**Pn**	**06 12 24.9**	**+1.3**
ERM				pmax	pmax		
	comp=Z,24nm,0.8s						
ERM	**Erimo**	**3.89**	**246**	*e*Pn	**Pn**	**06 12 25.0**	**+1.4**
ASAJ	**Asahikawa**	**3.90**	**278**	*e*Pn	**Pn**	**06 12 24.6**	**+1.0**
ASAJ				*e*Sn	**Sn**	**06 13 08.4**	**+0.3**
ASAJ				S	Sn	06 13 18.0	+10
ASAJ	**Asahikawa**	**3.90**	**278**	P	**Pn**	**06 12 24.9**	**+1.3**
	comp=Z,8.5nm,0.3s,baz=97,slow=14,SNR=46						
ASAJ				S	Sn	06 13 18.0	+10
	comp=Z,7.0nm,0.3s,baz=10,slow=22,SNR=3.7						
JFR	**Furan**	**3.94**	**264**	P	**Pn**	**06 12 25.4**	**+1.2**
JFR				*e*S	**Sn**	**06 13 09.2**	**+0.1**
JNBK	**Urakawa-nobuka**	**4.06**	**252**	P	**Pn**	**06 12 25.4**	**-0.4**
JSE	**Soyaes**	**4.06**	**290**	P	**Pn**	**06 12 26.6**	**+0.8**
JHR	**Hokuryu**	**4.51**	**273**	P	**Pn**	**06 12 34.1**	**+2.1**
JWK2	**Keihoku**	**4.63**	**293**	P	**Pn**	**06 12 35.8**	**+2.2**
JYG	**Yagishiri**	**4.76**	**281**	P	**Pn**	**06 12 37.1**	**+1.7**
YSS	**Yuzh-Sakhalins**	**4.92**	**314**	*e*PN	**Pn**	**06 12 39.0**	**+1.5**
YSS				*e*S	**Sn**	**06 13 30.7**	**-2.4**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				smax	smax		
	comp=E,50nm,0.8s						
JKB	**Kayabe**	**5.39**	**253**	P	**Pn**	**06 12 44.0**	**0.0**
JKB				*e*S	**Sn**	**06 13 41.6**	**-3.1**
USRK	**Ussuriysk Arra**	**11.52**	**278**	P	**Pn**	**06 14 08.1**	**+0.6**
	comp=E,0.2nm,0.3s,baz=82,slow=14,SNR=5.1						
KSRS	**Korea Array**	**16.42**	**255**	P	**Pn**	**06 15 12.4**	**+0.6**
	comp=E,0.3nm,0.3s,baz=60,slow=13,SNR=4.9						
KSRS				LR	LR	06 21 19.4	
	comp=E,12nm,21.9s,baz=70,slow=36						
KSAR	**Wonju Array Be**	**16.45**	**255**	P	**Pn**	**06 15 12.4**	**+0.2**
JNU	**Nakatsue**	**17.00**	**237**	*e*Pn	**Pn**	**06 15 19.3**	**+0.3**
BILL	**Bilibino**	**26.28**	**15**	*e*P	**P**	**06 16 55.5**	**+1.4**
BILL				*e*		06 17 36.6	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	**Songino Array**	**29.04**	**293**	P	**P**	**06 17 19.9**	**+0.8**
SONM	**Songino Array**	**29.04**	**293**	P	**P**	**06 17 19.9**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=72,slow=8.6,SNR=7.9						
TIXI	**Tiksi**	**29.56**	**348**	*e*P	**P**	**06 17 20.2**	**-3.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ILAR	**Eielson Array**	**41.21**	**36**	P	**P**	**06 19 02.6**	**-0.4**
ILAR	**Eielson Array**	**41.21**	**36**	P	**P**	**06 19 02.6**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=277,slow=9.6,SNR=12						
ZALV	**Zalesovo Beam**	**41.51**	**307**	*i* P	**P**	**06 19 06.9**	**+1.3**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	**Zalesovo Beam**	**41.51**	**307**	P	**P**	**06 19 06.1**	**+0.5**
ZALV	**Zalesovo Beam**	**41.51**	**307**	P	**P**	**06 19 06.1**	**+0.5**
	comp=Z,0.7nm,0.4s,baz=72,slow=8.6,SNR=3.6						
MKAR	**Makanchi Array**	**45.14**	**298**	P	**P**	**06 19 35.7**	**+0.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**45.14**	**298**	P	**P**	**06 19 35.7**	**+0.8**
MKAR	**Makanchi Array**	**45.14**	**298**	P	**P**	**06 19 35.7**	**+0.8**
	comp=Z,1.4nm,0.5s,baz=75,slow=6.6,SNR=20						
KURK	**Kurchatov**	**46.05**	**304**	*ce*P	**P**	**06 19 41.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,11nm,2.5s						
KURK	**Kurchatov**	**46.05**	**304**	P	**P**	**06 19 42.8**	**+0.7**
KURBB	**Kurchatov Arra**	**46.14**	**304**	P	**P**	**06 19 42.8**	**+0.1**
	comp=Z,1.8nm,0.4s,baz=74,slow=8.1,SNR=18						
INK	**Inuvik**	**46.18**	**30**	P	**P**	**06 19 43.6**	**+0.8**
INK	**Inuvik**	**46.18**	**30**	P	**P**	**06 19 43.6**	**+0.8**
	comp=Z,1.2nm,0.4s,baz=306,slow=8.0,SNR=12						
BVAR	**Borovoye Array**	**50.00**	**310**	P	**P**	**06 20 12.3**	**-0.2**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**50.00**	**310**	P	**P**	**06 20 12.3**	**-0.2**
BVAR	**Borovoye Array**	**50.00**	**310**	P	**P**	**06 20 12.3**	**-0.2**
	comp=Z,1.1nm,0.4s,baz=80,slow=8.1,SNR=6.5						
BRVK	**Borovoye**	**50.05**	**310**	*e*P	**P**	**06 20 12.4**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BRVK	**Borovoye**	**50.05**	**310**	*e*P	**P**	**06 20 12.4**	**-0.4**
	comp=Z,2.1nm,0.5s						
AAK	**Ala-Archa**	**51.92**	**296**	*e*P	**P**	**06 20 27.4**	**+0.2**
AAK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KKAR	**Karatay Array**	**54.26**	**298**	*e*P	**P**	**06 20 44.7**	**+0.4**
KKAR	**Karatay Array**	**54.26**	**298**	*e*P	**P**	**06 20 44.6**	**+0.4**
	comp=Z,0.5nm,0.4s						
ARU	**Arti**	**54.80**	**317**	*d i* P	**P**	**06 20 47.8**	**-0.1**
ARU						06 22 45.9	
ARU				S	**S**	**06 28 21.3**	**-1.4**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RES	**Resolute Bay**	**54.88**	**17**	P	**P**	**06 20 48.4**	**+0.2**
RES	**Resolute Bay**	**54.88**	**17**	P	**P**	**06 20 48.4**	**+0.2**
	comp=Z,3.6nm,0.4s,baz=339,slow=10,SNR=6.4						
YKA	**Yellowknife Ar**	**55.54**	**34**	P	**P**	**06 20 53.0**	**-0.1**
YKA	**Yellowknife Ar**	**55.54**	**34**	P	**P**	**06 20 53.0**	**-0.1**
	comp=Z,7.1nm,0.4s,baz=306,slow=7.3,SNR=4.5						
ABKAR	**Akbulak array**	**57.56**	**309**	*e*P	**P**	**06 21 08.1**	**+0.4**
	comp=Z,2.4nm,0.4s						
AKTO	**Aktyubinsk**	**58.03**	**311**	P	**P**	**06 21 11.6**	**+0.6**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
AKTO	**Aktyubinsk**	**58.03**	**311**	P	**P**	**06 21 11.6**	**+0.6**
AKTO	**Aktyubinsk**	**58.03**	**311**	P	**P**	**06 21 11.6**	**+0.6**
	comp=Z,1.2nm,0.5s,baz=80,slow=8.6,SNR=6.8						
KEV	**Kevo**	**58.99**	**340**	*e*P	**P**	**06 21 15.9**	**-1.4**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KEV	**Kevo**	**58.99**	**340**	*e*p	**P**	**06 21 15.9**	**-1.4**
	comp=Z,2.1nm,0.5s						
ARCES	**ARCESS Array B**	**59.52**	**340**	P	**P**	**06 21 20.8**	**-0.2**
ARCES	**ARCESS Array B**	**59.52**	**340**	P	**P**	**06 21 20.8**	**-0.2**
	comp=Z,0.8nm,0.4s,baz=42,slow=8.6,SNR=14						
JOF	**Joensuu**	**62.43**	**333**	*e*P	**P**	**06 21 40.1**	**-0.6**
JOF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
JOF	**Joensuu**	**62.43**	**333**	*e*p	**P**	**06 21 40.1**	**-0.6**
	comp=Z,4.0nm,0.5s						
WRA	**Warramunga Arr**	**64.52**	**194**	pP	pP	06 22 16.8	+2.1
WRA	**Warramunga Arr**	**64.52**	**194**	pP	pP	06 22 16.8	+2.1
	comp=Z,0.3nm,0.6s,baz=10.0,slow=6.8,SNR=3.5						
KAF	**Kangasniemi**	**64.64**	**334**	*e*P	**P**	**06 21 54.2**	**-1.1**
KAF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KAF	**Kangasniemi**	**64.64**	**334**	*e*p	**P**	**06 21 54.2**	**-1.1**
	comp=Z,3.8nm,0.7s						
FINES	**FINESS Array B**	**65.21**	**333**	P	**P**	**06 21 58.6**	**-0.4**
FINES	**FINESS Array B**	**65.21**	**333**	P	**P**	**06 21 58.6**	**-0.4**
	comp=Z,4.7nm,0.6s,baz=46,slow=5.8,SNR=11						
BOZ	**Bozeman (W)**	**66.53**	**49**	*e*P	**P**	**06 22 08.5**	**+0.5**
BOZ	**Bozeman (W)**	**66.53**	**49**	*e*P	**P**	**06 22 08.4**	**+0.5**
NVAR	**Mina Array Bea**	**67.13**	**58**	P	**P**	**06 22 13.2**	**+1.2**
NVAR	**Mina Array Bea**	**67.13**	**58**	P	**P**	**06 22 13.3**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=285,slow=7.1,SNR=3.7						
ASAR	**Alice Springs**	**68.24**	**194**	pP	pP	06 22 41.6	+3.1
ASAR	**Alice Springs**	**68.24**	**194**	pP	pP	06 22 41.6	+3.1
	comp=Z,0.5nm,0.9s,baz=14,slow=6.0,SNR=3.8						
NB2	**NORSAR Subarra**	**69.89**	**339**	P	**P**	**06 22 28.2**	**-0.4**
	comp=Z,4.5nm,0.6s,baz=31,slow=6.5						
NOA	**NORSAR Array B**	**69.89**	**339**	P	**P**	**06 22 28.4**	**-0.2**
NOA	**NORSAR Array B**	**69.89**	**339**	P	**P**	**06 22 28.4**	**-0.2**
	comp=Z,4.8nm,0.7s,baz=31,slow=6.3,SNR=25						
AKASG	**Malin Array Be**	**71.99**	**324**	*ce*P	**P**	**06 22 41.0**	**-0.4**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**71.99**	**324**	P	**P**	**06 22 41.1**	**-0.2**
AKASG	**Malin Array Be**	**71.99**	**324**	P	**P**	**06 22 41.1**	**-0.2**
	comp=Z,1.9nm,0.5s,baz=33,slow=6.2,SNR=6.7						
TXAR	**Lajitas Array**	**82.21**	**57**	P	**P**	**06 23 38.9**	**-0.3**
TXAR				pP	**pP**	**06 23 59.7**	**+0.2**
TXAR				sP	**sP**	**06 24 08.4**	**+0.6**
TXAR	**Lajitas Array**	**82.21**	**57**	P	**P**	**06 23 38.9**	**-0.3**
	comp=Z,0.2nm,0.7s,baz=302,slow=5.0,SNR=3.5						
TXAR				pP	**pP**	**06 23 59.7**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=298,slow=4.9,SNR=4.9						
TXAR				sP	**sP**	**06 24 08.4**	**+0.6**
	comp=Z,0.3nm,0.7s,baz=284,slow=4.4,SNR=3.0						

NSSC 17 06:16:08.0±2.6, 36.43N×35.84E, h4km±18km, MD0.9,
ML3.0, Fault plane solution: NP1:φs175.00000°,
δ90.00000°, λ60.00000°.
ISK 17 06:16:10.5, 36.23N×35.78E, h15km, MD3.2
ISCJB 17 06:16:11.4±0.4, 36.27N±0.02×35.83E±0.03, h7km±4km,
Error ellipse: s-maj=4.5km s-min=3.2km az=143.4
DDA 17 06:16:11.4, 36.32N×35.82E, h10km, MD3.2
CSEM 17 06:16:11.4±0.2, 36.26N×35.81E, h10km, MD3.2, Error
ellipse: s-maj=4.2km s-min=3.0km az=52.0
ISC 17 06:16:11.4±0.9, 36.28N±0.02×35.83E±0.02, h14km±8km,
n51, σ1s16/80, 3C-4D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HTY	**Hatay**	**0.30**	**122**	*e*PG	**Pg**	**06 16 17.4**	**-0.2**
HTY	**Hatay**	**0.30**	**122**	*e*Pg	**Pg**	**06 16 17.5**	**-0.2**
YAYL	**Yayladag**	**0.34**	**137**	*i* P	**Pg**	**06 16 18.5**	**+0.1**
YAYL				*i* S	**Sg**	**06

SVRC	Sivrice-ELAZID	3.47	52	*e*Pn		Pn	06 17 06.3	+1.1

PDG ***17*** *06:19:53.2±0.4,41.91N×19.18E,h11km±1km,MD2.5/1, ML2.4/9,Error ellipse: s-maj=1.3km s-min=1.1km az=90.0*
TIR ***17*** *06:19:53.2±1.1,42.04N×19.13E,h22km±80km,ML3.1*
CSEM ***17*** *06:19:53.0±0.6,41.87N×19.11E,h2km,ML2.4/9,Error ellipse: s-maj=10.0km s-min=5.4km az=21.0*
BEO ***17*** *06:19:54.5±0.9,41.89N×19.17E,h0km,ML2.3/6*

ISC 17 06:19:52.6±1.3,41.89N±0.05×19.13E±0.03,h8km±6km, n33,σ0.97/64,5C-7D,Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULC	**Ulcinj**	**0.11**	**47**	↑*i*Pg	**Pg**	**06 19 55.5**	**+0.2**
ULC				*e*Sg	**Sg**	**06 19 57.1**	**0.0**
ULC	**Ulcinj**	**0.11**	**47**	↑*i*Pg	**Pg**	**06 19 55.5**	**+0.2**
ULC				*e*Sg	**Sg**	**06 19 57.1**	**0.0**
BUM	**Brajici-Budva**	**0.45**	**337**	⇓*i*Pg	**Pg**	**06 20 01.7**	**+0.2**
BUM				*e*Sg	**Sb**	**06 20 09.4**	**-0.4**
BUM	**Brajici-Budva**	**0.45**	**337**	⇓*i*Pg	**Pg**	**06 20 01.7**	**+0.2**
BUM				*e*Sg	**Sb**	**06 20 09.4**	**-0.4**
PDG	**Podgorica**	**0.55**	**9**	*e*Pg	**Pg**	**06 20 03.6**	**+0.3**
PDG				*i* Sg	**Sb**	**06 20 11.6**	**-1.0**
PDG	**Podgorica**	**0.55**	**9**	*e*Pg	**Pg**	**06 20 03.6**	**+0.3**
PDG				*e*Sg	**Sb**	**06 20 11.6**	**-1.0**
TTG	**Podgorica**	**0.55**	**9**	↑*i*Pg	**Pg**	**06 20 03.2**	**-0.1**
TTG				*e*Sg	**Sb**	**06 20 11.6**	**-1.0**
PUK	**Puka**	**0.59**	**74**	*e*PG	**Pb**	**06 20 04.8**	**-0.4**
PUK				*i* SG	**Sb**	**06 20 13.8**	**0.0**
PUK	**Puka** SNR=9.0	**0.59**	**74**	*e*Pg	**Pb**	**06 20 04.8**	**-0.4**
PUK	SNR=9.0			*i* Sg	**Sb**	**06 20 13.8**	**0.0**
HCY	**Herceg Novi**	**0.73**	**320**	⇓*i*Pg	**Pg**	**06 20 06.7**	**-0.1**
HCY				*e*Sg	**Sn**	**06 20 19.3**	**-1.5**
HCY	**Herceg Novi**	**0.73**	**320**	⇓*i*Pg	**Pg**	**06 20 06.7**	**-0.1**
HCY				*e*Sg	**Sn**	**06 20 19.3**	**-1.5**
BCI	**Bajram Curri**	**0.85**	**55**	*e*PG	**Pb**	**06 20 09.3**	**-0.3**
BCI				*i* SG	**Sg**	**06 20 19.6**	**-0.3**
BCI	**Bajram Curri** SNR=9.0	**0.85**	**55**	*e*Pg	**Pb**	**06 20 09.3**	**-0.3**
BCI	SNR=9.0			*i* Sg	**Sg**	**06 20 19.6**	**-0.3**
PVY	**Plav**	**0.94**	**41**	⇓*i*Pg	**Pg**	**06 20 10.2**	**-0.5**
PVY				*e*Sg	**Sn**	**06 20 24.4**	**-1.5**
PHP	**Peshkopia**	**1.00**	**101**	*e*PG	**Pn**	**06 20 12.9**	**-0.1**
PHP				*i* SG	**Sn**	**06 20 28.7**	**+1.4**
PHP	**Peshkopia** SNR=9.0	**1.00**	**101**	*e*Pg	**Pn**	**06 20 12.9**	**-0.1**
PHP	SNR=9.0			*i* Sg	**Sn**	**06 20 28.7**	**+1.4**
BRY	**Bratogost**	**1.11**	**337**	⇓*i*Pg	**Pb**	**06 20 12.9**	**-1.2**
BRY				*e*Sg	**Sn**	**06 20 31.6**	**+1.5**
BRY	**Bratogost**	**1.11**	**337**	⇓*i*Pg	**Pb**	**06 20 12.9**	**-1.2**
BRY				*e*Sg	**Sn**	**06 20 31.6**	**+1.5**
BEY	**Berane**	**1.14**	**30**	*e*Pg	**Pb**	**06 20 14.1**	**-0.5**
BEY				*e*Sg	**Sn**	**06 20 31.3**	**+0.5**
IVA	**Berane**	**1.14**	**30**	*e*Pg	**Pb**	**06 20 14.1**	**-0.5**
IVA				*e*Sg	**Sn**	**06 20 31.3**	**+0.5**
UPM	**Unac-Piva**	**1.33**	**353**	*e*Pg	**Pn**	**06 20 16.9**	**-0.8**
UPM				*e*Sg	**Sg**	**06 20 38.1**	**+2.7**
UPM	**Unac-Piva**	**1.33**	**353**	*e*Pg	**Pn**	**06 20 16.9**	**-0.8**
UPM				*e*Sg	**Sg**	**06 20 38.1**	**+2.7**
STON	**Ston**	**1.45**	**313**	*e*Pg	**Pg**	**06 20 21.0**	**+0.6**
STON	**Ston**	**1.45**	**313**	*e*Pg	**Pg**	**06 20 21.0**	**+0.6**
PLE	**Pljevlja**	**1.46**	**7**	↑*i*Pg	**Pb**	**06 20 19.7**	**-0.4**
PLE				*e*Sg	**Sg**	**06 20 41.7**	**+2.2**
PLE	**Pljevlja**	**1.46**	**7**	↑*i*Pg	**Pb**	**06 20 19.7**	**-0.4**
PLE				*e*Sg	**Sg**	**06 20 41.7**	**+2.2**
SELS	**Selova**	**1.98**	**47**	*e*Pn	**Pb**	**06 20 28.6**	**-0.4**
SELS				*e*Sn	**Sb**	**06 20 53.7**	**-0.2**
BBLS	**Lazići**	**1.99**	**6**	*e*Pn	**Pb**	**06 20 29.5**	**+0.4**
BBLS				*e*Sn	**Sb**	**06 20 54.1**	**0.0**
BBLS	**Lazići**	**1.99**	**6**	*e*Pn	**Pb**	**06 20 29.5**	**+0.4**
BBLS				*e*Sn	**Sb**	**06 20 54.1**	**0.0**
DIVS	**Divibare**	**2.30**	**16**	*e*Pn	**Pb**	**06 20 33.1**	**-1.3**
DIVS				*e*Sn	**Sb**	**06 21 02.9**	**-0.1**
DIVS	**Divibare**	**2.30**	**16**	*e*Pn	**Pb**	**06 20 33.1**	**-1.3**
DIVS				*e*Sn	**Sb**	**06 21 02.9**	**-0.1**
GRUS	**Gruza**	**2.31**	**30**	*e*Pn	**Pb**	**06 20 33.8**	**-0.8**
GRUS				*e*Sn	**Sb**	**06 21 03.2**	**-0.2**
GRUS	**Gruza**	**2.31**	**30**	*e*Pn	**Pb**	**06 20 33.8**	**-0.8**
GRUS				*e*Sn	**Sb**	**06 21 03.2**	**-0.2**

WEL 17 06:22:52.8±0.2,39.03S×175.08E,h207km±1km,ML3.6/5, 14C-4D,Error ellipse: s-maj=2.1km s-min=1.9km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKVZ	**Pokaka**	**0.34**	**142**	↑PN	Pn	06 23 20.0	-0.3
PKVZ				SN	S	06 23 41.0	-0.8
WPVZ	**Whakapapa**	**0.41**	**117**	↑PN	Pn	06 23 20.3	-0.3
WPVZ				SN	S	06 23 41.4	-0.8
WTVZ	**West Tongariro**	**0.41**	**103**	↑PN	Pn	06 23 20.2	-0.3
WTVZ				SN	S	06 23 41.3	-0.8
NGZ	**Ngauruhoe**	**0.43**	**111**	↑PN	Pn	06 23 20.4	-0.3
NGZ				SN	S	06 23 41.0	-1.3
FWVZ	**Far West T-bar**	**0.43**	**122**	↑PN	Pn	06 23 20.5	-0.3
KRVZ	**Karewarewa**	**0.44**	**99**	↑PN	Pn	06 23 20.3	-0.4
KRVZ				SN	S	06 23 41.2	-1.2
DRZ	**Dome Shelter**	**0.45**	**124**	PN	Pn	06 23 20.7	-0.2
DRZ				SN	S	06 23 40.7	-2.1
TRVZ	**Turoa**	**0.46**	**127**	PN	Pn	06 23 20.5	-0.3
OTVZ	**Oturere**	**0.48**	**107**	PN	Pn	06 23 20.7	-0.1
KATZ	**Kakaramea**	**0.48**	**84**	PN	Pn	06 23 20.2	-0.7
WNVZ	**Wahianoa**	**0.50**	**127**	PN	Pn	06 23 20.7	-0.2
MOVZ	**Moawhango**	**0.65**	**126**	PN	Pn	06 23 20.9	-0.5
DREZ	**Durham Road**	**0.70**	**256**	PN	Pn	06 23 21.0	-0.6
WAZ	**Wanganui**	**0.73**	**186**	↑PN	Pn	06 23 21.9	+0.2
NEZ	**North Egmont**	**0.80**	**252**	PN	Pn	06 23 22.0	-0.2
DFE	**Dawson Falls**	**0.82**	**248**	↑PN	Pn	06 23 22.1	-0.2
BHHZ	**Black Hill Sta**	**0.89**	**122**	↑PN	Pn	06 23 22.2	-0.4
TSZ	**Takapari Road**	**1.24**	**147**	PN	Pn	06 23 25.1	+0.1
TSZ				AML	AML	06 23 50.9	
TSZ				AML	AML	06 23 51.0	
PNHZ	**Pukenui**	**1.24**	**136**	PN	Pn	06 23 25.0	0.0
MCHZ	**McNeill Hill**	**1.32**	**109**	PN	Pn	06 23 26.0	+0.4
POWZ	**Post Office Ro**	**1.47**	**159**	PN	Pn	06 23 26.6	-0.2
WPHZ	**Waipukurau**	**1.48**	**135**	↑PN	Pn	06 23 27.0	+0.1
DVHZ	**Dannevirke**	**1.52**	**147**	PN	Pn	06 23 27.1	-0.2
RAHZ	**Arahi**	**1.57**	**87**	PN	Pn	06 23 27.2	-0.6
KAHZ	**Kahuranaki**	**1.59**	**119**	PN	Pn	06 23 28.2	+0.2
PXZ	**Pawanui**	**1.71**	**127**	PN	Pn	06 23 28.8	-0.1
PXZ				AML	AML	06 23 56.9	
PXZ				AML	AML	06 23 56.9	
PXZ				AML	AML	06 24 06.3	
PXZ				AML	AML	06 24 06.3	
PRHZ	**Porangahau**	**1.73**	**136**	PN	Pn	06 23 28.7	-0.4
TIWZ	**Tintock**	**1.86**	**161**	PN	Pn	06 23 30.0	-0.4
BFZ	**Birch Farm**	**1.88**	**152**	⇓PN	Pn	06 23 30.1	-0.5
DUWZ	**D'Urville Isla**	**1.99**	**206**	↑PN	Pn	06 23 30.9	-0.8
KNZ	**Kokohu**	**2.02**	**91**	PN	Pn	06 23 31.2	-0.8
MWZ	**Matawai**	**2.04**	**71**	⇓PN	Pn	06 23 30.3	-1.9
TMWZ	**Te Maipa**	**2.17**	**164**	PN	Pn	06 23 32.9	-0.7
TCW	**Tory Channel**	**2.27**	**195**	PN	Pn	06 23 33.9	-0.6
TCW				AML	AML	06 23 35.4	
TCW				AML	AML	06 23 35.4	
WEL	**Wellington**	**2.27**	**186**	PN	Pn	06 23 33.6	-0.9
SNZO	**South Karori**	**2.30**	**187**	PN	Pn	06 23 33.9	-1.0
SNZO				AML	AML	06 24 06.8	
SNZO				AML	AML	06 24 09.0	
PAWZ	**Paruwai Farm**	**2.37**	**174**	↑PN	Pn	06 23 34.7	-1.0
MSWZ	**Moikau Station**	**2.39**	**177**	PN	Pn	06 23 34.9	-1.1
TRWZ	**Traveller**	**2.42**	**169**	PN	Pn	06 23 34.9	-1.2
CNGZ	**Carnagh Statio**	**2.50**	**79**	PN	Pn	06 23 35.9	-1.2
PLWZ	**Palliser**	**2.55**	**177**	PN	Pn	06 23 36.4	-1.2
NNZ	**Nelson**	**2.55**	**210**	↑PN	Pn	06 23 36.2	-1.4
TUWZ	**Tuamarina**	**2.56**	**200**	PN	Pn	06 23 36.7	-0.9
TUWZ				AML	AML	06 23 37.6	
TUWZ				AML	AML	06 23 37.8	
QRZ	**Quartz Range**	**2.66**	**227**	↑PN	Pn	06 23 36.6	-2.3
PUZ	**Puketiti**	**2.67**	**70**	PN	Pn	06 23 37.0	-2.0
BSWZ	**Blackbirch Sta**	**2.84**	**199**	PN	Pn	06 23 40.0	-0.9
MXZ	**Matakaoa Point**	**2.93**	**61**	PN	Pn	06 23 39.8	-2.2
THZ	**Tophouse**	**3.20**	**211**	⇓PN	Pn	06 23 43.2	-2.0
KHZ	**Kahutara**	**3.58**	**199**	PN	Pn	06 23 48.2	-1.4
DSZ	**Denniston Nort**	**3.69**	**222**	PN	Pn	06 23 48.4	-2.7
LTZ	**Lake Taylor**	**4.32**	**209**	PN	Pn	06 23 56.4	-2.4
MQZ	**McQueen's Vall**	**5.02**	**201**	PN	Pn	06 24 04.3	-3.2
WVZ	**Waitaha Valley**	**5.21**	**218**	PN	Pn	06 24 06.8	-3.2
ODZ	**Otahua Downs**	**6.86**	**207**	⇓PN	Pn	06 24 28.7	-2.5

ISCJB ***17*** *06:45:11.7±0.8,0.5N±0.2×25.4W±0.1,h12km,mb4.3/23, MS4.2/8,Error ellipse: s-maj=27.4km s-min=10.5km az=156.0*
IDC ***17*** *06:45:12.3±0.9,0.54N×25.42W,h0km,mb4.0/10, mb1 4.2/11,mb1mx4.0/27,mbtmp4.0/11,ML3.9/1,MS4.2/9, Ms1 4.2/9,ms1mx3.9/38,Error ellipse: s-maj=40.1km s-min=16.0km az=152.0*
NEIC ***17*** *06:45:13.5±0.6,0.64N×25.50W,h10km,mb4.6/13,Error ellipse: s-maj=20.5km s-min=9.3km az=155.0*
GCMT ***17*** *06:45:17.7±0.3,0.78N×25.46W,h12km,MW4.9,Moment Tensor Solution. s19,c21; s57,c80; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.43±.09; $M_{\theta\theta}$0.20±.09; $M_{\phi\phi}$2.22±.08; $M_{r\theta}$0.77±.41; $M_{\theta\phi}$0.05±.08; $M_{\phi r}$0.65±.26; Best double couple: $M_0$2.50000×10^{16} NP1:ϕ_s349.00000°,δ38.00000°, λ-112.00000°. NP2:ϕ_s196.00000°,δ55.00000°, λ-73.00000°. Principal axes: T 2.3200, Plg9.0000°, Azm275.0000°; N 0.3900, Plg14.0000°, Azm7.0000°; P -2.7100, Plg74.0000°, Azm154.0000°; Data Used: II IU IC G.*

ISC 17 06:45:13.8±0.7,0.6N±0.2×25.5W±0.1,h12km,n200, σ0.78/195,mb4.4/23,MS4.2/8,76C-79D,Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**12.19**	**238**	Pn	**Pn**	**06 48 07.1**	**-0.4**
RCBR				Sn	Sn	06 50 11.8	-12
RCBR	**Riachuelo** 0.7nm,0.3s,baz=64,slow=15,SNR=7.6	**12.19**	**238**	Pn	**Pn**	**06 48 07.1**	**-0.4**
RCBR	0.1nm,0.3s,baz=76,slow=9.7,SNR=2.6			Sn	Sn	06 50 11.8	-12
RCBR				LR	LR	06 51 44.3	
	comp=Z,962nm,19.7s,baz=47,slow=32						
DBIC	**Dimbokro**	**21.45**	**73**	P	**P**	**06 50 00.9**	**-1.3**
DBIC	**Dimbokro** 21nm,0.9s,baz=241,slow=14,SNR=12	**21.45**	**73**	P	**P**	**06 50 00.9**	**-1.3**
DBIC				LR	LR	06 56 26.0	
	comp=Z,740nm,21.6s,baz=245,slow=32						
BDFB	**Brasilia**	**27.48**	**233**	LR	LR	07 00 21.6	
	comp=Z,704nm,20.8s,baz=36,slow=33						
TORD	**Torodi Ar. Bea**	**29.68**	**64**	P	**P**	**06 51 18.6**	**-1.3**
TORD	**Torodi Ar. Bea** 2.7nm,0.8s,baz=254,slow=8.1,SNR=13	**29.68**	**64**	P	**P**	**06 51 18.6**	**-1.3**
TORD				LR	LR	07 01 31.5	
	comp=Z,688nm,20.0s,baz=235,slow=33						
SIV	**San Ignacio**	**38.80**	**243**	P	**P**	**06 52 40.7**	**+1.8**
SIV	**San Ignacio** 0.6nm,0.8s,baz=94,slow=13,SNR=3.6	**38.80**	**243**	P	**P**	**06 52 40.7**	**+1.8**
SIV				LR	LR	07 07 41.7	
	comp=Z,558nm,20.2s,slow=35						
ESDC	**Sonseca Array**	**43.59**	**24**	P	**P**	**06 53 19.4**	**+1.4**
ESDC	**Sonseca Array** 0.4nm,0.4s,baz=226,slow=9.1,SNR=7.2	**43.59**	**24**	P	**P**	**06 53 19.4**	**+1.4**
LPAZ	**La Paz**	**45.29**	**246**	P	**P**	**06 53 33.8**	**+1.2**
LPAZ	**La Paz** 1.5nm,0.7s,baz=91,slow=13,SNR=7.5	**45.29**	**246**	P	**P**	**06 53 33.8**	**+1.2**
KEST	**Kesra**	**47.65**	**39**	LR	LR	07 12 20.4	
	comp=Z,135nm,19.8s,baz=211,slow=34						
ROSC	**El Rosal**	**48.96**	**276**	LR	LR	07 13 21.4	
	comp=Z,392nm,19.2s,baz=116,slow=34						
BOSA	**Boshof**	**56.52**	**125**	LR	LR	07 14 38.3	
	comp=Z,232nm,18.5s,baz=299,slow=31						
GERES	**GERESS Array B**	**58.70**	**29**	P	**P**	**06 55 12.9**	**+1.5**
GERES	**GERESS Array B** 0.3nm,0.2s,baz=205,slow=6.5,SNR=3.6	**58.70**	**29**	P	**P**	**06 55 13.0**	**+1.5**
KMBO	**Kilima Mbogo**	**62.75**	**92**	LR	LR	07 20 28.1	
	comp=Z,112nm,18.9s,baz=100,slow=34						
BRTR	**Keskin Array B**	**66.29**	**46**	P	**P**	**06 56 04.3**	**+1.8**
BRTR	**Keskin Array B** 1.3nm,0.8s,baz=231,slow=5.9,SNR=7.8	**66.29**	**46**	P	**P**	**06 56 04.3**	**+1.8**
AK01	**Malin Array Si**	**67.96**	**34**	*e*P	**P**	**06 56 12.0**	**-0.6**
AKASG	**Malin Array Be**	**67.97**	**34**	P	**P**	**06 56 12.4**	**-0.3**
AKASG	**Malin Array Be** 0.3nm,0.3s,baz=239,slow=7.5,SNR=10.0	**67.97**	**34**	P	**P**	**06 56 12.4**	**-0.3**
TUL1	**Tulsa** baz=74	**73.78**	**307**	⇓P	**P**	**06 56 46.6**	**-1.7**
ECSD	**EROS Data Cent** 10nm,1.6s	**76.04**	**315**	*e*P	**P**	**06 56 59.5**	**-1.8**
632A	**Uvalde** baz=76	**76.07**	**300**	⇓P	**P**	**06 57 01.5**	**-0.3**
732A	**Laxson Ranch,** baz=76	**76.13**	**299**	↑P	**P**	**06 57 02.2**	**+0.1**
JCT	**Junction City** 8.8nm,1.2s	**76.21**	**301**	*e*P	**P**	**06 57 01.7**	**-0.9**
JCT	**Junction City** baz=76	**76.21**	**301**	↑P	**P**	**06 57 01.8**	**-0.9**
532A	**Rocksprings** baz=76	**76.25**	**301**	↑P	**P**	**06 57 02.1**	**-0.8**
432A	**Menard** baz=76	**76.25**	**302**	↑P	**P**	**06 57 02.3**	**-0.5**
232A	**Coleman** baz=76	**76.27**	**303**	↑P	**P**	**06 57 01.9**	**-1.0**
332A	**Millersview** baz=76	**76.28**	**302**	↑P	**P**	**06 57 02.0**	**-1.0**
Z32A	**Haskell** baz=76	**76.33**	**304**	↑P	**P**	**06 57 02.1**	**-1.0**
ABTX	**Abilene, Hawle** baz=76	**76.37**	**303**	↑P	**P**	**06 57 02.4**	**-1.1**
AGMN	**Agassiz Nation**	**76.61**	**320**	*e*P	**P**	**06 57 02.2**	**-2.2**
631A	**Perdido Creek** baz=77	**76.74**	**300**	↑P	**P**	**06 57 05.4**	**-0.2**
531A	**Rocksprings** baz=77	**76.81**	**301**	⇓P	**P**	**06 57 05.1**	**-0.9**
331A	**San Angelo** baz=77	**76.85**	**302**	↑P	**P**	**06 57 05.0**	**-1.2**
Z31A	**Sharp Cattle R** baz=77	**76.88**	**304**	⇓P	**P**	**06 57 05.1**	**-1.2**
431A	**Sonora** baz=77	**76.92**	**301**	↑P	**P**	**06 57 05.7**	**-1.0**
Y31A	**Rekieta Farm,** baz=77	**77.07**	**305**	⇓P	**P**	**06 57 06.6**	**-0.8**
430A	**Baggett Ranch,** baz=78	**77.47**	**301**	⇓P	**P**	**06 57 09.5**	**-0.3**
530A	**J-C Ranch, Com** baz=78	**77.49**	**301**	↑P	**P**	**06 57 09.9**	**+0.1**
330A	**Mertzon** baz=78	**77.50**	**302**	↑P	**P**	**06 57 09.2**	**-0.6**
X30A	**Coker Ranch, T** baz=78	**77.64**	**305**	↑P	**P**	**06 57 09.7**	**-0.9**
Z30A	**Sanderson Ranc** baz=78	**77.69**	**304**	⇓P	**P**	**06 57 10.1**	**-0.8**
429A	**Davenport Ranc** baz=78	**78.02**	**301**	⇓P	**P**	**06 57 12.4**	**-0.4**
Z29A	**Hungry Hill Ra** baz=78	**78.17**	**304**	⇓P	**P**	**06 57 12.7**	**-0.9**
Y29A	**Porterfield Fa** baz=78	**78.22**	**304**	⇓P	**P**	**06 57 13.2**	**-0.7**
529A	**Stev Forest Ra** baz=78	**78.24**	**301**	↑P	**P**	**06 57 13.6**	**-0.5**
428A	**Kincaid Ranch,** baz=79,SNR=5.6	**78.71**	**301**	⇓P	**P**	**06 57 15.7**	**-1.0**
528A	**Cox Ranch, San** baz=79	**78.74**	**301**	↑P	**P**	**06 57 16.4**	**-0.5**
628A	**Black Gap, Mar** baz=79	**78.75**	**300**	↑P	**P**	**06 57 16.1**	**-0.8**
S28A	**Manter** baz=79	**78.89**	**308**	↑P	**P**	**06 57 16.4**	**-1.2**
R28A	**Tribune** baz=79	**78.93**	**309**	⇓P	**P**	**06 57 16.7**	**-1.0**
MDND	**Maddock** baz=79	**78.95**	**319**	⇓P	**P**	**06 57 15.8**	**-1.7**
MSTX	**Muleshoe** baz=79	**79.14**	**304**	⇓P	**P**	**06 57 18.1**	**-0.8**
627A	**Terlingua Ranc** baz=79	**79.19**	**300**	⇓P	**P**	**06 57 19.1**	**-0.3**
J28A	**Allard Ranch,** baz=79	**79.27**	**314**	⇓P	**P**	**06 57 17.8**	**-1.7**
427A	**Hayter Ranch,** baz=79	**79.33**	**301**	↑P	**P**	**06 57 20.1**	**0.0**
TXAR	**Lajitas Array**	**79.42**	**300**	P	**P**	**06 57 20.4**	**-0.2**
TXAR	**Lajitas Array** 1.1nm,0.8s,baz=123,slow=4.6,SNR=12	**79.42**	**300**	P	**P**	**06 57 20.4**	**-0.2**
Z27A	**Tatum** baz=79,SNR=6.0	**79.43**	**304**	↑P	**P**	**06 57 19.7**	**-0.9**
527A	**Woodward Ranch** baz=79	**79.44**	**300**	↑P	**P**	**06 57 20.5**	**-0.3**
Y27A	**Causey** baz=79	**79.45**	**304**	⇓P	**P**	**06 57 20.2**	**-0.5**
OGNE	**Ogallala** 28nm,1.5s	**79.47**	**311**	*e*P	**P**	**06 57 20.4**	**-0.2**
OGNE	**Ogallala** baz=80	**79.47**	**311**	↑P	**P**	**06 57 19.3**	**-1.3**
KSCO	**Kaye Shedlock'** baz=80	**79.65**	**309**	⇓P	**P**	**06 57 20.7**	**-1.0**
R27A	**Eads** baz=80	**79.69**	**309**	↑P	**P**	**06 57 21.2**	**-0.7**
N27A	**Anderson Farm,** baz=80	**79.83**	**311**	⇓P	**P**	**06 57 21.0**	**-1.6**
626A	**Big Bend Ranch** baz=80	**79.84**	**300**	⇓P	**P**	**06 57 23.0**	**+0.1**
526A	**Mary Lane Ranc** baz=80	**79.85**	**300**	⇓P	**P**	**06 57 23.0**	**+0.1**
426A	**McDonald Obser** baz=80,SNR=9.3	**79.85**	**301**	⇓P	**P**	**06 57 23.3**	**+0.3**
326A	**Caldwell Ranch** baz=80	**79.87**	**302**	↑P	**P**	**06 57 22.9**	**-0.1**
X26A	**CR and CF Fran** baz=80	**80.06**	**305**	↑P	**P**	**06 57 23.4**	**-0.7**
226B	**Tecolote Peak,** baz=80	**80.10**	**302**	⇓P	**P**	**06 57 24.2**	**-0.1**
S26A	**Kim** baz=80	**80.14**	**308**	↑P	**P**	**06 57 23.1**	**-1.2**
T26A	**Comanche Natio** baz=80	**80.18**	**308**	↑P	**P**	**06 57 23.6**	**-1.1**
U26A	**Atchley Ranch,** baz=80	**80.21**	**307**	↑P	**P**	**06 57 24.1**	**-0.7**
P26A	**Davis Ranch, A** baz=80	**80.28**	**310**	⇓P	**P**	**06 57 24.2**	**-1.0**
125A	**Gardner Draw,** baz=80,SNR=6.1	**80.57**	**303**	↑P	**P**	**06 57 26.1**	**-0.7**
Z25A	**Roswell** baz=81	**80.68**	**303**	↑P	**P**	**06 57 26.8**	**-0.6**
425A	**Indio Mountain** baz=81,SNR=11	**80.69**	**301**	↑P	**P**	**06 57 27.9**	**+0.4**
325A	**Bean Ranch, Si** baz=81,SNR=9.4	**80.72**	**302**	⇓P	**P**	**06 57 27.0**	**-0.7**
U25A	**Circle Dot Ran** baz=81	**80.74**	**307**	⇓P	**P**	**06 57 26.7**	**-1.0**
X25A	**Clemmons Ranch** baz=81	**80.76**	**305**	↑P	**P**	**06 57 27.6**	**-0.2**
T25A	**Trinidad** baz=81	**80.82**	**307**	↑P	**P**	**06 57 27.6**	**-0.6**
R25A	**Fountain Ranch** baz=81	**80.83**	**308**	⇓P	**P**	**06 57 27.5**	**-0.6**
V25A	**Rancho No Teng** baz=81	**80.85**	**306**	↑P	**P**	**06 57 28.2**	**-0.2**
S25A	**Robets Cordova** baz=81	**80.90**	**308**	↑P	**P**	**06 57 28.0**	**-0.5**
P25A	**Willow Gulch B** baz=81	**80.90**	**310**	↑P	**P**	**06 57 28.0**	**-0.5**
224A	**Cornudas Mount** baz=81	**81.25**	**302**	↑P	**P**	**06 57 30.1**	**-0.4**
W24A	**Lazy 6 Ranch,** baz=81,SNR=8.0	**81.43**	**305**	⇓P	**P**	**06 57 31.5**	**+0.1**
M24A	**Cheyenne** baz=82	**81.63**	**312**	⇓P	**P**	**06 57 31.6**	**-0.7**
Y23A	**Lovelace Mesa,** baz=82	**81.85**	**304**	⇓P	**P**	**06 57 34.4**	**+0.7**
F24A	**Ekalaka** baz=82	**81.89**	**316**	↑P	**P**	**06 57 32.8**	**-0.7**
ISCO	**Idaho Springs** baz=82	**82.04**	**310**	⇓P	**P**	**06 57 34.3**	**-0.4**
R23A	**Moffat** baz=82	**82.05**	**308**	⇓P	**P**	**06 57 34.5**	**-0.2**
DGMT	**Dagmar** baz=82	**82.08**	**319**	↑P	**P**	**06 57 33.8**	**-0.5**
C24A	**Savage** baz=82	**82.11**	**318**	⇓P	**P**	**06 57 34.2**	**-0.3**
ANMO	**Albuquerque** 7.1nm,1.5s	**82.27**	**305**	*e*P	**P**	**06 57 35.6**	**-0.2**
O23A	**Lake Granby, G** baz=82	**82.32**	**310**	↑P	**P**	**06 57 36.0**	**-0.2**
N23A	**Red Feather La** baz=82	**82.41**	**311**	↑P	**P**	**06 57 36.0**	**-0.6**
G23A	**Biddle** baz=82	**82.47**	**315**	⇓P	**P**	**06 57 35.9**	**-0.7**
Z22A	**Elephant Butte** baz=82	**82.56**	**303**	↑P	**P**	**06 57 37.5**	**+0.1**
E23A	**Ismay** baz=82	**82.57**	**317**	⇓P	**P**	**06 57 36.3**	**-0.7**
D23A	**Lindsay** baz=83	**82.59**	**317**	⇓P	**P**	**06 57 36.7**	**-0.4**
U22A	**Llaves** baz=83	**82.70**	**306**	⇓P	**P**	**06 57 38.7**	**+0.6**
V22A	**San Miguel Ran** baz=83	**82.71**	**306**	↑P	**P**	**06 57 38.4**	**+0.2**
LAZ	**Ladron** 1.8nm,1.1s	**82.78**	**304**	*e*P	**P**	**06 57 38.8**	**+0.3**
O22A	**Kremmling** baz=83	**82.79**	**310**	⇓P	**P**	**06 57 38.3**	**-0.3**
T22A	**Edith** baz=83	**82.80**	**307**	↑P	**P**	**06 57 38.4**	**-0.2**
L22A	**Ellis Ranch, M** baz=83	**82.89**	**312**	↑P	**P**	**06 57 38.7**	**-0.2**
P22A	**Eagle** baz=83	**82.90**	**310**	⇓P	**P**	**06 57 38.6**	**-0.5**
Z21A	**St. Cloud Mine** baz=83	**83.15**	**303**	⇓P	**P**	**06 57 40.8**	**+0.3**
D22A	**Cohagen** baz=83	**83.24**	**317**	↑P	**P**	**06 57 39.9**	**-0.6**
A22A	**Carney Farms,** baz=83	**83.28**	**319**	↑P	**P**	**06 57 39.8**	**-0.8**
X21A	**Alamocita Cree** baz=83,SNR=6.0	**83.32**	**304**	⇓P	**P**	**06 57 41.9**	**+0.5**
U21A	**Nageezi** baz=83	**83.36**	**306**	⇓P	**P**	**06 57 41.6**	**+0.1**
P21A	**Newcastle** baz=83	**83.43**	**310**	⇓P	**P**	**06 57 42.0**	**+0.2**
Q21A	**Lamborn Mesa,** baz=83	**83.47**	**309**	↑P	**P**	**06 57 42.2**	**+0.2**
K21A	**Alcova** baz=84	**83

	1.0nm,1.0s,baz=96,slow=6.4,SNR=6.7							
S18A	**Hurst Farm, Bl** baz=85	**85.30**	**308**	⇑P		**P**	**06 57 51.1**	**-0.3**
G18A	**Lazy EL Ranch,** baz=85	**85.42**	**315**	⇓P		**P**	**06 57 51.0**	**-0.7**
I18A	**Diamond G Ranc** baz=86	**85.50**	**314**	⇓P		**P**	**06 57 51.9**	**-0.4**
GCMT	**Greycliff** 0.8nm,0.2s	**85.52**	**316**	*e*P		**P**	**06 57 51.8**	**-0.4**
F18A	**Big Timber** baz=86	**85.56**	**316**	⇓P		**P**	**06 57 52.0**	**-0.3**
EGMT	**Eagleton** baz=86	**85.73**	**318**	⇑P		**P**	**06 57 52.7**	**-0.4**
E18A	**Harlowton** baz=86	**85.75**	**316**	⇓P		**P**	**06 57 52.7**	**-0.5**
SRU	**San Rafael** baz=86	**85.78**	**309**	⇓P		**P**	**06 57 53.5**	**-0.2**
M17A	**Scullys Gap (B** baz=86	**86.00**	**311**	⇓P		**P**	**06 57 54.3**	**-0.4**
SNOW	**Snow King Moun** 7.7nm,1.1s	**86.17**	**313**	*e*P		**P**	**06 57 55.3**	**-0.3**
MOOW	**Moose Ponds** 2.8nm,1.0s	**86.17**	**314**	*e*P		**P**	**06 57 54.6**	**-0.9**
F17A	**Fitzpatrick Pl** baz=86	**86.22**	**316**	⇓P		**P**	**06 57 55.4**	**-0.2**
D17A	**Six Diamond Ra** baz=86	**86.31**	**317**	⇑P		**P**	**06 57 55.6**	**-0.4**
TPAW	**Teton Pass** 4.4nm,0.9s	**86.31**	**313**	*e*P		**P**	**06 57 55.8**	**-0.5**
WUAZ	**Wupatki** baz=86	**86.32**	**305**	⇑P		**P**	**06 57 56.8**	**+0.4**
IMW	**Indian Meadow** 3.9nm,0.9s	**86.32**	**314**	*e*P		**P**	**06 57 56.1**	**-0.2**
X16A	**Lo Mia Camp, P** baz=86	**86.34**	**304**	⇑P		**P**	**06 57 57.1**	**+0.6**
E17A	**Martinsdale** baz=86,SNR=5.7	**86.39**	**316**	⇓P		**P**	**06 57 56.0**	**-0.5**
A17A	**Triple J Farms** baz=86	**86.42**	**319**	⇑P		**P**	**06 57 55.7**	**-0.8**
B17A	**L&G Farms, Che** baz=86	**86.45**	**318**	⇑P		**P**	**06 57 56.1**	**-0.5**
RRI2	**Red Ridge**	**86.57**	**313**	*e*P		**P**	**06 57 57.6**	**0.0**
H16A	**Russell Place,** baz=86	**86.58**	**315**	⇓P		**P**	**06 57 57.3**	**-0.2**
QLMT	**Earthquake Lak** 0.2nm,0.2s	**86.71**	**315**	*e*P		**P**	**06 57 58.8**	**+0.6**
I16A	**Newdale** baz=87	**86.72**	**314**	⇑P		**P**	**06 57 57.9**	**-0.3**
D16A	**Dana Ranch, Ca** baz=87	**86.89**	**317**	⇑P		**P**	**06 57 58.7**	**-0.2**
A16A	**West Butte Ran** baz=87,SNR=6.2	**87.01**	**319**	⇑P		**P**	**06 57 58.6**	**-0.8**
MSU	**Marysvale** 1.0nm,0.3s	**87.05**	**308**	*e*P		**P**	**06 58 00.2**	**+0.2**
C16A	**Fuhringer Ranc** baz=87	**87.06**	**318**	⇓P		**P**	**06 57 58.5**	**-1.1**
U15A	**North Rim** baz=87	**87.09**	**306**	⇓P		**P**	**06 57 59.9**	**-0.3**
F15A	**Butte** baz=88	**87.50**	**316**	⇑P		**P**	**06 58 01.4**	**-0.5**
D15A	**Lincoln** baz=88	**87.56**	**317**	⇑P		**P**	**06 58 01.5**	**-0.7**
DUG	**Dugway** baz=88	**87.59**	**310**	⇑P		**P**	**06 58 02.2**	**-0.2**
Y14A	**Wickenburg** baz=88	**87.62**	**304**	⇓P		**P**	**06 58 03.3**	**+0.7**
B15A	**Bradely Ranch,** baz=88	**87.62**	**318**	⇑P		**P**	**06 58 01.6**	**-0.8**
C15A	**Salmond Ranch,** baz=88,SNR=5.2	**87.64**	**318**	⇑P		**P**	**06 58 01.3**	**-1.1**
A15A	**Johnson Ranch,** baz=88	**87.76**	**319**	⇓P		**P**	**06 58 02.0**	**-1.0**
I14A	**Mackay** baz=88	**88.14**	**314**	⇓P		**P**	**06 58 04.4**	**-0.6**
A14A	**Double T Ranch** baz=88	**88.21**	**319**	⇑P		**P**	**06 58 04.6**	**-0.6**
D14A	**Greenough** baz=88	**88.23**	**317**	⇓P		**P**	**06 58 04.7**	**-0.6**
W13A	**Hualapai Mount** baz=88	**88.36**	**305**	⇓P		**P**	**06 58 06.8**	**+0.5**
C14A	**Swan Lake** baz=88	**88.41**	**318**	⇑P		**P**	**06 58 05.4**	**-0.7**
PDMCI	**Parker Dam,Lak** baz=88	**88.57**	**304**	⇓P		**P**	**06 58 07.6**	**+0.6**
H12A	**Diamond D Ranc** baz=89	**89.15**	**314**	⇑P		**P**	**06 58 09.4**	**-0.4**
IRM	**Iron Mountain** baz=89	**89.40**	**304**	⇓P		**P**	**06 58 11.8**	**+0.8**
G12A	**Big Creek, Yel** baz=89	**89.48**	**315**	⇓P		**P**	**06 58 11.2**	**-0.1**
BMO	**Blue Mountains** 13nm,1.8s	**90.89**	**315**	*e*P		**P**	**06 58 17.3**	**-0.5**
ASAR	**Alice Springs**	**149.56**	**140**	PKPbc		**PKPbc**	**07 05 03.9**	**-0.3**
ASAR	**Alice Springs** 1.9nm,1.1s,baz=232,slow=1.1,SNR=6.0	**149.56**	**140**	PKPbc		**PKPbc**	**07 05 03.9**	**-0.3**

CSEM ***17*** *06:54:55.4±0.7,36.27N×35.59E,h5km,MD2.8,Error ellipse: s-maj=12.8km s-min=10.4km az=137.0*
ISCJB ***17*** *06:55:00.5±1.0,36.18N±0.03×36.00E±0.08,h9km±5km, Error ellipse: s-maj=10.9km s-min=4.8km az=10.8*
DDA ***17*** *06:55:00.3,36.19N×36.00E,h7km,MD2.8*
NSSC ***17*** *06:55:00.7±0.4,36.16N×36.02E,h15km±1km,MD0.5, ML2.1*

ISC 17 06:55:00.5±1.2,36.18N±0.03×36.00E±0.06,h11km±9km, n16,σ0♦47/30,Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
YAYL	**Yayladag**	**0.17**	**149**	*i* P		**Pg**	**06 55 04.1**	**-0.2**
YAYL				*i* S		**Sg**	**06 55 07.1**	**+0.1**
YAYL	**Yayladag**	**0.17**	**149**	*i* P		**Pg**	**06 55 04.1**	**-0.2**
ARNB	**Al Arnab**	**0.32**	**184**	*e*P		**Pg**	**06 55 07.0**	**+0.1**
ARNB				*e*S		**Sg**	**06 55 11.9**	**+0.7**
ARNB	comp=N,223nm,0.3s			AML		AML	06 55 12.7	
ARNB	comp=E,277nm,0.3s			AML		AML	06 55 13.1	
ARNB	**Al Arnab** SNR=96	**0.32**	**184**	*e*P		**Pg**	**06 55 07.0**	**+0.1**
ARNB	comp=E,277nm,0.3s,SNR=59			*e*S		**Sg**	**06 55 11.9**	**+0.7**
BTCH	**Batrach**	**0.40**	**110**	*e*P		**Pg**	**06 55 08.5**	**+0.1**
BTCH				*e*S		**Sg**	**06 55 14.1**	**+0.4**
BTCH	comp=E,229nm,0.2s			AML		AML	06 55 15.0	
BTCH	comp=N,272nm,0.2s			AML		AML	06 55 15.6	
BTCH	**Batrach** SNR=75	**0.40**	**110**	*e*P		**Pg**	**06 55 08.5**	**+0.1**
BTCH	comp=N,272nm,0.2s,SNR=59			*e*S		**Sg**	**06 55 14.1**	**+0.4**
COBT	**Iskenderun**	**0.40**	**31**	*i* P		**Pg**	**06 55 08.8**	**+0.3**
COBT				*i* S		**Sg**	**06 55 12.8**	**-1.1**
COBT	**Iskenderun**	**0.40**	**31**	*i* P		**Pg**	**06 55 08.8**	**+0.3**
COBT				*i* S		**Sg**	**06 55 12.8**	**-1.1**
DRWC	**Darouich**	**0.70**	**50**	*e*P		**Pg**	**06 55 13.8**	**-0.2**
DRWC				*e*S		**Sg**	**06 55 23.6**	**+0.4**
DRWC	comp=N,102nm,0.4s			AML		AML	06 55 25.2	
DRWC	comp=E,77nm,0.3s			AML		AML	06 55 25.8	
DRWC	**Darouich** SNR=75	**0.70**	**50**	*e*P		**Pg**	**06 55 13.9**	**-0.2**
DRWC	comp=E,77nm,0.3s,SNR=59			*e*S		**Sg**	**06 55 23.6**	**+0.4**
WRDH	**Warideh**	**0.75**	**153**	*e*P		**Pg**	**06 55 14.5**	**-0.4**
WRDH				*e*S		**Sg**	**06 55 24.4**	**-0.4**
WRDH	comp=E,58nm,0.5s			AML		AML	06 55 24.9	
WRDH	comp=N,72nm,0.1s			AML		AML	06 55 27.7	
WRDH	**Warideh** SNR=75	**0.75**	**153**	*e*P		**Pg**	**06 55 14.5**	**-0.4**
WRDH	comp=N,72nm,0.1s,SNR=59			*e*S		**Sg**	**06 55 24.4**	**-0.4**
KUZU	**Kuzuini**	**1.05**	**55**	*i* P		**Pb**	**06 55 20.7**	**-0.1**
KUZU				*i* S		**Sg**	**06 55 35.1**	**+0.6**
KUZU	**Kuzuini**	**1.05**	**55**	*i* P		**Pb**	**06 55 20.7**	**-0.1**
KUZU				*i* S		**Sg**	**06 55 35.1**	**+0.6**
AYKD	**Aykdinkavak**	**1.39**	**27**	*i* P		**Pb**	**06 55 26.7**	**+0.1**
AYKD				*i* S		**Sn**	**06 55 44.2**	**-0.1**
AYKD	**Aykdinkavak**	**1.39**	**27**	*i* P		**Pb**	**06 55 26.7**	**+0.1**

ISCJB ***17*** *07:04:51.1±0.6,45.63S±0.05×77.0W±0.2,h10km, mb4.3/14,MS4.5/8,Error ellipse: s-maj=17.5km s-min=7.1km az=12.2*
IDC ***17*** *07:04:51.5±0.9,45.71S×77.18W,h0km,mb4.3/10, mb1 4.5/12,mb1mx4.4/21,mbtmp4.4/12,ML4.4/2,MS4.5/10, Ms1 4.5/10,ms1mx4.3/26,Error ellipse: s-maj=35.7km s-min=13.7km az=101.0*
NEIC ***17*** *07:04:52.7±0.6,45.62S×77.15W,h10km,mb4.6/6,Error ellipse: s-maj=16.4km s-min=7.1km az=102.0*
GCMT ***17*** *07:04:53.8±0.2,45.83S×77.61W,h25km±1km,MW5.2, Moment Tensor Solution. s33,c40; s90,c145; Moment tensor: Scale 10¹⁶Nm; Mrr-0.81±.28; Mθθ 3.51±.24; Mϕϕ-2.70±.23; Mrθ-2.87±.54; Mθϕ-7.19±.19; Mϕr-2.20±.52; Best double couple: M₀8.60000×10¹⁶ NP1:φs346.00000°, δ68.00000°,λ-11.00000°. NP2:φs80.00000°,δ80.00000°, λ-158.00000°. Principal axes: T 8.4000, Plg8.0000°, Azm212.0000°; N 0.4800, Plg65.0000°, Azm104.0000°; P -8.8900, Plg23.0000°, Azm305.0000°; Data Used: II G IU IC.*

ISC 17 07:04:52.6±0.7,45.65S±0.07×77.2W±0.2,h10km,n55, σ1♦30/51,mb4.5/14,MS4.5/8,9C-2D,Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PUYE	**Entre Lagos**	**6.00**	**36**	⇑*i*P		**Pn**	**07 06 21.0**	**-0.4**
PUYE	**Entre Lagos**	**6.00**	**36**	⇑*i*P		**Pn**	**07 06 21.0**	**-0.4**
VLCH	**Valdivia**	**6.53**	**28**	*e*P		**Pn**	**07 06 28.9**	**+0.2**
VLCH	**Valdivia**	**6.53**	**28**	*e*P		**Pn**	**07 06 28.9**	**+0.2**
PLCA	**Paso Flores** 20nm,0.7s	**6.92**	**47**	*e*Pn		**Pn**	**07 06 34.6**	**+0.5**
PLCA	**Paso Flores** 2.0nm,0.3s,baz=228,slow=12,SNR=35	**6.92**	**47**	Pn		**Pn**	**07 06 35.3**	**+1.2**
PLCA	comp=Z,5μm,19.9s,baz=213,slow=38			LR		LR	07 09 14.6	
USHA	**Ushuaia**	**10.77**	**152**	Pn		**Pn**	**07 07 25.3**	**-1.4**
USHA	**Ushuaia** 1.3nm,0.3s,baz=303,slow=14,SNR=14	**10.77**	**152**	Pn		**Pn**	**07 07 25.3**	**-1.4**
USHA	comp=Z,3μm,19.5s,baz=136,slow=36			LR		LR	07 11 14.9	
LNV	**Longovilo**	**12.50**	**23**	*e*P		**Pn**	**07 07 49.2**	**-1.3**
LNV	**Longovilo**	**12.50**	**23**	*e*P		**Pn**	**07 07 49.2**	**-1.3**
CACH	**El Canelo**	**12.58**	**26**	*e*P		**Pn**	**07 07 50.0**	**-1.8**
CACH	**El Canelo**	**12.58**	**26**	*e*P		**Pn**	**07 07 50.0**	**-1.8**
TACH	**Talagante**	**12.91**	**24**	⇑*i*P		**Pn**	**07 07 53.7**	**-2.5**
TACH	**Talagante**	**12.91**	**24**	⇑*i*P		**Pn**	**07 07 53.7**	**-2.5**
PCH	**Pirque**	**13.07**	**26**	⇑*i*P		**Pn**	**07 07 56.2**	**-2.2**
PCH	**Pirque**	**13.07**	**26**	⇑*i*P		**Pn**	**07 07 56.2**	**-2.2**
ANTU	**Antumapu**	**13.08**	**25**	⇑*i*P		**Pn**	**07 07 56.6**	**-1.9**
ANTU	**Antumapu**	**13.08**	**25**	⇑*i*P		**Pn**	**07 07 56.6**	**-1.9**
CLCH	**Cerro Calan**	**13.27**	**25**	⇑*i*P		**Pn**	**07 07 58.6**	**-2.5**
TRQA	**Tornquist** 42nm,1.1s	**13.64**	**62**	*e*Pn		**Pn**	**07 08 07.8**	**+1.7**
CMCH	**Combarbala**	**15.24**	**21**	⇓*i*P		**Pn**	**07 08 26.2**	**-1.8**
CMCH	**Combarbala**	**15.24**	**21**	⇓*i*P		**Pn**	**07 08 26.2**	**-1.8**
CFAA	**Coronel Fontan**	**15.66**	**30**	Pn		**Pn**	**07 08 31.4**	**-2.0**
CFAA	**Coronel Fontan** 0.2nm,0.3s,baz=204,slow=13,SNR=21	**15.66**	**30**	Pn		**Pn**	**07 08 31.4**	**-2.0**
TLL	**Tololo Astrono**	**16.25**	**20**	*i* P		**Pn**	**07 08 40.2**	**-1.1**
TLL	**Tololo Astrono**	**16.25**	**20**	*i* P		**Pn**	**07 08 40.2**	**-1.1**
LCO	**Las Campanas** 40nm,0.7s	**17.39**	**19**	*e*Pn		**Pn**	**07 08 55.4**	**-0.2**
PMSA	**Palmer Station** comp=Z,488nm,20.6s,baz=330,slow=30	**20.50**	**164**	LR		LR	07 15 03.1	
LVC	**Limon Verde** 27nm,0.9s	**23.96**	**19**	*e*P		**P**	**07 10 07.5**	**+0.2**
LVC	**Limon Verde** 20nm,0.9s,baz=216,slow=9.9,SNR=15	**23.96**	**19**	P		**P**	**07 10 08.1**	**+0.7**
CPUP	**Villa Florida**	**24.99**	**46**	P		**P**	**07 10 17.5**	**+1.1**
CPUP	**Villa Florida** 13nm,0.6s,baz=206,slow=9.4,SNR=42	**24.99**	**46**	P		**P**	**07 10 17.5**	**+1.1**
CPUP	comp=Z,2μm,18.6s,baz=200,slow=38			LR		LR	07 20 45.0	
LPAZ	**La Paz**	**30.25**	**18**	P		**P**	**07 11 05.2**	**+0.9**
LPAZ	**La Paz** 3.1nm,1.0s,baz=205,slow=11,SNR=7.4	**30.25**	**18**	P		**P**	**07 11 05.2**	**+0.9**
SIV	**San Ignacio**	**32.52**	**30**	P		**P**	**07 11 23.9**	**+0.2**
SIV	**San Ignacio** 6.7nm,0.9s,baz=220,slow=9.9,SNR=22	**32.52**	**30**	P		**P**	**07 11 23.9**	**+0.2**
ATAH	**Atahualpa** comp=Z,190nm,18.5s,baz=313,slow=32	**38.38**	**358**	LR		LR	07 25 25.5	
SAML	**Samuel** 10nm,0.9s	**38.51**	**23**	*e*P		**P**	**07 12 15.0**	**-0.1**
BDFB	**Brasilia**	**38.66**	**49**	P		**P**	**07 12 17.0**	**+0.5**
BDFB	**Brasilia** 12nm,1.2s,baz=219,slow=6.6,SNR=5.2	**38.66**	**49**	P		**P**	**07 12 17.0**	**+0.5**
BDFB	comp=Z,2μm,18.4s,baz=203,slow=38			LR		LR	07 29 37.4	
SNAA	**Sanae**	**42.62**	**153**	P		**P**	**07 12 48.7**	**+0.1**
SNAA	**Sanae** 1.2nm,0.8s,baz=273,slow=5.1,SNR=12	**42.62**	**153**	P		**P**	**07 12 48.7**	**+0.1**
QSPA	**South Pole Qui**	**44.60**	**180**	P		**P**	**07 13 04.4**	**-0.4**
QSPA	**South Pole Qui** 9.3nm,0.9s,baz=138,slow=3.7,SNR=16	**44.60**	**180**	P		**P**	**07 13 04.4**	**-0.4**
OTAV	**Otavalo** 7.2nm,1.1s	**45.70**	**358**	*e*P		**P**	**07 13 14.3**	**-0.1**
ROSC	**El Rosal** comp=Z,511nm,19.6s,baz=200,slow=33	**50.35**	**4**	LR		LR	07 32 41.1	
VNDA	**Vanda**	**51.89**	**194**	P		**P**	**07 14 01.0**	**+0.4**
VNDA	**Vanda** 2.0nm,0.9s,baz=132,slow=7.3,SNR=10	**51.89**	**194**	P		**P**	**07 14 01.0**	**+0.4**
VNDA	comp=Z,283nm,19.3s,baz=114,slow=32			LR		LR	07 32 06.0	
MAW	**Mawson**	**63.12**	**164**	P		**P**	**07 15 19.6**	**-0.2**
MAW	**Mawson** 4.2nm,0.9s,baz=221,slow=9.1,SNR=6.2	**63.12**	**164**	P		**P**	**07 15 19.6**	**-0.2**
MAW	comp=Z,645nm,21.0s,baz=205,slow=35			LR		LR	07 41 27.4	
BOSA	**Boshof** comp=Z,242nm,18.2s,baz=154,slow=33	**78.09**	**119**	LR		LR	07 48 06.4	
TXAR	**Lajitas Array**	**78.40**	**337**	P		**P**	**07 16 54.4**	**+1.1**
TXAR	**Lajitas Array** 1.5nm,1.0s,baz=147,slow=7.0,SNR=6.0	**78.40**	**337**	P		**P**	**07 16 54.4**	**+1.1**
JCT	**Junction City** 7.7nm,0.9s	**78.50**	**340**	*e*P		**P**	**07 16 55.1**	**+1.4**
WMOK	**Wichita Mounta** 4.0nm,1.0s	**82.36**	**342**	*e*P		**P**	**07 17 14.9**	**+0.5**

MOS ***17*** *07:08:16.1±0.9,51.71N×175.25W,h33km,mb5.4/107, MS5.1/53,Error ellipse: s-maj=6.6km s-min=4.6km az=88.3*
BJI ***17*** *07:08:16.4,52.00N×175.52W,h30km,mB5.5/53, mb5.2/53,Ms5.4/65,Ms7 5.1/63*
NEIC ***17*** *07:08:17.5±0.1,51.61N×175.23W,h31km,mb5.4/185, MS5.1/147,MW5.5,ML5.6(AEIC),Error ellipse: s-maj=4.7km s-min=1.9km az=177.0,Moment Tensor Solution. s69 Moment tensor: Scale 10¹⁷Nm; Mrr1.63; Mθθ-1.56; Mϕϕ-0.07; Mrθ 1.17; Mθϕ-0.11; Mϕr 0.43; Best double couple: M₀2.00000×10¹⁷ NP1:φs76.00000°, δ64.00000°,λ82.00000°. NP2:φs274.00000°,δ27.00000°, λ106.00000°. Principal axes: T 2.0800, Plg69.0000°, Azm329.0000°; N -0.1000, Plg7.0000°, Azm79.0000°; P -1.9700, Plg18.0000°, Azm172.0000°;*
NEIC Felt on Adak.
IDC ***17*** *07:08:17.1±2.7,51.70N×175.25W,h28km±18km,mb4.5/30, mb1 4.7/33,mb1mx4.6/35,mbtmp4.5/33,ML4.9/3,MS5.1/44, Ms1 5.1/44,ms1mx5.0/56 Error ellipse: s-maj=13.6km s-min=8.3km az=153.0*
ISCJB ***17*** *07:08:18.2±0.3,51.69N±0.03×175.22W±0.02,h52km±2km, mb5.2/279,MS5.1/229,Error ellipse: s-maj=5.5km s-min=2.0km az=174.1*
GCMT ***17*** *07:08:19.1±0.1,51.46N×175.09W,h32km,MW5.6, Moment Tensor Solution. s96,c189; s35,c37; Moment tensor: Scale 10¹⁷Nm; Mrr2.79±.04; Mθθ-2.53±.04; Mϕϕ-0.26±.03; Mrθ 1.76±.05; Mθϕ-1.20±.02; Mϕr 1.19±.05; Best double couple: M₀3.60000×10¹⁷ NP1:φs254.00000°, δ28.00000°,λ103.00000°. NP2:φs60.00000°,δ63.00000°, λ84.00000°. Principal axes: T 3.5000, Plg71.0000°, Azm316.0000°; N 0.2200, Plg6.0000°, Azm63.0000°; P -3.7200, Plg18.0000°, Azm155.0000°; Data Used: II IU IC G. Surface waves: sta= 98, comp=202, per= 50.*
SZGRF ***17*** *07:08:19.6,51.71N×176.70W,h33km,mb5.2,Andreanof Islands, Aleutian Islands, United States*
DJA ***17*** *07:08:53.9±6.0,52°N±12°×17°5W±2°8,h376km±61km, M5.0/17,mB5.6/11,mb5.0/17,Mw(mB)5.1/11*

ISC 17 07:08:18.8±0.3,51.70N±0.05×175.27W±0.02,h43km±1km, h42km:pP-P,n1216,σ1♦02/1238,mb5.3/291,MS5.1/232,

248C-219D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
GSMY	**Great Sitkin M**	**0.59**	**305**	P		**Pn**	**07 08 31.6**	**+0.6**
GSTR	**Great Sitkin T**	**0.63**	**309**	P		**Pn**	**07 08 32.5**	**+1.1**
GSCK	**Great Sitkin C**	**0.63**	**300**	P		**Pn**	**07 08 32.1**	**+0.6**
GSTD	**Great Sitkin T**	**0.65**	**303**	P		**Pn**	**07 08 32.4**	**+0.7**
KOKL	**Mount Kliuchef**	**0.91**	**46**	P		**Pn**	**07 08 35.6**	**+0.4**
KOFP	**Korovin Flat P**	**0.92**	**51**	P		**Pn**	**07 08 35.7**	**+0.2**
KIRH	**Kanaga Island**	**1.15**	**281**	P		**Pn**	**07 08 38.7**	**+0.2**
KINC	**Kanaga Island**	**1.18**	**282**	P		**Pn**	**07 08 39.0**	**+0.2**
KIKV	**Kanaga Island**	**1.19**	**279**	P		**Pn**	**07 08 39.1**	**0.0**
TAPA	**Tanaga Point A**	**1.58**	**275**	P		**Pn**	**07 08 44.5**	**+0.1**
TAFP	**Tanaga Falls P**	**1.70**	**278**	P		**Pn**	**07 08 46.4**	**+0.5**
TASE	**Tanaga Southea**	**1.72**	**275**	P		**Pn**	**07 08 46.8**	**+0.5**
TANO	**Tanaga North**	**1.78**	**278**	P		**Pn**	**07 08 48.0**	**+0.9**
GAEA	**Gareloi East**	**2.16**	**273**	P		**Pn**	**07 08 53.3**	**+1.0**
GALAA	**Gareloi Lava P**	**2.18**	**273**	P		**Pn**	**07 08 53.4**	**+0.8**
GANE	**Gareloi Northe**	**2.18**	**274**	P		**Pn**	**07 08 53.3**	**+0.7**
GAKI	**Gareloi-Kavalg**	**2.21**	**268**	P		**Pn**	**07 08 53.4**	**+0.4**
CERAA	**Semis' Rag'd T**	**3.14**	**276**	P		**Pn**	**07 09 07.2**	**+1.4**
CEAP	**Semis' Anvil P**	**3.21**	**277**	P		**Pn**	**07 09 08.4**	**+1.7**
CESW	**Semis' Southwe**	**3.21**	**276**	P		**Pn**	**07 09 07.9**	**+1.2**
CETU	**Semis' Tuman**	**3.26**	**277**	P		**Pn**	**07 09 09.0**	**+1.7**
AMKA	**Amchitka**	**3.41**	**267**	P		**Pn**	**07 09 09.5**	**+0.2**
AMKA				S		**Sn**	**07 09 52.0**	**+3.5**
LSSE	**Little Sitkin**	**3.83**	**276**	P		**Pn**	**07 09 17.1**	**+1.9**
LSNW	**Little Sitkin**	**3.86**	**276**	P		**Pn**	**07 09 17.0**	**+1.3**
LSSA	**Little Sitkin**	**3.87**	**276**	P		**Pn**	**07 09 17.3**	**+1.6**
NIKH	**Nikolski High**	**4.14**	**70**	P		**Pn**	**07 09 20.0**	**+0.6**
NIKH				S		**Sn**	**07 10 08.0**	**+1.6**
OKSP	**Okmok Steeple**	**4.54**	**67**	P		**Pn**	**07 09 25.9**	**+0.9**
OKCE	**Okmok Cone E**	**4.67**	**66**	P		**Pn**	**07 09 27.9**	**+1.2**
OKFG	**Magazine Ridge**	**4.80**	**66**	P		**Pn**	**07 09 30.3**	**+1.8**
MCIR	**Makushin Cirqu**	**5.56**	**63**	P		**Pn**	**07 09 40.2**	**+1.3**
MREP	**Makushin Rep't**	**5.59**	**64**	P		**Pn**	**07 09 41.3**	**+1.8**
MTBL	**Makushin Table**	**5.68**	**63**	P		**Pn**	**07 09 42.5**	**+1.9**
UNV	**Unalaska Valle**	**5.74**	**65**	P		**Pn**	**07 09 43.4**	**+2.0**
UNV				S		**Sn**	**07 10 48.8**	**+3.0**
AKRB	**Akutan Reef Bi**	**6.07**	**63**	P		**Pn**	**07 09 47.6**	**+1.6**
AKGG	**Akutan Green G**	**6.14**	**62**	P		**Pn**	**07 09 48.4**	**+1.5**
SPIA	**Saint Paul Isl**	**6.22**	**26**	P		**Pn**	**07 09 50.9**	**+3.0**
AKUT	**Akutan**	**6.24**	**63**	P		**Pn**	**07 09 50.0**	**+1.8**
SMY	**Shemya**	**6.62**	**283**	P		**Pn**	**07 09 54.9**	**+1.5**
SMY	**Shemya**	**6.62**	**283**	P		**Pn**	**07 09 54.9**	**+1.5**
FX1	**Attu Island--F**	**7.19**	**284**	P		**Pn**	**07 10 02.6**	**+1.3**
SSBA	**Shishaldin**	**7.36**	**61**	P		**Pn**	**07 10 04.5**	**+0.8**
SSLW	**Shishaldin Wes**	**7.36**	**61**	P		**Pn**	**07 10 04.3**	**+0.6**
FALS	**False Pass**	**7.78**	**61**	P		**Pn**	**07 10 10.3**	**+1.0**
DRIA	**Deer Island**	**8.44**	**62**	P		**Pn**	**07 10 19.2**	**+0.7**
DT1	**Dutton Round H**	**8.48**	**61**	P		**Pn**	**07 10 19.9**	**+1.0**
DOL	**Dolgoi Island**	**8.72**	**61**	P		**Pn**	**07 10 22.6**	**+0.4**
PS4A	**Pavlof South-4**	**8.78**	**60**	P		**Pn**	**07 10 23.8**	**+0.7**
SDPT	**Sand Point**	**9.53**	**62**	P		**Pn**	**07 10 33.4**	**0.0**
CHGN	**Chignik**	**10.93**	**58**	*e*Pn		**Pn**	**07 10 53.3**	**+0.9**
CHGN				*e*Sn		**Sn**	**07 12 52.6**	**-0.5**
GAMB	**Gambell** 702nm,1.7s	**12.25**	**7**	*e*Pn		**Pn**	**07 11 12.0**	**+1.5**
OHAK	**Old Harbor**	**13.90**	**58**	*e*Pn		**Pn**	**07 11 30.9**	**-2.0**
OHAK				*e*Sn		**Sn**	**07 14 05.8**	**+0.3**
SVW2	**Sparrevohn**	**14.34**	**41**	*e*Pn		**Pn**	**07 11 41.0**	**+2.1**
TNA	**Tin City** 43nm,0.6s	**14.40**	**12**	*e*Pn		Pn	07 11 42.8	+3.2
KDAK	**Kodiak Island** 133nm,0.4s	**14.41**	**56**	*e*Pn		**Pn**	**07 11 39.2**	**-0.6**
KDAK				Sn		**Sn**	**07 14 14.5**	**-3.4**
KDAK				*e*Sn		**Sn**	**07 14 15.7**	**-2.2**
KDAK	**Kodiak Island** 6.3nm,0.3s,baz=249,slow=4.9,SNR=29	**14.41**	**56**	Pn		**Pn**	**07 11 38.0**	**-1.8**
KDAK	0.6nm,0.3s,baz=87,slow=21,SNR=2.0			Sn		**Sn**	**07 14 14.5**	**-3.4**
RSO	**Redoubt South**	**15.25**	**46**	*e*P		**P**	**07 11 54.9**	**-0.5**
SPU	**Mount Spurr**	**15.88**	**44**	*e*P		**P**	**07 12 02.6**	**+0.5**
PET	**Petropavlovsk**	**15.96**	**285**	*c i*P		**Pn**	**07 11 58.3**	**-1.7**
PET				*e*S		**Sn**	**07 14 53.8**	**-1.9**
PET	comp=Z,900nm,12.8s			pmax		pmax		
PET	comp=Z,1μm,16.8s			pmax		pmax		
PET	comp=Z,8μm,21.0s			MLR		MLR		
PET	comp=Z,6μm,19.0s			MLR		MLR		
PEA0B	**Petropavlovsk-**	**16.52**	**286**	*e*P		**P**	**07 12 09.4**	**+0.1**
PETK	**Petropavlovsk-**	**16.52**	**286**	P		**P**	**07 12 08.7**	**-0.6**
PETK	comp=Z,1.0nm,0.3s			pmax		pmax		
PETK	comp=Z,4μm,20.7s			MLR		MLR		
PETK	**Petropavlovsk-**	**16.52**	**286**	Pn		**P**	**07 12 08.7**	**-0.6**
PETK	**Petropavlovsk-** comp=Z,1.0nm,0.3s,baz=90,slow=16,SNR=24	**16.52**	**286**	Pn		**P**	**07 12 08.7**	**-0.6**
PETK	comp=Z,4μm,20.7s,baz=270,slow=36			LR		LR	07 18 06.7	
PMR	**Palmer**	**17.32**	**45**	*e*P		**Pn**	**07 12 16.7**	**-0.4**
PMR	comp=Z,33nm,0.9s			pmax		pmax		
PMR	**Palmer** comp=Z,33nm,0.9s	**17.32**	**45**	*e*P		**Pn**	**07 12 16.7**	**-0.4**
TRF	**Thorofare Moun** comp=Z,313nm,1.2s	**17.68**	**39**	*e*P		**P**	**07 12 23.2**	**+1.0**
SML	**Sawmill**	**17.76**	**45**	*e*P		**Pn**	**07 12 21.9**	**-0.7**
SML	comp=Z,27nm,1.0s			pmax		pmax		
SML

MENT Mentasta 20.17 44 *e*P P 07 12 49.0 -0.3
DOT Dot Lake 20.28 42 *e*P P 07 12 50.3 -0.2
comp=Z,148nm,0.7s
PNL Peninsula 21.50 54 *e*P P 07 13 04.2 +0.5
comp=Z,83nm,1.5s
EGAK Eagle 21.87 40 *e*P P 07 13 07.0 -0.5
comp=Z,304nm,0.9s
EGAK LR LR
comp=Z,8µm,19.0s
MIDW Midway 23.51 185 PFAKE 07 13 30.0 +5.2
MIDW LR LR
comp=Z,6µm,20.0s
SKAG Skagway 23.56 55 *e*P P 07 13 26.0 +1.0
CRAG Craig 25.01 65 *e*P P 07 13 39.8 +1.4
comp=Z,452nm,1.4s
KUR Kuril'sk 25.08 270*c* *i*P P 07 13 30.7 -8.4
KUR *i* S S 07 17 59.6 -0.8
KUR *i* SS SnSn 07 18 53.0 +0.7
KUR pmax pmax
comp=Z,274nm,1.5s
KUR MLR MLR
comp=N,573nm,18.0s
KUR MLR MLR
comp=E,515nm,18.0s
KUR MLR MLR
comp=Z,1µm,18.0s
WRAK Wrangell Islan 25.31 62 *e*P P 07 13 42.6 +1.6
comp=Z,130nm,1.0s
WRAK LR LR
comp=Z,2µm,19.0s
INK Inuvik 25.94 34 P P 07 13 46.3 -0.3
INK Inuvik 25.94 34 P P 07 13 46.3 -0.3
comp=Z,12nm,0.5s,baz=239,slow=8.1,SNR=23
INK LR LR 07 25 13.6
comp=Z,3µm,18.1s,baz=238,slow=39
DLBC Dease Lake 26.34 57 *e*P P 07 13 51.3 +0.9
DLBC Dease Lake 26.34 57 P P 07 13 51.8 +1.3
comp=Z,13nm,0.9s,baz=288,slow=9.6,SNR=23
DLBC LR LR 07 24 39.0
comp=Z,3µm,19.1s,baz=280,slow=37
YUK Yuzh-Kuril'sk 26.92 269*c* *i*P P 07 13 46.9 -8.8
YUK *i* 07 15 00.9
YUK *i* S S 07 18 24.7 -4.7
YUK *i* *SS sS 07 18 42.7 -6.0
YUK pmax pmax
comp=Z,259nm,1.3s
YUK pmax pmax
comp=N,139nm,1.4s
YUK pmax pmax
comp=E,181nm,1.4s
YUK MLR MLR
comp=N,396nm,22.0s
YUK MLR MLR
comp=E,813nm,22.0s
YUK MLR MLR
comp=Z,1µm,22.0s
YSS Yuzh-Sakhalins 27.48 277⇑ *e*P P 07 14 02.6 +1.9
YSS *e**SP **sP** 07 14 19.0 +1.6
YSS *e*S S 07 18 39.0 +0.8
YSS pmax pmax
comp=Z,600nm,6.0s
YSS pmax pmax
comp=N,30nm,1.0s
YSS pmax pmax
comp=Z,60nm,1.0s
YSS smax smax
comp=N,1µm,9.0s
YSS MLR MLR
comp=N,2µm,20.0s
YSS MLR MLR
comp=E,5µm,20.0s
YSS MLR MLR
comp=Z,6µm,20.0s
BBB Bella Bella 28.68 70 P P 07 14 12.4 +1.1
BBB Bella Bella 28.68 70 P P 07 14 12.4 +1.1
comp=Z,23nm,0.9s,baz=302,slow=10,SNR=7.1
BBB LR LR 07 23 39.2
comp=Z,2µm,20.7s,baz=294,slow=32
ASAJ Asahikawa 28.91 272 *e*P P 07 14 14.5 +1.1
comp=Z,22nm,1.2s
ASAJ Asahikawa 28.91 272 P P 07 14 14.2 +0.7
comp=Z,21nm,0.8s,baz=70,slow=5.1,SNR=5.1
ASAJ LR LR 07 25 03.1
comp=Z,1µm,19.8s,baz=81,slow=35
ERM Erimo 29.67 268*d* *i*P P 07 14 20.5 +0.3
ERM pmax pmax
comp=Z,24nm,1.7s
ERM Erimo 29.67 268 PFAKE 07 14 30.0 +10
ERM LR LR
comp=Z,2µm,22.0s
YAK Yakutsk 30.86 311 *e*P P 07 14 28.4 -2.1
YAK *e**PP **pP** 07 14 40.8 -1.3
YAK *e*PPP PPP 07 15 33.3
YAK *e* 07 17 26.0
YAK *e*S S 07 19 26.9 -4.2
YAK pmax pmax
comp=Z,10.0nm,1.3s
YAK pmax pmax
comp=N,2.0nm,1.2s
YAK pmax pmax
comp=E,7.0nm,1.3s
YAK pmax pmax
comp=Z,19nm,0.7s
YAK pmax pmax
comp=N,4.0nm,0.6s
YAK pmax pmax
comp=E,41nm,1.4s
YAK smax smax
comp=N,112nm,3.5s
YAK smax smax
comp=E,107nm,3.7s
YAK MLR MLR
comp=Z,5µm,20.0s
YAK MLR MLR
comp=N,3µm,21.0s
YAK MLR MLR
comp=E,4µm,19.0s
TIXI Tiksi 31.45 330⇑ *e*P P 07 14 38.0 +2.4
TIXI pmax pmax
comp=Z,9.0nm,1.0s
HABR Khabarovsk 31.54 284*c* *e*P P 07 14 36.2 -0.5
HABR *e**PP **pP** 07 14 50.3 +2.0
HABR *e* 07 15 40.9
HABR *e*S S 07 19 41.6 -0.3
HABR *e*SS SnSn 07 21 32.3 +2.7
HABR pmax pmax
comp=N,48nm,3.0s
HABR pmax pmax
comp=Z,183nm,3.0s
HABR pmax pmax
comp=E,123nm,3.0s
HABR MLR MLR
comp=Z,3µm,17.0s
PGC Sidney 32.76 74 *e*P P 07 14 49.6 +2.3
NLWA Neilton Lookou 33.06 77 *e*P P 07 14 51.3 +1.3
comp=Z,75nm,1.1s
NLWA LR LR
comp=Z,4µm,22.0s
KIP Kipapa 33.07 150 *e*P P 07 14 51.2 +0.9
KIP pmax pmax
comp=Z,244nm,1.6s
KIP MLR MLR
comp=Z,6µm,19.0s
KIP Kipapa 33.07 150 *e*P P 07 14 51.2 +0.9
comp=Z,244nm,1.6s
KIP LR LR
comp=Z,6µm,19.0s
KLR Kul'dur 33.20 287 *e*P P 07 14 47.0 -4.2
KLR *e*S S 07 20 00.0 -7.8
KLR pmax pmax
comp=Z,900nm,9.5s
KLR MLR MLR
comp=E,2µm,14.0s
KLR MLR MLR
comp=Z,2µm,14.0s
YKW3 Yellowknife Ar 33.38 47 *e*P P 07 14 52.6 0.0
comp=Z,0.3nm,1.1s
VDB Vedder Mountai 33.40 73 P P 07 14 53.6 +0.7
YKA Yellowknife Ar 33.40 47 P P 07 14 52.2 -0.6
YKA PcP PcP 07 17 33.5 +0.3
YKA Yellowknife Ar 33.40 47 P P 07 14 52.2 -0.6
comp=Z,2.3nm,0.5s,baz=279,slow=8.5,SNR=15
YKA PcP PcP 07 17 33.5 +0.3
comp=Z,3.4nm,0.7s,baz=289,slow=3.3,SNR=6.0
JCW Jim Creek 33.87 74 P P 07 14 58.0 +1.0
RVC Mount Rainier- 34.41 76 P P 07 15 03.7 +1.8

LON Longmire 34.60 77 *e*P P 07 15 04.7 +1.2
LON Longmire 34.60 77 *e*P P 07 15 04.7 +1.2
COR Corvallis 34.76 81 *e*P P 07 15 07.2 +2.5
COR pmax pmax
comp=Z,181nm,1.5s
COR Corvallis 34.76 81 *e*P P 07 15 07.2 +2.5
comp=Z,181nm,1.5s
G04A Mulino 34.95 79 P P 07 15 07.2 +0.8
KEBM Edson Butte 35.02 84 *e*P P 07 15 08.4 +1.3
comp=Z,90nm,1.1s
ETW Emtiat 35.09 74 P P 07 15 08.6 +0.8
WTV Waterville 35.27 74 P P 07 15 09.9 +0.6
WAKE Wake Island 35.34 210 PFAKE 07 15 20.0 +10
WAKE LR LR
comp=Z,3µm,22.0s
USRK Ussuriysk Arra 35.43 279 P P 07 15 09.7 -0.9
comp=Z,28nm,0.9s,baz=59,slow=7.4,SNR=32
USRK PcP PcP 07 17 39.6 +0.2
comp=Z,5.0nm,0.8s,baz=50,slow=1.9,SNR=3.7
USRK LR LR 07 29 00.6
comp=Z,3µm,20.9s,baz=53,slow=35
KBO Bosley Butte 35.45 85 *e*P P 07 15 12.3 +1.5
comp=Z,163nm,1.5s
VFP Flag Point 35.51 79 P P 07 15 12.2 +0.7
MAJO Matsushiro 36.01 264 *e*P P 07 15 15.9 +0.3
MAJO MLR MLR
comp=Z,3µm,21.0s
MAJO Matsushiro 36.01 264 *e*P P 07 15 15.9 +0.3
MAJO LR LR
comp=Z,3µm,21.0s
MAT Matsushiro 36.01 264 P P 07 15 15.8 +0.2
MAT S S 07 20 53.8 +2.4
HUMO Hull Mountain 36.02 84 *e*P P 07 15 16.6 +1.0
comp=Z,29nm,1.0s
KRMB Red Mountain 36.03 86 *e*P P 07 15 16.6 +0.8
comp=Z,99nm,1.8s
VLA Vladivostok 36.07 278*c* *i*P P 07 15 16.2 +0.2
VLA pmax pmax
comp=Z,190nm,2.5s
HAWA Hanford 36.15 76 *e*P P 07 15 17.6 +0.9
comp=Z,63nm,0.8s
HAWA LR LR
comp=Z,2µm,22.0s
OD2 Odessa Site #2 36.16 74 P P 07 15 17.1 +0.3
VIPM Ingram Point 36.44 79 P P 07 15 19.9 +0.5
VIPM Ingram Point 36.44 79 P P 07 15 19.9 +0.5
KHMM Horse Mountain 36.51 86 *e*P P 07 15 21.2 +1.2
comp=Z,86nm,1.2s
YBH Yreka Blue Hor 36.65 85 *e*P P 07 15 21.8 +0.7
comp=Z,24nm,0.9s
YBH Yreka Blue Hor 36.65 85 LR LR 07 26 55.4
comp=Z,2µm,21.5s,baz=306,slow=30
MDJ Mudanjiang 36.68 281 P P 07 15 20.5 -0.7
MDJ pP pP 07 15 31.9 -1.1
MDJ sP sP 07 15 35.0 -3.1
MDJ PP PnPn 07 16 45.8 +0.5
MDJ S S 07 21 05.3 +3.9
MDJ sS sS 07 21 21.6 +0.6
MDJ ScP ScP 07 21 24.8 -1.3
MDJ PcS PcS 07 21 28.4 -2.6
MDJ pmax pmax
comp=Z,11nm,0.8s
MDJ pmax pmax
comp=Z,330nm,7.5s
MDJ LR LR
comp=N,1µm,16.1s
MDJ LR LR
comp=E,3µm,18.8s
MDJ LR LR
comp=Z,4µm,17.5s
MDJ Mudanjiang 36.68 281 PFAKE 07 15 30.0 +8.8
MDJ LR LR
comp=Z,5µm,21.0s
NEW Newport 36.70 72 *e*P P 07 15 21.6 +0.3
comp=Z,70nm,1.0s
NEW Newport 36.70 72 LR LR 07 27 51.3
comp=Z,2µm,21.7s,baz=299,slow=32
NEW Newport 36.70 72 ⇑P P 07 15 21.9 +0.5
baz=37,SNR=57
A12A Yaak River Ran 37.25 70 ⇓P P 07 15 26.9 +0.8
baz=37,SNR=8.2
KCPM Cahto Peak 37.29 88 *e*P P 07 15 27.7 +1.1
comp=Z,34nm,1.0s
JHJ Hachijo jima 2 37.32 258 LR LR 07 28 32.7
comp=Z,1µm,20.9s,baz=58,slow=33
WDC Whiskeytown Da 37.41 86 *e*P P 07 15 27.9 +0.4
WDC pmax pmax
comp=Z,41nm,1.1s
WDC Whiskeytown Da 37.41 86 *e*P P 07 15 27.9 +0.4
comp=Z,41nm,1.1s
C12B Naegeli Ranch, 37.93 72 ⇑P P 07 15 32.2 +0.3
baz=38,SNR=21
A13A Flathead Natio 37.97 69 ⇓P P 07 15 32.6 +0.4
baz=38,SNR=9.1
HOPS Hopland 38.02 89 P P 07 15 33.5 +0.8
comp=Z,76nm,1.2s
MOD Modoc 38.05 83 *e*P P 07 15 33.7 +0.7
WALA Waterton Lakes 38.20 69 *e*P P 07 15 34.2 0.0
comp=Z,1.9nm,0.9s
B13A Whitefish 38.21 70 ⇑P P 07 15 34.3 +0.2
baz=38,SNR=42
B13A ⇑S S 07 21 24.3 -0.3
baz=38
BMO Blue Mountains 38.28 77 *e*P P 07 15 34.9 0.0
comp=Z,86nm,1.4s
BMO LR LR
comp=Z,2µm,21.0s
D12A Red Ives Fores 38.33 73 ⇑P P 07 15 35.1 -0.2
baz=38
C13A Hot Springs 38.48 71 ⇑P P 07 15 36.7 +0.2
baz=38,SNR=42
E12A Beaver Dam Sad 38.52 74 ⇓P P 07 15 36.8 -0.1
baz=38,SNR=48
A14A Double T Ranch 38.53 69 ⇓P P 07 15 37.2 +0.2
baz=38,SNR=78
WVOR Wild Horse Val 38.77 81 *e*P P 07 15 39.4 +0.3
WVOR pmax pmax
comp=Z,74nm,0.9s
WVOR MLR MLR
comp=Z,2µm,20.0s
WVOR Wild Horse Val 38.77 81 *e*P P 07 15 39.4 +0.3
comp=Z,74nm,0.9s
WVOR LR LR
comp=Z,2µm,20.0s
D13A Huson 38.84 72 ⇓P P 07 15 39.2 -0.3
baz=39,SNR=32
B14A Marquette Ranc 38.91 70 ⇓P P 07 15 40.5 +0.3
baz=39,SNR=30
C14A Swan Lake 38.92 71 ⇑P P 07 15 40.5 +0.2
baz=39
A15A Johnson Ranch, 38.93 68 ⇑P P 07 15 39.9 -0.3
baz=39,SNR=54
BEKR Beckworth 39.19 85 *e*P P 07 15 42.1 -0.5
comp=Z,14nm,1.1s
MSO Missoula 39.28 72 *e*P P 07 15 43.1 -0.1
comp=Z,105nm,1.4s
MSO LR LR
comp=Z,955nm,22.0s
MSO Missoula 39.28 72 ⇑P P 07 15 43.2 0.0
baz=39,SNR=18
G12A Big Creek, Yel 39.33 75 ⇓P P 07 15 43.8 0.0
baz=39
B15A Bradely Ranch, 39.35 69 ⇓P P 07 15 43.6 -0.2
baz=39,SNR=64
D14A Greenough 39.41 72 ⇑P P 07 15 44.1 -0.3
baz=39,SNR=89
C15A Salmond Ranch, 39.59 70 ⇑P P 07 15 46.3 +0.5
baz=39,SNR=138
A16A West Butte Ran 39.60 68 ⇑P P 07 15 45.3 -0.6
baz=40,SNR=37
CN2 Changchun 39.64 283 *e*P P 07 15 46.5 +0.4
CN2 PP PnPn 07 17 22.1 +1.3
CN2 *e*S S 07 21 43.5 -2.6
CN2 SS SS 07 24 32.6 -10
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,3µm,22.0s
CN2 LR LR
comp=E,3µm,22.0s
CN2 LR LR
comp=Z,5µm,22.0s
B16A M & M Farms, S 39.80 69 ⇑P P 07 15 47.0 -0.5
baz=40,SNR=12
H12A Diamond D Ranc 39.92 76 ⇓P P 07 15 48.1 -0.6
baz=40,SNR=14
MFID Camas Ranch 39.95 78 *e*P P 07 15 48.8 -0.1
comp=Z,69nm,1.4s
MFID Camas Ranch 39.95 78 ⇓P P 07 15 48.7 -0.1
baz=40,SNR=19
D15A Lincoln 40.01 71 ⇓P P 07 15 49.2 -0.1
baz=40,SNR=49
C16A Fuhringer Ranc 40.08 70 ⇑P P 07 15 49.8 0.0
baz=40,SNR=96
A17A Triple J Farms 40.12 68 ⇑P P 07 15 49.8 -0.3
baz=40,SNR=123
F14A Wisdom 40.14 73 ⇓P P 07 15 50.7 +0.2
baz=40,SNR=25
HIA Hailar 40.20 293 PFAKE 07 16 00.0 +9.2
HIA LR LR
comp=Z,2µm,20.0s
CMB Columbia Colle 40.27 88 *e*P P 07 15 51.2 -0.3
CMB Columbia Colle 40.27 88 *e*P P 07 15 51.2 -0.3
B17A L&G Farms, Che 40.38 68 ⇑P P 07 15 52.2 -0.1
baz=40,SNR=46
SAO San Andreas Ge 40.41 90 *e*P P 07 15 51.7 -0.9
SAO pmax pmax
comp=Z,34nm,1.1s
SAO San Andreas Ge 40.41 90 *e*P P 07 15 51.7 -0.9
comp=Z,34nm,1.1s
D16A Dana Ranch, Ca 40.58 71 ⇓P P 07 15 53.9 -0.2
baz=40,SNR=29
A18A Metzger Ranch, 40.62 67 ⇓P P 07 15 53.6 -0.7
baz=40,SNR=8.4
F15A Butte 40.65 73 ⇓P P 07 15 54.4 -0.4
baz=40,SNR=20
HLID Hailey 40.73 77 *e*P P 07 15 55.7 +0.3
HLID LR LR
comp=Z,2µm,21.0s
HLID Hailey 40.73 77 ⇓P P 07 15 55.4 0.0
baz=41,SNR=42
BMN Battle Mountai 40.79 82 *e*P P 07 15 55.8 -0.1
BMN pmax pmax
comp=Z,42nm,1.2s
BMN MLR MLR
comp=Z,3µm,20.0s
BMN Battle Mountai 40.79 82 *e*P P 07 15 55.8 -0.1
comp=Z,42nm,1.2s
BMN LR LR
comp=Z,3µm,20.0s
DLMT Dillon 40.84 73 *e*P P 07 15 55.7 -0.5
comp=Z,127nm,1.7s
B18A Beardsley Farm 40.92 68 ⇑P P 07 15 56.7 -0.1
baz=41,SNR=69
D17A Six Diamond Ra 41.03 70 ⇑P P 07 15 57.4 -0.4
baz=41,SNR=47
I14A Mackay 41.10 76 ⇑P P 07 15 58.8 +0.3
baz=41,SNR=57
EGMT Eagleton 41.12 68 *e*P P 07 15 58.3 -0.1
EGMT LR LR
comp=Z,2µm,21.0s
EGMT Eagleton 41.12 68 ⇑P P 07 15 58.3 -0.1
baz=41,SNR=58
F16A Kennard Place, 41.19 72 ⇑P P 07 15 58.9 -0.2
baz=41,SNR=19
A19A Klindworth Far 41.25 67 ⇑P P 07 15 59.2 -0.3
baz=41,SNR=46
BOZ Bozeman (W) 41.26 72 *e*P P 07 15 59.7 0.0
BOZ pmax pmax
comp=Z,82nm,1.2s
BOZ MLR MLR
comp=Z,798nm,20.0s
BOZ Bozeman (W) 41.26 72 *e*P P 07 15 59.6 0.0
comp=Z,82nm,1.2s
BOZ LR LR
comp=Z,798nm,20.0s
E17A Martinsdale 41.29 71 ⇑P P 07 16 00.3 +0.3
baz=41,SNR=42
NVAR Mina Array Bea 41.33 86 P P 07 16 00.7 +0.2
NVAR PcP PcP 07 17 58.9 +0.8
NVAR ScP ScP 07 21 44.5 +0.2
NVAR Mina Array Bea 41.33 86 P P 07 16 00.7 +0.2
comp=Z,2.7nm,0.6s,baz=294,slow=7.7,SNR=23
NVAR PcP PcP 07 17 58.9 +0.8
comp=Z,3.9nm,0.7s,baz=285,slow=3.5,SNR=3.1
NVAR ScP ScP 07 21 44.5 +0.2
comp=Z,0.8nm,0.6s,baz=306,slow=4.3,SNR=4.3
NVAR LR LR 07 31 54.0
comp=Z,2µm,19.2s,baz=62,slow=34
B19A Brinkman Farms 41.37 67 ⇓P P 07 16 00.4 0.0
baz=41,SNR=66
NV11 Mina Array Sit 41.42 86 *e*P P 07 16 01.7 +0.6
MLAC Mammoth Lakes 41.49 87 ⇑P P 07 16 02.6 +0.9
baz=41
D18A Linhart Farms, 41.52 69 ⇑P P 07 16 02.4 +0.6
baz=41,SNR=42
C19A Slack Wire Ran 41.68 68 ⇑P P 07 16 03.6 +0.6
baz=42,SNR=145
F17A Fitzpatrick Pl 41.70 71 ⇓P P 07 16 03.3 0.0
baz=42,SNR=33
A20A Cobblestone Ra 41.74 66 ⇓P P 07 16 03.4 -0.1
baz=42,SNR=32
E18A Harlowton 41.78 70 ⇓P P 07 16 04.6 +0.6
baz=42,SNR=68
ELK Elko 41.83 81 *e*P P 07 16 04.7 +0.1
comp=Z,43nm,0.9s
KSRS Korea Array 41.83 273 P P 07 16 05.1 +0.9
comp=Z,13nm,0.8s,baz=57,slow=7.6,SNR=40
KSRS LR LR 07 33 10.9
comp=Z,1µm,20.2s,baz=51,slow=36
MTUM Tungsten Hills 41.83 87 *e*P P 07 16 05.1 +0.6
KSAR Wonju Array Be 41.86 273 P P 07 16 05.1 +0.6
SNY Shenyang 41.88 281 ⇑P P 07 16 05.5 +0.9
SNY S S 07 22 18.8 -0.7
SNY pmax pmax
comp=Z,84nm,1.5s
SNY pmax pmax
comp=Z,1µm,3.5s
SNY LR LR
comp=N,2µm,21.1s
SNY LR LR
comp=E,840nm,26.7s
SNY LR LR
comp=Z,3µm,20.9s
B20A Solberg Farm, 41.91 67 ⇓P P 07 16 04.8 -0.1
baz=42
G17A Pierce Place, 41.97 72 ⇑P P 07 16 05.8 +0.3
baz=42,SNR=14
H16A Russell Place, 42.00 73 ⇓P P 07 16 05.8 -0.1
baz=42,SNR=37
RCTC Rector, Farmer 42.07 89 ⇑P P 07 16 06.0 -0.2
baz=42
D19A Cripps Ranch, 42.07 69 ⇓P P 07 16 06.5 +0.2
baz=42,SNR=54
FFC Flin Flon 42.15 56 *e*P P 07 16 06.4 -0.3
FFC pmax pmax
comp=Z,25nm,1.0s
FFC MLR MLR
comp=Z,2µm,20.0s
FFC Flin Flon 42.15 56 *e*P P 07 16 06.4 -0.3
comp=Z,25nm,1.0s
FFC LR LR
comp=Z,2µm,20.0s
YMR Madison River 42.19 73 *e*P P 07 16 07.8 +0.4
comp=Z,57nm,0.8s
TPH Tonopah 42.21 85 PFAKE 07 16 20.0 +12
TPH LR LR
comp=Z,1µm,20.0s
TIN Tinemaha 42.23 87 ⇓P P 07 16 08.0 +0.3
baz=42
SMMC Simmler 42.24 91 ⇓P P 07 16 08.2 +0.5
baz=42
F18A Big Timber 42.25 71 ⇓P P 07 16 07.9 +0.1
baz=42,SNR=30
C20A Veseth Ranch, 42.29 68 ⇑P P 07 16 08.1 +0.1
baz=42,SNR=76
I16A Newdale 42.31 75 ⇑P P 07 16 08.8 +0.4
baz=42,SNR=17
YFT Old Faithful 42.38 73 *e*P P 07 16 09.9 +0.9
comp=Z,56nm,1.0s
B21A Ellsworth Farm 42.49 66 ⇑P P 07 16 09.4 -0.1
baz=42,SNR=47
E19A Rath Farm, Rou 42.50 70 ⇑P P 07 16 10.0 +0.3
baz=42,SNR=52
D20A Manuel Ranch, 42.54 69 ⇑P P 07 16 10.4 +0.4
baz=42,SNR=44
H17A Grant Village 42.57 73 ⇓P P 07 16 12.1 +1.5
baz=42
LKWY Lake 42.58 73 *e*P P 07 16 11.5 +0.9
LKWY pmax pmax
comp=Z,105nm,1.3s
LKWY MLR MLR

comp=Z,1µm,19.0s
LKWY Lake 42.58 73 *e*P P 07 16 11.5 +0.9
comp=Z,105nm,1.3s
LKWY LR LR
comp=Z,1µm,19.0s
INCN Inchon 42.61 274 *e*P P 07 16 11.5 +0.8
INCN LR LR
comp=Z,670nm,22.0s
PKM Peak Mountain 42.62 91 ⇓P P 07 16 11.3 +0.3
baz=42
IMW Indian Meadow 42.63 74 *e*P P 07 16 11.4 +0.4
comp=Z,54nm,1.2s
DCID1 Drake Creek 42.65 75 *e*P P 07 16 12.3 +1.1
comp=Z,45nm,1.0s
G18A Lazy EL Ranch, 42.66 72 ⇓P P 07 16 11.0 -0.2
baz=42,SNR=15
CWC Cottonwood Cre 42.71 88 ⇓P P 07 16 11.9 +0.3
baz=43
RRI2 Red Ridge 42.71 75 *e*P P 07 16 12.3 +0.6
comp=Z,66nm,0.8s
HVU Hansel Valley 42.73 78 *e*P P 07 16 12.0 +0.3
HVU pmax pmax
comp=Z,41nm,0.9s
HVU Hansel Valley 42.73 78 *e*P P 07 16 12.0 +0.3
comp=Z,41nm,0.9s
F19A Roth Farm, Mol 42.73 71 ⇑P P 07 16 11.8 +0.1
baz=43,SNR=29
C21A Desert Coulee 42.75 67 ⇑P P 07 16 12.0 +0.3
baz=43,SNR=38
GRAC Grapevine Rang 42.79 87 ⇓P P 07 16 12.7 +0.5
baz=43
JNU Nakatsue 42.80 266 *e*P P 07 16 11.9 -0.3
comp=Z,12nm,0.9s
JNU Nakatsue 42.80 266 LR LR 07 32 57.2
comp=Z,2µm,21.4s,baz=57,slow=35
A22A Carney Farms, 42.82 65 ⇑P P 07 16 12.3 +0.1
baz=43,SNR=57
MOOW Moose Ponds 42.83 74 *e*P P 07 16 12.8 +0.2
comp=Z,43nm,1.4s
I17A Pilgrim Ck. 42.84 74 ⇓P P 07 16 13.5 +0.9
baz=43
TPAW Teton Pass 42.85 75 *e*P P 07 16 13.3 +0.5
comp=Z,66nm,1.3s
E20A Meyer Farm, Mu 42.86 69 ⇑P P 07 16 12.8 +0.1
baz=43,SNR=28
RLMT Red Lodge 42.95 72 *e*P P 07 16 13.7 +0.2
comp=Z,132nm,1.1s
RLMT LR LR
comp=Z,1µm,20.0s
H18A Shoshone NF, C 42.96 72 ⇓P P 07 16 13.7 +0.1
baz=43,SNR=9.9
ISA Isabella 42.96 89 *e*P P 07 16 13.4 -0.1
ISA Isabella 42.96 89 *e*P P 07 16 13.4 -0.1
ISA Isabella 42.96 89 ⇑P P 07 16 13.1 -0.5
baz=43
REDW Red Top Meadow 42.98 75 *e*P P 07 16 14.2 +0.3
comp=Z,1.1nm,1.3s
SNOW Snow King Moun 42.99 75 *e*P P 07 16 14.1 +0.2
comp=Z,41nm,1.1s
LOHW Long Hollow 42.99 74 *e*P P 07 16 14.4 +0.5
R11A Troy Canyon, C 43.06 84 ⇑P P 07 16 14.2 -0.3
baz=43,SNR=21
ARVC Arvin 43.08 90 ⇓P P 07 16 14.0 -0.5
baz=43
B22A Reddig Ranch S 43.13 66 ⇑P P 07 16 14.7 -0.1
baz=43,SNR=36
D21A La Casta Ranch 43.22 68 ⇓P P 07 16 15.5 0.0
baz=43,SNR=21
F20A Billings 43.23 70 ⇑P P 07 16 15.7 0.0
baz=43,SNR=18
MPMC Manual Prospec 43.31 88 ⇓P P 07 16 16.5 -0.1
baz=43,SNR=7.3
H19A Powell 43.36 72 ⇓P P 07 16 17.3 +0.5
baz=43,SNR=22
I18A Diamond G Ranc 43.41 74 ⇓P P 07 16 17.8 +0.5
baz=43,SNR=9.4
A23A Redstone 43.42 65 ⇑P P 07 16 17.1 +0.1
baz=43,SNR=25
FURC Furnace Creek, 43.45 87 ⇑P P 07 16 17.5 +0.2
baz=43,SNR=7.0
E21A Keefer Ranch, 43.45 69 ⇑P P 07 16 17.8 +0.4
baz=43,SNR=16
OSI Osito Adit 43.48 90 ⇑P P 07 16 17.5 -0.2
baz=43
C22A Vida 43.49 67 ⇑P P 07 16 17.5 -0.2
baz=43,SNR=37
G20A Bridger 43.51 71 ⇓P P 07 16 17.8 -0.2
baz=43,SNR=50
LRMC Laurel Mountai 43.57 89 ⇑P P 07 16 18.1 -0.4
baz=43
HWUT Hardware Ranch 43.57 77 *e*P P 07 16 18.3 -0.2
comp=Z,56nm,1.3s
HWUT LR LR
comp=Z,1µm,22.0s
D22A Cohagen 43.64 67 ⇑P P 07 16 19.4 +0.5
baz=44,SNR=76
DUG Dugway 43.64 80 PFAKE 07 16 30.0 +11
DUG LR LR
comp=Z,2µm,19.0s
DUG Dugway 43.64 80 ⇓P P 07 16 19.4 +0.3
baz=44,SNR=26
I19A Meeteetse 43.71 73 ⇑P P 07 16 19.7 0.0
baz=44,SNR=21
EDW2 Edwards Air Fo 43.77 89 ⇑P P 07 16 19.7 -0.4
baz=44
F21A Absaloka Mine, 43.82 70 ⇓P P 07 16 20.4 0.0
baz=44
C23A Lambert 43.86 66 ⇓P P 07 16 21.1 +0.5
baz=44,SNR=74
A24A Westby 43.93 64 ⇑P P 07 16 21.4 +0.2
baz=44,SNR=46
DECC Green Verdugo 43.97 90 ⇑P P 07 16 21.3 -0.4
baz=44
CTU Camp Tracy 44.00 78 *e*P P 07 16 22.3 +0.3
comp=Z,41nm,0.9s
H20A Greybull 44.05 72 ⇑P P 07 16 21.8 -0.5
baz=44,SNR=11
DGMT Dagmar 44.06 65 *e*P P 07 16 22.0 -0.2
comp=Z,352nm,1.6s
DGMT LR LR
comp=Z,3µm,21.0s
DGMT Dagmar 44.06 65 ⇓P P 07 16 22.2 0.0
baz=44,SNR=32
G21A Lodge Grass 44.10 70 ⇑P P 07 16 22.2 -0.5
baz=44,SNR=11
BW06 Boulder Array 44.10 75 *e*P P 07 16 22.7 -0.2
comp=Z,588nm,0.6s
BW06 LR LR
comp=Z,3µm,22.0s
PDAR Pinedale Array 44.10 75 P P 07 16 22.9 0.0
PDAR Pinedale Array 44.10 75 P P 07 16 22.9 0.0
comp=Z,24nm,0.7s,baz=304,slow=4.2,SNR=154
PDAR LR LR 07 32 26.6
comp=Z,2µm,20.6s,baz=312,slow=33
J19A Crowheart 44.12 74 ⇓P P 07 16 23.1 +0.2
baz=44,SNR=16
MWC Mount Wilson 44.15 90 *e*P P 07 16 23.5 +0.2
MWC pmax pmax
comp=Z,122nm,1.3s
MWC Mount Wilson 44.15 90 *e*P P 07 16 23.5 +0.2
comp=Z,122nm,1.3s
E22A Miles City 44.16 68 ⇓P P 07 16 23.1 0.0
baz=44,SNR=8.7
SHOC Shoshone 44.17 87 ⇓P P 07 16 23.2 -0.1
baz=44
D23A Lindsay 44.19 67 ⇓P P 07 16 23.7 +0.4
baz=44,SNR=38
M17A Scullys Gap (B 44.19 77 ⇑P P 07 16 23.1 -0.5
baz=44,SNR=12
GSC Goldstone 44.23 88 *e*P P 07 16 23.6 -0.2
GSC pmax pmax
comp=Z,90nm,1.1s
GSC Goldstone 44.23 88 *e*P P 07 16 23.6 -0.2
comp=Z,90nm,1.1s
GSC Goldstone 44.23 88 ⇑P P 07 16 23.6 -0.2
baz=44,SNR=8.7
JLU Jordanelle 44.23 78 *e*P P 07 16 23.4 -0.5
comp=Z,149nm,1.5s
I20A Worland 44.28 72 ⇓P P 07 16 24.3 +0.2
baz=44,SNR=30
L18A Fontenelle, Gr 44.31 76 ⇑P P 07 16 24.4 -0.1
baz=44
FMP Fort Macarthur 44.34 91 ⇑P P 07 16 24.1 -0.5
baz=44
RRX Edison Barstow 44.38 89 ⇑P P 07 16 25.2 +0.2
baz=44
BFSC Mount Baldy Ra 44.39 90 ⇓P P 07 16 24.8 -0.4
baz=44,SNR=10

C24A Savage 44.44 66 ⇓P P 07 16 25.8 +0.6
baz=44,SNR=41
DAU Daniels Canyon 44.47 78 *e*P P 07 16 26.2 +0.3
DAU pmax pmax
comp=Z,159nm,1.4s
DAU Daniels Canyon 44.47 78 *e*P P 07 16 26.2 +0.3
comp=Z,159nm,1.4s
MPU Maple Canyon 44.47 79 *e*P P 07 16 25.8 0.0
comp=Z,34nm,0.9s
CIS Catalina Islan 44.48 91 ⇑P P 07 16 25.0 -0.7
baz=44
K19A Absolon Red Bu 44.50 74 ⇑P P 07 16 25.5 -0.5
baz=44,SNR=38
E23A Ismay 44.50 68 ⇓P P 07 16 26.3 +0.5
baz=44
H21A Big Horn, Sher 44.53 71 ⇓P P 07 16 25.9 -0.3
baz=44
L19A Farson 44.61 75 ⇓P P 07 16 26.8 -0.1
baz=44,SNR=13
G22A Birney 44.64 70 ⇓P P 07 16 26.6 -0.4
baz=44,SNR=12
J20A Shoshoni 44.65 73 ⇑P P 07 16 27.4 +0.3
baz=44,SNR=9.4
SCI San Clemente I 44.68 92 ⇓P P 07 16 27.6 +0.3
baz=44
TUQ Turquoise Moun 44.69 87 ⇓P P 07 16 27.2 -0.3
baz=44,SNR=6.7
D24A Glendive 44.72 67 ⇓P P 07 16 28.4 +0.9
baz=45,SNR=28
ARUT Antelope Range 44.73 83 *e*P P 07 16 27.8 -0.1
ARUT pmax pmax
comp=Z,34nm,0.8s
ARUT Antelope Range 44.73 83 *e*P P 07 16 27.8 -0.1
comp=Z,34nm,0.8s
DL2 Dalian 44.82 279 ⇑*i*P P 07 16 28.8 +0.5
DL2 PP PP 07 18 17.3 +3.9
DL2 S S 07 23 03.9 +1.4
DL2 pmax pmax
comp=Z,92nm,0.9s
DL2 pmax pmax
comp=Z,290nm,4.7s
DL2 LR LR
comp=N,610nm,19.1s
DL2 LR LR
comp=E,520nm,19.4s
DL2 LR LR
comp=Z,570nm,21.0s
HEC Hector,Ludlow 44.83 88 ⇑P P 07 16 28.3 -0.3
baz=45
BBRC Big Bear Solar 44.84 89 ⇑P P 07 16 28.7 -0.1
baz=45
I21A Big Trails, Te 44.85 72 ⇓P P 07 16 28.4 -0.4
baz=45,SNR=26
F23A Volborg 44.87 69 ⇓P P 07 16 28.7 -0.1
baz=45,SNR=37
K20A Yellowstone Ra 44.90 74 ⇑P P 07 16 28.4 -0.7
baz=45,SNR=21
CCUT Cedar City 44.93 83 *e*P P 07 16 29.6 +0.1
comp=Z,152nm,1.8s
H22A Clearmont 44.96 71 ⇑P P 07 16 29.5 0.0
baz=45
J21A Lysite 45.03 73 ⇓P P 07 16 29.9 -0.3
baz=45,SNR=8.9
E24A Baker 45.04 67 ⇓P P 07 16 30.4 +0.3
baz=45,SNR=18
MSU Marysvale 45.06 81 *e*P P 07 16 31.1 +0.5
MSU pmax pmax
comp=Z,18nm,0.8s
MSU Marysvale 45.06 81 *e*P P 07 16 31.1 +0.5
comp=Z,18nm,0.8s
M19A Rock Springs 45.09 76 ⇓P P 07 16 30.3 -0.4
baz=45
MURC Murrieta 45.10 90 ⇓P P 07 16 30.2 -0.5
baz=45
G23A Biddle 45.17 69 ⇑P P 07 16 30.9 -0.3
baz=45,SNR=14
L20A Wamsutter 45.28 75 ⇑P P 07 16 31.7 -0.6
baz=45
GMRC Granite Mounta 45.28 88 ⇑P P 07 16 31.8 -0.4
baz=45,SNR=10
I22A 9 Mile Ranch, 45.28 72 ⇓P P 07 16 32.4 +0.3
baz=45,SNR=31
F24A Ekalaka 45.36 68 ⇑P P 07 16 32.7 0.0
baz=45,SNR=30
Q16A Castle Valley 45.43 80 ⇓P P 07 16 33.7 +0.2
baz=45,SNR=11
LDFC Landfair 45.43 87 *e*P P 07 16 32.7 -0.7
comp=Z,81nm,1.0s
H23A Clabaugh Cattl 45.53 70 ⇓P P 07 16 33.5 -0.6
baz=45
PFO Pinyon Flat Ob 45.56 90 *e*P P 07 16 33.9 -0.5
comp=Z,24nm,1.1s
PFO Pinyon Flat Ob 45.56 90 LR LR 07 31 35.5
comp=Z,3µm,21.9s,baz=298,slow=31
PFO Pinyon Flat Ob 45.56 90 ⇓P P 07 16 33.8 -0.5
baz=45
K21A Alcova 45.56 73 ⇓P P 07 16 33.7 -0.7
baz=45
J22A Midwest 45.56 72 ⇑P P 07 16 34.4 0.0
baz=45
BELC Belle Mtn. Jos 45.58 89 ⇓P P 07 16 33.8 -0.9
baz=45
109C Camp Elliot, M 45.63 91 ⇓P P 07 16 34.7 -0.1
baz=46
G24A Alzada 45.67 69 ⇓P P 07 16 34.6 -0.5
baz=46,SNR=28
M20A Sweetwater, Wa 45.68 75 ⇑P P 07 16 35.6 +0.1
baz=46,SNR=16
SRU San Rafael 45.70 79 ⇓P P 07 16 35.6 0.0
baz=46,SNR=19
O19A Miners Draw (B 45.83 77 ⇑P P 07 16 36.4 -0.1
baz=46,SNR=36
I23A Meade Ranch, G 45.84 71 ⇑P P 07 16 35.8 -0.8
baz=46
L21A Rawlins 45.89 74 ⇑P P 07 16 36.6 -0.5
baz=46,SNR=30
H24A Dirks Ranch, A 45.92 69 ⇑P P 07 16 36.3 -0.9
baz=46,SNR=12
NEE2 Needles Airpor 45.94 87 ⇑P P 07 16 36.8 -0.5
baz=46
K22A Casper 45.98 73 ⇓P P 07 16 37.2 -0.6
baz=46,SNR=22
IRM Iron Mountain 46.01 88 ⇓P P 07 16 37.6 -0.3
baz=46
N20A Spence Gulch, 46.03 76 ⇑P P 07 16 38.4 +0.2
baz=46,SNR=20
BAR Barrett 46.05 91 *e*P P 07 16 38.0 -0.1
comp=Z,21nm,1.0s
MONP Monument Peak 46.06 90 ⇓P P 07 16 38.4 -0.1
baz=46
M21A Separation Pea 46.10 75 ⇓P P 07 16 38.2 -0.6
baz=46,SNR=5.5
J23A Dilts Ranch, B 46.12 72 ⇑P P 07 16 38.8 0.0
baz=46
BC3 Big Chuckawall 46.15 89 ⇑P P 07 16 40.4 +1.4
baz=46
W13A Hualapai Mount 46.18 86 ⇓P P 07 16 38.9 -0.5
baz=46,SNR=8.3
U15A North Rim 46.30 84 ⇓P P 07 16 40.6 +0.1
baz=46,SNR=28
P19A Cripple Cowboy 46.33 78 ⇑P P 07 16 40.4 -0.1
baz=46,SNR=17
I24A Kuemmerle Ranc 46.40 70 ⇓P P 07 16 40.5 -0.4
baz=46
L22A Ellis Ranch, M 46.41 74 ⇑P P 07 16 41.3 +0.2
baz=46,SNR=15
DVTC Desert V Tower 46.41 90 ⇑P P 07 16 40.1 -1.0
baz=46
SWSC San W. Stewart 46.41 90 ⇓P P 07 16 40.2 -0.8
baz=46
K23A Bowen Ranch, D 46.46 72 ⇑P P 07 16 40.9 -0.6
baz=46,SNR=7.8
O20A White River Ci 46.47 77 ⇓P P 07 16 41.3 -0.3
baz=46,SNR=52
N21A Black Mountain 46.52 76 ⇑P P 07 16 41.5 -0.6
baz=46,SNR=17
PDMCI Parker Dam,Lak 46.54 87 ⇓P P 07 16 41.6 -0.4
baz=46,SNR=7.3
RSSD Black Hills 46.59 70 *e*P P 07 16 41.9 -0.6
RSSD pmax pmax
comp=Z,33nm,1.1s
RSSD Black Hills 46.59 70 *e*P P 07 16 41.9 -0.6
comp=Z,33nm,1.1s
Y12C Blythe 46.67 88 ⇓P P 07 16 42.7 -0.3
baz=46
M22A Cedar Creek Ra 46.69 74 ⇑P P 07 16 42.8 -0.6
baz=46,SNR=8.1
P20A De Beque 46.77 78 ⇓P P 07 16 43.5 -0.5
baz=47,SNR=18
L23A Garrett 46.79 73 ⇓P P 07 16 43.7 -0.5
baz=47,SNR=50
O21A Pagoda 46.88 76 ⇓P P 07 16 44.4 -0.5
baz=47,SNR=9.4
S18A Hurst Farm, Bl 46.92 81 ⇑P P 07 16 44.5 -0.7
baz=47,SNR=22
GLA Glamis 46.94 89 *e*P P 07 16 44.7 -0.5
GLA pmax pmax
comp=Z,27nm,1.0s
GLA Glamis 46.94 89 *e*P P 07 16 44.7 -0.5
comp=Z,27nm,1.0s
GLA Glamis 46.94 89 ⇓P P 07 16 45.1 -0.1
baz=47
K24A Anderson Ranch 46.95 72 ⇓P P 07 16 44.5 -0.8
baz=47
MDND Maddock 46.97 63 ⇑P P 07 16 45.4 +0.1
baz=47,SNR=81
N22A Wattenberg Ran 47.14 75 ⇑P P 07 16 46.8 -0.1
baz=47,SNR=23
PV04 Paradox Valley 47.14 79 *e*P P 07 16 46.6 -0.3
J25A Sunshine Ranch 47.16 71 ⇓P P 07 16 46.0 -0.8
baz=47,SNR=9.9
Q20A Ridgley Place, 47.16 78 ⇑P P 07 16 46.3 -0.8
baz=47,SNR=12
M23A Laramie 47.17 74 ⇓P P 07 16 46.7 -0.4
baz=47,SNR=21
L24A Wheatland 47.29 73 ⇑P P 07 16 47.7 -0.3
baz=47,SNR=5.9
P21A Newcastle 47.32 77 ⇓P P 07 16 48.1 -0.2
baz=47,SNR=22
N23A Red Feather La 47.39 75 ⇑P P 07 16 48.8 0.0
baz=47,SNR=22
PHWY Pilot Hill 47.43 74 *e*P P 07 16 48.5 -0.8
comp=Z,38nm,1.3s
BJI Beijing 47.45 284 P P 07 16 49.4 +0.4
BJI PP PP 07 18 40.8 +0.4
BJI S S 07 23 40.8 +0.7
BJI pmax pmax
comp=Z,40nm,0.9s
BJI pmax pmax
comp=Z,740nm,10.8s
BJI LR LR
comp=N,3µm,21.5s
BJI LR LR
comp=E,3µm,20.3s
BJI LR LR
comp=Z,4µm,23.9s
WUAZ Wupatki 47.46 84 *e*P P 07 16 49.5 +0.1
comp=Z,58nm,1.2s
WUAZ LR LR
comp=Z,2µm,20.0s
WUAZ Wupatki 47.46 84 ⇓P P 07 16 49.5 +0.1
baz=47,SNR=14
BJT Baijiatuau 47.47 284 *e*P P 07 16 48.9 -0.2
comp=Z,22nm,0.6s
BJT LR LR
comp=Z,4µm,21.0s
O22A Kremmling 47.47 76 ⇑P P 07 16 49.2 -0.4
baz=47,SNR=16
Y14A Wickenburg 47.49 87 ⇓P P 07 16 49.3 -0.2
baz=47
PV01 Paradox Valley 47.51 79 *e*P P 07 16 49.4 -0.4
comp=Z,3µm,0.8s
K25A Mack Ranch, Ha 47.58 71 ⇑P P 07 16 50.0 -0.1
baz=47
R20A Redvale 47.59 79 ⇓P P 07 16 50.0 -0.4
baz=47,SNR=19
ULM Lac du Bonnet 47.65 59 P P 07 16 49.8 -0.6
ULM Lac du Bonnet 47.65 59 P P 07 16 49.8 -0.6
comp=Z,14nm,0.6s,baz=305,slow=8.2,SNR=24
ULM LR LR 07 37 14.9
comp=Z,2µm,22.0s,baz=313,slow=36
Q21A Lamborn Mesa, 47.68 78 ⇓P P 07 16 50.7 -0.4
baz=48,SNR=22
P22A Eagle 47.70 76 ⇑P P 07 16 50.9 -0.3
baz=48,SNR=8.7
M24A Cheyenne 47.71 73 ⇓P P 07 16 51.3 0.0
baz=48,SNR=8.7
TLY Talaya 47.73 304 *e*P P 07 16 50.5 -0.6
TLY *e* 07 18 19.9
TLY *e*PPP PPP 07 19 30.3
TLY *e*S **sS** **07 24 04.7 +0.6**
TLY *e* 07 26 43.9
TLY pmax pmax
comp=Z,34nm,1.8s
TLY MLR MLR
comp=Z,2µm,22.0s
113A Mohawk Valley, 47.79 88 ⇑P P 07 16 51.3 -0.5
baz=48
L25A Engebretsen Ra 47.80 72 ⇓P P 07 16 52.3 +0.4
baz=48
O23A Lake Granby, G 47.82 75 ⇓P P 07 16 52.6 +0.3
baz=48,SNR=29
S20A Disappointment 47.83 79 ⇓P P 07 16 51.5 -0.8
baz=48,SNR=24
Z14A Wintersburg 47.91 87 ⇑P P 07 16 52.3 -0.4
baz=48
K26A Motz Farm, Whi 47.93 71 ⇓P P 07 16 52.1 -0.7
baz=48,SNR=5.8
R21A Cimarron 47.98 78 ⇑P P 07 16 53.2 -0.3
baz=48,SNR=7.9
Q22A Crested Butte, 48.06 77 ⇑P P 07 16 54.0 -0.2
baz=48,SNR=13
N24A Carr 48.06 74 ⇑P P 07 16 54.3 +0.3
baz=48
ULN Ulaanbaatar 48.08 298 PFAKE 07 17 10.0 +16
ULN LR LR
comp=Z,2µm,21.0s
X16A Lo Mia Camp, P 48.14 85 ⇓P P 07 16 54.8 +0.2
baz=48,SNR=9.0
M25A Palm-Egli Farm 48.18 73 ⇑P P 07 16 55.3 +0.4
baz=48,SNR=12
ISCO Idaho Springs 48.26 75 *e*P P 07 16 55.5 -0.2
ISCO pmax pmax
comp=Z,128nm,1.7s
ISCO MLR MLR
comp=Z,3µm,21.0s
ISCO Idaho Springs 48.26 75 *e*P P 07 16 55.5 -0.2
comp=Z,128nm,1.7s
ISCO LR LR
comp=Z,3µm,21.0s
ISCO Idaho Springs 48.26 75 ⇓P P 07 16 55.7 0.0
baz=48,SNR=22
S21A Coal Bank Pass 48.28 79 ⇓P P 07 16 55.8 -0.1
baz=48,SNR=15
O24A Longmont 48.38 75 ⇓P P 07 16 57.2 +0.8
baz=48,SNR=5.9
L26A Underwood Farm 48.39 72 ⇑P P 07 16 56.3 -0.1
baz=48
SONM Songino Array 48.45 298 P P 07 16 56.5 -0.3
SONM PcP **PcP** 07 18 23.1 +0.6
SONM PP **PP** 07 18 50.8 +1.3
SONM ScP **ScP** 07 22 14.8 +1.4
SONM Songino Array 48.45 298 P P 07 16 56.5 -0.3
comp=Z,1.1nm,0.7s,baz=49,slow=8.5,SNR=9.7
SONM PcP **PcP** 07 18 23.1 +0.6
comp=Z,9.9nm,0.9s,baz=56,slow=3.6,SNR=7.1
SONM PP **PP** 07 18 50.8 +1.3
comp=Z,8.9nm,0.9s,baz=61,slow=2.1,SNR=4.7
SONM ScP **ScP** 07 22 14.8 +1.4
comp=Z,3.0nm,0.8s,baz=44,slow=2.9,SNR=6.4
SONM LR LR 07 38 39.1
comp=Z,3µm,20.0s,baz=55,slow=38
K27A Flueckinger Fa 48.48 70 ⇑P P 07 16 56.6 -0.5
baz=48,SNR=9.4
N25A Grover 48.55 73 ⇑P P 07 16 58.3 +0.7
baz=48
R22A Saguache, Gunn 48.56 78 ⇓P P 07 16 58.4 +0.4
baz=48,SNR=22
J28A Allard Ranch, 48.63 69 ⇑P P 07 16 58.0 -0.2
baz=48,SNR=36
ZAK Zakamensk 48.66 303 *e*P P 07 16 57.7 -0.6
ZAK *e* 07 18 24.0
ZAK *e* 07 18 51.4
ZAK pmax pmax
comp=Z,9.0nm,1.3s
U20A Newcomb 48.66 81 ⇑P P 07 16 59.0 +0.3
baz=48
Q23A Hartsel 48.69 77 ⇓P P 07 16 59.7 +0.7
baz=48
M26A McRoberts Ranc 48.71 72 ⇑P P 07 16 59.3 +0.5
baz=48
W18A Petrified Fore 48.73 83 ⇑P P 07 16 59.5 +0.2
baz=49
AGMN Agassiz Nation 48.77 61 *e*P P 07 16 58.3 -0.8
comp=Z,174nm,1.3s

AGMN LR LR
comp=Z,2µm,19.0s
L27A T5 Ranch, Ells 48.82 71 ⇓P P 07 16 59.3 -0.4
baz=49
S22A 4UR Ranch, Cre 48.82 78 ⇓P P 07 17 00.4 +0.4
baz=49,SNR=33
P24A Kohler Place, 48.86 75 ⇓P P 07 17 01.0 +0.8
baz=49
T21A Navajo Lake 48.87 80 ⇓P P 07 17 00.5 +0.2
baz=49
214A Organ Pipe Nat 48.94 88 ⇑P P 07 17 00.6 0.0
baz=49
O25A Wiggins 48.96 74 ⇓P P 07 17 01.7 +0.8
baz=49
K28A Ten Mile Ranch 48.99 70 ⇑P P 07 17 00.7 -0.2
baz=49,SNR=13
X18A Snowflake 48.99 84 ⇑P P 07 17 01.4 +0.3
baz=49,SNR=7.0
N26A Koester Ranch, 49.05 73 ⇑P P 07 17 01.9 +0.4
baz=49,SNR=9.2
Q24A Divide 49.06 76 ⇑P P 07 17 01.9 0.0
baz=49,SNR=5.4
V20A Brimhall 49.07 81 ⇑P P 07 17 01.6 -0.2
baz=49,SNR=7.3
MOY Mondy 49.10 305 *e*P pP 07 17 16.5 +2.7
M27A Reverse DX Ran 49.12 72 ⇑P P 07 17 01.9 0.0
baz=49,SNR=10
R23A Moffat 49.15 77 ⇑P P 07 17 02.7 +0.3
baz=49,SNR=13
U21A Nageezi 49.16 80 ⇑P P 07 17 02.6 +0.1
baz=49,SNR=38
T22A Edith 49.24 79 ⇑P P 07 17 03.6 +0.4
baz=49,SNR=23
TIA Tai'an 49.30 279 ⇑P P 07 17 03.5 +0.2
TIA PP PP 07 18 59.8 +2.6
TIA S S 07 24 06.1 -0.3
TIA LR LR
comp=N,600nm,21.4s
TIA LR LR
comp=E,2µm,20.2s
TIA LR LR
comp=Z,2µm,23.7s
P25A Willow Gulch B 49.31 75 ⇓P P 07 17 04.2 +0.7
baz=49,SNR=8.5
BRSD Miller 49.33 67 ⇑P P 07 17 03.2 -0.3
baz=49
S23A Nye Farm, Mont 49.35 78 ⇓P P 07 17 04.7 +0.7
baz=49
O26A Horse Wrangler 49.36 74 ⇑P P 07 17 04.5 +0.5
baz=49
N27A Anderson Farm, 49.47 72 ⇑P P 07 17 05.0 +0.3
baz=49,SNR=16
W20A Ramah 49.49 82 ⇓P P 07 17 04.8 -0.3
baz=49,SNR=8.5
R24A Sanders Place, 49.55 77 ⇑P P 07 17 05.7 +0.2
baz=49,SNR=12
KBS Kingsbay 49.56 358 *ce*P P 07 17 05.4 +0.7
KBS pmax pmax
comp=Z,50nm,1.8s
KBS Kingsbay 49.56 358 PFAKE 07 17 20.0 +15
KBS LR LR
comp=Z,3µm,19.0s
K29A Lazy Trails An 49.57 69 ⇓P P 07 17 05.5 +0.1
baz=49
V21A Milan 49.58 81 ⇑P P 07 17 05.7 0.0
baz=49
Q25A Bedland, Calha 49.64 76 ⇓P P 07 17 06.1 0.0
baz=50,SNR=15
GUMO Guam 49.67 235 PFAKE 07 17 20.0 +14
GUMO LR LR
comp=Z,818nm,20.0s
U22A Llaves 49.69 80 ⇓P P 07 17 06.5 0.0
baz=50,SNR=21
OGNE Ogallala 49.69 72 *e*P P 07 17 05.9 -0.4
comp=Z,131nm,1.3s
OGNE LR LR
comp=Z,1µm,20.0s
OGNE Ogallala 49.69 72 ⇑P P 07 17 06.4 +0.1
baz=50,SNR=20
T23A Casias Ranch, 49.76 79 ⇓P P 07 17 07.4 +0.3
baz=50,SNR=19
P26A Davis Ranch, A 49.77 74 ⇓P P 07 17 07.5 +0.4
baz=50,SNR=31
M28A Bar X Bar Ranc 49.80 71 ⇓P P 07 17 07.1 0.0
baz=50,SNR=6.6
S24A Houchin Ranch, 49.87 77 ⇑P P 07 17 08.4 +0.4
baz=50,SNR=22
X20A Quemado 49.88 83 ⇑P P 07 17 08.3 +0.2
baz=50,SNR=13
O27A Beecher Island 49.89 73 ⇓P P 07 17 08.0 +0.1
baz=50,SNR=16
L29A Maesberg Ranch 49.91 70 ⇓P P 07 17 07.8 -0.1
baz=50
V22A San Miguel Ran 49.95 80 ⇓P P 07 17 08.3 -0.3
baz=50,SNR=13
TUC Tucson 49.96 87 *e*P P 07 17 08.0 -0.5
TUC pmax pmax
comp=Z,31nm,1.3s
TUC MLR MLR
comp=Z,984nm,19.0s
TUC Tucson 49.96 87 *e*P P 07 17 08.0 -0.5
comp=Z,31nm,1.3s
TUC LR LR
comp=Z,984nm,19.0s
W21A San Fidel 50.02 82 ⇓P P 07 17 08.9 -0.2
baz=50
Q26A Hugo 50.07 75 ⇓P P 07 17 09.6 +0.2
baz=50,SNR=11
R25A Fountain Ranch 50.11 76 ⇑P P 07 17 09.8 +0.2
baz=50,SNR=23
N28A Pribbeno Ranch 50.14 72 ⇑P P 07 17 09.8 +0.1
baz=50,SNR=8.3
M29A Burnside Ranch 50.17 71 ⇓P P 07 17 09.7 -0.3
baz=50,SNR=10.0
SSE Sheshan 50.20 272 P P 07 17 10.8 +0.6
SSE sP sP 07 17 28.1 +0.8
SSE PcP PcP 07 18 28.5 -0.3
SSE PP PP 07 19 09.8 +4.3
SSE S S 07 24 20.9 +1.9
SSE sS sS 07 24 39.8 +0.6
SSE pmax pmax
comp=Z,69nm,0.8s
SSE pmax pmax
comp=Z,550nm,4.6s
SSE LR LR
comp=N,540nm,17.1s
SSE LR LR
comp=E,490nm,17.5s
SSE LR LR
comp=Z,720nm,20.6s
P27A Ficken Ranch, 50.23 74 ⇓P P 07 17 10.3 -0.3
baz=50,SNR=7.8
S25A Robets Cordova 50.33 77 ⇑P P 07 17 11.2 -0.1
baz=50,SNR=41
O28A Krutsinger Ran 50.35 73 ⇓P P 07 17 11.6 +0.2
baz=50
Y20A Horse Springs, 50.37 83 ⇑P P 07 17 12.0 +0.2
baz=50,SNR=11
X21A Alamocita Cree 50.38 82 ⇑P P 07 17 12.1 +0.3
baz=50,SNR=33
V23A Ortiz Mt. (NFS 50.51 80 ⇓P P 07 17 13.3 +0.6
baz=50,SNR=12
R26A Arlington 50.51 76 ⇑P P 07 17 12.6 -0.1
baz=50,SNR=18
W22A Albuquerque 50.53 81 ⇑P P 07 17 13.4 +0.5
baz=50
KSCO Kaye Shedlock' 50.55 74 ⇓P P 07 17 13.3 +0.4
baz=50,SNR=13
M30A Dale-Ortello V 50.59 70 ⇑P P 07 17 13.1 0.0
baz=50
N29A Votaw Ranch, W 50.60 71 ⇑P P 07 17 13.0 -0.2
baz=50,SNR=8.0
U24A Moreno Valley 50.63 79 ⇑P P 07 17 14.0 +0.3
baz=50,SNR=10
T25A Trinidad 50.68 77 ⇑P P 07 17 14.2 +0.2
baz=50,SNR=49
Y21A Point of Rocks 50.74 83 ⇓P P 07 17 14.9 +0.3
baz=51,SNR=11
BTO Baotou 50.77 289 *e*P P 07 17 14.4 -0.1
Z20A Nine Sixteen R 50.77 84 ⇓P P 07 17 14.6 -0.1
baz=51,SNR=10
LAZ Ladron 50.81 82 *e*P P 07 17 15.4 +0.4
comp=Z,16nm,1.2s
X22A Bernardo 50.82 82 ⇓P P 07 17 15.7 +0.7
baz=51
ANMO Albuquerque 50.87 81 *e*P P 07 17 15.0 -0.5
comp=Z,37nm,1.4s
ANMO Albuquerque 50.87 81 LR LR 07 37 45.5
comp=Z,938nm,20.0s,baz=125,slow=35
R27A Eads 50.91 75 ⇑P P 07 17 15.7 0.0
baz=51,SNR=25
W23A Werner Place, 50.91 80 ⇓P P 07 17 15.9 0.0
baz=51,SNR=8.3
N30A Hueftle Ranch, 50.92 71 ⇓P P 07 17 15.6 0.0
baz=51
O29A 4D Ranch, Culb 50.93 72 ⇓P P 07 17 15.9 +0.2
baz=51,SNR=13
DAG Danmarks Havn 50.94 7 *i*P P 07 17 14.4 -0.7
S26A Kim 50.94 76 ⇓P P 07 17 15.6 -0.2
baz=51,SNR=24
NJ2 Nanjing 50.99 274 *e*P P 07 17 16.5 +0.3
NJ2 sP sP 07 17 29.5 -3.8
NJ2 PP PP 07 19 13.4 +0.7
NJ2 S S 07 24 33.0 +2.9
NJ2 sS sS 07 24 48.0 -2.3
NJ2 pmax pmax
comp=Z,40nm,0.8s
NJ2 pmax pmax
comp=Z,530nm,5.8s
NJ2 LR LR
comp=N,4µm,20.0s
NJ2 LR LR
comp=E,1µm,21.9s
NJ2 LR LR
comp=Z,7µm,27.4s
Q28A Sharon Springs 51.00 74 ⇑P P 07 17 16.3 +0.1
baz=51,SNR=16
V24A Rapart Ranch, 51.08 79 ⇓P P 07 17 17.3 +0.2
baz=51,SNR=8.2
ECSD EROS Data Cent 51.10 66 *e*P P 07 17 15.6 -1.3
comp=Z,26nm,0.9s
ECSD LR LR
comp=Z,2µm,21.0s
120A U Bar Ranch, L 51.13 85 ⇑P P 07 17 17.3 -0.1
baz=51,SNR=8.1
TARA Tarawa 51.15 195 PFAKE 07 17 30.0 +13
TARA LR LR
comp=Z,3µm,22.0s
T26A Comanche Natio 51.15 77 ⇑P P 07 17 17.1 -0.5
baz=51,SNR=11
Y22D IRIS PASSCAL I 51.16 82 ⇓P P 07 17 18.3 +0.7
baz=51
U25A Circle Dot Ran 51.16 78 ⇑P P 07 17 17.7 +0.1
baz=51,SNR=30
TIY Taiyuan 51.18 284 *e*P P 07 17 18.5 +0.9
TIY sP sP 07 17 35.0 +0.2
TIY S S 07 24 35.8 +3.1
TIY pmax pmax
comp=Z,570nm,3.7s
TIY LR LR
comp=N,980nm,16.5s
TIY LR LR
comp=E,2µm,18.8s
TIY LR LR
comp=Z,3µm,22.4s
LPM Los Pinos Moun 51.18 82 *e*P P 07 17 18.0 +0.2
comp=Z,19nm,1.2s
P29A Atwood 51.19 73 ⇑P P 07 17 17.7 +0.1
baz=51,SNR=12
Z21A St. Cloud Mine 51.21 83 ⇓P P 07 17 18.4 +0.3
baz=51,SNR=11
Y22A Socorro 51.23 82 ⇓P P 07 17 18.7 +0.5
baz=51
S27A Las Animas 51.24 76 ⇑P P 07 17 18.1 -0.1
baz=51
X23A Hoglass Bar 51.27 81 ⇓P P 07 17 18.7 +0.2
baz=51
BNM Barren Site 51.29 82 *e*P P 07 17 18.9 +0.2
comp=Z,96nm,1.8s
EYMN Ely 51.33 59 *e*P P 07 17 17.7 -0.9
comp=Z,62nm,1.0s
EYMN LR LR
comp=Z,2µm,21.0s
W24A Lazy 6 Ranch, 51.34 80 ⇑P P 07 17 19.1 +0.1
baz=51,SNR=13
O30A MW Ranch, Wils 51.34 72 ⇓P P 07 17 18.9 +0.1
baz=51
V25A Rancho No Teng 51.41 79 ⇑P P 07 17 19.6 +0.1
baz=51,SNR=18
R28A Tribune 51.47 74 ⇓P P 07 17 19.7 -0.1
baz=51,SNR=15
319A Douglas 51.53 86 ⇑P P 07 17 20.4 0.0
baz=51
U26A Atley Ranch, 51.57 78 ⇓P P 07 17 20.6 -0.1
baz=51,SNR=22
P30A Selden 51.63 72 ⇓P P 07 17 21.0 0.0
baz=52,SNR=11
220A Playas Peak, P 51.63 85 ⇓P P 07 17 20.7 -0.4
baz=52,SNR=13
121A Cookes Peak, D 51.67 84 ⇑P P 07 17 21.2 -0.2
baz=52,SNR=11
BGNE Belgrade 51.67 69 ⇑P P 07 17 20.7 -0.5
baz=52,SNR=7.1
Z22A Elephant Butte 51.69 83 ⇓P P 07 17 21.6 +0.1
baz=52,SNR=13
XMAS Kiritimati 51.70 157 PFAKE 07 17 30.0 +8.5
XMAS LR LR
comp=Z,3µm,20.0s
X24A Lazy VL Ranch, 51.75 81 ⇑P P 07 17 22.3 +0.3
baz=52
T27A Campo 51.76 76 ⇓P P 07 17 22.0 0.0
baz=52
Y23A Lovelace Mesa, 51.79 82 ⇑P P 07 17 22.4 +0.1
baz=52,SNR=14
R29A Marienthal 51.82 74 ⇑P P 07 17 22.6 +0.2
baz=52
S28A Manter 51.91 75 ⇓P P 07 17 22.9 -0.1
baz=52,SNR=24
W25A X Bar L Ranch, 51.91 79 ⇓P P 07 17 23.3 +0.1
baz=52,SNR=38
V26A Tequesquite Ra 51.94 78 ⇑P P 07 17 23.3 0.0
baz=52,SNR=22
320A Kipp Ranch, An 52.02 86 ⇓P P 07 17 24.1 0.0
baz=52
122A Conniff Cattle 52.04 83 ⇓P P 07 17 24.2 +0.1
baz=52
T28A Walsh 52.08 76 ⇑P P 07 17 24.3 -0.1
baz=52
U27A Thompson Grove 52.11 77 ⇑P P 07 17 24.3 -0.3
baz=52,SNR=18
Z23A Rita Site, Whi 52.13 82 ⇑P P 07 17 25.0 +0.2
baz=52
P31A Stockton 52.16 72 ⇓P P 07 17 24.7 -0.2
baz=52,SNR=18
Y24A Capitan 52.17 81 ⇑P P 07 17 25.3 0.0
baz=52,SNR=15
X25A Clemmons Ranch 52.25 80 ⇓P P 07 17 26.0 +0.2
baz=52
SPMN St. Paul 52.30 62 ⇓P P 07 17 25.1 -0.6
baz=52,SNR=21
S29A Ulysses 52.36 75 ⇓P P 07 17 26.5 +0.1
baz=52
222A Williams Famil 52.38 84 ⇑P P 07 17 26.7 0.0
baz=52
W26A Owens Ranch, T 52.42 79 ⇓P P 07 17 26.9 -0.1
baz=52,SNR=7.0
R30A Dighton 52.43 74 ⇓P P 07 17 26.8 -0.1
baz=52,SNR=20
SUMG Summit 52.43 15 *e*P P 07 17 26.7 -0.1
SUMG pmax pmax
comp=Z,17nm,1.0s
SUMG Summit 52.43 15 *e*P P 07 17 26.7 -0.1
comp=Z,16nm,1.0s
SUMG Summit 52.43 15 *i*P P 07 17 27.5 +0.7
comp=Z,4.7nm,0.8s
Q31A Ellis 52.48 72 ⇓P P 07 17 26.9 -0.4
baz=52,SNR=7.5
U28A Mallet 52.50 77 ⇑P P 07 17 26.9 -0.6
baz=52,SNR=13
123A Bell Site, Whi 52.54 83 ⇓P P 07 17 28.1 +0.2
baz=52
V27A Dan Oppiter Fa 52.54 78 ⇓P P 07 17 27.3 -0.6
baz=52,SNR=9.4
T29A Hugoton 52.55 75 ⇑P P 07 17 27.8 -0.1
baz=52
Z24A Sheeppen Canyo 52.62 82 ⇑P P 07 17 28.1 -0.4
baz=52,SNR=14
Y25A Mesa, Roswell 52.63 81 ⇑P P 07 17 28.2 -0.4
baz=52,SNR=17
S30A Montezuma 52.73 74 ⇓P P 07 17 29.2 0.0
baz=53
X26A CR and CF Fran 52.75 79 ⇑P P 07 17 29.0 -0.4
baz=53,SNR=7.6
223A Chaparral, Ant 52.86 84 ⇓P P 07 17 30.4 +0.1
baz=53
W27A Bowe Ranch, En 52.87 78 ⇓P P 07 17 30.0 -0.2
baz=53
R31A Burdett 52.87 73 ⇓P P 07 17 29.7 -0.5
baz=53,SNR=15
V28A Channing 52.92 77 ⇑P P 07 17 30.2 -0.4
baz=53
124A Stringfield Ra 52.99 82 ⇑P P 07 17 31.4 +0.1
baz=53
U29A Oasis Ranch, S 53.03 76 ⇓P P 07 17 31.2 -0.2
baz=53
Z25A Roswell 53.05 81 ⇑P P 07 17 31.4 -0.3
baz=53,SNR=10
T30A Plains 53.08 75 ⇓P P 07 17 31.2 -0.5
baz=53,SNR=5.8
X27A F and S Farms, 53.12 79 ⇓P P 07 17 32.1 0.0
baz=53
Y26A Elida 53.17 80 ⇓P P 07 17 32.4 -0.1
baz=53
W28A Vega 53.26 78 ⇓P P 07 17 33.0 -0.2
baz=53
V29A Stinnett 53.27 77 ⇓P P 07 17 32.6 -0.5
baz=53
S31A Mullinville 53.33 74 ⇑P P 07 17 33.0 -0.5
baz=53
U30A WK&E Inc. Balk 53.35 75 ⇓P P 07 17 33.3 -0.5
baz=53
224A Cornudas Mount 53.38 83 ⇑P P 07 17 33.9 -0.1
baz=53
125A Gardner Draw, 53.51 82 ⇑P P 07 17 34.8 -0.2
baz=53,SNR=9.0
Z26A Caprock 53.51 81 ⇓P P 07 17 34.6 -0.4
baz=53,SNR=7.3
T31A Randall Ranch, 53.56 74 ⇓P P 07 17 34.7 -0.5
baz=53,SNR=9.7
Y27A Causey 53.60 80 ⇓P P 07 17 35.2 -0.4
baz=53,SNR=15
W29A Amraillo 53.69 77 ⇑P P 07 17 35.9 -0.3
baz=54
MNTX Cornudas Mount 53.72 83 *e*P P 07 17 36.0 -0.4
comp=Z,19nm,1.0s
MNTX LR LR
comp=Z,548nm,20.0s
COWI Conover 53.74 59 *e*P P 07 17 35.6 -0.8
comp=Z,27nm,0.6s
COWI LR LR
comp=Z,2µm,21.0s
X28A Dimmitt 53.76 78 ⇓P P 07 17 36.1 -0.7
baz=54,SNR=5.5
MSTX Muleshoe 53.78 79 ⇓P P 07 17 36.3 -0.6
baz=54,SNR=13
225A Deer Hill, Car 53.78 82 ⇓P P 07 17 36.9 -0.2
baz=54,SNR=13
AMTX Amarillo 53.83 78 *e*P P 07 17 36.8 -0.5
comp=Z,46nm,1.0s
AMTX LR LR
comp=Z,984nm,19.0s
324A Moseley Ranch, 53.84 83 ⇓P P 07 17 37.0 -0.5
baz=54,SNR=8.4
V30A Spur Ranch, Mi 53.84 76 ⇓P P 07 17 36.7 -0.6
baz=54
126A Clayton Basin, 53.91 81 ⇓P P 07 17 37.6 -0.4
baz=54
U31A Nine Bar Ranch 53.94 75 ⇑P P 07 17 37.9 -0.2
baz=54
Z27A Tatum 53.95 80 ⇓P P 07 17 37.5 -0.7
baz=54,SNR=6.1
GDL2 Guadalupe Moun 54.01 82 *e*P P 07 17 38.1 -0.5
comp=Z,52nm,0.9s
KSU1 Kansas State U 54.06 70 *e*P P 07 17 38.0 -0.8
comp=Z,71nm,0.9s
KSU1 LR LR
comp=Z,2µm,20.0s
X29A Tulia 54.11 78 ⇓P P 07 17 39.2 -0.2
baz=54
Y28A McKinney Farm, 54.14 79 ⇓P P 07 17 38.7 -0.9
baz=54,SNR=7.6
SCIA State Center 54.19 66 *e*P P 07 17 39.1 -0.6
comp=Z,55nm,0.8s
SCIA LR LR
comp=Z,3µm,22.0s
325A Bean Ranch, Si 54.20 83 ⇓P P 07 17 39.8 -0.3
baz=54,SNR=17
226B Tecolote Peak, 54.21 82 ⇑P P 07 17 39.6 -0.5
baz=54,SNR=10
W30A Crocket Farms 54.30 77 ⇑P P 07 17 40.6 -0.1
baz=54
127A Arkansas Junct 54.30 81 ⇑P P 07 17 39.8 -1.0
baz=54
TATO Taipei 54.34 266 PFAKE 07 17 50.0 +9.0
TATO LR LR
comp=Z,2µm,22.0s
V31A Spring Creek L 54.34 76 ⇓P P 07 17 40.8 -0.2
baz=54
Z28A Tucker Farm, M 54.48 80 ⇓P P 07 17 41.0 -1.0
baz=54,SNR=7.3
SFJD Kangerlussuaq 54.50 23 PFAKE 07 17 50.0 +8.5
SFJD LR LR
comp=Z,2µm,21.0s
SFJD Kangerlussuaq 54.50 23 *i*P P 07 17 40.3 -1.2
comp=Z,6.6nm,0.7s
Y29A Porterfield Fa 54.53 79 ⇑P P 07 17 41.8 -0.6
baz=54,SNR=10
425A Indio Mountain 54.60 84 ⇓P P 07 17 42.8 -0.1
baz=54,SNR=15
X30A Coker Ranch, T 54.61 78 ⇑P P 07 17 42.5 -0.5
baz=54,SNR=7.1
YHNB Yeheng 54.63 266 PFAKE 07 18 00.0 +17
YHNB LR LR
comp=Z,1µm,21.0s
W31A Holland Ranch, 54.68 76 ⇑P P 07 17 42.9 -0.4
baz=54,SNR=8.1
227A Bennet, Jal 54.80 81 ⇓P P 07 17 43.6 -0.7
baz=55
WHN Wuhan 54.82 276 P P 07 17 44.3 -0.1
WHN S S 07 25 21.3 -0.9
WHN sS sS 07 25 41.1 -1.5
WHN pmax pmax
comp=Z,1µm,10.4s
WHN LR LR
comp=N,680nm,11.6s
WHN LR LR
comp=E,3µm,20.0s
WHN LR LR
comp=Z,3µm,26.5s
326A Caldwell Ranch 54.85 82 ⇑P P 07 17 44.3 -0.4
baz=55,SNR=11
128A Castleberry Fa 54.87 80 ⇓P P 07 17 44.2 -0.6
baz=55,SNR=9.1
Z29A Hungry Hill Ra 54.91 79 ⇓P P 07 17 44.5 -0.7
baz=55,SNR=8.5
Y30A Stafford Catti 54.99 78 ⇑P P 07 17 45.2 -0.5
baz=55,SNR=12
X31A McDonald Ranch 55.03 77 ⇑P P 07 17 45.5 -0.5
baz=55,SNR=6.3
327A Balmorhea Ranc 55.12 82 ⇑P P 07 17 46.3 -0.4
baz=55
228A UT Block 9, Go 55.15 81 ⇓P P 07 17 46.4 -0.6
baz=55
JFWS Jewell Farm 55.20 63 PFAKE 07 18 00.0 +13
JFWS LR LR
comp=Z,2µm,20.0s
129A Stewart Farms, 55.24 80 ⇑P P 07 17 46.7 -0.9
baz=55
Z30A Sanderson Ranc 55.25 79 ⇓P P 07 17 46.7 -0.8
baz=55,SNR=12
426A McDonald Obser 55.27 83 ⇑P P 07 17 47.2 -0.8
baz=55,SNR=9.8
Y31A Rekieta Farm, 55.31 78 ⇑P P 07 17 47.7 -0.3
baz=55
ZALV Zalesovo Beam 55.38 315 P P 07 17 48.9 +0.8
ZALV 07 18 48.7
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV pmax pmax
comp=Z,9.0nm,0.7s
ZALV MLR MLR
comp=Z,3µm,19.2s
ZALV Zalesovo Beam 55.38 315 P P 07 17 48.9 +0.8
ZALV PcP PcP 07 18 48.7 +0.6
ZALV Zalesovo Beam 55.38 315 P P 07 17 48.9 +0.8
comp=Z,0.7nm,0.4s,baz=41,slow=4.7,SNR=5.3
ZALV PcP PcP 07 18 48.7 +0.6
comp=Z,9.3nm,0.7s,baz=40,slow=4.2,SNR=13
ZALV LR LR 07 43 14.3
comp=Z,3µm,19.2s,baz=67,slow=38
NVS Novosibirsk 55.47 317 *e*P P 07 17 52.5 +3.8
NVS pmax pmax
comp=Z,6.0nm,0.7s
NVS pmax pmax

NVS pmax pmax
comp=N,2.0nm,0.5s
comp=E,3.0nm,0.5s
328A Wristen Ranch, 55.53 82 ⇑P **P 07 17 48.6 -1.0**
baz=55,SNR=11
427A Hayter Ranch, 55.53 82 ⇓P **P 07 17 48.9 -0.8**
baz=55,SNR=8.3
SSLB Suanglung 55.54 265 *eP* **P 07 17 49.4 -0.3**
comp=E,74nm,1.0s
YULB Yu-li 55.62 265 *eP* **P 07 17 50.0 -0.2**
comp=E,19nm,1.0s
526A Mary Lane Ranc 55.66 84 ⇑P **P 07 17 50.0 -0.7**
baz=56,SNR=10
WMOK Wichita Mounta 55.68 76 *eP* **P 07 17 50.3 -0.3**
WMOK pmax pmax
comp=Z,37nm,0.9s
WMOK MLR MLR
comp=Z,2μm,20.0s
WMOK Wichita Mounta 55.68 76 *eP* **P 07 17 50.3 -0.3**
comp=Z,37nm,0.9s
WMOK LR LR
comp=Z,2μm,20.0s
229A Bryant Ranch, 55.74 80 ⇓P **P 07 17 50.3 -0.7**
baz=56
XAN Xi'an 55.75 283 P **P 07 17 51.1 0.0**
XAN PP **PP 07 19 57.8 +2.3**
XAN S **S 07 25 32.3 -2.4**
XAN pmax pmax
comp=Z,11nm,0.9s
XAN pmax pmax
comp=Z,130nm,5.6s
XAN LR LR
comp=N,900nm,19.4s
XAN LR LR
comp=E,320nm,21.9s
XAN LR LR
comp=Z,680nm,21.6s
Y32A R-V Farms, Ver 55.78 77 ⇓P **P 07 17 50.8 -0.6**
baz=56,SNR=17
130A Snyder 55.82 79 ⇑P **P 07 17 51.0 -0.6**
baz=56
Z31A Sharp Cattle R 55.83 78 ⇓P **P 07 17 51.0 -0.7**
baz=56,SNR=13
527A Woodward Ranch 55.89 83 ⇓P **P 07 17 51.4 -0.9**
baz=56,SNR=12
329A Wagon Wheel Ra 55.96 81 ⇓P **P 07 17 51.8 -0.9**
baz=56,SNR=6.4
626A Big Bend Ranch 55.98 84 ⇓P **P 07 17 52.1 -0.8**
baz=56,SNR=9.1
428A Kincaid Ranch, 56.06 82 ⇓P **P 07 17 53.0 -0.4**
baz=56,SNR=13
131A Roby 56.12 79 ⇓P **P 07 17 53.2 -0.6**
baz=56
QZH Quanzhou 56.16 268 ⇑*iP* **P 07 17 54.6 +0.5**
QZH S **S 07 25 42.0 +1.8**
QZH pmax pmax
comp=Z,1μm,4.6s
QZH LR LR
comp=N,2μm,21.0s
QZH LR LR
comp=E,990nm,14.8s
QZH LR LR
comp=Z,1μm,18.1s
230A Sterling City 56.22 80 ⇑P **P 07 17 53.7 -0.9**
baz=56,SNR=12
Z32A Haskell 56.24 78 ⇓P **P 07 17 54.0 -0.6**
baz=56,SNR=21
528A Cox Ranch, San 56.39 83 ⇑P **P 07 17 55.2 -0.7**
baz=56,SNR=14
TXAR Lajitas Array 56.43 84 P **P 07 17 55.2 -0.8**
TXAR Lajitas Array 56.43 84 P **P 07 17 55.2 -0.8**
comp=Z,4.8nm,0.7s,baz=296,slow=4.4,SNR=37
TXAR LR LR 07 42 56.3
comp=Z,1μm,18.0s,baz=0.0,slow=37
330A Mertzon 56.51 80 ⇑P **P 07 17 55.4 -1.2**
baz=56,SNR=6.0
627A Terlingua Ranc 56.51 84 ⇑P **P 07 17 56.0 -0.7**
baz=56,SNR=14
SCO Scoresbysund 56.61 10 *iP* **P 07 17 57.1 +0.5**
comp=Z,4.0nm,0.8s
ABTX Abilene, Hawle 56.61 78 ⇓P **P 07 17 56.7 -0.6**
baz=56,SNR=10
429A Davenport Ranc 56.62 82 ⇓P **P 07 17 56.2 -1.1**
baz=56,SNR=6.1
231A Bronte 56.67 79 ⇑P **P 07 17 56.6 -1.1**
baz=56
TUL1 Tulsa 56.68 73 ⇑P **P 07 17 56.8 -0.9**
baz=56,SNR=7.8
529A Stev Forest Ra 56.77 82 ⇑P **P 07 17 57.5 -0.9**
baz=57,SNR=9.2
628A Black Gap, Mar 56.80 83 ⇓P **P 07 17 57.8 -0.9**
baz=57,SNR=15
430A Baggett Ranch, 56.91 81 ⇓P **P 07 17 58.4 -1.0**
baz=57,SNR=14
331A San Angelo 57.04 80 ⇑P **P 07 17 58.9 -1.4**
baz=57,SNR=8.9
232A Coleman 57.12 79 ⇑P **P 07 17 59.7 -1.1**
baz=57,SNR=7.4
530A J-C Ranch, Com 57.29 82 ⇑P **P 07 18 01.4 -0.7**
baz=57,SNR=21
431A Sonora 57.37 81 ⇑P **P 07 18 01.3 -1.4**
baz=57,SNR=12
LZH Lanzhou 57.39 288 ⇑P **P 07 18 03.1 +0.2**
LZH pP **pP 07 18 14.0 -1.2**
LZH sP **sP 07 18 19.1 -1.1**
LZH PP PP 07 20 15.8 +5.5
LZH S **S 07 25 54.0 -2.6**
LZH sS sS 07 26 09.0 -8.1
LZH SS **SS 07 29 46.4 +0.4**
LZH pmax pmax
comp=Z,91nm,1.4s
LZH pmax pmax
comp=Z,430nm,4.3s
LZH LR LR
comp=N,2μm,17.4s
LZH LR LR
comp=E,2μm,17.7s
LZH LR LR
comp=Z,3μm,19.0s
332A Millersview 57.41 79 ⇑P **P 07 18 01.9 -1.0**
baz=57,SNR=13
GTA Gaotai 57.47 294 ⇑*eP* **P 07 18 02.8 -0.6**
GTA pP **pP 07 18 19.0 +3.3**
GTA PP **PP 07 20 11.9 +1.0**
GTA S **S 07 25 53.3 -4.2**
GTA SS **SS 07 29 44.8 -2.3**
GTA pmax pmax
comp=Z,350nm,10.0s
GTA LR LR
comp=N,2μm,17.1s
GTA LR LR
comp=E,2μm,17.1s
GTA LR LR
comp=Z,3μm,19.0s
432A Menard 57.73 80 ⇑P **P 07 18 04.0 -1.2**
baz=58,SNR=9.3
KEV Kevo 57.77 351 *eP* **P 07 18 03.7 -1.1**
KEV pmax pmax
comp=Z,4.0nm,0.5s
KEV Kevo 57.77 351 *ep* **P 07 18 03.7 -1.1**
comp=Z,3.7nm,0.5s
KEV Kevo 57.77 351 PFAKE 07 18 20.0 +15
KEV LR LR
comp=Z,1μm,20.0s
531A Rocksprings 57.77 81 ⇓P **P 07 18 04.3 -1.2**
baz=58,SNR=7.6
JCT Junction City 58.00 80 *eP* **P 07 18 06.3 -0.8**
JCT pmax pmax
comp=Z,58nm,1.3s
JCT MLR MLR
comp=Z,2μm,21.0s
JCT Junction City 58.00 80 *eP* **P 07 18 06.3 -0.8**
comp=Z,58nm,1.3s
JCT LR LR
comp=Z,2μm,21.0s
JCT Junction City 58.00 80 ⇑P **P 07 18 05.7 -1.4**
baz=58,SNR=10.0
ENH Enshi 58.01 279 *eP* **P 07 18 06.9 -0.3**
comp=Z,53nm,1.0s
ENH LR LR
comp=Z,607nm,19.0s
SLM Saint Louis 58.07 67 *eP* **P 07 18 06.3 -1.1**
SLM pmax pmax
comp=Z,21nm,0.5s
SLM Saint Louis 58.07 67 *eP* **P 07 18 06.3 -1.1**
comp=Z,21nm,0.5s
ARCES ARCESS Array B 58.12 352 P **P 07 18 07.5 +0.1**
comp=Z,3.2nm,0.5s,baz=7.2,slow=8.5,SNR=17
ARCES LR LR 07 47 55.6
comp=Z,1μm,18.2s,baz=0.4,slow=41
RFTA Plano 58.13 76 *eP* **P 07 18 07.3 -0.6**
532A Rocksprings 58.19 81 ⇑P **P 07 18 07.0 -1.5**
baz=58,SNR=6.4
631A Perdido Creek 58.28 82 ⇑P **P 07 18 07.3 -1.8**
baz=58,SNR=8.1
SCHQ Schefferville 58.36 40 P **P 07 18 08.9 -0.3**
SCHQ Schefferville 58.36 40 P **P 07 18 08.9 -0.3**
comp=Z,10nm,0.6s,baz=324,slow=7.2,SNR=25
SCHQ LR LR 07 44 28.2
comp=Z,2μm,18.4s,baz=318,slow=37
WHTX Lake Whitney 58.38 77 ⇓P **P 07 18 09.3 -0.4**
baz=58,SNR=9.0
LVZ Lovozero 58.64 347 ⇓*eP* **P 07 18 09.3 -1.7**
LVZ pmax pmax
comp=Z,59nm,2.5s
SFIN Scholer Farm 58.65 63 ⇓P **P 07 18 11.0 -0.4**
baz=58,SNR=21
632A Uvalde 58.70 81 ⇓P **P 07 18 11.0 -1.0**
baz=58
APA Apatity 59.12 348 ⇑*eP* P 07 18 19.7 +5.5
APA pmax pmax
comp=Z,10.0nm,1.0s
APA MLR MLR
comp=Z,2μm,17.0s
732A Laxson Ranch, 59.13 82 ⇑P **P 07 18 14.1 -0.8**
baz=59,SNR=11
AAM Ann Arbor 59.21 60 *eP* **P 07 18 15.1 -0.2**
AAM pmax pmax
comp=Z,20nm,0.4s
AAM MLR MLR
comp=Z,2μm,21.0s
AAM Ann Arbor 59.21 60 *eP* **P 07 18 15.1 -0.2**
comp=Z,20nm,0.4s
AAM LR LR
comp=Z,2μm,21.0s
OLIL Olney 59.22 65 *eP* **P 07 18 14.5 -0.8**
comp=Z,75nm,0.9s
SIUC Southern Illin 59.28 67 *eP* **P 07 18 15.0 -0.9**
comp=Z,32nm,0.8s
BLO Bloomington 59.80 64 *eP* **P 07 18 18.8 -0.6**
BLO pmax pmax
comp=Z,56nm,0.9s
BLO Bloomington 59.80 64 *eP* **P 07 18 18.8 -0.6**
comp=Z,56nm,0.9s
HBAR Harrisburg 59.95 70 *eP* **P 07 18 19.0 -1.5**
USIN University of 59.99 66 *eP* **P 07 18 19.7 -1.1**
comp=Z,52nm,0.6s
KURK Kurchatov 60.37 315 *eP* **P 07 18 22.5 -0.6**
KURK pmax pmax
comp=Z,14nm,0.6s
KURK MLR MLR
comp=Z,3μm,19.0s
KURK Kurchatov 60.37 315 *eP* **P 07 18 22.5 -0.6**
comp=Z,14nm,0.6s
KURK LR LR
comp=Z,3μm,19.0s
UTMT University of 60.44 68 *eP* **P 07 18 22.9 -0.9**
comp=Z,176nm,1.1s
WCI Wyandotte Cave 60.59 65 *eP* **P 07 18 23.9 -0.9**
WCI pmax pmax
comp=Z,40nm,0.8s
WCI Wyandotte Cave 60.59 65 *eP* **P 07 18 23.9 -0.9**
comp=Z,40nm,0.8s
WMQ Urumqi 60.99 305 P **P 07 18 28.6 +1.0**
WMQ pP **pP 07 18 39.0 -1.0**
WMQ sP **sP 07 18 43.0 -1.9**
WMQ PcP **PcP 07 19 11.0 +0.5**
WMQ PP **PP 07 20 43.0 +1.2**
WMQ S **S 07 26 43.0 +0.3**
WMQ ScS **SKKSac 07 28 13.0 -1.8**
WMQ pmax pmax
comp=Z,26nm,0.8s
WMQ pmax pmax
comp=Z,180nm,4.0s
WMQ LR LR
comp=N,3μm,20.4s
WMQ LR LR
comp=E,1μm,25.6s
WMQ LR LR
comp=Z,2μm,22.2s
ACSO Alum Creek Sta 61.02 61 *eP* **P 07 18 27.3 -0.4**
comp=Z,246nm,1.7s
ACSO LR LR
comp=Z,2μm,19.0s
CD2 Chengdu 61.05 284 *eP* **P 07 18 28.8 +0.7**
CD2 pP **pP 07 18 40.3 -0.2**
CD2 sP **sP 07 18 44.3 -1.2**
CD2 PcP **PcP 07 19 12.3 +1.4**
CD2 PP **PP 07 20 45.8 +3.2**
CD2 S **S 07 26 43.3 -0.5**
CD2 sS **sS 07 27 00.8 -3.6**
CD2 ScS **SKKSac 07 28 13.8 -1.8**
CD2 SS **SS 07 30 44.1 +0.7**
CD2 pmax pmax
comp=Z,60nm,1.0s
CD2 pmax pmax
comp=Z,630nm,9.5s
CD2 LR LR
comp=N,1μm,21.4s
CD2 LR LR
comp=E,1μm,19.0s
CD2 LR LR
comp=Z,2μm,22.6s
WVT Waverly 61.18 67 *eP* **P 07 18 27.8 -1.1**
WVT pmax pmax
comp=Z,26nm,0.9s
WVT Waverly 61.18 67 *eP* **P 07 18 27.8 -1.1**
comp=Z,26nm,0.9s
KVTX Kingsville 61.26 81 PFAKE 07 18 40.0 +11
KVTX LR LR
comp=Z,1μm,19.0s
ERPA Erie 61.29 58 *eP* **P 07 18 29.5 0.0**
comp=Z,197nm,1.1s
ERPA LR LR
comp=Z,2μm,19.0s
SOKR Solikamsk 61.36 333 *eP* **pP 07 18 43.4 +1.4**
SOKR pmax pmax
comp=Z,10.0nm,1.3s
SOKR MLR MLR
comp=Z,2μm,12.0s
MK31 Makanchi Array 61.53 310 *eP* **P 07 18 30.5 -0.6**
MK31 Makanchi Array 61.53 310 *eP* **P 07 18 30.5 -0.6**
MKAR Makanchi Array 61.53 310 P **P 07 18 30.6 -0.6**
MKAR pmax pmax
comp=Z,2.0nm,0.3s
MKAR MLR MLR
comp=Z,2μm,21.3s
MKAR Makanchi Array 61.53 310 P **P 07 18 30.6 -0.6**
MKAR Makanchi Array 61.53 310 P **P 07 18 30.6 -0.6**
comp=Z,1.7nm,0.3s,baz=46,slow=6.1,SNR=43
MKAR LR LR 07 45 46.9
comp=Z,2μm,21.3s,baz=32,slow=37
ALLY Alegheny Colle 61.54 58 *eP* **P 07 18 31.3 +0.1**
comp=Z,176nm,0.8s
MSNY Massena 61.84 52 *eP* **P 07 18 32.4 -0.7**
comp=Z,706nm,0.9s
BVA0 Borovoye Array 62.04 321 *iP* **P 07 18 35.0 +0.6**
BVA0 pmax pmax
comp=Z,15nm,0.8s
BVAR Borovoye Array 62.04 321 LR LR 07 47 54.0
comp=Z,5μm,19.6s,baz=47,slow=38
VOSK Vostochnaya 62.04 321 P **P 07 18 34.7 +0.3**
VOSK pmax pmax
comp=Z,10.0nm,0.9s
BRVK Borovoye 62.05 322 *cP* **P 07 18 34.8 +0.3**
BRVK pmax pmax
comp=Z,15nm,0.9s
BRVK Borovoye 62.05 322 *eP* **P 07 18 35.1 +0.7**
comp=Z,21nm,1.0s
BRVK LR LR
comp=Z,5μm,20.0s
BORG Borgarnes 62.14 12 PFAKE 07 18 50.0 +15
BORG LR LR
comp=Z,2μm,20.0s
LONY Lake Ozonia 62.26 52 *eP* **P 07 18 34.9 -1.1**
comp=Z,23nm,0.8s
LONY LR LR
comp=Z,3μm,20.0s
VBMS Vicksburg 62.38 72 *eP* **P 07 18 36.7 -0.3**
comp=Z,76nm,1.0s
VBMS LR LR
comp=Z,2μm,19.0s
GYA Guiyang 62.47 278 ⇑*iP* **P 07 18 37.8 0.0**
GYA pP **pP 07 18 51.3 +1.1**
GYA sP **sP 07 18 56.9 +1.7**
GYA PcP **PcP 07 19 19.4 +2.6**
GYA PP **PP 07 20 58.9 +3.6**
GYA ScP **ScP 07 23 16.8 +1.7**
GYA S **S 07 27 01.4 -0.5**
GYA sS **sS 07 27 20.0 -2.6**
GYA SKS **ScS 07 28 25.6 -1.0**
GYA SS **SS 07 31 07.4 +1.5**
GYA pmax pmax
comp=Z,30nm,0.8s
GYA pmax pmax
comp=Z,410nm,6.8s
GYA LR LR
comp=N,1μm,20.1s
GYA LR LR
comp=E,810nm,21.5s
GYA LR LR
comp=Z,610nm,21.7s
SVE Sverdlovsk 62.48 329 *eP* **P 07 18 39.0 +1.8**
SVE *eS* **S 07 27 05.1 +4.2**
SVE *e* 07 31 03.8
SVE pmax pmax
comp=Z,13nm,0.8s
SVE MLR MLR
comp=Z,3μm,20.0s
FRNY Flat Rock 62.59 52 *eP* **P 07 18 36.5 -1.7**
comp=Z,22nm,1.2s
ZRNK Zerenda 62.63 322 *iP* **P 07 18 38.4 +0.1**
ZRNK pmax pmax
comp=Z,18nm,0.7s
NCB Newcomb 62.90 53 *eP* **P 07 18 39.7 -0.7**
comp=Z,30nm,0.9s
NCB LR LR
comp=Z,2μm,21.0s
BINY Binghamton 63.30 55 *eP* **P 07 18 43.2 +0.1**
comp=Z,173nm,1.0s
BINY LR LR
comp=Z,2μm,19.0s
TZTN Tazewell 63.32 64 *eP* **P 07 18 42.8 -0.4**
comp=Z,118nm,1.4s
MDV Middlebury 63.40 52 *eP* **P 07 18 42.5 -1.0**
comp=Z,27μm,0.4s
ARU Arti 63.46 330 *cP* **P 07 18 44.5 +0.7**
ARU *PP **pP 07 18 59.0 +2.8**
ARU 07 19 20.7
ARU 07 21 05.2
ARU S **S 07 27 13.0 -0.2**
ARU pmax pmax
comp=Z,14nm,1.0s
ARU MLR MLR
comp=Z,2μm,20.0s
CPCT Cooper Cave 63.55 66 *eP* **P 07 18 43.7 -1.1**
ACCN Adirondack Com 63.61 53 *eP* **P 07 18 44.5 -0.5**
comp=Z,36nm,0.9s
JOF Joensuu 63.81 347 *eP* **P 07 18 44.9 -1.1**
JOF pmax pmax
comp=Z,3.0nm,0.5s
JOF Joensuu 63.81 347 *ep* **P 07 18 44.9 -1.1**
comp=Z,3.0nm,0.5s
TKL Tuckaleechee C 63.83 65 LR LR 07 45 21.0
comp=Z,2μm,21.5s,baz=330,slow=35
LBNH Lisbon 63.83 51 *eP* **P 07 18 45.8 -0.6**
LBNH pmax pmax
comp=Z,27nm,1.1s
LBNH Lisbon 63.83 51 *eP* **P 07 18 45.8 -0.6**
comp=Z,27nm,1.1s
PQI Presque Isle 63.86 47 *eP* **P 07 18 45.3 -1.3**
comp=Z,10nm,0.5s
LRAL Lakeview Retre 63.87 69 *eP* **P 07 18 45.2 -1.6**
comp=Z,15nm,0.8s
LRAL LR LR
comp=Z,1μm,21.0s
KLMR Klimovskoe 64.38 342 P P 07 18 44.6 -5.1
KLMR pmax pmax
comp=Z,17nm,1.3s
KLMR MLR MLR
comp=Z,2μm,24.0s
HNR Honiara 64.53 207 LR LR 07 41 58.6
comp=Z,1μm,20.3s,baz=6.7,slow=31
FFD Franklin Falls 64.53 52 *eP* **P 07 18 50.1 -1.0**
comp=Z,31nm,0.9s
BLA Blacksburg 64.57 62 *eP* **P 07 18 51.7 +0.2**
BLA pmax pmax
comp=Z,294nm,1.6s
BLA MLR MLR
comp=Z,2μm,19.0s
BLA Blacksburg 64.57 62 *eP* **P 07 18 51.7 +0.2**
comp=Z,294nm,1.6s
BLA LR LR
comp=Z,2μm,19.0s
SDMD Soldier's Deli 64.89 58 *eP* **P 07 18 53.3 -0.1**
comp=Z,92nm,0.9s
BRNJ Basking Ridge 65.14 55 *eP* **P 07 18 56.1 +1.1**
comp=Z,17μm,0.7s
KAF Kangasniemi 65.24 349 *eP* **P 07 18 54.1 -1.2**
KAF pmax pmax
comp=Z,7.0nm,0.6s
KAF Kangasniemi 65.24 349 *ep* **P 07 18 54.1 -1.2**
comp=Z,6.7nm,0.6s
BRAL Brewton 65.29 71 *eP* **P 07 18 55.1 -1.0**
comp=Z,103nm,1.0s
BRAL LR LR
comp=Z,928nm,19.0s
HRV Adam Dziewonsk 65.30 52 *eP* **P 07 18 55.3 -0.7**
HRV pmax pmax
comp=Z,86nm,1.6s
HRV Adam Dziewonsk 65.30 52 *eP* **P 07 18 55.3 -0.7**
comp=Z,86nm,1.6s
AFI Afiamalu 65.41 176 LR LR 07 41 31.5
comp=Z,726nm,20.2s,baz=350,slow=30
CBN Corbin 65.50 59 *eP* **P 07 18 57.5 +0.2**
comp=Z,139nm,1.2s
CBN LR LR
comp=Z,2μm,19.0s
KMSC Kings Mountain 65.57 64 ⇓P **P 07 18 57.8 -0.2**
baz=65
EMMW East Machias 65.60 48 *eP* **P 07 18 57.1 -0.8**
comp=Z,29nm,0.8s
JSRW J. Sargeant Re 65.60 60 *eP* **P 07 18 58.0 0.0**
DAV Davao City (W) 65.64 249 PFAKE 07 19 10.0 +11
DAV LR LR
comp=Z,1μm,22.0s
BRYW Bryant College 65.75 53 *eP* **P 07 18 58.5 -0.5**
comp=Z,73nm,1.1s
KMI Kunming 65.85 280 P **P 07 19 00.5 +0.4**
KMI S **S 07 27 44.1 +0.1**
KMI SS **SS 07 32 00.8 +2.0**
KMI pmax pmax
comp=Z,56nm,1.3s
KMI pmax pmax
comp=Z,680nm,5.5s
KMI LR LR
comp=N,890nm,24.3s
KMI LR LR
comp=E,740nm,25.0s
KMI LR LR
comp=Z,1μm,27.6s
FINES FINESS Array B 65.92 349 P **P 07 18 59.0 -0.7**
FINES FINESS Array B 65.92 349 P **P 07 18 59.0 -0.7**
comp=Z,11nm,0.9s,baz=23,slow=10,SNR=6.7
FINES LR LR 07 51 03.8
comp=Z,1μm,19.5s,baz=22,slow=39
QIZ Qiongzhong 65.97 271 P **P 07 19 01.8 +1.1**
QIZ PP **PP 07 21 26.9 +0.9**
QIZ S **S 07 27 46.3 +1.1**
QIZ SS **SS 07 31 55.3 -5.2**
QIZ pmax pmax
comp=Z,22nm,1.3s
QIZ pmax pmax
comp=Z,520nm,6.0s
QIZ LR LR
comp=N,650nm,22.2s
QIZ LR LR
comp=Z,710nm,22.6s
QIZ Qiongzhong 65.97 271 *eP* **P 07 19 00.7 0.0**
comp=Z,25nm,1.1s
QIZ LR LR
comp=Z,792nm,22.0s
TIGA Tifton 67.00 68 ⇑P **P 07 19 05.9 -1.2**
baz=67
CNNC Cliffs of the 67.41 62 *eP* **P 07 19 09.7 +0.1**
comp=Z,26nm,0.4s
CNNC LR LR
comp=Z,2μm,20.0s

NB2 NORSAR Subarra 67.49 357 P **P** 07 19 09.0 -0.8
comp=Z,11nm,1.0s,baz=3.9,slow=6.2
NOA NORSAR Array B 67.49 357 P **P** 07 19 09.3 -0.5
NOA NORSAR Array B 67.49 357 P **P** 07 19 09.3 -0.5
comp=Z,8.8nm,1.0s,baz=3.4,slow=6.3,SNR=18
NOA LR LR 07 46 42.6
comp=Z,819nm,22.0s,baz=20,slow=34
TKM2 Tokmak 2 67.58 311 *e*P **P** 07 19 11.7 +0.7
TKM2 pmax pmax
comp=Z,23nm,1.3s
TKM2 MLR MLR
comp=Z,1μm,19.0s
TKM2 Tokmak 2 67.58 311 *e*P **P** 07 19 11.7 +0.7
comp=Z,24nm,1.3s
TKM2 LR LR
comp=Z,1μm,19.0s
NHSC New Hope 67.72 65 *e*P **P** 07 19 12.2 +0.6
comp=Z,122nm,1.0s
NHSC LR LR
comp=Z,3μm,19.0s
AAK Ala-Archa 68.32 312⇑ *e*P **P** 07 19 15.3 -0.2
AAK pmax pmax
comp=Z,19nm,0.7s
AAK Ala-Archa 68.32 312 *e*P **P** 07 19 15.7 +0.2
comp=Z,13nm,0.8s
AAK LR LR
comp=Z,2μm,20.0s
EKS2 Erkin-Say 68.63 312 *e*P **P** 07 19 17.3 -0.1
EKS2 pmax pmax
comp=Z,16nm,0.8s
EKS2 MLR MLR
comp=Z,3μm,20.0s
EKS2 Erkin-Say 68.63 312 *e*P **P** 07 19 17.3 -0.1
comp=Z,16nm,0.8s
EKS2 LR LR
comp=Z,3μm,20.0s
AKTO Aktyubinsk 68.66 327 P **P** 07 19 17.7 +0.4
AKTO pmax pmax
comp=Z,16nm,0.8s
VSU Vasula 68.74 348 *i* P **P** 07 19 17.0 -0.5
VSU pmax pmax
comp=Z,21nm,1.0s
PMG Port Moresby 68.92 220 LR LR 07 46 04.6
comp=Z,942nm,18.3s,baz=55,slow=33
KONO Kongsberg 68.93 357 PFAKE 07 19 30.0 +11
KONO LR LR
comp=Z,1μm,21.0s
AB31 Akbulak array 68.98 325 *i* P **P** 07 19 20.0 +0.8
AB31 pmax pmax
comp=Z,3.0nm,0.3s
ABKAR Akbulak array 68.98 325 *e*P **P** 07 19 19.6 +0.4
comp=Z,5.6nm,0.5s
MSVF Nonsavu 69.39 187 PFAKE 07 19 30.0 +7.9
MSVF LR LR
comp=Z,2μm,19.0s
LSA Lhasa 69.39 292 P **P** 07 19 23.8 +1.2
LSA S **S** 07 28 27.4 +0.6
LSA LR LR
comp=N,570nm,17.5s
LSA LR LR
comp=E,850nm,20.1s
LSA LR LR
comp=Z,1μm,16.3s
LSA Lhasa 69.39 292 *e*P **P** 07 19 23.9 +1.2
LSA pmax pmax
comp=Z,25nm,0.9s
LSA MLR MLR
comp=Z,1μm,19.0s
LSA Lhasa 69.39 292 *e*P **P** 07 19 23.9 +1.2
comp=Z,25nm,0.9s
LSA LR LR
comp=Z,1μm,19.0s
KK31 Karatay Array 69.76 315 *e*P **P** 07 19 24.4 +0.2
KK31 pmax pmax
comp=Z,7.0nm,0.5s
KKAR Karatay Array 69.76 315 *e*P **P** 07 19 24.0 -0.2
KKAR pmax pmax
comp=Z,8.0nm,0.6s
KKAR Karatay Array 69.76 315 *e*P **P** 07 19 23.9 -0.2
comp=Z,8.3nm,0.6s
KSH Kashi 70.04 309 P P 07 19 29.8 +3.6
KSH *e*PcP **PcP** **07 19 51.5 +3.4**
KSH *e*PP PP 07 22 07.6 +6.7
KSH *e*S **S** **07 28 33.3 -0.3**
KSH *e*SKS **SKSac** **07 29 21.3 -2.5**
KSH pmax pmax
comp=Z,31nm,0.8s
KSH pmax pmax
comp=Z,530nm,7.3s
KSH LR LR
comp=N,1μm,11.2s
KSH LR LR
comp=E,650nm,8.4s
KSH LR LR
comp=Z,320nm,7.1s
OBN Obninsk 70.31 341⇓ *e*P **P** 07 19 27.6 +0.3
OBN *e* 07 19 51.9
OBN *e* 07 22 12.2
OBN pmax pmax
comp=Z,14nm,1.0s
OBN MLR MLR
comp=Z,2μm,22.0s
MYLDM Lahad Datu 71.34 254 P **P** 07 19 36.3 +2.2
comp=Z,57nm,2.3s,comp=Z,2μm
UBPT Khong Chiam 71.52 271 P **P** 07 19 36.0 +0.7
KKM Kota Kinabalu 72.03 257 PFAKE 07 19 50.0 +12
KKM LR LR
comp=Z,635nm,19.0s
PPT Papeete 72.54 154 LR LR 07 46 03.3
comp=Z,2μm,18.8s,baz=303,slow=31
PPT2 Papeete2 72.56 154 *e*LR LR 07 42 01.6
comp=Z,3μm,21.5s,baz=348
TEIG Tepich 72.56 79 PFAKE 07 19 50.0 +8.6
TEIG LR LR
comp=Z,856nm,20.0s
CHTO Chiang Mai 72.89 279 *e*P **P** 07 19 42.6 -0.8
CHTO pmax pmax
comp=Z,51nm,1.5s
CHTO MLR MLR
comp=Z,849nm,19.0s
CHTO Chiang Mai 72.89 279 *e*P **P** 07 19 42.6 -0.8
comp=Z,51nm,1.5s
CHTO LR LR
comp=Z,849nm,19.0s
CHTO Chiang Mai 72.89 279 P **P** 07 19 43.4 0.0
comp=Z,34nm,2.5s,comp=Z,1μm
MRSI Marisa 73.08 248 P **P** 07 19 44.8 +0.3
comp=Z,94nm,1.0s,comp=Z,1μm
TAPN Taplejung 73.14 293 *e*P **P** 07 19 45.6 +0.4
comp=Z,104nm,0.9s
ESK Eskdalemuir 73.14 5 PFAKE 07 20 00.0 +16
ESK LR LR
comp=Z,899nm,21.0s
CM31 Chiang Mai Arr 73.16 278 *e*P **P** 07 19 45.6 +0.6
comp=Z,3.5nm,0.4s
CMAR Chiang Mai Arr 73.16 278 P **P** 07 19 45.4 +0.3
CMAR Chiang Mai Arr 73.16 278 P **P** 07 19 45.4 +0.3
comp=Z,8.7nm,1.0s,baz=30,slow=6.7,SNR=16
CMAR LR LR 07 55 22.7
comp=Z,770nm,18.5s,baz=33,slow=39
BSD Bornholm Skovb 73.21 354 *i* P **P** 07 19 44.4 -0.3
comp=Z,18nm,0.8s
VSR Storozhevoye 73.39 338 *e*P **P** 07 19 45.4 -0.5
VSR pmax pmax
comp=Z,20nm,1.2s
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,9.0nm,1.0s
VORD Divnogorie 73.60 338 *e*P **P** 07 19 47.5 +0.4
VORD pmax pmax
comp=Z,9.0nm,0.4s
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,10.0nm,0.6s
ODAN Odare 73.69 293 *e*P **P** 07 19 48.6 +0.2
comp=E,19nm,0.5s
GUN Gumba 73.75 294 *e*P **P** 07 19 49.3 +0.5
comp=E,183nm,0.6s
RAR Rarotonga 73.86 165 PFAKE 07 20 00.0 +11
RAR LR LR
comp=Z,3μm,19.0s
RAMN Ramite 74.08 293 *e*P **P** 07 19 50.8 +0.2
comp=Z,76nm,0.5s
KKN Kakani 74.19 295 *e*P **P** 07 19 51.7 +0.5
comp=Z,13nm,0.3s

PKI Pulchoki 74.28 294 *e*P **P** 07 19 51.9 0.0
comp=Z,136nm,1.3s
PKIN Phulchoki 74.28 295 *e*P **P** 07 19 51.9 +0.1
DMN Daman 74.42 295 *e*P **P** 07 19 53.1 +0.5
comp=Z,61nm,1.0s
DANN Dangsing 74.61 296 *e*P **P** 07 19 54.1 +0.3
comp=Z,40nm,0.4s
KOLN Koldanda 75.15 296 *e*P **P** 07 19 56.8 0.0
comp=Z,17nm,0.4s
DZM Mont Dzumac 75.19 198 *e*P **pP** 07 20 08.6 -0.8
comp=Z,88nm,1.4s
DZM *e*S **SKiKP** 07 29 17.7 +1.7
DZM *e*LQ LQ 07 39 00.0
comp=Z,2μm,23.6s
DZM *e*LR LR 07 43 36.7
comp=Z,2μm,27.7s
DZM Mont Dzumac 75.19 198 P **P** 07 19 57.3 +0.6
DZM Mont Dzumac 75.19 198 P **P** 07 19 57.3 +0.6
comp=Z,3.7nm,0.8s,baz=45,slow=18,SNR=3.1
DZM LR LR 07 47 58.9
comp=Z,1μm,19.5s,baz=15,slow=32
PYUN Piuthan 75.23 297 *e*P **P** 07 19 57.4 +0.1
comp=Z,122nm,1.0s
SKSI Soroako, Sulaw 75.87 247 P **P** 07 20 01.4 +0.6
comp=Z,45nm,1.9s,comp=Z,1μm
AKASG Malin Array Be 75.88 344 P **P** 07 19 59.8 -0.5
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG MLR MLR
comp=Z,2μm,19.4s
AKASG Malin Array Be 75.88 344 P **P** 07 19 59.8 -0.5
AKASG Malin Array Be 75.88 344 P **P** 07 19 59.8 -0.5
comp=Z,3.2nm,0.4s,baz=17,slow=5.9,SNR=9.7
AKASG LR LR 07 56 26.4
comp=Z,2μm,19.4s,baz=5.0,slow=38
KIEV Kiev 75.89 344 *e*P **P** 07 19 59.3 -1.0
KIEV pmax pmax
comp=Z,6.0nm,0.6s
KIEV MLR MLR
comp=Z,2μm,20.0s
KIEV Kiev 75.89 344 *e*P **P** 07 19 59.3 -1.0
comp=Z,6.0nm,0.6s
KIEV LR LR
comp=Z,2μm,20.0s
AK01 Malin Array Si 75.89 344 *e*P **P** 07 19 59.3 -1.0
AK02 Malin Array Si 75.92 344 *e*P **P** 07 19 59.4 -1.2
PHET Kaeng Krachan 76.96 274 P **P** 07 20 05.8 -1.1
comp=Z,85nm,1.0s
CLL Collm 77.13 355⇑ *i*P **P** 07 20 06.5 -0.8
CLL *e**PP **sP** 07 20 23.0 -2.0
CLL *e*S **S** 07 29 52.0 -0.8
CLL pmax pmax
comp=Z,7.0nm,0.8s
CLL MLR MLR
comp=Z,1μm,21.3s
CLL Collm 77.13 355⇑ *i*P **P** 07 20 06.5 -0.8
comp=Z,7.0nm,0.8s
CLL *e*sP **sP** 07 20 23.0 -2.0
CLL *i* 07 20 34.6
CLL *i* 07 20 47.2
CLL *e*PP PP 07 23 06.0 +5.5
CLL *e*PPP PPP 07 24 54.0
CLL *e*S **S** **07 29 52.0 -0.8**
CLL *e*PS **PnS** **07 30 42.0 +6.4**
CLL *e*SS SS 07 35 03.0 +14
CLL *e*SSS SSS 07 38 06.0
CLL *e* 07 40 00.0
CLL *e* 07 42 00.0
CLL *e* 07 42 36.0
CLL LmV 07 53 00.0
comp=Z,1μm,21.3s
TTSI Tana Toraja 77.16 248 P **P** 07 20 08.1 +0.1
comp=Z,76nm,1.1s
SBUM Sibu 77.28 258 P **P** 07 20 10.0 +1.3
comp=Z,29nm,2.3s,comp=Z,970nm
KBL Kabul 77.34 310 P **P** 07 20 08.1 -1.0
KBL pmax pmax
comp=Z,18nm,0.8s
KBL Kabul 77.34 310 P **P** 07 20 08.1 -1.0
comp=Z,18nm,0.8s
KSP Ksiaz 77.36 353 *e*P **P** 07 20 07.8 -0.9
KSP *e*S **S** **07 29 52.0 -3.4**
BRG Berggiesshubel 77.50 354 *i* P **P** 07 20 09.1 -0.4
comp=Z,9.2nm,1.0s
BRG *e* 07 20 24.9
comp=Z,8.0nm,1.0s
BRG *e* 07 20 36.4
comp=Z,20nm,1.3s
BRG *e* 07 20 49.8
comp=Z,38nm,1.4s
BRG SKS **S** **07 29 58.0 +1.1**
BRG S ScS 07 30 56.0 +32
BRG SS SS 07 35 12.0 +17
BRG
comp=Z,1μm,25.9s
BRG
comp=N,1μm,26.6s
BRG
comp=N,570nm,26.6s
BRG Berggiesshubel 77.50 354 *i* P **P** 07 20 09.1 -0.4
BRG *e* 07 20 24.9
BRG 07 29 58.0
BRG S ScS 07 30 56.0 +32
BRG pmax pmax
comp=Z,9.0nm,1.0s
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG pmax pmax
comp=Z,20nm,1.3s
BRG pmax pmax
comp=Z,38nm,1.4s
BRG MLR MLR
comp=Z,1μm,25.9s
BRG MLR MLR
comp=N,570nm,26.6s
PVCC Panska Ves 77.80 354 AMS AMS 07 50 30.0
comp=N,2μm,25.0s
DPC Dobruska-Polom 77.85 352 *e*P **P** 07 20 11.7 +0.2
DPC Dobruska-Polom 77.85 352 *e*P **P** 07 20 11.7 +0.2
TGUH Tegucigalpa,Un 77.88 83 *e*P **P** 07 20 12.5 +0.5
comp=N,42nm,1.0s
TGUH LR LR
comp=Z,1μm,22.0s
KWP Kalwaria Pacla 77.89 348 PFAKE 07 20 20.0 +8.3
KWP LR LR
comp=Z,2μm,20.0s
KWP Kalwaria Pacla 77.89 348 *e*P **P** 07 20 11.8 +0.1
SPSI Sidrap Palu 77.94 248 P **P** 07 20 12.1 -0.2
comp=Z,24nm,1.8s,comp=Z,796nm
MEM Membach 78.06 359 P **P** 07 20 15.2 +2.6
comp=Z,5.8nm,1.2s
TBI Tubuai 78.09 156 *e*LR LR 07 44 09.9
comp=Z,3μm,22.2s,baz=340
OKC Ostrava-Krasne 78.19 351 *e*S **S** **07 30 08.0 +3.6**
OKC AMS AMS 07 53 40.0
comp=Z,2μm,24.0s
NKC Novy Kostel 78.23 355 *e*P **P** 07 20 13.6 0.0
NKC Novy Kostel 78.23 355 *e*P **P** 07 20 13.6 0.0
BCLA Clavier 78.25 360 P **P** 07 20 16.6 +3.0
comp=Z,14nm,2.0s
MORC Moravsky Berou 78.31 352⇑ *i*P sP 07 20 39.6 +7.9
PRU Pruhonice 78.34 354 *e*S **S** **07 30 06.3 +0.3**
PRU MLR MLR
comp=Z,1μm,23.5s
PRU Pruhonice 78.34 354 *e*S **S** **07 30 06.3 +0.3**
PRU *ex* x 07 35 21.8
PRU AMS AMS 07 50 30.0
comp=Z,1μm,23.5s
GIVF Givet 78.57 360 *e*P **P** 07 20 15.6 +0.2
comp=Z,81nm,1.2s
GIVF Givet 78.57 360 *e*P **P** 07 20 15.6 +0.2
GIVF pmax pmax
comp=Z,81nm,1.2s
GIVF Givet 78.57 360 *e*P **P** 07 20 15.6 +0.2
comp=Z,81nm,1.2s
DOU Dourbes 78.58 0 P **P** 07 20 15.5 +0.1
comp=Z,6.2nm,1.6s
BAIF Baives 78.61 0 *e*P **P** 07 20 16.0 +0.4
comp=Z,69nm,1.2s
BAIF Baives 78.61 0 *e*P **P** 07 20 16.0 +0.4
BAIF pmax pmax
comp=Z,69nm,1.2s
BAIF Baives 78.61 0 *e*P **P** 07 20 16.0 +0.4
comp=Z,69nm,1.2s
MAK Makhachkala 78.68 329 *e*P **P** 07 20 13.9 -2.2
MAK *e* 07 23 14.5

MAK *e*S **S** 07 30 06.3 -3.5
MAK *e*SS SS 07 35 21.0 +7.8
MAK pmax pmax
comp=Z,32nm,0.4s
ABH Alteburg 78.76 358 *e*P **P** 07 20 16.8 +0.3
KAPI Kappang 78.80 247 *e*P **P** 07 20 16.2 -0.9
comp=Z,139nm,1.6s
KAPI LR LR
comp=Z,508nm,19.0s
KAPI Kappang 78.80 247 P **P** 07 20 16.7 -0.4
comp=Z,46nm,2.9s,comp=Z,2μm
GRF Grafenberg Arr 78.83 356 *e*P **P** 07 20 17.3 +0.4
comp=Z,34nm,1.4s
GRF *e*SS SS 07 35 30.9 +16
GRF Grafenberg Arr 78.83 356 *e*P **P** 07 20 17.3 +0.4
GRF pmax pmax
comp=Z,34nm,1.4s
GRF pmax pmax
comp=Z,80nm,1.5s
BKSI Bulukumba 78.84 246 P **P** 07 20 17.5 +0.2
comp=Z,92nm,1.1s,comp=Z,2μm
RUP Ruppelstein 78.95 358 *e*P **P** 07 20 17.1 -0.5
RUP Ruppelstein 78.95 358 *e*P **P** 07 20 17.1 -0.5
TREC Trest 78.96 353 AMS AMS 07 51 40.0
comp=Z,2μm,26.2s
WLF Walferdange 79.00 359 PFAKE 07 20 30.0 +12
WLF LR LR
comp=Z,1μm,20.0s
TOD Tromm 79.01 357 *e*P **P** 07 20 17.7 -0.2
TOD Tromm 79.01 357 *e*P **P** 07 20 17.7 -0.2
CTA Charters Tower 79.01 217 P **P** 07 20 18.1 0.0
CTA Charters Tower 79.01 217 P **P** 07 20 18.1 0.0
comp=Z,1.8nm,0.4s,baz=39,slow=6.5,SNR=3.5
CTAO Charters Tower 79.01 217 PFAKE 07 20 30.0 +12
CTAO LR LR
comp=Z,641nm,19.0s
KIV Kislovodsk 79.22 333 *e*P **P** 07 20 20.0 +0.8
KIV *e* 07 23 19.6
KIV *e*S **S** **07 30 15.7 -0.1**
KIV pmax pmax
comp=Z,7.0nm,1.0s
KSM Kuching 79.22 259 *e*P **P** 07 20 19.1 -0.3
comp=Z,33nm,1.1s
KSM LR LR
comp=Z,740nm,19.0s
KSM Kuching 79.22 259 P **P** 07 20 18.4 -1.0
comp=Z,43nm,1.1s,comp=Z,887nm
KHC Kasperske Hory 79.26 354 *e*P **P** 07 20 18.8 -0.5
KHC *e*SS SS 07 35 28.6 +7.0
KHC MLR MLR
comp=N,900nm,27.3s
KHC Kasperske Hory 79.26 354 *e*P **P** 07 20 18.8 -0.5
KHC *e*pP **pP** **07 20 35.0 +2.9**
KHC *ex* x 07 20 47.0
KHC *ex* x 07 21 00.0
KHC *e*SS SS 07 35 28.6 +7.0
KHC AMS AMS 07 50 20.0
KHC Kasperske Hory 79.26 354 *e*P **P** 07 20 19.1 -0.1
comp=N,10nm,1.3s
KBZ Khabaz 79.37 333 P **P** 07 20 21.4 +1.6
KBZ pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 79.37 333 P **P** 07 20 21.4 +1.6
KBZ Khabaz 79.37 333 P **P** 07 20 21.4 +1.6
comp=Z,3.1nm,0.8s,baz=39,slow=6.7
VYHS Vyhne 79.45 351 *e*P **P** 07 20 20.9 +0.6
VYHS *e* 07 20 36.3
VYHS Vyhne 79.45 351 *e*P **P** 07 20 20.9 +0.6
VYHS *e*pP **pP** **07 20 36.3 +3.2**
BUR08 Bucovina Ar. S 79.49 346 *e*P **P** 07 20 20.7 +0.1
BURAR Bucovina Array 79.51 346⇑ *i*P **P** 07 20 21.5 +0.8
KIS Kishinev 79.52 343 *e*P **P** 07 20 20.0 -0.7
KIS pmax pmax
comp=Z,400nm,10.0s
KIS MLR MLR
comp=N,1μm,20.0s
KIS MLR MLR
comp=E,900nm,20.0s
KIS MLR MLR
comp=Z,900nm,20.0s
KIS MLR MLR
comp=Z,2μm,20.0s
KIS Kishinev 79.52 343 *i* P **P** 07 20 20.0 -0.7
comp=Z,400nm,10.0s
GERES GERESS Array B 79.54 354 P **P** 07 20 20.8 -0.1
GERES GERESS Array B 79.54 354 P **P** 07 20 20.8 -0.1
comp=Z,1.0nm,0.6s,baz=20,slow=4.3,SNR=9.4
STKI Sintang 79.62 257 P **P** 07 20 21.6 0.0
LANF Langenberg 79.66 358 *e*P **P** 07 20 21.5 +0.1
LANF Langenberg 79.66 358 *e*P **P** 07 20 21.5 +0.1
LANF Langenberg 79.66 358 *e*P **P** 07 20 21.5 +0.1
ANN Anapa 79.81 337 *e*P **P** 07 20 19.5 -2.7
ANN *e**PP **pP** **07 20 36.5 +1.5**
ANN *e*S **S** **07 30 19.0 -2.7**
ANN pmax pmax
comp=Z,226nm,8.0s
FLN La Foliniere 79.81 4 *e*P **P** 07 20 21.9 -0.3
comp=Z,86nm,1.3s
FLN *e*R
comp=Z,987nm,22.2s
FLN La Foliniere 79.81 4 *e*P **P** 07 20 21.9 -0.3
FLN pmax pmax
comp=Z,86nm,1.3s
FLN La Foliniere 79.81 4 *e*P **P** 07 20 21.9 -0.3
comp=Z,86nm,1.3s
PSZ Piszkesteto 79.91 350 PFAKE 07 20 30.0 +7.1
PSZ LR LR
comp=Z,2μm,22.0s
LDF La Druitiere 80.00 3 *e*P **P** 07 20 22.8 -0.4
comp=Z,30nm,0.9s
LDF La Druitiere 80.00 3 *e*P **P** 07 20 22.8 -0.4
LDF pmax pmax
comp=Z,30nm,0.9s
LDF La Druitiere 80.00 3 *e*P **P** 07 20 22.8 -0.4
comp=Z,30nm,0.9s
ROSF Rostrenen 80.10 5 *e*P **P** 07 20 23.7 -0.1
comp=Z,25nm,1.0s
ROSF Rostrenen 80.10 5 *e*P **P** 07 20 23.7 -0.1
ROSF pmax pmax
comp=Z,25nm,1.0s
ROSF Rostrenen 80.10 5 *e*P **P** 07 20 23.7 -0.1
comp=Z,25nm,1.0s
PAGF Fort de Pagny 80.12 359 *e*P **P** 07 20 24.4 +0.5
comp=Z,29nm,0.9s
PAGF Fort de Pagny 80.12 359 *e*P **P** 07 20 24.4 +0.5
comp=Z,29nm,0.9s
GRR Gorron 80.17 4 *e*P **P** 07 20 24.1 0.0
comp=Z,38nm,0.9s
GRR Gorron 80.17 4 *e*P **P** 07 20 24.1 0.0
GRR pmax pmax
comp=Z,38nm,0.9s
GRR Gorron 80.17 4 *e*P **P** 07 20 24.1 0.0
comp=Z,38nm,0.9s
MEZF Maizieres J'vi 80.17 360 *e*P **P** 07 20 24.5 +0.4
MEZF Maizieres J'vi 80.17 360 *e*P **P** 07 20 24.5 +0.4
SGMF Saint Gilles 80.23 5 *e*P **P** 07 20 24.8 +0.4
comp=Z,76nm,1.4s
SGMF Saint Gilles 80.23 5 *e*P **P** 07 20 24.8 +0.4
SGMF pmax pmax
comp=Z,76nm,1.4s
SGMF Saint Gilles 80.23 5 *e*P **P** 07 20 24.8 +0.4
comp=Z,76nm,1.4s
CDF Champ du Feu 80.24 358 *e*P **P** 07 20 24.6 0.0
comp=Z,75nm,1.4s
CDF Champ du Feu 80.24 358 *e*P **P** 07 20 24.6 0.0
CDF pmax pmax
comp=Z,75nm,1.4s
CDF Champ du Feu 80.24 358 *e*P **P** 07 20 24.6 0.0
comp=Z,75nm,1.4s
CONA Conrad Observa 80.29 352⇑ *i*P **P** 07 20 25.0 +0.1
comp=Z,12nm,1.5s
BFO Black Forest 80.30 358 PFAKE 07 20 40.0 +15
BFO LR LR
comp=Z,970nm,22.0s
SOC Sochi 80.37 335 *e*P **P** 07 20 25.0 -0.3
SOC *e* 07 23 23.6
SOC *e*S **S** **07 30 24.1 -3.6**
SOC *e*SS **SS** **07 35 39.8 +1.4**
SOC *e*SSS SSS 07 39 08.1
SOC pmax pmax
comp=Z,30nm,1.1s
ECH Echery 80.44 358 *e*P **P** 07 20 25.3 -0.3
ECH pmax pmax
comp=Z,10.0nm,1.1s
ECH MLR MLR

comp=Z,719nm,19.0s
ECH Echery 80.44 358 *e*P **P 07 20 25.3 -0.3**
comp=Z,10nm,1.1s
ECH LR LR
comp=Z,719nm,19.0s
ECH Echery 80.44 358 *e*P **P 07 20 25.6 0.0**
SIM Simferopol' 80.44 339 *e*P **P 07 20 28.0 +2.4**
SIM *e*S **S 07 30 27.0 -1.4**
SIM pmax pmax
comp=Z,180nm,10.4s
SIM MLR MLR
comp=Z,640nm,15.6s
THEF They Montfort 80.44 359 *e*P **P 07 20 25.6 0.0**
THEF They Montfort 80.44 359 *e*P **P 07 20 25.6 0.0**
THEF They Montfort 80.44 359 *e*P **P 07 20 25.6 0.0**
SFTF Sexfontaines 80.47 360 *e*P **P 07 20 25.9 +0.1**
comp=Z,83nm,1.0s
SFTF Sexfontaines 80.47 360 *e*P **P 07 20 25.9 +0.1**
comp=Z,83nm,1.0s
SPAK Spaichingen-Ko 80.51 357 *e*P **P 07 20 25.0 -1.1**
QUIF Quistinic 80.53 5 *e*P **P 07 20 26.1 +0.1**
comp=Z,65nm,1.4s
QUIF Quistinic 80.53 5 *e*P **P 07 20 26.1 +0.1**
QUIF pmax pmax
comp=Z,65nm,1.4s
QUIF Quistinic 80.53 5 *e*P **P 07 20 26.1 +0.1**
comp=Z,65nm,1.4s
MTDJ Mount Denham 80.58 73 PFAKE 07 20 40.0 +13
MTDJ LR LR
comp=Z,482nm,20.0s
RAO Raoul Island 80.64 182 LR LR 07 52 15.9
comp=Z,2µm,18.4s,baz=10,slow=33
HAU Haudompre 80.66 359 *e*P **P 07 20 26.8 0.0**
comp=Z,55nm,1.1s
HAU *e*R
comp=Z,1µm,20.0s
HAU Haudompre 80.66 359 *e*P **P 07 20 26.8 0.0**
HAU pmax pmax
comp=Z,55nm,1.1s
HAU Haudompre 80.66 359 *e*P **P 07 20 26.8 0.0**
comp=Z,55nm,1.1s
GTBY Guantanamo Bay 80.68 70 PFAKE 07 20 40.0 +13
GTBY LR LR
comp=Z,892nm,20.0s
FELD Feldberg im Sc 80.76 358 *e*P **P 07 20 26.4 -1.1**
JBP Jabalpur 80.77 296 ⇑*i*P **P 07 20 27.5 -0.3**
JBP *i* x x 07 20 29.2
comp=Z,28nm,0.8s
JBP *e*S **sP 07 20 46.0 +0.6**
MOF Molkenrain 80.80 358 *e*P **P 07 20 27.6 -0.1**
MOF Molkenrain 80.80 358 *e*P **P 07 20 27.6 -0.1**
MOF Molkenrain 80.80 358 *e*P **P 07 20 27.6 -0.1**
HINF Hinteralfeld 80.84 359 *e*P **P 07 20 27.7 -0.1**
comp=Z,46nm,1.2s
HINF Hinteralfeld 80.84 359 *e*P **P 07 20 27.7 -0.1**
HINF pmax pmax
comp=Z,46nm,1.2s
HINF Hinteralfeld 80.84 359 *e*P **P 07 20 27.7 -0.1**
comp=Z,46nm,1.2s
VRI Vrincioaia 80.98 345 ⇑*i*P **P 07 20 29.2 +0.7**
PLOR Plostina 81.01 345 ⇓*i*P **P 07 20 31.4 +2.7**
WTTA Wattenberg 81.23 355 ⇑*i*P **P 07 20 30.1 0.0**
comp=Z,8.8nm,1.1s
KBA Koelnbreinsper 81.32 354 ⇑*i*P **P 07 20 30.9 +0.4**
comp=Z,9.1nm,0.8s
HYF Humbligny 81.39 1 *e*P **P 07 20 31.1 +0.4**
HYF Humbligny 81.39 1 *e*P **P 07 20 31.1 +0.4**
CFR Carcaliu 81.41 343 ⇓*i*P **P 07 20 31.2 +0.4**
LOR Lormes 81.41 1 *e*P **P 07 20 30.8 0.0**
comp=Z,53nm,1.0s
LOR *e*R
comp=Z,2µm,21.0s
LOR Lormes 81.41 1 *e*P **P 07 20 30.8 0.0**
comp=Z,53nm,1.0s
MLR Muntele Rosu 81.47 345 ⇑*i*P **P 07 20 33.1 +1.8**
FETA Feichten 81.52 356 ⇑*e*P **P 07 20 30.4 -1.2**
comp=Z,9.4nm,1.1s
SOKA Soboth 81.60 353 ⇑*i*PcP **P 07 20 34.7 +2.8**
comp=Z,7.8nm,0.8s
SSF Saint Saulge 81.61 1 *e*P **P 07 20 32.0 +0.1**
comp=Z,34nm,0.9s
SSF Saint Saulge 81.61 1 *e*P **P 07 20 32.0 +0.1**
SSF pmax pmax
comp=Z,34nm,0.9s
SSF Saint Saulge 81.61 1 *e*P **P 07 20 32.0 +0.1**
comp=Z,34nm,0.9s
VOIR 81.66 346 ⇑*i*P P 07 20 36.6 +4.3
ABTA Abfaltersbach 81.70 355 ⇑*i*PcP **PcP 07 20 36.1 -2.0**
comp=Z,9.0nm,1.4s
AVF Avril sur Loir 81.88 1 *e*P **P 07 20 33.3 0.0**
comp=Z,32nm,0.8s
AVF Avril sur Loir 81.88 1 *e*P **P 07 20 33.3 0.0**
AVF pmax pmax
comp=Z,32nm,0.8s
AVF Avril sur Loir 81.88 1 *e*P **P 07 20 33.3 0.0**
comp=Z,32nm,0.8s
BZS Buzias 81.97 348 ⇓*i*P **P 07 20 36.2 +2.4**
MFF Saint Martin d 81.98 3 *e*P **P 07 20 34.0 +0.2**
comp=Z,46nm,0.9s
MFF Saint Martin d 81.98 3 *e*P **P 07 20 34.0 +0.2**
MFF pmax pmax
comp=Z,46nm,0.9s
MFF Saint Martin d 81.98 3 *e*P **P 07 20 34.0 +0.2**
comp=Z,46nm,0.9s
SMF Signal de Mont 82.03 1 *e*P **P 07 20 34.1 0.0**
comp=Z,48nm,0.9s
SMF Signal de Mont 82.03 1 *e*P **P 07 20 34.1 0.0**
SMF pmax pmax
comp=Z,48nm,0.9s
SMF Signal de Mont 82.03 1 *e*P **P 07 20 34.1 0.0**
comp=Z,48nm,0.9s
GZR Gura Zlata 82.04 347 ⇑*i*P **P 07 20 34.5 +0.3**
TIRR Tirgusor 82.05 343 ⇑*i*P **P 07 20 35.1 +0.9**
CABF La Chapelle 82.06 359 *e*P **P 07 20 34.8 +0.5**
comp=Z,40nm,0.9s
CABF La Chapelle 82.06 359 *e*P **P 07 20 34.8 +0.5**
CABF pmax pmax
comp=Z,40nm,0.9s
CABF La Chapelle 82.06 359 *e*P **P 07 20 34.8 +0.5**
comp=Z,40nm,0.9s
GNI Garni 82.10 330 PFAKE 07 20 50.0 +15
GNI LR LR
comp=Z,1µm,20.0s
BGF Bois d'Agland 82.11 1 *e*P **P 07 20 34.5 0.0**
comp=Z,21nm,0.8s
BGF Bois d'Agland 82.11 1 *e*P **P 07 20 34.5 0.0**
BGF pmax pmax
comp=Z,21nm,0.8s
BGF Bois d'Agland 82.11 1 *e*P **P 07 20 34.5 0.0**
comp=Z,21nm,0.8s
TUE Stuetta 82.12 357 PFAKE 07 20 50.0 +15
TUE LR LR
comp=Z,947nm,21.0s
KULM Kulim 82.21 269 PFAKE 07 20 50.0 +15
KULM LR LR
comp=Z,452nm,19.0s
JTS JuntasAbangare 82.21 83 PFAKE 07 20 50.0 +14
JTS LR LR
comp=Z,942nm,21.0s
EIDS Eidsvold 82.23 210 *e*P **P 07 20 34.4 -0.8**
comp=Z,26nm,1.3s
TCF Toulx Ste Croi 82.36 2 *e*P **P 07 20 35.8 -0.1**
comp=Z,36nm,1.0s
TCF Toulx Ste Croi 82.36 2 *e*P **P 07 20 35.8 -0.1**
TCF pmax pmax
comp=Z,36nm,1.0s
TCF Toulx Ste Croi 82.36 2 *e*P **P 07 20 35.8 -0.1**
comp=Z,36nm,1.0s
RKT Rikitea 82.45 143 *e*LR LR 07 46 25.8
comp=Z,3µm,23.8s
IPM Ipoh 82.60 268 *e*P **P 07 20 37.4 -0.1**
comp=Z,28nm,1.3s
IPM Ipoh 82.60 268 P **P 07 20 37.3 -0.2**
comp=Z,27nm,0.9s
PYM Petit Puy Mans 82.92 1 *e*P **P 07 20 41.3 +2.5**
PYM Petit Puy Mans 82.92 1 *e*P **P 07 20 41.3 +2.5**
PYM Petit Puy Mans 82.92 1 *e*P **P 07 20 41.3 +2.5**
LPL La Plagne 83.14 359 *e*P **P 07 20 40.4 +0.2**
LPL La Plagne 83.14 359 *e*P **P 07 20 40.4 +0.2**
LPL La Plagne 83.14 359 *e*P **P 07 20 40.4 +0.2**
LPG La Plagne 83.16 359 *e*P **P 07 20 40.7 +0.3**
comp=Z,30nm,1.0s
LPG La Plagne 83.16 359 *e*P **P 07 20 40.7 +0.3**
LPG pmax pmax
comp=Z,30nm,1.0s
LPG La Plagne 83.16 359 *e*P **P 07 20 40.7 +0.3**
comp=Z,30nm,1.0s
RJF Les Rejaudoux 83.33 2 *e*P **P 07 20 40.9 0.0**
comp=Z,88nm,1.5s
RJF *e*R
comp=Z,2µm,20.2s
RJF Les Rejaudoux 83.33 2 *e*P **P 07 20 40.9 0.0**
RJF pmax pmax
comp=Z,88nm,1.5s
RJF Les Rejaudoux 83.33 2 *e*P **P 07 20 40.9 0.0**
comp=Z,88nm,1.5s
SSB Saint Sauveur 83.40 0 PFAKE 07 20 50.0 +8.7
SSB LR LR
comp=Z,861nm,20.0s
LBL Lubilhac 83.44 1 *e*P **P 07 20 42.3 +0.8**
LBL Lubilhac 83.44 1 *e*P **P 07 20 42.3 +0.8**
LBL Lubilhac 83.44 1 *e*P **P 07 20 42.3 +0.8**
BNI Bardonecchia 83.61 359 *e*P **P 07 20 42.7 +0.2**
BNI pmax pmax
comp=Z,16nm,1.3s
BNI MLR MLR
comp=Z,893nm,22.0s
BNI Bardonecchia 83.61 359 *e*P **P 07 20 42.7 +0.2**
comp=Z,16nm,1.3s
BNI LR LR
comp=Z,893nm,22.0s
SDDR Presa de Saban 83.64 68 PFAKE 07 20 50.0 +7.1
SDDR LR LR
comp=Z,1µm,20.0s
LFF La Frestale 83.67 3 *e*P **P 07 20 42.9 +0.3**
comp=Z,120nm,1.3s
LFF La Frestale 83.67 3 *e*P **P 07 20 42.9 +0.3**
LFF pmax pmax
comp=Z,121nm,1.3s
LFF La Frestale 83.67 3 *e*P **P 07 20 42.9 +0.3**
comp=Z,120nm,1.3s
CAF Calviac 83.72 2 *e*P **P 07 20 43.3 +0.4**
comp=Z,66nm,1.3s
CAF Calviac 83.72 2 *e*P **P 07 20 43.3 +0.4**
CAF pmax pmax
comp=Z,66nm,1.3s
CAF Calviac 83.72 2 *e*P **P 07 20 43.3 +0.4**
comp=Z,66nm,1.3s
ORIF Oris-en-Rattie 83.75 359 *e*P **P 07 20 43.3 +0.1**
ORIF *e*R
comp=Z,1µm,21.0s
ORIF Oris-en-Rattie 83.75 359 *e*P **P 07 20 43.3 +0.1**
ORIF Oris-en-Rattie 83.75 359 *e*P **P 07 20 43.3 +0.1**
WRAB Tennant Creek 83.80 227 *e*P **P 07 20 42.2 -1.2**
WRAB pmax pmax
comp=Z,33nm,1.6s
WRAB MLR MLR
comp=Z,1µm,20.0s
WRAB Tennant Creek 83.80 227 *e*P **P 07 20 42.2 -1.2**
comp=Z,33nm,1.6s
WRAB LR LR
comp=Z,1µm,20.0s
WRA Warramunga Arr 83.81 227 P **P 07 20 42.0 -1.4**
WRA Warramunga Arr 83.81 227 P **P 07 20 42.0 -1.4**
comp=Z,5.0nm,0.8s,baz=33,slow=5.8,SNR=30
WRA LR LR 07 55 02.5
comp=Z,759nm,19.1s,baz=45,slow=34
VIVF Saint-Julien-l 83.82 0 *e*P **P 07 20 44.1 +0.7**
comp=Z,74nm,1.4s
VIVF Saint-Julien-l 83.82 0 *e*P **P 07 20 44.1 +0.7**
VIVF pmax pmax
comp=Z,74nm,1.4s
VIVF Saint-Julien-l 83.82 0 *e*P **P 07 20 44.1 +0.7**
comp=Z,74nm,1.4s
MBDF Montbardon 83.93 359 *e*P **P 07 20 44.8 +0.6**
MBDF Montbardon 83.93 359 *e*P **P 07 20 44.8 +0.6**
MBDF Montbardon 83.93 359 *e*P **P 07 20 44.8 +0.6**
VLC Villacollemand 84.39 356 PFAKE 07 21 00.0 +14
VLC LR LR
comp=Z,806nm,22.0s
LASF Ste Croix 84.60 1 *e*P **P 07 20 47.9 +0.5**
comp=Z,50nm,1.4s
LASF Ste Croix 84.60 1 *e*P **P 07 20 47.9 +0.5**
comp=Z,50nm,1.4s
PGB Panagyurishte 84.62 346 *i* P **P 07 20 46.6 -0.9**
SMRF Simiane la Rot 84.70 359 *e*P **P 07 20 47.9 0.0**
comp=Z,65nm,1.2s
SMRF Simiane la Rot 84.70 359 *e*P **P 07 20 47.9 0.0**
comp=Z,65nm,1.2s
VTS Vitosha 84.72 346 *i* P **P 07 20 46.6 -1.6**
VTS Vitosha 84.72 346 ⇑*i*P **P 07 20 48.4 +0.2**
SBF Sospel 84.78 358 *e*P **P 07 20 48.3 -0.1**
comp=Z,66nm,0.9s
SBF Sospel 84.78 358 *e*P **P 07 20 48.3 -0.1**
SBF pmax pmax
comp=Z,67nm,0.9s
SBF Sospel 84.78 358 *e*P **P 07 20 48.3 -0.1**
comp=Z,66nm,0.9s
FRF La Foret Royal 85.10 359 *e*P **P 07 20 49.6 -0.3**
comp=Z,62nm,1.2s
FRF La Foret Royal 85.10 359 *e*P **P 07 20 49.6 -0.3**
FRF pmax pmax
comp=Z,62nm,1.2s
FRF La Foret Royal 85.10 359 *e*P **P 07 20 49.6 -0.3**
comp=Z,62nm,1.2s
KDZ Kurdzhali 85.30 345 *i* P **P 07 20 51.0 +0.1**
MTLF Montolieu 85.31 2 *e*P **P 07 20 51.3 +0.4**
comp=Z,59nm,1.4s
MTLF Montolieu 85.31 2 *e*P **P 07 20 51.3 +0.4**
MTLF pmax pmax
comp=Z,59nm,1.4s
MTLF Montolieu 85.31 2 *e*P **P 07 20 51.3 +0.4**
comp=Z,59nm,1.4s
LMR La Mourre 85.33 359 *e*P **P 07 20 50.6 -0.4**
comp=Z,125nm,1.5s
LMR La Mourre 85.33 359 *e*P **P 07 20 50.6 -0.4**
LMR pmax pmax
comp=Z,125nm,1.5s
LMR La Mourre 85.33 359 *e*P **P 07 20 50.6 -0.4**
comp=Z,125nm,1.5s
RZN Rozhen 85.38 345 *i* P **P 07 20 51.0 -0.5**
SJPF Ste Jean 85.42 4 *e*P **P 07 20 52.1 +0.6**
SJPF Ste Jean 85.42 4 *e*P **P 07 20 52.1 +0.6**
SJPF Ste Jean 85.42 4 *e*P **P 07 20 52.1 +0.6**
KKB Krupnik 85.45 346 *i* P **P 07 20 50.3 -1.4**
BR131 Keskin Array S 85.52 338 *e*P **P 07 20 52.5 +0.3**
comp=Z,3.0nm,0.7s
BRTR Keskin Array B 85.52 338 P **P 07 20 53.4 +1.1**
BRTR Keskin Array B 85.52 338 P **P 07 20 53.4 +1.1**
comp=Z,3.5nm,0.8s,baz=37,slow=3.6,SNR=14
BRTR LR LR 08 04 58.1
comp=Z,531nm,20.0s,baz=37,slow=40
EPF Esparros 85.57 3 *e*P **P 07 20 51.7 -0.6**
comp=Z,13nm,0.8s
EPF Esparros 85.57 3 *e*P **P 07 20 51.7 -0.6**
EPF pmax pmax
comp=Z,13nm,0.8s
EPF Esparros 85.57 3 *e*P **P 07 20 51.7 -0.6**
comp=Z,13nm,0.8s
ANTO Ankara 85.57 339 PFAKE 07 21 00.0 +7.6
ANTO LR LR
comp=Z,645nm,19.0s
MALT Malatya 85.64 334 PFAKE 07 21 00.0 +7.2
MALT LR LR
comp=Z,795nm,20.0s
ETSF Etsaut 85.67 4 *e*P **P 07 20 53.3 +0.5**
comp=Z,61nm,1.4s
ETSF Etsaut 85.67 4 *e*P **P 07 20 53.3 +0.5**
ETSF pmax pmax
comp=Z,61nm,1.4s
ETSF Etsaut 85.67 4 *e*P **P 07 20 53.3 +0.5**
comp=Z,61nm,1.4s
AQU L'Aquila 86.02 354 PFAKE 07 21 10.0 +15
AQU LR LR
comp=Z,923nm,22.0s
PGF Pioggiola 86.05 357 *e*P **P 07 20 54.5 -0.3**
comp=Z,124nm,1.5s
PGF Pioggiola 86.05 357 *e*P **P 07 20 54.5 -0.3**
PGF pmax pmax
comp=Z,124nm,1.5s
PGF Pioggiola 86.05 357 *e*P **P 07 20 54.5 -0.3**
comp=Z,124nm,1.5s
HYB Hyderabad 86.14 293 *i* P **P 07 20 55.0 -0.5**
BCIP Isla Barro Col 86.23 80 *e*P **P 07 20 55.4 -0.5**
BCIP LR LR
comp=Z,722nm,22.0s
TIR Tirane 86.39 349 PFAKE 07 21 10.0 +14
TIR LR LR
comp=Z,2µm,22.0s
FITZ Fitzroy Crossi 86.43 235 *e*P **P 07 20 56.2 -0.4**
comp=Z,13nm,0.7s
CMLA Cha da Macela 87.06 24 PFAKE 07 21 10.0 +10
CMLA LR LR
comp=Z,1µm,21.0s
SJG San Juan 87.25 64 PFAKE 07 21 10.0 +9.2
SJG LR LR
comp=Z,1µm,20.0s
AS31 Alice Springs 87.25 225 *e*P **P 07 20 59.9 -0.7**
ASAR Alice Springs 87.25 225 P **P 07 20 60.0 -0.6**
ASAR Alice Springs 87.25 225 P **P 07 20 60.0 -0.6**
comp=Z,6.2nm,0.8s,baz=30,slow=4.6,SNR=48
ASAR LR LR 07 56 52.4
comp=Z,1µm,19.0s,baz=28,slow=33
PAYG Puerto Ayora 87.41 94 PFAKE 07 21 10.0 +8.4
PAYG LR LR
comp=Z,962nm,20.0s
MTE Manteigas 87.65 9 PFAKE 07 21 10.0 +7.5
MTE LR LR
comp=Z,669nm,20.0s
ISP Isparta 88.03 340 PFAKE 07 21 20.0 +16
ISP LR LR
comp=Z,1µm,20.0s
CUC Castrocucco 88.17 352 PFAKE 07 21 20.0 +15
CUC LR LR
comp=Z,1µm,20.0s
MDRS Chennai 88.61 289 *ex* **PS 07 33 01.2 +2.2**
MDRS *ex* x 07 35 40.2
MDRS *ex* x 07 38 25.2
MDRS *ex* x 07 44 58.2
MDRS *ex* x 07 46 16.2
MDRS *ex* x 07 52 55.2
MDRS *ex* x 07 55 43.2
MDRS *ex* x 08 07 35.2
ESDC Sonseca Array 88.68 7 P **P 07 21 06.7 -0.8**
ESDC Sonseca Array 88.68 7 P **P 07 21 06.7 -0.8**
comp=Z,0.5nm,0.4s,baz=344,slow=4.9,SNR=5.6
PAB San Pablo 88.78 7 PFAKE 07 21 20.0 +12
PAB LR LR
comp=Z,833nm,19.0s
TIP Timpagrande 88.89 351 PFAKE 07 21 20.0 +12
TIP LR LR
comp=Z,2µm,21.0s
VSL Villasalto 89.09 356 PFAKE 07 21 20.0 +11
VSL LR LR
comp=Z,1µm,21.0s
URZ Urewera 89.84 186 LR LR 07 54 13.4
comp=Z,1µm,19.3s,baz=18,slow=31
CEL Celeste 89.88 351 PFAKE 07 21 20.0 +6.9
CEL LR LR
comp=Z,985nm,20.0s
ANWB Willy Bob 90.02 61 PFAKE 07 21 30.0 +16
ANWB LR LR
comp=Z,746nm,20.0s
CSS Prodhromos 90.13 337 PFAKE 07 21 30.0 +16
CSS LR LR
comp=Z,691nm,20.0s
SANT Santorini 90.43 343 PFAKE 07 21 30.0 +14
SANT LR LR
comp=Z,1µm,21.0s
STKA Stephens Creek 91.43 216 P **P 07 21 19.6 -0.3**
STKA Stephens Creek 91.43 216 P **P 07 21 19.6 -0.3**
comp=Z,6.2nm,0.7s,baz=352,slow=5.1,SNR=20
STKA LR LR 07 57 51.8
comp=Z,1µm,19.9s,baz=29,slow=32
MMAI Mount Meron Ar 91.44 335 LR LR 08 12 11.9
comp=Z,575nm,18.0s,baz=45,slow=42
ASF Jabal al Asfar 91.83 333 LR LR 08 09 53.2
comp=Z,796nm,20.4s,baz=37,slow=40
MBWA Marble Bar 92.03 238 PFAKE 07 21 30.0 +7.0
MBWA LR LR
comp=Z,792nm,21.0s
CAN Canberra 92.15 209 PFAKE 07 21 30.0 +6.7
CAN LR LR
comp=Z,927nm,21.0s
ROSC El Rosal 92.97 78 P **P 07 21 29.0 +0.9**
ROSC El Rosal 92.97 78 P **P 07 21 29.0 +0.9**
comp=Z,2.5nm,0.4s,baz=78,slow=20,SNR=3.8
SNZO South Karori 93.05 188 PFAKE 07 21 40.0 +13
SNZO LR LR
comp=Z,2µm,19.1s
OTAV Otavalo 94.05 85 *e*P **P 07 21 32.2 -1.0**
comp=Z,13nm,1.4s
OTAV LR LR
comp=Z,346nm,19.0s
RTC Rabat Centre 94.07 10 PFAKE 07 21 40.0 +7.6
RTC LR LR
comp=Z,693nm,20.0s
GRGR Grenville 94.61 64 PFAKE 07 21 50.0 +15
GRGR LR LR
comp=Z,844nm,20.0s
EIL Elat 94.73 334 LR LR 08 12 51.0
comp=Z,692nm,19.9s,baz=202,slow=41
BBGH Gun Hill 94.94 62 PFAKE 07 21 50.0 +13
BBGH LR LR
comp=Z,2µm,21.0s
RPZ Rata Peaks 95.78 190 LR LR 07 59 34.9
comp=Z,2µm,19.1s,baz=28,slow=32
TAU Tasmania Unive 99.66 207 PFAKE 07 22 10.0 +13
TAU LR LR
comp=Z,543nm,19.0s
NWAO Narrogin (SRO) 102.89 233 PFAKE 07 22 20.0 +8.2
NWAO LR LR
comp=Z,540nm,19.0s
NNA Nana 104.52 91 PFAKE 07 22 30.0 +10
NNA LR LR
comp=Z,569nm,20.0s
TAM Tamanrasset 105.83 359 PFAKE 07 26 50.0
TAM LR LR
comp=Z,580nm,22.0s
SAML Samuel 110.62 78 PFAKE 07 27 00.0
SAML LR LR
comp=Z,688nm,21.0s
TORD Torodi Ar. Bea 115.37 3 PKP **PKPdf 07 26 55.4 -0.5**
TORD PKKPbc **PKKPbc 07 37 28.0 +0.1**
TORD Torodi Ar. Bea 115.37 3 PKP **PKPdf 07 26 55.4 -0.5**
comp=Z,1.4nm,0.5s,baz=349,slow=2.2,SNR=29
TORD PKKPbc **PKKPbc 07 37 28.0 +0.1**
comp=Z,1.1nm,0.9s,baz=183,slow=1.9,SNR=7.1
MSEY Mahe Island 117.12 300 PFAKE 07 27 10.0 +11
MSEY LR LR
comp=Z,853nm,20.0s
LVC Limon Verde 117.47 92 PFAKE 07 27 10.0 +10
LVC LR LR
comp=Z,614nm,21.0s
DBIC Dimbokro 121.28 11 PKP **PKPdf 07 27 07.0 -0.3**
DBIC Dimbokro 121.28 11 PKP **PKPdf 07 27 07.0 -0.3**
comp=Z,1.9nm,0.4s,baz=2.9,slow=2.9,SNR=16
KMBO Kilima Mbogo 122.68 320 *e*PKPdf **PKPdf 07 27 10.6 +0.3**
KMBO PKP **PKPdf 07 27 11.3 +1.0**
KMBO LR LR
comp=Z,730nm,20.0s
KMBO Kilima Mbogo 122.68 320 PKP **PKPdf 07 27 11.3 +1.0**
comp=Z,2.8nm,0.6s,baz=26,slow=2.6,SNR=9.7
DRV Dumont d'Urvil 122.81 199 Pdif **Pdif 07 23 40.0 +0.5**
DRV Dumont d'Urvil 122.81 199 PP PKPdf 07 27 53.0 +45
DRV SKKS 07 35 01.0
DRV Dumont d'Urvil 122.81 199 SS SS 07 45 15.0 -13
RCBR Riachuelo 123.29 51 PFAKE 07 27 20.0 +8.8
RCBR LR LR
comp=Z,851nm,19.0s
BDFB Brasilia 124.94 69 PKP **PKPdf 07 27 14.0 -0.3**
BDFB Brasilia 124.94 69 PKP **PKPdf 07 27 14.0 -0.3**
comp=Z,1.2nm,0.6s,baz=68,slow=5.9,SNR=2.7
CPUP Villa Florida 127.37 86 PKP **PKPdf 07 27 18.0 -0.5**
CPUP Villa Florida 127.37 86 PKP **PKPdf 07 27 18.0 -0.5**
comp=Z,1.5nm,0.5s,baz=312,slow=2.7,SNR=9.0
PLCA Paso Flores 128.97 109 PKP **PKPdf 07 27 20.8 -0.5**
PLCA Paso Flores 128.97 109 PKP **PKPdf 07 27 20.8 -0.5**
comp=Z,7.4nm,0.8s,baz=242,slow=1.7,SNR=11
VNDA Vanda 129.74 186 PKP **PKPdf 07 27 21.2 -0.2**
VNDA Vanda 129.74 186 PKP **PKPdf 07 27 21.2 -0.2**
comp=Z,0.5nm,0.6s,baz=2.0,slow=3.1,SNR=6.8
SBA Scott Base 129.76 185 PFAKE 07 27 30.0 +8.5
SBA LR LR
comp=Z,643nm,19.0s
CASY Casey 130.34 211 PFAKE 07 27 30.0 +7.1
CASY LR LR
comp=Z,628nm,19.0s
SPB Sao Paulo 131.43 75 PFAKE 07 27 40.0 +14
SPB LR LR
comp=Z,500nm,19.0s
ABPO Ambohimpanom 133.44 298 PFAKE 07 27 40.0 +10
ABPO LR LR
comp=Z,619nm,20.0s
LSZ Lusaka 139.10 324 PFAKE 07 27 50.0 +9.0
LSZ LR LR
comp=Z,657nm,19.0s

QSPA	**South Pole Qui**	**141.46**	**180**	PFAKE		07 28 00.0	+16
QSPA				LR	LR		
	comp=Z,655nm,20.0s						
SHEL	**Horse Pasture**	**143.37**	**17**	PFAKE		07 28 00.0	+11
SHEL				LR	LR		
	comp=Z,462nm,19.0s						
TSUM	**Tsumeb**	**146.03**	**338**⇑	*iP*	**PKPab**	**07 27 54.5**	**-0.1**
TSUM	**Tsumeb**	**146.03**	**338**	*e*PKPdf	**PKPbc**	**07 27 53.8**	**-0.2**
TSUM				LR	LR		
	comp=Z,878nm,20.0s						
MAW	**Mawson**	**148.09**	**218**	PKPbc	**PKPbc**	**07 27 58.4**	**+0.2**
MAW	**Mawson**	**148.09**	**218**	PKPbc	**PKPbc**	**07 27 58.4**	**+0.2**
	comp=Z,28nm,0.7s,baz=73,slow=2.6,SNR=48						
POGA	**Pongola**	**148.38**	**310**⇑	*iP*	**PKPbc**	**07 28 00.3**	**0.0**
SLR	**Silverton**	**148.49**	**316**	*e*P	**PKPbc**	**07 28 01.1**	**+0.3**
SLR				AMS	AMS	08 36 24.6	
	comp=Z,1μm,21.7s						
LBTB	**Lobatse**	**148.95**	**321**	*e*P	**PKPbc**	**07 28 01.7**	**-0.2**
LBTB				AMS	AMS	08 44 10.2	
	comp=Z,780nm,18.8s						
ERPM	**east rand prop**	**149.04**	**316**⇑	*i*P	**PKPbc**	**07 28 02.1**	**-0.1**
PRYS	**Parys**	**149.93**	**317**	*e*P	**PKPbc**	**07 28 03.3**	**-1.1**
SWZ	**Schweizer**	**151.00**	**320**⇑	*i*P	**PKPbc**	**07 28 07.1**	**+0.2**
SEK	**Senekal**	**151.03**	**315**	*e*P	**PKPbc**	**07 28 07.1**	**+0.2**
KSD	**Kokstad**	**152.08**	**310**	*e*P	**PKPbc**	**07 28 09.2**	**-0.1**
BOSA	**Boshof**	**152.29**	**318**⇑	*i*P	**PKPbc**	**07 28 10.0**	**+0.3**
BOSA				AMS	AMS	08 50 26.1	
	comp=Z,1μm,21.0s						
BOSA	**Boshof**	**152.29**	**318**	PKP	**PKPdf**	**07 28 02.4**	**-0.6**
BOSA				PKPbc	**PKiKP**	**07 28 10.3**	**+0.3**
BOSA	**Boshof**	**152.29**	**318**	PKP	**PKPdf**	**07 28 02.4**	**-0.6**
	comp=Z,21nm,0.6s,baz=45,slow=2.9,SNR=3.2						
BOSA				PKPbc	**PKiKP**	**07 28 10.3**	**+0.3**
	comp=Z,20nm,0.6s,baz=23,slow=1.8,SNR=59						
SUR	**Sutherland**	**157.39**	**322**	PFAKE		07 28 20.0	+10
SUR				LR	LR		
	comp=Z,825nm,19.0s						
SNAA	**Sanae**	**159.68**	**173**	*e*PKPdf	**PKPdf**	**07 28 08.8**	**-2.5**
SNAA	**Sanae**	**159.68**	**173**	*es*PKPdf	sPKPdf	07 28 23.7	-5.8
SNAA	**Sanae**	**159.68**	**173**	*e*PKPab	**PKPab**	**07 28 48.7**	**-1.5**
SNAA	**Sanae**	**159.68**	**173**	*es*PKPab	sPKPab	07 29 02.9	-5.2
VNA1	**Neumayer--Stat**	**160.07**	**167**	*es*PKPab	sPKPab	07 29 04.9	-4.8

RSPR 17 07:12:26.3, 19°33N×68°68W, h60km±3km, MD3.8/11, 11C-1D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DR12	**Loma Pena Alta**	**0.86**	**231**⇓	*e*P		Pn	07 12 41.6	-1.0
AGPR	**Aguadilla, PR**	**1.71**	**120**⇑	*e*P		Pn	07 12 52.9	-1.0
AGPR	**Aguadilla, PR**	**1.71**	**120**	*e*S		Sn	07 13 13.7	-1.0
MPR	**Mayaguez**	**1.83**	**127**⇑	*e*P		Pn	07 12 54.4	-1.1
LSP	**Las Mesas**	**1.90**	**127**⇑	*e*P		Pn	07 12 56.0	-0.4
LSP				*e*S		Sn	07 13 18.8	-0.5
CRPR	**Cabo Rojo, PR**	**1.98**	**131**⇑	*e*P		Pn	07 12 57.3	-0.3
CRPR	**Cabo Rojo, PR**	**1.98**	**131**	*e*S		Sn	07 13 20.3	-1.0
LRS	**Lares**	**2.02**	**121**⇑	*e*P		Pn	07 12 57.4	-0.7
LRS				*e*S		Sn	07 13 21.5	-0.9
AOPR	**Arecibo Observ**	**2.07**	**118**⇑	*e*P		Pn	07 12 58.3	-0.5
OBIP	**Obispado Ponce**	**2.34**	**123**⇑	*e*P		Pn	07 13 01.7	-0.8
OBIP	**Obispado Ponce**	**2.34**	**123**	*e*S		Sn	07 13 29.8	-0.3
CELP	**Cerrillos**	**2.35**	**122**⇑	*e*P		Pn	07 13 02.0	-0.5
CELP				*e*S		Sn	07 13 29.5	-0.8
SJG	**San Juan**	**2.68**	**116**⇑	*e*P		Pn	07 13 06.3	-0.8
HUMP	**Col San Antoni**	**2.93**	**113**⇑	*e*P		Pn	07 13 09.8	-0.6
STVI	**Saint Thomas**	**3.66**	**105**⇑	*e*P		Pn	07 13 20.0	-0.4

NEIC ***17*** *07:15:50.7, 51°.53N×175°.22W, h8km, mb4.9/12, ML4.3(AEIC), After AEIC.*
IDC ***17*** *07:15:50.5±6.4, 51°.71N×175°.32W, h32km±46km, mb3.9/18, mb1 4.1/21, mb1mx4.0/30, mbtmp3.9/21, ML4.1/3, Error ellipse: s-maj=22.5km s-min=13.1km az=171.0*
ISCJB ***17*** *07:15:51.2±0.6, 51°.61N±0°.08×175°.23W±0°.05, h54km±4km, mb4.4/27, Error ellipse: s-maj=13.6km s-min=3.5km az=166.2*

ISC 17 07:15:52.8±1.2, 51°.67N±0°.10×175°.27W±0°.04, h51km±10km, n263, σ0.9 60/266, mb4.4/27, 77C-78D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GSMY	**Great Sitkin M**	**0.61**	**308**	P		**Pn**	**07 16 04.5**	**-0.9**
GSTR	**Great Sitkin T**	**0.65**	**312**	P		**Pn**	**07 16 05.5**	**-0.4**
GSCK	**Great Sitkin C**	**0.65**	**302**	P		**Pn**	**07 16 05.0**	**-0.9**
GSTD	**Great Sitkin T**	**0.67**	**306**	P		**Pn**	**07 16 05.4**	**-0.8**
GSTD				S		**Sn**	**07 16 16.9**	**+1.0**
KOKL	**Mount Kliuchef**	**0.93**	**45**	P		**Pn**	**07 16 08.7**	**-1.0**
KOFP	**Korovin Flat P**	**0.95**	**50**	P		**Pn**	**07 16 08.7**	**-1.1**
KOKV	**Korovin Volcan**	**0.97**	**44**	P		**Pn**	**07 16 09.5**	**-0.7**
KOKV				S		**Sn**	**07 16 23.3**	**+0.2**
KIRH	**Kanaga Island**	**1.15**	**282**	P		**Pn**	**07 16 11.6**	**-1.0**
KINC	**Kanaga Island**	**1.18**	**284**	P		**Pn**	**07 16 12.0**	**-0.9**
KIKV	**Kanaga Island**	**1.20**	**281**	P		**Pn**	**07 16 12.0**	**-1.1**
TAPA	**Tanaga Point A**	**1.58**	**276**	P		**Pn**	**07 16 17.4**	**-1.0**
TAFP	**Tanaga Falls P**	**1.70**	**279**	P		**Pn**	**07 16 19.4**	**-0.6**
TAFP				S		**Sn**	**07 16 41.1**	**+0.6**
TASE	**Tanaga Southea**	**1.73**	**277**	P		**Pn**	**07 16 19.7**	**-0.7**
TANO	**Tanaga North**	**1.78**	**279**	P		**Pn**	**07 16 21.1**	**0.0**
GAEA	**Gareloi East**	**2.16**	**274**	P		**Pn**	**07 16 26.7**	**+0.4**
GALAA	**Gareloi Lava P**	**2.18**	**274**	P		**Pn**	**07 16 26.7**	**+0.2**
GANE	**Gareloi Northe**	**2.18**	**275**	P		**Pn**	**07 16 26.7**	**+0.1**
GAKI	**Gareloi-Kavalg**	**2.21**	**268**	P		**Pn**	**07 16 26.0**	**-0.9**
CERAA	**Semis' Rag'd T**	**3.14**	**276**	P		**Pn**	**07 16 40.4**	**+0.7**
CEAP	**Semis' Anvil P**	**3.21**	**278**	P		**Pn**	**07 16 41.4**	**+0.7**
CESW	**Semis' Southwe**	**3.21**	**276**	P		**Pn**	**07 16 40.9**	**+0.2**
CETU	**Semis' Tuman**	**3.26**	**277**	P		**Pn**	**07 16 40.9**	**-0.5**
AMKA	**Amchitka**	**3.40**	**267**	P		**Pn**	**07 16 42.4**	**-0.9**
LSPA	**Little Sitkin**	**3.83**	**277**	P		**Pn**	**07 16 49.9**	**+0.8**
LSPA				S		**Sn**	**07 17 33.2**	**+0.4**
LSSE	**Little Sitkin**	**3.83**	**276**	P		**Pn**	**07 16 49.6**	**+0.5**
LSNW	**Little Sitkin**	**3.87**	**277**	P		**Pn**	**07 16 50.1**	**+0.5**
LSSA	**Little Sitkin**	**3.87**	**277**	P		**Pn**	**07 16 50.7**	**+1.1**
NIKH	**Nikolski High**	**4.15**	**69**	P		**Pn**	**07 16 53.4**	**-0.1**
NIKH				S		**Sn**	**07 17 40.2**	**-0.5**
OKCE	**Okmok Cone E**	**4.68**	**65**	P		**Pn**	**07 17 01.2**	**+0.4**
MREP	**Makushin Rep't**	**5.61**	**64**	P		**Pn**	**07 17 13.4**	**-0.1**
UNV	**Unalaska Valle**	**5.75**	**64**	P		**Pn**	**07 17 15.3**	**-0.1**
UNV				*e*Sg		Sn	07 18 35.2	+15
AKGG	**Akutan Green G**	**6.16**	**62**	P		**Pn**	**07 17 21.3**	**+0.3**
SPIA	**Saint Paul Isl**	**6.25**	**26**	P		**Pn**	**07 17 23.6**	**+1.3**
AKUT	**Akutan**	**6.26**	**63**	*e*Pn		**Pn**	**07 17 23.9**	**+1.6**
FX1	**Attu Island--F**	**7.20**	**284**	*e*Pn		**Pn**	**07 17 37.8**	**+2.5**
FALS	**False Pass**	**7.79**	**61**	*e*Pn		**Pn**	**07 17 44.5**	**+1.1**
KDAK	**Kodiak Island**	**14.43**	**56**	*e*Pn		**Pn**	**07 19 14.6**	**+0.8**
KDAK				Sn		Sn	07 22 00.2	+8.1
KDAK	**Kodiak Island**	**14.43**	**56**	Pn		**Pn**	**07 19 12.0**	**-1.7**
	0.7nm,0.3s,baz=288,slow=9.2,SNR=5.6						
KDAK				Sn		Sn	07 22 00.2	+8.1
	0.2nm,0.3s,baz=252,slow=19,SNR=3.3						
PETK	**Petropavlovsk-**	**16.53**	**286**	Pn		**Pn**	**07 19 39.6**	**-1.2**
PETK	**Petropavlovsk-**	**16.53**	**286**	Pn		**Pn**	**07 19 39.6**	**-1.2**
	0.2nm,0.3s,baz=247,slow=29,SNR=3.0						
MCK	**McKinley**	**18.37**	**39**	P		**P**	**07 20 03.7**	**+0.7**
	20nm,0.9s						
PAX	**Paxson**	**19.46**	**43**	*e*P		**Pn**	**07 20 17.1**	**+0.6**
	202nm,3.0s						
ILAR	**Eielson Array**	**19.66**	**37**	P		**P**	**07 20 15.3**	**-1.7**
ILAR	**Eielson Array**	**19.66**	**37**	P		**P**	**07 20 15.3**	**-1.7**
	0.8nm,0.3s,baz=226,slow=9.1,SNR=39						
COLD	**Coldfoot**	**19.90**	**29**	*e*P		**Pn**	**07 20 22.1**	**+0.5**
MENT	**Mentasta**	**20.20**	**44**	*e*P		Pn	07 20 26.3	+1.1
DOT	**Dot Lake**	**20.30**	**42**	*e*P		**P**	**07 20 23.7**	**-0.3**
PNL	**Peninsula**	**21.52**	**54**	*e*P		**P**	**07 20 39.7**	**+2.5**
EGAK	**Eagle**	**21.89**	**40**	*e*P		**P**	**07 20 40.3**	**-0.8**
	12nm,0.6s						
INK	**Inuvik**	**25.97**	**34**	P		**P**	**07 21 20.3**	**+0.3**
INK	**Inuvik**	**25.97**	**34**	P		**P**	**07 21 20.3**	**+0.3**
	2.4nm,0.5s,baz=240,slow=7.0,SNR=12						
YKA	**Yellowknife Ar**	**33.42**	**47**	P		**P**	**07 22 27.2**	**+1.1**
YKA	**Yellowknife Ar**	**33.42**	**47**	P		**P**	**07 22 27.2**	**+1.1**
	0.7nm,0.7s,baz=270,slow=7.6,SNR=3.1						
USRK	**Ussuriysk Arra**	**35.43**	**279**	P		**P**	**07 22 43.2**	**-0.5**
	3.3nm,0.6s,baz=47,slow=7.5,SNR=7.7						
NEW	**Newport**	**36.71**	**72**	*e*P		**P**	**07 22 54.8**	**+0.2**
	7.4nm,0.8s						
NEW	**Newport**	**36.71**	**72**	P		**P**	**07 22 55.0**	**+0.4**
	2.7nm,0.7s,baz=299,slow=8.6,SNR=6.9						
NEW	**Newport**	**36.71**	**72**	⇓P		**P**	**07 22 54.7**	**+0.1**
	baz=37						
C12B	**Naegeli Ranch,**	**37.95**	**72**	⇑P		**P**	**07 23 04.7**	**-0.4**
	baz=38						
A13A	**Flathead Natio**	**37.99**	**69**	⇓P		**P**	**07 23 06.1**	**+0.6**
	baz=38						
B13A	**Whitefish**	**38.22**	**70**	⇑P		**P**	**07 23 07.5**	**0.0**
	baz=38						
C13A	**Hot Springs**	**38.49**	**71**	⇑P		**P**	**07 23 09.8**	**0.0**
	baz=38						
E12A	**Beaver Dam Sad**	**38.53**	**74**	⇑P		**P**	**07 23 10.2**	**0.0**
	baz=38						
A14A	**Double T Ranch**	**38.55**	**69**	⇑P		**P**	**07 23 10.5**	**+0.2**
	baz=38,SNR=5.6						
D13A	**Huson**	**38.85**	**72**	⇑P		**P**	**07 23 12.6**	**-0.1**
	baz=39						
B14A	**Marquette Ranc**	**38.92**	**70**	⇓P		**P**	**07 23 13.5**	**+0.1**
	baz=39						
C14A	**Swan Lake**	**38.94**	**71**	⇑P		**P**	**07 23 13.7**	**+0.2**
	baz=39						
A15A	**Johnson Ranch,**	**38.94**	**68**	⇓P		**P**	**07 23 13.5**	**0.0**
	baz=39						
MSO	**Missoula**	**39.29**	**72**	⇑P		**P**	**07 23 16.4**	**0.0**
	baz=39						
B15A	**Bradely Ranch,**	**39.36**	**69**	⇑P		**P**	**07 23 17.3**	**+0.2**
	baz=39						
D14A	**Greenough**	**39.42**	**71**	⇓P		**P**	**07 23 17.5**	**-0.1**
	baz=39						
C15A	**Salmond Ranch,**	**39.60**	**70**	⇓P		**P**	**07 23 19.0**	**-0.1**
	baz=40,SNR=6.2						
A16A	**West Butte Ran**	**39.61**	**68**	⇓P		**P**	**07 23 19.4**	**+0.2**
	baz=40						
H12A	**Diamond D Ranc**	**39.93**	**76**	⇓P		**P**	**07 23 22.1**	**+0.2**
	baz=40						
MFID	**Camas Ranch**	**39.96**	**78**	⇓P		**P**	**07 23 22.1**	**0.0**
	baz=40						
D15A	**Lincoln**	**40.02**	**71**	⇓P		**P**	**07 23 22.5**	**-0.1**
	baz=40						
C16A	**Fuhringer Ranc**	**40.09**	**70**	⇓P		**P**	**07 23 22.8**	**-0.3**
	baz=40,SNR=5.6						
A17A	**Triple J Farms**	**40.13**	**67**	⇓P		**P**	**07 23 22.9**	**-0.4**
	baz=40,SNR=6.2						
F14A	**Wisdom**	**40.15**	**73**	⇑P		**P**	**07 23 23.3**	**-0.4**
	baz=40						
B17A	**L&G Farms, Che**	**40.40**	**68**	⇑P		**P**	**07 23 25.9**	**+0.3**
	baz=40,SNR=5.4						
F15A	**Butte**	**40.66**	**73**	⇓P		**P**	**07 23 27.6**	**-0.3**
	baz=40						
HLID	**Hailey**	**40.73**	**77**	⇑P		**P**	**07 23 29.1**	**+0.6**
	baz=41						
B18A	**Beardsley Farm**	**40.94**	**68**	⇑P		**P**	**07 23 30.6**	**+0.5**
	baz=41						
I14A	**Mackay**	**41.12**	**76**	⇑P		**P**	**07 23 31.6**	**0.0**
	baz=41,SNR=6.5						
EGMT	**Eagleton**	**41.14**	**68**	⇓P		**P**	**07 23 31.8**	**+0.2**
	baz=41						
F16A	**Kennard Place,**	**41.20**	**72**	⇑P		**P**	**07 23 32.5**	**+0.2**
	baz=41						
A19A	**Klindworth Far**	**41.26**	**67**	⇑P		**P**	**07 23 33.1**	**+0.4**
	baz=41						
E17A	**Martinsdale**	**41.30**	**71**	⇑P		**P**	**07 23 33.7**	**+0.5**
	baz=41						
NVAR	**Mina Array Bea**	**41.33**	**86**	P		**P**	**07 23 33.5**	**-0.1**
NVAR				PcP		**PcP**	**07 25 32.0**	**+0.9**
NVAR	**Mina Array Bea**	**41.33**	**86**	P		**P**	**07 23 33.5**	**-0.1**
	0.7nm,0.8s,baz=297,slow=6.0,SNR=2.3						
NVAR				PcP		**PcP**	**07 25 32.0**	**+0.9**
	0.6nm,0.7s,baz=286,slow=3.4,SNR=4.0						
D18A	**Linhart Farms,**	**41.53**	**69**	⇑P		**P**	**07 23 35.5**	**+0.5**
	baz=41						
C19A	**Slack Wire Ran**	**41.69**	**68**	⇓P		**P**	**07 23 37.0**	**+0.8**
	baz=42						
F17A	**Fitzpatrick Pl**	**41.71**	**71**	⇑P		**P**	**07 23 37.0**	**+0.5**
	baz=42						
A20A	**Cobblestone Ra**	**41.75**	**66**	⇑P		**P**	**07 23 37.3**	**+0.6**
	baz=42						
E18A	**Harlowton**	**41.80**	**70**	⇓P		**P**	**07 23 37.9**	**+0.7**
	baz=42						
KSRS	**Korea Array**	**41.83**	**273**	P		**P**	**07 23 38.5**	**+1.1**
	3.6nm,1.0s,baz=58,slow=7.9,SNR=8.1						
KSAR	**Wonju Array Be**	**41.86**	**273**	P		**P**	**07 23 38.5**	**+0.9**
B20A	**Solberg Farm,**	**41.92**	**67**	⇓P		**P**	**07 23 38.3**	**+0.2**
	baz=42						
H16A	**Russell Place,**	**42.01**	**73**	⇓P		**P**	**07 23 38.5**	**-0.6**
	baz=42						
C20A	**Veseth Ranch,**	**42.31**	**68**	⇑P		**P**	**07 23 41.8**	**+0.6**
	baz=42						
B21A	**Ellsworth Farm**	**42.50**	**66**	⇑P		**P**	**07 23 43.2**	**+0.5**
	baz=42						
E19A	**Rath Farm, Rou**	**42.51**	**70**	⇑P		**P**	**07 23 43.3**	**+0.4**
	baz=42						
D20A	**Manuel Ranch,**	**42.56**	**69**	⇓P		**P**	**07 23 43.4**	**+0.2**
	baz=42						
F19A	**Roth Farm, Mol**	**42.75**	**71**	⇓P		**P**	**07 23 44.6**	**-0.3**
	baz=43						
C21A	**Desert Coulee**	**42.77**	**67**	⇓P		**P**	**07 23 45.3**	**+0.3**
	baz=43						
A22A	**Carney Farms,**	**42.84**	**65**	⇓P		**P**	**07 23 45.8**	**+0.3**
	baz=43						
B22A	**Reddig Ranch S**	**43.15**	**66**	⇓P		**P**	**07 23 48.1**	**+0.1**
	baz=43						
D21A	**La Casta Ranch**	**43.23**	**68**	⇑P		**P**	**07 23 49.1**	**+0.4**
	baz=43						
H19A	**Powell**	**43.38**	**72**	⇓P		**P**	**07 23 49.8**	**-0.2**
	baz=43						
A23A	**Redstone**	**43.44**	**65**	⇓P		**P**	**07 23 50.4**	**+0.1**
	baz=43						
G20A	**Bridger**	**43.52**	**71**	⇓P		**P**	**07 23 51.0**	**-0.2**
	baz=43						
D22A	**Cohagen**	**43.66**	**67**	⇑P		**P**	**07 23 52.3**	**+0.2**
	baz=44						
C23A	**Lambert**	**43.88**	**66**	⇑P		**P**	**07 23 54.1**	**+0.2**
	baz=44						
A24A	**Westby**	**43.95**	**64**	⇓P		**P**	**07 23 54.3**	**-0.1**
	baz=44,SNR=5.3						
DGMT	**Dagmar**	**44.08**	**65**	⇓P		**P**	**07 23 55.3**	**-0.1**
	baz=44						
PDAR	**Pinedale Array**	**44.12**	**75**	P		**P**	**07 23 56.3**	**+0.2**
PDAR	**Pinedale Array**	**44.12**	**75**	P		**P**	**07 23 56.3**	**+0.2**
	4.8nm,0.7s,baz=306,slow=4.3,SNR=18						
J19A	**Crowheart**	**44.13**	**74**	⇑P		**P**	**07 23 56.5**	**+0.4**
	baz=44						
D23A	**Lindsay**	**44.20**	**67**	⇓P		**P**	**07 23 57.1**	**+0.6**
	baz=44						
GSC	**Goldstone**	**44.23**	**88**	*e*P		P	07 24 04.2	+7.3
	5.7nm,0.9s						
C24A	**Savage**	**44.45**	**66**	⇓P		**P**	**07 23 58.6**	**+0.1**
	baz=44						
K19A	**Absolon Red Bu**	**44.51**	**74**	⇓P		**P**	**07 23 58.4**	**-0.8**
	baz=44,SNR=6.4						
E23A	**Ismay**	**44.51**	**68**	⇑P		**P**	**07 23 59.4**	**+0.4**
	baz=44						
H21A	**Big Horn, Sher**	**44.55**	**71**	⇓P		**P**	**07 23 59.7**	**+0.3**
	baz=44						
L19A	**Farson**	**44.62**	**75**	⇓P		**P**	**07 24 00.7**	**+0.6**
	baz=44						
D24A	**Glendive**	**44.74**	**67**	⇓P		**P**	**07 24 01.8**	**+1.1**
	baz=45						
I21A	**Big Trails, Te**	**44.86**	**72**	⇑P		**P**	**07 24 01.9**	**-0.1**
	baz=45						
K20A	**Yellowstone Ra**	**44.91**	**74**	⇓P		**P**	**07 24 02.0**	**-0.4**
	baz=45						
E24A	**Baker**	**45.05**	**67**	⇑P		**P**	**07 24 03.7**	**+0.4**
	baz=45						
G23A	**Biddle**	**45.19**	**69**	⇓P		**P**	**07 24 04.6**	**+0.1**
	baz=45						
L20A	**Wamsutter**	**45.29**	**75**	⇑P		**P**	**07 24 05.4**	**0.0**
	baz=45						
I22A	**9 Mile Ranch,**	**45.30**	**71**	⇑P		**P**	**07 24 05.4**	**+0.1**
	baz=45						
F24A	**Ekalaka**	**45.38**	**68**	⇑P		**P**	**07 24 06.5**	**+0.6**
	baz=45						
K21A	**Alcova**	**45.57**	**73**	⇑P		**P**	**07 24 07.6**	**0.0**
	baz=45						
J22A	**Midwest**	**45.58**	**72**	⇑P		**P**	**07 24 07.6**	**0.0**
	baz=45						
G24A	**Alzada**	**45.68**	**69**	⇑P		**P**	**07 24 08.3**	**0.0**
	baz=46						
M20A	**Sweetwater, Wa**	**45.69**	**75**	⇑P		**P**	**07 24 08.3**	**-0.3**
	baz=46						
SRU	**San Rafael**	**45.71**	**79**	⇓P		**P**	**07 24 08.9**	**+0.1**
	baz=46						
O19A	**Miners Draw (B**	**45.84**	**77**	⇑P		**P**	**07 24 09.7**	**0.0**
	baz=46						
L21A	**Rawlins**	**45.90**	**74**	⇑P		**P**	**07 24 10.3**	**+0.1**
	baz=46						
H24A	**Dirks Ranch, A**	**45.94**	**69**	⇓P		**P**	**07 24 10.5**	**+0.1**
	baz=46						
N20A	**Spence Gulch,**	**46.04**	**76**	⇓P		**P**	**07 24 11.0**	**-0.3**
	baz=46						
M21A	**Separation Pea**	**46.12**	**75**	⇑P		**P**	**07 24 11.9**	**-0.1**
	baz=46						
U15A	**North Rim**	**46.31**	**84**	⇑P		**P**	**07 24 13.6**	**0.0**
	baz=46						
P19A	**Cripple Cowboy**	**46.33**	**78**	⇓P		**P**	**07 24 13.9**	**+0.2**
	baz=46						
N21A	**Black Mountain**	**46.53**	**76**	⇑P		**P**	**07 24 14.8**	**-0.4**
	baz=46						
P20A	**De Beque**	**46.78**	**78**	⇑P		**P**	**07 24 17.3**	**+0.3**
	baz=47						
L23A	**Garrett**	**46.81**	**73**	⇑P		**P**	**07 24 17.4**	**+0.1**
	baz=47						
O21A	**Pagoda**	**46.89**	**76**	⇑P		**P**	**07 24 18.0**	**-0.1**
	baz=47						
S18A	**Hurst Farm, Bl**	**46.92**	**81**	⇓P		**P**	**07 24 18.2**	**-0.2**
	baz=47						
MDND	**Maddock**	**46.99**	**63**	⇓P		**P**	**07 24 18.6**	**+0.2**
	baz=47,SNR=6.6						
PV10	**Paradox Valley**	**47.08**	**79**	*e*P		P	07 24 25.8	+6.3
N22A	**Wattenberg Ran**	**47.15**	**75**	⇓P		**P**	**07 24 20.2**	**+0.2**
	baz=47						
P21A	**Newcastle**	**47.33**	**77**	⇑P		**P**	**07 24 21.9**	**+0.5**
	baz=47						
O22A	**Kremmling**	**47.48**	**76**	⇓P		**P**	**07 24 22.6**	**-0.1**
	baz=47						
PV01	**Paradox Valley**	**47.52**	**79**	*e*P		P	07 24 26.6	+3.6
S20A	**Disappointment**	**47.84**	**79**	⇓P		**P**	**07 24 25.4**	**-0.1**
	baz=48						
SONM	**Songino Array**	**48.47**	**298**	PcP		**PcP**	**07 25 55.0**	**-0.4**
SONM	**Songino Array**	**48.47**	**298**	PcP		**PcP**	**07 25 55.0**	**-0.4**
	1.8nm,0.8s,baz=46,slow=2.4,SNR=6.3						
J28A	**Allard Ranch,**	**48.65**	**69**	⇓P		**P**	**07 24 31.6**	**+0.2**
	baz=48						
AGMN	**Agassiz Nation**	**48.79**	**61**	*e*P		**P**	**07 24 31.4**	**-0.9**
	12nm,0.9s						
N26A	**Koester Ranch,**	**49.06**	**73**	⇑P		**P**	**07 24 35.1**	**+0.4**
	baz=49						
U21A	**Nageezi**	**49.17**	**80**	⇓P		**P**	**07 24 35.4**	**-0.3**
	baz=49						
P25A	**Willow Gulch B**	**49.32**	**75**	⇓P		**P**	**07 24 36.9**	**+0.2**
	baz=49						
N27A	**Anderson Farm,**	**49.49**	**72**	⇓P		**P**	**07 24 38.0**	**+0.1**
	baz=49						
K29A	**Lazy Trails An**	**49.58**	**69**	⇓P		**P**	**07 24 38.6**	**+0.1**
	baz=49						
Q25A	**Bedland, Calha**	**49.65**	**75**	⇓P		**P**	**07 24 39.3**	**0.0**
	baz=50						
P26A	**Davis Ranch, A**	**49.78**	**74**	⇑P		**P**	**07 24 40.6**	**+0.3**
	baz=50						
X20A	**Quemado**	**49.88**	**83**	⇓P		**P**	**07 24 40.7**	**-0.5**
	baz=50						
O27A	**Beecher Island**	**49.91**	**73**	⇑P		**P**	**07 24 41.0**	**-0.1**
	baz=50						
TUC	**Tucson**	**49.96**	**87**	*e*P		P	07 24 45.7	+4.2
	38nm,1.7s						
R25A	**Fountain Ranch**	**50.12**	**76**	⇑P		**P**	**07 24 43.0**	**+0.2**
	baz=50						
SPITS	**Spitsbergen Ar**	**50.22**	**357**	P		**P**	**07 24 43.0**	**+0.2**
SPITS	**Spitsbergen Ar**	**50.22**	**357**	P		**P**	**07 24 43.0**	**+0.2**
	15nm,1.0s,baz=109,slow=7.1,SNR=4.0						
S25A	**Robets Cordova**	**50.34**	**77**	⇑P		**P**	**07 24 44.8**	**+0.3**
	baz=50						
X21A	**Alamocita Cree**	**50.39**	**82**	⇓P		**P**	**07 24 45.1**	**+0.1**
	baz=50						
R26A	**Arlington**	**50.52**	**76**	⇓P		**P**	**07 24 46.4**	**+0.6**
	baz=50						
KSCO	**Kaye Shedlock'**	**50.56**	**74**	⇓P		**P**	**07 24 46.6**	**+0.5**
	baz=50						
T25A	**Trinidad**	**50.69**	**77**	⇑P		**P**	**07 24

SCHQ	Schefferville	58.39	40	P		P	07 25 42.0	-0.4
	1.7nm,0.6s,baz=312,slow=9.3,SNR=4.6							
SFIN	Scholer Farm	58.67	63	⇓P		P	07 25 44.4	-0.1
	baz=58							
732A	Laxson Ranch,	59.14	82	⇓P		P	07 25 47.9	-0.2
	baz=59							
MKAR	Makanchi Array	61.55	310	P		P	07 26 03.5	-0.8
MKAR	Makanchi Array	61.55	310	P		P	07 26 03.5	-0.8
	0.9nm,0.7s,baz=49,slow=6.7,SNR=5.9							
ALLY	Alegheny Colle	61.56	58	*e*P		P	07 26 04.8	+0.4
	47nm,0.8s							
NCB	Newcomb	62.93	53	*e*PcP		PcP	07 26 58.4	+7.2
BINY	Binghamton	63.33	55	*e*P		P	07 26 15.8	-0.4
	21nm,0.6s							
LUPA	Lehigh Univers	64.81	56	*e*P		P	07 26 26.4	+0.5
	13nm,0.6s							
SDMD	Soldier's Deli	64.91	58	*e*P		P	07 26 26.6	0.0
	18nm,0.9s							
KMSC	Kings Mountain	65.59	64	⇑P		P	07 26 30.9	-0.1
	baz=65							
URVA	University of	65.89	60	*e*P		P	07 26 33.7	+0.8
NOA	NORSAR Array B	67.52	357	P		P	07 26 42.4	-0.6
NOA	NORSAR Array B	67.52	357	P		P	07 26 42.4	-0.6
	1.2nm,0.9s,baz=3.1,slow=6.4,SNR=3.8							
ABKAR	Akbulak array	69.00	325	*e*P		P	07 26 53.5	+1.1
KKAR	Karatay Array	69.78	315	*e*P		P	07 26 57.8	+0.5
CMAR	Chiang Mai Arr	73.16	278	P		P	07 27 19.0	+1.0
CMAR	Chiang Mai Arr	73.16	278	P		P	07 27 19.0	+1.0
	1.0nm,0.6s,baz=29,slow=7.1,SNR=4.1							
AKASG	Malin Array Be	75.91	344	P		P	07 27 32.7	-0.7
AKASG	Malin Array Be	75.91	344	P		P	07 27 32.7	-0.7
	0.9nm,0.5s,baz=15,slow=5.7,SNR=3.4							
WRA	Warramunga Arr	83.78	227	P		P	07 28 15.2	-1.1
WRA	Warramunga Arr	83.78	227	P		P	07 28 15.2	-1.1
	0.9nm,0.9s,baz=35,slow=5.9,SNR=4.6							
BRTR	Keskin Array B	85.55	338	P		P	07 28 24.2	-1.2
BRTR	Keskin Array B	85.55	338	P		P	07 28 24.2	-1.2
	0.9nm,1.0s,baz=15,slow=6.0,SNR=2.8							
ASAR	Alice Springs	87.22	225	P		P	07 28 33.2	-0.2
ASAR	Alice Springs	87.22	225	P		P	07 28 33.2	-0.2
	0.4nm,0.7s,baz=21,slow=4.7,SNR=4.8							
STKA	Stephens Creek	91.41	216	P		P	07 28 52.9	+0.1
STKA	Stephens Creek	91.41	216	P		P	07 28 52.9	+0.1
	0.7nm,1.0s,baz=327,slow=4.7,SNR=4.0							
TORD	Torodi Ar. Bea	115.40	3	PKP		PKPdf	07 34 28.5	-0.4
TORD	Torodi Ar. Bea	115.40	3	PKP		PKPdf	07 34 28.5	-0.4
	0.4nm,0.6s,baz=335,slow=2.8,SNR=6.9							
MAW	Mawson	148.06	218	PKPbc		PKPbc	07 35 31.2	+0.2
MAW	Mawson	148.06	218	PKPbc		PKPbc	07 35 31.2	+0.2
	6.5nm,0.8s,baz=74,slow=4.8,SNR=9.2							
BOSA	Boshof	152.32	318	PKPbc		PKPbc	07 35 42.9	+0.1
BOSA				PKPab		PKPab	07 35 51.1	-1.7
BOSA	Boshof	152.32	318	PKPbc		PKPbc	07 35 42.9	+0.1
	4.3nm,0.7s,baz=180,slow=3.9,SNR=11							
BOSA				PKPab		PKPab	07 35 51.1	-1.7
	3.8nm,0.8s,baz=149,slow=10,SNR=3.7							

IDC ***17*** *07:24:35.2±10.0, 13.08N×91.33W, h48km±63km, mb3.4/6, mb1 3.7/8, mb1mx3.5/25, mbtmp3.5/8, ML3.9/2, MS3.5/1, Ms1 3.5/1, ms1mx2.6/22, Error ellipse: s-maj=90.6km s-min=38.8km az=166.0*

CASC ***17*** *07:24:38.6±1.4, 13.46N×91.58W, h9km±18km, MD3.9, ML3.3*

ISC 17 07:24:35.9±1.3, 13.3N±0.1×91.64W±0.07, h28km, n18, σ1s34/19, mb3.6/6, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAT	Jato	0.99	0	⇑*e*P	Pn	07 24 54.0	0.0
FUG	Fuego 3	1.36	35	*e*P	Pb	07 25 00.6	-0.3
NBG	Las Nubes	1.78	45	*e*P	Pb	07 25 08.4	+0.4
RTR	El Retiro	2.02	73	*e*P	Pb	07 25 11.7	-0.4
SBLS	San Blas	2.03	75	*e*P	Pb	07 25 11.4	-0.8
SBLS				*e*S	Sb	07 25 36.8	-0.4
SNJE	San Jose	2.05	74	*e*P	Pb	07 25 12.1	-0.6
SNET	Serv Nac Est T	2.37	81	AML	AML	07 25 56.1	
	comp=Z,222nm,0.3s						
LFRS	El Faro	2.53	83	*e*P	Pb	07 25 19.4	-1.3
LFRS				*e*S	Sb	07 25 49.9	-1.6
LBRS	Las Brisas	2.56	80	*e*P	Pn	07 25 18.1	+2.4
MRL	Marmol	2.56	47	*e*P	Pb	07 25 19.5	-1.9
TEIG	Tepich	7.58	25	P	Pn	07 26 25.4	+0.8
	comp=Z,4.0nm,0.3s,baz=178,slow=1.4,SNR=28						
TEIG				S	Sn	07 27 51.8	+2.2
	baz=222,slow=12,SNR=2.4						
TEIG				LR	LR	07 29 29.6	
	comp=Z,314nm,19.9s,baz=331,slow=38						
TXAR	Lajitas Array	19.45	327	P	P	07 29 01.3	+0.7
	comp=Z,0.0nm,0.3s,baz=151,slow=11,SNR=5.3						
TKL	Tuckaleechee C	23.34	16	P	P	07 29 40.4	-1.6
	comp=Z,3.4nm,1.0s,baz=186,slow=11,SNR=3.5						
ANMO	Albuquerque	25.36	331	P	P	07 30 00.4	-0.5
	comp=Z,0.5nm,0.6s,baz=139,slow=6.9,SNR=3.8						
NVAR	Mina Array Bea	34.41	321	P	P	07 31 22.6	+1.4
	comp=Z,0.7nm,0.8s,baz=134,slow=7.7,SNR=7.2						
SCHQ	Schefferville	45.73	20	P	P	07 32 52.0	-2.6
	comp=Z,1.5nm,0.7s,baz=201,slow=8.6,SNR=3.7						
YKA	Yellowknife Ar	51.76	347	P	P	07 33 39.0	-1.7
	comp=Z,0.6nm,0.7s,baz=145,slow=7.6,SNR=3.9						
ILAR	Eielson Array	63.59	337	P	P	07 35 04.4	+0.5
	comp=Z,0.3nm,0.9s,baz=107,slow=5.1,SNR=4.2						

IDC ***17*** *07:39:09.0±0.7, 17.87S×167.64E, h0km, mb4.4/14, mb1 4.5/15, mb1mx4.4/21, mbtmp4.4/15, ML3.9/1, Error ellipse: s-maj=19.8km s-min=16.8km az=162.0*

ISCJB ***17*** *07:39:10.7±0.5, 18.00S±0.05×167.65E±0.08, h23km, mb4.5/19, Error ellipse: s-maj=10.8km s-min=6.7km az=16.0*

NEIC ***17*** *07:39:10.1±0.5, 17.91S×167.66E, h10km, mb4.9/6, Error ellipse: s-maj=13.5km s-min=9.7km az=166.0*

AUST ***17*** *07:40:39.6±4.3, 20.35S×162.80E, h584km±1km, Error ellipse: s-maj=2.9km s-min=2.2km az=325.0*

ISC 17 07:39:12.3±0.5, 17.97S±0.07×167.69E±0.08, h23km, n53, σ1s34/54, mb4.5/19, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	4.25	196	*e*P	Pn	07 40 14.0	-1.7
DZM				*e*S	Sn	07 41 03.6	-1.0
DZM	Mont Dzumac	4.25	196	*e*Pn	Pn	07 40 14.9	-0.8
DZM				Sn	Sn	07 41 04.5	-0.2
DZM	Mont Dzumac	4.25	196	Pn	Pn	07 40 15.3	-0.4
	5.8nm,0.3s,baz=359,slow=3.9,SNR=33						
DZM				Sn	Sn	07 41 04.5	-0.2
	22nm,0.3s,baz=131,slow=20,SNR=10						
NOUC	Port Laguerre	4.31	197	*e*P	Pn	07 40 15.4	-1.1
NOUC				*e*S	Sn	07 41 04.6	-1.5
MSVF	Nonsavu	9.87	90	*e*Pn	Pn	07 41 31.2	-1.7
	30nm,1.0s						
RMQ	Roma	19.45	241	P	Pn	07 43 40.1	+1.4
	baz=14,SNR=4.8						
CTA	Charters Tower	20.38	261	P	Pn	07 43 48.7	-1.1
CTA	Charters Tower	20.38	261	P	Pn	07 43 48.7	-1.1
	7.7nm,0.8s,baz=88,slow=14,SNR=11						
CTAO	Charters Tower	20.38	261	*e*P	P	07 43 47.5	-0.1
	11nm,0.8s						
PMG	Port Moresby	21.67	290	P	P	07 44 02.5	+1.0
PMG	Port Moresby	21.67	290	P	P	07 44 02.6	+1.0
	18nm,0.9s,baz=50,slow=2.2,SNR=4.1						
URZ	Urewera	21.83	160	P	P	07 44 05.7	+2.6
URZ	Urewera	21.83	160	P	P	07 44 05.7	+2.6
	13nm,0.9s,baz=44,slow=5.1,SNR=3.1						
MTSU	Mount Surprise	22.23	266	P	P	07 44 09.7	+2.1
	baz=18,SNR=10						
QLP	Quilpie	23.31	244	P	P	07 44 19.0	+0.2
	baz=18,SNR=25						
CAN	Canberra	23.96	220	*e*P	P	07 44 23.9	-1.2
	82nm,1.6s						
CMSA	Cobar Meteorol	24.05	232	P	P	07 44 26.4	+0.5
	baz=19,SNR=17						
STKA	Stephens Creek	27.33	235	P	P	07 44 55.9	+0.3
STKA	Stephens Creek	27.33	235	P	P	07 44 55.9	+0.3
	8.5nm,0.9s,baz=69,slow=8.1,SNR=24						
STKA	Stephens Creek	27.33	235	P	P	07 44 56.2	+0.6
	baz=22,SNR=14						
RAR	Rarotonga	30.79	101	P	P	07 45 27.7	+1.3
RAR	Rarotonga	30.79	101	P	P	07 45 27.7	+1.3
	5.3nm,0.5s,baz=270,slow=7.1,SNR=4.3						
WRAB	Tennant Creek	31.57	261	*e*P	P	07 45 30.8	-2.6
	4.7nm,0.8s						
WRA	Warramunga Arr	31.58	261	P	P	07 45 31.6	-1.9
WRA	Warramunga Arr	31.58	261	P	P	07 45 31.6	-1.9
	3.2nm,0.9s,baz=89,slow=9.2,SNR=13						
BBOO	Buckleboo	32.02	236	*e*P	P	07 45 36.4	-0.9
	112nm,0.9s						
BBOO	Buckleboo	32.02	236	P	P	07 45 37.3	+0.1
	baz=27,SNR=8.1						
AS31	Alice Springs	32.03	254	*e*P	P	07 45 36.0	-1.5
ASAR	Alice Springs	32.04	254	P	P	07 45 36.2	-1.2
ASAR				ScP	ScP	07 52 11.8	+2.5
ASAR	Alice Springs	32.04	254	P	P	07 45 36.2	-1.2
	4.8nm,0.7s,baz=82,slow=8.3,SNR=36						
ASAR				ScP	ScP	07 52 11.8	+2.5
	0.2nm,0.8s,baz=107,slow=3.2,SNR=4.2						
FORT	Forrest	38.09	243	*e*P	P	07 46 29.0	-0.6
	17nm,0.6s						
MEEK	Meekatharra	45.99	250	P	P	07 47 33.8	-0.4
	baz=41,SNR=5.5						
WSI	Waingapu	46.65	274	S	PcS	07 53 20.9	+13
	baz=42,SNR=6.6						
PETK	Petropavlovsk-	71.31	354	P	P	07 50 30.9	+1.0
PETK	Petropavlovsk-	71.31	354	P	P	07 50 30.9	+1.0
	6.1nm,0.8s,baz=157,slow=8.8,SNR=6.3						
QSPA	South Pole Qui	72.08	180	P	P	07 50 35.8	+1.2
QSPA	South Pole Qui	72.08	180	P	P	07 50 35.8	+1.2
	6.7nm,0.9s,baz=11,slow=3.7,SNR=8.4						
CMAR	Chiang Mai Arr	76.65	295	P	P	07 51 03.4	+1.6
CMAR	Chiang Mai Arr	76.65	295	P	P	07 51 03.4	+1.6
	0.8nm,0.4s,baz=130,slow=4.5,SNR=6.2						
MAW	Mawson	79.05	202	P	P	07 51 19.1	+4.7
MAW	Mawson	79.05	202	P	P	07 51 19.1	+4.7
	2.7nm,0.8s,baz=100,slow=6.1,SNR=5.7						
SONM	Songino Array	85.33	324	P	P	07 51 46.6	-1.1
SONM	Songino Array	85.33	324	P	P	07 51 46.6	-1.1
	2.9nm,1.0s,baz=130,slow=2.3,SNR=15						
BILL	Bilibino	85.77	359	*e*P	P	07 51 48.3	-0.9
	12nm,0.9s						
NVAR	Mina Array Bea	89.07	49	P	P	07 52 06.3	+0.2
NVAR	Mina Array Bea	89.07	49	P	P	07 52 06.3	+0.2
	1.7nm,1.0s,baz=234,slow=7.5,SNR=9.9						
ILAR	Eielson Array	89.47	18	P	P	07 52 05.2	-1.9
ILAR	Eielson Array	89.47	18	P	P	07 52 05.2	-1.9
	1.1nm,0.8s,baz=232,slow=5.8,SNR=11						
TXAR	Lajitas Array	97.45	62	P	P	07 52 44.6	-0.2
TXAR	Lajitas Array	97.45	62	P	P	07 52 44.6	-0.2
	0.5nm,0.9s,baz=232,slow=6.2,SNR=5.4						
BFO	Black Forest	145.37	336	*e*PKPdf	PKPbc	07 58 47.3	-0.9
TORD	Torodi Ar. Bea	165.69	252	PKP	PKPdf	07 59 16.3	+0.2
TORD	Torodi Ar. Bea	165.69	252	PKP	PKPdf	07 59 16.3	+0.2
	0.8nm,0.8s,baz=125,slow=1.0,SNR=4.4						

IDC ***17*** *07:45:40.3±10.0, 31.58S×177.08W, h0km, mb4.1/3, mb1 4.3/5, mb1mx3.9/19, mbtmp4.2/5, ML4.0/2, Error ellipse: s-maj=188.8km s-min=26.8km az=97.0*

ISCJB ***17*** *07:45:41.1±2.2, 31.81S±0.06×177.1W±0.3, h33km, mb4.1/3, Error ellipse: s-maj=41.4km s-min=6.4km az=8.1*

ISC 17 07:45:42.7±3.4, 31.76S±0.09×177.0W±0.4, h35km, n10, σ1s34/13, mb4.2/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.62	342	Pn	Pn	07 46 21.1	-1.4
	69nm,0.3s,baz=51,slow=18,SNR=7.7						
RAO				Sn	Sn	07 46 52.9	-0.1
	201nm,0.3s,baz=118,slow=23,SNR=4.1						
CNGZ	Carnagh Statio	7.77	209	PN	Pn	07 47 33.3	0.0
MWZ	Matawai	7.94	213	PN	Pn	07 47 35.5	-0.1
MWZ				SN	Sn	07 49 04.7	+0.3
URZ	Urewera	8.08	215	PN	Pn	07 47 37.4	-0.1
URZ				SN	Sn	07 49 05.6	-2.0
URZ	Urewera	8.08	215	Pn	Pn	07 47 39.2	+1.7
	0.9nm,0.3s,baz=18,slow=18,SNR=7.4						
URZ				Sn	Sn	07 49 06.5	-1.1
	4.3nm,0.3s,baz=187,slow=20,SNR=14						
MRZ	Mangatainoka R	10.71	212	*e*PN	Pn	07 48 13.4	-0.1
LTZ	Lake Taylor	13.91	215	PN	Pn	07 48 56.3	-1.0
STKA	Stephens Creek	35.02	259	P	P	07 52 35.7	+3.7
	2.1nm,0.7s,baz=96,slow=12,SNR=6.6						
ASAR	Alice Springs	43.90	269	P	P	07 53 48.1	+2.0
	1.3nm,0.6s,baz=112,slow=7.9,SNR=22						
WRA	Warramunga Arr	45.01	273	P	P	07 53 56.7	+1.6
	3.6nm,0.7s,baz=113,slow=8.0,SNR=24						

IDC 17 08:00:05.2±2.3, 52.19N×35.46E, h0km, mb3.3/1, mb1 3.8/3, mb1mx3.4/24, mbtmp3.7/3, ML3.2/3, Error ellipse: s-maj=31.6km s-min=13.3km az=126.0, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKASG	Malin Array Be	4.17	252	Pn	Pn	08 01 09.6	-0.5
	1.5nm,0.3s,baz=60,slow=12,SNR=4.1						
AKASG				Pg	Pb	08 01 19.1	-0.3
	2.7nm,0.3s,baz=58,slow=16,SNR=11						
AKASG				Sn	Sn	08 01 57.3	-2.2
	1.7nm,0.3s,baz=60,slow=17,SNR=3.3						
AKASG				Lg	Lg	08 02 14.0	
	2.8nm,0.3s,baz=61,slow=29,SNR=5.1						
MICGM	Minsk	5.10	300	*e*	Sb	08 02 34.0	-2.9
FINES	FINESS Array B	10.59	335	Pn	Pn	08 02 32.8	-5.2
	0.2nm,0.3s,baz=149,slow=11,SNR=2.6						
FINES				Sn	Sn	08 04 21.2	-16
	0.2nm,0.3s,baz=138,slow=26,SNR=2.1						
ARCES	ARCESS Array B	18.02	349	Pn	Pn	08 04 12.0	-4.7
	0.3nm,0.3s,baz=165,slow=11,SNR=13						
TORD	Torodi Ar. Bea	47.42	227	P	P	08 08 39.6	-1.8
	0.4nm,0.8s,baz=27,slow=8.0,SNR=2.1						

MOS ***17*** *08:17:50.0±0.5, 50.29N×158.30E, h9km, mb4.3/1, Error ellipse: s-maj=53.9km s-min=21.0km az=84.4*

KRSC 17 08:17:10.9±2.1, 47.64N×157.25E, h5km±5km, ML4.2, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	3.13	347	*e*Pn	Pg	08 18 16.9	+6.0
SKR				*e*S	Sn	08 18 32.1	-6.6
SKR				smax	smax		
	comp=N,310nm,0.3s						
SKR				smax	smax		
	comp=E,140nm,0.5s						
SKR	Severo-Kuril's	3.13	347	P	Pn	08 18 00.7	-0.2
SKR				*i* S	Sn	08 18 37.0	-1.7
MIPR	Malaya Ipel'ka	4.65	356	P	Pn	08 18 23.6	+1.8
MIPR				*i* S	Sn	08 19 16.5	+0.3
ASAK	Asacha	4.77	5	P	Pn	08 18 26.4	+2.9
ASAK				*i* S	Sn	08 19 21.3	+2.2
RUS	Russkaya	4.87	9	PN	Pn	08 18 27.0	+2.3
RUS	Russkaya	4.87	9	P	Pn	08 18 27.0	+2.3
RUS				*i* S	Sn	08 19 22.4	+1.0
MTVR	Mutnovka	4.89	7	P	Pn	08 18 27.7	+2.5
MTVR				*i* S	Sn	08 19 23.5	+1.3
APC	Apacha	5.29	359	P	Pn	08 18 33.7	+3.2
APC				*i* S	Sn	08 19 33.2	+1.4
PET	Petropavlovsk	5.46	9	PN	Pn	08 18 36.3	+3.4
PET	Petropavlovsk	5.46	9	P	Pn	08 18 36.3	+3.4
PET				*i* S	Sn	08 19 38.9	+2.8
UGLR	Uglovaya	5.67	10	P	Pn	08 18 39.5	+3.7
UGLR				*i* S	Sn	08 19 44.2	+2.9
AVH	Avacha	5.71	9	P	Pn	08 18 40.1	+3.7
AVH				*i* S	Sn	08 19 44.9	+2.5
SMAR	Somma	5.72	9	P	Pn	08 18 39.9	+3.2
SMAR				*i* S	Sn	08 19 44.7	+1.9
KOK	Koryaka	5.73	8	P	Pn	08 18 41.2	+4.5
KOK				*i* S	Sn	08 19 45.9	+3.1
SDLR	Sedlovina	5.74	10	P	Pn	08 18 39.4	+2.5
SDLR				*i* S	Sn	08 19 44.7	+1.5
SPN	Mys Shipunski	5.75	17	PN	Pn	08 18 39.3	+2.5
SPN	Mys Shipunski	5.75	17	P	Pn	08 18 39.3	+2.5
SPN				*i* S	Sn	08 19 44.6	+1.6
KRER	Koryakskii	5.75	9	P	Pn	08 18 40.8	+3.7
KRER				*i* S	Sn	08 19 45.4	+1.8
GNL	Ganaly	6.08	4	P	Pn	08 18 45.0	+3.5
GNL				*i* S	Sn	08 19 53.8	+2.3
MKZ	Mys Kozlova	7.48	20	PN	Pn	08 19 04.0	+3.5
MKZ	Mys Kozlova	7.48	20	P	Pn	08 19 04.0	+3.5
MKZ				*i* S	Sn	08 20 26.1	+0.6

NSSC ***17*** *08:28:06.6±8.7, 36.28N×36.00E, h0km±49km, MD1.1, ML2.9, Fault plane solution: NP1:φs351.00000°, δ50.00000°, λ0.00000°.*

ISCJB ***17*** *08:28:15.1±0.5, 35.97N±0.03×36.01E±0.04, h17km±4km, Error ellipse: s-maj=6.1km s-min=4.3km az=166.1*

CSEM ***17*** *08:28:16.2±0.4, 36.00N×36.04E, h20km, MD3.0, Error ellipse: s-maj=8.9km s-min=7.1km az=34.0*

DDA ***17*** *08:28:16.3, 36.20N×35.99E, h2km, MD3.0, ML3.3*

ISK ***17*** *08:28:17.2, 36.20N×36.07E, h11km, MD3.0, Mw3.2*

ISC 17 08:28:13.6±0.6, 35.94N±0.02×35.99E±0.03, h17km±4km, n50, σ1s83/71, 8C, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARNB	Al Arnab	0.08	192	⇑*e*P	Pg	08 28 13.3	-3.7
ARNB				*e*S	Sg	08 28 18.3	-1.1
ARNB				AML	AML	08 28 20.0	
	comp=E,923nm,0.5s						
ARNB				AML	AML	08 28 20.2	
	comp=N,419nm,0.2s						
ARNB	Al Arnab	0.08	192	⇑*e*P	Pg	08 28 13.3	-3.7
	SNR=75						
ARNB				*e*S	Sg	08 28 18.3	-1.1
	comp=N,419nm,0.2s,SNR=59						
YAYL	Yayladag	0.14	44	*i* P	Pg	08 28 20.3	+2.6
YAYL				*i* S	Sg	08 28 23.7	+3.2
YAYL	Yayladag	0.14	44	*i* P	Pg	08 28 20.3	+2.6
YAYL				*i* S	Sg	08 28 23.7	+3.2
HTY	Hatay	0.22	33	*e*PG	Pb	08 28 20.1	+1.0
HTY				*e*SG	Sg	08 28 23.1	+0.8
HTY	Hatay	0.22	33	*e*Pg	Pb	08 28 20.1	+1.0
HTY				*e*Sg	Sg	08 28 23.1	+0.8
WRDH	Warideh	0.55	141	⇑*e*P	Pg	08 28 22.6	-1.9
WRDH				*e*S	Sb	08 28 33.4	+1.0
WRDH	Warideh	0.55	141	⇑*e*P	Pg	08 28 22.6	-1.9
	SNR=67						
WRDH				*e*S	Sb	08 28 33.3	+1.0
	SNR=59						
COBT	Iskenderun	0.62	20	*i* P	Pg	08 28 24.2	-1.8
COBT				*i* S	Sg	08 28 29.0	-5.3
COBT	Iskenderun	0.62	20	*i* P	Pg	08 28 24.2	-1.8
COBT				*i* S	Sg	08 28 29.0	-5.3
KRTS	Karatas	0.81	322	*e*PG	Pn	08 28 30.8	+0.6
KRTS	Karatas	0.81	322	*e*Pg	Pn	08 28 30.8	+0.6
DRWC	Darouich	0.88	38	⇑*e*P	Pg	08 28 17.5	-13
DRWC				*i* S	Sg	08 28 27.2	-15
DRWC				AML	AML	08 28 29.7	
	comp=E,548nm,0.3s						
DRWC				AML	AML	08 28 30.9	
	comp=N,428nm,0.7s						
BIDA	Albida	0.96	164	⇑*e*P	Pg	08 28 30.1	-2.1
BIDA				*e*S	Sn	08 28 46.0	+0.4
BIDA	Albida	0.96	164	⇑*e*P	Pg	08 28 30.1	-2.1
	SNR=57						
BIDA				*e*S	Sn	08 28 46.0	+0.4
	SNR=49						
KFRA	Kufra	0.98	137	⇑*e*P	Pg	08 28 29.1	-3.5
KFRA				*e*S	Sn	08 28 46.0	0.0
KFRA				AML	AML	08 28 49.4	
	comp=N,692nm,0.2s						
KFRA				AML	AML	08 28 51.3	
	comp=E,581nm,0.3s						
CEYT	Ceyhan	1.09	350	*e*PG	Pb	08 28 34.1	+0.1
CEYT				*e*SG	Sb	08 28 46.5	-1.4
CEYT	Ceyhan	1.09	350	*e*Pg	Pb	08 28 34.1	+0.1
CEYT				*e*Sg	Sb	08 28 46.5	-1.4
KUZU	Kuzuini	1.21	46	*i* P	Pn	08 28 36.7	+0.9
KUZU				*i* S	Sb	08 28 51.9	+0.5
KUZU	Kuzuini	1.21	46	*i* P	Pn	08 28 36.7	+0.9
KUZU				*i* S	Sb	08 28 51.9	+0.5
KOZT	Kozan	1.55	355	*e*PN	Pb	08 28 41.8	0.0
KOZT				*e*SN	Sn	08 28 59.7	-0.3
KOZT	Kozan	1.55	355	*e*Pn	Pb	08 28 41.8	0.0
KOZT				*e*Sn	Sn	08 28 59.7	-0.3
GAZ	Gaziantep	1.58	38	*e*PN	Pn	08 28 42.4	+1.5
GAZ	Gaziantep	1.58	38	*e*Pn	Pn	08 28 42.4	+1.5
KIZK	Mersin	1.59	291	*i* P	Pg	08 28 44.9	+0.7
KIZK				*i* S	Sg	08 29 05.0	+0.1
KIZK	Mersin	1.59	291	*i* P	Pg	08 28 44.9	+0.7
KIZK				*i* S	Sg	08 29 05.0	+0.1
AYKD	Aykdinkavak	1.61	24	*i* P	Pb	08 28 43.2	+0.3
AYKD				*i* S	Sn	08 29 01.1	-0.7
GULE	Gulek	1.66	324	*i* P	Pb	08 28 44.1	+0.2
GULE				*i* S	Sn	08 29 04.0	+0.9
GULE	Gulek	1.66	324	*i* P	Pb	08 28 44.1	+0.2
GULE				*i* S	Sn	08 29 04.0	+0.9
ANDN	Andirin	1.67	10	*i* P	Pn	08 28 42.7	+0.6
ANDN				*i* S	Sn	08 29 01.9	-1.2
ANDN	Andirin	1.67	10	*i* P	Pn	08 28 42.7	+0.6
ANDN				*i* S	Sn	08 29 01.9	-1.2
KMRS	Kahramanmaras	1.73	25	*e*PN	Pn	08 28 44.1	+1.2
KMRS	Kahramanmaras	1.73	25	*e*Pn	Pn	08 28 44.1	+1.2
GZT	Gaziantep	1.90	41	*i* P	Pb	08 28 49.6	+1.8
NIG	Nigde	2.44	333	*e*PN	Pn	08 28 55.2	+2.4
NIG	Nigde	2.44	333	*e*Pn	Pn	08 28 55.2	+2.4
SARI	Sar

	comp=E,22nm,0.3s							
YUK					pmax	pmax		
	comp=Z,55nm,0.3s							
YUK					smax	smax		
	comp=N,131nm,0.4s							
YUK					smax	smax		
	comp=E,18nm,0.4s							
YSS	**Yuzh-Sakhalins**	**4.96**	**2**	*eP*		**Pn**	**08 30 17.2**	**+3.0**
USRK	**Ussuriysk Arra**	**8.03**	**289**	P		**Pn**	**08 30 58.5**	**+2.3**
	comp=E,0.3nm,0.3s,baz=92,slow=14,SNR=9.7							
SONM	**Songino Array**	**26.09**	**295**	P		**P**	**08 34 30.1**	**-0.2**
	comp=E,0.3nm,0.3s,baz=66,slow=8.6,SNR=4.1							
ZALV	**Zalesovo Beam**	**39.38**	**308**	P		**P**	**08 36 25.9**	**+0.2**
ZALV					pmax	pmax		
	comp=Z,2.0nm,0.7s							
ZALV	**Zalesovo Beam**	**39.38**	**308**	P		**P**	**08 36 25.9**	**+0.2**
	comp=Z,2.2nm,0.7s,baz=80,slow=8.1,SNR=8.9							
MKAR	**Makanchi Array**	**42.40**	**298**	P		**P**	**08 36 50.8**	**+0.1**
MKAR					pmax	pmax		
	comp=E,2.0nm,0.9s							
MKAR	**Makanchi Array**	**42.40**	**298**	P		**P**	**08 36 50.8**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=82,slow=8.9,SNR=7.0							
KURK	**Kurchatov**	**43.71**	**304**	P		**P**	**08 37 01.5**	**+0.3**
KURK					pmax	pmax		
	comp=Z,2.0nm,0.4s							
KURBB	**Kurchatov Arra**	**43.79**	**304**	P		**P**	**08 37 01.5**	**-0.3**
	comp=Z,2.2nm,0.4s,baz=76,slow=9.0,SNR=12							
ILAR	**Eielson Array**	**44.88**	**35**	P		**P**	**08 37 09.8**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=273,slow=5.3,SNR=5.4							
BVAR	**Borovoye Array**	**47.99**	**309**	P		**P**	**08 37 34.2**	**-0.7**
BVAR					pmax	pmax		
	comp=Z,1.0nm,0.3s							
BVAR	**Borovoye Array**	**47.99**	**309**	P		**P**	**08 37 34.2**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=71,slow=10,SNR=6.3							
AKTO	**Aktyubinsk**	**56.09**	**310**	P		**P**	**08 38 34.1**	**-0.9**
AKTO					pmax	pmax		
	comp=Z,1.0nm,0.4s							
AKTO	**Aktyubinsk**	**56.09**	**310**	P		**P**	**08 38 34.1**	**-0.9**
	comp=Z,0.5nm,0.4s,baz=100,slow=6.1,SNR=3.1							
WRA	**Warramunga Arr**	**62.09**	**189**	P		**P**	**08 39 16.6**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=6.4,slow=8.8,SNR=6.6							
FINES	**FINESS Array B**	**64.85**	**332**	P		**P**	**08 39 33.7**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=39,slow=12,SNR=3.6							
NB2	**NORSAR Subarra**	**69.96**	**337**	P		**P**	**08 40 05.9**	**-0.9**
	comp=Z,0.2nm,0.7s,baz=41,slow=6.5							
NOA	**NORSAR Array B**	**69.96**	**337**	P		**P**	**08 40 06.0**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=36,slow=6.2,SNR=5.1							
TXAR	**Lajitas Array**	**86.42**	**53**	P		**P**	**08 41 39.5**	**+1.1**
	comp=Z,0.3nm,0.6s,baz=307,slow=3.4,SNR=4.9							

ISCJB ***17*** *08:36:47.4±0.6,6°.34S±0°.07×149°.20E±0°.07, h53km, mb4.1/8, MS3.8/1, Error ellipse: s-maj=12.2km s-min=8.1km az=135.9*

NEIC ***17*** *08:36:48.6±1.2, 6°.31S×149°.20E, h48km±11km, mb4.5/2, Error ellipse: s-maj=13.4km s-min=7.7km az=155.0*

IDC ***17*** *08:36:49.8±1.0, 6°.36S×149°.18E, h56km±8km, mb4.1/6, mb1 4.4/8, mb1mx4.0/18, mbtmp4.3/8, MS3.6/2, Ms1 3.6/2, ms1mx2.9/33, Error ellipse: s-maj=23.5km s-min=11.3km az=119.0*

AUST ***17*** *08:36:51.5±0.0, 6°.57S×149°.14E, h48km, Error ellipse: s-maj=1.8km s-min=1.1km az=315.0*

ISC 17 08:36:49.3±0.5, 6°.33S±0°.08×149°.22E±0°.09, h53km, n45, σ0s96/60, mb4.2/8, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.62**	**54**	P		P	Pn	08 37 48.2	+5.3
	baz=3.8,SNR=6.9								
PMG	**Port Moresby**	**3.68**	**214**	*e*Pn		**Pn**	**Pn**	**08 37 43.7**	**0.0**
PMG				S		**Sn**	**Sn**	**08 38 24.6**	**-1.2**
PMG				*e*Sn		Sn	Sn	08 38 24.7	-1.1
PMG	**Port Moresby**	**3.68**	**214**	P		**Pn**	**Pn**	**08 37 43.8**	**+0.2**
	153nm,0.3s,baz=14,slow=5.0,SNR=214								
PMG				S		**Sn**	**Sn**	**08 38 24.6**	**-1.2**
	62nm,0.3s,baz=38,slow=19,SNR=7.9								
COEN	**Coen**	**9.64**	**218**	*e*Pn		**Pn**	**Pn**	**08 39 04.1**	**-1.3**
COEN	**Coen**	**9.64**	**218**	P		**Pn**	**Pn**	**08 39 04.3**	**-1.1**
	baz=9.4,SNR=8.7								
HNR	**Honiara**	**11.06**	**107**	Pn		**Pn**	**Pn**	**08 39 24.6**	**-0.3**
HNR	**Honiara**	**11.06**	**107**	LR		LR	LR	08 42 46.2	
	comp=Z,138nm,18.1s,baz=252,slow=32								
MTSU	**Mount Surprise**	**12.67**	**202**	P		**Pn**	**Pn**	**08 39 47.0**	**+0.1**
	baz=12,SNR=7.4								
QIS	**Mount Isa**	**16.95**	**212**	P		**Pn**	**Pn**	**08 40 42.1**	**-0.7**
	baz=17,SNR=5.9								
KDU	**Kakadu**	**17.68**	**248**	P		**Pn**	**Pn**	**08 40 51.9**	**0.0**
	baz=18,SNR=5.8								
MTN	**Manton Dam**	**18.97**	**249**	P		**Pn**	**Pn**	**08 41 07.5**	**-0.1**
	baz=19,SNR=8.4								
WRAB	**Tennant Creek**	**19.79**	**225**	*e*P		**P**	**P**	**08 41 14.4**	**-1.0**
	34nm,0.6s								
WRA	**Warramunga Arr**	**19.80**	**225**	P		**P**	**P**	**08 41 14.9**	**-0.6**
WRA					pP	**pP**	**pP**	**08 41 28.6**	**+1.1**
WRA					PcP	**PcP**	**PcP**	**08 45 32.7**	**+0.7**
WRA	**Warramunga Arr**	**19.80**	**225**	P		**P**	**P**	**08 41 14.9**	**-0.6**
	0.7nm,0.3s,baz=52,slow=11,SNR=100								
WRA					pP	**pP**	**pP**	**08 41 28.6**	**+1.1**
	1.1nm,0.3s,baz=51,slow=11,SNR=8.4								
WRA					PcP	**PcP**	**PcP**	**08 45 32.7**	**+0.7**
	0.0nm,0.3s,baz=42,slow=2.1,SNR=4.8								
RMQ	**Roma**	**20.05**	**181**	P		**P**	**P**	**08 41 19.2**	**+1.0**
	baz=20,SNR=5.5								
QLP	**Quilpie**	**20.70**	**193**	P		**P**	**P**	**08 41 25.9**	**+0.8**
	baz=20,SNR=20								
KNRA	**Kununurra**	**22.11**	**243**	P		**P**	**P**	**08 41 39.4**	**-0.9**
	baz=22,SNR=5.2								
AS31	**Alice Springs**	**22.68**	**219**	*e*P		**P**	**P**	**08 41 45.8**	**-0.6**
ASAR	**Alice Springs**	**22.68**	**219**	P		**P**	**P**	**08 41 46.0**	**-0.5**
ASAR					pP	**pP**	**pP**	**08 41 59.1**	**+0.5**
ASAR					S	**S**	**S**	**08 45 51.7**	**+0.6**
ASAR	**Alice Springs**	**22.68**	**219**	P		**P**	**P**	**08 41 46.0**	**-0.5**
	5.6nm,0.4s,baz=55,slow=9.2,SNR=196								
ASAR					pP	**pP**	**pP**	**08 41 59.1**	**+0.5**
	7.5nm,0.8s,baz=58,slow=9.6,SNR=6.5								
ASAR					S	**S**	**S**	**08 45 51.7**	**+0.6**
	0.3nm,0.7s,baz=36,slow=26,SNR=4.5								
DZM	**Mont Dzumac**	**22.84**	**135**	P		**P**	**P**	**08 41 47.8**	**-0.5**
DZM	**Mont Dzumac**	**22.84**	**135**	P		**P**	**P**	**08 41 47.8**	**-0.5**
	5.8nm,0.5s,baz=322,slow=17,SNR=15								
FITZ	**Fitzroy Crossi**	**25.81**	**241**	P		**P**	**P**	**08 42 15.8**	**+0.1**
FITZ					pP	**pP**	**pP**	**08 42 29.6**	**+0.5**
FITZ	**Fitzroy Crossi**	**25.81**	**241**	P		**P**	**P**	**08 42 15.8**	**+0.1**
	14nm,0.5s,baz=75,slow=7.7,SNR=43								
FITZ					pP	**pP**	**pP**	**08 42 29.6**	**+0.5**
	9.6nm,0.6s,baz=70,slow=7.6,SNR=4.3								
FITZ	**Fitzroy Crossi**	**25.81**	**241**	P		**P**	**P**	**08 42 20.0**	**+4.3**
	baz=26,SNR=12								
STKA	**Stephens Creek**	**26.40**	**195**	P		**P**	**P**	**08 42 21.7**	**+0.8**
STKA	**Stephens Creek**	**26.40**	**195**	P		**P**	**P**	**08 42 21.7**	**+0.8**
	2.5nm,0.8s,baz=12,slow=12,SNR=11								
STKA	**Stephens Creek**	**26.40**	**195**	P		**P**	**P**	**08 42 21.9**	**+1.0**
	baz=26,SNR=6.2								
MEEK	**Meekatharra**	**35.46**	**232**	P		**P**	**P**	**08 43 41.0**	**+0.2**
	baz=35,SNR=8.2								
RAR	**Rarotonga**	**51.47**	**112**	LR		LR	LR	09 05 05.2	
	comp=Z,92nm,18.5s,baz=270,slow=33								
PETK	**Petropavlovsk-**	**59.64**	**6**	P		**P**	**P**	**08 46 48.8**	**+1.0**
PETK					pP	**pP**	**pP**	**08 47 00.8**	**-1.6**
PETK	**Petropavlovsk-**	**59.64**	**6**	P		**P**	**P**	**08 46 48.8**	**+1.0**
	3.3nm,0.6s,baz=175,slow=8.3,SNR=10								
PETK					pP	**pP**	**pP**	**08 47 00.8**	**-1.6**
	2.7nm,0.5s,baz=180,slow=9.6,SNR=6.1								
VNDA	**Vanda**	**71.47**	**177**	*e*P		**P**	**P**	**08 48 04.2**	**+0.4**
	1.6nm,0.6s								
MKAR	**Makanchi Array**	**79.16**	**320**	P		**P**	**P**	**08 48 47.9**	**-0.7**
MKAR	**Makanchi Array**	**79.16**	**320**	P		**P**	**P**	**08 48 47.9**	**-0.7**
	0.2nm,0.5s,baz=96,slow=9.8,SNR=4.5								
ILAR	**Eielson Array**	**84.92**	**23**	P		**P**	**P**	**08 49 17.4**	**-0.9**
ILAR					pP	**pP**	**pP**	**08 49 34.5**	**+1.0**
ILAR	**Eielson Array**	**84.92**	**23**	P		**P**	**P**	**08 49 17.4**	**-0.9**
	0.7nm,0.6s,baz=247,slow=4.7,SNR=19								
ILAR					pP	**pP**	**pP**	**08 49 34.5**	**+1.0**
	0.5nm,0.9s,baz=248,slow=6.4,SNR=2.6								
GERES	**GERESS Array B**	**123.41**	**326**	PKP		**PKPdf**	**PKPdf**	**08 55 40.0**	**-0.8**
GERES	**GERESS Array B**	**123.41**	**326**	PKP		**PKPdf**	**PKPdf**	**08 55 40.0**	**-0.8**
	0.6nm,0.5s,baz=71,slow=4.5,SNR=4.5								
LPAZ	**La Paz**	**136.75**	**122**	PKP		**PKPdf**	**PKPdf**	**08 56 07.3**	**-0.3**
LPAZ	**La Paz**	**136.75**	**122**	PKP		**PKPdf**	**PKPdf**	**08 56 07.3**	**-0.3**
	1.1nm,0.8s,baz=256,slow=1.8,SNR=4.5								
TORD	**Torodi Ar. Bea**	**147.31**	**284**	PKPbc		**PKPbc**	**PKPbc**	**08 56 27.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**147.31**	**284**	PKPbc		**PKPbc**	**PKPbc**	**08 56 27.7**	**-0.3**
	1.4nm,0.3s,baz=72,slow=2.6,SNR=37								
BDFB	**Brasilia**	**152.29**	**142**	PKPbc		**PKPbc**	**PKPbc**	**08 56 40.7**	**+0.3**
BDFB				PKPab		**PKPab**	**PKPab**	**08 56 50.9**	**+0.6**
BDFB	**Brasilia**	**152.29**	**142**	PKPbc		**PKPbc**	**PKPbc**	**08 56 40.7**	**+0.3**
	3.7nm,0.6s,baz=11,slow=1.7,SNR=5.4								
BDFB				PKPab		**PKPab**	**PKPab**	**08 56 50.9**	**+0.6**
	1.8nm,0.5s,baz=180,slow=5.9,SNR=3.5								

IDC 17 08:50:50.9±27.0, 23°.27S×173°.51W, h0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/18, mbtmp4.1/4, Error ellipse: s-maj=500.5km s-min=145.1km az=79.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.44**	**267**	P		P	P	08 58 06.6	+0.4
	3.7nm,0.4s,baz=86,slow=13,SNR=6.4								
STKA	**Stephens Creek**	**40.47**	**248**	P		P	P	08 58 31.3	-0.2
	0.9nm,0.4s,baz=87,slow=9.4,SNR=6.2								
ASAR	**Alice Springs**	**48.00**	**258**	P		P	P	08 59 31.7	-0.3
	0.4nm,0.3s,baz=94,slow=7.8,SNR=12								
WRA	**Warramunga Arr**	**48.39**	**263**	P		P	P	08 59 34.6	-0.4
	1.3nm,0.3s,baz=103,slow=8.2,SNR=40								

NIED ***17*** *08:51:00, 39°.70N×141°.80E, h59km, Mw4.0 Best double couple: Mo1.17000×10^15 NP1:φs13.00000°, δ69.00000°, λ81.00000°. NP2:φs217.00000°, δ22.00000°, λ112.00000°.*

ISCJB ***17*** *08:51:29.0±0.4, 39°.75N±0°.03×141°.84E±0°.06, h67km±3km, mb3.9/17, Error ellipse: s-maj=8.4km s-min=4.5km az=13.8*

IDC ***17*** *08:51:29.8±0.9, 39°.70N×141°.67E, h59km±6km, mb3.7/16, mb1 3.9/18, mb1mx3.8/29, mbtmp3.8/18, MS3.3/1, Ms1 3.3/1, ms1mx2.4/37, Error ellipse: s-maj=19.2km s-min=12.1km az=102.0*

JMA ***17*** *08:51:30.3±0.1, 39°.76N×141°.83E, h58km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs17.00000°, δ64.00000°, λ90.00000°. NP2:φs197.00000°, δ26.00000°, λ90.00000°. Principal axes: T Plg71.0000°, Azm287.0000°; N Plg0.0000°, Azm17.0000°; P Plg19.0000°, Azm107.0000°;*

JMA Felt II J1.

ISC 17 08:51:29.8±0.6, 39°.73N±0°.03×141°.81E±0°.06, h58km±4km, n35, σ1s03/50, mb4.1/17, 3C-8D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.16**	**176**	↑P		**P**	**Pn**	**08 51 39.6**	**+0.8**
MIYJ				S		**Sn**	**Sn**	**08 51 46.0**	**+0.7**
JTH	**Tanohata**	**0.21**	**12**	↑P		**P**	**Pn**	**08 51 39.6**	**+0.5**
JTH				S		**Sn**	**Sn**	**08 51 46.0**	**+0.2**
JKZ	**Kuzumaki**	**0.44**	**305**	↓P		**P**	**Pn**	**08 51 41.8**	**+0.7**
JKZ				S		**Sn**	**Sn**	**08 51 49.7**	**+0.4**
JOM	**Ohasama**	**0.47**	**237**	↓P		**P**	**Pn**	**08 51 42.1**	**+0.8**
JOM				*e*S		**Sn**	**Sn**	**08 51 50.6**	**+0.9**
JANG	**Nango**	**0.68**	**341**	↓P		**P**	**Pn**	**08 51 43.7**	**0.0**
JANG				S		**Sn**	**Sn**	**08 51 53.4**	**-0.4**
JMK	**Ichinoseki**	**0.90**	**210**	↓P		**P**	**Pn**	**08 51 47.2**	**+0.7**
JMK				*e*S		**Sn**	**Sn**	**08 52 00.0**	**+1.2**
JRG	**Rokugo**	**0.97**	**250**	↓P		**P**	**Pn**	**08 51 47.9**	**+0.6**
JRG				*e*S		**Sn**	**Sn**	**08 52 01.0**	**+0.8**
JAH	**Hinai**	**1.01**	**297**	↓P		**P**	**Pn**	**08 51 48.4**	**+0.6**
JAH				*e*S		**Sn**	**Sn**	**08 52 01.6**	**+0.4**
JTM	**Tenmabayashi**	**1.20**	**332**	↓P		**P**	**Pn**	**08 51 50.5**	**+0.2**
JTM				*e*S		**Sn**	**Sn**	**08 52 05.6**	**0.0**
JIO	**Ouri**	**1.33**	**196**	↑P		**P**	**Pn**	**08 51 52.7**	**+0.6**
JIO				*e*S		**Sn**	**Sn**	**08 52 08.9**	**+0.2**
JYK	**Kaneyama**	**1.39**	**235**	↓P		**P**	**Pn**	**08 51 53.8**	**+0.9**
JYK				*e*S		**Sn**	**Sn**	**08 52 11.3**	**+1.1**
MAT	**Matsushiro**	**4.26**	**223**	P		P	Pn	08 52 35.6	+3.4
MAT				*e*S		**Sn**	**Sn**	**08 53 23.2**	**+2.5**
ASAJ	**Asahikawa**	**4.42**	**7**	P		**P**	**Pn**	**08 52 35.1**	**+0.8**
	3.9nm,0.3s,baz=210,slow=14,SNR=15								
ASAJ				S		**Sn**	**Sn**	**08 53 26.6**	**+2.2**
	3.2nm,0.3s,baz=198,slow=20,SNR=3.1								
JHJ	**Hachijo jima 2**	**6.80**	**194**	P		**P**	**Pn**	**08 53 07.0**	**+0.1**
	4.7nm,0.3s,baz=262,slow=22,SNR=6.6								
JHJ				S		**Sn**	**Sn**	**08 54 18.9**	**-4.0**
	4.6nm,0.3s,baz=49,slow=19,SNR=3.9								
USRK	**Ussuriysk Arra**	**8.56**	**305**	P		**P**	**Pn**	**08 53 33.0**	**+2.0**
	0.4nm,0.3s,baz=112,slow=14,SNR=18								
USRK					LR	LR	LR	08 56 36.6	
	comp=Z,188nm,19.1s,baz=93,slow=36								
JNU	**Nakatsue**	**11.00**	**237**	P		P	Pn	08 54 08.8	+4.4
	0.1nm,0.3s,baz=25,slow=19,SNR=2.9								
KSRS	**Korea Array**	**11.10**	**263**	P		P	Pn	08 54 10.0	+4.3
	0.5nm,0.3s,baz=69,slow=14,SNR=7.7								
SONM	**Songino Array**	**26.63**	**299**	P		**P**	**P**	**08 57 02.5**	**-0.4**
	1.1nm,0.8s,baz=88,slow=7.6,SNR=5.2								
ZALV	**Zalesovo Beam**	**40.37**	**310**	P		**P**	**P**	**08 59 01.8**	**+0.1**
	6.6nm,0.5s,baz=91,slow=8.0,SNR=30								
ZALV					pP	**pP**	**pP**	**08 59 16.0**	**-0.4**
	1.5nm,0.5s,baz=95,slow=9.4,SNR=2.6								
ZALV					sP	**sP**	**sP**	**08 59 22.9**	**-0.4**
	1.5nm,0.4s,baz=88,slow=9.2,SNR=2.2								
MKAR	**Makanchi Array**	**43.00**	**300**	P		**P**	**P**	**08 59 23.0**	**-0.3**
	3.0nm,0.6s,baz=88,slow=11,SNR=26								
MKAR					pP	**pP**	**pP**	**08 59 37.5**	**-0.7**
	0.7nm,0.7s,baz=92,slow=12,SNR=3.0								
MKAR					sP	**sP**	**sP**	**08 59 44.4**	**-0.5**
	1.2nm,0.8s,baz=83,slow=12,SNR=2.8								
ILAR	**Eielson Array**	**47.07**	**34**	P		**P**	**P**	**08 59 56.0**	**+0.7**
	0.6nm,0.5s,baz=268,slow=5.9,SNR=12								
INK	**Inuvik**	**51.85**	**28**	P		**P**	**P**	**09 00 32.4**	**+0.8**
	1.0nm,0.8s,baz=249,slow=5.0,SNR=3.6								
AKTO	**Aktyubinsk**	**57.12**	**311**	P		**P**	**P**	**09 01 09.8**	**-0.4**
	2.3nm,0.8s,baz=50,slow=7.9,SNR=8.2								
WRA	**Warramunga Arr**	**59.77**	**188**	P		**P**	**P**	**09 01 28.1**	**-0.8**
	0.9nm,0.7s,baz=5.8,slow=7.0,SNR=8.3								
ARCES	**ARCESS Array B**	**61.59**	**339**	P		**P**	**P**	**09 01 40.2**	**-0.4**
	1.4nm,0.7s,baz=62,slow=8.4,SNR=5.6								
ASAR	**Alice Springs**	**63.50**	**188**	P		**P**	**P**	**09 01 53.6**	**-0.2**
	0.5nm,0.6s,baz=4.1,slow=6.4,SNR=5.9								
JOF	**Joensuu**	**63.74**	**331**	*e*P		**P**	**P**	**09 01 54.7**	**-0.3**
	1.5nm,0.5s								
FINES	**FINESS Array B**	**66.58**	**332**	P		**P**	**P**	**09 02 13.0**	**-0.4**
	5.0nm,0.7s,baz=88,slow=5.9,SNR=5.3								
KBZ	**Khabaz**	**69.39**	**310**	P		**P**	**P**	**09 02 30.7**	**-0.7**
	1.3nm,0.5s,baz=14,slow=2.7,SNR=3.9								
HFS	**Hagfors**	**71.76**	**336**	P		**P**	**P**	**09 02 44.3**	**-1.2**
	1.0nm,0.3s,baz=46,slow=6.4,SNR=8.7								
NB2	**NORSAR Subarra**	**71.82**	**337**	P		**P**	**P**	**09 02 45.7**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=37,slow=6.2								
NOA	**NORSAR Array B**	**71.82**	**337**	P		**P**	**P**	**09 02 45.7**	**-0.2**
	comp=Z,1.1nm,0.6s,baz=38,slow=6.1,SNR=7.3								
AKASG	**Malin Array Be**	**72.36**	**322**	P		**P**	**P**	**09 02 48.8**	**-0.5**
	comp=Z,1.5nm,0.4s,baz=44,slow=6.1,SNR=6.0								
PDAR	**Pinedale Array**	**75.56**	**46**	P		**P**	**P**	**09 03 09.1**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=300,slow=3.3,SNR=4.0								
TXAR	**Lajitas Array**	**88.23**	**53**	P		**P**	**P**	**09 04 15.8**	**+0.8**
	comp=Z,0.1nm,0.5s,baz=260,slow=5.2,SNR=5.5								

AUST ***17*** *08:55:47.7±10.0, 7°.48N×125°.97E, h0km, Error ellipse: s-maj=3.6km s-min=1.7km az=236.0*

IDC ***17*** *08:55:49.2±0.5, 7°.45N×126°.31E, h0km, mb4.3/21, mb1 4.4/22, mb1mx4.3/30, mbtmp4.3/22, ML3.9/1, MS4.0/19, Ms1 4.0/19, ms1mx3.8/36, Error ellipse: s-maj=15.0km s-min=10.6km az=96.0*

ISCJB ***17*** *08:55:49.1±1.1, 7°.43N±0°.03×126°.37E±0°.04, h9km±6km, mb4.4/30, MS4.0/18, Error ellipse: s-maj=7.2km s-min=4.0km az=162.6*

NEIC ***17*** *08:55:50.9±0.2, 7°.42N×126°.26E, h10km, mb4.7/6, Error ellipse: s-maj=7.6km s-min=4.9km az=85.0*

NEIC Felt [III PIVS] at Compostela and Nabunturan; [II PIVS] at Tagum and [I PIVS] at Mati.

MAN ***17*** *08:55:51, 7°.34N×126°.23E, h13km, mb4.9, ML3.9, MS4.0*

MAN Intensity III - Nabunturan.

DJA ***17*** *08:56:06.3±0.8, 7°N±6°×12°6E±°, h10km, M4.9/10, mB5.4/7, mb4.9/10, MLv5.0/3, Mw(mB)4.8/7*

ISC 17 08:55:50.8±1.5, 7°.44N±0°.03×126°.22E±0°.05, h7km±9km, n114, σ1s09/109, mb4.3/30, MS4.0/18, 5C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.49**	**176**	*e*P		**Pg**	**Pg**	**08 55 60.0**	**-0.4**
MATI				*e*S		**Sb**	**Sb**	**08 56 12.3**	**+3.0**
DAV	**Davao City (W)**	**0.74**	**240**	*e*Pg		**Pg**	**Pg**	**08 56 05.1**	**+0.1**
DAV				Lg		Lg	Lg	08 56 20.1	
DAV	**Davao City (W)**	**0.74**	**240**	P		**Pg**	**Pg**	**08 56 05.1**	**+0.1**
DAV	**Davao City (W)**	**0.74**	**240**	Pg		**Pg**	**Pg**	**08 56 05.2**	**+0.1**
	401nm,0.3s,baz=45,slow=1.9,SNR=124								
DAV				Lg		Lg	Lg	08 56 20.1	
	914nm,0.3s,baz=60,slow=20,SNR=14								
DMPH	**Davao City--Mi**	**0.79**	**243**	*e*P		**Pn**	**Pn**	**08 56 07.7**	**-0.7**
DMPH				*e*S		**Sn**	**Sn**	**08 56 21.4**	**+0.9**
BUKP	**Musuan**	**1.23**	**291**	*e*P		**Pg**	**Pg**	**08 56 13.9**	**-0.5**
BUKP				*e*S		Sn	Sn	08 56 41.0	+10
BUTP	**Butuan**	**1.63**	**339**	*e*P		**Pb**	**Pb**	**08 56 20.6**	**-0.6**
CGP	**Cagayan de Oro**	**1.82**	**304**	↓*e*P		**Pn**	**Pn**	**08 56 22.1**	**-0.4**
CGP				*i* S		**Sb**	**Sb**	**08 56 47.5**	**+0.1**
CTBH	**Cotabato--PC H**	**1.97**	**264**	↑*e*P		**Pn**	**Pn**	**08 56 24.7**	**+0.1**
PAGZ	**Pagadian**	**2.84**	**278**	*e*P		**Pn**	**Pn**	**08 56 35.4**	**-1.3**
MSLP	**Maasin**	**3.00**	**333**	*e*P		**Pn**	**Pn**	**08 56 40.5**	**+1.8**
DCPH	**Dipolog City**	**3.06**	**292**	*e*P		**Pn**	**Pn**	**08 56 42.9**	**-2.7**
SNPH	**Sibulan**	**3.51**	**303**	↑*e*P		Pn	Pn	08 56 34.0	-12
LLP	**Lapu-Lapu**	**3.62**	**322**	↑*e*P		**Pn**	**Pn**	**08 56 47.8**	**+0.4**
PLP	**Palo**	**3.90**	**342**	↓*e*P		**Pn**	**Pn**	**08 56 51.5**	**+0.4**
PLP				*e*S		**Sn**	**Sn**	**08 57 38.2**	**+1.0**
GUIM	**Jordan**	**4.79**	**312**	*e*P		**Pn**	**Pn**	**08 57 04.9**	**+1.6**
CNP	**Catarman**	**5.27**	**343**	*e*P		**Pn**	**Pn**	**08 57 11.7**	**+1.8**
RCP	**Roxas**	**5.34**	**320**	↑*e*P		**Pn**	**Pn**	**08 57 11.9**	**+0.9**
GAMI	**Galela, Maluku**	**5.78**	**164**	P		P	Pn	08 57 22.3	+5.3
TNTI	**Ternate**	**6.72**	**170**	P		P	**Pn**	**08 57 31.7**	**+1.7**
	351nm,0.9s,4µm1.1nm								
TNTI				S			**Sn**	**08 58 46.8**	**-0.1**
	351nm,0.9s,4µm1.1nm								
LBMI	**Labuha**	**8.13**	**171**	S			**Sn**	**08 59 19.4**	**-2.1**
MRSI	**Marisa**	**8.13**	**212**	P			**Pn**	**08 57 49.4**	**+0.1**
	71nm,1.4s,834nm0.5nm								
MRSI				S			**Sn**	**08 59 19.2**	**-2.3**
	71nm,1.4s,834nm0.5nm								
LUWI	**Luwuk**	**9.10**	**202**	P			Pn	08 58 05.6	+2.9
	206nm,1.1s,2µm								
LUWI	**Luwuk**	**9.10**	**202**	P			Pn	08 58 15.5	+13
	baz=9.1,SNR=3.5								
SKSI	**Soroako, Sulaw**	**11.04**	**206**	P			**Pn**	**08 58 30.9**	**+1.6**
	37nm,1.2s								
TTSI	**Tana Toraja**	**12.22**	**212**	P			Pn	08 58 48.9	+3.5
	39nm,1.5s								
SPSI	**Sidrap Palu**	**13.03**	**210**	P			Pn	08 59 00.2	+3.7
	24nm,1.4s,1µm								
BAKI	**Biak**	**13.07**	**131**	P			**P**	**08 59 07.2**	**-0.2**
	82nm,1.2s,1µm								
KAPI	**Kappang**	**13.96**	**208**	Pn			**Pn**	**08 59 08.8**	**-0.3**
KAPI	**Kappang**	**13.96**	**208**	Pn			**Pn**	**08 59 08

	comp=Z,3.5nm,0.9s,baz=124,slow=7.2,SNR=9.5								
BVAR					LR		LR	09 34 03.3	
	comp=Z,100nm,20.3s,baz=298,slow=36								
BRVK	**Borovoye**	**64.04**	**326**	*eP*		**P**		**09 06 26.3**	**+1.2**
	comp=Z,13nm,1.4s								
ABKAR	**Akbulak array**	**68.99**	**320**	*eP*		**P**		**09 06 56.7**	**-0.2**
AKTO	**Aktyubinsk**	**70.47**	**321**	LR		LR		09 40 40.0	
	comp=Z,92nm,18.5s,baz=283,slow=38								
RAYN	**Ar Rayn**	**78.59**	**292**	*eP*		**P**		**09 07 53.5**	**-0.3**
SML	**Sawmill**	**81.34**	**29**	*eP*		**P**		**09 08 07.6**	**-0.3**
	comp=Z,0.8nm,0.7s								
ILAR	**Eielson Array**	**81.99**	**26**	P		**P**		**09 08 10.6**	**-0.7**
ILAR	**Eielson Array**	**81.99**	**26**	P		**P**		**09 08 10.6**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=239,slow=4.8,SNR=7.6								
JOF	**Joensuu**	**85.67**	**333**	*ep*		**P**		**09 08 30.0**	**-0.1**
	comp=Z,3.6nm,0.5s								
ARCES	**ARCESS Array B**	**86.81**	**340**	P		**P**		**09 08 35.4**	**-0.2**
ARCES	**ARCESS Array B**	**86.81**	**340**	P		**P**		**09 08 35.4**	**-0.2**
	comp=Z,2.0nm,0.8s,baz=77,slow=4.7,SNR=3.2								
ARCES					LR		LR	09 52 05.4	
	comp=Z,110nm,19.7s,baz=252,slow=39								
MAW	**Mawson**	**87.04**	**200**	LR		LR		09 43 11.0	
	comp=Z,121nm,18.5s,baz=261,slow=33								
VNDA	**Vanda**	**87.15**	**173**	P		**P**		**09 08 36.5**	**-0.6**
VNDA	**Vanda**	**87.15**	**173**	P		**P**		**09 08 36.5**	**-0.6**
	comp=Z,1.4nm,0.8s,baz=320,slow=7.1,SNR=6.1								
BRTR	**Keskin Array B**	**87.28**	**310**	P		**P**		**09 08 38.5**	**-0.3**
BRTR	**Keskin Array B**	**87.28**	**310**	P		**P**		**09 08 38.5**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=122,slow=6.3,SNR=3.7								
FINES	**FINESS Array B**	**88.34**	**332**	P		**P**		**09 08 43.0**	**-0.1**
FINES	**FINESS Array B**	**88.34**	**332**	P		**P**		**09 08 43.0**	**-0.1**
	comp=Z,1.7nm,0.5s,baz=134,slow=5.5,SNR=7.5								
FINES					LR		LR	09 52 37.0	
	comp=Z,106nm,19.4s,baz=81,slow=39								
AKASG	**Malin Array Be**	**88.71**	**321**	P		**P**		**09 08 43.9**	**-1.2**
AKASG	**Malin Array Be**	**88.71**	**321**	P		**P**		**09 08 43.9**	**-1.2**
	comp=Z,0.7nm,0.4s,baz=63,slow=6.3,SNR=5.6								
NOA	**NORSAR Array B**	**95.26**	**334**	P		**P**		**09 09 14.8**	**-0.5**
NOA	**NORSAR Array B**	**95.26**	**334**	P		**P**		**09 09 14.8**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=63,slow=4.9,SNR=2.5								
NOA					LR		LR	09 56 36.7	
	comp=Z,98nm,18.8s,baz=90,slow=38								
VYHS	**Vyhne**	**95.80**	**320**	*eP*		**P**		**09 09 17.9**	**-0.1**
VYHS				*e*				09 09 31.0	
YKA	**Yellowknife Ar**	**96.34**	**24**	P		**P**		**09 09 20.9**	**+0.8**
YKA	**Yellowknife Ar**	**96.34**	**24**	P		**P**		**09 09 20.9**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=301,slow=4.4,SNR=3.2								
TXAR	**Lajitas Array**	**119.68**	**50**	PKP		**PKPdf**		**09 14 42.5**	**+0.1**
TXAR	**Lajitas Array**	**119.68**	**50**	PKP		**PKPdf**		**09 14 42.5**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=3.5,slow=1.6,SNR=3.5								
TORD	**Torodi Ar. Bea**	**121.23**	**290**	PKP		**PKPdf**		**09 14 45.4**	**-0.2**
TORD	**Torodi Ar. Bea**	**121.23**	**290**	PKP		**PKPdf**		**09 14 45.4**	**-0.2**
	comp=Z,1.4nm,1.1s,baz=180,slow=5.3,SNR=4.4								

*ISCJB **17** 08:56:32.2±0.7, 50.˚23N±0.˚05×19.˚03E±0.˚04, h0km, Error ellipse: s-maj=7.8km s-min=4.1km az=1.6*
*IPEC **17** 08:56:32.6±0.4, 50.˚26N×19.˚11E, h1km±1km, ML1.5/3, Error ellipse: s-maj=2.8km s-min=2.5km az=150.0*
*PRU **17** 08:56:33.3, 50.˚27N×19.˚06E, h0km*
*CSEM **17** 08:56:33.4±0.2, 50.˚19N×19.˚08E, h2km, ML2.8/4, Error ellipse: s-maj=6.0km s-min=2.1km az=169.0*

ISC 17 08:56:33.2±1.0, 50.˚20N±0.˚06×19.˚07E±0.˚03, h0km, n10, σ0s61/20, Poland

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
OJC	**Ojcow**	**0.47**	**87**	*ePg*		**Pg**	**08 56 42.3**	**+0.2**
OJC				*eSg*		**Sg**	**08 56 48.5**	**+0.3**
OJC	**Ojcow**	**0.47**	**87**	*ePg*		**Pg**	**08 56 42.3**	**+0.2**
OJC				*eSg*		**Sg**	**08 56 48.5**	**+0.3**
MORC	**Moravsky Berou**	**1.07**	**247**	*ePg*		**Pg**	**08 56 54.1**	**+0.3**
	baz=64							
MORC				*eSg*		**Sg**	**08 57 07.7**	**0.0**
	8.6nm,0.2s,baz=64							
VYHS	**Vyhne**	**1.71**	**185**	*ePN*		**Pn**	**08 57 03.9**	**-0.5**
VYHS				*eSN*		**Sn**	**08 57 26.2**	**-0.8**
VYHS	**Vyhne**	**1.71**	**185**	*ePn*		**Pn**	**08 57 03.9**	**-0.5**
VYHS				*eSn*		**Sn**	**08 57 26.2**	**-0.8**
DPC	**Dobruska-Polom**	**1.77**	**276**	*ePG*		**Pn**	**08 57 04.4**	**-0.8**
DPC				*eSG*		**Sg**	**08 57 29.6**	**-0.5**
	comp=Z,41nm,0.5s							
DPC	**Dobruska-Polom**	**1.77**	**276**	Pg		**Pn**	**08 57 04.4**	**-0.8**
DPC				Sg		**Sg**	**08 57 29.6**	**-0.5**
	41nm,0.5s							
VRAC	**Vranov**	**1.84**	**242**	*ePn*		**Pn**	**08 57 06.0**	**-0.1**
	baz=59							
VRAC				*eSg*		**Sb**	**08 57 31.9**	**+0.6**
	4.2nm,0.3s,baz=59							
KSP	**Ksiaz**	**1.89**	**291**	*ePg*		**Pg**	**08 57 09.8**	**+0.4**
KSP				*eSg*		**Sg**	**08 57 33.5**	**-0.3**
KRUC	**Moravsky**	**2.08**	**238**	*ePn*		**Pn**	**08 57 09.6**	**+0.2**
	baz=55							
KRUC				*eSn*		**Sn**	**08 57 37.4**	**+1.4**
	2.2nm,0.2s,baz=55							

*ISCJB **17** 09:00:55.5±0.4, 36.˚57N±0.˚05×100.˚00E±0.˚05, h10km, mb4.1/17, Error ellipse: s-maj=8.0km s-min=5.2km az=13.8*
*IDC **17** 09:00:55.6±0.6, 36.˚51N×99.˚95E, h0km, mb4.1/19, mb1 4.2/20, mb1mx4.1/32, mbtmp4.1/20, ML4.1/1, Error ellipse: s-maj=20.9km s-min=13.0km az=50.0*
*BJI **17** 09:00:58.5, 36.˚54N×99.˚97E, h7km, mB4.3/2, mb4.2/7, ML4.2/11, MS3.7/8, Ms7 3.7/4*

ISC 17 09:00:57.5±0.6, 36.˚52N±0.˚05×99.˚92E±0.˚05, h10km, n31, σ1s39/37, mb4.1/17, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GTA	**Gaotai**	**2.88**	**358**	Pn		**Pb**	**09 01 47.3**	**-1.8**
GTA				Pg		**Pg**	**09 01 50.4**	**-2.3**
GTA				Sn		**Sn**	**09 02 21.0**	**+2.6**
GTA				Sg		**Sb**	**09 02 25.8**	**+1.4**
GTA				smax		smax		
	comp=N,170nm,0.9s							
GTA				smax		smax		
	comp=E,290nm,0.8s							
LZH	**Lanzhou**	**3.20**	**97**	Pn		**Pn**	**09 01 50.3**	**+2.4**
LZH				Pg		**Pg**	**09 01 59.4**	**+0.7**
LZH				Sn		**Sb**	**09 02 30.3**	**-3.2**
LZH				Sg		**Sg**	**09 02 37.9**	**-2.3**
LZH				smax		smax		
	comp=N,140nm,0.7s							
LZH				smax		smax		
	comp=E,220nm,0.9s							
LZH				LR		LR		
	comp=N,750nm,8.5s							
LZH				LR		LR		
	comp=E,680nm,6.6s							
LZH				LR		LR		
	comp=Z,800nm,7.8s							
XAN	**Xi'an**	**7.76**	**106**	Pn		**Pn**	**09 02 49.8**	**-0.8**
XAN				Sg		Sg	09 04 59.0	-7.6
XAN				LR		LR		
	comp=N,290nm,20.8s							
XAN				LR		LR		
	comp=E,140nm,18.5s							
BTO	**Baotou**	**8.90**	**60**	*eP*		**Pn**	**09 03 06.0**	**-0.1**
HHC	**Hu-ho-hao-te**	**10.07**	**61**	*eP*		**Pn**	**09 03 22.8**	**+0.6**
HHC				PP		**PnPn**	**09 03 30.8**	**+1.0**
HHC				S		**Sn**	**09 05 16.8**	**+1.5**
HHC				SS		**SnSn**	**09 05 30.4**	**+3.5**
HHC				LR		LR		
	comp=N,330nm,8.4s							
HHC				LR		LR		
	comp=E,640nm,8.9s							
HHC				LR		LR		
	comp=Z,400nm,10.0s							
SONM	**Songino Array**	**12.27**	**21**	Pn		**Pn**	**09 03 53.3**	**+0.9**
	comp=Z,1.0nm,0.3s,baz=204,slow=15,SNR=16							
SONM				Sn		Sn	09 06 01.9	-7.4
	comp=Z,0.4nm,0.3s,baz=186,slow=26,SNR=3.2							
SONM				Lg		Lg	09 07 20.3	
	baz=200,slow=29,SNR=2.9							
NJ2	**Nanjing**	**16.27**	**100**	*eP*		Pn	09 04 37.3	-8.7
NJ2				S		Sn	09 07 38.0	-8.5
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
NJ2				LR		LR		
	comp=N,340nm,23.4s							
NJ2				LR		LR		
	comp=E,240nm,12.5s							
NJ2				LR		LR		
	comp=Z,160nm,19.6s							
MKAR	**Makanchi Array**	**16.66**	**313**	Pn		**Pn**	**09 04 51.4**	**+0.4**
	comp=Z,1.0nm,0.3s,baz=112,slow=12,SNR=35							
MKAR				Sn		Sn	09 07 47.9	-8.2
	comp=Z,0.1nm,0.3s,baz=112,slow=27,SNR=7.8							
CMAR	**Chiang Mai Arr**	**18.02**	**183**	P		**P**	**09 05 10.1**	**+1.5**
	baz=358,slow=10,SNR=8.9							
ZALV	**Zalesovo Beam**	**20.34**	**334**	P		**P**	**09 05 33.7**	**0.0**
	comp=Z,6.2nm,0.5s,baz=138,slow=12,SNR=27							
AAK	**Ala-Archa**	**20.49**	**295**	P		Pn	09 05 36.4	-1.4
	comp=Z,2.7nm,0.3s,baz=160,slow=5.1,SNR=5.0							
KURBB	**Kurchatov Arra**	**20.84**	**319**	P		**P**	**09 05 39.6**	**+0.5**
	comp=Z,19nm,0.9s,baz=125,slow=11,SNR=32							
KSRS	**Korea Array**	**22.36**	**79**	P		**P**	**09 05 56.5**	**+0.9**
	comp=Z,6.8nm,0.7s,baz=268,slow=8.7,SNR=30							
JOF	**Joensuu**	**48.60**	**325**	*ep*		**P**	**09 09 41.0**	**+0.2**
	comp=Z,2.3nm,0.5s							
ARCES	**ARCESS Array B**	**50.89**	**334**	P		**P**	**09 09 57.3**	**-0.9**
	comp=Z,1.8nm,0.7s,baz=80,slow=7.6,SNR=4.6							
FINES	**FINESS Array B**	**51.14**	**324**	P		**P**	**09 10 00.1**	**0.0**
	comp=Z,2.4nm,0.5s,baz=38,slow=9.6,SNR=4.4							
BRTR	**Keskin Array B**	**51.16**	**295**	P		**P**	**09 10 01.6**	**+0.7**
	comp=Z,2.9nm,0.6s,baz=102,slow=6.9,SNR=8.0							
HFS	**Hagfors**	**57.35**	**324**	P		**P**	**09 10 45.4**	**0.0**
	comp=Z,1.5nm,0.7s,baz=116,slow=13,SNR=3.5							
NB2	**NORSAR Subarra**	**58.23**	**325**	P		**P**	**09 10 50.9**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=70,slow=6.9							
NOA	**NORSAR Array B**	**58.23**	**325**	P		**P**	**09 10 51.0**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=72,slow=7.0,SNR=4.8							
FITZ	**Fitzroy Crossi**	**59.52**	**151**	P		**P**	**09 10 59.8**	**-1.1**
	comp=Z,2.3nm,0.8s,baz=349,slow=16,SNR=3.0							
WRA	**Warramunga Arr**	**64.90**	**144**	P		**P**	**09 11 36.7**	**-0.4**
	comp=Z,1.8nm,0.6s,baz=344,slow=6.9,SNR=15							
ILAR	**Eielson Array**	**66.46**	**25**	P		**P**	**09 11 45.6**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=294,slow=5.3,SNR=19							
ASAR	**Alice Springs**	**67.92**	**146**	P		**P**	**09 11 56.3**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=334,slow=6.5,SNR=9.5							
INK	**Inuvik**	**68.18**	**19**	P		**P**	**09 11 57.2**	**-0.2**
	comp=Z,1.2nm,0.8s,baz=302,slow=15,SNR=4.1							
KMBO	**Kilima Mbogo**	**69.01**	**252**	P		**P**	**09 12 04.4**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=56,slow=11,SNR=4.4							
ESDC	**Sonseca Array**	**76.84**	**310**	P		**P**	**09 12 49.4**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=28,slow=4.7,SNR=4.0							
YKA	**Yellowknife Ar**	**77.48**	**16**	P		**P**	**09 12 52.5**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=326,slow=5.5,SNR=4.1							
STKA	**Stephens Creek**	**78.44**	**145**	P		**P**	**09 12 58.0**	**-0.4**
	comp=Z,1.8nm,0.7s,baz=345,slow=7.4,SNR=5.3							
TORD	**Torodi Ar. Bea**	**88.76**	**285**	P		**P**	**09 13 51.1**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=38,slow=5.2,SNR=2.9							
BDFB	**Brasilia**	**144.73**	**298**	PKP		PKPbc	09 20 34.1	0.0
	comp=Z,3.7nm,0.7s,baz=135,slow=8.6,SNR=5.5							

IDC 17 09:01:52.1±8.6, 16.˚74S×175.˚24W, h266km±198km, mb3.3/4, mb1 3.4/5, mb1mx3.1/20, mbtmp3.3/5, Error ellipse: s-maj=179.1km s-min=35.1km az=68.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**4.37**	**50**	P		Pn	09 03 02.7	+1.6
	6.5nm,0.3s,baz=288,slow=3.2,SNR=12							
AFI				S			09 03 55.7	-0.4
	7.9nm,0.3s,baz=208,slow=21,SNR=8.6							
URZ	**Urewera**	**22.47**	**196**	P		P	09 06 28.9	-0.2
	4.5nm,0.6s,baz=37,slow=5.1,SNR=4.1							
STKA	**Stephens Creek**	**41.84**	**241**	P		P	09 09 16.6	0.0
	2.7nm,1.0s,baz=84,slow=7.4,SNR=3.0							
WRA	**Warramunga Arr**	**47.82**	**258**	P		P	09 10 03.5	-0.2
	0.5nm,0.8s,baz=95,slow=7.9,SNR=7.0							
ASAR	**Alice Springs**	**48.02**	**253**	P		P	09 10 05.0	-0.2
	1.8nm,0.5s,baz=88,slow=8.5,SNR=34							

*RSPR **17** 09:19:57.1, 19.˚54N×64.˚31W, h53km±11km, MD3.5/3*
*NEIC **17** 09:19:57.1, 19.˚54N×64.˚31W, h53km, MD3.5(RSPR), After RSPR.*

ISC 17 09:19:56.5±4.5, 19.˚5N±0.˚2×64.˚3W±0.˚2, h27km, n10, σ0s42/18, 9C, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TBVI	**Tortola**	**1.10**	**196**	*eP*		**Pn**	**09 20 15.9**	**-0.2**
TBVI				*eS*		**Sn**	**09 20 30.8**	**+0.4**
TBVI	**Tortola**	**1.10**	**196**	*eP*		**Pn**	**09 20 15.9**	**-0.2**
TBVI				*eS*		**Sn**	**09 20 30.8**	**+0.4**
TBVI	**Tortola**	**1.10**	**196**	*eP*		**Pn**	**09 20 15.9**	**-0.2**
TBVI				*eS*		**Sn**	**09 20 30.8**	**+0.4**
STVI	**Saint Thomas**	**1.28**	**209**	*eP*		**Pn**	**09 20 18.6**	**-0.1**
STVI	**Saint Thomas**	**1.28**	**209**	*eP*		**Pn**	**09 20 18.6**	**-0.1**
STVI				*eS*		**Sn**	**09 20 35.1**	**+0.2**
STVI	**Saint Thomas**	**1.28**	**209**	*eP*		**Pn**	**09 20 18.6**	**-0.1**
STVI				*eS*		**Sn**	**09 20 35.1**	**+0.2**
HUMP	**Col San Antoni**	**1.99**	**228**	*eP*		**Pn**	**09 20 27.9**	**-0.5**
HUMP	**Col San Antoni**	**1.99**	**228**	*eP*		**Pn**	**09 20 27.9**	**-0.5**
HUMP				*eS*		**Sn**	**09 20 51.8**	**-0.5**
HUMP	**Col San Antoni**	**1.99**	**228**	*eP*		**Pn**	**09 20 27.9**	**-0.5**
HUMP				*eS*		**Sn**	**09 20 51.8**	**-0.5**
CELP	**Cerrillos**	**2.58**	**238**	*ePn*		**Pn**	**09 20 37.2**	**+0.8**
CELP				*eSn*		**Sn**	**09 21 07.4**	**+0.5**

*IDC **17** 09:22:13.6±0.8, 37.˚83N×69.˚85E, h0km, mb4.0/17, mb1 4.2/22, mb1mx4.1/31, mbtmp4.1/22, ML4.4/6, MS3.9/4, Ms1 3.9/4, ms1mx3.2/35, Error ellipse: s-maj=17.1km s-min=11.3km az=164.0*
*ISCJB **17** 09:22:14.9±1.2, 38.˚00N±0.˚03×69.˚76E±0.˚04, h15km±9km, mb4.2/37, MS3.8/10, Error ellipse: s-maj=5.7km s-min=3.5km az=143.6*
*BJI **17** 09:22:16.5, 38.˚29N×69.˚81E, h17km, mB4.8/13, mb4.6/21, ML4.4/2, Ms4.0/16, Ms7 3.9/13*
*NNC **17** 09:22:16.6±5.0, 38.˚08N×69.˚82E, h0km, mb4.6, mpv4.5, Error ellipse: s-maj=51.3km s-min=35.3km az=178.0*
*MOS **17** 09:22:18.2±1.1, 38.˚15N×69.˚70E, h33km, mb4.5/19, Error ellipse: s-maj=8.1km s-min=4.4km az=74.9*
*NEIC **17** 09:22:18.4±0.4, 38.˚14N×69.˚75E, mb4.4/6, Error ellipse: s-maj=8.4km s-min=6.2km az=155.0*
NEIC Felt at Kabul, Afghanistan.

ISC 17 09:22:18.1±0.3, 38.˚07N±0.˚04×69.˚69E±0.˚04, h21km±4km, h21km:pP-P,n166, σ1s74/189, mb4.2/36, MS3.9/10, 11C-6D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBL	**Kabul**	**3.56**	**189**	*ePN*		Pn	09 23 15.7	+3.3
KBL				*e*			09 24 02.2	
KBL	**Kabul**	**3.56**	**189**	*ePn*		Pn	09 23 15.7	+3.3
KBL				*eSn*		**Sb**	**09 24 02.2**	**-1.2**
CEP	**Cherat**	**4.61**	**156**	P		**Pn**	**09 23 29.2**	**+2.6**
CEP				S		**Sn**	**09 24 25.0**	**+5.5**
KK31	**Karatay Array**	**5.06**	**7**	Pn		**Pn**	**09 23 34.4**	**+1.7**
	18nm,0.4s,baz=196,slow=15,SNR=194							
KK31				↑Lg		Lg	09 24 57.3	
	179nm,0.5s,baz=193,slow=28,SNR=11							
KK31	**Karatay Array**	**5.06**	**7**	PN		**Pn**	**09 23 34.4**	**+1.7**
KK31				pmax		pmax		
	comp=Z,9.0nm,0.2s							
KKAR	**Karatay Array**	**5.06**	**7**	*ePN*		**Pn**	**09 23 34.4**	**+1.7**
KKAR	**Karatay Array**	**5.06**	**7**	*ePn*		**Pn**	**09 23 34.4**	**+1.7**
KKAR				*eSg*		Sb	09 24 56.3	+1.0
AML	**Almayashu**	**5.08**	**36**	*i* PN		**Pn**	**09 23 34.4**	**+1.1**
AML	**Almayashu**	**5.08**	**36**	P		**Pn**	**09 23 34.4**	**+1.1**
	SNR=80							
KSH	**Kashi**	**5.11**	**72**	Pn		Pn	09 23 29.8	-3.7
KSH				Sn		Sn	09 24 23.6	-8.4
KSH				LR		LR		
	comp=Z,2μm,3.8s							
THW	**Thamme Wali**	**5.53**	**162**	P		**Pn**	**09 23 40.9**	**+1.7**
EKS2	**Erkin-Say**	**5.54**	**33**	*ePN*		**Pn**	**09 23 41.1**	**+1.7**
EKS2				pmax		pmax		
	comp=Z,79nm,0.4s							
EKS2	**Erkin-Say**	**5.54**	**33**	*ePn*		**Pn**	**09 23 41.1**	**+1.7**
	comp=Z,80nm,0.4s							
EKS2	**Erkin-Say**	**5.54**	**33**	P		**Pn**	**09 23 41.1**	**+1.7**
	SNR=18							
UCH	**Uchtor**	**5.55**	**40**	*i* PN		**Pn**	**09 23 41.5**	**+1.6**
UCH	**Uchtor**	**5.55**	**40**	P		**Pn**	**09 23 41.5**	**+1.6**
	SNR=20							
KZA	**Kyzart**	**5.84**	**45**	*i* PN		**Pn**	**09 23 44.8**	**+1.0**
KZA	**Kyzart**	**5.84**	**45**	P		**Pn**	**09 23 44.8**	**+1.0**
	SNR=108							
AAK	**Ala-Archa**	**5.85**	**37**	*ePN*		**Pn**	**09 23 44.6**	**+1.0**
AAK							09 24 53.0	

AAK								09 25 17.5	
AAK	**Ala-Archa**	**5.85**	**37**	*ePn*		**Pn**		**09 23 44.6**	**+1.0**
AAK				Pg		**Pb**		**09 23 57.9**	**-1.5**
AAK				Sn		**Sn**		**09 24 53.0**	**+2.9**
AAK				Lg		Lg		09 25 17.5	
AAK				*eSg*		Sb		09 25 19.5	+10
AAK	**Ala-Archa**	**5.85**	**37**	P		**Pn**		**09 23 45.6**	**+2.0**
	SNR=92								
AAK	**Ala-Archa**	**5.85**	**37**	Pn		**Pn**		**09 23 45.5**	**+1.9**
	comp=Z,45nm,0.3s,baz=180,slow=6.0,SNR=89								
AAK				Pg		**Pb**		**09 23 57.9**	**-1.5**
	comp=Z,14nm,0.3s,baz=171,slow=5.4,SNR=10								
AAK				Sn		**Sn**		**09 24 53.0**	**+2.9**
	comp=Z,9.8nm,0.3s,baz=292,slow=19,SNR=2.8								
AAK				Lg		Lg		09 25 17.5	
	comp=Z,15nm,0.3s,baz=18,slow=20,SNR=2.4								
KBK	**Karagaybulak**	**6.09**	**40**	*i* PN		**Pn**		**09 23 48.6**	**+1.7**
KBK	**Karagaybulak**	**6.09**	**40**	P		**Pn**		**09 23 48.6**	**+1.7**
	SNR=62								
CHMS	**Chumysh**	**6.25**	**36**	*i* PN		**Pn**		**09 23 50.1**	**+1.1**
CHMS	**Chumysh**	**6.25**	**36**	P		**Pn**		**09 23 50.1**	**+1.1**
	SNR=62								
USP	**Ospenovka**	**6.34**	**34**	*i* PN		**Pn**		**09 23 51.2**	**+0.8**
USP	**Ospenovka**	**6.34**	**34**	P		**Pn**		**09 23 51.2**	**+0.8**
	SNR=46								
ULHL	**Ulahol**	**6.52**	**48**	*i* PN		**Pn**		**09 23 53.8**	**+0.9**
ULHL	**Ulahol**	**6.52**	**48**	P		**Pn**		**09 23 53.8**	**+0.9**
	SNR=54								
TKM2	**Tokmak 2**	**6.61**	**41**	↑Pn		**Pn**		**09 23 55.2**	**+1.1**
	comp=Z,29nm,0.3s								
TKM2				↓Lg		Lg		09 25 44.0	
	comp=Z,90nm,0.6s								
TKM2	**Tokmak 2**	**6.61**	**41**	*ePN*		**Pn**		**09 23 55.2**	**+1.1**
TKM2				pmax		pmax			
	comp=Z,84nm,0.6s								
TKM2	**Tokmak 2**	**6.61**	**41**	*ePn*		**Pn**		**09 23 55.2**	**+1.1**
	comp=Z,84nm,0.6s								
TKM2	**Tokmak 2**	**6.61**	**41**	P		**Pn**		**09 23 55.3**	**+1.1**
	SNR=38								
THN	**Thein Dam**	**7.48**	**137**	*ex*		Pn		09 24 09.5	+3.6
THN				*eS*		**Sn**		**09 25 30.0**	**0.0**
DLH	**Dalhousie**	**7.53**	**135**	*ePKP*		**Pn**		**09 24 08.0**	**+1.1**
DLH				*eS*		**Sn**		**09 25 32.0**	**+0.3**
AAA	**Alma-Ata**	**7.57**	**44**	*i* P		**Pn**		**09 24 08.8**	**+1.6**
AAA				*i* S		Sn		09 25 26.0	-6.4
AAA				pmax		pmax			
	comp=Z,300nm,0.4s								
AAA				smax		smax			
	comp=E,100nm,0.2s								
AAA				MLR		MLR			
	comp=Z,1μm,3.0s								
DHRM	**DHARAMSHALA**	**7.94**	**135**	*ePKP*		**Pn**		**09 24 12.1**	**-0.3**
DHRM				*eS*		**Sn**		**09 25 40.6**	**-1.1**
DHRM				AML		AML		09 25 52.6	
	comp=E,351nm,0.4s								
DHRM				AML		AML		09 25 54.4	
	comp=N,232nm,0.3s								
BHK	**Bhakra**	**8.64**	**138**	*e*4		x		09 24 48.8	
SDNR	**Sundarnagar**	**8.88**	**135**	*ePKP*		**Pn**		**09 24 28.0**	**+2.9**
SDNR				*ex*		x		09 26 26.1	
SMLA	**Simla**	**9.27**	**136**	*i* P		**Pn**		**09 24 29.5**	**-1.0**
SMLA				*i* P		**Pn**		**09 24 29.5**	**-1.0**
SMLA				*i* S		**Sn**		**09 26 11.5**	**-2.5**
SMLA				AML		AML		09 26 27.8	
	comp=N,103nm,0.6s								
SMLA				AML		AML		09 26 30.6	
	comp=E,120nm,0.6s								
DDI	**Dehra Dun**	**10.38**	**136**	*eS*		**Sn**		**09 26 38.5**	**-2.9**
NDI	**New Delhi**	**11.28**	**144**	*ePKP*		**Pn**		**09 24 58.0**	**0.0**
NDI				*ex*		x		09 26 57.0	
AJM	**Ajmer**	**12.29**	**159**	*ePKP*		**Pn**		**09 25 10.0**	**-1.9**
AJM				*i* x		x		09 27 20.0	
MK31	**Makanchi Array**	**12.73**	**43**	↓P		**Pn**		**09 25 17.3**	**-0.6**
	comp=E,21nm,0.7s,baz=229,slow=13,SNR=117								
MK31	**Makanchi Array**	**12.73**	**43**	*eP*		**Pn**		**09 25 17.6**	**-0.3**
MK31	**Makanchi Array**	**12.73**	**43**	*ePn*		**Pn**		**09 25 17.6**	**-0.3**
MKAR	**Makanchi Array**	**12.73**	**43**	*eP*		**Pn**		**09 25 17.6**	**-0.3**

	comp=Z,46nm,0.7s							
BHPL	**Bhopal**	**16.20**	**154**	*e*PKP	**Pn**	**09 26 05.3**	**+0.9**
BHPL				*ex*	x	09 28 51.2	
KKN	**Kakani**	**16.60**	**124**	*e*P	**Pn**	**09 26 05.7**	**-4.1**
	comp=Z,20nm,0.3s						
DMN	**Daman**	**16.61**	**124**	*e*P	**Pn**	**09 26 05.5**	**-4.4**
	comp=Z,34nm,0.6s						
PKIN	**Phulchoki**	**16.82**	**124**	*e*P	**Pn**	**09 26 08.7**	**-3.9**
	comp=Z,28nm,0.4s						
PKI	**Pulchoki**	**16.84**	**124**	*e*P	**Pn**	**09 26 08.5**	**-4.3**
	comp=Z,43nm,0.7s						
GUN	**Gumba**	**16.92**	**122**	*e*P	**Pn**	**09 26 10.2**	**-3.7**
	comp=Z,40nm,0.5s						
MAK	**Makhachkala**	**17.55**	**293**	*e*P	P	09 26 27.4	+5.2
MAK				MLR	MLR		
	comp=Z,298nm,14.0s						
RAMN	**Ramite**	**18.04**	**123**	*e*P	**Pn**	**09 26 24.8**	**-2.8**
TAPN	**Taplejung**	**18.52**	**120**	*e*P	**P**	**09 26 30.7**	**-2.7**
ODAN	**Odare**	**18.62**	**122**	*e*P	**P**	**09 26 32.4**	**-2.0**
ZALV	**Zalesovo Beam**	**18.97**	**28**	P	**P**	**09 26 36.4**	**-1.4**
ZALV				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ZALV	**Zalesovo Beam**	**18.97**	**28**	P	**P**	**09 26 36.4**	**-1.4**
ZALV	**Zalesovo Beam**	**18.97**	**28**	P	**P**	**09 26 36.4**	**-1.4**
	comp=Z,3.6nm,0.3s,baz=220,slow=11,SNR=69						
NVS	**Novosibirsk**	**19.13**	**24**	*e*P	**P**	**09 26 37.1**	**-2.4**
NVS				pmax	pmax		
	comp=N,7.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,11nm,0.8s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.6s						
GNI	**Garni**	**19.46**	**284**	*e*P	**Pn**	**09 26 45.6**	**+0.9**
	comp=E,14nm,0.6s						
GNI	**Garni**	**19.46**	**284**	P	**Pn**	**09 26 46.6**	**+1.9**
	comp=E,1.6nm,0.3s,baz=28,slow=6.9,SNR=5.9						
LSA	**Lhasa**	**19.64**	**109**	P	**Pn**	**09 26 46.9**	**-0.4**
LSA				pmax	pmax		
	comp=Z,20nm,0.7s						
LSA	**Lhasa**	**19.64**	**109**	*e*P	**Pn**	**09 26 47.0**	**-0.4**
LSA				pmax	pmax		
	comp=Z,20nm,0.7s						
LSA	**Lhasa**	**19.64**	**109**	*e*P	**Pn**	**09 26 47.0**	**-0.3**
	comp=Z,20nm,0.7s						
LSA				*ep*P	**pP**	**09 26 52.6**	**+0.7**
SVE	**Sverdlovsk**	**19.70**	**345**	*e*P	**P**	**09 26 44.3**	**-1.5**
ARU	**Arti**	**19.81**	**342**	*c i*P	**Pn**	**09 26 48.0**	**-0.6**
ARU				S	**Sn**	**09 30 30.0**	**-0.4**
ARU				pmax	pmax		
	comp=Z,20nm,1.2s						
ARU				MLR	MLR		
	comp=Z,170nm,15.0s						
IBDR	**Badra**	**19.93**	**263**	*e*P	P	09 26 40.6	-7.8
IBDR				*e*S	S	09 30 18.8	-13
KBZ	**Khabaz**	**20.98**	**294**	P	**P**	**09 27 00.0**	**+0.3**
KBZ				pmax	pmax		
	comp=Z,25nm,0.9s						
KBZ	**Khabaz**	**20.98**	**294**	P	**P**	**09 27 00.0**	**+0.3**
KBZ	**Khabaz**	**20.98**	**294**	P	**P**	**09 27 00.0**	**+0.3**
	comp=Z,25nm,0.9s,baz=129,slow=8.3,SNR=40						
KIV	**Kislovodsk**	**21.16**	**295**	*e*P	**P**	**09 27 02.1**	**+0.3**
KIV				*e*S	**S**	**09 30 56.6**	**+0.5**
KIV				pmax	pmax		
	comp=Z,43nm,1.0s						
KIV				MLR	MLR		
	comp=Z,144nm,14.0s						
HYB	**Hyderabad**	**22.00**	**157**	*i* P	**P**	**09 27 11.0**	**+0.1**
SHL	**Shillong**	**22.54**	**117**	*e*PKP	**P**	**09 27 16.0**	**-0.9**
SOKR	**Solikamsk**	**23.05**	**343**	*e*P	**P**	**09 27 21.4**	**-0.2**
SOKR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SOKR				MLR	MLR		
	comp=Z,270nm,29.0s						
SOC	**Sochi**	**23.27**	**293**	*e*P	**P**	**09 27 19.6**	**-4.4**
SOC				*e**PP	**pP**	**09 27 29.2**	**-1.0**
SOC				*e*S	**S**	**09 31 33.0**	**-2.1**
SOC				pmax	pmax		
	comp=Z,25nm,1.2s						
GTA	**Gaotai**	**23.49**	**77**	*e*P	**P**	**09 27 25.6**	**-0.8**
GTA				pP	**pP**	**09 27 36.3**	**+3.6**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.8s						
GTA				pmax	pmax		
	comp=Z,92nm,6.9s						
GTA				LR	LR		
	comp=N,190nm,17.3s						
GTA				LR	LR		
	comp=E,300nm,16.6s						
GTA				LR	LR		
	comp=Z,280nm,17.3s						
ANN	**Anapa**	**24.99**	**296**	*e*P	P	09 27 45.6	+5.5
ANN				pmax	pmax		
	comp=Z,27nm,1.4s						
VSR	**Storozhevoye**	**25.17**	**311**	*e*P	**P**	**09 27 41.3**	**-0.4**
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
VSR				pmax	pmax		
	comp=N,7.0nm,1.0s						
VSR				pmax	pmax		
	comp=E,40nm,1.3s						
RAYN	**Ar Rayn**	**25.24**	**242**	*e*P	**P**	**09 27 44.2**	**+1.5**
	comp=E,5.5nm,0.9s						
MOY	**Mondy**	**25.78**	**48**	*e*P	**P**	**09 27 48.2**	**+0.8**
ZAK	**Zakamensk**	**26.79**	**52**	*e*P	**P**	**09 27 56.3**	**-0.2**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LZH	**Lanzhou**	**27.23**	**84**	*e*P	**P**	**09 28 02.5**	**+1.8**
LZH				pP	**pP**	**09 28 07.0**	**-0.2**
LZH				sP	**sP**	**09 28 10.3**	**+0.5**
LZH				*e*S	**S**	**09 32 35.3**	**-3.5**
LZH				sS	**sS**	**09 32 47.4**	**-2.0**
LZH				SS	**SnSn**	**09 33 49.3**	**+2.3**
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,68nm,4.0s						
LZH				LR	LR		
	comp=N,300nm,13.0s						
LZH				LR	LR		
	comp=E,250nm,11.9s						
LZH				LR	LR		
	comp=Z,380nm,15.4s						
TLY	**Talaya**	**27.36**	**49**	*e*P	**P**	**09 28 02.1**	**+0.6**
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,90nm,14.0s						
BRTR	**Keskin Array B**	**27.99**	**285**	P	**P**	**09 28 08.7**	**+1.2**
BRTR	**Keskin Array B**	**27.99**	**285**	P	**P**	**09 28 08.7**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=98,slow=8.9,SNR=6.2						
OBN	**Obninsk**	**28.07**	**318**	*e*P	**P**	**09 28 06.1**	**-1.7**
OBN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SONM	**Songino Array**	**28.34**	**58**	P	**P**	**09 28 09.6**	**-1.0**
SONM	**Songino Array**	**28.34**	**58**	P	**P**	**09 28 09.6**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=263,slow=9.9,SNR=6.4						
SONM				LR	LR	09 40 25.5	
	comp=Z,144nm,19.9s,baz=272,slow=38						
ULN	**Ulaanbaatar**	**28.79**	**58**	*e*P	**P**	**09 28 13.8**	**-0.7**
	comp=Z,2.5nm,0.8s						
ULN				*ep*P	**pP**	**09 28 19.9**	**-1.1**
CD2	**Chengdu**	**28.86**	**94**	*e*P	**P**	**09 28 17.0**	**+1.9**
CD2				pP	**pP**	**09 28 22.8**	**+1.2**
CD2				sP	**sP**	**09 28 26.0**	**+1.7**
CD2				PP	**PnPn**	**09 29 10.5**	**+4.0**
CD2				S	**S**	**09 33 04.6**	**+0.4**
CD2				sS	**sS**	**09 33 13.6**	**-1.3**
CD2				SS	**SnSn**	**09 34 32.0**	**+5.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2				pmax	pmax		
	comp=Z,140nm,4.8s						
CD2				LR	LR		
	comp=N,200nm,17.8s						
CD2				LR	LR		
	comp=Z,220nm,14.4s						
KLMR	**Klimovskoe**	**29.60**	**330**	P	P	09 28 25.0	+3.7
KLMR				pmax	pmax		
	comp=Z,16nm,1.5s						
AKASG	**Malin Array Be**	**31.16**	**307**	*ce*P	**P**	**09 28 35.9**	**+0.7**
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKASG	**Malin Array Be**	**31.16**	**307**	P	**P**	**09 28 35.6**	**+0.4**
AKASG	**Malin Array Be**	**31.16**	**307**	P	**P**	**09 28 35.6**	**+0.4**
	comp=Z,4.6nm,0.7s,baz=80,slow=7.4,SNR=13						
AK01	**Malin Array Si**	**31.16**	**307**	*e*P	**P**	**09 28 35.6**	**+0.3**
AK01				*ep*P	**pP**	**09 28 40.8**	**-0.9**
AK02	**Malin Array Si**	**31.16**	**307**	*e*P	**P**	**09 28 35.7**	**+0.5**
AK02				*ep*P	**pP**	**09 28 40.9**	**-0.8**
KIEV	**Kiev**	**31.16**	**307**	*e*P	**P**	**09 28 35.9**	**+0.6**
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIEV	**Kiev**	**31.16**	**307**	*e*P	**P**	**09 28 35.9**	**+0.6**
	comp=Z,6.3nm,0.8s						
XAN	**Xi'an**	**31.81**	**85**	P	**P**	**09 28 40.9**	**-0.3**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GYA	**Guiyang**	**33.13**	**99**	*e*P	**P**	**09 28 53.8**	**+0.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BUR08	**Bucovina Ar. S**	**33.58**	**301**	*e*P	**P**	**09 28 58.1**	**+1.5**
BUR08				*ep*P	**pP**	**09 29 03.0**	**-0.2**
BUR08				*ePP*	**PnPn**	**09 30 08.2**	**0.0**
FINES	**FINESS Array B**	**35.60**	**325**	P	**P**	**09 29 14.0**	**+0.3**
FINES	**FINESS Array B**	**35.60**	**325**	P	**P**	**09 29 14.0**	**+0.3**
	comp=Z,4.7nm,0.8s,baz=116,slow=13,SNR=4.3						
VYHS	**Vyhne**	**37.82**	**303**	*e*P	**P**	**09 29 34.7**	**+1.8**
VYHS	**Vyhne**	**37.82**	**303**	*e*P	**P**	**09 29 34.7**	**+1.8**
ARCES	**ARCESS Array B**	**39.29**	**337**	P	**P**	**09 29 45.9**	**+0.9**
ARCES	**ARCESS Array B**	**39.29**	**337**	P	**P**	**09 29 45.9**	**+0.9**
	comp=Z,2.9nm,0.8s,baz=109,slow=7.8,SNR=18						
GERES	**GERESS Array B**	**41.18**	**304**	P	**P**	**09 30 01.7**	**+0.7**
GERES	**GERESS Array B**	**41.18**	**304**	P	**P**	**09 30 01.7**	**+0.7**
	comp=Z,0.3nm,0.2s,baz=81,slow=8.2,SNR=3.6						
CUC	**Castrocucco**	**41.36**	**290**	*e*P	**P**	**09 30 02.9**	**+0.4**
	comp=Z,6.4nm,0.9s						
CN2	**Changchun**	**41.83**	**64**	*e*P	**P**	**09 30 07.3**	**+1.1**
NB2	**NORSAR Subarra**	**42.50**	**322**	P	**P**	**09 30 11.7**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=94,slow=8.6						
NOA	**NORSAR Array B**	**42.50**	**322**	P	**P**	**09 30 12.5**	**+1.0**
NOA	**NORSAR Array B**	**42.50**	**322**	P	**P**	**09 30 12.5**	**+1.0**
	comp=Z,0.7nm,0.4s,baz=97,slow=8.1,SNR=5.0						
TIXI	**Tiksi**	**44.72**	**23**	*e*P	**P**	**09 30 28.6**	**-0.6**
TIXI				*i* *PP	**pP**	**09 30 36.4**	**+0.6**
TIXI				pmax	pmax		
	comp=Z,18nm,1.0s						
KSAR	**Wonju Array Be**	**45.34**	**72**	P	**P**	**09 30 33.8**	**-0.8**
KSRS	**Korea Array**	**45.37**	**72**	P	**P**	**09 30 33.8**	**-1.0**
	comp=Z,2.5nm,0.8s,baz=286,slow=6.6,SNR=11						
KSRS				LR	LR	09 51 48.2	
	comp=Z,148nm,18.2s,baz=68,slow=39						
USRK	**Ussuriysk Arra**	**46.33**	**62**	P	**P**	**09 30 40.4**	**-2.0**
	comp=Z,0.9nm,0.6s,baz=322,slow=8.0,SNR=4.4						
USRK				LR	LR	09 52 10.6	
	comp=Z,189nm,18.6s,baz=64,slow=39						
KEST	**Kesra**	**47.56**	**287**	P	**P**	**09 30 53.9**	**+1.7**
KEST	**Kesra**	**47.56**	**287**	P	**P**	**09 30 53.9**	**+1.7**
	comp=Z,1.0nm,0.6s,baz=340,slow=5.0,SNR=3.6						
ESDC	**Sonseca Array**	**55.81**	**296**	P	**P**	**09 31 54.0**	**+0.3**
ESDC	**Sonseca Array**	**55.81**	**296**	P	**P**	**09 31 54.0**	**+0.3**
	comp=Z,0.5nm,0.4s,baz=58,slow=6.9,SNR=11						
BILL	**Bilibino**	**57.66**	**26**	*i* P	**P**	**09 32 07.1**	**+0.8**
BILL				*i*		09 32 55.2	
BILL				pmax	pmax		
	comp=Z,19nm,1.3s						
TORD	**Torodi Ar. Bea**	**64.73**	**267**	P	**P**	**09 32 54.6**	**-0.4**
TORD	**Torodi Ar. Bea**	**64.73**	**267**	P	**P**	**09 32 54.6**	**-0.4**
	comp=Z,2.0nm,1.1s,baz=52,slow=6.1,SNR=12						
FX1	**Attu Island--F**	**67.85**	**40**	*e*P	**P**	**09 33 13.9**	**-0.6**
ILAR	**Eielson Array**	**73.55**	**15**	P	**P**	**09 33 47.8**	**-1.1**
ILAR	**Eielson Array**	**73.55**	**15**	P	**P**	**09 33 47.8**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=316,slow=5.6,SNR=5.6						
DBIC	**Dimbokro**	**73.76**	**266**	LR	LR	10 11 32.6	
	comp=Z,78nm,18.9s,baz=276,slow=40						
YKA	**Yellowknife Ar**	**79.72**	**2**	P	**P**	**09 34 23.6**	**-0.2**
YKA	**Yellowknife Ar**	**79.72**	**2**	P	**P**	**09 34 23.6**	**-0.2**
	comp=Z,1.5nm,0.5s,baz=352,slow=5.6,SNR=10						
WRA	**Warramunga Arr**	**83.70**	**121**	P	**P**	**09 34 43.5**	**-2.0**
WRA	**Warramunga Arr**	**83.70**	**121**	P	**P**	**09 34 43.5**	**-2.0**
	comp=Z,0.6nm,0.6s,baz=326,slow=5.1,SNR=5.9						
ASAR	**Alice Springs**	**86.00**	**124**	P	**P**	**09 34 54.9**	**-2.1**
ASAR	**Alice Springs**	**86.00**	**124**	P	**P**	**09 34 54.9**	**-2.1**
	comp=Z,0.6nm,0.8s,baz=313,slow=4.9,SNR=4.6						

DDA **17** *09:25:17.0,39.09N×35.38E,h7km,MD2.9*
CSEM **17** *09:25:17.3±0.1,39.11N×35.43E,h2km,MD2.9,Error ellipse: s-maj=3.2km s-min=2.4km az=24.0*
ISK **17** *09:25:17.4,39.12N×35.48E,h6km,MD2.9*

ISC 17 09:25:17.3±1.2,39.12N±0.03×35.41E±0.03,h0km±11km, n28,σ0ᵗ35/40,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BNN	**Bunyan**	**0.43**	**127**	*e*PG		**Pg**		**09 25 25.3**	**-0.3**
BNN				*e*SG		**Sg**		**09 25 31.6**	**+0.4**
BNN	**Bunyan**	**0.43**	**127**	*e*Pg		**Pg**		**09 25 25.3**	**-0.3**
BNN				*e*Sg		**Sg**		**09 25 31.6**	**+0.4**
AVNT	**Avonos**	**0.54**	**232**	*i* P		**Pg**		**09 25 27.9**	**+0.2**
AVNT				*i* S		**Sg**		**09 25 34.4**	**-0.3**
AVNT	**Avonos**	**0.54**	**232**	*i* P		**Pg**		**09 25 27.9**	**+0.2**
AVNT				*i* S		**Sg**		**09 25 34.4**	**-0.3**
PINB	**Pinarbasi**	**0.89**	**119**	*i* P		**Pg**		**09 25 34.3**	**-0.1**
PINB	**Pinarbasi**	**0.89**	**119**	*i* P		**Pg**		**09 25 34.3**	**-0.1**
CDAG	**Cicekdag**	**0.95**	**303**	*i* P		**Pg**		**09 25 35.3**	**-0.2**
CDAG				*i* S		**Sb**		**09 25 49.1**	**-0.7**
CDAG	**Cicekdag**	**0.95**	**303**	*i* P		**Pg**		**09 25 35.3**	**-0.2**
CDAG				*i* S		**Sb**		**09 25 49.1**	**-0.7**
SARI	**SarD1z-Kayseri**	**1.06**	**131**	*e*PG		**Pg**		**09 25 37.7**	**+0.1**
SARI	**SarD1z-Kayseri**	**1.06**	**131**	*e*Pg		**Pg**		**09 25 37.7**	**+0.1**
NIG	**Nigde**	**1.18**	**212**	*e*PN		**Pb**		**09 25 40.7**	**0.0**
NIG				*e*SN		**Sn**		**09 25 58.3**	**+0.1**
NIG	**Nigde**	**1.18**	**212**	*e*Pn		**Pb**		**09 25 40.7**	**0.0**
NIG				*e*Sn		**Sn**		**09 25 58.3**	**+0.1**
CORM	**Corum**	**1.22**	**331**	*e*PN		**Pn**		**09 25 41.6**	**-0.1**
CORM				*e*SN		**Sn**		**09 25 59.5**	**+0.6**
CORM	**Corum**	**1.22**	**331**	*e*Pn		**Pn**		**09 25 41.6**	**-0.1**
CORM				*e*Sn		**Sn**		**09 25 59.5**	**+0.6**
KAMT	**Kaman**	**1.34**	**281**	*e*PN		**Pb**		**09 25 43.7**	**+0.4**
KAMT	**Kaman**	**1.34**	**281**	*e*Pn		**Pb**		**09 25 43.7**	**+0.4**
SVSK	**Karacayir**	**1.47**	**56**	*e*PN		**Pn**		**09 25 44.3**	**-0.7**
SVSK	**Karacayir**	**1.47**	**56**	*e*Pn		**Pn**		**09 25 44.3**	**-0.7**
CTKT	**Corum**	**1.58**	**343**	*i* P		**Pn**		**09 25 46.6**	**0.0**
CTKT				*i* S		**Sg**		**09 26 08.4**	**+0.4**
CTKT	**Corum**	**1.58**	**343**	*i* P		**Pn**		**09 25 46.6**	**0.0**
CTKT				*i* S		**Sg**		**09 26 08.4**	**+0.4**
KOZT	**Kozan**	**1.67**	**168**	*e*PN		**Pn**		**09 25 47.9**	**+0.2**
KOZT	**Kozan**	**1.67**	**168**	*e*Pn		**Pn**		**09 25 47.9**	**+0.2**
SULT	**Sultanhani-AKS**	**1.74**	**239**	*e*PN		**Pb**		**09 25 49.8**	**-0.3**
SULT	**Sultanhani-AKS**	**1.74**	**239**	*e*Pn		**Pb**		**09 25 49.8**	**-0.3**
RSDY	**Resadiye-TOKAT**	**1.96**	**49**	*e*PN		**Pn**		**09 25 51.6**	**-0.2**
RSDY	**Resadiye-TOKAT**	**1.96**	**49**	*e*Pn		**Pn**		**09 25 51.6**	**-0.2**
PTK	**Pertek**	**3.12**	**93**	*e*PN		**Pn**		**09 26 07.9**	**+0.1**
PTK	**Pertek**	**3.12**	**93**	*e*Pn		**Pn**		**09 26 07.9**	**+0.1**

IDC 17 10:15:03.3±13.0,15.10S×165.53E,h0km,mb3.9/3, mb1 4.1/4,mb1mx3.7/19,mbtmp3.9/4,ML4.1/1,Error ellipse: s-maj=223.8km s-min=35.6km az=54.0,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.99**	**173**	*e*P		Pn		10 18 07.0	-0.1
DZM				*e*S		Sn		10 18 08.0	+0.6
DZM	**Mont Dzumac**	**6.99**	**173**	Pn		Pn		10 16 47.3	+0.2
	3.1nm,0.3s,baz=38,slow=18,SNR=32								
DZM				Sn		Sn		10 18 08.1	+0.7
	1.3nm,0.3s,baz=138,slow=21,SNR=7.8								
STKA	**Stephens Creek**	**27.48**	**228**	P		P		10 20 51.2	-0.2
	2.5nm,0.4s,baz=53,slow=8.7,SNR=17								
WRA	**Warramunga Arr**	**30.10**	**256**	P		P		10 21 15.0	+0.1
	0.3nm,0.5s,baz=85,slow=9.0,SNR=8.0								
ASAR	**Alice Springs**	**30.97**	**249**	P		P		10 21 22.4	0.0
	1.0nm,0.8s,baz=81,slow=8.9,SNR=12								

KRSC 17 10:17:55.5±1.5,48.44N×155.99E,h5km±5km,ML4.1, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.25**	**2**	P		Pn		10 18 33.7	+0.4
SKR				S		Sn		10 19 01.7	+0.3
PAU	**Pauzhetka**	**3.08**	**10**	P		Pn		10 18 46.7	+2.0
PAU				S		Sn		10 19 23.7	+1.9
MIPR	**Malaya Ipel'ka**	**3.87**	**7**	P		Pn		10 18 56.8	+1.1
ASAK	**Asacha**	**4.13**	**16**	P		Pn		10 19 02.0	+2.7
MTVR	**Mutnovka**	**4.28**	**18**	P		Pn		10 19 04.4	+2.9
MTVR				S		Sn		10 19 54.2	+2.2
RUS	**Russkaya**	**4.31**	**21**	P		Pn		10 19 03.8	+2.1
RUS				S		Sn		10 19 54.3	+2.0
PET	**Petropavlovsk**	**4.89**	**19**	S		Sn		10 20 10.4	+3.9
UGLR	**Uglovaya**	**5.10**	**20**	P		Pn		10 19 16.1	+3.4
AVH	**Avacha**	**5.13**	**19**	P		Pn		10 19 16.4	+3.3
KOK	**Koryaka**	**5.14**	**18**	P		Pn		10 19 16.5	+3.3
KRER	**Koryakskii**	**5.17**	**19**	P		Pn		10 19 15.9	+2.1
SDLR	**Sedlovina**	**5.18**	**20**	P		Pn		10 19 16.5	+2.7
SPN	**Mys Shipunski**	**5.32**	**27**	P		Pn		10 19 18.3	+2.8
SPN				S		Sn		10 20 19.6	+2.5
GNL	**Ganaly**	**5.40**	**12**	P		Pn		10 19 19.7	+2.8

IDC **17** *10:35:27.3±0.5,4.88N×127.03E,h0km,mb4.2/17, mb1 4.3/18,mb1mx4.1/31,mbtmp4.2/18,ML3.9/1,Error ellipse: s-maj=27.4km s-min=11.0km az=72.0*
MAN **17** *10:35:27,4.34N×127.12E,h28km,mb4.7,ML3.5,MS3.5*
ISCJB **17** *10:35:35.2±0.3,4.84N±0.04×126.92E±0.05,h76km, mb4.0/17,Error ellipse: s-maj=7.9km s-min=4.7km az=162.1*
DJA **17** *10:35:35.3±3.3,5.1N±8.1×127.7E±.1,h29km±44km,M4.8/6, mB5.3/4,mb4.9/6,MLv4.8/3,Mw(mB)4.8/4*
AUST **17** *10:35:41.4±1.3,4.49N×126.96E,h101km,Error ellipse: s-maj=2.1km s-min=1.5km az=31.0*

ISC 17 10:35:37.2±0.5,4.81N±0.05×126.96E±0.10,h76km,n52, σ1ᵗ35/53,mb4.2/17,1C,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**2.24**	**342**	*e*P		**Pn**		**10 36 10.7**	**-1.6**
MATI				*e*S		**Sn**		**10 36 42.9**	**+3.9**
DAV	**Davao City (W)**	**2.63**	**329**	Lg		Lg		10 36 50.0	
	45nm,0.3s,baz=90,slow=20,SNR=4.3								
BUKP	**Musuan**	**3.59**	**328**	*e*P		**Pn**		**10 36 29.0**	**-1.6**
CTBH	**Cotabato--PC H**	**3.61**	**312**	*i* P		Pn		10 36 26.4	-4.5
MNI	**Manado**	**3.96**	**212**	P		**Pn**		**10 36 34.5**	**-1.1**
TNTI	**Ternate**	**4.03**	**174**	P		**Pn**		**10 36 37.3**	**+0.7**
TNTI				S		**Sn**		**10 37 24.2**	**+1.6**
CGP	**Cagayan de Oro**	**4.27**	**328**	*e*P		**Pn**		**10 36 38.8**	**-1.0**
PAGZ	**Pagadian**	**4.67**	**310**	*e*P		**Pn**		**10 36 44.3**	**-1.0**
KMSI	**Cibinong**	**5.15**	**215**	P		**Pn**		**10 36 51.5**	**-0.4**
MRSI	**Marisa**	**6.61**	**230**	P		**Pn**		**10 37 10.8**	**-1.0**
	150nm,0.5s,2μm								
LUWI	**Luwuk**	**7.16**	**216**	P		**Pn**		**10 37 21.0**	**+1.6**
	228nm,0.9s,3μm								
LUWI	**Luwuk**	**7.16**	**216**	P		**Pn**		**10 37 21.4**	**+2.1**
	baz=6.9,SNR=11								
NLAI	**Namlea**	**8.00**	**179**	P		**Pn**		**10 37 29.6**	**-1.1**
	59nm,0.9s,2μm								
MYLDM	**Lahad Datu**	**8.44**	**273**	P		**Pn**		**10 37 36.7**	**-0.1**
	32nm,1.0s								
SKSI	**Soroako, Sulaw**	**9.21**	**218**	P		**Pn**		**10 37 45.9**	**-1.4**
	24nm,0.7s								
FAKI	**Fak Fak**	**9.32**	**145**	P		**Pn**		**10 37 48.6**	**-0.2**
	baz=9.1,SNR=12								
TTSI	**Tana Toraja**	**10.57**	**223**	P		**Pn**		**10 38 06.3**	**+0.3**
BAKI	**Biak**	**10.91**	**123**	P		Pn		10 38 14.6	+4.1
KAPI	**Kappang**	**12.13**	**217**	Pn		**Pn**		**10 38 24.1**	**-3.0**
	0.6nm,0.3s,baz=41,slow=9.3,SNR=2.9								
BBKI	**Banjar Baru**	**14.63**	**236**	P		**Pn**		**10 39 01.1**	**+0.7**
MTN	**Manton Dam**	**18.02**	**167**	P		**P**		**10 39 39.8**	**-2.4**
	baz=18,SNR=5.8								
MTN				S		Sn		10 42 45.9	-18
	baz=18,SNR=3.1								
KDU	**Kakadu**	**18.22**	**163**	P		**P**		**10 39 43.5**	**-0.9**
	baz=18,SNR=9.2								
KNRA	**Kununurra**	**20.43**	**175**	P		**P**		**10 40 08.8**	**+0.3**
	baz=20,SNR=14								
FITZ	**Fitzroy Crossi**	**22.80**	**183**	P		**P**		**10 40 32.7**	**-1.1**
	6.3nm,0.7s,baz=4.5,slow=9.0,SNR=15								
FITZ	**Fitzroy Crossi**	**22.80**	**183**	P		**P**		**10 40 34.2**	**+0.3**
	baz=23,SNR=4.9								
COEN	**Coen**	**24.62**	**139**	P		**P**		**10 40 50.8**	**+0.1**
	baz=24,SNR=6.9								
WRA	**Warramunga Arr**	**25.64**	**164**	P		**P**		**10 40 58.7**	**-1.3**
	3.9nm,0.5s,baz=333,slow=11,SNR=47								
QIS	**Mount Isa**	**28.10**	**154**	P		**P**		**10 41 23.9**	**+1.9**
	baz=28,SNR=5.5								
MTSU	**Mount Surprise**	**28.51**	**144**	P		**P**		**10 41 27.5**	**+1.8**
	baz=28,SNR=4.3								
ASAR	**Alice Springs**	**29.10**	**167**	P		**P**		**10 41 30.2**	**-0.7**
	1.5nm,0.4s,baz=351,slow

BKZ	**Black Stump Fm**	**8.24**	**202**	PN	**Pn**	**10 38 12.0**	**-0.2**
BKZ				SN	**S**	**10 39 46.9**	**-0.7**
OTVZ	**Oturere**	**8.52**	**206**	PN	**Pn**	**10 38 16.0**	**+0.3**
FWVZ	**Far West T-bar**	**8.65**	**206**	PN	**Pn**	**10 38 17.0**	**-0.3**
WHVZ	**Whangaehu Hut**	**8.65**	**206**	PN	**Pn**	**10 38 17.2**	**-0.1**
BHHZ	**Black Hill Sta**	**8.67**	**203**	PN	**Pn**	**10 38 16.5**	**-0.9**
MOVZ	**Moawhango**	**8.71**	**205**	PN	**Pn**	**10 38 17.1**	**-0.7**
PXZ	**Pawanui**	**8.93**	**198**	PN	**Pn**	**10 38 19.8**	**-0.6**
TSZ	**Takapari Road**	**9.22**	**202**	PN	**Pn**	**10 38 22.4**	**-1.5**
BFZ	**Birch Farm**	**9.70**	**199**	PN	**Pn**	**10 38 29.2**	**-0.4**
MRZ	**Mangatainoka R**	**9.89**	**202**	PN	**Pn**	**10 38 29.7**	**-2.1**
MRZ				SN	**S**	**10 40 19.6**	**-4.1**
OGWZ	**Otaki Gorge**	**10.16**	**203**	PN	**Pn**	**10 38 33.8**	**-1.3**
MTWZ	**Mount Morrison**	**10.36**	**201**	PN	**P**	**10 38 38.3**	**-0.3**
BSWZ	**Blackbirch Sta**	**11.41**	**206**	PN	**P**	**10 38 50.9**	**+0.6**
THZ	**Tophouse**	**11.83**	**209**	PN	**Pn**	**10 38 53.1**	**-1.9**
KHZ	**Kahutara**	**12.15**	**205**	PN	**P**	**10 38 57.3**	**-1.1**
KHZ				SN	**S**	**10 41 10.7**	**-2.5**
RPZ	**Rata Peaks**	**14.21**	**209**	P	**Pn**	**10 39 23.0**	**+0.1**
	1.8nm,0.3s,baz=46,slow=3.2,SNR=8.6						
RPZ				S	**S**	**10 41 51.9**	**-3.4**
	0.6nm,0.3s,baz=356,slow=19,SNR=5.6						
DZM	**Mont Dzumac**	**15.67**	**304**	P	**P**	**10 39 37.5**	**+0.1**
	0.5nm,0.3s,baz=143,slow=20,SNR=6.0						
AFI	**Afiamalu**	**18.97**	**24**	P	**P**	**10 40 15.2**	**+2.4**
	1.9nm,0.3s,baz=147,slow=17,SNR=4.3						
STKA	**Stephens Creek**	**32.94**	**259**	P	**P**	**10 42 20.2**	**+1.9**
	1.2nm,0.3s,baz=102,slow=10,SNR=6.6						
ASAR	**Alice Springs**	**41.74**	**269**	P	**P**	**10 43 31.4**	**-0.3**
	0.5nm,0.4s,baz=106,slow=7.5,SNR=6.3						
ASAR				PcP	**PcP**	**10 45 21.2**	**+0.6**
	0.3nm,0.3s,baz=116,slow=3.9,SNR=4.8						
ASAR				ScP	**ScP**	**10 48 37.1**	**+0.3**
	0.6nm,0.9s,baz=123,slow=3.4,SNR=4.2						
WRA	**Warramunga Arr**	**42.84**	**274**	P	**P**	**10 43 39.8**	**-0.7**
	1.0nm,0.3s,baz=111,slow=8.1,SNR=11						
WRA				PcP	**PcP**	**10 45 24.8**	**+0.5**
	0.3nm,0.4s,baz=112,slow=4.4,SNR=4.6						
FITZ	**Fitzroy Crossi**	**51.05**	**272**	P	**P**	**10 44 43.5**	**+0.3**
	2.6nm,0.9s,baz=117,slow=4.5,SNR=4.7						
SYO	**Syowa Base**	**75.67**	**194**	⇓*e*P	**PcP**	**10 47 33.6**	**+0.2**
PETK	**Petropavlovsk-**	**86.63**	**346**	P	**P**	**10 48 20.4**	**+0.9**
	0.5nm,0.5s,baz=140,slow=9.1,SNR=4.0						
BVAR	**Borovoye Array**	**126.31**	**315**	PKP	**PKPdf**	**10 54 37.1**	**+0.8**
	0.5nm,0.3s,baz=58,slow=0.4,SNR=4.2						
JOF	**Joensuu**	**143.00**	**337**	*e*pkp	**PKPdf**	**10 55 04.4**	**-2.5**
FINES	**FINESS Array B**	**145.76**	**338**	PKPbc	**PKPab**	**10 55 13.3**	**-0.7**
	1.4nm,0.3s,baz=49,slow=3.5,SNR=9.3						
NB2	**NORSAR Subarra**	**149.69**	**350**	PKP	**PKPbc**	**10 55 24.0**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**149.69**	**350**	PKPbc	**PKPbc**	**10 55 24.1**	**+0.8**
	comp=Z,0.5nm,0.4s,baz=14,slow=4.1,SNR=3.8						
BRTR	**Keskin Array B**	**151.95**	**296**	PKPbc	**PKPbc**	**10 55 30.3**	**+0.9**
	comp=Z,1.6nm,0.5s,baz=149,slow=3.9,SNR=8.6						

NIED ***17*** *10:41:00,36˚.00N×140˚.10E,h59km,Mw3.8 Best double couple: M₀5.88000×10¹⁴ NP1:φs3.00000°,δ65.00000°, λ87.00000°. NP2:φs189.00000°,δ25.00000°,λ95.00000°.*
ISCJB ***17*** *10:41:03.0±0.4,36˚.00N±0˚.03×140˚.14E±0˚.07,h78km±3km, mb3.8/11,Error ellipse: s-maj=9.5km s-min=5.0km az=7.1*
JMA ***17*** *10:41:04.7±0.1,36˚.04N×140˚.10E,h63km±1km,M3.5 Broadband fault plane solution: P waves. NP1: φs358.00000°,δ63.00000°,λ78.00000°. NP2: φs203.00000°,δ29.00000°,λ111.00000°. Principal axes: T Plg70.0000°, Azm244.0000°; N Plg10.0000°, Azm4.0000°; P Plg17.0000°, Azm97.0000°;*
JMA Felt I J1.
IDC ***17*** *10:41:05.9±2.6,35˚.97N×140˚.05E,h86km±24km,mb3.5/11, mb1 3.6/14,mb1mx3.5/31,mbtmp3.5/14 Error ellipse: s-maj=25.1km s-min=14.2km az=68.0*

ISC 17 10:41:04.1±0.7,36˚.01N±0˚.04×140˚.13E±0˚.06,h71km±6km, n29,σ0¶99/37,mb4.0/11,1C-6D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.22**	**14**	⇑P	**Pn**	**10 41 14.5**	**-0.4**
JYT				S	**Sn**	**10 41 21.7**	**-1.1**
TOK	**Tokyo**	**0.44**	**223**	P	**Pn**	**10 41 17.6**	**+1.2**
TOK				S	**Sn**	**10 41 27.6**	**+2.2**
JAG	**Ashikaga**	**0.68**	**307**	⇓P	**Pn**	**10 41 18.8**	**-0.1**
JAG				S	**Sn**	**10 41 29.0**	**-0.8**
JRY	**Ryogami san**	**0.99**	**271**	⇓P	**Pn**	**10 41 22.6**	**0.0**
JKT	**Katashina**	**1.03**	**317**	⇓P	**Pn**	**10 41 23.0**	**-0.1**
JOD2	**Odawara 2**	**1.13**	**229**	⇓P	**Pn**	**10 41 24.0**	**-0.3**
JOD2				S	**Sn**	**10 41 37.9**	**-1.4**
BSO3	**Boso 3**	**1.25**	**165**	P	**Pn**	**10 41 25.5**	**0.0**
JYN	**Shimodate**	**1.39**	**249**	⇓P	**Pn**	**10 41 28.0**	**+0.4**
JIM2	**Oshima 3**	**1.41**	**204**	P	**Pn**	**10 41 27.2**	**-0.7**
JIM2				*e*S	**Sn**	**10 41 44.3**	**-1.5**
JFY	**Yanaizu**	**1.43**	**346**	⇓P	**Pn**	**10 41 28.6**	**+0.4**
JFY				*e*S	**Sn**	**10 41 47.0**	**+0.6**
JFK	**Kawauchi**	**1.48**	**24**	P	**Pn**	**10 41 29.0**	**+0.2**
JFT	**Otama**	**1.51**	**6**	P	**Pn**	**10 41 29.7**	**+0.4**
BSO1	**Boso 1**	**1.52**	**153**	P	**Pn**	**10 41 29.9**	**+1.1**
JHJ	**Hachijo jima 2**	**2.90**	**186**	P	**Pn**	**10 41 48.8**	**+0.9**
	26nm,0.3s,baz=225,slow=21,SNR=39						
JHJ				S	**Sn**	**10 42 19.9**	**-1.7**
	24nm,0.3s,baz=52,slow=19,SNR=8.0						
JNU	**Nakatsue**	**8.15**	**252**	P	**Pn**	**10 43 00.9**	**+1.1**
	0.3nm,0.3s,baz=38,slow=12,SNR=3.9						
ASAJ	**Asahikawa**	**8.31**	**12**	P	**Pn**	**10 43 01.1**	**-0.7**
	0.6nm,0.3s,baz=180,slow=4.0,SNR=4.3						
ASAJ				S	**Sn**	**10 44 33.3**	**-0.8**
	0.5nm,0.3s,baz=86,slow=19,SNR=3.6						
KSRS	**Korea Array**	**9.90**	**282**	P	**Pn**	**10 43 26.1**	**+2.6**
	0.3nm,0.3s,baz=98,slow=13,SNR=7.3						
SONM	**Songino Array**	**27.52**	**306**	P	**P**	**10 46 43.0**	**-1.0**
	0.9nm,0.6s,baz=106,slow=11,SNR=6.0						
ZALV	**Zalesovo Beam**	**41.85**	**313**	P	**P**	**10 48 46.4**	**-0.5**
	2.5nm,0.8s,baz=105,slow=6.9,SNR=7.4						
MKAR	**Makanchi Array**	**43.79**	**303**	P	**P**	**10 49 02.9**	**+0.1**
	1.8nm,0.7s,baz=90,slow=9.5,SNR=11						
KURBB	**Kurchatov Arra**	**45.82**	**309**	P	**P**	**10 49 18.5**	**-0.2**
	3.3nm,0.7s,baz=85,slow=8.3,SNR=33						
ILAR	**Eielson Array**	**50.91**	**32**	P	**P**	**10 49 58.3**	**+0.6**
	0.5nm,0.7s,baz=274,slow=6.4,SNR=7.7						
ILAR				pP	**pP**	**10 50 14.8**	**-0.7**
	0.5nm,0.7s,baz=270,slow=6.0,SNR=4.3						
FITZ	**Fitzroy Crossi**	**55.54**	**197**	P	**P**	**10 50 32.3**	**+0.3**
	2.0nm,0.8s,baz=350,slow=6.1,SNR=4.4						
WRA	**Warramunga Arr**	**56.92**	**187**	P	**P**	**10 50 34.0**	**-0.8**
	0.7nm,0.5s,baz=2.9,slow=7.6,SNR=17						
AKTO	**Aktyubinsk**	**58.59**	**312**	P	**P**	**10 50 54.0**	**+0.6**
	0.5nm,0.3s,baz=42,slow=15,SNR=2.3						
ASAR	**Alice Springs**	**59.64**	**187**	P	**P**	**10 51 00.7**	**-0.2**
	0.6nm,0.8s,baz=17,slow=12,SNR=4.6						
KAF	**Kangasniemi**	**68.74**	**333**	*e*pkp		10 55 10.5	
NOA	**NORSAR Array B**	**74.72**	**337**	P	**P**	**10 52 35.6**	**-0.3**
	0.5nm,0.8s,baz=38,slow=6.1,SNR=3.7						
TXAR	**Lajitas Array**	**91.57**	**52**	P	**P**	**10 54 04.2**	**+0.8**
	0.1nm,0.6s,baz=270,slow=4.4,SNR=2.8						

DDA 17 10:46:24.1,37.81N×36.58E,h6km,MD2.7,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.30**	**219**	*i* P	Pg	10 46 30.1	-0.1
ANDN				*i* S	Sg	10 46 35.2	+1.0
AYKD	**Aykdinkavak**	**0.44**	**156**	*e*P	Pg	10 46 32.8	+0.1
AYKD				*e*S	Sg	10 46 39.7	+1.2

IDC 17 10:59:05.3±0.7,36.86N×53.50E,h0km,mb3.7/12, mb1 4.0/14,mb1mx3.8/29,mbtmp3.7/14,ML3.5/2, MS3.3/7,Ms1 3.3/7,ms1mx2.9/37,Error ellipse: s-maj=21.9km s-min=15.1km az=103.0,North of Franz Josef Land

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPITS	**Spitsbergen Ar**	**9.57**	**228**	Pn	Pn	11 01 22.0	-2.1
	baz=30,slow=14,SNR=18						
SPITS				Sn	Sn	11 03 04.1	-8.0
	baz=48,slow=35,SNR=3.7						
ARCES	**ARCESS Array B**	**17.86**	**213**	P	Pn	11 03 13.8	-1.0
	0.2nm,0.3s,baz=5.2,slow=11,SNR=4.7						
ARCES				LR	LR	11 08 59.3	
	comp=Z,40nm,20.9s,baz=331,slow=3.3						
RES	**Resolute Bay**	**18.18**	**333**	LR	LR	11 10 18.3	
	comp=Z,44nm,21.3s,baz=251,slow=37						

INK	**Inuvik**	**24.97**	**6**	P	P	11 04 30.7	+0.9
	2.0nm,0.8s,baz=18,slow=6.1,SNR=5.1						
NOA	**NORSAR Array B**	**26.86**	**226**	P	P	11 04 48.1	+1.0
	1.5nm,0.8s,baz=3.2,slow=8.8,SNR=3.0						
ILAR	**Eielson Array**	**28.36**	**18**	P	P	11 05 01.1	+0.7
	0.8nm,0.9s,baz=358,slow=9.2,SNR=8.6						
BVAR	**Borovoye Array**	**34.15**	**162**	LR	LR	11 22 43.2	
	comp=Z,65nm,19.2s,baz=250,slow=42						
AKTO	**Aktyubinsk**	**36.60**	**175**	P	P	11 06 12.7	+0.1
	0.6nm,0.3s,baz=350,slow=11,SNR=5.0						
AKTO				LR	LR	11 22 53.2	
	comp=Z,50nm,18.3s,baz=61,slow=39						
GERES	**GERESS Array B**	**38.96**	**222**	P	P	11 06 33.5	+0.9
	0.3nm,0.3s,baz=14,slow=6.1,SNR=6.5						
SONM	**Songino Array**	**40.51**	**124**	P	P	11 06 46.1	+0.4
	0.2nm,0.3s,baz=358,slow=7.2,SNR=4.1						
MKAR	**Makanchi Array**	**40.65**	**149**	P	P	11 06 46.4	-0.3
	0.9nm,0.9s,baz=28,slow=5.5,SNR=5.9						
MKAR				LR	LR	11 24 45.6	
	comp=Z,44nm,19.8s,baz=174,slow=38						
BRTR	**Keskin Array B**	**47.50**	**201**	P	P	11 07 44.2	+2.4
	0.6nm,0.6s,baz=26,slow=8.0,SNR=3.2						
ESDC	**Sonseca Array**	**48.87**	**240**	P	P	11 07 52.8	+0.5
	0.2nm,0.3s,baz=2.1,slow=10,SNR=4.5						
PDAR	**Pinedale Array**	**50.46**	**344**	P	P	11 08 03.8	-0.7
	0.6nm,0.7s,baz=29,slow=3.4,SNR=5.4						
PDAR				LR	LR	11 28 07.0	
	comp=Z,33nm,19.3s,baz=178,slow=34						
TXAR	**Lajitas Array**	**63.75**	**338**	P	P	11 09 37.6	-0.9
	0.5nm,0.8s,baz=329,slow=1.5,SNR=5.8						
TXAR				LR	LR	11 38 47.6	
	comp=Z,41nm,21.6s,baz=175,slow=37						
CMAR	**Chiang Mai Arr**	**69.45**	**134**	P	P	11 10 13.9	-1.1
	0.5nm,0.3s,baz=346,slow=10,SNR=4.1						
TORD	**Torodi Ar. Bea**	**75.00**	**232**	P	P	11 10 47.5	-0.7
	0.7nm,0.7s,baz=351,slow=6.8,SNR=4.9						

CSEM ***17*** *11:02:50.3,64˚.02N×28˚.02E,h0km,ML1.3,Mining explosion. After HEL*

HEL 17 11:02:50.3±0.5,64˚.02N×28˚.02E,h0km,ML1.3, Explosion,Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OUL	**Oulu**	**1.41**	**320**	SG	Sg	11 03 35.6	+0.1
OUL				MSG		11 03 35.6	
	comp=Z,0.6nm,0.2s						
OUL				RG	Rg	11 03 39.2	
OUL	**Oulu**	**1.41**	**320**	Sg	Sg	11 03 35.6	+0.1
SUF	**Sumiainen**	**1.56**	**214**	PG	Pn	11 03 18.1	-1.0
SUF				SG	Sg	11 03 41.6	+1.4
SUF				MSG		11 03 41.6	
	comp=Z,1.3nm,0.4s						
SUF	**Sumiainen**	**1.56**	**214**	Pg	Pn	11 03 18.1	-1.1
SUF				Sg	Sg	11 03 41.6	+1.4
JOF	**Joensuu**	**1.85**	**125**	PN	Pn	11 03 22.8	-0.4
	baz=306						
JOF				SG	Sn	11 03 46.8	-0.5
JOF				MSG		11 03 46.8	
	comp=Z,3.1nm,0.4s						
JOF	**Joensuu**	**1.85**	**125**	Pn	Pn	11 03 22.8	-0.4
JOF				Sg	Sn	11 03 46.8	-0.5
MSF	**Maaselka**	**1.95**	**12**	SG	Sn	11 03 50.1	+0.4
MSF				MSG		11 03 50.1	
	comp=Z,1.1nm,0.4s						
MSF	**Maaselka**	**1.95**	**12**	Sg	Sn	11 03 50.1	+0.4
KAF	**Kangasniemi**	**2.07**	**203**	PN	Pn	11 03 26.2	0.0
KAF				SG	Sn	11 03 52.9	+0.2
KAF				MSG		11 03 52.9	
	comp=Z,1.6nm,0.2s						
KAF	**Kangasniemi**	**2.07**	**203**	Pn	Pn	11 03 26.2	0.0
KAF				Sg	Sn	11 03 52.9	+0.2
KEF	**Keuruu**	**2.35**	**219**	SG	Sb	11 04 01.5	-1.5
KEF				MSG		11 04 01.5	
	comp=Z,1.7nm,0.2s						
KEF	**Keuruu**	**2.35**	**219**	Sg	Sb	11 04 01.4	-1.5
RNF	**Rovaniemi**	**2.73**	**343**	SG	Sb	11 04 14.2	+0.3
RNF				MSG		11 04 14.2	
	comp=Z,0.9nm,0.2s						
RNF	**Rovaniemi**	**2.73**	**343**	Sg	Sb	11 04 14.2	+0.3
FIA0	**FINESS Array S**	**2.74**	**200**	SG	Sn	11 04 10.7	+1.5
FIA0				MSG		11 04 10.7	
	comp=Z,3.4nm,0.5s						
FIA0	**FINESS Array S**	**2.74**	**200**	Sg	Sn	11 04 10.7	+1.5

CSEM ***17*** *11:02:57.4,60˚.32N×25˚.01E,h0km,ML1.0,Mining explosion. After HEL*

HEL 17 11:02:57.4±0.8,60˚.32N×25˚.01E,h0km,ML1.0, Explosion,Finland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MEF	**Metsahovi**	**0.32**	**251**	PG	Pg	11 03 02.5	-1.1
MEF				SG	Sg	11 03 06.2	-1.5
MEF	**Metsahovi**	**0.32**	**251**	Pg	Pg	11 03 02.4	-1.2
MEF				Sg	Sg	11 03 06.2	-1.5
FIA0	**FINESS Array S**	**1.24**	**25**	PG	Pn	11 03 23.4	+1.4
	baz=205						
FIA0				SG	Sg	11 03 37.1	-0.1
FIA0				MSG		11 03 37.1	
	comp=Z,1.3nm,0.4s						
FIA0				RG	Rg	11 03 41.8	
FIA0	**FINESS Array S**	**1.24**	**25**	Pg	Pn	11 03 23.4	+1.4
FIA0				Sg	Sg	11 03 37.1	-0.1
VJF	**Virojoki**	**1.28**	**79**	SG	Sb	11 03 39.4	+0.1
VJF				MSG		11 03 39.4	
	comp=Z,1.1nm,0.2s						
VJF				RG	Rg	11 03 41.6	
VJF	**Virojoki**	**1.28**	**79**	Sg	Sb	11 03 39.4	0.0
RAF	**Rauma**	**1.74**	**295**	SG	Sn	11 03 51.1	-0.6
RAF				MSG		11 03 51.1	
	comp=Z,0.4nm,0.1s						
RAF	**Rauma**	**1.74**	**295**	Sg	Sn	11 03 51.1	-0.6
KEF	**Keuruu**	**1.85**	**358**	PN	Pb	11 03 32.0	-0.1
KEF	**Keuruu**	**1.85**	**358**	Pn	Pb	11 03 32.0	-0.1
AAL	**Aland**	**2.50**	**269**	SG	Sb	11 04 13.0	-1.4
AAL	**Aland**	**2.50**	**269**	Sg	Sb	11 04 13.0	-1.5

NIED ***17*** *11:12:00,42˚.70N×146˚.30E,h32km,Mw4.3 Best double couple: M₀2.96000×10¹⁵ NP1:φs50.00000°,δ80.00000°, λ115.00000°. NP2:φs161.00000°,δ27.00000°,λ23.00000°.*
BJI ***17*** *11:12:08.4,42˚.69N×146˚.71E,h45km,mB4.8/8,mb4.7/14, Ms4.3/8,Ms7 4.1/8*
JMA ***17*** *11:12:10.0±0.2,42˚.75N×146˚.24E,h52km±2km,M4.2*
JMA Felt I J1.
MOS ***17*** *11:12:10.3±1.1,42˚.84N×146˚.12E,h44km,mb4.7/26,Error ellipse: s-maj=9.5km s-min=6.6km az=104.4*
ISCJB ***17*** *11:12:11.5±0.6,42˚.81N±0˚.04×146˚.14E±0˚.05,h52km±4km, mb4.4/50,MS4.0/19,Error ellipse: s-maj=7.9km s-min=4.9km az=150.4*
IDC ***17*** *11:12:12.1±2.8,42˚.75N×146˚.18E,h46km±26km,mb4.0/22, mb1 4.2/24,mb1mx4.1/32,mbtmp4.0/24,ML3.6/1,MS3.8/16, Ms1 3.8/16,ms1mx3.5/43,Error ellipse: s-maj=16.9km s-min=13.8km az=166.0*
NEIC ***17*** *11:12:12.9±0.5,42˚.84N×146˚.14E,h47km±4km,mb4.4/12, Error ellipse: s-maj=8.1km s-min=4.5km az=156.0*
NEIC Recorded [1 JMA] in eastern Hokkaido.

ISC 17 11:12:12.5±0.5,42.81N±0˚.06×146˚.14E±0˚.05,h45km±3km, h44km:pP-P,n135,σ1¶09/154,mb4.5/50,MS3.9/19,8C-2D, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.63**	**332**	P	**Pn**	**11 12 24.1**	**-0.9**
NEM2				*e*S	**Sn**	**11 12 35.1**	**+1.0**
JAK	**Akkeshi**	**1.08**	**281**	P	**Pn**	**11 12 30.2**	**-0.9**
YUK	**Yuzh-Kuril'sk**	**1.24**	**351**	*c* iPN	**Pn**	**11 12 31.9**	**-1.5**
YUK				*i* S	**Sn**	**11 12 50.9**	**+2.0**
YUK				pmax	pmax		
	comp=N,127nm,0.2s						
YUK				pmax	pmax		
	comp=Z,715nm,0.2s						
YUK				pmax	pmax		
	comp=E,221nm,0.2s						
YUK				smax	smax		
	comp=N,965nm,0.3s						
YUK				smax	smax		
	comp=E,229nm,0.6s						
YUK				smax	smax		
	comp=E,5μm,0.6s						
YUK				smax	smax		
	comp=N,8μm,2.0s						
JNK	**Nakash**	**1.30**	**307**	P	**Pn**	**11 12 33.1**	**-1.0**
JNK				*e*S	**Sn**	**11 12 50.4**	**+0.1**
JRA	**Rausu**	**1.35**	**327**	P	**Pn**	**11 12 34.3**	**-0.5**
JOB	**Onbets**	**1.70**	**274**	P	**Pn**	**11 12 39.0**	**-0.6**
JAR	**Ashorobuto**	**1.81**	**286**	P	**Pn**	**11 12 40.4**	**-0.7**
JTKR	**Abashiri--Toko**	**2.00**	**306**	P	**Pn**	**11 12 43.9**	**+0.2**
JCH	**Churui**	**2.06**	**266**	P	**Pn**	**11 12 43.9**	**-0.6**
JEM	**Erimo**	**2.35**	**251**	P	**Pn**	**11 12 48.9**	**+0.4**
ERM	**Erimo**	**2.35**	**251**	*e*PN	**Pn**	**11 12 48.5**	**0.0**
ERM	**Erimo**	**2.35**	**251**	*e*Pn	**Pn**	**11 12 48.5**	**0.0**
JMP	**Maruseppu**	**2.35**	**302**	P	**Pn**	**11 12 49.0**	**+0.4**
KUR	**Kuril'sk**	**2.73**	**27**	⇓*i*PN	**Pn**	**11 12 52.8**	**-0.9**
KUR				*i* S	**Sn**	**11 13 26.5**	**+1.1**
KUR				pmax	pmax		
	comp=N,22nm,0.1s						
KUR				pmax	pmax		
	comp=E,41nm,0.3s						
KUR				pmax	pmax		
	comp=Z,100nm,0.3s						
KUR				smax	smax		
	comp=E,110nm,0.3s						
KUR				smax	smax		
	comp=N,252nm,0.7s						
KUR				pmax	pmax		
	comp=E,422nm,2.5s						
KUR				pmax	pmax		
	comp=N,806nm,2.6s						
KUR				MLR	MLR		
	comp=N,945nm,17.0s						
KUR				MLR	MLR		
	comp=E,779nm,17.0s						
KUR				MLR	MLR		
	comp=Z,902nm,17.0s						
ASAJ	**Asahikawa**	**2.89**	**298**	*e*Pn	**Pn**	**11 12 56.7**	**+0.7**
ASAJ				S	Sn	11 13 37.9	+8.4
ASAJ	**Asahikawa**	**2.89**	**298**	P	**Pn**	**11 12 57.0**	**+1.0**
	comp=Z,5.6nm,0.3s,baz=143,slow=13,SNR=27						
ASAJ				S	Sn	11 13 37.9	+8.4
	comp=Z,16nm,0.3s,baz=148,slow=19,SNR=6.8						
ASAJ				LR	LR	11 14 24.7	
	comp=Z,2μm,18.3s,baz=111,slow=45						
YSS	**Yuzh-Sakhalins**	**4.79**	**331**	⇑*i*PN	**Pn**	**11 13 23.2**	**+1.2**
YSS				*e*S	**Sn**	**11 14 17.0**	**+0.8**
YSS				smax	smax		
	comp=E,60nm,1.0s						
YSS				MLR	MLR		
	comp=Z,1μm,13.0s						
YSS				MLR	MLR		
	comp=N,1μm,14.0s						
MAJO	**Matsushiro**	**8.75**	**227**	*e*PN	**Pn**	**11 14 18.3**	**+1.9**
MAJO	**Matsushiro**	**8.75**	**227**	*e*Pn	**Pn**	**11 14 18.3**	**+1.9**
HABR	**Khabarovsk**	**9.61**	**310**	*e*PN	**Pn**	**11 14 25.9**	**-2.1**
HABR				pmax	pmax		
	comp=N,16nm,2.8s						
HABR				pmax	pmax		
	comp=E,25nm,2.1s						
HABR				pmax	pmax		
	comp=Z,32nm,2.8s						
HABR				MLR	MLR		
	comp=Z,347nm,17.0s						
USRK	**Ussuriysk Arra**	**10.37**	**283**	LR	LR	11 18 54.6	
	comp=Z,190nm,19.4s,baz=259,slow=39						
SKR	**Severo-Kuril's**	**10.43**	**38**	*e*PN	Pn	11 14 32.8	-6.4
SKR				pmax	pmax		
	comp=Z,390nm,1.4s						
SKR				MLR	MLR		
	comp=E,700nm,18.0s						
SKR				MLR	MLR		
	comp=Z,700nm,18.0s						
VLA	**Vladivostok**	**10.45**	**277**	⇑*e*PN	**Pn**	**11 14 38.8**	**-0.8**
VLA				pmax	pmax		
	comp=Z,29nm,1.2s						
KLR	**Kul'dur**	**11.88**	**308**	*e*PN	**Pn**	**11 14 57.2**	**-1.9**
KLR				MLR	MLR		
	comp=E,500nm,13.0s						
KLR				MLR	MLR		
	comp=Z,700nm,13.0s						
PETK	**Petropavlovsk-**	**12.87**	**33**	PN	**Pn**	**11 15 11.3**	**-1.3**
PETK	**Petropavlovsk-**	**12.87**	**33**	P	**Pn**	**11 15 11.3**	**-1.3**
PETK	**Petropavlovsk-**	**12.87**	**33**	P	**Pn**	**11 15 11.3**	**-1.3**
	baz=187,slow=12,SNR=4.0						
KSRS	**Korea Array**	**14.92**	**255**	LR	LR	11 21 27.3	
	comp=Z,117nm,19.3s,baz=221,slow=37						
CN2	**Changchun**	**15.10**	**281**	*e*P	**Pn**	**11 15 43.6**	**+0.9**
CN2				*es*P	**sP**	**11 15 58.8**	**-4.5**
CN2				*e*S	**Sn**	**11 18 29.0**	**+0.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s						
CN2				LR	LR		
	comp=E,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,19.0s						
JNU	**Nakatsue**	**15.42**	**236**	*e*Pn	**Pn**	**11 15 48.2**	**+1.3**
	comp=Z,5.2nm,1.2s						
FX1	**Attu Island--F**	**20.63**	**51**	*e*P	**P**	**11 16 48.7**	**+0.8**
HHC	**Hu-ho-hao-te**	**25.73**	**277**	*e*P	**P**	**11 17 37.8**	**-1.0**
HHC				pP	**pP**	**11 17 49.5**	**-1.0**
HHC				sP	**sP**	**11 17 54.9**	**-1.0**
HHC				PP	**PnPn**	**11 18 18.4**	**+1.6**
HHC				S	**S**	**

GYA	**Guiyang**	**35.98**	**256**	*e*P	**P**	**11 19 10.4**	**+1.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI	**Kunming**	**39.59**	**258**	P	P	11 19 43.8	+4.0
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZALV	**Zalesovo Beam**	**40.98**	**308**	P	**P**	**11 19 50.0**	**-0.7**
ZALV						11 21 49.7	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV				MLR	MLR		
	comp=Z,164nm,18.2s						
ZALV	**Zalesovo Beam**	**40.98**	**308**	P	**P**	**11 19 50.0**	**-0.7**
ZALV				PcP	**PcP**	**11 21 49.7**	**-0.3**
ZALV	**Zalesovo Beam**	**40.98**	**308**	P	**P**	**11 19 50.0**	**-0.7**
	comp=Z,1.3nm,0.6s,baz=97,slow=7.5,SNR=8.2						
ZALV				PcP	**PcP**	**11 21 49.7**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=73,slow=5.0,SNR=3.5						
ZALV				LR	LR	11 38 12.2	
	comp=Z,164nm,18.2s,baz=70,slow=38						
COLD	**Coldfoot**	**41.34**	**32**	*e*P	**P**	**11 19 53.6**	**+0.1**
	comp=Z,4.6nm,1.0s						
SML	**Sawmill**	**42.21**	**40**	*e*P	pP	11 20 13.3	+0.4
SML	**Sawmill**	**42.21**	**40**	*e*pP	pP	11 20 13.3	+0.4
COLA	**College**	**42.27**	**35**	*e*P	**P**	**11 20 01.5**	**+0.5**
COLA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
COLA	**College**	**42.27**	**35**	*e*P	**P**	**11 20 01.5**	**+0.5**
	comp=Z,5.1nm,0.9s						
ILAR	**Eielson Array**	**42.68**	**36**	P	**P**	**11 20 03.5**	**-0.9**
ILAR	**Eielson Array**	**42.68**	**36**	P	**P**	**11 20 03.5**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=272,slow=8.7,SNR=20						
MK31	**Makanchi Array**	**44.37**	**298**	*e*P	**P**	**11 20 18.5**	**+0.2**
MK31	**Makanchi Array**	**44.37**	**298**	*e*P	**P**	**11 20 18.5**	**+0.2**
MKAR	**Makanchi Array**	**44.37**	**298**	*ce*P	**P**	**11 20 18.5**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MKAR	**Makanchi Array**	**44.37**	**298**	P	**P**	**11 20 18.3**	**0.0**
MKAR	**Makanchi Array**	**44.37**	**298**	P	**P**	**11 20 18.3**	**0.0**
	comp=Z,8.9nm,0.9s,baz=79,slow=9.0,SNR=40						
MKAR				LR	LR	11 40 07.4	
	comp=Z,95nm,19.3s,baz=7.9,slow=38						
KURK	**Kurchatov**	**45.45**	**304**	*c* i P	**P**	**11 20 26.5**	**-0.3**
KURK				pmax	pmax		
	comp=Z,21nm,1.0s						
KURK	**Kurchatov**	**45.45**	**304**	*e*P	**P**	**11 20 26.9**	**+0.1**
	comp=Z,17nm,0.9s						
KURK				PcP	**PcP**	**11 22 04.7**	**-0.4**
KURBB	**Kurchatov Arra**	**45.53**	**304**	P	**P**	**11 20 27.4**	**0.0**
	comp=Z,15nm,0.7s,baz=70,slow=8.7,SNR=81						
KURBB				PcP	**PcP**	**11 22 04.7**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=68,slow=2.7,SNR=4.3						
INK	**Inuvik**	**47.59**	**30**	P	**P**	**11 20 43.0**	**-0.3**
INK	**Inuvik**	**47.59**	**30**	P	**P**	**11 20 43.0**	**-0.3**
	comp=Z,4.8nm,0.7s,baz=295,slow=7.1,SNR=17						
INK				LR	LR	11 41 46.0	
	comp=Z,75nm,19.3s,baz=314,slow=37						
VOSK	**Vostochnaya**	**49.30**	**309**	P	**P**	**11 20 56.3**	**-0.4**
VOSK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BVAR	**Borovoye Array**	**49.53**	**310**	P	**P**	**11 20 58.1**	**-0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**49.53**	**310**	P	**P**	**11 20 58.1**	**-0.3**
BVAR	**Borovoye Array**	**49.53**	**310**	P	**P**	**11 20 58.1**	**-0.3**
	comp=Z,1.4nm,0.4s,baz=87,slow=9.1,SNR=11						
BRVK	**Borovoye**	**49.58**	**310**	*c* i P	**P**	**11 20 58.6**	**-0.2**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ZRNK	**Zerenda**	**50.34**	**310**	*i* P	**P**	**11 21 04.4**	**-0.2**
ZRNK				pmax	pmax		
	comp=Z,12nm,1.3s						
ARU	**Arti**	**54.53**	**317**	*c* i P	**P**	**11 21 35.0**	**-0.5**
ARU						11 23 36.9	
ARU				S	**S**	**11 29 12.8**	**+1.6**
ARU				pmax	pmax		
	comp=Z,16nm,1.7s						
YKA	**Yellowknife Ar**	**56.99**	**33**	P	**P**	**11 21 52.9**	**-0.1**
YKA	**Yellowknife Ar**	**56.99**	**33**	P	**P**	**11 21 52.9**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=304,slow=7.4,SNR=5.8						
AB31	**Akbulak array**	**57.08**	**309**	*i* P	**P**	**11 21 53.9**	**0.0**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ABKAR	**Akbulak array**	**57.08**	**309**	*e*P	**P**	**11 21 54.4**	**+0.5**
	comp=Z,2.1nm,0.4s						
AKTO	**Aktyubinsk**	**57.59**	**311**	P	**P**	**11 21 57.4**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKTO	**Aktyubinsk**	**57.59**	**311**	P	**P**	**11 21 57.4**	**-0.1**
AKTO	**Aktyubinsk**	**57.59**	**311**	P	**P**	**11 21 57.4**	**-0.1**
	comp=Z,0.9nm,0.4s,baz=54,slow=14,SNR=3.6						
KEV	**Kevo**	**59.33**	**339**	*e*P	**P**	**11 22 06.2**	**-3.1**
KEV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KEV	**Kevo**	**59.33**	**339**	*ep*	**P**	**11 22 06.2**	**-3.1**
	comp=Z,8.3nm,0.8s						
ARCES	**ARCESS Array B**	**59.87**	**340**	P	**P**	**11 22 13.3**	**+0.3**
ARCES	**ARCESS Array B**	**59.87**	**340**	P	**P**	**11 22 13.3**	**+0.3**
	comp=Z,5.4nm,0.8s,baz=34,slow=6.8,SNR=9.2						
ARCES				LR	LR	11 53 08.5	
	comp=Z,46nm,18.3s,baz=62,slow=41						
JOF	**Joensuu**	**62.58**	**332**	*e*P	P	11 22 19.6	-12
JOF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
JOF	**Joensuu**	**62.58**	**332**	*ep*	P	11 22 19.6	-12
	comp=Z,2.5nm,0.6s						
WRA	**Warramunga Arr**	**63.38**	**192**	P	**P**	**11 22 35.5**	**-1.7**
WRA	**Warramunga Arr**	**63.38**	**192**	P	**P**	**11 22 35.5**	**-1.7**
	comp=Z,0.3nm,0.4s,baz=12,slow=6.8,SNR=10						
NEW	**Newport**	**63.51**	**48**	*e*P	**P**	**11 22 38.5**	**+0.6**
NEW				*ep*P	**pP**	**11 22 51.6**	**+0.9**
KAF	**Kangasniemi**	**64.82**	**333**	*e*P	**P**	**11 22 43.8**	**-2.4**
KAF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KAF	**Kangasniemi**	**64.82**	**333**	*ep*	**P**	**11 22 43.8**	**-2.4**
	comp=Z,8.6nm,0.8s						
SUMG	**Summit**	**64.87**	**2**	*e*P	**P**	**11 22 47.2**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,27nm,1.1s						
SUMG	**Summit**	**64.87**	**2**	*e*P	**P**	**11 22 47.2**	**+0.3**
	comp=Z,27nm,1.1s						
SUMG	**Summit**	**64.87**	**2**	*i* P	**P**	**11 22 47.1**	**+0.2**
	comp=Z,14nm,1.0s						
FINES	**FINESS Array B**	**65.38**	**333**	P	**P**	**11 22 49.2**	**-0.5**
FINES	**FINESS Array B**	**65.38**	**333**	P	**P**	**11 22 49.2**	**-0.5**
	comp=Z,13nm,0.7s,baz=57,slow=10,SNR=9.5						
FINES				LR	LR	11 53 20.9	
	comp=Z,60nm,18.9s,baz=42,slow=38						
SWMT	**Swartz Lake**	**65.65**	**47**	*e*P	**P**	**11 22 52.3**	**+0.4**
SWMT				*ep*P	**pP**	**11 23 05.9**	**+1.0**
SLMT	**Seeley Lake**	**66.08**	**47**	*e*P	**P**	**11 22 55.1**	**+0.2**
	comp=Z,3.4nm,1.1s						
MSO	**Missoula**	**66.09**	**48**	*e*P	**P**	**11 22 54.9**	**+0.1**
FFC	**Flin Flon**	**66.89**	**36**	*i* P	**P**	**11 23 00.4**	**+0.7**
ASAR	**Alice Springs**	**67.10**	**192**	P	**P**	**11 23 00.6**	**-0.7**
ASAR	**Alice Springs**	**67.10**	**192**	P	**P**	**11 23 00.6**	**-0.7**
	comp=Z,0.9nm,0.9s,baz=8.2,slow=6.7,SNR=12						
HRY	**Holter Researc**	**67.31**	**47**	*e*P	**P**	**11 23 03.0**	**+0.4**
	comp=Z,1.4nm,0.5s						
LRM	**Limekiln Ridge**	**67.53**	**48**	*e*P	**P**	**11 23 04.8**	**+0.6**
DLMT	**Dillon**	**67.74**	**48**	*e*P	**P**	**11 23 06.2**	**+0.8**
DLMT				*ep*P	**pP**	**11 23 19.1**	**+0.8**
BOZ	**Bozeman (W)**	**68.09**	**48**	*e*P	**P**	**11 23 08.3**	**+0.7**
BOZ				*e**PP	**pP**	**11 23 21.2**	**+0.7**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BOZ	**Bozeman (W)**	**68.09**	**48**	*e*P	**P**	**11 23 08.3**	**+0.7**
	comp=Z,2.8nm,0.7s						
BOZ				*ep*P	**pP**	**11 23 21.2**	**+0.7**
NVAR	**Mina Array Bea**	**68.71**	**57**	P	**P**	**11 23 12.3**	**+0.6**
NVAR	**Mina Array Bea**	**68.71**	**57**	P	**P**	**11 23 12.3**	**+0.6**
	comp=Z,1.9nm,0.7s,baz=295,slow=6.8,SNR=20						
MOOW	**Moose Ponds**	**69.78**	**49**	*e*P	**P**	**11 23 19.0**	**+0.7**
	comp=Z,5.2nm,1.4s						
TPAW	**Teton Pass**	**69.84**	**49**	*e*P	**P**	**11 23 18.9**	**+0.2**
	comp=Z,6.9nm,1.2s						
KIV	**Kislovodsk**	**69.84**	**312**	*e*P	P	11 23 14.1	-4.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,104nm,19.0s						
KBZ	**Khabaz**	**69.87**	**311**	P	**P**	**11 23 19.1**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KBZ				MLR	MLR		
	comp=Z,88nm,18.7s						
KBZ	**Khabaz**	**69.87**	**311**	P	**P**	**11 23 19.1**	**+0.7**
KBZ	**Khabaz**	**69.87**	**311**	P	**P**	**11 23 19.1**	**+0.7**
	comp=Z,3.1nm,0.8s,baz=28,slow=6.6,SNR=6.5						
KBZ				LR	LR	11 59 26.8	
	comp=Z,88nm,18.7s,baz=271,slow=40						
NB2	**NORSAR Subarra**	**70.21**	**339**	P	**P**	**11 23 20.1**	**-0.2**
	comp=Z,8.4nm,0.8s,baz=33,slow=6.5						
NOA	**NORSAR Array B**	**70.21**	**339**	P	**P**	**11 23 19.8**	**-0.5**
NOA	**NORSAR Array B**	**70.21**	**339**	P	**P**	**11 23 19.8**	**-0.5**
	comp=Z,7.2nm,0.8s,baz=33,slow=6.3,SNR=23						
NOA				LR	LR	11 58 20.9	
	comp=Z,63nm,19.5s,baz=95,slow=39						
HFS	**Hagfors**	**70.27**	**337**	P	**P**	**11 23 20.0**	**-0.6**
HFS	**Hagfors**	**70.27**	**337**	P	**P**	**11 23 20.0**	**-0.6**
	comp=Z,6.2nm,0.6s,baz=41,slow=7.7,SNR=24						
HFS				LR	LR	11 57 09.5	
	comp=Z,83nm,20.0s,baz=222,slow=38						
FRB	**Frobisher Bay**	**70.28**	**16**	P	**P**	**11 23 19.3**	**-1.3**
FRB	**Frobisher Bay**	**70.28**	**16**	P	**P**	**11 23 19.3**	**-1.3**
	comp=Z,2.6nm,0.3s,baz=331,slow=6.4,SNR=3.6						
PDAR	**Pinedale Array**	**71.08**	**49**	P	**P**	**11 23 25.8**	**-0.4**
PDAR	**Pinedale Array**	**71.08**	**49**	P	**P**	**11 23 25.8**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=337,slow=2.1,SNR=8.5						
AKASG	**Malin Array Be**	**71.90**	**323**	*ce*P	**P**	**11 23 30.5**	**-0.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**71.90**	**323**	P	**P**	**11 23 29.8**	**-0.8**
AKASG	**Malin Array Be**	**71.90**	**323**	P	**P**	**11 23 29.8**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=41,slow=5.9,SNR=9.4						
ULM	**Lac du Bonnet**	**72.69**	**36**	LR	LR	11 59 53.5	
	comp=Z,42nm,19.7s,baz=35,slow=39						
BUR08	**Bucovina Ar. S**	**75.94**	**323**	*e*P	**P**	**11 23 55.1**	**+0.6**
BRTR	**Keskin Array B**	**77.66**	**313**	P	**P**	**11 24 04.8**	**+0.4**
BRTR	**Keskin Array B**	**77.66**	**313**	P	**P**	**11 24 04.8**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=66,slow=4.9,SNR=5.2						
BRTR				LR	LR	12 04 44.7	
	comp=Z,49nm,18.5s,baz=293,slow=41						
VOIR		**77.69**	**322**	S	**S**	**11 33 55.9**	**+3.0**
CLL	**Collm**	**77.81**	**332**	*e*P	**P**	**11 24 04.0**	**-0.7**
CLL				*i*		11 24 17.5	
CLL	**Collm**	**77.81**	**332**	*e*P	**P**	**11 24 04.0**	**-0.7**
CLL				*i* pP	**pP**	**11 24 17.5**	**-0.4**
GERES	**GERESS Array B**	**79.61**	**330**	LR	LR	12 03 12.6	
	comp=Z,116nm,18.9s,baz=201,slow=38						
TXAR	**Lajitas Array**	**83.79**	**56**	P	**P**	**11 24 37.1**	**-0.1**
TXAR	**Lajitas Array**	**83.79**	**56**	P	**P**	**11 24 37.1**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=294,slow=4.4,SNR=7.1						
RPZ	**Rata Peaks**	**88.99**	**162**	LR	LR	11 56 11.7	
	comp=Z,752nm,21.2s,baz=41,slow=30						
KEST	**Kesra**	**92.45**	**326**	LR	LR	12 11 35.0	
	comp=Z,37nm,18.3s,baz=249,slow=38						

IDC 17 11:28:12.6±6.4, 8°.86S×118°.79E, h108km±57km, mb3.2/2, mb1 3.3/4, mb1mx3.0/22, mbtmp3.1/4, Error ellipse: s-maj=137.4km s-min=40.4km az=40.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.34**	**145**	P	Pn	11 30 52.0	+0.6
	0.1nm,0.3s,baz=330,slow=12,SNR=6.6						
FITZ				S	Sn	11 32 55.1	-1.1
	0.4nm,0.3s,baz=190,slow=19,SNR=8.6						
WRA	**Warramunga Arr**	**18.64**	**128**	P	P	11 32 22.1	0.0
	0.2nm,0.3s,baz=302,slow=12,SNR=9.9						
WRA				S	S	11 35 50.0	+1.1
	0.1nm,0.3s,baz=307,slow=24,SNR=4.2						
ASAR	**Alice Springs**	**20.64**	**137**	P	P	11 32 44.0	+0.3
	0.7nm,0.5s,baz=310,slow=9.1,SNR=20						
STKA	**Stephens Creek**	**31.19**	**140**	P	P	11 34 21.1	-0.5
	0.6nm,0.4s,baz=293,slow=7.7,SNR=4.1						

IDC 17 11:28:43.7±1.1, 87°.07N×40°.88E, h0km, mb3.3/4, mb1 3.7/5, mb1mx3.4/26, mbtmp3.4/5, ML3.5/1, Error ellipse: s-maj=38.7km s-min=22.8km az=85.0, North of Franz Josef Land

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPITS	**Spitsbergen Ar**	**9.29**	**212**	P	Pn	11 30 58.3	-0.3
	baz=36,slow=14,SNR=14						
ILAR	**Eielson Array**	**28.31**	**7**	P	P	11 34 37.5	-0.9
	0.2nm,0.7s,baz=355,slow=10.0,SNR=4.3						
MKAR	**Makanchi Array**	**41.22**	**136**	P	P	11 36 29.8	+0.2
	0.4nm,0.7s,baz=27,slow=8.1,SNR=3.2						
NVAR	**Mina Array Bea**	**54.53**	**340**	P	P	11 38 13.7	+0.6
	0.2nm,0.4s,baz=351,slow=4.6,SNR=2.9						
TXAR	**Lajitas Array**	**63.25**	**325**	P	P	11 39 13.8	+0.3
	0.2nm,0.8s,baz=19,slow=4.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**74.66**	**220**	P	P	11 40 23.9	-0.6
	0.7nm,0.8s,baz=348,slow=6.3,SNR=3.5						

*NSSC **17** 11:28:49.4±1.3, 36°.24N×35°.97E, h8km±6km, MD1.1, ML2.0*
*ISCJB **17** 11:28:51.6±0.6, 36°.13N±0°.03×36°.08E±0°.05, h16km±7km, Error ellipse: s-maj=7.5km s-min=5.4km az=12.7*
*CSEM **17** 11:28:51.1±0.3, 36°.17N×36°.10E, h12km, MD2.6, Error ellipse: s-maj=8.5km s-min=6.4km az=106.0*
*DDA **17** 11:28:51.7, 36°.18N×36°.14E, h7km, MD2.6*
ISC 17 11:28:51.5±0.9, 36°.17N±0°.03×36°.14E±0°.04, h11km±7km, n17, σ0°.71/30, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YAYL	**Yayladag**	**0.14**	**189**	*i* P	**Pg**	**11 28 55.0**	**+0.1**
YAYL				*i* S	**Sg**	**11 28 57.8**	**+0.5**
YAYL	**Yayladag**	**0.14**	**189**	*i* P	**Pg**	**11 28 55.0**	**+0.1**
YAYL				*i* S	**Sg**	**11 28 57.8**	**+0.5**
BTCH	**Batrach**	**0.30**	**117**	*i* P	**Pb**	**11 28 58.8**	**0.0**
BTCH				*e*S	**Sb**	**11 29 04.5**	**+0.8**
BTCH				AML	AML	11 29 05.7	
	comp=N,156nm,0.2s						
BTCH				AML	AML	11 29 06.9	
	comp=E,130nm,0.1s						
BTCH	**Batrach**	**0.30**	**117**	*i* P	**Pb**	**11 28 58.8**	**0.0**
	SNR=99						
BTCH				*e*S	**Sb**	**11 29 04.5**	**+0.8**
	comp=E,130nm,0.1s,SNR=97						
ARNB	**Al Arnab**	**0.34**	**203**	*e*P	**Pg**	**11 28 57.9**	**-0.4**
ARNB				*e*S	**Sg**	**11 29 01.5**	**-1.3**
ARNB				AML	AML	11 29 03.1	
	comp=E,179nm,0.3s						
ARNB				AML	AML	11 29 03.3	
	comp=N,201nm,0.6s						
ARNB	**Al Arnab**	**0.34**	**203**	*e*P	**Pg**	**11 28 57.9**	**-0.4**
	SNR=100						
ARNB				*e*S	**Sg**	**11 29 01.5**	**-1.3**
	comp=N,201nm,0.6s,SNR=98						
DRWC	**Darouich**	**0.62**	**44**	*e*P	**Pg**	**11 29 02.2**	**-1.3**
DRWC				*e*S	**Sg**	**11 29 11.6**	**-0.1**
DRWC				AML	AML	11 29 13.3	
	comp=N,78nm,0.4s						
DRWC				AML	AML	11 29 13.9	
	comp=E,81nm,0.5s						
DRWC	**Darouich**	**0.62**	**44**	*e*P	**Pg**	**11 29 02.2**	**-1.3**
	SNR=72						
DRWC				*e*S	**Sg**	**11 29 11.6**	**-0.1**
	comp=E,81nm,0.5s,SNR=94						
YURE	**YUREGIR**	**0.77**	**328**	*e*P	**Pg**	**11 29 06.2**	**-0.1**
YURE				*e*S	**Sb**	**11 29 17.6**	**+0.3**
YURE	**YUREGIR**	**0.77**	**328**	*e*P	**Pg**	**11 29 06.2**	**-0.1**
YURE				*e*S	**Sb**	**11 29 17.6**	**+0.3**
KUZU	**Kuzuini**	**0.97**	**51**	*e*P	**Pg**	**11 29 09.4**	**-0.7**
KUZU				*i* S	**Sn**	**11 29 25.8**	**+1.0**
KUZU	**Kuzuini**	**0.97**	**51**	*e*P	**Pg**	**11 29 09.4**	**-0.7**
KUZU				*i* S	**Sn**	**11 29 25.8**	**+1.0**
AYKD	**Aykdinkavak**	**1.35**	**23**	*e*P	**Pg**	**11 29 17.5**	**+0.1**
AYKD				*e*S	**Sg**	**11 29 34.6**	**-0.4**
SLMH	**Al Salmeh**	**1.45**	**88**	*e*P	**Pn**	**11 29 17.8**	**+0.1**
SLMH	**Al Salmeh**	**1.45**	**88**	*e*P	**Pn**	**11 29 17.8**	**+0.1**
	SNR=47						
HAWK	**Haweek**	**1.66**	**172**	*e*P	**Pn**	**11 29 20.1**	**-0.5**
HAWK	**Haweek**	**1.66**	**172**	*e*P	**Pn**	**11 29 20.1**	**-0.5**
	SNR=47						

*ISK **17** 11:45:33.8, 37°.27N×28°.23E, h11km, MD2.7*
*ISCJB **17** 11:45:34.5±0.4, 37°.26N±0°.03×28°.24E±0°.03, h0km, Error ellipse: s-maj=4.4km s-min=3.4km az=136.9*

*DDA **17** 11:45:34.6, 37°.22N×28°.12E, h7km, MD2.7*
*CSEM **17** 11:45:34.6±0.2, 37°.25N×28°.24E, h1km, MD2.7, Error ellipse: s-maj=4.9km s-min=4.3km az=49.0*
ISC 17 11:45:34.7±0.8, 37°.27N±0°.02×28°.25E±0°.02, h0km, n28, σ0°.83/43, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.14**	**169**	*e*PG	**Pg**	**11 45 37.6**	**+0.3**
YER				*e*SG	**Sg**	**11 45 40.0**	**+0.9**
YER	**Yerkesik**	**0.14**	**169**	*e*Pg	**Pg**	**11 45 37.6**	**+0.3**
YER				*e*Sg	**Sg**	**11 45 40.0**	**+0.9**
MLSB	**Milas**	**0.38**	**274**	*e*PG	**Pg**	**11 45 41.4**	**-0.6**
MLSB				*e*SG	**Sg**	**11 45 47.1**	**+0.2**
MLSB	**Milas**	**0.38**	**274**	*e*Pg	**Pg**	**11 45 41.4**	**-0.6**
MLSB				*e*Sg	**Sg**	**11 45 47.1**	**+0.2**
TURN	**Turunc**	**0.49**	**145**	*i* P	**Pg**	**11 45 43.6**	**-0.4**
TURN				*i* S	**Sg**	**11 45 49.8**	**-0.5**
TURN	**Turunc**	**0.49**	**145**	*i* P	**Pg**	**11 45 43.6**	**-0.4**
TURN				*i* S	**Sg**	**11 45 49.8**	**-0.5**
AYDN	**Tasoluk**	**0.49**	**323**	*i* P	**Pg**	**11 45 45.0**	**+0.9**
AYDN				*i* S	**Sg**	**11 45 51.2**	**+0.7**
AYDN	**Tasoluk**	**0.49**	**323**	*i* P	**Pg**	**11 45 45.0**	**+0.9**
AYDN				*i* S	**Sg**	**11 45 51.2**	**+0.7**
DALY	**Dalyan (Mu¨la**	**0.56**	**144**	*e*PG	**Pg**	**11 45 45.4**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.56**	**144**	*e*Pg	**Pg**	**11 45 45.4**	**+0.1**
DNZL	**Cakiroluk**	**0.76**	**56**	*i* P	**Pb**	**11 45 51.2**	**+0.3**
DNZL				*e*S	**Sn**	**11 46 04.7**	**-0.4**
DNZL	**Cakiroluk**	**0.76**	**56**	*i* P	**Pb**	**11 45 51.2**	**+0.3**
DNZL				*e*S	**Sn**	**11 46 04.7**	**-0.4**
DAT	**Datca**	**0.76**	**225**	*e*PG	**Pg**	**11 45 48.8**	**-0.5**
DAT	**Datca**	**0.76**	**225**	*e*Pg	**Pg**	**11 45 48.8**	**-0.5**
BODT	**Bodrum**	**0.78**	**255**	*e*PG	**Pg**	**11 45 49.1**	**-0.6**
BODT				*e*SG	**Sg**	**11 46 00.1**	**+0.3**
BODT	**Bodrum**	**0.78**	**255**	*e*Pg	**Pg**	**11 45 49.1**	**-0.6**
BODT				*e*Sg	**Sg**	**11 46 00.1**	**+0.3**
DENT	**Denizli**	**0.79**	**52**	*e*PG	**Pg**	**11 45 49.8**	**0.0**
DENT	**Denizli**	**0.79**	**52**	*e*Pg	**Pg**	**11 45 49.8**	**0.0**
FETY	**Fethiye**	**0.92**	**133**	*e*PG	**Pg**	**11 45 52.2**	**-0.1**
FETY	**Fethiye**	**0.92**	**133**	*e*Pg	**Pg**	**11 45 52.2**	**-0.1**
MANT	**Manisa**	**1.24**	**11**	*e*P	**Pn**	**11 45 59.9**	**+0.3**
MANT				*e*S	**Sb**	**11 46 15.5**	**-0.4**
MANT	**Manisa**	**1.24**	**11**	*e*P	**Pn**	**11 45 59.9**	**+0.3**
MANT				*e*S	**Sb**	**11 46 15.5**	**-0.4**
KULA	**Kula-Manisa**	**1.28**	**14**	*e*PN	**Pg**	**11 45 58.2**	**-1.0**
KULA	**Kula-Manisa**	**1.28**	**14**	*e*Pn	**Pg**	**11 45 58.3**	**-1.0**
ELL	**Elmali**	**1.43**	**111**	*e*PN	**Pn**	**11 46 00.1**	**-1.8**
ELL	**Elmali**	**1.43**	**111**	*e*Pn	**Pn**	**11 46 00.1**	**-1.8**
AKAS	**Kas**	**1.50**	**133**	*e*P	**Pg**	**11 46 04.3**	**+0.8**
AKAS				*e*S	**Sn**	**11 46 26.3**	**+3.0**
AKAS	**Kas**	**1.50**	**133**	*e*P	**Pg**	**11 46 04.3**	**+0.8**

*IDC **17** 11:45:34.8±0.6, 29°.20S×177°.19W, h0km, mb4.7/13, mb1 4.9/13, mb1mx4.8/15, mbtmp4.6/13, MS4.3/22, Ms1 4.3/22, ms1mx4.1/34, Error ellipse: s-maj=24.1km s-min=18.1km az=136.0*
*ISCJB **17** 11:45:37.7±0.2, 29°.67S±0°.04×177°.10W±0°.05, h31km, mb4.9/58, MS4.4/23, Error ellipse: s-maj=6.8km s-min=4.8km az=43.1*
*BJI **17** 11:45:38.9, 29°.40S×177°.20W, h35km, mB5.4/15, mb5.3/23, Ms5.1/11, Ms7 4.8/9*
*AUST **17** 11:45:38.2, 28°.88S×176°.84W, h35km*
*NEIC **17** 11:45:40.1±0.2, 29°.35S×177°.24W, h35km, mb4.9/41, Error ellipse: s-maj=7.8km s-min=5.3km az=141.0*
*GCMT **17** 11:45:41.8±0.4, 29°.27S×176°.77W, h31km±1km, MW5.0, Moment Tensor Solution. s31,c36; s47,c65; Moment tensor: Scale 10^16 Nm; Mrr3.21±.23; Mθθ-0.09±.16; Mφφ-3.12±.15; Mrθ-0.01±.23; Mrφ-0.14±.13; Mθφ2.13±.17; Best double couple: M0 3.80000×10^16 NP1:φs 184.00000°, δ28.00000°, λ93.00000°. NP2:φs 1.00000°, δ62.00000°, λ89.00000°. Principal axes: T 3.8600, Plg73.0000°, Azm267.0000°; N -0.0900, Plg1.0000°, Azm2.0000°; P -3.7700, Plg17.0000°, Azm92.0000°; Data Used: II IU IC G CN.*
*DJA **17** 11:46:16.2±6.0, 30°.S±23°×17°.8W±3°.6, h329km±53km, M4.8/9, mb4.8/9*
ISC 17 11:45:39.0±0.3, 29°.51S±0°.05×177°.04W±0°.05, h31km, n236, σ1°.41/243, mb4.9/58, MS4.4/25, 1C-1D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.81**	**288**	*e*Pn	**Pn**	**11 45 54.3**	**0.0**
RAO				Sn	**

baz=27,SNR=4.0
PAE Paea 27.71 71 *e*T T 12 20 40.5
9.2nm,0.3s
PPT2 Papeete2 27.75 71 *e*LR LR 11 58 19.3
1µm,25.8s
PPT2 Papeete2 27.75 71 *e*T T 12 20 47.6
6.3nm,0.3s
PPT Papeete 27.76 71 LR LR 11 59 38.2
comp=Z,369nm,19.8s,baz=225,slow=30
PPT T T 12 21 06.5
15nm,0.4s,baz=223,slow=16,SNR=5.1
TVO Taravao 27.93 72 *e*T T 12 20 48.2
5.1nm,0.3s
EIDS Eidsvold 28.55 271 *e*P **P 11 51 32.9 +0.7**
10.0nm,0.8s
EIDS Eidsvold 28.55 271 P **P 11 51 33.3 +1.1**
baz=29,SNR=3.8
HNR Honiara 29.38 308 LR LR 12 01 00.3
comp=Z,304nm,19.2s,baz=4.3,slow=32
YNG Young 29.64 252 P **P 11 51 44.8 +3.0**
baz=30,SNR=6.1
RMQ Roma 30.29 267 P **P 11 51 50.1 +2.5**
baz=30,SNR=17
VAH Vaihoa 30.57 69 *e*T T 12 24 20.7
23nm,0.2s
CMSA Cobar Meteorol 32.07 257 P **P 11 52 04.4 +1.2**
baz=32,SNR=11
TOO Toolangi 32.09 246 P **P 11 52 05.3 +1.9**
baz=32,SNR=9.8
QLP Quilpie 34.20 265 P **P 11 52 22.4 +0.5**
baz=34,SNR=12
CTA Charters Tower 34.50 277 LR LR 12 04 58.9
comp=Z,844nm,19.9s,baz=19,slow=34
CTAO Charters Tower 34.50 277 *e*P **P 11 52 25.4 +0.8**
21nm,0.7s
ARPS Mount Arapiles 34.98 247 P **P 11 52 30.1 +1.5**
baz=35,SNR=7.0
STKA Stephens Creek 35.50 256 P **P 11 52 33.6 +0.5**
STKA Stephens Creek 35.50 256 P **P 11 52 33.6 +0.5**
22nm,0.7s,baz=92,slow=11,SNR=63
STKA LR LR 12 05 11.5
comp=Z,834nm,18.5s,baz=282,slow=33
STKA Stephens Creek 35.50 256 P **P 11 52 33.8 +0.7**
baz=36,SNR=41
MTSU Mount Surprise 36.97 279 P **P 11 52 47.0 +1.2**
baz=37,SNR=9.3
RKT Rikitea 38.08 90 *e*LR LR 12 03 14.6
590nm,24.0s
PMG Port Moresby 39.00 293 LR LR 12 06 10.9
comp=Z,505nm,19.8s,baz=131,slow=32
BBOO Buckleboo 40.02 253 *e*P **P 11 53 10.6 -0.6**
204nm,1.0s
BBOO Buckleboo 40.02 253 P **P 11 53 10.6 -0.6**
baz=40,SNR=11
AS31 Alice Springs 44.00 266 *e*P **P 11 53 42.7 -1.2**
ASAR Alice Springs 44.00 266 P **P 11 53 42.8 -1.1**
ASAR ScP **ScP 11 59 22.4 +3.5**
ASAR Alice Springs 44.00 266 P **P 11 53 42.8 -1.1**
13nm,0.8s,baz=105,slow=7.3,SNR=167
ASAR ScP **ScP 11 59 22.4 +3.5**
0.9nm,0.9s,baz=111,slow=4.1,SNR=4.3
ASAR LR LR 12 11 27.8
comp=Z,1µm,18.9s,baz=110,slow=35
WRAB Tennant Creek 44.91 271 *e*P **P 11 53 49.6 -1.5**
16nm,0.8s
WRA Warramunga Arr 44.91 271 P **P 11 53 49.9 -1.3**
WRA Warramunga Arr 44.91 271 P P 11 53 49.9 -1.3
14nm,0.8s,baz=110,slow=7.6,SNR=49
FORT Forrest 47.09 254 *e*P **P 11 54 06.7 -1.5**
40nm,0.6s
FORT Forrest 47.09 254 P **P 11 54 07.0 -1.2**
baz=47,SNR=18
SBA Scott Base 48.98 184 *e*P P 11 54 26.6 +4.4
48nm,1.4s
VNDA Vanda 49.06 186 P P 11 54 26.6 +3.8
VNDA Vanda 49.06 186 P P 11 54 26.6 +3.8
3.9nm,1.2s,baz=14,slow=8.3,SNR=6.3
VNDA LR LR 12 11 32.5
comp=Z,115nm,21.6s,baz=351,slow=32
KDU Kakadu 49.60 279 P **P 11 54 28.7 +1.0**
baz=50,SNR=3.3
MTN Manton Dam 50.68 278 P **P 11 54 35.0 -0.9**
baz=51,SNR=4.3
KNRA Kununurra 51.48 273 P **P 11 54 43.3 +1.4**
baz=52,SNR=7.7
FITZ Fitzroy Crossi 53.21 269 *e*P **P 11 54 53.9 -0.8**
FITZ Fitzroy Crossi 53.21 269 LR LR 12 18 29.3
comp=Z,510nm,18.4s,baz=99,slow=37
FITZ Fitzroy Crossi 53.21 269 P **P 11 54 53.8 -0.8**
baz=53,SNR=11
KLBR Kellerberrin 55.43 250 P **P 11 55 09.7 -1.1**
baz=56,SNR=5.5
NWAO Narrogin (SRO) 55.50 248 LR LR 12 17 39.2
comp=Z,349nm,21.7s,baz=276,slow=35
CASY Casey 56.31 208 *e*P **P 11 55 17.4 +0.9**
MBWA Marble Bar 57.16 263 *e*P **P 11 55 21.7 -1.5**
MORW Morawa 57.59 253 P **P 11 55 24.9 -1.3**
baz=58,SNR=5.1
QSPA South Pole Qui 60.60 180 *e*P **P 11 55 49.7 +3.1**
40nm,0.9s
PMSA Palmer Station 72.73 156 *e*P P 11 57 07.9 +4.1
143nm,1.3s
MAW Mawson 73.43 200 P **P 11 57 10.0 +2.2**
MAW Mawson 73.43 200 P **P 11 57 10.0 +2.2**
10.0nm,0.9s,baz=124,slow=8.8,SNR=15
MAW LR LR 12 28 20.9
comp=Z,205nm,19.6s,baz=118,slow=35
MAW Mawson 73.43 200 P **P 11 57 10.4 +2.5**
baz=74,SNR=8.4
KSM Kuching 75.69 280 *e*P **P 11 57 20.7 -1.1**
8.7nm,0.9s
MAJO Matsushiro 78.00 325 P **P 11 57 33.7 -0.7**
7.1nm,0.8s
MAT Matsushiro 78.00 325 P **P 11 57 33.6 -0.8**
MAT *e*S **S 12 07 26.8 +0.9**
SYO Syowa Base 78.16 193‖ *e*P **P 11 57 33.0 -1.9**
SYO Syowa Base 78.16 193‖ *i*PcP **PcP 11 57 41.8 -2.5**
SNAA Sanae 79.02 178 *e*P **P 11 57 40.9 +1.3**
SNAA Sanae 79.02 178 *e*PcP **PcP 11 57 48.8 +0.7**
SNAA Sanae 79.02 178 *e*pP pP 11 57 50.9 +1.4
SNAA Sanae 79.02 178 *e*P **P 11 57 40.7 +1.1**
8.1nm,0.9s
ASAJ Asahikawa 82.05 332 *e*P **P 11 57 56.5 +0.5**
6.1nm,0.8s
PLCA Paso Flores 82.50 133 LR LR 12 25 13.4
comp=Z,239nm,20.1s,baz=194,slow=29
KSRS Korea Array 84.22 319 P **P 11 58 07.1 -0.2**
2.2nm,0.8s,baz=125,slow=6.0,SNR=5.9
KSRS LR LR 12 34 29.3
comp=Z,100nm,18.6s,baz=305,slow=35
KSAR Wonju Array Be 84.23 319 P **P 11 58 07.1 -0.3**
ISA Isabella 85.08 44 *e*P **P 11 58 12.4 +0.5**
4.5nm,0.9s
PETK Petropavlovsk- 85.17 345 P **P 11 58 11.3 -0.5**
PETK Petropavlovsk- 85.17 345 P **P 11 58 11.3 -0.5**
10nm,1.0s,baz=132,slow=6.0,SNR=10
PETK LR LR 12 32 42.2
comp=Z,97nm,19.2s,baz=216,slow=33
QIZ Qiongzhong 85.38 295 P **P 11 58 11.9 -1.8**
QIZ S **S 12 08 41.3 -1.5**
QIZ LR LR
comp=N,200nm,14.3s
QIZ LR LR
comp=Z,210nm,8.6s
CMB Columbia Colle 85.54 41 *e*P **P 11 58 14.8 +0.6**
comp=Z,5.3nm,0.9s
GSC Goldstone 85.87 45 *e*P **P 11 58 16.8 +0.9**
comp=Z,3.4nm,0.9s
KULM Kulim 85.92 278 *e*P **P 11 58 15.5 -1.0**
comp=Z,9.9nm,0.9s
WDC Whiskeytown Da 86.10 38 *e*P **P 11 58 17.0 +0.3**
comp=Z,11nm,1.1s
NJ2 Nanjing 86.31 310 *e*P **P 11 58 20.5 +2.5**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
LDFC Landfair 86.79 46 *e*P **P 11 58 21.6 +1.2**
comp=Z,25nm,1.4s
YBH Yreka Blue Hor 86.82 38 *e*P **P 11 58 21.2 +0.8**
comp=Z,2.9nm,1.0s
YBH Yreka Blue Hor 86.82 38 LR LR 12 27 48.0
comp=Z,114nm,21.5s,baz=228,slow=29
USRK Ussuriysk Arra 86.88 326 P **P 11 58 20.5 0.0**
comp=Z,5.7nm,0.7s,baz=155,slow=4.0,SNR=13
USRK LR LR 12 33 06.7
comp=Z,126nm,20.2s,baz=160,slow=33
NVAR Mina Array Bea 87.02 42 P **P 11 58 21.9 +0.3**
NVAR Mina Array Bea 87.02 42 P P **P 11 58 21.9 +0.3**
comp=Z,5.1nm,0.9s,baz=221,slow=7.8,SNR=28
NVAR LR LR 12 33 45.5
comp=Z,252nm,18.1s,baz=174,slow=33
NV11 Mina Array Sit 87.11 42 *e*P **P 11 58 22.5 +0.6**
TUC Tucson 87.90 51 *e*P **P 11 58 27.4 +1.5**
comp=Z,2.6nm,0.9s
MOD Modoc 88.23 39 *e*P **P 11 58 27.6 +0.4**
comp=Z,3.0nm,0.9s
MDJ Mudanjiang 88.38 325 P **P 11 58 27.8 +0.2**
MDJ pmax pmax
comp=Z,10.0nm,1.0s
MDJ pmax pmax
comp=Z,69nm,6.5s
WUAZ Wupatki 89.45 48 *e*P **P 11 58 34.3 +1.2**
comp=Z,4.4nm,1.0s
TRQA Tornquist 89.46 134 *e*P **P 11 58 35.3 +2.1**
comp=Z,51nm,1.8s
CN2 Changchun 89.95 322 *e*P **P 11 58 35.3 +0.3**
CN2 *es*P **sP 11 58 49.8 +1.2**
CN2 *e*S **S 12 09 23.5 -2.0**
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,5.0s
NLWA Neilton Lookou 90.26 33 *e*P **P 11 58 37.2 +0.7**
comp=Z,9.3nm,1.1s
MSU Marysvale 90.77 45 *e*P **P 11 58 40.8 +1.5**
comp=Z,1.9nm,1.1s
TXAR Lajitas Array 91.20 57 P **P 11 58 42.5 +1.0**
TXAR Lajitas Array 91.20 57 P **P 11 58 42.5 +1.0**
comp=Z,1.6nm,1.1s,baz=218,slow=5.7,SNR=9.4
TXAR LR LR 12 36 26.0
comp=Z,79nm,18.0s,baz=170,slow=34
LAZ Ladron 91.60 51 *e*P **P 11 58 44.2 +0.9**
comp=Z,2.2nm,1.2s
HAWA Hanford 91.70 36 *e*P **P 11 58 43.9 +0.8**
comp=Z,7.3nm,0.8s
MFID Camas Ranch 91.70 40 *e*P **P 11 58 44.0 +0.6**
comp=Z,6.3nm,1.1s
BMO Blue Mountains 91.83 38 *e*P **P 11 58 44.0 +0.1**
comp=Z,3.3nm,1.1s
GYA Guiyang 91.84 299 *e*P **P 11 58 45.5 +1.0**
GYA *p*P **pP 11 58 56.9 +2.5**
GYA *s*P **sP 11 59 01.3 +3.3**
GYA PP **PP 12 02 27.5 +3.4**
GYA SKS **SKSac 12 09 13.8 -1.6**
GYA S **S 12 09 41.0 -2.8**
GYA *s*S **sS 12 10 01.3 +0.9**
GYA SS **SS 12 15 52.6 -0.2**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,5.3s
GYA LR LR
comp=N,370nm,19.1s
GYA LR LR
comp=E,210nm,20.5s
GYA LR LR
comp=Z,310nm,19.7s
HLID Hailey 92.59 40 *e*P **P 11 58 47.9 +0.3**
comp=Z,4.6nm,1.0s
CMAR Chiang Mai Arr 93.90 289 P **P 11 58 54.2 +0.2**
CMAR Chiang Mai Arr 93.90 289 P **P 11 58 54.2 +0.2**
comp=Z,1.0nm,0.8s,baz=116,slow=2.1,SNR=4.5
NEW Newport 94.17 35 LR LR 12 32 07.4
comp=Z,124nm,21.1s,baz=235,slow=30
KMI Kunming 94.17 296 P **P 11 58 55.9 +0.5**
KMI pmax pmax
comp=Z,11nm,0.6s
MCMT McKenzie Canyo 94.26 40 *e*P **P 11 58 56.0 +0.7**
comp=Z,1.9nm,1.0s
SNOW Snow King Moun 94.62 42 *e*P **P 11 58 57.5 +0.5**
comp=Z,7.7nm,1.0s
DLMT Dillon 94.73 40 *e*P **P 11 58 57.6 +0.3**
comp=Z,3.7nm,1.1s
IMW Indian Meadow 94.78 42 *e*P **P 11 58 58.5 +0.7**
comp=Z,3.2nm,0.9s
PDAR Pinedale Array 94.92 43 P **P 11 58 58.6 +0.2**
PDAR Pinedale Array 94.92 43 P **P 11 58 58.6 +0.2**
comp=Z,1.2nm,0.9s,baz=231,slow=4.3,SNR=6.7
PDAR LR LR 12 37 38.0
comp=Z,138nm,18.5s,baz=249,slow=33
TRF Thorofare Moun 95.05 12 *e*P **P 11 58 56.4 -2.0**
comp=Z,5.9nm,0.8s
QLMT Earthquake Lak 95.06 41 *e*P **P 11 59 00.2 +1.2**
comp=Z,0.5nm,0.5s
HHC Hu-ho-hao-te 96.22 314 *e*P **P 11 59 03.9 -0.3**
HHC *p*P **pP 11 59 14.3 +0.1**
HHC *s*P **sP 11 59 18.5 +0.7**
HHC PP **PP 12 02 58.9 +0.8**
HHC SKS **SKSac 12 09 36.5 -2.0**
HHC S **S 12 10 17.8 -3.9**
HHC *s*S **sS 12 10 35.4 -2.9**
HHC SS **SS 12 16 55.0 +0.1**
HHC pmax pmax
comp=Z,19nm,0.9s
HHC pmax pmax
comp=Z,180nm,6.3s
HHC LR LR
comp=N,240nm,18.2s
HHC LR LR
comp=E,190nm,17.8s
HHC LR LR
comp=Z,160nm,17.2s
CD2 Chengdu 96.33 302 *e*P **P 11 59 05.3 +0.4**
CD2 *p*P **pP 11 59 16.5 +1.7**
CD2 *s*P **sP 11 59 20.8 +2.4**
CD2 PP **PP 12 03 01.8 +2.8**
CD2 SKS **SKSac 12 09 38.1 -1.3**
CD2 S **S 12 10 19.5 -3.4**
CD2 *s*S **sS 12 10 38.1 -1.4**
CD2 SS **SS 12 16 56.3 -0.3**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,30nm,6.8s
CD2 LR LR
comp=N,160nm,14.4s
ILAR Eielson Array 96.88 13 P **P 11 59 05.1 -1.4**
ILAR Eielson Array 96.88 13 P P **P 11 59 05.1 -1.4**
comp=N,1.9nm,1.0s,baz=224,slow=5.3,SNR=12
LPAZ La Paz 97.74 114 LR LR 12 32 22.1
comp=N,82nm,20.6s,baz=230,slow=29
LZH Lanzhou 98.87 306 *e*P Pdif 11 59 17.6 +1.2
LZH *p*P pP 11 59 28.3 +2.0
LZH pmax pmax
comp=Z,15nm,1.0s
WMQ Urumqi 113.33 308 *e*PKP **PKiKP 12 04 11.0 -2.7**
WMQ LR LR
comp=Z,160nm,20.0s
MK31 Makanchi Array 117.84 310 *e*PKPdf **PKPdf 12 04 21.0 -1.2**
MKAR Makanchi Array 117.84 310 PKP **PKPdf 12 04 20.9 -1.2**
MKAR Makanchi Array 117.84 310 PKP **PKPdf 12 04 20.9 -1.2**
comp=Z,1.2nm,0.5s,baz=109,slow=0.4,SNR=13
ZALV Zalesovo Beam 117.92 319 PKP **PKPdf 12 04 20.9 -1.1**
ZALV Zalesovo Beam 117.92 319 PKP **PKPdf 12 04 20.9 -1.1**
comp=Z,0.8nm,0.4s,baz=118,slow=2.5,SNR=4.3
KURK Kurchatov 121.04 314 *e*PKPdf **PKPdf 12 04 27.4 -0.7**
KBL Kabul 124.64 293 *e*PKPdf **PKPdf 12 04 36.0 +0.1**
SCHQ Schefferville 125.02 42 PKP **PKPdf 12 04 35.6 -0.1**
SCHQ Schefferville 125.02 42 PKP **PKPdf 12 04 35.6 -0.1**
comp=Z,1.2nm,0.6s,baz=292,slow=1.0,SNR=3.5
KKAR Karatay Array 125.28 304 *e*PKPdf **PKPdf 12 04 36.5 -0.1**
BRVK Borovoye 126.42 316 *e*PKPdf **PKPdf 12 04 38.4 0.0**
ABKAR Akbulak array 132.96 311 *e*PKPdf **PKPdf 12 04 52.2 +1.3**
ARCES ARCESS Array B 137.90 348 PKP **PKPdf 12 04 59.2 -0.4**
ARCES ARCESS Array B 137.90 348 PKP **PKPdf 12 04 59.2 -0.4**
comp=Z,3.6nm,0.7s,baz=76,slow=1.1,SNR=7.6
JOF Joensuu 141.89 339 *e*pkp PKPdf 12 05 01.2 -5.8
comp=Z,2.6nm,0.6s
DGRG David-gareji 143.81 301 P **PKPdf 12 05 10.1 -1.0**
KAF Kangasniemi 143.98 342 *e*pkp PKPab 12 05 06.2 -1.9
comp=Z,3.2nm,0.6s
TBLG Delisi 144.25 301 P **PKPab 12 05 09.1 -0.7**
GUDG Gudauri 144.35 303 P **PKPdf 12 05 11.7 -0.5**
FIA1 FINESS Array S 144.59 341 *e*PKPdf **PKPab 12 05 09.5 -0.8**
FINES FINESS Array B 144.59 341 PKP **PKPab 12 05 09.2 -1.2**
FINES FINESS Array B 144.59 341 PKP **PKPab 12 05 09.2 -1.2**
comp=Z,22nm,0.7s,baz=5.7,slow=1.4,SNR=27
ONI Oni 145.09 303 P **PKPdf 12 05 14.0 +0.6**
AKH Akhalkalaki 145.22 301 P **PKPdf 12 05 14.9 +1.1**
KBZ Khabaz 145.30 305 PKPbc **PKPab 12 05 13.4 -0.1**
KBZ Khabaz 145.30 305 PKPbc **PKPab 12 05 13.4 -0.1**
comp=Z,12nm,0.8s,baz=102,slow=2.8,SNR=26
MZRK Al-Mazaregh 147.80 291 *e*P **PKPbc 12 05 22.0 +1.0**
KBSD Kabsdagh 147.86 293 *e*P **PKPbc 12 05 21.9 +0.7**
NB2 NORSAR Subarra 147.99 352 PKP **PKPbc 12 05 19.8 -0.9**
comp=Z,14nm,0.8s,baz=10,slow=2.9
NOA NORSAR Array B 147.99 352 PKPbc **PKPbc 12 05 19.6 -1.2**
NOA NORSAR Array B 147.99 352 PKPbc **PKPbc 12 05 19.6 -1.2**
comp=Z,11nm,0.8s,baz=13,slow=4.5,SNR=27
NAO01 NORSAR Array S 148.22 353 *e*PKPbc **PKPbc 12 05 20.4 -0.9**
MIGM Minsk 149.23 331 *e*P **PKPbc 12 05 22.0 -2.0**
KONO Kongsberg 149.53 353 *e*PKPbc **PKPbc 12 05 24.4 -0.2**
SALA Sala 150.98 285 *e*P **PKPbc 12 05 30.4 +1.2**
DRWC Darquich 150.99 293 *e*P **PKPbc 12 05 29.1 +0.1**
AKASG Malin Array Be 151.09 324 PKPbc **PKPbc 12 05 28.1 -0.5**
AKASG Malin Array Be 151.09 324 PKPbc **PKPbc 12 05 28.2 -0.5**
comp=Z,10nm,0.6s,baz=46,slow=3.0,SNR=34
AK01 Malin Array Si 151.10 324 *e*PKPbc **PKPbc 12 05 28.4 -0.3**
AK01 *e*PKPab **PKPab 12 05 35.2 -1.2**
KIEV Kiev 151.10 324 *e*PKPbc **PKPbc 12 05 28.4 -0.2**
KIEV *e*PKPab **PKPab 12 05 35.1 -1.2**
AK02 Malin Array Si 151.12 324 *e*PKPbc **PKPbc 12 05 28.4 -0.3**
TOTH TOTAH 151.26 286 *e*P **PKPbc 12 05 31.1 +1.4**
HAWK Haweek 151.29 289 *e*P **PKPbc 12 05 31.1 +1.3**
ARNB Al Arnab 151.60 292 *e*P **PKPbc 12 05 31.1 +0.6**
BR131 Keskin Array S 152.89 300 *e*PKPbc **PKPbc 12 05 33.2 -0.1**
BRTR Keskin Array B 152.89 300 PKPbc **PKPbc 12 05 32.5 -0.8**
BRTR Keskin Array B 152.89 300 PKPbc **PKPbc 12 05 32.5 -0.8**
comp=Z,7.5nm,0.9s,baz=117,slow=1.7,SNR=28
ANTO Ankara 153.50 301 *e*PKPbc **PKPbc 12 05 35.0 +0.4**
BSEG Bad Segeberg 155.01 350 *e*PKPab **PKPab 12 05 52.7 0.0**
BUR08 Bucovina Ar. S 155.05 323 *e*PKPab **PKPab 12 05 53.6 +0.2**
STHS Stebnicka Huta 155.74 330 *e*PKP **PKPdf 12 05 28.3 -1.3**
STHS *e* 12 05 56.5
CRVS Cervenica-Dubn 156.02 329 *e*PKP **PKPdf 12 05 31.1 +1.1**
CRVS *e* 12 05 54.3
NRDL Niedersach Rie 156.44 349 *e*PKPab **PKPab 12 05 58.2 -0.6**
UPC Upice 156.84 339 *e*PKPAB **PKPab 12 06 01.1 +0.4**
DPC Dobruska-Polom 156.87 338 *e*PKPAB **PKPab 12 06 01.2 +0.3**
CLL Collm 156.97 344 *i* pPKPdiff **PKPab** 12 05 54.0 -7.2
CLL *i* PKPab **PKPab 12 06 00.0 -1.2**
comp=Z,30nm,1.6s
CLL *e*(pPKPab) 12 06 08.0
CLZ Clausthal 157.02 348 *e*PKPab **PKPab 12 06 00.7 -0.8**
BRG Berggiesshubel 157.12 342 *i* PKP **PKPab 12 06 00.7 -1.2**
comp=Z,24nm,1.5s
BRG Berggiesshubel 157.12 342 *e*PKPab **PKPab 12 06 01.5 -0.4**
FBE Freiberg 157.24 343 *e*PKPab **PKPab 12 06 02.3 -0.1**
PVCC Panska Ves 157.26 341 *e*PKPAB **PKPab 12 06 02.5 0.0**
VYHS Vyhne 157.47 332 *e*PKP **PKPdf 12 05 35.5 +3.7**
VYHS *e* 12 06 02.6
PRU Pruhonice 157.75 340 *e*PKPAB **PKPab 12 06 04.5 -0.1**
MOX Moxa 157.91 345 *e*PKPab **PKPab 12 06 04.7 -0.6**
MOX *e*L L 13 17 42.8
comp=Z,70nm,21.4s
TANN Tannenbergstha 157.93 344 *e*PKPab **PKPab 12 06 05.1 -0.4**
WERD Werda 157.93 344 *e*PKPab **PKPab 12 06 05.1 -0.4**
PLN Plauen 157.93 344 *e*PKPab **PKPab 12 06 05.1 -0.3**
GUNZ Gunzen 158.00 344 *e*PKPab **PKPab 12 06 05.6 -0.2**
WERN Wernitzgruen 158.06 344 *e*PKPab **PKPab 12 06 05.8 -0.2**
NKC Novy Kostel 158.10 344 *e*PKPAB **PKPab 12 06 05.5 -0.7**
MANZ Manzenberg 158.41 344 *e*PKPab **PKPab 12 06 06.9 -0.6**
ROTZ Rotzenmuhle 158.59 343 *e*PKPab **PKPab 12 06 07.8 -0.5**
KHC Kasperske Hory 158.80 340 *e*PKPAB **PKPab 12 06 09.2 -0.1**
KHC *ep*PKP pPKPdf 12 06 21.5 +38
GRF Grafenberg Arr 158.89 345 *e*PKPab **PKPab 12 06 10.2 +0.6**
GRF *e*L L 13 21 17.3
comp=Z,63nm,20.6s
TNS Taunus Mts 158.90 350 *e*PKPab **PKPab 12 06 08.7 -1.0**
WET Wettzell 158.98 342 *e*PKPab **PKPab 12 06 09.9 -0.2**
GEC2 GERESS Array S 159.01 340 *e*PKPab **PKPab 12 06 09.9 -0.4**
GERES GERESS Array B 159.01 340 PKPab **PKPab 12 06 09.8 -0.5**
GERES GERESS Array B 159.01 340 PKPab **PKPab 12 06 09.8 -0.5**
comp=Z,0.9nm,0.5s,baz=15,slow=4.1,SNR=9.6
RJOB Jochberg 160.28 340 *e*PKPab **PKPab 12 06 15.9 +0.1**
BFO Black Forest 160.76 349 *e*PKPab **PKPab 12 06 17.5 -0.3**
TOA0 Torodi Ar. Sit 163.67 176 *e*PKPdf **PKPdf 12 05 40.1 +0.5**
TORD Torodi Ar. Bea 163.67 176 PKP **PKPdf 12 05 40.0 +0.4**
TORD PKPab **PKPab 12 06 32.3 +1.1**
TORD Torodi Ar. Bea 163.67 176 PKP **PKPdf 12 05 40.0 +0.4**
comp=Z,3.4nm,1.1s,baz=188,slow=2.9,SNR=10
TORD PKPab **PKPab 12 06 32.3 +1.1**
comp=Z,2.9nm,1.0s,baz=186,slow=3.1,SNR=5.4
ESDC Sonseca Array 168.37 28 PKP **PKPdf 12 05 43.5 +0.8**
ESDC PKPab **PKPab 12 06 51.3 -0.3**
ESDC Sonseca Array 168.37 28 PKP **PKPdf 12 05 43.5 +0.8**
comp=Z,0.2nm,0.4s,baz=304,slow=3.2,SNR=5.7
ESDC PKPab **PKPab 12 06 51.3 -0.3**
comp=Z,0.3nm,0.3s,baz=336,slow=3.3,SNR=5.4
KEST Kesra 171.79 321 PKPab **PKPab 12 07 07.0 0.0**
KEST Kesra 171.79 321 PKPab **PKPab 12 07 07.0 0.0**
comp=Z,1.4nm,0.5s,baz=323,slow=6.3,SNR=5.3

IDC 17 11:53:45.0±1.1, 29.04S×177.00W, h0km, mb 4.1/4, mb 1 4.2/4, mb1mx3.8/17, mbtmp4.1/4, Error ellipse: s-maj=36.2km s-min=19.7km az=168.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.83**	**255**	Pn	Pn	Pn	11 54 05.4	+1.3
	744nm,0.3s,baz=283,slow=14,SNR=35							
RAO				Sn	Sn	Sn	11 54 17.6	+0.6
	1µm,0.3s,baz=108,slow=20,SNR=17							
URZ	**Urewera**	**10.43**	**207**	Pn	Pn	Pn	11 56 08.8	-6.9
	0.4nm,0.3s,baz=29,slow=19,SNR=3.2							
URZ				Sn	Sn	Sn	11 58 01.3	-12
	1.6nm,0.3s,baz=252,slow=20,SNR=8.5							
RPZ	**Rata Peaks**	**17.50**	**210**	Pn	Pn	Pn	11 57 45.5	-4.9
	0.9nm,0.3s,baz=325,slow=6.9,SNR=5.4							
STKA	**Stephens Creek**	**35.66**	**255**	P	P	P	12 00 44.7	-0.2
	2.5nm,0.6s,baz=94,slow=10,SNR=9.3							
ASAR	**Alice Springs**	**44.07**	**265**	P	P	P	12 01 53.9	-1.2
	1.2nm,0.7s,baz=96,slow=7.0,SNR=19							
WRA	**Warramunga Arr**	**44.94**	**270**	P	P	P	12 02 00.7	-1.3
	0.7nm,0.4s,baz=111,slow=6.2,SNR=22							
QSPA	**South Pole Qui**	**61.07**	**180**	P	P	P	12 04 00.4	-0.1
	2.8nm,0.6s,baz=66,slow=2.8,SNR=14							
FINES	**FINESS Array B**	**144.15**	**341**	PKP	PKPbc	PKPbc	12 13 20.9	+0.7
	3.5nm,0.8s,baz=38,slow=3.4,SNR=3.7							
KBZ	**Khabaz**	**145.05**	**306**	PKPbc	PKPdf	PKPdf	12 13 24.9	+0.7
	1.7nm,0.9s,baz=180,slow=2.0,SNR=3.9							
NOA	**NORSAR Array B**	**147.53**	**353**	PKPbc	PKPbc	PKPbc	12 13 30.5	-0.1
	0.8nm,0.6s,baz=14,slow=4.5,SNR=3.4							
AKASG	**Malin Array Be**	**150.72**	**325**	PKPbc	PKPbc	PKPbc	12 13 37.6	-1.2
	0.5nm,0.4s,baz=42,slow=2.9,SNR=2.7							
BRTR	**Keskin Array B**	**152.68**	**301**	PKPbc	PKPbc	PKPbc	12 13 44.3	+0.4
	0.7nm,0.6s,baz=243,slow=0.6,SNR=4.1							

IDC 17 12:02:29.2±2.6, 1.89S×133.90E, h0km, mb 3.5/2, mb1 3.9/4, mb1mx3.6/19, mbtmp3.7/4, ML 3.7/2, Error ellipse: s-maj=90.6km s-min=28.6km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.95**	**179**	P	P	P	12 06 40.8	-0.3
	0.3nm,0.3s,baz=358,slow=12,SNR=14							
WRA				S	Sn	Sn	12 09 48.8	-13
	0.1nm,0.3s,baz=359,slow=24,SNR=3.3							
FITZ	**Fitzroy Crossi**	**18.04**	**206**	P	Pn	Pn	12 06 40.5	-1.1
	0.1nm,0.3s,baz=34,slow=9.9,SNR=5.2							
FITZ				S	Sn	Sn	12 09 50.7	-13
	0.1nm,0.3s,baz=202,slow=19,SNR=3.5							
ASAR	**Alice Springs**	**21.65**	**180**	P	P	P	12 07 21.8	+0.3
	1.3nm,0.6s,baz=4.8,slow=12,SNR=21							
MKAR	**Makanchi Array**	**66.25**	**324**	P	P	P	12 13 19.3	0.0
	0.3nm,0.5s,baz=118,slow=7.2,SNR=2.9							

NDI ***17*** *12:07:31.9±3.0, 29.59N×77.77E, h10km, ML3.7*
DMN ***17*** *12:07:33.5±0.5, 29.05N×77.57E, h10km, Ml4.7/9, Error ellipse: s-maj=64.7km s-min=9.4km az=9.0*

ISC 17 12:07:31.4±1.3, 29.58N±0.04×77.83E±0.04, h10km±11km, n28, σ1.9 69/41, Northern India

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
DDI	**Dehra Dun**	**0.77**	**15**	*e*PKP	**Pg**	**Pg**	**12 07 46.2**	**-0.1**
DDI				*e*S	**Sg**	**Sg**	**12 07 57.1**	**+0.8**
DDI				AML	AML	AML	12 07 58.0	
	comp=N,6µm,0.3s							
DDI				AML	AML	AML	12 07 58.3	
	comp=E,7µm,0.3s							
KKR	**Kurukshetra**	**0.96**	**294**	*e*PKP	**Pg**	**Pg**	**12 07 48.9**	**-1.0**

KKR					AML	AML	12 08 02.3	
	comp=Z,1μm,0.1s							
NDI	**New Delhi**	**1.04 211**	*e*PKP9	Pg		12 07 48.0	-3.4	
NDI			*e*S	**Sg**		**12 08 03.0**	**-1.9**	
BHGR	**Bahadurgarh**	**1.18 222**	*e*PKP	**Pb**		**12 07 53.0**	**-0.8**	
BHGR			*e*S	**Sb**		**12 08 09.3**	**+0.2**	
BHGR				AML	AML	12 08 11.0		
	comp=Z,1μm,0.1s							
AYAN	**Aya Nagar**	**1.25 210**	*e*PKP	**Pn**		**12 07 54.8**	**-0.1**	
AYAN			*e*S	**Sb**		**12 08 12.3**	**+1.1**	
AYAN				AML	AML	12 08 13.4		
	comp=Z,765nm,0.2s							
SMLA	**Simla**	**1.65 340**	*i* P	**Pn**		**12 08 00.1**	**-0.3**	
SMLA			*i* S	**Sn**		**12 08 21.7**	**0.0**	
SMLA				AML	AML	12 08 23.8		
	comp=E,2μm,0.6s							
SMLA				AML	AML	12 08 23.8		
	comp=N,888nm,0.2s							
KUDL	**Kundal**	**1.85 220**	*e*PKP	**Pn**		**12 08 04.3**	**+1.2**	
KUDL			*e*S	**Sn**		**12 08 27.8**	**+1.3**	
KUDL				AML	AML	12 08 30.0		
	comp=N,1μm,0.4s							
KUDL				AML	AML	12 08 30.3		
	comp=E,624nm,0.3s							
SDNR	**Sundarnagar**	**2.06 339**	*e*PKP	**Pn**		**12 08 08.6**	**+2.5**	
SDNR			*e*4			12 08 35.0		
PTH	**Pithoragarh**	**2.08 90**	*e*PKP9	Pn		12 08 02.3	-4.2	
PTH			*e*S	Sn		12 08 24.6	-7.9	
LGTI	**Lohaghat**	**2.11 93**	*e*4			12 08 05.2		
LGTI			*e*S	**Sn**		**12 08 33.8**	**+0.9**	
BHK	**Bhakra**	**2.21 327**	*e*PKP	**Pn**		**12 08 08.4**	**+0.3**	
BHK			*e*4			12 08 36.8		
AGRA	**Agra**	**2.34 178**	*ex*	**Pb**		**12 08 15.0**	**+1.4**	
AGRA			*e*S	**Sn**		**12 08 39.0**	**+0.4**	
AGRA				AML	AML	12 08 48.8		
	comp=N,283nm,0.1s							
AGRA				AML	AML	12 08 49.9		
	comp=E,660nm,0.4s							
PONG	**Pong**	**2.87 326**	*e*4	x		12 08 10.5		
DHRM	**DHARAMSHALA**	**2.97 334**	*e*PKP	**Pn**		**12 08 19.8**	**+1.0**	
DHRM			*e*S	**Sn**		**12 08 53.9**	**-0.8**	
DHRM				AML	AML	12 09 16.9		
	comp=N,742nm,0.6s							
DHRM				AML	AML	12 09 17.9		
	comp=E,759nm,0.7s							
THN	**Thein Dam**	**3.38 328**	*e*4	Pn		12 08 28.0	+3.8	
THN			*e*4	x		12 09 11.5		
AJM	**Ajmer**	**4.18 223**	*e*4	**Pb**		**12 08 45.0**	**0.0**	
AJM			*i* 4	x		12 09 37.0		
PYUN	**Piuthan**	**4.76 107**	*e*Pn	**Pn**		**12 08 45.4**	**+2.0**	
PYUN			*e*Sn	**Sn**		**12 09 37.6**	**-1.1**	
	comp=E,286nm,0.4s							
DANN	**Dangsing**	**5.34 102**	*e*Pn	**Pn**		**12 08 53.9**	**+2.5**	
DANN			*e*Sn	**Sn**		**12 09 53.2**	**+0.2**	
KOLN	**Koldanda**	**5.38 108**	*e*Pn	**Pn**		**12 08 54.0**	**+2.1**	
KOLN			*e*Sn	**Sn**		**12 09 53.3**	**-0.6**	
	comp=E,84nm,0.3s							
DMN	**Daman**	**6.69 105**	*e*Pn	**Pn**		**12 09 11.8**	**+1.9**	
KKN	**Kakani**	**6.78 103**	*e*Pn	**Pn**		**12 09 12.9**	**+1.7**	
KKN			*e*Sn	**Sn**		**12 10 25.9**	**-2.6**	
	comp=E,64nm,0.3s							
PKIN	**Phulchoki**	**6.94 105**	*e*Pn	**Pn**		**12 09 14.9**	**+1.5**	
PKIN			*e*Sn	**Sn**		**12 10 30.3**	**-2.3**	
	comp=E,130nm,0.4s							
PKI	**Pulchoki**	**6.96 105**	*e*Pn	**Pn**		**12 09 15.3**	**+1.6**	
PKI			*e*Sn	**Sn**		**12 10 30.0**	**-3.0**	
	comp=E,87nm,0.4s							
GUN	**Gumba**	**7.26 101**	*e*Pn	**Pn**		**12 09 19.3**	**+1.5**	
GUN			*e*Sn	**Sn**		**12 10 39.1**	**-1.4**	
	comp=E,73nm,0.3s							
RAMN	**Ramite**	**8.16 107**	*e*Pn	**Pn**		**12 09 30.5**	**+0.3**	
RAMN			*e*Sn	**Sn**		**12 10 59.4**	**-3.2**	
	comp=E,107nm,0.3s							
ODAN	**Odare**	**8.86 105**	*e*Pn	**Pn**		**12 09 39.7**	**+0.1**	
ODAN			*e*Sn	**Sn**		**12 11 16.1**	**-3.5**	
	comp=E,60nm,0.3s							
TAPN	**Taplejung**	**8.97 102**	*e*Pn	**Pn**		**12 09 42.3**	**+1.0**	
TAPN			*e*Sn	**Sn**		**12 11 19.9**	**-2.7**	
	comp=E,91nm,0.7s							
POO	**Poona**	**11.58 199**	*e*S	Sn		12 12 16.0	-10	

IDC 17 12:11:30.3±0.7, 6°47S×155°07E, h0km, mb4.0/11, mb1 4.3/13, mb1mx4.1/20, mbtmp4.0/13, ML3.7/2, MS3.2/4, Ms1 3.2/4, ms1mx3.0/24, Error ellipse: s-maj=24.9km s-min=17.9km az=134.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.66**	**122**	Pn	Pn	12 12 59.9	+4.2
	2.4nm,0.3s,baz=289,slow=6.7,SNR=2.0						
HNR				Sn	Sb	12 14 12.3	-6.2
	2.7nm,0.3s,baz=90,slow=20,SNR=2.4						
HNR				LR	LR	12 14 52.5	
	comp=Z,86nm,21.1s,baz=347,slow=36						
PMG	**Port Moresby**	**8.36**	**249**	Pn	Pn	12 13 34.9	+2.1
	5.4nm,0.3s,baz=65,slow=10,SNR=16						
PMG				Sn	Sn	12 15 11.3	+3.2
	1.3nm,0.3s,baz=61,slow=19,SNR=5.9						
PMG				LR	LR	12 16 08.3	
	comp=Z,74nm,18.9s,baz=257,slow=33						
DZM	**Mont Dzumac**	**19.01**	**146**	P	Pn	12 15 55.6	+1.0
	0.2nm,0.3s,baz=319,slow=18,SNR=3.7						
DZM				LR	LR	12 20 50.0	
	comp=Z,158nm,19.6s,baz=48,slow=29						
WRA	**Warramunga Arr**	**24.18**	**234**	P	P	12 16 48.6	0.0
	2.3nm,0.6s,baz=56,slow=9.9,SNR=28						
WRA				PcP	PcP	12 20 28.9	-0.8
	1.2nm,0.6s,baz=59,slow=2.2,SNR=10.0						
ASAR	**Alice Springs**	**26.58**	**228**	P	P	12 17 10.3	-0.1
	0.9nm,0.6s,baz=58,slow=9.4,SNR=30						
ASAR				PcP	PcP	12 20 34.1	-1.0
	0.7nm,0.8s,baz=65,slow=2.2,SNR=6.5						
STKA	**Stephens Creek**	**28.24**	**205**	PcP	PcP	12 20 37.9	-1.0
	1.1nm,0.7s,baz=339,slow=8.6,SNR=3.5						
FITZ	**Fitzroy Crossi**	**30.94**	**245**	P	P	12 17 48.8	-0.5
	4.6nm,1.1s,baz=63,slow=8.4,SNR=5.8						
FITZ				LR	LR	12 30 01.8	
	comp=Z,127nm,21.4s,baz=75,slow=36						
CMAR	**Chiang Mai Arr**	**60.62**	**295**	P	P	12 21 44.7	+1.1
	5.4nm,0.8s,baz=123,slow=5.5,SNR=25						
SONM	**Songino Array**	**68.93**	**327**	P	P	12 22 38.2	+0.8
	0.5nm,0.4s,baz=137,slow=7.2,SNR=4.1						
VNDA	**Vanda**	**71.10**	**178**	P	P	12 22 50.0	0.0
	0.8nm,0.8s,baz=329,slow=5.9,SNR=4.4						
ILAR	**Eielson Array**	**82.86**	**21**	P	P	12 23 56.1	-0.3
	0.2nm,0.3s,baz=242,slow=5.7,SNR=12						
MKAR	**Makanchi Array**	**83.06**	**319**	P	P	12 23 56.4	-1.5
	1.0nm,0.8s,baz=86,slow=4.5,SNR=6.4						
DLBC	**Dease Lake**	**87.65**	**31**	P	P	12 24 22.0	+1.3
	1.3nm,0.5s,baz=231,slow=8.4,SNR=3.1						
NVAR	**Mina Array Bea**	**91.34**	**52**	P	P	12 24 39.3	+0.6
	0.5nm,0.7s,baz=254,slow=6.5,SNR=4.3						
YKA	**Yellowknife Ar**	**95.84**	**28**	P	P	12 24 58.5	0.0
	0.8nm,0.8s,baz=264,slow=4.5,SNR=4.2						
TORD	**Torodi Ar. Bea**	**152.95**	**286**	PKPbc	PKPbc	12 31 28.9	-1.8
	1.9nm,0.8s,baz=80,slow=2.5,SNR=12						

IDC 17 12:20:18.9±0.8, 35°51N×143°04E, h0km, mb3.5/9, mb1 3.8/12, mb1mx3.7/28, mbtmp3.6/12, ML3.6/3, Error ellipse: s-maj=23.5km s-min=18.8km az=114.0
JMA 17 12:20:22.1±0.3, 35°63N×142°99E, h81km, M3.4
ISC 17 12:20:18.9±3.3, 35°59N±0°05×143°01E±0°07, h2km±21km, n27, σ1°71/37, mb3.5/9, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.76**	**274**	P	**Pb**	**12 20 51.3**	**-0.6**
CHOJ				S	**Sn**	**12 21 13.1**	**-0.2**
BSO1	**Boso 1**	**1.91**	**241**	P	**Pb**	**12 20 52.4**	**-1.7**
BSO1				S	**Sn**	**12 21 15.7**	**-0.6**
BSO3	**Boso 3**	**2.19**	**250**	P	**Pb**	**12 20 57.5**	**-1.6**
JFT	**Otama**	**2.89**	**313**	P	**Pn**	**12 21 06.4**	**+0.4**
JFT				S	**Sn**	**12 21 39.4**	**-1.9**
JAG	**Ashikaga**	**3.00**	**287**	P	**Pn**	**12 21 07.9**	**+0.4**
JAG				S	**Sn**	**12 21 41.9**	**-2.2**
JOD2	**Odawara 2**	**3.22**	**265**	P	**Pn**	**12 21 11.2**	**+0.7**
JOD2				S	**Sn**	**12 21 47.4**	**-2.1**
JRY	**Ryogami san**	**3.37**	**279**	P	**Pn**	**12 21 13.8**	**+1.2**
JRY				S	**Sn**	**12 21 52.8**	**-0.3**
JHJ2	**Mitsune**	**3.62**	**228**	P	**Pn**	**12 21 17.2**	**+1.3**
JHJ	**Hachijo jima 2**	**3.63**	**228**	Pn	**Pn**	**12 21 15.7**	**-0.5**
	13nm,0.3s,baz=83,slow=22,SNR=16						
JHJ				Sn	**Sn**	**12 21 54.4**	**-5.2**
	93nm,0.3s,baz=18,slow=20,SNR=11						
JYN	**Shimob**	**3.64**	**270**	P	**Pn**	**12 21 17.6**	**+1.2**
JMK	**Ichinoseki**	**3.65**	**337**	P	**Pn**	**12 21 15.6**	**-0.8**
JYK	**Kaneyama**	**3.94**	**328**	P	**Pn**	**12 21 19.8**	**-0.6**
JYK				S	**Sn**	**12 22 05.9**	**-1.3**
MAT	**Matsushiro**	**4.01**	**285**	P	**Pn**	**12 21 23.0**	**+1.6**
MAT				S	**Sn**	**12 22 06.7**	**-2.2**
MAT	**Matsushiro**	**4.01**	**285**	P	**Pn**	**12 21 23.5**	**+2.1**
JOM	**Ohasama**	**4.11**	**341**	P	**Pn**	**12 21 21.7**	**-1.1**
JOM				S	**Sn**	**12 22 07.8**	**-3.7**
JSD	**Sado**	**4.53**	**304**	P	**Pn**	**12 21 29.2**	**+0.7**
ASAJ	**Asahikawa**	**8.53**	**358**	Pn	**Pn**	**12 22 22.7**	**-0.7**
	1.1nm,0.3s,baz=191,slow=13,SNR=8.7						
ASAJ				Sn	Sn	12 23 54.6	-5.5
	0.5nm,0.3s,baz=60,slow=20,SNR=3.4						
KSRS	**Korea Array**	**12.28**	**283**	Pn	**Pn**	**12 23 17.8**	**+3.0**
	0.1nm,0.3s,baz=100,slow=14,SNR=4.5						
SONM	**Songino Array**	**29.67**	**306**	P	**P**	**12 26 27.5**	**+1.4**
	0.6nm,0.7s,baz=117,slow=8.3,SNR=3.5						
ZALV	**Zalesovo Beam**	**43.84**	**314**	P	**P**	**12 28 26.1**	**-0.2**
	0.4nm,0.4s,baz=99,slow=8.9,SNR=2.4						
MKAR	**Makanchi Array**	**45.99**	**304**	P	**P**	**12 28 44.3**	**+0.8**
	0.2nm,0.5s,baz=72,slow=6.7,SNR=2.9						
ILAR	**Eielson Array**	**50.03**	**32**	P	**P**	**12 29 15.3**	**+0.7**
	0.4nm,0.7s,baz=263,slow=6.2,SNR=5.1						
WRA	**Warramunga Arr**	**55.83**	**190**	P	**P**	**12 29 57.0**	**-0.8**
	1.0nm,0.7s,baz=11,slow=7.5,SNR=9.2						
ASAR	**Alice Springs**	**59.56**	**190**	P	**P**	**12 30 23.8**	**-0.2**
	0.4nm,0.7s,baz=17,slow=7.0,SNR=8.4						
NVAR	**Mina Array Bea**	**74.81**	**54**	P	**P**	**12 32 02.1**	**+0.9**
	0.2nm,0.5s,baz=309,slow=5.7,SNR=2.6						
PDAR	**Pinedale Array**	**77.75**	**46**	P	**P**	**12 32 18.2**	**+0.4**
	0.2nm,0.4s,baz=223,slow=3.6,SNR=3.1						
TXAR	**Lajitas Array**	**89.97**	**53**	P	**P**	**12 33 20.7**	**+0.4**
	0.2nm,0.7s,baz=276,slow=4.4,SNR=3.5						

NSSC 17 12:22:45.2±1.4, 33°74N×35°47E, h6km±7km, MD1.5, ML1.8
CSEM 17 12:22:46.6±0.4, 33°79N×35°62E, h8km, ML1.8, Error ellipse: s-maj=10.7km s-min=3.8km az=81.0
GRAL 17 12:22:48.1±0.3, 33°78N×35°76E, h0km±32km, MD2.9
ISC 17 12:22:45.5±1.5, 33°76N±0°03×35°54E±0°09, h17km±7km, n23, σ1°22/41, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BHL	**Bhannes**	**0.18**	**32**	*e*P	**Pg**	**12 22 50.8**	**+0.7**
BHL	**Bhannes**	**0.18**	**32**	*e*P	**Pg**	**12 22 50.8**	**+0.7**
RCY	**Rachaya**	**0.36**	**136**	*e*P	**Pg**	**12 22 53.3**	**+0.3**
RCY				*e*S	**Sg**	**12 22 57.3**	**-0.8**
RCY	**Rachaya**	**0.36**	**136**	*e*P	**Pg**	**12 22 53.3**	**+0.3**
RCY				*e*S	**Sg**	**12 22 57.3**	**-0.8**
BRBR	**Barbar**	**0.48**	**135**	*e*P	**Pg**	**12 22 55.5**	**+0.2**
BRBR				*e*S	**Sg**	**12 23 02.6**	**+0.8**
BRBR				AML	AML	12 23 04.9	
	comp=N,236nm,0.7s						
BRBR				AML	AML	12 23 05.5	
	comp=E,60nm,0.6s						
BRBR	**Barbar**	**0.48**	**135**	*e*P	Pg	12 22 51.6	-3.7
BRBR				*e*S	**Sg**	**12 22 58.1**	**-3.7**
BRBR	**Barbar**	**0.48**	**135**	*e*P	**Pg**	**12 22 55.5**	**+0.2**
	SNR=94						
BRBR				*e*S	**Sg**	**12 23 02.6**	**+0.8**
	comp=E,60nm,0.6s,SNR=93						
HWQ	**Hawqa**	**0.62**	**33**	*e*P	**Pg**	**12 22 57.3**	**-0.5**
HWQ				*e*S	**Sg**	**12 23 04.2**	**-1.9**
HWQ	**Hawqa**	**0.62**	**33**	*e*P	**Pg**	**12 22 57.3**	**-0.5**
HWQ				*e*S	**Sg**	**12 23 04.2**	**-1.9**
TOTH	**TOTAH**	**0.84**	**118**	*e*P	**Pg**	**12 23 01.6**	**-0.2**
TOTH				*e*S	**Sb**	**12 23 14.4**	**+1.7**
TOTH				AML	AML	12 23 23.6	
	comp=E,42nm,0.6s						
TOTH	**TOTAH**	**0.84**	**118**	*e*P	**Pg**	**12 23 01.7**	**-0.2**
TOTH				*e*S	**Sb**	**12 23 14.3**	**+1.6**
TOTH	**TOTAH**	**0.84**	**118**	*e*P	**Pg**	**12 23 01.6**	**-0.2**
	SNR=72						
TOTH				*e*S	**Sb**	**12 23 14.4**	**+1.7**
	comp=E,42nm,0.6s,SNR=91						
HAWK	**Haweek**	**1.05**	**43**	*e*P	**Pb**	**12 23 05.3**	**0.0**
HAWK				*e*S	**Sn**	**12 23 21.4**	**+1.5**
HAWK				AML	AML	12 23 29.6	
	comp=E,24nm,0.5s						
HAWK	**Haweek**	**1.05**	**43**	*e*P	**Pb**	**12 23 05.3**	**+0.1**
HAWK				*e*S	**Sn**	**12 23 20.4**	**+0.5**
HAWK	**Haweek**	**1.05**	**43**	*e*P	**Pb**	**12 23 05.3**	**+0.1**
	SNR=61						
TCHB	**Talchebab**	**1.14**	**162**	*e*P	**Pg**	**12 23 06.9**	**-0.6**
SALA	**Sala**	**1.44**	**136**	*e*P	**Pb**	**12 23 13.2**	**+1.2**
SALA				*e*S	**Sn**	**12 23 31.3**	**+1.6**
SALA				AML	AML	12 23 35.8	
	comp=N,47nm,0.4s						
SALA				AML	AML	12 23 36.1	
	comp=E,2.6nm,0.4s						
SALA	**Sala**	**1.44**	**136**	*e*P	**Pn**	**12 23 09.3**	**-1.8**
SALA				*e*S	**Sn**	**12 23 27.3**	**-2.4**
SALA	**Sala**	**1.44**	**136**	*e*P	**Pb**	**12 23 13.2**	**+1.2**
	SNR=61						
SALA				*e*S	**Sn**	**12 23 31.3**	**+1.6**
	comp=E,2.6nm,0.4s,SNR=62						
ZALF	**Zalf**	**1.72**	**118**	*e*P	**Pb**	**12 23 16.7**	**+0.1**
ZALF				*e*S	**Sb**	**12 23 38.4**	**+0.4**
ZALF				AML	AML	12 23 42.1	
	comp=E,22nm,0.3s						
ZALF				AML	AML	12 23 43.4	
	comp=N,18nm,0.4s						
ZALF	**Zalf**	**1.72**	**118**	*e*P	**Pb**	**12 23 16.7**	**+0.1**
	SNR=47						
ZALF				*e*S	**Sb**	**12 23 38.3**	**+0.4**
	comp=N,18nm,0.4s,SNR=49						
ARNB	**Al Arnab**	**2.13**	**9**	*e*P	**Pb**	**12 23 23.5**	**-0.2**
ARNB				*e*S	**Sg**	**12 23 54.2**	**+0.1**
BTCH	**Batrach**	**2.40**	**18**	*e*P	**Pb**	**12 23 29.5**	**+1.2**
BTCH				*e*S	**Sg**	**12 24 03.2**	**+0.6**

CSEM 17 12:24:14.6, 41°60N×27°89E, h12km, MD2.8, After ISK
ISK 17 12:24:14.6, 41°60N×27°89E, h12km, MD2.8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTYL	**Yal??k??y-??at**	**0.33**	**113**	*e*PG	Pg	12 24 21.8	-0.5
CTYL				*e*SG	Sb	12 24 27.0	-0.5
CTYL	**Yal??k??y-??at**	**0.33**	**113**	*e*Pg	Pb	12 24 21.8	-0.5
CTYL				*e*Sg	Sb	12 24 27.0	-0.5
SLVT	**Silivri**	**0.44**	**147**	*e*PG	Pg	12 24 23.7	+0.4
SLVT				*e*SG	Sb	12 24 30.6	-0.3
SLVT	**Silivri**	**0.44**	**147**	*e*Pg	Pg	12 24 23.7	+0.3
SLVT				*e*Sg	Sb	12 24 30.6	-0.3
CTKS	**Kestanelik-??a**	**0.59**	**128**	*e*PG	Pb	12 24 26.6	-0.2
CTKS				*e*SG	Sb	12 24 35.1	0.0
CTKS	**Kestanelik-??a**	**0.59**	**128**	*e*Pg	Pb	12 24 26.6	-0.2
CTKS				*e*Sg	Sb	12 24 35.1	-0.1
EDRB	**Edirne**	**0.89**	**286**	*e*PG	Pb	12 24 32.3	+0.2
EDRB	**Edirne**	**0.89**	**286**	*e*Pg	Pb	12 24 32.3	+0.3
KLYT	**Kilyos**	**0.93**	**112**	*e*PG	Pb	12 24 32.9	+0.2
KLYT	**Kilyos**	**0.93**	**112**	*e*Pg	Pb	12 24 32.9	+0.2
MFT	**Murefte**	**0.94**	**210**	*e*PG	Pn	12 24 33.5	-0.2
MFT				*e*SG	Sn	12 24 46.4	-0.8
MFT	**Murefte**	**0.94**	**210**	*e*Pg	Pn	12 24 33.5	-0.2
MFT				*e*Sg	Sn	12 24 46.4	-0.7
ISK	**Istanbul-Kandi**	**1.03**	**121**	*e*PG	Pg	12 24 34.5	0.0
ISK	**Istanbul-Kandi**	**1.03**	**121**	*e*Pg	Pg	12 24 34.5	0.0
RKY	**Sarkoy-Tekirda**	**1.06**	**211**	*e*PG	Pn	12 24 35.3	-0.1
RKY	**Sarkoy-Tekirda**	**1.06**	**211**	*e*Pg	Pn	12 24 35.3	-0.1
BUY	**Buyukada**	**1.19**	**129**	*e*PN	Pg	12 24 37.9	+0.4
BUY	**Buyukada**	**1.19**	**129**	*e*Pn	Pg	12 24 37.9	+0.4
ARMT	**Armutlu**	**1.27**	**144**	*e*PN	Pb	12 24 38.7	+0.2
ARMT	**Armutlu**	**1.27**	**144**	*e*Pn	Pb	12 24 38.7	+0.2
KRBG	**Karabiga-Canak**	**1.29**	**201**	*e*PN	Pg	12 24 39.2	-0.2
KRBG	**Karabiga-Canak**	**1.29**	**201**	*e*Pn	Pg	12 24 39.2	-0.2
KCTX	**Karacabey (Bur**	**1.38**	**165**	*e*PN	Pb	12 24 40.3	-0.1
KCTX	**Karacabey (Bur**	**1.38**	**165**	*e*Pn	Pb	12 24 40.3	-0.1
SILT	**Sile**	**1.39**	**108**	*e*PN	Pb	12 24 40.4	-0.1
SILT	**Sile**	**1.39**	**108**	*e*Pn	Pb	12 24 40.4	-0.1
ERIK	**Erikli-Kesan**	**1.40**	**229**	*e*PN	Pb	12 24 40.8	+0.2
ERIK	**Erikli-Kesan**	**1.40**	**229**	*e*Pn	Pb	12 24 40.8	+0.2
LPK	**Lapseki**	**1.50**	**215**	*e*PN	Pb	12 24 42.1	-0.2
LPK	**Lapseki**	**1.50**	**215**	*e*Pn	Pb	12 24 42.2	-0.1
GEMT	**Gemlik**	**1.52**	**139**	*e*PN	Pn	12 24 42.1	+0.5
GEMT	**Gemlik**	**1.52**	**139**	*e*Pn	Pn	12 24 42.2	+0.5
HRT	**Hereke**	**1.55**	**120**	*e*PN	Pb	12 24 42.8	-0.5
HRT	**Hereke**	**1.55**	**120**	*e*Pn	Pb	12 24 42.8	-0.5
ENEZ	**Enez**	**1.57**	**237**	*e*PN	Pn	12 24 42.8	+0.5
ENEZ	**Enez**	**1.57**	**237**	*e*Pn	Pn	12 24 42.8	+0.5
GELI	**Tayfur-Gelibol**	**1.61**	**222**	*e*PN	Pb	12 24 43.9	-0.4
GELI	**Tayfur-Gelibol**	**1.61**	**222**	*e*Pn	Pb	12 24 43.9	-0.4

NIED 17 12:43:00, 36°70N×142°10E, h26km, Mw3.7 Best double couple: M0 4.23000×10^14 NP1:φs14.00000°, δ64.00000°, λ85.00000°. NP2:φs206.00000°, δ27.00000°, λ101.00000°.
ISCJB 17 12:43:15.5±1.5, 36°68N±0°04×142°19E±0°09, h12km±11km, mb3.5/3, Error ellipse: s-maj=11.8km s-min=6.1km az=179.6
IDC 17 12:43:15.8±2.2, 36°70N×142°06E, h0km, mb3.5/3, mb1 3.6/5, mb1mx3.4/26, mbtmp3.6/5, ML3.3/2, MS2.6/1, Ms1 2.6/1, ms1mx1.4/30, Error ellipse: s-maj=62.1km s-min=24.6km az=82.0
JMA 17 12:43:17.2±0.2, 36°69N×142°11E, h26km, M3.6
ISC 17 12:43:15.0±3.9, 36°69N±0°04×142°20E±0°09, h7km±24km, n18, σ1°72/27, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**1.20**	**290**	P	**Pb**	**12 43 37.1**	**-1.0**
JFK	**Kawauchi**	**1.25**	**303**	P	**Pn**	**12 43 38.4**	**-0.7**
JHO	**Hitachi**	**1.31**	**267**	P	**Pn**	**12 43 39.1**	**-0.8**
JMM	**Marumori**	**1.62**	**317**	P	**Pn**	**12 43 44.0**	**-0.1**
JMM				S	**Sn**	**12 44 04.4**	**-0.9**
JFT	**Otama**	**1.70**	**299**	P	**Pn**	**12 43 45.5**	**+0.3**
JFT				S	**Sn**	**12 44 06.7**	**-0.6**
JIO	**Ouri**	**1.88**	**339**	P	**Pn**	**12 43 48.4**	**+0.7**
JIO				S	**Sn**	**12 44 11.7**	**0.0**
JOU	**Okura**	**2.07**	**324**	P	**Pn**	**12 43 51.2**	**+0.9**
JOU				S	**Sn**	**12 44 16.9**	**+0.6**
JFY	**Yanaizu**	**2.12**	**290**	P	**Pn**	**12 43 51.6**	**+0.6**
JAG	**Ashikaga**	**2.23**	**264**	P	**Pn**	**12 43 52.9**	**+0.5**
BSO1	**Boso 1**	**2.27**	**206**	P	**Pn**	**12 43 53.7**	**+1.3**
BSO1				S	**Sn**	**12 44 21.5**	**+1.1**
JMK	**Ichinoseki**	**2.38**	**341**	P	**Pn**	**12 43 55.6**	**+1.0**
JYK	**Kaneyama**	**2.66**	**327**	P	**Pn**	**12 43 59.5**	**+1.2**
JYK				*e*S	**Sb**	**12 44 33.2**	**-2.6**
MAT	**Matsushiro**	**3.22**	**268**	P	**Pn**	**12 44 07.8**	**+1.8**
MAT				S	**Sn**	**12 44 45.1**	**+0.5**
JHJ	**Hachijo jima 2**	**4.08**	**210**	Pn	**Pn**	**12 44 18.3**	**+0.4**
	6.4nm,0.3s,baz=249,slow=23,SNR=18						
JHJ				Sn	**Sn**	**12 45 01.7**	**-4.2**
	23nm,0.3s,baz=53,slow=20,SNR=5.9						
ASAJ	**Asahikawa**	**7.42**	**2**	Pn	**Pn**	**12 45 05.4**	**+1.6**
	0.5nm,0.3s,baz=223,slow=13,SNR=5.2						
ASAJ				Sn	**Sn**	**12 46 23.6**	**-4.6**
	0.4nm,0.3s,baz=72,slow=20,SNR=2.1						
ASAJ				LR	LR	12 48 47.5	
	comp=Z,42nm,20.8s,baz=312,slow=45						
SONM	**Songino Array**	**28.50**	**304**	P	**P**	**12 49 11.7**	**+0.6**
	1.1nm,0.6s,baz=97,slow=9.5,SNR=7.1						
MKAR	**Makanchi Array**	**44.83**	**303**	P	**P**	**12 51 30.9**	**+1.2**
	0.7nm,0.9s,baz=76,slow=6.1,SNR=3.9						
WRA	**Warramunga Arr**	**56.82**	**189**	P	**P**	**12 53 02.1**	**+1.9**
	0.3nm,0.8s,baz=17,slow=7.8,SNR=2.6						

MEX 17 12:50:14.7±0.5, 16°54N×99°18W, h16km±5km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.73**	**297**	*e*P	Pg	12 50 26.5	-2.6
ACX				*i* S	Sg	12 50 36.8	-2.0
PNIG	**Pinotepa**	**1.02**	**98**	*e*P	Pb	12 50 30.7	-3.3
PNIG				*i* S	Sb	12 50 42.7	-4.6
CAIG	**El Cayaco**	**1.16**	**296**	*i* P	Pn	12 50 33.2	-3.0
CAIG				*i* S	Sb	12 50 46.3	-4.9
MEIG	**Mezcala**	**1.44**	**343**	*i* P	P

HTY				*e*Sg		**Sg**	**14 03 37.0**	**+0.1**
ARNB	**Al Arnab**	**0.26**	**186**	*e*P		**Pb**	**14 03 37.8**	**-0.4**
ARNB				*e*S		**Sb**	**14 03 43.0**	**+0.4**
ARNB				AML	AML		14 03 43.2	
	comp=E,1μm,0.4s							
ARNB				AML	AML		14 03 43.3	
	comp=N,1μm,0.6s							
ARNB	**Al Arnab**	**0.26**	**186**	*e*P		**Pb**	**14 03 37.8**	**-0.4**
	SNR=93							
ARNB				*e*S		**Sb**	**14 03 43.0**	**+0.4**
	comp=N,1μm,0.6s,SNR=92							
BTCH	**Batrach**	**0.38**	**102**	*e*P		**Pg**	**14 03 39.5**	**+0.3**
BTCH				*e*S		**Sb**	**14 03 45.2**	**-0.7**
BTCH				AML	AML		14 03 46.0	
	comp=E,2μm,0.3s							
BTCH				AML	AML		14 03 46.1	
	comp=N,1μm,0.4s							
BTCH	**Batrach**	**0.38**	**102**	*e*P		**Pg**	**14 03 39.5**	**+0.3**
	SNR=92							
BTCH				*e*S		**Sb**	**14 03 45.2**	**-0.7**
	comp=N,1μm,0.4s,SNR=92							
KRTS	**Karatas**	**0.68**	**312**	*e*PG		**Pb**	**14 03 45.0**	**-0.4**
KRTS				*e*SG		**Sb**	**14 03 55.8**	**+1.1**
KRTS	**Karatas**	**0.68**	**312**	*e*Pg		**Pb**	**14 03 45.0**	**-0.4**
KRTS				*e*Sg		**Sb**	**14 03 55.8**	**+1.1**
WRDH	**Warideh**	**0.69**	**152**	*e*P		**Pb**	**14 03 45.3**	**-0.3**
WRDH				*e*S		**Sb**	**14 03 55.4**	**+0.3**
WRDH				AML	AML		14 03 58.0	
	comp=N,653nm,0.3s							
WRDH	**Warideh**	**0.69**	**152**	*e*P		**Pb**	**14 03 45.3**	**-0.3**
	SNR=91							
WRDH				*e*S		**Sb**	**14 03 55.3**	**+0.3**
	comp=N,653nm,0.3s,SNR=91							
DRWC	**Darouich**	**0.73**	**47**	*e*P		Pg	14 03 40.2	-5.7
DRWC				*e*S		**Sg**	**14 03 49.9**	**-5.6**
DRWC				AML	AML		14 03 52.6	
	comp=N,493nm,0.4s							
DRWC				AML	AML		14 03 52.7	
	comp=E,960nm,0.4s							
YURE	**YUREGIR**	**0.77**	**337**	*i* P		**Pb**	**14 03 46.5**	**-0.3**
YURE				*i* S		**Sb**	**14 03 57.2**	**+0.1**
YURE	**YUREGIR**	**0.77**	**337**	*i* P		**Pb**	**14 03 46.5**	**-0.3**
YURE				*i* S		**Sb**	**14 03 57.2**	**+0.1**
CEYT	**Ceyhan**	**0.91**	**347**	*e*PG		**Pb**	**14 03 49.0**	**-0.3**
CEYT	**Ceyhan**	**0.91**	**347**	*e*Pg		**Pb**	**14 03 49.0**	**-0.3**
KUZU	**Kuzuini**	**1.08**	**53**	*i* P		**Pg**	**14 03 51.7**	**-0.8**
KUZU				*i* S		**Sg**	**14 04 05.6**	**-1.0**
KUZU	**Kuzuini**	**1.08**	**53**	*i* P		**Pg**	**14 03 51.7**	**-0.8**
KUZU				*i* S		**Sg**	**14 04 05.6**	**-1.0**
KOZT	**Kozan**	**1.37**	**354**	*e*PN		**Pg**	**14 03 57.4**	**-0.5**
KOZT	**Kozan**	**1.37**	**354**	*e*Pn		**Pg**	**14 03 57.4**	**-0.5**
GAZ	**Gaziantep**	**1.43**	**42**	*e*PN		**Pg**	**14 03 58.5**	**-0.6**
GAZ	**Gaziantep**	**1.43**	**42**	*e*Pn		**Pg**	**14 03 58.5**	**-0.6**
AYKD	**Aykdinkavak**	**1.44**	**26**	*i* P		**Pn**	**14 03 57.8**	**+0.4**
AYKD				*i* S		**Sn**	**14 04 16.0**	**-0.3**
ANDN	**Andirin**	**1.48**	**10**	*e*P		**Pb**	**14 03 58.9**	**-0.2**
ANDN				*e*S		**Sb**	**14 04 18.2**	**+0.4**
ANDN	**Andirin**	**1.48**	**10**	*e*P		**Pb**	**14 03 58.9**	**-0.2**
ANDN				*e*S		**Sb**	**14 04 18.2**	**+0.4**
GULE	**Gulek**	**1.53**	**320**	*e*P		**Pb**	**14 03 59.3**	**-0.6**
GULE				*e*S		**Sn**	**14 04 18.9**	**+0.4**
GULE	**Gulek**	**1.53**	**320**	*e*P		**Pb**	**14 03 59.3**	**-0.6**
GULE				*e*S		**Sn**	**14 04 18.9**	**+0.4**
KIZK	**Mersin**	**1.55**	**284**	*e*P		**Pn**	**14 03 58.8**	**0.0**
KIZK				*e*S		**Sg**	**14 04 20.3**	**-1.2**
KIZK	**Mersin**	**1.55**	**284**	*e*P		**Pn**	**14 03 58.8**	**0.0**
KIZK				*e*S		**Sg**	**14 04 20.3**	**-1.2**
KMRS	**Kahramanmaras**	**1.56**	**27**	*e*PN		**Pb**	**14 04 00.6**	**+0.3**
KMRS	**Kahramanmaras**	**1.56**	**27**	*e*Pn		**Pb**	**14 04 00.6**	**+0.3**
EREN	**Erenkoy**	**1.60**	**249**	*e*PN		**Pb**	**14 04 00.7**	**-0.4**
EREN	**Erenkoy**	**1.60**	**249**	*e*Pn		**Pb**	**14 04 00.7**	**-0.4**
GZT	**Gaziantep**	**1.76**	**45**	*e*P		**Pb**	**14 04 03.4**	**-0.4**
GZT				*e*S		**Sn**	**14 04 25.6**	**+1.4**
HWQ	**Hawqa**	**1.84**	**182**	*e*P		**Pn**	**14 04 03.1**	**+0.2**
HWQ	**Hawqa**	**1.84**	**182**	*e*P		**Pn**	**14 04 03.1**	**+0.2**
FKH	**Fakeheh**	**1.90**	**170**	*e*P		**Pn**	**14 04 04.5**	**+0.6**
FKH	**Fakeheh**	**1.90**	**170**	*e*P		**Pn**	**14 04 04.4**	**+0.6**
BHL	**Bhannes**	**2.23**	**188**	*e*P		**Pn**	**14 04 08.2**	**-0.1**
BHL	**Bhannes**	**2.23**	**188**	*e*P		**Pn**	**14 04 08.2**	**-0.1**
NIG	**Nigde**	**2.28**	**331**	*e*PN		**Pn**	**14 04 10.4**	**+1.2**
NIG	**Nigde**	**2.28**	**331**	*e*Pn		**Pn**	**14 04 10.4**	**+1.2**
SARI	**SarD1z-Kayseri**	**2.31**	**8**	*e*PN		**Pn**	**14 04 11.3**	**+1.8**
CSS	**Prodhromos**	**2.47**	**243**	*e*PN		**Pn**	**14 04 13.3**	**+1.7**
CSS	**Prodhromos**	**2.47**	**243**	*e*Pn		**Pn**	**14 04 13.3**	**+1.7**
URFA	**Urfa**	**2.62**	**59**	*e*PN		**Pn**	**14 04 15.6**	**+2.0**
URFA	**Urfa**	**2.62**	**59**	*e*Pn		**Pn**	**14 04 15.6**	**+2.0**
DARE	**Darende-Malaty**	**2.71**	**25**	*e*PN		**Pn**	**14 04 16.9**	**+1.9**
MYA	**Malataya**	**2.93**	**41**	*e*PN		**Pn**	**14 04 19.5**	**+1.6**
MYA	**Malataya**	**2.93**	**41**	*e*Pn		**Pn**	**14 04 19.5**	**+1.6**

IDC 17 14:04:16.6±73.0, 23°18S×177°87W, h0km, mb3.8/3, mb1 4.0/3, mb1mx3.6/17, mbtmp3.8/3, Error ellipse: s-maj=1337.0km s-min=185.3km az=87.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek**	**36.80**	**247**	P		P	14 11 26.2	-0.2
	0.4nm,0.4s,baz=90,slow=10,SNR=2.8							
ASAR	**Alice Springs**	**44.08**	**259**	P		P	14 12 26.5	-0.4
	0.4nm,0.3s,baz=91,slow=7.4,SNR=14							
WRA	**Warramunga Arr**	**44.41**	**265**	P		P	14 12 29.6	+0.1
	0.6nm,0.3s,baz=104,slow=8.0,SNR=63							

CSEM 17 14:10:05.6, 52°82N×64°59E, h0km, mb3.5, After NNC
NNC 17 14:10:05.6±2.5, 52°82N×64°59E, h0km, mb3.5, mpv3.2, 5C-5D, Error ellipse: s-maj=42.8km s-min=15.0km az=155.0, Western Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ZRNK	**Zerenda**	**2.67**	**85**	⇑Pn		Pn	14 10 49.4	-0.5
	4.7nm,0.3s							
ZRNK				⇓Lg		Lg	14 11 31.7	
	4.3nm,0.5s							
ZRNK	**Zerenda**	**2.67**	**85**	Pn		Pn	14 10 49.4	-0.5
	4.7nm,0.3s							
ZRNK				Lg		Lg	14 11 31.7	
	4.3nm,0.5s							
BVA0	**Borovoye Array**	**3.51**	**84**	⇓Pn		Pn	14 11 00.6	-0.8
	5.6nm,0.2s,baz=282,slow=14,SNR=106							
BVA0				⇓Lg		Lg	14 11 59.6	
	5.2nm,0.5s,baz=275,slow=28,SNR=4.7							
BVA0	**Borovoye Array**	**3.51**	**84**	Pn		Pn	14 11 00.6	-0.8
	5.6nm,0.2s,SNR=106							
BVA0				Lg		Lg	14 11 59.6	
	5.2nm,0.5s,SNR=4.7							
VOSK	**Vostochnaya**	**3.88**	**89**	⇑Pn		Pn	14 11 06.2	-0.2
	2.7nm,0.4s							
VOSK				⇓Lg		Lg	14 12 13.4	
	3.2nm,0.6s							
AB31	**Akbulak array**	**4.62**	**221**	Pn		Pn	14 11 14.5	-2.1
	0.7nm,0.5s,baz=40,slow=13,SNR=19							
AB31				⇑Sn		Sn	14 12 10.1	-0.9
	0.6nm,0.3s,baz=43,slow=23,SNR=2.8							
AB31				⇓Lg		Lg	14 12 35.1	
	1.7nm,0.5s,baz=38,slow=26,SNR=5.3							
AB31	**Akbulak array**	**4.62**	**221**	Pn		Pn	14 11 14.5	-2.1
	0.7nm,0.5s,SNR=19							
AB31				Sn		Sn	14 12 10.1	-0.9
	0.6nm,0.3s,SNR=2.8							
AB31				Lg		Lg	14 12 35.1	
	1.7nm,0.5s,SNR=5.3							
AKTO	**Aktyubinsk**	**4.74**	**242**	⇑Pn		Pn	14 11 23.9	+5.5
	1.0nm,0.5s							
AKTO				⇑Lg		Lg	14 12 35.8	
	5.5nm,0.8s							
AKTO	**Aktyubinsk**	**4.74**	**242**	Pn		Pn	14 11 23.9	+5.6
	1.0nm,0.5s							
AKTO				Lg		Lg	14 12 35.8	
	5.5nm,0.8s							

MOS 17 14:18:02.8±0.9, 54°79N×160°21W, h14km, mb4.8/18, Error ellipse: s-maj=15.4km s-min=8.7km az=92.1
IDC 17 14:18:02.4±0.8, 54°73N×160°33W, h0km, mb4.2/17, mb1 4.3/19, mb1mx4.2/30, mbtmp4.2/19, ML3.8/2, MS3.5/17, Ms1 3.5/17, ms1mx3.3/48, Error ellipse: s-maj=26.7km s-min=15.0km az=171.0
ISCJB 17 14:18:07.9±0.7, 54°73N±0°06×160°15W±0°07, h55km±4km, mb4.4/34, MS3.5/12, Error ellipse: s-maj=11.7km s-min=4.0km az=151.7
NEIC 17 14:18:09.2±0.6, 54°73N×160°19W, h51km±4km, mb4.4/2, ML4.1(AEIC), Error ellipse: s-maj=10.7km s-min=3.4km az=152.0
ISC 17 14:18:08.8±1.1, 54°73N±0°07×160°11W±0°04, h48km±9km, n121, σt 34/121, mb4.5/34, MS3.6/12, 3C-3D, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SDPT	**Sand Point**	**0.66**	**341**	P		**Pn**	**14 18 20.5**	**-1.3**
SDPT				S		**Sn**	**14 18 30.3**	**-0.9**
DOL	**Dolgoi Island**	**1.10**	**293**	P		**Pn**	**14 18 26.3**	**-1.5**
PVV	**Pavlof Volcano**	**1.16**	**304**	P		**Pn**	**14 18 28.0**	**-0.6**
PS4A	**Pavlof South-4**	**1.18**	**302**	P		**Pn**	**14 18 28.2**	**-0.7**
HAG	**Hague Volcano**	**1.19**	**300**	P		**Pn**	**14 18 28.5**	**-0.5**
HAG	**Hague Volcano**	**1.19**	**300**	P		**Pn**	**14 18 28.5**	**-0.5**
DRIA	**Deer Island**	**1.27**	**282**	P		**Pn**	**14 18 28.5**	**-1.6**
DT1	**Dutton Round H**	**1.31**	**288**	P		**Pn**	**14 18 29.4**	**-1.3**
VNWF	**Veniaminof 8**	**1.46**	**12**	P		**Pn**	**14 18 34.1**	**+1.4**
VNWF				S		**Sn**	**14 18 55.4**	**+4.7**
VNHG	**Veniaminof 1**	**1.59**	**19**	P		**Pn**	**14 18 35.8**	**+1.3**
VNFG	**Veniaminof 2**	**1.59**	**11**	P		**Pn**	**14 18 36.3**	**+1.8**
CHGN	**Chignik**	**1.84**	**31**	*e*Pn		**Pn**	**14 18 37.9**	**0.0**
FALS	**False Pass**	**1.92**	**275**	P		**Pn**	**14 18 38.5**	**-0.4**
FALS				S		**Sn**	**14 19 02.1**	**+0.2**
ISNN	**Isanotski Nort**	**2.13**	**274**	P		**Pn**	**14 18 42.4**	**+0.5**
ANPB	**Aniakchak Plen**	**2.32**	**26**	P		**Pn**	**14 18 46.7**	**+2.3**
SSLW	**Shishaldin Wes**	**2.33**	**273**	P		**Pn**	**14 18 45.0**	**+0.4**
SSBA	**Shishaldin**	**2.33**	**273**	P		**Pn**	**14 18 44.6**	**0.0**
SSBA				S		**Sn**	**14 19 15.2**	**+3.2**
ANNW	**Aniakchak Nort**	**2.48**	**25**	P		**Pn**	**14 18 49.6**	**+3.0**
WESN	**West Dahl Nort**	**2.61**	**268**	P		**Pn**	**14 18 49.1**	**+0.7**
AKSA	**Akutan Strait**	**3.32**	**262**	P		**Pn**	**14 18 58.7**	**+0.6**
AKSA				S		**Sn**	**14 19 37.0**	**+0.7**
AKUT	**Akutan**	**3.36**	**262**	P		**Pn**	**14 18 59.0**	**+0.4**
AKLV	**Akutan Long Va**	**3.46**	**263**	P		**Pn**	**14 19 00.6**	**+0.5**
LVA	**Lava Point**	**3.51**	**263**	P		**Pn**	**14 19 00.8**	**+0.1**
AKRB	**Akutan Reef Bi**	**3.53**	**263**	P		**Pn**	**14 19 02.2**	**+1.1**
PLK4	**Peulik 4**	**3.58**	**34**	P		**Pn**	**14 19 04.0**	**+2.1**
UNV	**Unalaska Valle**	**3.85**	**259**	P		**Pn**	**14 19 04.8**	**-0.6**
MTBL	**Makushin Table**	**3.92**	**261**	P		**Pn**	**14 19 06.7**	**+0.2**
MSW	**Makushin Switc**	**3.99**	**261**	P		**Pn**	**14 19 07.2**	**-0.2**
MCIR	**Makushin Cirqu**	**4.05**	**262**	P		**Pn**	**14 19 08.3**	**+0.2**
ANCK	**Angle Creek**	**4.32**	**34**	P		**Pn**	**14 19 13.2**	**+1.4**
OHAK	**Old Harbor**	**4.57**	**54**	*e*Pn		**Pn**	**14 19 14.1**	**-1.1**
OKCE	**Okmok Cone E**	**4.92**	**258**	P		**Pn**	**14 19 20.1**	**0.0**
KDAK	**Kodiak Island**	**5.19**	**51**	Pn		**Pn**	**14 19 22.5**	**-1.2**
KDAK				P		**Pn**	**14 19 24.4**	**+0.7**
KDAK				Sn		**Sn**	**14 20 17.9**	**-4.2**
KDAK	**Kodiak Island**	**5.19**	**51**	Pn		**Pn**	**14 19 22.5**	**-1.2**
	1.9nm,0.3s,baz=222,slow=11,SNR=14							
KDAK				Sn		**Sn**	**14 20 17.9**	**-4.2**
	1.9nm,0.3s,baz=276,slow=18,SNR=4.3							
KDAK				LR		LR	14 21 41.0	
	comp=Z,463nm,19.9s,baz=175,slow=41							
SPIA	**Saint Paul Isl**	**6.20**	**297**	P		**Pn**	**14 19 39.3**	**+1.8**
SVW2	**Sparrevohn**	**6.82**	**19**	P		**Pn**	**14 19 48.8**	**+2.6**
TRF	**Thorofare Moun**	**10.09**	**26**	*e*Pn		**Pn**	**14 20 31.8**	**+0.9**
	22nm,1.0s							
PAX	**Paxson**	**11.18**	**37**	*e*P		**Pn**	**14 20 45.1**	**-0.7**
PAX				pmax		pmax		
	comp=Z,7.0nm,0.8s							
PAX	**Paxson**	**11.18**	**37**	*e*Pn		**Pn**	**14 20 45.0**	**-0.7**
	comp=Z,6.7nm,0.8s							
ILAR	**Eielson Array**	**12.04**	**28**	Pn		Pn	14 20 54.0	-3.4
ILAR	**Eielson Array**	**12.04**	**28**	Pn		Pn	14 20 54.0	-3.4
	comp=Z,0.1nm,0.3s,baz=214,slow=13,SNR=4.7							
ILAR				LR		LR	14 25 45.0	
	comp=Z,152nm,21.3s,baz=239,slow=38							
PNL	**Peninsula**	**12.24**	**58**	*e*Pn		**Pn**	**14 21 00.3**	**0.0**
	comp=Z,24nm,0.9s							
AMKA	**Amchitka**	**12.82**	**263**	*e*P		**Pn**	**14 21 06.5**	**-1.6**
	comp=Z,86nm,0.8s							
COLD	**Coldfoot**	**13.40**	**17**	P		**Pn**	**14 21 16.8**	**+0.8**
	comp=Z,4.9nm,0.9s							
EGAK	**Eagle**	**13.81**	**36**	Pn		**Pn**	**14 21 21.7**	**+0.2**
	comp=Z,7.1nm,0.8s							
DLBC	**Dease Lake**	**16.90**	**65**	LR		LR	14 28 14.0	
	comp=Z,108nm,20.0s,baz=289,slow=36							
INK	**Inuvik**	**18.37**	**32**	P		**P**	**14 22 18.4**	**-0.7**
INK	**Inuvik**	**18.37**	**32**	P		**P**	**14 22 18.4**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=234,slow=11,SNR=5.9							
INK				LR		LR	14 29 58.1	
	comp=Z,84nm,19.7s,baz=258,slow=39							
BBB	**Bella Bella**	**19.13**	**84**	LR		LR	14 27 47.3	
	comp=Z,89nm,19.2s,baz=255,slow=30							
BILL	**Bilibino**	**20.54**	**324**	*e*P		**P**	**14 22 42.6**	**-0.1**
BILL				pmax		pmax		
	comp=Z,23nm,0.9s							
BILL	**Bilibino**	**20.54**	**324**	P		**P**	**14 22 41.2**	**-1.4**
	comp=Z,16nm,1.5s							
PET	**Petropavlovsk**	**24.13**	**283**	*e*P		**P**	**14 23 19.7**	**0.0**
PET				pmax		pmax		
	comp=Z,55nm,0.7s							
YKA	**Yellowknife Ar**	**24.46**	**53**	P		**P**	**14 23 23.3**	**+0.6**
YKA	**Yellowknife Ar**	**24.46**	**53**	P		**P**	**14 23 23.3**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=250,slow=7.5,SNR=7.9							
PEA0B	**Petropavlovsk-**	**24.64**	**284**	*e*P		**P**	**14 23 24.1**	**-0.3**
PETK	**Petropavlovsk-**	**24.64**	**284**	P		**P**	**14 23 23.5**	**-0.9**
PETK	**Petropavlovsk-**	**24.64**	**284**	P		**P**	**14 23 23.5**	**-0.9**
PETK	**Petropavlovsk-**	**24.64**	**284**	P		**P**	**14 23 23.5**	**-0.9**
	comp=Z,17nm,0.5s,baz=88,slow=12,SNR=106							
NEW	**Newport**	**27.18**	**86**	LR		LR	14 34 02.7	
	comp=Z,39nm,18.1s,baz=300,slow=35							
YBH	**Yreka Blue Hor**	**27.73**	**102**	LR		LR	14 32 54.9	
	comp=Z,103nm,20.4s,baz=353,slow=32							
NVAR	**Mina Array Bea**	**32.45**	**103**	P		**P**	**14 24 37.0**	**+2.5**
NVAR	**Mina Array Bea**	**32.45**	**103**	P		**P**	**14 24 37.0**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=312,slow=8.4,SNR=3.7							
TIXI	**Tiksi**	**33.65**	**327**	⇑*e*P		**P**	**14 24 43.5**	**-0.8**
TIXI				pmax		pmax		
	comp=Z,4.0nm,1.0s							
YSS	**Yuzh-Sakhalins**	**36.00**	**282**	*e*P		**P**	**14 25 06.2**	**+1.5**
ASAJ	**Asahikawa**	**37.74**	**278**	P		**P**	**14 25 19.4**	**-0.2**
ASAJ	**Asahikawa**	**37.74**	**278**	P		**P**	**14 25 19.4**	**-0.2**
	comp=Z,7.1nm,0.9s,baz=344,slow=6.1,SNR=8.3							
ERM	**Erimo**	**38.71**	**275**	⇓*e*P		**P**	**14 25 25.9**	**-1.9**
ERM				pmax		pmax		
	comp=Z,19nm,1.7s							
ANMO	**Albuquerque**	**41.67**	**96**	LR		LR	14 42 33.5	
	comp=Z,31nm,19.1s,baz=26,slow=35							
MAJO	**Matsushiro**	**45.21**	**273**	*e*P		**P**	**14 26 19.7**	**-1.2**
MAJO				pmax		pmax		
	comp=Z,9.0nm,0.8s							
MAJO	**Matsushiro**	**45.21**	**273**	*e*P		**P**	**14 26 19.6**	**-1.2**
	comp=Z,8.5nm,0.8s							
MAT	**Matsushiro**	**45.21**	**273**	P		**P**	**14 26 20.9**	**0.0**
JHJ	**Hachijo jima 2**	**46.72**	**268**	LR		LR	14 45 13.5	
	comp=Z,23nm,19.2s,baz=46,slow=35							
TXAR	**Lajitas Array**	**47.39**	**99**	P		**P**	**14 26 39.0**	**+0.8**
TXAR	**Lajitas Array**	**47.39**	**99**	P		**P**	**14 26 39.0**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=302,slow=7.2,SNR=5.7							
TXAR				LR		LR	14 44 46.5	
	comp=Z,61nm,20.5s,baz=95,slow=34							
KSRS	**Korea Array**	**50.49**	**281**	P		**P**	**14 27 02.1**	**+0.4**
	comp=Z,3.7nm,0.8s,baz=46,slow=7.0,SNR=20							
KSRS				LR		LR	14 46 37.4	
	comp=Z,24nm,20.4s,baz=30,slow=34							
KSAR	**Wonju Array Be**	**50.53**	**281**	P		**P**	**14 27 02.0**	**+0.2**
ZAK	**Zakamensk**	**54.34**	**308**	*e*P		**P**	**14 27 29.9**	**-0.2**
ZAK				pmax		pmax		
	comp=Z,1.0nm,1.0s							
SONM	**Songino Array**	**54.68**	**304**	P		**P**	**14 27 32.7**	**0.0**
SONM				PcP		**PcP**	**14 28 33.9**	**-1.0**
SONM	**Songino Array**	**54.68**	**304**	P		**P**	**14 27 32.7**	**0.0**
	comp=Z,2.7nm,0.8s,baz=42,slow=7.8,SNR=13							
SONM				PcP		**PcP**	**14 28 33.9**	**-1.0**
	comp=Z,0.8nm,0.6s,baz=0.0,slow=4.9,SNR=3.6							
SONM				LR		LR	14 53 40.9	
	comp=Z,80nm,20.2s,baz=243,slow=39							
ZALV	**Zalesovo Beam**	**59.22**	**321**	LR		LR	14 55 53.1	
	comp=Z,94nm,18.1s,baz=70,slow=38							
KLMR	**Klimovskoe**	**63.71**	**349**	P		P	14 28 31.4	-3.2
KLMR				pmax		pmax		
	comp=Z,29nm,2.0s							
SVE	**Sverdlovsk**	**63.97**	**336**	*e*P		**P**	**14 28 37.0**	**+0.6**
SVE				pmax		pmax		
	comp=Z,9.0nm,0.8s							
KURK	**Kurchatov**	**64.06**	**323**	*c*e*e*P		**P**	**14 28 37.2**	**+0.1**
KURK				pmax		pmax		
	comp=Z,4.0nm,1.2s							
NB2	**NORSAR Subarra**	**64.37**	**5**	P		**P**	**14 28 39.5**	**+0.5**
	comp=Z,4.2nm,1.1s,baz=356,slow=6.5							
NOA	**NORSAR Array B**	**64.37**	**5**	P		**P**	**14 28 39.6**	**+0.5**
NOA	**NORSAR Array B**	**64.37**	**5**	P		**P**	**14 28 39.6**	**+0.5**
	comp=Z,1.2nm,0.8s,baz=355,slow=6.6,SNR=3.7							
BVA0	**Borovoye Array**	**64.77**	**329**	*i* P		**P**	**14 28 41.6**	**-0.1**
BVA0				pmax		pmax		
	comp=Z,5.0nm,0.5s							
BRVK	**Borovoye**	**64.77**	**329**	*c*e*e*P		**P**	**14 28 41.8**	**+0.1**
BRVK				pmax		pmax		
	comp=Z,6.0nm,0.9s							
ARU	**Arti**	**64.80**	**337**	*d i*P		**P**	**14 28 41.6**	**-0.3**
ARU							14 31 00.3	
ARU				S		**S**	**14 37 13.5**	**-5.2**
ARU				pmax		pmax		
	comp=Z,5.0nm,1.0s							
VOSK	**Vostochnaya**	**64.85**	**328**	P		**P**	**14 28 42.3**	**0.0**
VOSK				pmax		pmax		
	comp=Z,4.0nm,0.7s							
ZRNK	**Zerenda**	**65.24**	**330**	*i* P		**P**	**14 28 45.2**	**+0.4**
ZRNK				pmax		pmax		
	comp=Z,5.0nm,0.7s							
MK31	**Makanchi Array**	**65.97**	**318**	P		**P**	**14 28 48.9**	**-0.7**
MK31				pmax		pmax		
	comp=Z,5.0nm,0.9s							
MKAR	**Makanchi Array**	**65.97**	**318**	*i* P		**P**	**14 28 49.0**	**-0.6**
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.8s							
MKAR	**Makanchi Array**	**65.97**	**318**	P		**P**	**14 28 48.8**	**-0.8**
MKAR	**Makanchi Array**	**65.97**	**318**	P		**P**	**14 28 48.8**	**-0.8**
	comp=Z,1.5nm,0.8s,baz=48,slow=7.6,SNR=10							
MKAR				LR		LR	14 59 56.5	
	comp=Z,64nm,18.3s,baz=357,slow=38							
AB31	**Akbulak array**	**71.06**	**334**	P		**P**	**14 29 21.6**	**+0.3**
AB31				pmax		pmax		
	comp=Z,2.0nm,0.5s							
AAK	**Ala-Archa**	**72.44**	**321**	*de*P		**P**	**14 29 31.0**	**+1.1**
AAK				pmax		pmax		
	comp=Z,17nm,1.7s							
CLL	**Collm**	**74.17**	**4**	*i* P		**P**	**14 29 40.7**	**+1.0**
CLL	**Collm**	**74.17**	**4**	*i* P		**P**	**14 29 40.7**	**+1.0**
AKASG	**Malin Array Be**	**74.65**	**354**	*i* P		**P**	**14 29 42.7**	**+0.2**
AKASG				pmax		pmax		
	comp=Z,3.0nm,0.6s							
AKASG	**Malin Array Be**	**74.65**	**354**	P		**P**	**14 29 42.2**	**-0.3**
AKASG	**Malin Array Be**	**74.65**	**354**	P		**P**	**14 29 42.2**	**-0.3**
	comp=Z,3.0nm,0.6s,baz=4.0,slow=5.6,SNR=11							
RAR	**Rarotonga**	**75.63**	**180**	LR		LR	14 54 16.5	
	comp=Z,66nm,21.8s,baz=273,slow=29							
GERES	**GERESS Array B**	**76.67**	**4**	P		**P**	**14 29 55.2**	**+1.0**
GERES	**GERESS Array B**	**76.67**	**4**	P		**P**	**14 29 55.2**	**+1.0**
	comp=Z,1.0nm,0.8s,baz=23,slow=5.3,SNR=7.0							
KIV	**Kislovodsk**	**79.79**	**343**	*e*P		**P**	**14 30 11.8**	**+0.2**
KIV				pmax		pmax		
	comp=Z,7.0nm,1.1s							
KBZ	**Khabaz**	**79.97**	**343**	P		**P**	**14 30 13.6**	**+1.2**
KBZ	**Khabaz**	**79.97**	**343**	P		**P**	**14 30 13.6**	**+1.2**
KBZ	**Khabaz**	**79.97**	**343**	P		**P**	**14 30 13.6**	**+1.2**
	comp=Z,4.5nm,1.0s,baz=306,slow=2.8,SNR=6.7							
KBZ				LR		LR	15 14 15.3	
	comp=Z,30nm,18.6s,baz=289,slow=42							
CMAR	**Chiang Mai Arr**	**81.27**	**289**	P		**P**	**14 30 19.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**81.27**	**289**	P		**P**	**14 30 19.6**	**-0.2**
	comp=Z,4.2nm,0.9s,baz=22,slow=5.8,

PCVE	**Castro Verde**	**1.46**	**355**	*e*P		Pn	14 29 50.3	+0.3
PCVE				*e*S		Sb	14 30 08.5	-1.0
PCVE				A		A	14 30 09.4	
	1.6nm,0.1s							
PCVE	**Castro Verde**	**1.46**	**355**	P		Pn	14 29 50.3	+0.3
PCVE				S		Sb	14 30 08.5	-1.0
	1.6nm,0.1s							
PCVE	**Castro Verde**	**1.46**	**355**	*e*P		Pn	14 29 50.3	+0.3
PCVE				S		Sb	14 30 08.5	-1.0
	1.6nm,0.1s							
PTEO	**Sao Teotonio**	**1.53**	**334**	*e*S		Sn	14 30 11.1	-0.1
PTEO				A		A	14 30 15.2	
	4.6nm,0.3s							
PTEO	**Sao Teotonio**	**1.53**	**334**	S		Sn	14 30 11.1	-0.1
	2.3nm,0.3s							
PTEO	**Sao Teotonio**	**1.53**	**334**	S		Sn	14 30 11.1	-0.1
	2.3nm,0.3s							
EMIN	**Mina Concepcio**	**1.85**	**31**	P		Pn	14 29 55.5	0.0
	3.4nm,1.1s,SNR=7.9							
EMIN				S		Sn	14 30 19.0	-0.4
	1.5nm,0.8s,SNR=7.9							
EMIN	**Mina Concepcio**	**1.85**	**31**	P		Pn	14 29 55.5	0.0
	3.4nm,1.1s,SNR=7.9							
EMIN				S		Sn	14 30 19.0	-0.3
	1.5nm,0.8s,SNR=7.9							
PNCL	**Nicolau / Gran**	**2.00**	**345**	*e*S		Sn	14 30 21.3	-1.6
PNCL				A		A	14 30 30.4	
	2.7nm,0.2s							
PNCL	**Nicolau / Gran**	**2.00**	**345**	*e*S		Sn	14 30 21.3	-1.6
	2.7nm,0.2s							
PBAR	**Barrancos**	**2.10**	**18**	*e*P		Pn	14 29 59.6	+0.7
PBAR				*e*S		Sn	14 30 24.9	-0.5
PBAR				A		A	14 30 36.4	
	0.6nm,0.3s							
PBAR	**Barrancos**	**2.10**	**18**	P		Pn	14 29 59.6	+0.7
PBAR				S		Sn	14 30 24.9	-0.5
	0.6nm,0.3s							
PBAR	**Barrancos**	**2.10**	**18**	*e*P		Pn	14 29 59.6	+0.7
PBAR				*e*S		Sn	14 30 24.9	-0.5
	0.6nm,0.3s							
PMTG	**Montargil**	**2.90**	**355**	*e*P		Pn	14 30 09.7	-0.1
PMTG				*e*S		Sn	14 30 43.4	-1.7
PMTG				A		A	14 30 46.7	
	2.3nm,0.4s							
PMTG	**Montargil**	**2.90**	**355**	*e*P		Pn	14 30 09.7	-0.1
PMTG				*e*S		Sn	14 30 43.4	-1.7
	2.3nm,0.4s							
EADA	**Adamuz**	**3.30**	**52**	P		Pn	14 30 15.7	+0.4
	24nm,2.8s,SNR=7.9							
EADA				S		Sn	14 30 52.7	-2.3
	7.9nm,3.3s,SNR=7.9							
EADA	**Adamuz**	**3.30**	**52**	P		Pn	14 30 15.7	+0.3
	24nm,2.8s,SNR=7.9							
EADA				S		Sn	14 30 52.7	-2.3
	7.9nm,3.3s,SNR=7.9							
PCBR	**Castelo Branco**	**3.67**	**5**	*e*S		Sn	14 31 02.9	-1.2
PCBR	**Castelo Branco**	**3.67**	**5**	S		Sn	14 31 02.9	-1.2
PCBR	**Castelo Branco**	**3.67**	**5**	*e*S		Sn	14 31 02.9	-1.2
EBAN	**Banos Encina**	**3.82**	**58**	P		Pn	14 30 23.0	+0.4
	48nm,3.3s,SNR=7.9							
EBAN	**Banos Encina**	**3.82**	**58**	P		Pn	14 30 23.0	+0.5
	48nm,3.3s,SNR=7.9							
EPLA	**Plasencia**	**4.13**	**19**	S		Sn	14 31 13.0	-2.5
	0.7nm,0.3s,SNR=7.8							
EPLA	**Plasencia**	**4.13**	**19**	S		Sn	14 31 13.0	-2.5
	0.7nm,0.3s,SNR=7.8							
ETOB	**Tobarra**	**5.60**	**62**	P		Pn	14 30 47.0	-0.2
	1.7nm,1.5s,SNR=7.9							
ETOB				S		Sn	14 31 47.5	-4.4
	0.4nm,0.3s,SNR=7.9							
ETOB	**Tobarra**	**5.60**	**62**	P		Pn	14 30 47.0	-0.1
	1.7nm,1.5s,SNR=7.9							

IDC 17 14:40:56.9±1.1, 31°.69N×104°.38E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.4/29, mbtmp3.5/7, Error ellipse: s-maj=37.4km s-min=20.0km az=64.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**14.06**	**202**	Pn	Pn	14 44 18.9	+1.5
	baz=19,slow=10						
SONM	**Songino Array**	**16.20**	**5**	Pn	Pn	14 44 47.5	+1.4
	baz=189,slow=8.5,SNR=4.2						
KSRS	**Korea Array**	**20.20**	**67**	P	P	14 45 33.0	-0.1
	1.7nm,0.8s,baz=256,slow=10,SNR=7.9						
ZALV	**Zalesovo Beam**	**26.30**	**333**	P	P	14 46 33.7	-0.3
	0.6nm,0.5s,baz=128,slow=11,SNR=3.6						
KURBB	**Kurchatov Arra**	**26.92**	**322**	P	P	14 46 39.5	-0.1
	0.2nm,0.6s,baz=130,slow=8.6						
WRA	**Warramunga Arr**	**58.83**	**147**	P	P	14 50 56.8	-0.6
	0.7nm,0.6s,baz=341,slow=7.7,SNR=10						
ASAR	**Alice Springs**	**61.87**	**149**	P	P	14 51 18.3	+0.2
	0.3nm,0.5s,baz=334,slow=6.5,SNR=13						

ISCJB 17 14:52:35.4±0.5, 31°.45N±0°.05×138°.39E±0°.07, h428km±5km, mb2.9/5, Error ellipse: s-maj=10.0km s-min=6.6km az=155.4
JMA 17 14:52:36.0±0.3, 31°.45N×138°.36E, h427km±4km, M3.4
IDC 17 14:52:36.9±0.8, 31°.49N×138°.17E, h413km±15km, mb2.6/5, mb1 2.7/9, mb1mx2.6/30, mbtmp2.7/9, Error ellipse: s-maj=33.4km s-min=15.7km az=58.0
ISC 17 14:52:36.1±0.8, 31°.45N±0°.07×138°.37E±0°.08, h418km±8km, n30, σ1s96/44, mb2.9/5, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**2.02**	**36**	P	**P**	**14 53 35.2**	**+1.5**
JHCJ				S	**S**	**14 54 20.2**	**-0.3**
JHJ	**Hachijo jima 2**	**2.05**	**35**	P	**P**	**14 53 34.8**	**+0.9**
	20nm,0.3s,baz=243,slow=23,SNR=72						
JHJ				S	**S**	**14 54 21.9**	**+1.0**
	16nm,0.3s,baz=270,slow=20,SNR=4.9						
JHJ2	**Mitsune**	**2.06**	**36**	P	**P**	**14 53 35.4**	**+1.5**
TK02	**Tokai 2**	**2.54**	**348**	P	**P**	**14 53 39.0**	**+2.2**
TTO1	**TONANKAI O.B.S**	**2.55**	**329**	P	**P**	**14 53 38.7**	**+1.9**
TTO4	**TONANKAI O.B.S**	**2.64**	**345**	P	**P**	**14 53 39.5**	**+2.0**
JKO	**Kozu shima**	**2.80**	**13**	P	**P**	**14 53 41.5**	**+2.5**
JWZ	**Kozaga**	**3.06**	**313**	P	**P**	**14 53 41.7**	**+0.7**
JWZ				S	**S**	**14 54 33.0**	**-0.8**
JIE	**Ise**	**3.25**	**335**	P	**P**	**14 53 43.9**	**+1.4**
JIE				S	**S**	**14 54 36.7**	**+0.1**
JWY	**Kouya**	**3.62**	**320**	P	**P**	**14 53 47.0**	**+1.3**
JOD2	**Odawara 2**	**3.85**	**9**	P	**P**	**14 53 49.3**	**+1.6**
BSO1	**Boso 1**	**3.87**	**34**	P	**P**	**14 53 47.8**	**+0.6**
BSO1				S	**S**	**14 54 45.8**	**+0.4**
JNY	**Yasuok**	**3.92**	**354**	P	**P**	**14 53 50.3**	**+1.9**
JNY				S	**S**	**14 54 47.7**	**+0.3**
JHU	**Hanno**	**4.45**	**10**	P	**P**	**14 53 54.0**	**+0.7**
JHU				S	**S**	**14 54 51.9**	**-4.5**
JRY	**Ryogami san**	**4.58**	**5**	P	**P**	**14 53 55.7**	**+1.2**
JRY				S	**S**	**14 54 56.6**	**-2.0**
JTO	**Tosashimizu**	**4.93**	**288**	P	**P**	**14 53 58.3**	**+0.3**
JYT	**Yasato**	**5.00**	**17**	P	**P**	**14 53 58.2**	**-0.4**
JYT				S	**S**	**14 55 00.6**	**-5.6**
MAT	**Matsushiro**	**5.08**	**359**	P	**P**	**14 54 00.3**	**+0.8**
MAT				S	**S**	**14 55 05.1**	**-2.7**
CBIJ	**Chichi jima**	**5.47**	**142**	P	**P**	**14 54 03.4**	**-0.3**
CBIJ				S	**S**	**14 55 10.9**	**-4.4**
JHS	**Saijyo**	**5.65**	**310**	P	**P**	**14 54 06.4**	**+1.0**
JHHJ	**Haha-jima-NKT**	**5.85**	**144**	P	**P**	**14 54 07.5**	**-0.1**
JHHJ				*e*S	**S**	**14 55 20.5**	**-2.0**
JNU	**Nakatsue**	**6.56**	**287**	P	**P**	**14 54 14.6**	**-1.0**
	0.4nm,0.3s,baz=115,slow=7.1,SNR=6.3						
JMK	**Ichinoseki**	**7.84**	**17**	P	**P**	**14 54 30.8**	**+1.4**
JMK				S	**S**	**14 55 59.0**	**-3.0**
KSRS	**Korea Array**	**10.50**	**308**	P	**P**	**14 54 59.0**	**+0.4**
	0.2nm,0.3s,baz=122,slow=11,SNR=4.6						
ASAJ	**Asahikawa**	**13.07**	**14**	P	**P**	**14 55 29.3**	**+2.4**
	0.5nm,0.3s,baz=248,slow=26,SNR=7.7						
SONM	**Songino Array**	**29.29**	**313**	P	**P**	**14 58 01.0**	**-1.3**
	0.2nm,0.3s,baz=110,slow=7.8,SNR=3.2						
MKAR	**Makanchi Array**	**45.18**	**307**	P	**P**	**15 00 13.6**	**+0.1**
	0.4nm,0.7s,baz=99,slow=8.9,SNR=3.6						
KURBB	**Kurchatov Arra**	**47.64**	**312**	P	**P**	**15 00 31.9**	**-0.3**
	0.4nm,0.3s,baz=92,slow=8.3,SNR=7.0						
WRA	**Warramunga Arr**	**51.25**	**185**	P	**P**	**15 01 00.1**	**+0.7**
	0.7nm,0.9s,baz=0.3,slow=7.6,SNR=7.5						
WRA				PcP	**PcP**	**15 02 09.7**	**+1.9**
	0.2nm,0.4s,baz=358,slow=4.1,SNR=4.9						
ASAR	**Alice Springs**	**54.97**	**185**	P	**P**	**15 01 28.0**	**+1.8**
	0.2nm,0.5s,baz=25,slow=11,SNR=5.6						

ATH 17 14:52:35.9, 41°.26N×22°.70E, h19km±2km, MD2.8/4
SKO 17 14:52:35.5, 41°.29N×22°.68E, h10km, M1.0, ML1.5
CSEM 17 14:52:35.9, 41°.26N×22°.70E, h19km, MD2.8, After ATH
ISC 17 14:52:36.1±1.4, 41°.26N±0°.06×22°.70E±0°.03, h18km±4km, n9, σ0s27/16, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	**Valandovo**	**0.11**	**302**	*i* Pg	**Pb**	**14 52 37.7**	**-0.3**
VAY				*e*Lg	Lg	14 52 39.5	
	comp=E,213nm,0.2s						
VAY				*i* Sg	**Sb**	**14 52 39.5**	**+0.3**
VAY				*e*Lg	Lg	14 52 39.5	
	comp=N,315nm,0.2s						
GRG	**Griva**	**0.38**	**217**	*e*PB	**Pg**	**14 52 43.7**	**-0.3**
GRG				*e*SB	**Sg**	**14 52 49.5**	**+0.1**
GRG	**Griva**	**0.38**	**217**	*e*Pb	**Pg**	**14 52 43.7**	**-0.3**
GRG				*e*Sb	**Sg**	**14 52 49.5**	**+0.1**
SOH	**Sokhos**	**0.66**	**131**	*e*PN	**Pb**	**14 52 48.8**	**-0.3**
SOH				*e*SN	**Sg**	**14 52 58.3**	**+0.3**
SOH	**Sokhos**	**0.66**	**131**	*e*Pn	**Pb**	**14 52 48.8**	**-0.3**
SOH				*e*Sn	**Sg**	**14 52 58.3**	**+0.3**
NVR	**Nevrokopi**	**0.88**	**84**	*e*PN	**Pg**	**14 52 53.2**	**-0.1**
NVR				*e*SN	**Sg**	**14 53 05.1**	**+0.2**
NVR	**Nevrokopi**	**0.88**	**84**	*e*Pn	**Pg**	**14 52 53.2**	**-0.1**
NVR				*e*Sn	**Sg**	**14 53 05.1**	**+0.2**
FNA	**Florina**	**1.11**	**245**	*e*PN	**Pb**	**14 52 56.9**	**+0.2**
FNA	**Florina**	**1.11**	**245**	*e*Pn	**Pb**	**14 52 56.9**	**+0.2**

IDC 17 14:55:48.7±16.0, 23°.58S×179°.68W, h377km±124km, mb3.1/5, mb1 3.3/6, mb1mx3.1/19, mbtmp3.2/6, Error ellipse: s-maj=165.2km s-min=22.9km az=44.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.89**	**190**	P	P	14 58 59.7	-1.2
	1.9nm,0.3s,baz=66,slow=3.3,SNR=15						
URZ				S	S	15 01 26.5	-13
	0.3nm,0.3s,baz=152,slow=9.4,SNR=3.4						
CTA	**Charters Tower**	**31.77**	**270**	P	P	15 01 41.7	+1.9
	2.5nm,0.3s,baz=91,slow=11,SNR=9.9						
STKA	**Stephens Creek**	**35.12**	**248**	P	P	15 02 07.2	-1.0
	0.4nm,0.3s,baz=90,slow=13,SNR=4.8						
ASAR	**Alice Springs**	**42.38**	**260**	P	P	15 03 07.3	-0.7
	0.3nm,0.3s,baz=89,slow=6.9,SNR=22						
WRA	**Warramunga Arr**	**42.72**	**266**	P	P	15 03 10.1	-0.6
	0.7nm,0.3s,baz=98,slow=8.2,SNR=29						
VNDA	**Vanda**	**54.73**	**185**	P	P	15 04 40.2	+0.2
	0.5nm,0.3s,baz=16,slow=5.7,SNR=9.7						

IDC 17 15:09:00.4±1.2, 28°.73S×71°.76W, h0km, mb3.4/2, mb1 3.4/4, mb1mx3.3/19, mbtmp3.4/4, ML2.9/2, Error ellipse: s-maj=46.2km s-min=26.1km az=77.0
ISCJB 17 15:09:04.3±1.0, 28°.69S±0°.04×71°.5W±0°.1, h31km, mb3.3/2, Error ellipse: s-maj=13.2km s-min=5.1km az=179.3
GUC 17 15:09:05.7±0.9, 28°.76S×71°.35W, h37km±6km, ML4.1
ISC 17 15:09:05.6±1.0, 28°.75S±0°.04×71°.3W±0°.1, h31km, n13, σ0s96/18, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.59**	**116**	↓*i* P	**Pn**	**15 09 18.7**	**+0.6**
LCO				*i* S	**Sn**	**15 09 28.1**	**+1.2**
LCO				AML	AML	15 09 29.5	
	comp=N,4μm,0.2s						
TLL	**Tololo Astrono**	**1.48**	**163**	↑*i* P	**Pb**	**15 09 31.7**	**-0.8**
TLL				*i* S	**Sb**	**15 09 51.6**	**+0.5**
TLL				AML	AML	15 09 56.4	
	comp=E,2μm,0.6s						
CPCH	**Copiapo**	**1.63**	**32**	*e*P	**Pn**	**15 09 33.3**	**+1.1**
CPCH				*i* S	**Sb**	**15 09 54.9**	**-0.3**
CPCH				AML	AML	15 09 56.8	
	comp=N,8μm,0.1s						
CDCH	**Caldera**	**1.73**	**15**	*i* P	**Pn**	**15 09 33.5**	**-0.1**
CDCH				*i* S	**Sn**	**15 09 54.8**	**+0.2**
CMCH	**Combarbala**	**2.43**	**174**	*e*P	**Pn**	**15 09 43.9**	**+0.7**
CMCH				AML	AML	15 10 24.3	
	comp=E,3μm,0.5s						
CFAA	**Coronel Fontan**	**3.89**	**138**	Pn	Pn	15 10 07.2	+3.8
	comp=E,0.7nm,0.3s,baz=317,slow=13,SNR=67						
CFAA				Sn	**Sb**	**15 10 57.7**	**-2.6**
	comp=E,1.5nm,0.3s,baz=71,slow=21,SNR=7.0						
LVC	**Limon Verde**	**6.49**	**20**	Pn	**Pn**	**15 10 38.8**	**-0.4**
	comp=E,0.3nm,0.3s,baz=210,slow=8.1,SNR=11						
LVC				Sn	**Sn**	**15 11 52.3**	**0.0**
	comp=E,1.0nm,0.3s,baz=298,slow=8.2,SNR=3.6						
SNAA	**Sanae**	**56.23**	**159**	P	**P**	**15 18 42.3**	**-0.1**
	comp=E,0.1nm,0.6s,baz=330,slow=14,SNR=3.2						
TORD	**Torodi Ar. Bea**	**81.85**	**70**	P	**P**	**15 21 22.8**	**+0.5**
	comp=E,0.3nm,0.5s,baz=258,slow=4.6,SNR=6.6						
WRA	**Warramunga Arr**	**125.62**	**210**	PKP	**PKPdf**	**15 28 03.6**	**-0.9**
	comp=E,0.6nm,1.0s,baz=154,slow=1.9,SNR=8.1						
KURBB	**Kurchatov Arra**	**148.49**	**38**	PKPbc	**PKPbc**	**15 28 49.7**	**+0.8**
	comp=E,0.2nm,0.5s,baz=301,slow=3.7,SNR=4.7						
ZALV	**Zalesovo Beam**	**149.39**	**28**	PKPbc	**PKPbc**	**15 28 51.8**	**+0.7**
	comp=E,0.6nm,0.4s,baz=298,slow=3.1,SNR=6.8						
MKAR	**Makanchi Array**	**152.63**	**42**	PKPbc	**PKPbc**	**15 28 59.4**	**+0.5**
	comp=E,0.2nm,0.5s,baz=351,slow=3.6,SNR=2.9						

IDC 17 15:13:11.8±2.5, 4°.32S×131°.65E, h0km, mb3.5/1, mb1 3.6/4, mb1mx3.4/19, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=100.6km s-min=28.0km az=81.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**14.90**	**203**	Pn	Pn	15 16 43.8	-0.2
	0.1nm,0.3s,baz=26,slow=17,SNR=5.8						
FITZ				Sn	Sn	15 19 30.3	+0.4
	0.1nm,0.3s,baz=283,slow=19,SNR=2.1						
WRA	**Warramunga Arr**	**15.74**	**171**	Pn	Pn	15 16 55.3	+0.1
	0.1nm,0.3s,baz=354,slow=13,SNR=14						
WRA				Sn	Sn	15 19 47.6	-2.9
	0.1nm,0.3s,baz=345,slow=22,SNR=3.9						
ASAR	**Alice Springs**	**19.35**	**174**	P	P	15 17 39.2	+0.1
	0.1nm,0.3s,baz=349,slow=10,SNR=13						
MKAR	**Makanchi Array**	**66.93**	**325**	P	P	15 24 06.2	0.0
	0.3nm,0.6s,baz=131,slow=5.8,SNR=4.1						

IDC 17 15:57:36.3±1.3, 6°.17N×124°.97E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/24, mbtmp3.6/4, Error ellipse: s-maj=33.7km s-min=11.4km az=112.0
ISCJB 17 15:57:42.6±0.8, 6°.7N±0°.1×126°.0E±0°.1, h97km, mb3.4/4, Error ellipse: s-maj=24.0km s-min=9.7km az=143.8
MAN 17 15:57:43, 6°.58N×126°.05E, h45km, mb4.4, ML3.2, MS3.0
ISC 17 15:57:43.9±1.1, 6°.7N±0°.1×126°.1E±0°.1, h97km, n11, σ2s13/12, mb3.5/4, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.32**	**33**	*e*P	**Pn**	**15 57 55.7**	**-2.5**
MATI				*e*S	Sn	15 58 03.1	-5.9
DAV	**Davao City (W)**	**0.63**	**308**	Pg	**Pn**	**15 57 58.7**	**-1.7**
	baz=242,slow=17,SNR=5.2						
DAV				Lg	Lg	15 58 10.6	
	330nm,0.3s,baz=138,slow=21,SNR=16						
DMPH	**Davao City--Mi**	**0.70**	**305**	↓*i* P	**Pn**	**15 57 58.8**	**-2.2**
DMPH				*i* S	**Sn**	**15 58 10.1**	**-3.8**
BUKP	**Musuan**	**1.57**	**320**	*e*P	**Pn**	**15 58 10.8**	**-0.1**
CTBH	**Cotabato--PC H**	**1.90**	**287**	↓*i* P	**Pn**	**15 58 13.6**	**-1.5**
CGP	**Cagayan de Oro**	**2.24**	**322**	*e*P	**Pn**	**15 58 19.7**	**+0.2**
PAGZ	**Pagadian**	**2.92**	**294**	*e*P	**Pn**	**15 58 28.2**	**-0.3**
FITZ	**Fitzroy Crossi**	**24.62**	**181**	P	**P**	**16 02 55.2**	**-0.2**
	2.7nm,1.1s,baz=354,slow=9.2,SNR=2.9						
WRA	**Warramunga Arr**	**27.67**	**163**	P	**P**	**16 03 24.2**	**+1.3**
	0.6nm,0.9s,baz=333,slow=11,SNR=6.8						
ASAR	**Alice Springs**	**31.11**	**166**	P	**P**	**16 03 54.5**	**+1.2**
	0.4nm,0.4s,baz=339,slow=7.3,SNR=25						
MKAR	**Makanchi Array**	**54.79**	**324**	P	**P**	**16 07 06.3**	**+2.5**
	0.2nm,0.4s,baz=118,slow=8.0,SNR=5.2						

NIED 17 16:24:00, 33°.90N×137°.50E, h340km, Mw4.5 Best double couple: M0 5.42000×10^15 NP1:φs179.00000°, δ78.00000°, λ73.00000°. NP2:φs53.00000°, δ21.00000°, λ142.00000°.
JMA 17 16:24:37.9±0.2, 33°.90N×137°.50E, h338km±2km, M4.1

ISCJB 17 16:24:37.8±0.3, 33°.89N±0°.04×137°.44E±0°.04, h336km±1km, mb4.0/36, Error ellipse: s-maj=7.2km s-min=5.5km az=155.8
MOS 17 16:24:37.0±0.7, 33°.80N×137°.41E, h330km, mb4.0/20, Error ellipse: s-maj=12.4km s-min=8.2km az=94.1
BJI 17 16:24:37.1, 33°.92N×137°.37E, h333km, mB4.3/14, mb4.6/34
IDC 17 16:24:38.6±0.6, 33°.83N×137°.45E, h330km±5km, mb3.7/19, mb1 3.9/24, mb1mx3.8/32, mbtmp3.7/24, Error ellipse: s-maj=9.0km s-min=8.8km az=48.0
ISC 17 16:24:38.8±0.5, 33°.86N±0°.06×137°.45E±0°.04, h333km±4km, n96, σ1s16/123, mb4.1/36, 18C-4D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTO3	**TONANKAI O.B.S**	**0.05**	**273**	↑P	**Pn**	**16 25 20.9**	**+0.5**
TTO3				S	**S**	**16 25 53.4**	**-0.3**
TK01	**Tokai 1**	**0.15**	**130**	P	**Pn**	**16 25 20.3**	**0.0**
TK01				S	**S**	**16 25 53.5**	**0.0**
TTO4	**TONANKAI O.B.S**	**0.16**	**26**	↑P	**Pn**	**16 25 20.5**	**+0.2**
TTO4				S	**S**	**16 25 52.4**	**-1.1**
TK02	**Tokai 2**	**0.27**	**71**	P	**Pn**	**16 25 20.7**	**+0.3**
TTO2	**TONANKAI O.B.S**	**0.38**	**251**	↑P	**Pn**	**16 25 20.9**	**+0.3**
TTO5	**TONANKAI O.B.S**	**0.45**	**29**	↑P	**Pn**	**16 25 21.1**	**+0.3**
TTO5				*e*S	**S**	**16 25 53.0**	**-1.4**
TK03	**Tokai 3**	**0.52**	**54**	P	**Pn**	**16 25 21.4**	**+0.4**
TK03				S	**S**	**16 25 54.6**	**-0.1**
TTO1	**TONANKAI O.B.S**	**0.60**	**247**	↑P	**Pn**	**16 25 21.3**	**+0.2**
TK04	**Tokai 4**	**0.63**	**34**	P	**Pn**	**16 25 21.6**	**+0.3**
TK04				S	**S**	**16 25 56.1**	**+0.9**
JIE	**Ise**	**0.81**	**311**	↑P	**Pn**	**16 25 21.8**	**-0.2**
JIE				S	**S**	**16 25 54.8**	**-1.7**
JWZ	**Kozaga**	**1.48**	**258**	↑P	**Pn**	**16 25 24.7**	**-0.5**
JWY	**Kouya**	**1.58**	**284**	↑P	**Pn**	**16 25 25.8**	**0.0**
JYN	**Shimob**	**1.86**	**29**	P	**Pn**	**16 25 26.7**	**-0.9**
JYN				S	**S**	**16 26 05.9**	**-0.8**
JGM	**Miyama**	**1.93**	**342**	↑P	**Pn**	**16 25 27.9**	**-0.1**
JGM				S	**S**	**16 26 06.2**	**-1.3**
JOD2	**Odawara 2**	**1.94**	**44**	P	**Pn**	**16 25 27.3**	**-0.8**
JOD2				S	**S**	**16 26 06.0**	**-1.6**
JHJ	**Hachijo jima 2**	**2.08**	**110**	P	**Pn**	**16 25 28.5**	**-0.7**
	151nm,0.3s,baz=233,slow=20,SNR=63						
JHJ				S	**S**	**16 26 09.3**	**-0.2**
	74nm,0.3s,baz=107,slow=19,SNR=5.0						
JHJ2	**Mitsune**	**2.11**	**110**	↓↑P	**Pn**	**16 25 28.1**	**-1.3**
JWT	**Wachi**	**2.21**	**311**	↑P	**Pn**	**16 25 29.9**	**-0.2**
JWT				S	**S**	**16 26 09.2**	**-1.9**
JRY	**Ryogami san**	**2.46**	**29**	↓P	**Pn**	**16 25 31.5**	**-0.6**
JRY				S	**S**	**16 26 12.7**	**-2.1**
JAI	**Aioi**	**2.50**	**269**	↑P	**Pn**	**16 25 32.3**	**-0.2**
JAI				S	**S**	**16 26 14.9**	**-0.6**
JKG	**Kaga**	**2.58**	**339**	↑P	**Pn**	**16 25 32.6**	**-0.5**
MAT	**Matsushiro**	**2.75**	**13**	P	**Pn**	**16 25 33.8**	**-0.8**
MAT				S	**S**	**16 26 16.7**	**-2.6**
MAT	**Matsushiro**	**2.75**	**13**	P	**Pn**	**16 25 33.8**	**-0.8**
MAT				S	**S**	**16 26 16.9**	**-2.4**
BSO1	**Boso 1**	**3.02**	**74**	P	**Pn**	**16 25 33.8**	**-2.7**
BSO1				S	**S**	**16 26 18.2**	**-4.7**
JNU	**Nakatsue**	**5.54**	**264**	P	**Pn**	**16 26 03.2**	**-0.7**
	2.6nm,0.3s,baz=59,slow=12,SNR=40						
JNU				S	**S**	**16 27 13.3**	**+0.7**
	baz=241,slow=19,SNR=5.1						
KSRS	**Korea Array**	**8.54**	**298**	P	**Pn**	**16 26 39.4**	**+0.2**
	2.0nm,0.3s,baz=112,slow=12,SNR=136						
ERM	**Erimo**	**9.30**	**27**	↑P	**Pn**	**16 26 46.6**	**-1.6**
ASAJ	**Asahikawa**	**10.99**	**20**	P	**Pn**	**16 27 08.1**	**-0.5**
	1.3nm,0.3s,baz=228,slow=13,SNR=20						
ASAJ				S	S	16 29 02.4	-9.3
	0.5nm,0.3s,baz=60,slow=20,SNR=5.9						
USRK	**Ussuriysk Arra**	**11.16**	**339**	P	**Pn**	**16 27 10.2**	**-0.3**
	0.5nm,0.3s,baz=151,slow=12,SNR=29						
YUK	**Yuzh-Kuril'sk**	**12.08**	**30**	*c* *i* P	**P**	**16 27 23.6**	**+1.8**
YUK				*i* S	S	16 29 27.7	-8.1
YUK				pmax	pmax		
	comp=N,9.0nm,0.9s						
YUK				pmax	pmax		
	comp=Z,27nm,0.9s						
YUK				pmax	pmax		
	comp=E,6.0nm,0.4s						
YUK				pmax	pmax		
	comp=Z,88nm,2.0s						
YUK				smax	smax		
	comp=E,208nm,2.8s						
YUK				smax	smax		
	comp=N,74nm,0.7s						
MDJ	**Mudanjiang**	**12.34**	**333**	P	**P**	**16 27 24.8**	**0.0**
MDJ				pmax	pmax		
	comp=Z,44nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,79nm,4.9s						
CN2	**Changchun**	**13

comp=N,1.4nm,0.7s,baz=90,slow=2.9,SNR=4.9
ZALV ScP **ScP** **16 37 02.8 -0.5**
comp=N,0.7nm,0.6s,baz=108,slow=4.8,SNR=4.1
TAPN Taplejung 42.97 275 *e*P **P** **16 32 06.0 -0.6**
comp=N,17nm,0.9s
MK31 Makanchi Array 43.15 304 *i* P **P** **16 32 07.4 -0.1**
MK31 pmax pmax
comp=Z,8.0nm,0.6s
MKAR Makanchi Array 43.15 304 P **P** **16 32 07.8 +0.3**
MKAR pmax pmax
comp=Z,9.0nm,0.7s
MKAR pmax pmax
comp=N,1.0nm,0.7s
MKAR Makanchi Array 43.15 304 P **P** **16 32 07.8 +0.3**
comp=N,8.9nm,0.7s,baz=91,slow=8.8,SNR=75
MKAR ScP **ScP** **16 37 08.4 -0.7**
comp=N,0.8nm,0.7s,baz=74,slow=4.5,SNR=6.2
ODAN Odare 43.41 275 *e*P **P** **16 32 09.1 -1.0**
comp=N,20nm,0.8s
RAMN Ramite 44.03 275 *e*P **P** **16 32 13.7 -1.3**
comp=N,40nm,0.8s
GUN Gumba 44.28 277 *e*P **P** **16 32 16.6 -0.5**
comp=N,24nm,0.6s
PKI Pulchoki 44.79 277 *e*P **P** **16 32 20.4 -0.6**
comp=N,14nm,0.6s
PKIN Phulchoki 44.80 277 *e*P **P** **16 32 20.7 -0.3**
comp=N,6.0nm,0.5s
KKN Kakani 44.82 277 *e*P **P** **16 32 20.5 -0.6**
comp=N,20nm,0.7s
DMN Daman 45.03 277 *e*P **P** **16 32 22.0 -0.8**
comp=N,14nm,1.0s
KURK Kurchatov 45.42 310*d i*P **P** **16 32 24.6 -0.6**
KURK pmax pmax
comp=Z,17nm,1.0s
DANN Dangsing 45.87 278 *e*P **P** **16 32 29.5 +0.1**
comp=Z,68nm,0.6s
KOLN Koldanda 46.21 278 *e*P **P** **16 32 31.6 -0.3**
comp=Z,19nm,0.7s
BRVK Borovoye 50.43 314*c i*P **P** **16 33 03.4 +0.2**
BRVK pmax pmax
comp=Z,6.0nm,0.9s
KK31 Karatay Array 51.95 301 *i* P **P** **16 33 14.3 -0.3**
KK31 pmax pmax
comp=Z,3.0nm,0.4s
FITZ Fitzroy Crossi 52.88 194 P **P** **16 33 21.5 0.0**
comp=Z,3.0nm,0.8s,baz=354,slow=8.9,SNR=5.7
WRA Warramunga Arr 53.58 184 P **P** **16 33 25.9 -0.7**
comp=Z,3.9nm,0.4s,baz=360,slow=7.7,SNR=38
ILAR Eielson Array 53.89 31 P **P** **16 33 28.2 0.0**
comp=Z,2.4nm,0.7s,baz=276,slow=6.6,SNR=21
SVE Sverdlovsk 55.42 319 *e*P **P** **16 33 40.0 +0.8**
ARU Arti 56.62 319*c i*P **P** **16 33 47.3 -0.4**
ARU *PP **pP** **16 34 56.8 -1.8**
ARU 16 35 54.2
ARU S **S** **16 41 12.9 0.0**
ARU pmax pmax
comp=Z,17nm,1.7s
ASAR Alice Springs 57.31 184 P **P** **16 33 52.9 0.0**
comp=Z,2.5nm,0.6s,baz=2.5,slow=6.7,SNR=36
AB31 Akbulak array 57.53 311 *i* P **P** **16 33 53.6 -0.5**
AB31 pmax pmax
comp=Z,1.0nm,0.2s
AKTO Aktyubinsk 58.40 312 P **P** **16 34 00.3 +0.1**
AKTO pmax pmax
comp=Z,4.0nm,0.9s
STKA Stephens Creek 65.50 176 P **P** **16 34 46.9 -0.2**
comp=Z,2.0nm,0.7s,baz=357,slow=8.0,SNR=12
YKA Yellowknife Ar 66.15 28 P **P** **16 35 03.4 +0.1**
comp=Z,3.3nm,0.9s,baz=294,slow=6.0,SNR=12
FINES FINESS Array B 70.08 332 P **P** **16 35 15.1 -0.1**
comp=Z,1.4nm,0.5s,baz=16,slow=11,SNR=5.0
KBZ Khabaz 70.48 310 P **P** **16 35 17.7 -0.1**
KBZ pmax pmax
comp=Z,3.0nm,0.8s
KBZ Khabaz 70.48 310 P **P** **16 35 17.7 -0.1**
comp=Z,2.8nm,0.8s,baz=66,slow=3.8,SNR=6.2
KIV Kislovodsk 70.51 310 *e*P **P** **16 35 19.1 +0.9**
KIV pmax pmax
comp=Z,8.0nm,1.1s
MIB Mutribah 74.17 295 *e*P **P** **16 35 39.2 -0.5**
MIB AMb AMB 16 35 40.1
comp=Z,20nm,0.8s
RDF Al-Radifah 74.45 295 *e*P **P** **16 35 41.3 -0.1**
RDF AMb AMB 16 35 42.7
comp=Z,37nm,1.4s
NAY Al-Naaiem 74.52 295 *e*P **P** **16 35 41.2 -0.5**
NAY AMb AMB 16 35 42.2
comp=Z,16nm,0.9s
AKASG Malin Array Be 74.78 321*ce*P **P** **16 35 42.7 -0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 74.78 321 P **P** **16 35 42.8 -0.1**
comp=Z,1.6nm,0.5s,baz=50,slow=6.0,SNR=12
FFC Flin Flon 78.10 31 *i* P **P** **16 36 02.1 +0.9**
BRTR Keskin Array B 78.47 310 P **P** **16 36 04.2 +0.4**
comp=Z,1.8nm,0.8s,baz=97,slow=4.1,SNR=12
NVAR Mina Array Bea 79.49 51 P **P** **16 36 10.0 +0.6**
comp=Z,3.1nm,0.7s,baz=302,slow=5.5,SNR=24
CRVS Cervenica-Dubn 79.86 323 *e*P **P** **16 36 13.8 +2.9**
CRVS Cervenica-Dubn 79.86 323 *e*P **P** **16 36 13.8 +2.9**
PDAR Pinedale Array 82.19 43 P **P** **16 36 23.9 +0.4**
comp=Z,2.0nm,0.8s,baz=275,slow=3.0,SNR=14
GERES GERESS Array B 83.63 326 P **P** **16 36 30.3 -0.2**
comp=Z,1.0nm,0.8s,baz=32,slow=5.2,SNR=4.6
TXAR Lajitas Array 94.62 50 P **P** **16 37 23.4 +0.7**
comp=Z,2.0nm,0.6s,baz=289,slow=3.1,SNR=23
TORD Torodi Ar. Bea 117.09 310 PKP **PKPdf** **16 42 43.8 -1.3**
comp=Z,0.1nm,0.4s,baz=54,slow=1.9,SNR=2.8
QSPA South Pole Qui 123.61 180 PKP **PKPdf** **16 42 55.3 -0.8**
comp=Z,1.8nm,0.6s,baz=294,slow=1.8,SNR=13
LPAZ La Paz 151.09 59 PKPbc **PKPbc** **16 43 54.4 +0.4**
comp=Z,1.5nm,0.5s,baz=9.5,slow=4.9,SNR=8.2

IDC 17 16:25:24.5±4.4, 6°.58S×128°.69E, h225km±43km, mb3.3/1, mb1 3.2/4, mb1mx2.9/19, mbtmp3.0/4, Error ellipse: s-maj=73.5km s-min=16.9km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.83**	**194**	P		Pn	16 28 07.0	+0.3
	0.1nm,0.3s,baz=4.2,slow=12,SNR=12						
FITZ				S		S	16 30 09.5	-8.1
	0.2nm,0.3s,baz=284,slow=19,SNR=2.9						
WRA	**Warramunga Arr**	**14.37**	**158**	P		Pn	16 28 37.5	-0.7
	0.3nm,0.3s,baz=342,slow=13,SNR=27						
WRA				S		S	16 31 14.7	-2.5
	0.2nm,0.3s,baz=332,slow=20,SNR=7.1						
ASAR	**Alice Springs**	**17.71**	**164**	P		P	16 29 16.3	+0.6
	0.3nm,0.3s,baz=343,slow=12,SNR=35						
ASAR				S		S	16 32 28.4	+0.6
	0.1nm,0.3s,baz=335,slow=15,SNR=3.8						
MKAR	**Makanchi Array**	**67.17**	**327**	P		P	16 35 54.2	-0.1
	0.5nm,0.4s,baz=125,slow=8.2,SNR=8.6						

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*IDC **17** 16:41:00.9±3.9, 61°.07S×21°.98W, h0km, mb4.0/2, mb1 4.1/3, mb1mx3.7/17, mbtmp4.0/3, ML4.1/1, MS3.3/1, Ms1 3.2/1, ms1mx2.9/26, Error ellipse: s-maj=204.5km s-min=38.1km az=84.0*

ISC 17 16:41:05.5±2.6, 61°.0S±0°.3×19°.7W±0°.9, h10km, n7, σ2.2s 10/7, East of South Sandwich Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**12.62**	**155**	*e*Pn	**Pn**	**16 44 07.0**	**+2.2**
SNAA	**Sanae**	**12.62**	**155**	*e*Sn	**Sn**	**16 46 23.0**	**-2.2**
SNAA	**Sanae**	**12.62**	**155**	Pn	**Pn**	**16 44 07.1**	**+2.2**
	1.0nm,0.3s,baz=318,slow=15,SNR=67						
SNAA				Sn	**Sn**	**16 46 24.3**	**-0.9**
	0.3nm,0.3s,baz=325,slow=18,SNR=4.6						
MAW	**Mawson**	**33.84**	**137**	LR		17 00 09.9	
	comp=Z,48nm,18.9s,baz=103,slow=33						
TORD	**Torodi Ar. Bea**	**75.80**	**21**	P		P	16 52 51.5	+0.1
	1.4nm,0.8s,baz=192,slow=5.9,SNR=7.1						
ASAR	**Alice Springs**	**92.98**	**156**	P		P	16 54 17.6	-1.4
	0.3nm,0.7s,baz=181,slow=5.0,SNR=4.8						
SONM	**Songino Array**	**146.98**	**88**	PKPbc		**PKPbc**	**17 00 46.9**	**-0.4**
	1.3nm,0.7s,baz=213,slow=4.3,SNR=5.5						

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*NIED **17** 17:01:00, 42°.50N×142°.80E, h104km, Mw4.1 Best double couple: M0 1.59000×10^15 NP1:φs232.00000°, δ73.00000°, λ-109.00000°. NP2:φs102.00000°, δ25.00000°, λ-43.00000°.*

*BJI **17** 17:01:25.2, 42°.44N×143°.06E, h118km, mB4.7/6, mb4.4/8*
*ISCJB **17** 17:01:27.0±0.3, 42°.40N±0°.03×142°.80E±0°.04, h110km±2km, mb4.2/39, Error ellipse: s-maj=5.3km s-min=3.7km az=43.0*
*MOS **17** 17:01:27.2±1.0, 42°.43N×142°.74E, h110km, mb4.3/30, Error ellipse: s-maj=11.9km s-min=6.9km az=108.0*
*NEIC **17** 17:01:29.0±0.3, 42°.44N×142°.85E, mb4.5/9, MW4.1(NIED), Error ellipse: s-maj=8.1km s-min=7.1km az=118.0*
NEIC Recorded [2 JMA] in southeastern Hokkaido and [1 JMA] in southwestern Hokkaido.
*JMA **17** 17:01:29.1±0.1, 42°.47N×142°.88E, h98km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φs245.00000°, δ59.00000°, λ-101.00000°. NP2: φs86.00000°, δ33.00000°, λ-72.00000°. Principal axes: T Plg13.0000°, Azm343.0000°; N Plg10.0000°, Azm251.0000°; P Plg74.0000°, Azm125.0000°;*
JMA Felt II J1.
*IDC **17** 17:01:29.1±0.7, 42°.46N×142°.83E, h108km±5km, mb3.9/20, mb1 4.0/21, mb1mx3.9/31, mbtmp3.9/21 Error ellipse: s-maj=14.1km s-min=8.1km az=91.0*
ISC 17 17:01:28.5±0.5, 42°.42N±0°.04×142°.81E±0°.04, h108km±3km, h108km:pP-P, n113, σ1s15/146, mb4.2/39, 14C-12D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.15**	**195**	⇓P	**Pn**	**17 01 43.4**	**-0.2**
JNBK				*e*S	**Sn**	**17 01 53.9**	**-0.9**
JCH	**Churui**	**0.46**	**65**	⇓P	**Pn**	**17 01 44.0**	**-0.8**
JCH				*e*S	**Sn**	**17 01 55.2**	**-1.9**
JEM	**Erimo**	**0.48**	**147**	⇑P	**Pn**	**17 01 44.7**	**-0.3**
JEM				*e*S	**Sn**	**17 01 56.8**	**-0.6**
ERM	**Erimo**	**0.48**	**147**	*e*PN	**Pn**	**17 01 44.6**	**-0.4**
ERM	**Erimo**	**0.48**	**147**	*e*P	**Pn**	**17 01 44.6**	**-0.4**
JBT2	**Biratori 2**	**0.48**	**318**	⇓P	**Pn**	**17 01 44.5**	**-0.5**
JFR	**Furan**	**0.76**	**348**	⇓P	**Pn**	**17 01 46.6**	**-0.6**
JFR				*e*S	**Sn**	**17 02 00.0**	**-1.3**
JOB	**Onbets**	**0.90**	**57**	⇓P	**Pn**	**17 01 48.3**	**-0.2**
JOB				*e*S	**Sn**	**17 02 02.7**	**-0.9**
JEW	**Eniwo**	**1.08**	**293**	⇓P	**Pn**	**17 01 50.4**	**0.0**
JAR	**Ashorobuto**	**1.13**	**39**	⇓P	**Pn**	**17 01 50.3**	**-0.6**
JAR				*e*S	**Sn**	**17 02 06.0**	**-1.8**
JAB	**Ashibetsu**	**1.16**	**339**	⇓P	**Pn**	**17 01 51.2**	**-0.1**
JAB				*e*S	**Sn**	**17 02 08.1**	**-0.4**
JNB	**Noboribetsu**	**1.31**	**273**	⇓P	**Pn**	**17 01 52.0**	**-0.9**
JNB				*e*S	**Sn**	**17 02 10.0**	**-1.4**
JKB	**Kayabe**	**1.42**	**249**	⇓P	**Pn**	**17 01 53.4**	**-0.8**
JKB				*e*S	**Sn**	**17 02 11.8**	**-2.0**
JKK2	**Kamakawa 2**	**1.45**	**358**	⇑P	**Pn**	**17 01 54.5**	**-0.1**
JKK2				*e*S	**Sn**	**17 02 14.1**	**-0.4**
JAK	**Akkeshi**	**1.51**	**67**	⇑P	**Pn**	**17 01 54.4**	**-0.8**
JAK				*e*S	**Sn**	**17 02 13.5**	**-2.1**
JHR	**Hokuryu**	**1.54**	**329**	⇑P	**Pn**	**17 01 55.8**	**+0.1**
JHR				*e*S	**Sn**	**17 02 16.7**	**+0.4**
JOT	**Ohata**	**1.67**	**232**	⇑P	**Pn**	**17 01 56.3**	**-1.0**
JOT				*e*S	**Sn**	**17 02 17.0**	**-2.2**
ASAJ	**Asahikawa**	**1.70**	**355**	P	**Pn**	**17 01 57.8**	**+0.2**
ASAJ				S	**Sn**	**17 02 19.5**	**-0.3**
ASAJ	**Asahikawa**	**1.70**	**355**	P	**Pn**	**17 01 57.8**	**+0.2**
	52nm,0.3s,baz=198,slow=12,SNR=333						
ASAJ				S	**Sn**	**17 02 19.5**	**-0.3**
	50nm,0.3s,baz=198,slow=20,SNR=7.6						
JTKR	**Abashiri--Toko**	**1.75**	**27**	⇑P	**Pn**	**17 01 57.9**	**-0.3**
JTKR				*e*S	**Sn**	**17 02 19.8**	**-1.0**
YUK	**Yuzh-Kuril'sk**	**2.75**	**53***c*	*i*PN	**Pn**	**17 02 11.6**	**+0.5**
YUK				*i* S	**Sn**	**17 02 43.3**	**-0.7**
YUK				pmax	pmax		
	comp=E,36nm,0.1s						
YUK				pmax	pmax		
	comp=N,31nm,0.2s						
YUK				pmax	pmax		
	comp=Z,91nm,0.2s						
YUK				smax	smax		
	comp=N,599nm,0.5s						
YUK				smax	smax		
	comp=E,292nm,0.5s						
YSS	**Yuzh-Sakhalins**	**4.53**	**360**	⇑*i*PN	**Pn**	**17 02 36.4**	**+1.5**
YSS				*e*S	**Sn**	**17 03 28.5**	**+2.0**
YSS				pmax	pmax		
	comp=Z,130nm,1.0s						
YSS				smax	smax		
	comp=N,110nm,1.0s						
KUR	**Kuril'sk**	**4.62**	**51***d*	*i*PN	**Pn**	**17 02 36.9**	**+0.9**
KUR				*i* S	**Sn**	**17 03 30.0**	**+1.5**
KUR				pmax	pmax		
	comp=Z,21nm,0.4s						
KUR				pmax	pmax		
	comp=N,11nm,0.4s						
KUR				pmax	pmax		
	comp=E,13nm,0.4s						
KUR				smax	smax		
	comp=E,56nm,0.2s						
KUR				smax	smax		
	comp=N,86nm,0.2s						
MAJO	**Matsushiro**	**6.86**	**213**	*e*PN	**Pn**	**17 03 05.7**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,13nm,0.6s						
MAJO	**Matsushiro**	**6.86**	**213**	*e*P	**Pn**	**17 03 05.7**	**-0.8**
	comp=Z,12nm,0.6s						
MAT	**Matsushiro**	**6.86**	**213**	P	**Pn**	**17 03 05.7**	**-0.8**
MAT				S	**Sn**	**17 04 25.2**	**+2.0**
USRK	**Ussuriysk Arra**	**8.08**	**286**	P	**Pn**	**17 03 23.4**	**+0.5**
	comp=Z,0.2nm,0.3s,baz=82,slow=17,SNR=3.7						
HABR	**Khabarovsk**	**8.14**	**321**	*ce*PN	**Pn**	**17 03 23.3**	**-0.4**
HABR				pmax	pmax		
	comp=Z,26nm,1.4s						
HABR				pmax	pmax		
	comp=E,21nm,1.4s						
HABR				pmax	pmax		
	comp=N,16nm,1.9s						
HABR				MLR	MLR		
	comp=Z,55nm,16.0s						
JHJ	**Hachijo jima 2**	**9.59**	**195**	P	Pn	17 03 40.2	-3.3
	comp=Z,8.9nm,0.3s,baz=68,slow=17,SNR=7.5						
JHJ				S	Sn	17 05 20.5	-8.9
	comp=Z,9.2nm,0.3s,baz=30,slow=20,SNR=5.0						
KLR	**Kul'dur**	**10.28**	**315**	*e*PN	**Pn**	**17 03 50.3**	**-2.5**
KSRS	**Korea Array**	**12.45**	**251**	P	P	17 04 25.8	-3.4
	comp=Z,0.1nm,0.3s,baz=64,slow=13,SNR=2.6						
KSAR	**Wonju Array Be**	**12.48**	**251**	P	Pn	17 04 25.8	+3.5
HIA	**Hailar**	**17.43**	**301**	*e*P	**P**	**17 05 22.6**	**-1.7**
	comp=Z,14nm,0.9s						
YAK	**Yakutsk**	**21.14**	**343**	*e*P	**P**	**17 06 00.7**	**-3.7**
YAK				*e*S	**S**	**17 09 47.4**	**-5.8**
YAK				pmax	pmax		
	comp=Z,26nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK				smax	smax		
	comp=N,12nm,1.3s						
YAK				smax	smax		
	comp=E,6.0nm,1.3s						
YAK				MLR	MLR		
	comp=Z,29nm,15.0s						
ULN	**Ulaanbaatar**	**25.64**	**295**	*e*P	**P**	**17 06 48.3**	**+0.3**
	comp=Z,2.5nm,0.6s						
SONM	**Songino Array**	**26.08**	**295**	P	**P**	**17 06 52.9**	**+0.9**
SONM				pP	**pP**	**17 07 17.1**	**+1.6**
SONM	**Songino Array**	**26.08**	**295**	P	**P**	**17 06 52.9**	**+0.9**
	comp=Z,2.1nm,0.6s,baz=95,slow=8.8,SNR=13						
SONM				pP	**pP**	**17 07 17.2**	**+1.6**
	comp=Z,1.0nm,0.8s,baz=91,slow=8.4,SNR=2.4						
ZAK	**Zakamensk**	**28.12**	**300**	*e*P	**P**	**17 07 10.5**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
BILL	**Bilibino**	**28.57**	**18**	*e*P	**P**	**17 07 11.1**	**-2.7**
BILL				*i*		17 08 08.4	
BILL				*i*		17 10 21.0	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TIXI	**Tiksi**	**30.10**	**351**	⇑*e*P	P	17 07 24.0	-3.3
TIXI				*i* *PP	pP	17 07 50.1	-1.1
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA	**Gaotai**	**32.37**	**279**	*e*P	**P**	**17 07 49.5**	**+1.7**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
KRAR	**Krasnoyarsk**	**34.53**	**311**	⇑*e*P	**P**	**17 08 04.4**	**-1.7**
KRAR				pmax	pmax		
	comp=Z,15nm,0.8s						
QIZ	**Qiongzhong**	**36.34**	**240**	P	P	17 08 17.9	-4.1
QIZ				S	**S**	**17 13 52.8**	**-2.2**
QIZ				LR	LR		
	comp=N,470nm,18.2s						
QIZ				LR	LR		
	comp=Z,420nm,16.0s						
ZAA0	**Zalesovo Array**	**39.27**	**308**	*e*P	**P**	**17 08 46.3**	**0.0**
ZALV	**Zalesovo Beam**	**39.27**	**308**	P	**P**	**17 08 46.9**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ZALV	**Zalesovo Beam**	**39.27**	**308**	P	**P**	**17 08 46.9**	**+0.6**
ZALV	**Zalesovo Beam**	**39.27**	**308**	P	**P**	**17 08 46.9**	**+0.6**
	comp=Z,6.8nm,0.7s,baz=83,slow=8.3,SNR=31						
MK31	**Makanchi Array**	**42.38**	**297**	*e*P	**P**	**17 09 12.4**	**+0.5**
MK31	**Makanchi Array**	**42.38**	**297**	*e*P	**P**	**17 09 12.3**	**+0.5**
MKAR	**Makanchi Array**	**42.38**	**297**	P	**P**	**17 09 12.5**	**+0.6**
MKAR				*PP	**pP**	**17 09 37.5**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	**Makanchi Array**	**42.38**	**297**	P	**P**	**17 09 12.4**	**+0.6**
MKAR				pP	**pP**	**17 09 37.5**	**+0.7**
MKAR	**Makanchi Array**	**42.38**	**297**	P	**P**	**17 09 12.4**	**+0.6**
	comp=Z,3.1nm,0.7s,baz=79,slow=9.1,SNR=11						
MKAR				pP	**pP**	**17 09 37.5**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=75,slow=13,SNR=2.4						
KURK	**Kurchatov**	**43.63**	**304**	⇑*i*P	**P**	**17 09 22.0**	**+0.1**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KURK	**Kurchatov**	**43.63**	**304**	*e*P	**P**	**17 09 21.7**	**-0.2**
	comp=Z,10nm,0.6s						
KURK				pP	**pP**	**17 09 47.7**	**+0.8**
KURBB	**Kurchatov Arra**	**43.71**	**304**	P	**P**	**17 09 22.9**	**+0.4**
	comp=Z,2.7nm,0.4s,baz=76,slow=8.9,SNR=16						
KURBB				pP	**pP**	**17 09 47.7**	**+0.2**
	comp=Z,1.0nm,0.2s,baz=78,slow=8.7,SNR=1.5						
ILAR	**Eielson Array**	**44.42**	**35**	P	**P**	**17 09 28.1**	**+0.1**
ILAR	**Eielson Array**	**44.42**	**35**	P	**P**	**17 09 28.1**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=271,slow=6.3,SNR=15						
EGAK	**Eagle**	**46.85**	**35**	*e*P	**P**	**17 09 47.0**	**-0.2**
	comp=Z,3.8nm,1.0s						
BVAR	**Borovoye Array**	**47.88**	**309**	P	**P**	**17 09 55.9**	**+0.7**
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
BVAR	**Borovoye Array**	**47.88**	**309**	P	**P**	**17 09 55.9**	**+0.7**
BVAR	**Borovoye Array**	**47.88**	**309**	P	**P**	**17 09 55.9**	**+0.7**
	comp=Z,5.5nm,0.3s,baz=81,slow=7.5,SNR=35						
BRVK	**Borovoye**	**47.92**	**309**	⇑*e*P	**P**	**17 09 56.9**	**+1.3**
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRVK	**Borovoye**	**47.92**	**309**	*e*P	**P**	**17 09 55.7**	**+0.1**
	comp=Z,3.9nm,0.5s						
TKM2	**Tokmak 2**	**48.18**	**295**	*e*P	**P**	**17 09 59.0**	**+1.0**
TKM2				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TKM2	**Tokmak 2**	**48.18**	**295**	*e*P	**P**	**17 09 59.0**	**+1.0**
	comp=Z,8.7nm,1.0s						
INK	**Inuvik**	**49.14**	**29**	P	**P**	**17 10 04.6**	**0.0**
INK	**Inuvik**	**49.14**	**29**	P	**P**	**17 10 04.6**	**0.0**
	comp=Z,2.6nm,0.5s,baz=302,slow=8.6,SNR=15						
SVE	**Sverdlovsk**	**51.91**	**316**	*e*P	**P**	**17 10 26.7**	**+1.0**
SVE				pmax	pmax		
	comp=Z,12nm,0.8s						
ARU	**Arti**	**53.12**	**316***d*	*i*P	**P**	**17 10 34.6**	**0.0**
ARU				*PP	**pP**	**17 10 58.7**	**-1.7**
ARU						17 11 39.5	
ARU						17 12 32.9	
ARU				S	**S**	**17 17 59.1**	**+2.7**
ARU				SS	**SS**	**17 21 35.6**	**-1.0**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
ABKAR	**Akbulak array**	**55.39**	**308**	*e*P	**P**	**17 10 51.6**	**+0.4**
	comp=Z,5.1nm,0.5s						
ABKAR				*e*pP	**pP**	**17 11 17.3**	**+0.1**
AKTO	**Aktyubinsk**	**55.96**	**310**	P	**P**	**17 10 55.9**	**+0.6**
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKTO	**Aktyubinsk**	**55.96**	**310**	P	**P**	**17 10 55.9**	**+0.6**
AKTO	**Aktyubinsk**	**55.96**	**310**	P	**P**	**17 10 55.9**	**+0.6**
	comp=Z,1.3nm,0.4s,baz=78,slow=9.3,SNR=7.7						
RES	**Resolute Bay**	**57.12**	**16**	P	**P**	**17 11 03.1**	**0.0**
RES	**Resolute Bay**	**57.12**	**16**	P	**P**	**17 11 03.1**	**0.0**
	comp=Z,5.3nm,0.6s,baz=326,slow=7.3,SNR=7.6						
YKA	**Yellowknife Ar**	**58.65**	**32**	P	**P**	**17 11 13.9**	**+0.1**
YKA	**Yellowknife Ar**	**58.65**	**32**	P	**P**	**17 11 13.9**	**+0.1**
	comp=Z,0.6nm,0.6s,baz=310,slow=6.9,SNR=3.4						
KEV	**Kevo**	**58.81**	**339**	*e*P	**P**	**17 11 14.0**	**-0.9**
KEV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KEV	**Kevo**	**58.81**	**339**	*e*p	**P**	**17 11 14.0**	**-0.9**
	comp=Z,1.9nm,0.5s						
ARCES	**ARCESS Array B**	**59.35**	**339**	P	**P**	**17 11 19.2**	**+0.5**
ARCES	**ARCESS Array B**	**59.35**	**339**	P	**P**	**17 11 19.2**	**+0.5**
	comp=Z,0.8nm,0.5s,baz=50,slow=8.0,SNR=12						
JOF	**Joensuu**	**61.74**	**331**	*e*P	**P**	**17 11 34.0**	**-1.0**
JOF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
JOF	**Joensuu**	**61.74**	**331**	*e*p	**P**	**17 11 34.0**	**-1.0**
	comp=Z,1.8nm,0.5s						
WRA	**Warramunga Arr**	**62.54**	**189**	P	**P**	**17 11 40.9**	**+0.1**
WRA				pP	**pP**	**17 12 09.1**	**+1.7**
WRA	**Warramunga Arr**	**62.54**	**189**	P	**P**	**17 11 40.9**	**+0.1**
	comp=Z,1.2nm,0.7s,baz=8.7,slow=6.9,SNR=9.2						
WRA				pP	**pP**	**17 12 09.1**	**+1.7**
	comp=Z,0.9nm,0.8s,baz=3.3,slow=6.8,SNR=4.0						
KAF	**Kangasniemi**	**64.03**	**332**	*e*P	**P**	**17 11 48.8**	**-1.3**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KAF	**Kangasniemi**	**64.03**	**332**	*e*p	**P**	**17 11 48.8**	**-1.3**
	comp=Z,1.4nm,0.5s						
FINES	**FINESS Array B**	**64.57**	**332**	P	**P**	**17 11 53.7**	**+0.1**
FINES	**FINESS Array B**	**64.57**	**332**	P	**P**	**17 11 53.7**	**+0.1**
	comp=Z,5.7nm,0.7s,baz=54,slow=10.0,SNR=13						
SUMG	**Summit**	**65.30**	**0**	*e*P	**P**	**17 11 59.0**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
SUMG	**Summit**	**65.30**	**0**	*e*P	**P**	**17 11 59.0**	**+0.3**
	comp=Z,5.8nm,0.6s						
ASAR	**Alice Springs**	**66.27**	**189**	P	**P**	**17 12 05.8**	**+0.8**
ASAR				pP	**pP**	**17 12 33.0**	**+1.1**
ASAR	**Alice Springs**	**66.27**	**189**	P	**P**	**17 12 05.8**	**+0.8**
	comp=Z,0.8nm,0.7s,baz=12,slow=6.5,SNR=12						
ASAR				pP	**pP**	**17 12 33.0**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=12,slow=6.0,SNR=2.8						
KIV	**Kislovodsk**	**68.23**	**310**	*e*P	**P**	**17 12 16.3**	**-1.1**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBZ	**Khabaz**	**68.25**	**310**	P	**P**	**17 12 18.4**	**+1.0**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KBZ	**Khabaz**	**68.25**	**310**	P	**P**	**17 12 18.4**	**+1.0**
**KB

mb1 3.8/11,mb1mx3.7/29,mbtmp3.7/11,ML2.7/1, Error ellipse: s-maj=34.5km s-min=18.0km az=157.0

ISCJB ***17*** *17:10:45.7±0.3,34.84N±0.03×26.71E±0.04,h29km, mb3.8/13, Error ellipse: s-maj=4.5km s-min=4.0km az=31.2*

CSEM ***17*** *17:10:46.8±0.2,34.90N×26.81E,h20km,ML3.7, Error ellipse: s-maj=6.0km s-min=3.4km az=95.0*

HLW ***17*** *17:10:47.3,34.94N×26.81E,h33km±14km,Md3.6,Ml3.5*

ISC 17 17:10:47.2±0.6,**34.89N**±0.04×**26.69E**±0.05,**h29km,n91,** σ1**§43/96,mb3.8**/13**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**1.97**	**21**	*e*PG	**Pn**	**17 11 18.6**	**-0.1**
DAT	**Datca**	**1.97**	**21**	*e*Pg	**Pn**	**17 11 18.6**	**-0.1**
BODT	**Bodrum**	**2.23**	**13**	*e*PG	**Pn**	**17 11 21.5**	**-0.6**
BODT	**Bodrum**	**2.23**	**13**	*e*Pg	**Pn**	**17 11 21.5**	**-0.6**
APE	**Apeiranthos**	**2.37**	**337**	*e*PG	**Pn**	**17 11 24.3**	**+0.2**
APE	**Apeiranthos**	**2.37**	**337**	*e*Pg	**Pn**	**17 11 24.3**	**+0.2**
DALY	**Dalyan (Mu¨la**	**2.50**	**39**	*e*PG	**Pn**	**17 11 25.2**	**-0.7**
DALY	**Dalyan (Mu¨la**	**2.50**	**39**	*e*Pg	**Pn**	**17 11 25.2**	**-0.7**
TURN	**Turunc**	**2.52**	**38**	*e*Pn	**Pn**	**17 11 25.2**	**-0.9**
TURN				*e*Sn	**Sb**	**17 11 59.1**	**-3.1**
MLSB	**Milas**	**2.56**	**20**	*e*PG	**Pn**	**17 11 26.5**	**-0.2**
MLSB	**Milas**	**2.56**	**20**	*e*Pg	**Pn**	**17 11 26.5**	**-0.2**
YER	**Yerkesik**	**2.59**	**30**	*e*PG	**Pn**	**17 11 26.8**	**-0.3**
YER	**Yerkesik**	**2.59**	**30**	*e*Pg	**Pn**	**17 11 26.8**	**-0.3**
FETY	**Fethiye**	**2.61**	**48**	*e*PG	**Pn**	**17 11 26.3**	**-1.2**
FETY	**Fethiye**	**2.61**	**48**	*e*Pg	**Pn**	**17 11 26.3**	**-1.2**
AKAS	**Kas**	**2.73**	**60**	*i* Pn	**Pn**	**17 11 30.1**	**+1.0**
AKAS				*e*Sn	**Sn**	**17 12 04.1**	**+2.8**
AYDN	**Tasoluk**	**2.93**	**19**	*i* Pn	**Pn**	**17 11 33.7**	**+1.9**
ELL	**Elmali**	**3.21**	**54**	*e*PG	**Pn**	**17 11 34.5**	**-1.2**
ELL	**Elmali**	**3.21**	**54**	*e*Pg	**Pn**	**17 11 34.5**	**-1.2**
GLHS	**Glhisar (BURDU**	**3.21**	**44**	*e*PG	**Pn**	**17 11 35.0**	**-0.7**
GLHS	**Glhisar (BURDU**	**3.21**	**44**	*e*Pg	**Pn**	**17 11 35.0**	**-0.7**
GOLH	**Golhisar**	**3.30**	**44**	*e*Pn	**Pn**	**17 11 39.1**	**+2.1**
DNZL	**Cakiroluk**	**3.38**	**34**	*e*Pn	**Pn**	**17 11 39.4**	**+1.2**
DNZL				*e*Sn	**Sb**	**17 12 22.6**	**-4.7**
DENT	**Denizli**	**3.43**	**33**	*e*PG	**Pn**	**17 11 38.5**	**-0.2**
DENT	**Denizli**	**3.43**	**33**	*e*Pg	**Pn**	**17 11 38.5**	**-0.2**
BLCB	**Balcova**	**3.50**	**5**	*e*PG	**Pn**	**17 11 39.5**	**-0.1**
BLCB	**Balcova**	**3.50**	**5**	*e*Pg	**Pn**	**17 11 39.5**	**-0.1**
IZM	**Izmir**	**3.53**	**7**	*e*PG	**Pn**	**17 11 40.3**	**+0.2**
IZM	**Izmir**	**3.53**	**7**	*e*Pg	**Pn**	**17 11 40.3**	**+0.2**
SLUM		**3.61**	**200**	AMP		17 12 00.0	
	comp=E,100μm,0.6s,logA/T=5.2,baz=202						
SLUM		**3.61**	**200**	P	**Pn**	**17 11 42.1**	**+1.0**
KORT	**Korkueli**	**3.64**	**54**	*e*Pn	Pn	17 11 44.9	+3.2
KORT				*e*Sn	**Sb**	**17 12 31.5**	**-3.2**
ANTB	**Antalya**	**3.79**	**57**	*e*PG	**Pn**	**17 11 42.4**	**-1.2**
ANTB	**Antalya**	**3.79**	**57**	*e*Pg	**Pn**	**17 11 42.4**	**-1.2**
HMAT	**Matruh**	**3.80**	**175**	P	**Pn**	**17 11 44.7**	**+0.9**
	baz=176						
HMAT				S	**Sn**	**17 12 25.1**	**-2.4**
	baz=176						
HMAT	**Matruh**	**3.80**	**175**	P	**Pn**	**17 11 44.7**	**+0.9**
HMAT				S	**Sn**	**17 12 25.1**	**-2.4**
KULA	**Kula-Manisa**	**3.95**	**23**	*e*PG	**Pn**	**17 11 46.1**	**+0.2**
KULA	**Kula-Manisa**	**3.95**	**23**	*e*Pg	**Pn**	**17 11 46.1**	**+0.2**
BCK	**Bucak**	**4.07**	**50**	*e*PG	**Pn**	**17 11 47.2**	**-0.3**
BCK	**Bucak**	**4.07**	**50**	*e*Pg	**Pn**	**17 11 47.2**	**-0.3**
AKHS	**Akhisar**	**4.08**	**12**	*e*Pn	Pn	17 11 50.7	+3.1
KHL	**Karahalli**	**4.12**	**33**	*e*PG	**Pn**	**17 11 47.7**	**-0.5**
KHL	**Karahalli**	**4.12**	**33**	*e*Pg	**Pn**	**17 11 47.7**	**-0.5**
ISP	**Isparta**	**4.26**	**45**	*e*PG	**Pn**	**17 11 50.2**	**0.0**
ISP	**Isparta**	**4.26**	**45**	*e*Pg	**Pn**	**17 11 50.2**	**0.0**
DEMI	**Demirci**	**4.45**	**21**	*e*Pn	**Pn**	**17 11 54.4**	**+1.6**
GDZ	**Gediz**	**4.75**	**27**	*e*Pn	**Pn**	**17 11 55.3**	**-1.7**
GAZI	**Gazipasa**	**4.78**	**72**	*e*Pn	**Pn**	**17 11 58.2**	**+1.0**
ALT	**Altintas**	**4.98**	**32**	*e*PG	**Pn**	**17 12 00.7**	**+0.7**
ALT	**Altintas**	**4.98**	**32**	*e*Pg	**Pn**	**17 12 00.7**	**+0.7**
TVSB	**Tavsanli**	**5.06**	**25**	*e*PG	**Pn**	**17 12 01.8**	**+0.6**
TVSB	**Tavsanli**	**5.06**	**25**	*e*Pg	**Pn**	**17 12 01.8**	**+0.6**
GONE	**Gonen-Balikesi**	**5.21**	**8**	*e*PG	**Pn**	**17 12 03.9**	**+0.8**
GONE	**Gonen-Balikesi**	**5.21**	**8**	*e*Pg	**Pn**	**17 12 03.9**	**+0.8**
ERMK	**Ermenek**	**5.36**	**69**	*e*Pn	Pn	17 12 08.6	+3.3
CSS	**Prodhromos**	**5.46**	**87**	*e*PG	**Pn**	**17 12 04.8**	**-1.8**
CSS	**Prodhromos**	**5.46**	**87**	*e*Pg	**Pn**	**17 12 04.8**	**-1.8**
LFK	**Lefkose**	**5.63**	**84**	*e*PG	**Pn**	**17 12 07.1**	**-1.8**
LFK	**Lefkose**	**5.63**	**84**	*e*Pg	**Pn**	**17 12 07.1**	**-1.8**
KDHN	**Kadinhani**	**5.67**	**49**	*e*Pn	**Pn**	**17 12 09.6**	**+0.1**
SWA2		**5.73**	**191**	P	**Pn**	**17 12 11.0**	**+0.8**
	baz=192						
SWA2				S	**Sn**	**17 13 12.0**	**-3.0**
	baz=192						
SWA2		**5.73**	**191**	P	**Pn**	**17 12 11.0**	**+0.8**
KIZT	**Kizilcal**	**5.76**	**45**	*e*PG	**Pn**	**17 12 11.3**	**+0.5**
KIZT	**Kizilcal**	**5.76**	**45**	*e*Pg	**Pn**	**17 12 11.3**	**+0.5**
RSH		**7.09**	**122**	P	**Pn**	**17 12 28.7**	**-0.3**
	baz=122						
RSH		**7.09**	**122**	P	**Pn**	**17 12 28.7**	**-0.3**
SUZ		**7.24**	**132**	P	**Pn**	**17 12 31.1**	**+0.1**
	baz=133						
SUZ		**7.24**	**132**	P	**Pn**	**17 12 31.1**	**+0.1**
BRTR	**Keskin Array B**	**7.35**	**47**	Pn	**Pn**	**17 12 33.4**	**+0.8**
	comp=E,0.1nm,0.3s,baz=225,slow=12,SNR=4.6						
BRTR				Sn	**Sn**	**17 13 57.2**	**+2.2**
	baz=216,slow=20,SNR=2.7						
MMAI	**Mount Meron Ar**	**7.48**	**102**	Pn	**Pn**	**17 12 34.9**	**+0.5**
	comp=E,0.8nm,0.3s,baz=287,slow=12,SNR=3.3						
MMAI				Sn	**Sn**	**17 14 01.5**	**+3.3**
	comp=E,2.0nm,0.3s,baz=314,slow=26,SNR=3.9						
CRVS	**Cervenica-Dubn**	**14.53**	**346**	*e*PN	**Pn**	**17 14 07.7**	**-2.9**
LPG	**La Plagne**	**18.50**	**311**	*e*P	**Pn**	**17 15 03.2**	**+1.7**
	comp=E,7.0nm,0.8s						
LPL	**La Plagne**	**18.52**	**311**	*e*P	**Pn**	**17 15 02.5**	**+0.8**
CABF	**La Chapelle**	**19.45**	**313**	*e*P	**Pn**	**17 15 15.6**	**+2.9**
	comp=E,11nm,0.8s						
HINF	**Hinteralfeld**	**19.64**	**317**	*e*P	**P**	**17 15 14.1**	**+0.7**
SMF	**Signal de Mont**	**20.83**	**311**	*e*P	**P**	**17 15 27.5**	**+1.2**
AVF	**Avril sur Loir**	**21.20**	**311**	*e*P	**P**	**17 15 31.4**	**+1.2**
	comp=E,7.4nm,0.7s						
SSF	**Saint Saulge**	**21.22**	**312**	*e*P	**P**	**17 15 28.8**	**-1.7**
	comp=E,14nm,1.0s						
BAIF	**Baives**	**22.34**	**320**	*e*P	**P**	**17 15 44.2**	**+1.7**
	comp=E,8.2nm,0.6s						
SJPF	**Ste Jean**	**23.11**	**299**	*e*P	**P**	**17 15 51.4**	**+0.7**
LDF	**La Druitiere**	**24.09**	**313**	*e*P	**P**	**17 16 00.3**	**+0.3**
ESDC	**Sonseca Array**	**24.78**	**290**	P	**P**	**17 16 06.0**	**-0.5**
	comp=E,0.3nm,0.4s,baz=76,slow=9.5,SNR=2.9						
AKTO	**Aktyubinsk**	**27.52**	**46**	P	**P**	**17 16 31.5**	**+0.4**
	comp=E,1.0nm,0.6s,baz=253,slow=11,SNR=4.9						
EKA	**Eskdalemuir Ar**	**28.99**	**324**	P	**P**	**17 16 42.8**	**-1.3**
	comp=E,0.6nm,0.4s,baz=123,slow=10,SNR=3.5						
TORD	**Torodi Ar. Bea**	**31.30**	**232**	P	**P**	**17 17 06.4**	**+1.5**
	comp=E,0.9nm,0.6s,baz=37,slow=8.9,SNR=6.7						
ARCES	**ARCESS Array B**	**34.70**	**359**	P	**P**	**17 17 32.2**	**-1.8**
	comp=E,1.2nm,0.7s,baz=171,slow=8.6,SNR=4.1						
BVAR	**Borovoye Array**	**35.63**	**46**	P	**P**	**17 17 43.1**	**+0.8**
	comp=E,0.4nm,0.5s,baz=255,slow=4.5,SNR=4.9						
KURBB	**Kurchatov Arra**	**40.32**	**51**	P	**P**	**17 18 23.1**	**+1.4**
	comp=E,1.6nm,0.8s,baz=278,slow=8.7,SNR=13						
MKAR	**Makanchi Array**	**42.88**	**56**	P	**P**	**17 18 44.4**	**+1.5**
	comp=E,1.1nm,0.6s,baz=272,slow=7.5,SNR=14						
ZALV	**Zalesovo Beam**	**44.29**	**46**	P	**P**	**17 18 55.0**	**+0.9**
	comp=E,1.0nm,0.5s,baz=267,slow=8.4,SNR=5.3						
CMAR	**Chiang Mai Arr**	**65.36**	**84**	P	**P**	**17 21 29.8**	**+2.7**
	comp=E,0.3nm,0.3s,baz=302,slow=7.4,SNR=2.8						

NIED ***17*** *17:17:00,23.40N×120.50E,h5km,Mw4.5 Best double couple: M₀7.32000×10¹⁵ NP1:φ₀243.00000°,δ85.00000°, λ-79.00000°. NP2:φ₀355.00000°,δ12.00000°, λ-157.00000°.*

IDC ***17*** *17:17:43.0±0.9,23.37N×120.86E,h0km,mb3.7/8, mb1 3.9/9,mb1mx3.7/26,mbtmp3.7/9,ML3.4/1,MS3.5/11, Ms1 3.6/11,ms1mx3.2/40, Error ellipse: s-maj=35.6km s-min=17.2km az=67.0*

BJI ***17*** *17:17:44.5,23.46N×120.63E,h10km,mB4.4/5,mb4.2/9, ML4.4/7,Ms4.2/10,Ms7 4.0/10*

NEIC ***17*** *17:17:45.6,23.44N×120.65E,h13km,mb3.9/2, ML4.4(TAP),After TAP.*

NEIC Recorded [5 TAP] at Chia-i; [3 TAP] in T'ai-nan and Yun-lin; [2 TAP] in Chang-hua and P'eng-hu; [1 TAP] in T'ai-tung.

TAP ***17*** *17:17:45.6,23.44N×120.65E,h13km,ML4.4,B*

ISCJB ***17*** *17:17:46.6±0.2,23.44N±0.01×120.61E±0.01,h21km±2km, mb3.7/10,MS3.5/10, Error ellipse: s-maj=2.3km s-min=1.9km az=32.4*

JMA ***17*** *17:17:46.4±0.3,23.43N×120.52E,h92km,M3.8*

ISC 17 17:17:46.5±0.6,**23.45N**±0.01×**120.64E**±0.02,**h17**km,3km, **n104,**σ1**§23/**159**,mb3.7**/10**,MS3.5**/10**,17C-27D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPUB	**Ta-pu**	**0.15**	**183**	*e*P	**Pg**	**17 17 48.8**	**-1.8**
TPUB				*e*Sg	**Sg**	**17 17 52.1**	**-1.3**
CHN5	**Tsauling**	**0.15**	**13**	⇓*i*P	**Pg**	**17 17 50.0**	**-0.8**
	baz=10.0						
ALS	**Alishan**	**0.16**	**68**	⇑*i*P	**Pg**	**17 17 50.5**	**-0.7**
	baz=73						
ALS				*e*S	**Sb**	**17 17 53.7**	**-0.8**
	baz=73						
WTP	**Ta-pu**	**0.20**	**187**	⇓*i*P	**Pg**	**17 17 50.5**	**-1.0**
	baz=181						
CHY	**Chiayi**	**0.20**	**284**	⇑*i*P	**Pb**	**17 17 51.0**	**-0.8**
	baz=286						
WGK	**Gukeng**	**0.25**	**343**	⇑*i*P	**Pb**	**17 17 52.1**	**-0.5**
	baz=344						
WGK				*e*S	**Sb**	**17 17 57.0**	**+0.4**
	baz=344						
CHN1	**Nanshi**	**0.28**	**201**	⇓*i*P	**Pg**	**17 17 51.9**	**-0.8**
	baz=203						
YUS	**Yu-Shan**	**0.29**	**82**	⇑*i*P	**Pb**	**17 17 52.8**	**-0.8**
	baz=81						
YUS				*i* S	**Sb**	**17 17 57.8**	**-0.5**
	baz=81						
SGST	**Jiashian**	**0.37**	**188**	⇓*e*P	**Pg**	**17 17 53.6**	**-0.6**
	baz=188						
CHN8	**Yiju**	**0.41**	**256**	⇑P	**Pg**	**17 17 54.4**	**-0.5**
	baz=257						
WSF	**Szhu**	**0.43**	**296**	⇑*i*P	**Pb**	**17 17 55.0**	**-0.7**
	baz=297						
WSF				*e*S	**Sb**	**17 18 02.2**	**+0.4**
	baz=297						
WNT	**Mingjian**	**0.43**	**5**	⇓*i*P	**Pb**	**17 17 55.4**	**-0.3**
	baz=5.0						
WNT				*e*S	**Sb**	**17 18 02.4**	**+0.5**
	baz=5.0						
ELDTW	**Lidau**	**0.43**	**127**	⇑*i*P	**Pg**	**17 17 54.8**	**-0.6**
	baz=120						
ELDTW				S	**Sg**	**17 18 01.0**	**-0.4**
	baz=120						
SSLB	**Suanglung**	**0.44**	**40**	*e*P	**Pg**	**17 17 54.6**	**-1.0**
SSLB				*e*Sg	**Sb**	**17 18 01.5**	**-0.8**
CHN3	**Shinhua**	**0.45**	**214**	⇓*i*P	**Pb**	**17 17 56.0**	**+0.1**
	baz=216						
CHN3				*e*S	**Sn**	**17 18 04.3**	**-1.6**
	baz=216						
SCLT	**Jiali**	**0.49**	**236**	⇓*i*P	**Pb**	**17 17 56.3**	**-0.4**
	baz=237						
SCLT				*e*S	**Sb**	**17 18 04.7**	**+1.1**
	baz=237						
SMLT	**Sun Moon Lake**	**0.49**	**29**	⇓*i*P	**Pb**	**17 17 56.5**	**-0.4**
	baz=28						
SMLT				*e*S	**Sb**	**17 18 04.7**	**+0.8**
	baz=28						
TYC	**Yuchr**	**0.49**	**24**	⇓*i*P	**Pb**	**17 17 56.4**	**-0.4**
	baz=23						
TYC				S	**Sb**	**17 18 04.5**	**+0.7**
	baz=23						
WTCT	**Ta-ch'eng**	**0.53**	**322**	⇑*i*P	**Pb**	**17 17 56.7**	**-0.7**
	baz=322						
WTCT				*e*S	**Sb**	**17 18 05.4**	**+0.7**
	baz=322						
TAI1	**Yung-k'ang**	**0.56**	**223**	⇓*i*P	**Pb**	**17 17 58.0**	**+0.2**
	baz=233						
TAI1				*e*S	**Sn**	**17 18 07.0**	**-1.5**
	baz=233						
YULB	**Yu-li**	**0.61**	**95**	*e*P	**Pg**	**17 17 57.0**	**-1.5**
TWF1	**Yuli**	**0.61**	**99**	⇑*i*P	**Pb**	**17 17 58.1**	**-0.7**
	baz=108						
TWF1				*e*S	**Sb**	**17 18 06.7**	**-0.5**
	baz=108						
EHY	**Hungye**	**0.63**	**85**	⇑*i*P	**Pb**	**17 17 58.6**	**-0.5**
	baz=84						
EHY				*e*S	**Sb**	**17 18 08.0**	**+0.4**
	baz=84						
TWM1	**Shoushan**	**0.65**	**198**	⇓*i*P	**Pn**	**17 18 00.4**	**-0.7**
	baz=185						
TCU	**Taichung**	**0.70**	**3**	⇓*i*P	**Pb**	**17 18 00.1**	**-0.2**
	baz=2.0						
TCU				*e*S	**Sb**	**17 18 10.0**	**+0.4**
	baz=2.0						
SGLT	**Jiouru**	**0.73**	**191**	⇓*e*P	**Pn**	**17 18 01.8**	**-0.3**
	baz=191						
SGLT				S	**Sn**	**17 18 14.3**	**+1.4**
	baz=191						
TWG	**Pinlang**	**0.74**	**147**	⇑P	**Pb**	**17 18 00.5**	**-0.5**
	baz=148						
TWG				*i* S	**Sb**	**17 18 11.2**	**+0.4**
	baz=148						
TWG	**Pinlang**	**0.74**	**147**	*e*P	**Pg**	**17 17 59.9**	**-1.2**
TWG				*e*Sg	**Sb**	**17 18 11.3**	**+0.4**
CHKT	**Chengkung**	**0.75**	**117**	⇑*i*P	**Pn**	**17 18 01.5**	**-0.9**
	baz=117						
CHKT				*e*S	**Sn**	**17 18 12.9**	**-0.5**
	baz=117						
ESL	**Shilin**	**0.81**	**63**	⇓P	**Pb**	**17 18 01.9**	**-0.3**
	baz=63						
ESL				*e*S	**Sb**	**17 18 13.1**	**+0.1**
	baz=63						
TTN	**Taitung**	**0.83**	**146**	⇑*e*P	**Pn**	**17 18 03.0**	**-0.6**
	baz=146						
TTN				*e*S	**Sn**	**17 18 15.7**	**+0.3**
	baz=146						
ECL	**Taimali**	**0.90**	**161**	⇑*i*P	**Pb**	**17 18 03.1**	**-0.5**
	baz=151						
ECL				*e*S	**Sb**	**17 18 15.3**	**0.0**
	baz=151						
WHF	**Hehuan Shan**	**0.90**	**39**	⇓*i*P	**Pg**	**17 18 03.6**	**-0.5**
	baz=39						
WHF				*e*S	**Sb**	**17 18 16.0**	**+0.2**
	baz=39						
ESF	**Shoufeng Towns**	**0.90**	**62**	*e*P	**Pn**	**17 18 03.8**	**-0.6**
	baz=62						
TWQ1	**Liyutan**	**0.90**	**8**	⇓*i*P	**Pg**	**17 18 03.7**	**-0.4**
	baz=7.0						
TWQ1				*e*S	**Sn**	**17 18 16.5**	**-0.6**
	baz=7.0						
WDGT	**Dungji**	**0.92**	**258**	⇑*i*P	**Pb**	**17 18 02.8**	**-1.3**
	baz=258						
WDGT				S	**Sb**	**17 18 14.9**	**-1.0**
	baz=258						
KAU	**Kaohsiung**	**0.93**	**199**	*e*P	**Pn**	**17 18 04.2**	**-0.6**
	baz=200						
TWT	**Tainen**	**0.94**	**31**	*e*P	**Pb**	**17 18 03.4**	**-1.1**
	baz=30						
TWT				*e*S	**Sn**	**17 18 18.0**	**-0.3**
	baz=30						
NSY	**Sanyi**	**0.97**	**7**	⇓*i*P	**Pn**	**17 18 05.1**	**-0.3**
	baz=354						
NSY				S	**Sn**	**17 18 19.2**	**+0.4**
	baz=354						
PNG	**Penghu**	**1.00**	**277**	⇑*i*P	**Pb**	**17 18 03.9**	**-1.5**
	baz=277						
PNG				*e*S	**Sb**	**17 18 17.0**	**-1.3**
	baz=277						
HWA	**Hwalien**	**1.03**	**59**	⇓*i*P	**Pn**	**17 18 06.0**	**-0.2**
	baz=59						
HWA				*e*S	**Sg**	**17 18 19.3**	**-0.7**
	baz=59						
SCZT	**Fangliau**	**1.07**	**181**	*e*P	**Pn**	**17 18 06.4**	**-0.4**
	baz=173						
SCZT				*e*S	**Sn**	**17 18 23.4**	**+2.1**
	baz=173						
EAST	**Anshuo**	**1.08**	**170**	P	**Pb**	**17 18 06.4**	**-0.3**
	baz=178						
EAST				*e*S	**Sn**	**17 18 22.1**	**+0.6**
	baz=178						
TWD	**Chiawan**	**1.08**	**54**	⇓*i*P	**Pb**	**17 18 06.4**	**-0.4**
	baz=54						
TWD				*i* S	**Sg**	**17 18 21.0**	**-0.6**
	baz=54						
TAW	**Tawu**	**1.11**	**168**	P	**Pg**	**17 18 07.2**	**-0.9**
	baz=160						
TAW				*e*S	**Sn**	**17 18 23.7**	**+1.5**
	baz=160						
TWP	**Hsiaoliuchiu**	**1.13**	**193**	*e*P	**Pg**	**17 18 07.9**	**-0.4**
	baz=192						
TWP				*e*S	**Sn**	**17 18 26.0**	**+3.4**
	baz=192						
NACB	**Ninganchiao**	**1.13**	**50**	*e*P	**Pb**	**17 18 06.6**	**-1.1**
NACB				*e*S	**Sb**	**17 18 22.1**	**0.0**
NNS	**Nan Shan**	**1.19**	**34**	⇓*i*P	**Pn**	**17 18 08.0**	**-0.6**
	baz=42						
NNS				*e*S	**Sg**	**17 18 25.8**	**+0.5**
	baz=42						
NSTT	**Nanjuang**	**1.22**	**16**	⇓*i*P	**Pb**	**17 18 08.7**	**-0.5**
	baz=15						
NSTT				*e*S	**Sg**	**17 18 26.0**	**-0.2**
	baz=15						
HSN	**Hsinchu**	**1.38**	**13**	*e*P	**Pn**	**17 18 11.1**	**0.0**
	baz=356						
NSK	**Sanguang**	**1.39**	**28**	⇓*e*P	**Pb**	**17 18 11.4**	**-0.7**
	baz=18						
NSK				*e*S	**Sg**	**17 18 30.1**	**-1.3**
	baz=18						
YHNB	**Yeheng**	**1.39**	**29**	*e*P	**Pn**	**17 18 11.1**	**-0.1**
ENA	**Nanau**	**1.40**	**46**	⇓*i*P	**Pb**	**17 18 11.6**	**-0.7**
	baz=45						
ENA				*e*S	**Sg**	**17 18 32.4**	**+0.5**
	baz=45						
HEN	**Hengchun**	**1.44**	**176**	*e*P	**Pb**	**17 18 12.1**	**-0.8**
	baz=167						
HEN				*e*S	**Sg**	**17 18 34.5**	**+1.5**
	baz=167						
ENTT	**Nioudou**	**1.46**	**35**	*e*P	**Pb**	**17 18 12.4**	**-0.8**
	baz=24						
ENTT				*e*S	**Sg**	**17 18 34.3**	**+0.7**
	baz=24						
TWK1	**Hengchun**	**1.51**	**174**	*e*P	**Pn**	**17 18 13.0**	**+0.2**
	baz=171						
TSEB	**Hengchuen, Pin**	**1.56**	**171**	*e*P	**Pg**	**17 18 15.8**	**-0.8**
	baz=189						
TSEB				*e*S	**Sg**	**17 18 38.7**	**+1.8**
	baz=189						
TWE	**Neicheng**	**1.58**	**36**	⇓P	**Pb**	**17 18 14.8**	**-0.5**
	baz=36						
TWE				*e*S	**Sg**	**17 18 37.1**	**-0.3**
	baz=36						
NCU	**National Centr**	**1.59**	**18**	*e*P	**Pn**	**17 18 13.1**	**-0.9**
	baz=2.0						
TWC	**Suao**	**1.60**	**44**	P	**Pb**	**17 18 15.2**	**-0.5**
	baz=33						
TWC				*e*S	**Sg**	**17 18 37.8**	**-0.4**
	baz=33						
LAY	**Lan-yu**	**1.64**	**149**	*e*P	**Pn**	**17 18 13.9**	**-0.7**
	baz=139						
ILA	**Ilan**	**1.66**	**37**	*e*P	**Pb**	**17 18 16.4**	**-0.2**
	baz=19						
TATO	**Taipei**	**1.71**	**27**	*e*P	**Pn**	**17 18 15.4**	**-0.1**
TAP	**Taipei**	**1.77**	**26**	*e*P	**Pn**	**17 18 16.5**	**+0.1**
	baz=8.0						
TAP1	**Taipei**	**1.78**	**27**	⇓*e*P	**Pn**	**17 18 16.6**	**+0.2**
	baz=25						
TAP1				*e*S	**Sb**	**17 18 39.6**	**-1.0**
	baz=25						
TWS1	**Kuangyinshan**	**1.79**	**23**	*e*P	**Pn**	**17 18 17.0**	**+0.3**
	baz=10.0						
TWS1				*e*S	**Sb**	**17 18 40.5**	**-0.7**
	baz=10.0						
NWF	**Wu-fen Shan**	**1.92**	**33**	⇓P	**Pn**	**17 18 19.1**	**+0.6**
	baz=12						
NWF				*e*S	**Sg**	**17 18 46.9**	**-1.6**
	baz=12						
TWB1	**Santiao Chiao**	**1.98**	**38**	*e*P	**Pb**	**17 18 20.7**	**-1.4**
	baz=17						
TWB1				*e*S	**Sb**	**17 18 47.9**	**+1.4**
	baz=17						
TWY	**Chenhua**	**2.02**	**26**	*e*P	**Pn**	**17 18 20.1**	**+0.3**
	baz=8.0						
KNM	**Kinmen**	**2.24**	**296**	⇑*e*P	**Pn**	**17 18 22.9**	**+0.1**
	baz=294						
QZH	**Quanzhou**	**2.39**	**309**	Pn	**Pn**	**17 18 24.0**	**-0.9**
QZH				Sn	**Sn**	**17 18 53.8**	**0.0**
QZH				smax	smax		
	comp=N,2μm,0.5s						
QZH				smax	smax		
	comp=E,3μm,1.0s						
YOJ	**Yonaguni jima**	**2.39**	**65**	P	**Pn**	**17 18 25.7**	**+0.7**
	baz=64						
YOJ				*e*S	**Sb**	**17 18 56.1**	**-2.2**
	baz=64						
YOJ	**Yonaguni jima**	**2.39**	**65**	P	**Pn**	**17 18 25.9**	**+0.9**
YOJ				*e*S	**Sb**	**17 18 56.2**	**-2.2**
PCYT	**Pengchaiyu**	**2.53**	**31**	*e*P	**Pn**	**17 18 26.8**	**-0.1**
	baz=29						
HATJ	**Hateruma jima**	**2.96**	**78**	P	**Pn**	**17 18 33.9**	**+1.1**
HATJ				*e*S	**Sn**	**17 19 09.5**	**+1.5**
IRIF	**Iriomote-Funau**	**2.96**	**72**	P	**Pn**	**17 18 33.9**	**+1.1**
IRIF				*e*S	**Sn**	**17 19 10.3**	**+2.3**
JKRS	**Kuro-shima**	**3.18**	**75**	P	**Pn**	**17 18 37.1**	**+1.3**
JKRS				*e*S	**Sn**	**17 19 15.6**	**+2.2**
JIJ	**Ishigaki jima**	**3.33**	**73**	P	**Pn**	**17 18 38.5**	**+0.6**
JIJ				*e*S	**Sn**	**17 19 18.2**	**+1.1**
JTJ	**Tarama**	**3.90**	**71**	P	**Pn**	**17 18 46.6**	**+0.9**
JTJ				*e*S	**Sn**	**17 19 32.7**	**+1.6**
NJ2	**Nanjing**	**8.71**	**350**	*e*P	**Pn**	**17 19 51.4**	**-0.4**
NJ2				S	Sn	17 21 23.5	-6.2
NJ2				pmax	pm

ZALV					LR	LR	17 45 17.1		
	comp=Z,40nm,18.9s,baz=72,slow=41								
PETK	**Petropavlovsk-**	**40.75**	**34**		LR	LR	17 41 49.2		
	comp=Z,33nm,20.1s,baz=226,slow=36								
AAK	**Ala-Archa**	**42.56**	**308**		LR	LR	17 44 36.3		
	comp=Z,56nm,18.2s,baz=107,slow=38								
WRAB	**Tennant Creek**	**45.15**	**162**		P	**P**	**17 26 04.1**	**+1.7**	
	comp=Z,3.3nm,1.0s								
WRA	**Warramunga Arr**	**45.15**	**162**		P	**P**	**17 25 59.7**	**-2.7**	
	comp=Z,0.6nm,0.6s,baz=343,slow=9.1,SNR=5.5								
ASAR	**Alice Springs**	**48.57**	**164**		P	**P**	**17 26 27.6**	**-1.6**	
	comp=Z,0.3nm,0.4s,baz=337,slow=7.1,SNR=14								
ASAR					LR	LR	17 49 06.1		
	comp=Z,73nm,20.7s,baz=170,slow=39								
STKA	**Stephens Creek**	**58.55**	**159**		P	**P**	**17 27 40.0**	**-2.2**	
	comp=Z,1.7nm,1.0s,baz=330,slow=8.1,SNR=2.6								
NOA	**NORSAR Array B**	**78.64**	**332**		LR	LR	18 06 51.1		
	comp=Z,30nm,20.1s,baz=300,slow=37								
URZ	**Urewera**	**81.06**	**138**		LR	LR	18 02 32.0		
	comp=Z,99nm,19.2s,baz=144,slow=33								
YKA	**Yellowknife Ar**	**83.84**	**23**		P	**P**	**17 30 14.7**	**-0.2**	
	comp=Z,0.4nm,0.5s,baz=314,slow=4.7,SNR=3.9								

DDA ***17*** *17:24:42.9, 39.01N×29.48E, h7km, ML2.7*
ISCJB ***17*** *17:24:43.3±0.5, 39.01N±0.02×29.49E±0.03, h3km±6km, Error ellipse: s-maj=4.3km s-min=4.0km az=42.1*
ISK ***17*** *17:24:43.3, 39.04N×29.50E, h6km, MD2.4*
CSEM ***17*** *17:24:43.4±0.1, 39.04N×29.48E, h2km, ML2.7, Error ellipse: s-maj=2.4km s-min=2.2km az=46.0*

ISC 17 17:24:43.3±0.8, 39.03N±0.02×29.48E±0.02, h7km±6km, n46, σ0.942/63, Turkey

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GDZ	**Gediz**	**0.06**	**5**	*i* P		**Pg**	**17 24 45.0**	**-0.1**
GDZ				*i* S		**Sg**	**17 24 46.5**	**+0.1**
GDZ	**Gediz**	**0.06**	**5**	*i* P		**Pg**	**17 24 45.0**	**-0.1**
GDZ				*i* S		**Sg**	**17 24 46.5**	**+0.1**
TVSB	**Tavsanli**	**0.42**	**359**	PG		**Pg**	**17 24 51.2**	**-0.2**
TVSB				*e*SG		**Sg**	**17 24 57.4**	**+0.5**
TVSB	**Tavsanli**	**0.42**	**359**	*i* Pg		**Pg**	**17 24 51.2**	**-0.2**
TVSB				*e*Sg		**Sg**	**17 24 57.4**	**+0.5**
ALT	**Altintas**	**0.49**	**87**	*e*PG		**Pg**	**17 24 52.9**	**0.0**
ALT				*e*SG		**Sg**	**17 24 60.0**	**+0.6**
ALT	**Altintas**	**0.49**	**87**	*e*Pg		**Pg**	**17 24 52.9**	**0.0**
ALT				*e*Sg		**Sg**	**17 25 00.0**	**+0.6**
DEMI	**Demirci**	**0.59**	**271**	*i* P		**Pg**	**17 24 54.8**	**+0.1**
DEMI				*i* S		**Sg**	**17 25 02.7**	**+0.3**
DEMI	**Demirci**	**0.59**	**271**	*i* P		**Pg**	**17 24 54.8**	**+0.1**
DEMI				*i* S		**Sg**	**17 25 02.7**	**+0.3**
KHAL	**Karahalli**	**0.66**	**179**	*i* P		**Pg**	**17 24 56.0**	**0.0**
KHAL				*i* S		**Sg**	**17 25 04.7**	**+0.1**
KHAL	**Karahalli**	**0.66**	**179**	*i* P		**Pg**	**17 24 56.0**	**0.0**
KHAL				*i* S		**Sg**	**17 25 04.7**	**+0.1**
KHL	**Karahalli**	**0.71**	**177**	*e*PG		**Pb**	**17 24 57.8**	**-0.3**
KHL	**Karahalli**	**0.71**	**177**	*e*Pg		**Pb**	**17 24 57.8**	**-0.3**
KULA	**Kula-Manisa**	**0.82**	**231**	*e*PG		**Pb**	**17 24 59.4**	**-0.6**
KULA	**Kula-Manisa**	**0.82**	**231**	*e*Pg		**Pb**	**17 24 59.4**	**-0.6**
DST	**Dursunbey**	**0.88**	**311**	*e*PG		**Pb**	**17 25 00.7**	**-0.2**
DST	**Dursunbey**	**0.88**	**311**	*e*Pg		**Pb**	**17 25 00.7**	**-0.2**
DURS	**Dursunbey**	**0.96**	**307**	*i* P		**Pb**	**17 25 01.9**	**-0.5**
DURS				*i* S		**Sn**	**17 25 18.1**	**+0.7**
DURS	**Dursunbey**	**0.96**	**307**	*i* P		**Pb**	**17 25 01.9**	**-0.5**
SHUT	**Suhut-Afyon**	**0.97**	**119**	*e*PG		**Pb**	**17 25 02.4**	**-0.1**
SHUT				*e*SG		**Sb**	**17 25 15.5**	**-0.1**
SHUT	**Suhut-Afyon**	**0.97**	**119**	*e*Pg		**Pb**	**17 25 02.4**	**-0.1**
SHUT				*e*Sg		**Sb**	**17 25 15.5**	**-0.1**
ORLT	**Orhaneli**	**1.11**	**336**	*e*PN		**Pn**	**17 25 05.3**	**0.0**
ORLT	**Orhaneli**	**1.11**	**336**	*e*Pn		**Pn**	**17 25 05.3**	**0.0**
BORA	**Eskisehir**	**1.14**	**41**	*i* P		**Pg**	**17 25 04.4**	**-0.7**
BORA	**Eskisehir**	**1.14**	**41**	*i* P		**Pg**	**17 25 04.4**	**-0.7**
ULDT	**Uludag**	**1.14**	**347**	*e*P		**Pg**	**17 25 04.8**	**-0.4**
ULDT	**Uludag**	**1.14**	**347**	*e*P		**Pg**	**17 25 04.8**	**-0.4**
CAVI	**Cavuskoy**	**1.20**	**14**	*e*PN		**Pn**	**17 25 07.3**	**+0.7**
CAVI	**Cavuskoy**	**1.20**	**14**	*e*Pn		**Pn**	**17 25 07.3**	**+0.7**
AKHS	**Akhisar**	**1.30**	**264**	*i* P		**Pn**	**17 25 07.6**	**-0.4**
AKHS				*i* S		**Sn**	**17 25 25.6**	**-0.1**
AKHS	**Akhisar**	**1.30**	**264**	*i* P		**Pn**	**17 25 07.6**	**-0.4**
AKHS				*i* S		**Sn**	**17 25 25.6**	**-0.1**
BALB	**Balikesir**	**1.38**	**297**	*e*PN		**Pg**	**17 25 09.6**	**-0.1**
BALB	**Balikesir**	**1.38**	**297**	*e*Pn		**Pg**	**17 25 09.6**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.41**	**341**	*e*PN		**Pg**	**17 25 10.7**	**+0.3**
MDNY	**Mudanya-Bursa**	**1.41**	**341**	*e*Pn		**Pg**	**17 25 10.7**	**+0.3**
KCTX	**Karacabey (Bur**	**1.50**	**325**	*e*PN		**Pg**	**17 25 11.7**	**-0.5**
KCTX	**Karacabey (Bur**	**1.50**	**325**	*e*Pn		**Pg**	**17 25 11.7**	**-0.5**
YLV	**Yalova**	**1.54**	**357**	*e*PN		**Pg**	**17 25 12.5**	**-0.2**
YLV	**Yalova**	**1.54**	**357**	*e*Pn		**Pg**	**17 25 12.5**	**-0.2**
ARMT	**Armutlu**	**1.60**	**343**	*e*PN		**Pb**	**17 25 13.1**	**-0.2**
ARMT	**Armutlu**	**1.60**	**343**	*e*Pn		**Pb**	**17 25 13.1**	**-0.2**
BALY	**Balya**	**1.60**	**297**	*i* P		**Pn**	**17 25 12.1**	**0.0**
BALY				*i* S		**Sg**	**17 25 35.8**	**+1.0**
BALY	**Balya**	**1.60**	**297**	*i* P		**Pn**	**17 25 12.1**	**0.0**
BALY				*i* S		**Sg**	**17 25 35.8**	**+1.0**
GONE	**Gonen-Balikesi**	**1.71**	**307**	*e*PN		**Pb**	**17 25 15.0**	**-0.2**
GONE	**Gonen-Balikesi**	**1.71**	**307**	*e*Pn		**Pb**	**17 25 15.0**	**-0.2**
HRT	**Hereke**	**1.79**	**5**	*e*PN		**Pb**	**17 25 15.7**	**-0.9**
HRT	**Hereke**	**1.79**	**5**	*e*Pn		**Pb**	**17 25 15.7**	**-0.9**

MOS 17 17:37:37.3±1.3, 51.90N×98.16E, h8km, mb4.3/1, 1C, Error ellipse: s-maj=49.4km s-min=30.5km az=12.8, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
MOY	**Mondy**	**1.77**	**96**	*e*PN		Pb	17 38 10.0	-0.3
MOY				*e*			17 38 32.5	
MOY				pmax		pmax		
	comp=Z,38nm,0.5s							
MOY				smax		smax		
	comp=N,425nm,0.9s							
ARS	**Arshan**	**2.64**	**88**	*e*PN		Pb	17 38 23.3	-1.7
ARS				*e*			17 38 59.8	
ARS				pmax		pmax		
	comp=Z,46nm,0.2s							
ARS				smax		smax		
	comp=E,589nm,0.6s							
TLY	**Talaya**	**3.41**	**92**	*e*PN		Pn	17 38 30.3	-0.5
TLY				*e*			17 38 38.3	
TLY				*e*			17 39 22.8	
TLY				pmax		pmax		
	comp=Z,12nm,0.4s							
TLY				smax		smax		
	comp=N,106nm,0.8s							
TRG	**Tyrgan**	**5.09**	**77**	*e*PN		Pn	17 38 55.6	+1.6
TRG				*e*			17 39 09.3	
TRG				pmax		pmax		
	comp=Z,10.0nm,0.5s							
KRAR	**Krasnoyarsk**	**5.17**	**325**	*e*PN		Pn	17 38 56.9	+2.0

IDC ***17*** *17:39:10.7±1.1, 33.08N×92.26E, h0km, mb3.5/5, mb1 3.6/7, mb1mx3.5/27, mbtmp3.4/7, ML3.2/2, Error ellipse: s-maj=49.7km s-min=21.2km az=58.0*
ISCJB ***17*** *17:39:13.4±0.8, 33.15N±0.07×92.3E±0.1, h33km, mb3.5/4, Error ellipse: s-maj=14.5km s-min=9.1km az=18.8*

ISC 17 17:39:15.7±0.9, 33.16N±0.09×92.4E±0.1, h35km, n14, σ0.985/13, mb3.5/4, Qinghai

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GUN	**Gumba**	**7.64**	**229**	*e*P		**Pn**	**17 41 06.1**	**+1.2**
	7.4nm,0.4s							
RAMN	**Ramite**	**7.94**	**220**	*e*P		Pn	17 41 05.0	-3.8
	7.7nm,0.5s							
KKN	**Kakani**	**8.11**	**231**	*e*P		**Pn**	**17 41 11.5**	**+0.3**
	6.1nm,0.6s							
PKI	**Pulchoki**	**8.18**	**229**	*e*P		**Pn**	**17 41 11.8**	**-0.4**
	5.4nm,0.3s							
PKIN	**Phulchoki**	**8.18**	**229**	*e*P		**Pn**	**17 41 11.6**	**-0.6**
	3.1nm,0.3s							
DMN	**Daman**	**8.35**	**230**	*e*P		**Pn**	**17 41 14.5**	**+0.1**
	5.7nm,0.6s							
DANN	**Dangsing**	**8.80**	**239**	*e*P		**Pn**	**17 41 21.6**	**+0.9**
	6.1nm,0.5s							
MKAR	**Makanchi Array**	**15.63**	**334**	Pn		**Pn**	**17 42 51.9**	**-1.4**
	0.0nm,0.3s,baz=145,slow=13,SNR=2.9							
CMAR	**Chiang Mai Arr**	**15.79**	**156**	Pn		**Pn**	**17 42 54.2**	**-1.2**
	0.1nm,0.3s,baz=333,slow=12,SNR=4.3							
KURBB	**Kurchatov Arra**	**20.20**	**334**	P		**P**	**17 43 47.6**	**+0.4**
	0.7nm,0.6s,baz=147,slow=10.0,SNR=8.9							
ZALV	**Zalesovo Beam**	**21.46**	**348**	P		**P**	**17 44 00.9**	**+0.1**
	0.6nm,0.5s,baz=162,slow=15,SNR=3.7							
BRTR	**Keskin Array B**	**46.96**	**296**	P		**P**	**17 47 42.7**	**-0.5**
	0.3nm,0.5s,baz=91,slow=8.6,SNR=3.2							
ASAR	**Alice Springs**	**69.01**	**139**	P		**P**	**17 50 18.2**	**+0.5**
	1.2nm,0.8s,baz=322,slow=6.2,SNR=13							
ILAR	**Eielson Array**	**72.07**	**23**	P		**P**	**17 50 36.5**	**+0.7**
	0.3nm,0.6s,baz=302,slow=5.2,SNR=3.8							

ISCJB ***17*** *17:57:56.3±0.3, 38.23S±0.03×176.16E±0.05, h172km±2km, mb3.9/7, Error ellipse: s-maj=6.8km s-min=4.3km az=1.8*
IDC ***17*** *17:57:56.3±0.6, 38.37S×176.23E, h160km±9km, mb3.6/5, mb1 3.8/7, mb1mx3.7/16, mbtmp3.7/7, Error ellipse: s-maj=27.2km s-min=23.3km az=151.0*
WEL ***17*** *17:57:57.4±0.2, 38.14S×176.21E, h166km±1km, ML5.1/21, Error ellipse: s-maj=1.8km s-min=1.4km az=90.0*
WEL Felt from Bay of Plenty to Wellington, maximum reported intensity MM 4.
NEIC ***17*** *17:57:57.4, 38.14S×176.20E, h166km, mb4.1/2, After WEL.*
NEIC Felt at Tokoroa and in the Taradale area.
AUST ***17*** *17:58:06.4, 38.45S×173.81E, h100km*

ISC 17 17:57:56.9±0.6, 38.29S±0.04×176.17E±0.05, h170km±4km, n221, σ1.929/221, mb3.9/7, 44C-16D, North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
UTU	**Utuhina**	**0.11**	**8**	⇑PN		**Pn**	**17 58 19.6**	**+0.1**
UTU						**Sn**	**17 58 35.8**	**-0.9**
UTU	**Utuhina**	**0.11**	**8**	Pn		**Pn**	**17 58 19.6**	**+0.1**
HRRZ	**Handcock Road**	**0.14**	**140**	⇑PN		**Pn**	**17 58 19.8**	**+0.3**
HRRZ	**Handcock Road**	**0.14**	**140**	Pn		**Pn**	**17 58 19.9**	**+0.3**
OMRZ	**Omania**	**0.24**	**41**	⇓PN		**Pn**	**17 58 19.4**	**-0.3**
OMRZ						**Sn**	**17 58 36.1**	**-1.0**
OMRZ	**Omania**	**0.24**	**41**	Pn		**Pn**	**17 58 19.4**	**-0.3**
OMRZ						**Sn**	**17 58 36.1**	**-1.0**
TARZ	**Mount Tarawera**	**0.27**	**79**	⇑PN		**Pn**	**17 58 19.9**	**+0.1**
TARZ	**Mount Tarawera**	**0.27**	**79**	Pn		**Pn**	**17 58 19.9**	**+0.1**
KARZ	**Kaharoa**	**0.27**	**12**	⇓PN		**Pn**	**17 58 19.4**	**-0.4**
KARZ						**Sn**	**17 58 36.1**	**-1.2**
KARZ	**Kaharoa**	**0.27**	**12**	Pn		**Pn**	**17 58 19.4**	**-0.4**
KARZ						**Sn**	**17 58 36.1**	**-1.2**
PRRZ	**Plateau Road**	**0.27**	**141**	⇑PN		**Pn**	**17 58 20.0**	**+0.3**
PRRZ						**Sn**	**17 58 36.9**	**-0.4**
PRRZ	**Plateau Road**	**0.27**	**141**	Pn		**Pn**	**17 58 20.1**	**+0.3**
RRRZ	**Republican Roa**	**0.28**	**101**	⇑PN		**Pn**	**17 58 19.8**	**0.0**
RRRZ						**Sn**	**17 58 35.7**	**-1.5**
RRRZ	**Republican Roa**	**0.28**	**101**	Pn		**Pn**	**17 58 19.8**	**0.0**
RRRZ						**Sn**	**17 58 35.7**	**-1.5**
ALRZ	**Allen Road**	**0.31**	**154**	PN		**Pn**	**17 58 20.1**	**+0.3**
ALRZ	**Allen Road**	**0.31**	**154**	Pn		**Pn**	**17 58 20.1**	**+0.3**
LIRZ	**Lichensteins R**	**0.33**	**31**	⇓PN		**Pn**	**17 58 19.5**	**-0.4**
LIRZ						**Sn**	**17 58 36.5**	**-1.0**
LIRZ	**Lichensteins R**	**0.33**	**31**	Pn		**Pn**	**17 58 19.5**	**-0.4**
WHTZ	**Whakaora**	**0.41**	**204**	⇑PN		**Pn**	**17 58 21.3**	**+1.0**
WHTZ	**Whakaora**	**0.41**	**204**	Pn		**Pn**	**17 58 21.3**	**+1.0**
EDRZ	**Edgecumbe**	**0.48**	**68**	PN		**Pn**	**17 58 20.1**	**-0.4**
EDRZ	**Edgecumbe**	**0.48**	**68**	Pn		**Pn**	**17 58 20.1**	**-0.4**
MARZ	**Manawahe**	**0.50**	**53**	⇓PN		**Pn**	**17 58 20.1**	**-0.4**
MARZ	**Manawahe**	**0.50**	**53**	Pn		**Pn**	**17 58 20.1**	**-0.4**
OPRZ	**Ohinepanea**	**0.53**	**35**	⇓PN		**Pn**	**17 58 19.4**	**-1.2**
OPRZ	**Ohinepanea**	**0.53**	**35**	Pn		**Pn**	**17 58 19.4**	**-1.2**
WATZ	**Wairara**	**0.54**	**219**	⇑PN		**Pn**	**17 58 21.8**	**+1.0**
WATZ	**Wairara**	**0.54**	**219**	Pn		**Pn**	**17 58 21.8**	**+1.0**
TGRZ	**Tauranga**	**0.56**	**7**	⇓PN		**Pn**	**17 58 20.0**	**-0.8**
TGRZ						**Sn**	**17 58 37.3**	**-1.8**
TGRZ	**Tauranga**	**0.56**	**7**	Pn		**Pn**	**17 58 20.0**	**-0.8**
TGRZ						**Sn**	**17 58 37.3**	**-1.8**
HATZ	**Hinemaiaia**	**0.61**	**186**	PN		**Pn**	**17 58 21.9**	**+0.9**
HATZ	**Hinemaiaia**	**0.61**	**186**	Pn		**Pn**	**17 58 21.9**	**+0.9**
RATZ	**Rangitukua**	**0.66**	**208**	PN		**Pn**	**17 58 22.0**	**+0.7**
RATZ	**Rangitukua**	**0.66**	**208**	Pn		**Pn**	**17 58 22.0**	**+0.7**
RITZ	**Rihia Road**	**0.73**	**199**	⇑PN		**Pn**	**17 58 23.1**	**+1.4**
RITZ	**Rihia Road**	**0.73**	**199**	Pn		**Pn**	**17 58 23.1**	**+1.4**
URZ	**Urewera**	**0.74**	**88**	PN		**Pn**	**17 58 20.8**	**-0.9**
URZ					AML	AML	17 58 38.9	
URZ					AML	AML	17 58 38.9	
URZ					AML	AML	17 58 39.0	
URZ					AML	AML	17 58 39.0	
URZ	**Urewera**	**0.74**	**88**	Pn		**Pn**	**17 58 20.8**	**-0.9**
URZ	**Urewera**	**0.74**	**88**	P		**Pn**	**17 58 20.6**	**-1.1**
	345nm,0.3s,baz=266,slow=4.0,SNR=6401							
URZ					S	**Sn**	**17 58 38.5**	**-2.2**
	1μm,0.3s,baz=165,slow=20,SNR=91							
TOZ	**Tahuroa Road**	**0.77**	**316**	PN		**Pn**	**17 58 21.3**	**-0.6**
TOZ	**Tahuroa Road**	**0.77**	**316**	Pn		**Pn**	**17 58 21.3**	**-0.6**
KATZ	**Kakaramea**	**0.78**	**208**	⇑PN		**Pn**	**17 58 23.3**	**+1.1**
KATZ	**Kakaramea**	**0.78**	**208**	Pn		**Pn**	**17 58 23.3**	**+1.1**
KRVZ	**Karewarewa**	**0.91**	**207**	⇑PN		**Pn**	**17 58 24.2**	**+1.2**
KRVZ	**Karewarewa**	**0.91**	**207**	Pn		**Pn**	**17 58 24.2**	**+1.2**
BKZ	**Black Stump Fm**	**0.91**	**164**	AML	AML		17 58 43.7	
BKZ					AML	AML	17 58 43.7	
WTVZ	**West Tongariro**	**0.94**	**209**	⇑PN		**Pn**	**17 58 24.5**	**+1.2**
WTVZ	**West Tongariro**	**0.94**	**209**	Pn		**Pn**	**17 58 24.5**	**+1.2**
RAHZ	**Arahi**	**0.95**	**132**	PN		**Pn**	**17 58 24.5**	**+1.3**
RAHZ	**Arahi**	**0.95**	**132**	Pn		**Pn**	**17 58 24.5**	**+1.3**
OTVZ	**Oturere**	**0.96**	**204**	PN		**Pn**	**17 58 24.8**	**+1.3**
OTVZ	**Oturere**	**0.96**	**204**	Pn		**Pn**	**17 58 24.8**	**+1.3**
TWVZ	**Taurewa**	**0.97**	**216**	⇑PN		**Pn**	**17 58 24.8**	**+1.3**
TWVZ	**Taurewa**	**0.97**	**216**	Pn		**Pn**	**17 58 24.8**	**+1.3**
NGZ	**Ngauruhoe**	**0.99**	**206**	⇑PN		**Pn**	**17 58 24.9**	**+1.2**
NGZ	**Ngauruhoe**	**0.99**	**206**	Pn		**Pn**	**17 58 24.9**	**+1.2**
HIZ	**Hauiti**	**1.06**	**257**	PN		**Pn**	**17 58 24.3**	**+0.3**
HIZ	**Hauiti**	**1.06**	**257**	Pn		**Pn**	**17 58 24.3**	**+0.3**
TUVZ	**Tukino**	**1.06**	**202**	PN		**Pn**	**17 58 25.7**	**+1.5**
TUVZ	**Tukino**	**1.06**	**202**	Pn		**Pn**	**17 58 25.7**	**+1.5**
MWZ	**Matawai**	**1.07**	**93**	PN		**Pn**	**17 58 23.3**	**-0.8**
MWZ					AML	AML	17 58 44.1	
MWZ					AML	AML	17 58 44.1	
MWZ					AML	AML	17 58 44.4	
MWZ					AML	AML	17 58 44.4	
MWZ	**Matawai**	**1.07**	**93**	Pn		**Pn**	**17 58 23.3**	**-0.8**
FWVZ	**Far West T-bar**	**1.08**	**206**	PN		**Pn**	**17 58 25.4**	**+1.0**
FWVZ	**Far West T-bar**	**1.08**	**206**	Pn		**Pn**	**17 58 25.4**	**+1.0**
DRZ	**Dome Shelter**	**1.10**	**205**	PN		**Pn**	**17 58 25.8**	**+1.2**
DRZ	**Dome Shelter**	**1.10**	**205**	Pn		**Pn**	**17 58 25.8**	**+1.2**
TRVZ	**Turoa**	**1.12**	**206**	PN		**Pn**	**17 58 25.9**	**+1.1**
TRVZ	**Turoa**	**1.12**	**206**	Pn		**Pn**	**17 58 25.9**	**+1.1**
WNVZ	**Wahianoa**	**1.13**	**203**	⇑PN		**Pn**	**17 58 26.2**	**+1.4**
WNVZ	**Wahianoa**	**1.13**	**203**	Pn		**Pn**	**17 58 26.2**	**+1.4**
MOVZ	**Moawhango**	**1.17**	**196**	PN		**Pn**	**17 58 26.1**	**+1.1**
MOVZ	**Moawhango**	**1.17**	**196**	Pn		**Pn**	**17 58 26.1**	**+1.1**
BHHZ	**Black Hill Sta**	**1.20**	**184**	⇑PN		**Pn**	**17 58 26.6**	**+1.3**
BHHZ	**Black Hill Sta**	**1.20**	**184**	Pn		**Pn**	**17 58 26.6**	**+1.3**
MCHZ	**McNeill Hill**	**1.23**	**161**	⇑PN		**Pn**	**17 58 27.6**	**+2.1**
MTVZ	**Mangateitei**	**1.23**	**206**	⇑PN		**Pn**	**17 58 26.9**	**+1.4**
MTVZ	**Mangateitei**	**1.23**	**206**	Pn		**Pn**	**17 58 26.9**	**+1.4**
KNZ	**Kokohu**	**1.39**	**122**	⇓PN		**Pn**	**17 58 27.8**	**+0.9**
KNZ	**Kokohu**	**1.39**	**122**	Pn		**Pn**	**17 58 27.8**	**+0.9**
VRZ	**Vera Road**	**1.39**	**232**	PN		**Pn**	**17 58 27.9**	**+1.1**
VRZ	**Vera Road**	**1.39**	**232**	Pn		**Pn**	**17 58 27.9**	**+1.1**
MKAZ	**Moumakai**	**1.42**	**326**	PN		**Pn**	**17 58 25.9**	**-1.3**
MKAZ	**Moumakai**	**1.42**	**326**	Pn		**Pn**	**17 58 25.9**	**-1.3**
PRGZ	**Paritu Road**	**1.48**	**116**	⇓PN		**Pn**	**17 58 28.6**	**+0.8**
PRGZ	**Paritu Road**	**1.48**	**116**	Pn		**Pn**	**17 58 28.6**	**+0.8**
CKHZ	**Cape Kidnapper**	**1.54**	**153**	⇑PN		**Pn**	**17 58 30.3**	**+1.9**
CKHZ	**Cape Kidnapper**	**1.54**	**153**	Pn		**Pn**	**17 58 30.3**	**+1.9**
KUZ	**Kuaotunu**	**1.58**	**347**	PN		**Pn**	**17 58 27.1**	**-1.7**
KUZ	**Kuaotunu**	**1.58**	**347**	Pn		**Pn**	**17 58 27.1**	**-1.7**
KAHZ	**Kahuranaki**	**1.60**	**160**	⇑PN		**Pn**	**17 58 31.0**	**+2.0**
KAHZ	**Kahuranaki**	**1.60**	**160**	Pn		**Pn**	**17 58 31.0**	**+2.0**
MHGZ	**Mahia Peninsul**	**1.61**	**123**	⇓PN		**Pn**	**17 58 30.4**	**+1.3**
MHGZ	**Mahia Peninsul**	**1.61**	**123**	Pn		**Pn**	**17 58 30.4**	**+1.3**
CNGZ	**Carnagh Statio**	**1.61**	**98**	⇓PN		**Pn**	**17 58 29.8**	**+0.8**
PNHZ	**Pukenui**	**1.63**	**179**	⇑PN		**Pn**	**17 58 30.6**	**+1.4**
PNHZ	**Pukenui**	**1.63**	**179**	Pn		**Pn**	**17 58 30.6**	**+1.4**
MHEZ	**Mangahewa**	**1.65**	**241**	⇑PN		**Pn**	**17 58 31.5**	**+2.1**
MHEZ	**Mangahewa**	**1.65**	**241**	Pn		**Pn**	**17 58 31.6**	**+2.1**
PUZ	**Puketiti**	**1.66**	**83**	PN		**Pn**	**17 58 28.7**	**-0.9**
PUZ					AML	AML	17 58 54.7	
PUZ					AML	AML	17 58 54.9	
PUZ	**Puketiti**	**1.66**	**83**	Pn		**Pn**	**17 58 28.7**	**-0.9**
RAEZ	**Rainy Point**	**1.71**	**234**	PN		**Pn**	**17 58 32.2**	**+2.1**
WAZ	**Wanganui**	**1.73**	**212**	⇓PN		**Pn**	**17 58 31.7**	**+1.3**
WAZ	**Wanganui**	**1.73**	**212**	Pn		**Pn**	**17 58 31.7**	**+1.3**
TSZ	**Takapari Road**	**1.78**	**185**	PN		**Pn**	**17 58 31.8**	**+0.9**
TSZ					AML	AML	17 59 00.2	
TSZ					AML	AML	17 59 00.4	
TSZ	**Takapari Road**	**1.78**	**185**	Pn		**Pn**	**17 58 31.8**	**+0.9**

DREZ	**Durham Road**	**1.79**	**239**		⇑PN		**Pn**	**17 58 33.0**	**+2.1**
DREZ	**Durham Road**	**1.79**	**239**		Pn		**Pn**	**17 58 33.0**	**+2.1**
WPHZ	**Waipukurau**	**1.79**	**173**		⇑PN		**Pn**	**17 58 32.4**	**+1.5**
WPHZ	**Waipukurau**	**1.79**	**173**		Pn		**Pn**	**17 58 32.4**	**+1.5**
MTAZ	**Motutapu**	**1.80**	**326**		⇓PN		**Pn**	**17 58 30.4**	**-0.7**
MTAZ	**Motutapu**	**1.80**	**326**		Pn		**Pn**	**17 58 30.4**	**-0.7**
PXZ	**Pawanui**	**1.82**	**163**		PN		**Pn**	**17 58 32.5**	**+1.3**
PXZ						AML	AML	17 59 00.1	
PXZ						AML	AML	17 59 00.1	
PXZ						AML	AML	17 59 00.1	
PXZ						AML	AML	17 59 00.1	
PXZ	**Pawanui**	**1.82**	**163**		Pn		**Pn**	**17 58 32.5**	**+1.3**
MXZ	**Matakaoa Point**	**1.84**	**67**		⇑PN		**Pn**	**17 58 30.7**	**-0.7**
MXZ						AML	AML	17 58 58.0	
MXZ						AML	AML	17 58 59.2	
MXZ	**Matakaoa Point**	**1.84**	**67**		Pn		**Pn**	**17 58 30.7**	**-0.7**
NEZ	**North Egmont**	**1.90**	**238**		⇓PN		**Pn**	**17 58 34.5**	**+2.3**
DFE	**Dawson Falls**	**1.92**	**237**		⇓PN		**Pn**	**17 58 34.7**	**+2.2**
PKE	**Pukeiti**	**1.93**	**241**		⇑PN		**Pn**	**17 58 34.5**	**+2.0**
ABAZ	**Army Bay**	**1.99**	**327**		PN		**Pn**	**17 58 32.4**	**-0.8**
DVHZ	**Dannevirke**	**2.01**	**180**		⇑PN		**Pn**	**17 58 34.5**	**+1.1**
DVHZ	**Dannevirke**	**2.01**	**180**		Pn		**Pn**	**17 58 34.5**	**+1.1**
PRHZ	**Porangahau**	**2.01**	**170**		⇑PN		**Pn**	**17 58 34.9**	**+1.5**
NWEZ	**Newall Road**	**2.05**	**241**		⇑PN		**Pn**	**17 58 35.9**	**+2.1**
NWEZ	**Newall Road**	**2.05**	**241**		Pn		**Pn**	**17 58 35.9**	**+2.1**
POWZ	**Post Office Ro**	**2.13**	**188**		⇑PN		**Pn**	**17 58 35.7**	**+1.1**
POWZ	**Post Office Ro**	**2.13**	**188**		Pn		**Pn**	**17 58 35.7**	**+1.1**
BFZ	**Birch Farm**	**2.39**	**179**	

MEEK	**Meekatharra**	**49.23 266**	P	**P**	**18 06 28.5**	**+0.3**
	baz=47,SNR=14					
MORW	**Morawa**	**50.11 262**	P	**P**	**18 06 35.4**	**+0.6**
	baz=48,SNR=6.1					
QSPA	**South Pole Qui**	**51.84 180**	*eP*	P	18 06 51.5	+4.1
	2.8nm,0.4s					
KSRS	**Korea Array**	**87.51 324**	P	**P**	**18 10 26.4**	**+1.3**
	0.8nm,0.5s,baz=140,slow=5.3,SNR=6.7					
CMAR	**Chiang Mai Arr**	**91.67 292**	P	**P**	**18 10 45.4**	**+0.3**
	0.2nm,0.6s,baz=136,slow=3.9,SNR=3.5					
ARCES	**ARCESS Array B**	**144.97 343**	PKPbc	PKPbc	18 17 11.4	-1.0
	0.6nm,0.4s,baz=46,slow=3.5,SNR=8.3					
TORD	**Torodi Ar. Bea**	**154.49 193**	PKPab	**PKPab**	**18 17 53.2**	**+0.5**
	0.4nm,0.4s,baz=156,slow=3.5,SNR=6.0					

*ISCJB **17** 18:08:07.3±0.3,2˚.43N±0˚.03×128˚.43E±0˚.04, h200km, mb4.0/9, Error ellipse: s-maj=5.7km s-min=4.1km az=165.3*
*AUST **17** 18:08:07.1±0.7,2˚.45N×128˚.53E, h198km, Error ellipse: s-maj=1.4km s-min=0.8km az=41.0*
*IDC **17** 18:08:08.8±1.9,2˚.34N×128˚.43E, h202km±19km, mb3.8/10, mb1 4.0/12, mb1mx3.7/24, mbtmp3.9/12, Error ellipse: s-maj=23.2km s-min=8.9km az=77.0*
*DJA **17** 18:08:12.9±0.5,2˚N±5˚×12˚8E±˚, h160km±7km, M4.8/14, mB5.1/8, mb4.8/14, MLv5.1/9, Mw(mB)4.5/8*

ISC 17 18:08:08.8±0.5,2˚36N±0˚05×128˚33E±0˚06, h200km, n66, σ1ᵗ38/71, mb4.1/9, 1D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**1.85**	**211**	P	**Pn**	**18 08 46.6**	**+0.8**
LBMI	**Labuha**	**3.09**	**196**	P	**Pn**	**18 09 01.0**	**+1.4**
LBMI				S	**Sn**	**18 09 40.0**	**+0.6**
MNI	**Manado**	**3.60**	**255**	P	**Pn**	**18 09 06.0**	**+0.2**
MNI				S	**Sn**	**18 09 49.7**	**-0.7**
KMSI	**Cibinong**	**4.70**	**248**	P	**Pn**	**18 09 20.3**	**+0.9**
MATI	**Mati**	**5.00**	**336**	*eP*	**Pn**	**18 09 22.4**	**-0.8**
DAV	**Davao City (W)**	**5.42**	**330**	P	**Pn**	**18 09 29.4**	**+0.8**
	50nm,0.3s,baz=218,slow=11,SNR=7.3						
CTBH	**Cotabato--PC H**	**6.31**	**320**	⇓*iP*	**Pn**	**18 09 38.6**	**-1.6**
BUKP	**Musuan**	**6.38**	**329**	*eP*	**Pn**	**18 09 40.3**	**-0.7**
LUWI	**Luwuk**	**6.50**	**239**	P	**Pn**	**18 09 42.0**	**-0.7**
	511nm,0.7s,7μm2.2nm						
LUWI				S	**Sn**	**18 11 00.3**	**+3.3**
	511nm,0.7s,7μm2.2nm						
LUWI	**Luwuk**	**6.50**	**239**	P	**Pn**	**18 09 41.8**	**-0.9**
	baz=6.7,SNR=93						
FAKI	**Fak Fak**	**6.55**	**143**	P	**Pn**	**18 09 45.0**	**+1.8**
	152nm,0.9s,2μm0.5nm						
FAKI	**Fak Fak**	**6.55**	**143**	P	**Pn**	**18 09 45.1**	**+1.9**
	baz=6.5,SNR=49						
MRSI	**Marisa**	**6.66**	**254**	P	**Pn**	**18 09 45.4**	**+0.8**
	185nm,0.8s,2μm0.7nm						
RKPI	**Ransiki, Papua**	**7.00**	**123**	P	**Pn**	**18 09 51.9**	**+2.8**
	118nm,0.9s,1μm						
PAGZ	**Pagadian**	**7.35**	**318**	*eP*	**Pn**	**18 09 52.8**	**-0.8**
SKSI	**Soroako, Sulaw**	**8.51**	**235**	P	**Pn**	**18 10 08.6**	**-0.3**
	712nm,0.7s,7μm2.5nm						
SKSI				S	**Sn**	**18 11 40.1**	**-4.6**
	712nm,0.7s,7μm2.5nm						
BAKI	**Biak**	**8.54**	**114**	P	**Pn**	**18 10 11.4**	**+2.2**
	86nm,1.4s,958nm0.3nm						
BBSI	**Bau Bau**	**9.69**	**216**	P	Pn	18 10 35.3	+11
TTSI	**Tana Toraja**	**10.06**	**238**	P	**Pn**	**18 10 28.8**	**-0.1**
	81nm,1.2s,2μm						
MYLDM	**Lahad Datu**	**10.20**	**286**	P	**P**	**18 10 37.3**	**-1.2**
	61nm,0.8s						
BKSI	**Bulukumba**	**11.20**	**227**	P	**Pn**	**18 10 46.1**	**+2.5**
	45nm,0.6s						
KAPI	**Kappang**	**11.27**	**229**	P	**P**	**18 10 49.2**	**-1.2**
	67nm,0.6s,1μm						
KAPI	**Kappang**	**11.27**	**229**	P	**Pn**	**18 10 45.2**	**+0.7**
	18nm,0.3s,baz=65,slow=15,SNR=53						
KAPI				S	**Sn**	**18 12 49.3**	**-1.1**
	1.3nm,0.3s,baz=211,slow=19,SNR=6.8						
KKM	**Kota Kinabalu**	**12.62**	**287**	P	**Pn**	**18 11 02.5**	**+0.7**
	baz=13,SNR=4.7						
JAY	**Jayapura**	**13.29**	**111**	P	P	18 11 22.0	+9.1
KBKI	**Kotabaru**	**13.39**	**245**	P	**P**	**18 11 15.8**	**+1.8**
	20nm,1.3s						
MTN	**Manton Dam**	**15.36**	**170**	P	**Pn**	**18 11 34.6**	**-0.9**
	baz=16,SNR=40						
MTN				S	**S**	**18 14 22.8**	**-3.4**
	baz=16,SNR=3.1						
KDU	**Kakadu**	**15.51**	**165**	P	**Pn**	**18 11 36.9**	**-0.4**
	baz=16,SNR=12						
KHKI	**Kahang-Kahang**	**16.57**	**230**	P	Pn	18 11 55.6	+5.5
	86nm,0.6s						
JAGI	**Jajag, Banyuwa**	**17.77**	**233**	P	**Pn**	**18 12 05.4**	**+1.1**
	baz=18,SNR=4.7						
KNRA	**Kununurra**	**17.93**	**179**	P	**P**	**18 12 04.7**	**+0.8**
	baz=18,SNR=9.5						
KSM	**Kuching**	**18.03**	**268**	P	**Pn**	**18 12 08.3**	**+0.9**
	15nm,0.9s						
KSM	**Kuching**	**18.03**	**268**	P	**Pn**	**18 12 08.1**	**+0.7**
	baz=18,SNR=6.1						
SJI	**Sawahan**	**19.33**	**239**	P	**Pn**	**18 12 26.2**	**+3.4**
FITZ	**Fitzroy Crossi**	**20.51**	**187**	P	**P**	**18 12 31.1**	**-0.6**
	2.7nm,0.4s,baz=7.2,slow=11,SNR=21						
FITZ	**Fitzroy Crossi**	**20.51**	**187**	P	**P**	**18 12 31.1**	**-0.6**
	baz=21,SNR=17						
COEN	**Coen**	**21.90**	**138**	P	**P**	**18 12 45.1**	**-1.1**
	baz=22,SNR=5.3						
WRA	**Warramunga Arr**	**22.94**	**165**	P	**P**	**18 12 55.0**	**-0.8**
	35nm,0.5s,baz=345,slow=10,SNR=131						
WRA				S	**S**	**18 16 48.0**	**-2.7**
	1.4nm,1.0s,baz=344,slow=18,SNR=3.4						
QIS	**Mount Isa**	**25.32**	**155**	P	**P**	**18 13 17.3**	**0.0**
	baz=25,SNR=7.3						
MTSU	**Mount Surprise**	**25.74**	**143**	P	**P**	**18 13 21.5**	**+0.3**
	baz=26,SNR=6.9						
ASAR	**Alice Springs**	**26.43**	**168**	P	**P**	**18 13 26.9**	**-0.5**
	2.1nm,0.5s,baz=352,slow=8.0,SNR=99						
ASAR				ScP	**ScP**	**18 20 07.0**	**-1.4**
	0.3nm,0.6s,baz=333,slow=2.0,SNR=5.3						
MEEK	**Meekatharra**	**30.32**	**197**	P	**P**	**18 14 00.9**	**-0.8**
	baz=31,SNR=9.8						
QLP	**Quilpie**	**32.62**	**153**	P	**P**	**18 14 21.3**	**-0.5**
	baz=33,SNR=4.8						
CMAR	**Chiang Mai Arr**	**32.94**	**301**	P	**P**	**18 14 25.8**	**+1.0**
	5.5nm,0.8s,baz=117,slow=7.3,SNR=32						
KSRS	**Korea Array**	**34.92**	**359**	P	**P**	**18 14 41.2**	**-0.3**
	1.2nm,0.3s,baz=177,slow=10,SNR=9.7						
MAT	**Matsushiro**	**35.22**	**14**	P	**P**	**18 14 41.8**	**-2.3**
BBOO	**Buckleboo**	**35.74**	**169**	P	**P**	**18 14 48.4**	**-0.2**
	baz=36,SNR=13						
STKA	**Stephens Creek**	**36.31**	**161**	P	**P**	**18 14 53.0**	**-0.4**
	14nm,0.5s,baz=333,slow=8.5,SNR=75						
STKA	**Stephens Creek**	**36.31**	**161**	P	**P**	**18 14 53.2**	**-0.2**
	baz=36,SNR=46						
ARPS	**Mount Arapiles**	**40.91**	**163**	P	**P**	**18 15 32.3**	**+0.7**
	baz=41,SNR=13						
USRK	**Ussuriysk Arra**	**41.79**	**4**	P	**P**	**18 15 38.3**	**-0.3**
	1.1nm,0.5s,baz=180,slow=7.6,SNR=4.1						
TOO	**Toolangi**	**42.80**	**160**	P	**P**	**18 15 48.1**	**+1.1**
	baz=43,SNR=5.7						
ASAJ	**Asahikawa**	**43.46**	**15**	P	**P**	**18 15 51.9**	**-0.3**
	1.1nm,0.4s,baz=202,slow=11,SNR=7.0						
TAPN	**Taplejung**	**46.11**	**307**	*eP*	**P**	**18 16 14.1**	**+0.4**
	9.6nm,0.6s						
ODAN	**Odare**	**46.16**	**306**	*eP*	**P**	**18 16 14.6**	**+0.6**
	34nm,0.6s						
RAMN	**Ramite**	**46.84**	**305**	*eP*	**P**	**18 16 20.1**	**+0.8**
	44nm,0.6s						
GUN	**Gumba**	**47.82**	**306**	*eP*	**P**	**18 16 27.3**	**+0.4**
	46nm,0.6s						
PKI	**Pulchoki**	**48.06**	**306**	*eP*	**P**	**18 16 28.6**	**-0.2**
	8.1nm,0.4s						
PKIN	**Phulchoki**	**48.07**	**306**	*eP*	**P**	**18 16 28.8**	**0.0**
	2.8nm,0.2s						
KKN	**Kakani**	**48.25**	**306**	*eP*	**P**	**18 16 30.3**	**+0.2**
	12nm,0.5s						
DMN	**Daman**	**48.32**	**306**	*eP*	**P**	**18 16 30.9**	**+0.2**
	18nm,0.7s						
SONM	**Songino Array**	**49.10**	**341**	P	**P**	**18 16 36.0**	**-0.1**
	0.6nm,0.6s,baz=156,slow=9.0,SNR=4.6						
NFK	**Norfolk Island**	**49.14**	**132**	P	P	18 16 29.1	-7.4
	baz=49,SNR=3.1						
KOLN	**Koldanda**	**49.61**	**305**	*eP*	**P**	**18 16 41.0**	**+0.6**
	46nm,0.5s						
DANN	**Dangsing**	**49.71**	**306**	*eP*	**P**	**18 16 41.6**	**+0.3**
	46nm,0.5s						
MKAR	**Makanchi Array**	**59.58**	**325**	P	**P**	**18 17 51.4**	**-0.2**
	2.1nm,0.3s,baz=114,slow=8.0,SNR=74						
MKAR				pP	**pP**	**18 18 38.7**	**+1.4**
	0.5nm,0.5s,baz=116,slow=8.5,SNR=4.3						

MEX 17 19:00:43.7±1.0, 16˚66N×94˚63W, h81km±26km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGIG		**1.45**	**85**	*i* P	Pn	19 01 06.8	-1.7
TGIG				*i* S	Sn	19 01 25.8	-1.5
PCIG		**1.66**	**125**	*eP*	Pn	19 01 10.4	-0.8
PCIG				*i* S	Sn	19 01 29.7	-2.2
HUIG	**Huatulco**	**1.68**	**238**	*i* P	Pn	19 01 09.6	-1.7
HUIG				*i* S	Sn	19 01 31.2	-1.2
UTMO	**Huajuapan**	**3.25**	**291**	*i* P	Pn	19 01 33.8	+1.1
UTMO				*i* S	Sn	19 02 09.7	-0.8
PNIG	**Pinotepa**	**3.36**	**266**	*i* P	Pn	19 01 33.5	-0.5
PNIG				*i* S	Sn	19 02 10.9	-2.0

*IDC **17** 19:08:09.0±1.4, 33˚76S×71˚98W, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.8/17, mbtmp3.8/5, ML4.0/1, MS3.5/2, Ms1 3.4/2, ms1mx3.0/31, Error ellipse: s-maj=52.6km s-min=30.7km az=88.0*
*ISCJB **17** 19:08:10.0±1.0, 33˚84S±0˚04×72˚26W±0˚06, h23km±8km, mb3.8/2, MS3.4/2, Error ellipse: s-maj=8.0km s-min=6.3km az=17.8*
*GUC **17** 19:08:10.1±0.8, 33˚88S×72˚22W, h37km±2km, MD4.1, ML4.1*

ISC 17 19:08:10.5±2.0, 33˚86S±0˚04×72˚11W±0˚08, h16km±12km, n28, σ0ᵗ62/35, 9C-4D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNV	**Longovilo**	**0.59**	**100**	⇓*iP*	**Pn**	**19 08 23.4**	**-0.8**
IHA	**Instituto Hidr**	**0.92**	**25**	⇑*iP*	**Pn**	**19 08 28.3**	**-0.4**
IHA				*i* S	**Sn**	**19 08 41.0**	**-0.6**
TACH	**Talagante**	**1.00**	**79**	⇑*iP*	**Pb**	**19 08 29.3**	**-0.1**
CHCH	**Chadas Angostu**	**1.21**	**94**	⇑*iP*	**Pb**	**19 08 32.9**	**-0.2**
ANTU	**Antumapu**	**1.26**	**77**	⇑*iP*	**Pb**	**19 08 34.0**	**0.0**
ANTU				*i* S	**Sg**	**19 08 51.7**	**+0.4**
ANTU				AML	AML	19 09 02.1	
	comp=E,3μm,0.4s						
SAN	**Santiago**	**1.27**	**72**	⇑*iP*	**Pb**	**19 08 33.9**	**-0.2**
SAN				*i* S	**Sg**	**19 08 51.8**	**+0.1**
ROCH	**El Roble**	**1.27**	**46**	⇑*iP*	**Pb**	**19 08 34.0**	**-0.2**
ROCH				*i* S	**Sg**	**19 08 52.6**	**+0.9**
ROCH				AML	AML	19 09 01.5	
	comp=E,4μm,0.5s						
CACH	**El Canelo**	**1.28**	**102**	⇓*iP*	**Pg**	**19 08 34.8**	**-0.4**
STL	**Santa Lucia**	**1.29**	**72**	*eP*	**Pb**	**19 08 34.3**	**-0.1**
STL				*eS*	**Sg**	**19 08 52.6**	**+0.3**
PCH	**Pirque**	**1.35**	**80**	⇑*iP*	**Pb**	**19 08 35.2**	**-0.3**
PEL	**Peldehue**	**1.39**	**60**	⇑*iP*	**Pb**	**19 08 36.0**	**0.0**
PEL				*i* S	**Sg**	**19 08 55.4**	**+0.1**
PEL				AML	AML	19 09 01.4	
	comp=N,8μm,0.8s						
CLCH	**Cerro Calan**	**1.39**	**71**	⇓*iP*	**Pb**	**19 08 35.9**	**-0.2**
CLCH				*i* S	**Sg**	**19 08 55.6**	**+0.2**
CLCH				AML	AML	19 09 02.6	
	comp=E,3μm,0.4s						
SJCH	**San Jose de Ma**	**1.48**	**82**	*eP*	**Pn**	**19 08 36.2**	**-0.3**
SJCH				*i* S	**Sb**	**19 08 56.5**	**+0.3**
SJCH				AML	AML	19 08 59.6	
	comp=E,3μm,0.3s						
TALC	**Talca**	**1.59**	**166**	*eP*	**Pb**	**19 08 39.0**	**-0.5**
TALC				*eS*	**Sb**	**19 08 59.0**	**-0.2**
TALC				AML	AML	19 09 04.0	
	comp=E,7μm,0.5s						
CHNG	**Los Chungos**	**2.03**	**15**	⇓*iP*	**Pn**	**19 08 43.5**	**-0.6**
CMCH	**Combarbala**	**2.83**	**20**	*eP*	**Pn**	**19 08 54.9**	**-0.2**
TLL	**Tololo Astrono**	**3.84**	**17**	*eP*	**Pn**	**19 09 09.4**	**+0.3**
LCO	**Las Campanas**	**4.98**	**14**	⇑*iP*	**Pn**	**19 09 24.3**	**-0.5**
PLCA	**Paso Flores**	**6.98**	**170**	Pn	**Pn**	**19 09 54.5**	**+2.4**
	comp=E,0.6nm,0.3s,baz=341,slow=10,SNR=5.3						
LPAZ	**La Paz**	**17.86**	**13**	P	**P**	**19 12 19.6**	**0.0**
	comp=E,0.5nm,0.3s,baz=181,slow=8.1,SNR=11						
SIV	**San Ignacio**	**20.38**	**32**	P	**P**	**19 12 45.8**	**-0.9**
	comp=E,0.9nm,0.5s,baz=239,slow=11,SNR=5.6						
BDFB	**Brasilia**	**28.30**	**56**	LR	LR	19 24 25.6	
	comp=E,70nm,21.5s,baz=186,slow=35						
RCBR	**Riachuelo**	**43.62**	**58**	LR	LR	19 35 02.0	
	comp=E,70nm,19.5s,baz=203,slow=37						
TXAR	**Lajitas Array**	**69.58**	**331**	P	**P**	**19 19 19.8**	**+0.9**
	comp=E,0.2nm,0.6s,baz=160,slow=7.7,SNR=3.5						
TORD	**Torodi Ar. Bea**	**84.22**	**70**	P	**P**	**19 20 41.9**	**+0.4**
	comp=E,2.1nm,0.8s,baz=269,slow=6.0,SNR=12						
BVAR	**Borovoye Array**	**147.22**	**43**	PKPbc	**PKPab**	**19 27 53.4**	**-0.8**
	comp=E,0.5nm,0.4s,baz=304,slow=2.7,SNR=4.1						
ZALV	**Zalesovo Beam**	**154.13**	**32**	PKPbc	**PKPbc**	**19 28 09.3**	**+0.3**
	comp=E,1.3nm,0.5s,baz=293,slow=3.4,SNR=7.3						
MKAR	**Makanchi Array**	**156.71**	**49**	PKPab	**PKPab**	**19 28 34.0**	**-0.1**
	comp=E,0.4nm,0.6s,baz=279,slow=3.2,SNR=5.5						

*NNC **17** 19:30:23.8±1.0, 44˚81N±0˚09×78˚9E±0˚1, h10km, n15, σ1ᵗ74/14, 10C-5D, Eastern Kazakhstan*
*ISCJB **17** 19:30:24.6±1.0, 44˚95N±0˚07×78˚7E±0˚2, h10km, Error ellipse: s-maj=16.9km s-min=7.7km az=27.2*

ISC 17 19:30:23.8±1.4, 44˚81N±0˚09×78˚9E±0˚1, h10km, n15, σ1ᵗ74/14, 10C-5D, Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDC	**Almaty**	**2.10**	**221**	⇑Pn	**Pb**	**19 31 00.3**	**-1.7**
	23nm,0.3s						
KNDC				⇑Sn	**Sb**	**19 31 27.5**	**-0.7**
	200nm,0.5s						
TKM2	**Tokmak 2**	**3.03**	**232**	⇑Pn	**Pb**	**19 31 15.3**	**-2.6**
	8.7nm,0.5s						
TKM2				⇓Lg	Lg	19 31 56.9	
	35nm,0.6s						
TKM2	**Tokmak 2**	**3.03**	**232**	P	**Pb**	**19 31 17.3**	**-0.5**
	SNR=14						
MK31	**Makanchi Array**	**3.11**	**49**	Pn	**Pn**	**19 31 14.8**	**+1.9**
	3.8nm,0.3s,baz=222,slow=14,SNR=500						
MK31				⇑Lg	Lg	19 31 57.5	
	10nm,0.3s,baz=220,slow=25,SNR=2.7						
ULHL	**Ulahol**	**3.20**	**218**	P	**Pn**	**19 31 16.0**	**+1.7**
	SNR=29						
CHMS	**Chumysh**	**3.48**	**240**	P	**Pb**	**19 31 26.3**	**+0.8**
	SNR=9.7						
USP	**Usenovka**	**3.51**	**245**	P	**Pb**	**19 31 25.9**	**0.0**
	SNR=9.1						
KBK	**Karagaybulak**	**3.56**	**234**	P	**Pn**	**19 31 20.6**	**+1.3**
	SNR=8.9						
AAK	**Ala-Archa**	**3.84**	**237**	P	Pn	19 31 26.8	+3.6
	SNR=5.4						
EKS2	**Erkin-Say**	**4.27**	**242**	P	**Pn**	**19 31 30.2**	**+1.3**
	SNR=6.4						
KUR14	**Kurchatov Arra**	**5.81**	**358**	⇑Pg	**Pg**	**19 32 12.2**	**-2.7**
	1.5nm,0.6s						
KUR14				⇓Lg	Lg	19 33 26.3	
	8.0nm,0.7s						
KURK	**Kurchatov**	**5.91**	**358**	⇑Pg	Pg	19 32 12.3	-4.5
	2.2nm,0.4s						
KURK				⇑Lg	Lg	19 33 28.2	
	23nm,0.7s						
KK31	**Karatay Array**	**6.27**	**257**	⇑Pn	**Pn**	**19 31 56.9**	**+0.6**
	0.2nm,0.2s,baz=72,slow=13,SNR=23						
KK31				⇓Lg	Lg	19 33 38.3	
	5.7nm,0.5s,baz=74,slow=29,SNR=7.5						
BVA0	**Borovoye Array**	**9.93**	**329**	⇓Pn	**Pn**	**19 32 47.5**	**+1.1**
	1.4nm,0.7s,baz=149,slow=17,SNR=5.2						
BVA0				⇑Lg	Lg	19 35 37.6	
	2.8nm,0.6s,baz=142,slow=28,SNR=4.5						
ZRNK	**Zerenda**	**10.41**	**325**	⇓Pn	**Pn**	**19 32 54.7**	**+1.8**
	0.5nm,0.4s						
ZRNK				⇑Lg	Lg	19 35 50.3	
	3.7nm,0.7s						

IDC 17 19:39:58.2±8.3, 19˚53S×179˚14W, h616km±128km, mb2.7/3, mb1 3.1/3, mb1mx2.7/17, mbtmp2.7/3, Error ellipse: s-maj=262.9km s-min=36.0km az=159.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**43.68**	**261**	P	P	19 47 10.6	+0.3
	0.5nm,0.3s,baz=96,slow=7.6,SNR=8.8						
ASAR	**Alice Springs**	**43.70**	**256**	P	P	19 47 10.6	-0.3
	0.7nm,0.5s,baz=94,slow=7.5,SNR=10						
NVAR	**Mina Array Bea**	**81.07**	**44**	P	P	19 51 10.9	+0.1
	0.4nm,0.7s,baz=225,slow=8.5,SNR=3.2						
BRTR	**Keskin Array B**	**145.39**	**313**	PKPbc	PKPdf	19 58 28.1	+0.6
	0.3nm,0.5s,baz=123,slow=5.3,SNR=2.3						

*BJI **17** 19:42:34.9, 8˚10S×108˚50E, h73km, mB4.9/2, mb4.6/10, Ms7 4.5/1*
*IDC **17** 19:42:38.1±0.7, 7˚89S×108˚64E, h68km±5km, mb4.4/22, mb1 4.5/24, mb1mx4.4/28, mbtmp4.4/24, MS3.6/12, Ms1 3.6/12, ms1mx3.2/34, Error ellipse: s-maj=16.3km s-min=9.1km az=56.0*
*NEIC **17** 19:42:38.5±0.7, 7˚96S×108˚54E, h76km±5km, mb4.6/19, Error ellipse: s-maj=8.2km s-min=5.3km az=53.0*
*ISCJB **17** 19:42:39.2±0.3, 8˚06S±0˚04×108˚60E±0˚03, h97km±3km, mb4.7/43, Error ellipse: s-maj=6.4km s-min=3.5km az=28.3*
*DJA **17** 19:42:39.7±0.2, 8˚S±3˚×107˚9E±˚, h53km±3km, M5.0/34, mB5.4/14, mb5.1/34, MLv5.2/30, Mw(mB)4.8/14*
*AUST **17** 19:42:39.6±0.2, 8˚25S×108˚49E, h76km, Error ellipse: s-maj=0.7km s-min=0.6km az=0.0*

ISC 17 19:42:38.1±0.4, 8˚19S±0˚03×108˚52E±0˚02, h75km±3km, n233, σ1ᵗ65/238, mb4.8/51, 2C-10D, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CLJI	**Cilicap**	**0.68**	**46**	P	**Pn**	**19 42 55.1**	**+1.9**
CLJI				S	**Sn**	**19 43 06.1**	**+1.7**
CISI	**Cisompet, Garu**	**0.94**	**312**	P	**Pn**	**19 42 58.1**	**+1.8**
CISI				S	**Sn**	**19 43 06.3**	**-3.4**
CISI	**Cisompet, Garu**	**0.94**	**312**	P	**Pn**	**19 42 57.6**	**+1.4**
	baz=1.0,SNR=1000						
CISI				S	**Sn**	**19 43 12.1**	**+2.4**
	baz=1.0,SNR=9.3						
TGJI	**Tegal**	**1.45**	**25**	P	**Pn**	**19 43 02.8**	**+0.2**
BJII	**Banjamegara**	**1.46**	**54**	P	**Pn**	**19 43 03.1**	**+0.3**
BJII				S	**Sn**	**19 43 20.8**	**-0.6**
LEM	**Lembang**	**1.62**	**327**	P	Pn	19 43 08.5	+3.4
LEM				S	Sn	19 43 33.1	+7.7
LEM	**Lembang**	**1.62**	**327**	P	Pn	19 43 08.5	+3.4
	baz=1.7,SNR=373						
LEM				S	Sn	19 43 32.4	+7.0
	baz=1.7,SNR=7.2						
YOGI	**Yogyakarta**	**1.80**	**78**	P	**Pn**	**19 43 06.8**	**-0.5**
YOGI				S	**Sn**	**19 43 28.8**	**-0.6**
UGM	**Wanagama**	**2.01**	**82**	P	**Pn**	**19 43 09.9**	**-0.1**
UGM				S	**Sn**	**19 43 32.5**	**-1.8**
UGM	**Wanagama**	**2.01**	**82**	P	**Pn**	**19 43 10.0**	**-0.1**
	baz=2.0,SNR=198						
UGM				S	**Sn**	**19 43 32.6**	**-1.8**
	baz=2.0,SNR=16						
SMRI	**Semarang**	**2.22**	**59**	P	**Pn**	**19 43 14.4**	**+1.6**
SMRI	**Semarang**	**2.22**	**59**	P	**Pn**	**19 43 14.5**	**+1.6**
	baz=2.3,SNR=60						
SKJI	**Sukabumi**	**2.27**	**301**	P	**Pn**	**19 43 15.5**	**+1.9**
DBJI	**Dramaga**	**2.39**	**313**	P	Pn	19 43 18.8	+3.6
PCJI	**Pacitan**	**2.63**	**90**	P	**Pn**	**19 43 18.7**	**+0.3**
TNG	**Tangerang**	**2.73**	**317**	P	Pn	19 43 28.3	+8.5
SBJI	**Serang**	**3.14**	**311**	P	Pn	19 43 29.5	+4.2
SJI	**Sawahan**	**3.25**	**82**	P	**Pn**	**19 43 27.3**	**+0.4**
PWJI	**Pagerwojo**	**3.26**	**87**	P	**Pn**	**19 43 26.8**	**-0.1**
XMI	**Christmas Isla**	**3.58**	**231**	P	**Pn**	**19 43 32.1**	**+0.8**
	baz=3.5,SNR=12						
XMI				S	**Sn**	**19 44 09.3**	**-3.3**
	baz=3.5,SNR=19						
XMIS	**Christmas Isla**	**3.63**	**231**	*eP*	**Pn**	**19 43 32.2**	**+0.3**
XMIS	**Christmas Isla**	**3.63**	**231**	P	**Pn**	**19 43 32.3**	**+0.3**
	baz=3.6,SNR=30						
XMIS				S	**Sn**	**19 44 09.6**	**-4.1**
	baz=3.6,SNR=16						
BLSI	**Bandar Lampung**	**4.29**	**311**	P	Pn	19 43 44.5	+3.4
BWJI	**Bawean**	**4.72**	**61**	P	**Pn**	**19 43 47.6**	**+0.7**
KASI	**Kota Agung**	**4.79**	**303**	P	Pn	19 43 51.5	+3.6
GMJI	**Gumukmas**	**4.88**	**91**	P	**Pn**	**19 43 49.4**	**+0.4**
BLJI	**Banyuglugur**	**5.05**	**85**	P	**Pn**	**19 43 52.5**	**+1.1**
LWLI	**Liwa**	**5.44**	**305**	P	Pn	19 44 01.7	+4.9
	526nm,0.8s,7μm2.1nm						
TPI	**Tanjungpandan**	**5.47**	**351**	P	**Pn**	**19 44 00.0**	**+2.9**
	55nm,0.8s,761nm0.5nm						
PBKI	**Pangkalan Bun**	**6.29**	**30**	P	**Pn**	**19 44 10.9**	**+2.6**
	381nm,0.9s,3μm2.0nm						
PMBI	**Palembang**	**6.42**	**324**	P	Pn	19 44 16.1	+6.0
	455nm,1.1s,4μm1.5nm						
PPBI	**Pangkal Pinang**	**6.44**	**338**	P	Pn	19 44 14.4	+4.0
	153nm,1.0s,1μm0.5nm						
DNP	**Denpasar**	**6.64**	**95**	P	Pn	19 44 16.5	+3.4
	469nm,0.6s,24μm5.3nm						
MNAI	**Manna**	**6.71**	**304**	P	Pn	19 44 17.1	+3.0
	394nm,0.7s,9μm1.9nm						
MNAI	**Manna**	**6

comp=Z,89nm,20.8s,baz=297,slow=37
FITZ Fitzroy Crossi 19.35 122 P Pn 19 46 59.5 0.0
baz=19,SNR=33
LBMI Labuha 20.35 69 P P 19 47 08.6 -0.1
224nm,1.0s,2μm
MEEK Meekatharra 20.70 154 P Pn 19 47 14.8 -0.6
baz=21,SNR=14
MEEK S **S 19 50 54.4 -5.1**
baz=21,SNR=8.7
TNTI Ternate 20.79 66 P Pn 19 47 15.7 -0.9
235nm,1.0s,2μm
KNRA Kununurra 21.15 112 P P 19 47 17.9 +0.7
baz=21,SNR=36
GAMI Galela, Maluku 21.65 63 P P 19 47 23.8 +1.2
416nm,1.0s,4μm
MORW Morawa 21.94 162 P P 19 47 28.2 +2.6
baz=22,SNR=8.9
MORW S **S 19 51 19.1 -4.6**
baz=22,SNR=8.2
MTN Manton Dam 22.70 104 S S 19 51 16.0 -21
baz=23,SNR=3.9
DAV Davao City (W) 22.79 49 LR LR 19 56 15.3
comp=Z,58nm,21.2s,baz=229,slow=36
KDU Kakadu 23.97 103 P P 19 47 45.4 -0.4
baz=24,SNR=22
FAKI Fak Fak 24.19 79 P P 19 47 46.7 -1.1
baz=24,SNR=9.7
NWAO Narrogin (SRO) 25.91 163 P P 19 48 04.8 +1.5
NWAO Narrogin (SRO) 25.91 163 P P 19 48 04.8 +1.5
17nm,0.8s,baz=334,slow=11,SNR=7.0
NWAO LR LR 19 58 40.2
comp=Z,146nm,18.0s,baz=201,slow=37
RKPI Ransiki, Papua 26.40 77 P P 19 48 07.1 -0.8
55nm,1.1s,652nm
WRA Warramunga Arr 27.59 118 P P 19 48 18.9 +0.3
WRA PcP **PcP 19 51 35.2 +0.5**
WRA Warramunga Arr 27.59 118 P P 19 48 18.9 +0.3
20nm,0.9s,baz=290,slow=11,SNR=56
WRA PcP **PcP 19 51 35.2 +0.5**
1.2nm,0.6s,baz=311,slow=2.4,SNR=5.0
WRAB Tennant Creek 27.59 118 *eP* **P 19 48 19.3 +0.7**
24nm,0.8s
CM31 Chiang Mai Arr 28.11 340 *eP* **P 19 48 21.6 -1.6**
5.1nm,0.8s
CMAR Chiang Mai Arr 28.11 340 P **P 19 48 21.9 -1.2**
CMAR PcP **PcP 19 51 37.6 +1.7**
CMAR pPcP 19 51 56.6
CMAR ScP **ScP 19 55 10.1 -0.4**
CMAR Chiang Mai Arr 28.11 340 P **P 19 48 21.9 -1.2**
4.9nm,0.8s,baz=176,slow=8.1,SNR=34
CMAR PcP **PcP 19 51 37.6 +1.7**
1.6nm,0.8s,baz=200,slow=2.7,SNR=5.1
CMAR pPcP 19 51 56.6
2.8nm,0.9s,baz=201,slow=3.6,SNR=6.2
CMAR ScP **ScP 19 55 10.1 -0.4**
0.6nm,0.6s,baz=193,slow=4.1,SNR=5.7
CMAR LR LR 20 01 51.9
comp=Z,147nm,18.6s,baz=154,slow=41
CHTO Chiang Mai 28.45 341 *eP* **P 19 48 24.6 -1.5**
5.4nm,0.8s
AS31 Alice Springs 28.78 125 *eP* **P 19 48 30.3 +1.2**
ASAR Alice Springs 28.78 125 P **P 19 48 29.6 +0.5**
ASAR PcP **PcP 19 51 38.4 +0.7**
ASAR Alice Springs 28.78 125 P **P 19 48 29.6 +0.5**
18nm,0.8s,baz=304,slow=8.9,SNR=154
ASAR PcP **PcP 19 51 38.4 +0.7**
3.2nm,0.7s,baz=315,slow=1.5,SNR=9.4
QIS Mount Isa 32.45 116 P **P 19 49 02.5 +0.9**
baz=32,SNR=7.4
COEN Coen 34.47 103 *eP* **P 19 49 18.5 -0.6**
165nm,0.7s
COEN Coen 34.47 103 P **P 19 49 18.9 -0.1**
baz=34,SNR=13
BBOO Buckleboo 35.36 138 P **P 19 49 27.3 +0.7**
baz=35,SNR=10
MTSU Mount Surprise 36.17 110 P **P 19 49 35.1 +1.4**
baz=36,SNR=28
PMG Port Moresby 38.19 95 P **P 19 49 51.3 +0.4**
PMG Port Moresby 38.19 95 P **P 19 49 51.3 +0.4**
8.9nm,0.5s,baz=302,slow=12,SNR=8.3
CTA Charters Tower 38.36 112 P **P 19 49 53.2 +1.0**
CTA Charters Tower 38.36 112 P **P 19 49 53.2 +1.0**
22nm,0.9s,baz=276,slow=12,SNR=15
CTAO Charters Tower 38.36 112 *eP* **P 19 49 53.0 +0.7**
45nm,1.3s
QLP Quilpie 38.49 123 P **P 19 49 55.2 +2.0**
baz=38,SNR=33
STKA Stephens Creek 38.73 132 P **P 19 49 56.6 +1.5**
STKA PcP **PcP 19 52 06.5 +0.8**
STKA Stephens Creek 38.73 132 P **P 19 49 56.6 +1.5**
84nm,0.6s,baz=307,slow=8.2,SNR=184
STKA PcP **PcP 19 52 06.5 +0.8**
7.5nm,0.6s,baz=315,slow=3.8,SNR=3.1
STKA LR LR 20 06 20.9
comp=Z,110nm,18.4s,baz=331,slow=37
STKA Stephens Creek 38.73 132 P **P 19 49 56.6 +1.5**
baz=39,SNR=152
HYB Hyderabad 39.04 311 *i*P **P 19 49 56.5 -1.5**
ODAN Odare 40.42 330 *eP* **P 19 50 07.0 -2.5**
13nm,0.6s
TAPN Taplejung 40.68 331 *eP* **P 19 50 09.5 -2.2**
14nm,0.7s
RAMN Ramite 40.89 329 *eP* **P 19 50 11.6 -1.8**
4.5nm,0.3s
LSA Lhasa 41.21 337 P **P 19 50 14.9 -1.3**
LSA pmax pmax
comp=Z,10.0nm,0.6s
LSA Lhasa 41.21 337 *eP* **P 19 50 14.4 -1.9**
comp=Z,11nm,0.8s
ARPS Mount Arapiles 41.53 138 P **P 19 50 20.1 +1.9**
baz=42,SNR=7.7
CMSA Cobar Meteorol 41.65 129 P **P 19 50 21.2 +1.9**
baz=42,SNR=38
GUN Gumba 42.04 329 *eP* **P 19 50 20.2 -2.7**
comp=Z,15nm,0.6s
DMN Daman 42.19 328 *eP* **P 19 50 21.8 -2.2**
comp=Z,13nm,0.7s
KKN Kakani 42.25 329 *eP* **P 19 50 22.1 -2.3**
comp=Z,11nm,0.7s
KOLN Koldanda 43.12 327 *eP* **P 19 50 28.9 -2.6**
comp=Z,21nm,0.7s
POO Poona 43.30 308 *ex* **P 19 50 30.0 -2.9**
DANN Dangsing 43.49 328 *eP* **P 19 50 31.6 -3.0**
comp=Z,21nm,0.5s
TOO Toolangi 44.41 137 P P 19 50 44.6 +3.1
baz=44,SNR=5.4
YNG Young 44.90 131 P **P 19 50 47.6 +2.1**
baz=45,SNR=8.8
ARMA Armidale 45.93 125 P **P 19 50 56.8 +3.0**
baz=46,SNR=4.9
GTA Gaotai 48.04 351 *eP* **P 19 51 11.4 +1.3**
GTA pmax pmax
comp=Z,5.0nm,1.2s
KSAR Wonju Array Be 48.88 21 P **P 19 51 15.1 -1.2**
KSRS Korea Array 48.90 21 P **P 19 51 15.1 -1.4**
comp=Z,1.4nm,0.8s,baz=193,slow=7.5,SNR=4.5
HNR Honiara 50.80 95 P **P 19 51 30.9 -0.5**
HNR Honiara 50.80 95 P **P 19 51 30.9 -0.5**
comp=Z,25nm,0.4s,baz=255,slow=5.4,SNR=5.0
MAJO Matsushiro 52.51 30 *eP* P 19 51 40.3 -3.4
comp=Z,7.8nm,0.9s
MAT Matsushiro 52.51 30 P P 19 51 40.4 -3.3
SONM Songino Array 55.81 358 P **P 19 52 06.4 -1.3**
SONM PcP **PcP 19 53 03.6 -2.2**
SONM ScP **ScP 19 56 57.0 -1.4**
SONM Songino Array 55.81 358 P **P 19 52 06.4 -1.3**
comp=Z,2.4nm,0.6s,baz=179,slow=8.8,SNR=18
SONM PcP **PcP 19 53 03.7 -2.2**
comp=Z,1.5nm,0.7s,baz=208,slow=4.9,SNR=3.4
SONM ScP **ScP 19 56 57.0 -1.4**
comp=Z,1.1nm,0.8s,baz=173,slow=4.8,SNR=6.0
SONM LR LR 20 16 25.1
comp=Z,66nm,19.6s,baz=248,slow=36
ULN Ulaanbaatar 55.83 359 *eP* **P 19 52 05.9 -1.9**
comp=Z,2.4nm,0.5s
USRK Ussuriysk Arra 56.31 20 P **P 19 52 08.8 -2.3**
comp=Z,1.6nm,0.5s,baz=211,slow=7.5,SNR=5.1
TKM2 Tokmak 2 59.05 332 *eP* **P 19 52 28.6 -2.0**
comp=Z,4.2nm,0.8s
MK31 Makanchi Array 59.52 339 *eP* **P 19 52 31.3 -2.2**
MKAR Makanchi Array 59.52 339 P **P 19 52 31.8 -1.8**
MKAR PcP **PcP 19 53 21.8 +1.4**
MKAR ScP **ScP 19 57 13.7 -1.0**
MKAR Makanchi Array 59.52 339 P **P 19 52 31.8 -1.8**
comp=Z,4.0nm,0.5s,baz=149,slow=5.7,SNR=67
MKAR PcP **PcP 19 53 21.8 +1.4**
comp=Z,1.7nm,0.6s,baz=147,slow=6.0,SNR=4.2
MKAR ScP **ScP 19 57 13.7 -1.0**
comp=Z,9.0nm,0.8s,baz=148,slow=7.0,SNR=3.9
MKAR LR LR 20 18 28.8
comp=Z,34nm,19.7s,baz=153,slow=36
KURK Kurchatov 64.13 339 *eP* **P 19 53 02.3 -2.1**
comp=Z,3.2nm,0.7s
RPZ Rata Peaks 64.63 135 P **P 19 53 09.3 +1.4**
RPZ Rata Peaks 64.63 135 P **P 19 53 09.3 +1.4**
comp=Z,12nm,0.8s,baz=233,slow=5.1,SNR=4.0
ZAA0 Zalesovo Array 65.06 345 *eP* **P 19 53 07.6 -2.8**
ZALV Zalesovo Beam 65.06 345 P **P 19 53 08.1 -2.3**
ZALV Zalesovo Beam 65.06 345 P **P 19 53 08.1 -2.3**
comp=Z,1.9nm,0.3s,baz=154,slow=6.3,SNR=11
MAW Mawson 66.68 197 *eP* **P 19 53 23.0 +2.4**
comp=Z,4.0nm,0.7s
MAW Mawson 66.68 197 P **P 19 53 23.5 +2.9**
comp=Z,16nm,0.6s,baz=50,slow=6.3,SNR=71
MAW Mawson 66.68 197 P **P 19 53 23.5 +2.9**
baz=67,SNR=44
URZ Urewera 68.18 128 P **P 19 53 31.5 +0.8**
URZ Urewera 68.18 128 P **P 19 53 31.5 +0.8**
comp=Z,11nm,0.7s,baz=4.0,slow=3.9,SNR=5.1
RDF Al-Radifah 69.33 305 *eP* **P 19 53 38.0 0.0**
RDF AMb AMB 19 53 46.5
comp=Z,64nm,1.1s
UMR Umm Al-Rimmam 69.43 306 *eP* **P 19 53 38.5 0.0**
UMR AMb AMB 19 53 40.1
comp=Z,63nm,0.7s
NAY Al-Naaiem 69.70 305 *eP* **P 19 53 39.6 -0.7**
NAY AMb AMB 19 53 41.6
comp=Z,17nm,0.7s
MIB Mutribah 69.83 306 *eP* **P 19 53 40.6 -0.4**
MIB AMb AMB 19 53 46.1
comp=Z,26nm,0.7s
ABKAR Akbulak array 71.20 329 *eP* **P 19 53 47.5 -1.4**
comp=Z,5.5nm,0.6s
IBDR Badra 72.21 309 *eP* P 19 54 03.6 +8.2
IBDR *eS* **SKiKP 20 03 25.1 +0.2**
BHD Baghdad 73.47 308 *eP* **PcP 19 54 14.0 -4.6**
BHD *eS* S 20 03 44.5 +18
PETK Petropavlovsk- 73.91 28 P **P 19 54 03.9 -1.1**
PETK Petropavlovsk- 73.91 28 P **P 19 54 03.9 -1.1**
comp=Z,2.0nm,0.7s,baz=195,slow=3.8,SNR=6.8
VNDA Vanda 74.53 170 *eP* **P 19 54 10.0 +1.8**
comp=Z,9.3nm,0.9s
VNDA Vanda 74.53 170 P **P 19 54 10.3 +2.1**
comp=Z,8.4nm,0.8s,baz=312,slow=5.8,SNR=45
DGRG David-gareji 75.95 316 P **P 19 54 17.4 +0.3**
TBLG Delisi 76.50 316 P **P 19 54 20.6 +0.4**
GUDG Gudauri 76.97 317 P **P 19 54 23.4 +0.4**
GOR Gori 77.03 316 P **P 19 54 23.9 +0.7**
ONI Oni 77.72 317 P **P 19 54 28.0 +1.0**
KBZ Khabaz 78.54 318 P **P 19 54 31.7 +0.3**
KBZ Khabaz 78.54 318 P **P 19 54 31.7 +0.3**
comp=Z,9.4nm,0.9s,baz=122,slow=4.6,SNR=20
LSZ Lusaka 78.61 256 *eP* **P 19 54 34.2 +1.6**
comp=Z,4.0nm,0.9s
BOSA Boshof 80.24 242 P **P 19 54 43.6 +2.3**
BOSA Boshof 80.24 242 P **P 19 54 43.6 +2.3**
comp=Z,4.7nm,1.1s,baz=103,slow=11,SNR=4.6
QSPA South Pole Qui 81.81 180 *eP* **P 19 54 50.6 +1.8**
comp=Z,5.1nm,0.6s
QSPA South Pole Qui 81.81 180 LR LR 20 24 28.3
comp=Z,85nm,21.6s,baz=235,slow=31
BRTR Keskin Array B 83.74 311 P **P 19 54 59.1 -0.2**
BRTR pP **pP 19 55 16.8 -2.9**
BRTR Keskin Array B 83.74 311 P **P 19 54 59.1 -0.2**
comp=Z,3.6nm,0.7s,baz=133,slow=6.5,SNR=21
BRTR pP **pP 19 55 16.8 -2.9**
comp=Z,4.5nm,0.8s,baz=132,slow=7.4,SNR=6.4
BR131 Keskin Array S 83.74 311 *eP* **P 19 54 59.1 -0.2**
comp=Z,3.0nm,0.8s
SNAA Sanae 88.84 197 *eP* **P 19 55 26.0 +2.3**
comp=Z,21nm,1.4s
SNAA Sanae 88.84 197 LR LR 20 28 28.9
comp=Z,30nm,21.2s,baz=18,slow=31
AKASG Malin Array Be 89.56 321 P **P 19 55 27.6 +0.3**
AKASG Malin Array Be 89.56 321 P **P 19 55 27.6 +0.3**
comp=Z,0.7nm,0.4s,baz=86,slow=4.6,SNR=6.6
BUR08 Bucovina Ar. S 91.51 318 P **P 19 55 37.1 +0.5**
ARCES ARCESS Array B 95.17 339 P **P 19 55 51.8 -1.0**
ARCES ARCESS Array B 95.17 339 P **P 19 55 51.8 -1.0**
comp=Z,2.2nm,0.9s,baz=98,slow=6.5,SNR=4.7
ARCES LR LR 20 41 02.8
comp=Z,49nm,19.8s,baz=56,slow=37
TORD Torodi Ar. Bea 108.12 281 PKiKP **PKiKP 20 00 58.8 +0.3**
TORD Torodi Ar. Bea 108.12 281 PKiKP **PKiKP 20 00 58.8 +0.3**
comp=Z,0.4nm,0.8s,baz=115,slow=1.3,SNR=2.8
YKA Yellowknife Ar 117.44 21 PKP **PKPdf 20 01 16.2 +1.3**
YKA pPKP **pPKPdf 20 01 34.5 -1.7**
YKA Yellowknife Ar 117.44 21 PKP **PKPdf 20 01 16.2 +1.3**
comp=Z,0.9nm,0.7s,baz=316,slow=1.7,SNR=3.4
YKA pPKP **pPKPdf 20 01 34.5 -1.7**
comp=Z,1.1nm,0.6s,baz=341,slow=2.2,SNR=4.5
NVAR Mina Array Bea 128.29 47 SKPbc SKiKP 20 04 48.8 -18
comp=Z,0.5nm,0.6s,baz=252,slow=4.9,SNR=3.6
PDAR Pinedale Array 132.04 38 SKPbc **SKPbc 20 05 02.2 -1.3**
PDAR Pinedale Array 132.04 38 SKPbc **SKPbc 20 05 02.2 -1.3**
comp=Z,4.5nm,1.3s,baz=45,slow=0.2,SNR=5.9
SCHQ Schefferville 133.34 356 PKP **PKPdf 20 01 47.1 +1.6**
SCHQ pPKP **pPKPdf 20 02 06.6 -0.3**
SCHQ SKPbc **SKPbc 20 05 07.1 -0.1**
SCHQ Schefferville 133.34 356 PKP **PKPdf 20 01 47.1 +1.6**
comp=Z,1.2nm,0.5s,baz=0.0,slow=2.0,SNR=3.5
SCHQ pPKP **pPKPdf 20 02 06.6 -0.3**
comp=Z,2.2nm,0.6s,baz=206,slow=1.9,SNR=3.1
SCHQ SKPbc **SKPbc 20 05 07.1 -0.1**
comp=Z,4.5nm,0.7s,baz=7.2,slow=2.7,SNR=7.4
ULM Lac du Bonnet 133.42 21 SKPbc **SKPbc 20 05 06.2 -1.5**
ULM Lac du Bonnet 133.42 21 SKPbc **SKPbc 20 05 06.2 -1.5**
comp=Z,2.5nm,0.4s,baz=336,slow=5.2,SNR=3.0
ANMO Albuquerque 138.34 45 SKPbc **SKPbc 20 05 23.4 -0.3**
ANMO Albuquerque 138.34 45 SKPbc **SKPbc 20 05 23.4 -0.3**
comp=Z,1.9nm,0.8s,baz=269,slow=3.8,SNR=6.3
CPUP Villa Florida 143.03 201 PKP **PKPdf 20 02 02.8 -1.3**
CPUP Villa Florida 143.03 201 PKP **PKPdf 20 02 02.8 -1.3**
comp=Z,2.0nm,0.4s,baz=179,slow=1.1,SNR=10
TXAR Lajitas Array 143.18 51 PKP PKPbc 20 02 02.5 +0.9
TXAR SKPbc **SKiKP 20 05 36.3 -1.1**
TXAR Lajitas Array 143.18 51 PKP PKPbc 20 02 02.5 +0.9
comp=Z,0.8nm,0.7s,baz=318,slow=1.7,SNR=8.4
TXAR SKPbc **SKiKP 20 05 36.3 -1.1**
comp=Z,1.1nm,0.8s,baz=281,slow=0.6,SNR=7.0
Z32A Haskell 144.03 42 ↑↑P **PKPdf 20 02 05.0 -0.7**
baz=144
530A J-C Ranch, Com 144.53 48 ↓↓P **PKPdf 20 02 05.9 -0.8**
baz=144,SNR=12
232A Coleman 144.77 44 ↓↓P **PKPdf 20 02 06.9 -0.2**
baz=144,SNR=5.4
431A Sonora 144.77 47 ↓↓P **PKPdf 20 02 06.6 -0.5**
baz=144
332A Millersview 144.99 45 ↓↓P **PKPdf 20 02 07.8 +0.3**
baz=145,SNR=19
531A Rocksprings 145.10 47 ↓↓P **PKPdf 20 02 07.6 -0.1**
baz=145,SNR=18
432A Menard 145.25 46 ↓↓P **PKPdf 20 02 07.8 -0.1**
baz=145,SNR=8.2
JCT Junction City 145.46 46 *e*PKPdf **PKPab 20 02 08.6 -0.1**
JCT Junction City 145.46 46 ↓↓P **PKPab 20 02 08.9 +0.3**
baz=145,SNR=19
631A Perdido Creek 145.48 48 ↓↓P **PKPab 20 02 09.0 +0.2**
baz=145,SNR=9.5
532A Rocksprings 145.58 47 ↓↓P **PKPab 20 02 09.1 -0.1**
baz=145,SNR=9.0
HRV Adam Dziewonsk 145.82 0 *e*PKPdf **PKPab 20 02 09.6 0.0**
BINY Binghamton 145.90 6 *e*PKPdf **PKPab 20 02 09.9 0.0**
632A Uvalde 146.01 48 ↑↑P **PKPab 20 02 10.8 0.0**
baz=146,SNR=7.1
OLIL Olney 146.11 24 *e*PKPdf **PKPbc 20 02 09.9 -0.1**
732A Laxson Ranch, 146.29 49 ↓↓P **PKPab 20 02 11.9 +0.1**
baz=146,SNR=5.3
BDFB Brasilia 146.82 225 PKPbc **PKPab 20 02 15.4 +1.1**
BDFB Brasilia 146.82 225 PKPbc **PKPab 20 02 15.4 +1.1**
comp=Z,3.6nm,0.5s,baz=95,slow=4.1,SNR=4.7
WVT Waverly 148.44 26 *e*PKPbc **PKPbc 20 02 16.7 0.0**
LVC Limon Verde 149.28 185 *e*PKPbc **PKPab 20 02 21.8 -2.2**
CPCT Cooper Cave 150.36 22 *e*PKPbc **PKPbc 20 02 22.0 +0.2**
TKL Tuckaleechee C 150.44 21 PKPbc **PKPbc 20 02 22.0 +0.4**
TKL pPKPbc **pPKPbc 20 02 41.6 -1.3**
TKL Tuckaleechee C 150.44 21 PKPbc **PKPbc 20 02 22.0 +0.4**
comp=Z,8.4nm,0.6s,baz=157,slow=4.5,SNR=10
TKL pPKPbc **pPKPbc 20 02 41.6 -1.3**
comp=Z,7.5nm,0.7s,baz=107,slow=1.4,SNR=3.4
LPAZ La Paz 155.45 188 PKPab **PKPab 20 02 53.2 +2.8**
LPAZ La Paz 155.45 188 PKPab **PKPab 20 02 53.2 +2.8**
comp=Z,3.7nm,0.6s,baz=185,slow=4.2,SNR=15

FUNV 17 19:46:10.1, 8.77N×70.78W, h2km, MW3.6, 4C-1D, Venezuela

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SOCV	**Socops**	**0.49**	**189**	↑*i*P		Pg	19 46 19.4	-0.2
SOCV				*e*S		Sg	19 46 27.2	+1.3
VIGV	**El Vigia**	**0.58**	**277**	↓*i*P		Pg	19 46 21.3	0.0
VIGV				*e*S		Sg	19 46 29.5	+0.6
SANV	**Sanarito**	**1.43**	**59**	↑*e*P		Pn	19 46 35.8	-1.4
QARV	**Quebrada Arrib**	**1.45**	**10**	↑*e*P		Pn	19 46 36.9	-0.6
QARV				*e*S		Sb	19 46 56.8	-0.1
CAPV	**Capacho**	**1.76**	**239**	*e*P		Pn	19 46 41.6	-0.4
CAPV				*e*S		Sn	19 47 04.1	-1.0
TEPV	**Terepaima**	**1.97**	**53**	*e*P		Pn	19 46 43.9	-0.6
TEPV				*e*S		Sn	19 47 09.0	-0.7
SIQV	**Siquisique**	**2.10**	**27**	*e*P		Pn	19 46 46.3	0.0
SIQV				*e*S		Sn	19 47 12.6	-0.4
DABV	**Dabajuro**	**2.14**	**4**	*e*P		Pn	19 46 46.2	-0.6
ELOV	**Elorza**	**2.18**	**144**	*e*P		Pn	19 46 46.7	-0.6
MAPV	**Macapo**	**2.52**	**65**	↑*e*P		Pn	19 46 51.9	-0.2
MAPV				*e*S		Sn	19 47 21.6	-1.9
BAUV	**El Baul**	**2.71**	**86**	*e*P		Pn	19 46 53.2	-1.5
BAUV				*e*S		Sn	19 47 25.4	-2.7
JACV	**Jacura**	**3.00**	**40**	*e*P		Pn	19 46 57.0	-1.7
MONV	**Montecano**	**3.26**	**14**	*e*P		Pn	19 47 00.8	-1.5
TURV	**Turiamo**	**3.35**	**60**	*e*P		Pn	19 47 02.7	-0.7
MERV	**Las Mercedes**	**4.46**	**83**	*e*P		Pn	19 47 16.8	-1.9
BIRV	**Birongo**	**4.76**	**69**	*e*P		Pn	19 47 21.7	-1.2
CUPV	**Cœpira**	**5.09**	**75**	*e*P		Pn	19 47 26.1	-1.4

IDC 17 19:54:56.7±2.3, 1.32N×127.10E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.4/20, mbtmp3.6/3, MS2.9/1, Ms1 2.9/1, ms1mx1.6/25, Error ellipse: s-maj=205.1km s-min=23.6km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.67**	**229**	LR		LR	20 01 30.6	
	comp=Z,73nm,20.4s,baz=87,slow=41							
WRA	**Warramunga Arr**	**22.29**	**162**	P		P	19 59 54.6	-1.2
	0.7nm,0.4s,baz=340,slow=11,SNR=7.3							
ASAR	**Alice Springs**	**25.70**	**165**	P		P	20 00 29.6	+0.8
	0.7nm,0.3s,baz=346,slow=12,SNR=20							
MKAR	**Makanchi Array**	**59.74**	**326**	P		P	20 05 03.3	-0.1
	0.4nm,0.4s,baz=119,slow=7.8,SNR=14							

CSEM 17 20:49:59.3, 36.55N×21.20E, h20km, MD3.6, After ATH
ATH 17 20:49:59.3, 36.55N×21.20E, h20km±2km, MD3.6/13, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.56**	**51**	*e*PN		Pb	20 50 10.2	-0.2
PYL				*e*SN		Sb	20 50 18.4	+0.4
PYL	**PYLOS**	**0.56**	**51**	*e*Pn		Pb	20 50 10.2	-0.2
PYL				*e*Sn		Sb	20 50 18.4	+0.4
ITM	**Ithomi**	**0.86**	**43**	*e*PN		Pb	20 50 15.5	-0.1
ITM				*e*SN		Sn	20 50 27.6	-0.7
ITM	**Ithomi**	**0.86**	**43**	*e*Pn		Pb	20 50 15.5	-0.1
ITM				*e*Sn		Sn	20 50 27.6	-0.7
DYR	**Agios Nikonas**	**0.94**	**77**	*e*PN		Pn	20 50 17.8	+0.4
DYR				*e*SN		Sn	20 50 31.0	+0.8
DYR	**Agios Nikonas**	**0.94**	**77**	*e*Pn		Pn	20 50 17.8	+0.4
DYR				*e*Sn		Sn	20 50 31.0	+0.8
AMT	**Artemida-Makis**	**1.06**	**22**	*e*PN		Pn	20 50 19.3	+0.2
AMT				*e*SN		Sn	20 50 35.0	+1.6
AMT	**Artemida-Makis**	**1.06**	**22**	*e*Pn		Pn	20 50 19.3	+0.2
AMT				*e*Sn		Sn	20 50 35.0	+1.6
VLX	**Vlachokerasia**	**1.25**	**49**	*e*PN		Pb	20 50 23.2	+0.8
VLX				*e*SN		Sn	20 50 40.0	+1.8
VLX	**Vlachokerasia**	**1.25**	**49**	*e*Pn		Pb	20 50 23.2	+0.8
VLX				*e*Sn		Sn	20 50 40.0	+1.8
VLI	**Veliai**	**1.41**	**83**	*e*PN		Pb	20 50 26.2	+1.3
VLI	**Veliai**	**1.41**	**83**	*e*Pn		Pb	20 50 26.2	+1.3
KYTH	**Kithira**	**1.50**	**100**	*e*PB		Pb	20 50 26.5	-0.1
KYTH	**Kithira**	**1.50**	**100**	*e*Pb		Pb	20 50 26.5	-0.1
RLS	**Riolos of Patr**	**1.52**	**8**	*e*PN		Pb	20 50 27.6	+0.8
RLS	**Riolos of Patr**	**1.52**	**8**	*e*Pn		Pb	20 50 27.6	+0.8
GUR	**Goura**	**1.66**	**33**	*e*PN		Pb	20 50 28.9	-0.4
GUR	**Goura**	**1.66**	**33**	*e*Pn		Pb	20 50 28.9	-0.4
KLV	**Kalavryta, Ach**	**1.67**	**27**	*e*PN		Pb	20 50 30.3	+0.8
KLV	**Kalavryta, Ach**	**1.67**	**27**	*e*Pn		Pb	20 50 30.3	+0.8
VLS	**Valsamata**	**1.70**	**344**	*e*PB		Pb	20 50 29.3	-0.5
VLS	**Valsamata**	**1.70**	**344**	*e*Pb		Pb	20 50 29.3	-0.5
LAKA	**Lakka**	**1.80**	**20**	*e*PN		Pb	20 50 31.9	+0.3
LAKA	**Lakka**	**1.80**	**20**	*e*Pn		Pb	20 50 31.9	+0.3
ANKY	**Antikythira Is**	**1.83**	**111**	*e*PN		Pb	20 50 32.0	-0.1
ANKY	**Antikythira Is**	**1.83**	**111**	*e*Pn		Pb	20 50 32.0	-0.1
DID	**Didima**	**1.89**	**59**	*e*PB		Pb	20 50 32.2	-1.0
DID	**Didima**	**1.89**	**59**	*e*Pb		Pb	20 50 32.2	-1.0
EFP	**Efpalio**	**1.96**	**16**	*e*PN		Pb	20 50 34.2	0.0
EFP	**Efpalio**	**1.96**	**16**	*e*Pn		Pb	20 50 34.2	0.0
KALE	**Kalithea**	**1.98**	**22**	*e*PN		Pb	20 50 35.1	+0.3
KALE	**Kalithea**	**1.98**	**22**	*e*Pn		Pb	20 50 35.1	+0.3

IDC 17 20:59:56.9±0.8, 29.52S×177.03W, h0km, mb4.2/7, mb1 4.4/9, mb1mx4.2/20, mbtmp4.2/9, ML4.2/2, MS4.0/17, Ms1 4.0/17, ms1mx3.9/32, Error ellipse: s-maj=21.4km s-min=17.1km az=7.0
ISCJB 17 21:00:00.0±0.8, 29.67S±0.06×177.0W±0.1, h31km, mb4.3/9, MS4.1/16, Error ellipse: s-maj=13.0km s-min=8.3km az=163.2
NEIC 17 21:00:03.3±1.8, 29.45S×177.20W, h43km±13km, mb4.8/2, Error ellipse: s-maj=18.0km s-min=12.2km az=77.0
ISC 17 21:00:02.0±0.6, 29.53S±0.07×177.05W±0.08, h31km, n62, σ1s24/50, mb4.3/9, MS4.1/16, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.81**	**290**	Pn		**Pn**	**21 00 16.8**	**-0.4**
RAO				Sn		**Sb**	**21 00 29.4**	**+1.3**
RAO	**Raoul Island**	**0.81**	**290**	Pn		**Pn**	**21 00 16.8**	**-0.4**
	1μm,0.3s,baz=86,slow=12,SNR=93							
RAO				Sn		**Sb**	**21 00 29.4**	**+1.3**
	3μm,0.3s,baz=264,slow=24,SNR=17							
URZ	**Urewera**	**9.96**	**208**	Pn		**Pn**	**21 02 23.5**	**+0.4**
URZ				Sn		**Sn**	**21 04 12.9**	**-0.9**
URZ	**Urewera**	**9.96**	**208**	Pn		**Pn**	**21 02 23.5**	**+0.4**
	1.2nm,0.3s,baz=21,slow=17,SNR=3.5							
URZ				Sn		**Sn**	**21 04 12.9**	**-0.9**
	4.6nm,0.3s,baz=98,slow=21,SNR=7.8							
DZM	**Mont Dzumac**	**16.60**	**293**	*e*P		**P**	**21 03 55.9**	**+1.0**
	56nm,1.5s							
DZM				*e*LR		LR	21 07 53.0	
	1μm,23.9s							
DZM	**Mont Dzumac**	**16.60**	**293**	LR		LR	21 09 03.8	
	comp=Z,719nm,18.4s,baz=204,slow=33							
RPZ	**Rata Peaks**	**17.05**	**211**	*e*P		**Pn**	**21 03 57.5**	**-0.6**
RPZ				S		Sn	21 06 53.0	-14
RPZ	**Rata Peaks**	**17.05**	**211**	P		**Pn**	**21 03 57.8**	**-0.3**
	1.6nm,0.3s,baz=89,slow=16,SNR=8.6							
RPZ				S		Sn	21 06 53.0	-14
	0.5nm,0.3s,baz=43,slow=15,SNR=2.6							
TBI	**Tubuai**	**25.43**	**83**	*e*LR		LR	21 11 40.2	
	503nm,27.8s,baz=253							
PPT2	**Papeete2**	**27.77**	**71**	*e*LQ		LQ	21 11 11.4	
	215nm,24.0s							
PPT2				*e*LR		LR	21 12 38.5	
	477nm,26.5s,baz=242							
PPT	**Papeete**	**27.78**	**71**	LR		LR	21 13 49.8	
	comp=Z,283nm,18.0s,baz=190,slow=30							
HNR	**Honiara**	**29.38**	**308**	LR		LR	21 15 45.2	
	comp=Z,151nm,19.9s,baz=138,slow=32							
CTAO	**Charters Tower**	**34.49**	**277**	*e*P		**P**	**21

comp=Z,384nm,19.1s,baz=132,slow=35
WRAB Tennant Creek 44.89 271 *e*P **P 21 08 13.2 -0.8**
WRA Warramunga Arr 44.90 271 P **P 21 08 13.0 -1.1**
WRA Warramunga Arr 44.90 271 P **P 21 08 13.0 -1.1**
3.1nm,0.9s,baz=110,slow=6.2,SNR=10.0
FITZ Fitzroy Crossi 53.19 269 P **P 21 09 16.9 -0.7**
FITZ Fitzroy Crossi 53.19 269 P **P 21 09 16.9 -0.7**
6.2nm,1.1s,baz=96,slow=9.2,SNR=4.2
FITZ LR LR 21 32 28.8
comp=Z,239nm,20.8s,baz=120,slow=37
CASY Casey 56.29 208 *e*P **P 21 09 39.9 +0.6**
8.9nm,0.9s
QSPA South Pole Qui 60.58 180 *e*P **P 21 10 11.6 +2.2**
9.3nm,0.9s
MAW Mawson 73.41 200 P **P 21 11 29.4 -1.3**
MAW Mawson 73.41 200 P **P 21 11 29.4 -1.3**
1.4nm,0.8s,baz=110,slow=6.5,SNR=3.2
MAW LR LR 21 43 14.0
comp=Z,98nm,19.1s,baz=333,slow=35
PFO Pinyon Flat Ob 85.01 47 LR LR 21 41 11.8
comp=Z,69nm,20.8s,baz=310,slow=29
PETK Petropavlovsk- 85.18 345 LR LR 21 45 01.5
comp=Z,59nm,20.6s,baz=246,slow=32
YBH Yreka Blue Hor 86.84 38 LR LR 21 46 51.2
comp=Z,57nm,18.8s,baz=168,slow=32
USRK Ussuriysk Arra 86.89 326 P **P 21 12 43.8 +0.3**
1.4nm,0.7s,baz=130,slow=3.0,SNR=5.3
NVAR Mina Array Bea 87.04 42 P **P 21 12 44.7 0.0**
NVAR Mina Array Bea 87.04 42 P **P 21 12 44.7 0.0**
0.2nm,0.3s,baz=231,slow=5.7,SNR=3.1
ELK Elko 90.35 42 LR LR 21 48 49.4
comp=Z,123nm,19.8s,baz=69,slow=32
BBB Bella Bella 91.94 28 LR LR 21 44 35.8
comp=Z,73nm,21.7s,baz=111,slow=29
ANMO Albuquerque 92.39 51 LR LR 21 50 51.8
comp=Z,52nm,18.6s,baz=249,slow=33
NEW Newport 94.19 35 LR LR 21 53 06.7
comp=Z,63nm,18.7s,baz=60,slow=34
PDAR Pinedale Array 94.94 43 LR LR 21 53 02.2
comp=Z,66nm,18.9s,baz=13,slow=34
LPAZ La Paz 97.74 114 LR LR 21 46 47.5
comp=Z,55nm,20.5s,baz=313,slow=29
KURK Kurchatov 121.04 314 *e*PKPdf **PKPdf 21 18 54.5 +3.4**
ARCES ARCESS Array B 137.91 348 PKP **PKPdf 21 19 22.7 +0.1**
ARCES ARCESS Array B 137.91 348 PKP **PKPdf 21 19 22.7 +0.1**
1.4nm,0.8s,baz=349,slow=3.7,SNR=4.3
FINES FINESS Array B 144.60 341 PKP **PKPab 21 19 32.2 -1.2**
FINES FINESS Array B 144.60 341 PKP **PKPab 21 19 32.2 -1.2**
5.5nm,0.9s,baz=33,slow=7.3,SNR=4.4
KBZ Khabaz 145.30 305 PKPbc **PKPdf 21 19 35.7 -0.8**
KBZ Khabaz 145.30 305 PKPbc **PKPdf 21 19 35.7 -0.8**
6.0nm,1.2s,baz=94,slow=1.2,SNR=7.2
NB2 NORSAR Subarra1 48.01 352 PKP **PKPbc 21 19 42.4 -1.4**
comp=Z,0.9nm,0.7s,baz=12,slow=3.0
NOA NORSAR Array B 148.01 352 PKPbc **PKPbc 21 19 42.6 -1.1**
NOA NORSAR Array B 148.01 352 PKPbc **PKPbc 21 19 42.6 -1.1**
comp=Z,2.2nm,0.8s,baz=14,slow=4.5,SNR=4.1
MALT Malatya 149.40 296 *e*PKPab **PKPab 21 19 56.1 +3.0**
AKASG Malin Array Be 151.09 324 PKPbc **PKPbc 21 19 51.1 -0.5**
AKASG Malin Array Be 151.09 324 PKPbc **PKPbc 21 19 51.1 -0.5**
comp=Z,1.2nm,0.5s,baz=58,slow=2.0,SNR=15
BR131 Keskin Array S 152.89 300 *e*PKPbc **PKPbc 21 19 55.1 -1.2**
BRTR Keskin Array B 152.89 300 PKPbc **PKPbc 21 19 56.5 +0.2**
BRTR Keskin Array B 152.89 300 PKPbc **PKPbc 21 19 56.5 +0.2**
comp=Z,1.5nm,0.8s,baz=129,slow=3.3,SNR=11
KWP Kalwaria Pacla 154.94 329 *e*PKPab **PKPab 21 20 14.6 -1.0**
GERES GERESS Array B 159.03 340 PKPab **PKPab 21 20 32.2 -1.1**
GERES GERESS Array B 159.03 340 PKPab **PKPab 21 20 32.2 -1.1**
comp=Z,0.6nm,1.0s,baz=57,slow=4.9,SNR=5.5
TORD Torodi Ar. Bea 163.66 176 PKPab **PKPab 21 20 56.0 +1.9**
TORD Torodi Ar. Bea 163.66 176 PKPab **PKPab 21 20 56.1 +1.9**
comp=Z,1.0nm,1.0s,baz=179,slow=2.5,SNR=7.3

*ISCJB **17** 21:09:06.5±0.6, 5.°34N±0.°06×125.°9E±0.°1, h150km, mb3.6/9, Error ellipse: s-maj=20.5km s-min=7.2km az=163.4*
*MAN **17** 21:09:08, 5.°52N×125.°86E, h156km, mb4.5, ML3.4, MS3.3*
*IDC **17** 21:09:08.8±0.8, 5.°57N×125.°80E, h174km±6km, mb3.3/9, mb1 3.5/9, mb1mx3.3/23, mbtmp3.3/9, Error ellipse: s-maj=36.2km s-min=11.0km az=77.0*
ISC 17 21:09:06.6±0.7, **5.°46N**±0.°08×**125.°8E**±0.°1, **h150**km, **n18,** σ=2.9**11/23, mb3.5/9, 2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.55**	**17**	*e*P		**Pn**	**21 09 38.9**	**+2.2**
DAV	**Davao City (W)**	**1.61**	**352**	P		**Pn**	**21 09 40.0**	**+2.6**
	123nm,0.3s,baz=187,slow=8.1,SNR=6.2							
DAV				S		**Sn**	**21 10 05.0**	**+3.9**
	237nm,0.3s,baz=90,slow=20,SNR=12							
DMPH	**Davao City--Mi**	**1.64**	**350**	*e*P		**Pn**	**21 09 40.3**	**+2.6**
DMPH				*e*S		**Sn**	**21 10 04.3**	**+2.8**
CTBH	**Cotabato--PC H**	**2.33**	**319**	*e*P		**Pn**	**21 09 47.6**	**+1.9**
BUKP	**Musuan**	**2.51**	**343**	*e*P		**Pn**	**21 09 50.2**	**+2.3**
BUKP				*e*S		**Sn**	**21 10 17.2**	**-2.7**
CGP	**Cagayan de Oro**	**3.17**	**340**	*e*P		**Pn**	**21 09 57.9**	**+1.8**
PAGZ	**Pagadian**	**3.38**	**315**	*e*P		**Pn**	**21 10 00.8**	**+2.1**
IPIL	**Ipil**	**3.95**	**306**	*e*P		**Pn**	**21 10 08.8**	**+2.6**
FITZ	**Fitzroy Crossi**	**23.41**	**180**	P		**P**	**21 14 03.3**	**+1.1**
	2.9nm,0.8s,baz=0.5,slow=12,SNR=8.1							
WRA	**Warramunga Arr**	**26.60**	**162**	P		**P**	**21 14 31.5**	**+0.4**
	0.5nm,0.5s,baz=341,slow=11,SNR=6.3							
ASAR	**Alice Springs**	**30.01**	**165**	P		**P**	**21 15 01.9**	**+0.6**
	0.5nm,0.6s,baz=347,slow=7.8,SNR=10							
STKA	**Stephens Creek**	**40.07**	**159**	P		**P**	**21 16 28.5**	**+1.2**
	2.1nm,0.5s,baz=338,slow=9.0,SNR=10							
SONM	**Songino Array**	**45.37**	**342**	P		**P**	**21 17 10.2**	**+0.1**
	0.2nm,0.4s,baz=182,slow=6.6,SNR=3.2							
SONM				PcP		**PcP**	**21 18 46.7**	**-0.2**
	0.2nm,0.5s,baz=140,slow=4.9,SNR=4.7							
PETK	**Petropavlovsk-**	**54.20**	**23**	P		**P**	**21 18 15.0**	**-1.5**
	2.4nm,0.9s,baz=198,slow=12,SNR=2.9							
MKAR	**Makanchi Array**	**55.61**	**325**	P		**P**	**21 18 25.3**	**-1.5**
	0.4nm,0.5s,baz=117,slow=8.0,SNR=11							
MKAR				PcP		**PcP**	**21 19 22.9**	**-1.7**
	0.2nm,0.5s,baz=133,slow=2.5,SNR=3.2							
ILAR	**Eielson Array**	**83.95**	**26**	P		**P**	**21 21 18.6**	**-1.0**
	0.3nm,0.6s,baz=256,slow=6.1,SNR=2.9							
ARCES	**ARCESS Array B**	**88.52**	**160**	P		**P**	**21 21 40.0**	**-1.7**
	2.6nm,1.0s,baz=60,slow=4.9,SNR=3.8							
TORD	**Torodi Ar. Bea**	**121.49**	**289**	PKP		**PKPdf**	**21 27 42.0**	**-1.2**
	0.3nm,0.4s,baz=66,slow=1.5,SNR=17							

*ISCJB **17** 21:17:54.7±0.9, 49.°8S±0.°1×9.°0W±0.°3, h10km, mb4.2/8, MS3.8/4, Error ellipse: s-maj=29.8km s-min=16.0km az=162.6*
*IDC **17** 21:17:54.7±1.0, 49.°86S×8.°93W, h0km, mb3.9/5, mb1 4.2/5, mb1mx3.9/16, mbtmp3.9/5, MS3.8/4, Ms1 3.8/4, ms1mx3.5/16, Error ellipse: s-maj=35.1km s-min=28.1km az=80.0*
*NEIC **17** 21:17:56.1±0.6, 49.°80S×8.°86W, h10km, mb4.5/5, Error ellipse: s-maj=22.1km s-min=12.2km az=68.0*
ISC 17 21:17:56.6±0.8, **49.°8S**±0.°1×**9.°0W**±0.°2, **h10**km, **n19,** σ=0.**930/16, mb4.3/8, MS3.8/4, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**22.09**	**175**	*e*P		**P**	**21 22 51.4**	**-0.2**
	8.1nm,0.8s							
BOSA	**Boshof**	**33.54**	**64**	LR		LR	21 35 22.5	
	comp=Z,228nm,21.2s,baz=58,slow=31							
QSPA	**South Pole Qui**	**40.42**	**180**	*e*P		**P**	**21 25 34.9**	**+0.2**
	16nm,1.1s							
CPUP	**Villa Florida**	**43.73**	**284**	P		**P**	**21 26 02.0**	**+0.2**
CPUP	**Villa Florida**	**43.73**	**284**	P		**P**	**21 26 02.0**	**+0.2**
	0.3nm,0.3s,baz=103,slow=8.4,SNR=4.0							
VNDA	**Vanda**	**52.79**	**178**	*e*P		**P**	**21 27 11.2**	**0.0**
	8.0nm,1.2s							
VNDA	**Vanda**	**52.79**	**178**	P		**P**	**21 27 10.9**	**-0.3**
	4.3nm,1.0s,baz=206,slow=7.4,SNR=14							
VNDA				LR		LR	21 49 12.5	
	comp=Z,131nm,18.9s,baz=66,slow=36							
DBIC	**Dimbokro**	**56.39**	**5**	LR		LR	21 45 03.6	
	comp=Z,53nm,20.2s,baz=145,slow=29							
LPAZ	**La Paz**	**57.88**	**283**	*e*P		**P**	**21 27 49.0**	**-0.4**
	6.7nm,1.4s							
LPAZ	**La Paz**	**57.88**	**283**	P		**P**	**21 27 49.0**	**-0.4**
	2.4nm,1.1s,baz=104,slow=7.0,SNR=4.2							
SAML	**Samuel**	**60.51**	**293**	*e*P		**P**	**21 28 07.2**	**+0.3**
	4.8nm,1.2s							
KMBO	**Kilima Mbogo**	**62.46**	**55**	LR		LR	21 55 54.8	
	comp=Z,62nm,18.7s,baz=89,slow=36							

TORD Torodi Ar. Bea 63.42 12 P **P 21 28 25.9 -0.3**
TORD Torodi Ar. Bea 63.42 12 P **P 21 28 25.9 -0.3**
1.2nm,0.8s,baz=202,slow=7.0,SNR=7.5
ESDC Sonseca Array 89.25 4 P **P 21 30 52.6 +0.4**
0.1nm,0.3s,baz=182,slow=5.3,SNR=5.2
KSAR Wonju Array Be 146.89 95 PKPbc **PKPdf 21 37 37.0 +0.2**
KSRS Korea Array 146.93 95 PKPbc **PKPdf 21 37 37.0 +0.2**
1.3nm,0.8s,baz=239,slow=1.9,SNR=7.8
ILAR Eielson Array 153.42 320 PKPab **PKPab 21 38 06.0 -0.2**
ILAR Eielson Array 153.42 320 PKPab **PKPab 21 38 06.0 -0.2**
0.7nm,0.9s,baz=56,slow=1.2,SNR=4.7

IDC 17 21:34:34.0±7.8, **13.°34S×166.°98E, h244**km±84km, **mb3.2/5, mb1 3.4/6, mb1mx3.2/19, mbtmp3.2/6, Error ellipse: s-maj=82.5km s-min=27.7km az=156.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**8.70**	**183**	P		Pn	21 36 36.5	+0.2
	0.4nm,0.3s,baz=315,slow=20,SNR=3.9							
STKA	**Stephens Creek**	**29.70**	**227**	P		P	21 40 17.5	0.0
	0.6nm,0.3s,baz=45,slow=11,SNR=3.0							
WRA	**Warramunga Arr**	**31.91**	**254**	P		P	21 40 37.0	-0.1
	0.4nm,0.8s,baz=87,slow=9.6,SNR=3.6							
ASAR	**Alice Springs**	**32.93**	**247**	P		P	21 40 45.5	-0.4
	0.5nm,0.3s,baz=75,slow=10,SNR=16							
ILAR	**Eielson Array**	**85.30**	**18**	P		P	21 46 42.4	-0.6
	0.4nm,0.6s,baz=235,slow=4.9,SNR=3.4							
MKAR	**Makanchi Array**	**96.01**	**317**	P		P	21 47 34.5	+1.0
	0.4nm,0.6s,baz=94,slow=6.1,SNR=3.8							
ARCES	**ARCESS Array B**	**118.84**	**346**	PKP		PKPdf	21 52 52.6	-0.1
	1.1nm,0.8s,baz=49,slow=2.1,SNR=8.2							

*IDC **17** 21:35:04.2±0.8, 35.°59S×179.°65E, h0km, mb4.4/8, mb1 4.5/9, mb1mx4.4/17, mbtmp4.4/9, ML5.0/1, MS3.7/4, Ms1 3.7/4, ms1mx3.4/17, Error ellipse: s-maj=28.8km s-min=22.5km az=84.0*
*ISCJB **17** 21:35:07.6±1.1, 35.°88S±0.°05×179.°75E±0.°09, h34km±8km, mb4.4/13, MS3.7/3, Error ellipse: s-maj=13.0km s-min=8.4km az=171.1*
*NEIC **17** 21:35:08.9±2.9, 35.°80S×179.°77E, h34km±19km, mb4.3/8, Error ellipse: s-maj=14.9km s-min=7.3km az=80.0*
*AUST **17** 21:35:14.8, 36.°20S×179.°27E, h35km*
ISC 17 21:35:07.5±2.9, **35.°84S**±0.°06×**179.°77E**±0.°08, **h24**km±19km, **n110,** σ=1.**939/111, mb4.4/13, MS3.7/3, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.08**	**214**	Pn		**Pn**	**21 35 40.4**	**-0.5**
MXZ				Sn		**Sb**	**21 36 10.0**	**0.0**
MXZ	**Matakaoa Point**	**2.08**	**214**	P*		**Pn**	**21 35 40.4**	**-0.5**
MXZ				S*		**Sb**	**21 36 10.1**	**+0.1**
PUZ	**Puketiti**	**2.54**	**208**	Pn		**Pn**	**21 35 48.2**	**+1.1**
PUZ	**Puketiti**	**2.54**	**208**	PN		**Pn**	**21 35 48.5**	**+1.4**
CNGZ	**Carnagh Statio**	**2.92**	**205**	PN		**Pn**	**21 35 53.9**	**+1.5**
CNGZ				SN		**Sn**	**21 36 28.2**	**+1.5**
MWZ	**Matawai**	**3.07**	**215**	P*		**Pn**	**21 35 55.3**	**+0.8**
URZ	**Urewera**	**3.22**	**221**	*e*Pn		**Pn**	**21 35 57.4**	**+0.8**
URZ				*e*Sn		**Sn**	**21 36 32.9**	**-1.2**
URZ	**Urewera**	**3.22**	**221**	P*		**Pn**	**21 35 57.2**	**+0.7**
URZ				S*		**Sn**	**21 36 36.0**	**+1.9**
URZ	**Urewera**	**3.22**	**221**	Pn		**Pn**	**21 35 57.8**	**+1.3**
	169nm,0.3s,baz=41,slow=3.8,SNR=175							
URZ				Sn		**Sn**	**21 36 37.1**	**+3.1**
	97nm,0.3s,baz=0.0,slow=20,SNR=7.2							
OPRZ	**Ohinepanea**	**3.26**	**231**	Pn		**Pn**	**21 35 58.2**	**+1.0**
OPRZ				Sn		**Sb**	**21 36 43.8**	**-0.3**
OPRZ	**Ohinepanea**	**3.26**	**231**	P*		**Pn**	**21 35 58.2**	**+1.0**
KUZ	**Kuaotunu**	**3.40**	**253**	PN		**Pn**	**21 35 59.4**	**+0.5**
KNZ	**Kokohu**	**3.58**	**207**	Pn		**Pn**	**21 36 01.4**	**-0.2**
KNZ	**Kokohu**	**3.58**	**207**	PN		**Pn**	**21 36 01.4**	**-0.2**
RRRZ	**Republican Roa**	**3.60**	**225**	Pn		**Pn**	**21 36 03.0**	**+1.1**
RRRZ	**Republican Roa**	**3.60**	**225**	P*		**Pn**	**21 36 03.0**	**+1.1**
MHGZ	**Mahia Peninsul**	**3.62**	**204**	PN		**Pn**	**21 36 02.4**	**+0.3**
RAHZ	**Arahi**	**3.74**	**214**	PN		**Pn**	**21 36 04.9**	**+1.2**
PRRZ	**Plateau Road**	**3.78**	**225**	Pn		**Pn**	**21 36 05.7**	**+1.4**
PRRZ	**Plateau Road**	**3.78**	**225**	P*		**Pn**	**21 36 05.7**	**+1.4**
ALRZ	**Allen Road**	**3.86**	**224**	Pn		**Pn**	**21 36 06.3**	**+1.0**
ALRZ	**Allen Road**	**3.86**	**224**	P*		**Pn**	**21 36 06.3**	**+1.0**
TOZ	**Tahuroa Road**	**3.91**	**240**	Pn		**Pn**	**21 36 06.9**	**+0.9**
TOZ				Sn		**Sn**	**21 36 51.2**	**+0.1**
TOZ	**Tahuroa Road**	**3.91**	**240**	P*		**Pn**	**21 36 06.9**	**+0.9**
TOZ				S*		**Sn**	**21 36 51.2**	**+0.1**
MKAZ	**Moumakai**	**3.92**	**250**	PN		**Pn**	**21 36 07.6**	**+1.4**
NMHZ	**Naumai**	**4.02**	**215**	PN		**Pn**	**21 36 08.5**	**+0.9**
BKZ	**Black Stump Fm**	**4.22**	**217**	P*		**Pn**	**21 36 10.5**	**+0.2**
MCHZ	**McNeill Hill**	**4.34**	**213**	PN		**Pn**	**21 36 12.4**	**+0.4**
CKHZ	**Cape Kidnapper**	**4.37**	**208**	SN		**Sn**	**21 36 59.6**	**-2.8**
WCZ	**Waipu Caves**	**4.41**	**267**	Pn		**Pn**	**21 36 14.7**	**+1.9**
WCZ	**Waipu Caves**	**4.41**	**267**	PN		**Pn**	**21 36 14.7**	**+1.9**
KAHZ	**Kahuranaki**	**4.56**	**209**	PN		**Pn**	**21 36 13.9**	**-1.2**
KRVZ	**Karewarewa**	**4.62**	**224**	P*		**Pn**	**21 36 16.7**	**+0.8**
OTVZ	**Oturere**	**4.65**	**223**	P*		**Pn**	**21 36 16.6**	**+0.2**
WTVZ	**West Tongariro**	**4.66**	**224**	P*		**Pn**	**21 36 17.0**	**+0.5**
BHHZ	**Black Hill Sta**	**4.68**	**218**	P*		**Pn**	**21 36 16.7**	**0.0**
HIZ	**Hauiti**	**4.75**	**234**	PN		**Pn**	**21 36 19.2**	**+1.6**
WPVZ	**Whakapapa**	**4.75**	**224**	P*		**Pn**	**21 36 18.0**	**+0.2**
PXZ	**Pawanui**	**4.77**	**208**	PN		**Pn**	**21 36 16.7**	**-1.2**
WHVZ	**Whangaehu Hut**	**4.78**	**223**	P*		**Pn**	**21 36 18.1**	**-0.1**
MOVZ	**Moawhango**	**4.78**	**221**	P*		**Pn**	**21 36 16.8**	**-1.2**
WNVZ	**Wahianoa**	**4.80**	**222**	P*		**Pn**	**21 36 18.4**	**-0.1**
MTVZ	**Mangateitei**	**4.92**	**223**	P*		**Pn**	**21 36 20.2**	**+0.3**
PRHZ	**Porangahau**	**5.06**	**208**	PN		**Pn**	**21 36 21.1**	**-0.8**
OUZ	**Omahuta**	**5.08**	**275**	*e*Pn		**Pn**	**21 36 22.9**	**+0.8**
	51nm,0.5s							
OUZ				*e*Sn		**Sn**	**21 37 14.5**	**-5.4**
DVHZ	**Dannevirke**	**5.28**	**212**	PN		**Pn**	**21 36 23.0**	**-1.9**
WAZ	**Wanganui**	**5.44**	**223**	PN		**Pn**	**21 36 27.2**	**+0.1**
BFZ	**Birch Farm**	**5.57**	**209**	PN		**Pn**	**21 36 27.4**	**-1.4**
TIWZ	**Tintock**	**5.80**	**211**	PN		**Pn**	**21 36 30.1**	**-1.9**
MRZ	**Mangatainoka R**	**5.83**	**213**	PN		**Pn**	**21 36 30.0**	**-2.4**
OGWZ	**Otaki Gorge**	**6.14**	**215**	PN		**Pn**	**21 36 34.2**	**-2.5**
SNZO	**South Karori**	**6.75**	**214**	*e*Pn		**Pn**	**21 36 44.8**	**-0.1**
SNZO				*e*Sn		**Sn**	**21 37 56.7**	**-4.3**
THZ	**Tophouse**	**7.98**	**220**	Pn		Pn	21 36 58.2	-3.7
THZ				Sn		Sn	21 38 23.9	-7.6
RPZ	**Rata Peaks**	**10.33**	**218**	Pn		**Pn**	**21 37 32.0**	**-2.1**
RPZ				Sn		Sn	21 39 19.0	-10
RPZ	**Rata Peaks**	**10.33**	**218**	Pn		**Pn**	**21 37 32.0**	**-2.1**
	1.4nm,0.3s,baz=25,slow=5.7,SNR=4.0							
RPZ				Sn		Sn	21 39 19.0	-10
	3.0nm,0.3s,baz=332,slow=13,SNR=6.2							
DZM	**Mont Dzumac**	**17.98**	**316**	*e*LR		LR	21 44 00.8	
	330nm,23.6s							
DZM	**Mont Dzumac**	**17.98**	**316**	*e*Pn		**Pn**	**21 39 15.2**	**-0.8**
	3.4nm,0.7s							
DZM	**Mont Dzumac**	**17.98**	**316**	LR		LR	21 44 43.9	
	comp=Z,226nm,21.1s,baz=186,slow=33							
MSVF	**Nonsavu**	**18.10**	**355**	*e*Pn		**P**	**21 39 18.0**	**+0.4**
	3.7nm,0.6s							
MCQ	**Macquarie Isla**	**23.58**	**211**	*e*P		**P**	**21 40 17.6**	**+1.6**
TBI	**Tubuai**	**29.38**	**73**	*e*LR		LR	21 48 45.3	
	167nm,28.2s,baz=228							
QLP	**Quilpie**	**31.62**	**277**	P		P	21 41 32.6	+4.0
	baz=31,SNR=5.0							
STKA	**Stephens Creek**	**31.81**	**266**	P		**P**	**21 41 31.1**	**+0.9**
STKA	**Stephens Creek**	**31.81**	**266**	P		**P**	**21 41 31.1**	**+0.9**
	3.4nm,0.8s,baz=67,slow=6.5,SNR=6.4							
STKA				LR		LR	21 54 10.2	
	comp=Z,275nm,20.2s,baz=196,slow=36							
PPT2	**Papeete2**	**32.67**	**64**	*e*LR		LR	21 50 16.7	
	158nm,25.2s,baz=229							
PPT	**Papeete**	**32.68**	**64**	LR		LR	21 51 39.9	
	comp=Z,84nm,19.6s,baz=188,slow=30							
MTSU	**Mount Surprise**	**35.93**	**290**	P		P	21 42 10.4	+4.3
	baz=36,SNR=7.8							
COEN	**Coen**	**39.38**	**294**	*e*P		**P**	**21 42 34.8**	**-0.5**
	21nm,0.5s							
COEN	**Coen**	**39.38**	**294**	P		P	21 42 38.9	+3.6
	baz=39,SNR=5.7							
AS31	**Alice Springs**	**41.29**	**274**	*e*P		**P**	**21 42 50.2**	**-0.9**
ASAR	**Alice Springs**	**41.29**	**274**	P		**P**	**21 42 51.0**	**-0.1**
ASAR	**Alice Springs**	**41.29**	**274**	P		**P**	**21 42 51.0**	**-0.1**
	2.6nm,0.5s,baz=117,slow=7.7,SNR=26							
ASAR				LR		LR	21 59 51.5	
	comp=Z,105nm,21.6s,baz=122,slow=36							
WRA	**Warramunga Arr**	**42.77**	**279**	P		**P**	**21 43 00.7**	**-2.6**
WRA	**Warramunga Arr**	**42.77**	**279**	P		**P**	**21 43 00.7**	**-2.6**
	10nm,0.4s,baz=119,slow=7.8,SNR=37							

CASY Casey 49.48 210 *e*P **P 21 43 55.7 +0.2**
2.6nm,0.7s
FITZ Fitzroy Crossi 50.74 275 P **P 21 44 06.0 +0.3**
baz=50,SNR=6.5
MEEK Meekatharra 52.35 262 P **P 21 44 17.7 +0.1**
baz=52,SNR=6.4
MBWA Marble Bar 53.99 269 *e*P **P 21 44 29.1 -0.7**
19nm,1.3s
QSPA South Pole Qui 54.28 180 *e*P **P 21 44 32.9 +1.5**
2.6nm,0.7s
QSPA South Pole Qui 54.28 180 P P 21 44 35.1 +3.7
0.9nm,0.6s,baz=79,slow=1.3,SNR=5.2
MAW Mawson 66.57 202 P **P 21 45 57.1 +2.0**
MAW Mawson 66.57 202 P **P 21 45 57.1 +2.0**
1.1nm,0.5s,baz=176,slow=6.8,SNR=4.2
KKM Kota Kinabalu 72.61 291 *e*P **P 21 46 32.8 -0.6**
SNAA Sanae 72.77 179 *e*P **P 21 46 34.1 +0.8**
4.3nm,1.2s
PLCA Paso Flores 80.15 133 *e*P **P 21 47 15.0 -0.7**
2.4nm,1.0s
KSRS Korea Array 87.34 321 P **P 21 47 53.3 +1.1**
3.8nm,1.1s,baz=137,slow=5.2,SNR=5.8
KSAR Wonju Array Be 87.35 321 P **P 21 47 53.3 +1.1**
PETK Petropavlovsk- 90.64 347 P **P 21 48 08.3 +0.9**
PETK Petropavlovsk- 90.64 347 P **P 21 48 08.3 +0.9**
1.9nm,0.5s,baz=134,slow=6.4,SNR=4.1
USRK Ussuriysk Arra 90.70 328 P **P 21 48 08.9 +1.0**
0.9nm,0.6s,baz=162,slow=8.2,SNR=3.4
MKAR Makanchi Array 119.75 308 PKP **PKPdf 21 53 53.5 -1.6**
MKAR Makanchi Array 119.75 308 PKP **PKPdf 21 53 53.5 -1.6**
0.4nm,0.5s,baz=341,slow=1.4,SNR=9.2
ARCES ARCESS Array B 143.43 345 PKP PKPbc 21 54 37.4 +1.3
ARCES ARCESS Array B 143.43 345 PKP PKPbc 21 54 37.4 +1.3
1.4nm,0.7s,baz=54,slow=3.1,SNR=7.0
KBZ Khabaz 146.25 297 PKPbc **PKPbc 21 54 45.4 -0.2**
KBZ Khabaz 146.25 297 PKPbc **PKPbc 21 54 45.4 -0.2**
1.5nm,0.8s,baz=90,slow=1.0,SNR=3.7
JOF Joensuu 146.64 334 *ep* **PKPdf 21 54 44.0 -0.5**
3.7nm,0.5s
KAF Kangasniemi 148.91 336 *ep* **PKPdf 21 54 49.0 +0.7**
2.7nm,0.5s
FINES FINESS Array B 149.46 335 PKPbc **PKPbc 21 54 52.8 -0.9**
FINES FINESS Array B 149.46 335 PKPbc **PKPbc 21 54 52.8 -0.9**
2.3nm,0.4s,baz=32,slow=7.5,SNR=14
DBIC Dimbokro 150.66 171 PKPbc **PKPbc 21 54 59.4 +1.4**
DBIC Dimbokro 150.66 171 PKPbc **PKPbc 21 54 59.4 +1.4**
4.4nm,0.8s,baz=138,slow=3.4,SNR=2.9
BRTR Keskin Array B 153.05 289 PKPbc **PKPbc 21 55 01.1 -1.8**
BRTR Keskin Array B 153.05 289 PKPbc **PKPbc 21 55 01.1 -1.8**
1.0nm,0.4s,baz=144,slow=3.5,SNR=13
AKASG Malin Array Be 154.13 314 PKPbc **PKPbc 21 55 04.0 -0.7**
AKASG PKPab **PKPab 21 55 17.3 -1.2**
AKASG Malin Array Be 154.13 314 PKPbc **PKPbc 21 55 04.0 -0.7**
0.7nm,0.4s,baz=52,slow=2.9,SNR=5.9
AKASG PKPab **PKPab 21 55 17.3 -1.2**
0.2nm,0.3s,baz=53,slow=3.1,SNR=3.4
TORD Torodi Ar. Bea 157.34 185 PKPab **PKPab 21 55 33.8 +0.8**
TORD Torodi Ar. Bea 157.34 185 PKPab **PKPab 21 55 33.8 +0.8**
1.1nm,0.7s,baz=168,slow=2.3,SNR=4.7
GERES GERESS Array B 163.46 326 PKPab **PKPab 21 55 58.6 -0.4**
GERES GERESS Array B 163.46 326 PKPab **PKPab 21 55 58.6 -0.4**
0.4nm,0.7s,baz=7.6,slow=4.0,SNR=4.8

*IDC **17** 21:48:03.7±1.6, 38.°97N×22.°61E, h0km, mb3.5/3, mb1 3.5/4, mb1mx3.3/26, mbtmp3.5/4, ML3.2/1, Error ellipse: s-maj=100.7km s-min=23.4km az=142.0*
*ATH **17** 21:48:05.4, 38.°68N×23.°00E, h25km, MD3.7/33, ML4.0*
*CSEM **17** 21:48:05.4, 38.°68N×23.°00E, h25km, MD3.7, After ATH*
ISC 17 21:48:05.7±1.1, **38.°69N**±0.°02×**22.°98E**±0.°02, **h8**km±9km, **n80,** σ=0.**973/114, mb3.6/3, 3C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID	Op	ISC	Time h m s	Res ISC
AGG	**Agios Georgios**	**0.61**	**304**	*e*Pn		**Pb**	**21 48 17.9**	**-0.7**
AGG	**Agios Georgios**	**0.61**	**304**	*e*Pn		**Pb**	**21 48 17.9**	**-0.7**
NEO	**Neokhori**	**0.65**	**17**	*e*PN		**Pb**	**21 48 19.0**	**-0.3**
NEO				*e*SN		**Sb**	**21 48 27.9**	**-0.6**
NEO	**Neokhori**	**0.65**	**17**	*e*Pn		**Pb**	**21 48 19.0**	**-0.3**
NEO				*e*Sn		**Sb**	**21 48 27.9**	**-0.6**
LTK

GRG	**Griva**	**2.31**	**349**	*e*PN	**Pn**	**21 48 44.5**	**+0.4**
GRG	**Griva**	**2.31**	**349**	*e*Pn	**Pn**	**21 48 44.5**	**+0.4**
KYTH	**Kithira**	**2.40**	**179**	*e*PN	**Pn**	**21 48 45.3**	**0.0**
KYTH	**Kithira**	**2.40**	**179**	*e*Pn	**Pn**	**21 48 45.3**	**0.0**
CHOS	**Chios island**	**2.43**	**96**	*e*PN	**Pn**	**21 48 45.6**	**-0.1**
CHOS	**Chios island**	**2.43**	**96**	*e*Pn	**Pn**	**21 48 45.6**	**-0.1**
FNA	**Florina**	**2.43**	**330**	*e*PB	**Pn**	**21 48 46.9**	**+1.1**
FNA	**Florina**	**2.43**	**330**	*e*Pb	**Pn**	**21 48 46.9**	**+1.1**
PRK	**Paraskevi**	**2.62**	**77**	*e*PN	**Pn**	**21 48 47.7**	**-0.6**
PRK	**Paraskevi**	**2.62**	**77**	*e*Pn	**Pn**	**21 48 47.7**	**-0.6**
VAY	**Valandovo**	**2.65**	**353**	*e*Pn	**Pn**	**21 48 50.0**	**+1.3**
VAY				*e*Sg	Sg	21 49 37.8	+6.9
BIA	**Bitola**	**2.66**	**332**	*e*Pn	**Pb**	**21 48 53.2**	**-0.3**
BIA				*e*Sg	Sg	21 49 40.4	+9.4
NVR	**Nevrokopi**	**2.75**	**14**	*e*PN	**Pn**	**21 48 49.9**	**-0.1**
NVR	**Nevrokopi**	**2.75**	**14**	*e*Pn	**Pn**	**21 48 49.9**	**-0.1**
VAM	**Vamos**	**3.41**	**163**	*e*PN	**Pn**	**21 48 59.4**	**+0.2**
VAM	**Vamos**	**3.41**	**163**	*e*Pn	**Pn**	**21 48 59.4**	**+0.2**
NPS	**Neapolis**	**4.01**	**148**	*e*PN	**Pn**	**21 49 07.0**	**-0.4**
NPS	**Neapolis**	**4.01**	**148**	*e*Pn	**Pn**	**21 49 07.0**	**-0.4**
VOIR		**6.92**	**12**	⇓*i*P	**Pn**	**21 49 48.4**	**+1.0**
PLOR	**Plostina**	**7.66**	**20**	⇑*i*P	**Pn**	**21 49 59.9**	**+2.4**
VRI	**Vrincioaia**	**7.69**	**20**	⇑*i*P	**Pn**	**21 50 00.6**	**+2.6**
TESR	**Tescani**	**8.28**	**18**	⇑*i*P	**Pn**	**21 50 07.8**	**+1.9**
BRTR	**Keskin Array B**	**8.34**	**80**	Pn	**Pn**	**21 50 09.2**	**+2.2**
	0.3nm,0.3s,baz=265,slow=11,SNR=7.3						
TORD	**Torodi Ar. Bea**	**31.67**	**222**	P	**P**	**21 54 29.1**	**-0.6**
	0.3nm,0.4s,baz=32,slow=9.3,SNR=18						
MKAR	**Makanchi Array**	**43.38**	**59**	P	**P**	**21 56 08.7**	**+0.2**
	0.2nm,0.3s,baz=271,slow=7.4,SNR=4.4						
ZALV	**Zalesovo Beam**	**43.91**	**49**	P	**P**	**21 56 11.8**	**-0.8**
	0.6nm,0.6s,baz=286,slow=10,SNR=3.3						

MAN 17 22:05:59.17˝47N×119°88E,h33km,mb4.8,ML3.7,MS3.7, 2C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIPP	**Brgy, Tapao**	**0.71**	**50**	⇑*i*P	Pb	22 06 13.8	+0.7
ABRA	**Dolores**	**0.81**	**77**	*e*P	Pb	22 06 14.5	-0.2
BCPH	**Baguio City Da**	**1.27**	**148**	⇑*i*P	Pn	22 06 21.2	+0.5
APYP	**Conner**	**1.35**	**73**	*e*P	Pn	22 06 22.3	+0.7
CVP	**Callao Caves**	**1.86**	**83**	*e*P	Pn	22 06 29.7	+1.1
CVP				*e*S	Sn	22 06 53.1	+2.1
CAUP	**Cauayan**	**1.93**	**105**	*e*P	Pn	22 06 31.4	+2.0
BALP	**Baler**	**2.36**	**136**	*e*P	Pn	22 06 35.9	+0.4
PALP	**Palanan**	**2.46**	**99**	*e*P	Pn	22 06 37.9	+1.0

IDC 17 22:43:23.9±10.0,27˚58S×178˚81W,h318km±78km, mb3.5/4,mb1 3.6/5,mb1mx3.3/18,mbtmp3.5/5,Error ellipse: s-maj=97.2km s-min=25.7km az=48.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**11.19**	**197**	P	P	22 45 57.2	-0.7
	1.8nm,0.3s,baz=334,slow=5.5,SNR=8.4						
URZ				S	S	22 47 57.2	-4.2
	1.6nm,0.3s,baz=186,slow=13,SNR=9.9						
DZM	**Mont Dzumac**	**14.47**	**289**	P	Pn	22 46 37.1	+1.3
	0.5nm,0.3s,baz=115,slow=17,SNR=6.7						
ASAR	**Alice Springs**	**42.62**	**264**	P	P	22 50 50.1	0.0
	1.5nm,0.8s,baz=100,slow=8.5,SNR=13						
WRA	**Warramunga Arr**	**43.35**	**270**	P	P	22 50 55.4	-0.5
	2.4nm,0.6s,baz=105,slow=7.8,SNR=9.6						
FITZ	**Fitzroy Crossi**	**51.70**	**268**	P	P	22 51 59.7	+0.1
	2.3nm,0.8s,baz=127,slow=5.1,SNR=3.3						
MAW	**Mawson**	**74.70**	**200**	P	P	22 54 29.8	+1.1
	2.9nm,0.8s,baz=127,slow=5.1,SNR=5.4						
TORD	**Torodi Ar. Bea**	**165.64**	**182**	PKPab	PKPab	23 03 50.0	-1.9
	0.8nm,0.9s,baz=187,slow=3.6,SNR=4.3						

NIED ***17*** *23:11:00,44˚80N×149˚90E,h80km,Mw4.5 Best double couple: M₀6.24000×10¹⁵ NP1:φs270.00000°,δ82.00000°, λ-73.00000°. NP2:φs24.00000°,δ19.00000°, λ-155.00000°.*

BJI ***17*** *23:11:03.8,45˚44N×150˚58E,h86km,mB4.8/21,mb4.9/33, Ms4.3/14,Ms7 4.0/16*

ISCJB ***17*** *23:11:09.9±0.5,45˚32N±0˚04×149˚86E±0˚05, h107km±4km,mb4.7/153,Error ellipse: s-maj=7.1km s-min=4.1km az=143.5*

NEIC ***17*** *23:11:10.7±0.2,45˚46N×149˚78E,mb4.8/69,Error ellipse: s-maj=6.2km s-min=3.8km az=150.0*

MOS ***17*** *23:11:10.6±0.9,45˚60N×149˚72E,h101km,mb4.8/72, Error ellipse: s-maj=8.4km s-min=5.1km az=106.7*

IDC ***17*** *23:11:10.6±0.5,45˚51N×149˚78E,h97km±4km,mb4.1/23, mb1 4.3/27,mb1mx4.2/30,mbtmp4.1/27,MS3.3/7, Ms1 3.3/7,ms1mx3.0/30,Error ellipse: s-maj=12.8km s-min=10.9km az=152.0*

SZGRF ***17*** *23:11:11.0,46˚22N×148˚47E,h33km,mb5.0,Northwest of Kuril Islands, Russia*

SKHL ***17*** *23:11:12.1±1.5,45˚60N×150˚05E,h89km±7km,mb5.4/7, msh5.8/4*

JMA ***17*** *23:11:13.1±0.5,44˚85N×149˚89E,h100km,M4.2*

ISC 17 23:11:10.2±0.4,45˚38N±0˚05×149˚86E±0˚04,h97km±2km, h96km:pP-P,n469,σ1s25/531,mb4.8/153,42C-16D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**1.41**	**265**	*d*iPN	**Pn**	**23 11 37.6**	**+2.5**
KUR				*i* S	**Sn**	**23 11 58.4**	**+4.5**
KUR				pmax	pmax		
	comp=E,268nm,0.3s						
KUR				pmax	pmax		
	comp=Z,1μm,0.3s						
KUR				pmax	pmax		
	comp=N,469nm,0.3s						
KUR				smax	smax		
	comp=E,2μm,0.6s						
KUR				smax	smax		
	comp=N,3μm,0.6s						
KUR	**Kuril'sk**	**1.41**	**265**	⇓*i*P	**Pn**	**23 11 37.7**	**+2.6**
KUR				AMB	AMB	23 11 38.4	
	comp=N,2μm,0.5s						
KUR				*i* S	**Sn**	**23 11 58.5**	**+4.5**
KUR				A	A	23 11 59.0	
	comp=N,12μm,1.0s						
KUR				A	A	23 11 59.0	
	comp=N,20μm,2.0s						
KUR				A	A	23 12 01.5	
	comp=N,8μm,0.5s						
KUR				A	A	23 12 01.5	
	comp=N,3μm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.15**	**246**	*c i*PN	**Pn**	**23 12 00.3**	**+2.5**
YUK				*i* S	**Sn**	**23 12 35.7**	**+1.2**
YUK				pmax	pmax		
	comp=Z,761nm,0.2s						
YUK				pmax	pmax		
	comp=E,42nm,0.1s						
YUK				pmax	pmax		
	comp=N,54nm,0.1s						
YUK				smax	smax		
	comp=E,744nm,0.4s						
YUK				smax	smax		
	comp=N,406nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**3.15**	**246**	⇑*i*P	**Pn**	**23 12 00.4**	**+2.6**
YUK				AMB	AMB	23 12 00.8	
	comp=N,40nm,0.2s						
YUK				AMB	AMB	23 12 00.8	
	comp=N,50nm,0.2s						
YUK				AMB	AMB	23 12 00.8	
	comp=N,760nm,0.2s						
YUK				*i* S	**Sn**	**23 12 35.7**	**+1.2**
YUK				A	A	23 12 39.9	
	comp=N,410nm,0.4s						
YUK				A	A	23 12 39.9	
	comp=N,740nm,0.4s						
NEM2	**Nemuro 2**	**3.57**	**237**	P	**Pn**	**23 12 03.8**	**+0.3**
NEM2				*e*S	**Sn**	**23 12 43.8**	**-0.9**
JRA	**Rausu**	**3.67**	**249**	P	**Pn**	**23 12 07.3**	**+2.5**
JRA				*e*S	**Sn**	**23 12 51.1**	**+4.0**
JNK	**Nakash**	**4.09**	**246**	P	**Pn**	**23 12 12.6**	**+2.1**
JAK	**Akkeshi**	**4.41**	**239**	P	**Pn**	**23 12 15.2**	**+0.4**
JAK				*e*S	**Sn**	**23 13 04.1**	**-0.9**
JTKR	**Abashiri--Toko**	**4.47**	**254**	P	**Pn**	**23 12 18.3**	**+2.7**
JMP	**Maruseppu**	**4.83**	**256**	P	**Pn**	**23 12 23.3**	**+2.8**
JAR	**Ashorobuto**	**4.84**	**247**	P	**Pn**	**23 12 22.9**	**+2.3**
JOB	**Onbets**	**4.99**	**242**	P	**Pn**	**23 12 23.9**	**+1.2**
JOB				*e*S	**Sn**	**23 13 19.3**	**+0.2**
JSE	**Soyaes**	**5.16**	**268**	P	Pn	23 12 28.9	+4.0
YSS	**Yuzh-Sakhalins**	**5.18**	**290**	⇑*e*PN	Pn	23 12 29.5	+4.4
YSS				*e*		23 13 15.9	
YSS				pmax	pmax		
	comp=Z,100nm,0.9s						
YSS				pmax	pmax		
	comp=N,30nm,0.8s						
YSS				smax	smax		
	comp=N,90nm,1.0s						
YSS				smax	smax		
	comp=E,90nm,1.0s						
YSS	**Yuzh-Sakhalins**	**5.18**	**290**	⇑*e*P	Pn	23 12 29.5	+4.4
YSS				AMB	AMB	23 12 30.4	
	comp=E,100nm,0.9s						
YSS				AMB	AMB	23 12 30.4	
	comp=E,30nm,0.8s						
YSS				*e*S	**Sn**	**23 13 26.9**	**+3.3**
YSS				A	A	23 13 30.0	
	comp=E,90nm,1.0s						
JKK2	**Kamakawa 2**	**5.29**	**256**	P	**Pn**	**23 12 29.9**	**+3.1**
ASAJ	**Asahikawa**	**5.32**	**259**	P	Pn	23 12 30.7	+3.5
ASAJ	**Asahikawa**	**5.32**	**259**	P	Pn	23 12 30.7	+3.5
ASAJ	**Asahikawa**	**5.32**	**259**	P	Pn	23 12 30.7	+3.5
	comp=E,11nm,0.3s,baz=96,slow=13,SNR=84						
ASAJ				LR	LR	23 14 33.3	
	comp=E,81nm,20.6s,baz=174,slow=38						
JCH	**Churui**	**5.44**	**242**	P	**Pn**	**23 12 29.6**	**+0.8**
JCH				*e*S	**Sn**	**23 13 29.4**	**-0.6**
JWK2	**Keihoku**	**5.61**	**272**	P	Pn	23 12 36.5	+5.5
JFR	**Furan**	**5.67**	**250**	P	**Pn**	**23 12 34.5**	**+2.6**
JSS	**Shosan**	**5.77**	**263**	P	Pn	23 12 38.0	+4.8
JAB	**Ashibetsu**	**5.78**	**254**	P	Pn	23 12 37.2	+3.9
ERM	**Erimo**	**5.91**	**238**	*e*PN	**Pn**	**23 12 36.9**	**+1.8**
ERM				*e*		23 13 40.0	
ERM	**Erimo**	**5.91**	**238**	*e*Pn	**Pn**	**23 12 36.9**	**+1.8**
ERM				*e*Sn	**Sn**	**23 13 40.0**	**-1.4**
JEM	**Erimo**	**5.91**	**238**	P	**Pn**	**23 12 36.7**	**+1.6**
JEM				*e*S	**Sn**	**23 13 41.8**	**+0.4**
JBT2	**Biratori 2**	**5.99**	**247**	P	**Pn**	**23 12 37.3**	**+1.1**
JBT2				*e*S	**Sn**	**23 13 45.6**	**+2.2**
JNBK	**Urakawa-nobuka**	**6.00**	**241**	P	**Pn**	**23 12 36.4**	**0.0**
JNBK				*e*S	**Sn**	**23 13 40.7**	**-3.0**
JHR	**Hokuryu**	**6.04**	**257**	P	Pn	23 12 40.6	+3.8
UGL	**Uglegorsk**	**6.46**	**308**	*e*P	Pn	23 12 46.0	+3.4
UGL				AMB	AMB	23 12 48.0	
	comp=E,298nm,1.0s						
UGL				*e*L	L	23 17 14.0	
JEW	**Eniwo**	**6.56**	**250**	P	**Pn**	**23 12 46.6**	**+2.6**
SKR	**Severo-Kuril's**	**6.76**	**36**	*e*PN	Pn	23 12 43.0	-3.6
SKR				pmax	pmax		
	comp=N,80nm,0.4s						
SKR				pmax	pmax		
	comp=E,70nm,0.4s						
SKR				pmax	pmax		
	comp=Z,80nm,0.4s						
SKR	**Severo-Kuril's**	**6.76**	**36**	*e*P	Pn	23 12 43.0	-3.6
SKR				AMB	AMB	23 12 45.1	
	comp=Z,70nm,0.4s						
SKR				AMB	AMB	23 12 45.1	
	comp=Z,80nm,0.4s						
SKR				*e*S	Sn	23 13 51.1	-11
SKR				A	A	23 13 51.6	
	comp=Z,220nm,1.0s						
SKR				A	A	23 13 51.6	
	comp=Z,180nm,1.0s						
JNB	**Noboribetsu**	**7.00**	**249**	P	**Pn**	**23 12 51.0**	**+1.0**
JNB				*e*S	**Sn**	**23 14 08.0**	**0.0**
JKB	**Kayabe**	**7.29**	**244**	P	**Pn**	**23 12 54.3**	**+0.4**
JKB				*e*S	**Sn**	**23 14 11.8**	**-3.3**
TYV	**Tymovskoe**	**7.30**	**321**	*e*P	**Pn**	**23 12 56.5**	**+2.6**
TYV				AMB	AMB	23 12 59.0	
	comp=Z,26nm,1.0s						
TYV				AMB	AMB	23 12 59.0	
	comp=Z,44nm,1.0s						
TYV				AMB	AMB	23 12 59.0	
	comp=Z,88nm,1.2s						
JSH	**Shimam**	**7.58**	**252**	P	**Pn**	**23 13 00.1**	**+2.2**
JYM2	**Yakumo 2**	**7.60**	**248**	P	**Pn**	**23 12 59.3**	**+1.1**
JSR	**Shiriuchi**	**7.87**	**244**	P	**Pn**	**23 13 02.1**	**+0.3**
JSR				*e*S	**Sn**	**23 14 25.5**	**-3.7**
JTM	**Tenmabayashi**	**7.90**	**238**	P	**Pn**	**23 13 01.2**	**-1.0**
JTM				*e*S	Sn	23 14 23.6	-6.4
JANG	**Nango**	**7.91**	**234**	P	**Pn**	**23 13 00.4**	**-1.9**
JANG				*e*S	Sn	23 14 23.5	-6.7
JTH	**Tanohata**	**8.02**	**230**	*e*S	Sn	23 14 25.0	-7.7
JOSM	**Okushiri--Mats**	**8.21**	**250**	P	**Pn**	**23 13 07.2**	**+0.8**
OFUJ	**Ofunato**	**8.75**	**227**	P	**Pn**	**23 13 11.4**	**-2.3**
OFUJ				*e*S	**Sn**	**23 14 44.6**	**-5.9**
JRG	**Rokugo**	**9.07**	**232**	P	**Pn**	**23 13 16.7**	**-1.5**
JRG				*e*S	**Sn**	**23 14 54.0**	**-4.5**
JOG2	**Oga 2**	**9.21**	**237**	P	**Pn**	**23 13 19.6**	**-0.4**
JOG2				*e*S	**Sn**	**23 14 57.1**	**-4.7**
PEA0B	**Petropavlovsk-**	**9.27**	**31**	*e*Pn	**Pn**	**23 13 20.7**	**-0.1**
PEA0B				*e*Sn	**Sn**	**23 15 01.2**	**-2.0**
PETK	**Petropavlovsk-**	**9.27**	**31**	PN	**Pn**	**23 13 20.2**	**-0.6**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**9.27**	**31**	P	**Pn**	**23 13 20.1**	**-0.6**
PETK	**Petropavlovsk-**	**9.27**	**31**	P	**Pn**	**23 13 20.1**	**-0.6**
	comp=Z,1.3nm,0.3s,baz=213,slow=16,SNR=16						
JIO	**Ouri**	**9.38**	**225**	P	**Pn**	**23 13 20.2**	**-2.2**
JIO				*e*S	Sn	23 14 58.2	-7.8
NKL	**Nikolayevsk**	**9.81**	**326**	*e*P	**Pn**	**23 13 28.0**	**-0.1**
NKL				AMB	AMB	23 13 29.4	
	comp=Z,40nm,1.0s						
NKL				AMB	AMB	23 13 29.4	
	comp=Z,34nm,1.0s						
NKL				AMB	AMB	23 13 29.4	
	comp=Z,80nm,1.0s						
JYA	**Atsumi**	**10.14**	**232**	P	**Pn**	**23 13 31.7**	**-1.1**
JYA				*e*S	**Sn**	**23 15 20.5**	**-4.1**
HABR	**Khabarovsk**	**10.59**	**292**	*e*PN	**Pn**	**23 13 41.8**	**+3.1**
HABR				*e*S	**Sn**	**23 15 32.7**	**-2.5**
HABR				pmax	pmax		
	comp=N,5.0nm,0.6s						
HABR				pmax	pmax		
	comp=Z,41nm,1.3s						
HABR				pmax	pmax		
	comp=E,24nm,0.8s						
HABR				MLR	MLR		
	comp=Z,59nm,17.0s						
MAJO	**Matsushiro**	**12.46**	**229**	*e*PN	**Pn**	**23 14 02.7**	**-1.2**
MAJO	**Matsushiro**	**12.46**	**229**	*e*Pn	**Pn**	**23 14 02.7**	**-1.2**
MAT	**Matsushiro**	**12.46**	**229**	P	**Pn**	**23 14 02.8**	**-1.1**
MAT				*e*S	Sn	23 16 14.3	-6.5
USRK	**Ussuriysk Arra**	**12.74**	**271**	P	**Pn**	**23 14 09.2**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=89,slow=13,SNR=9.5						
KLR	**Kul'dur**	**12.87**	**294**	*e*PN	**Pn**	**23 14 07.2**	**-2.1**
JHJ	**Hachijo jima 2**	**14.51**	**216**	P	**P**	**23 14 37.0**	**+2.4**
	comp=Z,4.1nm,0.3s,baz=109,slow=17,SNR=6.8						
ZEA	**Zeya**	**16.82**	**308**	*e*P	**Pn**	**23 14 57.3**	**-2.2**
ZEA				AMB	AMB	23 14 58.5	
	comp=Z,35nm,1.0s						
ZEA				AMB	AMB	23 14 58.5	
	comp=Z,43nm,1.2s						
FX1	**Attu Island--F**	**16.95**	**55**	*e*Pn	**P**	**23 15 02.2**	**+0.8**
FX1				Sn	Sn	23 17 59.4	-10
CN2	**Changchun**	**17.44**	**274**	*e*P	**Pn**	**23 15 07.4**	**+0.3**
KSRS	**Korea Array**	**18.22**	**252**	P	**Pn**	**23 15 16.9**	**+0.4**
	comp=Z,0.5nm,0.3s,baz=62,slow=11,SNR=16						
KSAR	**Wonju Array Be**	**18.25**	**252**	P	**Pn**	**23 15 16.9**	**0.0**
JNU	**Nakatsue**	**19.07**	**237**	*e*P	**Pn**	**23 15 26.8**	**+0.1**
	comp=Z,5.3nm,0.9s						
JNU	**Nakatsue**	**19.07**	**237**	P	**Pn**	**23 15 26.8**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=62,slow=4.4,SNR=9.1						
JNU				LR	LR	23 22 26.3	
	comp=Z,64nm,18.2s,baz=52,slow=35						
CLNS	**Chul'man**	**19.29**	**315**	*e*P	**P**	**23 15 25.9**	**-1.2**
CLNS				pmax	pmax		
	comp=Z,12nm,0.7s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.7s						
YAK	**Yakutsk**	**20.36**	**332**	*e*P	**P**	**23 15 37.8**	**-0.7**
YAK				*e**PP	**pP**	**23 15 57.5**	**+0.4**
YAK				*e*S	**S**	**23 19 17.1**	**-3.9**
YAK				*e**SS	sS	23 19 44.6	-7.2
YAK				*e*		23 19 47.8	
YAK				*e*		23 26 53.6	
YAK				pmax	pmax		
	comp=Z,34nm,0.9s						
YAK				pmax	pmax		
	comp=N,22nm,1.3s						
YAK				pmax	pmax		
	comp=E,22nm,1.3s						
YAK				smax	smax		
	comp=E,63nm,1.9s						
YAK				smax	smax		
	comp=N,47nm,2.0s						
BILL	**Bilibino**	**24.27**	**15**	*e*P	**P**	**23 16 15.5**	**-2.3**
BILL				*i*		23 16 48.4	
BILL				*i*		23 19 56.3	
BILL				pmax	pmax		
	comp=Z,4.0nm,1.2s						
NJ2	**Nanjing**	**27.42**	**252**	*e*P	**P**	**23 16 46.8**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,70nm,0.8s						
HHC	**Hu-ho-hao-te**	**28.13**	**274**	*e*P	**P**	**23 16 51.9**	**-1.2**
HHC				pP	**pP**	**23 17 13.4**	**-1.3**
HHC				sP	**sP**	**23 17 25.4**	**-0.6**
HHC				PP	**PnPn**	**23 17 45.6**	**-0.4**
HHC				S	**S**	**23 21 27.0**	**-4.2**
HHC				sS	**sS**	**23 22 05.6**	**-3.2**
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.4s						
HHC				LR	LR		
	comp=N,260nm,10.2s						
HHC				LR	LR		
	comp=E,260nm,10.2s						
HHC				LR	LR		
	comp=Z,230nm,11.8s						
TIXI	**Tiksi**	**28.20**	**346**	⇑*i*P	**P**	**23 16 50.4**	**-2.7**
TIXI				*i* *PP	**pP**	**23 17 15.3**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ULN	**Ulaanbaatar**	**29.23**	**290**	*e*P	**P**	**23 17 02.5**	**-0.3**
	comp=Z,3.9nm,1.0s						
SONM	**Songino Array**	**29.67**	**291**	P	**P**	**23 17 06.1**	**-0.5**
SONM	**Songino Array**	**29.67**	**291**	P	**P**	**23 17 06.1**	**-0.5**
	comp=Z,1.1nm,0.3s,baz=77,slow=8.6,SNR=10						
SONM				LR	LR	23 29 40.4	
	comp=Z,53nm,18.9s,baz=244,slow=38						
ZAK	**Zakamensk**	**31.22**	**296**	*e*P	**P**	**23 17 21.2**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LZH	**Lanzhou**	**35.66**	**271**	*e*P	**P**	**23 17 59.5**	**+0.5**
LZH				pP	**pP**	**23 18 20.3**	**-0.8**
LZH				sP	**sP**	**23 18 31.8**	**-0.4**
LZH				*e*PP	**PP**	**23 19 22.0**	**+0.4**
LZH				*e*S	**S**	**23 23 23.0**	**-5.4**
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,51nm,4.0s						
LZH				LR	LR		
	comp=N,170nm,11.1s						
LZH				LR	LR		
	comp=E,130nm,12.0s						
LZH				LR	LR		
	comp=Z,320nm,14.6s						
PPLA	**Purkeypile**	**36.69**	**41**	*e*P	**P**	**23 18 08.2**	**+0.8**
	comp=Z,14nm,1.0s						
PPLA				*e*pP	**pP**	**23 18 30.6**	**+1.1**
SPU	**Mount Spurr**	**36.76**	**43**	*e*P	**P**	**23 18 09.3**	**+1.4**
GTA	**Gaotai**	**36.94**	**279**	P	**P**	**23 18 11.8**	**+2.0**
GTA				S	**S**	**23 23 50.9**	**+3.1**
GTA				pmax	pmax		
	comp=Z,19nm,0.9s						
GTA				pmax	pmax		
	comp=Z,71nm,6.2s						
GTA				LR	LR		
	comp=N,100nm,16.4s						
GTA				LR	LR		
	comp=E,88nm,16.6s						
GTA				LR	LR		
	comp=Z,97nm,17.8s						
COLD	**Coldfoot**	**37.73**	**33**	*e*P	**P**	**23 18 16.6**	**+0.6**
	comp=Z,6.9nm,0.7s						
MCK	**McKinley**	**38.15**	**39**	*e*P	**P**	**23 18 20.2**	**+0.6**
MCK				pmax	pmax		
	comp=Z,11nm,1.1s						
MCK	**McKinley**	**38.15**	**39**	*e*P	**P**	**23 18 20.2**	**+0.6**
	comp=Z,11nm,1.1s						
CD2	**Chengdu**	**38.49**	**264**	*e*P	**P**	**23 18 23.4**	**+0.5**
CD2				pP	**pP**	**23 18 45.9**	**+0.7**
CD2				sP	**sP**	**23 18 57.5**	**+1.2**
CD2				PP	**PnPn**	**23 19 57.1**	**+1.5**
CD2				S	**S**	**23 24 10.3**	**-1.0**
CD2				sS	**sS**	**23 24 49.6**	**-0.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.9s						
CD2				pmax	pmax		
	comp=Z,100nm,4.8s						
CD2				LR	LR		
	comp=E,100nm,15.5s						
CD2				LR	LR		
	comp=Z,120nm,10.8s						
SML	**Sawmill**	**38.51**	**42**	*e*P	**P**	**23 18 23.3**	**+0.6**
SML				*e**PP	**pP**	**23 18 46.0**	**+1.0**
SML				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SML	**Sawmill**	**38.51**	**42**	*e*P	**P**	**23 18 23.3**	**+0.6**
	comp=Z,7.6nm,0.8s						
SML				*e*pP	**pP**	**23 18 46.0**	**+1.0**
COLA	**College**	**38.61**	**37**	*e*P	**P**	**23 18 24.0**	**+0.7**
COLA				pmax	pmax		
	comp=Z,13nm,0.8s						
COLA	**College**	**38.61**	**37**	*e*P	**P**	**23 18 24.0**	**+0.7**
	comp=Z,13nm,0.8s						
ILAR	**Eielson Array**	**39.02**	**37**	P	**P**	**23 18 26.6**	**-0.2**
ILAR				pP	**pP**	**23 18 49.7**	**+0.5**
ILAR	**Eielson Array**	**39.02**	**37**	P	**P**	**23 18 26.6**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=257,slow=7.9,SNR=25						
ILAR				pP	**pP**	**23 18 49.7**	**+0.5**
	comp=Z,1.2nm,0.5s,baz=263,slow=7.3,SNR=2.7						
GYA	**Guiyang**	**39.20**	**256**	*e*P	**P**	**23 18 29.8**	**+0.9**
GYA				pP	**pP**	**23 18 52.8**	**+1.6**
GYA				sP	**sP**	**23 19 04.3**	**+2.0**
GYA				PP	**PnPn**	**23 20 05.3**	**+1.2**
GYA				ScP	**ScP**	**23 24 16.9**	**+1.2**
GYA				S	**S**	**23 24 22.0**	**0.0**
GYA				sS	**sS**	**23 25 01.8**	**+1.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,90nm,4.7s						
GYA				LR	LR		
	comp=N,450nm,17.7s						
GYA				LR	LR		
	comp=E,380nm,18.9s						
GYA				LR	LR		
	comp=Z,470nm,17.4s						
RAGM

WMQ pP **pP** 23 19 27.0 +2.1
WMQ pmax pmax
comp=Z,11nm,0.8s
WMQ pmax pmax
comp=Z,120nm,4.6s
WMQ LR LR
comp=Z,160nm,19.7s
MK31 Makanchi Array 45.55 297 *i* P **P** 23 19 19.3 -0.7
MK31 pmax pmax
comp=Z,11nm,0.7s
MK31 Makanchi Array 45.55 297 *e*P **P** 23 19 19.1 -0.9
MKAR Makanchi Array 45.55 297 *e*P **P** 23 19 19.8 -0.3
MKAR Makanchi Array 45.55 297 *e*P **P** 23 19 19.8 -0.3
MKAR Makanchi Array 45.55 297 P **P** 23 19 19.4 -0.6
comp=Z,7.6nm,0.8s,baz=77,slow=7.4,SNR=54
KURK Kurchatov 46.23 304 *e*P **P** 23 19 24.3 -0.9
KURK pmax pmax
comp=Z,7.0nm,0.6s
KURK Kurchatov 46.23 304 *e*P **P** 23 19 24.3 -0.9
comp=Z,7.1nm,0.6s
BRVK Borovoye 50.01 309⇑ *e*P **P** 23 19 53.2 -1.1
BRVK pmax pmax
comp=Z,11nm,1.9s
BRVK Borovoye 50.01 309 *e*P **P** 23 19 54.1 -0.3
comp=Z,6.4nm,1.1s
ULHL Ulahol 51.48 294 P **P** 23 20 07.1 +1.3
SNR=8.6
TKM2 Tokmak 2 51.55 295 *e*P **P** 23 20 07.7 +1.4
TKM2 pmax pmax
comp=Z,30nm,1.7s
TKM2 Tokmak 2 51.55 295 *e*P **P** 23 20 07.7 +1.4
comp=Z,30nm,1.7s
TAPN Taplejung 51.90 272 *e*P **P** 23 20 10.1 +0.9
comp=Z,9.6nm,0.6s
USP Ospenovka 52.07 296 P **P** 23 20 10.9 +0.9
SNR=13
KBK Karagaybulak 52.10 295 P **P** 23 20 11.7 +1.4
SNR=11
KZA Kyzart 52.20 295 P **P** 23 20 13.5 +2.1
SNR=9.8
AAK Ala-Archa 52.40 296 P **P** 23 20 12.5 0.0
AAK pmax pmax
comp=Z,10.0nm,0.8s
AAK Ala-Archa 52.40 296 *e*P **P** 23 20 12.2 -0.3
comp=Z,9.5nm,0.8s
AAK Ala-Archa 52.40 296 P **P** 23 20 14.4 +1.9
SNR=5.6
AAK Ala-Archa 52.40 296 P **P** 23 20 12.5 0.0
comp=Z,9.5nm,0.8s,baz=109,slow=4.1,SNR=13
EKS2 Erkin-Say 52.84 296 *e*P **P** 23 20 16.7 +1.0
EKS2 pmax pmax
comp=Z,12nm,0.9s
EKS2 Erkin-Say 52.84 296 *e*P **P** 23 20 16.6 +1.0
comp=Z,12nm,0.9s
EKS2 Erkin-Say 52.84 296 P **P** 23 20 17.1 +1.4
SNR=6.8
GUN Gumba 52.84 274 *e*P **P** 23 20 16.0 -0.2
comp=Z,13nm,0.5s
RAMN Ramite 52.92 272 *e*P **P** 23 20 16.7 0.0
comp=Z,16nm,0.5s
KSH Kashi 53.06 292 P P 23 20 22.3 +4.9
KSH *e*pP pP 23 20 46.0 +5.2
KSH *e*sP sP 23 20 57.1 +5.4
KSH *e*PcP **PcP** **23 21 28.3 +3.7**
KSH *e*PP PP 23 22 25.4 +7.6
KSH *e*ScP **ScP** **23 25 15.4 +2.3**
KSH *e*PcS **PcS** **23 25 25.6 +2.0**
KSH *e*S **S** **23 27 43.8 +3.7**
KSH *e*sS sS 23 28 26.3 +6.0
KSH pmax pmax
comp=Z,19nm,0.8s
KSH pmax pmax
comp=Z,120nm,3.9s
KSH LR LR
comp=N,220nm,5.3s
KSH LR LR
comp=E,250nm,5.3s
KSH LR LR
comp=Z,380nm,5.2s
AML Almayashu 53.16 296 P **P** 23 20 20.1 +1.7
SNR=5.3
SVE Sverdlovsk 53.28 317⇑ *i*P **P** 23 20 17.9 -0.7
SVE pmax pmax
comp=Z,17nm,0.8s
YKA Yellowknife Ar 53.36 35 P **P** 23 20 19.6 +0.5
YKA pP **pP** 23 20 42.9 +0.4
YKA Yellowknife Ar 53.36 35 P **P** 23 20 19.5 +0.5
comp=Z,3.9nm,0.6s,baz=299,slow=6.9,SNR=9.4
YKA pP **pP** 23 20 42.9 +0.4
comp=Z,6.6nm,0.6s,baz=297,slow=7.0,SNR=11
DMN Daman 53.57 274 *e*P **P** 23 20 20.6 -0.8
comp=Z,7.7nm,0.4s
DANN Dangsing 54.07 276 *e*P **P** 23 20 23.6 -1.5
comp=Z,24nm,0.7s
ARU Arti 54.48 317 *d i*P **P** 23 20 25.2 -2.1
ARU 23 21 27.5
ARU S **S** **23 27 56.5 -1.9**
ARU pmax pmax
comp=Z,21nm,1.0s
KOLN Koldanda 54.53 275 *e*P **P** 23 20 26.5 -1.9
comp=Z,15nm,0.9s
KK31 Karatay Array 54.66 298 *i*P **P** 23 20 28.6 -0.2
KK31 pmax pmax
comp=Z,4.0nm,0.4s
KKAR Karatay Array 54.66 298 *e*P **P** 23 20 29.1 +0.3
KKAR Karatay Array 54.66 298 *e*P **P** 23 20 29.1 +0.3
AB31 Akbulak array 57.54 309 *i*P **P** 23 20 48.5 -0.7
AB31 pmax pmax
comp=Z,5.0nm,0.3s
ABKAR Akbulak array 57.54 309 *e*P **P** 23 20 48.6 -0.6
ABKAR *e*PcP **PcP** 23 21 40.5 -1.0
KEV Kevo 57.86 340 *e*P **P** 23 20 48.5 -2.6
KEV pmax pmax
comp=Z,3.0nm,0.8s
KEV Kevo 57.86 340 *e*p **P** 23 20 48.5 -2.6
comp=Z,3.4nm,0.8s
ARCES ARCESS Array B 58.38 340 P **P** 23 20 52.8 -2.0
ARCES ARCESS Array B 58.38 340 P **P** 23 20 52.8 -2.0
comp=Z,1.7nm,0.5s,baz=40,slow=9.0,SNR=12
KBL Kabul 60.44 290 *e*P **P** 23 21 10.3 +0.5
KBL pmax pmax
comp=Z,33nm,0.8s
KBL Kabul 60.44 290 *e*P **P** 23 21 10.3 +0.5
comp=Z,33nm,0.8s
JOF Joensuu 61.53 333 *e*P **P** 23 21 13.9 -2.5
JOF pmax pmax
comp=Z,10.0nm,0.7s
JOF Joensuu 61.53 333 *e*p **P** 23 21 13.9 -2.5
comp=Z,9.8nm,0.7s
SUMG Summit 62.20 3 *e*P **P** 23 21 21.2 0.0
SUMG pmax pmax
comp=Z,36nm,1.0s
SUMG Summit 62.20 3 *e*P **P** 23 21 21.2 0.0
comp=Z,36nm,1.0s
SUMG Summit 62.20 3⇑ *i*P **P** 23 21 21.0 -0.2
comp=Z,26nm,1.0s
FFC Flin Flon 63.23 38 *e*P **P** 23 21 28.3 +0.5
FFC pmax pmax
comp=Z,9.0nm,0.8s
FFC Flin Flon 63.23 38 *e*P **P** 23 21 28.3 +0.5
comp=Z,9.0nm,0.8s
KAF Kangasniemi 63.70 334 *e*P **P** 23 21 28.3 -2.5
KAF pmax pmax
comp=Z,8.0nm,0.7s
KAF Kangasniemi 63.70 334 *e*p **P** 23 21 28.3 -2.5
comp=Z,8.0nm,0.7s
LRM Limekiln Ridge 63.82 51 *e*P **P** 23 21 32.6 +0.3
comp=Z,28nm,1.0s
LRM *e*pP **pP** 23 21 56.5 +0.1
FINES FINESS Array B 64.28 334 P **P** 23 21 33.2 -1.4
FINES FINESS Array B 64.28 334 P **P** 23 21 33.2 -1.4
comp=Z,11nm,0.6s,baz=46,slow=8.2,SNR=27
SCO Scoresbysund 64.29 357 *i*P **P** 23 21 34.2 -0.4
comp=Z,4.9nm,0.7s
NVAR Mina Array Bea 65.08 60 P **P** 23 21 41.4 +0.9
NVAR pP **pP** **23 22 04.7 0.0**
NVAR Mina Array Bea 65.08 60 P **P** 23 21 41.4 +0.9
comp=Z,1.1nm,0.5s,baz=300,slow=7.3,SNR=8.2
NVAR pP **pP** **23 22 04.7 0.0**
comp=Z,1.9nm,0.6s,baz=299,slow=7.6,SNR=7.0
TPAW Teton Pass 66.13 52 *e*P P 23 21 53.5 +6.3
TPAW *e*pP pP 23 22 13.0 +1.4
WRA Warramunga Arr 66.53 196 P **P** 23 21 49.8 +0.2
WRA Warramunga Arr 66.53 196 P **P** 23 21 49.8 +0.2
comp=Z,7.8nm,0.7s,baz=15,slow=6.8,SNR=37

VSR Storozhevoye 66.74 320 *e*P **P** 23 21 49.7 -0.9
VSR pmax pmax
comp=Z,9.0nm,0.5s
VSR pmax pmax
comp=N,5.0nm,0.8s
VSR pmax pmax
comp=E,3.0nm,0.8s
VORD Divnogorie 66.85 320 *e*P P 23 21 48.1 -3.2
VORD pmax pmax
comp=Z,10.0nm,1.3s
VORD pmax pmax
comp=N,30nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
SFJD Kangerlussuaq 66.87 9⇑ *i*P **P** 23 21 50.7 -0.4
comp=E,9.9nm,0.8s
PDAR Pinedale Array 67.38 52 P **P** 23 21 54.8 -0.4
PDAR pP **pP** 23 22 19.4 -0.1
PDAR Pinedale Array 67.38 52 P **P** 23 21 54.8 -0.4
comp=E,1.4nm,0.7s,baz=350,slow=1.5,SNR=6.6
PDAR pP **pP** 23 22 19.4 -0.1
comp=E,2.5nm,0.8s,baz=281,slow=1.8,SNR=7.3
NB2 NORSAR Subarra 68.76 340 P **P** 23 22 02.0 -1.2
comp=Z,5.0nm,0.5s,baz=28,slow=6.5
NOA NORSAR Array B 68.76 340 P **P** 23 22 02.1 -1.1
NOA NORSAR Array B 68.76 340 P **P** 23 22 02.1 -1.1
comp=Z,6.2nm,0.6s,baz=29,slow=6.4,SNR=39
NOA LR LR 23 54 60.0
comp=Z,21nm,18.3s,baz=330,slow=38
PFO Pinyon Flat Ob 69.33 63 P **P** 23 22 08.5 +1.2
PFO Pinyon Flat Ob 69.33 63 P **P** 23 22 08.5 +1.2
comp=Z,1.0nm,0.6s,baz=270,slow=6.1,SNR=2.5
KIV Kislovodsk 70.10 313 *e*P **P** 23 22 12.3 +0.5
KIV pmax pmax
comp=Z,35nm,1.1s
KIV MLR MLR
comp=Z,36nm,18.0s
KBZ Khabaz 70.14 313 P **P** 23 22 12.7 +0.7
KBZ pmax pmax
comp=Z,18nm,0.9s
KBZ Khabaz 70.14 313 P **P** 23 22 12.7 +0.7
KBZ Khabaz 70.14 313 P **P** 23 22 12.7 +0.7
comp=Z,18nm,0.9s,baz=50,slow=3.3,SNR=36
AS31 Alice Springs 70.24 196 *e*P **P** 23 22 13.4 +0.7
ASAR Alice Springs 70.24 196 P **P** 23 22 13.9 +1.2
ASAR Alice Springs 70.24 196 P **P** 23 22 13.9 +1.2
comp=Z,5.5nm,0.8s,baz=11,slow=5.8,SNR=41
DUS Dusheti 70.33 310 P **P** 23 22 13.6 +0.4
DGRG David-gareji 70.41 309 P **P** 23 22 14.4 +0.7
TBLG Delisi 70.56 310 *e*P **P** 23 22 16.6 +2.0
TBLG Delisi 70.56 310 P **P** 23 22 16.6 +2.0
ONI Oni 70.65 311 P **P** 23 22 16.5 +1.4
GOR Gori 70.72 311 P **P** 23 22 16.6 +1.1
AKASG Malin Array Be 71.39 325 P **P** 23 22 18.4 -1.0
AKASG pmax pmax
comp=Z,4.0nm,0.4s
AKASG Malin Array Be 71.39 325 P **P** 23 22 18.4 -1.0
AKASG Malin Array Be 71.39 325 P **P** 23 22 18.4 -1.0
comp=Z,3.6nm,0.4s,baz=35,slow=6.3,SNR=28
AK01 Malin Array Si 71.40 325 *e*P **P** 23 22 18.1 -1.3
KIEV Kiev 71.40 325 *e*P **P** 23 22 17.8 -1.6
KIEV pmax pmax
comp=Z,6.0nm,0.7s
KIEV Kiev 71.40 325 *e*P **P** 23 22 17.8 -1.6
comp=Z,6.3nm,0.7s
AK02 Malin Array Si 71.43 325 *e*P **P** 23 22 18.4 -1.2
AKH Akhalkalaki 71.45 310 P **P** 23 22 21.4 +1.3
GNI Garni 71.65 309 *e*P **P** 23 22 21.6 +0.2
comp=Z,14nm,0.8s
SOC Sochi 71.88 314 *c i*P **P** 23 22 22.3 -0.1
SOC *e* 23 25 11.0
SOC *e*S **S** **23 31 33.2 -2.2**
SOC pmax pmax
comp=Z,19nm,0.7s
EYMN Ely 72.66 38 *e*P **P** 23 22 28.3 +1.2
comp=Z,10nm,1.3s
ECSD EROS Data Cent 73.45 44 *e*P **P** 23 22 30.8 -1.0
comp=Z,12nm,1.2s
ECSD *e*pP **pP** **23 22 56.6 +0.1**
GKP Gorka Klasztor 73.70 333 *e*P **P** 23 22 32.6 -0.4
LVV L'vov 74.14 327 *e*P **P** 23 22 35.6 -0.1
ANMO Albuquerque 74.48 56 pP pP 23 23 04.0 +1.1
ANMO Albuquerque 74.48 56 pP pP 23 23 04.0 +1.1
comp=Z,0.9nm,0.7s,baz=292,slow=7.2,SNR=2.9
KWP Kalwaria Pacla 74.80 328 ⇓P **P** 23 22 39.9 +0.4
KWP Kalwaria Pacla 74.80 328 *e*P **P** 23 22 40.0 +0.5
comp=Z,37nm,1.0s
KWP Kalwaria Pacla 74.80 328 ⇓*i*P **P** 23 22 39.9 +0.4
KWP Kalwaria Pacla 74.80 328 *e*P **P** 23 22 39.9 +0.4
OJC Ojcow 75.38 329 *e*P **P** 23 22 42.8 0.0
OJC Ojcow 75.38 329 *e*P **P** 23 22 42.9 0.0
comp=Z,13nm,0.8s
OJC Ojcow 75.38 329 *e*P **P** 23 22 42.8 0.0
SCHQ Schefferville 75.42 21 P **P** 23 22 43.0 0.0
SCHQ Schefferville 75.42 21 P **P** 23 22 43.0 0.0
comp=Z,3.0nm,0.6s,baz=13,slow=7.0,SNR=5.2
SCHQ LR LR 00 00 43.8
comp=Z,50nm,18.1s,baz=70,slow=40
BUR08 Bucovina Ar. S 75.42 325 *e*P **P** 23 22 43.0 -0.3
BURAR Bucovina Array 75.44 325 ⇓*i*P **P** 23 22 43.5 +0.1
STHS Stebnicka Huta 75.52 328 *e*P **P** 23 22 44.4 +0.7
STHS pmax pmax
comp=Z,9.0nm,0.8s
STHS Stebnicka Huta 75.52 328 *e*P **P** 23 22 44.3 +0.6
TESR Tescani 75.73 323⇑ *i*P **P** 23 22 45.1 +0.2
TLCR 75.84 321 ⇓P **P** 23 22 45.5 0.0
TLCR 75.84 321 ⇓*i*P **P** 23 22 45.5 0.0
NIE Niedzica 75.86 329 *e*P **P** 23 22 46.7 +1.1
NIE Niedzica 75.86 329 *e*P **P** 23 22 46.7 +1.1
CRVS Cervenica-Dubn 75.86 328 *e*P **P** 23 22 43.4 -2.2
CRVS pmax pmax
comp=Z,8.0nm,1.0s
CRVS Cervenica-Dubn 75.86 328 *e*P **P** 23 22 43.4 -2.2
KSP Ksiaz 76.07 332 *e*P **P** 23 22 46.7 -0.1
KSP Ksiaz 76.07 332 *e*P **P** 23 22 46.1 -0.7
TRPA Tarpa 76.08 327⇑ *i*P **P** 23 22 47.3 +0.5
CFR Carcaliu 76.15 322 ⇓P **P** 23 22 48.0 +0.8
CFR Carcaliu 76.15 322 ⇓*i*P **P** 23 22 48.0 +0.8
OKC Ostrava-Krasne 76.29 330 *e*P **P** 23 22 48.3 +0.3
OKC Ostrava-Krasne 76.29 330 *e*P **P** 23 22 48.3 +0.3
MALT Malatya 76.38 311 ⇓*i*P **PcP** 23 23 00.2 -0.1
UPC Upice 76.45 332 *e*P **P** 23 22 49.3 +0.3
UPC Upice 76.45 332 *e*P **P** 23 22 49.2 +0.3
DPC Dobruska-Polom 76.48 331 *e*P **P** 23 22 49.5 +0.4
DPC Dobruska-Polom 76.48 331 *e*P **P** 23 22 49.5 +0.4
MORC Moravsky Berou 76.55 330⇑ P **P** 23 22 49.8 +0.3
MORC Moravsky Berou 76.55 330 *e*P **P** 23 22 49.3 -0.2
comp=Z,13nm,0.9s
MORC Moravsky Berou 76.55 330⇑ *i*P **P** 23 22 49.8 +0.3
CLL Collm 76.73 334 *e*P **P** 23 22 50.0 -0.5
comp=Z,19nm,0.9s
CLL Collm 76.73 334⇑ *i*P **P** 23 22 49.9 -0.5
CLL pmax pmax
comp=Z,19nm,1.0s
CLL Collm 76.73 334⇑ *i*P **P** 23 22 49.9 -0.5
comp=Z,19nm,1.0s
BRG Berggiesshubel 76.81 333 *e*P **P** 23 22 50.3 -0.6
comp=Z,6.5nm,1.0s
BRG Berggiesshubel 76.81 333 *e*P **P** 23 22 50.9 0.0
comp=Z,6.0nm,1.0s
BRG Berggiesshubel 76.81 333 *e*P **P** 23 22 50.3 -0.6
BRG pmax pmax
comp=Z,7.0nm,1.0s
MLR Muntele Rosu 76.84 323⇑ *i*P **P** 23 22 52.1 +0.7
FBE Freiberg 76.96 333 *e*P **P** 23 22 51.7 0.0
comp=Z,12nm,1.1s
VYHS Vyhne 77.17 329 *e*P **P** 23 22 53.4 +0.4
VYHS pmax pmax
comp=Z,5.0nm,0.9s
VYHS Vyhne 77.17 329 *e*P **P** 23 22 53.4 +0.4
NEUB Neuenburg 77.19 334 *e*P **P** 23 22 53.5 +0.5
comp=Z,14nm,0.9s
VOIR 77.26 324 ⇓P **P** 23 22 54.1 +0.5
VOIR 77.26 324 ⇓*i*P **P** 23 22 54.1 +0.5
STKA Stephens Creek 77.26 187 P **P** 23 22 54.4 +0.9
STKA Stephens Creek 77.26 187 P **P** 23 22 54.4 +0.9
comp=Z,1.5nm,0.7s,baz=333,slow=18,SNR=3.9
PSZ Piszkesteto 77.26 328⇑ P **P** 23 22 54.8 +1.2
PSZ Piszkesteto 77.26 328 *e*P **P** 23 22 54.5 +0.9
comp=Z,14nm,1.1s
PSZ Piszkesteto 77.26 328⇑ *i*P **P** 23 22 54.8 +1.2
VRAC Vranov 77.28 331⇑ *i*P **P** 23 22 54.0 +0.4
PRU Pruhonice 77.38 332 *e*P **P** 23 22 54.2 +0.1
PRU Pruhonice 77.38 332 *e*P **P** 23 22 54.3 +0.1

MNTX Cornudas Mount 77.41 58 *e*P **P** 23 22 54.9 +0.2
comp=Z,2.0nm,1.2s
MNTX *e*pP **pP** **23 23 20.1 +0.4**
ARR Arges 77.49 324⇑ *i*P **P** 23 22 56.2 +1.3
TREC Trest 77.67 331 *e*P **P** 23 22 56.0 +0.2
TREC Trest 77.67 331 *e*P **P** 23 22 56.0 +0.2
TANN Tannenbergstha 77.68 334 *e*P **P** 23 22 55.6 -0.3
comp=Z,9.0nm,1.5s
PLN Plauen 77.71 334 *e*P **P** 23 22 55.9 -0.1
comp=Z,74nm,1.5s
MOX Moxa 77.74 334 *e*P **P** 23 22 56.0 -0.1
comp=Z,12nm,1.2s
MOX Moxa 77.74 334 *e*P **P** 23 22 56.0 -0.1
MOX pmax pmax
comp=Z,12nm,1.2s
GUNZ Gunzen 77.76 334 *e*P **P** 23 22 56.2 -0.1
comp=Z,12nm,1.3s
LOT Lotru 77.78 324⇑ *i*P **P** 23 22 57.5 +0.9
BR131 Keskin Array S 77.79 315 *e*P **P** 23 22 57.1 +0.4
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 77.79 315 P **P** 23 22 57.9 +1.1
BRTR Keskin Array B 77.79 315 P **P** 23 22 57.9 +1.1
comp=Z,4.9nm,0.8s,baz=72,slow=4.5,SNR=31
WERN Wernitzgruen 77.82 334 *e*P **P** 23 22 56.7 +0.1
comp=Z,10.0nm,1.2s
ZST Bratislava 78.04 330 *e*P **P** 23 22 58.1 +0.3
ZST Bratislava 78.04 330 *e*P **P** 23 22 58.1 +0.3
ANTO Ankara 78.10 316 *e*P **P** 23 23 00.0 +1.6
ANTO pmax pmax
comp=Z,8.0nm,0.7s
ANTO Ankara 78.10 316 *e*P **P** 23 23 00.0 +1.6
comp=Z,8.3nm,0.7s
GZR Gura Zlata 78.23 325⇑ P **P** 23 22 59.4 +0.4
GZR Gura Zlata 78.23 325⇑ *i*P **P** 23 22 59.4 +0.4
BUG Bochum--Univer 78.29 337 *e*P **P** 23 22 59.1 0.0
comp=Z,11nm,1.1s
ROTZ Rotzenmuhle 78.33 334 *e*P **P** 23 22 59.7 +0.3
comp=Z,10.0nm,1.0s
KHC Kasperske Hory 78.44 332 *e*P **P** 23 23 00.4 +0.4
KHC pmax pmax
comp=Z,16nm,1.0s
KHC Kasperske Hory 78.44 332 *e*P **P** 23 23 00.5 +0.4
KHC Kasperske Hory 78.44 332 *e*P **P** 23 23 00.4 +0.4
comp=Z,16nm,1.0s
BZS Buzias 78.51 326 ⇓P **P** 23 23 00.6 +0.1
BZS Buzias 78.51 326 ⇓*i*P **P** 23 23 00.6 +0.1
GEC2 GERESS Array S 78.65 332 *e*P **P** 23 23 01.2 -0.1
comp=Z,5.0nm,0.8s
GEC2 GERESS Array S 78.65 332 *e*P **P** 23 23 01.3 -0.1
GEC2 GERESS Array S 78.65 332 *e*P **P** 23 23 01.3 -0.1
GERES GERESS Array B 78.65 332 P **P** 23 23 01.2 -0.1
GERES GERESS Array B 78.65 332 P **P** 23 23 01.2 -0.1
comp=Z,3.2nm,0.5s,baz=42,slow=5.1,SNR=45
GERES LR LR 00 01 45.0
comp=Z,37nm,18.4s,baz=38,slow=39
WET Wettzell 78.66 333 *e*P **P** 23 23 01.7 +0.5
comp=Z,18nm,1.2s
WET Wettzell 78.66 333 *e*P **P** 23 23 01.7 +0.5
WET pmax pmax
comp=Z,18nm,1.2s
GRF Grafenberg Arr 78.70 334 *e*P **P** 23 23 01.9 +0.5
comp=Z,21nm,0.9s
GRF Grafenberg Arr 78.70 334 *e*P **P** 23 23 01.9 +0.5
GRF pmax pmax
comp=Z,21nm,0.9s
GRFO Grafenberg 78.70 334 *e*P **P** 23 23 01.9 +0.4
GRFO pmax pmax
comp=Z,15nm,0.7s
GRFO Grafenberg 78.70 334 *e*P **P** 23 23 01.9 +0.4
comp=Z,14nm,0.7s
CONA Conrad Observa 78.71 330⇑ *i*P **P** 23 23 02.6 +0.9
comp=Z,10nm,0.8s
TNS Taunus Mts 79.05 336 *e*P **P** 23 23 03.4 0.0
comp=Z,10.0nm,0.9s
TNS Taunus Mts 79.05 336 *e*P **P** 23 23 03.4 0.0
TNS pmax pmax
comp=Z,10.0nm,0.9s
HGN Heimansgroeve 79.26 338 *e*P **P** 23 23 04.0 -0.5
comp=Z,37nm,1.5s
MOA Molln 79.32 331⇑ *i*P **P** 23 23 03.8 -1.1
comp=Z,5.1nm,0.8s
ARSA Arzberg 79.41 330⇑ *i*P **P** 23 23 06.0 +0.6
comp=Z,7.9nm,1.4s
FUR Furstenfeldbru 80.03 333 *e*P **P** 23 23 09.3 +0.6
comp=Z,24nm,1.0s
FUR Furstenfeldbru 80.03 333 *e*P **P** 23 23 09.3 +0.6
FUR pmax pmax
comp=Z,24nm,1.0s
SOKA Soboth 80.07 330⇑ *i*P **P** 23 23 09.5 +0.4
comp=Z,14nm,1.1s
PERS Pernice 80.08 330 *i*P **P** 23 23 09.2 +0.2
TXAR Lajitas Array 80.14 58 P **P** 23 23 10.0 +0.2
TXAR pP **pP** **23 23 34.7 -0.1**
TXAR Lajitas Array 80.14 58 P **P** 23 23 10.0 +0.2
comp=Z,1.1nm,0.5s,baz=299,slow=4.4,SNR=26
TXAR pP **pP** **23 23 34.7 -0.1**
comp=Z,3.1nm,0.6s,baz=296,slow=4.1,SNR=9.2
GIVF Givet 80.16 338 *e*P **P** 23 23 09.1 -0.2
GIVF Givet 80.16 338 *e*P **P** 23 23 09.1 -0.2
GIVF Givet 80.16 338 *e*P **P** 23 23 09.1 -0.2
WLF Walferdange 80.20 337 *e*P **P** 23 23 10.3 +0.7
comp=Z,10.0nm,1.0s
KBA Koelnbreinsper 80.30 332⇑ *i*P **P** 23 23 11.1 +0.7
comp=Z,19nm,0.8s
VTS Vitosha 80.34 323⇑ P **P** 23 23 10.6 -0.1
VTS Vitosha 80.34 323⇑ *i*P **P** 23 23 10.6 -0.1
BAIF Baives 80.36 338 *e*P **P** 23 23 10.4 0.0
BAIF Baives 80.36 338 *e*P **P** 23 23 10.4 0.0
BAIF Baives 80.36 338 *e*P **P** 23 23 10.4 0.0
DOBS Dobrina 80.37 330 *e*P **P** 23 23 10.3 -0.3
GOLS Golise 80.44 330 *i*P **P** 23 23 10.9 -0.1
MYKA Terra Mystica 80.59 331⇑ *i*P **P** 23 23 12.0 +0.2
comp=Z,4.3nm,0.7s
CRES Cresnjev 80.66 330 *i*P **P** 23 23 12.0 -0.1
WTTA Wattenberg 80.70 333⇑ *i*P **P** 23 23 13.1 +0.6
comp=Z,22nm,0.9s
BFO Black Forest 80.78 335 *e*P **P** 23 23 12.8 0.0
comp=Z,10.0nm,1.1s
BFO Black Forest 80.78 335 *e*P **P** 23 23 12.6 -0.2
BFO pmax pmax
comp=Z,7.0nm,0.9s
BFO Black Forest 80.78 335 *e*P **P** 23 23 12.8 0.0
BFO pmax pmax
comp=Z,10.0nm,1.1s
BFO Black Forest 80.78 335 *e*P **P** 23 23 12.6 -0.2
comp=Z,7.4nm,0.9s
RETA Reutte 80.79 333⇑ *i*P **P** 23 23 13.3 +0.4
comp=Z,8.4nm,1.0s
MOTA Moosalm 80.81 333⇑ *i*P **P** 23 23 13.4 +0.3
comp=Z,9.9nm,0.7s
ABTA Abfaltersbach 80.87 332⇓ *e*P **P** 23 23 13.0 -0.3
comp=Z,5.6nm,1.3s
CDF Champ du Feu 81.02 336 *e*P **P** 23 23 13.9 -0.2
comp=Z,14nm,0.9s
CDF Champ du Feu 81.02 336 *e*P **P** 23 23 13.9 -0.2
CDF pmax pmax
comp=Z,15nm,0.9s
CDF Champ du Feu 81.02 336 *e*P **P** 23 23 13.9 -0.2
comp=Z,14nm,0.9s
FETA Feichten 81.21 333⇑ *i*P **P** 23 23 15.6 +0.4
comp=Z,6.7nm,1.0s
ECH Echery 81.23 336 *e*P **P** 23 23 14.8 -0.3
ECH pmax pmax
comp=Z,6.0nm,0.8s
ECH Echery 81.23 336 *e*P **P** 23 23 14.8 -0.3
comp=Z,5.7nm,0.8s
DAVA Damuels 81.24 334⇑ *i*P **P** 23 23 14.9 -0.5
comp=Z,7.7nm,0.7s
PAGF Fort de Pagny 81.33 337⇑ *i*P **P** 23 23 15.9 +0.3
comp=Z,10nm,0.9s
PAGF Fort de Pagny 81.33 337⇑ *i*P **P** 23 23 15.9 +0.3
comp=Z,10nm,0.9s
MEZF Maizieres J'vi 81.56 337 *e*P **P** 23 23 17.0 +0.2
comp=Z,23nm,0.8s
MEZF Maizieres J'vi 81.56 337 *e*P **P** 23 23 17.0 +0.2
comp=Z,23nm,0.8s
CSS Prodhromos 81.59 312 *e*P **P** 23 23 18.0 +0.7
comp=Z,14nm,0.6s
HAU Haudompre 81.65 336 *e*P **P** 23 23 17.0 -0.4
comp=Z,11nm,0.7s
HAU *e*R
comp=Z,67nm,22.0s
HAU Haudompre 81.65 336 *e*P **P** 23 23 17.0 -0.4
HAU Haudompre 81.65 336 *e*P **P** 23 23 17.0 -0.4
HINF Hinteralfeld 81.68 336 *e*P **P** 23 23 17.0 -0.5
comp=Z,7.2nm,0.8s

HINF	**Hinteralfeld**	**81.68**	**336**	*e*P	**P**	**23**	**23**	**17.0**	**-0.5**
HINF				pmax	pmax				
	comp=Z,7.0nm,0.8s								
HINF	**Hinteralfeld**	**81.68**	**336**	*e*P	**P**	**23**	**23**	**17.0**	**-0.5**
	comp=Z,7.2nm,0.8s								
SFTF	**Sexfontaines**	**81.84**	**337**	*e*P	**P**	**23**	**23**	**18.3**	**0.0**
	comp=Z,30nm,0.8s								
SFTF	**Sexfontaines**	**81.84**	**337**	*e*P	**P**	**23**	**23**	**18.3**	**0.0**
	comp=Z,30nm,0.8s								
TUE	**Stuetta**	**82.14**	**334**	*e*P	**P**	**23**	**23**	**20.9**	**+0.7**
	comp=Z,6.7nm,0.8s								
FLN	**La Foliniere**	**82.72**	**341**	*e*P	**P**	**23**	**23**	**22.9**	**0.0**
	comp=Z,38nm,1.0s								
FLN				*e*R					
	comp=Z,66nm,19.5s								
FLN	**La Foliniere**	**82.72**	**341**	*e*P	**P**	**23**	**23**	**22.9**	**0.0**
FLN	**La Foliniere**	**82.72**	**341**	*e*P	**P**	**23**	**23**	**22.9**	**0.0**
LDF	**La Druitiere**	**82.79**	**340**	*e*P	**P**	**23**	**23**	**23.2**	**-0.1**
	comp=Z,15nm,0.8s								
LDF	**La Druitiere**	**82.79**	**340**	*e*P	**P**	**23**	**23**	**23.2**	**-0.1**
LDF				pmax	pmax				
	comp=Z,15nm,0.8s								
LDF	**La Druitiere**	**82.79**	**340**	*e*P	**P**	**23**	**23**	**23.2**	**-0.1**
	comp=Z,15nm,0.8s								
SENIN	**Lac Senin/Sane**	**82.86**	**335**	*e*P	**P**	**23**	**23**	**24.9**	**+1.0**
	comp=Z,43nm,2.3s								
CABF	**La Chapelle**	**82.99**	**336**	*e*P	**P**	**23**	**23**	**24.5**	**+0.1**
	comp=Z,9.8nm,0.8s								
CABF	**La Chapelle**	**82.99**	**336**	*e*P	**P**	**23**	**23**	**24.5**	**+0.1**
CABF				pmax	pmax				
	comp=Z,10.0nm,0.8s								
CABF	**La Chapelle**	**82.99**	**336**	*e*P	**P**	**23**	**23**	**24.5**	**+0.1**
	comp=Z,9.8nm,0.8s								
LOR	**Lormes**	**83.02**	**337**	*e*P	**P**	**23**	**23**	**24.4**	**-0.1**
	comp=Z,13nm,0.8s								
LOR				*e*R					
	comp=Z,84nm,19.5s								
LOR	**Lormes**	**83.02**	**337**	*e*P	**P**	**23**	**23**	**24.4**	**-0.1**
RAYN	**Ar Rayn**	**83.04**	**296**	*e*P	**P**	**23**	**23**	**25.4**	**+0.4**
	comp=Z,4.3nm,1.1s								
GRR	**Gorron**	**83.16**	**341**	*e*P	**P**	**23**	**23**	**25.4**	**+0.3**
	comp=Z,22nm,0.7s								
GRR	**Gorron**	**83.16**	**341**	*e*P	**P**	**23**	**23**	**25.4**	**+0.3**
GRR				pmax	pmax				
	comp=Z,22nm,0.7s								
GRR	**Gorron**	**83.16**	**341**	*e*P	**P**	**23**	**23**	**25.4**	**+0.3**
	comp=Z,22nm,0.7s								
SSF	**Saint Saulge**	**83.30**	**338**	*e*P	**P**	**23**	**23**	**25.9**	**0.0**
	comp=Z,11nm,0.9s								
SSF	**Saint Saulge**	**83.30**	**338**	*e*P	**P**	**23**	**23**	**25.9**	**0.0**
SSF				pmax	pmax				
	comp=Z,11nm,0.9s								
SSF	**Saint Saulge**	**83.30**	**338**	*e*P	**P**	**23**	**23**	**25.9**	**0.0**
	comp=Z,11nm,0.9s								
HYF	**Humbligny**	**83.34**	**338**	*e*P	**P**	**23**	**23**	**26.6**	**+0.5**
HYF	**Humbligny**	**83.34**	**338**	*e*P	**P**	**23**	**23**	**26.6**	**+0.5**
AVF	**Avril sur Loir**	**83.59**	**338**	*e*P	**P**	**23**	**23**	**27.6**	**+0.2**
	comp=Z,28nm,1.0s								
AVF	**Avril sur Loir**	**83.59**	**338**	*e*P	**P**	**23**	**23**	**27.6**	**+0.2**
AVF				pmax	pmax				
	comp=Z,28nm,1.0s								
AVF	**Avril sur Loir**	**83.59**	**338**	*e*P	**P**	**23**	**23**	**27.6**	**+0.2**
	comp=Z,28nm,1.0s								
SMF	**Signal de Mont**	**83.59**	**337**	*e*P	**P**	**23**	**23**	**27.6**	**+0.2**
	comp=Z,46nm,0.9s								
SMF	**Signal de Mont**	**83.59**	**337**	*e*P	**P**	**23**	**23**	**27.6**	**+0.2**
SMF				pmax	pmax				
	comp=Z,46nm,0.9s								
SMF	**Signal de Mont**	**83.59**	**337**	*e*P	**P**	**23**	**23**	**27.6**	**+0.2**
	comp=Z,46nm,0.9s								
SGMF	**Saint Gilles**	**83.67**	**342**	*e*P	**P**	**23**	**23**	**27.6**	**-0.1**
	comp=Z,6.0nm,0.4s								
SGMF	**Saint Gilles**	**83.67**	**342**	*e*P	**P**	**23**	**23**	**27.6**	**-0.1**
SGMF				pmax	pmax				
	comp=Z,6.0nm,0.4s								
SGMF	**Saint Gilles**	**83.67**	**342**	*e*P	**P**	**23**	**23**	**27.6**	**-0.1**
	comp=Z,6.0nm,0.4s								
ROSF	**Rostrenen**	**83.75**	**342**	*e*P	**P**	**23**	**23**	**28.2**	**+0.1**
	comp=Z,51nm,1.1s								
ROSF	**Rostrenen**	**83.75**	**342**	*e*P	**P**	**23**	**23**	**28.2**	**+0.1**
ROSF				pmax	pmax				
	comp=Z,51nm,1.1s								
ROSF	**Rostrenen**	**83.75**	**342**	*e*P	**P**	**23**	**23**	**28.2**	**+0.1**
	comp=Z,51nm,1.1s								
LPL	**La Plagne**	**83.79**	**335**	*e*P	**P**	**23**	**23**	**29.3**	**+0.6**
	comp=Z,14nm,1.0s								
LPL	**La Plagne**	**83.79**	**335**	*e*P	**P**	**23**	**23**	**29.3**	**+0.6**
LPL				pmax	pmax				
	comp=Z,14nm,1.0s								
LPL	**La Plagne**	**83.79**	**335**	*e*P	**P**	**23**	**23**	**29.3**	**+0.6**
	comp=Z,14nm,1.0s								
LPG	**La Plagne**	**83.81**	**335**	*e*P	**P**	**23**	**23**	**29.5**	**+0.6**
LPG	**La Plagne**	**83.81**	**335**	*e*P	**P**	**23**	**23**	**29.5**	**+0.6**
LPG	**La Plagne**	**83.81**	**335**	*e*P	**P**	**23**	**23**	**29.5**	**+0.6**
BGF	**Bois d'Agland**	**83.94**	**338**	*e*P	**P**	**23**	**23**	**29.3**	**+0.1**
BGF	**Bois d'Agland**	**83.94**	**338**	*e*P	**P**	**23**	**23**	**29.3**	**+0.1**
BGF	**Bois d'Agland**	**83.94**	**338**	*e*P	**P**	**23**	**23**	**29.3**	**+0.1**
QUIF	**Quistinic**	**84.12**	**342**	*e*P	**P**	**23**	**23**	**30.4**	**+0.4**
	comp=Z,16nm,0.7s								
QUIF	**Quistinic**	**84.12**	**342**	*e*P	**P**	**23**	**23**	**30.4**	**+0.4**
QUIF				pmax	pmax				
	comp=Z,16nm,0.7s								
QUIF	**Quistinic**	**84.12**	**342**	*e*P	**P**	**23**	**23**	**30.4**	**+0.4**
	comp=Z,16nm,0.7s								
BNI	**Bardonecchia**	**84.23**	**335**	*e*P	**P**	**23**	**23**	**31.6**	**+0.7**
BNI				pmax	pmax				
	comp=Z,99nm,2.8s								
BNI	**Bardonecchia**	**84.23**	**335**	*e*P	**P**	**23**	**23**	**31.6**	**+0.7**
	comp=Z,99nm,2.8s								
TCF	**Toulx Ste Croi**	**84.36**	**338**	*e*P	**P**	**23**	**23**	**31.9**	**+0.6**
	comp=Z,16nm,0.8s								
TCF	**Toulx Ste Croi**	**84.36**	**338**	*e*P	**P**	**23**	**23**	**31.9**	**+0.6**
TCF				pmax	pmax				
	comp=Z,16nm,0.8s								
TCF	**Toulx Ste Croi**	**84.36**	**338**	*e*P	**P**	**23**	**23**	**31.9**	**+0.6**
	comp=Z,16nm,0.8s								
MBDF	**Montbardon**	**84.50**	**335**	*e*P	**P**	**23**	**23**	**32.3**	**+0.1**
MBDF	**Montbardon**	**84.50**	**335**	*e*P	**P**	**23**	**23**	**32.3**	**+0.1**
MBDF	**Montbardon**	**84.50**	**335**	*e*P	**P**	**23**	**23**	**32.3**	**+0.1**
ORIF	**Oris-en-Rattie**	**84.59**	**335**	*e*P	**P**	**23**	**23**	**33.3**	**+0.7**
	comp=Z,18nm,0.7s								
ORIF				*e*R					
	comp=Z,111nm,22.8s								
ORIF	**Oris-en-Rattie**	**84.59**	**335**	*e*P	**P**	**23**	**23**	**33.3**	**+0.7**
ORIF	**Oris-en-Rattie**	**84.59**	**335**	*e*P	**P**	**23**	**23**	**33.3**	**+0.7**
SSB	**Saint Sauveur**	**84.65**	**336**	*e*P	**P**	**23**	**23**	**33.4**	**+0.5**
SSB				pmax	pmax				
	comp=Z,6.0nm,0.9s								
SSB	**Saint Sauveur**	**84.65**	**336**	*e*P	**P**	**23**	**23**	**33.4**	**+0.5**
	comp=Z,6.4nm,0.9s								
MFF	**Saint Martin d**	**84.66**	**340**	*e*P	**P**	**23**	**23**	**33.6**	**+0.8**
	comp=Z,39nm,0.9s								
MFF	**Saint Martin d**	**84.66**	**340**	*e*P	**P**	**23**	**23**	**33.6**	**+0.8**
MFF				pmax	pmax				
	comp=Z,39nm,0.9s								
MFF	**Saint Martin d**	**84.66**	**340**	*e*P	**P**	**23**	**23**	**33.6**	**+0.8**
	comp=Z,39nm,0.9s								
VIVF	**Saint-Julien-l**	**85.00**	**336**	*e*P	**P**	**23**	**23**	**35.2**	**+0.6**
	comp=Z,15nm,1.0s								
VIVF	**Saint-Julien-l**	**85.00**	**336**	*e*P	**P**	**23**	**23**	**35.2**	**+0.6**
VIVF				pmax	pmax				
	comp=Z,15nm,1.0s								
VIVF	**Saint-Julien-l**	**85.00**	**336**	*e*P	**P**	**23**	**23**	**35.2**	**+0.6**
	comp=Z,15nm,1.0s								
SBF	**Sospel**	**85.07**	**342**	*e*P	**P**	**23**	**23**	**33.5**	**-1.5**
	comp=Z,17nm,0.7s								
SBF	**Sospel**	**85.07**	**342**	*e*P	**P**	**23**	**23**	**33.5**	**-1.5**
SBF				pmax	pmax				
	comp=Z,17nm,0.7s								
SBF	**Sospel**	**85.07**	**342**	*e*P	**P**	**23**	**23**	**33.5**	**-1.5**
	comp=Z,17nm,0.7s								
RJF	**Les Rejaudoux**	**85.45**	**338**	*e*P	**P**	**23**	**23**	**37.7**	**+0.9**
RJF				*e*R					
	comp=Z,62nm,19.2s								
RJF	**Les Rejaudoux**	**85.45**	**338**	*e*P	**P**	**23**	**23**	**37.7**	**+0.9**
RJF	**Les Rejaudoux**	**85.45**	**338**	*e*P	**P**	**23**	**23**	**37.7**	**+0.9**
SMRF	**Simiane la Rot**	**85.54**	**335**	*e*P	**P**	**23**	**23**	**38.9**	**+1.6**
	comp=Z,8.8nm,0.9s								
SMRF	**Simiane la Rot**	**85.54**	**335**	*e*P	**P**	**23**	**23**	**38.9**	**+1.6**
	comp=Z,8.8nm,0.9s								
FRF	**La Foret Royal**	**85.59**	**334**	*e*P	**P**	**23**	**23**	**37.5**	**0.0**
	comp=Z,11nm,1.1s								
FRF	**La Foret Royal**	**85.59**	**334**	*e*P	**P**	**23**	**23**	**37.5**	**0.0**
FRF				pmax	pmax				
	comp=Z,11nm,1.1s								
FRF	**La Foret Royal**	**85.59**	**334**	*e*P	**P**	**23**	**23**	**37.5**	**0.0**
	comp=Z,11nm,1.1s								
CAF	**Calviac**	**85.66**	**338**	*e*P	**P**	**23**	**23**	**38.7**	**+0.8**
CAF	**Calviac**	**85.66**	**338**	*e*P	**P**	**23**	**23**	**38.7**	**+0.8**
CAF	**Calviac**	**85.66**	**338**	*e*P	**P**	**23**	**23**	**38.7**	**+0.8**
PGF	**Pioggiola**	**85.75**	**332**	*e*P	**P**	**23**	**23**	**38.5**	**0.0**
	comp=Z,6.6nm,0.6s								
PGF	**Pioggiola**	**85.75**	**332**	*e*P	**P**	**23**	**23**	**38.5**	**0.0**
PGF				pmax	pmax				
	comp=Z,7.0nm,0.6s								
PGF	**Pioggiola**	**85.75**	**332**	*e*P	**P**	**23**	**23**	**38.5**	**0.0**
	comp=Z,6.6nm,0.6s								
LMR	**La Mourre**	**85.84**	**334**	*e*P	**P**	**23**	**23**	**39.0**	**+0.3**
	comp=Z,19nm,0.7s								
LMR	**La Mourre**	**85.84**	**334**	*e*P	**P**	**23**	**23**	**39.0**	**+0.3**
LMR				pmax	pmax				
	comp=Z,19nm,0.7s								
LMR	**La Mourre**	**85.84**	**334**	*e*P	**P**	**23**	**23**	**39.0**	**+0.3**
	comp=Z,19nm,0.7s								
TIP	**Timpagrande**	**85.86**	**325**	*e*P	**P**	**23**	**23**	**39.6**	**+0.5**
	comp=Z,34nm,1.4s								
LASF	**Ste Croix**	**85.95**	**336**	*e*P	**P**	**23**	**23**	**40.4**	**+1.1**
	comp=Z,26nm,1.4s								
LASF	**Ste Croix**	**85.95**	**336**	*e*P	**P**	**23**	**23**	**40.4**	**+1.1**
	comp=Z,26nm,1.4s								
LFF	**La Frestale**	**85.99**	**339**	*e*P	**P**	**23**	**23**	**40.7**	**+1.2**
	comp=Z,26nm,0.8s								
LFF	**La Frestale**	**85.99**	**339**	*e*P	**P**	**23**	**23**	**40.7**	**+1.2**
LFF				pmax	pmax				
	comp=Z,26nm,0.8s								
LFF	**La Frestale**	**85.99**	**339**	*e*P	**P**	**23**	**23**	**40.7**	**+1.2**
	comp=Z,26nm,0.8s								
CEL	**Celeste**	**87.00**	**325**	*e*P	**P**	**23**	**23**	**44.6**	**0.0**
	comp=Z,7.9nm,0.7s								
MTLF	**Montolieu**	**87.08**	**337**	*e*P	**P**	**23**	**23**	**46.2**	**+1.3**
	comp=Z,8.9nm,0.9s								
MTLF	**Montolieu**	**87.08**	**337**	*e*P	**P**	**23**	**23**	**46.2**	**+1.3**
MTLF				pmax	pmax				
	comp=Z,9.0nm,0.9s								
MTLF	**Montolieu**	**87.08**	**337**	*e*P	**P**	**23**	**23**	**46.2**	**+1.3**
	comp=Z,8.9nm,0.9s								
EPF	**Esparros**	**87.88**	**338**	*e*P	**P**	**23**	**23**	**49.6**	**+0.9**
	comp=Z,6.5nm,0.7s								
EPF	**Esparros**	**87.88**	**338**	*e*P	**P**	**23**	**23**	**49.6**	**+0.9**
EPF				pmax	pmax				
	comp=Z,7.0nm,0.7s								
EPF	**Esparros**	**87.88**	**338**	*e*P	**P**	**23**	**23**	**49.6**	**+0.9**
	comp=Z,6.5nm,0.7s								
SJPF	**Ste Jean**	**88.20**	**339**	*e*P	**P**	**23**	**23**	**50.8**	**+0.6**
SJPF	**Ste Jean**	**88.20**	**339**	*e*P	**P**	**23**	**23**	**50.8**	**+0.6**
SJPF	**Ste Jean**	**88.20**	**339**	*e*P	**P**	**23**	**23**	**50.8**	**+0.6**
ETSF	**Etsaut**	**88.23**	**339⇑**	*i*P	**P**	**23**	**23**	**51.8**	**+1.4**
	comp=Z,11nm,0.7s								
ETSF	**Etsaut**	**88.23**	**339⇑**	*i*P	**P**	**23**	**23**	**51.8**	**+1.4**
ETSF				pmax	pmax				
	comp=Z,11nm,0.7s								
ETSF	**Etsaut**	**88.23**	**339⇑**	*i*P	**P**	**23**	**23**	**51.8**	**+1.4**
	comp=Z,11nm,0.7s								
KEST	**Kesra**	**91.72**	**329**	*e*P	**P**	**23**	**24**	**08.5**	**+1.6**
KEST	**Kesra**	**91.72**	**329**	P	**P**	**23**	**24**	**07.6**	**+0.8**
	comp=Z,2.8nm,0.9s,baz=313,slow=2.7,SNR=12								
ESDC	**Sonseca Array**	**92.12**	**340**	P	**P**	**23**	**24**	**08.7**	**+0.1**
ESDC	**Sonseca Array**	**92.12**	**340**	P	**P**	**23**	**24**	**08.7**	**+0.1**
	comp=Z,1.7nm,0.8s,baz=12,slow=4.2,SNR=8.0								
VNDA	**Vanda**	**122.85**	**177**	PKP	**PKPdf**	**23**	**29**	**53.7**	**+0.5**
VNDA	**Vanda**	**122.85**	**177**	PKP	**PKPdf**	**23**	**29**	**53.7**	**+0.5**
	comp=Z,0.8nm,0.8s,baz=316,slow=6.1,SNR=5.6								
BDFB	**Brasilia**	**146.75**	**33**	PKPbc	**PKPbc**	**23**	**30**	**41.7**	**+0.5**
BDFB				pPKPbc	pPKPbc	23	31	07.6	0.0
BDFB	**Brasilia**	**146.75**	**33**	PKPbc	**PKPbc**	**23**	**30**	**41.7**	**+0.5**
	comp=Z,2.8nm,0.7s,baz=3.7,slow=19,SNR=3.8								
BDFB				pPKPbc	pPKPbc	23	31	07.6	0.0
	comp=Z,7.0nm,0.8s,baz=268,slow=1.7,SNR=6.1								
PLCA	**Paso Flores**	**150.34**	**96**	PKPbc	**PKPbc**	**23**	**30**	**50.2**	**+0.5**
PLCA				pPKPbc	**pPKPbc**	**23**	**31**	**16.4**	**+0.1**
PLCA	**Paso Flores**	**150.34**	**96**	PKPbc	**PKPbc**	**23**	**30**	**50.2**	**+0.5**
	comp=Z,5.2nm,0.7s,baz=236,slow=3.5,SNR=11								
PLCA				pPKPbc	**pPKPbc**	**23**	**31**	**16.4**	**+0.1**
	comp=Z,3.6nm,0.9s,baz=264,slow=3.2,SNR=3.2								
SNAA	**Sanae**	**150.59**	**197**	*e*P	**PKPbc**	**23**	**30**	**49.7**	**+0.3**
SNAA	**Sanae**	**150.59**	**197**	*e*PKPbc	**PKPbc**	**23**	**30**	**49.1**	**-0.3**
CPUP	**Villa Florida**	**151.11**	**58**	PKPbc	**PKPbc**	**23**	**30**	**51.2**	**-0.7**
CPUP				pPKPbc	**pPKPbc**	**23**	**31**	**18.2**	**-0.1**
CPUP	**Villa Florida**	**151.11**	**58**	PKPbc	**PKPbc**	**23**	**30**	**51.2**	**-0.7**
	comp=Z,0.2nm,0.4s,baz=338,slow=19,SNR=3.9								
CPUP				pPKPbc	**pPKPbc**	**23**	**31**	**18.2**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=342,slow=20,SNR=3.2								

*DDA **17** 23:13:17.5, 39.20N×38.79E, h5km, ML3.2*
*ISK **17** 23:13:17.9, 39.22N×38.81E, h7km, MD3.0*
*ISCJB **17** 23:13:18.4±0.5, 39.21N±0.02×38.80E±0.03, h2km±5km, Error ellipse: s-maj=4.0km s-min=3.7km az=171.3*
*CSEM **17** 23:13:18.5±0.2, 39.20N×38.78E, h2km, MD3.0, Error ellipse: s-maj=4.2km s-min=3.4km az=88.0*

ISC 17 23:13:18.5±1.0, 39.21N±0.02×38.79E±0.02, h9km±8km, n50, σ0.88/68, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
KEMA	**Kemaliye**	**0.23**	**284**	*i* P	**Pg**	**23**	**13**	**22.6**	**-0.7**
KEMA				*i* S	**Sg**	**23**	**13**	**27.6**	**+1.1**
KEMA	**Kemaliye**	**0.23**	**284**	*i* P	**Pg**	**23**	**13**	**22.6**	**-0.7**
KEMA				*i* S	**Sg**	**23**	**13**	**27.6**	**+1.1**
ILIC	**ilic-Erzincan**	**0.29**	**325**	PG	**Pg**	**23**	**13**	**24.5**	**+0.1**
ILIC				SG	**Sg**	**23**	**13**	**28.9**	**+0.5**
ILIC	**ilic-Erzincan**	**0.29**	**325**	*i* Pg	**Pg**	**23**	**13**	**24.5**	**+0.1**
ILIC				*i* Sg	**Sg**	**23**	**13**	**28.9**	**+0.5**
PTK	**Pertek**	**0.57**	**124**	PG	**Pg**	**23**	**13**	**29.0**	**-0.6**
PTK				SG	**Sb**	**23**	**13**	**37.7**	**-1.3**
PTK	**Pertek**	**0.57**	**124**	*i* Pg	**Pg**	**23**	**13**	**29.0**	**-0.6**
PTK				*i* Sg	**Sb**	**23**	**13**	**37.7**	**-1.3**
EZC	**Erzincan**	**0.69**	**39**	*e*Pg	**Pn**	**23**	**13**	**34.1**	**-0.5**
ELZG	**Elazig**	**0.73**	**168**	*i* P	**Pg**	**23**	**13**	**32.1**	**-0.5**
ELZG				*i* S	**Sb**	**23**	**13**	**43.4**	**-0.2**
ELZG	**Elazig**	**0.73**	**168**	*i* P	**Pg**	**23**	**13**	**32.1**	**-0.5**
ELZG				*i* S	**Sb**	**23**	**13**	**43.4**	**-0.2**
ERZN	**Erzincan**	**0.81**	**62**	*e*PG	**Pb**	**23**	**13**	**34.1**	**-0.8**
EUZM	**Uzumlu**	**0.86**	**55**	*i* P	**Pg**	**23**	**13**	**34.8**	**-0.3**
EUZM				*i* S	**Sb**	**23**	**13**	**47.3**	**-0.1**
EUZM	**Uzumlu**	**0.86**	**55**	*i* P	**Pg**	**23**	**13**	**34.8**	**-0.3**
EUZM				*i* S	**Sb**	**23**	**13**	**47.3**	**-0.1**
SVRC	**Sivrice-ELAZID**	**0.93**	**154**	*e*PG	**Pg**	**23**	**13**	**35.7**	**-0.6**
SVRC	**Sivrice-ELAZID**	**0.93**	**154**	*e*Pg	**Pg**	**23**	**13**	**35.7**	**-0.6**
MYA	**Malataya**	**0.93**	**198**	*e*PG	**Pg**	**23**	**13**	**35.9**	**-0.5**
MYA	**Malataya**	**0.93**	**198**	*e*Pg	**Pg**	**23**	**13**	**35.9**	**-0.5**
KELT	**Kelkit**	**1.00**	**21**	*i* P	**Pg**	**23**	**13**	**36.7**	**-1.1**
KELT				*i* S	**Sg**	**23**	**13**	**49.8**	**-1.0**
KELT	**Kelkit**	**1.00**	**21**	*i* P	**Pg**	**23**	**13**	**36.7**	**-1.1**
KELT				*i* S	**Sg**	**23**	**13**	**49.8**	**-1.0**
SUSE	**Susehri**	**1.09**	**336**	*i* P	**Pn**	**23**	**13**	**40.2**	**+0.1**
SUSE				*i* S	**Sn**	**23**	**13**	**56.3**	**+0.8**
SUSE	**Susehri**	**1.09**	**336**	*i* P	**Pn**	**23**	**13**	**40.2**	**+0.1**
SUSE				*i* S	**Sn**	**23**	**13**	**56.3**	**+0.8**
AKCD	**Akcadag**	**1.14**	**217**	*i* P	**Pg**	**23**	**13**	**39.8**	**-0.5**
AKCD				*i* S	**Sn**	**23**	**13**	**56.6**	**+0.1**
AKCD	**Akcadag**	**1.14**	**217**	*i* P	**Pg**	**23**	**13**	**39.8**	**-0.5**
AKCD				*i* S	**Sn**	**23**	**13**	**56.6**	**+0.1**
DARE	**Darende-Malaty**	**1.20**	**238**	*e*PN	**Pn**	**23**	**13**	**42.0**	**+0.5**
GUMT	**Gumushane**	**1.35**	**23**	*e*PN	**Pb**	**23**	**13**	**43.7**	**-0.4**
GUMT	**Gumushane**	**1.35**	**23**	*e*Pn	**Pb**	**23**	**13**	**43.7**	**-0.4**
BINT	**Bingol**	**1.37**	**104**	*e*Pn	**Pg**	**23**	**13**	**45.4**	**+0.7**
BNGB	**Bing ¶ll**	**1.49**	**98**	*e*PN	**Pn**	**23**	**13**	**45.4**	**-0.2**
KOPT	**Kop Dagi**	**1.55**	**58**	*i* P	**Pg**	**23**	**13**	**48.5**	**+0.3**
KOPT				*i* S	**Sg**	**23**	**14**	**11.3**	**+3.0**
KOPT	**Kop Dagi**	**1.55**	**58**	*i* P	**Pg**	**23**	**13**	**48.5**	**+0.3**
KOPT				*i* S	**Sg**	**23**	**14**	**11.3**	**+3.0**
SVSK	**Karacayir**	**1.55**	**298**	*e*PN	**Pg**	**23**	**13**	**47.8**	**-0.4**
SVSK	**Karacayir**	**1.55**	**298**	*e*Pn	**Pg**	**23**	**13**	**47.8**	**-0.4**
RSDY	**Resadiye-TOKAT**	**1.63**	**317**	*e*PN	**Pn**	**23**	**13**	**47.9**	**+0.5**
RSDY	**Resadiye-TOKAT**	**1.63**	**317**	*e*Pn	**Pn**	**23**	**13**	**47.9**	**+0.5**
ESPY	**Espiye-Giresun**	**1.70**	**358**	*e*PN	**Pn**	**23**	**13**	**48.4**	**0.0**
ESPY	**Espiye-Giresun**	**1.70**	**358**	*e*Pn	**Pn**	**23**	**13**	**48.4**	**0.0**
URFA	**Urfa**	**1.77**	**179**	*e*PN	**Pb**	**23**	**13**	**50.0**	**-1.1**
URFA	**Urfa**	**1.77**	**179**	*e*Pn	**Pb**	**23**	**13**	**50.0**	**-1.1**
MACK	**Trabzon**	**1.89**	**23**	*i* P	**Pg**	**23**	**13**	**53.6**	**-1.0**
MACK	**Trabzon**	**1.89**	**23**	*i* P	**Pg**	**23**	**13**	**53.6**	**-1.0**
SARI	**SarD1z-Kayseri**	**2.02**	**247**	*e*PN	**Pn**	**23**	**13**	**53.2**	**+0.3**
SARI	**SarD1z-Kayseri**	**2.02**	**247**	*e*Pn	**Pn**	**23**	**13**	**53.2**	**+0.3**
TOKT	**Tokat**	**2.05**	**303**	*e*PN	**Pn**	**23**	**13**	**53.5**	**+0.3**
TOKT	**Tokat**	**2.05**	**303**	*e*Pn	**Pn**	**23**	**13**	**53.5**	**+0.3**
EZM	**Erzurum**	**2.11**	**70**	*e*PN	**Pn**	**23**	**13**	**54.5**	**+0.3**
ERZM	**Erzurum**	**2.11**	**70**	*i* P	**Pg**	**23**	**13**	**59.0**	**+0.1**
ERZM	**Erzurum**	**2.11**	**70**	*i* P	**Pg**	**23**	**13**	**59.0**	**+0.1**
KMRS	**Kahramanmaras**	**2.26**	**222**	*e*PN	**Pn**	**23**	**13**	**57.4**	**+1.4**
KMRS	**Kahramanmaras**	**2.26**	**222**	*e*Pn	**Pn**	**23**	**13**	**57.4**	**+1.4**
BNN	**Bunyan**	**2.32**	**262**	*e*PN	**Pn**	**23**	**13**	**58.2**	**+1.3**
BNN	**Bunyan**	**2.32**	**262**	*e*Pn	**Pn**	**23**	**13**	**58.2**	**+1.3**

*IDC **17** 23:16:14.8±1.1, 3.63N×96.17E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.7/26, mbtmp3.7/9, ML3.9/2, Error ellipse: s-maj=41.3km s-min=19.3km az=43.0*
*ISCJB **17** 23:16:17.6±0.6, 3.75N±0.07×96.45E±0.06, h25km, mb3.6/7, Error ellipse: s-maj=10.9km s-min=6.2km az=37.5*
*DJA **17** 23:16:18.0±1.0, 4.N±5.×9.6E±., h16km±15km, M4.5/5, MLv4.5/5*

ISC 17 23:16:18.4±0.7, 3.83N±0.06×96.41E±0.06, h25km, n16, σ1.59/19, mb3.6/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
KCSI	**Kotacane, Aceh**	**1.39**	**102**	P	**Pn**	**23**	**16**	**41.9**	**-0.4**
KCSI				S	**Sn**	**23**	**16**	**58.5**	**-1.4**
SNSI	**Sinabang, Aceh**	**1.41**	**183**	P	**Pn**	**23**	**16**	**41.2**	**-1.3**
LHMI	**Lhok Sumawe**	**1.49**	**21**	P	**Pn**	**23**	**16**	**42.8**	**-0.9**
BSI	**Banda Aceh**	**2.00**	**326**	P	**Pn**	**23**	**16**	**51.8**	**+1.2**
BSI				S	**Sb**	**23**	**17**	**17.8**	**-0.8**
TSI	**Tuntungan**	**2.17**	**98**	P	**Pn**	**23**	**16**	**53.8**	**+0.8**
PSI	**Prapat**	**2.71**	**112**	Pn	**Pb**	**23**	**17**	**04.0**	**-2.2**
	10.0nm,0.3s,baz=314,slow=12,SNR=36								
PSI				Sn	**Sb**	**23**	**17**	**43.1**	**+4.0**
	19nm,0.3s,baz=153,slow=14,SNR=5.5								
KULM	**Kulim**	**4.47**	**71**	P	**Pn**	**23**	**17**	**23.4**	**-1.2**
IPM	**Ipoh**	**4.65**	**82**	P	**Pn**	**23**	**17**	**26.9**	**-0.2**
CMAR	**Chiang Mai Arr**	**14.75**	**9**	Pn	**P**	**23**	**

ESL				*e*S	**Sb**	**00 05 24.5 -0.3**
	baz=235					
ENTT	**Nioudou**	**0.73**	**320**	*e*P	**Pb**	**00 05 16.8 -0.4**
	baz=315					
ENTT				*e*S	**Sb**	**00 05 26.6 -0.3**
	baz=315					
NNS	**Nan Shan**	**0.74**	**299**	P	**Pb**	**00 05 16.8 -0.6**
	baz=299					
NNS				*e*S	**Sb**	**00 05 26.8 -0.6**
	baz=299					
TWE	**Neicheng**	**0.74**	**329**	P	**Pb**	**00 05 17.1 -0.3**
	baz=338					
TWE				*e*S	**Sb**	**00 05 27.2 -0.1**
	baz=338					
ILA	**Ilan**	**0.74**	**336**	*e*S	**Sb**	**00 05 26.7 -0.6**
	baz=338					
WHF	**Hehuan Shan**	**0.75**	**275**	⇑*i*P	**Pb**	**00 05 17.0 -0.8**
	baz=273					
WHF				S	**Sb**	**00 05 27.5 -0.5**
	baz=273					
TWT	**Tachien**	**0.85**	**282**	*e*P	**Pb**	**00 05 18.8 -0.5**
	baz=272					
TWT				*e*S	**Sb**	**00 05 29.8 -0.6**
	baz=272					
NSK	**Sanguang**	**0.89**	**312**	P	**Pn**	**00 05 18.9 -0.2**
	baz=303					
NSK				*e*S	**Sb**	**00 05 29.7 -1.7**
	baz=303					
EHY	**Hungye**	**0.90**	**231**	P	**Pn**	**00 05 18.5 -0.8**
	baz=227					
EHY				*e*S	**Sb**	**00 05 30.7 -1.1**
	baz=227					
TWB1	**Santiao Chiao**	**0.93**	**355**	*e*P	**Pn**	**00 05 19.4 -0.2**
	baz=357					
TWB1				*e*S	**Sb**	**00 05 31.2 -1.3**
	baz=357					
YOJ	**Yonaguni jima**	**0.93**	**66**	P	**Pn**	**00 05 19.4 -0.1**
YOJ				*e*S	**Sb**	**00 05 32.3 -0.2**
NWF	**Wu-fen Shan**	**1.02**	**344**	*e*P	**Pn**	**00 05 21.2 +0.2**
	baz=360					
NWF				*e*S	**Sn**	**00 05 34.1 0.0**
	baz=360					
TWF1	**Yuli**	**1.02**	**225**	P	**Pn**	**00 05 20.3 -0.6**
	baz=233					
TWF1				*e*S	**Sn**	**00 05 33.3 -0.9**
	baz=233					
TAP	**Taipei**	**1.09**	**331**	*e*P	**Pn**	**00 05 20.7 -1.1**
	baz=333					
SMLT	**Sun Moon Lake**	**1.10**	**260**	P	**Pn**	**00 05 22.2 +0.1**
	baz=258					
SMLT				*e*S	**Sn**	**00 05 35.9 -0.3**
	baz=258					
NSTT	**Nanjuang**	**1.13**	**299**	*e*P	**Pn**	**00 05 23.2 +0.8**
	baz=299					
NSTT				*e*S	**Sn**	**00 05 37.2 +0.5**
	baz=299					
TYC	**Yuchr**	**1.14**	**261**	P	**Pn**	**00 05 22.7 +0.3**
	baz=253					
TYC				*e*S	**Sn**	**00 05 36.6 -0.3**
	baz=253					
CHKT	**Chengkung**	**1.18**	**214**	*e*P	**Pn**	**00 05 22.0 -1.0**
	baz=202					
CHKT				*e*S	**Sn**	**00 05 35.8 -2.2**
	baz=202					
TWS1	**Kuangyinshan**	**1.18**	**329**	*e*P	**Pn**	**00 05 23.4 +0.3**
	baz=331					
TWS1				*e*S	**Sn**	**00 05 38.3 +0.3**
	baz=331					
YUS	**Yu-Shan**	**1.19**	**241**	*e*P	**Pn**	**00 05 23.8 +0.1**
	baz=238					
YUS				*e*S	**Sn**	**00 05 38.5 -0.5**
	baz=238					
NCU	**National Centr**	**1.20**	**317**	*e*P	**Pn**	**00 05 23.2 -0.2**
	baz=318					
NCU				*e*S	**Sn**	**00 05 38.1 -0.5**
	baz=318					
TWQ1	**Liyutan**	**1.23**	**283**	*e*P	**Pn**	**00 05 24.6 +0.9**
	baz=282					
TWQ1				*e*S	**Sn**	**00 05 40.3 +1.2**
	baz=282					
NSY	**Sanyi**	**1.25**	**286**	*e*P	**Pn**	**00 05 24.8 +0.7**
	baz=285					
TWY	**Chenhua**	**1.27**	**340**	*e*P	**Pn**	**00 05 24.8 +0.6**
	baz=341					
TCU	**Taichung**	**1.29**	**273**	*e*P	**Pn**	**00 05 25.1 +0.5**
	baz=272					
WNT	**Mingjian**	**1.30**	**261**	*e*P	**Pn**	**00 05 25.1 +0.4**
	baz=260					
WNT				*e*S	**Sn**	**00 05 41.3 +0.5**
	baz=260					
ALS	**Alishan**	**1.30**	**244**	P	**Pn**	**00 05 25.6 +0.6**
	baz=234					
ALS				*e*S	**Sn**	**00 05 42.0 +0.6**
	baz=234					
ELDTW	**Lidau**	**1.32**	**228**	*e*P	**Pn**	**00 05 24.4 -0.7**
	baz=225					
ELDTW				*e*S	**Sn**	**00 05 40.6 -1.0**
	baz=225					
CHN5	**Tsauling**	**1.38**	**250**	P	**Pn**	**00 05 26.8 +1.0**
	baz=238					
CHN5				*e*S	**Sn**	**00 05 43.3 +0.4**
	baz=238					
IRIF	**Iriomote-Funau**	**1.52**	**80**	P	**Pn**	**00 05 27.6 -0.2**
IRIF				*e*S	**Sn**	**00 05 47.2 +0.8**
PCYT	**Pengchaiyu**	**1.54**	**360**	*e*P	**Pb**	**00 05 30.6 -0.2**
	baz=2.0					
PCYT				*e*S	**Sn**	**00 05 46.9 0.0**
	baz=2.0					
TWG	**Pinlang**	**1.56**	**217**	*e*P	**Pn**	**00 05 27.1 -1.2**
	baz=223					
TWG				*e*S	**Sn**	**00 05 45.6 -1.9**
	baz=223					
HATJ	**Hateruma jima**	**1.57**	**91**	P	**Pn**	**00 05 29.4 +1.0**
WTP	**Ta-pu**	**1.58**	**239**	*e*P	**Pn**	**00 05 29.8 +1.1**
	baz=236					
WTP				*e*S	**Sn**	**00 05 49.9 +1.9**
	baz=236					
CHN1	**Nanshi**	**1.68**	**238**	*e*P	**Pn**	**00 05 31.2 +1.2**
	baz=237					
CHN1				*e*S	**Sn**	**00 05 52.1 +1.6**
	baz=237					
JKRS	**Kuro-shima**	**1.77**	**85**	P	**Pn**	**00 05 31.6 +0.5**
JKRS				*e*S	**Sn**	**00 05 53.6 +1.2**
JIJ	**Ishigaki jima**	**1.90**	**81**	P	**Pn**	**00 05 32.7 -0.2**
JIJ				*e*S	**Sn**	**00 05 54.8 -1.0**
EAST	**Anshuo**	**2.04**	**214**	*e*P	**Pn**	**00 05 37.5 +2.6**
	baz=205					
SCZT	**Fangliau**	**2.17**	**219**	*e*P	**Pn**	**00 05 38.9 +2.2**
	baz=206					
SCZT				*e*S	**Sn**	**00 06 04.9 +2.5**
	baz=206					
JTJ	**Tarama**	**2.45**	**76**	P	**Pn**	**00 05 40.8 +0.3**
JTJ				*e*S	**Sn**	**00 06 10.0 +0.7**

*ISK **18** 00:25:42.4, 40°.24N×25°.72E, h5km, MD3.1*
*DDA **18** 00:25:44.0, 40°.28N×25°.80E, h22km, MD3.0*
*ATH **18** 00:25:43.9, 40°.28N×25°.78E, h27km±2km, MD2.8/5*
*ISCJB **18** 00:25:44.2±0.5, 40°.27N±0°.02×25°.74E±0°.03, h7km±4km, Error ellipse: s-maj=3.5km s-min=3.2km az=41.6*
*THE **18** 00:25:44.2, 40°.26N×25°.77E, h0km±3km, ML2.5/5, Error ellipse: s-maj=3.2km s-min=1.0km az=89.0*
*CSEM **18** 00:25:44.6±0.1, 40°.27N×25°.73E, h10km, MD2.8, Error ellipse: s-maj=2.8km s-min=2.6km az=178.0*

ISC 18 00:25:44.2±1.1, 40°.26N±0°.02×25°.75E±0°.02, h8km±10km, n85, σ0s95/108, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.27**	**322**	*e*PB	**Pb**	**00 25 50.4**	**-1.0**
SMTH				*e*SB	**Sb**	**00 25 55.4**	**-0.8**
SMTH	**Samothraki Isl**	**0.27**	**322**	*e*Pb	**Pb**	**00 25 50.4**	**-1.0**
SMTH				*e*Sb	**Sb**	**00 25 55.4**	**-0.8**
BOZC	**Bozcaada**	**0.47**	**151**	*i* P	**Pb**	**00 25 53.9**	**-0.8**
BOZC				*i* S	**Sb**	**00 26 00.9**	**-1.0**
LIA	**Limnos Island**	**0.56**	**231**	P	**Pb**	**00 25 56.4**	**+0.1**
LIA				S	**Sb**	**00 26 03.9**	**-0.5**
LIA	**Limnos Island**	**0.56**	**231**	*e*PN	**Pb**	**00 25 56.3**	**0.0**
LIA	**Limnos Island**	**0.56**	**231**	*e*Pn	**Pb**	**00 25 56.3**	**0.0**
LIA				S	**Sb**	**00 26 03.9**	**-0.5**
ENEZ	**Enez**	**0.57**	**32**	PG	**Pg**	**00 25 55.0**	**-0.1**
ENEZ				*e*SG	**Sb**	**00 26 04.4**	**-0.2**
ENEZ	**Enez**	**0.57**	**32**	*i* Pg	**Pg**	**00 25 55.1**	**-0.1**
ENEZ				*e*Sg	**Sb**	**00 26 04.4**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.57**	**75**	*i* Pg	**Pb**	**00 25 55.6**	**-0.8**
ALN	**Alexandroupoli**	**0.68**	**19**	P	**Pg**	**00 25 56.9**	**-0.4**
ALN				S	**Sb**	**00 26 06.7**	**-1.1**
ALN	**Alexandroupoli**	**0.68**	**19**	*e*PN	**Pg**	**00 25 56.7**	**-0.6**
ALN				*e*SN	**Sb**	**00 26 06.5**	**-1.3**
ALN	**Alexandroupoli**	**0.68**	**19**	P	**Pg**	**00 25 56.9**	**-0.4**
ALN				*e*Sn	**Sb**	**00 26 06.5**	**-1.3**
ERIK	**Erikli-Kesan**	**0.71**	**54**	*e*PG	**Pg**	**00 25 57.7**	**-0.2**
ERIK				*e*SG	**Sb**	**00 26 09.2**	**+0.4**
ERIK	**Erikli-Kesan**	**0.71**	**54**	*e*Pg	**Pg**	**00 25 57.7**	**-0.2**
ERIK				*e*Sg	**Sb**	**00 26 09.2**	**+0.4**
LPK	**Lapseki**	**0.78**	**81**	*e*PG	**Pg**	**00 25 59.1**	**-0.1**
LPK	**Lapseki**	**0.78**	**81**	*e*Pg	**Pg**	**00 25 59.1**	**-0.1**
SIGR	**SIGRI**	**1.05**	**176**	P	**Pb**	**00 26 04.3**	**-0.2**
SIGR				S	**Sn**	**00 26 19.8**	**-0.1**
SIGR	**SIGRI**	**1.05**	**176**	P	**Pb**	**00 26 04.3**	**-0.2**
SIGR				S	**Sn**	**00 26 19.8**	**-0.1**
PRK	**Paraskevi**	**1.08**	**158**	P	**Pb**	**00 26 05.1**	**-0.1**
PRK				S	**Sb**	**00 26 20.1**	**+0.6**
PRK	**Paraskevi**	**1.08**	**158**	*e*PN	**Pg**	**00 26 04.9**	**-0.1**
PRK	**Paraskevi**	**1.08**	**158**	P	**Pb**	**00 26 05.1**	**-0.1**
PRK				S	**Sb**	**00 26 20.1**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.17**	**68**	*e*PN	**Pg**	**00 26 06.3**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.17**	**68**	*e*Pn	**Pg**	**00 26 06.3**	**-0.3**
KRBG	**Karabiga-Canak**	**1.19**	**83**	*e*PN	**Pb**	**00 26 06.6**	**-0.3**
KRBG	**Karabiga-Canak**	**1.19**	**83**	*e*Pn	**Pb**	**00 26 06.6**	**-0.3**
AYVA	**Ayvalik**	**1.19**	**142**	*i* P	**Pn**	**00 26 07.3**	**+0.2**
AYVA				*i* S	**Sn**	**00 26 23.8**	**+0.3**
AYVA	**Ayvalik**	**1.19**	**142**	*i* P	**Pn**	**00 26 07.3**	**+0.2**
AYVA				*i* S	**Sn**	**00 26 23.8**	**+0.3**
MFT	**Murefte**	**1.28**	**65**	*e*PN	**Pg**	**00 26 08.3**	**-0.4**
MFT	**Murefte**	**1.28**	**65**	*e*Pn	**Pg**	**00 26 08.3**	**-0.4**
OUR	**Ouranopolis**	**1.35**	**274**	P	**Pn**	**00 26 08.7**	**-0.7**
OUR	**Ouranopolis**	**1.35**	**274**	P	**Pn**	**00 26 08.7**	**-0.7**
GONE	**Gonen-Balikesi**	**1.50**	**97**	*e*PN	**Pb**	**00 26 11.9**	**-0.3**
GONE	**Gonen-Balikesi**	**1.50**	**97**	*e*Pn	**Pb**	**00 26 11.9**	**-0.3**
BALY	**Balya**	**1.52**	**109**	*i* P	**Pn**	**00 26 11.8**	**0.0**
BALY				*i* S	**Sg**	**00 26 33.0**	**-0.2**
BALY	**Balya**	**1.52**	**109**	*i* P	**Pn**	**00 26 11.8**	**0.0**
BALY				*i* S	**Sg**	**00 26 33.0**	**-0.2**
TKR	**Tekirdag**	**1.54**	**61**	*e*PN	**Pb**	**00 26 12.7**	**-0.3**
TKR	**Tekirdag**	**1.54**	**61**	*e*Pn	**Pb**	**00 26 12.7**	**-0.3**
PAIG	**Paliouri**	**1.62**	**259**	P	**Pn**	**00 26 12.4**	**-0.6**
PAIG	**Paliouri**	**1.62**	**259**	P	**Pn**	**00 26 12.4**	**-0.6**
BNT	**Bandirma**	**1.66**	**86**	*e*PN	**Pb**	**00 26 14.1**	**-0.9**
BNT	**Bandirma**	**1.66**	**86**	*e*Pn	**Pb**	**00 26 14.1**	**-0.9**
BALB	**Balikesir**	**1.75**	**110**	*e*PN	**Pn**	**00 26 15.2**	**+0.4**
BALB	**Balikesir**	**1.75**	**110**	*e*Pn	**Pn**	**00 26 15.2**	**+0.4**
EDRB	**Edirne**	**1.76**	**25**	*e*PN	**Pn**	**00 26 15.3**	**+0.4**
EDRB	**Edirne**	**1.76**	**25**	*e*Pn	**Pn**	**00 26 15.3**	**+0.4**
NVR	**Nevrokopi**	**1.80**	**308**	*e*PN	**Pn**	**00 26 15.4**	**-0.2**
NVR	**Nevrokopi**	**1.80**	**308**	*e*Pn	**Pn**	**00 26 15.4**	**-0.2**
SRS	**Serrai**	**1.85**	**298**	P	**Pn**	**00 26 16.4**	**+0.2**
SRS				S	**Sg**	**00 26 42.7**	**-1.0**
SRS	**Serrai**	**1.85**	**298**	P	**Pn**	**00 26 16.4**	**+0.2**
SOH	**Sokhos**	**1.91**	**288**	P	**Pn**	**00 26 17.1**	**0.0**
SOH	**Sokhos**	**1.91**	**288**	P	**Pn**	**00 26 17.1**	**0.0**
KCTX	**Karacabey (Bur**	**1.99**	**89**	*e*PN	**Pn**	**00 26 18.5**	**+0.3**
KCTX	**Karacabey (Bur**	**1.99**	**89**	*e*Pn	**Pn**	**00 26 18.5**	**+0.3**
AKHS	**Akhisar**	**2.11**	**130**	*e*P	**Pn**	**00 26 20.0**	**+0.3**
AKHS				*i* S	**Sg**	**00 26 50.6**	**-1.2**
AKHS	**Akhisar**	**2.11**	**130**	*e*P	**Pn**	**00 26 20.0**	**+0.3**
AKHS				*i* S	**Sg**	**00 26 50.6**	**-1.2**
SLVT	**Silivri**	**2.11**	**62**	*e*PN	**Pb**	**00 26 20.9**	**-1.7**
SLVT	**Silivri**	**2.11**	**62**	*e*Pn	**Pb**	**00 26 20.9**	**-1.7**
BLCB	**Balcova**	**2.12**	**151**	*e*PN	**Pn**	**00 26 20.2**	**+0.4**
BLCB	**Balcova**	**2.12**	**151**	*e*Pn	**Pn**	**00 26 20.3**	**+0.4**
DURS	**Dursunbey**	**2.19**	**106**	*e*P	**Pn**	**00 26 20.4**	**-0.6**
DURS	**Dursunbey**	**2.19**	**106**	*e*P	**Pn**	**00 26 20.4**	**-0.6**
DST	**Dursunbey**	**2.30**	**106**	*e*PN	**Pn**	**00 26 23.0**	**+0.6**
DST	**Dursunbey**	**2.30**	**106**	*e*Pn	**Pn**	**00 26 23.0**	**+0.6**
CTKS	**Kestanelik-??a**	**2.31**	**64**	*e*PN	**Pb**	**00 26 24.0**	**-2.0**
CTKS	**Kestanelik-??a**	**2.31**	**64**	*e*Pn	**Pb**	**00 26 24.0**	**-2.0**
ARMT	**Armutlu**	**2.40**	**82**	*e*PN	**Pn**	**00 26 24.8**	**+1.1**
ARMT	**Armutlu**	**2.40**	**82**	*e*Pn	**Pn**	**00 26 24.8**	**+1.1**
MDNY	**Mudanya-Bursa**	**2.40**	**86**	*e*PN	**Pn**	**00 26 24.8**	**+1.1**
MDNY	**Mudanya-Bursa**	**2.40**	**86**	*e*Pn	**Pn**	**00 26 24.8**	**+1.1**
BGKT	**Bogazkoy**	**2.48**	**67**	*e*PN	**Pn**	**00 26 25.9**	**+1.1**
BGKT	**Bogazkoy**	**2.48**	**67**	*e*Pn	**Pn**	**00 26 25.9**	**+1.1**
DEMI	**Demirci**	**2.59**	**117**	*e*P	**Pn**	**00 26 27.2**	**+0.8**
DEMI	**Demirci**	**2.59**	**117**	*e*P	**Pn**	**00 26 27.2**	**+0.8**
VAY	**Valandovo**	**2.64**	**295**	*e*Pn	Pn	00 26 23.0	-4.0
VAY				*e*Sg	**Sg**	**00 27 12.5**	**+3.6**
KULA	**Kula-Manisa**	**2.85**	**127**	*e*PN	**Pn**	**00 26 30.4**	**+0.4**
KULA	**Kula-Manisa**	**2.85**	**127**	*e*Pn	**Pn**	**00 26 30.4**	**+0.4**
IZI	**Iznik**	**2.85**	**87**	*e*PN	**Pn**	**00 26 31.2**	**+1.2**
IZI	**Iznik**	**2.85**	**87**	*e*Pn	**Pn**	**00 26 31.2**	**+1.2**
TVSB	**Tavsanli**	**2.97**	**105**	*e*PN	**Pn**	**00 26 32.5**	**+0.9**
TVSB	**Tavsanli**	**2.97**	**105**	*e*Pn	**Pn**	**00 26 32.5**	**+0.9**
ALT	**Altintas**	**3.57**	**108**	*e*PN	**Pn**	**00 26 41.5**	**+1.5**
ALT	**Altintas**	**3.57**	**108**	*e*Pn	**Pn**	**00 26 41.5**	**+1.5**
PLOR	**Plostina**	**5.63**	**6**	S	**Sg**	**00 28 49.3**	**+4.4**
VRI	**Vrincioaia**	**5.65**	**7**	S	**Sg**	**00 28 47.8**	**+2.2**

IDC 18 00:29:41.5±0.9, 42°.85S×72°.35W, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.9/20, mbtmp3.8/8, ML3.9/1, Error ellipse: s-maj=36.4km s-min=15.1km az=118.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**2.50**	**33**	Pn	Pn	00 30 25.1	+1.6
	6.1nm,0.3s,baz=219,slow=14,SNR=75						
PLCA				Pg	Pb	00 30 27.5	+0.1
	9.0nm,0.3s,baz=219,slow=17,SNR=99						
PLCA				Lg	Lg	00 31 02.2	
	30nm,0.3s,baz=122,slow=18,SNR=21						
LVC	**Limon Verde**	**20.38**	**9**	P	P	00 34 20.3	+0.2
	3.3nm,0.8s,baz=205,slow=9.1,SNR=4.9						
CPUP	**Villa Florida**	**20.55**	**42**	P	P	00 34 20.1	-1.4
	0.7nm,0.7s,baz=222,slow=12,SNR=2.1						
SIV	**San Ignacio**	**28.45**	**23**	P	P	00 35 37.3	-0.8
	1.0nm,0.8s,baz=220,slow=13,SNR=5.5						
QSPA	**South Pole Qui**	**47.40**	**180**	P	P	00 38 18.1	+0.8
	3.5nm,1.0s,baz=152,slow=5.7,SNR=7.5						
TXAR	**Lajitas Array**	**77.39**	**332**	P	P	00 41 38.5	+0.3
	0.4nm,0.8s,baz=139,slow=8.4,SNR=5.7						
TORD	**Torodi Ar. Bea**	**87.49**	**70**	P	P	00 42 30.5	-0.7
	0.5nm,0.8s,baz=224,slow=6.0,SNR=2.4						
PDAR	**Pinedale Array**	**91.55**	**334**	P	P	00 42 49.4	-0.6
	0.3nm,0.3s,baz=157,slow=4.9,SNR=2.9						
GERES	**GERESS Array B**	**118.37**	**49**	PKP	PKPdf	00 48 29.5	-0.8
	0.3nm,0.7s,baz=180,slow=2.0,SNR=3.8						
ILAR	**Eielson Array**	**121.88**	**331**	PKP	PKPdf	00 48 36.6	+0.1
	0.4nm,0.6s,baz=155,slow=3.0,SNR=4.4						
ZALV	**Zalesovo Beam**	**161.30**	**46**	PKPab	PKPab	00 50 27.6	+0.5
	0.3nm,0.3s,baz=296,slow=4.6,SNR=2.4						
MKAR	**Makanchi Array**	**161.61**	**69**	PKPab	PKPab	00 50 27.8	-1.1
	0.5nm,0.8s,baz=284,slow=5.8,SNR=4.7						

IDC 18 00:48:31.9±2.0, 29°.50S×176°.94W, h0km, mb3.7/3, mb1 4.0/5, mb1mx3.8/19, mbtmp3.9/5, ML3.8/2, Error ellipse: s-maj=39.4km s-min=26.3km az=31.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.89**	**286**	Pn	Pn	00 48 52.0	+0.4
	366nm,0.3s,baz=241,slow=19,SNR=18						
RAO				Sn	Sn	00 49 04.9	-0.2
	758nm,0.3s,baz=108,slow=20,SNR=13						
URZ	**Urewera**	**10.04**	**208**	Pn	Pn	00 50 55.7	-1.6
	0.5nm,0.3s,baz=65,slow=8.5,SNR=2.8						
URZ				Sn	Sn	00 52 46.9	-3.8
	0.6nm,0.3s,baz=322,slow=19,SNR=5.3						
RPZ	**Rata Peaks**	**17.12**	**211**	P	Pn	00 52 32.5	-0.1
	0.6nm,0.3s,baz=61,slow=17,SNR=3.9						
STKA	**Stephens Creek**	**35.58**	**255**	P	P	00 55 32.3	+1.1
	1.7nm,0.7s,baz=92,slow=11,SNR=3.8						
ASAR	**Alice Springs**	**44.08**	**266**	P	P	00 56 41.0	-1.1
	0.5nm,0.7s,baz=97,slow=7.5,SNR=5.7						
WRA	**Warramunga Arr**	**44.99**	**271**	P	P	00 56 49.6	+0.3
	0.6nm,0.7s,baz=110,slow=7.8,SNR=3.5						
AKASG	**Malin Array Be**	**151.12**	**325**	PKPbc	PKPbc	01 08 26.2	-0.4
	0.2nm,0.3s,baz=40,slow=3.1,SNR=2.8						

MAN 18 00:55:33, 6°.93N×125°.62E, h1km, mb4.2, ML3.1, MS2.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.63**	**88**	*e*P	Pg	00 55 45.1	0.0
MATI				*e*S	Sn	00 56 00.7	+0.8
BUKP	**Musuan**	**1.10**	**330**	*e*P	Pn	00 55 56.0	+0.4
CTBH	**Cotabato--PC H**	**1.39**	**282**	⇑*i*P	Pb	00 56 00.3	+0.4
CGP	**Cagayan de Oro**	**1.77**	**329**	*e*P	Pn	00 56 05.5	+0.6
CGP				*i* S	Sg	00 56 30.0	-0.1
PAGZ	**Pagadian**	**2.40**	**293**	*e*P	Pn	00 56 14.7	+1.2

IDC 18 01:14:40.8±1.0, 15°.06S×166°.95E, h0km, mb4.1/10, mb1 4.2/11, mb1mx4.1/17, mbtmp4.1/11, ML4.0/1, MS3.6/4, Ms1 3.6/4, ms1mx3.2/28, Error ellipse: s-maj=32.8km s-min=20.5km az=102.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.99**	**184**	Pn	Pn	01 16 26.0	+1.4
	2.8nm,0.3s,baz=49,slow=20,SNR=10						
DZM				Sn	Sn	01 17 42.8	-2.1
	2.2nm,0.3s,baz=143,slow=20,SNR=3.3						
HNR	**Honiara**	**8.84**	**308**	LR	LR	01 19 52.6	
	comp=Z,199nm,19.9s,baz=179,slow=35						
STKA	**Stephens Creek**	**28.54**	**230**	P	P	01 20 41.1	+2.7
	1.5nm,0.6s,baz=76,slow=4.2,SNR=3.0						
STKA				LR	LR	01 31 13.9	
	comp=Z,124nm,21.3s,baz=22,slow=35						
RPZ	**Rata Peaks**	**28.77**	**174**	LR	LR	01 29 52.5	
	comp=Z,188nm,18.6s,baz=178,slow=32						
WRA	**Warramunga Arr**	**31.44**	**256**	P	P	01 21 02.9	-1.3
	0.6nm,0.6s,baz=87,slow=8.8,SNR=3.2						
ASAR	**Alice Springs**	**32.26**	**249**	P	P	01 21 10.8	-0.6
	1.6nm,0.4s,baz=81,slow=8.9,SNR=25						
ASAR				LR	LR	01 33 42.4	
	comp=Z,167nm,19.5s,baz=261,slow=35						
VNDA	**Vanda**	**62.52**	**181**	P	P	01 25 06.2	+0.4
	0.7nm,0.5s,baz=10,slow=7.3,SNR=6.9						
KSRS	**Korea Array**	**63.84**	**326**	P	P	01 25 15.2	+0.1
	0.3nm,0.3s,baz=126,slow=8.9,SNR=4.1						
USRK	**Ussuriysk Arra**	**67.03**	**333**	P	P	01 25 36.9	+1.2
	2.9nm,1.1s,baz=140,slow=6.4,SNR=3.4						
PETK	**Petropavlovsk-**	**68.36**	**354**	P	P	01 25 44.2	+0.4
	1.9nm,0.5s,baz=182,slow=7.2,SNR=3.3						
CMAR	**Chiang Mai Arr**	**74.80**	**294**	P	P	01 26 25.0	+1.6
	0.7nm,0.6s,baz=131,slow=4.2,SNR=4.0						
SONM	**Songino Array**	**82.58**	**324**	P	P	01 27 03.1	-2.7
	0.4nm,0.5s,baz=174,slow=2.9,SNR=3.5						
ILAR	**Eielson Array**	**86.94**	**18**	P	P	01 27 26.1	-1.1
	0.7nm,0.5s,baz=232,slow=5.2,SNR=14						
MKAR	**Makanchi Array**	**97.23**	**316**	P	P	01 28 15.2	-0.4
	0.3nm,0.5s,baz=97,slow=6.1,SNR=4.2						
ZALV	**Zalesovo Beam**	**97.47**	**324**	P	P	01 28 14.9	-1.5
	0.5nm,0.4s,baz=96,slow=5.1,SNR=2.6						
ARCES	**ARCESS Array B**	**120.49**	**345**	PKP	PKPdf	01 33 33.4	-0.4
	0.5nm,0.4s,baz=67,slow=2.3,SNR=8.7						
KEST	**Kesra**	**151.26**	**320**	PKPbc	PKPbc	01 34 35.9	-1.0
	1.1nm,0.9s,baz=0.0,slow=5.1,SNR=4.7						

*ISCJB **18** 01:16:34.0±1.3, 50°.94N±0°.05×175°.65W±0°.07, h14km±10km, mb3.6/2, Error ellipse: s-maj=8.6km s-min=6.9km az=173.9*
*IDC **18** 01:16:36.4±3.0, 51°.70N×176°.19W, h0km, mb3.5/2, mb1 3.7/4, mb1mx3.4/28, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=85.1km s-min=28.4km az=177.0*
*NEIC **18** 01:16:37.4, 51°.07N×175°.70W, h8km, ML3.3(AEIC), After AEIC.*

ISC 18 01:16:35.4±2.4, 51°.05N±0°.09×175°.74W±0°.04, h5km±13km, n28, σ0s96/34, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ETKA	**Kagalaska Isla**	**0.92**	**333**	P	**Pg**	**01 16 53.5**	**+0.6**
ETKA				S	**Sg**	**01 17 06.1**	**+1.2**
GSCK	**Great Sitkin C**	**1.00**	**345**	P	**Pg**	**01 16 55.0**	**+0.4**
GSMY	**Great Sitkin M**	**1.02**	**349**	P	**Pg**	**01 16 55.1**	**+0.2**
GSTD	**Great Sitkin T**	**1.04**	**346**	P	**Pg**	**01 16 55.6**	**+0.2**
GSTD				S	**Sb**	**01 17 10.7**	**+0.7**
GSTR	**Great Sitkin T**	**1.07**	**349**	*e*Pg	**Pg**	**01 16 56.3**	**+0.4**
GSTR				*e*S	**Sg**	**01 17 08.4**	**-1.3**
ADAG	**Mount Adagdak**	**1.08**	**330**	P	**Pg**	**01 16 56.7**	**+0.6**
KIRH	**Kanaga Island**	**1.20**	**316**	P	**Pb**	**01 16 58.1**	**-0.6**
KIRH				S	**Sb**	**01 17 15.1**	**+0.5**

ILAR	**Eielson Array**	**85.77**	**13**	P		**P**	**01 32 08.3**	**-0.9**	
	1.5nm,0.5s,baz=226,slow=5.2,SNR=20								
TXAR	**Lajitas Array**	**86.27**	**58**	P		P	01 32 14.7	+2.1	
	1.1nm,0.7s,baz=217,slow=6.2,SNR=18								
PDAR	**Pinedale Array**	**87.51**	**44**	P		**P**	**01 32 18.5**	**+0.2**	
	1.4nm,0.7s,baz=210,slow=4.3,SNR=8.5								
CMAR	**Chiang Mai Arr**	**88.36**	**290**	P		P	01 32 24.8	+2.3	
	0.7nm,0.6s,baz=116,slow=4.1,SNR=3.9								
SONM	**Songino Array**	**93.06**	**319**	P		**P**	**01 32 44.0**	**+0.3**	
	0.4nm,0.5s,baz=131,slow=4.0,SNR=3.1								
YKA	**Yellowknife Ar**	**94.32**	**25**	P		**P**	**01 32 48.7**	**-0.2**	
	1.1nm,0.7s,baz=251,slow=3.9,SNR=6.4								
ZALV	**Zalesovo Beam**	**107.76**	**322**	PKiKP		**PKiKP**	**01 37 52.2**	**-1.0**	
	0.6nm,0.4s,baz=98,slow=4.5,SNR=3.6								
MKAR	**Makanchi Array**	**108.63**	**314**	PKiKP		**PKiKP**	**01 37 54.7**	**-0.4**	
	0.5nm,0.5s,baz=190,slow=1.5,SNR=7.5								
ARCES	**ARCESS Array B**	**126.00**	**350**	PKP		**PKPdf**	**01 38 27.5**	**-0.2**	
	2.1nm,0.8s,baz=7.6,slow=3.7,SNR=6.4								
AKASG	**Malin Array Be**	**140.13**	**332**	PKP		**PKPdf**	**01 38 56.5**	**+1.8**	
	0.1nm,0.3s,baz=50,slow=3.4,SNR=4.1								
KWP	**Kalwaria Pacla**	**143.67**	**336**	⇓*iP*		**PKPdf**	**01 39 00.8**	**-0.2**	
BURAR	**Bucovina Array**	**144.19**	**332**	⇑*iP*		**PKPdf**	**01 39 03.2**	**+1.1**	
OJC	**Ojcow**	**144.23**	**339**	*e*PX		**PKPdf**	**01 39 02.0**	**+0.1**	
BRTR	**Keskin Array B**	**144.28**	**315**	PKP		**PKPdf**	**01 39 02.6**	**+0.1**	
	1.6nm,0.4s,baz=106,slow=2.6,SNR=20								
TESR	**Tescani**	**144.32**	**329**	⇑*iP*		**PKPdf**	**01 39 02.5**	**+0.3**	
STHS	**Stebnicka Huta**	**144.39**	**337**	*e*		**PKPab**	**01 39 02.9**	**+0.3**	
CFR	**Carcaliu**	**144.48**	**326**	⇓*iP*		**PKPab**	**01 39 03.3**	**+0.3**	
NIE	**Niedzica**	**144.73**	**338**	*e*PX		**PKPab**	**01 39 04.7**	**+0.8**	
VRI	**Vrincioaia**	**144.73**	**328**	⇑*iP*		**PKPab**	**01 39 04.3**	**+0.3**	
CRVS	**Cervenica-Dubn**	**144.74**	**337**	*e*		**PKPdf**	**01 39 01.0**	**-1.9**	
TRPA	**Tarpa**	**144.94**	**335**	⇑*iP*		**PKPab**	**01 39 04.3**	**-0.3**	
OKC	**Ostrava-Krasne**	**145.10**	**341**	*e*P		**PKPab**	**01 39 05.1**	**-0.1**	
CLL	**Collm**	**145.13**	**347**	⇑*iP*KP		**PKPbc**	**01 39 04.7**	**+0.4**	
	comp=Z,11nm,0.6s								
CLL				*i*		**PKPab**	**01 39 05.8**	**+0.5**	
	comp=Z,13nm,1.0s								
UPC	**Upice**	**145.13**	**343**	*e*P		**PKPab**	**01 39 05.2**	**-0.1**	
DPC	**Dobruska-Polom**	**145.19**	**343**	*e*P		**PKPab**	**01 39 05.7**	**+0.1**	
BRG	**Berggiesshubel**	**145.32**	**346**	*i* P		**PKPab**	**01 39 05.6**	**-0.5**	
	comp=Z,6.4nm,0.7s								
MORC	**Moravsky Berou**	**145.34**	**341**	⇓*iP*		**PKPab**	**01 39 06.0**	**-0.2**	
ISR	**Istrita**	**145.35**	**328**	⇑*iP*		**PKPab**	**01 39 07.9**	**+1.5**	
MLR	**Muntele Rosu**	**145.39**	**329**	⇓*iP*		**PKPab**	**01 39 06.6**	**-0.1**	
PVCC	**Panska Ves**	**145.49**	**345**	*e*P		**PKPab**	**01 39 06.4**	**-0.3**	
PRU	**Pruhonice**	**146.00**	**344**	*e*P		**PKPab**	**01 39 07.5**	**-1.2**	
PRU				*ex*		x	01 39 09.4		
VYHS	**Vyhne**	**146.03**	**339**	*e*		**PKPab**	**01 39 07.9**	**-1.1**	
VRAC	**Vranov**	**146.04**	**342**	⇓*iP*		**PKPab**	**01 39 08.1**	**-0.9**	
ARR	**Arges**	**146.12**	**330**	⇓*iP*		**PKPab**	**01 39 08.9**	**-0.6**	
NKC	**Novy Kostel**	**146.26**	**347**	*e*P		**PKPab**	**01 39 08.5**	**-1.3**	
NKC				*ex*		x	01 39 10.2		
KHC	**Kasperske Hory**	**147.03**	**345**	*e*P		**PKPab**	**01 39 10.5**	**-2.5**	
KHC				*ex*		x	01 39 13.5		
GERES	**GERESS Array B**	**147.26**	**345**	PKPbc		**PKPab**	**01 39 10.8**	**-3.2**	
	comp=Z,3.7nm,0.7s,baz=22,slow=2.8,SNR=31								
CONA	**Conrad Observa**	**147.49**	**341**	⇑*iP*KPbc		**PKPab**	**01 39 12.0**	**-2.9**	
	comp=Z,6.6nm,0.7s								
MOA	**Molln**	**148.03**	**343**	⇓*iP*KPbc		**PKPab**	**01 39 13.2**	**-3.8**	
	comp=Z,1.9nm,0.7s								
VTS	**Vitosha**	**148.84**	**328**	⇑*iP*		**PKPbc**	**01 39 15.1**	**+0.4**	
RETA	**Reutte**	**149.22**	**347**	⇑*iP*KPbc		**PKPbc**	**01 39 15.8**	**+0.4**	
	comp=Z,1.8nm,0.5s								
WTTA	**Wattenberg**	**149.24**	**346**	⇑*iP*KPbc		**PKPbc**	**01 39 16.1**	**+0.5**	
	comp=Z,10nm,0.8s								
MOTA	**Moosalm**	**149.28**	**347**	⇓*iP*KPbc		**PKPbc**	**01 39 15.9**	**+0.2**	
	comp=Z,2.3nm,0.4s								
MYKA	**Terra Mystica**	**149.31**	**343**	⇑*iP*KPbc		**PKPbc**	**01 39 15.4**	**-0.2**	
	comp=Z,2.9nm,0.4s								
ABTA	**Abfaltersbach**	**149.51**	**344**	⇑*iP*KPbc		**PKPbc**	**01 39 16.0**	**-0.1**	
	comp=Z,7.2nm,0.6s								
DAVA	**Damuels**	**149.59**	**348**	⇓*iP*KPbc		**PKPbc**	**01 39 16.7**	**+0.3**	
	comp=Z,3.1nm,0.5s								
FETA	**Feichten**	**149.67**	**347**	⇑*iP*KPbc		**PKPbc**	**01 39 17.3**	**+0.7**	
	comp=Z,5.5nm,0.9s								
ESDC	**Sonseca Array**	**157.64**	**10**	PKPab		**PKPab**	**01 39 58.1**	**0.0**	
	comp=Z,0.2nm,0.4s,baz=325,slow=4.8,SNR=4.0								
TORD	**Torodi Ar. Bea**	**175.46**	**187**	PKP		**PKPdf**	**01 39 36.4**	**-0.1**	
	comp=Z,0.4nm,0.8s,baz=197,slow=4.5,SNR=2.6								

IDC 18 01:22:32.7±1.1,3°.86S×74°.27W,h0km,mb3.7/5, mb1 4.0/8,mb1mx3.8/25,mbtmp3.7/8,ML4.1/3,MS3.6/1, Ms1 3.6/1,ms1mx2.7/26,Error ellipse: s-maj=36.5km s-min=23.5km az=46.0,Northern Peru

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
ATAH	**Atahualpa**	**5.24**	**231**	Pn		Pn	01 23 51.7		-1.2
	11nm,0.3s,baz=56,slow=6.2,SNR=64								
ATAH				Sn		Sn	01 24 50.0		-4.3
	3.9nm,0.3s,baz=12,slow=22,SNR=6.7								
ROSC	**El Rosal**	**8.66**	**360**	Lg		Lg	01 27 12.3		
	2.1nm,0.3s,baz=90,slow=20,SNR=4.1								
LPAZ	**La Paz**	**13.74**	**154**	Pn		Pn	01 25 50.4		+0.6
	0.2nm,0.3s,baz=332,slow=6.5,SNR=6.8								
LPAZ				Sn		Sn	01 28 15.1		-8.8
	0.1nm,0.3s,baz=156,slow=17,SNR=3.8								
LPAZ				Lg		Lg	01 29 40.9		
	0.2nm,0.3s,baz=164,slow=16,SNR=3.8								
SIV	**San Ignacio**	**17.71**	**134**	P		P	01 26 42.0		0.0
	0.4nm,0.3s,baz=320,slow=17,SNR=10								
SIV				S		Sn	01 29 54.8		-4.5
	0.1nm,0.3s,baz=249,slow=24,SNR=3.5								
SIV				Lg		Lg	01 31 52.4		
	0.2nm,0.3s,baz=52,slow=20,SNR=4.2								
TXAR	**Lajitas Array**	**43.41**	**321**	P		P	01 30 37.5		0.0
	0.4nm,0.6s,baz=148,slow=8.9,SNR=6.0								
ANMO	**Albuquerque**	**49.04**	**325**	P		P	01 31 22.2		+0.3
	0.6nm,0.8s,baz=139,slow=11,SNR=4.3								
NVAR	**Mina Array Bea**	**58.53**	**320**	P		P	01 32 31.7		+0.2
	0.9nm,0.7s,baz=123,slow=8.2,SNR=4.2								
NVAR				LR		LR	01 59 24.0		
	comp=Z,55nm,21.6s,baz=28,slow=38								
TORD	**Torodi Ar. Bea**	**77.26**	**76**	P		P	01 34 29.1		-0.5
	0.2nm,0.4s,baz=283,slow=5.5,SNR=4.9								
ILAR	**Eielson Array**	**86.14**	**336**	P		P	01 35 15.1		-0.3
	0.3nm,0.7s,baz=83,slow=4.3,SNR=3.0								
WRA	**Warramunga Arr**	**143.26**	**229**	PKhKP		PKPpre	01 42 05.8		
	0.5nm,0.8s,baz=114,slow=3.0,SNR=2.5								
WRA				PKP		PKPdf	01 42 10.2		+0.2
	0.3nm,0.4s,baz=118,slow=2.6,SNR=3.9								

*ISCJB **18** 01:38:57.1±0.6,31°.50S±0°.04×178°.5W±0°.1,h61km, mb5.0/5,Error ellipse: s-maj=15.5km s-min=3.6km az=13.3*
*AUST **18** 01:38:57.5,31°.95S×177°.62W,h100km*
*NEIC **18** 01:38:59.0±1.2,31°.44S×178°.27W,h86km±10km,mb4.4/2, Error ellipse: s-maj=18.1km s-min=11.2km az=107.0*
*IDC **18** 01:39:03.2±3.0,31°.03S×178°.43W,h116km±23km,mb4.7/3, mb1 4.7/4,mb1mx3.9/18,mbtmp4.5/4,MS3.0/1,Ms1 3.0/1, ms1mx2.8/22,Error ellipse: s-maj=44.7km s-min=22.1km az=156.0*

ISC 18 01:38:57.4±0.8,31°.47S±0°.06×178°.4W±0°.1,h61km,n63, σ2s01/69,mb5.1/5,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
RAO	**Raoul Island**	**2.25**	**11**	*e*Pn		**Pn**	**01 39 34.2**	**+2.0**	
RAO				S		**Sn**	**01 39 58.7**	**-0.2**	
RAO	**Raoul Island**	**2.25**	**11**	P		**Pn**	**01 39 34.0**	**+1.7**	
	1μm,0.3s,baz=97,slow=9.1,SNR=97								
RAO				S		**Sn**	**01 39 58.7**	**-0.2**	
	700nm,0.3s,baz=215,slow=23,SNR=6.7								
RAO				LR		LR	01 40 03.4		
	comp=Z,844nm,21.2s,baz=324,slow=33								
RIZ	**Raoul Island**	**2.25**	**11**	PN		**Pn**	**01 39 34.3**	**+2.0**	
RIZ				SN		**Sn**	**01 39 59.5**	**+0.4**	
MXZ	**Matakaoa Point**	**6.66**	**203**	PN		**Pn**	**01 40 35.5**	**+3.0**	
MXZ				SN		**Sn**	**01 41 48.0**	**+1.1**	
PUZ	**Puketiti**	**7.14**	**202**	PN		**Pn**	**01 40 41.4**	**+2.3**	
PUZ				SN		**Sn**	**01 41 58.7**	**-0.1**	
CNGZ	**Carnagh Statio**	**7.53**	**201**	PN		**Pn**	**01 40 47.2**	**+2.7**	
MWZ	**Matawai**	**7.62**	**205**	PN		**Pn**	**01 40 47.7**	**+2.0**	
URZ	**Urewera**	**7.71**	**207**	*e*Pn		**Pn**	**01 40 49.8**	**+2.8**	
	36nm,0.4s								
URZ				S		**Sn**	**01 42 16.1**	**+3.4**	
URZ	**Urewera**	**7.71**	**207**	PN		**Pn**	**01 40 49.5**	**+2.6**	
URZ				SN		**Sn**	**01 42 09.9**	**-2.8**	
URZ	**Urewera**	**7.71**	**207**	P		**Pn**	**01 40 49.7**	**+2.7**	
	13nm,0.3s,baz=250,slow=3.4,SNR=27								
URZ				S		**Sn**	**01 42 16.1**	**+3.4**	
	12nm,0.3s,baz=154,slow=22,SNR=11								
URZ				LR		LR	01 43 26.9		
	comp=Z,100nm,19.1s,baz=301,slow=33								
PRGZ	**Paritu Road**	**8.03**	**201**	PN		**Pn**	**01 40 53.5**	**+2.1**	
MHGZ	**Mahia Peninsul**	**8.24**	**200**	PN		**Pn**	**01 40 55.7**	**+1.6**	
ALRZ	**Allen Road**	**8.28**	**210**	PN		Pn	01 40 58.0	+3.2	
RAHZ	**Arahi**	**8.29**	**205**	PN		**Pn**	**01 40 57.4**	**+2.5**	
NMHZ	**Naumai**	**8.56**	**206**	PN		**Pn**	**01 41 00.6**	**+2.0**	
BKZ	**Black Stump Fm**	**8.74**	**207**	PN		**Pn**	**01 41 02.3**	**+1.2**	
PNHZ	**Pukenui**	**9.50**	**206**	SN		**Sn**	**01 42 57.2**	**+0.6**	
ANWZ	**Angora Road**	**9.88**	**203**	SN		**Sn**	**01 43 07.0**	**+1.0**	
POWZ	**Post Office Ro**	**10.08**	**206**	PN		**Pn**	**01 41 18.8**	**-0.5**	
PRWZ	**Pori Road**	**10.14**	**205**	PN		**Pn**	**01 41 19.3**	**-0.9**	
TIWZ	**Tintock**	**10.37**	**205**	SN		**Sn**	**01 43 17.6**	**-0.2**	
MTW	**Mount Morrison**	**10.84**	**205**	SN		**Sn**	**01 43 27.0**	**-2.5**	
SNZO	**South Karori**	**11.28**	**208**	*e*Pn		**Pn**	**01 41 33.4**	**-2.2**	
SNZO				*e*S		**Sn**	**01 43 37.6**	**-2.4**	
TUWZ	**Tuamarina**	**11.69**	**210**	SN		**Sn**	**01 43 46.5**	**-3.6**	
KHZ	**Kahutara**	**12.68**	**208**	SN		**Sn**	**01 44 10.5**	**-3.6**	
NIUE	**Niue**	**14.52**	**34**	P		Pn	01 42 17.1	-2.5	
	baz=15,SNR=4.1								
NIUE				S		Sn	01 44 41.4	-18	
	baz=15,SNR=5.2								
RPZ	**Rata Peaks**	**14.79**	**211**	*e*Pn		**Pn**	**01 42 23.2**	**+0.2**	
	7.9nm,0.4s								
RPZ				S		Sn	01 44 56.3	-9.3	
RPZ	**Rata Peaks**	**14.79**	**211**	P		**Pn**	**01 42 23.2**	**+0.2**	
	1.3nm,0.3s,baz=32,slow=6.2,SNR=5.0								
RPZ				S		Sn	01 44 56.3	-9.3	
	0.7nm,0.3s,baz=233,slow=20,SNR=4.7								
DZM	**Mont Dzumac**	**16.44**	**301**	P		**Pn**	**01 42 45.0**	**+0.8**	
DZM	**Mont Dzumac**	**16.44**	**301**	P		**Pn**	**01 42 45.0**	**+0.8**	
	0.5nm,0.3s,baz=138,slow=17,SNR=4.2								
EIDS	**Eidsvold**	**27.46**	**275**	S		S	01 48 59.7	-14	
	baz=28,SNR=3.8								
CMSA	**Cobar Meteorol**	**30.53**	**260**	P		P	01 45 08.2	+3.3	
	baz=31,SNR=7.4								
QLP	**Quilpie**	**32.92**	**269**	P		**P**	**01 45 27.4**	**+1.4**	
	baz=34,SNR=12								
CTAO	**Charters Tower**	**33.64**	**281**	*e*P		**P**	**01 45 33.5**	**+1.2**	
	5.1nm,0.4s								
STKA	**Stephens Creek**	**33.91**	**259**	*e*P		**P**	**01 45 36.2**	**+1.6**	
	1.1nm,0.4s								
STKA	**Stephens Creek**	**33.91**	**259**	P		**P**	**01 45 36.1**	**+1.5**	
	6.6nm,0.5s,baz=94,slow=10,SNR=27								
STKA	**Stephens Creek**	**33.91**	**259**	P		**P**	**01 45 36.7**	**+2.1**	
	baz=34,SNR=26								
MTSU	**Mount Surprise**	**36.17**	**283**	P		**P**	**01 45 55.1**	**+0.9**	
	baz=37,SNR=8.1								
BBOO	**Buckleboo**	**38.35**	**256**	P		**P**	**01 46 13.0**	**+0.5**	
	baz=39,SNR=5.7								
COEN	**Coen**	**39.24**	**288**	*e*P		**P**	**01 46 20.4**	**+0.2**	
	61nm,0.9s								
COEN	**Coen**	**39.24**	**288**	P		**P**	**01 46 20.5**	**+0.4**	
	baz=40,SNR=7.1								
AS31	**Alice Springs**	**42.71**	**268**	*e*P		**P**	**01 46 48.4**	**-0.3**	
ASAR	**Alice Springs**	**42.72**	**268**	P		**P**	**01 46 48.6**	**0.0**	
ASAR	**Alice Springs**	**42.72**	**268**	P		**P**	**01 46 48.6**	**0.0**	
	20nm,0.5s,baz=105,slow=7.5,SNR=262								
WRA	**Warramunga Arr**	**43.80**	**273**	P		**P**	**01 46 57.0**	**-0.4**	
WRA	**Warramunga Arr**	**43.80**	**273**	P		**P**	**01 46 57.0**	**-0.4**	
	25nm,0.4s,baz=112,slow=7.8,SNR=144								
MKAR	**Makanchi Array**	**118.19**	**310**	PKP		**PKPdf**	**01 57 34.9**	**-2.4**	
MKAR	**Makanchi Array**	**118.19**	**310**	PKP		**PKPdf**	**01 57 34.9**	**-2.4**	
	0.2nm,0.4s,baz=231,slow=2.7,SNR=5.3								
ARCES	**ARCESS Array B**	**139.56**	**347**	PKPpre		PKPpre	01 58 09.2		
ARCES				PKP		**PKPdf**	**01 58 14.6**	**-2.4**	
ARCES	**ARCESS Array B**	**139.56**	**347**	PKhKP		PKPpre	01 58 09.2		
	1.4nm,0.8s,baz=20,slow=2.9,SNR=5.0								
ARCES				PKP		**PKPdf**	**01 58 14.6**	**-2.4**	
	1.4nm,0.7s,baz=29,slow=2.8,SNR=6.0								
JOF	**Joensuu**	**143.28**	**338**	*e*pkp		PKPab	01 58 16.1	-3.7	
	1.3nm,0.5s								
KAF	**Kangasniemi**	**145.43**	**340**	*e*pkp		**PKPdf**	**01 58 24.5**	**-3.1**	
FINES	**FINESS Array B**	**146.02**	**339**	PKPbc		**PKPdf**	**01 58 27.2**	**-1.5**	
FINES	**FINESS Array B**	**146.02**	**339**	PKPbc		**PKPdf**	**01 58 27.2**	**-1.5**	
	5.9nm,0.7s,baz=42,slow=4.2,SNR=18								
NB2	**NORSAR Subarra**	**149.75**	**351**	PKP		**PKPdf**	**01 58 37.6**	**+2.7**	
	comp=Z,1.1nm,0.5s,baz=15,slow=2.6								
NOA	**NORSAR Array B**	**149.75**	**351**	PKPbc		**PKPdf**	**01 58 37.8**	**+2.9**	
NOA	**NORSAR Array B**	**149.75**	**351**	PKPbc		**PKPdf**	**01 58 37.8**	**+2.9**	
	comp=Z,1.5nm,0.6s,baz=15,slow=4.2,SNR=7.3								
AKASG	**Malin Array Be**	**151.92**	**321**	PKPbc		**PKPbc**	**01 58 42.8**	**-2.2**	
AKASG	**Malin Array Be**	**151.92**	**321**	PKPbc		**PKPbc**	**01 58 42.8**	**-2.2**	
	comp=Z,1.5nm,0.6s,baz=53,slow=2.8,SNR=7.6								
BRTR	**Keskin Array B**	**152.78**	**297**	PKPbc		**PKPbc**	**01 58 46.8**	**-0.7**	
BRTR				PKPab		**PKPab**	**01 58 55.2**	**-3.4**	
BRTR	**Keskin Array B**	**152.78**	**297**	PKPbc		**PKPbc**	**01 58 46.8**	**-0.7**	
	comp=Z,0.4nm,0.6s,baz=110,slow=3.0,SNR=3.6								
BRTR				PKPab		**PKPab**	**01 58 55.2**	**-3.4**	
	comp=Z,0.8nm,0.7s,baz=114,slow=3.6,SNR=5.9								
TORD	**Torodi Ar. Bea**	**161.76**	**180**	PKPab		**PKPab**	**01 59 38.3**	**+0.8**	
TORD	**Torodi Ar. Bea**	**161.76**	**180**	PKPab		**PKPab**	**01 59 38.3**	**+0.8**	
	comp=Z,0.5nm,0.6s,baz=178,slow=2.7,SNR=8.5								

*ISCJB **18** 01:51:29.6±0.5,39°.09N±0°.03×29°.03E±0°.03,h2km±9km, Error ellipse: s-maj=5.6km s-min=3.8km az=153.9*
*CSEM **18** 01:51:29.8±0.1,39°.10N×29°.03E,h2km,MD3.1,Error ellipse: s-maj=2.2km s-min=1.9km az=135.0*
*DDA **18** 01:51:29.6,39°.08N×29°.04E,h7km,MD3.1*
*ISK **18** 01:51:29.2,39°.08N×29°.05E,h5km,MD2.4*

ISC 18 01:51:30.0±1.0,39°.09N±0°.03×29°.03E±0°.02,h6km±11km, n32,σ0s30/46,Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
DEMI	**Demirci**	**0.25**	**259**	*i* P		**Pg**	**01 51 35.0**	**0.0**	
DEMI				*i* S		**Sg**	**01 51 38.7**	**+0.4**	
DEMI	**Demirci**	**0.25**	**259**	*i* P		**Pg**	**01 51 35.0**	**0.0**	
DEMI				*i* S		**Sg**	**01 51 38.7**	**+0.4**	
GDZ	**Gediz**	**0.35**	**90**	*i* P		**Pg**	**01 51 36.7**	**-0.1**	
GDZ				*i* S		**Sg**	**01 51 41.8**	**+0.4**	
GDZ	**Gediz**	**0.35**	**90**	*i* P		**Pg**	**01 51 36.7**	**-0.1**	
GDZ				*i* S		**Sg**	**01 51 41.8**	**+0.4**	
TVSB	**Tavsanli**	**0.49**	**43**	*e*PG		**Pg**	**01 51 39.1**	**-0.3**	
TVSB				*e*SG		**Sg**	**01 51 45.5**	**-0.3**	
TVSB	**Tavsanli**	**0.49**	**43**	*e*Pg		**Pg**	**01 51 39.1**	**-0.3**	
TVSB				*e*Sg		**Sg**	**01 51 45.5**	**-0.3**	
DST	**Dursunbey**	**0.60**	**328**	*e*PG		**Pg**	**01 51 41.5**	**-0.2**	
DST	**Dursunbey**	**0.60**	**328**	*e*Pg		**Pg**	**01 51 41.5**	**-0.2**	
KULA	**Kula-Manisa**	**0.65**	**207**	*e*PG		**Pg**	**01 51 42.3**	**-0.1**	
KULA				*e*SG		**Sg**	**01 51 50.8**	**0.0**	
KULA	**Kula-Manisa**	**0.65**	**207**	*e*Pg		**Pg**	**01 51 42.3**	**-0.1**	
KULA				*e*Sg		**Sg**	**01 51 50.8**	**0.0**	
MANT	**Manisa**	**0.71**	**212**	*i* P		**Pg**	**01 51 43.1**	**-0.5**	
MANT				*i* S		**Sg**	**01 51 52.7**	**-0.1**	
MANT	**Manisa**	**0.71**	**212**	*i* P		**Pg**	**01 51 43.1**	**-0.5**	
MANT				*i* S		**Sg**	**01 51 52.7**	**-0.1**	
KHAL	**Karahalli**	**0.80**	**153**	*i* P		**Pb**	**01 51 46.1**	**-0.4**	
KHAL				*i* S		**Sg**	**01 51 56.3**	**+0.4**	
KHAL	**Karahalli**	**0.80**	**153**	*i* P		**Pb**	**01 51 46.1**	**-0.4**	
KHAL				*i* S		**Sg**	**01 51 56.3**	**+0.4**	
ALT	**Altintas**	**0.84**	**92**	*e*PG		**Pg**	**01 51 46.2**	**+0.2**	
ALT	**Altintas**	**0.84**	**92**	*e*Pg		**Pg**	**01 51 46.3**	**+0.2**	
AKHS	**Akhisar**	**0.97**	**258**	*i* P		**Pg**	**01 51 48.8**	**+0.1**	
AKHS				*i* S		**Sb**	**01 52 02.6**	**+0.2**	
AKHS	**Akhisar**	**0.97**	**258**	*i* P		**Pg**	**01 51 48.8**	**+0.1**	
AKHS				*i* S		**Sb**	**01 52 02.6**	**+0.2**	
BALB	**Balikesir**	**1.05**	**302**	*e*PG		**Pg**	**01 51 50.2**	**+0.1**	
BALB	**Balikesir**	**1.05**	**302**	*e*Pg		**Pg**	**01 51 50.2**	**+0.1**	
CAVI	**Cavuskoy**	**1.27**	**29**	*e*PN		**Pn**	**01 51 54.2**	**-0.2**	
CAVI	**Cavuskoy**	**1.27**	**29**	*e*Pn		**Pn**	**01 51 54.2**	**-0.2**	
KCTX	**Karacabey (Bur**	**1.28**	**336**	*e*PN		**Pn**	**01 51 54.0**	**-0.6**	
KCTX	**Karacabey (Bur**	**1.28**	**336**	*e*Pn		**Pn**	**01 51 54.0**	**-0.6**	
GONE	**Gonen-Balikesi**	**1.41**	**313**	*e*PN		**Pn**	**01 51 56.4**	**+0.1**	
GONE	**Gonen-Balikesi**	**1.41**	**313**	*e*Pn		**Pn**	**01 51 56.4**	**+0.1**	
ARMT	**Armutlu**	**1.48**	**355**	*e*PN		**Pn**	**01 51 57.4**	**+0.2**	
ARMT	**Armutlu**	**1.48**	**355**	*e*Pn		**Pn**	**01 51 57.4**	**+0.2**	
YLV	**Yalova**	**1.50**	**10**	*e*PN		**Pb**	**01 51 58.2**	**0.0**	
YLV	**Yalova**	**1.50**	**10**	*e*Pn		**Pb**	**01 51 58.3**	**0.0**	
GULT	**Gulveren**	**1.76**	**40**	*e*PN		**Pn**	**01 52 01.7**	**+0.5**	
GULT	**Gulveren**	**1.76**	**40**	*e*Pn		**Pn**	**01 52 01.7**	**+0.5**	

IDC 18 02:23:34.3±11.0,14°.28N×145°.49E,h170km±106km, mb3.5/10,mb1 3.7/10,mb1mx3.5/24,mbtmp3.5/10,Error ellipse: s-maj=34.3km s-min=19.2km az=81.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time		Res
				Op		ISC	h m s		ISC
KSRS	**Korea Array**	**27.87**	**329**	P		P	02 29 08.3		+0.2
	1.0nm,0.5s,baz=148,slow=9.9,SNR=4.9								
WRA	**Warramunga Arr**	**35.73**	**198**	P		P	02 30 16.5		-0.4
	1.4nm,0.6s,baz=20,slow=9.7,SNR=8.8								
ASAR	**Alice Springs**	**39.38**	**197**	P		P	02 30 47.5		0.0
	0.6nm,0.7s,baz=20,slow=11,SNR=6.2								
MKAR	**Makanchi Array**	**61.42**	**316**	P		P	02 33 33.0		+0.4
	0.3nm,0.3s,baz=91,slow=8.6,SNR=10								
ILAR	**Eielson Array**	**67.69**	**25**	P		P	02 34 12.1		-0.8
	0.2nm,0.3s,baz=260,slow=5.6,SNR=6.2								
YBH	**Yreka Blue Hor**	**81.97**	**49**	P		P	02 35 35.4		0.0
	1.4nm,0.5s,baz=233,slow=4.1,SNR=3.6								
YKA	**Yellowknife Ar**	**81.97**	**28**	P		P	02 35 35.1		+0.2
	0.4nm,0.4s,baz=288,slow=4.5,SNR=4.3								
NVAR	**Mina Array Bea**	**86.02**	**52**	P		P	02 35 57.7		+1.5
	0.3nm,0.4s,baz=292,slow=4.8,SNR=3.7								
ARCES	**ARCESS Array B**	**86.61**	**342**	P		P	02 35 58.2		+0.1
	0.9nm,0.7s,baz=54,slow=4.6,SNR=8.0								
JOF	**Joensuu**	**87.93**	**335**	*ep*		P	02 36 02.9		-1.6
	1.1nm,0.5s								
FINES	**FINESS Array B**	**90.79**	**335**	P		P	02 36 16.8		-1.2
	1.1nm,0.4s,baz=60,slow=6.6,SNR=8.3								

**IDC 18 02:30:11.7±7.2,19°.54S×170°.04E,h0km,mb4.0/4, mb1 4.1/5,mb1mx3.9/18,mbtmp4.0/5,ML3.5/1,MS3.3/2, Ms1 3.3/2,ms1mx3.0/20,Error ellipse: s-maj=190.9km s-min=37.

KLR	**Kul'dur**	**7.08**	**293**	*e*PN		**Pn**	**02 33 45.1**	**-2.0**
KLR				MLR		MLR		
	comp=Z,800nm,11.0s							
KLR	**Kul'dur**	**7.08**	**293**	*e*P		**Pn**	**02 33 45.1**	**-2.0**
KLR				AMS		AMS	02 37 10.5	
	comp=Z,800nm,11.0s							
USRK	**Ussuriysk Arra**	**7.36**	**252**	LR		LR	02 36 36.1	
	comp=Z,54nm,21.4s,baz=32,slow=38							
EKMR	**Ekimchan**	**8.35**	**321**	*e*P		**Pn**	**02 34 03.3**	**-1.3**
EKMR				AMB		AMB	02 34 11.7	
	comp=Z,3.0nm,0.5s							
EKMR				*e*S		**Sn**	**02 35 42.8**	**+4.2**
EKMR				*e*Sg		Sg	02 36 42.8	+11
EKMR				A		A	02 36 43.5	
	comp=Z,10.0nm,0.8s							
EKMR				A		A	02 36 43.5	
	comp=Z,12nm,0.8s							
EKMR				A		A	02 36 43.5	
	comp=Z,31nm,0.8s							
MAJO	**Matsushiro**	**10.71**	**195**	*e*PN		**Pn**	**02 34 34.8**	**-2.2**
PETK	**Petropavlovsk-**	**11.97**	**53**	LR		LR	02 40 22.5	
	comp=Z,46nm,18.0s,baz=96,slow=42							
PET	**Petropavlovsk**	**12.47**	**55**	*e*PN		**Pn**	**02 34 59.3**	**-1.6**
YAK	**Yakutsk**	**16.62**	**340**	*e*P		**Pn**	**02 35 53.6**	**-2.8**
SONM	**Songino Array**	**23.82**	**285**	P		**P**	**02 37 17.0**	**+0.3**
	comp=Z,0.3nm,0.5s,baz=70,slow=8.3,SNR=3.0							
BILL	**Bilibino**	**24.60**	**22**	P		**P**	**02 37 20.0**	**-3.4**
BILL				pmax		pmax		
	comp=Z,6.0nm,2.0s							
TLY	**Talaya**	**25.09**	**295**	*e*P		**P**	**02 37 24.5**	**-3.5**
ZAK	**Zakamensk**	**25.44**	**292**	*e*P		**P**	**02 37 33.1**	**+1.8**
ZAK				pmax		pmax		
	comp=Z,3.0nm,1.1s							
KRAR	**Krasnoyarsk**	**31.16**	**305**	*ce*P		P	02 38 16.2	-5.9
MKAR	**Makanchi Array**	**39.78**	**292**	P		**P**	**02 39 36.3**	**0.0**
MKAR				pmax		pmax		
	comp=Z,1.0nm,0.6s							
MKAR	**Makanchi Array**	**39.78**	**292**	P		**P**	**02 39 36.3**	**0.0**
	comp=Z,0.8nm,0.6s,baz=76,slow=9.0,SNR=11							
COLA	**College**	**40.83**	**38**	*e*P		**P**	**02 39 45.5**	**+0.8**
ILAR	**Eielson Array**	**41.26**	**38**	P		**P**	**02 39 48.3**	**0.0**
	comp=Z,1.3nm,0.7s,baz=276,slow=8.3,SNR=5.4							
YKA	**Yellowknife Ar**	**55.26**	**33**	P		**P**	**02 41 36.9**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=303,slow=6.7,SNR=2.0							
PMG	**Port Moresby**	**56.29**	**174**	LR		LR	03 02 01.8	
	comp=Z,77nm,21.6s,baz=0.0,slow=32							
NOA	**NORSAR Array B**	**65.20**	**336**	LR		LR	03 16 15.0	
	comp=Z,21nm,18.4s,baz=45,slow=41							
WRA	**Warramunga Arr**	**66.89**	**188**	P		**P**	**02 42 56.3**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=6.1,slow=6.9,SNR=3.3							
ASAR	**Alice Springs**	**70.62**	**188**	P		**P**	**02 43 17.4**	**-1.4**
	comp=Z,0.7nm,0.8s,baz=16,slow=7.0,SNR=5.7							
PDAR	**Pinedale Array**	**70.68**	**48**	P		**P**	**02 43 22.4**	**+2.9**
	comp=Z,0.5nm,0.7s,baz=302,slow=5.9,SNR=3.7							
CLL	**Collm**	**72.68**	**329**	*e*P		**P**	**02 43 30.0**	**-1.0**
CLL	**Collm**	**72.68**	**329**	*e*P		**P**	**02 43 30.0**	**-1.0**
TXAR	**Lajitas Array**	**83.92**	**53**	P		**P**	**02 44 35.1**	**+1.4**
	comp=Z,0.3nm,0.5s,baz=309,slow=4.5,SNR=3.7							

IDC 18 02:52:32.5±11.0, 15°46S×175°68W, h317km±111km, mb3.2/5, mb1 3.6/5, mb1mx3.3/18, mbtmp3.2/5, Error ellipse: s-maj=128.1km s-min=27.5km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**47.69**	**257**	P	P	03 00 38.0	-0.4
	0.6nm,0.5s,baz=88,slow=7.1,SNR=6.6						
ASAR	**Alice Springs**	**48.00**	**252**	P	P	03 00 40.7	0.0
	3.5nm,0.5s,baz=87,slow=8.3,SNR=51						
NVAR	**Mina Array Bea**	**75.86**	**43**	P	P	03 03 45.1	+0.3
	0.4nm,0.6s,baz=224,slow=7.6,SNR=5.0						
ILAR	**Eielson Array**	**82.95**	**12**	P	P	03 04 21.7	-0.2
	0.4nm,0.7s,baz=214,slow=5.6,SNR=6.2						
PDAR	**Pinedale Array**	**83.79**	**43**	P	P	03 04 26.6	-0.3
	0.7nm,0.7s,baz=177,slow=3.0,SNR=4.0						
ARCES	**ARCESS Array B**	**124.35**	**351**	PKP	PKPdf	03 10 52.2	-1.1
	1.5nm,0.8s,baz=0.0,slow=1.3,SNR=4.8						
BRTR	**Keskin Array B**	**144.79**	**319**	PKP	PKPbc	03 11 32.0	-0.1
	1.4nm,0.8s,baz=27,slow=0.3,SNR=7.1						
GERES	**GERESS Array B**	**145.83**	**349**	PKPbc	PKPbc	03 11 34.6	-0.2
	0.4nm,0.5s,baz=15,slow=4.1,SNR=4.7						

MEX 18 02:54:41.3±0.5, 14°50N×92°26W, h78km±6km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THIG		**0.41**	**360**	*i* P	Pn	02 54 52.6	-1.6
THIG				*i* S	Sn	02 55 02.1	-1.6
PCIG		**1.52**	**323**	*i* P	Pn	02 55 05.6	-1.2
PCIG				*i* S	Sn	02 55 24.2	-1.8
CCIG	**Comitan**	**1.78**	**4**	*e*P	Pn	02 55 09.6	-0.9
CCIG				*e*S	Sn	02 55 29.9	-2.7
TGIG		**2.42**	**340**	*e*P	Pn	02 55 17.6	-1.2
TGIG				*e*S	Sn	02 55 45.2	-2.4
HUIG	**Huatulco**	**3.92**	**289**	*e*P	Pn	02 55 37.7	-1.5
HUIG				*e*S	Sn	02 56 22.3	-1.8

NIED ***18*** *03:05:00.24˚.40N×121˚.70E, h32km, Mw3.8 Best double couple: M₀5.46000×10¹⁴ NP1:φ₀196.00000°, δ78.00000°, λ-15.00000°. NP2:φ₀289.00000°, δ76.00000°, λ-167.00000°.*

ISCJB ***18*** *03:05:53.6±0.4, 24˚.29N±0˚.01×121˚.88E±0˚.02, h2km±3km, Error ellipse: s-maj=2.9km s-min=2.1km az=39.3*

JMA ***18*** *03:05:53.8±0.3, 24˚.43N×121˚.66E, h51km, M3.5*

TAP ***18*** *03:05:54.2, 24˚.29N×121˚.81E, h14km, ML4.0, B*

ISC 18 03:05:53.6±0.8, 24°29N±0˚.02×121°88E±0˚.02, h12km±6km, n61, σ0°79/106, 9C-6D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.12**	**278**	*i* P	**Pg**	**03 05 57.0**	**+0.2**
	baz=284						
EHP				*i* S	**Sg**	**03 05 59.2**	**+0.1**
	baz=284						
ENA	**Nanau**	**0.18**	**318**	⇑*i* P	**Pg**	**03 05 58.1**	**+0.4**
	baz=336						
ENA				S	**Sg**	**03 06 00.8**	**+0.3**
	baz=336						
TWC	**Suao**	**0.32**	**356**	⇑*i* P	**Pb**	**03 06 00.9**	**-0.3**
	baz=12						
TWC				S	**Sg**	**03 06 05.0**	**+0.6**
	baz=12						
TWD	**Chiawan**	**0.33**	**230**	⇓*i* P	**Pg**	**03 06 00.3**	**0.0**
	baz=228						
TWD				S	**Sg**	**03 06 05.1**	**+0.3**
	baz=228						
HWA	**Hwalien**	**0.40**	**218**	*e*P	**Pb**	**03 06 02.5**	**-0.1**
	baz=218						
ENTT	**Nioudou**	**0.45**	**321**	⇑*i* P	**Pb**	**03 06 02.9**	**-0.5**
	baz=327						
ENTT				*e*S	**Sg**	**03 06 07.8**	**-0.7**
	baz=327						
TWE	**Neicheng**	**0.47**	**336**	⇑*i* P	**Pb**	**03 06 03.4**	**-0.3**
	baz=344						
TWE				*i* S	**Sg**	**03 06 09.4**	**+0.4**
	baz=344						
NNS	**Nan Shan**	**0.48**	**288**	⇑*i* P	**Pg**	**03 06 03.2**	**+0.1**
	baz=291						
NNS				*i* S	**Sg**	**03 06 08.6**	**-1.0**
	baz=291						
ILA	**Ilan**	**0.48**	**346**	*i* P	**Pb**	**03 06 04.1**	**+0.1**
	baz=347						
ILA				S	**Sb**	**03 06 10.9**	**-0.2**
	baz=347						
ESF	**Shoufeng Towns**	**0.54**	**219**	*e*P	**Pg**	**03 06 04.2**	**0.0**
	baz=221						
ESF				*e*S	**Sb**	**03 06 12.3**	**-0.3**
	baz=221						
WHF	**Hehuan Shan**	**0.58**	**255**	⇓*i* P	**Pg**	**03 06 04.8**	**-0.2**
	baz=255						
WHF				*i* S	**Sg**	**03 06 12.1**	**-0.6**
	baz=255						
NSK	**Sanguang**	**0.61**	**309**	⇑*i* P	**Pb**	**03 06 05.7**	**-0.5**
	baz=313						
NSK				*i* S	**Sg**	**03 06 13.1**	**-0.4**
	baz=313						
ESL	**Shilin**	**0.62**	**220**	P	**Pg**	**03 06 05.7**	**-0.1**
	baz=221						
ESL				*e*S	**Sb**	**03 06 14.5**	**-0.6**
	baz=221						
TWT	**Tachien**	**0.64**	**267**	P	**Pb**	**03 06 06.6**	**-0.2**
	baz=267						
TWT				*i* S	**Sg**	**03 06 14.3**	**-0.2**
	baz=267						
TWB1	**Santiao Chiao**	**0.72**	**8**	P	**Pb**	**03 06 08.4**	**+0.3**
	baz=12						
TWB1				*e*S	**Sg**	**03 06 16.1**	**-0.9**
	baz=12						
NWF	**Wu-fen Shan**	**0.78**	**354**	⇑*i* P	**Pn**	**03 06 09.7**	**-0.8**
	baz=349						
NWF				S	**Sb**	**03 06 19.3**	**-0.4**
	baz=349						
TAP1	**Taipei**	**0.81**	**337**	*e*P	**Pb**	**03 06 09.5**	**-0.1**
	baz=339						
TAP1				*e*S	**Sb**	**03 06 20.6**	**+0.1**
	baz=339						
TAP	**Taipei**	**0.82**	**336**	*e*P	**Pn**	**03 06 09.9**	**-1.0**
	baz=339						
TAP				*e*S	**Sb**	**03 06 21.1**	**+0.5**
	baz=339						
NSTT	**Nanjuang**	**0.86**	**293**	⇑P	**Pb**	**03 06 10.5**	**0.0**
	baz=295						
NSTT				S	**Sg**	**03 06 20.9**	**-0.7**
	baz=295						
TWS1	**Kuangyinshan**	**0.91**	**333**	P	**Pn**	**03 06 12.0**	**-0.1**
	baz=335						
TWS1				*e*S	**Sn**	**03 06 25.1**	**-0.1**
	baz=335						
NCU	**National Centr**	**0.92**	**317**	*e*P	**Pn**	**03 06 12.2**	**-0.2**
	baz=315						
NCU				*e*S	**Sn**	**03 06 25.7**	**+0.2**
	baz=315						
EHY	**Hungye**	**0.93**	**213**	*e*P	**Pb**	**03 06 10.7**	**-1.0**
	baz=223						
EHY				*e*S	**Sn**	**03 06 26.5**	**+0.7**
	baz=223						
HSN	**Hsinchu**	**0.97**	**302**	*e*P	**Pn**	**03 06 13.1**	**+0.1**
	baz=298						
HSN				*e*S	**Sn**	**03 06 26.8**	**+0.2**
	baz=298						
SMLT	**Sun Moon Lake**	**0.98**	**246**	P	**Pg**	**03 06 12.7**	**+0.2**
	baz=239						
SMLT				*e*S	**Sb**	**03 06 25.3**	**-0.2**
	baz=239						
TWQ1	**Liyutan**	**1.01**	**273**	*e*P	**Pn**	**03 06 13.7**	**+0.2**
	baz=274						
TWQ1				*e*S	**Sg**	**03 06 26.4**	**+0.2**
	baz=274						
TYC	**Yuchr**	**1.01**	**248**	P	**Pg**	**03 06 12.8**	**-0.2**
	baz=240						
TYC				*e*S	**Sb**	**03 06 25.5**	**-0.7**
	baz=240						
TWY	**Chenhua**	**1.01**	**346**	*e*P	**Pn**	**03 06 13.9**	**+0.3**
	baz=342						
TWY				*e*S	**Sn**	**03 06 27.9**	**+0.2**
	baz=342						
NSY	**Sanyi**	**1.02**	**277**	*e*P	**Pn**	**03 06 13.7**	**-0.1**
	baz=278						
NSY				*e*S	**Sn**	**03 06 27.3**	**-0.8**
	baz=278						
YOJ	**Yonaguni jima**	**1.05**	**81**	⇑*e*P	**Pg**	**03 06 14.9**	**+1.1**
	baz=70						
YOJ				*e*S	**Sn**	**03 06 30.1**	**+1.4**
	baz=70						
YOJ	**Yonaguni jima**	**1.05**	**81**	P	**Pg**	**03 06 15.1**	**+1.3**
YOJ				S	**Sn**	**03 06 30.6**	**+1.9**
TWF1	**Yuli**	**1.08**	**210**	*e*P	**Pb**	**03 06 12.7**	**-1.5**
	baz=227						
TWF1				*e*S	**Sn**	**03 06 29.5**	**+0.2**
	baz=227						
TCU	**Taichung**	**1.10**	**263**	⇓P	**Pg**	**03 06 15.8**	**+0.9**
	baz=271						
TCU				*e*S	**Sn**	**03 06 30.7**	**+0.7**
	baz=271						
YUS	**Yu-Shan**	**1.16**	**227**	⇓*i* P	**Pn**	**03 06 15.9**	**-0.3**
	baz=238						
YUS				*e*S	**Sn**	**03 06 31.8**	**-0.4**
	baz=238						
WNT	**Mingjian**	**1.16**	**249**	*e*P	**Pg**	**03 06 16.5**	**+0.5**
	baz=247						
WNT				*e*S	**Sg**	**03 06 31.9**	**+0.8**
	baz=247						
ALS	**Alishan**	**1.25**	**232**	⇓P	**Pb**	**03 06 17.5**	**+0.2**
	baz=233						
ALS				*e*S	**Sg**	**03 06 36.5**	**+2.5**
	baz=233						
CHKT	**Chengkung**	**1.28**	**202**	*e*P	**Pn**	**03 06 17.0**	**-0.3**
	baz=184						
CHN5	**Tsauling**	**1.30**	**238**	*e*P	**Pg**	**03 06 18.5**	**0.0**
	baz=240						
CHN5				S	**Sg**	**03 06 37.5**	**+2.0**
	baz=240						
PCYT	**Pengchaiyu**	**1.34**	**8**	⇓*e*P	**Pb**	**03 06 18.5**	**-0.2**
	baz=9.0						
WGK	**Gukeng**	**1.34**	**244**	*e*P	**Pb**	**03 06 18.7**	**0.0**
	baz=245						
ELDTW	**Lidau**	**1.35**	**216**	*e*P	**Pn**	**03 06 17.6**	**-0.8**
	baz=202						
CHY	**Chiayi**	**1.55**	**240**	*e*P	**Pg**	**03 06 22.8**	**-0.5**
	baz=242						
CHY				*e*S	**Sg**	**03 06 43.8**	**+0.4**
	baz=242						
WTP	**Ta-pu**	**1.56**	**228**	P	**Pb**	**03 06 22.6**	**+0.2**
	baz=231						
WTP				*e*S	**Sg**	**03 06 44.9**	**+1.2**
	baz=231						
TWK	**Hsinying**	**1.63**	**231**	*e*P	**Pb**	**03 06 23.9**	**+0.3**
	baz=235						
TWK				*e*S	**Sg**	**03 06 46.1**	**0.0**
	baz=235						
TWG	**Pinlang**	**1.64**	**207**	*e*P	**Pn**	**03 06 22.1**	**-0.1**
	baz=193						
WSF	**Szhu**	**1.65**	**247**	*e*P	**Pb**	**03 06 23.5**	**-0.4**
	baz=258						
WSF				*e*S	**Sg**	**03 06 47.2**	**+0.6**
	baz=258						
CHN1	**Nanshi**	**1.66**	**229**	P	**Pb**	**03 06 24.4**	**+0.3**
	baz=233						
CHN1				*e*S	**Sg**	**03 06 47.9**	**+1.0**
	baz=233						
IRIF	**Iriomote-Funau**	**1.69**	**88**	P	**Pb**	**03 06 24.1**	**-0.6**
IRIF				S	**Sg**	**03 06 47.9**	**-0.2**
HATJ	**Hateruma jima**	**1.78**	**97**	P	**Pb**	**03 06 26.0**	**-0.1**
ECL	**Taimali**	**1.89**	**207**	*e*P	**Pn**	**03 06 24.6**	**-1.0**
	baz=196						
JKRS	**Kuro-shima**	**1.95**	**91**	P	**Pb**	**03 06 28.4**	**-0.6**
JKRS				S	**Sb**	**03 06 53.4**	**+0.1**
TWM1	**Shoushan**	**1.98**	**223**	*e*P	**Pb**	**03 06 29.2**	**-0.3**
	baz=225						
JIJ	**Ishigaki jima**	**2.07**	**88**	P	**Pb**	**03 06 29.5**	**-1.6**
JIJ				*e*S	**Sb**	**03 06 55.7**	**-1.1**
EAST	**Anshuo**	**2.12**	**207**	*e*P	**Pn**	**03 06 28.9**	**0.0**
	baz=197						
SCZT	**Fangliau**	**2.23**	**211**	*e*P	**Pb**	**03 06 32.9**	**-1.0**
	baz=218						
SCZT				*e*S	**Sb**	**03 07 02.2**	**+0.8**
	baz=218						
PNG	**Penghu**	**2.24**	**252**	*e*P	**Pn**	**03 06 30.4**	**-0.1**
	baz=254						
LAY	**Lan-yu**	**2.26**	**188**	*e*P	**Pn**	**03 06 29.4**	**-1.5**
	baz=190						
WDGT	**Dungji**	**2.27**	**244**	*e*P	**Pn**	**03 06 32.0**	**+1.0**
	baz=248						
WDGT				*e*S	**Sb**	**03 07 00.8**	**-1.8**
	baz=248						
TWK1	**Hengchun**	**2.54**	**203**	*e*P	**Pn**	**03 06 36.5**	**+1.9**
	baz=196						
TSEB	**Hengchuen, Pin**	**2.54**	**201**	*e*P	**Pn**	**03 06 34.5**	**-0.2**
	baz=195						
JTJ	**Tarama**	**2.60**	**82**	P	**Pb**	**03 06 37.6**	**-2.5**
KNM	**Kinmen**	**3.14**	**273**	*e*P	**Pn**	**03 06 44.0**	**+1.1**
	baz=274						

MOS ***18*** *03:06:23.7±1.7, 43˚.59N×40˚.35E, h13km, mb4.0/1, Error ellipse: s-maj=61.3km s-min=16.4km az=164.6*

CSEM ***18*** *03:06:24.1±0.4, 43˚.71N×40˚.10E, h20km, mb4.0, Error ellipse: s-maj=12.4km s-min=5.0km az=152.0*

ISC 18 03:06:24.0±1.1, 43.71N±0˚.06×40.06E±0.05, h26km±12km, n21, σ1°86/35, 2C-2D, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SOC	**Sochi**	**0.28**	**243**	*di* PG	**Pb**	**03 06 30.1**	**-0.7**
SOC				*i*		03 06 36.3	
SOC				pmax	pmax		
	comp=N,86nm,0.2s						
SOC				pmax	pmax		
	comp=E,137nm,0.2s						
SOC				pmax	pmax		
	comp=Z,77nm,0.2s						
SOC				smax	smax		
	comp=N,949nm,0.2s						
SOC	**Sochi**	**0.28**	**243**	*i* Pg	**Pb**	**03 06 30.1**	**-0.7**
SOC				*i* Sg	**Sb**	**03 06 36.3**	**+0.9**
	comp=N,949nm,0.2s						
CHVG	**Ch'k'valeri**	**1.78**	**123**	P	**Pb**	**03 06 57.2**	**+1.3**
CHVG				S	**Sb**	**03 07 22.8**	**+5.0**
SHAR	**Shatzhatmas**	**1.89**	**88**	⇑*e*PN	**Pn**	**03 06 54.7**	**-0.1**
SHAR				*e*S	**Sn**	**03 07 17.2**	**-0.7**
SHAR	**Shatzhatmas**	**1.89**	**88**	*e*Pn	**Pn**	**03 06 54.7**	**-0.1**
SHAR				*e*Sg	**Sn**	**03 07 17.2**	**-0.7**
KIV	**Kislovodsk**	**1.92**	**82**	⇓*i* PN	**Pn**	**03 06 54.6**	**-0.4**
KIV				*e*S	**Sn**	**03 07 17.7**	**-0.7**
KIV	**Kislovodsk**	**1.92**	**82**	*i* Pn	**Pn**	**03 06 54.6**	**-0.4**
KIV				*e*Sg	**Sn**	**03 07 17.7**	**-0.7**
BEYR	**Belyy Ugol+**	**2.02**	**80**	*e*PN	**Pn**	**03 06 57.2**	**+0.8**
BEYR	**Belyy Ugol+**	**2.02**	**80**	*e*Pn	**Pn**	**03 06 57.2**	**+0.8**
PYA	**Pyatigorsk**	**2.19**	**80**	⇑*e*PN	**Pn**	**03 07 00.1**	**+1.3**
PYA				*e*S	**Sn**	**03 07 26.5**	**+1.4**
PYA	**Pyatigorsk**	**2.19**	**80**	*e*Pn	**Pn**	**03 07 00.1**	**+1.3**
PYA				*e*Sg	**Sn**	**03 07 26.5**	**+1.4**
GOF	**Gofitskoye**	**2.52**	**57**	*e*PN	Pn	03 06 55.6	-7.7
GOF				*e*S	**Sb**	**03 07 38.1**	**-1.1**
GOF				pmax	pmax		
	comp=Z,20nm,0.7s						
GOF				smax	smax		
	comp=E,120nm,0.4s						
GOF				smax	smax		
	comp=N,100nm,0.9s						
GOF	**Gofitskoye**	**2.52**	**57**	*e*Pn	Pn	03 06 55.6	-7.7
	comp=N,20nm,0.7s						
GOF				*e*Sn	**Sb**	**03 07 38.1**	**-1.1**
	comp=N,100nm,0.9s						
DBOC	**Borcka**	**2.64**	**153**	*i* P	**Pn**	**03 07 04.9**	**-0.1**
DBOC				*i* S	**Sn**	**03 07 31.8**	**-4.4**
DBOC	**Borcka**	**2.64**	**153**	*i* P	**Pn**	**03 07 04.9**	**-0.1**
DBOC				*i* S	**Sn**	**03 07 31.8**	**-4.4**
ONI	**Oni**	**2.72**	**113**	P	**Pb**	**03 07 11.5**	**-0.5**
ONI				S	**Sb**	**03 07 43.6**	**-1.4**
DDEM	**Demirkent**	**3.08**	**155**	*i* P	**Pn**	**03 07 11.6**	**+0.5**
DDEM				*i* S	**Sn**	**03 07 44.3**	**-2.8**
DDEM	**Demirkent**	**3.08**	**155**	*i* P	**Pn**	**03 07 11.6**	**+0.5**
DDEM				*i* S	**Sn**	**03 07 44.3**	**-2.8**
KELT	**Kelkit**	**3.61**	**190**	*i* P	**Pn**	**03 07 19.5**	**+1.1**
KELT				*i* S	**Sn**	**03 08 01.9**	**+1.7**
KELT	**Kelkit**	**3.61**	**190**	*i* P	**Pn**	**03 07 19.5**	**+1.1**
KELT				*i* S	**Sn**	**03 08 01.9**	**+1.7**
DGRG	**David-gareji**	**4.53**	**118**	P	Pb	03 07 47.7	+4.9

AUST ***18*** *03:58:05.6±1.3, 8˚.47S×107˚.77E, h0km, Error ellipse: s-maj=1.3km s-min=0.9km az=322.0*

ISCJB ***18*** *03:58:07.1±1.3, 8˚.49S±0˚.04×107˚.84E±0˚.04, h23km±12km, Error ellipse: s-maj=7.2km s-min=6.0km az=165.3*

DJA ***18*** *03:58:09.2±0.9, 8˚S±4˚×107˚8E±˚, h34km±11km, M4.0/12, MLv4.0/12*

ISC 18 03:58:08.2±2.0, 8°43S±0˚.05×107°84E±0˚.04, h26km±20km, n19, σ1°13/24, Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**0.87**	**358**	P	**Pn**	**03 58 24.2**	**-0.6**
CISI	**Cisompet, Garu**	**0.87**	**358**	P	**Pn**	**03 58 24.2**	**-0.6**
	baz=0.9,SNR=46						
CISI				S	**Sn**	**03 58 34.6**	**-2.0**
	baz=0.9,SNR=4.4						
CNJI	**Cibinong**	**1.32**	**328**	P	**Pn**	**03 58 31.0**	**+0.1**
CLJI	**Cilicap**	**1.36**	**59**	P	**Pn**	**03 58 31.4**	**-0.1**
LEM	**Lembang**	**1.61**	**352**	P	**Pb**	**03 58 37.0**	**-0.3**
LEM	**Lembang**	**1.61**	**352**	P	**Pb**	**03 58 37.0**	**-0.3**
	baz=1.7,SNR=16						
SKJI	**Sukabumi**	**1.90**	**318**	P	**Pn**	**03 58 39.4**	**+0.4**
SKJI				S	**Sn**	**03 59 02.4**	**+0.3**
TGJI	**Tegal**	**2.00**	**39**	P	**Pn**	**03 58 40.9**	**+0.5**
DBJI	**Dramaga**	**2.15**	**330**	P	**Pn**	**03 58 44.7**	**+2.2**
DBJI				S	**Sn**	**03 59 09.9**	**+1.6**
UGM	**Wanagama**	**2.70**	**79**	P	**Pn**	**03 58 50.0**	**-0.1**
UGM				S	**Sn**	**03 59 21.6**	**-0.4**
UGM	**Wanagama**	**2.70**	**79**	P	**Pn**	**03 58 50.7**	**+0.7**
	baz=2.8,SNR=10						
SMRI	**Semarang**	**2.92**	**62**	P	**Pn**	**03 58 53.0**	**0.0**
SMRI	**Semarang**	**2.92**	**62**	P	**Pn**	**03 58 55.0**	**+2.0**
	baz=3.0,SNR=6.2						
XMI	**Christmas Isla**	**2.92**	**226**	P	**Pn**	**03 58 53.8**	**+0.8**
	baz=2.8,SNR=3.4						
XMI				S	**Sn**	**03 59 26.2**	**-1.2**
	baz=2.8,SNR=5.0						
XMIS	**Christmas Isla**	**2.97**	**226**	P	**Pn**	**03 58 54.5**	**+0.8**
	baz=2.9,SNR=14						
XMIS				S	**Sn**	**03 59 26.6**	**-2.0**
	baz=2.9,SNR=6.4						
PCJI	**Pacitan**	**3.31**	**86**	P	**Pn**	**03 58 59.1**	**+0.8**
PWJI	**Pagerwojo**	**3.94**	**84**	P	**Pn**	**03 59 07.6**	**+0.5**
JAGI	**Jajag, Banyuwa**	**6.24**	**91**	P	Pn	03 59 45.8	+7.0
	baz=6.3,SNR=3.1						
BKNI	**Bangkinang**	**11.03**	**322**	P	**Pn**	**04 00 43.7**	**-0.6**
	baz=11,SNR=3.8						

IDC 18 04:01:12.2±1.7, 3°55N×126°51E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/23, mbtmp3.8/5, Error ellipse: s-maj=101.4km s-min=23.5km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**21.53**	**182**	P	P	04 06 02.8	-0.4
	1.4nm,0.8s,baz=5.7,slow=10,SNR=5.2						
WRA	**Warramunga Arr**	**24.58**	**162**	P	P	04 06 33.8	-0.4
	11nm,1.2s,baz=342,slow=10,SNR=27						
ASAR	**Alice Springs**	**28.00**	**165**	P	P	04 07 05.2	+0.2
	0.3nm,0.3s,baz=347,slow=12,SNR=6.6						
STKA	**Stephens Creek**	**38.04**	**159**	P	P	04 08 32.9	+0.4
	0.6nm,0.3s,baz=338,slow=10,SNR=4.3						
MKAR	**Makanchi Array**	**57.58**	**325**	P	P	04 11 03.8	-0.1
	0.4nm,0.5s,baz=115,slow=7.5,SNR=6.8						

IDC ***18*** *04:26:09.1±0.4, 35˚.50N×28˚.41E, h0km, mb4.8/31, mb1 4.8/40, mb1mx4.8/41, mbtmp4.7/40, ML4.5/7, MS4.4/19, Ms1 4.3/19, ms1mx4.1/40, Error ellipse: s

*NSSC **18** 04:26:16.5±6.0, 35°.19N×29°.03E, h1km=340km, MD2.8, ML4.0*
*DDA **18** 04:26:16.9, 35°.67N×28°.60E, h31km, ML4.6*
*DJA **18** 04:26:29.2±1.5, 35°.5'×2°.9E±1°.0, h119km±11km, M5.4/12, mB5.1/3, mb4.8/12, MLv5.8/1, Mw(mB)4.4/3*
*TIR **18** 04:27:24.7, 38°.74N×22°.67E, h7km*
ISC 18 04:26:14.8±0.2, 35°.33N±0°.03×28°.51E±0°.02, h39km±2km, h39km:pP-P, n1581, σ1934/1734, mb4.9/186, MS4.4/33, 192C-206D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.94**	**341**	P	**Pn**	**04 26 31.2**	**-0.3**
ARG				S	**Sn**	**04 26 43.2**	**+0.1**
ARG	**Arkhangelos**	**0.94**	**341**	*e*P	**Pn**	**04 26 31.2**	**-0.3**
ARG				*e*S	**Sn**	**04 26 44.8**	**+1.1**
ARG	**Arkhangelos**	**0.94**	**341**	*e*P	**Pn**	**04 26 31.2**	**-0.3**
ARG				*e*S	**Sn**	**04 26 44.8**	**+1.1**
KARP	**Karpathos**	**1.12**	**281**	P	**Pn**	**04 26 34.8**	**+0.7**
KARP				S	**Sn**	**04 26 50.6**	**+2.3**
KARP	**Karpathos**	**1.12**	**281**	*e*P	**Pn**	**04 26 35.0**	**+0.9**
KARP				*e*S	**Sn**	**04 26 49.9**	**+1.6**
KARP	**Karpathos**	**1.12**	**281**	*e*P	**Pn**	**04 26 35.0**	**+0.9**
KARP				S	**Sn**	**04 26 50.6**	**+2.3**
AKAS	**Kas**	**1.26**	**44**	*i* Pn	**Pn**	**04 26 35.9**	**-0.2**
AKAS				*i* Sn	**Sn**	**04 26 50.0**	**-1.9**
FETY	**Fethiye**	**1.38**	**19**	*e*PN	**Pn**	**04 26 37.6**	**0.0**
FETY				*e*SN	**Sn**	**04 26 56.2**	**+1.6**
FETY	**Fethiye**	**1.38**	**19**	*e*Pn	**Pn**	**04 26 37.6**	**0.0**
FETY				*e*Sn	**Sn**	**04 26 56.2**	**+1.6**
DALY	**Dalyan (Mu˘la**	**1.49**	**4**	*e*PN	**Pn**	**04 26 38.9**	**-0.1**
DALY				*e*SN	**Sn**	**04 26 58.2**	**+1.0**
DALY	**Dalyan (Mu˘la**	**1.49**	**4**	*e*Pn	**Pn**	**04 26 38.9**	**-0.1**
DALY				*e*Sn	**Sn**	**04 26 58.2**	**+1.0**
TURN	**Turunc**	**1.54**	**3**	*i* Pn	**Pn**	**04 26 38.4**	**-1.3**
TURN				*i* Sn	**Sn**	**04 26 54.5**	**-4.0**
DAT	**Datca**	**1.59**	**332**	*e*PN	**Pn**	**04 26 40.2**	**-0.3**
DAT	**Datca**	**1.59**	**332**	*e*Pn	**Pn**	**04 26 40.2**	**-0.3**
NIS1	**Nisyros Isl.**	**1.67**	**320**	P	**Pn**	**04 26 41.8**	**+0.3**
NIS1				S	**Sn**	**04 27 01.4**	**-0.3**
NIS1	**Nisyros Isl.**	**1.67**	**320**	*e*P	**Pn**	**04 26 42.0**	**+0.5**
NIS1	**Nisyros Isl.**	**1.67**	**320**	*e*P	**Pn**	**04 26 42.0**	**+0.5**
NIS1				S	**Sn**	**04 27 01.4**	**-0.3**
YER	**Yerkesik**	**1.81**	**354**	*e*PN	**Pn**	**04 26 43.6**	**+0.1**
YER	**Yerkesik**	**1.81**	**354**	*e*Pn	**Pn**	**04 26 43.6**	**+0.1**
ZKR	**Zakros**	**1.89**	**264**	P	**Pn**	**04 26 45.5**	**+1.0**
ZKR				S	**Sn**	**04 27 09.2**	**+2.0**
ZKR	**Zakros**	**1.89**	**264**	*e*P	**Pn**	**04 26 45.6**	**+1.0**
ZKR				*e*S	**Sn**	**04 27 07.9**	**+0.7**
ZKR	**Zakros**	**1.89**	**264**	P	**Pn**	**04 26 45.5**	**+1.0**
ZKR				S	**Sn**	**04 27 09.2**	**+2.0**
BODT	**Bodrum**	**1.98**	**331**	*e*PN	**Pn**	**04 26 45.4**	**-0.4**
BODT	**Bodrum**	**1.98**	**331**	*e*Pn	**Pn**	**04 26 45.4**	**-0.4**
GLHS	**Glhisar (BURDU**	**1.99**	**23**	*e*PN	**Pn**	**04 26 46.5**	**+0.6**
GLHS	**Glhisar (BURDU**	**1.99**	**23**	*e*Pn	**Pn**	**04 26 46.6**	**+0.6**
MLSB	**Milas**	**2.05**	**343**	*e*PN	**Pn**	**04 26 46.2**	**-0.6**
MLSB	**Milas**	**2.05**	**343**	*e*Pn	**Pn**	**04 26 46.2**	**-0.6**
GOLH	**Golhisar**	**2.08**	**24**	*i* Pn	**Pn**	**04 26 48.4**	**+1.1**
GOLH				*i* Sn	**Sn**	**04 27 13.1**	**+1.1**
KORT	**Korkueli**	**2.23**	**41**	*i* Pn	**Pn**	**04 26 51.4**	**+2.0**
KORT				*i* Sn	**Sn**	**04 27 19.8**	**+4.0**
ANTB	**Antalya**	**2.34**	**47**	*e*PN	**Pn**	**04 26 51.8**	**+1.1**
ANTB	**Antalya**	**2.34**	**47**	*e*Pn	**Pn**	**04 26 51.8**	**+1.1**
NPS	**Neapolis**	**2.37**	**269**	P	**Pn**	**04 26 52.9**	**+1.7**
NPS	**Neapolis**	**2.37**	**269**	*e*P	**Pn**	**04 26 52.9**	**+1.7**
NPS				*e*S	**Sn**	**04 27 19.7**	**+0.6**
NPS	**Neapolis**	**2.37**	**269**	*e*P	**Pn**	**04 26 52.9**	**+1.7**
NPS				*e*S	**Sn**	**04 27 19.7**	**+0.6**
AYDN	**Tasoluk**	**2.38**	**348**	*i* Pn	**Pn**	**04 26 51.7**	**+0.4**
AYDN				*i* Sn	**Sn**	**04 27 17.6**	**-1.8**
DNZL	**Cakiroluk**	**2.39**	**10**	*i* Pn	**Pn**	**04 26 51.7**	**0.0**
DNZL				*i* Sn	**Sn**	**04 27 16.9**	**-3.0**
DENT	**Denizli**	**2.45**	**10**	*e*PN	**Pn**	**04 26 52.3**	**0.0**
DENT	**Denizli**	**2.45**	**10**	*e*Pn	**Pn**	**04 26 52.3**	**0.0**
LAST	**Lasithi**	**2.49**	**267**	*e*P	**Pn**	**04 26 54.4**	**+1.5**
LAST	**Lasithi**	**2.49**	**267**	*e*P	**Pn**	**04 26 54.4**	**+1.5**
GCAM	**G?zelcaml?**	**2.58**	**337**	*i* Pn	**Pn**	**04 26 53.6**	**-0.4**
GCAM				*i* Sn	**Sn**	**04 27 21.7**	**-2.4**
SANT	**Santorini**	**2.69**	**294**	P	**Pn**	**04 26 55.8**	**+0.2**
SANT	**Santorini**	**2.69**	**294**	*e*P	**Pn**	**04 26 55.8**	**+0.2**
SANT	**Santorini**	**2.69**	**294**	*e*Pn	**Pn**	**04 26 55.8**	**+0.2**
SANT	**Santorini**	**2.69**	**294**	*e*P	**Pn**	**04 26 55.8**	**+0.2**
THR1	**Thera Island**	**2.69**	**294**	P	**Pn**	**04 26 56.0**	**+0.4**
THR1	**Thera Island**	**2.69**	**294**	P	**Pn**	**04 26 56.0**	**+0.4**
BCK	**Bucak**	**2.71**	**38**	*e*PN	**Pn**	**04 26 56.2**	**+0.4**
BCK	**Bucak**	**2.71**	**38**	*e*Pn	**Pn**	**04 26 56.2**	**+0.4**
SMG	**Samos**	**2.73**	**331**	P	**Pn**	**04 26 55.6**	**-0.5**
SMG	**Samos**	**2.73**	**331**	*e*P	**Pn**	**04 26 56.2**	**+0.1**
SMG				*e*S	**Sn**	**04 27 26.6**	**-1.3**
SMG	**Samos**	**2.73**	**331**	*e*P	**Pn**	**04 26 56.2**	**+0.1**
THR2	**Thira island,**	**2.74**	**295**	P	**Pn**	**04 26 56.5**	**+0.3**
THR2	**Thira island,**	**2.74**	**295**	P	**Pn**	**04 26 56.5**	**+0.3**
THR3	**Thira Island,**	**2.75**	**294**	P	**Pn**	**04 26 56.9**	**+0.6**
THR3	**Thira Island,**	**2.75**	**294**	P	**Pn**	**04 26 56.9**	**+0.6**
ISP	**Isparta**	**2.97**	**32**	*e*PN	**Pn**	**04 27 00.3**	**+0.9**
ISP	**Isparta**	**2.97**	**32**	P	**Pn**	**04 27 00.1**	**+0.7**
ISP	**Isparta**	**2.97**	**32**	*e*P	**Pn**	**04 26 59.9**	**+0.5**
ISP	**Isparta**	**2.97**	**32**	*e*Pn	**Pn**	**04 26 59.9**	**+0.5**
ISP	**Isparta**	**2.97**	**32**⇑	*i* P	Pn	04 27 04.4	+5.0
ISP	**Isparta**	**2.97**	**32**	*e*P	**Pn**	**04 26 59.9**	**+0.5**
APE	**Apeiranthos**	**2.97**	**307**	P	**Pn**	**04 26 59.3**	**-0.1**
APE	**Apeiranthos**	**2.97**	**307**	*e*P	**Pn**	**04 26 59.9**	**+0.5**
APE				*e*S	**Sn**	**04 27 31.5**	**-2.0**
APE	**Apeiranthos**	**2.97**	**307**	*e*P	**Pn**	**04 26 59.9**	**+0.5**
SIVA	**Sivas**	**3.05**	**265**	*e*P	**Pn**	**04 27 02.0**	**+1.5**
SIVA				*e*S	**Sn**	**04 27 36.4**	**+0.7**
SIVA	**Sivas**	**3.05**	**265**	*e*P	**Pn**	**04 27 02.0**	**+1.5**
SIVA				*e*S	**Sn**	**04 27 36.4**	**+0.7**
KHL	**Karahalli**	**3.10**	**15**	*e*PN	**Pn**	**04 27 01.5**	**+0.3**
KHL	**Karahalli**	**3.10**	**15**	*e*Pn	**Pn**	**04 27 01.5**	**+0.3**
KHAL	**Karahalli**	**3.13**	**14**	*e*Pn	**Pn**	**04 27 01.4**	**-0.4**
AKMC	**Akamas**	**3.14**	**94**	P	**Pn**	**04 27 01.1**	**-0.7**
AKMC	**Akamas**	**3.14**	**94**	P	**Pn**	**04 27 01.1**	**-0.7**
PPCY	**Paphos**	**3.17**	**97**	P	**Pn**	**04 27 01.5**	**-0.7**
PPCY	**Paphos**	**3.17**	**97**	P	**Pn**	**04 27 01.5**	**-0.7**
KULA	**Kula-Manisa**	**3.18**	**2**	*e*PN	**Pn**	**04 27 02.5**	**+0.2**
KULA	**Kula-Manisa**	**3.18**	**2**	*e*Pn	**Pn**	**04 27 02.5**	**+0.2**
GAZI	**Gazipasa**	**3.22**	**73**	*i* Pn	**Pn**	**04 27 01.8**	**-1.1**
GAZI				*i* Sn	**Sn**	**04 27 35.7**	**-4.3**
IZM	**Izmir**	**3.22**	**342**	*e*PN	**Pn**	**04 27 03.0**	**+0.1**
IZM	**Izmir**	**3.22**	**342**	*e*Pn	**Pn**	**04 27 03.0**	**+0.1**
BLCB	**Balcova**	**3.27**	**339**	*e*PN	**Pn**	**04 27 03.8**	**+0.3**
BLCB	**Balcova**	**3.27**	**339**	*e*Pn	**Pn**	**04 27 03.8**	**+0.3**
ALFC	**Alevga** 58nm,0.2s	**3.35**	**92**	⇑P	**Pn**	**04 27 03.6**	**-1.0**
ALFC				S	**Sn**	**04 27 41.9**	**-1.3**
ALFC	**Alevga** 58nm,0.2s	**3.35**	**92**	⇑P	**Pn**	**04 27 03.6**	**-1.0**
ALFC				S	**Sn**	**04 27 41.9**	**-1.3**
URLA	**Izmir**	**3.39**	**334**	*i* P	**Pn**	**04 27 04.7**	**-0.5**
URLA	**Izmir**	**3.39**	**334**	*i* P	**Pn**	**04 27 04.7**	**-0.5**
VAM	**Vamos**	**3.53**	**272**	P	**Pn**	**04 27 08.3**	**+1.3**
VAM	**Vamos**	**3.53**	**272**	*e*P	**Pn**	**04 27 08.1**	**+1.1**
VAM				*e*S	**Sn**	**04 27 47.5**	**0.0**
VAM	**Vamos**	**3.53**	**272**	*e*P	**Pn**	**04 27 08.1**	**+1.1**
VAM				*e*S	**Sn**	**04 27 47.5**	**0.0**
AKHS	**Akhisar**	**3.58**	**351**	*i* Pn	**Pn**	**04 27 07.2**	**-0.7**
LEF	**Lefka**	**3.59**	**92**	*e*PN	**Pn**	**04 27 06.6**	**-1.3**
LEF	**Lefka**	**3.59**	**92**	*e*Pn	**Pn**	**04 27 06.6**	**-1.3**
SHUT	**Suhut-Afyon**	**3.61**	**26**	*e*PN	**Pn**	**04 27 08.5**	**+0.3**
SHUT	**Suhut-Afyon**	**3.61**	**26**	*e*Pn	**Pn**	**04 27 08.5**	**+0.3**
CHOS	**Chios island**	**3.63**	**328**	P	**Pn**	**04 27 09.6**	**+1.0**
CHOS	**Chios island**	**3.63**	**328**	*e*P	**Pn**	**04 27 09.5**	**+1.0**
CHOS	**Chios island**	**3.63**	**328**	*e*P	**Pn**	**04 27 09.5**	**+1.0**
SZAC	**Souni-Zanaja**	**3.63**	**98**	P	**Pn**	**04 27 08.1**	**-0.4**
SZAC	**Souni-Zanaja**	**3.63**	**98**	P	**Pn**	**04 27 08.1**	**-0.4**
GVD	**Gavdhos**	**3.66**	**264**	P	**Pn**	**04 27 09.7**	**+0.8**
GVD				S	**Sn**	**04 27 51.5**	**+0.6**
GVD	**Gavdhos**	**3.66**	**264**	*e*P	**Pn**	**04 27 09.6**	**+0.6**
GVD				*e*S	**Sn**	**04 27 51.4**	**+0.6**
GVD	**Gavdhos**	**3.66**	**264**	*e*Pn	**Pn**	**04 27 09.5**	**+0.6**
GVD	**Gavdhos**	**3.66**	**264**	*e*Pn	**Pn**	**04 27 09.5**	**+0.6**
GVD				S	**Sn**	**04 27 51.5**	**+0.6**
ERMK	**Ermenek**	**3.80**	**69**	*i* Pn	**Pn**	**04 27 12.1**	**+1.1**
ERMK				*i* Sn	**Sn**	**04 27 54.9**	**+0.3**
MAMC	**Mammari**	**3.85**	**91**	P	**Pn**	**04 27 10.9**	**-0.6**
MAMC	**Mammari**	**3.85**	**91**	P	**Pn**	**04 27 10.9**	**-0.6**
ALT	**Altintas**	**3.93**	**18**	*e*PN	**Pn**	**04 27 13.4**	**+0.7**
ALT	**Altintas**	**3.93**	**18**	*e*Pn	**Pn**	**04 27 13.4**	**+0.7**
CSS	**Prodhromos** 13nm,0.2s	**3.96**	**94**	P	**Pn**	**04 27 12.2**	**-0.9**
CSS				S	**Sn**	**04 27 56.7**	**-1.6**
CSS	**Prodhromos**	**3.96**	**94**	*e*PN	**Pn**	**04 27 12.3**	**-0.7**
CSS	**Prodhromos**	**3.96**	**94**	P	**Pn**	**04 27 12.5**	**-0.6**
CSS				S	**Sn**	**04 27 58.4**	**+0.1**
CSS	**Prodhromos**	**3.96**	**94**	*e*Pn	**Pn**	**04 27 12.1**	**-1.0**
CSS				*e*S	Sn	04 27 50.7	-7.7
CSS	**Prodhromos** 13nm,0.2s	**3.96**	**94**	P	**Pn**	**04 27 12.2**	**-0.9**
CSS				S	**Sn**	**04 27 56.7**	**-1.6**
KONT	**Konya--Tatoy**	**4.05**	**49**	*e*PN	**Pn**	**04 27 15.2**	**+1.1**
KONT	**Konya--Tatoy**	**4.05**	**49**	*e*Pn	**Pn**	**04 27 15.3**	**+1.1**
LFK	**Lefkose**	**4.11**	**89**	*e*PN	**Pn**	**04 27 15.1**	**+0.1**
LFK	**Lefkose**	**4.11**	**89**	*e*Pn	**Pn**	**04 27 15.1**	**+0.1**
TVSB	**Tavsanli**	**4.18**	**10**	*e*PN	**Pn**	**04 27 16.1**	**+0.1**
TVSB	**Tavsanli**	**4.18**	**10**	*e*Pn	**Pn**	**04 27 16.2**	**+0.1**
LADK	**Ladik-KONYA**	**4.21**	**46**	*e*PN	**Pn**	**04 27 17.5**	**+0.9**
LADK	**Ladik-KONYA**	**4.21**	**46**	*e*Pn	**Pn**	**04 27 17.5**	**+0.9**
ANKY	**Antikythira Is**	**4.28**	**279**	*e*P	**Pn**	**04 27 18.5**	**+1.1**
ANKY				*e*S	**Sn**	**04 28 05.8**	**-0.3**
ANKY	**Antikythira Is**	**4.28**	**279**	*e*P	**Pn**	**04 27 18.5**	**+1.1**
ANKY				*e*S	**Sn**	**04 28 05.8**	**-0.3**
PRK	**Paraskevi**	**4.30**	**336**	P	**Pn**	**04 27 17.5**	**-0.1**
PRK	**Paraskevi**	**4.30**	**336**	*e*P	**Pn**	**04 27 18.1**	**+0.5**
PRK	**Paraskevi**	**4.30**	**336**	*e*P	**Pn**	**04 27 18.1**	**+0.5**
KDHN	**Kadinhani**	**4.30**	**41**	*e*Pn	**Pn**	**04 27 18.1**	**+0.4**
BALB	**Balikesir**	**4.33**	**354**	*e*PN	**Pn**	**04 27 17.9**	**-0.2**
BALB	**Balikesir**	**4.33**	**354**	*e*Pn	**Pn**	**04 27 17.9**	**-0.2**
HMAT	**Matruh** comp=N,3700μm,0.6s,logA/T=6.8,baz=198	**4.39**	**196**	AMP		04 28 00.0	
HMAT	**Matruh**	**4.39**	**196**	P	Pn	04 27 15.3	-3.6
SIGR	**SIGRI**	**4.42**	**332**	P	**Pn**	**04 27 18.8**	**-0.4**
SIGR	**SIGRI**	**4.42**	**332**	P	**Pn**	**04 27 18.8**	**-0.4**
KIZT	**Kizilcal**	**4.45**	**36**	*e*PN	**Pn**	**04 27 20.2**	**+0.4**
KIZT	**Kizilcal**	**4.45**	**36**	*e*Pn	**Pn**	**04 27 20.2**	**+0.4**
PHNC	**Paralimni** comp=N,6.6nm,0.4s	**4.53**	**93**	P	**Pn**	**04 27 22.4**	**+1.5**
PHNC				S	**Sn**	**04 28 13.1**	**+0.8**
PHNC	**Paralimni** comp=N,6.6nm,0.4s	**4.53**	**93**	P	**Pn**	**04 27 22.4**	**+1.5**
PHNC				S	**Sn**	**04 28 13.1**	**+0.8**
KYTH	**Kithira**	**4.55**	**284**	P	**Pn**	**04 27 21.2**	**+0.1**
KYTH	**Kithira**	**4.55**	**284**	*e*P	**Pn**	**04 27 22.1**	**+1.0**
KYTH	**Kithira**	**4.55**	**284**	*e*P	**Pn**	**04 27 22.1**	**+1.0**
PTL	**Penteli**	**4.62**	**307**	*e*P	**Pn**	**04 27 23.2**	**+1.2**
PTL	**Penteli**	**4.62**	**307**	*e*P	**Pn**	**04 27 23.2**	**+1.2**
ATHU	**Athens Univers**	**4.62**	**306**	P	**Pn**	**04 27 23.4**	**+1.3**
ATHU	**Athens Univers**	**4.62**	**306**	P	**Pn**	**04 27 23.4**	**+1.3**
EREN	**Erenkoy**	**4.62**	**86**	*e*PN	**Pn**	**04 27 21.6**	**-0.5**
EREN	**Erenkoy**	**4.62**	**86**	*e*Pn	**Pn**	**04 27 21.6**	**-0.5**
ATH	**Athens Observa**	**4.67**	**306**	*e*P	**Pn**	**04 27 24.3**	**+1.6**
ATH	**Athens Observa**	**4.67**	**306**	*e*P	**Pn**	**04 27 24.3**	**+1.6**
KIZK	**Mersin**	**4.71**	**74**	*e*Pn	**Pn**	**04 27 24.2**	**+0.9**
NAIG	**Nisos Aigina**	**4.71**	**302**	*e*P	**Pn**	**04 27 24.9**	**+1.5**
NAIG	**Nisos Aigina**	**4.71**	**302**	*e*P	**Pn**	**04 27 24.9**	**+1.5**
SLUM	baz=218	**4.72**	**217**	P	**Pn**	**04 27 22.8**	**-0.6**
SLUM	comp=E,4790μm,0.8s,logA/T=6.8,baz=218			AMP		04 28 00.0	
SLUM	baz=218			S	**Sn**	**04 28 12.6**	**-4.3**
SLUM		**4.72**	**217**	P	**Pn**	**04 27 22.8**	**-0.6**
SLUM				S	**Sn**	**04 28 12.6**	**-4.3**
VLI	**Veliai**	**4.73**	**289**	P	**Pn**	**04 27 23.9**	**+0.4**
VLI	**Veliai**	**4.73**	**289**	*e*P	**Pn**	**04 27 23.9**	**+0.4**
VLI				*e*S	**Sn**	**04 28 14.6**	**-2.5**
VLI	**Veliai**	**4.73**	**289**	*e*P	**Pn**	**04 27 23.9**	**+0.4**
GONE	**Gonen-Balikesi**	**4.75**	**352**	*e*PN	**Pn**	**04 27 23.8**	**-0.1**
GONE	**Gonen-Balikesi**	**4.75**	**352**	*e*Pn	**Pn**	**04 27 23.8**	**-0.1**
SVRH	**Sivrihisar-ESK**	**4.76**	**29**	*e*PN	**Pn**	**04 27 23.8**	**-0.2**
SVRH	**Sivrihisar-ESK**	**4.76**	**29**	*e*Pn	**Pn**	**04 27 23.8**	**-0.2**
DID	**Didima**	**4.78**	**299**	P	**Pn**	**04 27 25.4**	**+1.2**
DID	**Didima**	**4.78**	**299**	*e*P	**Pn**	**04 27 25.5**	**+1.2**
DID	**Didima**	**4.78**	**299**	P	**Pn**	**04 27 25.4**	**+1.2**
KCTX	**Karacabey (Bur**	**4.93**	**359**	*e*PN	**Pn**	**04 27 26.0**	**-0.3**
KCTX	**Karacabey (Bur**	**4.93**	**359**	*e*Pn	**Pn**	**04 27 26.0**	**-0.3**
SULT	**Sultanhani-AKS**	**4.93**	**53**	*e*PN	**Pn**	**04 27 26.8**	**+0.4**
SULT	**Sultanhani-AKS**	**4.93**	**53**	*e*Pn	**Pn**	**04 27 26.8**	**+0.4**
CAVI	**Cavuskoy**	**4.98**	**12**	*e*PN	**Pn**	**04 27 27.2**	**+0.2**
CAVI	**Cavuskoy**	**4.98**	**12**	*e*Pn	**Pn**	**04 27 27.2**	**+0.2**
LTBQ	**Tobruq** SNR=48	**5.03**	**231**	*i* P	**Pn**	**04 27 27.6**	**-0.1**
MDNY	**Mudanya-Bursa**	**5.04**	**3**	*e*PN	**Pn**	**04 27 27.5**	**-0.3**
MDNY	**Mudanya-Bursa**	**5.04**	**3**	*e*Pn	**Pn**	**04 27 27.5**	**-0.3**
BNT	**Bandirma**	**5.04**	**355**	*e*PN	**Pn**	**04 27 27.5**	**-0.3**
BNT	**Bandirma**	**5.04**	**355**	*e*Pn	**Pn**	**04 27 27.5**	**-0.3**
KRBG	**Karabiga-Canak**	**5.14**	**350**	*e*PN	**Pn**	**04 27 28.7**	**-0.5**
KRBG	**Karabiga-Canak**	**5.14**	**350**	*e*Pn	**Pn**	**04 27 28.7**	**-0.5**
ADVT	**Abdulvahap**	**5.18**	**10**	*e*PN	**Pn**	**04 27 29.8**	**0.0**
ADVT	**Abdulvahap**	**5.18**	**10**	*e*Pn	**Pn**	**04 27 29.8**	**0.0**
LTK	**Loutraki**	**5.20**	**303**	P	**Pn**	**04 27 31.7**	**+1.6**
LTK	**Loutraki**	**5.20**	**303**	*e*P	**Pn**	**04 27 31.5**	**+1.4**
LTK	**Loutraki**	**5.20**	**303**	*e*P	**Pn**	**04 27 31.5**	**+1.4**
DYR	**Agios Nikonas**	**5.21**	**288**	P	**Pn**	**04 27 31.7**	**+1.6**
DYR	**Agios Nikonas**	**5.21**	**288**	*e*P	**Pn**	**04 27 31.9**	**+1.8**
DYR	**Agios Nikonas**	**5.21**	**288**	P	**Pn**	**04 27 31.7**	**+1.6**
LPK	**Lapseki**	**5.22**	**345**	*e*PN	**Pn**	**04 27 30.3**	**0.0**
LPK	**Lapseki**	**5.22**	**345**	*e*Pn	**Pn**	**04 27 30.3**	**0.0**
ARMT	**Armutlu**	**5.23**	**3**	*e*PN	**Pn**	**04 27 30.9**	**+0.4**
ARMT	**Armutlu**	**5.23**	**3**	*e*Pn	**Pn**	**04 27 30.9**	**+0.4**
LIA	**Limnos Island**	**5.27**	**331**	P	**Pn**	**04 27 32.1**	**+1.1**
LIA	**Limnos Island**	**5.27**	**331**	*e*P	**Pn**	**04 27 32.0**	**+1.1**
LIA	**Limnos Island**	**5.27**	**331**	*e*P	**Pn**	**04 27 32.0**	**+1.1**
GELI	**Tayfur-Gelibol**	**5.31**	**343**	*e*PN	**Pn**	**04 27 30.5**	**-1.0**
GELI	**Tayfur-Gelibol**	**5.31**	**343**	*e*Pn	**Pn**	**04 27 30.5**	**-1.0**
AOS	**Alonnisos**	**5.32**	**317**	*e*P	**Pn**	**04 27 33.7**	**+2.0**
AOS	**Alonnisos**	**5.32**	**317**	*e*P	**Pn**	**04 27 33.7**	**+2.0**
GULT	**Gulveren**	**5.33**	**17**	*e*PN	**Pn**	**04 27 31.3**	**-0.6**
GULT	**Gulveren**	**5.33**	**17**	*e*Pn	**Pn**	**04 27 31.3**	**-0.6**
VLX	**Vlachokerasia**	**5.35**	**294**	P	**Pn**	**04 27 33.5**	**+1.3**
VLX				S	**Sn**	**04 28 34.9**	**+2.3**
VLX	**Vlachokerasia**	**5.35**	**294**	*e*P	**Pn**	**04 27 34.3**	**+2.1**
VLX				*e*S	**Sn**	**04 28 31.2**	**-1.4**
VLX	**Vlachokerasia**	**5.35**	**294**	P	**Pn**	**04 27 33.5**	**+1.3**
VLX				S	**Sn**	**04 28 34.9**	**+2.3**
RKY	**Sarkoy-Tekirda**	**5.45**	**349**	*e*PN	**Pn**	**04 27 33.1**	**-0.4**
RKY	**Sarkoy-Tekirda**	**5.45**	**349**	*e*Pn	**Pn**	**04 27 33.1**	**-0.4**
AFSR	**Af˘ar-Bala (A**	**5.48**	**40**	*e*PN	**Pn**	**04 27 34.2**	**+0.3**
AFSR	**Af˘ar-Bala (A**	**5.48**	**40**	*e*Pn	**Pn**	**04 27 34.2**	**+0.3**
LKR	**Lokris**	**5.52**	**300**	*e*P	**Pn**	**04 27 35.5**	**+1.5**
LKR	**Lokris**	**5.52**	**309**	*e*P	**Pn**	**04 27 35.9**	**+1.5**
SMIA	**Simia**	**5.52**	**311**	P	**Pn**	**04 27 36.6**	**+2.1**
SMIA	**Simia**	**5.52**	**311**	P	**Pn**	**04 27 36.6**	**+2.1**
ATAL	**Atalanti**	**5.53**	**309**	P	**Pn**	**04 27 36.3**	**+1.8**
ATAL	**Atalanti**	**5.53**	**309**	P	**Pn**	**04 27 36.3**	**+1.8**
SPNC	**Sapanca-Adapaz**	**5.53**	**14**	*e*PN	**Pn**	**04 27 34.2**	**-0.3**
SPNC	**Sapanca-Adapaz**	**5.53**	**14**	*e*Pn	**Pn**	**04 27 34.2**	**-0.3**
MDUB	**Mudurnu**	**5.55**	**22**	*e*PN	**Pn**	**04 27 34.6**	**-0.4**
MDUB	**Mudurnu**	**5.55**	**22**	*e*Pn	**Pn**	**04 27 34.6**	**-0.4**
HRT	**Hereke**	**5.56**	**9**	*e*PN	**Pn**	**04 27 35.4**	**+0.4**
HRT	**Hereke**	**5.56**	**9**	*e*Pn	**Pn**	**04 27 35.4**	**+0.4**
ERIK	**Erikli-Kesan**	**5.56**	**344**	*e*PN	**Pn**	**04 27 34.2**	**-0.7**
ERIK	**Erikli-Kesan**	**5.56**	**344**	*e*Pn	**Pn**	**04 27 34.2**	**-0.7**
GUR	**Goura**	**5.60**	**299**	P	**Pn**	**04 27 37.3**	**+1.6**
GUR	**Goura**	**5.60**	**299**	*e*P	**Pn**	**04 27 37.2**	**+1.6**
GUR				*e*S	**Sn**	**04 28 35.8**	**-3.0**
GUR	**Goura**	**5.60**	**299**	*e*P	**Pn**	**04 27 37.2**	**+1.6**
NIG	**Nigde**	**5.63**	**59**	*e*PN	**Pn**	**04 27 36.1**	**0.0**
NIG	**Nigde**	**5.63**	**59**	*e*Pn	**Pn**	**04 27 36.1**	**0.0**
ITM	**Ithomi**	**5.63**	**291**	P	**Pn**	**04 27 37.2**	**+1.2**
ITM	**Ithomi**	**5.63**	**291**	*e*P	**Pn**	**04 27 37.2**	**+1.2**
ITM	**Ithomi**	**5.63**	**291**	*e*P	**Pn**	**04 27 37.2**	**+1.2**
SMTH	**Samothraki Isl**	**5.65**	**336**	*e*P	**Pn**	**04 27 36.2**	**0.0**
SMTH	**Samothraki Isl**	**5.65**	**336**	*e*P	**Pn**	**04 27 36.2**	**0.0**
ANTO	**Ankara**	**5.66**	**36**	*e*PN	**Pn**	**04 27 36.8**	**+0.4**
ANTO	**Ankara**	**5.66**	**36**	*e*P	**Pn**	**04 27 38.1**	**+1.7**
ANTO	**Ankara**	**5.66**	**36**	*e*Pn	**Pn**	**04 27 38.1**	**+1.7**
ANTO	**Ankara**	**5.66**	**36**	*e*Pn	**Pn**	**04 27 36.8**	**+0.4**
ANTO	**Ankara**	**5.66**	**36**	*e*P	**Pn**	**04 27 38.1**	**+1.7**
LOD	**Lodumlu**	**5.66**	**35**	*e*PN	**Pn**	**04 27 36.5**	**0.0**
LOD	**Lodumlu**	**5.66**	**35**	*e*Pn	**Pn**	**04 27 36.5**	**0.0**
DSF	**Desfina**	**5.70**	**304**	P	**Pn**	**04 27 38.7**	**+1.8**
DSF	**Desfina**	**5.70**	**304**	P	**Pn**	**04 27 38.7**	**+1.8**
PYL	**PYLOS**	**5.70**	**288**	*e*P	**Pn**	**04 27 37.4**	**+0.5**
PYL				*e*S	**Sn**	**04 28 39.8**	**-1.2**
PYL	**PYLOS**	**5.70**	**288**	*e*P	**Pn**	**04 27 37.4**	**+0.5**
KRTS	**Karatas**	**5.70**	**75**	*e*PN	**Pn**	**04 27 37.0**	**+0.1**
KRTS	**Karatas**	**5.70**	**75**	*e*Pn	**Pn**	**04 27 37.0**	**+0.1**
ENEZ	**Enez**	**5.71**	**342**	*e*PN	**Pn**	**04 27 36.9**	**-0.1**
ENEZ	**Enez**	**5.71**	**342**	*e*Pn	**Pn**	**04 27 36.9**	**-0.1**
ISK	**Istanbul-Kandi**	**5.74**	**4**	*e*PN	**Pn**	**04 27 36.9**	**-0.6**
ISK	**Istanbul-

BTCH eS Sn 04 28 53.1 -7.9
comp=N,278nm,0.6s,SNR=40
HAWK Haweek 6.53 95 eP **Pn 04 27 46.8 -1.6**
HAWK eS Sn 04 28 55.2 -6.5
HAWK AML AML 04 29 01.5
comp=E,147nm,0.8s
HAWK AML AML 04 29 01.7
comp=N,319nm,0.5s
HAWK Haweek 6.53 95 eP **Pn 04 27 46.4 -2.0**
SNR=45
HAWK eS Sn 04 28 53.2 -8.5
comp=N,319nm,0.5s,SNR=40
FKH Fakeheh 6.59 97 eP **Pn 04 27 48.1 -1.1**
HMDT Nahal Hemdat 6.59 116 Pn **Pn 04 27 48.0 -1.2**
SWA2 6.60 204 P **Pn 04 27 48.5 -0.7**
baz=205
SWA2 AMP 04 29 00.0
comp=E,2610µm,0.4s,logA/T=6.8,baz=205
SWA2 6.60 204 P **Pn 04 27 48.5 -0.7**
KZIT Kziot 6.62 130 Pn **Pn 04 27 47.9 -1.6**
CANT Cankiri 6.63 36 ePN **Pn 04 27 49.9 +0.2**
EDRB Edirne 6.65 349 ePN **Pn 04 27 48.8 -1.1**
EDRB Edirne 6.65 349 ePn **Pn 04 27 48.8 -1.1**
QASN Qassioun 6.66 103 eP **Pn 04 27 50.9 +0.7**
QASN eS **Sn 04 28 59.1 -5.7**
QASN AML AML 04 29 07.8
comp=N,926nm,0.6s
QASN AML AML 04 29 08.7
comp=E,335nm,0.6s
QASN Qassioun 6.66 103 eP **Pn 04 27 49.6 -0.6**
SNR=45
QASN eS Sn 04 28 56.7 -8.2
comp=E,926nm,0.6s,SNR=40
THL Klokotos Trika 6.68 311 P **Pn 04 27 52.7 +2.4**
THL Klokotos Trika 6.68 311 eP **Pn 04 27 50.8 +0.5**
THL Klokotos Trika 6.68 311 eP **Pn 04 27 50.8 +0.5**
RTMI Retamim 6.71 128 Pn **Pn 04 27 49.2 -1.5**
TCHB Talchebab 6.74 111 eP **Pn 04 27 50.5 -0.7**
SNR=45
TCHB eS Sn 04 28 58.1 -8.5
comp=E,322nm,0.5s,SNR=40
LIT Litokhoron 6.74 317 eP **Pn 04 27 51.8 +0.6**
LIT Litokhoron 6.74 317 eP **Pn 04 27 51.8 +0.6**
SAFT Safranbolu 6.75 28 ePN **Pn 04 27 50.9 -0.4**
SAFT Safranbolu 6.75 28 ePn **Pn 04 27 50.9 -0.4**
KDZ Kurdzhali 6.76 340 eP **Pn 04 27 52.1 +0.7**
KFRA Kufra 6.78 89 eP **Pn 04 27 50.2 -1.6**
SNR=45
KFRA eS Sn 04 28 59.0 -8.7
comp=E,1µm,0.6s,SNR=40
YTIR Yattir 6.79 124 Pn **Pn 04 27 51.4 -0.6**
SOH Sokhos 6.83 325 eP **Pn 04 27 53.4 +1.0**
SOH Sokhos 6.83 325 eP **Pn 04 27 53.4 +1.0**
BNN Bunyan 6.83 57 ePN **Pn 04 27 51.8 -0.8**
BNN Bunyan 6.83 57 ePn **Pn 04 27 51.8 -0.8**
CORM Corum 6.85 43 ePN **Pn 04 27 51.8 -1.0**
CORM Corum 6.85 43 ePn **Pn 04 27 51.8 -1.0**
YOZ Yozgat 6.91 50 ePN **Pn 04 27 52.9 -0.8**
YOZ Yozgat 6.91 50 ePn **Pn 04 27 52.9 -0.8**
ZAF 6.93 149 P **Pn 04 27 53.1 -0.7**
baz=149
ZAF 6.93 149 P **Pn 04 27 53.1 -0.7**
VLS Valsamata 6.97 296 P **Pn 04 27 54.4 +0.1**
VLS Valsamata 6.97 296 eP **Pn 04 27 54.7 +0.4**
VLS Valsamata 6.97 296 eP **Pn 04 27 54.7 +0.4**
ZNM 6.99 147 P **Pn 04 27 54.3 -0.3**
baz=147
ZNM 6.99 147 P **Pn 04 27 54.3 -0.3**
MZDA Masada 7.00 123 Pn **Pn 04 27 53.4 -1.2**
NVR Nevrokopi 7.03 330 eP **Pn 04 27 55.4 +0.2**
NVR Nevrokopi 7.03 330 eP **Pn 04 27 55.4 +0.2**
SARI SarD1z-Kayseri 7.04 62 ePN **Pn 04 27 54.7 -0.7**
RMNI Mount Ramon 7.06 130 Pn **Pn 04 27 54.3 -1.4**
HNKL Nakhl 7.09 138 P **Pn 04 27 54.8 -1.2**
baz=138
HNKL S Sn 04 29 07.6 -7.7
baz=138
HNKL Nakhl 7.09 138 P **Pn 04 27 54.8 -1.2**
KMRS Kahramanmaras 7.10 70 ePN **Pn 04 27 55.5 -0.7**
KMRS Kahramanmaras 7.10 70 ePn **Pn 04 27 55.5 -0.7**
DIM Dimitrovgrad 7.10 342 eP **Pn 04 27 56.3 +0.2**
TOS Tosya 7.16 36 ePN **Pn 04 27 56.6 -0.4**
TOS Tosya 7.16 36 ePn **Pn 04 27 56.6 -0.4**
LKD2 Lefkada island 7.17 301 P **Pn 04 27 58.0 +1.0**
LKD2 Lefkada island 7.17 301 eP **Pn 04 27 58.7 +1.7**
LKD2 Lefkada island 7.17 301 P **Pn 04 27 58.0 +1.0**
MMB Musomiste 7.29 330 eP **Pn 04 28 00.3 +1.6**
KZN Kozani 7.29 315 eP **Pn 04 27 59.8 +1.0**
KZN Kozani 7.29 315 eP **Pn 04 27 59.8 +1.0**
SALA Sala 7.31 109 eP **Pn 04 27 58.4 -0.7**
SNR=45
SALA eS Sn 04 29 12.2 -8.7
comp=E,252nm,0.5s,SNR=40
ZFRI Zfri 7.35 129 Pn **Pn 04 27 57.8 -1.8**
KRMI Paran Flat 7.38 133 Pn **Pn 04 27 58.1 -1.8**
PRNI Paran 7.38 130 Pn **Pn 04 27 58.4 -1.6**
JAN Janina 7.46 308 eP **Pn 04 28 01.6 +0.5**
JAN eS **Sn 04 29 20.5 -4.0**
JAN Janina 7.46 308 ePn **Pn 04 28 01.6 +0.5**
VAY Valandovo 7.59 324 ePn **Pn 04 28 03.6 +0.9**
HRFI Mount Harif 7.62 132 Pn **Pn 04 28 01.8 -1.5**
ASF Jabal al Asfar 7.66 112 Pn **Pn 04 28 03.1 -0.8**
ASF Sn **Sn 04 29 29.5 +0.1**
ASF Jabal al Asfar 7.66 112 Pn **Pn 04 28 03.1 -0.8**
comp=E,4.0nm,0.3s,baz=170,slow=4.7,SNR=23
ASF Sn **Sn 04 29 29.5 +0.1**
comp=E,4.7nm,0.3s,baz=162,slow=20,SNR=6.2
ZALF Zalf 7.70 106 eP **Pn 04 28 02.9 -1.5**
SNR=45
ZALF eS Sn 04 29 20.2 -10
comp=E,126nm,0.7s,SNR=40
MBRI Mt Berech 7.72 134 Pn **Pn 04 28 03.5 -1.3**
IGT Igoumenitsa 7.74 305 P **Pn 04 28 05.9 +1.0**
IGT Igoumenitsa 7.74 305 P **Pn 04 28 05.9 +1.0**
EIL Elat 7.84 134 Pn **Pn 04 28 05.5 -0.8**
EIL Sn Sn 04 29 26.6 -7.0
EIL Elat 7.84 134 Pn **Pn 04 28 05.5 -0.8**
comp=E,24nm,0.3s,baz=336,slow=12,SNR=115
EIL Sn Sn 04 29 26.6 -7.0
comp=E,21nm,0.3s,baz=258,slow=19,SNR=7.1
EIL LR LR 04 31 42.6
comp=E,882nm,20.3s,baz=325,slow=42
EIL Elat 7.84 134 Pn **Pn 04 28 04.8 -1.4**
DARE Darende-Malaty 7.88 63 ePN **Pn 04 28 05.9 -0.9**
BIA Bitola 8.02 317 ePn Pn 04 28 12.1 +3.4
BIA eSg Sn 04 29 44.3 +6.2
KBN Korca 8.07 313 ePN Pn 04 28 13.1 +3.7
KBN Korca 8.07 313 ePn Pn 04 28 13.1 +3.7
SRN Sarande 8.14 306 *i* PN 02 28 11.6
SRN Sarande 8.14 306 P **Pn 04 28 11.4 +1.1**
SRN Sarande 8.14 306 P **Pn 04 28 11.4 +1.1**
SVSK Karacayir 8.14 53 ePN **Pn 04 28 10.0 -0.3**
SVSK Karacayir 8.14 53 ePn **Pn 04 28 10.0 -0.3**
KEK Kerkira 8.19 305 P **Pn 04 28 11.8 +0.8**
KEK Kerkira 8.19 305 eP **Pn 04 28 12.3 +1.3**
KEK eS **Sn 04 29 36.9 -5.3**
KEK Kerkira 8.19 305 P **Pn 04 28 11.8 +0.8**
HKAT Jabal Katrina 8.23 144 P **Pn 04 28 10.4 -1.4**
baz=144
HKAT Jabal Katrina 8.23 144 P **Pn 04 28 10.4 -1.4**
LJBD Adjabya 8.25 240 *i* P **Pn 04 28 10.8 -1.0**
comp=E,397nm,1.4s,SNR=46
KVT Kavak 8.25 44 ePN **Pn 04 28 11.5 -0.4**
KVT Kavak 8.25 44 ePn **Pn 04 28 11.5 -0.4**
VTS Vitosha 8.34 332 ||P **Pn 04 28 14.9 +1.6**
VTS Vitosha 8.34 332 eP **Pn 04 28 14.4 +1.1**
VTS Vitosha 8.34 332 ||*i*P **Pn 04 28 14.9 +1.6**
VTS Vitosha 8.34 332 P **Pn 04 28 14.9 +1.6**
MALT Malatya 8.49 67 P **Pn 04 28 17.0 +1.8**
MALT eS **Sn 04 29 53.3 +3.5**
MALT pmax pmax
comp=Z,9.0nm,0.6s
MALT Malatya 8.49 67 Pn **Pn 04 28 17.0 +1.8**
comp=Z,9.3nm,0.6s
MALT eS **Sn 04 29 53.3 +3.5**
MALT Malatya 8.49 67 ⇑*i*P Pn 04 28 23.9 +8.7
MALT Malatya 8.49 67 P **Pn 04 28 17.0 +1.8**
comp=Z,9.0nm,0.6s
MYA Malataya 8.49 66 ePN **Pn 04 28 14.5 -0.8**
MYA Malataya 8.49 66 ePn **Pn 04 28 14.5 -0.8**
SKO Skopje 8.63 322 ePn **Pn 04 28 19.0 +1.9**
MPEP Malo Peshtene 8.82 337 eP Pn 04 28 23.5 +3.8
PHP Peshkopia 8.96 317 ePN Pn 04 28 25.0 +3.4
PHP Peshkopia 8.96 317 ePn **Pn 04 28 25.0 +3.4**
TIR Tirane 9.06 314 *i* PN **Pn 04 28 25.5 +2.5**
TIR Tirane 9.06 314 eP **Pn 04 28 24.2 +1.2**
TIR eS **Sn 04 30 06.3 +2.5**
TIR Tirane 9.06 314 ePn **Pn 04 28 24.2 +1.2**
TIR eS **Sn 04 30 06.2 +2.5**
TIR Tirane 9.06 314 eP **Pn 04 28 24.2 +1.2**
TIR Tirane 9.06 314 *i* Pn **Pn 04 28 25.5 +2.5**
TIR eS **Sn 04 30 06.2 +2.5**
TIRR Tirgusor 9.12 360 ⇑P **Pn 04 28 24.2 +0.5**
TIRR Tirgusor 9.12 360 ePn **Pn 04 28 23.7 0.0**
TIRR Tirgusor 9.12 360 ⇑*i*P **Pn 04 28 24.2 +0.5**
TIRR Tirgusor 9.12 360 ePn **Pn 04 28 23.7 0.0**
TIRR Tirgusor 9.12 360 P **Pn 04 28 24.2 +0.5**
ZAPS Zavoj 9.14 332 ePn **Pn 04 28 25.8 +1.7**
PTK Pertek 9.39 65 ePN **Pn 04 28 26.0 -1.6**
PTK Pertek 9.39 65 ePn **Pn 04 28 26.0 -1.6**
PUK Puka 9.50 317 ePN **Pn 04 28 31.6 +2.5**
PUK Puka 9.50 317 ePn **Pn 04 28 31.6 +2.5**
ULC Ulcinj 9.81 315 ⇑*i*Pn **Pn 04 28 35.2 +1.9**
ULC eSn **Sn 04 30 23.3 +1.1**
ULC Ulcinj 9.81 315 ⇑*i*Pn **Pn 04 28 35.2 +1.9**
ULC eSn **Sn 04 30 23.3 +1.1**
CFR Carcaliu 9.84 358 ||P **Pn 04 28 34.8 +1.2**
CFR Carcaliu 9.84 358 ||*i*P **Pn 04 28 34.8 +1.2**
CFR Carcaliu 9.84 358 P **Pn 04 28 34.8 +1.2**
PVY Plav 9.84 320 ⇑*i*Pn **Pn 04 28 35.6 +1.8**
PVY eSn **Sn 04 30 24.4 +1.4**
PVY Plav 9.84 320 ⇑*i*Pn **Pn 04 28 35.6 +1.8**
PVY eSn **Sn 04 30 24.4 +1.4**
BOLS Boljevac 9.88 331 ePn Pn 04 28 39.6 +5.5
GUMT Gumushane 10.06 56 ePN **Pn 04 28 35.3 -1.5**
GUMT Gumushane 10.06 56 ePn **Pn 04 28 35.3 -1.5**
PDG Podgorica 10.11 317 ||*i*Pn **Pn 04 28 40.1 +2.8**
PDG eSn **Sn 04 30 30.6 +1.2**
TTG Podgorica 10.11 317 ||*i*Pn **Pn 04 28 40.1 +2.8**
TTG eSn **Sn 04 30 30.6 +1.2**
TIP Timpagrande 10.12 296 ePn **Pn 04 28 35.8 -1.9**
TIP eS Sn 04 30 21.2 -8.7
BUM Brajici-Budva 10.23 316 ||*i*Pn **Pn 04 28 41.0 +2.0**
BUM eSn **Sn 04 30 33.0 +0.6**
BUM Brajici-Budva 10.23 316 ||*i*Pn **Pn 04 28 41.0 +2.0**
BUM eSn **Sn 04 30 33.0 +0.6**
MLR Muntele Rosu 10.34 350 Pn **Pn 04 28 41.4 +0.9**
MLR Muntele Rosu 10.34 350 ||P **Pn 04 28 42.2 +1.7**
MLR Muntele Rosu 10.34 350 Pn **Pn 04 28 41.4 +0.9**
comp=Z,0.1nm,0.3s,baz=138,slow=14,SNR=8.3
MLR Muntele Rosu 10.34 350 Pn **Pn 04 28 41.4 +0.9**
MLR Muntele Rosu 10.34 350 P **Pn 04 28 42.2 +1.7**
VOIR 10.43 346 ||P **Pn 04 28 42.7 +0.9**
VOIR 10.43 346 ||*i*P **Pn 04 28 42.7 +0.9**
VOIR 10.43 346 P **Pn 04 28 42.7 +0.9**
GRUS Gruza 10.45 327 ePn Pn 04 28 46.0 +4.1
ARR Arges 10.45 345 ⇑*i*P Pn 04 28 55.3 +13
NKY Niksic 10.51 318 ⇑*i*Pn **Pn 04 28 44.8 +1.9**
NKY eSn **Sn 04 30 40.3 +1.0**
NKY Niksic 10.51 318 ⇑*i*Pn **Pn 04 28 44.8 +1.9**
NKY eSn **Sn 04 30 40.3 +1.0**
SIM Simferopol' 10.52 22 eP Pn 04 28 59.0 +16
SIM pmax pmax
comp=Z,17nm,0.7s
SIM MLR MLR
comp=Z,20nm,17.0s
CEL Celeste 10.53 290 ePn **Pn 04 28 41.2 -2.0**
CEL eS Sn 04 30 27.1 -13
SVIS Svilajnac 10.54 330 ePn Pn 04 28 46.9 +3.8
HCY Herceg Novi 10.55 315 ⇑*i*Pn **Pn 04 28 45.0 +1.6**
HCY eSn **Sn 04 30 41.2 +1.0**
HCY Herceg Novi 10.55 315 ⇑*i*Pn **Pn 04 28 45.0 +1.6**
HCY eSn **Sn 04 30 41.2 +1.0**
PLOR Plostina 10.60 353 ||P **Pn 04 28 44.7 +0.6**
PLOR Plostina 10.60 353 ||*i*P **Pn 04 28 44.7 +0.6**
PLOR Plostina 10.60 353 P **Pn 04 28 44.7 +0.6**
VRI Vrincioaia 10.61 353 ⇑P **Pn 04 28 46.7 +2.5**
VRI Vrincioaia 10.61 353 ⇑*i*P **Pn 04 28 46.7 +2.5**
VRI Vrincioaia 10.61 353 P **Pn 04 28 46.7 +2.5**
PLE Pljevlja 10.66 321 ePn **Pn 04 28 47.6 +2.7**
PLE eSn **Sn 04 30 43.7 +0.7**
PLE Pljevlja 10.66 321 ePn **Pn 04 28 47.6 +2.7**
PLE eSn **Sn 04 30 43.7 +0.7**
HQSR 10.80 150 P **Pn 04 28 46.7 -0.1**
baz=150
HQSR 10.80 150 P **Pn 04 28 46.7 -0.1**
BRY Bratogost 10.82 317 ePn **Pn 04 28 48.3 +1.1**
BRY eSn **Sn 04 30 47.8 +0.9**
BRY Bratogost 10.82 317 ePn **Pn 04 28 48.3 +1.1**
BRY eSn **Sn 04 30 47.8 +0.9**
UPM Unac-Piva 10.82 319 ||*i*Pn **Pn 04 28 49.7 +2.4**
UPM eSn **Sn 04 30 47.9 +0.8**
UPM Unac-Piva 10.82 319 ||*i*Pn **Pn 04 28 49.7 +2.4**
UPM eSn **Sn 04 30 47.9 +0.8**
DIVS Divibare 10.94 326 ePn **Pn 04 28 51.1 +2.4**
GZR Gura Zlata 10.96 338 ⇑P **Pn 04 28 51.9 +2.9**
GZR Gura Zlata 10.96 338 ⇑*i*P **Pn 04 28 51.9 +2.9**
GZR Gura Zlata 10.96 338 P **Pn 04 28 51.9 +2.9**
BBLS Lazići 11.04 323 ⇑*i*Pn **Pn 04 28 52.7 +2.6**
CUC Castrocucco 11.09 299 ePn **Pn 04 28 48.8 -2.0**
CUC eS Sn 04 30 37.5 -16
TESR Tescani 11.26 353 ||*i*P **Pn 04 28 53.7 +0.7**
STON Ston 11.27 315 ePn **Pn 04 28 51.1 -2.1**
STON Sn Sn 04 30 51.1 -6.8
BZS Buzias 11.53 335 ⇑P **Pn 04 28 58.6 +1.8**
BZS Buzias 11.53 335 ⇑*i*P **Pn 04 28 58.6 +1.8**
BZS Buzias 11.53 335 P **Pn 04 28 58.6 +1.8**
ANN Anapa 11.66 33 eP **Pn 04 28 55.7 -2.8**
ANN eS **Sn 04 31 09.8 +2.6**
ANN pmax pmax
comp=Z,38nm,1.2s
ANN MLR MLR
comp=N,903nm,21.0s
ANN MLR MLR
comp=Z,2µm,21.0s
KIS Kishinev 11.66 1 eP **Pn 04 28 59.5 +1.0**
KIS eS **Sn 04 31 10.0 +2.8**
KIS eL L 04 33 04.0
KIS LRM MLR 04 34 18.0
comp=Z,4µm,17.0s
KIS MLR MLR
comp=N,3µm,16.0s
KIS Kishinev 11.66 1 eP **Pn 04 28 59.5 +1.0**
KIS eS **Sn 04 31 10.0 +2.8**
KIS eL L 04 33 04.0
KIS LRM MLR 04 34 18.0
comp=N,4µm,17.0s
KIS Kishinev 11.66 1 eP **Pn 04 28 59.5 +1.0**
KIS eS **Sn 04 31 10.0 +2.8**
SOC Sochi 11.94 43 eP Pn 04 29 11.7 +9.3
SOC MLR MLR
comp=Z,2µm,15.0s
BUR08 Bucovina Ar. S 12.55 350 ePn **Pn 04 29 10.8 +0.1**
BUR08 Bucovina Ar. S 12.55 350 ePn **Pn 04 29 10.8 +0.1**
CHVG Ch'k'valeri 12.87 51 P P 04 29 29.7 +4.6
PKSM Moragy 13.18 329 ⇑ePn **Pn 04 29 19.9 +0.6**
AKH Akhalkalaki 13.22 58 P **Pn 04 29 21.9 +1.8**
BHD Baghdad 13.28 94 *i* P Pn 04 29 16.7 -4.0
BHD *i* S Sn 04 31 40.7 -6.3
TRPA Tarpa 13.54 343 ||ePn Pn 04 29 28.0 +3.9
ONI Oni 13.69 54 P **Pn 04 29 27.4 +1.1**
AQU L'Aquila 13.70 305 ePn **Pn 04 29 25.5 -0.9**
comp=Z,96nm,1.2s
AQU L'Aquila 13.70 305 ePn **Pn 04 29 25.5 -0.9**
comp=Z,96nm,1.2s
GNI Garni 13.71 65 ePn **Pn 04 29 28.6 +1.8**
GNI Garni 13.71 65 Pn Pn 04 29 29.6 +2.9
comp=Z,0.4nm,0.3s,baz=14,slow=16,SNR=2.7
KZR Kazreti 13.86 59 P **P 04 29 33.6 -2.6**
KIV Kislovodsk 13.89 47 eP **Pn 04 29 31.5 +2.4**
KIV eS **Sn 04 32 06.5 +4.5**
KIV pmax pmax
comp=Z,38nm,1.0s
KIV MLR MLR
comp=Z,285nm,12.0s
KIV Kislovodsk 13.89 47 P **P 04 29 38.5 +1.9**
comp=Z,263nm,0.5s,SNR=6.0
KBZ Khabaz 13.90 49 P **Pn 04 29 30.8 +1.8**
KBZ MLR MLR
comp=Z,619nm,21.9s
KBZ Khabaz 13.90 49 Pn **Pn 04 29 30.8 +1.8**
KBZ Khabaz 13.90 49 Pn **Pn 04 29 30.8 +1.8**
comp=Z,0.1nm,0.3s,baz=240,slow=8.6,SNR=6.8
KBZ LR LR 04 35 44.6
comp=Z,619nm,21.9s,baz=253,slow=42
KBZ Khabaz 13.90 49 Pn **Pn 04 29 30.8 +1.8**
NVLJ Novalja 13.93 316 ePn **Pn 04 29 28.1 -1.5**
NVLJ Sn Sn 04 31 54.9 -7.8
NVLJ Novalja 13.93 316 ePn **Pn 04 29 28.0 -1.5**
BUD Budapest 14.06 333 ||ePn **Pn 04 29 33.2 +2.0**
PSZ Piszkesteto 14.12 336 ⇑P Pn 04 29 35.1 +3.0
PSZ Piszkesteto 14.12 336 ePn **Pn 04 29 34.0 +1.9**
PSZ Piszkesteto 14.12 336 ⇑*i*P Pn 04 29 35.1 +3.0
PSZ Piszkesteto 14.12 336 ||ePn **Pn 04 29 32.3 +0.2**
PSZ Piszkesteto 14.12 336 ePn **Pn 04 29 34.0 +1.9**
TBLG Delisi 14.21 58 eP **P 04 29 41.2 +1.2**
TBLG Delisi 14.21 58 P **P 04 29 41.2 +1.2**
BEHE Becsehely 14.21 325 ||ePn **Pn 04 29 31.7 -1.7**
PKSG 14.23 331 ePn **P 04 29 39.7 -0.5**
CSKK Cs^‡kako 14.26 331 ||ePn **P 04 29 41.1 +0.6**
PKST T^'s 14.27 330 ePn **P 04 29 41.2 +0.6**
BOJS Bojanci 14.31 319 *i* Pn **Pn 04 29 33.8 -0.9**
BOJS *i* Sn **Sn 04 32 07.8 -4.2**
GUDG Gudauri 14.32 55 P **P 04 29 43.7 +2.3**
CRVS Cervenica-Dubn 14.53 341 eP **Pn 04 29 35.0 -2.6**
CRVS Cervenica-Dubn 14.53 341 ePN **Pn 04 29 35.0 -2.6**
CRVS Cervenica-Dubn 14.53 341 eP **P 04 29 42.8 -0.7**
CRVS *e* 04 39 55.8
CRVS *e* 04 40 49.0
CRVS Cervenica-Dubn 14.53 341 eP **P 04 29 42.8 -0.7**
DGRG David-gareji 14.56 60 P **P 04 29 44.7 +0.7**
IBDR Badra 14.58 94 *i* P **Pn 04 29 38.1 -0.3**
IBDR *i* S **Sn 04 32 20.1 +1.4**
KWP Kalwaria Pacla 14.91 345 eP P 04 29 55.7 +7.9
VYHS Vyhne 14.98 334 eP **P 04 29 48.0 -0.5**
VYHS pmax pmax
comp=Z,51nm,1.7s
VYHS Vyhne 14.98 334 eP **P 04 29 48.0 -0.5**
VYHS eS **S 04 32 44.4 -0.3**
VYHS Vyhne 14.98 334 eP **P 04 29 48.0 -0.5**
comp=Z,51nm,1.7s
SKDS Skadanscina 15.01 317 *i* Pn **Pn 04 29 42.9 -1.2**
SKDS *i* Sn Sn 04 32 21.1 -8.0
STHS Stebnicka Huta 15.05 341 eP **P 04 29 49.7 +0.3**
STHS Stebnicka Huta 15.05 341 eP **P 04 29 49.7 +0.3**
STHS Stebnicka Huta 15.05 341 eP **P 04 29 49.7 +0.3**
PERS Pernice 15.14 322 *i* Pn **Pn 04 29 46.1 +0.4**
PERS *i* Sn **Sn 04 32 30.5 -1.7**
JAVS Javornik 15.20 318 *i* Pn **Pn 04 29 45.5 -1.1**
JAVS *i* Sn **Sn 04 32 27.0 -6.7**
SOKA Soboth 15.21 322 ⇑*i*Pn **Pn 04 29 45.7 -1.0**
comp=Z,3.1nm,0.9s
SOKA ⇑*i*Pn **Pn 04 29 47.4 +0.7**
comp=Z,59nm,1.2s
SOKA Soboth 15.21 322 Pn **Pn 04 29 47.4 +0.7**
comp=Z,59nm,1.2s
TRI Trieste 15.25 317 eP **Pn 04 29 45.1 -2.0**
TRI Trieste 15.25 317 ePn **Pn 04 29 45.1 -2.0**
TRI Trieste 15.25 317 ePn **Pn 04 29 45.1 -2.0**
NIE Niedzica 15.31 339 eP **P 04 29 51.4 -0.9**
NIE Niedzica 15.31 339 eP **P 04 29 51.4 -0.9**
NIE Niedzica 15.31 339 eP **P 04 29 51.4 -0.9**
AK02 Malin Array Si 15.33 2 ePn **Pn 04 29 47.8 -0.3**
AK02 Malin Array Si 15.33 2 ePn **Pn 04 29 47.8 -0.3**
OBKA Obir 15.34 321 *i* Pn **Pn 04 29 48.4 -0.1**
comp=Z,39nm,1.6s,SNR=9.0
AK01 Malin Array Si 15.36 2 ePn **Pn 04 29 48.1 -0.4**
AK01 Malin Array Si 15.36 2 ePn **Pn 04 29 48.1 -0.4**
KIEV Kiev 15.36 2 eP **Pn 04 29 48.5 -0.1**
KIEV pmax pmax
comp=Z,37nm,0.9s
KIEV Kiev 15.36 2 ePn **Pn 04 29 48.5 -0.1**
comp=Z,37nm,0.9s
KIEV eS **S 04 32 51.0 -1.5**
KIEV Kiev 15.36 2 ePn **Pn 04 29 48.5 -0.1**
comp=Z,37nm,0.9s
AKASG Malin Array Be 15.37 2 P **Pn 04 29 47.8 -0.9**
AKASG pmax pmax
comp=Z,7.0nm,0.3s
AKASG Malin Array Be 15.37 2 Pn **Pn 04 29 47.8 -0.9**
AKASG Malin Array Be 15.37 2 Pn **Pn 04 29 47.8 -0.9**
comp=Z,7.1nm,0.3s,baz=184,slow=11,SNR=21
AKASG Malin Array Be 15.37 2 Pn **Pn 04 29 47.8 -0.9**
ARSA Arzberg 15.37 325 *i* Pn **Pn 04 29 49.3 +0.5**
comp=Z,8.2nm,0.6s,SNR=9.3
VOY Vojsko 15.38 318 ePn **Pn 04 29 46.4 -2.5**
VOY eSn Sn 04 32 30.4 -7.7
ZST Bratislava 15.39 330 eP **P 04 29 51.4 -1.7**
ZST Bratislava 15.39 330 eP **P 04 29 51.4 -1.7**
ZST Bratislava 15.39 330 eP **P 04 29 51.4 -1.7**
SMOL Smolenice 15.52 331 eP **P 04 29 54.9 +0.4**
SMOL Smolenice 15.52 331 eP **P 04 29 54.9 +0.4**
SMOL Smolenice 15.52 331 eP **P 04 29 54.9 +0.4**
KEST Kesra 15.61 277 ePn **Pn 04 29 51.1 -1.0**
KEST Kesra 15.61 277 Pn **Pn 04 29 50.9 -1.1**
comp=Z,0.1nm,0.3s,baz=54,slow=12,SNR=34
KEST Kesra 15.61 277 ePn **Pn 04 29 51.1 -1.0**
CSNA Conrad Observa 15.72 327 ⇑*i*Pn **Pn 04 29 52.8 -0.5**
comp=Z,7.5nm,1.1s
MYKA Terra Mystica 15.89 320 ⇑*i*Pn **Pn 04 29 55.1 -0.5**
comp=Z,19nm,0.9s
OJC Ojcow 16.18 340 eP **P 04 30 02.1 +0.3**
OJC Ojcow 16.18 340 eP **P 04 30 02.1 +0.3**
OJC Ojcow 16.18 340 eP **P 04 30 02.1 +0.3**
KBA Koelnbreinsper 16.34 321 ⇑*i*Pn **Pn 04 30 01.4 +0.1**
comp=Z,14nm,0.8s,SNR=22
OKC Ostrava-Krasne 16.36 336 eP **P 04 30 04.6 +0.8**
OKC MLR MLR
comp=N,1µm,24.1s
OKC Ostrava-Krasne 16.36 336 eP **P 04 30 04.6 +0.8**
OKC AMS AMS 04 36 50.0
OKC Ostrava-Krasne 16.36 336 eP **P 04 30 04.6 +0.8**
comp=N,1µm,24.1s
MOA Molln 16.40 324 *i* Pn **Pn 04 30 02.3 +0.4**
comp=N,23nm,1.4s,SNR=9.3
VRAC Vranov 16.49 332 Pn **Pn 04 30 01.5 -1.5**
VRAC Vranov 16.49 332 ⇑*i*P **P 04 30 05.1 -0.1**
VRAC Vranov 16.49 332 Pn **Pn 04 30 01.5 -1.5**
comp=N,0.8nm,0.3s,baz=146,slow=12,SNR=23
VRAC Vranov 16.49 332 Pn **Pn 04 30 01.5 -1.5**
VRAC Vranov 16.49 332 P **P 04 30 05.1 -0.1**
MORC Moravsky Berou 16.52 334 ||P **P 04 30 05.4 -0.2**
MORC Moravsky Berou 16.52 334 ePn **Pn 04 30 02.9 -0.6**
comp=N,30nm,1.2s
MORC Moravsky Berou 16.52 334 ||*i*P **P 04 30 05.4 -0.2**
MORC Moravsky Berou 16.52 334 ePn **Pn 04 30 02.8 -0.6**
comp=N,30nm,1.2s
MORC Moravsky Berou 16.52 334 P **P 04 30 05.4 -0.2**
RAC Raciborz 16.55 336 eP **P 04 30 05.4 -0.6**
RAC MLR MLR
comp=Z,2µm,20.2s
RAC Raciborz 16.55 336 eP **P 04 30 05.4 -0.6**
comp=Z,2µm,20.2s
MAK Makhachkala 16.57 57 eP **P 04 30 06.5 +0.4**
MAK eS **S 04 33 12.1 -5.0**
MAK pmax pmax
comp=Z,207nm,2.5s
MAK MLR MLR
comp=Z,1µm,22.0s
MAK Makhachkala 16.57 57 eP **P 04 30 06.5 +0.4**
comp=Z,1µm,22.0s
ABTA Abfaltersbach 16.57 318 ||*i*Pn **Pn 04 30 02.9 -1.2**
comp=Z,20nm,0.9s,SNR=14
PGF Pioggiola 16.79 301 eP **Pn 04 30 04.5 -2.4**
comp=Z,64nm,1.1s
PGF Pioggiola 16.79 301 eP **Pn 04 30 04.5 -2.4**
PGF pmax pmax
comp=Z,64nm,1.1s
PGF Pioggiola 16.79 301 eP **Pn 04 30 04.5 -2.4**
comp=Z,64nm,1.1s
MIB Mutribah 16.79 104 eP **P 04 30 09.4 +0.7**
MIB AMb AMB 04 30 10.9
comp=Z,116nm,1.0s
TREC Trest 16.92 330 eP **Pn 04 30 08.9 +0.4**
TREC MLR MLR
comp=Z,900nm,12.1s
TREC Trest 16.92 330 eP **Pn 04 30 08.9 +0.4**
TREC AMS AMS 04 38 00.0
comp=Z,900nm,12.1s
TREC Trest 16.92 330 eP **Pn 04 30 08.9 +0.4**
comp=Z,900nm,12.1s
NAY Al-Naaiem 16.95 106 eP **P 04 30 10.8 +0.3**
NAY AMb AMB 04 30 12.7
comp=Z,65nm,1.2s
RJOB Jochberg 17.05 321 ePn **Pn 04 30 09.2 -0.9**
ABSA Djebel Ababsia 17.09 279 P **Pn 04 30 10.4 -0.4**
ABSA Djebel Ababsia 17.09 279 P **Pn 04 30 10.4 -0.4**
CMAH Djebel Manchou 17.12 280 P **Pn 04 30 09.4 -1.7**

CMAH Djebel Manchou 17.12 280 P Pn 04 30 09.4 -1.7
UMR Umm Al-Rimmam 17.19 104 eP P 04 30 14.0 +0.8
UMR AMb AMB 04 30 16.1
comp=Z,348nm,1.2s
WTTA Wattenberg 17.36 318 ||i Pn P 04 30 15.2 +0.1
comp=Z,6.7nm,0.5s,SNR=9.1
GEC2 GERESS Array S 17.37 326 ePn Pn 04 30 13.8 -0.3
GEC2 GERESS Array S 17.37 326 eP Pn 04 30 13.8 -0.3
GEC2 GERESS Array S 17.37 326 eP Pn 04 30 13.8 -0.3
GERES GERESS Array B 17.37 326 Pn Pn 04 30 13.3 -0.8
GERES PcP **PcP 04 34 54.9 +0.6**
GERES GERESS Array B 17.37 326 Pn Pn 04 30 13.3 -0.8
comp=Z,1.1nm,0.3s,baz=139,slow=12,SNR=84
GERES PcP **PcP 04 34 54.9 +0.6**
comp=Z,0.1nm,0.3s,baz=132,slow=2.0,SNR=4.9
GERES GERESS Array B 17.37 326 P Pn 04 30 13.4 -0.8
comp=Z,1.0nm,0.3s
DPC Dobruska-Polom 17.43 333 eP Pn 04 30 15.1 +0.2
DPC eS **S 04 33 32.0 -2.9**
DPC Dobruska-Polom 17.43 333 eP Pn 04 30 15.1 +0.2
DPC epP **pP 04 30 25.2 -0.4**
DPC eS **S 04 33 32.0 -2.9**
DPC Dobruska-Polom 17.43 333 eP Pn 04 30 15.1 +0.2
DPC S **S 04 33 32.0 -2.9**
VORD Divnogorie 17.46 23 eP P 04 30 18.2 +2.2
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORD pmax pmax
comp=N,90nm,0.6s
VORD pmax pmax
comp=E,50nm,0.5s
VORD MLR MLR
comp=Z,600nm,18.0s
VORD MLR MLR
comp=N,570nm,21.0s
VORD MLR MLR
comp=E,500nm,18.0s
KHC Kasperske Hory 17.63 326 eP Pn 04 30 17.4 +0.1
KHC eS **Sn 04 33 34.1 +1.5**
KHC MLR MLR
comp=Z,2μm,16.2s
KHC Kasperske Hory 17.63 326 eP Pn 04 30 17.4 +0.1
KHC ex x 04 30 24.4
KHC eS **Sn 04 33 34.1 +1.5**
KHC AMS AMS 04 38 00.0
comp=Z,2μm,16.2s
KHC Kasperske Hory 17.63 326 ePn Pn 04 30 16.9 -0.4
comp=Z,79nm,1.4s
KHC Kasperske Hory 17.63 326 ePn Pn 04 30 16.9 -0.4
comp=Z,79nm,1.4s
KHC Kasperske Hory 17.63 326 eP Pn 04 30 17.4 +0.1
VSR Storozhevoye 17.64 23 eP P 04 30 18.8 +0.9
VSR pmax pmax
comp=Z,20nm,1.5s
VSR pmax pmax
comp=N,6.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.8s
VSR MLR MLR
comp=Z,1μm,21.0s
VSR MLR MLR
comp=N,650nm,28.0s
VSR MLR MLR
comp=E,400nm,14.0s
VSR Storozhevoye 17.64 23 eP P 04 30 18.8 +0.9
comp=E,650nm,28.0s
UPC Upice 17.68 333 eP Pn 04 30 17.9 +0.1
UPC Upice 17.68 333 eP Pn 04 30 17.9 +0.1
UPC ex x 04 30 40.7
UPC Upice 17.68 333 eP Pn 04 30 17.9 +0.1
CKFL Kef-Lekhel 17.70 280 P Pn 04 30 15.5 -2.8
CKFL Kef-Lekhel 17.70 280 P Pn 04 30 15.5 -2.8
MOTA Moosalm 17.70 318 i/ P Pn 04 30 18.0 -0.3
comp=E,32nm,1.0s,SNR=12
MOTA Moosalm 17.70 318 P Pn 04 30 18.0 -0.3
comp=E,32nm,1.0s,SNR=12
FETA Feichten 17.72 317 i/ P Pn 04 30 18.7 +0.2
comp=E,36nm,0.9s,SNR=22
FETA Feichten 17.72 317 P Pn 04 30 18.7 +0.2
comp=E,36nm,0.9s,SNR=22
PRU Pruhonice 17.85 329 eP Pn 04 30 19.5 -0.4
PRU eS **Sn 04 33 40.0 +2.3**
PRU MLR MLR
comp=Z,1μm,12.2s
PRU Pruhonice 17.85 329 eP Pn 04 30 19.5 -0.4
PRU epP **pP 04 30 27.0 -3.1**
PRU esP **sP 04 30 35.4 +0.3**
PRU eS **Sn 04 33 40.0 +2.3**
PRU AMS AMS 04 38 20.0
comp=Z,1μm,12.2s
PRU Pruhonice 17.85 329 eP Pn 04 30 19.5 -0.4
comp=Z,1μm,12.2s
PRU S **Sn 04 33 40.0 +2.3**
KSP Ksiaz 17.85 334 ||eP Pn 04 30 19.5 -0.4
KSP eS **Sn 04 33 40.0 +2.2**
KSP Ksiaz 17.85 334 eP P 04 30 20.4 +0.1
KSP Ksiaz 17.85 334 eP Pn 04 30 19.5 -0.4
KSP eS **Sn 04 33 40.0 +2.2**
CASM Ain Smara 17.89 279 P Pn 04 30 17.9 -2.7
CASM Ain Smara 17.89 279 P Pn 04 30 17.9 -2.7
PRA Prague 17.95 329 P Pn 04 30 20.0 -1.2
PRA AMS AMS 04 38 30.0
WET Wettzell 17.96 325 ePn Pn 04 30 20.9 -0.5
WET Wettzell 17.96 325 eP Pn 04 30 20.9 -0.5
WET Wettzell 17.96 325 eP Pn 04 30 20.9 -0.5
CTEI Djebel Teioual 17.97 279 P Pn 04 30 18.5 -3.2
CTEI Djebel Teioual 17.97 279 P Pn 04 30 18.5 -3.2
RETA Reutte 17.97 318 i/ P P 04 30 22.8 +1.1
comp=Z,36nm,1.8s,SNR=12
RETA Reutte 17.97 318 P P 04 30 22.8 +1.1
comp=Z,36nm,1.8s,SNR=12
DAVOX Davos/Dischmat 18.07 315 P Pn 04 30 22.0 -0.8
DAVOX Davos/Dischmat 18.07 315 P Pn 04 30 22.0 -0.8
comp=Z,2.0nm,0.3s,baz=140,slow=12,SNR=17
DAVOX Davos/Dischmat 18.07 315 P Pn 04 30 22.0 -0.8
comp=Z,2.0nm,0.3s
FUR Furstenfeldbru 18.11 320 ePn Pn 04 30 22.3 -0.9
FUR Furstenfeldbru 18.11 320 eP Pn 04 30 22.3 -0.9
FUR Furstenfeldbru 18.11 320 eP Pn 04 30 22.3 -0.9
TUE Stuetta 18.22 313 eP P 04 30 24.7 +0.1
comp=Z,35nm,1.0s
TUE Stuetta 18.22 313 eP P 04 30 24.7 +0.1
comp=Z,35nm,1.0s
PVCC Panska Ves 18.25 331 eP P 04 30 24.7 0.0
PVCC MLR MLR
comp=Z,1μm,18.4s
PVCC Panska Ves 18.25 331 eP P 04 30 24.7 0.0
PVCC epP **pP 04 30 34.9 +0.4**
PVCC AMS AMS 04 38 10.0
comp=Z,1μm,18.4s
PVCC Panska Ves 18.25 331 eP P 04 30 24.7 0.0
comp=Z,1μm,18.4s
SAOF Saorge 18.27 305 eP P 04 30 21.3 -3.7
SAOF Saorge 18.27 305 eP P 04 30 21.3 -3.7
SAOF Saorge 18.27 305 eP P 04 30 21.3 -3.7
SBF Sospel 18.31 304 eP P 04 30 23.5 -1.9
comp=Z,97nm,0.9s
SBF Sospel 18.31 304 eP P 04 30 23.5 -1.9
SBF pmax pmax
comp=Z,97nm,0.9s
SBF Sospel 18.31 304 eP P 04 30 23.5 -1.9
comp=Z,97nm,0.9s
SBF Sospel 18.31 304 eP P 04 30 23.5 -1.9
comp=Z,49nm,0.9s
DAVA Damuels 18.35 316 i Pn P 04 30 25.7 -0.3
comp=Z,34nm,1.0s,SNR=14
AUTN L'Aution 18.36 304 eP P 04 30 24.1 -2.1
AUTN L'Aution 18.36 304 eP P 04 30 24.1 -2.1
AUTN L'Aution 18.36 304 eP P 04 30 24.1 -2.1
AUTN L'Aution 18.36 304 eP P 04 30 24.1 -2.1
DFRA Djebel Bou Aff 18.37 280 P P 04 30 24.2 -2.0
DFRA Djebel Bou Aff 18.37 280 P P 04 30 24.2 -2.0
TOUF Mont Tournerai 18.49 304 eP P 04 30 24.8 -2.8
TOUF Mont Tournerai 18.49 304 eP P 04 30 24.8 -2.8
TOUF Mont Tournerai 18.49 304 eP P 04 30 24.8 -2.8
TOUF Mont Tournerai 18.49 304 eP P 04 30 24.8 -2.8
CALN Calern 18.64 303 eP P 04 30 25.6 -3.6
CALN Calern 18.64 303 eP P 04 30 25.6 -3.6
CALN Calern 18.64 303 eP P 04 30 25.6 -3.6
CKHR Kef el Ahmar 18.70 279 P P 04 30 28.9 -1.0
CKHR Kef el Ahmar 18.70 279 P P 04 30 28.9 -1.0
ROTZ Rotzenmuhle 18.71 325 ePn P 04 30 29.9 +0.1
FRF La Foret Royal 18.74 303 eP P 04 30 29.5 -0.7
comp=Z,38nm,0.8s
FRF La Foret Royal 18.74 303 eP P 04 30 29.5 -0.7
FRF pmax pmax
comp=Z,38nm,0.8s
FRF La Foret Royal 18.74 303 eP P 04 30 29.5 -0.7
comp=Z,38nm,0.8s
FRF La Foret Royal 18.74 303 eP P 04 30 29.5 -0.7
comp=Z,19nm,0.8s
LMR La Mourre 18.77 302 eP P 04 30 28.6 -1.8
comp=Z,20nm,0.8s
LMR La Mourre 18.77 302 eP P 04 30 28.6 -1.8
LMR pmax pmax
comp=Z,20nm,0.8s
LMR La Mourre 18.77 302 eP P 04 30 28.6 -1.8
comp=Z,20nm,0.8s
LMR La Mourre 18.77 302 eP P 04 30 28.6 -1.8
comp=Z,9.9nm,0.8s
BRG Berggiesshubel 18.77 330 i P P 04 30 29.6 -0.8
comp=Z,42nm,1.2s
BRG S **Sn 04 33 54.0 -6.1**
BRG
comp=Z,1μm,21.1s
BRG
comp=N,970nm,21.2s
BRG
comp=E,960nm,21.2s
BRG Berggiesshubel 18.77 330 ePn P 04 30 29.9 -0.5
BRG Berggiesshubel 18.77 330 i P P 04 30 29.6 -0.8
BRG S **Sn 04 33 54.0 -6.1**
BRG pmax pmax
comp=Z,42nm,1.2s
BRG MLR MLR
comp=Z,1μm,21.1s
BRG MLR MLR
comp=N,970nm,21.2s
BRG MLR MLR
comp=E,960nm,21.2s
BRG Berggiesshubel 18.77 330 i P P 04 30 29.6 -0.8
comp=E,42nm,1.2s
SET Setif 18.77 279 P Pn 04 30 32.0 +0.6
SET Setif 18.77 279 P Pn 04 30 32.0 +0.6
RAYN Ar Rayn 18.88 124 Pn Pn 04 30 33.0 +0.4
comp=E,236nm,1.1s,SNR=14
MANZ Manzenberg 18.91 326 ePn P 04 30 31.8 -0.2
NKC Novy Kostel 18.93 327 eP P 04 30 31.3 -0.9
NKC eS **Sn 04 34 03.0 -1.0**
NKC MLR MLR
comp=Z,2μm,16.2s
NKC Novy Kostel 18.93 327 eP P 04 30 31.3 -0.9
NKC ex x 04 30 39.3
NKC eS **Sn 04 34 03.0 -1.0**
NKC AMS AMS 04 39 40.0
comp=Z,2μm,16.2s
NKC Novy Kostel 18.93 327 eP P 04 30 31.3 -0.9
NKC S **Sn 04 34 03.0 -1.0**
WERN Wernitzgruen 19.00 327 ePn P 04 30 32.4 -0.6
FBE Freiberg 19.05 330 ePn P 04 30 33.0 -0.5
SUW Suwalki 19.05 350 eP P 04 30 32.6 -0.8
SUW Suwalki 19.05 350 eP P 04 30 32.5 -0.8
SUW Suwalki 19.05 350 eP P 04 30 32.6 -0.8
TANN Tannenbergstha 19.06 327 ePn P 04 30 32.5 -1.1
MBDF Montbardon 19.06 306 eP P 04 30 33.7 -0.2
comp=Z,51nm,0.6s
MBDF Montbardon 19.06 306 eP P 04 30 33.7 -0.2
MBDF pmax pmax
comp=Z,51nm,0.6s
MBDF Montbardon 19.06 306 eP P 04 30 33.7 -0.2
comp=Z,51nm,0.6s
MBDF Montbardon 19.06 306 eP P 04 30 33.7 -0.2
comp=Z,25nm,0.6s
GUNZ Gunzen 19.08 327 ePn P 04 30 33.0 -0.8
GRA1 Grafenberg Arr 19.13 324 eP P 04 30 34.9 +0.5
GRF Grafenberg Arr 19.13 324 ePn P 04 30 34.9 +0.5
GRF Grafenberg Arr 19.13 324 eP P 04 30 34.9 +0.5
GRFO Grafenberg 19.13 324 eP P 04 30 34.6 +0.2
GRFO pmax pmax
comp=Z,11nm,0.8s
GRFO Grafenberg 19.13 324 eP P 04 30 34.5 +0.2
comp=Z,11nm,0.8s
GRFO Grafenberg 19.13 324 eP P 04 30 34.5 +0.2
comp=Z,11nm,0.8s
WERD Werda 19.15 327 ePn P 04 30 33.7 -0.9
MICGM Minsk 19.17 359 ||eP P 04 30 30.0 -4.8
MNK Minsk 19.17 359 ||eP P 04 30 30.0 -4.8
MNK eS Sn 04 33 55.0 -15
MNK pmax pmax
comp=Z,140nm,1.0s
MNK pmax pmax
comp=E,890nm,1.0s
MNK MLR MLR
comp=N,4μm,16.0s
MNK MLR MLR
comp=Z,4μm,16.0s
PLN Plauen 19.24 327 ePn P 04 30 34.8 -0.8
BNI Bardonecchia 19.25 307 eP P 04 30 36.5 +0.6
BNI pmax pmax
comp=Z,22nm,0.9s
BNI Bardonecchia 19.25 307 eP P 04 30 36.5 +0.6
comp=Z,22nm,0.9s
BNI Bardonecchia 19.25 307 eP P 04 30 36.5 +0.6
comp=Z,22nm,0.9s
LPG La Plagne 19.38 308 eP P 04 30 36.4 -1.0
comp=Z,65nm,0.8s
LPG La Plagne 19.38 308 eP P 04 30 36.4 -1.0
LPG pmax pmax
comp=Z,65nm,0.8s
LPG La Plagne 19.38 308 eP P 04 30 36.4 -1.0
comp=Z,65nm,0.8s
LPG La Plagne 19.38 308 eP P 04 30 36.4 -1.0
comp=Z,33nm,0.8s
LPL La Plagne 19.40 308 eP P 04 30 36.4 -1.2
comp=Z,43nm,0.6s
LPL La Plagne 19.40 308 eP P 04 30 36.4 -1.2
LPL pmax pmax
comp=Z,43nm,0.6s
LPL La Plagne 19.40 308 eP P 04 30 36.4 -1.2
comp=Z,43nm,0.6s
LPL La Plagne 19.40 308 eP P 04 30 36.4 -1.2
comp=Z,22nm,0.6s
SPAK Spaichingen-Ko 19.42 317 eP P 04 30 37.2 -0.4
SPAK Spaichingen-Ko 19.42 317 eP P 04 30 37.2 -0.4
CLL Collm 19.49 330 ePn P 04 30 37.8 -0.4
CLL Collm 19.49 330 i P P 04 30 37.9 -0.3
CLL eS **S 04 34 13.0 -3.2**
CLL pmax pmax
comp=Z,115nm,1.8s
CLL MLR MLR
comp=Z,1μm,20.9s
CLL Collm 19.49 330 i P P 04 30 37.9 -0.3
comp=Z,115nm,1.8s
CLL i 04 30 42.3
CLL i pP **pP 04 30 47.0 -1.1**
CLL ePPP PPP 04 31 03.0
CLL eS **S 04 34 13.0 -3.2**
CLL eSSS SSS 04 34 44.0
CLL ePcP **PcP 04 34 57.0 -0.7**
CLL i 04 34 59.0
comp=Z,9.0nm,1.1s
CLL Lm MLR 04 38 00.0
comp=Z,1μm,20.9s
CLL Lmax 04 39 00.0
CLL Collm 19.49 330 i P P 04 30 37.9 -0.3
comp=Z,115nm,1.8s
MOX Moxa 19.60 327 ePn P 04 30 40.4 +0.9
MOX Moxa 19.60 327 eP P 04 30 40.4 +0.9
MOX Moxa 19.60 327 eP P 04 30 40.4 +0.9
SMRF Simiane la Rot 19.61 303 eP P 04 30 37.6 -2.1
comp=Z,23nm,0.8s
SMRF Simiane la Rot 19.61 303 eP P 04 30 37.6 -2.1
comp=Z,23nm,0.8s
SMRF Simiane la Rot 19.61 303 eP P 04 30 37.6 -2.1
comp=Z,12nm,0.8s
GKP Gorka Klasztor 19.62 340 eP sP 04 30 53.6 -1.0
ORIF Oris-en-Rattie 19.73 306 eP P 04 30 39.4 -1.6
comp=Z,41nm,0.9s
ORIF eR
comp=Z,2μm,22.8s
ORIF Oris-en-Rattie 19.73 306 eP P 04 30 39.4 -1.6
ORIF pmax pmax
comp=Z,41nm,0.9s
ORIF Oris-en-Rattie 19.73 306 eP P 04 30 39.4 -1.6
comp=Z,41nm,0.9s
ORIF Oris-en-Rattie 19.73 306 eP P 04 30 39.4 -1.6
comp=Z,20nm,0.9s
FELD Feldberg im Sc 19.73 316 eP P 04 30 41.2 +0.1
FELD Feldberg im Sc 19.73 316 eP P 04 30 41.2 +0.1
BFO Black Forest 19.80 317 Pn P 04 30 42.6 +0.9
comp=Z,111nm,0.6s,SNR=6.3
BFO Black Forest 19.80 317 ePn P 04 30 42.3 +0.6
BFO Black Forest 19.80 317 eP P 04 30 42.2 +0.6
BFO pmax pmax
comp=Z,19nm,0.8s
BFO Black Forest 19.80 317 eP P 04 30 42.2 +0.6
comp=Z,19nm,0.8s
BFO Black Forest 19.80 317 eP P 04 30 42.2 +0.6
comp=Z,19nm,0.8s
BBS Basel-Blauen 19.81 314 eP P 04 30 42.0 +0.2
BBS Basel-Blauen 19.81 314 eP P 04 30 42.0 +0.2
BBS Basel-Blauen 19.81 314 eP P 04 30 42.0 +0.2
NEUB Neuenburg 19.93 328 ePn Pn 04 30 44.4 -0.6
RUE Ruedersdorf 20.09 333 ePn P 04 30 43.7 -1.1
RUE Ruedersdorf 20.09 333 eP P 04 30 43.9 -0.9
comp=Z,16nm,0.4s
RUE Ruedersdorf 20.09 333 eP P 04 30 43.9 -0.9
comp=Z,16nm,0.4s
LOMF Lomont 20.16 313 eP P 04 30 45.5 -0.1
LOMF Lomont 20.16 313 eP P 04 30 45.5 -0.1
LOMF Lomont 20.16 313 eP P 04 30 45.5 -0.1
LOMF Lomont 20.16 313 eP P 04 30 45.5 -0.1
MOF Molkenrain 20.22 315 eP P 04 30 45.8 -0.6
MOF Molkenrain 20.22 315 eP P 04 30 45.8 -0.6
MOF Molkenrain 20.22 315 eP P 04 30 45.8 -0.6
MOF Molkenrain 20.22 315 eP P 04 30 45.8 -0.6
CABF La Chapelle 20.27 311 eP P 04 30 44.2 -2.7
comp=Z,93nm,0.7s
CABF La Chapelle 20.27 311 eP P 04 30 44.2 -2.7
CABF pmax pmax
comp=Z,93nm,0.7s
CABF La Chapelle 20.27 311 eP P 04 30 44.2 -2.7
comp=Z,93nm,0.7s
CABF La Chapelle 20.27 311 eP P 04 30 44.2 -2.7
comp=Z,46nm,0.7s
HINF Hinteralfeld 20.37 314 eP P 04 30 46.8 -1.1
comp=Z,22nm,0.7s
HINF Hinteralfeld 20.37 314 eP P 04 30 46.8 -1.1
HINF pmax pmax
comp=Z,22nm,0.7s
HINF Hinteralfeld 20.37 314 eP P 04 30 46.8 -1.1
comp=Z,22nm,0.7s
HINF Hinteralfeld 20.37 314 eP P 04 30 46.8 -1.1
comp=Z,11nm,0.7s
ECH Echery 20.39 316 eP P 04 30 47.0 -1.1
ECH pmax pmax
comp=Z,14nm,0.9s
ECH Echery 20.39 316 eP P 04 30 47.0 -1.1
comp=Z,14nm,0.9s
ECH Echery 20.39 316 eP P 04 30 47.1 -1.1
ECH Echery 20.39 316 eP P 04 30 47.1 -1.1
CDF Champ du Feu 20.43 316 eP P 04 30 47.5 -1.1
comp=Z,45nm,0.9s
CDF Champ du Feu 20.43 316 eP P 04 30 47.5 -1.1
CDF pmax pmax
comp=Z,45nm,0.9s
CDF Champ du Feu 20.43 316 eP P 04 30 47.5 -1.1
comp=Z,45nm,0.9s
CDF Champ du Feu 20.43 316 eP P 04 30 47.5 -1.1
comp=Z,23nm,0.9s
UBBA Unterbreizbach 20.46 325 ePn P 04 30 49.7 +0.9
VIVF Saint-Julien-l 20.51 305 eP P 04 30 47.8 -1.6
comp=Z,41nm,0.8s
VIVF Saint-Julien-l 20.51 305 eP P 04 30 47.8 -1.6
VIVF pmax pmax
comp=Z,41nm,0.8s
VIVF Saint-Julien-l 20.51 305 eP P 04 30 47.8 -1.6
comp=Z,41nm,0.8s
VIVF Saint-Julien-l 20.51 305 eP P 04 30 47.8 -1.6
comp=Z,20nm,0.8s
OBN Obninsk 20.55 13 i/ eP P 04 30 49.7 0.0
OBN e 04 31 02.8
OBN eS **S 04 34 37.5 +0.2**
OBN eSS **SnSn 04 35 05.0 +7.2**
OBN pmax pmax
comp=N,43nm,1.2s
OBN MLR MLR
comp=N,900nm,18.0s
OBN Obninsk 20.55 13 eP P 04 30 49.7 0.0
comp=N,43nm,1.2s
SSB Saint Sauveur 20.74 306 eP P 04 30 50.6 -1.4
SSB pmax pmax
comp=Z,10.0nm,0.8s
SSB Saint Sauveur 20.74 306 eP P 04 30 50.6 -1.4
comp=Z,10.0nm,0.8s
SSB Saint Sauveur 20.74 306 eP P 04 30 50.6 -1.4
comp=Z,10.0nm,0.8s
EMHD Djebel Mahouad 20.75 280 P P 04 30 51.5 -0.7
EMHD Djebel Mahouad 20.75 280 P P 04 30 51.5 -0.7
HAU Haudompre 20.76 314 eP P 04 30 50.9 -1.2
comp=Z,23nm,0.5s
HAU eR
comp=Z,1μm,18.5s
HAU Haudompre 20.76 314 eP P 04 30 50.9 -1.2
HAU pmax pmax
comp=Z,23nm,0.5s
HAU Haudompre 20.76 314 eP P 04 30 50.9 -1.2
comp=Z,23nm,0.5s
HAU Haudompre 20.76 314 eP P 04 30 50.9 -1.2
comp=Z,11nm,0.5s
LASF Ste Croix 20.82 302 eP P 04 30 52.5 -0.4
comp=Z,41nm,0.8s
LASF Ste Croix 20.82 302 eP P 04 30 52.5 -0.4
comp=Z,41nm,0.8s
LASF Ste Croix 20.82 302 eP P 04 30 52.5 -0.4
comp=Z,20nm,0.8s
TNS Taunus Mts 20.84 322 ePn P 04 30 54.4 +1.4
TNS Taunus Mts 20.84 322 eP P 04 30 54.4 +1.4
TNS Taunus Mts 20.84 322 eP P 04 30 54.4 +1.4
CLZ Clausthal 21.00 327 ePn P 04 30 55.5 +0.8
CLZ Clausthal 21.00 327 eP P 04 30 55.5 +0.8
CLZ Clausthal 21.00 327 eP P 04 30 55.5 +0.8
MOS Moscow 21.35 14 eP P 04 30 52.8 -5.5
MOS e 04 31 01.8
MOS pmax pmax
comp=Z,63nm,0.9s
MOS MLR MLR
comp=Z,1μm,18.0s
FILF Fillols 21.39 298 eP P 04 30 57.2 -1.7
FILF Fillols 21.39 298 eP P 04 30 57.2 -1.7
FILF Fillols 21.39 298 eP P 04 30 57.2 -1.7
PAGF Fort de Pagny 21.39 315 eP P 04 30 58.7 -0.2
PAGF Fort de Pagny 21.39 315 eP P 04 30 58.7 -0.2
PAGF Fort de Pagny 21.39 315 eP P 04 30 58.7 -0.2
LRDF Laroque-de-Fa 21.48 299 eP P 04 30 57.0 -2.9
LRDF Laroque-de-Fa 21.48 299 eP P 04 30 57.0 -2.9
LRDF Laroque-de-Fa 21.48 299 eP P 04 30 57.0 -2.9
NRDL Niedersach Rie 21.58 328 ePn P 04 31 01.3 +0.6
LBL Lubilhac 21.59 305 eP P 04 31 00.7 -0.4
LBL Lubilhac 21.59 305 eP P 04 31 00.7 -0.4
LBL Lubilhac 21.59 305 eP P 04 31 00.7 -0.4
LBL Lubilhac 21.59 305 eP P 04 31 00.7 -0.4
PLDF La Plantade 21.59 307 eP P 04 31 01.2 +0.1
PLDF La Plantade 21.59 307 eP P 04 31 01.2 +0.1
PLDF La Plantade 21.59 307 eP P 04 31 01.2 +0.1
PLDF La Plantade 21.59 307 eP P 04 31 01.2 +0.1
SFTF Sexfontaines 21.62 314 eP P 04 31 01.7 +0.3
comp=Z,147nm,1.1s
SFTF Sexfontaines 21.62 314 eP P 04 31 01.7 +0.3
comp=Z,147nm,1.1s
SFTF Sexfontaines 21.62 314 eP P 04 31 01.7 +0.3
comp=Z,73nm,1.1s
SMF Signal de Mont 21.69 309 eP P 04 30 59.1 -3.0
comp=Z,106nm,1.1s
SMF Signal de Mont 21.69 309 eP P 04 30 59.1 -3.0
SMF pmax pmax
comp=Z,106nm,1.1s
SMF Signal de Mont 21.69 309 eP P 04 30 59.1 -3.0
comp=Z,106nm,1.1s
SMF Signal de Mont 21.69 309 eP P 04 30 59.1 -3.0
comp=Z,53nm,1.1s
WLF Walferdange 21.73 318 P P 04 31 03.9 +1.4
comp=Z,23nm,1.8s
VALF Valcebollere 21.75 297 eP P 04 31 01.4 -1.6
VALF Valcebollere 21.75 297 eP P 04 31 01.4 -1.6
VALF Valcebollere 21.75 297 eP P 04 31 01.4 -1.6
MEZF Maizieres J'vi 21.75 314 eP P 04 31 03.8 +1.0
comp=Z,84nm,1.0s
MEZF Maizieres J'vi 21.75 314 eP P 04 31 03.8 +1.0
comp=Z,84nm,1.0s
MTLF Montolieu 21.79 299 eP P 04 31 01.2 -2.0
comp=Z,35nm,1.1s
MTLF Montolieu 21.79 299 eP P 04 31 01.2 -2.0
MTLF pmax pmax

	comp=Z,35nm,1.1s								
MTLF	**Montolieu**	**21.79**	**299**	*e*P		**P**	**04 31 01.2**	**-2.0**
	comp=Z,35nm,1.1s								
MTLF	**Montolieu**	**21.79**	**299**	*e*P		**P**	**04 31 01.2**	**-2.0**
	comp=Z,18nm,1.1s								
EBNR	**Beni Rached**	**21.88**	**280**	P		**P**	**04 31 04.1**	**-0.2**
BSD	**Bornholm Skovb**	**21.90**	**339**	*i* P		**P**	**04 31 00.4**	**-3.8**
	comp=Z,26nm,0.8s								
BSD									
	comp=Z,1µm,17.0s								
BSD	**Bornholm Skovb**	**21.90**	**339**	*i* P		**P**	**04 31 00.5**	**-3.8**
	comp=Z,26nm,0.8s,SNR=34								
PYM	**Petit Puy Mans**	**21.91**	**306**	*e*P		**P**	**04 31 03.5**	**-1.1**
PYM	**Petit Puy Mans**	**21.91**	**306**	*e*P		**P**	**04 31 03.5**	**-1.1**
PYM	**Petit Puy Mans**	**21.91**	**306**	*e*P		**P**	**04 31 03.5**	**-1.1**
LOR	**Lormes**	**21.93**	**310**	*e*P		**P**	**04 31 02.1**	**-2.6**
	comp=Z,31nm,0.8s								
LOR				*e*R					
	comp=Z,2µm,20.5s								
LOR	**Lormes**	**21.93**	**310**	*e*P		**P**	**04 31 02.1**	**-2.6**
	comp=Z,31nm,0.8s								
AGO	**Saint Agoulin**	**21.93**	**307**	*e*P		**P**	**04 31 02.4**	**-2.4**
AGO	**Saint Agoulin**	**21.93**	**307**	*e*P		**P**	**04 31 02.4**	**-2.4**
AVF	**Avril sur Loir**	**22.06**	**309**	*e*P		**P**	**04 31 03.6**	**-2.4**
	comp=Z,117nm,1.4s								
AVF	**Avril sur Loir**	**22.06**	**309**	*e*P		**P**	**04 31 03.6**	**-2.4**
AVF				pmax		pmax			
	comp=Z,117nm,1.4s								
AVF	**Avril sur Loir**	**22.06**	**309**	*e*P		**P**	**04 31 03.6**	**-2.4**
	comp=Z,117nm,1.4s								
SSF	**Saint Saulge**	**22.07**	**310**	*e*P		**P**	**04 31 03.0**	**-3.1**
	comp=Z,105nm,0.8s								
SSF	**Saint Saulge**	**22.07**	**310**	*e*P		**P**	**04 31 03.0**	**-3.1**
SSF				pmax		pmax			
	comp=Z,105nm,0.8s								
SSF	**Saint Saulge**	**22.07**	**310**	*e*P		**P**	**04 31 03.0**	**-3.1**
	comp=Z,105nm,0.8s								
BUG	**Bochum--Univer**	**22.18**	**323**	*e*Pn		**P**	**04 31 07.5**	**+0.2**
BUG	**Bochum--Univer**	**22.18**	**323**	*e*P		**P**	**04 31 07.5**	**+0.2**
CAF	**Calviac**	**22.29**	**303**	*e*P		**P**	**04 31 06.0**	**-2.7**
	comp=Z,44nm,1.1s								
CAF	**Calviac**	**22.29**	**303**	*e*P		**P**	**04 31 06.0**	**-2.7**
CAF				pmax		pmax			
	comp=Z,44nm,1.1s								
CAF	**Calviac**	**22.29**	**303**	*e*P		**P**	**04 31 06.0**	**-2.7**
	comp=Z,44nm,1.1s								
BGF	**Bois d'Agland**	**22.30**	**308**	*e*P		**P**	**04 31 06.9**	**-1.7**
	comp=Z,60nm,0.8s								
BGF	**Bois d'Agland**	**22.30**	**308**	*e*P		**P**	**04 31 06.9**	**-1.7**
BGF				pmax		pmax			
	comp=Z,60nm,0.8s								
BGF	**Bois d'Agland**	**22.30**	**308**	*e*P		**P**	**04 31 06.9**	**-1.7**
	comp=Z,60nm,0.8s								
MEM	**Membach**	**22.33**	**320**	P		**P**	**04 31 08.9**	**0.0**
	comp=Z,10nm,1.4s								
BSEG	**Bad Segeberg**	**22.55**	**331**	*e*Pn		**P**	**04 31 10.0**	**-1.2**
BSEG	**Bad Segeberg**	**22.55**	**331**	*e*P		**P**	**04 31 10.0**	**-1.2**
BCLA	**Clavier**	**22.60**	**319**	P		**P**	**04 31 11.1**	**-0.7**
	comp=Z,18nm,1.4s								
TCF	**Toulx Ste Croi**	**22.62**	**307**	*e*P		**P**	**04 31 10.8**	**-1.3**
	comp=Z,116nm,1.5s								
TCF	**Toulx Ste Croi**	**22.62**	**307**	*e*P		**P**	**04 31 10.8**	**-1.3**
TCF				pmax		pmax			
	comp=Z,116nm,1.5s								
TCF	**Toulx Ste Croi**	**22.62**	**307**	*e*P		**P**	**04 31 10.8**	**-1.3**
	comp=Z,116nm,1.5s								
GIVF	**Givet**	**22.69**	**318**	*e*P		**P**	**04 31 12.2**	**-0.6**
	comp=Z,84nm,1.2s								
GIVF	**Givet**	**22.69**	**318**	*e*P		**P**	**04 31 12.2**	**-0.6**
GIVF				pmax		pmax			
	comp=Z,84nm,1.2s								
GIVF	**Givet**	**22.69**	**318**	*e*P		**P**	**04 31 12.2**	**-0.6**
	comp=Z,84nm,1.2s								
RJF	**Les Rejaudoux**	**22.77**	**304**	*e*P		**P**	**04 31 12.3**	**-1.4**
	comp=Z,42nm,0.8s								
RJF				*e*R					
	comp=Z,1µm,18.0s								
RJF	**Les Rejaudoux**	**22.77**	**304**	*e*P		**P**	**04 31 12.3**	**-1.4**
RJF				pmax		pmax			
	comp=Z,42nm,0.8s								
RJF	**Les Rejaudoux**	**22.77**	**304**	*e*P		**P**	**04 31 12.3**	**-1.4**
	comp=Z,42nm,0.8s								
DOU	**Dourbes**	**22.81**	**318**	P		**P**	**04 31 13.7**	**-0.4**
BAIF	**Baives**	**23.00**	**317**	*e*P		**P**	**04 31 14.9**	**-1.1**
BAIF	**Baives**	**23.00**	**317**	*e*P		**P**	**04 31 14.9**	**-1.1**
BAIF	**Baives**	**23.00**	**317**	*e*P		**P**	**04 31 14.9**	**-1.1**
EPF	**Esparros**	**23.08**	**298**	*e*P		**P**	**04 31 15.6**	**-1.3**
	comp=Z,25nm,0.9s								
EPF	**Esparros**	**23.08**	**298**	*e*P		**P**	**04 31 15.6**	**-1.3**
EPF				pmax		pmax			
	comp=Z,25nm,0.9s								
EPF	**Esparros**	**23.08**	**298**	*e*P		**P**	**04 31 15.6**	**-1.3**
	comp=Z,25nm,0.9s								
VSU	**Vasula**	**23.17**	**358**	*d i*P		**P**	**04 31 17.7**	**+0.1**
VSU				pmax		pmax			
	comp=Z,8.0nm,0.6s								
LFF	**La Frestale**	**23.20**	**303**	*e*P		**P**	**04 31 17.3**	**-0.8**
	comp=Z,15nm,0.4s								
LFF	**La Frestale**	**23.20**	**303**	*e*P		**P**	**04 31 17.3**	**-0.8**
LFF				pmax		pmax			
	comp=Z,15nm,0.4s								
LFF	**La Frestale**	**23.20**	**303**	*e*P		**P**	**04 31 17.3**	**-0.8**
	comp=Z,15nm,0.4s								
TAM	**Tamanrasset**	**23.60**	**244**	*e*P		**P**	**04 31 23.0**	**+0.8**
TAM				pmax		pmax			
	comp=Z,172nm,1.4s								
TAM	**Tamanrasset**	**23.60**	**244**	*e*P		**P**	**04 31 23.0**	**+0.8**
	comp=Z,172nm,1.4s								
ETSF	**Etsaut**	**23.71**	**297**	*e*P		**P**	**04 31 22.9**	**-0.1**
	comp=Z,12nm,0.6s								
ETSF	**Etsaut**	**23.71**	**297**	*e*P		**P**	**04 31 22.9**	**-0.1**
ETSF				pmax		pmax			
	comp=Z,12nm,0.6s								
ETSF	**Etsaut**	**23.71**	**297**	*e*P		**P**	**04 31 22.9**	**-0.1**
	comp=Z,12nm,0.6s								
SJPF	**Ste Jean**	**24.22**	**298**	*e*P		**P**	**04 31 27.3**	**-0.5**
	comp=Z,113nm,1.1s								
SJPF	**Ste Jean**	**24.22**	**298**	*e*P		**P**	**04 31 27.3**	**-0.5**
SJPF				pmax		pmax			
	comp=Z,113nm,1.1s								
SJPF	**Ste Jean**	**24.22**	**298**	*e*P		**P**	**04 31 27.3**	**-0.5**
	comp=Z,113nm,1.1s								
MFF	**Saint Martin d**	**24.26**	**306**	*e*P		**P**	**04 31 26.6**	**-1.4**
	comp=Z,35nm,0.8s								
MFF	**Saint Martin d**	**24.26**	**306**	*e*P		**P**	**04 31 26.6**	**-1.4**
MFF				pmax		pmax			
	comp=Z,35nm,0.8s								
MFF	**Saint Martin d**	**24.26**	**306**	*e*P		**P**	**04 31 26.6**	**-1.4**
	comp=Z,35nm,0.8s								
LDF	**La Druitiere**	**24.91**	**311**	*e*P		**P**	**04 31 30.9**	**-3.0**
	comp=Z,68nm,1.0s								
LDF	**La Druitiere**	**24.91**	**311**	*e*P		**P**	**04 31 30.9**	**-3.0**
LDF				pmax		pmax			
	comp=Z,68nm,1.0s								
LDF	**La Druitiere**	**24.91**	**311**	*e*P		**P**	**04 31 30.9**	**-3.0**
	comp=Z,68nm,1.0s								
FLN	**La Foliniere**	**25.19**	**311**	*e*P		**P**	**04 31 34.2**	**-2.3**
	comp=Z,25nm,0.4s								
FLN				*e*R					
	comp=Z,1µm,19.5s								
FLN	**La Foliniere**	**25.19**	**311**	*e*P		**P**	**04 31 34.2**	**-2.3**
FLN				pmax		pmax			
	comp=Z,25nm,0.4s								
FLN	**La Foliniere**	**25.19**	**311**	*e*P		**P**	**04 31 34.2**	**-2.3**
	comp=Z,25nm,0.4s								
GRR	**Gorron**	**25.29**	**310**	*e*P		**P**	**04 31 35.5**	**-1.9**
	comp=Z,38nm,0.4s								
GRR	**Gorron**	**25.29**	**310**	*e*P		**P**	**04 31 35.5**	**-1.9**
GRR				pmax		pmax			
	comp=Z,38nm,0.4s								
GRR	**Gorron**	**25.29**	**310**	*e*P		**P**	**04 31 35.5**	**-1.9**
	comp=Z,38nm,0.4s								
ESDC	**Sonseca Array**	**26.05**	**289**	P		**P**	**04 31 43.7**	**-0.7**
ESDC				PcP		**PcP**	**04 35 12.8**	**+1.3**
ESDC	**Sonseca Array**	**26.05**	**289**	P		**P**	**04 31 43.7**	**-0.7**
	comp=Z,8.1nm,0.5s,baz=80,slow=10,SNR=70								
ESDC				PcP		**PcP**	**04 35 12.8**	**+1.3**
	comp=Z,2.9nm,0.8s,baz=65,slow=3.4,SNR=7.4								
ESDC				LR		LR	04 43 03.2		
	comp=Z,236nm,19.0s,baz=70,slow=39								
ESLA	**Sonseca Array**	**26.05**	**289**	*e*P		**P**	**04 31 44.2**	**-0.2**
	comp=Z,7.5nm,0.9s								
AKTO	**Aktyubinsk**	**26.14**	**46**	*i* P		**P**	**04 31 44.9**	**-0.1**
AKTO				pmax		pmax			
	comp=Z,35nm,0.6s								
AKTO	**Aktyubinsk**	**26.14**	**46**	P		**P**	**04 31 45.0**	**-0.1**
	comp=Z,26nm,0.6s,baz=248,slow=9.9,SNR=100								
FINES	**FINESS Array B**	**26.18**	**357**	P		**P**	**04 31 43.0**	**-2.2**
FINES				PcP		**PcP**	**04 35 11.1**	**-0.2**
FINES	**FINESS Array B**	**26.18**	**357**	P		**P**	**04 31 43.0**	**-2.2**
	comp=Z,14nm,0.6s,baz=145,slow=10,SNR=37								
FINES				PcP		**PcP**	**04 35 11.1**	**-0.2**
	comp=Z,4.9nm,0.7s,baz=132,slow=2.1,SNR=4.5								
FINES				LR		LR	04 43 11.0		
	comp=Z,1µm,18.5s,baz=27,slow=39								
FIA1	**FINESS Array S**	**26.18**	**357**	*e*P		**P**	**04 31 44.4**	**-0.8**
SGMF	**Saint Gilles**	**26.32**	**309**	*e*P		**P**	**04 31 44.1**	**-2.6**
	comp=Z,14nm,0.5s								
SGMF	**Saint Gilles**	**26.32**	**309**	*e*P		**P**	**04 31 44.1**	**-2.6**
SGMF				pmax		pmax			
	comp=Z,14nm,0.4s								
SGMF	**Saint Gilles**	**26.32**	**309**	*e*P		**P**	**04 31 44.1**	**-2.6**
	comp=Z,14nm,0.4s								
PAB	**San Pablo**	**26.34**	**289**	*e*P		**P**	**04 31 46.9**	**-0.2**
PAB				pmax		pmax			
	comp=Z,63nm,1.1s								
PAB	**San Pablo**	**26.34**	**289**	*e*P		**P**	**04 31 46.9**	**-0.2**
	comp=Z,63nm,1.1s								
KLMR	**Klimovskoe**	**26.50**	**12**	P		P	04 31 43.2	-5.0
KLMR				pmax		pmax			
	comp=Z,47nm,1.4s								
QUIF	**Quistinic**	**26.61**	**308**	*e*P		**P**	**04 31 47.3**	**-2.0**
	comp=Z,18nm,0.4s								
QUIF	**Quistinic**	**26.61**	**308**	*e*P		**P**	**04 31 47.3**	**-2.0**
QUIF				pmax		pmax			
	comp=Z,18nm,0.4s								
QUIF	**Quistinic**	**26.61**	**308**	*e*P		**P**	**04 31 47.3**	**-2.0**
	comp=Z,18nm,0.4s								
HFS	**Hagfors**	**26.61**	**343**	P		**P**	**04 31 46.3**	**-2.9**
HFS	**Hagfors**	**26.61**	**343**	P		**P**	**04 31 46.3**	**-2.9**
	comp=Z,7.8nm,0.5s,baz=140,slow=11,SNR=48								
HFS				LR		LR	04 44 06.7		
	comp=Z,913nm,19.2s,baz=160,slow=41								
ROSF	**Rostrenen**	**26.80**	**309**	*e*P		**P**	**04 31 48.9**	**-2.1**
	comp=Z,29nm,0.7s								
ROSF	**Rostrenen**	**26.80**	**309**	*e*P		**P**	**04 31 48.9**	**-2.1**
ROSF				pmax		pmax			
	comp=Z,29nm,0.7s								
ROSF	**Rostrenen**	**26.80**	**309**	*e*P		**P**	**04 31 48.9**	**-2.1**
	comp=Z,29nm,0.7s								
KAF	**Kangasniemi**	**26.84**	**358**	*e*P		**P**	**04 31 49.4**	**-1.8**
KAF				pmax		pmax			
	comp=Z,4.0nm,0.4s								
KAF	**Kangasniemi**	**26.84**	**358**	*e*p		**P**	**04 31 49.4**	**-1.8**
	comp=Z,3.7nm,0.4s								
KAF	**Kangasniemi**	**26.84**	**358**	*e*P		**P**	**04 31 49.4**	**-1.8**
	comp=Z,3.7nm,0.4s								
AB31	**Akbulak array**	**26.87**	**49**	*ce*P		**P**	**04 31 51.4**	**-0.2**
AB31				pmax		pmax			
	comp=Z,18nm,0.8s								
ABKAR	**Akbulak array**	**26.87**	**49**	*e*P		**P**	**04 31 51.6**	**0.0**
	comp=Z,5.2nm,0.5s								
ABKAR				*e*PcP		**PcP**	**04 35 14.1**	**+0.9**
ATD	**Arta Tunnel**	**27.03**	**148**	LR		LR	04 44 44.3		
	comp=Z,292nm,19.0s,baz=335,slow=41								
KONO	**Kongsberg**	**27.28**	**339**	*e*P		**P**	**04 31 53.5**	**-1.7**
KONO				pmax		pmax			
	comp=Z,44nm,1.2s								
KONO	**Kongsberg**	**27.28**	**339**	*e*P		**P**	**04 31 53.5**	**-1.7**
	comp=Z,44nm,1.2s								
MDT	**Midelt**	**27.48**	**274**	P		**P**	**04 31 57.3**	**-0.1**
MDT	**Midelt**	**27.48**	**274**	P		**P**	**04 31 57.3**	**-0.1**
	comp=Z,18nm,1.0s,baz=84,slow=9.7,SNR=14								
JOF	**Joensuu**	**27.67**	**3**	*e*P		**P**	**04 31 57.1**	**-1.5**
JOF				pmax		pmax			
	comp=Z,4.0nm,0.6s								
JOF	**Joensuu**	**27.67**	**3**	*e*p		**P**	**04 31 57.1**	**-1.5**
	comp=Z,4.0nm,0.6s								
JOF	**Joensuu**	**27.67**	**3**	*e*P		**P**	**04 31 57.1**	**-1.5**
	comp=Z,4.0nm,0.6s								
NAO01	**NORSAR Array S**	**27.93**	**342**	*e*P		**P**	**04 31 59.8**	**-1.2**
	comp=Z,7.1nm,0.6s								
NB2	**NORSAR Subarra**	**28.01**	**342**	P		**P**	**04 31 59.5**	**-2.3**
	comp=Z,14nm,1.2s,baz=149,slow=9.3								
NB2	**NORSAR Subarra**	**28.01**	**342**	P		**P**	**04 31 59.5**	**-2.3**
	comp=Z,14nm,1.2s,SNR=3.1								
NOA	**NORSAR Array B**	**28.01**	**342**	P		P	04 31 58.6	-3.1
NOA				PcP		**PcP**	**04 35 15.8**	**0.0**
NOA	**NORSAR Array B**	**28.01**	**342**	P		P	04 31 58.6	-3.1
	comp=Z,5.3nm,0.8s,baz=146,slow=8.8,SNR=12								
NOA				PcP		**PcP**	**04 35 15.8**	**0.0**
	comp=Z,3.3nm,0.8s,baz=134,slow=2.5,SNR=4.6								
PBRG	**Braganca**	**28.17**	**294**	*e*P		**P**	**04 32 04.4**	**+0.9**
	comp=Z,33nm,1.7s								
PBRG	**Braganca**	**28.17**	**294**	*e*P		**P**	**04 32 06.1**	**+2.6**
	comp=Z,33nm,1.7s								
PBRG				A		A	04 32 07.2		
	comp=Z,33nm,1.8s								
PBRG	**Braganca**	**28.17**	**294**	*e*P		**P**	**04 32 04.4**	**+0.9**
	comp=Z,33nm,1.7s								
MVO	**Moncorvo**	**28.38**	**293**	*e*P		**P**	**04 32 05.6**	**+0.3**
	comp=Z,36nm,1.9s								
MVO	**Moncorvo**	**28.38**	**293**	*e*P		**P**	**04 32 05.7**	**+0.4**
	comp=Z,36nm,1.9s								
MVO				A		A	04 32 32.3		
	comp=Z,37nm,1.2s								
MVO	**Moncorvo**	**28.38**	**293**	*e*P		**P**	**04 32 05.6**	**+0.3**
	comp=Z,36nm,1.9s								
PBAR	**Barrancos**	**28.52**	**286**	*e*P		**P**	**04 32 06.7**	**+0.2**
	comp=Z,41nm,1.6s								
PBAR	**Barrancos**	**28.52**	**286**	*e*P		**P**	**04 32 07.4**	**+0.9**
	comp=Z,41nm,1.6s								
PBAR				A		A	04 32 07.9		
	comp=Z,40nm,1.4s								
PBAR	**Barrancos**	**28.52**	**286**	*e*P		**P**	**04 32 06.7**	**+0.2**
	comp=Z,41nm,1.6s								
PMRV	**Marv??o**	**28.70**	**289**	*e*P		**P**	**04 32 05.5**	**-2.6**
	comp=Z,26nm,1.9s								
PMRV	**Marv??o**	**28.70**	**289**	*e*P		**P**	**04 32 07.6**	**-0.6**
	comp=Z,26nm,1.9s								
PMRV				A		A	04 32 14.1		
	comp=Z,28nm,2.1s								
PMRV				A		A	04 49 32.5		
	comp=Z,320nm,18.0s								
PMRV	**Marv??o**	**28.70**	**289**	*e*P		**P**	**04 32 05.5**	**-2.6**
	comp=Z,26nm,1.9s								
PCBR	**Castelo Branco**	**28.75**	**290**	*e*P		**P**	**04 32 08.9**	**+0.4**
	comp=Z,23nm,1.7s								
PCBR	**Castelo Branco**	**28.75**	**290**	*e*P		**P**	**04 32 08.9**	**+0.4**
	comp=Z,23nm,1.7s								
MTE	**Manteigas**	**28.78**	**291**	*e*P		**P**	**04 32 08.6**	**-0.3**
	comp=Z,27nm,1.4s								
MTE				*e*LR		LR	04 37 19.7		
	comp=Z,517nm,20.0s								
MTE	**Manteigas**	**28.78**	**291**	*e*P		**P**	**04 32 08.6**	**-0.3**
	comp=Z,27nm,1.4s								
PESTR	**Estremoz**	**28.89**	**288**	*e*P		**P**	**04 32 10.5**	**+0.7**
	comp=Z,36nm,1.5s								
PESTR	**Estremoz**	**28.89**	**288**	*e*P		**P**	**04 32 10.7**	**+0.8**
	comp=Z,36nm,1.5s								
PESTR				A		A	04 32 12.5		
	comp=Z,38nm,1.7s								
PESTR	**Estremoz**	**28.89**	**288**	*e*P		**P**	**04 32 10.5**	**+0.7**
	comp=Z,36nm,1.5s								
PVRL	**Vila Real**	**28.90**	**293**	*e*P		P	04 32 13.1	+3.2
	comp=Z,28nm,1.8s								
PVRL	**Vila Real**	**28.90**	**293**	*e*P		P	04 32 13.1	+3.2
	comp=Z,28nm,1.8s								
POLO	**Lamas de Olo**	**28.96**	**293**	*e*P		**P**	**04 32 10.0**	**-0.5**
	comp=Z,11nm,1.3s								
POLO	**Lamas de Olo**	**28.96**	**293**	*e*P		**P**	**04 32 11.3**	**+0.8**
	comp=Z,11nm,1.3s								
POLO				A		A	04 32 33.7		
	comp=Z,15nm,1.8s								
POLO	**Lamas de Olo**	**28.96**	**293**	*e*P		**P**	**04 32 10.0**	**-0.5**
	comp=Z,11nm,1.3s								
PVIS	**Viseu**	**29.04**	**292**	*e*P		**P**	**04 32 11.4**	**+0.2**
	comp=Z,50nm,1.9s								
PVIS	**Viseu**	**29.04**	**292**	*e*P		**P**	**04 32 11.4**	**+0.2**
	comp=Z,50nm,1.9s								
PCAB	**Cabril**	**29.13**	**294**	*e*P		P	04 32 15.2	+3.2
	comp=Z,36nm,1.6s								
PCAB	**Cabril**	**29.13**	**294**	*e*P		P	04 32 15.2	+3.2
	comp=Z,36nm,1.6s								
PVAQ	**Vaqueiros**	**29.14**	**285**	*e*P		P	04 32 08.3	-3.7
	comp=Z,51nm,1.8s								
PVAQ	**Vaqueiros**	**29.14**	**285**	*e*P		**P**	**04 32 11.7**	**-0.3**
	comp=Z,51nm,1.8s								
PVAQ				A		A	04 32 14.7		
	comp=Z,51nm,1.7s								
PVAQ				*e*LR		LR	04 37 47.8		
	comp=Z,137nm,20.0s								
PVAQ	**Vaqueiros**	**29.14**	**285**	*e*P		P	04 32 08.3	-3.7
	comp=Z,51nm,1.8s								
PBEJ	**Beja**	**29.18**	**286**	*e*P		**P**	**04 32 13.4**	**+1.0**
	comp=Z,43nm,1.1s								
PBEJ	**Beja**	**29.18**	**286**	*e*P		**P**	**04 32 13.4**	**+1.0**
	comp=Z,43nm,1.1s								
EVO	**Evora**	**29.25**	**287**	*e*P		**P**	**04 32 14.1**	**+1.1**
	comp=Z,35nm,1.6s								
EVO	**Evora**	**29.25**	**287**	*e*P		**P**	**04 32 14.1**	**+1.1**
	comp=Z,35nm,1.6s								
ARU	**Arti**	**29.32**	**35**	*d i*P		**P**	**04 32 13.8**	**+0.4**
ARU							04 33 05.6		
ARU				PPP		PPP	04 33 17.2		
ARU				S		**S**	**04 37 08.0**	**+4.2**
ARU				SS		**SnSn**	**04 38 33.8**	**+1.9**
ARU				SSS		SSS	04 38 54.8		
ARU				pmax		pmax			
	comp=Z,43nm,2.5s								
ARU				MLR		MLR			
	comp=Z,730nm,18.0s								
PBDV	**Barranco-do-Ve**	**29.33**	**285**	*e*P		**P**	**04 32 13.6**	**-0.1**
	comp=Z,62nm,1.7s								
PBDV	**Barranco-do-Ve**	**29.33**	**285**	*e*P		**P**	**04 32 13.6**	**-0.1**
	comp=Z,62nm,1.7s								
PCVE	**Castro Verde**	**29.36**	**285**	*e*P		**P**	**04 32 16.7**	**+2.7**
	comp=Z,55nm,1.6s								
PCVE	**Castro Verde**	**29.36**	**285**	*e*P		**P**	**04 32 16.7**	**+2.7**
	comp=Z,55nm,1.6s								
EKA	**Eskdalemuir Ar**	**29.53**	**323**	P		P	04 32 12.2	-3.0
EKA				PcP		**PcP**	**04 35 19.7**	**+0.1**
EKA	**Eskdalemuir Ar**	**29.53**	**323**	P		P	04 32 12.2	-3.0
	comp=Z,1.7nm,0.6s,baz=112,slow=8.8,SNR=4.4								
EKA				PcP		**PcP**	**04 35 19.7**	**+0.1**
	comp=Z,3.1nm,0.7s,baz=101,slow=2.8,SNR=6.9								
SOKR	**Solikamsk**	**30.47**	**28**	*c i*P		**P**	**04 32 24.3**	**+0.9**
SOKR				pmax		pmax			
	comp=Z,30nm,0.9s								
SOKR				MLR		MLR			
	comp=Z,660nm,19.0s								
SVE	**Sverdlovsk**	**30.50**	**35**	*e*P		**P**	**04 32 24.3**	**+0.4**
SVE				*es*		**S**	**04 37 25.4**	**+3.0**
SVE				pmax		pmax			
	comp=Z,14nm,0.8s								
SVE				MLR		MLR			
	comp=Z,547nm,16.0s								
APA	**Apatity**	**32.41**	**41**	*e*P		P	04 32 57.8	+17
APA				*i*			04 33 12.0		
APA				pmax		pmax			
	comp=Z,30nm,1.3s								
APA				MLR		MLR			
	comp=Z,1µm,15.0s								
TOA0	**Torodi Ar. Sit**	**32.76**	**234**	*e*P		**P**	**04 32 43.6**	**-0.5**
TOA0				*e*PcP		**PcP**	**04 35 29.1**	**+0.3**
TORD	**Torodi Ar. Bea**	**32.76**	**234**	P		**P**	**04 32 43.6**	**-0.4**
TORD				PcP		**PcP**	**04 35 28.5**	**-0.4**
TORD	**Torodi Ar. Bea**	**32.76**	**234**	P		**P**	**04 32 43.7**	**-0.4**
	comp=Z,34nm,0.9s,baz=33,slow=8.7,SNR=179								
TORD				PcP		**PcP**	**04 35 28.5**	**-0.4**
	comp=Z,4.4nm,0.7s,baz=24,slow=2.8,SNR=8.6								
TORD				LR		LR	04 48 12.3		
	comp=Z,827nm,21.5s,baz=35,slow=40								
LVZ	**Lovozero**	**32.80**	**4**	*ce*P			**04 32 43.4**	**-0.6**
LVZ				pmax		pmax			
	comp=Z,42nm,2.5s								
KK31	**Karatay Array**	**33.17**	**64**	*i* P		**P**	**04 32 46.8**	**-0.7**
KK31				pmax		pmax			
	comp=Z,9.0nm,0.6s								
KKAR	**Karatay Array**	**33.17**	**64**	*e*P		**P**	**04 32 47.9**	**+0.4**
KKAR				pmax		pmax			
	comp=Z,17nm,0.9s								
KKAR	**Karatay Array**	**33.17**	**64**	*e*P		**P**	**04 32 47.9**	**+0.4**
	comp=Z,17nm,0.9s								
ZRNK	**Zerenda**	**33.42**	**46**	*i* P		**P**	**04 32 49.5**	**-0.1**
ZRNK				pmax		pmax			
	comp=Z,28nm,1.4s								
BRVK	**Borovoye**	**34.20**	**46**	*c i*P		**P**	**04 32 56.8**	**+0.5**
BRVK				pmax		pmax			
	comp=Z,22nm,1.9s								
BRVK	**Borovoye**	**34.20**	**46**	*e*P		**P**	**04 32 56.6**	**+0.3**
	comp=Z,28nm,1.4s								
BVA0	**Borovoye Array**	**34.25**	**46**	*i* P		**P**	**04 32 56.5**	**-0.2**
BVA0				pmax		pmax			
	comp=Z,26nm,1.9s								
BVAR	**Borovoye Array**	**34.25**	**46**	P		**P**	**04 32 57.1**	**+0.3**
BVAR				pmax		pmax			
	comp=Z,4.0nm,0.6s								
BVAR				MLR	

KSH LR LR
comp=Z,350nm,5.9s
PMOZ Porto Moniz, M 37.69 280 *e*LR LR 04 39 33.3
KURBB Kurchatov Arra 38.88 51 P **P** **04 33 35.8 -0.4**
comp=Z,15nm,0.7s,baz=274,slow=8.9,SNR=102
KURBB PcP **PcP** **04 35 46.5 +0.1**
comp=Z,4.6nm,0.7s,baz=261,slow=4.2,SNR=7.5
KURK Kurchatov 38.94 51 P **P** **04 33 36.8 +0.1**
comp=Z,111nm,0.6s,SNR=12
KURK Kurchatov 38.94 51 P **P** **04 33 35.8 -0.9**
KURK 04 35 46.5
KURK pmax pmax
comp=Z,15nm,0.7s
KURK pmax pmax
comp=Z,5.0nm,0.7s
KURK Kurchatov 38.94 51 *e*P **P** **04 33 36.4 -0.3**
comp=Z,17nm,0.9s
KURK PcP **PcP** **04 35 46.5 -0.1**
MK31 Makanchi Array 41.38 57 *ce*P **P** **04 33 56.8 -0.2**
MK31 pmax pmax
comp=Z,5.0nm,0.5s
MK31 Makanchi Array 41.38 57 *e*P **P** **04 33 57.1 +0.1**
MK31 *e*PcP **PcP** **04 35 55.8 +1.1**
MKAR Makanchi Array 41.38 57 P **P** **04 33 56.9 -0.1**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR Makanchi Array 41.38 57 P **P** **04 33 56.9 -0.1**
MKAR Makanchi Array 41.38 57 P **P** **04 33 56.9 -0.1**
comp=Z,4.6nm,0.6s,baz=277,slow=7.0,SNR=67
DBIC Dimbokro 41.87 235 *e*P **P** **04 34 00.9 -0.3**
comp=Z,76nm,1.2s
DBIC PcP **PcP** **04 35 57.3 +0.7**
DBIC *e*PcP **PcP** **04 35 57.5 +0.9**
DBIC Dimbokro 41.87 235 P **P** **04 34 00.8 -0.3**
comp=Z,30nm,0.7s,baz=24,slow=9.6,SNR=36
DBIC PcP **PcP** **04 35 57.3 +0.7**
comp=Z,6.6nm,0.5s,baz=18,slow=2.6,SNR=5.9
DBIC LR LR 04 53 25.3
comp=Z,421nm,21.7s,baz=235,slow=39
NVS Novosibirsk 42.03 45 *e*P **P** **04 34 00.8 -1.3**
NVS pmax pmax
comp=Z,20nm,1.2s
LIC Lamto 42.31 235 *e*P **P** **04 34 04.0 -0.8**
comp=Z,80nm,0.9s
LIC *e*R
comp=Z,679nm,22.5s
LIC Lamto 42.31 235 *e*P **P** **04 34 04.0 -0.8**
comp=Z,80nm,0.9s
ZAA0 Zalesovo Array 42.90 46 *e*P **P** **04 34 08.8 -0.4**
ZALV Zalesovo Beam 42.90 46 P **P** **04 34 08.9 -0.4**
ZALV pmax pmax
comp=Z,8.0nm,0.5s
ZALV MLR MLR
comp=Z,367nm,20.9s
ZALV Zalesovo Beam 42.90 46 P **P** **04 34 08.9 -0.4**
ZALV Zalesovo Beam 42.90 46 P **P** **04 34 08.9 -0.4**
comp=Z,8.0nm,0.5s,baz=267,slow=8.8,SNR=39
ZALV LR LR 04 56 03.3
comp=Z,366nm,20.9s,baz=69,slow=42
SPITS Spitsbergen Ar 43.27 356 P **P** **04 34 11.3 -0.7**
SPITS Spitsbergen Ar 43.27 356 P **P** **04 34 11.3 -0.7**
comp=Z,2.0nm,0.4s,baz=144,slow=11,SNR=21
SCO Scoresbysund 44.18 338 *i* P **P** **04 34 19.1 -0.2**
comp=Z,7.7nm,0.8s
SCO *i* 04 34 26.8
SCO
comp=Z,310nm,22.0s
SCO Scoresbysund 44.18 338 *i* P **P** **04 34 19.2 -0.1**
comp=Z,7.7nm,0.8s,SNR=25
KBS Kingsbay 44.24 355 *ce*P **P** **04 34 19.5 -0.2**
KBS pmax pmax
comp=Z,40nm,2.0s
KBS Kingsbay 44.24 355 *e*P **P** **04 34 20.0 +0.3**
comp=Z,6.4nm,1.0s,SNR=25
WMQ Urumqi 45.54 61 P **P** **04 34 32.3 +1.7**
WMQ pP **pP** **04 34 42.0 +0.1**
WMQ sP **sP** **04 34 46.0 -0.5**
WMQ PP **PP** **04 36 17.0 -0.5**
WMQ S **S** **04 41 11.0 +1.1**
WMQ sS **sS** **04 41 28.0 -0.6**
WMQ SS **ScS** **04 44 26.0 +2.3**
WMQ pmax pmax
comp=Z,19nm,1.1s
WMQ pmax pmax
comp=Z,160nm,5.0s
WMQ LR LR
comp=N,640nm,17.0s
WMQ LR LR
comp=E,680nm,22.0s
WMQ LR LR
comp=Z,590nm,22.2s
PYUN Piuthan 46.41 83 *e*P **P** **04 34 39.2 +1.3**
comp=Z,46nm,0.6s
DANN Dangsing 46.94 82 *e*P **P** **04 34 43.0 +0.9**
comp=Z,118nm,0.7s
KOLN Koldanda 47.04 83 *e*P **P** **04 34 43.2 +0.4**
comp=Z,27nm,0.6s
HYB Hyderabad 47.73 99 *i* P **P** **04 34 47.5 -0.5**
DMN Daman 48.33 83 *e*P **P** **04 34 53.4 +0.6**
comp=Z,60nm,0.9s
KKN Kakani 48.39 82 *e*P **P** **04 34 54.1 +0.8**
comp=Z,33nm,0.5s
PKIN Phulchoki 48.57 83 *e*P **P** **04 34 55.5 +0.8**
PKI Pulchoki 48.59 83 *e*P **P** **04 34 55.1 +0.2**
GUN Gumba 48.83 82 *e*P **P** **04 34 57.0 +0.2**
comp=Z,34nm,0.7s
RAMN Ramite 49.81 83 *e*P **P** **04 35 03.7 -0.4**
SUMG Summit 49.81 339 *e*P **P** **04 35 03.1 -0.6**
SUMG *e* 04 36 24.2
SUMG pmax pmax
comp=Z,7.0nm,0.6s
SUMG Summit 49.81 339 *e*P **P** **04 35 03.1 -0.6**
comp=Z,6.8nm,0.6s
SUMG *e*PcP **PcP** **04 36 24.2 +0.3**
LSZ Lusaka 50.33 180 *e*P **P** **04 35 09.1 +1.2**
comp=Z,26nm,1.5s
LSZ PcP **PcP** **04 36 28.4 +2.3**
LSZ *e*PcP **PcP** **04 36 29.2 +3.0**
LSZ Lusaka 50.33 180 P **P** **04 35 09.1 +1.2**
comp=Z,5.1nm,0.8s,baz=11,slow=9.4,SNR=9.0
LSZ PcP **PcP** **04 36 28.4 +2.3**
comp=Z,3.0nm,0.6s,baz=56,slow=7.5,SNR=3.5
TAPN Taplejung 50.54 82 *e*P **P** **04 35 09.7 -0.1**
TLY Talaya 54.47 48 *e*P **sP** **04 35 55.1 +0.8**
TLY *e*S pS 04 43 29.8 +2.3
TLY pmax pmax
comp=Z,14nm,1.7s
ZAK Zakamensk 54.56 49 *e*P **P** **04 35 39.4 +0.4**
ZAK *e* 04 36 42.6
ZAK pmax pmax
comp=Z,6.0nm,1.1s
TSUM Tsumeb 55.22 193 *e*P **P** **04 35 44.8 +0.8**
comp=Z,18nm,1.0s
GTA Gaotai 55.45 63 *e*P **P** **04 35 46.3 +0.7**
GTA pP **pP** **04 35 56.3 -0.8**
GTA sP **sP** **04 36 00.3 -1.4**
GTA PcP **PcP** **04 36 47.4 +2.0**
GTA S **S** **04 43 26.3 -1.5**
GTA sS **sS** **04 43 43.3 -3.6**
GTA SS **SS** **04 47 11.9 -0.6**
GTA pmax pmax
comp=Z,8.0nm,1.3s
GTA pmax pmax
comp=Z,120nm,5.7s
GTA LR LR
comp=N,250nm,21.4s
GTA LR LR
comp=E,250nm,22.3s
GTA LR LR
comp=Z,280nm,21.4s
SONM Songino Array 57.24 52 P **P** **04 35 58.9 +0.7**
SONM Songino Array 57.24 52 P **P** **04 35 58.9 +0.7**
comp=Z,4.7nm,0.6s,baz=290,slow=7.9,SNR=16
ULN Ulaanbaatar 57.65 51 *e*P **P** **04 36 01.9 +0.8**
comp=Z,6.0nm,0.8s
ULN Ulaanbaatar 57.65 51 P **P** **04 36 00.5 -0.6**
comp=Z,9.2nm,0.8s
LZH Lanzhou 59.65 65 *e*P **P** **04 36 17.5 +2.3**
LZH pP **pP** **04 36 28.6 +1.8**
LZH sP **sP** **04 36 32.4 +1.0**
LZH *e*PP **PP** **04 38 30.8 +3.9**
LZH pmax pmax
comp=Z,17nm,1.2s
LZH pmax pmax
comp=Z,61nm,7.3s
LZH LR LR
comp=N,290nm,15.2s
LZH LR LR
comp=E,260nm,16.0s
LZH LR LR
comp=Z,350nm,19.7s
LBTB Lobatse 60.08 183 *e*P **P** **04 36 20.4 +2.4**
comp=Z,28nm,1.0s
CD2 Chengdu 61.75 71 *e*P **P** **04 36 31.3 +1.8**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,30nm,4.8s
HHC Hu-ho-hao-te 63.25 57 *e*P **P** **04 36 41.1 +1.7**
HHC pP **pP** **04 36 51.8 +0.7**
HHC sP **sP** **04 36 56.6 +1.0**
HHC PP **PP** **04 39 01.4 +2.9**
HHC S **S** **04 45 08.9 +0.5**
HHC sS **sS** **04 45 26.8 -1.0**
HHC ScS **SKKSac** **04 46 27.4 -2.0**
HHC SS **SS** **04 49 16.1 +1.4**
HHC pmax pmax
comp=Z,45nm,0.8s
HHC pmax pmax
comp=Z,240nm,5.3s
HHC LR LR
comp=N,400nm,17.8s
HHC LR LR
comp=E,380nm,16.7s
HHC LR LR
comp=Z,430nm,17.0s
KMI Kunming 63.60 77 P **P** **04 36 44.3 +2.2**
KMI pmax pmax
comp=Z,7.0nm,1.1s
CHTO Chiang Mai 63.64 85 *e*P **P** **04 36 42.8 +0.6**
CHTO pmax pmax
comp=Z,9.0nm,1.3s
CHTO Chiang Mai 63.64 85 *e*P **P** **04 36 42.8 +0.6**
comp=Z,9.4nm,1.3s
CHTO Chiang Mai 63.64 85 P **P** **04 36 42.7 +0.6**
comp=Z,12nm,1.5s
CMMT Chiang Mai 63.65 85 P **P** **04 36 44.9 +2.7**
comp=Z,10nm,1.5s
BOSA Boshof 63.68 183 *e*P **P** **04 36 43.5 +1.3**
comp=Z,21nm,0.9s
BOSA Boshof 63.68 183 P **P** **04 36 43.8 +1.7**
comp=Z,18nm,0.8s,baz=2.0,slow=8.2,SNR=20
CMAR Chiang Mai Arr 63.82 85 P **P** **04 36 43.4 0.0**
CMAR Chiang Mai Arr 63.82 85 P **P** **04 36 43.4 0.0**
comp=Z,4.6nm,0.6s,baz=301,slow=7.8,SNR=18
CMAR LR LR 05 09 40.4
comp=Z,210nm,18.8s,baz=280,slow=41
XAN Xi'an 64.28 65 P **P** **04 36 47.1 +0.9**
XAN pmax pmax
comp=Z,2.0nm,1.1s
XAN LR LR
comp=N,130nm,20.2s
XAN LR LR
comp=Z,59nm,21.1s
YAK Yakutsk 64.34 31 *e*P **P** **04 36 44.9 -1.1**
YAK pmax pmax
comp=Z,16nm,1.0s
YAK pmax pmax
comp=N,7.0nm,1.4s
YAK pmax pmax
comp=E,13nm,1.4s
YAK MLR MLR
comp=Z,333nm,15.0s
YAK MLR MLR
comp=E,206nm,15.0s
YAK MLR MLR
comp=N,70nm,15.0s
SCHQ Schefferville 64.82 320 *e*P **P** **04 36 48.0 -1.4**
comp=N,12nm,0.6s
SCHQ Schefferville 64.82 320 P **P** **04 36 48.3 -1.1**
comp=N,6.2nm,0.4s,baz=58,slow=6.5,SNR=37
SCHQ LR LR 05 05 31.6
comp=N,282nm,20.0s,baz=77,slow=37
GYA Guiyang 66.07 74 *e*P **P** **04 36 57.8 -0.2**
GYA pP **pP** **04 37 10.3 +0.5**
GYA sP sP 04 37 17.9 +3.6
GYA PP **PP** **04 39 27.0 +3.4**
GYA ScP 04 41 27.6
GYA S **S** **04 45 42.0 -1.6**
GYA SKS **SKSac** **04 46 47.8 -3.5**
GYA pmax pmax
comp=Z,10.0nm,0.9s
GYA pmax pmax
comp=Z,80nm,5.0s
PBKT Sadao Pong 66.45 86 P **P** **04 37 01.8 +1.4**
comp=Z,7.0nm,1.2s
BJI Beijing 66.76 57 P **P** **04 37 03.8 +1.7**
BJI S **S** **04 45 52.1 +0.7**
BJI pmax pmax
comp=Z,25nm,1.1s
BJI LR LR
comp=N,190nm,21.4s
BJI LR LR
comp=E,220nm,19.3s
BJI LR LR
comp=Z,190nm,21.8s
PQI Presque Isle 69.30 313 *e*P **P** **04 37 18.1 +0.2**
comp=Z,238nm,1.7s
CN2 Changchun 71.00 49 ⇑P **P** **04 37 29.4 +1.1**
CN2 *e*pP **pP** **04 37 41.8 +1.6**
CN2 *e*S **S** **04 46 40.6 -0.8**
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,700nm,19.0s
CN2 LR LR
comp=E,400nm,19.0s
CN2 LR LR
comp=Z,600nm,21.0s
KLR Kul'dur 71.82 42 *e*P P 04 37 30.3 -2.9
KLR pmax pmax
comp=Z,57nm,1.6s
BILL Bilibino 72.20 15 *de*P **P** **04 37 35.6 +0.5**
BILL *PP **pP** **04 37 47.0 0.0**
BILL *e* 04 37 53.8
BILL pmax pmax
comp=Z,15nm,1.2s
QIZ Qiongzhong 72.35 79 P **P** **04 37 35.9 -1.0**
QIZ sP **sP** **04 37 50.3 -3.0**
QIZ S S 04 46 51.6 -6.1
QIZ LR LR
comp=N,150nm,16.1s
QIZ LR LR
comp=Z,220nm,15.9s
NJ2 Nanjing 72.55 63 *e*P **P** **04 37 39.3 +1.5**
NJ2 pmax pmax
comp=Z,20nm,0.6s
USRK Ussuriysk Arra 74.76 46 P **P** **04 37 50.5 -0.1**
comp=Z,19nm,0.7s,baz=295,slow=5.3,SNR=44
USRK LR LR 05 16 59.2
comp=Z,202nm,18.9s,baz=98,slow=41
KSAR Wonju Array Be 75.96 54 P **P** **04 37 58.0 +0.4**
KSRS Korea Array 75.98 54 P **P** **04 37 58.0 +0.3**
comp=Z,9.2nm,0.6s,baz=299,slow=5.1,SNR=43
COLD Coldfoot 77.76 359 *e*P **P** **04 38 07.6 +0.4**
comp=Z,11nm,1.2s
YKW3 Yellowknife Ar 78.04 343 *e*P **P** **04 38 08.0 -0.8**
comp=Z,0.2nm,1.1s
YKA Yellowknife Ar 78.10 343 P **P** **04 38 07.8 -1.3**
YKA Yellowknife Ar 78.10 343 P **P** **04 38 07.8 -1.3**
comp=Z,3.9nm,0.6s,baz=34,slow=5.5,SNR=30
YSS Yuzh-Sakhalins 79.08 40 ⇑*e*P **P** **04 38 17.1 +2.2**
YSS *e* 04 38 26.2
YSS *e*S **S** **04 48 13.0 +1.9**
EGAK Eagle 79.89 356 *e*P **P** **04 38 19.0 0.0**
comp=Z,5.7nm,1.1s
ILAR Eielson Array 80.16 358 P **P** **04 38 19.8 -0.7**
ILAR Eielson Array 80.16 358 P **P** **04 38 19.8 -0.7**
comp=Z,1.9nm,0.8s,baz=348,slow=3.5,SNR=24
FFC Flin Flon 80.74 333 P **P** **04 38 23.8 +0.1**
comp=Z,72nm,1.0s,SNR=5.6
FFC Flin Flon 80.74 333 *e*P **P** **04 38 22.5 -1.2**
FFC pmax pmax
comp=Z,21nm,1.3s
FFC Flin Flon 80.74 333 *e*P **P** **04 38 22.5 -1.2**
comp=Z,21nm,1.3s
DOT Dot Lake 81.18 357 *e*P **P** **04 38 26.4 +0.4**
comp=Z,7.8nm,1.3s
MCK McKinley 81.25 359 *e*P **P** **04 38 26.1 -0.2**
MCK pmax pmax
comp=Z,16nm,1.3s
MCK McKinley 81.25 359 *e*P **P** **04 38 26.1 -0.2**
comp=Z,16nm,1.3s
EYMN Ely 81.30 324 *e*P **P** **04 38 26.6 -0.3**
comp=Z,4.5nm,0.8s
COWI Conover 81.40 321 *e*P **P** **04 38 26.9 -0.6**
comp=Z,23nm,1.0s
PETK Petropavlovsk- 81.50 28 P **P** **04 38 27.7 -0.1**
PETK pmax pmax
comp=Z,7.0nm,1.0s
PETK Petropavlovsk- 81.50 28 P **P** **04 38 27.7 -0.1**
PETK Petropavlovsk- 81.50 28 P **P** **04 38 27.7 -0.1**
comp=Z,6.7nm,1.0s,baz=325,slow=2.3,SNR=7.0
PETK LR LR 05 21 07.9
comp=Z,160nm,18.0s,baz=125,slow=40
TRF Thorofare Moun 81.55 359 *e*P **P** **04 38 27.8 -0.3**
comp=Z,7.9nm,1.1s
ULM Lac du Bonnet 81.67 328 P **P** **04 38 27.9 -0.9**
ULM Lac du Bonnet 81.67 328 P **P** **04 38 27.9 -0.9**
comp=Z,9.4nm,0.7s,baz=54,slow=5.9,SNR=9.3
ULM LR LR 05 15 15.9
comp=Z,391nm,19.3s,baz=134,slow=36
PPLA Purkeypile 82.11 0 *e*P **P** **04 38 31.0 0.0**
comp=Z,14nm,0.7s
YUK Yuzh-Kuril'sk 82.65 40 *di*P **P** **04 38 33.7 -0.3**
YUK *e* 04 38 37.8
YUK *i* 04 41 40.5
YUK *i* S **S** **04 48 49.6 +1.1**
YUK pmax pmax
comp=E,71nm,0.6s
YUK pmax pmax
comp=N,129nm,1.3s
YUK pmax pmax
comp=Z,164nm,1.4s
YUK pmax pmax
comp=Z,360nm,1.5s
AGMN Agassiz Nation 83.09 326 *e*P **P** **04 38 35.3 -0.9**
comp=Z,37nm,1.4s
MAJO Matsushiro 83.14 50 *e*P **P** **04 38 37.7 +1.0**
MAJO Matsushiro 83.14 50 *e*P **P** **04 38 37.7 +1.0**
MAT Matsushiro 83.14 50 P **P** **04 38 37.1 +0.4**
SBUM Sibu 83.45 92 P **P** **04 38 41.1 +2.5**
SPMN St. Paul 83.86 323 ⇓P **P** **04 38 39.8 -0.4**
baz=84
KMSC Kings Mountain 84.12 309 ⇓P **P** **04 38 41.8 0.0**
baz=84
JFWS Jewell Farm 84.17 320 *e*P **P** **04 38 41.3 -0.6**
JFWS pmax pmax
comp=Z,32nm,1.2s
JFWS Jewell Farm 84.17 320 *e*P **P** **04 38 41.2 -0.6**
comp=Z,32nm,1.2s
SFIN Scholer Farm 84.17 316 ⇓P **P** **04 38 41.3 -0.6**
baz=84
MDND Maddock 85.09 328 ⇓P **P** **04 38 45.5 -1.0**
baz=85
WCI Wyandotte Cave 85.15 314 *e*P **P** **04 38 46.8 -0.1**
WCI pmax pmax
comp=Z,6.0nm,0.6s
WCI Wyandotte Cave 85.15 314 *e*P **P** **04 38 46.8 -0.1**
comp=Z,5.5nm,0.6s
HDIL Hopedale 85.28 317 *e*P **P** **04 38 47.7 +0.2**
comp=Z,77nm,1.5s
CPCT Cooper Cave 85.92 311 *e*P **P** **04 38 51.1 +0.4**
A24A Westby 86.08 331 ⇑P **P** **04 38 51.0 -0.4**
baz=86,SNR=7.3
USIN University of 86.12 315 *e*P **P** **04 38 51.6 -0.1**
comp=Z,15nm,0.8s
A23A Redstone 86.40 331 ⇓P **P** **04 38 52.4 -0.5**
baz=86
DGMT Dagmar 86.52 331 *e*P **P** **04 38 54.0 +0.4**
comp=Z,19nm,0.9s
DGMT Dagmar 86.52 331 ⇑P **P** **04 38 53.4 -0.1**
baz=86
A22A Carney Farms, 86.78 332 ⇓P **P** **04 38 54.1 -0.7**
baz=86,SNR=19
ECSD EROS Data Cent 86.81 324 *e*P **P** **04 38 54.5 -0.5**
comp=Z,20nm,0.8s
SIUC Southern Illin 87.19 315 *e*P **P** **04 38 57.2 +0.3**
comp=Z,12nm,0.8s
C24A Savage 87.37 330 ⇑P **P** **04 38 57.4 -0.3**
baz=87
B22A Reddig Ranch S 87.37 332 ⇓P **P** **04 38 57.5 -0.2**
baz=87,SNR=12
BRSD Miller 87.40 325 ⇑P **P** **04 38 57.1 -0.7**
baz=87
C23A Lambert 87.46 331 ⇓P **P** **04 38 58.1 0.0**
baz=87,SNR=5.1
WVT Waverly 87.47 313 *e*P **P** **04 38 57.5 -0.8**
WVT pmax pmax
comp=Z,17nm,1.4s
WVT Waverly 87.47 313 *e*P **P** **04 38 57.5 -0.8**
comp=Z,17nm,1.4s
A20A Cobblestone Ra 87.63 333 ⇑P **P** **04 38 58.6 -0.3**
baz=87,SNR=5.6
D24A Glendive 87.66 330 ⇑P **P** **04 38 58.4 -0.7**
baz=87
B21A Ellsworth Farm 87.66 332 ⇑P **P** **04 38 58.8 -0.3**
baz=87
C22A Vida 87.78 331 ⇓P **P** **04 38 59.2 -0.4**
baz=87,SNR=13
A19A Klindworth Far 87.89 333 ⇓P **P** **04 39 00.4 +0.2**
baz=88,SNR=10
TIGA Tifton 87.95 308 ⇑P **P** **04 39 01.0 +0.3**
baz=88
D23A Lindsay 87.97 330 ⇓P **P** **04 39 00.3 -0.3**
baz=88
B20A Solberg Farm, 88.03 333 ⇓P **P** **04 39 00.7 -0.2**
baz=88,SNR=22
E24A Baker 88.10 330 ⇑P **P** **04 39 01.0 -0.2**
baz=88
C21A Desert Coulee 88.19 332 ⇓P **P** **04 39 01.5 -0.1**
baz=88
A18A Metzger Ranch, 88.30 334 ⇓P **P** **04 39 01.7 -0.4**
baz=88,SNR=18
BDFB Brasilia 88.32 250 P **P** **04 39 03.5 +0.8**
BDFB Brasilia 88.32 250 P **P** **04 39 03.5 +0.8**
comp=Z,11nm,0.8s,baz=60,slow=3.7,SNR=18
BDFB LR LR 05 17 53.9
comp=Z,484nm,21.8s,baz=136,slow=35
B19A Brinkman Farms 88.36 333 ⇑P **P** **04 39 02.4 -0.1**
baz=88,SNR=28
D22A Cohagen 88.38 331 ⇓P **P** **04 39 02.7 +0.2**
baz=88,SNR=10.0
E23A Ismay 88.56 330 ⇓P **P** **04 39 02.9 -0.4**
baz=88,SNR=6.2
A17A Triple J Farms 88.58 334 ⇑P **P** **04 39 02.8 -0.7**
baz=88,SNR=5.9
C20A Veseth Ranch, 88.63 332 ⇓P **P** **04 39 03.5 -0.2**
baz=88,SNR=19
B18A Beardsley Farm 88.72 334 ⇓P **P** **04 39 03.8 -0.3**
baz=88,SNR=23
F24A Ekalaka 88.73 329 ⇓P **P** **04 39 04.0 -0.2**
baz=88
D21A La Casta Ranch 88.77 331 ⇑P **P** **04 39 04.6 +0.2**
baz=88
E22A Miles City 88.87 330 ⇓P **P** **04 39 04.8 -0.1**
baz=88
A16A West Butte Ran 88.89 335 ⇑P **P** **04 39 03.8 -1.2**
baz=88,SNR=28
C19A Slack Wire Ran 89.00 333 ⇓P **P** **04 39 05.5 0.0**
baz=89,SNR=21
EGMT Eagleton 89.02 333 *e*P **P** **04 39 05.7 +0.1**
comp=Z,66nm,1.3s
EGMT Eagleton 89.02 333 ⇑P **P** **04 39 05.5 -0.1**
baz=89,SNR=17
LRAL Lakeview Retre 89.05 311 *e*P **P** **04 39 05.2 -0.6**
comp=Z,4.2nm,0.6s
G24A Alzada 89.13 329 ⇓P **P** **04 39 05.5 -0.6**
baz=89
B17A L&G Farms, Che 89.17 334 ⇑P **P** **04 39 05.3 -1.0**
baz=89
D20A Manuel Ranch, 89.19 332 ⇓P **P** **04 39 06.0 -0.3**
baz=89,SNR=13
F23A Volborg 89.23 330 ⇓P **P** **04 39 05.8 -0.7**
baz=89,SNR=9.4
J28A Allard Ranch, 89.23 326 ⇓P **P** **04 39 06.1 -0.6**
baz=89,SNR=11
E21A Keefer Ranch, 89.23 331 ⇑P **P** **04 39 04.9 -1.7**
baz=89
A15A Johnson Ranch, 89.26 336 ⇑P **P** **04 39 05.7 -1.0**
baz=89,SNR=22
BGNE Belgrade 89.31 323 ⇓P **P** **04 39 06.5 -0.5**
baz=89,SNR=5.8
K29A Lazy Trails An 89.32 325 ⇓P **P** **04 39 07.2 +0.2**
baz=89,SNR=8.8
B16A M & M Farms, S 89.39 335 ⇓P **P** **04 39 06.3 -1.0**
baz=89,SNR=11

D19A	Cripps Ranch, baz=89,SNR=7.5	89.41	332	⇓P	P	04 39 06.7	-0.7
A14A	Double T Ranch baz=89,SNR=16	89.49	336	⇑P	P	04 39 07.0	-0.8
F22A	Rosebud baz=89,SNR=6.2	89.53	330	⇓P	P	04 39 07.6	-0.3
G23A	Biddle baz=89	89.64	329	⇑P	P	04 39 08.0	-0.5
H24A	Dirks Ranch, A baz=89,SNR=5.3	89.65	329	⇓P	P	04 39 07.2	-1.4
E20A	Meyer Farm, Mu baz=89	89.68	332	⇓P	P	04 39 08.2	-0.5
C17A	Wharram Farm, baz=89,SNR=11	89.72	334	⇑P	P	04 39 08.2	-0.6
D18A	Linhart Farms, baz=89,SNR=12	89.73	333	⇑P	P	04 39 08.8	-0.1
B15A	Bradely Ranch, baz=89,SNR=26	89.77	335	⇑P	P	04 39 07.8	-1.3
F21A	Absaloka Mine, baz=89	89.84	331	⇓P	P	04 39 08.8	-0.6
K28A	Ten Mile Ranch baz=90,SNR=13	89.84	326	⇓P	P	04 39 09.5	0.0
A13A	Flathead Natio baz=89	89.85	337	⇓P	P	04 39 08.9	-0.5
C16A	Fuhringer Ranc baz=90,SNR=13	89.92	334	⇓P	P	04 39 08.3	-1.5
RSSD	Black Hills	89.93	328	eP	P	04 39 10.1	0.0
RSSD	comp=Z,25nm,1.4s			pmax	pmax		
RSSD	Black Hills comp=Z,25nm,1.4s	89.93	328	eP	P	04 39 10.1	0.0
L29A	Maesberg Ranch baz=90	89.93	325	⇑P	P	04 39 10.0	0.0
E19A	Rath Farm, Rou baz=90,SNR=9.8	89.96	332	⇓P	P	04 39 09.5	-0.5
B14A	Marquette Ranc baz=90	89.97	336	⇓P	P	04 39 09.0	-1.1
G22A	Birney baz=90	90.00	330	⇓P	P	04 39 10.0	-0.3
M30A	Dale-Ortello V baz=90	90.05	324	⇑P	P	04 39 10.0	-0.4
D17A	Six Diamond Ra baz=90,SNR=13	90.10	334	⇓P	P	04 39 10.1	-0.6
H23A	Clabaugh Cattl baz=90	90.16	329	⇓P	P	04 39 10.2	-0.8
C15A	Salmond Ranch, baz=90,SNR=5.3	90.25	335	⇑P	P	04 39 10.4	-1.0
A12A	Yaak River Ran baz=90	90.25	337	⇑P	P	04 39 10.8	-0.5
K27A	Flueckinger Fa baz=90	90.25	326	⇓P	P	04 39 11.3	-0.1
KSU1	Kansas State U comp=Z,7.0nm,0.8s	90.25	320	eP	P	04 39 11.3	-0.1
F20A	Billings baz=90,SNR=5.3	90.27	331	⇑P	P	04 39 11.3	-0.2
E18A	Harlowton baz=90,SNR=13	90.30	333	⇓P	P	04 39 11.8	+0.2
B13A	Whitefish baz=90,SNR=7.0	90.36	336	⇓P	P	04 39 11.7	-0.1
G21A	Lodge Grass baz=90	90.36	330	⇑P	P	04 39 11.3	-0.7
I24A	Kuemmerle Ranc baz=90	90.40	328	⇑P	P	04 39 11.6	-0.5
J25A	Sunshine Ranch baz=90	90.41	327	⇓P	P	04 39 11.8	-0.4
D16A	Dana Ranch, Ca baz=90,SNR=34	90.51	334	⇑P	P	04 39 12.2	-0.4
F19A	Roth Farm, Mol baz=90,SNR=15	90.53	332	⇓P	P	04 39 12.8	+0.1
H22A	Clearmont baz=90,SNR=5.7	90.53	330	⇓P	P	04 39 11.9	-0.8
B12A	Libby baz=90	90.64	337	⇑P	P	04 39 12.6	-0.5
C14A	Swan Lake baz=90	90.64	336	⇓P	P	04 39 12.9	-0.3
I23A	Meade Ranch, G baz=90	90.67	329	⇑P	P	04 39 13.0	-0.5
K26A	Motz Farm, Whi baz=90	90.68	327	⇓P	P	04 39 12.8	-0.6
N30A	Hueftle Ranch, baz=90	90.73	324	⇑P	P	04 39 13.2	-0.5
E17A	Martinsdale baz=90,SNR=18	90.74	333	⇓P	P	04 39 13.5	-0.3
G20A	Bridger baz=90,SNR=5.9	90.77	331	⇑P	P	04 39 13.4	-0.5
L27A	T5 Ranch, Ells baz=90	90.78	326	⇑P	P	04 39 13.6	-0.3
F18A	Big Timber baz=90,SNR=11	90.78	332	⇑P	P	04 39 13.8	-0.1
H21A	Big Horn, Sher baz=90	90.79	330	⇓P	P	04 39 13.3	-0.7
J24A	Dixon Ranch, L baz=90	90.84	328	⇓P	P	04 39 14.0	-0.2
JTMT	Jette comp=Z,5.9nm,0.9s	90.84	336	eP	P	04 39 14.4	+0.3
D15A	Lincoln baz=90,SNR=11	90.85	335	⇑P	P	04 39 13.2	-1.0
GCMT	Greycliff comp=Z,7.7nm,0.9s	90.86	332	eP	P	04 39 14.6	+0.3
HRY	Holter Researc comp=Z,3.5nm,0.7s	90.88	334	eP	P	04 39 14.1	-0.3
BSMT	Bassoo Peak comp=Z,7.1nm,1.3s	90.92	336	eP	P	04 39 14.8	+0.3
SWMT	Swartz Lake comp=Z,22nm,1.3s	90.95	336	eP	P	04 39 15.1	+0.5
N29A	Votaw Ranch, W baz=91	90.96	324	⇓P	P	04 39 13.9	-0.8
E16A	East Helena baz=91	90.98	334	⇑P	P	04 39 14.3	-0.5
C13A	Hot Springs baz=91	91.00	336	⇓P	P	04 39 14.5	-0.3
SLMT	Seeley Lake comp=Z,23nm,1.3s	91.01	335	eP	P	04 39 14.7	-0.3
K25A	Mack Ranch, Ha baz=91,SNR=11	91.06	327	⇓P	P	04 39 15.1	-0.2
F17A	Fitzpatrick Pl baz=91,SNR=22	91.14	333	⇓P	P	04 39 15.5	-0.1
D14A	Greenough baz=91,SNR=17	91.16	335	⇑P	P	04 39 14.8	-0.8
I22A	9 Mile Ranch, baz=91,SNR=6.4	91.16	329	⇑P	P	04 39 14.7	-1.0
J23A	Dilts Ranch, B baz=91	91.16	328	⇓P	P	04 39 14.8	-1.0
L26A	Underwood Farm baz=91	91.16	326	⇓P	P	04 39 15.5	-0.2
O30A	MW Ranch, Wils baz=91	91.18	323	⇓P	P	04 39 14.8	-0.9
CHMT	Chamberlain Mo comp=Z,14nm,1.5s	91.21	335	eP	P	04 39 15.8	-0.2
G18A	Lazy EL Ranch, baz=91	91.22	332	⇑P	P	04 39 15.2	-0.8
M27A	Reverse DX Ran baz=91	91.24	325	⇑P	P	04 39 15.9	-0.2
C12B	Naegeli Ranch, baz=91	91.27	337	⇓P	P	04 39 15.1	-0.9
RLMT	Red Lodge comp=Z,15nm,1.4s	91.27	332	eP	P	04 39 16.7	+0.4
H20A	Greybull baz=91,SNR=6.7	91.29	330	⇓P	P	04 39 15.5	-0.8
NEW	Newport comp=Z,8.4nm,0.9s	91.30	338	eP	P	04 39 15.7	-0.4
NEW	Newport baz=91	91.30	338	⇓P	P	04 39 15.5	-0.6
P31A	Stockton baz=91	91.35	322	⇑P	P	04 39 15.7	-0.8
K24A	Anderson Ranch baz=91	91.39	328	⇓P	P	04 39 16.0	-0.9
C11A	Tepee Creek (N baz=91	91.40	337	⇑P	P	04 39 16.0	-0.6
D13A	Huson baz=91,SNR=8.7	91.47	336	⇓P	P	04 39 16.5	-0.5
L25A	Engebretsen Ra baz=91	91.47	327	⇓P	P	04 39 16.6	-0.6
N28A	Pribbeno Ranch baz=91,SNR=5.7	91.50	324	⇑P	P	04 39 17.2	-0.1
MSO	Missoula baz=91	91.52	335	⇓P	P	04 39 16.6	-0.7
H19A	Powell baz=91,SNR=8.0	91.53	331	⇓P	P	04 39 17.2	-0.2
OGNE	Ogallala baz=91	91.54	325	⇓P	P	04 39 16.8	-0.6
J22A	Midwest baz=91	91.55	329	⇑P	P	04 39 16.2	-1.4
I21A	Big Trails, Te baz=91,SNR=12	91.56	330	⇓P	P	04 39 16.1	-1.5
O29A	4D Ranch, Culb baz=91	91.58	324	⇑P	P	04 39 16.8	-0.8
F16A	Kennard Place, baz=91,SNR=14	91.60	333	⇓P	P	04 39 17.1	-0.6
M26A	McRoberts Ranc baz=91	91.64	326	⇓P	P	04 39 17.8	-0.2
G17A	Pierce Place, baz=91,SNR=8.2	91.66	333	⇑P	P	04 39 18.1	+0.1
BOZ	Bozeman (W)	91.72	333	eP	P	04 39 18.4	+0.2
BOZ	comp=Z,10.0nm,0.9s			pmax	pmax		
BOZ	Bozeman (W) comp=Z,10nm,0.9s	91.72	333	eP	P	04 39 18.4	+0.2
K23A	Bowen Ranch, D baz=91	91.72	328	⇑P	P	04 39 17.0	-1.4
Q31A	Ellis baz=91	91.75	322	⇑P	P	04 39 17.1	-1.3
P30A	Selden baz=91	91.76	323	⇓P	P	04 39 17.4	-1.1
I20A	Worland baz=91,SNR=14	91.79	330	⇑P	P	04 39 18.0	-0.6
H18A	Shoshone NF, C baz=91,SNR=6.4	91.79	332	⇓P	P	04 39 18.0	-0.7
D12A	Red Ives Fores baz=91	91.80	336	⇓P	P	04 39 17.6	-0.9
F15A	Butte baz=92,SNR=6.8	91.87	334	⇓P	P	04 39 18.1	-0.9
LRM	Limekiln Ridge comp=Z,59nm,0.9s	91.87	334	eP	P	04 39 19.3	+0.2
N27A	Anderson Farm, baz=92	91.88	325	⇑P	P	04 39 18.5	-0.5
L24A	Wheatland baz=92	91.99	327	⇑P	P	04 39 18.6	-1.0
J21A	Lysite baz=92,SNR=11	92.01	330	⇑P	P	04 39 18.8	-0.9
O28A	Krutsinger Ran baz=92	92.05	324	⇑P	P	04 39 19.2	-0.6
P29A	Atwood baz=92	92.05	323	⇑P	P	04 39 19.1	-0.7
I19A	Meeteetse baz=92,SNR=9.9	92.06	331	⇑P	P	04 39 19.7	-0.3
M25A	Palm-Egli Farm baz=92	92.08	326	⇓P	P	04 39 19.8	-0.3
TUL1	Tulsa baz=92	92.17	318	⇓P	P	04 39 19.6	-0.7
N26A	Koester Ranch, baz=92	92.18	325	⇓P	P	04 39 20.2	-0.3
Q30A	Quinter baz=92	92.19	323	⇓P	P	04 39 19.6	-0.8
K22A	Casper baz=92	92.19	329	⇑P	P	04 39 19.3	-1.3
F14A	Wisdom baz=92,SNR=6.2	92.20	334	⇑P	P	04 39 19.6	-0.9
J20A	Shoshoni baz=92,SNR=12	92.26	330	⇓P	P	04 39 20.2	-0.6
L23A	Garrett baz=92,SNR=6.0	92.27	328	⇑P	P	04 39 20.1	-0.8
DLMT	Dilin comp=Z,12nm,1.2s	92.31	334	eP	P	04 39 21.1	+0.1
O27A	Beecher Island baz=92,SNR=11	92.34	325	⇑P	P	04 39 20.5	-0.7
QLMT	Earthquake Lak comp=Z,0.5nm,0.7s	92.34	333	eP	P	04 39 21.7	+0.4
R31A	Burdett baz=92	92.36	322	⇑P	P	04 39 20.3	-0.9
H16A	Russell Place, baz=92	92.38	333	⇑P	P	04 39 20.6	-0.8
H17A	Grant Village baz=92,SNR=8.2	92.38	332	⇑P	P	04 39 20.9	-0.7
M24A	Cheyenne baz=92	92.40	327	⇓P	P	04 39 21.0	-0.5
E12A	Beaver Dam Sad baz=92,SNR=7.9	92.43	336	⇑P	P	04 39 20.4	-1.1
K21A	Alcova baz=92	92.51	329	⇑P	P	04 39 21.2	-0.8
N25A	Grer baz=92	92.59	326	⇑P	P	04 39 22.2	-0.3
Q29A	Oakley baz=92	92.63	323	⇓P	P	04 39 21.6	-0.9
L22A	Ellis Ranch, M baz=92,SNR=10	92.66	328	⇑P	P	04 39 22.2	-0.6
I18A	Diamond G Ranc baz=92	92.67	331	⇓P	P	04 39 22.3	-0.5
O26A	Horse Wrangler baz=92	92.69	325	⇓P	P	04 39 22.1	-0.7
J19A	Crowheart baz=92	92.73	330	⇓P	P	04 39 22.5	-0.6
R30A	Dighton baz=92	92.75	322	⇑P	P	04 39 22.3	-0.7
I17A	Pilgrim Ck. baz=92	92.78	332	⇓P	P	04 39 23.1	-0.2
M23A	Laramie baz=92	92.80	327	⇑P	P	04 39 23.2	-0.2
PHWY	Pil Hill comp=Z,14nm,0.9s	92.82	327	eP	P	04 39 23.4	-0.2
S31A	Mullinville baz=92	92.85	321	⇑P	P	04 39 22.7	-0.8
MCMT	McKenzie Canyo comp=Z,4.4nm,1.2s	92.86	334	eP	P	04 39 24.1	+0.4
P27A	Ficken Ranch, baz=92	92.88	324	⇓P	P	04 39 23.2	-0.6
Q28A	Sharon Springs baz=92	92.91	324	⇑P	P	04 39 23.0	-0.8
N24A	Carr baz=93	92.94	326	⇑P	P	04 39 23.6	-0.4
IMW	Indian Meadow comp=Z,6.8nm,1.0s	92.94	332	eP	P	04 39 24.5	+0.3
K20A	Yellowstone Ra baz=92,SNR=8.1	92.95	330	⇓P	P	04 39 22.6	-1.4
MOOW	Moose Ponds comp=Z,2.3nm,0.7s	93.00	332	eP	P	04 39 23.7	-0.6
K19A	Absolon Red Bu baz=93,SNR=5.3	93.01	330	⇑P	P	04 39 22.9	-1.4
R29A	Marienthal baz=93	93.07	323	⇓P	P	04 39 23.5	-1.0
L21A	Rawlins baz=93	93.11	329	⇑P	P	04 39 23.9	-1.0
O25A	Wiggins baz=93	93.17	326	⇑P	P	04 39 24.1	-1.0
I16A	Newdale baz=93,SNR=7.1	93.17	332	⇓P	P	04 39 25.6	+0.6
M22A	Cedar Creek Ra baz=93	93.24	328	⇓P	P	04 39 24.5	-1.0
P26A	Davis Ranch, A baz=93,SNR=5.7	93.25	325	⇑P	P	04 39 24.7	-0.8
KSCO	Kaye Shedlock' baz=93	93.33	324	⇓P	P	04 39 25.4	-0.5
S30A	Montezuma baz=93	93.33	322	⇓P	P	04 39 25.0	-0.8
T31A	Randall Ranch, baz=93	93.35	321	⇓P	P	04 39 24.9	-0.9
BW06	Boulder Array comp=Z,3.6nm,1.1s	93.35	330	eP	P	04 39 24.4	-1.6
PDAR	Pinedale Array	93.35	330	P	P	04 39 23.8	-2.2
PDAR	Pinedale Array	93.35	330	P	P	04 39 23.8	-2.2
PDAR	comp=Z,2.5nm,0.8s,baz=63,slow=4.2,SNR=17			LR	LR	05 25 02.3	
N23A	comp=Z,237nm,19.3s,baz=42,slow=38 Red Feather La baz=93,SNR=8.6	93.36	327	⇑P	P	04 39 25.7	-0.4
M21A	Separation Pea baz=93,SNR=7.1	93.40	328	⇓P	P	04 39 25.1	-1.1
R28A	Tribune baz=93	93.46	323	⇓P	P	04 39 26.3	-0.1
G12A	Big Creek, Yel baz=93	93.48	335	⇓P	P	04 39 25.9	-0.6
L20A	Wamsutter baz=93	93.48	329	⇑P	P	04 39 26.0	-0.6
O24A	Longmont baz=93	93.60	326	⇑P	P	04 39 27.0	0.0
N22A	Wattenberg Ran baz=93	93.66	327	⇓P	P	04 39 27.2	-0.3
P25A	Willow Gulch B baz=93	93.67	325	⇑P	P	04 39 27.2	-0.2
S29A	Ulysses baz=93	93.68	322	⇑P	P	04 39 27.1	-0.3
H12A	Diamond D Ranc baz=93	93.82	335	⇑P	P	04 39 27.4	-0.6
L19A	Farson baz=93	93.83	330	⇑P	P	04 39 27.5	-0.6
M20A	Sweetwater, Wa baz=94,SNR=12	93.85	329	⇑P	P	04 39 27.5	-0.8
I14A	Mackay baz=94,SNR=16	93.86	334	⇓P	P	04 39 28.0	-0.2
O23A	Lake Granby, G baz=94	93.91	327	⇑P	P	04 39 28.2	-0.5
R27A	Eads baz=94	93.99	324	⇓P	P	04 39 28.7	-0.1
U31A	Nine Bar Ranch baz=94	94.00	321	⇓P	P	04 39 28.7	-0.1
S28A	Manter baz=94,SNR=5.9	94.09	323	⇑P	P	04 39 28.7	-0.6
ISCO	Idaho Springs	94.10	326	eP	P	04 39 28.8	-0.8
ISCO	comp=Z,9.0nm,1.3s			pmax	pmax		
ISCO	Idaho Springs comp=Z,9.5nm,1.3s	94.10	326	eP	P	04 39 28.8	-0.8
ISCO	Idaho Springs baz=94,SNR=8.0	94.10	326	⇑P	P	04 39 28.6	-1.0
N21A	Black Mountain baz=94,SNR=7.7	94.16	328	⇑P	P	04 39 28.6	-1.2
Q25A	Bedland, Calha baz=94	94.18	325	⇑P	P	04 39 29.3	-0.5
O22A	Kremmling baz=94	94.23	327	⇑P	P	04 39 29.3	-0.9
M19A	Rock Springs baz=94	94.24	330	⇑P	P	04 39 29.5	-0.5
R26A	Arlington baz=94,SNR=9.7	94.29	324	⇓P	P	04 39 29.6	-0.6
BMO	Blue Mountains	94.39	336	eP	P	04 39 29.2	-1.3
BMO	comp=Z,4.0nm,0.8s			pmax	pmax		
BMO	Blue Mountains comp=Z,3.8nm,0.8s	94.39	336	eP	P	04 39 29.2	-1.3
N20A	Spence Gulch, baz=94,SNR=6.1	94.42	329	⇓P	P	04 39 30.0	-0.9
V31A	Spring Creek L baz=94	94.45	320	⇓P	P	04 39 31.1	+0.2
HLID	Hailey baz=94	94.53	334	⇓P	P	04 39 30.9	-0.4
Q24A	Divide baz=94	94.56	326	⇓P	P	04 39 31.2	-0.5
T28A	Walsh baz=94	94.57	323	⇑P	P	04 39 31.4	-0.1
O21A	Pagoda baz=94	94.59	328	⇓P	P	04 39 30.9	-0.8
WMOK	Wichita Mounta	94.67	319	eP	P	04 39 31.7	-0.2
WMOK	comp=Z,6.0nm,1.1s			pmax	pmax		
WMOK	Wichita Mounta comp=Z,5.7nm,1.1s	94.67	319	eP	P	04 39 31.7	-0.2
P22A	Eagle baz=94	94.78	327	⇓P	P	04 39 31.9	-0.7
R25A	Fountain Ranch baz=94	94.81	325	⇓P	P	04 39 32.1	-0.5
S26A	Kim baz=94	94.84	324	⇓P	P	04 39 32.1	-0.6
M17A	Scullys Gap (B baz=94	94.89	330	⇑P	P	04 39 32.2	-0.8
V30A	Spur Ranch, Mi baz=94	94.90	321	⇓P	P	04 39 32.6	-0.4
T27A	Campo baz=94	94.91	323	⇑P	P	04 39 32.5	-0.6
W31A	Holland Ranch, baz=95	94.95	320	⇓P	P	04 39 33.1	-0.1
O20A	White River Ci baz=95	94.99	328	⇓P	P	04 39 33.0	-0.5
HWUT	Hardware Ranch comp=Z,11nm,1.0s	95.13	331	eP	P	04 39 33.5	-0.6
R24A	Sanders Place, baz=95	95.13	325	⇓P	P	04 39 33.8	-0.4
MFID	Camas Ranch comp=Z,15nm,1.3s	95.15	335	eP	P	04 39 33.9	-0.2
MFID	Camas Ranch baz=95	95.15	335	⇓P	P	04 39 33.8	-0.3
U28A	Mallet baz=95	95.20	322	⇑P	P	04 39 34.1	-0.4
O19A	Miners Draw (B baz=95	95.23	329	⇑P	P	04 39 34.0	-0.6
T26A	Comanche Natio baz=95	95.25	323	⇓P	P	04 39 34.3	-0.5
S25A	Robets Cordova baz=95,SNR=7.3	95.27	324	⇑P	P	04 39 33.8	-1.0
X31A	McDonald Ranch baz=95	95.39	320	⇑P	P	04 39 35.1	-0.1
Q22A	Crested Butte, baz=95,SNR=6.5	95.45	327	⇑P	P	04 39 34.6	-1.2
HVU	Hansel Valley	95.45	332	eP	P	04 39 35.7	+0.1
HVU	comp=Z,7.0nm,1.2s			pmax	pmax		
HVU	Hansel Valley comp=Z,7.1nm,1.2s	95.45	332	eP	P	04 39 35.7	+0.1
U27A	Thompson Grove baz=95	95.47	323	⇓P	P	04 39 35.1	-0.5
R23A	Moffat baz=95,SNR=5.9	95.50	326	⇑P	P	04 39 34.5	-1.5
P20A	De Beque baz=95	95.58	328	⇓P	P	04 39 35.8	-0.4
Y32A	R-V Farms, Ver baz=95	95.58	319	⇓P	P	04 39 36.0	-0.1
S24A	Houchin Ranch, baz=95	95.66	325	⇑P	P	04 39 36.3	-0.4
T25A	Trinidad baz=95,SNR=8.9	95.67	324	⇓P	P	04 39 35.8	-0.9
V28A	Channing baz=95	95.69	322	⇓P	P	04 39 36.2	-0.5
P19A	Cripple Cowboy baz=95	95.72	328	⇑P	P	04 39 36.4	-0.4
R22A	Saguache, Gunn baz=96,SNR=5.3	95.89	326	⇓P	P	04 39 37.3	-0.6
JLU	Jordanelle comp=Z,13nm,1.5s	95.94	330	eP	P	04 39 38.0	+0.1
U26A	Atchley Ranch, baz=96,SNR=7.8	95.94	323	⇑P	P	04 39 36.8	-1.1
Q20A	Ridgley Place, baz=96	95.99	328	⇓P	P	04 39 37.9	-0.1
V27A	Dan Oppiter Fa baz=96	95.99	322	⇑P	P	04 39 37.2	-0.9
WHTX	Lake Whitney baz=96	96.00	316	⇓P	P	04 39 37.3	-0.7
X30A	Coker Ranch, T baz=96,SNR=9.7	96.01	320	⇑P	P	04 39 36.8	-1.3
Y31A	Rekieta Farm, baz=96	96.05	319	⇓P	P	04 39 38.0	-0.3
Z32A	Haskell baz=96,SNR=6.3	96.13	318	⇑P	P	04 39 37.9	-0.7
R21A	Cimarron baz=96	96.14	327	⇓P	P	04 39 38.2	-0.6
U25A	Circle Dot Ran baz=96,SNR=7.7	96.26	324	⇓P	P	04 39 38.6	-0.8
S22A	4UR Ranch, Cre baz=96,SNR=7.6	96.32	326	⇓P	P	04 39 38.7	-1.0
V26A	Tequesquite Ra baz=96	96.44	323	⇑P	P	04 39 39.4	-0.7
Z31A	Sharp Cattle R baz=96	96.48	319	⇓P	P	04 39 39.9	-0.3
T23A	Casias Ranch, baz=96,SNR=7.9	96.53	325	⇑P	P	04 39 40.3	-0.4
X28A	Dimmitt baz=96	96.64	321	⇓P	P	04 39 40.2	-0.8
W27A	Bowe Ranch, En baz=96	96.65	322	⇓P	P	04 39 40.6	-0.4
R20A	Redvale baz=96	96.66	327	⇑P	P	04 39 40.9	-0.2
V25A	Rancho No Teng baz=96	96.81	323	⇑P	P	04 39 41.2	-0.7
SRU	San Rafael baz=96	96.81	329	⇑P	P	04 39 41.0	-0.8
DUG	Dugway baz=96	96.83	331	⇓P	P	04 39 41.0	-0.8
S21A	Coal Bank Pass baz=96,SNR=7.0	96.83	326	⇓P	P	04 39 41.1	-1.0
Y29A	Porterfield Fa baz=96	96.88	320	⇓P	P	04 39 41.6	-0.5
S20A	Disappointment baz=97	96.94	327	⇓P	P	04 39 41.9	-0.7
T22A	Edith baz=97,SNR=7.2	96.95	326	⇓P	P	04 39 41.9	-0.6
W26A	Owens Ranch, T baz=97	96.99	322	⇑P	P	04 39 41.8	-0.8
Z30A	Sanderson Ranc baz=97	97.03	319	⇓P	P	04 39 42.0	-0.7
Y28A	McKinney Farm, baz=97	97.14	321	⇑P	P	04 39 42.7	-0.5
U23A	El Rito baz=97	97.17	325	⇓P	P	04 39 43.3	-0.2
V24A	Rampart Ranch, baz=97	97.22	324	⇓P	P	04 39 43.3	-0.5
W25A	X Bar L Ranch, baz=97	97.23	323	⇓P	P	04 39 43.0	-0.7
Q16A	Castle Valley baz=97	97.25	329	⇑P	P	04 39 43.2	-0.6
T21A	Navajo Lake baz=97	97.26	326	⇑P	P	04 39 43.4	-0.5
232A	Coleman baz=97	97.30	318	⇓P	P	04 39 43.9	-0.1
Z29A	Hungry Hill Ra baz=97	97.36	320	⇑P	P	04 39 43.9	-0.4
MSTX	Muleshoe	97.36	321	⇑P	P	04 39 44.0	-0.3

	baz=97							
X26A	CR and CF Fran	97.43	322	⇑P		P	04 39 44.0	-0.6
	baz=97							
U22A	Llaves	97.45	325	⇑P		P	04 39 43.9	-0.9
	baz=97,SNR=7.1							
130A	Snyder	97.48	319	⇓P		P	04 39 44.7	-0.1
	baz=97							
Y27A	Causey	97.63	321	⇓P		P	04 39 45.2	-0.3
	baz=97							
231A	Bronte	97.63	318	⇑P		P	04 39 45.4	-0.1
	baz=97							
V23A	Ortiz Mt. (NFS	97.64	324	⇑P		P	04 39 45.2	-0.5
	baz=97							
Z28A	Tucker Farm, M	97.70	320	⇑P		P	04 39 45.4	-0.4
	baz=97							
W24A	Lazy 6 Ranch,	97.70	323	⇓P		P	04 39 45.3	-0.6
	baz=97							
332A	Millersview	97.74	317	⇑P		P	04 39 45.7	-0.2
	baz=97							
U21A	Nageezi	97.78	326	⇑P		P	04 39 45.8	-0.5
	baz=97							
S18A	Hurst Farm, Bl	97.78	328	⇑P		P	04 39 45.3	-0.9
	baz=97							
V22A	San Miguel Ran	97.85	325	⇑P		P	04 39 46.1	-0.5
	baz=98							
Y26A	Elida	97.94	322	⇓P		P	04 39 46.4	-0.5
	baz=98							
W23A	Werner Place,	98.10	324	⇓P		P	04 39 47.1	-0.6
	baz=98							
Z27A	Tatum	98.11	321	⇓P		P	04 39 47.2	-0.5
	baz=98							
331A	San Angelo	98.17	318	⇓P		P	04 39 47.5	-0.3
	baz=98							
X24A	Lazy VL Ranch,	98.23	323	⇑P		P	04 39 47.4	-0.9
	baz=98							
128A	Castleberry Fa	98.27	320	⇓P		P	04 39 47.8	-0.5
	baz=98							
V21A	Milan	98.28	325	⇓P		P	04 39 47.9	-0.6
	baz=98							
Y25A	Mesa, Roswell	98.38	322	⇑P		P	04 39 48.2	-0.6
	baz=98							
330A	Mertzon	98.51	318	⇓P		P	04 39 48.8	-0.6
	baz=98							
Z26A	Caprock	98.53	321	⇓P		P	04 39 48.3	-1.2
	baz=98,SNR=7.4							
V20A	Brimhall	98.67	326	⇑P		P	04 39 49.6	-0.6
	baz=98							
Y24A	Capitan	98.74	323	⇓Pdiff		P	04 39 50.2	-0.4
	baz=98							
431A	Sonora	98.75	317	⇑Pdiff		P	04 39 50.5	0.0
	baz=98							
532A	Rocksprings	98.78	317	⇑Pdiff		P	04 39 50.6	0.0
	baz=98							
329A	Wagon Wheel Ra	98.88	319	⇑Pdiff		P	04 39 50.8	-0.3
	baz=98							
Z25A	Roswell	98.90	322	⇓Pdiff		P	04 39 51.1	-0.1
	baz=98							
430A	Baggett Ranch,	99.02	318	⇑Pdiff		Pdif	04 39 51.4	-0.3
	baz=99							
Y23A	Lovelace Mesa,	99.04	323	⇓Pdiff		Pdif	04 39 51.6	-0.4
	baz=99							
531A	Rocksprings	99.11	317	⇓Pdiff		Pdif	04 39 52.0	-0.1
	baz=99							
Z24A	Sheeppen Canyo	99.19	322	⇑Pdiff		Pdif	04 39 52.2	-0.4
	baz=99							
125A	Gardner Draw,	99.36	321	⇓Pdiff		Pdif	04 39 52.6	-0.6
	baz=99							
328A	Wristen Ranch,	99.41	319	⇑Pdiff		Pdif	04 39 53.1	-0.3
	baz=99							
X21A	Alamocita Cree	99.46	325	⇓Pdiff		Pdif	04 39 53.0	-0.8
	baz=99							
Y22A	Socorro	99.48	324	⇑Pdiff		Pdif	04 39 52.9	-1.0
	baz=99							
R11A	Troy Canyon, C	99.50	332	⇓Pdiff		Pdif	04 39 53.4	-0.4
	baz=99							
530A	J-C Ranch, Com	99.56	318	⇑Pdiff		Pdif	04 39 54.0	-0.1
	baz=99							
226B	Tecolote Peak,	99.57	321	⇑Pdiff		Pdif	04 39 54.1	-0.1
	baz=99							
Z23A	Rita Site, Whi	99.67	323	⇑Pdiff		Pdif	04 39 54.1	-0.6
	baz=99							
124A	Stringfield Ra	99.73	322	⇓Pdiff		Pdif	04 39 53.9	-1.2
	baz=99							
U15A	North Rim	99.83	329	⇓Pdiff		Pdif	04 39 55.2	-0.3
	baz=99							
428A	Kincaid Ranch,	99.85	319	⇑Pdiff		Pdif	04 39 55.1	-0.3
	baz=100							
732A	Laxson Ranch,	99.88	316	⇑Pdiff		Pdif	04 39 55.8	+0.3
	baz=100							
225A	Deer Hill, Car	99.88	321	⇑Pdiff		Pdif	04 39 55.6	-0.1
	baz=100							
529A	Stev Forest Ra	100.07	318	⇓Pdiff		Pdif	04 39 56.2	-0.2
	baz=100							
427A	Hayter Ranch,	100.14	319	⇓Pdiff		Pdif	04 39 56.5	-0.2
	baz=100							
WUAZ	Wupatki	100.20	328	⇓Pdiff		Pdif	04 39 57.0	0.0
	baz=100							
NVAR	Mina Array Bea	100.43	334	P		Pdif	04 39 57.7	-0.4
NVAR	Mina Array Bea	100.43	334	P		Pdif	04 39 57.7	-0.4
	comp=Z,0.8nm,0.7s,baz=28,slow=4.4,SNR=5.9							
426A	McDonald Obser	100.61	320	⇓Pdiff		Pdif	04 39 58.6	-0.4
	baz=100							
324A	Moseley Ranch,	100.75	321	⇓Pdiff		Pdif	04 39 58.9	-0.6
	baz=100							
527A	Woodward Ranch	100.80	319	⇑Pdiff		Pdif	04 39 59.8	+0.1
	baz=100							
628A	Black Gap, Mar	100.92	318	⇑Pdiff		Pdif	04 40 00.3	+0.1
	baz=101							
Z20A	Nine Sixteen R	100.94	324	⇓Pdiff		Pdif	04 40 00.4	+0.1
	baz=101							
121A	Cookes Peak, D	101.02	324	⇑Pdiff		Pdif	04 40 01.0	+0.2
	baz=101							
526A	Mary Lane Ranc	101.12	319	⇑Pdiff		Pdif	04 40 01.4	+0.2
	baz=101							
X16A	Lo Mia Camp, P	101.16	327	⇑Pdiff		Pdif	04 40 01.6	+0.3
	baz=101							
627A	Terlingua Ranc	101.22	319	⇓Pdiff		Pdif	04 40 02.2	+0.6
	baz=101							
TXAR	Lajitas Array	101.47	319	P		Pdif	04 40 02.3	-0.3
TXAR	Lajitas Array	101.47	319	P		Pdif	04 40 02.3	-0.3
	comp=Z,0.4nm,0.7s,baz=119,slow=3.3,SNR=4.6							
FURC	Furnace Creek,	101.63	332	⇓Pdiff		Pdif	04 40 03.2	+0.1
	baz=101							
W13A	Hualapai Mount	101.63	329	⇓Pdiff		Pdif	04 40 03.7	+0.2
	baz=101							
CWC	Cottonwood Cre	102.12	333	⇓Pdiff		Pdif	04 40 05.8	+0.3
	baz=102							
320A	Kipp Ranch, An	102.36	323	⇑Pdiff		Pdif	04 40 06.9	+0.2
	baz=102							
ISA	Isabella	102.95	333	⇓Pdiff		Pdif	04 40 09.3	+0.1
	baz=103							
113A	Mohawk Valley,	103.58	328	⇓Pdiff		Pdif	04 40 12.2	+0.4
	baz=103							
WRA	Warramunga Arr	113.89	98	PKP		PKiKP	04 44 49.5	-0.2
WRA	Warramunga Arr	113.89	98	PKP		PKiKP	04 44 49.5	-0.2
	comp=Z,1.1nm,0.7s,baz=319,slow=1.4,SNR=6.5							
WRAB	Tennant Creek	113.89	98	ePKiKP		PKiKP	04 44 50.6	+0.8
WRAB	Tennant Creek	113.89	98	ePKPdf		PKiKP	04 44 50.5	+0.8
ASAR	Alice Springs	115.39	102	PKP		PKPdf	04 44 52.6	+0.1
ASAR	Alice Springs	115.39	102	PKP		PKPdf	04 44 52.6	+0.1
	comp=Z,1.5nm,0.6s,baz=306,slow=1.4,SNR=22							
STKA	Stephens Creek	125.12	107	PKP		PKPdf	04 45 09.7	-1.2
STKA	Stephens Creek	125.12	107	PKP		PKPdf	04 45 09.7	-1.2
	comp=Z,4.0nm,0.7s,baz=342,slow=1.2,SNR=6.2							
QSPA	South Pole Qui	125.18	180	ePKPdf		PKPdf	04 45 10.6	+0.5

WEL 18 04:32:09.6±0.5, 37°.52S×176°.21E, h184$^{km}_{\pm 5km}$, ML3.6/13, 5D, Error ellipse: s-maj=7.5km s-min=5.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
URZ	Urewera	1.02	136	⇓PN		Pn	04 32 37.9	0.0
URZ				SN		Sn	04 32 59.1	-0.7
MWZ	Matawai	1.32	128	PN		Pn	04 32 41.0	+0.7
MWZ				SN		Sn	04 33 04.8	+0.6
RAHZ	Arahi	1.55	154	PN		Pn	04 32 42.7	+0.3
RAHZ				SN		Sn	04 33 07.2	-0.8
BKZ	Black Stump Fm	1.66	172	PN		Pn	04 32 43.0	-0.4
BKZ				SN		Sn	04 33 07.9	-2.0
OTVZ	Oturere	1.69	194	PN		Pn	04 32 44.7	+0.8
CNGZ	Carnagh Statio	1.85	122	PN		Pn	04 32 45.8	+0.5
WNVZ	Wahianoa	1.86	195	PN		Pn	04 32 45.9	+0.2
KNZ	Kokohu	1.89	143	PN		Pn	04 32 45.2	-0.4
PKVZ	Pokaka	1.89	201	PN		Pn	04 32 46.5	+0.7
MOVZ	Moawhango	1.92	191	PN		Pn	04 32 45.6	-0.5
MCHZ	McNeill Hill	1.96	169	PN		Pn	04 32 46.5	+0.1
MCHZ				SN		Sn	04 33 14.1	-1.2
BHHZ	Black Hill Sta	1.97	183	⇓PN		Pn	04 32 46.1	-0.5
KAHZ	Kahuranaki	2.33	167	PN		Pn	04 32 49.9	-0.7
PNHZ	Pukenui	2.39	180	PN		Pn	04 32 50.2	-1.1
TSZ	Takapari Road	2.54	184	⇓PN		Pn	04 32 51.7	-1.3
PXZ	Pawanui	2.56	169	PN		Pn	04 32 51.9	-1.2
DVHZ	Dannevirke	2.77	181	⇓PN		Pn	04 32 54.0	-1.7
POWZ	Post Office Ro	2.89	187	PN		Pn	04 32 55.1	-1.9
BFZ	Birch Farm	3.15	179	PN		Pn	04 32 58.0	-2.3
MRZ	Mangatainoka R	3.17	189	PN		Pn	04 32 58.1	-2.4
MRZ				AML		AML	04 33 37.7	
TIWZ	Tintock	3.26	184	PN		Pn	04 32 59.2	-2.4
OGWZ	Otaki Gorge	3.39	193	PN		Pn	04 33 00.7	-2.4
HOWZ	Holdsworth Sta	3.41	189	⇓PN		Pn	04 33 00.6	-2.9
KIW	Kapiti Island	3.48	196	PN		Pn	04 33 01.5	-2.8
TMWZ	Te Maipa	3.59	184	PN		Pn	04 33 02.8	-2.9
MTW	Mount Morrison	3.67	188	PN		Pn	04 33 03.3	-3.3
CAW	Cannon Point	3.69	194	PN		Pn	04 33 04.0	-2.9
DUWZ	D'Urville Isla	3.73	208	PN		Pn	04 33 05.3	-2.0
TRWZ	Traveller	3.89	186	PN		Pn	04 33 06.3	-3.1
PAWZ	Paruwai Farm	3.90	189	AML		AML	04 33 53.6	
MSWZ	Moikau Station	3.96	191	PN		Pn	04 33 06.6	-3.7
TCW	Tory Channel	3.98	202	PN		Pn	04 33 07.6	-2.8
PLWZ	Palliser	4.11	190	PN		Pn	04 33 08.3	-3.9
TUWZ	Tuamarina	4.28	203	PN		Pn	04 33 11.6	-2.7
QRZ	Quartz Range	4.37	220	PN		Pn	04 33 13.1	-2.3
THZ	Tophouse	4.94	210	PN		Pn	04 33 20.9	-2.0
KHZ	Kahutara	5.30	202	PN		Pn	04 33 24.0	-3.4
LTZ	Lake Taylor	6.06	209	PN		Pn	04 33 33.7	-3.6

*IDC **18** 04:36:21.7±1.1, 35°.32N×28°.48E, h0^{km}, mb3.7/7, mb1 3.7/11, mb1mx3.6/28, mbtmp3.6/11, ML3.6/4, Error ellipse: s-maj=23.5km s-min=18.9km az=170.0*
*ISK **18** 04:36:24.3, 35°.26N×28°.47E, h28^{km}, ML3.7*
*ISCJB **18** 04:36:25.2±0.3, 35°.24N±0°.03×28°.56E±0°.02, h47$^{km}_{\pm 7km}$, mb3.5/7, Error ellipse: s-maj=4.7km s-min=3.2km az=17.6*
*ATH **18** 04:36:25.7, 35°.33N×28°.52E, h110$^{km}_{\pm 4km}$*
*CSEM **18** 04:36:27.0±0.1, 35°.31N×28°.56E, h70$^{km}_{\pm 7km}$, Mw3.1, Error ellipse: s-maj=4.6km s-min=2.9km az=22.0*
*DDA **18** 04:36:27.2, 35°.52N×28°.51E, h28^{km}, ML3.6*
*NIC **18** 04:36:28.7±0.1, 35°.10N×28°.75E, h51^{km}, ML3.3, MW3.1*

ISC 18 04:36:26.7±0.9, 35°.33N±0°.04×28°.55E±0°.03, h39$^{km}_{\pm 5km}$, n113, σ1^{s}28/134, mb3.7/7, 1C, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
KSL	Kastellorizon	1.17	46	*e*P		Pn	04 36 49.6	+3.0
AKAS	Kas	1.25	43	*e*Pn		Pn	04 36 48.6	+0.9
AKAS				*e*Sn		Sn	04 37 04.5	+1.1
FETY	Fethiye	1.37	18	*e*PN		Pn	04 36 49.8	+0.5
FETY	Fethiye	1.37	18	*e*Pn		Pn	04 36 49.8	+0.5
DALY	Dalyan (Mu˘la	1.48	3	*e*PN		Pn	04 36 51.0	+0.2
DALY				*e*SN		Sn	04 37 10.0	+1.0
DALY	Dalyan (Mu˘la	1.48	3	*e*Pn		Pn	04 36 51.0	+0.2
DALY				*e*Sn		Sn	04 37 10.0	+1.0
TURN	Turunc	1.54	2	*e*Pn		Pn	04 36 50.9	-0.7
TURN				*e*Sn		Sn	04 37 09.1	-1.2
DAT	Datca	1.60	331	*e*PN		Pn	04 36 51.8	-0.7
DAT	Datca	1.60	331	*e*Pn		Pn	04 36 51.8	-0.7
NIS1	Nisyros Isl.	1.69	319	*e*P		Pn	04 36 55.3	+1.7
NIS1	Nisyros Isl.	1.69	319	*e*P		Pn	04 36 55.3	+1.7
ELL	Elmali	1.79	38	*e*PN		Pn	04 36 55.5	+0.4
ELL	Elmali	1.79	38	*e*Pn		Pn	04 36 55.6	+0.4
YER	Yerkesik	1.81	353	*e*PN		Pn	04 36 55.3	-0.1
YER	Yerkesik	1.81	353	*e*Pn		Pn	04 36 55.3	-0.1
ZKR	Zakros	1.92	264	*e*P		Pn	04 36 58.1	+1.3
ZKR	Zakros	1.92	264	*e*P		Pn	04 36 58.1	+1.3
GLHS	Glhisar (BURDU	1.98	23	*e*PN		Pn	04 36 58.2	+0.5
GLHS	Glhisar (BURDU	1.98	23	*e*Pn		Pn	04 36 58.2	+0.5
BODT	Bodrum	2.00	330	*e*PN		Pn	04 36 57.4	-0.5
BODT	Bodrum	2.00	330	*e*Pn		Pn	04 36 57.4	-0.5
MLSB	Milas	2.06	343	*e*PN		Pn	04 36 58.7	0.0
MLSB	Milas	2.06	343	*e*Pn		Pn	04 36 58.7	0.0
GOLH	Golhisar	2.07	23	*e*Pn		Pn	04 37 01.0	+2.0
GOLH				*e*Sn		Sn	04 37 26.0	+2.3
KORT	Korkueli	2.21	41	*e*Pn		Pn	04 37 01.4	+0.4
KORT				*e*Sn		Sn	04 37 31.2	+4.0
ANTB	Antalya	2.31	47	*e*PN		Pn	04 37 03.2	+1.0
ANTB	Antalya	2.31	47	*e*Pn		Pn	04 37 03.3	+1.0
AYDN	Tasoluk	2.38	347	*e*Pn		Pn	04 37 04.2	+0.9
AYDN				*e*Sn		Sn	04 37 26.6	-4.7
DNZL	Cakiroluk	2.39	10	*e*Pn		Pn	04 37 04.1	+0.6
DNZL				*e*Sn		Sn	04 37 31.3	-0.2
DENT	Denizli	2.45	9	*e*PN		Pn	04 37 04.6	+0.4
DENT	Denizli	2.45	9	*e*Pn		Pn	04 37 04.6	+0.4
LAST	Lasithi	2.52	267	*e*P		Pn	04 37 07.1	+2.0
LAST				*e*S		Sn	04 37 36.0	+1.4
LAST	Lasithi	2.52	267	*e*P		Pn	04 37 07.1	+2.0
LAST				*e*S		Sn	04 37 36.0	+1.4
GCAM	G?zelcaml?	2.59	336	*e*Pn		Pn	04 37 06.2	+0.2
GCAM				*e*Sn		Sn	04 37 34.0	-2.2
BCK	Bucak	2.69	37	*e*PN		Pn	04 37 08.6	+1.1
BCK	Bucak	2.69	37	*e*Pn		Pn	04 37 08.6	+1.1
ISP	Isparta	2.95	32	*e*PN		Pn	04 37 12.8	+1.7
ISP	Isparta	2.95	32	*e*Pn		Pn	04 37 12.8	+1.7
APE	Apeiranthos	2.99	306	*e*PN		Pn	04 37 11.9	+0.3
APE	Apeiranthos	2.99	306	*e*Pn		Pn	04 37 11.9	+0.3
SIVA	Sivas	3.08	265	*e*P		Pn	04 37 13.8	+1.1
SIVA	Sivas	3.08	265	*e*P		Pn	04 37 13.8	+1.1
KHL	Karahalli	3.09	14	*e*PN		Pn	04 37 13.3	+0.4
KHL	Karahalli	3.09	14	*e*Pn		Pn	04 37 13.4	+0.4
AKMC	Akamas	3.11	95	P		Pn	04 37 13.7	+0.4
AKMC	Akamas	3.11	95	P		Pn	04 37 13.7	+0.4
KULA	Kula-Manisa	3.18	2	*e*PN		Pn	04 37 15.5	+1.3
KULA	Kula-Manisa	3.18	2	*e*Pn		Pn	04 37 15.5	+1.3
GAZI	Gazipasa	3.19	73	*e*Pn		Pn	04 37 14.0	-0.4
GAZI				*e*Sn		Sn	04 37 47.7	-3.5
IZM	Izmir	3.23	342	*e*PN		Pn	04 37 15.2	+0.3
IZM	Izmir	3.23	342	*e*Pn		Pn	04 37 15.2	+0.3
BLCB	Balcova	3.28	339	*e*PN		Pn	04 37 16.0	+0.5
BLCB	Balcova	3.28	339	*e*Pn		Pn	04 37 16.0	+0.5
ALFC	Alevga	3.32	92	P		Pn	04 37 16.5	+0.4
	5.0nm,0.2s							
ALFC				S		Sn	04 37 54.0	-0.4
ALFC	Alevga	3.32	92	P		Pn	04 37 16.5	+0.4
	5.0nm,0.2s							
ALFC				S		Sn	04 37 54.0	-0.4
LEF	Lefka	3.56	92	*e*PN		Pn	04 37 19.5	+0.1
LEF	Lefka	3.56	92	*e*Pn		Pn	04 37 19.5	+0.1
SHUT	Suhut-Afyon	3.59	26	*e*PN		Pn	04 37 21.6	+1.6
SHUT	Suhut-Afyon	3.59	26	*e*Pn		Pn	04 37 21.6	+1.6
ERMK	Ermenek	3.77	68	*e*Pn		Pn	04 37 25.6	+3.1
ERMK				*e*Sn		Sn	04 38 07.4	+1.6
ALT	Altintas	3.92	18	*e*PN		Pn	04 37 25.3	+0.9
ALT	Altintas	3.92	18	*e*Pn		Pn	04 37 25.3	+0.9
CSS	Prodhromos	3.94	94	⇑P		Pn	04 37 25.0	+0.4
CSS				S		Sn	04 38 09.0	-0.5
CSS	Prodhromos	3.94	94	*e*PN		Pn	04 37 25.4	+0.8
CSS	Prodhromos	3.94	94	Pn		Pn	04 37 24.8	+0.2
CSS				S		Sn	04 38 09.0	-0.5
KONT	Konya--Tatoy	4.03	49	*e*PN		Pn	04 37 27.2	+1.4
KONT	Konya--Tatoy	4.03	49	*e*Pn		Pn	04 37 27.2	+1.4
LFK	Lefkose	4.08	89	*e*PN		Pn	04 37 27.7	+1.1
LFK	Lefkose	4.08	89	*e*Pn		Pn	04 37 27.7	+1.1
TVSB	Tavsanli	4.17	10	*e*PN		Pn	04 37 29.3	+1.4
TVSB	Tavsanli	4.17	10	*e*Pn		Pn	04 37 29.3	+1.4
LADK	Ladik-KONYA	4.19	46	*e*PN		Pn	04 37 30.1	+1.9
LADK	Ladik-KONYA	4.19	46	*e*Pn		Pn	04 37 30.1	+1.9
ANKY	Antikythira Is	4.31	279	*e*P		Pn	04 37 30.6	+1.0
ANKY				*e*S		Sn	04 38 18.1	-0.5
ANKY	Antikythira Is	4.31	279	*e*P		Pn	04 37 30.6	+1.0
ANKY				*e*S		Sn	04 38 18.1	-0.5
KIZT	Kizilcal	4.43	36	*e*PN		Pn	04 37 32.7	+1.3
KIZT	Kizilcal	4.43	36	*e*Pn		Pn	04 37 32.7	+1.3
KYTH	Kithira	4.58	284	*e*P		Pn	04 37 34.1	+0.7
KYTH	Kithira	4.58	284	*e*P		Pn	04 37 34.1	+0.7
VLI	Veliai	4.75	289	*e*P		Pn	04 37 36.6	+0.9
VLI	Veliai	4.75	289	*e*P		Pn	04 37 36.6	+0.9
DYR	Agios Nikonas	5.23	288	*e*P		Pn	04 37 43.9	+1.5
DYR	Agios Nikonas	5.23	288	*e*P		Pn	04 37 43.9	+1.5
ITM	Ithomi	5.66	291	*e*P		Pn	04 37 49.7	+1.5
ITM	Ithomi	5.66	291	*e*P		Pn	04 37 49.7	+1.5
BRTR	Keskin Array B	5.97	41	Pn		Pn	04 37 53.8	+1.3
	0.2nm,0.3s,baz=234,slow=15,SNR=4.1							
BRTR				Sn		Sn	04 38 59.0	-0.7
	0.4nm,0.3s,baz=214,slow=24,SNR=8.9							
MMAI	Mount Meron Ar	6.13	110	Pn		Pn	04 37 54.5	-0.4
	3.3nm,0.3s,baz=306,slow=11,SNR=5.7							
MMAI				Sn		Sn	04 39 01.6	-2.2
	7.9nm,0.3s,baz=308,slow=22,SNR=5.5							
KSDI	Kefar Szold	6.26	108	Pn		Pn	04 37 56.8	+0.3
KSDI				Sn		Sn	04 39 04.1	-2.7
RLS	Riolos of Patr	6.30	298	*e*P		Pn	04 37 58.3	+1.3
RLS	Riolos of Patr	6.30	298	*e*P		Pn	04 37 58.3	+1.3
MMLI	Mount Malkishu	6.41	115	Pn		Pn	04 37 58.4	-0.1
HMDT	Nahal Hemdat	6.57	116	Pn		Pn	04 38 00.7	-0.1
KZIT	Kziot	6.60	130	Pn		Pn	04 38 00.4	-0.8
DSI	Dead Sea	6.83	121	Pn		Pn	04 38 03.9	-0.4
MZDA	Masada	6.97	123	Pn		Pn	04 38 06.0	-0.2
KRMI	Paran Flat	7.36	133	Pn		Pn	04 38 10.6	-1.0
PRNI	Paran	7.36	131	Pn		Pn	04 38 10.8	-0.8
MBRI	Mt Berech	7.70	134	Pn		Pn	04 38 16.0	-0.4
EIL	Elat	7.82	134	Pn		Pn	04 38 17.3	-0.6
	1.8nm,0.3s,baz=340,slow=12,SNR=8.3							
EIL				Sn		Sn	04 39 38.8	-6.3
	5.1nm,0.3s,baz=324,slow=19,SNR=9.6							
EIL	Elat	7.82	134	Pn		Pn	04 38 17.0	-0.9
STON	Ston	11.29	315	*e*Pn		Pn	04 39 05.4	0.0
STON	Ston	11.29	315	*e*Pn		Pn	04 39 05.3	0.0
NVLJ	Novalja	13.95	315	*e*Pn		Pn	04 39 38.2	-3.4
NVLJ				Sn		Sn	04 40 07.0	-8.0
STHS	Stebnicka Huta	15.06	341	*e*P		P	04 39 59.2	-2.2
STHS	Stebnicka Huta	15.06	341	*e*P		P	04 39 59.2	-2.2
GERES	GERESS Array B	17.38	325	P		Pn	04 40 25.8	-0.4
	0.1nm,0.3s,baz=142,slow=11,SNR=2.7							
ESDC	Sonseca Array	26.07	289	P		P	04 41 57.2	+0.7
	0.2nm,0.3s,baz=82,slow=10,SNR=4.5							
HFS	Hagfors	26.62	343	P		P	04 42 00.9	-0.3
	2.1nm,0.8s,baz=179,slow=7.2,SNR=3.4							
TORD	Torodi Ar. Bea	32.78	234	P		P	04 42 56.1	-0.1
	0.8nm,0.7s,baz=34,slow=8.1,SNR=13							
ARCES	ARCESS Array B	34.30	358	P		P	04 43 09.3	+0.4
	1.2nm,0.8s,baz=184,slow=11,SNR=3.6							
KURBB	Kurchatov Arra	38.86	51	P		P	04 43 48.8	+0.9
	0.6nm,0.5s,baz=275,slow=9.1,SNR=5.0							
MKAR	Makanchi Array	41.36	57	P		P	04 44 09.5	+0.7
	0.2nm,0.5s,baz=270,slow=7.6,SNR=3.9							
ZALV	Zalesovo Beam	42.88	46	P		P	04 44 21.7	+0.7
	0.5nm,0.4s,baz=259,slow=9.7,SNR=2.1							

*DDA **18** 04:57:31.1, 35°.61N×28°.60E, h36^{km}, ML3.4*
*ATH **18** 04:57:31.2, 35°.54N×28°.34E, h59$^{km}_{\pm 5km}$, MD3.3/7*
*ISCJB **18** 04:57:32.3±0.6, 35°.61N±0°.05×28°.28E±0°.04, h67$^{km}_{\pm 12km}$, Error ellipse: s-maj=8.0km s-min=5.5km az=159.4*
*CSEM **18** 04:57:36.8±0.2, 35°.72N×27°.97E, h40^{km}, Mw3.0, Error ellipse: s-maj=10.3km s-min=5.6km az=175.0*
*NIC **18** 04:57:47.9±0.1, 35°.36N×28°.98E, h75^{km}, ML3.1, MW3.0*

ISC 18 04:57:33.2±1.3, 35°.63N±0°.05×28°.37E±0°.03, h49$^{km}_{\pm 20km}$, n36, σ1^{s}92/41, 2C, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
ARG	Arkhangelos	0.62	342	*e*P		Pn	04 57 46.0	+0.1
ARG				*e*S		Sn	04 57 57.

URZ				Sn	**Sn**	**05 17 05.8**	**-0.4**	
URZ	**Urewera**	**8.16 207**		PN	**Pn**	**05 15 34.5**	**-0.9**	
URZ	**Urewera**	**8.16 207**		Pn	Pn	05 15 32.5	-2.8	
	1.5nm,0.3s,baz=11,slow=9.9,SNR=9.2							
URZ				Sn	**Sn**	**05 17 05.8**	**-0.4**	
	3.9nm,0.3s,baz=90,slow=20,SNR=12							
RAHZ	**Arahi**	**8.75 205**		PN	**Pn**	**05 15 40.8**	**-2.6**	
RAHZ				SN	**Sn**	**05 17 19.1**	**-1.6**	
PNHZ	**Pukenui**	**9.95 206**		SN	**Sn**	**05 17 46.6**	**-3.6**	
BFZ	**Birch Farm**	**10.61 203**		SN	Sn	05 17 58.8	-7.5	
MRZ	**Mangatainoka R**	**10.83 206**		PN	Sn	05 18 05.4	-6.3	
THZ	**Tophouse**	**12.86 211**		PN	Pn	05 16 33.6	-6.0	
DZM	**Mont Dzumac**	**16.34 299**		LR	LR	05 22 19.5		
	comp=Z,262nm,19.5s,baz=15,slow=32							
CTA	**Charters Tower**	**33.70 280**		P	**P**	**05 20 18.8**	**+2.3**	
CTA	**Charters Tower**	**33.70 280**		P	**P**	**05 20 18.8**	**+2.3**	
	3.2nm,0.3s,baz=110,slow=12,SNR=6.1							
STKA	**Stephens Creek**	**34.14 258**		*e*P	**P**	**05 20 22.8**	**+2.6**	
	2.3nm,0.8s							
STKA	**Stephens Creek**	**34.14 258**		P	P	05 20 23.1	+2.9	
	10nm,0.8s,baz=89,slow=9.1,SNR=19							
AS31	**Alice Springs**	**42.87 268**		*e*P	**P**	**05 21 35.1**	**+1.5**	
ASAR	**Alice Springs**	**42.87 268**		P	**P**	**05 21 35.0**	**+1.4**	
ASAR	**Alice Springs**	**42.87 268**		P	**P**	**05 21 35.0**	**+1.4**	
	14nm,0.6s,baz=106,slow=7.4,SNR=79							
WRAB	**Tennant Creek**	**43.91 273**		*e*P	**P**	**05 21 43.1**	**+1.1**	
	20nm,0.8s							
WRA	**Warramunga Arr**	**43.91 273**		P	**P**	**05 21 42.8**	**+0.8**	
WRA	**Warramunga Arr**	**43.91 273**		P	**P**	**05 21 42.8**	**+0.8**	
	16nm,0.7s,baz=112,slow=8.1,SNR=77							
VNDA	**Vanda**	**47.45 186**		P	**P**	**05 22 09.5**	**+0.4**	
VNDA	**Vanda**	**47.45 186**		P	**P**	**05 22 09.5**	**+0.4**	
	0.5nm,0.7s,baz=344,slow=7.7,SNR=3.3							
CASY	**Casey**	**54.48 208**		*e*P	**P**	**05 22 59.1**	**-2.9**	
	23nm,0.6s							
QSPA	**South Pole Qui**	**59.08 180**		P	**P**	**05 23 36.9**	**+2.0**	
QSPA	**South Pole Qui**	**59.08 180**		P	**P**	**05 23 36.9**	**+2.0**	
	11nm,0.9s,baz=33,slow=2.7,SNR=28							
SNAA	**Sanae**	**77.53 179**		*e*P	**P**	**05 25 30.8**	**+0.8**	
	6.6nm,0.9s							
PLCA	**Paso Flores**	**82.23 133**		P	**P**	**05 25 57.4**	**+1.3**	
PLCA	**Paso Flores**	**82.23 133**		P	**P**	**05 25 57.4**	**+1.3**	
	5.7nm,1.0s,baz=199,slow=5.5,SNR=4.6							
NVAR	**Mina Array Bea**	**88.84 43**		P	**P**	**05 26 29.5**	**+0.6**	
NVAR	**Mina Array Bea**	**88.84 43**		P	**P**	**05 26 29.5**	**+0.6**	
	1.6nm,0.8s,baz=230,slow=6.6,SNR=7.8							
TUC	**Tucson**	**89.67 51**		*e*P	**P**	**05 26 34.8**	**+2.1**	
	1.4nm,0.8s							
TXAR	**Lajitas Array**	**92.91 57**		P	**P**	**05 26 48.9**	**+1.1**	
TXAR	**Lajitas Array**	**92.91 57**		P	**P**	**05 26 48.9**	**+1.1**	
	0.3nm,0.6s,baz=240,slow=4.2,SNR=3.7							
MKAR	**Makanchi Array**	**118.02 310**		PKP	**PKPdf**	**05 32 20.0**	**-1.0**	
MKAR	**Makanchi Array**	**118.02 310**		PKP	**PKPdf**	**05 32 20.0**	**-1.0**	
	1.4nm,0.9s,baz=118,slow=2.2,SNR=4.3							
KKAR	**Karatay Array**	**125.25 303**		*e*PKPdf	**PKPdf**	**05 32 35.1**	**+0.2**	
BVAR	**Borovoye Array**	**126.71 315**		PKP	**PKPdf**	**05 32 37.0**	**-0.3**	
BVAR	**Borovoye Array**	**126.71 315**		PKP	**PKPdf**	**05 32 37.0**	**-0.3**	
	0.4nm,0.3s,baz=116,slow=3.4,SNR=2.5							
ARCES	**ARCESS Array B**	**139.16 347**		PKPpre	PKPpre	05 32 55.7		
ARCES	**ARCESS Array B**	**139.16 347**		PKhKP	PKPpre	05 32 55.7		
	1.4nm,0.8s,baz=55,slow=3.4,SNR=3.8							
FINES	**FINESS Array B**	**145.66 339**		PKPbc	**PKPdf**	**05 33 11.3**	**-0.7**	
FINES	**FINESS Array B**	**145.66 339**		PKPbc	**PKPdf**	**05 33 11.3**	**-0.7**	
	17nm,0.7s,baz=46,slow=4.0,SNR=9.8							
NB2	**NORSAR Subarra149.34 351**			PKP	**PKPbc**	**05 33 22.2**	**-0.4**	
	comp=Z,4.3nm,1.0s,baz=17,slow=2.6							
NOA	**NORSAR Array B 149.34 351**			PKPbc	**PKPbc**	**05 33 22.5**	**-0.1**	
NOA	**NORSAR Array B 149.34 351**			PKPbc	**PKPbc**	**05 33 22.5**	**-0.1**	
	comp=Z,1.5nm,0.8s,baz=16,slow=4.1,SNR=5.1							
AKASG	**Malin Array Be**	**151.67 322**		PKPbc	**PKPbc**	**05 33 27.8**	**-0.7**	
AKASG	**Malin Array Be**	**151.67 322**		PKPbc	**PKPbc**	**05 33 27.8**	**-0.7**	
	comp=Z,1.1nm,0.6s,baz=48,slow=2.4,SNR=6.4							
BRTR	**Keskin Array B**	**152.71 297**		PKPbc	**PKPbc**	**05 33 30.2**	**-1.1**	
BRTR	**Keskin Array B**	**152.71 297**		PKPbc	**PKPbc**	**05 33 30.2**	**-1.1**	
	comp=Z,1.7nm,0.9s,baz=79,slow=1.3,SNR=3.9							
TORD	**Torodi Ar. Bea**	**162.20 180**		PKP	**PKPdf**	**05 33 37.6**	**+1.0**	
TORD				PKPab	**PKPab**	**05 34 23.5**	**+0.2**	
TORD	**Torodi Ar. Bea**	**162.20 180**		PKP	**PKPdf**	**05 33 37.6**	**+1.0**	
	comp=Z,0.9nm,1.1s,baz=221,slow=1.5,SNR=3.1							
TORD				PKPab	**PKPab**	**05 34 23.5**	**+0.2**	
	comp=Z,3.1nm,0.9s,baz=175,slow=3.5,SNR=12							

*BJI **18** 05:17:19.8, 7.˚75N×126.˚89E, h32km, mB4.9/29, mb4.8/42, Ms4.5/40, Ms7 4.3/39*
*MAN **18** 05:17:19, 7.˚83N×127.˚30E, h38km, mb5.5, ML4.5, MS4.8*
MAN Intensity II - Poblacion.
*AUST **18** 05:17:21.3, 7.˚99N×127.˚53E, h35km*
*NEIC **18** 05:17:22.8±0.2, 7.˚90N×126.˚90E, h35km, mb4.9/43, Error ellipse: s-maj=5.9km s-min=4.3km az=81.0*
NEIC Felt [II PIVS] at Tarragona and Tugbok.
*IDC **18** 05:17:22.9±2.3, 7.˚82N±126.˚70E, h38km±19km, mb4.5/29, mb1 4.6/30, mb1mx4.6/32, mbtmp4.5/30, ML4.0/1, MS4.2/18, Ms1 4.2/18, ms1mx4.0/35, Error ellipse: s-maj=19.3km s-min=9.5km az=81.0*
*ISCJB **18** 05:17:23.9±0.5, 7.˚87N±0.˚02×127.˚00E±0.˚04, h62km±4km, mb4.8/84, Error ellipse: s-maj=6.6km s-min=3.5km az=165.7*
*GCMT **18** 05:17:23.7±0.3, 7.˚73N×127.˚14E, h21km±1km, MW5.0, Moment Tensor Solution. s28,c31; s60,c79; Moment tensor: Scale 10^{16}Nm; M_{rr}3.56±.28; $M_{\theta\theta}$0.47±.17; $M_{\phi\phi}$-4.03±.19; $M_{r\theta}$0.72±.31; $M_{r\phi}$0.22±.12; $M_{\theta\phi}$1.88±.28; Best double couple: M_o4.30000×10^{16} NP1:ϕ_s164.00000°, δ33.00000°, λ69.00000°. NP2:ϕ_s9.00000°, δ59.00000°, λ103.00000°. Principal axes: T 4.1500, Plg73.0000°, Azm312.0000°; N 0.3200, Plg11.0000°, Azm182.0000°; P -4.4700, Plg13.0000°, Azm89.0000°; Data Used: IU II G IC.*
*DJA **18** 05:17:33.1±0.4, 7.˚1N±4.˚4×12.˚7E±.˚, h10km, M4.9/25, mB5.4/18, mb5.0/25, MLv5.2/4, Mw(mB)4.8/18*
ISC 18 05:17:23.1±0.3, **7.˚85N**±0.˚03×**126.˚91E**±0.˚04, **h40**km±2km, **n261**,σ1§**60**/285, **mb4.8**/82, **MS4.3**/31, **3C-3D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
							h m s	ISC
MATI	**Mati**	**1.11**	**216**	*e*P		**Pn**	**05 17 42.8**	**+0.7**
MATI				*e*S		**Sn**	**05 18 00.2**	**+4.1**
DAV	**Davao City (W)**	**1.53**	**240**	*e*Pn		Pn	05 17 51.2	+3.3
DAV				*e*Sn		Sn	05 18 14.4	+7.8
DAV				Sn		Sn	05 18 14.7	+8.1
DAV	**Davao City (W)**	**1.53**	**240**	P		Pn	05 17 52.7	+4.8
DAV	**Davao City (W)**	**1.53**	**240**	Pn		Pn	05 17 51.7	+3.8
	272nm,0.3s,baz=62,slow=3.1,SNR=97							
DAV				Sn		Sn	05 18 14.7	+8.1
	433nm,0.3s,baz=106,slow=19,SNR=6.9							
BUTP	**Butuan**	**1.69**	**311**	*e*P		**Pn**	**05 17 52.9**	**+2.7**
BUTP				*e*S		Sn	05 18 23.3	+13
BUKP	**Musuan**	**1.83**	**271**	*e*P		Pn	05 17 56.4	+4.3
CTBH	**Cotabato--PC H**	**2.71**	**257**↑	*e*P		Pn	05 18 07.3	+3.1
MSLP	**Maasin**	**3.04**	**318**	*e*P		**Pn**	**05 18 11.4**	**+2.6**
PAGZ	**Pagadian**	**3.50**	**270**	*e*P		Pn	05 18 18.8	+3.8
TBP	**Tagbilaran**	**3.53**	**302**	*e*P		Pn	05 18 18.7	+3.4
DCPH	**Dipolog City**	**3.60**	**282**↑	*e*P		Pn	05 18 20.6	+4.2
LLP	**Lapu-Lapu**	**3.80**	**310**‖	*e*P		Pn	05 18 22.3	+3.1
LLP				*e*S		Sn	05 19 10.5	+7.8
PLP	**Palo**	**3.81**	**330**‖	*e*P		**Pn**	**05 18 19.9**	**+0.7**
PLP				*e*S		Sn	05 19 14.3	+12
OCLP	**Ormoc**	**3.91**	**325**	*e*P		Pn	05 18 24.7	+4.1
SNPH	**Sibulan**	**3.92**	**292**↑	*e*P		Pn	05 18 10.6	-10
SNPH				*e*S		**Sn**	**05 19 01.7**	**-4.1**
GUIM	**Jordan**	**5.08**	**303**	*e*P		Pn	05 18 39.8	+3.0
CNP	**Catarman**	**5.13**	**335**	*e*P		**Pn**	**05 18 36.9**	**-0.5**
RCP	**Roxas**	**5.52**	**312**‖	*e*P		Pn	05 18 45.8	+3.1
GAMI	**Gala, Maluku**	**6.03**	**172**	P		Pn	05 18 54.3	+4.4
	245nm,0.9s,1.8nm							
PVCP	**Virac**	**6.32**	**335**	*e*P		**Pn**	**05 18 55.1**	**+1.3**
MNI	**Manado**	**6.69**	**198**	P		Pn	05 19 16.7	+18
TNTI	**Ternate**	**7.04**	**176**	P		**Pn**	**05 19 06.4**	**+2.7**
	424nm,1.1s,5μm1.5nm							
LBMI	**Labuha**	**8.45**	**176**	P		Pn	05 19 26.5	+3.5
	287nm,0.8s,3μm1.1nm							
LBMI				S		**Sn**	**05 20 57.4**	**+0.2**
	287nm,0.8s,3μm1.1nm							
MYLDM	**Lahad Datu**	**8.77**	**253**	P		Pn	05 19 33.4	+6.1
MYLDM	**Lahad Datu**	**8.77**	**253**	P		Pn	05 19 36.8	+9.4
	67nm,1.4s,1μm							
MRSI	**Marisa**	**8.84**	**214**	P		Pn	05 19 31.7	+3.3
	148nm,1.0s,1μm							
MRSI				S		**Sn**	**05 21 09.3**	**+2.5**
	148nm,1.0s,1μm							
TSM	**Tawau**	**9.65**	**249**	P		Pn	05 19 46.0	+6.4
LUWI	**Luwuk**	**9.75**	**205**	P		Pn	05 19 46.9	+6.1
	266nm,1.1s,3μm							
LUWI	**Luwuk**	**9.75**	**205**	P		Pn	05 19 51.8	+11
	baz=10,SNR=4.7							
LUWI				S		Sn	05 21 46.4	+17
	baz=10,SNR=3.2							
SDKM	**Sandakan**	**9.89**	**258**	P		Pn	05 19 49.7	+6.8
KDM	**Kudat**	**10.04**	**265**	P		Pn	05 19 51.1	+6.4
KKM	**Kota Kinabalu**	**10.77**	**261**	Pn		**Pn**	**05 19 55.7**	**+0.8**
KKM	**Kota Kinabalu**	**10.77**	**261**	P		Pn	05 20 02.7	+7.9
KKM	**Kota Kinabalu**	**10.77**	**261**	P		Pn	05 20 02.8	+7.9
	54nm,1.4s,1μm							
KKM	**Kota Kinabalu**	**10.77**	**261**	P		Pn	05 20 02.2	+7.3
	baz=11,SNR=13							
NLAI	**Namlea**	**11.02**	**179**	P		Pn	05 20 09.6	+11
SKSI	**Soroako, Sulaw**	**11.71**	**209**	P		Pn	05 20 10.9	+3.1
	62nm,0.9s,681nm							
RKPI	**Ransiki, Papua**	**11.79**	**142**	P		Pn	05 20 17.5	+8.7
	117nm,1.3s,4μm							
FAKI	**Fak Fak**	**11.95**	**153**	P		Pn	05 20 17.5	+6.5
	146nm,1.1s,1μm							
FAKI	**Fak Fak**	**11.95**	**153**	P		**Pn**	**05 20 09.8**	**-1.2**
	baz=12,SNR=5.8							
FAKI				S		Sn	05 22 16.1	-6.9
	baz=12,SNR=7.3							
BAKI	**Biak**	**12.84**	**134**	P		**P**	**05 20 33.2**	**0.0**
	166nm,1.4s,2μm							
TTSI	**Tana Toraja**	**12.93**	**213**	P		P	05 20 29.4	-4.8
	221nm,0.9s,2μm							
SPSI	**Sidrap Palu**	**13.73**	**212**	P		P	05 20 40.4	-2.7
	34nm,1.1s,1μm							
KAPI	**Kappang**	**14.64**	**209**	Pn		**Pn**	**05 20 47.7**	**+0.1**
KAPI				*e*S		**S**	**05 23 45.6**	**-0.7**
KAPI	**Kappang**	**14.64**	**209**	P		**Pn**	**05 20 49.6**	**+2.0**
	53nm,0.8s,1μm							
KAPI	**Kappang**	**14.64**	**209**	Pn		**Pn**	**05 20 47.7**	**+0.1**
	0.7nm,0.3s,baz=16,slow=14,SNR=12							
BKSI	**Bulukumba**	**14.73**	**208**	P		**Pn**	**05 20 50.9**	**+2.1**
	28nm,1.0s,571nm							
SBUM	**Sibu**	**15.58**	**251**	P		**P**	**05 21 03.9**	**+0.2**
SBUM	**Sibu**	**15.58**	**251**	P		**P**	**05 21 04.3**	**+0.6**
	92nm,0.8s,1μm							
BBKI	**Banjar Baru**	**16.47**	**227**	P		P	05 21 18.7	+5.1
TPUB	**Ta-pu**	**16.50**	**339**	*e*Pn		**Pn**	**05 21 10.7**	**-1.0**
MMRI	**Maumere**	**17.02**	**196**	P		P	05 21 27.1	+7.4
STKI	**Sintang**	**17.22**	**244**	P		P	05 21 28.0	+6.1
	65nm,1.1s,14μm							
KSM	**Kuching**	**17.71**	**250**	*e*P		**P**	**05 21 28.2**	**+0.9**
	51nm,1.0s							
KSM	**Kuching**	**17.71**	**250**	P		**P**	**05 21 30.6**	**+3.3**
KSM	**Kuching**	**17.71**	**250**	P		**P**	**05 21 31.6**	**+4.3**
	61nm,0.9s,1μm							
KSM	**Kuching**	**17.71**	**250**	P		**P**	**05 21 31.1**	**+3.8**
	baz=18,SNR=5.3							
WSI	**Waingapu**	**18.61**	**201**	P		Pn	05 21 51.6	+14
WSI	**Waingapu**	**18.61**	**201**	P		Pn	05 21 45.8	+8.1
	baz=19,SNR=5.8							
WSI				S		Sn	05 24 53.0	-12
	baz=19,SNR=5.0							
QZH	**Quanzhou**	**18.77**	**336**	P		**Pn**	**05 21 42.1**	**+2.5**
QZH				S		**Sn**	**05 25 06.8**	**-1.8**
QZH				LR		LR		
	comp=N,1μm,13.7s							
QZH				LR		LR		
	comp=E,940nm,15.9s							
QZH				LR		LR		
	comp=Z,1μm,15.7s							
JOW	**Kunigami**	**18.93**	**4**	*e*Pn		**Pn**	**05 21 45.3**	**+3.8**
	comp=Z,44nm,0.9s							
QIZ	**Qiongzhong**	**19.95**	**306**	P		**P**	**05 21 52.3**	**+0.4**
QIZ				sP		**sP**	**05 22 04.1**	**-3.0**
QIZ				S		**Sn**	**05 25 37.8**	**+0.3**
QIZ				pmax		pmax		
	comp=Z,16nm,0.9s							
QIZ				pmax		pmax		
	comp=Z,240nm,9.1s							
QIZ				LR		LR		
	comp=N,780nm,15.4s							
QIZ				LR		LR		
	comp=Z,1μm,17.0s							
QIZ	**Qiongzhong**	**19.95**	**306**	*e*P		**P**	**05 21 52.6**	**+0.7**
	comp=Z,13nm,0.8s							
MTN	**Manton Dam**	**20.98**	**168**	P		**P**	**05 22 03.2**	**+0.2**
	baz=21,SNR=14							
KDU	**Kakadu**	**21.14**	**165**	P		**P**	**05 22 04.3**	**-0.4**
	baz=21,SNR=6.6							
TGJI	**Tegal**	**22.99**	**231**	P		P	05 22 30.6	+6.1
	comp=Z,89nm,1.1s							
KNRA	**Kununurra**	**23.45**	**176**	P		**P**	**05 22 29.0**	**+0.1**
	baz=24,SNR=18							
MYKOM	**Kota Tinggi**	**23.74**	**256**	P		**P**	**05 22 34.2**	**+2.3**
MYKOM	**Kota Tinggi**	**23.74**	**256**	P		**P**	**05 22 35.5**	**+3.6**
	comp=Z,63nm,1.8s,comp=Z,830nm							
KTGM	**Kuala Trenggan**	**23.75**	**265**	P		**P**	**05 22 34.3**	**+2.4**
KGM	**Kluang**	**24.20**	**257**	P		**P**	**05 22 38.5**	**+2.4**
PMBI	**Palembang**	**24.54**	**245**	P		P	05 22 28.7	-11
	baz=25,SNR=4.0							
NJ2	**Nanjing**	**25.22**	**344**	*e*P		**P**	**05 22 46.8**	**+1.6**
NJ2				pP		**pP**	**05 22 55.3**	**-0.9**
NJ2				sP		**sP**	**05 22 59.1**	**-1.9**
NJ2				pmax		pmax		
	comp=Z,10.0nm,1.0s							
NJ2				pmax		pmax		
	comp=Z,210nm,5.2s							
NJ2				LR		LR		
	comp=N,320nm,24.1s							
NJ2				LR		LR		
	comp=E,290nm,20.6s							
NJ2				LR		LR		
	comp=Z,230nm,22.3s							
JNU	**Nakatsue**	**25.42**	**8**	P		**P**	**05 22 47.0**	**0.0**
JNU				*e*PcP		**PcP**	**05 26 22.4**	**+3.8**
JNU	**Nakatsue**	**25.42**	**8**	P		**P**	**05 22 47.0**	**0.0**
	comp=Z,23nm,1.0s,baz=114,slow=1.5,SNR=8.3							
JNU				LR		LR	05 32 42.7	
	comp=Z,396nm,18.8s,baz=56,slow=36							
FITZ	**Fitzroy Crossi**	**25.82**	**183**	*e*P		**P**	**05 22 51.1**	**+0.4**
FITZ	**Fitzroy Crossi**	**25.82**	**183**	P		**P**	**05 22 50.9**	**+0.3**
	comp=Z,25nm,0.8s,baz=112,slow=5.4,SNR=20							
FITZ	**Fitzroy Crossi**	**25.82**	**183**	P		**P**	**05 22 53.5**	**+2.8**
	baz=26,SNR=11							
IPM	**Ipoh**	**25.95**	**264**	*e*P		**P**	**05 22 52.6**	**+0.5**
	comp=Z,36nm,1.0s							
IPM	**Ipoh**	**25.95**	**264**	P		**P**	**05 22 55.0**	**+3.0**
IPM	**Ipoh**	**25.95**	**264**	P		pP	05 23 04.8	+1.8
	comp=Z,40nm,1.3s							
KASI	**Kota Agung**	**26.01**	**240**	P		sP	05 23 07.9	-0.5
KULM	**Kulim**	**26.21**	**266**	*e*P		**P**	**05 22 55.4**	**+1.0**
	comp=Z,130nm,1.9s							
KULM	**Kulim**	**26.21**	**266**	P		**P**	**05 22 57.1**	**+2.8**
KULM	**Kulim**	**26.21**	**266**	P		pP	05 23 07.3	+1.9
	comp=Z,33nm,1.5s							
GYA	**Guiyang**	**26.70**	**316**	*e*P		**P**	**05 23 01.8**	**+3.0**
GYA				pP		**pP**	**05 23 09.8**	**0.0**
GYA				sP		**sP**	**05 23 16.5**	**+1.8**
GYA				PP		**PnPn**	**05 23 46.0**	**+4.9**
GYA				PcP		**PcP**	**05 26 23.3**	**+1.5**
GYA				S		**S**	**05 27 31.8**	**+0.1**
GYA				sS		**sS**	**05 27 49.0**	**-1.2**
GYA				SS		**SnSn**	**05 28 43.4**	**+5.9**
GYA				ScP		**ScP**	**05 30 01.3**	**+2.4**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
GYA				pmax		pmax		
	comp=Z,120nm,4.9s							
GYA				LR		LR		
	comp=N,550nm,17.5s							
GYA				LR		LR		
	comp=E,480nm,18.0s							
GYA				LR		LR		
	comp=Z,510nm,17.7s							
COEN	**Coen**	**27.02**	**143**	*e*P		**P**	**05 23 01.5**	**0.0**
	comp=Z,281nm,1.1s							
COEN	**Coen**	**27.02**	**143**	P		**P**	**05 23 01.6**	**0.0**
	baz=27,SNR=7.1							
WRAB	**Tennant Creek**	**28.56**	**165**	*e*P		**P**	**05 23 15.0**	**-0.4**
	comp=Z,15nm,0.8s							
WRA	**Warramunga Arr**	**28.57**	**165**	P		**P**	**05 23 15.1**	**-0.4**
WRA	**Warramunga Arr**	**28.57**	**165**	P		**P**	**05 23 15.0**	**-0.4**
	comp=Z,3.2nm,0.8s,baz=348,slow=9.5,SNR=5.9							
KMI	**Kunming**	**28.76**	**310**	P		**P**	**05 23 18.0**	**+0.6**
KMI				S		**S**	**05 28 08.8**	**+4.3**
KMI				pmax		pmax		
	comp=Z,13nm,0.5s							
KMI				LR		LR		
	comp=N,170nm,17.5s							
KMI				LR		LR		
	comp=E,640nm,17.0s							
KMI				LR		LR		
	comp=Z,830nm,16.8s							
CM31	**Chiang Mai Arr**	**29.16**	**294**	*e*P		**P**	**05 23 21.3**	**+0.6**
CMAR	**Chiang Mai Arr**	**29.16**	**294**	P		**P**	**05 23 20.7**	**-0.1**
CMAR				PcP		**PcP**	**05 26 27.6**	**-0.2**
CMAR	**Chiang Mai Arr**	**29.16**	**294**	P		**P**	**05 23 20.7**	**-0.1**
	comp=Z,4.5nm,0.9s,baz=123,slow=7.6,SNR=12							
CMAR				PcP		**PcP**	**05 26 27.6**	**-0.2**
	comp=Z,1.7nm,0.4s,baz=130,slow=1.0,SNR=7.9							
CMAR				LR		LR	05 36 01.8	
	comp=Z,268nm,20.0s,baz=189,slow=39							
CMMT	**Chiang Mai**	**29.26**	**295**	P		P	05 23 34.4	+13
	comp=Z,11nm,1.0s							
CHTO	**Chiang Mai**	**29.27**	**295**	*e*P		**P**	**05 23 21.7**	**0.0**
	comp=Z,9.4nm,1.1s							
CHTO	**Chiang Mai**	**29.27**	**295**	P		P	05 23 33.9	+12
KSAR	**Wonju Array Be**	**29.47**	**2**	P		**P**	**05 23 23.9**	**+0.7**
KSAR				PcP		**PcP**	**05 26 28.9**	**+0.7**
KSRS	**Korea Array**	**29.49**	**2**	P		**P**	**05 23 23.9**	**+0.6**
	comp=Z,8.2nm,1.0s,baz=187,slow=9.6,SNR=18							
KSRS				PcP		**PcP**	**05 26 28.9**	**+0.6**
	comp=Z,1.8nm,0.8s,baz=173,slow=2.4,SNR=5.5							
KSRS				LR		LR	05 36 06.7	
	comp=Z,380nm,18.5s,baz=186,slow=38							
MBWA	**Marble Bar**	**29.68**	**194**	*e*P		**P**	**05 23 25.6**	**+0.4**
	comp=Z,16nm,0.9s							
MAJO	**Matsushiro**	**30.36**	**18**	P		**P**	**05 23 30.7**	**-0.5**
	comp=Z,5.6nm,0.4s							
MAT	**Matsushiro**	**30.36**	**18**	P		**P**	**05 23 29.8**	**-1.4**
MAT				S		**S**	**05 28 28.4**	**-0.6**
QIS	**Mount Isa**	**30.86**	**156**	P		**P**	**05 23 37.2**	**+1.5**
	baz=31,SNR=8.4							
XAN	**Xi'an**	**30.90**	**330**	P		**P**	**05 23 33.5**	**-2.5**
XAN				pmax		pmax		
	comp=Z,2.0nm,1.1s							
MTSU	**Mount Surprise**	**31.01**	**146**	P		**P**	**05 23 38.9**	**+1.8**
	baz=31,SNR=6.6							
DL2	**Dalian**	**31.29**	**352**	P		**P**	**05 23 41.0**	**+1.8**
DL2				S		**S**	**05 28 46.4**	**+3.1**
DL2				pmax		pmax		
	comp=Z,120nm,7.4s							
DL2				LR		LR		
	comp=N,250nm,20.2s							
DL2				LR		LR		
	comp=Z,300nm,14.2s							
CD2	**Chengdu**	**31.54**	**320**	*e*P		**P**	**05 23 43.3**	**+1.6**
CD2				pP		**pP**	**05 23 53.0**	**+0.2**
CD2				sP		**sP**	**05 23 57.3**	**-0.3**
CD2				PP		**PnPn**	**05 24 48.0**	**+2.1**
CD2				S		**S**	**05 28 48.4**	**+0.8**
CD2				sS		**sS**	**05 29 05.3**	**-0.8**
CD2				SS		**SnSn**	**05 30 38.4**	**+3.1**
CD2				pmax		pmax		
	comp=Z,20nm,1.1s							
CD2				pmax		pmax		
	comp=Z,140nm,5.2s							
CD2				LR		LR		
	comp=N,790nm,15.6s							
CD2				LR		LR		
	comp=E,980nm,19.0s							
CD2				LR		LR		
	comp=Z,770nm,16.6s							
ASAR	**Alice Springs**	**32.06**	**168**	P		**P**	**05 23 46.4**	**+0.2**
ASAR				PcP		**PcP**	**05 26 35.5**	**+0.2**
ASAR				ScP		**ScP**	**05 30 15.6**	**-0.3**
ASAR	**Alice Springs**	**32.06**	**168**	P		**P**	**05 23 46.4**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=342,slow=7.5,SNR=13							
ASAR				PcP		**PcP**	**05 26 35.5**	**+0.2**
	comp=Z,0.8nm,0.4s,baz=336,slow=2.9,SNR=3.7							
ASAR				ScP		**ScP**	**05 30 15.6**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=342,slow=3.1,SNR=4.9							
BJT	**Baijiatuan**	**33.45**	**345**	*e*P		**P**	**05 23 57.9**	**-0.3**
	comp=Z,10nm,0.4s							
BJI	**Beijing**	**33.46**	**345**	P		**P**	**05 24 00.3**	**+2.0**
BJI				S		S	05

	comp=Z,103nm,1.4s							
QLP	**Quilpie**	**38.13**	**154**	P		**P**	**05 24 39.4**	**+0.9**
	baz=38,SNR=6.3							
MORW	**Morawa**	**38.17**	**195**	P		**P**	**05 24 39.4**	**+0.7**
	baz=39,SNR=8.7							
FORT	**Forrest**	**38.42**	**178**	*e*P		**P**	**05 24 41.8**	**+0.9**
	comp=Z,60nm,1.0s							
FORT	**Forrest**	**38.42**	**178**	P		**P**	**05 24 42.8**	**+1.9**
	baz=39,SNR=6.3							
ASAJ	**Asahikawa**	**38.64**	**18**	*e*P		**P**	**05 24 41.6**	**-0.9**
	comp=Z,6.2nm,0.9s							
ASAJ	**Asahikawa**	**38.64**	**18**	P		**P**	**05 24 43.4**	**+0.8**
	comp=Z,4.9nm,0.3s,baz=225,slow=13,SNR=6.5							
KMBL	**Kambalda**	**39.29**	**187**	P		**P**	**05 24 48.7**	**+0.5**
	baz=40,SNR=6.4							
GTA	**Gaotai**	**39.73**	**326**	*e*P		**P**	**05 24 51.6**	**-0.3**
GTA				pP		**pP**	**05 25 01.5**	**-1.7**
GTA				sP		**sP**	**05 25 05.5**	**-2.5**
GTA				PcP		**PcP**	**05 26 58.3**	**+0.4**
GTA				S		**S**	**05 30 53.5**	**+0.4**
GTA				sS		**sS**	**05 31 09.9**	**-2.0**
GTA				SS		**SS**	**05 33 44.1**	**-5.9**
GTA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
GTA				pmax		pmax		
	comp=Z,120nm,7.1s							
GTA				LR		LR		
	comp=N,200nm,21.4s							
GTA				LR		LR		
	comp=E,370nm,21.9s							
GTA				LR		LR		
	comp=Z,190nm,20.4s							
LSA	**Lhasa**	**39.97**	**308**	P		**P**	**05 24 55.4**	**+0.9**
LSA	**Lhasa**	**39.97**	**308**	*e*P		**P**	**05 24 54.8**	**+0.4**
	comp=Z,8.5nm,0.6s							
KLBR	**Kellerberrin**	**40.18**	**192**	P		**P**	**05 24 56.2**	**+0.6**
	baz=41,SNR=14							
EIDS	**Eidsvold**	**40.54**	**145**	P		**P**	**05 24 58.3**	**-0.4**
	comp=Z,13nm,1.0s							
BBOO	**Buckleboo**	**41.36**	**168**	*e*P		**P**	**05 25 05.5**	**+0.3**
	comp=Z,304nm,0.9s							
BBOO	**Buckleboo**	**41.36**	**168**	P		**P**	**05 25 05.2**	**0.0**
	baz=42,SNR=14							
NWAO	**Narrogin (SRO)**	**41.58**	**192**	*e*P		**P**	**05 25 07.8**	**+0.8**
NWAO	**Narrogin (SRO)**	**41.58**	**192**	P		**P**	**05 25 06.3**	**-0.7**
	comp=Z,41nm,1.0s,baz=22,slow=6.1,SNR=8.1							
HIA	**Hailar**	**41.72**	**353**	*e*P		**P**	**05 25 08.3**	**+0.3**
	comp=Z,8.7nm,0.4s							
TAPN	**Taplejung**	**41.85**	**303**	*e*P		**P**	**05 25 10.1**	**+0.3**
	comp=Z,14nm,0.4s							
STKA	**Stephens Creek**	**41.92**	**161**	*e*P		**P**	**05 25 10.1**	**+0.2**
STKA	**Stephens Creek**	**41.92**	**161**	P		**P**	**05 25 09.5**	**-0.4**
	comp=Z,7.2nm,0.8s,baz=330,slow=6.3,SNR=9.7							
STKA	**Stephens Creek**	**41.92**	**161**	P		**P**	**05 25 10.1**	**+0.2**
	baz=42,SNR=8.0							
ODAN	**Odare**	**41.95**	**302**	*e*P		**P**	**05 25 10.4**	**-0.2**
	comp=Z,40nm,0.7s							
RAMN	**Ramite**	**42.65**	**302**	*e*P		**P**	**05 25 15.7**	**-0.5**
	comp=Z,19nm,0.7s							
CMSA	**Cobar Meteorol**	**43.09**	**156**	P		**P**	**05 25 20.9**	**+1.6**
	baz=43,SNR=9.0							
RKGY	**Rocky Gully**	**43.26**	**192**	P		**P**	**05 25 22.7**	**+2.0**
	baz=44,SNR=6.4							
ULN	**Ulaanbaatar**	**43.30**	**341**	*e*P		**P**	**05 25 20.8**	**-0.3**
SONM	**Songino Array**	**43.50**	**340**	P		**P**	**05 25 21.6**	**-1.0**
SONM				PcP		**PcP**	**05 27 10.1**	**-0.1**
SONM	**Songino Array**	**43.50**	**340**	P		**P**	**05 25 21.6**	**-1.0**
	comp=Z,2.0nm,0.8s,baz=162,slow=7.7,SNR=8.8							
SONM				PcP		**PcP**	**05 27 10.1**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=158,slow=4.6,SNR=5.9							
SONM				LR		LR	05 45 14.5	
	comp=Z,318nm,20.4s,baz=270,slow=38							
GUN	**Gumba**	**43.57**	**303**	*e*P		**P**	**05 25 23.4**	**-0.4**
	comp=Z,45nm,0.9s							
KKN	**Kakani**	**44.03**	**302**	*e*P		**P**	**05 25 27.2**	**-0.1**
DMN	**Daman**	**44.12**	**302**	*e*P		**P**	**05 25 27.9**	**-0.2**
KOLN	**Koldanda**	**45.44**	**301**	*e*P		**P**	**05 25 38.4**	**-0.2**
	comp=Z,31nm,0.8s							
DANN	**Dangsing**	**45.48**	**302**	*e*P		**P**	**05 25 38.6**	**-0.4**
	comp=Z,35nm,0.8s							
ARPS	**Mount Arapiles**	**46.54**	**163**	P		P	05 25 58.2	+11
	baz=47,SNR=6.8							
HYB	**Hyderabad**	**48.02**	**286**	*i* P		**P**	**05 25 58.0**	**-0.7**
WMQ	**Urumqi**	**49.52**	**323**	P		**P**	**05 26 11.3**	**+1.4**
WMQ				pP		**pP**	**05 26 22.0**	**+0.6**
WMQ				sP		**sP**	**05 26 25.5**	**-0.7**
WMQ				PcP		**PcP**	**05 27 35.0**	**+3.7**
WMQ				S		**S**	**05 33 15.5**	**+0.6**
WMQ				sS		**sS**	**05 33 32.0**	**-2.1**
WMQ				pmax		pmax		
	comp=Z,10.0nm,0.9s							
WMQ				pmax		pmax		
	comp=Z,100nm,5.3s							
WMQ				LR		LR		
	comp=N,1μm,21.7s							
WMQ				LR		LR		
	comp=E,680nm,21.7s							
WMQ				LR		LR		
	comp=Z,560nm,19.3s							
PETK	**Petropavlovsk-**	**51.59**	**23**	P		**P**	**05 26 26.6**	**+1.4**
PETK	**Petropavlovsk-**	**51.59**	**23**	P		P	**05 26 26.6**	**+1.4**
	comp=Z,7.8nm,0.8s,baz=199,slow=3.1,SNR=10.0							
MK31	**Makanchi Array**	**54.33**	**324**	*e*P		**P**	**05 26 45.4**	**-0.2**
MK31				*e*PcP		**PcP**	**05 27 49.1**	**-0.1**
MK31				*e*ScP		**ScP**	**05 31 45.0**	**+0.5**
MKAR	**Makanchi Array**	**54.33**	**324**	P		**P**	**05 26 45.3**	**-0.3**
MKAR				PcP		**PcP**	**05 27 49.1**	**-0.2**
MKAR				ScP		**ScP**	**05 31 45.0**	**+0.5**
MKAR	**Makanchi Array**	**54.33**	**324**	P		**P**	**05 26 45.3**	**-0.3**
	comp=Z,14nm,0.8s,baz=124,slow=8.0,SNR=114							
MKAR				PcP		**PcP**	**05 27 49.1**	**-0.2**
	comp=Z,7.5nm,0.8s,baz=121,slow=4.4,SNR=7.4							
MKAR				ScP		**ScP**	**05 31 45.0**	**+0.5**
	comp=Z,1.0nm,0.8s,baz=111,slow=4.8,SNR=4.9							
MKAR				LR		LR	05 51 19.6	
	comp=Z,265nm,19.9s,baz=130,slow=38							
KSH	**Kashi**	**55.33**	**313**	*e*P		**P**	**05 26 55.1**	**+2.0**
KSH				*e*pP		**pP**	**05 27 05.3**	**+0.5**
KSH				*e*sP		**sP**	**05 27 09.3**	**-0.2**
KSH				*e*PcP		**PcP**	**05 27 55.8**	**+2.4**
KSH				*e*PP		**PP**	**05 29 00.6**	**+3.6**
KSH				*e*S		**S**	**05 34 33.3**	**-1.3**
KSH				*e*sS		**sS**	**05 34 51.3**	**-2.8**
KSH				pmax		pmax		
	comp=Z,11nm,0.8s							
KSH				pmax		pmax		
	comp=Z,130nm,3.7s							
KSH				LR		LR		
	comp=N,420nm,7.3s							
KSH				LR		LR		
	comp=E,290nm,6.3s							
KSH				LR		LR		
	comp=Z,300nm,8.2s							
ULHL	**Ulahol**	**56.14**	**316**	P		**P**	**05 26 59.2**	**+0.2**
	SNR=8.4							
KZA	**Kyzart**	**56.76**	**316**	P		**P**	**05 27 04.2**	**+0.5**
	SNR=16							
TKM2	**Tokmak 2**	**56.84**	**317**	*e*P		**P**	**05 27 04.3**	**+0.3**
	comp=Z,5.2nm,0.8s							
TKM2	**Tokmak 2**	**56.84**	**317**	P		**P**	**05 27 04.4**	**+0.5**
	SNR=7.4							
ZAA0	**Zalesovo Array**	**57.04**	**332**	*e*P		**P**	**05 27 03.9**	**-0.9**
ZAA0				*e*PcP		**PcP**	**05 27 58.6**	**-0.9**
ZALV	**Zalesovo Beam**	**57.04**	**332**	P		**P**	**05 27 03.6**	**-1.3**
ZALV	**Zalesovo Beam**	**57.04**	**332**	P		**P**	**05 27 03.6**	**-1.3**
	comp=Z,13nm,0.8s,baz=113,slow=6.6,SNR=51							
ZALV				LR		LR	05 52 41.4	
	comp=Z,146nm,18.4s,baz=68,slow=37							
AAK	**Ala-Archa**	**57.49**	**316**	*e*P		**P**	**05 27 08.7**	**+0.2**
	comp=Z,2.5nm,0.6s							
AAK	**Ala-Archa**	**57.49**	**316**	LR		LR	05 50 58.3	
	comp=Z,293nm,20.9s,baz=78,slow=35							
USP	**Ospenovka**	**57.72**	**317**	P		**P**	**05 27 10.1**	**+0.2**
	SNR=6.9							
AML	**Almayashu**	**57.86**	**315**	P		**P**	**05 27 12.2**	**+0.8**
	SNR=10							
EKS2	**Erkin-Say**	**57.99**	**316**	*e*P		**P**	**05 27 11.5**	**-0.5**
	comp=Z,9.1nm,0.9s							
EKS2	**Erkin-Say**	**57.99**	**316**	P		**P**	**05 27 12.7**	**+0.7**
	SNR=9.0							
KURK	**Kurchatov**	**58.41**	**326**	*e*P		**P**	**05 27 13.9**	**-0.6**
	comp=Z,38nm,0.9s							
KBL	**Kabul**	**59.23**	**306**	*e*P		**P**	**05 27 20.6**	**-0.3**
	comp=Z,6.4nm,0.4s							
KKAR	**Karatay Array**	**60.40**	**315**	*e*P		**P**	**05 27 28.1**	**-0.4**
	comp=Z,9.3nm,0.8s							
BVAR	**Borovoye Array**	**64.01**	**326**	P		**P**	**05 27 51.9**	**-0.6**
BVAR	**Borovoye Array**	**64.01**	**326**	P		**P**	**05 27 51.9**	**-0.6**
	comp=Z,8.0nm,0.7s,baz=119,slow=8.4,SNR=35							
BVAR				LR		LR	05 57 05.0	
	comp=Z,145nm,21.8s,baz=95,slow=37							
BRVK	**Borovoye**	**64.08**	**326**	*e*P		**P**	**05 27 53.0**	**+0.1**
	comp=Z,13nm,0.8s							
URZ	**Urewera**	**65.44**	**138**	LR		LR	05 53 26.9	
	comp=Z,250nm,19.2s,baz=300,slow=33							
ABKAR	**Akbulak array**	**69.12**	**320**	*e*P		**P**	**05 28 24.4**	**-0.7**
	comp=Z,5.6nm,0.8s							
UNV	**Unalaska Valle**	**69.97**	**35**	*e*P		**P**	**05 28 32.1**	**+1.9**
	comp=Z,20nm,0.7s							
AKTO	**Aktyubinsk**	**70.58**	**321**	LR		LR	06 02 18.5	
	comp=Z,214nm,18.6s,baz=285,slow=38							
CASY	**Casey**	**74.90**	**187**	*e*P		**P**	**05 28 59.6**	**+0.3**
	comp=Z,11nm,0.8s							
KDAK	**Kodiak Island**	**78.34**	**33**	P		**P**	**05 29 20.5**	**+1.5**
KDAK	**Kodiak Island**	**78.34**	**33**	P		**P**	**05 29 20.5**	**+1.5**
	comp=Z,20nm,0.7s,baz=211,slow=7.5,SNR=10							
RSO	**Redoubt South**	**78.45**	**30**	*e*P		**P**	**05 29 20.8**	**+1.0**
	comp=Z,22nm,0.9s							
TRF	**Thorofare Moun**	**79.81**	**27**	*e*P		**P**	**05 29 27.8**	**+0.7**
	comp=Z,16nm,1.1s							
COLD	**Coldfoot**	**80.06**	**23**	*e*P		**P**	**05 29 30.3**	**+2.0**
	comp=Z,4.3nm,0.8s							
PMR	**Palmer**	**80.27**	**29**	*e*P		**P**	**05 29 29.3**	**-0.2**
	comp=Z,18nm,0.9s							
KBZ	**Khabaz**	**80.31**	**313**	P		**P**	**05 29 29.6**	**-0.4**
KBZ	**Khabaz**	**80.31**	**313**	P		**P**	**05 29 29.6**	**-0.4**
	comp=Z,3.0nm,0.9s,baz=90,slow=3.0,SNR=5.4							
KBZ				LR		LR	06 10 31.5	
	comp=Z,150nm,18.6s,baz=229,slow=40							
MCK	**McKinley**	**80.42**	**27**	*e*P		**P**	**05 29 31.1**	**+0.7**
	comp=Z,25nm,0.9s							
SML	**Sawmill**	**80.66**	**29**	*e*P		**P**	**05 29 32.6**	**+1.0**
	comp=Z,6.1nm,1.0s							
COLA	**College**	**80.92**	**26**	*e*P		**P**	**05 29 33.6**	**+0.7**
	comp=Z,3.1nm,0.8s							
ILAR	**Eielson Array**	**81.33**	**26**	P		**P**	**05 29 35.9**	**+0.8**
ILAR	**Eielson Array**	**81.33**	**26**	P		**P**	**05 29 35.9**	**+0.8**
	comp=Z,2.5nm,0.8s,baz=241,slow=6.4,SNR=26							
PAX	**Paxson**	**81.98**	**27**	*e*P		**P**	**05 29 38.3**	**-0.4**
	comp=Z,32nm,1.7s							
DOT	**Dot Lake**	**82.59**	**27**	*e*P		**P**	**05 29 43.3**	**+1.4**
	comp=Z,8.5nm,1.0s							
EGAK	**Eagle**	**83.78**	**26**	*e*P		**P**	**05 29 49.0**	**+1.1**
	comp=Z,26nm,1.6s							
JOF	**Joensuu**	**85.62**	**333**	*e*p		**P**	**05 29 55.3**	**-1.8**
	comp=Z,20nm,0.7s							
JOF	**Joensuu**	**85.62**	**333**	*e*pkp		**PP**	**05 33 14.0**	**-2.0**
	comp=Z,2.4nm,0.7s							
KEV	**Kevo**	**86.11**	**340**	*e*p		**P**	**05 29 57.8**	**-1.6**
	comp=Z,5.4nm,0.7s							
ARCES	**ARCESS Array B**	**86.67**	**340**	P		**P**	**05 30 01.6**	**-0.7**
ARCES	**ARCESS Array B**	**86.67**	**340**	P		**P**	**05 30 01.6**	**-0.7**
	comp=Z,8.5nm,0.8s,baz=74,slow=6.7,SNR=24							
ARCES				LR		LR	06 16 43.9	
	comp=Z,115nm,18.9s,baz=281,slow=41							
ARE0	**ARCESS Array S**	**86.67**	**340**	*e*P		**P**	**05 30 02.1**	**-0.1**
VNDA	**Vanda**	**87.46**	**173**	P		**P**	**05 30 06.0**	**+0.2**
	comp=Z,3.0nm,0.9s							
VNDA	**Vanda**	**87.46**	**173**	P		**P**	**05 30 06.0**	**+0.2**
	comp=Z,4.5nm,0.8s,baz=312,slow=5.9,SNR=24							
VNDA				LR		LR	06 07 49.7	
	comp=Z,118nm,18.1s,baz=321,slow=35							
BR131	**Keskin Array S**	**87.55**	**310**	*e*P		**P**	**05 30 06.3**	**-1.0**
	comp=Z,1.9nm,0.7s							
BRTR	**Keskin Array B**	**87.55**	**310**	P		**P**	**05 30 05.7**	**-1.7**
BRTR	**Keskin Array B**	**87.55**	**310**	P		**P**	**05 30 05.7**	**-1.7**
	comp=Z,1.8nm,0.7s,baz=72,slow=4.7,SNR=8.7							
EIL	**Elat**	**87.86**	**299**	P		**P**	**05 30 09.2**	**+0.3**
	baz=88,SNR=4.7							
KAF	**Kangasniemi**	**88.05**	**332**	*e*p		**P**	**05 30 06.5**	**-2.5**
	comp=Z,5.6nm,0.8s							
KAF	**Kangasniemi**	**88.05**	**332**	*e*pkp			05 33 08.5	
FINES	**FINESS Array B**	**88.31**	**332**	P		**P**	**05 30 09.5**	**-0.7**
FINES	**FINESS Array B**	**88.31**	**332**	P		**P**	**05 30 09.5**	**-0.7**
	comp=Z,10nm,0.8s,baz=58,slow=5.2,SNR=8.1							
FINES				LR		LR	06 18 05.8	
	comp=Z,119nm,18.6s,baz=51,slow=41							
SBA	**Scott Base**	**88.36**	**172**	*e*P		**P**	**05 30 12.1**	**+2.0**
	comp=Z,7.0nm,1.0s							
AKASG	**Malin Array Be**	**88.83**	**321**	P		**P**	**05 30 11.7**	**-1.2**
AKASG	**Malin Array Be**	**88.83**	**321**	P		**P**	**05 30 11.7**	**-1.2**
	comp=Z,9.0nm,0.8s,baz=72,slow=4.4,SNR=28							
AKASG				LR		LR	06 14 54.3	
	comp=Z,140nm,18.9s,baz=100,slow=39							
AK01	**Malin Array Si**	**88.84**	**321**	*e*P		**P**	**05 30 11.8**	**-1.2**
KIEV	**Kiev**	**88.84**	**321**	*e*P		**P**	**05 30 11.6**	**-1.4**
	comp=Z,7.8nm,1.0s							
AK02	**Malin Array Si**	**88.85**	**321**	*e*P		**P**	**05 30 11.1**	**-1.9**
KIS	**Kishinev**	**89.80**	**317**	*e*		**P**	**05 30 18.0**	**+0.4**
KMBO	**Kilima Mbogo**	**89.81**	**269**	P		**P**	**05 30 18.4**	**-0.2**
KMBO	**Kilima Mbogo**	**89.81**	**269**	P		**P**	**05 30 18.4**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=56,slow=7.3,SNR=4.3							
KMBO				LR		LR	06 09 45.8	
	comp=Z,69nm,18.4s,baz=275,slow=35							
BUR08	**Bucovina Ar. S**	**92.06**	**319**	*e*P		**P**	**05 30 27.8**	**-0.4**
KWP	**Kalwaria Pacla**	**93.15**	**321**	*e*P		**P**	**05 30 33.1**	**+0.1**
	comp=Z,12nm,0.8s							
KWP	**Kalwaria Pacla**	**93.15**	**321**	*e*P		**P**	**05 30 33.2**	**+0.1**
STHS	**Stebnicka Huta**	**94.13**	**321**	*e*P		**P**	**05 30 38.0**	**+0.4**
CRVS	**Cervenica-Dubn**	**94.14**	**320**	*e*P		**P**	**05 30 35.9**	**-1.8**
NB2	**NORSAR Subarra**	**95.20**	**334**	P		**P**	**05 30 40.5**	**-1.8**
	comp=Z,3.0nm,0.8s,baz=63,slow=4.6							
NB2	**NORSAR Subarra**	**95.20**	**334**	P		**P**	**05 30 40.5**	**-1.8**
	baz=63,slow=4.6							
NOA	**NORSAR Array B**	**95.20**	**334**	P		**P**	**05 30 40.3**	**-1.9**
NOA	**NORSAR Array B**	**95.20**	**334**	P		**P**	**05 30 40.3**	**-1.9**
	comp=Z,2.6nm,0.8s,baz=63,slow=4.7,SNR=7.9							
NOA				LR		LR	06 17 10.2	
	comp=Z,114nm,20.4s,baz=55,slow=38							
YKA	**Yellowknife Ar**	**95.69**	**24**	P		**P**	**05 30 44.7**	**+0.3**
YKA	**Yellowknife Ar**	**95.69**	**24**	P		**P**	**05 30 44.7**	**+0.3**
	comp=Z,1.8nm,0.7s,baz=302,slow=4.4,SNR=11							
QSPA	**South Pole Qui**	**97.73**	**180**	*e*P	Pdif		05 30 54.1	+0.4
QSPA	**South Pole Qui**	**97.73**	**180**	P	Pdif		05 30 53.4	-0.2
	comp=Z,1.1nm,0.9s,baz=279,slow=3.4,SNR=4.2							
CLL	**Collm**	**98.42**	**325**	*e*Pdif	Pdif		05 30 57.0	0.0
CLL				Lm	MLR		06 18 00.0	
	comp=N,100nm,20.6s							
CLL				Lm	MLR		06 18 00.0	
	comp=E,100nm,18.5s							
CLL				Lm	MLR		06 18 00.0	
	comp=Z,100nm,18.9s							
GERES	**GERESS Array B**	**98.98**	**322**	P		**Pdif**	**05 30 59.0**	**-0.7**
GERES	**GERESS Array B**	**98.98**	**322**	P		**Pdif**	**05 30 59.0**	**-0.7**
	comp=Z,1.7nm,0.9s,baz=44,slow=3.3,SNR=10							
GERES				LR		LR	06 22 16.2	
	comp=Z,121nm,18.8s,baz=285,slow=39							
STU	**Stuttgart**	**101.72**	**323**	*e*Pdif		**Pdif**	**05 31 12.4**	**+0.6**
PV10	**Paradox Valley**	**110.62**	**44**	*e*PKPdf		**PKiKP**	**05 35 54.1**	**+2.0**
PV01	**Paradox Valley**	**111.06**	**44**	PKPdf		**PKiKP**	**05 35 54.2**	**+1.2**
ISCO	**Idaho Springs**	**112.20**	**41**	*e*PKPdf		**PKiKP**	**05 35 55.6**	**+0.4**
TXAR	**Lajitas Array**	**118.90**	**50**	PKP		**PKPdf**	**05 36 08.6**	**+0.5**
TXAR	**Lajitas Array**	**118.90**	**50**	PKP		**PKPdf**	**05 36 08.5**	**+0.5**
	comp=Z,0.5nm,0.8s,baz=251,slow=1.6,SNR=5.9							
WMOK	**Wichita Mounta**	**119.54**	**43**	*e*PKPdf		**PKPdf**	**05 36 10.0**	**+0.9**
JCT	**Junction City**	**121.20**	**47**	*e*PKPdf		**PKPdf**	**05 36 13.0**	**+0.6**
TORD	**Torodi Ar. Bea**	**121.73**	**291**	PKP		**PKPdf**	**05 36 13.0**	**-0.7**
TORD	**Torodi Ar. Bea**	**121.73**	**291**	PKP		**PKPdf**	**05 36 13.0**	**-0.7**
	comp=Z,1.4nm,0.4s,baz=69,slow=2.1,SNR=21							
WVT	**Waverly**	**125.41**	**34**	*e*PKPdf		**PKPdf**	**05 36 20.5**	**+0.2**
TKL	**Tuckaleechee C**	**127.96**	**32**	PKP		**PKPdf**	**05 36 25.7**	**+0.6**
TKL	**Tuckaleechee C**	**127.96**	**32**	PKP		**PKPdf**	**05 36 25.7**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=135,slow=4.4,SNR=4.2							
TRQA	**Tornquist**	**148.87**	**166**	*e*PKPbc		**PKPbc**	**05 37 07.5**	**+0.6**
LPAZ	**La Paz**	**163.08**	**121**	*e*PKPdf		**PKPdf**	**05 37 23.6**	**+0.7**
LPAZ				*e*PKPab		**PKPab**	**05 38 15.3**	**+2.4**

*MOS **18** 05:17:50.1±0.9,54.42N×161.81E,h38km,mb4.2/1, Error ellipse: s-maj=22.9km s-min=11.0km az=81.4*
*KRSC **18** 05:17:51.4±0.4,54.47N×161.62E,h33km±22km, ML4.1*

ISC 18 05:17:49.7±1.0, 54.42N±0.03°×161.85E±0.04, h29km±8km, n47,σ1#18/94, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MKZ	**Mys Kozlova**	**0.15**	**333**	PN		**Pn**	**05 17 56.5**	**+0.5**
MKZ				S		**Sb**	**05 18 00.0**	**+0.9**
MKZ	**Mys Kozlova**	**0.15**	**333**	*i* P		**Pn**	**05 17 56.5**	**+0.5**
MKZ				*e*S		**Sb**	**05 18 00.0**	**+0.9**
TUMR	**Tumrok**	**1.31**	**312**	*e*P		**Pn**	**05 18 12.1**	**0.0**
TUMR				*i* S		**Sn**	**05 18 27.7**	**-0.9**
KII	**Karymskiy**	**1.46**	**256**	*e*P		**Pn**	**05 18 14.9**	**+0.8**
KII				*i* S		**Sn**	**05 18 31.8**	**-0.5**
KMNR	**Kamenistaya**	**1.62**	**326**	*e*P		**Pn**	**05 18 17.6**	**+1.2**
KMNR				*i* S		**Sn**	**05 18 36.3**	**-0.1**
BZGR	**Bezymyannyi-Gr**	**1.66**	**337**	*e*P		**Pn**	**05 18 17.7**	**+0.8**
BZGR				*i* S		**Sn**	**05 18 36.6**	**-0.6**
BZMR	**Bezymyannaya**	**1.70**	**333**	*e*P		**Pn**	**05 18 18.1**	**+0.6**
BZMR				*e*S		**Sn**	**05 18 37.5**	**-0.9**
ZLN	**Zelenaya**	**1.71**	**340**	*e*P		**Pn**	**05 18 19.0**	**+1.5**
ZLN				*i* S		**Sn**	**05 18 39.3**	**+0.9**
SPN	**Mys Shipunski**	**1.71**	**220**	PN		**Pn**	**05 18 17.1**	**-0.4**
SPN				S		**Sn**	**05 18 36.0**	**-2.4**
SPN	**Mys Shipunski**	**1.71**	**220**	*i* P		**Pn**	**05 18 17.1**	**-0.4**
SPN				*i* S		**Sn**	**05 18 36.0**	**-2.4**
BZWR	**Bezymyannyi-We**	**1.73**	**334**	P		**Pn**	**05 18 18.9**	**+1.0**
BZWR				*i* S		**Sn**	**05 18 39.0**	**0.0**
KIRR	**Kirishev**	**1.76**	**331**	P		**Pn**	**05 18 19.5**	**+1.2**
KIRR				*i* S		**Sn**	**05 18 39.9**	**+0.1**
LGNR	**Loginova**	**1.79**	**339**	*e*P		**Pn**	**05 18 20.3**	**+1.4**
LGNR				*i* S		**Sn**	**05 18 41.2**	**+0.5**
KPT	**Kopyto**	**1.80**	**330**	*e*P		**Pn**	**05 18 20.1**	**+1.2**
KPT				*i* S		**Sn**	**05 18 41.2**	**+0.4**
CIRR	**Tsirk**	**1.81**	**340**	*e*P		**Pn**	**05 18 20.2**	**+1.2**
CIRR				*e*S		**Sn**	**05 18 41.3**	**+0.3**
KBG	**Krutoberegovo**	**1.90**	**15**	PN		**Pb**	**05 18 22.2**	**-1.5**
KBG				S		**Sn**	**05 18 44.5**	**+1.5**
KBG	**Krutoberegovo**	**1.90**	**15**	*e*P		**Pb**	**05 18 22.2**	**-1.5**
KBG				*i* S		**Sn**	**05 18 44.5**	**+1.5**
KRSR	**Krestovskiy**	**1.94**	**338**	*e*P		**Pn**	**05 18 21.6**	**+0.8**
KRSR				*i* S		**Sn**	**05 18 43.5**	**-0.7**
NLC	**Nalytchevo**	**1.94**	**231**	PN		**Pn**	**05 18 20.9**	**+0.2**
NLC				S		**Sn**	**05 18 42.8**	**-1.3**
NLC	**Nalytchevo**	**1.94**	**231**	*e*P		**Pn**	**05 18 20.9**	**+0.2**
NLC				*i* S		**Sn**	**05 18 42.8**	**-1.3**
KOZ	**Kozyrevsk**	**1.99**	**326**	P		**Pn**	**05 18 21.9**	**+0.5**
KOZ				*i* S		**Sn**	**05 18 44.3**	**-1.0**
KOZR	**Kozyr**	**1.99**	**327**	PN		**Pn**	**05 18 21.9**	**+0.6**
KOZR				S		**Sn**	**05 18 44.3**	**-1.0**
KLY	**Klyuchi**	**2.01**	**341**	PN		**Pn**	**05 18 22.2**	**+0.6**
KLY				S		**Sn**	**05 18 44.4**	**-1.4**
KLY	**Klyuchi**	**2.01**	**341**	P		**Pn**	**05 18 22.2**	**+0.6**
KLY				*i* S		**Sn**	**05 18 44.4**	**-1.4**
SDLR	**Sedlovina**	**2.10**	**238**	*e*P		**Pn**	**05 18 24.1**	**+1.2**
SDLR				*i* S		**Sn**	**05 18 48.0**	**-0.1**
SMAR	**Somma**	**2.15**	**238**	*e*P		**Pn**	**05 18 25.1**	**+1.4**
SMAR				*i* S		**Sn**	**05 18 49.8**	**+0.4**
KRER	**Koryakskii**	**2.15**	**240**	*e*P		**Pn**	**05 18 25.5**	**+1.8**
KRER				*i* S		**Sn**	**05 18 50.0**	**+0.5**
UGLR	**Uglovaya**	**2.17**	**237**	*e*P		**Pn**	**05 18 25.2**	**+1.3**
UGLR				*i* S		**Sn**	**05 18 49.9**	**+0.1**
SMKR	**Semkarok**	**2.17**	**354**	P		**Pn**	**05 18 25.5**	**+1.6**
SMKR				*i* S		**Sn**	**05

AYDN				*i* S	**Sn**	**06 11 10.5**	**-1.9**
AYDN	**Tasoluk**	**2.17**	**348**	*i* P	**Pn**	**06 10 46.2**	**-0.4**
AYDN				*i* S	**Sn**	**06 11 10.5**	**-1.9**
DNZL	**Cakiroluk**	**2.21**	**13**	*i* P	**Pn**	**06 10 47.8**	**+0.6**
DNZL	**Cakiroluk**	**2.21**	**13**	*i* P	**Pn**	**06 10 47.8**	**+0.6**
NPS	**Neapolis**	**2.32**	**264**	*e*P	**Pn**	**06 10 48.4**	**-0.1**
NPS				*e*S	**Sn**	**06 11 15.8**	**-0.2**
NPS	**Neapolis**	**2.32**	**264**	*e*P	**Pn**	**06 10 48.4**	**-0.1**
NPS				*e*S	**Sn**	**06 11 15.8**	**-0.2**
LAST	**Lasithi**	**2.44**	**262**	*e*P	**Pn**	**06 10 50.4**	**+0.1**
LAST				*e*S	**Sn**	**06 11 19.6**	**+0.5**
LAST	**Lasithi**	**2.44**	**262**	*e*P	**Pn**	**06 10 50.4**	**+0.1**
LAST				*e*S	**Sn**	**06 11 19.6**	**+0.5**

IDC 18 06:11:17.5±0.6, 7°.15S×156°.20E, h61km±5km, mb3.9/10, mb1 4.0/11, mb1mx3.9/18, mbtmp3.9/11, MS2.9/2, Ms1 2.9/2, ms1mx2.7/25, Error ellipse: s-maj=16.8km s-min=12.6km az=35.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.35**	**122**	P	Pn	06 12 22.9	+1.7
	7.1nm,0.3s,baz=304,slow=10,SNR=2.4						
HNR				S	Sn	06 13 11.5	+0.9
	10nm,0.3s,baz=128,slow=20,SNR=3.9						
HNR				LR	LR	06 13 28.6	
	comp=Z,96nm,20.1s,baz=103,slow=30						
PMG	**Port Moresby**	**9.22**	**255**	LR	LR	06 16 17.8	
	comp=Z,129nm,19.8s,baz=37,slow=32						
CTA	**Charters Tower**	**16.08**	**216**	P	Pn	06 14 57.0	-2.8
	0.1nm,0.3s,baz=262,slow=7.1,SNR=2.3						
DZM	**Mont Dzumac**	**17.83**	**147**	P	Pn	06 15 23.9	+2.3
	0.2nm,0.3s,baz=312,slow=18,SNR=2.4						
WRA	**Warramunga Arr**	**24.73**	**237**	P		06 16 33.8	+0.4
	3.8nm,0.5s,baz=60,slow=9.9,SNR=68						
WRA				pP	pP	06 16 47.3	-1.0
	5.5nm,0.7s,baz=61,slow=9.5,SNR=12						
WRA				PcP	PcP	06 20 09.8	+0.6
	0.7nm,0.7s,baz=61,slow=2.5,SNR=5.4						
WRA				pPcP		06 20 26.7	
	0.5nm,0.5s,baz=65,slow=2.8,SNR=7.7						
ASAR	**Alice Springs**	**26.98**	**230**	P	P	06 16 53.9	+0.1
	1.3nm,0.7s,baz=56,slow=10,SNR=16						
ASAR				pP	pP	06 17 09.4	+0.6
	1.4nm,0.5s,baz=60,slow=9.6,SNR=7.0						
ASAR				PcP	PcP	06 20 12.2	-2.1
	0.3nm,0.7s,baz=60,slow=2.5,SNR=3.3						
ASAR				pPcP		06 20 31.8	
	0.4nm,0.5s,baz=67,slow=2.4,SNR=5.8						
STKA	**Stephens Creek**	**28.13**	**207**	P	P	06 17 03.7	-0.1
	1.4nm,0.7s,baz=318,slow=16,SNR=2.9						
RPZ	**Rata Peaks**	**38.69**	**163**	P	P	06 18 34.7	-0.7
	12nm,0.8s,baz=238,slow=7.2,SNR=3.6						
CMAR	**Chiang Mai Arr**	**61.93**	**295**	P	P	06 21 31.8	+0.4
	1.0nm,0.3s,baz=124,slow=5.1,SNR=5.9						
CMAR				pP	pP	06 21 48.0	+0.2
	1.3nm,0.7s,baz=125,slow=5.7,SNR=1.4						
SONM	**Songino Array**	**70.11**	**327**	pP	pP	06 22 43.1	+2.8
	1.0nm,0.3s,baz=134,slow=7.3,SNR=2.4						
VNDA	**Vanda**	**70.40**	**179**	P	P	06 22 24.8	+0.1
	0.8nm,0.8s,baz=314,slow=5.6,SNR=5.3						
ILAR	**Eielson Array**	**83.08**	**21**	P	P	06 23 36.2	-0.1
	0.2nm,0.9s,baz=242,slow=5.7,SNR=2.8						
ILAR				pP	pP	06 23 53.0	-0.4
	0.4nm,1.0s,baz=246,slow=5.1,SNR=2.6						
MKAR	**Makanchi Array**	**84.31**	**318**	P	P	06 23 44.0	+1.0
	3.1nm,0.8s,baz=107,slow=5.7,SNR=31						
MKAR				pP	pP	06 24 01.4	+1.3
	1.6nm,0.5s,baz=98,slow=5.8,SNR=10.0						
MAW	**Mawson**	**84.72**	**203**	P	P	06 23 45.0	+0.5
	3.2nm,0.6s,baz=121,slow=5.9,SNR=5.9						
ZALV	**Zalesovo Beam**	**84.97**	**326**	P	P	06 23 44.7	-1.4
	0.7nm,0.3s,baz=104,slow=6.1,SNR=4.2						
ZALV				pP	pP	06 24 03.3	+0.1
	0.9nm,0.4s,baz=112,slow=6.5,SNR=1.9						
BDFB	**Brasilia**	**147.02**	**133**	PKPbc	PKPbc	06 30 53.6	-1.0
	3.9nm,0.8s,baz=202,slow=4.1,SNR=6.8						
TORD	**Torodi Ar. Bea**	**154.22**	**285**	PKPbc	PKPbc	06 31 11.1	-0.7
	0.8nm,0.7s,baz=71,slow=2.8,SNR=6.3						
TORD				pPKPbc	pPKPbc	06 31 28.2	-1.5
	0.6nm,0.7s,baz=87,slow=2.9,SNR=3.7						

GUC 18 06:14:17.1±0.6, 23°.89S×67°.59W, h224km±9km, ML3.9, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.75**	**316**	⇑*i*P	Pn	06 14 56.7	+1.1
LVC				*i* S	S	06 15 27.3	+2.0
PB04	**Plate Boundary**	**2.38**	**312**	*i*P	Pn	06 15 08.3	+7.1
PB04				*i* S	S	06 15 46.9	+11
PB04				AML	AML	06 15 56.4	
	comp=N,112nm,0.4s						
CEN1	**Los Morros**	**2.44**	**281**	*i* P	Pn	06 15 02.8	+0.8
CEN1				*e*S	S	06 15 38.5	+1.5
CEN1				AML	AML	06 15 40.5	
	comp=N,134nm,0.3s						
PB09	**Plate Boundary**	**2.58**	**323**	⇓*i*P	Pn	06 15 06.2	+2.6
PB09				*i* S	S	06 15 43.2	+3.4
PB09				AML	AML	06 15 49.0	
	comp=N,230nm,0.5s						
ANCH	**Antofagasta**	**2.59**	**274**	⇑*i*P	Pn	06 15 05.4	+1.9
ANCH				*i* S	S	06 15 41.4	+1.9
ANCH				AML	AML	06 15 46.0	
	comp=E,381nm,0.1s						
PB07	**Plate Boundary**	**3.02**	**315**	*e*P	Pn	06 15 10.7	+2.2
PB07				*i* S	S	06 15 51.0	+2.4
PB07				AML	AML	06 15 55.2	
	comp=E,119nm,0.6s						
PB01	**Plate Boundary**	**3.33**	**328**	*e*P	Pn	06 15 14.0	+2.0
PB01				*i* S	S	06 15 57.3	+2.4
PB01				AML	AML	06 15 58.1	
	comp=E,86nm,0.2s						
HMBC	**Humberstone**	**4.17**	**329**	*e*P	Pn	06 15 23.1	+0.9
HMBC				*e*S	S	06 16 14.6	+1.3
HMBC				AML	AML	06 16 19.5	
	comp=N,36nm,0.7s						
MNMC	**Minimini**	**5.09**	**338**	*e*P	Pn	06 15 35.4	+1.8
MNMC				*e*S	S	06 16 36.2	+2.1
MNMC				AML	AML	06 16 40.2	
	comp=E,40nm,0.3s						

*IDC **18** 06:20:59.5±0.4, 31°.23N×141°.82E, h0km, mb4.8/32, mb1 4.9/34, mb1mx4.9/37, mbtmp4.8/34, ML4.3/2, MS4.8/37, Ms1 4.8/37, ms1mx4.7/47, Error ellipse: s-maj=12.8km s-min=10.1km az=72.0*

*JMA **18** 06:21:00.7±0.2, 31°.32N×142°.11E, h38km, M5.4*

*NIED **18** 06:21:00, 31°.30N×142°.10E, h5km, Mw5.1 Best double couple: M0=4.57000×10^16 NP1:φs=52.00000°, δ61.00000°, λ119.00000°. NP2:φs=183.00000°, δ40.00000°, λ49.00000°.*

*BJI **18** 06:21:02.9, 31°.35N×141°.85E, h41km, mB5.1/44, mb4.9/51, Ms5.2/64, Ms7 5.0/63*

*ISCJB **18** 06:21:04.4±0.1, 31°.32N±0°.02×141°.74E±0°.02, h37km, mb5.0/184, MS5.0/70, Error ellipse: s-maj=3.4km s-min=2.8km az=9.2*

*MOS **18** 06:21:05.4±0.9, 31°.67N×141°.77E, h33km, mb5.2/82, MS4.9/32, Error ellipse: s-maj=8.2km s-min=4.6km az=109.8*

*GCMT **18** 06:21:05.6±0.2, 31°.18N×142°.04E, h12km, MW5.1, Moment Tensor Solution. s55,c77; s94,c159; Moment tensor: Scale 10^16Nm; Mrr=4.92±.10; Mθθ-0.33±.10; Mφφ-4.59±.10; Mrθ2.97±.35; Mrφ-1.20±.09; Mθφ3.33±.29; Best double couple: M0=6.60000×10^16 NP1:φs=180.00000°, δ27.00000°, λ62.00000°. NP2:φs=32.00000°, δ66.00000°, λ104.00000°. Principal axes: T 6.8600, Plg66.0000°, Azm326.0000°; N -0.4700, Plg13.0000°, Azm206.0000°; P -6.3900, Plg20.0000°, Azm111.0000°; Data Used: II IU IC G.*

*NEIC **18** 06:21:06.0±0.4, 31°.30N×141°.75E, h39km±3km, mb5.0/110, MW5.0(NIED) Error ellipse: s-maj=4.2km s-min=3.1km az=162.0*

*DJA **18** 06:21:13.5±2.4, 31°N±10°×14°2E±1°3, h89km±22km, M5.2/12, mB5.7/6, mb5.2/12, Mw(mB)5.2/6*

ISC 18 06:21:05.4±0.3, 31°.35N±0°.03×141°.81E±0°.03, h34km, h34km:pP-P, n819, σ1s23/886, mb5.0/189, MS5.0/70, 152C-156D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**2.42**	**316**	P	**Pn**	**06 21 42.1**	**-0.5**
JHJ2	**Mitsune**	**2.44**	**317**	P	**Pn**	**06 21 42.0**	**-0.8**
JHJ2				*e*S	**Sn**	**06 22 12.9**	**+1.4**
JHJ	**Hachijo jima 2**	**2.47**	**316**	Pn	**Pn**	**06 21 41.5**	**-1.7**
	32nm,0.3s,baz=171,slow=12,SNR=17						
JHJ				Sn	**Sn**	**06 22 13.7**	**+1.5**
	117nm,0.3s,baz=151,slow=23,SNR=7.1						
JHJ				LR	LR	06 22 45.6	
	comp=Z,15μm,18.1s,baz=167,slow=42						
BSO1	**Boso 1**	**3.37**	**348**	P	**Pn**	**06 21 54.0**	**-1.1**
BSO3	**Boso 3**	**3.62**	**343**	P	**Pn**	**06 21 58.0**	**-0.7**
BSO3				*e*S	**Sn**	**06 22 41.4**	**+1.3**
JKO	**Kozu shima**	**3.62**	**322**	P	**Pn**	**06 21 59.1**	**+0.1**
CBIJ	**Chichi jima**	**4.25**	**176**	P	Pn	06 22 04.4	-3.3
CBIJ				*e*S	**Sn**	**06 22 52.0**	**-4.1**
JOD2	**Odawara 2**	**4.52**	**330**	P	**Pn**	**06 22 11.3**	**-0.2**
JHHJ	**Haha-jima-NKT**	**4.71**	**176**	P	Pn	06 22 10.9	-3.2
JHHJ				*e*S	**Sn**	**06 23 04.7**	**-2.8**
JRY	**Ryogami san**	**5.25**	**333**	P	**Pn**	**06 22 21.5**	**0.0**
JIE	**Ise**	**5.26**	**307**	P	**Pn**	**06 22 22.9**	**+1.3**
JWZ	**Kozaga**	**5.60**	**295**	P	**Pn**	**06 22 28.9**	**+2.7**
MAJO	**Matsushiro**	**5.99**	**331**	*e*P	**Pn**	**06 22 32.7**	**+1.1**
MAJO				*e*		06 23 42.9	
MAJO	**Matsushiro**	**5.99**	**331**	*e*Pn	**Pn**	**06 22 32.6**	**+1.1**
MAJO				*e*Sn	**Sn**	**06 23 42.9**	**+3.9**
MAT	**Matsushiro**	**5.99**	**331**	P	**Pn**	**06 22 32.6**	**+1.0**
MAT				S	**Sn**	**06 23 37.0**	**-2.0**
MAT	**Matsushiro**	**5.99**	**331**	P	**Pn**	**06 22 32.9**	**+1.3**
JMK	**Ichinoseki**	**7.60**	**357**	P	**Pn**	**06 22 52.0**	**-1.7**
JMK				*e*S	Sn	06 24 11.7	-7.0
JTO	**Tosashimizu**	**7.79**	**284**	P	Pn	06 22 59.8	+3.4
JHS	**Saijyo**	**8.15**	**299**	P	**Pn**	**06 23 04.3**	**+3.0**
JNU	**Nakatsue**	**9.43**	**284**	*e*Pn	**Pn**	**06 23 21.4**	**+2.6**
JNU				*e*Sn	Sn	06 25 20.2	+16
JNU	**Nakatsue**	**9.43**	**284**	Pn	Pn	06 23 22.2	+3.3
	0.8nm,0.3s,baz=88,slow=8.0,SNR=32						
JNU				LR	LR	06 26 56.8	
	comp=Z,4μm,18.5s,baz=95,slow=38						
JOT	**Ohata**	**10.04**	**357**	P	**Pn**	**06 23 25.3**	**-1.8**
JOT				*e*S	Sn	06 25 11.8	-6.6
JKB	**Kayabe**	**10.54**	**357**	P	**Pn**	**06 23 32.6**	**-1.4**
ERM	**Erimo**	**10.70**	**5**	Pn	Pn	06 23 32.0	-4.2
	211nm,0.8s,SNR=9.1						
ERM	**Erimo**	**10.70**	**5**	*e*P	Pn	06 23 32.7	-3.5
ERM				*e*		06 25 26.2	
ERM	**Erimo**	**10.70**	**5**	*e*Pn	Pn	06 23 32.7	-3.5
ERM				*e*Sn	Sn	06 25 26.2	-8.6
JOSM	**Okushiri--Mats**	**10.88**	**351**	P	**Pn**	**06 23 37.2**	**-1.4**
JOW	**Kunigami**	**12.66**	**253**	Pn	**Pn**	**06 24 01.1**	**-2.0**
ASAJ	**Asahikawa**	**12.76**	**3**	Pn	**Pn**	**06 24 01.8**	**-2.6**
	2.4nm,0.6s						
ASAJ	**Asahikawa**	**12.76**	**3**	Pn	**Pn**	**06 24 01.8**	**-2.6**
	5.0nm,0.3s,baz=227,slow=13,SNR=8.9						
ASAJ				LR	LR	06 29 47.3	
	comp=Z,5μm,18.0s,baz=186,slow=41						
KSRS	**Korea Array**	**12.98**	**302**	Pn	**Pn**	**06 24 09.8**	**+2.4**
	0.5nm,0.3s,baz=115,slow=13,SNR=58						
KSRS				LR	LR	06 29 08.3	
	comp=Z,4μm,18.8s,baz=111,slow=37						
KSAR	**Wonju Array Be**	**13.01**	**302**	Pn	**Pn**	**06 24 09.8**	**+2.1**
YUK	**Yuzh-Kuril'sk**	**13.06**	**13**	*d*P	Pn	06 24 03.5	-5.0
YUK				pmax	pmax		
	comp=N,29nm,0.3s						
YUK				pmax	pmax		
	comp=E,24nm,0.3s						
YUK				pmax	pmax		
	comp=Z,53nm,0.3s						
YUK				pmax	pmax		
	comp=Z,120nm,2.0s						
YUK				MLR	MLR		
	comp=N,327nm,14.0s						
YUK				MLR	MLR		
	comp=E,841nm,14.0s						
YUK				MLR	MLR		
	comp=Z,1μm,14.0s						
INCN	**Inchon**	**13.94**	**300**	Pn	**P**	**06 24 26.4**	**-1.8**
	SNR=5.6						
INCN	**Inchon**	**13.94**	**300**	Pn	**Pn**	**06 24 21.9**	**+1.4**
	comp=Z,103nm,1.1s						
VLA	**Vladivostok**	**14.15**	**329**	*e*P	**Pn**	**06 24 22.8**	**-0.5**
VLA				pmax	pmax		
	comp=Z,42nm,1.2s						
VLA				MLR	MLR		
	comp=Z,5μm,16.0s						
KUR	**Kuril'sk**	**14.65**	**17**	P	Pn	06 24 21.5	-8.6
KUR				*e*S	Sn	06 26 59.1	-12
KUR				pmax	pmax		
	comp=Z,31nm,1.3s						
KUR				MLR	MLR		
	comp=N,1μm,10.0s						
KUR				MLR	MLR		
	comp=E,811nm,10.0s						
KUR				MLR	MLR		
	comp=Z,2μm,10.0s						
USRK	**Ussuriysk Arra**	**14.98**	**332**	Pn	**Pn**	**06 24 32.9**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=145,slow=12,SNR=19						
USRK				LR	LR	06 30 23.7	
	comp=Z,2μm,19.1s,baz=136,slow=37						
YSS	**Yuzh-Sakhalins**	**15.60**	**2**	⇓*e*P	**Pn**	**06 24 41.3**	**-1.4**
YSS				pmax	pmax		
	comp=Z,60nm,1.0s						
YSS				MLR	MLR		
	comp=N,4μm,14.0s						
YSS				MLR	MLR		
	comp=E,4μm,14.0s						
YSS				MLR	MLR		
	comp=Z,5μm,14.0s						
MDJ	**Mudanjiang**	**16.35**	**328**	P	**Pn**	**06 24 52.8**	**+0.5**
MDJ				pP	**pP**	**06 25 03.4**	**-0.3**
MDJ				sP	**sP**	**06 25 07.4**	**-0.6**
MDJ				S	**Sn**	**06 27 52.8**	**+0.1**
MDJ				PcP	**PcP**	**06 29 45.4**	**+1.3**
MDJ				ScS	**ScS**	**06 36 55.6**	**+0.6**
MDJ				pmax	pmax		
	comp=Z,49nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,450nm,11.8s						
MDJ				LR	LR		
	comp=N,6μm,13.9s						
MDJ				LR	LR		
	comp=E,3μm,13.7s						
MDJ				LR	LR		
	comp=Z,5μm,14.0s						
MDJ	**Mudanjiang**	**16.35**	**328**	*e*Pn	**Pn**	**06 24 51.7**	**-0.6**
	comp=Z,56nm,1.0s						
SSE	**Sheshan**	**17.65**	**275**	P	**Pn**	**06 25 07.4**	**-1.2**
SSE				S	**Sn**	**06 28 23.6**	**-0.5**
SSE				sS	sS	06 28 38.3	-6.4
SSE				pmax	pmax		
	comp=Z,34nm,0.7s						
SSE				pmax	pmax		
	comp=Z,1μm,11.6s						
SSE				LR	LR		
	comp=N,5μm,13.4s						
SSE				LR	LR		
	comp=E,3μm,13.4s						
SSE				LR	LR		
	comp=Z,5μm,16.5s						
UGL	**Uglegorsk**	**17.71**	**1**	*e*P	**P**	**06 25 13.0**	**+3.2**
UGL				pmax	pmax		
	comp=Z,112nm,1.0s						
UGL				MLR	MLR		
	comp=N,2μm,17.0s						
UGL				MLR	MLR		
	comp=E,5μm,17.0s						
HABR	**Khabarovsk**	**17.86**	**345**	*e*P	**Pn**	**06 25 08.5**	**-2.6**
HABR						06 28 22.6	
HABR				pmax	pmax		
	comp=N,63nm,1.3s						
HABR				pmax	pmax		
	comp=Z,101nm,1.3s						
HABR				pmax	pmax		
	comp=E,46nm,1.5s						
HABR				MLR	MLR		
	comp=Z,3μm,16.0s						
GUMO	**Guam**	**17.90**	**170**	*e*Pn	**Pn**	**06 25 12.1**	**+0.4**
	comp=Z,348nm,1.0s						
CN2	**Changchun**	**17.93**	**318**	⇑P	**Pn**	**06 25 11.6**	**-0.3**
CN2				*e*sP	**sP**	**06 25 25.8**	**+0.4**
CN2				*e*S	**Sn**	**06 28 27.4**	**-3.4**
CN2				pmax	pmax		
	comp=Z,60nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=N,6μm,13.0s						
CN2				LR	LR		
	comp=E,5μm,13.0s						
CN2				LR	LR		
	comp=Z,5μm,15.0s						
SNY	**Shenyang**	**17.96**	**311**	⇓P	**Pn**	**06 25 12.3**	**0.0**
SNY				pmax	pmax		
	comp=Z,140nm,0.9s						
SNY				pmax	pmax		
	comp=Z,850nm,8.8s						
SNY				LR	LR		
	comp=N,6μm,14.1s						
SNY				LR	LR		
	comp=E,2μm,18.2s						
SNY				LR	LR		
	comp=Z,4μm,16.2s						
DL2	**Dalian**	**18.13**	**300**	P	**P**	**06 25 14.8**	**+0.2**
DL2				pmax	pmax		
	comp=Z,48nm,1.0s						
DL2				pmax	pmax		
	comp=Z,560nm,7.9s						
DL2				LR	LR		
	comp=E,5μm,12.7s						
DL2				LR	LR		
	comp=Z,850nm,11.8s						
TATO	**Taipei**	**19.00**	**256**	*e*P	**P**	**06 25 24.4**	**+0.2**
	comp=Z,153nm,1.0s						
YHNB	**Yeheng**	**19.22**	**255**	*e*P	**P**	**06 25 26.3**	**-0.4**
	comp=Z,107nm,1.0s						
NACB	**Ninganchiao**	**19.25**	**253**	*e*P	**P**	**06 25 26.0**	**-0.9**
	comp=Z,72nm,0.9s						
KLR	**Kul'dur**	**19.41**	**340**	*e*P	**P**	**06 25 24.0**	**-4.5**
KLR				pmax	pmax		
	comp=N,800nm,11.0s						
KLR				pmax	pmax		
	comp=Z,2μm,11.0s						
KLR				MLR	MLR		
	comp=E,3μm,13.0s						
KLR				MLR	MLR		
	comp=Z,7μm,13.0s						
NJ2	**Nanjing**	**19.55**	**278**	*e*P	**Pn**	**06 25 31.8**	**+0.2**
NJ2				pP	**pP**	**06 25 39.1**	**+0.1**
NJ2				sP	**sP**	**06 25 43.3**	**0.0**
NJ2				PP	**PnPn**	**06 25 46.4**	**+1.1**
NJ2				S	**Sn**	**06 29 12.5**	**+2.5**
NJ2				pmax	pmax		
	comp=Z,20nm,1.2s						
NJ2				pmax	pmax		
	comp=Z,690nm,10.1s						
NJ2				LR	LR		
	comp=N,3μm,22.3s						
NJ2				LR	LR		
	comp=E,3μm,23.6s						
NJ2				LR	LR		
	comp=Z,2μm,23.6s						
YULB	**Yu-li**	**19.85**	**252**	*e*P	**P**	**06 25 33.1**	**-0.4**
	comp=Z,168nm,1.0s						
SSLB	**Suanglung**	**19.95**	**253**	*e*P	**P**	**06 25 34.8**	**+0.2**
	comp=Z,231nm,1.1s						
TWG	**Pinlang**	**20.30**	**250**	*e*P	**P**	**06 25 37.4**	**-1.0**
	comp=Z,1μm,1.5s						
TPUB	**Ta-pu**	**20.43**	**252**	*e*P	**P**	**06 25 40.0**	**+0.1**
	comp=Z,205nm,1.2s						
TIA	**Tai'an**	**21.07**	**290**	P	**P**	**06 25 46.3**	**-0.3**
TIA				LR	LR		
	comp=N,4μm,14.2s						
TIA				LR	LR		
	comp=E,7μm,15.5s						
TIA				LR	LR		
	comp=Z,6μm,16.6s						
QZH	**Quanzhou**	**21.43**	**258**	P	**P**	**06 25 50.0**	**-0.5**
QZH				S	**S**	**06 29 41.4**	**-5.2**
QZH				LR	LR		
	comp=N,2μm,13.0s						
QZH				LR	LR		
	comp=E,5μm,15.8s						
QZH				LR	LR		
	comp=Z,6μm,17.0s						
SKR	**Severo-Kuril's**	**22.06**	**25**	P	P	06 26 06.0	+8.9
SKR				*e*		06 26 24.0	
SKR				*e*S	**S**	**06 29 54.0**	**-4.3**
SKR				*e*SS	**SnSn**	**06 30 30.0**	**+4.3**
SKR				smax	smax		
	comp=N,1μm,10.0s						
SKR				smax	smax		
	comp=E,5μm,10.0s						
SKR				MLR	MLR		
	comp=N,2μm,14.0s						
SKR				MLR	MLR		
	comp=Z,3μm,14.0s						
BJI	**Beijing**	**22.50**	**300**	P	**P**	**06 26 01.0**	**-0.9**
BJI				S	**S**	**06 30 03.4**	**-3.3**
BJI				pmax	pmax		
	comp=Z,66nm,1.3s						
BJI				pmax	pmax		
	comp=Z,470nm,10.6s						
BJI				LR	LR		
	comp=N,4μm,12.8s						
BJI				LR	LR		
	comp=E,4μm,12.8s						
BJI				LR	LR		
	comp=Z,2μm,19.0s						
BJT	**Baijiatuan**	**22.50**	**300**	*e*P	**P**	**06 26 01.0**	**-0.9**
	comp=Z,69nm,0.8s						
WHN	**Wuhan**	**23.55**	**275**	⇓P	**P**	**06 26 13.0**	**+0.3**
WHN				S	**S**	**06 30 22.4**	**-2.2**
WHN				LR	LR		
	comp=N,9μm,13.2s						
WHN				LR	LR		
	comp=E,5μm,13.8s						
WHN				LR	LR		
	comp=Z,8μm,16.4s						
HIA	**Hailar**	**24.42**	**323**	*e*P	**P**	**06 26 20.6**	**-0.2**
	comp=Z,145nm,0.9s						
PETK	**Petropavlovsk-**	**24.62**	**23**	P	**P**	**06 26 23.2**	**+0.8**
PETK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PETK	**Petropavlovsk-**	**24.62**	**23**	P	**P**	**06 26 23.2**	**+0.8**
PETK	**Petropavlovsk-**	**24.62**	**23**	P	**P**	**06 26 23.2**	**+0.8**
	comp=Z,4.6nm,0.9s,baz=211,slow=1.7,SNR=3.6						
PET	**Petropavlovsk**	**24.88**	**25**	*e*P	**P**	**06 26 24.9**	**+0.2**
PET				*e*S	**S**	**06 30 41.7**	**-3.8**
PET				pmax	pmax		
	comp=Z,100nm,7.1s						
PET				pmax	pmax		
	comp=Z,37nm,1.1s						
PET				MLR	MLR		
	comp=Z,2μm,16.0s						
TIY	**Taiyuan**	**24.96**	**293**	*e*P	**P**	**06 26 24.3**	**-1.5**
TIY				LR	LR		
	comp=N,4μm,13.8s						
TIY				LR	LR		
	comp=E,4μm,14.4s						
TIY				LR	LR		
	comp=Z,6μm,16.3s						
HHC	**Hu-ho-hao-te**	**26.11**	**300**	*e*P	**P**	**06 26 35.0**	**-1.2**
HHC				pP	**pP**	**06 26 44.6**	**-1.2**
HHC				sP	**sP**	**06 26 48.3**	**-1.6**
HHC				PP	**PnPn**	**06 27 16.8**	**+1.6**
HHC				PcP	**PcP**	**06 30 03.3**	**+0.2**
HHC				S	**S**	**06 31 01.5**	**-4.0**
HHC				sS	**sS**	**06 31 17.0**	**-4.5**
HHC				SS	**SnSn**	**06 32 08.1**	**+3.0**
HHC				pmax	pmax		
	comp=Z,55nm,0.9s						
HHC				pmax	pmax		
	comp=Z,1μm,7.5s						
HHC				LR	LR		
	comp=N,1μm,14.3s						
HHC				LR	LR		
	comp=E,4μm,14.3s						
HHC				LR	LR		
	comp=Z,5μm,14.1s						
BTO	**Baotou**	**27.22**	**299**	*e*P	**P**	**06 26 43.6**	**-2.6**
ENH	**Enshi**	**27.73**	**276**	*e*P	**P**	**06 26 48.7**	**-2.2**
	comp=Z,18nm,0.8s						
XAN	**Xi'an**	**27.75**	**284**	P	**P**	**06 26 49.0**	**-1.9**
XAN				PP	**PnPn**	**06 27 37.9**	**+0.4**
XAN				pmax	pmax		
	comp=Z,12nm,1.1s						
XAN				LR	LR		
	comp=N,2μm,13.0s						
XAN				LR	LR		
	comp=E,600nm,15.8s

XAN LR LR
comp=Z,790nm,13.0s
CLNS Chul'man 28.07 340 *e*P **P 06 26 53.6 0.0**
CLNS pmax pmax
comp=Z,17nm,0.9s
CLNS pmax pmax
comp=N,9.0nm,0.8s
CLNS pmax pmax
comp=E,5.0nm,0.8s
CLNS MLR MLR
comp=E,558nm,9.0s
CLNS MLR MLR
comp=Z,1μm,14.0s
CLNS MLR MLR
comp=N,726nm,11.0s
DAV Davao City (W) 28.52 216 LR LR 06 36 46.5
comp=N,2μm,18.7s,baz=18,slow=33
CIT Chita 29.23 323 *e*P **P 06 27 04.0 +0.1**
GYA Guiyang 31.07 270 P **P 06 27 20.3 -0.3**
GYA pP **pP 06 27 31.3 +1.0**
GYA sP **sP 06 27 39.0 +4.7**
GYA PP **PnPn 06 28 24.5 +2.1**
GYA PcP **PcP 06 30 17.8 +2.1**
GYA S **S 06 32 21.0 -2.9**
GYA sS **sS 06 32 41.8 +1.9**
GYA ScP **ScP 06 33 53.4 -2.7**
GYA SS **SnSn 06 34 07.5 +1.1**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,120nm,4.8s
GYA LR LR
comp=N,2μm,14.3s
GYA LR LR
comp=E,2μm,18.7s
GYA LR LR
comp=Z,2μm,18.3s
ULN Ulaanbaatar 31.13 312 P **P 06 27 22.1 +1.2**
SNR=36
ULN Ulaanbaatar 31.13 312 *e*P **P 06 27 21.8 +0.9**
comp=Z,44nm,1.0s
ULN Ulaanbaatar 31.13 312 P **P 06 27 21.4 +0.5**
comp=Z,46nm,1.1s,comp=Z,612nm
FX1 Attu Island--F 31.29 37 *e*P **P 06 27 23.2 +1.1**
QIZ Qiongzhong 31.30 255 P **P 06 27 23.3 +0.7**
QIZ PP **PnPn 06 28 28.8 +3.3**
QIZ S **S 06 32 26.8 -0.6**
QIZ sS **sS 06 32 43.0 -0.4**
QIZ pmax pmax
comp=Z,11nm,1.6s
QIZ pmax pmax
comp=Z,200nm,5.0s
QIZ LR LR
comp=N,1μm,13.5s
QIZ LR LR
comp=Z,1μm,17.8s
SONM Songino Array 31.54 312 P **P 06 27 25.2 +0.7**
SONM Songino Array 31.54 312 P **P 06 27 25.2 +0.7**
comp=Z,37nm,1.0s,baz=120,slow=8.5,SNR=64
SONM LR LR 06 40 44.1
comp=Z,3μm,18.3s,baz=87,slow=38
YAK Yakutsk 31.69 349 *e*P **P 06 27 22.3 -3.2**
YAK *e**PP **pP 06 27 34.0 -1.2**
YAK *e*PPP PPP 06 28 34.0
YAK *e* 06 30 14.8
YAK *e*S **S 06 32 29.4 -3.1**
YAK *e**SS **sS 06 32 48.5 0.0**
YAK *e*SS **SnSn 06 34 19.9 -0.6**
YAK *e*SSS SSS 06 34 41.2
YAK *e* 06 37 51.7
YAK pmax pmax
comp=Z,25nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.1s
YAK pmax pmax
comp=N,17nm,1.1s
YAK pmax pmax
comp=Z,32nm,0.9s
YAK pmax pmax
comp=N,25nm,1.1s
YAK pmax pmax
comp=E,12nm,1.3s
YAK smax smax
comp=E,260nm,6.7s
YAK smax smax
comp=N,84nm,3.0s
YAK MLR MLR
comp=Z,2μm,16.0s
YAK MLR MLR
comp=N,2μm,14.0s
YAK MLR MLR
comp=E,1μm,14.0s
LZH Lanzhou 31.80 289 ⇑P **P 06 27 25.5 -1.4**
LZH pP **pP 06 27 36.3 -0.3**
LZH sP **sP 06 27 41.3 +0.6**
LZH PP **PnPn 06 28 32.0 +0.2**
LZH S **S 06 32 31.5 -3.7**
LZH sS **sS 06 32 50.3 -0.9**
LZH SS **SnSn 06 34 24.0 +0.1**
LZH pmax pmax
comp=Z,90nm,1.4s
LZH pmax pmax
comp=Z,230nm,5.2s
LZH LR LR
comp=N,3μm,12.5s
LZH LR LR
comp=E,3μm,12.3s
LZH LR LR
comp=Z,3μm,13.5s
MYLDM Lahad Datu 34.00 225 P **P 06 27 47.7 +1.5**
MYLDM Lahad Datu 34.00 225 P **P 06 27 44.9 -1.3**
comp=Z,70nm,1.0s,comp=Z,991nm
ZAK Zakamensk 34.30 315 *e*P **P 06 27 48.4 -0.1**
ZAK pmax pmax
comp=Z,14nm,1.5s
IRK Irkutsk 34.37 318 *e*P **P 06 27 46.9 -2.1**
IRK pmax pmax
comp=Z,50nm,1.1s
TLY Talaya 34.52 317 *e*P **P 06 27 50.1 -0.3**
TLY *e* 06 29 03.5
TLY *e*PPP PPP 06 29 19.1
TLY *e*S **S 06 33 22.3 +5.5**
TLY pmax pmax
comp=Z,39nm,1.1s
TLY MLR MLR
comp=Z,3μm,15.0s
TLY Talaya 34.52 317 P **P 06 27 52.6 +2.2**
comp=Z,181nm,0.7s,SNR=7.3
KMI Kunming 34.85 270 P P 06 27 58.8 +5.1
KMI PP **PP 06 29 13.8 +0.8**
KMI S **S 06 33 25.8 +3.1**
KMI pmax pmax
comp=Z,15nm,0.6s
KMI LR LR
comp=N,2μm,13.4s
KMI LR LR
comp=E,2μm,15.1s
KMI LR LR
comp=Z,3μm,15.1s
GTA Gaotai 34.92 295 P **P 06 27 52.8 -1.3**
GTA pP **pP 06 28 02.5 -1.4**
GTA sP **sP 06 28 06.4 -1.5**
GTA PcP **PcP 06 30 26.3 0.0**
GTA S **S 06 33 20.3 -3.2**
GTA sS **sS 06 33 36.3 -3.3**
GTA SS **SnSn 06 35 33.9 -5.8**
GTA pmax pmax
comp=Z,10.0nm,1.3s
GTA pmax pmax
comp=Z,170nm,5.2s
GTA LR LR
comp=N,2μm,14.3s
GTA LR LR
comp=E,4μm,13.8s
GTA LR LR
comp=Z,4μm,14.7s
MRSI Marisa 36.01 215 P **P 06 28 02.7 -0.8**
comp=Z,96nm,1.1s,comp=Z,936nm
UBPT Khong Chiam 36.80 253 P sP 06 28 23.7 -0.4
SKSI Soroako, Sulaw 38.92 214 P **P 06 28 29.8 +1.7**
comp=Z,29nm,0.9s
BTM Bintulu 38.94 230 P **P 06 28 28.4 +0.1**
BILL Bilibino 39.41 14*d i*P **P 06 28 31.9 +0.2**
BILL *e* 06 28 44.3
BILL *e*S **S 06 34 29.1 -1.7**

BILL pmax pmax
comp=Z,34nm,1.8s
BILL MLR MLR
comp=Z,1μm,20.0s
BILL Bilibino 39.41 14 *e*P **P 06 28 31.7 +0.1**
comp=Z,34nm,1.4s
PBKT Sadao Pong 39.88 258 P P 06 28 39.7 +3.6
SBUM Sibu 40.07 230 P **P 06 28 40.6 +2.9**
comp=Z,15nm,1.1s,comp=Z,2μm
CMMT Chiang Mai 40.54 262 P **P 06 28 44.7 +3.1**
comp=Z,18nm,1.0s
CHTO Chiang Mai 40.54 262 *e*P **P 06 28 40.6 -1.0**
CHTO pmax pmax
comp=Z,14nm,0.9s
CHTO Chiang Mai 40.54 262 *e*P **P 06 28 40.6 -1.0**
comp=Z,14nm,0.9s
CHTO Chiang Mai 40.54 262 P **P 06 28 42.1 +0.4**
comp=Z,20nm,1.0s
CMAR Chiang Mai Arr 40.70 262 P **P 06 28 42.0 -0.9**
CMAR Chiang Mai Arr 40.70 262 P **P 06 28 42.0 -0.9**
comp=Z,3.1nm,0.7s,baz=52,slow=7.1,SNR=11
CMAR LR LR 06 47 12.3
comp=Z,2μm,18.4s,baz=271,slow=39
TIXI Tiksi 40.96 354 *e*P **P 06 28 42.7 -1.7**
TIXI pmax pmax
comp=Z,7.0nm,1.3s
KAPI Kappang 41.84 214 *e*P **P 06 28 51.9 -0.3**
comp=Z,38nm,1.0s
KAPI Kappang 41.84 214 P **P 06 28 53.2 +1.0**
comp=Z,38nm,1.1s
KSM Kuching 42.06 231 P P 06 29 03.4 +9.3
LSA Lhasa 43.36 281 P **P 06 29 05.6 +0.5**
WMQ Urumqi 43.93 302⇓ *i*P **P 06 29 09.6 +0.5**
WMQ pP **pP 06 29 20.0 +1.0**
WMQ sP **sP 06 29 24.0 +1.0**
WMQ PP **PP 06 30 53.0 +1.4**
WMQ S **S 06 35 38.0 -0.4**
WMQ sS **sS 06 35 54.0 -0.8**
WMQ SS SS 06 38 46.0 -9.5
WMQ pmax pmax
comp=Z,32nm,1.2s
WMQ pmax pmax
comp=Z,400nm,5.3s
WMQ LR LR
comp=N,2μm,14.8s
WMQ LR LR
comp=E,2μm,14.2s
WMQ LR LR
comp=Z,980nm,14.2s
SHL Shillong 43.98 275 *e*PKP **P 06 29 07.5 -2.3**
COEN Coen 45.06 178 *e*P **P 06 29 18.9 +0.7**
comp=Z,271nm,1.0s
ZAA0 Zalesovo Array 46.13 317 *e*P **P 06 29 26.2 -0.1**
ZAA0 *e*PcP **PcP 06 31 02.1 +0.2**
ZALV Zalesovo Beam 46.13 317 P **P 06 29 26.4 +0.1**
ZALV 06 31 02.3
ZALV pmax pmax
comp=Z,18nm,0.8s
ZALV pmax pmax
comp=Z,7.0nm,0.8s
ZALV MLR MLR
comp=Z,1μm,19.4s
ZALV Zalesovo Beam 46.13 317 P **P 06 29 26.4 +0.1**
ZALV PcP **PcP 06 31 02.3 +0.5**
ZALV Zalesovo Beam 46.13 317 P **P 06 29 26.4 +0.1**
comp=Z,18nm,0.8s,baz=100,slow=7.7,SNR=63
ZALV PcP **PcP 06 31 02.3 +0.5**
comp=Z,7.2nm,0.8s,baz=78,slow=2.8,SNR=3.8
ZALV LR LR 06 49 32.4
comp=Z,1μm,19.4s,baz=70,slow=37
KULM Kulim 46.46 245 P sP 06 29 43.6 +0.2
TAPN Taplejung 46.94 280 *e*P **P 06 29 33.2 -0.2**
comp=Z,33nm,0.9s
NVS Novosibirsk 47.13 318⇑ *i*P **P 06 29 34.0 -0.1**
NVS pmax pmax
comp=Z,57nm,1.0s
NVS pmax pmax
comp=N,11nm,0.8s
NVS pmax pmax
comp=E,30nm,0.9s
ODAN Odare 47.37 279 *e*P **P 06 29 36.2 -0.4**
comp=E,35nm,0.6s
MKAR Makanchi Array 47.60 307 P **P 06 29 37.9 0.0**
MKAR S **S 06 36 33.0 +1.9**
MKAR pmax pmax
comp=Z,12nm,0.6s
MKAR smax smax
comp=N,1.0nm,0.9s
MKAR MLR MLR
comp=Z,1μm,18.9s
MKAR Makanchi Array 47.60 307 P **P 06 29 37.9 0.0**
MKAR S **S 06 36 33.0 +1.9**
MKAR Makanchi Array 47.60 307 P **P 06 29 37.9 0.0**
comp=Z,12nm,0.6s,baz=90,slow=7.9,SNR=95
MKAR S **S 06 36 33.0 +1.9**
comp=Z,1.2nm,0.9s,baz=84,slow=18,SNR=3.9
MKAR LR LR 06 50 34.8
comp=Z,1μm,18.9s,baz=92,slow=37
RAMN Ramite 48.00 279 *e*P **P 06 29 40.8 -0.8**
comp=Z,59nm,1.0s
GUN Gumba 48.30 281 *e*P **P 06 29 43.6 -0.4**
comp=Z,61nm,0.8s
PKI Pulchoki 48.81 281 *e*P **P 06 29 47.1 -0.8**
PKIN Phulchoki 48.81 281 *e*P **P 06 29 46.8 -1.1**
KKN Kakani 48.84 281 *e*P **P 06 29 47.5 -0.5**
DMN Daman 49.05 281 *e*P **P 06 29 49.0 -0.7**
KURK Kurchatov 49.84 312 P **P 06 29 55.2 +0.2**
comp=Z,303nm,1.0s,SNR=25
KURK Kurchatov 49.84 312 *e*P **P 06 29 55.0 -0.1**
KURK *e*S **S 06 37 05.0 +2.6**
KURK pmax pmax
comp=Z,61nm,0.9s
KURK Kurchatov 49.84 312 *e*P **P 06 29 55.0 -0.1**
comp=Z,61nm,0.9s
KURK *e*S **S 06 37 05.0 +2.6**
SVW2 Sparrevohn 49.93 34 *e*P **P 06 29 56.4 +0.8**
comp=Z,14nm,1.1s
DANN Dangsing 49.94 282 *e*P **P 06 29 56.0 -0.5**
KOLN Koldanda 50.26 282 *e*P **P 06 29 58.3 -0.5**
PYUN Piuthan 50.66 282 *e*P **P 06 30 01.6 -0.3**
KDAK Kodiak Island 51.21 39 P **P 06 30 03.0 -2.2**
KDAK Kodiak Island 51.21 39 P **P 06 30 03.0 -2.2**
comp=Z,23nm,1.0s,baz=25,slow=5.8,SNR=4.7
RSO Redoubt South 51.25 35 *e*P **P 06 30 06.3 +0.5**
CTA Charters Tower 51.32 175 P P 06 30 03.1 -3.3
CTA Charters Tower 51.32 175 P P 06 30 03.1 -3.3
comp=Z,3.3nm,0.6s,baz=342,slow=9.6,SNR=2.8
WRAB Tennant Creek 51.49 189 P **P 06 30 06.0 -1.7**
comp=Z,215nm,1.2s,SNR=24
WRAB Tennant Creek 51.49 189 *e*P **P 06 30 06.6 -1.1**
WRAB pmax pmax
comp=Z,53nm,1.1s
WRAB Tennant Creek 51.49 189 *e*P **P 06 30 06.5 -1.1**
comp=Z,53nm,1.1s
WRA Warramunga Arr 51.50 189 P **P 06 30 06.1 -1.7**
WRA S **S 06 37 21.1 -4.7**
WRA Warramunga Arr 51.50 189 P **P 06 30 06.1 -1.7**
comp=Z,46nm,1.1s,baz=6.9,slow=7.7,SNR=110
WRA S **S 06 37 21.1 -4.7**
comp=Z,2.9nm,0.9s,baz=3.8,slow=13,SNR=6.9
WRA LR LR 06 51 06.7
comp=Z,921nm,18.9s,baz=15,slow=35
FITZ Fitzroy Crossi 51.56 200 *e*P **P 06 30 08.1 -0.1**
comp=Z,16nm,0.9s
SPU Mount Spurr 51.64 34 *e*P **P 06 30 08.6 0.0**
PPLA Purkeypile 51.72 32 *e*P **P 06 30 10.4 +1.2**
comp=Z,22nm,1.1s
AAA Alma-Ata 51.76 303 *e*P **P 06 30 10.8 +1.1**
AAA *e*S **S 06 37 24.4 -4.9**
AAA pmax pmax
comp=Z,500nm,3.5s
AAA smax smax
comp=E,600nm,13.4s
AAA MLR MLR
comp=Z,2μm,16.0s
ULHL Ulahol 52.45 301 P **P 06 30 15.5 +0.5**
SNR=6.3
TRF Thorofare Moun 52.62 32 *e*P **P 06 30 15.9 0.0**
comp=Z,15nm,1.1s
TKM2 Tokmak 2 52.79 302 *e*P **P 06 30 18.3 +0.8**
TKM2 pmax pmax
comp=Z,26nm,1.0s
TKM2 Tokmak 2 52.79 302 *e*P **P 06 30 18.3 +0.8**
comp=Z,26nm,1.0s
TKM2 Tokmak 2 52.79 302 P **P 06 30 18.9 +1.3**
SNR=9.6

COLD Coldfoot 53.01 27 *e*P **P 06 30 19.5 +1.0**
comp=Z,5.9nm,0.9s
PMR Palmer 53.07 34 P **P 06 30 18.1 -0.9**
PMR pmax pmax
comp=Z,16nm,1.0s
PMR Palmer 53.07 34 P **P 06 30 18.1 -0.9**
comp=Z,16nm,1.0s
KZA Kyzart 53.20 301 P **P 06 30 22.1 +1.3**
SNR=9.4
KSH Kashi 53.20 298 P P 06 30 24.1 +3.6
KSH *e*pP pP 06 30 34.3 +3.6
KSH *e*sP sP 06 30 37.3 +2.7
KSH *e*PcP **PcP 06 31 31.6 +3.4**
KSH PP **PP 06 32 25.6 +5.0**
KSH *e*S **S 06 37 51.0 +1.6**
KSH *e*sS sS 06 38 07.8 +1.7
KSH pmax pmax
comp=Z,46nm,1.0s
KSH pmax pmax
comp=Z,340nm,3.6s
KSH LR LR
comp=N,2μm,13.5s
KSH LR LR
comp=E,770nm,9.7s
KSH LR LR
comp=Z,690nm,13.7s
KBK Karagaybulak 53.31 302 P **P 06 30 23.0 +1.7**
SNR=13
SML Sawmill 53.45 34 *e*P **P 06 30 21.9 0.0**
SML pmax pmax
comp=Z,4.0nm,0.9s
SML Sawmill 53.45 34 *e*P **P 06 30 21.9 0.0**
comp=Z,4.2nm,0.9s
USP Ospenovka 53.52 303 P **P 06 30 23.4 +0.8**
SNR=7.1
AAK Ala-Archa 53.64 302 *e*P **P 06 30 24.6 +0.8**
AAK pmax pmax
comp=Z,17nm,1.0s
AAK Ala-Archa 53.64 302 *e*P **P 06 30 24.6 +0.8**
comp=Z,17nm,1.0s
AAK Ala-Archa 53.64 302 P **P 06 30 24.6 +0.8**
SNR=6.4
AAK Ala-Archa 53.64 302 LR LR 06 54 04.2
comp=Z,891nm,18.9s,baz=64,slow=37
COLA College 53.77 30 *e*P **P 06 30 24.8 +0.7**
COLA pmax pmax
comp=Z,14nm,0.8s
COLA College 53.77 30 *e*P **P 06 30 24.8 +0.7**
comp=Z,14nm,0.8s
EKS2 Erkin-Say 54.16 302 *e*P **P 06 30 27.9 +0.4**
EKS2 pmax pmax
comp=Z,10.0nm,0.8s
EKS2 Erkin-Say 54.16 302 *e*P **P 06 30 27.9 +0.4**
comp=Z,9.6nm,0.8s
EKS2 Erkin-Say 54.16 302 P **P 06 30 28.1 +0.6**
SNR=6.9
ILAR Eielson Array 54.18 30 P **P 06 30 25.7 -1.4**
ILAR Eielson Array 54.18 30 P **P 06 30 25.7 -1.4**
comp=Z,7.0nm,1.0s,baz=263,slow=6.0,SNR=58
ILAR LR LR 06 53 40.8
comp=Z,396nm,18.1s,baz=109,slow=36
AML Almayashu 54.33 302 P **P 06 30 30.5 +1.5**
SNR=18
BVAR Borovoye Array 54.75 315 LR LR 06 54 49.3
comp=Z,1μm,18.3s,baz=300,slow=37
BRVK Borovoye 54.81 316 P **P 06 30 32.4 +0.6**
comp=Z,100nm,0.7s,SNR=6.0
BRVK Borovoye 54.81 316*c i*P **P 06 30 32.1 +0.3**
BRVK pmax pmax
comp=Z,14nm,0.8s
BRVK Borovoye 54.81 316 *e*P **P 06 30 32.5 +0.6**
comp=Z,15nm,0.9s
AS31 Alice Springs 55.22 189 *e*P **P 06 30 35.0 -0.2**
ASAR Alice Springs 55.22 189 P **P 06 30 33.8 -1.4**
ASAR S **S 06 38 16.5 +0.1**
ASAR Alice Springs 55.22 189 P **P 06 30 33.8 -1.4**
comp=Z,10nm,0.7s,baz=2.0,slow=6.2,SNR=67
ASAR S **S 06 38 16.5 +0.1**
comp=Z,2.9nm,1.0s,baz=18,slow=19,SNR=9.2
ASAR LR LR 06 53 11.4
comp=Z,870nm,19.2s,baz=7.8,slow=35
DOT Dot Lake 55.41 31 *e*P **P 06 30 36.0 -0.1**
comp=Z,11nm,1.1s
EGAK Eagle 56.63 30 *e*P **P 06 30 45.3 +0.6**
comp=Z,95nm,2.7s
DZM Mont Dzumac 58.13 153 *e*LQ LQ 06 47 16.5
DZM *e*LR LR 06 48 34.5
comp=Z,534nm,20.4s
DZM Mont Dzumac 58.13 153 P **P 06 30 56.1 +0.3**
DZM Mont Dzumac 58.13 153 P **P 06 30 56.1 +0.3**
comp=Z,14nm,1.1s,baz=29,slow=15,SNR=3.5
HYB Hyderabad 58.56 272 *i* P **P 06 31 00.0 +0.9**
INK Inuvik 59.33 25 P **P 06 31 03.8 +0.2**
INK Inuvik 59.33 25 P **P 06 31 03.8 +0.2**
comp=Z,5.8nm,1.0s,baz=280,slow=8.0,SNR=6.3
KBL Kabul 59.91 294 *e*P **P 06 31 08.7 +0.3**
KBL pmax pmax
comp=Z,21nm,0.9s
KBL Kabul 59.91 294 *e*P **P 06 31 08.7 +0.3**
comp=Z,21nm,0.9s
ARU Arti 60.90 321*c i*P **P 06 31 14.5 0.0**
ARU 06 31 58.6
ARU S **S 06 39 30.3 +0.3**
ARU pmax pmax
comp=Z,48nm,0.8s
ARU MLR MLR
comp=Z,1μm,17.0s
ARU Arti 60.90 321 P **P 06 31 14.0 -0.5**
comp=Z,309nm,0.8s,SNR=8.9
SOKR Solikamsk 61.09 325 *e*P **P 06 31 15.9 +0.2**
SOKR S S 06 39 44.3 +12
SOKR pmax pmax
comp=Z,10.0nm,0.9s
SOKR MLR MLR
comp=Z,2μm,26.0s
POO Poona 62.09 276⇓ *i*x x 06 31 28.0
comp=Z,30nm,1.0s
KAD Karad 62.35 274 *i* x **P 06 31 24.6 -0.3**
AKTO Aktyubinsk 62.80 314 P **P 06 31 27.6 +0.1**
AKTO pmax pmax
comp=Z,11nm,1.0s
AKTO MLR MLR
comp=Z,660nm,18.4s
AKTO Aktyubinsk 62.80 314 P **P 06 31 27.6 +0.1**
AKTO Aktyubinsk 62.80 314 P **P 06 31 27.6 +0.1**
comp=Z,11nm,1.0s,baz=73,slow=9.9,SNR=3.9
AKTO LR LR 06 59 39.2
comp=Z,660nm,18.4s,baz=248,slow=37
STKA Stephens Creek 62.88 180 *e*P **P 06 31 28.1 +0.1**
STKA Stephens Creek 62.88 180 P **P 06 31 26.2 -1.8**
comp=Z,4.3nm,1.1s,baz=354,slow=12,SNR=3.2
STKA LR LR 06 58 29.0
comp=Z,1μm,20.1s,baz=15,slow=36
DLBC Dease Lake 62.95 36 P **P 06 31 29.8 +1.4**
DLBC Dease Lake 62.95 36 P **P 06 31 29.8 +1.4**
comp=Z,5.0nm,0.9s,baz=276,slow=8.0,SNR=8.7
FORT Forrest 63.15 193 *e*P **P 06 31 30.1 +0.3**
comp=Z,39nm,0.8s
AFI Afiamalu 63.31 128 LR LR 06 55 26.9
comp=Z,765nm,18.4s,baz=293,slow=33
KBS Kingsbay 66.31 351 *e*P **P 06 31 50.9 +1.0**
KBS pmax pmax
comp=Z,18nm,1.0s
ABKT Ailbek 66.97 301 P **P 06 31 56.7 +1.8**
comp=Z,150nm,1.1s,SNR=6.8
APA Apatity 68.02 337⇑ *i*P P 06 31 49.6 -11
APA *i* 06 31 58.0
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,700nm,13.0s
YKW3 Yellowknife Ar 68.55 29 *e*P **P 06 32 04.3 0.0**
comp=Z,0.1nm,0.8s
YKA Yellowknife Ar 68.58 29 P **P 06 32 03.9 -0.6**
YKA Yellowknife Ar 68.58 29 P **P 06 32 03.9 -0.6**
comp=Z,1.7nm,0.9s,baz=296,slow=6.0,SNR=7.0
KEV Kevo 68.88 340 *e*P **P 06 32 04.5 -1.7**
KEV pmax pmax
comp=Z,6.0nm,0.9s
KEV Kevo 68.88 340 *e*p **P 06 32 04.5 -1.7**
comp=Z,6.4nm,0.9s
ARCES ARCESS Array B 69.44 340 P **P 06 32 09.3 -0.4**
ARCES ARCESS Array B 69.44 340 P **P 06 32 09.3 -0.4**
comp=Z,14nm,0.9s,baz=57,slow=8.8,SNR=20
ARCES LR LR 07 07 54.4
comp=Z,748nm,18.4s,baz=192,slow=40

NLWA **Neilton Lookou** 70.36 46 *e*P P 06 32 18.1 +2.2
comp=Z,35nm,1.7s
JOF **Joensuu** 71.15 333 *e*P P 06 32 19.0 -1.2
JOF pmax pmax
comp=Z,8.0nm,0.7s
JOF **Joensuu** 71.15 333 *e*p P 06 32 19.0 -1.2
comp=Z,7.9nm,0.7s
RAO **Raoul Island** 71.41 143 LR LR 07 02 49.2
comp=Z,388nm,18.0s,baz=105,slow=35
DAG **Danmarks Havn** 71.45 355 *i* P P 06 32 23.1 +1.2
comp=Z,11nm,1.0s
MOS **Moscow** 72.04 325 *e*P P 06 32 25.9 +0.2
MOS *e* 06 32 46.6
MAK **Makhachkala** 72.28 310 *e*P P 06 32 26.2 -1.2
MAK *e* 06 32 46.6
MAK *e* 06 35 10.2
MAK *e*S S 06 41 48.1 0.0
MAK *e* 06 42 24.1
MAK pmax pmax
comp=Z,29nm,0.3s
MAK MLR MLR
comp=Z,3µm,16.0s
BANOM **Banah** 73.42 290 P P 06 32 36.3 +1.7
SNR=6.0
VSR **Storozhevoye** 73.46 320 *e*P P 06 32 33.8 -0.5
VSR pmax pmax
comp=Z,20nm,1.4s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,20nm,1.2s
VSR MLR MLR
comp=N,560nm,14.0s
VSR MLR MLR
comp=E,970nm,14.0s
VSR MLR MLR
comp=Z,1µm,14.0s
HAWA **Hanford** 73.47 46 *e*P P 06 32 37.3 +2.9
comp=Z,27nm,1.8s
VORD **Divnogorie** 73.52 320 *e*P P 06 32 33.4 -1.2
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=Z,7.0nm,0.6s
VORD pmax pmax
comp=E,20nm,0.7s
VORD MLR MLR
comp=N,480nm,14.0s
VORD MLR MLR
comp=Z,1µm,14.0s
VORD MLR MLR
comp=E,870nm,15.0s
KAF **Kangasniemi** 73.52 334 *e*P P 06 32 33.9 -0.5
KAF pmax pmax
comp=Z,11nm,0.6s
KAF **Kangasniemi** 73.52 334 *e*p P 06 32 33.9 -0.5
comp=Z,10nm,0.6s
YBH **Yreka Blue Hor** 73.61 51 *e*P P 06 32 36.4 +0.9
comp=Z,4.9nm,0.9s
HOQ **Hoqain** 73.67 288 P P 06 32 37.2 +1.2
SNR=11
FIA1 **FINESS Array S** 74.01 333 *e*P P 06 32 38.0 +0.7
FINES **FINESS Array B** 74.01 333 P P 06 32 37.1 -0.2
FINES **FINESS Array B** 74.01 333 P P 06 32 37.1 -0.2
comp=Z,9.7nm,0.8s,baz=69,slow=10,SNR=7.6
FINES LR LR 07 10 34.7
comp=Z,547nm,18.1s,baz=205,slow=40
NEW **Newport** 74.01 43 *e*P P 06 32 38.2 +0.6
comp=Z,7.4nm,0.9s
NAZ **Nazwa, Dubai** 74.36 290 P P 06 32 41.3 +1.3
SNR=6.5
DGRG **David-gareji** 74.38 309 P P 06 32 40.7 +0.7
ARQ **Araqi** 74.43 288 P P 06 32 41.8 +1.3
SNR=15
GUDG **Gudauri** 74.49 310 P P 06 32 42.6 +1.8
TBLG **Delisi** 74.67 310 *e*P P 06 32 40.7 -0.8
TBLG **Delisi** 74.67 310 P P 06 32 40.7 -0.8
ASUD **Al Ashush, Dub** 74.80 290 P P 06 32 44.0 +1.5
SNR=7.2
KBZ **Khabaz** 74.90 312 P P 06 32 43.3 +0.5
KBZ pmax pmax
comp=Z,11nm,0.8s
KBZ MLR MLR
comp=Z,733nm,18.1s
KBZ **Khabaz** 74.90 312 P P 06 32 43.3 +0.5
KBZ **Khabaz** 74.90 312 P P 06 32 43.3 +0.5
comp=Z,11nm,0.8s,baz=60,slow=3.9,SNR=20
KBZ LR LR 07 08 51.9
comp=Z,732nm,18.1s,baz=145,slow=38
KIV **Kislovodsk** 74.93 312 *e*P P 06 32 44.3 +1.2
KIV *e* 06 32 59.0
KIV *e*S S 06 42 19.3 +1.1
KIV pmax pmax
comp=Z,16nm,0.9s
KIV MLR MLR
comp=Z,969nm,19.0s
GOR **Gori** 74.96 310 P P 06 32 45.3 +2.0
ONI **Oni** 75.10 311 P P 06 32 45.2 +1.1
MOD **Modoc** 75.12 50 *e*P P 06 32 45.8 +1.4
comp=Z,6.1nm,1.0s
A13A **Flathead Natio** 75.24 41 ⇑P P 06 32 45.0 +0.2
baz=75
C12B **Naegeli Ranch,** 75.25 43 ⇑P P 06 32 45.1 +0.2
baz=75
GNI **Garni** 75.42 308 P P 06 32 48.4 +2.3
SNR=9.0
GNI **Garni** 75.42 308 *e*P P 06 32 47.4 +1.3
comp=Z,42nm,1.0s
GNI **Garni** 75.42 308 P P 06 32 47.8 +1.7
comp=Z,4.9nm,0.4s,baz=188,slow=21,SNR=7.4
WALA **Waterton Lakes** 75.46 41 *e*P P 06 32 46.8 +0.7
comp=Z,0.2nm,0.7s
B13A **Whitefish** 75.49 42 ⇑P P 06 32 46.2 0.0
baz=75,SNR=10
VSU **Vasula** 75.54 331 *e*P P 06 32 46.4 +0.3
VSU pmax pmax
comp=Z,15nm,0.9s
OHCM **Honcut** 75.56 53 *e*P P 06 32 49.3 +2.6
BSMT **Bassoo Peak** 75.58 43 *e*P P 06 32 48.0 +1.1
BMO **Blue Mountains** 75.58 46 *e*P P 06 32 46.9 0.0
BMO pmax pmax
comp=Z,18nm,1.5s
BMO **Blue Mountains** 75.58 46 *e*P P 06 32 46.9 0.0
comp=Z,18nm,1.5s
AKH **Akhalkalaki** 75.64 310 P P 06 32 49.4 +2.0
D12A **Red Ives Fores** 75.65 43 ⇑P P 06 32 46.8 -0.5
baz=76
A14A **Double T Ranch** 75.78 41 ⇑P P 06 32 47.9 0.0
baz=76,SNR=10
C13A **Hot Springs** 75.79 43 ⇓P P 06 32 48.0 +0.1
baz=76
E12A **Beaver Dam Sad** 75.85 44 ⇓P P 06 32 48.3 -0.2
baz=76
JTMT **Jette** 75.92 42 *e*P P 06 32 49.9 +1.1
WVOR **Wild Horse Val** 75.94 49 *e*P P 06 32 48.6 -0.4
WVOR pmax pmax
comp=Z,7.0nm,1.0s
WVOR **Wild Horse Val** 75.94 49 *e*P P 06 32 48.6 -0.4
comp=Z,6.8nm,1.0s
BEKR **Beckworth** 76.07 52 *e*P P 06 32 49.7 -0.1
comp=Z,5.0nm,0.9s
D13A **Huson** 76.16 43 ⇓P P 06 32 50.0 -0.1
baz=76
A15A **Johnson Ranch,** 76.16 41 ⇓P P 06 32 49.7 -0.4
baz=76,SNR=11
B14A **Marquette Ranc** 76.18 42 ⇓P P 06 32 50.5 +0.2
baz=76,SNR=9.0
SWMT **Swartz Lake** 76.21 43 *e*P P 06 32 50.7 +0.3
C14A **Swan Lake** 76.22 42 ⇑P P 06 32 50.3 -0.1
baz=76
SUMG **Summit** 76.36 0 *e*P P 06 32 52.9 +1.8
SUMG pmax pmax
comp=Z,24nm,1.2s
SUMG **Summit** 76.36 0 *e*P P 06 32 52.9 +1.8
comp=Z,24nm,1.2s
SUMG **Summit** 76.36 0 *i* P P 06 32 52.5 +1.4
comp=Z,10nm,1.0s
RAR **Rarotonga** 76.59 125 LR LR 07 02 41.1
comp=Z,671nm,18.6s,baz=304,slow=33
MSO **Missoula** 76.60 43 *e*P P 06 32 53.4 +0.7
comp=Z,11nm,1.4s
MSO **Missoula** 76.60 43 ⇓P P 06 32 52.0 -0.6
baz=76
B15A **Bradely Ranch,** 76.61 41 ⇑P P 06 32 52.2 -0.5
baz=76,SNR=23
SLMT **Seeley Lake** 76.64 43 *e*P P 06 32 53.2 +0.3
G12A **Big Creek, Yel** 76.66 45 ⇑P P 06 32 52.3 -0.7
baz=76
URZ **Urewera** 76.67 152 LR LR 07 02 22.3
comp=Z,346nm,19.1s,baz=347,slow=32
D14A **Greenough** 76.72 43 ⇓P P 06 32 52.9 -0.4
baz=77,SNR=16
A16A **West Butte Ran** 76.81 40 ⇓P P 06 32 53.3 -0.5
baz=77,SNR=14
C15A **Salmond Ranch,** 76.87 42 ⇓P P 06 32 54.0 -0.2
baz=77,SNR=17
CMB **Columbia Colle** 76.94 53 *e*P P 06 32 54.6 0.0
CMB pmax pmax
comp=Z,12nm,0.9s
CMB **Columbia Colle** 76.94 53 *e*P P 06 32 54.6 0.0
comp=Z,12nm,0.9s
CHMT **Chamberlain Mo** 76.96 43 *e*P P 06 32 54.9 +0.2
SOC **Sochi** 76.98 313 *c i*P P 06 32 55.2 +0.6
SOC *e* 06 33 05.4
SOC *e*S S 06 42 37.3 -3.3
SOC *e*SS SS 06 47 37.4 +0.4
SOC *e*SSS SSS 06 50 47.3
SOC pmax pmax
comp=Z,11nm,0.6s
SOC MLR MLR
comp=Z,748nm,15.0s
B16A **M & M Farms, S** 77.04 41 ⇑P P 06 32 54.8 -0.2
baz=77,SNR=5.1
MFID **Camas Ranch** 77.23 47 *e*P P 06 32 56.6 +0.3
comp=Z,26nm,1.5s
MFID **Camas Ranch** 77.23 47 ⇓P P 06 32 55.7 -0.5
baz=77
H12A **Diamond D Ranc** 77.24 46 ⇑P P 06 32 55.4 -1.0
baz=77
A17A **Triple J Farms** 77.31 40 ⇓P P 06 32 56.1 -0.5
baz=77,SNR=12
D15A **Lincoln** 77.31 42 ⇓P P 06 32 55.8 -0.9
baz=77
C16A **Fuhringer Ranc** 77.35 42 ⇓P P 06 32 56.2 -0.6
baz=77,SNR=27
MICGM **Minsk** 77.41 327 *e* P 06 32 53.0 -3.8
MNK **Minsk** 77.43 327 *e*P P 06 32 53.0 -4.0
MNK MLR MLR
comp=Z,6µm,14.0s
MNK MLR MLR
comp=E,3µm,14.0s
MNK MLR MLR
comp=N,3µm,14.0s
F14A **Wisdom** 77.47 44 ⇓P P 06 32 57.0 -0.6
baz=77
B17A **L&G Farms, Che** 77.61 41 ⇑P P 06 32 57.9 -0.3
baz=77,SNR=14
ANN **Anapa** 77.75 315 *e*P P 06 32 58.1 -0.8
ANN *e*S S 06 42 47.9 -1.0
ANN pmax pmax
comp=Z,62nm,1.6s
A18A **Metzger Ranch,** 77.79 40 ⇓P P 06 32 58.9 -0.3
baz=78,SNR=16
SCO **Scoresbysund** 77.79 354 ⇓ *i*P P 06 33 03.9 +5.2
comp=Z,12nm,1.0s
BMN **Battle Mountai** 77.87 50 *e*P pP 06 33 12.0 +1.6
BMN **Battle Mountai** 77.87 50 *e*pP pP 06 33 12.0 +1.6
D16A **Dana Ranch, Ca** 77.88 42 ⇑P P 06 32 59.5 -0.3
baz=78,SNR=18
HRY **Holter Researc** 77.89 42 *e*P P 06 33 00.7 +0.8
F15A **Butte** 77.97 43 ⇑P P 06 32 59.8 -0.6
baz=78,SNR=23
C17A **Wharram Farm,** 77.99 41 ⇓P P 06 32 59.9 -0.5
baz=78
LRM **Limekiln Ridge** 78.01 43 *e*P P 06 33 01.0 +0.3
HLID **Hailey** 78.03 46 *e*P P 06 33 01.3 +0.5
comp=Z,6.4nm,1.0s
E16A **East Helena** 78.07 43 ⇑P P 06 33 00.4 -0.5
baz=78
B18A **Beardsley Farm** 78.12 40 ⇑P P 06 33 00.5 -0.6
baz=78,SNR=23
NVAR **Mina Array Bea** 78.17 52 P P 06 33 01.3 -0.4
NVAR **Mina Array Bea** 78.17 52 P P 06 33 01.3 -0.4
comp=Z,8.7nm,0.8s,baz=283,slow=5.2,SNR=44
NVAR LR LR 07 04 24.5
comp=Z,885nm,18.9s,baz=58,slow=33
DLMT **Dillon** 78.17 44 *e*P P 06 33 02.2 +0.7
MLAC **Mammoth Lakes** 78.21 53 ⇓P P 06 33 00.9 -1.0
baz=78
NV11 **Mina Array Sit** 78.27 52 *e*P P 06 33 02.5 +0.3
D17A **Six Diamond Ra** 78.30 42 ⇑P P 06 33 01.6 -0.6
baz=78,SNR=21
FFC **Flin Flon** 78.32 32 P P 06 33 02.0 +0.1
comp=Z,45nm,0.8s,SNR=5.4
FFC **Flin Flon** 78.32 32 *e*P P 06 33 01.7 -0.2
FFC pmax pmax
comp=Z,7.0nm,0.9s
FFC **Flin Flon** 78.32 32 *e*P P 06 33 01.7 -0.2
comp=Z,7.2nm,0.9s
A19A **Klindworth Far** 78.39 39 ⇓P P 06 33 01.7 -0.8
baz=78,SNR=12
I14A **Mackay** 78.43 46 ⇑P P 06 33 03.1 +0.1
baz=78
F16A **Kennard Place,** 78.51 43 ⇓P P 06 33 03.3 0.0
baz=78,SNR=16
MTUM **Tungsten Hills** 78.53 53 *e*P P 06 33 04.7 +0.9
BOZ **Bozeman (W)** 78.59 43 *e*P P 06 33 03.9 +0.1
BOZ pmax pmax
comp=Z,7.0nm,1.1s
BOZ **Bozeman (W)** 78.59 43 *e*P P 06 33 03.9 +0.1
comp=Z,6.9nm,1.1s
E17A **Martinsdale** 78.59 42 ⇓P P 06 33 03.6 -0.2
baz=78,SNR=12
D18A **Linhart Farms,** 78.78 41 ⇑P P 06 33 04.4 -0.4
baz=79,SNR=7.8
RDF **Al-Radifah** 78.85 297 *e*P P 06 33 05.5 +0.2
RDF AMb AMB 06 33 07.6
comp=Z,59nm,0.8s
C19A **Slack Wire Ran** 78.90 41 ⇓P P 06 33 05.0 -0.4
baz=79,SNR=24
PKM **Peak Mountain** 78.90 56 ⇓P P 06 33 05.5 -0.3
baz=79
NAY **Al-Naaiem** 78.93 297 *e*P P 06 33 05.5 -0.3
NAY AMb AMB 06 33 18.8
comp=Z,52nm,1.0s
VES **Vestal, Richgr** 78.94 55 ⇑P P 06 33 05.6 -0.1
baz=79
ELK **Elko** 78.99 49 *e*P P 06 33 07.2 +0.9
comp=Z,8.1nm,1.1s
F17A **Fitzpatrick Pl** 79.01 43 ⇓P P 06 33 05.9 -0.2
baz=79,SNR=12
AKASG **Malin Array Be** 79.02 323 P P 06 33 05.5 -0.3
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG MLR MLR
comp=Z,2µm,19.1s
AKASG **Malin Array Be** 79.02 323 P P 06 33 05.5 -0.3
AKASG **Malin Array Be** 79.02 323 P P 06 33 05.5 -0.3
comp=Z,2.6nm,0.5s,baz=49,slow=5.5,SNR=17
AKASG LR LR 07 11 07.7
comp=Z,2µm,19.1s,baz=65,slow=38
AK01 **Malin Array Si** 79.03 323 *e*P P 06 33 06.0 +0.2
KIEV **Kiev** 79.03 323 *e*P P 06 33 06.1 +0.2
KIEV **Kiev** 79.03 323 *e*P P 06 33 06.1 +0.2
AK02 **Malin Array Si** 79.05 323 *e*P P 06 33 06.3 +0.3
B20A **Solberg Farm,** 79.06 40 ⇑P P 06 33 05.6 -0.6
baz=79
E18A **Harlowton** 79.07 42 ⇑P P 06 33 06.6 +0.2
baz=79,SNR=8.1
QLMT **Earthquake Lak** 79.15 44 *e*P P 06 33 08.1 +1.1
G17A **Pierce Place,** 79.29 43 ⇓P P 06 33 08.3 +0.6
baz=79
D19A **Cripps Ranch,** 79.32 41 ⇓P P 06 33 07.7 0.0
baz=79,SNR=13
H16A **Russell Place,** 79.33 44 ⇑P P 06 33 07.8 -0.2
baz=79
CWC **Cottonwood Cre** 79.33 54 ⇑P P 06 33 07.6 -0.5
baz=79
RPZ **Rata Peaks** 79.35 159 LR LR 07 05 03.5
comp=Z,302nm,20.3s,baz=157,slow=33
HFS **Hagfors** 79.41 336 P P 06 33 07.6 -0.2
HFS **Hagfors** 79.41 336 P P 06 33 07.6 -0.2
comp=Z,11nm,0.8s,baz=62,slow=7.4,SNR=8.8
ISA **Isabella** 79.46 55 *e*P P 06 33 09.2 +0.5
ISA pmax pmax
comp=Z,7.0nm,1.2s
ISA **Isabella** 79.46 55 *e*P P 06 33 09.2 +0.5
comp=Z,7.4nm,1.2s
ISA **Isabella** 79.46 55 ⇑P P 06 33 08.2 -0.5
baz=79
C20A **Veseth Ranch,** 79.49 40 ⇓P P 06 33 08.5 -0.1
baz=79,SNR=12
YMR **Madison River** 79.52 44 *e*P P 06 33 10.8 +1.8
comp=Z,16nm,1.1s
GRAC **Grapevine Rang** 79.53 53 ⇑P P 06 33 08.6 -0.4
baz=79
F18A **Big Timber** 79.56 42 ⇑P P 06 33 09.1 +0.1
baz=79,SNR=17
NB2 **NORSAR Subarra** 79.56 338 P P 06 33 08.9 +0.2
comp=Z,6.2nm,0.8s,baz=41,slow=5.6
NOA **NORSAR Array B** 79.56 338 P P 06 33 08.5 -0.1
NOA **NORSAR Array B** 79.56 338 P P 06 33 08.5 -0.1
comp=Z,12nm,0.8s,baz=42,slow=5.4,SNR=24
NOA LR LR 07 14 24.3
comp=Z,652nm,18.1s,baz=45,slow=40
B21A **Ellsworth Farm** 79.61 39 ⇓P P 06 33 09.0 -0.2
baz=79
SIM **Simferopol'** 79.64 317 *e*P P 06 33 09.0 -0.4
SIM *e*S S 06 43 12.0 +2.8
SIM pmax pmax
comp=Z,18nm,0.7s
SIM pmax pmax
comp=Z,70nm,9.4s
I16A **Newdale** 79.65 45 ⇓P P 06 33 09.8 +0.1
baz=80
YFT **Old Faithful** 79.72 44 *e*P P 06 33 12.6 +2.5
comp=Z,27nm,1.2s
E19A **Rath Farm, Rou** 79.77 41 ⇓P P 06 33 09.9 -0.3
baz=80,SNR=19
D20A **Manuel Ranch,** 79.77 41 ⇓P P 06 33 10.0 -0.1
baz=80,SNR=17
A22A **Carney Farms,** 79.87 38 ⇑P P 06 33 10.5 -0.1
baz=80
H17A **Grant Village** 79.90 44 ⇑P P 06 33 12.3 +1.1
baz=80
LKWY **Lake** 79.91 44 *e*P P 06 33 13.7 +2.5
LKWY pmax pmax
comp=Z,20nm,1.1s
LKWY **Lake** 79.91 44 *e*P P 06 33 13.7 +2.5
comp=Z,20nm,1.1s
C21A **Desert Coulee** 79.92 40 ⇑P P 06 33 11.1 +0.1
baz=80
MPMC **Manual Prospec** 79.94 54 ⇓P P 06 33 11.0 -0.4
baz=80
IMW **Indian Meadow** 79.96 45 *e*P P 06 33 12.7 +1.2
comp=Z,18nm,0.9s
DCID1 **Drake Creek** 79.98 45 *e*P P 06 33 13.4 +1.9
comp=Z,22nm,1.0s
HVU **Hansel Valley** 80.01 47 *e*P P 06 33 12.9 +1.3
HVU pmax pmax
comp=Z,11nm,0.9s
HVU **Hansel Valley** 80.01 47 *e*P P 06 33 12.9 +1.3
comp=Z,11nm,0.9s
F19A **Roth Farm, Mol** 80.03 42 ⇓P P 06 33 11.4 -0.2
baz=80
R11A **Troy Canyon, C** 80.03 51 ⇑P P 06 33 11.6 -0.3
baz=80
RRI2 **Red Ridge** 80.04 45 *e*P P 06 33 13.7 +1.7
comp=Z,19nm,0.8s
LRMC **Laurel Mountai** 80.10 55 ⇓P P 06 33 11.7 -0.5
baz=80
E20A **Meyer Farm, Mu** 80.12 41 ⇑P P 06 33 11.8 -0.3
baz=80,SNR=10
FURC **Furnace Creek,** 80.16 53 ⇑P P 06 33 12.7 +0.4
baz=80
MOOW **Moose Ponds** 80.16 45 *e*P P 06 33 13.3 +0.8
comp=Z,7.1nm,0.9s
I17A **Pilgrim Ck.** 80.17 44 ⇓P P 06 33 12.6 0.0
baz=80
TPAW **Teton Pass** 80.18 45 *e*P P 06 33 14.0 +1.3
comp=Z,9.3nm,0.9s
EDW2 **Edwards Air Fo** 80.20 55 ⇑P P 06 33 13.1 +0.4
baz=80
B22A **Reddig Ranch S** 80.24 39 ⇑P P 06 33 12.5 -0.1
baz=80
RLMT **Red Lodge** 80.26 43 *e*P P 06 33 13.8 +0.8
comp=Z,10nm,1.0s
H18A **Shoshone NF, C** 80.28 43 ⇓P P 06 33 13.5 +0.4
baz=80
SNOW **Snow King Moun** 80.32 45 *e*P P 06 33 14.8 +1.4
comp=Z,8.2nm,0.9s
LOHW **Long Hollow** 80.32 45 *e*P P 06 33 14.3 +0.9
comp=Z,6.5nm,1.0s
D21A **La Casta Ranch** 80.42 40 ⇓P P 06 33 14.3 +0.6
baz=80
A23A **Redstone** 80.44 38 ⇑P P 06 33 14.0 +0.4
baz=80
MWC **Mount Wilson** 80.50 56 *e*P P 06 33 15.5 +1.0
MWC pmax pmax
comp=Z,11nm,1.0s
MWC **Mount Wilson** 80.50 56 *e*P P 06 33 15.4 +1.0
comp=Z,11nm,1.0s
F20A **Billings** 80.51 42 ⇑P P 06 33 14.5 +0.3
baz=80
MALT **Malatya** 80.57 309 *e*P P 06 33 13.2 -1.5
comp=Z,12nm,0.8s
MALT **Malatya** 80.57 309 ⇑ *i*P P 06 33 19.3 +4.6
C22A **Vida** 80.63 39 ⇑P P 06 33 14.5 -0.2
baz=80
H19A **Powell** 80.68 43 ⇓P P 06 33 15.4 +0.3
baz=80
E21A **Keefer Ranch,** 80.69 41 ⇓P P 06 33 15.6 +0.5
baz=80
I18A **Diamond G Ranc** 80.75 44 ⇓P P 06 33 15.9 +0.2
baz=81
BFSC **Mount Baldy Ra** 80.77 56 ⇓P P 06 33 16.0 +0.2
baz=81
GSC **Goldstone** 80.81 54 *e*P P 06 33 16.3 +0.3
GSC pmax pmax
comp=Z,133nm,3.0s
GSC **Goldstone** 80.81 54 *e*P P 06 33 16.3 +0.3
comp=Z,133nm,3.0s
GSC **Goldstone** 80.81 54 ⇑P P 06 33 16.1 +0.1
baz=81
G20A **Bridger** 80.81 42 ⇓P P 06 33 16.1 +0.3
baz=81
D22A **Cohagen** 80.82 40 ⇑P P 06 33 16.3 +0.5
baz=81
HWUT **Hardware Ranch** 80.86 47 *e*P P 06 33 16.6 +0.4
comp=Z,42nm,1.5s
SHOC **Shoshone** 80.86 54 ⇓P P 06 33 16.2 +0.1
baz=81
C23A **Lambert** 80.97 39 ⇑P P 06 33 16.5 0.0
baz=81
I19A **Meeteetse** 81.04 44 ⇓P P 06 33 17.1 -0.1
baz=81,SNR=5.8
F21A **Absaloka Mine,** 81.08 41 ⇓P P 06 33 17.3 +0.1
baz=81
DGMT **Dagmar** 81.09 38 *e*P P 06 33 17.9 +0.7
comp=Z,27nm,1.4s
BBRC **Big Bear Solar** 81.28 55 ⇑P P 06 33 18.2 -0.5
baz=81
D23A **Lindsay** 81.34 39 ⇑P P 06 33 18.8 +0.2
baz=81
TUQ **Turquoise Moun** 81.35 54 ⇑P P 06 33 18.4 -0.5
baz=81
H20A **Greybull** 81.36 43 ⇑P P 06 33 18.7 -0.1
baz=81,SNR=7.6
E22A **Miles City** 81.37 40 ⇓P P 06 33 19.0 +0.2
baz=81
G21A **Lodge Grass** 81.39 42 ⇓P P 06 33 18.5 -0.3
baz=81
HEC **Hector,Ludlow** 81.39 55 ⇑P P 06 33 19.0 0.0
baz=81
MURC **Murrieta** 81.43 56 ⇓P P 06 33 19.0 -0.2
baz=81
BW06 **Boulder Array** 81.43 45 *e*P P 06 33 19.5 +0.1
comp=Z,4.4nm,0.7s
PDAR **Pinedale Array** 81.43 45 P P 06 33 18.8 -0.5
PDAR **Pinedale Array** 81.43 45 P P 06 33 18.8 -0.5
comp=Z,5.4nm,0.8s,baz=282,slow=2.9,SNR=21
PDAR LR LR 07 06 01.6
comp=Z,390nm,19.6s,baz=319,slow=33
J19A **Crowheart** 81.45 44 ⇓P P 06 33 19.3 -0.1
baz=81,SNR=9.6
JLU **Jordanelle** 81.49 47 *e*P P 06 33 20.5 +0.8
comp=Z,14nm,0.9s
M17A **Scullys Gap (B** 81.49 46 ⇓P P 06 33 19.3 -0.4
baz=81,SNR=12
SFJD **Kangerlussuaq** 81.51 5 LR LR 07 10 23.5
comp=Z,353nm,18.8s,baz=336,slow=36
C24A **Savage** 81.54 39 ⇓P P 06 33 19.2 -0.4
baz=81
F22A **Rosebud** 81.60 41 ⇑P P 06 33 19.8 -0.2
baz=81
I20A **Worland** 81.60 43 ⇑P P 06 33 19.7 -0.4
baz=81,SNR=17
L18A **Fontenelle, Gr** 81.62 46 ⇓P P 06 33 20.5 +0.1
baz=82
E23A **Ismay** 81.69 40 ⇓P P 06 33 20.6 +0.2
baz=82

DAU Daniels Canyon 81.72 48 eP P 06 33 21.6 +0.6
DAU Daniels Canyon 81.72 48 eP P 06 33 21.6 +0.6
ARUT Antelope Range 81.76 51 eP P 06 33 21.4 +0.3
ARUT pmax pmax
comp=Z,13nm,0.9s
ARUT Antelope Range 81.76 51 eP P 06 33 21.4 +0.3
comp=Z,13nm,0.9s
PPT Papeete 81.82 116 LR LR 07 08 13.7
comp=Z,478nm,18.9s,baz=319,slow=35
K19A Absolon Red Bu 81.83 45 ⇑P P 06 33 21.4 0.0
baz=82
PPT2 Papeete2 81.83 116 eLR LR 06 57 58.5
comp=Z,644nm,21.2s,baz=314
H21A Big Horn, Sher 81.83 42 ⇓P P 06 33 21.3 0.0
baz=82
D24A Glendive 81.85 39 ⇑P P 06 33 21.4 +0.2
baz=82
GMRC Granite Mounta 81.88 54 ⇑P P 06 33 21.6 -0.1
baz=82
G22A Birney 81.91 41 ⇓P P 06 33 21.8 +0.2
baz=82
L19A Farson 81.94 45 ⇑P P 06 33 21.8 -0.2
baz=82,SNR=11
CCUT Cedar City 81.94 51 eP P 06 33 22.4 +0.3
comp=Z,7.0nm,0.9s
PFO Pinyon Flat Ob 81.95 56 P P 06 33 22.0 -0.1
comp=Z,78nm,0.9s,SNR=7.2
PFO Pinyon Flat Ob 81.95 56 eP P 06 33 22.2 +0.1
PFO Pinyon Flat Ob 81.95 56 ⇑P P 06 33 22.0 -0.1
baz=82
J20A Shoshoni 81.98 44 ⇑P P 06 33 22.4 +0.4
baz=82
BELC Belle Mtn. Jos 82.06 55 ⇓P P 06 33 22.2 -0.5
baz=82
LDFC Landfair 82.10 54 eP P 06 33 22.8 -0.1
comp=Z,15nm,0.9s
F23A Volborg 82.11 41 ⇓P P 06 33 22.6 -0.1
baz=82
I21A Big Trails, Te 82.17 43 ⇑P P 06 33 22.3 -0.8
baz=82,SNR=12
MVU Marysvale 82.17 50 eP P 06 33 23.8 +0.4
comp=Z,16nm,1.1s
LVV L'vov 82.18 325 eP P 06 33 27.6 +4.8
LVV MLR MLR
comp=Z,1μm,17.0s
LVV MLR MLR
comp=N,400nm,18.0s
LVV MLR MLR
comp=E,1μm,17.0s
MSU Marysvale 82.19 50 eP P 06 33 23.9 +0.5
MSU Marysvale 82.19 50 eP P 06 33 23.9 +0.5
K20A Yellowstone Ra 82.23 44 ⇑P P 06 33 23.1 -0.3
baz=82
H22A Clearmont 82.25 42 ⇓P P 06 33 23.3 -0.1
baz=82
BAR Barrett 82.29 57 eP P 06 33 23.8 0.0
comp=E,13nm,1.0s
J21A Lysite 82.36 44 ⇑P P 06 33 23.9 -0.2
baz=82
MONP Monument Peak 82.36 56 ⇑P P 06 33 24.1 -0.2
baz=82
M19A Rock Springs 82.40 46 ⇓P P 06 33 24.2 -0.2
baz=82
G23A Biddle 82.43 41 ⇑P P 06 33 24.1 -0.2
baz=82
F24A Ekalaka 82.57 40 ⇑P P 06 33 24.7 -0.3
baz=82
IRM Iron Mountain 82.57 55 ⇓P P 06 33 24.9 -0.3
baz=82
I22A 9 Mile Ranch, 82.59 43 ⇑P P 06 33 24.8 -0.5
baz=82,SNR=9.8
L20A Wamsutter 82.61 45 ⇑P P 06 33 25.4 -0.1
baz=82
NEE2 Needles Airpor 82.61 54 ⇓P P 06 33 25.3 -0.1
baz=82
Q16A Castle Valley 82.61 49 ⇓P P 06 33 25.0 -0.6
baz=82,SNR=9.8
BC3 Big Chuckawall 82.63 55 ⇑P P 06 33 25.6 -0.1
baz=82
DVTC Desert V Tower 82.71 56 ⇑P P 06 33 26.4 +0.3
baz=83
SWSC Sam W. Stewart 82.78 56 ⇓P P 06 33 25.9 -0.3
baz=83
J22A Midwest 82.88 43 ⇑P P 06 33 26.7 -0.2
baz=83
BRTR Keskin Array B 82.89 312 P P 06 33 27.2 +0.3
BRTR Keskin Array B 82.89 312 P P 06 33 27.2 +0.3
comp=E,16nm,1.0s,baz=116,slow=2.9,SNR=12
BRTR LR LR 07 14 39.2
comp=E,329nm,18.7s,baz=256,slow=39
K21A Alcova 82.89 44 ⇓P P 06 33 26.6 -0.4
baz=83,SNR=9.5
G24A Alzada 82.90 41 ⇓P P 06 33 26.2 -0.6
baz=83
W13A Hualapai Mount 82.94 53 ⇑P P 06 33 27.5 +0.1
baz=83
KWP Kalwaria Pacla 82.95 325 eP P 06 33 27.5 +0.6
BUR08 Bucovina Ar. S 82.98 322 eP P 06 33 28.2 +1.1
BURAR Bucovina Array 82.99 322 ⇓iP P 06 33 29.1 +1.9
M20A Sweetwater, Wa 83.00 45 ⇓P P 06 33 27.6 0.0
baz=83
O19A Miners Draw (B 83.12 47 ⇑P P 06 33 27.7 -0.4
baz=83,SNR=7.8
RAYN Ar Rayn 83.16 293 P P 06 33 29.3 +0.9
comp=E,130nm,0.8s,SNR=6.8
RAYN Ar Rayn 83.16 293 eP P 06 33 29.7 +1.3
comp=E,125nm,1.7s
H24A Dirks Ranch, A 83.18 41 ⇓P P 06 33 27.3 -1.0
baz=83
PDMCI Parker Dam,Lak 83.20 54 ⇓P P 06 33 28.3 -0.1
baz=83
L21A Rawlins 83.22 45 ⇓P P 06 33 28.5 -0.1
baz=83,SNR=12
Y12C Blythe 83.23 55 ⇑P P 06 33 28.7 +0.1
baz=83
U15A North Rim 83.28 51 ⇑P P 06 33 29.2 0.0
baz=83
VRI Vrincioaia 83.29 320 ⇑iP P 06 33 29.1 +0.4
K22A Casper 83.31 44 ⇑P P 06 33 29.4 +0.3
baz=83
PLOR Plostina 83.34 320 ⇓iP P 06 33 31.6 +2.6
N20A Spence Gulch, 83.34 46 ⇓P P 06 33 29.1 -0.3
baz=83,SNR=23
GLA Glamis 83.40 55 eP pP 06 33 40.3 +0.1
GLA Glamis 83.40 55 epP pP 06 33 40.2 +0.1
GLA Glamis 83.40 55 ⇑P P 06 33 29.5 0.0
baz=83
M21A Separation Pea 83.43 45 ⇓P P 06 33 29.6 -0.2
baz=83,SNR=14
P19A Cripple Cowboy 83.60 47 ⇓P P 06 33 30.4 -0.3
baz=83,SNR=31
L22A Ellis Ranch, M 83.74 44 ⇑P P 06 33 31.4 +0.1
baz=84,SNR=9.8
MUD Monsted U'grnd 83.75 336 iP pP 06 33 51.1 +10
comp=E,14nm,1.0s
O20A White River Ci 83.77 46 ⇑P P 06 33 31.2 -0.2
baz=84,SNR=10
K23A Bowen Ranch, D 83.78 43 ⇑P P 06 33 31.3 -0.2
baz=84
STHS Stebnicka Huta 83.81 326 eP P 06 33 32.7 +1.4
STHS pmax pmax
comp=Z,8.0nm,1.1s
STHS Stebnicka Huta 83.81 326 eP P 06 33 32.0 +0.7
STHS ePP PP 06 36 48.7 +4.7
STHS Stebnicka Huta 83.81 326 eP P 06 33 32.7 +1.4
N21A Black Mountain 83.84 46 ⇓P P 06 33 31.6 -0.3
baz=84,SNR=18
RSSD Black Hills 83.86 41 eP P 06 33 32.0 +0.1
RSSD pmax pmax
comp=Z,13nm,1.6s
RSSD Black Hills 83.86 41 eP P 06 33 32.0 +0.1
comp=Z,13nm,1.6s
OJC Ojcow 83.95 327 eP P 06 33 32.1 +0.1
OJC eS S 06 43 56.3 +2.9
OJC Ojcow 83.95 327 eP P 06 33 32.3 +0.3
OJC Ojcow 83.95 327 eP P 06 33 32.1 +0.1
OJC eS S 06 43 56.3 +2.9
OJC L L 07 24 34.7
comp=Z,300nm,18.3s
TRPA Tarpa 84.03 324 ⇑iP P 06 33 33.1 +0.7
P20A De Beque 84.05 47 ⇓P P 06 33 32.9 0.0
baz=84,SNR=12
CRVS Cervenica-Dubn 84.05 325 eP P 06 33 30.9 -1.6
CRVS pmax pmax
comp=Z,19nm,1.5s
CRVS Cervenica-Dubn 84.05 325 eP P 06 33 31.1 -1.4
CRVS Cervenica-Dubn 84.05 325 eP P 06 33 30.9 -1.6

ULM Lac du Bonnet 84.07 33 P P 06 33 32.0 -0.6
ULM Lac du Bonnet 84.07 33 P P 06 33 32.0 -0.6
comp=Z,2.0nm,0.4s,baz=348,slow=8.2,SNR=3.1
ULM LR LR 07 12 60.0
comp=Z,481nm,18.6s,baz=150,slow=37
S18A Hurst Farm, Bl 84.07 49 ⇓P P 06 33 33.1 -0.1
baz=84,SNR=20
L23A Garrett 84.12 44 ⇓P P 06 33 33.1 -0.2
baz=84,SNR=11
Y14A Wickenburg 84.18 54 ⇑P P 06 33 33.4 -0.2
baz=84,SNR=12
O21A Pagoda 84.19 46 ⇑P P 06 33 33.5 -0.2
baz=84
NIE Niedzica 84.25 326 eP P 06 33 35.0 +1.4
NIE eS S 06 44 01.9 +5.3
NIE Niedzica 84.25 326 eP P 06 33 35.0 +1.4
NIE eS S 06 44 01.9 +5.3
PV04 Paradox Valley 84.37 48 eP P 06 33 35.3 +0.7
WUAZ Wupatki 84.41 52 eP P 06 33 34.8 0.0
comp=Z,26nm,1.0s
Q20A Ridgley Place, 84.42 47 ⇓P P 06 33 34.7 -0.1
baz=84,SNR=43
N22A Wattenberg Ran 84.47 45 ⇑P P 06 33 34.9 -0.2
baz=84
P21A Newcastle 84.62 47 ⇓P P 06 33 35.7 -0.2
baz=84
N23A Red Feather La 84.72 45 ⇑P P 06 33 36.4 0.0
baz=84,SNR=17
PV01 Paradox Valley 84.73 48 eP P 06 33 36.1 -0.4
comp=Z,3μm,1.2s
PHWY Pilot Hill 84.76 44 eP P 06 33 37.6 +1.0
comp=Z,8.3nm,1.1s
O22A Kremmling 84.79 46 ⇓P P 06 33 36.3 -0.5
baz=85,SNR=20
R20A Redvale 84.82 48 ⇑P P 06 33 36.5 -0.4
baz=85,SNR=27
Q21A Lamborn Mesa, 84.95 47 ⇓P P 06 33 37.9 +0.4
baz=85,SNR=26
ASF Jabal al Asfar 84.98 305 P P 06 33 37.4 -0.2
ASF Jabal al Asfar 84.98 305 P P 06 33 37.4 -0.2
comp=Z,8.1nm,0.7s,baz=54,slow=3.5,SNR=8.0
X16A Lo Mia Camp, P 84.98 53 ⇓P P 06 33 37.8 0.0
baz=85,SNR=16
OKC Ostrava-Krasne 84.99 327 eS S 06 44 02.7 -1.0
OKC AMS AMS 07 20 30.0
comp=Z,700nm,15.9s
P22A Eagle 85.00 46 ⇑P P 06 33 38.0 +0.2
baz=85,SNR=25
M24A Cheyenne 85.04 44 ⇓P P 06 33 38.1 +0.2
baz=85
S20A Disappointment 85.05 48 ⇓P P 06 33 38.0 -0.1
baz=85,SNR=10.0
KSP Ksiaz 85.11 329 ⇑eP P 06 33 38.2 +0.4
KSP e*PP pP 06 33 49.1 +0.6
KSP eS S 06 44 06.0 +1.0
KSP Ksiaz 85.11 329 eP P 06 33 38.2 +0.4
L25A Engebretsen Ra 85.12 43 ⇓P P 06 33 38.0 -0.2
baz=85
O23A Lake Granby, G 85.15 45 ⇓P P 06 33 38.6 0.0
baz=85,SNR=16
K26A Motz Farm, Whi 85.23 42 ⇓P P 06 33 38.6 -0.1
baz=85
R21A Cimarron 85.24 48 ⇑P P 06 33 39.5 +0.4
baz=85,SNR=20
MORC Moravsky Berou 85.31 327 ⇓P P 06 33 39.4 +0.5
MORC Moravsky Berou 85.31 327 eP P 06 33 38.7 -0.2
comp=Z,12nm,1.2s
MORC Moravsky Berou 85.31 327 ⇓iP P 06 33 39.4 +0.5
TBI Tubuai 85.34 121 eLR LR 06 59 08.2
comp=Z,426nm,35.2s,baz=320
Q22A Crested Butte, 85.35 47 ⇑P P 06 33 39.9 +0.2
baz=85,SNR=34
AGMN Agassiz Nation 85.42 34 eP P 06 33 39.3 -0.1
comp=Z,21nm,1.6s
214A Organ Pipe Nat 85.42 55 ⇑P P 06 33 40.3 +0.5
baz=85,SNR=13
DPC Dobruska-Polom 85.45 328 eP P 06 33 40.7 +1.1
DPC ePCP PcP 06 33 44.5 +1.9
DPC eS S 06 44 09.3 +0.8
PSZ Piszkesteto 85.48 325 eP P 06 33 39.7 -0.2
PSZ pmax pmax
comp=Z,15nm,1.1s
PSZ Piszkesteto 85.48 325 eP P 06 33 39.7 -0.2
comp=Z,15nm,1.1s
S21A Coal Bank Pass 85.51 48 ⇑P P 06 33 40.8 +0.3
baz=85,SNR=12
ISCO Idaho Springs 85.58 46 eP P 06 33 41.8 +1.0
ISCO pmax pmax
comp=Z,20nm,1.6s
ISCO Idaho Springs 85.58 46 eP P 06 33 41.8 +1.0
comp=Z,20nm,1.6s
VYHS Vyhne 85.60 326 eP P 06 33 40.8 +0.5
VYHS pmax pmax
comp=Z,11nm,1.4s
VYHS Vyhne 85.60 326 eP P 06 33 41.0 +0.7
VYHS Vyhne 85.60 326 eP P 06 33 40.8 +0.5
VYHS epP pP 06 33 54.8 +3.8
O24A Longmont 85.71 45 ⇓P P 06 33 41.5 +0.3
baz=86
GZR Gura Zlata 85.72 322 ⇑P P 06 33 31.7 -9.3
GZR Gura Zlata 85.72 322 ⇑iP P 06 33 31.7 -9.3
K27A Fluecklinger Fa 85.77 42 ⇑P P 06 33 41.4 0.0
baz=86
U20A Newcomb 85.80 50 ⇓P P 06 33 41.6 -0.1
baz=86
R22A Saguache, Gunn 85.83 47 ⇓P P 06 33 42.1 +0.1
baz=86,SNR=24
J28A Allard Ranch, 85.87 41 ⇓P P 06 33 41.5 -0.4
baz=86
X18A Snowflake 85.93 52 ⇓P P 06 33 42.2 -0.2
baz=86,SNR=7.2
S22A 4UZ Ranch, Cre 86.07 48 ⇓P P 06 33 43.1 -0.2
baz=86,SNR=12
T21A Navajo Lake 86.07 49 ⇑P P 06 33 42.5 -0.7
baz=86
VRAC Vranov 86.08 328 P P 06 33 42.9 +0.2
VRAC Vranov 86.08 328 ⇓iP P 06 33 41.3 -1.4
VRAC Vranov 86.08 328 P P 06 33 42.9 +0.2
comp=Z,7.4nm,0.8s,baz=27,slow=7.2,SNR=5.0
PVCC Panska Ves 86.10 329 AMS AMS 07 17 00.0
comp=Z,1μm,14.5s
BRG Berggiesshubel 86.12 330 iP P 06 33 45.8 +3.0
comp=Z,27nm,1.8s
BRG e 06 34 19.7
comp=Z,7.5nm,1.0s
BRG
comp=Z,1μm,15.3s
BRG
comp=N,870nm,16.3s
BRG
comp=E,690nm,16.3s
BRG Berggiesshubel 86.12 330 iP P 06 33 45.8 +3.0
BRG pmax pmax
comp=Z,27nm,1.8s
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG MLR MLR
comp=Z,1μm,15.3s
BRG MLR MLR
comp=N,870nm,16.3s
BRG MLR MLR
comp=E,690nm,16.3s
V20A Brimhall 86.17 50 ⇓P P 06 33 43.3 -0.4
baz=86,SNR=8.5
CLL Collm 86.19 331 iP P 06 33 43.3 +0.1
CLL eS S 06 44 09.0 -6.6
CLL pmax pmax
comp=Z,9.0nm,1.0s
CLL Collm 86.19 331 iP P 06 33 43.3 +0.1
comp=Z,9.0nm,1.0s
CLL iPcP PcP 06 33 46.9 +1.2
comp=Z,22nm,1.1s
CLL ipP pP 06 33 54.9 +1.1
CLL i 06 34 05.2
CLL ePP PP 06 37 18.0 +15
CLL eS S 06 44 12.0 -3.6
CLL ePS PnS 06 45 19.0 +3.2
CLL eSS SS 06 49 52.0 -1.4
CLL e 06 50 42.0
CLL eSSS SSS 06 53 26.0
CLL e 06 54 48.0
CLL eSSSS 06 56 12.0
K28A Ten Mile Ranch 86.25 41 ⇓P P 06 33 43.9 +0.1
baz=86
O25A Wiggins 86.30 45 ⇑P P 06 33 43.8 -0.3
baz=86

U21A Nageezi 86.33 49 ⇑P P 06 33 44.4 -0.1
baz=86,SNR=11
R23A Moffat 86.43 47 ⇑P P 06 33 44.6 -0.4
baz=86,SNR=22
T22A Edith 86.46 48 ⇑P P 06 33 44.8 -0.3
baz=86,SNR=12
PRU Pruhonice 86.51 329 eS S 06 44 14.8 -3.9
PRU AMS AMS 07 17 00.0
comp=Z,1μm,16.0s
W20A Ramah 86.55 51 ⇓P P 06 33 45.2 -0.3
baz=86,SNR=9.5
TREC Trest 86.59 328 AMS AMS 07 16 50.0
comp=Z,900nm,14.2s
TUC Tucson 86.64 54 eP P 06 33 45.9 +0.1
TUC Tucson 86.64 54 eP P 06 33 45.9 +0.1
P25A Willow Gulch B 86.64 45 ⇑P P 06 33 45.7 -0.2
baz=86
V21A Milan 86.71 50 ⇓P P 06 33 46.4 +0.1
baz=87
R24A Sanders Place, 86.85 47 ⇓P P 06 33 46.9 -0.1
baz=87
U22A Llaves 86.88 49 ⇑P P 06 33 46.9 -0.2
baz=87
X20A Quemado 86.89 51 ⇓P P 06 33 47.1 -0.2
baz=87,SNR=11
Q25A Bedland, Calha 86.96 46 ⇓P P 06 33 47.9 +0.4
baz=87
T23A Casias Ranch, 87.00 48 ⇓P P 06 33 47.5 -0.3
baz=87
P26A Davis Ranch, A 87.11 45 ⇓P P 06 33 48.5 +0.4
baz=87
W21A San Fidel 87.11 50 ⇑P P 06 33 49.0 +0.7
baz=87
V22A San Miguel Ran 87.12 49 ⇑P P 06 33 48.4 0.0
baz=87
S24A Houchin Ranch, 87.15 47 ⇓P P 06 33 48.1 -0.4
baz=87
NKC Novy Kostel 87.23 330 AMS AMS 07 21 10.0
comp=Z,900nm,16.2s
U23A El Rito 87.33 49 ⇓P P 06 33 49.0 -0.3
baz=87,SNR=25
Y20A Horse Springs, 87.35 52 ⇓P P 06 33 49.4 -0.1
baz=87,SNR=16
R25A Fountain Ranch 87.42 46 ⇓P P 06 33 49.6 0.0
baz=87
X21A Alamocita Cree 87.42 51 ⇓P P 06 33 50.0 +0.2
baz=87
KHC Kasperske Hory 87.56 329 eP P 06 33 45.7 -4.3
KHC ePCP PcP 06 33 52.8 +0.9
KHC eS S 06 44 22.6 -6.4
KHC ePS PnS 06 45 28.8 -3.6
KHC AMS AMS 07 17 20.0
comp=Z,800nm,16.3s
KHC Kasperske Hory 87.56 329 eP P 06 33 45.7 -4.3
KHC ePCP PcP 06 33 52.8 +0.9
KHC eS S 06 44 22.6 -6.4
KHC ePS PnS 06 45 28.8 -3.6
KHC e 06 33 52.8
KHC e 06 44 22.6
KHC e 06 45 28.8
KHC MLR MLR
comp=Z,800nm,16.3s
S25A Robets Cordova 87.62 47 ⇑P P 06 33 50.6 -0.1
baz=88
Z20A Nine Sixteen R 87.67 52 ⇓P P 06 33 51.1 +0.1
baz=88,SNR=20
V23A Ortiz Mt. (NFS 87.69 49 ⇑P P 06 33 50.7 -0.3
baz=88
GERES GERESS Array B 87.72 329 P P 06 33 50.9 +0.1
GERES PP PP 06 37 21.3 +5.5
GERES GERESS Array B 87.72 329 P P 06 33 50.9 +0.1
comp=Z,1.2nm,0.8s,baz=15,slow=4.1,SNR=7.1
GERES PP PP 06 37 21.3 +5.5
comp=Z,0.3nm,0.4s,baz=33,slow=7.4,SNR=3.0
GERES LR LR 07 18 43.4
comp=Z,547nm,18.9s,baz=181,slow=39
EYMN Ely 87.74 33 eP P 06 33 51.1 +0.3
comp=Z,11nm,1.1s
Y21A Point of Rocks 87.76 51 ⇓P P 06 33 51.6 +0.1
baz=88
R26A Arlington 87.83 46 ⇑P P 06 33 51.6 0.0
baz=88
LAZ Ladron 87.88 51 P P 06 33 52.0 +0.1
comp=Z,1.5nm,1.0s
T25A Trinidad 87.96 47 ⇑P P 06 33 52.0 -0.3
baz=88
120A U Bar Ranch, L 87.98 53 ⇑P P 06 33 53.2 +0.8
baz=88
ANMO Albuquerque 88.00 50 eP P 06 33 53.2 +0.7
comp=Z,11nm,1.5s
ECSD EROS Data Cent 88.17 38 eP P 06 33 52.8 -0.1
comp=Z,12nm,1.0s
Z21A St. Cloud Mine 88.18 52 ⇑P P 06 33 53.8 +0.4
baz=88
319A Douglas 88.22 54 ⇓P P 06 33 53.7 +0.2
baz=88
V24A Rampart Ranch, 88.29 49 ⇑P P 06 33 53.4 -0.5
baz=88,SNR=5.8
U25A Circle Dot Ran 88.42 48 ⇑P P 06 33 54.6 0.0
baz=88
220A Playas Peak, P 88.43 53 ⇑P P 06 33 54.7 +0.1
baz=88
T26A Comanche Natio 88.45 47 ⇑P P 06 33 54.7 0.0
baz=88
W24A Lazy 6 Ranch, 88.52 49 ⇓P P 06 33 54.7 -0.3
baz=88,SNR=7.1
121A Cookes Peak, D 88.56 52 ⇑P P 06 33 55.5 +0.3
baz=88
V25A Rancho No Teng 88.64 48 ⇑P P 06 33 55.3 -0.2
baz=88,SNR=5.2
320A Kipp Ranch, An 88.76 54 ⇓P P 06 33 56.1 0.0
baz=89
U26A Atchley Ranch, 88.84 47 ⇑P P 06 33 56.5 0.0
baz=89
Y23A Lovelace Mesa, 88.88 50 ⇓P P 06 33 56.6 -0.1
baz=89
P30A Selden 88.95 43 ⇑P P 06 33 56.2 -0.5
baz=89
SPMN St. Paul 89.08 35 ⇓P P 06 33 57.0 -0.1
baz=89
W25A X Bar L Ranch, 89.12 49 ⇓P P 06 33 57.2 -0.5
baz=89
V26A Tequesquite Ra 89.19 48 ⇑P P 06 33 58.1 0.0
baz=89
S28A Manter 89.23 45 ⇓P P 06 33 58.3 +0.2
baz=89
X25A Clemmons Ranch 89.42 49 ⇓P P 06 33 59.0 -0.2
baz=89
P31A Stockton 89.47 43 ⇓P P 06 33 59.0 -0.2
baz=89
124A Stringfield Ra 90.03 51 ⇓P P 06 34 02.1 0.0
baz=90
Z25A Roswell 90.16 50 ⇑P P 06 34 02.5 -0.1
baz=90
COWI Conover 90.19 33 eP P 06 34 02.3 0.0
comp=Z,3.9nm,0.9s
X27A F and S Farms, 90.35 48 ⇑P P 06 34 03.9 +0.4
baz=90
224A Cornudas Mount 90.36 52 ⇓P P 06 34 03.6 0.0
baz=90
125A Gardner Draw, 90.58 51 ⇓P P 06 34 04.8 +0.3
baz=90
Z26A Caprock 90.64 50 ⇓P P 06 34 04.7 -0.1
baz=90
MNTX Cornudas Mount 90.69 52 eP P 06 34 04.1 -0.8
comp=Z,3.1nm,1.1s
SCHQ Schefferville 90.70 16 LR LR 07 16 28.4
comp=Z,301nm,19.6s,baz=349,slow=37
324A Moseley Ranch, 90.78 52 ⇓P P 06 34 04.8 -0.8
baz=91
CDF Champ du Feu 90.79 332 eP P 06 34 04.7 -0.5
comp=Z,26nm,1.3s
CDF Champ du Feu 90.79 332 eP P 06 34 04.7 -0.5
CDF pmax pmax
comp=Z,26nm,1.3s
CDF Champ du Feu 90.79 332 eP P 06 34 04.7 -0.5
comp=Z,26nm,1.3s
Y27A Causey 90.79 49 ⇑P P 06 34 05.2 -0.4
baz=91
DAVOX Davos/Dischmat 90.97 329 P P 06 34 06.1 -0.1
DAVOX Davos/Dischmat 90.97 329 P P 06 34 06.1 -0.1
comp=Z,3.0nm,0.5s,baz=333,slow=11,SNR=4.1
X28A Dimmitt 91.01 48 ⇓P P 06 34 06.5 0.0
baz=91
AMTX Amarillo 91.10 47 eP P 06 34 06.3 -0.6
comp=Z,16nm,1.2s
Z27A Tatum 91.12 49 ⇓P P 06 34 06.8 -0.3
baz=91
325A Bean Ranch, Si 91.17 52 ⇓P P 06 34 07.6 +0.2
baz=91
226B Tecolote Peak, 91.27 51 ⇓P P 06 34 07.9 +0.2

	baz=91									
PAGF	**Fort de Pagny**	**91.30**	**333**	*e*P		**P**	06 34 07.3	-0.1		
PAGF	**Fort de Pagny**	**91.30**	**333**	*e*P		**P**	06 34 07.3	-0.1		
KSU1	**Kansas State U**	**91.34**	**42**	*e*P		**P**	06 34 07.7	-0.1		
	comp=Z,10nm,0.8s									
Y28A	**McKinney Farm,**	**91.36**	**48**	⇑P		**P**	06 34 08.4	+0.2		
	baz=91									
X29A	**Tulia**	**91.37**	**48**	⇓P		**P**	06 34 08.3	+0.1		
	baz=91									
TUE	**Stuetta**	**91.44**	**329**	*e*P		**P**	06 34 08.1	-0.3		
	comp=Z,36nm,1.6s									
425A	**Indio Mountain**	**91.52**	**52**	⇓P		**P**	06 34 09.0	0.0		
	baz=91									
Y29A	**Porterfield Fa**	**91.76**	**48**	⇓P		**P**	06 34 10.0	0.0		
	baz=92									
SFTF	**Sexfontaines**	**91.85**	**333**	*e*P		**P**	06 34 09.7	-0.3		
	comp=Z,66nm,1.3s									
SFTF	**Sexfontaines**	**91.85**	**333**	*e*P		**P**	06 34 09.7	-0.3		
	comp=Z,66nm,1.3s									
W31A	**Holland Ranch,**	**91.99**	**46**	⇑P		**P**	06 34 11.0	+0.1		
	baz=92									
128A	**Castleberry Fa**	**92.03**	**50**	⇓P		**P**	06 34 11.3	0.0		
	baz=92									
Z29A	**Hungry Hill Ra**	**92.13**	**49**	⇑P		**P**	06 34 11.8	+0.1		
	baz=92									
426A	**McDonald Obser**	**92.23**	**52**	⇑P		**P**	06 34 12.0	-0.4		
	baz=92									
Y30A	**Stafford Cattl**	**92.24**	**48**	⇑P		**P**	06 34 12.4	+0.1		
	baz=92									
228A	**UT Block 9, Go**	**92.28**	**50**	⇓P		**P**	06 34 12.1	-0.4		
	baz=92									
X31A	**McDonald Ranch**	**92.33**	**47**	⇑P		**P**	06 34 12.2	-0.3		
	baz=92									
Z30A	**Sanderson Ranc**	**92.48**	**48**	⇓P		**P**	06 34 12.9	-0.3		
	baz=92									
427A	**Hayter Ranch,**	**92.54**	**51**	⇑P		**P**	06 34 13.5	-0.1		
	baz=92									
526A	**Mary Lane Ranc**	**92.57**	**52**	⇑P		**P**	06 34 13.8	-0.1		
	baz=92									
Y31A	**Rekieta Farm,**	**92.59**	**47**	⇑P		**P**	06 34 13.8	+0.1		
	baz=92									
328A	**Wristen Ranch,**	**92.60**	**51**	⇑P		**P**	06 34 13.8	-0.1		
	baz=92									
CABF	**La Chapelle**	**92.71**	**331**	*e*P		**P**	06 34 13.9	-0.2		
	comp=Z,49nm,1.5s									
CABF	**La Chapelle**	**92.71**	**331**	*e*P		**P**	06 34 13.9	-0.2		
CABF					pmax	pmax				
	comp=Z,49nm,1.5s									
CABF	**La Chapelle**	**92.71**	**331**	*e*P		**P**	06 34 13.9	-0.2		
	comp=Z,49nm,1.5s									
527A	**Woodward Ranch**	**92.84**	**52**	⇓P		**P**	06 34 14.7	-0.4		
	baz=93									
626A	**Big Bend Ranch**	**92.86**	**53**	⇑P		**P**	06 34 14.9	-0.2		
	baz=93									
229A	**Bryant Ranch,**	**92.89**	**50**	⇓P		**P**	06 34 15.1	-0.1		
	baz=93									
WMOK	**Wichita Mounta**	**93.00**	**46**	*e*P		**P**	06 34 15.9	+0.3		
WMOK					pmax	pmax				
	comp=Z,12nm,1.4s									
WMOK	**Wichita Mounta**	**93.00**	**46**	*e*P		**P**	06 34 15.9	+0.3		
	comp=Z,12nm,1.4s									
130A	**Snyder**	**93.03**	**49**	⇓P		**P**	06 34 15.5	-0.3		
	baz=93									
LOR	**Lormes**	**93.07**	**333**	*e*P		**P**	06 34 15.1	-0.6		
	comp=Z,42nm,1.3s									
LOR				*e*R						
	comp=Z,585nm,17.2s									
LOR	**Lormes**	**93.07**	**333**	*e*P		**P**	06 34 15.1	-0.6		
	comp=Z,42nm,1.3s									
Y32A	**R-V Farms, Ver**	**93.08**	**47**	⇑P		**P**	06 34 16.0	+0.1		
	baz=93									
329A	**Wagon Wheel Ra**	**93.08**	**50**	⇑P		**P**	06 34 15.8	-0.4		
	baz=93									
Z31A	**Sharp Cattle R**	**93.08**	**48**	⇑P		**P**	06 34 15.8	-0.2		
	baz=93									
428A	**Kincaid Ranch,**	**93.10**	**51**	⇑P		**P**	06 34 16.4	+0.1		
	baz=93									
TXAR	**Lajitas Array**	**93.31**	**53**	P		**P**	06 34 17.5	+0.3		
TXAR	**Lajitas Array**	**93.31**	**53**	P		**P**	06 34 17.5	+0.3		
	comp=Z,12nm,0.8s,baz=295,slow=3.0,SNR=133									
TXAR					LR	LR	07 14 20.7			
	comp=Z,822nm,18.9s,baz=10.0,slow=34									
LPL	**La Plagne**	**93.32**	**330**	*e*P		**P**	06 34 16.7	-0.4		
LPL	**La Plagne**	**93.32**	**330**	*e*P		**P**	06 34 16.7	-0.4		
LPL	**La Plagne**	**93.32**	**330**	*e*P		**P**	06 34 16.7	-0.4		
LPG	**La Plagne**	**93.32**	**330**	*e*P		**P**	06 34 16.9	-0.3		
	comp=Z,22nm,0.9s									
LPG	**La Plagne**	**93.32**	**330**	*e*P		**P**	06 34 16.9	-0.3		
LPG					pmax	pmax				
	comp=Z,22nm,0.9s									
LPG	**La Plagne**	**93.32**	**330**	*e*P		**P**	06 34 16.9	-0.3		
	comp=Z,22nm,0.9s									
SSF	**Saint Saulge**	**93.38**	**333**	*e*P		**P**	06 34 16.7	-0.4		
	comp=Z,24nm,1.1s									
SSF	**Saint Saulge**	**93.38**	**333**	*e*P		**P**	06 34 16.7	-0.4		
SSF					pmax	pmax				
	comp=Z,24nm,1.1s									
SSF	**Saint Saulge**	**93.38**	**333**	*e*P		**P**	06 34 16.7	-0.4		
	comp=Z,24nm,1.1s									
528A	**Cox Ranch, San**	**93.39**	**52**	⇓P		**P**	06 34 17.8	+0.2		
	baz=93									
230A	**Sterling City**	**93.39**	**49**	⇑P		**P**	06 34 17.3	-0.2		
	baz=93									
627A	**Terlingua Ranc**	**93.42**	**52**	⇑P		**P**	06 34 17.8	0.0		
	baz=93									
FLN	**La Foliniere**	**93.43**	**336**	*e*P		**P**	06 34 16.8	-0.4		
FLN				*e*R						
	comp=Z,687nm,17.5s									
FLN	**La Foliniere**	**93.43**	**336**	*e*P		**P**	06 34 16.8	-0.4		
FLN	**La Foliniere**	**93.43**	**336**	*e*P		**P**	06 34 16.8	-0.4		
LDF	**La Druitiere**	**93.44**	**336**	*e*P		**P**	06 34 16.7	-0.6		
LDF	**La Druitiere**	**93.44**	**336**	*e*P		**P**	06 34 16.7	-0.6		
LDF	**La Druitiere**	**93.44**	**336**	*e*P		**P**	06 34 16.7	-0.6		
Z32A	**Haskell**	**93.51**	**47**	⇓P		**P**	06 34 17.9	-0.1		
	baz=93									
SMF	**Signal de Mont**	**93.59**	**332**	*e*P		**P**	06 34 17.6	-0.5		
	comp=Z,26nm,1.1s									
SMF	**Signal de Mont**	**93.59**	**332**	*e*P		**P**	06 34 17.6	-0.5		
SMF					pmax	pmax				
	comp=Z,26nm,1.1s									
SMF	**Signal de Mont**	**93.59**	**332**	*e*P		**P**	06 34 17.6	-0.5		
	comp=Z,26nm,1.1s									
330A	**Mertzon**	**93.66**	**50**	⇑P		**P**	06 34 18.5	-0.2		
	baz=94									
AVF	**Avril sur Loir**	**93.67**	**333**	*e*P		**P**	06 34 18.0	-0.4		
	comp=Z,31nm,1.0s									
AVF	**Avril sur Loir**	**93.67**	**333**	*e*P		**P**	06 34 18.0	-0.4		
AVF					pmax	pmax				
	comp=Z,31nm,1.0s									
AVF	**Avril sur Loir**	**93.67**	**333**	*e*P		**P**	06 34 18.0	-0.4		
	comp=Z,31nm,1.0s									
429A	**Davenport Ranc**	**93.69**	**51**	⇓P		**P**	06 34 18.7	-0.2		
	baz=94									
BNI	**Bardonecchia**	**93.71**	**330**	*e*P		**P**	06 34 19.3	+0.5		
BNI					pmax	pmax				
	comp=Z,3.0nm,0.6s									
BNI	**Bardonecchia**	**93.71**	**330**	*e*P		**P**	06 34 19.3	+0.5		
	comp=Z,3.5nm,0.6s									
628A	**Black Gap, Mar**	**93.74**	**52**	⇑P		**P**	06 34 18.8	-0.3		
	baz=94									
529A	**Stev Forest Ra**	**93.79**	**51**	⇓P		**P**	06 34 19.3	-0.1		
	baz=94									
ABTX	**Abilene, Hawle**	**93.86**	**48**	⇓P		**P**	06 34 19.6	0.0		
	baz=94									
231A	**Bronte**	**93.88**	**49**	⇓P		**P**	06 34 19.4	-0.3		
	baz=94									
GRR	**Gorron**	**93.88**	**336**	*e*P		**P**	06 34 19.0	-0.3		
	comp=Z,40nm,1.3s									
GRR	**Gorron**	**93.88**	**336**	*e*P		**P**	06 34 19.0	-0.3		
GRR					pmax	pmax				
	comp=Z,41nm,1.3s									
GRR	**Gorron**	**93.88**	**336**	*e*P		**P**	06 34 19.0	-0.3		
	comp=Z,40nm,1.3s									
TUL1	**Tulsa**	**94.00**	**43**	⇑P		**P**	06 34 20.1	-0.1		
	baz=94									
430A	**Baggett Ranch,**	**94.02**	**50**	⇑P		**P**	06 34 20.3	-0.1		
	baz=94									
331A	**San Angelo**	**94.21**	**49**	⇑P		**P**	06 34 21.0	-0.2		
	baz=94									
SBF	**Sospel**	**94.32**	**329**	*e*P		**P**	06 34 21.3	-0.3		
SBF	**Sospel**	**94.32**	**329**	*e*P		**P**	06 34 21.3	-0.3		
SBF	**Sospel**	**94.32**	**329**	*e*P		**P**	06 34 21.3	-0.3		
232A	**Coleman**	**94.34**	**49**	⇑P		**P**	06 34 21.7	-0.1		
	baz=94									
530A	**J-C Ranch, Com**	**94.36**	**51**	⇑P		**P**	06 34 21.8	-0.2		
	baz=94									
431A	**Sonora**	**94.50**	**50**	⇑P		**P**	06 34 22.2	-0.4		
	baz=94									
TCF	**Toulx Ste Croi**	**94.52**	**333**	*e*P		**P**	06 34 22.1	-0.3		
	comp=Z,16nm,1.1s									
TCF	**Toulx Ste Croi**	**94.52**	**333**	*e*P		**P**	06 34 22.1	-0.3		
TCF					pmax	pmax				
	comp=Z,16nm,1.1s									
TCF	**Toulx Ste Croi**	**94.52**	**333**	*e*P		**P**	06 34 22.1	-0.3		
	comp=Z,16nm,1.1s									
332A	**Millersview**	**94.61**	**49**	⇑P		**P**	06 34 22.8	-0.2		
	baz=94									
PGF	**Pioggiola**	**94.64**	**327**	*e*P		**P**	06 34 21.8	-1.3		
PGF	**Pioggiola**	**94.64**	**327**	*e*P		**P**	06 34 21.8	-1.3		
PGF	**Pioggiola**	**94.64**	**327**	*e*P		**P**	06 34 21.8	-1.3		
VIVF	**Saint-Julien-l**	**94.71**	**331**	*e*P		**P**	06 34 22.9	-0.4		
	comp=Z,17nm,0.9s									
VIVF	**Saint-Julien-l**	**94.71**	**331**	*e*P		**P**	06 34 22.9	-0.4		
VIVF					pmax	pmax				
	comp=Z,17nm,0.9s									
VIVF	**Saint-Julien-l**	**94.71**	**331**	*e*P		**P**	06 34 22.9	-0.4		
	comp=Z,17nm,0.9s									
531A	**Rocksprings**	**94.87**	**50**	⇓P		**P**	06 34 24.2	-0.1		
	baz=95									
432A	**Menard**	**94.90**	**49**	⇑P		**P**	06 34 24.1	-0.4		
	baz=95									
SMRF	**Simiane la Rot**	**95.04**	**330**	*e*P		**P**	06 34 24.1	-0.7		
SMRF	**Simiane la Rot**	**95.04**	**330**	*e*P		**P**	06 34 24.1	-0.7		
QUIF	**Quistinic**	**95.07**	**337**	*e*P		**P**	06 34 24.1	-0.7		
QUIF	**Quistinic**	**95.07**	**337**	*e*P		**P**	06 34 24.1	-0.7		
QUIF	**Quistinic**	**95.07**	**337**	*e*P		**P**	06 34 24.1	-0.7		
MFF	**Saint Martin d**	**95.14**	**335**	*e*P		**P**	06 34 24.9	-0.3		
	comp=Z,46nm,1.5s									
MFF	**Saint Martin d**	**95.14**	**335**	*e*P		**P**	06 34 24.9	-0.3		
MFF					pmax	pmax				
	comp=Z,46nm,1.5s									
MFF	**Saint Martin d**	**95.14**	**335**	*e*P		**P**	06 34 24.9	-0.3		
	comp=Z,46nm,1.5s									
LMR	**La Mourre**	**95.15**	**329**	*e*P		**P**	06 34 24.2	-1.1		
	comp=Z,22nm,1.2s									
LMR	**La Mourre**	**95.15**	**329**	*e*P		**P**	06 34 24.2	-1.1		
LMR					pmax	pmax				
	comp=Z,22nm,1.2s									
LMR	**La Mourre**	**95.15**	**329**	*e*P		**P**	06 34 24.2	-1.1		
	comp=Z,22nm,1.2s									
JCT	**Junction City**	**95.16**	**50**	*e*P		**P**	06 34 25.8	+0.2		
JCT					pmax	pmax				
	comp=Z,10.0nm,0.9s									
JCT	**Junction City**	**95.16**	**50**	*e*P		**P**	06 34 25.8	+0.2		
	comp=Z,9.6nm,0.9s									
532A	**Rocksprings**	**95.32**	**50**	⇓P		**P**	06 34 26.0	-0.4		
	baz=95									
631A	**Perdido Creek**	**95.34**	**51**	⇑P		**P**	06 34 27.0	+0.5		
	baz=95									
LASF	**Ste Croix**	**95.69**	**331**	*e*P		**P**	06 34 27.5	-0.3		
LASF	**Ste Croix**	**95.69**	**331**	*e*P		**P**	06 34 27.5	-0.3		
CAF	**Calviac**	**95.71**	**333**	*e*P		**P**	06 34 28.0	+0.1		
	comp=Z,23nm,1.3s									
CAF	**Calviac**	**95.71**	**333**	*e*P		**P**	06 34 28.0	+0.1		
CAF					pmax	pmax				
	comp=Z,23nm,1.3s									
CAF	**Calviac**	**95.71**	**333**	*e*P		**P**	06 34 28.0	+0.1		
	comp=Z,23nm,1.3s									
732A	**Laxson Ranch,**	**96.19**	**51**	⇓P		**P**	06 34 30.6	+0.3		
	baz=96									
RKT	**Rikitea**	**96.26**	**113**	*e*LR		LR	07 04 34.1			
	comp=Z,543nm,22.5s									
KEST	**Kesra**	**99.73**	**322**	LR		LR	07 24 04.0			
	comp=Z,177nm,19.7s,baz=195,slow=38									
TORD	**Torodi Ar. Bea**	**121.50**	**313**	PKP		**PKPdf**	06 39 55.9	-0.1		
TORD				PP		**PP**	06 41 27.4	+0.2		
TORD				PKKPab		**PKKPab**	06 49 58.0	-0.6		
TORD	**Torodi Ar. Bea**	**121.50**	**313**	PKP		**PKPdf**	06 39 55.9	-0.1		
	comp=Z,0.9nm,0.7s,baz=93,slow=0.7,SNR=4.1									
TORD				PP		**PP**	06 41 27.4	+0.2		
	comp=Z,2.5nm,1.0s,baz=34,slow=5.6,SNR=6.0									
TORD				PKKPab		**PKKPab**	06 49 58.0	-0.6		
	comp=Z,0.7nm,0.8s,baz=228,slow=5.6,SNR=3.8									
SAML	**Samuel**	**147.79**	**52**	*e*PKPdf		**PKPdf**	06 40 44.2	-0.4		
SAML				*e*PKPbc		**PKPbc**	06 40 47.9	+0.5		
USHA	**Ushuaia**	**148.19**	**146**	PKPbc		**PKPbc**	06 40 45.7	-1.5		
USHA	**Ushuaia**	**148.19**	**146**	PKPbc		**PKPbc**	06 40 45.7	-1.5		
	comp=Z,17nm,1.0s,baz=256,slow=8.3,SNR=3.1									
LPAZ	**La Paz**	**148.90**	**68**	*e*PKPdf		**PKPdf**	06 40 47.2	+0.2		
LPAZ				PKPbc		**PKPdf**	06 40 48.3	+1.3		
LPAZ				*e*PKPbc		**PKiKP**	06 40 52.2	-0.1		
LPAZ	**La Paz**	**148.90**	**68**	PKPbc		**PKPdf**	06 40 48.3	+1.3		
	comp=Z,5.3nm,0.8s,baz=4.5,slow=4.2,SNR=16									
LVC	**Limon Verde**	**151.35**	**80**	*e*PKPdf		**PKPdf**	06 40 51.0	+0.8		
LVC				PKPbc		**PKPbc**	06 40 56.2	-0.1		
LVC	**Limon Verde**	**151.35**	**80**	PKPbc		**PKPbc**	06 40 56.2	-0.1		
	comp=Z,5.4nm,0.9s,baz=292,slow=5.1,SNR=5.8									
LCO	**Las Campanas**	**151.85**	**94**	*e*PKPbc		**PKPbc**	06 40 58.1	+0.8		
LCO				*e*PKPab		**PKPab**	06 41 07.5	+1.0		
PLCA	**Paso Flores**	**152.33**	**119**	PKPbc		**PKPbc**	06 40 58.3	+0.5		
PLCA	**Paso Flores**	**152.33**	**119**	PKPbc		**PKPbc**	06 40 58.3	+0.5		
	comp=Z,2.3nm,0.8s,baz=223,slow=5.9,SNR=3.6									
SIV	**San Ignacio**	**154.14**	**59**	PKPbc		**PKPbc**	06 41 02.3	-0.1		
SIV				PKPab		**PKPab**	06 41 15.1	-0.9		
SIV	**San Ignacio**	**154.14**	**59**	PKPbc		**PKPbc**	06 41 02.3	-0.1		
	comp=Z,3.1nm,0.9s,baz=358,slow=0.4,SNR=8.0									
SIV				PKPab		**PKPab**	06 41 15.1	-0.9		
	comp=Z,12nm,1.1s,baz=309,slow=4.5,SNR=14									
CFAA	**Coronel Fontan**	**154.40**	**99**	PKPab		**PKPab**	06 41 17.6	+0.6		
CFAA	**Coronel Fontan**	**154.40**	**99**	PKPab		**PKPab**	06 41 17.6	+0.6		
	comp=Z,0.5nm,0.8s,baz=227,slow=8.8,SNR=5.7									
BDFB	**Brasilia**	**161.97**	**32**	PKPab		**PKPab**	06 41 45.5	-4.4		
BDFB	**Brasilia**	**161.97**	**32**	PKPab		**PKPab**	06 41 45.5	-4.4		
	comp=Z,1.5nm,0.7s,baz=125,slow=18,SNR=3.1									
CPUP	**Villa Florida**	**162.50**	**78**	PKP		**PKPdf**	06 41 05.0	+1.0		
CPUP	**Villa Florida**	**162.50**	**78**	PKP		**PKPdf**	06 41 05.0	+1.0		
	comp=Z,1.1nm,0.7s,baz=38,slow=2.0,SNR=2.8									

NNC 18 06:22:38.5±6.1, 36°.58N×69°.21E, h0km, mb3.7, mpv3.6, 3C, Error ellipse: s-maj=70.2km s-min=49.5km az=80.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.59**	**8**	⇑P	Pn	06 24 18.1	+1.4
	2.7nm,0.6s,baz=198,slow=13,SNR=30						
KK31				⇑S	Sn	06 25 33.5	+1.0
	0.3nm,0.2s,baz=288,slow=9.0,SNR=3.5						
TKM2	**Tokmak 2**	**8.01**	**36**	⇑P	Pn	06 24 34.9	-1.6
	2.1nm,0.7s						
MK31	**Makanchi Array**	**14.11**	**40**	P	Pn	06 26 01.7	+2.1
	1.0nm,0.7s,baz=215,slow=10,SNR=6.6						
AB31	**Akbulak array**	**14.36**	**335**	P	Pn	06 26 01.6	-1.3
	0.1nm,0.3s,baz=159,slow=11,SNR=6.7						

DDA ***18*** *06:23:19.1,36°.04N×27°.19E,h8km,MD3.1*
ISCJB ***18*** *06:23:26.1±0.6,36°.25N±0°.05×27°.39E±0°.04,h86km±8km, Error ellipse: s-maj=8.7km s-min=4.2km az=147.2*
ATH ***18*** *06:23:26.0,36°.30N×27°.32E,h79km±3km*
ISK ***18*** *06:23:26.9,36°.33N×27°.45E,h84km,MD2.8*
CSEM ***18*** *06:23:27.0±0.1,36°.27N×27°.38E,h80km,MD2.8, Error ellipse: s-maj=3.7km s-min=1.8km az=143.0*

ISC 18 06:23:26.4±1.3, 36°.26N±0°.04×27°.39E±0°.03, h87km±8km, n42, σ0s74/60, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.49**	**18**	PG	**Pn**	06 23 41.1	+0.2
DAT				SG	Sn	06 23 51.2	-0.3
DAT	**Datca**	**0.49**	**18**	*i* Pg	**Pn**	06 23 41.1	+0.2
DAT				*i* Sg	Sn	06 23 51.2	-0.3
ARG	**Arkhangelos**	**0.59**	**94**	*e*P	**Pn**	06 23 42.3	+0.7
ARG				*e*S	Sn	06 23 53.4	+0.5
ARG	**Arkhangelos**	**0.59**	**94**	*e*P	**Pn**	06 23 42.3	+0.7
ARG				*e*S	Sn	06 23 53.4	+0.5
KARP	**Karpathos**	**0.74**	**195**	*e*P	**Pn**	06 23 43.1	0.0
KARP				*e*S	Sn	06 23 55.0	-0.5
KARP	**Karpathos**	**0.74**	**195**	*e*P	**Pn**	06 23 43.1	0.0
KARP				*e*S	Sn	06 23 55.0	-0.5
BODT	**Bodrum**	**0.80**	**355**	*e*PG	**Pn**	06 23 43.6	-0.1
BODT				*e*SG	Sn	06 23 56.5	-0.1
BODT	**Bodrum**	**0.80**	**355**	*e*Pg	**Pn**	06 23 43.6	-0.1
BODT				*e*Sg	Sn	06 23 56.5	-0.1
MLSB	**Milas**	**1.07**	**17**	*e*PG	**Pn**	06 23 47.0	+0.2
MLSB	**Milas**	**1.07**	**17**	*e*Pg	**Pn**	06 23 47.0	+0.2
YER	**Yerkesik**	**1.12**	**39**	*e*PG	**Pn**	06 23 48.0	+0.6
YER	**Yerkesik**	**1.12**	**39**	*e*Pg	**Pn**	06 23 48.0	+0.6
TURN	**Turunc**	**1.15**	**58**	*i* P	Pn	06 23 44.3	-3.3
TURN				*i* S	Sn	06 23 56.5	-7.0
TURN	**Turunc**	**1.15**	**58**	*i* P	**Pn**	06 23 44.3	-3.3
DALY	**Dalyan (Mu˘la**	**1.16**	**61**	*e*PN	**Pn**	06 23 48.1	+0.4
DALY	**Dalyan (Mu˘la**	**1.16**	**61**	*e*Pn	**Pn**	06 23 48.1	+0.4
FETY	**Fethiye**	**1.41**	**74**	*e*PN	**Pn**	06 23 51.4	+0.5
FETY				*e*SN	Sn	06 24 09.2	-0.2
FETY	**Fethiye**	**1.41**	**74**	*e*Pn	**Pn**	06 23 51.4	+0.5
FETY				*e*Sn	Sn	06 24 09.2	-0.2
AYDN	**Tasoluk**	**1.45**	**15**	*i* P	**Pn**	06 23 51.9	+0.5
AYDN	**Tasoluk**	**1.45**	**15**	*i* P	**Pn**	06 23 51.9	+0.5
ZKR	**Zakros**	**1.49**	**220**	*e*P	**Pn**	06 23 52.4	+0.5
ZKR	**Zakros**	**1.49**	**220**	*e*P	**Pn**	06 23 52.4	+0.5
NPS	**Neapolis**	**1.76**	**236**	*e*P	**Pn**	06 23 55.3	0.0
NPS				*e*S	Sn	06 24 15.8	-1.5
NPS	**Neapolis**	**1.76**	**236**	*e*P	**Pn**	06 23 55.3	0.0
NPS				*e*S	Sn	06 24 15.8	-1.5
KSL	**Kastellorizon**	**1.78**	**93**	*e*P	**Pn**	06 23 56.3	+0.8
KSL	**Kastellorizon**	**1.78**	**93**	*e*P	**Pn**	06 23 56.3	+0.8
AKAS	**Kas**	**1.79**	**90**	*i* P	**Pn**	06 23 56.2	+0.4
AKAS				*i* S	Sn	06 24 16.2	-2.0
AKAS	**Kas**	**1.79**	**90**	*i* P	**Pn**	06 23 56.2	+0.4
AKAS				*i* S	Sn	06 24 16.2	-2.0
LAST	**Lasithi**	**1.91**	**235**	*e*P	**Pn**	06 23 57.4	+0.1
LAST				*e*S	Sn	06 24 20.1	-0.8
LAST	**Lasithi**	**1.91**	**235**	*e*P	**Pn**	06 23 57.4	+0.1
LAST				*e*S	Sn	06 24 20.1	-0.8
GLHS	**Glhisar (BURDU**	**1.91**	**62**	*e*PN	**Pn**	06 23 58.1	+0.7
GLHS	**Glhisar (BURDU**	**1.91**	**62**	*e*Pn	**Pn**	06 23 58.1	+0.7
GOLH	**Golhisar**	**1.99**	**60**	*i* P	**Pn**	06 23 59.2	+0.7
GOLH				*i* S	Sn	06 24 21.9	-1.1
GOLH	**Golhisar**	**1.99**	**60**	*i* P	**Pn**	06 23 59.2	+0.7
GOLH				*i* S	Sn	06 24 21.9	-1.1
ELL	**Elmali**	**2.08**	**76**	*e*PN	**Pn**	06 24 00.6	+0.9
ELL	**Elmali**	**2.08**	**76**	*e*Pn	**Pn**	06 24 00.6	+0.9
SIVA	**Sivas**	**2.44**	**240**	*e*P	**Pn**	06 24 05.3	+0.9
SIVA	**Sivas**	**2.44**	**240**	*e*P	**Pn**	06 24 05.3	+0.9
KULA	**Kula-Manisa**	**2.46**	**24**	*e*PN	**Pn**	06 24 04.7	0.0
KULA	**Kula-Manisa**	**2.46**	**24**	*e*Pn	**Pn**	06 24 04.7	0.0
GVD	**Gavdhos**	**3.05**	**243**	*e*P	**Pn**	06 24 13.3	+0.8
GVD				*e*S	Sn	06 24 48.7	+0.7
GVD	**Gavdhos**	**3.05**	**243**	*e*P	**Pn**	06 24 13.3	+0.8
GVD				*e*S	Sn	06 24 48.7	+0.7

IDC ***18*** *06:30:22.8±1.8,51°.74N×176°.21W,h0km,mb3.6/4, mb1 4.0/6,mb1mx3.6/28,mbtmp3.7/6,ML4.2/2, Error ellipse: s-maj=74.9km s-min=28.8km az=144.0*
ISCJB ***18*** *06:30:29.7±0.5,51°.53N±0°.07×175°.76W±0°.04,h47km, mb3.5/4, Error ellipse: s-maj=9.6km s-min=3.6km az=170.9*
NEIC ***18*** *06:30:30.2,51°.52N×175°.80W,h9km,ML3.8(AEIC), After AEIC.*

ISC 18 06:30:30.9±0.8, 51°.71N±0°.10×175°.85W±0°.04, h47km, n42, σ1s28/46, mb3.6/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSMY	**Great Sitkin M**	**0.36**	**339**	P	**Pn**	06 30 40.7	+0.3
GSCK	**Great Sitkin C**	**0.36**	**328**	P	**Pn**	06 30 40.9	+0.5
ETKA	**Kagalaska Isla**	**0.38**	**295**	P	**Pn**	06 30 40.7	+0.1
GSTD	**Great Sitkin T**	**0.40**

YER	Yerkesik	1.83	353	ePN	Pn	06 31 38.2	+1.3	VLI		eS	Sn	06 33 07.7	-4.1
YER	Yerkesik	1.83	353	ePn	Pn	06 31 38.2	+1.3	VLI	Veliai	4.78	289 eP	Pn	06 32 17.8	+0.4
ZKR	Zakros	1.94	265	P	Pn	06 31 39.2	+0.8	DID	Didima	4.83	298 P	Pn	06 32 19.2	+1.1
ZKR	Zakros	1.94	265	eP	Pn	06 31 39.3	+0.8	DID	Didima	4.83	298 eP	Pn	06 32 19.1	+1.0
ZKR	Zakros	1.94	265	P	Pn	06 31 39.2	+0.8	DID	Didima	4.83	298 eP	Pn	06 32 19.1	+1.0
GLHS	Glhisar (BURDU	1.98	22	ePN	Pn	06 31 41.1	+2.1	CAVI	Cavuskoy	4.98	11 ePN	Pn	06 32 21.4	+1.3
GLHS	Glhisar (BURDU	1.98	22	ePn	Pn	06 31 41.1	+2.1	CAVI	Cavuskoy	4.98	11 ePn	Pn	06 32 21.4	+1.3
BODT	Bodrum	2.02	330	ePN	Pn	06 31 40.1	+0.6	LTBQ	Tobruq	5.07	231 iP	Pn	06 32 22.6	+1.3
BODT	Bodrum	2.02	330	ePn	Pn	06 31 40.1	+0.6		SNR=36					
GOLH	Golhisar	2.07	22	iP	Pb	06 31 43.0	-1.6	ADVT	Abdulvahap	5.19	10 ePN	Pn	06 32 24.6	+1.6
GOLH				iS	Sn	06 32 05.9	+0.8	ADVT	Abdulvahap	5.19	10 ePn	Pn	06 32 24.6	+1.6
GOLH	Golhisar	2.07	22	iP	Pb	06 31 43.0	-1.6	LTK	Loutraki	5.26	303 eP	Pn	06 32 25.3	+1.3
GOLH				iS	Sn	06 32 05.9	+0.8	LTK	Loutraki	5.26	303 eP	Pn	06 32 25.3	+1.3
MLSB	Milas	2.08	342	ePN	Pn	06 31 40.8	+0.5	DYR	Agios Nikonas	5.26	288 P	Pn	06 32 25.5	+1.5
MLSB	Milas	2.08	342	ePn	Pn	06 31 40.8	+0.5	DYR			S	Sn	06 33 23.8	+0.2
KORT	Korkueli	2.21	40	iP	Pb	06 31 45.6	-1.3	DYR	Agios Nikonas	5.26	288 eP	Pn	06 32 25.7	+1.7
KORT				iS	Sb	06 32 11.6	-2.3	DYR	Agios Nikonas	5.26	288 P	Pn	06 32 25.5	+1.5
KORT	Korkueli	2.21	40	iP	Pb	06 31 45.6	-1.3	DYR			S	Sn	06 33 23.8	+0.2
KORT				iS	Sb	06 32 11.6	-2.3	GULE	Gulek	5.38	67 iP	Pn	06 32 28.6	+2.9
ANTB	Antalya	2.31	46	ePN	Pn	06 31 44.9	+1.5	GULE			iS	Sn	06 33 27.3	+0.6
ANTB	Antalya	2.31	46	ePn	Pn	06 31 44.9	+1.5	GULE	Gulek	5.38	67 iP	Pn	06 32 28.6	+2.9
DNZL	Cakiroluk	2.40	9	iP	Pn	06 31 45.9	+1.1	GULE			iS	Sn	06 33 27.3	+0.6
DNZL	Cakiroluk	2.40	9	iP	Pn	06 31 45.9	+1.1	VLX	Vlachokerasia	5.41	294 P	Pn	06 32 27.0	+0.9
AYDN	Tasoluk	2.41	347	iP	Pn	06 31 46.2	+1.4	VLX			S	Sn	06 33 26.0	-1.3
AYDN	Tasoluk	2.41	347	iP	Pn	06 31 46.2	+1.4	VLX	Vlachokerasia	5.41	294 P	Pn	06 32 27.0	+0.9
XRY	Khrisi	2.41	260	eP	Pn	06 31 45.8	+1.1	VLX			S	Sn	06 33 26.0	-1.3
XRY	Khrisi	2.41	260	eP	Pn	06 31 45.8	+1.1	ANTO	Ankara	5.64	35 P	Pn	06 32 32.4	+3.1
NPS	Neapolis	2.43	270	P	Pn	06 31 46.8	+1.7	ANTO			pmax	pmax		
NPS	Neapolis	2.43	270	eP	Pn	06 31 46.7	+1.7		comp=Z,17nm,0.9s					
NPS				eS	Sn	06 32 13.3	-0.4	ANTO	Ankara	5.64	35 Pn	Pn	06 32 32.4	+3.1
NPS	Neapolis	2.43	270	eP	Pn	06 31 46.7	+1.7		comp=Z,16nm,0.9s					
NPS				eS	Sn	06 32 13.3	-0.4	ANTO	Ankara	5.64	35 ⇓iP	Pb	06 32 52.3	+7.0
DENT	Denizli	2.46	8	ePN	Pn	06 31 46.8	+1.3	ANTO	Ankara	5.64	35 P	Pn	06 32 32.4	+3.1
DENT	Denizli	2.46	8	ePn	Pn	06 31 46.8	+1.3		comp=Z,17nm,0.9s					
LAST	Lasithi	2.54	267	P	Pn	06 31 48.1	+1.4	ITM	Ithomi	5.69	291 P	Pn	06 32 31.2	+1.3
LAST	Lasithi	2.54	267	eP	Pn	06 31 48.2	+1.5	ITM	Ithomi	5.69	291 eP	Pn	06 32 30.9	+1.0
LAST	Lasithi	2.54	267	P	Pn	06 31 48.1	+1.4	ITM	Ithomi	5.69	291 eP	Pn	06 32 30.9	+1.0
GCAM	G?zelcaml?	2.61	336	iP	Pn	06 31 48.0	+0.4	PYL	PYLOS	5.75	288 eP	Pn	06 32 30.2	-0.6
GCAM	G?zelcaml?	2.61	336	iP	Pn	06 31 48.0	+0.4	PYL	PYLOS	5.75	288 eP	Pn	06 32 30.2	-0.6
BCK	Bucak	2.68	37	ePN	Pn	06 31 51.0	+2.4	HMYD	Mayadein	5.82	161 P	Pn	06 32 32.4	+0.7
BCK	Bucak	2.68	37	ePn	Pn	06 31 51.0	+2.4		baz=161					
SANT	Santorini	2.74	293	P	Pn	06 31 49.9	+0.5	HMYD	Mayadein	5.82	161 P	Pn	06 32 32.4	+0.7
SANT	Santorini	2.74	293	ePn	Pn	06 31 49.7	+0.2	KLV	Kalavryta, Ach	5.84	300 eP	Pn	06 32 33.9	+1.9
SANT	Santorini	2.74	293	P	Pn	06 31 49.9	+0.5	KLV	Kalavryta, Ach	5.84	300 eP	Pn	06 32 33.9	+1.9
SMG	Samos	2.77	330	P	Pn	06 31 50.0	+0.2	HNAT	Natroun	5.92	163 P	Pn	06 32 33.6	+0.4
SMG	Samos	2.77	330	eP	Pn	06 31 50.0	+0.2		baz=163					
SMG	Samos	2.77	330	eP	Pn	06 31 50.0	+0.2	HNAT	Natroun	5.92	163 P	Pn	06 32 33.6	+0.4
ISP	Isparta	2.95	31	ePN	Pn	06 31 54.8	+2.4	BR131	Keskin Array S	5.96	41 ePn	Pn	06 32 36.1	+2.3
ISP	Isparta	2.95	31	eP	Pn	06 31 53.7	+1.4		comp=Z,10nm,0.8s					
ISP	Isparta	2.95	31	ePn	Pn	06 31 53.7	+1.4	BR131			eSn	Sn	06 33 41.4	+0.3
ISP	Isparta	2.95	31	eP	Pn	06 31 53.7	+1.4	BR131	Keskin Array S	5.96	41 ePn	Pn	06 32 36.1	+2.3
APE	Apeiranthos	3.02	306	ePN	Pn	06 31 53.0	-0.3		comp=Z,10nm,0.8s					
APE	Apeiranthos	3.02	306	P	Pn	06 31 53.6	+0.3	BR131			eSn	Sn	06 33 41.3	+0.3
APE	Apeiranthos	3.02	306	eP	Pn	06 31 53.4	+0.1	BRTR	Keskin Array B	5.96	41 Pn	Pn	06 32 36.0	+2.3
APE				eS	Sn	06 32 25.4	-3.0	BRTR			Sn	Sn	06 33 42.0	+1.0
APE	Apeiranthos	3.02	306 ⇑	iP	Sn	06 32 26.5	-1.9	BRTR	Keskin Array B	5.96	41 Pn	Pn	06 32 36.0	+2.3
APE	Apeiranthos	3.02	306	ePn	Pn	06 31 53.0	-0.3		comp=Z,0.4nm,0.3s,baz=227,slow=13,SNR=10.0					
APE	Apeiranthos	3.02	306	P	Pn	06 31 53.6	+0.3	BRTR			Sn	Sn	06 33 42.0	+1.0
AKMC	Akamas	3.09	94	P	Pn	06 31 55.3	+1.2		comp=Z,0.7nm,0.3s,baz=205,slow=26,SNR=6.4					
AKMC	Akamas	3.09	94	P	Pn	06 31 55.3	+1.2	BRTR	Keskin Array B	5.96	41 P	Pn	06 32 36.0	+2.3
SIVA	Sivas	3.10	266	P	Pn	06 31 56.0	+1.7		comp=Z,1.0nm,0.3s					
SIVA				S	Sn	06 32 30.9	+0.6	BRTR			S	Sn	06 33 42.0	+1.0
SIVA	Sivas	3.10	266	eP	Pn	06 31 56.0	+1.7	AYT	Al 'Ayyat	6.00	158 P	Pn	06 32 35.0	+0.7
SIVA	Sivas	3.10	266	eP	Pn	06 31 56.0	+1.7		baz=158					
SIVA				S	Sn	06 32 30.9	+0.6	AYT	Al 'Ayyat	6.00	158 P	Pn	06 32 35.0	+0.7
PPCY	Paphos	3.12	97	P	Pn	06 31 55.9	+1.4	KOT	Kottamia	6.03	152 P	Pn	06 32 34.3	-0.4
PPCY	Paphos	3.12	97	P	Pn	06 31 55.9	+1.4		baz=152					
KHAL	Karahalli	3.13	13	iP	Pn	06 31 56.1	+1.2	KOT	Kottamia	6.03	152 P	Pn	06 32 34.3	-0.4
KHAL	Karahalli	3.13	13	iP	Pn	06 31 56.1	+1.2	AMAG	Maghara	6.07	139 P	Pn	06 32 35.0	-0.2
GAZI	Gazipasa	3.17	72	iP	Pn	06 31 56.4	+1.1		baz=139					
GAZI				iS	Sn	06 32 30.6	-1.6	AMAG	Maghara	6.07	139 P	Pn	06 32 35.0	-0.2
GAZI	Gazipasa	3.17	72	iP	Pn	06 31 56.4	+1.1	MMA0	Mount Meron ar	6.11	110 Pn	Pn	06 32 36.1	+0.4
GAZI				iS	Sn	06 32 30.6	-1.6	MMAI	Mount Meron Ar	6.11	110 Pn	Pn	06 32 35.5	-0.2
KULA	Kula-Manisa	3.19	1	ePN	Pn	06 31 56.5	+0.8	MMAI			Sn	Sn	06 33 41.3	-3.2
KULA	Kula-Manisa	3.19	1	ePn	Pn	06 31 56.5	+0.9	MMAI	Mount Meron Ar	6.11	110 Pn	Pn	06 32 35.5	-0.2
IZM	Izmir	3.25	341	ePN	Pn	06 31 57.7	+1.3		comp=Z,14nm,0.3s,baz=314,slow=13,SNR=21					
IZM	Izmir	3.25	341	ePn	Pn	06 31 57.7	+1.3	MMAI			Sn	Sn	06 33 41.3	-3.2
ALFC	Alevga	3.29	92	P	Pn	06 31 58.2	+1.2		comp=Z,24nm,0.3s,baz=317,slow=22,SNR=7.7					
	10.0nm,0.2s							MMAI	Mount Meron Ar	6.11	110 Pn	Pn	06 32 35.5	-0.2
ALFC				S	Sn	06 32 34.0	-1.2	HHAG	Hagoal	6.12	150 S	Sn	06 33 39.8	-5.0
ALFC	Alevga	3.29	92	P	Pn	06 31 58.2	+1.2		baz=150					
	10.0nm,0.2s							RSH		6.12	134 P	Pn	06 32 35.8	-0.1
ALFC				S	Sn	06 32 34.0	-1.2		baz=134					
BLCB	Balcova	3.30	339	ePN	Pn	06 31 58.2	+1.2	RSH		6.12	134 P	Pn	06 32 35.8	-0.1
BLCB	Balcova	3.30	339	ePn	Pn	06 31 58.2	+1.2	HWQ	Hawqa	6.15	98 eP	Pn	06 32 36.6	+0.2
LEF	Lefka	3.54	92	ePN	Pn	06 32 00.6	+0.3	HWQ	Hawqa	6.15	98 eP	Pn	06 32 36.6	+0.2
LEF	Lefka	3.54	92	ePn	Pn	06 32 00.6	+0.3	YAYL	Yayladag	6.17	81 iP	Pn	06 32 37.3	+0.7
SZAC	Souni-Zanaja	3.58	98	P	Pn	06 32 02.3	+1.4	YAYL			iS	Sn	06 33 42.4	-3.7
SZAC	Souni-Zanaja	3.58	98	P	Pn	06 32 02.3	+1.4	YAYL	Yayladag	6.17	81 iP	Pn	06 32 37.3	+0.7
VAM	Vamos	3.58	273	P	Pn	06 32 02.2	+1.3	SLTI	Sal'it	6.19	118 Pn	Pn	06 32 37.5	+0.7
VAM	Vamos	3.58	273	eP	Pn	06 32 02.0	+1.1	KSDI	Kefar Szold	6.24	108 Pn	Pn	06 32 37.7	+0.3
VAM	Vamos	3.58	273	eP	Pn	06 32 02.0	+1.1	KSDI			Sn	Sn	06 33 45.9	-1.7
SHUT	Suhut-Afyon	3.59	25	ePN	Pn	06 32 03.4	+2.2	RCY	Rachaya	6.27	105 eP	Pn	06 32 38.5	+0.5
SHUT	Suhut-Afyon	3.59	25	ePn	Pn	06 32 03.4	+2.2	RCY	Rachaya	6.27	105 eP	Pn	06 32 38.5	+0.5
CHOS	Chios island	3.67	327	P	Pn	06 32 02.2	0.0	BIDA	Albida	6.35	91 eP	Pn	06 32 36.8	-2.3
CHOS	Chios island	3.67	327	P	Pn	06 32 02.2	0.0	BIDA			eS	Sn	06 33 38.4	-12
GVD	Gavdhos	3.71	264	P	Pn	06 32 03.6	+0.8	BIDA			eS	Sn	06 33 39.6	-11
GVD				S	Sn	06 32 44.3	-1.2	BIDA			AML	AML	06 33 47.1	
GVD	Gavdhos	3.71	264	eP	Pn	06 32 03.5	+0.8		comp=E,374nm,0.5s					
GVD				eS	Sn	06 32 44.2	-1.2	BIDA			AML	AML	06 33 48.4	
GVD	Gavdhos	3.71	264	ePn	Pn	06 32 03.3	+0.6		comp=N,76nm,0.5s					
GVD	Gavdhos	3.71	264	eP	Pn	06 32 03.5	+0.8	MMLI	Mount Malkishu	6.38	115 Pn	Pn	06 32 39.8	+0.4
GVD				S	Sn	06 32 44.3	-1.2	MMLI			Sn	Sn	06 33 49.2	-1.9
DEMI	Demirci	3.72	2	iP	Pn	06 32 03.2	+0.3	BRBR	Barbar	6.39	105 iP	Pn	06 32 39.9	+0.2
DEMI	Demirci	3.72	2	iP	Pn	06 32 03.2	+0.3	BRBR			eS	Sn	06 33 45.2	-6.4
ERMK	Ermenek	3.75	68	iP	Pn	06 32 06.6	+3.1	BRBR			AML	AML	06 33 51.8	
ERMK				iS	Sn	06 32 48.0	+1.3		comp=N,98nm,0.5s					
ERMK	Ermenek	3.75	68	iP	Pn	06 32 06.6	+3.1	BRBR			AML	AML	06 33 54.3	
ERMK				iS	Sn	06 32 48.0	+1.3		comp=E,64nm,0.5s					
MAMC	Mammari	3.80	91	P	Pn	06 32 04.3	+0.4	BRBR	Barbar	6.39	105 iP	Pn	06 32 39.9	+0.2
MAMC	Mammari	3.80	91	P	Pn	06 32 04.3	+0.4		SNR=90					
GDZ	Gediz	3.83	11	iP	Pn	06 32 05.1	+0.6	KSHT	Keshet	6.43	109 Pn	Pn	06 32 41.3	+1.1
GDZ	Gediz	3.83	11	iP	Pn	06 32 05.1	+0.6	BTCH	Batrach	6.46	81 eP	Pn	06 32 38.7	-1.7
CSS	Prodhromos	3.91	94	P	Pn	06 32 06.7	+1.2	BTCH			eS	Sn	06 33 42.3	-11
	4.3nm,0.4s							BTCH			AML	AML	06 33 56.2	
CSS				S	Sn	06 32 49.2	-1.1		comp=N,46nm,0.4s					
CSS	Prodhromos	3.91	94	ePN	Pn	06 32 06.2	+0.8	BTCH			AML	AML	06 34 00.1	
CSS	Prodhromos	3.91	94	P	Pn	06 32 06.6	+1.2		comp=E,111nm,0.5s					
CSS				S	Sn	06 32 51.3	+1.0	BTCH	Batrach	6.46	81 eP	Pn	06 32 39.0	-1.5
CSS	Prodhromos	3.91	94	ePn	Pn	06 32 06.6	+1.2	BTCH			eS	Sn	06 33 41.6	-12
CSS	Prodhromos	3.91	94	Pn	Pn	06 32 06.4	+0.9	BTCH			AML	AML	06 33 56.1	
CSS				S	Sn	06 32 51.3	+1.0		comp=N,46nm,0.4s					
ALT	Altintas	3.93	18	ePN	Pn	06 32 07.9	+2.1	BTCH			AML	AML	06 34 00.1	
ALT	Altintas	3.93	18	ePn	Pn	06 32 07.9	+2.1		comp=E,111nm,0.5s					
KONT	Konya--Tatoy	4.02	48	ePN	Pn	06 32 09.5	+2.6	HAWK	Haweek	6.48	95 eP	Pn	06 32 40.4	-0.4
KONT	Konya--Tatoy	4.02	48	ePn	Pn	06 32 09.5	+2.6	HAWK			eS	Sn	06 33 46.8	-6.9
LFK	Lefkose	4.05	89	ePN	Pn	06 32 08.6	+1.2	HAWK			AML	AML	06 33 54.4	
LFK	Lefkose	4.05	89	ePn	Pn	06 32 08.6	+1.2		comp=N,67nm,0.8s					
TVSB	Tavsanli	4.18	9	ePN	Pn	06 32 10.8	+1.6	HAWK			AML	AML	06 34 00.4	
TVSB	Tavsanli	4.18	9	ePn	Pn	06 32 10.9	+1.6		comp=E,52nm,0.4s					
LADK	Ladik-KONYA	4.18	45	ePN	Pn	06 32 11.6	+2.3	HAWK	Haweek	6.48	95 eP	Pn	06 32 40.4	-0.4
LADK	Ladik-KONYA	4.18	45	ePn	Pn	06 32 11.6	+2.3		SNR=90					
KDHN	Kadinhani	4.27	41	iP	Pn	06 32 12.3	+1.8	SUZ		6.54	146 P	Pn	06 32 42.2	+0.7
KDHN				iS	Sn	06 32 59.4	0.0		baz=146					
KDHN	Kadinhani	4.27	41	iP	Pn	06 32 12.3	+1.8	SUZ		6.54	146 P	Pn	06 32 42.2	+0.7
KDHN				iS	Sn	06 32 59.4	0.0	HMDT	Nahal Hemdat	6.54	116 Pn	Pn	06 32 42.5	+0.9
ANKY	Antikythira Is	4.33	279	eP	Pn	06 32 11.3	0.0	KZIT	Kziot	6.57	130 Pn	Pn	06 32 42.3	+0.3
ANKY	Antikythira Is	4.33	279	eP	Pn	06 32 11.3	0.0	SWA2		6.61	204 P	Pn	06 32 42.7	+0.2
HMAT	Matruh	4.39	197	AMP		06 33 00.0			baz=205					
	comp=N,530µm,0.2s,logA/T=6.3,baz=198							SWA2			AMP		06 34 00.0	
KIZT	Kizilcal	4.43	36	ePN	Pn	06 32 14.1	+1.4		comp=N,360µm,0.3s,logA/T=6.1,baz=205					
KIZT	Kizilcal	4.43	36	ePn	Pn	06 32 14.1	+1.4	SWA2		6.61	204 P	Pn	06 32 42.7	+0.2
BALY	Balya	4.48	350	iP	Pn	06 32 13.9	+0.6	RTMI	Retamim	6.66	128 Pn	Pn	06 32 43.4	+0.2
BALY	Balya	4.48	350	iP	Pn	06 32 13.9	+0.6	HBNS	Bani Suwayf	6.73	160 P	Pn	06 32 44.9	+0.7
EREN	Erenkoy	4.57	86	ePN	Pn	06 32 15.8	+1.3		baz=160					
EREN	Erenkoy	4.57	86	ePn	Pn	06 32 15.8	+1.3	HBNS	Bani Suwayf	6.73	160 P	Pn	06 32 44.9	+0.7
KYTH	Kithira	4.61	284	P	Pn	06 32 15.3	+0.3	YTIR	Yattir	6.74	124 Pn	Pn	06 32 45.5	+1.0
KYTH	Kithira	4.61	284	eP	Pn	06 32 15.6	+0.6	DSI	Dead Sea	6.80	121 Pn	Pn	06 32 45.5	+0.3
KYTH	Kithira	4.61	284	eP	Pn	06 32 15.6	+0.6	DSI			Sn	Sn	06 34 00.2	-1.4
KIZK	Mersin	4.66	74	iP	Pn	06 32 18.7	+2.9	ZAF		6.89	150 P	Pn	06 32 47.4	+1.0
KIZK				iS	Sn	06 33 08.0	-0.9		baz=150					
KIZK	Mersin	4.66	74	iP	Pn	06 32 18.7	+2.9	ZAF		6.89	150 P	Pn	06 32 47.4	+1.0
KIZK				iS	Sn	06 33 08.0	-0.9	MZDA	Masada	6.94	123 Pn	Pn	06 32 47.6	+0.5
SLUM		4.74	217	P	Pn	06 32 17.4	+0.5	AWBH		6.98	178 P	Pn	06 32 48.1	+0.5
	baz=218								baz=178					
SLUM		4.74	217	P	Pn	06 32 17.4	+0.5	AWBH		6.98	178 P	Pn	06 32 48.1	+0.5
GONE	Gonen-Balikesi	4.77	352	ePN	Pn	06 32 18.7	+1.4	RMNI	Mount Ramon	7.01	130 Pn	Pn	06 32 48.6	+0.5
GONE	Gonen-Balikesi	4.77	352	ePn	Pn	06 32 18.7	+1.4							
VLI	Veliai	4.78	289	P	Pn	06 32 17.6	+0.2							
VLI	Veliai	4.78	289	eP	Pn	06 32 17.8	+0.4							

HNKL	Nakhl	7.04	138	P	Pn	06 32 48.2	-0.3	
	baz=138							
HNKL	Nakhl	7.04	138	P	Pn	06 32 48.2	-0.3	
LKD2	Lefkada island	7.22	301	P	Pn	06 32 52.1	+1.2	
LKD2	Lefkada island	7.22	301	P	Pn	06 32 52.1	+1.2	
SALA	Sala	7.25	109	eP	Pn	06 32 53.1	+1.5	
SALA	Sala	7.25	109	eP	Pn	06 32 53.1	+1.5	
	SNR=90							
ZFRI	Zfri	7.30	129	Pn	Pn	06 32 52.1	+0.1	
KRMI	Paran Flat	7.33	133	Pn	Pn	06 32 52.0	-0.4	
PRNI	Paran	7.33	131	Pn	Pn	06 32 52.2	-0.3	
HRFI	Mount Harif	7.57	132	Pn	Pn	06 32 55.8	0.0	
ASF	Jabal al Asfar	7.61	112	Pn	Pn	06 32 57.5	+1.2	
ASF				Sn	Sn	06 34 18.1	-3.4	
ASF	Jabal al Asfar	7.61	112	Pn	Pn	06 32 57.5	+1.2	
	comp=N,1.2nm,0.3s,baz=162,slow=7.4,SNR=9.3							
ASF				Sn	Sn	06 34 18.1	-3.4	
	comp=N,1.3nm,0.3s,baz=254,slow=19,SNR=3.1							
ASF				LR	LR	06 36 54.4		
	comp=N,80nm,19.4s,baz=147,slow=45							
MBRI	Mt Berech	7.67	134	Pn	Pn	06 32 57.4	+0.1	
EIL	Elat	7.79	135	Pn	Pn	06 32 58.8	+0.1	
EIL				Sn	Sn	06 34 21.4	-4.5	
EIL	Elat	7.79	135	Pn	Pn	06 32 58.8	+0.1	
	comp=N,5.9nm,0.3s,baz=339,slow=5.8,SNR=32							
EIL				Sn	Sn	06 34 21.4	-4.5	
	comp=N,21nm,0.3s,baz=338,slow=13,SNR=11							
EIL	Elat	7.79	135	Pn	Pn	06 32 58.8	+0.1	
GRB	Gharib	7.88	152	P	Pn	06 33 00.3	+0.2	
	baz=152							
GRB	Gharib	7.88	152	P	Pn	06 33 00.3	+0.2	
HKAT	Jabal Katrina	8.19	144	P	Pn	06 33 04.4	0.0	
	baz=144							
HKAT	Jabal Katrina	8.19	144	P	Pn	06 33 04.4	0.0	
VTS	Vitosha	8.38	332 ⇑	iP	Pn	06 33 15.9	+9.0	
VTS	Vitosha	8.38	332 ⇑	iP	Pn	06 33 15.9	+9.0	
TIRR	Tirgusor	9.13	359 ⇑	iP	Pn	06 33 23.0	+6.0	
TIP	Timpagrande	10.18	296	ePn	Pn	06 33 29.6	-1.9	
MLR	Muntele Rosu	10.36	350	Pn	Pn	06 33 33.9	-0.1	
MLR	Muntele Rosu	10.36	350 ⇑	iP	Pn	06 33 33.4	-0.6	
MLR	Muntele Rosu	10.36	350	Pn	Pn	06 33 33.9	-0.1	
	comp=N,0.1nm,0.3s,baz=28,slow=6.7,SNR=5.6							
MLR	Muntele Rosu	10.36	350	P	Pn	06 33 33.4	-0.6	
MLR	Muntele Rosu	10.36	350	Pn	Pn	06 33 33.9	-0.1	
VOIR		10.46	346 ⇓	iP	Pn	06 33 39.4	+4.1	
CEL	Celeste	10.59	290	ePn	Pn	06 33 35.1	-2.0	
BBLS	Lazići	11.08	323	ePn	Pn	06 33 47.0	+3.1	
CUC	Castrocucco	11.14	299	ePn	Pn	06 33 42.5	-2.2	
STON	Ston	11.32	315	ePn	Pn	06 33 45.9	-1.2	
STON				Sn	Sn	06 35 44.8	-7.6	
STON	Ston	11.32	315	ePn	Pn	06 33 45.8	-1.2	
ANN	Anapa	11.64	33	eP	Pn	06 33 55.1	+3.7	
ANN				eS	Sn	06 36 13.0	+13	
ANN				pmax	pmax			
	comp=Z,43nm,1.1s							
ANN	Anapa	11.64	33	eP	Pn	06 33 55.1	+3.7	
	comp=Z,43nm,1.1s							
KIV	Kislovodsk	13.86	47	eP	P	06 34 29.0	-0.8	
KIV				pmax	pmax			
	comp=Z,10.0nm,1.0s							
KIV				MLR	MLR			
	comp=Z,66nm,11.0s							
KIV	Kislovodsk	13.86	47	eP	P	06 34 29.0	-0.8	
	comp=Z,66nm,11.0s							
IBDR	Badra	14.53	94	eP	P	06 34 39.4	+2.3	
IBDR				eS	S	06 37 26.1	-3.5	
IBDR				ePcP	PcP	06 39 39.7	-4.4	
VYHS	Vyhne	15.01	334	eP	Pn	06 34 35.9	-1.5	
VYHS	Vyhne	15.01	334	ePN	Pn	06 34 35.9	-1.5	
VYHS	Vyhne	15.01	334	eP	P	06 34 42.2	-0.3	
VYHS	Vyhne	15.01	334	ePn	Pn	06 34 35.9	-1.5	
VYHS	Vyhne	15.01	334	eP	P	06 34 42.2	-0.3	
AKASG	Malin Array Be	15.38	2	P	P	06 34 46.9	+0.4	
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AKASG	Malin Array Be	15.38	2	Pn	P	06 34 46.9	+0.4	
AKASG	Malin Array Be	15.38	2	Pn	P	06 34 46.9	+0.4	
	comp=Z,1.3nm,0.3s,baz=193,slow=12,SNR=6.7							
AKASG	Malin Array Be	15.38	2	P	P	06 34 46.9	+0.4	
	comp=Z,1.0nm,0.3s							
KEST	Kesra	15.67	277	ePdif	Pn	06 34 45.8	-0.3	
KEST	Kesra	15.67	277	Pn	Pn	06 34 45.6	-0.5	
KEST				Sn	Sn	06 37 30.3	-8.4	
KEST	Kesra	15.67	277	Pn	Pn	06 34 45.6	-0.5	
	comp=Z,0.1nm,0.3s,baz=131,slow=9.3,SNR=6.5							
KEST				Sn	Sn	06 37 30.3	-8.4	
	comp=Z,0.1nm,0.3s,baz=72,slow=19,SNR=5.6							
KEST	Kesra	15.67	277	Pn	Pn	06 34 45.6	-0.5	
VRAC	Vranov	16.52	331	Pn	Pn	06 34 56.5	-0.3	
VRAC	Vranov	16.52	331

CLL	**Collm**	**19.53**	**330**	*e*(P)	**Pn**	**06 35 35.0**	**+1.4**
	comp=Z,6.0nm,0.8s						
CLL				*ep*P	**pP**	**06 35 41.0**	**+0.5**
CLL				*es*P	**sP**	**06 35 45.0**	**+0.5**
CLL	**Collm**	**19.53**	**330**	*e*P	**Pn**	**06 35 35.0**	**+1.4**
	comp=Z,6.0nm,0.8s						
ORIF	**Oris-en-Rattie**	**19.77**	**306**	*e*P	**P**	**06 35 35.6**	**+0.5**
	comp=Z,6.8nm,0.6s						
ORIF				*e*R			
	comp=Z,169nm,20.5s						
ORIF	**Oris-en-Rattie**	**19.77**	**306**	*e*P	**P**	**06 35 35.6**	**+0.5**
ORIF				pmax	pmax		
	comp=Z,7.0nm,0.6s						
ORIF	**Oris-en-Rattie**	**19.77**	**306**	*e*P	**P**	**06 35 35.6**	**+0.5**
	comp=Z,6.8nm,0.6s						
ORIF	**Oris-en-Rattie**	**19.77**	**306**	*e*P	**P**	**06 35 35.6**	**+0.5**
	comp=Z,3.4nm,0.6s						
CABF	**La Chapelle**	**20.32**	**311**	*e*P	**P**	**06 35 40.5**	**-0.5**
	comp=Z,19nm,0.7s						
CABF	**La Chapelle**	**20.32**	**311**	*e*P	**P**	**06 35 40.5**	**-0.5**
CABF				pmax	pmax		
	comp=Z,19nm,0.7s						
CABF	**La Chapelle**	**20.32**	**311**	*e*P	**P**	**06 35 40.5**	**-0.5**
	comp=Z,19nm,0.7s						
CABF	**La Chapelle**	**20.32**	**311**	*e*P	**P**	**06 35 40.5**	**-0.5**
	comp=Z,9.6nm,0.7s						
CDF	**Champ du Feu**	**20.48**	**316**	*e*P	**P**	**06 35 42.4**	**-0.3**
	comp=Z,17nm,0.9s						
CDF	**Champ du Feu**	**20.48**	**316**	*e*P	**P**	**06 35 42.4**	**-0.3**
CDF				pmax	pmax		
	comp=Z,17nm,0.9s						
CDF	**Champ du Feu**	**20.48**	**316**	*e*P	**P**	**06 35 42.4**	**-0.3**
	comp=Z,17nm,0.9s						
CDF	**Champ du Feu**	**20.48**	**316**	*e*P	**P**	**06 35 42.4**	**-0.3**
	comp=Z,8.6nm,0.9s						
VIVF	**Saint-Julien-l**	**20.56**	**305**	*e*P	**P**	**06 35 42.6**	**-1.0**
	comp=Z,8.7nm,0.7s						
VIVF	**Saint-Julien-l**	**20.56**	**305**	*e*P	**P**	**06 35 42.6**	**-1.0**
VIVF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
VIVF	**Saint-Julien-l**	**20.56**	**305**	*e*P	**P**	**06 35 42.6**	**-1.0**
	comp=Z,8.7nm,0.7s						
VIVF	**Saint-Julien-l**	**20.56**	**305**	*e*P	**P**	**06 35 42.6**	**-1.0**
	comp=Z,4.3nm,0.7s						
LASF	**Ste Croix**	**20.88**	**302**	*e*P	Pn	06 35 49.5	-0.1
LASF	**Ste Croix**	**20.88**	**302**	*e*P	Pn	06 35 49.5	-0.1
LASF	**Ste Croix**	**20.88**	**302**	*e*P	Pn	06 35 49.5	-0.1
MOS	**Moscow**	**21.35**	**14**	*e*P	P	06 36 00.3	+8.4
MOS				pmax	pmax		
	comp=Z,59nm,0.6s						
MTLF	**Montolieu**	**21.84**	**299**	*e*P	**P**	**06 35 57.1**	**-0.3**
	comp=Z,3.4nm,0.5s						
MTLF	**Montolieu**	**21.84**	**299**	*e*P	**P**	**06 35 57.1**	**-0.3**
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MTLF	**Montolieu**	**21.84**	**299**	*e*P	**P**	**06 35 57.1**	**-0.3**
	comp=Z,3.4nm,0.5s						
MTLF	**Montolieu**	**21.84**	**299**	*e*P	**P**	**06 35 57.1**	**-0.3**
	comp=Z,1.7nm,0.5s						
LOR	**Lormes**	**21.98**	**310**	*e*P	**P**	**06 35 58.2**	**-0.6**
	comp=Z,7.7nm,0.6s						
LOR				*e*R			
	comp=Z,117nm,22.8s						
LOR	**Lormes**	**21.98**	**310**	*e*P	**P**	**06 35 58.2**	**-0.6**
	comp=Z,7.7nm,0.6s						
LOR	**Lormes**	**21.98**	**310**	*e*P	**P**	**06 35 58.2**	**-0.6**
	comp=Z,3.8nm,0.6s						
AVF	**Avril sur Loir**	**22.11**	**309**	*e*P	**P**	**06 35 59.7**	**-0.5**
	comp=Z,13nm,0.9s						
AVF	**Avril sur Loir**	**22.11**	**309**	*e*P	**P**	**06 35 59.7**	**-0.5**
AVF				pmax	pmax		
	comp=Z,13nm,0.9s						
AVF	**Avril sur Loir**	**22.11**	**309**	*e*P	**P**	**06 35 59.7**	**-0.5**
	comp=Z,13nm,0.9s						
AVF	**Avril sur Loir**	**22.11**	**309**	*e*P	**P**	**06 35 59.7**	**-0.5**
	comp=Z,6.4nm,0.9s						
SSF	**Saint Saulge**	**22.12**	**310**	*e*P	**P**	**06 35 58.9**	**-1.3**
	comp=Z,16nm,0.8s						
SSF	**Saint Saulge**	**22.12**	**310**	*e*P	**P**	**06 35 58.9**	**-1.3**
SSF				pmax	pmax		
	comp=Z,17nm,0.8s						
SSF	**Saint Saulge**	**22.12**	**310**	*e*P	**P**	**06 35 58.9**	**-1.3**
	comp=Z,16nm,0.8s						
SSF	**Saint Saulge**	**22.12**	**310**	*e*P	**P**	**06 35 58.9**	**-1.3**
	comp=Z,8.2nm,0.8s						
CAF	**Calviac**	**22.35**	**303**	*e*P	**P**	**06 36 02.6**	**-0.2**
	comp=Z,14nm,1.0s						
CAF	**Calviac**	**22.35**	**303**	*e*P	**P**	**06 36 02.6**	**-0.2**
CAF				pmax	pmax		
	comp=Z,14nm,1.0s						
CAF	**Calviac**	**22.35**	**303**	*e*P	**P**	**06 36 02.6**	**-0.2**
	comp=Z,14nm,1.0s						
CAF	**Calviac**	**22.35**	**303**	*e*P	**P**	**06 36 02.6**	**-0.2**
	comp=Z,6.9nm,1.0s						
BGF	**Bois d'Agland**	**22.35**	**308**	*e*P	**P**	**06 36 03.1**	**+0.4**
	comp=Z,9.0nm,0.5s						
BGF	**Bois d'Agland**	**22.35**	**308**	*e*P	**P**	**06 36 03.1**	**+0.4**
BGF				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BGF	**Bois d'Agland**	**22.35**	**308**	*e*P	**P**	**06 36 03.1**	**+0.4**
	comp=Z,9.0nm,0.5s						
BGF	**Bois d'Agland**	**22.35**	**308**	*e*P	**P**	**06 36 03.1**	**+0.4**
	comp=Z,4.5nm,0.5s						
RJF	**Les Rejaudoux**	**22.82**	**304**	*e*P	**P**	**06 36 08.3**	**+0.5**
RJF				*e*R			
	comp=Z,109nm,18.8s						
RJF	**Les Rejaudoux**	**22.82**	**304**	*e*P	**P**	**06 36 08.3**	**+0.5**
RJF	**Les Rejaudoux**	**22.82**	**304**	*e*P	**P**	**06 36 08.3**	**+0.5**
RJF	**Les Rejaudoux**	**22.82**	**304**	*e*P	**P**	**06 36 08.3**	**+0.5**
LFF	**La Frestale**	**23.26**	**303**	*e*P	**P**	**06 36 12.6**	**+0.4**
LFF	**La Frestale**	**23.26**	**303**	*e*P	**P**	**06 36 12.6**	**+0.4**
LFF	**La Frestale**	**23.26**	**303**	*e*P	**P**	**06 36 12.6**	**+0.4**
LFF	**La Frestale**	**23.26**	**303**	*e*P	**P**	**06 36 12.6**	**+0.4**
TAM	**Tamanrasset**	**23.64**	**244**	*e*P	**P**	**06 36 17.1**	**+0.8**
TAM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TAM	**Tamanrasset**	**23.64**	**244**	*e*P	**P**	**06 36 17.1**	**+0.8**
	comp=Z,7.5nm,1.0s						
TAM	**Tamanrasset**	**23.64**	**244**	*e*P	**P**	**06 36 17.1**	**+0.8**
	comp=Z,7.5nm,1.0s						
ETSF	**Etsaut**	**23.76**	**297**	*e*P	**P**	**06 36 18.8**	**+1.6**
	comp=Z,2.6nm,0.4s						
ETSF	**Etsaut**	**23.76**	**297**	*e*P	**P**	**06 36 18.8**	**+1.6**
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ETSF	**Etsaut**	**23.76**	**297**	*e*P	**P**	**06 36 18.8**	**+1.6**
	comp=Z,2.6nm,0.4s						
ETSF	**Etsaut**	**23.76**	**297**	*e*P	**P**	**06 36 18.8**	**+1.6**
	comp=Z,1.3nm,0.4s						
MFF	**Saint Martin d**	**24.31**	**306**	*e*P	**P**	**06 36 22.3**	**+0.1**
MFF	**Saint Martin d**	**24.31**	**306**	*e*P	**P**	**06 36 22.3**	**+0.1**
MFF	**Saint Martin d**	**24.31**	**306**	*e*P	**P**	**06 36 22.3**	**+0.1**
MFF	**Saint Martin d**	**24.31**	**306**	*e*P	**P**	**06 36 22.3**	**+0.1**
LDF	**La Druitiere**	**24.96**	**311**	*e*P	**P**	**06 36 25.8**	**-2.2**
	comp=Z,12nm,0.6s						
LDF	**La Druitiere**	**24.96**	**311**	*e*P	**P**	**06 36 25.8**	**-2.2**
LDF				pmax	pmax		
	comp=Z,12nm,0.6s						
LDF	**La Druitiere**	**24.96**	**311**	*e*P	**P**	**06 36 25.8**	**-2.2**
	comp=Z,12nm,0.6s						
FLN	**La Foliniere**	**25.24**	**311**	*e*P	**P**	**06 36 28.5**	**-2.1**
FLN				*e*R			
	comp=Z,121nm,19.8s						
FLN	**La Foliniere**	**25.24**	**311**	*e*P	**P**	**06 36 28.5**	**-2.1**
FLN	**La Foliniere**	**25.24**	**311**	*e*P	**P**	**06 36 28.5**	**-2.1**
FLN	**La Foliniere**	**25.24**	**311**	*e*P	**P**	**06 36 28.5**	**-2.1**
GRR	**Gorron**	**25.34**	**310**	*e*P	**P**	**06 36 29.6**	**-1.9**
	comp=Z,20nm,0.5s						
GRR	**Gorron**	**25.34**	**310**	*e*P	**P**	**06 36 29.6**	**-1.9**
GRR				pmax	pmax		
	comp=Z,20nm,0.5s						
GRR	**Gorron**	**25.34**	**310**	*e*P	**P**	**06 36 29.6**	**-1.9**
	comp=Z,20nm,0.5s						
GRR	**Gorron**	**25.34**	**310**	*e*P	**P**	**06 36 29.6**	**-1.9**
	comp=Z,10nm,0.5s						
ESDC	**Sonseca Array**	**26.10**	**289**	P	**P**	**06 36 37.3**	**-1.2**
ESDC	**Sonseca Array**	**26.10**	**289**	P	**P**	**06 36 37.3**	**-1.2**
	comp=Z,3.1nm,0.5s,baz=80,slow=11,SNR=19						
ESDC	**Sonseca Array**	**26.10**	**289**	P	**P**	**06 36 37.3**	**-1.2**
ESLA	**Sonseca Array**	**26.10**	**289**	*e*P	**P**	**06 36 38.9**	**+0.3**
	comp=Z,1.2nm,0.8s						
ESLA	**Sonseca Array**	**26.10**	**289**	*e*P	**P**	**06 36 38.9**	**+0.3**
	comp=Z,1.2nm,0.8s						
AKTK	**Aktyubinsk**	**26.12**	**46**	P	**P**	**06 36 38.5**	**0.0**
	comp=Z,4.0nm,0.6s						
AKTO	**Aktyubinsk**	**26.12**	**46**	P	**P**	**06 36 38.5**	**0.0**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKTO	**Aktyubinsk**	**26.12**	**46**	P	**P**	**06 36 38.5**	**0.0**
	comp=Z,3.9nm,0.6s,baz=243,slow=10,SNR=8.2						
AKTO	**Aktyubinsk**	**26.12**	**46**	P	**P**	**06 36 38.5**	**0.0**
FINES	**FINESS Array B**	**26.19**	**357**	P	**P**	**06 36 37.8**	**-1.3**
FINES	**FINESS Array B**	**26.19**	**357**	P	**P**	**06 36 37.7**	**-1.3**
	comp=Z,5.5nm,0.9s,baz=156,slow=7.6,SNR=6.4						
FINES	**FINESS Array B**	**26.19**	**357**	P	**P**	**06 36 37.8**	**-1.3**
SGMF	**Saint Gilles**	**26.37**	**309**	*e*P	**P**	**06 36 39.6**	**-1.2**
SGMF	**Saint Gilles**	**26.37**	**309**	*e*P	**P**	**06 36 39.6**	**-1.2**
SGMF	**Saint Gilles**	**26.37**	**309**	*e*P	**P**	**06 36 39.6**	**-1.2**
SGMF	**Saint Gilles**	**26.37**	**309**	*e*P	**P**	**06 36 39.6**	**-1.2**
PAB	**San Pablo**	**26.40**	**289**	*e*P	**P**	**06 36 41.1**	**-0.2**
PAB				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PAB	**San Pablo**	**26.40**	**289**	*e*P	**P**	**06 36 41.1**	**-0.2**
	comp=Z,6.1nm,0.8s						
PAB	**San Pablo**	**26.40**	**289**	*e*P	**P**	**06 36 41.1**	**-0.2**
	comp=Z,6.1nm,0.8s						
HFS	**Hagfors**	**26.64**	**343**	P	**P**	**06 36 42.2**	**-0.9**
HFS	**Hagfors**	**26.64**	**343**	P	**P**	**06 36 42.2**	**-0.9**
	comp=Z,8.0nm,1.0s,baz=140,slow=12,SNR=9.4						
HFS	**Hagfors**	**26.64**	**343**	P	**P**	**06 36 42.2**	**-0.9**
	comp=Z,8.0nm,1.0s						
ABKAR	**Akbulak array**	**26.84**	**49**	*e*P	**P**	**06 36 48.4**	**+3.3**
ROSF	**Rostrenen**	**26.85**	**309**	*e*P	**P**	**06 36 43.3**	**-1.9**
ROSF	**Rostrenen**	**26.85**	**309**	*e*P	**P**	**06 36 43.3**	**-1.9**
ROSF	**Rostrenen**	**26.85**	**309**	*e*P	**P**	**06 36 43.3**	**-1.9**
ROSF	**Rostrenen**	**26.85**	**309**	*e*P	**P**	**06 36 43.3**	**-1.9**
MDT	**Midelt**	**27.54**	**274**	P	**P**	**06 36 52.7**	**+1.1**
MDT	**Midelt**	**27.54**	**274**	P	**P**	**06 36 52.7**	**+1.1**
	comp=Z,2.9nm,0.9s,baz=85,slow=14,SNR=7.2						
MDT	**Midelt**	**27.54**	**274**	P	**P**	**06 36 52.7**	**+1.1**
NOA	**NORSAR Array B**	**28.04**	**342**	P	**P**	**06 36 54.6**	**-1.1**
NOA	**NORSAR Array B**	**28.04**	**342**	P	**P**	**06 36 54.6**	**-1.1**
	comp=Z,1.5nm,0.8s,baz=142,slow=8.6,SNR=3.0						
NOA				LR	LR	06 48 39.5	
	comp=Z,48nm,19.9s,baz=75,slow=38						
NOA	**NORSAR Array B**	**28.04**	**342**	P	**P**	**06 36 54.6**	**-1.1**
	comp=Z,48nm,19.9s						
TOA0	**Torodi Ar. Sit**	**32.80**	**234**	*e*P	**P**	**06 37 38.2**	**+0.1**
TOA0	**Torodi Ar. Sit**	**32.80**	**234**	*e*P	**P**	**06 37 38.2**	**+0.1**
TORD	**Torodi Ar. Bea**	**32.80**	**234**	P	**P**	**06 37 37.8**	**-0.3**
TORD				PcP	**PcP**	**06 40 23.4**	**+0.6**
TORD	**Torodi Ar. Bea**	**32.80**	**234**	P	**P**	**06 37 37.8**	**-0.3**
	comp=Z,4.3nm,0.7s,baz=29,slow=9.8,SNR=34						
TORD				PcP	**PcP**	**06 40 23.4**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=46,slow=2.2,SNR=5.3						
TORD	**Torodi Ar. Bea**	**32.80**	**234**	P	**P**	**06 37 37.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**32.80**	**234**	PcP	**PcP**	**06 40 23.4**	**+0.6**
KKAR	**Karatay Array**	**33.13**	**64**	*e*P	**P**	**06 37 42.1**	**+1.3**
KKAR	**Karatay Array**	**33.13**	**64**	*e*P	**P**	**06 37 42.1**	**+1.3**
KKAR	**Karatay Array**	**33.13**	**64**	*e*P	**P**	**06 37 42.1**	**+1.3**
ARCES	**ARCESS Array B**	**34.31**	**358**	P	**P**	**06 37 49.5**	**-1.3**
ARCES				PcP	**PcP**	**06 40 26.0**	**-0.2**
ARCES	**ARCESS Array B**	**34.31**	**358**	P	**P**	**06 37 49.5**	**-1.3**
	comp=Z,0.9nm,0.4s,baz=172,slow=7.3,SNR=13						
ARCES				PcP	**PcP**	**06 40 26.0**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=182,slow=2.7,SNR=4.4						
ARCES	**ARCESS Array B**	**34.31**	**358**	P	**P**	**06 37 49.5**	**-1.3**
	comp=Z,1.0nm,0.4s						
ARCES	**ARCESS Array B**	**34.31**	**358**	PcP	**PcP**	**06 40 26.0**	**-0.2**
	comp=Z,1.0nm,0.6s						
EKS2	**Erkin-Say**	**35.55**	**64**	*e*P	**P**	**06 38 03.7**	**+1.8**
EKS2				pmax	pmax		
	comp=Z,1.0nm,0.4s						
EKS2	**Erkin-Say**	**35.55**	**64**	*e*P	**P**	**06 38 03.7**	**+1.8**
	comp=Z,0.9nm,0.4s						
EKS2	**Erkin-Say**	**35.55**	**64**	*e*P	**P**	**06 38 03.7**	**+1.8**
	comp=Z,0.9nm,0.4s						
MK31	**Makanchi Array**	**41.35**	**57**	*e*P	**P**	**06 38 51.5**	**+1.0**
MK31	**Makanchi Array**	**41.35**	**57**	*e*P	**P**	**06 38 51.5**	**+1.0**
MK31	**Makanchi Array**	**41.35**	**57**	*e*P	**P**	**06 38 51.5**	**+1.0**
MKAR	**Makanchi Array**	**41.35**	**57**	P	**P**	**06 38 51.5**	**+1.0**
MKAR						06 40 49.2	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**41.35**	**57**	P	**P**	**06 38 51.5**	**+1.0**
MKAR				PcP	**PcP**	**06 40 49.2**	**+0.9**
MKAR	**Makanchi Array**	**41.35**	**57**	P	**P**	**06 38 51.5**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=274,slow=7.8,SNR=9.5						
MKAR				PcP	**PcP**	**06 40 49.2**	**+0.9**
	comp=Z,0.4nm,0.6s,baz=278,slow=3.1,SNR=2.9						
MKAR	**Makanchi Array**	**41.35**	**57**	P	**P**	**06 38 51.5**	**+1.0**
	comp=Z,2.0nm,0.7s						
MKAR	**Makanchi Array**	**41.35**	**57**	PcP	**PcP**	**06 40 49.2**	**+0.9**
DBIC	**Dimbokro**	**41.90**	**235**	P	**P**	**06 38 54.6**	**-0.6**
DBIC				PcP	**PcP**	**06 40 51.5**	**+0.9**
DBIC	**Dimbokro**	**41.90**	**235**	P	**P**	**06 38 54.6**	**-0.6**
	comp=Z,2.5nm,0.4s,baz=36,slow=13,SNR=11						
DBIC				PcP	**PcP**	**06 40 51.5**	**+0.9**
	comp=Z,1.9nm,0.5s,baz=79,slow=19,SNR=3.4						
DBIC	**Dimbokro**	**41.90**	**235**	P	**P**	**06 38 54.6**	**-0.6**
	comp=Z,3.0nm,0.4s						
DBIC	**Dimbokro**	**41.90**	**235**	PcP	**PcP**	**06 40 51.5**	**+0.9**
	comp=Z,2.0nm,0.5s						
LIC	**Lamto**	**42.34**	**235**	*e*P	**P**	**06 38 58.2**	**-0.7**
	comp=Z,11nm,0.7s						
LIC	**Lamto**	**42.34**	**235**	*e*P	**P**	**06 38 58.2**	**-0.7**
	comp=Z,11nm,0.7s						
LIC	**Lamto**	**42.34**	**235**	*e*P	**P**	**06 38 58.2**	**-0.7**
	comp=Z,5.5nm,0.7s						
ZALV	**Zalesovo Beam**	**42.88**	**46**	P	**P**	**06 39 03.4**	**+0.6**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**42.88**	**46**	P	**P**	**06 39 03.4**	**+0.6**
ZALV	**Zalesovo Beam**	**42.88**	**46**	P	**P**	**06 39 03.4**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=264,slow=8.7,SNR=6.6						
ZALV	**Zalesovo Beam**	**42.88**	**46**	P	**P**	**06 39 03.4**	**+0.6**
	comp=Z,2.2.0nm,0.4s						
SPITS	**Spitsbergen Ar**	**43.28**	**356**	P	**P**	**06 39 06.8**	**+1.0**
SPITS	**Spitsbergen Ar**	**43.28**	**356**	P	**P**	**06 39 06.8**	**+1.0**
	comp=Z,5.1nm,1.0s,baz=165,slow=8.1,SNR=3.7						
SPITS	**Spitsbergen Ar**	**43.28**	**356**	P	**P**	**06 39 06.8**	**+1.0**
	comp=Z,5.0nm,1.0s						
SONM	**Songino Array**	**57.21**	**52**	P	**P**	**06 40 53.6**	**+1.9**
SONM	**Songino Array**	**57.21**	**52**	P	**P**	**06 40 53.6**	**+1.9**
	comp=Z,1.0nm,0.7s,baz=288,slow=8.0,SNR=4.7						
SONM	**Songino Array**	**57.21**	**52**	P	**P**	**06 40 53.6**	**+1.9**
	comp=Z,1.0nm,0.7s						
BOSA	**Boshof**	**63.67**	**183**	P	**P**	**06 41 37.9**	**+2.0**
BOSA	**Boshof**	**63.67**	**183**	P	**P**	**06 41 37.9**	**+2.0**
	comp=Z,1.6nm,0.7s,baz=6.3,slow=9.2,SNR=3.4						
BOSA	**Boshof**	**63.67**	**183**	P	**P**	**06 41 37.9**	**+2.0**
	comp=Z,2.0nm,0.7s						
CMAR	**Chiang Mai Arr**	**63.77**	**85**	P	**P**	**06 41 37.8**	**+1.0**
CMAR	**Chiang Mai Arr**	**63.77**	**85**	P	**P**	**06 41 37.8**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=291,slow=7.7,SNR=5.9						
CMAR	**Chiang Mai Arr**	**63.77**	**85**	P	**P**	**06 41 37.8**	**+1.0**
	comp=Z,1.0nm,0.3s						
SCHQ	**Schefferville**	**64.86**	**320**	P	**P**	**06 41 42.2**	**-1.2**
SCHQ	**Schefferville**	**64.86**	**320**	P	**P**	**06 41 42.2**	**-1.2**
	comp=Z,2.3nm,0.4s,baz=70,slow=3.4,SNR=12						
SCHQ	**Schefferville**	**64.86**	**320**	P	**P**	**06 41 42.2**	**-1.2**
USRK	**Ussuriysk Arra**	**74.73**	**46**	P	**P**	**06 42 45.0**	**+0.7**
	comp=Z,3.7nm,0.6s,baz=285,slow=5.1,SNR=8.6						
KSAR	**Wonju Array Be**	**75.93**	**54**	P	**P**	**06 42 52.4**	**+1.1**
KSAR	**Wonju Array Be**	**75.93**	**54**	P	**P**	**06 42 52.3**	**+1.1**
KSRS	**Korea Array**	**75.95**	**54**	P	**P**	**06 42 52.4**	**+1.0**
	comp=Z,1.2nm,0.7s,baz=319,slow=3.9,SNR=5.3						
KSRS	**Korea Array**	**75.95**	**54**	P	**P**	**06 42 52.4**	**+1.0**
	comp=Z,1.0nm,0.7s						
YKA	**Yellowknife Ar**	**78.13**	**343**	P	**P**	**06 43 01.5**	**-1.7**
YKA	**Yellowknife Ar**	**78.13**	**343**	P	**P**	**06 43 01.5**	**-1.7**
	comp=Z,0.8nm,0.5s,baz=30,slow=5.3,SNR=6.6						
YKA	**Yellowknife Ar**	**78.13**	**343**	P	**P**	**06 43 01.5**	**-1.7**
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**80.18**	**358**	P	**P**	**06 43 14.3**	**0.0**
ILAR	**Eielson Array**	**80.18**	**358**	P	**P**	**06 43 14.3**	**0.0**
	comp=Z,0.3nm,0.7s,baz=345,slow=3.3,SNR=5.5						
ILAR	**Eielson Array**	**80.18**	**358**	P	**P**	**06 43 14.4**	**0.0**
PPLA	**Purkeypile**	**82.12**	**0**	*e*P	**P**	**06 43 25.2**	**+0.3**
	comp=Z,1.5nm,0.5s						
PPLA	**Purkeypile**	**82.12**	**0**	*e*P	**P**	**06 43 25.2**	**+0.3**
	comp=Z,1.5nm,0.5s						
CPCT	**Cooper Cave**	**85.97**	**311**	*e*P	**P**	**06 43 45.0**	**+0.1**
CPCT	**Cooper Cave**	**85.97**	**311**	*e*P	**P**	**06 43 45.0**	**+0.1**
BDFB	**Brasilia**	**88.37**	**250**	P	**P**	**06 43 56.7**	**-0.1**
BDFB	**Brasilia**	**88.37**	**250**	P	**P**	**06 43 56.7**	**-0.1**
	comp=Z,1.9nm,0.8s,baz=67,slow=7.7,SNR=3.5						
BDFB	**Brasilia**	**88.37**	**250**	P	**P**	**06 43 56.7**	**-0.1**
	comp=Z,2.0nm,0.8s						
BOZ	**Bozeman (W)**	**91.75**	**333**	*e*P	**P**	**06 44 13.1**	**+0.8**
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.6s						
BOZ	**Bozeman (W)**	**91.75**	**333**	*e*P	**P**	**06 44 13.1**	**+0.8**
	comp=Z,5.2nm,1.6s						
BOZ	**Bozeman (W)**	**91.75**	**333**	*e*P	**P**	**06 44 13.1**	**+0.8**
	comp=Z,5.2nm,1.6s						
PDAR	**Pinedale Array**	**93.39**	**331**	P	**P**	**06 44 19.1**	**-0.9**
PDAR	**Pinedale Array**	**93.39**	**331**	P	**P**	**06 44 19.1**	**-0.9**
	comp=Z,0.4nm,0.5s,baz=29,slow=2.1,SNR=3.2						
PDAR	**Pinedale Array**	**93.39**	**331**	P	**P**	**06 44 19.1**	**-0.9**
WRA	**Warramunga Arr**	**113.83**	**98**	PKiKP	**PKiKP**	**06 49 43.4**	**-0.1**
WRA	**Warramunga Arr**	**113.83**	**98**	PKiKP	**PKiKP**	**06 49 43.4**	**-0.1**
	comp=Z,0.3nm,0.8s,baz=298,slow=3.8,SNR=4.6						
ASAR	**Alice Springs**	**115.33**	**102**	PKP	**PKPdf**	**06 49 46.6**	**+0.2**
ASAR	**Alice Springs**	**115.33**	**102**	PKP	**PKPdf**	**06 49 46.6**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=309,slow=1.3,SNR=8.1						

IDC ***18*** *06:33:29.4±3.1, 43.1°S×72.8°W, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.7/19, mbtmp3.8/5, ML3.9/1, Error ellipse: s-maj=63.1km s-min=41.7km az=99.0*

GUC ***18*** *06:33:31.6±0.6, 42.84°S×72.65°W, h8km±32km, ML3.2*

ISC 18 06:33:32.9±2.0, 43.1°S±0.1°×72.9°W±0.1, h35km, n10, σ2s96/11, 2C, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
FUTA	**Futaleufœ**	**0.74**	**99**	*e*P		**Pn**	**06 33 44.4**	**-2.5**
FUTA				*i* S		**Sn**	**06 33 54.0**	**-2.8**
FUTA				AML		AML	06 33 56.0	
	comp=N,1μm,0.5s							
HUNY	**Huinay**	**0.76**	**25**	*e*P		Px	06 34 30.0	
HUNY				*i* S		Sx	06 34 36.7	
HUNY				AML		AML	06 34 41.5	
	comp=E,2μm,0.5s							
PUEL	**Puelo Alto**	**1.47**	**16**	*i*P		**Pn**	**06 33 53.9**	**-2.9**
PUEL				*i* S		**Sn**	**06 34 10.6**	**-4.2**
PUEL				AML		AML	06 34 28.5	
	comp=E,361nm,0.7s							
PMCH	**Puerto Montt**	**1.58**	**359**	*i*P		**Pn**	**06 33 57.0**	**-1.4**
PMCH				*i* S		**Sn**	**06 34 15.1**	**-2.5**
PMCH				AML		AML	06 34 26.1	
	comp=E,894nm,0.5s							
COYC	**Coyhaique**	**2.56**	**168**	AML		AML	06 35 13.8	
	comp=E,58nm,0.6s							
PLCA	**Paso Flores**	**2.90**	**37**	Pn		**Pn**	**06 34 16.6**	**0.0**
	comp=E,4.2nm,0.3s,baz=215,slow=16,SNR=54							
PLCA				Sn		**Sn**	**06 34 53.4**	**+3.1**
	comp=E,15nm,0.3s,baz=116,slow=20,SNR=12							
LVC	**Limon Verde**	**20.66**	**10**	P		Pn	06 38 12.9	+0.5
	comp=E,2.9nm,0.7s,baz=194,slow=12,SNR=4.5							
CPUP	**Villa Florida**	**20.96**	**42**	P		**P**	**06 38 15.7**	**+2.8**
	comp=E,1.0nm,0.7s,baz=209,slow=10,SNR=4.1							
SIV	**San Ignacio**	**28.81**	**24**	P		**P**	**06 39 28.3**	**+0.6**
	comp=E,0.9nm,0.8s,baz=227,slow

*NNC **18** 07:35:11.0±10.0, 40.42N×45.92E, h54km±71km, mb4.0, Error ellipse: s-maj=88.3km s-min=59.0km az=94.0*
ISC 18 07:34:54.7±0.8, 40.26N±0.02×44.80E±0.01, h7km±6km, n171, σ1s80/200, mb4.1/15, MS3.3/6, 17C-29D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GNI	**Garni**	**0.11**	**202**	*e*Pg	**Pg**	**07 34 56.8**	**-0.5**
GNI				*e*Sg	**Sg**	**07 34 59.3**	**+0.2**
GNI	**Garni**	**0.11**	**202**	Pg	**Pg**	**07 34 56.4**	**-0.9**
	18μm,0.3s,baz=314,slow=4.0,SNR=6654						
GNI	**Garni**	**0.11**	**202**	*e*Pg	**Pg**	**07 34 56.8**	**-0.5**
GNI				*e*Sg	**Sg**	**07 34 59.3**	**+0.2**
ARRZ	**Ararat**	**0.41**	**191**	⇓*i*P	**Pn**	07 35 17.0	+10
ARRZ				⇓*i*S	Sb	07 35 23.5	+13
VRNZ	**Vardanashen**	**0.51**	**246**	*i* PG	**Pg**	**07 35 02.4**	**-2.1**
VRD	**Vardenis**	**0.69**	**93**	*i* PG	**Pg**	**07 35 08.0**	**-0.1**
VADZ	**Vardenis**	**0.73**	**96**	*i* P	**Pg**	**07 35 08.0**	**-0.8**
VADZ				*i* S	**Sg**	**07 35 18.0**	**-0.3**
VADZ	**Vardenis**	**0.73**	**96**	P	**Pg**	**07 35 08.0**	**-0.8**
VADZ				S	**Sg**	**07 35 18.0**	**-0.3**
VNNZ	**Vanand**	**0.76**	**259**	*i* PG	**Pg**	**07 35 07.3**	**-2.0**
STEZ	**Stepenevan**	**0.80**	**338**	⇓*i*P	**Pg**	**07 35 08.6**	**-1.6**
STEZ				⇓S	**Sg**	**07 35 21.0**	**+0.4**
STE	**Stepanavan**	**0.81**	**337**	⇓P	**Pg**	**07 35 08.6**	**-1.7**
STE				S	**Sg**	**07 35 21.0**	**+0.1**
GMRZ	**Gyumri**	**0.92**	**307**	*e*P	**Pg**	**07 35 11.0**	**-1.4**
GMRZ				*e*S	**Sg**	**07 35 25.0**	**+0.6**
DIGO	**Kars**	**1.10**	**279**	*i* P	**Pg**	**07 35 14.2**	**-1.6**
DIGO				*i* S	**Sg**	**07 35 29.2**	**-0.8**
DIGO	**Kars**	**1.10**	**279**	*i* P	**Pg**	**07 35 14.2**	**-1.6**
DIGO				*i* S	**Sg**	**07 35 29.2**	**-0.8**
DYDN	**Diyadin**	**1.11**	**231**	*i* P	**Pg**	**07 35 14.9**	**-1.1**
DYDN				*i* S	**Sb**	**07 35 31.6**	**+0.5**
DYDN	**Diyadin**	**1.11**	**231**	*i* P	**Pg**	**07 35 14.9**	**-1.1**
DYDN				*i* S	**Sb**	**07 35 31.6**	**+0.5**
KZR	**Kazreti**	**1.16**	**346**	P	**Pb**	**07 35 15.7**	**-1.5**
KZR				S	**Sg**	**07 35 31.4**	**-0.7**
NAX	**Nakhchivan**	**1.21**	**153**	⇓S	**Sn**	**07 35 34.7**	**0.0**
NAX	**Nakhchivan**	**1.21**	**153**	S	**Sn**	**07 35 34.7**	**0.0**
GANJ	**Ganja**	**1.23**	**71**	⇑P	**Pn**	**07 35 16.7**	**-1.6**
	SNR=341						
GANJ				⇓S	**Sb**	**07 35 33.7**	**-0.6**
GANJ	**Ganja**	**1.23**	**71**	P	**Pn**	**07 35 16.7**	**-1.6**
	SNR=341						
GANJ				S	**Sb**	**07 35 33.7**	**-0.6**
DGRG	**David-gareji**	**1.27**	**20**	*e*PG	**Pn**	**07 35 18.8**	**-0.1**
DGRG	**David-gareji**	**1.27**	**20**	P	**Pn**	**07 35 18.9**	**-0.1**
DGRG				S	**Sn**	**07 35 38.8**	**+2.5**
DGRG	**David-gareji**	**1.27**	**20**	*e*Pg	**Pn**	**07 35 18.8**	**-0.1**
CLDR	**Caldiran**	**1.30**	**212**	*e*PN	**Pn**	**07 35 19.0**	**-0.5**
CLDR				*e*SN	**Sn**	**07 35 37.6**	**+0.3**
CLDR	**Caldiran**	**1.30**	**212**	*e*Pn	**Pn**	**07 35 19.0**	**-0.5**
CLDR				*e*Sn	**Sn**	**07 35 37.6**	**+0.3**
KARS	**Kars**	**1.36**	**286**	*e*PN	**Pn**	**07 35 20.0**	**-0.3**
KARS				*e*SN	**Sg**	**07 35 38.7**	**+0.2**
KARS	**Kars**	**1.36**	**286**	PG	**Pn**	**07 35 20.0**	**-0.3**
KARS	**Kars**	**1.36**	**286**	*e*Pn	**Pn**	**07 35 20.0**	**-0.3**
KARS				*e*Sn	**Sg**	**07 35 38.7**	**+0.2**
GRS	**Goris**	**1.40**	**122**	*i* PG	**Pn**	**07 35 19.0**	**-1.8**
GRS	**Goris**	**1.40**	**122**	*i* P	**Pn**	**07 35 19.0**	**-1.8**
GRS				*i* S	**Sb**	**07 35 39.0**	**-0.4**
TBLG	**Delisi**	**1.48**	**358**	*e*PG	**Pn**	**07 35 21.3**	**-0.4**
TBLG	**Delisi**	**1.48**	**358**	P	**Pn**	**07 35 21.3**	**-0.4**
TBLG				S	**Sb**	**07 35 41.7**	**+0.3**
TBLG	**Delisi**	**1.48**	**358**	P	**Pn**	**07 35 21.3**	**-0.4**
TBLG				S	**Sb**	**07 35 41.7**	**+0.3**
KDR	**Kadzharan**	**1.49**	**137**	⇓*i*P	**Pn**	**07 35 19.0**	**-3.2**
KDR				⇓*i*S	**Sn**	**07 35 38.9**	**-3.1**
AKH	**Akhalkalaki**	**1.52**	**320**	PG	**Pn**	**07 35 22.2**	**-0.2**
AKH	**Akhalkalaki**	**1.52**	**320**	P	**Pn**	**07 35 22.3**	**-0.2**
AKH				S	**Sg**	**07 35 43.9**	**+0.3**
AKH	**Akhalkalaki**	**1.52**	**320**	Pg	**Pn**	**07 35 22.2**	**-0.2**
AGRB	**Hanur-Agry**	**1.54**	**245**	*e*PN	**Pn**	**07 35 22.9**	**+0.1**
AGRB	**Hanur-Agry**	**1.54**	**245**	*e*Pn	**Pn**	**07 35 22.9**	**+0.1**
XTNZ	**Xhotanan**	**1.56**	**128**	⇓*i*P	Pn	07 35 19.5	-3.3
XTNZ				⇓*i*S	**Sn**	**07 35 41.3**	**-2.0**
STKZ		**1.56**	**106**	*i* P	**Pn**	**07 35 21.4**	**-1.6**
STKZ				*i* S	**Sn**	**07 35 43.4**	**-0.1**
TUTA	**Tutak**	**1.75**	**241**	*i* P	**Pn**	**07 35 26.1**	**+0.5**
TUTA				*i* S	**Sb**	**07 35 49.7**	**+0.2**
TUTA	**Tutak**	**1.75**	**241**	*i* P	**Pn**	**07 35 26.1**	**+0.5**
TUTA				*i* S	**Sb**	**07 35 49.7**	**+0.2**
MGRZ	**Megri**	**1.75**	**140**	⇓*i*P	Pn	07 35 21.9	-3.5
MGRZ				⇓*i*S	**Sn**	**07 35 45.9**	**-2.2**
GOR	**Gori**	**1.81**	**344**	*e*PN	**Pb**	**07 35 27.3**	**-0.8**
GOR	**Gori**	**1.81**	**344**	P	**Pb**	**07 35 27.3**	**-0.8**
GOR				S	**Sg**	**07 35 52.5**	**-0.2**
GOR	**Gori**	**1.81**	**344**	*e*Pn	**Pb**	**07 35 27.3**	**-0.8**
BRDA	**Brd**	**1.82**	**89**	⇑P	**Pb**	**07 35 28.7**	**+0.3**
	SNR=79						
BRDA				⇓S	**Sg**	**07 35 56.1**	**+2.8**
BRDA	**Brd**	**1.82**	**89**	P	**Pb**	**07 35 28.7**	**+0.3**
	SNR=79						
BRDA				S	**Sg**	**07 35 56.1**	**+2.8**
TVAN	**Van**	**2.03**	**212**	*i* P	**Pb**	**07 35 31.8**	**-0.3**
TVAN	**Van**	**2.03**	**212**	*i* P	**Pb**	**07 35 31.8**	**-0.3**
SEKA	**Sheki**	**2.06**	**62**	⇑P	**Pb**	**07 35 31.5**	**-0.9**
	SNR=201						
SEKA				⇑S	**Sg**	**07 36 00.1**	**-0.8**
SEKA	**Sheki**	**2.06**	**62**	P	**Pb**	**07 35 31.5**	**-0.9**
	SNR=201						
SEKA				S	**Sg**	**07 36 00.1**	**-0.8**
GUDG	**Gudauri**	**2.22**	**354**	P	**Pb**	**07 35 34.2**	**-1.1**
GUDG				S	**Sb**	**07 36 04.9**	**+1.8**
HOMI	**Horasan**	**2.23**	**266**	*i* P	**Pb**	**07 35 34.1**	**-1.3**
HOMI				*i* S	**Sg**	**07 36 06.2**	**0.0**
GEVA	**Gevas**	**2.36**	**215**	*i* P	**Pb**	**07 35 38.1**	**+0.4**
GEVA	**Gevas**	**2.36**	**215**	*i* P	**Pb**	**07 35 38.1**	**+0.4**
DDEM	**Demirkent**	**2.41**	**286**	*i* P	**Pb**	**07 35 38.1**	**-0.3**
DDEM				*i* S	**Sg**	**07 36 11.1**	**-0.9**
DDEM	**Demirkent**	**2.41**	**286**	*i* P	**Pb**	**07 35 38.1**	**-0.3**
ONI	**Oni**	**2.54**	**337**	*e*PN	**Pb**	**07 35 39.7**	**-1.0**
ONI	**Oni**	**2.54**	**337**	P	**Pb**	**07 35 39.7**	**-1.0**
ONI				S	**Sb**	**07 36 14.1**	**+1.9**
ONI	**Oni**	**2.54**	**337**	*e*Pn	**Pb**	**07 35 39.7**	**-1.0**
KMKR	**Kumukh**	**2.56**	**42**	*e*PN	**Pb**	**07 35 40.0**	**-1.0**
KMKR				*i* S	**Sb**	**07 36 14.0**	**+1.3**
KMKR				pmax	pmax		
	comp=Z,505nm,0.4s						
KMKR	**Kumukh**	**2.56**	**42**	*e*Pn	**Pb**	**07 35 40.0**	**-1.0**
	comp=Z,505nm,0.4s						
KMKR				*i* Sn	**Sb**	**07 36 14.0**	**+1.3**
DBOC	**Borcka**	**2.61**	**296**	*i* P	**Pb**	**07 35 42.3**	**+0.4**
DBOC	**Borcka**	**2.61**	**296**	*i* P	**Pb**	**07 35 42.3**	**+0.4**
IML	**Ismayilli**	**2.64**	**77**	⇑P	**Pb**	**07 35 40.2**	**-2.1**
	SNR=7.1						
IML				⇓S	**Sg**	**07 36 19.9**	**+0.5**
IML	**Ismayilli**	**2.64**	**77**	P	**Pb**	**07 35 40.2**	**-2.1**
	SNR=7.1						
ERZM	**Erzurum**	**2.66**	**264**	*i* P	**Pb**	**07 35 41.6**	**-1.1**
ERZM	**Erzurum**	**2.66**	**264**	*i* P	**Pb**	**07 35 41.6**	**-1.1**
EZM	**Erzurum**	**2.66**	**264**	*e*PN	**Pn**	**07 35 39.0**	**+0.8**
BCA	**Borcka**	**2.69**	**297**	*e*PN	**Pn**	**07 35 40.0**	**+1.7**
BCA	**Borcka**	**2.69**	**297**	*e*Pn	**Pn**	**07 35 40.0**	**+1.7**
HAKT	**HAKKARI**	**2.82**	**198**	*i* P	**Pb**	**07 35 43.0**	**-2.6**
HAKT				*i* S	**Sg**	**07 36 26.0**	**+0.6**
HAKT	**HAKKARI**	**2.82**	**198**	*i* P	**Pb**	**07 35 43.0**	**-2.6**
PQL	**Pirkuli**	**2.94**	**78**	⇑P	**Pb**	**07 35 44.9**	**-2.6**
	SNR=35						
PQL				⇑S	**Sb**	**07 36 26.4**	**+2.6**
PQL	**Pirkuli**	**2.94**	**78**	P	**Pb**	**07 35 44.9**	**-2.6**
	SNR=35						
PQL				S	**Sb**	**07 36 26.4**	**+2.6**
GLBA	**Clilabad**	**2.95**	**109**	⇑P	**Pb**	**07 35 46.3**	**-1.3**
	SNR=9.3						
GLBA				⇓S	**Sg**	**07 36 27.5**	**-1.9**
GLBA	**Clilabad**	**2.95**	**109**	P	**Pb**	**07 35 46.3**	**-1.3**
	SNR=9.3						
QUBA	**Quba, Azerbaij**	**3.01**	**67**	⇓P	**Pb**	**07 35 46.2**	**-2.5**
	SNR=22						
QUBA				⇓S	**Sg**	**07 36 28.8**	**-2.6**
QUBA	**Quba, Azerbaij**	**3.01**	**67**	P	**Pb**	**07 35 46.2**	**-2.5**
	SNR=22						
BNGL	**BINGOL**	**3.10**	**246**	*e*P	**Pb**	**07 35 49.3**	**-1.0**
SIZA	**Siyzn**	**3.23**	**74**	⇓P	**Pn**	**07 35 48.9**	**+3.1**
	SNR=27						
SIZA	**Siyzn**	**3.23**	**74**	P	**Pn**	**07 35 48.9**	**+3.1**
	SNR=27						
ALIB	**Äli-Bayra**	**3.24**	**94**	⇑P	**Pn**	**07 35 48.6**	**+2.7**
	SNR=15						
ALIB	**Äli-Bayra**	**3.24**	**94**	P	**Pn**	**07 35 48.6**	**+2.7**
	SNR=15						
KOPT	**Kop Dagi**	**3.30**	**267**	*i* P	**Pg**	**07 35 58.7**	**+0.7**
MAK	**Makhachkala**	**3.38**	**36**	*e*PN	**Pn**	**07 35 47.0**	**-0.9**
MAK				MLR	MLR		
	comp=Z,397nm,9.0s						
LKRN	**Lenkeran, Azer**	**3.45**	**115**	⇓P	**Pb**	**07 35 54.3**	**-1.7**
	SNR=8.8						
LKRN				⇓S	**Sb**	**07 36 40.0**	**+1.9**
LKRN	**Lenkeran, Azer**	**3.45**	**115**	P	**Pb**	**07 35 54.3**	**-1.7**
	SNR=8.8						
BEST	**Besiri**	**3.62**	**230**	*i* P	**Pg**	**07 36 02.2**	**-1.9**
KBZ	**Khabaz**	**3.75**	**338**	PN	Pn	07 35 56.1	+3.2
KBZ						07 36 51.6	
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KBZ				smax	smax		
	comp=N,5.0nm,0.3s						
KBZ				MLR	MLR		
	comp=Z,290nm,18.6s						
KBZ	**Khabaz**	**3.75**	**338**	Pn	Pn	07 35 56.1	+3.2
	comp=Z,1.1nm,0.3s,baz=164,slow=12,SNR=11						
KBZ				Sn	**Sg**	**07 36 51.6**	**-3.5**
	comp=Z,4.9nm,0.3s,baz=0.0,slow=20,SNR=3.7						
KBZ				LR	LR	07 37 34.5	
	comp=Z,290nm,18.6s,baz=100,slow=42						
KBZ	**Khabaz**	**3.75**	**338**	Pn	Pn	07 35 56.1	+3.2
	comp=Z,1.0nm,0.3s						
KIV	**Kislovodsk**	**4.02**	**338**	*e*PN	**Pn**	**07 35 59.3**	**+2.6**
KIV				*e*S	**Sb**	**07 36 50.2**	**-4.4**
KIV				pmax	pmax		
	comp=Z,48nm,1.0s						
KIV				MLR	MLR		
	comp=Z,21nm,6.0s						
KIV	**Kislovodsk**	**4.02**	**338**	*e*Pn	**Pn**	**07 35 59.3**	**+2.6**
	comp=Z,48nm,1.0s						
KELT	**Kelkit**	**4.24**	**270**	*i* P	**Pg**	**07 36 15.6**	**-0.4**
SOC	**Sochi**	**5.04**	**313**	*e*PN	**Pg**	**07 36 28.4**	**-2.8**
SOC				*e*		07 37 16.8	
SOC						07 37 39.3	
SOC				pmax	pmax		
	comp=Z,33nm,0.9s						
SOC				MLR	MLR		
	comp=Z,375nm,10.0s						
ANN	**Anapa**	**7.08**	**312**	*e*P	Pn	07 36 41.9	+3.2
ANN				pmax	pmax		
	comp=Z,49nm,1.3s						
ANN	**Anapa**	**7.08**	**312**	*e*P	Pn	07 36 41.9	+3.2
	comp=Z,49nm,1.3s						
IBDR	**Badra**	**7.19**	**172**	*e*Pn	**Pb**	**07 36 58.1**	**-1.7**
IBDR				*e*Pg	Pg	07 37 39.3	+27
IBDR				*e*Sn	Sb	07 38 33.0	+7.2
IBDR				*e*Sb	Sg	07 39 03.5	+18
IBDR				*e*Lg	Lg	07 39 20.7	
BRTR	**Keskin Array B**	**8.58**	**270**	Pn	Pn	07 37 05.2	+5.8
	comp=Z,0.1nm,0.3s,baz=102,slow=12,SNR=11						
ASF	**Jabal al Asfar**	**10.28**	**221**	LR	LR	07 41 55.5	
	comp=Z,165nm,18.4s,baz=67,slow=42						
MMAI	**Mount Meron Ar**	**10.44**	**229**	LR	LR	07 42 02.9	
	comp=Z,156nm,19.9s,baz=55,slow=42						
VORD	**Divnogorie**	**11.38**	**342**	*e*P	**Pn**	**07 37 39.7**	**+2.2**
VORD				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VORD				pmax	pmax		
	comp=N,10.0nm,1.5s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.9s						
VORD	**Divnogorie**	**11.38**	**342**	*e*P	**Pn**	**07 37 39.7**	**+2.2**
	comp=E,10.0nm,1.5s						
VSR	**Storozhevoye**	**11.64**	**342**	*e*P	**Pn**	**07 37 42.6**	**+1.5**
VSR				pmax	pmax		
	comp=N,10.0nm,0.7s						
VSR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VSR				pmax	pmax		
	comp=E,10.0nm,1.1s						
VSR	**Storozhevoye**	**11.64**	**342**	*e*P	**Pn**	**07 37 42.6**	**+1.5**
EIL	**Elat**	**13.28**	**220**	LR	LR	07 43 50.9	
	comp=E,120nm,18.5s,baz=277,slow=41						
AKTK	**Aktyubinsk**	**13.76**	**38**	*i* P	**Pn**	**07 38 11.0**	**+0.9**
	comp=E,5.0nm,0.6s						
AKTO	**Aktyubinsk**	**13.76**	**38**	⇓P	**Pn**	**07 38 12.9**	**+2.8**
	comp=E,5.2nm,0.6s						
AKTO				⇓S	**Sn**	**07 40 37.9**	**-5.3**
	comp=E,5.0nm,1.0s						
AKTO	**Aktyubinsk**	**13.76**	**38**	*i* P	**Pn**	**07 38 11.0**	**+0.9**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKTO	**Aktyubinsk**	**13.76**	**38**	Pn	**Pn**	**07 38 08.4**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=219,slow=12,SNR=18						
AKTO				LR	LR	07 45 03.3	
	comp=Z,133nm,18.3s,baz=357,slow=44						
AKTO	**Aktyubinsk**	**13.76**	**38**	P	**Pn**	**07 38 12.9**	**+2.8**
	comp=Z,5.2nm,0.6s						
AB31	**Akbulak array**	**14.01**	**45**	⇑P	**Pn**	**07 38 15.6**	**+2.2**
	comp=Z,2.0nm,0.6s,baz=235,slow=13,SNR=21						
AB31				⇑S	**Sn**	**07 40 43.1**	**-6.0**
	comp=Z,1.9nm,0.7s,baz=242,slow=26,SNR=4.9						
AB31	**Akbulak array**	**14.01**	**45**	*i* P	**Pn**	**07 38 12.2**	**-1.2**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AB31	**Akbulak array**	**14.01**	**45**	P	**Pn**	**07 38 15.6**	**+2.2**
	comp=Z,2.0nm,0.6s,baz=235,SNR=21						
MLR	**Muntele Rosu**	**14.77**	**297**	⇑*i*P	P	07 38 39.7	+10
AKASG	**Malin Array Be**	**15.08**	**319**	P	**Pn**	**07 38 27.8**	**-0.2**
AKASG	**Malin Array Be**	**15.08**	**319**	Pn	**Pn**	**07 38 27.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=122,slow=14,SNR=2.6						
KIEV	**Kiev**	**15.09**	**319**	*e*P	**P**	**07 38 31.8**	**-1.6**
VOIR		**15.37**	**296**	⇓*i*P	P	07 38 46.1	+9.3
BURAR	**Bucovina Array**	**15.88**	**304**	⇓*i*P	P	07 38 48.8	+6.3
ARU	**Arti**	**18.53**	**25**	*d i*P	**Pn**	**07 39 11.9**	**+0.2**
ARU				S	**S**	**07 42 44.0**	**+0.9**
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
ARU	**Arti**	**18.53**	**25**	*i* P	**Pn**	**07 39 11.9**	**+0.2**
	comp=Z,11nm,1.2s						
ARU				S	**S**	**07 42 44.0**	**+0.9**
KK31	**Karatay Array**	**19.39**	**73**	⇑P	**Pn**	**07 39 21.6**	**-0.7**
	comp=Z,13nm,0.9s,baz=278,slow=14,SNR=111						
KK31	**Karatay Array**	**19.39**	**73**	*i* P	**P**	**07 39 21.3**	**+0.1**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SVE	**Sverdlovsk**	**19.54**	**27**	*e*P	**Pn**	**07 39 25.7**	**+1.9**
SVE				pmax	pmax		
	comp=Z,29nm,1.8s						
SVE	**Sverdlovsk**	**19.54**	**27**	*e*P	**Pn**	**07 39 25.7**	**+1.9**
	comp=Z,29nm,1.8s						
ZRNK	**Zerenda**	**20.80**	**44**	⇓P	Pn	07 39 39.2	+0.4
	comp=Z,5.7nm,0.7s						
ZRNK	**Zerenda**	**20.80**	**44**	P	Pn	07 39 39.2	+0.4
	comp=Z,5.7nm,0.7s						
BRVK	**Borovoye**	**21.54**	**45**	⇑P	P	07 39 49.6	+5.3
	comp=Z,15nm,0.6s						
BRVK	**Borovoye**	**21.54**	**45**	*d i*P	**P**	**07 39 44.8**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRVK	**Borovoye**	**21.54**	**45**	P	P	07 39 49.6	+5.3
	comp=Z,15nm,0.6s						
VSU	**Vasula**	**21.56**	**334**	*e*P	**P**	**07 39 44.1**	**-0.4**
VSU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSU	**Vasula**	**21.56**	**334**	*e*P	**P**	**07 39 44.1**	**-0.4**
	comp=Z,7.0nm,0.9s						
BVA0	**Borovoye Array**	**21.58**	**45**	⇑P	**P**	**07 39 49.1**	**+4.3**
	comp=Z,7.4nm,0.7s,baz=241,slow=9.0,SNR=32						
BVA0	**Borovoye Array**	**21.58**	**45**	*i* P	**P**	**07 39 48.4**	**+3.6**
BVA0				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BVA0	**Borovoye Array**	**21.58**	**45**	*i* P	**P**	**07 39 48.4**	**+3.6**
	comp=Z,8.0nm,0.6s						
BVAR	**Borovoye Array**	**21.58**	**45**	P	**P**	**07 39 47.5**	**+2.7**
BVAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BVAR	**Borovoye Array**	**21.58**	**45**	P	**P**	**07 39 47.5**	**+2.7**
	comp=Z,6.3nm,0.7s,baz=251,slow=9.0,SNR=31						
BVAR	**Borovoye Array**	**21.58**	**45**	P	**P**	**07 39 47.5**	**+2.7**
	comp=Z,6.0nm,0.7s						
VOSK	**Vostochnaya**	**21.78**	**46**	⇓P	**P**	**07 39 51.2**	**+4.3**
	comp=Z,11nm,0.8s						
AAK	**Ala-Archa**	**22.34**	**74**	P	**P**	**07 39 56.7**	**+3.5**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AAK				MLR	MLR		
	comp=Z,89nm,18.6s						
AAK	**Ala-Archa**	**22.34**	**74**	P	**P**	**07 39 56.7**	**+3.5**
	comp=Z,5.1nm,0.9s,baz=270,slow=7.1,SNR=4.0						
AAK				LR	LR	07 49 13.0	
	comp=Z,89nm,18.6s,baz=172,slow=38						
AAK	**Ala-Archa**	**22.34**	**74**	P	**P**	**07 39 56.7**	**+3.5**
	comp=Z,89nm,18.6s						
TKM2	**Tokmak 2**	**23.13**	**73**	⇑P	**P**	**07 40 05.5**	**+4.0**
	comp=Z,5.7nm,0.8s						
TKM2	**Tokmak 2**	**23.13**	**73**	P	**P**	**07 40 05.5**	**+4.0**
	comp=Z,5.7nm,0.8s						
GERES	**GERESS Array B**	**23.63**	**302**	P	**P**	**07 40 07.7**	**+1.3**
	comp=Z,0.7nm,0.4s,baz=96,slow=9.2,SNR=9.7						
GERES	**GERESS Array B**	**23.63**	**302**	P	**P**	**07 40 07.7**	**+1.3**
	comp=Z,1.0nm,0.4s						
KHC	**Kasperske Hory**	**23.76**	**302**	*e*P	**P**	**07 40 08.4**	**+0.8**
KHC	**Kasperske Hory**	**23.76**	**302**	*e*P	**P**	**07 40 08.4**	**+0.8**
CLL	**Collm**	**24.58**	**307**	*e*P	**P**	**07 40 17.0**	**+1.9**
CLL				*e*		07 40 21.0	
CLL	**Collm**	**24.58**	**307**	*e*(P)	**P**	**07 40 17.0**	**+1.9**
	comp=Z,5.0nm,1.0s						
CLL				*e*		07 40 21.0	
CLL				*e*		07 40 42.0	
CLL	**Collm**	**24.58**	**307**	*e*P	**P**	**07 40 17.0**	**+1.9**
KURBB	**Kurchatov Arra**	**25.63**	**55**	P	**P**	**07 40 26.4**	**+1.7**
	comp=Z,1.2nm,0.6s,baz=263,slow=9.2,SNR=17						
KURK	**Kurchatov**	**25.71**	**55**	⇑P	**P**	**07 40 27.4**	**+2.1**
	comp=Z,6.3nm,0.7s						
KURK	**Kurchatov**	**25.71**	**55**	P	**P**	**07 40 26.4**	**+1.1**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	**25.71**	**55**	P	**P**	**07 40 27.4**	**+2.1**
	comp=Z,6.3nm,0.7s						
DAVOX	**Davos/Dischmat**	**25.99**	**296**	P	**P**	**07 40 27.9**	**-0.3**
	comp=Z,3.5nm,0.6s,baz=36,slow=14,SNR=3.8						
HFS	**Hagfors**	**27.72**	**326**	LR	LR	07 52 32.3	
	comp=Z,115nm,19.0s,baz=36,slow=38						
MK31	**Makanchi Array**	**27.76**	**64**	P	**P**	**07 40 45.6**	**+1.6**
	comp=Z,0.8nm,0.7s,baz=280,slow=5.3,SNR=11						
MK31	**Makanchi Array**	**27.76**	**64**	P	**P**	**07 40 45.6**	**+1.6**
	comp=Z,0.8nm,0.7s,SNR=11						
MKAR	**Makanchi Array**	**27.76**	**64**	P	**P**	**07 40 45.8**	**+1.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array**	**27.76**	**64**	P	**P**	**07 40 45.8**	**+1.8**
	comp=Z,1.2nm,0.8s,baz=271,slow=7.3,SNR=8.7						
NOA	**NORSAR Array B**	**29.24**	**327**	LR	LR	07 53 29.3	
	comp=Z,76nm,18.1s,baz=130,slow=38						
ZALV	**Zalesovo Beam**	**30.05**	**49**	LR	LR	07 54 50.3	
	comp=Z,54nm,18.4s,baz=250,slow=40						
ARCES	**ARCESS Array B**	**31.07**	**347**	LR	LR	07 53 58.1	
	comp=Z,50nm,19.8s,baz=104,slow=37						
SONM	**Songino Array**	**43.87**	**59**	LR	LR	08 03 25.4	
	comp=Z,75nm,19.6s,baz=251,slow=39						
TORD	**Torodi Ar. Bea**	**46.38**	**247**	P	**P**	**07 43 19.9**	**-1.9**
	comp=Z,0.4nm,0.7s,baz=32,slow=8.8,SNR=2.7						

IDC 18 07:40:21.2±2.0, 25.32S×68.87W, h119km±7km, mb3.2/1, mb1 3.1/3, mb1mx3.0/18, mbtmp3.0/3, MS3.9/1, Ms1 3.9/1, ms1mx3.2/6, Error ellipse: s-maj=61.8km s-min=36.3km az=42.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**9.01**	**5**	P	Pn	07 42 28.6	-0.6
	0.3nm,0.3s,baz=168,slow=3.5,SNR=8.1						
CPUP	**Villa Florida**	**10.45**	**98**	P	Pn	07 42 47.8	+0.1
	0.2nm,0.3s,baz=258,slow=14,SNR=2.9						
PLCA	**Paso Flores**	**15.44**	**185**	LR	LR	07 50 11.1	
	comp=Z,433nm,20.4s,baz=176,slow=38						
TORD	**Torodi Ar. Bea**	**78.62**	**70**	P	P	07 52 10.1	-0.2
	0.4nm,0.7s,baz=258,slow=5.1,SNR=3.1						
TORD				pP	pP	07 52 41.2	+0.7
	0.3nm,0.6s,baz=241,slow

AOS	**Alonnisos**	**0.86**	**55**	P	**Pg**	**08 26 29.2**	**-0.3**
AOS				S	**Sb**	**08 26 40.9**	**-0.3**
EFP	**Efpalio**	**0.87**	**254**	P	**Pg**	**08 26 28.9**	**-0.8**
EFP				S	**Sn**	**08 26 42.7**	**-0.6**
EFP	**Efpalio**	**0.87**	**254**	*e*PB	**Pg**	**08 26 28.9**	**-0.8**
EFP				*e*SN	**Sn**	**08 26 42.6**	**-0.7**
EFP	**Efpalio**	**0.87**	**254**	P	**Pg**	**08 26 28.9**	**-0.8**
EFP				*e*Sn	**Sn**	**08 26 42.6**	**-0.7**
GUR	**Goura**	**0.89**	**214**	P	**Pg**	**08 26 29.6**	**-0.4**
GUR				S	**Sn**	**08 26 43.1**	**-0.7**
GUR	**Goura**	**0.89**	**214**	*e*PN	**Pg**	**08 26 29.5**	**-0.4**
GUR	**Goura**	**0.89**	**214**	P	**Pg**	**08 26 29.6**	**-0.4**
GUR				S	**Sn**	**08 26 43.1**	**-0.7**
LAKA	**Lakka**	**0.89**	**241**	P	**Pg**	**08 26 29.4**	**-0.7**
LAKA				S	**Sn**	**08 26 43.7**	**-0.2**
LAKA	**Lakka**	**0.89**	**241**	*e*PB	**Pg**	**08 26 29.4**	**-0.7**
LAKA	**Lakka**	**0.89**	**241**	P	**Pg**	**08 26 29.4**	**-0.7**
LAKA				S	**Sn**	**08 26 43.7**	**-0.2**
KLV	**Kalavryta, Ach**	**0.90**	**226**	*e*PN	**Pn**	**08 26 30.9**	**-0.3**
KLV				*e*SN	**Sb**	**08 26 43.0**	**+0.7**
KLV	**Kalavryta, Ach**	**0.90**	**226**	*e*Pn	**Pn**	**08 26 30.9**	**-0.3**
KLV				*e*Sn	**Sb**	**08 26 43.0**	**+0.7**
ATH	**Athens Observa**	**0.91**	**140**	P	**Pg**	**08 26 30.2**	**-0.2**
ATH				S	**Sb**	**08 26 43.1**	**+0.6**
ATH	**Athens Observa**	**0.91**	**140**	*e*PN	**Pg**	**08 26 30.0**	**-0.4**
ATH				*e*SN	**Sb**	**08 26 43.2**	**+0.7**
ATH	**Athens Observa**	**0.91**	**140**	P	**Pg**	**08 26 30.2**	**-0.2**
ATH				S	**Sb**	**08 26 43.1**	**+0.6**
PTL	**Penteli**	**0.94**	**131**	P	**Pb**	**08 26 30.9**	**0.0**
PTL				S	**Sb**	**08 26 43.8**	**+0.5**
PTL	**Penteli**	**0.94**	**131**	*e*PN	**Pb**	**08 26 30.7**	**-0.2**
PTL				*e*SN	**Sg**	**08 26 43.4**	**+0.2**
PTL	**Penteli**	**0.94**	**131**	P	**Pb**	**08 26 30.9**	**0.0**
PTL				*e*Sn	**Sg**	**08 26 43.4**	**+0.2**
EVR	**Evrytania**	**0.94**	**285**	P	**Pn**	**08 26 31.9**	**+0.1**
EVR				S	**Sn**	**08 26 45.8**	**+0.6**
EVR	**Evrytania**	**0.94**	**285**	P	**Pn**	**08 26 31.9**	**+0.1**
EVR				S	**Sn**	**08 26 45.8**	**+0.6**
ATHU	**Athens Univers**	**0.95**	**138**	P	**Pb**	**08 26 30.6**	**-0.6**
ATHU				S	**Sn**	**08 26 45.3**	**0.0**
ATHU	**Athens Univers**	**0.95**	**138**	P	**Pb**	**08 26 30.6**	**-0.6**
ATHU				S	**Sn**	**08 26 45.3**	**0.0**
NAIG	**Nisos Aigina**	**1.00**	**156**	*e*PN	**Pb**	**08 26 31.7**	**-0.3**
NAIG	**Nisos Aigina**	**1.00**	**156**	*e*Pn	**Pb**	**08 26 31.7**	**-0.3**
THL	**Klokotos Trika**	**1.16**	**320**	P	**Pg**	**08 26 35.1**	**-0.1**
THL				S	**Sn**	**08 26 52.2**	**+1.8**
THL	**Klokotos Trika**	**1.16**	**320**	*e*PN	**Pb**	**08 26 34.4**	**-0.3**
THL	**Klokotos Trika**	**1.16**	**320**	*e*Pn	**Pb**	**08 26 34.4**	**-0.3**
THL	**Klokotos Trika**	**1.16**	**320**	P	**Pg**	**08 26 35.1**	**-0.1**
THL				S	**Sn**	**08 26 52.2**	**+1.8**
DID	**Didima**	**1.18**	**170**	P	**Pb**	**08 26 34.9**	**-0.1**
DID				S	**Sg**	**08 26 52.0**	**+1.0**
DID	**Didima**	**1.18**	**170**	*e*PN	**Pn**	**08 26 35.0**	**-0.1**
DID	**Didima**	**1.18**	**170**	*e*Pn	**Pn**	**08 26 35.0**	**-0.1**
DID				S	**Sg**	**08 26 52.0**	**+1.0**
RLS	**Riolos of Patr**	**1.33**	**243**	*e*PN	**Pg**	**08 26 38.2**	**-0.2**
RLS	**Riolos of Patr**	**1.33**	**243**	*e*Pn	**Pg**	**08 26 38.2**	**-0.2**
VLX	**Vlachokerasia**	**1.38**	**200**	P	**Pb**	**08 26 38.5**	**-0.1**
VLX				S	**Sg**	**08 26 58.1**	**+0.7**
VLX	**Vlachokerasia**	**1.38**	**200**	*e*PN	**Pb**	**08 26 38.7**	**+0.1**
VLX				*e*SN	**Sg**	**08 26 57.2**	**-0.2**
VLX	**Vlachokerasia**	**1.38**	**200**	P	**Pb**	**08 26 38.5**	**-0.1**
VLX				*e*Sn	**Sg**	**08 26 57.2**	**-0.2**
VLX				S	**Sg**	**08 26 58.1**	**+0.7**
ITM	**Ithomi**	**1.71**	**209**	P	**Pb**	**08 26 44.2**	**+0.2**
ITM				S	**Sb**	**08 27 05.4**	**0.0**
ITM	**Ithomi**	**1.71**	**209**	P	**Pb**	**08 26 44.2**	**+0.2**
ITM				S	**Sb**	**08 27 05.4**	**0.0**
VLI	**Veliai**	**1.95**	**181**	*e*PN	**Pn**	**08 26 45.8**	**+0.2**
VLI	**Veliai**	**1.95**	**181**	*e*Pn	**Pn**	**08 26 45.8**	**+0.2**
PYL	**PYLOS**	**2.02**	**209**	*e*PB	**Pb**	**08 26 48.2**	**-1.2**
PYL	**PYLOS**	**2.02**	**209**	*e*Pb	**Pb**	**08 26 48.2**	**-1.2**
KYTH	**Kithira**	**2.39**	**179**	P	**Pn**	**08 26 52.9**	**+1.3**
KYTH	**Kithira**	**2.39**	**179**	*e*PB	**Pn**	**08 26 53.0**	**+1.3**
KYTH	**Kithira**	**2.39**	**179**	P	**Pn**	**08 26 52.9**	**+1.3**

*ATH **18** 08:30:57.4, 38.°76N×23.°04E, h13km±1km, MD3.0/6*
*ISCJB **18** 08:30:59.4±0.4, 38.°68N±0.°03×22.°98E±0.°04, h11km±2km, Error ellipse: s-maj=5.8km s-min=3.6km az=137.1*
*THE **18** 08:30:59.4, 38.°68N×22.°98E, h12km±1km, ML2.5/2, Error ellipse: s-maj=1.9km s-min=0.6km az=77.0*
*CSEM **18** 08:30:59.0±0.1, 38.°67N×22.°98E, h12km, ML2.5/2, Error ellipse: s-maj=3.9km s-min=2.3km az=134.0*

ISC 18 08:30:58.3±0.8, 38.°68N±0.°03×22.°98E±0.°03, h16km±4km, n32, σ1§66/61, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAL	**Atalanti**	**0.04**	**76**	P	**Pg**	**08 31 01.6**	**+0.3**
ATAL				S	**Sg**	**08 31 03.0**	**-0.3**
ATAL	**Atalanti**	**0.04**	**76**	P	**Pg**	**08 31 01.6**	**+0.3**
ATAL				S	**Sg**	**08 31 03.0**	**-0.3**
LKR	**Lokris**	**0.04**	**149**	*e*PG	**Pg**	**08 31 01.5**	**+0.2**
LKR				*e*SG	**Sg**	**08 31 02.8**	**-0.4**
LKR	**Lokris**	**0.04**	**149**	*e*Pg	**Pg**	**08 31 01.5**	**+0.2**
LKR				*e*Sg	**Sg**	**08 31 02.8**	**-0.4**
AXAR	**Agios Charalam**	**0.26**	**289**	P	**Pb**	**08 31 05.0**	**+0.4**
AXAR				S	**Sb**	**08 31 09.7**	**+0.9**
AXAR	**Agios Charalam**	**0.26**	**289**	P	**Pb**	**08 31 05.0**	**+0.4**
AXAR				S	**Sb**	**08 31 09.7**	**+0.9**
SMIA	**Simia**	**0.27**	**43**	P	**Pb**	**08 31 05.3**	**+0.6**
SMIA				S	**Sb**	**08 31 09.7**	**+0.6**
SMIA	**Simia**	**0.27**	**43**	P	**Pb**	**08 31 05.3**	**+0.6**
SMIA				S	**Sb**	**08 31 09.7**	**+0.6**
DSF	**Desfina**	**0.44**	**232**	P	**Pb**	**08 31 07.3**	**-0.4**
DSF				S	**Sb**	**08 31 14.3**	**+0.2**
DSF	**Desfina**	**0.44**	**232**	P	**Pb**	**08 31 07.3**	**-0.4**
DSF				S	**Sb**	**08 31 14.3**	**+0.2**
AGG	**Agios Georgios**	**0.61**	**304**	P	**Pn**	**08 31 11.3**	**-0.9**
AGG				S	**Sb**	**08 31 19.1**	**+0.3**
AGG	**Agios Georgios**	**0.61**	**304**	P	**Pn**	**08 31 11.3**	**-0.9**
AGG				S	**Sb**	**08 31 19.1**	**+0.3**
LTK	**Loutraki**	**0.66**	**181**	P	**Pb**	**08 31 11.5**	**+0.2**
LTK				S	**Sn**	**08 31 21.6**	**-1.4**
LTK	**Loutraki**	**0.66**	**181**	*e*PB	**Pb**	**08 31 11.6**	**+0.2**
LTK				*e*SB	**Sn**	**08 31 21.6**	**-1.4**
LTK	**Loutraki**	**0.66**	**181**	*e*Pb	**Pb**	**08 31 11.6**	**+0.2**
LTK				S	**Sn**	**08 31 21.6**	**-1.4**
XOR	**Xorichti**	**0.70**	**14**	P	**Pn**	**08 31 13.4**	**-0.2**
XOR				S	**Sn**	**08 31 23.0**	**-1.1**
XOR	**Xorichti**	**0.70**	**14**	P	**Pn**	**08 31 13.4**	**-0.2**
XOR				S	**Sn**	**08 31 23.0**	**-1.1**
KALE	**Kalithea**	**0.72**	**246**	P	**Pb**	**08 31 12.6**	**+0.2**
KALE	**Kalithea**	**0.72**	**246**	*e*PB	**Pb**	**08 31 12.6**	**+0.2**
KALE				*e*SB	**Sn**	**08 31 23.7**	**-0.7**
KALE	**Kalithea**	**0.72**	**246**	*e*Pb	**Pb**	**08 31 12.6**	**+0.2**
KALE				*e*Sb	**Sn**	**08 31 23.7**	**-0.7**
TRIZ	**Trizonia**	**0.78**	**246**	P	**Pb**	**08 31 13.3**	**0.0**
TRIZ				S	**Sn**	**08 31 25.6**	**-0.2**
TRIZ	**Trizonia**	**0.78**	**246**	*e*PG	**Pb**	**08 31 13.3**	**0.0**
TRIZ				*e*SB	**Sn**	**08 31 25.3**	**-0.5**
TRIZ	**Trizonia**	**0.78**	**246**	P	**Pb**	**08 31 13.3**	**0.0**
TRIZ				*e*Sb	**Sn**	**08 31 25.3**	**-0.5**
AOS	**Alonnisos**	**0.86**	**55**	P	**Pn**	**08 31 15.5**	**-0.1**
AOS				S	**Sn**	**08 31 27.2**	**-0.6**
AOS	**Alonnisos**	**0.86**	**55**	P	**Pn**	**08 31 15.5**	**-0.1**
AOS				S	**Sn**	**08 31 27.2**	**-0.6**
EFP	**Efpalio**	**0.88**	**253**	P	**Pn**	**08 31 15.3**	**-0.6**
EFP				S	**Sn**	**08 31 29.2**	**+0.9**
EFP	**Efpalio**	**0.88**	**253**	*e*PB	**Pn**	**08 31 15.3**	**-0.6**
EFP	**Efpalio**	**0.88**	**253**	P	**Pn**	**08 31 15.3**	**-0.6**
EFP				S	**Sn**	**08 31 29.2**	**+0.9**
GUR	**Goura**	**0.90**	**214**	P	**Pn**	**08 31 16.8**	**+0.5**
GUR				S	**Sn**	**08 31 30.2**	**+1.3**
GUR	**Goura**	**0.90**	**214**	*e*PB	**Pn**	**08 31 16.1**	**-0.2**
GUR				*e*SB	**Sn**	**08 31 30.1**	**+1.2**
GUR	**Goura**	**0.90**	**214**	*e*Pb	**Pn**	**08 31 16.1**	**-0.2**
GUR	**Goura**	**0.90**	**214**	P	**Pn**	**08 31 16.8**	**+0.5**
GUR				*e*Sb	**Sn**	**08 31 30.1**	**+1.2**

*IDC **18** 08:36:52.2±1.2, 24.°15S×66.°75W, h183km±13km, mb2.9/1, mb1 2.9/7, mb1mx2.9/21, mbtmp2.8/7, Error ellipse: s-maj=20.3km s-min=15.9km az=74.0*
*GUC **18** 08:36:54.0±0.6, 23.°94S×67.°36W, h236km±11km, ML4.3*

ISC 18 08:36:55.7±1.5, 23.°99S±0.°08×67.°3W±0.°2, h232km±15km, n20, σ1§05/26, 3C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.99**	**313**	⇑*i*P	**Pn**	**08 37 36.7**	**-0.2**
LVC				*e*S	**S**	**08 38 09.2**	**+0.2**
LVC	**Limon Verde**	**1.99**	**313**	P	**Pn**	**08 37 36.9**	**-0.1**
	8.0nm,0.3s,baz=129,slow=6.1,SNR=132						
LVC				S	**S**	**08 38 09.3**	**+0.2**
	35nm,0.3s,baz=294,slow=20,SNR=60						
PB04	**Plate Boundary**	**2.62**	**310**	*e*P	Pn	08 37 48.7	+5.7
PB04				*i* S	S	08 38 29.7	+10
PB04				AML	AML	08 38 33.7	
	comp=N,196nm,0.6s						
CEN1	**Los Morros**	**2.69**	**282**	*e*P	**Pn**	**08 37 43.6**	**-0.3**
CEN1				*i* S	**S**	**08 38 22.0**	**+0.4**
CEN1				AML	AML	08 38 24.6	
	comp=N,336nm,0.5s						
PB09	**Plate Boundary**	**2.80**	**321**	⇑*i*P	**Pn**	**08 37 46.0**	**+0.8**
PB09				*e*S	**S**	**08 38 25.2**	**+1.4**
PB09				AML	AML	08 38 31.6	
	comp=N,676nm,0.5s						
ANCH	**Antofagasta**	**2.83**	**275**	⇓*i*P	**Pn**	**08 37 45.5**	**+0.3**
ANCH				*i* S	**S**	**08 38 24.1**	**+0.1**
ANCH				AML	AML	08 38 27.5	
	comp=E,439nm,0.5s						
PB01	**Plate Boundary**	**3.54**	**325**	⇑*i*P	**Pn**	**08 37 53.4**	**0.0**
PB01				*i* S	**S**	**08 38 38.7**	**-0.1**
PB01				AML	AML	08 38 40.6	
	comp=E,157nm,0.2s						
HMBC	**Humberstone**	**4.38**	**327**	*e*P	**Pn**	**08 38 02.6**	**-0.9**
HMBC				*e*S	**S**	**08 38 56.5**	**-0.7**
PSGC	**Pisagua**	**5.08**	**329**	*e*P	**Pn**	**08 38 11.2**	**-0.9**
PSGC				*i* S	**S**	**08 39 11.6**	**-1.0**
MNMC	**Minimini**	**5.27**	**336**	*e*P	**Pn**	**08 38 15.1**	**+0.5**
MNMC				*e*S	**S**	**08 39 17.2**	**0.0**
CFAA	**Coronel Fontan**	**7.63**	**186**	P	Pn	08 38 39.0	-5.2
	comp=E,0.1nm,0.3s,baz=11,slow=10,SNR=15						
CFAA				S	S	08 39 58.4	-13
	comp=E,0.3nm,0.3s,baz=285,slow=22,SNR=18						
LPAZ	**La Paz**	**7.69**	**354**	P	**Pn**	**08 38 47.2**	**+1.4**
	comp=E,0.4nm,0.3s,baz=139,slow=9.3,SNR=13						
LPAZ				S	**S**	**08 40 13.1**	**-0.7**
	comp=E,0.1nm,0.3s,baz=48,slow=18,SNR=3.5						
CPUP	**Villa Florida**	**9.36**	**107**	P	Pn	08 38 55.9	-10
	comp=E,0.2nm,0.3s,baz=278,slow=15,SNR=2.4						
SIV	**San Ignacio**	**9.89**	**38**	P	Pn	08 39 08.0	-5.3
	comp=E,0.1nm,0.3s,baz=224,slow=12,SNR=3.7						
PLCA	**Paso Flores**	**16.92**	**188**	P	**P**	**08 40 36.3**	**-1.4**
	comp=E,0.2nm,0.3s,baz=4.1,slow=14,SNR=2.3						
TORD	**Torodi Ar. Bea**	**76.85**	**69**	P	**P**	**08 48 21.7**	**-0.9**
	comp=E,0.2nm,0.5s,baz=246,slow=5.8,SNR=4.3						
ASAR	**Alice Springs**	**128.34**	**205**	PKP	**PKPdf**	**08 55 37.5**	**+2.1**
	comp=E,0.2nm,0.6s,baz=95,slow=2.2,SNR=4.0						
WRA	**Warramunga Arr**	**131.50**	**208**	PKP	**PKPdf**	**08 55 44.2**	**+2.7**
	comp=E,0.1nm,0.4s,baz=155,slow=1.7,SNR=7.8						
ZALV	**Zalesovo Beam**	**143.52**	**28**	PKP	**PKPdf**	**08 56 02.1**	**-0.3**
	comp=E,0.6nm,0.5s,baz=298,slow=3.1,SNR=3.0						
MKAR	**Makanchi Array**	**146.71**	**39**	PKPbc	**PKPab**	**08 56 11.1**	**-0.8**
	comp=E,0.6nm,0.6s,baz=337,slow=3.0,SNR=7.4						

IDC 18 08:52:26.4±2.4, 4.°25S×135.°45E, h0km, mb3.1/1, mb1 3.4/3, mb1mx3.3/16, mbtmp3.2/3, ML3.1/2, 1C, Error ellipse: s-maj=90.6km s-min=28.5km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DMPH	**Davao City--Mi**	**15.01**	**319**	⇑*e*P	P	08 56 07.7	+2.1
WRA	**Warramunga Arr**	**15.63**	**184**	Pn	Pn	08 56 06.7	-1.6
	0.1nm,0.3s,baz=6.7,slow=13,SNR=8.5						
WRA				Sn	Sn	08 59 01.3	-1.0
	0.1nm,0.3s,baz=358,slow=23,SNR=3.6						
ASAR	**Alice Springs**	**19.36**	**184**	P	Pn	08 56 54.9	+0.1
	0.1nm,0.3s,baz=9.3,slow=12,SNR=6.0						
MKAR	**Makanchi Array**	**69.06**	**324**	P	P	09 03 34.1	-0.1
	0.2nm,0.7s,baz=111,slow=8.2,SNR=2.3						

IDC 18 08:53:34.5±9.7, 18.°23S×174.°43W, h174km±41km, mb3.2/3, mb1 3.5/4, mb1mx3.2/20, mbtmp3.2/4, Error ellipse: s-maj=304.0km s-min=27.3km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**4.99**	**31**	P	Pn	08 54 48.3	0.0
	1.5nm,0.3s,baz=195,slow=20,SNR=2.9						
AFI				S	Sn	08 55 38.1	-8.2
	4.4nm,0.3s,baz=45,slow=20,SNR=7.9						
WRA	**Warramunga Arr**	**48.30**	**259**	P	P	09 01 58.0	-0.6
	0.3nm,0.3s,baz=97,slow=6.9,SNR=9.3						
ASAR	**Alice Springs**	**48.35**	**254**	P	P	09 01 59.1	+0.2
	2.7nm,0.7s,baz=91,slow=7.8,SNR=35						
ILAR	**Eielson Array**	**85.39**	**11**	P	P	09 05 51.7	0.0
	0.2nm,0.6s,baz=225,slow=6.1,SNR=4.9						

GUC 18 09:01:32.4±0.5, 19.°53S×69.°79W, h51km±2km, ML4.0, 4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**0.32**	**258**	⇓*i*P	Pn	09 01 42.1	+0.1
PSGC				*i* S	Sn	09 01 49.4	+0.5
PSGC				AML	AML	09 01 50.0	
	comp=N,7μm,0.3s						
MNMC	**Minimini**	**0.44**	**24**	⇓*i*P	Pn	09 01 43.5	+0.1
MNMC				*i* S	Sn	09 01 51.9	+0.6
MNMC				AML	AML	09 01 54.5	
	comp=E,17μm,0.2s						
ARCH	**Arica**	**1.14**	**335**	⇓*i*P	Pn	09 01 52.6	+0.5
ARCH				*i* S	Sn	09 02 07.5	+0.9
ARCH				AML	AML	09 02 13.5	
	comp=N,5μm,0.3s						
PB09	**Plate Boundary**	**2.31**	**167**	⇓*i*P	Pn	09 02 09.6	+1.3
PB09				*i* S	Sn	09 02 37.2	+1.5
PB09				AML	AML	09 02 56.1	
	comp=E,3μm,0.7s						
PB04	**Plate Boundary**	**2.74**	**174**	*e*P	Pn	09 02 16.3	+2.4
PB04				AML	AML	09 03 07.3	
	comp=N,960nm,0.6s						
LVC	**Limon Verde**	**3.17**	**165**	*e*P	Pn	09 02 21.9	+1.7
LVC				*e*S	Sn	09 02 59.0	+1.9

*ISCJB **18** 09:08:15.0±0.7, 23.°68S±0.°06×180.°0W±0.°1, h518km, mb3.9/12, Error ellipse: s-maj=13.2km s-min=7.3km az=170.4*
*IDC **18** 09:08:14.1±1.8, 23.°51S×179.°84W, h498km±19km, mb3.4/11, mb1 3.7/13, mb1mx3.6/21, mbtmp3.5/13, Error ellipse: s-maj=16.1km s-min=14.7km az=60.0*
*AUST **18** 09:08:16.0±1.4, 23.°52S×179.°13W, h594km, Error ellipse: s-maj=2.1km s-min=1.3km az=314.0*

ISC 18 09:08:16.3±0.6, 23.°80S±0.°08×179.°93W±0.°09, h518km, n38, σ1§19/44, mb4.1/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**10.43**	**65**	S	**S**	**09 12 36.2**	**+0.9**
	baz=9.7,SNR=14						
AFI	**Afiamalu**	**12.50**	**40**	P	P	09 10 53.4	-6.8
	2.3nm,0.3s,baz=179,slow=12,SNR=6.2						
AFI				S	S	09 13 00.9	-14
	3.0nm,0.3s,baz=218,slow=12,SNR=7.6						
URZ	**Urewera**	**14.63**	**189**	*e*PN	**P**	**09 11 20.8**	**-1.4**
URZ				SN	**S**	**09 13 54.0**	**-1.6**
URZ	**Urewera**	**14.63**	**189**	P	**P**	**09 11 22.1**	**-0.1**
	5.1nm,0.3s,baz=8.1,slow=4.8,SNR=21						
URZ				S	**S**	**09 13 54.4**	**-1.1**
	1.0nm,0.3s,baz=186,slow=23,SNR=14						
BKZ	**Black Stump Fm**	**15.62**	**190**	PN	**P**	**09 11 31.0**	**-1.5**
BKZ				SN	**S**	**09 14 11.0**	**-3.1**
NNZ	**Nelson**	**18.25**	**196**	PN	**P**	**09 11 58.2**	**+0.4**
NNZ				SN	**S**	**09 14 56.6**	**-1.6**
THZ	**Tophouse**	**18.88**	**197**	PN	**P**	**09 12 04.5**	**+0.9**
KHZ	**Kahutara**	**19.34**	**195**	PN	**P**	**09 12 07.9**	**+0.2**
LTZ	**Lake Taylor**	**20.00**	**197**	PN	**P**	**09 12 14.5**	**+0.7**
RPZ	**Rata Peaks**	**21.20**	**198**	P	**P**	**09 12 25.2**	**+0.5**
	8.3nm,0.6s,baz=358,slow=6.0,SNR=4.6						
EIDS	**Eidsvold**	**26.39**	**261**	P	**P**	**09 13 12.0**	**+0.9**
	baz=27,SNR=4.4						
CMSA	**Cobar Meteorol**	**31.31**	**248**	P	**P**	**09 13 54.9**	**+1.1**
	baz=32,SNR=10						
CTA	**Charters Tower**	**31.54**	**270**	P	**P**	**09 13 56.5**	**+0.5**
	26nm,0.4s,baz=95,slow=11,SNR=52						

QLP	**Quilpie**	**32.48**	**257**	P	**P**	**09 14 04.6**	**+0.7**
	baz=33,SNR=9.0						
TOO	**Toolangi**	**32.55**	**237**	P	**P**	**09 14 06.0**	**+1.6**
	baz=33,SNR=4.7						
MTSU	**Mount Surprise**	**33.80**	**273**	P	**P**	**09 14 15.6**	**+0.4**
	baz=34,SNR=15						
STKA	**Stephens Creek**	**34.82**	**248**	P	**P**	**09 14 24.5**	**+1.0**
	3.9nm,0.6s,baz=91,slow=11,SNR=18						
STKA	**Stephens Creek**	**34.82**	**248**	P	**P**	**09 14 24.6**	**+1.0**
	baz=36,SNR=14						
STKA				S	S	09 18 54.5	-23
	baz=36,SNR=7.2						
BBOO	**Buckleboo**	**39.54**	**247**	P	**P**	**09 15 02.3**	**0.0**
	baz=40,SNR=12						
ASAR	**Alice Springs**	**42.11**	**260**	P	**P**	**09 15 22.9**	**-0.1**
	7.9nm,0.6s,baz=96,slow=7.3,SNR=101						
ASAR				ScP	**ScP**	**09 20 07.5**	**+0.7**
	0.7nm,1.0s,baz=101,slow=3.8,SNR=4.9						
WRA	**Warramunga Arr**	**42.48**	**266**	P	**P**	**09 15 25.0**	**-0.9**
	9.4nm,0.3s,baz=92,slow=8.5,SNR=669						
WRA				ScP	**ScP**	**09 20 09.3**	**+1.0**
	0.7nm,0.8s,baz=99,slow=3.7,SNR=4.0						
KDU	**Kakadu**	**46.34**	**275**	P	**P**	**09 15 54.4**	**-1.4**
	baz=47,SNR=11						
FORT	**Forrest**	**46.41**	**249**	P	**P**	**09 15 55.6**	**-0.4**
	baz=47,SNR=22						
MTN	**Manton Dam**	**47.51**	**274**	P	**P**	**09 16 03.3**	**-1.3**
	baz=48,SNR=7.8						
KNRA	**Kununurra**	**48.75**	**270**	P	**P**	**09 16 13.2**	**-0.6**
	baz=50,SNR=11						
FITZ	**Fitzroy Crossi**	**50.90**	**266**	P	**P**	**09 16 29.5**	**-0.1**
	baz=52,SNR=10.0						
VNDA	**Vanda**	**54.48**	**185**	P	**P**	**09 16 56.5**	**+2.3**
	1.0nm,0.6s,baz=1.6,slow=6.2,SNR=11						
MEEK	**Meekatharra**	**55.20**	**253**	P	**P**	**09 16 59.7**	**-0.5**
	baz=56,SNR=5.3						
MORW	**Morawa**	**56.97**	**250**	P	**P**	**09 17 12.1**	**-0.3**
	baz=58,SNR=7.1						
QSPA	**South Pole Qui**	**66.28**	**180**	P	**P**	**09 18 14.2**	**+1.5**
	6.6nm,0.7s,baz=11,slow=1.0,SNR=35						
KSRS	**Korea Array**	**78.21**	**320**	P	**P**	**09 19 21.3**	**-0.8**
	0.6nm,0.6s,baz=138,slow=5.7,SNR=3.9						
USRK	**Ussuriysk Arra**	**80.71**	**327**	P	**P**	**09 19 33.2**	**-1.8**
	0.9nm,0.6s,baz=132,slow=5.7,SNR=3.3						
NVAR	**Mina Array Bea**	**84.64**	**44**	P	**P**	**09 19 53.9**	**-1.5**
	0.2nm,0.5s,baz=231,slow=9.2,SNR=2.7						
CMAR	**Chiang Mai Arr**	**89.55**	**290**	P	**P**	**09 20 19.4**	**+0.7**
	1.5nm,0.8s,baz=153,slow=3.7,SNR=5.8						
TXAR	**Lajitas Array**	**90.33**	**58**	P	**P**	**09 20 21.7**	**-0.5**
	0.5nm,0.7s,baz=213,slow=6.8,SNR=9.8						
AKASG	**Malin Array Be**	**144.92**	**327**	PKP	**PKPdf**	**09 26 52.0**	**-1.9**
	2.8nm,0.5s,baz=42,slow=3.8,SNR=9.5						
BRTR	**Keskin Array B**	**147.57**	**307**	PKPbc	**PKPdf**	**09 27 00.2**	**+1.3**
	0.8nm,0.5s,baz=150,slow=5.0,SNR=4.3						
BRTR				PKPab	**PKiKP**	**09 27 05.4**	**+1.4**
	2.1nm,0.6s,baz=93,slow=3.6,SNR=8.5						
TORD	**Torodi Ar. Bea**	**169.29**	**189**	PKPab	**PKPab**	**09 28 39.9**	**-0.6**
	0.8nm,0.7s,baz=164,slow=4.9,SNR=7.9						

*IDC **18** 09:41:38.7±6.1, 36.°72N×71.°49E, h81km±54km, mb3.2/5, mb1 3.6/9, mb1mx3.4/29, mbtmp3.6/9, ML4.1/4, Error ellipse: s-maj=46.7km s-min=24.4km az=30.0*
*ISCJB **18** 09:41:40.5±0.4, 37.°02N±0.°03×71.°37E±0.°08, h106km, mb3.4/5, Error ellipse: s-maj=9.3km s-min=4.0km az=178.2*
*NNC **18** 09:41:45.4±1.1, 37.°26N×71.°36E, h153km±11km, mb3.4, mpv4.3, Error ellipse: s-maj=9.0km s-min=5.4km az=10.0*
*NDI **18** 09:43:54.2±2.2, 32.°09N×75.°66E, h10km, ML2.5*

ISC 18 09:41:41.9±0.7, 37.°01N±0.°05×71.°45E±0.°09, h106km, n41, σ1§42/39, mb3.3/5, 5C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.20**	**173**	P	**Pn**	**09 42 31.5**	**+0.9**
CEP				S	**Sn**	**09 43 09.

*ATH **18** 09:48:06.8, 39°.38N×28°.02E, h10km±4km, MD3.5/5*
*ISCJB **18** 09:48:08.1±0.4, 39°.29N±0°.02×27°.94E±0°.03, h4km±3km, Error ellipse: s-maj=3.4km s-min=3.0km az=17.4*
*CSEM **18** 09:48:08.6±0.1, 39°.29N×27°.94E, h8km, MD3.2, Error ellipse: s-maj=2.3km s-min=2.2km az=122.0*
*DDA **18** 09:48:08.1, 39°.29N×27°.94E, h7km, ML3.2*
*ISK **18** 09:48:08.0, 39°.30N×27°.94E, h8km, MD3.2*

ISC 18 09:48:08.7±0.9, 39°.30N±0°.02×27°.94E±0°.02, h13km±9km, n91, σ0969/109, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALB	**Balikesir**	**0.34**	**353**	PG	**Pg**	**09 48 15.6**	**-0.1**
BALB				eSG	**Sg**	**09 48 21.2**	**+0.8**
BALB	**Balikesir**	**0.34**	**353**	*i* Pg	**Pg**	**09 48 15.6**	**-0.1**
BALB				eSg	**Sg**	**09 48 21.2**	**+0.8**
AKHS	**Akhisar**	**0.43**	**193**	*i* Pg	**Pg**	**09 48 16.4**	**-0.8**
AKHS				*i* S	**Sg**	**09 48 23.4**	**+0.3**
BALY	**Balya**	**0.50**	**331**	*i* Pg	**Pg**	**09 48 18.2**	**-0.4**
BALY				*i* S	**Sg**	**09 48 25.8**	**+0.4**
DURS	**Dursunbey**	**0.52**	**54**	*i* Pg	**Pg**	**09 48 18.1**	**-0.7**
DURS				*i* S	**Sg**	**09 48 26.2**	**+0.4**
DST	**Dursunbey**	**0.61**	**60**	PG	**Pg**	**09 48 19.9**	**-0.8**
DST				eSG	**Sg**	**09 48 29.5**	**+0.7**
DST	**Dursunbey**	**0.61**	**60**	*i* Pg	**Pg**	**09 48 19.9**	**-0.8**
DST				eSg	**Sg**	**09 48 29.5**	**+0.7**
DEMI	**Demirci**	**0.66**	**113**	*i* Pg	**Pg**	**09 48 20.9**	**-0.7**
DEMI				*i* S	**Sg**	**09 48 30.5**	**+0.2**
GONE	**Gonen-Balikesi**	**0.77**	**346**	PG	**Pg**	**09 48 23.0**	**-0.7**
GONE				eSG	**Sb**	**09 48 34.4**	**0.0**
GONE	**Gonen-Balikesi**	**0.77**	**346**	*i* Pg	**Pg**	**09 48 23.0**	**-0.7**
GONE				eSg	**Sb**	**09 48 34.4**	**0.0**
MANT	**Manisa**	**0.94**	**149**	*i* P	**Pg**	**09 48 26.3**	**-0.7**
MANT	**Manisa**	**0.94**	**149**	*i* P	**Pg**	**09 48 26.3**	**-0.7**
AYVA	**Ayvalik**	**0.97**	**271**	*e*P	**Pn**	**09 48 27.9**	**0.0**
AYVA	**Ayvalik**	**0.97**	**271**	*e*P	**Pn**	**09 48 27.9**	**0.0**
KULA	**Kula-Manisa**	**0.97**	**144**	PG	**Pg**	**09 48 26.6**	**-0.8**
KULA	**Kula-Manisa**	**0.97**	**144**	*i* Pg	**Pg**	**09 48 26.6**	**-0.8**
KCTX	**Karacabey (Bur**	**1.02**	**18**	PG	**Pb**	**09 48 27.6**	**-0.6**
KCTX				eSG	**Sg**	**09 48 42.4**	**+0.7**
KCTX	**Karacabey (Bur**	**1.02**	**18**	*i* Pg	**Pb**	**09 48 27.6**	**-0.6**
KCTX				eSg	**Sg**	**09 48 42.4**	**+0.7**
IZM	**Izmir**	**1.04**	**210**	*e*PG	**Pb**	**09 48 28.4**	**-0.2**
IZM				eSG	**Sn**	**09 48 43.3**	**-0.2**
IZM	**Izmir**	**1.04**	**210**	*e*Pg	**Pb**	**09 48 28.4**	**-0.2**
IZM				eSg	**Sn**	**09 48 43.3**	**-0.2**
ORLT	**Orhaneli**	**1.05**	**45**	*e*PG	**Pb**	**09 48 28.3**	**-0.5**
ORLT	**Orhaneli**	**1.05**	**45**	*e*Pg	**Pb**	**09 48 28.3**	**-0.5**
BNT	**Bandirma**	**1.06**	**359**	*e*PG	**Pb**	**09 48 28.2**	**-0.6**
BNT	**Bandirma**	**1.06**	**359**	*e*Pg	**Pb**	**09 48 28.3**	**-0.6**
BLCB	**Balcova**	**1.15**	**218**	*e*PN	**Pg**	**09 48 30.7**	**-0.1**
BLCB	**Balcova**	**1.15**	**218**	*e*Pn	**Pg**	**09 48 30.7**	**-0.1**
TVSB	**Tavsanli**	**1.19**	**82**	*e*PN	**Pg**	**09 48 31.8**	**+0.1**
TVSB				eSN	**Sg**	**09 48 47.4**	**+0.2**
TVSB	**Tavsanli**	**1.19**	**82**	*e*Pn	**Pg**	**09 48 31.8**	**+0.1**
TVSB				eSn	**Sg**	**09 48 47.4**	**+0.2**
KRBG	**Karabiga-Canak**	**1.20**	**336**	*e*PN	**Pn**	**09 48 30.8**	**-0.4**
KRBG	**Karabiga-Canak**	**1.20**	**336**	*e*Pn	**Pn**	**09 48 30.8**	**-0.4**
GDZ	**Gediz**	**1.22**	**99**	*i* P	**Pn**	**09 48 31.3**	**-0.3**
GDZ	**Gediz**	**1.22**	**99**	*i* P	**Pn**	**09 48 31.3**	**-0.3**
ULDT	**Uludag**	**1.25**	**47**	*i* P	**Pn**	**09 48 32.2**	**+0.1**
ULDT	**Uludag**	**1.25**	**47**	*i* P	**Pn**	**09 48 32.2**	**+0.1**
PRK	**Paraskevi**	**1.29**	**268**	*e*PB	**Pn**	**09 48 32.4**	**0.0**
PRK	**Paraskevi**	**1.29**	**268**	*e*Pb	**Pn**	**09 48 32.4**	**0.0**
MDNY	**Mudanya-Bursa**	**1.29**	**34**	*e*PN	**Pn**	**09 48 32.4**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.29**	**34**	*e*Pn	**Pn**	**09 48 32.4**	**-0.1**
EZN	**Ezine**	**1.35**	**293**	*e*PN	**Pb**	**09 48 33.9**	**0.0**
EZN	**Ezine**	**1.35**	**293**	*e*Pn	**Pb**	**09 48 33.9**	**0.0**
LPK	**Lapseki**	**1.40**	**320**	*e*PN	**Pn**	**09 48 34.2**	**+0.2**
LPK	**Lapseki**	**1.40**	**320**	*e*Pn	**Pn**	**09 48 34.2**	**+0.2**
ARMT	**Armutlu**	**1.45**	**29**	*e*PN	**Pn**	**09 48 34.9**	**+0.2**
ARMT	**Armutlu**	**1.45**	**29**	*e*Pn	**Pn**	**09 48 34.9**	**+0.2**
GEMT	**Gemlik**	**1.49**	**40**	*e*PN	**Pn**	**09 48 35.5**	**+0.3**
GEMT	**Gemlik**	**1.49**	**40**	*e*Pn	**Pn**	**09 48 35.5**	**+0.3**
BOZC	**Bozcaada**	**1.55**	**291**	*e*P	**Pn**	**09 48 36.5**	**+0.5**
MFT	**Murefte**	**1.57**	**342**	*e*PN	**Pn**	**09 48 36.4**	**+0.1**
MFT	**Murefte**	**1.57**	**342**	*e*Pn	**Pn**	**09 48 36.4**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.57**	**315**	*e*PN	**Pb**	**09 48 37.0**	**-0.6**
GELI	**Tayfur-Gelibol**	**1.57**	**315**	*e*Pn	**Pb**	**09 48 37.0**	**-0.6**
YLV	**Yalova**	**1.68**	**41**	*e*PN	**Pn**	**09 48 38.5**	**+0.6**
YLV	**Yalova**	**1.68**	**41**	*e*Pn	**Pn**	**09 48 38.5**	**+0.6**
ALT	**Altintas**	**1.71**	**98**	*e*PN	**Pn**	**09 48 38.9**	**+0.7**
ALT	**Altintas**	**1.71**	**98**	*e*Pn	**Pn**	**09 48 38.9**	**+0.7**
CAVI	**Cavuskoy**	**1.73**	**58**	*e*PN	**Pb**	**09 48 39.5**	**-0.8**
CAVI	**Cavuskoy**	**1.73**	**58**	*e*Pn	**Pb**	**09 48 39.5**	**-0.8**
CHOS	**Chios island**	**1.73**	**239**	*e*PG	**Pb**	**09 48 40.8**	**+0.5**
CHOS				eSN	**Sg**	**09 49 04.8**	**+0.5**
CHOS	**Chios island**	**1.73**	**239**	*e*Pg	**Pb**	**09 48 40.8**	**+0.5**
CHOS				eSn	**Sg**	**09 49 04.8**	**+0.5**
ERIK	**Erikli-Kesan**	**1.75**	**322**	*e*PN	**Pb**	**09 48 39.9**	**-0.8**
ERIK	**Erikli-Kesan**	**1.75**	**322**	*e*Pn	**Pb**	**09 48 39.9**	**-0.8**
ADVT	**Abdulvahap**	**1.79**	**50**	*e*PN	**Pn**	**09 48 40.2**	**+0.9**
ADVT	**Abdulvahap**	**1.79**	**50**	*e*Pn	**Pn**	**09 48 40.2**	**+0.9**
SMG	**Samos**	**1.81**	**209**	*e*PN	**Pb**	**09 48 41.2**	**-0.4**
SMG	**Samos**	**1.81**	**209**	*e*Pn	**Pb**	**09 48 41.2**	**-0.4**
DNZL	**Cakiroluk**	**1.83**	**151**	*e*P	**Pn**	**09 48 39.9**	**-0.1**
DNZL	**Cakiroluk**	**1.83**	**151**	*e*P	**Pn**	**09 48 39.9**	**-0.1**
ISK	**Istanbul-Kandi**	**1.96**	**26**	*e*PN	**Pn**	**09 48 42.3**	**+0.6**
ISK	**Istanbul-Kandi**	**1.96**	**26**	*e*Pn	**Pn**	**09 48 42.3**	**+0.6**
ENEZ	**Enez**	**1.98**	**317**	*e*PN	**Pb**	**09 48 43.4**	**-1.3**
ENEZ	**Enez**	**1.98**	**317**	*e*Pn	**Pb**	**09 48 43.4**	**-1.3**
CTKS	**Kestanelik-??a**	**1.98**	**13**	*e*PN	**Pb**	**09 48 43.4**	**-1.2**
CTKS	**Kestanelik-??a**	**1.98**	**13**	*e*Pn	**Pb**	**09 48 43.4**	**-1.2**
BGKT	**Bogazkoy**	**1.99**	**19**	*e*PN	**Pn**	**09 48 42.8**	**+0.8**
BGKT	**Bogazkoy**	**1.99**	**19**	*e*Pn	**Pn**	**09 48 42.8**	**+0.8**
HRT	**Hereke**	**2.02**	**41**	*e*PN	**Pn**	**09 48 43.0**	**+0.5**
HRT	**Hereke**	**2.02**	**41**	*e*Pn	**Pn**	**09 48 43.0**	**+0.5**
ALN	**Alexandroupoli**	**2.16**	**318**	*e*PN	**Pn**	**09 48 45.0**	**+0.7**
ALN	**Alexandroupoli**	**2.16**	**318**	*e*Pn	**Pn**	**09 48 45.0**	**+0.7**
SHUT	**Suhut-Afyon**	**2.17**	**109**	*e*PN	**Pn**	**09 48 45.9**	**+1.2**
SHUT	**Suhut-Afyon**	**2.17**	**109**	*e*Pn	**Pn**	**09 48 45.9**	**+1.2**
SMTH	**Samothraki Isl**	**2.19**	**303**	*e*PN	**Pn**	**09 48 45.1**	**+0.3**
SMTH	**Samothraki Isl**	**2.19**	**303**	*e*Pn	**Pn**	**09 48 45.1**	**+0.3**
CTYL	**Yal??k??y-??at**	**2.19**	**7**	*e*PN	**Pn**	**09 48 46.4**	**+1.6**
CTYL	**Yal??k??y-??at**	**2.19**	**7**	*e*Pn	**Pn**	**09 48 46.4**	**+1.6**
GULT	**Gulveren**	**2.29**	**59**	*e*PN	**Pn**	**09 48 47.5**	**+1.3**
GULT	**Gulveren**	**2.29**	**59**	*e*Pn	**Pn**	**09 48 47.5**	**+1.3**
SVRH	**Sivrihisar-ESK**	**2.79**	**86**	*e*PN	**Pn**	**09 48 54.7**	**+1.7**
SVRH	**Sivrihisar-ESK**	**2.79**	**86**	*e*Pn	**Pn**	**09 48 54.7**	**+1.7**
KIZT	**Kizilcal**	**3.10**	**97**	*e*PN	**Pn**	**09 48 58.4**	**+1.0**
KIZT	**Kizilcal**	**3.10**	**97**	*e*Pn	**Pn**	**09 48 58.4**	**+1.0**

*ISCJB **18** 09:54:07.4±0.4, 6°.84S±0°.04×114°.48E±0°.04, h10km, mb3.9/7, Error ellipse: s-maj=5.8km s-min=5.0km az=163.9*
*IDC **18** 09:54:07.2±1.1, 6°.92S×114°.47E, h0km, mb3.9/7, mb1 4.1/9, mb1mx3.9/23, mbtmp3.9/9, ML3.7/2, Error ellipse: s-maj=26.9km s-min=16.2km az=44.0*
*AUST **18** 09:54:09.2±4.0, 7°.04S×114°.44E, h0km, Error ellipse: s-maj=1.2km s-min=0.8km az=6.0*
*DJA **18** 09:54:11.7±0.8, 7°.S±3°×11°.4E±°, h17km±11km, M4.2/5, mb4.8/5, mB4.8/1, MLv4.0/5, Mw(mB)4.1/1*

ISC 18 09:54:08.6±0.6, 6°.92S±0°.04×114°.47E±0°.05, h10km, n33, σ0996/34, mb3.9/7, Bali Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLJI	**Banyuglugur**	**1.20**	**227**	P	**Pg**	**09 54 30.7**	**-0.8**
SRBI	**Singaraja**	**1.37**	**148**	P	**Pb**	**09 54 33.7**	**-0.6**
SRBI				S	**Sg**	**09 54 52.9**	**+0.3**
JAGI	**Jajag, Banyuwa**	**1.57**	**192**	P	**Pb**	**09 54 36.6**	**-1.2**
JAGI				S	**Sb**	**09 54 57.2**	**-0.5**
JAGI	**Jajag, Banyuwa** baz=1.5,SNR=81	**1.57**	**192**	P	**Pb**	**09 54 36.6**	**-1.2**
JAGI				S	**Sg**	**09 54 57.7**	**-1.4**
	baz=1.5,SNR=7.6						
GMJI	**Gumukmas**	**1.69**	**217**	P	**Pn**	**09 54 38.1**	**0.0**
GMJI				S	**Sb**	**09 55 00.9**	**-0.1**
KHKI	**Kahang-Kahang**	**1.82**	**142**	P	**Pn**	**09 54 39.4**	**-0.6**
SJI	**Sawahan**	**2.80**	**253**	P	**Pn**	**09 54 54.0**	**+0.4**
BBKI	**Banjar Baru**	**3.46**	**6**	P	**Pg**	**09 55 12.7**	**-2.1**
SMRI	**Semarang**	**4.01**	**268**	P	**Pn**	**09 55 11.5**	**+1.4**
SMRI	**Semarang** baz=4.0,SNR=12	**4.01**	**268**	P	**Pn**	**09 55 11.3**	**+1.2**
UGM	**Wanagama** baz=4.0,SNR=12	**4.04**	**256**	P	**Pn**	**09 55 10.9**	**+0.4**
BJII	**Banjamegara**	**4.75**	**265**	P	**Pn**	**09 55 21.3**	**+1.0**
TGJI	**Tegal**	**5.32**	**270**	P	**Pn**	**09 55 28.3**	**+0.3**
	72nm,0.6s						
KAPI	**Kappang**	**5.58**	**70**	Pn	**Pn**	**09 55 32.0**	**+0.3**
	7.4nm,0.3s,baz=251,slow=7.8,SNR=31						
KAPI				Pg	Pb	09 55 49.9	+3.8
	7.2nm,0.3s,baz=250,slow=7.4,SNR=6.5						
KAPI				Lg	Lg	09 57 04.0	
	5.6nm,0.3s,baz=341,slow=22,SNR=6.0						
BKSI	**Bulukumba**	**5.84**	**75**	P	**Pn**	**09 55 36.2**	**+1.0**
	57nm,0.6s,839nm						
BSSI	**Bau Bau, Buton**	**6.03**	**83**	P	**Pn**	**09 55 38.6**	**+0.7**
	276nm,0.6s						
SPSI	**Sidrap Palu**	**6.03**	**61**	P	**Pn**	**09 55 38.7**	**+0.8**
	18nm,0.5s						
TTSI	**Tana Toraja**	**6.57**	**54**	P	Pn	09 55 49.6	+4.3
FITZ	**Fitzroy Crossi**	**15.55**	**137**	Pn	**Pn**	**09 57 46.9**	**-1.2**
	0.1nm,0.3s,baz=331,slow=13,SNR=2.9						
FITZ	**Fitzroy Crossi** baz=16,SNR=3.0	**15.55**	**137**	P	**Pn**	**09 57 49.6**	**+1.6**
KNRA	**Kununurra**	**16.48**	**123**	P	**P**	**09 58 04.1**	**+1.3**
	baz=16,SNR=3.6						
MTN	**Manton Dam**	**17.43**	**111**	P	**P**	**09 58 12.5**	**-0.8**
	baz=17,SNR=6.4						
KDU	**Kakadu**	**18.63**	**109**	P	Pn	09 58 34.0	+7.2
	baz=19,SNR=3.7						
WRA	**Warramunga Arr**	**23.22**	**126**	P	**P**	**09 59 15.6**	**-0.4**
	3.5nm,0.8s,baz=299,slow=12,SNR=20						
ASAR	**Alice Springs**	**25.01**	**134**	P	**P**	**09 59 33.6**	**+0.7**
	4.9nm,0.8s,baz=306,slow=8.8,SNR=44						
COEN	**Coen**	**29.06**	**106**	P	P	09 59 58.9	-10
	baz=29,SNR=9.7						
CMAR	**Chiang Mai Arr**	**29.51**	**329**	P	**P**	**10 00 13.7**	**+0.4**
	0.3nm,0.3s,baz=143,slow=8.9,SNR=2.7						
QLP	**Quilpie**	**34.40**	**128**	P	**P**	**10 00 57.6**	**+1.4**
	baz=34,SNR=6.6						
STKA	**Stephens Creek**	**35.44**	**138**	P	**P**	**10 01 05.5**	**+0.4**
	2.3nm,0.6s,baz=318,slow=9.8,SNR=8.4						
STKA	**Stephens Creek** baz=36,SNR=6.5	**35.44**	**138**	P	**P**	**10 01 05.7**	**+0.5**
SONM	**Songino Array**	**54.98**	**353**	P	**P**	**10 03 40.4**	**+0.3**
	0.7nm,0.6s,baz=172,slow=4.4,SNR=2.5						
MKAR	**Makanchi Array**	**60.64**	**335**	P	**P**	**10 04 20.6**	**+0.9**
	0.3nm,0.5s,baz=162,slow=6.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**65.58**	**341**	P	**P**	**10 04 51.7**	**-0.7**
	0.7nm,0.5s,baz=151,slow=6.0,SNR=4.1						

IDC 18 10:03:21.4±1.0, 29°.43N×43°.05W, h0km, mb3.8/12, mb1 4.0/12, mb1mx3.8/29, mbtmp3.8/12, MS3.7/15, Ms1 3.7/15, ms1mx3.4/39, Error ellipse: s-maj=33.3km s-min=18.7km az=178.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCHQ	**Schefferville**	**30.62**	**333**	LR	LR	10 20 11.6	
	comp=Z,110nm,21.9s,baz=100,slow=33						
MDT	**Midelt**	**32.96**	**74**	LR	LR	10 20 09.5	
	comp=Z,56nm,21.1s,baz=12,slow=31						
ESDC	**Sonseca Array**	**33.55**	**62**	P	P	10 10 03.6	+0.5
	0.2nm,0.2s,baz=269,slow=8.5,SNR=4.1						
DBIC	**Dimbokro**	**42.48**	**115**	LR	LR	10 26 11.1	
	comp=Z,172nm,18.4s,baz=280,slow=32						
TORD	**Torodi Ar. Bea**	**44.43**	**102**	P	P	10 11 34.0	-0.4
	2.1nm,1.1s,baz=298,slow=7.8,SNR=6.9						
TORD				LR	LR	10 26 56.7	
	comp=Z,77nm,20.7s,baz=155,slow=32						
ULM	**Lac du Bonnet**	**44.50**	**313**	LR	LR	10 26 54.1	
	comp=Z,73nm,20.3s,baz=45,slow=32						
BDFB	**Brasilia**	**45.06**	**187**	LR	LR	10 28 12.0	
	comp=Z,88nm,19.9s,baz=309,slow=33						
JMIC	**Jan Mayen**	**45.79**	**15**	LR	LR	10 27 48.8	
	comp=Z,52nm,18.7s,baz=73,slow=32						
HFS	**Hagfors**	**48.50**	**34**	LR	LR	10 28 56.8	
	comp=Z,34nm,21.0s,baz=256,slow=32						
LPAZ	**La Paz**	**51.50**	**211**	P	P	10 12 30.1	+0.4
	0.3nm,0.5s,baz=8.1,slow=14,SNR=2.1						
TXAR	**Lajitas Array**	**52.27**	**286**	P	P	10 12 34.9	0.0
	0.4nm,0.8s,baz=99,slow=5.6,SNR=4.6						
TXAR				LR	LR	10 32 43.3	
	comp=Z,41nm,19.5s,baz=295,slow=34						
PDAR	**Pinedale Array**	**54.07**	**303**	P	P	10 12 48.2	0.0
	0.7nm,0.7s,baz=99,slow=6.8,SNR=6.5						
PDAR				LR	LR	10 34 30.4	
	comp=Z,121nm,18.8s,baz=93,slow=35						
AKASG	**Malin Array Be**	**56.90**	**46**	P	P	10 13 07.9	-0.1
	0.3nm,0.3s,baz=295,slow=13,SNR=3.9						
CPUP	**Villa Florida**	**57.11**	**195**	LR	LR	10 36 52.3	
	comp=Z,82nm,18.8s,baz=60,slow=35						
NVAR	**Mina Array Bea**	**61.51**	**300**	P	P	10 13 38.9	-1.7
	0.6nm,1.0s,baz=95,slow=11,SNR=3.9						
NVAR				LR	LR	10 38 17.8	
	comp=Z,70nm,19.5s,baz=335,slow=34						
BRTR	**Keskin Array**	**62.22**	**58**	P	P	10 13 43.2	-2.0
	2.3nm,1.3s,baz=270,slow=5.0,SNR=5.4						
KBZ	**Khabaz**	**67.58**	**51**	P	P	10 14 20.8	+0.9
	2.7nm,0.9s,baz=281,slow=5.2,SNR=4.0						
ILAR	**Eielson Array**	**69.38**	**334**	P	P	10 14 31.3	+0.6
	0.6nm,0.8s,baz=72,slow=3.7,SNR=8.1						
ILAR				LR	LR	10 44 26.7	
	comp=Z,94nm,19.3s,baz=106,slow=36						
KMBO	**Kilima Mbogo**	**82.10**	**96**	LR	LR	10 50 00.3	
	comp=Z,62nm,20.5s,baz=272,slow=34						
ZALV	**Zalesovo Beam**	**85.54**	**28**	P	P	10 16 02.0	+0.6
	1.2nm,0.8s,baz=297,slow=6.3,SNR=5.2						
BOSA	**Boshof**	**87.10**	**125**	LR	LR	10 48 50.2	
	comp=Z,78nm,18.3s,baz=337,slow=31						
MKAR	**Makanchi Array**	**89.52**	**34**	P	P	10 16 21.4	+0.7
	1.1nm,0.8s,baz=312,slow=4.6,SNR=9.6						

*ISCJB **18** 10:20:02.8±0.5, 50°.66N±0°.05×73°.59E±0°.06, h10km, mb3.6/1, Error ellipse: s-maj=7.5km s-min=4.3km az=36.5*
*IDC **18** 10:20:03.1±0.9, 50°.95N×73°.57E, h0km, mb3.4/1, mb1 3.4/5, mb1mx3.2/30, mbtmp3.2/5, ML3.0/4, MS2.5/1, Ms1 2.5/1, ms1mx2.0/31, Error ellipse: s-maj=20.7km s-min=7.3km az=30.0*
*NNC **18** 10:20:03.5±0.7, 50°.78N×73°.69E, h0km, mb3.6, mpv3.3, Error ellipse: s-maj=12.0km s-min=4.6km az=35.0*

ISC 18 10:20:03.4±0.8, 50°.85N±0°.06×73°.63E±0°.06, h10km, n17, σ1887/22, 17C-7D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VOSK	**Vostochnaya**	**2.50**	**320**	⇑Pn	**Pb**	**10 20 46.4**	**-1.9**
	7.0nm,0.4s						
VOSK				⇑Sn	**Sb**	**10 21 19.8**	**+0.7**
	189nm,0.9s						
VOSK				⇑Rg	Rg	10 21 35.7	
	201nm,1.4s						
BVA0	**Borovoye Array**	**2.96**	**319**	⇑Pn	**Pb**	**10 20 55.2**	**-1.0**
	14nm,1.1s,baz=130,slow=16,SNR=13						
BVA0				⇑Lg	Lg	10 21 40.8	
	79nm,0.8s,baz=130,slow=29,SNR=24						
BVA0				⇑Rg	Rg	10 21 56.9	
	151nm,1.4s,baz=146,slow=32,SNR=3.5						
BVAR	**Borovoye Array**	**2.96**	**319**	Pg	**Pb**	**10 20 53.5**	**-2.8**
	2.2nm,0.3s,baz=124,slow=15,SNR=20						
BVAR				Lg	Lg	10 21 36.3	
	3.9nm,0.3s,baz=133,slow=30,SNR=12						
BRVK	**Borovoye**	**3.03**	**318**	⇓Pn	**Pb**	**10 20 54.7**	**-2.7**
	20nm,0.6s						
BRVK				⇑Lg	Lg	10 21 39.8	
	439nm,1.1s						
KUR16	**Kurchatov Arra**	**3.10**	**92**	⇑Pn	**Pn**	**10 20 53.3**	**+1.0**
	10nm,0.8s						
KUR16				⇑Lg	Lg	10 21 39.5	
	45nm,1.0s						
KURBB	**Kurchatov Arra**	**3.12**	**92**	Pn	**Pn**	**10 20 53.9**	**+1.2**
	0.3nm,0.3s,baz=278,slow=14,SNR=81						
KURBB				Lg	Lg	10 21 43.0	
	1.0nm,0.3s,baz=276,slow=30,SNR=15						
KURK	**Kurchatov**	**3.17**	**91**	⇓Pn	**Pn**	**10 20 54.0**	**+0.8**
	16nm,0.9s						
KURK				⇓Lg	Lg	10 21 40.9	
	131nm,1.1s						
ZRNK	**Zerenda**	**3.56**	**308**	⇓Pn	**Pn**	**10 21 01.5**	**+2.9**
ZRNK				⇑Sn	**Sn**	**10 21 43.6**	**+2.9**
	239nm,1.1s						
MK31	**Makanchi Array**	**7.01**	**122**	⇓Pn	**Pn**	**10 21 45.7**	**-0.4**
	1.1nm,0.7s,baz=301,slow=12,SNR=11						
MK31				⇑Pg	Pb	10 22 08.9	+3.7
	1.7nm,0.8s,baz=295,slow=12,SNR=5.4						
MK31				⇑Lg	Lg	10 23 43.5	
	63nm,1.1s,baz=314,slow=26,SNR=6.8						
MKAR	**Makanchi Array**	**7.01**	**122**	Pn	**Pn**	**10 21 47.2**	**+1.1**
	0.1nm,0.3s,baz=300,slow=11,SNR=7.5						
MKAR				Sn	**Sn**	**10 23 08.2**	**+2.4**
	0.2nm,0.3s,baz=317,slow=19,SNR=3.8						
MKAR				Lg	Lg	10 23 44.9	
	0.7nm,0.3s,baz=313,slow=25,SNR=9.4						
ZALV	**Zalesovo Beam**	**7.51**	**61**	Pn	**Pn**	**10 21 53.9**	**+1.0**
	0.3nm,0.3s,baz=250,slow=14,SNR=3.8						
ZALV				Sn	**Sn**	**10 23 16.2**	**-1.9**
	0.1nm,0.3s,baz=242,slow=18,SNR=3.5						
ZALV				Lg	Lg	10 24 09.4	
	0.2nm,0.3s,baz=254,slow=21,SNR=5.8						
KK31	**Karatay Array**	**8.04**	**197**	⇓Pn	**Pn**	**10 21 59.5**	**-0.7**
	0.4nm,0.5s						
KK31				⇑Lg	Lg	10 24 18.5	
	16nm,1.1s						
TKM2	**Tokmak 2**	**8.05**	**170**	⇓Pn	**Pn**	**10 22 01.0**	**+0.5**
	1.6nm,0.7s						
TKM2				⇑Pg	Pb	10 22 29.3	+6.3
	3.0nm,0.9s						
TKM2				⇑Lg	Lg	10 24 16.3	
	44nm,0.9s						
AAK	**Ala-Archa**	**8.24**	**176**	Sn	**Sn**	**10 23 35.2**	**-1.1**
	0.5nm,0.3s,baz=246,slow=19,SNR=4.3						
AAK				Lg	Lg	10 24 28.3	
	0.7nm,0.3s,baz=187,slow=17,SNR=6.3						
AAK				LR	LR	10 26 05.3	
	comp=Z,33nm,19.5s,baz=14,slow=43						
AB31	**Akbulak array**	**8.95**	**265**	⇑Pn	**Pn**	**10 22 12.5**	**-0.2**
	0.1nm,0.3s,baz=0.0,slow=0.1,SNR=7.2						
AB31				⇑Lg	Lg	10 24 51.6	
	18nm,1.3s,baz=73,slow=27,SNR=5.7						
AKTO	**Aktyubinsk**	**9.93**	**274**	Pn	**Pn**	**10 22 24.6**	**-1.5**
	0.3nm,0.3s,baz=84,slow=10,SNR=3.2						
AKTO				Sn	**Sn**	**10 24 20.8**	**+3.2**
	0.2nm,0.3s,baz=165,slow=18,SNR=3.1						
AKTO				Lg	Lg	10 25 18.3	
	0.2nm,0.3s,baz=226,slow=14,SNR=4.5						
ILAR	**Eielson Array**	**60.51**	**19**	P	**P**	**10 30 13.4**	**+0.4**
	0.3nm,0.6s,baz=322,slow=4.1,SNR=5.5						

*ISCJB **18** 10:25:18.1±1.2, 19°.4S×107°.2×169°.4E±0°.2, h33km, mb3.9/8, Error ellipse: s-maj=35.6km s-min=7.1km az=36.8*
*IDC **18** 10:25:25.2±3.9, 19°.66S×169°.34E, h87km±39km, mb3.6/8, mb1 3.9/9, mb1mx3.7/19, mbtmp3.7/9, Error ellipse: s-maj=55.5km s-min=24.1km az=152.0*
*NOU **18** 10:25:28.4±1.5, 19°.96S×169°.62E, h30km, MD3.1, ML3.9*

ISC 18 10:25:20.7±1.2, 19°.2S±0°.2×169°.3E±0°.2, h35km, n14, σ2906/18, mb3.9/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**3.68**	**218**	*e*P	**Pn**	**10 26 17.9**	**+2.8**
BAYA				eS	**Sn**	**10 26 54.9**	**-2.3**
BAYA				AMP		10 26 58.2	
DZM	**Mont Dzumac**	**3.88**	**223**	*e*P	**Pn**	**10 26 20.6**	**+2.6**
DZM	

JOF	**Joensuu**	**69.15**	**331**	*ep*		**P**		**11 09 24.7**	**-0.7**
	1.8nm,0.6s								
FINES	**FINESS Array B**	**71.98**	**330**	P		**P**		**11 09 42.4**	**-0.2**
	1.7nm,0.5s,baz=58,slow=5.1,SNR=20								
AKASG	**Malin Array Be**	**74.84**	**319**	P		**P**		**11 09 58.7**	**-1.0**
	0.6nm,0.3s,baz=58,slow=6.6,SNR=5.0								
BRTR	**Keskin Array B**	**76.57**	**308**	P		**P**		**11 10 10.1**	**+0.1**
	2.1nm,0.7s,baz=107,slow=5.1,SNR=8.5								
YKA	**Yellowknife Ar**	**77.27**	**25**	P		**P**		**11 10 14.0**	**+0.8**
	1.1nm,0.8s,baz=298,slow=5.5,SNR=8.3								
NB2	**NORSAR Subarra**	**78.38**	**334**	P		**P**		**11 10 19.2**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=50,slow=5.9								
NOA	**NORSAR Array B**	**78.38**	**334**	P		**P**		**11 10 19.2**	**-0.3**
	comp=Z,3.2nm,0.7s,baz=52,slow=5.6,SNR=11								

IDC 18 11:07:05.4±1.9, 18°72S×178°31W, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.7/18, mbtmp3.7/3, ML6.0/1, Error ellipse: s-maj=50.2km s-min=34.8km az=128.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RAO	**Raoul Island**	**10.49**	**178**	Pn		Pn	11 09 37.4	+0.2
	107nm,0.3s,baz=78,slow=22,SNR=3.7							
WRA	**Warramunga Arr**	**44.59**	**260**	P		P	11 15 20.0	+0.3
	0.4nm,0.3s,baz=96,slow=7.4,SNR=14							
ASAR	**Alice Springs**	**44.67**	**255**	P		P	11 15 19.8	-0.6
	1.1nm,0.8s,baz=96,slow=7.8,SNR=14							
ILAR	**Eielson Array**	**86.65**	**13**	P		P	11 19 50.5	0.0
	0.3nm,0.5s,baz=220,slow=5.0,SNR=7.2							

IDC 18 11:32:04.6±1.2, 4°85N×125°66E, h0km, mb3.4/5, mb1 3.7/5, mb1mx3.5/23, mbtmp3.4/5, Error ellipse: s-maj=69.7km s-min=22.1km az=78.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.81**	**180**	P		P	11 37 10.6	+1.5
	2.2nm,0.8s,baz=357,slow=19,SNR=3.0							
WRA	**Warramunga Arr**	**26.07**	**161**	P		P	11 37 38.6	-1.5
	0.4nm,0.6s,baz=336,slow=10,SNR=4.4							
ASAR	**Alice Springs**	**29.46**	**164**	P		P	11 38 10.8	+0.4
	0.1nm,0.3s,baz=344,slow=6.6,SNR=3.3							
MKAR	**Makanchi Array**	**56.03**	**325**	P		P	11 41 45.3	0.0
	0.3nm,0.5s,baz=121,slow=8.5,SNR=4.9							
ILAR	**Eielson Array**	**84.56**	**25**	P		P	11 44 39.5	-0.1
	0.2nm,0.6s,baz=272,slow=5.5,SNR=6.0							

MAN 18 11:39:47,13°54N×121°04E, h13km, mb4.4, ML3.2, MS3.0, 1C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PGP	**Puerto Galera**	**0.09**	**245**	⇑*iP*		Pg	11 39 50.3	+0.4
TGY	**Tagaytay City**	**0.57**	**350**	⇓*iP*		Pb	11 39 59.7	+0.8
LQP	**Lukban**	**0.75**	**41**	*eP*		Sn	11 40 17.5	+2.4
BOAC	**Boac**	**0.79**	**96**	*eP*		Pg	11 40 01.5	-0.9
SJMP	**San Jose**	**1.07**	**176**	*eP*		Pn	11 40 07.9	+0.1
SJMP				*eS*		Sn	11 40 22.8	+0.2
GQP	**Guinayangan**	**1.42**	**75**	⇓*eP*		Pn	11 40 12.5	-0.1
OTRP	**Odiongan**	**1.51**	**140**	*eP*		Pb	11 40 15.1	+0.2
AUQP	**San Andres**	**1.61**	**97**	*eP*		Pg	11 40 22.3	+4.3
BALP	**Baler**	**2.25**	**13**	*eP*		Pb	11 40 27.4	-0.1

*ISCJB **18** 11:45:47.2±0.6, 33°35N±0°03×46°15E±0°04, h8km±5km, Error ellipse: s-maj=6.0km s-min=3.5km az=43.9*
*TEH **18** 11:45:47.8, 33°32N×46°03E, h14km, ML3.6*
*CSEM **18** 11:45:48.9±0.1, 33°40N×46°13E, h15km, ML3.6, Error ellipse: s-maj=3.7km s-min=3.0km az=147.0*

ISC 18 11:45:48.2±1.1, 33°37N±0°03×46°12E±0°03, h8km±11km, n43, σ0°77/59, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
IBDR	**Badra**	**0.30**	**211**	*ePg*		**Pg**	**11 45 53.2**	**-0.9**
IBDR				*eSg*		**Sg**	**11 45 58.1**	**0.0**
IGHG	**Ghaleghazi**	**1.03**	**21**	*e*			11 46 10.0	
	comp=Z,18μm,0.1s							
IGHG				*ePg*		**Pb**	**11 46 07.8**	**-0.7**
IGHG				*eSg*		**Sn**	**11 46 23.2**	**-0.8**
IVIS	**Veis**	**1.31**	**28**	*ePn*		**Pn**	**11 46 12.6**	**-0.3**
IVIS				*eSg*		**Sg**	**11 46 31.3**	**+1.0**
IVIS				*e*			11 46 34.4	
	comp=Z,10μm,0.1s							
IVIS	**Veis**	**1.31**	**28**	*ePn*		**Pn**	**11 46 12.6**	**-0.3**
IVIS				*eSg*		**Sg**	**11 46 31.3**	**+1.0**
IDHR	**Dehrash**	**1.35**	**10**	*ePn*		**Pn**	**11 46 13.4**	**-0.2**
IDHR				*eSg*		**Sb**	**11 46 31.7**	**+0.3**
IDHR				*e*			11 46 35.5	
	comp=Z,12μm,0.1s							
IDHR	**Dehrash**	**1.35**	**10**	*ePn*		**Pn**	**11 46 13.4**	**-0.2**
IDHR				*eSg*		**Sb**	**11 46 31.7**	**+0.3**
IKOM	**Komasi**	**1.41**	**55**	*ePn*		**Pn**	**11 46 14.6**	**+0.2**
IKOM				*eSg*		**Sg**	**11 46 35.1**	**+1.4**
IKOM				*e*			11 46 37.0	
	comp=Z,21μm,0.2s							
IKOM	**Komasi**	**1.41**	**55**	*ePn*		**Pn**	**11 46 14.6**	**+0.2**
IKOM				*eSg*		**Sg**	**11 46 35.1**	**+1.4**
BHD	**Baghdad**	**1.46**	**267**	*ePb*		**Pn**	**11 46 14.8**	**0.0**
BHD				*i* Pg		**Pg**	**11 46 16.7**	**+0.6**
BHD				*i* Sb		**Sg**	**11 46 34.8**	**-0.2**
BHD				*i* Sg		**Sb**	**11 46 35.5**	**+1.3**
BHD	**Baghdad**	**1.46**	**267**	*eP*		**Pn**	**11 46 14.8**	**0.0**
BHD	**Baghdad**	**1.46**	**267**	*i* Pg		**Pg**	**11 46 16.7**	**+0.6**
BHD				*i* S		**Sg**	**11 46 34.8**	**-0.2**
BHD				*i* Sg		**Sb**	**11 46 35.5**	**+1.3**
ILIN	**Lien**	**1.70**	**24**	*ePn*		**Pn**	**11 46 18.7**	**+0.3**
ILIN				*eSg*		**Sb**	**11 46 42.9**	**+1.3**
ILIN				*e*			11 46 49.8	
	comp=Z,5μm,0.2s							
ILIN	**Lien**	**1.70**	**24**	*ePn*		**Pn**	**11 46 18.7**	**+0.3**
ILIN				*eSg*		**Sb**	**11 46 42.9**	**+1.3**
SNGE	**Sanandaj**	**2.00**	**30**	*ePg*		**Pn**	**11 46 22.2**	**-0.3**
SNGE				*eSg*		**Sn**	**11 46 47.5**	**-0.4**
SHGR	**Shooshtar-Gavs**	**2.59**	**118**	*ePn*		**Pn**	**11 46 32.1**	**+1.7**
KHMZ	**Khomeyn**	**3.23**	**82**	*ePn*		**Pn**	**11 46 39.7**	**+0.2**
ASAO	**Ashtian**	**3.46**	**69**	*ePn*		**Pn**	**11 46 42.3**	**-0.3**
IRAZ	**Razeghan**	**3.75**	**56**	*ePn*		**Pn**	**11 46 46.4**	**-0.2**
IRAZ				*e*			11 47 08.6	
	comp=Z,491nm,0.3s							
IRAZ	**Razeghan**	**3.75**	**56**	*ePn*		**Pn**	**11 46 46.4**	**-0.2**
UMR	**Umm Al-Rimmam**	**4.04**	**160**	*eP*		**Pn**	**11 46 50.5**	**+0.1**
UMR				AML		AML	11 47 39.9	
	comp=Z,46nm,0.4s							
UMR	**Umm Al-Rimmam**	**4.04**	**160**	*eP*		**Pn**	**11 46 50.5**	**+0.1**
IPIR	**Pirpir**	**4.07**	**98**	*ePn*		**Pn**	**11 46 50.4**	**-0.7**
IPIR				*e*			11 47 42.5	
	comp=Z,982nm,0.2s							
IPIR	**Pirpir**	**4.07**	**98**	*ePn*		**Pn**	**11 46 50.4**	**-0.7**
NAY	**Al-Naaiem**	**4.22**	**166**	*eP*		**Pn**	**11 46 52.9**	**+0.1**
NAY				AML		AML	11 47 40.6	
	comp=Z,6.7nm,0.4s							
NAY	**Al-Naaiem**	**4.22**	**166**	*eP*		**Pn**	**11 46 52.9**	**+0.1**
IAZR	**Azarshahr**	**4.30**	**359**	*e*		**Pg**	**11 47 10.2**	**-0.5**
	comp=Z,615nm,0.2s							
IKLH	**Kolahrood**	**4.57**	**89**	*ePn*		**Pn**	**11 46 57.3**	**-0.6**
IKLH				*e*			11 47 58.7	
	comp=Z,305nm,0.1s							
IKLH	**Kolahrood**	**4.57**	**89**	*ePn*		**Pn**	**11 46 57.3**	**-0.6**
RDF	**Al-Radifah**	**4.59**	**164**	*eP*		**Pn**	**11 46 58.4**	**+0.4**
RDF				AML		AML	11 47 52.2	
	comp=Z,16nm,0.2s							
RDF	**Al-Radifah**	**4.59**	**164**	*eP*		**Pn**	**11 46 58.4**	**+0.4**
ISHB	**Shabestar**	**4.92**	**355**	*ePn*		**Pn**	**11 47 01.8**	**-0.9**
ISHB				*e*			11 47 28.3	
	comp=Z,195nm,0.3s							
ISHB	**Shabestar**	**4.92**	**355**	*ePn*		**Pn**	**11 47 01.8**	**-0.9**
IVRN	**Varamin**	**4.93**	**69**	*e*			11 47 03.8	
	comp=Z,487nm,0.1s							
IVRN				*ePn*		**Pn**	**11 47 02.1**	**-0.5**
IGAR	**Gharneh**	**5.08**	**99**	*ePn*		**Pn**	**11 47 04.0**	**-0.9**
IGAR				*e*			11 48 05.5	
	comp=Z,494nm,0.1s							
IZEF	**Zefreh**	**5.23**	**93**	*ePn*		**Pn**	**11 47 06.2**	**-0.8**
IZEF				*e*			11 48 11.5	
	comp=Z,159nm,0.1s							
IZEF	**Zefreh**	**5.23**	**93**	*ePn*		**Pn**	**11 47 06.2**	**-0.8**
IDMV	**Damavand**	**5.36**	**64**	*e*			11 47 09.7	
	comp=Z,208nm,0.1s							
IDMV				*ePn*		**Pn**	**11 47 08.2**	**-0.6**
IFIR	**Firoozkooh**	**5.93**	**66**	*ePn*		**Pn**	**11 47 15.9**	**-0.7**
IFIR				*e*			11 47 17.6	
	comp=Z,548nm,0.1s							
IFIR	**Firoozkooh**	**5.93**	**66**	*ePn*		**Pn**	**11 47 15.9**	**-0.7**
ISHM	**Shahmirzad**	**6.40**	**66**	*ePn*		**Pn**	**11 47 22.2**	**-0.9**
ISHM	**Shahmirzad**	**6.40**	**66**	*ePn*		**Pn**	**11 47 22.2**	**-0.9**
IANJ	**Anjilo**	**6.78**	**70**	*ePn*		**Pn**	**11 47 26.8**	**-1.4**
IANJ				*e*			11 47 42.0	
	comp=Z,52nm,0.2s							
IANJ	**Anjilo**	**6.78**	**70**	*ePn*		**Pn**	**11 47 26.8**	**-1.4**

*DDA **18** 11:45:54.8, 39°66N×33°48E, h7km, MD2.6*
*ISCJB **18** 11:45:55.5±0.6, 39°52N±0°05×33°52E±0°03, h7km±7km, Error ellipse: s-maj=8.2km s-min=4.3km az=7.0*
*ISK **18** 11:45:55.0, 39°48N×33°50E, h4km, MD2.3*
*CSEM **18** 11:45:55.4±0.2, 39°51N×33°52E, h8km, MD2.3, Error ellipse: s-maj=6.1km s-min=3.5km az=5.0*

ISC 18 11:45:55.4±0.9, 39°50N±0°04×33°51E±0°02, h11km±9km, n16, σ0°28/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KAMT	**Kaman**	**0.20**	**131**	*ePG*		**Pg**	**11 45 59.7**	**-0.1**
KAMT				*eSG*		**Sg**	**11 46 03.2**	**+0.3**
KAMT	**Kaman**	**0.20**	**131**	*ePg*		**Pg**	**11 45 59.7**	**-0.1**
KAMT				*eSg*		**Sg**	**11 46 03.2**	**+0.3**
BBAL	**Bala**	**0.30**	**278**	*i* P		**Pg**	**11 46 01.3**	**-0.3**
BBAL				*i* S		**Sg**	**11 46 05.6**	**-0.1**
BBAL	**Bala**	**0.30**	**278**	*i* P		**Pg**	**11 46 01.3**	**-0.3**
BBAL				*i* S		**Sg**	**11 46 05.6**	**-0.1**
AFSR	**Af`ar-Bala (A**	**0.35**	**261**	*ePG*		**Pg**	**11 46 02.1**	**-0.3**
AFSR				*eSG*		**Sg**	**11 46 07.3**	**+0.3**
AFSR	**Af`ar-Bala (A**	**0.35**	**261**	*ePg*		**Pg**	**11 46 02.1**	**-0.3**
AFSR				*eSg*		**Sg**	**11 46 07.3**	**+0.3**
ANTO	**Ankara**	**0.66**	**304**	*ePG*		**Pb**	**11 46 09.3**	**+0.3**
ANTO				*eSG*		**Sb**	**11 46 18.7**	**+0.4**
ANTO	**Ankara**	**0.66**	**304**	*ePg*		**Pb**	**11 46 09.3**	**+0.3**
ANTO				*eSg*		**Sb**	**11 46 18.7**	**+0.4**
CDAG	**Cicekdag**	**0.68**	**79**	*i* P		**Pg**	**11 46 08.4**	**-0.1**
CDAG				*i* S		**Sb**	**11 46 18.4**	**-0.2**
CDAG	**Cicekdag**	**0.68**	**79**	*i* P		**Pg**	**11 46 08.4**	**-0.1**
CDAG				*i* S		**Sb**	**11 46 18.4**	**-0.2**
CORM	**Corum**	**1.09**	**52**	*ePN*		**Pb**	**11 46 16.2**	**-0.2**
CORM	**Corum**	**1.09**	**52**	*ePn*		**Pb**	**11 46 16.2**	**-0.2**
SULT	**Sultanhani-AKS**	**1.30**	**180**	*ePN*		**Pg**	**11 46 20.6**	**+0.2**
SULT	**Sultanhani-AKS**	**1.30**	**180**	*ePn*		**Pg**	**11 46 20.6**	**+0.2**
KDHN	**Kadinhani**	**1.46**	**228**	*i* P		**Pb**	**11 46 22.4**	**-0.2**
KDHN				*i* S		**Sg**	**11 46 42.2**	**-0.3**
KDHN	**Kadinhani**	**1.46**	**228**	*i* P		**Pb**	**11 46 22.4**	**-0.2**
KDHN				*i* S		**Sg**	**11 46 42.2**	**-0.3**

*IDC **18** 11:55:14.0±1.2, 44°59N×10°50E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.6/25, mbtmp3.5/5, ML3.6/1, MS2.6/1, Ms1 2.6/1, ms1mx2.1/42, Error ellipse: s-maj=24.5km s-min=12.6km az=104.0*
*ZUR **18** 11:55:14.1, 44°40N×10°57E, h8km±5km, ML3.7/9*
*ISCJB **18** 11:55:15.5±0.1, 44°65N±0°01×10°61E±0°02, h10km, mb3.5/4, Error ellipse: s-maj=1.7km s-min=1.2km az=39.5*
*GEN **18** 11:55:15.1, 44°65N×10°71E, h20km, ML3.2*
*CSEM **18** 11:55:16.8±0.1, 44°60N×10°60E, h15km, ML3.9/17, Error ellipse: s-maj=2.2km s-min=1.7km az=131.0*
*SZGRF **18** 11:55:16.2, 44°50N×10°43E, h10km, mb4.0, Northern Italy*
*BGR **18** 11:55:16.2±0.7, 44°50N×10°43E, h10km, ML4.0/5, Error ellipse: s-maj=13.3km s-min=8.9km az=134.0*
*ROM **18** 11:55:17.4±0.2, 44°56N×10°56E, h17km±3km, Ml3.6/11, Error ellipse: s-maj=2.4km s-min=1.7km az=46.0*
*STR **18** 11:55:17.7±0.5, 44°64N×10°50E, h10km, Ml3.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **18** 11:55:17.3±0.2, 44°52N×10°71E, h30km, Ml3.7/27, Error ellipse: s-maj=4.3km s-min=3.1km az=133.0*
*PRU **18** 11:55:19.4, 44°80N×10°83E, h0km*

ISC 18 11:55:16.0±0.5, 44°58N±0°01×10°57E±0°01, h10km, n318, σ1s65/465, mb3.7/4, 51C-25D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ERBM	**Eremo**	**0.20**	**214**	Pg		**Pg**	**11 55 22.5**	**+2.3**
ERBM				Sg		**Sg**	**11 55 25.6**	**+2.5**
	7μm,0.2s							
ERBM	**Eremo**	**0.20**	**214**	Pg		**Pg**	**11 55 22.5**	**+2.3**
ERBM				Sg		**Sg**	**11 55 25.6**	**+2.5**
	7μm,0.2s							
GSCL	**Gusciola**	**0.23**	**176**	Pg		**Pg**	**11 55 22.6**	**+1.8**
	1.0nm,0.3s							
GSCL	**Gusciola**	**0.23**	**176**	Pg		**Pg**	**11 55 22.6**	**+1.8**
	1.0nm,0.3s							
NOVE	**Novellara**	**0.24**	**26**	Pg		**Pb**	**11 55 23.3**	**+2.3**
NOVE				Sg		**Sg**	**11 55 26.6**	**+2.3**
	40μm,0.4s							
NOVE	**Novellara**	**0.24**	**26**	Pg		**Pb**	**11 55 23.3**	**+2.3**
NOVE				Sg		**Sg**	**11 55 26.6**	**+2.3**
	40μm,0.4s							
PRMA	**PARMA**	**0.26**	**315**	Pg		**Pb**	**11 55 23.5**	**+0.8**
PRMA				Sg		**Sb**	**11 55 28.4**	**+1.2**
	4μm,0.6s							
PRMA	**PARMA**	**0.26**	**315**	Pg		**Pb**	**11 55 23.5**	**+0.8**
PRMA				Sg		**Sb**	**11 55 28.4**	**+1.2**
	4μm,0.6s							
VALM	**Valbona**	**0.33**	**224**	P		**Pb**	**11 55 24.0**	**0.0**
VALM				S		**Sb**	**11 55 30.1**	**+0.8**
GRAM	**Graiana**	**0.37**	**256**	P		**Pg**	**11 55 24.8**	**+1.5**
GRAM				S		**Sb**	**11 55 31.2**	**+0.7**
ZCCA	**Zocca**	**0.38**	**128**	Pg		**Pb**	**11 55 25.7**	**+0.9**
	5μm,0.4s							
ZCCA	**Zocca**	**0.38**	**128**	Pg		**Pb**	**11 55 25.7**	**+0.9**
	5μm,0.4s							
SARO	**Sassorosso**	**0.41**	**197**	P		**Pg**	**11 55 25.1**	**+0.9**
SARO				S		**Sb**	**11 55 32.0**	**+0.1**
RAVA	**Ravarino**	**0.43**	**66**	Pg		**Pb**	**11 55 27.0**	**+1.3**
	13μm,0.7s							
RAVA	**Ravarino**	**0.43**	**66**	Pg		**Pb**	**11 55 27.0**	**+1.3**
	13μm,0.7s							
VLC	**Villacollemand**	**0.44**	**197**	Pg		**Pg**	**11 55 25.2**	**+0.5**
VLC				Sg		**Sb**	**11 55 33.0**	**+0.4**
	4μm,1.0s							
VLC	**Villacollemand**	**0.44**	**197**	Pg		**Pg**	**11 55 25.2**	**+0.5**
VLC				Sg		**Sb**	**11 55 33.0**	**+0.4**
	4μm,1.0s							
BACM	**Baccana**	**0.47**	**229**	P		**Pg**	**11 55 26.2**	**+1.1**
BACM				S		**Sb**	**11 55 34.0**	**+0.7**
PZZT	**Monte Pizzetto**	**0.50**	**155**	Pg		**Pg**	**11 55 26.2**	**+0.4**
PZZT				Sg		**Sg**	**11 55 33.9**	**+1.6**
	2μm,0.5s							
PZZT	**Monte Pizzetto**	**0.50**	**155**	Pg		**Pg**	**11 55 26.2**	**+0.4**
PZZT				Sg		**Sg**	**11 55 33.9**	**+1.6**
	2μm,0.5s							
BDI	**Bagni Di Lucca**	**0.52**	**177**	Pg		**Pg**	**11 55 26.4**	**+0.2**
BDI				Sg		**Sb**	**11 55 35.1**	**+0.2**
	2μm,0.5s							
BDI	**Bagni Di Lucca**	**0.52**	**177**	Pg		**Pg**	**11 55 26.4**	**+0.2**
BDI				Sg		**Sb**	**11 55 35.1**	**+0.2**
	2μm,0.5s							
SBPO	**S.Benedetto Po**	**0.53**	**28**	Pg		**Pb**	**11 55 29.9**	**+2.4**
	7μm,0.5s							
VINC	**Vinca**	**0.53**	**214**	P		**Pg**	**11 55 27.4**	**+1.0**
VINC				S		**Sb**	**11 55 35.8**	**+0.6**
CODM	**Codolo**	**0.55**	**250**	P		**Pg**	**11 55 27.9**	**+1.2**
CODM				S		**Sb**	**11 55 36.4**	**+0.8**
FNVD	**Fontana Vidola**	**0.58**	**136**	Pg		**Pg**	**11 55 27.4**	**+0.2**
FNVD				Sg		**Sg**	**11 55 36.1**	**+1.3**
	2μm,0.6s							
FNVD	**Fontana Vidola**	**0.58**	**136**	Pg		**Pg**	**11 55 27.4**	**+0.2**
FNVD				Sg		**Sg**	**11 55 36.1**	**+1.3**
	2μm,0.6s							
FIU	**Minerbio Fiu**	**0.66**	**85**	Pg		**Pb**	**11 55 31.5**	**+1.8**
FIU	**Minerbio Fiu**	**0.66**	**85**	Pg		**Pb**	**11 55 31.5**	**+1.8**
MAIM	**Mastiano**	**0.67**	**185**	Pg		**Pg**	**11 55 29.1**	**+0.1**
MAIM				Sg		**Sb**	**11 55 39.9**	**+0.8**
	1μm,0.7s							
MAIM	**Mastiano**	**0.67**	**185**	P		**Pg**	**11 55 29.1**	**+0.1**
MAIM				S		**Sb**	**11 55 39.0**	**-0.1**
MAIM				Sg		**Sb**	**11 55 39.9**	**+0.8**
	1μm,0.7s							
SC2M	**Scurtabo**	**0.76**	**257**	Pg		**Pg**	**11 55 31.3**	**+0.6**
SC2M				Sg		**Sb**	**11 55 42.0**	**+0.3**
SC2M	**Scurtabo**	**0.76**	**257**	P		**Pg**	**11 55 31.3**	**+0.6**
SC2M				S		**Sb**	**11 55 42.1**	**+0.3**
SEI	**Scarperia**	**0.78**	**133**	Pg		**Pb**	**11 55 32.2**	**+0.6**
SEI	**Scarperia**	**0.78**	**133**	Pg		**Pb**	**11 55 32.2**	**+0.6**
MSSA	**Maissana**	**0.80**	**251**	Pg		**Pg**	**11 55 32.0**	**+0.6**
MSSA	**Maissana**	**0.80**	**251**	Pg		**Pg**	**11 55 32.0**	**+0.6**
BOB	**Bobbio (Coli)**	**0.82**	**283**	Pg		**Pb**	**11 55 33.5**	**+1.1**
BOB	**Bobbio (Coli)**	**0.82**	**283**	Pg		**Pb**	**11 55 33.5**	**+1.1**
CRMI	**Carmignano**	**0.84**	**160**	Pg		**Pg**	**11 55 32.2**	**-0.1**
CRMI				Sg		**Sb**	**11 55 44.7**	**+0.5**
CRMI	**Carmignano**	**0.84**	**160**	Pg		**Pg**	**11 55 32.2**	**-0.1**
CRMI				Sg		**Sb**	**11 55 44.7**	**+0.5**
PII	**Pisa**	**0.86**	**182**	Pg		**Pg**	**11 55 32.7**	**+0.1**
PII	**Pisa**	**0.86**	**182**	Pg		**Pg**	**11 55 32.7**	**+0.1**
CMPO	**Campotto Po**	**0.89**	**90**	Pg		**Pn**	**11 55 35.8**	**+1.3**
CMPO	**Campotto Po**	**0.89**	**90**	Pg		**Pn**	**11 55 35.8**	**+1.3**
SALO	**Salr**	**1.04**	**358**	⇑*ePg*		**Pn**	**11 55 37.8**	**+1.1**
SALO				*eSg*		**Sn**	**11 55 53.2**	**+2.0**
TEOL	**Teolo**	**1.10**	**45**	⇑*ePg*		**Pb**	**11 55 37.5**	**+0.3**
TEOL	**Teolo**	**1.10**	**45**	⇑*ePg*		**Pb**	**11 55 37.5**	**+0.3**
TEOL				*eSg*		**Sg**	**11 55 53.7**	**+2.1**
SFI	**Santa Sofia**	**1.14**	**126**	Pg		**Pb**	**11 55 38.5**	**+0.6**
SFI	**Santa Sofia**	**1.14**	**126**	Pg		**Pb**	**11 55 38.5**	**+0.6**
ASQU	**Asqua**	**1.18**	**131**	Pg		**Pb**	**11 55 39.2**	**+0.7**
ASQU				Sg		**Sb**	**11 55 54.5**	**+0.6**
ASQU	**Asqua**	**1.18**	**131**	Pg		**Pb**	**11 55 39.2**	**+0.7**
ASQU				Sg		**Sb**	**11 55 54.5**	**+0.6**
CSNT	**Castellina Chi**	**1.23**	**154**	Pg		**Pn**	**11 55 39.1**	**-0.2**
CSNT				Sg		**Sn**	**11 55 56.5**	**+0.6**
CSNT	**Castellina Chi**	**1.23**	**154**	Pg		**Pn**	**11 55 39.1**	**-0.2**
CSNT				Sg		**Sn**	**11 55 56.5**	**+0.6**
DDS	**Dosso del Somm**	**1.37**	**19**	⇓*ePn*		**Sn**	**11 55 56.2**	**-3.4**
CRE	**Caprese Michel**	**1.39**	**133**	Pg		**Pn**	**11 55 42.1**	**+0.6**
CRE	**Caprese Michel**	**1.39**	**133**	Pg		**Pn**	**11 55 42.1**	**+0.6**
PANI	**Panarotta**	**1.56**	**19**	⇓*ePg*		**Pn**	**11 55 44.0**	**0.0**
PANI	**Panarotta**	**1.56**	**19**	⇓*ePg*		**Pn**	**11 55 44.0**	**0.0**
CGRP	**Cima Grappa**	**1.56**	**33**	⇓*ePg*		**Pn**	**11 55 43.4**	**-0.6**
CGRP	**Cima Grappa**	**1.56**	**33**	*ePg*		**Pn**	**11 55 43.4**	**-0.6**
CGRP				*eSg*		**Sn**	**11 56 04.0**	**-0.5**
CTI	**Castel Tesino**	**1.65**	**27**	*ePn*		**Pn**	**11 55 45.2**	**0.0**
MUGIO	**Muggio**	**1.72**	**322**	⇓*iP*		**Pn**	**11 55 46.3**	**+0.2**
	736nm,2.0s							
FAU	**Forcella Aurin**	**1.93**	**31**	⇑*ePn*		**Pn**	**11 55 48.0**	**-1.0**
FAU	**Forcella Aurin**	**1.93**	**31**	⇑*ePn*		**Pn**	**11 55 48.0**	**-1.0**
CAE	**Caneva**	**1.94**	**42**	*ePn*		**Pn**	**11 55 48.9**	**-0.2**
CAE	**Caneva**	**1.94**	**42**	*ePn*		**Pn**	**11 55 48.9**	**-0.2**
KOSI	**Kohlern**	**1.96**	**17**	⇓*ePn*		**Pn**	**11 55 50.2**	**+0.6**
POLC	**Polcenigo**	**1.99**	**43**	⇑*ePn*		**Pn**	**11 55 49.4**	**-0.3**
POLC				*eSn*		**Sn**	**11 56 14.0**	**-0.6**
MOSI	**Grossmontoni**	**2.03**	**360**	⇓*ePn*		**Pn**	**11 55 52.2**	**+1.7**
VDL	**Val di Lei**	**2.06**	**338**	⇓*iP*		**Pn**	**11 55 52.0**	**+1.2**
	919nm,2.0s							
CSO	**Casso**	**2.10**	**36**	⇑*ePn*		**Pn**	**11 55 50.8**	**-0.5**
CSO	**Casso**	**2.10**	**36**	⇑*ePn*		**Pn**	**11 55 50.8**	**-0.5**
MLNI	**Malnisio**	**2.13**	**42**	Pn		**Pn**	**11 55 51.6**	**-0.1**
MLNI	**Malnisio**	**2.13**	**42**	Pn		**Pn**	**11 55 51.6**	**-0.1**
CIMO	**Cimolais**	**2.17**	**37**	⇑*ePn*		**Pn**	**11 55 51.8**	**-0.5**
CIMO	**Cimolais**	**2.17**	**37**	⇑*ePn*		**Pn**	**11 55 51.8**	**-0.5**
CIMO				*eSn*		**Sn**	**11 56 18.6**	**-0.7**
ABSI	**Aberstueckl**	**2.21**	**14**	⇑*ePn*		**Pn**	**11 55 54.0**	**+1.1**
SAOF	**Saorge**	**2.24**	**256**	P		**Pn**	**11 55 54.6**	**+1

	14nm,0.2s								
DAVA				⇑*e*	Sn	Sn	11 56 36.9	+3.3	
	194nm,0.5s								
DAVA	**Damuels**	**2.75**	**350**		Pn	Pn	11 56 03.1	+2.8	
	14nm,0.2s								
DAVA					Sn	Sn	11 56 36.9	+3.3	
	194nm,0.5s								
HASLI	**Hasliberg/Brie**	**2.75**	**323**	*e*	P	Pn	11 56 02.4	+2.0	
	776nm,2.0s								
VOY	**Vojsko**	**2.76**	**57**	⇑*e*	Pn	Pn	11 55 59.1	-1.3	
VOY				*e*	Sn	Sn	11 56 31.4	-2.4	
VOY	**Vojsko**	**2.76**	**57**	⇑*e*	Pn	Pn	11 55 59.1	-1.3	
VOY				*e*	Sn	Sn	11 56 31.4	-2.4	
CALN	**Calern**	**2.77**	**254**	P	Pn	Pn	11 56 02.0	+1.4	
CALN				S	Sn	Sn	11 56 37.2	+3.0	
CALN	**Calern**	**2.77**	**254**	P	Pn	Pn	11 56 02.0	+1.4	
CALN				S	Sn	Sn	11 56 37.2	+3.0	
CADS	**Cadrg**	**2.77**	**53**	*e*	Pn	Pn	11 56 00.1	-0.5	
CADS				*e*	Sn	Sn	11 56 32.5	-1.6	
CADS	**Cadrg**	**2.77**	**53**	*e*	Pn	Pn	11 56 00.1	-0.5	
CADS				*e*	Sn	Sn	11 56 32.5	-1.6	
WTTA	**Wattenberg**	**2.78**	**15**	⇑*e*	Pn	Pn	11 56 03.2	+2.4	
	58nm,0.2s								
WTTA				⇑*i*	Sn	Sn	11 56 35.9	+1.4	
	269nm,0.4s								
WTTA	**Wattenberg**	**2.78**	**15**		Pn	Pn	11 56 03.2	+2.4	
	58nm,0.2s								
WTTA					Sn	Sn	11 56 35.9	+1.4	
	269nm,0.4s								
MOTA	**Moosalm**	**2.79**		**8** ⇑	*e*	Pn	Pn	11 56 03.3	+2.5
	11nm,0.2s								
MOTA				⇑*i*	Sn	Sb	11 56 39.5	-0.8	
	76nm,0.5s								
MOTA	**Moosalm**	**2.79**	**8**		Pn	Pn	11 56 03.3	+2.5	
	11nm,0.2s								
LPG					*e*	Sn	Sn	11 56 33.7	-2.7
	82nm,0.7s,SNR=1.0								
LPG	**La Plagne**	**2.85**	**290**		*e*	Pn	Pn	11 56 01.4	-0.5
	SNR=1.0								
LPL	**La Plagne**	**2.87**	**290**		*e*	Pn	Pn	11 56 02.4	+0.3
	SNR=1.0								
LPL					*e*	Sn	Sn	11 56 34.1	-2.7
	100nm,0.7s								
LPL	**La Plagne**	**2.87**	**290**		*e*	Pn	Pn	11 56 02.4	+0.3
	SNR=1.0								
RETA	**Reutte**	**2.91**		**3** ⇓	*i*	Pn	Pn	11 56 04.8	+2.4
	6.5nm,0.2s								
RETA				⇑	*e*	Sn	Sn	11 56 40.3	+2.8
	43nm,0.4s								
RETA	**Reutte**	**2.91**	**3**		Pn	Pn	11 56 04.8	+2.4	
	6.5nm,0.2s								
RETA					Sn	Sn	11 56 40.3	+2.8	
	43nm,0.4s								
MYKA	**Terra Mystica**	**2.98**		**45** ⇑	*e*	Pn	Pn	11 56 05.0	+1.7
	2.4nm,0.1s								
MYKA				⇑	Sg	Sg	11 56 54.2	+2.6	
	172nm,0.6s								
MYKA	**Terra Mystica**	**2.98**	**45**		Pn	Pn	11 56 05.0	+1.7	
	2.4nm,0.1s								
MYKA					Sg	Sg	11 56 54.2	+2.6	
	172nm,0.6s								
RSL	**Roselend**	**3.00**	**293**		P	Pn	11 56 05.8	+2.0	
RSL	**Roselend**	**3.00**	**293**		P	Pn	11 56 05.8	+2.0	
FRF	**La Foret Royal**	**3.00**	**251**		*e*	Pn	11 56 04.6	+0.9	
	SNR=1.0								
FRF					*e*	Sn	Sn	11 56 36.4	-3.3
	110nm,0.3s								
FRF	**La Foret Royal**	**3.00**	**251**		*e*	Pn	11 56 04.6	+0.9	
	SNR=1.0								
FRF					*e*	Sn	Sn	11 56 36.4	-3.3
	55nm,0.3s								
NVLJ	**Novalja**	**3.08**	**89**		*i*	Pn	Pn	11 56 04.9	+0.2
NVLJ						Sn	Sn	11 56 39.1	-2.4
NVLJ	**Novalja**	**3.08**	**89**		*i*	Pn	Pn	11 56 04.8	+0.2
OSPF	**L'Ospedale**	**3.09**	**199**		P	Pn	11 56 05.8	+0.9	
OSPF	**L'Ospedale**	**3.09**	**199**		P	Pn	11 56 05.8	+0.9	
LJU	**Ljubljana**	**3.15**	**61**		*e*	Pn	Pn	11 56 06.0	+0.3
LJU					*e*	Pg	Pg	11 56 20.0	+3.6
LJU					*e*	Sn	Sn	11 56 43.0	-0.4
KBA	**Koelnbreinsper**	**3.16**		**37** ⇓	*i*	Pn	Pn	11 56 07.4	+1.4
	4.5nm,0.2s								
KBA				⇑	*i*	Pg	Pg	11 56 16.5	-0.1
	27nm,0.3s								
KBA				⇓	*i*	Sn	Sn	11 56 43.4	-0.5
	70nm,0.6s								
KBA				⇓	*i*	Sg	Sg	11 56 59.5	+1.9
	86nm,0.4s								
KBA	**Koelnbreinsper**	**3.16**	**37**		Pn	Pn	11 56 07.4	+1.4	
	4.5nm,0.2s								
LMR	**La Mourre**	**3.18**	**248**		*e*	Pn	11 56 07.5	+1.4	
	SNR=1.0								
LMR					*e*	Sn	Sn	11 56 40.6	-3.5
	79nm,0.4s,SNR=1.0								
LMR	**La Mourre**	**3.18**	**248**		*e*	Pn	11 56 07.5	+1.4	
	SNR=1.0								
LMR					*e*	Sn	Sn	11 56 40.6	-3.5
	40nm,0.4s,SNR=1.0								
OG25	**Le Caire**	**3.22**	**268**		P	Pn	11 56 09.8	+3.0	
OG25	**Le Caire**	**3.22**	**268**		P	Pn	11 56 09.8	+3.0	
ORIF	**Oris-en-Rattie**	**3.35**	**277**		*e*	Pn	11 56 10.5	+1.9	
	SNR=1.0								
ORIF					*e*	Sn	Sn	11 56 45.1	-3.4
	32nm,0.4s,SNR=1.0								
ORIF	**Oris-en-Rattie**	**3.35**	**277**		*e*	Pn	11 56 10.5	+1.9	
	SNR=1.0								
ORIF					*e*	Sn	Sn	11 56 45.1	-3.4
	16nm,0.4s,SNR=1.0								
OBKA	**Obir**	**3.40**		**54** ⇓	*i*	Pn	Pn	11 56 09.6	+0.4
	2.5nm,0.1s								
OBKA				⇑	*i*	Sn	Sn	11 56 50.7	+1.2
	132nm,0.6s								
OBKA	**Obir**	**3.40**	**54**		Pn	Pn	11 56 09.6	+0.4	
	2.5nm,0.1s								
OBKA					Sn	Sn	11 56 50.7	+1.2	
	132nm,0.6s								
BOJS	**Bojanci**	**3.45**	**73**		*i*	Pn	Pn	11 56 09.6	-0.2
BOJS					*i*	Sn	Sn	11 56 49.0	-1.7
BOJS	**Bojanci**	**3.45**	**73**		*i*	Pn	Pn	11 56 09.6	-0.2
BOJS					*i*	Sn	Sn	11 56 49.0	-1.7
RJOB	**Jochberg**	**3.52**	**25**		*e*	Pn	Pn	11 56 12.5	+1.7
RJOB					*e*	Pg	Pg	11 56 24.2	+0.8
RJOB					*e*	Sn	Sn	11 56 54.4	+2.0
RJOB					*e*	Sg	Sg	11 57 11.0	+2.1
RJOB	**Jochberg**	**3.52**	**25**		*e*	Pn	Pn	11 56 12.5	+1.7
RJOB					*e*	Pg	Pg	11 56 24.2	+0.8
RJOB					*e*	Sn	Sn	11 56 54.4	+2.0
RJOB					*e*	Sg	Sg	11 57 11.0	+2.1
RJOB	**Jochberg**	**3.52**	**25**		Pn	Pn	Pn	11 56 12.5	+1.7
FUR	**Furstenfeldbru**	**3.62**	**8**		*e*	Pn	Pn	11 56 12.2	+0.1
FUR	**Furstenfeldbru**	**3.62**	**8**		*e*	Pn	Pn	11 56 12.2	+0.1
FUR	**Furstenfeldbru**	**3.62**	**8**		Pn	Pn	Pn	11 56 12.2	+0.1
SMRF	**Simiane la Rot**	**3.63**	**262**		*e*	Pn	Pn	11 56 11.1	-1.3
SMRF	**Simiane la Rot**	**3.63**	**262**		*e*	P	Pn	11 56 14.5	+2.1
	SNR=1.0								
SMRF					*e*	Sn	Sn	11 56 52.1	-3.2
	19nm,0.5s								
SMRF	**Simiane la Rot**	**3.63**	**262**		*e*	Pn	Pn	11 56 11.1	-1.3
SMRF	**Simiane la Rot**	**3.63**	**262**		*e*	P	Pn	11 56 14.5	+2.1
	SNR=1.0								
SMRF					*e*	Sn	Sn	11 56 52.1	-3.2
	9.4nm,0.5s								
CABF	**La Chapelle**	**3.74**	**304**		*e*	Pn	Pn	11 56 13.0	-0.9
	SNR=1.0								
CABF					*e*	Sn	Sn	11 56 53.4	-4.6
	62nm,0.6s								
CABF	**La Chapelle**	**3.74**	**304**		*e*	Pn	Pn	11 56 13.0	-0.9
	SNR=1.0								
CABF					*e*	Sn	Sn	11 56 53.4	-4.6
	31nm,0.6s								
FELD	**Feldberg im Sc**	**3.74**	**333**		P	Pn	Pn	11 56 14.1	+0.1
OG26	**St.-Nazaire-De**	**3.76**	**272**		P	Pn	Pn	11 56 16.3	+2.2
OG26	**St.-Nazaire-De**	**3.76**	**272**		P	Pn	Pn	11 56 16.3	+2.2
SOKA	**Soboth**	**3.77**	**55**	⇑	*i*	Pn	Pn	11 56 14.5	+0.2
	3.7nm,0.2s								
SOKA				⇓	*i*	Sn	Sn	11 56 57.9	-0.8
	33nm,0.4s								
SOKA	**Soboth**	**3.77**	**55**		Pn	Pn	Pn	11 56 14.5	+0.2
	3.7nm,0.2s								
SOKA					Sn	Sn	11 56 57.9	-0.8	
	33nm,0.4s								
LOMF	**Lomont**	**3.80**	**318**		P	Pn	11 56 15.5	+0.8	
LOMF	**Lomont**	**3.80**	**318**		P	Pn	11 56 15.5	+0.8	
MOF	**Molkenrain**	**4.04**	**325**		P	Pn	11 56 18.5	+0.4	
MOF	**Molkenrain**	**4.04**	**325**		P	Pn	11 56 18.5	+0.4	
BFO	**Black Forest**	**4.05**	**338**		*e*	Pn	Pn	11 56 18.1	0.0
BFO					*e*	Pg	Pg	11 56 33.4	-0.2
BFO					*e*	Sn	Sn	11 57 02.4	-3.2
BFO	**Black Forest**	**4.05**	**338**		*e*	Pn	Pn	11 56 18.1	0.0
BFO					*e*	Pg	Pg	11 56 33.4	-0.2
BFO					*e*	Sn	Sn	11 57 02.4	-3.2
BFO	**Black Forest**	**4.05**	**338**		Pn	Pn	Pn	11 56 18.1	0.0
HINF	**Hinteralfeld**	**4.14**	**323**		*e*	Pn	Pn	11 56 19.2	-0.1
	SNR=1.0								
HINF					*e*	Sn	Sn	11 57 04.1	-3.6
	179nm,0.5s								
HINF	**Hinteralfeld**	**4.14**	**323**		*e*	Pn	Pn	11 56 19.2	-0.1
	SNR=1.0								
HINF					*e*	Sn	Sn	11 57 04.1	-3.6
	89nm,0.5s								
MOA	**Molln**	**4.16**		**37** ⇑	*i*	Pn	Pn	11 56 20.5	+1.0
	2.8nm,0.1s								
MOA				⇓	*i*	Sn	Sn	11 57 07.6	-0.5
	30nm,0.3s								
MOA	**Molln**	**4.16**	**37**		Pn	Pn	Pn	11 56 20.5	+1.0
	2.8nm,0.1s								
MOA					Sn	Sn	11 57 07.6	-0.5	
	30nm,0.3s								
VIVF	**Saint-Julien-l**	**4.21**	**276**		*e*	Pn	Pn	11 56 20.5	+0.2
	SNR=1.0								
VIVF					*e*	Sn	Sn	11 57 06.6	-2.9
	15nm,0.4s								
VIVF	**Saint-Julien-l**	**4.21**	**276**		*e*	Pn	Pn	11 56 20.5	+0.2
	SNR=1.0								
VIVF					*e*	Sn	Sn	11 57 06.6	-2.9
	7.3nm,0.4s								
STU	**Stuttgart**	**4.30**	**348**		*e*	Pn	Pn	11 56 20.9	-0.5
STU					*e*	Pg	Pg	11 56 38.4	+0.1
STU	**Stuttgart**	**4.30**	**348**		*e*	Pn	Pn	11 56 20.9	-0.5
STU					*e*	Pg	Pg	11 56 38.4	+0.1
STU	**Stuttgart**	**4.30**	**348**		Pn	Pn	Pn	11 56 20.9	-0.5
ECH	**Echery**	**4.33**	**328**		P	Pn	Pn	11 56 22.2	+0.3
ECH	**Echery**	**4.33**	**328**		P	Pn	Pn	11 56 22.2	+0.3
ARSA	**Arzberg**	**4.37**		**51** ⇑	Pn	Pn	Pn	11 56 22.6	+0.1
ARSA				⇑	*i*	Sn	Sn	11 57 12.2	-1.2
	15nm,0.5s								
ARSA	**Arzberg**	**4.37**	**51**		Pn	Pn	Pn	11 56 22.6	+0.1
ARSA					Sn	Sn	Sn	11 57 12.2	-1.2
	15nm,0.5s								
CDF	**Champ du Feu**	**4.45**	**331**		*e*	Pn	Pn	11 56 23.3	-0.4
CDF					*e*	Sn	Sn	11 57 11.3	-4.3
	54nm,0.5s,SNR=1.0								
CDF	**Champ du Feu**	**4.45**	**331**		*e*	Pn	Pn	11 56 23.3	-0.4
HAU	**Haudompre**	**4.50**	**321**		*e*	Pn	Pn	11 56 24.5	+0.2
	SNR=1.0								
HAU					*e*	Sn	Sn	11 57 12.5	-4.2
	182nm,0.4s								
HAU	**Haudompre**	**4.50**	**321**		*e*	Pn	Pn	11 56 24.5	+0.2
	SNR=1.0								
HAU					*e*	Sn	Sn	11 57 12.5	-4.2
	91nm,0.4s								
GEC2	**GERESS Array S**	**4.78**	**26**		*e*	Pn	Pn	11 56 27.9	-0.2
GEC2					*e*	Pg	Pg	11 56 47.6	+0.1
GEC2					*e*	Sn	Sn	11 57 21.2	-2.4
GEC2	**GERESS Array S**	**4.78**	**26**		*e*	Pn	Pn	11 56 27.9	-0.2
GEC2					*e*	Pg	Pg	11 56 47.6	+0.1
GEC2					*e*	Sn	Sn	11 57 21.2	-2.4
GEC2	**GERESS Array S**	**4.78**	**26**		Pn	Pn	Pn	11 56 27.9	-0.2
GERES	**GERESS Array B**	**4.78**	**26**		Pn	Pn	Pn	11 56 27.9	-0.2
	1.9nm,0.3s,baz=204,slow=14,SNR=29								
GERES						Sn	Sn	11 57 21.5	-2.1
	8.8nm,0.3s,baz=203,slow=23,SNR=17								
GERES						Lg	Lg	11 57 45.7	
	3.9nm,0.3s,baz=209,slow=29,SNR=4.1								
LANF	**Langenberg**	**4.79**	**338**		P	Pn	Pn	11 56 28.5	+0.3
LANF	**Langenberg**	**4.79**	**338**		P	Pn	Pn	11 56 28.5	+0.3
THEF	**They Montfort**	**4.83**	**321**		P	Pn	Pn	11 56 29.3	+0.6
THEF	**They Montfort**	**4.83**	**321**		P	Pn	Pn	11 56 29.3	+0.6
WET	**Wettzell**	**4.83**	**18**		*e*	Pn	Pn	11 56 28.6	-0.2
WET	**Wettzell**	**4.83**	**18**		*e*	Pn	Pn	11 56 28.6	-0.2
WET	**Wettzell**	**4.83**	**18**		Pn	Pn	Pn	11 56 28.6	-0.2
LASF	**Ste Croix**	**4.84**	**266**		*e*	P	Pn	11 56 31.2	+2.3
LASF					*e*	Sn	Sn	11 57 21.4	-3.6
	8.7nm,0.5s								
LASF	**Ste Croix**	**4.84**	**266**		*e*	P	Pn	11 56 31.2	+2.3
LASF					*e*	Sn	Sn	11 57 21.4	-3.6
	4.3nm,0.5s								
CONA	**Conrad Observa**	**4.97**		**46** ⇑	*i*	Pn	Pn	11 56 31.6	+0.9
	1.8nm,0.2s								
CONA				⇑	*i*	Sn	Sn	11 57 27.0	-1.3
	31nm,0.6s								
CONA	**Conrad Observa**	**4.97**	**46**		Pn	Pn	Pn	11 56 31.6	+0.9
	1.8nm,0.2s								
CONA					Sn	Sn	11 57 27.0	-1.3	
	31nm,0.6s								
KHC	**Kasperske Hory**	**5.00**	**23**		*e*	PN	Pn	11 56 31.1	0.0
KHC					*ex*	x	x	11 56 50.1	
KHC					*e*	SN	Sn	11 57 26.4	-2.5
KHC	**Kasperske Hory**	**5.00**	**23**		Pn	Pn	Pn	11 56 31.1	0.0
KHC					Sn	Sn	Sn	11 57 26.4	-2.5
PLDF	**La Plantade**	**5.09**	**288**		P	Pn	Pn	11 56 32.7	+0.2
PLDF	**La Plantade**	**5.09**	**288**		P	Pn	Pn	11 56 32.7	+0.2
GRA1	**Grafenberg Arr**	**5.13**	**5**		Pg	Pg	Pn	11 56 53.7	-0.6
GRF	**Grafenberg Arr**	**5.13**	**5**		*e*	Pg	Pg	11 56 53.7	-0.6
GRF	**Grafenberg Arr**	**5.13**	**5**		*e*	Pg	Pg	11 56 53.7	-0.6
SMF	**Signal de Mont**	**5.15**	**296**		*e*	Pn	Pn	11 56 33.0	-0.1
	SNR=1.0								
SMF					*e*	Sn	Sn	11 57 28.9	-3.7
	43nm,0.4s								
SMF	**Signal de Mont**	**5.15**	**296**		*e*	Pn	Pn	11 56 33.0	-0.1
	SNR=1.0								
SMF					*e*	Sn	Sn	11 57 28.9	-3.7
	22nm,0.4s								
TOD	**Tromm**	**5.17**	**347**		P	Pn	Pn	11 56 33.1	-0.3
PAGF	**Fort de Pagny**	**5.19**	**322**		*e*	Pn	Pn	11 56 34.1	+0.4
	baz=140								
PAGF					*e*	Sn	Sn	11 57 29.8	-3.8
	15nm,0.7s								
PAGF	**Fort de Pagny**	**5.19**	**322**		*e*	Pn	Pn	11 56 34.1	+0.4
	baz=140								
LBL	**Lubilhac**	**5.24**	**280**		P	Pn	Pn	11 56 34.0	-0.5
LBL	**Lubilhac**	**5.24**	**280**		P	Pn	Pn	11 56 34.0	-0.5
SFTF	**Sexfontaines**	**5.27**	**315**		*e*	Pn	Pn	11 56 34.8	0.0
	baz=132								
SFTF					*e*	Sn	Sn	11 57 30.8	-4.7
	43nm,0.6s								
SFTF	**Sexfontaines**	**5.27**	**315**		*e*	Pn	Pn	11 56 34.8	0.0
	baz=132								
SFTF					*e*	Sn	Sn	11 57 30.8	-4.7
	22nm,0.6s								
ROTZ	**Rotzenmuhle**	**5.31**	**12**		*e*	Pn	Pn	11 56 34.3	-1.0
ROTZ					*e*	Pg	Pg	11 56 55.2	-2.4
ROTZ					*e*	Sn	Sn	11 57 33.3	-3.2
ROTZ					*e*	Sg	Sg	11 58 05.4	-0.9
ROTZ	**Rotzenmuhle**	**5.31**	**12**		*e*	Pn	Pn	11 56 34.3	-1.0
ROTZ					*e*	Pg	Pg	11 56 55.2	-2.4
ROTZ					*e*	Sn	Sn	11 57 33.3	-3.2
ROTZ					*e*	Sg	Sg	11 58 05.4	-0.9
ROTZ	**Rotzenmuhle**	**5.31**	**12**		Pn	Pn	Pn	11 56 34.3	-1.0
LOR	**Lormes**	**5.39**	**302**		*e*	Pn	Pn	11 56 37.1	+0.6
	baz=123,SNR=1.0								
LOR					*e*	Sn	Sn	11 57 34.4	-4.3
	65nm,0.4s								
LOR	**Lormes**	**5.39**	**302**		*e*	Pn	Pn	11 56 37.1	+0.6
	baz=123,SNR=1.0								
MEZF	**Maizieres J'vi**	**5.46**	**318**		*e*	Pn	Pn	11 56 37.7	+0.3
	SNR=1.0								
MEZF					*e*	Sn	Sn	11 57 35.4	-4.9
	63nm,0.6s								
MEZF	**Maizieres J'vi**	**5.46**	**318**		*e*	Pn	Pn	11 56 37.7	+0.3
	SNR=1.0								
MANZ	**Manzenberg**	**5.51**	**10**		*e*	Pn	Pn	11 56 37.1	-1.0
MANZ					*e*	Pg	Pg	11 57 01.9	+0.5
MANZ					*e*	Sn	Sn	11 57 36.6	-4.9
MANZ	**Manzenberg**	**5.51**	**10**		*e*	Pn	Pn	11 56 37.1	-1.0
MANZ					*e*	Pg	Pg	11 57 01.9	+0.5
MANZ					*e*	Sn	Sn	11 57 36.6	-4.9
MANZ	**Manzenberg**	**5.51**	**10**		Pn	Pn	Pn	11 56 37.1	-1.0
AVF	**Avril sur Loir**	**5.51**	**296**		*e*	Pn	Pn	11 56 39.1	+1.0
	SNR=1.0								
AVF					*e*	Sn	Sn	11 57 36.8	-4.8
	15nm,0.4s								
AVF	**Avril sur Loir**	**5.51**	**296**		*e*	Pn	Pn	11 56 39.1	+1.0
	SNR=1.0								
SSF	**Saint Saulge**	**5.52**	**299**		*e*	Pn	Pn	11 56 39.1	+0.8
	SNR=1.0								
SSF					*e*	Sn	Sn	11 57 37.5	-4.3
	25nm,0.5s								
SSF	**Saint Saulge**	**5.52**	**299**		*e*	Pn	Pn	11 56 39.1	+0.8
	SNR=1.0								
RUP	**Ruppelstein**	**5.65**	**336**		P	Pn	Pn	11 56 40.8	+0.7
BGF	**Bois d'Agland**	**5.77**	**293**		*e*	Pn	Pn	11 56 40.4	-1.2
	SNR=1.0								
BGF					*e*	Sn	Sn	11 57 43.4	-4.4
	26nm,0.4s								
BGF	**Bois d'Agland**	**5.77**	**293**		*e*	Pn	Pn	11 56 40.4	-1.2
	SNR=1.0								
NKC	**Novy Kostel**	**5.80**	**12**		*e*	PN	Pn	11 56 40.8	-1.2
NKC					*e*	SN	Sn	11 57 45.1	-3.4
NKC	**Novy Kostel**	**5.80**	**12**		Pn	Pn	Pn	11 56 40.8	-1.2
TNS	**Taunus Mts**	**5.82**	**346**		*e*	Pn	Pn	11 56 42.7	+0.3
TNS					*e*	Pg	Pg	11 57 06.0	-1.5
TNS	**Taunus Mts**	**5.82**	**346**		*e*	Pn	Pn	11 56 42.7	+0.3
TNS					*e*	Pg	Pg	11 57 06.0	-1.5
TNS	**Taunus Mts**	**5.82**	**346**		Pn	Pn	Pn	11 56 42.7	+0.3
WERN	**Wernitzgruen**	**5.84**	**11**		*e*	Pg	Pg	11 57 08.1	+0.3
WERN	**Wernitzgruen**	**5.84**	**11**		*e*	Pg	Pg	11 57 08.1	+0.3
WERN	**Wernitzgruen**	**5.84**	**11**		Pg	Pg	Pg	11 57 08.1	+0.3
GUNZ	**Gunzen**	**5.91**	**11**		*e*	Pg	Pg	11 57 07.6	-1.5
GUNZ					*e*	Sg	Sg	11 58 28.9	+3.4
GUNZ	**Gunzen**	**5.91**	**11**		*e*	Pg	Pg	11 57 07.6	-1.5
GUNZ					*e*	Sg	Sg	11 58 28.9	+3.4
GUNZ	**Gunzen**	**5.91**	**11**		Pg	Pg	Pg	11 57 07.6	-1.5
TANN	**Tannenbergstha**	**5.97**	**12**		*e*	Pg	Pg	11 57 08.9	-1.5
TANN	**Tannenbergstha**	**5.97**	**12**		*e*	Pg	Pg	11 57 08.9	-1.5
TANN	**Tannenbergstha**	**5.97**	**12**		Pg	Pg	Pg	11 57 08.9	-1.5
WERD	**Werda**	**5.99**	**11**		*e*	Pg	Pg	11 57 09.8	-0.8
WERD	**Werda**	**5.99**	**11**		*e*	Pg	Pg	11 57 09.8	-0.8
WERD	**Werda**	**5.99**	**11**		Pg	Pg	Pg	11 57 09.8	-0.8
PLN	**Plauen**	**6.00**	**10**		*e*	Pg	Pg	11 57 11.6	+0.7
PLN	**Plauen**	**6.00**	**10**		*e*	Pg	Pg	11 57 11.6	+0.7
PLN	**Plauen**	**6.00**	**10**		Pg	Pg	Pg	11 57 11.6	+0.7
PRU	**Pruhonice**	**6.05**	**25**		*e*	PN	Pn	11 56 44.4	-0.5
PRU					*e*	SN	Sn	11 57 50.3	-4.4
PRU	**Pruhonice**	**6.05**	**25**		Pn	Pn	Pn	11 56 44.9	-0.5
CAF	**Calviac**	**6.06**	**276**		*e*	Pn	Pn	11 56 44.4	-1.3
CAF	**Calviac**	**6.06**	**276**		*e*	Pn	Pn	11 56 44.4	-1.3
MOX	**Moxa**	**6.11**	**6**		*e*	Pg	Pg	11 57 12.8	-0.1
MOX	**Moxa**	**6.11**	**6**		*e*	Pg	Pg	11 57 12.8	-0.1
MOX	**Moxa**	**6.11**	**6**		Pg	Pg	Pg	11 57 12.8	-0.1
TCF	**Toulx Ste Croi**	**6.12**	**289**		*e*	Pn	Pn	11 56 45.4	-1.1
TCF					*e*	Sn	Sn	11 57 52.1	-4.5
	10nm,0.3s								
TCF	**Toulx Ste Croi**	**6.12**	**289**		*e*	Pn	Pn	11 56 45.4	-1.1
MTLF	**Montolieu**	**6.15**	**261**		*e*	Pn	Pn	11 56 47.6	+0.7
	SNR=1.0								
UBBA	**Unterbreizbach**	**6.25**	**357**		*e*	Pn	Pn	11 56 47.9	-0.2
UBBA	**Unterbreizbach**	**6.25**	**357**		*e*	Pn	Pn	11 56 47.9	-0.2
UBBA	**Unterbreizbach**	**6.25**	**357**		Pn	Pn	Pn	11 56 47.9	-0.2
VRAC	**Vranov**	**6.27**	**39**		LR	LR		11 59 26.8	
	comp=Z,45nm,18.3s,baz=254,slow=40								
VRAC	**Vranov**	**6.27**	**39**		*e*	Sn	Sn	11 57 56.9	-3.4
BRG	**Berggiesshubel**	**6.69**	**19**		*e*	PN	Pn	11 56 54.9	+0.6
	3.3nm,0.7s								
BRG					*i*			11 57 01.0	
	6.9nm,0.7s								
BRG					*e*			11 57 41.7	
BRG					*e*			11 58 48.3	
	19nm,1.0s								
GIVF	**Givet**	**6.76**	**327**		*e*	Pn	Pn	11 56 53.

LBMI				S	Sn	12 07 08.7	+10	
KMSI	**Cibinong**	**2.56**	**251**	P	**Pn**	**12 06 35.3**	**+0.7**	
KMSI				S	**Sn**	**12 07 03.0**	**-1.6**	
LUWI	**Luwuk**	**4.38**	**236**	P	**Pn**	**12 07 01.8**	**+2.2**	
MRSI	**Marisa**	**4.55**	**258**	P	Pn	12 07 05.1	+3.1	
SKSI	**Soroako, Sulaw**	**6.41**	**232**	P	**Pn**	**12 07 28.7**	**+1.1**	
	75nm,0.7s,583nm0.2nm							
TTSI	**Tana Toraja**	**7.94**	**236**	P	**Pn**	**12 07 49.4**	**+0.9**	
	66nm,0.7s,763nm0.2nm							
SPSI	**Sidrap Palu**	**8.52**	**231**	P	**Pn**	**12 07 58.1**	**+1.6**	
	45nm,0.6s,478nm							
MYLDM	**Lahad Datu**	**8.72**	**295**	P	Pn	12 08 05.9	+6.7	
BKSI	**Bulukumba**	**9.18**	**223**	P	Pn	12 08 08.6	+3.1	
KAPI	**Kappang**	**9.22**	**226**	*e*Pn	**Pn**	**12 08 05.4**	**-0.7**	
	15nm,0.6s							
KAPI				S	**Sn**	**12 09 52.2**	**+3.6**	
KAPI	**Kappang**	**9.22**	**226**	P	Pn	12 08 11.8	+5.7	
KAPI	**Kappang**	**9.22**	**226**	P	**Pn**	**12 08 07.0**	**+0.9**	
	3.3nm,0.3s,baz=109,slow=2.3,SNR=8.2							
KAPI				S	**Sn**	**12 09 52.2**	**+3.6**	
	1.2nm,0.3s,baz=307,slow=20,SNR=2.5							
KKM	**Kota Kinabalu**	**11.14**	**295**	*e*Pn	**Pn**	**12 08 33.9**	**+1.4**	
KSM	**Kuching**	**16.08**	**270**	*e*Pn	**Pn**	**12 09 38.3**	**-0.4**	
	7.7nm,0.8s							
FITZ	**Fitzroy Crossi**	**19.42**	**182**	P	**P**	**12 10 16.4**	**-1.7**	
FITZ	**Fitzroy Crossi**	**19.42**	**182**	P	**P**	**12 10 16.4**	**-1.7**	
	0.4nm,0.3s,baz=53,slow=14,SNR=8.5							
TPUB	**Ta-pu**	**22.45**	**346**	*e*P	**P**	**12 10 51.5**	**+0.7**	
	22nm,0.8s							
WRAB	**Tennant Creek**	**22.62**	**160**	*e*P	**P**	**12 10 52.3**	**-0.4**	
	9.4nm,0.6s							
WRA	**Warramunga Arr**	**22.62**	**160**	P	**P**	**12 10 51.1**	**-1.6**	
WRA				S	**S**	**12 14 53.3**	**-4.1**	
WRA	**Warramunga Arr**	**22.62**	**160**	P	**P**	**12 10 51.1**	**-1.6**	
	8.9nm,0.6s,baz=340,slow=11,SNR=42							
WRA				S	**S**	**12 14 53.3**	**-4.1**	
	0.8nm,0.9s,baz=345,slow=17,SNR=3.1							
QIZ	**Qiongzhong**	**23.86**	**318**	P	**P**	**12 11 05.6**	**+0.8**	
AS31	**Alice Springs**	**25.99**	**164**	*e*P	**P**	**12 11 24.5**	**+0.2**	
ASAR	**Alice Springs**	**25.99**	**164**	P	**P**	**12 11 23.4**	**-0.9**	
ASAR				S	S	12 15 43.9	-7.9	
ASAR	**Alice Springs**	**25.99**	**164**	P	**P**	**12 11 23.4**	**-0.9**	
	2.0nm,0.4s,baz=345,slow=11,SNR=26							
ASAR				S	S	12 15 43.9	-7.9	
	0.2nm,0.7s,baz=353,slow=23,SNR=2.9							
NWAO	**Narrogin (SRO)**	**35.25**	**193**	P	**P**	**12 12 45.5**	**-0.3**	
NWAO	**Narrogin (SRO)**	**35.25**	**193**	P	**P**	**12 12 45.5**	**-0.3**	
	4.2nm,0.6s,baz=346,slow=4.2,SNR=3.4							
KSAR	**Wonju Array Be**	**35.86**	**2**	P	**P**	**12 12 52.7**	**+1.7**	
KSRS	**Korea Array**	**35.88**	**2**	P	**P**	**12 12 52.7**	**+1.6**	
	1.0nm,0.6s,baz=179,slow=9.7,SNR=7.9							
KSRS				LR	LR	12 27 50.2		
	comp=Z,34nm,18.5s,baz=184,slow=36							
STKA	**Stephens Creek**	**36.13**	**158**	P	**P**	**12 12 53.4**	**0.0**	
STKA	**Stephens Creek**	**36.13**	**158**	P	**P**	**12 12 53.4**	**0.0**	
	2.5nm,0.6s,baz=337,slow=9.3,SNR=10							
USRK	**Ussuriysk Arra**	**42.88**	**6**	P	**P**	**12 13 51.0**	**+1.7**	
	2.4nm,0.7s,baz=161,slow=6.5,SNR=5.0							
PETK	**Petropavlovsk-**	**57.67**	**22**	P	**P**	**12 15 43.0**	**+1.8**	
PETK	**Petropavlovsk-**	**57.67**	**22**	P	**P**	**12 15 43.0**	**+1.8**	
	1.8nm,0.5s,baz=180,slow=6.1,SNR=13							
MK31	**Makanchi Array**	**59.26**	**326**	*e*P	**P**	**12 15 52.1**	**-0.2**	
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**12 15 52.1**	**-0.2**	
MKAR				PcP	**PcP**	**12 16 40.4**	**+0.2**	
MKAR	**Makanchi Array**	**59.26**	**326**	P	**P**	**12 15 52.1**	**-0.2**	
	2.2nm,0.6s,baz=120,slow=8.8,SNR=21							
MKAR				PcP	**PcP**	**12 16 40.4**	**+0.2**	
	1.1nm,0.7s,baz=126,slow=6.2,SNR=3.8							
ZALV	**Zalesovo Beam**	**62.48**	**334**	P	**P**	**12 16 13.7**	**-0.4**	
ZALV	**Zalesovo Beam**	**62.48**	**334**	P	**P**	**12 16 13.7**	**-0.4**	
	0.7nm,0.4s,baz=152,slow=6.5,SNR=2.3							
KURK	**Kurchatov**	**63.50**	**328**	*e*P	**P**	**12 16 20.8**	**-0.1**	
	7.3nm,0.7s							
KKAR	**Karatay Array**	**64.69**	**318**	*e*P	**P**	**12 16 28.5**	**-0.4**	
ABKAR	**Akbulak array**	**73.72**	**321**	*e*P	**P**	**12 17 23.9**	**-0.8**	
	0.9nm,0.6s							
VNDA	**Vanda**	**81.20**	**173**	P	**P**	**12 18 05.5**	**-0.5**	
VNDA	**Vanda**	**81.20**	**173**	P	**P**	**12 18 05.5**	**-0.5**	
	0.7nm,0.6s,baz=316,slow=8.2,SNR=7.6							
KBZ	**Khabaz**	**84.31**	**314**	P	**P**	**12 18 23.2**	**+0.5**	
KBZ	**Khabaz**	**84.31**	**314**	P	**P**	**12 18 23.2**	**+0.5**	
	1.1nm,0.5s,baz=180,slow=5.1,SNR=3.7							
ILAR	**Eielson Array**	**87.31**	**25**	P	**P**	**12 18 36.5**	**-0.7**	
ILAR	**Eielson Array**	**87.31**	**25**	P	**P**	**12 18 36.5**	**-0.7**	
	0.4nm,0.5s,baz=245,slow=4.6,SNR=16							
EIL	**Elat**	**90.56**	**300**	LR	LR	13 03 38.0		
	comp=Z,56nm,18.3s,baz=90,slow=38							
ARCES	**ARCESS Array B**	**92.48**	**340**	P	**P**	**12 18 60.0**	**-1.3**	
ARCES	**ARCESS Array B**	**92.48**	**340**	P	**P**	**12 18 60.0**	**-1.3**	
	1.7nm,0.7s,baz=83,slow=7.4,SNR=4.9							
TORD	**Torodi Ar. Bea**	**123.28**	**287**	PKP	**PKPdf**	**12 24 47.4**	**-1.1**	
TORD	**Torodi Ar. Bea**	**123.28**	**287**	PKP	**PKPdf**	**12 24 47.4**	**-1.1**	
	0.5nm,0.8s,baz=42,slow=1.9,SNR=3.0							
CFAA	**Coronel Fontan**	**146.96**	**157**	PKPbc	**PKPbc**	**12 25 32.7**	**-1.1**	
CFAA	**Coronel Fontan**	**146.96**	**157**	PKPbc	**PKPbc**	**12 25 32.7**	**-1.1**	
	0.2nm,0.3s,baz=247,slow=5.4,SNR=3.6							

IDC 18 12:10:07.8±17.0, **20°39S**×**175°54W**, **h0**km, **mb4.1/5, mb1 4.2/5, mb1mx3.8/21, mbtmp4.1/5, Error ellipse: s-maj=325.2km s-min=151.9km az=81.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**35.79**	**264**	P	P	12 17 10.1	+0.9
	2.0nm,0.3s,baz=99,slow=13,SNR=3.5						
STKA	**Stephens Creek**	**39.91**	**244**	P	P	12 17 43.4	-0.5
	1.2nm,0.6s,baz=90,slow=8.1,SNR=3.5						
ASAR	**Alice Springs**	**46.79**	**256**	P	P	12 18 38.9	-0.6
	1.2nm,0.5s,baz=90,slow=8.5,SNR=15						
WRA	**Warramunga Arr**	**46.90**	**261**	P	P	12 18 40.0	-0.5
	0.9nm,0.3s,baz=97,slow=7.8,SNR=76						
FITZ	**Fitzroy Crossi**	**55.33**	**262**	P	P	12 19 43.9	+0.1
	1.4nm,0.9s,baz=100,slow=9.8,SNR=11						

*ATH **18** 12:10:51.0, 35°31N×28°53E, h35km±5km, MD3.5/9*
*CSEM **18** 12:10:52.6±0.6, 35°38N×28°48E, h20km, MD3.5, Error ellipse: s-maj=15.2km s-min=5.2km az=148.0*
*ISCJB **18** 12:10:53.2±1.4, 35°39N±0°07×28°46E±0°05, h32km±12km, Error ellipse: s-maj=12.7km s-min=4.3km az=152.5*
*DDA **18** 12:10:54.2, 35°64N×28°49E, h28km, MD3.2*
*ISK **18** 12:10:58.8, 35°74N×28°54E, h23km, MD3.3*

ISC 18 12:10:53.1±1.5, **35°36N**±0°07×**28°50E**±0°04, **h32**km±13km, **n38**, σ**0°79/55, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.91**	**341**	*e*PN	**Pn**	**12 11 09.2**	**-0.5**
ARG	**Arkhangelos**	**0.91**	**341**	*e*Pn	**Pn**	**12 11 09.2**	**-0.5**
KARP	**Karpathos**	**1.11**	**280**	*e*PN	**Pn**	**12 11 12.5**	**0.0**
KARP				*e*SN	**Sb**	**12 11 28.2**	**+0.3**
KARP	**Karpathos**	**1.11**	**280**	*e*Pn	**Pn**	**12 11 12.5**	**0.0**
KARP				*e*Sn	**Sb**	**12 11 28.2**	**+0.3**
AKAS	**Kas**	**1.25**	**46**	*i* P	**Pn**	**12 11 14.2**	**-0.4**
AKAS				*i* S	**Sn**	**12 11 30.5**	**+0.1**
AKAS	**Kas**	**1.25**	**46**	*i* P	**Pn**	**12 11 14.2**	**-0.4**
AKAS				*i* S	**Sn**	**12 11 30.5**	**+0.1**
FETY	**Fethiye**	**1.36**	**20**	*e*PG	**Pb**	**12 11 17.9**	**-0.1**
FETY				*e*SG	**Sn**	**12 11 31.4**	**-1.5**
FETY	**Fethiye**	**1.36**	**20**	*e*Pg	**Pb**	**12 11 17.9**	**-0.1**
FETY				*e*Sg	**Sn**	**12 11 31.4**	**-1.5**
DALY	**Dalyan (Mu¨la**	**1.46**	**5**	*e*PG	**Pn**	**12 11 19.0**	**+1.7**
TURN	**Turunc**	**1.51**	**3**	*i* P	Pn	12 11 16.8	-1.2
TURN				*i* S	Sn	12 11 31.9	-4.7
DAT	**Datca**	**1.56**	**332**	*e*PN	**Pb**	**12 11 21.5**	**+0.1**
DAT				*e*SN	**Sn**	**12 11 37.9**	**0.0**
DAT	**Datca**	**1.56**	**332**	*e*Pn	**Pb**	**12 11 21.5**	**+0.1**
DAT				*e*Sn	**Sn**	**12 11 37.9**	**0.0**
NIS1	**Nisyros Isl.**	**1.64**	**320**	*e*PB	**Pn**	**12 11 20.8**	**+1.0**
NIS1	**Nisyros Isl.**	**1.64**	**320**	*e*Pb	**Pn**	**12 11 20.8**	**+1.0**
YER	**Yerkesik**	**1.78**	**354**	*e*PN	**Pn**	**12 11 23.8**	**+2.1**
YER	**Yerkesik**	**1.78**	**354**	*e*Pn	**Pn**	**12 11 23.8**	**+2.1**
ELL	**Elmali**	**1.80**	**39**	*e*PN	**Pb**	**12 11 24.8**	**-0.7**
ELL				*e*SN	**Sn**	**12 11 43.7**	**-0.1**
BODT	**Bodrum**	**1.95**	**331**	*e*PN	**Pb**	**12 11 27.1**	**-0.9**
BODT	**Bodrum**	**1.95**	**331**	*e*Pn	**Pb**	**12 11 27.1**	**-0.9**
GOLH	**Golhisar**	**2.06**	**24**	*i* P	**Pn**	**12 11 26.6**	**+0.9**
GOLH				*i* S	**Sn**	**12 11 50.9**	**+0.6**
GOLH	**Golhisar**	**2.06**	**24**	*i* P	**Pn**	**12 11 26.6**	**+0.9**
GOLH				*i* S	**Sn**	**12 11 50.9**	**+0.6**
KORT	**Korkueli**	**2.22**	**42**	*e*P	**Pn**	**12 11 28.6**	**+0.7**
KORT				*e*S	**Sn**	**12 11 55.6**	**+1.3**
AYDN	**Tasoluk**	**2.35**	**348**	*i* P	**Pn**	**12 11 29.9**	**+0.3**
AYDN				*e*S	Sn	12 11 51.9	-5.5
AYDN	**Tasoluk**	**2.35**	**348**	*i* P	**Pn**	**12 11 29.9**	**+0.3**
NPS	**Neapolis**	**2.36**	**268**	*e*PN	**Pn**	**12 11 30.3**	**+0.6**
NPS				*e*SN	**Sn**	**12 11 57.5**	**-0.1**
NPS	**Neapolis**	**2.36**	**268**	*e*Pn	**Pn**	**12 11 30.3**	**+0.6**
NPS				*e*Sn	**Sn**	**12 11 57.5**	**-0.1**
DNZL	**Cakiroluk**	**2.37**	**11**	*i* P	**Pn**	**12 11 29.7**	**-0.2**
DNZL				*i* S	**Sn**	**12 11 56.7**	**-1.3**
DNZL	**Cakiroluk**	**2.37**	**11**	*i* P	**Pn**	**12 11 29.7**	**-0.2**
DNZL				*i* S	**Sn**	**12 11 56.7**	**-1.3**
LAST	**Lasithi**	**2.48**	**266**	*e*PN	**Pn**	**12 11 32.1**	**+0.7**
LAST	**Lasithi**	**2.48**	**266**	*e*Pn	**Pn**	**12 11 32.1**	**+0.7**
APE	**Apeiranthos**	**2.94**	**306**	*e*PN	**Pn**	**12 11 37.8**	**+0.1**
APE	**Apeiranthos**	**2.94**	**306**	*e*Pn	**Pn**	**12 11 37.8**	**+0.1**
IDI	**Anoyia**	**2.95**	**270**	*e*PN	**Pn**	**12 11 37.8**	**-0.1**
IDI				*e*SN	**Sn**	**12 12 12.3**	**+0.1**
IDI	**Anoyia**	**2.95**	**270**	*e*Pn	**Pn**	**12 11 37.8**	**-0.1**
IDI				*e*Sn	**Sn**	**12 12 12.3**	**+0.1**
VAM	**Vamos**	**3.51**	**272**	*e*PN	**Pn**	**12 11 45.4**	**-0.1**
VAM	**Vamos**	**3.51**	**272**	*e*Pn	**Pn**	**12 11 45.4**	**-0.1**
KYTH	**Kithira**	**4.53**	**283**	*e*PN	**Pn**	**12 12 00.0**	**+0.4**
KYTH	**Kithira**	**4.53**	**283**	*e*Pn	**Pn**	**12 12 00.0**	**+0.4**

*ISCJB **18** 12:24:31.3±0.9, 39°21N±0°06×2°63W±0°10, h0km, Error ellipse: s-maj=10.7km s-min=8.4km az=178.4*
*CSEM **18** 12:24:32.9, 39°25N×2°56W, h0km, ML1.1, Mining explosion. After MDD*
*MDD **18** 12:25:12.2±0.4, 37°08N×3°50W, h0km, mbLg1.3/2, Error ellipse: s-maj=5.3km s-min=1.7km az=138.0, PROXIMO SIN SOLUCION*

ISC 18 12:24:32.0±1.2, **39°27N**±0°05×**2°58W**±0°06, **h0**km, **n16**, σ**0°72/10, 1C-1D, Spain**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EVIA	**Vianos**	**0.63**	**175**	Lg	Lg	12 24 52.3	
	SNR=7.9						
ETOB	**Tobarra**	**1.01**	**128**	Pg	**Pg**	**12 24 51.4**	**-0.1**
	1.2nm,0.3s,SNR=9.7						
ETOB				Lg	Lg	12 25 04.7	
	2.3nm,0.3s,SNR=6.9						
ESDC	**Sonseca Array**	**1.15**	**291**	Pg	**Pg**	**12 24 54.0**	**0.0**
	0.3nm,0.2s,SNR=5.3						
ESDC				Lg	Lg	12 25 10.7	
	0.4nm,0.3s,SNR=4.1						
EHUE	**Huescar**	**1.45**	**181**	Pg	**Pn**	**12 24 59.1**	**-0.5**
	SNR=7.9						
EHUE				Lg	Lg	12 25 18.5	
	SNR=7.9						
EBAN	**Banos Encina**	**1.45**	**221**	Pg	**Pn**	**12 24 58.9**	**-0.7**
	SNR=7.9						
EBAN				Lg	Lg	12 25 18.6	
	SNR=7.9						
EQES	**Quesada**	**1.51**	**195**	Pg	**Pn**	**12 24 59.9**	**-0.6**
	SNR=7.9						
EQES				Lg	Lg	12 25 20.5	
	2.0nm,0.4s,SNR=8.1						
ETOR	**Torete**	**1.60**	**14**	P	**Pn**	**12 25 02.0**	**+0.3**
	4.0nm,0.3s,SNR=7.0						
ETOR				Lg	Lg	12 25 25.3	
	9.6nm,0.4s,SNR=9.8						
EMUR	**La Murta**	**1.77**	**143**	Lg	Lg	12 25 28.1	
	SNR=7.9						
ECOG	**Cogollos-Vega**	**2.13**	**202**	Pg	Pg	12 25 16.1	+3.1
	5.7nm,0.1s,SNR=7.9						
ECOG				Lg	Lg	12 25 18.9	
	5.9nm,0.1s,SNR=7.9						
ECOG	**Cogollos-Vega**	**2.13**	**202**	Pg	Pg	12 25 16.1	+3.1
	5.7nm,0.1s,SNR=7.9						
ECOG				Lg	Lg	12 25 18.9	
	5.9nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**2.17**	**199**	⇑Pg	**Pg**	**12 25 14.7**	**+1.1**
	4.5nm,0.1s,SNR=18						
EQUE				Lg	Lg	12 25 16.6	
	5.7nm,0.0s,SNR=7.9						
EQUE	**Quentar**	**2.17**	**199**	Pg	**Pg**	**12 25 14.7**	**+1.1**
	4.5nm,0.1s,SNR=18						
EQUE				Lg	Lg	12 25 16.6	
	5.7nm,0.0s,SNR=7.9						
EBER	**Berja**	**2.38**	**186**	Lg	Lg	12 25 29.2	
	0.4nm,0.1s,SNR=7.9						
EBER	**Berja**	**2.38**	**186**	Lg	Lg	12 25 29.2	
	0.4nm,0.1s,SNR=7.9						
ERON	**Agron**	**2.45**	**204**	⇓Pg	**Pb**	**12 25 16.8**	**-0.2**
	1.6nm,0.1s,SNR=18						
ERON				Lg	Lg	12 25 21.2	
	0.7nm,0.1s,SNR=7.9						
ERON	**Agron**	**2.45**	**204**	Pg	**Pb**	**12 25 16.8**	**-0.2**
	1.6nm,0.1s,SNR=18						
ERON				Lg	Lg	12 25 21.2	
	0.7nm,0.1s,SNR=7.9						

*ISCJB **18** 12:27:07.7±0.8, 20°63S±0°05×68°8W±0°2, h115km±13km, mb3.5/1, Error ellipse: s-maj=24.0km s-min=7.5km az=170.2*
*GUC **18** 12:27:08.5±0.7, 20°73S×69°17W, h124km±6km, ML3.8*
*IDC **18** 12:27:10.2±1.5, 20°82S×68°40W, h117km±18km, mb3.5/1, mb1 3.4/3, mb1mx3.2/18, mbtmp3.4/3, Error ellipse: s-maj=55.3km s-min=16.3km az=108.0*

ISC 18 12:27:08.6±1.0, **20°58S**±0°05×**68°7W**±0°1, **h102**km±14km, **n12**, σ**1°83/17, 4C-1D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**Plate Boundary**	**0.86**	**237**	*i* P	**Pn**	**12 27 26.8**	**-1.0**
PB01				*i* S	**Sn**	**12 27 40.9**	**-1.3**
PB01				AML	AML	12 27 42.1	
	comp=E,5µm,0.8s						
PB09	**Plate Boundary**	**1.31**	**202**	⇑*i* P	**Pn**	**12 27 32.3**	**-0.5**
PB09				*i* S	**Sn**	**12 27 50.2**	**-0.9**
PB09				AML	AML	12 27 51.9	
	comp=N,3µm,0.5s						
PSGC	**Pisagua**	**1.65**	**306**	⇑*i* P	**Pn**	**12 27 36.5**	**-0.4**
PSGC				*i* S	**Sn**	**12 27 57.6**	**-0.7**
PSGC				AML	AML	12 28 03.5	
	comp=N,656nm,0.4s						
MNMC	**Minimini**	**1.66**	**330**	⇑*i* P	**Pn**	**12 27 38.6**	**+1.4**
MNMC				*i* S	**Sn**	**12 28 01.9**	**+2.9**
MNMC				AML	AML	12 28 06.5	
	comp=N,2µm,0.3s						
PB04	**Plate Boundary**	**1.83**	**203**	⇓*i* P	Pn	12 27 42.8	+3.8
PB04				*i* S	**Sn**	**12 28 07.3**	**+5.1**
PB04				AML	AML	12 28 18.0	
	comp=E,473nm,1.0s						
LVC	**Limon Verde**	**2.03**	**185**	*e*P	**Pn**	**12 27 42.0**	**+0.1**
LVC				*i* S	**Sn**	**12 28 07.9**	**+0.6**
LVC	**Limon Verde**	**2.03**	**185**	P	**Pn**	**12 27 42.2**	**+0.3**
	comp=E,7.2nm,0.3s,baz=7.4,slow=9.8,SNR=46						
LVC				S	**Sn**	**12 28 06.4**	**-0.9**
	comp=E,26nm,0.3s,baz=268,slow=22,SNR=28						
CEN1	**Los Morros**	**3.12**	**206**	*e*P	**Pn**	**12 27 56.4**	**+0.3**
LPAZ	**La Paz**	**4.30**	**7**	P	Pn	12 28 17.4	+4.8
	comp=E,1.6nm,0.3s,baz=162,slow=4.1,SNR=5.5						
SIV	**San Ignacio**	**8.57**	**59**	P	**Pn**	**12 29 09.4**	**-0.5**
	comp=E,2.0nm,0.3s,baz=258,slow=12,SNR=20						
TORD	**Torodi Ar. Bea**	**76.87**	**70**	P	**P**	**12 38 49.2**	**-0.9**
	comp=E,0.4nm,0.4s,baz=258,slow=6.1,SNR=4.4						
MKAR	**Makanchi Array**	**144.78**	**35**	PKP	**PKPab**	**12 46 32.2**	**-0.5**
	comp=E,0.3nm,0.6s,baz=324,slow=3.5,SNR=3.9						

*ISCJB **18** 12:33:12.8±1.7, 50°92N±0°06×175°67W±0°06, h11km±14km, mb3.6/2, MS3.6/3, Error ellipse: s-maj=9.8km s-min=6.3km az=177.0*
*IDC **18** 12:33:13.0±3.1, 51°52N×175°85W, h0km, mb3.6/2, mb1 3.7/3, mb1mx3.3/27, mbtmp3.4/3, MS4.2/2, Ms1 4.2/2, ms1mx3.0/34, Error ellipse: s-maj=91.2km s-min=32.5km az=2.0*
*NEIC **18** 12:33:15.1, 51°07N×175°71W, h10km, ML3.4(AEIC), After AEIC.*

ISC 18 12:33:12.8±1.9, **51°05N**±0°09×**175°70W**±0°04, **h8**km±11km, **n33**, σ**1°01/35, MS4.2/3, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ETKA	**Kagalaska Isla**	**0.93**	**332**	P	**Pn**	**12 33 32.4**	**+0.3**
ETKA				S	**Sn**	**12 33 45.2**	**-0.4**
GSCK	**Great Sitkin C**	**1.01**	**344**	P	**Pn**	**12 33 33.8**	**+0.6**
GSMY	**Great Sitkin M**	**1.02**	**348**	P	**Pn**	**12 33 33.9**	**+0.5**
GSTD	**Great Sitkin T**	**1.05**	**345**	P	**Pn**	**12 33 34.5**	**+0.6**
GSTD				S	**Sn**	**12 33 49.5**	**+0.8**
GSTR	**Great Sitkin T**	**1.07**	**348**	P	**Pn**	**12 33 35.0**	**+0.9**
KIRH	**Kanaga Island**	**1.22**	**315**	P	**Pn**	**12 33 37.0**	**+0.8**
KIKV	**Kanaga Island**	**1.24**	**313**	P	**Pn**	**12 33 37.1**	**+0.7**
KIKV				S	**Sn**	**12 33 55.5**	**+2.2**
KINC	**Kanaga Island**	**1.26**	**315**	P	**Pg**	**12 33 37.4**	**+0.6**
KICM	**Kanaga Island**	**1.28**	**314**	P	**Pg**	**12 33 37.8**	**+0.5**
TAPA	**Tanaga Point A**	**1.53**	**301**	P	**Pb**	**12 33 41.2**	**-0.1**
KOKL	**Mount Kliuchef**	**1.58**	**36**	P	**Pb**	**12 33 42.4**	**+0.1**
KOFP	**Korovin Flat P**	**1.58**	**38**	P	**Pb**	**12 33 42.5**	**+0.2**
KOKV	**Korovin Volcan**	**1.63**	**35**	P	**Pb**	**12 33 42.7**	**-0.3**
KOKV				S	**Sg**	**12 34 05.0**	**0.0**
KOSE	**Korovin Southe**	**1.66**	**38**	P	**Pg**	**12 33 44.1**	**-0.4**
TASE	**Tanaga Southea**	**1.66**	**299**	P	**Pb**	**12 33 43.5**	**-0.1**
TAFP	**Tanaga Falls P**	**1.66**	**302**	P	**Pb**	**12 33 43.3**	**-0.4**
TAFP				S	**Sg**	**12 34 05.8**	**-0.3**
TANO	**Tanaga North**	**1.74**	**301**	P	**Pb**	**12 33 45.5**	**+0.5**
GAEA	**Gareloi East**	**2.04**	**292**	P	**Pb**	**12 33 49.2**	**-0.9**
GALAA	**Gareloi Lava P**	**2.05**	**292**	P	**Pb**	**12 33 49.8**	**-0.4**
GANE	**Gareloi Northe**	**2.07**	**293**	P	**Pb**	**12 33 49.5**	**-1.1**
CESW	**Semis' Southwe**	**3.08**	**288**	P	**Pn**	**12 34 02.8**	**+1.1**
AMKA	**Amchitka**	**3.16**	**278**	P	**Pn**	**12 34 03.2**	**+0.5**
LSPA	**Little Sitkin**	**3.69**	**287**	P	**Pn**	**12 34 11.3**	**+1.2**
NIKH	**Nikolski High**	**4.65**	**63**	P	**Pn**	**12 34 24.9**	**+1.7**
ILAR	**Eielson Array**	**20.32**	**37**	P	**P**	**12 37 46.8**	**-2.1**
ILAR	**Eielson Array**	**20.32**	**37**	P	**P**	**12 37 46.8**	**-2.1**
	0.1nm,0.3s,baz=238,slow=9.3,SNR=10						
PDAR	**Pinedale Array**	**44.54**	**74**	P	**P**	**12 41 26.0**	**+0.9**
PDAR	**Pinedale Array**	**44.54**	**74**	P	**P**	**12 41 26.0**	**+0.9**
	0.2nm,0.3s,baz=283,slow=8.2,SNR=2.7						
MKAR	**Makanchi Array**	**61.75**	**310**	P	**P**	**12 43 30.4**	**-1.1**
MKAR	**Makanchi Array**	**61.75**	**310**	P	**P**	**12 43 30.4**	**-1.1**
	0.4nm,0.4s,baz=50,slow=6.7,SNR=8.2						
TGY	**Tagaytay City**	**62.46**	**258**	LR	LR	13 12 15.2	
	comp=Z,2.7nm,18.8s,baz=176,slow=38						
RAO	**Raoul Island**	**79.97**	**182**	LR	LR	13 13 29.9	
	comp=Z,161nm,21.8s,baz=133,slow=30						
FITZ	**Fitzroy Crossi**	**85.83**	**235**	LR	LR	13 23 24.8	
	comp=Z,95nm,20.4s,baz=233,slow=35						

IDC 18 12:37:32.1±1.7, **9°94S**×**125°40E**, **h0**km, **mb3.8/1, mb1 3.6/4, mb1mx3.5/19, mbtmp3.5/4, ML3.2/3, MS3.2/1, Ms1 3.2/1, ms1mx2.3/34, Error ellipse: s-maj=91.6km s-min=26.7km az=66.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**8.12**	**178**	Pn	Pn	12 39 30.7	-0.8
	0.2nm,0.3s,baz=356,slow=13,SNR=15						
FITZ				Sn	Sn	12 40 55.3	-8.7
	0.6nm,0.3s,baz=111,slow=17,SNR=4.1						
WRA	**Warramunga Arr**	**13.17**	**140**	Pn	Pn	12 40 41.2	+0.6
	0.2nm,0.3s,baz=316,slow=13,SNR=11						
WRA				Sn	Sn	12 43 02.7	-5.3
	0.2nm,0.3s,baz=318,slow=24,SNR=3.8						
ASAR	**Alice Springs**	**15.89**	**150**	Pn	Pn	12 41 17.6	+0.2
	0.1nm,0.3s,baz=326,slow=11,SNR=7.8						
ASAR				Sn	Sn	12 44 07.1	-7.2
	0.1nm,0.3s,baz=327,slow=22,SNR=3.1						
KSRS	**Korea Array**	**47.20**	**3**	LR	LR	13 06 05.9	
	comp=Z,23nm,18.9s,baz=215,slow=36						
MKAR	**Makanchi Array**	**68.31**	**330**	P	P	12 48 35.2	0.0
	0.8nm,0.8s,baz=129,slow=7.5,SN

	comp=Z,1μm,0.2s						
IRAZ	**Razeghan**	**3.71**	**35**	*e*Pn	**Pn**	**12 53 43.5**	**+1.3**
IR5	**Iran Long-Peri**	**3.91**	**43**	*e*Pn	**Pn**	**12 53 46.4**	**+1.5**
IR5	**Iran Long-Peri**	**3.91**	**43**	*e*Pn	**Pn**	**12 53 46.4**	**+1.5**
GHVR	**GHOM**	**3.92**	**57**	*e*Pn	**Pn**	**12 53 46.2**	**+1.2**
GHVR	**GHOM**	**3.92**	**57**	*e*Pn	**Pn**	**12 53 46.2**	**+1.2**
IGAR	**Gharneh**	**4.00**	**89**	*e*Pn	**Pn**	**12 53 47.1**	**+0.9**
IGAR				*e*		12 54 36.5	
	comp=Z,2μm,0.2s						
IZEF	**Zefreh**	**4.26**	**82**	*e*Pn	**Pn**	**12 53 50.8**	**+1.0**
IZEF				*e*		12 55 07.4	
	comp=Z,613nm,0.3s						
IZEF	**Zefreh**	**4.26**	**82**	*e*Pn	**Pn**	**12 53 50.8**	**+1.0**
IR3	**Iran Long-Peri**	**4.35**	**44**	*e*Pn	**Pn**	**12 53 52.3**	**+1.4**
IR3	**Iran Long-Peri**	**4.35**	**44**	*e*Pn	**Pn**	**12 53 52.3**	**+1.4**
IVRN	**Varamin**	**4.50**	**54**	*e*Pn	**Pn**	**12 53 54.0**	**+1.1**
IVRN				*e*		12 54 14.9	
	comp=Z,806nm,0.3s						
IVRN	**Varamin**	**4.50**	**54**	*e*Pn	**Pn**	**12 53 54.0**	**+1.1**
NASN	**Na'in**	**4.65**	**84**	*e*Pn	**Pn**	**12 53 55.8**	**+0.5**
NASN	**Na'in**	**4.65**	**84**	*e*Pn	**Pn**	**12 53 55.8**	**+0.5**
DAMV	**Damavand**	**5.04**	**49**	*e*Pn	**Pn**	**12 54 02.0**	**+1.5**
DAMV	**Damavand**	**5.04**	**49**	*e*Pn	**Pn**	**12 54 02.0**	**+1.5**
IDMV	**Damavand**	**5.04**	**50**	*e*Pn	**Pn**	**12 54 01.2**	**+0.6**
IDMV				*e*		12 55 31.7	
	comp=Z,435nm,0.4s						
IDMV	**Damavand**	**5.04**	**50**	*e*Pn	**Pn**	**12 54 01.2**	**+0.6**
ISAD	**Sadrabad**	**5.42**	**93**	*e*Pn	**Pn**	**12 54 06.5**	**+0.7**
ISAD				*e*		12 55 12.2	
	comp=Z,493nm,0.3s						
ISAD	**Sadrabad**	**5.42**	**93**	*e*Pn	**Pn**	**12 54 06.5**	**+0.7**
IFIR	**Firoozkooh**	**5.56**	**53**	*e*		12 54 24.8	
IFIR	comp=Z,275nm,0.2s			*e*Pn	**Pn**	**12 54 08.5**	**+0.9**
ILAS	**Lasjerd**	**5.56**	**56**	*e*Pn	**Pn**	**12 54 08.2**	**+0.5**
ILAS	**Lasjerd**	**5.56**	**56**	*e*Pn	**Pn**	**12 54 08.2**	**+0.5**
ICHK	**Chekchek**	**6.00**	**90**	*e*Pn	**Pn**	**12 54 14.5**	**+0.7**
ICHK				*e*		12 55 27.4	
	comp=Z,287nm,0.2s						
ICHK	**Chekchek**	**6.00**	**90**	*e*Pn	**Pn**	**12 54 14.5**	**+0.7**
ISHM	**Shahmirzad**	**6.01**	**54**	*e*Pn	**Pn**	**12 54 14.8**	**+0.9**
ISHM				*e*		12 54 48.3	
	comp=Z,440nm,0.3s						
ISHM	**Shahmirzad**	**6.01**	**54**	*e*Pn	**Pn**	**12 54 14.8**	**+0.9**
IANJ	**Anjilo**	**6.28**	**59**	*e*Pn	**Pn**	**12 54 18.3**	**+0.7**
IANJ				*e*		12 54 21.5	
	comp=Z,164nm,0.3s						
IANJ	**Anjilo**	**6.28**	**59**	*e*Pn	**Pn**	**12 54 18.3**	**+0.7**
IMEH	**Mehriz**	**6.29**	**97**	*e*Pn	**Pn**	**12 54 18.2**	**+0.6**
IMEH				*e*		12 55 53.4	
	comp=Z,135nm,0.3s						
IMEH	**Mehriz**	**6.29**	**97**	*e*Pn	**Pn**	**12 54 18.2**	**+0.6**
IBAF	**Bafgh**	**7.05**	**94**	*e*Pn	**Pn**	**12 54 28.3**	**+0.2**
IBAF				*e*		12 55 17.2	
	comp=Z,84nm,0.3s						
IBAF	**Bafgh**	**7.05**	**94**	*e*Pn	**Pn**	**12 54 28.3**	**+0.2**
MMAI	**Mount Meron Ar**	**10.06**	**277**	Lg	Lg	12 58 03.5	
	comp=Z,0.8nm,0.3s,baz=91,slow=35,SNR=2.3						
EIL	**Elat**	**10.95**	**259**	Lg	Lg	12 58 38.2	
	comp=Z,0.4nm,0.3s,baz=50,slow=17,SNR=3.3						
AKTO	**Aktyubinsk**	**19.69**	**21**	P	**P**	**12 57 13.7**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=199,slow=9.4,SNR=4.6						
AKASG	**Malin Array Be**	**22.65**	**329**	P	**P**	**12 57 45.0**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=140,slow=9.1,SNR=5.0						
BVAR	**Borovoye Array**	**26.48**	**32**	P	**P**	**12 58 21.6**	**+0.6**
	comp=Z,1.3nm,0.5s,baz=223,slow=9.4,SNR=6.3						
KURBB	**Kurchatov Arra**	**29.32**	**42**	P	**P**	**12 58 47.2**	**+0.8**
	comp=Z,1.2nm,0.5s,baz=234,slow=8.1,SNR=8.2						
MKAR	**Makanchi Array**	**30.27**	**51**	P	**P**	**12 58 55.1**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=247,slow=6.9,SNR=12						
FINES	**FINESS Array B**	**32.17**	**341**	P	**P**	**12 59 11.0**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=179,slow=8.3,SNR=4.6						
ZALV	**Zalesovo Beam**	**34.23**	**40**	P	**P**	**12 59 29.1**	**-0.4**
	comp=Z,1.0nm,0.4s,baz=257,slow=9.6,SNR=7.7						
NOA	**NORSAR Array B**	**37.02**	**332**	P	**P**	**12 59 52.8**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=124,slow=8.7,SNR=3.3						
ARCES	**ARCESS Array B**	**39.16**	**348**	P	**P**	**13 00 10.4**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=157,slow=10,SNR=8.0						
TORD	**Torodi Ar. Bea**	**45.82**	**256**	P	**P**	**13 01 05.5**	**-0.5**
	comp=Z,1.2nm,0.9s,baz=53,slow=7.9,SNR=9.0						
TORD				LR	LR	13 22 11.3	
	comp=Z,25nm,20.2s,baz=230,slow=39						
CMAR	**Chiang Mai Arr**	**48.22**	**94**	P	**P**	**13 01 25.7**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=295,slow=8.8,SNR=3.0						
KSRS	**Korea Array**	**64.36**	**61**	P	**P**	**13 03 18.9**	**-0.7**
	comp=Z,0.4nm,0.3s,baz=281,slow=7.2,SNR=3.9						

IDC 18 13:00:28.9±1.1, 31°20N×97°36E, h0km, mb3.6/6, mb1 3.8/7, mb1mx3.6/26, mbtmp3.6/7, ML3.5/1, Error ellipse: s-maj=43.2km s-min=18.4km az=60.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
SHL	**Shillong**	**7.40**	**222**	*e*x		Sn	13 03 47.5	+4.2
MKAR	**Makanchi Array**	**19.43**	**328**	P		Pn	13 04 57.7	-0.2
	0.1nm,0.3s,baz=133,slow=13,SNR=4.5							
AAK	**Ala-Archa**	**21.48**	**308**	P		P	13 05 23.4	+4.1
	2.0nm,0.5s,baz=143,slow=9.8,SNR=4.4							
KURBB	**Kurchatov Arra**	**23.94**	**330**	P		P	13 05 44.9	+0.4
	0.3nm,0.2s,baz=132,slow=11,SNR=3.1							
ZALV	**Zalesovo Beam**	**24.47**	**342**	P		P	13 05 49.4	0.0
	1.1nm,0.6s,baz=166,slow=7.0,SNR=3.4							
KSRS	**Korea Array**	**25.93**	**68**	P		P	13 06 03.4	+0.6
	0.7nm,0.6s,baz=261,slow=9.3,SNR=3.6							
WRA	**Warramunga Arr**	**62.02**	**140**	P		P	13 10 51.1	-0.1
	1.3nm,0.6s,baz=333,slow=7.3,SNR=20							
ASAR	**Alice Springs**	**64.82**	**143**	P		P	13 11 09.8	+0.1
	0.6nm,0.5s,baz=327,slow=6.6,SNR=20							
ILAR	**Eielson Array**	**72.17**	**24**	P		P	13 11 54.1	-1.1
	0.2nm,0.7s,baz=284,slow=3.6,SNR=3.1							

*BJI **18** 13:11:12.6, 9.°24S×124.°25E, h165km, mB4.8/10, mb4.8/15*
*AUST **18** 13:11:17.7±0.2, 8.°53S×123.°86E, h124km, Error ellipse: s-maj=0.8km s-min=0.6km az=32.0*
*NEIC **18** 13:11:17.7±1.1, 8.°42S×123.°83E, h139km±10km, mb4.9/13, Error ellipse: s-maj=11.9km s-min=6.0km az=53.0*
*ISCJB **18** 13:11:19.1±0.4, 8.°55S±0.°03×123.°82E±0.°03, h167km±4km, mb4.5/35, Error ellipse: s-maj=6.5km s-min=3.9km az=139.3*
*DJA **18** 13:11:20.8±0.4, 9.°3S×12.°4E±.°, h147km±7km, M4.7/10, mb4.8/10, mB4.8/4, MLv4.8/10, Mw(mB)4.1/4*
*IDC **18** 13:11:21.3±1.7, 8.°39S×123.°78E, h168km±15km, mb4.2/25, mb1 4.2/27, mb1mx4.2/31, mbtmp4.2/27, Error ellipse: s-maj=13.4km s-min=8.2km az=63.0*

ISC 18 13:11:20.2±0.6, 8°59S±0.°04×123°81E±0.°05, h161km±5km, n158, σ1°60/176, mb4.6/34, 1D, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
MMRI	**Maumere**	**1.55**	**268**	P		**Pn**	**13 11 51.8**	**+0.7**
MMRI				S		**Sn**	**13 12 15.6**	**+0.8**
BBSI	**Bau Bau**	**3.32**	**338**	P		**Pn**	**13 12 12.9**	**+0.9**
BASI	**Baing, Sumba**	**3.57**	**243**	P		**Pn**	**13 12 15.3**	**+0.1**
BASI				S		**Sn**	**13 12 56.7**	**-1.3**
WSI	**Waingapu**	**3.63**	**253**	P		**Pn**	**13 12 15.8**	**-0.1**
WSI				S		**Sn**	**13 12 57.5**	**-1.8**
WSI	**Waingapu**	**3.63**	**253**	P		**Pn**	**13 12 15.9**	**0.0**
	baz=3.7,SNR=21							
WSI				S		**Sn**	**13 12 58.1**	**-1.1**
	baz=3.7,SNR=6.7							
BSSI	**Bau Bau, Buton**	**4.09**	**306**	P		**Pn**	**13 12 22.4**	**+0.5**
WBSI	**Waikabubak, Su**	**4.48**	**256**	P		**Pn**	**13 12 26.1**	**-1.0**
WBSI				S		**Sn**	**13 13 14.8**	**-4.4**
BKSI	**Bulukumba**	**4.89**	**311**	P		**Pn**	**13 12 32.4**	**0.0**
KAPI	**Kappang**	**5.37**	**311**	*e*Pn		**Pn**	**13 12 36.5**	**-2.1**
	153nm,1.0s							
KAPI	**Kappang**	**5.37**	**311**	P		**Pn**	**13 12 38.4**	**-0.3**
	144nm,1.1s,1μm0.4nm							
KAPI	**Kappang**	**5.37**	**311**	P		**Pn**	**13 12 38.2**	**-0.4**
	9.9nm,0.3s,baz=154,slow=6.0,SNR=31							
SPSI	**Sidrap Palu**	**6.10**	**319**	P		**Pn**	**13 12 49.1**	**+0.7**
	78nm,0.8s,0.3nm							
SKSI	**Soroako, Sulaw**	**6.51**	**338**	P		**Pn**	**13 12 54.4**	**+0.6**
	72nm,0.8s,538nm0.2nm							
TTSI	**Tana Toraja**	**6.79**	**324**	P		**Pn**	**13 13 00.0**	**+2.5**
	79nm,1.1s,697nm0.2nm							
BNDI	**Bandanaira**	**7.28**	**57**	S		Sn	13 13 57.1	-29
	baz=7.2,SNR=5.8							
MTN	**Manton Dam**	**8.35**	**121**	P		**Pn**	**13 13 16.6**	**-1.5**
	baz=8.3,SNR=260							
MTN				S		Sn	13 14 43.6	-7.6
	baz=8.3,SNR=10							
SRBI	**Singaraja**	**8.52**	**273**	P		**Pn**	**13 13 19.4**	**-1.1**
	66nm,1.1s							
KNRA	**Kununurra**	**8.55**	**146**	P		**Pn**	**13 13 19.1**	**-1.7**
	baz=8.6,SNR=394							
KNRA				S		Sn	13 14 49.6	-6.5
	baz=8.6,SNR=20							
KDU	**Kakadu**	**9.44**	**116**	P		**Pn**	**13 13 30.3**	**-2.3**
	comp=Z,9.4nm,SNR=70							
JAGI	**Jajag, Banyuwa**	**9.55**	**270**	P		**Pn**	**13 13 33.2**	**-1.0**
	81nm,0.5s							
JAGI	**Jajag, Banyuwa**	**9.55**	**270**	P		**Pn**	**13 13 31.5**	**-2.6**
	baz=9.6,SNR=12							
JAGI				S		Sn	13 15 11.1	-9.2
	baz=9.6,SNR=8.7							
FITZ	**Fitzroy Crossi**	**9.62**	**170**	P		**Pn**	**13 13 33.2**	**-1.9**
FITZ				S		Sn	13 15 14.5	-7.4
FITZ	**Fitzroy Crossi**	**9.62**	**170**	P		**Pn**	**13 13 33.2**	**-1.9**
	5.0nm,0.3s,baz=2.4,slow=8.3,SNR=222							
FITZ				S		Sn	13 15 14.5	-7.4
	11nm,0.3s,baz=358,slow=10.0,SNR=4.7							
FITZ	**Fitzroy Crossi**	**9.62**	**170**	P		**Pn**	**13 13 33.1**	**-1.9**
	baz=9.7,SNR=101							
FITZ				S		Sn	13 15 15.0	-6.9
	baz=9.7,SNR=20							
FAKI	**Fak Fak**	**10.11**	**57**	P		**Pn**	**13 13 41.5**	**-0.1**
	baz=10,SNR=6.1							
SJI	**Sawahan**	**11.95**	**273**	P		**Pn**	**13 14 06.0**	**+0.3**
	82nm,0.6s							
UGM	**Wanagama**	**13.16**	**272**	P		**Pn**	**13 14 19.6**	**-1.6**
	baz=13,SNR=5.8							
UGM				S		**Sn**	**13 16 46.0**	**-1.3**
	baz=13,SNR=4.8							
TSM	**Tawau**	**14.10**	**335**	P		**P**	**13 14 35.1**	**-0.7**
MYLDM	**Lahad Datu**	**14.67**	**339**	P		**P**	**13 14 43.6**	**+1.6**
STKI	**Sintang**	**15.00**	**304**	P		**P**	**13 14 47.6**	**+1.9**
WRA	**Warramunga Arr**	**15.21**	**139**	P		**Pn**	**13 14 44.5**	**-2.3**
WRA				S		Sn	13 17 23.2	-13
WRA	**Warramunga Arr**	**15.21**	**139**	P		**Pn**	**13 14 44.5**	**-2.3**
	5.1nm,0.3s,baz=316,slow=13,SNR=223							
WRA				S		Sn	13 17 23.2	-13
	6.4nm,0.3s,baz=317,slow=25,SNR=11							
WRAB	**Tennant Creek**	**15.21**	**139**	*e*Pn		**Pn**	**13 14 44.6**	**-2.2**
	143nm,0.9s							
WRAB				*e*Sn		Sn	13 17 23.8	-12
SDKM	**Sandakan**	**15.60**	**335**	P		**P**	**13 14 54.7**	**+2.2**
SBUM	**Sibu**	**15.93**	**313**	P		**P**	**13 14 58.7**	**+2.6**
SBUM	**Sibu**	**15.93**	**313**	P		**P**	**13 14 57.8**	**+1.7**
KKM	**Kota Kinabalu**	**16.39**	**332**	P		**Pn**	**13 15 01.6**	**+0.2**
KKM	**Kota Kinabalu**	**16.39**	**332**	P		**Pn**	**13 15 02.9**	**+1.5**
	baz=16,SNR=5.5							
KSM	**Kuching**	**16.76**	**306**	*e*P		**P**	**13 15 03.9**	**-1.4**
	12nm,0.6s							
KSM	**Kuching**	**16.76**	**306**	P		**Pn**	**13 15 08.1**	**+2.3**
KSM	**Kuching**	**16.76**	**306**	P		**Pn**	**13 15 08.4**	**+2.6**
	baz=17,SNR=9.8							
AS31	**Alice Springs**	**17.84**	**148**	*e*P		**Pn**	**13 15 18.8**	**+0.3**
AS31				*e*S		**S**	**13 18 27.3**	**-6.6**
ASAR	**Alice Springs**	**17.84**	**148**	P		**Pn**	**13 15 18.9**	**+0.3**
ASAR				S		**S**	**13 18 28.0**	**-5.9**
ASAR	**Alice Springs**	**17.84**	**148**	P		**Pn**	**13 15 18.9**	**+0.3**
	6.3nm,0.3s,baz=324,slow=10,SNR=411							
ASAR				S		**S**	**13 18 28.0**	**-5.9**
	1.5nm,0.3s,baz=315,slow=18,SNR=5.2							
MEEK	**Meekatharra**	**18.61**	**195**	P		**Pn**	**13 15 27.4**	**-0.2**
	baz=19,SNR=20							
MEEK				S		**S**	**13 18 52.1**	**+2.9**
	baz=19,SNR=5.8							
QIS	**Mount Isa**	**19.35**	**130**	P		**Pn**	**13 15 35.1**	**-1.2**
	baz=19,SNR=117							
COEN	**Coen**	**19.72**	**107**	*e*P		**P**	**13 15 36.8**	**-0.7**
	254nm,0.7s							
COEN	**Coen**	**19.72**	**107**	P		**P**	**13 15 38.4**	**+0.9**
	baz=20,SNR=3.7							
MORW	**Morawa**	**21.64**	**199**	P		**P**	**13 15 58.8**	**+0.9**
	baz=22,SNR=6.4							
MORW				S		Sn	13 20 01.0	-8.2
	baz=22,SNR=6.1							
MTSU	**Mount Surprise**	**22.07**	**118**	P		**P**	**13 16 03.5**	**+1.0**
	baz=22,SNR=18							
FORT	**Forrest**	**22.43**	**170**	*e*P		**P**	**13 16 05.8**	**+0.1**
	31nm,0.6s							
FORT	**Forrest**	**22.43**	**170**	P		**P**	**13 16 06.7**	**+0.9**
	baz=23,SNR=24							
KMBL	**Kambalda**	**22.73**	**184**	P		**P**	**13 16 09.9**	**+1.3**
	baz=23,SNR=11							
PMG	**Port Moresby**	**23.08**	**94**	P		**P**	**13 16 12.8**	**+0.9**
PMG	**Port Moresby**	**23.08**	**94**	P		**P**	**13 16 12.8**	**+0.9**
	14nm,0.9s,baz=284,slow=8.3,SNR=4.4							
KLBR	**Kellerberrin**	**23.57**	**193**	P		**P**	**13 16 18.6**	**+2.4**
	baz=24,SNR=6.0							
CTA	**Charters Tower**	**24.53**	**120**	P		**P**	**13 16 27.8**	**+2.7**
CTA	**Charters Tower**	**24.53**	**120**	P		**P**	**13 16 27.8**	**+2.7**
	9.4nm,0.6s,baz=297,slow=13,SNR=12							
NWAO	**Narrogin (SRO)**	**24.97**	**193**	P		**P**	**13 16 29.9**	**+1.0**
NWAO	**Narrogin (SRO)**	**24.97**	**193**	P		**P**	**13 16 29.9**	**+1.0**
	8.5nm,0.7s,baz=14,slow=12,SNR=5.7							
QLP	**Quilpie**	**26.37**	**135**	P		**P**	**13 16 43.9**	**+2.3**
	baz=26,SNR=25							
BBOO	**Buckleboo**	**26.64**	**157**	P		**P**	**13 16 45.2**	**+1.3**
	baz=27,SNR=13							
PSI	**Prapat**	**27.27**	**293**	P		**P**	**13 16 49.1**	**-0.8**
PSI	**Prapat**	**27.27**	**293**	P		**P**	**13 16 49.1**	**-0.8**
	3.0nm,0.4s,baz=199,slow=9.9,SNR=4.8							
STKA	**Stephens Creek**	**28.46**	**147**	P		**P**	**13 17 01.8**	**+1.6**
STKA	**Stephens Creek**	**28.46**	**147**	P		**P**	**13 17 01.8**	**+1.6**
	9.6nm,0.7s,baz=320,slow=10,SNR=20							
STKA	**Stephens Creek**	**28.46**	**147**	P		**P**	**13 17 01.9**	**+1.8**
	baz=29,SNR=16							
RMQ	**Roma**	**29.61**	**130**	P		**P**	**13 17 12.9**	**+2.5**
	baz=30,SNR=7.2							
CMSA	**Cobar Meteorol**	**30.59**	**141**	P		**P**	**13 17 21.3**	**+2.3**
	baz=31,SNR=13							
ARPS	**Mount Arapiles**	**32.48**	**152**	P		**P**	**13 17 38.0**	**+2.4**
	baz=33,SNR=21							
YNG	**Young**	**34.14**	**142**	P		**P**	**13 17 52.7**	**+2.8**
	baz=34,SNR=6.3							
TOO	**Toolangi**	**34.89**	**149**	P		P	13 17 59.8	+3.4
	baz=35,SNR=3.8							
MGCD	**Mangrove Creek**	**35.15**	**138**	P		**P**	**13 17 58.1**	**-0.5**
	baz=35,SNR=5.5							
MGCD	**Mangrove Creek**	**35.15**	**138**	P		**P**	**13 17 58.1**	**-0.5**
	baz=30,SNR=5.5							
CMAR	**Chiang Mai Arr**	**36.39**	**318**	P		**P**	**13 18 10.3**	**+1.0**
CMAR	**Chiang Mai Arr**	**36.39**	**318**	P		**P**	**13 18 10.3**	**+1.0**
	5.8nm,0.8s,baz=142,slow=6.4,SNR=30							
WHN	**Wuhan**	**39.96**	**347**	↓P		**P**	**13 18 39.1**	**+0.2**
KSAR	**Wonju Array Be**	**45.95**	**5**	P		**P**	**13 19 25.8**	**-1.2**
KSAR				PcP		**PcP**	**13 21 00.8**	**-0.4**
KSRS	**Korea Array**	**45.97**	**5**	P		**P**	**13 19 25.8**	**-1.3**
	2.8nm,0.8s,baz=182,slow=9.7,SNR=18							
KSRS				PcP		**PcP**	**13 21 00.8**	**-0.5**
	1.2nm,1.0s,baz=185,slow=3.8,SNR=5.1							
MAJO	**Matsushiro**	**46.89**	**16**	*e*P		**P**	**13 19 31.6**	**-2.8**
	14nm,0.8s							
LZH	**Lanzhou**	**48.25**	**338**	*e*P		**P**	**13 19 45.3**	**+0.2**
LZH				pmax		pmax		
	comp=Z,17nm,1.5s							
LSA	**Lhasa**	**49.36**	**322**	P		**P**	**13 19 55.1**	**+1.0**
LSA				pmax		pmax		
	comp=Z,20nm,0.5s							
LSA	**Lhasa**	**49.36**	**322**	*e*P		**P**	**13 19 52.7**	**-1.4**
	comp=Z,14nm,0.6s							
ODAN	**Odare**	**49.89**	**316**	*e*P		**P**	**13 19 57.7**	**-0.1**
	comp=Z,45nm,0.6s							
TAPN	**Taplejung**	**49.99**	**317**	*e*P		**P**	**13 19 58.6**	**0.0**
	comp=Z,45nm,0.5s							
RAMN	**Ramite**	**50.49**	**316**	*e*P		**P**	**13 20 02.0**	**-0.4**
	comp=Z,118nm,0.5s							
GUN	**Gumba**	**51.59**	**316**	*e*P		**P**	**13 20 10.4**	**-0.3**
	comp=Z,59nm,0.5s							
PKI	**Pulchoki**	**51.71**	**315**	*e*P		**P**	**13 20 11.0**	**-0.5**
	comp=Z,58nm,0.5s							
PKIN	**Phulchoki**	**51.72**	**315**	*e*P		**P**	**13 20 10.6**	**-0.9**
	comp=Z,51nm,0.5s							
KKN	**Kakani**	**51.93**	**315**	*e*P		**P**	**13 20 12.6**	**-0.4**
	comp=Z,21nm,0.5s							
DMN	**Daman**	**51.94**	**315**	*e*P		**P**	**13 20 12.8**	**-0.4**
	comp=Z,38nm,0.6s							
GTA	**Gaotai**	**52.69**	**337**	*e*P		**P**	**13 20 18.0**	**-0.3**
GTA				pmax		pmax		
	comp=Z,5.0nm,1.0s							
USRK	**Ussuriysk Arra**	**53.06**	**7**	P		**P**	**13 20 19.6**	**-1.1**
	comp=Z,15nm,0.7s,baz=191,slow=7.1,SNR=36							
KOLN	**Koldanda**	**53.10**	**314**	*e*P		**P**	**13 20 21.2**	**-0.4**
	comp=Z,56nm,0.6s							
MDJ	**Mudanjiang**	**53.22**	**5**	P		**P**	**13 20 21.1**	**-0.8**
MDJ				pmax		pmax		
	comp=Z,34nm,0.9s							
MDJ				pmax		pmax		
	comp=Z,63nm,6.2s							
MDJ	**Mudanjiang**	**53.22**	**5**	*e*P		**P**	**13 20 18.7**	**-3.2**
	comp=Z,38nm,1.0s							
DANN	**Dangsing**	**53.34**	**315**	*e*P		**P**	**13 20 23.1**	**-0.3**
	comp=Z,89nm,0.5s							
RPZ	**Rata Peaks**	**53.92**	**139**	P		**P**	**13 20 28.7**	**+1.6**
RPZ	**Rata Peaks**	**53.92**	**139**	P		**P**	**13 20 28.7**	**+1.6**
	comp=Z,17nm,0.8s,baz=213,slow=21,SNR=5.3							
ASAJ	**Asahikawa**	**55.15**	**16**	P		**P**	**13 20 35.1**	**-0.8**
ASAJ	**Asahikawa**	**55.15**	**16**	P		**P**	**13 20 35.1**	**-0.8**
	comp=Z,4.3nm,0.7s,baz=89,slow=27,SNR=11							
SONM	**Songino Array**	**58.26**	**346**	P		**P**	**13 20 56.3**	**-1.6**
SONM	**Songino Array**	**58.26**	**346**	P		**P**	**13 20 56.3**	**-1.6**
	comp=Z,3.5nm,0.7s,baz=176,slow=4.3,SNR=2.5							
MK31	**Makanchi Array**	**66.36**	**330**	*e*P		**P**	**13 21 50.9**	**-0.8**
MKAR	**Makanchi Array**	**66.36**	**330**	P		**P**	**13 21 51.5**	**-0.2**
MKAR	**Makanchi Array**	**66.36**	**330**	P		**P**	**13 21 51.5**	**-0.2**
	comp=Z,13nm,0.5s,baz=132,slow=7.7,SNR=101							
KZA	**Kyzart**	**67.16**	**323**	P		**P**	**13 21 57.6**	**+0.3**
	SNR=14							
KBL	**Kabul**	**67.22**	**313**	*e*P		**P**	**13 21 56.3**	**-1.3**
	comp=Z,26nm,0.9s							
KBL	**Kabul**	**67.22**	**313**	P		**P**	**13 21 57.1**	**-0.5**
	baz=67,SNR=4.6							
TKM2	**Tokmak 2**	**67.46**	**324**	*e*P		**P**	**13 21 57.4**	**-1.5**
	comp=Z,6.2nm,0.6s							
TKM2	**Tokmak 2**	**67.46**	**324**	P		**P**	**13 21 58.8**	**-0.2**
	SNR=9.8							
PETK	**Petropavlovsk-**	**67.88**	**21**	P		**P**	**13 22 00.8**	**-0.3**
PETK	**Petropavlovsk-**	**67.88**	**21**	P		**P**	**13 22 00.8**	**-0.3**
	comp=Z,9.4nm,0.6s,baz=189,slow=6.8,SNR=10							
AAK	**Ala-Archa**	**67.94**	**323**	*e*P		**P**	**13 22 00.6**	**-1.3**
	comp=Z,14nm,0.6s							
AAK	**Ala-Archa**	**67.94**	**323**	P		**P**	**13 22 01.9**	**0.0**
	SNR=8.4							
AAK	**Ala-Archa**	**67.94**	**323**	P		**P**	**13 22 01.7**	**-0.2**
	comp=Z,18nm,0.7s,baz=121,slow=5.0,SNR=23							
AML	**Almayashu**	**68.13**	**322**	P		**P**	**13 22 03.3**	**-0.1**
	SNR=15							
USP	**Ospenovka**	**68.31**	**323**	P		**P**	**13 22 03.8**	**-0.2**
	SNR=8.0							
EKS2	**Erkin-Say**	**68.38**	**323**	*e*P		**P**	**13 22 03.6**	**-1.1**
	comp=Z,11nm,0.9s							
EKS2	**Erkin-Say**	**68.38**	**323**	P		**P**	**13 22 04.2**	**-0.4**
	SNR=8.1							
ZAA0	**Zalesovo Array**	**70.45**	**337**	*e*P		**P**	**13 22 14.3**	**-2.6**
ZALV	**Zalesovo Beam**	**70.45**	**337**	P		**P**	**13 22 15.1**	**-1.7**
ZALV	**Zalesovo Beam**	**70.45**	**337**	P		**P**	**13 22 15.1**	**-1.7**
	comp=Z,7.8nm,0.5s,baz=134,slow=4.6,SNR=43							
KURBB	**Kurchatov Arra**	**70.80**	**331**	P		**P**	**13 22 17.7**	**-1.3**
	comp=Z,4.5nm,0.3s,baz=143,slow=4.5,SNR=12							
KURK	**Kurchatov**	**70.82**	**331**	P		**P**	**13 22 17.7**	**-1.4**
MAW	**Mawson**	**71.27**	**201**	P		**P**	**13 22 23.3**	**+1.7**
MAW	**Mawson**	**71.27**	**201**	P		**P**	**13

baz=42,SNR=23
WRA **Warramunga Arr** **44.67 260** P **P** **13 19 44.8 -0.5**
7.8nn,0.7s,baz=97,slow=7.6,SNR=2.5
ASAR **Alice Springs** **44.83 254** P **P** **13 19 46.3 -0.1**
45nn,0.4s,baz=90,slow=7.8,SNR=18
FITZ **Fitzroy Crossi** **53.07 261** P **P** **13 20 47.8 +0.6**
4.8nn,0.6s,baz=74,slow=10.0,SNR=2.8
WSI **Waingapu** **59.93 269** S S 13 28 51.6 -11
baz=58,SNR=3.0
UGM **Wanagama** **69.70 268** P **P** **13 22 36.1 +0.3**
baz=68,SNR=4.5
ASAJ **Asahikawa** **71.37 331** P **P** **13 22 45.5 +0.6**
2.7nn,0.5s,baz=171,slow=3.5,SNR=7.4
KSM **Kuching** **72.75 277** P **P** **13 22 54.8 +1.2**
baz=71,SNR=8.0
PETK **Petropavlovsk-** **73.77 345** P **P** **13 22 57.4 -1.1**
3.5nn,0.8s,baz=129,slow=5.9,SNR=3.6
KSRS **Korea Array** **74.80 318** P **P** **13 23 05.0 +0.4**
1.2nn,0.7s,baz=136,slow=7.1,SNR=7.3
KDAK **Kodiak Island** **78.46 14** P **P** **13 23 23.4 -0.7**
3.0nn,0.7s,baz=162,slow=16,SNR=2.9
NVAR **Mina Array Bea** **79.44 44** P **P** **13 23 29.4 -0.7**
0.5nn,0.7s,baz=226,slow=9.1,SNR=5.3
MAW **Mawson** **83.81 200** P **P** **13 23 53.0 +1.4**
1.3nn,0.6s,baz=146,slow=7.3,SNR=5.2
PSI **Prapat** **83.95 275** P **P** **13 23 53.5 +0.1**
1.7nn,0.3s,baz=157,slow=14,SNR=3.7
TXAR **Lajitas Array** **85.99 58** P **P** **13 24 04.9 +1.9**
0.4nn,0.8s,baz=239,slow=10,SNR=2.9
PDAR **Pinedale Array** **87.37 43** P **P** **13 24 09.3 0.0**
0.5nn,0.7s,baz=227,slow=3.6,SNR=3.0
YKA **Yellowknife Ar** **94.38 25** P **P** **13 24 39.8 -1.0**
0.6nn,0.7s,baz=247,slow=4.4,SNR=5.4
ZALV **Zalesovo Beam** **108.33 322** PKiKP **PKiKP** **13 29 45.3 -0.3**
0.4nn,0.4s,baz=124,slow=2.6,SNR=3.1
MKAR **Makanchi Array** **109.23 314** PKiKP **PKiKP** **13 29 47.3 -0.3**
0.7nn,0.5s,baz=84,slow=1.1,SNR=8.1
KURBB **Kurchatov Arra** **111.97 318** PKiKP **PKiKP** **13 29 52.5 -0.1**
0.8nn,0.6s,baz=87,slow=2.0,SNR=9.9
BVAR **Borovoye Array** **116.94 321** PKP **PKPdf** **13 30 02.1 +0.1**
1.1nn,0.5s,baz=50,slow=2.5,SNR=7.9
SPITS **Spitsbergen Ar** **119.34 357** PKP **PKPdf** **13 30 05.8 -0.2**
0.7nn,0.5s,baz=62,slow=7.0,SNR=5.0
AKTO **Aktyubinsk** **124.96 319** PKP **PKPdf** **13 30 18.0 +0.4**
1.1nn,0.5s,baz=294,slow=4.5,SNR=5.9
ARCES **ARCESS Array B** **126.40 350** PKP **PKPdf** **13 30 19.6 -0.2**
0.7nn,0.5s,baz=38,slow=2.2,SNR=5.3
FINES **FINESS Array B** **133.28 344** PKhKP PKPpre 13 30 23.9
1.6nn,0.9s,baz=0.0,slow=0.4,SNR=2.0
FINES PKP **PKPdf** **13 30 32.7 -0.3**
1.2nn,0.7s,baz=219,slow=1.2,SNR=4.5
HFS **Hagfors** **137.01 351** PKhKP PKPpre 13 30 31.5
3.1nn,1.0s,baz=79,slow=7.5,SNR=3.2
BRTR **Keskin Array B** **144.88 315** PKP **PKPab** **13 30 56.1 -0.4**
6.6nn,0.8s,baz=140,slow=4.0,SNR=22
KHC **Kasperske Hory** **147.46 345** *eP* **PKPbc** **13 31 02.5 +0.2**
GERES **GERESS Array B** **147.70 345** PKPbc **PKPbc** **13 31 03.5 +0.5**
2.3nn,0.5s,baz=5.2,slow=1.5,SNR=12
TORD **Torodi Ar. Bea** **175.19 181** PKP **PKPdf** **13 31 27.8 +0.2**
0.7nn,0.8s,baz=281,slow=1.8,SNR=2.8

CSEM 18 13:34:35.8, 45.97N×15.47E, h0km, ML 0.2, 1C, Mining explosion. After LJU, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CESS	**Cesta pri Krsk**	**0.01**	**305**	*i* Pg	Pg	13 34 35.5	-0.5
CESS				*i* Sg	Sg	13 34 35.8	-0.3
CESS							
	comp=Z,397nm,0.1s						
CESS	**Cesta pri Krsk**	**0.01**	**305**	Pg	Pg	13 34 35.5	-0.5
CESS				*i* Sg	Sg	13 34 35.8	-0.3
	comp=Z,397nm,0.1s						
LEGS	**Legarje**	**0.11**	**259**	*i* Pg	Pg	13 34 37.8	-0.1
LEGS				*i* Sg	Sg	13 34 40.6	+1.2
LEGS	**Legarje**	**0.11**	**259**	*i* Pg	Pg	13 34 37.8	-0.1
LEGS				*i* Sg	Sg	13 34 40.6	+1.2
GOLS	**Golise**	**0.12**	**69**	*i* Pg	Pg	13 34 37.8	-0.3
GOLS				*i* Sg	Sg	13 34 40.2	+0.6
GOLS							
	comp=Z,8.0nm,0.2s						
GOLS	**Golise**	**0.12**	**69**	Pg	Pg	13 34 37.8	-0.3
GOLS				*i* Sg	Sg	13 34 40.2	+0.5
	comp=Z,8.0nm,0.2s						
CRES	**Cresnjev**	**0.14**	**184**	*i* Pg	Pg	13 34 38.1	-0.5
CRES				*i* Sg	Sg	13 34 41.0	+0.4
CRES							
	comp=Z,2.0nm,0.1s						
CRES	**Cresnjev**	**0.14**	**184**	*i* Pg	Pg	13 34 38.1	-0.5
CRES				*i* Sg	Sg	13 34 41.0	+0.5
	comp=Z,2.0nm,0.1s						

ATH ***18*** *14:03:20.9, 35.16N×29.22E, h85km±18km*
IDC ***18*** *14:03:24.2±0.4, 35.49N×28.44E, h0km, mb4.5/25, mb1 4.5/30, mb1mx4.5/33, mbtmp4.4/30, ML4.1/6, MS3.6/12, Ms1 3.6/12, ms1mx3.4/37, Error ellipse: s-maj=12.2km s-min=10.9km az=155.0*
BJI ***18*** *14:03:24.8, 35.12N×28.15E, h38km, mB4.9/7, mb4.7/13, Ms4.4/2, Ms7 4.3/2*
MOS ***18*** *14:03:26.7±1.2, 35.22N×28.44E, h33km, mb4.8/55, Error ellipse: s-maj=5.5km s-min=3.0km az=117.1*
DDA ***18*** *14:03:26.5, 35.11N×28.34E, h58km, MD4.4*
ISK ***18*** *14:03:27.1, 35.26N×28.51E, h40km, ML4.2*
PDG ***18*** *14:03:27.9±0.7, 35.35N×28.57E, h26km±3km, ML4.5/5, Error ellipse: s-maj=1.3km s-min=1.1km az=90.0*
HLW ***18*** *14:03:27.5, 35.42N×28.52E, h31km±13km, Md4.1, Ml4.4*
ISCJB ***18*** *14:03:27.6±0.2, 35.26N±0.02×28.54E±0.01, h42km±2km, mb4.4/81, MS3.7/9, Error ellipse: s-maj=2.8km s-min=1.7km az=27.5*
NEIC ***18*** *14:03:28.5±0.3, 35.39N×28.51E, mb4.7/58, Error ellipse: s-maj=5.6km s-min=3.5km az=185.0*
TEH ***18*** *14:03:29.7, 35.23N×28.58E, h51km, ML4.6*
CSEM ***18*** *14:03:29.5±0.1, 35.31N×28.55E, h47km±1km, mb4.4/26, Ms3.4, Mw3.7, Error ellipse: s-maj=3.2km s-min=1.8km az=32.0*
PDA ***18*** *14:03:29.7, 35.20N×28.60E, h50km, mb4.6*
THE ***18*** *14:03:30.6, 35.41N×28.54E, h47km±3km, ML4.6/3, Error ellipse: s-maj=3.8km s-min=0.9km az=349.0*
NIC ***18*** *14:03:33.3±0.2, 35.43N×28.96E, h51km, mb4.5, ML4.2, MW3.7*
SZGRF ***18*** *14:03:35.7, 35.53N×27.36E, h10km, mb4.2, Dodecanese Islands, Greece*

ISC 18 14:03:28.1±0.3, 35.31N±0.02×28.51E±0.02, h29km±1km, h28km; pP-P, n832, σ1.950/897, mb4.5/81, MS3.7/9, 31C-34D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.95**	**341**	P	**Pb**	**14 03 45.9**	**-0.2**
ARG				S	**Sn**	**14 03 58.1**	**-0.2**
ARG	**Arkhangelos**	**0.95**	**341**	*ePn*	**Pb**	**14 03 45.9**	**-0.2**
ARG				*eS*	**Sb**	**14 04 04.2**	**+5.8**
ARG	**Arkhangelos**	**0.95**	**341**	*eP*	**Pb**	**14 03 45.9**	**-0.2**
ARG				*eS*	**Sb**	**14 04 04.2**	**+5.8**
ARG	**Arkhangelos**	**0.95**	**341**	*eP*	**Pb**	**14 03 45.9**	**-0.2**
ARG				*eS*	**Sb**	**14 04 04.2**	**+5.8**
ARG	**Arkhangelos**	**0.95**	**341**	P	**Pb**	**14 03 45.9**	**-0.2**
ARG				S	**Sn**	**14 03 58.1**	**-0.2**
KARP	**Karpathos**	**1.12**	**282**	P	**Pb**	**14 03 49.4**	**+0.4**
KARP				S	**Sb**	**14 04 03.8**	**+0.5**
KARP	**Karpathos**	**1.12**	**282**	*eP*	**Pb**	**14 03 49.7**	**+0.7**
KARP	**Karpathos**	**1.12**	**282**	*eP*	**Pb**	**14 03 49.7**	**+0.7**
KARP	**Karpathos**	**1.12**	**282**	P	**Pb**	**14 03 49.4**	**+0.4**
KARP				S	**Sb**	**14 04 03.8**	**+0.5**
AKAS	**Kas**	**1.28**	**44**	*i* P	**Pn**	**14 03 50.7**	**+0.4**
AKAS				*eS*	Sb	14 04 20.6	+13
AKAS	**Kas**	**1.28**	**44**	*i* P	**Pn**	**14 03 50.7**	**+0.4**
FETY	**Fethiye**	**1.40**	**19**	*ePN*	**Pn**	**14 03 51.6**	**-0.2**
FETY				*eSN*	**Sn**	**14 04 09.6**	**+0.2**
FETY	**Fethiye**	**1.40**	**19**	*ePn*	**Pn**	**14 03 51.6**	**-0.2**
FETY				*eSn*	**Sn**	**14 04 09.6**	**+0.2**
DALY	**Dalyan (Mu˘la**	**1.51**	**4**	*ePN*	**Pn**	**14 03 53.2**	**0.0**
DALY	**Dalyan (Mu˘la**	**1.51**	**4**	*ePn*	**Pn**	**14 03 53.2**	**0.0**
TURN	**Turunc**	**1.56**	**3**	*i* P	**Pn**	**14 03 53.2**	**-0.8**
TURN				*eS*	**Sb**	**14 04 20.8**	**+5.2**
TURN	**Turunc**	**1.56**	**3**	*i* P	**Pn**	**14 03 53.2**	**-0.8**
DAT	**Datca**	**1.60**	**332**	*ePN*	**Pn**	**14 03 54.8**	**+0.1**
DAT	**Datca**	**1.60**	**332**	*ePn*	**Pn**	**14 03 54.8**	**+0.1**
NIS1	**Nisyros Isl.**	**1.68**	**320**	P	**Pn**	**14 03 56.4**	**+0.8**
NIS1				S	**Sn**	**14 04 15.7**	**-0.5**
NIS1	**Nisyros Isl.**	**1.68**	**320**	P	**Pn**	**14 03 56.4**	**+0.8**
NIS1				S	**Sn**	**14 04 15.7**	**-0.5**
YER	**Yerkesik**	**1.83**	**354**	*ePN*	**Pn**	**14 03 58.0**	**+0.3**
YER	**Yerkesik**	**1.83**	**354**	*ePn*	**Pn**	**14 03 58.0**	**+0.3**
ZKR	**Zakros**	**1.89**	**265**	*eP*	**Pb**	**14 04 00.8**	**-1.1**
ZKR	**Zakros**	**1.89**	**265**	*eP*	**Pb**	**14 04 00.8**	**-1.1**
ZKR	**Zakros**	**1.89**	**265**	*eP*	**Pb**	**14 04 00.8**	**-1.1**
BODT	**Bodrum**	**2.00**	**331**	*ePN*	**Pn**	**14 04 00.0**	**0.0**
BODT	**Bodrum**	**2.00**	**331**	*ePn*	**Pn**	**14 04 00.0**	**0.0**
GLHS	**Glhisar (BURDU**	**2.01**	**23**	*ePN*	**Pn**	**14 04 00.4**	**+0.2**
GLHS	**Glhisar (BURDU**	**2.01**	**23**	*ePn*	**Pn**	**14 04 00.4**	**+0.2**
MLSB	**Milas**	**2.07**	**344**	*ePN*	**Pn**	**14 04 01.2**	**+0.2**
MLSB	**Milas**	**2.07**	**344**	*ePn*	**Pn**	**14 04 01.2**	**+0.2**
GOLH	**Golhisar**	**2.10**	**24**	*i* P	**Pn**	**14 04 03.2**	**+1.7**
GOLH				*i* S	Sb	14 04 44.7	+13
GOLH	**Golhisar**	**2.10**	**24**	*i* P	**Pn**	**14 04 03.2**	**+1.7**
KORT	**Korkueli**	**2.25**	**41**	*i* P	**Pb**	**14 04 06.1**	**-2.1**
KORT				*eS*	Sb	14 04 57.3	+21
KORT	**Korkueli**	**2.25**	**41**	*i* P	**Pb**	**14 04 06.1**	**-2.1**
NPS	**Neapolis**	**2.37**	**270**	P	**Pb**	**14 04 07.9**	**-2.2**
NPS	**Neapolis**	**2.37**	**270**	P	**Pb**	**14 04 07.9**	**-2.2**
AYDN	**Tasoluk**	**2.40**	**348**	*i* P	**Pn**	**14 04 06.3**	**+0.7**
AYDN				*eS*	**Sn**	**14 04 33.6**	**-0.4**
AYDN	**Tasoluk**	**2.40**	**348**	*i* P	**Pn**	**14 04 06.3**	**+0.7**
AYDN				*eS*	**Sn**	**14 04 33.6**	**-0.4**
DNZL	**Cakiroluk**	**2.41**	**10**	*i* P	**Pn**	**14 04 06.4**	**+0.5**
DNZL				*eS*	Sb	14 04 50.4	+10
DNZL	**Cakiroluk**	**2.41**	**10**	*i* P	**Pn**	**14 04 06.4**	**+0.5**
DENT	**Denizli**	**2.48**	**10**	*ePN*	**Pn**	**14 04 06.9**	**+0.3**
DENT	**Denizli**	**2.48**	**10**	*ePn*	**Pn**	**14 04 06.9**	**+0.3**
LAST	**Lasithi**	**2.48**	**267**	*eP*	**Pb**	**14 04 09.4**	**-2.7**
LAST	**Lasithi**	**2.48**	**267**	*eP*	**Pb**	**14 04 09.4**	**-2.7**
GCAM	**G?zelcaml?**	**2.60**	**337**	*eP*	**Pb**	**14 04 08.4**	**+0.2**
GCAM				*eS*	**Sb**	**14 04 43.2**	**-2.2**
GCAM	**G?zelcaml?**	**2.60**	**337**	*eP*	**Pn**	**14 04 08.4**	**+0.2**
GCAM				*eS*	**Sb**	**14 04 43.2**	**-2.2**
THR1	**Thera Island**	**2.69**	**294**	P	**Pn**	**14 04 10.4**	**+0.8**
THR1	**Thera Island**	**2.69**	**294**	P	**Pn**	**14 04 10.4**	**+0.8**
SANT	**Santorini**	**2.69**	**294**	P	**Pn**	**14 04 10.5**	**+0.9**
SANT	**Santorini**	**2.69**	**294**	*eP*	**Pn**	**14 04 11.4**	**+1.8**
SANT	**Santorini**	**2.69**	**294**	*ePn*	**Pn**	**14 04 08.4**	**-1.2**
SANT	**Santorini**	**2.69**	**294**	*ePn*	**Pn**	**14 04 08.4**	**-1.2**
SANT	**Santorini**	**2.69**	**294**	P	**Pn**	**14 04 10.5**	**+0.9**
BCK	**Bucak**	**2.73**	**37**	*ePN*	**Pn**	**14 04 10.8**	**+0.7**
BCK	**Bucak**	**2.73**	**37**	*ePn*	**Pn**	**14 04 10.8**	**+0.7**
THR6	**Thira Island,**	**2.73**	**293**	P	**Pn**	**14 04 10.9**	**+0.8**
THR6	**Thira Island,**	**2.73**	**293**	P	**Pn**	**14 04 10.9**	**+0.8**
SMG	**Samos**	**2.75**	**331**	P	**Pn**	**14 04 10.6**	**+0.3**
SMG	**Samos**	**2.75**	**331**	P	**Pn**	**14 04 10.6**	**+0.3**
THR3	**Thira Island,**	**2.75**	**294**	P	**Pn**	**14 04 11.5**	**+1.2**
THR3	**Thira Island,**	**2.75**	**294**	P	**Pn**	**14 04 11.5**	**+1.2**
IDI	**Anoyia**	**2.96**	**271**	P	**Pn**	**14 04 15.0**	**+1.8**
IDI				S	**Sn**	**14 04 49.3**	**+1.5**
IDI	**Anoyia**	**2.96**	**271**	*eP*	**Pn**	**14 04 15.1**	**+1.8**
IDI	**Anoyia**	**2.96**	**271**	*ePn*	**Pn**	**14 04 11.1**	**-2.2**
IDI	**Anoyia**	**2.96**	**271**	*ePn*	**Pn**	**14 04 11.1**	**-2.2**
IDI	**Anoyia**	**2.96**	**271**	P	**Pn**	**14 04 15.0**	**+1.8**
IDI				S	**Sn**	**14 04 49.3**	**+1.5**
APE	**Apeiranthos**	**2.98**	**307**	*ePN*	**Pn**	**14 04 14.1**	**+0.6**
APE	**Apeiranthos**	**2.98**	**307**	P	**Pn**	**14 04 14.1**	**+0.6**
APE				S	**Sn**	**14 04 48.0**	**-0.3**
APE	**Apeiranthos**	**2.98**	**307**	||P	**Pn**	**14 04 14.4**	**+0.9**
APE	**Apeiranthos**	**2.98**	**307**	||P	**Pn**	**14 04 14.4**	**+0.9**
APE	**Apeiranthos**	**2.98**	**307**	*ePn*	**Pn**	**14 04 14.1**	**+0.6**
APE	**Apeiranthos**	**2.98**	**307**	P	**Pn**	**14 04 14.4**	**+0.9**
APE				S	**Sn**	**14 04 48.0**	**-0.3**
ISP	**Isparta**	**2.99**	**32**	*ePN*	**Pn**	**14 04 14.7**	**+1.0**
ISP	**Isparta**	**2.99**	**32**	*eP*	**Pn**	**14 04 15.4**	**+1.7**
ISP	**Isparta**	**2.99**	**32**	*ePn*	**Pn**	**14 04 15.3**	**+1.7**
ISP	**Isparta**	**2.99**	**32**	||P	**Pn**	**14 04 15.4**	**+1.7**
ISP	**Isparta**	**2.99**	**32**	*ePn*	**Pn**	**14 04 14.7**	**+1.0**
ISP	**Isparta**	**2.99**	**32**	*eP*	**Pn**	**14 04 15.4**	**+1.7**
SIVA	**Sivas**	**3.04**	**266**	*eP*	**Pn**	**14 04 17.2**	**+2.9**
SIVA	**Sivas**	**3.04**	**266**	*eP*	**Pn**	**14 04 17.2**	**+2.9**
SIVA	**Sivas**	**3.04**	**266**	*eP*	**Pn**	**14 04 17.2**	**+2.9**
AKMC	**Akamas**	**3.15**	**94**	||P	**Pn**	**14 04 16.0**	**+0.2**
KHAL	**Karahalli**	**3.15**	**14**	*i* P	**Pn**	**14 04 16.7**	**+0.7**
KHAL				*i* S	Sb	14 05 10.6	+9.0
KHAL	**Karahalli**	**3.15**	**14**	*i* P	**Pn**	**14 04 16.7**	**+0.7**
PPCY	**Paphos**	**3.17**	**97**	P	**Pn**	**14 04 16.7**	**+0.5**
KULA	**Kula-Manisa**	**3.20**	**2**	*ePN*	**Pn**	**14 04 17.4**	**+0.8**
KULA	**Kula-Manisa**	**3.20**	**2**	P	**Pn**	**14 04 16.7**	**+0.1**
KULA	**Kula-Manisa**	**3.20**	**2**	P	**Pn**	**14 04 16.7**	**+0.1**
KULA	**Kula-Manisa**	**3.20**	**2**	*ePn*	**Pn**	**14 04 17.4**	**+0.8**
GAZI	**Gazipasa**	**3.23**	**72**	*i* P	**Pn**	**14 04 16.6**	**-0.3**
GAZI				*i* S	**Sn**	**14 04 50.3**	**-4.2**
GAZI	**Gazipasa**	**3.23**	**72**	*i* P	**Pn**	**14 04 16.6**	**-0.3**
GAZI				*i* S	**Sn**	**14 04 50.3**	**-4.2**
IZM	**Izmir**	**3.24**	**342**	*ePN*	**Pn**	**14 04 17.6**	**+0.5**
IZM	**Izmir**	**3.24**	**342**	*ePn*	**Pn**	**14 04 17.6**	**+0.5**
BLCB	**Balcova**	**3.29**	**339**	*ePN*	**Pn**	**14 04 18.2**	**+0.6**
BLCB	**Balcova**	**3.29**	**339**	*ePn*	**Pn**	**14 04 18.3**	**+0.6**
ALFC	**Alevga**	**3.35**	**91**	P	**Pn**	**14 04 18.8**	**+0.1**
	20nm,0.2s						
ALFC				S	**Sn**	**14 04 54.3**	**-3.2**
ALFC	**Alevga**	**3.35**	**91**	P	**Pn**	**14 04 18.8**	**+0.1**
	20nm,0.2s						
ALFC				S	**Sn**	**14 04 54.3**	**-3.2**
VAM	**Vamos**	**3.52**	**273**	P	**Pn**	**14 04 22.5**	**+1.6**
VAM				S	**Sn**	**14 05 02.3**	**+0.7**
VAM	**Vamos**	**3.52**	**273**	*eP*	**Pn**	**14 04 23.8**	**+2.9**
VAM	**Vamos**	**3.52**	**273**	*eP*	**Pn**	**14 04 23.8**	**+2.9**
VAM	**Vamos**	**3.52**	**273**	*eP*	**Pn**	**14 04 23.8**	**+2.9**
VAM	**Vamos**	**3.52**	**273**	P	**Pn**	**14 04 22.5**	**+1.6**
VAM				S	**Sn**	**14 05 02.3**	**+0.7**
LEF	**Lefka**	**3.59**	**92**	*ePN*	**Pn**	**14 04 21.6**	**-0.3**
LEF	**Lefka**	**3.59**	**92**	*ePn*	**Pn**	**14 04 21.6**	**-0.3**
AKHS	**Akhisar**	**3.60**	**351**	*i* P	**Pn**	**14 04 22.1**	**0.0**
AKHS				*eS*	Sb	14 05 31.4	+17
AKHS	**Akhisar**	**3.60**	**351**	*i* P	**Pn**	**14 04 22.1**	**0.0**
SHUT	**Suhut-Afyon**	**3.63**	**26**	*ePN*	**Pn**	**14 04 23.3**	**+0.8**
SHUT	**Suhut-Afyon**	**3.63**	**26**	*ePn*	**Pn**	**14 04 23.3**	**+0.8**
SZAC	**Souni-Zanaja**	**3.63**	**98**	||P	**Pn**	**14 04 23.1**	**+0.6**
CHIO	**Chios island**	**3.65**	**328**	P	**Pn**	**14 04 22.7**	**0.0**
CHOS	**Chios island**	**3.65**	**328**	P	**Pn**	**14 04 22.7**	**0.0**
GVD	**Gavdhos**	**3.66**	**264**	*eP*	**Pn**	**14 04 24.6**	**+1.8**
GVD	**Gavdhos**	**3.66**	**264**	*ePn*	**Pn**	**14 04 24.9**	**+2.1**
GVD	**Gavdhos**	**3.66**	**264**	*eP*	**Pn**	**14 04 24.6**	**+1.8**
GVD	**Gavdhos**	**3.66**	**264**	*ePn*	**Pn**	**14 04 24.9**	**+2.1**
DEMI	**Demirci**	**3.73**	**3**	*i* P	**Pn**	**14 04 24.0**	**+0.2**
DEMI				*i* S	**Sb**	**14 05 18.6**	**+0.5**
DEMI	**Demirci**	**3.73**	**3**	*i* P	**Pn**	**14 04 24.0**	**+0.2**
ERMK	**Ermenek**	**3.81**	**68**	*i* P	**Pn**	**14 04 27.3**	**+2.2**
ERMK				*i* S	**Sn**	**14 05 07.5**	**-1.6**
ERMK	**Ermenek**	**3.81**	**68**	*i* P	**Pn**	**14 04 27.3**	**+2.2**
ERMK				*i* S	**Sn**	**14 05 07.5**	**-1.6**
MAMC	**Mammari**	**3.86**	**91**	P	**Pn**	**14 04 26.2**	**+0.6**
MAMC	**Mammari**	**3.86**	**91**	P	**Pn**	**14 04 26.2**	**+0.6**
ALT	**Altintas**	**3.95**	**18**	*ePN*	**Pn**	**14 04 28.6**	**+1.7**
ALT	**Altintas**	**3.95**	**18**	*ePn*	**Pn**	**14 04 28.6**	**+1.7**
CSS	**Prodhromos**	**3.97**	**94**	||P	**Pn**	**14 04 27.2**	**+0.2**
	5.9nm,0.3s						
CSS				S	**Sn**	**14 05 09.9**	**-2.8**
CSS	**Prodhromos**	**3.97**	**94**	*ePN*	**Pn**	**14 04 27.3**	**+0.2**
CSS	**Prodhromos**	**3.97**	**94**	P	**Pn**	**14 04 27.3**	**+0.2**
CSS	**Prodhromos**	**3.97**	**94**	*ePn*	**Pn**	**14 04 25.8**	**-1.3**
CSS	**Prodhromos**	**3.97**	**94**	Pn	**Pn**	**14 04 26.8**	**-0.3**
CSS	**Prodhromos**	**3.97**	**94**	P	**Pn**	**14 04 27.3**	**+0.2**
CSS				S	**Sn**	**14 05 09.9**	**-2.8**
CSS				Sn	Sb	14 05 10.8	-14
KONT	**Konya--Tatoy**	**4.06**	**49**	*ePN*	**Pn**	**14 04 29.8**	**+1.4**
KONT	**Konya--Tatoy**	**4.06**	**49**	*ePn*	**Pn**	**14 04 29.8**	**+1.4**
LFK	**Lefkose**	**4.11**	**89**	*ePN*	**Pn**	**14 04 29.8**	**+0.7**
LFK	**Lefkose**	**4.11**	**89**	*ePn*	**Pn**	**14 04 29.8**	**+0.7**
TVSB	**Tavsanli**	**4.20**	**10**	*ePN*	**Pn**	**14 04 31.1**	**+0.7**
TVSB	**Tavsanli**	**4.20**	**10**	*ePn*	**Pn**	**14 04 31.1**	**+0.7**
LADK	**Ladik-KONYA**	**4.23**	**46**	*ePN*	**Pn**	**14 04 32.0**	**+1.2**
LADK	**Ladik-KONYA**	**4.23**	**46**	*ePn*	**Pn**	**14 04 32.0**	**+1.2**
ANKY	**Antikythira Is**	**4.28**	**279**	*eP*	**Pn**	**14 04 32.9**	**+1.6**
ANKY	**Antikythira Is**	**4.28**	**279**	*eP*	**Pn**	**14 04 32.9**	**+1.6**
ANKY	**Antikythira Is**	**4.28**	**279**	*eP*	**Pn**	**14 04 32.9**	**+1.6**
BALB	**Balikesir**	**4.35**	**354**	*ePN*	**Pn**	**14 04 33.5**	**+1.2**
BALB	**Balikesir**	**4.35**	**354**	*ePn*	**Pn**	**14 04 33.5**	**+1.2**
KIZT	**Kizilcal**	**4.47**	**36**	*ePN*	**Pn**	**14 04 34.9**	**+0.9**
KIZT	**Kizilcal**	**4.47**	**36**	*ePn*	**Pn**	**14 04 34.9**	**+0.9**
BALY	**Balya**	**4.48**	**351**	*i* P	**Pn**	**14 04 34.0**	**-0.1**
BALY				*eS*	**Sb**	**14 05 45.1**	**+5.6**
BALY	**Balya**	**4.48**	**351**	*i* P	**Pn**	**14 04 34.0**	**-0.1**
KYTH	**Kithira**	**4.55**	**284**	*eP*	**Pn**	**14 04 36.7**	**+1.6**
KYTH	**Kithira**	**4.55**	**284**	*eP*	**Pn**	**14 04 36.7**	**+1.6**
EREN	**Erenkoy**	**4.63**	**86**	*ePN*	**Pn**	**14 04 36.8**	**+0.6**
EREN	**Erenkoy**	**4.63**	**86**	*ePn*	**Pn**	**14 04 36.8**	**+0.6**
SLUM		**4.70**	**217**	P	**Pn**	**14 04 37.6**	**+0.5**
	baz=217						
SLUM				AMP		14 05 00.0	
	comp=N,660μm,0.5s,logA/T=6.1,baz=217						
SLUM		**4.70**	**217**	P	**Pn**	**14 04 37.6**	**+0.5**
KIZK	**Mersin**	**4.72**	**74**	*i* P	**Pn**	**14 04 37.8**	**+0.3**
KIZK				*i* S	**Sn**	**14 05 27.6**	**-3.6**
KIZK	**Mersin**	**4.72**	**74**	*i* P	**Pn**	**14 04 37.8**	**+0.3**
KIZK				*i* S	**Sn**	**14 05 27.6**	**-3.6**
VLI	**Veliai**	**4.73**	**289**	*eP*	**Pn**	**14 04 38.8**	**+1.3**
VLI	**Veliai**	**4.73**	**289**	*eP*	**Pn**	**14 04 38.8**	**+1.3**
GONE	**Gonen-Balikesi**	**4.77**	**352**	*ePN*	**Pn**	**14 04 39.4**	**+1.3**
GONE	**Gonen-Balikesi**	**4.77**	**352**	*ePn*	**Pn**	**14 04 39.4**	**+1.3**
HBRG	**Burj al 'Arab**	**4.86**	**166**	P	**Pn**	**14 04 40.1**	**+0.8**
	baz=166						
HBRG				S	**Sn**	**14 05 32.1**	**-2.4**
	baz=166						
CAVI	**Cavuskoy**	**5.00**	**12**	*ePN*	**Pn**	**14 04 43.1**	**+1.9**
CAVI	**Cavuskoy**	**5.00**	**12**	*ePn*	**Pn**	**14 04 43.1**	**+1.9**
LTBQ	**Tobruq**	**5.01**	**231**	*i* P	**Pn**	**14 04 42.5**	**+1.0**
	SNR=24						
KRBG	**Karabiga-Canak**	**5.16**	**350**	*ePN*	**Pn**	**14 04 45.0**	**+1.5**
KRBG	**Karabiga-Canak**	**5.16**	**350**	*ePn*	**Pn**	**14 04 45.0**	**+1.5**
VLX	**Vlachokerasia**	**5.36**	**294**	*eP*	**Pn**	**14 04 49.1**	**+2.9**
GULE	**Gulek**	**5.43**	**67**	*eP*	**Pn**	**14 04 49.5**	**+2.1**
GULE				*eS*	**Sn**	**14 05 49.7**	**+0.7**
GULE	**Gulek**	**5.43**	**67**	*eP*	**Pn**	**14 04 49.5**	**+2.1**
GULE				*eS*	**Sn**	**14 05 49.7**	**+0.7**
ITM	**Ithomi**	**5.63**	**291**	*eP*	**Pn**	**14 04 52.1**	**+2.1**
ITM	**Ithomi**	**5.63**	**291**	*eP*	**Pn**	**14 04 52.1**	**+2.1**
ANTO	**Ankara**	**5.68**	**36**	*ePN*	**Pn**	**14 04 53.5**	**+2.8**
ANTO	**Ankara**	**5.68**	**36**	*eP*	**Pn**	**14 04 50.9**	**+0.2**
ANTO	**Ankara**	**5.68**	**36**	*ePn*	**Pn**	**14 04 50.9**	**+0.2**
ANTO	**Ankara**	**5.68**	**36**	||P	Pb	**14 04 59.1**	**-7.5**
ANTO	**Ankara**	**5.68**	**36**	*eP*	**Pn**	**14 04 50.9**	**+0.2**
KLV	**Kalavryta, Ach**	**5.79**	**300**	*eP*	**Pn**	**14 04 54.8**	**+2.6**
KLV	**Kalavryta, Ach**	**5.79**	**300**	*eP*	**Pn**	**14 04 54.8**	**+2.6**
HMYD	**Mayadein**	**5.83**	**160**	P	**Pn**	**14 04 53.4**	**+0.7**
	baz=160						
AMT

EIL Sn **Sn** **14 06 43.3 -4.4**
PRD Provadia 7.92 354 *e*P Pb 14 05 33.5 -11
KBN Korca 8.08 313 *e*PN Pn 14 05 28.5 +4.9
KBN *i* SN **Sn** **14 06 51.2 -2.8**
SRN Sarande 8.15 307 *e*PN **Pn** **14 05 26.7 +2.3**
SRN *i* SN **Sn** **14 06 50.6 -4.9**
KEK Kerkira 8.20 305 *e*P **Pn** **14 05 26.5 +1.4**
KEK Kerkira 8.20 305 *e*P **Pn** **14 05 26.5 +1.4**
VTS Vitosha 8.36 332 ⇑P Pn 14 05 30.6 +3.1
VTS Vitosha 8.36 332 *e*P **Pn** **14 05 30.2 +2.7**
VTS Vitosha 8.36 332 ⇑*i*P Pn 14 05 30.6 +3.1
VTS Vitosha 8.36 332 *e*P **Pn** **14 05 30.2 +2.7**
MALT Malatya 8.50 66 *e*P **Pn** **14 05 29.7 +0.3**
MALT pmax pmax
comp=Z,18nm,0.9s
MALT Malatya 8.50 66 *e*Pn **Pn** **14 05 29.7 +0.3**
comp=Z,18nm,0.9s
MALT Malatya 8.50 66 ⇑*i*P Pn 14 05 38.8 +9.4
MALT Malatya 8.50 66 *e*P **Pn** **14 05 29.7 +0.3**
comp=Z,18nm,0.9s
MPEP Malo Peshtene 8.84 337 *e*P Pn 14 05 42.0 +8.1
TIR Tirane 9.08 314 *e*P **Pn** **14 05 35.2 -2.0**
TIR Tirane 9.08 314 *e*Pn **Pn** **14 05 35.2 -2.0**
BARS Barje 9.12 327 *e*Pn **Pn** **14 05 40.4 +2.6**
TIRR Tirgusor 9.14 360 ⇑P Pn 14 05 43.5 +5.5
TIRR Tirgusor 9.14 360 *e*Pn **Pn** **14 05 46.0 +8.0**
TIRR Tirgusor 9.14 360 ⇑*i*P Pn 14 05 43.5 +5.5
ULC Ulcinj 9.82 315 ⇓*i*Pn **Pn** **14 05 49.5 +2.0**
ULC *e*Sn **Sn** **14 07 35.0 -1.8**
ULC Ulcinj 9.82 315 ⇓*i*Pn **Pn** **14 05 49.5 +2.0**
ULC *e*Sn **Sn** **14 07 35.0 -1.8**
CFR Carcaliu 9.86 358 ⇑P Pn 14 05 52.8 +4.9
CFR Carcaliu 9.86 358 ⇑*i*P Pn 14 05 52.8 +4.9
TLCR 9.87 1 ⇑P Pn 14 05 53.7 +5.7
TLCR 9.87 1 ⇑*i*P Pn 14 05 53.7 +5.7
BEY Berane 10.09 321 *e*Pn Pn 14 05 55.2 +4.1
IVA Berane 10.09 321 *e*Pn Pn 14 05 55.2 +4.1
PDG Podgorica 10.12 317 ⇓*i*Pn **Pn** **14 05 53.9 +2.4**
PDG *e*Sn **Sn** **14 07 42.2 -1.8**
TTG Podgorica 10.12 317 ⇓*i*Pn **Pn** **14 05 53.9 +2.4**
TTG *e*Sn **Sn** **14 07 42.2 -1.8**
TIP Timpagrande 10.13 296 *e*Pn **Pn** **14 05 49.3 -2.4**
BUM Brajici-Budva 10.24 316 ⇓*i*Pn **Pn** **14 05 55.2 +2.0**
BUM *e*Sn **Sn** **14 07 45.3 -1.7**
BUM Brajici-Budva 10.24 316 ⇓*i*Pn **Pn** **14 05 55.2 +2.0**
BUM *e*Sn **Sn** **14 07 45.3 -1.7**
MLR Muntele Rosu 10.35 350 Pn **Pn** **14 05 56.5 +1.7**
MLR Muntele Rosu 10.35 350 ⇓*i*P Pn 14 05 58.6 +3.8
MLR Muntele Rosu 10.35 350 Pn **Pn** **14 05 56.5 +1.7**
comp=Z,0.0nm,0.3s,baz=223,slow=7.3,SNR=5.8
MLR Muntele Rosu 10.35 350 P **Pn** **14 05 56.5 +1.7**
VOIR 10.45 346 ⇓P Pn 14 05 59.4 +3.3
VOIR 10.45 346 ⇓*i*P Pn 14 05 59.4 +3.3
CEL Celeste 10.54 290 *e*Pn **Pn** **14 05 56.3 -0.9**
CEL Celeste 10.54 290 *e*Pn **Pn** **14 05 56.3 -0.9**
SIM Simferopol' 10.54 22 *e*P Pn 14 06 14.0 +17
SIM pmax pmax
comp=Z,18nm,0.6s
SIM MLR MLR
comp=Z,160nm,17.4s
HCY Herceg Novi 10.56 315 ⇑*i*Pn **Pn** **14 05 59.9 +2.4**
HCY *e*Sn **Sn** **14 07 53.3 -1.5**
HCY Herceg Novi 10.56 315 ⇑*i*Pn **Pn** **14 05 59.9 +2.4**
HCY *e*Sn **Sn** **14 07 53.3 -1.5**
PLOR Plostina 10.62 353 ⇑P Pn 14 06 02.8 +4.4
PLOR Plostina 10.62 353 ⇑*i*P Pn 14 06 02.8 +4.4
VRI Vrincioaia 10.63 353 ⇓P Pn 14 06 02.6 +4.1
VRI Vrincioaia 10.63 353 ⇓*i*P Pn 14 06 02.6 +4.1
BRY Bratogost 10.83 317 ⇑*i*Pn **Pn** **14 06 03.5 +2.2**
BRY *e*Sn **Sn** **14 07 59.6 -2.0**
BRY Bratogost 10.83 317 ⇑*i*Pn **Pn** **14 06 03.5 +2.2**
BRY *e*Sn **Sn** **14 07 59.6 -2.0**
UPM Unac-Piva 10.83 320 ⇓*i*Pn **Pn** **14 06 04.0 +2.6**
UPM *e*Sn **Sn** **14 07 59.8 -2.0**
UPM Unac-Piva 10.83 320 ⇓*i*Pn **Pn** **14 06 04.0 +2.6**
UPM *e*Sn **Sn** **14 07 59.8 -2.0**
GZR Gura Zlata 10.97 338 ⇓P **Pn** **14 06 05.4 +2.2**
GZR Gura Zlata 10.97 338 ⇓*i*P **Pn** **14 06 05.4 +2.2**
GZR Gura Zlata 10.97 338 P **Pn** **14 06 05.4 +2.2**
CUC Castrocucco 11.09 299 *e*Pn **Pn** **14 06 01.9 -2.9**
TESR Tescani 11.28 353 ⇓*i*P Pn 14 06 12.4 +5.1
BZS Buzias 11.55 335 ⇓P **Pn** **14 06 13.7 +2.7**
BZS Buzias 11.55 335 ⇓*i*P **Pn** **14 06 13.7 +2.7**
BZS Buzias 11.55 335 P **Pn** **14 06 13.7 +2.7**
KIS Kishinev 11.68 1 *e*P **Pn** **14 06 15.0 +2.2**
KIS *e*S **Sn** **14 08 20.0 -2.1**
KIS MLR MLR
comp=Z,800nm,17.0s
KIS MLR MLR
comp=Z,800nm,17.0s
KIS Kishinev 11.68 1 *e*P **Pn** **14 06 15.0 +2.2**
KIS Kishinev 11.68 1 *e*PP Pn 14 06 26.0 +13
KIS *e*S **Sn** **14 08 20.0 -2.1**
KIS *e*L L 14 10 00.0
KIS LRM MLR 14 11 30.0
comp=Z,800nm,17.0s
KIS Kishinev 11.68 1 *e*P **Pn** **14 06 15.0 +2.2**
comp=Z,800nm,17.0s
KIS *e*S **Sn** **14 08 20.0 -2.1**
comp=Z,800nm,17.0s
DRGR 12.27 341 ⇓P Pn 14 06 24.7 +3.8
DRGR 12.27 341 ⇓*i*P Pn 14 06 24.7 +3.8
BURAR Bucovina Array 12.54 350 ⇓*i*P Pn 14 06 28.6 +4.0
BUR08 Bucovina Ar. S 12.57 350 *e*Pn **Pn** **14 06 23.3 -1.7**
BUR08 Bucovina Ar. S 12.57 350 *e*Pn **Pn** **14 06 23.3 -1.7**
PKSM Moragy 13.20 329 ⇑P **Pn** **14 06 36.2 +2.7**
PKSM Moragy 13.20 329 ⇑*i*P **Pn** **14 06 36.2 +2.7**
PKSM Moragy 13.20 329 P **Pn** **14 06 36.2 +2.7**
BHD Baghdad 13.28 94 *e*P **Pn** **14 06 36.7 +1.9**
BHD *e*S **Sn** **14 09 03.0 +1.5**
BHD Baghdad 13.28 94 *e*P **Pn** **14 06 36.7 +1.9**
BHD *e*S **Sn** **14 09 03.0 +1.5**
KIV Kislovodsk 13.91 47 *e*P **Pn** **14 06 46.3 +2.9**
KIV pmax pmax
comp=Z,21nm,1.0s
KIV MLR MLR
comp=Z,67nm,12.0s
KBZ Khabaz 13.91 49 P **P** **14 06 50.9 -0.2**
KBZ MLR MLR
comp=Z,109nm,21.9s
KBZ Khabaz 13.91 49 Pn **P** **14 06 50.9 -0.2**
KBZ Khabaz 13.91 49 Pn **P** **14 06 50.9 -0.2**
comp=Z,0.2nm,0.3s,baz=221,slow=8.6,SNR=10
KBZ LR LR 14 13 10.3
comp=Z,109nm,21.9s,baz=313,slow=42
NVLJ Novalja 13.94 316 *e*Pn **Pn** **14 06 42.9 -0.8**
NVLJ Sn Sn 14 09 10.8 -6.6
NVLJ Novalja 13.94 316 *e*Pn **Pn** **14 06 42.8 -0.8**
PSZ Piszkesteto 14.13 336 ⇓P **Pn** **14 06 48.8 +2.4**
PSZ Piszkesteto 14.13 336 *e*Pn **P** **14 06 53.9 +0.3**
PSZ Piszkesteto 14.13 336 ⇓*i*P **Pn** **14 06 48.8 +2.4**
KOLS Kolonicke sedl 14.37 343 *e*P **P** **14 06 56.9 +0.7**
KOLS pmax pmax
comp=Z,4.0nm,1.1s
KOLS Kolonicke sedl 14.37 343 *e*P **P** **14 06 56.9 +0.7**
KOLS Kolonicke sedl 14.37 343 *e*P **P** **14 06 56.9 +0.7**
comp=Z,4.0nm,1.1s
KECS Kecovo 14.44 338 *e*P **P** **14 06 56.5 -0.5**
KECS pmax pmax
comp=Z,2.0nm,1.2s
KECS Kecovo 14.44 338 *e*P **P** **14 06 56.5 -0.5**
KECS Kecovo 14.44 338 *e*P **P** **14 06 56.5 -0.5**
comp=Z,2.0nm,1.2s
CRVS Cervenica-Dubn 14.54 341 *e*P **P** **14 06 56.7 -1.4**
CRVS pmax pmax
comp=Z,8.0nm,1.3s
CRVS Cervenica-Dubn 14.54 341 *e*P **P** **14 06 56.7 -1.4**
CRVS Cervenica-Dubn 14.54 341 *e*P **P** **14 06 56.7 -1.4**
comp=Z,8.0nm,1.3s
IBDR Badra 14.59 94 *e*P **Pn** **14 06 52.9 +0.4**
IBDR *e*S **Sn** **14 09 34.1 +0.9**
LVV L'vov 14.87 349 *e*P P 14 07 10.0 +8.3
VYHS Vyhne 14.99 334 *e*P **P** **14 07 03.2 +0.1**
VYHS pmax pmax
comp=Z,4.0nm,0.9s
VYHS Vyhne 14.99 334 *e*P **P** **14 07 03.2 +0.1**
VYHS Vyhne 14.99 334 *e*P **P** **14 07 03.2 +0.1**
comp=Z,4.0nm,0.9s
STHS Stebnicka Huta 15.07 341 *e*P **P** **14 07 04.0 0.0**
STHS pmax pmax
comp=Z,3.0nm,1.5s
STHS Stebnicka Huta 15.07 341 *e*P **P** **14 07 04.0 0.0**
comp=Z,3.0nm,1.5s
IHRS Heris 15.15 73 *e*P **Pn** **14 07 01.3 +1.0**
SOKA Soboth 15.22 322 ⇑*i*Pn **Pn** **14 07 02.5 +1.4**
comp=Z,24nm,1.1s
SOKA Soboth 15.22 322 Pn **Pn** **14 07 02.5 +1.4**
comp=Z,24nm,1.1s
AK02 Malin Array Si 15.35 2 *e*Pn **Pn** **14 07 02.0 -0.6**
AK02 *e*pP **pP** **14 07 13.8 -0.8**
AK02 *e*sP **sP** **14 07 17.5 -0.8**
AK02 Malin Array Si 15.35 2 *e*Pn **Pn** **14 07 02.0 -0.6**
AK01 Malin Array Si 15.38 2 *e*Pn **Pn** **14 07 02.5 -0.5**
AK01 *e*pP **pP** **14 07 14.0 -1.0**
AK01 *e*sP **sP** **14 07 18.0 -0.7**
AK01 Malin Array Si 15.38 2 *e*Pn **Pn** **14 07 02.5 -0.5**
KIEV Kiev 15.38 2 *e*P **P** **14 07 05.8 -1.6**
KIEV Kiev 15.38 2 *e*Pn **P** **14 07 05.8 -1.6**
KIEV Kiev 15.38 2 *e*P **P** **14 07 05.8 -1.6**
ARSA Arzberg 15.39 325 ⇑*e*P **P** **14 07 05.3 -2.2**
comp=Z,4.3nm,0.5s
ARSA Arzberg 15.39 325 P **P** **14 07 05.3 -2.2**
comp=Z,4.3nm,0.5s
AKASG Malin Array Be 15.39 2 P **Pn** **14 06 59.2 -3.9**
AKASG pmax pmax
comp=Z,1.0nm,0.3s
AKASG Malin Array Be 15.39 2 Pn **Pn** **14 06 59.2 -3.9**
AKASG Malin Array Be 15.39 2 Pn **Pn** **14 06 59.2 -3.9**
comp=Z,0.6nm,0.3s,baz=187,slow=12,SNR=4.5
KEST Kesra 15.61 277 *e*Pn **Pn** **14 07 06.0 -0.2**
KEST Sn Sn 14 09 49.4 -8.9
KEST Kesra 15.61 277 Pn **Pn** **14 07 06.3 +0.1**
comp=Z,0.1nm,0.3s,baz=274,slow=0.8,SNR=12
KEST Sn Sn 14 09 49.4 -8.9
comp=Z,0.1nm,0.3s,baz=50,slow=20,SNR=5.7
KEST Kesra 15.61 277 *e*Pn **Pn** **14 07 06.0 -0.2**
CONA Conrad Observa 15.73 327 ⇑*i*Pn **Pn** **14 07 08.2 +0.5**
comp=Z,9.9nm,1.3s
CONA Conrad Observa 15.73 327 Pn **Pn** **14 07 08.2 +0.5**
comp=Z,9.9nm,1.3s
KBA Koelnbreinsper 16.35 321 ⇓*i*Pn **Pn** **14 07 16.2 +0.5**
comp=Z,8.3nm,0.9s
KBA Koelnbreinsper 16.35 321 P **Pn** **14 07 16.2 +0.5**
comp=Z,8.3nm,0.9s
OKC Ostrava-Krasne 16.38 336 AMS AMS 14 15 00.0
comp=Z,300nm,13.5s
MOA Molln 16.41 324 ⇑*e*P **P** **14 07 17.6 -1.3**
comp=Z,12nm,1.1s
MOA Molln 16.41 324 P **P** **14 07 17.6 -1.3**
comp=Z,12nm,1.1s
VRAC Vranov 16.50 332 Pn **P** **14 07 19.8 0.0**
VRAC Vranov 16.50 332 ⇑*i*P **P** **14 07 20.0 +0.1**
VRAC Vranov 16.50 332 Pn **P** **14 07 19.8 0.0**
comp=Z,0.6nm,0.3s,baz=157,slow=11,SNR=7.0
VRAC Vranov 16.50 332 P **P** **14 07 20.0 +0.1**
MORC Moravsky Berou 16.53 334 ⇓P **P** **14 07 21.2 +1.0**
MORC Moravsky Berou 16.53 334 *e*Pn **Pn** **14 07 17.8 -0.1**
comp=Z,12nm,1.0s
MORC Moravsky Berou 16.53 334 ⇓*i*P **P** **14 07 21.2 +1.0**
MORC Moravsky Berou 16.53 334 *e*Pn **Pn** **14 07 17.8 -0.1**
comp=Z,12nm,1.0s
MORC Moravsky Berou 16.53 334 P **P** **14 07 21.2 +1.0**
ABTA Abfaltersbach 16.58 318 ⇑*i*Pn **Pn** **14 07 18.8 +0.2**
comp=Z,6.4nm,0.9s
ABTA Abfaltersbach 16.58 318 P **Pn** **14 07 18.8 +0.2**
comp=Z,6.4nm,0.9s
PGF Pioggiola 16.79 301 *e*P **Pn** **14 07 19.2 -2.0**
comp=Z,76nm,1.3s
PGF Pioggiola 16.79 301 *e*P **Pn**
PGF pmax pmax **14 07 19.2 -2.0**
comp=Z,76nm,1.3s
PGF Pioggiola 16.79 301 *e*P **Pn** **14 07 19.2 -2.0**
comp=Z,76nm,1.3s
NAY Al-Naaiem 16.95 106 *e*P **P** **14 07 25.6 +0.7**
NAY AMb AMB 14 07 32.3
comp=Z,23nm,1.1s
NAY Al-Naaiem 16.95 106 *e*P **P** **14 07 25.6 +0.7**
comp=Z,23nm,1.1s
UMR Umm Al-Rimmam 17.19 104 *e*P **P** **14 07 28.9 +1.3**
UMR AMb AMB 14 07 35.6
comp=Z,93nm,1.2s
UMR Umm Al-Rimmam 17.19 104 *e*P **P** **14 07 28.9 +1.3**
comp=Z,93nm,1.2s
KBD Kabd 17.34 105 *e*P **P** **14 07 30.3 +1.1**
KBD AMb AMB 14 07 40.1
comp=Z,34nm,1.1s
KBD Kabd 17.34 105 *e*P **P** **14 07 30.3 +1.1**
comp=Z,34nm,1.1s
WTTA Wattenberg 17.37 319 ⇑*i*Pn **P** **14 07 30.2 +0.5**
comp=Z,24nm,1.3s
WTTA Wattenberg 17.37 319 P **P** **14 07 30.2 +0.5**
comp=Z,24nm,1.3s
GEC2 GERESS Array S 17.38 326 *e*Pn **Pn** **14 07 28.9 +0.3**
comp=Z,16nm,1.0s
GEC2 GERESS Array S 17.38 326 *e*P **Pn** **14 07 28.9 +0.3**
GEC2 pmax pmax
comp=Z,16nm,1.0s
GEC2 GERESS Array S 17.38 326 *e*P **Pn** **14 07 28.9 +0.3**
comp=Z,16nm,1.0s
GERES GERESS Array B 17.38 326 Pn **Pn** **14 07 28.7 +0.1**
GERES GERESS Array B 17.38 326 Pn **Pn** **14 07 28.7 +0.1**
comp=Z,0.4nm,0.3s,baz=139,slow=12,SNR=32
GERES GERESS Array B 17.38 326 P **Pn** **14 07 28.7 +0.1**
DPC Dobruska-Polom 17.45 333 *e*P **P** **14 07 30.0 -0.4**
DPC Dobruska-Polom 17.45 333 *e*P **P** **14 07 30.0 -0.4**
DPC Dobruska-Polom 17.45 333 *e*P **P** **14 07 30.0 -0.4**
IRAZ Razeghan 17.48 83 *e*P **Pn** **14 07 30.3 +0.3**
IRAZ Razeghan 17.48 83 *e*P **Pn** **14 07 30.3 +0.3**
VORD Divnogorie 17.48 23 *e*P **P** **14 07 32.3 +1.6**
VORD pmax pmax
comp=Z,3.0nm,0.9s
VORD pmax pmax
comp=N,20nm,0.7s
VORD pmax pmax
comp=E,30nm,0.6s
VORD Divnogorie 17.48 23 *e*P **P** **14 07 32.3 +1.6**
comp=E,20nm,0.7s
KHC Kasperske Hory 17.64 326 *e*P **P** **14 07 32.3 -0.2**
KHC MLR MLR
comp=Z,400nm,16.0s
KHC Kasperske Hory 17.64 326 *e*P **P** **14 07 32.3 -0.2**
KHC *e*pP **pP** **14 07 38.5 -1.7**
KHC *ex* x 14 07 48.2
KHC AMS AMS 14 15 30.0
comp=Z,400nm,16.0s
KHC Kasperske Hory 17.64 326 *e*Pn **Pn** **14 07 29.4 -2.4**
comp=Z,19nm,1.0s
KHC Kasperske Hory 17.64 326 *e*P **P** **14 07 32.3 -0.2**
comp=Z,400nm,16.0s
VSR Storozhevoye 17.66 23 *e*P P 14 07 37.7 +5.1
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=E,8.0nm,1.0s
UPC Upice 17.69 333 *e*P **P** **14 07 33.2 +0.2**
UPC Upice 17.69 333 *e*P **P** **14 07 33.2 +0.2**
UPC Upice 17.69 333 *e*P **P** **14 07 33.2 +0.2**
MOTA Moosalm 17.71 318 ⇑*i*Pn **P** **14 07 34.1 +0.7**
comp=E,9.6nm,0.6s
MOTA Moosalm 17.71 318 P **P** **14 07 34.1 +0.7**
comp=E,9.6nm,0.6s
FETA Feichten 17.73 317 ⇑*i*Pn **P** **14 07 34.6 +1.0**
comp=E,24nm,1.1s
FETA ⇑*i*S **S** **14 10 54.5 -1.8**
FETA Feichten 17.73 317 P **P** **14 07 34.6 +1.0**
comp=E,24nm,1.1s
FETA S **S** **14 10 54.5 -1.8**
PRU Pruhonice 17.86 329 *e*P **Pn** **14 07 34.4 0.0**
PRU Pruhonice 17.86 329 *e*P **Pn** **14 07 34.4 0.0**
PRU Pruhonice 17.86 329 *e*P **Pn** **14 07 34.4 0.0**
KSP Ksiaz 17.86 334 *e*P **P** **14 07 35.4 +0.5**
KSP Ksiaz 17.86 334 *e*P **P** **14 07 35.4 +0.5**
WET Wettzell 17.98 325 *e*Pn **Pn** **14 07 35.6 -0.3**
comp=Z,77nm,2.1s
WET Wettzell 17.98 325 *e*P **Pn** **14 07 35.6 -0.3**
WET pmax pmax
comp=Z,77nm,2.1s
WET Wettzell 17.98 325 *e*P **Pn** **14 07 35.6 -0.3**
comp=Z,77nm,2.1s
RETA Reutte 17.98 318 ⇑*i*P **P** **14 07 36.3 0.0**
comp=Z,9.1nm,0.7s
RETA Reutte 17.98 318 P **P** **14 07 36.3 0.0**
comp=Z,9.1nm,0.7s
DAVOX Davos/Dischmat 18.08 315 P **P** **14 07 37.8 +0.3**
comp=Z,0.3nm,0.3s,baz=137,slow=17,SNR=7.7
DAVOX Davos/Dischmat 18.08 315 P **P** **14 07 37.8 +0.3**
TUE Stuetta 18.23 314 *e*Pn **Pn** **14 07 37.9 -1.2**
comp=Z,15nm,0.9s
TUE Stuetta 18.23 314 *e*Pn **Pn** **14 07 37.9 -1.2**
comp=Z,15nm,0.9s
SAOF Saorge 18.28 305 *e*P **P** **14 07 38.2 -1.3**
SAOF Saorge 18.28 305 *e*P **P** **14 07 38.2 -1.3**
SAOF Saorge 18.28 305 *e*P **P** **14 07 38.2 -1.3**
SAOF Saorge 18.28 305 *e*P **P** **14 07 38.2 -1.3**
SBF Sospel 18.31 304 *e*P **P** **14 07 39.2 -0.8**
comp=Z,57nm,0.8s
SBF Sospel 18.31 304 *e*P **P** **14 07 39.2 -0.8**
SBF pmax pmax
comp=Z,57nm,0.8s
SBF Sospel 18.31 304 *e*P **P** **14 07 39.2 -0.8**
comp=Z,57nm,0.8s
SBF Sospel 18.31 304 *e*P **P** **14 07 39.2 -0.8**
comp=Z,28nm,0.8s
DAVA Damuels 18.36 316 ⇑*i*Pn **Pn** **14 07 41.3 +0.6**
comp=Z,20nm,0.7s
DAVA Damuels 18.36 316 P **Pn** **14 07 41.3 +0.6**
comp=Z,20nm,0.7s
AUTN L'Aution 18.37 305 *e*P Pn 14 07 46.0 +5.2
AUTN L'Aution 18.37 305 *e*P Pn 14 07 46.0 +5.2
AUTN L'Aution 18.37 305 *e*P Pn 14 07 46.0 +5.2
TOUF Mont Tournerai 18.49 304 *e*P **Pn** **14 07 42.4 0.0**
TOUF Mont Tournerai 18.49 304 *e*P **Pn** **14 07 42.4 0.0**
TOUF Mont Tournerai 18.49 304 *e*P **Pn** **14 07 42.4 0.0**
TOUF Mont Tournerai 18.49 304 *e*P **Pn** **14 07 42.4 0.0**
MVIF Mont Vial 18.52 304 *e*P **P** **14 07 40.8 -1.5**
MVIF Mont Vial 18.52 304 *e*P **P** **14 07 40.8 -1.5**
MVIF Mont Vial 18.52 304 *e*P **P** **14 07 40.8 -1.5**
MVIF Mont Vial 18.52 304 *e*P **P** **14 07 40.8 -1.5**
CALN Calern 18.65 303 *e*P **P** **14 07 43.1 -0.6**
CALN Calern 18.65 303 *e*P **P** **14 07 43.1 -0.6**
CALN Calern 18.65 303 *e*P **P** **14 07 43.1 -0.6**
CALN Calern 18.65 303 *e*P **P** **14 07 43.1 -0.6**
ROTZ Rotzenmuhle 18.73 325 *e*Pn **Pn** **14 07 45.0 0.0**
IPIR Pirpir 18.74 92 *e*P **P** **14 07 44.2 -0.8**
IPIR Pirpir 18.74 92 *e*P **P** **14 07 44.2 -0.8**
FRF La Foret Royal 18.75 303 *e*P **Pn** **14 07 45.6 +0.3**
comp=Z,30nm,0.8s
FRF La Foret Royal 18.75 303 *e*P **Pn** **14 07 45.6 +0.3**
FRF pmax pmax
comp=Z,30nm,0.8s
FRF La Foret Royal 18.75 303 *e*P **Pn** **14 07 45.6 +0.3**
comp=Z,30nm,0.8s
FRF La Foret Royal 18.75 303 *e*P **Pn** **14 07 45.6 +0.3**
comp=Z,15nm,0.8s
LMR La Mourre 18.77 302 *e*P **Pn** **14 07 45.4 -0.2**
comp=Z,38nm,1.1s
LMR La Mourre 18.77 302 *e*P **Pn** **14 07 45.4 -0.2**
LMR pmax pmax
comp=Z,39nm,1.1s
LMR La Mourre 18.77 302 *e*P **Pn** **14 07 45.4 -0.2**
comp=Z,38nm,1.1s
LMR La Mourre 18.77 302 *e*P **Pn** **14 07 45.4 -0.2**
comp=Z,19nm,1.1s
BRG Berggiesshubel 18.79 330 *e*P **P** **14 07 45.2 +0.2**
comp=Z,9.5nm,1.0s
BRG *e* 14 07 51.8
comp=Z,21nm,1.3s
BRG Berggiesshubel 18.79 330 *e*Pn **Pn** **14 07 45.4 -0.3**
BRG Berggiesshubel 18.79 330 *e*P **P** **14 07 45.2 +0.2**
BRG pmax pmax
comp=Z,10.0nm,1.0s
BRG pmax pmax
comp=Z,21nm,1.2s
BRG Berggiesshubel 18.79 330 *e*P **P** **14 07 45.2 +0.2**
comp=Z,21nm,1.2s
MANZ Manzenberg 18.93 326 *e*Pn **Pn** **14 07 48.6 +1.2**
comp=Z,19nm,1.0s
NKC Novy Kostel 18.95 327 AMS AMS 14 16 50.0
comp=Z,500nm,16.5s
WERN Wernitzgruen 19.02 327 *e*Pn **Pn** **14 07 48.7 +0.2**
MBDF Montbardon 19.07 306 *e*P **P** **14 07 47.5 -0.9**
comp=Z,37nm,0.7s
MBDF Montbardon 19.07 306 *e*P **P** **14 07 47.5 -0.9**
MBDF pmax pmax
comp=Z,37nm,0.7s
MBDF Montbardon 19.07 306 *e*P **P** **14 07 47.5 -0.9**
comp=Z,37nm,0.7s
MBDF Montbardon 19.07 306 *e*P **P** **14 07 47.5 -0.9**
comp=Z,19nm,0.7s
TANN Tannenbergstha 19.07 327 *e*Pn **P** **14 07 48.3 +0.1**
GUNZ Gunzen 19.09 327 *e*Pn **P** **14 07 48.0 -0.5**
GRA1 Grafenberg Arr 19.14 324 *e*P **P** **14 07 49.2 +0.2**
GRF Grafenberg Arr 19.14 324 *e*Pn **P** **14 07 49.2 +0.2**
GRF Grafenberg Arr 19.14 324 *e*P **P** **14 07 49.2 +0.2**
GRFO Grafenberg 19.14 324 *e*P **P** **14 07 49.1 +0.2**
GRFO pmax pmax
comp=Z,22nm,1.0s
GRFO Grafenberg 19.14 324 *e*P **P** **14 07 49.1 +0.2**
comp=Z,22nm,1.0s
GRFO Grafenberg 19.14 324 *e*P **P** **14 07 49.1 +0.2**
comp=Z,22nm,1.0s
WERD Werda 19.16 327 *e*Pn **P** **14 07 48.4 -0.8**
BNI Bardonecchia 19.26 307 *e*P **Pn** **14 07 51.4 -0.1**
BNI pmax pmax
comp=Z,12nm,0.9s
BNI Bardonecchia 19.26 307 *e*Pn **Pn** **14 07 51.4 -0.1**
comp=Z,12nm,0.9s
BNI Bardonecchia 19.26 307 *e*P **Pn** **14 07 51.4 -0.1**
comp=Z,12nm,0.9s
PLN Plauen 19.26 327 *e*Pn **P** **14 07 50.0 -0.2**
LPG La Plagne 19.39 308 *e*P **Pn** **14 07 53.4 +0.2**
comp=Z,28nm,0.7s
LPG La Plagne 19.39 308 *e*P **Pn** **14 07 53.4 +0.2**
LPG pmax pmax
comp=Z,28nm,0.7s
LPG La Plagne 19.39 308 *e*P **Pn** **14 07 53.4 +0.2**
comp=Z,28nm,0.7s
LPG La Plagne 19.39 308 *e*P **Pn** **14 07 53.4 +0.2**
comp=Z,14nm,0.7s
LPL La Plagne 19.41 308 *e*P **Pn** **14 07 53.1 -0.3**
comp=Z,23nm,0.6s
LPL La Plagne 19.41 308 *e*P **Pn** **14 07 53.1 -0.3**
LPL pmax pmax
comp=Z,23nm,0.6s
LPL La Plagne 19.41 308 *e*P **Pn** **14 07 53.1 -0.3**
comp=Z,23nm,0.6s
LPL La Plagne 19.41 308 *e*P **Pn** **14 07 53.1 -0.3**
comp=Z,12nm,0.6s
SPAK Spaichingen-Ko 19.43 317 *e*P **Pn** **14 07 53.8 +0.3**
SPAK Spaichingen-Ko 19.43 317 *e*P **Pn** **14 07 53.8 +0.3**
CLL Collm 19.50 330 *e*Pn **P** **14 07 52.5 -0.4**
CLL Collm 19.50 330 *i* P **P** **14 07 52.4 -0.4**
CLL *e*S **Sn** **14 11 34.0 +1.9**
CLL MLR MLR
comp=Z,200nm,19.7s
CLL Collm 19.50 330 *i* P **P** **14 07 52.4 -0.4**
CLL *i* 14 07 55.6
comp=Z,23nm,0.9s
CLL *i* pP **pP** **14 07 58.5 -2.0**
CLL *i* PP **PnPn** **14 08 09.6 +1.8**
CLL *i* PPP PPP 14 08 18.2
CLL *e* 14 08 39.0
CLL *e*S **Sn** **14 11 36.0 +3.9**
CLL *e*SS SnSn 14 11 57.0 +11
CLL *i* PcP **PcP** **14 12 13.9 +1.3**
CLL Lm MLR 14 16 00.0
comp=N,100nm,20.4s
CLL Lm MLR 14 16 00.0
comp=E,200nm,19.6s
CLL Lm MLR 14 16 00.0
comp=Z,200nm,19.7s
CLL Collm 19.50 330 *i* P **P** **14 07 52.4 -0.4**
RSL Roselend 19.55 309 *e*P **P** **14 07 53.7 +0.1**
RSL Roselend 19.55 309 *e*P **P** **14 07 53.7 +0.1**
RSL Roselend 19.55 309 *e*P **P** **14 07 53.7 +0.1**
RSL Roselend 19.55 309 *e*P **P** **14 07 53.7 +0.1**
MOX Moxa 19.61 327 *e*Pn **Pn** **14 07 55.6 0.0**
MOX Moxa 19.61 327 *e*P **Pn** **14 07 55.6 0.0**
MOX Moxa 19.61 327 *e*P **Pn** **14 07 55.6 0.0**
SMRF Simiane la Rot 19.62 303 *e*P **P** **14 07 54.8 +0.5**
comp=Z,23nm,0.9s
SMRF Simiane la Rot 19.62 303 *e*P **P** **14 07 54.8 +0.5**
comp=Z,23nm,0.9s
SMRF Simiane la Rot 19.62 303 *e*P **P** **14 07 54.8 +0.5**
comp=Z,12nm,0.9s
ORIF Oris-en-Rattie 19.73 306 *e*P **Pn** **14 07 56.7 -0.4**
comp=Z,19nm,0.8s
ORIF *e*R

comp=Z,385nm,22.2s
ORIF Oris-en-Rattie 19.73 306 *e*P **Pn** **14 07 56.7 -0.4**
ORIF pmax pmax
comp=Z,19nm,0.8s
ORIF Oris-en-Rattie 19.73 306 *e*P **Pn** **14 07 56.7 -0.4**
comp=Z,19nm,0.8s
ORIF Oris-en-Rattie 19.73 306 *e*P **Pn** **14 07 56.7 -0.4**
comp=Z,9.3nm,0.8s
BFO Black Forest 19.81 317 *e*Pn **Pn** **14 07 58.6 +0.7**
BFO Black Forest 19.81 317 *e*P **P** **14 07 55.4 -0.9**
BFO pmax pmax
comp=Z,15nm,0.8s
BFO Black Forest 19.81 317 *e*P **P** **14 07 55.4 -0.9**
comp=Z,15nm,0.8s
BFO Black Forest 19.81 317 *e*P **P** **14 07 55.4 -0.9**
comp=Z,15nm,0.8s
BBS Basel-Blauen 19.82 314 *e*P **Pn** **14 07 57.9 -0.2**
BBS Basel-Blauen 19.82 314 *e*P **Pn** **14 07 57.9 -0.2**
BBS Basel-Blauen 19.82 314 *e*P **Pn** **14 07 57.9 -0.2**
IZEF Zefreh 19.86 90 *e*P **Pn** **14 07 58.4 -0.6**
IZEF Zefreh 19.86 90 *e*P **Pn** **14 07 58.4 -0.6**
ISHM Shahmirzad 20.16 81 *e*P Pn 14 08 01.6 -1.0
ISHM Shahmirzad 20.16 81 *e*P Pn 14 08 01.6 -1.0
LOMF Lomont 20.16 313 *e*P Pn 14 08 03.1 +0.8
LOMF Lomont 20.16 313 *e*P Pn 14 08 03.1 +0.8
LOMF Lomont 20.16 313 *e*P Pn 14 08 03.1 +0.8
CABF La Chapelle 20.28 311 *e*P **P** **14 08 01.6 +0.2**
comp=Z,72nm,0.7s
CABF La Chapelle 20.28 311 *e*P **P** **14 08 01.6 +0.2**
CABF pmax pmax
comp=Z,73nm,0.7s
CABF La Chapelle 20.28 311 *e*P **P** **14 08 01.6 +0.2**
comp=Z,72nm,0.7s
CABF La Chapelle 20.28 311 *e*P **P** **14 08 01.6 +0.2**
comp=Z,36nm,0.7s
TOD Tromm 20.29 321 *e*P Pn 14 08 07.0 +3.3
TOD Tromm 20.29 321 *e*P Pn 14 08 07.0 +3.3
OG35 Corcelles 20.36 309 *e*P **P** **14 08 02.9 +0.5**
HINF Hinteralfeld 20.38 314 *e*P Pn 14 08 03.5 -1.2
comp=Z,11nm,0.7s
HINF Hinteralfeld 20.38 314 *e*P Pn 14 08 03.5 -1.2
HINF pmax pmax
comp=Z,11nm,0.7s
HINF Hinteralfeld 20.38 314 *e*P Pn 14 08 03.5 -1.2
comp=Z,11nm,0.7s
HINF Hinteralfeld 20.38 314 *e*P Pn 14 08 03.5 -1.2
comp=Z,5.4nm,0.7s
ECH Echery 20.41 316 *e*P **P** **14 08 02.3 -0.5**
ECH pmax pmax
comp=Z,17nm,1.0s
ECH Echery 20.41 316 *e*P **P** **14 08 02.2 -0.5**
comp=Z,17nm,1.0s
ECH Echery 20.41 316 *e*P **P** **14 08 02.3 -0.5**
comp=Z,17nm,1.0s
CDF Champ du Feu 20.44 316 *e*P **P** **14 08 01.4 -1.8**
comp=Z,34nm,0.7s
CDF Champ du Feu 20.44 316 *e*P **P** **14 08 01.4 -1.8**
CDF pmax pmax
comp=Z,34nm,0.7s
CDF Champ du Feu 20.44 316 *e*P **P** **14 08 01.4 -1.8**
comp=Z,34nm,0.7s
CDF Champ du Feu 20.44 316 *e*P **P** **14 08 01.4 -1.8**
comp=Z,17nm,0.7s
LANF Langenberg 20.46 318 *e*P **P** **14 08 03.3 0.0**
LANF Langenberg 20.46 318 *e*P **P** **14 08 03.3 0.0**
LANF Langenberg 20.46 318 *e*P **P** **14 08 03.3 0.0**
LANF Langenberg 20.46 318 *e*P **P** **14 08 03.3 0.0**
UBBA Unterbreizbach 20.48 325 *e*Pn **P** **14 08 04.3 +0.9**
VIVF Saint-Julien-I 20.52 305 *e*P **P** **14 08 02.5 -1.5**
comp=Z,21nm,0.7s
VIVF Saint-Julien-I 20.52 305 *e*P **P** **14 08 02.5 -1.5**
VIVF pmax pmax
comp=Z,21nm,0.7s
VIVF Saint-Julien-I 20.52 305 *e*P **P** **14 08 02.5 -1.5**
comp=Z,21nm,0.7s
VIVF Saint-Julien-I 20.52 305 *e*P **P** **14 08 02.5 -1.5**
comp=Z,10nm,0.7s
EMHD Djebel Mahouad 20.74 280 P **P** **14 08 06.5 -0.2**
SSB Saint Sauveur 20.75 306 *e*P **P** **14 08 05.7 -0.8**
SSB Saint Sauveur 20.75 306 *e*P **P** **14 08 05.7 -0.8**
SSB Saint Sauveur 20.75 306 *e*P **P** **14 08 05.7 -0.8**
HAU Haudompre 20.77 314 *e*P **P** **14 08 07.2 +0.5**
comp=Z,25nm,0.6s
HAU *e*R
comp=Z,318nm,18.5s
HAU Haudompre 20.77 314 *e*P **P** **14 08 07.2 +0.5**
HAU pmax pmax
comp=Z,25nm,0.6s
HAU Haudompre 20.77 314 *e*P **P** **14 08 07.2 +0.5**
comp=Z,25nm,0.6s
HAU Haudompre 20.77 314 *e*P **P** **14 08 07.2 +0.5**
comp=Z,13nm,0.6s
LASF Ste Croix 20.83 302 *e*P **P** **14 08 08.4 +1.0**
comp=Z,32nm,0.9s
LASF Ste Croix 20.83 302 *e*P **P** **14 08 08.4 +1.0**
comp=Z,32nm,0.9s
LASF Ste Croix 20.83 302 *e*P **P** **14 08 08.4 +1.0**
comp=Z,16nm,0.9s
TNS Taunus Mts 20.85 322 *e*Pn **P** **14 08 08.5 +0.9**
TNS Taunus Mts 20.85 322 *e*P **P** **14 08 08.5 +0.9**
TNS Taunus Mts 20.85 322 *e*P **P** **14 08 08.5 +0.9**
CLZ Clausthal 21.01 327 *e*Pn P 14 08 16.6 +7.3
comp=Z,26nm,1.8s
CLZ Clausthal 21.01 327 *e*P P 14 08 16.6 +7.3
CLZ pmax pmax
comp=Z,26nm,1.8s
THEF They Montfort 21.09 315 *e*P **P** **14 08 10.7 +0.6**
THEF They Montfort 21.09 315 *e*P **P** **14 08 10.7 +0.6**
THEF They Montfort 21.09 315 *e*P **P** **14 08 10.7 +0.6**
THEF They Montfort 21.09 315 *e*P **P** **14 08 10.7 +0.6**
ISAD Sadrabad 21.23 92 *e*P **P** **14 08 13.6 +1.6**
ISAD Sadrabad 21.23 92 *e*P **P** **14 08 13.6 +1.6**
NRDL Niedersach Rie 21.59 328 *e*Pn P 14 08 24.1 +8.7
comp=Z,17nm,1.2s
LBL Lubilhac 21.59 305 *e*P **P** **14 08 19.1 +3.5**
LBL Lubilhac 21.59 305 *e*P **P** **14 08 19.1 +3.5**
LBL Lubilhac 21.59 305 *e*P **P** **14 08 19.1 +3.5**
PLDF La Plantade 21.59 307 *e*P **P** **14 08 16.4 +0.8**
PLDF La Plantade 21.59 307 *e*P **P** **14 08 16.4 +0.8**
PLDF La Plantade 21.59 307 *e*P **P** **14 08 16.4 +0.8**
PLDF La Plantade 21.59 307 *e*P **P** **14 08 16.4 +0.8**
SFTF Sexfontaines 21.63 314 *e*P **P** **14 08 16.9 +0.9**
comp=Z,61nm,0.9s
SFTF Sexfontaines 21.63 314 *e*P **P** **14 08 16.9 +0.9**
comp=Z,61nm,0.9s
SFTF Sexfontaines 21.63 314 *e*P **P** **14 08 16.9 +0.9**
comp=Z,30nm,0.9s
SMF Signal de Mont 21.70 309 *e*P **P** **14 08 15.6 -1.1**
comp=Z,34nm,0.8s
SMF Signal de Mont 21.70 309 *e*P **P** **14 08 15.6 -1.1**
SMF pmax pmax
comp=Z,34nm,0.8s
SMF Signal de Mont 21.70 309 *e*P **P** **14 08 15.6 -1.1**
comp=Z,34nm,0.8s
SMF Signal de Mont 21.70 309 *e*P **P** **14 08 15.6 -1.1**
comp=Z,17nm,0.8s
ICHK Chekchek 21.73 91 *e*P **P** **14 08 17.4 0.0**
ICHK Chekchek 21.73 91 *e*P **P** **14 08 17.4 0.0**
MTLF Montolieu 21.80 300 *e*P **P** **14 08 18.2 +0.4**
comp=Z,17nm,0.9s
MTLF Montolieu 21.80 300 *e*P **P** **14 08 18.2 +0.4**
MTLF pmax pmax
comp=Z,17nm,0.9s
MTLF Montolieu 21.80 300 *e*P **P** **14 08 18.2 +0.4**
comp=Z,17nm,0.9s
MTLF Montolieu 21.80 300 *e*P **P** **14 08 18.2 +0.4**
comp=Z,8.4nm,0.9s
PYM Petit Puy Mans 21.92 306 *e*P **P** **14 08 22.4 +3.2**
PYM Petit Puy Mans 21.92 306 *e*P **P** **14 08 22.4 +3.2**
PYM Petit Puy Mans 21.92 306 *e*P **P** **14 08 22.4 +3.2**
LOR Lormes 21.94 311 *e*P **P** **14 08 19.4 +0.1**
comp=Z,23nm,0.8s
LOR *e*R
comp=Z,257nm,18.8s
LOR Lormes 21.94 311 *e*P **P** **14 08 19.4 +0.1**
comp=Z,23nm,0.8s
LOR Lormes 21.94 311 *e*P **P** **14 08 19.4 +0.1**
comp=Z,12nm,0.8s
AVF Avril sur Loir 22.07 309 *e*P **P** **14 08 19.8 -0.8**
comp=Z,33nm,0.8s
AVF Avril sur Loir 22.07 309 *e*P **P** **14 08 19.8 -0.8**
AVF pmax pmax
comp=Z,33nm,0.8s
AVF Avril sur Loir 22.07 309 *e*P **P** **14 08 19.8 -0.8**
comp=Z,33nm,0.8s
AVF Avril sur Loir 22.07 309 *e*P **P** **14 08 19.8 -0.8**
comp=Z,17nm,0.8s
SSF Saint Saulge 22.07 310 *e*P **P** **14 08 20.2 -0.5**
comp=Z,48nm,0.7s
SSF Saint Saulge 22.07 310 *e*P **P** **14 08 20.2 -0.5**
SSF pmax pmax
comp=Z,48nm,0.7s
SSF Saint Saulge 22.07 310 *e*P **P** **14 08 20.2 -0.5**
comp=Z,48nm,0.7s
SSF Saint Saulge 22.07 310 *e*P **P** **14 08 20.2 -0.5**
comp=Z,24nm,0.7s
IMEH Mehriz 22.13 93 *e*P **P** **14 08 23.3 +1.6**
IMEH Mehriz 22.13 93 *e*P **P** **14 08 23.3 +1.6**
CAF Calviac 22.30 304 *e*P **P** **14 08 22.5 -0.7**
comp=Z,23nm,1.0s
CAF Calviac 22.30 304 *e*P **P** **14 08 22.5 -0.7**
CAF pmax pmax
comp=Z,23nm,1.0s
CAF Calviac 22.30 304 *e*P **P** **14 08 22.5 -0.7**
comp=Z,23nm,1.0s
CAF Calviac 22.30 304 *e*P **P** **14 08 22.5 -0.7**
comp=Z,12nm,1.0s
BGF Bois d'Agland 22.31 308 *e*P **P** **14 08 22.6 -0.6**
comp=Z,31nm,0.7s
BGF Bois d'Agland 22.31 308 *e*P **P** **14 08 22.6 -0.6**
BGF pmax pmax
comp=Z,31nm,0.7s
BGF Bois d'Agland 22.31 308 *e*P **P** **14 08 22.6 -0.6**
comp=Z,31nm,0.7s
BGF Bois d'Agland 22.31 308 *e*P **P** **14 08 22.6 -0.6**
comp=Z,15nm,0.7s
MEM Membach 22.34 320 P **P** **14 08 26.0 +2.5**
BCLA Clavier 22.61 319 P **P** **14 08 29.1 +2.7**
comp=Z,12nm,1.3s
TCF Toulx Ste Croi 22.62 307 *e*P **P** **14 08 26.3 -0.3**
comp=Z,9.4nm,0.7s
TCF Toulx Ste Croi 22.62 307 *e*P **P** **14 08 26.3 -0.3**
TCF pmax pmax
comp=Z,9.0nm,0.7s
TCF Toulx Ste Croi 22.62 307 *e*P **P** **14 08 26.3 -0.3**
comp=Z,9.4nm,0.7s
TCF Toulx Ste Croi 22.62 307 *e*P **P** **14 08 26.3 -0.3**
comp=Z,4.7nm,0.7s
GIVF Givet 22.70 318 *e*P **P** **14 08 27.0 -0.4**
comp=Z,55nm,1.2s
GIVF Givet 22.70 318 *e*P **P** **14 08 27.0 -0.4**
GIVF pmax pmax
comp=Z,55nm,1.2s
GIVF Givet 22.70 318 *e*P **P** **14 08 27.0 -0.4**
comp=Z,55nm,1.2s
GIVF Givet 22.70 318 *e*P **P** **14 08 27.0 -0.4**
comp=Z,27nm,1.2s
RJF Les Rejaudoux 22.78 304 *e*P **P** **14 08 28.9 +0.6**
comp=Z,20nm,0.7s
RJF *e*R
comp=Z,287nm,18.5s
RJF Les Rejaudoux 22.78 304 *e*P **P** **14 08 28.9 +0.6**
RJF pmax pmax
comp=Z,20nm,0.7s
RJF Les Rejaudoux 22.78 304 *e*P **P** **14 08 28.9 +0.6**
comp=Z,20nm,0.7s
RJF Les Rejaudoux 22.78 304 *e*P **P** **14 08 28.9 +0.6**
comp=Z,9.9nm,0.7s
DOU Dourbes 22.82 318 P **P** **14 08 30.2 +1.6**
IBAF Bafgh 22.85 92 *e*P **P** **14 08 30.2 +0.9**
IBAF Bafgh 22.85 92 *e*P **P** **14 08 30.2 +0.9**
BAIF Baives 23.02 317 *e*P **P** **14 08 30.0 -0.6**
comp=Z,39nm,1.1s
BAIF Baives 23.02 317 *e*P **P** **14 08 30.0 -0.6**
BAIF pmax pmax
comp=Z,39nm,1.1s
BAIF Baives 23.02 317 *e*P **P** **14 08 30.0 -0.6**
comp=Z,39nm,1.1s
BAIF Baives 23.02 317 *e*P **P** **14 08 30.0 -0.6**
comp=Z,20nm,1.1s
EPF Esparros 23.08 298 *e*P **P** **14 08 30.0 -1.5**
comp=Z,9.1nm,0.7s
EPF Esparros 23.08 298 *e*P **P** **14 08 30.0 -1.5**
EPF pmax pmax
comp=Z,9.0nm,0.7s
EPF Esparros 23.08 298 *e*P **P** **14 08 30.0 -1.5**
comp=Z,9.1nm,0.7s
EPF Esparros 23.08 298 *e*P **P** **14 08 30.0 -1.5**
comp=Z,4.6nm,0.7s
TAM Tamanrasset 23.58 244 *e*P **P** **14 08 35.5 -1.2**
TAM *e**PP **pP** **14 08 44.1 -0.7**
TAM *e**SP **sP** **14 08 48.6 +0.3**
TAM pmax pmax
comp=Z,21nm,1.0s
TAM Tamanrasset 23.58 244 *e*P **P** **14 08 35.5 -1.2**
comp=Z,21nm,1.0s
TAM *epP* **pP** **14 08 44.0 -0.7**
TAM *esP* **sP** **14 08 48.6 +0.3**
TAM Tamanrasset 23.58 244 *e*P **P** **14 08 35.5 -1.2**
comp=Z,21nm,1.0s
ETSF Etsaut 23.71 297 *e*P **P** **14 08 37.7 0.0**
comp=Z,14nm,0.8s
ETSF Etsaut 23.71 297 *e*P **P** **14 08 37.7 0.0**
ETSF pmax pmax
comp=Z,14nm,0.8s
ETSF Etsaut 23.71 297 *e*P **P** **14 08 37.7 0.0**
comp=Z,14nm,0.8s
ETSF Etsaut 23.71 297 *e*P **P** **14 08 37.7 0.0**
comp=Z,6.8nm,0.8s
SJPF Ste Jean 24.23 298 *e*P **P** **14 08 42.7 +0.3**
comp=Z,31nm,0.9s
SJPF Ste Jean 24.23 298 *e*P **P** **14 08 42.7 +0.3**
SJPF pmax pmax
comp=Z,31nm,0.9s
SJPF Ste Jean 24.23 298 *e*P **P** **14 08 42.7 +0.3**
comp=Z,31nm,0.9s
SJPF Ste Jean 24.23 298 *e*P **P** **14 08 42.7 +0.3**
comp=Z,15nm,0.9s
MFF Saint Martin d 24.27 306 *e*P **P** **14 08 42.1 -0.6**
comp=Z,24nm,0.8s
MFF Saint Martin d 24.27 306 *e*P **P** **14 08 42.1 -0.6**
MFF pmax pmax
comp=Z,24nm,0.8s
MFF Saint Martin d 24.27 306 *e*P **P** **14 08 42.1 -0.6**
comp=Z,24nm,0.8s
MFF Saint Martin d 24.27 306 *e*P **P** **14 08 42.1 -0.6**
comp=Z,12nm,0.8s
LDF La Druitiere 24.92 311 *e*P **P** **14 08 45.9 -2.7**
comp=Z,20nm,0.6s
LDF La Druitiere 24.92 311 *e*P **P** **14 08 45.9 -2.7**
LDF pmax pmax
comp=Z,20nm,0.6s
LDF La Druitiere 24.92 311 *e*P **P** **14 08 45.9 -2.7**
comp=Z,20nm,0.6s
FLN La Foliniere 25.20 311 *e*P **P** **14 08 49.2 -2.0**
comp=Z,38nm,0.7s
FLN *e*R
comp=Z,245nm,17.8s
FLN La Foliniere 25.20 311 *e*P **P** **14 08 49.2 -2.0**
FLN pmax pmax
comp=Z,38nm,0.7s
FLN La Foliniere 25.20 311 *e*P **P** **14 08 49.2 -2.0**
comp=Z,38nm,0.7s
GRR Gorron 25.30 310 *e*P **P** **14 08 50.0 -2.1**
comp=Z,79nm,1.1s
GRR Gorron 25.30 310 *e*P **P** **14 08 50.0 -2.1**
GRR pmax pmax
comp=Z,79nm,1.1s
GRR Gorron 25.30 310 *e*P **P** **14 08 50.0 -2.1**
comp=Z,79nm,1.1s
IMYA Miami 25.58 78 *e*P **P** **14 08 55.4 +0.4**
ESDC Sonseca Array 26.05 289 P **P** **14 08 58.2 -0.8**
ESDC Sonseca Array 26.05 289 P **P** **14 08 58.2 -0.8**
comp=Z,10nm,0.7s,baz=80,slow=10.0,SNR=41
ESLA Sonseca Array 26.05 289 *e*P **P** **14 08 58.1 -0.9**
comp=Z,2.3nm,0.8s
ESLA *epP* **pP** **14 09 07.0 -0.3**
ESLA *esP* **sP** **14 09 10.4 -0.5**
AKTO Aktyubinsk 26.16 46 P **P** **14 08 59.9 0.0**
AKTO pmax pmax
comp=Z,9.0nm,0.8s
AKTO Aktyubinsk 26.16 46 P **P** **14 08 59.9 0.0**
AKTO Aktyubinsk 26.16 46 P **P** **14 08 59.9 0.0**
comp=Z,9.0nm,0.8s,baz=251,slow=8.5,SNR=19
FINES FINESS Array B 26.20 357 P **P** **14 08 59.0 -1.1**
FINES FINESS Array B 26.20 357 P **P** **14 08 59.0 -1.1**
comp=Z,9.1nm,0.7s,baz=154,slow=14,SNR=16
FINES LR LR 14 20 32.8
comp=Z,203nm,18.6s,baz=194,slow=40
FIA1 FINESS Array S 26.20 357 *e*P **P** **14 08 58.7 -1.4**
FIA1 *epP* **pP** **14 09 07.5 -0.9**
SGMF Saint Gilles 26.33 309 *e*P **P** **14 09 01.0 -0.4**
SGMF Saint Gilles 26.33 309 *e*P **P** **14 09 01.0 -0.4**
SGMF Saint Gilles 26.33 309 *e*P **P** **14 09 01.0 -0.4**
PAB San Pablo 26.35 289 *e*P **P** **14 09 02.0 +0.2**
PAB San Pablo 26.35 289 *e*P **P** **14 09 02.0 +0.2**
QUIF Quistinic 26.62 308 *e*P **P** **14 09 02.0 -2.0**
comp=Z,23nm,0.7s
QUIF Quistinic 26.62 308 *e*P **P** **14 09 02.0 -2.0**
QUIF pmax pmax
comp=Z,23nm,0.7s
QUIF Quistinic 26.62 308 *e*P **P** **14 09 02.0 -2.0**
comp=Z,23nm,0.7s
QUIF Quistinic 26.62 308 *e*P **P** **14 09 02.0 -2.0**
comp=Z,12nm,0.7s
HFS Hagfors 26.63 343 P **P** **14 09 01.8 -2.2**
HFS Hagfors 26.63 343 P **P** **14 09 01.8 -2.2**
comp=Z,7.2nm,0.9s,baz=150,slow=9.8,SNR=7.8
HFS LR LR 14 21 18.7
comp=Z,171nm,18.5s,baz=321,slow=41
ROSF Rostrenen 26.81 309 *e*P **P** **14 09 03.7 -2.0**
comp=Z,17nm,0.8s
ROSF Rostrenen 26.81 309 *e*P **P** **14 09 03.7 -2.0**
ROSF pmax pmax
comp=Z,17nm,0.8s
ROSF Rostrenen 26.81 309 *e*P **P** **14 09 03.7 -2.0**
comp=Z,17nm,0.8s
ROSF Rostrenen 26.81 309 *e*P **P** **14 09 03.7 -2.0**
comp=Z,8.6nm,0.8s
KAF Kangasniemi 26.86 358 *e*P **P** **14 09 07.3 +1.3**
KAF pmax pmax
comp=Z,5.0nm,0.7s
KAF Kangasniemi 26.86 358 *ep* **P** **14 09 07.3 +1.3**
comp=Z,4.6nm,0.7s
KAF Kangasniemi 26.86 358 *e*P **P** **14 09 07.3 +1.3**
comp=Z,4.6nm,0.7s
ABKAR Akbulak array 26.89 49 *e*P **P** **14 09 06.2 -0.2**
ATD Arta Tunnel 27.02 148 LR LR 14 21 06.9
comp=Z,62nm,18.8s,baz=72,slow=39
MDT Midelt 27.48 274 P **P** **14 09 12.3 +0.2**
MDT Midelt 27.48 274 P **P** **14 09 12.3 +0.2**
comp=Z,5.6nm,0.8s,baz=81,slow=9.1,SNR=14
JOF Joensuu 27.69 3 *e*P **P** **14 09 14.6 +1.2**
JOF pmax pmax
comp=Z,2.0nm,0.5s
JOF Joensuu 27.69 3 *ep* **P** **14 09 14.6 +1.2**
comp=Z,2.2nm,0.5s
JOF Joensuu 27.69 3 *e*P **P** **14 09 14.6 +1.2**
comp=Z,2.2nm,0.5s
NAO01 NORSAR Array S 27.94 342 *e*P **P** **14 09 14.2 -1.5**
comp=Z,20nm,1.0s
NAO01 *epP* **pP** **14 09 22.9 -1.3**
NB2 NORSAR Subarra 28.03 342 P **P** **14 09 15.7 -0.8**
comp=Z,3.0nm,0.8s,baz=156,slow=10
NB2 NORSAR Subarra 28.03 342 P **P** **14 09 15.7 -0.8**
comp=Z,3.0nm,0.8s,SNR=7.8
NOA NORSAR Array B 28.03 342 P **P** **14 09 14.3 -2.2**
NOA PcP **PcP** **14 12 31.7 +1.0**
NOA NORSAR Array B 28.03 342 P **P** **14 09 14.3 -2.2**
comp=Z,2.1nm,0.8s,baz=149,slow=8.0,SNR=5.8
NOA PcP **PcP** **14 12 31.7 +1.0**
comp=Z,2.2nm,1.0s,baz=195,slow=3.9,SNR=3.2
NOA LR LR 14 22 03.5
comp=Z,113nm,18.9s,baz=150,slow=40
PBRG Braganca 28.18 294 *e*P **P** **14 09 20.9 +2.8**
comp=Z,20nm,1.1s
PBRG Braganca 28.18 294 *e*P **P** **14 09 20.9 +2.8**
comp=Z,20nm,1.1s
MVO Moncorvo 28.38 293 *e*P **P** **14 09 22.6 +2.6**
comp=Z,24nm,2.3s
MVO Moncorvo 28.38 293 *e*P **P** **14 09 22.6 +2.6**
comp=Z,24nm,2.3s
PBAR Barrancos 28.52 286 *e*P **P** **14 09 23.6 +2.4**
comp=Z,16nm,1.3s
PBAR Barrancos 28.52 286 *e*P **P** **14 09 23.6 +2.4**
comp=Z,16nm,1.3s
PMRV Marv??o 28.70 289 *e*P P 14 09 26.0 +3.2
comp=Z,19nm,2.1s
PMRV Marv??o 28.70 289 *e*P P 14 09 26.0 +3.2
comp=Z,19nm,2.1s
PESTR Estremoz 28.89 288 *e*P P 14 09 30.5 +6.0
PESTR Estremoz 28.89 288 *e*P P 14 09 30.5 +6.0
POLO Lamas de Olo 28.96 293 *e*P P 14 09 28.3 +3.2
comp=Z,9.2nm,1.7s
POLO Lamas de Olo 28.96 293 *e*P P 14 09 28.3 +3.2
comp=Z,9.2nm,1.7s
PVIS Viseu 29.04 292 *e*P P 14 09 30.1 +4.3
comp=Z,24nm,1.9s
PVIS Viseu 29.04 292 *e*P P 14 09 30.1 +4.3
comp=Z,24nm,1.9s
ARU Arti 29.34 35 *d i*P **P** **14 09 27.8 -0.4**
ARU 14 10 21.3
ARU S **S** **14 14 22.9 +3.2**
ARU SS **SnSn** **14 15 52.8 +6.0**
ARU pmax pmax
comp=Z,9.0nm,1.7s
SOKR Solikamsk 30.47 28 *e*P **P** **14 09 39.0 +0.9**
SOKR pmax pmax
comp=Z,10.0nm,0.8s
SVE Sverdlovsk 30.52 35 *e*P **P** **14 09 39.4 +0.7**
SVE pmax pmax
comp=Z,11nm,1.3s
TOA0 Torodi Ar. Sit 32.74 234 *e*P **P** **14 09 58.6 0.0**
TOA0 *epP* **pP** **14 10 07.1 +0.1**
TORD Torodi Ar. Bea 32.74 234 P **P** **14 09 59.0 +0.4**
TORD PcP **PcP** **14 12 43.8 +0.1**
TORD Torodi Ar. Bea 32.74 234 P **P** **14 09 59.0 +0.4**
comp=Z,13nm,0.8s,baz=32,slow=9.6,SNR=90
TORD PcP **PcP** **14 12 43.8 +0.1**
comp=Z,1.4nm,0.9s,baz=48,slow=2.3,SNR=3.7
KKAR Karatay Array 33.19 64 *e*P **P** **14 10 02.9 +0.6**
KKAR Karatay Array 33.19 64 *e*P **P** **14 10 02.9 +0.6**
BRVK Borovoye 34.22 46 *ij*P **P** **14 10 12.2 +1.1**
BRVK pmax pmax
comp=Z,10.0nm,2.2s
BVAR Borovoye Array 34.27 46 P **P** **14 10 11.4 -0.1**
BVAR pmax pmax
comp=Z,2.0nm,0.9s
BVAR Borovoye Array 34.27 46 P **P** **14 10 11.4 -0.1**
BVAR Borovoye Array 34.27 46 P **P** **14 10 11.4 -0.1**
comp=Z,2.3nm,0.9s,baz=239,slow=8.1,SNR=9.5
ARCES ARCESS Array B 34.32 358 P **P** **14 10 10.3 -1.5**
ARCES ARCESS Array B 34.32 358 P **P** **14 10 10.3 -1.5**
comp=Z,4.5nm,0.8s,baz=184,slow=7.3,SNR=13
ARCES LR LR 14 25 13.4
comp=Z,162nm,18.6s,baz=61,slow=38
EKS2 Erkin-Say 35.60 64 *e*P **P** **14 10 24.4 +1.1**
EKS2 pmax pmax
comp=Z,9.0nm,0.9s
EKS2 Erkin-Say 35.60 64 *e*P **P** **14 10 24.4 +1.1**
comp=Z,9.3nm,0.9s
AAK Ala-Archa 36.13 64 P **P** **14 10 28.8 +0.9**
AAK pmax pmax
comp=Z,6.0nm,0.8s
AAK Ala-Archa 36.13 64 *e*P **P** **14 10 29.0 +1.1**
AAK Ala-Archa 36.13 64 P **P** **14 10 28.8 +0.9**
comp=Z,5.9nm,0.8s,baz=222,slow=6.4,SNR=9.7
TKM2 Tokmak 2 36.92 64 *e*P **P** **14 10 35.4 +0.7**
TKM2 Tokmak 2 36.92 64 *e*P **P** **14 10 35.4 +0.7**
KMBO Kilima Mbogo 37.16 165 P **P** 14 10 40.0 +3.1
KMBO Kilima Mbogo 37.16 165 P **P** 14 10 40.0 +3.1
comp=Z,1.8nm,0.7s,baz=35,slow=16,SNR=5.3
KURBB Kurchatov Arra 38.90 51 P **P** **14 10 51.0 +0.1**
comp=Z,4.0nm,0.6s,baz=274,slow=8.8,SNR=20
KURBB PcP **PcP** **14 13 02.6 +1.2**
comp=Z,1.6nm,0.7s,baz=264,slow=4.5,SNR=4.1
KURK Kurchatov 38.96 51 P **P** **14 10 51.0 -0.5**
KURK 14 13 02.6
KURK pmax pmax
comp=Z,4.0nm,0.6s
KURK pmax pmax
comp=Z,2.0nm,0.7s
KURK Kurchatov 38.96 51 *e*P **P** **14 10 51.6 +0.1**
KURK PcP **PcP** **14 13 02.6 +1.0**
MK31 Makanchi Array 41.40 57 *e*P **P** **14 11 11.6 -0.3**
MK31 *e**PP **pP** **14 11 20.4 0.0**
MK31 Makanchi Array 41.40 57 *e*P **P** **14 11 11.6 -0.3**
MK31 *epP* **pP** **14 11 20.4 0.0**
MKAR Makanchi Array 41.40 57 P **P** **14 11 11.9 0.0**
MKAR pmax pmax
comp=Z,3.0nm,0.8s
MKAR Makanchi Array 41.40 57 P **P** **14 11 11.9 0.0**
MKAR Makanchi Array 41.40 57 P **P** **14 11 11.9 0.0**
comp=Z,2.8nm,0.8s,baz=275,slow=7.6,SNR=22
DBIC Dimbokro 41.85 235 *e*P **P** **14 11 16.0 +0.3**
DBIC PcP **PcP** **14 13 12.2 +0.8**

DBIC	**Dimbokro**	**41.85**	**235**	P		**P**	**14 11 15.9**	**+0.1**
	comp=Z,15nm,0.9s,baz=25,slow=9.3,SNR=11							
DBIC				PcP		**PcP**	**14 13 12.2**	**+0.8**
	comp=Z,2.2nm,0.5s,baz=19,slow=5.7,SNR=2.9							
NVS	**Novosibirsk**	**42.05**	**45**	*e*P		**P**	**14 11 17.6**	**+0.6**
LIC	**Lamto**	**42.29**	**235**	*e*P		**P**	**14 11 18.9**	**-0.5**
	comp=Z,21nm,0.6s							
LIC	**Lamto**	**42.29**	**235**	*e*P		**P**	**14 11 18.9**	**-0.5**
	comp=Z,21nm,0.6s							
LIC	**Lamto**	**42.29**	**235**	*e*P		**P**	**14 11 18.9**	**-0.5**
	comp=Z,10nm,0.6s							
ZAA0	**Zalesovo Array**	**42.92**	**46**	*e*P		**P**	**14 11 23.6**	**-0.4**
ZAA0				*ep*P		**pP**	**14 11 32.0**	**-0.6**
ZAA0				*es*P		**sP**	**14 11 36.3**	**+0.2**
ZALV	**Zalesovo Beam**	**42.92**	**46**	P		**P**	**14 11 23.3**	**-0.8**
ZALV				pmax	pmax			
	comp=Z,2.0nm,0.4s							
ZALV				MLR	MLR			
	comp=Z,72nm,20.1s							
ZALV	**Zalesovo Beam**	**42.92**	**46**	P		**P**	**14 11 23.3**	**-0.8**
ZALV	**Zalesovo Beam**	**42.92**	**46**	P		**P**	**14 11 23.3**	**-0.8**
	comp=Z,1.5nm,0.4s,baz=280,slow=8.9,SNR=10.0							
ZALV				LR	LR		14 33 17.8	
	comp=Z,72nm,20.1s,baz=250,slow=42							
PYUN	**Piuthan**	**46.42**	**83**	*e*P		**P**	**14 11 53.3**	**+0.7**
DANN	**Dangsing**	**46.95**	**82**	*e*P		**P**	**14 11 57.7**	**+0.9**
KOLN	**Koldanda**	**47.05**	**83**	*e*P		**P**	**14 11 58.0**	**+0.5**
	comp=Z,12nm,0.5s							
DMN	**Daman**	**48.33**	**83**	*e*P		**P**	**14 12 08.0**	**+0.4**
KKN	**Kakani**	**48.40**	**82**	*e*P		**P**	**14 12 08.2**	**+0.2**
PKIN	**Phulchoki**	**48.58**	**83**	*e*P		**P**	**14 12 09.6**	**+0.1**
PKI	**Pulchoki**	**48.59**	**83**	*e*P		**P**	**14 12 09.8**	**+0.1**
GUN	**Gumba**	**48.84**	**82**	*e*P		**P**	**14 12 11.8**	**+0.3**
SUMG	**Summit**	**49.83**	**339**	*e*P		**P**	**14 12 17.2**	**-1.3**
SUMG				pmax	pmax			
	comp=Z,9.0nm,1.0s							
SUMG	**Summit**	**49.83**	**339**	*e*P		**P**	**14 12 17.2**	**-1.3**
	comp=Z,9.3nm,1.0s							
SUMG	**Summit**	**49.83**	**339**	*i* P		**P**	**14 12 18.6**	**+0.1**
	comp=Z,6.8nm,1.0s							
SUMG	**Summit**	**49.83**	**339**	*i* P		**P**	**14 12 18.6**	**+0.1**
	comp=Z,6.8nm,1.0s							
ZAK	**Zakamensk**	**54.58**	**49**	*e*P		P	14 12 48.1	-5.7
ZAK				pmax	pmax			
	comp=Z,4.0nm,1.1s							
GTA	**Gaotai**	**55.46**	**63**	*e*P		**P**	**14 13 00.5**	**+0.1**
GTA				pP		**pP**	**14 13 10.8**	**+1.6**
GTA				sP		**sP**	**14 13 16.9**	**+4.3**
GTA				pmax	pmax			
	comp=Z,3.0nm,1.3s							
ULN	**Ulaanbaatar**	**57.67**	**51**	*e*P		**P**	**14 13 14.9**	**-1.1**
	comp=Z,3.5nm,0.8s							
ULN				*ep*P		**pP**	**14 13 24.5**	**-0.3**
ULN				*es*P		**sP**	**14 13 28.2**	**-0.1**
LZH	**Lanzhou**	**59.66**	**65**	*e*P		P	14 13 47.0	+17
LZH				pP		pP	14 13 51.8	+13
LZH				sP		sP	14 13 54.1	+12
LZH				pmax	pmax			
	comp=Z,16nm,1.3s							
TIXI	**Tiksi**	**60.05**	**21**	*i* P		**P**	**14 13 31.9**	**0.0**
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.9s							
BOSA	**Boshof**	**63.66**	**183**	P		**P**	**14 13 58.9**	**+2.1**
BOSA	**Boshof**	**63.66**	**183**	P		**P**	**14 13 58.9**	**+2.1**
	comp=Z,8.8nm,0.8s,baz=24,slow=7.5,SNR=12							
BOSA				LR	LR		14 44 09.4	
	comp=Z,102nm,18.9s,baz=0.2,slow=38							
CMAR	**Chiang Mai Arr**	**63.83**	**85**	P		**P**	**14 13 58.0**	**-0.2**
CMAR	**Chiang Mai Arr**	**63.83**	**85**	P		**P**	**14 13 57.9**	**-0.2**
	comp=Z,3.3nm,0.8s,baz=299,slow=8.2,SNR=16							
CMAR				LR	LR		14 44 43.2	
	comp=Z,58nm,19.3s,baz=210,slow=39							
SCHQ	**Schefferville**	**64.83**	**320**	*e*P		**P**	**14 14 03.3**	**-0.9**
	comp=Z,4.9nm,0.6s							
SCHQ				*ep*P		**pP**	**14 14 12.9**	**-0.2**
SCHQ				*es*P		**sP**	**14 14 16.4**	**-0.1**
SCHQ	**Schefferville**	**64.83**	**320**	P		**P**	**14 14 03.5**	**-0.7**
	comp=Z,4.2nm,0.6s,baz=88,slow=8.1,SNR=6.6							
KLR	**Kul'dur**	**71.84**	**42**	*e*P		P	14 14 43.0	-5.1
BILL	**Bilibino**	**72.22**	**15**	P		**P**	**14 14 51.0**	**+1.0**
BILL				*e*			14 15 02.9	
USRK	**Ussuriysk Arra**	**74.78**	**46**	P		**P**	**14 15 05.7**	**+0.2**
	comp=Z,7.8nm,0.8s,baz=296,slow=4.8,SNR=16							
KSAR	**Wonju Array Be**	**75.98**	**54**	P		**P**	**14 15 13.1**	**+0.5**
KSRS	**Korea Array**	**76.00**	**54**	P		**P**	**14 15 13.1**	**+0.4**
	comp=Z,6.8nm,1.0s,baz=301,slow=5.2,SNR=21							
YKW3	**Yellowknife Ar**	**78.06**	**343**	*e*P		**P**	**14 15 22.9**	**-0.9**
	comp=Z,0.1nm,0.9s							
YKW3				*ep*P		**pP**	**14 15 32.4**	**-0.5**
YKW3				*es*P		**sP**	**14 15 35.6**	**-0.6**
YKA	**Yellowknife Ar**	**78.12**	**343**	P		**P**	**14 15 22.9**	**-1.2**
YKA	**Yellowknife Ar**	**78.12**	**343**	P		**P**	**14 15 22.9**	**-1.2**
	comp=Z,2.4nm,0.8s,baz=35,slow=5.4,SNR=22							
ILAR	**Eielson Array**	**80.18**	**358**	P		**P**	**14 15 35.7**	**+0.3**
ILAR	**Eielson Array**	**80.18**	**358**	P		**P**	**14 15 35.7**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=358,slow=3.6,SNR=12							
FFC	**Flin Flon**	**80.75**	**333**	*i* P		**P**	**14 15 38.5**	**-0.1**
FFC	**Flin Flon**	**80.75**	**333**	*e*P		**P**	**14 15 37.7**	**-0.9**
	comp=Z,1.7nm,0.9s							
PETK	**Petropavlovsk-**	**81.52**	**28**	LR		LR	14 58 11.1	
	comp=Z,57nm,18.4s,baz=62,slow=40							
ULM	**Lac du Bonnet**	**81.68**	**328**	P		**P**	**14 15 42.4**	**-1.2**
ULM	**Lac du Bonnet**	**81.68**	**328**	P		**P**	**14 15 42.4**	**-1.2**
	comp=Z,2.1nm,0.5s,baz=3.5,slow=3.9,SNR=3.3							
MAT	**Matsushiro**	**83.16**	**50**	P		**P**	**14 15 51.8**	**+0.2**
CPCT	**Cooper Cave**	**85.93**	**311**	*e*P		**P**	**14 16 04.5**	**-1.2**
ECSD	**EROS Data Cent**	**86.83**	**324**	*e*P		**P**	**14 16 08.5**	**-1.5**
	comp=Z,2.9nm,0.7s							
ECSD				*e*PcP		**PcP**	**14 16 12.0**	**-0.2**
BDFB	**Brasilia**	**88.31**	**250**	P		**P**	**14 16 19.2**	**+1.8**
BDFB	**Brasilia**	**88.31**	**250**	P		**P**	**14 16 19.2**	**+1.8**
	comp=Z,7.2nm,0.9s,baz=340,slow=2.7,SNR=6.8							
JTMT	**Jette**	**90.86**	**336**	*e*P		**P**	**14 16 28.2**	**-0.8**
	comp=Z,2.2nm,0.7s							
SWMT	**Swartz Lake**	**90.97**	**336**	*e*P		**P**	**14 16 28.9**	**-0.6**
	comp=Z,8.5nm,1.3s							
BOZ	**Bozeman (W)**	**91.73**	**333**	*e*P		**P**	**14 16 32.3**	**-0.9**
BOZ				*e**PP		**pP**	**14 16 41.9**	**-0.5**
BOZ				*e**SP		**sP**	**14 16 45.5**	**-0.2**
BOZ				pmax	pmax			
	comp=Z,3.0nm,0.9s							
BOZ	**Bozeman (W)**	**91.73**	**333**	*e*P		**P**	**14 16 32.3**	**-0.9**
	comp=Z,2.6nm,0.9s							
BOZ				*ep*P		**pP**	**14 16 41.9**	**-0.5**
BOZ				*es*P		**sP**	**14 16 45.5**	**-0.2**
DLMT	**Dillon**	**92.33**	**334**	*e*P		**P**	**14 16 35.2**	**-0.7**
	comp=Z,3.3nm,1.1s							
DLMT				*ep*P		**pP**	**14 16 44.0**	**-1.2**
PDAR	**Pinedale Array**	**93.37**	**330**	P		**P**	**14 16 39.6**	**-1.3**
PDAR	**Pinedale Array**	**93.37**	**330**	P		**P**	**14 16 39.6**	**-1.3**
	comp=Z,0.7nm,0.8s,baz=46,slow=4.3,SNR=5.7							
HWUT	**Hardware Ranch**	**95.14**	**331**	*e*P		**P**	**14 16 48.1**	**-0.9**
	comp=Z,2.2nm,0.4s							
NVAR	**Mina Array Bea**	**100.45**	**334**	P		**Pdif**	**14 17 13.0**	**0.0**
NVAR	**Mina Array Bea**	**100.45**	**334**	P		**Pdif**	**14 17 13.0**	**0.0**
	comp=Z,0.3nm,0.6s,baz=46,slow=3.1,SNR=3.6							
WRA	**Warramunga Arr**	**113.89**	**98**	PKiKP		**PKiKP**	**14 22 04.1**	**-0.6**
WRA	**Warramunga Arr**	**113.89**	**98**	PKiKP		**PKiKP**	**14 22 04.1**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=296,slow=2.1,SNR=6.0							
ASAR	**Alice Springs**	**115.39**	**102**	PKP		**PKPdf**	**14 22 07.3**	**-0.1**
ASAR	**Alice Springs**	**115.39**	**102**	PKP		**PKPdf**	**14 22 07.3**	**-0.1**
	comp=Z,0.7nm,0.6s,baz=308,slow=1.7,SNR=9.2							
STKA	**Stephens Creek**	**125.12**	**107**	PKP		**PKPdf**	**14 22 26.0**	**+0.2**
STKA	**Stephens Creek**	**125.12**	**107**	PKP		**PKPdf**	**14 22 26.0**	**+0.2**
	comp=Z,1.3nm,0.6s,baz=228,slow=1.4,SNR=4.8							

*IDC **18** 14:25:30.0±0.8, 8.95N×127.13E, h0km, mb3.9/9, mb1 4.1/10, mb1mx3.9/23, mbtmp4.0/10, ML4.4/1, Error ellipse: s-maj=22.9km s-min=13.2km az=95.0*
*ISCJB **18** 14:25:33.4±0.6, 8.92N±0.05×127.19E±0.06, h38km, mb3.8/11, Error ellipse: s-maj=8.9km s-min=6.7km az=138.2*
*MAN **18** 14:25:37, 8.95N×126.86E, h49km, mb5.1, ML4.1, MS4.2*

ISC 18 14:25:36.1±0.7, 8.83N±0.05×127.05E±0.08, h38km, n27, σ1§64/30, mb3.8/11, 4D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.42**	**276**	*e*P	**Pn**	**14 25 57.7**	**-1.6**
BUTP				*e*S	**Sn**	**14 26 19.9**	**+3.2**
MATI	**Mati**	**2.03**	**203**	*e*P	**Pn**	**14 26 07.9**	**+0.1**
BUKP	**Musuan**	**2.18**	**244**	*e*P	**Pn**	**14 26 11.1**	**+1.2**
DAV	**Davao City (W)**	**2.28**	**220**	Pn	**Pn**	**14 26 12.6**	**+1.4**
	82nm,0.3s,baz=314,slow=5.5,SNR=9.0						
DAV				Lg	Lg	14 26 46.9	
	106nm,0.3s,baz=141,slow=21,SNR=9.2						
CGP	**Cagayan de Oro**	**2.36**	**261**	*e*P	**Pn**	**14 26 11.5**	**-0.8**
CGP				*i* S	**Sn**	**14 26 36.4**	**-3.6**
MSLP	**Maasin**	**2.52**	**301**	*e*P	**Pn**	**14 26 15.1**	**+0.7**
PLP	**Palo**	**3.09**	**319**	*e*P	**Pn**	**14 26 22.0**	**-0.3**
PLP				*e*S	**Sn**	**14 27 02.2**	**+4.2**
CTBH	**Cotabato--PC H**	**3.21**	**240**	*i* P	**Pn**	**14 26 24.2**	**+0.3**
TBP	**Tagbilaran**	**3.26**	**285**	*e*P	**Pn**	**14 26 25.1**	**+0.4**
OCLP	**Ormoc**	**3.26**	**313**	*e*P	Pn	14 26 28.9	+4.2
LLP	**Lapu-Lapu**	**3.38**	**296**	*e*P	**Pn**	**14 26 26.3**	**0.0**
LLP				*e*S	**Sn**	**14 27 06.8**	**+1.5**
DCPH	**Dipolog City**	**3.67**	**266**	*e*P	**Pn**	**14 26 30.2**	**0.0**
PAGZ	**Pagadian**	**3.76**	**255**	*e*P	**Pn**	**14 26 33.1**	**+1.6**
CNP	**Catarman**	**4.34**	**328**	*e*P	**Pn**	**14 26 38.8**	**-0.7**
GUIM	**Jordan**	**4.75**	**292**	*e*P	**Pn**	**14 26 44.6**	**-0.5**
RCP	**Roxas**	**5.03**	**303**	*e*P	**Pn**	**14 26 49.4**	**+0.4**
FITZ	**Fitzroy Crossi**	**26.80**	**183**	P	**P**	**14 31 14.6**	**+1.8**
	2.9nm,0.6s,baz=0.0,slow=9.1,SNR=4.0						
CMAR	**Chiang Mai Arr**	**28.90**	**292**	P	**P**	**14 31 30.4**	**-1.3**
	0.9nm,0.6s,baz=99,slow=8.0,SNR=5.6						
WRA	**Warramunga Arr**	**29.48**	**166**	P	**P**	**14 31 35.5**	**-1.2**
	0.4nm,0.6s,baz=348,slow=9.3,SNR=4.1						
ASAR	**Alice Springs**	**32.99**	**168**	P	**P**	**14 32 06.5**	**-1.1**
	0.2nm,0.4s,baz=350,slow=7.2,SNR=7.7						
USRK	**Ussuriysk Arra**	**35.50**	**6**	P	**P**	**14 32 27.6**	**-1.4**
	1.9nm,0.8s,baz=174,slow=9.0,SNR=2.5						
STKA	**Stephens Creek**	**42.80**	**162**	P	**P**	**14 33 30.3**	**+0.1**
	1.6nm,0.8s,baz=338,slow=11,SNR=2.6						
MKAR	**Makanchi Array**	**53.63**	**323**	P	**P**	**14 34 52.8**	**-1.0**
	3.7nm,0.7s,baz=120,slow=8.0,SNR=49						
MKAR				PcP	**PcP**	**14 35 59.6**	**-0.3**
	0.4nm,0.6s,baz=112,slow=2.9,SNR=1.9						
ZALV	**Zalesovo Beam**	**56.25**	**331**	P	**P**	**14 35 11.1**	**-1.4**
	1.2nm,0.6s,baz=115,slow=7.6,SNR=8.0						
ILAR	**Eielson Array**	**80.39**	**26**	P	**P**	**14 37 45.7**	**+2.3**
	0.3nm,0.7s,baz=224,slow=5.0,SNR=3.4						
VNDA	**Vanda**	**88.42**	**173**	P	P	14 38 27.4	+3.8
	0.5nm,0.8s,baz=323,slow=6.6,SNR=2.5						
YKA	**Yellowknife Ar**	**94.75**	**24**	P	**P**	**14 38 53.9**	**+0.6**
	0.3nm,0.7s,baz=305,slow=4.7,SNR=3.4						

IDC 18 14:51:28.1±4.2, 21.63S×68.89W, h0km, mb3.5/1, mb1 3.8/2, mb1mx3.5/17, mbtmp3.7/2, ML3.8/1, MS2.7/1, Ms1 2.8/1, ms1mx2.6/16, Error ellipse: s-maj=122.8km s-min=56.4km az=74.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.36**	**8**	Pn	Pn	14 52 49.9	0.0
	1.9nm,0.3s,baz=189,slow=8.3,SNR=38						
LPAZ				LR	LR	14 55 20.9	
	comp=Z,84nm,21.6s,baz=263,slow=43						
TORD	**Torodi Ar. Bea**	**77.38**	**70**	P	P	15 03 25.4	0.0
	0.3nm,0.7s,baz=258,slow=4.9,SNR=3.3						
MKAR	**Makanchi Array**	**145.73**	**36**	PKPbc	PKPdf	15 11 08.2	-0.4
	0.2nm,0.7s,baz=325,slow=3.5,SNR=2.7						

*IDC **18** 15:00:57.4±3.0, 31.52S×177.85W, h0km, mb4.2/4, mb1 4.3/5, mb1mx3.9/19, mbtmp4.1/5, ML3.2/1, Error ellipse: s-maj=63.4km s-min=43.6km az=121.0*
*ISCJB **18** 15:00:59.6±2.6, 31.79S±0.09×177.9W±0.4, h26km, mb4.2/4, Error ellipse: s-maj=48.1km s-min=10.8km az=7.3*

ISC 18 15:00:59.7±2.5, 31.60S±0.10×177.7W±0.3, h26km, n11, σ1§65/14, mb4.3/4, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.34**	**356**	Sn	**Sn**	**15 02 01.2**	**-3.3**
	279nm,0.3s,baz=57,slow=23,SNR=5.8						
CNGZ	**Carnagh Statio**	**7.63**	**205**	PN	**Pn**	**15 02 49.7**	**+0.5**
MWZ	**Matawai**	**7.76**	**209**	PN	**Pn**	**15 02 51.2**	**+0.1**
MWZ				SN	**Sn**	**15 04 16.1**	**-2.0**
URZ	**Urewera**	**7.88**	**211**	PN	**Pn**	**15 02 52.2**	**-0.3**
URZ				SN	**Sn**	**15 04 19.9**	**-1.0**
URZ	**Urewera**	**7.88**	**211**	Pn	**Pn**	**15 02 52.3**	**-0.3**
	0.3nm,0.3s,baz=275,slow=20,SNR=7.6						
URZ				Sn	**Sn**	**15 04 18.7**	**-2.1**
	1.0nm,0.3s,baz=334,slow=19,SNR=7.4						
BKZ	**Black Stump Fm**	**8.90**	**210**	PN	**Pn**	**15 03 05.1**	**-1.6**
CTA	**Charters Tower**	**34.23**	**281**	P	**P**	**15 07 45.2**	**+1.7**
	4.4nm,0.9s,baz=122,slow=15,SNR=3.3						
STKA	**Stephens Creek**	**34.45**	**259**	P	**P**	**15 07 47.0**	**+1.7**
	0.5nm,0.4s,baz=97,slow=13,SNR=6.5						
ASAR	**Alice Springs**	**43.28**	**268**	P	**P**	**15 08 59.5**	**0.0**
	2.2nm,0.5s,baz=107,slow=7.4,SNR=86						
WRA	**Warramunga Arr**	**44.38**	**273**	P	**P**	**15 09 08.3**	**+0.1**
	4.6nm,0.7s,baz=112,slow=8.0,SNR=55						
FINES	**FINESS Array B**	**146.34**	**340**	PKPbc	**PKPbc**	**15 20 38.3**	**+0.9**
	2.1nm,0.7s,baz=64,slow=4.4,SNR=5.9						

KRSC 18 15:08:24.4±0.8, 55.31N×165.67E, h4km±6km, ML3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.20**	**121**	*i* P	Pg	15 08 30.6	+2.3
BKI				*e*S	Sg	15 08 35.5	+4.5
MKZ	**Mys Kozlova**	**2.40**	**253**	*e*P	Pb	15 09 07.0	-1.0
MKZ				*e*S	Sb	15 09 38.4	+0.5
ZLN	**Zelenaya**	**2.85**	**286**	S	Sb	15 09 50.5	-0.7
BZGR	**Bezymyannyi-Gr**	**2.89**	**285**	P	Pb	15 09 14.7	-1.9
BZGR				S	Sb	15 09 52.4	0.0
KLY	**Klyuchi**	**3.00**	**292**	P	Pn	15 09 13.4	+0.7
KMNR	**Kamenistaya**	**3.12**	**280**	*e*P	Pb	15 09 18.3	-2.2
TUMR	**Tumrok**	**3.16**	**272**	P	Pb	15 09 18.7	-2.5
TUMR				S	Sb	15 09 58.5	-1.7
SRDR	**Sredinnyy**	**3.51**	**289**	P	Pn	15 09 23.1	+3.4
SPN	**Mys Shipunski**	**3.99**	**239**	*e*P	Pn	15 09 28.8	+2.6
SPN				S	Sn	15 10 15.3	+1.9
NLC	**Nalytchevo**	**4.29**	**243**	S	Sn	15 10 23.7	+3.0
SDLR	**Sedlovina**	**4.47**	**246**	*e*P	Pn	15 09 37.2	+4.2
SMAR	**Somma**	**4.52**	**246**	*e*P	Pn	15 09 37.6	+3.8
KRER	**Koryakskii**	**4.52**	**246**	P	Pn	15 09 37.6	+3.7
UGLR	**Uglovaya**	**4.53**	**245**	P	Pn	15 09 36.9	+3.0
AVH	**Avacha**	**4.55**	**246**	P	Pn	15 09 38.4	+4.3
KOK	**Koryaka**	**4.59**	**247**	*e*P	Pn	15 09 38.7	+4.1
PET	**Petropavlovsk**	**4.72**	**244**	P	Pn	15 09 39.7	+3.5
PET				S	Sn	15 10 34.8	+3.5
GNL	**Ganaly**	**4.79**	**253**	P	Pn	15 09 41.0	+3.6
RUS	**Russkaya**	**5.12**	**239**	*e*P	Pn	15 09 44.9	+3.1
MTVR	**Mutnovka**	**5.25**	**240**	*e*P	Pn	15 09 47.4	+3.6
MTVR				*e*S	Sn	15 10 47.1	+2.1
ASAK	**Asacha**	**5.45**	**241**	*e*P	Pn	15 09 51.6	+5.1
ASAK				S	Sn	15 10 54.9	+5.2

IDC 18 15:38:17.3±12.0, 15.18S×165.50E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.5/19, mbtmp3.6/4, ML3.8/1, Error ellipse: s-maj=211.1km s-min=36.0km az=54.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.91**	**173**	Pn	Pn	15 40 00.5	+0.4
	1.6nm,0.3s,baz=358,slow=21,SNR=21						
DZM				Sn	Sn	15 41 19.3	-0.4
	0.2nm,0.3s,baz=315,slow=20,SNR=1.4						
STKA	**Stephens Creek**	**27.41**	**228**	P	P	15 44 05.1	+0.3
	1.6nm,0.9s,baz=66,slow=12,SNR=5.1						
WRA	**Warramunga Arr**	**30.05**	**256**	P	P	15 44 28.2	-0.3
	0.3nm,0.9s,baz=83,slow=7.6,SNR=2.8						
ASAR	**Alice Springs**	**30.91**	**249**	P	P	15 44 35.9	-0.2
	0.4nm,0.8s,baz=81,slow=8.4,SNR=4.2						

IDC 18 15:54:19.7±1.8, 32.24N×95.92E, h0km, mb3.4/4, mb1 3.5/5, mb1mx3.3/26, mbtmp3.3/5, ML2.9/1, Error ellipse: s-maj=190.3km s-min=20.0km az=59.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**17.91**	**328**	P	P	15 58 30.8	0.0
	0.0nm,0.3s,baz=129,slow=11,SNR=3.7						
KURBB	**Kurchatov Arra**	**22.43**	**330**	P	P	15 59 20.1	+0.2
	0.6nm,0.5s,baz=146,slow=9.4,SNR=9.5						
ZALV	**Zalesovo Beam**	**23.11**	**343**	P	P	15 59 26.4	-0.7
	0.4nm,0.4s,baz=150,slow=9.5,SNR=4.0						
WRA	**Warramunga Arr**	**63.59**	**139**	P	P	16 04 52.5	0.0
	0.5nm,0.9s,baz=326,slow=7.9,SNR=5.1						
ASAR	**Alice Springs**	**66.39**	**142**	P	P	16 05 10.7	0.0
	0.3nm,0.5s,baz=326,slow=6.8,SNR=8.4						

IDC 18 15:57:22.4±1.5, 2.23N×127.95E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/22, mbtmp3.5/6, Error ellipse: s-maj=99.1km s-min=18.8km az=71.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.33**	**186**	P	P	16 02 01.1	+0.7
	2.1nm,0.9s,baz=6.3,slow=13,SNR=5.4						
WRA	**Warramunga Arr**	**22.91**	**164**	P	P	16 02 28.2	0.0
	2.4nm,0.7s,baz=344,slow=11,SNR=27						
ASAR	**Alice Springs**	**26.39**	**168**	P	P	16 03 00.3	-0.4
	0.3nm,0.3s,baz=347,slow=11,SNR=17						
MKAR	**Makanchi Array**	**59.47**	**325**	P	P	16 07 27.3	0.0
	0.2nm,0.4s,baz=126,slow=6.8,SNR=6.3						
KURBB	**Kurchatov Arra**	**63.65**	**327**	P	P	16 07 55.5	+0.1
	0.2nm,0.6s,baz=128,slow=5.9,SNR=4.4						
VNDA	**Vanda**	**81.80**	**173**	P	P	16 09 42.6	-0.2
	0.3nm,0.5s,baz=308,slow=7.8,SNR=5.5						

*ISCJB **18** 15:58:52.5±0.4, 51.48N±0.02×16.09E±0.02, h0km, mb3.4/1, Error ellipse: s-maj=3.3km s-min=2.0km az=17.7*
*IPEC **18** 15:58:53.1±0.4, 51.58N×16.24E, h0km, ML2.7/4, Error ellipse: s-maj=4.6km s-min=2.2km az=80.0*
*WAR **18** 15:58:54.9, 51.51N×16.12E*
*IDC **18** 15:58:54.8±0.6, 51.51N×15.90E, h0km, mb3.2/1, mb1 3.5/8, mb1mx3.3/28, mbtmp3.3/8, ML3.0/5, Error ellipse: s-maj=10.1km s-min=6.0km az=104.0*
*PRU **18** 15:58:54.7, 51.50N×16.10E, h0km*
*CSEM **18** 15:58:54.1±0.2, 51.50N×16.11E, h2km, ML3.7/12, Error ellipse: s-maj=3.7km s-min=2.3km az=14.0*
*BGR **18** 15:58:55.3±0.4, 51.48N×16.11E, h1km, ML3.2/17, Error ellipse: s-maj=4.4km s-min=2.2km az=15.0*
*VIE **18** 15:58:57.5±0.9, 51.28N×15.96E, h0km, mb2.9/7, ML3.1/7, Error ellipse: s-maj=6.0km s-min=4.6km az=13.0 76 km WNW of Wroclaw Suspected Mining induced.*

ISC 18 15:58:52.7±0.6, 51.56N±0.03×16.13E±0.02, h0km, n87, σ1§17/161, 6C-4D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.72**	**172**	*e*Pg	**Pg**	**15 59 07.6**	**+1.0**
KSP				*e*Sg	**Sg**	**15 59 16.9**	**+1.0**
KSP	**Ksiaz**	**0.72**	**172**	*e*Pg	**Pg**	**15 59 07.5**	**+0.9**
KSP				*e*Sg	**Sg**	**15 59 16.8**	**+0.9**
KSP	**Ksiaz**	**0.72**	**172**	*e*	Pn	15 59 20.0	+10
KSP	**Ksiaz**	**0.72**	**172**	Pg	**Pg**	**15 59 07.6**	**+1.0**
KSP				Sg	**Sg**	**15 59 16.9**	**+1.0**
UPC	**Upice**	**1.06**	**184**	*i* PG	**Pg**	**15 59 13.5**	**+0.6**
UPC	**Upice**	**1.06**	**184**	Pg	**Pg**	**15 59 13.5**	**+0.6**
DPC	**Dobruska-Polom**	**1.22**	**174**	*e*Pg	**Pg**	**15 59 16.4**	**+0.3**
DPC				*e*Sg	**Sg**	**15 59 31.1**	**-0.6**
DPC	**Dobruska-Polom**	**1.22**	**174**	*i* PG	**Pg**	**15 59 16.3**	**+0.3**
DPC				*e*SG	**Sg**	**15 59 30.8**	**-0.9**
DPC	**Dobruska-Polom**	**1.22**	**174**	Pg	**Pg**	**15 59 16.3**	**+0.3**
DPC				Sg	**Sg**	**15 59 31.1**	**-0.6**
PVCC	**Panska Ves**	**1.43**	**224**	*e*PG	**Pg**	**15 59 20.3**	**+0.3**
PVCC				*e*SG	**Sb**	**15 59 39.0**	**+0.1**
	comp=Z,323nm,0.2s						
PVCC	**Panska Ves**	**1.43**	**224**	Pg	**Pg**	**15 59 20.3**	**+0.3**
P

GEC2	**GERESS Array S**	**3.13 211**	*e*Pn	**Pn**	**15 59 44.7**	**+1.3**
GEC2			*e*Pg	**Pg**	**15 59 52.3**	**-0.4**
GEC2			*e*Sg	**Sg**	**16 00 31.2**	**-2.1**
GEC2	**GERESS Array S**	**3.13 211**	Pn	**Pn**	**15 59 44.7**	**+1.3**
GERES	**GERESS Array B**	**3.13 211**	Pn	**Pn**	**15 59 43.6**	**+0.2**
	comp=Z,3.1nm,0.3s,baz=29,slow=12,SNR=60					
GERES			Pg	**Pb**	**15 59 49.8**	**+0.4**
	comp=Z,3.9nm,0.3s,baz=27,slow=18,SNR=31					
GERES			Sn	**Sn**	**16 00 20.1**	**-1.5**
	comp=Z,5.5nm,0.3s,baz=30,slow=26,SNR=7.6					
GERES			Lg	Lg	16 00 30.0	
	comp=Z,11nm,0.3s,baz=34,slow=29,SNR=11					
SMOL	**Smolenice**	**3.16 164**	*e*PG	**Pg**	**15 59 52.9**	**-0.4**
SMOL			*e*SG	**Sg**	**16 00 36.1**	**+1.9**
WET	**Wettzell**	**3.19 222**	*e*Pn	**Pn**	**15 59 44.7**	**+0.6**
WET			*e*Sg	**Sg**	**16 00 33.4**	**-1.8**
WET	**Wettzell**	**3.19 222**	Pn	**Pn**	**15 59 44.7**	**+0.6**
WET			Sg	**Sg**	**16 00 33.4**	**-1.8**
NIE	**Niedzica**	**3.42 127**	*e*P	**Pg**	**15 59 58.8**	**+0.5**
NIE			*e*S	**Sg**	**16 00 44.8**	**+2.2**
VYHS	**Vyhne**	**3.53 149**	*e*PN	**Pn**	**15 59 51.4**	**+2.6**
VYHS			*e*SG	**Sg**	**16 00 47.0**	**+1.0**
VYHS	**Vyhne**	**3.53 149**	*e*Pn	**Pn**	**15 59 51.4**	**+2.6**
CLZ	**Clausthal**	**3.59 277**	*e*Pn	**Pn**	**15 59 51.4**	**+1.7**
CLZ			*e*Sg	**Sg**	**16 00 49.4**	**+1.3**
CLZ	**Clausthal**	**3.59 277**	Pn	**Pn**	**15 59 51.4**	**+1.7**
CLZ			Sg	**Sg**	**16 00 49.4**	**+1.3**
BSD	**Bornholm Skovb**	**3.63 349**	*i* P	**Pn**	**15 59 50.6**	**+0.4**
BSD			*e*S	**Sn**	**16 00 30.5**	**-3.2**
CONA	**Conrad Observa**	**3.64 183**	*i* Pn	**Pn**	**15 59 51.3**	**+1.0**
	comp=Z,3.4nm,0.3s,SNR=11					
CONA			⇑*e*Pg	**Pg**	**16 00 01.2**	**-1.2**
	comp=Z,8.6nm,0.3s					
CONA			⇓*e*Sg	**Sg**	**16 00 49.3**	**-0.3**
	comp=Z,26nm,0.3s					
CONA	**Conrad Observa**	**3.64 183**	Pn	**Pn**	**15 59 51.3**	**+1.0**
	comp=Z,3.4nm,0.3s,SNR=11					
GRA1	**Grafenberg Arr**	**3.64 241**	Sg	**Sg**	**16 00 50.2**	**+0.6**
GRF	**Grafenberg Arr**	**3.64 241**	*e*Sg	**Sg**	**16 00 50.2**	**+0.6**
MOA	**Molln**	**3.91 199**	⇑*i*Pn	**Pn**	**15 59 55.0**	**+1.0**
	SNR=21					
MOA			⇑*i*Sg	**Sg**	**16 00 58.3**	**+0.2**
	comp=Z,9.5nm,0.2s					
MOA	**Molln**	**3.91 199**	Pn	**Pn**	**15 59 55.0**	**+1.0**
	SNR=21					
MOA			Sg	**Sg**	**16 00 58.3**	**+0.2**
	comp=Z,9.5nm,0.2s					
STHS	**Stebnicka Huta**	**3.91 121**	*e*PN	**Pn**	**15 59 55.6**	**+1.6**
STHS			*e*SG	**Sg**	**16 00 58.8**	**+0.7**
STHS	**Stebnicka Huta**	**3.91 121**	*e*Pn	**Pn**	**15 59 55.6**	**+1.6**
KECS	**Kecovo**	**4.17 136**	*e*PN	**Pn**	**15 59 58.3**	**+0.8**
KECS			*e*PG	**Pb**	**16 00 09.7**	**+2.8**
KECS			*e*SG	**Sg**	**16 01 05.4**	**-1.1**
KECS	**Kecovo**	**4.17 136**	*e*Pn	**Pn**	**15 59 58.3**	**+0.8**
ARSA	**Arzberg**	**4.33 185**	⇑*i*Pn	**Pn**	**16 00 01.9**	**+2.1**
	comp=Z,2.7nm,0.3s					
ARSA			⇓*i*Sg	**Sg**	**16 01 11.6**	**-0.2**
	comp=Z,24nm,0.8s					
ARSA	**Arzberg**	**4.33 185**	Pn	**Pn**	**16 00 01.9**	**+2.1**
	comp=Z,2.7nm,0.3s					
ARSA			Sg	**Sg**	**16 01 11.6**	**-0.2**
	comp=Z,24nm,0.8s					
CRVS	**Cervenica-Dubn**	**4.33 126**	*e*PG	**Pg**	**16 00 13.9**	**-1.8**
CRVS			*e*SG	**Sg**	**16 01 11.9**	**+0.1**
CRVS	**Cervenica-Dubn**	**4.33 126**	*e*Pg	**Pg**	**16 00 13.9**	**-1.8**
CRVS			*e*Sg	**Sg**	**16 01 12.0**	**+0.1**
KBA	**Koelnbreinsper**	**4.84 203**	⇑*i*Pn	**Pn**	**16 00 08.2**	**+1.2**
	comp=Z,5.0nm,0.3s					
KBA			⇑*i*Sg	**Sg**	**16 01 26.7**	**-1.4**
KBA	**Koelnbreinsper**	**4.84 203**	Pn	**Pn**	**16 00 08.2**	**+1.2**
	comp=Z,5.0nm,0.3s					
KBA			Sg	**Sg**	**16 01 26.7**	**-1.4**
	comp=Z,8.1nm,0.4s					
ABTA	**Abfaltersbach**	**5.37 208**	⇓*i*Pn	**Pn**	**16 00 16.1**	**+2.0**
	comp=Z,0.9nm,0.1s					
ABTA			⇓*i*Sg	**Sg**	**16 01 43.4**	**-1.7**
	comp=Z,3.6nm,0.3s					
ABTA	**Abfaltersbach**	**5.37 208**	Pn	**Pn**	**16 00 16.1**	**+2.0**
	comp=Z,0.9nm,0.1s					
ABTA			Sg	**Sg**	**16 01 43.4**	**-1.7**
	comp=Z,3.6nm,0.3s					
DAVOX	**Davos/Dischmat**	**6.30 223**	Pn	**Pn**	**16 00 27.0**	**0.0**
	baz=18,slow=6.4					
DAVOX			Lg	Lg	16 02 07.1	
	comp=Z,0.5nm,0.3s,baz=196,slow=18,SNR=3.2					
AKASG	**Malin Array Be**	**8.28 91**	Pn	**Pn**	**16 00 55.1**	**+1.1**
	comp=Z,1.1nm,0.3s,baz=280,slow=12,SNR=4.6					
AKASG			Sn	**Sn**	**16 02 24.9**	**-3.3**
	comp=Z,1.1nm,0.3s,baz=284,slow=22,SNR=4.2					
AKASG			Lg	Lg	16 03 26.5	
	baz=275,slow=25,SNR=2.9					
HFS	**Hagfors**	**8.70 352**	Pn	**Pn**	**16 01 00.3**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=166,slow=18,SNR=4.8					
HFS			Sn	**Sn**	**16 02 35.0**	**-3.5**
	comp=Z,0.2nm,0.3s,baz=182,slow=31,SNR=2.6					
FINES	**FINESS Array B**	**11.31 25**	Pn	**Pn**	**16 01 34.3**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=212,slow=10,SNR=6.9					
FINES			Sn	Sn	16 03 36.0	-6.3
	comp=Z,0.2nm,0.3s,baz=213,slow=20,SNR=4.1					
ARCES	**ARCESS Array B**	**18.57 10**	Pn	**P**	**16 03 08.5**	**-2.4**
	comp=Z,0.2nm,0.3s,baz=201,slow=11,SNR=5.1					
YKA	**Yellowknife Ar**	**59.82 336**	P	**P**	**16 09 00.7**	**+1.5**
	comp=Z,0.3nm,0.8s,baz=31,slow=6.4,SNR=3.5					

WEL 18 16:01:04.4±0.5, 37.82S×176.23E, h178km±4km, ML3.5/15, 7C, Error ellipse: s-maj=4.0km s-min=3.9km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RRRZ	**Republican Roa**	**0.57**	**157**	PN	Pn	16 01 29.8	+0.5
URZ	**Urewera**	**0.82**	**123**	⇑PN	Pn	16 01 30.3	-0.3
URZ				SN	Sn	16 01 50.4	-0.4
URZ				AML	AML	16 01 50.5	
MWZ	**Matawai**	**1.15**	**117**	PN	Pn	16 01 32.9	-0.1
MWZ				SN	Sn	16 01 54.3	-0.9
RAHZ	**Arahi**	**1.29**	**149**	PN	Pn	16 01 34.5	+0.3
RAHZ				SN	Sn	16 01 57.5	+0.1
NMHZ	**Naumai**	**1.36**	**161**	PN	Pn	16 01 35.3	+0.4
BKZ	**Black Stump Fm**	**1.36**	**172**	⇑PN	Pn	16 01 34.5	-0.5
BKZ				SN	Sn	16 01 58.3	-0.4
FWVZ	**Far West T-bar**	**1.53**	**200**	PN	Pn	16 01 36.8	+0.1
WNVZ	**Wahianoa**	**1.59**	**198**	PN	Pn	16 01 36.9	-0.3
KNZ	**Kokohu**	**1.65**	**137**	PN	Pn	16 01 37.3	-0.3
MXZ	**Matakaoa Point**	**1.66**	**82**	PN	Pn	16 01 37.2	-0.5
MCHZ	**McNeill Hill**	**1.67**	**168**	PN	Pn	16 01 37.9	+0.2
BHHZ	**Black Hill Sta**	**1.68**	**185**	PN	Pn	16 01 37.2	-0.7
MTVZ	**Mangateitei**	**1.68**	**201**	PN	Pn	16 01 37.8	-0.2
CNGZ	**Carnagh Statio**	**1.69**	**114**	PN	Pn	16 01 38.6	+0.6
VRZ	**Vera Road**	**1.75**	**221**	⇑PN	Pn	16 01 39.1	+0.6
MHGZ	**Mahia Peninsul**	**1.87**	**136**	PN	Pn	16 01 39.6	-0.3
KAHZ	**Kahuranaki**	**2.04**	**166**	PN	Pn	16 01 41.2	-0.5
PNHZ	**Pukenui**	**2.10**	**181**	PN	Pn	16 01 41.3	-1.1
TSZ	**Takapari Road**	**2.25**	**185**	⇑PN	Pn	16 01 42.7	-1.4
WPHZ	**Waipukurau**	**2.25**	**176**	PN	Pn	16 01 43.0	-1.1
PXZ	**Pawanui**	**2.27**	**168**	⇑PN	Pn	16 01 43.1	-1.0
DVHZ	**Dannevirke**	**2.48**	**181**	⇑PN	Pn	16 01 45.0	-1.7
BFZ	**Birch Farm**	**2.86**	**180**	PN	Pn	16 01 49.3	-1.9
MRZ	**Mangatainoka R**	**2.89**	**190**	⇑PN	Pn	16 01 49.1	-2.4
TIWZ	**Tintock**	**2.97**	**185**	PN	Pn	16 01 50.1	-2.5
OGWZ	**Otaki Gorge**	**3.11**	**195**	PN	Pn	16 01 51.7	-2.5
HOWZ	**Holdsworth Sta**	**3.13**	**190**	PN	Pn	16 01 51.6	-2.8
KIW	**Kapiti Island**	**3.21**	**198**	PN	Pn	16 01 52.6	-2.9
MTW	**Mount Morrison**	**3.39**	**189**	PN	Pn	16 01 54.3	-3.3
CAW	**Cannon Point**	**3.41**	**195**	PN	Pn	16 01 55.0	-3.0
MSWZ	**Moikau Station**	**3.67**	**192**	PN	Pn	16 01 57.6	-3.6
SNZO	**South Karori**	**3.68**	**198**	PN	Pn	16 01 57.8	-3.5
TCW	**Tory Channel**	**3.71**	**203**	AML	AML	16 03 07.3	
PLWZ	**Palliser**	**3.83**	**191**	PN	Pn	16 01 59.3	-3.9
TUWZ	**Tuamarina**	**4.02**	**205**	PN	Pn	16 02 02.5	-3.0
THZ	**Tophouse**	**4.70**	**212**	PN	Pn	16 02 11.4	-3.1
KHZ	**Kahutara**	**5.04**	**203**	PN	Pn	16 02 15.0	-3.6

*IDC **18** 16:38:52.5±0.6, 11.76S×113.76E, h0km, mb4.0/15, mb1 4.1/15, mb1mx4.0/23, mbtmp4.1/15, MS3.3/2, Ms1 3.3/2, ms1mx2.7/24, Error ellipse: s-maj=26.9km s-min=13.4km az=72.0*
*AUST **18** 16:38:55.2, 11.94S×113.86E, h30km*
*ISCJB **18** 16:38:56.6±1.0, 11.70S±0.05×113.91E±0.05, h40km±9km, mb4.0/15, MS3.2/2, Error ellipse: s-maj=9.3km s-min=6.4km az=137.7*
*DJA **18** 16:39:02.7±1.1, 11.5S±17.4×11.4E±, h15km±22km, M4.7/8, MLv4.7/8*

ISC 18 16:38:56.5±1.9, 11.75S±0.06×113.84E±0.05, h26km±13km, n54, σ1.40/55, mb4.1/15, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DNP	**Denpasar**	**3.33**	**24**	P	**Pn**	**16 39 47.5**	**+0.6**
DNP				S	**Sn**	**16 40 24.9**	**-0.7**
GMJI	**Gumukmas**	**3.47**	**353**	P	**Pn**	**16 39 51.6**	**+2.8**
GMJI				S	**Sn**	**16 40 25.0**	**-4.1**
KHKI	**Kahang-Kahang**	**3.78**	**28**	P	**Pn**	**16 39 55.4**	**+2.3**
KHKI				S	**Sn**	**16 40 34.8**	**-1.9**
BLJI	**Banyuglugur**	**3.98**	**356**	P	**Pn**	**16 39 57.4**	**+1.6**
BLJI				S	**Sn**	**16 40 41.9**	**+0.2**
PWJI	**Pagerwojo**	**4.21**	**331**	P	**Pn**	**16 39 58.8**	**-0.2**
PWJI				S	**Sb**	**16 40 59.4**	**-0.9**
PCJI	**Pacitan**	**4.40**	**323**	P	**Pn**	**16 40 03.5**	**+1.9**
SJI	**Sawahan**	**4.48**	**333**	P	**Pn**	**16 40 02.9**	**+0.1**
SJI				S	**Sn**	**16 40 53.7**	**-0.4**
NGJI	**Ngawi**	**4.94**	**331**	S	**Sn**	**16 41 06.3**	**+0.9**
UGM	**Wanagama**	**5.02**	**319**	P	**Pn**	**16 40 12.3**	**+2.1**
UGM	**Wanagama**	**5.02**	**319**	P	**Pn**	**16 40 10.5**	**+0.3**
	baz=5.2,SNR=10						
UGM				S	**Sn**	**16 41 03.3**	**-4.1**
	baz=5.2,SNR=8.4						
WSI	**Waingapu**	**6.67**	**73**	P	Pb	16 40 44.3	-7.5
WSI	**Waingapu**	**6.67**	**73**	P	**Pb**	**16 40 51.5**	**-0.3**
	baz=6.7,SNR=5.0						
CISI	**Cisompet, Garu**	**7.26**	**304**	P	**Pn**	**16 40 39.8**	**-1.1**
	baz=7.4,SNR=3.5						
LEM	**Lembang**	**7.85**	**308**	P	**Pn**	**16 40 52.0**	**+2.8**
	baz=8.0,SNR=3.2						
XMIS	**Christmas Isla**	**8.14**	**278**	P	Pn	16 40 49.6	-3.4
	baz=8.2,SNR=11						
XMIS				S	Sn	16 42 13.9	-10
	baz=8.2,SNR=3.8						
FITZ	**Fitzroy Crossi**	**13.03**	**120**	Pn	Pn	16 41 56.1	-3.8
	0.8nm,0.3s,baz=274,slow=14,SNR=44						
FITZ				Sn	Sn	16 44 09.8	-14
	1.5nm,0.3s,baz=345,slow=20,SNR=7.2						
FITZ	**Fitzroy Crossi**	**13.03**	**120**	P	Pn	16 41 56.5	-3.5
	baz=13,SNR=22						
FITZ				S	Sn	16 44 12.2	-12
	baz=13,SNR=3.8						
KNRA	**Kununurra**	**15.01**	**107**	P	**Pn**	**16 42 26.0**	**-0.9**
	baz=15,SNR=9.6						
MEEK	**Meekatharra**	**15.48**	**164**	P	Pn	16 42 27.2	-5.9
	baz=15,SNR=60						
MEEK				S	Sn	16 45 06.4	-18
	baz=15,SNR=9.8						
MTN	**Manton Dam**	**16.93**	**96**	P	**Pn**	**16 42 49.1**	**-2.6**
	baz=17,SNR=4.9						
MORW	**Morawa**	**17.36**	**174**	P	Pn	16 42 51.1	-5.9
	baz=17,SNR=7.9						
MORW				S	Sn	16 45 52.4	-17
	baz=17,SNR=4.8						
FAKI	**Fak Fak**	**20.23**	**66**	P	Pn	16 43 31.0	-0.9
	baz=20,SNR=3.2						
KMBL	**Kambalda**	**20.89**	**160**	P	Pn	16 43 38.8	-0.7
	baz=21,SNR=4.7						
NWAO	**Narrogin (SRO)**	**21.31**	**172**	P	**P**	**16 43 40.8**	**-0.5**
	4.6nm,0.6s,baz=342,slow=19,SNR=4.1						
WRA	**Warramunga Arr**	**21.32**	**115**	P	**P**	**16 43 42.0**	**+0.4**
	2.7nm,0.7s,baz=291,slow=10,SNR=12						
WRA				S	S	16 47 27.3	-10
	1.8nm,0.7s,baz=284,slow=25,SNR=5.1						
ASAR	**Alice Springs**	**22.45**	**125**	P	**P**	**16 43 54.3**	**+0.5**
	2.6nm,0.7s,baz=301,slow=10,SNR=27						
ASAR				S	**S**	**16 47 56.5**	**-2.5**
	1.6nm,0.7s,baz=300,slow=23,SNR=3.9						
FORT	**Forrest**	**23.07**	**147**	P	P	16 44 09.5	+9.5
	baz=23,SNR=11						
STKA	**Stephens Creek**	**32.47**	**132**	P	**P**	**16 45 26.0**	**+1.1**
	2.5nm,0.9s,baz=295,slow=17,SNR=4.0						
STKA				LR	LR	16 57 26.3	
	comp=Z,64nm,19.2s,baz=16,slow=34						
CMAR	**Chiang Mai Arr**	**33.42**	**334**	P	**P**	**16 45 34.0**	**+0.8**
	1.5nm,0.8s,baz=159,slow=6.7,SNR=7.2						
CMAR				LR	LR	17 00 13.5	
	comp=Z,35nm,19.9s,baz=180,slow=38						
ODAN	**Odare**	**46.18**	**327**	*e*P	**P**	**16 47 20.1**	**+0.6**
	17nm,0.8s						
TAPN	**Taplejung**	**46.40**	**327**	*e*P	**P**	**16 47 22.5**	**+1.2**
	23nm,0.7s						
RAMN	**Ramite**	**46.68**	**326**	*e*P	**P**	**16 47 24.6**	**+1.1**
	13nm,0.7s						
PKI	**Pulchoki**	**47.83**	**325**	*e*P	**P**	**16 47 32.9**	**+0.4**
GUN	**Gumba**	**47.83**	**326**	*e*P	**P**	**16 47 33.4**	**+0.9**
	46m,0.7s						
PKIN	**Phulchoki**	**47.84**	**325**	*e*P	**P**	**16 47 32.4**	**-0.1**
	7.1nm,0.6s						
DMN	**Daman**	**48.03**	**325**	*e*P	**P**	**16 47 34.5**	**+0.6**
	22nm,0.7s						
KKN	**Kakani**	**48.07**	**325**	*e*P	**P**	**16 47 34.6**	**+0.4**
KOLN	**Koldanda**	**49.01**	**324**	*e*P	**P**	**16 47 41.9**	**+0.5**
	28nm,0.6s						
DANN	**Dangsing**	**49.36**	**324**	*e*P	**P**	**16 47 44.5**	**+0.3**
	29nm,0.7s						
PYUN	**Piuthan**	**49.61**	**323**	*e*P	**P**	**16 47 46.5**	**+0.5**
KSRS	**Korea Array**	**50.69**	**14**	P	**P**	**16 47 52.9**	**-0.9**
	4.9nm,0.8s,baz=203,slow=7.7,SNR=22						
USRK	**Ussuriysk Arra**	**58.08**	**15**	P	**P**	**16 48 47.6**	**+0.2**
	2.7nm,0.7s,baz=189,slow=5.7,SNR=6.8						
SONM	**Songino Array**	**59.68**	**354**	P	**P**	**16 48 59.1**	**+0.4**
	2.2nm,0.7s,baz=172,slow=9.4,SNR=11						
MKAR	**Makanchi Array**	**64.76**	**337**	P	**P**	**16 49 33.1**	**+0.5**
	0.9nm,0.4s,baz=147,slow=7.7,SNR=38						
ZALV	**Zalesovo Beam**	**69.94**	**342**	P	**P**	**16 50 05.1**	**-0.1**
	0.3nm,0.3s,baz=145,slow=5.3,SNR=3.1						
VNDA	**Vanda**	**70.13**	**170**	P	**P**	**16 50 05.7**	**-0.4**
	1.0nm,1.0s,baz=310,slow=5.1,SNR=4.2						
BVAR	**Borovoye Array**	**74.44**	**334**	P	**P**	**16 50 31.4**	**-0.8**
	0.3nm,0.5s,baz=150,slow=6.3,SNR=5.1						
QSPA	**South Pole Qui**	**78.27**	**180**	P	**P**	**16 50 53.6**	**-0.4**
	2.9nm,1.1s,baz=290,slow=2.9,SNR=3.5						
BOSA	**Boshof**	**83.25**	**242**	P	**P**	**16 51 20.6**	**-0.7**
	3.8nm,1.1s,baz=121,slow=5.9,SNR=3.1						
SNAA	**Sanae**	**86.98**	**196**	P	**P**	**16 51 40.1**	**+1.0**
	0.6nm,0.9s,baz=49,slow=3.6,SNR=4.1						
TORD	**Torodi Ar. Bea**	**113.92**	**279**	PKiKP	**PKiKP**	**16 57 34.3**	**+0.3**
	0.4nm,0.5s,baz=90,slow=1.3,SNR=3.2						
YKA	**Yellowknife Ar**	**118.73**	**23**	PKP	**PKPdf**	**16 57 42.6**	**+0.7**
	0.4nm,0.5s,baz=320,slow=2.1,SNR=6.2						
SIV	**San Ignacio**	**151.99**	**190**	PKPbc	**PKPbc**	**16 58 49.9**	**-0.4**
	0.3nm,0.3s,baz=240,slow=19,SNR=3.1						
SIV				PKPab	**PKPab**	**16 58 59.6**	**+0.2**
	1.0nm,0.7s,baz=238,slow=14,SNR=4.4						
LPAZ	**La Paz**	**152.08**	**176**	PKPbc	**PKPbc**	**16 58 52.0**	**+0.7**
	0.8nm,0.6s,baz=91,slow=3.0,SNR=4.3						
LPAZ				PKPab	**PKPab**	**16 59 00.8**	**+0.4**
	1.1nm,0.5s,baz=150,slow=4.4,SNR=5.6						

*ISCJB **18** 17:18:45.2±0.9, 24.8N±0.2×94.2E±0.2, h63km±10km, mb3.3/4, Error ellipse: s-maj=33.8km s-min=14.0km az=44.5*
*IDC **18** 17:18:49.8±4.2, 24.85N×94.36E, h91km±38km, mb3.0/4, mb1 3.2/5, mb1mx3.0/27, mbtmp3.0/5, Error ellipse: s-maj=59.3km s-min=19.7km az=72.0*

ISC 18 17:18:45.6±1.3, 24.8N±0.2×94.3E±0.2, h53km±13km, n7, σ0.96/8, mb3.3/4, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**0.29**	**272**	*i* P	**Pn**	**17 18 55.0**	**0.0**
IMP				*i* S	**Sn**	**17 19 02.0**	**+0.2**
SHL	**Shillong**	**2.29**	**291**	*e*PN	**Pn**	**17 19 22.0**	**+0.9**
SHL				*e*PG		17 19 28.0	
SHL				*e*SN	**Sn**	**17 19 47.0**	**-1.2**
SHL				*e*SG		17 19 58.0	
CMAR	**Chiang Mai Arr**	**7.65**	**144**	P	Pn	17 20 38.8	+4.3
	0.2nm,0.3s,baz=320,slow=11,SNR=11						
MKAR	**Makanchi Array**	**23.97**	**339**	P	**P**	**17 23 55.2**	**+0.2**
	0.5nm,0.8s,baz=144,slow=9.7,SNR=4.3						
SONM	**Songino Array**	**24.95**	**20**	P	**P**	**17 24 03.8**	**-0.2**
	0.2nm,0.4s,baz=220,slow=8.7,SNR=2.9						
WRA	**Warramunga Arr**	**59.14**	**135**	P	**P**	**17 28 40.2**	**-0.9**
	0.3nm,0.6s,baz=325,slow=7.4,SNR=2.9						
ASAR	**Alice Springs**	**61.61**	**138**	P	**P**	**17 28 58.7**	**+0.7**
	0.2nm,0.4s,baz=322,slow=6.8,SNR=12						

IDC 18 17:20:35.4±64.0, 21.90S×175.21W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.8/18, mbtmp4.0/3, Error ellipse: s-maj=1200.0km s-min=177.1km az=86.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**39.57**	**246**	P	P	17 28 08.4	-0.1
	1.1nm,0.6s,baz=112,slow=7.4,SNR=5.6						
ASAR	**Alice Springs**	**46.75**	**258**	P	P	17 29 06.5	-0.3
	1.3nm,0.6s,baz=94,slow=7.4,SNR=41						
WRA	**Warramunga Arr**	**47.00**	**263**	P	P	17 29 08.7	0.0
	0.8nm,0.3s,baz=102,slow=8.3,SNR=20						

*IDC **18** 17:29:24.4±8.8, 15.79N×97.63W, h0km, mb3.7/4, mb1 4.1/5, mb1mx3.8/24, mbtmp3.7/5, ML3.6/1, Error ellipse: s-maj=151.8km s-min=52.7km az=176.0*
*ISCJB **18** 17:29:40.4±0.9, 16.76N±0.06×100.42W±0.04, h33km±5km, mb3.3/3, Error ellipse: s-maj=9.4km s-min=5.6km az=8.4*
*MEX **18** 17:29:42.5±0.9, 16.75N×100.42W, h12km±4km, MD4.1*

ISC 18 17:29:40.8±1.1, 16.77N±0.07×100.42W±0.04, h21km±4km, n15, σ1.907/24, mb3.4/3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.31**	**27**	*e*P	**Pb**	**17 29 48.2**	**+0.6**
CAIG				*i* S	**Sn**	**17 29 54.7**	**-1.3**
ACX	**Acapulco**	**0.54**	**80**	*e*P	**Pb**	**17 29 51.4**	**-0.3**
ACX				*i* S	**Sb**	**17 29 58.8**	**-0.3**
ZIIG	**Zihuatanejo**	**1.30**	**310**	*e*P	**Pn**	**17 30 03.4**	**-0.4**
ZIIG				*i* S	**Sn**	**17 30 18.2**	**-2.4**
MEIG	**Mezcala**	**1.38**	**33**	*e*P	**Pn**	**17 30 04.5**	**-0.4**
MEIG				*i* S	**Sn**	**17 30 21.4**	**-1.1**
ARIG	**Puente Sto Nin**	**1.50**	**2**	*e*P	**Pn**	**17 30 06.2**	**-0.4**
ARIG				*i* S	**Sn**	**17 30 24.6**	**-1.0**
PLIG	**Platanillo**	**1.83**	**28**	*e*P	**Pn**	**17 30 11.2**	**+0.1**
PLIG				*i* S	**Sn**	**17 30 32.4**	**-1.4**
PNIG	**Pinotepa**	**2.23**	**99**	*i* P	**Pn**	**17 30 16.4**	**-0.1**
PNIG				*i* S	**Sn**	**17 30 42.5**	**-1.0**
YAIG	**Yautepec**	**2.44**	**32**	*e*P	Pn	17 30 19.0	-0.7
YAIG				*i* S	**Sn**	**17 30 48.1**	**-0.8**
UTMO	**Huajuapan**	**2.71**	**67**	*e*P	**Pn**	**17 30 22.9**	**-0.4**
UTMO				*i* S	**Sn**	**17 30 54.3**	**-1.2**
PPM	**Popocatepetl**	**2.85**	**36**	*i* P	**Pn**	**17 30 25.2**	**-0.3**
PPM				*i* S	**Sn**	**17 30 58.8**	**-0.6**
MMIG	**Aquila**	**3.18**	**299**	*i* P	**Pn**	**17 30 28.7**	**-0.9**
MMIG				*i* S	**Sn**	**17 31 06.3**	**-0.5**
TXAR	**Lajitas Array**	**12.86**	**347**	Pn	**P**	**17 32 55.1**	**+1.9**
	0.1nm,0.3s,baz=159,slow=10,SNR=4.9						
NVAR	**Mina Array Bea**	**26.68**	**327**	P	P	17 35 24.9	+6.2
	0.6nm,0.6s,baz=142,slow=10,SNR=3.7						
PDAR	**Pinedale Array**	**27.06**	**345**	P	**P**	**17 35 23.4**	**+1.3**
	0.3nm,0.4s,baz=144,slow=11,SNR=4.6						
YKA	**Yellowknife Ar**	**46.75**	**351**	P	**P**	**17 38 07.9**	**-0.3**
	0.4nm,0.7s,baz=158,slow=7.5,SNR=3.5						

IDC 18 17:29:54.6±5.1, 17.74S×176.46W, h392km±152km, mb3.6/4, mb1 3.7/5, mb1mx3.2/20, mbtmp3.6/5, Error ellipse: s-maj=133.7km s-min=89.2km az=92.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.90**	**50**	P	Pn	17 31 26.3	+0.3
	2.7nm,0.3s,baz=191,slow=5.2,SNR=6.5						
AFI				S	S	17 32 40.6	+0.2
	5.0nm,0.3s,baz=179,slow=22,SNR=5.4						
CTA	**Charters Tower**	**35.30**	**260**	P	P	17 36 14.4	-0.2
	1.7nm,0.3s,baz=85,slow=9.9,SNR=4.4						
STKA	**Stephens Creek**	**40.34**	**241**	P	P	17 36 56.0	-0.1
	4.0nm,0.6s,baz=78,slow=10,SNR=16						
WRA	**Warramunga Arr**	**46.48**	**259**	P	P	17 37 44.5	-0.2
	1.3nm,0.5s,baz=96,slow=6

BSWZ	Blackbirch Sta	1.68	177	PN	Pn	18 24 55.6	0.0	
WTVZ	West Tongariro	1.68	58	⇓PN	Pn	18 24 55.4	-0.4	
TSZ	Takapari Road	1.69	92	PN	Pn	18 24 55.8	+0.1	
OTVZ	Oturere	1.71	60	PN	Pn	18 24 56.0	-0.1	
KRVZ	Karewarewa	1.73	58	⇑PN	Pn	18 24 55.9	-0.3	
HIZ	Hauiti	1.74	30	⇓PN	Pn	18 24 55.2	-0.9	
MTW	Mount Morrison	1.74	131	⇑PN	Pn	18 24 56.0	-0.1	
MTW				AML	AML	18 25 25.8		
TIWZ	Tintock	1.79	115	PN	Pn	18 24 56.7	+0.1	
MSWZ	Moikau Station	1.79	141	PN	Pn	18 24 56.5	-0.1	
THZ	Tophouse	1.85	200	⇑PN	Pn	18 24 56.8	-0.4	
PAWZ	Paruwai Farm	1.85	137	PN	Pn	18 24 57.0	-0.1	
BHHZ	Black Hill Sta	1.86	74	PN	Pn	18 24 56.7	-0.7	
PNHZ	Pukenui	1.88	87	PN	Pn	18 24 57.1	-0.4	
PLWZ	Palliser	1.91	144	PN	Pn	18 24 57.4	-0.4	
TMWZ	Te Maipa	1.95	124	PN	Pn	18 24 58.1	0.0	
DSZ	Dennistion Nort	2.27	220	⇑PN	Pn	18 25 00.4	-0.9	
BKZ	Black Stump Fm	2.28	69	⇓PN	Pn	18 25 00.9	-0.7	
MCHZ	McNeill Hill	2.34	76	PN	Pn	18 25 02.5	+0.4	
PXZ	Pawanui	2.38	91	AML	AML	18 25 38.5		
PXZ				AML	AML	18 25 43.6		
KHZ	Kahutara	2.39	184	⇑PN	Pn	18 25 01.7	-0.9	
LTZ	Lake Taylor	2.97	202	PN	Pn	18 25 07.7	-1.3	
URZ	Urewera	3.15	57	PN	Pn	18 25 09.2	-1.9	
KNZ	Kokohu	3.19	73	PN	Pn	18 25 10.8	-0.8	
MWZ	Matawai	3.38	61	⇓PN	Pn	18 25 12.4	-1.5	
WVZ	Waitaha Valley	3.79	216	PN	Pn	18 25 16.8	-1.9	
FOZ	Fox Glacier	4.66	219	PN	Pn	18 25 26.0	-3.4	
JCZ	Jackson Bay	5.49	221	PN	Pn	18 25 37.1	-3.0	
ODZ	Otahua Downs	5.51	204	⇓PN	Pn	18 25 38.7	-1.5	

WEL 18 18:33:29.4±0.2, 38°43S×176°03E, h158km±1km, ML3.5/16, 10C-2D, Error ellipse: s-maj=1.7km s-min=1.5km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WTVZ	West Tongariro	0.77	207	PN	Pn	18 33 53.3	0.0
OTVZ	Oturere	0.79	201	PN	Pn	18 33 53.8	+0.3
OTVZ				SN	Sn	18 34 11.8	-0.2
TWVZ	Taurewa	0.80	216	PN	Pn	18 33 53.4	-0.1
BKZ	Black Stump Fm	0.82	154	⇑PN	Pn	18 33 53.8	+0.3
BKZ				SN	Sn	18 34 11.4	-0.8
URZ	Urewera	0.86	79	⇓PN	Pn	18 33 53.5	-0.2
URZ				SN	Sn	18 34 11.7	-0.8
WPVZ	Whakapapa	0.87	206	PN	Pn	18 33 54.0	0.0
TUVZ	Tukino	0.89	199	PN	Pn	18 33 54.3	+0.1
TUVZ				SN	Sn	18 34 13.0	-0.3
NMHZ	Naumai	0.90	138	PN	Pn	18 33 55.7	+1.5
FWVZ	Far West T-bar	0.91	204	PN	Pn	18 33 54.4	-0.1
HIZ	Hauiti	0.93	264	⇑PN	Pn	18 33 54.0	-0.3
HIZ				SN	Sn	18 34 13.2	-0.1
TRVZ	Turoa	0.95	203	PN	Pn	18 33 54.7	0.0
RAHZ	Arahi	0.96	121	PN	Pn	18 33 55.7	+1.2
WNVZ	Wahianoa	0.96	201	⇑PN	Pn	18 33 54.7	0.0
MOVZ	Moawhango	1.00	193	⇑PN	Pn	18 33 54.7	-0.3
PKVZ	Pokaka	1.02	212	⇑PN	Pn	18 33 54.9	-0.1
MTVZ	Mangateitei	1.05	204	⇑PN	Pn	18 33 55.3	-0.1
BHHZ	Black Hill Sta	1.06	179	PN	Pn	18 33 55.4	-0.1
MCHZ	McNeill Hill	1.14	153	PN	Pn	18 33 55.7	+1.1
MWZ	Matawai	1.18	86	PN	Pn	18 33 56.7	+0.2
VRZ	Vera Road	1.22	235	⇑PN	Pn	18 33 56.6	-0.1
PNHZ	Pukenui	1.49	175	PN	Pn	18 33 59.3	-0.2
KAHZ	Kahuranaki	1.52	155	PN	Pn	18 34 00.5	+0.8
RAEZ	Rainy Point	1.54	236	PN	Pn	18 34 00.2	+0.3
WAZ	Wanganui	1.56	211	⇑PN	Pn	18 33 59.7	-0.4
TSZ	Takapari Road	1.63	182	⇑PN	Pn	18 34 00.6	-0.3
WPHZ	Waipukurau	1.67	169	PN	Pn	18 34 01.2	-0.1
PXZ	Pawanui	1.73	158	PN	Pn	18 34 02.2	+0.3
NEZ	North Egmont	1.73	240	PN	Pn	18 34 02.2	+0.1
PKE	Pukeiti	1.77	244	PN	Pn	18 34 02.2	-0.3
DVHZ	Dannevirke	1.87	177	PN	Pn	18 34 02.9	-0.6
NWEZ	Newall Road	1.89	243	PN	Pn	18 34 03.4	-0.3
PRHZ	Porangahau	1.90	166	PN	Pn	18 34 03.7	-0.1
MXZ	Matakaoa Point	1.99	65	PN	Pn	18 34 05.0	+0.2
BFZ	Birch Farm	2.26	176	PN	Pn	18 34 07.0	-0.9
MRZ	Mangatainoka R	2.26	189	⇑PN	Pn	18 34 06.7	-1.3
MRZ				AML	AML	18 34 37.2	
TIWZ	Tintock	2.35	183	PN	Pn	18 34 07.9	-1.1
OGWZ	Otaki Gorge	2.48	195	PN	Pn	18 34 09.1	-1.4
HOWZ	Holdsworth Sta	2.50	189	PN	Pn	18 34 09.2	-1.7
KIW	Kapiti Island	2.58	199	PN	Pn	18 34 09.9	-2.0
TMWZ	Te Maipa	2.68	182	PN	Pn	18 34 11.3	-1.7
MTW	Mount Morrison	2.76	188	PN	Pn	18 34 11.9	-2.1
CAW	Cannon Point	2.78	195	PN	Pn	18 34 12.3	-2.0
DUWZ	D'Urville Isla	2.88	214	PN	Pn	18 34 13.2	-2.3
TRWZ	Traveller	2.98	185	PN	Pn	18 34 14.9	-1.9
PAWZ	Paruwai Farm	2.99	189	PN	Pn	18 34 14.6	-2.2
WEL	Wellington	3.02	198	PN	Pn	18 34 14.4	-2.7
MSWZ	Moikau Station	3.05	191	PN	Pn	18 34 15.1	-2.5
SNZO	South Karori	3.06	199	PN	Pn	18 34 15.1	-2.6
TCW	Tory Channel	3.10	205	PN	Pn	18 34 15.7	-2.5
PLWZ	Palliser	3.20	191	PN	Pn	18 34 16.8	-2.8
TUMZ	Tuamarina	3.44	208	PN	Pn	18 34 19.3	-2.8
NNZ	Nelson	3.46	215	PN	Pn	18 34 19.8	-2.9
QRZ	Quartz Range	3.62	227	PN	Pn	18 34 21.2	-3.6
THZ	Tophouse	4.11	215	PN	Pn	18 34 27.6	-3.6
KHZ	Kahutara	4.42	205	⇓PN	Pn	18 34 32.0	-3.2
MQZ	McQueen's Vall	5.86	205	PN	Pn	18 34 49.2	-5.0
ODZ	Otahua Downs	7.74	210	PN	Pn	18 35 14.2	-5.0

IDC 18 18:42:59.5±4.3, 5°83S×147°59E, h224km±39km, mb3.6/2, mb1 3.5/4, mb1mx3.0/18, mbtmp3.3/4, Error ellipse: s-maj=72.0km s-min=39.5km az=128.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.58	187	P	Pn	18 43 57.9	+0.7
	0.9nm,0.3s,baz=5.2,slow=11,SNR=6.2						
PMG				S	S	18 44 42.9	+0.4
	4.2nm,0.3s,baz=342,slow=20,SNR=11						
WRA	Warramunga Arr	19.05	221	P	P	18 47 04.6	-0.7
	0.9nm,0.3s,baz=47,slow=12,SNR=26						
ASAR	Alice Springs	22.09	215	P	P	18 47 37.5	+0.7
	0.7nm,0.3s,baz=49,slow=7.8,SNR=17						
FITZ	Fitzroy Crossi	24.66	238	P	P	18 48 00.4	+0.3
	6.2nm,0.4s,baz=50,slow=10,SNR=50						
TORD	Torodi Ar. Bea	145.62	285	PKPbc	PKPdf	19 02 11.5	-0.7
	0.2nm,0.5s,baz=88,slow=3.5,SNR=3.6						

*AUST **18** 19:28:36.5±0.0, 6.66S×128.47E, h299km, Error ellipse: s-maj=0.9km s-min=0.6km az=41.0*
*NEIC **18** 19:28:36.6±1.1, 6.64S×128.33E, h300km±12km, mb4.3/9, Error ellipse: s-maj=11.6km s-min=5.7km az=222.0*
*ISCJB **18** 19:28:37.8±0.2, 6.70S±0.03×128.40E±0.04, h334km, mb4.0/15, Error ellipse: s-maj=6.7km s-min=3.5km az=145.4*
*IDC **18** 19:28:37.5±1.7, 6.70S×128.29E, h307km±18km, mb3.8/10, mb1 4.0/15, mb1mx3.9/22, mbtmp4.0/15, Error ellipse: s-maj=16.4km s-min=8.6km az=62.0*
*DJA **18** 19:28:39.8±0.3, 7.5S×12.8E*, *h224km±12km, M4.8/16, mB5.2/14, mb5.0/16, MLv5.2/3, Mw(mB)4.6/14*
ISC 18 19:28:39.2±0.4, 6.72S±0.04×128.35E±0.05, h334km, n104, σ1°47/107, mb4.0/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.67	35	P	Pn	19 29 30.1	-4.4
	baz=2.6,SNR=12						
MSAI	Masohi	3.40	10	P	Pn	19 29 35.9	-5.4
FAKI	Fak Fak	5.41	46	P	Pn	19 29 56.7	-6.2
	1µm,0.7s,11µm3.7nm						
FAKI	Fak Fak	5.41	46	P	Pn	19 29 56.5	-6.4
	baz=5.3,SNR=452						
FAKI				S	S	19 30 55.8	-15
	baz=5.3,SNR=28						
BBSI	Bau Bau	5.88	282	P	Pn	19 30 07.7	-0.5
	213nm,1.0s,2µm						
MMRI	Maumere	6.35	252	P	Pn	19 30 12.1	-1.6
	125nm,0.8s,2µm						
MTN	Manton Dam	6.67	156	P	Pn	19 30 14.3	-3.1
	baz=6.7,SNR=27						
KDU	Kakadu	7.19	146	P	Pn	19 30 20.2	-3.3
	baz=7.2,SNR=136						
KDU				S	S	19 31 41.0	-7.2
	baz=7.2,SNR=5.8						
RKPI	Ransiki, Papua	7.78	49	P	Pn	19 30 26.3	-4.3
	389nm,0.5s,9µm						
LUWI	Luwuk	7.92	315	P	Pn	19 30 31.4	-0.9
	152nm,0.9s,2µm						
LUWI	Luwuk	7.92	315	P	Pn	19 30 31.4	-0.9
	baz=8.0,SNR=11						
SKSI	Soroako, Sulaw	8.14	300	P	Pn	19 30 35.2	+0.2
	152nm,0.8s,1µm						
BKSI	Bulukumba	8.30	279	P	Pn	19 30 35.8	-1.0
	35nm,0.8s						
KMSI	Cibinong	8.46	329	P	Pn	19 30 38.1	-0.6
	184nm,1.1s,1µm						
WSI	Waingapu	8.49	249	P	P	19 30 44.6	+2.0
	813nm,0.4s,24µm5.8nm						
WSI	Waingapu	8.49	249	P	Pn	19 30 38.4	-0.8
	baz=8.6,SNR=4.5						
WSI				S	S	19 32 11.4	-5.5
	baz=8.6,SNR=3.2						
KAPI	Kappang	8.72	281	P	Pn	19 30 39.1	-2.7
KAPI	Kappang	8.72	281	P	Pn	19 30 41.4	-0.5
	29nm,1.1s						
KAPI	Kappang	8.72	281	P	Pn	19 30 39.2	-2.7
	3.0nm,0.3s,baz=137,slow=8.6,SNR=15						
KNRA	Kununurra	8.91	177	P	Pn	19 30 42.4	-1.8
	baz=9.0,SNR=68						
TTSI	Tana Toraja	9.25	293	P	Pn	19 30 48.9	+0.6
	65nm,0.9s,631nm						
BAKI	Biak	9.48	55	P	Pn	19 30 48.2	-2.9
	440nm,0.9s,3µm						
MRSI	Marisa	9.59	318	P	Pn	19 30 51.4	-1.0
	417nm,0.7s,4µm						
WAMI	Wamena	10.69	75	P	P	19 31 08.0	+0.9
	124nm,0.7s,2µm						
FITZ	Fitzroy Crossi	11.62	193	P	Pn	19 31 14.5	-2.2
FITZ				S	S	19 33 29.1	+2.5
FITZ	Fitzroy Crossi	11.62	193	P	Pn	19 31 14.5	-2.2
	4.2nm,0.3s,baz=31,slow=9.1,SNR=64						
FITZ				S	S	19 33 29.1	+2.5
	1.4nm,0.3s,baz=61,slow=14,SNR=4.7						
FITZ	Fitzroy Crossi	11.62	193	P	Pn	19 31 14.6	-2.2
	baz=12,SNR=56						
JAY	Jayapura	13.00	72	P	Pn	19 31 36.0	+2.7
WRAB	Tennant Creek	14.37	157	eP	P	19 31 47.5	-0.2
	49nm,0.6s						
WRAB				eS	S	19 34 20.2	-4.1
WRA	Warramunga Arr	14.37	157	P	P	19 31 47.6	-0.2
WRA				S	S	19 34 21.5	-2.9
WRA	Warramunga Arr	14.37	157	P	P	19 31 47.6	-0.2
	5.8nm,0.3s,baz=336,slow=12,SNR=155						
WRA				S	S	19 34 21.5	-2.9
	1.5nm,0.3s,baz=334,slow=21,SNR=12						
TSM	Tawau	15.13	316	P	Pn	19 31 59.3	+1.0
MYLDM	Lahad Datu	15.38	320	P	Pn	19 32 00.9	-0.2
COEN	Coen	16.25	117	eP	P	19 32 08.1	-0.2
	763nm,0.6s						
COEN	Coen	16.25	117	P	P	19 32 08.2	-0.2
	baz=16,SNR=168						
SDKM	Sandakan	16.57	318	P	Pn	19 32 13.1	-2.0
MBWA	Marble Bar	16.61	209	eP	P	19 32 11.8	-0.3
	45nm,0.9s						
KKM	Kota Kinabalu	17.53	316	P	P	19 32 22.4	+0.1
KKM	Kota Kinabalu	17.53	316	P	P	19 32 22.4	+0.1
	baz=18,SNR=4.8						
QIS	Mount Isa	17.56	143	P	P	19 32 22.6	+0.2
	baz=18,SNR=78						
QIS				S	S	19 35 26.1	-1.4
	baz=18,SNR=5.4						
AS31	Alice Springs	17.68	163	eP	P	19 32 23.9	+0.2
AS31				eS	S	19 35 30.1	+0.3
ASAR	Alice Springs	17.68	163	P	P	19 32 24.4	+0.7
ASAR				S	S	19 35 29.1	-0.7
ASAR	Alice Springs	17.68	163	P	P	19 32 24.4	+0.7
	15nm,0.3s,baz=344,slow=12,SNR=1665						
ASAR				S	S	19 35 29.1	-0.7
	0.6nm,0.3s,baz=339,slow=18,SNR=15						
UGM	Wanagama	17.72	265	S	S	19 35 46.0	+15
	baz=18,SNR=3.6						
KDM	Kudat	17.76	319	P	P	19 32 24.8	+0.1
SBUM	Sibu	18.50	299	P	P	19 32 33.0	+0.5
PMG	Port Moresby	18.81	99	eP	P	19 32 35.4	-0.4
	13nm,0.8s						
PMG	Port Moresby	18.81	99	P	P	19 32 37.2	+1.4
	0.7nm,0.3s,baz=207,slow=11,SNR=3.3						
MTSU	Mount Surprise	19.26	128	P	P	19 32 40.2	-0.4
	baz=19,SNR=10						
KSM	Kuching	19.76	294	eP	P	19 32 44.4	-1.6
	22nm,0.8s						
KSM	Kuching	19.76	294	P	P	19 32 46.5	+0.6
KSM	Kuching	19.76	294	P	P	19 32 46.9	+0.9
	baz=20,SNR=10						
CISI	Cisompet, Garu	20.39	266	P	P	19 32 53.4	+1.1
	baz=20,SNR=5.7						
CTA	Charters Tower	21.87	129	P	P	19 33 07.2	+1.6
CTA	Charters Tower	21.87	129	P	P	19 33 07.2	+1.6
	3.4nm,0.5s,baz=324,slow=12,SNR=10						
CTAO	Charters Tower	21.87	129	eP	P	19 33 05.9	+0.3
	5.8nm,0.6s						
MEEK	Meekatharra	21.87	204	P	P	19 33 06.1	+0.6
	baz=22,SNR=16						
QLP	Quilpie	24.88	144	P	P	19 33 34.4	+1.6
	baz=25,SNR=5.4						
KLBR	Kellerberrin	26.66	200	P	P	19 33 49.6	+1.1
	baz=27,SNR=9.3						
BBOO	Buckleboo	26.93	166	P	P	19 33 51.9	+1.0
	baz=27,SNR=7.8						
STKA	Stephens Creek	27.92	155	P	P	19 34 00.4	+0.8
	5.3nm,0.6s,baz=331,slow=9.9,SNR=20						
STKA	Stephens Creek	27.92	155	P	P	19 34 00.5	+0.8
	baz=28,SNR=15						
CMSA	Cobar Meteorol	29.54	149	P	P	19 34 15.1	+1.2
	baz=30,SNR=20						
PSI	Prapat	30.86	287	P	P	19 34 25.1	-0.8
PSI	Prapat	30.86	287	P	P	19 34 25.1	-0.8
	7.9nm,0.4s,baz=127,slow=6.1,SNR=10.0						
ARPS	Mount Arapiles	32.35	160	P	P	19 34 40.1	+1.8
	baz=32,SNR=9.0						
YNG	Young	33.11	149	P	P	19 34 46.9	+1.9
	baz=33,SNR=10						
CMAR	Chiang Mai Arr	38.31	311	P	P	19 35 29.2	+0.2
CMAR				ScP	S	19 40 54.8	-3.3
CMAR	Chiang Mai Arr	38.31	311	P	P	19 35 29.2	+0.2
	2.9nm,0.6s,baz=140,slow=6.9,SNR=14						
CMAR				ScP	S	19 40 54.8	-3.3
	0.5nm,0.8s,baz=145,slow=4.9,SNR=4.7						
KSAR	Wonju Array Be	43.93	359	P	P	19 36 13.9	-0.2
KSRS	Korea Array	43.94	360	P	P	19 36 13.9	-0.2
	3.5nm,0.7s,baz=176,slow=9.6,SNR=22						
USRK	Ussuriysk Arra	50.79	3	P	P	19 37 05.9	-0.4
	3.5nm,0.5s,baz=189,slow=7.4,SNR=12						
LSA	Lhasa	50.87	317	eP	P	19 37 08.2	+0.3
	3.8nm,0.6s						
ODAN	Odare	51.84	312	eP	P	19 37 15.5	+0.7
	9.0nm,0.4s						
TAPN	Taplejung	51.88	313	eP	P	19 37 15.8	+0.7
	14nm,0.4s						
RAMN	Ramite	52.48	311	eP	P	19 37 20.2	+0.8
	40nm,0.8s						
GUN	Gumba	53.54	312	eP	P	19 37 27.8	+0.6
	19nm,0.4s						
PKI	Pulchoki	53.71	311	eP	P	19 37 28.7	+0.3
	7.7nm,0.3s						
PKIN	Phulchoki	53.72	311	eP	P	19 37 28.7	+0.3
	7.2nm,0.6s						
KKN	Kakani	53.92	312	eP	P	19 37 29.8	0.0
DMN	Daman	53.95	311	eP	P	19 37 30.4	+0.3
KOLN	Koldanda	55.17	311	eP	P	19 37 39.2	+0.5
	8.6nm,0.4s						
DANN	Dangsing	55.35	311	eP	P	19 37 40.3	+0.2
ULN	Ulaanbaatar	57.51	343	eP	P	19 37 54.8	+0.2
	2.3nm,0.3s						
SONM	Songino Array	57.67	343	P	P	19 37 56.9	+1.2
SONM	Songino Array	57.67	343	P	P	19 37 56.9	+1.2
	2.2nm,0.6s,baz=167,slow=9.0,SNR=7.5						
PETK	Petropavlovsk-	64.58	19	P	P	19 38 42.0	+0.6
PETK	Petropavlovsk-	64.58	19	P	P	19 38 42.0	+0.6
	3.2nm,0.5s,baz=182,slow=6.0,SNR=9.7						
MK31	Makanchi Array	67.10	328	eP	P	19 38 58.1	+0.5
MKAR	Makanchi Array	67.10	328	P	P	19 38 58.7	+1.1
MKAR	Makanchi Array	67.10	328	P	P	19 38 58.7	+1.1
	6.5nm,0.4s,baz=116,slow=8.4,SNR=197						
ZAAO	Zalesovo Array	70.62	334	eP	P	19 39 18.1	-0.7
ZALV	Zalesovo Beam	70.62	334	P	P	19 39 18.7	-0.1
ZALV	Zalesovo Beam	70.62	334	P	P	19 39 18.7	-0.1
	3.7nm,0.5s,baz=126,slow=5.3,SNR=19						
KURK	Kurchatov	71.43	329	eP	P	19 39 24.2	+0.4
	6.7nm,0.4s						
ABKAR	Akbulak array	81.28	322	eP	P	19 40 19.2	+0.4
	1.0nm,0.6s						
ILAR	Eielson Array	93.79	25	P	P	19 41 16.8	-1.7
ILAR	Eielson Array	93.79	25	P	P	19 41 16.8	-1.7
	0.6nm,0.9s,baz=263,slow=5.4,SNR=3.7						
ARCES	ARCESS Array B	100.75	340	P	Pdif	19 41 51.4	+1.6
ARCES	ARCESS Array B	100.75	340	P	Pdif	19 41 51.4	+1.6
	1.8nm,0.9s,baz=63,slow=5.9,SNR=4.1						
TORD	Torodi Ar. Bea	127.15	281	PKP	PKPdf	19 47 06.4	+1.3
TORD				SKPbc	SKiKP	19 49 51.3	-18
TORD	Torodi Ar. Bea	127.15	281	PKP	PKPdf	19 47 06.4	+1.3
	0.4nm,0.6s,baz=82,slow=3.6,SNR=3.7						
TORD				SKPbc	SKiKP	19 49 51.3	-18
	0.2nm,0.5s,baz=74,slow=4.8,SNR=4.4						
LPAZ	La Paz	151.92	145	PKPbc	PKPbc	19 47 59.0	+2.2
LPAZ	La Paz	151.92	145	PKPbc	PKPbc	19 47 59.0	+2.2
	0.5nm,0.4s,baz=160,slow=2.3,SNR=2.8						

*ISCJB **18** 20:25:55.2±0.3, 6.48S±0.05×128.45E±0.07, h334km, mb3.5/8, Error ellipse: s-maj=10.6km s-min=5.2km az=154.4*
*AUST **18** 20:25:55.5, 6.49S×128.53E, h300km*
*IDC **18** 20:25:58.9±2.1, 6.68S×128.32E, h361km±23km, mb3.3/8, mb1 3.5/11, mb1mx3.4/21, mbtmp3.4/11, Error ellipse: s-maj=28.9km s-min=10.0km az=67.0*
ISC 18 20:25:56.7±0.6, 6.50S±0.06×128.5E±0.1, h334km, n33, σ1°59/36, mb3.7/8, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	Fak Fak	5.19	47	P	Pn	20 27 18.7	+0.9
	baz=5.1,SNR=14						
FAKI				S	S	20 28 17.4	-5.9
	baz=5.1,SNR=3.4						
MTN	Manton Dam	6.83	158	P	Pn	20 27 36.8	+0.1
	baz=6.9,SNR=54						
KDU	Kakadu	7.31	148	P	Pn	20 27 42.8	+0.4
	baz=7.3,SNR=64						
WSI	Waingapu	8.67	248	S	S	20 29 48.2	+10
	baz=8.7,SNR=6.2						
KNRA	Kununurra	9.12	178	P	Pn	20 28 04.3	+0.2
	baz=9.2,SNR=17						
FITZ	Fitzroy Crossi	11.85	193	P	Pn	20 28 35.3	-1.6
	0.4nm,0.3s,baz=24,slow=10,SNR=42						
FITZ				S	S	20 30 54.3	+5.1
	0.3nm,0.3s,baz=68,slow=19,SNR=2.3						
FITZ	Fitzroy Crossi	11.85	193	P	P	20 28 37.5	+0.1
	baz=12,SNR=9.0						
WRA	Warramunga Arr	14.53	157	P	P	20 29 07.2	+0.2
	4.0nm,0.3s,baz=332,slow=12,SNR=99						
WRA				S	S	20 31 41.1	-3.8
	0.2nm,0.3s,baz=340,slow=21,SNR=5.4						
COEN	Coen	16.26	118	P	P	20 29 27.3	+1.4
	baz=16,SNR=54						
QIS	Mount Isa	17.66	143	P	P	20 29 41.6	+0.6
	baz=18,SNR=30						
ASAR	Alice Springs	17.85	164	P	P	20 29 43.3	+0.3
	5.0nm,0.3s,baz=342,slow=12,SNR=334						
ASAR				S	S	20 32 46.5	-4.1
	0.2nm,0.3s,baz=345,slow=21,SNR=12						
ASAR				ScP	ScP	20 37 02.2	-3.2
	0.1nm,0.3s,baz=352,slow=1.7,SNR=5.1						
MTSU	Mount Surprise	19.31	128	P	P	20 29 59.1	+0.5
	baz=19,SNR=4.8						
CTA	Charters Tower	21.93	130	P	P	20 30 24.4	+0.8
	3.5nm,0.7s,baz=302,slow=13,SNR=3.1						
STKA	Stephens Creek	28.07	156	P	P	20 31 17.5	-1.0
	2.9nm,0.5s,baz=330,slow=9.4,SNR=21						
STKA	Stephens Creek	28.07	156	P	P	20 31 18.7	+0.2
	baz=28,SNR=12						
CMSA	Cobar Meteorol	29.67	149	P	P	20 31 33.5	+0.9
	baz=30,SNR=6.0						
YNG	Young	33.24	149	P	P	20 32 04.9	+1.3
	baz=33,SNR=8.7						
CMAR	Chiang Mai Arr	38.25	311	P	P	20 32 46.1	+0.1
	0.5nm,0.5s,baz=142,slow=6.8,SNR=4.5						
KSRS	Korea Array	43.73	359	P	P	20 33 30.8	+0.8
	1.0nm,0.5s,baz=175,slow=9.5,SNR=7.1						
USRK	Ussuriysk Arra	50.57	3	P	P	20 34 22.6	+0.4
	1.0nm,0.6s,baz=177,slow=7.2,SNR=3.4						
ODAN	Odare	51.78	312	eP	P	20 34 31.2	-0.6
	6.4nm,0.5s						
TAPN	Taplejung	51.82	312	eP	P	20 34 31.8	-0.3
	9.2nm,0.4s						
RAMN	Ramite	52.42	311	eP	P	20 34 36.3	-0.1
	9.0nm,0.5s						
GUN	Gumba	53.48	312	eP	P	20 34 43.9	-0.3
	20nm,0.7s						
PKI	Pulchoki	53.65	311	eP	P	20 34 44.7	-0.7
	6.4nm,0.5s						
PKIN	Phulchoki	53.66	311	eP	P	20 34 44.5	-0.9
	4.2nm,0.6s						
KKN	Kakani	53.86	311	eP	P	20 34 46.3	-0.5
	4.7nm,0.5s						
KOLN	Koldanda	55.11	310	eP	P	20 34 55.5	-0.2
PYUN	Piuthan	55.74	310	eP	P	20 35 00.1	-0.1
MKAR	Makanchi Array	66.98	327	P	P	20 36 14.6	+0.3
	0

PRHZ	**Porangahau**	**1.92**	**148**	⇑PN	Pn	20 48 19.3	-0.2
MRZ	**Mangatainoka R**	**2.02**	**174**	⇑PN	Pn	20 48 19.5	-1.1
MRZ				AML	AML	20 48 49.6	
MRZ				AML	AML	20 48 49.7	
PRGZ	**Paritu Road**	**2.05**	**98**	PN	Pn	20 48 20.7	-0.2
MHGZ	**Mahia Peninsul**	**2.10**	**105**	PN	Pn	20 48 21.3	-0.1
BFZ	**Birch Farm**	**2.16**	**160**	PN	Pn	20 48 21.2	-0.7
OGWZ	**Otaki Gorge**	**2.17**	**182**	⇑PN	Pn	20 48 21.0	-0.9
TIWZ	**Tintock**	**2.17**	**168**	PN	Pn	20 48 21.0	-1.1
KIW	**Kapiti Island**	**2.23**	**187**	⇑PN	Pn	20 48 21.1	-1.5
KIW				AML	AML	20 48 54.4	
KIW				AML	AML	20 48 55.9	
HOWZ	**Holdsworth Sta**	**2.25**	**176**	⇑PN	Pn	20 48 21.4	-1.4
CNGZ	**Carnagh Statio**	**2.29**	**87**	PN	Pn	20 48 23.4	+0.1
DUWZ	**D'Urville Isla**	**2.39**	**206**	PN	Pn	20 48 22.4	-1.9
PUZ	**Puketiti**	**2.41**	**77**	PN	Pn	20 48 23.7	-0.8
PUZ				AML	AML	20 48 59.3	
PUZ				AML	AML	20 49 00.2	
TMWZ	**Te Maipa**	**2.50**	**169**	PN	Pn	20 48 23.9	-1.5
MTW	**Mount Morrison**	**2.51**	**176**	PN	Pn	20 48 23.8	-1.8
MTW				AML	AML	20 48 59.8	
MTW				AML	AML	20 48 59.8	
MXZ	**Matakaoa Point**	**2.62**	**66**	PN	Pn	20 48 25.9	-0.8
MXZ				AML	AML	20 49 04.7	
TCW	**Tory Channel**	**2.67**	**197**	⇑PN	Pn	20 48 25.6	-1.6
TCW				AML	AML	20 49 02.0	
TCW				AML	AML	20 49 03.3	
SNZO	**South Karori**	**2.69**	**189**	PN	Pn	20 48 25.5	-2.0
SNZO				AML	AML	20 49 02.6	
SNZO				AML	AML	20 49 02.8	
PAWZ	**Paruwai Farm**	**2.73**	**178**	PN	Pn	20 48 26.1	-1.8
PAWZ				AML	AML	20 49 02.5	
PAWZ				AML	AML	20 49 04.0	
MSWZ	**Moikau Station**	**2.76**	**181**	PN	Pn	20 48 26.3	-1.9
MSWZ				AML	AML	20 49 02.3	
MSWZ				AML	AML	20 49 04.7	
TRWZ	**Traveller**	**2.76**	**174**	PN	Pn	20 48 26.8	-1.5
TRWZ				AML	AML	20 49 04.7	
TRWZ				AML	AML	20 49 05.0	
BHW	**Baring Head**	**2.77**	**186**	PN	Pn	20 48 26.3	-2.0
BHW				AML	AML	20 49 03.5	
BHW				AML	AML	20 49 04.1	
PLWZ	**Palliser**	**2.92**	**180**	⇑PN	Pn	20 48 27.9	-2.1
NNZ	**Nelson**	**2.95**	**209**	⇑PN	Pn	20 48 27.7	-2.6
TUWZ	**Tuamarina**	**2.96**	**200**	PN	Pn	20 48 28.3	-2.2
TUWZ				AML	AML	20 48 29.3	
TUWZ				AML	AML	20 48 29.3	
QRZ	**Quartz Range**	**3.04**	**224**	⇑PN	Pn	20 48 28.1	-3.2
BSWZ	**Blackbirch Sta**	**3.24**	**199**	PN	Pn	20 48 31.8	-2.0
THZ	**Tophouse**	**3.60**	**210**	⇑PN	Pn	20 48 34.7	-3.3
KHZ	**Kahutara**	**3.99**	**199**	PN	Pn	20 48 39.9	-2.6
DSZ	**Denniston Nort**	**4.08**	**220**	PN	Pn	20 48 39.8	-3.9
LTZ	**Lake Taylor**	**4.72**	**208**	PN	Pn	20 48 48.0	-3.7
MQZ	**McQueen's Vall**	**5.43**	**201**	PN	Pn	20 48 56.0	-4.4
WVZ	**Waitaha Valley**	**5.61**	**217**	PN	Pn	20 48 58.6	-4.1
RPZ	**Rata Peaks**	**5.98**	**211**	PN	Pn	20 49 02.6	-4.9
FOZ	**Fox Glacier**	**6.48**	**219**	PN	Pn	20 49 07.9	-5.8
LBZ	**Lake Benmore**	**6.89**	**212**	PN	Pn	20 49 14.3	-4.8
ODZ	**Otahua Downs**	**7.26**	**207**	PN	Pn	20 49 20.0	-3.9
JCZ	**Jackson Bay**	**7.31**	**220**	PN	Pn	20 49 20.6	-4.0

*IDC **18** 20:53:09.0±1.0,25°.62S×176°.11W,h0km,mb4.1/9,*
mb1 4.3/9,mb1mx4.2/16,mbtmp4.1/9,ML5.2/1,MS3.9/6,
Ms1 3.9/6,ms1mx3.6/22,Error ellipse: s-maj=34.2km
s-min=21.5km az=127.0
*ISCJB **18** 20:53:12.5±0.6,25°.59S±0°.06×176°.3W±0°.1,h31km,*
mb4.2/15,MS3.9/4,Error ellipse: s-maj=15.8km
s-min=7.8km az=5.8
*NEIC **18** 20:53:14.3±1.2,25°.60S×176°.26W,h35km±9km,mb4.3/7,*
Error ellipse: s-maj=13.1km s-min=7.5km az=78.0

ISC 18 20:53:13.7±0.6,25°.58S±0°.07×176°.1W±0°.1,h31km,n48,
σ1s18/47,mb4.2/15,MS4.0/4,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.00**	**203**	Pn	**Pn**	**20 54 12.3**	**-0.5**
RAO				Sn	**Sn**	**20 54 59.0**	**+0.3**
RAO	**Raoul Island**	**4.00**	**203**	Pn	**Pn**	**20 54 12.3**	**-0.5**
	162nm,0.3s,baz=81,slow=11,SNR=16						
RAO				Sn	**Sn**	**20 54 59.0**	**+0.3**
	206nm,0.3s,baz=72,slow=19,SNR=7.1						
MSVF	**Nonsavu**	**9.52**	**324**	*e*Pn	**Pn**	**20 55 27.6**	**-1.2**
	44nm,1.2s						
URZ	**Urewera**	**13.89**	**203**	*e*Pn	**Pn**	**20 56 27.4**	**-0.9**
	9.0nm,0.5s						
URZ				Sn	Sn	20 58 49.7	-12
URZ	**Urewera**	**13.89**	**203**	Pn	**Pn**	**20 56 30.7**	**+2.3**
	1.0nm,0.3s,baz=3.5,slow=19,SNR=5.0						
URZ				Sn	Sn	20 58 49.7	-12
	1.2nm,0.3s,baz=55,slow=23,SNR=8.6						
RAR	**Rarotonga**	**15.60**	**77**	LR	LR	21 01 21.4	
	comp=Z,198nm,19.9s,baz=319,slow=32						
DZM	**Mont Dzumac**	**16.35**	**279**	*e*P	**P**	**20 57 06.0**	**+2.2**
DZM				*e*LR	LR	21 00 58.8	
	750nm,23.9s						
DZM	**Mont Dzumac**	**16.35**	**279**	*e*Pn	**Pn**	**20 57 00.1**	**-1.1**
	32nm,1.3s						
DZM	**Mont Dzumac**	**16.35**	**279**	Pn	**P**	**20 57 07.2**	**+3.4**
	0.3nm,0.3s,baz=99,slow=21,SNR=3.4						
DZM				LR	LR	21 02 07.2	
	comp=Z,675nm,19.8s,baz=37,slow=33						
TBI	**Tubuai**	**24.34**	**90**	*e*T	T	21 23 06.6	
	9.7nm,0.3s						
PPT2	**Papeete2**	**25.88**	**77**	*e*LR	LR	21 04 54.9	
	300nm,28.2s						
PPT	**Papeete**	**25.89**	**77**	LR	LR	21 06 35.8	
	comp=Z,123nm,18.5s,baz=218,slow=31						
HNR	**Honiara**	**27.84**	**301**	LR	LR	21 08 15.4	
	comp=Z,326nm,18.3s,baz=122,slow=32						
CTAO	**Charters Tower**	**35.04**	**271**	*e*P	**P**	**21 00 02.4**	**-1.5**
STKA	**Stephens Creek**	**37.45**	**250**	P	**P**	**21 00 24.9**	**+0.5**
	1.3nm,0.5s,baz=102,slow=14,SNR=9.2						
AS31	**Alice Springs**	**45.27**	**261**	*e*P	**P**	**21 01 27.6**	**-1.1**
ASAR	**Alice Springs**	**45.28**	**261**	P	**P**	**21 01 27.6**	**-1.1**
ASAR	**Alice Springs**	**45.28**	**261**	P	**P**	**21 01 27.6**	**-1.1**
	0.7nm,0.4s,baz=94,slow=8.0,SNR=21						
WRAB	**Tennant Creek**	**45.83**	**266**	*e*P	**P**	**21 01 31.7**	**-1.5**
	4.6nm,1.0s						
WRA	**Warramunga Arr**	**45.84**	**266**	P	**P**	**21 01 31.7**	**-1.5**
WRA	**Warramunga Arr**	**45.84**	**266**	P	**P**	**21 01 31.7**	**-1.5**
	0.9nm,0.4s,baz=103,slow=7.9,SNR=14						
SBA	**Scott Base**	**52.95**	**184**	*e*P	**P**	**21 02 26.6**	**-0.1**
	2.4nm,0.8s						
VNDA	**Vanda**	**53.04**	**186**	*e*P	**P**	**21 02 26.6**	**-0.8**
	1.3nm,0.5s						
CASY	**Casey**	**60.18**	**207**	*e*P	**P**	**21 03 18.3**	**+0.1**
	6.4nm,0.5s						
PETK	**Petropavlovsk-**	**81.61**	**344**	P	**P**	**21 05 29.1**	**+0.9**
PETK	**Petropavlovsk-**	**81.61**	**344**	P	**P**	**21 05 29.1**	**+0.9**
	2.4nm,0.8s,baz=169,slow=8.2,SNR=3.3						
KSRS	**Korea Array**	**81.83**	**318**	P	**P**	**21 05 31.0**	**+1.2**
	2.6nm,0.9s,baz=136,slow=6.0,SNR=8.5						
KSRS				LR	LR	21 41 29.4	
	comp=Z,66nm,18.1s,baz=30,slow=35						
KSAR	**Wonju Array Be**	**81.85**	**318**	P	**P**	**21 05 31.0**	**+1.1**
SNAA	**Sanae**	**82.90**	**178**	*e*P	**P**	**21 05 35.6**	**+0.6**
SNAA	**Sanae**	**82.90**	**178**	*e*P	**P**	**21 05 35.6**	**+0.6**
	1.2nm,0.6s						
VNA1	**Neumayer--Stat**	**83.65**	**176**	*e*P	**P**	**21 05 37.6**	**-1.2**
USRK	**Ussuriysk Arra**	**84.12**	**325**	P	**P**	**21 05 42.0**	**+0.6**
	0.7nm,0.7s,baz=64,slow=4.5,SNR=5.3						
ENH	**Enshi**	**90.31**	**304**	*e*P	**P**	**21 06 11.6**	**-0.4**
	22nm,1.5s						
PDAR	**Pinedale Array**	**91.48**	**43**	P	**P**	**21 06 17.6**	**+0.3**
PDAR	**Pinedale Array**	**91.48**	**43**	P	**P**	**21 06 17.6**	**+0.3**
	0.6nm,0.7s,baz=158,slow=2.6,SNR=4.0						
ILAR	**Eielson Array**	**92.88**	**12**	P	**P**	**21 06 23.3**	**+0.4**
ILAR	**Eielson Array**	**92.88**	**12**	P	**P**	**21 06 23.3**	**+0.4**
	0.3nm,0.6s,baz=224,slow=5.0,SNR=3.9						
CMAR	**Chiang Mai Arr**	**93.43**	**289**	P	**P**	**21 06 28.6**	**+2.0**
CMAR	**Chiang Mai Arr**	**93.43**	**289**	P	**P**	**21 06 28.6**	**+2.0**
	1.4nm,0.8s,baz=133,slow=4.0,SNR=8.4						
CMAR				LR	LR	21 44 43.2	
	comp=Z,74nm,18.5s,baz=295,slow=33						
MKAR	**Makanchi Array**	**115.91**	**312**	PKP	**PKPdf**	**21 11 51.9**	**-1.3**
MKAR	**Makanchi Array**	**115.91**	**312**	PKP	**PKPdf**	**21 11 51.9**	**-1.3**
	0.3nm,0.6s,baz=190,slow=1.2,SNR=6.6						
NB2	**NORSAR Subarra**	**144.20**	**354**	PKP	**PKPab**	**21 12 43.9**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=20,slow=3.8						
AKASG	**Malin Array Be**	**148.27**	**329**	PKPbc	**PKPbc**	**21 12 56.0**	**-0.5**
AKASG	**Malin Array Be**	**148.27**	**329**	PKPbc	**PKPbc**	**21 12 56.0**	**-0.5**
	comp=Z,2.1nm,0.6s,baz=42,slow=3.2,SNR=10						
BRTR	**Keskin Array B**	**151.42**	**307**	PKPbc	**PKPbc**	**21 13 04.5**	**-0.3**
BRTR	**Keskin Array B**	**151.42**	**307**	PKPbc	**PKPbc**	**21 13 04.5**	**-0.3**
	comp=Z,1.3nm,0.9s,baz=64,slow=3.4,SNR=4.8						
TORD	**Torodi Ar. Bea**	**167.46**	**170**	PKP	**PKPdf**	**21 13 16.5**	**-0.9**
TORD				PKPab	**PKPab**	**21 14 22.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**167.46**	**170**	PKP	**PKPdf**	**21 13 16.5**	**-0.9**
	comp=Z,0.9nm,1.1s,baz=225,slow=2.2,SNR=3.6						
TORD				PKPab	**PKPab**	**21 14 22.6**	**-0.1**
	comp=Z,1.7nm,1.1s,baz=194,slow=2.8,SNR=5.1						

*ISCJB **18** 20:53:56.0±1.9,35°.1N±0°.1×27°.84E±0°.10,h8km±15km,*
Error ellipse: s-maj=21.2km s-min=13.3km az=173.3
*CSEM **18** 20:53:56.2±0.8,35°.11N×27°.80E,h10km,MD3.2,Error*
ellipse: s-maj=21.6km s-min=8.7km az=164.0
*DDA **18** 20:54:01.6,35°.22N×28°.02E,h59km,MD3.2*
*ATH **18** 20:54:03.0,35°.81N×27°.24E,h10km,MD3.3/3*

ISC 18 20:53:55.7±2.4,35°.18N±0°.10×27°.89E±0°.06,h0km±17km,
n16,σ1s70/26,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.70**	**302**	*e*PG	**Pg**	**20 54 08.5**	**-0.6**
KARP	**Karpathos**	**0.70**	**302**	*e*Pg	**Pg**	**20 54 08.5**	**-0.6**
ARG	**Arkhangelos**	**1.06**	**11**	*e*PB	**Pn**	**20 54 18.9**	**+1.2**
ARG	**Arkhangelos**	**1.06**	**11**	*e*Pb	**Pn**	**20 54 18.9**	**+1.2**
AKAS	**Kas**	**1.75**	**52**	*e*P	**Pn**	**20 54 27.5**	**+0.1**
AKAS				*e*S	**Sn**	**20 54 49.1**	**-1.4**
AKAS	**Kas**	**1.75**	**52**	*e*P	**Pn**	**20 54 27.5**	**+0.1**
AKAS				*e*S	**Sn**	**20 54 49.1**	**-1.4**
TURN	**Turunc**	**1.79**	**19**	*e*P	**Pn**	**20 54 27.8**	**0.0**
TURN				*e*S	**Sn**	**20 54 46.7**	**-4.5**
TURN	**Turunc**	**1.79**	**19**	*e*P	**Pn**	**20 54 27.8**	**0.0**
TURN				*e*S	**Sn**	**20 54 46.7**	**-4.5**
NPS	**Neapolis**	**1.86**	**273**	*e*PB	**Pn**	**20 54 29.6**	**+0.8**
NPS	**Neapolis**	**1.86**	**273**	*e*Pb	**Pn**	**20 54 29.6**	**+0.8**
GOLH	**Golhisar**	**2.46**	**33**	*e*P	**Pn**	**20 54 39.0**	**+1.8**
GOLH				*e*S	**Sn**	**20 55 09.2**	**+1.2**
GOLH	**Golhisar**	**2.46**	**33**	*e*P	**Pn**	**20 54 39.0**	**+1.8**
GOLH				*e*S	**Sn**	**20 55 09.2**	**+1.2**
AYDN	**Tasoluk**	**2.48**	**360**	*e*P	**Pn**	**20 54 38.0**	**+0.6**
AYDN				*e*S	**Sn**	**20 55 08.5**	**+0.1**
AYDN	**Tasoluk**	**2.48**	**360**	*e*P	**Pn**	**20 54 38.0**	**+0.6**
AYDN				*e*S	**Sn**	**20 55 08.5**	**+0.1**
DNZL	**Cakiroluk**	**2.68**	**20**	*e*P	**Pn**	**20 54 40.6**	**+0.4**
DNZL				*e*S	**Sb**	**20 55 19.4**	**+1.3**
DNZL	**Cakiroluk**	**2.68**	**20**	*e*P	**Pn**	**20 54 40.6**	**+0.4**
DNZL				*e*S	**Sb**	**20 55 19.4**	**+1.3**

*JMA **18** 21:02:44.9±0.2,24°.27N×122°.23E,h52km,M1.7*
*ISCJB **18** 21:02:46.5±0.5,24°.25N±0°.04×122°.33E±0°.02,*
h43km±22km,Error ellipse: s-maj=6.7km s-min=3.3km
az=166.3
*TAP **18** 21:02:46.2,24°.31N×122°.29E,h59km,ML2.9,C*

ISC 18 21:02:46.9±1.3,24°.26N±0°.05×122°.32E±0°.03,h40km±31km,
n25,σ0s82/43,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.55**	**309**	P	**Pn**	**21 02 58.4**	**0.0**
	baz=307						
TWC				S	**Sn**	**21 03 06.4**	**-0.1**
	baz=307						
ENA	**Nanau**	**0.56**	**287**	P	**Pn**	**21 02 58.6**	**+0.1**
	baz=289						
ENA				S	**Sn**	**21 03 07.3**	**+0.7**
	baz=289						
YOJ	**Yonaguni jima**	**0.66**	**72**	P	**Pn**	**21 02 59.2**	**-0.6**
YOJ				*e*S	**Sn**	**21 03 09.9**	**+0.9**
TWD	**Chiawan**	**0.69**	**255**	*e*P	**Pn**	**21 02 60.0**	**-0.2**
	baz=242						
TWD				*e*S	**Sn**	**21 03 09.9**	**+0.2**
	baz=242						
TWE	**Neicheng**	**0.75**	**307**	*i* P	**Pn**	**21 03 01.1**	**0.0**
	baz=314						
TWE				S	**Sn**	**21 03 11.6**	**+0.2**
	baz=314						
ENTT	**Nioudou**	**0.79**	**299**	⇑*i*P	**Pn**	**21 03 01.6**	**+0.1**
	baz=297						
ENTT				*i* S	**Sn**	**21 03 12.8**	**+0.6**
	baz=297						
TWB1	**Santiao Chiao**	**0.80**	**338**	P	**Pn**	**21 03 01.0**	**-0.8**
	baz=329						
TWB1				*e*S	**Sn**	**21 03 10.9**	**-1.6**
	baz=329						
NNS	**Nan Shan**	**0.89**	**282**	*e*P	**Pn**	**21 03 02.7**	**-0.3**
	baz=271						
NNS				*e*S	**Sn**	**21 03 14.9**	**+0.1**
	baz=271						
ESL	**Shilin**	**0.93**	**241**	P	**Pn**	**21 03 02.9**	**-0.6**
	baz=230						
ESL				*e*S	**Sn**	**21 03 15.4**	**-0.2**
	baz=230						
NWF	**Wu-fen Shan**	**0.94**	**329**	*e*P	**Pn**	**21 03 02.9**	**-0.9**
	baz=329						
WHF	**Hehuan Shan**	**0.97**	**263**	*e*P	**Pn**	**21 03 04.4**	**-0.1**
	baz=260						
WHF				S	**Sn**	**21 03 17.3**	**0.0**
	baz=260						
TWT	**Tachien**	**1.05**	**270**	*e*P	**Pn**	**21 03 05.6**	**+0.3**
	baz=267						
TWT				*e*S	**Sn**	**21 03 19.3**	**+0.5**
	baz=267						
EHY	**Hungye**	**1.19**	**231**	*e*P	**Pn**	**21 03 06.9**	**-0.1**
	baz=238						
EHY				*e*S	**Sn**	**21 03 20.8**	**-1.2**
	baz=238						
NSTT	**Nanjuang**	**1.26**	**287**	*e*P	**Pn**	**21 03 08.2**	**+0.2**
	baz=286						
NSTT				*e*S	**Sn**	**21 03 24.3**	**+0.5**
	baz=286						
IRIF	**Iriomote-Funau**	**1.28**	**87**	P	**Pn**	**21 03 08.2**	**-0.2**
IRIF				*e*S	**Sn**	**21 03 24.5**	**+0.1**
TWF1	**Yuli**	**1.31**	**226**	*e*P	**Pn**	**21 03 08.7**	**0.0**
	baz=235						
TWF1				*e*S	**Sn**	**21 03 23.7**	**-1.2**
	baz=235						
SMLT	**Sun Moon Lake**	**1.36**	**254**	*e*S	**Sn**	**21 03 26.4**	**+0.1**
	baz=245						
TYC	**Yuchr**	**1.39**	**255**	*e*P	**Pn**	**21 03 11.4**	**+1.6**
	baz=247						
CHKT	**Chengkung**	**1.45**	**217**	*e*S	**Sn**	**21 03 26.2**	**-2.4**
	baz=207						
YUS	**Yu-Shan**	**1.47**	**239**	*e*P	**Pn**	**21 03 11.8**	**+0.4**
	baz=236						
JKRS	**Kuro-shima**	**1.54**	**91**	P	**Pn**	**21 03 11.7**	**-0.1**
JKRS				*e*S	**Sn**	**21 03 31.4**	**+0.8**
ALS	**Alishan**	**1.58**	**242**	*e*P	**Pn**	**21 03 14.7**	**+2.0**
	baz=232						
CHN5	**Tsauling**	**1.65**	**247**	*e*P	**Pn**	**21 03 13.0**	**-0.4**
	baz=235						
CHN5				*e*S	**Sn**	**21 03 34.2**	**+0.8**
	baz=235						
JIJ	**Ishigaki jima**	**1.66**	**86**	P	**Pn**	**21 03 13.6**	**+0.1**
JIJ				*e*S	**Sn**	**21 03 33.1**	**-0.6**
JTJ	**Tarama**	**2.20**	**80**	*e*S	**Sn**	**21 03 48.2**	**+1.3**

IDC 18 21:07:04.3±1.8,25°.54S×176°.98W,h0km,mb4.0/6,
mb1 4.2/8,mb1mx4.1/17,mbtmp4.1/8,ML4.4/2,MS4.0/6,
Ms1 4.0/6,ms1mx3.6/21,Error ellipse: s-maj=49.3km
s-min=24.8km az=103.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.79**	**192**	Pn	Pn	21 08 02.4	-1.5
	71nm,0.3s,baz=69,slow=21,SNR=6.6						
RAO				Sn	Sn	21 08 49.2	-0.2
	84nm,0.3s,baz=346,slow=23,SNR=5.6						
URZ	**Urewera**	**13.64**	**200**	Pn	Pn	21 10 18.8	-0.1
	0.7nm,0.3s,baz=58,slow=19,SNR=2.9						
URZ				Sn	Sn	21 12 41.9	-9.3
	0.9nm,0.3s,baz=319,slow=22,SNR=5.8						
DZM	**Mont Dzumac**	**15.55**	**279**	*e*LR	LR	21 14 54.8	
	642nm,23.8s						
RPZ	**Rata Peaks**	**20.59**	**205**	LR	LR	21 19 43.1	
	comp=Z,243nm,18.1s,baz=199,slow=37						
TBI	**Tubuai**	**25.13**	**91**	*e*LR	LR	21 18 07.1	
	174nm,27.2s						
TBI	**Tubuai**	**25.13**	**91**	*e*T	T	21 36 58.8	
	10nm,0.3s						
PPT2	**Papeete2**	**26.65**	**78**	*e*LR	LR	21 18 55.4	
	175nm,24.5s						
PPT	**Papeete**	**26.66**	**78**	LR	LR	21 20 34.9	
	comp=Z,151nm,19.1s,baz=179,slow=30						
HNR	**Honiara**	**27.14**	**302**	LR	LR	21 22 05.6	
	comp=Z,335nm,18.2s,baz=285,slow=33						
STKA	**Stephens Creek**	**36.71**	**250**	P	P	21 14 14.2	+1.0
	3.0nm,1.0s,baz=245,slow=16,SNR=4.7						
STKA				LR	LR	21 28 26.6	
	comp=Z,341nm,20.1s,baz=291,slow=35						
ASAR	**Alice Springs**	**44.49**	**262**	P	P	21 15 18.0	+0.2
	0.5nm,0.4s,baz=96,slow=8.0,SNR=20						
ASAR				LR	LR	21 34 03.9	
	comp=Z,268nm,18.4s,baz=108,slow=36						
WRA	**Warramunga Arr**	**45.05**	**267**	P	P	21 15 21.7	-0.5
	0.5nm,0.3s,baz=102,slow=7.8,SNR=10						
KSRS	**Korea Array**	**81.27**	**319**	P	P	21 19 20.6	-1.6
	1.3nm,0.9s,baz=157,slow=5.9,SNR=6.7						
KSRS				LR	LR	21 51 11.8	
	comp=Z,51nm,18.6s,baz=142,slow=33						
PETK	**Petropavlovsk-**	**81.36**	**345**	P	P	21 19 19.4	-3.0
	4.3nm,0.9s,baz=170,slow=9.0,SNR=5.1						
USRK	**Ussuriysk Arra**	**83.63**	**326**	P	P	21 19 34.4	-0.1
	1.1nm,0.8s,baz=114,slow=4.6,SNR=5.5						
CMAR	**Chiang Mai Arr**	**92.66**	**289**	P	P	21 20 18.2	-0.3
	1.1nm,0.8s,baz=157,slow=3.3,SNR=6.1						
NOA	**NORSAR Array B**	**144.07**	**353**	PKhKP	PKPpre	21 26 34.5	
	1.8nm,0.9s,baz=3.9,slow=2.3,SNR=3.8						
AKASG	**Malin Array Be**	**147.81**	**328**	PKPbc	PKPbc	21 26 51.2	+0.3
	0.7nm,0.5s,baz=29,slow=3.7,SNR=3.8						
BRTR	**Keskin Array B**	**150.75**	**306**	PKP	PKPdf	21 26 54.6	+1.3
	0.8nm,0.8s,baz=122,slow=1.6,SNR=3.6						
BRTR				PKPbc	PKiKP	21 27 02.7	+3.2
	0.9nm,0.8s,baz=49,slow=3.8,SNR=4.3						

IDC 18 21:46:19.4±5.4,26°.72S×69°.13E,h0km,mb3.6/4,
mb1 3.8/4,mb1mx3.5/23,mbtmp3.6/4,MS3.5/1,Ms1 3.7/1,
ms1mx2.9/29,Error ellipse: s-maj=149.5km
s-min=36.8km az=56.0,Indian Ocean Triple Junction

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**53.42**	**36**	P	P	21 55 41.2	0.0
	1.6nm,1.0s,baz=216,slow=7.4,SNR=6.5						
CMAR				LR	LR	22 15 15.0	
	comp=Z,45nm,18.1s,baz=185,slow=32						
ASAR	**Alice Springs**	**58.13**	**102**	P	P	21 56 16.2	+0.9
	0.3nm,0.7s,baz=255,slow=6.6,SNR=3.4						
WRA	**Warramunga Arr**	**59.70**	**98**	P	P	21 56 25.1	-1.1
	0.7nm,0.9s,baz=251,slow=6.4,SNR=3.1						
MKAR	**Makanchi Array**	**74.13**	**9**	P	P	21 57 57.4	0.0
	0.2nm,0.7s,baz=186,slow=5.4,SNR=3.3						

IDC 18 22:03:24.6±5.6,6°.70S×150°.29E,h52km±46km,mb3.9/5,
mb1 4.1/6,mb1mx3.7/18,mbtmp4.0/6,ML3.0/1,Error
ellipse: s-maj=55.5km s-min=31.3km az=127.0,New
Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.10**	**229**	P	Pn	22 04 25.5	+0.6
	6.7nm,0.3s,baz=32,slow=8.0,SNR=16						
PMG				S	Sn	22 05 12.3	+0.7
	32nm,0.3s,baz=174,slow=19,SNR=13						
WRA	**Warramunga Arr**	**20.32**	**228**	P	P	22 07 56.4	-0.3
	11nm,0.7s,baz=52,slow=11,SNR=47						
ASAR	**Alice Springs**	**23.08**	**221**	P	P	22 08 25.4	-0.7
	2.1nm,0.5s,baz=55,slow=9.0,SNR=26						
STKA	**Stephens Creek**	**26.34**	**197**	P	P	22 08 55.2	-0.6
	2.0nm,0.9s,baz=13,slow=9.2,SNR=3.6						
FITZ	**Fitzroy Crossi**	**26.57**	**242**	P	P	22 08 58.1	+0.1
	5.8nm,0.7s,baz=92,slow=11,SNR=11						
ILAR	**Eielson Array**	**84.85**	**23**	P	P	22 15 53.1	-0.3
	0.6nm,0.7s,baz=244,slow=6.5,SNR=5.6						
TORD	**Torodi Ar. Bea**	**148.43**	**284**	PKPbc	PKPbc	22 23 07.0	+0.4
	0.7nm,0.6s,baz=92,slow=2.8,SNR=10.0						

*IDC **18** 22:23:35.7±1.0,35°.08N×27°.81E,h0km,mb3.7/7,*
mb1 3.6/12,mb1mx3.5/29,mbtmp3.5/12,ML3.4/4,MS3.2/3,
Ms1 3.3/3,ms1mx2.6/43,Error ellipse: s-maj=21.0km
s-min=17.3km az=5.0
*ISCJB **18** 22:23:37.8±0.7,35°.07N±0°.03×27°.93E±0°.02,h21km±6km,*
mb3.6/9,MS3.2/3,Error ellipse: s-maj=4.4km s-min=3.4km
az=4.1
*CSEM **18** 22:23:37.4±0.1,35°.11N×27°.91E,h2km,MD3.6,Error*
ellipse: s-maj=3.2km s-min=2.5km az=13.0
*ISK **18** 22:23:38.6,35°.04N×27°.91E,h36km,ML3.

VAM	**Vamos**	**3.06 276**	P		**Pn**	**22 24 26.5**	**+0.3**
VAM	**Vamos**	**3.06 276**	P		**Pn**	**22 24 26.5**	**+0.3**
GVD	**Gavdhos**	**3.16 266**	*e*PB		**Pn**	**22 24 30.0**	**+2.4**
GVD	**Gavdhos**	**3.16 266**	*e*Pb		**Pn**	**22 24 30.0**	**+2.4**
BCK	**Bucak**	**3.17 42**	*e*PN		**Pn**	**22 24 28.6**	**+0.8**
BCK	**Bucak**	**3.17 42**	*e*Pn		**Pn**	**22 24 28.6**	**+0.8**
IZM	**Izmir**	**3.30 351**	*e*PN		**Pn**	**22 24 31.8**	**+2.2**
IZM	**Izmir**	**3.30 351**	*e*Pn		**Pn**	**22 24 31.8**	**+2.2**
BLCB	**Balcova**	**3.32 348**	*e*PN		**Pn**	**22 24 31.0**	**+1.2**
BLCB	**Balcova**	**3.32 348**	*e*Pn		**Pn**	**22 24 31.0**	**+1.2**
ISP	**Isparta**	**3.41 37**	*e*PN		**Pn**	**22 24 32.7**	**+1.6**
ISP	**Isparta**	**3.41 37**	*e*Pn		**Pn**	**22 24 32.7**	**+1.6**
KULA	**Kula-Manisa**	**3.43 10**	*e*PN		**Pn**	**22 24 32.9**	**+1.5**
KULA	**Kula-Manisa**	**3.43 10**	*e*Pn		**Pn**	**22 24 32.9**	**+1.5**
KHL	**Karahalli**	**3.43 22**	*e*PN		**Pn**	**22 24 32.3**	**+0.8**
KHL	**Karahalli**	**3.43 22**	*e*Pn		**Pn**	**22 24 32.3**	**+0.8**
SHUT	**Suhut-Afyon**	**4.01 31**	*e*PN		**Pn**	**22 24 41.1**	**+1.7**
SHUT	**Suhut-Afyon**	**4.01 31**	*e*Pn		**Pn**	**22 24 41.1**	**+1.7**
LEF	**Lefka**	**4.07 89**	*e*PN		**Pn**	**22 24 40.0**	**-0.1**
LEF	**Lefka**	**4.07 89**	*e*Pn		**Pn**	**22 24 40.1**	**-0.1**
KYTH	**Kithira**	**4.13 287**	P		**Pn**	**22 24 42.0**	**+0.9**
KYTH	**Kithira**	**4.13 287**	P		**Pn**	**22 24 42.0**	**+0.9**
SLUM		**4.28 213**	P		**Pn**	**22 24 43.2**	**+0.2**
	baz=213						
SLUM			AMP			22 25 00.0	
	comp=N,60µm,0.7s,logA/T=5.0,baz=213						
SLUM			S		**Sn**	**22 25 29.3**	**-3.6**
	baz=213						
SLUM		**4.28 213**	P		**Pn**	**22 24 43.2**	**+0.2**
SLUM			S		**Sn**	**22 25 29.3**	**-3.6**
ALT	**Altintas**	**4.29 23**	*e*PN		**Pn**	**22 24 44.8**	**+1.6**
ALT	**Altintas**	**4.29 23**	*e*Pn		**Pn**	**22 24 44.8**	**+1.6**
VLI	**Veliai**	**4.34 293**	P		**Pn**	**22 24 44.1**	**+0.2**
VLI	**Veliai**	**4.34 293**	P		**Pn**	**22 24 44.1**	**+0.2**
CSS	**Prodhromos**	**4.44 91**	*e*PN		**Pn**	**22 24 46.3**	**+1.0**
CSS	**Prodhromos**	**4.44 91**	P		**Pn**	**22 24 46.3**	**+1.0**
CSS	**Prodhromos**	**4.44 91**	P		**Pn**	**22 24 46.3**	**+1.0**
DID	**Didima**	**4.46 303**	P		**Pn**	**22 24 45.3**	**-0.2**
DID	**Didima**	**4.46 303**	P		**Pn**	**22 24 45.3**	**-0.2**
TVSB	**Tavsanli**	**4.48 15**	*e*PN		**Pn**	**22 24 47.5**	**+1.6**
TVSB	**Tavsanli**	**4.48 15**	*e*Pn		**Pn**	**22 24 47.5**	**+1.6**
BALB	**Balikesir**	**4.50 360**	*e*PN		**Pn**	**22 24 47.5**	**+1.5**
BALB	**Balikesir**	**4.50 360**	*e*Pn		**Pn**	**22 24 47.5**	**+1.5**
KONT	**Konya--Tatoy**	**4.54 51**	*e*PN		**Pn**	**22 24 48.0**	**+1.3**
KONT	**Konya--Tatoy**	**4.54 51**	*e*Pn		**Pn**	**22 24 48.0**	**+1.3**
LFK	**Lefkose**	**4.60 87**	*e*PN		**Pn**	**22 24 48.0**	**+0.6**
LFK	**Lefkose**	**4.60 87**	*e*Pn		**Pn**	**22 24 48.0**	**+0.6**
LADK	**Ladik-KONYA**	**4.70 48**	*e*PN		**Pn**	**22 24 50.7**	**+1.7**
LADK	**Ladik-KONYA**	**4.70 48**	*e*Pn		**Pn**	**22 24 50.7**	**+1.7**
DYR	**Agios Nikonas**	**4.81 291**	P		**Pn**	**22 24 50.4**	**0.0**
DYR	**Agios Nikonas**	**4.81 291**	P		**Pn**	**22 24 50.4**	**0.0**
KIZT	**Kizilcal**	**4.90 39**	*e*PN		**Pn**	**22 24 53.4**	**+1.7**
KIZT	**Kizilcal**	**4.90 39**	*e*Pn		**Pn**	**22 24 53.4**	**+1.7**
EREN	**Erenkoy**	**5.12 84**	*e*PN		**Pn**	**22 24 55.8**	**+1.2**
EREN	**Erenkoy**	**5.12 84**	*e*Pn		**Pn**	**22 24 55.8**	**+1.2**
ITM	**Ithomi**	**5.26 295**	P		**Pn**	**22 24 57.4**	**+0.9**
ITM	**Ithomi**	**5.26 295**	P		**Pn**	**22 24 57.4**	**+0.9**
SULT	**Sultanhani-AKS**	**5.44 54**	*e*PN		**Pn**	**22 25 00.8**	**+1.8**
SULT	**Sultanhani-AKS**	**5.44 54**	*e*Pn		**Pn**	**22 25 00.8**	**+1.8**
SWA2		**6.23 200**	P		**Pn**	**22 25 10.1**	**+0.3**
	baz=201						
SWA2		**6.23 200**	P		**Pn**	**22 25 10.1**	**+0.3**
AMAG	**Maghara**	**6.31 134**	P		**Pn**	**22 25 11.2**	**+0.2**
	baz=134						
AMAG	**Maghara**	**6.31 134**	P		**Pn**	**22 25 11.2**	**+0.2**
RSH		**6.41 129**	P		**Pn**	**22 25 11.6**	**-0.6**
	baz=129						
RSH		**6.41 129**	P		**Pn**	**22 25 11.6**	**-0.6**
BRTR	**Keskin Array B**	**6.46 43**	Pn		**Pn**	**22 25 14.2**	**+1.1**
	comp=N,0.2nm,0.3s,baz=220,slow=15,SNR=7.1						
MMAI	**Mount Meron Ar**	**6.56 107**	Pn		**Pn**	**22 25 14.9**	**+0.5**
	comp=N,1.5nm,0.3s,baz=304,slow=12,SNR=9.4						
MMAI			Sn		**Sn**	**22 26 31.9**	**+2.7**
	comp=N,1.9nm,0.3s,baz=308,slow=23,SNR=4.2						
SUZ		**6.71 140**	P		**Pn**	**22 25 16.5**	**0.0**
	baz=141						
SUZ		**6.71 140**	P		**Pn**	**22 25 16.5**	**0.0**
KOZT	**Kozan**	**6.80 68**	*e*PN		**Pn**	**22 25 19.5**	**+1.8**
KOZT	**Kozan**	**6.80 68**	*e*Pn		**Pn**	**22 25 19.5**	**+1.8**
HNKL	**Nakhl**	**7.29 134**	P		**Pn**	**22 25 24.6**	**+0.2**
	baz=134						
HNKL	**Nakhl**	**7.29 134**	P		**Pn**	**22 25 24.6**	**+0.2**
EIL	**Elat**	**8.06 131**	Pn		**Pn**	**22 25 35.7**	**+0.7**
	comp=N,0.4nm,0.3s,baz=345,slow=14,SNR=13						
EIL			Sn		**Sn**	**22 27 01.7**	**-4.4**
	comp=N,0.6nm,0.3s,baz=208,slow=17,SNR=3.0						
MLR	**Muntele Rosu**	**10.46 352**	Pn		**Pn**	**22 26 09.5**	**+1.6**
	baz=175,slow=12						
KEST	**Kesra**	**15.16 278**	Pn		**Pn**	**22 27 13.3**	**+1.3**
	comp=N,0.0nm,0.3s,baz=104,slow=8.3,SNR=2.4						
AKASG	**Malin Array Be**	**15.59 3**	Pn		**Pn**	**22 27 19.7**	**+2.2**
	comp=N,0.5nm,0.3s,baz=91,slow=8.1,SNR=2.8						
VRAC	**Vranov**	**16.43 333**	Pn		**P**	**22 27 31.2**	**0.0**
	comp=N,0.1nm,0.3s,baz=144,slow=15,SNR=4.3						
GERES	**GERESS Array B**	**17.26 327**	P		**Pn**	**22 27 38.6**	**-0.3**
	comp=N,0.1nm,0.3s,baz=135,slow=13,SNR=10						
FRF	**La Foret Royal**	**18.44 304**	*e*P		**Pn**	**22 27 54.7**	**+1.2**
	comp=N,17nm,1.3s						
LPL	**La Plagne**	**19.14 309**	*e*P		**P**	**22 28 01.7**	**+0.4**
CABF	**La Chapelle**	**20.03 312**	*e*P		**P**	**22 28 12.1**	**+1.3**
SMF	**Signal de Mont**	**21.44 310**	*e*P		**P**	**22 28 25.8**	**-0.2**
	comp=N,11nm,0.9s						
SSF	**Saint Saulge**	**21.82 311**	*e*P		**P**	**22 28 28.4**	**-1.7**
	comp=N,4.5nm,0.6s						
ESDC	**Sonseca Array**	**25.65 290**	P		**P**	**22 29 07.2**	**-0.5**
	comp=N,0.4nm,0.5s,baz=83,slow=9.1,SNR=4.8						
ESDC			LR	LR		22 39 44.5	
	comp=N,54nm,18.1s,baz=250,slow=38						
FINES	**FINESS Array B**	**26.36 358**	P		**P**	**22 29 15.0**	**+1.3**
	comp=N,2.6nm,1.0s,baz=184,slow=27,SNR=2.9						
AKTO	**Aktyubinsk**	**26.63 46**	P		**P**	**22 29 16.5**	**+0.1**
	comp=N,0.5nm,0.6s,baz=245,slow=14,SNR=2.0						
HFS	**Hagfors**	**26.67 344**	P		**P**	**22 29 15.5**	**-1.1**
	comp=N,1.6nm,0.7s,baz=230,slow=12,SNR=4.0						
ATD	**Arta Tunnel**	**27.13 146**	LR	LR		22 40 51.2	
	comp=N,32nm,21.3s,baz=316,slow=38						
TORD	**Torodi Ar. Bea**	**32.25 234**	P		**P**	**22 30 05.3**	**-1.3**
	comp=N,0.8nm,0.6s,baz=38,slow=6.0,SNR=30						
MKAR	**Makanchi Array**	**41.90 57**	P		**P**	**22 31 27.8**	**-0.5**
	comp=N,0.2nm,0.5s,baz=273,slow=8.5,SNR=4.2						
SCHQ	**Schefferville**	**64.66 320**	P		**P**	**22 34 13.7**	**-1.8**
	comp=N,1.6nm,0.7s,baz=49,slow=11,SNR=2.9						
SCHQ			LR	LR		23 02 17.2	
	comp=N,35nm,18.8s,baz=300,slow=36						

IDC 18 22:44:53.1±1.6,4.88N×126.94E,h0km,mb3.5/4, mb1 3.7/4,mb1mx3.5/22,mbtmp3.5/4,Error ellipse: s-maj=146.5km s-min=21.8km az=68.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.71**	**164**	P	P	22 50 24.8	-0.5
	0.5nm,0.5s,baz=343,slow=10,SNR=5.8						
ASAR	**Alice Springs**	**29.17**	**167**	P	P	22 50 56.8	+0.5
	0.2nm,0.4s,baz=353,slow=7.7,SNR=5.3						
MKAR	**Makanchi Array**	**56.74**	**325**	P	P	22 54 39.5	+0.7
	0.4nm,0.6s,baz=120,slow=7.0,SNR=8.5						
ZALV	**Zalesovo Beam**	**59.67**	**333**	P	P	22 54 58.4	-0.8
	0.3nm,0.3s,baz=129,slow=8.6,SNR=2.5						

*ROM **18** 23:03:01.8±0.2,46.68N×10.57E,h11km±1km,Ml2.4/15, Error ellipse: s-maj=2.0km s-min=1.2km az=165.0*
*VIE **18** 23:03:01.7±0.3,46.67N×10.58E,h8km,mb2.3/9,ML2.8/14, Error ellipse: s-maj=2.1km s-min=1.6km az=12.0 2 km E of Glorenza*
*ZUR **18** 23:03:02.1,46.67N×10.57E,h10km±1km,ML2.7/2*
*CSEM **18** 23:03:02.2±0.1,46.67N×10.61E,h2km,ML3.0/31,Error ellipse: s-maj=2.0km s-min=1.5km az=1.0*
*GEN **18** 23:03:02.2,46.66N×10.57E,h4km,ML2.2*
*LDG **18** 23:03:03.0±0.1,46.56N×10.52E,h10km,Ml2.4/9,Error ellipse: s-maj=3.5km s-min=2.6km az=44.0*
*PRU **18** 23:03:05.7,46.81N×10.61E,h0km*
*STR **18** 23:03:10.8±1.1,46.94N×10.10E,h10km,Ml2.4,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 18 23:03:02.2±0.8,46.68N±0.01×10.57E±0.01,h11km±5km, n161,σ1$39/268,32C-18D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOSI	**Grossmontoni**	**0.06**	**193**	Pg	**Pg**	**23 03 04.4**	**-0.4**
MOSI					Sg	**Sg**	23 03 05.9	-0.7
	3µm,0.4s						
MOSI	**Grossmontoni**	**0.06**	**193**	Pg	**Pg**	**23 03 04.4**	**-0.4**
MOSI					*i* Sg	**Sg**	23 03 05.8	-0.8
BRMO	**Bormio**	**0.24**	**214**	Pg	**Pg**	**23 03 07.2**	**-0.1**
BRMO					Sg	**Sg**	23 03 10.6	-0.2
	1µm,0.2s						
BRMO	**Bormio**	**0.24**	**214**	Pg	**Pg**	**23 03 07.2**	**-0.1**
BRMO					Sg	**Sg**	23 03 10.6	-0.2
	1µm,0.2s						
FETA	**Feichten**	**0.36**	**18**	⇑*i*Pg	**Pg**	**23 03 09.6**	**+0.1**
	9.9nm,0.1s,SNR=229						
FETA				⇑*i*Sg	**Sg**	23 03 14.5	+0.1
	139nm,0.2s						
FETA	**Feichten**	**0.36**	**18**	Pg	**Pg**	**23 03 09.6**	**+0.1**
	9.9nm,0.1s,SNR=229						
FETA				Sg	**Sg**	23 03 14.5	+0.1
	139nm,0.2s						
DAVOX	**Davos/Dischmat**	**0.49**	**283**	⇑*i*Pg	**Pg**	**23 03 11.6**	**-0.2**
	859nm,0.2s						
DAVOX				*e*Sg	**Sg**	23 03 18.5	+0.2
	859nm,0.2s						
DAVOX	**Davos/Dischmat**	**0.49**	**283**	Pg	**Pg**	**23 03 11.7**	**-0.1**
DAVOX					Sg	**Sg**	23 03 18.4	+0.2
DAVOX	**Davos/Dischmat**	**0.49**	**283**	Pg	**Pg**	**23 03 11.7**	**-0.1**
DAVOX					*e*Sg	**Sg**	23 03 18.5	+0.2
	859nm,0.2s						
APPI	**Appiano**	**0.50**	**113**	Pg	**Pg**	**23 03 11.9**	**0.0**
APPI					Sg	**Sg**	23 03 18.3	-0.2
	433nm,0.2s						
APPI	**Appiano**	**0.50**	**113**	Pg	**Pg**	**23 03 11.9**	**0.0**
APPI					Sg	**Sg**	23 03 18.3	-0.2
	433nm,0.2s						
ABSI	**Aberstueckl**	**0.52**	**84**	Pg	**Pg**	**23 03 12.0**	**-0.4**
ABSI					Sg	**Sg**	23 03 19.4	+0.1
	173nm,0.2s						
ABSI	**Aberstueckl**	**0.52**	**84**	Pg	**Pg**	**23 03 12.0**	**-0.4**
ABSI					Sg	**Sg**	23 03 19.4	+0.1
	173nm,0.2s						
BOSI	**Bolzano**	**0.55**	**109**	Pg	**Pg**	**23 03 13.0**	**+0.1**
BOSI					Sg	**Sg**	23 03 20.3	+0.2
BOSI	**Bolzano**	**0.55**	**109**	Pg	**Pg**	**23 03 13.0**	**+0.1**
BOSI					Sg	**Sg**	23 03 20.3	+0.2
KOSI	**Kohlern**	**0.60**	**111**	Pg	**Pg**	**23 03 13.8**	**-0.1**
KOSI					Sg	**Sg**	23 03 21.5	-0.3
	108nm,0.3s						
KOSI	**Kohlern**	**0.60**	**111**	⇓*e*Pg	**Pg**	**23 03 13.7**	**-0.1**
KOSI					Sg	**Sg**	23 03 21.5	-0.3
	108nm,0.3s						
MABI	**Malga Bissina**	**0.62**	**184**	Pg	**Pg**	**23 03 14.2**	**-0.2**
MABI					Sg	**Sg**	23 03 22.0	-0.6
	110nm,0.2s						
MABI	**Malga Bissina**	**0.62**	**184**	Pg	**Pg**	**23 03 14.2**	**-0.2**
MABI					Sg	**Sg**	23 03 22.0	-0.6
	110nm,0.2s						
ROSI	**Rosskopf**	**0.63**	**66**	Pg	**Pg**	**23 03 14.1**	**-0.4**
ROSI					Sg	**Sg**	23 03 22.3	-0.6
	131nm,0.5s						
ROSI	**Rosskopf**	**0.63**	**66**	Pg	**Pg**	**23 03 14.1**	**-0.4**
ROSI					Sg	**Sg**	23 03 22.3	-0.6
	131nm,0.5s						
RNI	**Roncone**	**0.70**	**176**	⇓*e*Pg	**Pg**	**23 03 15.7**	**-0.1**
RNI				*e*Sg	**Sg**	23 03 24.8	-0.1
RNI	**Roncone**	**0.70**	**176**	⇓*e*Pg	**Pg**	**23 03 15.7**	**-0.1**
RNI				*e*Sg	**Sg**	23 03 24.8	-0.1
SQTA	**Sankt Quirin**	**0.70**	**39**	⇑*i*Pg	**Pg**	**23 03 15.8**	**0.0**
SQTA				⇑*i*Sg	**Sg**	23 03 24.7	-0.3
	91nm,0.2s						
SQTA	**Sankt Quirin**	**0.70**	**39**	⇑*i*Pg	**Pg**	**23 03 15.8**	**0.0**
SQTA					Sg	**Sg**	23 03 24.7	-0.3
	91nm,0.2s						
MOTA	**Moosalm**	**0.76**	**28**	⇑*i*Pg	**Pg**	**23 03 16.9**	**-0.1**
	10nm,0.1s,SNR=58						
MOTA				⇑*i*Sg	**Sg**	23 03 26.5	-0.5
	31nm,0.1s						
MOTA	**Moosalm**	**0.76**	**28**	Pg	**Pg**	**23 03 16.9**	**-0.1**
	10nm,0.1s,SNR=58						
MOTA				Sg	**Sg**	23 03 26.5	-0.5
	31nm,0.1s						
DAVA	**Damuels**	**0.77**	**323**	⇑*e*Pg	**Pb**	**23 03 17.8**	**0.0**
	1.0nm,0.1s						
DAVA				⇑*i*Sg	**Sg**	23 03 27.7	+0.4
	12nm,0.1s						
DAVA	**Damuels**	**0.77**	**323**	⇑*e*Pg	**Pg**	**23 03 17.6**	**+0.4**
DAVA					Sg	**Sg**	23 03 27.7	+0.4
	12nm,0.1s						
VDL	**Val di Lei**	**0.80**	**256**	⇑*i*Pg	**Pg**	**23 03 16.7**	**-1.0**
	321nm,0.2s						
PANI	**Panarotta**	**0.81**	**141**	*e*Pg	**Pb**	**23 03 18.5**	**+0.1**
PANI				*e*Sg	**Sg**	23 03 29.1	+0.6
PANI	**Panarotta**	**0.81**	**141**	*e*Pg	**Pb**	**23 03 18.5**	**+0.1**
PANI				*e*Sg	**Sg**	23 03 29.1	+0.6
RETA	**Reutte**	**0.82**	**9**	⇑*e*Pg	**Pg**	**23 03 17.9**	**-0.2**
	1.3nm,0.1s,SNR=11						
RETA				⇓*i*Sg	**Sb**	23 03 30.7	+1.0
	9.1nm,0.2s						
RETA	**Reutte**	**0.82**	**9**	Pg	**Pg**	**23 03 17.9**	**-0.2**
	1.3nm,0.1s,SNR=11						
RETA				Sg	**Sb**	23 03 30.7	+1.0
	9.1nm,0.2s						
TUE	**Stuetta**	**0.87**	**257**	Pg	**Pg**	**23 03 17.9**	**-1.1**
TUE				Sg	**Sg**	23 03 30.2	-0.2
	65nm,0.3s						
TUE	**Stuetta**	**0.87**	**257**	Pg	**Pg**	**23 03 17.9**	**-1.1**
TUE				Sg	**Sg**	23 03 30.2	-0.2
	65nm,0.3s						
WTTA	**Wattenberg**	**0.94**	**51**	⇑*i*Pg	**Pg**	**23 03 19.8**	**-0.6**
	2.8nm,0.1s,SNR=11						
WTTA				⇓*i*Sg	**Sg**	23 03 32.5	0.0
	20nm,0.2s						
WTTA	**Wattenberg**	**0.94**	**51**	Pg	**Pg**	**23 03 19.7**	**-0.6**
WTTA					Sg	**Sg**	23 03 32.1	-0.5
	46nm,0.7s						
WTTA	**Wattenberg**	**0.94**	**51**	Pg	**Pg**	**23 03 19.8**	**-0.6**
	2.8nm,0.1s,SNR=11						
WTTA				Sg	**Sg**	23 03 32.1	-0.5
	46nm,0.7s						
CTI	**Castel Tesino**	**0.98**	**130**	Pg	**Pg**	**23 03 20.7**	**-0.4**
CTI				Sg	**Sg**	23 03 33.0	-0.8
	272nm,0.2s						
CTI	**Castel Tesino**	**0.98**	**130**	Pg	**Pg**	**23 03 20.7**	**-0.4**
CTI				Sg	**Sg**	23 03 33.0	-0.8
	272nm,0.2s						
SALO	**Salr**	**1.06**	**182**	Pg	**Pb**	**23 03 22.3**	**-0.3**
SALO				Sg	**Sg**	23 03 36.7	+0.3
	63nm,0.2s						
SALO	**Salr**	**1.06**	**182**	Pg	**Pb**	**23 03 22.3**	**-0.3**
SALO				Sg	**Sg**	23 03 36.7	+0.3
	63nm,0.2s						
RISI	**Rein**	**1.07**	**75**	Pg	**Pb**	**23 03 22.1**	**-0.8**
RISI				Sg	**Sb**	23 03 36.5	-0.4
	96nm,0.5s						
RISI	**Rein**	**1.07**	**75**	⇓*e*Pg	**Pb**	**23 03 22.2**	**-0.7**
RISI				Sg	**Sb**	23 03 36.5	-0.4
	96nm,0.5s						
FAU	**Forcella Aurin**	**1.07**	**114**	*e*Pg	**Pb**	**23 03 21.5**	**-1.4**
FAU	**Forcella Aurin**	**1.07**	**114**	*e*Pg	**Pb**	**23 03 21.5**	**-1.4**
MDI	**Monti di Nese**	**1.08**	**214**	Pg	**Pb**	**23 03 22.8**	**-0.1**
MDI				Sg	**Sb**	23 03 36.4	-0.7
	89nm,0.6s						
MDI	**Monti di Nese**	**1.08**	**214**	Pg	**Pb**	**23 03 22.8**	**-0.1**
MDI				Sg	**Sb**	23 03 36.4	-0.7
	89nm,0.6s						
AGOR	**Agordo**	**1.09**	**111**	⇑*e*Pg	**Pb**	**23 03 22.9**	**-0.3**
AGOR				*e*Sg	**Sb**	23 03 36.5	-1.0
AGOR	**Agordo**	**1.09**	**111**	Pg	**Pb**	**23 03 22.8**	**-0.3**
AGOR				Sg	**Sb**	23 03 36.4	-1.0
	109nm,0.4s						
AFL	**Alpe Faloria**	**1.12**	**97**	*e*Pg	**Pb**	**23 03 23.3**	**-0.4**
AFL	**Alpe Faloria**	**1.12**	**97**	*e*Pg	**Pb**	**23 03 23.3**	**-0.4**
CGRP	**Cima Grappa**	**1.17**	**133**	⇓*e*Pg	**Pb**	**23 03 24.5**	**0.0**
CGRP	**Cima Grappa**	**1.17**	**133**	Pg	**Pb**	**23 03 24.2**	**-0.3**
CGRP				Sg	**Sb**	23 03 40.1	+0.4
	101nm,0.3s						
CGRP	**Cima Grappa**	**1.17**	**133**	⇓*e*Pg	**Pb**	**23 03 24.5**	**0.0**
CGRP				Sg	**Sb**	23 03 40.1	+0.4
	101nm,0.3s						
VARN	**Col Varnada, M**	**1.26**	**122**	⇑*e*Pg	**Pn**	**23 03 25.5**	**-0.4**
VARN	**Col Varnada, M**	**1.26**	**122**	⇑*e*Pg	**Pn**	**23 03 25.5**	**-0.4**
CSO	**Casso**	**1.28**	**108**	*e*Pg	**Pn**	**23 03 26.2**	**+0.1**
CSO				*e*Sg	**Sb**	23 03 42.8	0.0
CSO	**Casso**	**1.28**	**108**	*e*Pg	**Pn**	**23 03 26.2**	**+0.1**
CSO				*e*Sg	**Sb**	23 03 42.8	0.0
MUGIO	**Muggio**	**1.30**	**235**	Pg	**Pn**	**23 03 26.0**	**-0.4**
MUGIO				Sg	**Sb**	23 03 42.3	-1.1
MUGIO	**Muggio**	**1.30**	**235**	Pg	**Pn**	**23 03 26.0**	**-0.4**
MUGIO				Sg	**Sb**	23 03 42.3	-1.1
ABTA	**Abfaltersbach**	**1.34**	**86**	⇑*i*Pg	**Pn**	**23 03 27.2**	**+0.3**
	17nm,0.4s,SNR=19						
ABTA				⇑*i*Sg	**Sn**	23 03 45.0	+0.3
	24nm,0.2s						
ABTA	**Abfaltersbach**	**1.34**	**86**	Pg	**Pn**	**23 03 27.2**	**+0.3**
	17nm,0.4s,SNR=19						
ABTA				Sg	**Sn**	23 03 45.0	+0.3
	24nm,0.2s						
CIMO	**Cimolais**	**1.34**	**105**	⇓*e*Pg	**Pb**	**23 03 27.4**	**0.0**
CIMO				*e*Sg	**Sb**	23 03 44.2	-0.4
CIMO	**Cimolais**	**1.34**	**105**	⇓*e*Pg	**Pb**	**23 03 27.4**	**0.0**
CIMO				*e*Sg	**Sb**	23 03 44.2	-0.4
POLC	**Polcenigo**	**1.49**	**115**	*e*Pg	**Pg**	**23 03 30.5**	**-0.3**
TEOL	**Teolo**	**1.52**	**149**	⇑*e*Pg	**Pg**	**23 03 31.4**	**-0.1**
TEOL				*e*Sg	**Sg**	23 03 51.5	+0.2
TEOL	**Teolo**	**1.52**	**149**	⇑*e*Pg	**Pg**	**23 03 31.4**	**-0.1**
TEOL				*e*Sg	**Sg**	23 03 51.5	+0.2
FVI	**Forni Avoltri**	**1.52**	**92**	Pg	**Pb**	**23 03 30.2**	**-0.3**
	35nm,0.3s						
FVI	**Forni Avoltri**	**1.52**	**92**	Pg	**Pb**	**23 03 30.2**	**-0.3**
	35nm,0.3s						
ZOU	**Zoufplan**	**1.66**	**93**	⇓*e*Pg	**Pb**	**23 03 33.0**	**0.0**
ZOU				*e*Sg	**Sg**	23 03 55.3	-0.4
FUSE	**Fusea**	**1.70**	**98**	⇑*e*Pg	**Pb**	**23 03 34.1**	**+0.7**
FUSE	**Fusea**	**1.70**	**98**	⇑*e*Pg	**Pb**	**23 03 34.2**	**+0.7**
SPAK	**Spaichingen-Ko**	**1.87**	**320**	Pg	**Pg**	**23 03 37.7**	**-0.4**
SPAK				Sg	**Sb**	23 03 59.5	-0.4
BAD	**Bernadia**	**1.90**	**102**	*e*Pg	**Pb**	**23 03 37.5**	**+0.6**
BAD	**Bernadia**	**1.90**	**102**	*e*Pg	**Pb**	**23 03 37.5**	**+0.6**
VINO	**Villanova**	**1.92**	**102**	⇑*e*Pg	**Pb**	**23 03 37.5**	**+0.3**
VINO	**Villanova**	**1.92**	**102**	⇑*e*Pg	**Pb**	**23 03 37.5**	**+0.3**
KBA	**Koelnbreinsper**	**1.94**	**77**	*e*Pg	**Pb**	**23 03 38.2**	**+0.4**
	5.0nm,0.2s,SNR=5.9						
KBA				⇓*i*Sg	**Sg**	23 04 05.5	+0.7
	10nm,0.4s						
KBA	**Koelnbreinsper**	**1.94**	**77**	Pg	**Pb**	**23 03 38.2**	**+0.4**
	5.0nm,0.2s,SNR=5.9						
KBA				Sg	**Sg**	23 04 05.5	+0.7
	10nm,0.4s						
ACOM	**Acomizza, Ital**	**2.03**	**93**	⇓*e*Pg	**Pb**	**23 03 39.8**	**+0.5**
ACOM	**Acomizza, Ital**	**2.03**	**93**	⇓*e*Pg	**Pb**	**23 03 39.8**	**+0.5**
MYKA	**Terra Mystica**	**2.12**	**90**	⇑*e*Pn	**Pb**	**23 03 40.7**	**+0.1**
	4.6nm,0.3s						
MYKA				⇑*e*Sg	**Sg**	23 04 11.3	+1.0
	5.6nm,0.3s						
MYKA	**Terra Mystica**	**2.12**	**90**	Pn	**Pb**	**23 03 40.7**	**+0.1**
	4.6nm,0.3s						
MYKA				Sg	**Sg**	23 04 11.3	+1.0
	5.6nm,0.3s						
FELD	**Feldberg im Sc**	**2.12**	**305**	Pg	**Pg**	**23 03 42.6**	**-0.3**
FELD				Sg	**Sb**	23 04 06.4	-0.7
BBS	**Basel-Blauen**	**2.23**	**292**	Pn	**Pb**	**23 03 41.9**	**-0.7**
CADS	**Cadrg**	**2.23**	**100**	*i* Pn	**Pb**	**23 03 43.5**	**+0.9**
CADS				*i* Sn	**Sg**

FRF	**La Foret Royal**	**4.17**	**223**	*e*P	**Pn**	**23 04 06.7**	**+0.9**
FRF	**La Foret Royal**	**4.17**	**223**	*e*P	**Pn**	**23 04 06.7**	**+0.9**
TREC	**Trest**	**4.21**	**50**	*e*SG	**Sg**	**23 05 16.0**	**-1.5**
	comp=Z,4.1nm,0.5s						
TREC	**Trest**	**4.21**	**50**	Sg	**Sg**	**23 05 16.0**	**-1.5**
	4.1nm,0.5s						
PRU	**Pruhonice**	**4.24**	**37**	*e*SG	**Sg**	**23 05 16.2**	**-2.2**
	comp=Z,2.1nm,0.3s						
PRU	**Pruhonice**	**4.24**	**37**	Sg	**Sg**	**23 05 16.2**	**-2.2**
	2.1nm,0.3s						
VIVF	**Saint-Julien-l**	**4.51**	**248**	*e*P	**Pn**	**23 04 12.3**	**+1.8**
VIVF	**Saint-Julien-l**	**4.51**	**248**	*e*P	**Pn**	**23 04 12.3**	**+1.8**
LOR	**Lormes**	**4.63**	**280**	*e*P	**Pn**	**23 04 14.6**	**+2.5**
LOR				*e*Sn	**Sn**	**23 05 01.4**	**-4.5**
	2.4nm,0.4s						
LOR	**Lormes**	**4.63**	**280**	*e*P	**Pn**	**23 04 14.6**	**+2.5**
SMF	**Signal de Mont**	**4.63**	**272**	*e*P	**Pn**	**23 04 14.4**	**+2.3**
SMF	**Signal de Mont**	**4.63**	**272**	*e*P	**Pn**	**23 04 14.4**	**+2.3**
PVCC	**Panska Ves**	**4.68**	**33**	*e*SG	**Sg**	**23 05 30.0**	**-2.3**
	comp=Z,5.6nm,0.4s						
PVCC	**Panska Ves**	**4.68**	**33**	Sg	**Sg**	**23 05 30.0**	**-2.3**
	5.6nm,0.4s						
BRG	**Berggiesshubel**	**4.75**	**27**	*e*(P)	**Sg**	**23 05 31.9**	**-2.9**
	2.9nm,0.6s						
SSF	**Saint Saulge**	**4.86**	**277**	*e*P	**Pn**	**23 04 17.7**	**+2.5**
SSF	**Saint Saulge**	**4.86**	**277**	*e*P	**Pn**	**23 04 17.7**	**+2.5**
CLL	**Collm**	**4.90**	**18**	*e*(Pg)	Pg	23 04 40.0	+3.9
CLL				*e*Sg	**Sg**	**23 05 39.0**	**-0.6**
	comp=Z,6.0nm,1.1s						
CLL				*i*		23 05 54.3	
AVF	**Avril sur Loir**	**4.96**	**274**	*e*P	**Pn**	**23 04 19.1**	**+2.5**
AVF	**Avril sur Loir**	**4.96**	**274**	*e*P	**Pn**	**23 04 19.1**	**+2.5**
UPC	**Upice**	**5.26**	**41**	*e*SG	**Sg**	**23 05 48.3**	**-2.9**
UPC	**Upice**	**5.26**	**41**	Sg	**Sg**	**23 05 48.3**	**-2.9**
DPC	**Dobruska-Polom**	**5.30**	**44**	*e*SG	**Sg**	**23 05 50.1**	**-2.2**
DPC	**Dobruska-Polom**	**5.30**	**44**	Sg	**Sg**	**23 05 50.1**	**-2.2**
BGF	**Bois d'Agland**	**5.32**	**272**	*e*P	**Pn**	**23 04 24.4**	**+2.8**
BGF	**Bois d'Agland**	**5.32**	**272**	*e*P	**Pn**	**23 04 24.4**	**+2.8**
HYF	**Humbligny**	**5.46**	**279**	*e*P	**Pn**	**23 04 26.4**	**+2.9**
HYF	**Humbligny**	**5.46**	**279**	*e*P	**Pn**	**23 04 26.4**	**+2.9**
TCF	**Toulx Ste Croi**	**5.79**	**269**	*e*P	**Pn**	**23 04 30.5**	**+2.5**
TCF	**Toulx Ste Croi**	**5.79**	**269**	*e*P	**Pn**	**23 04 30.5**	**+2.5**
CAF	**Calviac**	**6.20**	**257**	*e*P	**Pn**	**23 04 36.1**	**+2.5**
CAF	**Calviac**	**6.20**	**257**	*e*P	**Pn**	**23 04 36.1**	**+2.5**
STON	**Ston**	**6.34**	**124**	*i* Pg	Pn	23 04 40.0	+4.5
STON				Sg	Pb	23 04 47.2	-5.3
MFF	**Saint Martin d**	**7.38**	**273**	*e*P	**Pn**	**23 04 52.6**	**+2.8**
MFF	**Saint Martin d**	**7.38**	**273**	*e*P	**Pn**	**23 04 52.6**	**+2.8**

IDC 18 23:23:02.2±2.5, 0.65S×132.80E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.5/21, mbtmp3.5/4, ML3.6/2, MS3.3/1, Ms1 3.3/1, ms1mx2.8/17, Error ellipse: s-maj=99.3km s-min=26.6km az=78.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**18.72**	**202**	P	Pn	23 27 23.7	+1.0
	0.1nm,0.3s,baz=30,slow=11,SNR=3.3						
FITZ				LR	LR	23 34 04.4	
	comp=Z,104nm,20.3s,baz=272,slow=35						
WRA	**Warramunga Arr**	**19.23**	**176**	P	P	23 27 27.9	-0.3
	0.2nm,0.3s,baz=354,slow=11,SNR=2.7						
ASAR	**Alice Springs**	**22.91**	**177**	P	P	23 28 07.3	-0.5
	0.6nm,0.3s,baz=356,slow=9.8,SNR=11						
MKAR	**Makanchi Array**	**64.61**	**324**	P	P	23 33 41.5	0.0
	0.2nm,0.5s,baz=112,slow=8.2,SNR=4.2						

*ISK **18** 23:31:49.2, 35.11N×28.81E, h14km, MD3.5*
*CSEM **18** 23:31:49.8±0.2, 35.22N×28.75E, h2km, MD3.5, Error ellipse: s-maj=8.1km s-min=6.2km az=50.0*
*ISCJB **18** 23:31:51.6±0.5, 35.15N±0.04×28.75E±0.05, h37km, Error ellipse: s-maj=6.6km s-min=5.1km az=32.2*
*ATH **18** 23:31:55.6, 35.83N×28.19E, h90km*
ISC 18 23:31:52.5±1.3, 35.24N±0.05×28.73E±0.04, h37km, n35, σ1§51/38, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**1.09**	**334**	*e*P	**Pn**	**23 32 10.3**	**-0.9**
ARG	**Arkhangelos**	**1.09**	**334**	*e*P	**Pn**	**23 32 10.3**	**-0.9**
KARP	**Karpathos**	**1.32**	**284**	*e*P	**Pn**	**23 32 13.7**	**-0.6**
KARP				*e*S	**Sn**	**23 32 28.8**	**-1.8**
KARP	**Karpathos**	**1.32**	**284**	*e*P	**Pn**	**23 32 13.7**	**-0.6**
KARP				*e*S	**Sn**	**23 32 28.8**	**-1.8**
FETY	**Fethiye**	**1.43**	**12**	*e*PN	**Pn**	**23 32 17.0**	**+1.1**
FETY	**Fethiye**	**1.43**	**12**	*e*Pn	**Pn**	**23 32 17.0**	**+1.1**
DALY	**Dalyan (Mu¨la**	**1.58**	**358**	*e*PN	**Pn**	**23 32 19.6**	**+1.7**
DALY	**Dalyan (Mu¨la**	**1.58**	**358**	*e*Pn	**Pn**	**23 32 19.6**	**+1.7**
DAT	**Datca**	**1.76**	**328**	*e*PN	**Pn**	**23 32 22.0**	**+1.6**
DAT	**Datca**	**1.76**	**328**	*e*Pn	**Pn**	**23 32 22.0**	**+1.6**
YER	**Yerkesik**	**1.93**	**349**	*e*PN	**Pn**	**23 32 24.1**	**+1.4**
YER	**Yerkesik**	**1.93**	**349**	*e*Pn	**Pn**	**23 32 24.2**	**+1.4**
GLHS	**Glhisar (BURDU**	**2.02**	**18**	*e*PN	**Pn**	**23 32 25.2**	**+1.2**
GLHS	**Glhisar (BURDU**	**2.02**	**18**	*e*Pn	**Pn**	**23 32 25.2**	**+1.2**
BODT	**Bodrum**	**2.15**	**328**	*e*PN	**Pn**	**23 32 27.4**	**+1.6**
BODT	**Bodrum**	**2.15**	**328**	*e*Pn	**Pn**	**23 32 27.4**	**+1.6**
MLSB	**Milas**	**2.19**	**340**	*e*PN	**Pn**	**23 32 28.3**	**+1.9**
MLSB	**Milas**	**2.19**	**340**	*e*Pn	**Pn**	**23 32 28.3**	**+1.9**
NPS	**Neapolis**	**2.55**	**272**	*e*P	**Pn**	**23 32 31.4**	**+0.2**
NPS	**Neapolis**	**2.55**	**272**	*e*P	**Pn**	**23 32 31.4**	**+0.2**
APE	**Apeiranthos**	**3.17**	**306**	*e*PN	**Pn**	**23 32 42.6**	**+2.8**
APE	**Apeiranthos**	**3.17**	**306**	*e*Pn	**Pn**	**23 32 42.6**	**+2.8**
LEF	**Lefka**	**3.41**	**91**	*e*PN	**Pn**	**23 32 42.5**	**-0.6**
LEF	**Lefka**	**3.41**	**91**	*e*Pn	**Pn**	**23 32 42.5**	**-0.6**
CSS	**Prodhromos**	**3.79**	**93**	*e*PN	**Pn**	**23 32 47.6**	**-0.6**
CSS	**Prodhromos**	**3.79**	**93**	*e*Pn	**Pn**	**23 32 47.6**	**-0.6**
CSS				*e*Sn	**Sn**	**23 33 30.8**	**-0.7**
LFK	**Lefkose**	**3.93**	**88**	*e*PN	**Pn**	**23 32 50.0**	**-0.3**
LFK	**Lefkose**	**3.93**	**88**	*e*Pn	**Pn**	**23 32 50.0**	**-0.3**
LADK	**Ladik-KONYA**	**4.16**	**44**	*e*PN	**Pn**	**23 32 55.6**	**+2.1**
LADK	**Ladik-KONYA**	**4.16**	**44**	*e*Pn	**Pn**	**23 32 55.6**	**+2.1**
SLUM		**4.75**	**219**	P	**Pn**	**23 33 02.1**	**+0.6**
AMAG	**Maghara**	**5.93**	**139**	P	**Pn**	**23 33 20.3**	**+2.6**
RSH		**5.98**	**134**	P	**Pn**	**23 33 20.1**	**+1.7**
AWBH		**6.89**	**179**	P	**Pn**	**23 33 31.5**	**+0.5**
HFRF	**Wahat Farafira**	**8.07**	**183**	P	**Pn**	**23 33 47.9**	**+0.8**

KRSC 18 23:35:13.0±0.0, 55.08N×165.53E, h27km±17km, ML3.6, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.28**	**64**	*i* P	Pb	23 35 19.6	-0.3
BKI				*i* S	Sb	23 35 23.9	-0.7
MKZ	**Mys Kozlova**	**2.26**	**258**	*e*P	Pn	23 35 49.8	+1.3
MKZ				*i* S	Sn	23 36 15.9	+0.4
SPN	**Mys Shipunski**	**3.80**	**241**	*e*P	Pn	23 36 10.5	+0.8
SPN				*i* S	Sn	23 36 51.2	-2.3
NLC	**Nalytchevo**	**4.11**	**245**	P	Pn	23 36 15.8	+1.9
NLC				*i* S	Sn	23 36 59.7	-1.4
SDLR	**Sedlovina**	**4.30**	**248**	P	Pn	23 36 18.9	+2.1
SMAR	**Somma**	**4.35**	**248**	P	Pn	23 36 19.0	+1.4
KRER	**Koryakskii**	**4.36**	**249**	*e*P	Pn	23 36 19.8	+2.1
UGLR	**Uglovaya**	**4.37**	**247**	P	Pn	23 36 19.2	+1.6
AVH	**Avacha**	**4.39**	**248**	*e*P	Pn	23 36 20.1	+2.2
KOK	**Koryaka**	**4.43**	**249**	*e*P	Pn	23 36 20.5	+2.0
GNL	**Ganaly**	**4.65**	**256**	*e*P	Pn	23 36 24.6	+3.1
RUS	**Russkaya**	**4.94**	**240**	*e*P	Pn	23 36 27.2	+1.9
MTVR	**Mutnovka**	**5.07**	**242**	*e*P	Pn	23 36 29.4	+2.0
MTVR				*i* S	Sn	23 37 23.3	-1.9
ASAK	**Asacha**	**5.27**	**242**	P	Pn	23 36 32.2	+2.1

IDC 18 23:37:29.3±2.8, 15.99S×173.16W, h0km, mb3.8/5, mb1 4.2/5, mb1mx3.9/20, mbtmp3.8/5, MS3.3/3, Ms1 3.3/3, ms1mx2.8/27, Error ellipse: s-maj=162.7km s-min=24.0km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.46**	**33**	Pn	Pn	23 38 06.1	-4.7
	14nm,0.3s,baz=96,slow=12,SNR=14						
AFI				Sn	Sn	23 38 37.1	-4.6
	24nm,0.3s,baz=52,slow=18,SNR=8.6						
AFI				LR	LR	23 38 41.7	
	comp=Z,225nm,18.8s,baz=93,slow=29						
RAR	**Rarotonga**	**13.71**	**114**	LR	LR	23 44 30.4	
	comp=Z,167nm,20.5s,baz=286,slow=31						
DZM	**Mont Dzumac**	**20.20**	**249**	*e*LR	LR	23 47 35.3	
	153nm,25.2s						
PPT2	**Papeete2**	**22.63**	**97**	*e*LR	LR	23 47 11.6	
	90nm,25.0s						
STKA	**Stephens Creek**	**43.95**	**241**	LR	LR	00 00 24.2	
	comp=Z,90nm,18.4s,baz=204,slow=31						
WRA	**Warramunga Arr**	**49.94**	**257**	P	P	23 46 25.0	-0.4
	0.4nm,0.5s,baz=93,slow=6.7,SNR=2.8						
ASAR	**Alice Springs**	**50.16**	**252**	P	P	23 46 26.7	-0.3
	3.0nm,0.7s,baz=88,slow=8.4,SNR=25						
NVAR	**Mina Array Bea**	**74.61**	**42**	P	P	23 49 11.1	+0.4
	1.0nm,0.8s,baz=223,slow=9.6,SNR=6.2						
PDAR	**Pinedale Array**	**82.55**	**42**	P	P	23 49 53.8	-0.7
	1.1nm,0.8s,baz=204,slow=3.3,SNR=7.6						
ILAR	**Eielson Array**	**82.98**	**11**	P	P	23 49 55.0	-0.8
	0.4nm,0.5s,baz=240,slow=5.4,SNR=5.6						
GERES	**GERESS Array B**	**146.76**	**352**	PKPbc	PKPbc	23 57 13.6	+0.2
	0.7nm,0.7s,baz=35,slow=4.9,SNR=7.6						
BRTR	**Keskin Array B**	**146.76**	**321**	PKPbc	PKPbc	23 57 13.8	0.0
	1.4nm,0.7s,baz=91,slow=1.1,SNR=8.3						

*CSEM **18** 23:46:47.6±0.1, 47.93N×6.42E, h17km±1km, ML2.4/14, Error ellipse: s-maj=2.5km s-min=2.0km az=169.0*
*ISCJB **18** 23:46:48.3±0.3, 47.92N±0.02×6.41E±0.03, h17km±4km, Error ellipse: s-maj=4.2km s-min=3.0km az=23.8*
*STR **18** 23:46:48.3±0.2, 47.97N×6.46E, h10km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **18** 23:46:48.5±0.1, 47.94N×6.43E, h12km, Md2.8/3, Ml2.5/19, Error ellipse: s-maj=1.6km s-min=1.2km az=160.0*
*BGR **18** 23:46:49.0±1.6, 48.00N×6.44E, h10km, ML2.0/2, Error ellipse: s-maj=14.5km s-min=6.7km az=39.0*
ISC 18 23:46:47.1±0.9, 47.94N±0.02×6.40E±0.01, h18km±3km, n88, σ1§13/138, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HAU	**Haudompre**	**0.08**	**333**	*e*Pg	**Pg**	**23 46 50.9**	**+0.3**
HAU				*e*Sg	**Sg**	**23 46 52.4**	**-0.6**
	414nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**0.08**	**333**	*e*Pg	**Pg**	**23 46 50.9**	**+0.3**
HAU				*e*Sg	**Sg**	**23 46 52.4**	**-0.6**
	207nm,0.2s,SNR=1.0						
HINF	**Hinteralfeld**	**0.33**	**112**	*e*Pg	**Pb**	**23 46 54.6**	**+0.2**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**23 46 58.7**	**-0.2**
	49nm,0.2s						
HINF	**Hinteralfeld**	**0.33**	**112**	*e*Pg	**Pb**	**23 46 54.6**	**+0.2**
	SNR=1.0						
HINF				*e*Sg	**Sg**	**23 46 58.7**	**-0.2**
	24nm,0.2s						
THEF	**They Montfort**	**0.40**	**316**	Pg	**Pb**	**23 46 56.6**	**+0.9**
THEF				Sg	**Sb**	**23 47 02.1**	**+0.6**
THEF	**They Montfort**	**0.40**	**316**	Pg	**Pb**	**23 46 56.6**	**+0.9**
THEF				Sg	**Sb**	**23 47 02.1**	**+0.6**
MOF	**Molkenrain**	**0.50**	**100**	Pg	**Pb**	**23 46 57.7**	**+0.3**
MOF				Sg	**Sg**	**23 47 04.3**	**+0.3**
MOF	**Molkenrain**	**0.50**	**100**	Pg	**Pb**	**23 46 57.7**	**+0.3**
MOF				Sg	**Sg**	**23 47 04.3**	**+0.3**
ECH	**Echery**	**0.58**	**61**	*e*Pg	**Pb**	**23 46 59.1**	**+0.5**
ECH				*e*Sg	**Sg**	**23 47 06.4**	**0.0**
ECH	**Echery**	**0.58**	**61**	Pg	**Pb**	**23 46 59.1**	**+0.5**
ECH				Sg	**Sg**	**23 47 06.5**	**+0.1**
ECH	**Echery**	**0.58**	**61**	Pg	**Pb**	**23 46 59.1**	**+0.5**
ECH				Sg	**Sg**	**23 47 06.5**	**+0.1**
LOMF	**Lomont**	**0.66**	**154**	Pg	**Pb**	**23 47 01.0**	**+1.0**
LOMF				Sg	**Sn**	**23 47 10.6**	**-0.8**
LOMF	**Lomont**	**0.66**	**154**	Pg	**Pb**	**23 47 01.0**	**+1.0**
LOMF				Sg	**Sn**	**23 47 10.6**	**-0.8**
CDF	**Champ du Feu**	**0.75**	**51**	*e*Pg	**Pg**	**23 47 02.2**	**+0.3**
	SNR=1.0						
CDF	**Champ du Feu**	**0.75**	**51**	*e*Pn	**Pn**	**23 47 03.0**	**+0.1**
CDF				*e*Sg	**Sb**	**23 47 11.9**	**+0.2**
	26nm,0.2s,SNR=1.0						
CDF	**Champ du Feu**	**0.75**	**51**	*e*Pg	**Pg**	**23 47 02.2**	**+0.3**
	SNR=1.0						
CDF	**Champ du Feu**	**0.75**	**51**	*e*Pn	**Pn**	**23 47 03.0**	**+0.1**
CDF				*e*Sg	**Sb**	**23 47 11.9**	**+0.2**
	13nm,0.2s,SNR=1.0						
PAGF	**Fort de Pagny**	**0.76**	**324**	*e*Pg	**Pn**	**23 47 03.6**	**+0.7**
	baz=147						
PAGF	**Fort de Pagny**	**0.76**	**324**	*e*Pn	**Pn**	**23 47 04.1**	**+1.1**
	baz=146						
PAGF				*e*Sg	**Sn**	**23 47 13.9**	**-0.1**
	2.0nm,0.2s						
PAGF	**Fort de Pagny**	**0.76**	**324**	*e*Pg	**Pn**	**23 47 03.6**	**+0.7**
	baz=147						
PAGF	**Fort de Pagny**	**0.76**	**324**	*e*Pn	**Pn**	**23 47 04.1**	**+1.1**
	baz=146						
PAGF				*e*Sg	**Sn**	**23 47 13.9**	**-0.1**
	1.0nm,0.2s						
BBS	**Basel-Blauen**	**0.89**	**122**	Pg	**Pn**	**23 47 05.8**	**+1.1**
BBS				Sg	**Sg**	**23 47 16.5**	**+0.4**
SFTF	**Sexfontaines**	**0.95**	**287**	*e*Pn	**Pg**	**23 47 06.9**	**+1.4**
	baz=112						
SFTF	**Sexfontaines**	**0.95**	**287**	*e*Pg	**Pg**	**23 47 07.2**	**+1.7**
	baz=110						
SFTF				*e*Sg	**Sn**	**23 47 20.1**	**+1.5**
	18nm,0.2s						
SFTF	**Sexfontaines**	**0.95**	**287**	*e*Pn	**Pg**	**23 47 06.9**	**+1.4**
	baz=112						
SFTF	**Sexfontaines**	**0.95**	**287**	*e*Pg	**Pg**	**23 47 07.2**	**+1.7**
	baz=110						
SFTF				*e*Sg	**Sn**	**23 47 20.1**	**+1.5**
	9.2nm,0.2s						
MEZF	**Maizieres J'vi**	**1.06**	**303**	*e*Pg	**Pg**	**23 47 08.8**	**+1.1**
	baz=123,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.06**	**303**	*e*P	**Pg**	**23 47 09.4**	**+1.7**
	baz=118						
MEZF				*e*Sn	**Sn**	**23 47 21.6**	**+0.2**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**23 47 23.1**	**+1.5**
	17nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.06**	**303**	*e*Pg	**Pg**	**23 47 08.8**	**+1.1**
	baz=123,SNR=1.0						
MEZF	**Maizieres J'vi**	**1.06**	**303**	*e*P	**Pg**	**23 47 09.4**	**+1.7**
	baz=118						
MEZF				*e*Sn	**Sn**	**23 47 21.6**	**+0.2**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**23 47 23.1**	**+1.5**
	8.5nm,0.3s,SNR=1.0						
FELD	**Feldberg im Sc**	**1.08**	**93**	Pg	**Pn**	**23 47 07.8**	**+0.4**
FELD				Sg	**Sb**	**23 47 21.7**	**+0.6**
CABF	**La Chapelle**	**1.34**	**189**	*e*Pn	**Pb**	**23 47 12.4**	**+0.6**
CABF	**La Chapelle**	**1.34**	**189**	*e*Pg	**Pg**	**23 47 14.2**	**+1.2**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**23 47 31.2**	**+0.6**
	12nm,0.4s,SNR=1.0						
CABF	**La Chapelle**	**1.34**	**189**	*e*Pn	**Pb**	**23 47 12.4**	**+0.6**
CABF	**La Chapelle**	**1.34**	**189**	*e*Pg	**Pg**	**23 47 14.2**	**+1.2**
	SNR=1.0						
CABF				*e*Sg	**Sg**	**23 47 31.2**	**+0.6**
	6.0nm,0.4s,SNR=1.0						
BFO	**Black Forest**	**1.35**	**72**	*e*Pg	**Pg**	**23 47 13.8**	**+0.7**
BFO				*e*Sg	**Sg**	**23 47 30.8**	**0.0**
BFO	**Black Forest**	**1.35**	**72**	Pg	**Pg**	**23 47 13.8**	**+0.7**
BFO				Sg	**Sg**	**23 47 30.8**	**0.0**
LANF	**Langenberg**	**1.40**	**41**	Pg	**Pg**	**23 47 14.0**	**-0.1**
LANF				Sg	**Sg**	**23 47 32.3**	**-0.1**
LANF	**Langenberg**	**1.40**	**41**	Pg	**Pg**	**23 47 14.0**	**-0.1**
LANF				Sg	**Sg**	**23 47 32.3**	**-0.1**
WLF	**Walferdange**	**1.73**	**355**	*e*Sg	**Sg**	**23 47 42.5**	**-0.5**
WLF	**Walferdange**	**1.73**	**355**	Sg	**Sg**	**23 47 42.5**	**-0.5**
LOR	**Lormes**	**1.85**	**250**	*e*Pn	**Pn**	**23 47 18.8**	**+1.0**
	baz=74,SNR=1.0						
LOR	**Lormes**	**1.85**	**250**	*e*Pg	**Pg**	**23 47 23.7**	**+1.2**
	baz=72						
LOR				*e*Sg	**Sg**	**23 47 47.3**	**+0.8**
	4.6nm,0.2s,SNR=1.0						
LOR	**Lormes**	**1.85**	**250**	*e*Pn	**Pn**	**23 47 18.8**	**+1.0**
	baz=74,SNR=1.0						
LOR	**Lormes**	**1.85**	**250**	*e*Pg	**Pg**	**23 47 23.7**	**+1.2**
	baz=72						
LOR				*e*Sg	**Sg**	**23 47 47.3**	**+0.8**
	2.3nm,0.2s,SNR=1.0						
SSF	**Saint Saulge**	**2.15**	**247**	*e*Pn	**Pn**	**23 47 22.9**	**+0.9**
	SNR=1.0						
SSF	**Saint Saulge**	**2.15**	**247**	*e*Pg	**Pg**	**23 47 29.2**	**+0.9**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**23 47 47.5**	**-0.7**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**23 47 56.4**	**+0.2**
	1.2nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**2.17**	**234**	*e*Pn	**Pn**	**23 47 22.6**	**+0.3**
	SNR=1.0						
SMF	**Signal de Mont**	**2.17**	**234**	*e*Pg	**Pg**	**23 47 29.6**	**+0.9**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**23 47 57.6**	**+0.8**
	12nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**2.17**	**234**	*e*Pn	**Pn**	**23 47 22.6**	**+0.3**
	SNR=1.0						
SMF	**Signal de Mont**	**2.17**	**234**	*e*Pg	**Pg**	**23 47 29.6**	**+0.9**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**23 47 57.6**	**+0.8**
	6.1nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**2.37**	**242**	*e*Pn	**Pn**	**23 47 25.4**	**+0.4**
	SNR=1.0						
AVF	**Avril sur Loir**	**2.37**	**242**	*e*Pg	**Pg**	**23 47 33.3**	**+0.8**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**23 48 02.9**	**-0.3**
	1.9nm,0.2s,SNR=1.0						
AVF	**Avril sur Loir**	**2.37**	**242**	*e*Pn	**Pn**	**23 47 25.4**	**+0.4**
	SNR=1.0						
AVF	**Avril sur Loir**	**2.37**	**242**	*e*Pg	**Pg**	**23 47 33.3**	**+0.8**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**23 48 02.9**	**-0.3**
	0.9nm,0.2s,SNR=1.0						
BAIF	**Baives**	**2.57**	**327**	*e*Pn	**Pb**	**23 47 30.5**	**-2.0**
BAIF	**Baives**	**2.57**	**327**	*e*Pg	**Pg**	**23 47 35.5**	**-0.8**
	SNR=1.0						
BAIF				*e*Sg	**Sg**	**23 48 09.6**	**+0.1**
	2.2nm,0.3s,SNR=1.0						
BAIF	**Baives**	**2.57**	**327**	*e*Pn	**Pb**	**23 47 30.5**	**-2.0**
BAIF	**Baives**	**2.57**	**327**	*e*Pg	**Pg**	**23 47 35.5**	**-0.8**
	SNR=1.0						
BAIF				*e*Sg	**Sg**	**23 48 09.6**	**+0.1**
	1.1nm,0.3s,SNR=1.0						
HYF	**Humbligny**	**2.63**	**257**	*e*Pn	**Pn**	**23 47 30.3**	**+1.7**
HYF	**Humbligny**	**2.63**	**257**	*e*Pg	**Pg**	**23 47 38.2**	**+0.7**
HYF	**Humbligny**	**2.63**	**257**	*e*Pn	**Pn**	**23 47 30.3**	**+1.7**
HYF	**Humbligny**	**2.63**	**257**	*e*Pg	**Pg**	**23 47 38.2**	**+0.7**
TNS	**Taunus Mts**	**2.65**	**30**	*e*Sg	**Sg**	**23 48 11.3**	**-1.0**
TNS	**Taunus Mts**	**2.65**	**30**	Sg	**Sg**	**23 48 11.3**	**-1.0**
BGF	**Bois d'Agland**	**2.79**	**242**	*e*Pn	**Pn**	**23 47 29.5**	**-1.2**
BGF	**Bois d'Agland**	**2.79**	**242**	*e*Pg	**Pg**	**23 47 40.9**	**+0.4**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**23 48 01.9**	**-2.0**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**23 48 16.1**	**-0.5**
	11nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**2.79**	**242**	*e*Pn	**Pn**	**23 47 29.5**	**-1.2**
BGF	**Bois d'Agland**	**2.79**	**242**	*e*Pg	**Pg**	**23 47 40.9**	**+0.4**
	SNR=1.0						
BGF				*e*Sg	**Sg**	**23 48 16.1**	**-0.5**
	5.4nm,0.4s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.04**	**187**	*e*Pn	**Pn**	**23 47 34.0**	**-0.3**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**23 48 23.1**	**-1.7**
	1.6nm,0.2s,SNR=1.0						
ORIF	**Oris-en-Rattie**	**3.04**	**187**	*e*Pn	**Pn**	**23 47 34.0**	**-0.3**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.30**	**242**	*e*Pn	**Pn**	**23 47 37.7**	**-0.2**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.30**	**242**	*e*Pg	**Pg**	**23 47 50.1**	**-0.2**
TCF				*e*Sn	**Sn**	**23 48 14.6**	**-2.1**
	SNR=1.0						
TCF				*e*Sg	**Sg**	**23 48 30.7**	**-2.4**
	1.0nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.30**	**242**	*e*Pn	**Pn**	**23 47 37.7**	**-0.2**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.30**	**242**	*e*Pg	**Pg**	**23 47 50.1**	**-0.2**
VIVF	**Saint-Julien-l**	**3.31**	**202**	*e*Sn	**Sn**	**23 48 15.1**	**-1.7**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**23 48 30.2**	**-3

ASAJ				S		Sn	23 53 09.3	-1.7
	comp=E,9.3nm,0.3s,baz=95,slow=31,SNR=3.9							
JAG	**Ashikaga**	**5.11**	**236**	P		**Pn**	**23 52 16.1**	**-0.5**
JSD	**Sado**	**5.24**	**257**	P		**Pn**	**23 52 18.1**	**-0.2**
BSO1	**Boso 1**	**5.60**	**214**	P		**Pn**	**23 52 21.2**	**-1.6**
BSO1				S		Sn	23 53 22.4	-3.1
BSO4	**Boso 4**	**5.62**	**220**	P		**Pn**	**23 52 22.7**	**-0.8**
BSO3	**Boso 3**	**5.69**	**218**	P		**Pn**	**23 52 22.8**	**-1.4**
JRY	**Ryogami san**	**5.72**	**236**	P		**Pn**	**23 52 24.3**	**-0.6**
MAT	**Matsushiro**	**5.88**	**243**	P		**Pn**	**23 52 28.0**	**+0.8**
MAT				S		Sn	23 53 32.8	-0.5
MAT	**Matsushiro**	**5.88**	**243**	P		**Pn**	**23 52 28.2**	**+1.0**
JNG	**Nsakai**	**6.03**	**242**	P		**Pn**	**23 52 30.0**	**+0.6**
JYN	**Shimob**	**6.27**	**234**	P		**Pn**	**23 52 33.1**	**+0.6**
JYN				S		Sn	23 53 40.4	-2.5
KUR	**Kuril'sk**	**6.28**	**21**	P		**Pn**	**23 52 33.4**	**+0.8**
KUR				*e*S		Sn	23 53 39.0	-4.0
KUR				pmax		pmax		
	comp=Z,63nm,0.1s							
KUR				smax		smax		
	comp=N,191nm,0.2s							
KUR				smax		smax		
	comp=E,236nm,0.4s							
JIM2	**Oshima 3**	**6.30**	**224**	P		**Pn**	**23 52 31.2**	**-1.7**
JNY	**Yasuok**	**6.79**	**236**	P		**Pn**	**23 52 40.9**	**+1.2**
JHJ	**Hachijo jima 2**	**7.42**	**214**	P		**Pn**	**23 52 46.2**	**-2.1**
	comp=E,26nm,0.3s,baz=239,slow=18,SNR=17							
JHJ				S		Sn	23 54 01.8	-9.4
	comp=E,94nm,0.3s,baz=127,slow=24,SNR=11							
USRK	**Ussuriysk Arra**	**10.64**	**301**	P		**Pn**	**23 53 34.5**	**+2.2**
	comp=E,1.2nm,0.3s,baz=105,slow=14,SNR=26							
KSRS	**Korea Array**	**13.32**	**267**	P		**Pn**	**23 54 11.2**	**+2.3**
	comp=E,0.5nm,0.3s,baz=73,slow=14,SNR=10							
KSRS				LR		LR	23 58 26.9	
	comp=E,39nm,21.5s,baz=270,slow=33							
KLR	**Kul'dur**	**13.51**	**321**	*e*P		**Pn**	**23 54 12.8**	**+1.4**
PETK	**Petropavlovsk-**	**16.35**	**29**	LR		LR	00 00 24.8	
	comp=E,22nm,21.8s,baz=138,slow=34							
ZALV	**Zalesovo Beam**	**42.31**	**311**	P		**P**	**23 58 51.9**	**+0.7**
ZALV				*PP		**pP**	**23 59 03.5**	**-0.9**
ZALV	**Zalesovo Beam**	**42.31**	**311**	P		**P**	**23 58 51.9**	**+0.7**
	comp=E,0.3nm,0.5s,baz=94,slow=8.4,SNR=2.2							
ZALV				pP		**pP**	**23 59 03.5**	**-0.9**
	comp=E,1.4nm,0.5s,baz=86,slow=8.2,SNR=5.6							
MKAR	**Makanchi Array**	**45.12**	**301**	P		**P**	**23 59 15.5**	**+1.5**
MKAR	**Makanchi Array**	**45.12**	**301**	P		**P**	**23 59 15.5**	**+1.5**
	comp=E,0.3nm,0.8s,baz=81,slow=8.9,SNR=2.7							
ILAR	**Eielson Array**	**46.10**	**34**	P		**P**	**23 59 20.6**	**-0.8**
	comp=E,0.2nm,0.8s,baz=236,slow=6.4,SNR=2.7							
ILAR				sP		**sP**	**23 59 40.7**	**+0.4**
	comp=E,2.0nm,0.6s,baz=257,slow=6.3,SNR=13							
INK	**Inuvik**	**51.09**	**28**	P		**P**	**23 59 57.9**	**-1.7**
	comp=E,1.0nm,0.6s,baz=292,slow=5.4,SNR=2.4							
INK				sP		**sP**	**00 00 16.7**	**-2.0**
	comp=E,1.6nm,0.5s,baz=341,slow=6.0,SNR=2.6							
WRA	**Warramunga Arr**	**59.82**	**191**	P		**P**	**00 01 02.8**	**-0.1**
	comp=E,1.3nm,0.5s,baz=12,slow=7.2,SNR=7.0							
WRA				sP		**sP**	**00 01 23.5**	**+1.3**
	comp=E,1.0nm,0.5s,baz=12,slow=7.3,SNR=3.0							
YKA	**Yellowknife Ar**	**60.45**	**32**	P		**P**	**00 01 07.9**	**+1.2**
	comp=E,0.3nm,0.9s,baz=305,slow=7.7,SNR=3.6							
YKA				sP		**sP**	**00 01 26.3**	**+0.2**
	comp=E,0.3nm,0.6s,baz=300,slow=6.3,SNR=4.1							
ASAR	**Alice Springs**	**63.54**	**191**	P		**P**	**00 01 28.1**	**+0.1**
	comp=E,0.9nm,0.7s,baz=12,slow=6.6,SNR=7.7							
ASAR				sP		**sP**	**00 01 47.9**	**+0.6**
	comp=E,0.4nm,0.7s,baz=14,slow=6.9,SNR=2.8							
FINES	**FINESS Array B**	**67.93**	**333**	P		**P**	**00 01 57.1**	**+1.4**
	comp=E,0.7nm,0.6s,baz=44,slow=8.3,SNR=5.1							
FINES				pP		**pP**	**00 02 11.8**	**+2.1**
	comp=E,1.7nm,0.5s,baz=52,slow=9.0,SNR=1.1							
FINES				sP		**sP**	**00 02 16.6**	**+1.4**
	comp=E,1.4nm,0.5s,baz=45,slow=7.0,SNR=3.4							
FINES				LR		LR	00 33 16.5	
	comp=E,52nm,18.6s,baz=172,slow=37							

JMA 18 23:54:01.5, 32.90N×130.82E, h12km±1km, M1.0, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNU	**Nakatsue**	**0.23**	**12**	P	Pg	23 54 06.5	+0.1
JNU				*e*S	Sg	23 54 09.9	+0.1
JNU	**Nakatsue**	**0.23**	**12**	P	Pg	23 54 06.1	-0.3
	4.0nm,0.3s,baz=84,slow=16,SNR=18						
JTA	**Tamana**	**0.25**	**285**	P	Pg	23 54 06.7	-0.1
JTA				*e*S	Sg	23 54 10.3	0.0
JIU2	**Izumi 2**	**0.35**	**181**	P	Pg	23 54 08.8	+0.2

JMA 19 00:08:30.6±0.3, 44.01N×148.04E, h6km, M3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.79**	**250**	P	Pn	00 09 02.6	+0.6
NEM2				*e*S	Sn	00 09 25.4	+0.5
JRA	**Rausu**	**2.11**	**269**	P	Pn	00 09 07.1	+0.7
JRA				*e*S	Sb	00 09 34.3	-1.3
JNK	**Nakash**	**2.44**	**261**	P	Pn	00 09 12.0	+1.0
JNK				*e*S	Sn	00 09 42.1	+0.9
JAR	**Ashorobuto**	**3.18**	**259**	P	Pn	00 09 23.2	+2.1
JAR				*e*S	Sn	00 10 00.9	+1.5
JOB	**Onbets**	**3.26**	**252**	*e*S	Sn	00 10 02.3	+1.1
JCH	**Churui**	**3.69**	**249**	P	Pn	00 09 29.9	+1.8
JCH				*e*S	Sn	00 10 13.4	+1.5
JNBK	**Urakawa-nobuka**	**4.24**	**248**	P	Pn	00 09 37.3	+1.6
JNBK				*e*S	Sn	00 10 26.5	+1.1

IDC ***19*** *00:23:39.2±4.5, 16.86N×99.45W, h0km, mb3.7/2, mb1 4.0/5, mb1mx3.7/25, mbtmp3.8/5, ML3.6/3, Error ellipse: s-maj=82.4km s-min=39.1km az=33.0*
ISCJB ***19*** *00:23:41.9±0.6, 16.76N±0.06×99.68W±0.04, h41km±6km, mb3.6/2, Error ellipse: s-maj=9.9km s-min=4.8km az=22.9*
MEX ***19*** *00:23:44.3±0.7, 16.77N×99.66W, h30km±4km, MD4.2*
ISC 19 00:23:42.9±1.2, 16.75N±0.06×99.67W±0.04, h34km±2km, n19, σ1§11/30, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.22**	**304**	*i* P	**Pb**	**00 23 49.8**	**-0.1**
ACX				*i* S	**Sb**	**00 23 54.6**	**0.0**
ACP2	**Acapulco**	**0.24**	**301**	*e*P	**Pb**	**00 23 49.8**	**-0.3**
ACP2				*i* S	**Sb**	**00 23 54.6**	**-0.4**
CAIG	**El Cayaco**	**0.65**	**298**	*i* P	**Pb**	**00 23 55.0**	**-1.0**
CAIG				*i* S	**Sb**	**00 24 02.7**	**-2.1**
MEIG	**Mezcala**	**1.17**	**2**	*e*P	**Pn**	**00 24 02.0**	**-1.0**
MEIG				*i* S	**Sn**	**00 24 15.7**	**-2.1**
PNIG	**Pinotepa**	**1.52**	**103**	*i* P	**Pn**	**00 24 07.3**	**-0.5**
PNIG				*i* S	**Sn**	**00 24 26.2**	**-0.1**
PLIG	**Platanillo**	**1.64**	**6**	*e*P	**Pn**	**00 24 09.0**	**-0.4**
PLIG				*i* S	**Sn**	**00 24 29.0**	**-0.5**
ARIG	**Puente Sto Nin**	**1.66**	**337**	*e*P	**Pn**	**00 24 09.4**	**-0.1**
ARIG				*i* S	**Sn**	**00 24 28.8**	**-0.9**
ZIIG	**Zihuatanejo**	**1.92**	**297**	*e*P	**Pn**	**00 24 13.1**	**0.0**
ZIIG				*i* S	**Sn**	**00 24 34.6**	**-1.5**
PPM	**Popocatepetl**	**2.51**	**23**	*e*P	**Pb**	**00 24 28.9**	**+1.3**
OXX	**Oaxaca**	**2.84**	**83**	*i* P	**Pn**	**00 24 26.1**	**+0.1**
HUIG	**Huatulco**	**3.56**	**105**	*i* P	**Pn**	**00 24 36.5**	**+0.7**
HUIG				*i* S	**Sn**	**00 25 15.1**	**-1.5**
MMIG	**Aquila**	**3.83**	**294**	*e*P	**Pn**	**00 24 40.1**	**+0.6**
MMIG				*i* S	**Sn**	**00 25 22.6**	**-0.7**
EZ5V		**4.62**	**307**	*e*P	**Pn**	**00 24 52.2**	**+1.6**
EZ5V				*i* S	**Sn**	**00 25 43.7**	**+0.4**
ANIG	**Ahuacatlan**	**6.28**	**314**	*e*P	**Pn**	**00 25 13.9**	**+0.7**
TEIG	**Tepich**	**11.35**	**71**	Pn	**Pn**	**00 26 20.3**	**-2.3**
	1.9nm,0.3s,baz=199,slow=5.4,SNR=9.9						
TEIG				Sn	Sn	00 28 18.5	-10
	0.8nm,0.3s,baz=360,slow=19,SNR=2.4						
TXAR	**Lajitas Array**	**13.05**	**344**	Pn	**Pn**	**00 26 47.8**	**+1.7**
	0.0nm,0.3s,baz=161,slow=16,SNR=3.5						
TXAR				Lg	Lg	00 30 31.5	
	0.0nm,0.3s,baz=166,slow=11,SNR=2.8						
ANMO	**Albuquerque**	**19.11**	**343**	P	**P**	**00 28 03.6**	**+0.5**
	0.1nm,0.3s,baz=147,slow=13,SNR=7.9						
PDAR	**Pinedale Array**	**27.27**	**344**	P	**P**	**00 29 24.9**	**+0.6**
	1.3nm,0.9s,baz=148,slow=10,SNR=7.9						
YKA	**Yellowknife Ar**	**46.88**	**351**	P	**P**	**00 32 10.1**	**+0.5**
	0.9nm,0.9s,baz=156,slow=7.6,SNR=8.0						

ISCJB ***19*** *00:31:28.3±0.5, 51.49N±0.02×16.16E±0.03, h0km, Error ellipse: s-maj=3.7km s-min=2.8km az=28.7*

IPEC ***19*** *00:31:29.8±0.3, 51.54N×16.24E, h0km, ML2.5/3, Error ellipse: s-maj=2.0km s-min=1.5km az=34.0*
CSEM ***19*** *00:31:30.0±0.4, 51.49N×16.16E, h2km, ML3.4/10, Error ellipse: s-maj=6.4km s-min=4.0km az=5.0*
WAR ***19*** *00:31:31.1, 51.51N×16.12E*
PRU ***19*** *00:31:31.8, 51.44N×16.10E, h0km*
VIE ***19*** *00:31:32.4±0.9, 51.34N×16.05E, h0km, mb2.2/4, ML2.8/4, Error ellipse: s-maj=7.2km s-min=3.4km az=28.0 72 km WNW of Wroclaw Suspected Mining induced.*
UPP ***19*** *00:32:41.5, 56.89N×13.98E, h0km, ML0.8, Suspected Mining explosion.*
ISC 19 00:31:29.8±0.8, 51.55N±0.03×16.12E±0.02, h0km, n44, σ1§28/73, 4C, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.72**	**171**	*e*Pg	**Pg**	**00 31 43.7**	**+0.1**
KSP				*e*Sg	**Sg**	**00 31 52.9**	**0.0**
UPC	**Upice**	**1.05**	**184**	*e*PG	**Pg**	**00 31 49.7**	**-0.2**
UPC	**Upice**	**1.05**	**184**	Pg	**Pg**	**00 31 49.7**	**-0.2**
DPC	**Dobruska-Polom**	**1.21**	**174**	*e*PG	**Pg**	**00 31 52.5**	**-0.5**
DPC				*e*SG	**Sg**	**00 32 07.6**	**-1.1**
DPC	**Dobruska-Polom**	**1.21**	**174**	Pg	**Pg**	**00 31 52.5**	**-0.5**
DPC				Sg	**Sg**	**00 32 07.6**	**-1.1**
PVCC	**Panska Ves**	**1.42**	**224**	*e*PG	**Pb**	**00 31 57.1**	**0.0**
PVCC				*e*SG	**Sg**	**00 32 15.4**	**+0.1**
	comp=Z,129nm,0.3s						
PVCC	**Panska Ves**	**1.42**	**224**	Pg	**Pb**	**00 31 57.1**	**0.0**
PVCC				Sg	**Sg**	**00 32 15.4**	**+0.1**
	129nm,0.3s						
BRG	**Berggiesshubel**	**1.53**	**244**	PN	**Pn**	**00 31 58.4**	**0.0**
BRG				PG	**Pg**	**00 31 59.1**	**0.0**
BRG				SG	**Sg**	**00 32 19.7**	**+0.8**
	64nm,0.4s						
BRG	**Berggiesshubel**	**1.53**	**244**	*e*(P)		00 47 25.0	
	1.7nm,0.3s						
PRU	**Pruhonice**	**1.86**	**213**	*e*PN	**Pn**	**00 32 02.2**	**-0.7**
PRU				*e*PG	**Pb**	**00 32 04.3**	**-0.3**
PRU				*e*SG	**Sn**	**00 32 27.2**	**+0.1**
	comp=Z,36nm,0.3s						
PRU	**Pruhonice**	**1.86**	**213**	Pn	**Pn**	**00 32 02.2**	**-0.7**
PRU	**Pruhonice**	**1.86**	**213**	Pg	**Pb**	**00 32 04.3**	**-0.3**
PRU				Sg	**Sn**	**00 32 27.2**	**+0.1**
	36nm,0.3s						
CLL	**Collm**	**1.96**	**264**	*e*Pn	**Pn**	**00 32 04.0**	**-0.4**
CLL				*i*		00 32 05.5	
CLL				*e*Pg	**Pg**	**00 32 07.0**	**-0.5**
CLL				*i*		00 32 10.0	
CLL				*i*		00 32 11.1	
CLL				*i* Sg	**Sg**	**00 32 33.5**	**+0.6**
	comp=Z,40nm,0.6s						
MORC	**Moravsky Berou**	**2.00**	**152**	*e*Pn	**Pn**	**00 32 04.1**	**-0.7**
MORC				*e*Sg	**Sn**	**00 32 31.1**	**+0.6**
	comp=Z,26nm,0.4s,baz=335						
OKC	**Ostrava-Krasne**	**2.15**	**142**	*e*SG	**Sb**	**00 32 36.3**	**-0.4**
	comp=Z,39nm,0.7s						
OKC	**Ostrava-Krasne**	**2.15**	**142**	Sg	**Sb**	**00 32 36.3**	**-0.4**
	comp=Z,39nm,0.7s						
VRAC	**Vranov**	**2.27**	**172**	*e*Pn	**Pn**	**00 32 08.3**	**-0.2**
VRAC				*e*Sg	**Sb**	**00 32 39.9**	**-0.3**
	comp=Z,42nm,0.7s,baz=354						
TREC	**Trest**	**2.30**	**190**	*e*PN	**Pn**	**00 32 08.9**	**-0.1**
TREC				*e*PG	**Pb**	**00 32 12.2**	**+0.1**
TREC	**Trest**	**2.30**	**190**	Pn	**Pn**	**00 32 08.9**	**-0.1**
TREC	**Trest**	**2.30**	**190**	Pg	**Pb**	**00 32 12.2**	**+0.1**
KRUC	**Moravsky**	**2.50**	**176**	*e*Pn	**Pn**	**00 32 11.6**	**-0.1**
	baz=358						
KRUC				*e*Sg	**Sb**	**00 32 47.6**	**+0.7**
	comp=Z,19nm,0.8s,baz=358						
NKC	**Novy Kostel**	**2.67**	**242**	*e*PN	**Pn**	**00 32 14.5**	**+0.4**
NKC				*e*PG	**Pg**	**00 32 20.3**	**-0.7**
NKC				*e*SG	**Sg**	**00 32 56.2**	**+0.6**
	comp=Z,49nm,0.4s						
NKC	**Novy Kostel**	**2.67**	**242**	Pn	**Pn**	**00 32 14.5**	**+0.4**
OJC	**Ojcow**	**2.69**	**118**	*e*Pn	**Pn**	**00 32 12.4**	**-1.9**
OJC				*e*Pg	**Pg**	**00 32 20.1**	**-1.2**
OJC				*e*Sg	**Sg**	**00 32 54.8**	**-1.3**
OJC	**Ojcow**	**2.69**	**118**	*e*Pn	**Pn**	**00 32 12.4**	**-1.9**
KHC	**Kasperske Hory**	**2.92**	**215**	*e*PN	**Pn**	**00 32 17.1**	**-0.4**
KHC				*e*PG	**Pb**	**00 32 23.5**	**+0.8**
KHC				*e*SG	**Sb**	**00 33 00.9**	**+1.9**
	comp=Z,12nm,0.4s						
KHC	**Kasperske Hory**	**2.92**	**215**	Pn	**Pn**	**00 32 17.1**	**-0.4**
SMOL	**Smolenice**	**3.16**	**164**	*e*SG	**Sg**	**00 33 09.6**	**-1.6**
SMOL	**Smolenice**	**3.16**	**164**	*e*Sg	**Sg**	**00 33 09.6**	**-1.6**
NIE	**Niedzica**	**3.43**	**127**	*e*P	**Pg**	**00 32 34.9**	**-0.6**
NIE				*e*S	**Sg**	**00 33 19.6**	**-0.3**
VYHS	**Vyhne**	**3.53**	**149**	*e*PG	**Pb**	**00 32 35.3**	**+2.2**
VYHS				*e*SG	**Sg**	**00 33 21.2**	**-1.9**
VYHS	**Vyhne**	**3.53**	**149**	*e*Pg	**Pb**	**00 32 35.3**	**+2.2**
VYHS				*e*Sg	**Sg**	**00 33 21.2**	**-1.9**
CONA	**Conrad Observa**	**3.63**	**183**	⇑*e*Pn	**Pn**	**00 32 28.1**	**+0.7**
	comp=Z,0.8nm,0.2s						
CONA				⇑*e*Sg	**Sg**	**00 33 24.6**	**-1.8**
	comp=Z,13nm,0.5s						
CONA	**Conrad Observa**	**3.63**	**183**	Pn	**Pn**	**00 32 28.1**	**+0.7**
	comp=Z,0.8nm,0.2s						
CONA				Sg	**Sg**	**00 33 24.6**	**-1.8**
	comp=Z,13nm,0.5s						
BSD	**Bornholm Skovb**	**3.64**	**349**	*i* P	**Pn**	**00 32 26.7**	**-0.7**
BSD				*i* S	**Sn**	**00 33 06.6**	**-4.4**
MOA	**Molln**	**3.90**	**199**	⇑*i* Pn	**Pn**	**00 32 31.2**	**+0.2**
	comp=Z,2.6nm,0.3s						
MOA				⇑*e*Sg	**Sg**	**00 33 33.4**	**-1.5**
	comp=Z,14nm,0.5s						
MOA	**Molln**	**3.90**	**199**	Pn	**Pn**	**00 32 31.2**	**+0.2**
	comp=Z,2.6nm,0.3s						
MOA				Sg	**Sg**	**00 33 33.4**	**-1.5**
	comp=Z,14nm,0.5s						
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*PN	Pn	00 32 34.7	+3.6
STHS				*e*SG	**Sg**	**00 33 38.4**	**+3.0**
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*Pn	Pn	00 32 34.7	+3.6
STHS				*e*Sg	**Sg**	**00 33 38.4**	**+3.0**
KECS	**Kecovo**	**4.17**	**136**	*e*SN	**Sn**	**00 33 26.6**	**+2.6**
KECS	**Kecovo**	**4.17**	**136**	*e*Sn	**Sn**	**00 33 26.6**	**+2.6**
DEL	**Delary**	**5.10**	**346**	P	**Pn**	**00 32 49.6**	**+2.2**
VXJU	**Vaexsjoe**	**5.42**	**353**	P	**Pn**	**00 32 51.5**	**-0.4**
EKSU	**Eksjoe**	**6.05**	**356**	P	**Pn**	**00 33 00.1**	**-0.4**

IDC ***19*** *00:35:14.9±2.6, 24.64N×127.44E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/25, mbtmp3.7/5, Error ellipse: s-maj=168.2km s-min=22.5km az=66.0*
ISCJB ***19*** *00:35:16.7±0.6, 24.80N±0.04×127.75E±0.04, h30km, mb3.6/5, Error ellipse: s-maj=7.0km s-min=4.2km az=136.6*
JMA ***19*** *00:35:18.7±0.3, 24.90N×127.70E, h79km, M3.0*
ISC 19 00:35:17.6±0.9, 24.82N±0.05×127.76E±0.04, h30km, n19, σ1§58/30, mb3.8/5, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJT2	**Tamagusuku 2**	**1.32**	**360**	P	**Pb**	**00 35 41.0**	**-0.7**
JJT2				*e*S	**Sb**	**00 35 57.2**	**-1.0**
JKE	**Kume jima 2**	**1.74**	**330**	P	**Pb**	**00 35 46.6**	**-2.3**
JKE				*e*S	**Sb**	**00 36 06.6**	**-3.8**
JAGN	**Aguni-jima**	**1.83**	**345**	P	**Pn**	**00 35 47.4**	**+0.5**
JAGN				*e*S	**Sn**	**00 36 08.8**	**-0.3**
JOW	**Kunigami**	**2.06**	**13**	P	**Pn**	**00 35 50.5**	**+0.3**
JOW				*e*S	**Sn**	**00 36 15.8**	**+0.9**
JOGS	**Gusukube**	**2.14**	**269**	P	**Pn**	**00 35 52.1**	**+0.9**
JOGS				*e*S	**Sn**	**00 36 17.1**	**+0.4**
JIH	**Iheya**	**2.22**	**5**	P	**Pn**	**00 35 53.3**	**+1.0**
JIH				*e*S	**Sn**	**00 36 18.7**	**-0.1**
JMJ	**Miyako jima 2**	**2.24**	**270**	*e*S	**Sn**	**00 36 19.4**	**+0.2**
JTJ	**Tarama**	**2.78**	**267**	P	**Pn**	**00 36 00.7**	**+0.6**
JTJ				*e*S	**Sn**	**00 36 31.4**	**-1.3**
JTK	**Tokunoshima**	**3.15**	**20**	P	**Pn**	**00 36 06.4**	**+1.3**
JTK				*e*S	**Sn**	**00 36 40.7**	**-1.0**
JMZ	**Minamidaito 2**	**3.29**	**72**	P	**Pn**	**00 36 06.6**	**-0.5**
JMZ				*e*S	**Sn**	**00 36 41.0**	**-4.2**
JIJ	**Ishigaki jima**	**3.32**	**263**	P	**Pn**	**00 36 07.2**	**-0.3**
JIJ				*e*S	**Sn**	**00 36 43.2**	**-2.8**
JAMN	**Amaminishikomi**	**3.64**	**20**	P	**Pn**	**00 36 12.9**	**+1.0**
JAMN				*e*S	**Sn**	**00 36 53.6**	**-0.3**
JAM	**Amami Oshima**	**3.94**	**24**	P	**Pn**	**00 36 17.0**	**+0.9**
JZK	**Kikaishima**	**4.01**	**29**	P	**Pn**	**00 36 18.5**	**+1.5**
MKAR	**Makanchi Array**	**42.17**	**313**	P	**P**	**00 43 08.4**	**+0.9**
	0.4nm,0.5s,baz=101,slow=9.1,SNR=7.1						
WRA	**Warramunga Arr**	**44.95**	**171**	P	**P**	**00 43 31.4**	**+1.3**
	0.9nm,0.7s,baz=352,slow=8.6,SNR=5.9						
KURBB	**Kurchatov Arra**	**45.59**	**318**	P	**P**	**00 43 35.9**	**+1.0**
	0.2nm,0.6s,baz=102,slow=8.4,SNR=2.7						
ASAR	**Alice Springs**	**48.56**	**172**	P	**P**	**00 43 58.3**	**-0.1**
	1.4nm,1.0s,baz=7.4,slow=9.3,SNR=4.9						
FINES	**FINESS Array B**	**73.88**	**331**	P	**P**	**00 46 51.5**	**+2.2**
	1.1nm,0.7s,baz=60,slow=6.6,SNR=3.9						

WEL 19 00:43:41.8±0.2, 40.80S×176.47E, h24km±1km, ML3.5/32, 7C-2D, Error ellipse: s-maj=2.1km s-min=1.0km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BFZ	**Birch Farm**	**0.21**	**305**	⇑P*	Pb	00 43 47.8	+0.2
BFZ				S*	Sb	00 43 51.5	+0.1
TIWZ	**Tintock**	**0.45**	**273**	⇑P*	Pb	00 43 51.7	+0.5
TIWZ				S*	Sb	00 43 58.1	+0.5
TMWZ	**Te Maipa**	**0.54**	**235**	P*	Pn	00 43 54.1	+0.1
PRHZ	**Porangahau**	**0.55**	**13**	P*	Pb	00 43 52.9	+0.1
PRHZ				S*	Sb	00 44 00.9	+0.6
DVHZ	**Dannevirke**	**0.55**	**335**	⇑P*	Pb	00 43 51.9	-1.1
POWZ	**Post Office Ro**	**0.68**	**307**	⇑P*	Pb	00 43 54.2	-0.8
MRZ	**Mangatainoka R**	**0.69**	**281**	P*	Pb	00 43 54.7	-0.6
MRZ				AML	AML	00 44 04.1	
MRZ				AML	AML	00 44 04.2	
HOWZ	**Holdsworth Sta**	**0.73**	**262**	P*	Pb	00 43 56.0	-0.1
WPHZ	**Waipukurau**	**0.73**	**358**	⇓P*	Pb	00 43 55.6	-0.4
MTW	**Mount Morrison**	**0.82**	**244**	P*	Pb	00 43 57.5	+0.1
MTW				AML	AML	00 44 11.3	
MTW				AML	AML	00 44 13.1	
PXZ	**Pawanui**	**0.82**	**21**	P*	Pb	00 43 56.8	-0.6
PXZ				AML	AML	00 44 11.6	
PXZ				AML	AML	00 44 11.6	
PXZ				AML	AML	00 44 13.8	
PXZ				AML	AML	00 44 13.8	
TSZ	**Takapari Road**	**0.84**	**332**	⇑P*	Pb	00 43 56.4	-1.3
TSZ				AML	AML	00 44 06.9	
TSZ				AML	AML	00 44 07.0	
TRWZ	**Traveller**	**0.84**	**225**	P*	Pn	00 43 58.2	0.0
TRWZ				AML	AML	00 44 22.4	
TRWZ				AML	AML	00 44 24.4	
PNHZ	**Pukenui**	**0.91**	**347**	P*	Pb	00 43 57.8	-1.2
PAWZ	**Paruwai Farm**	**0.98**	**233**	P*	Pn	00 43 59.9	-0.3
PAWZ				AML	AML	00 44 13.6	
PAWZ				AML	AML	00 44 18.9	
OGWZ	**Otaki Gorge**	**0.99**	**269**	⇑P*	Pn	00 43 59.5	-0.7
KAHZ	**Kahuranaki**	**1.05**	**17**	PN	Pn	00 44 00.0	-1.1
CAW	**Cannon Point**	**1.11**	**253**	P*	Pn	00 44 01.4	-0.4
CAW				AML	AML	00 44 15.6	
CAW				AML	AML	00 44 17.0	
MSWZ	**Moikau Station**	**1.11**	**236**	P*	Pn	00 44 01.3	-0.6
MSWZ				AML	AML	00 44 16.3	
MSWZ				AML	AML	00 44 31.5	
KIW	**Kapiti Island**	**1.19**	**267**	P*	Pn	00 44 02.4	-0.5
KIW				AML	AML	00 44 17.6	
KIW				AML	AML	00 44 17.7	
PLWZ	**Palliser**	**1.20**	**230**	P*	Pn	00 44 02.4	-0.8
BHHZ	**Black Hill Sta**	**1.35**	**346**	PN	Pn	00 44 04.3	-0.9
BHW	**Baring Head**	**1.35**	**243**	P*	Pn	00 44 05.1	-0.1
BHW				AML	AML	00 44 21.9	
BHW				AML	AML	00 44 36.5	
MCHZ	**McNeill Hill**	**1.37**	**7**	PN	Pn	00 44 04.7	-0.7
WEL	**Wellington**	**1.38**	**249**	P*	Pn	00 44 05.3	-0.2
SNZO	**South Karori**	**1.43**	**249**	PN	Pn	00 44 05.7	-0.6
SNZO				AML	AML	00 44 23.7	
SNZO				AML	AML	00 44 24.6	
MOVZ	**Moawhango**	**1.50**	**338**	PN	Pn	00 44 06.9	-0.4
MOVZ				AML	AML	00 44 27.9	
MOVZ				AML	AML	00 44 29.1	
WAZ	**Wanganui**	**1.54**	**312**	PN	Pn	00 44 07.8	-0.1
WAZ				AML	AML	00 44 40.6	
WAZ				AML	AML	00 44 41.1	
MTVZ	**Mangateitei**	**1.61**	**331**	PN	Pn	00 44 09.2	+0.3

σ1§05/34, **mb4.1**/13, **MS3.3/4**, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.50**	**33**	*e*Pn	**Pn**	**00 59 45.5**	**-1.3**
GUMO				*e*Sn	**Sn**	**01 00 06.1**	**+0.7**
JNU	**Nakatsue**	**23.95**	**332**	LR	LR	01 12 56.6	
	comp=Z,14nm,21.3s,baz=234,slow=34						
WRAB	**Tennant Creek**	**33.44**	**197**	*e*P	**P**	**01 05 56.3**	**-2.2**
WRA	**Warramunga Arr**	**33.45**	**197**	P	**P**	**01 05 58.0**	**-0.6**
WRA	**Warramunga Arr**	**33.45**	**197**	P	**P**	**01 05 58.0**	**-0.6**
	2.0nm,0.8s,baz=20,slow=9.5,SNR=9.4						
ASAR	**Alice Springs**	**37.12**	**196**	P	**P**	**01 06 30.2**	**+0.1**
ASAR				PcP	**PcP**	**01 08 50.7**	**+0.4**
ASAR	**Alice Springs**	**37.12**	**196**	P	**P**	**01 06 30.2**	**+0.1**
	1.1nm,0.7s,baz=17,slow=10,SNR=13						
ASAR				PcP	**PcP**	**01 08 50.7**	**+0.4**
	0.7nm,0.6s,baz=34,slow=2.9,SNR=6.1						
ASAR				LR	LR	01 20 18.6	
	comp=Z,93nm,21.5s,baz=348,slow=34						
PETK	**Petropavlovsk-**	**42.12**	**12**	LR	LR	01 23 38.7	
	comp=Z,24nm,19.6s,baz=75,slow=35						
STKA	**Stephens Creek**	**44.01**	**183**	*e*P	**P**	**01 07 26.6**	**-0.4**
STKA	**Stephens Creek**	**44.01**	**183**	P	**P**	**01 07 25.8**	**-1.2**
	2.3nm,0.8s,baz=340,slow=12,SNR=2.5						
MK31	**Makanchi Array**	**61.85**	**317**	*e*P	**P**	**01 09 39.0**	**+0.5**
MKAR	**Makanchi Array**	**61.85**	**317**	P	**P**	**01 09 39.1**	**+0.6**
MKAR	**Makanchi Array**	**61.85**	**317**	P	**P**	**01 09 39.1**	**+0.6**
	1.0nm,0.6s,baz=92,slow=8.1,SNR=12						
ZALV	**Zalesovo Beam**	**62.19**	**325**	P	**P**	**01 09 40.0**	**-0.6**
ZALV	**Zalesovo Beam**	**62.19**	**325**	P	**P**	**01 09 40.0**	**-0.6**
	0.3nm,0.4s,baz=109,slow=7.2,SNR=2.8						
KURBB	**Kurchatov Arra**	**65.07**	**320**	P	**P**	**01 09 59.8**	**+0.1**
	2.8nm,0.8s,baz=105,slow=6.6,SNR=16						
KKAR	**Karatay Array**	**69.68**	**311**	*e*P	**P**	**01 10 30.5**	**+1.4**
	0.9nm,0.7s						
ILAR	**Eielson Array**	**70.05**	**25**	P	**P**	**01 10 29.2**	**-1.8**
ILAR	**Eielson Array**	**70.05**	**25**	P	**P**	**01 10 29.2**	**-1.8**
	0.5nm,0.4s,baz=255,slow=5.6,SNR=7.0						
YKA	**Yellowknife Ar**	**84.35**	**27**	P	**P**	**01 11 51.2**	**+0.1**
YKA	**Yellowknife Ar**	**84.35**	**27**	P	**P**	**01 11 51.2**	**+0.1**
	2.0nm,1.0s,baz=290,slow=5.6,SNR=14						
NEW	**Newport**	**86.71**	**41**	*e*P	**P**	**01 12 04.2**	**+0.9**
	4.2nm,0.9s						
BMO	**Blue Mountains**	**87.45**	**45**	*e*P	**P**	**01 12 07.0**	**0.0**
	7.0nm,1.4s						
NVAR	**Mina Array Bea**	**88.34**	**51**	P	**P**	**01 12 13.0**	**+1.4**
NVAR	**Mina Array Bea**	**88.34**	**51**	P	**P**	**01 12 13.0**	**+1.4**
	1.4nm,0.5s,baz=271,slow=5.2,SNR=12						
FINES	**FINESS Array B**	**91.96**	**335**	P	**P**	**01 12 26.2**	**-1.5**
FINES	**FINESS Array B**	**91.96**	**335**	P	**P**	**01 12 26.2**	**-1.5**
	1.1nm,0.6s,baz=74,slow=5.9,SNR=11						
NOA	**NORSAR Array B**	**97.94**	**339**	LR	LR	01 59 15.1	
	comp=Z,16nm,18.0s,baz=115,slow=37						
TORD	**Torodi Ar. Bea**	**134.89**	**303**	PKP	**PKPdf**	**01 18 40.2**	**+1.0**
TORD	**Torodi Ar. Bea**	**134.89**	**303**	PKP	**PKPdf**	**01 18 40.2**	**+1.0**
	0.2nm,0.6s,baz=43,slow=2.2,SNR=7.5						
DBIC	**Dimbokro**	**143.78**	**300**	PKP	PKPbc	01 18 53.1	+0.1
DBIC	**Dimbokro**	**143.78**	**300**	PKP	PKPbc	01 18 53.1	+0.1
	2.2nm,0.5s,baz=44,slow=4.5,SNR=6.4						
LPAZ	**La Paz**	**148.60**	**101**	PKPbc	**PKPbc**	**01 19 08.8**	**+0.8**
LPAZ	**La Paz**	**148.60**	**101**	PKPbc	**PKPbc**	**01 19 08.8**	**+0.8**
	1.9nm,0.7s,baz=284,slow=2.7,SNR=11						
CPUP	**Villa Florida**	**155.54**	**128**	PKPab	**PKPab**	**01 19 40.4**	**+1.0**
CPUP	**Villa Florida**	**155.54**	**128**	PKPab	**PKPab**	**01 19 40.4**	**+1.0**
	0.2nm,0.4s,baz=315,slow=5.7,SNR=3.4						

JMA 19 01:14:08.3±0.1, **36°.69N**×**141°.24E**, **h46**km±**2**km, **M2.7, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.54**	**319**	P	Pn	01 14 19.3	-0.7
ONAJ				S	Sn	01 14 27.5	-0.8
JHO	**Hitachi**	**0.55**	**262**	P	Pn	01 14 19.8	-0.1
JHO				S	Sn	01 14 27.9	-0.3
JFK	**Kawauchi**	**0.74**	**337**	P	Pn	01 14 22.0	-0.5
JFT	**Otama**	**1.10**	**319**	P	Pn	01 14 28.3	+1.0
JFT				S	Sn	01 14 42.5	+1.1
JMM	**Marumori**	**1.23**	**343**	P	Pn	01 14 29.1	+0.1
JMM				S	Sn	01 14 44.5	+0.1
JFY	**Yanaizu**	**1.42**	**301**	P	Pn	01 14 33.3	+1.6
MAT	**Matsushiro**	**2.44**	**267**	P	Pn	01 14 47.2	+1.5
MAT				S	Sn	01 15 17.6	+3.2

IDC 19 01:35:25.0±1.6, **24°.22S**×**66°.96W**, **h157**km±**22**km, **mb3.1**/1, **mb1 3.2**/6, **mb1mx3.1**/18, **mbtmp3.1**/6, **Error ellipse: s-maj=27.0km s-min=17.7km az=94.0, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.40**	**311**	P	Pn	01 36 06.9	+1.3
	4.1nm,0.3s,baz=132,slow=6.1,SNR=104						
LVC				S	Sn	01 36 37.1	+0.2
	22nm,0.3s,baz=292,slow=19,SNR=97						
CFAA	**Coronel Fontan**	**7.45**	**188**	P	Pn	01 37 10.2	-0.8
	0.0nm,0.3s,baz=12,slow=8.9,SNR=4.4						
CFAA				S	Sn	01 38 28.1	-6.3
	0.0nm,0.3s,baz=122,slow=17,SNR=6.7						
LPAZ	**La Paz**	**7.97**	**352**	P	Pn	01 37 18.8	0.0
	0.4nm,0.3s,baz=162,slow=7.1,SNR=11						
LPAZ				S	Sn	01 38 46.8	-1.5
	0.1nm,0.3s,baz=233,slow=20,SNR=3.6						
SIV	**San Ignacio**	**9.87**	**35**	P	Pn	01 37 42.9	-0.4
	0.3nm,0.3s,baz=229,slow=14,SNR=12						
PLCA	**Paso Flores**	**16.74**	**190**	P	P	01 39 09.4	-0.6
	0.1nm,0.3s,baz=356,slow=13,SNR=2.2						
BDFB	**Brasilia**	**19.73**	**68**	P	P	01 39 43.4	+0.5
	0.1nm,0.3s,baz=236,slow=11,SNR=5.2						
TORD	**Torodi Ar. Bea**	**76.61**	**69**	P	P	01 46 58.5	-0.2
	0.3nm,0.6s,baz=252,slow=5.6,SNR=3.3						
MKAR	**Makanchi Array**	**146.67**	**40**	PKPbc	PKPbc	01 54 47.7	-0.5
	0.2nm,0.6s,baz=315,slow=2.6,SNR=3.4						

MEX 19 01:40:45.5±0.5, **18°.71N**×**101°.29W**, **h22**km±**54**km, **MD3.6, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.99**	**116**	*e*P	Pb	01 41 00.8	-3.2
ARIG				*i* S	Sb	01 41 13.1	-3.5
ZIIG	**Zihuatanejo**	**1.11**	**189**	*e*P	Pn	01 41 02.5	-3.3
ZIIG				*e*S	Sb	01 41 16.4	-3.7
PLIG	**Platanillo**	**1.72**	**100**	*e*P	Pn	01 41 12.2	-2.1
PLIG				*e*S	Sn	01 41 31.6	-4.1
MEIG	**Mezcala**	**1.77**	**116**	*e*P	Pn	01 41 12.1	-2.8
MEIG				*e*S	Sn	01 41 32.3	-4.5
CAIG	**El Cayaco**	**1.92**	**149**	*e*P	Pn	01 41 14.4	-2.5
CAIG				*i* S	Sn	01 41 35.9	-4.5
MMIG	**Aquila**	**2.00**	**258**	*e*P	Pn	01 41 16.0	-2.0
MMIG				*e*S	Sn	01 41 38.0	-4.3
YAIG	**Yautepec**	**2.11**	**86**	*i* P	Pn	01 41 17.3	-2.4
YAIG				*e*S	Sn	01 41 41.0	-4.4
ACX	**Acapulco**	**2.28**	**143**	*i* P	Pn	01 41 18.5	-3.5
EZ5V		**2.32**	**290**	*i* P	Pn	01 41 20.6	-2.2
R15V		**2.59**	**281**	*e*P	Pn	01 41 23.8	-2.4
R15V				*i* S	Sn	01 41 54.0	-3.2

ISK ***19*** *02:09:27.2, 34°.92N×28°.39E, h30km, MD3.5*
ISCJB ***19*** *02:09:34.7±0.4, 35°.35N±0°.03×28°.65E±0°.04, h36km, Error ellipse: s-maj=5.0km s-min=4.4km az=6.1*
CSEM ***19*** *02:09:36.3±0.2, 35°.32N×28°.59E, h30km, MD3.1, Error ellipse: s-maj=6.2km s-min=5.3km az=106.0*
DDA ***19*** *02:09:37.6, 35°.50N×28°.46E, h54km, MD3.0*
ATH ***19*** *02:09:43.5, 36°.12N×27°.57E, h31km, MD3.1/5*

ISC 19 02:09:36.7±1.3, **35°.40N**±0°.05×**28°.55E**±0°.04, **h36**km, **n42**, σ1§57/48, **Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.88**	**337**	*e*PB	**Pn**	**02 09 53.8**	**+1.3**
ARG	**Arkhangelos**	**0.88**	**337**	*e*Pb	**Pn**	**02 09 53.8**	**+1.3**
KARP	**Karpathos**	**1.14**	**278**	*e*PN	**Pn**	**02 09 57.1**	**+1.0**
KARP	**Karpathos**	**1.14**	**278**	*e*Pn	**Pn**	**02 09 57.1**	**+1.0**
AKAS	**Kas**	**1.20**	**46**	*e*P	**Pn**	**02 09 58.6**	**+1.6**
AKAS				*e*S	**Sn**	**02 10 12.7**	**+0.7**
AKAS	**Kas**	**1.20**	**46**	*e*P	**Pn**	**02 09 58.6**	**+1.6**
AKAS				*e*S	**Sn**	**02 10 12.7**	**+0.7**
DALY	**Dalyan (Mu¨la**	**1.42**	**3**	*e*PN	**Pn**	**02 09 58.1**	**-1.7**
TURN	**Turunc**	**1.47**	**2**	*i* P	**Pn**	**02 10 01.2**	**+0.6**
TURN				*i* S	**Sn**	**02 10 17.6**	**-0.9**
TURN	**Turunc**	**1.47**	**2**	*i* P	**Pn**	**02 10 01.2**	**+0.6**
TURN				*i* S	**Sn**	**02 10 17.6**	**-0.9**
DAT	**Datca**	**1.54**	**330**	*e*PN	**Pn**	**02 09 58.7**	**-2.9**
DAT				*e*SN	**Sn**	**02 10 21.5**	**+1.0**
YER	**Yerkesik**	**1.74**	**353**	*e*PN	**Pn**	**02 10 02.4**	**-2.0**
GLHS	**Gihisar (BURDU**	**1.91**	**23**	*e*PN	**Pn**	**02 10 05.9**	**-0.9**
BODT	**Bodrum**	**1.94**	**329**	*e*PN	**Pn**	**02 10 04.1**	**-2.9**
MLSB	**Milas**	**1.99**	**342**	*e*PN	**Pn**	**02 10 05.9**	**-1.9**
GOLH	**Golhisar**	**2.01**	**24**	*i* P	Pn	02 10 11.1	+3.0
GOLH				*i* S	**Sn**	**02 10 35.5**	**+3.5**
GOLH	**Golhisar**	**2.01**	**24**	*i* P	Pn	02 10 11.1	+3.0
GOLH				*i* S	**Sn**	**02 10 35.5**	**+3.5**
AYDN	**Tasoluk**	**2.32**	**347**	*i* P	Pn	02 10 14.4	+2.1
AYDN				*i* S	**Sn**	**02 10 39.4**	**-0.2**
AYDN	**Tasoluk**	**2.32**	**347**	*i* P	Pn	02 10 14.4	+2.1
AYDN				*i* S	**Sn**	**02 10 39.4**	**-0.2**
DNZL	**Cakiroluk**	**2.32**	**10**	*i* P	**Pn**	**02 10 14.1**	**+1.7**
DNZL				*e*S	**Sn**	**02 10 39.8**	**0.0**
DNZL	**Cakiroluk**	**2.32**	**10**	*i* P	**Pn**	**02 10 14.1**	**+1.7**
DNZL				*e*S	**Sn**	**02 10 39.8**	**0.0**
NPS	**Neapolis**	**2.40**	**268**	*e*PN	**Pn**	**02 10 14.1**	**+0.7**
NPS	**Neapolis**	**2.40**	**268**	*e*Pn	**Pn**	**02 10 14.1**	**+0.7**
LAST	**Lasithi**	**2.52**	**265**	*e*PN	**Pn**	**02 10 16.3**	**+1.2**
LAST	**Lasithi**	**2.52**	**265**	*e*Pn	**Pn**	**02 10 16.3**	**+1.2**
GCAM	**G?zelcaml?**	**2.53**	**336**	*e*P	**Pn**	**02 10 16.8**	**+1.7**
GCAM				*e*S	**Sn**	**02 10 43.2**	**-1.4**
GCAM	**G?zelcaml?**	**2.53**	**336**	*e*P	**Pn**	**02 10 16.8**	**+1.7**
GCAM				*e*S	**Sn**	**02 10 43.2**	**-1.4**
BCK	**Bucak**	**2.63**	**38**	*e*PN	**Pn**	**02 10 15.7**	**-0.9**
APE	**Apeiranthos**	**2.95**	**305**	*e*PN	Pn	02 10 16.0	-5.0
APE	**Apeiranthos**	**2.95**	**305**	*e*Pn	Pn	02 10 16.0	-5.0
GAZI	**Gazipasa**	**3.17**	**74**	*e*P	**Pn**	**02 10 24.6**	**+0.6**
GAZI				*e*S	**Sn**	**02 10 57.4**	**-3.2**
GAZI	**Gazipasa**	**3.17**	**74**	*e*P	**Pn**	**02 10 24.7**	**+0.6**
GAZI				*e*S	**Sn**	**02 10 57.4**	**-3.2**
VAM	**Vamos**	**3.55**	**271**	*e*PN	**Pn**	**02 10 29.1**	**-0.1**
VAM	**Vamos**	**3.55**	**271**	*e*Pn	**Pn**	**02 10 29.1**	**-0.1**
LEF	**Lefka**	**3.56**	**93**	*e*PN	Pn	02 10 23.5	-5.9
LFK	**Lefkose**	**4.08**	**90**	*e*PN	Pn	02 10 31.3	-5.2
KDHN	**Kadinhani**	**4.23**	**42**	*e*P	**Pn**	**02 10 38.4**	**-0.2**
KDHN				*e*S	**Sn**	**02 11 26.4**	**-0.3**
KDHN	**Kadinhani**	**4.23**	**42**	*e*P	**Pn**	**02 10 38.4**	**-0.2**
KDHN				*e*S	**Sn**	**02 11 26.4**	**-0.3**
HMAT	**Matruh**	**4.46**	**196**	P	**Pn**	**02 10 41.6**	**-0.2**
HMAT				S	Sn	02 11 25.7	-6.8
SLUM		**4.79**	**216**	P	**Pn**	**02 10 46.5**	**+0.2**
SLUM				S	Sn	02 11 34.3	-6.3
AMAG	**Maghara**	**6.15**	**139**	P	Pn	02 11 03.5	-1.5
RSH		**6.20**	**134**	P	Pn	02 11 04.1	-1.5
SUZ		**6.62**	**146**	P	Pn	02 11 09.7	-1.7

ISCJB ***19*** *02:25:14.3±0.5, 8°.15S±0°.06×117°.98E±0°.07, h33km, mb4.1/9, MS3.0/1, Error ellipse: s-maj=10.0km s-min=7.5km az=155.4*
AUST ***19*** *02:25:16.4, 7°.99S×117°.96E, h35km*
IDC ***19*** *02:25:16.3±5.5, 8°.17S×117°.77E, h37km±48km, mb3.9/9, mb1 4.0/11, mb1mx3.8/23, mbtmp3.8/11, ML3.9/3, MS3.1/3, Ms1 3.1/3, ms1mx2.7/41, Error ellipse: s-maj=45.6km s-min=13.6km az=71.0*

ISC 19 02:25:16.3±0.6, **8°.11S**±0°.06×**117°.93E**±0°.08, **h35**km, **n26**, σ2§01/24, **mb4.3/9, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WSI	**Waingapu**	**2.81**	**124**	S	**Sn**	**02 26 34.2**	**+2.9**
	baz=2.9,SNR=3.5						
KAPI	**Kappang**	**3.56**	**31**	Pn	**Pn**	**02 26 09.5**	**+0.3**
	18nm,0.3s,baz=216,slow=2.8,SNR=121						
KAPI				Sn	**Sn**	**02 26 51.1**	**+1.0**
	85nm,0.3s,baz=209,slow=19,SNR=33						
KAPI				LR	LR	02 27 43.8	
	comp=Z,205nm,19.4s,baz=2.2,slow=40						
LUWI	**Luwuk**	**8.52**	**35**	P	Pn	02 27 06.5	-11
	baz=8.4,SNR=3.3						
LUWI				S	Sn	02 28 42.1	-10
	baz=8.4,SNR=3.7						
BNDI	**Bandanaira**	**12.42**	**74**	S	Sn	02 30 19.9	-8.1
	baz=12,SNR=3.4						
FITZ	**Fitzroy Crossi**	**12.45**	**144**	Pn	**Pn**	**02 28 12.0**	**+1.0**
	0.4nm,0.3s,baz=336,slow=12,SNR=9.3						
FITZ				Sn	**Sn**	**02 30 23.6**	**-4.9**
	0.3nm,0.3s,baz=180,slow=19,SNR=4.7						
FITZ				LR	LR	02 33 42.3	
	comp=Z,104nm,20.3s,baz=358,slow=40						
FITZ	**Fitzroy Crossi**	**12.45**	**144**	P	Pn	02 28 15.5	+4.5
	baz=13,SNR=7.1						
KNRA	**Kununurra**	**12.99**	**126**	P	Pn	02 28 08.4	-10
	baz=13,SNR=4.9						
MTN	**Manton Dam**	**13.80**	**111**	P	**Pn**	**02 28 29.8**	**+0.1**
	baz=14,SNR=7.1						
MTN				S	**Sn**	**02 30 58.5**	**-3.3**
	baz=14,SNR=4.1						
MEEK	**Meekatharra**	**18.44**	**178**	P	**Pn**	**02 29 33.4**	**+4.2**
	baz=19,SNR=9.1						
MEEK				S	Sn	02 32 37.6	-17
	baz=19,SNR=12						
BKNI	**Bangkinang**	**18.81**	**296**	S	**Sn**	**02 33 03.0**	**-0.4**
	baz=19,SNR=5.5						
WRA	**Warramunga Arr**	**19.77**	**128**	P	**P**	**02 29 43.7**	**+0.1**
	0.3nm,0.3s,baz=302,slow=12,SNR=11						
ASAR	**Alice Springs**	**21.76**	**137**	P	**P**	**02 30 06.0**	**+0.9**
	3.3nm,0.6s,baz=311,slow=9.3,SNR=34						
ASAR				LR	LR	02 38 45.0	
	comp=Z,58nm,19.5s,baz=74,slow=37						
COEN	**Coen**	**25.43**	**105**	P	**P**	**02 30 42.3**	**+1.2**
	baz=25,SNR=4.0						
STKA	**Stephens Creek**	**32.31**	**140**	P	**P**	**02 31 42.5**	**+0.3**
	1.9nm,0.5s,baz=318,slow=8.7,SNR=7.7						
STKA	**Stephens Creek**	**32.31**	**140**	P	**P**	**02 31 43.3**	**+1.2**
	baz=32,SNR=5.8						
CMAR	**Chiang Mai Arr**	**32.37**	**325**	P	**P**	**02 31 42.5**	**-0.3**
	2.4nm,0.6s,baz=148,slow=6.7,SNR=7.9						
ARMA	**Armidale**	**38.54**	**130**	P	P	02 32 51.0	+15
	baz=39,SNR=13						
MGCD	**Mangrove Creek**	**39.54**	**134**	P	**P**	**02 32 42.5**	**-1.6**
	baz=40,SNR=4.4						
KSRS	**Korea Array**	**46.28**	**11**	P	**P**	**02 33 39.7**	**+1.3**
	1.1nm,0.6s,baz=184,slow=8.0,SNR=6.1						
SONM	**Songino Array**	**56.63**	**351**	P	**P**	**02 34 56.6**	**+0.6**
	1.8nm,0.8s,baz=167,slow=8.1,SNR=6.3						
MKAR	**Makanchi Array**	**63.19**	**333**	P	**P**	**02 35 40.5**	**-0.4**
	1.9nm,0.7s,baz=147,slow=7.6,SNR=18						
ZALV	**Zalesovo Beam**	**67.84**	**340**	P	**P**	**02 36 09.5**	**-1.2**
	1.5nm,0.5s,baz=131,slow=8.4,SNR=8.7						
MAW	**Mawson**	**69.72**	**200**	P	**P**	**02 36 22.1**	**-0.2**
	1.5nm,0.5s,baz=50,slow=7.9,SNR=4.1						
VNDA	**Vanda**	**73.03**	**171**	P	**P**	**02 36 41.4**	**-0.8**
	0.4nm,0.5s,baz=314,slow=8.7,SNR=3.8						
TORD	**Torodi Ar. Bea**	**117.26**	**281**	PKP	**PKPdf**	**02 43 55.8**	**-3.3**
	0.2nm,0.5s,baz=86,slow=1.5,SNR=2.8						
CPUP	**Villa Florida**	**145.46**	**188**	PKPbc	**PKPbc**	**02 44 50.9**	**-0.5**
	0.5nm,0.4s,baz=135,slow=8.6,SNR=5.0						

IDC ***19*** *02:30:11.9±3.0, 13°.60N×120°.50E, h102km±33km, mb3.5/4, mb1 3.6/4, mb1mx3.2/25, mbtmp3.5/4, Error ellipse: s-maj=108.4km s-min=20.5km az=68.0*
ISCJB ***19*** *02:30:12.3±0.7, 13°.76N±0°.06×120°.32E±0°.10, h100km, mb3.8/4, Error ellipse: s-maj=13.8km s-min=8.2km az=170.1*
MAN ***19*** *02:30:13, 13°.74N×120°.50E, h92km, mb4.3, ML3.1, MS2.9*

ISC 19 02:30:12.9±0.9, **13°.74N**±0°.06×**120°.5E**±0°.1, **h100**km, **n12**, σ1§53/14, **mb3.8/4**, **1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	**0.52**	**116**	*i* P	**Sn**	**02 30 42.0**	**+1.1**
TGY	**Tagaytay City**	**0.58**	**51**	*i* P	**Pn**	**02 30 30.5**	**+1.1**
TGY	**Tagaytay City**	**0.58**	**51**	P	**Pn**	**02 30 30.8**	**+1.4**
	240nm,0.3s,baz=266,slow=1.3,SNR=7.4						
TGY				S	**Sn**	**02 30 43.5**	**+1.8**
	561nm,0.3s,baz=324,slow=22,SNR=34						
SJMP	**San Jose**	**1.42**	**153**	*e*P	**Pn**	**02 30 39.6**	**+1.5**
SJMP				*e*S	**Sn**	**02 30 57.8**	**+0.5**
OTRP	**Odiongan**	**2.04**	**132**	*e*P	**Pn**	**02 30 47.1**	**+1.2**
BALP	**Baler**	**2.26**	**28**	*e*P	**Pn**	**02 30 49.9**	**+1.0**
ENPP	**El Nido**	**2.71**	**202**	*e*P	**Pn**	**02 30 56.9**	**+2.0**
CUYO	**Cuyo Island**	**2.92**	**169**	*e*P	**Pn**	**02 30 58.4**	**+0.8**
SONM	**Songino Array**	**35.96**	**344**	P	**P**	**02 37 03.9**	**-0.1**
	1.2nm,0.5s,baz=157,slow=7.8,SNR=2.6						
WRA	**Warramunga Arr**	**36.14**	**158**	P	**P**	**02 37 03.0**	**-2.7**
	0.5nm,0.7s,baz=330,slow=10,SNR=3.2						
MKAR	**Makanchi Array**	**45.87**	**324**	P	**P**	**02 38 25.6**	**+0.4**
	0.3nm,0.4s,baz=118,slow=9.8,SNR=6.6						
ZALV	**Zalesovo Beam**	**48.92**	**333**	P	**P**	**02 38 47.5**	**-1.2**
	0.8nm,0.3s,baz=126,slow=7.0,SNR=4.7						

ISCJB ***19*** *02:54:13.1±0.9, 2°.7N±0°.1×93°.26E±0°.07, h17km, mb3.8/7, MS3.4/6, Error ellipse: s-maj=15.7km s-min=8.2km az=23.9*
IDC ***19*** *02:54:17.0±1.0, 2°.76N×93°.34E, h29km±5km, mb3.7/7, mb1 3.9/9, mb1mx3.6/27, mbtmp3.7/9, ML4.1/2, MS3.3/7, Ms1 3.3/7, ms1mx3.0/37, Error ellipse: s-maj=33.4km s-min=17.7km az=48.0*
DJA ***19*** *02:54:21.6±1.5, 3°.1N±10°.×9°.4E±1°.1, h10km, M4.6/6, mb4.7/3, mB5.0/2, MLv4.6/6, Mw(mB)4.3/2*

ISC 19 02:54:16.5±0.9, **2°.8N**±0°.1×**93°.33E**±0°.09, **h17**km, **n23**, σ2§10/23, **mb3.8/7**, **MS3.3/6**, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**3.02**	**97**	P	**Pn**	**02 55 03.4**	**-0.1**
SNSI				S	**Sn**	**02 55 35.6**	**-3.6**
BSI	**Banda Aceh**	**3.34**	**36**	P	**Pn**	**02 55 07.1**	**-0.9**
KCSI	**Kotacane, Aceh**	**4.50**	**80**	P	**Pn**	**02 55 25.6**	**+1.7**
PSI	**Prapat**	**5.59**	**90**	Pn	Pn	**02 55 37.9**	**-1.1**
	3.5nm,0.3s,baz=282,slow=13,SNR=13						
PSI				Sn	**Sn**	**02 56 43.9**	**+0.9**
	5.8nm,0.3s,baz=0.0,slow=19,SNR=5.6						
PSI				LR	LR	02 57 41.3	
	comp=Z,198nm,18.9s,baz=301,slow=37						
KULM	**Kulim**	**7.72**	**71**	P	**Pn**	**02 56 08.4**	**+0.2**
	35nm,0.8s,0.2nm						
PPI	**Padang Panjang**	**7.76**	**114**	P	**Pn**	**02 56 09.0**	**+0.3**
	69nm,0.8s,1µm0.3nm						
IPM	**Ipoh**	**7.87**	**77**	P	Pn	02 56 15.5	+5.3
CMAR	**Chiang Mai Arr**	**16.53**	**19**	Pn	**Pn**	**02 58 07.2**	**-0.5**
	0.3nm,0.3s,baz=213,slow=12,SNR=4.3						
STKI	**Sintang**	**18.34**	**98**	P	**P**	**02 58 35.0**	**+4.7**
AAK	**Ala-Archa**	**43.11**	**340**	LR	LR	03 21 26.4	
	comp=Z,37nm,19.0s,baz=33,slow=38						
MKAR	**Makanchi Array**	**44.89**	**349**	P	**P**	**03 02 28.8**	**-1.3**
	1.7nm,0.8s,baz=162,slow=8.5,SNR=12						
MKAR				pP	**pP**	**03 02 38.0**	**+2.6**
	2.5nm,0.7s,baz=165,slow=8.7,SNR=16						
WRA	**Warramunga Arr**	**46.15**	**121**	P	**P**	**03 02 39.0**	**-1.5**
	0.3nm,0.3s,baz=304,slow=8.5,SNR=5.3						
JNU	**Nakatsue**	**46.31**	**45**	LR	LR	03 25 28.0	
	comp=Z,19nm,20.2s,baz=355,slow=40						
KSRS	**Korea Array**	**46.88**	**38**	LR	LR	03 22 08.2	
	comp=Z,31nm,18.0s,baz=235,slow=36						
ASAR	**Alice Springs**	**47.43**	**126**	P	**P**	**03 02 48.5**	**-2.0**
	2.3nm,1.1s,baz=308,slow=7.7,SNR=9.7						
KURBB	**Kurchatov Arra**	**49.29**	**348**	P	**P**	**03 03 02.9**	**-1.5**
	0.8nm,0.7s,baz=170,slow=7.2,SNR=9.3						
KURBB				pP	**pP**	**03 03 12.8**	**+3.0**
	0.8nm,0.5s,baz=172,slow=7.0,SNR=8.5						
ZALV	**Zalesovo Beam**	**51.49**	**354**	P	**P**	**03 03 19.6**	**-1.3**
	0.5nm,0.4s,baz=152,slow=7.5,SNR=4.6						
ZALV				pP	**pP**	**03 03 29.2**	**+2.8**
	1.5nm,0.5s,baz=190,slow=6.0,SNR=5.2						
ZALV				LR	LR	03 26 00.1	
	comp=Z,29nm,18.1s,baz=160,slow=37						
KMBO	**Kilima Mbogo**	**56.20**	**267**	LR	LR	03 25 11.6	
	comp=Z,51nm,19.1s,baz=279,slow=33						
EIL	**Elat**	**61.35**	**302**	LR

PCP	**Piancastagn**	**0.91**	**51**	Pg		**Pb**	**02 57 00.3**	**+0.9**
PCP				Sg		**Sn**	**02 57 13.1**	**-1.0**
	15nm,0.8s							
MBDF	**Montbardon**	**0.94**	**324**	*e*Pg		**Pb**	**02 57 00.0**	**0.0**
MBDF				*e*Sg		**Sb**	**02 57 12.9**	**+0.1**
	4.1nm,0.3s							
MBDF	**Montbardon**	**0.94**	**324**	*e*Pg		**Pb**	**02 57 00.0**	**0.0**
MBDF				*e*Sg		**Sb**	**02 57 12.9**	**+0.1**
	2.0nm,0.3s							
LMR	**La Mourre**	**0.99**	**230**	*e*Pg		**Pg**	**02 57 00.8**	**+0.6**
LMR				*e*Sg		**Sg**	**02 57 13.6**	**+0.6**
	21nm,0.3s							
LMR	**La Mourre**	**0.99**	**230**	*e*Pg		**Pg**	**02 57 00.8**	**+0.6**
LMR				*e*Sg		**Sg**	**02 57 13.6**	**+0.6**
	11nm,0.3s							
SMRF	**Simiane la Rot**	**1.43**	**271**	*e*Pg		**Pg**	**02 57 09.3**	**+0.7**
SMRF				*e*Sg		**Sg**	**02 57 29.0**	**+1.9**
	5.6nm,0.3s							
SMRF	**Simiane la Rot**	**1.43**	**271**	*e*Pg		**Pg**	**02 57 09.3**	**+0.7**
SMRF				*e*Sg		**Sg**	**02 57 29.0**	**+1.9**
	2.8nm,0.3s							
ORIF	**Oris-en-Rattie**	**1.53**	**309**	*e*Pg		**Pg**	**02 57 11.4**	**+0.9**
ORIF				*e*Sg		**Sg**	**02 57 32.3**	**+2.0**
	5.6nm,0.4s							
ORIF	**Oris-en-Rattie**	**1.53**	**309**	*e*Pg		**Pg**	**02 57 11.4**	**+0.9**
ORIF				*e*Sg		**Sg**	**02 57 32.3**	**+2.0**
	2.8nm,0.4s							
LPG	**La Plagne**	**1.63**	**340**	*e*Pg		**Pg**	**02 57 12.5**	**0.0**
LPG	**La Plagne**	**1.63**	**340**	*e*Pg		**Pg**	**02 57 12.5**	**0.0**
LPL	**La Plagne**	**1.65**	**340**	*e*Pg		**Pg**	**02 57 13.2**	**+0.3**
LPL	**La Plagne**	**1.65**	**340**	*e*Pg		**Pg**	**02 57 13.2**	**+0.3**
PGF	**Pioggiola**	**1.77**	**143**	*e*Pn		**Pn**	**02 57 11.1**	**-1.3**
PGF				*e*Sn		**Sn**	**02 57 32.0**	**-3.3**
	1.1nm,0.2s							
PGF	**Pioggiola**	**1.77**	**143**	*e*Pn		**Pn**	**02 57 11.1**	**-1.3**
PGF				*e*Sn		**Sn**	**02 57 32.0**	**-3.3**
	0.6nm,0.2s							
VIVF	**Saint-Julien-l**	**2.25**	**294**	*e*Pg		**Pg**	**02 57 24.0**	**-0.2**
VIVF				*e*Sn		**Sn**	**02 57 46.1**	**-0.9**
	1.1nm,0.3s							
VIVF	**Saint-Julien-l**	**2.25**	**294**	*e*Pg		**Pg**	**02 57 24.0**	**-0.2**
VIVF				*e*Sn		**Sn**	**02 57 46.1**	**-0.9**
	0.6nm,0.3s							
LASF	**Ste Croix**	**2.67**	**274**	*e*Pg		**Pg**	**02 57 32.1**	**-0.2**
LASF				*e*Sn		**Sn**	**02 57 56.3**	**-1.1**
	0.5nm,0.2s							
LASF	**Ste Croix**	**2.67**	**274**	*e*Pg		**Pg**	**02 57 32.1**	**-0.2**
LASF				*e*Sn		**Sn**	**02 57 56.3**	**-1.1**
	0.2nm,0.2s							

ROM 19 02:57:30.9±0.5, 42°39N×13°41E, h7km±5km, Md1.6/6, Error ellipse: s-maj=3.5km s-min=2.5km az=55.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**186**	Pg	Pg	02 57 32.4	0.0
AQU				Sg	Sg	02 57 33.1	-0.3
	295nm,0.3s						
AQU	**L'Aquila**	**0.03**	**186**	Pg	Pg	02 57 32.4	0.0
AQU				Sg	Sg	02 57 33.1	-0.3
	295nm,0.3s						
FAGN	**Fagnano**	**0.18**	**133**	Pg	Pg	02 57 34.6	0.0
FAGN				Sg	Sg	02 57 38.0	+0.9
FAGN	**Fagnano**	**0.18**	**133**	Pg	Pg	02 57 35.0	+0.4
FAGN				Sg	Sg	02 57 38.0	+0.9
TERO	**Teramo**	**0.28**	**32**	Pg	Pb	02 57 37.8	-0.5
TERO				Sg	Sg	02 57 41.4	+1.2
TERO	**Teramo**	**0.28**	**32**	Pg	Pg	02 57 36.8	+0.3
TERO				Sg	Sg	02 57 41.3	+1.1
VCEL	**Villa Celiera**	**0.32**	**89**	Pg	Pg	02 57 37.5	+0.1
VCEL				Sg	Sb	02 57 44.3	-0.4

*IDC **19** 03:01:47.5±6.3, 36°07N×71°48E, h85km±50km, mb3.4/6, mb1 3.5/8, mb1mx3.2/29, mbtmp3.4/8, ML3.5/2, Error ellipse: s-maj=71.8km s-min=36.6km az=138.0*
*ISCJB **19** 03:01:51.6±1.3, 36°69N±0°09×71°0E±0°1, h88km, mb3.7/5, Error ellipse: s-maj=14.6km s-min=11.7km az=39.6*
*NNC **19** 03:01:59.7±7.8, 37°10N×71°22E, h198km±79km, mb2.8, mpv3.8, Error ellipse: s-maj=105.2km s-min=41.8km az=49.0*

ISC 19 03:01:52.6±1.4, 36°7N±0°1×70°8E±0°1, h88km, n13, σ26°31/17, mb3.6/5, 3C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array**	**6.38**	**358**	P	**Pn**	**03 03 26.6**	**+2.6**
	4.6nm,0.3s,baz=178,slow=12,SNR=177						
KK31				⇑S	**Sn**	**03 04 37.8**	**+2.4**
	7.3nm,0.5s,baz=181,slow=23,SNR=11						
AAK	**Ala-Archa**	**6.57**	**25**	P	**Pn**	**03 03 27.1**	**+0.5**
	2.4nm,0.3s,baz=171,slow=5.8,SNR=6.3						
AAK				S	**Sn**	**03 04 39.5**	**-0.6**
	1.0nm,0.3s,baz=317,slow=22,SNR=9.9						
TKM2	**Tokmak 2**	**7.22**	**29**	⇓P	**Pn**	**03 03 35.5**	**-0.1**
	2.2nm,0.5s						
AB31	**Akbulak array**	**14.81**	**331**	⇑P	**P**	**03 05 19.0**	**-2.0**
	0.4nm,0.3s,baz=138,slow=14,SNR=22						
AB31				⇓S	**Sn**	**03 07 54.9**	**-5.4**
	0.5nm,0.4s,baz=161,slow=20,SNR=6.4						
KURBB	**Kurchatov Arra**	**14.97**	**19**	P	**Pn**	**03 05 21.6**	**+2.2**
	0.0nm,0.3s,baz=204,slow=11,SNR=2.9						
AKTO	**Aktyubinsk**	**16.51**	**330**	⇓P	**P**	**03 05 40.3**	**+0.6**
	1.9nm,0.7s						
AKTO				⇑S	**Sn**	**03 08 39.5**	**-1.8**
	1.3nm,0.7s						
ZALV	**Zalesovo Beam**	**19.79**	**25**	P	**P**	**03 06 13.8**	**-1.9**
	1.2nm,0.5s,baz=226,slow=10,SNR=5.4						
FINES	**FINESS Array B**	**37.21**	**326**	P	**P**	**03 08 57.4**	**+2.4**
	8.5nm,1.3s,baz=123,slow=6.8,SNR=3.4						
ARCES	**ARCESS Array B**	**40.88**	**338**	P	**P**	**03 09 27.5**	**+2.0**
	3.0nm,1.0s,baz=110,slow=7.9,SNR=3.5						
NB2	**NORSAR Subarra**	**44.10**	**323**	P	**P**	**03 09 53.5**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=98,slow=7.9						
NOA	**NORSAR Array B**	**44.10**	**323**	P	**P**	**03 09 53.3**	**+1.5**
	comp=Z,0.5nm,0.5s,baz=96,slow=7.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**65.55**	**268**	P	**P**	**03 12 25.9**	**-1.2**
	comp=Z,0.3nm,0.7s,baz=48,slow=5.9,SNR=9.9						
YKA	**Yellowknife Ar**	**81.04**	**3**	P	**P**	**03 13 56.3**	**-1.1**
	comp=Z,0.2nm,0.7s,baz=349,slow=5.3,SNR=3.7						

IDC 19 03:05:50.9±9.8, 22°70S×66°10W, h224km±66km, mb3.5/1, mb1 3.1/3, mb1mx3.0/16, mbtmp3.1/3, Error ellipse: s-maj=113.7km s-min=37.5km az=24.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**6.66**	**343**	P	Pn	03 07 28.4	+0.5
	0.4nm,0.3s,baz=170,slow=10.0,SNR=10						
LPAZ				S	S	03 08 44.2	-0.8
	0.1nm,0.3s,baz=338,slow=17,SNR=7.8						
BDFB	**Brasilia**	**18.46**	**71**	P	P	03 09 51.6	+1.3
	0.1nm,0.3s,baz=225,slow=7.1,SNR=3.0						
TORD	**Torodi Ar. Bea**	**75.33**	**69**	P	P	03 17 09.2	-0.8
	0.7nm,0.5s,baz=256,slow=5.7,SNR=28						
MKAR	**Makanchi Array**	**145.00**	**39**	PKPbc	PKPdf	03 25 01.3	0.0
	0.5nm,0.7s,baz=328,slow=4.3,SNR=6.4						

IDC 19 03:07:52.0±28.0, 19°03S×177°47W, h500km±253km, mb3.1/3, mb1 3.4/3, mb1mx2.9/19, mbtmp3.1/3, Error ellipse: s-maj=226.1km s-min=96.1km az=121.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.31**	**260**	P	P	03 15 24.6	-0.3
	0.9nm,0.3s,baz=98,slow=7.6,SNR=14						
ASAR	**Alice Springs**	**45.35**	**255**	P	P	03 15 25.3	+0.1
	1.2nm,0.4s,baz=83,slow=8.6,SNR=23						
ASAR				PcP	PcP	03 16 53.4	-1.0
	0.5nm,0.5s,baz=97,slow=4.5,SNR=5.2						
FITZ	**Fitzroy Crossi**	**53.73**	**261**	P	P	03 16 27.0	0.0
	1.3nm,0.5s,baz=111,slow=8.6,SNR=7.8						
BRTR	**Keskin Array B**	**146.20**	**314**	PKPbc	PKPbc	03 26 35.6	-0.8
	0.4nm,0.5s,baz=47,slow=2.8,SNR=3.4						
MMAI	**Mount Meron Ar**	**147.49**	**302**	PKPbc	PKPbc	03 26 39.8	-0.1
	1.1nm,0.5s,baz=70,slow=4.8,SNR=4.1						
GERES	**GERESS Array B**	**148.92**	**346**	PKPbc	PKPbc	03 26 42.6	-0.5
	0.4nm,0.6s,baz=46,slow=2.8,SNR=5.1						

IDC 19 03:16:10.7±1.2, 23°44S×67°86W, h100km±19km, mb3.7/3, mb1 3.6/5, mb1mx3.4/17, mbtmp3.6/5, MS2.8/1, Ms1 2.8/1, ms1mx2.3/23, Error ellipse: s-maj=28.1km s-min=16.2km az=82.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.27**	**310**	P	Pn	03 16 35.3	+0.8
	74nm,0.3s,baz=133,slow=8.5,SNR=2924						
LVC				S	Sn	03 16 52.3	-0.2
	158nm,0.3s,baz=274,slow=19,SNR=70						
LPAZ	**La Paz**	**7.12**	**358**	P	Pn	03 17 52.6	-0.4
	0.7nm,0.3s,baz=199,slow=8.0,SNR=17						
CFAA	**Coronel Fontan**	**8.14**	**182**	P	Pn	03 18 07.5	+1.3
	0.0nm,0.3s,baz=356,slow=15,SNR=11						
CFAA				S	Sn	03 19 35.1	-1.5
	0.1nm,0.3s,baz=277,slow=23,SNR=7.8						
SIV	**San Ignacio**	**9.78**	**42**	P	Pn	03 18 27.3	-1.2
	1.4nm,0.3s,baz=244,slow=9.9,SNR=30						
SIV				LR	LR	03 22 52.3	
	comp=Z,59nm,21.3s,slow=41						
BDFB	**Brasilia**	**20.23**	**71**	P	P	03 20 37.9	-0.2
	2.5nm,0.7s,baz=216,slow=8.7,SNR=5.1						
DBIC	**Dimbokro**	**68.38**	**72**	P	P	03 27 01.8	-0.1
	1.6nm,0.7s,baz=238,slow=13,SNR=3.8						
TORD	**Torodi Ar. Bea**	**77.11**	**69**	P	P	03 27 54.3	+0.7
	1.3nm,0.5s,baz=255,slow=5.6,SNR=47						
MKAR	**Makanchi Array**	**146.58**	**38**	PKPbc	PKPdf	03 35 38.7	-0.1
	0.2nm,0.7s,baz=343,slow=2.3,SNR=3.2						

MAN 19 03:25:26.7±1.4, 1°41N×126°29E, h10km, mb4.3, ML3.1, MS2.9, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.46**	**184**	*e*P	Pb	03 25 36.5	+0.3
MATI				*e*S	Sb	03 25 45.0	+2.0
BUKP	**Musuan**	**1.30**	**291**	*e*P	Pn	03 25 50.0	-0.4
BUTP	**Butuan**	**1.69**	**337**	*e*P	Pb	03 25 56.5	-0.7
CGP	**Cagayan de Oro**	**1.89**	**304**	*e*P	Pn	03 25 58.9	+0.5
CGP				*i* S	Sb	03 26 23.9	-0.5
CTBH	**Cotabato--PC H**	**2.04**	**265**	*i* P	Pb	03 26 02.5	-0.7

IDC 19 03:53:08.1±3.7, 3°30S×139°80E, h0km, mb3.6/3, mb1 4.1/4, mb1mx3.7/16, mbtmp3.9/4, ML4.1/1, Error ellipse: s-maj=111.6km s-min=32.0km az=91.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.38**	**197**	Pn	Pn	03 57 12.2	0.0
	0.7nm,0.3s,baz=18,slow=13,SNR=16						
WRA				Sn	Sn	04 00 13.2	-13
	0.4nm,0.3s,baz=13,slow=22,SNR=6.1						
FITZ	**Fitzroy Crossi**	**20.22**	**222**	P	P	03 57 45.3	+0.3
	1.8nm,0.5s,baz=49,slow=11,SNR=6.2						
FITZ				S	S	04 01 20.0	-13
	4.9nm,0.6s,baz=131,slow=17,SNR=6.1						
ASAR	**Alice Springs**	**21.03**	**195**	P	P	03 57 53.4	-0.3
	4.5nm,0.7s,baz=24,slow=9.5,SNR=39						
ASAR				S	S	04 01 44.2	-4.7
	1.2nm,0.7s,baz=10,slow=26,SNR=5.0						
MKAR	**Makanchi Array**	**70.92**	**322**	P	P	04 04 27.4	0.0
	0.1nm,0.4s,baz=111,slow=6.8,SNR=2.5						

*MOS **19** 04:10:30.4±2.2, 34°90N×28°42E, h33km, mb4.1/5, Error ellipse: s-maj=12.1km s-min=5.5km az=99.1*
*HLW **19** 04:10:31.8, 35°47N×28°63E, h31km±16km, Md3.6, Ml3.8*
*ISK **19** 04:10:31.7, 35°23N×28°55E, h32km, ML4.1*
*ISCJB **19** 04:10:33.0±0.2, 35°26N±0°02×28°59E±0°02, h51km±3km, mb3.9/20, MS3.1/3, Error ellipse: s-maj=3.2km s-min=2.6km az=23.7*
*DDA **19** 04:10:32.6, 35°33N×28°45E, h35km, ML3.8*
*IDC **19** 04:10:34.6±2.0, 35°32N×28°52E, h40km±20km, mb3.6/10, mb1 3.8/19, mb1mx3.7/33, mbtmp3.6/19, ML3.8/8, MS3.2/4, Ms1 3.2/4, ms1mx2.7/38, Error ellipse: s-maj=16.6km s-min=15.8km az=5.0*
*CSEM **19** 04:10:34.6±0.1, 35°30N×28°56E, h40km, ML3.9/1, Mw3.4, Error ellipse: s-maj=2.9km s-min=2.1km az=39.0*
*THE **19** 04:10:35.2, 35°41N×28°65E, h29km±24km, ML3.9/1, Error ellipse: s-maj=24.5km s-min=1.1km az=74.0*
*ATH **19** 04:10:36.0, 35°51N×28°38E, h63km±8km*
*NIC **19** 04:10:38.6±0.1, 35°40N×28°97E, h55km, mb4.0, ML3.6, MW3.4*

ISC 19 04:10:34.4±0.8, 35°40N±0°03×28°58E±0°02, h32km±6km, n302, σ1°33/330, mb4.0/20, MS3.1/3, 6C, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.90**	**336**	P	**Pn**	**04 10 51.4**	**+0.6**
ARG				S	**Sn**	**04 11 02.8**	**+0.1**
ARG	**Arkhangelos**	**0.90**	**336**	*e*P	**Pn**	**04 10 51.4**	**+0.6**
ARG	**Arkhangelos**	**0.90**	**336**	*e*P	**Pn**	**04 10 51.4**	**+0.6**
ARG				S	**Sn**	**04 11 02.8**	**+0.1**
KARP	**Karpathos**	**1.17**	**278**	P	**Pn**	**04 10 55.0**	**+0.5**
KARP				S	**Sn**	**04 11 10.5**	**+1.2**
KARP	**Karpathos**	**1.17**	**278**	*e*P	**Pn**	**04 10 55.2**	**+0.7**
KARP				*e*S	**Sn**	**04 11 08.6**	**-0.7**
KARP	**Karpathos**	**1.17**	**278**	P	**Pn**	**04 10 55.0**	**+0.5**
KARP				*e*S	**Sn**	**04 11 08.6**	**-0.7**
AKAS	**Kas**	**1.18**	**45**	*i* P	**Pb**	**04 10 56.6**	**+0.2**
AKAS				*i* S	**Sb**	**04 11 15.2**	**+3.7**
AKAS	**Kas**	**1.18**	**45**	*e*Pn	**Pb**	**04 10 56.2**	**-0.2**
AKAS				*e*Sn	**Sn**	**04 11 08.5**	**-1.4**
AKAS	**Kas**	**1.18**	**45**	*i* P	**Pb**	**04 10 56.6**	**+0.2**
AKAS				*i* S	**Sb**	**04 11 15.2**	**+3.7**
FETY	**Fethiye**	**1.30**	**18**	*e*PN	**Pn**	**04 10 56.2**	**-0.2**
FETY	**Fethiye**	**1.30**	**18**	*e*Pn	**Pn**	**04 10 56.2**	**-0.2**
DALY	**Dalyan (Mu¨la**	**1.42**	**3**	*e*PN	**Pn**	**04 10 58.5**	**+0.5**
DALY	**Dalyan (Mu¨la**	**1.42**	**3**	*e*Pn	**Pn**	**04 10 58.5**	**+0.5**
TURN	**Turunc**	**1.48**	**1**	*i* P	**Pn**	**04 10 59.1**	**+0.4**
TURN				*i* S	**Sn**	**04 11 18.1**	**+1.2**
TURN	**Turunc**	**1.48**	**1**	*i* Pn	**Pn**	**04 10 58.4**	**-0.3**
TURN				*i* Sn	Sn	04 11 06.8	-10
TURN	**Turunc**	**1.48**	**1**	*i* P	**Pn**	**04 10 59.1**	**+0.4**
DAT	**Datca**	**1.56**	**329**	*e*PN	**Pn**	**04 10 59.8**	**-0.2**
DAT	**Datca**	**1.56**	**329**	*e*Pn	**Pn**	**04 10 59.8**	**-0.2**
NIS1	**Nisyros Isl.**	**1.65**	**317**	P	**Pn**	**04 11 01.4**	**+0.2**
NIS1	**Nisyros Isl.**	**1.65**	**317**	*e*P	**Pn**	**04 11 02.1**	**+0.9**
NIS1	**Nisyros Isl.**	**1.65**	**317**	P	**Pn**	**04 11 01.4**	**+0.2**
ELL	**Elmali**	**1.73**	**38**	*e*PN	**Pn**	**04 11 02.2**	**-0.2**
ELL	**Elmali**	**1.73**	**38**	*e*Pn	**Pn**	**04 11 02.2**	**-0.2**
YER	**Yerkesik**	**1.75**	**352**	*e*PN	**Pn**	**04 11 03.2**	**+0.6**
YER	**Yerkesik**	**1.75**	**352**	*e*Pn	**Pn**	**04 11 03.2**	**+0.6**
GLHS	**Glhisar (BURDU**	**1.91**	**23**	*e*PN	**Pn**	**04 11 05.2**	**+0.4**
GLHS	**Glhisar (BURDU**	**1.91**	**23**	*e*Pn	**Pn**	**04 11 05.2**	**+0.4**
ZKR	**Zakros**	**1.95**	**262**	P	**Pn**	**04 11 05.9**	**+0.6**
ZKR				S	**Sn**	**04 11 29.9**	**+1.2**
ZKR	**Zakros**	**1.95**	**262**	*e*P	**Pn**	**04 11 06.0**	**+0.6**
ZKR	**Zakros**	**1.95**	**262**	P	**Pn**	**04 11 05.9**	**+0.6**
ZKR				S	**Sn**	**04 11 29.9**	**+1.2**
BODT	**Bodrum**	**1.95**	**329**	*e*PN	**Pn**	**04 11 04.8**	**-0.5**
BODT	**Bodrum**	**1.95**	**329**	*e*Pn	**Pn**	**04 11 04.8**	**-0.5**
GOLH	**Golhisar**	**2.00**	**23**	*i* P	**Pb**	**04 11 08.7**	**-1.6**
GOLH				*i* S	**Sb**	**04 11 34.5**	**-0.4**
GOLH	**Golhisar**	**2.00**	**23**	*i* Pn	**Pb**	**04 11 08.5**	**-1.8**
GOLH				*i* Sn	Sn	04 11 22.4	-7.7
GOLH	**Golhisar**	**2.00**	**23**	*i* P	**Pb**	**04 11 08.7**	**-1.6**
GOLH				*i* S	**Sb**	**04 11 34.5**	**-0.4**
MLSB	**Milas**	**2.00**	**341**	*e*PN	**Pn**	**04 11 06.7**	**+0.6**
MLSB	**Milas**	**2.00**	**341**	*e*Pn	**Pn**	**04 11 06.7**	**+0.6**
KORT	**Korkueli**	**2.15**	**41**	*i* P	**Pb**	**04 11 11.9**	**-0.9**
KORT				*i* S	**Sb**	**04 11 39.4**	**+0.3**
KORT	**Korkueli**	**2.15**	**41**	*e*Pn	**Pb**	**04 11 11.4**	**-1.4**
KORT				*e*Sn	**Sb**	**04 11 38.9**	**-0.2**
KORT	**Korkueli**	**2.15**	**41**	*i* P	**Pb**	**04 11 11.9**	**-0.9**
KORT				*i* S	**Sb**	**04 11 39.4**	**+0.3**
ANTB	**Antalya**	**2.25**	**48**	*e*PN	**Pn**	**04 11 09.8**	**+0.4**
ANTB	**Antalya**	**2.25**	**48**	*e*Pn	**Pn**	**04 11 09.8**	**+0.4**
DNZL	**Cakiroluk**	**2.32**	**9**	*i* P	**Pn**	**04 11 11.7**	**+1.1**
DNZL				*i* S	**Sb**	**04 11 41.9**	**-2.1**
DNZL	**Cakiroluk**	**2.32**	**9**	*i* P	**Pn**	**04 11 11.7**	**+1.1**
DNZL				*i* S	**Sb**	**04 11 41.9**	**-2.1**
AYDN	**Tasoluk**	**2.33**	**346**	*i* P	**Pn**	**04 11 11.7**	**+1.2**
AYDN				*i* S	**Sn**	**04 11 36.4**	**-1.7**
AYDN	**Tasoluk**	**2.33**	**346**	*e*Pn	**Pn**	**04 11 11.8**	**+1.2**
AYDN				*i* Sn	Sn	04 11 32.8	-5.3
AYDN	**Tasoluk**	**2.33**	**346**	*i* P	**Pn**	**04 11 11.7**	**+1.2**
AYDN				*i* S	**Sn**	**04 11 36.4**	**-1.7**
DENT	**Denizli**	**2.38**	**9**	*e*PN	**Pn**	**04 11 12.3**	**+1.0**
DENT	**Denizli**	**2.38**	**9**	*e*Pn	**Pn**	**04 11 12.3**	**+1.0**
NPS	**Neapolis**	**2.43**	**268**	P	**Pn**	**04 11 13.2**	**+1.4**
NPS	**Neapolis**	**2.43**	**268**	*e*P	**Pn**	**04 11 13.1**	**+1.3**
NPS	**Neapolis**	**2.43**	**268**	*e*P	**Pn**	**04 11 13.1**	**+1.3**
GCAM	**G?zelcaml?**	**2.54**	**335**	*i* P	**Pn**	**04 11 13.9**	**+0.5**
GCAM				*i* S	**Sn**	**04 11 42.7**	**-0.5**
GCAM	**G?zelcaml?**	**2.54**	**335**	*i* P	**Pn**	**04 11 13.9**	**+0.5**
GCAM	**G?zelcaml?**	**2.54**	**335**	*i* P	**Pn**	**04 11 13.9**	**+0.5**
GCAM				*i* S	**Sn**	**04 11 42.7**	**-0.5**
LAST	**Lasithi**	**2.54**	**266**	P	**Pn**	**04 11 14.6**	**+1.1**
LAST				S	**Sn**	**04 11 44.7**	**+1.2**
LAST	**Lasithi**	**2.54**	**266**	*e*P	**Pn**	**04 11 14.7**	**+1.2**
LAST	**Lasithi**	**2.54**	**266**	P	**Pn**	**04 11 14.6**	**+1.1**
LAST				S	**Sn**	**04 11 44.7**	**+1.2**
BCK	**Bucak**	**2.62**	**38**	*e*PN	**Pn**	**04 11 15.5**	**+0.9**
BCK	**Bucak**	**2.62**	**38**	*e*Pn	**Pn**	**04 11 15.5**	**+0.9**
SMG	**Samos**	**2.70**	**329**	*e*P	**Pn**	**04 11 15.8**	**+0.2**
SMG	**Samos**	**2.70**	**329**	*e*P	**Pn**	**04 11 15.8**	**+0.2**
THR3	**Thira Island,**	**2.77**	**292**	P	**Pn**	**04 11 16.7**	**+0.2**
THR3	**Thira Island,**	**2.77**	**292**	P	**Pn**	**04 11 16.7**	**+0.2**
ISP	**Isparta**	**2.88**	**32**	*e*PN	**Pn**	**04 11 19.9**	**+1.7**
ISP	**Isparta**	**2.88**	**32**	*e*P	**Pb**	**04 11 22.3**	**-3.0**
ISP	**Isparta**	**2.88**	**32**	*e*Pn	**Pn**	**04 11 20.0**	**+1.7**
ISP	**Isparta**	**2.88**	**32**	*e*P	**Pb**	**04 11 22.3**	**-3.0**
APE	**Apeiranthos**	**2.98**	**305**	*e*PN	**Pn**	**04 11 19.6**	**+0.1**
APE	**Apeiranthos**	**2.98**	**305**	*e*P	**Pn**	**04 11 19.4**	**0.0**
APE	**Apeiranthos**	**2.98**	**305**	*e*P	**Pn**	**04 11 19.5**	**+0.1**
APE	**Apeiranthos**	**2.98**	**305**	*e*Pn	**Pn**	**04 11 19.6**	**+0.1**
IDI	**Anoyia**	**3.02**	**269**	P	**Pn**	**04 11 20.4**	**+0.4**
IDI	**Anoyia**	**3.02**	**269**	*e*P	**Pn**	**04 11 20.4**	**+0.4**
IDI	**Anoyia**	**3.02**	**269**	*e*P	**Pn**	**04 11 20.4**	**+0.4**
KHL	**Karahalli**	**3.02**	**14**	*e*PN	**Pn**	**04 11 21.1**	**+1.0**
KHL	**Karahalli**	**3.02**	**14**	*e*Pn	**Pn**	**04 11 21.1**	**+1.0**
KHAL	**Karahalli**	**3.06**	**14**	*i* P	**Pn**	**04 11 21.5**	**+0.9**
KHAL				*i* S	Sn	04 11 38.3	-18
KHAL	**Karahalli**	**3.06**	**14**	*i* P	**Pn**	**04 11 21.5**	**+0.9**
AKMC	**Akamas**	**3.10**	**96**	⇑P	**Pn**	**04 11 21.2**	**+0.2**
AKMC	**Akamas**	**3.10**	**96**	⇑P	**Pn**	**04 11 21.2**	**+0.2**
SIVA	**Sivas**	**3.11**	**264**	*e*P	**Pn**	**04 11 22.2**	**+1.0**
SIVA	**Sivas**	**3.11**	**264**	*e*P	**Pn**	**04 11 22.2**	**+1.0**
KULA	**Kula-Manisa**	**3.11**	**1**	*e*PN	**Pn**	**04 11 22.1**	**+0.8**
KULA	**Kula-Manisa**	**3.11**	**1**	*e*Pn	**Pn**	**04 11 22.1**	**+0.8**
PPCY	**Paphos**	**3.13**	**98**	P	**Pn**	**04 11 21.8**	**+0.3**
PPCY	**Paphos**	**3.13**	**98**	P	**Pn**	**04 11 21.8**	**+0.3**
GAZI	**Gazipasa**	**3.15**	**74**	*i* P	**Pn**	**04 11 22.2**	**+0.3**
GAZI				*i* S	Sn	04 11 51.3	-7.0
GAZI	**Gazipasa**	**3.15**	**74**	*i* P	**Pn**	**04 11 22.1**	**+0.3**
GAZI				*i* S	**Sn**	**04 11 56.4**	**-2.0**
GAZI	**Gazipasa**	**3.15**	**74**	*i* P	**Pn**	**04 11 22.2**	**+0.3**
IZM	**Izmir**	**3.18**	**341**	*e*PN	**Pn**	**04 11 22.8**	**+0.6**
IZM	**Izmir**	**3.18**	**341**	*e*Pn	**Pn**	**04 11 22.8**	**+0.6**
BLCB	**Balcova**	**3.23**	**338**	*e*PN	**Pn**	**04 11 23.1**	**+0.3**
BLCB	**Balcova**	**3.23**	**338**	*e*Pn	**Pn**	**04 11 23.1**	**+0.3**
ALFC	**Alevga**	**3.30**	**93**	⇑P	**Pn**	**04 11 24.0**	**+0.1**
	7.3nm,0.1s						
ALFC				S	**Sn**	**04 11 59.4**	**-2.6**
ALFC	**Alevga**	**3.30**	**93**	⇑P	**Pn**	**04 11 24.0**	**+0.1**
	7.3nm,0.1s						
ALFC				S	**Sn**	**04 11 59.4**	**-2.6**
SHUT	**Suhut-Afyon**	**3.53**	**26**	*e*PN	**Pn**	**04 11 27.8**	**+0.7**
SHUT	**Suhut-Afyon**	**3.53**	**26**

baz=135
RSH 6.18 134 P Pn 04 12 01.5 -1.9
HHAG Hagoal 6.18 150 P Pn 04 12 02.2 -1.3
baz=151
HHAG AMP 04 13 00.0
comp=N,80µm,0.2s,logA/T=5.6,baz=151
HHAG Hagoal 6.18 150 P Pn 04 12 02.2 -1.3
HTY Hatay 6.19 81 ePN Pn 04 12 04.4 +0.9
HTY Hatay 6.19 81 ePN Pn 04 12 04.4 +0.9
KOZT Kozan 6.20 68 ePN Pn 04 12 05.4 +1.7
KOZT Kozan 6.20 68 ePn Pn 04 12 05.4 +1.7
RCY Rachaya 6.29 105 eP Pn 04 12 04.3 -0.8
SUZ 6.60 146 P Pn 04 12 07.9 -1.3
baz=146
SUZ 6.60 146 P Pn 04 12 07.9 -1.3
SWA2 6.68 204 P Pn 04 12 08.7 -1.6
baz=205
SWA2 6.68 204 P Pn 04 12 08.7 -1.6
ZAF 6.96 150 P Pn 04 12 12.3 -1.8
baz=150
ZAF 6.96 150 P Pn 04 12 12.3 -1.8
ZNM 7.02 148 P Pn 04 12 13.8 -1.1
baz=148
ZNM 7.02 148 P Pn 04 12 13.8 -1.1
AWBH 7.06 178 P Pn 04 12 13.8 -1.7
baz=178
AWBH 7.06 178 P Pn 04 12 13.8 -1.7
HNKL Nakhl 7.10 139 P Pn 04 12 14.2 -2.0
baz=139
HNKL AMP 04 13 00.0
comp=E,80µm,0.5s,logA/T=5.2,baz=139
HNKL Nakhl 7.10 139 P Pn 04 12 14.1 -2.0
ASF Jabal al Asfar 7.64 113 Pn Pn 04 12 22.5 -1.0
comp=E,0.9nm,0.3s,baz=202,slow=7.7,SNR=7.3
EIL Elat 7.84 135 Pn Pn 04 12 24.8 -1.5
comp=E,2.6nm,0.3s,baz=280,slow=2.3,SNR=53
EIL Sn Sn 04 13 48.1 -5.9
comp=E,8.1nm,0.3s,baz=323,slow=17,SNR=11
ASUT 8.37 161 P Pn 04 12 32.3 -1.2
baz=161
ASUT 8.37 161 P Pn 04 12 32.3 -1.2
MLR Muntele Rosu 10.28 350 Pn Pn 04 13 02.6 +2.9
baz=3.4,slow=19
MLR Muntele Rosu 10.28 350 P Pn 04 13 02.6 +2.9
STON Ston 11.27 315 ePn Pn 04 13 11.7 -1.4
STON Ston 11.27 315 ePn Pn 04 13 11.7 -1.4
ANN Anapa 11.58 33 eP Pn 04 13 33.3 +16
ANN pmax pmax
comp=Z,16nm,0.8s
BHD Baghdad 13.23 95 eP Pn 04 13 42.0 +2.0
BHD eS Sn 04 16 15.0 +9.0
BHD Baghdad 13.23 95 eP Pn 04 13 42.0 +2.0
KIV Kislovodsk 13.81 48 eP P 04 13 53.7 -2.3
KIV eS Sn 04 16 28.7 +8.5
KIV pmax pmax
comp=Z,6.0nm,1.2s
KIV Kislovodsk 13.81 48 eP P 04 13 53.7 -2.3
comp=Z,6.0nm,1.2s
NVLJ Novalja 13.92 315 ePn Pn 04 13 47.5 -1.8
NVLJ Novalja 13.92 315 ePn Pn 04 13 47.5 -1.8
KOLS Kolonicke sedl 14.30 343 eP P 04 14 02.2 +0.9
KOLS Kolonicke sedl 14.30 343 ePN P 04 14 02.2 +0.9
KOLS Kolonicke sedl 14.30 343 eP P 04 14 02.2 +0.9
KECS Kecovo 14.38 338 eP P 04 14 03.1 +0.9
KECS Kecovo 14.38 338 ePN P 04 14 03.1 +0.9
KECS Kecovo 14.38 338 eP P 04 14 03.1 +0.9
CRVS Cervenica-Dubn 14.48 341 eP Pn 04 14 00.7 +3.7
CRVS Cervenica-Dubn 14.48 341 ePN Pn 04 14 00.7 +3.7
VYHS Vyhne 14.94 334 eP P 04 14 09.8 +1.4
VYHS Vyhne 14.94 334 ePN P 04 14 09.8 +1.4
VYHS Vyhne 14.94 334 eP P 04 14 09.8 +1.4
KIEV Kiev 15.30 2 eP P 04 14 12.4 +0.1
KIEV Kiev 15.30 2 eP P 04 14 12.4 +0.1
AKASG Malin Array Be 15.31 2 P Pn 04 14 09.2 +1.3
AKASG Malin Array Be 15.31 2 Pn Pn 04 14 09.2 +1.3
comp=Z,0.4nm,0.3s,baz=189,slow=9.7,SNR=3.1
KEST Kesra 15.66 277 Pn Pn 04 14 09.7 -3.0
comp=Z,0.0nm,0.3s,baz=186,slow=5.0,SNR=4.5
VRAC Vranov 16.45 331 Pn P 04 14 25.1 -0.1
comp=Z,0.2nm,0.3s,baz=126,slow=14,SNR=3.1
VRAC LR LR 04 21 37.6
comp=Z,100nm,18.6s,baz=138,slow=40
VRAC Vranov 16.45 331 P P 04 14 25.1 -0.1
comp=Z,100nm,18.6s
PGF Pioggiola 16.80 301 eP Pn 04 14 26.3 -0.9
GERES GERESS Array B 17.35 325 P Pn 04 14 34.4 +0.4
comp=Z,0.2nm,0.3s,baz=143,slow=12,SNR=15
GERES GERESS Array B 17.35 325 P Pn 04 14 34.4 +0.4
DPC Dobruska-Polom 17.40 333 eP P 04 14 40.6 +4.9
DPC Dobruska-Polom 17.40 333 eP P 04 14 40.6 +4.9
KHC Kasperske Hory 17.61 326 eP Pn 04 14 37.0 -0.2
KHC Kasperske Hory 17.61 326 eP Pn 04 14 37.0 -0.2
KHC ex x 04 14 42.3
KHC Kasperske Hory 17.61 326 eP Pn 04 14 37.0 -0.2
UPC Upice 17.64 333 eP P 04 14 40.8 +2.5
UPC Upice 17.64 333 eP P 04 14 40.8 +2.5
UPC Upice 17.64 333 eP P 04 14 40.8 +2.5
PRU Pruhonice 17.82 329 eP Pn 04 14 40.8 +1.1
PRU Pruhonice 17.82 329 eP Pn 04 14 40.8 +1.1
PRU epP pP 04 14 47.3 -1.4
PRU Pruhonice 17.82 329 eP Pn 04 14 40.8 +1.1
BRG Berggiesshubel 18.74 330 eP Pn 04 14 52.2 +1.2
comp=Z,2.4nm,0.9s
BRG Berggiesshubel 18.74 330 eP Pn 04 14 52.2 +1.2
BRG pmax pmax
comp=Z,2.0nm,0.9s
BRG Berggiesshubel 18.74 330 eP Pn 04 14 52.2 +1.2
comp=Z,2.0nm,0.9s
FRF La Foret Royal 18.75 302 eP P 04 14 49.5 -1.1
comp=Z,8.0nm,0.9s
FRF La Foret Royal 18.75 302 eP P 04 14 49.5 -1.1
comp=Z,4.0nm,0.9s
LMR La Mourre 18.78 302 eP P 04 14 49.8 -1.1
comp=Z,16nm,1.1s
LMR La Mourre 18.78 302 eP P 04 14 49.8 -1.1
comp=Z,8.1nm,1.1s
MBDF Montbardon 19.07 306 eP P 04 14 53.7 -0.5
comp=Z,15nm,0.7s
MBDF Montbardon 19.07 306 eP P 04 14 53.7 -0.5
comp=Z,7.3nm,0.7s
LPG La Plagne 19.38 308 eP P 04 14 58.5 +0.8
comp=Z,9.5nm,0.7s
LPG La Plagne 19.38 308 eP P 04 14 58.5 +0.8
comp=Z,4.8nm,0.7s
LPL La Plagne 19.40 308 eP P 04 14 58.5 +0.6
comp=Z,6.5nm,0.6s
LPL La Plagne 19.40 308 eP P 04 14 58.5 +0.6
comp=Z,3.2nm,0.6s
CLL Collm 19.46 330 *i* P P 04 14 59.3 +1.1
CLL pmax pmax
comp=Z,4.0nm,0.6s
CLL Collm 19.46 330 *i* P P 04 14 59.3 +1.1
comp=Z,4.0nm,0.6s
CLL *i* 04 15 01.9
CLL epP pP 04 15 07.0 +0.2
CLL LmV 04 23 00.0
comp=Z,100nm,19.4s
CLL Collm 19.46 330 *i* P P 04 14 59.3 +1.1
comp=Z,4.0nm,0.6s
ORIF Oris-en-Rattie 19.73 306 eP P 04 15 01.5 +0.1
comp=Z,5.0nm,0.8s
ORIF eR
comp=Z,101nm,21.2s
ORIF Oris-en-Rattie 19.73 306 eP P 04 15 01.5 +0.1
comp=Z,2.5nm,0.8s
CABF La Chapelle 20.26 310 eP P 04 15 06.3 -0.9
comp=Z,16nm,0.7s
CABF La Chapelle 20.26 310 eP P 04 15 06.3 -0.9
comp=Z,7.9nm,0.7s
HINF Hinteralfeld 20.36 314 eP P 04 15 08.7 +0.6
HINF Hinteralfeld 20.36 314 eP P 04 15 08.7 +0.6
CDF Champ du Feu 20.42 316 eP P 04 15 09.6 +0.8
comp=Z,18nm,1.0s
CDF Champ du Feu 20.42 316 eP P 04 15 09.6 +0.8
comp=Z,9.1nm,1.0s
OBN Obninsk 20.48 13 eP Pn 04 15 13.2 +1.6
OBN *e* 04 15 23.7
OBN *e* 04 15 30.9
OBN pmax pmax
comp=Z,3.0nm,0.9s
VIVF Saint-Julien-l 20.51 305 eP P 04 15 08.6 -1.2
comp=Z,4.4nm,0.6s
VIVF Saint-Julien-l 20.51 305 eP P 04 15 08.6 -1.2
comp=Z,2.2nm,0.6s
HAU Haudompre 20.75 314 eP P 04 15 13.8 +1.5
comp=Z,8.3nm,0.6s
HAU *e*R
comp=Z,92nm,20.8s
HAU Haudompre 20.75 314 eP P 04 15 13.8 +1.5
comp=Z,4.2nm,0.6s
LASF Ste Croix 20.83 302 eP P 04 15 13.2 -0.1
comp=Z,12nm,1.0s
LASF Ste Croix 20.83 302 eP P 04 15 13.2 -0.1
comp=Z,5.8nm,1.0s
SMF Signal de Mont 21.69 309 eP P 04 15 21.5 -1.0
comp=Z,16nm,0.8s
SMF Signal de Mont 21.69 309 eP P 04 15 21.5 -1.0
comp=Z,7.8nm,0.8s
AVF Avril sur Loir 22.06 309 eP P 04 15 25.6 -0.8
comp=Z,8.0nm,0.8s
SSF Saint Saulge 22.07 310 eP P 04 15 26.2 -0.3
comp=Z,11nm,0.6s
RJF Les Rejaudoux 22.78 304 eP P 04 15 32.9 -1.2
comp=Z,8.9nm,0.8s
RJF *e*R
comp=Z,64nm,21.0s
EPF Esparros 23.09 298 eP P 04 15 35.7 -1.7
LFF La Frestale 23.21 303 eP P 04 15 37.1 -1.4
MFF Saint Martin d 24.27 306 eP P 04 15 47.2 -1.3
LDF La Druitiere 24.91 311 eP P 04 15 52.1 -2.2
FLN La Foliniere 25.19 311 eP P 04 15 54.7 -2.2
FLN *e*R
comp=Z,75nm,20.2s
GRR Gorron 25.29 310 eP P 04 15 55.5 -2.3
comp=Z,9.5nm,0.6s
AKTO Aktyubinsk 26.06 46 P P 04 16 04.3 -0.5
AKTO pmax pmax
comp=Z,2.0nm,0.6s
AKTO Aktyubinsk 26.06 46 P P 04 16 04.3 -0.5
comp=Z,1.5nm,0.6s,baz=233,slow=6.6,SNR=7.5
ESDC Sonseca Array 26.07 289 P P 04 16 04.0 -1.1
comp=Z,2.6nm,0.6s,baz=83,slow=10,SNR=18
FINES FINESS Array B 26.12 357 P P 04 16 04.2 -0.9
comp=Z,1.6nm,0.6s,baz=157,slow=9.8,SNR=12
SGMF Saint Gilles 26.32 309 eP P 04 16 04.7 -2.4
KLMR Klimovskoe 26.43 12 eP P 04 16 08.8 +0.9
KLMR pmax pmax
comp=Z,26nm,1.9s
HFS Hagfors 26.57 343 P P 04 16 08.9 -0.3
comp=Z,0.9nm,0.4s,baz=165,slow=12,SNR=7.9
HFS LR LR 04 27 54.5
comp=Z,63nm,20.4s,baz=140,slow=39
QUIF Quistinic 26.61 309 eP P 04 16 07.8 -1.9
MDT Midelt 27.53 274 P P 04 16 20.5 +2.1
comp=Z,1.7nm,0.8s,baz=77,slow=8.5,SNR=6.8
NB2 NORSAR Subarra 27.96 342 P P 04 16 20.3 -1.5
comp=Z,1.3nm,0.8s,baz=146,slow=10
NB2 NORSAR Subarra 27.96 342 P P 04 16 20.3 -1.5
comp=Z,1.3nm,0.8s,SNR=4.2
NOA NORSAR Array B 27.96 342 LR LR 04 27 43.3
comp=Z,33nm,19.1s,baz=150,slow=37
TORD Torodi Ar. Bea 32.84 234 P P 04 17 04.3 -0.9
comp=Z,1.6nm,0.7s,baz=35,slow=8.6,SNR=22
TORD PcP PcP 04 19 49.6 0.0
comp=Z,0.1nm,0.4s,baz=25,slow=3.0,SNR=4.6
ARCES ARCESS Array B 34.24 358 P P 04 17 15.5 -1.3
comp=Z,1.4nm,0.7s,baz=170,slow=7.4,SNR=5.1
AAK Ala-Archa 36.04 64 *ce*P P 04 17 34.2 +1.3
AAK pmax pmax
comp=Z,4.0nm,1.0s
KMBO Kilima Mbogo 37.23 166 LR LR 04 35 54.9
comp=Z,40nm,20.5s,baz=100,slow=41
MKAR Makanchi Array 41.31 57 eP P 04 18 18.3 +1.4
MKAR Makanchi Array 41.31 57 P P 04 18 18.0 +1.1
comp=Z,0.4nm,0.6s,baz=273,slow=7.2,SNR=4.9
ZALV Zalesovo Beam 42.82 46 P P 04 18 29.2 +0.1
ZALV Zalesovo Beam 42.82 46 P P 04 18 29.2 +0.1
comp=Z,0.4nm,0.4s,baz=264,slow=7.1,SNR=2.8
BILL Bilibino 72.12 15 eP P 04 21 57.2 +2.0
BILL *e* 04 22 13.8
BILL *e* 04 24 36.2
BILL *e*SS SS 04 35 56.0 +4.7
BILL pmax pmax
comp=Z,10.0nm,1.4s
YKA Yellowknife Ar 78.05 343 P P 04 22 27.9 -1.5
comp=Z,0.3nm,0.4s,baz=30,slow=5.3,SNR=9.0
ILAR Eielson Array 80.10 358 P P 04 22 40.9 +0.2
comp=Z,0.2nm,0.6s,baz=326,slow=4.1,SNR=4.0

*ISCJB **19** 04:15:00.3±0.8, 7.66N±0.04×126.60E±0.08, h99km±8km, mb4.3/29, Error ellipse: s-maj=13.9km s-min=5.9km az=173.7*
*IDC **19** 04:15:00.4±1.9, 7.72N×126.61E, h80km±18km, mb4.1/17, mb1 4.2/17, mb1mx4.0/28, mbtmp4.1/17, MS3.3/10, Ms1 3.3/10, ms1mx3.1/29, Error ellipse: s-maj=27.5km s-min=10.2km az=84.0*
*NEIC **19** 04:15:00.5±1.0, 7.70N×126.58E, h84km±10km, mb4.4/13, Error ellipse: s-maj=11.0km s-min=5.5km az=76.0*
ISC 19 04:15:01.5±1.4, 7.65N±0.05×126.6E±0.1, h91km±12km, n75, σ1s05/78, mb4.3/29, 2C-5D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.78**	**206**	*e*P		Pn	04 15 14.4	-4.4
MATI				*e*S		Sn	04 15 25.1	-6.8
DAV	**Davao City (W)**	**1.16**	**240**	*e*Pn		**Pn**	**04 15 22.9**	**-0.2**
DAV	**Davao City (W)**	**1.16**	**240**	P		**Pn**	**04 15 22.0**	**-1.1**
	774nm,0.3s,baz=332,slow=1.7,SNR=70							
DMPH	**Davao City--Mi**	**1.22**	**242**	*e*P		**Pn**	**04 15 23.7**	**-0.1**
DMPH				*e*S		**Sn**	**04 15 42.1**	**+1.5**
BUKP	**Musuan**	**1.54**	**279**	*e*P		**Pn**	**04 15 27.5**	**-0.3**
BUTP	**Butuan**	**1.63**	**324**	*e*P		**Pn**	**04 15 27.4**	**-1.6**
CGP	**Cagayan de Oro**	**2.05**	**293**	*e*P		**Pn**	**04 15 32.5**	**-1.8**
CGP				*i* S		**Sn**	**04 15 59.3**	**-0.1**
CTBH	**Cotabato--PC H**	**2.37**	**260**	*i* P		**Pn**	**04 15 38.2**	**-0.5**
MSLP	**Maasin**	**3.00**	**325**	*e*P		**Pn**	**04 15 46.3**	**-0.9**
PAGZ	**Pagadian**	**3.19**	**274**	*e*P		**Pn**	**04 15 49.9**	**+0.2**
DCPH	**Dipolog City**	**3.34**	**286**	*e*P		**Pn**	**04 15 52.8**	**+1.1**
TBP	**Tagbilaran**	**3.38**	**307**	*e*P		**Pn**	**04 15 52.0**	**-0.2**
LLP	**Lapu-Lapu**	**3.71**	**316**	*e*P		**Pn**	**04 15 58.6**	**+1.9**
LLP				*e*S		**Sn**	**04 16 43.1**	**+3.7**
SNPH	**Sibulan**	**3.73**	**297**	*i* P		Pn	04 15 42.5	-14
SNPH				*i* S		Sn	04 16 26.6	-13
PLP	**Palo**	**3.84**	**336**	*e*P		**Pn**	**04 15 59.6**	**+1.2**
PLP				*e*S		**Sn**	**04 16 43.3**	**+0.8**
GUIM	**Jordan**	**4.94**	**307**	*e*P		**Pn**	**04 16 13.7**	**+0.3**
CNP	**Catarman**	**5.19**	**339**	*e*P		Pn	04 16 12.2	-4.6
RCP	**Roxas**	**5.43**	**316**	*e*P		**Pn**	**04 16 20.9**	**+0.8**
KKM	**Kota Kinabalu**	**10.43**	**262**	*e*Pn		**Pn**	**04 17 25.6**	**-2.7**
KAPI	**Kappang**	**14.32**	**209**	*e*Pn		**Pn**	**04 18 19.6**	**-0.4**
FITZ	**Fitzroy Crossi**	**25.61**	**182**	P		**P**	**04 20 22.9**	**+0.3**
FITZ	**Fitzroy Crossi**	**25.61**	**182**	P		**P**	**04 20 22.9**	**+0.3**
	3.1nm,0.3s,baz=16,slow=12,SNR=20							
JNU	**Nakatsue**	**25.65**	**8**	P		**P**	**04 20 21.8**	**-1.1**
JNU	**Nakatsue**	**25.65**	**8**	P		**P**	**04 20 21.8**	**-1.1**
	9.9nm,0.9s,baz=164,slow=8.1,SNR=4.8							
JNU				LR		LR	04 29 36.9	
	comp=Z,37nm,18.9s,baz=156,slow=34							
KULM	**Kulim**	**25.89**	**266**	*e*P		**P**	**04 20 25.2**	**0.0**
	17nm,1.2s							
COEN	**Coen**	**27.05**	**142**	*e*P		**P**	**04 20 35.0**	**-0.6**
	72nm,0.8s							
WRAB	**Tennant Creek**	**28.45**	**165**	*e*P		**P**	**04 20 47.0**	**-1.1**
	17nm,1.2s							
WRA	**Warramunga Arr**	**28.46**	**165**	P		**P**	**04 20 47.1**	**-1.0**
WRA				PcP		**PcP**	**04 23 59.0**	**+0.7**
WRA	**Warramunga Arr**	**28.46**	**165**	P		**P**	**04 20 47.1**	**-1.0**
	2.6nm,0.7s,baz=350,slow=10.0,SNR=20							
WRA				PcP		**PcP**	**04 23 59.0**	**+0.7**
	2.0nm,0.6s,baz=338,slow=2.8,SNR=7.6							
CMAR	**Chiang Mai Arr**	**28.95**	**294**	LR		LR	04 33 09.7	
	comp=Z,54nm,18.7s,baz=120,slow=38							
KSAR	**Wonju Array Be**	**29.68**	**2**	P		**P**	**04 20 58.5**	**-0.2**
KSRS	**Korea Array**	**29.69**	**2**	P		**P**	**04 20 58.5**	**-0.3**
	1.4nm,0.7s,baz=174,slow=11,SNR=6.7							
KSRS				LR		LR	04 32 36.8	
	comp=Z,34nm,19.6s,baz=327,slow=36							
MAJO	**Matsushiro**	**30.65**	**19**	*e*P		**P**	**04 21 05.5**	**-1.9**
	5.9nm,0.8s							
AS31	**Alice Springs**	**31.93**	**167**	*e*P		**P**	**04 21 18.4**	**-0.4**
AS31				*e*PcP		**PcP**	**04 24 07.8**	**+0.5**
ASAR	**Alice Springs**	**31.93**	**167**	P		**P**	**04 21 18.2**	**-0.6**
ASAR				PcP		**PcP**	**04 24 08.2**	**+0.9**
ASAR	**Alice Springs**	**31.93**	**167**	P		**P**	**04 21 18.2**	**-0.6**
	1.7nm,0.3s,baz=341,slow=7.4,SNR=33							
ASAR				PcP		**PcP**	**04 24 08.2**	**+0.9**
	3.8nm,0.5s,baz=346,slow=2.5,SNR=18							
CTAO	**Charters Tower**	**33.68**	**145**	*e*P		**P**	**04 21 34.4**	**+0.4**
	5.2nm,0.7s							
USRK	**Ussuriysk Arra**	**36.71**	**7**	P		**P**	**04 21 59.7**	**-0.1**
	11nm,0.7s,baz=192,slow=8.0,SNR=23							
FORT	**Forrest**	**38.24**	**178**	*e*P		**P**	**04 22 13.3**	**+0.5**
	51nm,0.5s							
ASAJ	**Asahikawa**	**38.92**	**18**	*e*P		**P**	**04 22 18.6**	**+0.2**
	4.6nm,0.8s							
ASAJ	**Asahikawa**	**38.92**	**18**	P		**P**	**04 22 18.4**	**0.0**
	7.9nm,0.4s,baz=248,slow=16,SNR=11							
ASAJ				LR		LR	04 37 08.8	
	comp=Z,34nm,19.5s,baz=176,slow=34							
NWAO	**Narrogin (SRO)**	**41.33**	**192**	P		**P**	**04 22 40.4**	**+2.0**
NWAO	**Narrogin (SRO)**	**41.33**	**192**	P		**P**	**04 22 40.4**	**+2.0**
	13nm,0.5s,baz=14,slow=8.4,SNR=10							
STKA	**Stephens Creek**	**41.84**	**161**	*e*P		**P**	**04 22 42.2**	**-0.4**
	2.0nm,0.8s							
STKA	**Stephens Creek**	**41.84**	**161**	P		**P**	**04 22 42.7**	**+0.1**
	8.5nm,0.5s,baz=328,slow=7.7,SNR=30							
STKA				LR		LR	04 42 35.7	
	comp=Z,67nm,18.0s,baz=205,slow=40							
PETK	**Petropavlovsk-**	**51.89**	**23**	LR		LR	04 42 54.6	
	comp=Z,18nm,21.0s,baz=74,slow=32							
MK31	**Makanchi Array**	**54.30**	**324**	*e*P		**P**	**04 24 18.3**	**-0.3**
MKAR	**Makanchi Array**	**54.30**	**324**	P		**P**	**04 24 18.2**	**-0.4**
MKAR				PcP		**PcP**	**04 25 22.2**	**+0.6**
MKAR	**Makanchi Array**	**54.30**	**324**	P		**P**	**04 24 18.2**	**-0.4**
	2.4nm,0.8s,baz=123,slow=8.1,SNR=26							
MKAR				PcP		**PcP**	**04 25 22.2**	**+0.6**
	1.7nm,0.8s,baz=110,slow=5.6,SNR=4.1							
MKAR				LR		LR	04 50 55.1	
	comp=Z,20nm,19.2s,baz=354,slow=40							
ZALV	**Zalesovo Beam**	**57.07**	**332**	P		**P**	**04 24 36.6**	**-1.5**
ZALV	**Zalesovo Beam**	**57.07**	**332**	P		**P**	**04 24 36.6**	**-1.5**
	0.7nm,0.3s,baz=126,slow=7.3,SNR=4.0							
AAK	**Ala-Archa**	**57.41**	**316**	LR		LR	04 53 54.9	
	comp=Z,24nm,19.8s,baz=43,slow=41							
KURK	**Kurchatov**	**58.40**	**326**	*e*P		**P**	**04 24 46.4**	**-1.2**
	1.3nm,0.5s							
BRVK	**Borovoye**	**64.07**	**326**	*e*P		**P**	**04 25 24.9**	**-0.9**
	3.6nm,0.8s							
ABKAR	**Akbulak array**	**69.07**	**320**	*e*P		**P**	**04 25 56.9**	**-0.8**
	0.8nm,0.7s							
AKTO	**Aktyubinsk**	**70.54**	**321**	P		**P**	**04 26 05.8**	**-0.9**
AKTO	**Aktyubinsk**	**70.54**	**321**	P		**P**	**04 26 05.8**	**-0.9**
	0.8nm,0.3s,baz=89,slow=9.7,SNR=3.7							
MCK	**McKinley**	**80.74**	**27**	*e*P		**P**	**04 27 04.9**	**+0.2**
	5.0nm,0.9s							
COLA	**College**	**81.23**	**26**	*e*P		**P**	**04 27 06.8**	**-0.5**
	5.4nm,1.1s							
ILAR	**Eielson Array**	**81.64**	**26**	P		**P**	**04 27 08.7**	**-0.8**
ILAR	**Eielson Array**	**81.64**	**26**	P		**P**	**04 27 08.7**	**-0.8**
	1.4nm,0.5s,baz=254,slow=4.5,SNR=24							
EGAK	**Eagle**	**84.09**	**25**	*e*P		**P**	**04 27 22.4**	**+0.3**
	2.7nm,0.4s							
ARCES	**ARCESS Array B**	**86.75**	**340**	P		**P**	**04 27 34.4**	**-0.9**
ARCES	**ARCESS Array B**	**86.75**	**340**	P		**P**	**04 27 34.4**	**-0.9**
	1.5nm,0.8s,baz=81,slow=5.6,SNR=4.8							
VNDA	**Vanda**	**87.31**	**173**	*e*P		**P**	**04 27 38.3**	**+0.6**
	3.9nm,0.9s							
VNDA	**Vanda**	**87.31**	**173**	P		**P**	**04 27 38.9**	**+1.2**
	3.0nm,0.9s,baz=317,slow=6.3,SNR=17							
FINES	**FINESS Array B**	**88.33**	**332**	P		**P**	**04 27 41.4**	**-1.6**
FINES	**FINESS Array B**	**88.33**	**332**	P		**P**	**04 27 41.4**	**-1.6**
	0.5nm,0.5s,baz=64,slow=6.6,SNR=6.4							
KMBO	**Kilima Mbogo**	**89.50**	**269**	LR		LR	05 05 46.5	
	comp=Z,25nm,20.2s,baz=104,slow=34							
NOA	**NORSAR Array B**	**95.23**	**334**	LR		LR	05 19 36.2	
	comp=Z,20nm,18.3s,baz=175,slow=41							
YKW3	**Yellowknife Ar**	**95.96**	**24**	*e*P		**P**	**04 28 18.2**	**0.0**
YKA	**Yellowknife Ar**	**96.00**	**24**	P		**P**	**04 28 18.7**	**+0.3**
YKA	**Yellowknife Ar**	**96.00**	**24**	P		**P**	**04 28 18.7**	**+0.3**
	1.4nm,0.6s,baz=301,slow=4.6,SNR=26							
TORD	**Torodi Ar. Bea**	**121.50**	**290**	PKP		**PKPdf**	**04 33 45.6**	**0.0**
TORD	**Torodi Ar. Bea**	**121.50**	**290**	PKP		**PKPdf**	**04 33 45.6**	**0.0**
	0.9nm,0.8s,baz=69,slow=2.1,SNR=6.9							

*ISCJB **19** 04:15:55.8±0.3, 41.30N±0.02×22.74E±0.02, h7km±3km, Error ellipse: s-maj=2.9km s-min=2.6km az=137.8*
*SKO **19** 04:15:55.8, 41.30N×22.71E, h15km, ML2.5, ML2.9*
*THE **19** 04:15:56.2, 41.31N×22.74E, h0km±1km, ML3.2/10, Error ellipse: s-maj=1.6km s-min=0.4km az=341.0*
*CSEM **19** 04:15:56.1±0.2, 41.25N×22.73E, h8km, ML3.2/10, Error ellipse: s-maj=4.3km s-min=4.0km az=98.0*
*ATH **19** 04:15:56.0, 41.28N×22.73E, h23km±1km, MD3.7/14*
*BEO **19** 04:15:56.1±0.7, 41.23N×22.72E, h4km±2km, ML3.0/8*
*SOF **19** 04:15:57.7, 41.34N×22.86E, h10km, MD3.3*
ISC 19 04:15:56.5±0.8, 41.29N±0.02×22.73E±0.02, h10km±5km, n95, σ0s74/132, 5C-4D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**286**	P		**Pg**	**04 15 59.0**	**-0.3**
VAY				S		**Sg**	**04 16 01.4**	**0.0**
VAY	**Valandovo**	**0.12**	**286**	*e*Pg		**Pg**	**04 15 59.1**	**-0.3**
VAY				*i* Sg		**Sg**	**04 16 01.4**	**0.0**
VAY	**Valandovo**	**0.12**	**286**	*i* Pg		**Pg**	**04 15 59.0**	**-0.3**
VAY				*e*Lg		Lg	04 16 01.4	
	comp=E,6µm,0.5s							
VAY				*i* Sg		**Sg**	**04 16 01.5**	**+0.1**
VAY				*e*Lg		Lg	04 16 01.6	
	comp=N,17µm,0.3s							
VAY	**Valandovo**	**0.12**	**286**	*e*Pg		**Pg**	**04 15 59.1**	**-0.3**
VAY				*i* Sg		**Sg**	**04 16 01.4**	**0.0**
KNT	**Kendrikon**	**0.18**	**134**	P		**Pg**	**04 16 00.6**	**+0.3**
KNT				S		**Sg**	**04 16 03.4**	**+0.5**
KNT	**Kendrikon**	**0.18**	**134**	P		**Pg**	**04 16 00.6**	**+0.3**
GRG	**Griva**	**0.41**	**217**	P		**Pg**	**04 16 04.8**	**+0.2**
GRG				S		**Sg**	**04 16 10.7**	**+0.7**
GRG	**Griva**	**0.41**	**217**	*e*PB		**Pg**	**04 16 04.9**	**+0.3**
GRG				*e*SB		**Sg**	**04 16 10.9**	**+0.9**
GRG	**Griva**	**0.41**	**217**	*e*Pb		**Pg**	**04 16 04.9**	**+0.3**
GRG				S		**Sg**	**04 16 10.7**	**+0.7**
KKB	**Krupnik**	**0.64**	**25**	*i* P		**Pg**	**04 16 08.6**	**-0.3**
KKB	**Krupnik**	**0.64**	**25**	*i* P		**Pg**	**04 16 08.6**	**-0.3**
SOH	**Sokhos**	**0.66**	**134**	P		**Pg**	**04 16 08.9**	**-0.4**
SOH				S		**Sb**	**04 16 19.1**	**-0.4**
SOH	**Sokhos**	**0.66**	**134**	*e*PN		**Pg**	**04 16 09.0**	**-0.4**
SOH				*e*SN		**Sb**	**04 16 19.1**	**-0.4**
SOH	**Sokhos**	**0.66**	**134**	P		**Pg**	**04 16 08.9**	**-0.4**
SOH				S		**Sb**	**04 16 19.1**	**-0.4**
SRS	**Serrai**	**0.67**	**104**	P		**Pg**	**04 16 09.2**	**-0.3**
SRS				S		**Sg**	**04 16 18.6**	**+0.3**
SRS	**Serrai**	**0.67**	**104**	P		**Pg**	**04 16 09.2**	**-0.3**
SRS				S		**Sg**	**04 16 18.6**	**+0.3**
THE	**Thessaloniki**	**0.68**	**165**	P		**Pg**	**04 16 09.4**	**-0.2**
THE				S		**Sb**	**04 16 19.8**	**-0.1**
THE	**Thessaloniki**	**0.68**	**165**	P		**Pg**	**04 16 09.4**	**-0.2**
THE				S		**Sb**	**04 16 19.8**	**-0.1**
HORT	**Hortiatis**	**0.74**	**158**	P		**Pg**	**04 16 10.6**	**-0.2**
HORT				S		**Sb**	**04 16 21.7**	**-0.2**
HORT	**Hortiatis**	**0.74**	**158**	P		**Pg**	**04 16 10.6**	**-0.2**
HORT				S		**Sb**	**04 16 21.7**	**-0.2**
MMB	**Musomiste**	**

OUR	**Ouranopolis**	**1.34**	**135**	P	**Pn**	**04 16 21.2**	**-0.2**
OUR				S	**Sg**	**04 16 41.3**	**+1.6**
OUR	**Ouranopolis**	**1.34**	**135**	P	**Pn**	**04 16 21.2**	**-0.2**
VTS	**Vitosha**	**1.35**	**15**	P	**Pn**	**04 16 21.5**	**-0.1**
VTS	**Vitosha**	**1.35**	**15**	*i* P	**Pb**	**04 16 21.9**	**-0.2**
VTS	**Vitosha**	**1.35**	**15**	*e*Pg	**Pb**	**04 16 21.9**	**-0.2**
VTS				*i* Sg	**Sb**	**04 16 39.7**	**+0.2**
VTS	**Vitosha**	**1.35**	**15**	⇑*i*P	**Pb**	**04 16 22.1**	**0.0**
VTS				S	**Sb**	**04 16 39.7**	**+0.2**
VTS	**Vitosha**	**1.35**	**15**	*i* P	**Pb**	**04 16 21.9**	**-0.2**
VTS				*i* Sg	**Sb**	**04 16 39.7**	**+0.2**
PAIG	**Paliouri**	**1.54**	**152**	P	**Pn**	**04 16 23.6**	**-0.4**
PAIG				S	**Sg**	**04 16 46.5**	**+0.5**
PAIG	**Paliouri**	**1.54**	**152**	*e*PN	**Pn**	**04 16 24.1**	**+0.1**
PAIG	**Paliouri**	**1.54**	**152**	P	**Pn**	**04 16 23.6**	**-0.4**
PAIG	**Paliouri**	**1.54**	**152**	*e*Pn	**Pn**	**04 16 24.1**	**+0.1**
NEST	**Nestorio**	**1.54**	**236**	P	**Pn**	**04 16 24.5**	**+0.3**
NEST	**Nestorio**	**1.54**	**236**	P	**Pn**	**04 16 24.5**	**+0.3**
BARS	**Barje**	**1.67**	**336**	*e*Pn	**Pn**	**04 16 26.4**	**+0.5**
BARS				*e*Sn	**Sg**	**04 16 49.8**	**-0.5**
BARS	**Barje**	**1.67**	**336**	*e*Pn	**Pn**	**04 16 26.4**	**+0.5**
BARS				*e*Sn	**Sg**	**04 16 49.8**	**-0.5**
PLD	**Plovdiv**	**1.69**	**60**	*e*Pg	**Pb**	**04 16 27.6**	**-0.1**
PLD	**Plovdiv**	**1.69**	**60**	*e*Pg	**Pb**	**04 16 27.6**	**-0.1**
THL	**Klokotos Trika**	**1.80**	**198**	P	**Pn**	**04 16 27.8**	**+0.1**
THL	**Klokotos Trika**	**1.80**	**198**	P	**Pn**	**04 16 27.8**	**+0.1**
ZAPS	**Zavoj**	**1.99**	**358**	*e*Pn	**Pb**	**04 16 31.8**	**-1.0**
NEO	**Neokhori**	**2.01**	**169**	*e*PB	**Pn**	**04 16 30.2**	**-0.4**
NEO	**Neokhori**	**2.01**	**169**	*e*Pb	**Pn**	**04 16 30.2**	**-0.4**
KDZ	**Kurdzhali**	**2.05**	**79**	*i* P	**Pb**	**04 16 33.7**	**-0.2**
KDZ	**Kurdzhali**	**2.05**	**79**	*i* P	**Pb**	**04 16 33.7**	**-0.2**
MPEP	**Malo Peshtene**	**2.20**	**20**	*i* P	**Pg**	**04 16 37.7**	**-1.0**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*PB	**Pn**	**04 16 34.6**	**+0.4**
SMTH	**Samothraki Isl**	**2.27**	**110**	*e*Pb	**Pn**	**04 16 34.6**	**+0.4**
AGG	**Agios Georgios**	**2.28**	**188**	*e*PN	**Pn**	**04 16 34.4**	**+0.1**
AGG	**Agios Georgios**	**2.28**	**188**	*e*Pn	**Pn**	**04 16 34.4**	**+0.1**
AOS	**Alonnisos**	**2.29**	**157**	*e*PN	**Pn**	**04 16 33.7**	**-0.7**
AOS	**Alonnisos**	**2.29**	**157**	*e*Pn	**Pn**	**04 16 33.7**	**-0.7**
LIA	**Limnos Island**	**2.33**	**126**	*e*PB	**Pn**	**04 16 35.8**	**+0.9**
LIA	**Limnos Island**	**2.33**	**126**	*e*Pb	**Pn**	**04 16 35.8**	**+0.9**
ALN	**Alexandroupoli**	**2.54**	**98**	P	**Pn**	**04 16 37.7**	**-0.1**
ALN	**Alexandroupoli**	**2.54**	**98**	*e*PN	**Pn**	**04 16 38.0**	**+0.2**
ALN	**Alexandroupoli**	**2.54**	**98**	P	**Pn**	**04 16 37.7**	**-0.1**
ALN	**Alexandroupoli**	**2.54**	**98**	*e*Pn	**Pn**	**04 16 38.0**	**+0.2**
BOLS	**Boljevac**	**2.60**	**348**	*e*Pn	**Pn**	**04 16 39.8**	**+1.1**
BOLS	**Boljevac**	**2.60**	**348**	*e*Pn	**Pn**	**04 16 39.8**	**+1.1**
LKD2	**Lefkada island**	**2.96**	**213**	*e*PB	**Pn**	**04 16 45.2**	**+1.6**
LKD2	**Lefkada island**	**2.96**	**213**	*e*Pb	**Pn**	**04 16 45.2**	**+1.6**
GRUS	**Gruza**	**3.00**	**331**	*e*Pn	**Pn**	**04 16 44.2**	**+0.1**
GRUS				*e*Sn	**Sn**	**04 17 22.5**	**+2.4**
GRUS	**Gruza**	**3.00**	**331**	*e*Pn	**Pn**	**04 16 44.2**	**+0.1**
GRUS				*e*Sn	**Sn**	**04 17 22.5**	**+2.4**
JMB	**Yambol**	**3.11**	**66**	*e*Pn	**Pn**	**04 16 45.9**	**+0.2**
JMB				*e*Sn	**Sn**	**04 17 23.1**	**+0.2**
JMB	**Yambol**	**3.11**	**66**	*e*Pn	**Pn**	**04 16 45.9**	**+0.2**
JMB				*e*Sn	**Sn**	**04 17 23.1**	**+0.2**
DIVS	**Divibare**	**3.46**	**325**	*e*Pn	**Pn**	**04 16 50.8**	**+0.3**
DIVS				*e*Sn	**Sn**	**04 17 32.3**	**+0.7**
DIVS	**Divibare**	**3.46**	**325**	*e*Pn	**Pn**	**04 16 50.8**	**+0.3**
DIVS				*e*Sn	**Sn**	**04 17 32.3**	**+0.7**
HUMR	**Humele**	**3.64**	**26**	⇓*i*P	**Pg**	**04 17 05.8**	**-0.4**
GZR	**Gura Zlata**	**4.11**	**0**	⇓*i*P	**Pn**	**04 17 00.6**	**+1.2**
BZS	**Buzias**	**4.40**	**350**	⇑*i*P	**Pn**	**04 17 03.0**	**-0.4**
VOIR		**4.48**	**21**	⇓*i*P	**Pn**	**04 17 05.2**	**+0.6**
MLR	**Muntele Rosu**	**4.81**	**28**	⇓*i*P	**Pn**	**04 17 11.2**	**+2.0**
TIRR	**Tirgusor**	**5.24**	**51**	⇑*i*P	**Pg**	**04 17 34.8**	**-2.1**
TIRR				S	**Sg**	**04 18 42.6**	**-2.3**
PLOR	**Plostina**	**5.38**	**31**	⇑*i*P	**Pn**	**04 17 18.4**	**+1.7**
VRI	**Vrincioaia**	**5.42**	**31**	⇑*i*P	**Pn**	**04 17 19.4**	**+2.0**

*ISCJB **19** 04:49:01.0±0.4,41°.31N±0°.02×22°.72E±0°.03, h8km±3km, Error ellipse: s-maj=4.1km s-min=3.3km az=154.9*
*SKO **19** 04:49:00.9, 41°.31N×22°.72E, h15km, M2.0, ML2.4*
*ATH **19** 04:49:01.5, 41°.25N×22°.75E, h22km±1km, MD3.6/6*
*THE **19** 04:49:01.7, 41°.30N×22°.74E, h0km±1km, ML2.8/5, Error ellipse: s-maj=1.4km s-min=0.4km az=5.0*
*CSEM **19** 04:49:01.2±0.1, 41°.32N×22°.73E, h2km, ML2.3, Error ellipse: s-maj=3.6km s-min=2.6km az=70.0*
*BEO **19** 04:49:03.0±0.4, 41°.35N×22°.59E, h8km±3km, ML2.3/6*

ISC 19 04:49:01.6±0.8, 41°.30N±0°.02×22°.72E±0°.02, h10km±6km, n47, σ0s64/71, 3C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	**Valandovo**	**0.11**	**280**	P		**Pg**	**04 49 04.0**	**-0.3**
VAY				S		**Sg**	**04 49 06.5**	**+0.3**
VAY	**Valandovo**	**0.11**	**280**	*i* Pg		**Pg**	**04 49 04.1**	**-0.2**
VAY				eLg		Lg	04 49 06.5	
	comp=E,2μm,0.6s							
VAY				*i* Sg		**Sg**	**04 49 06.5**	**+0.3**
VAY				eLg		Lg	04 49 06.6	
	comp=N,3μm,0.3s							
VAY	**Valandovo**	**0.11**	**280**	P		**Pg**	**04 49 04.0**	**-0.3**
VAY				S		**Sg**	**04 49 06.5**	**+0.3**
KNT	**Kendrikon**	**0.20**	**135**	P		**Pg**	**04 49 05.7**	**0.0**
KNT				S		**Sg**	**04 49 08.5**	**+0.1**
KNT	**Kendrikon**	**0.20**	**135**	P		**Pg**	**04 49 05.7**	**0.0**
KNT				S		**Sg**	**04 49 08.5**	**+0.1**
GRG	**Griva**	**0.42**	**215**	P		**Pg**	**04 49 09.8**	**0.0**
GRG				S		**Sg**	**04 49 16.1**	**+0.7**
GRG	**Griva**	**0.42**	**215**	*e*PB		**Pg**	**04 49 09.8**	**0.0**
GRG				*e*SB		**Sg**	**04 49 16.0**	**+0.7**
GRG	**Griva**	**0.42**	**215**	P		**Pg**	**04 49 09.8**	**0.0**
GRG				*e*Sb		**Sg**	**04 49 16.0**	**+0.7**
SOH	**Sokhos**	**0.68**	**135**	P		**Pg**	**04 49 14.2**	**-0.5**
SOH				S		**Sg**	**04 49 24.2**	**+0.6**
SOH	**Sokhos**	**0.68**	**135**	*e*PN		**Pg**	**04 49 14.1**	**-0.6**
SOH	**Sokhos**	**0.68**	**135**	P		**Pg**	**04 49 14.2**	**-0.5**
SOH				S		**Sg**	**04 49 24.2**	**+0.6**
SRS	**Serrai**	**0.69**	**105**	P		**Pg**	**04 49 14.3**	**-0.5**
SRS	**Serrai**	**0.69**	**105**	P		**Pg**	**04 49 14.3**	**-0.5**
THE	**Thessaloniki**	**0.69**	**164**	P		**Pg**	**04 49 14.5**	**-0.5**
THE				S		**Sb**	**04 49 24.9**	**-0.5**
THE	**Thessaloniki**	**0.69**	**164**	P		**Pg**	**04 49 14.5**	**-0.5**
THE				S		**Sb**	**04 49 24.9**	**-0.5**
HORT	**Hortiatis**	**0.76**	**157**	P		**Pg**	**04 49 15.8**	**-0.4**
HORT				S		**Sb**	**04 49 27.2**	**-0.2**
HORT	**Hortiatis**	**0.76**	**157**	P		**Pg**	**04 49 15.8**	**-0.4**
HORT				S		**Sb**	**04 49 27.2**	**-0.2**
NVR	**Nevrokopi**	**0.86**	**86**	P		**Pg**	**04 49 17.7**	**-0.5**
NVR	**Nevrokopi**	**0.86**	**86**	*e*PN		**Pg**	**04 49 17.6**	**-0.6**
NVR				*e*SN		**Sg**	**04 49 29.6**	**+0.1**
NVR	**Nevrokopi**	**0.86**	**86**	P		**Pg**	**04 49 17.7**	**-0.5**
NVR				*e*Sn		**Sg**	**04 49 29.6**	**+0.1**
BIA	**Bitola**	**1.09**	**255**	*e*Pg		**Pg**	**04 49 21.6**	**-0.9**
BIA				*e*Sg		**Sg**	**04 49 36.7**	**+0.1**
FNA	**Florina**	**1.14**	**243**	P		**Pb**	**04 49 23.3**	**-0.1**
FNA	**Florina**	**1.14**	**243**	*e*PN		**Pb**	**04 49 23.3**	**-0.1**
FNA	**Florina**	**1.14**	**243**	P		**Pb**	**04 49 23.3**	**-0.1**
VTS	**Vitosha**	**1.34**	**16**	P		**Pn**	**04 49 26.9**	**+0.3**
VTS	**Vitosha**	**1.34**	**16**	*e*Pg		**Pb**	**04 49 27.1**	**+0.2**
VTS				*i* Sg		**Sn**	**04 49 44.7**	**+0.2**
VTS	**Vitosha**	**1.34**	**16**	⇑*i*P		**Pb**	**04 49 27.1**	**+0.2**
VTS				S		**Sn**	**04 49 44.8**	**+0.2**
VTS	**Vitosha**	**1.34**	**16**	*e*Pg		**Pb**	**04 49 27.1**	**+0.2**
VTS				*i* Sg		**Sn**	**04 49 44.7**	**+0.2**
OUR	**Ouranopolis**	**1.36**	**135**	P		**Pn**	**04 49 26.4**	**-0.3**
OUR				S		**Sg**	**04 49 46.7**	**+1.3**
OUR	**Ouranopolis**	**1.36**	**135**	P		**Pn**	**04 49 26.4**	**-0.3**
OUR				S		**Sg**	**04 49 46.7**	**+1.3**
PAIG	**Paliouri**	**1.56**	**152**	P		**Pn**	**04 49 29.5**	**+0.2**
PAIG	**Paliouri**	**1.56**	**152**	P		**Pn**	**04 49 29.5**	**+0.2**
BARS	**Barje**	**1.66**	**336**	*e*Pn		**Pn**	**04 49 31.1**	**+0.3**
BARS				*e*Sn		**Sn**	**04 49 52.2**	**0.0**
BARS	**Barje**	**1.66**	**336**	*e*Pn		**Pn**	**04 49 31.1**	**+0.3**
BARS				*e*Sn		**Sn**	**04 49 52.2**	**0.0**
PLD	**Plovdiv**	**1.69**	**61**	*e*Pn		**Pb**	**04 49 32.7**	**-0.1**
PLD				*e*Sn		**Sg**	**04 49 57.0**	**+1.1**
PLD	**Plovdiv**	**1.69**	**61**	*e*Pn		**Pb**	**04 49 32.7**	**-0.1**
ZAPS	**Zavoj**	**1.97**	**358**	*e*Pg		**Pb**	**04 49 38.1**	**+0.5**
NEO	**Neokhori**	**2.03**	**169**	*e*PB		**Pn**	**04 49 35.6**	**-0.3**
NEO	**Neokhori**	**2.03**	**169**	*e*Pb		**Pn**	**04 49 35.6**	**-0.3**
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*PB		**Pn**	**04 49 40.9**	**+1.5**
SMTH	**Samothraki Isl**	**2.29**	**110**	*e*Pb		**Pn**	**04 49 40.9**	**+1.5**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn		**Pn**	**04 49 50.3**	**+1.4**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn		**Pn**	**04 49 50.3**	**+1.4**
DIVS	**Divibare**	**3.44**	**325**	*e*Pn		**Pn**	**04 49 55.3**	**-0.1**
DIVS	**Divibare**	**3.44**	**325**	*e*Pn		**Pn**	**04 49 55.3**	**-0.1**
VOIR		**4.47**	**22**	⇑*i*P		Pn	04 50 13.1	+3.6
MLR	**Muntele Rosu**	**4.80**	**28**	⇑*i*P		**Pb**	**04 50 23.5**	**-2.4**

*BEO **19** 05:25:47.8±1.0, 39°.41N×20°.58E, h0km, ML3.7/8*
*TIR **19** 05:25:48.6±5.1, 39°.71N×20°.73E, h0km±13km*
*THE **19** 05:25:50.2, 39°.74N×20°.75E, h0km±2km, ML3.6/6, Error ellipse: s-maj=2.0km s-min=0.6km az=225.0*
*CSEM **19** 05:25:50.4±0.2, 39°.68N×20°.75E, h2km, MD3.9, Error ellipse: s-maj=4.1km s-min=3.2km az=25.0*
*PDG **19** 05:25:51.0±0.6, 39°.78N×20°.73E, h4km±1km, ML3.5/8, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*
*IDC **19** 05:25:50.1±1.3, 39°.72N×20°.48E, h0km, mb3.8/7, mb1 3.8/10, mb1mx3.7/30, mbtmp3.7/10, ML3.6/3, MS3.1/4, Ms1 3.1/4, ms1mx2.6/36, Error ellipse: s-maj=23.6km s-min=14.7km az=131.0*
*ATH **19** 05:25:50.4, 39°.72N×20°.76E, h5km±3km, MD3.7/15*
*PRU **19** 05:25:54.5, 39°.90N×20°.71E, h5km*

ISC 19 05:25:50.1±1.0, 39°.74N±0°.02×20°.74E±0°.02, h2km±8km, n151, σ1s54/210, mb3.8/6, MS2.8/3, 22C-9D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JAN	**Janina**	**0.12**	**132**	P		**Pg**	**05 25 51.8**	**-0.6**
JAN				S		**Sg**	**05 25 54.0**	**0.0**
JAN	**Janina**	**0.12**	**132**	*e*PG		**Pg**	**05 25 51.8**	**-0.6**
JAN				*e*SG		**Sg**	**05 25 53.9**	**0.0**
JAN	**Janina**	**0.12**	**132**	P		**Pg**	**05 25 51.8**	**-0.6**
JAN				S		**Sg**	**05 25 54.0**	**0.0**
IGT	**Igoumenitsa**	**0.37**	**237**	P		**Pg**	**05 25 57.1**	**-0.2**
IGT				S		**Sg**	**05 26 03.4**	**+1.2**
IGT	**Igoumenitsa**	**0.37**	**237**	P		**Pg**	**05 25 57.1**	**-0.2**
IGT				S		**Sg**	**05 26 03.4**	**+1.2**
MEV	**Metsovon**	**0.38**	**82**	P		**Pg**	**05 25 57.4**	**-0.1**
MEV	**Metsovon**	**0.38**	**82**	P		**Pg**	**05 25 57.4**	**-0.1**
LSK	**Leskovik**	**0.43**	**346**	*e*PG		**Pg**	**05 25 59.1**	**+0.7**
LSK				*i* SG		**Sb**	**05 26 06.5**	**-1.0**
SRN	**Sarande**	**0.59**	**285**	*e*PG		**Pg**	**05 26 01.1**	**-0.3**
SRN				*i* SG		**Sb**	**05 26 12.4**	**+0.5**
SRN	**Sarande**	**0.59**	**285**	P		**Pg**	**05 26 01.3**	**-0.1**
SRN				S		**Sb**	**05 26 11.2**	**-0.7**
SRN	**Sarande**	**0.59**	**285**	P		**Pg**	**05 26 01.3**	**-0.1**
SRN				S		**Sb**	**05 26 11.2**	**-0.7**
NEST	**Nestorio**	**0.72**	**19**	P		**Pg**	**05 26 03.3**	**-0.7**
NEST				S		**Sg**	**05 26 14.4**	**+1.1**
NEST	**Nestorio**	**0.72**	**19**	P		**Pg**	**05 26 03.3**	**-0.7**
NEST				S		**Sg**	**05 26 14.4**	**+1.1**
KEK	**Kerkira**	**0.73**	**269**	P		**Pg**	**05 26 04.0**	**0.0**
KEK				S		**Sb**	**05 26 14.9**	**-1.0**
KEK	**Kerkira**	**0.73**	**269**	*e*PG		**Pg**	**05 26 04.1**	**0.0**
KEK				*e*SB		**Sb**	**05 26 15.7**	**-0.2**
KEK	**Kerkira**	**0.73**	**269**	*e*Pg		**Pg**	**05 26 04.1**	**0.0**
KEK				S		**Sb**	**05 26 14.9**	**-1.0**
KEK				*e*Sb		**Sb**	**05 26 15.7**	**-0.2**
KBN	**Korca**	**0.89**	**2**	*e*PG		**Pb**	**05 26 08.0**	**-0.3**
KBN				*i* SG		**Sn**	**05 26 26.7**	**+3.5**
LKD2	**Lefkada island**	**0.95**	**184**	P		**Pg**	**05 26 08.5**	**+0.3**
LKD2				S		**Sb**	**05 26 22.7**	**+0.4**
LKD2	**Lefkada island**	**0.95**	**184**	*e*PB		**Pg**	**05 26 08.6**	**+0.3**
LKD2	**Lefkada island**	**0.95**	**184**	P		**Pg**	**05 26 08.5**	**+0.3**
LKD2				S		**Sb**	**05 26 22.7**	**+0.4**
KZN	**Kozani**	**0.98**	**54**	P		**Pg**	**05 26 09.0**	**+0.1**
KZN				S		**Sb**	**05 26 22.9**	**-0.3**
KZN	**Kozani**	**0.98**	**54**	*e*PN		**Pb**	**05 26 09.6**	**-0.2**
KZN	**Kozani**	**0.98**	**54**	P		**Pg**	**05 26 09.0**	**+0.1**
KZN	**Kozani**	**0.98**	**54**	*e*Pn		**Pb**	**05 26 09.6**	**-0.2**
KZN				S		**Sb**	**05 26 22.9**	**-0.3**
THL	**Klokotos Trika**	**1.00**	**99**	P		**Pg**	**05 26 08.6**	**-0.7**
THL				S		**Sb**	**05 26 24.1**	**+0.4**
THL	**Klokotos Trika**	**1.00**	**99**	*e*PG		**Pg**	**05 26 08.8**	**-0.5**
THL	**Klokotos Trika**	**1.00**	**99**	*e*Pg		**Pg**	**05 26 08.8**	**-0.5**
THL				S		**Sb**	**05 26 24.1**	**+0.4**
FNA	**Florina**	**1.16**	**25**	P		**Pg**	**05 26 11.6**	**-0.7**
FNA	**Florina**	**1.16**	**25**	*e*PG		**Pg**	**05 26 11.8**	**-0.5**
FNA				*e*SB		**Sn**	**05 26 29.7**	**-0.1**
FNA	**Florina**	**1.16**	**25**	*e*Pg		**Pg**	**05 26 11.8**	**-0.5**
FNA				*e*Sb		**Sn**	**05 26 29.7**	**-0.1**
EVR	**Evrytania**	**1.16**	**134**	P		**Pg**	**05 26 12.2**	**-0.2**
EVR	**Evrytania**	**1.16**	**134**	*e*PB		**Pg**	**05 26 12.1**	**-0.3**
EVR	**Evrytania**	**1.16**	**134**	*e*Pb		**Pg**	**05 26 12.1**	**-0.3**
VLO	**Vlora**	**1.20**	**308**	*e*PN		**Pn**	**05 26 15.4**	**+1.4**
VLO				*i* SN		**Sn**	**05 26 36.1**	**+5.2**
MAKR	**Makrakomi, Fth**	**1.30**	**123**	P		**Pg**	**05 26 14.7**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.30**	**123**	P		**Pg**	**05 26 14.7**	**-0.3**
BIA	**Bitola**	**1.36**	**19**	*e*Pn		**Pn**	**05 26 41.0**	**+6.2**
BIA				*e*Sg		**Sn**	**05 26 41.0**	**+6.2**
LIT	**Litokhoron**	**1.40**	**74**	P		**Pn**	**05 26 16.8**	**+0.2**
LIT				S		**Sb**	**05 26 35.4**	**+0.2**
LIT	**Litokhoron**	**1.40**	**74**	*e*PB		**Pg**	**05 26 17.4**	**+0.5**
LIT	**Litokhoron**	**1.40**	**74**	P		**Pn**	**05 26 16.8**	**+0.2**
LIT	**Litokhoron**	**1.40**	**74**	*e*Pb		**Pg**	**05 26 17.4**	**+0.5**
LIT				S		**Sb**	**05 26 35.4**	**+0.2**
AGG	**Agios Georgios**	**1.42**	**119**	P		**Pn**	**05 26 16.6**	**-0.4**
AGG	**Agios Georgios**	**1.42**	**119**	*e*PG		**Pn**	**05 26 16.9**	**-0.1**
AGG	**Agios Georgios**	**1.42**	**119**	P		**Pn**	**05 26 16.6**	**-0.4**
AGG	**Agios Georgios**	**1.42**	**119**	*e*Pg		**Pn**	**05 26 16.9**	**-0.1**
VLS	**Valsamata**	**1.56**	**184**	P		**Pn**	**05 26 18.7**	**-0.2**
VLS	**Valsamata**	**1.56**	**184**	P		**Pn**	**05 26 18.7**	**-0.2**
TIR	**Tirane**	**1.74**	**338**	*e*PN		**Pg**	**05 26 24.3**	**+0.7**
TIR				*i* SN		Sg	05 26 52.8	+6.6
GRG	**Griva**	**1.76**	**46**	*e*PG		**Pb**	**05 26 22.9**	**-0.3**
GRG				*e*SN		**Sg**	**05 26 48.0**	**+1.3**
GRG	**Griva**	**1.76**	**46**	*e*Pg		**Pb**	**05 26 22.9**	**-0.3**
GRG				*e*Sn		**Sg**	**05 26 48.0**	**+1.3**
KLV	**Kalavryta, Ach**	**2.02**	**146**	*e*PN		**Pg**	**05 26 29.0**	**+0.2**
VAY	**Valandovo**	**2.11**	**41**	*e*Pn		**Pb**	**05 26 29.5**	**+0.4**
VAY				*e*Sn		**Sg**	**05 27 00.2**	**+2.2**
VAY	**Valandovo**	**2.11**	**41**	*e*Pn		**Pn**	**05 26 26.5**	**0.0**
VAY				*e*Sg		**Sg**	**05 27 00.4**	**+2.4**
VAY	**Valandovo**	**2.11**	**41**	*e*Pn		**Pb**	**05 26 29.5**	**+0.4**
PAIG	**Paliouri**	**2.27**	**84**	*e*PN		**Pb**	**05 26 31.6**	**-0.3**
SOH	**Sokhos**	**2.28**	**61**	*e*PN		**Pb**	**05 26 31.5**	**-0.5**
SOH	**Sokhos**	**2.28**	**61**	*e*Pn		**Pb**	**05 26 31.5**	**-0.5**
SKO	**Skopje**	**2.30**	**13**	*e*Pn		**Pn**	**05 26 30.7**	**+1.7**
SKO				*e*Sg		**Sg**	**05 27 04.0**	**0.0**
PUK	**Puka**	**2.39**	**345**	*e*PN		**Pb**	**05 26 32.9**	**-1.1**
AOS	**Alonnisos**	**2.50**	**102**	*e*PN		**Pb**	**05 26 34.6**	**-1.1**
ULC	**Ulcinj**	**2.50**	**333**	⇑*i*Pn		**Pn**	**05 26 32.8**	**+1.0**
ULC				*e*Sn		**Sb**	**05 27 06.2**	**-0.8**
ULC	**Ulcinj**	**2.50**	**333**	⇑*i*Pn		**Pn**	**05 26 32.8**	**+1.0**
ULC				*e*Sn		**Sb**	**05 27 06.2**	**-0.8**
KKB	**Krupnik**	**2.77**	**39**	*e*P		**Pb**	**05 26 39.5**	**-1.0**
KKB	**Krupnik**	**2.77**	**39**	*e*P		**Pb**	**05 26 39.5**	**-1.0**
PDG	**Podgorica**	**2.92**	**338**	*e*Pn		**Pn**	**05 26 39.3**	**+1.8**
PDG				*e*Sn		**Sb**	**05 27 17.9**	**-1.1**
PDG	**Podgorica**	**2.92**	**338**	⇑*i*Pn		**Pn**	**05 26 38.9**	**+1.4**
PDG				*e*Sn		**Sn**	**05 27 15.6**	**+2.5**
PVY	**Plav**	**2.92**	**349**	*e*Pn		**Pn**	**05 26 38.8**	**+1.1**
PVY				*e*Sn		**Sn**	**05 27 15.6**	**+2.2**
PVY	**Plav**	**2.92**	**349**	*e*Pn		**Pn**	**05 26 38.8**	**+1.1**
PVY				*e*Sn		**Sn**	**05 27 15.6**	**+2.2**
TTG	**Podgorica**	**2.92**	**338**	⇑*i*Pn		**Pn**	**05 26 38.9**	**+1.4**
TTG				*e*Sn		**Sn**	**05 27 15.6**	**+2.5**
BUM	**Brajici-Budva**	**2.92**	**332**	⇑*i*Pn		**Pn**	**05 26 37.8**	**+0.2**
BUM				*e*Sn		**Sn**	**05 27 15.6**	**+2.3**
BUM	**Brajici-Budva**	**2.92**	**332**	⇑*i*Pn		**Pn**	**05 26 37.8**	**+0.2**
BUM				*e*Sn		**Sn**	**05 27 15.6**	**+2.3**
MMB	**Musomiste**	**2.93**	**50**	*e*P		**Pg**	**05 26 45.0**	**-1.3**
BARS	**Barje**	**3.18**	**14**	*e*Pn		**Pn**	**05 26 42.5**	**+1.3**
BARS	**Barje**	**3.18**	**14**	*e*Pn		**Pn**	**05 26 42.5**	**+1.3**
HCY	**Herceg Novi**	**3.20**	**329**	⇓*i*Pn		**Pn**	**05 26 41.9**	**+0.5**
HCY				*e*Sn		**Sn**	**05 27 22.4**	**+2.3**
HCY	**Herceg Novi**	**3.20**	**329**	⇓*i*Pn		**Pn**	**05 26 41.9**	**+0.5**
HCY				*e*Sn		**Sn**	**05 27 22.4**	**+2.3**
BEY	**Berane**	**3.20**	**349**	*e*Pn		**Pn**	**05 26 44.4**	**+2.9**
BEY				*e*Sn		**Sn**	**05 27 22.6**	**+2.4**
IVA	**Berane**	**3.20**	**349**	*e*Pn		**Pn**	**05 26 44.4**	**+2.9**
IVA				*e*Sn		**Sn**	**05 27 22.6**	**+2.4**
NKY	**Niksic**	**3.34**	**337**	⇑*i*Pn		**Pn**	**05 26 44.2**	**+0.7**
NKY				*e*Sn		**Sn**	**05 27 25.8**	**+1.9**
NKY	**Niksic**	**3.34**	**337**	⇑*i*Pn		**Pn**	**05 26 44.2**	**+0.7**
NKY				*e*Sn		**Sn**	**05 27 25.8**	**+1.9**
VTS	**Vitosha**	**3.41**	**32**	*e*P		Pn	05 26 48.0	+3.5
VTS	**Vitosha**	**3.41**	**32**	*e*Pn		**Pn**	**05 26 47.3**	**+2.8**
VTS				*e*Sn		**Sb**	**05 27 30.9**	**-2.3**
VTS	**Vitosha**	**3.41**	**32**	⇑*i*P		**Pn**	**05 26 47.5**	**+3.0**
VTS	**Vitosha**	**3.41**	**32**	S		**Sb**	**05 27 31.0**	**-2.3**
VTS	**Vitosha**	**3.41**	**32**	*e*Pn		**Pn**	**05 26 47.3**	**+2.8**
VTS	**Vitosha**	**3.41**	**32**	*e*P		Pn	05 26 48.0	+3.5
VTS				*e*Sn		**Sb**	**05 27 30.9**	**-2.3**
VLI	**Veliai**	**3.47**	**149**	*e*PN		**Pn**	**05 26 47.5**	**+2.3**
BRY	**Bratogost**	**3.57**	**333**	⇑*i*Pn		**Pn**	**05 26 48.0**	**+1.3**
BRY				*e*Sn		**Sn**	**05 27 31.7**	**+2.2**
BRY	**Bratogost**	**3.57**	**333**	⇑*i*Pn		**Pn**	**05 26 48.0**	**+1.3**
BRY				*e*Sn		**Sn**	**05 27 31.7**	**+2.2**
UPM	**Unac-Piva**	**3.73**	**339**	⇑*i*Pn		**Pn**	**05 26 50.5**	**+1.6**
UPM				*e*Sn		**Sn**	**05 27 35.0**	**+1.5**
UPM	**Unac-Piva**	**3.73**	**339**	⇑*i*Pn		**Pn**	**05 26 50.5**	**+1.6**
UPM				*e*Sn		**Sn**	**05 27 35.0**	**+1.5**
PLE	**Pljevlja**	**3.73**	**345**	⇑*i*Pn		**Pn**	**05 26 49.4**	**+0.5**
PLE				*e*Sn		**Sn**	**05 27 35.6**	**+2.1**
PLE	**Pljevlja**	**3.73**	**345**	⇑*i*Pn		**Pn**	**05 26 49.4**	**+0.5**
PLE				*e*Sn		**Sn**	**05 27 35.6**	**+2.1**
ZAPS	**Zavoj**	**3.81**	**21**	*e*Pn		**Pn**	**05 26 52.0**	**+2.1**
ZAPS				*e*Sn		**Sb**	**05 27

PTK	**Pertek**	**1.18 250**	*e*Pn	**Pg**	**05 33 04.8**	**+0.1**
BEST	**Besiri**	**1.45 166**	*e*P	**Pg**	**05 33 10.4**	**+0.5**
BEST			*e*S	**Sg**	**05 33 30.9**	**+2.2**
KELT	**Kelkit**	**1.47 306**	*e*P	**Pn**	**05 33 09.6**	**0.0**
KELT			*e*S	**Sg**	**05 33 29.7**	**+0.2**
KELT	**Kelkit**	**1.47 306**	*e*P	**Pn**	**05 33 09.6**	**0.0**
KELT			*e*S	**Sg**	**05 33 29.7**	**+0.2**
GUMT	**Gumushane**	**1.55 319**	*e*PN	**Pn**	**05 33 10.6**	**0.0**
GUMT	**Gumushane**	**1.55 319**	*e*Pn	**Pn**	**05 33 10.6**	**0.0**
ELZG	**Elazig**	**1.63 241**	*e*P	**Pg**	**05 33 13.6**	**+0.1**
ELZG			*e*S	**Sg**	**05 33 36.8**	**+2.1**
ELZG	**Elazig**	**1.63 241**	*e*P	**Pg**	**05 33 13.6**	**+0.1**
AGRB	**Hanur-Agry**	**1.71 80**	*e*PN	**Pb**	**05 33 13.8**	**-0.4**
AGRB	**Hanur-Agry**	**1.71 80**	*e*Pn	**Pb**	**05 33 13.8**	**-0.4**
ILIC	**ilic-Erzincan**	**1.75 276**	*e*PN	**Pn**	**05 33 13.2**	**0.0**
ILIC	**ilic-Erzincan**	**1.75 276**	*e*Pn	**Pn**	**05 33 13.2**	**0.0**

NIED ***19*** *05:32:00.0, 35°.50N×141°.30E, h38km, Mw4.4 Best double couple: M0=4.83000×10^15 NP1:φs=261.00000°, δ=67.00000°, λ=-120.00000°. NP2:φs=137.00000°, δ=37.00000°, λ=-41.00000°.*

BJI ***19*** *05:32:42.7, 35°.57N×142°.29E, h33km, mB4.8/2, mb4.5/4*

IDC ***19*** *05:32:46.3±0.6, 35°.50N×141°.13E, h0km, mb4.1/21, mb1 4.3/23, mb1mx4.2/29, mbtmp4.2/23, ML4.6/2, MS3.5/16, Ms1 3.5/16, ms1mx3.4/32, Error ellipse: s-maj=18.5km s-min=12.2km az=101.0*

MOS ***19*** *05:32:48.7±1.1, 35°.54N×141°.39E, h33km, mb4.5/32, Error ellipse: s-maj=10.7km s-min=6.4km az=104.0*

NEIC ***19*** *05:32:49.5±3.1, 35°.53N×141°.23E, h21km±21km, mb4.5/8, MW4.4(NIED), Error ellipse: s-maj=10.2km s-min=8.7km az=132.0*

NEIC Recorded [1 JMA] in Chiba.

ISCJB ***19*** *05:32:50.5±0.6, 35°.50N±0°.03×141°.23E±0°.05, h45km±4km, mb4.3/43, MS3.5/13, Error ellipse: s-maj=7.5km s-min=4.9km az=16.1*

JMA ***19*** *05:32:50.3±0.1, 35°.53N×141°.25E, h42km±1km, M4.4 Broadband fault plane solution: P waves. NP1: φs=271.00000°, δ=88.00000°, λ=-105.00000°. NP2: φs=173.00000°, δ=15.00000°, λ=-8.00000°. Principal axes: T Plg41.0000°, Azm15.0000°; N Plg15.0000°, Azm272.0000°; P Plg45.0000°, Azm166.0000°;*

JMA Felt I J1.

ISC 19 05:32:50.8±1.3, 35°.48N±0°.04×141°.25E±0°.05, h30km±9km, n117, σ1§12/118, mb4.4/43, MS3.7/13, 11C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CHOJ	**Chosi**	**0.39**	**305**	⇓P		**Pb**	**05 32 59.3**	**-0.2**
CHOJ				S		**Sn**	**05 33 05.9**	**-1.0**
KTR	**Katsuura**	**0.83**	**247**	⇑P		**Pn**	**05 33 06.1**	**-0.4**
KTR				S		**Sn**	**05 33 17.5**	**-0.3**
BSO1	**Boso 1**	**0.85**	**196**	⇑P		**Pn**	**05 33 06.7**	**0.0**
BSO1				S		**Sn**	**05 33 19.4**	**+2.0**
JCN	**Nagara**	**0.86**	**266**	P		**Pb**	**05 33 07.4**	**+0.2**
BSO4	**Boso 4**	**0.89**	**237**	⇑P		**Pn**	**05 33 07.1**	**-0.1**
BSO4				S		**Sn**	**05 33 19.6**	**+0.5**
BSO3	**Boso 3**	**0.91**	**222**	⇑P		**Pn**	**05 33 07.4**	**+0.1**
JIM2	**Oshima 3**	**1.68**	**244**	⇑P		**Pn**	**05 33 16.7**	**-1.4**
JIM2				S		**Sn**	**05 33 37.2**	**-1.4**
JAG	**Ashikaga**	**1.74**	**303**	P		**Pn**	**05 33 18.4**	**-0.6**
JOD2	**Odawara 2**	**1.78**	**264**	⇑P		**Pn**	**05 33 19.0**	**-0.6**
JOD2				S		**Sn**	**05 33 40.7**	**-0.5**
JFK	**Kawauchi**	**1.91**	**351**	⇑P		**Pn**	**05 33 20.0**	**-1.4**
JRY	**Ryogami san**	**1.99**	**286**	P		**Pn**	**05 33 22.8**	**+0.4**
JHJ	**Hachijo jima 2**	**2.65**	**208**	Pn		**Pn**	**05 33 30.7**	**-0.7**
	211nm,0.3s,baz=77,slow=4.7,SNR=54							
JHJ				Sn		**Sn**	**05 34 01.4**	**-1.1**
	328nm,0.3s,baz=84,slow=23,SNR=13							
JHJ				LR		LR	05 34 40.5	
	comp=Z,549nm,18.5s,baz=58,slow=44							
MAJO	**Matsushiro**	**2.69**	**294**	*e*P		**Pn**	**05 33 32.7**	**+0.7**
MAJO	**Matsushiro**	**2.69**	**294**	*e*Pn		**Pn**	**05 33 32.7**	**+0.7**
MAT	**Matsushiro**	**2.69**	**294**	P		**Pn**	**05 33 32.9**	**+0.9**
MAT				*e*S		**Sn**	**05 34 01.0**	**-2.6**
ERM	**Erimo**	**6.70**	**12**	*e*P		**Pn**	**05 34 25.1**	**-1.9**
ERM	**Erimo**	**6.70**	**12**	*e*Pn		**Pn**	**05 34 24.5**	**-2.6**
	73nm,0.8s							
ASAJ	**Asahikawa**	**8.69**	**6**	*e*Pn		**Pn**	**05 34 51.5**	**-2.8**
	9.3nm,0.4s							
ASAJ	**Asahikawa**	**8.69**	**6**	Pn		**Pn**	**05 34 51.6**	**-2.8**
	8.0nm,0.3s,baz=215,slow=8.0,SNR=14							
YUK	**Yuzh-Kuril'sk**	**9.25**	**21**	*d* iP		Pn	05 34 58.9	-3.2
YUK				*i* S		Sn	05 36 38.1	-7.0
YUK				pmax	pmax			
	comp=N,16nm,0.2s							
YUK				pmax	pmax			
	comp=E,40nm,0.2s							
YUK				pmax	pmax			
	comp=Z,70nm,0.2s							
YUK				smax	smax			
	comp=N,142nm,2.7s							
YUK				smax	smax			
	comp=E,221nm,2.7s							
KSRS	**Korea Array**	**10.92**	**284**	Pn		Pn	05 35 28.6	+3.7
	comp=E,0.2nm,0.3s,baz=97,slow=13,SNR=7.4							
KSRS				LR		LR	05 39 28.6	
	comp=E,282nm,21.9s,baz=356,slow=37							
KSAR	**Wonju Array Be**	**10.95**	**284**	Pn		Pn	05 35 28.6	+3.3
KUR	**Kuril'sk**	**10.97**	**25**	⇑P		**Pn**	**05 35 26.6**	**+1.0**
KUR				*e*S		**Sn**	**05 37 31.6**	**+4.4**
KUR				pmax	pmax			
	comp=N,8.0nm,0.1s							
KUR				pmax	pmax			
	comp=E,20nm,0.1s							
KUR				pmax	pmax			
	comp=Z,24nm,0.1s							
USRK	**Ussuriysk Arra**	**11.24**	**324**	Pn		**Pn**	**05 35 30.1**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=137,slow=12,SNR=15							
USRK				LR		LR	05 39 41.9	
	comp=Z,154nm,18.5s,baz=32,slow=37							
YSS	**Yuzh-Sakhalins**	**11.52**	**5**	⇑*e*P		**Pn**	**05 35 32.0**	**-1.1**
YSS				pmax	pmax			
	comp=Z,30nm,0.8s							
PETK	**Petropavlovsk-**	**21.11**	**28**	P		**P**	**05 37 34.6**	**+1.8**
PETK				pmax	pmax			
	comp=Z,4.0nm,0.8s							
PETK				MLR	MLR			
	comp=Z,43nm,19.7s							
PETK	**Petropavlovsk-**	**21.11**	**28**	P		**P**	**05 37 34.5**	**+1.8**
PETK	**Petropavlovsk-**	**21.11**	**28**	P		**P**	**05 37 34.5**	**+1.8**
	comp=Z,4.4nm,0.8s,baz=206,slow=6.4,SNR=3.9							
PETK				LR		LR	05 45 48.7	
	comp=Z,43nm,19.7s,baz=47,slow=37							
CLNS	**Chul'man**	**24.06**	**338**	*e*P		**P**	**05 38 03.4**	**+0.1**
CLNS				pmax	pmax			
	comp=Z,18nm,1.0s							
CLNS				pmax	pmax			
	comp=N,13nm,1.0s							
CLNS				pmax	pmax			
	comp=E,6.0nm,1.0s							
ENH	**Enshi**	**27.11**	**268**	*e*P		**P**	**05 38 32.5**	**+1.3**
	comp=E,10nm,0.7s							
YAK	**Yakutsk**	**27.56**	**348**	*e*P		**P**	**05 38 33.1**	**-1.7**
YAK				pmax	pmax			
	comp=Z,19nm,0.9s							
YAK				pmax	pmax			
	comp=N,17nm,1.3s							
YAK				pmax	pmax			
	comp=E,5.0nm,1.2s							
ULN	**Ulaanbaatar**	**28.15**	**307**	*e*P		**P**	**05 38 40.7**	**+0.3**
	comp=E,5.5nm,1.1s							
SONM	**Songino Array**	**28.58**	**306**	P		**P**	**05 38 44.0**	**-0.2**
SONM	**Songino Array**	**28.58**	**306**	P		**P**	**05 38 44.0**	**-0.2**
	comp=E,1.9nm,0.7s,baz=104,slow=8.6,SNR=6.5							
SONM				LR		LR	05 50 14.3	
	comp=E,95nm,21.4s,baz=111,slow=37							
LZH	**Lanzhou**	**30.24**	**282**	*e*P		P	05 38 53.0	-6.1
LZH				pP		pP	05 38 58.5	-9.2
LZH				sP		sP	05 39 00.0	-11
LZH				pmax	pmax			
	comp=Z,15nm,1.0s							
BILL	**Bilibino**	**35.56**	**16**	*e*P		**P**	**05 39 45.1**	**+0.2**
BILL				*e**PP		pP	05 39 55.7	+2.1
BILL				pmax	pmax			
	comp=Z,4.0nm,1.3s							
TIXI	**Tiksi**	**36.82**	**353**	⇑*i*P		**P**	**05 39 55.0**	**-0.6**
TIXI				pmax	pmax			
	comp=Z,6.0nm,1.1s							
CMAR	**Chiang Mai Arr**	**41.00**	**257**	P		**P**	**05 40 31.3**	**0.0**
	comp=Z,0.9nm,0.4s,baz=52,slow=7.3,SNR=3.3							
CMAR				LR		LR	05 59 11.8	
	comp=Z,50nm,18.5s,baz=210,slow=39							
ZAA0	**Zalesovo Array**	**42.88**	**314**	*e*P		**P**	**05 40 45.3**	**-0.9**
ZALV	**Zalesovo Beam**	**42.88**	**314**	P		**P**	**05 40 45.5**	**-0.7**
ZALV							05 42 36.3	
ZALV				pmax		pmax		
	comp=Z,3.0nm,0.5s							
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.6s							
ZALV				MLR		MLR		
	comp=Z,33nm,18.9s							
ZALV	**Zalesovo Beam**	**42.88**	**314**	P		**P**	**05 40 45.5**	**-0.7**
ZALV				PcP		**PcP**	**05 42 36.3**	**-0.4**
ZALV	**Zalesovo Beam**	**42.88**	**314**	P		**P**	**05 40 45.5**	**-0.7**
	comp=Z,2.8nm,0.5s,baz=100,slow=6.7,SNR=12							
ZALV				PcP		**PcP**	**05 42 36.3**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=103,slow=4.6,SNR=3.0							
ZALV				LR		LR	05 59 26.5	
	comp=Z,33nm,18.9s,baz=71,slow=37							
NVS	**Novosibirsk**	**43.83**	**315**	*e*P		P	05 40 45.5	-8.4
MK31	**Makanchi Array**	**44.85**	**303**	*e*P		**P**	**05 41 01.1**	**-1.1**
MK31	**Makanchi Array**	**44.85**	**303**	*e*P		**P**	**05 41 01.1**	**-1.1**
MKAR	**Makanchi Array**	**44.85**	**303**	P		**P**	**05 41 01.6**	**-0.6**
MKAR				pmax		pmax		
	comp=Z,2.0nm,0.6s							
MKAR				MLR		MLR		
	comp=Z,64nm,21.2s							
MKAR	**Makanchi Array**	**44.85**	**303**	P		**P**	**05 41 01.6**	**-0.6**
MKAR	**Makanchi Array**	**44.85**	**303**	P		**P**	**05 41 01.6**	**-0.6**
	comp=Z,2.1nm,0.6s,baz=86,slow=9.5,SNR=23							
MKAR				LR		LR	05 59 57.4	
	comp=Z,64nm,21.2s,baz=156,slow=36							
PMG	**Port Moresby**	**44.99**	**172**	LR		LR	05 59 09.1	
	comp=Z,91nm,20.1s,baz=53,slow=35							
KURK	**Kurchatov**	**46.80**	**309**	*e*P		**P**	**05 41 16.0**	**-1.5**
KURK				pmax		pmax		
	comp=Z,7.0nm,0.6s							
KURK	**Kurchatov**	**46.80**	**309**	*e*P		**P**	**05 41 16.0**	**-1.5**
	comp=Z,6.6nm,0.6s							
HNR	**Honiara**	**48.03**	**155**	LR		LR	05 58 12.2	
	comp=Z,134nm,19.9s,baz=3.3,slow=32							
KDAK	**Kodiak Island**	**48.35**	**41**	P		**P**	**05 41 28.9**	**-0.5**
KDAK	**Kodiak Island**	**48.35**	**41**	P		**P**	**05 41 28.9**	**-0.5**
	comp=Z,5.0nm,0.9s,baz=300,slow=12,SNR=2.4							
TKM2	**Tokmak 2**	**50.27**	**300**	*e*P		**P**	**05 41 43.9**	**-0.7**
TKM2				pmax		pmax		
	comp=Z,4.0nm,0.6s							
TKM2	**Tokmak 2**	**50.27**	**300**	*e*P		**P**	**05 41 43.9**	**-0.7**
	comp=Z,3.5nm,0.6s							
ILAR	**Eielson Array**	**50.88**	**32**	P		**P**	**05 41 49.3**	**+0.7**
ILAR	**Eielson Array**	**50.88**	**32**	P		**P**	**05 41 49.3**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=266,slow=6.1,SNR=20							
AAK	**Ala-Archa**	**51.13**	**299**	*e*P		**P**	**05 41 50.0**	**-1.0**
AAK				pmax		pmax		
	comp=Z,4.0nm,1.1s							
BVAR	**Borovoye Array**	**51.53**	**313**	LR		LR	06 03 39.6	
	comp=Z,40nm,21.6s,baz=252,slow=36							
BRVK	**Borovoye**	**51.59**	**313**	*e*P		**P**	**05 41 53.2**	**-0.9**
BRVK				pmax		pmax		
	comp=Z,3.0nm,0.6s							
BRVK	**Borovoye**	**51.59**	**313**	*e*P		**P**	**05 41 53.1**	**-0.9**
	comp=Z,2.8nm,0.6s							
KKAR	**Karatay Array**	**53.80**	**301**	*e*P		**P**	**05 42 10.3**	**-0.4**
KKAR				pmax		pmax		
	comp=Z,7.0nm,1.0s							
KKAR	**Karatay Array**	**53.80**	**301**	*e*P		**P**	**05 42 10.2**	**-0.4**
	comp=Z,6.6nm,1.0s							
FITZ	**Fitzroy Crossi**	**55.30**	**198**	P		**P**	**05 42 21.6**	**0.0**
FITZ	**Fitzroy Crossi**	**55.30**	**198**	P		**P**	**05 42 21.6**	**0.0**
	comp=Z,1.2nm,0.4s,baz=25,slow=11,SNR=8.9							
WRAB	**Tennant Creek**	**55.49**	**188**	*e*P		**P**	**05 42 22.8**	**-0.1**
WRAB				pmax		pmax		
	comp=Z,12nm,0.9s							
WRAB	**Tennant Creek**	**55.49**	**188**	*e*P		**P**	**05 42 22.8**	**-0.1**
	comp=Z,12nm,0.9s							
WRA	**Warramunga Arr**	**55.50**	**188**	P		**P**	**05 42 22.6**	**-0.4**
WRA	**Warramunga Arr**	**55.50**	**188**	P		**P**	**05 42 22.6**	**-0.4**
	comp=Z,4.6nm,0.6s,baz=4.6,slow=8.2,SNR=41							
ARU	**Arti**	**57.45**	**319**	*c* iP		**P**	**05 42 35.6**	**-0.9**
ARU							05 44 40.6	
ARU				S		**S**	**05 50 32.6**	**+1.1**
ARU				pmax		pmax		
	comp=Z,6.0nm,1.0s							
ABKAR	**Akbulak array**	**58.85**	**311**	*e*P		**P**	**05 42 45.4**	**-1.1**
	comp=Z,1.3nm,0.4s							
ASAR	**Alice Springs**	**59.23**	**188**	P		**P**	**05 42 49.2**	**-0.1**
ASAR	**Alice Springs**	**59.23**	**188**	P		**P**	**05 42 49.2**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=12,slow=9.5,SNR=8.8							
ASAR				LR		LR	06 09 08.6	
	comp=Z,58nm,18.2s,baz=355,slow=37							
AKTO	**Aktyubinsk**	**59.63**	**313**	P		**P**	**05 42 53.2**	**+1.4**
AKTO				pmax		pmax		
	comp=Z,1.0nm,0.3s							
AKTO	**Aktyubinsk**	**59.63**	**313**	P		**P**	**05 42 53.2**	**+1.4**
AKTO	**Aktyubinsk**	**59.63**	**313**	P		**P**	**05 42 53.2**	**+1.4**
	comp=Z,0.5nm,0.3s,baz=57,slow=7.0,SNR=5.2							
YKA	**Yellowknife Ar**	**65.22**	**30**	P		**P**	**05 43 29.5**	**+0.5**
YKA	**Yellowknife Ar**	**65.22**	**30**	P		**P**	**05 43 29.5**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=300,slow=6.5,SNR=5.9							
ARCES	**ARCESS Array B**	**65.41**	**340**	P		**P**	**05 43 28.6**	**-1.6**
ARCES	**ARCESS Array B**	**65.41**	**340**	P		**P**	**05 43 28.6**	**-1.6**
	comp=Z,2.9nm,0.8s,baz=45,slow=9.5,SNR=4.0							
ARCES				LR		LR	06 14 54.6	
	comp=Z,42nm,19.1s,baz=82,slow=39							
STKA	**Stephens Creek**	**67.00**	**180**	P		**P**	**05 43 40.7**	**0.0**
STKA	**Stephens Creek**	**67.00**	**180**	P		**P**	**05 43 40.7**	**0.0**
	comp=Z,1.2nm,0.5s,baz=327,slow=9.8,SNR=3.7							
JOF	**Joensuu**	**67.28**	**332**	*e*P		**P**	**05 43 41.1**	**-1.1**
JOF				pmax		pmax		
	comp=Z,2.0nm,0.5s							
JOF	**Joensuu**	**67.28**	**332**	*e*p		**P**	**05 43 41.1**	**-1.1**
	comp=Z,1.6nm,0.5s							
OBN	**Obninsk**	**69.27**	**324**	*e*P		**P**	**05 43 55.0**	**+0.3**
OBN				*e*			05 44 18.2	
OBN				*e*			05 46 25.0	
OBN				pmax		pmax		
	comp=Z,5.0nm,0.8s							
KAF	**Kangasniemi**	**69.63**	**333**	*e*P		**P**	**05 43 56.2**	**-0.7**
KAF				pmax		pmax		
	comp=Z,2.0nm,0.5s							
KAF	**Kangasniemi**	**69.63**	**333**	*e*p		**P**	**05 43 56.2**	**-0.7**
	comp=Z,2.1nm,0.5s							
FINES	**FINESS Array B**	**70.13**	**332**	P		**P**	**05 43 59.5**	**-0.4**
FINES	**FINESS Array B**	**70.13**	**332**	P		**P**	**05 43 59.5**	**-0.4**
	comp=Z,3.4nm,0.7s,baz=50,slow=6.2,SNR=15							
FINES				LR		LR	06 19 25.1	
	comp=Z,40nm,19.9s,baz=359,slow=40							
KIV	**Kislovodsk**	**71.83**	**311**	*e*P		**P**	**05 44 11.7**	**+0.9**
KIV				pmax		pmax		
	comp=Z,9.0nm,1.2s							
AKASG	**Malin Array Be**	**75.45**	**322**	P		**P**	**05 44 29.9**	**-1.8**
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.6s							
AKASG	**Malin Array Be**	**75.45**	**322**	P		**P**	**05 44 29.9**	**-1.8**
AKASG	**Malin Array Be**	**75.45**	**322**	P		**P**	**05 44 29.9**	**-1.8**
	comp=Z,1.7nm,0.6s,baz=45,slow=7.1,SNR=7.6							
HFS	**Hagfors**	**75.45**	**336**	P		**P**	**05 44 31.1**	**-0.5**
HFS	**Hagfors**	**75.45**	**336**	P		**P**	**05 44 31.1**	**-0.5**
	comp=Z,2.9nm,0.9s,baz=134,slow=4.3,SNR=5.8							
NB2	**NORSAR Subarra**	**75.57**	**337**	P		**P**	**05 44 31.7**	**-0.6**
	comp=Z,4.6nm,1.0s,baz=41,slow=5.9							
NOA	**NORSAR Array B**	**75.57**	**337**	P		**P**	**05 44 31.9**	**-0.4**
NOA	**NORSAR Array B**	**75.57**	**337**	P		**P**	**05 44 31.9**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=40,slow=5.7,SNR=7.2							
NOA				LR		LR	06 20 45.3	
	comp=Z,55nm,18.3s,baz=45,slow=38							
NVAR	**Mina Array Bea**	**76.03**	**53**	P		P	05 44 40.7	+5.1
NVAR	**Mina Array Bea**	**76.03**	**53**	P		P	05 44 40.7	+5.1
	comp=Z,0.4nm,0.5s,baz=315,slow=5.3,SNR=4.2							
PDAR	**Pinedale Array**	**78.85**	**45**	P		**P**	**05 44 52.4**	**+1.1**
PDAR	**Pinedale Array**	**78.85**	**45**	P		**P**	**05 44 52.4**	**+1.1**
	comp=Z,0.7nm,0.7s,baz=318,slow=2.0,SNR=4.5							
BRTR	**Keskin Array B**	**79.79**	**312**	P		**P**	**05 44 55.7**	**-0.7**
BRTR	**Keskin Array B**	**79.79**	**312**	P		**P**	**05 44 55.7**	**-0.7**
	comp=Z,1.3nm,0.7s,baz=144,slow=4.6,SNR=5.8							
BRG	**Berggiesshubel**	**82.33**	**329**	*e*P		P	05 45 17.8	+8.3
	comp=Z,5.7nm,1.1s							
BRG	**Berggiesshubel**	**82.33**	**329**	*e*P		P	05 45 17.8	+8.3
BRG				pmax		pmax		
	comp=Z,6.0nm,1.1s							
CLL	**Collm**	**82.38**	**330**	*e*P		**P**	**05 45 09.0**	**-0.7**
CLL				pmax		pmax		
	comp=Z,6.0nm,1.2s							
CLL	**Collm**	**82.38**	**330**	*e*P		**P**	**05 45 09.0**	**-0.7**
	comp=Z,6.0nm,1.2s							
GERES	**GERESS Array B**	**83.97**	**328**	P		**P**	**05 45 17.9**	**-0.2**
GERES	**GERESS Array B**	**83.97**	**328**	P		**P**	**05 45 17.9**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=32,slow=6.3,SNR=5.7							
GERES				LR		LR	06 27 47.1	
	comp=Z,34nm,18.1s,baz=334,slow=39							
TORD	**Torodi Ar. Bea**	**118.33**	**314**	PKP		**PKPdf**	**05 51 35.1**	**-0.7**
TORD	**Torodi Ar. Bea**	**118.33**	**314**	PKP		**PKPdf**	**05 51 35.1**	**-0.7**
	comp=Z,0.3nm,0.4s,baz=44,slow=2.2,SNR=4.9							
SAML	**Samuel**	**145.43**	**46**	*e*PKPdf		**PKPbc**	**05 52 26.5**	**+0.1**
LPAZ	**La Paz**	**147.57**	**61**	*e*PKPdf		**PKPdf**	**05 52 31.7**	**+1.0**
LPAZ				PKPbc		**PKPbc**	**05 52 34.7**	**+1.4**
LPAZ	**La Paz**	**147.57**	**61**	PKPbc		**PKPbc**	**05 52 34.7**	**+1.4**
	comp=Z,2.1nm,0.7s,baz=14,slow=10,SNR=10							

JMA 19 06:07:09.0±0.1, 33°.52N×137°.24E, h410km, M3.5, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JWZ	**Kozaga**	**1.27**	**271**	P		P	06 08 02.6	+0.4
JNY	**Yasuok**	**1.90**	**15**	P		P	06 08 05.5	+0.2
JRY	**Ryogami san**	**2.84**	**28**	P		P	06 08 12.7	+1.1
BSO4	**Boso 4**	**2.96**	**59**	P		P	06 08 13.5	+1.2
MAT	**Matsushiro**	**3.12**	**14**	P		P	06 08 14.1	+0.4
MAT				*e*S		S	06 09 06.4	-0.1
BSO1	**Boso 1**	**3.30**	**69**	P		P	06 08 15.4	+0.8
JAG	**Ashikaga**	**3.42**	**31**	P		P	06 08 16.1	-0.2
JYT	**Yasato**	**3.63**	**41**	P		P	06 08 18.1	0.0
JHO	**Hitachi**	**4.12**	**41**	P		P	06 08 23.0	+0.5
JFK	**Kawauchi**	**4.85**	**37**	P		P	06 08 30.5	+0.8
JFK				*e*S		S	06 09 27.2	-8.6

CSEM ***19*** *06:15:23.5±1.3, 35°.80N×35°.83E, h19km±1km, MD2.6, Error ellipse: s-maj=35.4km s-min=15.5km az=154.0*

ISK ***19*** *06:15:28.8, 36°.10N×35°.94E, h1km, MD2.6*

DDA ***19*** *06:15:29.7, 36°.18N×35°.98E, h7km, ML3.1*

ISC 19 06:15:29.1±1.1, 36°.11N±0°.05×35°.96E±0°.04, h15km±7km, n15, σ0§35/26, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
YAYL	**Yayladag**	**0.14**	**122**	*i* Pg		**Pb**	**06 15 33.5**	**0.0**
YAYL				*i* S		**Sb**	**06 15 36.7**	**+0.4**
HTY	**Hatay**	**0.14**	**84**	*e*PG		**Pg**	**06 15 32.8**	**-0.2**
HTY				*e*SG		**Sg**	**06 15 35.7**	**+0.2**
HTY	**Hatay**	**0.14**	**84**	*e*Pg		**Pg**	**06 15 32.8**	**-0.2**
HTY				*e*Sg		**Sg**	**06 15 35.7**	**+0.2**
COBT	**Iskenderun**	**0.47**	**30**	*i* P		**Pg**	**06 15 38.3**	**-0.4**
COBT				*i* S		**Sg**	**06 15 44.7**	**-0.4**
COBT	**Iskenderun**	**0.47**	**30**	*i* P		**Pg**	**06 15 38.3**	**-0.4**
KRTS	**Karatas**	**0.66**	**315**	*e*PG		**Pg**	**06 15 41.7**	**-0.4**
KRTS				*e*SG		**Sb**	**06 15 51.6**	**+0.2**
KRTS	**Karatas**	**0.66**	**315**	*e*Pg		**Pg**	**06 15 41.7**	**-0.4**
KRTS				*e*Sg		**Sb**	**06 15 51.6**	**+0.2**
YURE	**YUREGIR**	**0.77**	**340**	*e*Pg		Pg	06 15 40.6	-3.4
CEYT	**Ceyhan**	**0.92**	**349**	*e*PG		**Pg**	**06 15 47.1**	**+0.2**
CEYT				*e*SG		**Sn**	**06 16 00.0**	**-0.4**
CEYT	**Ceyhan**	**0.92**	**349**	*e*Pg		**Pg**	**06 15 47.1**	**+0.2**
CEYT				*e*Sg		**Sn**	**06 16 00.0**	**-0.4**
KUZU	**Kuzuini**	**1.12**	**53**	*i* Pg		**Pb**	**06 15 50.1**	**0.0**
KUZU				*i* Sg		**Sb**	**06 16 04.8**	**+0.2**
AYKD	**Aykdinkavak**	**1.47**	**27**	*i* P		**Pb**	**06 15 56.1**	**-0.1**
AYKD				*i* S		**Sb**	**06 16 15.5**	**+0.9**
AYKD	**Aykdinkavak**	**1.47**	**27**	*i* P		**Pb**	**06 15 56.1**	**-0.1**
GULE	**Gulek**	**1.51**	**321**	*e*P		**Pb**	**06 15 57.0**	**0.0**
GULE				*i* S		**Sg**	**06 16 18.4**	**+0.5**
GULE	**Gulek**	**1.51**	**321**	*e*P		**Pb**	**06 15 57.0**	**0.0**
GULE				*i* S		**Sg**	**06 16 18.4**	**+0.5**

KRSC 19 06:24:44.4±1.3, 50°.84N×160°.29E, h41km±40km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
RUS	**Russkaya**	**1.94**	**326**	*e*P		Pn	06 25 16.8	+2.0
RUS				*e*S		Sn	06 25 40.3	+2.3
MTVR	**Mutnovka**	**2.

	baz=214							
PCYT	**Pengchaiyu**	**1.00**	**346**	*e*P		**Pn**	**06 28 42.0**	**+0.2**
	baz=341							
NCU	**National Centr**	**1.10**	**287**	*e*P		**Pn**	**06 28 42.6**	**-0.2**
	baz=276							
NCU				*e*S		**Sn**	**06 28 59.3**	**+0.8**
	baz=276							
WHF	**Hehuan Shan**	**1.11**	**243**	⇓*i*P		**Pn**	**06 28 43.3**	**-0.1**
	baz=240							
WHF				*e*S		**Sn**	**06 28 59.3**	**-0.2**
	baz=240							
TWT	**Tachien**	**1.14**	**250**	P		**Pn**	**06 28 44.2**	**+0.6**
	baz=242							
TWT				*e*S		**Sn**	**06 29 00.4**	**+0.7**
	baz=242							
ESL	**Shilin**	**1.18**	**225**	P		**Pn**	**06 28 43.0**	**-0.9**
	baz=230							
ESL				*e*S		**Sn**	**06 28 59.2**	**-1.1**
	baz=230							
NSTT	**Nanjuang**	**1.22**	**269**	⇓*i*P		**Pn**	**06 28 44.1**	**-0.3**
	baz=267							
NSTT				*e*S		**Sn**	**06 29 00.8**	**-0.5**
	baz=267							
HSN	**Hsinchu**	**1.26**	**277**	*e*P		**Pn**	**06 28 44.3**	**-0.5**
	baz=277							
IRIF	**Iriomote-Funau**	**1.30**	**104**	P		**Pn**	**06 28 45.2**	**-0.1**
IRIF				S		**Sn**	**06 29 03.0**	**+0.1**
HATJ	**Hateruma jima**	**1.46**	**114**	P		**Pn**	**06 28 47.8**	**+0.5**
HATJ				S		**Sn**	**06 29 07.4**	**+1.0**
NSY	**Sanyi**	**1.46**	**261**	P		**Pn**	**06 28 47.6**	**+0.3**
	baz=259							
NSY				*e*S		**Sn**	**06 29 07.0**	**+0.5**
	baz=259							
TWQ1	**Liyutan**	**1.46**	**258**	P		**Pn**	**06 28 47.2**	**-0.2**
	baz=256							
TWQ1				*e*S		**Sn**	**06 29 06.0**	**-0.5**
	baz=256							
EHY	**Hungye**	**1.48**	**219**	*e*P		**Pn**	**06 28 46.3**	**-1.2**
	baz=225							
EHY				*e*S		**Sn**	**06 29 05.1**	**-1.7**
	baz=225							
SMLT	**Sun Moon Lake**	**1.53**	**240**	*e*P		**Pn**	**06 28 48.8**	**+0.5**
	baz=235							
SMLT				*e*S		**Sn**	**06 29 09.1**	**+1.0**
	baz=235							
TYC	**Yuchr**	**1.55**	**241**	P		**Pn**	**06 28 48.9**	**+0.4**
	baz=245							
TYC				*e*S		**Sn**	**06 29 09.7**	**+1.3**
	baz=245							
JKRS	**Kuro-shima**	**1.57**	**105**	P		**Pn**	**06 28 49.0**	**+0.3**
JKRS				S		**Sn**	**06 29 09.2**	**+0.2**
TCU	**Taichung**	**1.60**	**252**	*e*P		**Pn**	**06 28 49.1**	**0.0**
	baz=250							
TWF1	**Yuli**	**1.61**	**217**	P		**Pn**	**06 28 48.1**	**-1.2**
	baz=221							
JIJ	**Ishigaki jima**	**1.67**	**100**	P		**Pn**	**06 28 49.5**	**-0.4**
JIJ				S		**Sn**	**06 29 10.4**	**-0.7**
WNT	**Mingjian**	**1.70**	**243**	*e*P		**Pn**	**06 28 51.0**	**+0.6**
	baz=251							
WNT				*e*S		**Sn**	**06 29 12.9**	**+0.9**
	baz=251							
YUS	**Yu-Shan**	**1.72**	**228**	P		**Pn**	**06 28 51.3**	**+0.1**
	baz=219							
YUS				*e*S		**Sn**	**06 29 13.1**	**-0.1**
	baz=219							
CHKT	**Chengkung**	**1.79**	**210**	P		**Pn**	**06 28 50.6**	**-1.0**
	baz=202							
CHKT				*e*S		**Sn**	**06 29 12.1**	**-1.9**
	baz=202							
ALS	**Alishan**	**1.81**	**231**	*e*P		**Pn**	**06 28 53.0**	**+0.9**
	baz=223							
ALS				*e*S		**Sn**	**06 29 15.6**	**+0.7**
	baz=223							
CHN5	**Tsauling**	**1.85**	**236**	P		**Pn**	**06 28 52.8**	**+0.4**
	baz=243							
CHN5				*e*S		**Sn**	**06 29 16.8**	**+1.2**
	baz=243							
WGK	**Gukeng**	**1.89**	**240**	*e*P		**Pn**	**06 28 53.0**	**+0.2**
	baz=248							
ELDTW	**Lidau**	**1.90**	**220**	*i* P		**Pn**	**06 28 52.3**	**-0.8**
	baz=213							
WTP	**Ta-pu**	**2.12**	**229**	P		**Pn**	**06 28 56.0**	**+0.1**
	baz=227							
WTP				*e*S		**Sn**	**06 29 23.0**	**+1.4**
	baz=227							
JTJ	**Tarama**	**2.15**	**90**	P		**Pn**	**06 28 56.3**	**+0.1**
JTJ				S		**Sn**	**06 29 22.6**	**+0.3**
TWK	**Hsinying**	**2.19**	**231**	*e*P		**Pn**	**06 28 57.5**	**+0.6**
	baz=239							
CHN1	**Nanshi**	**2.21**	**229**	P		**Pn**	**06 28 57.7**	**+0.5**
	baz=228							
CHN1				*e*S		**Sn**	**06 29 24.1**	**+0.1**
	baz=228							
ECL	**Taimali**	**2.41**	**212**	*e*P		**Pn**	**06 28 59.1**	**-0.6**
	baz=210							
JKE	**Kume jima 2**	**4.34**	**67**	P		**Pn**	**06 29 25.7**	**-0.1**
JKE				S		**Sn**	**06 30 14.7**	**-0.6**

NIED ***19*** *06:30:00,23.°20N×120.°70E,h5km,Mw4.0 Best double couple: M₀1.11000×10¹⁵ NP1:φ₀52.00000°,δ52.00000°, λ78.00000°. NP2:φ₀251.00000°,δ39.00000°,λ105.00000°. TAP* ***19*** *06:30:43.9,23.°42N×120.°60E,h12km,ML4.0,B ISCJB* ***19*** *06:30:44.9±0.2,23.°43N×120.°59E±0.°01,h10km±1km, Error ellipse: s-maj=2.4km s-min=1.8km az=19.1 NEIC* ***19*** *06:30:44.0±1.5,23.°42N×120.°59E,h12km±9km, ML4.2(TAP),Error ellipse: s-maj=19.7km s-min=10.5km az=99.0 NEIC Recorded [2 TAP] in Chia-i, Nan-t'tou, T'ai-nan and Yun-lin; [1 TAP] in Chang-hua and Kao-hsiung.*

ISC 19 06:30:44.4±0.8,23°43N±0.°01×120°58E±0.°02,h14km±5km, n66,σ0s62/116,19C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TPUB	**Ta-pu**	**0.13**	**162**	*e*Pg		**Pg**	**06 30 47.0**	**-1.0**
TPUB				*e*Sg		**Sg**	**06 30 50.1**	**-0.4**
CHY	**Chiayi**	**0.16**	**295**	⇑*i*P		**Pg**	**06 30 48.5**	**+0.1**
	baz=295							
TWK	**Hsinying**	**0.18**	**209**	⇑*i*P		**Pg**	**06 30 48.8**	**0.0**
	baz=209							
TWK				S		**Sg**	**06 30 52.2**	**+0.4**
	baz=209							
WTP	**Ta-pu**	**0.18**	**171**	⇑*i*P		**Pg**	**06 30 48.5**	**-0.3**
	baz=167							
WTP				*e*S		**Sg**	**06 30 52.0**	**+0.3**
	baz=167							
CHN5	**Tsauling**	**0.19**	**27**	⇑*i*P		**Pg**	**06 30 48.7**	**-0.3**
	baz=30							
ALS	**Alishan**	**0.22**	**68**	⇑*i*P		**Pg**	**06 30 49.5**	**0.0**
	baz=73							
ALS				*e*S		**Sg**	**06 30 53.5**	**+0.6**
	baz=73							
CHN1	**Nanshi**	**0.25**	**192**	⇑*i*P		**Pg**	**06 30 49.7**	**-0.1**
	baz=195							
CHN1				*i* S		**Sb**	**06 30 54.2**	**-0.7**
	baz=195							
WGK	**Gukeng**	**0.26**	**355**	⇑*i*P		**Pg**	**06 30 50.5**	**+0.5**
	baz=354							
WGK				*e*S		**Sb**	**06 30 55.4**	**+0.1**
	baz=354							
YUS	**Yu-Shan**	**0.34**	**80**	P		**Pg**	**06 30 51.8**	**+0.1**
	baz=80							
YUS				*e*S		**Sg**	**06 30 57.2**	**+0.5**
	baz=80							
SGST	**Jiashian**	**0.34**	**180**	⇑*e*P		**Pg**	**06 30 51.5**	**+0.1**
	baz=181							
CHN8	**Yiju**	**0.35**	**257**	*e*P		**Pg**	**06 30 51.8**	**+0.1**
	baz=257							
CHN8				*e*S		**Sb**	**06 30 58.5**	**+0.6**
	baz=257							
WSF	**Szhu**	**0.39**	**302**	*i* P		**Pg**	**06 30 52.7**	**+0.3**
	baz=302							
WSF				*i* S		**Sb**	**06 30 59.6**	**+0.5**
	baz=302							
CHN3	**Shinhua**	**0.40**	**210**	*e*P		**Pb**	**06 30 53.6**	**+0.3**
	baz=221							
CHN3				*e*S		**Sb**	**06 31 01.0**	**+1.6**
	baz=221							
SCLT	**Jiali**	**0.44**	**235**	*e*P		**Pb**	**06 30 53.9**	**-0.1**
	baz=235							
SCLT				*e*S		**Sb**	**06 31 01.8**	**+1.4**
	baz=235							
WNT	**Mingjian**	**0.46**	**12**	P		**Pg**	**06 30 54.0**	**+0.4**
	baz=11							
WNT				S		**Sb**	**06 31 01.4**	**+0.4**
	baz=11							
ELDTW	**Lidau**	**0.46**	**121**	⇑*i*P		**Pg**	**06 30 53.6**	**-0.1**
	baz=116							
ELDTW				*e*S		**Sg**	**06 31 00.3**	**+0.3**
	baz=116							
SSLB	**Suanglung**	**0.49**	**43**	*e*Pg		**Pg**	**06 30 53.9**	**-0.4**
SSLB				*e*Sg		**Sg**	**06 31 01.4**	**+0.5**
TAI1	**Yung-k'ang**	**0.51**	**220**	*e*P		**Pb**	**06 30 55.6**	**+0.5**
	baz=231							
TAI1				*e*S		**Sb**	**06 31 03.6**	**+1.3**
	baz=231							
WTCT	**Ta-ch'eng**	**0.52**	**327**	P		**Pg**	**06 30 54.7**	**0.0**
	baz=327							
WTCT				S		**Sb**	**06 31 02.9**	**+0.3**
	baz=327							
TYC	**Yuchr**	**0.54**	**28**	⇑P		**Pg**	**06 30 55.3**	**+0.3**
	baz=28							
TYC				*e*S		**Sb**	**06 31 03.9**	**+0.6**
	baz=28							
SMLT	**Sun Moon Lake**	**0.54**	**33**	P		**Pg**	**06 30 55.4**	**+0.3**
	baz=33							
SMLT				*e*S		**Sb**	**06 31 03.7**	**+0.4**
	baz=33							
TWM1	**Shoushan**	**0.62**	**194**	*e*P		**Pn**	**06 30 58.0**	**-0.9**
	baz=180							
YULB	**Yu-li**	**0.66**	**93**	*e*Pg		**Pg**	**06 30 56.5**	**-0.8**
YULB				*e*Sg		**Sg**	**06 31 05.4**	**-0.6**
TWF1	**Yuli**	**0.66**	**96**	⇑*i*P		**Pg**	**06 30 57.2**	**-0.2**
	baz=106							
TWF1				S		**Sg**	**06 31 05.7**	**-0.4**
	baz=106							
EHY	**Hungye**	**0.68**	**83**	⇑*i*P		**Pg**	**06 30 57.6**	**-0.2**
	baz=84							
EHY				S		**Sg**	**06 31 06.8**	**0.0**
	baz=84							
SGLT	**Jiouru**	**0.70**	**187**	*e*P		**Pn**	**06 30 59.2**	**-0.7**
	baz=187							
TCU	**Taichung**	**0.72**	**7**	*e*P		**Pg**	**06 30 58.3**	**-0.3**
	baz=7.0							
TCU				*e*S		**Sb**	**06 31 09.3**	**+0.7**
	baz=7.0							
TWG	**Pinlang**	**0.75**	**143**	⇑*i*P		**Pg**	**06 30 59.0**	**-0.1**
	baz=144							
TWG				S		**Sb**	**06 31 09.7**	**+0.2**
	baz=144							
TWG	**Pinlang**	**0.75**	**143**	*e*Pg		**Pg**	**06 30 58.6**	**-0.5**
TWG				*e*Sg		**Sb**	**06 31 10.0**	**+0.6**
CHKT	**Chengkung**	**0.79**	**114**	⇑*i*P		**Pb**	**06 31 00.3**	**+0.4**
	baz=115							
CHKT				*e*S		**Sn**	**06 31 11.7**	**-1.0**
	baz=115							
TTN	**Taitung**	**0.85**	**142**	*e*P		**Pb**	**06 31 01.2**	**+0.3**
	baz=143							
TTN				S		**Sn**	**06 31 13.8**	**-0.3**
	baz=143							
WDGT	**Dungji**	**0.87**	**259**	*e*P		**Pg**	**06 31 00.4**	**-0.8**
	baz=258							
WDGT				*e*S		**Sg**	**06 31 12.4**	**-0.2**
	baz=258							
ESL	**Shilin**	**0.87**	**64**	*e*P		**Pg**	**06 31 01.1**	**-0.1**
	baz=64							
ESL				*e*S		**Sg**	**06 31 12.7**	**0.0**
	baz=64							
KAU	**Kaohsiung**	**0.89**	**197**	*e*P		**Pn**	**06 31 02.4**	**-0.1**
	baz=197							
ECL	**Taimali**	**0.89**	**158**	⇑P		**Pg**	**06 31 01.5**	**-0.3**
	baz=146							
ECL				*e*S		**Sn**	**06 31 14.5**	**-0.8**
	baz=146							
TWQ1	**Liyutan**	**0.93**	**11**	⇑P		**Pb**	**06 31 02.4**	**0.0**
	baz=11							
TWQ1				S		**Sn**	**06 31 16.0**	**-0.4**
	baz=11							
WHF	**Hehuan Shan**	**0.95**	**41**	⇓*i*P		**Pb**	**06 31 02.6**	**-0.3**
	baz=41							
WHF				*e*S		**Sb**	**06 31 15.8**	**+0.3**
	baz=41							
PNG	**Penghu**	**0.95**	**279**	⇑P		**Pb**	**06 31 01.8**	**-1.0**
	baz=278							
PNG				*e*S		**Sg**	**06 31 14.6**	**-0.9**
	baz=278							
TWT	**Tachien**	**0.98**	**33**	*e*P		**Pb**	**06 31 03.2**	**-0.2**
	baz=33							
NSY	**Sanyi**	**1.00**	**9**	*e*P		**Pb**	**06 31 03.5**	**0.0**
	baz=10.0							
NSY				*e*S		**Sn**	**06 31 18.2**	**+0.3**
	baz=10.0							
SCZT	**Fangliau**	**1.05**	**178**	*e*P		**Pg**	**06 31 04.4**	**-0.3**
	baz=169							
SCZT				*e*S		**Sn**	**06 31 20.2**	**+1.0**
	baz=169							
EAST	**Anshuo**	**1.07**	**167**	⇑*i*P		**Pg**	**06 31 04.8**	**-0.3**
	baz=174							
EAST				*e*S		**Sn**	**06 31 20.1**	**+0.4**
	baz=174							
HWA	**Hwalien**	**1.08**	**60**	*e*P		**Pg**	**06 31 05.3**	**0.0**
	baz=60							
HWA				*e*S		**Sn**	**06 31 20.0**	**0.0**
	baz=60							
TWP	**Hsiaoliuchiu**	**1.10**	**191**	*e*P		**Pg**	**06 31 06.6**	**+1.0**
	baz=213							
TAW	**Tawu**	**1.10**	**165**	*e*P		**Pb**	**06 31 05.2**	**-0.1**
	baz=165							
TWD	**Chiawan**	**1.13**	**55**	*e*P		**Pb**	**06 31 05.3**	**-0.4**
	baz=55							
TWD				*e*S		**Sb**	**06 31 20.4**	**0.0**
	baz=55							
NACB	**Ninganchiao**	**1.19**	**51**	*e*Pn		**Pn**	**06 31 06.2**	**-0.4**
NACB				*e*Sn		**Sg**	**06 31 23.0**	**+0.2**
NNS	**Nan Shan**	**1.24**	**35**	⇑P		**Pn**	**06 31 07.1**	**-0.4**
	baz=36							
NNS				*e*S		**Sg**	**06 31 25.3**	**+0.8**
	baz=36							
NSTT	**Nanjuang**	**1.26**	**18**	*e*P		**Pn**	**06 31 07.3**	**-0.3**
	baz=18							
NSTT				S		**Sn**	**06 31 24.7**	**+0.4**
	baz=18							
HEN	**Hengchun**	**1.42**	**174**	*e*P		**Pg**	**06 31 11.3**	**-0.5**
	baz=174							
YHNB	**Yeheng**	**1.43**	**30**	*e*Pn		**Pn**	**06 31 10.2**	**+0.1**
YHNB				*e*Sn		**Sb**	**06 31 29.8**	**+0.6**
ENA	**Nanau**	**1.45**	**47**	*e*P		**Pn**	**06 31 10.6**	**+0.3**
	baz=47							
ENA				*e*S		**Sg**	**06 31 31.8**	**+0.5**
	baz=47							
TWK1	**Hengchun**	**1.49**	**172**	*e*P		**Pn**	**06 31 11.2**	**+0.4**
	baz=167							
ENTT	**Nioudou**	**1.50**	**36**	*e*P		**Pn**	**06 31 11.5**	**+0.5**
	baz=27							
ENTT				*e*S		**Sg**	**06 31 32.5**	**-0.5**
	baz=27							
TSEB	**Hengchuen, Pin**	**1.55**	**169**	*e*P		**Pn**	**06 31 12.0**	**+0.4**
	baz=186							
TWE	**Neicheng**	**1.62**	**37**	*e*P		**Pb**	**06 31 13.8**	**-0.3**
	baz=38							
TWE				*e*S		**Sb**	**06 31 35.8**	**+1.2**
	baz=38							
LAY	**Lan-yu**	**1.65**	**147**	*e*P		**Pn**	**06 31 12.4**	**-0.5**
	baz=137							
TWC	**Suao**	**1.65**	**44**	*e*P		**Pb**	**06 31 14.6**	**-0.1**
	baz=45							
TWC				*e*S		**Sb**	**06 31 36.0**	**+0.8**
	baz=45							
TATO	**Taipei**	**1.75**	**28**	*e*Pn		**Pn**	**06 31 14.1**	**-0.2**
TATO				*e*Sg		**Sg**	**06 31 39.7**	**-1.1**
TAP1	**Taipei**	**1.82**	**28**	*e*P		**Pb**	**06 31 16.6**	**-0.9**
	baz=29							
TAP1				*e*S		**Sn**	**06 31 39.1**	**+0.9**
	baz=29							
TWS1	**Kuangyinshan**	**1.83**	**24**	*e*P		**Pn**	**06 31 15.5**	**0.0**
	baz=8.0							
NWF	**Wu-fen Shan**	**1.97**	**33**	*e*P		**Pb**	**06 31 19.4**	**-0.7**
	baz=17							
NWF				*e*S		**Sb**	**06 31 44.3**	**-0.2**
	baz=17							
TWB1	**Santiao Chiao**	**2.03**	**39**	*e*P		**Pn**	**06 31 18.8**	**+0.6**
	baz=21							
TWB1				*e*S		**Sb**	**06 31 45.8**	**-0.4**
	baz=21							
KNM	**Kinmen**	**2.20**	**297**	*e*P		**Pn**	**06 31 20.6**	**0.0**
	baz=294							
QZH	**Quanzhou**	**2.36**	**310**	Pn		**Pn**	**06 31 23.8**	**+1.0**
QZH				Sn		**Sn**	**06 31 48.8**	**-2.8**
QZH				smax		smax		
	comp=N,510nm,0.3s							
QZH				smax		smax		
	comp=E,360nm,0.5s							
YOJ	**Yonaguni jima**	**2.45**	**65**	*e*P		**Pn**	**06 31 24.9**	**+0.9**
	baz=65							

IDC 19 06:54:01.3±1.8,12.°16S×165.°80E,h0km,mb4.1/4, mb1 4.1/5,mb1mx3.8/18,mbtmp4.1/5,ML3.4/1,MS3.5/3, Ms1 3.5/3,ms1mx2.8/31,Error ellipse: s-maj=53.3km s-min=34.6km az=109.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.88**	**177**	P		Pn	06 56 25.1	+0.3
	0.3nm,0.3s,baz=307,slow=4.5,SNR=5.0							
DZM				LR		LR	06 58 59.7	
	comp=Z,95nm,19.9s,baz=266,slow=30							
STKA	**Stephens Creek**	**29.68**	**225**	LR		LR	07 11 43.0	
	comp=Z,83nm,18.8s,baz=24,slow=36							
WRA	**Warramunga Arr**	**31.17**	**252**	P		P	07 00 22.4	0.0
	0.9nm,0.8s,baz=84,slow=9.3,SNR=5.1							
ASAR	**Alice Springs**	**32.35**	**245**	P		P	07 00 32.6	-0.2
	1.2nm,0.8s,baz=78,slow=9.6,SNR=8.9							
NVAR	**Mina Array Bea**	**86.70**	**50**	LR		LR	07 42 22.9	
	comp=Z,66nm,18.7s,baz=128,slow=33							
MKAR	**Makanchi Array**	**94.36**	**137**	P		P	07 07 23.6	+0.5
	1.1nm,0.6s,baz=90,slow=6.5,SNR=16							
ZALV	**Zalesovo Beam**	**94.48**	**324**	P		P	07 07 22.6	-0.8
	0.7nm,0.5s,baz=90,slow=4.4,SNR=3.9							
KEST	**Kesra**	**148.32**	**322**	PKPbc		PKPbc	07 13 50.0	-0.3
	1.0nm,0.8s,baz=17,slow=3.3,SNR=4.8							
TORD	**Torodi Ar. Bea**	**164.46**	**275**	PKP		PKPdf	07 14 06.6	-1.5
	0.9nm,0.9s,baz=95,slow=2.2,SNR=4.9							

IDC 19 07:03:09.9±2.3,16.°96S×172.°92W,h0km,mb4.1/4, mb1 4.1/5,mb1mx3.8/22,mbtmp4.0/5,ML1.5/1,Error ellipse: s-maj=65.1km s-min=23.9km az=117.0,Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AFI	**Afiamalu**	**3.23**	**20**	P		Pn	07 04 02.3	+0.3
	3.2nm,0.3s,baz=120,slow=23,SNR=6.1							
AFI				Sn		Sn	07 04 40.3	-0.9
	5.7nm,0.3s,baz=81,slow=18,SNR=4.6							
URZ	**Urewera**	**22.95**	**200**	P		P	07 08 15.7	-0.1
	8.8nm,0.6s,baz=74,slow=6.7,SNR=6.6							
STKA	**Stephens Creek**	**43.68**	**241**	P		P	07 11 16.2	-0.5
	1.4nm,0.8s,baz=99,slow=13,SNR=2.8							
WRA	**Warramunga Arr**	**49.95**	**258**	P		P	07 12 06.0	-0.1
	0.3nm,0.3s,baz=96,slow=7.9,SNR=14							
ASAR	**Alice Springs**	**50.08**	**253**	P		P	07 12 07.3	+0.2
	4.0nm,0.7s,baz=88,slow=8.7,SNR=62							

IDC 19 07:15:37.1±5.4,12.°65S×166.°74E,h127km±50km,mb3.5/7, mb1 3.6/8,mb1mx3.5/19,mbtmp3.5/8,Error ellipse: s-maj=33.5km s-min=26.7km az=161.0,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.38**	**182**	P		Pn	07 17 50.6	+1.4
	1.3nm,0.3s,baz=300,slow=20,SNR=25							
DZM				S		Sn	07 19 30.7	-2.4
	0.2nm,0.3s,baz=217,slow=20,SNR=3.2							
CTA	**Charters Tower**	**20.99**	**247**	P		P	07 20 10.8	+0.3
	3.1nm,0.6s,baz=72,slow=15,SNR=3.7							
STKA	**Stephens Creek**	**30.00**	**226**	P		P	07 21 34.3	+0.5
	1.6nm,0.8s,baz=38,slow=10,SNR=9.1							
WRA	**Warramunga Arr**	**31.89**	**253**	P		P	07 21 49.6	-1.1
	0.5nm,0.8s,baz=84,slow=9.4,SNR=5.6							
ASAR	**Alice Springs**	**32.99**	**246**	P		P	07 22 00.1	-0.2
	0.7nm,0.6s,baz=70,slow=9.5,SNR=13							
VNDA	**Vanda**	**64.92**	**181**	P		P	07 26 02.7	+0.3
	0.4nm,0.7s,baz=16,slow=5.3,SNR=3.8							
ILAR	**Eielson Array**	**84.72**	**18**	P		P	07 27 55.9	-0.5
	0.4nm,0.5s,baz=235,slow=5.6,SNR=11							
MKAR	**Makanchi Array**	**95.35**	**317**	P		P	07 28 47.5	+0.6
	0.5nm,0.6s,baz=88,slow=6.9,SNR=8.0							

MEX 19 07:35:11.6±0.6,15.°40N×94.°74W,h16km±8km,MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
HUIG	**Huatulco**	**1.37**	**286**	*e*P		Pn	07 35 32.6	-3.4
HUIG				*i* S		Sn	07 35 48.0	-5.8
PCIG		**1.50**	**78**	*e*P		Pn	07 35 34.0	-3.8
PCIG				*i* S		Sn	07 35 51.4	-5.6
TGIG		**2.07**	**48**	*e*P		Pn	07 35 43.0	-2.8
TGIG				*e*S		Sn	07 36 06.7	-4.7
THIG		**2.44**	**101**	*e*P		Pn	07 35 47.5	-3.3
THIG				*i* S		Sn	07 36 15.9	-4.4
CCIG	**Comitan**	**2.65**	**70**	*e*P		Pn	07 35 51.2	-2.8
CCIG				*i* S		Sn	07 36 21.9	-4.1
PNIG	**Pinotepa**	**3.41**	**287**	*e*P		Pn	07 36 01.8	-2.3
PNIG				*e*S		Sn	07 36 39.5	-4.8

NNC ***19*** *07:56:32.8±7.0,36.°87N×68.°08E,h0km,mb3.7,mpv3.6, Error ellipse: s-maj=58.8km s-min=40.3km az=176.0 IDC* ***19*** *07:56:40.6±5.7,36.°46N×69.°35E,h136km±44km,mb2.9/3, mb1 3.0/8,mb1mx2.9/31,mbtmp2.9/8,MS3.0/1,Ms1 3.0/1, ms1mx2.1/16, Error ellipse: s-maj=74.3km s-min=30.9km az=145.0*

ISC 19 07:56:32.9±1.0,36.°68N±0.°07×68.°5E±0.°1,h24km,n18, σ2s26/17,5C-2D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CEP	**Cherat**	**4.01**	**134**	P		Pn	07 57 38.2	+5.3
CEP				S		**Sb**	**07 58 28.0**	**-3.0**
THW	**Thamme Wali**	**4.72**	**144**	P		**Pb**	**07 57 56.5**	**+1.5**
KK31	**Karatay Array**	**6.60**	**13**	Pn		**Pn**	**07 58 10.9**	**+2.5**
	0.7nm,0.3s,baz=205,slow=14,SNR=31							
KK31				⇓Sn		**Sn**	**07 59 23.5**	**+0.5**
	2.1nm,0.3s,baz=199,slow=22,SNR=3.8							
KK31				⇑Lg		Lg	08 00 00.6	
	21nm,0.7s,baz=190,slow=30,SNR=7.7							
AAK	**Ala-Archa**	**7.54**	**36**	P		Pn	07 58 25.5	+4.1
	2.3nm,0.3s,baz=198,slow=5.7,SNR=8.5							
AAK				S		Sn	07 59 39.1	-7.2
	0.6nm,0.3s,baz=220,slow=17,SNR=2.2							
TKM2	**Tokmak 2**	**8.30**	**39**	⇑Pn		**Pn**	**07 58 33.5**	**+1.6**
	4.7nm,0.6s							
TKM2				Sn		Sn	08 00 15.6	+11
	3.8nm,0.7s							
AB31	**Akbulak array**	**14.02**	**336**	⇑Pn		**Pn**	**07 59 48.2**	**-1.7**
	0.3nm,0.3s,baz=159,slow=13,SNR=4.5							
AB31				Sn		**Sn**	**08 02 20.2**	**-4.4**
	0.7nm,0.5s,baz=152,slow=23,SNR=5.6							
MKAR	**Makanchi Array**	**14.42**	**41**	P		**Pn**	**07

ellipse: s-maj=11.1km s-min=9.8km az=177.0

ISC 19 08:09:18.4±0.5, 39°3'S×0'1×78°1'E±0'1, h10km, n54, σ0$84/39, mb4.4/17, MS4.2/26, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**29.55**	**192**	P	**P**	**08 15 23.1**	**+0.3**
MAW	**Mawson**	**29.55**	**192**	P	**P**	**08 15 23.1**	**+0.3**
	2.7nm,0.6s,baz=18,slow=6.4,SNR=5.0						
MAW				LR	LR	08 24 54.2	
	comp=Z,423nm,18.1s,baz=4.1,slow=32						
NWAO	**Narrogin (SRO)**	**32.06**	**91**	LR	LR	08 25 29.6	
	comp=Z,673nm,21.3s,baz=195,slow=30						
OPO	**Ambohidratompo**	**33.80**	**299**	LR	LR	08 26 34.8	
	comp=Z,370nm,18.8s,baz=260,slow=31						
BOSA	**Boshof**	**44.55**	**267**	*e*P	**P**	**08 17 30.3**	**-0.3**
	12nm,1.2s						
BOSA	**Boshof**	**44.55**	**267**	P	**P**	**08 17 29.8**	**-0.9**
	3.0nm,0.8s,baz=99,slow=12,SNR=4.3						
BOSA				LR	LR	08 32 24.5	
	comp=Z,271nm,19.4s,baz=52,slow=31						
LBTB	**Lobatse**	**46.07**	**272**	*e*P	**P**	**08 17 41.6**	**-1.1**
	8.4nm,1.0s						
LBTB	**Lobatse**	**46.07**	**272**	P	**P**	**08 17 41.6**	**-1.1**
	3.8nm,0.8s,baz=154,slow=9.6,SNR=6.9						
LBTB				LR	LR	08 33 55.7	
	comp=Z,402nm,18.4s,baz=130,slow=32						
PSI	**Prapat**	**46.11**	**30**	LR	LR	08 32 45.7	
	comp=Z,189nm,18.3s,baz=26,slow=31						
SUR	**Sutherland**	**46.28**	**260**	LR	LR	08 33 57.0	
	comp=Z,201nm,20.8s,baz=126,slow=32						
ASAR	**Alice Springs**	**49.33**	**89**	P	**P**	**08 18 07.2**	**-0.8**
ASAR	**Alice Springs**	**49.33**	**89**	P	**P**	**08 18 07.2**	**-0.8**
	3.0nm,0.8s,baz=238,slow=5.9,SNR=15						
ASAR				LR	LR	08 37 26.0	
	comp=Z,486nm,18.1s,baz=245,slow=34						
LSZ	**Lusaka**	**49.67**	**284**	*e*P	**P**	**08 18 10.2**	**-0.4**
	12nm,1.1s						
SNAA	**Sanae**	**50.38**	**204**	P	**P**	**08 18 14.5**	**-0.9**
SNAA	**Sanae**	**50.38**	**204**	P	**P**	**08 18 14.5**	**-0.9**
	0.8nm,1.0s,baz=141,slow=5.6,SNR=4.4						
SNAA				LR	LR	08 35 57.9	
	comp=Z,51nm,19.9s,baz=28,slow=32						
VNDA	**Vanda**	**50.60**	**164**	P	**P**	**08 18 16.9**	**+0.1**
VNDA	**Vanda**	**50.60**	**164**	P	**P**	**08 18 16.9**	**+0.1**
	4.3nm,0.9s,baz=275,slow=8.2,SNR=15						
VNDA				LR	LR	08 38 12.3	
	comp=Z,286nm,18.4s,baz=266,slow=34						
KAPI	**Kappang**	**50.80**	**59**	LR	LR	08 34 32.6	
	comp=Z,159nm,21.6s,baz=44,slow=30						
QSPA	**South Pole Qui**	**50.82**	**180**	*e*P	**P**	**08 18 19.0**	**+0.2**
	18nm,1.0s						
QSPA	**South Pole Qui**	**50.82**	**180**	P	**P**	**08 18 18.9**	**+0.1**
	15nm,1.0s,baz=286,slow=1.4,SNR=16						
QSPA				LR	LR	08 38 34.1	
	comp=Z,454nm,18.3s,baz=300,slow=35						
STKA	**Stephens Creek**	**51.22**	**102**	P	**P**	**08 18 20.9**	**-1.2**
STKA	**Stephens Creek**	**51.22**	**102**	P	**P**	**08 18 20.9**	**-1.2**
	5.6nm,1.0s,baz=174,slow=1.8,SNR=2.9						
STKA				LR	LR	08 35 09.5	
	comp=Z,275nm,21.6s,baz=108,slow=30						
SBA	**Scott Base**	**51.61**	**164**	*e*P	**P**	**08 18 26.0**	**+1.6**
	36nm,2.0s						
WRA	**Warramunga Arr**	**51.72**	**85**	P	**P**	**08 18 25.3**	**-0.7**
WRA	**Warramunga Arr**	**51.72**	**85**	P	**P**	**08 18 25.3**	**-0.7**
	13nm,0.8s,baz=235,slow=6.9,SNR=30						
WRA				LR	LR	08 37 57.1	
	comp=Z,318nm,19.4s,baz=220,slow=33						
WRAB	**Tennant Creek**	**51.73**	**85**	*e*P	**P**	**08 18 25.9**	**-0.2**
	14nm,0.9s						
KMBO	**Kilima Mbogo**	**53.22**	**305**	LR	LR	08 35 52.6	
	comp=Z,156nm,19.1s,baz=97,slow=30						
TSUM	**Tsumeb**	**55.45**	**273**	*e*P	**P**	**08 18 53.3**	**-0.2**
	6.5nm,0.9s						
CMAR	**Chiang Mai Arr**	**60.71**	**23**	P	**P**	**08 19 30.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**60.71**	**23**	P	**P**	**08 19 30.5**	**+0.5**
	0.6nm,0.3s,baz=216,slow=6.4,SNR=4.8						
CMAR				LR	LR	08 41 21.1	
	comp=Z,96nm,19.0s,baz=97,slow=32						
RPZ	**Rata Peaks**	**66.05**	**128**	LR	LR	08 42 57.5	
	comp=Z,230nm,20.3s,baz=219,slow=31						
PMG	**Port Moresby**	**67.91**	**84**	LR	LR	08 48 07.6	
	comp=Z,178nm,18.8s,baz=233,slow=34						
DZM	**Mont Dzumac**	**75.12**	**106**	LR	LR	08 52 08.4	
	comp=Z,210nm,18.2s,baz=20,slow=34						
MMAI	**Mount Meron Ar**	**82.16**	**325**	LR	LR	08 52 47.2	
	comp=Z,37nm,18.5s,baz=225,slow=32						
GNI	**Garni**	**84.78**	**335**	LR	LR	08 54 13.8	
	comp=Z,75nm,20.9s,baz=98,slow=32						
MK31	**Makanchi Array**	**85.84**	**3**	*e*P	**P**	**08 21 57.9**	**+0.2**
MKAR	**Makanchi Array**	**85.84**	**3**	P	**P**	**08 21 56.7**	**-1.0**
MKAR	**Makanchi Array**	**85.84**	**3**	P	**P**	**08 21 56.7**	**-1.0**
	1.4nm,0.7s,baz=188,slow=5.8,SNR=10						
MKAR				LR	LR	08 57 42.5	
	comp=Z,90nm,20.1s,baz=170,slow=34						
TORD	**Torodi Ar. Bea**	**88.00**	**289**	P	**P**	**08 22 10.2**	**+1.3**
TORD	**Torodi Ar. Bea**	**88.00**	**289**	P	**P**	**08 22 10.2**	**+1.3**
	0.4nm,0.7s,baz=140,slow=5.6,SNR=2.6						
DBIC	**Dimbokro**	**88.76**	**280**	LR	LR	08 56 11.4	
	comp=Z,141nm,19.1s,baz=37,slow=32						
KURBB	**Kurchatov Arra**	**89.59**	**0**	P	**P**	**08 22 15.3**	**-0.2**
	0.6nm,0.6s,baz=196,slow=4.4,SNR=4.7						
KURK	**Kurchatov**	**89.68**	**0**	P	**P**	**08 22 15.3**	**-0.7**
AKTO	**Aktyubinsk**	**91.13**	**347**	LR	LR	08 57 04.4	
	comp=Z,54nm,19.3s,baz=341,slow=32						
BVAR	**Borovoye Array**	**92.24**	**355**	LR	LR	09 02 15.6	
	comp=Z,64nm,18.3s,baz=71,slow=34						
KEST	**Kesra**	**97.96**	**310**	LR	LR	09 05 21.3	
	comp=Z,48nm,19.8s,baz=282,slow=34						
ILAR	**Eielson Array**	**143.66**	**31**	PKP	**PKPdf**	**08 28 52.8**	**+0.3**
ILAR	**Eielson Array**	**143.66**	**31**	PKP	**PKPdf**	**08 28 52.8**	**+0.3**
	0.3nm,0.7s,baz=297,slow=3.7,SNR=4.9						
YKA	**Yellowknife Ar**	**155.57**	**14**	PKP	**PKPdf**	**08 29 12.6**	**+1.3**
YKA	**Yellowknife Ar**	**155.57**	**14**	PKP	**PKPdf**	**08 29 12.6**	**+1.3**
	0.1nm,0.3s,baz=0.8,slow=4.5,SNR=4.3						
NVAR	**Mina Array Bea**	**167.18**	**89**	PKPab	**PKPab**	**08 30 30.3**	**+1.1**
NVAR	**Mina Array Bea**	**167.18**	**89**	PKPab	**PKPab**	**08 30 30.3**	**+1.1**
	1.0nm,0.9s,baz=233,slow=6.7,SNR=3.1						
PDAR	**Pinedale Array**	**173.28**	**57**	PKP	**PKPdf**	**08 29 27.9**	**+0.1**
PDAR	**Pinedale Array**	**173.28**	**57**	PKP	**PKPdf**	**08 29 27.9**	**+0.1**
	0.2nm,0.4s,baz=100,slow=2.0,SNR=2.7						

*IDC **19** 08:15:59.6±2.6, 27°47N×56°48E, h0km, mb3.7/8, mb1 3.8/9, mb1mx3.6/28, mbtmp3.7/9, ML4.6/1, Error ellipse: s-maj=52.0km s-min=28.3km az=154.0*

*ISCJB **19** 08:16:01.5±0.4, 27°37N±0'04×56°40E±0'08, h18km, mb3.8/10, Error ellipse: s-maj=10.8km s-min=4.7km az=162.2*

*THR **19** 08:16:04.6±0.8, 27°57N×56°38E, h14km±6km, ML3.7*

*CSEM **19** 08:16:04.8±0.3, 27°39N×56°40E, h20km, ML3.7, Error ellipse: s-maj=15.0km s-min=7.4km az=75.0*

*OMAN **19** 08:16:04.3±27.0, 27°43N×56°42E, h117km±5km, Error ellipse: s-maj=9.8km s-min=5.3km az=33.0*

*TEH **19** 08:16:09.9, 28°00N×56°02E, h10km, ML3.7*

ISC 19 08:16:02.8±0.6, 27°45N±0'04×56°48E±0'06, h18km, n47, σ1$46/48, mb3.7/10, 4C-4D, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	**Bandar-Abbas**	**0.28**	**260**	*e*Pg	**Pb**	**08 16 10.1**	**+0.7**
BNDS				AML	AML	08 16 16.5	
	comp=N,14μm,0.5s						
BNDS				AML	AML	08 16 16.8	
	comp=E,13μm,0.4s						
BNDS	**Bandar-Abbas**	**0.28**	**260**	*e*Pg	**Pb**	**08 16 10.1**	**+0.7**
BANOM	**Banah**	**1.53**	**186**	⇑P	**Pb**	**08 16 31.4**	**+0.8**
	SNR=66						
BANOM				⇓S	**Sg**	**08 16 52.8**	**+0.7**
BANOM	**Banah**	**1.53**	**186**	P	**Pb**	**08 16 31.4**	**+0.8**
	SNR=66						
KRBR	**Kerman**	**2.54**	**5**	*e*Pn	**Pn**	**08 16 45.9**	**+2.4**
KRBR				*e*Sg	**Sb**	**08 17 20.7**	**+1.6**
KRBR				AML	AML	08 17 24.2	
	comp=E,402nm,0.5s						
KRBR				AML	AML	08 17 27.1	
	comp=N,374nm,0.5s						
KRBR	**Kerman**	**2.54**	**5**	*e*Pn	**Pn**	**08 16 45.9**	**+2.4**
KRBR				*e*Sg	**Sb**	**08 17 20.7**	**+1.6**
GHIR	**Ghir-Karzin**	**3.21**	**286**	*e*Pn	**Pn**	**08 16 55.3**	**+2.9**
GHIR	**Ghir-Karzin**	**3.21**	**286**	*e*Pn	**Pn**	**08 16 55.3**	**+2.9**
IPAR	**Pars**	**3.85**	**309**	*e*Pn	**Pn**	**08 17 03.3**	**+1.9**
IPAR				*e*		08 18 31.5	
	comp=Z,646nm,0.3s						
IPAR	**Pars**	**3.85**	**309**	*e*Pn	**Pn**	**08 17 03.3**	**+1.9**
ARQ	**Araqi**	**4.09**	**179**	⇓P	**Pn**	**08 17 07.2**	**+2.7**
	SNR=18						
ARQ	**Araqi**	**4.09**	**179**	P	**Pn**	**08 17 07.2**	**+2.7**
	SNR=18						
IBAF	**Bafgh**	**4.21**	**349**	*e*Pn	**Pn**	**08 17 07.5**	**+1.3**
IBAF	**Bafgh**	**4.21**	**349**	*e*Pn	**Pn**	**08 17 07.5**	**+1.3**
IMEH	**Mehriz**	**4.25**	**338**	*e*		08 17 09.9	
	comp=Z,2μm,0.1s						
IMEH				*e*Pn	**Pn**	**08 17 09.0**	**+2.0**
IMEH	**Mehriz**	**4.25**	**338**	*e*Pn	**Pn**	**08 17 09.0**	**+2.0**
ZHSF	**Zahedan**	**4.35**	**59**	*e*Pn	Pn	08 17 12.9	+4.7
ZHSF	**Zahedan**	**4.35**	**59**	*e*Pn	Pn	08 17 12.9	+4.7
BSY	**Bisya**	**4.73**	**172**	⇑P	**Pn**	**08 17 13.4**	**+0.2**
	SNR=8.5						
BSYO	**Bisya**	**4.75**	**172**	P	**Pn**	**08 17 13.4**	**-0.1**
	SNR=8.5						
ISAD	**Sadrabad**	**5.07**	**332**	*e*Pn	**Pn**	**08 17 20.3**	**+2.0**
ISAD				*e*		08 17 24.4	
	comp=Z,812nm,0.1s						
ISAD	**Sadrabad**	**5.07**	**332**	*e*Pn	**Pn**	**08 17 20.3**	**+2.0**
ICHK	**Chekchek**	**5.11**	**340**	*e*Pn	**Pn**	**08 17 20.5**	**+1.8**
ICHK				*e*		08 17 21.9	
	comp=Z,676nm,0.1s						
ICHK	**Chekchek**	**5.11**	**340**	*e*Pn	**Pn**	**08 17 20.5**	**+1.8**
WBK	**Wadi Bani Khal**	**5.32**	**154**	⇑P	**Pn**	**08 17 22.4**	**+1.0**
WBK				⇓S	**Sn**	**08 18 22.6**	**+0.4**
WBK	**Wadi Bani Khal**	**5.32**	**154**	P	**Pn**	**08 17 22.4**	**+1.0**
WBK				S	**Sn**	**08 18 22.6**	**+0.4**
IDAH	**Dahanechah**	**6.04**	**28**	*e*Pn	Pn	08 17 38.7	+7.2
IDAH				*e*		08 17 59.2	
	comp=Z,193nm,0.2s						
IGAR	**Gharneh**	**6.26**	**323**	*e*Pn	**Pn**	**08 17 35.9**	**+1.3**
IGAR				*e*		08 17 37.2	
	comp=Z,854nm,0.1s						
IZEF	**Zefreh**	**6.51**	**328**	*e*Pn	**Pn**	**08 17 38.5**	**+0.5**
IZEF				*e*		08 17 50.1	
	comp=Z,372nm,0.2s						
IZEF	**Zefreh**	**6.51**	**328**	*e*Pn	**Pn**	**08 17 38.5**	**+0.5**
IVRN	**Varamin**	**8.55**	**333**	*e*Pn	**Pn**	**08 18 06.7**	**+0.8**
IVRN	**Varamin**	**8.55**	**333**	*e*Pn	**Pn**	**08 18 06.7**	**+0.8**
RBK	**Rabkut**	**10.12**	**192**	⇓P	**Pn**	**08 18 27.5**	**+0.2**
	SNR=12						
RBK	**Rabkut**	**10.12**	**192**	P	**Pn**	**08 18 27.5**	**+0.2**
	SNR=12						
ABTO	**Aybut**	**10.47**	**197**	⇑P	**Pn**	**08 18 31.1**	**-1.0**
	SNR=6.9						
ABTO	**Aybut**	**10.47**	**197**	P	**Pn**	**08 18 31.1**	**-1.0**
	SNR=6.9						
MMAI	**Mount Meron Ar**	**19.03**	**292**	P	**P**	**08 20 23.0**	**-0.9**
	comp=Z,1.7nm,0.3s,baz=113,slow=17,SNR=3.1						
BRTR	**Keskin Array B**	**22.56**	**309**	P	**P**	**08 21 02.1**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=133,slow=12,SNR=5.1						
AKTO	**Aktyubinsk**	**22.99**	**3**	P	**P**	**08 21 05.7**	**-0.7**
	comp=Z,3.0nm,0.7s,baz=204,slow=8.3,SNR=4.2						
KURBB	**Kurchatov Arra**	**28.58**	**30**	P	P	08 22 01.7	+4.0
	comp=Z,0.9nm,0.6s,baz=229,slow=8.6,SNR=9.7						
AKASG	**Malin Array Be**	**31.11**	**326**	P	**P**	**08 22 19.1**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=134,slow=8.5,SNR=3.3						
ZALV	**Zalesovo Beam**	**33.68**	**30**	P	**P**	**08 22 42.2**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=235,slow=4.9,SNR=4.0						
JOF	**Joensuu**	**39.12**	**342**	*e*p	**P**	**08 23 28.7**	**-0.2**
	comp=Z,1.6nm,0.4s						
FINES	**FINESS Array B**	**39.61**	**338**	P	**P**	**08 23 32.0**	**-1.0**
	comp=Z,1.3nm,0.6s,baz=144,slow=10.0,SNR=8.6						
NOA	**NORSAR Array B**	**45.18**	**331**	P	**P**	**08 24 17.2**	**-1.2**
	comp=Z,0.9nm,0.8s,baz=124,slow=7.1,SNR=3.0						
TORD	**Torodi Ar. Bea**	**52.93**	**266**	P	**P**	**08 25 17.9**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=66,slow=7.0,SNR=5.5						
ILAR	**Eielson Array**	**86.30**	**10**	P	**P**	**08 28 42.8**	**-0.5**
	comp=Z,0.2nm,0.8s,baz=318,slow=4.8,SNR=4.0						

*ISCJB **19** 08:24:17.7±0.6, 39°4'S±0'1×78°2'E±0'1, h10km, mb4.2/11, MS4.0/13, Error ellipse: s-maj=18.7km s-min=15.1km az=169.3*

*IDC **19** 08:24:17.5±0.8, 39°27'S×78°06'E, h0km, mb4.1/9, mb1 4.2/9, mb1mx4.0/21, mbtmp4.1/9, MS4.0/13, Ms1 4.0/13, ms1mx3.6/33, Error ellipse: s-maj=24.6km s-min=20.2km az=180.0*

*NEIC **19** 08:24:19.8±0.6, 39°38S×78°14E, h10km, mb4.6/5, Error ellipse: s-maj=20.0km s-min=16.7km az=163.0*

ISC 19 08:24:19.2±0.8, 39°3'S±0'2×78°1'E±0'2, h10km, n28, σ0$62/19, mb4.2/11, MS4.0/13, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAW	**Mawson**	**29.62**	**192**	P	**P**	**08 30 24.4**	**+0.1**
MAW	**Mawson**	**29.62**	**192**	P	**P**	**08 30 24.4**	**+0.1**
	2.3nm,0.8s,baz=305,slow=7.6,SNR=3.4						
MAW				LR	LR	08 39 15.0	
	comp=Z,237nm,19.2s,baz=198,slow=30						
NWAO	**Narrogin (SRO)**	**32.07**	**91**	LR	LR	08 40 30.7	
	comp=Z,363nm,20.8s,baz=349,slow=30						
OPO	**Ambohidratompo**	**33.77**	**299**	LR	LR	08 40 28.5	
	comp=Z,108nm,20.9s,baz=0.6,slow=29						
BOSA	**Boshof**	**44.55**	**267**	*e*P	**P**	**08 32 32.4**	**+0.9**
	4.5nm,1.0s						
BOSA	**Boshof**	**44.55**	**267**	P	**P**	**08 32 30.8**	**-0.7**
	1.0nm,0.6s,baz=131,slow=9.3,SNR=2.7						
BOSA				LR	LR	08 46 53.0	
	comp=Z,202nm,20.2s,baz=316,slow=30						
LBTB	**Lobatse**	**46.07**	**272**	*e*P	**P**	**08 32 43.6**	**+0.1**
	15nm,1.3s						
LBTB	**Lobatse**	**46.07**	**272**	P	**P**	**08 32 42.3**	**-1.2**
	2.3nm,0.7s,baz=146,slow=6.7,SNR=3.9						
FITZ	**Fitzroy Crossi**	**46.12**	**77**	LR	LR	08 49 31.9	
	comp=Z,109nm,19.2s,baz=288,slow=33						
ASAR	**Alice Springs**	**49.34**	**89**	P	**P**	**08 33 08.6**	**-0.3**
ASAR	**Alice Springs**	**49.34**	**89**	P	**P**	**08 33 08.6**	**-0.3**
	1.7nm,0.7s,baz=238,slow=6.1,SNR=17						
ASAR				LR	LR	08 52 11.0	
	comp=Z,206nm,19.9s,baz=307,slow=34						
VNDA	**Vanda**	**50.68**	**164**	*e*P	**P**	**08 33 19.2**	**+1.0**
	3.4nm,1.0s						
VNDA	**Vanda**	**50.68**	**164**	P	**P**	**08 33 18.6**	**+0.3**
	2.1nm,0.9s,baz=277,slow=8.5,SNR=9.0						
VNDA				LR	LR	08 53 13.5	
	comp=Z,183nm,18.2s,baz=267,slow=34						
QSPA	**South Pole Qui**	**50.89**	**180**	*e*P	**P**	**08 33 20.0**	**-0.2**
	12nm,1.1s						
QSPA	**South Pole Qui**	**50.89**	**180**	P	**P**	**08 33 19.6**	**-0.6**
	6.2nm,0.9s,baz=337,slow=2.8,SNR=8.3						
STKA	**Stephens Creek**	**51.24**	**102**	LR	LR	08 49 56.8	
	comp=Z,195nm,18.5s,baz=205,slow=30						
WRA	**Warramunga Arr**	**51.72**	**85**	P	**P**	**08 33 26.4**	**-0.5**
WRA	**Warramunga Arr**	**51.72**	**85**	P	**P**	**08 33 26.4**	**-0.5**
	6.1nm,0.9s,baz=235,slow=7.4,SNR=36						
WRA				LR	LR	08 52 03.5	
	comp=Z,140nm,21.5s,baz=320,slow=32						
WRAB	**Tennant Creek**	**51.73**	**85**	*e*P	**P**	**08 33 26.2**	**-0.7**
	7.6nm,0.9s						
KMBO	**Kilima Mbogo**	**53.17**	**305**	LR	LR	08 50 42.1	
	comp=Z,87nm,20.1s,baz=92,slow=30						
CMAR	**Chiang Mai Arr**	**60.65**	**23**	P	P	08 34 34.6	+4.1
CMAR	**Chiang Mai Arr**	**60.65**	**23**	P	P	08 34 34.6	+4.1
	0.6nm,0.4s,baz=214,slow=3.9,SNR=5.1						
CMAR				LR	LR	08 56 51.7	
	comp=Z,46nm,18.6s,baz=205,slow=32						
PMG	**Port Moresby**	**67.91**	**84**	LR	LR	09 00 43.7	
	comp=Z,168nm,19.3s,baz=225,slow=32						
HNR	**Honiara**	**77.81**	**92**	LR	LR	09 04 57.4	
	comp=Z,103nm,18.6s,baz=241,slow=31						
MKAR	**Makanchi Array**	**85.77**	**3**	P	**P**	**08 36 58.9**	**+0.7**
MKAR	**Makanchi Array**	**85.77**	**3**	P	**P**	**08 36 58.9**	**+0.7**
	0.9nm,0.7s,baz=182,slow=6.5,SNR=8.4						
TORD	**Torodi Ar. Bea**	**87.98**	**289**	P	**P**	**08 37 09.6**	**-0.1**
TORD	**Torodi Ar. Bea**	**87.98**	**289**	P	**P**	**08 37 09.6**	**-0.1**
	0.2nm,0.7s,baz=114,slow=5.0,SNR=2.5						

*CSEM **19** 08:34:01.5, 38°33N×22°01E, h9km±2km, MD2.9/5, After ATH*

ATH 19 08:34:01.5, 38°33N×22°01E, h9km±2km, MD2.9/5, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.06**	**54**	*e*PG	Pg	08 34 03.3	-0.2
TRIZ				*e*SG	Sg	08 34 04.8	-0.1
TRIZ	**Trizonia**	**0.06**	**54**	*e*Pg	Pg	08 34 03.3	-0.2
TRIZ				*e*Sg	Sg	08 34 04.8	-0.1
LAKA	**Lakka**	**0.09**	**195**	*e*PG	Pg	08 34 03.8	-0.1
LAKA				*e*SG	Sg	08 34 05.8	+0.1
LAKA	**Lakka**	**0.09**	**195**	*e*Pg	Pg	08 34 03.8	-0.1
LAKA				*e*Sg	Sg	08 34 05.8	+0.1
KALE	**Kalithea**	**0.12**	**59**	*e*PG	Pg	08 34 04.4	0.0
KALE				*e*SG	Sg	08 34 06.8	+0.4
KALE	**Kalithea**	**0.12**	**59**	*e*Pg	Pg	08 34 04.4	0.0
KALE				*e*Sg	Sg	08 34 06.8	+0.4
EFP	**Efpalio**	**0.13**	**320**	*e*PG	Pg	08 34 04.4	0.0
EFP				*e*SG	Sg	08 34 07.1	+0.7
EFP	**Efpalio**	**0.13**	**320**	*e*Pg	Pg	08 34 04.4	0.0
EFP				*e*Sg	Sg	08 34 07.1	+0.7
KLV	**Kalavryta, Ach**	**0.31**	**159**	*e*PG	Pg	08 34 07.4	-0.3
KLV				*e*SB	Sg	08 34 12.5	+0.6
KLV	**Kalavryta, Ach**	**0.31**	**159**	*e*Pg	Pg	08 34 07.4	-0.3
KLV				*e*Sb	Sg	08 34 12.5	+0.6

IDC 19 08:34:14.1±1.4, 3°41N×126°10E, h0km, mb3.6/6, mb1 3.8/6, mb1mx3.6/23, mbtmp3.7/6, Error ellipse: s-maj=102.7km s-min=18.9km az=67.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**21.38**	**181**	P	P	08 39 03.8	+0.5
	0.9nm,0.5s,baz=6.3,slow=9.2,SNR=4.4						
WRA	**Warramunga Arr**	**24.57**	**161**	P	P	08 39 35.0	-1.0
	1.9nm,0.5s,baz=339,slow=11,SNR=20						
ASAR	**Alice Springs**	**27.96**	**165**	P	P	08 40 07.5	+1.0
	0.4nm,0.4s,baz=354,slow=14,SNR=8.4						
STKA	**Stephens Creek**	**38.06**	**158**	P	P	08 41 34.3	-0.2
	3.0nm,0.9s,baz=335,slow=11,SNR=8.8						
MKAR	**Makanchi Array**	**57.46**	**326**	P	P	08 44 04.3	-0.6
	0.4nm,0.4s,baz=120,slow=7.2,SNR=5.9						
KURBB	**Kurchatov Arra**	**61.67**	**328**	P	P	08 44 34.2	+0.4
	0.4nm,0.5s,baz=128,slow=5.0,SNR=4.6						

IDC 19 08:45:38.5±1.0, 37°17N×32°39W, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.6/30, mbtmp3.7/8, MS3.8/10, Ms1 3.8/10, ms1mx3.3/44, Error ellipse: s-maj=24.6km s-min=21.8km az=160.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**22.37**	**75**	P	P	08 50 39.1	+0.9
	0.2nm,0.3s,baz=269,slow=10.0,SNR=3.4						
SCHQ	**Schefferville**	**29.33**	**318**	LR	LR	09 01 57.8	
	comp=Z,276nm,21.7s,baz=88,slow=33						
SFJD	**Kangerlussuaq**	**31.64**	**346**	LR	LR	09 01 52.8	
	comp=Z,173nm,18.9s,baz=110,slow=31						
SADO	**Sadowa**	**35.70**	**297**	LR	LR	09 05 02.4	
	comp=Z,83nm,19.6s,baz=161,slow=33						
TORD	**Torodi Ar. Bea**	**38.70**	**119**	P	P	08 53 04.8	+0.5
	1.6nm,1.1s,baz=312,slow=5.9,SNR=5.9						
DBIC	**Dimbokro**	**39.38**	**134**	LR	LR	09 07 05.2	
	comp=Z,182nm,18.4s,baz=32,slow=33						
TKL	**Tuckaleechee C**	**40.97**	**284**	LR	LR	09 07 07.6	
	comp=Z,68nm,18.2s,baz=67,slow=32						
ULM	**Lac du Bonnet**	**46.35**	**307**	LR	LR	09 12 51.6	
	comp=Z,88nm,20.6s,baz=159,slow=35						
RES	**Resolute Bay**	**47.31**	**341**	LR	LR	09 10 46.4	
	comp=Z,44nm,21.6s,baz=257,slow=32						
YKA	**Yellowknife Ar**	**54.33**	**326**	P	P	08 55 06.6	+0.3
	0.7nm,0.8s,baz=74,slow=6.7,SNR=8.8						
PDAR	**Pinedale Array**	**57.48**	**302**	P	P	08 55 30.7	+1.2
	2.6nm,1.2s,baz=73,slow=5.1,SNR=5.7						
PDAR				LR	LR	09 18 06.2	
	comp=Z,131nm,20.6s,baz=68,slow=34						
NEW	**Newport**	**60.23**	**310**	LR	LR	09 21 03.6	
	comp=Z,124nm,20.5s,baz=105,slow=35						
AKTO	**Aktyubinsk**	**62.68**	**46**	P	P	08 56 04.3	-0.5
	1.0nm,0.7s,baz=301,slow=7.8,SNR=3.5						
LPAZ	**La Paz**	**62.94**	**219**	P	P	08 56 05.8	-1.8
	1.6nm,0.9s,baz=17,slow=5.7,SNR=3.6						
NVAR	**Mina Array Bea**	**65.35**	**300**	P	P	08 56 25.0	+2.2
	0.6nm,0.9s,baz=354,slow=6.0,SNR=4.1						
KURBB	**Kurchatov Arra**	**73.61**	**38**	P	P	08 57 13.6	+0.2
	0.9nm,1.0s,baz=313,slow=7.0,SNR=6.1						
MKAR	**Makanchi

MIB	**Mutribah**	**3.14**	**197**	*e*P		**Pn**	**08 49 38.1**	**+1.9**
IZEF	**Zefreh**	**3.29**	**88**	*e*Pn		**Pn**	**08 49 40.4**	**+1.8**
IZEF				*e*			08 49 49.4	
	comp=Z,742nm,0.2s							
IZEF	**Zefreh**	**3.29**	**88**	*e*Pn		**Pn**	**08 49 40.4**	**+1.8**
UMR	**Umm Al-Rimmam**	**3.31**	**191**	*e*P		**Pn**	**08 49 40.3**	**+1.8**
UMR	**Umm Al-Rimmam**	**3.31**	**191**	*e*P		**Pn**	**08 49 40.3**	**+1.8**
IMHD	**Mahdasht**	**3.42**	**32**	*e*Pn		**Pn**	**08 49 42.2**	**+2.0**
IMHD				*e*			08 49 42.9	
	comp=Z,2µm,0.1s							
IMHD	**Mahdasht**	**3.42**	**32**	*e*Pn		**Pn**	**08 49 42.2**	**+2.0**
BHD	**Baghdad**	**3.42**	**279**	*e*Pn		Pb	08 49 44.8	-3.9
BHD				*e*Pg		Pn	08 49 57.0	+17
BHD				*e*Sn		**Sb**	**08 50 30.0**	**+0.2**
BHD				*i* Sb		Sn	08 50 40.3	+21
BHD				*i* Sg		Sn	08 50 48.5	+29
BHD	**Baghdad**	**3.42**	**279**	*e*Pn		Pb	08 49 44.8	-3.9
IR3	**Iran Long-Peri**	**3.43**	**38**	*e*Pn		**Pn**	**08 49 42.1**	**+1.8**
IR3	**Iran Long-Peri**	**3.43**	**38**	*e*Pn		**Pn**	**08 49 42.1**	**+1.8**
IVRN	**Varamin**	**3.51**	**51**	*e*Pn		**Pn**	**08 49 42.8**	**+1.4**
IVRN				*e*			08 49 44.3	
	comp=Z,1µm,0.0s							
IVRN	**Varamin**	**3.51**	**51**	*e*Pn		**Pn**	**08 49 42.8**	**+1.4**
KBD	**Kabd**	**3.68**	**190**	*e*P		**Pn**	**08 49 45.5**	**+1.9**
KBD				AML		AML	08 50 31.5	
	comp=Z,52nm,0.4s							
KBD	**Kabd**	**3.68**	**190**	*e*P		**Pn**	**08 49 45.5**	**+1.9**
NASN	**Na'in**	**3.70**	**89**	*e*PN5		**Pn**	**08 49 45.7**	**+1.5**
THKV	**Tehran--Karaj**	**3.71**	**33**	*e*Pn		**Pn**	**08 49 46.0**	**+1.8**
THKV				AML		AML	08 50 53.0	
	comp=E,78nm,0.3s							
THKV	**Tehran--Karaj**	**3.71**	**33**	*e*Pn		**Pn**	**08 49 46.0**	**+1.8**
ZNJK	**Zanjan**	**3.85**	**3**	*e*Pn		**Pn**	**08 49 48.7**	**+2.4**
ZNJK	**Zanjan**	**3.85**	**3**	*e*Pn		**Pn**	**08 49 48.7**	**+2.4**
IGZV	**Ghazvin**	**3.86**	**22**	*e*Pn		**Pn**	**08 49 47.8**	**+1.4**
IGZV				*e*			08 49 48.2	
	comp=Z,2µm,0.1s							
IGZV	**Ghazvin**	**3.86**	**22**	*e*Pn		**Pn**	**08 49 47.8**	**+1.4**
RDF	**Al-Radifah**	**3.94**	**191**	*e*P		**Pn**	**08 49 49.6**	**+2.3**
RDF				AML		AML	08 50 36.9	
	comp=Z,60nm,0.4s							
RDF	**Al-Radifah**	**3.94**	**191**	*e*P		**Pn**	**08 49 49.6**	**+2.3**
DAMV	**Damavand**	**4.07**	**45**	*e*Pn		**Pn**	**08 49 50.4**	**+1.1**
DAMV	**Damavand**	**4.07**	**45**	*e*Pn		**Pn**	**08 49 50.4**	**+1.1**
IDMV	**Damavand**	**4.07**	**46**	*e*Pn		**Pn**	**08 49 50.6**	**+1.3**
IDMV				*e*			08 49 51.7	
	comp=Z,1µm,0.1s							
IDMV	**Damavand**	**4.07**	**46**	*e*Pn		**Pn**	**08 49 50.6**	**+1.3**
ISAD	**Sadrabad**	**4.55**	**100**	*e*Pn		**Pn**	**08 49 57.1**	**+1.2**
ISAD				*e*			08 50 58.6	
	comp=Z,340nm,0.2s							
ISAD	**Sadrabad**	**4.55**	**100**	*e*Pn		**Pn**	**08 49 57.1**	**+1.2**
IFIR	**Firoozkooh**	**4.57**	**51**	*e*Pn		**Pn**	**08 49 57.9**	**+1.8**
IFIR				*e*			08 50 27.0	
	comp=Z,3µm,0.0s							
IFIR	**Firoozkooh**	**4.57**	**51**	*e*Pn		**Pn**	**08 49 57.9**	**+1.8**
IPAR	**Pars**	**4.95**	**126**	*e*Pn		**Pn**	**08 50 01.2**	**-0.2**
IPAR				*e*			08 51 00.2	
	comp=Z,379nm,0.3s							
IPAR	**Pars**	**4.95**	**126**	*e*Pn		**Pn**	**08 50 01.2**	**-0.2**
IBAF	**Bafgh**	**6.18**	**99**	*e*Pn		**Pn**	**08 50 19.5**	**+1.3**
IBAF				*e*			08 50 31.2	
	comp=Z,107nm,0.2s							
IBAF	**Bafgh**	**6.18**	**99**	*e*Pn		**Pn**	**08 50 19.5**	**+1.3**
ASF	**Jabal al Asfar**	**9.75**	**269**	Pn		**Pn**	**08 51 05.3**	**-1.8**
	comp=Z,0.5nm,0.3s,baz=175,slow=12,SNR=5.1							
ASF				Sn		Sn	08 52 48.6	-7.0
	comp=Z,0.3nm,0.3s,baz=99,slow=13,SNR=2.4							
AKTO	**Aktyubinsk**	**18.98**	**19**	P		**P**	**08 53 07.1**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=185,slow=9.7,SNR=4.0							
BVAR	**Borovoye Array**	**25.64**	**31**	P		**P**	**08 54 15.9**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=222,slow=6.0,SNR=4.6							
KURBB	**Kurchatov Arra**	**28.39**	**42**	P		**P**	**08 54 40.5**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=245,slow=9.7,SNR=2.9							
MKAR	**Makanchi Array**	**29.28**	**52**	P		**P**	**08 54 48.5**	**+0.1**
	comp=Z,0.9nm,0.6s,baz=246,slow=10,SNR=11							
FINES	**FINESS Array B**	**32.09**	**340**	P		**P**	**08 55 12.7**	**-0.2**
	comp=Z,0.5nm,0.3s,baz=144,slow=9.3,SNR=8.7							
ZALV	**Zalesovo Beam**	**33.32**	**40**	P		**P**	**08 55 25.6**	**+1.9**
	comp=Z,0.6nm,0.4s,baz=234,slow=11,SNR=3.4							
NB2	**NORSAR Subarra**	**37.10**	**331**	P		**P**	**08 55 54.6**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=123,slow=9.3							
NOA	**NORSAR Array B**	**37.10**	**331**	P		**P**	**08 55 54.8**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=123,slow=8.5,SNR=4.1							
TORD	**Torodi Ar. Bea**	**46.82**	**257**	P		**P**	**08 57 16.4**	**+0.2**
	comp=Z,0.9nm,0.8s,baz=63,slow=7.2,SNR=6.8							
JMIC	**Jan Mayen**	**48.69**	**339**	LR		LR	09 16 34.7	
	comp=Z,44nm,19.0s,baz=90,slow=34							
FRB	**Frobisher Bay**	**71.75**	**335**	P		**P**	**09 00 07.5**	**-0.2**
	comp=Z,3.6nm,0.8s,baz=19,slow=5.0,SNR=4.2							
ILAR	**Eielson Array**	**82.00**	**7**			**P**	**09 01 04.8**	**-0.7**
	comp=Z,0.2nm,0.7s,baz=328,slow=3.3,SNR=3.4							
YKA	**Yellowknife Ar**	**84.05**	**352**	P		**P**	**09 01 15.2**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=12,slow=5.2,SNR=6.6							
ASAR	**Alice Springs**	**98.89**	**112**	LR		LR	09 48 57.6	
	comp=Z,84nm,20.0s,baz=357,slow=36							

BJI ***19*** *09:05:53.3,55.88N×161.17E,h5km,mB4.7/23,mb4.7/32, Ms4.4/22,Ms7 4.1/21*
NEIC ***19*** *09:05:55.0±0.1,55.63N×161.84E,mb4.7/77,Error ellipse: s-maj=5.0km s-min=2.8km az=170.0*
MOS ***19*** *09:05:58.0±1.0,55.70N×161.94E,h63km,mb5.0/67,Error ellipse: s-maj=8.3km s-min=4.5km az=88.4*
KRSC ***19*** *09:06:00.1±0.6,55.50N×162.23E,h63km±56km,ML5.2*
IDC ***19*** *09:06:00.7±2.3,55.66N×161.96E,h75km±21km,mb4.3/38, mb1 4.4/40,mb1mx4.4/41,mbtmp4.3/40,MS3.6/24, Ms1 3.7/24,ms1mx3.5/38,Error ellipse: s-maj=12.0km s-min=7.8km az=161.0*
ISCJB ***19*** *09:06:00.9±0.2,55.57N±0.02×161.96E±0.04,h94km±2km, mb4.7/162,Error ellipse: s-maj=3.7km s-min=2.7km az=35.5*
SZGRF ***19*** *09:06:16.7,58.37N×157.46E,h33km,mb5.1,Kamchatka Peninsula, Russia*

ISC 19 09:05:59.2±0.6, 55.54N±0.02×162.25E±0.02, h63km±5km, n743, σ1§57/803, mb4.8/171, 154C-163D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KBG	**Krutoberegovo**	**0.77**	**19**	PN		**Pn**	**09 06 15.6**	**+1.3**
KBG				S		**Sn**	**09 06 26.4**	**+0.9**
KBG	**Krutoberegovo**	**0.77**	**19**	*i* P		**Pn**	**09 06 15.6**	**+1.3**
KBG				*i* S		**Sn**	**09 06 26.4**	**+0.9**
ZLN	**Zelenaya**	**0.95**	**301**	*i* P		Pn	09 06 19.1	+2.4
BZGR	**Bezymyannyi-Gr**	**0.97**	**295**	P		Pn	09 06 19.5	+2.5
MKZ	**Mys Kozlova**	**1.03**	**197**	PN		**Pn**	**09 06 18.4**	**+0.8**
MKZ	**Mys Kozlova**	**1.03**	**197**	P		**Pn**	**09 06 18.4**	**+0.8**
CIRR	**Tsirk**	**1.03**	**305**	P		Pn	09 06 20.1	+2.3
LGNR	**Loginova**	**1.04**	**303**	P		Pn	09 06 20.4	+2.3
BZMR	**Bezymyannaya**	**1.07**	**293**	P		Pn	09 06 20.6	+2.2
BZMR				*i* S		**Sn**	**09 06 35.5**	**+2.9**
BZWR	**Bezymyannyi-We**	**1.08**	**294**	P		Pn	09 06 20.9	+2.4
BZWR				*i* S		**Sn**	**09 06 35.8**	**+3.0**
SMKR	**Semkarok**	**1.14**	**338**	*i* P		**Pn**	**09 06 20.8**	**+1.7**
KIRR	**Kirishev**	**1.16**	**292**	P		**Pn**	**09 06 21.6**	**+2.1**
KIRR				*i* S		**Sn**	**09 06 37.0**	**+2.4**
KMNR	**Kamenistaya**	**1.16**	**282**	P		Pn	09 06 21.9	+2.4
KRSR	**Krestovskiy**	**1.17**	**306**	P		**Pn**	**09 06 21.6**	**+2.0**
KRSR				*i* S		**Sn**	**09 06 36.5**	**+1.7**
BDR	**Baidarnaya**	**1.19**	**331**	P		**Pn**	**09 06 21.9**	**+2.1**
BDR				*i* S		**Sn**	**09 06 37.4**	**+2.2**
KLY	**Klyuchi**	**1.19**	**312**	PN		**Pn**	**09 06 20.6**	**+0.9**
KLY	**Klyuchi**	**1.19**	**312**	P		**Pn**	**09 06 20.6**	**+0.9**
KLY				*i* S		**Sn**	**09 06 35.0**	**-0.1**
KPT	**Kopyto**	**1.22**	**291**	P		Pn	09 06 22.5	+2.2
KPT				*i* S		**Sn**	**09 06 38.6**	**+2.5**
TUMR	**Tumrok**	**1.23**	**259**	P		**Pn**	**09 06 22.8**	**+2.5**
SRKR	**Sorokina**	**1.27**	**332**	P		**Pn**	**09 06 22.8**	**+1.9**
KOZR	**Kozyr**	**1.43**	**293**	PN		Pn	09 06 25.9	+2.9
KOZ	**Kozyrevsk**	**1.44**	**292**	P		Pn	09 06 25.9	+2.8
KOZ				*i* S		**Sn**	**09 06 44.6**	**+3.5**
SRDR	**Sredinnyy**	**1.63**	**300**	P		Pn	09 06 27.7	+2.1
SRDR				*i* S		**Sn**	**09 06 47.5**	**+1.9**
ESO	**Esso**	**2.04**	**282**	PN		**Pn**	**09 06 32.8**	**+1.6**
ESO	**Esso**	**2.04**	**282**	*e*P		**Pn**	**09 06 32.8**	**+1.6**
ESO				*i* S		**Sn**	**09 06 57.2**	**+1.5**
BKI	**Bering**	**2.15**	**97**	PN		**Pn**	**09 06 33.0**	**+0.4**
BKI				S		**Sn**	**09 06 56.6**	**-1.6**
BKI	**Bering**	**2.15**	**97**	*i* P		**Pn**	**09 06 33.0**	**+0.4**
BKI				*i* S		**Sn**	**09 06 56.6**	**-1.6**
KII	**Karymskiy**	**2.21**	**228**	*i* P		**Pn**	**09 06 35.5**	**+2.0**
KII				*e*S		**Sn**	**09 07 00.8**	**+1.0**
SPN	**Mys Shipunski**	**2.77**	**209**	PN		**Pn**	**09 06 41.4**	**+0.3**
SPN				S		**Sn**	**09 07 11.5**	**-1.8**
SPN	**Mys Shipunski**	**2.77**	**209**	P		**Pn**	**09 06 41.4**	**+0.3**
SPN				*i* S		**Sn**	**09 07 11.5**	**-1.8**
NLC	**Nalytchevo**	**2.92**	**217**	PN		**Pn**	**09 06 44.6**	**+1.6**
NLC				S		**Sn**	**09 07 16.9**	**+0.1**
NLC	**Nalytchevo**	**2.92**	**217**	P		**Pn**	**09 06 44.6**	**+1.6**
NLC				*i* S		**Sn**	**09 07 16.9**	**+0.1**
SDLR	**Sedlovina**	**3.00**	**222**	P		**Pn**	**09 06 46.3**	**+2.0**
SDLR				*i* S		**Sn**	**09 07 19.6**	**+0.5**
KRER	**Koryakskii**	**3.03**	**224**	*i* P		**Pn**	**09 06 47.2**	**+2.4**
KRER				*e*S		**Sn**	**09 07 21.4**	**+1.4**
SMAR	**Somma**	**3.04**	**223**	P		**Pn**	**09 06 47.0**	**+2.0**
AVH	**Avacha**	**3.06**	**223**	P		**Pn**	**09 06 47.6**	**+2.4**
AVH				*i* S		**Sn**	**09 07 22.4**	**+1.8**
UGLR	**Uglovaya**	**3.07**	**222**	P		**Pn**	**09 06 47.5**	**+2.2**
KOK	**Koryaka**	**3.08**	**225**	P		**Pn**	**09 06 47.6**	**+2.1**
GNL	**Ganaly**	**3.11**	**235**	P		**Pn**	**09 06 48.3**	**+2.5**
PET	**Petropavlovsk**	**3.28**	**221**	*i* P	PN	**Pn**	**09 06 50.0**	**+1.9**
PET				*i* S		**Sn**	**09 07 26.5**	**+0.7**
PET				pmax	pmax			
	comp=Z,800nm,0.5s							
PET				smax	smax			
	comp=E,2µm,0.6s							
PET				smax	smax			
	comp=N,2µm,0.5s							
PET				MLR	MLR			
	comp=Z,1µm,5.0s							
PET				MLR	MLR			
	comp=Z,1µm,9.0s							
PET	**Petropavlovsk**	**3.28**	**221**	P		**Pn**	**09 06 50.3**	**+2.2**
PET				*i* S		**Sn**	**09 07 27.9**	**+2.1**
PEA0B	**Petropavlovsk-**	**3.61**	**229**	*e*Pn		Pn	09 06 48.8	-3.8
PEA0B				*e*Sn		Sn	09 07 23.3	-11
PETK	**Petropavlovsk-**	**3.61**	**229**	PN		**Pn**	**09 06 54.8**	**+2.3**
PETK				pmax	pmax			
	comp=Z,28nm,0.3s							
PETK	**Petropavlovsk-**	**3.61**	**229**	P		**Pn**	**09 06 54.8**	**+2.3**
PETK				S		Sn	09 07 41.8	+8.0
PETK	**Petropavlovsk-**	**3.61**	**229**	P		**Pn**	**09 06 54.8**	**+2.3**
	comp=Z,28nm,0.3s,baz=69,slow=14,SNR=287							
PETK				S		Sn	09 07 41.8	+8.0
	comp=Z,7.4nm,0.3s,baz=89,slow=20,SNR=3.1							
PALN	**Palana**	**3.77**	**342**	*e*P		**Pn**	**09 06 55.6**	**+0.9**
RUS	**Russkaya**	**3.81**	**217**	PN		**Pn**	**09 06 56.5**	**+1.2**
RUS				S		**Sn**	**09 07 37.7**	**-1.1**
RUS	**Russkaya**	**3.81**	**217**	P		**Pn**	**09 06 56.5**	**+1.2**
RUS				*i* S		**Sn**	**09 07 37.7**	**-1.1**
GRL	**Gorelyy**	**3.87**	**221**	P		Pn	09 06 59.2	+3.0
GRL				*i* S		**Sn**	**09 07 42.6**	**+2.1**
MTVR	**Mutnovka**	**3.89**	**220**	P		**Pn**	**09 06 58.8**	**+2.3**
MTVR				*i* S		**Sn**	**09 07 42.4**	**+1.5**
APC	**Apacha**	**3.97**	**231**	*i* P		Pn	09 07 00.3	+2.8
ASAK	**Asacha**	**4.07**	**221**	P		Pn	09 07 01.9	+3.0
ASAK				*i* S		**Sn**	**09 07 47.5**	**+2.2**
MIPR	**Malaya Ipel'ka**	**4.60**	**227**	*i* P		Pn	09 07 09.4	+3.2
PAU	**Pauzhetka**	**5.21**	**221**	PN		Pn	09 07 17.0	+2.6
PAU	**Pauzhetka**	**5.21**	**221**	*e*P		Pn	09 07 17.0	+2.6
TILK	**Tilichiki**	**5.34**	**21**	*e*P		**Pn**	**09 07 18.4**	**+2.2**
TILK				*e*S		**Sn**	**09 08 17.0**	**+0.8**
SKR	**Severo-Kuril's**	**6.10**	**220**	*e*PN		**Pn**	**09 07 24.5**	**-2.1**
SKR				pmax	pmax			
	comp=Z,280nm,0.7s							
SKR				pmax	pmax			
	comp=N,80nm,0.5s							
SKR				pmax	pmax			
	comp=E,80nm,0.5s							
SKR	**Severo-Kuril's**	**6.10**	**220**	*e*P		**Pn**	**09 07 28.3**	**+1.7**
SKR				*i* S		**Sn**	**09 08 32.5**	**-2.5**
FX1	**Attu Island--F**	**6.93**	**108**	*e*Pn		**Pn**	**09 07 37.3**	**-0.7**
FX1				*e*Sn		Sn	09 08 50.6	-4.7
BILL	**Bilibino**	**12.69**	**7**	*c i*PN		Pn	09 09 00.6	+4.2
BILL				pmax	pmax			
	comp=Z,60nm,1.0s							
BILL				MLR	MLR			
	comp=Z,200nm,19.0s							
BILL	**Bilibino**	**12.69**	**7**	Pn		Pn	09 08 53.0	-3.4
	comp=Z,45nm,0.9s							
BILL				*e*Sn		**Sn**	**09 11 11.6**	**-4.1**
BILL				*e*ScP		**ScP**	**09 18 01.4**	**+5.7**
KUR	**Kuril'sk**	**13.77**	**227**	*i* P		**Pn**	**09 09 10.1**	**-1.1**
KUR				pmax	pmax			
	comp=N,5.0nm,0.1s							
KUR				pmax	pmax			
	comp=E,12nm,0.1s							
KUR				pmax	pmax			
	comp=Z,33nm,0.1s							
KUR				MLR	MLR			
	comp=N,96nm,20.0s							
KUR				MLR	MLR			
	comp=E,152nm,20.0s							
KUR				MLR	MLR			
	comp=Z,101nm,20.0s							
YSS	**Yuzh-Sakhalins**	**14.88**	**243**	*e*P		**P**	**09 09 30.0**	**0.0**
YSS				*e*S		**Sn**	**09 12 14.0**	**+4.7**
YSS				MLR	MLR			
	comp=Z,400nm,14.0s							
YUK	**Yuzh-Kuril'sk**	**15.59**	**229**	*d i*P		**Pn**	**09 09 35.1**	**+0.4**
YUK				*i* S		**Sn**	**09 12 24.0**	**-2.3**
YUK				pmax	pmax			
	comp=N,28nm,0.3s							
YUK				pmax	pmax			
	comp=E,25nm,0.3s							
YUK				pmax	pmax			
	comp=Z,93nm,0.3s							
YUK				smax	smax			
	comp=N,147nm,2.7s							
YUK				smax	smax			
	comp=E,121nm,3.7s							
YUK				MLR	MLR			
	comp=Z,91nm,6.0s							
YUK				MLR	MLR			
	comp=E,113nm,6.0s							
ASAJ	**Asahikawa**	**17.00**	**236**	*e*Pn		**Pn**	**09 09 48.8**	**-3.7**
	comp=E,13nm,1.0s							
ASAJ				*e*Sn		**Sn**	**09 12 53.7**	**-6.8**
ASAJ	**Asahikawa**	**17.00**	**236**	P		**P**	**09 09 53.6**	**+0.2**
	comp=E,1.9nm,0.3s,baz=39,slow=8.3,SNR=22							
ASAJ				LR		LR	09 16 09.5	
	comp=E,199nm,19.5s,baz=173,slow=36							
YAK	**Yakutsk**	**17.94**	**305**	*e*P		**P**	**09 10 02.5**	**-1.1**
YAK				*e*S		**Sn**	**09 13 15.9**	**-7.0**
YAK				pmax	pmax			
	comp=E,69nm,1.1s							
YAK				pmax	pmax			
	comp=Z,114nm,0.9s							
YAK				pmax	pmax			
	comp=N,23nm,1.1s							
YAK				pmax	pmax			
	comp=Z,85nm,1.0s							
YAK				pmax	pmax			
	comp=N,50nm,1.5s							
YAK				pmax	pmax			
	comp=E,109nm,1.4s							
YAK				smax	smax			
	comp=N,23nm,1.6s							
YAK				smax	smax			
	comp=E,25nm,1.9s							
UNV	**Unalaska Valle**	**18.07**	**82**	*e*P		**P**	**09 10 06.5**	**+1.4**
	comp=E,50nm,0.9s							
HABR	**Khabarovsk**	**18.09**	**258**	*ce*P		**P**	**09 10 04.9**	**-0.5**
HABR				S		**Sn**	**09 13 23.1**	**-3.7**
HABR				pmax	pmax			
	comp=Z,25nm,1.0s							
HABR				MLR	MLR			
	comp=Z,191nm,21.0s							
ERM	**Erimo**	**18.39**	**231**	*e*P		**P**	**09 10 06.4**	**-2.3**
ERM				*e*S		**S**	**09 13 36.0**	**+1.1**
ERM				pmax	pmax			
	comp=Z,23nm,0.9s							
ERM	**Erimo**	**18.39**	**231**	*e*P		**P**	**09 10 06.4**	**-2.3**
	comp=Z,23nm,0.9s							
ERM				*e*S		**S**	**09 13 36.0**	**+1.1**
AKUT	**Akutan**	**18.39**	**81**	*e*P		**Pn**	**09 10 11.6**	**+2.2**
	comp=Z,165nm,1.0s							
FALS	**False Pass**	**19.50**	**78**	*e*Pn		**P**	**09 10 22.9**	**+2.1**
	comp=Z,165nm,0.7s							
KLR	**Kul'dur**	**19.55**	**264**	*e*P		P	09 10 15.9	-5.5
CLNS	**Chul'man**	**20.66**	**289**	*e*P		Pn	09 10 38.8	+2.4
CLNS				pmax	pmax			
	comp=Z,25nm,1.0s							
CLNS				pmax	pmax			
	comp=E,22nm,1.0s							
CLNS				pmax	pmax			
	comp=N,20nm,1.0s							
TIXI	**Tiksi**	**21.46**	**332**	*c i*P		**P**	**09 10 42.1**	**+0.4**
TIXI				pmax	pmax			
	comp=Z,254nm,0.9s							
CHGN	**Chignik**	**21.86**	**72**	*e*P		**P**	**09 10 47.9**	**+1.7**
USRK	**Ussuriysk Arra**	**22.37**	**252**	P		**P**	**09 10 51.4**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=241,slow=6.4,SNR=4.0							
USRK				PcP		**PcP**	**09 14 44.0**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=340,slow=4.6,SNR=4.6							
USRK				LR		LR	09 19 59.9	
	comp=Z,193nm,19.9s,baz=19,slow=38							
SVW2	**Sparrevohn**	**22.52**	**58**	*e*P		**P**	**09 10 54.3**	**+1.0**
	comp=Z,16nm,1.0s							
MDJ	**Mudanjiang**	**23.41**	**256**	P		**P**	**09 10 58.9**	**-3.4**
MDJ				pmax	pmax			
	comp=Z,4.0nm,0.7s							
MDJ				pmax	pmax			
	comp=Z,47nm,7.9s							
OHAK	**Old Harbor**	**24.35**	**68**	*e*P		**P**	**09 11 10.9**	**+0.2**
	comp=Z,37nm,0.8s							
KDAK	**Kodiak Island**	**24.58**	**66**	P		**P**	**09 11 12.4**	**-0.4**
KDAK	**Kodiak Island**	**24.58**	**66**	P		**P**	**09 11 12.4**	**-0.4**
	comp=Z,30nm,1.0s,baz=328,slow=3.1,SNR=13							
TRF	**Thorofare Moun**	**24.82**	**52**	*e*P		**P**	**09 11 15.5**	**+0.4**
	comp=Z,27nm,1.0s							
COLD	**Coldfoot**	**24.88**	**43**	*e*P		**P**	**09 11 16.3**	**+0.8**
	comp=Z,13nm,0.9s							
MAJO	**Matsushiro**	**25.07**	**231**	*e*P		**P**	**09 11 18.0**	**+0.6**
MAJO				pmax	pmax			
	comp=Z,28nm,0.8s							
MAJO	**Matsushiro**	**25.07**	**231**	*e*P		**P**	**09 11 18.0**	**+0.6**
	comp=Z,28nm,0.8s							
MAT	**Matsushiro**	**25.07**	**231**	P		**P**	**09 11 17.8**	**+0.4**
MAT				S		**S**	**09 15 33.4**	**-3.8**
MCK	**McKinley**	**25.40**	**51**	*e*P		**P**	**09 11 20.9**	**+0.6**
MCK				pmax	pmax			
	comp=Z,16nm,1.0s							
MCK	**McKinley**	**25.40**	**51**	*e*P		**P**	**09 11 20.9**	**+0.6**
	comp=Z,16nm,1.0s							
COLA	**College**	**25.80**	**49**	*e*P		**P**	**09 11 22.0**	**-1.8**
COLA				pmax	pmax			
	comp=Z,23nm,1.4s							
COLA	**College**	**25.80**	**49**	*e*P		**P**	**09 11 22.0**	**-1.8**
	comp=Z,23nm,1.4s							
SML	**Sawmill**	**25.89**	**56**	*e*P		**P**	**09 11 25.1**	**+0.4**
SML				pmax	pmax			
	comp=Z,3.0nm,0.8s							
SML	**Sawmill**	**25.89**	**56**	*e*P		**P**	**09 11 25.1**	**+0.4**
	comp=Z,3.4nm,0.8s							
ILAR	**Eielson Array**	**26.22**	**49**	P		**P**	**09 11 27.8**	**+0.1**
ILAR				PcP		**PcP**	**09 14 50.8**	**-1.7**
ILAR	**Eielson Array**	**26.22**	**49**	P		**P**	**09 11 27.8**	**+0.1**
	comp=Z,5.2nm,0.9s,baz=267,slow=9.3,SNR=44							
ILAR				PcP		**PcP**	**09 14 50.8**	**-1.7**
	comp=Z,0.5nm,1.0s,baz=261,slow=3.6,SNR=4.0							
CN2	**Changchun**	**26.23**	**259**	*e*P		**P**	**09 11 26.3**	**-1.6**
CN2				*e*sP		P	09 11 33.0	+5.1
CN2				*e*S		**S**	**09 15 53.4**	**-2.0**
CN2				pmax	pmax			
	comp=Z,10.0nm,1.0s							
CN2				LR	LR			
	comp=Z,200nm,20.0s							
PAX	**Paxson**	**27.04**	**53**	*e*P		**P**	**09 11 36.5**	**+1.4**
PAX				pmax	pmax			
	comp=Z,5.0nm,0.9s							
PAX	**Paxson**	**27.04**	**53**	*e*P		**P**	**09 11 36.5**	**+1.4**
	comp=Z,5.1nm,0.9s							
EGAK	**Eagle**	**28.66**	**48**	*e*P		**P**	**09 11 49.6**	**+0.2**
	comp=Z,7.0nm,0.9s							
KSRS	**Korea Array**	**29.33**	**246**	P		**P**	**09 11 54.4**	**-1.2**
	comp=Z,2.1nm,0.8s,baz=33,slow=9.4,SNR=8.2							
KSRS				PcP		**PcP**	**09 15 01.6**	**+1.2**
	comp=Z,2.1nm,0.7s,baz=360,slow=1.6,SNR=9.3							
KSRS				LR		LR	09 22 50.5	
	comp=Z,91nm,19.9s,baz=33,slow=34							
KSAR	**Wonju Array Be**	**29.36**	**246**	P		**P**	**09 11 54.4**	**-1.5**
KSAR				PcP		**PcP**	**09 15 01.6**	**+1.1**
INK	**Inuvik**	**31.17**	**40**	P		**P**	**09 12 11.8**	**+0.3**
INK				PcP		**PcP**	**09 15 04.2**	**-0.6**
INK	**Inuvik**	**31

comp=Z,2.4nm,0.7s,baz=34,slow=5.6,SNR=6.8
ZALV LR LR 09 32 55.6
comp=Z,74nm,20.4s,baz=70,slow=38
NVS Novosibirsk 42.80 303 *e*P **P 09 13 47.1 -3.0**
NVS pmax pmax
comp=N,2.0nm,0.6s
NVS pmax pmax
comp=E,4.0nm,0.6s
NVS pmax pmax
comp=Z,8.0nm,0.6s
GTA Gaotai 43.61 275 *e*P **P 09 13 55.6 -1.5**
GTA pP **P 09 13 59.6 +2.5**
GTA sP pP 09 14 02.8 -10
GTA S **S 09 20 21.8 -0.1**
GTA sS sS 09 20 29.4 -20
GTA SS SS 09 23 26.3 -12
GTA pmax pmax
comp=Z,3.0nm,1.0s
GTA pmax pmax
comp=Z,40nm,4.7s
GTA LR LR
comp=N,120nm,16.4s
GTA LR LR
comp=E,100nm,15.4s
GTA LR LR
comp=Z,190nm,12.6s
LZH Lanzhou 43.64 269 *e*P **P 09 13 55.5 -1.9**
LZH pP **P 09 13 59.5 +2.1**
LZH sP pP 09 14 01.5 -12
LZH PcP **PcP 09 15 43.5 -0.1**
LZH pmax pmax
comp=Z,13nm,1.0s
LZH pmax pmax
comp=Z,56nm,4.3s
LZH LR LR
comp=N,120nm,10.8s
LZH LR LR
comp=E,110nm,12.1s
LZH LR LR
comp=Z,140nm,15.0s
WMQ Urumqi 47.37 289 ⇓*i*P **P 09 14 26.9 +0.3**
WMQ pP P 09 14 31.3 +4.7
WMQ sP pP 09 14 34.0 -8.8
WMQ *e*S **S 09 21 18.0 +2.3**
WMQ ScS **ScS 09 24 20.0 +5.7**
WMQ pmax pmax
comp=Z,12nm,0.6s
WMQ pmax pmax
comp=Z,84nm,4.3s
WMQ LR LR
comp=N,330nm,10.0s
WMQ LR LR
comp=E,200nm,12.0s
WMQ LR LR
comp=Z,310nm,22.8s
CD2 Chengdu 47.48 264 *e*P **P 09 14 27.3 -0.3**
CD2 pP P 09 14 31.8 +4.2
CD2 sP pP 09 14 34.3 -9.4
CD2 PP **PP 09 16 17.8 -1.4**
CD2 S **S 09 21 18.9 +1.4**
CD2 sS sS 09 21 25.9 -19
CD2 SS **SS 09 24 39.3 -6.3**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,30nm,4.8s
CD2 LR LR
comp=E,130nm,14.3s
CD2 LR LR
comp=Z,220nm,13.2s
KURK Kurchatov 47.53 301 P **P 09 14 26.3 -1.4**
KURK 09 15 55.8
KURK 09 16 19.4
KURK pmax pmax
comp=Z,25nm,0.7s
KURK pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 47.53 301 *e*P **P 09 14 25.6 -2.1**
comp=Z,44nm,1.0s
KURK PcP **PcP 09 15 55.8 -0.9**
KURK PP **PP 09 16 19.4 +0.1**
NEW Newport 47.63 63 *e*P **P 09 14 29.6 +1.0**
comp=Z,15nm,1.9s
NEW Newport 47.63 63 P **P 09 14 29.0 +0.4**
comp=Z,2.0nm,0.9s,baz=44,slow=2.9,SNR=5.1
NEW Newport 47.63 63 ⇓P **P 09 14 29.6 +1.0**
baz=48
KURBB Kurchatov Arra 47.64 301 P **P 09 14 26.3 -2.2**
comp=Z,25nm,0.7s,baz=54,slow=7.9,SNR=225
KURBB PcP **PcP 09 15 55.8 -1.3**
comp=Z,4.7nm,0.8s,baz=49,slow=3.4,SNR=7.0
KURBB PP **PP 09 16 19.4 -0.8**
comp=Z,2.1nm,0.8s,baz=51,slow=10.0,SNR=5.1
DAG Danmarks Havn 47.96 0 *i*P **P 09 14 29.9 -0.7**
comp=Z,13nm,0.8s
MK31 Makanchi Array 48.25 295 *e*P **P 09 14 31.4 -1.9**
MK31 Makanchi Array 48.25 295 *e*P **P 09 14 31.4 -1.9**
MKAR Makanchi Array 48.25 295 P **P 09 14 31.4 -1.9**
MKAR 09 15 58.9
MKAR pmax pmax
comp=Z,11nm,0.7s
MKAR MLR MLR
comp=Z,110nm,21.9s
MKAR Makanchi Array 48.25 295 *e*P **P 09 14 31.4 -1.9**
MKAR PcP **PcP 09 15 58.9 -0.5**
MKAR Makanchi Array 48.25 295 P **P 09 14 31.4 -1.9**
comp=Z,11nm,0.7s,baz=56,slow=6.7,SNR=102
MKAR PcP **PcP 09 15 58.9 -0.5**
comp=Z,1.0nm,0.6s,baz=52,slow=3.9,SNR=2.5
MKAR LR LR 09 35 39.9
comp=Z,110nm,21.9s,baz=7.4,slow=37
A13A Flathead Natio 48.55 61 ⇑P **P 09 14 36.9 +1.2**
baz=48
C12B Naegeli Ranch, 48.83 63 ⇓P **P 09 14 39.5 +1.7**
baz=49
B13A Whitefish 48.89 62 ⇑P **P 09 14 39.5 +1.1**
baz=49
A14A Double T Ranch 49.02 60 ⇓P **P 09 14 40.3 +1.0**
baz=49
YBH Yreka Blue Hor 49.05 73 P **P 09 14 39.6 -0.1**
YBH Yreka Blue Hor 49.05 73 P **P 09 14 39.6 -0.1**
comp=Z,2.0nm,0.9s,baz=351,slow=5.1,SNR=9.3
BSMT Bassoo Peak 49.08 62 *e*P **P 09 14 41.7 +1.8**
BSMT *ep*P pP 09 14 49.6 -6.5
GYA Guiyang 49.26 257 *e*P **P 09 14 41.0 -0.4**
GYA PP **PP 09 16 35.3 -0.3**
GYA ScP **ScP 09 19 58.8 +5.9**
GYA S **S 09 21 44.0 +1.2**
GYA SS **SS 09 25 10.4 -4.2**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,80nm,5.0s
GYA LR LR
comp=N,390nm,18.3s
GYA LR LR
comp=E,250nm,19.7s
GYA LR LR
comp=Z,360nm,18.0s
C13A Hot Springs 49.30 62 ⇑P **P 09 14 43.1 +1.7**
baz=49,SNR=7.4
A15A Johnson Ranch, 49.35 60 ⇑P **P 09 14 42.4 +0.5**
baz=49
JTMT Jette 49.40 62 *e*P **P 09 14 44.2 +1.9**
JTMT *ep*P pP 09 14 51.5 -7.1
B14A Marquette Ranc 49.50 61 ⇓P **P 09 14 44.4 +1.4**
baz=49
E12A Beaver Dam Sad 49.65 64 ⇑P **P 09 14 45.5 +1.3**
baz=50
C14A Swan Lake 49.66 62 ⇓P **P 09 14 45.5 +1.4**
baz=50
SWMT Swartz Lake 49.70 62 *e*P **P 09 14 46.2 +1.6**
SWMT *ep*P pP 09 14 53.4 -7.4
D13A Huson 49.75 63 ⇓P **P 09 14 46.1 +1.2**
baz=50
BMO Blue Mountains 49.80 67 *e*P **P 09 14 46.5 +1.1**
comp=Z,1.4nm,0.7s
VOSK Vostochnaya 49.81 307 P **P 09 14 42.9 -2.2**
VOSK pmax pmax
comp=Z,15nm,0.5s
BVA0 Borovoye Array 49.87 308 *i*P **P 09 14 43.6 -2.0**
BVA0 pmax pmax
comp=Z,19nm,0.5s
BVAR Borovoye Array 49.87 308 P **P 09 14 43.8 -1.8**
BVAR 09 16 04.0
BVAR 09 16 42.0
BVAR pmax pmax
comp=Z,24nm,0.6s
BVAR pmax pmax
comp=Z,4.0nm,0.9s
BVAR Borovoye Array 49.87 308 P **P 09 14 43.8 -1.8**
BVAR PcP **PcP 09 16 04.0 -1.1**
BVAR PP **PP 09 16 42.0 +1.6**
BVAR Borovoye Array 49.87 308 P **P 09 14 43.8 -1.8**
comp=Z,24nm,0.6s,baz=58,slow=8.0,SNR=84
BVAR PcP **PcP 09 16 04.0 -1.1**
comp=Z,2.6nm,0.6s,baz=67,slow=5.0,SNR=3.6
BVAR PP **PP 09 16 42.0 +1.6**
comp=Z,4.0nm,0.9s,baz=56,slow=11,SNR=4.4
B15A Bradely Ranch, 49.88 60 ⇑P **P 09 14 46.7 +0.8**
baz=50
BRVK Borovoye 49.90 308*c i*P **P 09 14 43.8 -2.0**
BRVK pmax pmax
comp=Z,40nm,0.9s
BRVK MLR MLR
comp=Z,123nm,29.0s
BRVK Borovoye 49.90 308 *e*P **P 09 14 44.1 -1.7**
comp=Z,26nm,0.6s
SLMT Seeley Lake 50.14 62 *e*P **P 09 14 49.9 +1.9**
MSO Missoula 50.19 63 *e*P **P 09 14 49.7 +1.5**
comp=Z,1.6nm,0.9s
MSO Missoula 50.19 63 ⇑P **P 09 14 48.8 +0.5**
baz=50
C15A Salmond Ranch, 50.22 61 ⇑P **P 09 14 49.7 +1.2**
baz=50
MOD Modoc 50.24 71 *e*P **P 09 14 50.6 +1.9**
comp=Z,6.7nm,0.9s
D14A Greenough 50.24 62 ⇓P **P 09 14 49.5 +0.8**
baz=50,SNR=6.1
A17A Triple J Farms 50.37 59 ⇑P **P 09 14 50.2 +0.7**
baz=50,SNR=5.5
FFC Flin Flon 50.44 48 *e*P **P 09 14 50.7 +0.9**
FFC pmax pmax
comp=Z,5.0nm,1.2s
FFC Flin Flon 50.44 48 *e*P **P 09 14 50.7 +0.9**
comp=Z,5.1nm,1.2s
FFC *ep*P pP 09 14 58.2 -7.9
CHMT Chamberlain Mo 50.48 62 *e*P **P 09 14 52.3 +1.7**
comp=Z,1.6nm,0.9s
ZRNK Zerenda 50.54 309 P **P 09 14 48.7 -2.0**
ZRNK pmax pmax
comp=Z,23nm,0.5s
C16A Fuhringer Ranc 50.63 60 ⇑P **P 09 14 51.7 +0.2**
baz=51
G12A Big Creek, Yel 50.65 65 ⇓P **P 09 14 52.8 +1.0**
baz=51
WVOR Wild Horse Val 50.76 70 *e*P **P 09 14 54.0 +1.4**
WVOR pmax pmax
comp=Z,2.0nm,0.9s
WVOR Wild Horse Val 50.76 70 *e*P **P 09 14 54.0 +1.4**
comp=Z,2.4nm,0.9s
B17A L&G Farms, Che 50.76 59 ⇑P **P 09 14 52.4 -0.1**
baz=51
D15A Lincoln 50.76 62 ⇓P **P 09 14 53.3 +0.7**
baz=51
A18A Metzger Ranch, 50.80 58 ⇓P **P 09 14 53.4 +0.7**
baz=51
F14A Wisdom 51.18 63 ⇑P **P 09 14 56.7 +1.0**
baz=51
B18A Beardsley Farm 51.19 59 ⇓P **P 09 14 56.6 +0.9**
baz=51
C17A Wharram Farm, 51.23 60 ⇑P **P 09 14 56.9 +0.8**
baz=51
D16A Dana Ranch, Ca 51.26 61 ⇑P **P 09 14 57.3 +1.1**
baz=51
A19A Klindworth Far 51.33 58 ⇑P **P 09 14 57.3 +0.6**
baz=51
HRY Holter Researc 51.33 62 *e*P **P 09 14 58.8 +1.9**
ARCES ARCESS Array B 51.35 342 P **P 09 14 55.5 -1.1**
ARCES PcP **PcP 09 16 09.8 -0.6**
ARCES ARCESS Array B 51.35 342 P **P 09 14 55.5 -1.1**
comp=Z,13nm,0.8s,baz=28,slow=8.2,SNR=15
ARCES PcP **PcP 09 16 09.8 -0.6**
comp=Z,3.1nm,1.0s,baz=62,slow=4.3,SNR=3.8
ARCES LR LR 09 37 50.1
comp=Z,48nm,21.6s,baz=104,slow=37
SVE Sverdlovsk 51.37 316 *e*P **P 09 14 55.0 -1.8**
SVE pmax pmax
comp=Z,20nm,0.9s
SUMG Summit 51.37 8 *e*P **P 09 14 57.3 +0.2**
SUMG pmax pmax
comp=Z,42nm,1.1s
SUMG Summit 51.37 8 *e*P **P 09 14 57.3 +0.2**
comp=Z,42nm,1.1s
SUMG Summit 51.37 8⇑*i*P **P 09 14 57.1 0.0**
comp=Z,2.4nm,1.0s
EGMT Eagleton 51.46 59 ⇑P **P 09 14 58.9 +1.2**
baz=51
APA Apatity 51.47 338⇑*i*P **P 09 14 57.0 -0.4**
APA pmax pmax
comp=Z,70nm,1.4s
APA MLR MLR
comp=Z,800nm,20.0s
E16A East Helena 51.53 62 ⇓P **P 09 14 59.7 +1.3**
baz=52,SNR=5.5
B19A Brinkman Farms 51.55 58 ⇓P **P 09 14 59.5 +1.2**
baz=52
MFID Camas Ranch 51.57 67 ⇓P **P 09 15 00.2 +1.6**
baz=52
D17A Six Diamond Ra 51.60 60 ⇓P **P 09 14 59.9 +1.0**
baz=52
F15A Butte 51.60 63 ⇓P **P 09 15 00.3 +1.3**
baz=52
I12A Atlanta 51.66 66 ⇓P **P 09 15 00.7 +1.2**
baz=52
A20A Cobblestone Ra 51.75 57 ⇑P **P 09 15 01.0 +1.1**
baz=52
DLMT Dillon 51.88 63 *e*P **P 09 15 01.6 +0.7**
comp=Z,5.4nm,1.2s
E17A Martinsdale 51.99 61 ⇓P **P 09 15 03.3 +1.5**
baz=52
C19A Slack Wire Ran 52.00 59 ⇓P **P 09 15 03.0 +1.3**
baz=52,SNR=7.8
D18A Linhart Farms, 52.01 60 ⇓P **P 09 15 03.3 +1.4**
baz=52
B20A Solberg Farm, 52.01 58 ⇑P **P 09 15 02.7 +0.9**
baz=52
F16A Kennard Place, 52.08 62 ⇓P **P 09 15 03.9 +1.5**
baz=52
HLID Hailey 52.20 66 *e*P **P 09 15 05.3 +1.9**
comp=Z,40nm,3.0s
HLID Hailey 52.20 66 ⇓P **P 09 15 05.3 +1.9**
baz=52
E18A Harlowton 52.39 60 ⇑P **P 09 15 06.3 +1.5**
baz=52,SNR=5.2
I14A Mackay 52.44 65 ⇑P **P 09 15 07.3 +2.0**
baz=52
ARU Arti 52.46 317*d i*P **P 09 15 03.5 -1.4**
ARU 09 16 13.0
ARU 09 17 00.5
ARU S **S 09 22 22.5 -3.6**
ARU SS SS 09 25 55.0 -8.9
ARU pmax pmax
comp=Z,30nm,1.0s
D19A Cripps Ranch, 52.48 59 ⇓P **P 09 15 07.0 +1.7**
baz=52
KMI Kunming 52.49 260 P **P 09 15 05.3 -0.5**
KMI pmax pmax
comp=Z,12nm,0.6s
B21A Ellsworth Farm 52.50 57 ⇑P **P 09 15 06.5 +1.1**
baz=52
C20A Veseth Ranch, 52.52 58 ⇓P **P 09 15 07.1 +1.5**
baz=52
A22A Carney Farms, 52.62 56 ⇑P **P 09 15 07.5 +1.2**
baz=52
C21A Desert Coulee 52.88 58 ⇓P **P 09 15 09.3 +1.0**
baz=53,SNR=5.9
D20A Manuel Ranch, 52.89 59 ⇑P **P 09 15 09.8 +1.4**
baz=53,SNR=6.2
F18A Big Timber 52.95 61 ⇑P **P 09 15 10.7 +1.8**
baz=53,SNR=6.3
E19A Rath Farm, Rou 53.02 60 ⇑P **P 09 15 11.0 +1.7**
baz=53
H16A Russell Place, 53.02 63 ⇓P **P 09 15 11.5 +1.9**
baz=53,SNR=8.9
GCMT Greycliff 53.05 61 *e*P **P 09 15 11.8 +2.2**
comp=Z,1.6nm,0.6s
B22A Reddig Ranch S 53.07 57 ⇑P **P 09 15 10.6 +1.0**
baz=53
E20A Meyer Farm, Mu 53.31 59 ⇓P **P 09 15 12.8 +1.3**
baz=53,SNR=7.0
F19A Roth Farm, Mol 53.37 61 ⇑P **P 09 15 13.5 +1.6**
baz=53
B23A Brockton 53.43 56 ⇑P **P 09 15 13.7 +1.5**
baz=53
G18A Lazy EL Ranch, 53.44 61 ⇓P **P 09 15 13.6 +1.0**
baz=53
D21A La Casta Ranch 53.47 58 ⇓P **P 09 15 14.0 +1.4**
baz=53
I16A Newdale 53.49 64 ⇓P **P 09 15 14.7 +1.8**
baz=53
QIZ Qiongzhong 53.51 249 P **P 09 15 14.5 +1.4**
QIZ S **S 09 22 45.5 +4.3**
C22A Vida 53.52 57 ⇑P **P 09 15 14.3 +1.4**
baz=53
A24A Westby 53.57 55 ⇓P **P 09 15 14.3 +1.1**
baz=54
H17A Grant Village 53.58 63 ⇓P **P 09 15 15.2 +1.5**
baz=54
RLMT Red Lodge 53.73 61 *e*P **P 09 15 16.6 +1.9**
comp=Z,8.5nm,0.8s
RLMT *ep*P pP 09 15 24.5 -6.6
IMW Indian Meadow 53.75 64 *e*P **P 09 15 17.9 +2.9**
comp=Z,4.4nm,0.8s
NVAR Mina Array Bea 53.77 73 P **P 09 15 17.2 +2.1**
NVAR Mina Array Bea 53.77 73 P **P 09 15 17.2 +2.1**
comp=Z,3.7nm,0.6s,baz=302,slow=7.6,SNR=44
E21A Keefer Ranch, 53.80 59 ⇑P **P 09 15 16.7 +1.7**
baz=54
F20A Billings 53.80 60 ⇓P **P 09 15 16.1 +1.1**
baz=54
D22A Cohagen 53.80 58 ⇓P **P 09 15 16.3 +1.3**
baz=54,SNR=9.0
C23A Lambert 53.81 57 ⇓P **P 09 15 16.4 +1.4**
baz=54,SNR=9.2
NV11 Mina Array Sit 53.85 73 *e*P **P 09 15 17.8 +2.2**
NV11 *ep*P pP 09 15 26.1 -5.9
MOOW Moose Ponds 53.96 64 *e*P **P 09 15 18.6 +2.2**
comp=Z,4.4nm,1.2s
TPAW Teton Pass 54.03 64 *e*P **P 09 15 19.6 +2.5**
comp=Z,3.3nm,0.6s
LOHW Long Hollow 54.12 64 *e*P **P 09 15 19.9 +2.3**
comp=Z,3.3nm,0.8s
SNOW Snow King Moun 54.16 64 *e*P **P 09 15 20.2 +2.3**
comp=Z,4.4nm,1.0s
G20A Bridger 54.18 61 ⇓P **P 09 15 19.2 +1.3**
baz=54,SNR=5.2
H19A Powell 54.19 62 ⇓P **P 09 15 19.5 +1.6**
baz=54
D23A Lindsay 54.25 57 ⇑P **P 09 15 19.6 +1.4**
baz=54
C24A Savage 54.36 56 ⇓P **P 09 15 20.2 +1.1**
baz=54
TKM2 Tokmak 2 54.37 296 *e*P **P 09 15 18.3 -1.1**
TKM2 Tokmak 2 54.37 296 *e*P **P 09 15 18.2 -1.1**
E22A Miles City 54.42 58 ⇓P **P 09 15 20.9 +1.4**
baz=54,SNR=8.6
G21A Lodge Grass 54.67 60 ⇓P **P 09 15 22.4 +0.9**
baz=55
USP Ospenovka 54.68 297 P **P 09 15 20.5 -0.9**
SNR=6.3
E23A Ismay 54.69 58 ⇓P **P 09 15 22.5 +1.1**
baz=55
D24A Glendive 54.71 57 ⇓P **P 09 15 23.0 +1.4**
baz=55
FRB Frobisher Bay 54.76 25 P **P 09 15 20.9 -0.6**
FRB Frobisher Bay 54.76 25 P **P 09 15 20.9 -0.6**
comp=Z,14nm,0.8s,baz=327,slow=6.6,SNR=15
RCTC Rector, Farmer 54.80 76 ⇑P **P 09 15 24.2 +1.9**
baz=55
HWUT Hardware Ranch 55.07 66 *e*P **P 09 15 26.7 +2.3**
comp=Z,4.4nm,0.8s
HWUT *ep*P pP 09 15 34.5 -6.4
SMMC Simmler 55.11 77 ⇑P **P 09 15 26.5 +1.9**
baz=55
G22A Birney 55.13 59 ⇑P **P 09 15 25.9 +1.2**
baz=55
I20A Worland 55.13 62 ⇓P **P 09 15 26.4 +1.6**
baz=55
AAK Ala-Archa 55.14 296 *e*P **P 09 15 23.5 -1.4**
AAK pmax pmax
comp=Z,9.0nm,0.9s
AAK Ala-Archa 55.14 296 *e*P **P 09 15 23.4 -1.4**
comp=Z,8.8nm,0.9s
AAK Ala-Archa 55.14 296 P **P 09 15 23.5 -1.4**
SNR=5.7
AAK Ala-Archa 55.14 296 P **P 09 15 23.4 -1.4**
comp=Z,3.6nm,0.4s,baz=120,slow=5.5,SNR=12
KZA Kyzart 55.15 295 P **P 09 15 24.0 -1.3**
SNR=11
J19A Crowheart 55.16 63 ⇑P **P 09 15 26.7 +1.6**
baz=55
H21A Big Horn, Sher 55.18 60 ⇓P **P 09 15 26.7 +1.6**
baz=55
F23A Volborg 55.20 58 ⇓P **P 09 15 26.5 +1.3**
baz=55,SNR=8.2
VES Vestal, Richgr 55.23 76 ⇑P **P 09 15 26.9 +1.6**
baz=55
BW06 Boulder Array 55.26 64 *e*P **P 09 15 27.6 +1.7**
comp=Z,5.9nm,1.0s
BW06 *ep*P pP 09 15 34.9 -7.5
PDAR Pinedale Array 55.26 64 P **P 09 15 27.6 +1.7**
PDAR Pinedale Array 55.26 64 P **P 09 15 27.6 +1.7**
comp=Z,4.4nm,0.8s,baz=323,slow=2.8,SNR=25
R11A Troy Canyon, C 55.30 71 ⇓P **P 09 15 28.0 +1.9**
baz=55
GRAC Grapevine Rang 55.32 74 ⇑P **P 09 15 28.4 +2.3**
baz=55
CWC Cottonwood Cre 55.34 75 ⇓P **P 09 15 28.4 +2.0**
baz=55
DUG Dugway 55.44 68 *e*P **P 09 15 29.6 +2.5**
DUG pmax pmax
comp=Z,6.0nm,0.9s
DUG Dugway 55.44 68 *e*P **P 09 15 29.6 +2.5**
comp=Z,5.9nm,0.9s
DUG *ep*P pP 09 15 37.8 -5.8
DUG Dugway 55.44 68 ⇓P **P 09 15 29.1 +2.0**
baz=55,SNR=9.7
KLMR Klimovskoe 55.47 330 *e*P **P 09 15 25.7 -1.0**
KLMR pmax pmax
comp=Z,67nm,1.8s
EKS2 Erkin-Say 55.48 296 *e*P **P 09 15 26.4 -0.9**
EKS2 pmax pmax
comp=Z,9.0nm,0.8s
EKS2 Erkin-Say 55.48 296 *e*P **P 09 15 26.4 -0.9**
comp=Z,8.6nm,0.8s
EKS2 Erkin-Say 55.48 296 P **P 09 15 26.6 -0.8**
SNR=7.0
PKM Peak Mountain 55.51 77 ⇑P **P 09 15 29.8 +2.1**
baz=56
LSA Lhasa 55.54 273 P **P 09 15 30.1 +1.8**
LSA pmax pmax
comp=Z,10.0nm,0.6s
LSA Lhasa 55.54 273 *e*P **P 09 15 25.8 -2.5**
LSA pmax pmax
comp=Z,14nm,0.6s
LSA Lhasa 55.54 273 *e*P **P 09 15 25.8 -2.5**
comp=Z,14nm,0.6s
LSA *ep*P pP 09 15 30.4 -14
H22A Clearmont 55.55 60 ⇓P **P 09 15 29.2 +1.4**
baz=56
F24A Ekalaka 55.57 58 ⇑P **P 09 15 29.1 +1.3**
baz=56
K19A Absolon Red Bu 55.58 63 ⇓P **P 09 15 29.5 +1.4**
baz=56
L18A Fontenelle, Gr 55.63 65 ⇑P **P 09 15 30.3 +1.8**
baz=56
M17A Scullys Gap (B 55.63 65 ⇑P **P 09 15 30.3 +1.8**
baz=56
I21A Big Trails, Te 55.65 61 ⇑P **P 09 15 29.7 +1.2**
baz=56
ISA Isabella 55.69 76 ⇓P **P 09 15 30.5 +1.7**
baz=56
L19A Farson 55.85 64 ⇑P **P 09 15 31.4 +1.4**
baz=56
JOF Joensuu 55.88 335 *e*P **P 09 15 27.7 -1.9**
JOF pmax pmax
comp=Z,35nm,0.6s
JOF Joensuu 55.88 335 *ep* **P 09 15 27.7 -1.9**
comp=Z,35nm,0.6s
AML Almayashu 55.91 296 P **P 09 15 30.0 -0.7**
SNR=6.5
J21A Lysite 55.91 62 ⇓P **P 09 15 31.6 +1.2**
baz=56
MPMC Manual Prospec 55.94 75 ⇓P **P 09 15 32.8 +2.0**
baz=56
G24A Alzada 55.96 58 ⇓P **P 09 15 31.9 +1.3**
baz=56
FURC Furnace Creek, 55.98 74 ⇓P **P 09 15 33.3 +2.5**
baz=56

I22A 9 Mile Ranch, 55.99 61 ⇑P P 09 15 32.5 +1.6
baz=56,SNR=5.3
DAU Daniels Canyon 56.10 67 eP P 09 15 34.7 +2.7
DAU Daniels Canyon 56.10 67 eP P 09 15 34.7 +2.7
MPU Maple Canyon 56.19 67 eP P 09 15 35.1 +2.6
comp=Z,7.0nm,0.8s
ULM Lac du Bonnet 56.24 49 P P 09 15 33.4 +1.0
ULM Lac du Bonnet 56.24 49 P P 09 15 33.4 +1.0
comp=Z,4.9nm,0.4s,baz=310,slow=4.4,SNR=5.1
LRMC Laurel Mountai 56.26 75 ⇓P P 09 15 35.2 +2.3
baz=56
H24A Dirks Ranch, A 56.32 59 ⇓P P 09 15 34.3 +1.1
baz=56
J22A Midwest 56.35 61 ⇑P P 09 15 35.2 +1.7
baz=56
MDND Maddock 56.37 53 ⇓P P 09 15 35.0 +1.5
baz=56
L20A Wamsutter 56.44 63 ⇓P P 09 15 35.4 +1.1
baz=56
K21A Alcova 56.53 62 ⇓P P 09 15 36.2 +1.3
baz=56
EDW2 Edwards Air Fo 56.54 76 ⇑P P 09 15 37.0 +2.1
baz=57
KSH Kashi 56.64 292 eP P 09 15 38.5 +2.9
KSH epP P 09 15 43.8 +8.2
KSH esP pP 09 15 45.5 -6.6
KSH ePcP PcP 09 16 34.6 +3.4
KSH ePP PP 09 17 45.4 +3.7
KSH eScP ScP 09 20 31.6 +6.8
KSH ePcS PcS 09 20 33.3 +1.2
KSH eS S 09 23 28.3 +5.4
KSH esS sS 09 23 37.5 -13
KSH pmax pmax
comp=Z,8.0nm,0.7s
KSH pmax pmax
comp=Z,170nm,4.8s
KSH LR LR
comp=N,140nm,6.2s
KSH LR LR
comp=E,300nm,5.0s
KSH LR LR
comp=Z,270nm,6.3s
SHOC Shoshone 56.72 74 ⇓P P 09 15 38.1 +2.0
baz=57
KK31 Karatay Array 56.80 299 i P P 09 15 34.7 -1.9
KK31 pmax pmax
comp=Z,7.0nm,0.5s
KKAR Karatay Array 56.80 299 eP P 09 15 35.0 -1.6
KKAR pmax pmax
comp=Z,2.0nm,0.4s
KKAR Karatay Array 56.80 299 eP P 09 15 35.0 -1.6
comp=Z,1.7nm,0.4s
ARUT Antelope Range 56.86 70 eP P 09 15 39.6 +2.3
ARUT pmax pmax
comp=Z,3.0nm,0.3s
ARUT Antelope Range 56.86 70 eP P 09 15 39.6 +2.3
comp=Z,2.7nm,0.3s
GSC Goldstone 56.88 75 eP P 09 15 39.4 +2.1
GSC pmax pmax
comp=Z,5.0nm,0.7s
GSC Goldstone 56.88 75 eP P 09 15 39.4 +2.1
comp=Z,4.9nm,0.7s
GSC Goldstone 56.88 75 ⇑P P 09 15 39.6 +2.3
baz=57
K22A Casper 56.88 62 ⇑P P 09 15 39.1 +1.7
baz=57
M20A Sweetwater, Wa 56.89 64 ⇑P P 09 15 39.4 +1.9
baz=57
L21A Rawlins 56.96 63 ⇑P P 09 15 39.0 +1.1
baz=57
MVU Marysvale 56.99 69 eP P 09 15 40.8 +2.5
MSU Marysvale 57.00 69 eP P 09 15 41.0 +2.7
MSU Marysvale 57.00 69 eP P 09 15 41.0 +2.7
RSSD Black Hills 57.03 59 eP P 09 15 39.9 +1.5
RSSD pmax pmax
comp=Z,6.0nm,0.7s
RSSD Black Hills 57.03 59 eP P 09 15 39.9 +1.5
comp=Z,6.3nm,0.7s
RSSD epP pP 09 15 47.5 -7.5
CCUT Cedar City 57.08 70 eP P 09 15 41.1 +2.2
comp=Z,4.6nm,1.2s
CCUT epP pP 09 15 48.9 -6.5
AKTO Aktyubinsk 57.10 312 P P 09 15 37.1 -1.5
AKTO 09 16 31.1
AKTO pmax pmax
comp=Z,10.0nm,0.6s
AKTO MLR MLR
comp=Z,85nm,18.6s
AKTO Aktyubinsk 57.10 312 P P 09 15 37.1 -1.5
AKTO PcP PcP 09 16 31.1 -1.6
AKTO Aktyubinsk 57.10 312 P P 09 15 37.1 -1.5
comp=Z,10nm,0.6s,baz=63,slow=9.1,SNR=49
AKTO PcP PcP 09 16 31.1 -1.6
comp=Z,4.9nm,0.8s,baz=45,slow=5.7,SNR=3.6
AKTO LR LR 09 42 44.4
comp=Z,85nm,18.6s,baz=217,slow=39
AB31 Akbulak array 57.17 310 i P P 09 15 37.4 -1.6
AB31 pmax pmax
comp=Z,5.0nm,0.3s
ABKAR Akbulak array 57.17 310 eP P 09 15 37.0 -2.1
comp=Z,8.1nm,0.4s
BFSC Mount Baldy Ra 57.20 76 ⇑P P 09 15 41.8 +2.2
baz=57
M21A Separation Pea 57.23 63 ⇑P P 09 15 41.2 +1.3
baz=57,SNR=5.5
Q16A Castle Valley 57.24 68 ⇑P P 09 15 41.8 +1.8
baz=57
K23A Bowen Ranch, D 57.25 61 ⇑P P 09 15 41.0 +1.1
baz=57
TUQ Turquoise Moun 57.26 74 ⇑P P 09 15 42.0 +1.9
baz=57
O19A Miners Draw (B 57.29 65 ⇓P P 09 15 42.0 +1.8
baz=57,SNR=5.8
N20A Spence Gulch, 57.34 64 ⇑P P 09 15 42.8 +2.1
baz=57,SNR=23
L22A Ellis Ranch, M 57.38 62 ⇓P P 09 15 42.6 +1.7
baz=57
SRU San Rafael 57.44 67 ⇓P P 09 15 43.3 +2.0
baz=57,SNR=8.7
HEC Hector,Ludlow 57.49 75 ⇓P P 09 15 43.6 +2.0
baz=58
J25A Sunshine Ranch 57.68 59 ⇑P P 09 15 44.0 +1.1
baz=58
L23A Garrett 57.69 62 ⇑P P 09 15 44.1 +1.0
baz=58,SNR=11
AGMN Agassiz Nation 57.71 51 eP P 09 15 43.7 +0.8
comp=Z,5.5nm,0.8s
KAF Kangasniemi 57.72 337 eP P 09 15 41.4 -1.3
KAF pmax pmax
comp=Z,25nm,0.7s
KAF Kangasniemi 57.72 337 ep P 09 15 41.4 -1.3
comp=Z,25nm,0.7s
N21A Black Mountain 57.77 64 ⇓P P 09 15 45.6 +1.9
baz=58,SNR=6.0
P19A Cripple Cowboy 57.85 66 ⇑P P 09 15 46.3 +2.0
baz=58,SNR=7.4
O20A White River Ci 57.86 65 ⇓P P 09 15 46.0 +1.7
baz=58,SNR=13
GMRC Granite Mounta 57.89 74 ⇑P P 09 15 46.6 +2.1
baz=58
M23A Laramie 58.16 62 ⇓P P 09 15 48.1 +1.7
baz=58
O21A Pagoda 58.20 64 ⇑P P 09 15 48.4 +1.6
baz=58
P20A De Beque 58.26 65 ⇑P P 09 15 48.3 +1.3
baz=58
N22A Wattenberg Ran 58.28 63 ⇓P P 09 15 49.0 +1.7
baz=58,SNR=7.0
BELC Belle Mtn. Jos 58.29 75 ⇑P P 09 15 48.7 +1.4
baz=58
PFO Pinyon Flat Ob 58.33 76 P P 09 15 48.7 +1.1
PFO Pinyon Flat Ob 58.33 76 P P 09 15 48.7 +1.1
comp=Z,2.8nm,0.8s,baz=325,slow=6.4,SNR=6.3
PFO Pinyon Flat Ob 58.33 76 ⇑P P 09 15 49.1 +1.5
baz=58
FIA1 FINESS Array S 58.37 337 eP P 09 15 46.6 -0.6
FINES FINESS Array B 58.37 337 P P 09 15 46.4 -0.9
FINES FINESS Array B 58.37 337 P P 09 15 46.4 -0.9
comp=Z,42nm,0.6s,baz=33,slow=9.0,SNR=198
FINES LR LR 09 42 43.2
comp=Z,42nm,20.8s,baz=173,slow=38
N23A Red Feather La 58.47 63 ⇓P P 09 15 50.6 +1.9
baz=58,SNR=10
U15A North Rim 58.49 71 ⇑P P 09 15 50.5 +1.6
baz=58
M24A Cheyenne 58.61 62 ⇑P P 09 15 51.4 +2.0
baz=58,SNR=5.2

W13A Hualapai Mount 58.62 73 ⇓P P 09 15 51.6 +1.9
baz=59
IRM Iron Mountain 58.63 74 ⇑P P 09 15 51.6 +2.0
baz=59
Q20A Ridgley Place, 58.71 66 ⇑P P 09 15 51.7 +1.4
baz=59
P21A Newcastle 58.73 65 ⇑P P 09 15 52.3 +1.9
baz=59,SNR=6.4
PV04 Paradox Valley 58.81 67 eP P 09 15 53.0 +2.0
BC3 Big Chuckawall 58.84 75 ⇑P P 09 15 52.2 +1.1
baz=59
J28A Allard Ranch, 58.90 58 ⇑P P 09 15 52.7 +1.3
baz=59,SNR=9.0
K27A Flueckinger Fa 58.96 59 ⇓P P 09 15 52.8 +1.0
baz=59
O23A Lake Granby, G 58.99 63 ⇓P P 09 15 54.6 +2.3
baz=59,SNR=8.7
M25A Palm-Egli Farm 59.02 61 ⇓P P 09 15 54.0 +1.7
baz=59
P22A Eagle 59.03 64 ⇓P P 09 15 54.1 +1.7
baz=59
Q21A Lamborn Mesa, 59.18 65 ⇓P P 09 15 55.2 +1.8
baz=59,SNR=7.4
PV01 Paradox Valley 59.18 67 eP P 09 15 55.5 +1.9
comp=Z,200nm,0.8s
BRSD Miller 59.22 55 ⇓P P 09 15 54.6 +1.2
baz=59
R20A Redvale 59.24 66 ⇓P P 09 15 55.5 +1.5
baz=59
TAPN Taplejung 59.28 274 eP P 09 15 53.4 -1.1
comp=Z,13nm,0.4s
K28A Ten Mile Ranch 59.37 58 ⇓P P 09 15 56.1 +1.5
baz=59
ISCO Idaho Springs 59.46 63 eP P 09 15 57.8 +2.3
ISCO pmax pmax
comp=Z,5.0nm,0.9s
ISCO Idaho Springs 59.46 63 eP P 09 15 57.8 +2.3
comp=Z,4.8nm,0.9s
ISCO Idaho Springs 59.46 63 ⇓P P 09 15 57.7 +2.2
baz=59,SNR=8.3
Q22A Crested Butte, 59.50 65 ⇓P P 09 15 57.6 +1.7
baz=59
S20A Disappointment 59.52 67 ⇑P P 09 15 57.9 +2.0
baz=60
R21A Cimarron 59.54 66 ⇓P P 09 15 57.9 +1.9
baz=60,SNR=7.4
CHTO Chiang Mai 59.63 259 eP P 09 15 55.9 -0.7
CHTO Chiang Mai 59.63 259 eP P 09 15 55.9 -0.7
WUAZ Wupatki 59.66 71 eP P 09 15 59.2 +2.4
comp=Z,4.7nm,1.2s
WUAZ Wupatki 59.66 71 ⇑P P 09 15 59.0 +2.2
baz=60
ODAN Odare 59.84 274 eP P 09 15 57.6 -0.6
comp=Z,14nm,0.6s
GUN Gumba 59.89 276 eP P 09 15 56.9 -1.8
comp=Z,14nm,0.3s
CMAR Chiang Mai Arr 59.91 259 P P 09 15 57.4 -1.1
CMAR PcP PcP 09 16 44.5 +0.3
CMAR Chiang Mai Arr 59.91 259 P P 09 15 57.4 -1.1
comp=Z,4.2nm,0.8s,baz=22,slow=6.9,SNR=14
CMAR PcP PcP 09 16 44.5 +0.3
comp=Z,8.4nm,0.8s,baz=11,slow=3.8,SNR=16
CMAR LR LR 09 41 26.1
comp=Z,84nm,20.7s,baz=253,slow=36
S21A Coal Bank Pass 59.94 66 ⇓P P 09 16 01.0 +2.1
baz=60,SNR=7.9
Y14A Wickenburg 59.97 73 ⇓P P 09 16 00.9 +2.1
baz=60
R22A Saguache, Gunn 60.05 65 ⇑P P 09 16 01.7 +2.0
baz=60
RAMN Ramite 60.22 275 eP P 09 15 59.0 -1.8
comp=Z,23nm,0.3s
N27A Anderson Farm, 60.24 61 ⇓P P 09 16 02.8 +2.2
baz=60
KKN Kakani 60.32 277 eP P 09 16 00.5 -1.0
comp=Z,12nm,0.2s
S22A 4UR Ranch, Cre 60.38 66 ⇑P P 09 16 03.9 +2.1
baz=60,SNR=5.9
P25A Willow Gulch B 60.41 63 ⇓P P 09 16 03.4 +1.6
baz=60
PKI Pulchoki 60.42 276 eP P 09 16 00.8 -1.5
PKIN Phulchoki 60.42 276 eP P 09 16 01.0 -1.2
113A Mohawk Valley, 60.44 74 ⇑P P 09 16 04.0 +2.1
baz=60
X16A Lo Mia Camp, P 60.45 71 ⇑P P 09 16 04.5 +2.2
baz=60
DMN Daman 60.56 277 eP P 09 16 02.3 -0.9
R23A Moffat 60.56 65 ⇓P P 09 16 04.9 +1.8
baz=60
O27A Beecher Island 60.74 61 ⇓P P 09 16 05.5 +1.5
baz=61
DANN Dangsing 60.75 278 eP P 09 16 03.3 -1.2
comp=Z,13nm,0.3s
P26A Davis Ranch, A 60.78 62 ⇓P P 09 16 06.0 +1.6
baz=61
N28A Pribbeno Ranch 60.82 60 ⇓P P 09 16 06.0 +1.4
baz=61
ECSD EROS Data Cent 60.85 55 eP P 09 16 04.9 +0.3
comp=Z,5.4nm,1.1s
VSU Vasula 60.88 335 ⇓eP P 09 16 04.2 -0.3
VSU pmax pmax
comp=Z,42nm,0.7s
T22A Edith 60.90 66 ⇑P P 09 16 07.1 +1.8
baz=61
R24A Sanders Place, 60.90 64 ⇑P P 09 16 07.1 +1.9
baz=61
U21A Nageezi 60.95 67 ⇓P P 09 16 07.4 +1.7
baz=61
OBN Obninsk 61.13 328 ⇑eP P 09 16 02.3 -3.9
OBN e 09 16 47.4
OBN e 09 18 17.3
OBN pmax pmax
comp=Z,15nm,0.5s
P27A Ficken Ranch, 61.17 62 ⇓P P 09 16 08.4 +1.4
baz=61
X18A Snowflake 61.17 70 ⇑P P 09 16 09.2 +2.0
baz=61
N29A Votaw Ranch, W 61.17 59 ⇑P P 09 16 08.6 +1.7
baz=61
Q26A Hugo 61.18 63 ⇓P P 09 16 08.6 +1.5
baz=61
KOLN Koldanda 61.28 278 eP P 09 16 05.7 -2.3
comp=Z,18nm,0.6s
S24A Houchin Ranch, 61.29 65 ⇑P P 09 16 09.6 +1.5
baz=61
PYUN Piuthan 61.37 279 eP P 09 16 05.7 -2.9
comp=Z,41nm,0.7s
R25A Fountain Ranch 61.38 64 ⇑P P 09 16 09.9 +1.4
baz=61
W20A Ramah 61.49 69 ⇓P P 09 16 10.9 +1.6
baz=62
NB2 NORSAR Subarra 61.53 344 P P 09 16 07.9 -1.1
comp=Z,15nm,0.9s,baz=19,slow=6.9
NOA NORSAR Array B 61.53 344 P P 09 16 07.9 -1.1
NOA NORSAR Array B 61.53 344 P P 09 16 07.9 -1.1
comp=Z,8.6nm,0.8s,baz=19,slow=6.8,SNR=34
NOA LR LR 09 45 03.0
comp=Z,20nm,19.7s,baz=220,slow=38
KSCO Kaye Shedlock' 61.56 62 ⇑P P 09 16 11.0 +1.4
baz=62
P28A Saint Francis 61.57 61 ⇓P P 09 16 11.0 +1.4
baz=62
214A Organ Pipe Nat 61.58 74 ⇑P P 09 16 11.9 +2.2
baz=62
O29A 4D Ranch, Culb 61.62 60 ⇓P P 09 16 11.2 +1.2
baz=62
S25A Robets Cordova 61.68 64 ⇑P P 09 16 12.3 +1.8
baz=62
R26A Arlington 61.69 63 ⇓P P 09 16 12.0 +1.4
baz=62,SNR=7.1
U23A El Rito 61.79 66 ⇓P P 09 16 13.3 +2.0
baz=62,SNR=7.4
X20A Qumado 61.94 69 ⇓P P 09 16 14.3 +2.0
baz=62,SNR=8.6
O30A MW Ranch, Wils 61.94 59 ⇑P P 09 16 12.7 +0.6
baz=62
T25A Trinidad 62.09 65 ⇓P P 09 16 14.7 +1.4
baz=62
S26A Kim 62.20 64 ⇓P P 09 16 15.2 +1.2
baz=62
V23A Ortiz Mt. (NFS 62.24 67 ⇑P P 09 16 16.8 +2.5
baz=62,SNR=6.8
P30A Selden 62.34 60 ⇑P P 09 16 15.5 +0.8
baz=62
X21A Alamocita Cree 62.39 69 ⇓P P 09 16 17.4 +2.1
baz=62,SNR=11
T26A Comanche Natio 62.48 64 ⇓P P 09 16 16.8 +0.9
baz=62

Y20A Horse Springs, 62.48 70 ⇓P P 09 16 18.1 +2.1
baz=62
U25A Circle Dot Ran 62.66 65 ⇑P P 09 16 18.7 +1.6
baz=63
W23A Werner Place, 62.70 67 ⇑P P 09 16 18.8 +1.4
baz=63
ANMO Albuquerque 62.71 68 eP P 09 16 19.1 +1.7
comp=Z,20nm,2.2s
ANMO Albuquerque 62.71 68 P P 09 16 18.8 +1.4
comp=Z,1.8nm,0.7s,baz=327,slow=8.0,SNR=11
V24A Rampart Ranch, 62.73 66 ⇑P P 09 16 19.2 +1.6
baz=63,SNR=5.2
LAZ Ladron 62.76 68 eP P 09 16 20.0 +2.2
comp=Z,1.3nm,1.0s
SCHQ Schefferville 62.90 29 P P 09 16 17.3 -0.8
SCHQ Schefferville 62.90 29 P P 09 16 17.3 -0.8
comp=Z,7.4nm,0.7s,baz=342,slow=7.9,SNR=12
Z20A Nine Sixteen R 62.98 70 ⇑P P 09 16 21.2 +2.0
baz=63
V25A Rancho No Teng 62.98 66 ⇑P P 09 16 20.9 +1.6
baz=63
U26A Atchley Ranch, 63.00 65 ⇓P P 09 16 20.7 +1.3
baz=63
S28A Manter 63.02 62 ⇑P P 09 16 20.7 +1.4
baz=63
W24A Lazy 6 Ranch, 63.05 67 ⇓P P 09 16 21.5 +1.8
baz=63
Y22A Socorro 63.21 69 ⇑P P 09 16 22.9 +2.2
baz=63
T28A Walsh 63.27 63 ⇓P P 09 16 21.6 +0.5
baz=63
R30A Dighton 63.30 61 ⇓P P 09 16 21.8 +0.7
baz=63
Z21A St. Cloud Mine 63.32 70 ⇓P P 09 16 24.1 +2.5
baz=63
S29A Ulysses 63.39 62 ⇑P P 09 16 23.1 +1.4
baz=63
120A U Bar Ranch, L 63.39 71 ⇑P P 09 16 23.9 +1.9
baz=63
V26A Tequesquite Ra 63.44 65 ⇓P P 09 16 23.3 +1.1
baz=63
U27A Thompson Grove 63.45 64 ⇓P P 09 16 22.9 +0.6
baz=63,SNR=6.0
W25A X Bar L Ranch, 63.54 66 ⇓P P 09 16 23.9 +1.0
baz=64
R31A Burdett 63.66 60 ⇑P P 09 16 23.9 +0.3
baz=64
Y23A Lovelace Mesa, 63.70 68 ⇑P P 09 16 25.8 +1.7
baz=64,SNR=6.6
S30A Montezuma 63.70 61 ⇓P P 09 16 23.9 +0.1
baz=64
Z22A Elephant Butte 63.74 69 ⇓P P 09 16 25.8 +1.6
baz=64
121A Cookes Peak, D 63.86 70 ⇓P P 09 16 26.7 +1.6
baz=64
220A Playas Peak, P 63.95 71 ⇓P P 09 16 27.7 +2.1
baz=64
319A Douglas 63.95 72 ⇑P P 09 16 27.0 +1.4
baz=64
KBL Kabul 64.02 294 eP P 09 16 23.6 -2.5
KBL pmax pmax
comp=Z,6.0nm,0.8s
KBL Kabul 64.02 294 eP P 09 16 23.6 -2.5
comp=Z,6.2nm,0.8s
Y24A Capitan 64.03 68 ⇑P P 09 16 27.9 +1.7
baz=64,SNR=12
X26A CR and CF Fran 64.39 66 ⇑P P 09 16 29.5 +1.0
baz=64
Y25A Mesa, Roswell 64.42 67 ⇑P P 09 16 30.1 +1.4
baz=64,SNR=8.0
Z24A Sheeppen Canyo 64.53 68 ⇑P P 09 16 31.1 +1.6
baz=64,SNR=5.4
222A Williams Famil 64.56 70 ⇓P P 09 16 31.3 +1.7
baz=64
X27A F and S Farms, 64.69 65 ⇑P P 09 16 31.4 +1.0
baz=65
Z25A Roswell 64.91 67 ⇓P P 09 16 32.9 +1.1
baz=65
124A Stringfield Ra 64.97 68 ⇑P P 09 16 33.5 +1.1
baz=65
Y27A Causey 65.25 66 ⇑P P 09 16 35.1 +1.0
baz=65
Z26A Caprock 65.30 67 ⇓P P 09 16 35.7 +1.3
baz=65,SNR=5.9
MSTX Muleshoe 65.38 66 ⇑P P 09 16 36.1 +1.2
baz=65
224A Cornudas Mount 65.42 69 ⇑P P 09 16 36.7 +1.5
baz=65,SNR=6.3
125A Gardner Draw, 65.42 68 ⇑P P 09 16 36.5 +1.4
baz=65
X29A Tulia 65.56 65 ⇓P P 09 16 36.9 +0.9
baz=66
Z27A Tatum 65.66 66 ⇓P P 09 16 37.7 +0.9
baz=66
126A Clayton Basin, 65.77 67 ⇓P P 09 16 38.3 +0.9
baz=66
MNTX Cornudas Mount 65.79 69 eP P 09 16 39.1 +1.7
comp=Z,3.3nm,1.0s
X30A Coker Ranch, T 65.99 64 ⇑P P 09 16 39.6 +0.9
baz=66
127A Arkansas Junct 66.09 67 ⇓P P 09 16 40.4 +1.0
baz=66
Z28A Tucker Farm, M 66.11 66 ⇓P P 09 16 40.1 +0.4
baz=66
226B Tecolote Peak, 66.13 68 ⇑P P 09 16 40.8 +1.1
baz=66
325A Bean Ranch, Si 66.26 69 ⇓P P 09 16 41.9 +1.2
baz=66
X31A McDonald Ranch 66.30 63 ⇓P P 09 16 41.7 +1.0
baz=66
Z29A Hungry Hill Ra 66.49 65 ⇑P P 09 16 42.9 +0.9
baz=66
128A Castleberry Fa 66.59 66 ⇑P P 09 16 43.6 +1.0
baz=66
425A Indio Mountain 66.71 69 ⇑P P 09 16 44.3 +0.8
baz=67,SNR=5.8
Z30A Sanderson Ranc 66.77 65 ⇑P P 09 16 44.2 +0.5
baz=67
WMOK Wichita Mounta 66.82 62 eP P 09 16 44.5 +0.5
WMOK pmax pmax
comp=Z,7.0nm,1.0s
WMOK Wichita Mounta 66.82 62 eP P 09 16 44.5 +0.5
comp=Z,7.2nm,1.0s
326A Caldwell Ranch 66.83 68 ⇑P P 09 16 45.5 +1.3
baz=67
Y32A R-V Farms, Ver 67.06 63 ⇓P P 09 16 45.9 +0.3
baz=67
AKASG Malin Array Be 67.15 330 eP P 09 16 44.5 -1.3
AKASG pmax pmax
comp=Z,19nm,0.8s
AKASG Malin Array Be 67.15 330 P P 09 16 44.2 -1.6
AKASG Malin Array Be 67.15 330 P P 09 16 44.2 -1.6
comp=Z,18nm,0.8s,baz=28,slow=6.0,SNR=30
AKASG LR LR 09 49 36.0
comp=Z,43nm,18.4s,baz=30,slow=39
KIEV Kiev 67.16 330 eP P 09 16 44.6 -1.3
KIEV pmax pmax
comp=Z,18nm,0.9s
KIEV Kiev 67.16 330 eP P 09 16 44.6 -1.3
comp=Z,18nm,0.9s
AK01 Malin Array Si 67.17 330 eP P 09 16 44.8 -1.0
AK02 Malin Array Si 67.20 330 eP P 09 16 44.7 -1.4
Z31A Sharp Cattle R 67.25 64 ⇓P P 09 16 47.1 +0.4
baz=67
426A McDonald Obser 67.31 69 ⇓P P 09 16 48.3 +1.0
baz=67
TUL1 Tulsa 67.37 59 ⇓P P 09 16 48.0 +0.6
baz=67
328A Wristen Ranch, 67.39 67 ⇑P P 09 16 48.8 +1.1
baz=67
130A Snyder 67.39 65 ⇓P P 09 16 48.6 +0.9
baz=67
427A Hayter Ranch, 67.50 68 ⇓P P 09 16 49.4 +1.0
baz=68
Z32A Haskell 67.60 64 ⇓P P 09 16 49.4 +0.5
baz=68
131A Roby 67.63 65 ⇓P P 09 16 49.7 +0.5
baz=68
329A Wagon Wheel Ra 67.74 67 ⇓P P 09 16 50.6 +0.7
baz=68
526A Mary Lane Ranc 67.76 69 ⇑P P 09 16 51.1 +1.0
baz=68
230A Sterling City 67.88 66 ⇑P P 09 16 51.7 +0.9
baz=68
527A Woodward Ranch 67.94 69 ⇓P P 09 16 52.0 +0.7
baz=68
ABTX Abilene, Hawle 68.05 64 ⇓P P 09 16 52.3 +0.5
baz=68

626A	**Big Bend Ranch**	**68.13**	**70**	⇓P		**P**	**09 16 53.3**	**+0.9**
	baz=68								
330A	**Mertzon**	**68.23**	**66**	⇓P		**P**	**09 16 53.5**	**+0.6**
	baz=68								
429A	**Davenport Ranc**	**68.47**	**67**	⇑P		**P**	**09 16 55.1**	**+0.6**
	baz=68								
BSEG	**Bad Segeberg**	**68.48**	**343**	*e*P		**P**	**09 16 53.5**	**-0.5**
	comp=Z,28nm,1.1s								
KIV	**Kislovodsk**	**68.50**	**318**	*e*P		**P**	**09 16 55.0**	**+0.5**
KIV				*e*			09 17 18.8		
KIV				*e*			09 19 22.7		
KIV				*e*SS		SS	09 30 13.9	-1.4	
KIV				pmax		pmax			
	comp=Z,8.0nm,1.1s								
KIV				MLR		MLR			
	comp=Z,100nm,22.0s								
627A	**Terlingua Ranc**	**68.61**	**69**	⇑P		**P**	**09 16 56.7**	**+1.3**
	baz=69								
KBZ	**Khabaz**	**68.61**	**317**	P		**P**	**09 16 54.5**	**-0.6**
KBZ				pmax		pmax			
	comp=Z,4.0nm,0.7s								
KBZ				MLR		MLR			
	comp=Z,70nm,21.8s								
KBZ	**Khabaz**	**68.61**	**317**	P		**P**	**09 16 54.5**	**-0.6**
KBZ	**Khabaz**	**68.61**	**317**	P		**P**	**09 16 54.5**	**-0.6**
	comp=Z,4.0nm,0.7s,baz=70,slow=1.3,SNR=5.4								
KBZ				LR		LR	09 49 29.4		
	comp=Z,70nm,21.8s,baz=225,slow=38								
232A	**Coleman**	**68.64**	**65**	⇑P		**P**	**09 16 55.9**	**+0.4**
	baz=69								
430A	**Baggett Ranch,**	**68.69**	**67**	⇑P		**P**	**09 16 56.5**	**+0.7**
	baz=69								
331A	**San Angelo**	**68.69**	**66**	⇑P		**P**	**09 16 56.4**	**+0.6**
	baz=69								
529A	**Stev Forest Ra**	**68.69**	**68**	⇑P		**P**	**09 16 56.7**	**+0.8**
	baz=69								
628A	**Black Gap, Mar**	**68.85**	**69**	⇓P		**P**	**09 16 57.8**	**+1.0**
	baz=69								
332A	**Millersview**	**68.99**	**65**	⇓P		**P**	**09 16 58.6**	**+0.9**
	baz=69								
431A	**Sonora**	**69.10**	**66**	⇓P		**P**	**09 16 59.1**	**+0.7**
	baz=69								
432A	**Menard**	**69.36**	**65**	⇓P		**P**	**09 17 00.5**	**+0.4**
	baz=69								
LVV	**L'vov**	**69.38**	**333**	*e*P		**P**	**09 16 58.8**	**-0.9**
531A	**Rocksprings**	**69.54**	**66**	⇑P		**P**	**09 17 01.5**	**+0.4**
	baz=70								
JCT	**Junction City**	**69.67**	**66**	*e*P		**P**	**09 17 02.5**	**+0.6**
JCT				pmax		pmax			
	comp=Z,11nm,1.1s								
JCT	**Junction City**	**69.67**	**66**	*e*P		**P**	**09 17 02.5**	**+0.6**
	comp=Z,11nm,1.1s								
JCT	**Junction City**	**69.67**	**66**	⇓P		**P**	**09 17 02.4**	**+0.5**
	baz=70								
KULM	**Kulim**	**69.84**	**249**	*e*P		**P**	**09 17 03.2**	**+0.1**
	comp=Z,17nm,0.9s								
KWP	**Kalwaria Pacla**	**69.89**	**333**	*e*P		**P**	**09 17 02.9**	**0.0**
KWP	**Kalwaria Pacla**	**69.89**	**333**	*e*P		**P**	**09 17 02.9**	**0.0**
	comp=Z,82nm,1.1s								
KWP	**Kalwaria Pacla**	**69.89**	**333**	⇑*i*P		**P**	**09 17 02.8**	**0.0**
KWP	**Kalwaria Pacla**	**69.89**	**333**	*e*P		**P**	**09 17 02.9**	**0.0**
NRDL	**Niedersach Rie**	**69.90**	**342**	*e*P		**P**	**09 17 02.4**	**-0.4**
532A	**Rocksprings**	**69.90**	**66**	⇓P		**P**	**09 17 03.9**	**+0.6**
	baz=70								
OJC	**Ojcow**	**70.06**	**335**	*e*P		**P**	**09 17 03.9**	**0.0**
OJC				pmax		pmax			
	comp=Z,37nm,1.1s								
OJC	**Ojcow**	**70.06**	**335**	*e*P		**P**	**09 17 03.9**	**0.0**
	comp=Z,37nm,1.1s								
OJC	**Ojcow**	**70.06**	**335**	*e*P		**P**	**09 17 03.9**	**0.0**
631A	**Perdido Creek**	**70.12**	**67**	⇑P		**P**	**09 17 05.4**	**+0.7**
	baz=70								
KSP	**Ksiaz**	**70.27**	**338**	⇑*e*P		**P**	**09 17 04.9**	**-0.3**
KSP	**Ksiaz**	**70.27**	**338**	*e*P		**P**	**09 17 04.9**	**-0.3**
STHS	**Stebnicka Huta**	**70.46**	**334**	*e*P		**P**	**09 17 07.0**	**+0.6**
STHS				pmax		pmax			
	comp=Z,17nm,0.9s								
STHS	**Stebnicka Huta**	**70.46**	**334**	*e*P		**P**	**09 17 07.0**	**+0.6**
632A	**Uvalde**	**70.46**	**66**	⇑P		**P**	**09 17 07.4**	**+0.7**
	baz=70								
CLZ	**Clausthal**	**70.48**	**342**	*e*P		**P**	**09 17 06.3**	**-0.2**
	comp=Z,18nm,1.2s								
CLL	**Collm**	**70.50**	**340**	*e*P		**P**	**09 17 05.8**	**-0.8**
	comp=Z,25nm,1.3s								
CLL	**Collm**	**70.50**	**340**	*i* P		**P**	**09 17 05.7**	**-0.8**
CLL				*e*			09 17 22.0		
CLL				pmax		pmax			
	comp=Z,21nm,1.1s								
CLL	**Collm**	**70.50**	**340**	*i* P		**P**	**09 17 05.7**	**-0.8**
	comp=Z,21nm,1.1s								
KIS	**Kishinev**	**70.59**	**328**	*e*P		**P**	**09 17 05.0**	**-2.2**
KIS	**Kishinev**	**70.59**	**328**	*e*P		**P**	**09 17 05.0**	**-2.2**
KOLS	**Kolonicke sedl**	**70.65**	**333**	*e*P		**P**	**09 17 07.3**	**-0.2**
KOLS				pmax		pmax			
	comp=Z,12nm,1.1s								
KOLS	**Kolonicke sedl**	**70.65**	**333**	*e*P		**P**	**09 17 07.3**	**-0.2**
UPC	**Upice**	**70.65**	**338**	*e*P		**P**	**09 17 07.7**	**+0.2**
UPC	**Upice**	**70.65**	**338**	*e*P		**P**	**09 17 07.7**	**+0.2**
DPC	**Dobruska-Polom**	**70.73**	**338**	*e*P		**P**	**09 17 08.0**	**-0.1**
DPC	**Dobruska-Polom**	**70.73**	**338**	*e*P		**P**	**09 17 08.0**	**-0.1**
BRG	**Berggiesshubel**	**70.73**	**339**	*e*P		**P**	**09 17 07.7**	**-0.3**
	comp=Z,14nm,1.1s								
BRG	**Berggiesshubel**	**70.73**	**339**	*e*P		**P**	**09 17 07.3**	**-0.7**
	comp=Z,14nm,1.1s								
BRG	**Berggiesshubel**	**70.73**	**339**	*e*P		**P**	**09 17 07.7**	**-0.3**
BRG				pmax		pmax			
	comp=Z,14nm,1.2s								
OKC	**Ostrava-Krasne**	**70.80**	**336**	*e*P		**P**	**09 17 08.9**	**+0.5**
OKC	**Ostrava-Krasne**	**70.80**	**336**	*e*P		**P**	**09 17 08.9**	**+0.5**
CRVS	**Cervenica-Dubn**	**70.88**	**334**	*e*P		**P**	**09 17 06.3**	**-2.7**
CRVS				pmax		pmax			
	comp=Z,8.0nm,1.0s								
CRVS	**Cervenica-Dubn**	**70.88**	**334**	*e*P		**P**	**09 17 06.3**	**-2.7**
GNI	**Garni**	**70.91**	**314**	LR		LR	09 52 15.0		
	comp=Z,62nm,18.6s,baz=101,slow=39								
732A	**Laxson Ranch,**	**70.99**	**67**	⇑P		**P**	**09 17 11.0**	**+1.1**
	baz=71								
MORC	**Moravsky Berou**	**71.00**	**337**	⇑P		**P**	**09 17 09.7**	**0.0**
MORC	**Moravsky Berou**	**71.00**	**337**	*e*P		**P**	**09 17 08.8**	**-0.8**
	comp=Z,16nm,0.9s								
MORC	**Moravsky Berou**	**71.00**	**337**	⇑*i*P		**P**	**09 17 09.7**	**0.0**
BUR08	**Bucovina Ar. S**	**71.05**	**331**	*e*P		**P**	**09 17 09.6**	**-0.5**
BURAR	**Bucovina Array**	**71.07**	**331**	⇓*i*P		**P**	**09 17 10.1**	**-0.2**
TRPA	**Tarpa**	**71.32**	**333**	⇓*i*P		**P**	**09 17 11.4**	**-0.2**
MOX	**Moxa**	**71.40**	**341**	*e*P		**P**	**09 17 11.6**	**-0.5**
	comp=Z,11nm,1.1s								
PRU	**Pruhonice**	**71.45**	**339**	*e*P		**P**	**09 17 11.9**	**-0.4**
PRU	**Pruhonice**	**71.45**	**339**	*e*P		**P**	**09 17 11.9**	**-0.4**
WERD	**Werda**	**71.46**	**340**	*e*P		**P**	**09 17 12.1**	**-0.3**
	comp=Z,18nm,1.1s								
TANN	**Tannenbergstha**	**71.46**	**340**	*e*P		**P**	**09 17 12.2**	**-0.3**
	comp=Z,10.0nm,1.2s								
KECS	**Kecovo**	**71.51**	**334**	*e*P		**P**	**09 17 12.5**	**-0.3**
KECS				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KECS	**Kecovo**	**71.51**	**334**	*e*P		**P**	**09 17 12.5**	**-0.3**
GUNZ	**Gunzen**	**71.53**	**340**	*e*P		**P**	**09 17 12.7**	**-0.2**
	comp=Z,17nm,1.3s								
WERN	**Wernitzgruen**	**71.59**	**340**	*e*P		**P**	**09 17 13.1**	**-0.2**
	comp=Z,19nm,1.0s								
NKC	**Novy Kostel**	**71.63**	**340**	*e*P		**P**	**09 17 13.6**	**+0.1**
NKC	**Novy Kostel**	**71.63**	**340**	*e*P		**P**	**09 17 13.6**	**+0.1**
VRAC	**Vranov**	**71.65**	**337**	P		**P**	**09 17 14.2**	**+0.6**
VRAC	**Vranov**	**71.65**	**337**	⇓*i*P		**P**	**09 17 13.7**	**+0.1**
VRAC	**Vranov**	**71.65**	**337**	P		**P**	**09 17 14.2**	**+0.6**
	comp=Z,12nm,0.8s,baz=34,slow=7.1,SNR=12								
VRAC				LR		LR	09 49 37.4		
	comp=Z,36nm,21.4s,baz=21,slow=37								
TESR	**Tescani**	**71.67**	**329**	⇑*i*P		**P**	**09 17 13.3**	**-0.5**
VYHS	**Vyhne**	**71.90**	**335**	*e*P		**P**	**09 17 15.1**	**-0.1**
VYHS				pmax		pmax			
	comp=Z,6.0nm,0.9s								
VYHS	**Vyhne**	**71.90**	**335**	*e*P		**P**	**09 17 15.0**	**-0.1**
MANZ	**Manzenberg**	**71.94**	**340**	*e*P		**P**	**09 17 14.9**	**-0.4**
	comp=Z,13nm,1.3s								
ROTZ	**Rotzenmuhle**	**72.12**	**340**	*e*P		**P**	**09 17 16.5**	**+0.1**
	comp=Z,17nm,1.3s								
PSZ	**Piszkesteto**	**72.18**	**334**	⇑P		**P**	**09 17 16.8**	**-0.1**
PSZ	**Piszkesteto**	**72.18**	**334**	*e*P		**P**	**09 17 17.3**	**+0.5**
PSZ	**Piszkesteto**	**72.18**	**334**	⇑*i*P		**P**	**09 17 16.8**	**-0.1**
GRF	**Grafenberg Arr**	**72.39**	**341**	*e*P		**P**	**09 17 18.0**	**0.0**
	comp=Z,22nm,1.3s								
CFR	**Carcaliu**	**72.44**	**328**	⇓P		**P**	**09 17 17.7**	**-0.6**
CFR	**Carcaliu**	**72.44**	**328**	⇓*i*P		**P**	**09 17 17.7**	**-0.6**
KHC	**Kasperske Hory**	**72.46**	**339**	*e*P		**P**	**09 17 18.5**	**0.0**
KHC				pmax		pmax			
	comp=Z,21nm,1.2s								
KHC	**Kasperske Hory**	**72.46**	**339**	*e*P		**P**	**09 17 18.4**	**0.0**
KHC	**Kasperske Hory**	**72.46**	**339**	*e*P		**P**	**09 17 18.5**	**0.0**
	comp=Z,21nm,1.2s								
DRGR		**72.51**	**332**	⇓P		**P**	**09 17 18.6**	**-0.2**
DRGR		**72.51**	**332**	⇓*i*P		**P**	**09 17 18.6**	**-0.2**
WET	**Wettzell**	**72.59**	**339**	*e*P		**P**	**09 17 19.3**	**+0.1**
	comp=Z,18nm,1.2s								
BCLA	**Clavier**	**72.68**	**345**	P		**P**	**09 17 20.5**	**+0.8**
	comp=Z,11nm,2.1s								
GEC2	**GERESS Array S**	**72.71**	**339**	*e*P		**P**	**09 17 19.7**	**-0.3**
	comp=Z,9.0nm,1.0s								
GERES	**GERESS Array B**	**72.71**	**339**	P		**P**	**09 17 19.7**	**-0.3**
GERES	**GERESS Array B**	**72.71**	**339**	P		**P**	**09 17 19.7**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=41,slow=4.3,SNR=24								
GERES				LR		LR	09 54 47.9		
	comp=Z,36nm,18.7s,baz=107,slow=40								
MLR	**Muntele Rosu**	**72.80**	**329**	⇑P		**P**	**09 17 20.6**	**-0.1**
MLR	**Muntele Rosu**	**72.80**	**329**	LR		LR	09 54 02.8		
	comp=Z,12nm,18.6s,baz=13,slow=40								
TIRR	**Tirgusor**	**73.00**	**327**	⇓P		**P**	**09 17 20.9**	**-0.8**
TIRR	**Tirgusor**	**73.00**	**327**	*e*P		**P**	**09 17 20.9**	**-0.8**
	comp=Z,9.6nm,0.9s								
TIRR	**Tirgusor**	**73.00**	**327**	⇓*i*P		**P**	**09 17 20.9**	**-0.8**
VOIR		**73.11**	**330**	⇑P		**P**	**09 17 22.2**	**-0.2**
VOIR		**73.11**	**330**	⇑*i*P		**P**	**09 17 22.2**	**-0.2**
TKL	**Tuckaleechee C**	**73.18**	**51**	P		**P**	**09 17 22.7**	**-0.2**
TKL	**Tuckaleechee C**	**73.18**	**51**	P		**P**	**09 17 22.7**	**-0.2**
	comp=Z,1.0nm,0.6s,baz=120,slow=2.8,SNR=3.5								
BZS	**Buzias**	**73.88**	**332**	⇑P		**P**	**09 17 26.5**	**-0.4**
BZS	**Buzias**	**73.88**	**332**	⇑*i*P		**P**	**09 17 26.5**	**-0.4**
RJOB	**Jochberg**	**73.95**	**339**	*e*P		**P**	**09 17 27.2**	**-0.1**
	comp=Z,12nm,0.9s								
BFO	**Black Forest**	**74.22**	**342**	*e*P		**P**	**09 17 28.1**	**-0.7**
BFO				pmax		pmax			
	comp=Z,8.0nm,1.2s								
BFO	**Black Forest**	**74.22**	**342**	*e*P		**P**	**09 17 28.1**	**-0.7**
	comp=Z,7.6nm,1.2s								
CDF	**Champ du Feu**	**74.32**	**343**	*e*P		**P**	**09 17 28.9**	**-0.6**
	comp=Z,16nm,0.9s								
CDF	**Champ du Feu**	**74.32**	**343**	*e*P		**P**	**09 17 28.9**	**-0.6**
CDF				pmax		pmax			
	comp=Z,16nm,0.9s								
CDF	**Champ du Feu**	**74.32**	**343**	*e*P		**P**	**09 17 28.9**	**-0.6**
	comp=Z,16nm,0.9s								
GROS	**Grobnik**	**74.58**	**337**	*e*P		**P**	**09 17 30.8**	**-0.2**
KMSC	**Kings Mountain**	**74.69**	**50**	⇑P		**P**	**09 17 31.7**	**+0.1**
	baz=74								
HAU	**Haudompre**	**74.86**	**343**	*e*P		**P**	**09 17 31.8**	**-0.8**
HAU	**Haudompre**	**74.86**	**343**	*e*P		**P**	**09 17 31.8**	**-0.8**
HAU	**Haudompre**	**74.86**	**343**	*e*P		**P**	**09 17 31.8**	**-0.8**
MALT	**Malatya**	**74.99**	**317**	⇓P		**P**	**09 17 31.7**	**-1.8**
MALT	**Malatya**	**74.99**	**317**	⇓*i*P		**P**	**09 17 31.7**	**-1.8**
LEGS	**Legarje**	**75.11**	**337**	*i* P		**P**	**09 17 33.6**	**-0.4**
CRES	**Cresnjev**	**75.19**	**337**	*e*P		**P**	**09 17 33.9**	**-0.6**
BR131	**Keskin Array S**	**75.52**	**322**	*e*P		**P**	**09 17 36.0**	**-0.6**
	comp=Z,3.3nm,0.6s								
BRTR	**Keskin Array B**	**75.52**	**322**	P		**P**	**09 17 36.0**	**-0.6**
BRTR	**Keskin Array B**	**75.52**	**322**	P		**P**	**09 17 36.0**	**-0.6**
	comp=Z,5.1nm,0.7s,baz=58,slow=4.1,SNR=27								
BRTR				LR		LR	09 52 45.7		
	comp=Z,32nm,20.7s,baz=103,slow=37								
ANTO	**Ankara**	**75.68**	**322**	⇓P		**P**	**09 17 37.5**	**0.0**
ANTO	**Ankara**	**75.68**	**322**	⇓*i*P		**P**	**09 17 37.5**	**0.0**
TUE	**Stuetta**	**75.83**	**341**	*e*P		**P**	**09 17 38.0**	**-0.3**
	comp=Z,3.8nm,0.5s								
VTS	**Vitosha**	**76.25**	**330**	⇑P		**P**	**09 17 39.8**	**-0.9**
VTS	**Vitosha**	**76.25**	**330**	⇑*i*P		**P**	**09 17 39.8**	**-0.9**
CABF	**La Chapelle**	**76.26**	**343**	*e*P		**P**	**09 17 39.3**	**-1.3**
	comp=Z,9.5nm,0.8s								
CABF	**La Chapelle**	**76.26**	**343**	*e*P		**P**	**09 17 39.3**	**-1.3**
CABF				pmax		pmax			
	comp=Z,10.0nm,0.8s								
CABF	**La Chapelle**	**76.26**	**343**	*e*P		**P**	**09 17 39.3**	**-1.3**
	comp=Z,9.5nm,0.8s								
AVF	**Avril sur Loir**	**76.51**	**345**	*e*P		**P**	**09 17 41.3**	**-0.6**
AVF	**Avril sur Loir**	**76.51**	**345**	*e*P		**P**	**09 17 41.3**	**-0.6**
AVF	**Avril sur Loir**	**76.51**	**345**	*e*P		**P**	**09 17 41.3**	**-0.6**
LPL	**La Plagne**	**77.22**	**343**	*e*P		**P**	**09 17 46.6**	**+0.4**
	comp=Z,21nm,0.9s								
LPL	**La Plagne**	**77.22**	**343**	*e*P		**P**	**09 17 46.6**	**+0.4**
LPL				pmax		pmax			
	comp=Z,21nm,0.9s								
LPL	**La Plagne**	**77.22**	**343**	*e*P		**P**	**09 17 46.6**	**+0.4**
	comp=Z,21nm,0.9s								
LPG	**La Plagne**	**77.23**	**343**	*e*P		**P**	**09 17 46.8**	**+0.4**
	comp=Z,26nm,1.0s								
LPG	**La Plagne**	**77.23**	**343**	*e*P		**P**	**09 17 46.8**	**+0.4**
LPG				pmax		pmax			
	comp=Z,26nm,1.0s								
LPG	**La Plagne**	**77.23**	**343**	*e*P		**P**	**09 17 46.8**	**+0.4**
	comp=Z,26nm,1.0s								
ORIF	**Oris-en-Rattie**	**77.94**	**343**	*e*P		**P**	**09 17 50.4**	**+0.3**
	comp=Z,14nm,0.9s								
ORIF	**Oris-en-Rattie**	**77.94**	**343**	*e*P		**P**	**09 17 50.4**	**+0.3**
ORIF				pmax		pmax			
	comp=Z,14nm,0.9s								
ORIF	**Oris-en-Rattie**	**77.94**	**343**	*e*P		**P**	**09 17 50.4**	**+0.3**
	comp=Z,14nm,0.9s								
VIVF	**Saint-Julien-l**	**78.20**	**344**	*e*P		**P**	**09 17 51.4**	**0.0**
	comp=Z,12nm,1.0s								
VIVF	**Saint-Julien-l**	**78.20**	**344**	*e*P		**P**	**09 17 51.4**	**0.0**
VIVF				pmax		pmax			
	comp=Z,12nm,1.0s								
VIVF	**Saint-Julien-l**	**78.20**	**344**	*e*P		**P**	**09 17 51.4**	**0.0**
	comp=Z,12nm,1.0s								
MIB	**Mutribah**	**78.54**	**306**	*e*P		**P**	**09 17 51.8**	**-1.7**
MIB				AMb		AMB	09 17 53.1		
	comp=Z,58nm,0.7s								
UMR	**Umm Al-Rimmam**	**78.58**	**306**	*e*P		**P**	**09 17 51.8**	**-2.0**
UMR				AMb		AMB	09 17 52.6		
	comp=Z,34nm,0.6s								
WRAB	**Tennant Creek**	**78.82**	**207**	*e*P		**P**	**09 17 55.5**	**+0.5**
WRAB				pmax		pmax			
	comp=Z,4.0nm,0.6s								
WRAB	**Tennant Creek**	**78.82**	**207**	*e*P		**P**	**09 17 55.5**	**+0.5**
	comp=Z,4.1nm,0.6s								
WRA	**Warramunga Arr**	**78.83**	**207**	P		**P**	**09 17 55.1**	**+0.1**
WRA	**Warramunga Arr**	**78.83**	**207**	P		**P**	**09 17 55.1**	**+0.1**
	comp=Z,4.3nm,0.7s,baz=13,slow=5.9,SNR=42								
KBD	**Kabd**	**78.91**	**306**	*e*P		**P**	**09 17 53.9**	**-1.6**
NAY	**Al-Naaiem**	**79.05**	**306**	*e*P		**P**	**09 17 54.3**	**-2.0**
NAY				AMb		AMB	09 17 55.5		
	comp=Z,28nm,1.4s								
RDF	**Al-Radifah**	**79.18**	**306**	*e*P		**P**	**09 17 55.5**	**-1.5**
RDF				AMb		AMB	09 17 56.9		
	comp=Z,92nm,1.0s								
PGF	**Pioggiola**	**79.68**	**340**	*e*P		**P**	**09 17 59.3**	**-0.4**
	comp=Z,5.5nm,0.5s								
PGF	**Pioggiola**	**79.68**	**340**	*e*P		**P**	**09 17 59.3**	**-0.4**
PGF				pmax		pmax			
	comp=Z,6.0nm,0.5s								
PGF	**Pioggiola**	**79.68**	**340**	*e*P		**P**	**09 17 59.3**	**-0.4**
	comp=Z,5.5nm,0.5s								
MTLF	**Montolieu**	**80.05**	**345**	*e*P		**P**	**09 18 01.7**	**+0.2**
	comp=Z,5.5nm,0.8s								
MTLF	**Montolieu**	**80.05**	**345**	*e*P		**P**	**09 18 01.7**	**+0.2**
MTLF				pmax		pmax			
	comp=Z,6.0nm,0.8s								
MTLF	**Montolieu**	**80.05**	**345**	*e*P		**P**	**09 18 01.7**	**+0.2**
	comp=Z,5.5nm,0.8s								
MMAI	**Mount Meron Ar**	**80.81**	**317**	LR		LR	09 55 12.4		
	comp=Z,36nm,19.5s,baz=325,slow=37								
ETSF	**Etsaut**	**80.86**	**347**	*e*P		**P**	**09 18 05.4**	**-0.6**
	comp=Z,6.0nm,0.8s								
ETSF	**Etsaut**	**80.86**	**347**	*e*P		**P**	**09 18 05.4**	**-0.6**
ETSF				pmax		pmax			
	comp=Z,6.0nm,0.8s								
ETSF	**Etsaut**	**80.86**	**347**	*e*P		**P**	**09 18 05.4**	**-0.6**
	comp=Z,6.0nm,0.8s								
ASF	**Jabal al Asfar**	**80.97**	**316**	LR		LR	09 58 36.8		
	comp=Z,42nm,18.2s,baz=66,slow=39								
TIP	**Timpagrande**	**81.17**	**334**	*e*P		**P**	**09 18 07.4**	**-0.3**
	comp=Z,12nm,0.9s								
AS31	**Alice Springs**	**82.51**	**206**	*e*P		**P**	**09 18 15.4**	**+0.8**
ASAR	**Alice Springs**	**82.51**	**206**	P		**P**	**09 18 15.1**	**+0.5**
ASAR	**Alice Springs**	**82.51**	**206**	P		**P**	**09 18 15.1**	**+0.5**
	comp=Z,5.9nm,0.7s,baz=15,slow=5.6,SNR=68								
PPT	**Papeete**	**83.41**	**134**	LR		LR	09 46 23.5		
	comp=Z,102nm,21.4s,baz=355,slow=29								
EIL	**Elat**	**83.95**	**316**	LR		LR	09 58 32.9		
	comp=Z,47nm,18.4s,baz=275,slow=38								
ESDC	**Sonseca Array**	**84.43**	**349**	P		**P**	**09 18 24.9**	**+0.4**
ESDC	**Sonseca Array**	**84.43**	**349**	P		**P**	**09 18 24.9**	**+0.4**
	comp=Z,5.7nm,0.8s,baz=358,slow=4.4,SNR=14								
RAYN	**Ar Rayn**	**84.74**	**305**	*e*P		**P**	**09 18 24.3**	**-2.0**
KEST	**Kesra**	**86.18**	**338**	P		**P**	**09 18 32.4**	**-1.0**
KEST	**Kesra**	**86.18**	**338**	P		**P**	**09 18 32.4**	**-1.0**
	comp=Z,1.1nm,0.8s,baz=53,slow=5.5,SNR=3.3								
STKA	**Stephens Creek**	**88.84**	**197**	P		**P**	**09 18 46.5**	**+0.8**
STKA	**Stephens Creek**	**88.84**	**197**	P		**P**	**09 18 46.5**	**+0.8**
	comp=Z,2.0nm,0.9s,baz=330,slow=6.6,SNR=3.1								
STKA				LR		LR	09 54 39.1		
	comp=Z,101nm,19.2s,baz=25,slow=33								
TORD	**Torodi Ar. Bea**	**109.65**	**340**	PP		PP	09 24 47.0	-6.7	
TORD	**Torodi Ar. Bea**	**109.65**	**340**	PP		PP	09 24 47.0	-6.7	
	comp=Z,0.7nm,0.6s,baz=12,slow=6.0,SNR=5.3								
LPAZ	**La Paz**	**125.27**	**65**	PKP		**PKPdf**	**09 24 53.3**	**0.0**
LPAZ	**La Paz**	**125.27**	**65**	PKP		**PKPdf**	**09 24 53.3**	**0.0**
	comp=Z,0.4nm,0.5s,baz=341,slow=5.1,SNR=4.0								
VNDA	**Vanda**	**132.79**	**180**	PKP		**PKPdf**	**09 25 06.4**	**+1.4**
VNDA	**Vanda**	**132.79**	**180**	PKP		**PKPdf**	**09 25 06.4**	**+1.4**
	comp=Z,1.0nm,0.7s,baz=346,slow=4.2,SNR=5.3								
BOSA	**Boshof**	**139.24**	**293**	PKP		**PKPdf**	**09 25 20.6**	**+2.0**
BOSA	**Boshof**	**139.24**	**293**	PKP		**PKPdf**	**09 25 20.6**	**+2.0**
	comp=Z,3.0nm,0.6s,baz=83,slow=3.8,SNR=6.9								
PLCA	**Paso Flores**	**142.75**	**89**	PKP		**PKPdf**	**09 25 24.9**	**+0.5**
PLCA	**Paso Flores**	**142.75**	**89**	PKP		**PKPdf**	**09 25 24.9**	**+0.5**
	comp=Z,3.7nm,0.9s,baz=318,slow=9.1,SNR=4.5								
SUR	**Sutherland**	**144.55**	**295**	PKP		PKPbc	09 25 26.9	0.0	
SUR	**Sutherland**	**144.55**	**295**	PKP		PKPbc	09 25 26.9	0.0	
	comp=Z,6.3nm,0.8s,baz=32,slow=3.3,SNR=5.5								
QSPA	**South Pole Qui**	**145.29**	**180**	PKPbc		**PKPdf**	**09 25 27.3**	**-0.8**
QSPA				*e*PKPdf		**PKPbc**	**09 25 27.6**	**-0.4**
QSPA	**South Pole Qui**	**145.29**	**180**	PKPbc		**PKPdf**	**09 25 27.3**	**-0.8**
	comp=Z,17nm,0.8s,baz=355,slow=1.3,SNR=104								
SNAA	**Sanae**	**162.60**	**196**	PKPab		**PKPab**	**09 26 39.7**	**-1.1**
SNAA	**Sanae**	**162.60**	**196**	PKPab		**PKPab**	**09 26 39.7**	**-1.1**
	comp=Z,0.8nm,0.9s,baz=344,slow=2.2,SNR=4.5								

ISCJB ***19*** *09:13:23.0±0.6, 38.86N±0.03×23.78E±0.05, h11km±4km, Error ellipse: s-maj=7.1km s-min=4.4km az=179.3*
ATH ***19*** *09:13:23.5, 38.89N×23.71E, h30km, MD3.3/11*
CSEM ***19*** *09:13:23.0±0.2, 38.85N×23.78E, h12km, ML2.9/2, Error ellipse: s-maj=5.1km s-min=3.1km az=83.0*
THE ***19*** *09:13:23.7, 38.87N×23.75E, h10km±1km, ML2.9/2, Error ellipse: s-maj=1.6km s-min=0.6km az=313.0*

ISC 19 09:13:23.3±0.9, 38.88N±0.02×23.73E±0.04, h13km±7km, n38, σ0s38/56, Greece

| Code | Station Name | Δ° | AZ° | Phase | ID | Time | Res |

TVSB				*e*SG	**Sg**	09 15 54.4	+1.6		
ULDT	**Uludag**	**0.52**	**335**	*i* P	**Pg**	09 15 56.0	+0.2		
ULDT				*i* S	**Sg**	09 16 04.0	+1.4		
ULDT	**Uludag**	**0.52**	**335**	*i* P	**Pg**	09 15 56.0	+0.2		
ULDT				*i* S	**Sg**	09 16 04.0	+1.4		
ORLT	**Orhaneli**	**0.55**	**313**	*e*PG	**Pg**	09 15 56.8	+0.4		
ORLT				*e*SG	**Sb**	09 16 05.0	-1.9		
GDZ	**Gediz**	**0.58**	**176**	*e*P	**Pg**	09 15 57.0	+0.1		
GDZ				*e*S	**Sg**	09 16 05.6	+1.2		
GDZ	**Gediz**	**0.58**	**176**	*e*P	**Pg**	09 15 57.0	+0.1		
GDZ				*e*S	**Sg**	09 16 05.6	+1.2		
CAVI	**Cavuskoy**	**0.62**	**31**	*e*PG	**Pg**	09 15 57.3	-0.4		
CAVI				*e*SG	**Sg**	09 16 07.2	+1.4		
DURS	**Dursunbey**	**0.74**	**265**	*e*P	**Pg**	09 15 59.9	+0.1		
DURS				*e*S	**Sb**	09 16 12.0	-0.1		
DURS	**Dursunbey**	**0.74**	**265**	*e*P	**Pg**	09 15 59.9	+0.1		
DURS				*e*S	**Sb**	09 16 12.0	-0.1		
GEMT	**Gemlik**	**0.79**	**347**	*e*PG	**Pb**	09 16 02.0	-0.3		
ADVT	**Abdulvahap**	**0.80**	**17**	*e*PG	**Pg**	09 16 00.8	-0.3		
ALT	**Altintas**	**0.81**	**139**	*e*PG	**Pg**	09 16 00.8	-0.5		
MDNY	**Mudanya-Bursa**	**0.81**	**330**	*e*PG	**Pb**	09 16 02.1	-0.6		
YLV	**Yalova**	**0.90**	**358**	*e*PG	**Pg**	09 16 03.0	0.0		
GPA	**Golpazari**	**0.92**	**47**	*e*PG	**Pg**	09 16 03.6	+0.2		
ARMT	**Armutlu**	**0.99**	**335**	*e*PG	**Pb**	09 16 05.6	-0.3		
KCTX	**Karacabey (Bur**	**1.01**	**306**	*e*PG	**Pb**	09 16 05.6	-0.6		
SEYT	**Eskypehyr**	**1.11**	**97**	*e*P	**Pg**	09 16 06.8	-0.3		
SEYT				*e*S	**Sn**	09 16 25.9	+1.1		
SEYT	**Eskypehyr**	**1.11**	**97**	*e*P	**Pg**	09 16 06.8	-0.3		
SEYT				*e*S	**Sn**	09 16 25.9	+1.1		
GULT	**Gulveren**	**1.13**	**47**	*e*PN	**Pg**	09 16 07.6	+0.1		
HRT	**Hereke**	**1.17**	**9**	*e*PN	**Pg**	09 16 08.2	0.0		
BALB	**Balikesir**	**1.19**	**269**	*e*PN	**Pb**	09 16 09.2	+0.1		
BUY	**Buyukada**	**1.21**	**349**	*e*PN	**Pg**	09 16 08.9	0.0		
KULA	**Kula-Manisa**	**1.30**	**207**	*e*PN	**Pg**	09 16 10.3	-0.3		
KHL	**Karahalli**	**1.34**	**177**	*e*PN	**Pg**	09 16 10.7	-0.8		
GONE	**Gonen-Balikesi**	**1.39**	**286**	*e*PN	**Pg**	09 16 11.8	-0.6		
BALY	**Balya**	**1.39**	**274**	*e*P	**Pb**	09 16 12.6	-0.1		
BALY				*e*S	**Sn**	09 16 32.0	+0.4		
BALY	**Balya**	**1.39**	**274**	*e*P	**Pb**	09 16 12.6	-0.1		
BALY				*e*S	**Sn**	09 16 32.0	+0.4		
SHUT	**Suhut-Afyon**	**1.42**	**141**	*e*PN	**Pn**	09 16 11.3	-1.6		
ISK	**Istanbul-Kandi**	**1.42**	**349**	*e*PN	**Pg**	09 16 13.1	+0.1		
SILT	**Sile**	**1.49**	**6**	*e*PN	**Pn**	09 16 13.5	-0.3		
MDUB	**Mudurnu**	**1.58**	**59**	*e*PN	**Pn**	09 16 14.2	-0.9		
KLYT	**Kilyos**	**1.61**	**350**	*e*PN	**Pn**	09 16 14.6	-0.8		
SVRH	**Sivrihisar-ESK**	**1.64**	**97**	*e*PN	**Pn**	09 16 15.5	-0.4		
KIZT	**Kizilcal**	**2.06**	**112**	*e*PN	**Pn**	09 16 21.4	-0.4		

NNC 19 09:17:14.3±5.5, 54°.33N×85°.92E, h0km, mb4.2, mpv3.7, 8C-4D, Error ellipse: s-maj=52.1km s-min=32.1km az=37.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURK	**Kurchatov**	**5.74**	**234**	⇓Pn	Pn	09 18 41.7	+0.9
	4.4nm,0.7s						
KURK				⇓Lg	Lg	09 20 16.6	
	14nm,0.8s						
KUR14	**Kurchatov Arra**	**5.82**	**233**	⇑Pn	Pn	09 18 43.5	+1.6
	3.3nm,0.6s,baz=53,slow=13						
KUR14				⇑Lg	Lg	09 20 20.6	
	2.4nm,0.8s,baz=23,slow=36						
MK31	**Makanchi Array**	**7.89**	**198**	⇑Pn	Pn	09 19 10.5	+0.1
	3.9nm,0.5s,baz=25,slow=13,SNR=84						
MK31				⇑Lg	Lg	09 21 20.0	
	7.1nm,0.9s,baz=32,slow=28,SNR=9.6						
VOSK	**Vostochnaya**	**9.05**	**266**	⇓Pn	Pn	09 19 22.3	-3.8
	2.7nm,0.6s						
VOSK				⇑Sn	Sn	09 21 10.2	+1.6
	3.1nm,0.6s						
BVA0	**Borovoye Array**	**9.31**	**268**	⇓Pn	Pn	09 19 30.6	+0.8
	2.4nm,0.5s,baz=85,slow=13,SNR=5.9						
BVA0				⇑Sn	Sn	09 21 17.8	+2.7
	2.1nm,0.5s						
ZRNK	**Zerenda**	**10.14**	**269**	⇑Pn	Pn	09 19 41.9	+0.9
	5.5nm,0.6s						
ZRNK				⇑Sn	Sn	09 21 31.7	-3.7
	2.6nm,0.8s						

*ISCJB **19** 09:25:59.0±0.6, 39°.53N±0°.03×26°.79E±0°.05, h14km±5km, Error ellipse: s-maj=6.1km s-min=5.7km az=44.6*
*DDA **19** 09:25:58.7, 39°.55N×26°.80E, h7km, MD2.7*
*CSEM **19** 09:25:58.1±0.5, 39°.46N×26°.75E, h12km, MD2.9, Error ellipse: s-maj=9.5km s-min=4.5km az=20.0*
*ISK **19** 09:26:00.3, 39°.60N×26°.80E, h24km, MD2.9*
ISC 19 09:25:58.6±1.0, 39°.56N±0°.05×26°.80E±0°.03, h12km±10km, n22, σ0°.46/32, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AYVA	**Ayvalik**	**0.27**	**198**	*i* Pg	**Pg**	09 26 04.3	+0.1
AYVA				*i* Sg	**Sg**	09 26 07.8	-0.1
BOZC	**Bozcaada**	**0.64**	**296**	*e*P	**Pb**	09 26 11.7	0.0
BOZC				*e*S	**Sb**	09 26 20.3	-0.2
BALY	**Balya**	**0.66**	**74**	*e*P	**Pb**	09 26 12.0	-0.1
BALY				*e*S	**Sg**	09 26 20.5	+0.3
BALY	**Balya**	**0.66**	**74**	*e*P	**Pb**	09 26 12.0	-0.1
BALY				*e*S	**Sg**	09 26 20.5	+0.3
LPK	**Lapseki**	**0.81**	**358**	*e*PG	**Pn**	09 26 16.1	+0.2
LPK				*e*SG	**Sn**	09 26 27.4	-0.3
LPK	**Lapseki**	**0.81**	**358**	*e*Pg	**Pn**	09 26 16.1	+0.2
LPK				*e*Sg	**Sn**	09 26 27.4	-0.3
GONE	**Gonen-Balikesi**	**0.84**	**55**	*e*PG	**Pn**	09 26 16.4	+0.2
GONE				*e*SG	**Sn**	09 26 28.9	+0.4
GONE	**Gonen-Balikesi**	**0.84**	**55**	*e*Pg	**Pn**	09 26 16.4	+0.2
GONE				*e*Sg	**Sn**	09 26 28.9	+0.4
GELI	**Tayfur-Gelibol**	**0.87**	**344**	*e*PG	**Pn**	09 26 16.4	-0.2
GELI				*e*SG	**Sn**	09 26 29.1	-0.1
GELI	**Tayfur-Gelibol**	**0.87**	**344**	*e*Pg	**Pn**	09 26 16.5	-0.2
GELI				*e*Sg	**Sn**	09 26 29.1	-0.1
KRBG	**Karabiga-Canak**	**0.91**	**25**	*e*PG	**Pn**	09 26 17.4	+0.2
KRBG	**Karabiga-Canak**	**0.91**	**25**	*e*Pg	**Pn**	09 26 17.5	+0.2
ERIK	**Erikli-Kesan**	**1.13**	**349**	*e*PN	**Pg**	09 26 20.6	+0.2
ERIK	**Erikli-Kesan**	**1.13**	**349**	*e*Pn	**Pg**	09 26 20.6	+0.2
RKY	**Sarkoy-Tekirda**	**1.16**	**15**	*e*PN	**Pn**	09 26 20.9	+0.1
RKY	**Sarkoy-Tekirda**	**1.16**	**15**	*e*Pn	**Pn**	09 26 20.9	+0.1
ENEZ	**Enez**	**1.27**	**337**	*e*PN	**Pg**	09 26 23.0	-0.1
ENEZ	**Enez**	**1.27**	**337**	*e*Pn	**Pg**	09 26 23.0	-0.1
ARMT	**Armutlu**	**1.88**	**57**	*e*PN	**Pb**	09 26 31.8	-1.0
ARMT	**Armutlu**	**1.88**	**57**	*e*Pn	**Pb**	09 26 31.8	-1.0
EDRB	**Edirne**	**2.28**	**359**	*e*PN	**Pn**	09 26 37.2	+1.1
EDRB	**Edirne**	**2.28**	**359**	*e*Pn	**Pn**	09 26 37.2	+1.1

IDC 19 10:00:19.7±2.9, 8°.76S×119°.36E, h0km, mb3.0/2, mb1 3.2/3, mb1mx3.2/21, mbtmp3.0/3, ML2.7/1, Error ellipse: s-maj=272.6km s-min=27.1km az=51.0, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.27**	**129**	P	P	10 04 35.6	+0.5
	0.0nm,0.3s,baz=307,slow=14,SNR=3.9						
WRA				S	Sn	10 07 42.0	-18
	0.0nm,0.3s,baz=308,slow=26,SNR=4.0						
ASAR	**Alice Springs**	**20.34**	**139**	P	P	10 04 57.2	-0.6
	0.4nm,0.9s,baz=319,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**64.40**	**333**	P	P	10 10 57.7	0.0
	0.2nm,0.6s,baz=145,slow=5.3,SNR=2.6						

*ISK **19** 10:11:52.6, 39°.91N×33°.07E, h3km, MD2.3*
*ISCJB **19** 10:11:53.8±0.7, 39°.87N±0°.05×33°.03E±0°.05, h15km±9km, Error ellipse: s-maj=7.9km s-min=6.5km az=23.2*
*CSEM **19** 10:11:53.7±0.3, 39°.88N×33°.05E, h15km, MD2.5, Error ellipse: s-maj=7.6km s-min=5.8km az=12.0*
*DDA **19** 10:11:58.1, 39°.37N×33°.21E, h7km, MD2.5*
ISC 19 10:11:53.3±1.0, 39°.88N±0°.05×33°.05E±0°.04, h15km±7km, n18, σ0°.63/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANTO	**Ankara**	**0.20**	**268**	*e*PG	**Pg**	10 11 57.6	-0.4
ANTO				*e*SG	**Sg**	10 12 01.6	+0.3
ANTO	**Ankara**	**0.20**	**268**	*e*Pg	**Pg**	10 11 57.6	-0.5
ANTO				*e*Sg	**Sg**	10 12 01.6	+0.4
LOD	**Lodumlu**	**0.22**	**273**	*e*PG	**Pg**	10 11 58.2	-0.2
LOD	**Lodumlu**	**0.22**	**273**	*e*Pg	**Pg**	10 11 58.2	-0.2
BBAL	**Bala**	**0.34**	**171**	*i* P	**Pg**	10 12 00.6	+0.2
BBAL				*i* S	**Sb**	10 12 06.7	+0.3
BBAL	**Bala**	**0.34**	**171**	*i* P	**Pg**	10 12 00.6	+0.2
BBAL				*i* S	**Sb**	10 12 06.7	+0.3
AFSR	**Af˙ar-Bala (A**	**0.43**	**178**	*e*PG	**Pg**	10 12 02.4	+0.4
AFSR				*e*SG	**Sb**	10 12 09.6	+0.7
AFSR	**Af˙ar-Bala (A**	**0.43**	**178**	*e*Pg	**Pg**	10 12 02.4	+0.4
AFSR				*e*Sg	**Sb**	10 12 09.6	+0.7
CDAG	**Cicekdag**	**1.05**	**104**	*i* P	**Pb**	10 12 12.7	-0.6
CDAG				*e*S	**Sg**	10 12 27.8	+0.4
CDAG	**Cicekdag**	**1.05**	**104**	*i* P	**Pb**	10 12 12.7	-0.6
CDAG				*e*S	**Sg**	10 12 27.8	+0.4
SVRH	**Sivrihisar-ESK**	**1.25**	**250**	*e*PN	**Pg**	10 12 18.4	+0.8
SVRH	**Sivrihisar-ESK**	**1.25**	**250**	*e*Pn	**Pg**	10 12 18.4	+0.8
TOS	**Tosya**	**1.38**	**32**	*e*PN	**Pb**	10 12 18.9	+0.1
TOS	**Tosya**	**1.38**	**32**	*e*Pn	**Pb**	10 12 18.9	+0.1
KDHN	**Kadinhani**	**1.54**	**209**	*e*P	**Pn**	10 12 20.6	+0.3
KDHN				*e*S	**Sn**	10 12 38.7	-1.3
KDHN	**Kadinhani**	**1.54**	**209**	*e*P	**Pn**	10 12 20.6	+0.3
KDHN				*e*S	**Sn**	10 12 38.7	-1.3
AVNT	**Avonos**	**1.78**	**127**	*e*P	**Pb**	10 12 25.1	-0.6
AVNT				*i* S	**Sn**	10 12 45.2	-0.8
AVNT	**Avonos**	**1.78**	**127**	*e*P	**Pb**	10 12 25.1	-0.6
AVNT				*i* S	**Sn**	10 12 45.2	-0.8

*ISCJB **19** 10:29:13.9±0.9, 24°.88N±0°.06×122°.27E±0°.03, h111km±7km, Error ellipse: s-maj=10.3km s-min=4.1km az=177.2*
*JMA **19** 10:29:13.7±0.2, 24°.96N×122°.26E, h109km, M2.3*
*TAP **19** 10:29:14.0, 24°.91N×122°.24E, h109km, ML3.2, C*
ISC 19 10:29:14.9±1.9, 24°.85N±0°.08×122°.27E±0°.03, h106km±12km, n23, σ0°.67/42, 2D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.29**	**301**	*e*P	**Pn**	10 29 29.8	-0.4
	baz=283						
TWB1				*e*S	**Sn**	10 29 41.2	-0.4
	baz=283						
TWC	**Suao**	**0.45**	**237**	*i* P	**Pn**	10 29 30.6	-0.4
	baz=236						
TWC				*i* S	**Sn**	10 29 42.5	-0.5
	baz=236						
NWF	**Wu-fen Shan**	**0.49**	**296**	⇓P	**Pn**	10 29 31.0	-0.4
	baz=286						
TWE	**Neicheng**	**0.56**	**256**	P	**Pn**	10 29 31.5	-0.3
	baz=255						
TWE				*e*S	**Sn**	10 29 44.1	-0.3
	baz=255						
ENA	**Nanau**	**0.64**	**228**	P	**Pn**	10 29 32.4	0.0
	baz=217						
ENA				S	**Sn**	10 29 46.0	+0.5
	baz=217						
ENTT	**Nioudou**	**0.67**	**252**	⇓*i*P	**Pn**	10 29 32.6	0.0
	baz=246						
ENTT				*e*S	**Sn**	10 29 47.3	+1.3
	baz=246						
TWY	**Chenhua**	**0.73**	**305**	*e*P	**Pn**	10 29 32.6	-0.6
	baz=302						
YOJ	**Yonaguni jima**	**0.78**	**120**	P	**Pn**	10 29 33.4	-0.2
YOJ				*e*S	**Sn**	10 29 48.3	+0.6
TWS1	**Kuangyinshan**	**0.81**	**288**	*e*P	**Pn**	10 29 33.5	-0.4
	baz=289						
TWS1				*e*S	**Sn**	10 29 50.0	+1.9
	baz=289						
NNS	**Nan Shan**	**0.91**	**243**	*e*P	**Pn**	10 29 35.3	+0.3
	baz=246						
NNS				*e*S	**Sn**	10 29 50.4	+0.2
	baz=246						
TWD	**Chiawan**	**0.98**	**218**	*e*P	**Pn**	10 29 35.4	-0.2
	baz=213						
TWD				*e*S	**Sn**	10 29 51.1	0.0
	baz=213						
WHF	**Hehuan Shan**	**1.15**	**232**	P	**Pn**	10 29 37.8	-0.1
	baz=225						
WHF				S	**Sn**	10 29 55.2	-0.1
	baz=225						
TWT	**Tachien**	**1.16**	**239**	*e*P	**Pn**	10 29 37.5	-0.2
	baz=229						
TWT				*e*S	**Sn**	10 29 55.7	+0.8
	baz=229						
NSTT	**Nanjuang**	**1.17**	**259**	*e*P	**Pn**	10 29 37.2	-0.5
	baz=248						
NSTT				*e*S	**Sn**	10 29 54.1	-0.7
	baz=248						
ESL	**Shilin**	**1.28**	**216**	*e*P	**Pn**	10 29 37.2	-1.8
	baz=221						
IRIF	**Iriomote-Funau**	**1.43**	**111**	P	**Pn**	10 29 40.2	-0.4
IRIF				*e*S	**Sn**	10 30 00.7	+0.5
SMLT	**Sun Moon Lake**	**1.58**	**232**	*e*P	**Pn**	10 29 42.6	0.0
	baz=225						
SMLT				*e*S	**Sn**	10 30 04.5	+0.9
	baz=225						
TYC	**Yuchr**	**1.59**	**234**	*e*P	**Pn**	10 29 42.5	-0.1
	baz=238						
TYC				*e*S	**Sn**	10 30 03.7	0.0
	baz=238						
HATJ	**Hateruma jima**	**1.61**	**119**	*e*S	**Sn**	10 30 05.4	+1.3
JKRS	**Kuro-shima**	**1.70**	**111**	P	**Pn**	10 29 44.0	0.0
JKRS				*e*S	**Sn**	10 30 06.3	+0.2
JIJ	**Ishigaki jima**	**1.78**	**106**	P	**Pn**	10 29 44.5	-0.4
JIJ				*e*S	**Sn**	10 30 07.3	-0.5
CHN5	**Tsauling**	**1.91**	**230**	*e*P	**Pn**	10 29 46.2	-0.5
	baz=226						
CHN5				*e*S	**Sn**	10 30 11.8	+0.8
	baz=226						
JTJ	**Tarama**	**2.23**	**95**	P	**Pn**	10 29 50.7	+0.1
JTJ				*e*S	**Sn**	10 30 17.8	-0.2

*NIED **19** 10:30:00, 23°.90N×122°.20E, h32km, Mw4.3 Best double couple: M0 3.27000×10^15 NP1:φs70.00000°, δ86.00000°, λ36.00000°. NP2:φs337.00000°, δ54.00000°, λ175.00000°.*
*IDC **19** 10:30:04.1±0.6, 24°.09N×122°.41E, h0km, mb4.3/24, mb1 4.5/24, mb1mx4.4/31, mbtmp4.3/24, MS3.6/12, Ms1 3.7/12, ms1mx3.5/38, Error ellipse: s-maj=20.3km s-min=13.7km az=63.0*
*BJI **19** 10:30:05.4, 24°.05N×122°.25E, h5km, mB4.5/21, mb4.4/28, ML4.1/6, Ms4.2/26, Ms7 4.0/29*
*NEIC **19** 10:30:05.7±0.3, 24°.02N×122°.38E, h10km, mb4.9/21, ML5.0(TAP), Error ellipse: s-maj=6.4km s-min=5.7km az=93.0*
NEIC Recorded [2 TAP] in I-lan; [1 TAP] in Hua-lien, Nan-t'ou, T'ai-chung and T'ai-pei.
*JMA **19** 10:30:06.3±0.3, 23°.87N×122°.23E, h16km, M4.6*
*ISCJB **19** 10:30:07.9±0.4, 23°.93N±0°.02×122°.38E±0°.02, h32km±2km, mb4.5/49, MS3.7/14, Error ellipse: s-maj=2.8km s-min=2.2km az=145.2*
*TAP **19** 10:30:08.3, 23°.99N×122°.31E, h20km, ML4.7, C*
ISC 19 10:30:07.3±0.4, 23°.90N±0°.02×122°.29E±0°.02, h17km±2km, n198, σ1s61/294, mb4.5/49, MS3.7/15, 10C-19D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.63**	**277**	⇓*e*P	**Pn**	10 30 21.2	-0.3
	baz=255						
HWA				*e*S	**Sn**	10 30 30.0	-1.2
	baz=255						
EHP	**Heping Village**	**0.65**	**309**	*e*P	**Pn**	10 30 20.7	-1.0
	baz=301						
EHP				*e*S	**Sn**	10 30 30.6	-1.1
	baz=301						
TWD	**Chiawan**	**0.66**	**286**	⇓P	**Pn**	10 30 21.0	-0.9
	baz=278						
TWD				S	**Sn**	10 30 30.4	-1.5
	baz=278						
NACB	**Ninganchiao**	**0.69**	**293**	*e*Pn	**Pn**	10 30 21.3	-1.1
NACB				*e*Sn	**Sn**	10 30 32.9	+0.2
TEGC	**Jichi Village**	**0.71**	**255**	*e*P	**Pn**	10 30 22.3	-0.4
	baz=249						
TEGC				*e*S	**Sn**	10 30 33.2	0.0
	baz=249						
ESF	**Shoufeng Towns**	**0.72**	**268**	*e*P	**Pn**	10 30 22.3	-0.5
	baz=250						
ESF				*e*S	**Sn**	10 30 32.7	-0.6
	baz=250						
ENA	**Nanau**	**0.73**	**316**	⇑*i*P	**Pb**	10 30 21.4	-0.2
	baz=319						
ESL	**Shilin**	**0.79**	**264**	⇓*e*P	**Pb**	10 30 22.9	+0.2
	baz=246						
ESL				*e*S	**Sb**	10 30 33.7	+0.6
	baz=246						
TWC	**Suao**	**0.81**	**330**	⇑P	**Pg**	10 30 22.3	-0.9
	baz=326						
TWC				*e*S	**Sg**	10 30 31.4	-2.6
	baz=326						
YOJ	**Yonaguni jima**	**0.86**	**49**	⇓*i*P	**Pb**	10 30 23.8	-0.1
	baz=65						
YOJ				*e*S	**Sb**	10 30 34.1	-1.1
	baz=65						
YOJ	**Yonaguni jima**	**0.86**	**49**	P	**Pb**	10 30 23.6	-0.3
YOJ				*e*S	**Sg**	10 30 35.8	+0.2
EHY	**Hungye**	**0.97**	**246**	⇑P	**Pn**	10 30 26.3	+0.1
	baz=242						
EHY				*e*S	**Sg**	10 30 39.0	0.0
	baz=242						
WHF	**Hehuan Shan**	**0.97**	**285**	⇓P	**Pg**	10 30 26.2	-0.1
	baz=279						
WHF				S	**Sg**	10 30 38.9	-0.2
	baz=279						
ENTT	**Nioudou**	**0.99**	**318**	⇓*i*P	**Pn**	10 30 26.4	-0.1
	baz=326						
ENTT				*e*S	**Sn**	10 30 39.4	-0.7
	baz=326						
ILA	**Ilan**	**0.99**	**330**	*e*P	**Pn**	10 30 26.1	-0.5
	baz=326						
ILA				*e*S	**Sn**	10 30 39.4	-0.8
	baz=326						
NNS	**Nan Shan**	**1.00**	**303**	⇓*i*P	**Pn**	10 30 26.4	-0.3
	baz=284						
NNS				S	**Sg**	10 30 39.4	-0.4
	baz=284						
TWE	**Neicheng**	**1.00**	**325**	⇑P	**Pg**	10 30 26.0	-0.7
	baz=330						
TWE				*e*S	**Sg**	10 30 39.0	-0.8
	baz=330						
YULB	**Yu-li**	**1.04**	**241**	*e*Pn	**Pg**	10 30 27.3	-0.2
YULB				*e*Sn	**Sn**	10 30 41.4	0.0
TWF1	**Yuli**	**1.06**	**239**	⇑P	**Pg**	10 30 27.9	0.0
	baz=236						
TWF1				*e*S	**Sn**	10 30 42.1	+0.2
	baz=236						
TWT	**Tachien**	**1.08**	**289**	⇓P	**Pg**	10 30 28.2	0.0
	baz=272						
TWT				*e*S	**Sn**	10 30 42.1	-0.4
	baz=272						
TWB1	**Santiao Chiao**	**1.14**	**346**	⇓*i*P	**Pb**	10 30 27.9	-0.7
	baz=329						
TWB1				*e*S	**Sg**	10 30 42.9	-1.4
	baz=329						
CHKT	**Chengkung**	**1.16**	**227**	*e*P	**Pn**	10 30 28.5	-0.4
	baz=225						
CHKT				*e*S	**Sb**	10 30 42.6	-1.2
	baz=225						
SSLB	**Suanglung**	**1.23**	**265**	*e*Pn	**Pb**	10 30 29.9	-0.3
SSLB				*e*Sn	**Sg**	10 30 46.4	-0.8
NWF	**Wu-fen Shan**	**1.26**	**338**	⇓*i*P	**Pb**	10 30 30.2	-0.5
	baz=334						
NWF				*e*S	**Sb**	10 30 45.8	-0.8
	baz=334						
SMLT	**Sun Moon Lake**	**1.27**	**270**	⇓P	**Pg**	10 30 31.2	-0.8
	baz=254						
SMLT				*e*S	**Sb**	10 30 46.6	-0.5
	baz=254						
YUS	**Yu-Shan**	**1.29**	**252**	⇑P	**Pb**	10 30 32.0	+0.5
	baz=249						
YUS				*e*S	**Sb**	10 30 48.3	+0.3
	baz=249						
TATO	**Taipei**	**1.30**	**326**	*e*Pn	**Pb**	10 30 31.0	-0.3
TATO				*e*Sn	**Sg**	10 30 48.4	-0.9
TYC	**Yuchr**	**1.31**	**271**	⇓P	**Pg**	10 30 31.6	-1.0
	baz=267						
TAP1	**Taipei**	**1.33**	**329**	*e*P	**Pb**	10 30 31.7	-0.2
	baz=323						
TAP1				*e*S	**Sg**	10 30 48.9	-1.6
	baz=323						
TAP	**Taipei**	**1.34**	**328**	*e*P	**Pb**	10 30 31.7	-0.3
	baz=323						
TAP				*e*S	**Sb**	10 30 48.1	-0.9
	baz=323						
ELDTW	**Lidau**	**1.37**	**239**	⇑*i*P	**Pn**	10 30 32.0	+0.3
	baz=237						
ELDTW				*e*S	**Sn**	10 30 49.0	-0.6
	baz=237						
IRIF	**Iriomote-Funau**	**1.39**	**71**	P	**Pn**	10 30 32.3	+0.4
IRIF				S	**Sn**	10 30 50.1	+0.3
NSTT	**Nanjuang**	**1.39**	**302**	⇓*i*P	**Pg**	10 30 33.1	-0.9
	baz=284						
NSTT				S	**Sg**	10 30 51.1	-1.0
	baz=284						
HATJ	**Hateruma jima**	**1.39**	**83**	P	**Pn**	10 30 31.8	-0.2
HATJ				S	**Sb**	10 30 51.5	+1.1
ALS	**Alishan**	**1.42**	**254**	⇑*i*P	**Pg**	10 30 34.0	-0.7
	baz=241						
TWS1	**Kuangyinshan**	**1.44**	**327**	⇓*i*P	**Pb**	10 30 33.3	-0.3
	baz=323						
TWQ1	**Liyutan**	**1.46**	**288**	⇓*i*P	**Pb**	10 30 34.9	-0.5
	baz=284						
TWQ1				S	**Sg**	10 30 54.1	-0.3
	baz=284						
NCU	**National Centr**	**1.47**	**317**	*e*P	**Pb**	10 30 33.6	-0.5
	baz=312						
NCU				*e*S	**Sg**	10 30 53.3	-1.4
	baz=312						
WNT	**Mingjian**	**1.47**	**270**	*e*P	**Pg**	10 30 35.2	-0.5
	baz=266						
WNT				*e*S	**Sg**	10 30 53.8	-1.0
	baz=266						
NSY	**Sanyi**	**1.49**	**291**	⇓*i*P	**Pg**	10 30 35.4	-0.6
	baz=286						
NSY				*e*S	**Sg**	10 30 55.1	-0.4
	baz=286						
TCU	**Taichung**	**1.50**	**280**	⇓P	**Pg**	10 30 35.6	-0.6

CHN3	**Shinhua**	**1.95**	**246**	*eP*		**Pb**	**10 30 42.7**	**+0.3**
	baz=244									
CHN3				*eS*		**Sg**	**10 31 09.5**	**-0.6**
	baz=244									
LAY	**Lan-yu**	**1.97**	**200**	*eP*		**Pn**	**10 30 40.0**	**0.0**
	baz=200									
CHN8	**Yiju**	**1.98**	**254**	*eP*		**Pb**	**10 30 42.0**	**-1.1**
	baz=252									
CHN8				*eS*		**Sb**	**10 31 07.8**	**+0.3**
	baz=252									
TAW	**Tawu**	**2.00**	**220**	*eP*		**Pn**	**10 30 40.5**	**+0.1**
	baz=219									
EAST	**Anshuo**	**2.01**	**222**	*eP*		**Pn**	**10 30 40.8**	**+0.3**
	baz=220									
TWM1	**Shoushan**	**2.02**	**238**	*eP*		**Pg**	**10 30 45.0**	**-1.2**
	baz=236									
SGLT	**Jiouru**	**2.03**	**235**	*eP*		**Pb**	**10 30 43.1**	**-0.6**
	baz=233									
SCLT	**Jiali**	**2.06**	**250**	*eP*		**Pb**	**10 30 42.8**	**-1.4**
	baz=248									
SCLT				*eS*		**Sb**	**10 31 10.1**	**+0.6**
	baz=248									
TAI1	**Yung-k'ang**	**2.08**	**246**	*eP*		**Pb**	**10 30 43.9**	**-0.7**
	baz=245									
TAI1				*eS*		**Sb**	**10 31 10.9**	**+0.8**
	baz=245									
SCZT	**Fangliau**	**2.16**	**226**	*eP*		**Pb**	**10 30 44.4**	**-1.7**
	baz=218									
SCZT				*eS*		**Sb**	**10 31 11.4**	**-1.1**
	baz=218									
JTJ	**Tarama**	**2.32**	**71**	P		**Pn**	**10 30 45.7**	**+0.9**
JTJ				*eS*		**Sn**	**10 31 14.7**	**+1.8**
TWP	**Hsiaoliuchiu**	**2.35**	**229**	*eP*		**Pb**	**10 30 49.9**	**+0.6**
	baz=228									
HEN	**Hengchun**	**2.37**	**218**	*eP*		**Pb**	**10 30 48.3**	**-1.3**
	baz=216									
TSEB	**Hengchuen, Pin**	**2.37**	**213**	*eP*		**Pn**	**10 30 46.6**	**+1.2**
	baz=215									
TSEB				*eS*		**Sb**	**10 31 16.7**	**-1.8**
	baz=215									
TWK1	**Hengchun**	**2.38**	**215**	*eP*		**Pn**	**10 30 45.8**	**+0.2**
	baz=216									
TWK1				*eS*		**Sn**	**10 31 15.0**	**+0.6**
	baz=216									
WDGT	**Dungji**	**2.50**	**256**	*eP*		**Pn**	**10 30 48.8**	**+1.6**
	baz=242									
WDGT				*eS*		**Sn**	**10 31 18.0**	**+0.7**
	baz=242									
PNG	**Penghu**	**2.53**	**263**	*eP*		**Pn**	**10 30 49.0**	**+1.3**
	baz=261									
PNG				S		**Sn**	**10 31 19.4**	**+1.3**
	baz=261									
JMJ	**Miyako jima 2**	**2.89**	**71**	*eS*		**Sn**	**10 31 29.5**	**+2.6**
JOGS	**Gusukube**	**2.97**	**73**	P		**Pn**	**10 30 55.0**	**+1.3**
JOGS				*eS*		**Sn**	**10 31 31.8**	**+2.9**
QZH	**Quanzhou**	**3.53**	**288**	⇑*iPn*		**Pn**	**10 31 02.4**	**+1.0**
QZH				Sn		**Sn**	**10 31 40.5**	**-2.2**
QZH				smax		smax				
	comp=N,730nm,0.3s									
QZH				smax		smax				
	comp=E,820nm,0.6s									
KNM	**Kinmen**	**3.56**	**279**	*eP*		**Pn**	**10 31 03.9**	**+2.1**
	baz=276									
JKE	**Kume jima 2**	**4.74**	**58**	P		**Pn**	**10 31 17.9**	**-0.1**
JOW	**Kunigami**	**6.15**	**60**	*eP*		**Pn**	**10 31 36.4**	**-1.0**
	baz=64									
JAMN	**Amaminishikomi**	**7.55**	**54**	P		**Pn**	**10 31 54.4**	**-2.3**
JAM	**Amami Oshima**	**7.96**	**54**	P		**Pn**	**10 32 00.3**	**-2.0**
NJ2	**Nanjing**	**8.67**	**340**	*eP*		**Pn**	**10 32 09.0**	**-3.0**
NJ2				pP			10 32 14.5			
NJ2				sP			10 32 18.1			
NJ2				S		**Sn**	**10 33 49.0**	**-0.4**
NJ2				pmax		pmax				
	comp=Z,30nm,0.6s									
NJ2				pmax		pmax				
	comp=Z,120nm,4.7s									
NJ2				smax		smax				
	comp=N,70nm,1.0s									
NJ2				smax		smax				
	comp=E,90nm,1.0s									
NJ2				LR		LR				
	comp=N,820nm,13.6s									
NJ2				LR		LR				
	comp=E,630nm,7.2s									
NJ2				LR		LR				
	comp=Z,1μm,12.8s									
WHN	**Wuhan**	**9.68**	**315**	*eP*		Pn	10 32 30.0	+4.1		
WHN				S		**Sn**	**10 34 19.6**	**+5.4**		
WHN				LR		LR				
	comp=E,1μm,4.5s									
WHN				LR		LR				
	comp=Z,1μm,12.6s									
JNU	**Nakatsue**	**11.89**	**37**	LR		LR	10 37 58.2			
	comp=Z,227nm,19.1s,baz=142,slow=41									
QIZ	**Qiongzhong**	**12.56**	**250**	P		**Pn**	**10 33 06.0**	**+0.6**		
QIZ				S		**Sn**	**10 35 26.3**	**+1.4**		
QIZ				pmax		pmax				
	comp=Z,28nm,2.7s									
QIZ				LR		LR				
	comp=Z,260nm,11.3s									
KSAR	**Wonju Array Be**	**14.33**	**18**	Pn		**Pn**	**10 33 30.6**	**+1.2**		
KSRS	**Korea Array**	**14.35**	**18**	Pn		**Pn**	**10 33 30.6**	**+0.9**		
	comp=Z,0.3nm,0.3s,baz=213,slow=39,SNR=6.7									
KSRS				LR		LR	10 39 39.5			
	comp=Z,162nm,18.5s,baz=333,slow=41									
GYA	**Guiyang**	**14.38**	**283**	*eP*		**Pn**	**10 33 30.8**	**+0.5**		
GYA				PP		**PnPn**	**10 33 41.6**	**+3.4**		
GYA				S		**Sn**	**10 36 10.9**	**+1.4**		
GYA				SS		**S**	**10 36 28.0**	**-1.5**		
GYA				pmax		pmax				
	comp=Z,10.0nm,0.8s									
GYA				pmax		pmax				
	comp=Z,80nm,4.6s									
GYA				LR		LR				
	comp=N,290nm,15.3s									
GYA				LR		LR				
	comp=E,250nm,16.7s									
GYA				LR		LR				
	comp=Z,360nm,15.0s									
XAN	**Xi'an**	**15.44**	**314**	P		**P**	**10 33 49.9**	**+0.9**		
XAN				pmax		pmax				
	comp=Z,4.0nm,0.9s									
XAN				pmax		pmax				
	comp=Z,11nm,3.0s									
XAN				LR		LR				
	comp=N,200nm,9.3s									
XAN				LR		LR				
	comp=E,130nm,11.6s									
XAN				LR		LR				
	comp=Z,100nm,11.6s									
BJI	**Beijing**	**16.90**	**344**	P		**Pn**	**10 34 03.3**	**+0.3**		
BJI				S		**S**	**10 37 15.4**	**-5.3**		
BJI				pmax		pmax				
	comp=Z,8.0nm,0.9s									
BJI				LR		LR				
	comp=N,450nm,12.5s									
BJI				LR		LR				
	comp=E,85nm,13.4s									
KMI	**Kunming**	**17.84**	**278**	P		**P**	**10 34 15.8**	**+0.1**		
KMI				pP		**pP**	**10 34 20.8**	**+0.3**		
KMI				S		**Sn**	**10 37 31.8**	**-1.9**		
KMI				sS		**S**	**10 37 39.3**	**-1.1**		
KMI				SS		**SnSn**	**10 37 55.0**	**+7.7**		
KMI				pmax		pmax				
	comp=Z,8.0nm,0.7s									
KMI				pmax		pmax				
	comp=Z,75nm,3.1s									
KMI				LR		LR				
	comp=N,480nm,12.5s									
KMI				LR		LR				
	comp=E,360nm,11.2s									
KMI				LR		LR				
	comp=Z,390nm,11.8s									
CD2	**Chengdu**	**17.86**	**297**	P		**P**	**10 34 16.1**	**+0.3**		
CD2				pP		**pP**	**10 34 20.3**	**-0.3**		
CD2				sP		**sP**	**10 34 23.9**	**+1.1**		
CD2				PP		**PnPn**	**10 34 30.9**	**+4.9**		
CD2				S		**Sn**	**10 37 32.4**	**-1.7**		
CD2				sS		**S**	**10 37 39.3**	**-1.3**		
CD2				SS		**SnSn**	**10 37 55.3**	**+7.6**		
CD2				pmax		pmax				
	comp=Z,20nm,0.8s									
CD2				pmax		pmax				
	comp=Z,100nm,5.2s									
CD2				LR		LR				
	comp=N,310nm,11.8s									
CD2				LR		LR				
	comp=E,590nm,14.2s									
CD2				LR		LR				
	comp=Z,560nm,14.2s									
HHC	**Hu-ho-hao-te**	**19.15**	**335**	*eP*		**P**	**10 34 29.6**	**-0.3**		
HHC				sP		**sP**	**10 34 38.8**	**+1.9**		
HHC				PP		**PnPn**	**10 34 47.3**	**+3.6**		
HHC				S		**Sn**	**10 38 02.1**	**-3.0**		
HHC				sS		**S**	**10 38 09.3**	**+2.8**		
HHC				SS		**SnSn**	**10 38 27.0**	**+7.6**		
HHC				PcP		**PcP**	**10 38 54.4**	**+0.8**		
HHC				pmax		pmax				
	comp=Z,35nm,0.8s									
HHC				pmax		pmax				
	comp=Z,150nm,4.5s									
HHC				LR		LR				
	comp=N,820nm,11.8s									
HHC				LR		LR				
	comp=E,540nm,11.5s									
HHC				LR		LR				
	comp=Z,960nm,11.8s									
CN2	**Changchun**	**20.02**	**7**	*eP*		P	10 34 32.1	-7.2		
CN2				*es*P		sP	10 34 39.0	-7.3		
CN2				*eS*		S	10 38 11.3	-12		
CN2				pmax		pmax				
	comp=Z,10.0nm,1.0s									
CN2				LR		LR				
	comp=Z,500nm,14.0s									
LZH	**Lanzhou**	**20.03**	**312**	*eP*		Pn	10 34 40.5	-1.0		
LZH				pP		pP	10 34 44.3	-0.1		
LZH				sP		sP	10 34 47.8	+1.2		
LZH				*eS*		S	10 38 16.5	-7.9		
LZH				sS		Sn	10 38 25.0	-1.5		
LZH				SS		**SnSn**	**10 38 47.3**	**+6.3**		
LZH				pmax		pmax				
	comp=Z,16nm,1.0s									
LZH				pmax		pmax				
	comp=Z,100nm,4.8s									
LZH				LR		LR				
	comp=N,300nm,10.2s									
LZH				LR		LR				
	comp=E,320nm,14.0s									
LZH				LR		LR				
	comp=Z,410nm,13.5s									
MDJ	**Mudanjiang**	**21.51**	**14**	P		**P**	**10 34 55.8**	**+0.4**		
MDJ				pP		**pP**	**10 34 58.6**	**-1.6**		
MDJ				sP		**sP**	**10 35 00.0**	**-2.4**		
MDJ				S		**S**	**10 38 54.3**	**+1.0**		
MDJ				pmax		pmax				
	comp=Z,4.0nm,0.7s									
MDJ				pmax		pmax				
	comp=Z,16nm,3.3s									
MDJ				LR		LR				
	comp=N,120nm,13.5s									
MDJ				LR		LR				
	comp=E,290nm,12.5s									
MDJ				LR		LR				
	comp=Z,390nm,14.6s									
USRK	**Ussuriysk Arra**	**21.76**	**19**	P		**P**	**10 34 55.2**	**-2.8**		
	comp=Z,2.1nm,0.6s,baz=211,slow=9.7,SNR=5.4									
USRK				LR		LR	10 44 20.8			
	comp=Z,139nm,18.3s,baz=162,slow=40									
CMAR	**Chiang Mai Arr**	**22.42**	**260**	P		**P**	**10 35 05.8**	**+0.4**		
CMAR	**Chiang Mai Arr**	**22.42**	**260**	P		**P**	**10 35 05.8**	**+0.4**		
	comp=Z,1.2nm,0.4s,baz=61,slow=8.7,SNR=7.0									
CMAR				LR		LR	10 44 50.9			
	comp=Z,72nm,18.2s,baz=70,slow=39									
GTA	**Gaotai**	**24.50**	**314**	*eP*		**P**	**10 35 27.0**	**+1.0**		
GTA				pP		**pP**	**10 35 31.4**	**+0.3**		
GTA				sP		**sP**	**10 35 34.8**	**+1.5**		
GTA				S		**S**	**10 39 50.3**	**+4.5**		
GTA				pmax		pmax				
	comp=Z,7.0nm,0.8s									
GTA				pmax		pmax				
	comp=Z,36nm,5.9s									
GTA				LR		LR				
	comp=N,160nm,14.5s									
GTA				LR		LR				
	comp=E,260nm,17.1s									
GTA				LR		LR				
	comp=Z,200nm,14.3s									
ASAJ	**Asahikawa**	**26.14**	**35**	LR		LR	10 46 05.4			
	comp=Z,125nm,18.4s,baz=180,slow=37									
ULN	**Ulaanbaatar**	**26.82**	**337**	*eP*		**P**	**10 35 45.8**	**-1.1**		
	comp=Z,20nm,0.7s									
SONM	**Songino Array**	**27.03**	**336**	P		**P**	**10 35 47.5**	**-1.2**		
SONM	**Songino Array**	**27.03**	**336**	P		**P**	**10 35 47.5**	**-1.2**		
	comp=Z,28nm,0.8s,baz=149,slow=9.5,SNR=91									
SONM				LR		LR	10 47 03.5			
	comp=Z,129nm,20.9s,baz=247,slow=38									
KAPI	**Kappang**	**28.84**	**185**	LR		LR	10 48 01.8			
	comp=Z,67nm,19.3s,baz=126,slow=37									
WMQ	**Urumqi**	**34.58**	**314**	*eP*		**P**	**10 36 56.5**	**+1.1**		
WMQ				pP		**pP**	**10 37 01.0**	**+0.5**		
WMQ				sP		**sP**	**10 37 04.0**	**+1.3**		
WMQ				PP		**PnPn**	**10 38 12.0**	**+1.2**		
WMQ				*eS*		**S**	**10 42 24.0**	**+0.1**		
WMQ				pmax		pmax				
	comp=Z,8.0nm,0.6s									
WMQ				LR		LR				
	comp=N,250nm,8.2s									
WMQ				LR		LR				
	comp=E,320nm,11.0s									
WMQ				LR		LR				
	comp=Z,210nm,15.0s									
MK31	**Makanchi Array**	**39.25**	**316**	*eP*		**P**	**10 37 34.2**	**-0.7**		
MKAR	**Makanchi Array**	**39.25**	**316**	P		**P**	**10 37 34.3**	**-0.7**		
MKAR				PcP		**PcP**	**10 39 42.1**	**-1.7**		
MKAR	**Makanchi Array**	**39.25**	**316**	P		**P**	**10 37 34.3**	**-0.7**		
	comp=Z,3.0nm,0.5s,baz=101,slow=9.8,SNR=48									
MKAR				PcP		**PcP**	**10 39 42.1**	**-1.7**		
	comp=Z,0.6nm,0.7s,baz=82,slow=3.2,SNR=3.6									
MKAR				LR		LR	10 55 25.6			
	comp=Z,108nm,18.2s,baz=174,slow=39									
PETK	**Petropavlovsk-**	**39.54**	**33**	LR		LR	10 54 25.4			
	comp=Z,67nm,18.7s,baz=223,slow=37									
ZAA0	**Zalesovo Array**	**41.03**	**327**	*eP*		**P**	**10 37 47.7**	**-1.9**		
ZALV	**Zalesovo Beam**	**41.03**	**327**	P		**P**	**10 37 47.6**	**-2.0**		
ZALV	**Zalesovo Beam**	**41.03**	**327**	P		**P**	**10 37 47.6**	**-2.0**		
	comp=Z,7.5nm,0.4s,baz=112,slow=7.7,SNR=47									
ZALV				LR		LR	10 56 25.2			
	comp=Z,104nm,18.4s,baz=70,slow=39									
KSH	**Kashi**	**41.90**	**303**	*eP*		P	10 38 01.1	+4.0		
KSH				*ep*P		pP	10 38 05.6	+3.2		
KSH				*es*P		sP	10 38 08.3	+3.8		
KSH				*eP*P		**PnPn**	**10 39 42.1**	**+2.9**		
KSH				*eP*cP		**PcP**	**10 39 55.8**	**+3.2**		
KSH				*eS*cP		**ScP**	**10 43 44.6**	**+2.2**		
KSH				*eP*cS		**PcS**	**10 43 46.1**	**+1.8**		
KSH				*eS*S		**S**	**10 44 20.3**	**+5.5**		
KSH				*es*S		sS	10 44 27.9	+4.4		
KSH				pmax		pmax				
	comp=Z,8.0nm,0.5s									
KSH				LR		LR				
	comp=Z,350nm,6.7s									
ULHL	**Ulahol**	**42.14**	**307**	P		**P**	**10 37 59.6**	**+0.5**		
	SNR=5.2									
TKM2	**Tokmak 2**	**42.74**	**308**	*eP*		**P**	**10 38 04.9**	**+0.9**		
	comp=Z,11nm,1.0s									
TKM2	**Tokmak 2**	**42.74**	**308**	P		**P**	**10 38 04.7**	**+0.7**		
	SNR=12									
KZA	**Kyzart**	**42.84**	**307**	P		**P**	**10 38 06.5**	**+1.5**		
	SNR=5.2									
KURK	**Kurchatov**	**42.96**	**320**	*eP*		**P**	**10 38 04.2**	**-1.1**		
	comp=Z,12nm,0.6s									
KURBB	**Kurchatov Arra**	**42.98**	**320**	P		**P**	**10 38 03.6**	**-1.9**		
	comp=Z,1.0nm,0.4s,baz=112,slow=7.6,SNR=16									
KBK	**Karagaybulak**	**43.16**	**308**	P		**P**	**10 38 08.3**	**+0.9**		
	SNR=5.1									
AAK	**Ala-Archa**	**43.48**	**307**	P		**P**	**10 38 10.4**	**+0.4**		
AAK	**Ala-Archa**	**43.48**	**307**	P		**P**	**10 38 10.4**	**+0.4**		
	comp=Z,2.2nm,0.4s,baz=149,slow=3.7,SNR=5.5									
AML	**Almayashu**	**43.99**	**307**	P		**P**	**10 38 15.3**	**+1.0**		
	SNR=8.6									
EKS2	**Erkin-Say**	**44.01**	**307**	*eP*		**P**	**10 38 14.9**	**+0.7**		
	comp=Z,4.4nm,0.8s									
WRAB	**Tennant Creek**	**45.12**	**164**	*eP*		**P**	**10 38 23.9**	**+0.9**		
	comp=Z,5.3nm,0.8s									
WRA	**Warramunga Arr**	**45.13**	**164**	P		**P**	**10 38 23.6**	**+0.6**		
WRA	**Warramunga Arr**	**45.13**	**164**	P		**P**	**10 38 23.6**	**+0.6**		
	comp=Z,4.6nm,0.8s,baz=345,slow=8.9,SNR=36									
KKAR	**Karatay Array**	**46.45**	**307**	*eP*		**P**	**10 38 33.9**	**+0.5**		
	comp=Z,1.7nm,0.4s									
BVAR	**Borovoye Array**	**48.53**	**321**	P		**P**	**10 38 48.4**	**-1.0**		
BVAR				PcP		**PcP**	**10 40 14.1**	**-1.1**		
BVAR	**Borovoye Array**	**48.53**	**321**	P		**P**	**10 38 48.4**	**-1.0**		
	comp=Z,3.4nm,0.6s,baz=109,slow=8.8,SNR=14									
BVAR				PcP		**PcP**	**10 40 14.1**	**-1.1**		
	comp=Z,1.1nm,0.5s,baz=113,slow=3.4,SNR=3.8									
BRVK	**Borovoye**	**48.60**	**321**	*eP*		**P**	**10 38 49.5**	**-0.5**		
	comp=Z,7.7nm,0.9s									
AS31	**Alice Springs**	**48.61**	**166**	*eP*		**P**	**10 38 50.9**	**+0.6**		
ASAR	**Alice Springs**	**48.61**	**166**	P		**P**	**10 38 50.9**	**+0.6**		
ASAR	**Alice Springs**	**48.61**	**166**	P		**P**	**10 38 50.9**	**+0.6**		
	comp=Z,3.5nm,0.6s,baz=89,slow=7.8,SNR=64									
ABKAR	**Akbulak array**	**54.36**	**314**	*eP*		**P**	**10 39 32.8**	**-0.4**		
	comp=Z,11nm,0.8s									
STKA	**Stephens Creek**	**58.45**	**161**	P		**P**	**10 40 02.8**	**+0.4**		
STKA	**Stephens Creek**	**58.45**	**161**	P		**P**	**10 40 02.8**	**+0.4**		
	comp=Z,2.0nm,0.6s,baz=322,slow=12,SNR=2.0									
KBZ	**Khabaz**	**66.45**	**309**	P		**P**	**10 40 56.6**	**+0.8**		
KBZ	**Khabaz**	**66.45**	**309**	P		**P**	**10 40 56.6**	**+0.8**		
	comp=Z,4.2nm,0.9s,baz=160,slow=7.2,SNR=4.8									
ILAR	**Eielson Array**	**69.00**	**27**	P		**P**	**10 41 10.6**	**-1.0**		
ILAR	**Eielson Array**	**69.00**	**27**	P		**P**	**10 41 10.6**	**-1.0**		
	comp=Z,0.4nm,0.8s,baz=302,slow=8.4,SNR=8.3									
JOF	**Joensuu**	**69.45**	**331**	*ep*		**P**	**10 41 12.9**	**-1.5**		
	comp=Z,1.0nm,0.4s									
ARCES	**ARCESS Array B**	**70.18**	**338**	P		**P**	**10 41 16.9**	**-1.9**		
ARCES	**ARCESS Array B**	**70.18**	**338**	P		**P**	**10 41 16.9**	**-1.9**		
	comp=Z,2.1nm,0.9s,baz=54,slow=6.3,SNR=5.0									
FINES	**FINESS Array B**	**72.20**	**330**	P		**P**	**10 41 29.6**	**-1.5**		
FINES	**FINESS Array B**	**72.20**	**330**	P		**P**	**10 41 29.6**	**-1.5**		
	comp=Z,1.2nm,0.6s,baz=62,slow=5.8,SNR=11									
FINES				LR		LR	11 16 39.8			
	comp=Z,131nm,18.8s,baz=185,slow=39									
INK	**Inuvik**	**73.11**	**22**	P		**P**	**10 41 33.5**	**-2.9**		
INK	**Inuvik**	**73.11**	**22**	P		**P**	**10 41 33.5**	**-2.9**		
	comp=Z,2.1nm,0.6s,baz=303,slow=5.4,SNR=7.4									
AKASG	**Malin Array Be**	**73.75**	**319**	P		**P**	**10 41 38.4**	**-2.1**		
AKASG	**Malin Array Be**	**73.75**	**319**	P		**P**	**10 41 38.4**	**-2.1**		
	comp=Z,6.0nm,0.7s,baz=60,slow=6.3,SNR=13									
AK01	**Malin Array Si**	**73.76**	**319**	*eP*		**P**	**10 41 39.2**	**-1.4**		
KIEV	**Kiev**	**73.77**	**319**	*eP*		**P**	**10 41 39.2**	**-1.4**		
	comp=Z,2.4nm,0.7s									
AK02	**Malin Array Si**	**73.78**	**319**	*eP*		**P**	**10 41 39.4**	**-1.3**		
BR131	**Keskin Array S**	**74.15**	**307**	*eP*		**P**	**10 41 43.2**	**-0.1**		
	comp=Z,6.3nm,0.9s									
BRTR	**Keskin Array B**	**74.15**	**307**	P		**P**	**10 41 43.0**	**-0.3**		
BRTR	**Keskin Array B**	**74.15**	**307**	P		**P**	**10 41 43.0**	**-0.3**		
	comp=Z,6.9nm,0.9s,baz=101,slow=6.4,SNR=30									
BUR08	**Bucovina Ar. S**	**77.27**	**317**	*eP*		**P**	**10 42 00.2**	**-0.7**		
DLBC	**Dease Lake**	**78.67**	**31**	P		**P**	**10 42 07.8**	**-0.7**		
DLBC	**Dease Lake**	**78.67**	**31**	P		**P**	**10 42 07.8**	**-0.7**		
	comp=Z,0.8nm,0.5s,baz=252,slow=17,SNR=3.4									
NB2	**NORSAR Subarra**	**78.95**	**332**	P		**P**	**10 42 08.2**	**-1.7**		
	comp=Z,0.7nm,0.5s,baz=53,slow=5.9									
NOA	**NORSAR Array B**	**78.95**	**332**	P		**P**	**10 42 08.2**	**-1.7**		
NOA	**NORSAR Array B**	**78.95**	**332**	P		**P**	**10 42 08.2**	**-1.7**		
	comp=Z,1.3nm,0.6s,baz=59,slow=5.3,SNR=4.5									
NOA				LR		LR	11 20 51.2			
	comp=Z,84nm,18.4s,baz=0.0,slow=39									
VYHS	**Vyhne**	**80.84**	**319**	*eP*		**P**	**10 42 20.2**	**-0.2**		
YKA	**Yellowknife Ar**	**82.84**	**23**	P		**P**	**10 42 29.3**	**-1.2**		
YKA	**Yellowknife Ar**	**82.84**	**23**	P		**P**	**10 42 29.3**	**-1.2**		
	comp=Z,2.0nm,0.7s,baz=312,slow=4.8,SNR=41									
KHC	**Kasperske Hory**	**83.63**	**321**	*eP*		**P**	**10 42 33.9**	**-1.1**		
GERES	**GERESS Array B**	**83.70**	**321**	P		**P**	**10 42 34.7**	**-0.7**		
GERES	**GERESS Array B**	**83.70**	**321**	P		**P**	**10 42 34.7**	**-0.7**		
	comp=Z,2.3nm,0.8s,baz=72,slow=4.3,SNR=17									
LPG	**La Plagne**	**89.49**	**321**	*eP*		**P**	**10 43 03.0**	**-1.1**		
	comp=Z,11nm,0.9s									
LPG	**La Plagne**	**89.49**	**321**	*eP*		**P**	**10 43 03.0**	**-1.1**		
	comp=Z,11nm,0.9s									
LPL	**La Plagne**	**89.49**	**321**	*eP*		**P**	**10 43 02.9**	**-1.1**		
	comp=Z,6.8nm,0.7s									
LPL	**La Plagne**	**89.49**	**321**	*eP*		**P**	**10 43 02.9**	**-1.1**		
	comp=Z,6.8nm,0.7s									
PGF	**Pioggiola**	**89.77**	**317**	*eP*		**P**	**10 43 04.2**	**-1.0**		
	comp=Z,27nm,1.1s									
PGF	**Pioggiola**	**89.77**	**317**	*eP*		**P**	**10 43 04.2**	**-1.0**		
	comp=Z,27nm,1.1s									
SBF	**Sospel**	**90.01**	**319**	*eP*		**P**	**10 43 05.3**	**-0.9**		
	comp=Z,9.6nm,0.7s									
SBF	**Sospel**	**90.01**	**319**	*eP*		**P**	**10 43 05.3**	**-0.9**		
	comp=Z,9.6nm,0.6s									
ORIF	**Oris-en-Rattie**	**90.33**	**320**	*eP*		**P**	**10 43 06.5**	**-1.3**		
	comp=Z,13nm,1.0s									
ORIF	**Oris-en-Rattie**	**90.33**	**320**	*eP*		**P**	**10 43 06.5**	**-1.3**		
	comp=Z,13nm,1.0s									
SMF	**Signal de Mont**	**90.48**	**323**	*eP*		**P**	**10 43 06.9**	**-1.4**		
	comp=Z,4.8nm,0.6s									
SMF	**Signal de Mont**	**90.48**	**323**	*eP*		**P**	**10 43 06.9**	**-1.4**		
	comp=Z,4.8nm,0.6s									
FRF	**La Foret Royal**	**90.65**	**319**	*eP*		**P**	**10 43 07.6**	**-1.5**		
FRF	**La Foret Royal**	**90.65**	**319**	*eP*		**P**	**10 43 07.6**	**-1.5**		
NEW	**Newport**	**90.66**	**35**	*eP*		**P**	**10 43 09.1**	**0.0**		
	comp=Z,5.2nm,1.0s									
AVF	**Avril sur Loir**	**90.67**	**323**	*eP*		**P**	**10 43 07.7**	**-1.4**	

comp=E,57µm,0.5s
HMBC Humberstone 1.28 308 ⇓*i*P **Pn 10 36 46.6 -1.5**
HMBC *i*S **Sn 10 37 05.2 -1.4**
HMBC Humberstone 1.28 308 ⇓*i*P **Pn 10 36 46.6 -1.5**
HMBC *i*S **Sn 10 37 05.2 -1.4**
HMBC AML AML 10 37 06.8
comp=E,134µm,0.7s
PB04 Plate Boundary 1.35 208 ⇑*i*P Pn 10 36 52.2 +3.5
PB04 Plate Boundary 1.35 208 ⇑*i*P Pn 10 36 52.2 +3.5
PB04 AML AML 10 37 20.7
comp=E,23µm,0.3s
PB11 Plate Boundary 1.53 328 ⇓*i*P **Pn 10 36 49.8 -1.2**
PB11 *i*S **Sn 10 37 11.1 -0.6**
PB11 Plate Boundary 1.53 328 ⇓*i*P **Pn 10 36 49.8 -1.2**
PB11 *i*S **Sn 10 37 11.1 -0.6**
PB11 AML AML 10 37 15.0
comp=E,274µm,0.8s
LVC Limon Verde 1.54 184 ⇑*i*P **Pn 10 36 50.8 -0.5**
LVC S **Sn 10 37 11.5 -0.7**
LVC *i*S **Sn 10 37 11.8 -0.4**
LVC Limon Verde 1.54 184 ⇑*i*P **Pn 10 36 50.8 -0.5**
LVC *i*S **Sn 10 37 11.8 -0.4**
LVC Limon Verde 1.54 184 P **Pn 10 36 50.7 -0.5**
comp=E,713nm,0.3s,baz=7.8,slow=8.5,SNR=8146
LVC S **Sn 10 37 11.5 -0.7**
comp=E,1µm,0.3s,baz=243,slow=15,SNR=47
PB06 Plate Boundary 1.78 203 ⇑*i*P **Pn 10 36 52.8 -1.2**
PB06 *i*S **Sn 10 37 16.2 -1.0**
PB06 Plate Boundary 1.78 203 ⇑*i*P **Pn 10 36 52.8 -1.2**
PB06 *i*S **Sn 10 37 16.2 -1.0**
PB06 AML AML 10 37 20.1
comp=N,25µm,0.5s
PSGC Pisagua 1.92 320 ⇑*i*P **Pn 10 36 54.2 -1.5**
PSGC *i*S **Sn 10 37 18.8 -1.4**
PSGC Pisagua 1.92 320 ⇑*i*P **Pn 10 36 54.2 -1.5**
PSGC *i*S **Sn 10 37 18.8 -1.4**
PSGC AML AML 10 37 23.3
comp=N,32µm,0.5s
ARCH Arica 2.92 331 *e*P **Pn 10 37 07.8 -1.0**
ARCH *e*S **Sn 10 37 42.0 -1.4**
ARCH Arica 2.92 331 *e*P **Pn 10 37 07.8 -1.0**
ARCH *e*S **Sn 10 37 42.0 -1.4**
ARCH AML AML 10 37 50.5
comp=E,25µm,0.6s
ANCH Antofagasta 2.99 209 ⇓*i*P **Pn 10 37 08.3 -1.3**
ANCH Antofagasta 2.99 209 ⇓*i*P **Pn 10 37 08.3 -1.3**
ANCH AML AML 10 37 55.5
comp=N,10µm,0.6s
LPAZ La Paz 4.80 8 *e*Pn **Pn 10 37 35.0 +0.6**
LPAZ S Sn 10 38 22.1 -7.2
LPAZ *e*Sn 10 38 22.8
LPAZ La Paz 4.80 8 P **Pn 10 37 35.3 +0.8**
comp=N,104nm,0.3s,baz=171,slow=6.4,SNR=476
LPAZ S Sn 10 38 22.1 -7.2
baz=177,slow=20,SNR=3.9
LPAZ LR LR 10 39 24.8
comp=N,1µm,18.7s,baz=152,slow=38
LCO Las Campanas 8.09 192 *e*Pn Pn 10 38 15.3 -3.3
LCO *e*Sn **Sn 10 39 49.0 +0.4**
SIV San Ignacio 8.91 57 P Pn 10 38 25.5 -4.1
SIV S Sn 10 39 58.9 -9.3
SIV San Ignacio 8.91 57 P Pn 10 38 25.5 -4.1
comp=N,61nm,0.3s,baz=253,slow=13,SNR=784
SIV S Sn 10 39 58.9 -9.3
baz=186,slow=16,SNR=7.6
CFAA Coronel Fontan 10.51 177 P Pn 10 38 46.0 -5.2
CFAA Coronel Fontan 10.51 177 P Pn 10 38 46.0 -5.2
comp=N,0.3nm,0.3s,baz=353,slow=14,SNR=14
CPUP Villa Florida 11.74 119 P **Pn 10 39 04.8 -3.0**
CPUP Villa Florida 11.74 119 P **Pn 10 39 04.8 -3.0**
comp=N,1.1nm,0.3s,baz=282,slow=12,SNR=21
NNA Nana 11.87 318 *e*Pn **Pn 10 39 07.8 -1.7**
NNA *e*Sn Sn 10 41 15.1 -5.1
SAML Samuel 13.21 25 *e*Pn Pn 10 39 23.1 -4.0
comp=N,105nm,0.7s
ATAH Atahualpa 16.67 325 P **P 10 40 12.0 +0.3**
ATAH Atahualpa 16.67 325 P **P 10 40 12.0 +0.3**
comp=N,0.6nm,0.3s,baz=166,slow=8.2,SNR=16
ATAH LR LR 10 47 51.3
comp=N,301nm,19.4s,baz=163,slow=41
TRQA Tornquist 17.93 162 *e*P **P 10 40 23.6 -1.5**
comp=N,538nm,1.3s
PLCA Paso Flores 19.66 184 *e*P **P 10 40 44.8 +0.9**
comp=N,68nm,1.2s
PLCA Paso Flores 19.66 184 P **P 10 40 43.5 -0.4**
comp=N,0.6nm,0.3s,baz=359,slow=13,SNR=14
SPB Sao Paulo 19.93 101 *e*P **P 10 40 43.4 -3.5**
comp=N,15nm,0.7s
BDFB Brasilia 20.45 78 P **P 10 40 51.2 -1.5**
BDFB Brasilia 20.45 78 P **P 10 40 51.2 -1.5**
comp=N,9.5nm,0.6s,baz=255,slow=11,SNR=13
OTAV Otavalo 23.18 335 *e*P **P 10 41 22.4 +1.0**
comp=N,140nm,1.4s
ROSC El Rosal 26.33 348 *e*P **P 10 41 50.8 +0.9**
ROSC El Rosal 26.33 348 P **P 10 41 50.5 +0.7**
comp=N,24nm,0.6s,baz=277,slow=23,SNR=11
ROSC LR LR 10 53 01.9
comp=N,239nm,19.0s,baz=14,slow=38
SDV Santo Domingo 29.82 356 *e*P **P 10 42 19.1 -1.6**
comp=N,46nm,1.0s
BCIP Isla Barro Col 31.94 339 *e*P **P 10 42 40.6 +1.4**
comp=N,9.7nm,0.7s
RCBR Riachuelo 35.30 69 P **P 10 43 07.1 -1.3**
RCBR Riachuelo 35.30 69 P **P 10 43 07.1 -1.3**
comp=N,11nm,0.8s,baz=233,slow=10.0,SNR=5.8
CRPR Cabo Rojo, PR 38.87 3 *e*P **P 10 43 36.1 -2.3**
comp=N,138nm,0.8s
OBIP Obispado Ponce 38.93 3 *e*P **P 10 43 36.8 -2.2**
comp=N,159nm,0.6s
CELP Cerrillos 38.96 3 *e*P **P 10 43 37.0 -2.3**
CELP *e*pP **pP 10 44 04.2 0.0**
CELP *e*sP **sP 10 44 17.0 +0.2**
LSP Las Mesas 39.04 3 *e*P **P 10 43 37.9 -2.0**
LSP *e*pP **pP 10 44 05.1 +0.2**
MTP Monte Pirata 39.05 5 *e*P **P 10 43 37.2 -2.8**
comp=N,63nm,0.9s
MTP *e*pP **pP 10 44 04.4 -0.6**
MTP *e*sP **sP 10 44 15.6 -1.9**
MPR Mayaguez 39.07 3 *e*P **P 10 43 38.0 -2.1**
comp=N,151nm,0.8s
HUMP Col San Antoni 39.08 4 *e*P **P 10 43 37.3 -2.9**
comp=N,37nm,0.9s
LRS Lares 39.16 3 *e*P **P 10 43 38.5 -2.4**
LRS *e*pP **pP 10 44 06.7 +0.7**
AOPR Arecibo Observ 39.22 3 *e*P P 10 43 38.1 -3.3
comp=N,84nm,0.6s
TGUH Tegucigalpa,Un 39.34 331 *e*P **P 10 43 43.2 +0.9**
comp=N,49nm,0.9s
TGUH *e*pP **pP 10 44 08.9 +1.4**
TGUH *e*sP **sP 10 44 20.4 +0.4**
STVI Saint Thomas 39.36 6 *e*P **P 10 43 40.2 -2.3**
comp=N,26nm,0.7s
SDDR Presa de Saban 39.88 356 *e*P **P 10 43 48.1 +1.2**
PMSA Palmer Station 43.80 177 P **P 10 44 18.4 +0.3**
PMSA pP **pP 10 44 42.9 -0.7**
PMSA Palmer Station 43.80 177 P **P 10 44 18.4 +0.3**
comp=N,11nm,1.0s,baz=324,slow=2.6,SNR=3.6
PMSA pP **pP 10 44 42.9 -0.7**
comp=N,28nm,0.6s,baz=354,slow=8.6,SNR=4.3
TEIG Tepich 45.24 334 *e*P **P 10 44 30.2 0.0**
comp=N,78nm,1.4s
TEIG *e*pP **pP 10 44 55.5 -0.3**
TIGA Tifton 54.10 344 ⇑P **P 10 45 36.6 -0.6**
baz=54,SNR=5.4
BRAL Brewton 54.67 341 *e*P **P 10 45 42.4 +1.2**
comp=N,96nm,0.6s
BRAL *e*pP **pP 10 46 09.3 +1.5**
BRAL *e*sP **sP 10 46 21.5 +1.6**
NHSC New Hope 54.96 348 *e*P **P 10 45 44.0 +0.7**
comp=N,484nm,1.0s
NHSC *e*pP **pP 10 46 10.6 +0.9**
NHSC *e*pP **sP 10 46 22.6 +0.6**
GOGA Godfrey 55.95 345 *e*P **P 10 45 49.4 -1.0**
GOGA *e**PP **pP 10 46 16.5 -0.5**
GOGA pmax pmax
comp=Z,42nm,1.2s
GOGA Godfrey 55.95 345 *e*P **P 10 45 49.4 -1.0**
comp=Z,42nm,1.2s
GOGA *e*pP **pP 10 46 16.5 -0.5**
LRAL Lakeview Retre 56.54 342 *e*P **P 10 45 53.4 -1.2**
comp=Z,40nm,1.0s
LRAL *e*pP **pP 10 46 20.9 -0.3**
CNNC Cliffs of the 56.66 351 *e*P **P 10 45 55.3 -0.1**
comp=Z,40nm,1.0s
CNNC *e*pP **pP 10 46 21.9 -0.2**

KMSC Kings Mountain 57.15 348 ⇑P **P 10 45 58.6 -0.3**
baz=57,SNR=27
732A Laxson Ranch, 57.93 328 ⇓P **P 10 46 04.3 -0.2**
baz=58,SNR=18
CPCT Cooper Cave 58.15 345 *e*P **P 10 46 05.0 -0.9**
CPCT *e*pP **pP 10 46 32.5 -0.2**
CPCT *e*sP **sP 10 46 44.5 -0.3**
TKL Tuckaleechee C 58.17 346 P **P 10 46 05.4 -0.7**
TKL Tuckaleechee C 58.17 346 P **P 10 46 05.4 -0.7**
comp=Z,75nm,1.0s,baz=160,slow=8.5,SNR=75
632A Uvalde 58.48 328 ⇑P **P 10 46 08.4 +0.1**
baz=59,SNR=24
631A Perdido Creek 58.79 328 ⇑P **P 10 46 10.0 -0.5**
baz=59,SNR=32
TZTN Tazewell 58.97 346 *e*P **P 10 46 11.0 -0.6**
comp=Z,42nm,0.9s
TZTN *e*pP **pP 10 46 38.2 -0.3**
TZTN *e*sP **sP 10 46 49.6 -0.9**
BLA Blacksburg 58.99 349 *e*P **P 10 46 12.3 +0.5**
BLA *e**PP **pP 10 46 39.3 +0.7**
BLA pmax pmax
comp=Z,22nm,0.5s
BLA Blacksburg 58.99 349 *e*P **P 10 46 12.3 +0.5**
comp=Z,22nm,0.5s
BLA *e*pP **pP 10 46 39.3 +0.7**
532A Rocksprings 59.05 329 ⇓P **P 10 46 12.3 0.0**
baz=59,SNR=26
JSRW J. Sargeant Re 59.07 352 *e*P **P 10 46 12.1 -0.1**
JSRW *e*pP **pP 10 46 39.3 +0.2**
JSRW *e*sP **sP 10 46 51.1 -0.1**
JCT Junction City 59.28 329 *e*P **P 10 46 13.8 -0.2**
JCT pmax pmax
comp=Z,31nm,0.8s
JCT Junction City 59.28 329 *e*P **P 10 46 13.8 -0.2**
comp=Z,31nm,0.8s
JCT Junction City 59.28 329 ⇓P **P 10 46 13.6 -0.4**
baz=60,SNR=23
MET Memphis--Engin 59.37 340 *e*P **P 10 46 16.4 +2.1**
comp=Z,135nm,0.6s
531A Rocksprings 59.39 328 ⇑P **P 10 46 14.7 0.0**
baz=60,SNR=44
WHTX Lake Whitney 59.47 332 ⇑P **P 10 46 14.9 -0.3**
baz=60,SNR=6.5
432A Menard 59.61 329 ⇑P **P 10 46 15.8 -0.4**
baz=60,SNR=43
WVT Waverly 59.67 342 *e*P **P 10 46 14.8 -1.6**
WVT *e**PP **pP 10 46 42.6 -0.6**
WVT *e**SP **sP 10 46 54.3 -1.1**
WVT pmax pmax
comp=Z,153nm,0.9s
WVT Waverly 59.67 342 *e*P **P 10 46 14.8 -1.6**
comp=Z,153nm,0.9s
WVT *e*pP **pP 10 46 42.6 -0.6**
WVT *e*sP **sP 10 46 54.3 -1.1**
530A J-C Ranch, Com 59.77 327 ⇑P **P 10 46 17.3 0.0**
baz=60,SNR=17
431A Sonora 59.84 328 ⇓P **P 10 46 17.4 -0.4**
baz=60,SNR=39
UALR University of 59.87 338 *e*P **P 10 46 17.4 -0.4**
comp=Z,52nm,0.9s
UALR *e*pP **pP 10 46 45.4 +0.7**
UALR *e*sP **sP 10 46 57.4 +0.6**
HBAR Harrisburg 60.00 339 *e*P **P 10 46 19.6 +0.9**
332A Millersview 60.01 329 ⇑P **P 10 46 18.5 -0.4**
baz=60,SNR=36
RFTA Plano 60.01 333 *e*P **P 10 46 19.2 +0.4**
628A Black Gap, Mar 60.04 326 ⇓P **P 10 46 19.6 +0.5**
baz=60,SNR=46
UTMT University of 60.17 341 *e*P **P 10 46 19.1 -0.7**
comp=Z,296nm,1.0s
GNAR Gosnell 60.17 340 *e*P **P 10 46 19.8 -0.1**
comp=Z,3µm,1.2s
GNAR *e*pP **pP 10 46 47.2 +0.5**
529A Stev Forest Ra 60.20 327 ⇓P **P 10 46 20.4 +0.1**
baz=60,SNR=59
430A Baggett Ranch, 60.24 328 ⇓P **P 10 46 20.0 -0.5**
baz=60,SNR=31
331A San Angelo 60.27 329 ⇓P **P 10 46 20.2 -0.5**
baz=60,SNR=27
627A Terlingua Ranc 60.28 325 ⇑P **P 10 46 20.8 -0.1**
baz=60,SNR=25
TXAR Lajitas Array 60.33 325 P **P 10 46 21.5 +0.2**
TXAR Lajitas Array 60.33 325 P **P 10 46 21.5 +0.2**
comp=Z,5.2nm,0.6s
232A Coleman 60.38 330 ⇓P **P 10 46 21.1 -0.3**
baz=61,SNR=31
429A Davenport Ranc 60.44 327 ⇓P **P 10 46 21.8 -0.1**
baz=61,SNR=39
PVMO Portageville 60.49 341 *e*P **P 10 46 21.7 -0.3**
comp=Z,400nm,1.0s
528A Cox Ranch, San 60.52 326 ⇑P **P 10 46 22.3 -0.3**
baz=61,SNR=26
SDMD Soldier's Deli 60.63 353 *e*P **P 10 46 22.8 -0.1**
comp=Z,25nm,0.8s
SDMD *e*pP **pP 10 46 50.2 +0.3**
VNA1 Neumayer--Stat 60.66 161 *e*P **P 10 46 23.6 +0.9**
VNA1 Neumayer--Stat 60.66 161 *e*PcP **PcP 10 47 03.5 -2.3**
330A Mertzon 60.72 328 ⇑P **P 10 46 23.0 -0.7**
baz=61,SNR=7.9
231A Bronte 60.73 329 ⇑P **P 10 46 23.0 -0.8**
baz=61,SNR=5.6
PARMO Parma 60.73 341 *e*P **P 10 46 23.6 -0.1**
PARMO *e*pP **pP 10 46 51.3 +0.7**
626A Big Bend Ranch 60.76 325 ⇑P **P 10 46 24.5 +0.4**
baz=61,SNR=70
527A Woodward Ranch 60.94 326 ⇑P **P 10 46 25.2 -0.2**
baz=61,SNR=46
ABTX Abilene, Hawle 60.99 330 ⇓P **P 10 46 25.2 -0.3**
baz=61,SNR=14
230A Sterling City 61.08 329 ⇑P **P 10 46 25.5 -0.7**
baz=61,SNR=7.8
526A Mary Lane Ranc 61.13 325 ⇑P **P 10 46 26.9 +0.2**
baz=61,SNR=69
MVL Millersville 61.16 353 *e*P **P 10 46 26.4 0.0**
comp=Z,35nm,0.8s
MVL *e*pP **pP 10 46 53.6 +0.2**
329A Wagon Wheel Ra 61.18 328 ⇑P **P 10 46 26.5 -0.4**
baz=61,SNR=38
WCI Wyandotte Cave 61.23 344 *e*P **P 10 46 25.5 -1.5**
WCI *e**PP **pP 10 46 53.3 -0.7**
WCI pmax pmax
comp=Z,69nm,0.6s
WCI Wyandotte Cave 61.23 344 *e*P **P 10 46 25.5 -1.5**
comp=Z,70nm,0.6s
WCI *e*pP **pP 10 46 53.3 -0.7**
USIN University of 61.34 343 *e*P **P 10 46 26.6 -1.1**
comp=Z,85nm,0.8s
USIN *e*pP **pP 10 46 54.3 -0.4**
USIN *e*sP **sP 10 47 05.9 -0.9**
131A Roby 61.38 330 ⇑P **P 10 46 27.8 -0.4**
baz=62,SNR=12
427A Hayter Ranch, 61.39 326 ⇑P **P 10 46 28.2 -0.2**
baz=62,SNR=31
229A Bryant Ranch, 61.48 328 ⇑P **P 10 46 28.3 -0.6**
baz=62,SNR=11
Z32A Haskell 61.49 331 ⇑P **P 10 46 28.4 -0.4**
baz=62,SNR=8.5
328A Wristen Ranch, 61.51 327 ⇑P **P 10 46 28.8 -0.3**
baz=62,SNR=30
SIUC Southern Illin 61.55 342 *e*P **P 10 46 28.3 -0.8**
comp=Z,138nm,0.8s
SIUC *e*pP **pP 10 46 56.5 +0.4**
SIUC *e*sP **sP 10 47 07.5 -0.7**
426A McDonald Obser 61.58 326 ⇓P **P 10 46 29.8 0.0**
baz=62,SNR=40
130A Snyder 61.59 329 ⇑P **P 10 46 29.1 -0.5**
baz=62,SNR=21
Z31A Sharp Cattle R 61.80 330 ⇓P **P 10 46 30.7 -0.3**
baz=62,SNR=28
327A Balmorhea Ranc 61.85 326 ⇑P **P 10 46 31.6 +0.2**
baz=62
228A UT Block 9, Go 61.99 328 ⇑P **P 10 46 31.7 -0.7**
baz=62,SNR=9.1
129A Stewart Farms, 62.05 329 ⇑P **P 10 46 32.3 -0.5**
baz=62,SNR=21
Y32A R-V Farms, Ver 62.05 331 ⇑P **P 10 46 32.4 -0.2**
baz=62,SNR=8.0
326A Caldwell Ranch 62.06 326 ⇑P **P 10 46 32.8 -0.1**
baz=62,SNR=29
TUL1 Tulsa 62.16 335 ⇑P **P 10 46 32.8 -0.5**
baz=62,SNR=15
425A Indio Mountain 62.18 325 ⇑P **P 10 46 33.6 -0.1**
baz=62,SNR=60
BLO Bloomington 62.18 344 *e*P **P 10 46 32.1 -1.2**
BLO *e**PP **pP 10 46 59.8 -0.6**
BLO *e**SP **sP 10 47 12.1 -0.3**

BLO pmax pmax
BLO Bloomington 62.18 344 *e*P **P 10 46 32.1 -1.2**
comp=Z,125nm,0.6s
BLO *e*pP **pP 10 46 59.8 -0.6**
BLO *e*sP **sP 10 47 12.1 -0.3**
OLIL Olney 62.18 343 *e*P **P 10 46 32.1 -1.2**
comp=Z,77nm,0.8s
YLE Yale 62.18 356 *e*P **P 10 46 33.6 +0.3**
comp=Z,191nm,1.3s
YLE *e*pP **pP 10 47 00.8 +0.5**
YLE *e*sP **sP 10 47 13.9 +1.5**
Z30A Sanderson Ranc 62.23 330 ⇓P **P 10 46 33.3 -0.6**
baz=62,SNR=34
227A Bennet, Jal 62.26 327 ⇑P **P 10 46 34.1 -0.1**
baz=62,SNR=15
128A Castleberry Fa 62.35 328 ⇓P **P 10 46 33.9 -0.8**
baz=63,SNR=13
Y31A Rekieta Farm, 62.39 331 ⇑P **P 10 46 34.4 -0.5**
baz=63,SNR=31
ACSO Alum Creek Sta 62.40 348 *e*P **P 10 46 34.5 -0.3**
comp=Z,120nm,0.9s
ACSO *e*pP **pP 10 47 01.2 -0.6**
Z29A Hungry Hill Ra 62.49 329 ⇓P **P 10 46 34.6 -1.0**
baz=63,SNR=15
Y30A Stafford Cattl 62.61 330 ⇑P **P 10 46 35.4 -1.0**
baz=63
325A Bean Ranch, Si 62.63 325 ⇑P **P 10 46 36.5 -0.2**
baz=63,SNR=132
SNAA Sanae 62.65 161 *e*P **P 10 46 36.2 0.0**
SNAA Sanae 62.65 161 *e*PcP **PcP 10 47 16.3 +2.2**
SNAA Sanae 62.65 161 *e*P **P 10 46 36.3 0.0**
comp=Z,56nm,1.0s
SLM Saint Louis 62.70 341 *e*P **P 10 46 36.0 -0.8**
SLM pmax pmax
comp=Z,51nm,0.8s
SLM Saint Louis 62.70 341 *e*P **P 10 46 36.0 -0.8**
comp=Z,51nm,0.8s
BRYW Bryant College 62.72 358 *e*P **P 10 46 37.0 +0.1**
comp=Z,488nm,1.4s
BRYW *e*pP **pP 10 47 04.2 +0.2**
226B Tecolote Peak, 62.76 326 ⇓P **P 10 46 37.8 +0.4**
baz=63,SNR=43
CLNB Carlsbad 62.76 327 *e*P **P 10 46 38.4 +0.9**
comp=Z,1.1nm,0.5s
CLNB *e*pP **pP 10 47 01.7 -2.9**
X31A McDonald Ranch 62.82 331 ⇓P **P 10 46 37.2 -0.6**
baz=63,SNR=31
127A Arkansas Junct 62.83 327 ⇑P **P 10 46 37.5 -0.5**
baz=63,SNR=13
Z28A Tucker Farm, M 62.84 329 ⇓P **P 10 46 37.0 -1.0**
baz=63,SNR=18
324A Moseley Ranch, 62.95 325 ⇓P **P 10 46 38.1 -0.8**
baz=63,SNR=68
GDL2 Guadalupe Moun 62.96 326 *e*P **P 10 46 39.3 +0.4**
GDL2 *e*pP **pP 10 47 06.2 +0.3**
Y29A Porterfield Fa 62.96 330 ⇑P **P 10 46 38.0 -0.8**
baz=63,SNR=23
X30A Coker Ranch, T 63.07 331 ⇓P **P 10 46 38.7 -0.8**
baz=63,SNR=19
MNTX Cornudas Mount 63.10 325 *e*P **P 10 46 38.7 -0.9**
comp=Z,49nm,0.3s
MNTX *e*pP **pP 10 47 05.7 -1.0**
126A Clayton Basin, 63.14 327 ⇑P **P 10 46 39.7 -0.3**
baz=63,SNR=16
Z27A Tatum 63.27 328 ⇑P **P 10 46 40.1 -0.8**
baz=64,SNR=32
W31A Holland Ranch, 63.27 332 ⇑P **P 10 46 39.8 -0.9**
baz=64,SNR=8.2
Y28A McKinney Farm, 63.28 329 ⇓P **P 10 46 39.8 -1.1**
baz=64,SNR=15
ALLY Alegheny Colle 63.28 351 *e*P **P 10 46 40.6 0.0**
comp=Z,153nm,0.9s
ALLY *e*pP **pP 10 47 07.6 -0.1**
BINY Binghamton 63.30 354 *e*P **P 10 46 41.2 +0.4**
comp=Z,97nm,1.0s
BINY *e*pP **pP 10 47 08.4 +0.6**
HRV Adam Dziewonsk 63.31 358 *e*P **P 10 46 40.8 +0.1**
HRV *e**PP **pP 10 47 08.2 +0.4**
HRV pmax pmax
comp=Z,142nm,1.6s
HRV Adam Dziewonsk 63.31 358 *e*P **P 10 46 40.8 +0.1**
comp=Z,142nm,1.6s
HRV *e*pP **pP 10 47 08.2 +0.4**
X29A Tulia 63.46 330 ⇓P **P 10 46 41.1 -0.9**
baz=64,SNR=13
SFIN Scholer Farm 63.46 344 ⇓P **P 10 46 39.9 -1.9**
baz=64,SNR=13
224A Cornudas Mount 63.47 325 ⇑P **P 10 46 41.7 -0.6**
baz=64,SNR=52
125A Gardner Draw, 63.47 326 ⇓P **P 10 46 41.5 -0.7**
baz=64,SNR=21
W30A Crocket Farms 63.55 331 ⇑P **P 10 46 42.0 -0.7**
baz=64
MSTX Muleshoe 63.58 329 ⇓P **P 10 46 42.1 -0.8**
baz=64,SNR=51
Z26A Caprock 63.61 327 ⇑P **P 10 46 42.8 -0.3**
baz=64,SNR=21
TRY Troy 63.64 356 *e*P **P 10 46 43.5 +0.5**
comp=Z,111nm,0.9s
TRY *e*pP **pP 10 47 10.8 +0.7**
Y27A Causey 63.70 328 ⇓P **P 10 46 42.9 -0.8**
baz=64,SNR=32
ERPA Erie 63.71 351 *e*P **P 10 46 43.2 -0.3**
comp=Z,238nm,1.0s
ERPA *e*pP **pP 10 47 10.4 -0.1**
ERPA *e*sP **sP 10 47 22.8 +0.1**
V31A Spring Creek L 63.72 332 ⇓P **P 10 46 43.7 0.0**
baz=64,SNR=16
X28A Dimmitt 63.75 330 ⇓P **P 10 46 43.1 -0.9**
baz=64,SNR=13
AMTX Amarillo 63.81 330 *e*P **P 10 46 44.0 -0.3**
comp=Z,54nm,1.3s
223A Chaparral, Ant 63.90 325 ⇑P **P 10 46 45.0 -0.1**
baz=64
124A Stringfield Ra 63.92 326 ⇓P **P 10 46 45.0 -0.3**
baz=64,SNR=35
W29A Amraillo 63.99 330 ⇑P **P 10 46 44.6 -0.9**
baz=64,SNR=8.7
Z25A Roswell 63.99 327 ⇓P **P 10 46 45.0 -0.6**
baz=64,SNR=28
Y26A Elida 64.06 328 ⇓P **P 10 46 45.4 -0.7**
baz=64
V30A Spur Ranch, Mi 64.08 331 ⇑P **P 10 46 46.2 +0.1**
baz=64,SNR=6.4
U31A Nine Bar Ranch 64.23 332 ⇓P **P 10 46 46.6 -0.4**
baz=64
X27A F and S Farms, 64.28 329 ⇓P **P 10 46 46.8 -0.7**
baz=64,SNR=9.8
ACCN Adirondack Com 64.29 356 *e*P **P 10 46 47.5 +0.3**
comp=Z,32nm,1.1s
ACCN *e*pP **pP 10 47 14.6 +0.2**
123A Bell Site, Whi 64.30 325 ⇑P **P 10 46 47.3 -0.3**
baz=64
222A Williams Famil 64.34 324 ⇑P **P 10 46 48.4 +0.5**
baz=64
W28A Vega 64.36 330 ⇑P **P 10 46 47.6 -0.4**
baz=65
Z24A Sheeppen Canyo 64.37 326 ⇓P **P 10 46 47.8 -0.4**
baz=65,SNR=42
Y25A Mesa, Roswell 64.49 327 ⇓P **P 10 46 48.0 -0.8**
baz=65,SNR=30
HNH Hanover 64.53 357 *e*pP pP 10 47 17.1 +1.1
320A Kipp Ranch, An 64.55 323 ⇑P **P 10 46 50.1 +0.8**
baz=65,SNR=19
V29A Stinnett 64.55 331 ⇑P **P 10 46 48.5 -0.7**
baz=65
X26A CR and CF Fran 64.55 328 ⇑P **P 10 46 49.0 -0.3**
baz=65,SNR=21
W27A Bowe Ranch, En 64.61 329 ⇓P **P 10 46 49.1 -0.5**
baz=65,SNR=16
U30A WK&E Inc. Balk 64.71 332 ⇑P **P 10 46 49.9 -0.3**
baz=65
122A Conniff Cattle 64.74 325 ⇑P **P 10 46 51.3 +0.8**
baz=65,SNR=6.8
Z23A Rita Site, Whi 64.77 326 ⇓P **P 10 46 51.0 +0.4**
baz=65,SNR=8.3
T31A Randall Ranch, 64.77 333 ⇑P **P 10 46 50.2 -0.3**
baz=65,SNR=13
V28A Channing 64.77 330 ⇓P **P 10 46 50.3 -0.3**
baz=65,SNR=16
Y24A Capitan 64.87 327 ⇓P **P 10 46 50.9 -0.5**
baz=65,SNR=8.8
MDV Middlebury 64.87 357 *e*P **P 10 46 51.1 +0.2**
NCB Newcomb 64.91 356 *e*P **P 10 46 51.3 0.0**
comp=Z,67nm,1.4s
NCB *e*pP **pP 10 47 18.7 +0.2**

U29A	Oasis Ranch, S	64.92	331	⇓P		P	10 46 51.3	-0.2
	baz=65							
X25A	Clemmons Ranch	64.95	328	⇑P		P	10 46 51.2	-0.7
	baz=65							
W26A	Owens Ranch, T	64.96	329	⇓P		P	10 46 51.9	0.0
	baz=65,SNR=8.9							
220A	Playas Peak, P	64.97	323	⇓P		P	10 46 52.8	+0.7
	baz=65,SNR=41							
319A	Douglas	65.01	322	⇓P		P	10 46 53.1	+0.8
	baz=65,SNR=37							
121A	Cookes Peak, D	65.04	324	⇑P		P	10 46 53.6	+1.1
	baz=65,SNR=24							
V27A	Dan Oppiter Fa	65.06	330	⇓P		P	10 46 52.4	-0.2
	baz=65,SNR=6.4							
T30A	Plains	65.09	332	⇑P		P	10 46 52.5	-0.2
	baz=65							
S31A	Mullinville	65.13	333	⇑P		P	10 46 52.6	-0.2
	baz=65							
Z22A	Elephant Butte	65.15	325	⇑P		P	10 46 54.1	+0.9
	baz=65,SNR=47							
Y23A	Lovelace Mesa,	65.19	326	⇓P		P	10 46 53.6	+0.1
	baz=65,SNR=14							
KSU1	Kansas State U	65.27	336	*eP*		P	10 46 53.1	-0.5
KSU1				*epP*		pP	10 47 19.7	-1.2
U28A	Mallet	65.29	331	⇑P		P	10 46 53.6	-0.4
	baz=66,SNR=5.8							
X24A	Lazy V/L Ranch,	65.37	327	⇑P		P	10 46 54.4	-0.3
	baz=66							
W25A	X Bar L Ranch,	65.41	328	⇑P		P	10 46 54.5	-0.3
	baz=66,SNR=22							
T29A	Hugoton	65.52	332	⇑P		P	10 46 55.1	-0.3
	baz=66,SNR=5.3							
120A	U Bar Ranch, L	65.52	324	⇓P		P	10 46 56.5	+0.9
	baz=66,SNR=29							
V26A	Tequesquite Ra	65.54	329	⇓P		P	10 46 55.5	-0.1
	baz=66,SNR=44							
S30A	Montezuma	65.56	333	⇓P		P	10 46 55.4	-0.3
	baz=66,SNR=11							
Z21A	St. Cloud Mine	65.57	325	⇓P		P	10 46 57.1	+1.1
	baz=66,SNR=52							
LONY	Lake Ozonia	65.58	355	*eP*		P	10 46 55.8	+0.2
	comp=Z,49nm,1.0s							
LONY				*epP*		pP	10 47 23.0	+0.2
U27A	Thompson Grove	65.60	330	⇑P		P	10 46 55.6	-0.4
	baz=66,SNR=6.7							
BNM	Barren Site	65.66	326	*eP*		P	10 46 57.1	+0.5
	comp=Z,14nm,1.0s							
BNM				*epP*		pP	10 47 24.6	+0.7
Y22A	Socorro	65.67	326	⇓P		P	10 46 57.3	+0.7
	baz=66,SNR=13							
R31A	Burdett	65.72	334	⇓P		P	10 46 56.3	-0.3
	baz=66,SNR=9.5							
FRNY	Flat Rock	65.73	356	*eP*		P	10 46 56.6	+0.2
	comp=Z,43nm,1.1s							
FRNY				*epP*		pP	10 47 24.0	+0.3
Y22D	IRIS PASSCAL I	65.76	326	⇓P		P	10 46 57.9	+0.8
	baz=66							
X23A	Hourglass Bar	65.77	327	⇓P		P	10 46 57.6	+0.4
	baz=66							
LPM	Los Pinos Moun	65.79	326	*eP*		P	10 46 58.1	+0.8
LPM				*epP*		pP	10 47 24.8	+0.2
S29A	Ulysses	65.83	332	⇓P		P	10 46 57.2	-0.2
	baz=66,SNR=14							
T28A	Walsh	65.85	331	⇓P		P	10 46 56.9	-0.6
	baz=66							
W24A	Lazy 6 Ranch,	65.87	328	⇑P		P	10 46 57.7	-0.2
	baz=66,SNR=13							
Z20A	Nine Sixteen R	65.92	324	⇑P		P	10 46 59.3	+1.1
	baz=66,SNR=49							
V25A	Rancho No Teng	65.98	329	⇑P		P	10 46 58.5	0.0
	baz=66,SNR=40							
MSNY	Massena	65.98	355	*eP*		P	10 46 58.1	+0.1
	comp=Z,459nm,1.0s							
MSNY				*epP*		pP	10 47 25.5	+0.2
MSNY				*esP*		sP	10 47 37.2	-0.1
U26A	Atchley Ranch,	66.01	330	⇓P		P	10 46 58.6	-0.1
	baz=66,SNR=51							
R30A	Dighton	66.02	333	⇓P		P	10 46 58.5	-0.1
	baz=66,SNR=9.1							
T27A	Campo	66.08	331	⇓P		P	10 46 58.7	-0.4
	baz=66,SNR=12							
Y21A	Point of Rocks	66.10	325	⇓P		P	10 47 00.8	+1.4
	baz=66,SNR=65							
LAZ	Ladron	66.12	326	*eP*		P	10 47 00.9	+1.4
	comp=Z,19nm,1.3s							
LAZ				*epP*		pP	10 47 27.8	+0.9
LAZ				*esP*		sP	10 47 39.8	+1.0
S28A	Manter	66.14	332	⇓P		P	10 46 59.2	-0.2
	baz=66,SNR=25							
ANMO	Albuquerque	66.19	327	*eP*		P	10 47 00.3	+0.4
ANMO				*epP*		pP	10 47 27.6	+0.3
ANMO				*esP*		sP	10 47 41.3	+2.1
SADO	Sadowa	66.20	352	P		P	10 46 58.9	-0.6
SADO				pP		pP	10 47 26.2	-0.6
SADO	Sadowa	66.20	352	P		P	10 46 58.9	-0.6
	comp=Z,17nm,0.5s,baz=217,slow=2.7,SNR=28							
SADO				pP		pP	10 47 26.2	-0.6
	comp=Z,32nm,0.9s,baz=230,slow=2.7,SNR=9.9							
W23A	Werner Place,	66.20	327	⇓P		P	10 47 00.5	+0.5
	baz=66,SNR=17							
V24A	Rampart Ranch,	66.21	328	⇓P		P	10 47 00.1	+0.1
	baz=66,SNR=20							
Q31A	Ellis	66.27	334	⇑P		P	10 47 00.1	0.0
	baz=66,SNR=13							
U25A	Circle Dot Ran	66.33	329	⇑P		P	10 47 00.8	+0.1
	baz=66,SNR=51							
Y20A	Horse Springs,	66.40	325	⇓P		P	10 47 02.4	+1.0
	baz=67,SNR=34							
X21A	Alamocita Cree	66.50	325	⇓P		P	10 47 03.1	+1.2
	baz=67,SNR=37							
W22A	Albuquerque	66.50	327	⇓P		P	10 47 02.9	+1.1
	baz=67,SNR=16							
R29A	Marienthal	66.51	333	⇓P		P	10 47 01.5	-0.2
	baz=67							
TUC	Tucson	66.56	322	*eP*		P	10 47 03.0	+0.8
TUC				*e*PP		PcP	10 47 30.9	+0.2
TUC				*e*SP		sP	10 47 42.3	+0.8
TUC				pmax		pmax		
	comp=Z,102nm,1.1s							
TUC	Tucson	66.56	322	*eP*		P	10 47 03.0	+0.8
	comp=Z,102nm,1.1s							
TUC				*epP*		PcP	10 47 30.9	+0.2
TUC				*esP*		sP	10 47 42.3	+0.8
T26A	Comanche Natio	66.57	330	⇓P		P	10 47 02.5	+0.2
	baz=67,SNR=34							
SCIA	State Center	66.61	340	*eP*		P	10 47 01.8	-0.4
	comp=Z,85nm,0.8s							
SCIA				*epP*		PcP	10 47 29.9	-0.6
SCIA				*esP*		sP	10 47 42.0	+0.5
JFWS	Jewell Farm	66.66	343	*eP*		P	10 47 01.5	-1.0
JFWS				*e*PP		pP	10 47 29.7	-0.2
JFWS				*e*SP		sP	10 47 43.1	+1.3
JFWS				pmax		pmax		
	comp=Z,82nm,0.8s							
JFWS	Jewell Farm	66.66	343	*eP*		P	10 47 01.5	-1.0
	comp=Z,82nm,0.8s							
JFWS				*epP*		pP	10 47 29.6	-0.2
JFWS				*esP*		sP	10 47 43.1	+1.3
S27A	Las Animas	66.67	331	⇓P		P	10 47 02.4	-0.4
	baz=67							
V23A	Ortiz Mt. (NFS	66.68	327	⇑P		P	10 47 03.8	+0.8
	baz=67,SNR=31							
P31A	Stockton	66.71	335	⇑P		P	10 47 02.8	-0.1
	baz=67							
R28A	Tribune	66.73	332	⇑P		P	10 47 02.8	-0.3
	baz=67,SNR=12							
U24A	Moreno Valley	66.76	329	⇓P		P	10 47 04.3	+0.7
	baz=67,SNR=9.6							
S26A	Kim	66.88	331	⇑P		P	10 47 04.6	+0.5
	baz=67,SNR=49							
T25A	Trinidad	66.92	330	⇓P		P	10 47 05.2	+0.6
	baz=67,SNR=19							
W21A	San Fidel	66.94	326	⇑P		P	10 47 05.7	+1.0
	baz=67,SNR=5.6							
X20A	Quemado	66.95	325	⇓P		P	10 47 05.9	+1.2
	baz=67,SNR=37							
P30A	Selden	67.08	334	⇑P		P	10 47 05.2	-0.1
	baz=67,SNR=8.4							
R27A	Eads	67.12	331	⇑P		P	10 47 05.3	-0.3
	baz=67,SNR=11							
U23A	El Rito	67.14	328	⇑P		P	10 47 06.7	+0.7
	baz=67,SNR=14							
MAIT	Maitri	67.17	159	*eP*		P	10 46 56.2	-9.2
V22A	San Miguel Ran	67.18	327	⇓P		P	10 47 07.2	+1.0
	baz=67,SNR=35							
Q28A	Sharon Springs	67.34	333	⇑P		P	10 47 06.9	-0.1
	baz=68,SNR=8.6							
S25A	Robets Cordova	67.36	330	⇓P		P	10 47 07.5	+0.3
	baz=68,SNR=24							
W20A	Ramah	67.40	325	⇓P		P	10 47 08.6	+1.0
	baz=68,SNR=46							
P29A	Atwood	67.41	334	⇑P		P	10 47 07.5	+0.1
	baz=68,SNR=8.1							
R26A	Arlington	67.42	331	⇑P		P	10 47 07.8	+0.2
	baz=68,SNR=23							
V21A	Milan	67.47	327	⇑P		P	10 47 08.8	+0.8
	baz=68,SNR=6.9							
214A	Organ Pipe Nat	67.49	320	⇓P		P	10 47 09.4	+1.4
	baz=68,SNR=38							
U22A	Llaves	67.51	327	⇓P		P	10 47 09.3	+1.0
	baz=68,SNR=13							
O30A	MW Ranch, Wils	67.54	335	⇑P		P	10 47 08.1	0.0
	baz=68,SNR=11							
T23A	Casias Ranch,	67.62	328	⇓P		P	10 47 09.6	+0.6
	baz=68,SNR=11							
KSCO	Kaye Shedlock'	67.64	332	⇓P		P	10 47 09.3	+0.3
	baz=68,SNR=14							
R25A	Fountain Ranch	67.68	330	⇓P		P	10 47 09.4	+0.2
	baz=68,SNR=6.6							
S24A	Houchin Ranch,	67.71	329	⇑P		P	10 47 10.3	+0.8
	baz=68,SNR=24							
X18A	Snowflake	67.73	324	⇑P		P	10 47 10.7	+1.1
	baz=68,SNR=8.8							
P28A	Saint Francis	67.73	333	⇑P		P	10 47 09.6	+0.2
	baz=68,SNR=9.0							
O29A	4D Ranch, Culb	67.79	334	⇑P		P	10 47 09.9	+0.1
	baz=68,SNR=9.3							
BGNE	Belgrade	67.86	337	⇑P		P	10 47 09.8	-0.3
	baz=68,SNR=23							
V20A	Brimhall	67.89	326	⇑P		P	10 47 11.3	+0.6
	baz=68,SNR=19							
U21A	Nageezi	67.96	327	⇑P		P	10 47 12.0	+0.9
	baz=68,SNR=21							
Q26A	Hugo	67.96	331	⇑P		P	10 47 11.4	+0.5
	baz=68,SNR=20							
T22A	Edith	68.03	328	⇓P		P	10 47 12.5	+0.9
	baz=68,SNR=24							
W18A	Petrified Fore	68.05	325	⇑P		P	10 47 12.5	+0.8
	baz=68,SNR=8.9							
P27A	Ficken Ranch,	68.07	332	⇑P		P	10 47 11.8	+0.2
	baz=68,SNR=5.0							
R24A	Sanders Place,	68.13	330	⇓P		P	10 47 12.8	+0.7
	baz=68,SNR=23							
S23A	Nye Farm, Mont	68.14	329	⇓P		P	10 47 12.9	+0.7
	baz=68							
LIC	Lamto	68.18	74	*eP*		P	10 47 11.0	-1.7
	comp=Z,35nm,0.7s,baz=239							
LIC				*eR*				
	comp=Z,184nm,22.2s							
LIC	Lamto	68.18	74	*eP*		P	10 47 11.0	-1.7
	comp=Z,35nm,0.7s							
Q25A	Bedland, Calha	68.28	331	⇓P		P	10 47 13.0	-0.1
	baz=68							
N29A	Votaw Ranch, W	68.31	334	⇓P		P	10 47 13.1	+0.1
	baz=69,SNR=6.4							
T21A	Navajo Lake	68.33	327	⇓P		P	10 47 13.9	+0.5
	baz=68,SNR=17							
U20A	Newcomb	68.36	326	⇓P		P	10 47 14.2	+0.6
	baz=69,SNR=16							
P26A	Davis Ranch, A	68.41	332	⇑P		P	10 47 14.1	+0.3
	baz=69,SNR=7.8							
R23A	Moffat	68.44	329	⇑P		P	10 47 14.7	+0.5
	baz=69							
X16A	Lo Mia Camp, P	68.47	323	⇑P		P	10 47 15.6	+1.3
	baz=69,SNR=35							
DBIC	Dimbokro	68.52	74	*eP*		P	10 47 13.6	-1.2
	comp=Z,86nm,0.9s							
DBIC	Dimbokro	68.52	74	P		P	10 47 13.5	-1.2
	comp=Z,67nm,0.8s,baz=221,slow=6.1,SNR=64							
O27A	Becher Island	68.55	333	⇑P		P	10 47 15.1	+0.5
	baz=69,SNR=19							
S22A	4UR Ranch, Cre	68.57	328	⇑P		P	10 47 15.6	+0.6
	baz=69,SNR=16							
N28A	Pribbeno Ranch	68.57	334	⇓P		P	10 47 14.8	+0.1
	baz=69							
Z14A	Wintersburg	68.57	321	⇑P		P	10 47 15.8	+1.1
	baz=69,SNR=5.4							
M30A	Dale-Ortello V	68.62	335	⇓P		P	10 47 14.9	0.0
	baz=69,SNR=6.6							
113A	Mohawk Valley,	68.64	320	⇓P		P	10 47 16.1	+1.0
	baz=69,SNR=7.0							
P25A	Willow Gulch B	68.73	331	⇑P		P	10 47 16.4	+0.6
	baz=69,SNR=34							
Q24A	Divide	68.74	330	⇑P		P	10 47 16.5	+0.4
	baz=69,SNR=8.9							
M29A	Burnside Ranch	68.87	335	⇑P		P	10 47 16.7	+0.2
	baz=69,SNR=5.5							
R22A	Saguache, Gunn	68.91	329	⇓P		P	10 47 17.7	+0.6
	baz=69,SNR=10							
O26A	Horse Wrangler	68.95	332	⇑P		P	10 47 17.6	+0.5
	baz=69,SNR=12							
S21A	Coal Bank Pass	68.98	328	⇑P		P	10 47 18.1	+0.5
	baz=69,SNR=19							
OGNE	Ogallala	68.99	334	⇓P		P	10 47 17.6	+0.3
	baz=69							
Q23A	Hartsel	69.01	330	⇓P		P	10 47 18.2	+0.5
	baz=69							
Y14A	Wickenburg	69.02	322	⇑P		P	10 47 18.5	+1.0
	baz=69,SNR=6.8							
P24A	Kohler Place,	69.07	331	⇑P		P	10 47 18.7	+0.8
	baz=69,SNR=8.2							
N27A	Anderson Farm,	69.09	333	⇓P		P	10 47 18.1	+0.2
	baz=69,SNR=5.6							
M28A	Bar X Bar Ranc	69.10	334	⇓P		P	10 47 18.3	+0.4
	baz=69							
QSPA	South Pole Qui	69.12	180	*eP*		P	10 47 18.4	+0.6
	comp=Z,44nm,1.0s							
QSPA				*epP*		pP	10 47 46.3	+0.9
QSPA				*esP*		sP	10 47 58.6	+1.2
O25A	Wiggins	69.20	332	⇓P		P	10 47 19.5	+0.8
	baz=69							
WUAZ	Wupatki	69.24	324	*eP*		P	10 47 20.5	+1.4
	comp=Z,53nm,1.0s							
WUAZ	Wupatki	69.24	324	⇓P		P	10 47 20.3	+1.3
	baz=69,SNR=47							
L29A	Maesberg Ranch	69.31	335	⇓P		P	10 47 19.4	+0.2
	baz=70,SNR=7.2							
ECSD	EROS Data Cent	69.35	339	*eP*		P	10 47 18.5	-0.8
	comp=Z,88nm,1.4s							
S20A	Disappointment	69.40	327	⇓P		P	10 47 21.2	+1.1
	baz=70,SNR=45							
N26A	Koester Ranch,	69.40	333	⇑P		P	10 47 20.3	+0.5
	baz=70							
R21A	Cimarron	69.41	328	⇑P		P	10 47 20.9	+0.8
	baz=70,SNR=20							
GLA	Glamis	69.47	320	*eP*		P	10 47 22.2	+1.9
GLA				*e*PP		PcP	10 47 44.2	+1.3
GLA				pmax		pmax		
	comp=Z,27nm,1.1s							
GLA	Glamis	69.47	320	*eP*		P	10 47 22.2	+1.9
	comp=Z,27nm,1.1s							
GLA				*epP*		PcP	10 47 44.2	+1.3
GLA	Glamis	69.47	320	⇓P		P	10 47 21.5	+1.1
	baz=70,SNR=5.3							
Q22A	Crested Butte,	69.49	329	⇓P		P	10 47 21.4	+0.8
	baz=70,SNR=15							
SPMN	St. Paul	69.50	342	⇑P		P	10 47 19.1	-1.1
	baz=70,SNR=19							
ISCO	Idaho Springs	69.62	331	*eP*		P	10 47 22.4	+0.9
ISCO				*e*PP		pP	10 47 49.6	+0.6
ISCO				pmax		pmax		
	comp=Z,21nm,0.9s							
ISCO	Idaho Springs	69.62	331	*eP*		P	10 47 22.4	+0.9
	comp=Z,21nm,0.9s							
ISCO				*epP*		pP	10 47 49.5	+0.6
ISCO	Idaho Springs	69.62	331	⇑P		P	10 47 21.9	+0.4
	baz=70,SNR=27							
M27A	Reverse DX Ran	69.63	334	⇑P		P	10 47 21.4	+0.3
	baz=70,SNR=5.5							
O24A	Longmont	69.64	331	⇓P		P	10 47 22.1	+0.7
	baz=70,SNR=6.2							
R20A	Redvale	69.68	328	⇓P		P	10 47 23.0	+1.2
	baz=70,SNR=62							
PV01	Paradox Valley	69.73	327	*eP*		P	10 47 23.3	+1.2
	comp=Z,2μm,1.1s							
N25A	Grover	69.76	332	⇑P		P	10 47 22.8	+0.8
	baz=70							
Y12C	Blythe	69.78	321	⇓P		P	10 47 23.5	+1.4
	baz=70,SNR=11							
Q21A	Lamborn Mesa,	69.79	329	⇓P		P	10 47 23.0	+0.7
	baz=70,SNR=5.6							
K29A	Lazy Trails An	69.84	336	⇓P		P	10 47 22.6	+0.2
	baz=70,SNR=16							
M26A	McRoberts Ranc	69.89	333	⇓P		P	10 47 23.2	+0.4
	baz=70							
PDMCI	Parker Dam,Lak	69.94	321	⇓P		P	10 47 24.1	+1.0
	baz=70,SNR=8.2							
DVTC	Desert V Tower	69.98	319	⇓P		P	10 47 25.1	+1.6
	baz=70,SNR=15							
SWSC	Sam W. Stewart	69.98	319	⇑P		P	10 47 25.0	+1.6
	baz=70							
P22A	Eagle	69.99	330	⇓P		P	10 47 24.4	+0.8
	baz=70,SNR=18							
L27A	T5 Ranch, Ells	70.06	334	⇓P		P	10 47 24.3	+0.5
	baz=70							
O23A	Lake Granby, G	70.09	331	⇑P		P	10 47 25.0	+0.7
	baz=70,SNR=22							
PV04	Paradox Valley	70.10	327	*eP*		P	10 47 25.5	+1.2
N24A	Carr	70.12	332	⇓P		P	10 47 25.3	+1.0
	baz=70,SNR=15							
K28A	Ten Mile Ranch	70.21	335	⇑P		P	10 47 25.3	+0.6
	baz=70,SNR=16							
Q20A	Ridgley Place,	70.23	328	⇑P		P	10 47 25.6	+0.6
	baz=70,SNR=8.6							
M25A	Palm-Egli Farm	70.25	333	⇓P		P	10 47 25.6	+0.5
	baz=70							
P21A	Newcastle	70.27	329	⇑P		P	10 47 26.3	+1.0
	baz=70,SNR=35							
BC3	Big Chuckawall	70.27	320	⇓P		P	10 47 26.6	+1.3
	baz=70,SNR=40							
MONP	Monument Peak	70.33	319	⇓P		P	10 47 27.2	+1.4
	baz=70,SNR=14							
L26A	Underwood Farm	70.34	334	⇓P		P	10 47 26.0	+0.5
	baz=71							
O22A	Kremmling	70.34	330	⇓P		P	10 47 26.3	+0.5
	baz=71,SNR=44							
BAR	Barrett	70.34	318	*eP*		P	10 47 27.4	+1.7
BAR				*epP*		PcP	10 47 48.1	+1.5
BAR				*esP*		sP	10 48 06.5	+1.3
W13A	Hualapai Mount	70.36	322	⇓P		P	10 47 27.4	+1.5
	baz=70,SNR=17							
U15A	North Rim	70.42	324	⇑P		P	10 47 28.0	+1.6
	baz=71,SNR=56							
IRM	Iron Mountain	70.44	320	⇑P		P	10 47 27.6	+1.4
	baz=71,SNR=27							
K27A	Flueckinger Fa	70.55	334	⇑P		P	10 47 27.4	+0.6
	baz=71,SNR=12							
NEE2	Needles Airpor	70.55	321	⇓P		P	10 47 28.0	+1.2
	baz=71,SNR=6.0							
M24A	Cheyenne	70.61	332	⇓P		P	10 47 28.3	+0.9
	baz=71,SNR=20							
N23A	Red Feather La	70.65	331	⇓P		P	10 47 28.3	+0.6
	baz=71,SNR=20							
P20A	De Beque	70.70	329	⇑P		P	10 47 28.7	+0.8
	baz=71,SNR=16							
109C	Camp Elliot, M	70.75	318	⇑P		P	10 47 29.3	+1.2
	baz=71							
PHWY	Pilot Hill	70.76	332	*eP*		P	10 47 29.1	+0.8
	comp=Z,49nm,1.4s							
J28A	Allard Ranch,	70.76	336	⇑P		P	10 47 28.2	+0.2
	baz=71,SNR=45							
BRSD	Miller	70.79	338	⇑P		P	10 47 27.5	-0.6
	baz=71,SNR=5.3							
L25A	Engebretsen Ra	70.81	333	⇓P		P	10 47 29.0	+0.6
	baz=71							
N22A	Wattenberg Ran	70.81	331	⇑P		P	10 47 29.5	+0.8
	baz=71,SNR=21							
O21A	Pagoda	70.82	330	⇑P		P	10 47 29.8	+1.1
	baz=71,SNR=6.0							
BELC	Belle Mtn. Jos	70.83	320	⇑P		P	10 47 30.1	+1.4
	baz=71,SNR=22							
PFO	Pinyon Flat Ob	70.84	319	P		P	10 47 30.9	+2.1
	comp=Z,129nm,0.7s,SNR=12							
PFO	Pinyon Flat Ob	70.84	319	*eP*		P	10 47 30.2	+1.4
	comp=Z,24nm,1.0s							
PFO	Pinyon Flat Ob	70.84	319	P		P	10 47 28.9	+0.1
	comp=Z,23nm,1.0s,baz=127,slow=5.8,SNR=23							
PFO	Pinyon Flat Ob	70.84	319	⇑P		P	10 47 30.2	+1.4
	baz=71,SNR=20							
K26A	Motz Farm, Whi	70.93	334	⇓P		P	10 47 29.5	+0.4
	baz=71							
M23A	Laramie	71.01	331	⇓P		P	10 47 30.3	+0.5
	baz=71,SNR=5.3							
LDFC	Landfair	71.05	321	*eP*		P	10 47 32.2	+2.2
	comp=Z,33nm,0.8s							
P19A	Cripple Cowboy	71.09	328	⇓P		P	10 47 31.1	+0.8
	baz=71,SNR=48							
O20A	White River Ci	71.12	329	⇑P		P	10 47 31.4	+0.9
	baz=71,SNR=41							
L24A	Wheatland	71.13	332	⇑P		P	10 47 30.8	+0.5
	baz=71							
K25A	Mack Ranch, Ha	71.14	333	⇑P		P	10 47 31.1	+0.7
	baz=71							
GMRC	Granite Mounta	71.17	321	⇓P		P	10 47 32.3	+1.6
	baz=71,SNR=53							
N21A	Black Mountain	71.27	330	⇑P		P	10 47 32.6	+1.2
	baz=72,SNR=9.3							
MURC	Murrita	71.29	319	⇑P		P	10 47 32.7	+1.3
	baz=72,SNR=6.6							
M22A	Cedar Creek Ra	71.35	331	⇑P		P	10 47 32.4	+0.5
	baz=72							
SRU	San Rafael	71.47	327	⇓P		P	10 47 33.4	+0.8
	baz=72,SNR=48							
L23A	Garrett	71.52	332	⇑P		P	10 47 33.1	+0.3
	baz=72,SNR=8.7							
BBRC	Big Bear Solar	71.57	319	⇑P		P	10 47 35.0	+1.7
	baz=72,SNR=9.8							
HEC	Hector,Ludlow	71.60	320	⇓P		P	10 47 35.0	+1.7
	baz=72,SNR=6.8							
K24A	Anderson Ranch	71.63	333	⇓P		P	10 47 34.2	+0.8
	baz=72,SNR=7.3							
EYMN	Ely	71.66	344	*eP*		P	10 47 32.5	-0.7
	comp=Z,39nm,0.8s							
EYMN				*epP*		pP	10 48 00.0	-0.9
Q16A	Castle Valley	71.66	326	⇓P		P	10 47 34.7	+1.0
	baz=72,SNR=26							
O19A	Miners Draw (B	71.68	329	⇓P		P	10 47 34.5	+0.8
	baz=72,SNR=20							
N20A

GSC	**Goldstone**	72.21 320	*e*P		**P**		**10 47 38.9 +2.0**
	comp=Z,53nm,1.4s						
GSC			*ep*P		**pP**		**10 48 06.4 +1.7**
GSC			*es*P		**sP**		**10 48 17.8 +1.2**
GSC	**Goldstone**	72.21 320	⇑P		**P**		**10 47 38.3 +1.4**
	baz=72,SNR=18						
MWC	**Mount Wilson**	72.24 319	*e*P		**P**		**10 47 38.6 +1.3**
MWC			pmax		pmax		
	comp=Z,31nm,0.9s						
MWC	**Mount Wilson**	72.24 319	*e*P		**P**		**10 47 38.6 +1.3**
	comp=Z,31nm,0.9s						
PASC	**Pasadena Art C**	72.28 319	*e*P		**P**		**10 47 38.5 +1.2**
	comp=Z,45nm,1.1s						
PASC			*ep*P		**pP**		**10 48 06.1 +1.0**
SHOC	**Shoshone**	72.31 321	⇑P		**P**		**10 47 38.6 +1.2**
	baz=72,SNR=11						
K22A	**Casper**	72.31 332	⇓P		**P**		**10 47 38.1 +0.6**
	baz=72,SNR=12						
DECC	**Green Verdugo**	72.42 319	⇓P		**P**		**10 47 39.6 +1.4**
	baz=73,SNR=6.2						
RSSD	**Black Hills**	72.45 334	*e*P		**P**		**10 47 38.9 +0.5**
RSSD	**Black Hills**	72.45 334	*e*P		**P**		**10 47 38.9 +0.5**
I24A	**Kuemmerle Ranc**	72.48 334	⇓P		**P**		**10 47 38.8 +0.5**
	baz=73,SNR=6.2						
J23A	**Dilts Ranch, B**	72.50 333	⇓P		**P**		**10 47 39.2 +0.7**
	baz=73						
M19A	**Rock Springs**	72.62 329	⇓P		**P**		**10 47 39.8 +0.4**
	baz=73,SNR=11						
K21A	**Alcova**	72.62 331	⇓P		**P**		**10 47 40.1 +0.7**
	baz=73,SNR=56						
L20A	**Wamsutter**	72.63 330	⇓P		**P**		**10 47 40.1 +0.6**
	baz=73,SNR=19						
EDW2	**Edwards Air Fo**	72.64 319	⇓P		**P**		**10 47 40.4 +1.0**
	baz=73,SNR=12						
MPU	**Maple Canyon**	72.71 327	*e*P		**P**		**10 47 41.5 +1.5**
	comp=Z,40nm,0.9s						
MPU			*ep*P		**pP**		**10 48 08.8 +1.1**
DAU	**Daniels Canyon**	72.82 327	*e*P		**P**		**10 47 42.3 +1.6**
DAU	**Daniels Canyon**	72.82 327	*e*P		**P**		**10 47 42.3 +1.6**
LRMC	**Laurel Mountai**	72.86 320	⇓P		**P**		**10 47 42.0 +1.2**
	baz=73,SNR=17						
J22A	**Midwest**	72.91 332	⇑P		**P**		**10 47 41.2 +0.2**
	baz=73,SNR=37						
OSI	**Osito Adit**	72.91 319	⇓P		**P**		**10 47 42.1 +1.1**
	baz=73						
FURC	**Furnace Creek,**	73.04 321	⇓P		**P**		**10 47 43.1 +1.5**
	baz=73,SNR=33						
JLU	**Jordanelle**	73.06 327	*e*P		**P**		**10 47 43.2 +1.1**
	comp=Z,34nm,0.8s						
JLU			*ep*P		**pP**		**10 48 10.7 +0.8**
MPMC	**Manual Prospec**	73.13 321	⇓P		**P**		**10 47 43.5 +1.0**
	baz=73,SNR=18						
K20A	**Yellowstone Ra**	73.14 331	⇑P		**P**		**10 47 42.6 +0.2**
	baz=73,SNR=39						
H24A	**Dirks Ranch, A**	73.18 334	⇑P		**P**		**10 47 42.4 0.0**
	baz=73,SNR=31						
L19A	**Farson**	73.18 330	⇓P		**P**		**10 47 43.4 +0.8**
	baz=73,SNR=26						
AGMN	**Agassiz Nation**	73.18 342	*e*P		**P**		**10 47 41.4 -0.8**
	comp=Z,36nm,0.8s						
AGMN			*ep*P		**pP**		**10 48 09.8 -0.3**
J21A	**Lysite**	73.28 332	⇓P		**P**		**10 47 43.7 +0.5**
	baz=74,SNR=22						
I22A	**9 Mile Ranch,**	73.29 333	⇓P		**P**		**10 47 43.5 +0.3**
	baz=74,SNR=30						
ARVC	**Arvin**	73.31 319	⇓P		**P**		**10 47 44.8 +1.4**
	baz=74						
M17A	**Scullys Gap (B**	73.33 328	⇑P		**P**		**10 47 43.6 +0.1**
	baz=74,SNR=13						
L18A	**Fontenelle, Gr**	73.37 329	⇓P		**P**		**10 47 44.4 +0.6**
	baz=74,SNR=7.2						
H23A	**Clabaugh Cattl**	73.38 334	⇑P		**P**		**10 47 43.9 +0.2**
	baz=74,SNR=5.6						
DUG	**Dugway**	73.45 326	*e*P		**P**		**10 47 45.4 +1.2**
DUG			*e**PP		**pP**		**10 48 13.8 +1.7**
DUG			pmax		pmax		
	comp=Z,31nm,1.0s						
DUG	**Dugway**	73.45 326	*e*P		**P**		**10 47 45.4 +1.2**
	comp=Z,31nm,1.0s						
DUG			*ep*P		**pP**		**10 48 13.8 +1.7**
DUG	**Dugway**	73.45 326	⇑P		**P**		**10 47 45.4 +1.2**
	baz=74,SNR=39						
ISA	**Isabella**	73.45 320	*e*P		**P**		**10 47 46.1 +1.8**
ISA			*e**PP		**pP**		**10 48 13.3 +1.2**
ISA			pmax		pmax		
	comp=Z,33nm,0.9s						
ISA	**Isabella**	73.45 320	*e*P		**P**		**10 47 46.1 +1.8**
	comp=Z,33nm,0.9s						
ISA			*ep*P		**pP**		**10 48 13.3 +1.2**
ISA	**Isabella**	73.45 320	⇑P		**P**		**10 47 45.7 +1.5**
	baz=74,SNR=27						
K19A	**Absolon Red Bu**	73.50 330	⇓P		**P**		**10 47 44.6 +0.1**
	baz=74,SNR=23						
I21A	**Big Trails, Te**	73.58 332	⇑P		**P**		**10 47 45.1 +0.2**
	baz=74,SNR=85						
G24A	**Alzada**	73.60 335	⇓P		**P**		**10 47 45.0 +0.1**
	baz=74,SNR=15						
R11A	**Troy Canyon, C**	73.62 323	⇓P		**P**		**10 47 46.8 +1.5**
	baz=74,SNR=32						
GRAC	**Grapevine Rang**	73.70 321	⇓P		**P**		**10 47 47.0 +1.4**
	baz=74						
CWC	**Cottonwood Cre**	73.74 320	⇑P		**P**		**10 47 47.4 +1.4**
	baz=74,SNR=9.9						
PKM	**Peak Mountain**	73.77 318	⇓P		**P**		**10 47 47.7 +1.4**
	baz=74,SNR=14						
BW06	**Boulder Array**	73.79 330	*e*P		**P**		**10 47 46.6 +0.3**
	comp=Z,20nm,1.3s						
PDAR	**Pinedale Array**	73.79 330	P		**P**		**10 47 46.8 +0.5**
PDAR	**Pinedale Array**	73.79 330	P		**P**		**10 47 46.8 +0.5**
	comp=Z,6.2nm,0.8s,baz=150,slow=6.7,SNR=38						
PDAR			LR		LR		11 22 20.6
	comp=Z,53nm,18.8s,baz=303,slow=37						
H22A	**Clearmont**	73.80 333	⇑P		**P**		**10 47 46.2 +0.1**
	baz=74,SNR=13						
HWUT	**Hardware Ranch**	73.87 328	*e*P		**P**		**10 47 47.1 +0.4**
	comp=Z,28nm,0.8s						
HWUT			*ep*P		**pP**		**10 48 14.8 +0.2**
G23A	**Biddle**	73.89 334	⇓P		**P**		**10 47 46.8 +0.1**
	baz=74,SNR=26						
J19A	**Crowheart**	73.94 331	⇓P		**P**		**10 47 47.4 +0.3**
	baz=74,SNR=38						
VES	**Vestal, Richgr**	73.94 319	⇑P		**P**		**10 47 48.2 +1.2**
	baz=74,SNR=12						
MDND	**Maddock**	73.97 339	⇑P		**P**		**10 47 46.9 0.0**
	baz=74,SNR=18						
F24A	**Ekalaka**	74.04 335	⇓P		**P**		**10 47 47.6 +0.2**
	baz=74,SNR=43						
I20A	**Worland**	74.06 332	⇑P		**P**		**10 47 48.0 +0.4**
	baz=74,SNR=23						
H21A	**Big Horn, Sher**	74.12 333	⇑P		**P**		**10 47 47.9 -0.1**
	baz=74,SNR=14						
SMMC	**Simmler**	74.15 319	⇑P		**P**		**10 47 50.0 +1.7**
	baz=74,SNR=14						
TIN	**Tinemaha**	74.24 321	⇑P		**P**		**10 47 50.3 +1.5**
	baz=74,SNR=6.2						
G22A	**Birney**	74.28 333	⇑P		**P**		**10 47 48.7 -0.2**
	baz=74,SNR=8.6						
F23A	**Volborg**	74.32 334	⇑P		**P**		**10 47 49.2 +0.1**
	baz=75,SNR=42						
RCTC	**Rector, Farmer**	74.35 320	⇓P		**P**		**10 47 49.8 +0.5**
	baz=74						
H20A	**Greybull**	74.42 332	⇑P		**P**		**10 47 49.7 0.0**
	baz=75,SNR=25						
PTRM	**Twissleman Ran**	74.51 319	*e*P		**P**		**10 47 52.3 +1.9**
I19A	**Meeteetse**	74.51 331	⇑P		**P**		**10 47 51.0 +0.6**
	baz=75,SNR=34						
E24A	**Baker**	74.58 335	⇓P		**P**		**10 47 51.1 +0.6**
	baz=75,SNR=31						
HVU	**Hansel Valley**	74.60 327	*e*P		**P**		**10 47 51.9 +1.0**
HVU			*e**PP		**pP**		**10 48 19.2 +0.4**
HVU			*e**SP		**sP**		**10 48 32.6 +1.9**
HVU			pmax		pmax		
	comp=Z,35nm,1.1s						
HVU	**Hansel Valley**	74.60 327	*e*P		**P**		**10 47 51.9 +1.0**
	comp=Z,35nm,1.1s						
HVU			*ep*P		**pP**		**10 48 19.2 +0.4**
HVU			*es*P		**sP**		**10 48 32.6 +1.9**
I18A	**Diamond G Ranc**	74.63 330	⇓P		**P**		**10 47 51.9 +0.7**
	baz=75,SNR=21						
MTUM	**Tungsten Hills**	74.64 321	*e*P		**P**		**10 47 52.7 +1.4**
MTUM			*ep*P		**pP**		**10 48 21.1 +1.9**
G21A	**Lodge Grass**	74.67 333	⇑P		**P**		**10 47 51.4 +0.2**
	baz=75,SNR=21						
REDW	**Red Top Meadow**	74.85 330	*e*P		**P**		**10 47 53.2 +0.8**
	comp=Z,0.2nm,0.7s						
REDW			*ep*P		**pP**		**10 48 21.0 +0.7**
SNOW	**Snow King Moun**	74.88 330	*e*P		**P**		**10 47 53.5 +0.9**
	comp=Z,33nm,0.9s						
SNOW			*ep*P		**pP**		**10 48 21.1 +0.6**
SNOW			*es*P		**sP**		**10 48 34.5 +2.1**
E23A	**Ismay**	74.92 335	⇑P		**P**		**10 47 52.5 0.0**
	baz=75,SNR=22						
LOHW	**Long Hollow**	74.93 330	*e*P		**P**		**10 47 54.0 +1.2**
	comp=Z,25nm,0.9s						
LOHW			*ep*P		**pP**		**10 48 20.9 +0.2**
ULM	**Lac du Bonnet**	74.94 342	P		**P**		**10 47 51.9 -0.5**
ULM	**Lac du Bonnet**	74.94 342	P		**P**		**10 47 51.9 -0.5**
	comp=Z,35nm,0.5s,baz=154,slow=6.1,SNR=38						
ULM			LR		LR		11 24 23.6
	comp=Z,20nm,19.3s,baz=148,slow=38						
MLAC	**Mammoth Lakes**	74.99 321	⇓P		**P**		**10 47 54.7 +1.4**
	baz=75,SNR=6.7						
TPAW	**Teton Pass**	75.00 330	*e*P		**P**		**10 47 53.8 +0.5**
H19A	**Powell**	75.00 332	⇑P		**P**		**10 47 53.7 +0.5**
	baz=75,SNR=14						
D24A	**Glendive**	75.04 336	⇑P		**P**		**10 47 53.8 +0.6**
	baz=75,SNR=14						
RRI2	**Red Ridge**	75.06 329	*e*P		**P**		**10 47 55.0 +1.3**
	comp=Z,69nm,1.0s						
RRI2			*ep*P		**pP**		**10 48 22.4 +0.8**
MOOW	**Moose Ponds**	75.10 330	*e*P		**P**		**10 47 53.9 +0.1**
	comp=Z,78nm,1.8s						
G20A	**Bridger**	75.10 332	⇓P		**P**		**10 47 53.6 0.0**
	baz=75,SNR=28						
F21A	**Absaloka Mine,**	75.11 333	⇓P		**P**		**10 47 54.1 +0.4**
	baz=75,SNR=24						
E22A	**Miles City**	75.13 334	⇓P		**P**		**10 47 53.6 -0.1**
	baz=75,SNR=7.8						
ELK	**Elko**	75.13 325	*e*P		**P**		**10 47 54.8 +0.8**
	comp=Z,14nm,1.1s						
ELK			*ep*P		**pP**		**10 48 22.5 +0.5**
NV11	**Mina Array Sit**	75.13 322	*e*P		**P**		**10 47 55.4 +1.4**
I17A	**Pilgrim Ck.**	75.15 330	⇑P		**P**		**10 47 55.5 +1.4**
	baz=75,SNR=18						
NVAR	**Mina Array Bea**	75.22 322	P		**P**		**10 47 56.0 +1.4**
NVAR	**Mina Array Bea**	75.22 322	P		**P**		**10 47 56.0 +1.4**
	comp=Z,12nm,0.9s,baz=154,slow=6.8,SNR=70						
NVAR			LR		LR		11 19 22.6
	comp=Z,53nm,19.9s,baz=312,slow=34						
IMW	**Indian Meadow**	75.30 330	*e*P		**P**		**10 47 55.6 +0.6**
	comp=Z,46nm,1.0s						
IMW			*ep*P		**pP**		**10 48 23.7 +0.7**
H18A	**Shoshone NF, C**	75.31 331	⇓P		**P**		**10 47 55.5 +0.4**
	baz=76,SNR=41						
C24A	**Savage**	75.42 336	⇑P		**P**		**10 47 56.1 +0.7**
	baz=76,SNR=22						
D23A	**Lindsay**	75.43 335	⇑P		**P**		**10 47 56.2 +0.8**
	baz=76,SNR=30						
RLMT	**Red Lodge**	75.48 332	*e*P		**P**		**10 47 56.7 +0.7**
	comp=Z,19nm,0.6s						
H17A	**Grant Village**	75.51 330	⇑P		**P**		**10 47 57.9 +1.7**
	baz=76,SNR=10.0						
PPT	**Papeete**	75.51 257	LR		LR		11 11 34.7
	comp=Z,23nm,20.2s,baz=139,slow=28						
F20A	**Billings**	75.53 333	⇓P		**P**		**10 47 56.4 +0.3**
	baz=76,SNR=14						
I16A	**Newdale**	75.54 330	⇑P		**P**		**10 47 57.2 +0.9**
	baz=76,SNR=22						
LKWY	**Lake**	75.56 331	*e*P		**P**		**10 47 58.9 +2.4**
LKWY			*e**PP		**pP**		**10 48 26.8 +2.4**
LKWY			pmax		pmax		
	comp=Z,50nm,1.0s						
LKWY	**Lake**	75.56 331	*e*P		**P**		**10 47 58.9 +2.4**
	comp=Z,50nm,1.0s						
LKWY			*ep*P		**pP**		**10 48 26.8 +2.4**
SCHQ	**Schefferville**	75.61 1	*e*P		**P**		**10 47 56.0 -0.2**
SCHQ			pP		**pP**		**10 48 23.9 -0.2**
SCHQ	**Schefferville**	75.61 1	P		**P**		**10 47 55.8 -0.4**
	comp=Z,26nm,0.9s,baz=188,slow=3.9,SNR=23						
SCHQ			pP		**pP**		**10 48 23.9 -0.2**
	comp=Z,30nm,1.0s,baz=174,slow=6.1,SNR=8.1						
E21A	**Keefer Ranch,**	75.67 334	⇑P		**P**		**10 47 57.3 +0.5**
	baz=76,SNR=27						
YFT	**Old Faithful**	75.67 330	*e*P		**P**		**10 47 59.6 +2.5**
	comp=Z,41nm,1.0s						
YFT			*ep*P		**pP**		**10 48 26.6 +1.6**
G18A	**Lazy EL Ranch,**	75.77 332	⇑P		**P**		**10 47 58.1 +0.6**
	baz=76,SNR=53						
D22A	**Cohagen**	75.80 335	⇓P		**P**		**10 47 58.3 +0.8**
	baz=76,SNR=36						
YMR	**Madison River**	75.90 330	*e*P		**P**		**10 48 00.3 +1.9**
	comp=Z,114nm,1.2s						
F19A	**Roth Farm, Mol**	75.91 332	⇑P		**P**		**10 47 58.8 +0.5**
	baz=76,SNR=39						
C23A	**Lambert**	75.94 336	⇓P		**P**		**10 47 58.8 +0.6**
	baz=76,SNR=6.5						
D21A	**La Casta Ranch**	76.06 334	⇑P		**P**		**10 47 59.7 +0.8**
	baz=76,SNR=41						
H16A	**Russell Place,**	76.06 330	⇑P		**P**		**10 48 00.5 +1.3**
	baz=76,SNR=36						
E20A	**Meyer Farm, Mu**	76.08 333	⇑P		**P**		**10 47 59.9 +0.7**
	baz=76,SNR=19						
DGMT	**Dagmar**	76.12 337	*e*P		**P**		**10 48 00.1 +0.8**
	comp=Z,86nm,0.8s						
DGMT			*ep*P		**pP**		**10 48 29.0 +1.8**
DGMT	**Dagmar**	76.12 337	⇑P		**P**		**10 47 60.0 +0.8**
	baz=76,SNR=21						
C22A	**Vida**	76.16 335	⇑P		**P**		**10 47 59.9 +0.4**
	baz=76,SNR=22						
CMB	**Columbia Colle**	76.17 320	*e*P		**P**		**10 48 00.7 +0.9**
CMB			pmax		pmax		
	comp=Z,6.0nm,0.1s						
CMB	**Columbia Colle**	76.17 320	*e*P		**P**		**10 48 00.7 +0.9**
	comp=Z,6.5nm,0.1s						
GCMT	**Greycliff**	76.18 332	*e*P		**P**		**10 48 00.8 +1.0**
	comp=Z,50nm,1.1s						
GCMT			*ep*P		**pP**		**10 48 28.1 +0.3**
QLMT	**Earthquake Lak**	76.24 330	*e*P		**P**		**10 48 01.8 +1.6**
QLMT			*ep*P		**pP**		**10 48 30.3 +2.0**
SBA	**Scott Base**	76.27 190	*e*P		**P**		**10 48 01.7 +1.9**
SBA			pmax		pmax		
	comp=Z,32nm,1.3s						
SBA	**Scott Base**	76.27 190	*e*P		**P**		**10 48 01.7 +1.9**
	comp=Z,32nm,1.3s						
F18A	**Big Timber**	76.29 332	⇑P		**P**		**10 48 01.1 +0.7**
	baz=76,SNR=84						
G17A	**Pierce Place,**	76.30 331	⇑P		**P**		**10 48 01.9 +1.4**
	baz=76,SNR=6.7						
E19A	**Rath Farm, Rou**	76.32 333	⇑P		**P**		**10 48 01.3 +0.8**
	baz=77						
B23A	**Brockton**	76.41 336	⇓P		**P**		**10 48 01.5 +0.6**
	baz=77,SNR=32						
A24A	**Westby**	76.42 337	⇓P		**P**		**10 48 01.7 +0.8**
	baz=77,SNR=20						
I14A	**Mackay**	76.53 329	⇑P		**P**		**10 48 03.3 +1.4**
	baz=77,SNR=52						
D20A	**Manuel Ranch,**	76.55 334	⇓P		**P**		**10 48 02.3 +0.6**
	baz=77						
B22A	**Reddig Ranch S**	76.66 335	⇑P		**P**		**10 48 02.9 +0.6**
	baz=77,SNR=15						
F17A	**Fitzpatrick Pl**	76.71 331	⇓P		**P**		**10 48 03.8 +1.0**
	baz=77,SNR=57						
C21A	**Desert Coulee**	76.71 335	⇓P		**P**		**10 48 03.0 +0.4**
	baz=77,SNR=28						
HLID	**Hailey**	76.73 328	*e*P		**P**		**10 48 04.3 +1.3**
	comp=Z,39nm,0.9s						
HLID			*ep*P		**pP**		**10 48 32.5 +1.4**
HLID	**Hailey**	76.73 328	⇓P		**P**		**10 48 04.4 +1.4**
	baz=77,SNR=83						
A23A	**Redstone**	76.78 337	⇓P		**P**		**10 48 03.5 +0.5**
	baz=77,SNR=6.4						
SYO	**Syowa Base**	76.87 159	⇑*e*P		**P**		**10 48 02.2 -1.0**
SYO	**Syowa Base**	76.87 159	⇑*e*P		pP		10 48 35.0 +3.7
E18A	**Harlowton**	76.89 332	⇓P		**P**		**10 48 04.4 +0.6**
	baz=77,SNR=32						
MCMT	**McKenzie Canyo**	76.90 329	*e*P		**P**		**10 48 05.2 +1.2**
	comp=Z,23nm,1.1s						
MCMT			*ep*P		**pP**		**10 48 33.8 +1.7**
MCMT			*es*P		**sP**		**10 48 46.7 +2.8**
D19A	**Cripps Ranch,**	76.92 333	⇑P		**P**		**10 48 04.2 +0.3**
	baz=77,SNR=30						
BOZ	**Bozeman (W)**	76.95 331	*e*P		**P**		**10 48 05.0 +0.8**
BOZ			*e**PP		**pP**		**10 48 33.2 +1.0**
BOZ			pmax		pmax		
	comp=Z,23nm,1.2s						
BOZ	**Bozeman (W)**	76.95 331	*e*P		**P**		**10 48 05.0 +0.8**
	comp=Z,23nm,1.2s						
BOZ			*ep*P		**pP**		**10 48 33.2 +1.0**
C20A	**Veseth Ranch,**	76.99 334	⇓P		**P**		**10 48 04.3 +0.1**
	baz=77,SNR=22						
F16A	**Kennard Place,**	77.05 331	⇑P		**P**		**10 48 05.4 +0.7**
	baz=77,SNR=11						
TOA0	**Torodi Ar. Sit**	77.12 70	*e*P		**P**		**10 48 04.1 -1.5**
TOA0			*ep*P		**pP**		**10 48 35.2 +1.6**
TORD	**Torodi Ar. Bea**	77.12 70	P		**P**		**10 48 04.2 -1.5**
TORD	**Torodi Ar. Bea**	77.12 70	P		**P**		**10 48 04.2 -1.5**
	comp=Z,61nm,1.0s,baz=252,slow=5.0,SNR=185						
B21A	**Ellsworth Farm**	77.16 335	⇑P		**P**		**10 48 05.7 +0.5**
	baz=77,SNR=26						
DLMT	**Dillon**	77.18 330	*e*P		**P**		**10 48 06.4 +0.9**
	comp=Z,50nm,1.3s						
DLMT			*ep*P		**pP**		**10 48 35.2 +1.6**
A22A	**Carney Farms,**	77.19 336	⇓P		**P**		**10 48 05.9 +0.6**
	baz=77,SNR=32						
E17A	**Martinsdale**	77.22 332	⇑P		**P**		**10 48 06.4 +0.7**
	baz=78,SNR=38						
VNDA	**Vanda**	77.29 190	*e*P		**P**		**10 48 07.3 +1.8**
	comp=Z,9.3nm,1.1s						
VNDA	**Vanda**	77.29 190	P		**P**		**10 48 06.6 +1.1**
	comp=Z,5.2nm,1.0s,baz=137,slow=4.0,SNR=17						
D18A	**Linhart Farms,**	77.33 333	⇑P		**P**		**10 48 06.8 +0.6**
	baz=78,SNR=28						
MFID	**Camas Ranch**	77.34 327	*e*P		**P**		**10 48 07.7 +1.3**
	comp=Z,33nm,1.1s						
MFID	**Camas Ranch**	77.34 327	⇓P		**P**		**10 48 07.6 +1.3**
	baz=78,SNR=34						
BEKR	**Beckworth**	77.36 322	*e*P		**P**		**10 48 08.2 +1.5**
	comp=Z,22nm,1.4s						
C19A	**Slack Wire Ran**	77.43 333	⇑P		**P**		**10 48 07.1 +0.4**
	baz=78,SNR=32						
LRM	**Limekiln Ridge**	77.46 330	*e*P		**P**		**10 48 07.9 +0.7**
LRM			*ep*P		**pP**		**10 48 36.3 +1.0**
LRM			*es*P		**sP**		**10 48 49.0 +2.0**
F15A	**Butte**	77.49 330	⇑P		**P**		**10 48 08.0 +0.8**
	baz=78,SNR=29						
B20A	**Solberg Farm,**	77.57 334	⇓P		**P**		**10 48 07.6 +0.2**
	baz=78,SNR=37						
E16A	**East Helena**	77.64 331	⇓P		**P**		**10 48 08.7 +0.7**
	baz=78,SNR=17						
H12A	**Diamond D Ranc**	77.67 328	⇑P		**P**		**10 48 09.4 +1.2**
	baz=78,SNR=30						
OHCM	**Honcut**	77.67 321	*e*P		**P**		**10 48 09.3 +1.2**
D17A	**Six Diamond Ra**	77.68 332	⇓P		**P**		**10 48 08.7 +0.5**
	baz=78,SNR=89						
HRY	**Holter Researc**	77.85 331	*e*P		**P**		**10 48 10.2 +1.1**
HRY			*ep*P		**pP**		**10 48 38.0 +0.8**
F14A	**Wisdom**	77.88 330	⇑P		**P**		**10 48 10.7 +1.3**
	baz=78,SNR=30						
A20A	**Cobblestone Ra**	77.89 335	⇓P		**P**		**10 48 09.3 +0.2**
	baz=78,SNR=15						
EGMT	**Eagleton**	77.96 333	*e*P		**P**		**10 48 09.9 +0.3**
	comp=Z,50nm,1.0s						
EGMT	**Eagleton**	77.96 333	⇑P		**P**		**10 48 09.8 +0.1**
	baz=78,SNR=27						
B19A	**Brinkman Farms**	77.96 334	⇓P		**P**		**10 48 10.0 +0.4**
	baz=78,SNR=38						
D16A	**Dana Ranch, Ca**	77.97 332	⇓P		**P**		**10 48 10.9 +1.1**
	baz=78,SNR=99						
C17A	**Wharram Farm,**	78.08 332	⇓P		**P**		**10 48 10.6 +0.2**
	baz=78,SNR=30						
WVOR	**Wild Horse Val**	78.13 325	*e*P		**P**		**10 48 11.4 +0.6**
WVOR			pmax		pmax		
	comp=Z,8.0nm,1.0s						
WVOR	**Wild Horse Val**	78.13 325	*e*P		**P**		**10 48 11.4 +0.6**
	comp=Z,7.6nm,1.0s						
A19A	**Klindworth Far**	78.25 334	⇓P		**P**		**10 48 11.4 +0.2**
	baz=78,SNR=20						
B18A	**Beardsley Farm**	78.26 333	⇑P		**P**		**10 48 11.8 +0.5**
	baz=78,SNR=32						
G12A	**Big Creek, Yel**	78.32 328	⇑P		**P**		**10 48 12.5 +0.7**
	baz=78,SNR=23						
D15A	**Lincoln**	78.41 331	⇓P		**P**		**10 48 13.3 +1.1**
	baz=79,SNR=38						
B17A	**L&G Farms, Che**	78.61 333	⇓P		**P**		**10 48 13.2 0.0**
	baz=79,SNR=12						
C16A	**Fuhringer Ranc**	78.64 332	⇑P		**P**		**10 48 13.8 +0.4**
	baz=79,SNR=36						
CHMT	**Chamberlain Mo**	78.64 331	*e*P		**P**		**10 48 14.4 +0.8**
MOD	**Modoc**	78.68 323	*e*P		**P**		**10 48 14.8 +0.9**
	comp=Z,41nm,1.1s						
A18A	**Metzger Ranch,**	78.69 334	⇑P		**P**		**10 48 13.6 0.0**
	baz=79,SNR=24						
D14A	**Greenough**	78.89 331	⇓P		**P**		**10 48 15.6 +0.7**
	baz=79,SNR=13						
MSO	**Missoula**	78.90 330	*e*P		**P**		**10 48 15.9 +1.1**
	comp=Z,20nm,1.4s						
MSO			*ep*P		**pP**		**10 48 45.8 +2.8**
MSO	**Missoula**	78.90 330	⇑P		**P**		**10 48 16.0 +1.1**
	baz=79,SNR=21						
C15A	**Salmond Ranch,**	79.00 332	⇑P		**P**		**10 48 16.3 +0.9**
	baz=79,SNR=74						
SLMT	**Seeley Lake**	79.00 331	*e*P		**P**		**10 48 16.3 +0.8**
SLMT			*ep*P		**pP**		**10 48

NEW Newport 81.42 330 *e*P **P 10 48 28.7 +0.4**
comp=Z,24nm,1.5s
NEW *e*pP **pP 10 48 56.8 +0.2**
NEW Newport 81.42 330 ⇓P **P 10 48 28.4 +0.1**
baz=82,SNR=12
PBDV Barranco-do-Ve 81.53 45 *e*P **P 10 48 29.5 +0.4**
comp=Z,45nm,1.7s
OD2 Odessa Site #2 81.58 328 P **P 10 48 30.0 +0.8**
KEBM Edson Butte 81.58 322 *e*P **P 10 48 31.0 +1.6**
comp=Z,99nm,1.1s
PNCL Nicolau / Gran 81.63 44 *e*P **P 10 48 30.2 +0.6**
comp=Z,59nm,1.4s
C09A Chrisman Ranch 81.65 329 P **P 10 48 30.2 +0.7**
DPW Davenport 81.66 329 P **P 10 48 30.8 +1.2**
DPW Davenport 81.66 329 P **P 10 48 30.8 +1.2**
PCVE Castro Verde 81.67 44 *e*P **P 10 48 30.3 +0.5**
comp=Z,25nm,1.1s
TRW Toppenish Ridg 81.75 327 P **P 10 48 31.8 +1.7**
PBEJ Beja 82.01 44 *e*P **P 10 48 32.5 +0.9**
comp=Z,23nm,1.1s
COR Corvallis 82.09 324 *e*P P 10 48 35.6 +3.8
COR Corvallis 82.09 324 *e*P P 10 48 35.6 +3.8
EVOP Sao Brissos 82.13 44 *e*P **P 10 48 31.9 -0.3**
EVOP pmax pmax
comp=Z,34nm,1.0s
EVOP Sao Brissos 82.13 44 *e*P **P 10 48 31.9 -0.3**
comp=Z,34nm,1.0s
EVO Evora 82.20 44 *e*P **P 10 48 31.9 -0.7**
comp=Z,34nm,1.0s
EVO *e*R
comp=Z,88nm,19.8s
EVO Evora 82.20 44 *e*P **P 10 48 32.9 +0.3**
comp=Z,16nm,1.4s
PMTG Montargil 82.37 43 *e*P **P 10 48 33.7 +0.3**
comp=Z,42nm,1.1s
WTV Waterville 82.40 328 P **P 10 48 34.1 +0.7**
LTY Liberty 82.46 327 P **P 10 48 34.4 +0.5**
PBAR Barrancos 82.63 44 *e*P **P 10 48 35.1 +0.3**
comp=Z,27nm,1.3s
PESTR Estremoz 82.66 44 *e*P **P 10 48 35.6 +0.6**
comp=Z,24nm,1.1s
LON Longmire 82.71 326 *e*P **P 10 48 35.6 +0.5**
LON pmax pmax
comp=Z,9.0nm,1.1s
LON Longmire 82.71 326 *e*P **P 10 48 35.6 +0.5**
comp=Z,9.1nm,1.1s
PMRV Marv??o 83.11 43 *e*P **P 10 48 37.4 +0.1**
comp=Z,14nm,1.4s
RMW Rattlesnake Mo 83.17 327 P **P 10 48 37.6 +0.1**
RMW Rattlesnake Mo 83.17 327 P **P 10 48 37.6 +0.1**
PVIS Viseu 83.52 42 *e*P **P 10 48 40.2 +0.8**
comp=Z,28nm,1.9s
MTE Manteigas 83.56 42 *e*P **P 10 48 39.6 -0.1**
comp=Z,35nm,1.1s
MTE Manteigas 83.56 42 *e*P **P 10 48 39.6 -0.1**
comp=Z,21nm,0.9s
BOSA Boshof 83.56 118 *e*P **P 10 48 39.5 -0.7**
comp=Z,39nm,1.1s
BOSA pP **pP 10 49 08.2 -0.3**
BOSA *e*pP **pwP 10 49 10.2 +1.6**
BOSA Boshof 83.56 118 P **P 10 48 39.9 -0.3**
comp=Z,25nm,1.0s,baz=238,slow=4.7,SNR=19
BOSA pP **pP 10 49 08.2 -0.3**
comp=Z,8.6nm,0.8s,baz=274,slow=5.3,SNR=4.0
BOSA LR LR 11 22 47.5
comp=Z,106nm,20.0s,baz=345,slow=33
HDW Hoodsport 83.94 327 P **P 10 48 42.3 +0.9**
PVRL Vila Real 83.95 42 *e*P **P 10 48 41.1 -0.5**
comp=Z,39nm,1.3s
POLO Lamas de Olo 83.96 41 *e*P **P 10 48 41.7 0.0**
comp=Z,23nm,1.6s
PCAB Cabril 84.00 41 *e*P **P 10 48 42.2 +0.4**
comp=Z,47nm,1.5s
NLWA Neilton Lookou 84.19 326 *e*P **P 10 48 43.8 +1.2**
comp=Z,28nm,1.1s
MVO Moncorvo 84.31 42 *e*P **P 10 48 43.9 +0.4**
comp=Z,58nm,1.6s
VDB Vedder Mountai 84.36 328 P **P 10 48 43.7 +0.3**
FRB Frobisher Bay 84.53 0 P **P 10 48 43.3 -0.6**
FRB Frobisher Bay 84.53 0 P **P 10 48 43.3 -0.6**
comp=Z,31nm,1.0s,baz=181,slow=4.6,SNR=21
TAM Tamanrasset 84.54 63 *e*P **P 10 48 44.7 -0.5**
TAM *e*PP **pP 10 49 14.3 +0.7**
TAM pmax pmax
comp=Z,20nm,1.0s
TAM Tamanrasset 84.54 63 *e*P **P 10 48 44.6 -0.5**
comp=Z,20nm,1.0s
TAM *e*pP **pP 10 49 14.3 +0.7**
MAW Mawson 84.71 163 P **P 10 48 45.5 +0.6**
MAW pP **pP 10 49 14.3 +0.9**
MAW Mawson 84.71 163 P **P 10 48 45.5 +0.6**
comp=Z,22nm,1.0s,baz=223,slow=6.2,SNR=22
MAW pP **pP 10 49 14.3 +0.9**
comp=Z,9.4nm,0.9s,baz=207,slow=5.7,SNR=4.4
PGC Sidney 84.79 327 *e*P **P 10 48 46.7 +1.2**
comp=Z,5.9nm,1.5s
PBRG Braganca 84.85 42 *e*P **P 10 48 45.9 -0.2**
comp=Z,41nm,1.6s
LBTB Lobatse 85.11 115 *e*P **P 10 48 48.0 0.0**
comp=Z,32nm,1.0s
LBTB *e*pP **pP 10 49 16.5 -0.1**
PAB San Pablo 85.14 44 *e*P **P 10 48 47.2 -0.5**
PAB San Pablo 85.14 44 *e*P **P 10 48 47.2 -0.5**
ESDC Sonseca Array 85.46 44 P **P 10 48 48.8 -0.5**
ESDC Sonseca Array 85.46 44 P **P 10 48 48.8 -0.5**
comp=Z,15nm,1.0s,baz=242,slow=4.8,SNR=41
SFJD Kangerlussuaq 88.85 7 *i* P **P 10 49 04.6 -0.2**
comp=Z,8.2nm,0.8s
SJPF Ste Jean 89.00 43 *e*P **P 10 49 04.3 -1.8**
comp=Z,7.8nm,0.8s
SJPF Ste Jean 89.00 43 *e*P **P 10 49 04.3 -1.8**
SJPF pmax pmax
comp=Z,8.0nm,0.8s
SJPF Ste Jean 89.00 43 *e*P **P 10 49 04.3 -1.8**
comp=Z,7.8nm,0.8s
ETSF Etsaut 89.32 43 *e*P **P 10 49 06.7 -1.0**
comp=Z,17nm,1.1s
ETSF Etsaut 89.32 43 *e*P **P 10 49 06.7 -1.0**
ETSF pmax pmax
comp=Z,17nm,1.1s
ETSF Etsaut 89.32 43 *e*P **P 10 49 06.7 -1.0**
comp=Z,17nm,1.1s
EPF Esparros 89.96 43 *e*P **P 10 49 09.3 -1.4**
EPF Esparros 89.96 43 *e*P **P 10 49 09.3 -1.4**
EPF Esparros 89.96 43 *e*P **P 10 49 09.3 -1.4**
QUIF Quistinic 90.31 38 *e*P **P 10 49 11.1 -0.9**
comp=Z,29nm,1.1s
QUIF Quistinic 90.31 38 *e*P **P 10 49 11.1 -0.9**
QUIF pmax pmax
comp=Z,29nm,1.1s
QUIF Quistinic 90.31 38 *e*P **P 10 49 11.1 -0.9**
comp=Z,29nm,1.1s
ROSF Rostrenen 90.47 37 *e*P **P 10 49 11.9 -0.9**
comp=Z,35nm,1.1s
ROSF Rostrenen 90.47 37 *e*P **P 10 49 11.9 -0.9**
ROSF pmax pmax
comp=Z,35nm,1.1s
ROSF Rostrenen 90.47 37 *e*P **P 10 49 11.9 -0.9**
comp=Z,35nm,1.1s
YKA Yellowknife Ar 90.81 341 P **P 10 49 13.8 -0.2**
YKA pP **pP 10 49 42.8 0.0**
YKA Yellowknife Ar 90.81 341 P **P 10 49 13.8 -0.2**
comp=Z,21nm,0.9s,baz=134,slow=4.7,SNR=214
YKA pP **pP 10 49 42.8 0.0**
comp=Z,26nm,0.9s,baz=126,slow=4.7,SNR=16
SGMF Saint Gilles 90.83 38 *e*P **P 10 49 13.2 -1.3**
SGMF Saint Gilles 90.83 38 *e*P **P 10 49 13.2 -1.3**
SGMF Saint Gilles 90.83 38 *e*P **P 10 49 13.2 -1.3**
YKW3 Yellowknife Ar 90.87 341 *e*P **P 10 49 14.0 -0.3**
comp=Z,1.0nm,1.3s
YKW3 *e*pP **pP 10 49 43.2 +0.1**
LFF La Frestale 91.14 42⇑ *i*P **P 10 49 15.4 -0.6**
comp=Z,77nm,1.0s
LFF La Frestale 91.14 42⇑ *i*P **P 10 49 15.4 -0.6**
LFF pmax pmax
comp=Z,77nm,1.0s
LFF La Frestale 91.14 42⇑ *i*P **P 10 49 15.4 -0.6**
comp=Z,77nm,1.0s
MTLF Montolieu 91.31 44⇑ *i*P **P 10 49 16.2 -0.7**
comp=Z,37nm,1.5s
MTLF Montolieu 91.31 44⇑ *i*P **P 10 49 16.2 -0.7**
MTLF pmax pmax
comp=Z,37nm,1.5s
MTLF Montolieu 91.31 44⇑ *i*P **P 10 49 16.2 -0.7**
comp=Z,37nm,1.5s
MFF Saint Martin d 91.41 40⇑ *i*P **P 10 49 16.6 -0.6**
comp=Z,43nm,1.1s
MFF Saint Martin d 91.41 40⇑ *i*P **P 10 49 16.6 -0.6**
MFF pmax pmax
comp=Z,43nm,1.1s
MFF Saint Martin d 91.41 40⇑ *i*P **P 10 49 16.6 -0.6**
comp=Z,43nm,1.1s
RJF Les Rejaudoux 91.79 42⇑ *i*P **P 10 49 18.3 -0.8**
comp=Z,64nm,1.4s
RJF *e*R
comp=Z,102nm,17.0s
RJF Les Rejaudoux 91.79 42⇑ *i*P **P 10 49 18.3 -0.8**
RJF pmax pmax
comp=Z,64nm,1.4s
RJF Les Rejaudoux 91.79 42⇑ *i*P **P 10 49 18.3 -0.8**
comp=Z,64nm,1.4s
GRR Gorron 91.87 38⇑ *i*P **P 10 49 18.2 -1.1**
comp=Z,47nm,1.2s
GRR Gorron 91.87 38⇑ *i*P **P 10 49 18.2 -1.1**
GRR pmax pmax
comp=Z,47nm,1.2s
GRR Gorron 91.87 38⇑ *i*P **P 10 49 18.2 -1.1**
comp=Z,47nm,1.2s
CAF Calviac 91.96 42⇑ *i*P **P 10 49 19.3 -0.6**
CAF Calviac 91.96 42⇑ *i*P **P 10 49 19.3 -0.6**
CAF Calviac 91.96 42⇑ *i*P **P 10 49 19.3 -0.6**
FLN La Foliniere 92.28 38 *e*P **P 10 49 20.3 -0.9**
FLN *e*R
comp=Z,124nm,20.8s
FLN La Foliniere 92.28 38 *e*P **P 10 49 20.3 -0.9**
FLN La Foliniere 92.28 38 *e*P **P 10 49 20.3 -0.9**
LDF La Druitiere 92.40 38 *e*P **P 10 49 20.8 -1.0**
comp=Z,34nm,1.2s
LDF La Druitiere 92.40 38 *e*P **P 10 49 20.8 -1.0**
LDF pmax pmax
comp=Z,34nm,1.2s
LDF La Druitiere 92.40 38 *e*P **P 10 49 20.8 -1.0**
comp=Z,34nm,1.2s
TCF Toulx Ste Croi 92.69 41⇑ *i*P **P 10 49 22.3 -0.9**
comp=Z,19nm,1.1s
TCF Toulx Ste Croi 92.69 41⇑ *i*P **P 10 49 22.3 -0.9**
TCF pmax pmax
comp=Z,19nm,1.1s
TCF Toulx Ste Croi 92.69 41⇑ *i*P **P 10 49 22.3 -0.9**
comp=Z,19nm,1.1s
CASY Casey 92.92 180 *e*P **P 10 49 25.4 +1.4**
comp=Z,27nm,1.2s
CASY *e*pP **pP 10 49 54.0 +1.2**
CASY *e*sP **sP 10 50 06.8 +2.4**
KEST Kesra 92.97 53 P **P 10 49 24.3 -0.6**
KEST Kesra 92.97 53 P **P 10 49 24.3 -0.6**
comp=Z,2.8nm,1.0s,baz=187,slow=1.6,SNR=6.4
BGF Bois d'Agland 93.20 41⇑ *i*P **P 10 49 24.7 -0.8**
comp=Z,48nm,1.2s
BGF Bois d'Agland 93.20 41⇑ *i*P **P 10 49 24.7 -0.8**
BGF pmax pmax
comp=Z,48nm,1.2s
BGF Bois d'Agland 93.20 41⇑ *i*P **P 10 49 24.7 -0.8**
comp=Z,48nm,1.2s
VIVF Saint-Julien-l 93.58 43 *e*P **P 10 49 26.1 -1.2**
VIVF Saint-Julien-l 93.58 43 *e*P **P 10 49 26.1 -1.2**
VIVF Saint-Julien-l 93.58 43 *e*P **P 10 49 26.1 -1.2**
AVF Avril sur Loir 93.62 41⇑ *i*P **P 10 49 26.5 -0.9**
comp=Z,38nm,1.4s
AVF Avril sur Loir 93.62 41⇑ *i*P **P 10 49 26.5 -0.9**
AVF pmax pmax
comp=Z,38nm,1.4s
AVF Avril sur Loir 93.62 41⇑ *i*P **P 10 49 26.5 -0.9**
comp=Z,38nm,1.4s
SMRF Simiane la Rot 93.77 44 *e*P **P 10 49 27.4 -0.9**
SMRF Simiane la Rot 93.77 44 *e*P **P 10 49 27.4 -0.9**
WRAK Wrangell Islan 93.78 330 *e*P **P 10 49 28.4 +0.6**
comp=Z,6.8nm,1.0s
SSF Saint Saulge 93.83 41⇑ *i*P **P 10 49 27.2 -1.2**
comp=Z,22nm,1.2s
SSF Saint Saulge 93.83 41⇑ *i*P **P 10 49 27.2 -1.2**
SSF pmax pmax
comp=Z,22nm,1.2s
SSF Saint Saulge 93.83 41⇑ *i*P **P 10 49 27.2 -1.2**
comp=Z,22nm,1.2s
SMF Signal de Mont 93.85 41 *e*P **P 10 49 27.9 -0.6**
comp=Z,61nm,1.3s
SMF Signal de Mont 93.85 41 *e*P **P 10 49 27.9 -0.6**
SMF pmax pmax
comp=Z,61nm,1.3s
SMF Signal de Mont 93.85 41 *e*P **P 10 49 27.9 -0.6**
comp=Z,61nm,1.3s
LOR Lormes 94.14 41⇑ *i*P **P 10 49 28.7 -1.2**
comp=Z,28nm,1.4s
LOR *e*R
comp=Z,81nm,18.5s
LOR Lormes 94.14 41⇑ *i*P **P 10 49 28.7 -1.2**
comp=Z,28nm,1.4s
FRF La Foret Royal 94.30 45 *e*P **P 10 49 29.3 -1.3**
FRF La Foret Royal 94.30 45 *e*P **P 10 49 29.3 -1.3**
FRF La Foret Royal 94.30 45 *e*P **P 10 49 29.3 -1.3**
ORIF Oris-en-Rattie 94.38 43 *e*P **P 10 49 30.0 -1.1**
comp=Z,35nm,1.4s
ORIF *e*R
comp=Z,190nm,21.0s
ORIF Oris-en-Rattie 94.38 43 *e*P **P 10 49 30.0 -1.1**
ORIF pmax pmax
comp=Z,35nm,1.4s
ORIF Oris-en-Rattie 94.38 43 *e*P **P 10 49 30.0 -1.1**
comp=Z,35nm,1.4s
URZ Urewera 94.57 226 LR LR 11 22 06.7
comp=Z,105nm,18.1s,baz=78,slow=29
SBF Sospel 94.94 45 *e*P **P 10 49 32.3 -1.4**
SBF Sospel 94.94 45 *e*P **P 10 49 32.3 -1.4**
SBF Sospel 94.94 45 *e*P **P 10 49 32.3 -1.4**
LPL La Plagne 95.17 43 *e*P **P 10 49 33.7 -1.2**
comp=Z,22nm,1.3s
LPL La Plagne 95.17 43 *e*P **P 10 49 33.7 -1.2**
LPL pmax pmax
comp=Z,22nm,1.3s
LPL La Plagne 95.17 43 *e*P **P 10 49 33.7 -1.2**
comp=Z,22nm,1.3s
LPG La Plagne 95.18 43 *e*P **P 10 49 34.0 -1.0**
comp=Z,25nm,1.3s
LPG La Plagne 95.18 43 *e*P **P 10 49 34.0 -1.0**
LPG pmax pmax
comp=Z,25nm,1.3s
LPG La Plagne 95.18 43 *e*P **P 10 49 34.0 -1.0**
comp=Z,25nm,1.3s
CABF La Chapelle 95.23 42⇑ *i*P **P 10 49 34.4 -0.6**
CABF La Chapelle 95.23 42⇑ *i*P **P 10 49 34.4 -0.6**
CABF La Chapelle 95.23 42⇑ *i*P **P 10 49 34.4 -0.6**
SFTF Sexfontaines 95.27 40 *e*P **P 10 49 34.1 -0.9**
comp=Z,32nm,1.0s
SFTF Sexfontaines 95.27 40 *e*P **P 10 49 34.1 -0.9**
comp=Z,32nm,1.0s
RAO Raoul Island 95.36 236 LR LR 11 19 59.9
comp=Z,628nm,21.4s,baz=169,slow=27
RPZ Rata Peaks 95.39 219 LR LR 11 25 39.1
comp=Z,39nm,19.0s,baz=27,slow=31
MEZF Maizieres J'vi 95.41 40 *e*P **P 10 49 34.9 -0.7**
comp=Z,32nm,1.2s
MEZF Maizieres J'vi 95.41 40 *e*P **P 10 49 34.9 -0.7**
comp=Z,32nm,1.2s
BAIF Baives 95.59 38 *e*P **P 10 49 35.6 -0.8**
BAIF Baives 95.59 38 *e*P **P 10 49 35.6 -0.8**
BAIF Baives 95.59 38 *e*P **P 10 49 35.6 -0.8**
SUMG Summit 95.62 9 *e*P **P 10 49 36.5 0.0**
SUMG pmax pmax
comp=Z,8.0nm,0.8s
SUMG Summit 95.62 9 *e*P **P 10 49 36.5 0.0**
comp=Z,8.2nm,0.8s
SUMG Summit 95.62 9 *i* P **P 10 49 36.5 0.0**
comp=Z,7.8nm,0.8s
PAGF Fort de Pagny 95.83 40 *e*P **P 10 49 35.9 -1.6**
comp=Z,4.9nm,0.8s
PAGF Fort de Pagny 95.83 40 *e*P **P 10 49 35.9 -1.6**
comp=Z,4.9nm,0.8s
GIVF Givet 95.97 38⇑ *i*P **P 10 49 37.4 -0.7**
GIVF Givet 95.97 38⇑ *i*P **P 10 49 37.4 -0.7**
GIVF Givet 95.97 38⇑ *i*P **P 10 49 37.4 -0.7**
HAU Haudompre 95.98 41⇑ *i*P **P 10 49 37.2 -1.0**
HAU *e*R
comp=Z,109nm,18.0s
HAU Haudompre 95.98 41⇑ *i*P **P 10 49 37.2 -1.0**
HAU Haudompre 95.98 41⇑ *i*P **P 10 49 37.2 -1.0**
HINF Hinteralfeld 96.21 41 *e*P **P 10 49 38.2 -1.1**
HINF Hinteralfeld 96.21 41 *e*P **P 10 49 38.2 -1.1**
HINF Hinteralfeld 96.21 41 *e*P **P 10 49 38.2 -1.1**
CDF Champ du Feu 96.71 41 *e*P **P 10 49 40.7 -0.9**
comp=Z,15nm,1.3s
CDF Champ du Feu 96.71 41 *e*P **P 10 49 40.7 -0.9**
CDF pmax pmax
comp=Z,15nm,1.3s
CDF Champ du Feu 96.71 41 *e*P **P 10 49 40.7 -0.9**
comp=Z,15nm,1.3s
INK Inuvik 100.57 340 P **Pdif 10 49 57.1 -1.2**
INK pP pP 10 50 26.8 -0.5
INK Inuvik 100.57 340 P **Pdif 10 49 57.1 -1.2**
comp=Z,2.2nm,1.0s,baz=79,slow=4.6,SNR=3.3
INK pP pP 10 50 26.8 -0.5
comp=Z,2.1nm,1.0s,baz=105,slow=5.3,SNR=3.1
GERES GERESS Array B 100.83 42 P **Pdif 10 49 59.1 -1.0**
GERES GERESS Array B 100.83 42 P **Pdif 10 49 59.1 -1.0**
comp=Z,0.3nm,0.5s,baz=250,slow=4.0,SNR=3.7
CLL Collm 101.23 39 *e*SP SP 11 02 57.0 -6.3
CLL *e*PPS PPS 11 04 07.0
ILAR Eielson Array 103.90 334 Pdif **Pdif 10 50 13.2 -0.1**
ILAR PP PKiKP 10 54 19.6 -11
ILAR Eielson Array 103.90 334 Pdiff **Pdif 10 50 13.2 -0.1**
comp=Z,0.2nm,0.8s,baz=123,slow=3.3,SNR=3.5
ILAR PP PKiKP 10 54 19.6 -11
comp=Z,0.8nm,1.0s,baz=105,slow=7.7,SNR=6.1
AKASG Malin Array Be 111.03 42 PKiKP **PKiKP 10 54 42.9 -1.0**
AKASG Malin Array Be 111.03 42 PKiKP **PKiKP 10 54 42.9 -1.0**
AKASG Malin Array Be 111.03 42 PKiKP **PKiKP 10 54 42.9 -1.0**
comp=Z,0.8nm,0.5s,baz=266,slow=1.7,SNR=4.9
BRTR Keskin Array B 112.50 55 PKiKP **PKiKP 10 54 47.1 -0.2**
BRTR PP **PP 10 55 34.9 -0.6**
BRTR Keskin Array B 112.50 55 PKiKP **PKiKP 10 54 47.1 -0.2**
comp=Z,1.6nm,0.8s,baz=184,slow=3.7,SNR=6.8
BRTR PP **PP 10 55 34.9 -0.6**
comp=Z,1.0nm,0.9s,baz=224,slow=3.4,SNR=4.7
APA Apatity 113.94 24⇓ *e*PKiKP **PKiKP 10 54 46.0 -3.0**
APA *i* 10 55 13.6
APA MLR MLR
comp=Z,800nm,17.0s
OBN Obninsk 115.77 38 *e*PKiKP **PKPdf 10 54 52.5 -0.3**
OBN *e* 10 55 22.6
OBN *e* 10 55 55.5
OBN *e*SS SS 11 11 49.8 -0.1
OBN pmax pmax
comp=Z,11nm,1.3s
OBN MLR MLR
comp=Z,100nm,21.0s
ANN Anapa 115.91 49 *i* PKiKP **PKPdf 10 54 50.5 -2.9**
ANN *e* 10 55 21.2
ANN *e* 11 01 25.4
ANN pmax pmax
comp=Z,19nm,1.0s
KIV Kislovodsk 119.63 51⇓ *i*PKiKP **PKPdf 10 55 01.5 +0.7**
KIV *e* 10 56 27.9
KIV *e* 11 01 40.4
KIV *e* 11 01 57.6
KIV *e*PS **PS 11 06 14.5 -1.1**
KIV pmax pmax
comp=Z,21nm,1.2s
KBZ Khabaz 119.77 51 PKiKP **PKPdf 10 55 01.5 +0.6**
KBZ Khabaz 119.77 51 PKP **PKPdf 10 55 01.4 +0.6**
KBZ Khabaz 119.77 51 PKP **PKPdf 10 55 01.4 +0.6**
comp=Z,11nm,0.9s,baz=209,slow=3.2,SNR=12
BILL Bilibino 122.16 339 *i* PKiKP **PKPdf 10 55 04.4 -0.4**
BILL *e* 10 56 42.1
BILL pmax pmax
comp=Z,25nm,1.0s
SOKR Solikamsk 125.75 31 *e*PKiKP **PKPdf 10 55 12.7 +0.9**
SOKR pmax pmax
comp=Z,10.0nm,0.6s
CTA Charters Tower 126.62 222 PKP **PKPdf 10 55 14.9 +0.1**
CTA Charters Tower 126.62 222 PKP **PKPdf 10 55 14.9 +0.1**
comp=Z,6.2nm,0.9s,baz=0.4,slow=5.8,SNR=5.3
ARU Arti 127.74 34 *i* PKiKP **PKPdf 10 55 16.3 +0.5**
ARU 10 57 15.9
ARU 11 02 11.1
TIXI Tiksi 128.38 353⇑ *i*PKiKP **PKPdf 10 55 16.2 -0.4**
SVE Sverdlovsk 128.66 33 *e*PKiKP **PKPdf 10 55 18.5 +0.9**
AKTO Aktyubinsk 129.25 41 PKiKP **PKPdf 10 55 19.2 +0.3**
AKTO pmax pmax
comp=Z,17nm,1.1s
ASAR Alice Springs 130.34 208 PKP **PKPdf 10 55 21.4 -0.5**
ASAR pPKP **pPKPdf 10 55 51.2 -0.7**
ASAR Alice Springs 130.34 208 PKP **PKPdf 10 55 21.4 -0.5**
comp=Z,7.0nm,0.9s,baz=144,slow=2.2,SNR=41
ASAR pPKP **pPKPdf 10 55 51.2 -0.7**
comp=Z,2.1nm,0.8s,baz=147,slow=2.6,SNR=3.8
AB31 Akbulak array 130.77 42*c* *i*PKiKP **PKPdf 10 55 22.4 +0.6**
AB31 pmax pmax
comp=Z,33nm,1.1s
ABKAR Akbulak array 130.77 42 *e*PKPdf **PKPdf 10 55 22.3 +0.5**
ABKAR *ep*PKPdf **pPKPdf 10 55 52.5 +0.6**
PETK Petropavlovsk- 132.28 324 PKiKP **PKPdf 10 55 25.6 +1.0**
PETK Petropavlovsk- 132.28 324 PKP **PKPdf 10 55 25.6 +1.0**
PETK Petropavlovsk- 132.28 324 PKP **PKPdf 10 55 25.6 +1.0**
comp=Z,4.8nm,0.5s,baz=136,slow=3.0,SNR=15
WRA Warramunga Arr 133.37 211 PKP **PKPdf 10 55 27.5 -0.2**
WRA Warramunga Arr 133.37 211 PKP **PKPdf 10 55 27.5 -0.2**
comp=Z,6.0nm,0.8s,baz=156,slow=1.7,SNR=38
ZRNK Zerenda 134.69 35 PKiKP **PKPdf 10 55 29.5 +0.4**
ZRNK pmax pmax
comp=Z,15nm,0.8s
BRVK Borovoye 135.31 34*c* *i*PKiKP **PKPdf 10 55 31.7 +1.5**
BRVK pmax pmax
comp=Z,5.0nm,1.2s
BVA0 Borovoye Array 135.39 34 *i* PKiKP **PKPdf 10 55 30.6 +0.2**
BVA0 pmax pmax
comp=Z,8.0nm,0.9s
BVAR Borovoye Array 135.39 34 PKiKP **PKPdf 10 55 31.5 +1.1**
BVAR 10 55 58.3
BVAR Borovoye Array 135.39 34 PKP **PKPdf 10 55 31.5 +1.1**
BVAR pPKP **pPKPdf 10 55 58.3 -2.1**
BVAR Borovoye Array 135.39 34 PKP **PKPdf 10 55 31.5 +1.1**
comp=Z,6.0nm,0.8s,baz=298,slow=3.2,SNR=23
BVAR pPKP **pPKPdf 10 55 58.3 -2.1**
comp=Z,3.6nm,0.8s,baz=282,slow=1.4,SNR=4.3
VOSK Vostochnaya 135.85 34 PKiKP **PKPdf 10 55 31.5 +0.2**
VOSK pmax pmax
comp=Z,10.0nm,0.8s
YAK Yakutsk 137.12 347 *e*PKHKP PKPpre 10 55 19.8
YAK pmax pmax
comp=N,9.0nm,0.9s
YAK pmax pmax
comp=E,22nm,1.3s
KKAR Karatay Array 139.65 48 *e*PKiKP **PKPdf 10 55 39.7 +1.1**
KKAR *e* 10 56 09.2
KKAR Karatay Array 139.65 48 *e*PKPdf **PKPdf 10 55 39.7 +1.1**
KKAR *ep*PKPdf **pPKPdf 10 56 09.2 +0.6**
KURK Kurchatov 140.92 33 *e*PKHKP PKPdf 10 55 34.7 -5.9
KURK Kurchatov 140.92 33 *e*PKPdf PKPdf 10 55 34.7 -5.9
ZAA0 Zalesovo Array 141.53 25 *e*PKPdf **PKPdf 10 55 42.0 +0.4**
ZAA0 *ep*PKPdf **pPKPdf 10 56 09.1 -2.5**
ZALV Zalesovo Beam 141.53 25 PKHKP PKPpre 10 55 35.2
ZALV 10 55 42.8
ZALV 10 56 10.9
ZALV Zalesovo Beam 141.53 25 PKPpre PKPpre 10 55 35.2
ZALV PKP **PKPdf 10 55 42.8 +1.3**
ZALV pPKP pPKPdf 10 56 10.8 -0.8
ZALV Zalesovo Beam 141.53 25 PKhKP PKPpre 10 55 35.2
comp=E,3.9nm,0.6s,baz=316,slow=4.1,SNR=16
ZALV PKP **PKPdf 10 55 42.8 +1.3**
comp=E,24nm,0.8s,baz=301,slow=2.6,SNR=35
ZALV pPKP pPKPdf 10 56 10.8 -0.8
comp=E,14nm,0.8s,baz=299,slow=3.1,SNR=5.4
EKS2 Erkin-Say 142.04 47 *e*PKiKP **PKPdf 10 55 42.5 -0.6**
EKS2 *e* 10 56 14.1
EKS2 Erkin-Say 142.04 47 *e*PKPdf **PKPdf 10 55 42.5 -0.6**
EKS2 *ep*PKPdf **pPKPdf 10 56 14.1 +1.0**
KRAR Krasnoyarsk 142.53 17 *i* PKiKP **PKPdf 10 55 46.1 +2.8**
AAK Ala-Archa 142.54 46 *e*PKiKP **PKPdf 10 55 43.8 -0.2**
AAK *e* 10 56 15.1
AAK Ala-Archa 142.54 46 *e*PKPdf **PKPdf 10 55 43.8 -0.2**
AAK *ep*PKPdf **pPKPdf 10 56 15.1 +1.0**
TKM2 Tokmak 2 143.16 45 *e*PKiKP PKPbc 10 55 42.8 +0.4
TKM2 *e* 10 56 16.0
TKM2 Tokmak 2 143.16 45 *e*PKPdf PKPbc 10 55 42.8 +0.4
TKM2 *ep*PKPdf pPKPdf 10 56 16.0 +0.7
YSS Yuzh-Sakhalins 143.66 323⇑ *e*PKiKP PKPbc 10 55 44.5 +1.2
YSS pmax pmax
comp=Z,30nm,1.0s
KSH Kashi 144.76 51 *i* PKP PKPbc 10 55 46.8 -0.4
KSH *ep*PKP pPKPdf 10 56 13.1 -4.9
KSH *es*PKP 10 56 24.3
KSH *e*SKS **SKSdf 11 02 44.9 -2.5**
KSH *e*SKKS **SKKSac 11 05 43.0 -5.3**
KSH AMB AMB
comp=Z,86nm,3.8s

KSH					LR	LR		
	comp=N,260nm,5.7s							
KSH					LR	LR		
	comp=E,170nm,4.0s							
MK31	**Makanchi Array**	**145.23**	**36**	*e*PKIKP	**PKPab**	10 55 48.1	-0.4	
MK31				*e*		10 56 18.2		
MK31	**Makanchi Array**	**145.23**	**36**	*e*PKPbc	**PKPab**	10 55 48.0	-0.4	
MK31				*ep*PKPdf	**pPKPdf**	**10 56 18.2**	**-0.2**	
MKAR	**Makanchi Array**	**145.23**	**36**	PKIKP	**PKPdf**	10 55 48.4	0.0	
MKAR						10 56 18.3		
MKAR	**Makanchi Array**	**145.23**	**36**	PKPbc	**PKPdf**	10 55 48.4	0.0	
MKAR				pPKPbc	pPKPbc	10 56 18.2	+0.2	
MKAR	**Makanchi Array**	**145.23**	**36**	PKPbc	**PKPdf**	**10 55 48.4**	**0.0**	
	comp=E,57nm,0.8s,baz=313,slow=2.7,SNR=378							
MKAR				pPKPbc	pPKPbc	10 56 18.2	+0.2	
	comp=E,31nm,0.9s,baz=336,slow=2.7,SNR=7.9							
ASAJ	**Asahikawa**	**145.29**	**319**	PKPbc	**PKPab**	**10 55 49.2**	**+0.4**	
ASAJ	**Asahikawa**	**145.29**	**319**	PKPbc	**PKPab**	**10 55 49.2**	**+0.4**	
	comp=E,92nm,0.9s,baz=280,slow=5.6,SNR=80							
ERM	**Erimo**	**145.97**	**315**	*e*PKP2	**PKPab**	**10 55 51.6**	**+0.2**	
ERM	**Erimo**	**145.97**	**315**	*e*PKPbc	**PKPab**	**10 55 51.6**	**+0.2**	
ERM				*ep*PKPdf	**pPKPdf**	**10 56 21.2**	**+1.5**	
HABR	**Khabarovsk**	**146.63**	**331**	*e*PKIKP	**PKPdf**	**10 55 51.1**	**+0.5**	
HABR				*e*		10 56 22.0		
HABR				*e*		10 59 17.1		
HABR				*e*PPP	PPP	11 02 33.1		
HABR				*e*		11 02 49.6		
HABR				*e*		11 11 54.0		
HABR				*e*SS	SS	11 18 07.0	+1.4	
HABR				pmax	pmax			
	comp=N,17nm,1.1s							
HABR				pmax	pmax			
	comp=E,18nm,1.1s							
HABR				pmax	pmax			
	comp=Z,80nm,1.1s							
KLR	**Kul'dur**	**147.47**	**335**	*e*PKHKP	PKPpre	10 55 48.8		
KLR				*e*		10 59 17.8		
KLR				pmax	pmax			
	comp=Z,50nm,1.2s							
MOY	**Mondy**	**148.44**	**12**	*e*PKP2	**PKPbc**	**10 55 58.0**	**+0.6**	
MOY				pmax	pmax			
	comp=Z,80nm,1.7s							
CIT	**Chita**	**149.05**	**357**	*e*PKP2	**PKPbc**	**10 55 59.1**	**+0.3**	
WMQ	**Urumqi**	**150.06**	**35**	PKPbc	**PKPdf**	**10 55 58.1**	**+1.6**	
ZAK	**Zakamensk**	**150.09**	**10**	*e*PKHKP	**PKPdf**	**10 55 57.2**	**+0.8**	
ZAK				*e*		10 59 36.1		
ZAK				pmax	pmax			
	comp=Z,17nm,1.4s							
HIA	**Hailar**	**151.05**	**348**	*e*PKPdf	**PKPdf**	**10 55 57.9**	**+0.1**	
HIA				*e*PKPbc	**PKPbc**	**10 56 03.8**	**+0.1**	
HIA				*e*PKPab	**PKPab**	**10 56 12.3**	**+0.8**	
USRK	**Ussuriysk Arra**	**151.20**	**328**	PKP	**PKPdf**	**10 55 58.8**	**+0.6**	
	comp=Z,2.5nm,0.8s,baz=318,slow=2.6,SNR=5.5							
USRK				PKPbc	**PKiKP**	**10 56 04.8**	**+0.2**	
	comp=Z,35nm,0.8s,baz=0.7,slow=1.3,SNR=42							
USRK				pPKPbc	**pPKPbc**	**10 56 34.4**	**+0.4**	
	comp=Z,14nm,0.9s,baz=3.1,slow=1.8,SNR=4.8							
MAJO	**Matsushiro**	**151.88**	**309**	*e*PKIKP	**PKPdf**	**10 56 00.8**	**+1.3**	
MAJO				*e*		10 56 15.9		
MAJO	**Matsushiro**	**151.88**	**309**	*e*PKPdf	**PKPdf**	**10 56 00.8**	**+1.3**	
MAJO				*e*PKPbc	**PKPbc**	**10 56 05.7**	**-0.3**	
MAJO				*e*PKPab	**PKPab**	**10 56 15.9**	**+0.4**	
MAT	**Matsushiro**	**151.88**	**309**	PKP	**PKPbc**	**10 56 05.6**	**-0.4**	
MDJ	**Mudanjiang**	**152.02**	**331**	*e*PKPdf	**PKPdf**	**10 56 00.1**	**+0.7**	
MDJ				*e*PKPbc	**PKPbc**	**10 56 06.0**	**0.0**	
MDJ				*e*PKPab	**PKPab**	**10 56 15.8**	**0.0**	
KAPI	**Kappang**	**152.75**	**199**	PKPbc	**PKPbc**	**10 56 08.3**	**-0.3**	
KAPI	**Kappang**	**152.75**	**199**	PKPbc	**PKPbc**	**10 56 08.3**	**-0.3**	
	comp=Z,25nm,0.8s,baz=195,slow=2.4,SNR=10							
SONM	**Songino Array**	**153.02**	**7**	PKP	**PKPdf**	**10 56 01.8**	**+0.9**	
SONM				PKPbc	**PKiKP**	**10 56 08.6**	**+0.1**	
SONM				PKPab	**PKPab**	**10 56 20.5**	**+0.5**	
SONM				pPKPbc	**pPKPbc**	**10 56 37.2**	**-1.1**	
SONM				PP	**PP**	**10 59 53.3**	**+0.5**	
SONM	**Songino Array**	**153.02**	**7**	PKP	**PKPdf**	**10 56 01.8**	**+0.9**	
	comp=Z,6.3nm,0.9s,baz=222,slow=0.6,SNR=23							
SONM				PKPbc	**PKiKP**	**10 56 08.6**	**+0.1**	
	comp=Z,15nm,1.0s,baz=326,slow=1.1,SNR=23							
SONM				PKPab	**PKPab**	**10 56 20.5**	**+0.5**	
	comp=Z,10nm,0.8s,baz=335,slow=4.1,SNR=11							
SONM				pPKPbc	**pPKPbc**	**10 56 37.2**	**-1.1**	
	comp=Z,6.7nm,0.8s,baz=245,slow=1.6,SNR=4.0							
SONM				PP	**PP**	**10 59 53.3**	**+0.5**	
	comp=Z,1.5nm,1.0s,baz=298,slow=6.2,SNR=4.1							
ULN	**Ulaanbaatar**	**153.06**	**6**	*e*PKPdf	**PKPdf**	**10 56 02.0**	**+1.0**	
ULN				*e*PKPbc	**PKiKP**	**10 56 09.6**	**+1.0**	
ULN				*e*PKPab	**PKPab**	**10 56 20.9**	**+0.8**	
CN2	**Changchun**	**154.41**	**336**	*e*PKPbc	**PKPdf**	**10 56 02.8**	**-0.1**	
CN2				*ep*PKP	**pPKPdf**	**10 56 29.6**	**-3.4**	
CN2				PP	**PP**	**11 00 04.5**	**+3.7**	
KSRS	**Korea Array**	**158.16**	**322**	PKP	**PKPdf**	**10 56 08.8**	**+0.9**	
	comp=Z,6.4nm,0.9s,baz=71,slow=1.1,SNR=24							
KSRS				PKPab	**PKPab**	**10 56 42.6**	**+0.5**	
	comp=Z,15nm,1.0s,baz=62,slow=4.0,SNR=6.8							
KSAR	**Wonju Array Be**	**158.19**	**322**	PKP	**PKPdf**	**10 56 08.8**	**+0.8**	
KSAR				PKPab	**PKPab**	**10 56 42.6**	**+0.3**	
PSI	**Prapat**	**158.26**	**145**	PKP	**PKPdf**	**10 56 08.8**	**-0.1**	
PSI				PKPab	**PKPab**	**10 56 42.5**	**-0.8**	
PSI	**Prapat**	**158.26**	**145**	PKP	**PKPdf**	**10 56 08.8**	**-0.1**	
	comp=Z,4.7nm,0.7s,baz=331,slow=22,SNR=4.0							
PSI				PKPab	**PKPab**	**10 56 42.5**	**-0.8**	
	comp=Z,14nm,0.9s,baz=184,slow=7.3,SNR=5.5							
GTA	**Gaotai**	**159.28**	**26**	*e*PKP	**PKPdf**	**10 56 10.5**	**+1.1**	
GTA				PKP	**pPKPdf**	**10 56 39.6**	**0.0**	
GTA				sPKP		10 56 47.4		
HHC	**Hu-ho-hao-te**	**160.28**	**359**	*e*PKP	**PKPdf**	**10 56 12.3**	**+1.8**	
HHC				PKP	**pPKPdf**	**10 56 39.9**	**-0.8**	
HHC				sPKP		10 56 50.6		
HHC				PKS	**PKSdf**	**10 59 44.3**	**+0.4**	
HHC				PP	PP	11 00 37.8	+5.0	
HHC				SKS	**SKSdf**	**11 03 05.3**	**-0.5**	
HHC				SKKS	**SKKSac**	**11 07 13.8**	**+1.7**	
HHC				AMB	AMB			
	comp=Z,230nm,8.2s							
HHC				LR	LR			
	comp=N,320nm,20.2s							
HHC				LR	LR			
	comp=E,870nm,22.6s							
HHC				LR	LR			
	comp=Z,300nm,19.0s							
SHL	**Shillong**	**161.71**	**72**	*e*PKP	**PKPdf**	**10 56 08.5**	**-4.1**	
LZH	**Lanzhou**	**163.72**	**22**	*e*PKP	**PKPdf**	**10 56 15.0**	**+0.8**	
LZH				pPKP	**pPKPdf**	**10 56 42.5**	**-1.9**	
LZH				sPKP		10 56 54.0		
LZH				PKPab	**PKPab**	**10 57 10.1**	**+3.5**	
LZH				LR	LR			
	comp=N,75nm,10.1s							
LZH				LR	LR			
	comp=E,160nm,11.7s							
LZH				LR	LR			
	comp=Z,120nm,17.2s							
XAN	**Xi'an**	**166.93**	**8**	PKP	**PKPdf**	**10 56 17.0**	**+0.2**	
CD2	**Chengdu**	**168.14**	**33**	PKP	**PKPdf**	**10 56 17.3**	**-0.4**	
CD2				pPKP	**pPKPdf**	**10 56 46.4**	**-1.6**	
CD2				sPKP		10 56 57.8		
CD2				PKPab	**PKPab**	**10 57 26.0**	**-0.2**	
CD2				PP	**PP**	**11 01 15.3**	**+0.8**	
CD2				SKS	**SKSdf**	**11 03 08.3**	**-3.4**	
CD2				SKKS	**SKKSac**	**11 07 50.1**	**-2.1**	
CD2				SS	**SS**	**11 21 51.5**	**-3.9**	
CD2				AMB	AMB			
	comp=Z,100nm,10.2s							
CD2				LR	LR			
	comp=E,240nm,15.4s							
CD2				LR	LR			
	comp=Z,140nm,13.2s							
CMAR	**Chiang Mai Arr**	**168.18**	**101**	PKP	**PKPdf**	**10 56 18.6**	**+0.5**	
CMAR				*ep*PKP	**pPKPdf**	**10 56 47.4**	**-0.9**	
CMAR				PKPab	**PKPab**	**10 57 25.6**	**-1.3**	
CMAR	**Chiang Mai Arr**	**168.18**	**101**	PKP	**PKPdf**	**10 56 18.6**	**+0.5**	
	comp=Z,5.0nm,1.0s,baz=269,slow=1.9,SNR=20							
CMAR				pPKP	**pPKPdf**	**10 56 47.4**	**-0.9**	
	comp=Z,5.5nm,1.1s,baz=250,slow=2.3,SNR=4.1							
CMAR				PKPab	**PKPab**	**10 57 25.6**	**-1.3**	
	comp=Z,2.9nm,0.9s,baz=253,slow=5.1,SNR=7.3							
WHN	**Wuhan**	**170.15**	**344**	PKP	**PKPdf**	**10 56 19.4**	**+0.5**	
KMI	**Kunming**	**171.24**	**61**	PKP	**PKPdf**	**10 56 18.9**	**-1.1**	
KMI				sPKP		10 57 00.5		
KMI				PP	**PP**	**11 01 31.3**	**-0.1**	
KMI				AMB	AMB			
	comp=Z,110nm,5.6s							
KMI				LR	LR			
	comp=Z,52nm,33.7s							
GYA	**Guiyang**	**173.22**	**37**	PKP	**PKPdf**	**10 56 19.0**	**-1.7**	
GYA				pPKP	**pPKPdf**	**10 56 50.4**	**-0.5**	
GYA				sPKP		10 57 01.9		
GYA				PKPab	**PKPab**	**10 57 48.0**	**-0.9**	
GYA				PKS	**PKSdf**	**10 59 50.3**	**-2.9**	
GYA				PP	**PP**	**11 01 41.4**	**+1.3**	
GYA				AMB	AMB			
	comp=Z,140nm,7.9s							

*DDA **19** 10:49:18.9, 39.70N×30.71E, h7km, MD2.7*
*ISK **19** 10:49:18.7, 39.78N×30.78E, h5km, MD2.5*
*ISCJB **19** 10:49:19.0±0.6, 39.75N±0.03×30.76E±0.04, h4km±6km, Error ellipse: s-maj=6.9km s-min=3.9km az=40.9*
*CSEM **19** 10:49:19.0±0.2, 39.75N×30.77E, h2km, MD2.7, Error ellipse: s-maj=4.3km s-min=2.7km az=36.0*

ISC 19 10:49:18.9±1.2, 39.74N±0.03×30.77E±0.03, h1km±12km, n24, σ0.58/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEYT	**Eskypehyr**	**0.23**	**164**	*i* P	**Pg**	**10 49 23.8**	**+0.5**
SEYT				*i* S	**Sg**	**10 49 26.8**	**+0.6**
SEYT	**Eskypehyr**	**0.23**	**164**	*i* P	**Pg**	**10 49 23.8**	**+0.5**
SEYT				*i* S	**Sg**	**10 49 26.8**	**+0.6**
BORA	**Eskisehir**	**0.28**	**300**	*i* P	**Pg**	**10 49 24.6**	**+0.4**
BORA				*i* S	**Sg**	**10 49 28.4**	**+0.6**
BORA	**Eskisehir**	**0.28**	**300**	*i* P	**Pg**	**10 49 24.6**	**+0.4**
BORA				*i* S	**Sg**	**10 49 28.4**	**+0.6**
GPA	**Golpazari**	**0.65**	**327**	*e*PG	**Pg**	**10 49 30.9**	**-0.5**
GPA				*e*SG	**Sg**	**10 49 40.2**	**+0.4**
GPA	**Golpazari**	**0.65**	**327**	*e*Pg	**Pg**	**10 49 30.9**	**-0.5**
GPA				*e*Sg	**Sg**	**10 49 40.2**	**+0.4**
SVRH	**Sivrihisar-ESK**	**0.65**	**116**	*e*PG	**Pg**	**10 49 31.8**	**+0.4**
SVRH				*e*SG	**Sb**	**10 49 41.7**	**-1.1**
SVRH	**Sivrihisar-ESK**	**0.65**	**116**	*e*Pg	**Pg**	**10 49 31.8**	**+0.4**
SVRH				*e*Sg	**Sb**	**10 49 41.7**	**-1.1**
CAVI	**Cavuskoy**	**0.85**	**303**	*e*PG	**Pg**	**10 49 35.5**	**+0.4**
CAVI	**Cavuskoy**	**0.85**	**303**	*e*Pg	**Pg**	**10 49 35.5**	**+0.4**
ALT	**Altintas**	**0.85**	**217**	*e*PG	**Pb**	**10 49 36.5**	**-0.1**
ALT				*e*SG	**Sb**	**10 49 48.7**	**+0.1**
ALT	**Altintas**	**0.85**	**217**	*e*Pg	**Pb**	**10 49 36.5**	**-0.1**
ALT				*e*Sg	**Sb**	**10 49 48.7**	**+0.1**
TVSB	**Tavsanli**	**1.05**	**254**	*e*PG	**Pb**	**10 49 39.6**	**-0.3**
TVSB	**Tavsanli**	**1.05**	**254**	*e*Pg	**Pb**	**10 49 39.7**	**-0.3**
GDZ	**Gediz**	**1.19**	**237**	*e*P	**Pg**	**10 49 41.7**	**0.0**
GDZ				*e*S	**Sg**	**10 49 55.8**	**-1.3**
GDZ	**Gediz**	**1.19**	**237**	*e*P	**Pg**	**10 49 41.7**	**0.0**
GDZ				*e*S	**Sg**	**10 49 55.8**	**-1.3**
SHUT	**Suhut-Afyon**	**1.20**	**188**	*e*PN	**Pn**	**10 49 42.8**	**-0.1**
SHUT	**Suhut-Afyon**	**1.20**	**188**	*e*Pn	**Pn**	**10 49 42.8**	**-0.1**
KIZT	**Kizilcal**	**1.22**	**135**	*e*PN	**Pn**	**10 49 43.4**	**+0.2**
KIZT	**Kizilcal**	**1.22**	**135**	*e*Pn	**Pn**	**10 49 43.4**	**+0.2**
ULDT	**Uludag**	**1.32**	**288**	*e*P	**Pg**	**10 49 44.3**	**+0.2**
ULDT				*e*S	**Sn**	**10 50 04.2**	**+1.3**
ULDT	**Uludag**	**1.32**	**288**	*e*P	**Pg**	**10 49 44.3**	**+0.2**
KDHN	**Kadinhani**	**1.61**	**139**	*i* P	**Pn**	**10 49 48.1**	**-0.5**
KDHN				*e*S	**Sg**	**10 50 10.4**	**-0.1**
KDHN	**Kadinhani**	**1.61**	**139**	*i* P	**Pn**	**10 49 48.1**	**-0.5**
KDHN				*e*S	**Sg**	**10 50 10.4**	**-0.1**

SKHL 19 10:49:51.8±0.8, 52.07N×124.37E, h9km±2km, mb4.0/3, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZEA	**Zeya**	**2.42**	**45**	*e*Pn	Pn	10 50 33.4	+1.9
ZEA				AMB	AMB	10 50 34.1	
	17nm,0.3s						
ZEA				sPn	Sn	10 50 38.2	-23
ZEA				*e*Sg	Sg	10 51 09.7	+0.3
ZEA				A	A	10 51 11.9	
	200nm,0.3s						
KROS	**Kirovskiy**	**2.84**	**32**	*i* Pn	Pn	10 50 37.9	+0.6
KROS				AMB	AMB	10 50 38.2	
	15nm,0.4s						
KROS				AMB	AMB	10 50 38.2	
	14nm,0.4s						
KROS				AMB	AMB	10 50 38.2	
	29nm,0.4s						
KROS				*e*Sn	Sn	10 51 11.0	-0.6
KROS				*i* Sg	Sg	10 51 20.5	-2.5
KROS				A	A	10 51 23.0	
	33nm,0.5s						
KROS				A	A	10 51 23.0	
	68nm,0.5s						
KROS				A	A	10 51 23.0	
	30nm,0.5s						
TUP	**Tupik**	**3.55**	**313**	*e*Pn	Pn	10 50 48.5	+1.4
TUP				*e*Pg	Pb	10 50 56.5	+1.7
TUP				AMB	AMB	10 50 58.5	
	11nm,0.2s						
TUP				*e*Sn	Sn	10 51 29.7	+0.5
TUP				*e*Sg	Sg	10 51 42.2	-3.7
TUP				A	A	10 51 48.7	
	69nm,0.5s						
BMKR	**Bomnak**	**3.76**	**44**	*e*Pn	Pn	10 50 49.9	-0.1
BMKR				*i* Pn	Pn	10 50 52.4	+0.3
BMKR				*e*Sg	Sb	10 51 47.9	+3.8
BMKR				A	A	10 51 49.9	
	20nm,0.5s						
CLNS	**Chul'man**	**4.79**	**3**	*e*Sg	Sg	10 52 24.3	-1.3
CLNS				A	A	10 52 25.3	
	24nm,0.8s						
CLNS				A	A	10 52 25.3	
	21nm,0.8s						
EKMR	**Ekimchan**	**5.33**	**76**	*e*rx	rx	10 51 15.5	
EKMR				*e*Sg	Sg	10 52 38.4	-4.5
EKMR				A	A	10 52 45.0	
	8.0nm,0.5s						
EKMR				A	A	10 52 45.0	
	5.0nm,0.5s						
EKMR				A	A	10 52 45.0	
	6.0nm,0.5s						
CRS	**Chara**	**6.00**	**326**	*e*Pn	Pn	10 51 22.7	+1.9
CRS				*e*Sg	Sg	10 52 59.0	-5.6
CRS				A	A	10 53 11.3	
	29nm,1.4s						

*ISK **19** 10:50:52.6, 39.85N×33.08E, h3km, MD2.6*
*DDA **19** 10:50:53.8, 39.89N×33.09E, h7km, MD2.7*
*CSEM **19** 10:50:53.3±0.1, 39.95N×33.08E, h2km, MD2.6, Error ellipse: s-maj=3.9km s-min=2.1km az=169.0*

ISC 19 10:50:53.9±0.9, 39.88N±0.03×33.07E±0.03, h12km±8km, n22, σ0.65/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANTO	**Ankara**	**0.21**	**267**	*e*PG	**Pg**	**10 50 57.9**	**-0.6**
ANTO				*e*SG	**Sg**	**10 51 01.8**	**+0.2**
ANTO	**Ankara**	**0.21**	**267**	*e*Pg	**Pg**	**10 50 57.9**	**-0.6**
ANTO				*e*Sg	**Sg**	**10 51 01.8**	**+0.2**
LOD	**Lodumlu**	**0.23**	**272**	*e*PG	**Pg**	**10 50 58.3**	**-0.5**
LOD				*e*SG	**Sg**	**10 51 02.6**	**+0.4**
LOD	**Lodumlu**	**0.23**	**272**	*e*Pg	**Pg**	**10 50 58.3**	**-0.5**
LOD				*e*Sg	**Sg**	**10 51 02.6**	**+0.4**
BBAL	**Bala**	**0.34**	**172**	*i* P	**Pg**	**10 51 00.9**	**+0.1**
BBAL				*i* S	**Sb**	**10 51 06.8**	**-0.6**
BBAL	**Bala**	**0.34**	**172**	*i* P	**Pg**	**10 51 00.9**	**+0.1**
BBAL				*i* S	**Sb**	**10 51 06.8**	**-0.6**
AFSR	**Afʿar-Bala (A**	**0.43**	**179**	*e*PG	**Pg**	**10 51 01.3**	**-1.2**
AFSR	**Afʿar-Bala (A**	**0.43**	**179**	*e*Pg	**Pg**	**10 51 01.3**	**-1.2**
CDAG	**Cicekdag**	**1.04**	**104**	*i* P	**Pb**	**10 51 14.0**	**+0.1**
CDAG				*e*S	**Sg**	**10 51 28.1**	**+0.6**
CDAG	**Cicekdag**	**1.04**	**104**	*i* P	**Pb**	**10 51 14.0**	**+0.1**
CDAG				*e*S	**Sg**	**10 51 28.1**	**+0.6**
CORM	**Corum**	**1.24**	**76**	*e*PN	**Pn**	**10 51 17.2**	**+0.1**
CORM	**Corum**	**1.24**	**76**	*e*Pn	**Pn**	**10 51 17.2**	**+0.1**
SVRH	**Sivrihisar-ESK**	**1.27**	**251**	*e*PN	**Pb**	**10 51 18.1**	**+0.4**
SVRH	**Sivrihisar-ESK**	**1.27**	**251**	*e*Pn	**Pb**	**10 51 18.1**	**+0.4**
CTKT	**Corum**	**1.51**	**60**	*e*P	**Pn**	**10 51 21.2**	**+0.2**
CTKT				*i* S	**Sn**	**10 51 39.6**	**-1.1**
CTKT	**Corum**	**1.51**	**60**	*e*P	**Pn**	**10 51 21.2**	**+0.2**
CTKT				*i* S	**Sn**	**10 51 39.6**	**-1.1**
KDHN	**Kadinhani**	**1.54**	**209**	*e*P	**Pb**	**10 51 23.0**	**+0.5**
KDHN				*e*S	**Sg**	**10 51 45.0**	**+1.4**
KDHN	**Kadinhani**	**1.54**	**209**	*e*P	**Pb**	**10 51 23.0**	**+0.5**
KDHN				*e*S	**Sg**	**10 51 45.0**	**+1.4**
BALT	**Daday**	**1.67**	**8**	*e*P	**Pg**	**10 51 25.9**	**-0.1**
BALT				*e*S	**Sg**	**10 51 48.4**	**+0.7**
BALT	**Daday**	**1.67**	**8**	*e*P	**Pg**	**10 51 25.9**	**-0.1**
BALT				*e*S	**Sg**	**10 51 48.4**	**+0.7**
AVNT	**Avonos**	**1.77**	**128**	*e*P	**Pb**	**10 51 26.6**	**+0.2**
AVNT				*e*S	**Sb**	**10 51 49.0**	**+0.4**
AVNT	**Avonos**	**1.77**	**128**	*e*P	**Pb**	**10 51 26.6**	**+0.2**
AVNT				*e*S	**Sb**	**10 51 49.0**	**+0.4**

*CSEM **19** 10:59:02.9±0.1, 42.58N×2.29E, h15km, ML1.7/4, Error ellipse: s-maj=2.7km s-min=2.1km az=110.0*
*STR **19** 10:59:03.7±0.1, 42.56N×2.31E, h2km, Ml1.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **19** 10:59:03.6±0.1, 42.58N×2.30E, h3km, Md1.8/1, Ml1.8/4, Error ellipse: s-maj=1.2km s-min=1.1km az=130.0*

MDD 19 10:59:04.1±0.3, 42.57N×2.31E, h0km, mbLg1.1/3, 1C, Error ellipse: s-maj=3.3km s-min=2.1km az=177.0, Pyrenees

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FILF	**Fillols**	**0.19**	**92**	Pg	Pg	10 59 05.6	-2.2
FILF				Sg	Sg	10 59 06.8	-3.5
FILF	**Fillols**	**0.19**	**92**	Pg	Pg	10 59 05.6	-2.2
FILF				Lg	Lg	10 59 06.8	
CARF	**Carcanieres**	**0.21**	**315**	Pg	Pg	10 59 08.2	-0.2
CARF				Sg	Sg	10 59 11.0	-0.3
CARF	**Carcanieres**	**0.21**	**315**	Pg	Pg	10 59 08.2	-0.2
CARF				Lg	Lg	10 59 10.9	
CARF				Sg	Sg	10 59 11.0	-0.3
CLLI	**Llivia**	**0.26**	**250**	⇑Pg	Pg	10 59 09.0	-0.4
	1.2nm,0.0s,SNR=18						
CLLI				Lg	Lg	10 59 12.5	
	6.3nm,0.1s,SNR=5.5						
CLLI	**Llivia**	**0.26**	**250**	Pg	Pg	10 59 09.0	-0.4
	1.2nm,0.0s,SNR=18						
CLLI				Lg	Lg	10 59 12.5	
	6.3nm,0.1s,SNR=5.5						
VALF	**Valcebollere**	**0.27**	**232**	Pg	Pg	10 59 09.1	-0.5
VALF				Sg	Sg	10 59 12.9	-0.4
VALF	**Valcebollere**	**0.27**	**232**	Pg	Pg	10 59 09.2	-0.4
VALF				Lg	Lg	10 59 12.8	
EJON	**La Jonquera**	**0.45**	**105**	Pg	Pg	10 59 12.2	-0.5
	0.5nm,0.1s,SNR=7.9						
EJON				Lg	Lg	10 59 18.0	
	0.7nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**0.45**	**105**	Pg	Pg	10 59 12.2	-0.6
	0.5nm,0.1s,SNR=7.9						
EJON				Lg	Lg	10 59 18.0	
	0.7nm,0.1s,SNR=7.9						
MTLF	**Montolieu**	**0.78**	**355**	*e*Pg	Pg	10 59 18.2	-0.9
MTLF	**Montolieu**	**0.78**	**355**	*e*Pn	Pg	10 59 19.6	+0.5
MTLF				*e*Sn	Sb	10 59 31.2	-0.5
	4.2nm,0.2s						
MTLF	**Montolieu**	**0.78**	**355**	Pg	Pg	10 59 18.2	-0.9
MTLF	**Montolieu**	**0.78**	**355**	*e*Pn	Pg	10 59 19.6	+0.5
MTLF				*e*Sn	Sb	10 59 31.2	-0.5
	2.1nm,0.2s						
MTLF				Lg	Lg	10 59 31.2	
	2.2nm,0.2s						
CFON	**Fontmartina**	**0.81**	**173**	Pg	Pg	10 59 19.4	-0.4
	0.7nm,0.1s,SNR=7.9						
CFON				Lg	Lg	10 59 30.6	
	1.9nm,0.1s,SNR=7.8						
CFON	**Fontmartina**	**0.81**	**173**	Pg	Pg	10 59 19.4	-0.4
	0.7nm,0.1s,SNR=7.9						
CFON				Lg	Lg	10 59 30.6	
	1.9nm,0.1s,SNR=7.8						
EMIR	**Miracle**	**0.88**	**222**	Pg	Pg	10 59 20.1	-0.9
	0.3nm,0.1s,SNR=7.9						
EMIR				Lg	Lg	10 59 32.5	
	0.7nm,0.1s,SNR=7.9						
EMIR	**Miracle**	**0.88**	**222**	Pg	Pg	10 59 20.1	-0.9
	0.3nm,0.1s,SNR=7.9						
EMIR				Lg	Lg	10 59 32.5	
	0.7nm,0.1s,SNR=7.9						
EPF	**Esparros**	**1.52**	**288**	*e*Pg	Pn	10 59 31.6	-1.1
EPF				*e*Sg	Sg	10 59 51.6	-1.6
	0.7nm,0.2s						
EPF	**Esparros**	**1.52**	**288**	Pg	Pn	10 59 31.6	-1.1
EPF				Lg	Lg	10 59 51.6	
	0.4nm,0.2s						
EPF				*e*Sg	Sg	10 59 51.6	-1.6
	0.3nm,0.2s						
EPOB	**Poblet**	**1.52**	**217**	Pg	Pn	10 59 32.2	-0.5
	0.9nm,0.2s,SNR=7.9						
EPOB				Lg	Lg	10 59 51.2	
	0.8nm,0.1s,SNR=7.9						
EPOB	**Poblet**	**1.52**	**217**	Pg	Pn	10 59 32.2	-0.5
	0.9nm,0.2s,SNR=7.9						
EPOB				Lg	Lg	10 59 51.2	
	0.8nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**1.60**	**275**	Pg	Pn	10 59 33.3	-0.8
	0.0nm,0.1s,SNR=7.9						
EBIE				Lg	Lg

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.59**	**201**	P	Pn	11 11 46.3	+0.1
	0.7nm,0.3s,baz=59,slow=5.9,SNR=3.9						
FITZ	**Fitzroy Crossi**	**18.60**	**168**	P	P	11 14 26.5	-0.3
	0.1nm,0.3s,baz=334,slow=5.1,SNR=3.7						
WRA	**Warramunga Arr**	**23.51**	**149**	P	P	11 15 16.4	-0.1
	3.1nm,0.5s,baz=326,slow=11,SNR=30						
ASAR	**Alice Springs**	**26.50**	**154**	P	P	11 15 43.2	-0.3
	1.3nm,0.5s,baz=344,slow=14,SNR=19						
ASAR				PcP	PcP	11 19 02.8	-0.5
	0.2nm,0.3s,baz=344,slow=1.9,SNR=6.4						
STKA	**Stephens Creek**	**37.02**	**151**	P	P	11 17 15.3	+0.3
	1.8nm,0.3s,baz=328,slow=10,SNR=13						
MKAR	**Makanchi Array**	**57.80**	**329**	P	P	11 19 54.9	0.0
	0.5nm,0.6s,baz=125,slow=7.6,SNR=3.8						

*IDC **19** 11:22:42.0±0.6,39°.06S×46°.33E,h0km,mb4.0/12, mb1 4.1/12,mb1mx3.9/26,mbtmp4.0/12,MS3.5/6, Ms1 3.5/6,ms1mx3.3/24,Error ellipse: s-maj=26.0km s-min=17.6km az=27.0*

*ISCJB **19** 11:22:43.3±0.5,39°.05S±0°.1×46°.3E±0°.1,h18km,mb4.0/12, MS3.4/6,Error ellipse: s-maj=17.2km s-min=12.8km az=25.2*

*NEIC **19** 11:22:43.7±0.3,39°.02S×46°.30E,h10km,mb4.5/2,Error ellipse: s-maj=11.3km s-min=8.4km az=205.0*

ISC 19 11:22:45.0±0.6,39°.0S±0°.1×46°.3E±0°.1,h18km,n37, σ0s54/34,mb4.0/12,MS3.4/6,Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	**Boshof**	**20.30**	**294**	P	**P**	**11 27 19.9**	**0.0**
BOSA	**Boshof**	**20.30**	**294**	P	**P**	**11 27 19.9**	**0.0**
	2.1nm,0.7s,baz=122,slow=12,SNR=4.8						
BOSA				LR	LR	11 33 41.9	
	comp=Z,158nm,19.2s,baz=166,slow=32						
OPO	**Ambohidratompo**	**20.40**	**2**	P	**P**	**11 27 21.2**	**0.0**
OPO	**Ambohidratompo**	**20.40**	**2**	P	**P**	**11 27 21.2**	**0.0**
	5.0nm,1.0s,baz=180,slow=10,SNR=3.9						
OPO				LR	LR	11 33 20.5	
	comp=Z,162nm,20.7s,baz=195,slow=31						
SUR	**Sutherland**	**21.70**	**280**	P	**P**	**11 27 34.2**	**-0.9**
SUR	**Sutherland**	**21.70**	**280**	P	**P**	**11 27 34.2**	**-0.9**
	7.1nm,0.8s,baz=94,slow=9.4,SNR=4.0						
LBTB	**Lobatse**	**22.37**	**303**	P	**P**	**11 27 42.0**	**-0.4**
LBTB	**Lobatse**	**22.37**	**303**	P	**P**	**11 27 42.0**	**-0.4**
	2.0nm,0.8s,baz=108,slow=8.0,SNR=4.2						
LBTB				LR	LR	11 34 20.3	
	comp=Z,115nm,21.7s,baz=286,slow=31						
MAW	**Mawson**	**30.07**	**167**	LR	LR	11 37 29.0	
	comp=Z,88nm,20.3s,baz=107,slow=30						
KMBO	**Kilima Mbogo**	**38.62**	**345**	LR	LR	11 42 50.3	
	comp=Z,80nm,21.9s,baz=99,slow=31						
SNAA	**Sanae**	**40.87**	**201**	P	**P**	**11 30 25.0**	**-0.5**
SNAA	**Sanae**	**40.87**	**201**	P	**P**	**11 30 25.0**	**-0.5**
	0.4nm,0.7s,baz=116,slow=5.7,SNR=5.4						
TORD	**Torodi Ar. Bea**	**66.53**	**312**	P	**P**	**11 33 34.9**	**+1.0**
TORD	**Torodi Ar. Bea**	**66.53**	**312**	P	**P**	**11 33 34.9**	**+1.0**
	3.0nm,0.8s,baz=142,slow=6.2,SNR=17						
ASAR	**Alice Springs**	**73.72**	**107**	P	**P**	**11 34 18.3**	**+0.2**
ASAR	**Alice Springs**	**73.72**	**107**	P	**P**	**11 34 18.3**	**+0.2**
	0.9nm,0.7s,baz=231,slow=5.7,SNR=12						
STKA	**Stephens Creek**	**74.42**	**118**	*e*P	**P**	**11 34 22.4**	**+0.3**
STKA	**Stephens Creek**	**74.42**	**118**	P	**P**	**11 34 21.9**	**-0.1**
	3.7nm,1.1s,baz=175,slow=20,SNR=4.3						
WRA	**Warramunga Arr**	**76.24**	**105**	P	**P**	**11 34 32.6**	**-0.1**
WRA	**Warramunga Arr**	**76.24**	**105**	P	**P**	**11 34 32.6**	**-0.1**
	1.0nm,0.8s,baz=228,slow=4.6,SNR=7.3						
WRAB	**Tennant Creek**	**76.26**	**105**	*e*P	**P**	**11 34 33.4**	**+0.6**
	2.0nm,0.6s						
PLCA	**Paso Flores**	**81.94**	**223**	*e*P	**P**	**11 35 04.6**	**+1.0**
	4.6nm,0.8s						
CPUP	**Villa Florida**	**83.58**	**241**	P	**P**	**11 35 12.2**	**0.0**
CPUP	**Villa Florida**	**83.58**	**241**	P	**P**	**11 35 12.2**	**0.0**
	0.3nm,0.3s,baz=146,slow=6.2,SNR=4.5						
BDFB	**Brasilia**	**83.60**	**255**	LR	LR	12 05 44.2	
	comp=Z,28nm,21.4s,baz=30,slow=31						
MKAR	**Makanchi Array**	**91.30**	**24**	P	**P**	**11 35 48.7**	**-0.2**
MKAR	**Makanchi Array**	**91.30**	**24**	P	**P**	**11 35 48.7**	**-0.2**
	0.5nm,0.7s,baz=202,slow=6.3,SNR=4.5						
ZALV	**Zalesovo Beam**	**98.37**	**22**	P	**P**	**11 36 20.1**	**-0.9**
ZALV	**Zalesovo Beam**	**98.37**	**22**	P	**P**	**11 36 20.1**	**-0.9**
	0.8nm,0.6s,baz=224,slow=3.9,SNR=4.0						
ULM	**Lac du Bonnet**	**151.15**	**305**	PKPbc	**PKPbc**	**11 42 36.1**	**-0.4**
ULM	**Lac du Bonnet**	**151.15**	**305**	PKPbc	**PKPbc**	**11 42 36.1**	**-0.4**
	2.8nm,0.6s,baz=175,slow=0.8,SNR=3.7						
ILAR	**Eielson Array**	**153.08**	**12**	PKPbc	**PKPbc**	**11 42 40.0**	**-0.4**
ILAR	**Eielson Array**	**153.08**	**12**	PKPbc	**PKPbc**	**11 42 40.0**	**-0.4**
	1.5nm,0.8s,baz=325,slow=3.2,SNR=19						
TXAR	**Lajitas Array**	**153.45**	**258**	PKPbc	**PKPbc**	**11 42 42.8**	**+0.4**
TXAR	**Lajitas Array**	**153.45**	**258**	PKPbc	**PKPbc**	**11 42 42.8**	**+0.4**
	0.8nm,0.7s,baz=116,slow=2.9,SNR=10						
YKA	**Yellowknife Ar**	**153.80**	**340**	PKPbc	**PKPbc**	**11 42 41.8**	**-0.2**
YKA	**Yellowknife Ar**	**153.80**	**340**	PKPbc	**PKPbc**	**11 42 41.8**	**-0.2**
	0.5nm,0.6s,baz=39,slow=1.8,SNR=7.1						

*NOU **19** 11:24:19.2±0.8,11°.65S×168°.71E,h30km,MD4.1,ML3.0*

*ISCJB **19** 11:24:23.3±0.5,11°.76S±0°.04×166°.56E±0°.09,h250km, mb4.0/21,Error ellipse: s-maj=12.9km s-min=5.9km az=173.8*

*IDC **19** 11:24:23.5±2.0,11°.85S×166°.67E,h244km±18km, mb3.8/16,mb1 3.9/18,mb1mx3.8/25,mbtmp3.8/18,Error ellipse: s-maj=17.5km s-min=10.6km az=74.0*

*NEIC **19** 11:24:25.1±1.4,11°.79S×166°.56E,h255km±13km, mb4.3/11,Error ellipse: s-maj=12.7km s-min=9.4km az=77.0*

ISC 19 11:24:24.0±0.6,11°.90S±0°.06×166°.6E±0°.1,h250km,n48, σ1s35/59,mb4.0/21,Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.97**	**290**	*e*Pn	**Pn**	**11 26 03.8**	**-0.5**
	131nm,1.0s						
HNR				*e*Sn	S	11 27 32.0	+7.2
HNR	**Honiara**	**6.97**	**290**	P	**Pn**	**11 26 03.2**	**-1.2**
	6.7nm,0.3s,baz=189,slow=17,SNR=11						
DZM	**Mont Dzumac**	**10.12**	**181**	*e*P	**P**	**11 26 47.6**	**-2.1**
DZM				*e*S	**S**	**11 28 37.6**	**-0.4**
DZM				AMP		11 28 41.0	
	comp=Z,134nm,8.5s						
DZM	**Mont Dzumac**	**10.12**	**181**	*e*Pn	**P**	**11 26 47.8**	**-1.9**
	comp=Z,41nm,0.6s						
DZM				S	**S**	**11 28 38.0**	**+0.1**
DZM				*e*Sn	**S**	**11 28 39.3**	**+1.3**
DZM	**Mont Dzumac**	**10.12**	**181**	P	**Pn**	**11 26 45.1**	**+0.9**
	comp=Z,12nm,0.3s,baz=222,slow=22,SNR=99						
DZM				S	**S**	**11 28 38.0**	**+0.1**
	comp=Z,1.9nm,0.3s,baz=342,slow=20,SNR=4.2						
NOUC	**Port Laguerre**	**10.15**	**181**	*e*P	**P**	**11 26 48.3**	**-1.7**
NOUC				*e*S	**S**	**11 28 39.3**	**+0.8**
NOUC				AMP		11 28 41.6	
	comp=Z,7.0nm,3.4s						
BAYA	**Yate Dam**	**10.20**	**178**	*e*P	**P**	**11 26 48.3**	**-2.3**
CTA	**Charters Tower**	**21.16**	**245**	P	**P**	**11 28 51.6**	**+1.4**
CTA	**Charters Tower**	**21.16**	**245**	P	**P**	**11 28 51.6**	**+1.4**
	comp=Z,6.7nm,0.9s,baz=84,slow=13,SNR=6.4						
CTAO	**Charters Tower**	**21.16**	**245**	*e*P	**P**	**11 28 51.8**	**+1.5**
	comp=Z,5.3nm,0.8s						
URZ	**Urewera**	**27.89**	**162**	*e*P	**P**	**11 29 51.6**	**+0.7**
	comp=Z,11nm,0.7s						
URZ	**Urewera**	**27.89**	**162**	P	**P**	**11 29 51.6**	**+0.7**
	comp=Z,12nm,0.6s,baz=275,slow=5.6,SNR=14						
STKA	**Stephens Creek**	**30.41**	**225**	P	**P**	**11 30 14.7**	**+1.4**
STKA				pP	**pP**	**11 30 59.5**	**-3.4**
STKA	**Stephens Creek**	**30.41**	**225**	P	**P**	**11 30 14.7**	**+1.4**
	comp=Z,2.9nm,0.8s,baz=352,slow=4.6,SNR=5.3						
STKA				pP	**pP**	**11 30 59.5**	**-3.4**
	comp=Z,13nm,1.3s,baz=342,slow=10,SNR=4.1						
RPZ	**Rata Peaks**	**31.94**	**174**	*e*P	**P**	**11 30 27.8**	**+1.3**
	comp=Z,12nm,0.5s						
RPZ	**Rata Peaks**	**31.94**	**174**	P	**P**	**11 30 26.7**	**+0.2**
	comp=Z,14nm,0.6s,baz=224,slow=4.7,SNR=11						
WRAB	**Tennant Creek**	**31.97**	**251**	*e*P	**P**	**11 30 27.8**	**+0.7**
	comp=Z,1.4nm,0.6s						
WRA	**Warramunga Arr**	**31.98**	**251**	P	**P**	**11 30 27.4**	**+0.2**
WRA	**Warramunga Arr**	**31.98**	**251**	P	**P**	**11 30 27.4**	**+0.2**
	comp=Z,1.8nm,0.6s,baz=85,slow=9.4,SNR=32						
AS31	**Alice Springs**	**33.16**	**245**	*e*P	**P**	**11 30 37.9**	**+0.5**
AS31				*e*pP	**pP**	**11 31 25.1**	**-2.3**
ASAR	**Alice Springs**	**33.16**	**245**	P	**P**	**11 30 37.5**	**+0.1**
ASAR				pP	**pP**	**11 31 24.6**	**-2.7**
ASAR				ScP	**ScP**	**11 36 34.2**	**-0.4**
ASAR	**Alice Springs**	**33.16**	**245**	P	**P**	**11 30 37.5**	**+0.1**
	comp=Z,1.7nm,0.6s,baz=67,slow=10,SNR=37						
ASAR				pP	**pP**	**11 31 24.6**	**-2.7**
	comp=Z,2.1nm,0.8s,baz=76,slow=8.8,SNR=10.0						
ASAR				ScP	**ScP**	**11 36 34.2**	**-0.4**
	comp=Z,0.4nm,1.0s,baz=48,slow=2.8,SNR=3.1						
ASAJ	**Asahikawa**	**59.87**	**340**	P	**P**	**11 34 04.2**	**+0.7**
ASAJ	**Asahikawa**	**59.87**	**340**	P	**P**	**11 34 04.2**	**+0.7**
	comp=Z,5.2nm,0.6s,baz=233,slow=6.2,SNR=8.9						
KSRS	**Korea Array**	**61.04**	**325**	P	**P**	**11 34 12.5**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=141,slow=6.8,SNR=7.7						
KSAR	**Wonju Array Be**	**61.05**	**325**	P	**P**	**11 34 12.5**	**+0.9**
USRK	**Ussuriysk Arra**	**64.07**	**333**	P	**P**	**11 34 31.6**	**+0.2**
	comp=Z,3.1nm,0.9s,baz=132,slow=2.8,SNR=6.1						
VNDA	**Vanda**	**65.66**	**181**	*e*P	**P**	**11 34 42.5**	**+1.3**
	comp=Z,7.8nm,1.4s						
VNDA	**Vanda**	**65.66**	**181**	P	**P**	**11 34 42.4**	**+1.3**
	comp=Z,1.3nm,0.8s,baz=335,slow=4.5,SNR=6.8						
CMAR	**Chiang Mai Arr**	**73.20**	**294**	P	**P**	**11 35 29.6**	**+1.4**
CMAR	**Chiang Mai Arr**	**73.20**	**294**	P	**P**	**11 35 29.6**	**+1.4**
	comp=Z,2.6nm,0.9s,baz=122,slow=4.7,SNR=9.1						
QSPA	**South Pole Qui**	**78.11**	**180**	*e*P	**P**	**11 35 56.2**	**+0.9**
QSPA	**South Pole Qui**	**78.11**	**180**	P	**P**	**11 35 55.6**	**+0.3**
	comp=Z,3.0nm,0.8s,baz=15,slow=2.5,SNR=10						
ULN	**Ulaanbaatar**	**79.47**	**324**	*e*P	**P**	**11 36 03.8**	**+0.9**
	comp=Z,3.7nm,0.8s						
BILL	**Bilibino**	**79.73**	**360**	*e*P	**P**	**11 36 03.7**	**0.0**
	comp=Z,4.5nm,0.8s						
SONM	**Songino Array**	**79.84**	**324**	P	**P**	**11 36 05.2**	**+0.4**
SONM	**Songino Array**	**79.84**	**324**	P	**P**	**11 36 05.2**	**+0.4**
	comp=Z,1.2nm,0.7s,baz=150,slow=6.8,SNR=5.4						
ILAR	**Eielson Array**	**84.06**	**18**	P	**P**	**11 36 25.1**	**-1.1**
ILAR	**Eielson Array**	**84.06**	**18**	P	**P**	**11 36 25.1**	**-1.1**
	comp=Z,2.5nm,0.6s,baz=237,slow=5.2,SNR=53						
EGAK	**Eagle**	**85.89**	**20**	*e*P	**P**	**11 36 35.3**	**0.0**
	comp=Z,3.9nm,0.7s						
ARUT	**Antelope Range**	**89.43**	**51**	*e*P	P	11 36 55.3	+2.3
	comp=Z,1.3nm,0.6s						
MK31	**Makanchi Array**	**94.70**	**317**	*e*P	**P**	**11 37 17.1**	**+0.1**
MKAR	**Makanchi Array**	**94.70**	**317**	P	**P**	**11 37 17.1**	**+0.2**
MKAR	**Makanchi Array**	**94.70**	**317**	P	**P**	**11 37 17.1**	**+0.2**
	comp=Z,2.6nm,0.8s,baz=95,slow=5.6,SNR=16						
YKA	**Yellowknife Ar**	**95.35**	**27**	P	**P**	**11 37 17.4**	**-2.0**
YKA	**Yellowknife Ar**	**95.35**	**27**	P	**P**	**11 37 17.4**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=259,slow=4.6,SNR=7.8						
FINES	**FINESS Array B**	**122.86**	**339**	PKP	**PKPdf**	**11 42 49.8**	**-0.2**
FINES	**FINESS Array B**	**122.86**	**339**	PKP	**PKPdf**	**11 42 49.8**	**-0.2**
	comp=Z,2.5nm,0.9s,baz=277,slow=5.0,SNR=3.9						

*IDC **19** 11:37:48.5±1.0,60°.74S×25°.59W,h0km,mb3.9/5, mb1 4.0/5,mb1mx3.9/16,mbtmp3.9/5,MS3.6/4,Ms1 3.6/4, ms1mx3.2/16,Error ellipse: s-maj=32.9km s-min=28.3km az=58.0*

ISC 19 11:37:49.3±0.8,60°.9S±0°.1×25°.4W±0°.2,h10km,n14, σ1s75/10,mb3.8/5,MS3.5/4,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**11.98**	**152**	*e*Pn	**Pn**	**11 40 38.9**	**-0.9**
SNAA	**Sanae**	**13.97**	**150**	*e*Pn	**Pn**	**11 41 05.1**	**-1.9**
SNAA	**Sanae**	**13.97**	**150**	*e*Sn	Sn	11 43 30.3	-12
SNAA	**Sanae**	**13.97**	**150**	Pn	**Pn**	**11 41 05.2**	**-1.9**
	1.3nm,0.3s,baz=312,slow=13,SNR=143						
QSPA	**South Pole Qui**	**29.33**	**180**	P	**P**	**11 43 54.1**	**+2.2**
	0.7nm,0.5s,baz=90,slow=5.1,SNR=1.4						
PLCA	**Paso Flores**	**34.02**	**286**	LR	LR	11 57 43.1	
	comp=Z,104nm,21.2s,baz=173,slow=35						
MAW	**Mawson**	**35.75**	**139**	LR	LR	11 57 53.8	
	comp=Z,46nm,18.6s,baz=148,slow=34						
CPUP	**Villa Florida**	**40.80**	**313**	P	**P**	**11 45 29.1**	**-1.5**
	0.5nm,0.4s,baz=199,slow=8.2,SNR=3.1						
CPUP				LR	LR	12 02 06.7	
	comp=Z,50nm,18.1s,baz=293,slow=36						
BOSA	**Boshof**	**46.51**	**70**	P	**P**	**11 46 16.2**	**-0.5**
	2.5nm,0.6s,baz=211,slow=8.6,SNR=4.1						
LPAZ	**La Paz**	**54.00**	**306**	P	**P**	**11 47 12.9**	**-1.2**
	0.5nm,0.5s,baz=191,slow=11,SNR=2.9						
TORD	**Torodi Ar. Bea**	**76.89**	**27**	P	**P**	**11 49 43.0**	**+1.6**
	1.5nm,1.0s,baz=192,slow=6.3,SNR=5.9						
FITZ	**Fitzroy Crossi**	**97.89**	**152**	LR	LR	12 31 36.7	
	comp=Z,85nm,18.5s,baz=238,slow=33						
YKA	**Yellowknife Ar**	**140.32**	**313**	PKP	**PKPdf**	**11 57 17.8**	**+1.1**
	0.3nm,0.8s,baz=133,slow=2.1,SNR=3.9						
ILAR	**Eielson Array**	**153.86**	**304**	PKPbc	**PKPbc**	**11 57 48.0**	**+1.0**
	0.6nm,0.9s,baz=90,slow=1.8,SNR=6.2						

*IDC **19** 11:51:32.0±1.4,37°.79N×20°.94E,h0km,mb3.6/4, mb1 3.6/5,mb1mx3.3/26,mbtmp3.5/5,ML2.8/1,Error ellipse: s-maj=54.8km s-min=24.3km az=135.0*

*ISCJB **19** 11:51:32.2±0.6,37°.70N±0°.02×21°.17E±0°.03,h4km±4km, mb3.6/4,Error ellipse: s-maj=4.7km s-min=3.3km az=156.2*

*CSEM **19** 11:51:32.8±0.3,37°.71N×21°.17E,h5km,ML3.2/5,Error ellipse: s-maj=5.2km s-min=3.1km az=71.0*

*ATH **19** 11:51:32.8,37°.71N×21°.18E,h8km±3km,MD3.2/16*

*THE **19** 11:51:33.0,37°.72N×21°.19E,h0km±2km,ML3.2/5,Error ellipse: s-maj=2.4km s-min=0.6km az=238.0*

ISC 19 11:51:32.7±1.1,37°.71N±0°.02×21°.17E±0°.03,h6km±8km, n64,σ0s54/98,mb3.7/4,Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.42**	**34**	P	**Pg**	**11 51 40.6**	**-0.3**
RLS				S	**Sg**	**11 51 47.1**	**+0.7**
RLS	**Riolos of Patr**	**0.42**	**34**	*e*PG	**Pg**	**11 51 40.6**	**-0.3**
RLS				*e*SB	**Sg**	**11 51 47.4**	**+1.0**
RLS	**Riolos of Patr**	**0.42**	**34**	P	**Pg**	**11 51 40.6**	**-0.3**
RLS				S	**Sg**	**11 51 47.1**	**+0.7**
AXS	**Araxos**	**0.51**	**19**	P	**Pg**	**11 51 42.8**	**+0.2**
AXS				S	**Sg**	**11 51 50.2**	**+0.9**
AXS	**Araxos**	**0.51**	**19**	P	**Pg**	**11 51 42.8**	**+0.2**
AXS				S	**Sg**	**11 51 50.2**	**+0.9**
VLS	**Valsamata**	**0.65**	**316**	P	**Pg**	**11 51 45.4**	**+0.1**
VLS				S	**Sb**	**11 51 56.3**	**+0.5**
VLS	**Valsamata**	**0.65**	**316**	*e*PB	**Pg**	**11 51 45.4**	**+0.1**
VLS				*e*SB	**Sb**	**11 51 55.2**	**-0.6**
VLS	**Valsamata**	**0.65**	**316**	P	**Pg**	**11 51 45.4**	**+0.1**
VLS				*e*Sb	**Sb**	**11 51 55.2**	**-0.6**
ITM	**Ithomi**	**0.81**	**131**	P	**Pg**	**11 51 48.2**	**+0.1**
ITM				S	**Sb**	**11 52 00.6**	**+0.4**
ITM	**Ithomi**	**0.81**	**131**	*e*PB	**Pg**	**11 51 48.3**	**+0.1**
ITM				*e*SB	**Sg**	**11 51 58.3**	**-0.3**
ITM	**Ithomi**	**0.81**	**131**	P	**Pg**	**11 51 48.2**	**+0.1**
ITM				*e*Sb	**Sg**	**11 51 58.3**	**-0.3**
ITM				S	**Sb**	**11 52 00.6**	**+0.4**
LAKA	**Lakka**	**0.83**	**50**	P	**Pg**	**11 51 48.3**	**-0.4**
LAKA				S	**Sg**	**11 52 00.0**	**+0.4**
LAKA	**Lakka**	**0.83**	**50**	*e*PG	**Pg**	**11 51 48.3**	**-0.4**
LAKA				*e*SB	**Sg**	**11 51 59.9**	**+0.4**
LAKA	**Lakka**	**0.83**	**50**	P	**Pg**	**11 51 48.3**	**-0.4**
LAKA				*e*Sb	**Sg**	**11 51 59.9**	**+0.4**
KLV	**Kalavryta, Ach**	**0.85**	**67**	*e*PG	**Pg**	**11 51 48.2**	**-0.8**
KLV				*e*SB	**Sg**	**11 52 00.8**	**+0.8**
KLV	**Kalavryta, Ach**	**0.85**	**67**	*e*Pg	**Pg**	**11 51 48.2**	**-0.8**
KLV				*e*Sb	**Sg**	**11 52 00.8**	**+0.8**
EFP	**Efpalio**	**0.92**	**39**	P	**Pg**	**11 51 50.4**	**-0.1**
EFP				S	**Sb**	**11 52 03.5**	**-0.1**
EFP	**Efpalio**	**0.92**	**39**	*e*PB	**Pg**	**11 51 50.2**	**-0.3**
EFP				*e*SB	**Sg**	**11 52 02.3**	**-0.2**
EFP	**Efpalio**	**0.92**	**39**	P	**Pg**	**11 51 50.4**	**-0.1**
EFP				*e*Sb	**Sg**	**11 52 02.3**	**-0.2**
EFP				S	**Sb**	**11 52 03.5**	**-0.1**
PYL	**PYLOS**	**0.93**	**150**	P	**Pg**	**11 51 49.9**	**-0.7**
PYL				S	**Sg**	**11 52 03.1**	**+0.3**
PYL	**PYLOS**	**0.93**	**150**	*e*PG	**Pg**	**11 51 49.9**	**-0.7**
PYL				*e*SB	**Sb**	**11 52 03.7**	**-0.2**
PYL	**PYLOS**	**0.93**	**150**	P	**Pg**	**11 51 49.9**	**-0.7**
PYL				S	**Sg**	**11 52 03.1**	**+0.3**
GUR	**Goura**	**0.96**	**76**	P	**Pg**	**11 51 50.2**	**-0.9**
GUR	**Goura**	**0.96**	**76**	*e*PG	**Pg**	**11 51 50.3**	**-0.9**
GUR	**Goura**	**0.96**	**76**	*e*Pg	**Pg**	**11 51 50.3**	**-0.9**
TRIZ	**Trizonia**	**0.97**	**47**	P	**Pg**	**11 51 50.6**	**-0.7**
TRIZ				S	**Sb**	**11 52 05.0**	**0.0**
TRIZ	**Trizonia**	**0.97**	**47**	*e*PG	**Pg**	**11 51 50.7**	**-0.6**
TRIZ	**Trizonia**	**0.97**	**47**	*e*Pg	**Pg**	**11 51 50.7**	**-0.6**
TRIZ				S	**Sb**	**11 52 05.0**	**0.0**
VLX	**Vlachokerasia**	**1.02**	**109**	P	**Pg**	**11 51 52.1**	**-0.3**
VLX				S	**Sb**	**11 52 07.3**	**+0.7**
VLX	**Vlachokerasia**	**1.02**	**109**	*e*PB	**Pg**	**11 51 52.2**	**-0.2**
VLX	**Vlachokerasia**	**1.02**	**109**	*e*Pb	**Pg**	**11 51 52.2**	**-0.2**
VLX				S	**Sb**	**11 52 07.3**	**+0.7**
KALE	**Kalithea**	**1.03**	**48**	P	**Pg**	**11 51 51.8**	**-0.6**
KALE	**Kalithea**	**1.03**	**48**	*e*PG	**Pg**	**11 51 51.9**	**-0.5**
KALE	**Kalithea**	**1.03**	**48**	*e*Pg	**Pg**	**11 51 51.9**	**-0.5**
LKD2	**Lefkada island**	**1.15**	**340**	P	**Pg**	**11 51 54.1**	**-0.7**
LKD2				S	**Sn**	**11 52 11.3**	**-0.1**
LKD2	**Lefkada island**	**1.15**	**340**	P	**Pg**	**11 51 54.1**	**-0.7**
LKD2				S	**Sn**	**11 52 11.3**	**-0.1**
DSF	**Desfina**	**1.28**	**57**	P	**Pn**	**11 51 56.5**	**-0.7**
DSF				S	**Sn**	**11 52 14.6**	**-0.1**
DSF	**Desfina**	**1.28**	**57**	P	**Pn**	**11 51 56.5**	**-0.7**
DSF				S	**Sn**	**11 52 14.6**	**-0.1**
EVR	**Evrytania**	**1.31**	**23**	P	**Pn**	**11 51 57.4**	**-0.2**
EVR				S	**Sn**	**11 52 15.7**	**+0.3**
EVR	**Evrytania**	**1.31**	**23**	*e*PB	**Pn**	**11 51 57.2**	**-0.4**
EVR	**Evrytania**	**1.31**	**23**	P	**Pn**	**11 51 57.4**	**-0.2**
EVR				S	**Sn**	**11 52 15.7**	**+0.3**
DYR	**Agios Nikonas**	**1.33**	**135**	P	**Pb**	**11 51 58.0**	**0.0**
DYR	**Agios Nikonas**	**1.33**	**135**	*e*PB	**Pb**	**11 51 58.0**	**0.0**
DYR	**Agios Nikonas**	**1.33**	**135**	P	**Pb**	**11 51 58.0**	**0.0**
LTK	**Loutraki**	**1.46**	**77**	P	**Pb**	**11 52 00.2**	**-0.1**
LTK	**Loutraki**	**1.46**	**77**	*e*PB	**Pb**	**11 52 00.2**	**-0.1**
LTK	**Loutraki**	**1.46**	**77**	P	**Pb**	**11 52 00.2**	**-0.1**
MAKR	**Makrakomi, Fth**	**1.51**	**30**	P	**Pn**	**11 52 00.0**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.51**	**30**	P	**Pn**	**11 52 00.0**	**-0.3**
AXAR	**Agios Charalam**	**1.58**	**48**	P	**Pn**	**11 52 01.0**	**-0.3**
AXAR	**Agios Charalam**	**1.58**	**48**	P	**Pn**	**11 52 01.0**	**-0.3**
DID	**Didima**	**1.66**	**96**	P	**Pb**	**11 52 03.1**	**-0.6**
DID	**Didima**	**1.66**	**96**	*e*PB	**Pb**	**11 52 04.4**	**-0.1**
DID	**Didima**	**1.66**	**96**	P	**Pb**	**11 52 03.1**	**-0.6**
DID	**Didima**	**1.66**	**96**	*e*Pb	**Pb**	**11 52 04.4**	**-0.1**
VLI	**Veliai**	**1.73**	**124**	*e*PN	**Pg**	**11 52 05.4**	**-0.4**
VLI	**Veliai**	**1.73**	**124**	*e*Pn	**Pg**	**11 52 05.4**	**-0.4**
NEO	**Neokhori**	**2.27**	**45**	*e*PN	**Pb**	**11 52 12.9**	**-1.2**
NEO	**Neokhori**	**2.27**	**45**	*e*Pn	**Pb**	**11 52 12.9**	**-1.2**
BRTR	**Keskin Array B**	**9.96**	**75**	Pn	**Pn**	**11 53 57.6**	**+1.2**
	0.1nm,0.3s,baz=266,slow=12,SNR=2.2						
FINES	**FINESS Array B**	**23.96**	**6**	P	**P**	**11 56 46.9**	**-0.5**
	1.8nm,0.9s,baz=201,slow=10,SNR=3.8						
TORD	**Torodi Ar. Bea**	**30.00**	**221**	P	**P**	**11 57 41.9**	**-0.3**
	0.4nm,0.6s,baz=38,slow=7.3,SNR=3.1						
MKAR	**Makanchi Array**	**45.11**	**58**	P	**P**	**11 59 51.1**	**+1.4**
	0.5nm,0.6s,baz=272,slow=7.7,SNR=6.7						
ZALV	**Zalesovo Beam**	**45.62**	**48**	P	**P**	**11 59 54.2**	**+0.6**
	0.7nm,0.4s,baz=277,slow=8.2,SNR=3.7						

*ISCJB **19** 11:58:11.6±0.7,38°.29N±0°.05×38°.13E±0°.03,h0km,Error ellipse: s-maj=7.5km s-min=3.7km az=179.2*

*CSEM **19** 11:58:11.2±0.2,38°.38N×38°.09E,h1km,MD2.1,Error ellipse: s-maj=

GIFN	**Gifford Fjord,**	**4.31**	**228**	PN	**Pn**	**13 27 49.5**	**+1.3**
GIFN				SN	**Sn**	**13 28 39.5**	**+1.0**
GIFN				Trac		13 28 44.6	
	comp=Z,22nm,0.1s						
ILON	**Igloolik, Nuna**	**4.85**	**224**	PN	**Pn**	**13 27 56.6**	**+0.9**
ILON				SN	**Sn**	**13 28 51.4**	**-0.3**
ILON				Trac		13 28 53.9	
	comp=Z,14nm,0.1s						
AP3N	**Apex site 3 Nu**	**5.36**	**233**	PN	**Pn**	**13 28 03.8**	**+1.1**
AP3N				SN	**Sn**	**13 29 04.7**	**+0.4**
AP3N				Trac		13 29 07.7	
	comp=Z,18nm,0.1s						
LAIN	**Lailor River,**	**5.42**	**228**	PN	**Pn**	**13 28 04.1**	**+0.6**
LAIN				SN	**Sn**	**13 29 05.2**	**-0.6**
LAIN				Trac		13 29 08.6	
	comp=Z,33nm,0.2s						
SRLN	**Sarcpa Lake, N**	**5.84**	**224**	PN	**Pn**	**13 28 09.2**	**+0.1**
SRLN				SN	**Sn**	**13 29 13.7**	**-2.3**
SRLN				Trac		13 29 18.4	
	comp=Z,30nm,0.2s						
RES	**Resolute Bay**	**6.45**	**295**	PN	**Pn**	**13 28 18.9**	**+1.3**
RES				SN	**Sn**	**13 29 31.4**	**+0.4**
RES				Trac		13 29 42.3	
	comp=Z,7.4nm,0.3s						
EUNU	**Eureka**	**7.66**	**341**	PN	**Pn**	**13 28 33.3**	**-0.9**
EUNU				SN	Sn	13 29 51.2	-10
KUGN	**Kugaaruk Camp,**	**7.74**	**238**	PN	**Pn**	**13 28 34.8**	**-0.5**
KUGN				SN	Sn	13 29 59.3	-3.4
KUGN				Trac		13 30 02.5	
	comp=Z,18nm,0.3s						
QILN	**Qikiluqaq Expl**	**8.07**	**224**	PN	**Pn**	**13 28 38.9**	**-0.9**
QILN				SN	Sn	13 30 06.0	-5.0
QILN				Trac		13 30 11.3	
	comp=Z,15nm,0.2s						
STLN	**Stellar Camp,**	**9.06**	**240**	PN	**Pn**	**13 28 55.0**	**+1.7**
STLN				SN	Sn	13 30 30.6	-4.6
STLN				Trac		13 30 34.5	
	comp=Z,7.6nm,0.3s						
WAGN	**Wager Bay**	**9.38**	**228**	PN	**Pn**	**13 28 57.6**	**-0.1**
WAGN				SN	Sn	13 30 38.0	-5.1
FRB	**Frobisher Bay**	**9.52**	**170**	PN	Pn	13 28 52.9	-6.7
FRB				SN	Sn	13 30 31.7	-15
FRB				Trac		13 30 40.0	
	comp=Z,4.9nm,0.2s						
BULN	**Bullion Camp,**	**9.81**	**237**	PN	**Pn**	**13 29 03.2**	**-0.3**
BULN				SN	Sn	13 30 46.7	-6.8
NUNN	**Nunuq Camp, NU**	**10.31**	**229**	PN	**Pn**	**13 29 09.7**	**-0.8**
NUNN				SN	Sn	13 30 58.6	-7.2
NUNN				Trac		13 31 07.0	
	comp=Z,4.2nm,0.1s						
SEDN	**First Sedna Si**	**12.06**	**225**	PN	Pn	13 29 30.6	-3.8
SEDN				SN	Sn	13 31 39.3	-9.3
JOSN	**Second Sedna S**	**12.21**	**225**	PN	**Pn**	**13 29 34.2**	**-2.1**
JOSN				SN	Sn	13 31 41.6	-11
YBKN	**Baker Lake, Hu**	**12.21**	**236**	SN	Sn	13 31 44.5	-7.7
AKVQ	**Akulivik**	**12.57**	**193**	PN	Pn	13 29 34.8	-6.5
AKVQ				SN	Sn	13 31 48.6	-12
JERN	**Jeri Cho Mine,**	**15.10**	**262**	PN	**Pn**	**13 30 14.1**	**-1.8**
JERN				SN	Sn	13 32 54.7	-8.2
YKA	**Yellowknife Ar**	**18.67**	**257**	P	**P**	**13 30 58.2**	**-2.2**
	0.2nm,0.3s,baz=30,slow=12,SNR=7.0						
ILAR	**Eielson Array**	**26.18**	**291**	P	P	13 32 23.2	+6.4
	0.2nm,0.8s,baz=48,slow=8.1,SNR=5.6						
NVAR	**Mina Array Bea**	**41.28**	**239**	P	**P**	**13 34 29.4**	**+1.3**
	0.4nm,0.5s,baz=20,slow=6.6,SNR=3.6						
TXAR	**Lajitas Array**	**46.84**	**219**	P	**P**	**13 35 14.2**	**+1.7**
	0.5nm,0.7s,baz=38,slow=6.3,SNR=4.8						
TXAR				LR	LR	13 56 06.9	
	comp=Z,151nm,21.9s,baz=185,slow=38						

IDC 19 13:32:20.2±1.1, 29°.91S×178°.07W, h68km±14km, mb4.1/5, mb1 4.3/5, mb1mx3.8/17, mbtmp4.1/5, Error ellipse: s-maj=26.8km s-min=23.0km az=59.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.67**	**11**	P	Pn	13 32 34.3	-0.4
	221nm,0.3s,baz=102,slow=23,SNR=13						
RAO				S	Sn	13 32 47.1	+1.9
	929nm,0.3s,baz=90,slow=20,SNR=19						
STKA	**Stephens Creek**	**34.53**	**256**	P	P	13 39 02.5	+0.3
	8.8nm,0.7s,baz=105,slow=12,SNR=26						
ASAR	**Alice Springs**	**43.08**	**266**	P	P	13 40 13.2	-0.6
	2.0nm,0.5s,baz=103,slow=7.6,SNR=46						
WRA	**Warramunga Arr**	**44.02**	**272**	P	P	13 40 21.2	-0.2
	4.4nm,0.4s,baz=111,slow=8.1,SNR=99						
VNDA	**Vanda**	**48.57**	**186**	P	P	13 40 57.1	+0.8
	1.1nm,0.8s,baz=342,slow=3.2,SNR=2.8						
QSPA	**South Pole Qui**	**60.20**	**180**	P	P	13 42 21.4	+0.5
	5.1nm,0.7s,baz=36,slow=1.5,SNR=38						
BVAR	**Borovoye Array**	**126.02**	**316**	PKP	PKPdf	13 51 15.3	+1.2
	0.5nm,0.5s,baz=49,slow=2.7,SNR=3.8						
FINES	**FINESS Array B**	**144.67**	**340**	PKP	PKPab	13 51 47.1	-0.2
	2.9nm,0.5s,baz=58,slow=3.4,SNR=19						
AKASG	**Malin Array Be**	**150.88**	**323**	PKPbc	PKPbc	13 52 05.3	+0.6
	0.6nm,0.3s,baz=54,slow=3.1,SNR=5.8						
MMAI	**Mount Meron Ar**	**151.35**	**285**	PKPbc	PKPbc	13 52 07.2	+0.7
	1.7nm,0.4s,baz=74,slow=6.2,SNR=5.0						
BRTR	**Keskin Array B**	**152.31**	**299**	PKPbc	PKPbc	13 52 06.9	-1.7
	0.6nm,0.6s,baz=132,slow=2.1,SNR=2.8						
TORD	**Torodi Ar. Bea**	**163.31**	**179**	PKPab	PKPab	13 53 03.9	-2.6
	0.3nm,0.6s,baz=212,slow=5.1,SNR=3.1						

IDC 19 13:40:26.3±2.2, 31°.03S×178°.90W, h0km, mb3.9/3, mb1 4.1/4, mb1mx3.8/18, mbtmp4.0/4, ML3.2/1, Error ellipse: s-maj=51.9km s-min=33.7km az=57.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.93**	**203**	Pn	Pn	13 42 21.1	-1.6
	0.3nm,0.3s,baz=24,slow=14,SNR=6.1						
URZ				Sn	Sn	13 43 44.3	-8.9
	1.5nm,0.3s,baz=345,slow=19,SNR=7.5						
ASAR	**Alice Springs**	**42.31**	**268**	P	P	13 48 21.9	-0.1
	1.1nm,0.6s,baz=106,slow=7.2,SNR=17						
WRA	**Warramunga Arr**	**43.36**	**273**	P	P	13 48 30.7	+0.1
	2.0nm,0.5s,baz=111,slow=8.1,SNR=52						
QSPA	**South Pole Qui**	**59.08**	**180**	P	P	13 50 28.5	+0.4
	0.8nm,0.9s,baz=13,slow=19,SNR=5.6						
FINES	**FINESS Array B**	**145.46**	**339**	PKPbc	PKPdf	14 00 04.1	-1.4
	2.7nm,1.0s,baz=68,slow=0.7,SNR=3.5						

*ISCJB **19** 13:49:41.3±0.4, 39°.49S±0°.09×78°.2E±0°.1, h10km, mb4.5/19, MS4.7/10, Error ellipse: s-maj=12.6km s-min=11.4km az=162.4*
*IDC **19** 13:49:41.9±0.5, 39°.48S×78°.13E, h0km, mb4.3/16, mb1 4.4/16, mb1mx4.2/26, mbtmp4.3/16, MS4.7/10, Ms1 4.7/10, ms1mx4.5/36, Error ellipse: s-maj=17.4km s-min=15.6km az=161.0*
*NEIC **19** 13:49:43.1±0.3, 39°.51S×78°.14E, h10km, mb4.7/6, Error ellipse: s-maj=9.9km s-min=8.9km az=169.0*
*GCMT **19** 13:49:48.6±0.2, 39°.32S×77°.90E, h12km±1km, MW5.2, Moment Tensor Solution. s30,c35; s74,c108; Moment tensor: Scale 10^16^Nm; Mrr=0.83±.26; Mθθ=5.86±.24; Mφφ=6.69±.26; Mrθ=-3.92±.97; Mrφ=0.58±.20; Mθφ=3.26±.80; Best double couple: M0=8.10000×10^16^ NP1:φs=45.00000°, δ=51.00000°, λ=-7.00000°. NP2:φs=139.00000°, δ=85.00000°, λ=-141.00000°. Principal axes: T 7.9600, Plg22.0000°, Azm266.0000°; N 0.3400, Plg51.0000°, Azm146.0000°; P -8.3000, Plg31.0000°, Azm10.0000°; Data Used: G IU II IC CN.*

ISC 19 13:49:43.5±0.5, 39°.5S±0°.1×78°.2E±0°.1, h10km, n52, σ0=99/51, mb4.4/19, MS4.7/10, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**29.39**	**192**	P	**P**	**13 55 46.3**	**-0.2**
MAW	**Mawson**	**29.39**	**192**	P	**P**	**13 55 46.3**	**-0.2**
	2.8nm,0.6s,baz=37,slow=12,SNR=4.5						
MAW				LR	LR	14 05 29.6	
	comp=Z,1μm,18.1s,baz=14,slow=32						
OPO	**Ambohidratompo**	**33.92**	**299**	LR	LR	14 06 50.1	
	comp=Z,1μm,18.9s,baz=179,slow=30						
BOSA	**Boshof**	**44.59**	**267**	P	**P**	**13 57 55.0**	**-1.1**
BOSA	**Boshof**	**44.59**	**267**	P	**P**	**13 57 55.0**	**-1.1**
	3.1nm,0.7s,baz=110,slow=6.2,SNR=6.1						
BOSA				LR	LR	14 12 58.6	
	comp=Z,880nm,18.3s,baz=164,slow=31						

LBTB	**Lobatse**	**46.12**	**272**	*e*P	**P**	**13 58 07.2**	**-1.0**
LBTB	**Lobatse**	**46.12**	**272**	P	**P**	**13 58 06.8**	**-1.3**
	5.9nm,0.7s,baz=143,slow=7.1,SNR=8.1						
PSI	**Prapat**	**46.23**	**29**	LR	LR	14 13 53.4	
	comp=Z,497nm,18.8s,baz=200,slow=32						
ASAR	**Alice Springs**	**49.29**	**89**	P	**P**	**13 58 32.8**	**0.0**
ASAR	**Alice Springs**	**49.29**	**89**	P	**P**	**13 58 32.8**	**0.0**
	2.8nm,0.7s,baz=241,slow=5.8,SNR=36						
ASAR				LR	LR	14 17 17.0	
	comp=Z,1μm,19.1s,baz=215,slow=34						
LSZ	**Lusaka**	**49.75**	**284**	*e*P	**P**	**13 58 35.2**	**-1.2**
	15nm,0.9s						
LSZ	**Lusaka**	**49.75**	**284**	P	**P**	**13 58 36.5**	**+0.1**
	9.5nm,0.8s,baz=84,slow=11,SNR=6.9						
SNAA	**Sanae**	**50.25**	**204**	*e*P	**P**	**13 58 39.9**	**+0.5**
SNAA	**Sanae**	**50.25**	**204**	*e*P	**P**	**13 58 38.5**	**-1.0**
	4.0nm,1.0s						
SNAA	**Sanae**	**50.25**	**204**	P	**P**	**13 58 39.9**	**+0.5**
	0.9nm,0.9s,baz=106,slow=6.8,SNR=7.7						
VNDA	**Vanda**	**50.43**	**164**	*e*P	**P**	**13 58 40.4**	**-0.3**
	12nm,1.3s						
VNDA	**Vanda**	**50.43**	**164**	P	**P**	**13 58 41.0**	**+0.3**
	5.0nm,0.9s,baz=270,slow=8.3,SNR=16						
VNDA				LR	LR	14 18 55.3	
	comp=Z,873nm,18.1s,baz=270,slow=35						
QSPA	**South Pole Qui**	**50.65**	**180**	P	**P**	**13 58 43.0**	**+0.3**
QSPA	**South Pole Qui**	**50.65**	**180**	P	**P**	**13 58 42.9**	**+0.3**
	17nm,1.0s,baz=289,slow=4.6,SNR=19						
STKA	**Stephens Creek**	**51.15**	**102**	P	**P**	**13 58 45.8**	**-0.9**
STKA	**Stephens Creek**	**51.15**	**102**	P	**P**	**13 58 45.8**	**-0.9**
	1.7nm,0.8s,baz=8.8,slow=23,SNR=5.5						
STKA				LR	LR	14 15 57.7	
	comp=Z,757nm,21.6s,baz=205,slow=31						
SBA	**Scott Base**	**51.44**	**164**	*e*P	**P**	**13 58 47.5**	**-0.8**
	8.5nm,1.1s						
WRA	**Warramunga Arr**	**51.69**	**85**	P	**P**	**13 58 50.5**	**-0.4**
WRA	**Warramunga Arr**	**51.69**	**85**	P	**P**	**13 58 50.5**	**-0.4**
	9.0nm,0.7s,baz=234,slow=7.4,SNR=92						
WRA				LR	LR	14 18 02.8	
	comp=Z,994nm,20.9s,baz=220,slow=33						
WRAB	**Tennant Creek**	**51.70**	**85**	*e*P	**P**	**13 58 49.3**	**-1.7**
	31nm,1.3s						
VNA1	**Neumayer--Stat**	**52.15**	**205**	*e*P	**P**	**13 58 56.5**	**+2.9**
TSUM	**Tsumeb**	**55.51**	**273**	*e*P	**P**	**13 59 19.0**	**0.0**
	9.8nm,1.1s						
CMAR	**Chiang Mai Arr**	**60.85**	**23**	P	**P**	**13 59 56.2**	**+0.1**
CMAR	**Chiang Mai Arr**	**60.85**	**23**	P	**P**	**13 59 56.2**	**+0.1**
	1.3nm,0.8s,baz=216,slow=6.5,SNR=6.2						
RPZ	**Rata Peaks**	**65.92**	**128**	LR	LR	14 23 04.0	
	comp=Z,644nm,19.8s,baz=314,slow=30						
PMG	**Port Moresby**	**67.89**	**84**	P	**P**	**14 00 41.6**	**-0.8**
PMG	**Port Moresby**	**67.89**	**84**	P	**P**	**14 00 41.6**	**-0.8**
	18nm,0.9s,baz=22,slow=1.5,SNR=3.2						
PMG				LR	LR	14 29 53.1	
	comp=Z,306nm,18.2s,baz=21,slow=36						
MK31	**Makanchi Array**	**86.00**	**3**	*e*P	**P**	**14 02 22.0**	**-1.6**
MKAR	**Makanchi Array**	**86.00**	**3**	P	**P**	**14 02 22.2**	**-1.4**
MKAR	**Makanchi Array**	**86.00**	**3**	P	**P**	**14 02 22.2**	**-1.4**
	2.2nm,0.8s,baz=166,slow=5.4,SNR=11						
TORD	**Torodi Ar. Bea**	**88.10**	**289**	P	**P**	**14 02 34.8**	**+0.2**
TORD	**Torodi Ar. Bea**	**88.10**	**289**	P	**P**	**14 02 34.8**	**+0.2**
	0.5nm,0.8s,baz=85,slow=3.2,SNR=2.6						
KURBB	**Kurchatov Arra**	**89.76**	**0**	P	**P**	**14 02 41.3**	**-0.1**
	0.4nm,0.6s,baz=199,slow=4.4,SNR=3.0						
KURK	**Kurchatov**	**89.85**	**0**	P	**P**	**14 02 41.3**	**-0.6**
SONM	**Songino Array**	**90.52**	**19**	P	**P**	**14 02 45.6**	**+0.3**
SONM	**Songino Array**	**90.52**	**19**	P	**P**	**14 02 45.6**	**+0.3**
	0.3nm,0.4s,baz=179,slow=9.1,SNR=3.3						
PAX	**Paxson**	**145.04**	**33**	*e*PKPdf	**PKPbc**	**14 09 19.4**	**-0.2**
INK	**Inuvik**	**146.41**	**21**	PKPbc	**PKPbc**	**14 09 23.9**	**+0.4**
INK	**Inuvik**	**146.41**	**21**	PKPbc	**PKPbc**	**14 09 23.9**	**+0.4**
	1.7nm,0.8s,baz=262,slow=7.1,SNR=3.4						
YKA	**Yellowknife Ar**	**155.72**	**14**	PKPab	**PKPab**	**14 10 03.3**	**+0.3**
YKA				PP	**PP**	**14 13 42.4**	**+2.4**
YKA	**Yellowknife Ar**	**155.72**	**14**	PKPbc	PKPdf	14 09 45.2	+8.6
	0.4nm,0.8s,baz=336,slow=2.8,SNR=3.9						
YKA				PKPab	**PKPab**	**14 10 03.3**	**+0.3**
	0.2nm,0.7s,baz=344,slow=3.3,SNR=3.1						
YKA				PP	**PP**	**14 13 42.4**	**+2.4**
	0.1nm,0.4s,baz=343,slow=4.4,SNR=4.2						
NVAR	**Mina Array Bea**	**167.14**	**90**	PKPab	**PKPab**	**14 10 54.7**	**+0.6**
NVAR	**Mina Array Bea**	**167.14**	**90**	PKPab	**PKPab**	**14 10 54.7**	**+0.6**
	1.5nm,0.9s,baz=262,slow=4.3,SNR=6.3						
TXAR	**Lajitas Array**	**169.74**	**171**	PKP	**PKPdf**	**14 09 52.1**	**+0.6**
TXAR	**Lajitas Array**	**169.74**	**171**	PKP	**PKPdf**	**14 09 52.1**	**+0.6**
	0.3nm,0.8s,baz=169,slow=5.3,SNR=2.8						
PDAR	**Pinedale Array**	**173.33**	**58**	PKP	**PKPdf**	**14 09 54.2**	**+1.2**
PDAR	**Pinedale Array**	**173.33**	**58**	PKP	**PKPdf**	**14 09 54.2**	**+1.2**
	0.7nm,0.7s,baz=203,slow=1.1,SNR=4.3						

*BYKL **19** 13:54:17.1±0.9, 51°.15N×100°.09E*
MOS 19 13:54:18.8±1.7, 51°.27N×100°.09E, h12km, mb4.3/1, 3C-6D, Error ellipse: s-maj=30.4km s-min=20.5km az=53.2, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MOY	**Mondy**	**0.69**	**54**	⇓*i*PG	Pg	13 54 31.3	-1.1
MOY				*e*		13 54 41.9	
MOY				pmax	pmax		
	comp=Z,461nm,0.2s						
MOY				smax	smax		
	comp=N,959nm,0.4s						
MOY	**Mondy**	**0.69**	**54**	⇓*i*Pg	Pg	13 54 31.3	-1.1
	comp=N,240nm,0.4s						
MOY				⇓*i*Pg	Pg	13 54 31.3	-1.1
	comp=N,149nm,0.4s						
MOY				⇓*i*Pg	Pg	13 54 31.3	-1.1
	comp=N,456nm,0.4s						
MOY				*i* Sg	Sg	13 54 41.9	+0.2
MOY				Pmax			
	comp=N,455nm,0.4s						
MOY				Smax			
	comp=N,957nm,0.4s						
ORL	**Orlik**	**1.29**	**352**	*e*PG	Pn	13 54 42.5	-0.3
ORL				*e*		13 55 00.9	
ORL				pmax	pmax		
	comp=Z,126nm,0.3s						
ORL				smax	smax		
	comp=N,445nm,0.5s						
ORL	**Orlik**	**1.29**	**352**	⇑*i*Pg	Pn	13 54 42.5	-0.3
ORL				*e*Pb	Pb	13 54 43.3	+0.2
ORL				*e*		13 54 49.1	
ORL				*e*Sg	Sg	13 55 01.0	+0.4
ORL				max			
	comp=N,107nm,0.4s						
ORL				Smax			
	comp=N,256nm,0.3s						
ARS	**Arshan**	**1.60**	**65**	*e*PN	Pn	13 54 47.1	+0.1
ARS				*e*		13 55 08.5	
ARS				pmax	pmax		
	comp=Z,92nm,0.2s						
ARS				smax	smax		
	comp=E,843nm,0.6s						
ARS	**Arshan**	**1.60**	**65**	*e*Pg	Pn	13 54 47.0	0.0
ARS				*e*		13 54 48.4	
ARS				*e*		13 54 53.3	
ARS				*e*Sg	Sb	13 55 08.8	+0.3
ARS				*e*		13 55 12.1	
ARS				max			
	comp=E,107nm,0.5s						
ARS				max			
	comp=E,839nm,0.8s						
ZAK	**Zakamensk**	**2.21**	**112**	*e*PN	Pn	13 54 55.8	+0.4
ZAK				*e*		13 55 25.0	
ZAK				pmax	pmax		
	comp=Z,184nm,0.3s						
ZAK				smax	smax		
	comp=N,207nm,0.4s						
ZAK	**Zakamensk**	**2.21**	**112**	*e*Pn	Pn	13 54 53.9	-1.5
ZAK				⇓*i*Pg	Pb	13 54 56.1	-2.7
ZAK				*e*Sg	Sb	13 55 25.2	-1.0
ZAK				Pmax			
	comp=N,182nm,0.3s						
ZAK				Smax			
	comp=N,205nm,0.5s						
TLY	**Talaya**	**2.26**	**78**	⇑*i*PN	Pb	13 54 58.0	-1.6
TLY				*e*		13 55 28.2	
TLY				pmax	pmax		
	comp=Z,39nm,0.3s						
TLY				smax	smax		
	comp=N,167nm,0.4s						
TLY	**Talaya**	**2.26**	**78**	⇑*i*Pg	Pb	13 54 57.9	-1.7
TLY				*e*Sg	Sb	13 55 28.3	+0.8
TLY				Pmax			
	comp=N,40nm,0.4s						
TLY				Smax			
	comp=N,166nm,0.4s						
IRK	**Irkutsk**	**2.78**	**68**	*e*PN	Pb	13 55 06.8	-1.6
IRK				*e*		13 55 43.1	
IRK				pmax	pmax		
	comp=Z,142nm,0.2s						
IRK				smax	smax		
	comp=N,836nm,0.3s						
IRK	**Irkutsk**	**2.78**	**68**	*e*Pg	Pb	13 55 06.7	-1.7
IRK				*e*PgPg	PnPn	13 55 09.5	-0.8
IRK				*i* Sg	Sb	13 55 44.3	+2.0
IRK				Pmax			
	comp=N,142nm,0.2s						
IRK				Smax			
	comp=N,830nm,0.4s						
LSTR	**Listvyanka**	**3.02**	**77**	*e*	Pb	13 55 09.6	-2.9
LSTR				*e*Pg	Pn	13 55 11.0	+4.6
LSTR				*e*		13 55 16.6	
LSTR				*i* Sg	Sb	13 55 50.9	+1.6
LSTR				Pmax			
	comp=N,6.0nm,0.5s						
LSTR				Smax			
	comp=N,101nm,1.5s						
TRG	**Tyrgan**	**4.14**	**66**	*e*	Pg	13 56 17.7	+39
TRG				*e*Sg	Sb	13 56 25.4	+3.6
TRG				Smax			
	comp=N,105nm,0.6s						
KAB	**Kabansk**	**4.16**	**77**	Sg	Sb	13 56 25.8	+3.6
KAB				*e*		13 56 30.5	
KAB				*e*		13 56 42.4	
KAB				max			
	comp=N,436nm,1.8s						
UUDB	**Ulan-Yde**	**4.76**	**80**	*e*Pg	Pb	13 55 42.3	+0.1
UUDB				*e*		13 55 44.5	
UUDB				*e*Sg	Sb	13 56 44.6	+5.1
UUDB				max			
	comp=N,5.0nm,0.5s						
UUDB				Smax			
	comp=N,46nm,1.4s						
OGRR	**Ongureny**	**5.17**	**60**	*e*	Pb	13 55 47.1	-2.0
OGRR				*e*Pg	Pg	13 55 50.3	-7.5
OGRR				*e*		13 56 56.5	
OGRR				*e*Sg	Sg	13 56 58.1	-6.7
OGRR				Pmax			
	comp=N,4.0nm,0.1s						
OGRR				Smax			
	comp=N,72nm,0.9s						
ULN	**Ulaanbaatar**	**5.67**	**124**	⇓*i*Pg	Pb	13 55 57.6	-0.2
ULN				*e*Sg	Sb	13 57 10.5	+4.7
ULN				*e*		13 57 12.8	
MXMB	**Maximikha**	**5.68**	**66**	*e*Pg	Pb	13 55 59.5	+1.7
MXMB				*e*Sg	Sg	13 57 13.5	-7.6
MXMB				Pmax			
	comp=N,8.0nm,0.1s						
MXMB				Smax			
	comp=N,149nm,1.0s						
SYVR	**Suvo**	**6.51**	**65**	*e*Sg	Sb	13 57 38.6	+8.9
SYVR				Smax			
	comp=N,58nm,0.1s						
NIZ	**Nizh Angarsk**	**7.22**	**48**	*e*	Pg	13 57 20.4	+43
NIZ				*e*Sg	Sg	13 58 03.1	-7.3
NIZ				Smax			
	comp=N,45nm,0.7s						
YLYR	**Ulyunkhan**	**7.58**	**57**	*e*	Pb	13 56 25.7	-4.5
YLYR				*e*Pg	Pg	13 56 33.7	-10
YLYR				*e*		13 57 41.9	
YLYR				*e*Sg	Sg	13 58 13.2	-8.9
YLYR				Pmax			
	comp=N,2.0nm,0.5s						
YLYR				Smax			
	comp=N,43nm,1.7s						
KMO	**Kumora**	**8.07**	**51**	*e*Sg	Sg	13 58 29.4	-8.2
KMO				Smax			
	comp=N,55nm,0.7s						
YOA	**Uoyan**	**8.45**	**50**	*e*Sg	Sg	13 58 39.2	-10
YOA				Smax			
	comp=N,152nm,1.7s						
UKT	**Uakit**	**9.13**	**57**	*e*Sg	Sn	13 59 02.1	+49
UKT				Smax			
	comp=N,12nm,2.6s						
NLYR	**Nelyaty**	**10.59**	**54**	*e*Sg	Sn	13 59 43.5	+55
NLYR				*e*		13 59 50.5	
NLYR				max			
	comp=N,23nm,1.6s						
CRS	**Chara**	**12.06**	**55**	*e*Sg		14 00 32.6	
CRS				Smax			
	comp=N,38nm,1.3s						
TUP	**Tupik**	**12.41**	**67**	*e*		13 59 41.2	
TUP				*e*Sg		14 00 44.2	
TUP				Smax			
	comp=N,13nm,2.2s						

*KRSC **19** 13:58:22.0±1.2, 52°.62N×156°.67E, h280km±39km, ML3.9*
*IDC **19** 13:58:22.8±0.7, 52°.93N×156°.46E, h274km±14km, mb2.8/4, mb1 3.0/5, mb1mx2.7/26, mbtmp2.9/5, Error ellipse: s-maj=54.6km s-min=21.2km az=61.0*
*ISCJB **19** 13:58:23.4±0.5, 52°.61N±0°.07×156°.9E±0°.1, h278km±4km, mb3.1/4, Error ellipse: s-maj=16.5km s-min=7.4km az=35.4*

ISC 19 13:58:23.0±0.9, 52°.68N±0°.09×156°.80E±0°.09, h278km±6km, n42, σ1=93/57, mb3.1/4, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
APC	**Apacha**	**0.33**	**42**	*i* P	**Pn**	**13 58 58.7**	**+0.1**
APC				*i* S	**S**	**13 59 25.4**	**-1.4**
MIPR	**Malaya Ipel'ka**	**0.41**	**183**	*i* P	**Pn**	**13 58 59.1**	**+0.1**
MIPR				*e*S	**S**	**13 59 26.2**	**-1.2**
PETK	**Petropavlovsk-**	**0.69**	**52**	P	**Pn**	**13 58 59.8**	**+0.1**
	23nm,0.3s,baz=249,slow=8.8,SNR=748						
PETK				S	**S**	**13 59 28.5**	**-0.1**
	baz=104,slow=18,SNR=2.7						
ASAK	**Asacha**	**0.74**	**114**	P	**Pn**	**13 59 00.9**	**+0.9**
ASAK				*i* S	**S**	**13 59 29.3**	**+0.1**
GRL	**Gorelyy**	**0.79**	**99**	P	**Pn**	**13 59 01.4**	**+1.2**
MTVR	**Mutnovka**	**0.87**	**103**	*e*P	**Pn**	**13 59 01.4**	**+0.8**
MTVR				*e*S	**S**	**13 59 30.3**	**0.0**
RUS	**Russkaya**	**1.08**	**103**	P	**Pn**	**13 59 01.7**	**+0.3**
RUS				*i* S	**S**	**13 59 30.7**	**-1.0**
PET	**Petropavlovsk**	**1.18**	**72**	*i*

0.5nm,0.3s,baz=56,slow=11,SNR=7.4
KURBB **Kurchatov Arra 46.34 300** P **P** **14 06 19.2 -2.1**
0.2nm,0.4s,baz=62,slow=8.5,SNR=2.3
MKAR **Makanchi Array 46.52 294** P P 14 06 19.9 -2.9
0.2nm,0.6s,baz=56,slow=7.2,SNR=2.9
WRA **Warramunga Arr 74.91 202** P **P** **14 09 34.1 +0.7**
0.4nm,0.5s,baz=20,slow=6.1,SNR=10.0
ASAR **Alice Springs 78.60 201** P **P** **14 09 55.4 +1.4**
0.5nm,0.5s,baz=15,slow=5.1,SNR=13

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*ISCJB **19** 13:59:20.6±0.3,43°.11N±0°.02×0°.01E±0°.02,h14km±2km, Error ellipse: s-maj=3.9km s-min=2.4km az=9.8*
*CSEM **19** 13:59:21.8±0.1,43°.07N×0°.01W,h8km,ML2.6/13,Error ellipse: s-maj=2.7km s-min=1.6km az=8.0*
*MDD **19** 13:59:23.0±0.2,43°.03N×0°.04W,h0km,mbLg2.3/24,Error ellipse: s-maj=2.7km s-min=1.4km az=9.0*
*LDG **19** 13:59:22.2±0.1,43°.12N×0°.00W,h2km,Md2.9/2,Ml2.9/13, Error ellipse: s-maj=2.3km s-min=1.9km az=171.0*
*STR **19** 13:59:22.0±0.1,42°.99N×0°.03W,h5km,Ml2.9,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 19 13:59:22.3±0.8,43°.05N±0°.02×0°.02W±0°.01,h11km±4km, n103,σ1§37/148,1C,Pyrenees

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LABF	**Labassere**	**0.07**	**88**	Pg	**Pg**	**13 59 24.7**	**-0.1**
LABF				Sg	**Sg**	**13 59 26.4**	**-0.2**
LABF	**Labassere**	**0.07**	**88**	Pg	**Pg**	**13 59 24.7**	**-0.1**
LABF				Sg	**Sg**	**13 59 26.4**	**-0.2**
VIEF	**Viey**	**0.17**	**169**	Pg	**Pg**	**13 59 25.7**	**-0.4**
VIEF				Sg	**Sg**	**13 59 26.6**	**-2.1**
VIEF	**Viey**	**0.17**	**169**	Pg	**Pg**	**13 59 25.7**	**-0.4**
VIEF				Sg	**Sg**	**13 59 26.6**	**-2.1**
VIEF				Lg	Lg	13 59 28.2	
EPF	**Esparros**	**0.27**	**93**	*e*Pg	**Pg**	**13 59 27.7**	**-0.1**
	SNR=1.0						
EPF				*e*Sg	**Sg**	**13 59 30.5**	**-0.9**
	184nm,0.2s						
EPF	**Esparros**	**0.27**	**93**	Pg	**Pg**	**13 59 27.7**	**-0.1**
EPF				Lg	Lg	13 59 30.5	
	92nm,0.2s						
REYF	**Montagne du Re**	**0.27**	**275**	Pg	**Pg**	**13 59 27.5**	**-0.5**
REYF				Sg	**Sg**	**13 59 31.8**	**+0.1**
REYF	**Montagne du Re**	**0.27**	**275**	Pg	**Pg**	**13 59 27.5**	**-0.5**
REYF				Lg	Lg	13 59 31.4	
RESF	**Ens**	**0.35**	**132**	Pg	**Pg**	**13 59 29.1**	**-0.3**
RESF				Sg	**Sg**	**13 59 34.0**	**-0.2**
RESF	**Ens**	**0.35**	**132**	Pg	**Pg**	**13 59 29.1**	**-0.3**
RESF				Sg	**Sg**	**13 59 34.0**	**-0.2**
EBIE	**Bielsa**	**0.38**	**161**	⇑Pg	**Pg**	**13 59 29.5**	**-0.4**
	28nm,0.1s,SNR=18						
EBIE				Lg	Lg	13 59 34.4	
	205nm,0.1s,SNR=144						
EBIE	**Bielsa**	**0.38**	**161**	Pg	**Pg**	**13 59 29.5**	**-0.4**
	28nm,0.1s,SNR=18						
EBIE				Lg	Lg	13 59 34.4	
	205nm,0.1s,SNR=144						
ETSF	**Etsaut**	**0.42**	**250**	*e*Pg	**Pg**	**13 59 30.2**	**-0.4**
	SNR=1.0						
ETSF				*e*Sg	**Sg**	**13 59 35.4**	**-0.9**
	222nm,0.3s						
ETSF	**Etsaut**	**0.42**	**250**	Pg	**Pg**	**13 59 30.2**	**-0.4**
ETSF				*e*Sg	**Sg**	**13 59 35.4**	**-0.9**
	111nm,0.3s						
FDAF	**Les Forges d'A**	**0.46**	**241**	Pg	**Pg**	**13 59 30.9**	**-0.5**
FDAF				Lg	Lg	13 59 36.9	
MELF	**Melles**	**0.60**	**107**	Pg	**Pg**	**13 59 33.3**	**-0.6**
MELF				Lg	Lg	13 59 41.9	
ORDF	**Ordiarp**	**0.69**	**284**	Pg	**Pg**	**13 59 35.5**	**-0.2**
ORDF				Sg	**Sb**	**13 59 45.6**	**-0.2**
ORDF	**Ordiarp**	**0.69**	**284**	Pg	**Pg**	**13 59 35.4**	**-0.2**
ORDF				Lg	Lg	13 59 44.8	
ORDF				Sg	**Sb**	**13 59 45.6**	**-0.2**
MLS	**Moulis**	**0.82**	**96**	Lg	Lg	13 59 49.8	
SJPF	**Ste Jean**	**0.89**	**275**	*e*Pn	**Pg**	**13 59 39.2**	**-0.2**
	SNR=1.0						
SJPF				*e*Sg	**Sb**	**13 59 51.6**	**+0.1**
	13nm,0.2s						
SJPF	**Ste Jean**	**0.89**	**275**	Pn	**Pg**	**13 59 39.2**	**-0.2**
SJPF				*e*Sg	**Sb**	**13 59 51.6**	**+0.1**
	6.7nm,0.2s						
SJPF				Lg	Lg	13 59 51.6	
	6.6nm,0.2s						
IELO	**Elcoad**	**0.92**	**258**	Pg	**Pg**	**13 59 39.5**	**-0.4**
	3.0nm,0.1s,SNR=7.9						
IELO				Lg	Lg	13 59 51.8	
	7.4nm,0.1s,SNR=7.9						
IELO	**Elcoad**	**0.92**	**258**	Pg	**Pg**	**13 59 39.5**	**-0.4**
	3.0nm,0.1s,SNR=7.9						
IELO				Lg	Lg	13 59 51.8	
	7.4nm,0.1s,SNR=7.9						
CTRE	**Tremp**	**0.93**	**141**	Pg	**Pb**	**13 59 40.0**	**-0.4**
CTRE				Lg	Lg	13 59 52.6	
	30nm,0.2s						
CTRE	**Tremp**	**0.93**	**141**	Pg	**Pb**	**13 59 40.0**	**-0.4**
CTRE				Lg	Lg	13 59 52.6	
	30nm,0.2s						
OSSF	**Osses**	**0.93**	**283**	Pg	**Pg**	**13 59 39.1**	**-1.2**
OSSF				Sg	**Sg**	**13 59 52.4**	**0.0**
OSSF	**Osses**	**0.93**	**283**	Pg	**Pg**	**13 59 39.8**	**-0.5**
OSSF				Lg	Lg	13 59 50.8	
OSSF				Sg	**Sg**	**13 59 52.4**	**0.0**
IEPA	**Eparoz**	**0.95**	**254**	Pg	**Pg**	**13 59 40.3**	**-0.4**
	1.9nm,0.1s,SNR=7.9						
IEPA				Lg	Lg	13 59 52.8	
	33nm,0.2s,SNR=7.9						
IEPA	**Eparoz**	**0.95**	**254**	Pg	**Pg**	**13 59 40.3**	**-0.4**
	1.9nm,0.1s,SNR=7.9						
IEPA				Lg	Lg	13 59 52.8	
	33nm,0.2s,SNR=7.9						
CEST	**Esterri de Car**	**1.04**	**115**	Pg	**Pg**	**13 59 41.6**	**-0.7**
CEST				Lg	Lg	13 59 56.6	
	25nm,0.2s						
CEST	**Esterri de Car**	**1.04**	**115**	Pg	**Pg**	**13 59 41.6**	**-0.7**
CEST				Lg	Lg	13 59 56.6	
	25nm,0.2s						
CSOR	**Sort**	**1.08**	**128**	Pg	**Pg**	**13 59 42.5**	**-0.6**
	0.9nm,0.1s,SNR=28						
CSOR				Lg	Lg	13 59 56.9	
	21nm,0.3s						
CSOR	**Sort**	**1.08**	**128**	Pg	**Pg**	**13 59 42.5**	**-0.6**
	0.9nm,0.1s,SNR=28						
CSOR				Lg	Lg	13 59 56.9	
	21nm,0.3s						
EALK	**Alkurruntz**	**1.10**	**280**	Pg	**Pg**	**13 59 43.0**	**-0.5**
	0.5nm,0.1s,SNR=13						
EALK				Lg	Lg	13 59 58.6	
	5.1nm,0.1s						
EALK	**Alkurruntz**	**1.10**	**280**	Pg	**Pg**	**13 59 43.0**	**-0.5**
	0.5nm,0.1s,SNR=13						
EALK				Lg	Lg	13 59 58.6	
	5.1nm,0.1s						
ELIZ	**Elizondo**	**1.11**	**277**	Pg	**Pb**	**13 59 43.5**	**0.0**
	0.7nm,0.1s,SNR=8.8						
ELIZ				Lg	Lg	13 59 59.3	
	14nm,0.2s,SNR=9.1						
ELIZ	**Elizondo**	**1.11**	**277**	Pg	**Pb**	**13 59 43.5**	**0.0**
	0.7nm,0.1s,SNR=8.8						
ELIZ				Lg	Lg	13 59 59.3	
	14nm,0.2s,SNR=9.1						
IUNC	**Unciti**	**1.12**	**256**	Pg	**Pb**	**13 59 43.7**	**0.0**
	1.6nm,0.1s,SNR=4.0						
IUNC				Lg	Lg	13 59 59.8	
	25nm,0.2s,SNR=7.9						
IUNC	**Unciti**	**1.12**	**256**	Pg	**Pb**	**13 59 43.7**	**0.0**
	1.6nm,0.1s,SNR=4.0						
IUNC				Lg	Lg	13 59 59.8	
	25nm,0.2s,SNR=7.9						
IUSE	**Utxeti**	**1.12**	**265**	Pg	**Pg**	**13 59 43.3**	**-0.6**
	9.8nm,0.1s,SNR=7.9						
IUSE				Lg	Lg	13 59 58.6	
	29nm,0.2s,SNR=7.9						
IUSE	**Utxeti**	**1.12**	**265**	Pg	**Pg**	**13 59 43.3**	**-0.6**
	9.8nm,0.1s,SNR=7.9						
IUSE				Lg	Lg	13 59 58.6	
	29nm,0.2s,SNR=7.9						
GRBF	**Gourbit**	**1.16**	**100**	Pg	**Pb**	**13 59 44.0**	**-0.4**
GRBF				Lg	Lg	13 59 58.6	
EARA	**Aranguren**	**1.18**	**257**	Pg	**Pn**	**13 59 44.6**	**-0.1**
	0.8nm,0.0s,SNR=4.0						
EARA				Lg	Lg	14 00 01.0	
	26nm,0.2s,SNR=7.9						
EARA	**Aranguren**	**1.18**	**257**	Pg	**Pn**	**13 59 44.6**	**-0.1**
	0.8nm,0.0s,SNR=4.0						
EARA				Lg	Lg	14 00 01.0	
	26nm,0.2s,SNR=7.9						
CORG	**Organya**	**1.28**	**129**	Pg	**Pg**	**13 59 46.5**	**-0.4**
CORG	**Organya**	**1.28**	**129**	Pg	**Pg**	**13 59 46.5**	**-0.4**
CAVN	**Les Avellanes**	**1.29**	**154**	Pg	**Pb**	**13 59 46.5**	**-0.1**
CAVN	**Les Avellanes**	**1.29**	**154**	Pg	**Pb**	**13 59 46.5**	**-0.1**
ESAC	**San Caprasio**	**1.36**	**194**	Pg	**Pg**	**13 59 48.4**	**-0.1**
	48nm,0.3s,SNR=18						
ESAC				Lg	Lg	14 00 06.5	
	61nm,0.1s,SNR=5.0						
ESAC	**San Caprasio**	**1.36**	**194**	Pg	**Pg**	**13 59 48.4**	**-0.1**
	48nm,0.3s,SNR=18						
ESAC				Lg	Lg	14 00 06.5	
	61nm,0.1s,SNR=5.0						
CLLI	**Llivia**	**1.57**	**110**	Pg	**Pg**	**13 59 52.9**	**+0.4**
	0.4nm,0.1s,SNR=7.3						
CLLI				Lg	Lg	14 00 14.0	
	12nm,0.2s,SNR=14						
CLLI	**Llivia**	**1.57**	**110**	Pg	**Pg**	**13 59 52.9**	**+0.4**
	0.4nm,0.1s,SNR=7.3						
CLLI				Lg	Lg	14 00 14.0	
	12nm,0.2s,SNR=14						
EMIR	**Miracle**	**1.61**	**134**	Pn	**Pb**	**13 59 52.2**	**+0.2**
	0.9nm,0.1s,SNR=14						
EMIR				Pg	**Pg**	**13 59 53.7**	**+0.5**
	2.6nm,0.1s,SNR=7.9						
EMIR				Lg	Lg	14 00 15.8	
	5.1nm,0.1s						
EMIR	**Miracle**	**1.61**	**134**	Pn	**Pb**	**13 59 52.2**	**+0.2**
	0.9nm,0.1s,SNR=14						
VALF	**Valcebollere**	**1.63**	**113**	Pg	**Pb**	**13 59 52.5**	**0.0**
VALF				Sg	**Sg**	**14 00 14.3**	**-0.5**
VALF	**Valcebollere**	**1.63**	**113**	Pg	**Pb**	**13 59 52.5**	**0.0**
VALF				Sg	**Sg**	**14 00 14.3**	**-0.5**
MTLF	**Montolieu**	**1.66**	**79**	*e*Pn	**Pn**	**13 59 51.2**	**-0.1**
	SNR=1.0						
MTLF	**Montolieu**	**1.66**	**79**	*e*Pg	**Pb**	**13 59 53.2**	**+0.3**
	SNR=1.0						
MTLF				*e*Sg	**Sn**	**14 00 12.8**	**+0.2**
	9.7nm,0.2s,SNR=1.0						
MTLF	**Montolieu**	**1.66**	**79**	Pn	**Pn**	**13 59 51.2**	**-0.1**
MTLF	**Montolieu**	**1.66**	**79**	Pg	**Pb**	**13 59 53.2**	**+0.3**
MTLF				*e*Sg	**Sn**	**14 00 12.8**	**+0.2**
	4.8nm,0.2s,SNR=1.0						
EPOB	**Poblet**	**1.88**	**154**	Pn	**Pb**	**13 59 56.7**	**+0.1**
	1.9nm,0.1s,SNR=16						
EPOB				Sn	**Sn**	**14 00 18.2**	**+0.2**
	1.4nm,0.1s,SNR=7.9						
EPOB				Lg	Lg	14 00 21.3	
	8.2nm,0.1s,SNR=13						
EPOB	**Poblet**	**1.88**	**154**	Pn	**Pb**	**13 59 56.7**	**+0.1**
	1.9nm,0.1s,SNR=16						
EPOB				Sn	**Sn**	**14 00 18.2**	**+0.2**
	1.4nm,0.1s,SNR=7.9						
EPOB				Lg	Lg	14 00 21.3	
	8.2nm,0.1s,SNR=13						
LFF	**La Frestale**	**1.97**	**16**	*e*Pn	**Pn**	**13 59 56.3**	**+0.7**
	SNR=1.0						
LFF				*e*Sg	**Sn**	**14 00 21.4**	**+1.2**
	22nm,0.3s,SNR=1.0						
LFF	**La Frestale**	**1.97**	**16**	Pn	**Pn**	**13 59 56.3**	**+0.7**
LFF				*e*Sg	**Sn**	**14 00 21.4**	**+1.2**
	11nm,0.3s,SNR=1.0						
ERTA	**Horta de San J**	**2.10**	**173**	Pn	**Pn**	**13 59 58.2**	**+0.8**
	0.6nm,0.1s,SNR=7.9						
ERTA				Sn	**Sn**	**14 00 23.7**	**+0.1**
	3.1nm,0.2s,SNR=7.9						
ERTA				Lg	Lg	14 00 28.1	
	8.0nm,0.2s,SNR=26						
ERTA	**Horta de San J**	**2.10**	**173**	Pn	**Pn**	**13 59 58.2**	**+0.8**
	0.6nm,0.1s,SNR=7.9						
ERTA				Sn	**Sn**	**14 00 23.7**	**+0.1**
	3.1nm,0.2s,SNR=7.9						
ERTA				Lg	Lg	14 00 28.1	
	8.0nm,0.2s,SNR=26						
EJON	**La Jonquera**	**2.22**	**105**	Pg	**Pg**	**14 00 04.7**	**-0.2**
	0.5nm,0.1s,SNR=7.9						
EJON				Lg	Lg	14 00 34.3	
	2.0nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**2.22**	**105**	Pg	**Pg**	**14 00 04.7**	**-0.2**
	0.5nm,0.1s,SNR=7.9						
EJON				Lg	Lg	14 00 34.3	
	2.0nm,0.1s,SNR=7.9						
CFON	**Fontmartina**	**2.23**	**124**	Pn	**Pb**	**14 00 00.8**	**-1.7**
	0.3nm,0.1s,SNR=7.9						
CFON				Pg	**Pg**	**14 00 04.2**	**-0.8**
	2.6nm,0.1s,SNR=7.5						
CFON				Lg	Lg	14 00 32.3	
	41nm,0.3s,SNR=12						
CFON	**Fontmartina**	**2.23**	**124**	Pn	**Pb**	**14 00 00.8**	**-1.7**
	0.3nm,0.1s,SNR=7.9						
CAF	**Calviac**	**2.41**	**38**	*e*Pg	**Pb**	**14 00 06.3**	**+0.7**
	SNR=1.0						
CAF				*e*Sn	**Sn**	**14 00 26.2**	**-4.9**
	SNR=1.0						
CAF				*e*Sg	**Sb**	**14 00 35.3**	**0.0**
	7.1nm,0.2s,SNR=1.0						
CAF	**Calviac**	**2.41**	**38**	*e*Pg	**Pb**	**14 00 06.3**	**+0.7**
	SNR=1.0						
CAF				*e*Sn	**Sn**	**14 00 26.2**	**-4.9**
	SNR=1.0						
CAF				*e*Sg	**Sb**	**14 00 35.3**	**0.0**
	3.5nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.51**	**26**	*e*Pg	**Pg**	**14 00 09.3**	**-1.2**
	SNR=1.0						
RJF				*e*Sg	**Sb**	**14 00 38.2**	**-0.1**
	6.7nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.51**	**26**	*e*Pg	**Pg**	**14 00 09.3**	**-1.2**
	SNR=1.0						
RJF				*e*Sg	**Sb**	**14 00 38.2**	**-0.1**
	3.3nm,0.2s,SNR=1.0						
ETOR	**Torete**	**2.69**	**215**	Pn	**Pn**	**14 00 06.6**	**+1.0**
	3.7nm,0.1s,SNR=7.0						
ETOR				Sn	**Sn**	**14 00 38.2**	**0.0**
	7.8nm,0.2s,SNR=5.8						
ETOR				Lg	Lg	14 00 48.3	
	15nm,0.2s,SNR=5.8						
ETOR	**Torete**	**2.69**	**215**	Pn	**Pn**	**14 00 06.6**	**+1.0**
	3.7nm,0.1s,SNR=7.0						
ETOR				Sn	**Sn**	**14 00 38.2**	**0.0**
	7.8nm,0.2s,SNR=5.8						
ETOR				Lg	Lg	14 00 48.3	
	15nm,0.2s,SNR=5.8						
EMOS	**Mosqueruela**	**2.70**	**187**	Pn	**Pn**	**14 00 07.2**	**+1.4**
	0.6nm,0.1s,SNR=7.9						
EMOS				Pg	**Pg**	**14 00 12.5**	**-1.5**
	0.4nm,0.1s,SNR=7.9						
EMOS				Sn	**Sn**	**14 00 37.2**	**-1.3**
	0.4nm,0.1s,SNR=7.9						
EMOS				Lg	Lg	14 00 45.9	
	1.9nm,0.1s,SNR=7.9						
EMOS	**Mosqueruela**	**2.70**	**187**	Pn	**Pn**	**14 00 07.2**	**+1.4**
	0.6nm,0.1s,SNR=7.9						
LASF	**Ste Croix**	**3.00**	**69**	*e*Sg	**Sb**	**14 00 53.9**	**+1.6**
	4.6nm,0.3s,SNR=1.0						
LASF	**Ste Croix**	**3.00**	**69**	*e*Sg	**Sb**	**14 00 53.9**	**+1.6**
	2.3nm,0.3s,SNR=1.0						
MFF	**Saint Martin d**	**3.56**	**359**	*e*Pn	**Pn**	**14 00 15.6**	**-1.8**
	SNR=1.0						
MFF	**Saint Martin d**	**3.56**	**359**	*e*Pg	**Pb**	**14 00 26.0**	**+0.8**
MFF				*e*Sg	**Sb**	**14 01 11.2**	**+2.9**
	2.7nm,0.2s,SNR=1.0						
MFF	**Saint Martin d**	**3.56**	**359**	*e*Pn	**Pn**	**14 00 15.6**	**-1.8**
	SNR=1.0						
MFF	**Saint Martin d**	**3.56**	**359**	*e*Pg	**Pb**	**14 00 26.0**	**+0.8**
MFF				*e*Sg	**Sb**	**14 01 11.2**	**+2.9**
	1.4nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.61**	**25**	*e*Pg	**Pb**	**14 00 27.5**	**+1.4**
TCF				*e*Sg	**Sb**	**14 01 12.4**	**+2.5**
	5.7nm,0.3s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.61**	**25**	*e*Pg	**Pb**	**14 00 27.5**	**+1.4**
TCF				*e*Sg	**Sb**	**14 01 12.4**	**+2.5**
	2.8nm,0.3s,SNR=1.0						
EARI	**Arriondas**	**3.81**	**276**	Pn	**Pn**	**14 00 22.9**	**+2.1**
	0.3nm,0.2s,SNR=4.0						
EARI				Sn	**Sn**	**14 01 05.0**	**-0.5**
	0.4nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**3.81**	**276**	Pn	**Pn**	**14 00 22.9**	**+2.1**
	0.3nm,0.2s,SNR=4.0						
EARI				Sn	**Sn**	**14 01 05.0**	**-0.5**
	0.4nm,0.2s,SNR=7.9						
VIVF	**Saint-Julien-l**	**3.84**	**60**	*e*Sg	**Sb**	**14 01 20.0**	**+3.5**
	2.7nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**3.84**	**60**	*e*Sg	**Sb**	**14 01 20.0**	**+3.5**
	1.4nm,0.3s,SNR=1.0						
ETOS	**Mallorca**	**3.91**	**146**	Sn	**Sn**	**14 01 07.5**	**-0.5**
	0.3nm,0.1s,SNR=4.0						
ETOS	**Mallorca**	**3.91**	**146**	Sn	**Sn**	**14 01 07.5**	**-0.5**
	0.3nm,0.1s,SNR=4.0						
GUD	**Guadarrama**	**3.91**	**234**	Pn	**Pn**	**14 00 23.3**	**+0.9**
	0.6nm,0.2s,SNR=7.9						
GUD				Sn	**Sn**	**14 01 07.1**	**-1.2**
	0.3nm,0.1s,SNR=6.7						
GUD				Lg	Lg	14 01 23.5	
	1.1nm,0.3s,SNR=7.9						
GUD	**Guadarrama**	**3.91**	**234**	Pn	**Pn**	**14 00 23.3**	**+0.9**
	0.6nm,0.2s,SNR=7.9						
GUD				Sn	**Sn**	**14 01 07.1**	**-1.2**
	0.3nm,0.1s,SNR=6.7						
GUD				Lg	Lg	14 01 23.5	
	1.1nm,0.3s,SNR=7.9						
BGF	**Bois d'Agland**	**4.06**	**29**	*e*Pg	**Pb**	**14 00 36.0**	**+2.2**
BGF				*e*Sg	**Sb**	**14 01 26.9**	**+4.1**
	16nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**4.06**	**29**	*e*Pg	**Pb**	**14 00 36.0**	**+2.2**
BGF				*e*Sg	**Sb**	**14 01 26.9**	**+4.1**
	8.2nm,0.4s,SNR=1.0						
LOR	**Lormes**	**5.04**	**32**	*e*Sg	**Sg**	**14 02 00.8**	**-3.0**
	3.4nm,0.3s,SNR=1.0						
LOR	**Lormes**	**5.04**	**32**	*e*Sg	**Sg**	**14 02 00.8**	**-3.0**
	1.7nm,0.3s,SNR=1.0						
ECAL	**Calabor**	**5.09**	**260**	Sn	**Sn**	**14 01 36.4**	**-0.8**
	1.1nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**5.09**	**260**	Sn	**Sn**	**14 01 36.4**	**-0.8**
	1.1nm,0.2s,SNR=7.9						
QUIF	**Quistinic**	**5.35**	**337**	*e*Pn	Pn	14 00 38.4	-3.5
	SNR=1.0						
QUIF	**Quistinic**	**5.35**	**337**	*e*Pn	Pn	14 00 38.4	-3.5
	SNR=1.0						
MEZF	**Maizieres J'vi**	**6.51**	**31**	*e*Sn	**Sn**	**14 02 06.8**	**-5.2**
	7.7nm,0.4s,SNR=1.0						

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*ISCJB **19** 13:59:59.0±0.6,36°.36N±0°.04×70°.98E±0°.08,h114km, mb3.6/7,Error ellipse: s-maj=9.9km s-min=4.7km az=160.5*
*IDC **19** 14:00:00.4±4.7,36°.28N×71°.13E,h125km±40km,mb3.4/8, mb1 3.5/13,mb1mx3.3/31,mbtmp3.4/13,Error ellipse: s-maj=31.3km s-min=18.7km az=30.0*
*NNC **19** 14:00:08.1±1.8,36°.86N×70°.83E,h161km±19km,mb3.3, mpv4.5,Error ellipse: s-maj=15.6km s-min=11.8km az=19.0*

ISC 19 14:00:01.4±0.7,36°.49N±0°.05×71°.1E±0°.1,h114km,n40, σ1§93/36,mb3.5/7,5C-3D,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.74**	**166**	⇑P	Pn	14 00 47.2	+2.9
CEP				S	**Sn**	**14 01 21.0**	**+3.7**
CHCP	**Chirah Chowk**	**3.34**	**147**	P	Pn	14 00 55.1	+3.0
THW	**Thamme Wali**	**3.73**	**172**	P	**Pn**	**14 00 59.5**	**+2.2**
SARP	**Sargodha**	**4.74**	**164**	P	**Pn**	**14 01 11.9**	**+1.1**
AML	**Almayashu**	**5.98**	**19**	P	**Pn**	**14 01 29.9**	**+2.1**
	SNR=50						
UCH	**Uchtor**	**6.31**	**24**	P	**Sn**	**14 02 42.4**	**-0.9**
	SNR=6.2						
KZA	**Kyzart**	**6.44**	**29**	P	**Pn**	**14 01 36.8**	**+2.7**
	SNR=7.3						
KK31	**Karatay Array**	**6.62**	**356**	⇓P	**Pn**	**14 01 38.1**	**+2.0**
	19nm,0.3s,baz=181,slow=13,SNR=279						
KK31				⇓S	**Sn**	**14 02 49.3**	**-0.9**
	11nm,0.5s,baz=184,slow=22,SNR=14						
AAK	**Ala-Archa**	**6.67**	**22**	P	Pn	14 01 42.4	+5.4
	SNR=6.1						
AAK	**Ala-Archa**	**6.67**	**22**	P	**Pn**	**14 01 40.0**	**+3.1**
	3.5nm,0.3s,baz=117,slow=7.0,SNR=13						
AAK				S	**Sn**	**14 02 52.8**	**+1.3**
	2.7nm,0.3s,baz=329,slow=23,SNR=12						
KBK	**Karagaybulak**	**6.84**	**25**	P	Pn	14 01 44.5	+5.2
	SNR=6.7						
CHMS	**Chumysh**	**7.08**	**22**	P	Pn	14 01 46.9	+4.5
	SNR=9.0						
USP	**Ospenovka**	**7.25**	**20**	P	**Pn**	**14 01 47.0**	**+2.2**
	SNR=5.6						
TKM2	**Tokmak 2**	**7.30**	**27**	⇑P	Pn	14 01 49.4	+3.9
	13nm,0.6s						
TKM2				⇑S	**Sn**	**14 03 09.4**	**+2.6**
	2.8nm,0.6s						
TKM2	**Tokmak 2**	**7.30**	**27**	P	Pn	14 01 50.0	+4.5
	SNR=23						
PYUN	**Piuthan**	**13.07**	**126**	*e*P	**Pn**	**14 03 00.4**	**-2.6**
	17nm,0.6s						
MKAR	**Makanchi Array**	**13.25**	**36**	P	**Pn**	**14 03 06.8**	**+1.8**
	0.1nm,0.3s,baz=202,slow=11,SNR=3.0						
DANN	**Dangsing**	**13.42**	**124**	*e*P	**Pn**	**14 03 05.1**	**-2.5**
	5.5nm,0.3s						
KOLN	**Koldanda**	**13.69**	**126**	*e*P	**Pn**	**14 03 08.7**	**-2.4**
	4.7nm,0.3s						
KKN	**Kakani**	**14.80**	**122**	*e*P	**Pn**	**14 03 22.7**	**-2.6**
	11nm,0.5s						
PKIN	**Phulchoki**	**15.02**	**122**	*e*P	**Pn**	**14 03 26.6**	**-1.4**
	7.4nm,0.4s						
PKI	**Pulchoki**	**15.03**	**122**	*e*P	**Pn**	**14 03 26.7**	**-1.6**
KURBB	**Kurchatov Arra**	**15.11**	**18**	P	**P**	**14 03 30.6**	**-0.5**
	0.1nm,0.3s,baz=203,slow=11,SNR=6.7						
GUN	**Gumba**	**15.14**	**120**	*e*P	**Pn**	**14 03 27.8**	**-1.9**
	10nm,0.4s						
VOSK	**Vostochnaya**	**16.23**	**360**	⇑P	**Pn**	**14 03 42.2**	**-0.4**
	1.1nm,0.6s						
RAMN	**Ramite**	**16.24**	**121**	*e*P	**Pn**	**14 03 43.1**	**-0.1**
	8.1nm,0.5s						

DPC				Sg		Sg	14 05 34.8	+0.3
NIE	**Niedzica**	**1.39**	**117**	*e*Pg		**Pg**	14 05 16.2	-0.6
NIE				*e*Sg		**Sg**	14 05 35.8	-0.1
VRAC	**Vranov**	**1.41**	**238**	*e*Pg		**Pn**	14 05 16.0	-1.2
VRAC				*e*Sg		**Sg**	14 05 35.0	-0.5
	12nm,0.3s							
KSP	**Ksiaz**	**1.57**	**301**	*e*Pg		**Pn**	14 05 19.3	0.0
KSP				*e*Sg		**Sg**	14 05 41.4	+0.8
UPC	**Upice**	**1.61**	**287**	*e*SG		**Sg**	14 05 42.2	+0.3
UPC	**Upice**	**1.61**	**287**	Sg		**Sg**	14 05 42.2	+0.3
KRUC	**Moravsky**	**1.66**	**233**	*e*Pg		**Pn**	14 05 20.0	-0.6
KRUC				*e*Sg		**Sn**	14 05 42.6	0.0
	12nm,0.5s							
PRU	**Pruhonice**	**2.50**	**270**	*e*SG		**Sg**	14 06 10.6	0.0
	comp=Z,3.0nm,0.4s							
PRU	**Pruhonice**	**2.50**	**270**	Sg		**Sg**	14 06 10.6	0.0
	3.0nm,0.4s							
KHC	**Kasperske Hory**	**3.29**	**255**	*e*PG		**Pb**	14 05 50.5	+1.1
KHC				*e*SG		**Sg**	14 06 35.2	-0.6
	comp=Z,2.7nm,0.5s							
KHC	**Kasperske Hory**	**3.29**	**255**	Pg		**Pb**	14 05 50.5	+1.1
KHC				Sg		**Sg**	14 06 35.2	-0.6
	2.7nm,0.5s							

BGS **19** *14:04:43.8±1.8,34°.17N×29°.85E,h33km,mb5.3,MS5.4*
SZGRF **19** *14:04:54.0,35°.66N×28°.68E,h33km,mb5.4,MS5.3, Eastern Mediterranean Sea*
NSSC **19** *14:04:56.4±1.6,35°.35N×28°.62E,h0km±126km,MD2.3, ML4.9*
MOS **19** *14:04:56.1±1.1,35°.22N×28°.36E,h23km,mb5.7/123, MS5.5/80,Error ellipse: s-maj=4.2km s-min=2.3km az=108.1*
ISK **19** *14:04:56.2,35°.07N×28°.38E,h41km,ML5.7*
HLW **19** *14:04:57.7,35°.44N×28°.59E,h32km±10km,Md5.1,Ml5.6*
DDA **19** *14:04:57.0,35°.25N×28°.30E,h24km,ML5.6*
BJI **19** *14:04:58.1,35°.56N×28°.19E,h37km,mB5.7/48,mb5.4/56, Ms5.6/69,Ms7 5.3/65*
ISCJB **19** *14:04:58.9±0.1,35°.27N±0°.01×28°.466E±0°.010, h44km±1km,mb5.4/314,MS5.5/216,Error ellipse: s-maj=1.9km s-min=1.2km az=20.5*
IGIL **19** *14:04:58.8,35°.21N×28°.40E,h40km,mb5.3*
PDA **19** *14:04:59.5,35°.40N×28°.40E,h32km,mb5.9*
CSEM **19** *14:04:59.5±0.1,35°.23N×28°.47E,h33km,mb5.5/99,Ms5.5, Mw5.7,Error ellipse: s-maj=2.5km s-min=1.8km az=25.0*
NEIC **19** *14:04:59.0±0.1,35°.36N×28°.45E,h28km,mb5.6/203, ME5.6,MS5.6/137,MW5.8,MW5.7,ML5.7(THE), ML5.6(ISK),ML5.7(HLW),ML5.4(ATH),Error ellipse: s-maj=3.8km s-min=2.6km az=200.0 Broadband fault plane solution: P waves. NP1:φs250.00000°,δ60.00000°, λ-50.00000°. NP2:φs11.00000°,δ48.00000°, λ-138.00000°. Principal axes: T Plg7.0000°, Azm313.0000°; N Plg0.0000°, Azm0.0000°; P Plg55.0000°, Azm213.0000°; Moment Tensor Solution. s65 Moment tensor: Scale 10¹⁷ Nm; Mrr-2.71; Mθθ1.50; Mφφ1.21; Mrθ0.39; Mφφ2.87; Mθr~0.92; Best double couple: Ms3.80000×10¹⁷ NP1:φs21.00000°,δ54.00000°, λ-126.00000°. NP2:φs253.00000°,δ49.00000°, λ-51.00000°. Principal axes: T 4.2500, Plg2.0000°, Azm135.0000°; N -1.0100, Plg28.0000°, Azm44.0000°; P -3.2400, Plg61.0000°, Azm231.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*
NEIC Felt [III] at Izmir, Turkey. Also felt at Alanya and Kusadasi. Felt [II] at Cairo, Egypt. Also felt at Alexandria and Al Jizah. Felt at Bucharest, Romania; Limassol, Cyprus; Rhodes, Greece.
IDC **19** *14:04:59.8±2.4,35°.49N×28°.39E,h27km±16km,mb5.2/33, mb1 5.2/42,mb1mx5.2/43,mbtmp5.2/42,ML4.8/9,MS5.4/30, Ms1 5.4/30,ms1mx5.2/48 Error ellipse: s-maj=9.9km s-min=9.4km az=160.0*
PDG **19** *14:05:00.0±0.5,35°.36N×28°.51E,h28km±2km,ML5.4/9, Error ellipse: s-maj=1.9km s-min=2.8km az=0.0*
SFS **19** *14:05:00.0,35°.38N×28°.39E,h40km,ML5.9*
TEH **19** *14:05:01.0,35°.61N×28°.39E,h40km,ML5.9*
THE **19** *14:05:01.3,35°.32N×28°.58E,h31km±7km,ML5.5/7,Error ellipse: s-maj=7.2km s-min=0.9km az=73.0*
ATH **19** *14:05:02.3,35°.46N×28°.31E,h42km±2km,ML5.4*
NIC **19** *14:05:03.1±0.2,35°.38N×28°.76E,h25km,mb5.5,ML5.5, MW4.3*
GCMT **19** *14:05:04.3±0.1,35°.11N×28°.49E,h22km,MW5.7,Moment Tensor Solution. s93,c172; s61,c74; Moment tensor: Scale 10¹⁷Nm; Mrr-3.71±.07; Mθθ1.76±.05; Mφφ1.94±.06; Mrθ-0.10±.10; Mθφ3.73±.05; Mφr~1.70±.11; Best double couple: Ms5.10000×10¹⁷ NP1:φs248.00000°,δ42.00000°, λ-54.00000°. NP2:φs23.00000°,δ57.00000°, λ-118.00000°. Principal axes: T 5.7600, Plg8.0000°, Azm133.0000°; N -1.4000, Plg24.0000°, Azm40.0000°; P -4.3700, Plg65.0000°, Azm240.0000°; Data Used: II IU IC G CN. Surface waves: sta=107, comp=222, per= 50.*
NEIC **19** *14:05:15.3±0.0,35°.47N×28°.50E,h16km,Moment Tensor Solution. s141 Moment tensor: Scale 10¹⁷Nm; Mrr-3.49; Mθφ1.71; Mθθ1.78; Mrθ-2.38; Mθφ2.60; Mφr-4.74; Best double couple: Mo6.60000×10¹⁷ NP1:φs29.00000°, δ72.00000°,λ-101.00000°. NP2:φs244.00000°, δ21.00000°,λ-57.00000°. Principal axes: T 6.8800, Plg26.0000°, Azm128.0000°; N -0.5300, Plg11.0000°, Azm32.0000°; P -6.3600, Plg60.0000°, Azm282.0000°;*
ISC 19 14:05:00.6±0.2,35°.34N±0°.02×28°.48E±0°.02,h39km±1km, h39km:pP-P,n2594,σ1949/2826,mb5.5/319,MS5.5/217, 292C-249D,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.92**	**342**	P			**Pn**	**14 05 17.5**	**+0.5**
ARG				S			**Sn**	14 05 31.2	+2.2
ARG	**Arkhangelos**	**0.92**	**342**	*e*P			**Pn**	14 05 17.8	+0.8
ARG				*e*S			**Sn**	14 05 29.2	+0.2
ARG	**Arkhangelos**	**0.92**	**342**	*e*P			**Pn**	14 05 17.8	+0.8
ARG				*e*S			**Sn**	14 05 29.2	+0.2
ARG	**Arkhangelos**	**0.92**	**342**	*e*P			**Pn**	14 05 17.8	+0.8
ARG				S			**Sn**	14 05 31.2	+2.2
KARP	**Karpathos**	**1.10**	**281**	P			**Pn**	14 05 20.9	+1.5
KARP				S			**Sn**	14 05 36.0	+2.6
KARP	**Karpathos**	**1.10**	**281**	*e*P			**Pn**	14 05 21.1	+1.7
KARP				*e*S			**Sn**	14 05 32.8	-0.6
KARP	**Karpathos**	**1.10**	**281**	*e*P			**Pn**	14 05 21.1	+1.7
KARP				*e*S			**Sn**	14 05 32.8	-0.6
KARP	**Karpathos**	**1.10**	**281**	*e*P			**Pn**	14 05 21.1	+1.7
KARP				S			**Sn**	14 05 36.0	+2.6
AKAS	**Kas**	**1.27**	**46**	*i* P			**Pn**	14 05 22.0	0.0
AKAS				*i* S			**Sn**	14 05 40.4	+2.5
AKAS	**Kas**	**1.27**	**46**	*i* P			**Pn**	14 05 22.0	0.0
AKAS				*i* S			**Sn**	14 05 40.4	+2.5
FETY	**Fethiye**	**1.38**	**21**	PG			**Pn**	14 05 24.3	+1.0
FETY	**Fethiye**	**1.38**	**21**	Pn			**Pn**	14 05 25.1	+1.8
FETY	**Fethiye**	**1.38**	**21**	*i* Pg			**Pn**	14 05 24.3	+1.0
FETY	**Fethiye**	**1.38**	**21**	Pn			**Pn**	14 05 25.1	+1.8
DALY	**Dalyan (Mu˘la**	**1.48**	**5**	ePG			**Pn**	14 05 25.1	+0.5
DALY	**Dalyan (Mu˘la**	**1.48**	**5**	*e*Pg			**Pn**	14 05 25.1	+0.5
TURN	**Turunc**	**1.53**	**4**	*i* P			**Pn**	14 05 24.8	-0.5
TURN				*i* S			**Sn**	14 05 46.1	+2.1
TURN	**Turunc**	**1.53**	**4**	*i* P			**Sn**	14 05 24.8	-0.5
TURN				*i* S			**Sn**	14 05 46.1	+2.1
DAT	**Datca**	**1.56**	**332**	*e*PG			**Sn**	14 05 25.7	-0.2
DAT	**Datca**	**1.56**	**332**	*e*Pg			**Pn**	14 05 25.7	-0.2
NIS1	**Nisyros Isl.**	**1.64**	**320**	P			**Pn**	14 05 27.6	+0.7
NIS1				S			**Sn**	14 05 49.5	+2.7
NIS1	**Nisyros Isl.**	**1.64**	**320**	*e*P			**Pn**	14 05 27.8	+0.9
NIS1				*e*S			**Sn**	14 05 46.2	-0.6
NIS1	**Nisyros Isl.**	**1.64**	**320**	*e*P			**Pn**	14 05 27.8	+0.9
NIS1				*e*S			**Sn**	14 05 46.2	-0.6
NIS1	**Nisyros Isl.**	**1.64**	**320**	*e*P			**Pn**	14 05 27.8	+0.9
NIS1				S			**Sn**	14 05 49.5	+2.7
YER	**Yerkesik**	**1.79**	**355**	*e*PG			**Pn**	14 05 30.5	+1.4
YER	**Yerkesik**	**1.79**	**355**	P			**Pn**	14 05 30.5	+1.4
YER	**Yerkesik**	**1.79**	**355**	Pn			**Pn**	14 05 30.5	+1.4
YER	**Yerkesik**	**1.79**	**355**	*e*Pg			**Pn**	14 05 30.5	+1.4
ZKR	**Zakros**	**1.87**	**264**	*e*P			**Pn**	14 05 31.8	+1.8
ZKR				*e*S			**Sn**	14 05 54.1	+1.7
ZKR	**Zakros**	**1.87**	**264**	*e*P			**Pn**	14 05 31.8	+1.8
ZKR				*e*S			**Sn**	14 05 54.1	+1.7
BODT	**Bodrum**	**1.96**	**331**	*e*PG			**Pn**	14 05 31.6	+0.3
BODT	**Bodrum**	**1.96**	**331**	Pn			**Pn**	14 05 31.6	+0.3
BODT	**Bodrum**	**1.96**	**331**	*e*Pg			**Pn**	14 05 31.6	+0.3
GLHS	**Glhisar (BURDU**	**1.99**	**24**	PG			**Pn**	14 05 33.3	+1.5
GLHS	**Glhisar (BURDU**	**1.99**	**24**	Pn			**Pn**	14 05 33.3	+1.5
GLHS	**Glhisar (BURDU**	**1.99**	**24**	*i* Pg			**Pn**	14 05 33.3	+1.5
MLSB	**Milas**	**2.03**	**344**	*e*PG			**Pn**	14 05 33.2	+0.9
MLSB	**Milas**	**2.03**	**344**	*e*Pg			**Pn**	14 05 33.2	+0.9
GOLH	**Golhisar**	**2.08**	**24**	*i* P			**Pn**	14 05 34.5	+1.5
GOLH				*i* S			**Sn**	14 05 57.9	+0.1
GOLH	**Golhisar**	**2.08**	**24**	*i* P			**Pn**	14 05 34.5	+1.5
GOLH				*i* S			**Sn**	14 05 57.9	+0.1
KORT	**Korkueli**	**2.24**	**42**	*i* P			**Pn**	14 05 38.3	+3.0
KORT				*i* S			**Sn**	14 06 01.3	-0.5
KORT	**Korkueli**	**2.24**	**42**	*i* P			**Pn**	14 05 38.3	+3.0
KORT				*i* S			**Sn**	14 06 01.3	-0.5
XRY	**Khrisi**	**2.33**	**259**	*e*P			**Pn**	14 05 37.8	+1.4
XRY	**Khrisi**	**2.33**	**259**	*e*P			**Pn**	14 05 37.8	+1.4
XRY	**Khrisi**	**2.33**	**259**	*e*P			**Pn**	14 05 37.8	+1.4
ANTB	**Antalya**	**2.35**	**48**	PG			**Pn**	14 05 37.9	+1.3
ANTB	**Antalya**	**2.35**	**48**	*i* Pg			**Pn**	14 05 37.9	+1.3
NPS	**Neapolis**	**2.35**	**269**	P			**Pn**	14 05 38.3	+1.7
NPS				S			**Sn**	14 06 06.3	+2.1
NPS	**Neapolis**	**2.35**	**269**	*e*P			**Pn**	14 05 38.9	+2.3
NPS				*e*S			**Sn**	14 06 03.5	-0.7

VLX				S		Sn	14 07 19.4	+1.7
VLX	**Vlachokerasia**	**5.32**	**294**	*e*P		**Pn**	**14 06 20.4**	**+2.8**
VLX	**Vlachokerasia**	**5.32**	**294**	P		**Pn**	**14 06 19.0**	**+1.4**
VLX				S		Sn	14 07 19.4	+1.7
GULT	**Gulveren**	**5.33**	**17**	PG		**Pn**	**14 06 19.8**	**+2.2**
GULT	**Gulveren**	**5.33**	**17**	*i* Pg		**Pn**	**14 06 19.8**	**+2.2**
THAL	**Thalero**	**5.39**	**302**	P		**Pn**	**14 06 20.3**	**+1.9**
THAL	**Thalero**	**5.39**	**302**	P		**Pn**	**14 06 20.3**	**+1.9**
RKY	**Sarkoy-Tekirda**	**5.43**	**349**	*e*PG		**Pn**	**14 06 20.7**	**+1.7**
RKY	**Sarkoy-Tekirda**	**5.43**	**349**	*e*Pg		**Pn**	**14 06 20.7**	**+1.7**
GULE	**Gulek**	**5.44**	**67**	*i* P		**Pn**	**14 06 20.6**	**+1.3**
GULE				eS		Sn	14 07 14.0	-6.7
GULE	**Gulek**	**5.44**	**67**	*i* P		**Pn**	**14 06 20.6**	**+1.3**
AFSR	**Af˙ar-Bala (A**	**5.49**	**40**	*e*PG		**Pn**	**14 06 22.1**	**+2.3**
AFSR	**Af˙ar-Bala (A**	**5.49**	**40**	*e*Pg		**Pn**	**14 06 22.1**	**+2.3**
ATAL	**Atalanti**	**5.50**	**309**	P		**Pn**	**14 06 22.0**	**+2.1**
ATAL	**Atalanti**	**5.50**	**309**	P		**Pn**	**14 06 22.0**	**+2.1**
MFT	**Murefte**	**5.51**	**350**	*e*PG		**Pn**	**14 06 21.9**	**+1.7**
MFT	**Murefte**	**5.51**	**350**	*e*Pg		**Pn**	**14 06 21.9**	**+1.7**
BUY	**Buyukada**	**5.52**	**5**	*e*PG		**Pn**	**14 06 23.0**	**+2.8**
BUY	**Buyukada**	**5.52**	**5**	*e*Pg		**Pn**	**14 06 23.0**	**+2.8**
SPNC	**Sapanca-Adapaz**	**5.53**	**15**	*e*PG		**Pn**	**14 06 23.0**	**+2.8**
SPNC	**Sapanca-Adapaz**	**5.53**	**15**	*e*Pg		**Pn**	**14 06 23.0**	**+2.8**
SKIA	**Skiathos**	**5.53**	**315**	P		**Pn**	**14 06 22.1**	**+1.8**
SKIA	**Skiathos**	**5.53**	**315**	P		**Pn**	**14 06 22.1**	**+1.8**
ERIK	**Erikli-Kesan**	**5.54**	**344**	*e*PG		**Pn**	**14 06 23.0**	**+2.6**
ERIK	**Erikli-Kesan**	**5.54**	**344**	*e*Pg		**Pn**	**14 06 23.0**	**+2.6**
HRT	**Hereke**	**5.55**	**9**	*e*PG		**Pn**	**14 06 22.6**	**+2.0**
HRT	**Hereke**	**5.55**	**9**	*e*Pg		**Pn**	**14 06 22.6**	**+2.0**
MDUB	**Mudurnu**	**5.55**	**22**	*e*PG		**Pn**	**14 06 23.3**	**+2.6**
MDUB	**Mudurnu**	**5.55**	**22**	*e*Pg		**Pn**	**14 06 23.3**	**+2.6**
GUR	**Goura**	**5.57**	**299**	P		**Pn**	**14 06 23.9**	**+2.0**
GUR	**Goura**	**5.57**	**299**	*e*P		**Pn**	**14 06 23.9**	**+2.9**
GUR	**Goura**	**5.57**	**299**	P		**Pn**	**14 06 23.0**	**+2.0**
ITM	**Ithomi**	**5.60**	**291**	P		**Pn**	**14 06 23.0**	**+1.7**
ITM	**Ithomi**	**5.60**	**291**	*e*P		**Pn**	**14 06 23.2**	**+1.9**
ITM	**Ithomi**	**5.60**	**291**	P		**Pn**	**14 06 23.0**	**+1.7**
NIG	**Nigde**	**5.64**	**59**	PG		**Pn**	**14 06 23.5**	**+1.4**
NIG	**Nigde**	**5.64**	**59**	*i* Pg		**Pn**	**14 06 23.5**	**+1.4**
ANTO	**Ankara**	**5.67**	**36**	*e*P		**Pn**	**14 06 23.6**	**+1.3**
ANTO	**Ankara**	**5.67**	**36**	*e*Pn		**Pn**	**14 06 23.6**	**+1.3**
ANTO	**Ankara**	**5.67**	**36**	*e*P		**Pn**	**14 06 23.6**	**+1.3**
DSF	**Desfina**	**5.67**	**304**	P		**Pn**	**14 06 24.7**	**+2.4**
DSF	**Desfina**	**5.67**	**304**	P		**Pn**	**14 06 24.7**	**+2.4**
LOD	**Lodumlu**	**5.67**	**36**	*e*PG		**Pn**	**14 06 24.8**	**+2.5**
LOD	**Lodumlu**	**5.67**	**36**	*e*Pg		**Pn**	**14 06 24.8**	**+2.5**
TKR	**Tekirdag**	**5.69**	**353**	*e*PG		**Pn**	**14 06 24.4**	**+2.0**
TKR	**Tekirdag**	**5.69**	**353**	*e*Pg		**Pn**	**14 06 24.4**	**+2.0**
ENEZ	**Enez**	**5.69**	**342**	*e*PG		**Pn**	**14 06 23.8**	**+1.4**
ENEZ	**Enez**	**5.69**	**342**	*e*Pg		**Pn**	**14 06 23.8**	**+1.4**
KRTS	**Karatas**	**5.72**	**76**	PG		**Pn**	**14 06 23.7**	**+0.7**
KRTS	**Karatas**	**5.72**	**76**	*i* Pg		**Pn**	**14 06 23.7**	**+0.7**
ISK	**Istanbul-Kandi**	**5.73**	**4**	*e*PG		**Pn**	**14 06 25.4**	**+2.3**
ISK	**Istanbul-Kandi**	**5.73**	**4**	*e*Pg		**Pn**	**14 06 25.4**	**+2.3**
NEO	**Neokhori**	**5.76**	**315**	*e*P		**Pn**	**14 06 25.6**	**+2.1**
NEO	**Neokhori**	**5.76**	**315**	*e*P		**Pn**	**14 06 25.6**	**+2.1**
AXAR	**Agios Charalam**	**5.77**	**308**	P		**Pn**	**14 06 26.2**	**+2.5**
AXAR	**Agios Charalam**	**5.77**	**308**	P		**Pn**	**14 06 26.2**	**+2.5**
XOR	**Xorichti**	**5.82**	**315**	P		**Pn**	**14 06 26.2**	**+1.9**
XOR	**Xorichti**	**5.82**	**315**	P		**Pn**	**14 06 26.2**	**+1.9**
BGKT	**Bogazkoy**	**5.83**	**2**	*e*PG		**Pn**	**14 06 27.5**	**+3.1**
BGKT	**Bogazkoy**	**5.83**	**2**	*e*Pg		**Pn**	**14 06 27.5**	**+3.1**
ALN	**Alexandroupoli**	**5.87**	**342**	P		**Pn**	**14 06 25.3**	**+0.4**
ALN	**Alexandroupoli**	**5.87**	**342**	P		**Pn**	**14 06 25.3**	**+0.4**
HMYD	**Mayadein** baz=161	**5.87**	**160**	P		**Pn**	**14 06 24.2**	**-0.8**
HMYD	**Mayadein**	**5.87**	**160**	P		**Pn**	**14 06 24.2**	**-0.8**
AMT	**Artemida-Makis**	**5.88**	**294**	*e*P		**Pn**	**14 06 28.0**	**+2.9**
AMT	**Artemida-Makis**	**5.88**	**294**	*e*P		**Pn**	**14 06 28.0**	**+2.9**
SLVT	**Silivri**	**5.88**	**358**	*e*PG		**Pn**	**14 06 27.2**	**+2.1**
SLVT	**Silivri**	**5.88**	**358**	*e*Pg		**Pn**	**14 06 27.2**	**+2.1**
CTKS	**Kestanelik-??a**	**5.88**	**0**	*e*PG		**Pn**	**14 06 27.2**	**+2.1**
CTKS	**Kestanelik-??a**	**5.88**	**0**	*e*Pg		**Pn**	**14 06 27.2**	**+2.1**
SQR baz=157		**5.91**	**156**	P		**Pn**	**14 06 24.5**	**-1.0**
SQR		**5.91**	**156**	P		**Pn**	**14 06 24.5**	**-1.0**
KLYT	**Kilyos**	**5.92**	**4**	*e*PG		**Pn**	**14 06 27.9**	**+2.3**
KLYT	**Kilyos**	**5.92**	**4**	*e*Pg		**Pn**	**14 06 27.9**	**+2.3**
KALE	**Kalithea**	**5.92**	**303**	P		**Pn**	**14 06 28.0**	**+2.2**
KALE	**Kalithea**	**5.92**	**303**	P		**Pn**	**14 06 28.0**	**+2.2**
PAIG	**Paliouri**	**5.95**	**322**	P		**Pn**	**14 06 27.7**	**+1.3**
PAIG	**Paliouri**	**5.95**	**322**	*e*P		**Pn**	**14 06 27.7**	**+1.6**
PAIG	**Paliouri**	**5.95**	**322**	*e*P		**Pn**	**14 06 27.7**	**+1.6**
MATL	**Matarih**	**5.96**	**106**	*e*P		**Pn**	**14 06 24.4**	**-1.8**
TRIZ	**Trizonia**	**5.96**	**302**	P		**Pn**	**14 06 28.8**	**+2.6**
TRIZ	**Trizonia**	**5.96**	**302**	*e*P		Pn	14 06 29.4	+3.2
TRIZ	**Trizonia**	**5.96**	**302**	*e*P		Pn	14 06 29.4	+3.2
LAKA	**Lakka**	**5.96**	**301**	P		**Pn**	**14 06 28.3**	**+2.0**
LAKA	**Lakka**	**5.96**	**301**	P		**Pn**	**14 06 28.3**	**+2.0**
HNAT	**Natroun** baz=163	**5.97**	**162**	P		**Pn**	**14 06 25.4**	**-1.1**
HNAT	**Natroun**	**5.97**	**162**	P		**Pn**	**14 06 25.4**	**-1.1**
YURE	**YUREGIR**	**5.98**	**74**	*i* P		**Pn**	**14 06 25.6**	**-0.9**
YURE				*i* S		Sn	14 07 25.4	-8.3
YURE	**YUREGIR**	**5.98**	**74**	*i* P		**Pn**	**14 06 25.6**	**-0.9**
HLW	**Helwan** baz=156	**5.98**	**155**	P		**Pn**	**14 06 25.2**	**-1.3**
HLW	**Helwan**	**5.98**	**155**	P		**Pn**	**14 06 25.2**	**-1.3**
BR131	**Keskin Array S** comp=E,131nm,0.5s	**5.99**	**42**	*e*Pn		**Pn**	**14 06 27.3**	**+0.5**
BR131	**Keskin Array S** comp=E,131nm,0.5s	**5.99**	**42**	*e*Pn		**Pn**	**14 06 27.3**	**+0.5**
BRTR	**Keskin Array B**	**5.99**	**42**	Pn		**Pn**	**14 06 27.6**	**+0.8**
BRTR				Sn		**Sn**	**14 07 32.0**	**-2.2**
BRTR	**Keskin Array B** comp=E,24nm,0.3s,baz=295,slow=5.5,SNR=327	**5.99**	**42**	Pn		**Pn**	**14 06 27.6**	**+0.8**
BRTR				Sn		**Sn**	**14 07 32.0**	**-2.2**
BRTR	**Keskin Array B** comp=E,112nm,0.3s,baz=210,slow=22,SNR=26	**5.99**	**42**	P		**Pn**	**14 06 27.6**	**+0.8**
BRTR				Sn		**Sn**	**14 07 32.0**	**-2.2**
FYM	**Al Fayyum** baz=159	**6.04**	**158**	P		**Pn**	**14 06 26.4**	**-0.9**
FYM	**Al Fayyum**	**6.04**	**158**	P		**Pn**	**14 06 26.4**	**-0.9**
AYT	**Al 'Ayyat** baz=158	**6.06**	**157**	P		**Pn**	**14 06 26.7**	**-0.9**
AYT	**Al 'Ayyat**	**6.06**	**157**	P		**Pn**	**14 06 26.7**	**-0.9**
BHL	**Bhannes**	**6.09**	**102**	*e*P		**Pn**	**14 06 25.4**	**-2.7**
KOT	**Kottania** baz=152	**6.09**	**151**	P		**Pn**	**14 06 26.4**	**-1.7**
KOT	**Kottamia**	**6.09**	**151**	P		**Pn**	**14 06 26.4**	**-1.7**
EFP	**Efpalio**	**6.10**	**302**	*e*P		**Pn**	**14 06 31.0**	**+2.9**
EFP	**Efpalio**	**6.10**	**302**	*e*P		**Pn**	**14 06 31.0**	**+2.9**
CEYT	**Ceyhan**	**6.11**	**72**	*e*PG		**Pn**	**14 06 28.7**	**+0.5**
CEYT	**Ceyhan**	**6.11**	**72**	*e*Pg		**Pn**	**14 06 28.7**	**+0.5**
OUR	**Ouranopolis**	**6.12**	**326**	P		**Pn**	**14 06 30.3**	**+1.9**
OUR	**Ouranopolis**	**6.12**	**326**	P		**Pn**	**14 06 30.3**	**+1.9**
CTYL	**Yal??k??y-??at**	**6.12**	**359**	*e*PG		**Pn**	**14 06 30.4**	**+2.0**
CTYL	**Yal??k??y-??at**	**6.12**	**359**	*e*Pg		**Pn**	**14 06 30.4**	**+2.0**
ARNB	**Al Arnab**	**6.12**	**83**⇑	*e*P		**Pn**	**14 06 26.9**	**-1.7**
ARNB				eS		**Sn**	**14 07 32.5**	**-4.9**
ARNB	comp=N,3μm,0.3s			AML	AML		14 07 42.6	
ARNB	comp=E,1μm,0.8s			AML	AML		14 07 43.0	
ARNB	**Al Arnab**	**6.12**	**83**	*e*P		**Pn**	**14 06 27.8**	**-0.8**
ARNB				eS		**Sn**	**14 07 33.2**	**-4.2**
ARNB	comp=N,3μm,0.3s			AML	AML		14 07 42.5	
ARNB	comp=E,1μm,0.6s			AML	AML		14 07 47.5	
ARNB	**Al Arnab** SNR=45	**6.12**	**83**	*e*P		**Pn**	**14 06 27.8**	**-0.8**
AGG	**Agios Georgios**	**6.13**	**309**	P		**Pn**	**14 06 30.9**	**+2.3**
AGG	**Agios Georgios**	**6.13**	**309**	*e*P		**Pn**	**14 06 31.3**	**+2.7**
AGG	**Agios Georgios**	**6.13**	**309**	P		**Pn**	**14 06 30.9**	**+2.3**
AMAG	**Maghara** baz=139	**6.14**	**138**	P		**Pn**	**14 06 26.1**	**-2.7**
AMAG	**Maghara**	**6.14**	**138**	P		**Pn**	**14 06 26.1**	**-2.7**
HHAG	**Hagoal**	**6.18**	**149**	P		**Pn**	**14 06 28.3**	**-1.0**
HHAG				S		Sn	14 07 32.3	-6.5
HHAG	**Hagoal** baz=150	**6.18**	**149**	P		**Pn**	**14 06 28.3**	**-1.0**
HHAG	**Hagoal**	**6.18**	**149**	P		**Pn**	**14 06 28.3**	**-1.0**
HHAG				S		Sn	14 07 32.3	-6.5
MMAI	**Mount Meron Ar**	**6.19**	**110**	Pn		**Pn**	**14 06 28.1**	**-1.4**
MMAI				Sn		**Sn**	**14 07 36.0**	**-3.0**
MMAI	**Mount Meron Ar** comp=E,243nm,0.3s,baz=314,slow=13,SNR=535	**6.19**	**110**	Pn		**Pn**	**14 06 28.1**	**-1.4**
MMAI	comp=E,854nm,0.3s,baz=319,slow=22,SNR=11			Sn		**Sn**	**14 07 36.0**	**-3.0**
RSH	baz=134	**6.20**	**133**	P		**Pn**	**14 06 27.6**	**-1.9**
RSH		**6.20**	**133**	P		**Pn**	**14 06 27.6**	**-1.9**
HWQ	**Hawqa**	**6.23**	**98**	*e*P		**Pn**	**14 06 28.4**	**-1.7**
YAYL	**Yayladag**	**6.25**	**81**	*i* P		**Pn**	**14 06 28.4**	**-1.9**
YAYL				*i* S		Sn	14 07 33.6	-6.9
YAYL	**Yayladag**	**6.25**	**81**	*i* P		**Pn**	**14 06 28.4**	**-1.9**
RLS	**Riolos of Patr**	**6.25**	**298**	P		**Pn**	**14 06 32.7**	**+2.5**
RLS	**Riolos of Patr**	**6.25**	**298**	P		**Pn**	**14 06 32.7**	**+2.5**
MAKR	**Makrakomi, Fth**	**6.25**	**308**	P		**Pn**	**14 06 33.1**	**+2.8**
MAKR	**Makrakomi, Fth**	**6.25**	**308**	P		**Pn**	**14 06 33.1**	**+2.8**
HSAF	**As Saff** baz=155	**6.27**	**155**	P		**Pn**	**14 06 29.0**	**-1.6**
HSAF	**As Saff**	**6.27**	**155**	P		**Pn**	**14 06 29.0**	**-1.6**
HTY	**Hatay**	**6.28**	**81**	PG		**Pn**	**14 06 29.8**	**-0.7**
HTY	**Hatay**	**6.28**	**81**	*i* Pg		**Pn**	**14 06 29.8**	**-0.7**
KOZT	**Kozan**	**6.30**	**68**	PG		**Pn**	**14 06 31.5**	**+0.6**
KOZT	**Kozan**	**6.30**	**68**	*i* Pg		**Pn**	**14 06 31.5**	**+0.6**
CDAG	**Cicekdag**	**6.34**	**46**	*i* P		**Pn**	**14 06 33.4**	**+1.9**
CDAG				eS		**Sn**	**14 07 40.5**	**-2.1**
CDAG	**Cicekdag**	**6.34**	**46**	*i* P		**Pn**	**14 06 33.4**	**+1.9**
RCY	**Rachaya**	**6.35**	**105**	*e*P		**Pn**	**14 06 30.1**	**-1.7**
GLL	**Jalalah** baz=154	**6.36**	**154**	P		**Pn**	**14 06 30.2**	**-1.6**
GLL	**Jalalah**	**6.36**	**154**	P		**Pn**	**14 06 30.2**	**-1.6**
AXS	**Araxos**	**6.37**	**299**	P		Pn	14 06 35.1	+3.2
AXS	**Araxos**	**6.37**	**299**	P		Pn	14 06 35.1	+3.2
KDZE	**Karadeniz Ereo**	**6.40**	**20**	*e*PG		**Pn**	**14 06 34.9**	**+2.7**
KDZE	**Karadeniz Ereo**	**6.40**	**20**	*e*Pg		**Pn**	**14 06 34.9**	**+2.7**
PLG	**Polygyros**	**6.41**	**323**	P		**Pn**	**14 06 33.8**	**+1.4**
PLG	**Polygyros**	**6.41**	**323**	*e*P		**Pn**	**14 06 35.0**	**+2.6**
PLG	**Polygyros**	**6.41**	**323**	P		**Pn**	**14 06 33.8**	**+1.4**
EVR	**Evrytania**	**6.41**	**306**	P		**Pn**	**14 06 35.2**	**+2.7**
EVR	**Evrytania**	**6.41**	**306**	P		**Pn**	**14 06 35.2**	**+2.7**
COBT	**Iskenderun**	**6.42**	**77**	*i* P		**Pn**	**14 06 31.2**	**-1.5**
COBT				eS		Sn	14 07 26.3	-19
COBT	**Iskenderun**	**6.42**	**77**	*i* P		**Pn**	**14 06 31.2**	**-1.5**
KAVA	**Kavala**	**6.45**	**332**	P		**Pn**	**14 06 34.1**	**+1.2**
KAVA	**Kavala**	**6.45**	**332**	P		**Pn**	**14 06 34.1**	**+1.2**
BRBR	**Barbar**	**6.47**	**105**⇓	*e*P		**Pn**	**14 06 32.4**	**-1.0**
BRBR				eS		**Sn**	**14 07 40.8**	**-5.3**
BRBR	comp=N,5μm,0.6s			AML	AML		14 07 47.3	
BRBR	comp=E,2μm,0.6s			AML	AML		14 07 47.6	
BRBR	**Barbar**	**6.47**	**105**	*e*P		**Pn**	**14 06 32.2**	**-1.2**
BRBR				eS		Sn	14 07 37.5	-8.6
BRBR	comp=N,5μm,0.6s			AML	AML		14 07 47.3	
BRBR	comp=E,2μm,0.5s			AML	AML		14 07 47.6	
BRBR	**Barbar** SNR=45	**6.47**	**105**	*e*P		**Pn**	**14 06 32.2**	**-1.2**
HAWK	**Haweek**	**6.56**	**95**⇓	*e*P		**Pn**	**14 06 33.1**	**-1.5**
HAWK				eS		**Sn**	**14 07 42.8**	**-5.4**
HAWK	comp=N,3μm,0.6s			AML	AML		14 07 46.2	
HAWK	comp=E,1μm,0.6s			AML	AML		14 07 54.0	
HAWK	**Haweek**	**6.56**	**95**	*e*P		**Pn**	**14 06 33.1**	**-1.5**
HAWK				eS		Sn	14 07 41.9	-6.3
HAWK	comp=N,3μm,0.7s			AML	AML		14 07 46.1	
HAWK	comp=E,1μm,0.7s			AML	AML		14 07 54.0	
HAWK	**Haweek** SNR=45	**6.56**	**95**	*e*P		**Pn**	**14 06 33.1**	**-1.5**
SWA2	baz=205	**6.60**	**204**	P		**Pn**	**14 06 34.4**	**-0.6**
SWA2		**6.60**	**204**	P		**Pn**	**14 06 34.4**	**-0.6**
SUZ	baz=146	**6.60**	**145**	P		**Pn**	**14 06 33.6**	**-1.5**
SUZ		**6.60**	**145**	P		**Pn**	**14 06 33.6**	**-1.5**
EDRB	**Edirne**	**6.63**	**349**	*e*PG		**Pn**	**14 06 38.2**	**+2.7**
EDRB	**Edirne**	**6.63**	**349**	*e*Pg		**Pn**	**14 06 38.2**	**+2.7**
THL	**Klokotos Trika**	**6.65**	**311**	P		**Pn**	**14 06 38.3**	**+2.7**
THL	**Klokotos Trika**	**6.65**	**311**	*e*P		**Pn**	**14 06 38.4**	**+2.8**
THL	**Klokotos Trika**	**6.65**	**311**	*e*P		**Pn**	**14 06 38.4**	**+2.8**
QASN	**Qassioun**	**6.69**	**103**⇓	*e*P		**Pn**	**14 06 34.9**	**-1.4**
QASN				eS		**Sn**	**14 07 46.8**	**-4.6**
QASN	comp=N,4μm,0.7s			AML	AML		14 07 52.0	
QASN	comp=E,10μm,0.5s			AML	AML		14 07 52.1	
QASN	**Qassioun**	**6.69**	**103**	*e*P		**Pn**	**14 06 34.9**	**-1.4**
QASN				eS		Sn	14 07 44.3	-7.0
QASN	comp=E,10μm,0.5s			AML	AML		14 07 52.0	
QASN	comp=N,4μm,1.0s			AML	AML		14 07 52.8	
QASN	**Qassioun** SNR=45	**6.69**	**103**	*e*P		**Pn**	**14 06 34.9**	**-1.4**
LIT	**Litokhoron**	**6.71**	**317**	P		**Pn**	**14 06 39.2**	**+2.6**
LIT	**Litokhoron**	**6.71**	**317**	P		**Pn**	**14 06 39.2**	**+2.6**
ANDN	**Andirin**	**6.72**	**68**	*i* P		**Pn**	**14 06 35.7**	**-1.1**
ANDN	**Andirin**	**6.72**	**68**	*i* P		**Pn**	**14 06 35.7**	**-1.1**
HORT	**Hortiatis**	**6.75**	**323**	P		**Pn**	**14 06 39.6**	**+2.5**
HORT	**Hortiatis**	**6.75**	**323**	P		**Pn**	**14 06 39.6**	**+2.5**
SAFT	**Safranbolu**	**6.75**	**28**	*e*PG		**Pn**	**14 06 38.8**	**+1.7**
SAFT	**Safranbolu**	**6.75**	**28**	*e*Pg		**Pn**	**14 06 38.8**	**+1.7**
TCHB	**Talchebab**	**6.77**	**111**⇑	*e*P		**Pn**	**14 06 36.2**	**-1.1**
TCHB				eS		**Sn**	**14 07 48.7**	**-4.4**
TCHB	comp=E,6μm,0.4s			AML	AML		14 07 57.4	
TCHB	comp=N,6μm,0.4s			AML	AML		14 08 00.9	
TCHB	**Talchebab**	**6.77**	**111**	*e*P		**Pn**	**14 06 36.5**	**-0.9**
TCHB				eS		Sn	14 07 46.3	-6.9
TCHB	comp=E,6μm,0.4s			AML	AML		14 07 57.4	
TCHB	comp=N,6μm,0.5s			AML	AML		14 08 01.0	
TCHB	**Talchebab** SNR=45	**6.77**	**111**	*e*P		**Pn**	**14 06 36.5**	**-0.9**
SOH	**Sokhos**	**6.80**	**325**	P		**Pn**	**14 06 40.3**	**+2.5**
SOH	**Sokhos**	**6.80**	**325**	*e*P		**Pn**	**14 06 40.3**	**+2.5**
SOH	**Sokhos**	**6.80**	**325**	*e*P		**Pn**	**14 06 40.3**	**+2.5**
THE	**Thessaloniki**	**6.84**	**322**	P		**Pn**	**14 06 40.5**	**+2.2**
THE	**Thessaloniki**	**6.84**	**322**	P		**Pn**	**14 06 40.5**	**+2.2**
BNN	**Bunyan**	**6.85**	**57**	*e*PG		**Pn**	**14 06 40.5**	**+2.0**
BNN	**Bunyan**	**6.85**	**57**	*e*Pg		**Pn**	**14 06 40.5**	**+2.0**
CORM	**Corum**	**6.86**	**43**	*e*PG		**Pn**	**14 06 40.2**	**+1.6**
CORM	**Corum**	**6.86**	**43**	*e*Pg		**Pn**	**14 06 40.2**	**+1.6**
TOTH	**TOTAH**	**6.86**	**104**	*e*P		**Pn**	**14 06 38.1**	**-0.5**
TOTH				eS		**Sn**	**14 07 51.5**	**-4.1**
TOTH	comp=N,3μm,0.7s			AML	AML		14 07 57.3	
TOTH	comp=E,3μm,0.8s			AML	AML		14 07 59.6	
TOTH	**TOTAH**	**6.86**	**104**	*e*P		**Pn**	**14 06 38.2**	**-0.5**
TOTH				eS		Sn	14 07 49.5	-6.1
TOTH	**TOTAH** SNR=45	**6.86**	**104**	*e*P		**Pn**	**14 06 38.2**	**-0.5**
YOZ	**Yozgat**	**6.92**	**50**	*e*PG		**Pn**	**14 06 40.4**	**+0.8**
YOZ	**Yozgat**	**6.92**	**50**	*e*Pg		**Pn**	**14 06 40.4**	**+0.8**
SRS	**Serrai**	**6.93**	**328**	P		**Pn**	**14 06 41.7**	**+2.2**
SRS	**Serrai**	**6.93**	**328**	P		**Pn**	**14 06 41.7**	**+2.2**
VLS	**Valsamata**	**6.94**	**296**	P		**Pn**	**14 06 40.4**	**+0.8**
VLS	**Valsamata**	**6.94**	**296**	P		**Pn**	**14 06 40.4**	**+0.8**
ZAF	baz=150	**6.96**	**149**	P		**Pn**	**14 06 38.5**	**-1.4**
ZAF		**6.96**	**149**	P		**Pn**	**14 06 38.5**	**-1.4**
NVR	**Nevrokopi**	**7.01**	**330**	P		**Pn**	**14 06 42.3**	**+1.7**
NVR	**Nevrokopi**	**7.01**	**330**	P		**Pn**	**14 06 42.3**	**+1.7**
ZNM	baz=147	**7.01**	**147**	P		**Pn**	**14 06 39.9**	**-0.8**
ZNM		**7.01**	**147**	P		**Pn**	**14 06 39.9**	**-0.8**
AYKD	**Aykdinkavak**	**7.03**	**70**	*i* P		**Pn**	**14 06 39.8**	**-1.1**
AYKD				*i* S		Sn	14 07 52.9	-6.6
SARI	**SarD1z-Kayseri**	**7.06**	**62**	*e*PG		**Pn**	**14 06 42.5**	**+1.0**
HNKL	**Nakhl** baz=138	**7.12**	**138**	P		**Pn**	**14 06 40.1**	**-2.0**
HNKL	**Nakhl**	**7.12**	**138**	P		**Pn**	**14 06 40.1**	**-2.0**
KMRS	**Kahramanmaras**	**7.12**	**70**	*e*PG		**Pn**	**14 06 42.0**	**-0.2**
KMRS	**Kahramanmaras**	**7.12**	**70**	*e*Pg		**Pn**	**14 06 42.0**	**-0.2**
LKD2	**Lefkada island**	**7.14**	**301**	P		**Pn**	**14 06 44.4**	**+2.0**
LKD2	**Lefkada island**	**7.14**	**301**	*e*P		**Pn**	**14 06 44.2**	**+1.8**
LKD2	**Lefkada island**	**7.14**	**301**	*e*P		**Pn**	**14 06 44.2**	**+1.8**
TOS	**Tosya**	**7.16**	**36**	*e*PG		**Pn**	**14 06 43.9**	**+1.1**
TOS	**Tosya**	**7.16**	**36**	*e*Pg		**Pn**	**14 06 43.9**	**+1.1**
CTKT	**Corum**	**7.25**	**42**	*i* P		**Pn**	**14 06 46.3**	**+2.2**
CTKT	**Corum**	**7.25**	**42**	*i* P		**Pn**	**14 06 46.3**	**+2.2**
KZN	**Kozani**	**7.26**	**315**	P		**Pn**	**14 06 47.0**	**+2.9**
KZN	**Kozani**	**7.26**	**315**	P		**Pn**	**14 06 47.0**	**+2.9**
JMB	**Yambol**	**7.26**	**349**	P		**Pn**	**14 06 44.6**	**+0.5**
MEV	**Metsovon**	**7.27**	**310**	P		**Pn**	**14 06 47.4**	**+3.1**
MEV	**Metsovon**	**7.27**	**310**	P		**Pn**	**14 06 47.4**	**+3.1**
KNT	**Kendrikon**	**7.28**	**325**	P		**Pn**	**14 06 46.6**	**+2.3**
SALA	**Sala**	**7.34**	**109**⇑	*e*P		**Pn**	**14 06 44.7**	**-0.5**
SALA				eS		**Sn**	**14 08 02.8**	**-4.6**
SALA	**Sala**	**7.34**	**109**	*e*P		**Pn**	**14 06 44.8**	**-0.5**
SALA				eS		Sn	14 08 00.9	-6.5
SALA	comp=N,2μm,0.6s			AML	AML		14 08 07.4	
SALA	comp=E,285nm,0.7s			AML	AML		14 08 11.4	
SALA	**Sala** SNR=45	**7.34**	**109**	*e*P		**Pn**	**14 06 44.8**	**-0.5**
PLD	**Plovdiv**	**7.37**	**338**	P		**Pn**	**14 06 47.9**	**+2.4**
PLD	**Plovdiv**	**7.37**	**338**	P		**Pn**	**14 06 47.9**	**+2.4**
GRG	**Griva**	**7.37**	**321**	P		**Pn**	**14 06 48.3**	**+2.7**
GRG	**Griva**	**7.37**	**321**	*e*P		Pn	14 06 49.1	+3.5
GRG	**Griva**	**7.37**	**321**	*e*P		Pn	14 06 49.1	+3.5
JAN	**Janina**	**7.44**	**308**	P		**Pn**	**14 06 49.5**	**+3.0**
JAN	**Janina**	**7.44**	**308**	P		**Pn**	**14 06 49.5**	**+3.0**
VAY	**Valandovo**	**7.56**	**324**	*i* Pn		**Pn**	**14 06 49.9**	**+1.8**
ASF	**Jabal al Asfar**	**7.69**	**112**	Pn		**Pn**	**14 06 49.5**	**-0.6**
ASF				Sn		**Sn**	**14 08 12.6**	**-3.3**
ASF	**Jabal al Asfar** comp=E,23nm,0.3s,baz=161,slow=6.9,SNR=74	**7.69**	**112**	Pn		**Pn**	**14 06 49.5**	**-0.6**
ASF	comp=E,44nm,0.3s,baz=46,slow=18,SNR=3.8			Sn		**Sn**	**14 08 12.6**	**-3.3**
ASF	comp=E,20μm,21.0s,baz=344,slow=47			LR	LR		14 11 09.9	
IGT	**Igoumenitsa**	**7.71**	**305**	P		**Pn**	**14 06 51.8**	**+1.5**
IGT	**Igoumenitsa**	**7.71**	**305**	P		**Pn**	**14 06 51.8**	**+1.5**
NEST	**Nestorio**	**7.75**	**313**	P		Pn	14 06 54.2	+3.3
HRDS	**Abu Rudays** baz=148	**7.77**	**147**	P		**Pn**	**14 06 49.9**	**-1.3**
FNA	**Florina**	**7.80**	**316**	P

TIP	**Timpagrande**	**10.10**	**296**	*e*Pn	**Pn**	**14 07 21.5**	**-1.5**
BUM	**Brajici-Budva**	**10.20**	**316**	⇓*i*Pn	**Pn**	**14 07 26.3**	**+1.9**
BUM				*e*Sn	**Sn**	**14 09 16.9**	**-0.6**
BUM	**Brajici-Budva**	**10.20**	**316**	⇓*i*Pn	**Pn**	**14 07 26.3**	**+1.9**
MTUR	**Matau**	**10.21**	**346**	⇑*i*P	**Pn**	**14 07 26.6**	**+2.1**
MTUR	**Matau**	**10.21**	**346**	⇑*i*P	**Pn**	**14 07 26.6**	**+2.1**
MTUR	**Matau**	**10.21**	**346**	P	**Pn**	**14 07 26.6**	**+2.1**
BINT	**Bingol**	**10.22**	**66**	*e*Pg	**Pn**	**14 07 26.7**	**+2.0**
MLR	**Muntele Rosu**	**10.32**	**350**	Pn	**Pn**	**14 07 26.5**	**+0.5**
MLR	**Muntele Rosu**	**10.32**	**350**	⇓*i*P	**Pn**	**14 07 28.1**	**+2.0**
MLR	**Muntele Rosu**	**10.32**	**350**	Pn	**Pn**	**14 07 26.5**	**+0.5**
comp=E,0.7nm,0.3s,baz=144,slow=4.2,SNR=46									
MLR	**Muntele Rosu**	**10.32**	**350**	Pn	**Pn**	**14 07 26.5**	**+0.5**
MLR	**Muntele Rosu**	**10.32**	**350**	P	**Pn**	**14 07 28.1**	**+2.0**
DJES	**Djerdap**	**10.37**	**336**	*e*Pn	**Pn**	**14 07 27.7**	**+1.1**
BNGB	**Bing℡**	**10.39**	**66**	*e*PG	**Pn**	**14 07 26.7**	**-0.4**
PETR	**Petresti**	**10.41**	**355**	⇓*i*P	**Pn**	**14 07 30.2**	**+3.0**
VOIR		**10.41**	**347**	⇓*i*P	**Pn**	**14 07 29.3**	**+2.0**
VOIR		**10.41**	**347**	⇓*i*P	**Pn**	**14 07 29.3**	**+2.0**
VOIR		**10.41**	**347**	P	**Pn**	**14 07 29.3**	**+2.0**
ARR	**Arges**	**10.43**	**345**	⇑*i*P	**Pn**	**14 07 29.6**	**+2.0**
NKY	**Niksic**	**10.48**	**318**	⇑*i*Pn	**Pn**	**14 07 30.5**	**+2.2**
NKY				*e*Sn	**Sn**	**14 09 23.1**	**-1.3**
NKY	**Niksic**	**10.48**	**318**	⇑*i*Pn	**Pn**	**14 07 30.5**	**+2.2**
CEL	**Celeste**	**10.50**	**290**	*e*Pn	**Pn**	**14 07 26.6**	**-1.9**
CEL	**Celeste**	**10.50**	**290**	*e*Pn	**Pn**	**14 07 26.6**	**-1.9**
SIM	**Simferopol'**	**10.52**	**22**	*de*P	**Pn**	**14 07 30.6**	**+2.0**
SIM				pmax	pmax		
comp=Z,83nm,0.6s									
SIM				MLR	MLR		
comp=Z,6µm,10.0s									
SIM	**Simferopol'**	**10.52**	**22**	*e*P	**Pn**	**14 07 30.6**	**+2.0**
comp=Z,6µm,10.0s									
HCY	**Herceg Novi**	**10.52**	**315**	⇓*i*Pn	**Pn**	**14 07 29.9**	**+1.1**
HCY				*e*Sn	**Sn**	**14 09 24.1**	**-1.2**
HCY	**Herceg Novi**	**10.52**	**315**	⇓*i*Pn	**Pn**	**14 07 29.9**	**+1.1**
PLOR	**Plostina**	**10.59**	**353**	⇓*i*P	**Pn**	**14 07 32.2**	**+2.5**
PLOR	**Plostina**	**10.59**	**353**	⇓*i*P	**Pn**	**14 07 32.2**	**+2.5**
PLOR	**Plostina**	**10.59**	**353**	P	**Pn**	**14 07 32.2**	**+2.5**
VRI	**Vrincioaia**	**10.60**	**353**	⇑⇑P	**Pn**	**14 07 32.2**	**+2.5**
VRI	**Vrincioaia**	**10.60**	**353**	⇑*i*P	**Pn**	**14 07 32.2**	**+2.5**
VRI	**Vrincioaia**	**10.60**	**353**	P	**Pn**	**14 07 32.2**	**+2.5**
PLE	**Pljevlja**	**10.63**	**321**	⇓*i*Pn	**Pn**	**14 07 33.1**	**+2.7**
PLE				*e*Sn	**Sn**	**14 09 26.7**	**-1.4**
PLE	**Pljevlja**	**10.63**	**321**	⇓*i*Pn	**Pn**	**14 07 33.1**	**+2.7**
LOT	**Lotru**	**10.71**	**342**	⇓*i*P	**Pn**	**14 07 33.0**	**+1.6**
BAI	**Bari**	**10.78**	**306**	*e*Pn	**Pn**	**14 07 31.5**	**-0.8**
BRY	**Bratogost**	**10.79**	**317**	⇓*i*Pn	**Pn**	**14 07 34.0**	**+1.4**
BRY				*e*Sn	**Sn**	**14 09 30.5**	**-1.5**
BRY	**Bratogost**	**10.79**	**317**	⇓*i*Pn	**Pn**	**14 07 34.0**	**+1.4**
UPM	**Unac-Piva**	**10.79**	**320**	⇓*i*Pn	**Pn**	**14 07 35.5**	**+2.9**
UPM				*e*Sn	**Sn**	**14 09 30.4**	**-1.8**
UPM	**Unac-Piva**	**10.79**	**320**	⇓*i*Pn	**Pn**	**14 07 35.5**	**+2.9**
DOPR	**Dopca**	**10.87**	**348**	⇓*i*P	**Pn**	**14 07 35.8**	**+2.3**
DIVS	**Divibare**	**10.91**	**326**	P	**Pn**	**14 07 35.7**	**+1.6**
DIVS	**Divibare**	**10.91**	**326**	*e*Pn	Pn	14 07 38.2	+4.1
DIVS	**Divibare**	**10.91**	**326**	P	**Pn**	**14 07 35.7**	**+1.6**
BBLS	**Lazići**	**11.01**	**323**	*e*Pn	Pn	14 07 39.1	+3.6
CUC	**Castrocucco**	**11.06**	**299**	*e*Pn	**Pn**	**14 07 34.4**	**-1.7**
CUC	**Castrocucco**	**11.06**	**299**	*e*Pn	**Pn**	**14 07 34.4**	**-1.7**
LEOM	**Leova**	**11.12**	**359**	⇓*i*P	**Pn**	**14 07 39.8**	**+2.9**
LEOM	**Leova**	**11.12**	**359**	⇓*i*P	**Pn**	**14 07 39.8**	**+2.9**
LEOM	**Leova**	**11.12**	**359**	P	**Pn**	**14 07 39.8**	**+2.9**
EZM	**Erzurum**	**11.18**	**62**	*e*PG	**Pn**	**14 07 37.5**	**-0.6**
TESR	**Tescani**	**11.24**	**353**	⇑*i*P	**Pn**	**14 07 41.0**	**+2.4**
STON	**Ston**	**11.25**	**315**	*e*Pn	**Pn**	**14 07 37.9**	**-0.7**
STON				Sn	**Sn**	**14 09 39.3**	**-3.6**
DEV	**Deva**	**11.35**	**340**	⇑⇑P	**Pn**	**14 07 41.6**	**+1.6**
DEV	**Deva**	**11.35**	**340**	⇑*i*P	**Pn**	**14 07 41.6**	**+1.6**
DEV	**Deva**	**11.35**	**340**	P	**Pn**	**14 07 41.6**	**+1.6**
BZS	**Buzias**	**11.51**	**335**	⇑⇑P	**Pn**	**14 07 43.5**	**+1.3**
BZS	**Buzias**	**11.51**	**335**	⇑*i*P	**Pn**	**14 07 43.5**	**+1.3**
BZS	**Buzias**	**11.51**	**335**	P	**Pn**	**14 07 43.5**	**+1.3**
KIS	**Kishinev**	**11.65**	**1**	*e*P	**Pn**	**14 07 44.0**	**-0.1**
KIS				*i*S	**Sn**	**14 09 52.0**	**-0.7**
KIS				pmax	pmax		
comp=Z,960nm,2.6s									
KIS				pmax	pmax		
comp=Z,1µm,5.6s									
KIS				pmax	pmax		
comp=Z,1µm,14.0s									
KIS				MLR	MLR		
comp=N,34µm,16.0s									
KIS				MLR	MLR		
comp=E,9µm,18.0s									
KIS				MLR	MLR		
comp=Z,42µm,18.0s									
KIS	**Kishinev**	**11.65**	**1**	*i*P	**Pn**	**14 07 44.0**	**-0.1**
comp=Z,1µm,2.6s									
KIS	**Kishinev**	**11.65**	**1**	*i*PP	Pn	14 07 54.0	+10
KIS				*i*S	**Sn**	**14 09 52.0**	**-0.7**
comp=Z,4µm,12.0s									
KIS				*i*Li		14 10 36.0	
KIS				*i*Lg1		14 10 54.0	
KIS				*i*Lg2		14 11 23.0	
KIS				*i*Rg	Rg	14 12 00.0	
KIS				LRM	MLR	14 13 02.0	
comp=Z,43µm,18.0s									
KIS	**Kishinev**	**11.65**	**1**	*e*P	**Pn**	**14 07 44.0**	**-0.1**
comp=Z,1µm,14.0s									
ANN	**Anapa**	**11.66**	**33**	*c*P	**Pn**	**14 07 44.6**	**+0.3**
ANN				*e*S	**Sn**	**14 09 54.6**	**+1.5**
ANN				pmax	pmax		
comp=Z,32nm,1.2s									
ANN				MLR	MLR		
comp=N,8µm,15.0s									
ANN				MLR	MLR		
comp=Z,8µm,15.0s									
ANN				MLR	MLR		
comp=E,3µm,11.0s									
EMRS	**Mersa Alam**	**11.67**	**150**	P	**Pn**	**14 07 43.3**	**-1.2**
baz=151									
EMRS	**Mersa Alam**	**11.67**	**150**	P	**Pn**	**14 07 43.3**	**-1.2**
CJR	**Cluj-Napoca**	**11.94**	**344**	⇑*i*P	**Pn**	**14 07 49.9**	**+1.8**
SOC	**Sochi**	**11.95**	**43**	*d*iP	**Pn**	**14 07 49.7**	**+1.4**
SOC				*e*		14 09 59.0	
SOC				pmax	pmax		
comp=N,104nm,1.3s									
SOC				pmax	pmax		
comp=Z,89nm,1.2s									
SOC				pmax	pmax		
comp=E,83nm,1.1s									
SOC				MLR	MLR		
comp=N,7µm,10.0s									
SOC				MLR	MLR		
comp=Z,14µm,10.0s									
SOC				MLR	MLR		
comp=E,9µm,10.0s									
SOC	**Sochi**	**11.95**	**43**	*i*P	**Pn**	**14 07 49.7**	**+1.4**
comp=E,89nm,1.2s									
LKFR	**Kufra**	**12.04**	**204**	*i*P	**Pn**	**14 07 48.1**	**-1.6**
comp=E,210nm,0.7s,SNR=22									
DRGR		**12.23**	**341**	⇓P	**Pn**	**14 07 53.8**	**+1.6**
DRGR		**12.23**	**341**	⇓*i*P	**Pn**	**14 07 53.8**	**+1.6**
DRGR		**12.23**	**341**	P	**Pn**	**14 07 53.8**	**+1.6**
AGRB	**Hanur-Agry**	**12.28**	**66**	*e*PG	**Pn**	**14 07 52.5**	**-0.5**
AGRB	**Hanur-Agry**	**12.28**	**66**	*e*Pg	**Pn**	**14 07 52.5**	**-0.5**
BURAR	**Bucovina Array**	**12.50**	**350**	⇑*i*P	**Pn**	**14 07 57.9**	**+2.1**
BUR08	**Bucovina Ar. S**	**12.53**	**350**	*e*Pn	**Pn**	**14 07 55.8**	**-0.5**
BUR08	**Bucovina Ar. S**	**12.53**	**350**	*e*Pn	**Pn**	**14 07 55.8**	**-0.5**
CLDR	**Caldiran**	**12.87**	**68**	*e*PG	**Pn**	**14 07 59.7**	**-1.4**
CLDR	**Caldiran**	**12.87**	**68**	*e*Pg	**Pn**	**14 07 59.7**	**-1.4**
CHVG	**Ch'k'valeri**	**12.88**	**51**	P	Pn	14 08 04.9	+4.0
PKS2	**Kecel**	**13.15**	**331**	⇑*e*	**Pn**	**14 08 07.7**	**+3.2**
PKSM	**Moragy**	**13.16**	**329**	⇓P	**Pn**	**14 08 05.7**	**+1.0**
PKSM	**Moragy**	**13.16**	**329**	⇓*i*P	**Pn**	**14 08 05.7**	**+1.0**
PKSM	**Moragy**	**13.16**	**329**	⇑*e*	**Pn**	**14 08 05.6**	**+0.9**
PKSM	**Moragy**	**13.16**	**329**	P	**Pn**	**14 08 05.7**	**+1.0**
PKSN	**Nyarlorinc**	**13.23**	**333**	⇑*e*	P	14 08 11.2	-3.6
AKH	**Akhalkalaki**	**13.24**	**58**	P	**Pn**	**14 08 08.0**	**+2.0**
BHD	**Baghdad**	**13.31**	**94**	*i*P	**Pn**	**14 08 08.8**	**+2.0**
BHD				*i*S	**Sn**	**14 10 38.4**	**+5.0**
UDBI	**Udbina**	**13.38**	**317**	*e*Pn	**Pn**	**14 08 08.3**	**+0.4**
UDBI				Sn	**Sn**	**14 10 31.9**	**-3.2**
UDBI	**Udbina**	**13.38**	**317**	*e*Pn	**Pn**	**14 08 08.2**	**+0.4**
TRPA	**Tarpa**	**13.52**	**343**	⇑*i*P	**Pn**	**14 08 11.2**	**+1.6**
TRPA	**Tarpa**	**13.52**	**343**	⇑*e*	**Pn**	**14 08 09.6**	**0.0**
HSHL	**Bi'r Shalatayn**	**13.60**	**152**	P	**Pn**	**14 08 11.2**	**+0.3**
baz=152									
PKS9	**Tamasi**	**13.61**	**329**	⇑*e*	**Pn**	**14 08 12.7**	**+1.8**
PKS7	**Kunszentmiklos**	**13.62**	**332**	⇑*e*	**Pn**	**14 08 13.5**	**+2.5**
AQU	**L'Aquila**	**13.67**	**305**	*e*Pn	**Pn**	**14 08 10.5**	**-1.3**
AQU	**L'Aquila**	**13.67**	**305**	⇑*i*P	**Pn**	**14 08 12.1**	**+0.3**
AQU	**L'Aquila**	**13.67**	**305**	*e*Pn	**Pn**	**14 08 10.5**	**-1.3**
ONI	**Oni**	**13.70**	**54**	P	**Pn**	**14 08 14.1**	**+1.9**
GNI	**Garni**	**13.73**	**65**	*e*Pn	**Pn**	**14 08 14.7**	**+2.0**
comp=E,115nm,0.9s									
GNI	**Garni**	**13.73**	**65**	Pn	**Pn**	**14 08 15.3**	**+2.6**
comp=E,2.4nm,0.3s,baz=305,slow=2.5,SNR=12									
GNI	**Garni**	**13.73**	**65**	*e*Pn	**Pn**	**14 08 14.7**	**+2.0**
comp=E,115nm,0.9s									
GOR	**Gori**	**13.89**	**57**	P	Pn	14 08 18.1	+3.3
NVLJ	**Novalja**	**13.90**	**316**	*e*Pn	**Pn**	**14 08 14.0**	**-0.9**
NVLJ				Sn	Sn	14 10 40.9	-6.9
NVLJ	**Novalja**	**13.90**	**316**	*e*Pn	**Pn**	**14 08 14.0**	**-0.9**
KIV	**Kislovodsk**	**13.90**	**48**	⇑*e*P	**Pn**	**14 08 17.2**	**+2.2**
KIV				pmax	pmax		
comp=Z,68nm,1.2s									
KIV				MLR	MLR		
comp=Z,8µm,19.0s									
KIV	**Kislovodsk**	**13.90**	**48**	P	**P**	**14 08 25.6**	**+3.1**
comp=Z,2µm,0.9s,SNR=7.8									
KBZ	**Khabaz**	**13.91**	**49**	P	**Pn**	**14 08 17.9**	**+2.9**
KBZ				pmax	pmax		
comp=Z,1.0nm,0.3s									
KBZ				MLR	MLR		
comp=Z,4µm,18.5s									
KBZ	**Khabaz**	**13.91**	**49**	Pn	**Pn**	**14 08 17.9**	**+2.9**
KBZ	**Khabaz**	**13.91**	**49**	Pn	**Pn**	**14 08 17.9**	**+2.9**
comp=Z,0.5nm,0.3s,baz=243,slow=10,SNR=37									
KBZ				LR	LR	14 15 15.8	
comp=Z,4µm,18.5s,baz=250,slow=44									
KBZ	**Khabaz**	**13.91**	**49**	Pn	**Pn**	**14 08 17.9**	**+2.9**
ISHB	**Shabestar**	**14.04**	**73**	*e*P	**Pn**	**14 08 19.7**	**+2.7**
PSZ	**Piszkesteto**	**14.10**	**336**	⇑P	**Pn**	**14 08 18.9**	**+1.3**
PSZ	**Piszkesteto**	**14.10**	**336**	*e*Pn	**Pn**	**14 08 17.1**	**-0.5**
PSZ	**Piszkesteto**	**14.10**	**336**	⇑*i*P	**Pn**	**14 08 18.9**	**+1.3**
PSZ	**Piszkesteto**	**14.10**	**336**	⇑*e*	**Pn**	**14 08 17.3**	**-0.3**
PSZ	**Piszkesteto**	**14.10**	**336**	*e*Pn	**Pn**	**14 08 17.1**	**-0.5**
IMRD	**Marand**	**14.16**	**71**	*e*P	**Pn**	**14 08 20.7**	**+2.0**
BEHE	**Becsehely**	**14.19**	**325**	⇑*e*	**Pn**	**14 08 19.2**	**+0.4**
PKSG		**14.21**	**331**	⇑*e*	**Pn**	**14 08 21.5**	**+2.5**
TBLG	**Delisi**	**14.22**	**59**	*e*P	**Pn**	**14 08 20.6**	**+1.3**
TBLG	**Delisi**	**14.22**	**59**	P	**Pn**	**14 08 20.6**	**+1.3**
CSKK	**Cs˘ˇtkako**	**14.23**	**331**	⇑*e*	**P**	**14 08 25.4**	**-0.6**
PKST	**T˘ˇs**	**14.24**	**330**	⇑*e*	**Pn**	**14 08 20.9**	**+1.4**
IAZR	**Azarshahr**	**14.27**	**75**	*e*P	**Pn**	**14 08 23.1**	**+2.9**
IAZR	**Azarshahr**	**14.27**	**75**	*e*P	**Pn**	**14 08 23.1**	**+2.9**
BOJS	**Bojanci**	**14.28**	**319**	*e*Pn	**Pn**	**14 08 18.8**	**-1.3**
GUDG	**Gudauri**	**14.33**	**55**	P	**Pn**	**14 08 23.4**	**+2.4**
KOLS	**Kolonicke sedl**	**14.33**	**343**	*e*P	**Pn**	**14 08 22.7**	**+2.0**
KOLS	**Kolonicke sedl**	**14.33**	**343**	*e*PN	**Pn**	**14 08 22.7**	**+2.0**
KOLS	**Kolonicke sedl**	**14.33**	**343**	*e*Pn	**Pn**	**14 08 22.7**	**+2.0**
DUS	**Dusheti**	**14.33**	**57**	P	**P**	**14 08 25.3**	**-1.9**
KECS	**Kecovo**	**14.40**	**338**	*e*P	**Pn**	**14 08 22.6**	**+0.9**
KECS	**Kecovo**	**14.40**	**338**	*e*PN	**Pn**	**14 08 22.6**	**+0.9**
KECS	**Kecovo**	**14.40**	**338**	*e*Pn	**Pn**	**14 08 22.6**	**+0.9**
ITBZ	**Tabriz**	**14.45**	**73**	*e*P	**Pn**	**14 08 25.0**	**+2.5**
ITBZ	**Tabriz**	**14.45**	**73**	*e*P	**Pn**	**14 08 25.0**	**+2.5**
CRVS	**Cervenica-Dubn**	**14.51**	**341**	*e*P	**Pn**	**14 08 21.9**	**-1.1**
CRVS	**Cervenica-Dubn**	**14.51**	**341**	*e*PN	**Pn**	**14 08 21.9**	**-1.1**
LEGS	**Legarje**	**14.54**	**321**	*e*Pn	**Pn**	**14 08 22.3**	**-1.2**
DGRG	**David-gareji**	**14.57**	**60**	P	**Pn**	**14 08 26.2**	**+2.1**
IBDR	**Badra**	**14.61**	**94**	*e*P	**Pn**	**14 08 23.1**	**-1.4**
IBDR				*e*S	**Sn**	**14 11 00.8**	**-4.3**
IDHR	**Dehrash**	**14.69**	**87**	*e*P	**Pn**	**14 08 26.3**	**+0.5**
VISS	**Visnje**	**14.70**	**319**	*e*Pn	**Pn**	**14 08 24.2**	**-1.5**
GOF	**Gofitskoye**	**14.74**	**44**	⇑*i*P	**P**	**14 08 33.0**	**+1.3**
GOF				pmax	pmax		
comp=Z,320nm,1.4s									
LVV	**L'vov**	**14.83**	**349**	*e*P	**Pn**	**14 08 29.0**	**+1.6**
LVV				*e*S	S	14 11 20.6	-6.8
LVV				MLR	MLR		
comp=Z,14µm,15.0s									
KWP	**Kalwaria Pacla**	**14.89**	**345**	*e*P	**Pn**	**14 08 29.4**	**+1.2**
KWP	**Kalwaria Pacla**	**14.89**	**345**	*e*Pn	**Pn**	**14 08 27.5**	**-0.7**
comp=Z,164nm,1.1s									
KWP	**Kalwaria Pacla**	**14.89**	**345**	⇑*i*P	**Pn**	**14 08 29.5**	**+1.2**
KWP	**Kalwaria Pacla**	**14.89**	**345**	*e*P	**Pn**	**14 08 29.3**	**+1.1**
KWP				*e*S	**S**	**14 11 33.5**	**+4.8**
KWP	**Kalwaria Pacla**	**14.89**	**345**	*e*Pn	**Pn**	**14 08 27.5**	**-0.7**
comp=Z,164nm,1.1s									
IGHG	**Ghaleghazi**	**14.89**	**89**	*e*P	**Pn**	**14 08 29.4**	**+0.9**
IGHG	**Ghaleghazi**	**14.89**	**89**	*e*P	**Pn**	**14 08 29.4**	**+0.9**
VYHS	**Vyhne**	**14.96**	**334**	*e*P	**Pn**	**14 08 28.4**	**-0.7**
VYHS	**Vyhne**	**14.96**	**334**	*e*PN	**Pn**	**14 08 28.4**	**-0.7**
VYHS	**Vyhne**	**14.96**	**334**	*e*Pn	**Pn**	**14 08 28.4**	**-0.7**
SKDS	**Skadanscina**	**14.98**	**317**	*e*Pn	**Pn**	**14 08 26.7**	**-2.8**
LJU	**Ljubljana**	**15.02**	**320**	*e*Pn	**Pn**	**14 08 27.0**	**-2.9**
STHS	**Stebnicka Huta**	**15.03**	**342**	*e*P	**Pn**	**14 08 32.3**	**+2.2**
STHS	**Stebnicka Huta**	**15.03**	**342**	*e*PN	**Pn**	**14 08 32.2**	**+2.2**
STHS	**Stebnicka Huta**	**15.03**	**342**	*e*Pn	**Pn**	**14 08 32.3**	**+2.2**
IVIS	**Veis**	**15.09**	**88**	*e*P	**Pn**	**14 08 31.6**	**+0.5**
IVIS	**Veis**	**15.09**	**88**	*e*P	**Pn**	**14 08 31.6**	**+0.5**
PERS	**Pernice**	**15.11**	**322**	*e*Pn	**Pn**	**14 08 30.1**	**-1.1**
ILIN	**Lien**	**15.13**	**86**	*e*P	**Pn**	**14 08 32.1**	**+0.4**
ILIN	**Lien**	**15.13**	**86**	*e*P	**Pn**	**14 08 32.1**	**+0.4**
IHRS	**Heris**	**15.16**	**73**	*e*P	**P**	**14 08 34.4**	**-2.2**
IHRS	**Heris**	**15.16**	**73**	*e*P	**P**	**14 08 34.4**	**-2.2**
SOKA	**Soboth**	**15.18**	**322**	⇓*i*Pn	**Pn**	**14 08 31.6**	**-0.6**
comp=Z,365nm,1.3s									
SOP	**Sopron**	**15.20**	**328**	⇑*e*p	**Pn**	**14 08 32.3**	**0.0**
TRI	**Trieste**	**15.22**	**317**	*e*P	**Pn**	**14 08 30.9**	**-1.6**
TRI	**Trieste**	**15.22**	**317**	*e*Pn	**Pn**	**14 08 30.9**	**-1.6**
TRI	**Trieste**	**15.22**	**317**	*e*Pn	**Pn**	**14 08 30.9**	**-1.6**
NIE	**Niedzica**	**15.29**	**339**	*e*P	**Pn**	**14 08 34.5**	**+1.0**
NIE				*e*S	Sn	14 11 29.2	+7.6
NIE	**Niedzica**	**15.29**	**339**	*e*P	**Pn**	**14 08 34.5**	**+1.0**
NIE				*e*		14 09 03.1	
NIE				*e*S	Sn	14 11 29.2	+7.6
OBKA	**Obir**	**15.31**	**321**	⇑*i*Pn	**Pn**	**14 08 33.3**	**-0.6**
comp=Z,203nm,1.2s,SNR=29									
AK02	**Malin Array Si**	**15.31**	**2**	*e*Pn	**Pn**	**14 08 33.8**	**+0.1**
AK02	**Malin Array Si**	**15.31**	**2**	*e*Pn	**Pn**	**14 08 33.8**	**+0.1**
ARSA	**Arzberg**	**15.35**	**325**	⇓*i*Pn	**Pn**	**14 08 35.4**	**+1.1**
comp=Z,57nm,0.7s,SNR=32									
AK01	**Malin Array Si**	**15.35**	**2**	*e*Pn	**Pn**	**14 08 33.7**	**-0.5**
AK01	**Malin Array Si**	**15.35**	**2**	*e*Pn	**Pn**	**14 08 33.7**	**-0.5**
VOY	**Vojsko**	**15.35**	**318**	*e*Pn	**Pn**	**14 08 32.8**	**-1.5**
VOY				*e*		14 08 36.4	
VOY				*e*		14 11 16.9	
KIEV	**Kiev**	**15.35**	**2**	*e*P	**Pn**	**14 08 33.5**	**-0.7**
KIEV				pmax	pmax		
comp=Z,1µm,2.0s									
KIEV	**Kiev**	**15.35**	**2**	*e*Pn	**Pn**	**14 08 33.5**	**-0.7**
comp=Z,1µm,2.0s									
KIEV	**Kiev**	**15.35**	**2**	*e*Pn	**Pn**	**14 08 33.5**	**-0.7**
comp=Z,1µm,2.0s									
AKASG	**Malin Array Be**	**15.36**	**2**	P	**Pn**	**14 08 33.2**	**-1.1**
AKASG				pmax	pmax		
comp=Z,3.0nm,0.3s									
AKASG				MLR	MLR		
comp=Z,33µm,18.6s									
AKASG	**Malin Array Be**	**15.36**	**2**	Pn	**Pn**	**14 08 33.1**	**-1.1**
AKASG				ScP	**ScP**	**14 17 08.7**	**+1.0**
AKASG	**Malin Array Be**	**15.36**	**2**	Pn	**Pn**	**14 08 33.1**	**-1.1**
comp=Z,2.7nm,0.3s,baz=185,slow=12,SNR=35									
AKASG				LR	LR	14 15 27.9	
comp=Z,33µm,18.6s,baz=185,slow=41									
AKASG				ScP	**ScP**	**14 17 08.7**	**+1.0**
comp=Z,0.6nm,0.3s,baz=190,slow=0.3,SNR=8.2									
AKASG	**Malin Array Be**	**15.36**	**2**	Pn	**Pn**	**14 08 33.2**	**-1.1**
AKASG				ScP	**ScP**	**14 17 08.7**	**+1.0**
SMOL	**Smolenice**	**15.49**	**332**	*e*P	**P**	**14 08 40.5**	**+0.5**
SMOL	**Smolenice**	**15.49**	**332**	*e*P	**P**	**14 08 40.5**	**+0.5**
SMOL	**Smolenice**	**15.49**	**332**	*e*P	**P**	**14 08 40.5**	**+0.5**
KEST	**Kesra**	**15.59**	**277**	*e*Pn	**Pn**	**14 08 36.3**	**-1.1**
KEST	**Kesra**	**15.59**	**277**	Pn	**Pn**	**14 08 36.3**	**-1.1**
comp=Z,0.5nm,0.3s,baz=50,slow=8.0,SNR=78									
KEST	**Kesra**	**15.59**	**277**	*e*Pn	**Pn**	**14 08 36.3**	**-1.1**
ISRB	**Sarab**	**15.61**	**75**	*e*P	**Pn**	**14 08 39.6**	**+1.7**
ISRB	**Sarab**	**15.61**	**75**	*e*P	**Pn**	**14 08 39.6**	**+1.7**
IKOM	**Komasi**	**15.69**	**89**	*e*P	**Pn**	**14 08 39.1**	**+0.2**
IKOM	**Komasi**	**15.69**	**89**	*e*P	**Pn**	**14 08 39.1**	**+0.2**
CONA	**Conrad Observa**	**15.69**	**327**	*i*Pn	**Pn**	**14 08 38.6**	**-0.1**
comp=Z,68nm,1.3s,SNR=42									
MYKA	**Terra Mystica**	**15.87**	**320**	⇑*i*Pn	**Pn**	**14 08 40.8**	**-0.2**
comp=Z,131nm,0.8s									
OJC	**Ojcow**	**16.16**	**340**	*e*P	**Pn**	**14 08 43.6**	**-1.0**
OJC				*e*S	**S**	**14 11 50.4**	**-4.1**
OJC				MLR	MLR		
comp=Z,26µm,18.5s									
OJC	**Ojcow**	**16.16**	**340**	*e*Pn	**Pn**	**14 08 44.0**	**-0.6**
OJC	**Ojcow**	**16.16**	**340**	*e*P	**Pn**	**14 08 43.6**	**-1.0**
OJC				*e*		14 09 17.3	
OJC				*e*S	**S**	**14 11 50.4**	**-4.1**
OJC				L	L	14 15 58.3	
comp=Z,26µm,18.5s									
OJC	**Ojcow**	**16.16**	**340**	*e*Pn	**Pn**	**14 08 44.0**	**-0.6**
KBA	**Koelnbreinsper**	**16.31**	**321**	*i*Pn	**Pn**	**14 08 47.1**	**+0.3**
SNR=55									
OKC	**Ostrava-Krasne**	**16.34**	**336**	*e*P	**P**	**14 08 49.1**	**-0.2**
OKC				*e*S	**Sn**	**14 11 51.8**	**+4.9**
OKC				MLR	MLR		
comp=Z,16µm,14.8s									
OKC	**Ostrava-Krasne**	**16.34**	**336**	⇓*e*P	**P**	**14 08 49.1**	**-0.2**
OKC				*e*S	**Sn**	**14 11 51.8**	**+4.9**
OKC				AMS	AMS	14 15 40.0	
comp=Z,16µm,14.8s									
OKC	**Ostrava-Krasne**	**16.34**	**336**	*e*P	**P**	**14 08 49.1**	**-0.2**
comp=Z,16µm,14.8s									
MOA	**Molln**	**16.37**	**324**	⇑*i*Pn	**Pn**	**14 08 47.9**	**+0.5**
comp=Z,119nm,0.8s,SNR=44									
VLC	**Villacollemand**	**16.44**	**308**	*e*Pn	**Pn**	**14 08 46.2**	**-2.0**
VLC	**Villacollemand**	**16.44**	**308**	*e*Pn	**Pn**	**14 08 46.2**	**-2.0**
VRAC	**Vranov**	**16.46**	**332**	Pn	**Pn**	**14 08 47.8**	**-0.7**
VRAC	**Vranov**	**16.46**	**332**	⇑*i*P	**Pn**	**14 08 49.2**	**+0.7**
VRAC	**Vranov**	**16.46**	**332**	Pn	**Pn**	**14 08 47.8**	**-0.7**
comp=Z,2.1nm,0.3s,baz=136,slow=10,SNR=34									
VRAC	**Vranov**	**16.46**	**332**	Pn	**Pn**	**14 08 47.8**	**-0.7**
VRAC	**Vranov**	**16.46**	**332

VSR	Storozhevoye	17.64	23	eP		Pn	14 09 02.9	-0.2	
VSR				eS		Sn	14 12 21.8	+3.4	
VSR					pmax	pmax			
	comp=Z,40nm,1.3s								
VSR					pmax	pmax			
	comp=N,150nm,1.6s								
VSR					pmax	pmax			
	comp=E,60nm,1.4s								
VSR					smax	smax			
	comp=Z,2µm,4.5s								
VSR					smax	smax			
	comp=N,530nm,2.7s								
VSR					smax	smax			
	comp=E,2µm,4.3s								
VSR					MLR	MLR			
	comp=Z,12µm,23.0s								
VSR					MLR	MLR			
	comp=N,8µm,25.0s								
VSR					MLR	MLR			
	comp=E,5µm,16.0s								
VSR	Storozhevoye	17.64	23	eP		Pn	14 09 02.9	-0.2	
	comp=E,2µm,4.5s								
IGZV	Ghazvin	17.65	80	eP		P	14 09 04.3	+0.1	
IGZV	Ghazvin	17.65	80	eP		P	14 09 04.3	+0.1	
UPC	Upice	17.65	333	eP		Pn	14 09 03.5	+0.2	
UPC	Upice	17.65	333⇓	eP		Pn	14 09 03.5	+0.2	
UPC	Upice	17.65	333	eP		Pn	14 09 03.5	+0.2	
CKFL	Kef-Lekhel	17.67	280	P		Pn	14 09 03.1	-0.6	
CKFL	Kef-Lekhel	17.67	280	P		Pn	14 09 03.1	-0.6	
MOTA	Moosalm	17.67	318⇑	iP		Pn	14 09 03.9	+0.2	
	comp=E,171nm,0.8s,SNR=90								
MOTA	Moosalm	17.67	318	P		Pn	14 09 03.9	+0.2	
	comp=E,171nm,0.8s,SNR=90								
FETA	Feichten	17.69	317⇑	iPn		P	14 09 05.2	+0.7	
	comp=E,197nm,1.0s,SNR=118								
PRU	Pruhonice	17.82	329⇓	iP		Pn	14 09 04.7	-0.7	
PRU				eS		Sn	14 12 22.3	-0.6	
PRU					MLR	MLR			
	comp=Z,15µm,11.9s								
PRU	Pruhonice	17.82	329⇓	iP		Pn	14 09 04.7	-0.7	
PRU				eS		Sn	14 12 22.3	-0.6	
PRU					AMS	AMS	14 17 00.0		
	comp=Z,15µm,11.9s								
PRU	Pruhonice	17.82	329	i P		Pn	14 09 04.7	-0.7	
	comp=Z,15µm,11.9s								
KSP	Ksiaz	17.83	334⇑	eP		P	14 09 05.9	+0.1	
KSP				eS		S	14 12 27.0	-1.5	
KSP					MLR	MLR			
	comp=Z,38µm,21.6s								
KSP	Ksiaz	17.83	334	eP		P	14 09 05.9	+0.1	
KSP				eS		S	14 12 27.7	-0.8	
KSP	Ksiaz	17.83	334	eP		P	14 09 05.9	+0.1	
KSP				eS		S	14 12 27.0	-1.5	
CASM	Ain Smara	17.86	279	P		Pn	14 09 04.9	-1.1	
CASM	Ain Smara	17.86	279	P		Pn	14 09 04.9	-1.1	
PRA	Prague	17.93	329⇓	iP		Pn	14 09 05.0	-1.7	
PRA					AMS	AMS	14 17 30.0		
WET	Wettzell	17.94	325	eP		P	14 09 07.2	+0.1	
	comp=Z,285nm,1.4s								
RETA	Reutte	17.94	318⇑	iP		Pn	14 09 06.8	-0.2	
	comp=Z,276nm,1.2s,SNR=52								
RETA	Reutte	17.94	318	P		Pn	14 09 06.8	-0.2	
	comp=Z,276nm,1.2s,SNR=52								
DAVOX	Davos/Dischmat	18.04	315	P		Pn	14 09 08.2	-0.1	
DAVOX	Davos/Dischmat	18.04	315	P		Pn	14 09 08.2	-0.1	
	comp=Z,5.1nm,0.3s,baz=120,slow=10,SNR=28								
DAVOX	Davos/Dischmat	18.04	315	P		Pn	14 09 08.2	-0.1	
	comp=Z,5.0nm,0.3s								
FUR	Furstenfeldbru	18.08	320	eP		Pn	14 09 08.2	-0.4	
	comp=Z,477nm,1.0s								
VOR	Voronezh	18.10	22	eP		P	14 09 08.0	-0.7	
VOR					pmax	pmax			
	comp=Z,1µm,3.4s								
VOR	Voronezh	18.10	22	eP		P	14 09 08.0	-0.7	
	comp=Z,1µm,3.4s								
TUE	Stuetta	18.19	313	eP		P	14 09 09.4	-0.7	
	comp=Z,273nm,1.0s								
TUE	Stuetta	18.19	313	eP		P	14 09 09.4	-0.7	
	comp=Z,273nm,1.0s								
PVCC	Panska Ves	18.23	331	eP		P	14 09 10.3	+0.1	
PVCC				eS		Sn	14 12 29.3	-3.4	
PVCC					MLR	MLR			
	comp=Z,15µm,20.6s								
PVCC	Panska Ves	18.23	331⇓	eP		P	14 09 10.3	+0.1	
PVCC				eS		Sn	14 12 29.3	-3.4	
PVCC					AMS	AMS	14 16 50.0		
	comp=Z,15µm,20.6s								
PVCC	Panska Ves	18.23	331	eP		P	14 09 10.3	+0.1	
	comp=Z,15µm,20.6s								
SAOF	Saorge	18.24	305	eP		P	14 09 08.4	-2.0	
SAOF	Saorge	18.24	305	eP		P	14 09 08.4	-2.0	
SAOF	Saorge	18.24	305	eP		P	14 09 08.4	-2.0	
SAOF	Saorge	18.24	305	eP		P	14 09 08.4	-2.0	
SBF	Sospel	18.28	304	eP		P	14 09 09.2	-1.7	
	comp=Z,630nm,0.9s								
SBF	Sospel	18.28	304	eP		P	14 09 09.2	-1.7	
SBF					pmax	pmax			
	comp=Z,630nm,0.9s								
SBF	Sospel	18.28	304	eP		P	14 09 09.2	-1.7	
	comp=Z,630nm,0.9s								
SBF	Sospel	18.28	304	eP		P	14 09 09.2	-1.7	
	comp=Z,315nm,0.9s								
REVF	Revere	18.28	304	eP		P	14 09 09.2	-1.7	
REVF	Revere	18.28	304	eP		P	14 09 09.2	-1.7	
REVF	Revere	18.28	304	eP		P	14 09 09.2	-1.7	
REVF	Revere	18.28	304	eP		P	14 09 09.2	-1.7	
DAVA	Damuels	18.32	316⇑	iPn		P	14 09 11.3	-0.1	
	comp=Z,345nm,1.2s,SNR=41								
AUTN	L'Aution	18.33	304	eP		P	14 09 10.2	-1.4	
AUTN	L'Aution	18.33	304	eP		P	14 09 10.2	-1.4	
AUTN	L'Aution	18.33	304	eP		P	14 09 10.2	-1.4	
AUTN	L'Aution	18.33	304	eP		P	14 09 10.2	-1.4	
DFRA	Djebel Bou Aff	18.34	280	P		Pn	14 09 12.3	+0.4	
DFRA	Djebel Bou Aff	18.34	280	P		Pn	14 09 12.3	+0.4	
IR3	Iran Long-Peri	18.38	83	eP		Pn	14 09 13.2	+0.9	
TOUF	Mont Tournerai	18.46	304	eP		P	14 09 12.3	-0.7	
TOUF	Mont Tournerai	18.46	304	eP		P	14 09 12.3	-0.7	
TOUF	Mont Tournerai	18.46	304	eP		P	14 09 12.3	-0.7	
TOUF	Mont Tournerai	18.46	304	eP		P	14 09 12.3	-0.7	
MVIF	Mont Vial	18.48	304	eP		P	14 09 11.6	-1.6	
MVIF	Mont Vial	18.48	304	eP		P	14 09 11.6	-1.6	
MVIF	Mont Vial	18.48	304	eP		P	14 09 11.6	-1.6	
MVIF	Mont Vial	18.48	304	eP		P	14 09 11.6	-1.6	
CALN	Calern	18.61	303	eP		P	14 09 13.2	-1.4	
CALN	Calern	18.61	303	eP		P	14 09 13.2	-1.4	
CALN	Calern	18.61	303	eP		P	14 09 13.2	-1.4	
CALN	Calern	18.61	303	eP		P	14 09 13.2	-1.4	
ROTZ	Rotzenmuhle	18.69	325	eP		Pn	14 09 16.0	+0.1	
	comp=Z,276nm,1.3s								
FRF	La Foret Royal	18.71	303	eP		P	14 09 13.7	-1.9	
	comp=Z,339nm,1.0s								
FRF	La Foret Royal	18.71	303	eP		P	14 09 13.7	-1.9	
FRF					pmax	pmax			
	comp=Z,339nm,1.0s								
FRF	La Foret Royal	18.71	303	eP		P	14 09 13.7	-1.9	
	comp=Z,339nm,1.0s								
FRF	La Foret Royal	18.71	303	eP		P	14 09 13.7	-1.9	
	comp=Z,169nm,1.0s								
LMR	La Mourre	18.74	302	eP		P	14 09 14.8	-1.1	
	comp=Z,275nm,1.1s								
LMR	La Mourre	18.74	302	eP		P	14 09 14.8	-1.1	
LMR					pmax	pmax			
	comp=Z,275nm,1.1s								
LMR	La Mourre	18.74	302	eP		P	14 09 14.8	-1.1	
	comp=Z,275nm,1.1s								
LMR	La Mourre	18.74	302	eP		P	14 09 14.8	-1.1	
	comp=Z,138nm,1.1s								
SET	Setif	18.75	279	P		P	14 09 08.0	-8.1	
BRG	Berggiesshubel	18.75	330	eP		P	14 09 16.2	+0.3	
	comp=Z,52nm,1.0s								
BRG				i	pP	pP	14 09 24.1	-1.7	
	comp=Z,416nm,1.6s								
BRG				i			14 09 33.8		
	comp=Z,148nm,1.1s								
BRG					S	Sn	14 12 43.0	-2.2	
BRG				e	PCS	PcS	14 17 17.6	-1.2	
	comp=Z,7.1nm,1.0s								
BRG									
	comp=N,9µm,17.3s								
BRG									
	comp=E,10µm,17.6s								
BRG									
	comp=Z,17µm,19.8s								
BRG	Berggiesshubel	18.75	330	eP		P	14 09 15.7	-0.2	
	comp=Z,416nm,1.6s								

BRG	Berggiesshubel	18.75	330	eP		P	14 09 16.2	+0.3	
BRG					S	Sn	14 12 43.0	-2.2	
BRG					pmax	pmax			
	comp=Z,52nm,1.0s								
BRG					MLR	MLR			
	comp=N,9µm,17.3s								
BRG					MLR	MLR			
	comp=E,10µm,17.6s								
BRG					MLR	MLR			
	comp=Z,17µm,19.8s								
BRG	Berggiesshubel	18.75	330	eP		P	14 09 16.2	+0.3	
	comp=Z,52nm,1.0s								
IPIR	Pirpir	18.76	92	eP		Pn	14 09 17.6	+0.3	
MANZ	Manzenberg	18.89	326	eP		P	14 09 16.7	-0.8	
	comp=Z,262nm,1.5s								
RAYN	Ar Rayn	18.90	124	Pn		Pn	14 09 19.5	+0.7	
	comp=Z,698nm,1.0s,SNR=49								
RAYN	Ar Rayn	18.90	124	ePn		P	14 09 17.2	-0.7	
	comp=Z,152nm,1.0s								
RAYN	Ar Rayn	18.90	124	ePn		P	14 09 17.2	-0.7	
	comp=Z,152nm,1.0s								
NKC	Novy Kostel	18.91	327	eP		P	14 09 16.8	-0.9	
NKC				eS		Sn	14 12 47.3	-1.9	
NKC					MLR	MLR			
	comp=Z,22µm,16.3s								
NKC	Novy Kostel	18.91	327⇓	eP		P	14 09 16.8	-0.9	
NKC				eS		Sn	14 12 47.3	-1.9	
NKC					AMS	AMS	14 18 30.0		
	comp=Z,22µm,16.3s								
NKC	Novy Kostel	18.91	327	eP		P	14 09 16.8	-0.9	
	comp=Z,22µm,16.3s								
WERN	Wernitzgruen	18.98	327	eP		P	14 09 18.1	-0.4	
	comp=Z,103nm,0.9s								
IVRN	Varamin	19.00	84	eP		Pn	14 09 20.6	+0.7	
FBE	Freiberg	19.02	330	eP		P	14 09 18.8	-0.2	
	comp=Z,274nm,0.9s								
SUW	Suwalki	19.03	350	eP		P	14 09 18.4	-0.6	
SUW				eS		Sn	14 12 48.8	-3.3	
SUW	Suwalki	19.03	350	eP		P	14 09 18.3	-0.7	
SUW				eS		Sn	14 12 48.7	-3.3	
SUW	Suwalki	19.03	350	eP		P	14 09 18.4	-0.6	
TANN	Tannenbergstha	19.03	327	eP		P	14 09 18.6	-0.5	
	comp=Z,140nm,1.1s								
MBDF	Montbardon	19.04	306	eP		P	14 09 19.4	+0.1	
	comp=Z,460nm,0.8s								
MBDF	Montbardon	19.04	306	eP		P	14 09 19.4	+0.1	
MBDF					pmax	pmax			
	comp=Z,460nm,0.8s								
MBDF	Montbardon	19.04	306	eP		P	14 09 19.4	+0.1	
	comp=Z,460nm,0.8s								
MBDF	Montbardon	19.04	306	eP		P	14 09 19.4	+0.1	
	comp=Z,230nm,0.8s								
GUNZ	Gunzen	19.05	327	eP		P	14 09 19.0	-0.3	
	comp=Z,137nm,0.7s								
GRF	Grafenberg Arr	19.10	324	eP		P	14 09 19.8	0.0	
	comp=Z,323nm,1.1s								
GRF				e	L	L	14 17 29.9		
	comp=Z,15µm,21.7s								
GRFO	Grafenberg	19.10	324	eP		P	14 09 20.1	+0.3	
GRFO					pmax	pmax			
	comp=Z,249nm,1.0s								
GRFO	Grafenberg	19.10	324	ePn		P	14 09 20.1	+0.3	
	comp=Z,249nm,1.0s								
GRFO	Grafenberg	19.10	324	eP		P	14 09 20.1	+0.3	
	comp=Z,249nm,1.0s								
WERD	Werda	19.12	327	eP		P	14 09 19.7	-0.4	
	comp=Z,196nm,1.2s								
MICGM	Minsk	19.16	359⇑	iP		P	14 09 18.0	-2.4	
MNK	Minsk	19.16	359	cP		P	14 09 18.0	-2.4	
MNK				e	S	Sn	14 12 48.0	-7.1	
MNK					pmax	pmax			
	comp=Z,7µm,6.0s								
MNK					pmax	pmax			
	comp=Z,980nm,1.0s								
MNK					pmax	pmax			
	comp=N,1µm,1.0s								
MNK					smax	smax			
	comp=E,8µm,10.0s								
MNK					MLR	MLR			
	comp=E,13µm,10.0s								
MNK					MLR	MLR			
	comp=N,21µm,16.0s								
MNK					MLR	MLR			
	comp=Z,13µm,10.0s								
IKLH	Kolahrood	19.18	89	eP		Pn	14 09 22.5	+0.3	
IDMV	Damavand	19.18	82	eP		Pn	14 09 23.4	+1.1	
PLN	Plauen	19.22	327	eP		P	14 09 20.7	-0.4	
	comp=Z,2µm,1.3s								
BNI	Bardonecchia	19.22	307	eP		P	14 09 19.3	-2.0	
BNI	Bardonecchia	19.22	307	eP		P	14 09 19.3	-2.0	
BNI	Bardonecchia	19.22	307	eP		P	14 09 19.3	-2.0	
LPG	La Plagne	19.35	308	eP		P	14 09 22.2	-0.7	
	comp=Z,314nm,0.6s								
LPG	La Plagne	19.35	308	eP		P	14 09 22.2	-0.7	
LPG					pmax	pmax			
	comp=Z,314nm,0.6s								
LPG	La Plagne	19.35	308	eP		P	14 09 22.2	-0.7	
	comp=Z,314nm,0.6s								
LPG	La Plagne	19.35	308	eP		P	14 09 22.2	-0.7	
	comp=Z,157nm,0.6s								
LPL	La Plagne	19.37	308	eP		P	14 09 22.4	-0.6	
	comp=Z,444nm,0.7s								
LPL	La Plagne	19.37	308	eP		P	14 09 22.4	-0.6	
LPL					pmax	pmax			
	comp=Z,444nm,0.7s								
LPL	La Plagne	19.37	308	eP		P	14 09 22.4	-0.6	
	comp=Z,444nm,0.7s								
LPL	La Plagne	19.37	308	eP		P	14 09 22.4	-0.6	
	comp=Z,222nm,0.7s								
SENIN	Lac Senin/Sane	19.38	311	eP		P	14 09 22.5	-0.6	
	comp=Z,326nm,0.7s								
SENIN	Lac Senin/Sane	19.38	311	eP		P	14 09 22.5	-0.6	
	comp=Z,326nm,0.7s								
AKF	Akfadou	19.39	281	P		Pn	14 09 24.8	+0.2	
AKF	Akfadou	19.39	281	P		Pn	14 09 24.8	+0.2	
SPAK	Spaichingen-Ko	19.39	317	eP		Pn	14 09 23.9	-0.5	
SPAK	Spaichingen-Ko	19.39	317	eP		Pn	14 09 23.9	-0.5	
CLL	Collm	19.46	330	eP		P	14 09 23.1	-0.7	
	comp=Z,143nm,0.9s								
CLL	Collm	19.46	330	eP		P	14 09 23.0	-0.7	
CLL				eS		S	14 13 00.0	-1.5	
CLL					MLR	MLR			
	comp=Z,15µm,20.6s								
CLL	Collm	19.46	330	eP		P	14 09 23.0	-0.7	
CLL				i	Pmax		14 09 25.7		
	comp=Z,127nm,0.8s								
CLL				i	pP	pP	14 09 29.9	-3.7	
	comp=Z,2µm,2.5s								
CLL				e	pPP		14 09 42.0		
CLL				e			14 09 51.0		
CLL				eS		S	14 13 00.0	-1.5	
CLL				e	SSS	SSS	14 13 28.0		
CLL				e	PcP	PcP	14 13 45.0	+1.6	
CLL					Lm	MLR	14 17 00.0		
	comp=Z,15µm,20.6s								
CLL				i	PcS	PcS	14 17 20.2	-0.2	
CLL					Lmax		14 18 00.0		
CLL	Collm	19.46	330	eP		P	14 09 23.0	-0.7	
STU	Stuttgart	19.55	319	eP		P	14 09 24.5	-0.2	
	comp=Z,167nm,0.8s								
STU	Stuttgart	19.55	319	eP		P	14 09 24.0	-0.7	
STU					pmax	pmax			
	comp=Z,233nm,0.9s								
STU	Stuttgart	19.55	319	eP		P	14 09 24.0	-0.7	
	comp=Z,233nm,0.9s								
STU	Stuttgart	19.55	319	eP		P	14 09 24.0	-0.7	
	comp=Z,233nm,0.9s								
MOX	Moxa	19.57	327	eP		P	14 09 24.8	-0.2	
	comp=Z,209nm,1.0s								
SMRF	Simiane la Rot	19.58	303	eP		P	14 09 25.2	0.0	
	comp=Z,130nm,0.7s								
SMRF	Simiane la Rot	19.58	303	eP		P	14 09 25.2	0.0	
	comp=Z,130nm,0.7s								
SMRF	Simiane la Rot	19.58	303	eP		P	14 09 25.2	0.0	
	comp=Z,65nm,0.7s								
NACGM	Naroch	19.59	357	eP		P	14 09 23.0	-2.1	
NACGM	Naroch	19.59	357	eP		P	14 09 23.8	-1.3	
GKP	Gorka Klasztor	19.60	340	eP		Pn	14 09 26.2	-0.6	
GKP				eS		S	14 13 02.6	-1.6	
GKP	Gorka Klasztor	19.60	340	eP		Pn	14 09 26.1	-0.7	
GKP				eS		S	14 13 02.6	-1.6	
GKP	Gorka Klasztor	19.60	340	eP		Pn	14 09 26.2	-0.6	
ORIF	Oris-en-Rattie	19.70	306	eP		P	14 09 25.4	-1.1	
	comp=Z,174nm,0.7s								
ORIF				e	R				
	comp=Z,27µm,22.8s								

ORIF	Oris-en-Rattie	19.70	306	eP		P	14 09 25.4	-1.1	
ORIF					pmax	pmax			
	comp=Z,174nm,0.7s								
ORIF	Oris-en-Rattie	19.70	306	eP		P	14 09 25.4	-1.1	
	comp=Z,174nm,0.7s								
ORIF	Oris-en-Rattie	19.70	306	eP		P	14 09 25.4	-1.1	
	comp=Z,87nm,0.7s								
FELD	Feldberg im Sc	19.71	316	eP		P	14 09 27.0	+0.4	
FELD	Feldberg im Sc	19.71	316	eP		P	14 09 27.0	+0.4	
IFIR	Firoozkooh	19.76	82	eP		Pn	14 09 33.2	+4.1	
BFO	Black Forest	19.77	317	eP		P	14 09 27.9	+0.8	
	comp=Z,212nm,1.1s								
BFO	Black Forest	19.77	317	eP		Pn	14 09 28.1	-0.8	
BFO					pmax	pmax			
	comp=Z,184nm,1.0s								
BFO	Black Forest	19.77	317	ePn		Pn	14 09 28.1	-0.8	
	comp=Z,184nm,1.0s								
BFO	Black Forest	19.77	317	eP		Pn	14 09 28.1	-0.8	
	comp=Z,184nm,1.0s								
IGAR	Gharneh	19.77	92	eP		Pn	14 09 28.9	-0.4	
BBS	Basel-Blauen	19.78	314	eP		Pn	14 09 28.5	-0.5	
BBS	Basel-Blauen	19.78	314	eP		Pn	14 09 28.5	-0.5	
BBS	Basel-Blauen	19.78	314	eP		Pn	14 09 28.5	-0.5	
IZEF	Zefreh	19.89	90	eP		Pn	14 09 30.9	+0.2	
NEUB	Neuenburg	19.91	328	eP		P	14 09 28.8	+0.2	
	comp=Z,224nm,1.0s								
AKET	Djebel Ketaf	19.98	279	P		P	14 09 29.2	-0.5	
AKET	Djebel Ketaf	19.98	279	P		P	14 09 29.2	-0.5	
RUE	Ruedersdorf	20.07	333	eP		P	14 09 29.9	-0.4	
	comp=Z,1µm,1.8s								
RUE	Ruedersdorf	20.07	333	eP		P	14 09 29.0	-1.3	
	comp=Z,2µm,1.6s								
RUE	Ruedersdorf	20.07	333	eP		P	14 09 29.0	-1.3	
	comp=Z,2µm,1.6s								
LOMF	Lomont	20.13	313	eP		P	14 09 31.3	+0.2	
LOMF	Lomont	20.13	313	eP		P	14 09 31.3	+0.2	
LOMF	Lomont	20.13	313	eP		P	14 09 31.3	+0.2	
MOF	Molkenrain	20.19	315	eP		P	14 09 32.2	+0.3	
MOF	Molkenrain	20.19	315	eP		P	14 09 32.2	+0.3	
MOF	Molkenrain	20.19	315	eP		P	14 09 32.2	+0.3	
CABF	La Chapelle	20.24	311	eP		P	14 09 31.1	-1.2	
	comp=Z,809nm,0.7s								
CABF	La Chapelle	20.24	311	eP		P	14 09 31.1	-1.2	
CABF					pmax	pmax			
	comp=Z,809nm,0.7s								
CABF	La Chapelle	20.24	311	eP		P	14 09 31.1	-1.2	
	comp=Z,809nm,0.7s								
CABF	La Chapelle	20.24	311	eP		P	14 09 31.1	-1.2	
	comp=Z,405nm,0.7s								
TOD	Tromm	20.25	321	eP		P	14 09 31.9	-0.5	
TOD	Tromm	20.25	321	eP		P	14 09 31.9	-0.5	
TOD	Tromm	20.25	321	eP		P	14 09 31.9	-0.5	
ADJB	Djebel Djouab	20.33	280	P		P	14 09 33.1	-0.4	
ADJB	Djebel Djouab	20.33	280	P		P	14 09 33.1	-0.4	
HINF	Hinteralfeld	20.34	314	eP		P	14 09 32.7	-0.7	
	comp=Z,261nm,1.0s								
HINF	Hinteralfeld	20.34	314	eP		P	14 09 32.7	-0.7	
HINF					pmax	pmax			
	comp=Z,261nm,1.0s								
HINF	Hinteralfeld	20.34	314	eP		P	14 09 32.7	-0.7	
	comp=Z,261nm,1.0s								
HINF	Hinteralfeld	20.34	314	eP		P	14 09 32.7	-0.7	
	comp=Z,130nm,1.0s								
ECH	Echery	20.37	316	eP		P	14 09 32.9	-0.7	
ECH					pmax	pmax			
	comp=Z,192nm,1.1s								
ECH					MLR	MLR			
	comp=Z,20µm,19.0s								
ECH	Echery	20.37	316	eP		P	14 09 32.9	-0.7	
	comp=Z,192nm,1.1s								
ECH					LR	LR			
	comp=Z,20µm,19.0s								
ECH	Echery	20.37	316	eP		P	14 09 32.9	-0.7	
	comp=Z,192nm,1.1s								
CDF	Champ du Feu	20.40	316	eP		P	14 09 33.6	-0.5	
	comp=Z,399nm,0.9s								
CDF	Champ du Feu	20.40	316	eP		P	14 09 33.6	-0.5	
CDF					pmax	pmax			
	comp=Z,399nm,0.9s								
CDF	Champ du Feu	20.40	316	eP		P	14 09 33.6	-0.5	
	comp=Z,399nm,0.9s								
CDF	Champ du Feu	20.40	316	eP		P	14 09 33.6	-0.5	
	comp=Z,199nm,0.9s								
LANF	Langenberg	20.42	318	eP		P	14 09 33.9	-0.3	
LANF	Langenberg	20.42	318	eP		P	14 09 33.9	-0.3	
LANF	Langenberg	20.42	318	eP		P	14 09 33.9	-0.3	
KTD	Kalmit	20.46	319	eP		P	14 09 34.1	-0.6	
KTD	Kalmit	20.46	319	eP		P	14 09 34.1	-0.6	
KTD	Kalmit	20.46	319	eP		P	14 09 34.1	-0.6	
VIVF	Saint-Julien-l	20.48	305	eP		P	14 09 33.8	-1.1	
	comp=Z,359nm,0.9s								
VIVF	Saint-Julien-l	20.48	305	eP		P	14 09 33.8	-1.1	
VIVF					pmax	pmax			
	comp=Z,359nm,0.9s								
VIVF	Saint-Julien-l	20.48	305	eP		P	14 09 33.8	-1.1	
	comp=Z,359nm,0.9s								
VIVF	Saint-Julien-l	20.48	305	eP		P	14 09 33.8	-1.1	
	comp=Z,179nm,0.9s								
OBN	Obninsk	20.55	13	ciP		P	14 09 35.3	-0.1	
OBN				e	*PP	pP	14 09 43.7	-1.7	
OBN				e			14 13 42.8		
OBN					pmax	pmax			
	comp=Z,299nm,0.8s								
OBN					MLR	MLR			
	comp=Z,15µm,21.0s								
OBN	Obninsk	20.55	13	iP		P	14 09 35.3	-0.1	
	comp=Z,299nm,0.8s								
ABA	Alger-Bouzarea	20.61	282	P		P	14 09 37.0	+0.7	
ABA	Alger-Bouzarea	20.61	282	P		P	14 09 37.0	+0.7	
SSB	Saint Sauveur	20.71	306	eP		P	14 09 34.5	-2.9	
SSB				

PAGF Fort de Pagny 21.36 315 *e*P **P 14 09 44.9 +0.6**
comp=Z,225nm,1.3s,baz=119
PAGF Fort de Pagny 21.36 315 *e*P **P 14 09 44.9 +0.6**
comp=Z,225nm,1.3s
LRDF Laroque-de-Fa 21.45 299 *e*P **P 14 09 45.2 -0.1**
LRDF Laroque-de-Fa 21.45 299 *e*P **P 14 09 45.2 -0.1**
NRDL Niedersach Rie 21.55 328 *e*P **P 14 09 47.8 +1.6**
comp=Z,172nm,1.1s
LBL Lubilhac 21.56 305 *e*P **P 14 09 46.5 0.0**
LBL Lubilhac 21.56 305 *e*P **P 14 09 46.5 0.0**
LBL Lubilhac 21.56 305 *e*P **P 14 09 46.5 0.0**
SFTF Sexfontaines 21.59 314 *e*P **P 14 09 46.6 -0.2**
comp=Z,849nm,1.1s,baz=122
SFTF Sexfontaines 21.59 314 *e*P **P 14 09 46.6 -0.2**
comp=Z,849nm,1.1s
SMF Signal de Mont 21.66 309 *e*P **P 14 09 45.9 -1.7**
comp=Z,628nm,0.9s
SMF Signal de Mont 21.66 309 *e*P **P 14 09 45.9 -1.7**
SMF pmax pmax
comp=Z,628nm,0.9s
SMF Signal de Mont 21.66 309 *e*P **P 14 09 45.9 -1.7**
comp=Z,628nm,0.9s
WLF Walferdange 21.70 318 P **P 14 09 47.9 -0.1**
comp=Z,84nm,1.0s
WLF Walferdange 21.70 318 *e*P **P 14 09 48.8 +0.9**
comp=Z,121nm,0.9s
WLF Walferdange 21.70 318 *e*P **P 14 09 46.7 -1.2**
WLF pmax pmax
comp=Z,148nm,0.9s
WLF MLR MLR
comp=Z,21µm,22.0s
WLF Walferdange 21.70 318 *e*P **P 14 09 46.7 -1.2**
comp=Z,148nm,0.9s
WLF LR LR
comp=Z,21µm,22.0s
WLF Walferdange 21.70 318 *e*P **P 14 09 46.7 -1.2**
comp=Z,148nm,0.9s
CARF Carcanieres 21.71 298 *e*P **P 14 09 48.4 +0.1**
CARF Carcanieres 21.71 298 *e*P **P 14 09 48.4 +0.1**
VALF Valcebollere 21.72 297 *e*P **P 14 09 47.9 -0.5**
VALF Valcebollere 21.72 297 *e*P **P 14 09 47.9 -0.5**
MEZF Maizieres J'vi 21.73 314 *e*P **P 14 09 48.9 +0.7**
comp=Z,411nm,0.8s,baz=122
MEZF Maizieres J'vi 21.73 314 *e*P **P 14 09 48.9 +0.7**
comp=Z,411nm,0.8s
ICHK Chekchek 21.75 91 *e*P **P 14 09 49.8 +0.9**
MTLF Montolieu 21.76 299 *e*P **P 14 09 47.9 -0.8**
comp=Z,90nm,0.6s
MTLF Montolieu 21.76 299 *e*P **P 14 09 47.9 -0.8**
MTLF pmax pmax
comp=Z,90nm,0.6s
MTLF Montolieu 21.76 299 *e*P **P 14 09 47.9 -0.8**
comp=Z,90nm,0.6s
EBNR Beni Rached 21.85 280 P **P 14 09 49.8 0.0**
BSD Bornholm Skovb 21.88 339 *i*P **P 14 09 46.9 -2.9**
comp=Z,114nm,0.8s
BSD *i*S S 14 13 41.9 -7.3
BSD
comp=Z,16µm,18.0s
PYM Petit Puy Mans 21.88 306 *e*P **P 14 09 49.3 -0.7**
PYM Petit Puy Mans 21.88 306 *e*P **P 14 09 49.3 -0.7**
PYM Petit Puy Mans 21.88 306 *e*P **P 14 09 49.3 -0.7**
LOR Lormes 21.90 310 *e*P **P 14 09 48.7 -1.4**
comp=Z,212nm,0.8s,baz=125
LOR *e*R
comp=Z,19µm,20.8s
LOR Lormes 21.90 310 *e*P **P 14 09 48.7 -1.4**
comp=Z,212nm,0.8s
AGO Saint Agoulin 21.91 307 *e*P **P 14 09 49.5 -0.7**
AGO Saint Agoulin 21.91 307 *e*P **P 14 09 49.5 -0.7**
RGN Rugen 21.91 336 *e*P **P 14 09 47.9 -2.2**
comp=Z,386nm,0.7s
RGN Rugen 21.91 336 *e*P **P 14 09 47.5 -2.6**
comp=Z,343nm,0.7s
ECHA Ech Chlef 22.00 280 P **P 14 09 50.0 -1.3**
AVF Avril sur Loir 22.03 309 *e*P **P 14 09 49.9 -1.6**
comp=Z,349nm,0.8s
AVF Avril sur Loir 22.03 309 *e*P **P 14 09 49.9 -1.6**
AVF pmax pmax
comp=Z,349nm,0.8s
AVF Avril sur Loir 22.03 309 *e*P **P 14 09 49.9 -1.6**
comp=Z,349nm,0.8s
SSF Saint Saulge 22.04 310 *e*P **P 14 09 49.9 -1.7**
comp=Z,540nm,0.9s
SSF Saint Saulge 22.04 310 *e*P **P 14 09 49.9 -1.7**
SSF pmax pmax
comp=Z,540nm,0.9s
SSF Saint Saulge 22.04 310 *e*P **P 14 09 49.9 -1.7**
comp=Z,540nm,0.9s
ETRT Tiaret 22.14 278 P **P 14 09 51.7 -1.3**
IMEH Mehriz 22.16 93 *e*P **P 14 09 54.3 +1.0**
BUG Bochum--Univer 22.16 323 *e*P **P 14 09 53.5 +0.7**
comp=Z,340nm,1.4s
EANR 'Ain N'Sour 22.24 280 P **P 14 09 52.0 -1.9**
CAF Calviac 22.27 303 *e*P **P 14 09 53.0 -1.1**
comp=Z,217nm,1.0s
CAF Calviac 22.27 303 *e*P **P 14 09 53.0 -1.1**
CAF pmax pmax
comp=Z,217nm,1.0s
CAF Calviac 22.27 303 *e*P **P 14 09 53.0 -1.1**
comp=Z,217nm,1.0s
BGF Bois d'Agland 22.27 308 *e*P **P 14 09 52.7 -1.4**
comp=Z,420nm,0.9s
BGF Bois d'Agland 22.27 308 *e*P **P 14 09 52.7 -1.4**
BGF pmax pmax
comp=Z,420nm,0.9s
BGF Bois d'Agland 22.27 308 *e*P **P 14 09 52.7 -1.4**
comp=Z,420nm,0.9s
MEM Membach 22.30 320 P **P 14 09 55.4 +1.0**
comp=Z,70nm,1.2s
HGN Heimansgroeve 22.43 320 *e*P **P 14 09 58.2 +2.5**
comp=Z,64nm,1.1s
HGN *e*S **S 14 13 56.9 -2.5**
MLS Moulis 22.49 298 *e*P **P 14 09 54.6 -1.9**
MLS Moulis 22.49 298 *e*P **P 14 09 54.6 -1.9**
BSEG Bad Segeberg 22.52 331 *e*P **P 14 09 55.8 -0.9**
comp=Z,365nm,1.3s
BCLA Clavier 22.57 319 P **P 14 09 55.8 -1.5**
comp=Z,140nm,2.0s
BEBN Eben Emael 22.58 320 P **P 14 09 58.3 +1.0**
comp=Z,25nm,1.3s
TCF Toulx Ste Croi 22.59 307 *e*P **P 14 09 57.8 +0.3**
comp=Z,319nm,1.0s
TCF Toulx Ste Croi 22.59 307 *e*P **P 14 09 57.8 +0.3**
TCF pmax pmax
comp=Z,319nm,1.0s
TCF Toulx Ste Croi 22.59 307 *e*P **P 14 09 57.8 +0.3**
comp=Z,319nm,1.0s
GIVF Givet 22.66 318 *e*P **P 14 09 57.8 -0.4**
comp=Z,142nm,0.7s
GIVF Givet 22.66 318 *e*P **P 14 09 57.8 -0.4**
GIVF pmax pmax
comp=Z,142nm,0.7s
GIVF Givet 22.66 318 *e*P **P 14 09 57.8 -0.4**
comp=Z,142nm,0.7s
HYF Humbligny 22.66 310 *e*P **P 14 09 59.9 +1.6**
HYF Humbligny 22.66 310 *e*P **P 14 09 59.9 +1.6**
WTSB Winterswijk 22.71 324 *e*P **P 14 09 57.6 -1.1**
RJF Les Rejaudoux 22.74 304 *e*P **P 14 09 59.1 -0.1**
comp=Z,286nm,0.9s
RJF *e*R
comp=Z,17µm,18.2s
RJF Les Rejaudoux 22.74 304 *e*P **P 14 09 59.1 -0.1**
RJF pmax pmax
comp=Z,287nm,0.9s
RJF Les Rejaudoux 22.74 304 *e*P **P 14 09 59.1 -0.1**
comp=Z,286nm,0.9s
DOU Dourbes 22.78 318 P **P 14 09 57.5 -2.0**
comp=Z,35nm,1.0s
IBAF Bafgh 22.88 92 *e*P **P 14 10 02.1 +1.3**
LLD Lille Linde 22.92 336 *i*P **P 14 09 59.4 -1.4**
comp=Z,331nm,0.8s
BAIF Baives 22.98 317 *e*P **P 14 10 00.8 -0.7**
comp=Z,246nm,0.9s
BAIF Baives 22.98 317 *e*P **P 14 10 00.8 -0.7**
BAIF pmax pmax
comp=Z,246nm,0.9s
BAIF Baives 22.98 317 *e*P **P 14 10 00.8 -0.7**
comp=Z,246nm,0.9s
RESF Ens 23.01 297 *e*P **P 14 10 02.4 +0.3**
RESF Ens 23.01 297 *e*P **P 14 10 02.4 +0.3**
EPF Esparros 23.05 298 *e*P **P 14 10 01.2 -1.2**
comp=Z,80nm,0.7s
EPF Esparros 23.05 298 *e*P **P 14 10 01.2 -1.2**
EPF pmax pmax
comp=Z,80nm,0.7s
EPF Esparros 23.05 298 *e*P **P 14 10 01.2 -1.2**
comp=Z,80nm,0.7s
VSU Vasula 23.16 358 *c i*P **P 14 10 03.5 +0.3**
VSU pmax pmax
comp=Z,64nm,0.8s
LFF La Frestale 23.18 303 *e*P **P 14 10 02.7 -0.9**
comp=Z,398nm,1.1s
LFF La Frestale 23.18 303 *e*P **P 14 10 02.7 -0.9**
LFF pmax pmax
comp=Z,398nm,1.1s
LFF La Frestale 23.18 303 *e*P **P 14 10 02.7 -0.9**
comp=Z,398nm,1.1s
LABF Labassere 23.24 298 *e*P **P 14 10 03.6 -0.7**
LABF Labassere 23.24 298 *e*P **P 14 10 03.6 -0.7**
VIEF Viey 23.25 297 *e*P **P 14 10 05.0 +0.5**
VIEF Viey 23.25 297 *e*P **P 14 10 05.0 +0.5**
TAM Tamanrasset 23.58 244 *e*P **P 14 10 08.7 +0.9**
TAM pmax pmax
comp=Z,236nm,1.2s
TAM MLR MLR
comp=Z,6µm,22.0s
TAM Tamanrasset 23.58 244 *e*P **P 14 10 08.7 +0.9**
comp=Z,236nm,1.2s
TAM LR LR
comp=Z,6µm,22.0s
TAM Tamanrasset 23.58 244 *e*P **P 14 10 08.7 +0.9**
comp=Z,236nm,1.2s
REYF Montagne du Re 23.58 298 *e*P **P 14 10 08.2 +0.5**
REYF Montagne du Re 23.58 298 *e*P **P 14 10 08.2 +0.5**
ETSF Etsaut 23.68 297 *e*P **P 14 10 07.8 -0.7**
comp=Z,97nm,0.7s
ETSF Etsaut 23.68 297 *e*P **P 14 10 07.8 -0.7**
ETSF pmax pmax
comp=Z,97nm,0.7s
ETSF Etsaut 23.68 297 *e*P **P 14 10 07.8 -0.7**
comp=Z,97nm,0.7s
CART Cartagena 23.77 284 *e*P **P 14 10 07.9 -1.5**
CART *i*S **S 14 14 19.7 -2.4**
ORDF Ordiarp 24.00 298 *e*P **P 14 10 10.9 -0.5**
ORDF Ordiarp 24.00 298 *e*P **P 14 10 10.9 -0.5**
SJPF Ste Jean 24.19 298 *e*P **P 14 10 13.2 -0.1**
comp=Z,337nm,1.0s
SJPF Ste Jean 24.19 298 *e*P **P 14 10 13.2 -0.1**
SJPF pmax pmax
comp=Z,337nm,1.0s
SJPF Ste Jean 24.19 298 *e*P **P 14 10 13.2 -0.1**
comp=Z,337nm,1.0s
MFF Saint Martin d 24.23 306 *e*P **P 14 10 12.9 -0.6**
comp=Z,131nm,0.6s
MFF Saint Martin d 24.23 306 *e*P **P 14 10 12.9 -0.6**
MFF pmax pmax
comp=Z,131nm,0.6s
MFF Saint Martin d 24.23 306 *e*P **P 14 10 12.9 -0.6**
comp=Z,131nm,0.6s
OSSF Osses 24.24 298 *e*P **P 14 10 09.8 -3.9**
OSSF Osses 24.24 298 *e*P **P 14 10 13.5 -0.2**
OSSF Osses 24.24 298 *e*P **P 14 10 13.5 -0.2**
MUD Monsted U'grnd 24.86 334 *i*P **P 14 10 18.8 -0.3**
comp=Z,75nm,1.0s
MUD *i*S **S 14 14 42.8 +3.6**
MUD
comp=Z,16µm,16.0s
LDF La Druitiere 24.88 311 *e*P **P 14 10 17.3 -2.1**
comp=Z,122nm,0.4s
LDF La Druitiere 24.88 311 *e*P **P 14 10 17.3 -2.1**
LDF pmax pmax
comp=Z,122nm,0.4s
LDF La Druitiere 24.88 311 *e*P **P 14 10 17.3 -2.1**
comp=Z,122nm,0.4s
FLN La Foliniere 25.16 311 *e*P **P 14 10 20.3 -1.7**
comp=Z,234nm,0.5s,baz=106
FLN *e*R
comp=Z,16µm,19.8s
FLN La Foliniere 25.16 311 *e*P **P 14 10 20.3 -1.7**
FLN pmax pmax
comp=Z,234nm,0.5s
FLN La Foliniere 25.16 311 *e*P **P 14 10 20.3 -1.7**
comp=Z,234nm,0.5s
ELSH Elham, Standar 25.22 317 AMS AMS 14 21 40.0
comp=Z,13µm,22.5s
GRR Gorron 25.27 310 *e*P **P 14 10 21.8 -1.1**
comp=Z,598nm,0.7s
GRR Gorron 25.27 310 *e*P **P 14 10 21.8 -1.1**
GRR pmax pmax
comp=Z,599nm,0.7s
GRR Gorron 25.27 310 *e*P **P 14 10 21.8 -1.1**
comp=Z,598nm,0.7s
IKOO Kooshah 25.46 88 *e*P **P 14 10 27.0 +1.9**
ASUD Al Ashush, Dub 25.52 107 P **P 14 10 26.9 +1.5**
HMNX Herstmonceux 25.54 316 *e*P **P 14 10 24.7 -0.6**
HMNX AMB AMB 14 10 28.9
comp=Z,126nm,1.0s
HMNX Herstmonceux 25.54 316 P **P 14 10 24.7 -0.6**
HMNX AMB AMB 14 10 28.9
comp=Z,126nm,1.0s
HMNX Herstmonceux 25.54 316 *e*P **P 14 10 24.7 -0.6**
NAZ Nazwa, Dubai 25.59 106 P **P 14 10 27.2 +1.1**
BANOM Banah 25.64 104 ⇑P **P 14 10 27.8 +1.2**
SNR=27
BANOM Banah 25.64 104 ⇑S **S 14 14 47.0 -5.3**
BANOM Banah 25.64 104 P **P 14 10 27.8 +1.2**
SNR=27
BANOM S **S 14 14 47.0 -5.3**
FAQ Al Faqa, Dubai 25.66 107 P **P 14 10 27.5 +0.8**
ESDC Sonseca Array 26.02 289 P **P 14 10 29.5 -0.4**
ESDC PcP **PcP 14 13 58.0 +0.8**
ESDC Sonseca Array 26.02 289 P **P 14 10 29.5 -0.4**
comp=Z,36nm,0.5s,baz=80,slow=10,SNR=121
ESDC PcP **PcP 14 13 58.0 +0.8**
comp=Z,1.2nm,0.4s,baz=53,slow=2.5,SNR=4.7
ESDC Sonseca Array 26.02 289 P **P 14 10 29.5 -0.4**
ESDC Sonseca Array 26.02 289 PcP **PcP 14 13 58.0 +0.8**
ESLA Sonseca Array 26.02 289 *e*P **P 14 10 29.7 -0.2**
comp=Z,26nm,0.8s
ESLA Sonseca Array 26.02 289 *e*P **P 14 10 29.7 -0.2**
comp=Z,26nm,0.8s
HATD Hatta, Dubai 26.04 106 P **P 14 10 30.8 +0.6**
IDAH Dahanechah 26.08 87 *e*P **P 14 10 32.9 +2.1**
AKTO Aktyubinsk 26.15 46 P **P 14 10 31.1 +0.2**
AKTO pmax pmax
comp=Z,338nm,0.6s
AKTO Aktyubinsk 26.15 46 P **P 14 10 31.1 +0.2**
AKTO Aktyubinsk 26.15 46 P **P 14 10 31.1 +0.2**
comp=Z,338nm,0.6s,baz=253,slow=7.8,SNR=374
AKTO Aktyubinsk 26.15 46 P **P 14 10 31.1 +0.2**
DESE Dese 26.16 154 *e*P **P 14 10 34.5 +2.8**
DESE *i*S S 14 15 12.4 +11
FINES FINESS Array B 26.16 357 P **P 14 10 30.5 -0.4**
FINES PcP **PcP 14 13 58.5 +1.5**
FINES FINESS Array B 26.16 357 P **P 14 10 30.5 -0.4**
comp=Z,121nm,0.8s,baz=148,slow=11,SNR=158
FINES PcP **PcP 14 13 58.5 +1.5**
comp=Z,18nm,0.8s,baz=193,slow=5.7,SNR=5.4
FINES LR LR 14 21 57.8
comp=Z,14µm,18.9s,baz=174,slow=39
FINES FINESS Array B 26.16 357 P **P 14 10 30.5 -0.4**
FINES FINESS Array B 26.16 357 PcP **PcP 14 13 58.5 +1.5**
FIA1 FINESS Array S 26.16 357 *e*P **P 14 10 29.3 -1.6**
FIA1 FINESS Array S 26.16 357 *e*P **P 14 10 29.3 -1.6**
SGMF Saint Gilles 26.29 309 *e*P **P 14 10 30.9 -1.3**
comp=Z,98nm,0.6s
SGMF Saint Gilles 26.29 309 *e*P **P 14 10 30.9 -1.3**
SGMF pmax pmax
comp=Z,98nm,0.6s
SGMF Saint Gilles 26.29 309 *e*P **P 14 10 30.9 -1.3**
comp=Z,98nm,0.6s
JRS Jersey 26.31 311 *e*P **P 14 10 30.8 -1.5**
JRS Jersey 26.31 311 P **P 14 10 30.8 -1.5**
JRS Jersey 26.31 311 *e*P **P 14 10 30.8 -1.5**
PAB San Pablo 26.32 289 *e*P **P 14 10 32.4 -0.2**
PAB MLR MLR
comp=Z,3µm,21.0s
PAB San Pablo 26.32 289 *e*P **P 14 10 32.4 -0.2**
PAB LR LR
comp=Z,3µm,21.0s
PAB San Pablo 26.32 289 *e*P **P 14 10 32.4 -0.2**
JLP Les Platons 26.33 311 *e*P **P 14 10 30.5 -2.0**
JLP Les Platons 26.33 311 P **P 14 10 30.5 -2.0**
JLP Les Platons 26.33 311 *e*P **P 14 10 30.5 -2.0**
JSA Saint Aubin 26.36 311 *e*P **P 14 10 31.2 -1.5**
JSA AMB AMB 14 10 36.8
comp=Z,123nm,1.0s
JSA Saint Aubin 26.36 311 P **P 14 10 31.2 -1.5**
JSA AMB AMB 14 10 36.8
comp=Z,123nm,1.0s
JSA Saint Aubin 26.36 311 *e*P **P 14 10 31.2 -1.5**
KLMR Klimovskoe 26.50 12 *c i*P **P 14 10 33.8 -0.1**
KLMR *i*S **S 14 15 03.3 -1.7**
KLMR pmax pmax
comp=Z,594nm,1.5s
KLMR pmax pmax
comp=Z,786nm,1.5s
KLMR MLR MLR
comp=Z,24µm,21.0s
HOMB Homborsund 26.50 336 *e*P **P 14 10 31.4 -2.5**
HOMB AMS AMS 14 22 47.8
comp=Z,11µm,20.2s
EMAL Malaga-Limoner 26.58 283 *i*P **P 14 10 37.2 +2.3**
QUIF Quistinic 26.58 308 *e*P **P 14 10 33.0 -1.8**
comp=Z,193nm,0.7s
QUIF Quistinic 26.58 308 *e*P **P 14 10 33.0 -1.8**
QUIF pmax pmax
comp=Z,193nm,0.7s
QUIF Quistinic 26.58 308 *e*P **P 14 10 33.0 -1.8**
comp=Z,193nm,0.7s
HFS Hagfors 26.59 343 P **P 14 10 33.8 -1.0**
HFS Hagfors 26.59 343 P **P 14 10 33.8 -1.0**
comp=Z,43nm,0.4s,baz=153,slow=8.5,SNR=72
HFS LR LR 14 22 53.3
comp=Z,11µm,18.9s,baz=157,slow=41
HFS Hagfors 26.59 343 P **P 14 10 33.8 -1.0**
WOL Wolverton 26.62 316 *e*P **P 14 10 33.5 -1.5**
WOL AMB AMB 14 10 35.5
comp=Z,119nm,1.6s
WOL *e* 14 14 50.1
WOL AMS AMS 14 22 55.7
comp=Z,16µm,20.5s
WOL Wolverton 26.62 316 P **P 14 10 33.5 -1.5**
WOL AMB AMB 14 10 35.5
comp=Z,119nm,1.6s
WOL 14 14 50.1
WOL AMS AMS 14 22 55.7
comp=Z,16µm,20.5s
WOL Wolverton 26.62 316 *e*P **P 14 10 33.5 -1.5**
ROSF Rostrenen 26.77 309 *e*P **P 14 10 34.6 -2.0**
comp=Z,209nm,0.7s
ROSF Rostrenen 26.77 309 *e*P **P 14 10 34.6 -2.0**
ROSF pmax pmax
comp=Z,209nm,0.7s
ROSF Rostrenen 26.77 309 *e*P **P 14 10 34.6 -2.0**
comp=Z,209nm,0.7s
KAF Kangasniemi 26.83 358 *e*P **P 14 10 36.1 -0.7**
KAF pmax pmax
comp=Z,38nm,0.6s
KAF Kangasniemi 26.83 358 *e*p **P 14 10 36.1 -0.7**
comp=Z,38nm,0.6s
AB31 Akbulak array 26.88 49 *i*P **P 14 10 37.5 0.0**
AB31 pmax pmax
comp=Z,93nm,0.6s
ABKAR Akbulak array 26.88 49 *e*P **P 14 10 37.8 +0.3**
ABKAR Akbulak array 26.88 49 *e*P **P 14 10 37.8 +0.3**
SWN1 Swindon 27.03 316 *e* 14 15 16.2
SWN1 AMS AMS 14 23 18.3
comp=Z,16µm,17.7s
ATD Arta Tunnel 27.06 148 P **P 14 10 42.2 +2.8**
ATD Arta Tunnel 27.06 148 P **P 14 10 42.2 +2.8**
comp=Z,27nm,1.1s,baz=270,slow=20,SNR=5.6
ATD LR LR 14 23 22.0
comp=Z,3µm,20.3s,baz=146,slow=40
ARQ Araqi 27.12 109 ⇓P **P 14 10 40.7 +0.8**
SNR=24
REAL Reales 27.23 282 *e*P **P 14 10 39.0 -2.0**
KONO Kongsberg 27.26 339 *e*P **P 14 10 37.9 -2.9**
KONO pmax pmax
comp=Z,116nm,0.9s
KONO MLR MLR
comp=Z,10µm,22.0s
KONO Kongsberg 27.26 339 *e*P **P 14 10 37.9 -2.9**
comp=Z,116nm,0.9s
KONO LR LR
comp=Z,10µm,22.0s
BST Brest 27.27 308 *e*P **P 14 10 39.5 -1.5**
BST Brest 27.27 308 *e*P **P 14 10 39.5 -1.5**
LIJA Lijar 27.34 283 *i*P **P 14 10 40.5 -1.3**
MDT Midelt 27.46 274 P **P 14 10 43.2 +0.2**
MDT Midelt 27.46 274 P **P 14 10 43.2 +0.2**
comp=Z,34nm,1.0s,baz=84,slow=11,SNR=20
MDT Midelt 27.46 274 P **P 14 10 43.2 +0.2**
HOQ Hoqain 27.60 107 P **P 14 10 44.7 +0.5**
SNR=9.8
HOQ Hoqain 27.60 107 P **P 14 10 44.7 +0.5**
SNR=9.8
NC602 NORSAR Array S 27.64 342 *e*P **P 14 10 43.7 -0.5**
JOF Joensuu 27.66 3 *e*P **P 14 10 44.1 -0.2**
JOF pmax pmax
comp=Z,28nm,0.6s
JOF Joensuu 27.66 3 *e*p **P 14 10 44.1 -0.2**
comp=Z,28nm,0.6s
JOF Joensuu 27.66 3 *e*P **P 14 10 44.1 -0.2**
comp=Z,28nm,0.6s
KBI1 Birley Grange 27.66 320 *e*P **P 14 10 42.7 -1.7**
KBI1 Birley Grange 27.66 320 P **P 14 10 42.7 -1.7**
KBI1 Birley Grange 27.66 320 *e*P **P 14 10 42.7 -1.7**
DYA Yadsworthy 27.86 313 *e*P **P 14 10 44.9 -1.3**
DYA AMB AMB 14 10 48.0
comp=Z,55nm,1.5s
DYA Yadsworthy 27.86 313 P **P 14 10 44.9 -1.3**
DYA AMB AMB 14 10 48.0
comp=Z,55nm,1.5s
DYA Yadsworthy 27.86 313 *e*P **P 14 10 44.9 -1.3**
MCH1 Michaelchurch 27.91 316 *e*P **P 14 10 44.4 -2.3**
MCH1 AMB AMB 14 10 50.1
comp=Z,62nm,1.6s
MCH1 *e* 14 15 29.5
MCH1 AMS AMS 14 23 45.4
comp=Z,13µm,19.9s
MCH1 Michaelchurch 27.91 316 P **P 14 10 44.4 -2.3**
MCH1 AMB AMB 14 10 50.1
comp=Z,62nm,1.6s
MCH1 14 15 29.5
MCH1 AMS AMS 14 23 45.4
comp=Z,13µm,19.9s
MCH1 Michaelchurch 27.91 316 *e*P **P 14 10 44.4 -2.3**
FURI Furi 27.93 158 P **P 14 10 44.0 -3.5**
FURI S **S 14 15 28.5 -0.4**
BSY Bisya 27.96 109 ⇓P **P 14 10 48.4 +0.9**
SNR=16
NB2 NORSAR Subarra 27.99 342 P **P 14 10 46.2 -1.1**
comp=Z,36nm,0.7s,baz=149,slow=9.3
NB2 NORSAR Subarra 27.99 342 P **P 14 10 46.2 -1.1**
baz=149,slow=9.3
NB2 NORSAR Subarra 27.99 342 P **P 14 10 46.2 -1.1**
comp=Z,36nm,0.7s,baz=149,slow=8.8,SNR=0.5
NOA NORSAR Array B 27.99 342 P **P 14 10 46.7 -0.6**
NOA NORSAR Array B 27.99 342 P **P 14 10 46.7 -0.6**
comp=Z,22nm,0.6s,baz=37,slow=22,SNR=43
NOA NORSAR Array B 27.99 342 P **P 14 10 46.7 -0.6**
BSYO Bisya 28.00 109 P **P 14 10 48.4 +0.6**
SNR=16
HEX Exmoor 28.01 314 *e*P **P 14 10 46.7 -0.9**
HEX Exmoor 28.01 314 P **P 14 10 46.7 -0.9**
HEX Exmoor 28.01 314 *e*P **P 14 10 46.7 -0.9**
HPK Haverah Park 28.05 321 *e* 14 15 42.4
HLM1 Long Mynd 28.06 317 *e*P **P 14 10 45.9 -2.1**
HLM1 AMB AMB 14 10 52.7
comp=Z,52nm,1.0s
HLM1 Long Mynd 28.06 317 P **P 14 10 45.9 -2.1**
HLM1 AMB AMB 14 10 52.7
comp=Z,52nm,1.0s
HLM1 Long Mynd 28.06 317 *e*P **P 14 10 45.9 -2.1**
BLS5 Blasjo 28.07 336 *e*P **P 14 10 46.6 -1.4**
BLS5 AMB AMB 14 10 50.7
comp=Z,82nm,0.6s
PBRG Braganca 28.14 294 *e*P **P 14 10 49.1 +0.1**
comp=Z,174nm,1.1s
PBRG Braganca 28.14 294 *e*P **P 14 10 49.1 +0.1**
comp=Z,174nm,1.1s
MVO Moncorvo 28.35 293 *e*P **P 14 10 51.8 +1.0**
comp=Z,202nm,1.4s
MVO Moncorvo 28.35 293 *e*PP P 14 10 57.4 +6.6
MVO *e*S S 14 15 28.6 -6.2
MVO *e*LR LR 14 21 25.8
comp=Z,5µm,20.0s
MVO Moncorvo 28.35 293 *e*P **P 14 10 51.8 +1.0**
comp=Z,202nm,1.4s
MVO *e*S S 14 15 28.6 -6.2
HTL Hartland 28.38 314 AMS AMS 14 24 25.2
comp=Z,10µm,20.7s
ODD1 Odda 28.39 337 *e*P **P 14 10 49.6 -1.2**
FOEL Foel Wylfa 28.40 318 *e*P **P 14 10 49.5 -1.5**

FOEL AMB AMB 14 10 54.8
comp=Z,66nm,1.7s
FOEL e 14 15 54.8
FOEL AMS AMS 14 23 15.9
comp=Z,8µm,20.8s
FOEL Foel Wylfa 28.40 318 P **P** **14 10 49.5 -1.5**
FOEL AMB AMB 14 10 54.8
comp=Z,66nm,1.7s
FOEL 14 15 54.8
FOEL AMS AMS 14 23 15.9
comp=Z,8µm,20.8s
FOEL Foel Wylfa 28.40 318 *e*P **P** **14 10 49.5 -1.5**
SMDO Samad 28.45 107 ||P **P** **14 10 51.7 -0.2**
SNR=26
PBAR Barrancos 28.49 286 *e*P **P** **14 10 51.5 -0.5**
comp=Z,138nm,1.2s
PBAR Barrancos 28.49 286 *e*P **P** **14 10 51.5 -0.5**
comp=Z,138nm,1.2s
PMRV Marv??o 28.67 289 *e*P **P** **14 10 53.2 -0.5**
comp=Z,84nm,1.1s
PMRV Marv??o 28.67 289 *e*PP **pP** **14 11 04.3 -0.3**
PMRV *e*S **S** **14 15 39.7 -0.2**
PMRV *e*LR LR 14 22 26.3
comp=Z,4µm,16.0s
PMRV Marv??o 28.67 289 *e*P **P** **14 10 53.2 -0.5**
comp=Z,84nm,1.1s
PMRV *e*S **S** **14 15 39.7 -0.2**
PCBR Castelo Branco 28.72 290 *e*P **P** **14 10 54.5 +0.5**
comp=Z,68nm,0.9s
PCBR Castelo Branco 28.72 290 *e*P **P** **14 10 54.5 +0.5**
comp=Z,68nm,0.9s
MTE Manteigas 28.75 291 *e*P **P** **14 10 53.4 -1.0**
comp=Z,74nm,1.0s
MTE Manteigas 28.75 291 *e*PP **sP** **14 11 07.6 -2.4**
MTE *e*S **S** **14 15 39.6 -1.5**
MTE *e*LR LR 14 21 43.8
comp=Z,6µm,20.0s
MTE Manteigas 28.75 291 *e*P **P** **14 10 52.3 -2.1**
comp=Z,42nm,0.8s
MTE LR LR
comp=Z,7µm,21.0s
MTE Manteigas 28.75 291 *e*P **P** **14 10 53.4 -1.0**
comp=Z,74nm,1.0s
MTE *e*S **S** **14 15 39.6 -1.5**
PESTR Estremoz 28.86 288 *e*P **P** **14 10 54.2 -1.2**
comp=Z,92nm,0.9s
PESTR Estremoz 28.86 288 *e*PcP **PcP** **14 14 05.3 +1.3**
PESTR Estremoz 28.86 288 *e*P **P** **14 10 54.2 -1.2**
comp=Z,92nm,0.9s
PESTR Estremoz 28.86 288 *e*PcP **PcP** **14 14 05.3 +1.3**
JMDO Jabal Madar 28.87 109 P **P** **14 10 55.9 +0.4**
SNR=12
JMDO Jabal Madar 28.87 109 P **P** **14 10 55.9 +0.4**
SNR=12
PVRL Vila Real 28.87 293 *e*P **P** **14 10 54.6 -0.8**
comp=Z,89nm,1.5s
PVRL Vila Real 28.87 293 *e*P **P** **14 10 54.6 -0.8**
comp=Z,89nm,1.5s
POLO Lamas de Olo 28.93 293 *e*P **P** **14 10 55.2 -0.8**
comp=Z,47nm,1.1s
POLO Lamas de Olo 28.93 293 *e*P **P** **14 10 55.2 -0.8**
comp=Z,47nm,1.1s
WPM1 Penmaenmawr 28.94 318 *e*P **P** **14 10 54.0 -1.8**
WPM1 Penmaenmawr 28.94 318 P **P** **14 10 54.0 -1.8**
WPM1 Penmaenmawr 28.94 318 *e*P **P** **14 10 54.0 -1.8**
RBK Rabkut 28.96 121 P **P** **14 10 57.7 +1.3**
SNR=6.9
RBK Rabkut 28.96 121 P **P** **14 10 57.7 +1.3**
SNR=6.9
RTC Rabat Centre 29.01 278 PFAKE 14 11 10.0 +13
RTC LR LR
comp=Z,4µm,21.0s
PVIS Viseu 29.01 292 *e*P **P** **14 10 56.3 -0.4**
comp=Z,105nm,1.2s
PVIS Viseu 29.01 292 *e*P **P** **14 10 56.3 -0.4**
comp=Z,105nm,1.2s
PCAB Cabril 29.10 294 *e*P **P** **14 10 56.3 -1.2**
comp=Z,143nm,1.1s
PCAB Cabril 29.10 294 *e*PcP **PcP** **14 14 07.7 +3.1**
PCAB Cabril 29.10 294 *e*P **P** **14 10 56.3 -1.2**
comp=Z,143nm,1.1s
PCAB Cabril 29.10 294 *e*PcP **PcP** **14 14 07.7 +3.1**
PVAQ Vaqueiros 29.11 285 *e*P **P** **14 10 56.6 -0.9**
comp=Z,144nm,1.7s
PVAQ Vaqueiros 29.11 285 *e*PP **pP** **14 11 09.9 +1.5**
PVAQ *e*S **S** **14 15 43.4 -3.3**
PVAQ *e*LR LR 14 21 24.1
comp=Z,2µm,20.0s
PVAQ Vaqueiros 29.11 285 *e*P **P** **14 10 56.6 -0.9**
comp=Z,144nm,1.7s
PVAQ *e*S **S** **14 15 43.4 -3.3**
KESW Keswick, Cumbr 29.12 321 AMS AMS 14 21 52.4
comp=Z,4µm,18.2s
EGD Espegrend 29.12 336 *e*P **P** **14 10 55.5 -1.8**
EGD AMB AMB 14 10 56.7
comp=Z,80nm,1.6s
PBEJ Beja 29.16 286 *e*P **P** **14 10 57.4 -0.5**
comp=Z,129nm,1.4s
PBEJ Beja 29.16 286 *e*P **P** **14 10 57.4 -0.5**
comp=Z,129nm,1.4s
BER Bergen 29.17 336 *e*P **P** **14 10 55.8 -1.9**
BER *e*S **S** **14 15 47.3 +0.3**
BER AMS AMS 14 24 28.1
comp=Z,13µm,17.9s
RUND Rundenannen 29.18 336 *e*P **P** **14 10 55.6 -2.3**
WLF1 Llynfaes 29.22 318 AMS AMS 14 23 40.2
comp=Z,8µm,23.4s
EVO Evora 29.22 287 *e*P **P** **14 10 59.7 +1.2**
comp=Z,38nm,0.6s
EVO *e*R
comp=Z,4µm,20.5s
ASK Askoy 29.29 336 *e*P **P** **14 10 56.5 -2.3**
ASK AMB AMB 14 10 59.5
comp=Z,166nm,1.3s
PGAV Gavieira, Arco 29.29 294 *e*P **P** **14 10 59.6 +0.4**
comp=Z,115nm,1.4s
PGAV Gavieira, Arco 29.29 294 *e*PP **sP** **14 11 14.1 -0.7**
PGAV *e*S **S** **14 15 46.1 -3.5**
PGAV A A 14 24 56.0
comp=Z,3µm,20.0s
PGAV Gavieira, Arco 29.29 294 *e*P **P** **14 10 59.6 +0.4**
comp=Z,115nm,1.4s
PGAV *e*S **S** **14 15 46.1 -3.5**
PBDV Barranco-do-Ve 29.30 285 *e*P **P** **14 10 59.0 -0.2**
comp=Z,162nm,1.1s
PBDV Barranco-do-Ve 29.30 285 *e*P **P** **14 10 59.0 -0.2**
comp=Z,162nm,1.1s
EVOP Sao Brissos 29.31 287 *e*P **P** **14 10 59.7 +0.4**
EVOP pmax pmax
comp=Z,38nm,0.6s
EVOP Sao Brissos 29.31 287 *e*P **P** **14 10 59.7 +0.4**
comp=Z,38nm,0.6s
ARU Arti 29.32 35 *d*/P **P** **14 10 59.0 -0.2**
ARU 14 11 53.0
ARU 14 14 01.2
ARU S **S** **14 15 50.3 +0.6**
ARU SSS SSS 14 17 29.0
ARU pmax pmax
comp=Z,117nm,1.7s
ARU MLR MLR
comp=Z,9µm,18.0s
ARU Arti 29.32 35 P **P** **14 10 59.1 -0.2**
comp=Z,365nm,0.7s,SNR=16
PCVE Castro Verde 29.34 285 *e*P **P** **14 10 59.7 +0.2**
comp=Z,70nm,1.2s
PCVE Castro Verde 29.34 285 *e*PcP **PcP** **14 14 08.7 +3.5**
PCVE Castro Verde 29.34 285 *e*P **P** **14 10 59.7 +0.2**
comp=Z,70nm,1.2s
PCVE Castro Verde 29.34 285 *e*PcP **PcP** **14 14 08.7 +3.5**
PMTG Montargil 29.34 288 *e*P **P** **14 10 59.3 -0.3**
comp=Z,56nm,1.1s
PMTG Montargil 29.34 288 *e*P **P** **14 10 59.3 -0.3**
comp=Z,56nm,1.1s
DOMB Dombas 29.39 341 *e*P **P** **14 11 00.2 +0.5**
ECK Cauldkaine Hil 29.41 322 *e*P **P** **14 10 58.1 -1.9**
ECK Cauldkaine Hil 29.41 322 P **P** **14 10 58.1 -1.9**
ECK Cauldkaine Hil 29.41 322 *e*P **P** **14 10 58.1 -1.9**
PTOM Tomar 29.45 289 *e*P **P** **14 11 01.2 +0.7**
comp=Z,68nm,0.7s
PTOM Tomar 29.45 289 *e*P **P** **14 11 01.2 +0.7**
comp=Z,68nm,0.7s
MESJ Messejana 29.45 286 *e*P **P** **14 10 59.2 -1.4**
MESJ AMb AMB 14 11 26.3
comp=Z,86nm,1.5s
MESJ *e*S **S** **14 15 50.8 -1.3**
MESJ Messejana 29.45 286 *e*P **P** **14 10 59.2 -1.4**
comp=Z,86nm,1.5s
MESJ *e*S **S** **14 15 50.8 -1.3**
MESJ Messejana 29.45 286 *e*P **P** **14 10 59.2 -1.4**
comp=Z,86nm,1.5s
MESJ *e*S **S** **14 15 50.8 -1.3**
HYA Hoyanger 29.50 338 *e*P **P** **14 10 59.8 -0.8**
EKA Eskdalemuir Ar 29.50 323 P **P** **14 10 59.9 -0.9**
EKA PcP **PcP** **14 14 06.8 +1.5**
EKA Eskdalemuir Ar 29.50 323 P **P** **14 10 59.9 -0.9**
comp=Z,3.6nm,0.4s,baz=123,slow=10,SNR=19
EKA PcP **PcP** **14 14 06.8 +1.5**
comp=Z,9.3nm,0.6s,baz=108,slow=2.8,SNR=6.7
EKA Eskdalemuir Ar 29.50 323 P **P** **14 10 59.9 -0.9**
EKA Eskdalemuir Ar 29.50 323 PcP **PcP** **14 14 06.8 +1.5**
ESK Eskdalemuir 29.52 322 *e*P **P** **14 10 59.5 -1.4**
ESK AMB AMB 14 11 10.2
comp=Z,52nm,3.4s
ESK Eskdalemuir 29.52 322 P **P** **14 10 59.5 -1.4**
ESK AMB AMB 14 11 10.2
comp=Z,52nm,3.4s
ESK Eskdalemuir 29.52 322 *e*P **P** **14 11 00.2 -0.7**
ESK MLR MLR
comp=Z,8µm,20.0s
ESK Eskdalemuir 29.52 322 *e*P **P** **14 11 00.2 -0.7**
ESK LR LR
comp=Z,8µm,20.0s
ESK Eskdalemuir 29.52 322 *e*P **P** **14 11 00.2 -0.7**
PTO Porto 29.54 293 *e*P **P** **14 11 03.1 +1.8**
comp=Z,102nm,2.1s
PTO Porto 29.54 293 *e*P **P** **14 11 03.1 +1.8**
comp=Z,102nm,2.1s
PNCL Nicolau / Gran 29.67 286 *e*P **P** **14 11 02.2 -0.2**
comp=Z,68nm,1.4s
PNCL Nicolau / Gran 29.67 286 *e*P **P** **14 11 02.2 -0.2**
comp=Z,68nm,1.4s
EDI Edinburgh 29.81 324 *e*P **P** **14 11 01.0 -2.5**
EDI AMB AMB 14 11 04.8
comp=Z,43nm,0.7s
EDI *e* 14 16 21.9
EDI AMS AMS 14 24 39.2
comp=Z,11µm,19.8s
EDI Edinburgh 29.81 324 P **P** **14 11 01.0 -2.5**
EDI AMB AMB 14 11 04.8
comp=Z,43nm,0.7s
EDI 14 16 21.9
EDI AMS AMS 14 24 39.2
comp=Z,11µm,19.8s
MORF Marmelete 29.86 285 *e*P **P** **14 11 04.5 +0.3**
comp=Z,47nm,1.8s
MORF Marmelete 29.86 285 *e*PcP **PcP** **14 14 09.1 +2.5**
MORF Marmelete 29.86 285 *e*P **P** **14 11 02.2 -2.0**
MORF *e*S **S** **14 15 57.1 -1.5**
MORF Marmelete 29.86 285 *e*P **P** **14 11 04.5 +0.3**
comp=Z,47nm,1.8s
MORF Marmelete 29.86 285 *e*PcP **PcP** **14 14 09.1 +2.5**
SUE Sulen 29.86 337 *e*P **P** **14 11 03.1 -0.8**
SUE AMB AMB 14 11 10.1
comp=Z,102nm,1.4s
PTEO Sao Teotonio 29.89 285 *e*P **P** **14 11 03.9 -0.5**
comp=Z,191nm,1.5s
PTEO Sao Teotonio 29.89 285 *e*P **P** **14 11 03.9 -0.5**
comp=Z,191nm,1.5s
DRUM Mains of Drumt 30.00 326 *e*P **P** **14 11 02.9 -2.3**
DRUM AMB AMB 14 11 06.4
comp=Z,68nm,2.6s
DRUM Mains of Drumt 30.00 326 P **P** **14 11 02.9 -2.3**
DRUM AMB AMB 14 11 06.4
comp=Z,68nm,2.6s
PFVI Vila Bisbo 30.02 285 *e*P **P** **14 11 05.8 +0.2**
comp=Z,98nm,1.5s
PFVI Vila Bisbo 30.02 285 *e*PcP **PcP** **14 14 11.1 +4.1**
PFVI Vila Bisbo 30.02 285 *e*P **P** **14 11 05.8 +0.2**
comp=Z,98nm,1.5s
PFVI Vila Bisbo 30.02 285 *e*PcP **PcP** **14 14 11.1 +4.1**
GAL1 Galloway 30.07 321 AMS AMS 14 28 25.3
comp=Z,4µm,16.8s
LIS Lisbon 30.09 288 *e*P **P** **14 11 04.0 -2.2**
LIS AMb AMB 14 11 22.3
comp=Z,163nm,1.0s
LIS *e*S **S** **14 16 00.2 -1.9**
LIS Lisbon 30.09 288 *e*P **P** **14 11 04.0 -2.2**
comp=Z,163nm,1.0s
LIS *e*S **S** **14 16 00.2 -1.9**
LIS Lisbon 30.09 288 *e*P **P** **14 11 04.0 -2.2**
LIS *e*S **S** **14 16 00.1 -1.9**
LIS Lisbon 30.09 288 *e*P **P** **14 11 04.0 -2.2**
comp=Z,163nm,1.0s
LIS *e*S **S** **14 16 00.2 -1.9**
TBLU Trondheim 30.12 344 *e*P **P** **14 11 06.7 +0.5**
TBLU AMS AMS 14 25 17.7
comp=Z,23µm,15.9s
PMAFR Mafra 30.17 288 *e*P **P** **14 11 06.0 -0.9**
comp=Z,87nm,0.8s
PMAFR Mafra 30.17 288 *e*P **P** **14 11 06.0 -0.9**
comp=Z,87nm,0.8s
MOL Molde 30.23 341 *e*P **P** **14 11 07.4 +0.3**
PGBU Glenifferbraes 30.39 323 AMS AMS 14 24 43.3
comp=Z,5µm,24.4s
DLF Lyons Farm 30.40 317 *e*P **P** **14 11 08.6 -0.1**
SOKR Solikamsk 30.47 28 *d*/P **P** **14 11 09.6 +0.4**
SOKR S **S** **14 16 06.5 -0.9**
SOKR pmax pmax
comp=Z,190nm,0.7s
SOKR MLR MLR
comp=Z,4µm,13.0s
EAB Aberfoyle 30.51 323 *e*P **P** **14 11 07.7 -2.0**
EAB Aberfoyle 30.51 323 P **P** **14 11 07.7 -2.0**
EAB Aberfoyle 30.51 323 *e*P **P** **14 11 07.7 -2.0**
SVE Sverdlovsk 30.51 35 ‖/P **P** **14 11 11.6 +1.9**
SVE *e* 14 12 23.4
SVE *e* 14 14 03.9
SVE *e*S **S** **14 16 12.6 +4.4**
SVE pmax pmax
comp=Z,85nm,0.8s
SVE MLR MLR
comp=Z,8µm,18.0s
MCD Coleburn Disti 30.71 326 *e*P **P** **14 11 09.7 -1.8**
MCD Coleburn Disti 30.71 326 P **P** **14 11 09.7 -1.8**
MCD Coleburn Disti 30.71 326 *e*P **P** **14 11 09.7 -1.8**
NSS Namsos 30.89 346 *e*S **S** **14 16 16.1 +2.2**
NSS AMS AMS 14 25 20.2
comp=Z,3µm,18.2s
LRW Lerwick 31.34 332 *e*P **P** **14 11 14.8 -2.1**
LRW AMB AMB 14 11 18.0
comp=Z,187nm,1.0s
LRW AMS AMS 14 26 18.5
comp=Z,10µm,21.2s
LRW Lerwick 31.34 332 P **P** **14 11 14.8 -2.1**
LRW AMB AMB 14 11 18.0
comp=Z,187nm,1.0s
LRW AMS AMS 14 26 18.5
comp=Z,10µm,21.2s
LRW Lerwick 31.34 332 *e*P **P** **14 11 14.8 -2.1**
KPL Plockton 31.70 325 AMS AMS 14 25 47.9
comp=Z,11µm,20.6s
MOR8 Moi Rana 31.96 349 *e*P **P** **14 11 21.6 -0.7**
VAL Valentia 32.10 313 *e*P **P** **14 11 21.1 -2.6**
FLOS Flostrand 32.28 349 *e*P **P** **14 11 24.6 -0.5**
STOK Stokkvaagen 32.33 348 *e*P **P** **14 11 25.5 -0.1**
STOK *e*ScP **ScP** **14 17 48.6 -4.5**
APA Apatity 32.39 4 *i*/P **P** **14 11 23.7 -2.4**
APA *i* 14 11 36.0
APA *i*S **S** **14 16 36.0 -1.4**
APA *i* 14 18 57.0
APA pmax pmax
comp=Z,54nm,1.4s
APA MLR MLR
comp=Z,16µm,19.0s
KONS Konsvik 32.47 349 *e*P **P** **14 11 26.0 -0.7**
TOA0 Torodi Ar. Sit 32.75 234 *e*P **P** **14 11 29.7 -0.1**
TOA0 Torodi Ar. Sit 32.75 234 *e*P **P** **14 11 29.7 -0.1**
TORD Torodi Ar. Bea 32.75 234 P **P** **14 11 29.8 0.0**
TORD PcP **PcP** **14 14 15.4 +0.8**
TORD Torodi Ar. Bea 32.75 234 P **P** **14 11 29.8 0.0**
comp=Z,78nm,0.8s,baz=34,slow=8.8,SNR=264
TORD PcP **PcP** **14 14 15.4 +0.8**
comp=Z,11nm,0.6s,baz=16,slow=3.1,SNR=5.9
TORD LR LR 14 26 58.8
comp=Z,10µm,21.0s,baz=30,slow=40
TORD Torodi Ar. Bea 32.75 234 P **P** **14 11 29.8 0.0**
LVZ Lovozero 32.79 4 *i*/P **P** **14 11 30.5 +0.8**
LVZ MLR MLR
comp=Z,15µm,18.0s
KBL Kabul 33.10 79 *e*P **P** **14 11 33.8 +0.8**
KBL pmax pmax
comp=Z,64nm,1.5s
KBL Kabul 33.10 79 *e*P **P** **14 11 33.8 +0.8**
comp=Z,64nm,1.5s
KBL Kabul 33.10 79 *e*P **P** **14 11 33.8 +0.8**
comp=Z,64nm,1.5s
KK31 Karatay Array 33.19 64 *i*/P **P** **14 11 33.8 +0.4**
KK31 pmax pmax
comp=Z,85nm,0.6s
KKAR Karatay Array 33.19 64 *e*P **P** **14 11 34.1 +0.7**
KKAR Karatay Array 33.19 64 *e*P **P** **14 11 34.1 +0.7**
KKAR Karatay Array 33.19 64 *e*P **P** **14 11 34.1 +0.7**
ZRNK Zerenda 33.43 46 *i*/P **P** **14 11 35.7 +0.3**
ZRNK pmax pmax
comp=Z,284nm,1.3s
STEI Steigen 33.49 351 *e*P **P** **14 11 35.0 -0.7**
KTK1 Kautokeino 33.85 357 *e*P **P** **14 11 37.9 -0.9**
BRVK Borovoye 34.21 46 *de*P **P** **14 11 42.5 +0.4**
BRVK pmax pmax
comp=Z,78nm,1.6s
BRVK MLR MLR
comp=Z,13µm,24.0s
BRVK Borovoye 34.21 46 *e*P **P** **14 11 43.1 +1.0**
BRVK LR LR
comp=Z,11µm,21.0s
BRVK Borovoye 34.21 46 *e*P **P** **14 11 43.1 +1.0**
BVA0 Borovoye Array 34.26 46 *i*/P **P** **14 11 42.5 -0.1**
BVA0 pmax pmax
comp=Z,120nm,1.4s
BVAR Borovoye Array 34.26 46 P **P** **14 11 43.3 +0.7**
BVAR pmax pmax
comp=Z,23nm,0.6s
BVAR Borovoye Array 34.26 46 P **P** **14 11 43.3 +0.7**
BVAR Borovoye Array 34.26 46 P **P** **14 11 43.3 +0.7**
comp=Z,23nm,0.6s,baz=245,slow=6.7,SNR=90
BVAR Borovoye Array 34.26 46 P **P** **14 11 43.3 +0.7**
ARCES ARCESS Array B 34.28 358 P **P** **14 11 41.9 -0.7**
ARCES ARCESS Array B 34.28 358 P **P** **14 11 41.9 -0.7**
comp=Z,34nm,0.7s,baz=178,slow=7.3,SNR=82
ARCES LR LR 14 26 48.1
comp=Z,11µm,18.3s,baz=170,slow=38
ARCES ARCESS Array B 34.28 358 P **P** **14 11 41.9 -0.7**
ARE0 ARCESS Array S 34.28 358 *e*P **P** **14 11 40.3 -2.3**
KEV Kevo 34.48 359 *e*P **P** **14 11 44.9 +0.7**
KEV pmax pmax
comp=Z,27nm,0.7s
KEV Kevo 34.48 359 *e*p **P** **14 11 44.9 +0.7**
comp=Z,27nm,0.7s
KEV Kevo 34.48 359 *e*P **P** **14 11 45.2 +1.0**
comp=Z,52nm,0.9s
KEV LR LR
comp=Z,11µm,19.0s
KEV Kevo 34.48 359 *e*P **P** **14 11 44.9 +0.7**
comp=Z,27nm,0.7s
VOSK Vostochnaya 34.54 46 P **P** **14 11 45.2 +0.2**
VOSK pmax pmax
comp=Z,152nm,1.4s
TRO Tromso 34.74 354 *e*P **P** **14 11 45.9 -0.6**
TRO *e*S **S** **14 17 11.8 -1.9**
TRO AMS AMS 14 27 07.3
comp=Z,11µm,21.2s
AML Almayashu 35.58 65 P **P** **14 11 56.2 +1.6**
SNR=18
AML Almayashu 35.58 65 P **P** **14 11 55.1 +0.5**
SNR=18
EKS2 Erkin-Say 35.61 64 *e*P **P** **14 11 55.8 +1.3**
EKS2 pmax pmax
comp=Z,82nm,0.9s
EKS2 MLR MLR
comp=Z,3µm,21.0s
EKS2 Erkin-Say 35.61 64 *e*P **P** **14 11 55.8 +1.3**
comp=Z,82nm,0.9s
EKS2 LR LR
comp=Z,3µm,21.0s
EKS2 Erkin-Say 35.61 64 P **P** **14 11 56.7 +2.2**
SNR=37
EKS2 Erkin-Say 35.61 64 *e*P **P** **14 11 55.8 +1.3**
comp=Z,82nm,0.9s
MBAR Mbarara 35.82 176 *e*P **P** **14 11 58.4 +1.8**
MBAR Mbarara 35.82 176 LR LR 14 29 11.8
comp=Z,8µm,19.8s,baz=5.2,slow=40
USP Ospenovka 36.10 63 P **P** **14 11 59.7 +1.1**
SNR=24
AAK Ala-Archa 36.14 64 *de*P **P** **14 12 00.0 +1.0**
AAK pmax pmax
comp=Z,418nm,1.7s
AAK Ala-Archa 36.14 64 *e*P **P** **14 12 00.1 +1.0**
AAK LR LR
comp=Z,3µm,21.0s
AAK Ala-Archa 36.14 64 P **P** **14 12 01.8 +2.8**
SNR=44
AAK Ala-Archa 36.14 64 *e*P **P** **14 12 00.1 +1.0**
CHMS Chumysh 36.30 64 P **P** **14 12 02.3 +2.0**
SNR=38
KBK Karagaybulak 36.47 64 P **P** **14 12 04.5 +2.6**
SNR=34
KZA Kyzart 36.74 65 P **P** **14 12 07.6 +3.1**
SNR=12
PMPS Porto Santo 36.90 280 *e*P **P** **14 12 05.7 +0.3**
comp=Z,234nm,1.0s
PMPS Porto Santo 36.90 280 *e*P **P** **14 12 05.7 +0.3**
comp=Z,234nm,1.0s
TKM2 Tokmak 2 36.92 64 *i*/P **P** **14 12 07.6 +1.8**
TKM2 Tokmak 2 36.92 64 *e*P **P** **14 12 06.7 +0.8**
comp=Z,69nm,0.7s
TKM2 LR LR
comp=Z,3µm,22.0s
TKM2 Tokmak 2 36.92 64 P **P** **14 12 07.7 +1.8**
SNR=82
TKM2 Tokmak 2 36.92 64 *e*P **P** **14 12 06.7 +0.8**
comp=Z,69nm,0.7s
KMBO Kilima Mbogo 37.20 165 *e*P **P** **14 12 10.8 +2.5**
KMBO PcP **PcP** **14 14 30.5 +2.7**
KMBO Kilima Mbogo 37.20 165 P **P** **14 12 10.5 +2.1**
comp=Z,11nm,0.9s,baz=357,slow=8.8,SNR=24
KMBO PcP **PcP** **14 14 30.5 +2.7**
comp=Z,8.6nm,0.8s,baz=25,slow=4.1,SNR=6.3
KMBO LR LR 14 30 11.3
comp=Z,7µm,19.4s,baz=337,slow=40
ULHL Ulahol 37.46 65 P **P** **14 12 13.0 +2.6**
SNR=89
PMAR Madeira 37.46 279 *e*P **P** **14 12 11.2 +0.7**
comp=Z,272nm,1.6s
PMAR Madeira 37.46 279 *e*P **P** **14 12 11.2 +0.7**
comp=Z,272nm,1.6s
KSH Kashi 37.60 69 P **P** **14 12 11.1 -0.4**
KSH *e*pP **pP** **14 12 20.8 -1.8**
KSH *e*sP **sP** **14 12 24.3 -3.0**
KSH *e*PP **PnPn** **14 13 39.1 +0.3**
KSH *e*PcP **PcP** **14 14 29.3 +0.7**
KSH *e*S **S** **14 17 54.9 -3.5**
KSH *e*sS **ScP** **14 18 12.8 0.0**
KSH pmax pmax
comp=Z,26nm,0.8s
KSH LR LR
comp=N,2µm,14.1s
KSH LR LR
comp=E,2µm,11.7s
KSH LR LR
comp=Z,2µm,14.0s
PMOZ Porto Moniz, M 37.66 280 *e*PP P 14 12 17.7 +5.6
PMOZ *e*LR LR 14 18 05.5
comp=Z,1µm,20.0s
AAA Alma-Ata 37.88 63 *e*P **P** **14 12 15.8 +2.1**
AAA *e*S **S** **14 18 03.1 +0.6**
AAA pmax pmax
comp=Z,800nm,8.2s
AAA smax smax
comp=E,2µm,14.1s
KURBB Kurchatov Arra 38.89 51 P **P** **14 12 22.3 +0.3**
comp=E,102nm,0.7s,baz=275,slow=8.8,SNR=476
KURBB PP **PnPn** **14 13 55.0 +1.0**
comp=E,11nm,0.7s,baz=274,slow=12,SNR=4.5
KURBB PcP **PcP** **14 14 34.1 +1.9**
comp=E,21nm,0.8s,baz=271,slow=4.1,SNR=4.2
KURK Kurchatov 38.95 51 *e*P **P** **14 12 22.8 +0.2**
KURK 14 13 55.0
KURK 14 14 34.2
KURK MLR MLR
comp=Z,7µm,19.0s
KURK Kurchatov 38.95 51 *e*P **P** **14 12 22.8 +0.2**
KURK PP **PnPn** **14 13 55.0 +0.2**
KURK PcP **PcP** **14 14 34.1 +1.7**
KURK LR LR
comp=Z,7µm,19.0s

KURK	**Kurchatov**	38.95	51	*e*P		**P**	**14 12 22.8**	**+0.2**	
KURK	**Kurchatov**	38.95	51	PP		PP	14 13 55.0	+2.9	
THN	**Thein Dam**	39.03	80	*e*PKP		**P**	**14 12 21.8**	**-1.6**	
THN				*e*4			14 18 09.5		
MSKU	**Masuku**	39.35	204	PFAKE			14 12 40.0	+14	
MSKU				LR	LR				
	comp=Z,2.0nm,20.0s								
BJO	**Bjornoya**	39.50	356	*e*P		**P**	**14 12 26.8**	**0.0**	
BJO				AMS	AMS		14 29 53.6		
	comp=Z,5µm,21.4s								
BHK	**Bhakra**	39.92	82	*ex*		pP	14 12 40.0	-2.0	
AJM	**Ajmer**	40.28	90	*e*PKP		**P**	**14 12 35.5**	**+1.5**	
SDNR	**Sundarnagar**	40.34	81	*e*PKP		**P**	**14 12 35.0**	**+0.6**	
SMLA	**Simla**	40.62	82	*i* P		**P**	**14 12 37.6**	**+1.0**	
SMLA				AMb	AMB		14 12 39.6		
	comp=Z,68nm,0.1s								
SMLA				*i* 4			14 18 42.2		
JMIC	**Jan Mayen**	40.70	342	*e*P		**P**	**14 12 38.0**	**+1.2**	
JMIC				AMS	AMS		14 30 51.1		
	comp=Z,5µm,17.5s								
JMIC	**Jan Mayen**	40.70	342	LR	LR		14 30 57.8		
	comp=Z,6µm,20.8s,baz=123,slow=38								
MK31	**Makanchi Array**	41.40	57	*i* P		**P**	**14 12 43.4**	**+0.5**	
MK31				pmax	pmax				
	comp=Z,31nm,0.4s								
MK31	**Makanchi Array**	41.40	57	*e*P		**P**	**14 12 43.1**	**+0.2**	
MK31	**Makanchi Array**	41.40	57	*e*P		**P**	**14 12 43.1**	**+0.2**	
MKAR	**Makanchi Array**	41.40	57	P		**P**	**14 12 43.2**	**+0.2**	
MKAR				pmax	pmax				
	comp=Z,28nm,0.6s								
MKAR	**Makanchi Array**	41.40	57	P		**P**	**14 12 43.1**	**+0.2**	
MKAR	**Makanchi Array**	41.40	57	P		**P**	**14 12 43.1**	**+0.2**	
	comp=Z,28nm,0.6s,baz=272,slow=5.9,SNR=256								
MKAR	**Makanchi Array**	41.40	57	P		**P**	**14 12 43.2**	**+0.2**	
BORG	**Borgarnes**	41.71	330	*e*P		**P**	**14 12 45.0**	**-0.1**	
	comp=Z,83nm,1.0s								
BORG				LR	LR				
	comp=Z,8µm,22.0s								
BORG	**Borgarnes**	41.71	330	*e*P		**P**	**14 12 45.0**	**-0.1**	
	comp=Z,83nm,1.0s								
DBIC	**Dimbokro**	41.85	235	*e*P		**P**	**14 12 46.8**	**-0.1**	
	comp=Z,67nm,0.6s								
DBIC	**Dimbokro**	41.85	235	P		**P**	**14 12 46.7**	**-0.1**	
	comp=Z,74nm,0.6s,baz=22,slow=9.2,SNR=68								
DBIC				LR	LR		14 32 57.4		
	comp=Z,3µm,19.6s,baz=229,slow=40								
DBIC	**Dimbokro**	41.85	235	*e*P		**P**	**14 12 46.8**	**-0.1**	
	comp=Z,67nm,0.6s								
NVS	**Novosibirsk**	42.04	45⇑	*i* P		**P**	**14 12 49.6**	**+1.6**	
NVS				*i*			14 14 26.5		
NVS				*i* S		**S**	**14 19 03.3**	**-0.9**	
NVS				*e*SS		**SS**	**14 22 10.6**	**-1.4**	
NVS				pmax	pmax				
	comp=N,39nm,1.1s								
NVS				pmax	pmax				
	comp=E,62nm,1.1s								
NVS				pmax	pmax				
	comp=Z,145nm,1.1s								
NVS				pmax	pmax				
	comp=N,54nm,1.9s								
NVS				pmax	pmax				
	comp=Z,208nm,1.9s								
NVS				pmax	pmax				
	comp=E,81nm,1.7s								
NVS				smax	smax				
	comp=N,95nm,2.3s								
NVS				smax	smax				
	comp=E,128nm,2.2s								
HSP	**Hornsund**	42.16	356	*e*P		**P**	**14 12 49.2**	**+0.5**	
LIC	**Lamto**	42.29	235⇓	*i* P		**P**	**14 12 50.2**	**-0.3**	
	comp=E,158nm,0.6s,baz=52								
LIC				*e*R					
	comp=E,5µm,20.5s								
LIC	**Lamto**	42.29	235⇓	*i* P		**P**	**14 12 50.2**	**-0.3**	
	comp=E,158nm,0.6s								
ZAA0	**Zalesovo Array**	42.91	46	*e*P		**P**	**14 12 55.0**	**-0.1**	
ZAA0	**Zalesovo Array**	42.91	46	*e*P		**P**	**14 12 55.0**	**-0.1**	
ZALV	**Zalesovo Beam**	42.91	46	P		**P**	**14 12 55.3**	**+0.1**	
ZALV				pmax	pmax				
	comp=Z,72nm,0.6s								
ZALV				MLR	MLR				
	comp=Z,5µm,20.9s								
ZALV	**Zalesovo Beam**	42.91	46	P		**P**	**14 12 55.2**	**+0.1**	
ZALV	**Zalesovo Beam**	42.91	46	P		**P**	**14 12 55.2**	**+0.1**	
	comp=Z,72nm,0.6s,baz=266,slow=9.3,SNR=150								
ZALV				LR	LR		14 34 50.4		
	comp=Z,5µm,20.9s,baz=257,slow=42								
ZALV	**Zalesovo Beam**	42.91	46	P		**P**	**14 12 55.2**	**+0.1**	
CMLA	**Cha da Macela**	42.95	290	PFAKE			14 13 10.0	+14	
CMLA				LR	LR				
	comp=Z,4µm,21.0s								
SPA0	**Spitsbergen Ar**	43.25	356	*e*P		**P**	**14 12 57.8**	**+0.2**	
SPA0				*e*S		**S**	**14 19 16.4**	**-5.2**	
SPA0				*e*SS		**SS**	**14 22 36.7**	**+1.5**	
POO	**Poona**	43.38	101	*e*PKP		**P**	**14 12 58.0**	**-1.3**	
POO				*e*PKP		**P**	**14 13 00.1**	**+0.8**	
POO				AMB	AMB		14 13 07.1		
	comp=Z,100nm,0.5s								
SCO	**Scoresbysund**	44.16	338	*i* P		**P**	**14 13 05.5**	**+0.6**	
	comp=Z,45nm,0.7s								
SCO									
	comp=Z,4µm,26.0s								
KBS	**Kingsbay**	44.23	355⇑	*e*P		**P**	**14 13 05.5**	**+0.1**	
KBS				pmax	pmax				
	comp=Z,65nm,1.0s								
KBS				MLR	MLR				
	comp=Z,8µm,20.0s								
KBS	**Kingsbay**	44.23	355	*e*P		**P**	**14 13 02.9**	**-2.5**	
	comp=Z,24nm,0.8s								
KBS				LR	LR				
	comp=Z,8µm,20.0s								
KAD	**Karad**	44.30	102	*e*PKP		**P**	**14 13 08.0**	**+1.2**	
WMQ	**Urumqi**	45.55	61⇑	*i* P		**P**	**14 13 18.6**	**+2.1**	
WMQ				pP		**pP**	**14 13 31.0**	**+3.2**	
WMQ				sP		**sP**	**14 13 36.0**	**+3.6**	
WMQ				PP		**PP**	**14 15 06.0**	**+2.6**	
WMQ				S		**S**	**14 19 57.0**	**+1.1**	
WMQ				sS		**sS**	**14 20 18.0**	**+3.4**	
WMQ				ScS		**ScS**	**14 23 09.0**	**-0.5**	
WMQ				pmax	pmax				
	comp=Z,130nm,0.6s								
WMQ				pmax	pmax				
	comp=Z,710nm,6.0s								
WMQ				LR	LR				
	comp=N,4µm,18.8s								
WMQ				LR	LR				
	comp=E,4µm,18.0s								
WMQ				LR	LR				
	comp=Z,4µm,22.7s								
LATR	**Latur**	45.62	99	*e*PKP		**P**	**14 13 15.5**	**-1.7**	
NGP	**Nagpur**	46.27	94	*e*PKP		**P**	**14 13 23.3**	**+1.0**	
NGP				*e*S		**S**	**14 20 08.3**	**+1.7**	
PYUN	**Piuthan**	46.44	83	*e*P		**P**	**14 13 25.0**	**+1.2**	
	comp=Z,381nm,0.7s								
DAG	**Danmarks Havn**	46.49	347	*i* P		**P**	**14 13 22.6**	**-0.7**	
	comp=Z,14nm,0.7s								
DAG									
	comp=Z,5µm,22.0s								
DANN	**Dangsing**	46.96	82	*e*P		**P**	**14 13 29.2**	**+1.2**	
	comp=Z,1µm,0.8s								
KOLN	**Koldanda**	47.06	83	*e*P		**P**	**14 13 29.2**	**+0.5**	
	comp=Z,180nm,0.7s								
MSEY	**Mahe Island**	47.20	142	PFAKE			14 13 40.0	+10	
MSEY				LR	LR				
	comp=Z,2µm,19.0s								
KRAR	**Krasnoyarsk**	47.55	43⇑	*e*P		**P**	**14 13 32.9**	**+1.1**	
KRAR				pmax	pmax				
	comp=Z,35nm,0.6s								
HYB	**Hyderabad**	47.76	99	*i* P		**P**	**14 13 34.0**	**0.0**	
HYB				*e*S		**S**	**14 20 30.0**	**+2.1**	
DMN	**Daman**	48.35	83	*e*P		**P**	**14 13 39.5**	**+0.7**	
	comp=Z,525nm,0.9s								
KKN	**Kakani**	48.42	82	*e*P		**P**	**14 13 39.8**	**+0.6**	
	comp=Z,214nm,0.6s								
PKIN	**Phulchoki**	48.60	83	*e*P		**P**	**14 13 41.0**	**+0.3**	
	comp=Z,510nm,1.0s								
PKI	**Pulchoki**	48.61	83	*e*P		**P**	**14 13 41.6**	**+0.8**	
	comp=Z,251nm,0.8s								
GUN	**Gumba**	48.85	82	*e*P		**P**	**14 13 43.4**	**+0.7**	
	comp=Z,456nm,1.0s								
SUMG	**Summit**	49.79	339	*e*P		**P**	**14 13 47.7**	**-1.6**	
SUMG				pmax	pmax				
	comp=Z,80nm,0.8s								
SUMG	**Summit**	49.79	339	*e*P		**P**	**14 13 47.7**	**-1.6**	
	comp=Z,80nm,0.8s								
SUMG	**Summit**	49.79	339	*i* P		**P**	**14 13 49.8**	**+0.5**	
	comp=Z,36nm,0.9s								
SUMG									
	comp=Z,4µm,22.0s								
SUMG	**Summit**	49.79	339	*i* P		**P**	**14 13 49.8**	**+0.5**	
	comp=Z,36nm,0.9s								
RAMN	**Ramite**	49.83	83	*e*P		**P**	**14 13 50.3**	**+0.2**	
	comp=Z,357nm,1.0s								
LSZ	**Lusaka**	50.34	180	*e*P		**P**	**14 13 55.0**	**+1.2**	
LSZ	**Lusaka**	50.34	180	*e*P		**P**	**14 13 54.7**	**+1.0**	
	comp=Z,16nm,0.9s								
LSZ	**Lusaka**	50.34	180	LR		LR	14 38 16.6		
	comp=Z,4µm,20.2s,baz=0.5,slow=40								
LSZ	**Lusaka**	50.34	180	*e*P		**P**	**14 13 54.7**	**+1.0**	
	comp=Z,16nm,0.9s								
ODAN	**Odare**	50.51	82	*e*P		**P**	**14 13 55.6**	**+0.4**	
	comp=Z,245nm,1.1s								
TAPN	**Taplejung**	50.56	82	*e*P		**P**	**14 13 56.2**	**+0.5**	
	comp=Z,317nm,1.1s								
MDRS	**Chennai**	51.51	102	*e*PKP		**P**	**14 14 03.7**	**+1.2**	
MDRS				AMB	AMB		14 14 06.3		
	comp=Z,5µm,0.1s								
TRD	**Trivandrum**	51.63	109	*e*4		x	14 21 33.4		
LSA	**Lhasa**	52.38	77	P		**P**	**14 14 11.3**	**+1.9**	
LSA				S		**S**	**14 21 30.8**	**-2.1**	
LSA				pmax	pmax				
	comp=Z,30nm,0.5s								
LSA				pmax	pmax				
	comp=Z,300nm,5.8s								
LSA				LR	LR				
	comp=N,620nm,21.6s								
LSA				LR	LR				
	comp=E,3µm,23.0s								
LSA				LR	LR				
	comp=Z,3µm,20.4s								
LSA	**Lhasa**	52.38	77	*e*P		**P**	**14 14 10.6**	**+1.2**	
LSA				pmax	pmax				
	comp=Z,56nm,0.8s								
LSA				MLR	MLR				
	comp=Z,3µm,21.0s								
LSA	**Lhasa**	52.38	77	*e*P		**P**	**14 14 10.6**	**+1.2**	
	comp=Z,56nm,0.8s								
LSA				LR	LR				
	comp=Z,3µm,21.0s								
LSA	**Lhasa**	52.38	77	P		**P**	**14 14 10.3**	**+0.9**	
MOY	**Mondy**	52.87	48	*e*P		P	14 14 16.4	+4.0	
MOY				pmax	pmax				
	comp=Z,75nm,3.4s								
SFJD	**Kangerlussuaq**	53.82	331	*e*P		**P**	**14 14 15.7**	**-3.2**	
	comp=Z,24nm,0.7s								
SFJD				LR	LR				
	comp=Z,6µm,22.0s								
SFJD	**Kangerlussuaq**	53.82	331	*i* P		**P**	**14 14 17.6**	**-1.3**	
	comp=Z,12nm,0.8s								
SFJD									
	comp=Z,4µm,21.0s								
TLY	**Talaya**	54.48	48	*d i* P		**P**	**14 14 25.5**	**+1.5**	
TLY				*e*			14 15 30.4		
TLY				*e*			14 16 34.6		
TLY				*e*S		**S**	**14 22 02.9**	**+2.9**	
TLY				*e*PS		**PnS**	**14 22 16.3**	**+2.9**	
TLY				*e*			14 24 17.0		
TLY				pmax	pmax				
	comp=Z,38nm,0.9s								
TLY				MLR	MLR				
	comp=Z,4µm,19.0s								
TLY	**Talaya**	54.48	48	P		**P**	**14 14 25.5**	**+1.5**	
	comp=Z,101nm,0.8s,SNR=9.7								
ZAK	**Zakamensk**	54.58	49	*e*P		**P**	**14 14 26.9**	**+2.1**	
ZAK				*e*			14 22 04.5		
ZAK				pmax	pmax				
	comp=Z,36nm,1.1s								
SHL	**Shillong**	54.71	82	*e*PKP		**P**	**14 14 27.0**	**+0.8**	
SHL				*e*4		x	14 22 02.5		
IRK	**Irkutsk**	54.72	47	*e*P		**P**	**14 14 26.6**	**+0.9**	
IRK				pmax	pmax				
	comp=Z,79nm,2.2s								
TSUM	**Tsumeb**	55.22	193	*e*P		**P**	**14 14 31.1**	**+1.3**	
TSUM	**Tsumeb**	55.22	193	*e*P		**P**	**14 14 27.6**	**-2.1**	
	comp=Z,18nm,2.3s								
TSUM				LR	LR				
	comp=Z,9µm,19.0s								
TSUM	**Tsumeb**	55.22	193	*e*P		**P**	**14 14 27.6**	**-2.1**	
	comp=Z,18nm,2.3s								
PALK	**Pallekele**	55.30	107	*e*P		**P**	**14 14 31.8**	**+1.4**	
	comp=Z,54nm,1.0s								
PALK	**Pallekele**	55.30	107	*e*P		**P**	**14 14 31.8**	**+1.4**	
	comp=Z,54nm,1.0s								
GTA	**Gaotai**	55.47	63	P		**P**	**14 14 33.1**	**+1.6**	
GTA				pP		**pP**	**14 14 45.4**	**+2.4**	
GTA				sP		**sP**	**14 14 51.8**	**+4.2**	
GTA				S		**S**	**14 22 15.9**	**+2.1**	
GTA				sS		**sS**	**14 22 36.1**	**+3.2**	
GTA				SS		**SS**	**14 26 00.4**	**+1.8**	
GTA				pmax	pmax				
	comp=Z,32nm,0.8s								
GTA				pmax	pmax				
	comp=Z,320nm,5.0s								
GTA				LR	LR				
	comp=N,3µm,21.1s								
GTA				LR	LR				
	comp=E,2µm,24.0s								
GTA				LR	LR				
	comp=Z,4µm,22.1s								
OPO	**Ambohidratompo**	56.48	159	LR		LR	14 38 39.5		
	comp=Z,2µm,20.9s,baz=345,slow=36								
IMP	**Imphal**	56.72	82	*e*PKP		**P**	**14 14 40.0**	**-0.5**	
ABPO	**Ambohimpanom**	56.91	159	*e*P		**P**	**14 14 42.7**	**+0.8**	
ABPO				pmax	pmax				
	comp=Z,25nm,0.9s								
ABPO				MLR	MLR				
	comp=Z,4µm,20.0s								
ABPO	**Ambohimpanom**	56.91	159	*e*P		**P**	**14 14 42.7**	**+0.8**	
	comp=Z,25nm,0.9s								
ABPO				LR	LR				
	comp=Z,4µm,20.0s								
ABPO	**Ambohimpanom**	56.91	159	*e*P		**P**	**14 14 42.7**	**+0.8**	
	comp=Z,25nm,0.9s								
SONM	**Songino Array**	57.26	52	P		**P**	**14 14 45.1**	**+1.0**	
SONM	**Songino Array**	57.26	52	P		**P**	**14 14 45.1**	**+1.0**	
	comp=Z,38nm,0.7s,baz=286,slow=7.6,SNR=120								
SONM				LR		LR	14 42 46.9		
	comp=Z,6µm,21.8s,baz=287,slow=40								
SONM	**Songino Array**	57.26	52	P		**P**	**14 14 45.1**	**+1.0**	
ULN	**Ulaanbaatar**	57.67	51	*e*P		**P**	**14 14 45.8**	**-1.2**	
	comp=Z,43nm,0.7s								
ULN				LR	LR				
	comp=Z,5µm,19.0s								
ULN	**Ulaanbaatar**	57.67	51	*e*P		**P**	**14 14 45.8**	**-1.2**	
	comp=Z,43nm,0.7s								
ASCN	**Ascension**	59.01	232	PFAKE			14 15 10.0	+13	
ASCN				LR	LR				
	comp=Z,927nm,22.0s								
DGAR	**Diego Garcia**	59.36	127	PFAKE			14 15 10.0	+11	
DGAR				LR	LR				
	comp=Z,3µm,21.0s								
LZH	**Lanzhou**	59.66	65	*e*P		**P**	**14 15 02.5**	**+1.4**	
LZH				S		**S**	**14 23 08.0**	**-1.0**	
LZH				sS		**sS**	**14 23 28.1**	**-0.2**	
LZH				SS		**SS**	**14 27 04.6**	**-0.1**	
LZH				pmax	pmax				
	comp=Z,46nm,1.0s								
LZH				pmax	pmax				
	comp=Z,220nm,4.0s								
LZH				LR	LR				
	comp=N,2µm,17.0s								
LZH				LR	LR				
	comp=E,1µm,15.3s								
LZH				LR	LR				
	comp=Z,3µm,19.9s								
TIXI	**Tiksi**	60.03	21	*d i* P		**P**	**14 15 03.1**	**+0.3**	
TIXI				pmax	pmax				
	comp=Z,29nm,0.6s								
TIXI				MLR	MLR				
	comp=Z,7µm,24.0s								
LBTB	**Lobatse**	60.09	183	*e*P		**P**	**14 15 05.1**	**+1.2**	
	comp=Z,53nm,0.9s								
LBTB	**Lobatse**	60.09	183	LR		LR	14 43 46.0		
	comp=Z,4µm,20.6s,baz=14,slow=39								
LBTB	**Lobatse**	60.09	183	*e*P		**P**	**14 15 05.1**	**+1.2**	
	comp=Z,53nm,0.9s								
CIT	**Chita**	60.25	45	*e*P		**P**	**14 15 05.1**	**+0.4**	
CIT				*e*			14 15 49.9		
CIT				*e*			14 17 21.1		
CIT				pmax	pmax				
	comp=Z,118nm,3.3s								
SHEL	**Horse Pasture**	60.47	218	PFAKE			14 15 20.0	+13	
SHEL				LR	LR				
	comp=Z,2µm,20.0s								
SLR	**Silverton**	60.75	180	*e*P		**P**	**14 15 10.6**	**+2.3**	
SLR				AMB	AMB		14 15 11.6		
	comp=Z,50nm,3.9s								
KSR	**Koster**	60.88	182	*e*P		P	14 15 12.5	+3.1	
KSR				AMB	AMB		14 15 14.3		
	comp=Z,35nm,2.7s								
ERPM	**east rand prop**	61.35	180	*e*P		**P**	**14 15 14.4**	**+1.9**	
ERPM				AMB	AMB		14 15 16.0		
	comp=Z,71nm,2.7s								
CNG	**Changalane**	61.40	176	*e*P		**P**	**14 15 10.6**	**-2.0**	
CD2	**Chengdu**	61.77	71	P		**P**	**14 15 16.3**	**+0.9**	
CD2				pP		**pP**	**14 15 28.1**	**+1.0**	
CD2				sP		**sP**	**14 15 32.9**	**+1.3**	
CD2				PcP		**PcP**	**14 15 57.3**	**+1.0**	
CD2				PP		**PP**	**14 17 34.5**	**+3.1**	
CD2				S		**S**	**14 23 34.4**	**-1.5**	
CD2				sS		**sS**	**14 23 54.3**	**-0.9**	
CD2				pmax	pmax				
	comp=Z,40nm,0.7s								
CD2				pmax	pmax				
	comp=Z,560nm,10.2s								
CD2				LR	LR				
	comp=N,1µm,17.8s								
CD2				LR	LR				
	comp=E,2µm,21.4s								
CD2				LR	LR				
	comp=Z,2µm,19.0s								
RER	**Riviere de l'E**	61.86	151	PFAKE			14 15 30.0	+14	
RER				LR	LR				
	comp=Z,3µm,22.0s								
PRYS	**Parys**	61.94	181	*e*P		**P**	**14 15 18.0**	**+1.6**	
PRYS				AMB	AMB		14 15 19.2		
	comp=Z,46nm,2.1s								
SWZ	**Schweizer**	62.26	183	*e*P		**P**	**14 15 20.3**	**+1.7**	
SWZ				AMB	AMB		14 15 21.0		
	comp=Z,70nm,2.0s								
BTO	**Baotou**	62.29	58	*e*P		**P**	**14 15 19.4**	**+0.6**	
POGA	**Pongola**	62.45	177	*e*P		**P**	**14 15 20.9**	**+1.3**	
POGA				AMB	AMB		14 15 36.7		
	comp=Z,55nm,6.5s								
HHC	**Hu-ho-hao-te**	63.26	57	*e*P		**P**	**14 15 25.5**	**+0.3**	
HHC				pP		**pP**	**14 15 38.5**	**+1.6**	
HHC				sP		**sP**	**14 15 44.6**	**+3.1**	
HHC				PP		**PP**	**14 17 47.3**	**+2.9**	
HHC				PcS			14 20 07.5		
HHC				S		**S**	**14 23 52.3**	**-2.1**	
HHC				sS		**sS**	**14 24 16.0**	**+2.2**	
HHC				ScS		**SKKSac**	**14 25 11.3**	**-4.0**	
HHC				SS		**SS**	**14 28 01.3**	**+0.6**	
HHC				pmax	pmax				
	comp=Z,100nm,0.9s								
HHC				pmax	pmax				
	comp=Z,1µm,5.3s								
HHC				LR	LR				
	comp=N,4µm,16.5s								
HHC				LR	LR				
	comp=E,4µm,17.6s								
HHC				LR	LR				
	comp=Z,5µm,18.2s								
KMI	**Kunming**	63.63	77	⇑P		**P**	**14 15 29.0**	**+1.0**	
KMI				pP		**pP**	**14 15 40.8**	**+1.1**	
KMI				sP		**sP**	**14 15 45.8**	**+1.5**	
KMI				PcP		**PcP**	**14 16 05.0**	**+0.8**	
KMI				PP		PP	14 17 54.8	+6.7	
KMI				S		**S**	**14 23 57.0**	**-2.6**	
KMI				sS		**sS**	**14 24 18.3**	**-0.7**	
KMI				SS		**SS**	**14 28 05.1**	**-2.2**	
KMI				pmax	pmax				
	comp=Z,20nm,1.4s								
KMI				pmax	pmax				
	comp=Z,330nm,3.2s								
KMI				LR	LR				
	comp=N,1µm,20.6s								
KMI				LR	LR				
	comp=E,1µm,11.9s								
KMI				LR	LR				
	comp=Z,1µm,21.6s								
CHTO	**Chiang Mai**	63.67	85	*e*P		**P**	**14 15 28.3**	**+0.2**	
CHTO				pmax	pmax				
	comp=Z,26nm,0.8s								
CHTO				MLR	MLR				
	comp=Z,2µm,22.0s								
CHTO	**Chiang Mai**	63.67	85	*e*P		**P**	**14 15 28.3**	**+0.2**	
	comp=Z,26nm,0.8s								
CHTO				LR	LR				
	comp=Z,2µm,22.0s								
CHTO	**Chiang Mai**	63.67	85	*e*P		**P**	**14 15 28.3**	**+0.2**	
	comp=Z,26nm,0.8s								
BOSA	**Boshof**	63.69	183	*e*P		**P**	**14 15 28.8**	**+0.8**	
	comp=Z,34nm,0.8s								
BOSA	**Boshof**	63.69	183	P		**P**	**14 15 29.6**	**+1.6**	
	comp=Z,39nm,0.8s,baz=9.3,slow=6.8,SNR=58								
BOSA	**Boshof**	63.69	183	*e*P		**P**	**14 15 28.8**	**+0.8**	
	comp=Z,34nm,0.8s								
CM31	**Chiang Mai Arr**	63.85	85	*e*P		**P**	**14 15 29.2**	**-0.1**	
	comp=Z,17nm,0.6s								
CM31	**Chiang Mai Arr**	63.85	85	*e*P		**P**	**14 15 29.2**	**-0.1**	
	comp=Z,17nm,0.6s								
CMAR	**Chiang Mai Arr**	63.85	85	P		**P**	**14 15 30.4**	**+1.2**	
CMAR	**Chiang Mai Arr**	63.85	85	P		**P**	**14 15 30.4**	**+1.2**	
	comp=Z,24nm,0.7s,baz=297,slow=8.3,SNR=122								
CMAR				LR	LR		14 49 36.2		
	comp=Z,1µm,21.4s,baz=280,slow=42								
CMAR	**Chiang Mai Arr**	63.85	85	P		**P**	**14 15 30.5**	**+1.2**	
XAN	**Xi'an**	64.30	65	P		**P**	**14 15 33.5**	**+1.4**	
XAN				pP		**pP**	**14 15 46.0**	**+2.1**	
XAN				sP		**sP**	**14 15 51.3**	**+2.9**	
XAN				PP		**PP**	**14 17 55.5**	**+1.9**	
XAN				S		**S**	**14 24 03.8**	**-3.6**	
XAN				sS		**sS**	**14 24 25.1**	**-1.7**	
XAN				pmax	pmax				
	comp=Z,5.0nm,0.6s								
XAN				pmax	pmax				
	comp=Z,67nm,4.8s								
XAN				LR	LR				
	comp=N,2µm,20.9s								
XAN				LR	LR				
	comp=E,640nm,20.2s								
XAN				LR	LR				
	comp=Z,620nm,22.5s								
YAK	**Yakutsk**	64.34	31	*e*P		**P**	**14 15 31.6**	**-0.2**	
YAK				*e**PP		**pP**	**14 15 40.9**	**-2.6**	
YAK				*e*			14 16 06.1		
YAK				*e*S		**S**	**14 24 03.8**	**-3.0**	
YAK				*e*			14 25 20.7		
YAK				*e*SS		**SS**	**14 28 21.3**	**+5.0**	
YAK				pmax	pmax				
	comp=Z,57nm,0.8s								
YAK				pmax	pmax				
	comp=N,10.0nm,0.9s								
YAK				pmax	pmax				
	comp=E,27nm,1.3s								
YAK				smax	smax				
	comp=N,438nm,3.8s								
YAK				smax	smax	

comp=E,347nm,11.4s
CLNS MLR MLR
comp=Z,1μm,18.0s
CLNS MLR MLR
comp=E,2μm,17.0s
CLNS MLR MLR
comp=N,2μm,18.0s
SCHQ Schefferville 64.79 320 *e*P **P 14 15 33.4 -1.5**
comp=N,63nm,0.6s
SCHQ Schefferville 64.79 320 P **P 14 15 34.0 -0.9**
comp=N,36nm,0.7s,baz=69,slow=5.9,SNR=91
SCHQ LR LR 14 44 18.2
comp=N,3μm,20.4s,baz=76,slow=36
SCHQ Schefferville 64.79 320 *e*P **P 14 15 33.4 -1.5**
comp=N,63nm,0.6s
HIA Hailar 64.95 46 *e*P **P 14 15 35.8 -0.3**
comp=N,32nm,0.8s
HIA LR LR
comp=Z,3μm,20.0s
HIA Hailar 64.95 46 *e*P **P 14 15 35.8 -0.3**
comp=Z,32nm,0.8s
TIY Taiyuan 65.22 60 *e*P **P 14 15 39.0 +0.9**
TIY S **S 14 24 20.4 +1.7**
TIY pmax pmax
comp=Z,440nm,3.8s
TIY LR LR
comp=N,1μm,18.7s
TIY LR LR
comp=E,890nm,18.2s
TIY LR LR
comp=Z,2μm,21.8s
GYA Guiyang 66.09 74⇑ *i*P **P 14 15 44.8 +0.9**
GYA pP **pP 14 15 57.8 +2.1**
GYA sP **sP 14 16 02.9 +2.7**
GYA PcP **PcP 14 16 15.0 +0.8**
GYA PP **PP 14 18 13.0 +3.5**
GYA ScP 14 20 14.8
GYA S **S 14 24 27.8 -1.9**
GYA sS **sS 14 24 49.4 +0.2**
GYA SKS **SKSac 14 25 34.0 -3.2**
GYA SS **SS 14 28 44.6 -0.8**
GYA pmax pmax
comp=Z,50nm,0.9s
GYA pmax pmax
comp=Z,200nm,5.8s
GYA LR LR
comp=N,810nm,18.0s
GYA LR LR
comp=E,1μm,25.5s
GYA LR LR
comp=Z,2μm,22.0s
ENH Enshi 66.46 69 *e*P **P 14 15 46.3 +0.2**
comp=Z,60nm,0.8s
ENH LR LR
comp=Z,2μm,20.0s
ENH Enshi 66.46 69 *e*P **P 14 15 46.3 +0.2**
comp=Z,60nm,0.8s
BJI Beijing 66.78 57 P **P 14 15 49.1 +1.2**
BJI PP **PP 14 18 14.0 -1.0**
BJI S **S 14 24 36.3 -1.0**
BJI SS **SS 14 28 55.3 +0.2**
BJI pmax pmax
comp=Z,53nm,0.8s
BJI pmax pmax
comp=Z,550nm,5.4s
BJI LR LR
comp=N,2μm,19.2s
BJI LR LR
comp=E,2μm,19.2s
BJI LR LR
comp=Z,2μm,24.1s
BJT Baijiatuau 66.78 57 *e*P **P 14 15 49.2 +1.2**
comp=Z,84nm,0.9s
BJT LR LR
comp=Z,3μm,20.0s
BJT Baijiatuau 66.78 57 *e*P **P 14 15 49.2 +1.2**
comp=Z,84nm,0.9s
SUR Sutherland 67.75 187 *e*P **P 14 15 55.4 +1.2**
SUR AMB AMB 14 15 58.7
comp=Z,59nm,2.9s
SUR Sutherland 67.75 187 *e*P **P 14 15 54.0 -0.2**
comp=Z,36nm,0.7s
SUR Sutherland 67.75 187 LR LR 14 49 46.0
comp=Z,5μm,19.1s,baz=2.7,slow=40
SUR Sutherland 67.75 187 *e*P **P 14 15 54.0 -0.2**
comp=Z,36nm,0.7s
TIA Tai'an 69.24 60 P **P 14 16 02.8 -0.7**
TIA S S 14 25 14.4 +7.4
TIA LR LR
comp=N,2μm,22.1s
TIA LR LR
comp=E,3μm,19.6s
TIA LR LR
comp=Z,2μm,21.6s
PQI Presque Isle 69.27 313 *e*P **P 14 16 03.4 -0.1**
comp=Z,174nm,1.2s
PQI Presque Isle 69.27 313 *e*P **P 14 16 03.4 -0.1**
comp=Z,174nm,1.2s
EMMW East Machias 69.91 311 *e*P **P 14 16 05.8 -1.7**
comp=Z,88nm,1.0s
EMMW East Machias 69.91 311 *e*P **P 14 16 05.8 -1.7**
comp=Z,88nm,1.0s
WHN Wuhan 70.00 66⇓ *i*P **P 14 16 08.8 +0.6**
WHN sP **sP 14 16 25.3 +0.7**
WHN S **S 14 25 14.1 -1.8**
WHN pmax pmax
comp=Z,870nm,4.3s
WHN LR LR
comp=N,3μm,15.2s
WHN LR LR
comp=E,1μm,15.0s
WHN LR LR
comp=Z,4μm,19.1s
SNY Shenyang 70.83 52 ⇓P **P 14 16 13.0 -0.1**
SNY S **S 14 25 25.1 -0.2**
SNY pmax pmax
comp=Z,490nm,5.1s
SNY LR LR
comp=N,1μm,22.2s
SNY LR LR
comp=E,2μm,21.3s
SNY LR LR
comp=Z,3μm,20.1s
CN2 Changchun 71.01 49 ⇓P **P 14 16 14.9 +0.7**
CN2 *e*pP **pP 14 16 24.8 -1.2**
CN2 *e*S **S 14 25 26.8 -0.5**
CN2 pmax pmax
comp=Z,40nm,0.8s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,2μm,20.0s
CN2 LR LR
comp=E,2μm,20.0s
CN2 LR LR
comp=Z,2μm,18.0s
KLR Kul'dur 71.83 42 *e*P P 14 16 15.6 -3.4
KLR *e*S **S 14 25 32.0 -4.6**
KLR pmax pmax
comp=Z,170nm,2.0s
KLR MLR MLR
comp=E,2μm,15.0s
KLR MLR MLR
comp=Z,4μm,15.0s
BILL Bilibino 72.19 15*c i*P **P 14 16 21.6 +0.7**
BILL *e**PP **pP 14 16 31.1 -1.6**
BILL *e* 14 16 37.3
BILL *e*S **S 14 25 41.1 +0.9**
BILL *e*SS **SS 14 30 19.7 +2.6**
BILL pmax pmax
comp=Z,44nm,1.2s
BILL Bilibino 72.19 15 *e*P **P 14 16 20.9 0.0**
comp=Z,51nm,1.1s
BILL Bilibino 72.19 15 *e*P **P 14 16 20.9 0.0**
comp=Z,51nm,1.1s
QIZ Qiongzhong 72.37 79 P **P 14 16 22.9 +0.1**
QIZ pP **pP 14 16 33.9 -0.8**
QIZ S **S 14 25 44.5 +0.7**
QIZ pmax pmax
comp=Z,26nm,0.9s
QIZ pmax pmax
comp=Z,190nm,6.7s
QIZ LR LR
comp=N,1μm,24.2s
QIZ LR LR
comp=E,330nm,24.8s
QIZ LR LR
comp=Z,1μm,23.2s
QIZ Qiongzhong 72.37 79 *e*P **P 14 16 22.5 -0.3**
comp=Z,26nm,0.8s
QIZ LR LR
comp=Z,1μm,22.0s
QIZ Qiongzhong 72.37 79 *e*P **P 14 16 22.5 -0.3**
comp=Z,26nm,0.8s
KULM Kulim 72.42 96 *e*P **P 14 16 22.4 -0.7**
comp=Z,120nm,1.4s
KULM LR LR
comp=Z,2μm,20.0s
KULM Kulim 72.42 96 P **P 14 16 24.2 +1.1**
KULM Kulim 72.42 96 *e*P **P 14 16 22.4 -0.7**
comp=Z,120nm,1.4s
PSI Prapat 72.47 99 P **P 14 16 24.8 +1.2**
PSI Prapat 72.47 99 P **P 14 16 24.8 +1.2**
comp=Z,17nm,0.7s,baz=324,slow=6.0,SNR=22
NJ2 Nanjing 72.56 63 *e*P **P 14 16 25.4 +1.7**
NJ2 pP **pP 14 16 33.5 -2.1**
NJ2 sP **sP 14 16 39.4 -0.7**
NJ2 S **S 14 25 44.5 -1.1**
NJ2 sS **sS 14 26 02.5 -2.8**
NJ2 SS **SS 14 30 24.0 -0.6**
NJ2 pmax pmax
comp=Z,80nm,0.8s
NJ2 pmax pmax
comp=Z,410nm,5.7s
NJ2 LR LR
comp=N,1μm,23.7s
NJ2 LR LR
comp=E,990nm,26.7s
NJ2 LR LR
comp=Z,2μm,27.0s
LBNH Lisbon 72.89 312 *e*P **P 14 16 24.6 -0.9**
LBNH pmax pmax
comp=Z,36nm,0.8s
LBNH MLR MLR
comp=Z,2μm,20.0s
LBNH Lisbon 72.89 312 *e*P **P 14 16 24.6 -0.9**
comp=Z,36nm,0.8s
LBNH LR LR
comp=Z,2μm,20.0s
LBNH Lisbon 72.89 312 *e*P **P 14 16 24.6 -0.9**
comp=Z,36nm,0.8s
RCBR Riachuelo 72.93 250 PFAKE 14 16 40.0 +14
RCBR LR LR
comp=Z,3μm,21.0s
GZH Guangzhou 73.03 74 P **P 14 16 28.8 +2.2**
GZH S **S 14 25 53.0 +1.9**
GZH LR LR
comp=Z,2μm,18.3s
MDJ Mudanjiang 73.11 47 P **P 14 16 25.9 -0.8**
MDJ pP **pP 14 16 37.9 -0.7**
MDJ sP **sP 14 16 42.8 -0.4**
MDJ PP **PP 14 19 07.9 -1.5**
MDJ S **S 14 25 48.8 -2.6**
MDJ ScS **SKKSac 14 26 29.8 +0.2**
MDJ SS **SS 14 30 32.8 +0.6**
MDJ pmax pmax
comp=Z,10.0nm,1.3s
MDJ pmax pmax
comp=Z,290nm,4.3s
MDJ LR LR
comp=N,1μm,20.4s
MDJ LR LR
comp=E,2μm,16.3s
MDJ LR LR
comp=Z,3μm,19.4s
MDJ Mudanjiang 73.11 47 *e*P **P 14 16 26.5 -0.2**
comp=Z,15nm,0.7s
MDJ LR LR
comp=Z,3μm,19.0s
MDJ Mudanjiang 73.11 47 *e*P **P 14 16 26.5 -0.2**
comp=Z,15nm,0.7s
IPM Ipoh 73.19 97 *e*P **P 14 16 25.3 -2.4**
comp=Z,54nm,1.3s
IPM Ipoh 73.19 97 P P 14 16 34.8 +7.1
IPM Ipoh 73.19 97 *e*P **P 14 16 25.3 -2.4**
comp=Z,54nm,1.3s
HNH Hanover 73.39 312 *e*P **P 14 16 29.0 +0.6**
comp=Z,41nm,0.7s
HNH Hanover 73.39 312 *e*P **P 14 16 29.0 +0.6**
comp=Z,41nm,0.7s
WES Weston 73.52 310 *e*P **P 14 16 30.0 +0.8**
WES pmax pmax
comp=Z,62nm,0.8s
WES Weston 73.52 310 *e*P **P 14 16 30.0 +0.8**
comp=Z,62nm,0.8s
WES Weston 73.52 310 *e*P **P 14 16 30.0 +0.8**
comp=Z,62nm,0.8s
FRNY Flat Rock 73.56 313 *e*P **P 14 16 29.3 -0.1**
comp=Z,26nm,0.6s
FRNY Flat Rock 73.56 313 *e*P **P 14 16 29.3 -0.1**
comp=Z,26nm,0.6s
MDV Middlebury 73.78 313 *e*P **P 14 16 30.4 -0.2**
MDV Middlebury 73.78 313 *e*P **P 14 16 30.5 -0.2**
HABR Khabarovsk 74.06 42 *d i*P **P 14 16 33.0 +0.8**
HABR *e**PP **pP 14 16 43.1 -1.0**
HABR *e**SP **sP 14 16 48.1 -0.5**
HABR *e* 14 19 17.4
HABR *e*S **S 14 26 03.2 +1.3**
HABR *e* 14 26 38.1
HABR *e*SS **SS 14 30 48.1 +1.8**
HABR SSS SSS 14 34 08.5
HABR pmax pmax
comp=Z,111nm,1.7s
HABR pmax pmax
comp=E,41nm,1.7s
HABR pmax pmax
comp=N,23nm,1.7s
HABR MLR MLR
comp=E,5μm,22.0s
HABR MLR MLR
comp=N,2μm,22.0s
HABR MLR MLR
comp=Z,3μm,22.0s
LONY Lake Ozonia 74.27 314 *e*P **P 14 16 31.7 -1.9**
comp=Z,48nm,1.1s
LONY LR LR
comp=Z,2μm,20.0s
LONY Lake Ozonia 74.27 314 *e*P **P 14 16 31.7 -1.9**
comp=Z,48nm,1.1s
FRIM Kepong 74.40 97 P sP 14 16 50.5 -0.6
ACCN Adirondack Com 74.41 312 *e*P **P 14 16 34.4 0.0**
comp=Z,25nm,0.7s
ACCN Adirondack Com 74.41 312 *e*P **P 14 16 34.4 0.0**
comp=Z,25nm,0.7s
NCB Newcomb 74.42 313 PFAKE 14 16 50.0 +16
NCB LR LR
comp=Z,3μm,20.0s
SSE Sheshan 74.76 63 P **P 14 16 34.4 -2.2**
SSE sP **sP 14 16 51.8 -1.3**
SSE S **S 14 26 08.8 -1.6**
SSE sS **sS 14 26 30.3 +0.1**
SSE ScS **SKKSac 14 26 42.8 +0.3**
SSE pmax pmax
comp=Z,23nm,0.7s
SSE pmax pmax
comp=Z,290nm,4.7s
SSE LR LR
comp=N,2μm,22.4s
SSE LR LR
comp=E,580nm,22.4s
SSE LR LR
comp=Z,1μm,21.8s
USRK Ussuriysk Arra 74.77 46 P **P 14 16 37.3 +0.9**
comp=Z,108nm,0.7s,baz=293,slow=5.4,SNR=179
USRK LR LR 14 55 55.2
comp=Z,2μm,18.4s,baz=300,slow=41
INCN Inchon 75.12 55 *e*P **P 14 16 39.2 +0.6**
comp=Z,33nm,0.6s
INCN LR LR
comp=Z,2μm,21.0s
INCN Inchon 75.12 55 *e*P **P 14 16 39.2 +0.6**
comp=Z,33nm,0.6s
VLA Vladivostok 75.32 47 *i*P **P 14 16 40.8 +1.2**
VLA pmax pmax
comp=Z,67nm,0.6s
VLA MLR MLR
comp=Z,2μm,23.0s
INK Inuvik 75.78 353 P **P 14 16 41.2 -0.6**
INK Inuvik 75.78 353 P **P 14 16 41.2 -0.6**
comp=Z,8.7nm,0.7s,baz=30,slow=10,SNR=19
INK Inuvik 75.78 353 P **P 14 16 41.2 -0.6**
KSAR Wonju Array Be 75.98 54 P **P 14 16 44.3 +0.8**
KSAR Wonju Array Be 75.98 54 P **P 14 16 44.3 +0.8**
KSRS Korea Array 76.00 54 P **P 14 16 44.3 +0.7**
comp=Z,50nm,0.7s,baz=305,slow=4.5,SNR=167
KSRS LR LR 14 56 04.7
comp=Z,2μm,20.4s,baz=305,slow=40
QZH Quanzhou 76.11 69⇓ *i*P **P 14 16 45.8 +1.4**
QZH LR LR
comp=N,1μm,14.0s
QZH LR LR
comp=E,1μm,13.7s
QZH LR LR
comp=Z,2μm,22.8s
KGM Kluang 76.48 97 P sP 14 17 04.9 +1.8
BINY Binghamton 76.49 312 *e*P **P 14 16 46.1 -0.3**
comp=Z,61nm,1.1s
BINY LR LR
comp=Z,3μm,21.0s
BINY Binghamton 76.49 312 *e*P **P 14 16 46.1 -0.3**
comp=Z,61nm,1.1s
COLD Coldfoot 77.74 359 *e*P **P 14 16 52.6 -0.3**
comp=Z,35nm,1.1s
COLD Coldfoot 77.74 359 *e*P **P 14 16 52.6 -0.3**
comp=Z,35nm,1.1s
YKW3 Yellowknife Ar 78.02 343 *e*P **P 14 16 53.6 -0.9**
comp=Z,0.5nm,0.8s
YKW3 Yellowknife Ar 78.02 343 *e*P **P 14 16 53.6 -0.9**
comp=Z,0.5nm,0.8s
YKA Yellowknife Ar 78.08 343 P **P 14 16 54.1 -0.7**
YKA P'P' 14 44 00.9
YKA Yellowknife Ar 78.08 343 P **P 14 16 54.1 -0.7**
comp=Z,19nm,0.7s,baz=30,slow=5.7,SNR=185
YKA PKPPKP **P'P'df 14 44 00.9 -1.5**
comp=Z,0.2nm,0.4s,baz=208,slow=2.7,SNR=3.8
YKA Yellowknife Ar 78.08 343 P **P 14 16 54.2 -0.7**
TATO Taipei 78.29 68 PFAKE 14 17 10.0 +13
TATO LR LR
comp=Z,2μm,21.0s
TPUB Ta-pu 78.56 70 *e*P **P 14 16 59.1 +0.9**
comp=Z,47nm,0.9s
TPUB Ta-pu 78.56 70 *e*P **P 14 16 59.1 +0.9**
comp=Z,47nm,0.9s
SDMD Soldier's Deli 78.65 310 *e*P **P 14 16 58.1 -0.4**
comp=Z,43nm,0.9s
SDMD Soldier's Deli 78.65 310 *e*P **P 14 16 58.1 -0.4**
comp=Z,43nm,0.9s
NACB Ninganchiao 78.82 68 *e*P **P 14 17 01.1 +1.5**
comp=Z,32nm,0.7s
NACB Ninganchiao 78.82 68 *e*P **P 14 17 01.1 +1.5**
comp=Z,32nm,0.7s
ERPA Erie 78.92 314 *e*P **P 14 16 59.5 -0.4**
comp=Z,147nm,1.1s
ERPA LR LR
comp=Z,2μm,20.0s
ERPA Erie 78.92 314 *e*P **P 14 16 59.5 -0.4**
comp=Z,147nm,1.1s
YULB Yu-li 79.02 69 *e*P **P 14 16 58.4 -2.4**
comp=Z,30nm,0.7s
YULB Yu-li 79.02 69 *e*P **P 14 16 58.4 -2.4**
comp=Z,30nm,0.7s
YSS Yuzh-Sakhalins 79.09 39⇓ *e*P **P 14 17 02.8 +2.1**
YSS *e**PP **pP 14 17 12.2 -0.5**
YSS *e**SP **sP 14 17 17.0 -0.2**
YSS *e* 14 20 06.0
YSS *e*S **S 14 26 59.0 +2.0**
YSS *e*PS **PnS 14 27 36.0 -7.2**
YSS *e*SS **SS 14 32 07.0 +4.7**
YSS pmax pmax
comp=Z,70nm,1.1s
YSS pmax pmax
comp=Z,900nm,5.0s
CBN Corbin 79.70 310 PFAKE 14 17 20.0 +16
CBN LR LR
comp=Z,2μm,22.0s
GLMI Grayling 79.84 318 PFAKE 14 17 20.0 +15
GLMI LR LR
comp=Z,3μm,20.0s
EGAK Eagle 79.88 356 *e*P **P 14 17 03.5 -1.1**
comp=Z,59nm,0.8s
EGAK LR LR
comp=Z,2μm,21.0s
EGAK Eagle 79.88 356 *e*P **P 14 17 03.5 -1.1**
comp=Z,59nm,0.8s
COCO West Island 79.98 113 PFAKE 14 17 20.0 +14
COCO LR LR
comp=Z,4μm,20.0s
COLA College 80.07 358 *e*P **P 14 17 05.4 -0.3**
COLA pmax pmax
comp=Z,22nm,1.0s
COLA MLR MLR
comp=Z,2μm,21.0s
COLA College 80.07 358 *e*P **P 14 17 05.4 -0.3**
comp=Z,22nm,1.0s
COLA LR LR
comp=Z,2μm,21.0s
COLA College 80.07 358 *e*P **P 14 17 05.4 -0.3**
comp=Z,22nm,1.0s
ILAR Eielson Array 80.15 358 P **P 14 17 06.1 0.0**
ILAR PKKPbc **PKKPbc 14 35 49.2 -0.5**
ILAR Eielson Array 80.15 358 P **P 14 17 06.1 0.0**
comp=Z,8.5nm,0.7s,baz=352,slow=4.1,SNR=122
ILAR PKKPbc **PKKPbc 14 35 49.2 -0.5**
comp=Z,1.6nm,0.8s,baz=247,slow=1.8,SNR=11
ILAR LR LR 14 55 00.3
comp=Z,1μm,21.4s,baz=17,slow=38
ILAR Eielson Array 80.15 358 P **P 14 17 06.1 0.0**
ANWB Willy Bob 80.21 285 PFAKE 14 17 20.0 +13
ANWB LR LR
comp=Z,2μm,22.0s
JSRW J. Sargeant Re 80.33 309 *e*P **P 14 17 06.8 -0.8**
JSRW J. Sargeant Re 80.33 309 *e*P **P 14 17 06.8 -0.8**
JNU Nakatsue 80.45 56 *e*P **P 14 17 07.2 -1.2**
comp=Z,17nm,0.8s
JNU Nakatsue 80.45 56 P **P 14 17 08.5 +0.1**
comp=Z,26nm,0.7s,baz=302,slow=2.0,SNR=21
JNU Nakatsue 80.45 56 *e*P **P 14 17 07.2 -1.2**
comp=Z,17nm,0.8s
FFC Flin Flon 80.71 333 *i*P **P 14 17 09.3 -0.1**
FFC Flin Flon 80.71 333 *e*P **P 14 17 09.0 -0.4**
comp=Z,39nm,0.8s
FFC LR LR
comp=Z,5μm,21.0s
FFC Flin Flon 80.71 333 *e*P **P 14 17 09.0 -0.4**
comp=Z,39nm,0.8s
ASAJ Asahikawa 80.86 42 *e*P **P 14 17 10.9 +0.6**
ASAJ Asahikawa 80.86 42 P **P 14 17 10.6 +0.3**
comp=Z,26nm,0.7s,baz=352,slow=6.3,SNR=26
ASAJ LR LR 14 57 37.5
comp=Z,4μm,21.8s,baz=289,slow=39
ASAJ Asahikawa 80.86 42 *e*P **P 14 17 10.9 +0.6**
AAM Ann Arbor 80.93 316 PFAKE 14 17 20.0 +9.3
AAM LR LR
comp=Z,4μm,21.0s
BBGH Gun Hill 80.95 280 PFAKE 14 17 20.0 +8.7
BBGH LR LR
comp=Z,2μm,20.0s
DOT Dot Lake 81.16 357 *e*P **P 14 17 11.2 -0.4**
comp=Z,26nm,0.8s
DOT Dot Lake 81.16 357 *e*P **P 14 17 11.2 -0.4**
comp=Z,26nm,0.8s
MCK McKinley 81.24 359 *e*P **P 14 17 10.1 -1.9**
MCK pmax pmax
comp=Z,101nm,1.4s
MCK McKinley 81.24 359 *e*P **P 14 17 10.1 -1.9**
comp=Z,101nm,1.4s
MCK McKinley 81.24 359 *e*P **P 14 17 10.1 -1.9**
comp=Z,101nm,1.4s
EYMN Ely 81.27 324 *e*P **P 14 17 10.4 -2.1**
comp=Z,58nm,1.2s
EYMN LR LR
comp=Z,3μm,21.0s
EYMN Ely 81.27 324 *e*P **P 14 17 10.4 -2.1**
comp=Z,58nm,1.2s
PEA0B Petropavlovsk- 81.50 28 *e*P **P 14 17 13.4 -0.2**
PEA0B Petropavlovsk- 81.50 28 *e*P **P 14 17 13.4 -0.2**
PETK Petropavlovsk- 81.50 28 P **P 14 17 13.3 -0.3**
PETK pmax pmax
comp=Z,17nm,0.8s
PETK Petropavlovsk- 81.50 28 P **P 14 17 13.3 -0.3**
PETK Petropavlovsk- 81.50 28 P **P 14 17 13.3 -0.3**
comp=Z,16nm,0.8s,baz=178,slow=0.2,SNR=14
PETK LR LR 15 00 38.7
comp=Z,3μm,18.6s,baz=314,slow=41
PETK Petropavlovsk- 81.50 28 P **P 14 17 13.3 -0.3**
TRF Thorofare Moun 81.54 359 *e*P **P 14 17 12.4 -1.4**
comp=Z,32nm,0.7s
TRF Thorofare Moun 81.54 359 *e*P **P 14 17 12.4 -1.4**

comp=Z,32nm,0.7s
ULM Lac du Bonnet 81.64 328 P P 14 17 13.8 -0.6
ULM Lac du Bonnet 81.64 328 P P 14 17 13.8 -0.6
comp=Z,34nm,0.7s,baz=37,slow=4.7,SNR=30
ULM LR LR 14 53 52.4
comp=Z,5µm,20.8s,baz=48,slow=36
ULM Lac du Bonnet 81.64 328 P P 14 17 13.8 -0.6
CNNC Cliffs of the 81.83 307 PFAKE 14 17 30.0 +14
CNNC LR LR
comp=Z,4µm,20.0s
MENT Mentasta 81.86 356 *e*P **P 14 17 14.1 -1.2**
MENT Mentasta 81.86 356 *e*P **P 14 17 14.1 -1.2**
ACSO Alum Creek Sta 81.86 314 *e*P **P 14 17 15.0 -0.7**
comp=Z,49nm,0.8s
ACSO LR LR
comp=Z,2µm,20.0s
ACSO Alum Creek Sta 81.86 314 *e*P **P 14 17 15.0 -0.7**
comp=Z,49nm,0.8s
PAX Paxson 81.90 357 *e*P **P 14 17 14.2 -1.4**
PAX pmax pmax
comp=Z,9.0nm,0.7s
PAX Paxson 81.90 357 *e*P **P 14 17 14.2 -1.4**
comp=Z,8.8nm,0.7s
PAX Paxson 81.90 357 *e*P **P 14 17 14.2 -1.4**
comp=Z,8.8nm,0.7s
PET Petropavlovsk 81.93 28 *e*P **P 14 17 15.3 -0.5**
PET *e*S **S 14 27 22.2 -4.3**
PET *e*PS **PnS 14 28 11.4 -6.9**
PET *e*PPS PPS 14 28 22.1
PET pmax pmax
comp=Z,400nm,4.4s
PET pmax pmax
comp=Z,200nm,5.4s
BLA Blacksburg 82.22 310 *e*P **P 14 17 16.9 -0.8**
BLA pmax pmax
comp=Z,7.0nm,0.7s
BLA MLR MLR
comp=Z,2µm,19.0s
BLA Blacksburg 82.22 310 *e*P **P 14 17 16.9 -0.8**
comp=Z,6.5nm,0.7s
BLA LR LR
comp=Z,2µm,19.0s
BLA Blacksburg 82.22 310 *e*P **P 14 17 16.9 -0.8**
comp=Z,6.5nm,0.7s
JOW Kunigami 82.28 63 *e*P **P 14 17 18.0 -0.2**
comp=Z,64nm,1.3s
JOW Kunigami 82.28 63 *e*P **P 14 17 18.0 -0.2**
comp=Z,64nm,1.3s
KSM Kuching 82.48 94 *e*P **P 14 17 18.9 -0.4**
comp=Z,82nm,1.3s
KSM LR LR
comp=Z,2µm,19.0s
KSM Kuching 82.48 94 P **P 14 17 21.7 +2.3**
KSM Kuching 82.48 94 *e*P **P 14 17 19.0 -0.4**
comp=Z,82nm,1.3s
CDVI St. Croix 82.51 286 *e*P **P 14 17 20.4 +1.0**
comp=Z,184nm,0.8s
CDVI St. Croix 82.51 286 *e*P **P 14 17 20.4 +1.0**
comp=Z,184nm,0.8s
ERM Erimo 82.55 43 *i* P **P 14 17 20.8 +1.6**
ERM pmax pmax
comp=Z,53nm,1.6s
ERM Erimo 82.55 43 *e*P **P 14 17 20.1 +0.9**
ERM LR LR
comp=Z,4µm,20.0s
ERM Erimo 82.55 43 *e*P **P 14 17 20.1 +0.9**
YUK Yuzh-Kuril'sk 82.66 40 *c i*P **P 14 17 18.8 -1.0**
YUK *i* S **S 14 27 29.3 -5.0**
YUK *i* SS SS 14 33 04.8 +9.1
YUK pmax pmax
comp=Z,263nm,0.8s
YUK pmax pmax
comp=N,165nm,0.9s
YUK pmax pmax
comp=E,36nm,0.4s
YUK pmax pmax
comp=Z,1µm,2.7s
KUR Kuril'sk 82.87 38 *c i*P **P 14 17 19.8 -1.1**
KUR *i* 14 20 35.3
KUR *i* S **S 14 27 34.4 -2.0**
KUR *i* SSS SSS 14 36 30.6
KUR pmax pmax
comp=E,71nm,1.8s
KUR pmax pmax
comp=Z,351nm,1.7s
KUR pmax pmax
comp=N,69nm,1.8s
KUR pmax pmax
comp=Z,214nm,1.8s
MTP Monte Pirata 82.93 287 *e*P **P 14 17 20.2 -1.4**
comp=Z,20nm,0.5s
MTP Monte Pirata 82.93 287 *e*P **P 14 17 20.2 -1.4**
comp=Z,20nm,0.5s
AGMN Agassiz Nation 83.07 326 *e*P **P 14 17 20.6 -1.2**
comp=Z,24nm,0.7s
AGMN LR LR
comp=Z,3µm,20.0s
AGMN Agassiz Nation 83.07 326 *e*P **P 14 17 20.6 -1.2**
comp=Z,24nm,0.7s
MAJO Matsushiro 83.15 50 *e*P **P 14 17 22.3 -0.3**
MAJO pmax pmax
comp=Z,28nm,0.9s
MAJO MLR MLR
comp=Z,2µm,22.0s
MAJO Matsushiro 83.15 50 *e*P **P 14 17 22.3 -0.3**
comp=Z,28nm,0.9s
MAJO LR LR
comp=Z,2µm,22.0s
MAJO Matsushiro 83.15 50 *e*P **P 14 17 22.3 -0.3**
comp=Z,28nm,0.9s
MAT Matsushiro 83.15 50 P **P 14 17 22.7 +0.1**
MAT S **S 14 27 38.8 -0.9**
SML Sawmill 83.16 358 *e*P **P 14 17 20.8 -1.3**
SML pmax pmax
comp=Z,13nm,0.8s
SML Sawmill 83.16 358 *e*P **P 14 17 20.8 -1.3**
comp=Z,13nm,0.8s
SML Sawmill 83.16 358 *e*P **P 14 17 20.8 -1.3**
comp=Z,13nm,0.8s
GRGR Grenville 83.20 280 PFAKE 14 17 30.0 +6.9
GRGR LR LR
comp=Z,786nm,22.0s
PMR Palmer 83.39 359 *e*P **P 14 17 22.3 -0.9**
PMR pmax pmax
comp=Z,81nm,1.2s
PMR Palmer 83.39 359 *e*P **P 14 17 22.3 -0.9**
comp=Z,81nm,1.2s
PMR Palmer 83.39 359 *e*P **P 14 17 22.3 -0.9**
comp=Z,81nm,1.2s
SBUM Sibu 83.48 92 P **P 14 17 26.5 +2.0**
CELP Cerrillos 83.74 288 *e*P **P 14 17 23.0 -2.8**
CELP Cerrillos 83.74 288 *e*P **P 14 17 23.0 -2.8**
DIV Divide 83.76 357 *e*P **P 14 17 25.3 +0.1**
comp=Z,9.4nm,0.6s
DIV Divide 83.76 357 *e*P **P 14 17 25.3 +0.1**
comp=Z,9.4nm,0.6s
BTM Bintulu 83.76 91 P **P 14 17 24.4 -1.6**
OBIP Obispado Ponce 83.78 288 *e*P **P 14 17 23.7 -2.3**
comp=Z,86nm,1.0s
OBIP Obispado Ponce 83.78 288 *e*P **P 14 17 23.7 -2.3**
comp=Z,86nm,1.0s
SPMN St. Paul 83.83 323 ⇑P **P 14 17 25.3 -0.6**
baz=84
RC01 Rabbit Creek A 83.90 359 *e*P **P 14 17 22.8 -3.1**
comp=Z,56nm,0.8s
AGPR Aguadilla, PR 83.93 288 *e*P **P 14 17 27.8 +1.0**
comp=Z,94nm,1.0s
AGPR Aguadilla, PR 83.93 288 *e*P **P 14 17 27.8 +1.0**
comp=Z,94nm,1.0s
KMSC Kings Mountain 84.09 309 ⇑P **P 14 17 27.1 -0.3**
baz=84,SNR=7.4
JFWS Jewell Farm 84.14 320 *e*P **P 14 17 25.5 -2.0**
JFWS pmax pmax
comp=Z,54nm,0.8s
JFWS MLR MLR
comp=Z,5µm,20.0s
JFWS Jewell Farm 84.14 320 *e*P **P 14 17 25.4 -2.0**
comp=Z,54nm,0.8s
JFWS LR LR
comp=Z,5µm,20.0s
JFWS Jewell Farm 84.14 320 *e*P **P 14 17 25.5 -2.0**
comp=Z,54nm,0.8s
SFIN Scholer Farm 84.14 316 ⇑P **P 14 17 27.1 -0.5**
baz=84
CRPR Cabo Rojo, PR 84.19 288 *e*P **P 14 17 27.8 -0.3**
comp=Z,55nm,0.7s
CRPR Cabo Rojo, PR 84.19 288 *e*P **P 14 17 27.8 -0.3**
comp=Z,55nm,0.7s
TZTN Tazewell 84.58 311 *e*P **P 14 17 29.4 -0.4**
comp=Z,29nm,0.9s
TZTN *e*PcP **PcP 14 17 34.3 +1.0**
TZTN Tazewell 84.58 311 *e*P **P 14 17 29.4 -0.4**
comp=Z,29nm,0.9s
SKAG Skagway 84.59 352 *e*P **P 14 17 28.3 -1.1**
comp=Z,37nm,1.1s
SKAG Skagway 84.59 352 *e*P **P 14 17 28.3 -1.1**
comp=Z,37nm,1.1s
BLO Bloomington 84.62 315 *e*P **P 14 17 29.0 -1.0**
BLO *e* 14 17 34.2
BLO pmax pmax
comp=Z,71nm,0.6s
BLO Bloomington 84.62 315 *e*P **P 14 17 29.0 -1.0**
comp=Z,71nm,0.6s
BLO *e*PcP **PcP 14 17 34.2 +0.7**
BLO Bloomington 84.62 315 *e*P **P 14 17 29.0 -1.0**
comp=Z,71nm,0.6s
NHSC New Hope 84.63 307 PFAKE 14 17 40.0 +10
NHSC LR LR
comp=Z,3µm,20.0s
KKM Kota Kinabalu 84.70 86 *e*P **P 14 17 31.1 +0.2**
comp=Z,20nm,0.8s
KKM LR LR
comp=Z,1µm,20.0s
KKM Kota Kinabalu 84.70 86 *e*P **P 14 17 31.1 +0.2**
comp=Z,20nm,0.8s
MDND Maddock 85.07 328 ⇑P **P 14 17 31.5 -0.6**
baz=85
WCI Wyandotte Cave 85.12 314 *e*P **P 14 17 31.8 -0.7**
WCI *e* 14 17 36.4
WCI pmax pmax
comp=Z,44nm,0.8s
WCI Wyandotte Cave 85.12 314 *e*P **P 14 17 31.8 -0.7**
comp=Z,44nm,0.8s
WCI *e*PcP **PcP 14 17 36.4 +0.7**
WCI Wyandotte Cave 85.12 314 *e*P **P 14 17 31.8 -0.7**
comp=Z,44nm,0.8s
HDIL Hopedale 85.25 317 *e*P **P 14 17 32.6 -0.5**
HDIL LR LR
comp=Z,2µm,20.0s
HDIL Hopedale 85.25 317 *e*P **P 14 17 32.6 -0.5**
TKL Tuckaleechee C 85.29 311 LR LR 14 57 00.9
comp=Z,3µm,20.6s,baz=145,slow=37
SDKM Sandakan 85.73 86 P P 14 17 29.5 -6.4
OLIL Olney 85.83 315 *e*P **P 14 17 35.5 -0.5**
comp=Z,82nm,0.9s
OLIL *e*PcP **PcP 14 17 39.7 +1.0**
OLIL *e*pP **pP 14 17 46.1 -2.0**
OLIL Olney 85.83 315 *e*P **P 14 17 35.5 -0.5**
comp=Z,82nm,0.9s
CPCT Cooper Cave 85.89 311 *e*P **P 14 17 36.1 -0.3**
CPCT Cooper Cave 85.89 311 *e*P **P 14 17 36.1 -0.3**
A24A Westby 86.06 331 ⇓P **P 14 17 36.4 -0.6**
baz=86,SNR=30
USIN University of 86.10 315 *e*P **P 14 17 36.9 -0.4**
comp=Z,46nm,0.6s
USIN University of 86.10 315 *e*P **P 14 17 36.9 -0.4**
comp=Z,46nm,0.6s
A23A Redstone 86.38 331 ⇑P **P 14 17 37.8 -0.8**
baz=86,SNR=14
SCIA State Center 86.41 320 *e*P **P 14 17 37.4 -1.4**
comp=Z,71nm,0.8s
SCIA LR LR
comp=Z,3µm,20.0s
SCIA State Center 86.41 320 *e*P **P 14 17 37.4 -1.4**
comp=Z,71nm,0.8s
DGMT Dagmar 86.50 331 *e*P **P 14 17 38.7 -0.5**
comp=Z,80nm,0.8s
DGMT LR LR
comp=Z,4µm,22.0s
DGMT Dagmar 86.50 331 *e*P **P 14 17 38.7 -0.5**
comp=Z,80nm,0.8s
A22A Carney Farms, 86.75 332 ⇓P **P 14 17 40.2 -0.3**
baz=86,SNR=52
ECSD EROS Data Cent 86.79 324 *e*P **P 14 17 39.8 -0.9**
comp=Z,1.9nm,1.0s
ECSD *e*pP **pP 14 17 49.7 -3.1**
ECSD LR LR
comp=Z,2µm,22.0s
ECSD EROS Data Cent 86.79 324 *e*P **P 14 17 39.8 -0.9**
comp=Z,1.9nm,1.0s
ECSD *e*pP **pP 14 17 49.7 -3.1**
B23A Brockton 86.82 331 ⇓P **P 14 17 40.7 0.0**
baz=86,SNR=14
SDDR Presa de Saban 86.85 291 *e*P **P 14 17 41.6 +0.2**
comp=Z,65nm,0.8s
SDDR LR LR
comp=Z,1µm,21.0s
SDDR Presa de Saban 86.85 291 *e*P **P 14 17 41.6 +0.2**
comp=Z,65nm,0.8s
FX1 Attu Island--F 86.92 21 *e*P **P 14 17 40.7 -0.3**
FX1 *e*pP **pP 14 17 51.3 -1.9**
FX1 Attu Island--F 86.92 21 *e*P **P 14 17 40.7 -0.3**
FX1 *e*pP **pP 14 17 51.3 -1.9**
TSM Tawau 87.05 87 P **P 14 17 44.2 +1.8**
MYLDM Lahad Datu 87.06 86 P **P 14 17 44.2 +1.8**
SLM Saint Louis 87.11 317 *e*P **P 14 17 41.7 -0.6**
SLM pmax pmax
comp=Z,101nm,0.8s
SLM Saint Louis 87.11 317 *e*P **P 14 17 41.7 -0.6**
comp=Z,101nm,0.8s
SLM Saint Louis 87.11 317 *e*P **P 14 17 41.7 -0.6**
comp=Z,101nm,0.8s
WRAK Wrangell Islan 87.15 349 *e*P **P 14 17 41.9 -0.2**
comp=Z,26nm,0.8s
WRAK *e*pP **pP 14 17 52.5 -1.7**
WRAK LR LR
comp=Z,3µm,20.0s
WRAK Wrangell Islan 87.15 349 *e*P **P 14 17 41.9 -0.2**
comp=Z,26nm,0.8s
WRAK *e*pP **pP 14 17 52.5 -1.7**
SIUC Southern Illin 87.17 315 *e*P **P 14 17 42.5 -0.1**
comp=Z,89nm,0.8s
SIUC Southern Illin 87.17 315 *e*P **P 14 17 42.5 -0.1**
comp=Z,89nm,0.8s
KDAK Kodiak Island 87.22 1 *e*P **P 14 17 42.1 -0.3**
comp=Z,30nm,0.8s
KDAK LR LR
comp=Z,2µm,22.0s
KDAK Kodiak Island 87.22 1 P **P 14 17 42.9 +0.5**
comp=Z,20nm,0.7s,baz=17,slow=6.6,SNR=27
KDAK Kodiak Island 87.22 1 *e*P **P 14 17 42.1 -0.3**
comp=Z,30nm,0.8s
C24A Savage 87.34 330 ⇓P **P 14 17 43.2 -0.2**
baz=87
B22A Reddig Ranch S 87.35 332 ⇓P **P 14 17 43.4 +0.1**
baz=87,SNR=48
BRSD Miller 87.37 325 ⇓P **P 14 17 43.1 -0.4**
baz=87
C23A Lambert 87.43 331 ⇓P **P 14 17 43.6 -0.2**
baz=87,SNR=12
WVT Waverly 87.44 313 *e*P **P 14 17 42.2 -1.7**
WVT *e**PP **pP 14 17 53.5 -2.6**
WVT pmax pmax
comp=Z,21nm,0.8s
WVT Waverly 87.44 313 *e*P **P 14 17 42.2 -1.7**
comp=Z,21nm,0.8s
WVT *e*pP **pP 14 17 53.5 -2.6**
WVT Waverly 87.44 313 *e*P **P 14 17 42.2 -1.7**
comp=Z,21nm,0.8s
WVT *e*pP **pP 14 17 53.5 -2.6**
A20A Cobblestone Ra 87.61 333 ⇑P **P 14 17 44.4 -0.2**
baz=87,SNR=14
D24A Glendive 87.64 330 ⇑P **P 14 17 44.5 -0.3**
baz=87
B21A Ellsworth Farm 87.64 332 ⇓P **P 14 17 44.2 -0.5**
baz=87
C22A Vida 87.75 331 ⇓P **P 14 17 45.3 0.0**
baz=87,SNR=19
OHAK Old Harbor 87.78 1 *e*P **P 14 17 45.3 +0.2**
comp=Z,30nm,0.7s
OHAK *e*pP **pP 14 17 55.1 -2.2**
OHAK Old Harbor 87.78 1 *e*P **P 14 17 45.3 +0.2**
comp=Z,30nm,0.7s
OHAK *e*pP **pP 14 17 55.1 -2.2**
A19A Klindworth Far 87.87 333 ⇓P **P 14 17 46.2 +0.3**
baz=88,SNR=24
TIGA Tifton 87.92 308 ⇓P **P 14 17 46.0 -0.3**
baz=88
D23A Lindsay 87.95 330 ⇑P **P 14 17 46.3 0.0**
baz=88
B20A Solberg Farm, 88.01 333 ⇓P **P 14 17 46.7 +0.2**
baz=88,SNR=98
E24A Baker 88.07 330 ⇓P **P 14 17 46.8 -0.1**
baz=88
C21A Desert Coulee 88.16 332 ⇑P **P 14 17 47.6 +0.3**
baz=88,SNR=49
A18A Metzger Ranch, 88.28 334 ⇓P **P 14 17 47.5 -0.3**
baz=88,SNR=40
BDFB Brasilia 88.30 250 P **P 14 17 50.2 +1.8**
BDFB Brasilia 88.30 250 P **P 14 17 50.2 +1.8**
comp=Z,22nm,0.8s,baz=62,slow=3.9,SNR=17
BDFB LR LR 15 00 33.9
comp=Z,2µm,19.2s,baz=53,slow=38
BDFB Brasilia 88.30 250 P **P 14 17 50.2 +1.8**
B19A Brinkman Farms 88.34 333 ⇑P **P 14 17 47.8 -0.3**
baz=88
D22A Cohagen 88.36 331 ⇑P **P 14 17 48.7 +0.6**
baz=88,SNR=21
CHGN Chignik 88.53 4 *e*P **P 14 17 48.1 -0.6**
CHGN Chignik 88.53 4 *e*P **P 14 17 48.1 -0.6**
E23A Ismay 88.53 330 ⇓P **P 14 17 48.9 -0.1**
baz=88
A17A Triple J Farms 88.56 334 ⇓P **P 14 17 48.7 -0.5**
baz=88
C20A Veseth Ranch, 88.60 332 ⇓P **P 14 17 49.5 +0.2**
baz=88,SNR=59
B18A Beardsley Farm 88.69 334 ⇑P **P 14 17 49.7 -0.1**
baz=88,SNR=77
F24A Ekalaka 88.70 329 ⇑P **P 14 17 50.0 +0.1**
baz=88,SNR=16
D21A La Casta Ranch 88.75 331 ⇓P **P 14 17 50.4 +0.4**
baz=88,SNR=28
E22A Miles City 88.84 330 ⇓P **P 14 17 50.3 -0.2**
baz=88
A16A West Butte Ran 88.87 335 ⇑P **P 14 17 50.2 -0.4**
baz=88
C19A Slack Wire Ran 88.98 333 ⇓P **P 14 17 51.1 0.0**
baz=89,SNR=60
EGMT Eagleton 89.00 333 *e*P **P 14 17 51.0 -0.2**
comp=Z,127nm,1.4s
EGMT LR LR
comp=Z,3µm,19.0s
EGMT Eagleton 89.00 333 *e*P **P 14 17 51.0 -0.2**
comp=Z,127nm,1.4s
LRAL Lakeview Retre 89.02 311 *e*P **P 14 17 50.2 -1.3**
comp=Z,25nm,0.6s
LRAL LR LR
comp=Z,1µm,19.0s
LRAL Lakeview Retre 89.02 311 *e*P **P 14 17 50.2 -1.3**
comp=Z,25nm,0.6s
G24A Alzada 89.10 329 ⇓P **P 14 17 51.3 -0.5**
baz=89
D20A Manuel Ranch, 89.17 332 ⇑P **P 14 17 52.0 0.0**
baz=89,SNR=42
GTBY Guantanamo Bay 89.18 294 PFAKE 14 18 00.0 +7.6
GTBY LR LR
comp=Z,2µm,22.0s
F23A Volborg 89.20 330 ⇓P **P 14 17 52.1 -0.1**
baz=89,SNR=17
J28A Allard Ranch, 89.21 326 ⇑P **P 14 17 52.3 0.0**
baz=89,SNR=21
E21A Keefer Ranch, 89.21 331 ⇓P **P 14 17 52.4 +0.2**
baz=89
A15A Johnson Ranch, 89.23 336 ⇓P **P 14 17 51.7 -0.6**
baz=89,SNR=75
BGNE Belgrade 89.28 323 ⇓P **P 14 17 52.1 -0.5**
baz=89,SNR=8.0
SDPT Sand Point 89.34 5 *e*P **P 14 17 52.4 -0.1**
comp=Z,102nm,0.7s
SDPT Sand Point 89.34 5 *e*P **P 14 17 52.4 -0.1**
comp=Z,102nm,0.7s
B16A M & M Farms, S 89.36 335 ⇓P **P 14 17 52.6 -0.4**
baz=89,SNR=8.2
D19A Cripps Ranch, 89.39 332 ⇑P **P 14 17 52.6 -0.5**
baz=89,SNR=21
A14A Double T Ranch 89.47 336 ⇑P **P 14 17 53.0 -0.4**
baz=89,SNR=43
WALA Waterton Lakes 89.56 336 *e*P **P 14 17 53.9 0.0**
comp=Z,0.3nm,0.6s
WALA Waterton Lakes 89.56 336 *e*P **P 14 17 53.9 0.0**
comp=Z,0.3nm,0.6s
G23A Biddle 89.61 329 ⇓P **P 14 17 53.8 -0.4**
baz=89,SNR=15
H24A Dirks Ranch, A 89.63 329 ⇑P **P 14 17 53.6 -0.7**
baz=89,SNR=8.6
E20A Meyer Farm, Mu 89.65 332 ⇓P **P 14 17 54.3 0.0**
baz=89,SNR=9.6
C17A Wharram Farm, 89.69 334 ⇓P **P 14 17 54.1 -0.4**
baz=89,SNR=45
D18A Linhart Farms, 89.71 333 ⇓P **P 14 17 54.7 +0.1**
baz=89,SNR=32
B15A Bradely Ranch, 89.75 335 ⇑P **P 14 17 53.7 -1.0**
baz=89,SNR=64
F21A Absaloka Mine, 89.82 331 ⇑P **P 14 17 54.3 -0.8**
baz=90
K28A Ten Mile Ranch 89.82 326 ⇓P **P 14 17 55.8 +0.6**
baz=90,SNR=55
A13A Flathead Natio 89.83 337 ⇑P **P 14 17 54.7 -0.4**
baz=90
C16A Fuhringer Ranc 89.90 334 ⇓P **P 14 17 54.8 -0.7**
baz=90,SNR=32
L29A Maesberg Ranch 89.91 325 ⇑P **P 14 17 55.3 -0.3**
baz=90,SNR=6.0
RSSD Black Hills 89.91 328 *e*P **P 14 17 55.7 0.0**
RSSD pmax pmax
comp=Z,22nm,0.9s
RSSD Black Hills 89.91 328 *e*P **P 14 17 55.7 0.0**
comp=Z,22nm,0.9s
RSSD Black Hills 89.91 328 *e*P **P 14 17 55.7 0.0**
comp=Z,22nm,0.9s
E19A Rath Farm, Rou 89.94 332 ⇓P **P 14 17 55.3 -0.4**
baz=90,SNR=33
B14A Marquette Ranc 89.95 336 ⇓P **P 14 17 55.2 -0.6**
baz=90,SNR=29
G22A Birney 89.97 330 ⇑P **P 14 17 55.6 -0.3**
baz=90,SNR=7.0
M30A Dale-Ortello V 90.02 324 ⇑P **P 14 17 55.7 -0.4**
baz=90
D17A Six Diamond Ra 90.07 333 ⇑P **P 14 17 55.8 -0.6**
baz=90,SNR=45
H23A Clabaugh Cattl 90.14 329 ⇓P **P 14 17 55.5 -1.2**
baz=90
C15A Salmond Ranch, 90.22 335 ⇑P **P 14 17 56.5 -0.6**
baz=90,SNR=19
A12A Yaak River Ran 90.23 337 ⇓P **P 14 17 56.6 -0.4**
baz=90
K27A Flueckinger Fa 90.23 326 ⇓P **P 14 17 56.8 -0.3**
baz=90,SNR=15
KSU1 Kansas State U 90.23 320 *e*P **P 14 17 56.3 -0.7**
comp=Z,31nm,0.7s
KSU1 LR LR
comp=Z,3µm,20.0s
KSU1 Kansas State U 90.23 320 *e*P **P 14 17 56.3 -0.7**
comp=Z,31nm,0.7s
F20A Billings 90.24 331 ⇓P **P 14 17 56.9 -0.2**
baz=90,SNR=14
E18A Harlowton 90.28 333 ⇓P **P 14 17 57.5 +0.2**
baz=90,SNR=54
B13A Whitefish 90.33 336 ⇓P **P 14 17 57.2 -0.2**
baz=90,SNR=25
G21A Lodge Grass 90.34 330 ⇓P **P 14 17 57.3 -0.3**
baz=90
I24A Kuemmerle Ranc 90.37 328 ⇓P **P 14 17 57.2 -0.6**
baz=90
J25A Sunshine Ranch 90.39 327 ⇑P **P 14 17 57.8 -0.1**
baz=90,SNR=25
M29A Burnside Ranch 90.48 324 ⇑P **P 14 17 58.0 -0.3**
baz=90
D16A Dana Ranch, Ca 90.49 334 ⇑P **P 14 17 57.7 -0.6**
baz=90,SNR=7.6
F19A Roth Farm, Mol 90.51 332 ⇑P **P 14 17 58.5 +0.2**
baz=90,SNR=23
H22A Clearmont 90.51 330 ⇓P **P 14 17 58.2 -0.2**
baz=90,SNR=15
B12A Libby 90.61 337 ⇓P **P 14 17 58.2 -0.5**
baz=90
BLMT Blacktail Moun 90.61 336 *e*P **P 14 17 56.2 -2.7**
comp=Z,21nm,0.8s
YBMT Yellow Bay 90.63 336 *e*P **P 14 17 59.4 +0.5**
comp=Z,37nm,0.9s
YBMT *e*pP **pP 14 18 08.6 -2.5**
YBMT Yellow Bay 90.63 336 *e*P **P 14 17 59.4 +0.5**
comp=Z,37nm,0.9s
YBMT *e*pP **pP 14 18 08.6 -2.5**
I23A Meade Ranch, G 90.65 329 ⇑P **P 14 17 58.3 -0.7**
baz=90
K26A Motz Farm, Whi 90.66 327 ⇓P **P 14 17 58.5 -0.6**
baz=90,SNR=20
E17A Martinsdale 90.72 333 ⇑P **P 14 17 59.5 +0.1**
baz=90,SNR=61
G20A Bridger 90.75 331 ⇑P **P 14 17 59.4 -0.1**
baz=90,SNR=13

L27A **T5 Ranch, Ells** 90.75 326 ⇑P P 14 17 60.0 +0.4
baz=90,SNR=11
F18A **Big Timber** 90.76 332 ⇓P P 14 17 59.6 0.0
baz=90,SNR=32
H21A **Big Horn, Sher** 90.76 330 ⇑P P 14 17 59.4 -0.2
baz=90,SNR=7.6
J24A **Dixon Ranch, L** 90.81 328 ⇓P P 14 17 59.7 -0.1
baz=90,SNR=13
JTMT **Jette** 90.82 336 eP P 14 17 59.8 0.0
comp=Z,28nm,1.0s
JTMT **Jette** 90.82 336 eP P 14 17 59.8 0.0
comp=Z,28nm,1.0s
D15A **Lincoln** 90.82 335 ⇓P P 14 17 59.5 -0.4
baz=90,SNR=25
GCMT **Greycliff** 90.84 332 eP P 14 18 00.6 +0.7
comp=Z,26nm,0.7s
GCMT **Greycliff** 90.84 332 eP P 14 18 00.6 +0.7
comp=Z,26nm,0.7s
M28A **Bar X Bar Ranc** 90.85 325 ⇑P P 14 17 59.8 -0.2
baz=90,SNR=18
BSMT **Bassoo Peak** 90.89 336 eP P 14 17 59.9 -0.4
comp=Z,13nm,0.8s
BSMT **Bassoo Peak** 90.89 336 eP P 14 17 59.9 -0.4
comp=Z,13nm,0.8s
SWMT **Swartz Lake** 90.93 336 eP P 14 18 00.2 -0.1
comp=Z,31nm,1.0s
SWMT **Swartz Lake** 90.93 336 eP P 14 18 00.2 -0.1
comp=Z,31nm,1.0s
N29A **Votaw Ranch, W** 90.94 324 ⇑P P 14 17 59.9 -0.5
baz=91,SNR=7.0
E16A **East Helena** 90.96 334 ⇑P P 14 18 00.5 0.0
baz=91,SNR=37
C13A **Hot Springs** 90.97 336 ⇓P P 14 18 00.2 -0.3
baz=91,SNR=12
SLMT **Seeley Lake** 90.99 335 eP P 14 18 00.3 -0.3
comp=Z,31nm,1.0s
SLMT **Seeley Lake** 90.99 335 eP P 14 18 00.3 -0.3
comp=Z,31nm,1.0s
UALR **University of** 91.02 315 eP P 14 18 00.9 +0.1
comp=Z,13nm,0.7s
UALR **University of** 91.02 315 eP P 14 18 00.9 +0.1
comp=Z,13nm,0.7s
K25A **Mack Ranch, Ha** 91.04 327 ⇑P P 14 18 01.0 +0.1
baz=91,SNR=31
F17A **Fitzpatrick Pl** 91.11 333 ⇑P P 14 18 01.8 +0.6
baz=91,SNR=78
D14A **Greenough** 91.13 335 ⇓P P 14 18 00.8 -0.5
baz=91,SNR=26
I22A **9 Mile Ranch,** 91.13 329 ⇑P P 14 18 01.0 -0.4
baz=91,SNR=16
J23A **Dilts Ranch, B** 91.14 328 ⇑P P 14 18 00.6 -0.8
baz=91
L26A **Underwood Farm** 91.14 326 ⇑P P 14 18 00.5 -0.8
baz=91
O30A **MW Ranch, Wils** 91.15 323 ⇓P P 14 18 00.6 -0.8
baz=91
CHMT **Chamberlain Mo** 91.19 335 eP P 14 18 00.6 -1.0
comp=Z,39nm,1.4s
CHMT **Chamberlain Mo** 91.19 335 eP P 14 18 00.6 -1.0
comp=Z,39nm,1.4s
G18A **Lazy EL Ranch,** 91.19 332 ⇑P P 14 18 01.4 -0.3
baz=91
M27A **Reverse DX Ran** 91.22 325 ⇓P P 14 18 01.6 -0.1
baz=91,SNR=7.8
RLMT **Red Lodge** 91.24 332 eP P 14 18 01.0 -0.9
comp=Z,23nm,1.0s
RLMT epP pP 14 18 11.8 -2.2
RLMT LR LR
comp=Z,5μm,22.0s
RLMT **Red Lodge** 91.24 332 eP P 14 18 01.0 -0.9
comp=Z,23nm,1.0s
RLMT epP pP 14 18 11.9 -2.2
C12B **Naegeli Ranch,** 91.24 337 ⇓P P 14 18 01.4 -0.2
baz=91,SNR=9.5
H20A **Greybull** 91.27 330 ⇓P P 14 18 01.6 -0.3
baz=91,SNR=10
NEW **Newport** 91.28 338 eP P 14 18 01.9 +0.1
comp=Z,24nm,0.7s
NEW LR LR
comp=Z,4μm,19.0s
NEW **Newport** 91.28 338 eP P 14 18 01.9 +0.1
comp=Z,24nm,0.7s
P31A **Stockton** 91.32 322 ⇑P P 14 18 01.8 -0.4
baz=91
K24A **Anderson Ranch** 91.37 328 ⇓P P 14 18 01.7 -0.8
baz=91
C11A **Tepee Creek (N** 91.38 337 ⇓P P 14 18 02.2 -0.2
baz=91
L25A **Engebretsen Ra** 91.44 327 ⇑P P 14 18 02.5 -0.3
baz=91,SNR=10.0
D13A **Huson** 91.44 336 ⇓P P 14 18 02.6 0.0
baz=91,SNR=24
N28A **Pribbeno Ranch** 91.48 324 ⇓P P 14 18 02.7 -0.2
baz=91,SNR=5.4
MSO **Missoula** 91.50 335 eP P 14 18 02.4 -0.5
comp=Z,6.0nm,0.7s
MSO LR LR
comp=Z,4μm,22.0s
MSO **Missoula** 91.50 335 eP P 14 18 02.4 -0.5
comp=Z,6.0nm,0.7s
H19A **Powell** 91.51 331 ⇓P P 14 18 03.3 +0.2
baz=91,SNR=19
OGNE **Ogallala** 91.51 325 eP P 14 18 00.9 -2.2
comp=Z,48nm,0.7s
OGNE LR LR
comp=Z,3μm,20.0s
OGNE **Ogallala** 91.51 325 eP P 14 18 00.9 -2.2
comp=Z,48nm,0.7s
J22A **Midwest** 91.52 329 ⇑P P 14 18 02.0 -1.2
baz=91,SNR=22
I21A **Big Trails, Te** 91.53 330 ⇓P P 14 18 02.5 -0.8
baz=91,SNR=26
O29A **4D Ranch, Culb** 91.56 324 ⇓P P 14 18 02.6 -0.7
baz=91
F16A **Kennard Place,** 91.58 333 ⇓P P 14 18 03.4 0.0
baz=91,SNR=56
M26A **McRoberts Ranc** 91.62 326 ⇑P P 14 18 03.7 +0.1
baz=91,SNR=9.3
G17A **Pierce Place,** 91.64 333 ⇓P P 14 18 04.2 +0.5
baz=91,SNR=25
K23A **Bowen Ranch, D** 91.69 328 ⇓P P 14 18 02.9 -1.0
baz=91,SNR=13
BOZ **Bozeman (W)** 91.69 333 eP P 14 18 01.5 -2.4
BOZ pmax pmax
comp=Z,26nm,0.7s
BOZ MLR MLR
comp=Z,4μm,20.0s
BOZ **Bozeman (W)** 91.69 333 eP P 14 18 01.5 -2.4
comp=Z,26nm,0.7s
BOZ LR LR
comp=Z,4μm,20.0s
BOZ **Bozeman (W)** 91.69 333 eP P 14 18 01.5 -2.4
comp=Z,26nm,0.7s
DAV **Davao City (W)** 91.71 80 PFAKE 14 18 20.0 +16
DAV LR LR
comp=Z,1μm,20.0s
Q31A **Ellis** 91.72 322 ⇓P P 14 18 03.5 -0.5
baz=91
P30A **Selden** 91.73 323 ⇑P P 14 18 03.4 -0.7
baz=91
VBMS **Vicksburg** 91.74 312 PFAKE 14 18 20.0 +16
VBMS LR LR
comp=Z,3μm,20.0s
I20A **Worland** 91.77 330 ⇓P P 14 18 04.1 -0.1
baz=91,SNR=18
H18A **Shoshone NF, C** 91.77 332 ⇑P P 14 18 04.3 -0.1
baz=91,SNR=28
F15A **Butte** 91.84 334 ⇓P P 14 18 04.5 -0.2
baz=92,SNR=47
LRM **Limekiln Ridge** 91.84 334 eP P 14 18 02.9 -1.8
comp=Z,165nm,0.8s
LRM **Limekiln Ridge** 91.84 334 eP P 14 18 02.9 -1.8
comp=Z,165nm,0.8s
N27A **Anderson Farm,** 91.86 325 ⇓P P 14 18 04.5 -0.2
baz=92,SNR=8.9
DPW **Davenport** 91.96 338 P P 14 18 05.6 +0.6
DPW **Davenport** 91.96 338 P P 14 18 05.6 +0.6
DPW **Davenport** 91.96 338 P P 14 18 05.6 +0.6
L24A **Wheatland** 91.96 327 ⇓P P 14 18 05.1 -0.2
baz=92
J21A **Lysite** 91.98 329 ⇑P P 14 18 04.5 -0.8
baz=92,SNR=18
MTDJ **Mount Denham** 92.03 294 PFAKE 14 18 20.0 +14
MTDJ LR LR
comp=Z,1μm,21.0s
P29A **Atwood** 92.03 323 ⇑P P 14 18 04.8 -0.7
baz=92
I19A **Meeteetse** 92.04 331 ⇑P P 14 18 05.8 +0.1
baz=92,SNR=30
M25A **Palm-Egli Farm** 92.06 326 ⇑P P 14 18 05.4 -0.3
baz=92,SNR=18
PAF **Port-aux-Franc** 92.11 154 PFAKE 14 18 20.0 +15
PAF LR LR
comp=Z,3μm,19.0s
TUL1 **Tulsa** 92.15 318 ⇑P P 14 18 05.5 -0.5
baz=92,SNR=6.1
LKWY **Lake** 92.15 332 eP P 14 18 06.8 +0.6
LKWY pmax pmax
comp=Z,31nm,1.1s
LKWY MLR MLR
comp=Z,9μm,19.0s
LKWY **Lake** 92.15 332 eP P 14 18 06.8 +0.6
comp=Z,31nm,1.1s
LKWY LR LR
comp=Z,9μm,19.0s
LKWY **Lake** 92.15 332 eP P 14 18 06.8 +0.6
comp=Z,31nm,1.1s
N26A **Koester Ranch,** 92.16 325 ⇓P P 14 18 05.5 -0.6
baz=92
K22A **Casper** 92.16 329 ⇑P P 14 18 05.4 -0.8
baz=92,SNR=27
F14A **Wisdom** 92.18 334 ⇑P P 14 18 05.9 -0.3
baz=92,SNR=15
L23A **Garrett** 92.24 328 ⇓P P 14 18 05.5 -1.1
baz=92,SNR=30
DLMT **Dillon** 92.29 334 eP P 14 18 06.8 +0.1
comp=Z,29nm,1.0s
DLMT **Dillon** 92.29 334 eP P 14 18 06.8 +0.1
comp=Z,29nm,1.0s
O27A **Beecher Island** 92.31 325 ⇑P P 14 18 06.7 -0.1
baz=92,SNR=22
R31A **Burdett** 92.34 322 ⇓P P 14 18 06.1 -0.8
baz=92,SNR=14
H16A **Russell Place,** 92.35 333 ⇑P P 14 18 07.8 +0.7
baz=92,SNR=30
H17A **Grant Village** 92.36 332 ⇑P P 14 18 09.2 +2.1
baz=92
M24A **Cheyenne** 92.38 327 ⇓P P 14 18 07.0 -0.2
baz=92,SNR=12
E12A **Beaver Dam Sad** 92.41 336 ⇑P P 14 18 06.2 -1.0
baz=92,SNR=24
YFT **Old Faithful** 92.41 332 eP P 14 18 07.1 -0.3
comp=Z,32nm,1.0s
YFT **Old Faithful** 92.41 332 eP P 14 18 07.1 -0.3
comp=Z,32nm,1.0s
P28A **Saint Francis** 92.45 324 ⇑P P 14 18 06.8 -0.6
baz=92
SAW **Saint Andrews** 92.47 339 P P 14 18 07.8 +0.5
SAW **Saint Andrews** 92.47 339 P P 14 18 07.8 +0.5
OD2 **Odessa Site #2** 92.54 338 P P 14 18 08.1 +0.5
OD2 **Odessa Site #2** 92.54 338 P P 14 18 08.1 +0.5
N25A **Grover** 92.57 326 ⇓P P 14 18 08.1 0.0
baz=92
L22A **Ellis Ranch, M** 92.63 328 ⇓P P 14 18 08.1 -0.3
baz=92,SNR=23
I18A **Diamond G Ranc** 92.65 331 ⇓P P 14 18 08.6 +0.1
baz=92
O26A **Horse Wrangler** 92.66 325 ⇓P P 14 18 08.1 -0.4
baz=92,SNR=14
SPB **Sao Paulo** 92.67 243 PFAKE 14 18 20.0 +12
SPB LR LR
comp=Z,3μm,22.0s
J19A **Crowheart** 92.71 330 ⇓P P 14 18 08.1 -0.6
baz=92,SNR=22
PGC **Sidney** 92.71 342 eP P 14 18 07.5 -0.8
comp=Z,1.2nm,0.8s
PGC **Sidney** 92.71 342 eP P 14 18 07.5 -0.8
comp=Z,1.2nm,0.8s
R30A **Dighton** 92.72 322 ⇑P P 14 18 08.1 -0.6
baz=92,SNR=5.3
JCW **Jim Creek** 92.73 341 P P 14 18 08.0 -0.6
JCW **Jim Creek** 92.73 341 P P 14 18 07.9 -0.6
I17A **Pilgrim Ck.** 92.76 332 ⇑P P 14 18 09.9 +1.0
baz=92
M23A **Laramie** 92.78 327 ⇓P P 14 18 08.8 -0.3
baz=92,SNR=18
PHWY **Pilot Hill** 92.79 327 eP P 14 18 09.0 -0.3
comp=Z,56nm,0.8s
PHWY **Pilot Hill** 92.79 327 eP P 14 18 09.0 -0.3
comp=Z,56nm,0.8s
S31A **Mullinville** 92.83 321 ⇑P P 14 18 08.6 -0.6
baz=92
MCMT **McKenzie Canyo** 92.84 334 eP P 14 18 09.8 +0.4
comp=Z,9.7nm,0.7s
MCMT **McKenzie Canyo** 92.84 334 eP P 14 18 09.8 +0.4
comp=Z,9.7nm,0.7s
P27A **Ficken Ranch,** 92.86 324 ⇓P P 14 18 09.1 -0.3
baz=92,SNR=14
Q28A **Sharon Springs** 92.88 324 ⇓P P 14 18 09.2 -0.3
baz=93,SNR=6.2
N24A **Carr** 92.92 326 ⇑P P 14 18 09.8 +0.1
baz=93,SNR=10.0
IMW **Indian Meadow** 92.92 332 eP P 14 18 09.3 -0.5
comp=Z,21nm,0.9s
IMW **Indian Meadow** 92.92 332 eP P 14 18 09.3 -0.5
comp=Z,21nm,0.9s
K20A **Yellowstone Ra** 92.92 330 ⇓P P 14 18 08.7 -1.0
baz=93
MOOW **Moose Ponds** 92.97 332 eP P 14 18 09.6 -0.3
comp=Z,14nm,0.8s
MOOW **Moose Ponds** 92.97 332 eP P 14 18 09.6 -0.3
comp=Z,14nm,0.8s
K19A **Absolon Red Bu** 92.99 330 ⇑P P 14 18 09.0 -1.0
baz=93,SNR=11
LOHW **Long Hollow** 93.03 332 eP P 14 18 08.3 -1.9
comp=Z,14nm,0.9s
LOHW **Long Hollow** 93.03 332 eP P 14 18 08.3 -1.9
comp=Z,13nm,0.9s
R29A **Marienthal** 93.04 323 ⇑P P 14 18 09.6 -0.6
baz=93
L21A **Rawlins** 93.08 329 ⇓P P 14 18 09.5 -1.0
baz=93,SNR=16
O25A **Wiggins** 93.14 326 ⇓P P 14 18 10.1 -0.6
baz=93
I16A **Newdale** 93.15 332 ⇑P P 14 18 12.0 +1.3
baz=93,SNR=13
M22A **Cedar Creek Ra** 93.21 328 ⇑P P 14 18 10.9 -0.2
baz=93,SNR=12
P26A **Davis Ranch, A** 93.22 325 ⇓P P 14 18 10.8 -0.3
baz=93,SNR=19
TPAW **Teton Pass** 93.27 332 eP P 14 18 10.1 -1.3
comp=Z,22nm,0.7s
TPAW **Teton Pass** 93.27 332 eP P 14 18 10.1 -1.3
comp=Z,22nm,0.7s
DCID1 **Drake Creek** 93.27 332 eP P 14 18 11.6 +0.3
comp=Z,45nm,0.8s
DCID1 **Drake Creek** 93.27 332 eP P 14 18 11.6 +0.3
comp=Z,45nm,0.8s
S30A **Montezuma** 93.31 322 ⇑P P 14 18 10.8 -0.6
baz=93
KSCO **Kaye Shedlock'** 93.31 324 ⇑P P 14 18 11.2 -0.3
baz=93
T31A **Randall Ranch,** 93.32 321 ⇓P P 14 18 11.1 -0.3
baz=93
BW06 **Boulder Array** 93.33 330 eP P 14 18 09.2 -2.4
comp=Z,8.3nm,0.8s
BW06 LR LR
comp=Z,4μm,22.0s
BW06 **Boulder Array** 93.33 330 eP P 14 18 09.2 -2.4
comp=Z,8.3nm,0.8s
PDAR **Pinedale Array** 93.33 330 P P 14 18 11.2 -0.5
PDAR **Pinedale Array** 93.33 330 P P 14 18 11.2 -0.5
comp=Z,7.8nm,0.7s,baz=61,slow=4.2,SNR=39
PDAR LR LR 15 03 48.8
comp=Z,3μm,19.7s,baz=36,slow=38
PDAR **Pinedale Array** 93.33 330 P P 14 18 11.1 -0.5
N23A **Red Feather La** 93.34 327 ⇑P P 14 18 11.4 -0.4
baz=93,SNR=21
M21A **Separation Pea** 93.38 328 ⇑P P 14 18 11.3 -0.6
baz=93
R28A **Tribune** 93.44 323 ⇑P P 14 18 11.8 -0.3
baz=93
OBC **Olympics--Boni** 93.44 342 P P 14 18 12.9 +1.1
OBC **Olympics--Boni** 93.44 342 P P 14 18 12.9 +1.1
L20A **Wamsutter** 93.46 329 ⇑P P 14 18 11.7 -0.5
baz=93,SNR=14
RRI2 **Red Ridge** 93.53 332 eP P 14 18 13.7 +1.1
comp=Z,45nm,0.7s
RRI2 **Red Ridge** 93.53 332 eP P 14 18 13.7 +1.1
comp=Z,45nm,0.7s
O24A **Longmont** 93.57 326 ⇓P P 14 18 11.9 -0.8
baz=93
N22A **Wattenberg Ran** 93.64 327 ⇓P P 14 18 12.9 -0.2
baz=93,SNR=7.0
P25A **Willow Gulch B** 93.64 325 ⇑P P 14 18 12.8 -0.3
baz=93,SNR=13
H2OWA **Water** 93.65 338 P P 14 18 14.3 +1.6
H2OWA **Water** 93.65 338 P P 14 18 14.3 +1.6
S29A **Ulysses** 93.65 322 ⇓P P 14 18 12.5 -0.5
baz=93
HAWA **Hanford** 93.69 338 eP P 14 18 12.0 -0.9
comp=Z,26nm,0.8s
HAWA LR LR
comp=Z,5μm,19.0s
HAWA **Hanford** 93.69 338 eP P 14 18 12.0 -0.9
comp=Z,26nm,0.8s
NAC **Naches** 93.75 339 P P 14 18 13.4 +0.2
NAC **Naches** 93.75 339 P P 14 18 13.4 +0.2
T30A **Plains** 93.79 321 ⇓P P 14 18 13.2 -0.5
baz=94
H12A **Diamond D Ranc** 93.80 335 ⇑P P 14 18 13.1 -0.6
baz=93,SNR=9.5
Q26A **Hugo** 93.80 324 ⇓P P 14 18 13.3 -0.5
baz=94,SNR=5.6
M20A **Sweetwater, Wa** 93.82 329 ⇓P P 14 18 13.5 -0.4
baz=94,SNR=26
I14A **Mackay** 93.83 333 ⇓P P 14 18 14.5 +0.6
baz=94,SNR=73
O23A **Lake Granby, G** 93.88 327 ⇓P P 14 18 13.9 -0.4
baz=94,SNR=9.9
KAPI **Kappang** 93.90 93 PFAKE 14 18 30.0 +16
KAPI LR LR
comp=Z,2μm,22.0s
R27A **Eads** 93.96 324 ⇓P P 14 18 14.7 +0.2
baz=94
U31A **Nine Bar Ranch** 93.97 321 ⇓P P 14 18 14.5 0.0
baz=94
NLWA **Neilton Lookou** 93.98 342 eP P 14 18 14.3 0.0
comp=Z,16nm,0.9s
NLWA LR LR
comp=Z,5μm,22.0s
NLWA **Neilton Lookou** 93.98 342 eP P 14 18 14.3 0.0
comp=Z,16nm,0.9s
P24A **Kohler Place,** 93.98 326 ⇓P P 14 18 14.0 -0.7
baz=94
WPW **White Pass** 93.99 340 P P 14 18 15.1 +0.7
WPW **White Pass** 93.99 340 P P 14 18 15.1 +0.7
LON **Longmire** 94.02 340 eP P 14 18 13.9 -0.6
LON pmax pmax
comp=Z,6.0nm,0.8s
LON **Longmire** 94.02 340 eP P 14 18 13.9 -0.6
comp=Z,6.3nm,0.8s
LON **Longmire** 94.02 340 eP P 14 18 13.9 -0.6
comp=Z,6.2nm,0.8s
S28A **Manter** 94.06 323 ⇓P P 14 18 13.8 -1.2
baz=94
TRW **Toppenish Ridg** 94.08 339 P P 14 18 15.7 +1.0
TRW **Toppenish Ridg** 94.08 339 P P 14 18 15.7 +1.0
ISCO **Idaho Springs** 94.08 326 eP P 14 18 14.4 -0.8
ISCO pmax pmax
comp=Z,42nm,0.9s
ISCO MLR MLR
comp=Z,3μm,20.0s
ISCO **Idaho Springs** 94.08 326 eP P 14 18 14.4 -0.8
comp=Z,42nm,0.9s
ISCO LR LR
comp=Z,3μm,20.0s
ISCO **Idaho Springs** 94.08 326 eP P 14 18 14.4 -0.8
comp=Z,42nm,0.9s
T29A **Hugoton** 94.10 322 ⇑P P 14 18 14.8 -0.3
baz=94
N21A **Black Mountain** 94.14 328 ⇓P P 14 18 14.6 -0.8
baz=94,SNR=21
Q25A **Bedland, Calha** 94.16 325 ⇑P P 14 18 14.9 -0.6
baz=94
O22A **Kremmling** 94.20 327 ⇑P P 14 18 14.9 -0.9
baz=94,SNR=5.7
M19A **Rock Springs** 94.22 330 ⇓P P 14 18 15.0 -0.7
baz=94,SNR=14
L18A **Fontenelle, Gr** 94.23 330 ⇑P P 14 18 14.7 -1.1
baz=94
U30A **WK&E Inc. Balk** 94.26 321 ⇓P P 14 18 15.2 -0.6
baz=94
R26A **Arlington** 94.26 324 ⇑P P 14 18 15.3 -0.6
baz=94,SNR=35
BMO **Blue Mountains** 94.36 336 eP P 14 18 14.5 -1.7
comp=Z,37nm,0.7s
BMO LR LR
comp=Z,5μm,22.0s
BMO **Blue Mountains** 94.36 336 eP P 14 18 14.5 -1.7
comp=Z,37nm,0.7s
N20A **Spence Gulch,** 94.40 329 ⇓P P 14 18 16.1 -0.5
baz=94,SNR=24
V31A **Spring Creek L** 94.42 320 ⇑P P 14 18 15.4 -1.1
baz=94
S27A **Las Animas** 94.48 323 ⇑P P 14 18 16.6 -0.4
baz=94
HLID **Hailey** 94.50 334 eP P 14 18 15.9 -1.0
comp=Z,4.7nm,0.8s
HLID LR LR
comp=Z,5μm,19.0s
HLID **Hailey** 94.50 334 eP P 14 18 15.9 -1.0
comp=Z,4.7nm,0.8s
Q24A **Divide** 94.54 326 ⇓P P 14 18 16.2 -1.2
baz=94,SNR=5.6
T28A **Walsh** 94.54 322 ⇓P P 14 18 16.9 -0.2
baz=94
O21A **Pagoda** 94.56 328 ⇑P P 14 18 16.5 -0.9
baz=94
U29A **Oasis Ranch, S** 94.64 322 ⇑P P 14 18 16.8 -0.8
baz=94
WMOK **Wichita Mounta** 94.64 319 eP P 14 18 15.8 -1.8
WMOK pmax pmax
comp=Z,21nm,0.8s
WMOK MLR MLR
comp=Z,2μm,19.0s
WMOK **Wichita Mounta** 94.64 319 eP P 14 18 15.8 -1.8
comp=Z,21nm,0.8s
WMOK LR LR
comp=Z,2μm,19.0s
WMOK **Wichita Mounta** 94.64 319 eP P 14 18 15.8 -1.8
comp=Z,21nm,0.8s
P22A **Eagle** 94.76 327 ⇑P P 14 18 17.0 -1.2
baz=94
R25A **Fountain Ranch** 94.78 324 ⇑P P 14 18 17.7 -0.6
baz=94,SNR=11
S26A **Kim** 94.81 324 ⇓P P 14 18 17.7 -0.7
baz=94,SNR=7.9
M17A **Scullys Gap (B** 94.86 330 ⇓P P 14 18 17.3 -1.3
baz=94
V30A **Spur Ranch, Mi** 94.87 321 ⇑P P 14 18 17.7 -0.9
baz=95
T27A **Campo** 94.89 323 ⇑P P 14 18 17.9 -0.9
baz=95
Q23A **Hartsel** 94.90 326 ⇑P P 14 18 17.9 -1.1
baz=95
W31A **Holland Ranch,** 94.92 320 ⇑P P 14 18 18.4 -0.5
baz=95
O20A **White River Ci** 94.97 328 ⇑P P 14 18 18.8 -0.3
baz=95
VTHM **Trough** 95.09 339 P P 14 18 20.4 +1.1
VTHM **Trough** 95.09 339 P P 14 18 20.5 +1.1
R24A **Sanders Place,** 95.11 325 ⇑P P 14 18 19.3 -0.6
baz=95,SNR=8.5
HWUT **Hardware Ranch** 95.11 331 eP P 14 18 19.1 -0.6
comp=Z,29nm,0.9s
HWUT LR LR
comp=Z,5μm,22.0s
HWUT **Hardware Ranch** 95.11 331 eP P 14 18 19.1 -0.6
comp=Z,29nm,0.9s
P21A **Newcastle** 95.12 327 ⇓P P 14 18 19.4 -0.5
baz=95
MFID **Camas Ranch** 95.13 335 eP P 14 18 19.6 -0.2
comp=Z,25nm,1.0s
MFID epP pP 14 18 29.8 -2.2
MFID **Camas Ranch** 95.13 335 eP P 14 18 19.5 -0.2
comp=Z,25nm,1.0s
MFID epP pP 14 18 29.8 -2.2
MFID **Camas Ranch** 95.13 335 ⇓P P 14 18 19.3 -0.5
baz=95
U28A **Mallet** 95.17 322 ⇓P P 14 18 19.2 -0.8
baz=95,SNR=7.3
O19A **Miners Draw (B** 95.21 329 ⇑P P 14 18 19.6 -0.7
baz=95
V29A **Stinnett** 95.21 321 ⇓P P 14 18 19.5 -0.7
baz=95
T26A **Comanche Natio** 95.22 323 ⇑P P 14 18 19.8 -0.6
baz=95,SNR=5.8
S25A **Robets Cordova** 95.24 324 ⇑P P 14 18 19.5 -0.9
baz=95,SNR=34
W30A **Crocket Farms** 95.26 320 ⇓P P 14 18 19.9 -0.5
baz=95
X31A **McDonald Ranch** 95.36 320 ⇓P P 14 18 20.4 -0.5
baz=95

Q22A	Crested Butte,		95.42 327	⇑P		P	14 18 20.8	-0.6	
	baz=95								
HVU	Hansel Valley		95.43 332	eP		P	14 18 19.5	-1.7	
HVU					pmax	pmax			
	comp=Z,25nm,1.1s								
HVU	Hansel Valley		95.43 332	eP		P	14 18 19.5	-1.7	
	comp=Z,25nm,1.1s								
HVU	Hansel Valley		95.43 332	eP		P	14 18 19.5	-1.7	
	comp=Z,25nm,1.1s								
U27A	Thompson Grove		95.44 323	⇑P		P	14 18 20.6	-0.7	
	baz=95								
R23A	Moffat		95.47 325	⇑P		P	14 18 20.7	-0.9	
	baz=95,SNR=5.9								
P20A	De Beque		95.55 328	⇓P		P	14 18 20.6	-1.2	
	baz=95								
Y32A	R-V Farms, Ver		95.56 319	⇑P		P	14 18 21.1	-0.6	
	baz=95								
S24A	Houchin Ranch,		95.63 325	⇓P		P	14 18 21.6	-0.7	
	baz=95,SNR=15								
T25A	Trinidad		95.65 324	⇑P		P	14 18 21.9	-0.5	
	baz=95,SNR=18								
V28A	Channing		95.66 322	⇑P		P	14 18 21.5	-0.9	
	baz=95								
P19A	Cripple Cowboy		95.70 328	⇓P		P	14 18 21.8	-0.8	
	baz=95								
VIPM	Ingram Point		95.72 338	P		P	14 18 24.0	+1.6	
VIPM	Ingram Point		95.72 338	P		P	14 18 24.0	+1.6	
VIPM	Ingram Point		95.72 338	P		P	14 18 24.0	+1.6	
Q21A	Lamborn Mesa,		95.74 327	⇑P		P	14 18 22.4	-0.3	
	baz=95								
W29A	Amraillo		95.86 321	⇑P		P	14 18 22.4	-0.8	
	baz=96								
R22A	Saguache, Gunn		95.87 326	⇓P		P	14 18 23.1	-0.4	
	baz=96,SNR=9.9								
U26A	Atchley Ranch,		95.92 323	⇑P		P	14 18 22.5	-1.1	
	baz=96,SNR=12								
S23A	Nye Farm, Mont		95.95 325	⇓P		P	14 18 22.1	-1.7	
	baz=96								
Q20A	Ridgley Place,		95.96 328	⇑P		P	14 18 22.6	-1.1	
	baz=96								
V27A	Dan Oppiter Fa		95.97 322	⇑P		P	14 18 22.5	-1.2	
	baz=96								
WHTX	Lake Whitney		95.97 316	⇑P		P	14 18 23.3	-0.3	
	baz=96								
X30A	Coker Ranch, T		95.98 320	⇓P		P	14 18 23.3	-0.4	
	baz=96,SNR=19								
DAU	Daniels Canyon		95.99 330	eP		P	14 18 22.8	-1.2	
DAU				e*PP		pP	14 18 34.7	-1.5	
DAU					pmax	pmax			
	comp=Z,9.0nm,0.9s								
DAU	Daniels Canyon		95.99 330	eP		P	14 18 22.8	-1.2	
	comp=Z,9.0nm,0.9s								
DAU				epP		pP	14 18 34.7	-1.5	
DAU	Daniels Canyon		95.99 330	eP		P	14 18 22.8	-1.2	
	comp=Z,9.0nm,0.9s								
DAU				epP		pP	14 18 34.7	-1.5	
Y31A	Rekieta Farm,		96.03 319	⇑P		P	14 18 23.5	-0.4	
	baz=96								
W28A	Vega		96.04 321	⇓P		P	14 18 23.2	-0.9	
	baz=96								
AMTX	Amarillo		96.06 321	PFAKE			14 18 40.0	+16	
AMTX				LR		LR			
	comp=Z,4µm,20.0s								
Z32A	Haskell		96.11 318	⇓P		P	14 18 23.6	-0.6	
	baz=96,SNR=10.0								
R21A	Cimarron		96.11 327	⇑P		P	14 18 23.2	-1.3	
	baz=96								
U25A	Circle Dot Ran		96.24 324	⇓P		P	14 18 24.5	-0.5	
	baz=96,SNR=22								
S22A	4UR Ranch, Cre		96.30 326	⇑P		P	14 18 24.5	-0.9	
	baz=96,SNR=20								
V26A	Tequesquite Ra		96.41 323	⇑P		P	14 18 24.4	-1.3	
	baz=96								
X29A	Tulia		96.41 321	⇑P		P	14 18 25.0	-0.7	
	baz=96								
Y30A	Stafford Cattl		96.43 320	⇑P		P	14 18 25.3	-0.5	
	baz=96								
SAML	Samuel		96.46 264	eP		P	14 18 26.2	+0.2	
SAML				LR		LR			
	comp=Z,9.3nm,1.4s								
	comp=Z,2µm,22.0s								
SAML	Samuel		96.46 264	eP		P	14 18 26.2	+0.2	
	comp=Z,9.3nm,1.4s								
Z31A	Sharp Cattle R		96.46 319	⇓P		P	14 18 25.1	-0.8	
	baz=96,SNR=5.6								
T23A	Casias Ranch,		96.50 325	⇑P		P	14 18 25.8	-0.5	
	baz=96,SNR=13								
X28A	Dimmitt		96.61 321	⇓P		P	14 18 26.2	-0.4	
	baz=96								
W27A	Bowe Ranch, En		96.63 322	⇑P		P	14 18 25.9	-0.8	
	baz=96,SNR=7.1								
R20A	Redvale		96.63 327	⇑P		P	14 18 26.4	-0.4	
	baz=96,SNR=9.2								
U24A	Moreno Valley		96.65 324	⇑P		P	14 18 27.1	+0.1	
	baz=96								
PV04	Paradox Valley		96.69 328	eP		P	14 18 26.2	-0.8	
PV04				epP		pP	14 18 35.8	-3.4	
PV04	Paradox Valley		96.69 328	eP		P	14 18 26.2	-0.8	
PV04				epP		pP	14 18 35.8	-3.4	
ABTX	Abilene, Hawle		96.71 318	⇑P		P	14 18 27.0	0.0	
	baz=96								
V25A	Rancho No Teng		96.78 323	⇑P		P	14 18 27.1	-0.4	
	baz=96,SNR=5.8								
SRU	San Rafael		96.79 329	⇓P		P	14 18 26.5	-1.0	
	baz=96								
DUG	Dugway		96.80 331	eP		P	14 18 24.5	-2.9	
DUG					pmax	pmax			
	comp=Z,13nm,0.9s								
DUG				MLR		MLR			
	comp=Z,4µm,22.0s								
DUG	Dugway		96.80 331	eP		P	14 18 24.5	-2.9	
	comp=Z,13nm,0.9s								
DUG				LR		LR			
	comp=Z,4µm,22.0s								
S21A	Coal Bank Pass		96.80 326	⇑P		P	14 18 26.9	-0.8	
	baz=96,SNR=8.6								
Y29A	Porterfield Fa		96.85 320	⇓P		P	14 18 27.5	-0.2	
	baz=96								
S20A	Disappointment		96.92 327	⇑P		P	14 18 27.3	-0.8	
	baz=97								
T22A	Edith		96.93 326	⇓P		P	14 18 27.5	-0.7	
	baz=97,SNR=14								
WVOR	Wild Horse Val		96.95 336	eP		P	14 18 26.6	-1.5	
WVOR					pmax	pmax			
	comp=Z,14nm,1.3s								
WVOR				MLR		MLR			
	comp=Z,4µm,21.0s								
WVOR	Wild Horse Val		96.95 336	eP		P	14 18 26.6	-1.5	
	comp=Z,14nm,1.3s								
WVOR				LR		LR			
	comp=Z,4µm,21.0s								
WVOR	Wild Horse Val		96.95 336	eP		P	14 18 26.6	-1.5	
	comp=Z,14nm,1.3s								
W26A	Owens Ranch, T		96.96 322	⇑P		P	14 18 26.9	-1.3	
	baz=97								
X27A	F and S Farms,		96.97 322	⇑P		P	14 18 27.7	-0.6	
	baz=97								
Z30A	Sanderson Ranc		97.01 319	⇑P		P	14 18 27.2	-1.2	
	baz=97								
131A	Roby		97.08 319	⇓P		P	14 18 28.5	-0.2	
	baz=97								
Y28A	McKinney Farm,		97.11 321	⇓P		P	14 18 28.1	-0.8	
	baz=97,SNR=8.4								
U23A	El Rito		97.15 325	⇑P		P	14 18 28.9	-0.3	
	baz=97								
V24A	Rampart Ranch,		97.19 324	⇓P		P	14 18 28.7	-0.7	
	baz=97,SNR=9.7								
W25A	X Bar L Ranch,		97.20 323	⇓P		P	14 18 28.4	-1.0	
	baz=97,SNR=9.8								
Q16A	Castle Valley		97.22 329	⇑P		P	14 18 28.7	-0.8	
	baz=97								
T21A	Navajo Lake		97.23 326	⇑P		P	14 18 28.7	-0.8	
	baz=97								
ELK	Elko		97.25 333	eP		Pdif	14 18 30.0	+0.4	
	comp=Z,8.3nm,0.9s								
ELK				epP		pP	14 18 39.5	-2.3	
ELK	Elko		97.25 333	eP		Pdif	14 18 30.0	+0.3	
	comp=Z,8.3nm,0.9s								
ELK				epP		pP	14 18 39.5	-2.3	
232A	Coleman		97.27 318	⇑P		Pdif	14 18 29.8	+0.1	
	baz=97								
Z29A	Hungry Hill Ra		97.33 320	⇑P		P	14 18 29.6	-0.3	
	baz=97								
MSTX	Muleshoe		97.34 321	⇓P		P	14 18 29.3	-0.7	
	baz=97								
X26A	CR and CF Fran		97.41 322	⇑P		P	14 18 29.2	-1.1	
	baz=97,SNR=8.6								
U22A	Llaves		97.42 325	⇓P		Pdif	14 18 30.3	-0.2	
	baz=97								
130A	Snyder		97.45 319	⇓P		P	14 18 30.2	-0.2	
	baz=97,SNR=5.6								
Y27A	Causey		97.61 321	⇑P		P	14 18 30.6	-0.6	
	baz=97								
231A	Bronte		97.61 318	⇓P		Pdif	14 18 31.1	0.0	
	baz=97								
V23A	Ortiz Mt. (NFS		97.62 324	⇑P		P	14 18 30.0	-1.3	
	baz=97								
Z28A	Tucker Farm, M		97.67 320	⇓P		P	14 18 30.9	-0.5	
	baz=97								
W24A	Lazy 6 Ranch,		97.67 323	⇓P		P	14 18 30.5	-1.1	
	baz=97,SNR=5.4								
332A	Millersview		97.71 317	⇓P		Pdif	14 18 31.9	+0.2	
	baz=97								
U21A	Nageezi		97.75 326	⇓P		P	14 18 31.1	-0.9	
	baz=97,SNR=5.8								
V22A	San Miguel Ran		97.82 325	⇓P		Pdif	14 18 32.4	+0.1	
	baz=98								
X25A	Clemmons Ranch		97.85 323	⇑P		P	14 18 31.8	-0.5	
	baz=98,SNR=13								
129A	Stewart Farms,		97.91 320	⇑P		P	14 18 31.7	-0.8	
	baz=98								
Y26A	Elida		97.91 322	⇓P		P	14 18 31.9	-0.6	
	baz=98								
MOD	Modoc		97.97 337	eP		Pdif	14 18 33.0	+0.3	
	comp=Z,14nm,0.9s								
MOD				epP		pP	14 18 42.7	-2.2	
MOD	Modoc		97.97 337	eP		Pdif	14 18 33.0	+0.3	
	comp=Z,14nm,0.9s								
MOD				epP		pP	14 18 42.7	-2.2	
MSU	Marysvale		97.98 330	eP		Pdif	14 18 32.8	-0.1	
MSU					pmax	pmax			
	comp=Z,7.0nm,0.7s								
MSU	Marysvale		97.98 330	eP		Pdif	14 18 32.8	-0.2	
	comp=Z,7.4nm,0.7s								
MSU	Marysvale		97.98 330	eP		Pdif	14 18 32.8	-0.1	
	comp=Z,7.4nm,0.7s								
MVU	Marysvale		98.00 330	eP		P	14 18 31.5	-1.5	
	comp=Z,6.4nm,0.8s								
MVU				epP		pP	14 18 42.0	-3.3	
MVU					LR	LR			
	comp=Z,4µm,20.0s								
MVU	Marysvale		98.00 330	eP		P	14 18 31.5	-1.5	
	comp=Z,6.4nm,0.8s								
MVU				epP		pP	14 18 42.0	-3.3	
W23A	Werner Place,		98.07 324	⇓P		P	14 18 31.5	-1.8	
	baz=98								
230A	Sterling City		98.08 319	⇑P		P	14 18 32.3	-0.9	
	baz=98,SNR=5.2								
Z27A	Tatum		98.08 321	⇓P		P	14 18 32.1	-1.2	
	baz=98								
432A	Menard		98.12 317	⇑P		P	14 18 33.2	-0.2	
	baz=98								
331A	San Angelo		98.14 318	⇑P		Pdif	14 18 33.4	-0.2	
	baz=98								
U20A	Newcomb		98.19 326	⇓P		P	14 18 32.5	-1.3	
	baz=98								
X24A	Lazy VL Ranch,		98.20 323	⇑P		P	14 18 32.9	-1.1	
	baz=98								
128A	Castleberry Fa		98.24 320	⇓P		P	14 18 33.1	-0.9	
	baz=98								
BMN	Battle Mountai		98.25 334	eP		Pdif	14 18 34.3	+0.3	
BMN					pmax	pmax			
	comp=Z,5.0nm,0.7s								
BMN					MLR	MLR			
	comp=Z,4µm,20.0s								
BMN	Battle Mountai		98.25 334	eP		Pdif	14 18 34.2	+0.2	
	comp=Z,4.7nm,0.7s								
BMN					LR	LR			
	comp=Z,4µm,20.0s								
BMN	Battle Mountai		98.25 334	eP		Pdif	14 18 34.2	+0.2	
	comp=Z,4.7nm,0.7s								
V21A	Milan		98.25 325	⇓P		P	14 18 32.9	-1.2	
	baz=98								
Y25A	Mesa, Roswell		98.35 322	⇑P		P	14 18 33.8	-0.8	
	baz=98								
229A	Bryant Ranch,		98.39 319	⇓P		P	14 18 33.9	-0.8	
	baz=98								
ANMO	Albuquerque		98.39 324	eP		P	14 18 33.7	-1.1	
	comp=Z,2.9nm,0.8s								
ANMO					LR	LR			
	comp=Z,3µm,20.0s								
ANMO	Albuquerque		98.39 324	eP		P	14 18 33.7	-1.1	
	comp=Z,2.9nm,0.8s								
JCT	Junction City		98.43 317	PFAKE			14 18 50.0	+15	
JCT				LR		LR			
	comp=Z,3µm,21.0s								
330A	Mertzon		98.48 318	⇑P		P	14 18 34.5	-0.5	
	baz=98								
W22A	Albuquerque		98.49 324	⇑P		P	14 18 33.9	-1.3	
	baz=98								
TEIG	Tepich		98.49 302	PFAKE			14 18 50.0	+15	
TEIG				LR		LR			
	comp=Z,1µm,22.0s								
Z26A	Caprock		98.50 321	⇓P		P	14 18 33.8	-1.3	
	baz=98,SNR=17								
X23A	Hourglass Bar		98.56 324	⇓Pdif		P	14 18 35.1	-0.5	
	baz=98								
V20A	Brimhall		98.64 326	⇑Pdif		P	14 18 35.1	-0.7	
	baz=98								
127A	Arkansas Junct		98.65 321	⇑Pdif		P	14 18 34.8	-1.1	
	baz=98								
228A	UT Block 9, Go		98.69 320	⇑Pdif		P	14 18 34.9	-1.1	
	baz=98								
Y24A	Capitan		98.72 323	⇓Pdif		P	14 18 35.5	-0.7	
	baz=98								
431A	Sonora		98.72 317	⇓Pdif		P	14 18 35.5	-0.7	
	baz=98								
532A	Rocksprings		98.75 317	⇑Pdif		P	14 18 35.8	-0.5	
	baz=98								
W21A	San Fidel		98.82 325	⇑Pdif		P	14 18 35.6	-1.1	
	baz=98								
329A	Wagon Wheel Ra		98.85 319	⇑Pdif		P	14 18 36.4	-0.3	
	baz=99								
Z25A	Roswell		98.87 322	⇑Pdif		P	14 18 36.0	-0.9	
	baz=99								
430A	Baggett Ranch,		98.99 318	⇑Pdif		Pdif	14 18 36.4	-0.9	
	baz=99								
Y23A	Lovelace Mesa,		99.02 323	⇓Pdif		Pdif	14 18 36.4	-1.2	
	baz=99								
126A	Clayton Basin,		99.02 321	⇑Pdif		Pdif	14 18 37.1	-0.4	
	baz=99								
531A	Rocksprings		99.08 317	⇓Pdif		Pdif	14 18 37.5	-0.3	
	baz=99								
BNM	Barren Site		99.12 324	eP		Pdif	14 18 37.0	-1.1	
	comp=Z,4.2nm,0.9s								
BNM	Barren Site		99.12 324	eP		Pdif	14 18 37.0	-1.1	
	comp=Z,4.2nm,0.9s								
227A	Bennet, Jal		99.14 320	⇑Pdif		Pdif	14 18 37.6	-0.5	
	baz=99								
632A	Uvalde		99.16 316	⇑Pdif		Pdif	14 18 37.4	-0.6	
	baz=99								
Z24A	Sheeppen Canyo		99.16 322	⇓Pdif		Pdif	14 18 37.6	-0.6	
	baz=99								
LAZ	Ladron		99.16 324	eP		Pdif	14 18 37.9	-0.3	
	comp=Z,2.2nm,1.0s								
LAZ	Ladron		99.16 324	eP		Pdif	14 18 37.9	-0.3	
	comp=Z,2.2nm,1.0s								
W20A	Ramah		99.21 325	⇓Pdif		Pdif	14 18 37.6	-0.9	
	baz=99								
LBCM	Butte Creek Ri		99.27 337	P		Pdif	14 18 39.1	+0.6	
LBCM	Butte Creek Ri		99.27 337	P		Pdif	14 18 39.2	+0.6	
CCUT	Cedar City		99.29 330	eP		Pdif	14 18 37.4	-1.4	
	comp=Z,3.6nm,0.8s								
CCUT				epP		pP	14 18 48.7	-2.3	
CCUT	Cedar City		99.29 330	eP		Pdif	14 18 37.4	-1.4	
	comp=Z,3.6nm,0.8s								
CCUT				epP		pP	14 18 48.7	-2.3	
Y22D	IRIS PASSCAL I		99.32 324	⇓Pdif		Pdif	14 18 38.0	-0.9	
	baz=99								
125A	Gardner Draw,		99.34 321	⇓Pdif		Pdif	14 18 38.3	-0.6	
	baz=99								
BCIP	Isla Barro Col		99.36 288	PFAKE			14 18 50.0	+11	
BCIP				LR		LR			
	comp=Z,750nm,21.0s								
328A	Wristen Ranch,		99.38 319	⇓Pdif		Pdif	14 18 38.0	-1.1	
	baz=99								
X21A	Alamocita Cree		99.44 325	⇑Pdif		Pdif	14 18 38.3	-1.2	
	baz=99								
Y22A	Socorro		99.46 324	⇑Pdif		Pdif	14 18 38.3	-1.2	
	baz=99								
429A	Davenport Ranc		99.47 318	⇑Pdif		Pdif	14 18 38.6	-0.9	
	baz=99								
R11A	Troy Canyon, C		99.47 332	⇓Pdif		Pdif	14 18 38.9	-0.6	
	baz=99								
KVTX	Kingsville		99.53 314	PFAKE			14 18 50.0	+10	
KVTX				LR		LR			
	comp=Z,2µm,19.0s								
530A	J-C Ranch, Com		99.53 318	⇑Pdiff		Pdif	14 18 39.8	+0.1	
	baz=99								
226B	Tecolote Peak,		99.54 321	⇓Pdiff		Pdif	14 18 38.8	-1.0	
	baz=99								
Z23A	Rita Site, Whi		99.64 323	⇓Pdiff		Pdif	14 18 40.3	0.0	
	baz=99								
631A	Perdido Creek		99.67 317	⇓Pdiff		Pdif	14 18 40.5	+0.1	
	baz=99								
X20A	Quemado		99.69 325	⇓Pdiff		Pdif	14 18 40.1	-0.5	
	baz=99								
124A	Stringfield Ra		99.71 322	⇑Pdiff		Pdif	14 18 39.4	-1.3	
	baz=99								
Y21A	Point of Rocks		99.74 324	⇑Pdiff		Pdif	14 18 40.2	-0.7	
	baz=99								
327A	Balmorhea Ranc		99.75 320	⇓Pdiff		Pdif	14 18 40.3	-0.5	
	baz=100								
W18A	Petrified Fore		99.78 326	⇑Pdiff		Pdif	14 18 40.5	-0.5	
	baz=100								
U15A	North Rim		99.80 329	⇑Pdiff		Pdif	14 18 40.8	-0.4	
	baz=100								
428A	Kincaid Ranch,		99.82 319	⇑Pdiff		Pdif	14 18 40.7	-0.4	
	baz=100								
732A	Laxson Ranch,		99.85 316	⇑Pdiff		Pdif	14 18 41.0	-0.1	
	baz=100								
Z22A	Elephant Butte		100.01 323	⇓Pdiff		Pdif	14 18 41.6	-0.3	
	baz=100								
529A	Stev Forest Ra		100.04 318	⇑Pdiff		Pdif	14 18 42.3	+0.3	
	baz=100								
326A	Caldwell Ranch		100.05 320	⇓Pdiff		Pdif	14 18 41.8	-0.2	
	baz=100								
427A	Hayter Ranch,		100.11 319	⇓Pdiff		Pdif	14 18 42.2	-0.1	
	baz=100								
Y20A	Horse Springs,		100.15 325	⇓Pdiff		Pdif	14 18 42.4	-0.3	
	baz=100								
123A	Bell Site, Whi		100.16 322	⇓Pdiff		Pdif	14 18 42.0	-0.7	
	baz=100								
WUAZ	Wupatki		100.18 328	eP		Pdif	14 18 42.8	+0.1	
WUAZ	comp=Z,7.1nm,0.8s				LR	LR			
	comp=Z,2µm,20.0s								
WUAZ	Wupatki		100.18 328	eP		Pdif	14 18 42.8	+0.1	
	comp=Z,7.1nm,0.8s								
224A	Cornudas Mount		100.24 322	⇓Pdiff		Pdif	14 18 42.1	-1.0	
	baz=100								
Z21A	St. Cloud Mine		100.31 324	⇑Pdiff		Pdif	14 18 42.3	-1.0	
	baz=100								
528A	Cox Ranch, San		100.32 319	⇑Pdiff		Pdif	14 18 42.6	-0.8	
	baz=100								
TPH	Tonopah		100.33 333	PFAKE			14 18 50.0	+6.6	
TPH				LR		LR			
	comp=Z,4µm,20.0s								
NV11	Mina Array Sit		100.36 334	eP	dif	Pdif	14 18 42.0	-1.4	
X18A	Snowflake		100.37 326	⇑Pdiff		Pdif	14 18 42.8	-0.8	
	baz=100								
NVAR	Mina Array Bea		100.41 334	P		Pdif	14 18 44.4	+0.7	
NVAR				PKKPbc		PKKPbc	14 34 59.9	+0.8	
NVAR	Mina Array Bea		100.41 334	P		Pdif	14 18 44.4	+0.7	
	comp=Z,4.8nm,0.7s,baz=39,slow=3.7,SNR=22								
NVAR				PKKPbc		PKKPbc	14 34 59.9	+0.8	
	comp=Z,1.2nm,0.8s,baz=206,slow=5.3,SNR=4.8								
NVAR	Mina Array Bea		100.41 334	P		Pdif	14 18 44.4	+0.7	
MNTX	Cornudas Mount		100.47 321	eP	dif	Pdif	14 18 42.9	-1.0	
	comp=Z,6.4nm,0.7s								
MNTX				LR		LR			
	comp=Z,3µm,20.0s								
122A	Conniff Cattle		100.48 323	⇑Pdiff		Pdif	14 18 43.3	-0.7	
	baz=100								
325A	Bean Ranch, Si		100.52 321	⇑Pdiff		Pdif	14 18 43.8	-0.5	
	baz=100								
426A	McDonald Obser		100.58 320	⇑Pdiff		Pdif	14 18 44.1	-0.5	
	baz=100								
324A	Moseley Ranch,		100.73 321	⇓Pdiff		Pdif	14 18 44.6	-0.6	
	baz=100								
223A	Chaparral, Ant		100.75 322	⇓Pdiff		Pdif	14 18 44.7	-0.6	
	baz=100								
527A	Woodward Ranch		100.77 319	⇑Pdiff		Pdif	14 18 44.8	-0.6	
	baz=100								
Z20A	Nine Sixteen R		100.91 324	⇑Pdiff		Pdif	14 18 44.7	-1.2	
	baz=101								
425A	Indio Mountain		100.99 320	⇓Pdiff		Pdif	14 18 45.4	-0.9	
	baz=101								
121A	Cookes Peak, D		101.00 323	⇑Pdiff		Pdif	14 18 45.9	-0.5	
	baz=101								
222A	Williams Famil		101.01 323	⇓Pdiff		Pdif	14 18 45.3	-1.1	
	baz=101								
526A	Mary Lane Ranc		101.09 319	⇑Pdiff		Pdif	14 18 46.3	-0.6	
	baz=101								
X16A	Lo Mia Camp, P		101.13 327	⇑Pdiff		Pdif	14 18 46.5	-0.5	
	baz=101								
627A	Terlingua Ranc		101.20 319	⇑Pdiff		Pdif	14 18 46.2	-1.0	
	baz=101								
MLAC	Mammoth Lakes		101.31 334	⇑Pdiff		Pdif	14 18 46.6	-1.2	
	baz=101								
GRAC	Grapevine Rang		101.33 333	⇑Pdiff		Pdif	14 18 48.3	+0.6	
	baz=101								
120A	U Bar Ranch, L		101.39 324	⇑Pdiff		Pdif	14 18 48.4	+0.3	
	baz=101								
TXAR	Lajitas Array		101.44 319	P		Pdif	14 18 48.8	+0.5	
TXAR				PP		PP	14 23 03.4	+6.0	
TXAR				PKKPbc		PKKPbc	14 34 57.1	+1.5	
TXAR	Lajitas Array		101.44 319	P		Pdif	14 18 48.8	+0.5	
	comp=Z,1.7nm,0.8s,baz=35,slow=4.6,SNR=11								
TXAR				PP		PP	14 23 03.4	+6.0	
	comp=Z,0.7nm,0.6s,baz=52,slow=8.1,SNR=3.7								
TXAR				PKKPbc		PKKPbc	14 34 57.1	+1.5	
	comp=Z,0.5nm,0.7s,baz=194,slow=4.8,SNR=4.4								
TXAR	Lajitas Array		101.44 319	P		Pdif	14 18 48.8	+0.5	
626A	Big Bend Ranch		101.52 319	⇑Pdiff		Pdif	14 18 48.9	+0.2	
	baz=101								
TIN	Tinemaha		101.60 333	⇑Pdiff		Pdif	14 18 49.9	+1.0	
	baz=101								
FURC	Furnace Creek,		101.61 332	⇓Pdiff		Pdif	14 18 49.4	+0.6	
	baz=101								
W13A	Hualapai Mount		101.61 329	⇑Pdiff		Pdif	14 18 49.3	+0.2	
	baz=101								
220A	Playas Peak, P	

baz=103
BELC Belle Mtn. Jos 103.43 330 ⇓Pdiff **Pdif 14 18 57.7 +0.6**
baz=103
EDW2 Edwards Air Fo 103.44 332 ⇓Pdiff **Pdif 14 18 57.8 +0.7**
baz=103
BC3 Big Chuckawall 103.50 330 ⇑Pdiff **Pdif 14 18 57.3 -0.1**
baz=103
BBRC Big Bear Solar 103.57 331 ⇓Pdiff **Pdif 14 18 57.7 -0.2**
baz=103
OTAV Otavalo 103.63 280 PFAKE 14 19 10.0 +11
OTAV LR LR
comp=Z,1μm,22.0s
SMMC Simmler 103.80 334 ⇑Pdiff **Pdif 14 18 58.3 -0.3**
baz=104
214A Organ Pipe Nat 103.83 327 ⇑Pdiff **Pdif 14 18 59.1 +0.3**
baz=104
PFO Pinyon Flat Ob 103.95 330 PFAKE 14 19 10.0 +11
PFO LR LR
comp=Z,3μm,20.0s
PFO Pinyon Flat Ob 103.95 330 ⇑Pdiff **Pdif 14 18 59.3 -0.1**
baz=104
LPAZ La Paz 104.53 260 PKiKP **PKiKP 14 23 18.2 -0.6**
LPAZ PKKPbc **PKKPbc 14 34 49.1 +2.0**
LPAZ La Paz 104.53 260 PKiKP **PKiKP 14 23 18.2 -0.6**
comp=Z,3.2nm,1.1s,baz=214,slow=2.9,SNR=4.7
LPAZ PKKPbc **PKKPbc 14 34 49.1 +2.0**
comp=Z,0.6nm,0.7s,baz=224,slow=3.5,SNR=3.9
LPAZ La Paz 104.53 260 PKiKP **PKiKP 14 23 18.2 -0.6**
NWAO Narrogin (SRO) 107.25 118 PFAKE 14 23 30.0
NWAO LR LR
comp=Z,1μm,22.0s
LVC Limon Verde 108.50 255 PFAKE 14 23 40.0
LVC LR LR
comp=Z,1μm,20.0s
SNAA Sanae 108.99 190 PKKPbc PKKPbc 14 34 35.2 +0.9
SNAA Sanae 108.99 190 PKKPbc PKKPbc 14 34 35.2 +0.9
comp=Z,0.3nm,0.5s,baz=257,slow=2.2,SNR=3.8
NNA Nana 109.28 269 PFAKE 14 23 40.0
NNA LR LR
comp=Z,1μm,19.0s
TRQA Tornquist 111.02 238 PFAKE 14 23 40.0
TRQA LR LR
comp=Z,2μm,20.0s
MIDW Midway 112.23 25 PFAKE 14 23 40.0
MIDW LR LR
comp=Z,1μm,19.0s
WAKE Wake Island 112.73 43 PFAKE 14 23 50.0
WAKE LR LR
comp=Z,1μm,20.0s
PAYG Puerto Ayora 113.59 287 PFAKE 14 23 50.0
PAYG LR LR
comp=Z,476nm,20.0s
WRA Warramunga Arr 113.92 98 PKiKP **PKiKP 14 23 35.8 +0.2**
WRA PKKPbc **PKKPbc 14 34 18.3 +1.9**
WRA Warramunga Arr 113.92 98 PKiKP **PKiKP 14 23 35.8 +0.2**
comp=Z,5.2nm,0.7s,baz=316,slow=1.4,SNR=53
WRA PKKPbc **PKKPbc 14 34 18.3 +1.9**
comp=Z,1.4nm,0.9s,baz=115,slow=3.5,SNR=8.0
WRA Warramunga Arr 113.92 98 PKiKP **PKiKP 14 23 35.8 +0.2**
WRAB Tennant Creek 113.92 98 *e*PKiKP **PKiKP 14 23 35.1 -0.5**
WRAB MLR MLR
comp=Z,2μm,19.0s
WRAB Tennant Creek 113.92 98 *e*PKPdf **PKiKP 14 23 35.1 -0.5**
WRAB LR LR
comp=Z,2μm,19.0s
EFI East Falkland 114.83 223 PFAKE 14 23 50.0 +14
EFI LR LR
comp=Z,2μm,20.0s
ASAR Alice Springs 115.42 102 PKP **PKPdf 14 23 38.5 +0.1**
ASAR PP PP 14 24 47.2 +6.7
ASAR PKKPbc **PKKPbc 14 34 12.8 +1.4**
ASAR Alice Springs 115.42 102 PKP **PKPdf 14 23 38.5 +0.1**
comp=Z,3.5nm,0.3s,baz=316,slow=1.6,SNR=72
ASAR PP PP 14 24 47.2 +6.7
comp=Z,2.3nm,0.9s,baz=299,slow=6.8,SNR=4.1
ASAR PKKPbc **PKKPbc 14 34 12.8 +1.4**
comp=Z,1.3nm,0.7s,baz=122,slow=3.7,SNR=23
AS31 Alice Springs 115.42 102 *e*PKPdf **PKPdf 14 23 38.8 +0.4**
PLCA Paso Flores 118.16 238 PKP **PKPdf 14 23 43.4 +0.1**
PLCA Paso Flores 118.16 238 PKP **PKPdf 14 23 43.4 +0.1**
comp=Z,4.3nm,0.6s,baz=69,slow=3.2,SNR=8.0
PLCA Paso Flores 118.16 238 PKiKP **PKPdf 14 23 43.3 +0.1**
PMG Port Moresby 118.73 81 PFAKE 14 24 00.0 +15
PMG LR LR
comp=Z,3μm,20.0s
CASY Casey 118.75 153 PFAKE 14 24 00.0 +17
CASY LR LR
comp=Z,2μm,20.0s
CTA Charters Tower 123.69 92 PKP **PKPdf 14 23 55.9 +1.6**
CTA Charters Tower 123.69 92 PKP **PKPdf 14 23 55.9 +1.6**
comp=Z,17nm,0.8s,baz=282,slow=3.3,SNR=19
CTA Charters Tower 123.69 92 PKiKP **PKPdf 14 23 55.9 +1.6**
CTAO Charters Tower 123.69 92 *e*PKiKP **PKPdf 14 23 55.4 +1.1**
CTAO MLR MLR
comp=Z,2μm,22.0s
CTAO Charters Tower 123.69 92 *e*PKPdf **PKPdf 14 23 55.4 +1.1**
CTAO LR LR
comp=Z,2μm,22.0s
CTAO Charters Tower 123.69 92 *e*PKiKP **PKPdf 14 23 55.4 +1.1**
STKA Stephens Creek 125.15 107 *e*PKPdf **PKPdf 14 23 57.1 +0.4**
STKA PKP **PKPdf 14 23 58.4 +1.6**
STKA Stephens Creek 125.15 107 PKP **PKPdf 14 23 58.4 +1.6**
comp=Z,15nm,0.8s,baz=334,slow=2.9,SNR=19
STKA Stephens Creek 125.15 107 *e*PKiKP **PKPdf 14 23 57.2 +0.4**
QSPA South Pole Qui 125.19 180 PKP **PKPdf 14 23 56.2 +0.4**
QSPA South Pole Qui 125.19 180 PKP **PKPdf 14 23 56.2 +0.4**
comp=Z,12nm,0.8s,baz=268,slow=2.2
QSPA South Pole Qui 125.19 180 PKiKP **PKPdf 14 23 56.2 +0.4**
HNR Honiara 128.89 72 PFAKE 14 24 20.0 +16
HNR LR LR
comp=Z,1μm,19.0s
DRV Dumont d'Urvil 130.37 151 PP PP 14 26 12.0 -8.4
DRV SKS SKSdf 14 31 28.0 +15
DRV Dumont d'Urvil 130.37 151 SS SS 14 43 42.0 -2.5
TARA Tarawa 130.65 50 PFAKE 14 24 20.0 +12
TARA LR LR
comp=Z,663nm,20.0s
CAN Canberra 132.14 108 PFAKE 14 24 20.0 +10
CAN LR LR
comp=Z,2μm,21.0s
TAU Tasmania Unive 132.88 119 PFAKE 14 24 20.0 +8.9
TAU LR LR
comp=Z,1μm,21.0s
VNDA Vanda 133.18 167 PKP **PKPdf 14 24 12.9 +2.2**
VNDA Vanda 133.18 167 PKP **PKPdf 14 24 12.9 +2.2**
comp=Z,0.9nm,0.8s,baz=265,slow=8.1,SNR=5.0
VNDA Vanda 133.18 167 PKiKP **PKPdf 14 24 12.9 +2.2**
SBA Scott Base 133.79 169 *e*PKiKP **PKPdf 14 24 13.4 +1.5**
SBA MLR MLR
comp=Z,3μm,22.0s
SBA Scott Base 133.79 169 *e*PKPdf **PKPdf 14 24 13.4 +1.5**
SBA LR LR
comp=Z,3μm,22.0s
SBA Scott Base 133.79 169 *e*PKiKP **PKPdf 14 24 13.4 +1.5**
DZM Mont Dzumac 141.11 82 *e*PKiKP **PKPdf 14 24 26.0 -1.1**
DZM Mont Dzumac 141.11 82 *e*SS SS 14 45 57.9 +2.7
comp=Z,490nm,30.2s
DZM Mont Dzumac 141.11 82 *e*LR LR 15 13 29.4
comp=Z,4μm,22.4s
XMAS Kiritimati 142.39 10 PFAKE 14 24 40.0 +10
XMAS LR LR
comp=Z,2μm,20.0s
MSVF Nonsavu 147.80 65 *e*PKP2 **PKPbc 14 24 40.2 -1.5**
MSVF MLR MLR
comp=Z,2μm,20.0s
MSVF Nonsavu 147.80 65 *e*PKPdf **PKPbc 14 24 40.2 -1.5**
MSVF *e*PKPab **PKPab 14 24 44.9 +0.7**
MSVF LR LR
comp=Z,2μm,20.0s
MSVF Nonsavu 147.80 65 *e*PKiKP **PKPbc 14 24 40.2 -1.5**
ODZ Otahua Downs 149.76 120 *e*PKPbc **PKPbc 14 24 47.7 +1.9**
ODZ Otahua Downs 149.76 120 *e*PKPbc **PKPbc 14 24 47.7 +1.9**
RPZ Rata Peaks 150.15 118 *e*PKPbc **PKPbc 14 24 48.3 +1.5**
RPZ Rata Peaks 150.15 118 PKPbc **PKPbc 14 24 48.6 +1.7**
comp=Z,77nm,0.9s,baz=238,slow=1.1,SNR=17
RPZ Rata Peaks 150.15 118 *e*PKPbc **PKPbc 14 24 48.3 +1.5**
AFI Afiamalu 151.92 46 PFAKE 14 25 00.0 -1.1
AFI LR LR
comp=Z,1μm,19.0s
KHZ Kahutara 152.04 115 *e*PKPbc **PKPbc 14 24 51.9 +0.7**
KHZ Kahutara 152.04 115 *e*PKPbc **PKPbc 14 24 51.9 +0.7**
SNZO South Karori 152.96 113 PFAKE 14 25 00.0 -4.7
SNZO LR LR
comp=Z,2μm,22.0s
RAO Raoul Island 156.91 82 PFAKE 14 25 00.0 +8.2
RAO LR LR
comp=Z,3μm,20.0s
RKT Rikitea 161.14 306 *e*PKIKP PKPdf 14 24 50.9 -6.1
comp=Z,201nm,24.5s
RKT Rikitea 161.14 306 *e*PP PP 14 29 25.2 +1.9
comp=Z,221nm,29.2s
RKT Rikitea 161.14 306 *e*LR LR 15 20 09.7
comp=Z,2μm,23.0s
PPT2 Papeete2 162.23 354 *e*PKIKP **PKPdf 14 24 54.6 -3.7**
PPT2 Papeete2 162.23 354 *e*LR LR 15 20 28.7
comp=Z,2μm,24.2s,baz=20
TBI Tubuai 167.91 351 *e*PKIKP **PKPdf 14 25 02.0 -0.9**
TBI Tubuai 167.91 351 *e*PP PP 14 30 01.6 +4.0
comp=Z,376nm,28.5s
TBI Tubuai 167.91 351 *e*LR LR 15 23 20.0
comp=Z,2μm,23.5s

NIED ***19*** *14:10:00,39.˚10N×143.˚40E, h26km, Mw4.1 Best double couple: M₀1.45000×10¹⁵ NP1:φ₀23.00000°, δ58.00000°, λ93.00000°. NP2:φ₀197.00000°, δ32.00000°, λ85.00000°.*
IDC ***19*** *14:10:03.4±1.8, 39.˚13N×143.˚73E, h0km, mb4.0/5, mb1 4.0/9, mb1mx3.8/29, mbtmp4.0/9, ML3.4/4, MS3.5/2, Ms1 3.5/2, ms1mx3.3/45, Error ellipse: s-maj=48.4km s-min=18.1km az=75.0*
JMA ***19*** *14:10:06.4±0.1, 39.˚08N×143.˚44E, h25km±3km, M4.2*
ISC 19 14:10:05.7±3.3, 39.˚08N±0.˚05×143.˚37E±0.˚10, h8km±17km, n24, σ1°31/35, mb4.0/5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.30**	**293**	P	**Pn**	**14 10 30.0**	**-0.2**
MIYJ				*e*S	**Sg**	**14 10 47.3**	**-0.2**
OFUJ	**Ofunato**	**1.32**	**270**	P	**Pn**	**14 10 30.6**	**0.0**
OFUJ				*e*S	**Sg**	**14 10 48.3**	**0.0**
JTH	**Tanohata**	**1.45**	**307**	P	**Pn**	**14 10 32.0**	**-0.2**
JTH				*e*S	**Sn**	**14 10 51.5**	**+0.1**
JOM	**Ohasama**	**1.66**	**284**	P	**Pn**	**14 10 35.6**	**+0.4**
JOM				*e*S	**Sn**	**14 10 57.5**	**+0.8**
JMK	**Ichinoseki**	**1.68**	**266**	P	**Pn**	**14 10 35.9**	**+0.4**
JMK				*e*S	**Sn**	**14 10 57.5**	**+0.3**
JIO	**Ouri**	**1.70**	**249**	P	**Pn**	**14 10 35.8**	**+0.1**
JIO				*e*S	**Sn**	**14 10 57.1**	**+0.6**
JRG	**Rokugo**	**2.15**	**279**	P	**Pn**	**14 10 42.6**	**+0.7**
JRG				*e*S	**Sn**	**14 11 08.9**	**+0.1**
JOU	**Okura**	**2.23**	**252**	P	**Pn**	**14 10 43.8**	**+0.7**
JOU				*e*S	**Sn**	**14 11 11.4**	**+0.5**
JYK	**Kaneyama**	**2.35**	**267**	P	**Pn**	**14 10 45.7**	**+1.0**
JMM	**Marumori**	**2.36**	**240**	P	**Pn**	**14 10 45.0**	**+0.2**
JMM				*e*S	**Sn**	**14 11 13.7**	**-0.3**
JAH	**Hinai**	**2.38**	**298**	P	**Pn**	**14 10 45.8**	**+0.7**
JTM	**Tenmabayashi**	**2.46**	**315**	P	**Pn**	**14 10 46.0**	**-0.1**
JFT	**Otama**	**2.85**	**238**	P	**Pn**	**14 10 52.5**	**+0.9**
JFT				*e*S	**Sn**	**14 11 26.7**	**+0.5**
JOT	**Ohata**	**2.90**	**323**	P	**Pn**	**14 10 53.1**	**+0.8**
JOT				*e*S	**Sn**	**14 11 27.4**	**0.0**
MAT	**Matsushiro**	**4.81**	**240**	P	Pn	14 11 20.8	+2.3
MAT				S	**Sn**	**14 12 18.5**	**+4.0**
ASAJ	**Asahikawa**	**5.06**	**354**	Pn	**Pn**	**14 11 20.9**	**-1.1**
	2.0nm,0.3s,baz=203,slow=15,SNR=32						
ASAJ				Sn	**Sn**	**14 12 19.5**	**-1.1**
	1.5nm,0.3s,baz=139,slow=20,SNR=3.4						
ASAJ				LR	LR	14 14 04.7	
	comp=Z,230nm,19.9s,baz=15,slow=48						
JHJ	**Hachijo jima 2**	**6.62**	**207**	Pn	**Pn**	**14 11 43.0**	**-0.4**
	14nm,0.3s,baz=228,slow=9.7,SNR=6.6						
JHJ				Sn	**Sn**	**14 12 53.8**	**-5.2**
	21nm,0.3s,baz=92,slow=22,SNR=5.8						
USRK	**Ussuriysk Arra**	**9.93**	**305**	Pn	Pn	14 12 31.9	+3.3
	0.5nm,0.3s,baz=99,slow=14,SNR=6.5						
KSRS	**Korea Array**	**12.25**	**267**	Pn	Pn	14 13 04.3	+3.7
	0.1nm,0.3s,baz=89,slow=14,SNR=4.6						
KSRS				LR	LR	14 17 17.7	
	comp=Z,432nm,19.0s,baz=184,slow=35						
ZALV	**Zalesovo Beam**	**41.71**	**311**	P	**P**	**14 17 55.2**	**+0.3**
	1.8nm,0.6s,baz=112,slow=6.4,SNR=2.4						
MKAR	**Makanchi Array**	**44.37**	**301**	P	**P**	**14 18 16.5**	**-0.1**
	2.7nm,0.9s,baz=98,slow=6.0,SNR=3.8						
KURBB	**Kurchatov Arra**	**45.99**	**307**	P	**P**	**14 18 29.0**	**-0.3**
	3.9nm,0.7s,baz=82,slow=8.6,SNR=4.9						
WRA	**Warramunga Arr**	**59.32**	**190**	P	**P**	**14 20 07.4**	**-0.8**
	0.9nm,0.8s,baz=7.0,slow=6.7,SNR=4.3						
ASAR	**Alice Springs**	**63.05**	**190**	P	**P**	**14 20 33.6**	**+0.2**
	0.4nm,0.7s,baz=5.5,slow=5.8,SNR=3.4						

ISK ***19*** *14:13:16.1, 35.˚21N×28.˚68E, h22km, MD3.5*
CSEM ***19*** *14:13:18.1±0.4, 35.˚22N×28.˚65E, h30km, MD3.5, Error ellipse: s-maj=9.1km s-min=4.5km az=23.0*
DDA ***19*** *14:13:28.6, 36.˚29N×28.˚61E, h44km, MD3.2*
ISC 19 14:13:17.7±1.8, 35.˚27N±0.˚07×28.˚68E±0.˚05, h30km±14km, n51, σ1°38/68, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**1.22**	**38**	*i* P	**Pb**	**14 13 40.0**	**-0.3**
AKAS				*i* S	**Sb**	**14 13 57.4**	**+1.6**
AKAS	**Kas**	**1.22**	**38**	*i* P	**Pb**	**14 13 40.0**	**-0.3**
AKAS				*i* S	**Sb**	**14 13 57.4**	**+1.6**
FETY	**Fethiye**	**1.40**	**13**	*e*PN	**Pn**	**14 13 42.0**	**+0.8**
FETY				*e*SN	**Sb**	**14 14 00.7**	**-0.1**
FETY	**Fethiye**	**1.40**	**13**	*e*Pn	**Pn**	**14 13 42.0**	**+0.8**
FETY				*e*Sn	**Sb**	**14 14 00.7**	**-0.1**
DALY	**Dalyan (Mu¨la**	**1.54**	**359**	*e*PN	**Pn**	**14 13 43.9**	**+0.8**
DALY	**Dalyan (Mu¨la**	**1.54**	**359**	*e*Pn	**Pn**	**14 13 43.9**	**+0.8**
TURN	**Turunc**	**1.60**	**358**	*i* P	**Pn**	**14 13 42.6**	**-1.3**
TURN				*i* S	**Sn**	**14 14 00.6**	**-3.0**
DAT	**Datca**	**1.71**	**329**	*e*PN	**Pn**	**14 13 46.2**	**+0.7**
DAT				*e*SN	**Sn**	**14 14 07.8**	**+1.5**
DAT	**Datca**	**1.71**	**329**	*e*Pn	**Pn**	**14 13 46.2**	**+0.7**
DAT				*e*Sn	**Sn**	**14 14 07.8**	**+1.5**
YER	**Yerkesik**	**1.89**	**350**	*e*PN	**Pn**	**14 13 48.5**	**+0.6**
YER	**Yerkesik**	**1.89**	**350**	*e*Pn	**Pn**	**14 13 48.5**	**+0.6**
GLHS	**Glhisar (BURDU**	**2.00**	**19**	*e*PN	**Pn**	**14 13 50.1**	**+0.7**
GLHS	**Glhisar (BURDU**	**2.00**	**19**	*e*Pn	**Pn**	**14 13 50.1**	**+0.7**
GOLH	**Golhisar**	**2.09**	**20**	*i* P	**Pn**	**14 13 51.8**	**+1.1**
GOLH				*i* S	**Sn**	**14 14 18.3**	**+2.5**
GOLH	**Golhisar**	**2.09**	**20**	*i* P	**Pn**	**14 13 51.8**	**+1.1**
GOLH				*i* S	**Sn**	**14 14 18.3**	**+2.5**
BODT	**Bodrum**	**2.10**	**329**	*e*PN	**Pn**	**14 13 51.8**	**+1.0**
BODT	**Bodrum**	**2.10**	**329**	*e*Pn	**Pn**	**14 13 51.8**	**+1.0**
MLSB	**Milas**	**2.15**	**340**	*e*PN	**Pn**	**14 13 52.4**	**+0.9**
MLSB	**Milas**	**2.15**	**340**	*e*Pn	**Pn**	**14 13 52.4**	**+0.9**
KORT	**Korkueli**	**2.20**	**38**	*i* P	**Pb**	**14 13 54.9**	**-1.9**
KORT				*i* S	**Sb**	**14 14 23.4**	**-0.2**
KORT	**Korkueli**	**2.20**	**38**	*i* P	**Pb**	**14 13 54.9**	**-1.9**
KORT				*i* S	**Sb**	**14 14 23.4**	**-0.2**
ANTB	**Antalya**	**2.28**	**44**	*e*PN	**Pn**	**14 13 53.9**	**+0.7**
ANTB	**Antalya**	**2.28**	**44**	*e*Pn	**Pn**	**14 13 53.9**	**+0.7**
AYDN	**Tasoluk**	**2.47**	**345**	*i* P	**Pn**	**14 13 55.3**	**-0.6**
AYDN				*i* S	**Sn**	**14 14 21.6**	**-3.5**
AYDN	**Tasoluk**	**2.47**	**345**	*i* P	**Pn**	**14 13 55.3**	**-0.6**
AYDN				*i* S	**Sn**	**14 14 21.6**	**-3.5**
DENT	**Denizli**	**2.50**	**6**	*e*PN	**Pn**	**14 13 57.2**	**+0.9**
DENT	**Denizli**	**2.50**	**6**	*e*Pn	**Pn**	**14 13 57.2**	**+0.9**
BCK	**Bucak**	**2.68**	**35**	*e*PN	**Pn**	**14 13 59.6**	**+0.8**
BCK	**Bucak**	**2.68**	**35**	*e*Pn	**Pn**	**14 13 59.6**	**+0.8**
ISP	**Isparta**	**2.95**	**30**	PN	**Pn**	**14 14 04.5**	**+1.9**
ISP	**Isparta**	**2.95**	**30**	*i* Pn	**Pn**	**14 14 04.5**	**+1.9**
GAZI	**Gazipasa**	**3.11**	**71**	*i* P	**Pb**	**14 14 11.6**	**-0.7**
GAZI				*i* S	**Sn**	**14 14 40.1**	**-0.7**
GAZI	**Gazipasa**	**3.11**	**71**	*i* P	**Pb**	**14 14 11.6**	**-0.7**
GAZI				*i* S	**Sn**	**14 14 40.1**	**-0.7**
APE	**Apeiranthos**	**3.12**	**306**	*e*PN	**Pn**	**14 14 06.1**	**+1.3**
APE	**Apeiranthos**	**3.12**	**306**	*e*Pn	**Pn**	**14 14 06.1**	**+1.3**
KHL	**Karahalli**	**3.12**	**12**	*e*PN	**Pn**	**14 14 06.2**	**+1.3**
KHL	**Karahalli**	**3.12**	**12**	*e*Pn	**Pn**	**14 14 06.2**	**+1.3**
KULA	**Kula-Manisa**	**3.24**	**360**	*e*PN	**Pn**	**14 14 07.8**	**+1.3**
KULA	**Kula-Manisa**	**3.24**	**360**	*e*Pn	**Pn**	**14 14 07.8**	**+1.3**
IZM	**Izmir**	**3.32**	**340**	*e*PN	**Pn**	**14 14 09.2**	**+1.6**
IZM	**Izmir**	**3.32**	**340**	*e*Pn	**Pn**	**14 14 09.2**	**+1.6**
LEF	**Lefka**	**3.45**	**91**	*e*PN	**Pn**	**14 14 09.6**	**+0.2**
LEF				*e*SN	**Sn**	**14 14 48.0**	**-1.2**
LEF	**Lefka**	**3.45**	**91**	*e*Pn	**Pn**	**14 14 09.6**	**+0.2**
LEF				*e*Sn	**Sn**	**14 14 48.0**	**-1.2**
CSS	**Prodhromos**	**3.83**	**93**	*e*PN	**Pn**	**14 14 15.5**	**+1.0**
CSS	**Prodhromos**	**3.83**	**93**	*e*Pn	**Pn**	**14 14 15.5**	**+1.0**
LFK	**Lefkose**	**3.97**	**88**	*e*PN	**Pn**	**14 14 17.8**	**+1.2**
LFK	**Lefkose**	**3.97**	**88**	*e*Pn	**Pn**	**14 14 17.8**	**+1.2**
KONT	**Konya--Tatoy**	**3.99**	**47**	*e*PN	**Pn**	**14 14 18.2**	**+1.5**
KONT	**Konya--Tatoy**	**3.99**	**47**	*e*Pn	**Pn**	**14 14 18.2**	**+1.5**
LADK	**Ladik-KONYA**	**4.16**	**44**	*e*PN	**Pn**	**14 14 20.4**	**+1.2**
LADK	**Ladik-KONYA**	**4.16**	**44**	*e*Pn	**Pn**	**14 14 20.4**	**+1.2**

ISK ***19*** *14:15:44.9, 34.˚93N×28.˚54E, h5km, MD3.8, ML3.8*
ISCJB ***19*** *14:15:49.9±0.8, 34.˚98N±0.˚08×28.˚55E±0.˚05, h36km, mb3.7/6, Error ellipse: s-maj=11.3km s-min=5.8km az=6.5*
IDC ***19*** *14:15:49.4±1.7, 35.˚65N×28.˚29E, h0km, mb3.7/4, mb1 3.8/5, mb1mx3.6/23, mbtmp3.7/5, ML2.4/1, Error ellipse: s-maj=47.2km s-min=24.9km az=151.0*
ISC 19 14:15:51.3±1.1, 35.˚0N±0.˚1×28.˚51E±0.˚06, h36km, n30, σ1°09/28, mb3.8/6, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**1.72**	**16**	*e*PN	**Pn**	**14 16 18.1**	**-0.7**
DALY	**Dalyan (Mu¨la**	**1.84**	**4**	*e*PN	**Pn**	**14 16 18.8**	**-1.5**
DAT	**Datca**	**1.91**	**337**	*e*PN	**Pn**	**14 16 20.4**	**-0.9**
YER	**Yerkesik**	**2.16**	**355**	*e*PN	**Pn**	**14 16 24.4**	**-0.4**
BODT	**Bodrum**	**2.30**	**335**	*e*PN	**Pn**	**14 16 25.7**	**-0.9**
GLHS	**Glhisar (BURDU**	**2.32**	**20**	*e*PN	**Pn**	**14 16 26.8**	**-0.2**
MLSB	**Milas**	**2.39**	**346**	*e*PN	**Pn**	**14 16 27.9**	**-0.1**
ANTB	**Antalya**	**2.59**	**42**	*e*PN	**Pn**	**14 16 30.2**	**-0.4**
DENT	**Denizli**	**2.81**	**8**	*e*PN	**Pn**	**14 16 33.4**	**-0.2**
BCK	**Bucak**	**3.00**	**33**	*e*PN	**Pn**	**14 16 35.0**	**-1.3**
APE	**Apeiranthos**	**3.19**	**312**	PN	**Pn**	**14 16 39.0**	**0.0**
KULA	**Kula-Manisa**	**3.54**	**2**	*e*PN	**Pn**	**14 16 43.8**	**0.0**
BLCB	**Balcova**	**3.60**	**341**	*e*PN	**Pn**	**14 16 44.3**	**-0.2**
CSS	**Prodhromos**	**3.96**	**89**	*e*PN	**Pn**	**14 16 48.9**	**-0.6**
CSS	**Prodhromos**	**3.96**	**89**	*e*SN	**Sn**	**14 17 35.6**	**+1.0**
LFK	**Lefkose**	**4.13**	**84**	*e*PN	**Pn**	**14 16 50.6**	**-1.2**
ALT	**Altintas**	**4.27**	**17**	*e*PN	**Pn**	**14 16 54.2**	**+0.4**
KONT	**Konya--Tatoy**	**4.29**	**45**	PN	**Pn**	**14 16 54.1**	**0.0**
LADK	**Ladik-KONYA**	**4.47**	**43**	*e*PN	**Pn**	**14 16 56.1**	**-0.4**
KEST	**Kesra**	**15.66**	**278**	Pn	**Pn**	**14 19 29.0**	**-0.2**
	0.0nm,0.3s,baz=61,slow=5.9,SNR=2.1						
CABF	**La Chapelle**	**20.50**	**311**	*e*P	Pn	14 20 27.7	-0.8
	13nm,0.7s						
AVF	**Avril sur Loir**	**22.28**	**310**	*e*P	**P**	**14 20 46.3**	**+1.1**
	3.9nm,0.5s						
SSF	**Saint Saulge**	**22.29**	**310**	*e*P	**P**	**14 20 46.6**	**+1.2**
GIVF	**Givet**	**22.95**	**318**	*e*P	**P**	**14 20 54.3**	**+2.0**
	6.2nm,0.5s						
LDF	**La Druitiere**	**25.14**	**312**	*e*P	**P**	**14 21 12.7**	**-0.1**
GRR	**Gorron**	**25.52**	**311**	*e*P	**P**	**14 21 16.2**	**-0.1**
ESDC	**Sonseca Array**	**26.16**	**290**	P	**P**	**14 21 22.1**	**-0.2**
	0.6nm,0.4s,baz=78,slow=11,SNR=4.3						
FINES	**FINESS Array B**	**26.53**	**357**	P	**P**	**14 21 22.0**	**-3.3**
	2.4nm,0.8s,baz=170,slow=12,SNR=3.6						
TORD	**Torodi Ar. Bea**	**32.55**	**235**	P	P	14 22 24.3	+5.2
	0.9nm,0.6s,baz=38,slow=8.6,SNR=5.7						
MKAR	**Makanchi Array**	**41.58**	**57**	P	**P**	**14 23 37.1**	**+1.6**
	0.4nm,0.8s,baz=272,slow=8.6,SNR=3.0						

IDC 19 14:20:19.1±0.9, 31.˚70S×58.˚50E, h0km, mb4.1/7, mb1 4.3/7, mb1mx3.9/27, mbtmp4.1/7, Error ellipse: s-maj=32.9km s-min=24.6km az=18.0, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSUM	**Tsumeb**	**38.77**	**279**	P	P	14 27 45.6	0.0
	3.5nm,0.8s,baz=117,slow=6.7,SNR=6.2						
QSPA	**South Pole Qui**	**58.47**	**180**	P	P	14 30 16.8	+0.1
	1.4nm,0.6s,baz=267,slow=2.0,SNR=3.3						
CMAR	**Chiang Mai Arr**	**63.18**	**44**	P	P	14 30 49.1	-0.1
	1.5nm,0.9s,baz=228,slow=7.1,SNR=7.2						
ASAR	**Alice Springs**	**66.07**	**104**	P	P	14 31 07.8	-0.5
	1.4nm,0.7s,baz=238,slow=6.2,SNR=15						
WRA	**Warramunga Arr**	**68.07**	**100**	P	P	14 31 21.2	+0.3
	1.5nm,0.7s,baz=240,slow=5.5,SNR=9.8						
STKA	**Stephens Creek**	**68.78**	**115**	P	P	14 31 25.8	+0.6
	1.8nm,0.9s,baz=288,slow=19,SNR=2.9						
BVAR	**Borovoye Array**	**85.00**	**7**	P	P	14 32 56.7	+0.8
	1.2nm,0.7s,baz=187,slow=7.5,SNR=5.6						
YKA	**Yellowknife Ar**	**148.87**	**354**	PKPbc	PKPbc	14 40 06.3	-1.6
	1.3nm,0.8s,baz=8.2,slow=2.7,SNR=8.4						

IDC ***19*** *14:24:36.8±0.8, 35.˚38N×28.˚46E, h0km, mb4.0/11, mb1 4.0/16, mb1mx3.9/29, mbtmp3.9/16, ML3.7/5, Error ellipse: s-maj=19.5km s-min=15.8km az=5.0*
ISK ***19*** *14:24:39.2, 35.˚39N×28.˚54E, h18km, MD3.9, ML3.9*
ISCJB ***19*** *14:24:41.2±0.3, 35.˚37N±0.˚03×28.˚56E±0.˚02, h61km±4km, mb3.9/15, Error ellipse: s-maj=4.6km s-min=2.8km az=9.0*
CSEM ***19*** *14:24:42.5±0.1, 35.˚39N×28.˚55E, h60km, ML3.9/3, Mw3.3, Error ellipse: s-maj=3.7km s-min=2.4km az=23.0*
DDA ***19*** *14:24:42.5, 35.˚49N×28.˚63E, h27km, MD3.4*
ATH ***19*** *14:24:43.8, 35.˚53N×28.˚37E, h63km±4km*
THE ***19*** *14:24:45.5, 35.˚48N×28.˚40E, h48km±3km, ML3.9/3, Error ellipse: s-maj=3.3km s-min=0.8km az=126.0*
NIC ***19*** *14:24:46.9±0.1, 35.˚31N×28.˚89E, h25km, mb4.3, ML3.9, MW3.3*
ISC 19 14:24:42.8±0.8, 35.˚39N±0.˚04×28.˚56E±0.˚02, h45km±8km, n190, σ1°40/236, mb3.9/15, 4C, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**0.90**	**337**	P	**Pn**	**14 24 59.3**	**+0.2**
ARG				S	**Sn**	**14 25 10.5**	**-0.5**
ARG	**Arkhangelos**	**0.90**	**337**	*e*P	**Pn**	**14 24 59.1**	**0.0**
ARG	**Arkhangelos**	**0.90**	**337**	P	**Pn**	**14 24

AYDN	Tasoluk	2.34	347	*i*	P		Pn	14	25	19.4	+0.6
AYDN				*i*	S		Sn	14	25	46.9	+0.6
AYDN	Tasoluk	2.34	347	*i*	P		Pn	14	25	19.4	+0.6
AYDN				*i*	S		Sn	14	25	46.9	+0.6
DENT	Denizli	2.39	9	*e*	PN		Pn	14	25	18.9	-0.7
DENT	Denizli	2.39	9	*e*	Pn		Pn	14	25	18.9	-0.7
NPS	Neapolis	2.42	268		P		Pn	14	25	20.7	+0.9
NPS	Neapolis	2.42	268	*e*	P		Pn	14	25	20.9	+1.1
NPS	Neapolis	2.42	268		P		Pn	14	25	20.7	+0.9
LAST	Lasithi	2.53	266		P		Pn	14	25	21.9	+0.4
LAST	Lasithi	2.53	266	*e*	P		Pn	14	25	22.4	+0.9
LAST	Lasithi	2.53	266		P		Pn	14	25	21.9	+0.4
BCK	Bucak	2.64	38	*e*	PN		Pn	14	25	22.5	-0.4
BCK	Bucak	2.64	38	*e*	Pn		Pn	14	25	22.5	-0.4
SMG	Samos	2.70	330		P		Pn	14	25	23.4	-0.3
SMG					S		Sn	14	25	53.7	-1.5
SMG	Samos	2.70	330	*e*	P		Pn	14	25	23.8	+0.1
SMG	Samos	2.70	330		P		Pn	14	25	23.4	-0.3
SMG					S		Sn	14	25	53.7	-1.5
ISP	Isparta	2.90	32	*e*	PN		Pn	14	25	26.6	+0.1
ISP	Isparta	2.90	32	*e*	Pn		Pn	14	25	26.6	+0.1
APE	Apeiranthos	2.97	305	*e*	PN		Pn	14	25	27.0	-0.5
APE	Apeiranthos	2.97	305		P		Pn	14	25	27.3	-0.2
APE					S		Sn	14	25	59.5	-2.4
APE	Apeiranthos	2.97	305	*e*	P		Pn	14	25	27.3	-0.2
APE	Apeiranthos	2.97	305	*e*	Pn		Pn	14	25	27.0	-0.5
APE	Apeiranthos	2.97	305	*e*	P		Pn	14	25	27.3	-0.2
APE					S		Sn	14	25	59.5	-2.4
IDI	Anoyia	3.00	269		P		Pn	14	25	28.0	+0.1
IDI	Anoyia	3.00	269	*e*	P		Pn	14	25	28.0	+0.1
IDI	Anoyia	3.00	269	*e*	P		Pn	14	25	28.0	+0.1
KHL	Karahalli	3.03	14	*e*	PN		Pn	14	25	27.8	-0.5
KHL	Karahalli	3.03	14	*e*	Pn		Pn	14	25	27.8	-0.5
AKMC	Akamas	3.11	96	⇑	P		Pn	14	25	29.3	0.0
AKMC	Akamas	3.11	96	⇑	P		Pn	14	25	29.3	0.0
KULA	Kula-Manisa	3.12	1	*e*	PN		Pn	14	25	28.2	-1.4
KULA	Kula-Manisa	3.12	1	*e*	Pn		Pn	14	25	28.2	-1.4
PPCY	Paphos	3.14	98		P		Pn	14	25	29.7	0.0
PPCY	Paphos	3.14	98		P		Pn	14	25	29.7	0.0
GAZI	Gazipasa	3.17	73	*i*	P		Pn	14	25	29.7	-0.4
GAZI				*i*	S		Sn	14	26	05.2	-1.5
GAZI	Gazipasa	3.17	73	*i*	P		Pn	14	25	29.7	-0.4
GAZI				*i*	S		Sn	14	26	05.2	-1.5
IZM	Izmir	3.18	341	*e*	PN		Pn	14	25	30.0	-0.4
IZM	Izmir	3.18	341	*e*	Pn		Pn	14	25	30.0	-0.4
BLCB	Balcova	3.23	338	*e*	PN		Pn	14	25	30.3	-0.7
BLCB	Balcova	3.23	338	*e*	Pn		Pn	14	25	30.3	-0.7
ALFC	Alevga 7.1nm,0.3s	3.31	93	⇑	P		Pn	14	25	32.1	0.0
ALFC					S		Sn	14	26	07.6	-2.7
ALFC	Alevga 7.1nm,0.3s	3.31	93	⇑	P		Pn	14	25	32.1	0.0
ALFC					S		Sn	14	26	07.6	-2.7
SHUT	Suhut-Afyon	3.54	26	*e*	PN		Pn	14	25	34.5	-0.9
SHUT	Suhut-Afyon	3.54	26	*e*	Pn		Pn	14	25	34.5	-0.9
LEF	Lefka	3.55	93	*e*	PN		Pn	14	25	34.8	-0.6
LEF	Lefka	3.55	93	*e*	Pn		Pn	14	25	34.8	-0.6
VAM	Vamos	3.56	272	*e*	P		Pn	14	25	37.2	+1.6
VAM	Vamos	3.56	272	*e*	P		Pn	14	25	37.2	+1.6
CHOS	Chios island	3.61	327		P		Pn	14	25	36.1	-0.1
CHOS					S		Sn	14	26	15.7	-1.9
CHOS	Chios island	3.61	327		P		Pn	14	25	36.1	-0.1
CHOS					S		Sn	14	26	15.7	-1.9
GVD	Gavdhos	3.71	263	*e*	P		Pn	14	25	37.5	0.0
GVD	Gavdhos	3.71	263	*e*	P		Pn	14	25	37.5	0.0
ERMK	Ermenek	3.74	69	*i*	P		Pn	14	25	40.0	+1.8
ERMK				*i*	S		Sn	14	26	24.5	+3.4
ERMK	Ermenek	3.74	69	*i*	P		Pn	14	25	40.0	+1.8
ERMK				*i*	S		Sn	14	26	24.5	+3.4
MAMC	Mammari	3.81	92		P		Pn	14	25	39.3	+0.3
MAMC	Mammari	3.81	92		P		Pn	14	25	39.3	+0.3
ALT	Altintas	3.87	18	*e*	PN		Pn	14	25	39.9	+0.1
ALT	Altintas	3.87	18	*e*	Pn		Pn	14	25	39.9	+0.1
CSS	Prodhromos 4.2nm,0.4s	3.93	95		P		Pn	14	25	40.7	+0.1
CSS					S		Sn	14	26	23.1	-2.4
CSS	Prodhromos	3.93	95	*e*	PN		Pn	14	25	40.7	+0.1
CSS	Prodhromos 4.2nm,0.4s	3.93	95		P		Pn	14	25	40.7	+0.1
CSS					S		Sn	14	26	23.1	-2.4
KONT	Konya--Tatoy	3.98	49	*e*	PN		Pn	14	25	41.1	-0.2
KONT	Konya--Tatoy	3.98	49	*e*	Pn		Pn	14	25	41.1	-0.2
LFK	Lefkose	4.07	90	*e*	PN		Pn	14	25	42.9	+0.4
LFK	Lefkose	4.07	90	*e*	Pn		Pn	14	25	42.9	+0.4
TVSB	Tavsanli	4.12	10	*e*	PN		Pn	14	25	42.6	-0.7
TVSB	Tavsanli	4.12	10	*e*	Pn		Pn	14	25	42.6	-0.7
LADK	Ladik-KONYA	4.15	46	*e*	PN		Pn	14	25	44.7	+1.0
LADK	Ladik-KONYA	4.15	46	*e*	Pn		Pn	14	25	44.7	+1.0
KIZT	Kizilcal	4.38	36	*e*	PN		Pn	14	25	46.5	-0.4
KIZT	Kizilcal	4.38	36	*e*	Pn		Pn	14	25	46.5	-0.4
KYTH	Kithira	4.58	283	*e*	P		Pn	14	25	49.6	+0.1
KYTH	Kithira	4.58	283	*e*	P		Pn	14	25	49.6	+0.1
EREN	Erenkoy	4.58	87	*e*	PN		Pn	14	25	50.1	+0.6
EREN	Erenkoy	4.58	87	*e*	Pn		Pn	14	25	50.1	+0.6
KIZK	Mersin	4.66	75	*i*	P		Pn	14	25	51.6	+1.0
KIZK				*i*	S		Sn	14	26	42.0	-1.4
KIZK	Mersin	4.66	75	*i*	P		Pn	14	25	51.6	+1.0
KIZK				*i*	S		Sn	14	26	42.0	-1.4
SVRH	Sivrihisar-ESK	4.69	29	*e*	PN		Pn	14	25	51.9	+0.8
SVRH	Sivrihisar-ESK	4.69	29	*e*	Pn		Pn	14	25	51.9	+0.8
GONE	Gonen-Balikesi	4.70	352	*e*	PN		Pn	14	25	51.3	+0.1
GONE	Gonen-Balikesi	4.70	352	*e*	Pn		Pn	14	25	51.3	+0.1
VLI	Veliai	4.75	288	*e*	P		Pn	14	25	51.7	-0.1
VLI	Veliai	4.75	288	*e*	P		Pn	14	25	51.7	-0.1
SULT	Sultanhani-AKS	4.87	53	*e*	PN		Pn	14	25	54.3	+0.8
SULT	Sultanhani-AKS	4.87	53	*e*	Pn		Pn	14	25	54.3	+0.8
CAVI	Cavuskoy	4.91	12	*e*	PN		Pn	14	25	54.0	-0.1
CAVI	Cavuskoy	4.91	12	*e*	Pn		Pn	14	25	54.0	-0.1
KRBG	Karabiga-Canak	5.10	349	*e*	PN		Pn	14	25	56.4	-0.2
KRBG	Karabiga-Canak	5.10	349	*e*	Pn		Pn	14	25	56.4	-0.2
GELI	Tayfur-Gelibol	5.27	342	*e*	PN		Pn	14	25	60.0	+1.0
GELI	Tayfur-Gelibol	5.27	342	*e*	Pn		Pn	14	26	00.0	+1.0
GULT	Gulveren	5.27	16	*e*	PN		Pn	14	25	59.4	+0.3
GULT	Gulveren	5.27	16	*e*	Pn		Pn	14	25	59.4	+0.3
YURE	YUREGIR	5.90	74	*i*	P		Pn	14	26	06.0	-1.7
YURE				*i*	S		Sn	14	27	09.9	-4.1
YURE	YUREGIR	5.90	74	*i*	P		Pn	14	26	06.0	-1.7
BRTR	Keskin Array B 0.6nm,0.3s,baz=238,slow=13,SNR=8.2	5.92	41		Pn		Pn	14	26	08.5	+0.5
BRTR					Sn		Sn	14	27	16.4	+1.8
MMAI	Mount Meron Ar 1.7nm,0.3s,baz=212,slow=25,SNR=13 6.8nm,0.3s,baz=308,slow=12,SNR=21	6.14	111		Pn		Pn	14	26	10.0	-1.0
MMAI					Sn		Sn	14	27	20.9	+0.9
HWQ	Hawqa 18nm,0.3s,baz=314,slow=28,SNR=7.8	6.17	98	*e*	P		Pn	14	26	10.8	-0.6
HWQ	Hawqa	6.17	98	*e*	P		Pn	14	26	10.9	-0.6
COBT	Iskenderun	6.34	77	*i*	P		Pn	14	26	14.1	+0.2
COBT				*i*	S		Sn	14	27	21.9	-3.2
COBT	Iskenderun	6.34	77	*i*	P		Pn	14	26	14.1	+0.2
COBT				*i*	S		Sn	14	27	21.9	-3.2
EIL	Elat 3.4nm,0.3s,baz=340,slow=8.0,SNR=5.1	7.85	135		Pn		Pn	14	26	33.5	-0.9
EIL					Sn		Sn	14	27	54.8	-7.0
AKASG	Malin Array Be 1.3nm,0.3s,baz=191,slow=11,SNR=4.5	15.31	2		Pn		Pn	14	28	17.0	+1.3
KEST	Kesra 0.1nm,0.3s,baz=135,slow=11,SNR=2.4	15.65	277		Pn		Pn	14	28	19.6	-0.6
PGF	Pioggiola	16.79	301	*e*	P		Pn	14	28	30.7	-4.0
GERES	GERESS Array B 0.2nm,0.3s,baz=134,slow=9.5,SNR=7.5	17.35	325		P		Pn	14	28	41.0	-0.5
DPC	Dobruska-Polom	17.40	333	*e*	P		P	14	28	43.1	+0.1
DPC				*e*	pP		pP	14	28	53.0	-0.6
DPC	Dobruska-Polom	17.40	333		P		P	14	28	43.1	+0.1
KHC	Kasperske Hory	17.61	326	*e*	P		P	14	28	45.8	+0.5
KHC				*e*	pP		pP	14	28	52.3	-3.6
KHC	Kasperske Hory	17.61	326		P		P	14	28	45.8	+0.5
UPC	Upice	17.65	333	*e*	P		P	14	28	45.7	+0.1
UPC	Upice	17.65	333		P		P	14	28	45.7	+0.1
FRF	La Foret Royal	18.75	302	*e*	P		P	14	28	55.1	-2.7
FRF	La Foret Royal	18.75	302	*e*	P		P	14	28	55.1	-2.7
LMR	La Mourre 28nm,1.1s	18.77	302	*e*	P		P	14	28	56.5	-1.6
LMR	La Mourre 28nm,1.1s	18.77	302	*e*	P		P	14	28	56.5	-1.6
MBDF	Montbardon	19.06	306	*e*	P		P	14	28	59.4	-2.0
MBDF	Montbardon	19.06	306	*e*	P		P	14	28	59.4	-2.0
LPG	La Plagne	19.38	308	*e*	P		P	14	29	03.4	-1.6
LPG	La Plagne	19.38	308	*e*	P		P	14	29	03.4	-1.6
LPL	La Plagne 8.3nm,0.6s	19.39	308	*e*	P		P	14	29	02.4	-2.7
LPL	La Plagne 8.0nm,0.6s	19.39	308	*e*	P		P	14	29	02.4	-2.7
CLL	Collm	19.46	330	*e*	(pP)		Pn	14	29	10.0	+3.0
CLL				*e*	PP		PnPn	14	29	21.0	-0.2
ORIF	Oris-en-Rattie	19.72	306	*e*	P		P	14	29	07.1	-1.5
ORIF	Oris-en-Rattie	19.72	306	*e*	P		P	14	29	07.1	-1.5
CABF	La Chapelle 9.6nm,0.6s	20.26	310	*e*	P		P	14	29	12.8	-1.6
CABF	La Chapelle 9.0nm,0.6s	20.26	310	*e*	P		P	14	29	12.8	-1.6
SMF	Signal de Mont 6.9nm,0.6s	21.69	309	*e*	P		P	14	29	27.3	-2.4
SMF	Signal de Mont 6.0nm,0.6s	21.69	309	*e*	P		P	14	29	27.3	-2.4
LOR	Lormes 3.1nm,0.5s	21.92	310	*e*	P		P	14	29	27.8	-4.4
AVF	Avril sur Loir	22.05	309	*e*	P		P	14	29	30.9	-2.7
AVF	Avril sur Loir	22.05	309	*e*	P		P	14	29	30.9	-2.7
SSF	Saint Saulge 7.9nm,0.7s	22.06	310	*e*	P		P	14	29	30.0	-3.6
SSF	Saint Saulge 7.0nm,0.7s	22.06	310	*e*	P		P	14	29	30.0	-3.6
MFF	Saint Martin d	24.26	306	*e*	P		P	14	29	52.7	-2.8
MFF	Saint Martin d	24.26	306	*e*	P		P	14	29	52.7	-2.8
FLN	La Foliniere	25.19	311	*e*	P		P	14	30	01.6	-2.3
FLN	La Foliniere	25.19	311	*e*	P		P	14	30	01.6	-2.3
GRR	Gorron 8.6nm,0.5s	25.29	310	*e*	P		P	14	30	02.6	-2.2
GRR	Gorron 8.0nm,0.5s	25.29	310	*e*	P		P	14	30	02.6	-2.2
ESDC	Sonseca Array 1.7nm,0.5s,baz=84,slow=9.9,SNR=7.4	26.06	289		P		P	14	30	11.4	-0.6
FINES	FINESS Array B 2.5nm,0.6s,baz=160,slow=11,SNR=15	26.12	357		P		P	14	30	12.1	-0.1
FINES					PcP		PcP	14	33	39.4	+0.9
HFS	Hagfors 2.2nm,0.6s,baz=139,slow=9.8,SNR=8.5	26.57	343		P		P	14	30	15.4	-0.9
NOA	NORSAR Array B 1.2nm,0.7s,baz=145,slow=7.7,SNR=3.4	27.97	342		P		P	14	30	29.6	+0.7
TORD	Torodi Ar. Bea 1.0nm,0.6s,baz=29,slow=10.0,SNR=24	32.82	234		P		P	14	31	11.7	-0.4
ARCES	ARCESS Array B 2.4nm,1.0s,baz=182,slow=9.7,SNR=6.0	34.24	358		P		P	14	31	23.9	-0.1
MKAR	Makanchi Array 0.4nm,0.4s,baz=266,slow=8.7,SNR=11	41.32	57		P		P	14	32	25.2	+1.3
ZALV	Zalesovo Beam 0.8nm,0.4s,baz=265,slow=9.7,SNR=3.0	42.84	46		P		P	14	32	37.1	+1.0
SCHQ	Schefferville 0.8nm,0.4s,baz=71,slow=3.1,SNR=5.4	64.80	320		P		P	14	35	16.2	-0.3
KSRS	Korea Array 1.0nm,0.6s,baz=298,slow=4.5,SNR=5.2	75.92	54		P		P	14	36	25.1	+0.4
YKA	Yellowknife Ar 0.4nm,0.5s,baz=30,slow=5.3,SNR=7.2	78.06	343		P		P	14	36	36.0	-0.3
ASAR	Alice Springs 0.1nm,0.4s,baz=301,slow=1.7,SNR=5.2	115.36	102		PKP		PKPdf	14	43	20.4	+0.5

*NSSC **19** 14:33:28.6±2.5, 35˚.41N×28˚.64E, h5km±999km, MD2.4, ML3.4*
*BJI **19** 14:33:30.7, 34˚.65N×27˚.97E, h40km, mb4.6/5*
*ISK **19** 14:33:31.6, 35˚.07N×28˚.33E, h83km, ML4.1*
*MOS **19** 14:33:34.2±1.1, 35˚.33N×28˚.47E, h28km, mb4.5/41, Error ellipse: s-maj=5.5km s-min=3.2km az=115.7*
*ISCJB **19** 14:33:35.2±0.2, 35˚.31N±0˚.02×28˚.60E±0˚.01, h43km±2km, mb4.3/53, MS5.0/1, Error ellipse: s-maj=2.7km s-min=1.8km az=17.0*
*IDC **19** 14:33:35.6±5.3, 35˚.39N×28˚.48E, h23km±35km, mb4.1/24, mb1 4.2/35, mb1mx4.1/41, mbtmp4.1/35, ML3.9/11, MS4.3/2, Ms1 4.3/2, ms1mx3.5/51, Error ellipse: s-maj=10.7km s-min=10.3km az=124.0*
*HLW **19** 14:33:35.8, 35˚.33N×28˚.58E, h31km±15km, Md4.2, Ml4.5*
*DDA **19** 14:33:36.1, 35˚.46N×28˚.74E, h29km, MD3.9*
*CSEM **19** 14:33:36.9±0.1, 35˚.34N×28˚.58E, h40km, mb4.4/9, Mw3.7, Error ellipse: s-maj=2.6km s-min=1.9km az=28.0*
*NEIC **19** 14:33:37.4±0.4, 35˚.39N×28˚.54E, h42km±4km, mb4.5/40, MD4.1(ATH), Error ellipse: s-maj=4.4km s-min=3.3km az=189.0*
*THE **19** 14:33:38.9, 35˚.42N×28˚.58E, h39km±2km, ML4.4/6, Error ellipse: s-maj=2.9km s-min=0.7km az=344.0*
*NIC **19** 14:33:41.2±0.2, 35˚.23N×28˚.95E, h39km, mb4.4, ML4.0, MW3.7*
*ATH **19** 14:33:41.3, 35˚.62N×28˚.18E, h46km±34km, MD4.1/11*
*SZGRF **19** 14:33:43.2, 35˚.75N×27˚.93E, h10km, mb4.3, Dodecanese Islands, Greece*
ISC 19 14:33:36.6±0.8, 35˚.34N±0˚.03×28˚.57E±0˚.02, h32km±5km, n775, σ1§31/809, mb4.4/53, 7C-15D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h	m	s	Res ISC
ARG	Arkhangelos	0.94	338	P		Pb	14	33	54.3	-0.1
ARG				S		Sn	14	34	05.9	0.0
ARG	Arkhangelos	0.94	338	*e*P		Pb	14	33	54.3	-0.1
ARG	Arkhangelos	0.94	338	*e*P		Pb	14	33	54.3	-0.1
ARG	Arkhangelos	0.94	338	*e*P		Pb	14	33	54.3	-0.1
ARG	Arkhangelos	0.94	338	*e*P		Pb	14	33	54.3	-0.1
ARG				S		Sn	14	34	05.9	0.0
KARP	Karpathos	1.17	281	P		Pb	14	33	58.2	+0.1
KARP				S		Sb	14	34	13.4	+0.4
KARP	Karpathos	1.17	281	*e*P		Pb	14	33	58.3	+0.1
KARP	Karpathos	1.17	281	*e*P		Pb	14	33	58.3	+0.1
KARP	Karpathos	1.17	281	P		Pb	14	33	58.2	+0.1
KARP				S		Sb	14	34	13.4	+0.4
AKAS	Kas	1.23	43	*i*	P	Pb	14	33	58.7	-0.6
AKAS				*i*	S	Sn	14	34	07.6	-5.6
AKAS	Kas	1.23	43	*i*	P	Pb	14	33	58.7	-0.6
FETY	Fethiye	1.36	18	*e*PN		Pb	14	34	00.5	-0.9
FETY	Fethiye	1.36	18	Pn		Pb	14	34	00.5	-0.9
FETY	Fethiye	1.36	18	*e*Pn		Pb	14	34	00.5	-0.9
DALY	Dalyan (Mu¨la	1.47	3	*e*PN		Pn	14	34	01.3	+0.5
DALY	Dalyan (Mu¨la	1.47	3	*e*Pn		Pn	14	34	01.3	+0.5
TURN	Turunc	1.53	1	*i*	P	Pn	14	34	01.5	-0.1
TURN				*i*	S	Sb	14	34	33.4	+10
TURN	Turunc	1.53	1	*i*	P	Pn	14	34	01.5	-0.1
DAT	Datca	1.60	330	*e*PN		Pn	14	34	01.8	-0.9
DAT	Datca	1.60	330	*e*Pn		Pn	14	34	01.8	-0.9
NIS1	Nisyros Isl.	1.69	319	P		Pn	14	34	04.4	+0.6
NIS1				S		Sn	14	34	24.3	-0.1
NIS1	Nisyros Isl.	1.69	319	P		Pn	14	34	04.4	+0.6
NIS1				S		Sn	14	34	24.3	-0.1
ELL	Elmali	1.77	37	*e*PN		Pn	14	34	06.4	+1.3
ELL	Elmali	1.77	37	P		Pn	14	34	06.4	+1.3
ELL	Elmali	1.77	37	Pn		Pn	14	34	06.4	+1.3
ELL	Elmali	1.77	37	*e*Pn		Pn	14	34	06.4	+1.3
YER	Yerkesik	1.80	353	*e*PN		Pn	14	34	06.0	+0.5
YER	Yerkesik	1.80	353	P		Pn	14	34	06.0	+0.5
YER	Yerkesik	1.80	353	Pn		Pn	14	34	06.0	+0.5
YER	Yerkesik	1.80	353	*e*Pn		Pn	14	34	06.0	+0.5
ZKR	Zakros	1.94	264	P		Pn	14	34	08.9	+1.7
ZKR				S		Sn	14	34	32.2	+1.7
ZKR	Zakros	1.94	264	*e*P		Pn	14	34	09.0	+1.7
ZKR	Zakros	1.94	264	*e*P		Pn	14	34	09.0	+1.7
ZKR	Zakros	1.94	264	P		Pn	14	34	08.9	+1.7
ZKR				S		Sn	14	34	32.2	+1.7
GLHS	Glhisar (BURDU	1.96	22	*e*PN		Pn	14	34	09.1	+1.5
GLHS	Glhisar (BURDU	1.96	22	*e*Pn		Pn	14	34	09.1	+1.5
BODT	Bodrum	2.00	330	*e*PN		Pn	14	34	07.1	-0.9
BODT	Bodrum	2.00	330	Pn		Pn	14	34	07.1	-0.9
BODT	Bodrum	2.00	330	*e*Pn		Pn	14	34	07.1	-0.9
MLSB	Milas	2.05	342	*e*PN		Pn	14	34	08.9	+0.1
MLSB	Milas	2.05	342	*e*Pn		Pn	14	34	08.9	+0.1
GOLH	Golhisar	2.05	23	*i*	P	Pb	14	34	11.3	-2.0
GOLH				*i*	S	Sb	14	35	01.6	+23
GOLH	Golhisar	2.05	23	*i*	P	Pb	14	34	11.3	-2.0
KORT	Korkueli	2.20	41	*i*	P	Pb	14	34	14.7	-1.0
KORT				*i*	S	Sb	14	34	57.9	+15
KORT	Korkueli	2.20	41	*i*	P	Pb	14	34	14.7	-1.0
ANTB	Antalya	2.30	47	*e*PN		Pn	14	34	13.7	+1.6
ANTB	Antalya	2.30	47	*e*Pn		Pn	14	34	13.7	+1.6
DNZL	Cakiroluk	2.38	9	*i*	P	Pn	14	34	14.1	+0.7
DNZL				*i*	S	Sb	14	35	02.4	+14
DNZL	Cakiroluk	2.38	9	*i*	P	Pn	14	34	14.1	+0.7
AYDN	Tasoluk	2.38	347	*i*	P	Pn	14	34	14.7	+1.3
AYDN				*i*	S	Sb	14	34	52.7	+5.0
AYDN	Tasoluk	2.38	347	*i*	P	Pn	14	34	14.7	+1.3
NPS	Neapolis	2.42	269	P		Pn	14	34	15.9	+2.0
NPS				S		Sn	14	34	44.1	+1.7

NPS	Neapolis	2.42	269	*e*	P		Pn	14	34	16.4	+2.5
NPS	Neapolis	2.42	269	*e*	P		Pn	14	34	16.4	+2.5
NPS	Neapolis	2.42	269	*e*	P		Pn	14	34	16.4	+2.5
NPS	Neapolis	2.42	269		P		Pn	14	34	15.9	+2.0
NPS					S		Sn	14	34	44.1	+1.7
DENT	Denizli	2.44	9	*e*	PN		Pn	14	34	15.3	+1.2
DENT	Denizli	2.44	9	*e*	Pn		Pn	14	34	15.3	+1.2
LAST	Lasithi	2.53	267		P		Pn	14	34	17.6	+2.1
LAST	Lasithi	2.53	267	*e*	P		Pn	14	34	17.7	+2.2
LAST	Lasithi	2.53	267	*e*	P		Pn	14	34	17.7	+2.2
LAST	Lasithi	2.53	267		P		Pn	14	34	17.6	+2.1
GCAM	G?zelcaml?	2.59	336	*i*	P		Pn	14	34	16.9	+0.8
GCAM				*i*	S		Sb	14	35	04.4	+11
GCAM	G?zelcaml?	2.59	336	*i*	P		Pn	14	34	16.9	+0.8
BCK	Bucak	2.67	37	*e*	PN		Pn	14	34	19.1	+1.7
BCK	Bucak	2.67	37	*e*	Pn		Pn	14	34	19.1	+1.7
THR1	Thera Island	2.73	293		P		Pn	14	34	18.8	+0.7
THR1	Thera Island	2.73	293		P		Pn	14	34	18.8	+0.7
SMG	Samos	2.74	330		P		Pn	14	34	18.9	+0.6
SMG					S		Sn	14	34	50.4	0.0
SMG	Samos	2.74	330	*e*	P		Pn	14	34	18.9	+0.6
SMG	Samos	2.74	330	*e*	P		Pn	14	34	18.9	+0.6
SMG	Samos	2.74	330	*e*	P		Pn	14	34	18.9	+0.6
SMG					S		Sn	14	34	50.4	0.0
THR2	Thira island,	2.77	294		P		Pn	14	34	19.4	+0.7
THR2	Thira island,	2.77	294		P		Pn	14	34	19.4	+0.7
THR3	Thira Island,	2.78	293		P		Pn	14	34	19.7	+0

SLUM		**4.75**	**217**	P		**Pn**	14 34 45.0	-1.0
	baz=218							
SLUM				S		**Sn**	14 35 35.7	-4.3
	baz=218							
SLUM		**4.75**	**217**	P		**Pn**	14 34 45.0	-1.0
SLUM				S		**Sn**	14 35 35.7	-4.3
VLI	**Veliai**	**4.76**	**288**	P		**Pn**	14 34 47.1	+1.0
VLI				S		**Sn**	14 35 41.4	+1.2
VLI	**Veliai**	**4.76**	**288**	P		**Pn**	14 34 47.1	+1.0
VLI				S		**Sn**	14 35 41.4	+1.2
DID	**Didima**	**4.81**	**298**	P		**Pn**	14 34 48.1	+1.3
DID	**Didima**	**4.81**	**298**	P		**Pn**	14 34 48.1	+1.3
HBRG	**Burj al 'Arab**	**4.87**	**167**	P		**Pn**	14 34 47.8	+0.2
HBRG	**Burj al 'Arab**	**4.87**	**167**	P		**Pn**	14 34 47.0	-0.6
	baz=167							
HBRG				AMP			14 35 00.0	
	comp=N,1150µm,0.5s,logA/T=6.3,baz=167							
HBRG	**Burj al 'Arab**	**4.87**	**167**	P		**Pn**	14 34 47.8	+0.2
KCTX	**Karacabey (Bur**	**4.92**	**358**	*e*PN		**Pn**	14 34 48.0	-0.2
KCTX	**Karacabey (Bur**	**4.92**	**358**	*e*Pn		**Pn**	14 34 48.0	-0.2
CAVI	**Cavuskoy**	**4.96**	**11**	*e*PN		**Pn**	14 34 48.9	+0.1
CAVI	**Cavuskoy**	**4.96**	**11**	*e*Pn		**Pn**	14 34 48.9	+0.1
BNT	**Bandirma**	**5.03**	**354**	*e*PN		**Pn**	14 34 49.4	-0.4
BNT	**Bandirma**	**5.03**	**354**	*e*Pn		**Pn**	14 34 49.4	-0.4
IZI	**Iznik**	**5.04**	**8**	*e*PN		**Pn**	14 34 50.1	+0.2
IZI	**Iznik**	**5.04**	**8**	*e*Pn		**Pn**	14 34 50.1	+0.2
KRBG	**Karabiga-Canak**	**5.14**	**349**	*e*PN		**Pn**	14 34 50.5	-0.7
KRBG	**Karabiga-Canak**	**5.14**	**349**	*e*Pn		**Pn**	14 34 50.5	-0.7
ARMT	**Armutlu**	**5.22**	**2**	*e*PN		**Pn**	14 34 52.3	-0.1
ARMT	**Armutlu**	**5.22**	**2**	*e*Pn		**Pn**	14 34 52.3	-0.1
LPK	**Lapseki**	**5.22**	**345**	*e*PN		**Pn**	14 34 51.0	-1.4
LPK	**Lapseki**	**5.22**	**345**	*e*Pn		**Pn**	14 34 51.0	-1.4
DYR	**Agios Nikonas**	**5.25**	**287**	P		**Pn**	14 34 54.5	+1.8
DYR	**Agios Nikonas**	**5.25**	**287**	P		**Pn**	14 34 54.5	+1.8
YLV	**Yalova**	**5.25**	**7**	*e*PN		**Pn**	14 34 53.5	+0.6
YLV	**Yalova**	**5.25**	**7**	*e*Pn		**Pn**	14 34 53.5	+0.6
GULT	**Gulveren**	**5.31**	**16**	*e*PN		**Pn**	14 34 54.0	+0.3
GULT	**Gulveren**	**5.31**	**16**	*e*Pn		**Pn**	14 34 54.0	+0.3
GELI	**Tayfur-Gelibol**	**5.31**	**342**	*e*PN		**Pn**	14 34 52.1	-1.5
GELI	**Tayfur-Gelibol**	**5.31**	**342**	*e*Pn		**Pn**	14 34 52.1	-1.5
AOS	**Alonnisos**	**5.34**	**317**	P		**Pn**	14 34 55.3	+1.2
AOS	**Alonnisos**	**5.34**	**317**	P		**Pn**	14 34 55.3	+1.2
GULE	**Gulek**	**5.38**	**67**	*i* P		**Pn**	14 34 57.0	+2.3
GULE				*i* S		**Sn**	14 35 56.4	+0.9
GULE	**Gulek**	**5.38**	**67**	*i* P		**Pn**	14 34 57.0	+2.3
GULE				*i* S		**Sn**	14 35 56.4	+0.9
VLX	**Vlachokerasia**	**5.39**	**294**	P		**Pn**	14 34 56.3	+1.5
VLX				S		**Sn**	14 35 56.6	+0.9
VLX	**Vlachokerasia**	**5.39**	**294**	P		**Pn**	14 34 56.3	+1.5
VLX				S		**Sn**	14 35 56.6	+0.9
AFSR	**Afˇar-Bala (A**	**5.44**	**40**	*e*PN		**Pn**	14 34 56.0	+0.5
AFSR	**Afˇar-Bala (A**	**5.44**	**40**	*e*Pn		**Pn**	14 34 56.0	+0.5
RKY	**Sarkoy-Tekirda**	**5.45**	**349**	*e*PN		**Pn**	14 34 54.6	-0.9
RKY	**Sarkoy-Tekirda**	**5.45**	**349**	*e*Pn		**Pn**	14 34 54.6	-0.9
MDUB	**Mudurnu**	**5.53**	**21**	*e*PN		**Pn**	14 34 57.2	+0.6
MDUB	**Mudurnu**	**5.53**	**21**	*e*Pn		**Pn**	14 34 57.2	+0.6
MFT	**Murefte**	**5.53**	**350**	*e*PN		**Pn**	14 34 55.6	-1.1
MFT	**Murefte**	**5.53**	**350**	*e*Pn		**Pn**	14 34 55.6	-1.1
ERIK	**Erikli-Kesan**	**5.56**	**344**	*e*PN		**Pn**	14 34 55.8	-1.2
ERIK	**Erikli-Kesan**	**5.56**	**344**	*e*Pn		**Pn**	14 34 55.8	-1.2
NIG	**Nigde**	**5.58**	**59**	*e*PN		**Pn**	14 34 57.6	0.0
NIG	**Nigde**	**5.58**	**59**	*e*Pn		**Pn**	14 34 57.6	0.0
ANTO	**Ankara**	**5.63**	**35**	*e*P		**Pn**	14 34 57.1	-0.9
ANTO	**Ankara**	**5.63**	**35**	*e*Pn		**Pn**	14 34 57.1	-0.9
ANTO	**Ankara**	**5.63**	**35**	*e*P		**Pn**	14 34 57.1	-0.9
LOD	**Lodumlu**	**5.63**	**35**	*e*PN		**Pn**	14 34 58.4	+0.4
LOD	**Lodumlu**	**5.63**	**35**	*e*Pn		**Pn**	14 34 58.4	+0.4
GUR	**Goura**	**5.63**	**299**	P		**Pn**	14 35 00.3	+2.1
GUR	**Goura**	**5.63**	**299**	P		**Pn**	14 35 00.3	+2.1
KRTS	**Karatas**	**5.66**	**75**	*e*PN		**Pn**	14 34 57.8	-0.6
KRTS	**Karatas**	**5.66**	**75**	*e*Pn		**Pn**	14 34 57.8	-0.6
ITM	**Ithomi**	**5.67**	**291**	P		**Pn**	14 35 00.5	+1.9
ITM	**Ithomi**	**5.67**	**291**	P		**Pn**	14 35 00.5	+1.9
ENEZ	**Enez**	**5.71**	**341**	*e*PN		**Pn**	14 34 57.7	-1.4
ENEZ	**Enez**	**5.71**	**341**	*e*Pn		**Pn**	14 34 57.7	-1.4
HMYD	**Mayadein**	**5.84**	**161**	P		**Pn**	14 35 00.7	-0.2
	baz=160							
HMYD	**Mayadein**	**5.84**	**161**	P		**Pn**	14 35 00.7	-0.2
XOR	**Xorichti**	**5.87**	**315**	P		**Pn**	14 35 03.1	+1.8
XOR	**Xorichti**	**5.87**	**315**	P		**Pn**	14 35 03.1	+1.8
SQR		**5.88**	**157**	P		**Pn**	14 35 01.2	-0.2
	baz=157							
SQR		**5.88**	**157**	P		**Pn**	14 35 01.2	-0.2
YURE	**YUREGIR**	**5.91**	**73**	*i* P		**Pn**	14 35 01.7	-0.2
YURE				*i* S		**Sn**	14 36 07.1	-1.4
YURE	**YUREGIR**	**5.91**	**73**	*i* P		**Pn**	14 35 01.7	-0.2
YURE				*i* S		**Sn**	14 36 07.1	-1.4
BR131	**Keskin Array S**	**5.95**	**41**	*e*Pn		**Pn**	14 35 02.0	-0.5
	comp=N,6.7nm,0.6s							
BR131	**Keskin Array S**	**5.95**	**41**	*e*Pn		**Pn**	14 35 02.0	-0.5
	comp=N,6.7nm,0.6s							
BRTR	**Keskin Array B**	**5.95**	**41**	Pn		**Pn**	14 35 03.1	+0.6
BRTR				Sn		**Sn**	14 36 11.4	+1.9
BRTR	**Keskin Array B**	**5.95**	**41**	Pn		**Pn**	14 35 03.1	+0.6
	comp=N,0.4nm,0.3s,baz=212,slow=12,SNR=18							
BRTR				Sn		**Sn**	14 36 11.4	+1.9
	comp=N,1.4nm,0.3s,baz=214,slow=27,SNR=8.3							
BRTR	**Keskin Array B**	**5.95**	**41**	Pn		**Pn**	14 35 03.1	+0.6
BRTR	**Keskin Array B**	**5.95**	**41**	*e*P		**Pn**	14 35 04.5	+2.0
	comp=N,3.0nm,0.8s							
BRTR				Sn		**Sn**	14 36 11.4	+1.9
HLW	**Helwan**	**5.95**	**156**	P		**Pn**	14 35 03.1	+0.7
HLW				S		**Sn**	14 36 04.3	-5.1
HLW	**Helwan**	**5.95**	**156**	P		**Pn**	14 35 03.1	+0.7
HLW				S		**Sn**	14 36 04.3	-5.1
HLW	**Helwan**	**5.95**	**156**	P		**Pn**	14 35 01.8	-0.6
	baz=156							
HLW	**Helwan**	**5.95**	**156**	P		**Pn**	14 35 01.8	-0.6
HLW				S		**Sn**	14 36 04.3	-5.1
HNAT	**Natroun**	**5.95**	**163**	P		**Pn**	14 35 01.9	-0.5
	baz=162							
HNAT	**Natroun**	**5.95**	**163**	P		**Pn**	14 35 01.9	-0.5
FYM	**Al Fayyum**	**6.01**	**159**	P		**Pn**	14 35 02.2	-1.0
	baz=159							
FYM	**Al Fayyum**	**6.01**	**159**	P		**Pn**	14 35 02.2	-1.0
TRIZ	**Trizonia**	**6.02**	**302**	P		**Pn**	14 35 05.2	+1.9
TRIZ	**Trizonia**	**6.02**	**302**	P		**Pn**	14 35 05.2	+1.9
LAKA	**Lakka**	**6.03**	**301**	P		**Pn**	14 35 05.5	+2.0
LAKA	**Lakka**	**6.03**	**301**	P		**Pn**	14 35 05.5	+2.0
AYT	**Al 'Ayyat**	**6.03**	**158**	P		**Pn**	14 35 02.1	-1.4
	baz=158							
AYT	**Al 'Ayyat**	**6.03**	**158**	P		**Pn**	14 35 02.1	-1.4
CEYT	**Ceyhan**	**6.04**	**72**	*e*PN		**Pn**	14 35 03.1	-0.5
CEYT	**Ceyhan**	**6.04**	**72**	*e*Pn		**Pn**	14 35 03.2	-0.5
ARNB	**Al Arnab**	**6.05**	**83**	*e*P		Pn	14 34 59.1	-4.8
ARNB				*e*S		Sn	14 36 02.5	-10
ARNB				AML		AML	14 36 15.4	
	comp=N,77nm,0.5s							
ARNB				AML		AML	14 36 21.2	
	comp=E,36nm,0.6s							
ARNB	**Al Arnab**	**6.05**	**83**	*e*P		Pn	14 34 59.9	-4.0
ARNB				*e*S		Sn	14 36 03.7	-8.5
ARNB				AML		AML	14 36 13.0	
	comp=E,37nm,0.2s							
ARNB				AML		AML	14 36 15.4	
	comp=N,77nm,0.6s							
ARNB	**Al Arnab**	**6.05**	**83**	*e*P		Pn	14 34 59.7	-4.2
ARNB				*e*S		Sn	14 36 03.4	-8.8
ARNB				AML		AML	14 36 13.0	
	comp=E,37nm,0.3s							
ARNB				AML		AML	14 36 15.4	
	comp=N,77nm,0.6s							
ARNB	**Al Arnab**	**6.05**	**83**	*e*P		Pn	14 34 59.1	-4.8
	SNR=51							
ARNB				*e*S		Sn	14 36 02.5	-10
	comp=N,36nm,0.6s,SNR=49							
AMAG	**Maghara**	**6.09**	**139**	P		**Pn**	14 35 03.5	-0.9
	baz=139							
AMAG	**Maghara**	**6.09**	**139**	P		**Pn**	14 35 03.6	-0.9
MMAI	**Mount Meron Ar**	**6.12**	**110**	Pn		**Pn**	14 35 04.4	-0.4
MMAI				Sn		**Sn**	14 36 14.6	+0.8
MMAI	**Mount Meron Ar**	**6.12**	**110**	Pn		**Pn**	14 35 04.4	-0.4
	comp=N,16nm,0.3s,baz=315,slow=13,SNR=37							
MMAI				Sn		**Sn**	14 36 14.6	+0.8
	comp=N,22nm,0.3s,baz=301,slow=29,SNR=7.5							
MMAI	**Mount Meron Ar**	**6.12**	**110**	Pn		**Pn**	14 35 04.4	-0.4
MMAI				Sn		**Sn**	14 36 14.6	+0.8
RSH		**6.15**	**134**	P		**Pn**	14 35 05.0	-0.1
	baz=133							
RSH		**6.15**	**134**	P		**Pn**	14 35 05.0	-0.1
HWQ	**Hawqa**	**6.16**	**98**	*e*P		**Pn**	14 35 05.5	+0.1
YAYL	**Yayladag**	**6.17**	**81**	*i* P		**Pn**	14 35 06.0	+0.4
YAYL				*i* S		**Sn**	14 36 13.2	-2.0
YAYL	**Yayladag**	**6.17**	**81**	*i* P		**Pn**	14 35 06.0	+0.4
YAYL				*i* S		**Sn**	14 36 13.2	-2.0
AGG	**Agios Georgios**	**6.19**	**308**	P		**Pn**	14 35 06.9	+1.2
AGG	**Agios Georgios**	**6.19**	**308**	P		**Pn**	14 35 06.9	+1.2
HTY	**Hatay**	**6.21**	**81**	*e*PN		**Pn**	14 35 04.8	-1.1
HTY	**Hatay**	**6.21**	**81**	*e*Pn		**Pn**	14 35 04.8	-1.1
KOZT	**Kozan**	**6.23**	**68**	*e*PN		**Pn**	14 35 05.9	-0.4
KOZT	**Kozan**	**6.23**	**68**	*e*Pn		**Pn**	14 35 05.9	-0.4
HSAF	**As Saff**	**6.24**	**155**	P		**Pn**	14 35 05.8	-0.6
	baz=155							
HSAF	**As Saff**	**6.24**	**155**	P		**Pn**	14 35 05.8	-0.6
RCY	**Rachaya**	**6.28**	**105**	*e*P		**Pn**	14 35 07.1	0.0
GLL	**Jalalah**	**6.33**	**154**	P		**Pn**	14 35 07.0	-0.6
	baz=154							
GLL	**Jalalah**	**6.33**	**154**	P		**Pn**	14 35 07.1	-0.6
COBT	**Iskenderun**	**6.35**	**77**	*i* P		**Pn**	14 35 08.2	+0.1
COBT				*i* S		**Sn**	14 36 17.0	-2.5
COBT	**Iskenderun**	**6.35**	**77**	*i* P		**Pn**	14 35 08.2	+0.1
COBT				*i* S		**Sn**	14 36 17.0	-2.5
BRBR	**Barbar**	**6.40**	**105**	*e*P		Pn	14 35 03.6	-5.2
BRBR				*e*S		Sn	14 36 11.6	-9.3
BRBR				AML		AML	14 36 17.2	
	comp=N,157nm,0.5s							
BRBR				AML		AML	14 36 24.6	
	comp=E,70nm,0.5s							
BRBR	**Barbar**	**6.40**	**105**	*e*P		Pn	14 35 03.1	-5.7
BRBR				*e*S		Sn	14 36 11.4	-10
BRBR				AML		AML	14 36 17.3	
	comp=N,158nm,0.7s							
BRBR				AML		AML	14 36 24.6	
	comp=E,70nm,0.4s							
BRBR	**Barbar**	**6.40**	**105**	*e*P		Pn	14 35 04.2	-4.6
BRBR				*e*S		Sn	14 36 11.3	-10
BRBR				AML		AML	14 36 17.2	
	comp=N,157nm,0.6s							
BRBR				AML		AML	14 36 24.5	
	comp=E,71nm,0.6s							
BRBR	**Barbar**	**6.40**	**105**	*e*P		Pn	14 35 03.6	-5.2
	SNR=51							
BRBR				*e*S		Sn	14 36 11.6	-9.3
	comp=E,70nm,0.5s,SNR=49							
HAWK	**Haweek**	**6.49**	**95**	*e*S		Sn	14 36 15.4	-7.5
HAWK				AML		AML	14 36 24.2	
	comp=N,74nm,0.7s							
HAWK				AML		AML	14 36 28.7	
	comp=E,37nm,0.9s							
HAWK	**Haweek**	**6.49**	**95**	*e*P		Pn	14 35 05.8	-4.1
HAWK				*e*S		Sn	14 36 13.9	-9.0
HAWK				AML		AML	14 36 28.7	
	comp=E,37nm,0.7s							
HAWK				AML		AML	14 36 30.0	
	comp=N,76nm,0.5s							
HAWK	**Haweek**	**6.49**	**95**	*e*P		**Pn**	**14 35 07.5**	**-2.4**
HAWK				*e*S		Sn	14 36 14.1	-8.8
HAWK				AML		AML	14 36 28.7	
	comp=E,37nm,0.9s							
HAWK				AML		AML	14 36 30.0	
	comp=N,75nm,0.5s							
HAWK	**Haweek**	**6.49**	**95**	*e*P		**Pn**	**14 35 07.5**	**-2.4**
	SNR=90							
HAWK				*e*S		Sn	14 36 15.4	-7.5
	comp=N,164nm,0.9s,SNR=49							
SUZ		**6.56**	**146**	P		**Pn**	**14 35 11.0**	**+0.2**
	baz=145							
SUZ		**6.56**	**146**	P		**Pn**	**14 35 11.0**	**+0.2**
QASN	**Qassioun**	**6.62**	**104**	AML		AML	14 36 14.7	
	comp=E,272nm,0.8s							
QASN				AML		AML	14 36 14.8	
	comp=N,164nm,0.9s							
QASN	**Qassioun**	**6.62**	**104**	AML		AML	14 36 14.7	
	comp=E,272nm,0.8s							
QASN				AML		AML	14 36 14.7	
	comp=N,159nm,0.8s							
SWA2		**6.63**	**204**	P		**Pn**	**14 35 11.5**	**-0.2**
	baz=205							
SWA2		**6.63**	**204**	P		**Pn**	**14 35 11.5**	**-0.2**
TCHB	**Talchebab**	**6.70**	**111**	*e*P		Pn	14 35 05.3	-7.4
TCHB				*e*S		Sn	14 36 17.5	-10
TCHB				AML		AML	14 36 23.5	
	comp=E,195nm,0.3s							
TCHB				AML		AML	14 36 26.2	
	comp=N,170nm,0.5s							
TCHB	**Talchebab**	**6.70**	**111**	*e*P		Pn	14 35 05.9	-6.9
TCHB				*e*S		Sn	14 36 17.4	-11
THL	**Klokotos Trika**	**6.70**	**311**	P		**Pn**	**14 35 14.1**	**+1.4**
THL	**Klokotos Trika**	**6.70**	**311**	P		**Pn**	**14 35 14.1**	**+1.4**
HBNS	**Bani Suwayf**	**6.75**	**160**	P		**Pn**	**14 35 12.8**	**-0.7**
	baz=159							
HBNS	**Bani Suwayf**	**6.75**	**160**	P		**Pn**	**14 35 12.8**	**-0.7**
BNN	**Bunyan**	**6.79**	**57**	*e*PN		**Pn**	**14 35 13.7**	**-0.4**
BNN	**Bunyan**	**6.79**	**57**	*e*Pn		**Pn**	**14 35 13.7**	**-0.4**
TOTH	**TOTAH**	**6.79**	**105**	*e*P		Pn	14 35 10.0	-4.1
TOTH				*e*S		Sn	14 36 23.8	-6.6
TOTH				AML		AML	14 36 28.4	
	comp=E,74nm,0.6s							
TOTH				AML		AML	14 36 38.9	
	comp=N,69nm,0.5s							
TOTH	**TOTAH**	**6.79**	**105**	*e*P		**Pn**	**14 35 11.1**	**-3.0**
TOTH				*e*S		Sn	14 36 23.2	-7.2
TOTH	**TOTAH**	**6.79**	**105**	*e*P		Pn	14 35 10.0	-4.1
	SNR=51							
TOTH				*e*S		Sn	14 36 23.8	-6.6
	comp=N,69nm,0.5s,SNR=49							
SARI	**SarD1z-Kayseri**	**7.00**	**62**	*e*PN		**Pn**	**14 35 16.5**	**-0.5**
VLS	**Valsamata**	**7.00**	**296**	P		**Pn**	**14 35 18.0**	**+1.2**
VLS	**Valsamata**	**7.00**	**296**	P		**Pn**	**14 35 18.0**	**+1.2**
AWBH		**7.01**	**178**	P		**Pn**	**14 35 16.2**	**-0.7**
	baz=177							
AWBH		**7.01**	**178**	P		**Pn**	**14 35 16.2**	**-0.7**
HNKL	**Nakhl**	**7.07**	**138**	P		**Pn**	**14 35 17.4**	**-0.4**
	baz=138							
HNKL	**Nakhl**	**7.07**	**138**	P		**Pn**	**14 35 17.4**	**-0.4**
LKD2	**Lefkada island**	**7.20**	**301**	P		**Pn**	**14 35 21.3**	**+1.8**
LKD2	**Lefkada island**	**7.20**	**301**	P		**Pn**	**14 35 21.3**	**+1.8**
SALA	**Sala**	**7.27**	**109**	*e*P		Pn	14 35 15.5	-5.2
SALA				*e*S		Sn	14 36 33.1	-9.1
SALA				AML		AML	14 36 39.5	
	comp=E,7.8nm,0.8s							
SALA				AML		AML	14 36 45.4	
	comp=N,89nm,0.7s							
SALA	**Sala**	**7.27**	**109**	*e*P		Pn	14 35 15.3	-5.4
SALA				*e*S		Sn	14 36 31.8	-11
SALA				AML		AML	14 36 39.5	
	comp=E,7.8nm,0.8s							
SALA				AML		AML	14 36 45.5	
	comp=N,88nm,0.3s							
SALA	**Sala**	**7.27**	**109**	*e*P		Pn	14 35 15.5	-5.2
	SNR=51							
SALA				*e*S		Sn	14 36 33.1	-9.1
	comp=N,89nm,0.7s,SNR=49							
ASF	**Jabal al Asfar**	**7.62**	**112**	Pn		**Pn**	**14 35 25.9**	**+0.5**
ASF				Sn		**Sn**	**14 36 55.7**	**+4.9**
ASF	**Jabal al Asfar**	**7.62**	**112**	Pn		**Pn**	**14 35 25.9**	**+0.5**
	comp=N,1.4nm,0.3s,baz=159,slow=3.3,SNR=10							
ASF				Sn		**Sn**	**14 36 55.7**	**+4.9**
	comp=N,1.7nm,0.3s,baz=9.2,slow=23,SNR=3.3							
ASF				LR		LR	14 38 37.9	
	comp=N,749nm,21.6s,baz=170,slow=39							
ZALF	**Zalf**	**7.66**	**106**	*e*P		**Pn**	**14 35 23.6**	**-2.3**
ZALF				*e*S		Sn	14 36 42.5	-9.1
ZALF	**Zalf**	**7.66**	**106**	*e*P		**Pn**	**14 35 23.6**	**-2.3**
	SNR=90							
EIL	**Elat**	**7.81**	**135**	Pn		**Pn**	**14 35 27.5**	**-0.5**
EIL				Sn		**Sn**	**14 36 51.2**	**-4.1**
EIL	**Elat**	**7.81**	**135**	Pn		**Pn**	**14 35 27.5**	**-0.5**
	comp=N,12nm,0.3s,baz=320,slow=5.1,SNR=53							
EIL				Sn		**Sn**	**14 36 51.2**	**-4.1**
	comp=N,20nm,0.3s,baz=29,slow=18,SNR=6.4							
EIL	**Elat**	**7.81**	**135**	Pn		**Pn**	**14 35 27.5**	**-0.5**
EIL				Sn		**Sn**	**14 36 51.2**	**-4.1**
HFRF	**Wahat Farafira**	**8.17**	**182**	P		**Pn**	**14 35 32.5**	**-0.4**
	baz=182							
HFRF	**Wahat Farafira**	**8.17**	**182**	P		**Pn**	**14 35 32.5**	**-0.4**
MALT	**Malatya**	**8.44**	**67**	*e*P		**Pn**	**14 35 37.2**	**+0.5**
MALT				pmax		pmax		
	comp=Z,6.0nm,0.7s							
MALT	**Malatya**	**8.44**	**67**	*e*Pn		**Pn**	**14 35 37.2**	**+0.5**
	comp=Z,6.1nm,0.7s							
MALT	**Malatya**	**8.44**	**67**	*e*P		**Pn**	**14 35 37.2**	**+0.5**
	comp=Z,6.0nm,0.7s							
HSFG		**9.88**	**151**	P		**Pn**	**14 35 56.2**	**-0.2**
	baz=150							
HSFG		**9.88**	**151**	P		**Pn**	**14 35 56.2**	**-0.2**
TIP	**Timpagrande**	**10.16**	**296**	*e*Pn		**Pn**	**14 35 58.3**	**-1.9**
	comp=Z,32nm,0.4s							
TIP	**Timpagrande**	**10.16**	**296**	*e*Pn		**Pn**	**14 35 58.3**	**-1.9**
	comp=Z,32nm,0.4s							
MLR	**Muntele Rosu**	**10.33**	**350**	Pn		**Pn**	**14 36 02.1**	**-0.5**
MLR	**Muntele Rosu**	**10.33**	**350**	Pn		**Pn**	**14 36 02.1**	**-0.5**
	comp=Z,0.0nm,0.3s,baz=174,slow=7.2,SNR=5.4							
MLR	**Muntele Rosu**	**10.33**	**350**	P		**Pn**	**14 36 02.1**	**-0.5**
CEL	**Celeste**	**10.57**	**290**	*e*Pn		**Pn**	**14 36 04.1**	**-1.7**
	comp=Z,29nm,0.6s							
CEL	**Celeste**	**10.57**	**290**	*e*Pn		**Pn**	**14 36 04.1**	**-1.7**
	comp=Z,29nm,0.6s							
CUC	**Castrocucco**	**11.12**	**298**	*e*Pn		**Pn**	**14 36 11.8**	**-1.5**
	comp=Z,141nm,0.8s							
CUC	**Castrocucco**	**11.12**	**298**	*e*Pn		**Pn**	**14 36 11.8**	**-1.5**
	comp=Z,141nm,0.8s							
STON	**Ston**	**11.30**	**315**	*e*Pn		**Pn**	**14 36 14.8**	**-0.9**
STON	**Ston**	**11.30**	**315**	*e*Pn		**Pn**	**14 36 14.7**	**-0.9**
KIS	**Kishinev**	**11.65**	**1**	*e*P		**Pn**	**14 36 23.0**	**+2.6**
KIS	**Kishinev**	**11.65**	**1**	*e*P		**Pn**	**14 36 23.0**	**+2.6**
KIS	**Kishinev**	**11.65**	**1**	*e*P		**Pn**	**14 36 23.0**	**+2.6**
BUR08	**Bucovina Ar. S**	**12.55**	**349**	*e*Pn		**Pn**	**14 36 31.1**	**-1.7**
BUR08	**Bucovina Ar. S**	**12.55**	**349**	*e*Pn		**Pn**	**14 36 31.1**	**-1.7**
BHD	**Baghdad**	**13.24**	**94**	*e*P		**Pn**	**14 36 41.5**	**-0.7**
BHD				*e*S		Sn	14 39 16.0	+7.7
UDBI	**Udbina**	**13.43**	**317**	*e*Pn		**Pn**	**14 36 45.1**	**+0.3**
UDBI	**Udbina**	**13.43**	**317**	*e*Pn		**Pn**	**14 36 45.1**	**+0.3**
KIV	**Kislovodsk**	**13.85**	**47**	*e*P		**Pn**	**14 36 51.5**	**+0.8**
KIV				pmax		pmax		
	comp=Z,5.0nm,1.0s							
KBZ	**Khabaz**	**13.86**	**49**	P		**Pn**	**14 36 53.1**	**+2.5**
KBZ	**Khabaz**	**13.86**	**49**	Pn		**Pn**	**14 36 53.1**	**+2.5**
KBZ	**Khabaz**	**13.86**	**49**	Pn		**Pn**	**14 36 53.1**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=256,slow=8.3,SNR=2.2							
KBZ	**Khabaz**	**13.86**	**49**	Pn		**Pn**	**14 36 53.1**	**+2.5**
NVLJ	**Novalja**	**13.95**	**315**	*e*Pn		**Pn**	**14 36 51.3**	**-0.7**
NVLJ	**Novalja**	**13.95**	**315**	*e*Pn		**Pn**	**14 36 51.2**	**-0.7**
PSZ	**Piszkesteto**	**14.13**	**335**	*e*P		**Pn**	**14 36 53.3**	**-1.1**
PSZ				pmax		pmax		
	comp=Z,15nm,0.8s							
PSZ	**Piszkesteto**	**14.13**	**335**	*e*Pn		**Pn**	**14 36 53.3**	**-1.1**
	comp=Z,15nm,0.8s							
PSZ	**Piszkesteto**	**14.13**	**335**	*e*Pn		**Pn**	**14 36 53.3**	**-1.1**
	comp=Z,15nm,0.8s							
BOJS	**Bojanci**	**14.33**	**319**	*i* Pn		**Pn**	**14 36 56.8**	**-0.2**
KOLS	**Kolonicke sedl**	**14.35**	**343**	*e*P		**Pn**	**14 36 58.7**	**+1.3**
KOLS	**Kolonicke sedl**	**14.35**	**343**	*e*PN		**Pn**	**14 36 58.7**	**+1.3**
KOLS	**Kolonicke sedl**	**14.35**	**343**	*e*Pn		**Pn**	**14 36 58.7**	**+1.3**
KECS	**Kecovo**	**14.43**

comp=Z,17nm,0.9s
PRU Pruhonice 17.86 329 *e*P **Pn 14 37 41.9 -0.5**
PRU Pruhonice 17.86 329 *e*P **Pn 14 37 41.9 -0.5**
PRU *ex* x 14 37 50.1
PRU Pruhonice 17.86 329 *e*P **Pn 14 37 41.9 -0.5**
CASM Ain Smara 17.93 279 P **Pn 14 37 42.5 -0.9**
CASM Ain Smara 17.93 279 P **Pn 14 37 42.5 -0.9**
WET Wettzell 17.98 325 *e*P **Pn 14 37 43.7 -0.2**
comp=Z,68nm,1.8s
RETA Reutte 17.99 318‖ *i*P **P 14 37 45.5 +1.0**
comp=Z,18nm,1.5s
RETA Reutte 17.99 318 P **P 14 37 46.0 +1.6**
comp=Z,18nm,1.5s
DAVOX Davos/Dischmat 18.09 315 Pn **P 14 37 46.1 +0.5**
DAVOX Davos/Dischmat 18.09 315 Pn **P 14 37 46.1 +0.5**
comp=Z,0.6nm,0.3s,baz=149,slow=17,SNR=8.6
DAVOX Davos/Dischmat 18.09 315 P **P 14 37 46.2 +0.5**
comp=Z,1.0nm,0.3s
TUE Stuetta 18.24 313 *e*Pn **P 14 37 46.6 -0.8**
comp=Z,25nm,1.4s
TUE Stuetta 18.24 313 *e*Pn **P 14 37 46.6 -0.8**
comp=Z,25nm,1.4s
PVCC Panska Ves 18.27 330 *e*P **Pn 14 37 47.3 0.0**
PVCC Panska Ves 18.27 330 *e*P **Pn 14 37 47.3 0.0**
PVCC *ex* x 14 37 56.8
PVCC Panska Ves 18.27 330 *e*P **Pn 14 37 47.3 0.0**
SAOF Saorge 18.30 304 *e*P **P 14 37 45.5 -2.3**
SAOF Saorge 18.30 304 *e*P **P 14 37 45.5 -2.3**
SAOF Saorge 18.30 304 *e*P **P 14 37 45.5 -2.3**
SAOF Saorge 18.30 304 *e*P **P 14 37 45.5 -2.3**
SBF Sospel 18.34 304 *e*P **P 14 37 46.5 -1.7**
comp=Z,55nm,0.9s
SBF Sospel 18.34 304 *e*P **P 14 37 46.5 -1.7**
SBF pmax pmax
comp=Z,55nm,0.9s
SBF Sospel 18.34 304 *e*P **P 14 37 46.5 -1.7**
comp=Z,55nm,0.9s
SBF Sospel 18.34 304 *e*P **P 14 37 46.5 -1.7**
comp=Z,27nm,0.9s
DAVA Damuels 18.37 316‖ *i*Pn **Pn 14 37 48.9 +0.1**
comp=Z,21nm,1.2s
AUTN L'Aution 18.39 304 *e*P **P 14 37 45.5 -3.5**
AUTN L'Aution 18.39 304 *e*P **P 14 37 45.5 -3.5**
AUTN L'Aution 18.39 304 *e*P **P 14 37 45.5 -3.5**
DFRA Djebel Bou Aff 18.41 280 P **Pn 14 37 50.4 +1.1**
DFRA Djebel Bou Aff 18.41 280 P **Pn 14 37 50.4 +1.1**
TOUF Mont Tournerai 18.52 304 *e*P **P 14 37 49.8 -0.5**
TOUF Mont Tournerai 18.52 304 *e*P **P 14 37 49.8 -0.5**
TOUF Mont Tournerai 18.52 304 *e*P **P 14 37 49.8 -0.5**
TOUF Mont Tournerai 18.52 304 *e*P **P 14 37 49.8 -0.5**
CALN Calern 18.67 303 *e*P **P 14 37 50.7 -1.3**
CALN Calern 18.67 303 *e*P **P 14 37 50.7 -1.3**
CALN Calern 18.67 303 *e*P **P 14 37 50.7 -1.3**
CALN Calern 18.67 303 *e*P **P 14 37 50.7 -1.3**
ROTZ Rotzenmuhle 18.73 325 *e*P **Pn 14 37 52.7 -0.3**
comp=Z,20nm,1.3s
FRF La Foret Royal 18.77 303 *e*P **P 14 37 52.2 -0.8**
comp=Z,22nm,1.0s
FRF La Foret Royal 18.77 303 *e*P **P 14 37 52.2 -0.8**
FRF pmax pmax
comp=Z,22nm,1.0s
FRF La Foret Royal 18.77 303 *e*P **P 14 37 52.2 -0.8**
comp=Z,22nm,1.0s
FRF La Foret Royal 18.77 303 *e*P **P 14 37 52.2 -0.8**
comp=Z,11nm,1.0s
BRG Berggiesshubel 18.78 330 *e*P **Pn 14 37 55.1 +1.4**
comp=Z,16nm,1.0s
BRG *e* 14 41 13.6
comp=Z,3.5nm,1.1s
BRG Berggiesshubel 18.78 330 *e*P **Pn 14 37 53.9 +0.3**
comp=Z,75nm,2.1s
BRG Berggiesshubel 18.78 330 *e*P **Pn 14 37 55.1 +1.4**
BRG *e* 14 41 13.6
BRG pmax pmax
comp=Z,17nm,1.0s
BRG pmax pmax
comp=Z,4.0nm,1.1s
LMR La Mourre 18.80 302 *e*P **P 14 37 52.2 -1.0**
comp=Z,55nm,1.2s
LMR La Mourre 18.80 302 *e*P **P 14 37 52.2 -1.0**
LMR pmax pmax
comp=Z,55nm,1.2s
LMR La Mourre 18.80 302 *e*P **P 14 37 52.2 -1.0**
comp=Z,55nm,1.2s
LMR La Mourre 18.80 302 *e*P **P 14 37 52.2 -1.0**
comp=Z,28nm,1.2s
MANZ Manzenberg 18.93 326 *e*P **Pn 14 37 56.1 +0.7**
comp=Z,16nm,1.3s
FBE Freiberg 19.06 329 *e*P **Pn 14 37 57.1 +0.1**
comp=Z,21nm,1.0s
MBDF Montbardon 19.09 306 *e*P **P 14 37 56.8 +0.2**
comp=Z,23nm,0.8s
MBDF Montbardon 19.09 306 *e*P **P 14 37 56.8 +0.2**
MBDF pmax pmax
comp=Z,23nm,0.8s
MBDF Montbardon 19.09 306 *e*P **P 14 37 56.8 +0.2**
comp=Z,23nm,0.8s
MBDF Montbardon 19.09 306 *e*P **P 14 37 56.8 +0.2**
comp=Z,12nm,0.8s
GUNZ Gunzen 19.09 327 *e*P **P 14 37 56.0 -0.5**
comp=Z,16nm,1.5s
GRF Grafenberg Arr 19.14 324 *e*P **Pn 14 37 57.6 -0.4**
comp=Z,43nm,1.4s
PLN Plauen 19.26 327 *e*P **Pn 14 37 59.5 +0.1**
comp=Z,329nm,2.0s
BNI Bardonecchia 19.28 307 *e*P **P 14 37 57.0 -1.6**
BNI pmax pmax
comp=Z,9.0nm,0.8s
BNI Bardonecchia 19.28 307 *e*P **P 14 37 57.0 -1.6**
comp=Z,8.9nm,0.8s
BNI Bardonecchia 19.28 307 *e*P **P 14 37 57.0 -1.6**
comp=Z,8.9nm,0.8s
LPG La Plagne 19.41 308 *e*P **P 14 38 00.5 +0.3**
comp=Z,31nm,0.7s
LPG La Plagne 19.41 308 *e*P **P 14 38 00.5 +0.3**
LPG pmax pmax
comp=Z,31nm,0.7s
LPG La Plagne 19.41 308 *e*P **P 14 38 00.5 +0.3**
comp=Z,31nm,0.7s
LPG La Plagne 19.41 308 *e*P **P 14 38 00.5 +0.3**
comp=Z,16nm,0.7s
LPL La Plagne 19.43 308 *e*P **P 14 38 00.4 +0.1**
comp=Z,16nm,0.5s
LPL La Plagne 19.43 308 *e*P **P 14 38 00.4 +0.1**
LPL pmax pmax
comp=Z,16nm,0.5s
LPL La Plagne 19.43 308 *e*P **P 14 38 00.4 +0.1**
comp=Z,16nm,0.5s
LPL La Plagne 19.43 308 *e*P **P 14 38 00.4 +0.1**
comp=Z,8.1nm,0.5s
AKF Akfadou 19.46 281 P Pn 14 38 07.7 +5.7
CLL Collm 19.50 330 *e*P **P 14 38 00.5 -0.3**
comp=Z,24nm,1.3s
CLL Collm 19.50 330 *e*P **P 14 38 00.0 -0.8**
CLL *e*S **S 14 41 37.0 -2.2**
CLL Collm 19.50 330 *e*P **P 14 38 00.0 -0.8**
CLL *i* Pmax 14 38 02.8
comp=Z,53nm,1.9s
CLL *i* pP **pP 14 38 10.1 +0.8**
CLL *i* (pPP) 14 38 20.0
CLL *i* sPP 14 38 28.7
CLL *e*S **S 14 41 37.0 -2.2**
CLL *e*SSS SSS 14 42 10.0
CLL Collm 19.50 330 *e*P **P 14 38 00.0 -0.8**
RSL Roselend 19.56 309 *e*P **P 14 38 01.8 0.0**
RSL Roselend 19.56 309 *e*P **P 14 38 01.8 0.0**
RSL Roselend 19.56 309 *e*P **P 14 38 01.8 0.0**
RSL Roselend 19.56 309 *e*P **P 14 38 01.8 0.0**
MOX Moxa 19.62 326 *e*P **Pn 14 38 03.8 +0.2**
comp=Z,49nm,1.7s
ORIF Oris-en-Rattie 19.75 306 *e*P **P 14 38 02.8 -1.0**
comp=Z,20nm,0.8s
ORIF Oris-en-Rattie 19.75 306 *e*P **P 14 38 02.8 -1.0**
ORIF pmax pmax
comp=Z,21nm,0.8s
ORIF Oris-en-Rattie 19.75 306 *e*P **P 14 38 02.8 -1.0**
comp=Z,20nm,0.8s
ORIF Oris-en-Rattie 19.75 306 *e*P **P 14 38 02.8 -1.0**
comp=Z,10nm,0.8s
BFO Black Forest 19.82 317 *e*P **Pn 14 38 05.3 -0.8**
comp=Z,13nm,1.2s
BFO Black Forest 19.82 317 *e*P **P 14 38 03.5 -0.9**
BFO pmax pmax
comp=Z,12nm,1.0s
BFO Black Forest 19.82 317 *e*P **P 14 38 03.5 -0.9**
comp=Z,12nm,1.0s
BFO Black Forest 19.82 317 *e*P **P 14 38 03.5 -0.9**
comp=Z,12nm,1.0s
NEUB Neuenburg 19.95 328 *e*P **Pn 14 38 08.5 +1.0**
comp=Z,72nm,2.1s
AKET Djebel Ketaf 20.05 279 P Pn 14 38 10.7 +1.6
LOMF Lomont 20.18 313 *e*P Pn 14 38 10.0 -0.4
LOMF Lomont 20.18 313 *e*P Pn 14 38 10.0 -0.4
LOMF Lomont 20.18 313 *e*P Pn 14 38 10.0 -0.4
LOMF Lomont 20.18 313 *e*P Pn 14 38 10.0 -0.4
MOF Molkenrain 20.25 315 *e*P Pn 14 38 10.2 -1.0
MOF Molkenrain 20.25 315 *e*P Pn 14 38 10.2 -1.0
MOF Molkenrain 20.25 315 *e*P Pn 14 38 10.2 -1.0
MOF Molkenrain 20.25 315 *e*P Pn 14 38 10.2 -1.0
CABF La Chapelle 20.29 311 *e*P **P 14 38 09.7 +0.1**
comp=Z,25nm,0.6s
CABF La Chapelle 20.29 311 *e*P **P 14 38 09.7 +0.1**
CABF pmax pmax
comp=Z,25nm,0.6s
CABF La Chapelle 20.29 311 *e*P **P 14 38 09.7 +0.1**
comp=Z,25nm,0.6s
CABF La Chapelle 20.29 311 *e*P **P 14 38 09.7 +0.1**
comp=Z,13nm,0.6s
HINF Hinteralfeld 20.39 314 *e*P **P 14 38 11.2 +0.6**
HINF Hinteralfeld 20.39 314 *e*P **P 14 38 11.2 +0.6**
HINF Hinteralfeld 20.39 314 *e*P **P 14 38 11.2 +0.6**
HINF Hinteralfeld 20.39 314 *e*P **P 14 38 11.2 +0.6**
ADJB Djebel Djouab 20.40 280 P **P 14 38 10.7 -0.2**
ADJB Djebel Djouab 20.40 280 P **P 14 38 10.7 -0.2**
ECH Echery 20.42 316 *e*P **P 14 38 07.2 -3.7**
ECH pmax pmax
comp=Z,13nm,1.2s
ECH Echery 20.42 316 *e*P **P 14 38 07.2 -3.7**
comp=Z,13nm,1.2s
CDF Champ du Feu 20.45 316 *e*P **P 14 38 10.5 -0.8**
comp=Z,55nm,1.2s
CDF Champ du Feu 20.45 316 *e*P **P 14 38 10.5 -0.8**
CDF pmax pmax
comp=Z,55nm,1.2s
CDF Champ du Feu 20.45 316 *e*P **P 14 38 10.5 -0.8**
comp=Z,55nm,1.2s
CDF Champ du Feu 20.45 316 *e*P **P 14 38 10.5 -0.8**
comp=Z,28nm,1.2s
LANF Langenberg 20.47 318 *e*P **P 14 38 11.2 -0.2**
LANF Langenberg 20.47 318 *e*P **P 14 38 11.2 -0.2**
LANF Langenberg 20.47 318 *e*P Pn 14 38 13.0 -0.7
LANF Langenberg 20.47 318 *e*P **P 14 38 11.2 -0.2**
OBN Obninsk 20.53 13‖ *e*P **P 14 38 12.5 +0.5**
OBN *e* 14 38 25.7
OBN *e* 14 38 31.4
OBN *e* 14 42 22.4
OBN pmax pmax
comp=Z,23nm,1.7s
OBN Obninsk 20.53 13 *e*P **P 14 38 12.5 +0.5**
comp=Z,23nm,1.7s
VIVF Saint-Julien-l 20.54 305 *e*P **P 14 38 10.3 -1.9**
comp=Z,15nm,0.7s
VIVF Saint-Julien-l 20.54 305 *e*P **P 14 38 10.3 -1.9**
VIVF pmax pmax
comp=Z,15nm,0.7s
VIVF Saint-Julien-l 20.54 305 *e*P **P 14 38 10.3 -1.9**
comp=Z,15nm,0.7s
VIVF Saint-Julien-l 20.54 305 *e*P **P 14 38 10.3 -1.9**
comp=Z,7.6nm,0.7s
HAU Haudompre 20.78 314 *e*P Pn 14 38 16.1 -1.3
comp=Z,16nm,0.7s
HAU Haudompre 20.78 314 *e*P Pn 14 38 16.1 -1.3
HAU pmax pmax
comp=Z,16nm,0.7s
HAU Haudompre 20.78 314 *e*P Pn 14 38 16.1 -1.3
comp=Z,16nm,0.7s
HAU Haudompre 20.78 314 *e*P Pn 14 38 16.1 -1.3
comp=Z,7.8nm,0.7s
LASF Ste Croix 20.86 302 *e*P **P 14 38 14.7 -1.0**
comp=Z,21nm,1.0s
LASF Ste Croix 20.86 302 *e*P **P 14 38 14.7 -1.0**
comp=Z,21nm,1.0s
LASF Ste Croix 20.86 302 *e*P **P 14 38 14.7 -1.0**
comp=Z,11nm,1.0s
LBL Lubilhac 21.62 305 *e*P **P 14 38 25.6 +1.7**
LBL Lubilhac 21.62 305 *e*P **P 14 38 25.6 +1.7**
LBL Lubilhac 21.62 305 *e*P **P 14 38 25.6 +1.7**
SMF Signal de Mont 21.72 309 *e*P **P 14 38 23.6 -1.3**
comp=Z,62nm,1.1s
SMF Signal de Mont 21.72 309 *e*P **P 14 38 23.6 -1.3**
SMF pmax pmax
comp=Z,63nm,1.1s
SMF Signal de Mont 21.72 309 *e*P **P 14 38 23.6 -1.3**
comp=Z,62nm,1.1s
SMF Signal de Mont 21.72 309 *e*P **P 14 38 23.6 -1.3**
comp=Z,31nm,1.1s
MTLF Montolieu 21.82 299 *e*P **P 14 38 25.0 -1.1**
comp=Z,27nm,1.2s
MTLF Montolieu 21.82 299 *e*P **P 14 38 25.0 -1.1**
MTLF pmax pmax
comp=Z,27nm,1.2s
MTLF Montolieu 21.82 299 *e*P **P 14 38 25.0 -1.1**
comp=Z,27nm,1.2s
MTLF Montolieu 21.82 299 *e*P **P 14 38 25.0 -1.1**
comp=Z,13nm,1.2s
PYM Petit Puy Mans 21.94 306 *e*P **P 14 38 29.0 +1.6**
PYM Petit Puy Mans 21.94 306 *e*P **P 14 38 29.0 +1.6**
PYM Petit Puy Mans 21.94 306 *e*P **P 14 38 29.0 +1.6**
LOR Lormes 21.95 310 *e*P **P 14 38 26.9 -0.5**
comp=Z,8.5nm,0.6s
LOR Lormes 21.95 310 *e*P **P 14 38 26.9 -0.5**
comp=Z,8.5nm,0.6s
AGO Saint Agoulin 21.96 307 *e*P **P 14 38 27.9 +0.4**
AGO Saint Agoulin 21.96 307 *e*P **P 14 38 27.9 +0.4**
AVF Avril sur Loir 22.09 309 *e*P **P 14 38 28.6 -0.2**
comp=Z,21nm,0.8s
AVF Avril sur Loir 22.09 309 *e*P **P 14 38 28.6 -0.2**
AVF pmax pmax
comp=Z,21nm,0.8s
AVF Avril sur Loir 22.09 309 *e*P **P 14 38 28.6 -0.2**
comp=Z,21nm,0.8s
SSF Saint Saulge 22.09 310 *e*P **P 14 38 28.3 -0.6**
comp=Z,36nm,0.8s
SSF Saint Saulge 22.09 310 *e*P **P 14 38 28.3 -0.6**
SSF pmax pmax
comp=Z,36nm,0.8s
SSF Saint Saulge 22.09 310 *e*P **P 14 38 28.3 -0.6**
comp=Z,36nm,0.8s
BGF Bois d'Agland 22.32 308 *e*P **P 14 38 31.2 -0.2**
comp=Z,25nm,0.8s
BGF Bois d'Agland 22.32 308 *e*P **P 14 38 31.2 -0.2**
BGF pmax pmax
comp=Z,25nm,0.8s
BGF Bois d'Agland 22.32 308 *e*P **P 14 38 31.2 -0.2**
comp=Z,25nm,0.8s
CAF Calviac 22.32 303 *e*P **P 14 38 31.2 -0.3**
CAF Calviac 22.32 303 *e*P **P 14 38 31.2 -0.3**
CAF Calviac 22.32 303 *e*P **P 14 38 31.2 -0.3**
TCF Toulx Ste Croi 22.64 307 *e*P **P 14 38 33.0 -1.9**
TCF Toulx Ste Croi 22.64 307 *e*P **P 14 38 33.0 -1.9**
TCF Toulx Ste Croi 22.64 307 *e*P **P 14 38 33.0 -1.9**
RJF Les Rejaudoux 22.80 304 *e*P **P 14 38 36.4 -0.1**
comp=Z,25nm,0.9s
RJF Les Rejaudoux 22.80 304 *e*P **P 14 38 36.4 -0.1**
RJF pmax pmax
comp=Z,25nm,0.9s
RJF Les Rejaudoux 22.80 304 *e*P **P 14 38 36.4 -0.1**
comp=Z,25nm,0.9s
EPF Esparros 23.11 298 *e*P **P 14 38 38.7 -1.0**
comp=Z,7.0nm,0.7s
EPF Esparros 23.11 298 *e*P **P 14 38 38.7 -1.0**
EPF pmax pmax
comp=Z,7.0nm,0.7s
EPF Esparros 23.11 298 *e*P **P 14 38 38.7 -1.0**
comp=Z,7.0nm,0.7s
VSU Vasula 23.16 358 *i* P **P 14 38 39.2 -0.8**
LFF La Frestale 23.23 303 *e*P **P 14 38 41.2 +0.3**
LFF La Frestale 23.23 303 *e*P **P 14 38 41.2 +0.3**
LFF La Frestale 23.23 303 *e*P **P 14 38 41.2 +0.3**
TAM Tamanrasset 23.64 244 *e*P **P 14 38 44.0 -1.2**
TAM pmax pmax
comp=Z,12nm,1.0s
TAM Tamanrasset 23.64 244 *e*P **P 14 38 44.0 -1.2**
comp=Z,12nm,1.0s
TAM Tamanrasset 23.64 244 *e*P **P 14 38 44.0 -1.2**
comp=Z,12nm,1.0s
ETSF Etsaut 23.74 297 *e*P **P 14 38 45.2 -0.7**
comp=Z,20nm,1.0s
ETSF Etsaut 23.74 297 *e*P **P 14 38 45.2 -0.7**
ETSF pmax pmax
comp=Z,20nm,1.0s
ETSF Etsaut 23.74 297 *e*P **P 14 38 45.2 -0.7**
comp=Z,20nm,1.0s
SJPF Ste Jean 24.26 298 *e*P **P 14 38 50.8 +0.2**
SJPF Ste Jean 24.26 298 *e*P **P 14 38 50.8 +0.2**
SJPF Ste Jean 24.26 298 *e*P **P 14 38 50.8 +0.2**
MFF Saint Martin d 24.29 306 *e*P **P 14 38 48.5 -2.4**
comp=Z,8.5nm,0.6s
MFF Saint Martin d 24.29 306 *e*P **P 14 38 48.5 -2.4**
MFF pmax pmax
comp=Z,9.0nm,0.6s
MFF Saint Martin d 24.29 306 *e*P **P 14 38 48.5 -2.4**
comp=Z,8.5nm,0.6s
LDF La Druitiere 24.94 311 *e*P **P 14 38 54.9 -1.8**
comp=Z,12nm,0.7s
LDF La Druitiere 24.94 311 *e*P **P 14 38 54.9 -1.8**
LDF pmax pmax
comp=Z,12nm,0.7s
LDF La Druitiere 24.94 311 *e*P **P 14 38 54.9 -1.8**
comp=Z,12nm,0.7s
FLN La Foliniere 25.22 311 *e*P **P 14 38 57.5 -1.8**
comp=Z,24nm,0.6s
FLN La Foliniere 25.22 311 *e*P **P 14 38 57.5 -1.8**
FLN pmax pmax
comp=Z,24nm,0.6s
FLN La Foliniere 25.22 311 *e*P **P 14 38 57.5 -1.8**
comp=Z,24nm,0.6s
GRR Gorron 25.32 310 *e*P **P 14 38 58.4 -1.8**
comp=Z,20nm,0.4s
GRR Gorron 25.32 310 *e*P **P 14 38 58.4 -1.8**
GRR pmax pmax
comp=Z,20nm,0.4s
GRR Gorron 25.32 310 *e*P **P 14 38 58.4 -1.8**
comp=Z,20nm,0.4s
ESDC Sonseca Array 26.08 289 P **P 14 39 06.8 -0.5**
ESDC Sonseca Array 26.08 289 P **P 14 39 06.8 -0.5**
comp=Z,4.8nm,0.5s,baz=80,slow=9.8,SNR=29
ESDC Sonseca Array 26.08 289 P **P 14 39 06.8 -0.5**
ESLA Sonseca Array 26.08 289 *e*P **P 14 39 04.4 -2.9**
comp=Z,5.1nm,1.0s
ESLA Sonseca Array 26.08 289 *e*P **P 14 39 04.4 -2.9**
comp=Z,5.1nm,1.0s
AKTO Aktyubinsk 26.11 46 P **P 14 39 08.2 +0.9**
AKTO pmax pmax
comp=Z,5.0nm,0.8s
AKTO Aktyubinsk 26.11 46 P **P 14 39 08.2 +0.9**
AKTO Aktyubinsk 26.11 46 P **P 14 39 08.2 +0.9**
comp=Z,5.1nm,0.8s,baz=247,slow=12,SNR=15
AKTO Aktyubinsk 26.11 46 P **P 14 39 08.2 +0.9**
FINES FINESS Array B 26.17 357 P **P 14 39 07.4 -0.3**
FINES FINESS Array B 26.17 357 P **P 14 39 07.4 -0.3**
comp=Z,4.0nm,0.6s,baz=160,slow=12,SNR=20
FINES FINESS Array B 26.17 357 P **P 14 39 07.4 -0.3**
FIA1 FINESS Array S 26.17 357 *e*P **P 14 39 07.5 -0.2**
FIA1 FINESS Array S 26.17 357 *e*P **P 14 39 07.5 -0.2**
SGMF Saint Gilles 26.35 309 *e*P **P 14 39 08.9 -0.6**
SGMF Saint Gilles 26.35 309 *e*P **P 14 39 08.9 -0.6**
SGMF Saint Gilles 26.35 309 *e*P **P 14 39 08.9 -0.6**
PAB San Pablo 26.38 289 *e*P **P 14 39 08.8 -1.2**
PAB pmax pmax
comp=Z,10.0nm,0.8s
PAB San Pablo 26.38 289 *e*P **P 14 39 08.8 -1.2**
comp=Z,10nm,0.8s
PAB San Pablo 26.38 289 *e*P **P 14 39 08.8 -1.2**
comp=Z,10nm,0.8s
KLMR Klimovskoe 26.48 12 P **P 14 39 10.4 -0.1**
KLMR pmax pmax
comp=Z,29nm,1.4s
HFS Hagfors 26.62 343 P **P 14 39 11.2 -0.6**
HFS Hagfors 26.62 343 P **P 14 39 11.2 -0.6**
comp=Z,2.5nm,0.5s,baz=143,slow=11,SNR=23
HFS Hagfors 26.62 343 P **P 14 39 11.2 -0.6**
QUIF Quistinic 26.64 308 *e*P **P 14 39 10.5 -1.6**
QUIF Quistinic 26.64 308 *e*P **P 14 39 10.5 -1.6**
QUIF Quistinic 26.64 308 *e*P **P 14 39 10.5 -1.6**
ABKAR Akbulak array 26.83 49 *e*P **P 14 39 12.9 -0.9**
comp=Z,1.8nm,0.5s
ABKAR Akbulak array 26.83 49 *e*P **P 14 39 12.9 -0.9**
comp=Z,1.8nm,0.5s
KAF Kangasniemi 26.83 358 *e*P **P 14 39 12.3 -1.4**
KAF pmax pmax
comp=Z,2.0nm,0.6s
KAF Kangasniemi 26.83 358 *e*p **P 14 39 12.3 -1.4**
comp=Z,1.7nm,0.6s
KAF Kangasniemi 26.83 358 *e*P **P 14 39 12.3 -1.4**
comp=Z,1.7nm,0.6s
ROSF Rostrenen 26.83 309 *e*P **P 14 39 11.8 -2.1**
comp=Z,8.6nm,0.5s
ROSF Rostrenen 26.83 309 *e*P **P 14 39 11.8 -2.1**
ROSF pmax pmax
comp=Z,9.0nm,0.5s
ROSF Rostrenen 26.83 309 *e*P **P 14 39 11.8 -2.1**
comp=Z,8.6nm,0.5s
MDT Midelt 27.53 274 P **P 14 39 20.3 -0.1**
MDT Midelt 27.53 274 P **P 14 39 20.3 -0.1**
comp=Z,3.3nm,0.8s,baz=75,slow=9.8,SNR=9.2
MDT Midelt 27.53 274 P **P 14 39 20.3 -0.1**
JOF Joensuu 27.65 3 *e*P **P 14 39 20.5 -0.6**
JOF Joensuu 27.65 3 *e*p **P 14 39 20.5 -0.6**
JOF Joensuu 27.65 3 *e*P **P 14 39 20.5 -0.6**
NB2 NORSAR Subarra 28.01 342 P **P 14 39 23.6 -0.8**
comp=Z,1.7nm,0.7s,baz=157,slow=10
NOA NORSAR Array B 28.01 342 P **P 14 39 23.8 -0.6**
NOA NORSAR Array B 28.01 342 P **P 14 39 23.7 -0.6**
comp=Z,0.8nm,0.6s,baz=158,slow=9.6,SNR=4.9
NOA NORSAR Array B 28.01 342 P **P 14 39 23.8 -0.6**
ARU Arti 29.29 35 P **P 14 39 34.2 -1.5**
TORD Torodi Ar. Bea 32.80 234 P **P 14 40 06.7 -0.4**
TORD Torodi Ar. Bea 32.80 234 P **P 14 40 06.7 -0.4**
comp=Z,4.0nm,0.8s,baz=33,slow=8.6,SNR=27
TORD Torodi Ar. Bea 32.80 234 P **P 14 40 06.7 -0.4**
KKAR Karatay Array 33.13 64 *e*P **P 14 40 10.1 +0.4**
KKAR pmax pmax
comp=Z,6.0nm,0.9s
KKAR Karatay Array 33.13 64 *e*P **P 14 40 10.1 +0.4**
comp=Z,6.3nm,0.9s
KKAR Karatay Array 33.13 64 *e*P **P 14 40 10.1 +0.4**
comp=Z,6.3nm,0.9s
BRVK Borovoye 34.16 46‖ *e*P **P 14 40 19.7 +1.2**
BRVK pmax pmax
comp=Z,6.0nm,2.5s
BVAR Borovoye Array 34.21 46 P **P 14 40 19.7 +0.7**
BVAR pmax pmax
comp=Z,1.0nm,0.9s
BVAR Borovoye Array 34.21 46 P **P 14 40 19.7 +0.7**
BVAR Borovoye Array 34.21 46 P **P 14 40 19.7 +0.7**
comp=Z,1.2nm,0.9s,baz=256,slow=6.0,SNR=6.6
BVAR Borovoye Array 34.21 46 P **P 14 40 19.7 +0.7**
ARCES ARCESS Array B 34.29 358 P **P 14 40 19.1 -0.4**
ARCES ARCESS Array B 34.29 358 P **P 14 40 19.1 -0.4**
comp=Z,3.5nm,0.7s,baz=176,slow=8.5,SNR=8.3
ARCES ARCESS Array B 34.29 358 P **P 14 40 19.1 -0.4**
AAK Ala-Archa 36.07 64‖ *e*P **P 14 40 36.9 +1.6**
AAK pmax pmax
comp=Z,37nm,1.7s
KMBO Kilima Mbogo 37.18 166 P **P 14 40 46.3 +1.3**
KMBO Kilima Mbogo 37.18 166 P **P 14 40 46.3 +1.3**
comp=Z,0.8nm,0.3s,baz=72,slow=23,SNR=6.7
KMBO Kilima Mbogo 37.18 166 P **P 14 40 46.3 +1.3**
KURBB Kurchatov Arra 38.84 51 P **P 14 40 58.9 +0.5**
comp=Z,3.9nm,1.0s,baz=275,slow=8.7,SNR=16
KURK Kurchatov 38.90 51 P **P 14 40 58.9 0.0**
KURK pmax pmax
comp=Z,4.0nm,1.0s
KURK Kurchatov 38.90 51 P **P 14 40 58.9 0.0**
KURK Kurchatov 38.90 51 P **P 14 40 58.9 0.0**
MK31 Makanchi Array 41.34 57 *e*P **P 14 41 19.7 +0.4**
MK31 Makanchi Array 41.34 57 *e*P **P 14 41 19.7 +0.4**
MK31 Makanchi Array 41.34 57 *e*P **P 14 41 19.7 +0.4**
MKAR Makanchi Array 41.34 57 P **P 14 41 20.1 +0.7**
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 41.34 57 P **P 14 41 20.1 +0.7**
MKAR Makanchi Array 41.34 57 P **P 14 41 20.1 +0.7**
comp=Z,1.8nm,0.9s,baz=275,slow=6.8,SNR=14
MKAR Makanchi Array 41.34 57 P **P 14 41 20.0 +0.7**
DBIC Dimbokro 41.91 235 P **P 14 41 23.4 -0.8**
DBIC Dimbokro 41.91 235 P **P 14 41 23.4 -0.8**
comp=Z,3.3nm,0.7s,baz=43,slow=14,SNR=4.5
DBIC Dimbokro 41.91 235 P **P 14 41 23.4 -0.8**
NVS Novosibirsk 41.99 45 *e*P **P 14 41 25.3 +0.9**
NVS *e* 14 43 07.2
NVS pmax pmax
comp=Z,22nm,2.5s
NVS pmax pmax

	comp=N,17nm,3.0s							
NVS					pmax	pmax		
	comp=E,13nm,2.5s							
LIC	**Lamto**	**42.35**	**235**	*e*P	**P**		**14 41 28.4**	**+0.6**
	comp=E,13nm,0.8s							
LIC	**Lamto**	**42.35**	**235**	*e*P	**P**		**14 41 28.4**	**+0.6**
	comp=E,13nm,0.8s							
ZALV	**Zalesovo Beam**	**42.87**	**46**	P	**P**		**14 41 31.7**	**+0.1**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.5s							
ZALV	**Zalesovo Beam**	**42.87**	**46**	P	**P**		**14 41 31.7**	**+0.1**
ZALV	**Zalesovo Beam**	**42.87**	**46**	P	**P**		**14 41 31.7**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=268,slow=9.8,SNR=3.2							
ZALV	**Zalesovo Beam**	**42.87**	**46**	P	**P**		**14 41 31.7**	**+0.1**
SPITS	**Spitsbergen Ar**	**43.26**	**356**	P	**P**		**14 41 34.3**	**-0.1**
SPITS	**Spitsbergen Ar**	**43.26**	**356**	P	**P**		**14 41 34.3**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=144,slow=11,SNR=7.1							
SPITS	**Spitsbergen Ar**	**43.26**	**356**	P	**P**		**14 41 34.3**	**-0.1**
HYB	**Hyderabad**	**47.69**	**99**	*i* P	**P**		**14 42 10.0**	**-0.3**
LSZ	**Lusaka**	**50.34**	**180**	P	**P**		**14 42 32.2**	**+1.6**
LSZ	**Lusaka**	**50.34**	**180**	P	**P**		**14 42 32.2**	**+1.6**
	comp=Z,1.6nm,0.7s,baz=12,slow=9.3,SNR=3.8							
LSZ	**Lusaka**	**50.34**	**180**	P	**P**		**14 42 32.2**	**+1.6**
ZAK	**Zakamensk**	**54.52**	**49**	*e*P	**P**		**14 43 02.6**	**+1.3**
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.4s							
SONM	**Songino Array**	**57.20**	**52**	P	**P**		**14 43 21.9**	**+1.3**
SONM	**Songino Array**	**57.20**	**52**	P	**P**		**14 43 21.9**	**+1.3**
	comp=Z,0.5nm,0.5s,baz=295,slow=7.2,SNR=3.0							
SONM	**Songino Array**	**57.20**	**52**	P	**P**		**14 43 21.9**	**+1.3**
LBTB	**Lobatse**	**60.09**	**183**	P	**P**		**14 43 41.7**	**+1.0**
LBTB	**Lobatse**	**60.09**	**183**	P	**P**		**14 43 41.7**	**+1.0**
	comp=Z,6.6nm,0.8s,baz=6.5,slow=7.8,SNR=8.6							
LBTB	**Lobatse**	**60.09**	**183**	P	**P**		**14 43 41.7**	**+1.0**
BOSA	**Boshof**	**63.69**	**183**	P	**P**		**14 44 05.5**	**+0.6**
BOSA	**Boshof**	**63.69**	**183**	P	**P**		**14 44 05.5**	**+0.6**
	comp=Z,6.8nm,0.9s,baz=9.5,slow=6.3,SNR=7.6							
BOSA	**Boshof**	**63.69**	**183**	P	**P**		**14 44 05.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**63.78**	**85**	P	**P**		**14 44 06.2**	**+0.5**
CMAR	**Chiang Mai Arr**	**63.78**	**85**	P	**P**		**14 44 06.2**	**+0.5**
	comp=Z,2.7nm,0.9s,baz=299,slow=8.2,SNR=13							
CMAR	**Chiang Mai Arr**	**63.78**	**85**	P	**P**		**14 44 06.2**	**+0.5**
SCHQ	**Schefferville**	**64.84**	**320**	P	**P**		**14 44 10.8**	**-1.4**
SCHQ	**Schefferville**	**64.84**	**320**	P	**P**		**14 44 10.8**	**-1.4**
	comp=Z,2.8nm,0.4s,baz=350,slow=3.0,SNR=16							
SCHQ	**Schefferville**	**64.84**	**320**	P	**P**		**14 44 10.8**	**-1.4**
USRK	**Ussuriysk Arra**	**74.72**	**46**	P	**P**		**14 45 13.9**	**+0.8**
	comp=Z,3.8nm,0.8s,baz=297,slow=6.2,SNR=6.2							
KSAR	**Wonju Array Be**	**75.92**	**54**	P	**P**		**14 45 20.4**	**+0.4**
KSAR	**Wonju Array Be**	**75.92**	**54**	P	**P**		**14 45 20.5**	**+0.4**
KSRS	**Korea Array**	**75.94**	**54**	P	**P**		**14 45 20.4**	**+0.3**
	comp=Z,2.9nm,0.9s,baz=305,slow=5.2,SNR=11							
YKA	**Yellowknife Ar**	**78.10**	**343**	P	**P**		**14 45 31.3**	**-0.6**
YKA	**Yellowknife Ar**	**78.10**	**343**	P	**P**		**14 45 31.3**	**-0.6**
	comp=Z,0.9nm,0.5s,baz=30,slow=5.4,SNR=14							
YKA	**Yellowknife Ar**	**78.10**	**343**	P	**P**		**14 45 31.3**	**-0.6**
ERPA	**Erie**	**78.98**	**314**	*e*P	**P**		**14 45 34.1**	**-3.0**
	comp=Z,51nm,0.6s							
ERPA	**Erie**	**78.98**	**314**	*e*P	**P**		**14 45 34.1**	**-3.0**
	comp=Z,51nm,0.6s							
BLA	**Blacksburg**	**82.28**	**310**	*e*P	**P**		**14 45 54.5**	**-0.4**
BLA				pmax	pmax			
	comp=Z,14nm,0.8s							
BLA	**Blacksburg**	**82.28**	**310**	*e*P	**P**		**14 45 54.5**	**-0.4**
	comp=Z,14nm,0.8s							
BLA	**Blacksburg**	**82.28**	**310**	*e*P	**P**		**14 45 54.5**	**-0.4**
	comp=Z,14nm,0.8s							
CPCT	**Cooper Cave**	**85.94**	**311**	*e*P	**P**		**14 46 13.1**	**-0.5**
CPCT	**Cooper Cave**	**85.94**	**311**	*e*P	**P**		**14 46 13.1**	**-0.5**
NEW	**Newport**	**91.31**	**338**	LR	LR		15 28 01.0	
	comp=Z,480nm,18.4s,baz=145,slow=36							
ASAR	**Alice Springs**	**115.35**	**102**	PKP	**PKPdf**		**14 52 15.7**	**+0.4**
ASAR	**Alice Springs**	**115.35**	**102**	PKP	**PKPdf**		**14 52 15.7**	**+0.4**
	comp=Z,0.6nm,1.0s,baz=299,slow=1.5,SNR=4.4							

*CSEM **19** 14:44:13.2±0.4, 37.72N×38.10E, h30km, MD2.9, Error ellipse: s-maj=11.0km s-min=8.8km az=88.0*
*DDA **19** 14:44:14.8, 37.78N×38.30E, h8km, MD2.9*
*ISK **19** 14:44:14.3, 37.80N×38.26E, h10km, MD2.7*

ISC 19 14:44:14.6±1.5, 37.80N±0.03×38.28E±0.03, h7km±12km, n16, σ0.943/24, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ATAB	**Bozova**	**0.33**	**178**	*i* P		**Pg**	**14 44 21.4**	**+0.3**
ATAB	**Bozova**	**0.33**	**178**	*i* P		**Pg**	**14 44 21.4**	**+0.3**
MYA	**Malataya**	**0.54**	**12**	*e*PG		**Pg**	**14 44 25.2**	**+0.1**
MYA				*e*SG		**Sb**	**14 44 33.6**	**-0.8**
MYA	**Malataya**	**0.54**	**12**	*e*Pg		**Pg**	**14 44 25.2**	**+0.1**
MYA				*e*Sg		**Sb**	**14 44 33.6**	**-0.8**
URFA	**Urfa**	**0.56**	**130**	*e*PG		**Pg**	**14 44 25.4**	**0.0**
URFA				*e*SG		**Sb**	**14 44 34.6**	**-0.4**
URFA	**Urfa**	**0.56**	**130**	*e*Pg		**Pg**	**14 44 25.4**	**0.0**
URFA				*e*Sg		**Sb**	**14 44 34.6**	**-0.4**
AKCD	**Akcadag**	**0.57**	**331**	*i* P		**Pg**	**14 44 25.5**	**-0.1**
AKCD				*i* S		**Sb**	**14 44 35.5**	**+0.1**
AKCD	**Akcadag**	**0.57**	**331**	*i* P		**Pg**	**14 44 25.5**	**-0.1**
AKCD				*i* S		**Sb**	**14 44 35.5**	**+0.1**
GZT	**Gaziantep**	**0.72**	**232**	*i* P		**Pn**	**14 44 30.8**	**-0.6**
GZT				*i* S		**Sn**	**14 44 43.4**	**+0.7**
DARE	**Darende-Malaty**	**0.99**	**321**	*e*PG		**Pg**	**14 44 34.0**	**+0.3**
DARE	**Darende-Malaty**	**0.99**	**321**	*e*Pg		**Pg**	**14 44 34.0**	**+0.3**
KMRS	**Kahramanmaras**	**1.13**	**255**	*e*PN		**Pg**	**14 44 36.1**	**-0.2**
KMRS	**Kahramanmaras**	**1.13**	**255**	*e*Pn		**Pg**	**14 44 36.2**	**-0.2**
AYKD	**Aykdinkavak**	**1.23**	**252**	*i* P		**Pg**	**14 44 38.1**	**-0.1**
AYKD				*i* S		**Sn**	**14 44 55.8**	**+0.7**
PTK	**Pertek**	**1.40**	**38**	*e*PN		**Pn**	**14 44 40.9**	**+0.2**
PTK	**Pertek**	**1.40**	**38**	*e*Pn		**Pn**	**14 44 40.9**	**+0.2**

HEL 19 14:47:09.7±0.4, 67.76N×20.18E, h0km, ML1.3, Explosion, Sweden

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
LANU	**Lannavaara**	**0.74**	**66**	*e*S		Sg	14 47 32.4	-1.3
KIF	**Kilpisjarvi**	**1.27**	**10**	*e*S		Sg	14 47 49.7	-0.9
HEF	**Hetta**	**1.46**	**62**	*e*P		Pn	14 47 35.7	-1.6
HEF				*e*S		Sg	14 47 54.9	-1.8
SGF	**Sodankyl**	**2.45**	**94**	*e*P		Pn	14 47 50.9	0.0
SGF				*e*S		Sn	14 48 20.6	-0.9
ARA0	**ARCESS Array S**	**2.64**	**45**	*e*P		Pn	14 47 54.1	+0.6
ARA0				*e*S		Sn	14 48 25.3	-1.0
KEV	**Kevo**	**3.19**	**48**	*e*S		Sn	14 48 38.9	-0.9
KEV				*e*SG		Sb	14 48 48.4	+1.8
KEV				MSG			14 48 48.6	
	comp=Z,0.6nm,0.2s							

*ISCJB **19** 14:48:53.0±0.9, 35.33N±0.05×28.52E±0.04, h24km±9km, Error ellipse: s-maj=8.2km s-min=5.2km az=12.2*
*ISK **19** 14:48:52.9, 35.31N×28.57E, h28km, MD3.7*
*CSEM **19** 14:48:54.0±0.3, 35.37N×28.54E, h20km, ML3.6/2, Error ellipse: s-maj=7.5km s-min=4.5km az=7.0*
*DDA **19** 14:48:54.9, 35.47N×28.55E, h30km, MD3.3*
*THE **19** 14:48:58.9, 35.58N×28.28E, h14km±3km, ML3.6/2, Error ellipse: s-maj=5.4km s-min=1.1km az=98.0*

ISC 19 14:48:52.3±1.4, 35.32N±0.05×28.52E±0.03, h20km±6km, n65, σ1.914/87, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARG	**Arkhangelos**	**0.95**	**341**	P		**Pn**	**14 49 11.8**	**+1.2**
ARG				S		**Sg**	**14 49 21.1**	**-2.4**
ARG	**Arkhangelos**	**0.95**	**341**	P		**Pn**	**14 49 11.8**	**+1.2**
ARG				S		**Sg**	**14 49 21.1**	**-2.4**
KARP	**Karpathos**	**1.13**	**282**	P		**Pg**	**14 49 15.5**	**+1.2**
KARP				S		**Sg**	**14 49 28.2**	**-0.9**
KARP	**Karpathos**	**1.13**	**282**	P		**Pg**	**14 49 15.5**	**+1.2**
KARP				S		**Sg**	**14 49 28.2**	**-0.9**
AKAS	**Kas**	**1.27**	**44**	*i* P		**Pb**	**14 49 16.1**	**+0.4**
AKAS				*i* S		**Sb**	**14 49 32.5**	**+0.8**
AKAS	**Kas**	**1.27**	**44**	*i* P		**Pb**	**14 49 16.1**	**+0.4**
AKAS				*i* S		**Sb**	**14 49 32.5**	**+0.8**
FETY	**Fethiye**	**1.39**	**19**	*e*PN		**Pn**	**14 49 16.9**	**+0.2**
FETY	**Fethiye**	**1.39**	**19**	*e*Pn		**Pn**	**14 49 16.9**	**+0.2**
DALY	**Dalyan (Mu˘la**	**1.50**	**4**	*e*PN		**Pn**	**14 49 18.5**	**+0.4**
DALY	**Dalyan (Mu˘la**	**1.50**	**4**	*e*Pn		**Pn**	**14 49 18.5**	**+0.4**
TURN	**Turunc**	**1.55**	**3**	*i* P		**Pn**	**14 49 19.4**	**+0.5**
TURN				*i* S		**Sn**	**14 49 37.5**	**-0.9**
TURN	**Turunc**	**1.55**	**3**	*i* P		**Pn**	**14 49 19.4**	**+0.5**
TURN				*i* S		**Sn**	**14 49 37.6**	**-0.9**
DAT	**Datca**	**1.60**	**332**	*e*PN		**Pn**	**14 49 20.4**	**+0.8**
DAT				*e*SN		**Sn**	**14 49 40.3**	**+0.5**
DAT	**Datca**	**1.60**	**332**	*e*Pn		**Pn**	**14 49 20.4**	**+0.8**
DAT				*e*Sn		**Sn**	**14 49 40.3**	**+0.5**
NIS1	**Nisyros Isl.**	**1.68**	**320**	P		**Pn**	**14 49 21.1**	**+0.5**
NIS1				S		**Sn**	**14 49 39.9**	**-1.7**
NIS1	**Nisyros Isl.**	**1.68**	**320**	P		**Pn**	**14 49 21.1**	**+0.5**
NIS1				S		**Sn**	**14 49 39.9**	**-1.7**
YER	**Yerkesik**	**1.82**	**354**	*e*PN		**Pn**	**14 49 23.1**	**+0.5**
YER	**Yerkesik**	**1.82**	**354**	*e*Pn		**Pn**	**14 49 23.1**	**+0.5**
BODT	**Bodrum**	**2.00**	**331**	*e*PN		**Pn**	**14 49 26.2**	**+1.2**
BODT	**Bodrum**	**2.00**	**331**	*e*Pn		**Pn**	**14 49 26.2**	**+1.2**
GLHS	**Gihisar (BURDU**	**2.00**	**23**	*e*PN		**Pn**	**14 49 25.7**	**+0.6**
GLHS	**Gihisar (BURDU**	**2.00**	**23**	*e*Pn		**Pn**	**14 49 25.7**	**+0.6**
MLSB	**Milas**	**2.06**	**343**	*e*PN		**Pn**	**14 49 26.8**	**+0.9**
MLSB	**Milas**	**2.06**	**343**	*e*Pn		**Pn**	**14 49 26.8**	**+0.9**
GOLH	**Golhisar**	**2.09**	**23**	*i* P		**Pb**	**14 49 29.0**	**-0.7**
GOLH				*i* S		**Sb**	**14 49 54.6**	**-0.7**
GOLH	**Golhisar**	**2.09**	**23**	*i* P		**Pb**	**14 49 29.0**	**-0.7**
GOLH				*i* S		**Sb**	**14 49 54.6**	**-0.7**
KORT	**Korkueli**	**2.24**	**41**	*i* P		**Pb**	**14 49 31.7**	**-0.5**
KORT				*i* S		**Sn**	**14 49 57.2**	**+1.6**
KORT	**Korkueli**	**2.24**	**41**	*i* P		**Pb**	**14 49 31.7**	**-0.5**
KORT				*i* S		**Sn**	**14 49 57.2**	**+1.6**
ANTB	**Antalya**	**2.34**	**47**	*e*PN		**Pn**	**14 49 30.3**	**+0.6**
ANTB	**Antalya**	**2.34**	**47**	*e*Pn		**Pn**	**14 49 30.3**	**+0.6**
NPS	**Neapolis**	**2.38**	**270**	P		**Pb**	**14 49 34.0**	**-0.5**
NPS	**Neapolis**	**2.38**	**270**	P		**Pb**	**14 49 34.0**	**-0.5**
DNZL	**Cakiroluk**	**2.41**	**10**	*i* P		**Pn**	**14 49 32.1**	**+1.4**
DNZL				*i* S		**Sn**	**14 50 00.9**	**+1.1**
DNZL	**Cakiroluk**	**2.41**	**10**	*i* P		**Pn**	**14 49 32.1**	**+1.4**
DNZL				*i* S		**Sn**	**14 50 00.9**	**+1.1**
DENT	**Denizli**	**2.47**	**10**	*e*PN		**Pn**	**14 49 32.3**	**+0.8**
DENT	**Denizli**	**2.47**	**10**	*e*Pn		**Pn**	**14 49 32.3**	**+0.8**
BCK	**Bucak**	**2.71**	**37**	*e*PN		**Pn**	**14 49 35.5**	**+0.6**
BCK	**Bucak**	**2.71**	**37**	*e*Pn		**Pn**	**14 49 35.5**	**+0.6**
SMG	**Samos**	**2.74**	**331**	P		**Pn**	**14 49 36.4**	**+1.2**
SMG	**Samos**	**2.74**	**331**	P		**Pn**	**14 49 36.4**	**+1.2**
ISP	**Isparta**	**2.98**	**32**	*e*PN		**Pn**	**14 49 39.6**	**+1.1**
ISP	**Isparta**	**2.98**	**32**	*e*Pn		**Pn**	**14 49 39.6**	**+1.1**
APE	**Apeiranthos**	**2.98**	**307**	*e*PN		**Pn**	**14 49 40.1**	**+1.5**
APE	**Apeiranthos**	**2.98**	**307**	P		**Pn**	**14 49 40.0**	**+1.5**
APE				S		**Sn**	**14 50 12.3**	**-1.5**
APE	**Apeiranthos**	**2.98**	**307**	P		**Pn**	**14 49 40.0**	**+1.5**
APE				S		**Sn**	**14 50 12.3**	**-1.5**
KHL	**Karahalli**	**3.11**	**15**	*e*PN		**Pn**	**14 49 41.3**	**+1.0**
KHL	**Karahalli**	**3.11**	**15**	*e*Pn		**Pn**	**14 49 41.3**	**+1.0**
KULA	**Kula-Manisa**	**3.19**	**2**	*e*PN		**Pn**	**14 49 42.2**	**+0.7**
KULA	**Kula-Manisa**	**3.19**	**2**	*e*Pn		**Pn**	**14 49 42.2**	**+0.7**
GAZI	**Gazipasa**	**3.22**	**72**	*i* P		**Pn**	**14 49 41.8**	**0.0**
GAZI				*i* S		**Sn**	**14 50 16.8**	**-2.8**
GAZI	**Gazipasa**	**3.22**	**72**	*i* P		**Pn**	**14 49 41.8**	**0.0**
GAZI				*i* S		**Sn**	**14 50 16.8**	**-2.8**
LEF	**Lefka**	**3.59**	**92**	*e*PN		**Pn**	**14 49 46.9**	**+0.1**
LEF	**Lefka**	**3.59**	**92**	*e*Pn		**Pn**	**14 49 46.9**	**+0.1**
CSS	**Prodhromos**	**3.96**	**94**	*e*PN		**Pn**	**14 49 52.8**	**+0.8**
CSS	**Prodhromos**	**3.96**	**94**	*e*Pn		**Pn**	**14 49 52.8**	**+0.8**
KONT	**Konya--Tatoy**	**4.05**	**49**	*e*PN		**Pn**	**14 49 54.8**	**+1.5**
KONT	**Konya--Tatoy**	**4.05**	**49**	*e*Pn		**Pn**	**14 49 54.8**	**+1.5**
LFK	**Lefkose**	**4.10**	**89**	*e*PN		**Pn**	**14 49 55.3**	**+1.3**
LFK	**Lefkose**	**4.10**	**89**	*e*Pn		**Pn**	**14 49 55.3**	**+1.3**
TVSB	**Tavsanli**	**4.19**	**10**	*e*PN		**Pn**	**14 49 56.0**	**+0.7**
TVSB	**Tavsanli**	**4.19**	**10**	*e*Pn		**Pn**	**14 49 56.0**	**+0.7**
LADK	**Ladik-KONYA**	**4.22**	**46**	*e*PN		**Pn**	**14 49 57.1**	**+1.5**
LADK	**Ladik-KONYA**	**4.22**	**46**	*e*Pn		**Pn**	**14 49 57.2**	**+1.5**
KIZT	**Kizilcal**	**4.46**	**36**	*e*PN		**Pn**	**14 50 00.4**	**+1.5**
KIZT	**Kizilcal**	**4.46**	**36**	*e*Pn		**Pn**	**14 50 00.4**	**+1.5**

*ISK **19** 14:52:58.9, 34.39N×28.15E, h12km, MD3.7*
*DDA **19** 14:53:26.5, 36.39N×28.71E, h7km, MD3.3*
*CSEM **19** 14:53:26.5, 36.39N×28.71E, h7km, MD3.3, After DDA*

ISC 19 14:53:01.8±3.0, 34.6N±0.2×28.2E±0.1, h10km, n21, σ1.923/22, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKAS	**Kas**	**2.04**	**34**	*i* P		**Pn**	**14 53 35.0**	**-1.4**
AKAS				*i* S		Sn	14 53 52.0	-10
AKAS	**Kas**	**2.04**	**34**	*i* P		**Pn**	**14 53 35.0**	**-1.4**
AKAS				*i* S		Sn	14 53 52.0	-10
FETY	**Fethiye**	**2.21**	**19**	*e*PN		**Pn**	**14 53 38.4**	**-0.2**
FETY				*e*SN		**Sn**	**14 54 07.6**	**+1.7**
DAT	**Datca**	**2.23**	**347**	*e*PN		**Pn**	**14 53 38.9**	**0.0**
DALY	**Dalyan (Mu˘la**	**2.30**	**9**	*e*PN		**Pn**	**14 53 39.8**	**+0.1**
TURN	**Turunc**	**2.34**	**8**	*i* P		**Pn**	**14 53 38.1**	**-2.3**
TURN				*i* S		Sn	14 53 55.9	-13
TURN	**Turunc**	**2.34**	**8**	*i* P		**Pn**	**14 53 38.1**	**-2.3**
TURN				*i* S		Sn	14 53 55.9	-13
YER	**Yerkesik**	**2.58**	**2**	*e*PN		**Pn**	**14 53 44.1**	**+0.4**
ELL	**Elmali**	**2.60**	**32**	*e*PN		**Pn**	**14 53 44.3**	**+0.2**
BODT	**Bodrum**	**2.61**	**344**	*e*PN		**Pn**	**14 53 43.9**	**-0.1**
MLSB	**Milas**	**2.76**	**353**	*e*PN		**Pn**	**14 53 46.5**	**+0.4**
GLHS	**Gihisar (BURDU**	**2.81**	**22**	*e*PN		**Pn**	**14 53 47.5**	**+0.5**
GOLH	**Golhisar**	**2.91**	**22**	*i* P		**Pn**	**14 53 47.4**	**-0.8**
GOLH				*i* S		Sn	14 54 14.1	-9.2
GOLH	**Golhisar**	**2.91**	**22**	*i* P		**Pn**	**14 53 47.4**	**-0.8**
GOLH				*i* S		Sn	14 54 14.1	-9.2
DNZL	**Cakiroluk**	**3.21**	**12**	*i* P		**Pn**	**14 53 50.4**	**-2.1**
DNZL				*i* S		Sn	14 54 19.0	-12
DNZL	**Cakiroluk**	**3.21**	**12**	*i* P		**Pn**	**14 53 50.4**	**-2.1**
DNZL				*i* S		Sn	14 54 19.0	-12
GAZI	**Gazipasa**	**3.77**	**62**	*i* P		**Pn**	**14 54 00.3**	**+0.3**
GAZI				*i* S		Sn	14 54 34.7	-10
GAZI	**Gazipasa**	**3.77**	**62**	*i* P		**Pn**	**14 54 00.3**	**+0.3**
GAZI				*i* S		Sn	14 54 34.7	-10
LEF	**Lefka**	**3.91**	**80**	*e*PN		**Pn**	**14 54 00.9**	**-1.0**
CSS	**Prodhromos**	**4.25**	**83**	*e*PN		**Pn**	**14 54 06.5**	**-0.2**
LFK	**Lefkose**	**4.45**	**79**	*e*PN		**Pn**	**14 54 09.2**	**-0.3**

*DJA **19** 15:05:58.7±2.3, 16.1N×21.4×14.7E±2.1, h10km, M5.4/14, mB5.8/11, mb5.5/14, Mw(mB)5.4/11*
*BJI **19** 15:06:20.6, 13.89N×145.60E, h113km, mB5.3/35, mb5.2/51*
*ISCJB **19** 15:06:23.8±0.5, 14.08N±0.03×145.23E±0.03, h117km±4km, mb5.3/211, Error ellipse: s-maj=4.4km s-min=4.0km az=1.4*
*NEIC **19** 15:06:24.6±0.1, 14.08N×145.19E, mb5.5/116, Error ellipse: s-maj=4.7km s-min=4.2km az=121.0*
NEIC Felt [II] on Saipan. Also felt on Tinian. Felt [IV] at Santa Rita; [III] at Andersen AFB, Dededo and Tamuning; [II] at Yigo, Guam. Also felt at Agat, Barrigada, Hagatna, Hagatna Heights, Mangilao, Talofofo and Yona.
*MOS **19** 15:06:24.1±1.1, 14.12N×145.15E, h120km, mb5.3/51, MS4.6/28, Error ellipse: s-maj=8.4km s-min=5.0km az=102.1*
*IDC **19** 15:06:25.2±0.6, 14.04N×145.27E, h119km±4km, mb4.9/33, mb1 5.0/34, mb1mx4.9/38, mbtmp4.9/34, MS4.5/14, Ms1 4.5/14, ms1mx4.2/40, Error ellipse: s-maj=12.6km s-min=7.0km az=88.0*
*GCMT **19** 15:06:29.7±0.1, 13.73N×145.33E, h110km±1km, MW5.5, Moment Tensor Solution. s74,c107; s9,c9; Moment tensor: Scale 10^17Nm; Mrr1.28±.04; Mθθ-0.64±.05; Mϕϕ-0.64±.05; Mrθ1.74±.03; Mθϕ-0.93±.04; Mϕr-0.20±.04; Best double couple: M0:2.20000×10^17 NP1:ϕs201.00000°, δ31.00000°, λ36.00000°. NP2:ϕs79.00000°, δ72.00000°, λ116.00000°. Principal axes: T 2.4500, Plg55.0000°, Azm22.0000°; N -0.4100, Plg25.0000°, Azm250.0000°; P -2.0400, Plg23.0000°, Azm149.0000°; Data Used: II IU IC G CN. Surface waves: sta= 89, comp=179, per= 50.*

ISC 19 15:06:25.5±0.3, 14.09N±0.03×145.20E±0.04, h119km±1km, h119km:pP-P, n955, σ1.910/960, mb5.4/220, 210C-215D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GUMO	**Guam**	**0.59**	**213**	*i* Pn		**Pn**	**15 06 43.7**	**-0.1**
GUMO				*e*Sn		**Sn**	**15 06 56.3**	**-1.4**
JAY	**Jayapura** 142nm,1.2s,3μm	**17.09**	**195**	P		**P**	**15 10 17.2**	**+0.1**
BAKI	**Biak**	**17.65**	**211**	P		**Pn**	**15 10 28.3**	**+4.2**
WAMI	**Wamena** 128nm,1.1s,2μm	**18.98**	**200**	P		**Pn**	**15 10 41.6**	**+1.8**
JHJ	**Hachijo jima 2** 28nm,0.3s,baz=217,slow=16,SNR=11	**19.58**	**346**	P		**P**	**15 10 44.5**	**+0.3**
JHJ				LR		LR	15 16 48.5	
	comp=Z,2μm,19.5s,baz=129,slow=32							
JOW	**Kunigami** 54nm,0.7s	**20.28**	**311**	*e*P		Pn	15 10 54.5	-0.3
DAV	**Davao City (W)**	**20.50**	**252**	PFAKE			15 11 10.0	+12
DAV				LR		LR		
	comp=Z,985nm,19.0s							
WAKE	**Wake Island**	**21.18**	**73**	*e*P		**P**	**15 11 00.2**	**-1.3**
	comp=Z,253nm,1.0s							
WAKE				LR		LR		
	comp=Z,1μm,20.0s							
FAKI	**Fak Fak**	**21.22**	**218**	P		**P**	**15 11 03.3**	**+1.3**
	comp=Z,296nm,1.1s,comp=Z,3μm							
CTBH	**Cotabato--PC H**	**21.68**	**254**	*i* P		**P**	**15 11 08.0**	**+1.0**
TNTI	**Ternate**	**22.05**	**235**	P		**P**	**15 11 11.1**	**+0.3**
	comp=Z,87nm,1.5s,comp=Z,2μm							
JNU	**Nakatsue**	**23.00**	**328**	*e*P		**P**	**15 11 21.1**	**+0.9**
	comp=Z,53nm,0.7s							
JNU	**Nakatsue**	**23.00**	**328**	P		**P**	**15 11 20.1**	**-0.1**
	comp=Z,86nm,0.5s,baz=112,slow=3.5,SNR=213							
MAJO	**Matsushiro**	**23.22**	**346**	*e*P		**P**	**15 11 22.0**	**-0.1**
MAJO				pmax		pmax		
	comp=Z,203nm,0.6s							
MAJO				MLR		MLR		
	comp=Z,972nm,20.0s							
MAJO	**Matsushiro**	**23.22**	**346**	*e*P		**P**	**15 11 22.0**	**-0.1**
	comp=Z,204nm,0.6s							
MAJO				LR		LR		
	comp=Z,972nm,20.0s							
MAT	**Matsushiro**	**23.22**	**346**	P		**P**	**15 11 21.4**	**-0.8**
MAT				S		**S**	**15 15 21.8**	**-3.2**
PMG	**Port Moresby**	**23.42**	**175**	*e*P		**P**	**15 11 22.3**	**-1.7**
	comp=Z,404nm,0.9s							
PMG				LR		LR		
	comp=Z,3μm,20.0s							
PMG	**Port Moresby**	**23.42**	**175**	P		**P**	**15 11 22.2**	**-1.9**
	comp=Z,364nm,0.9s,baz=7.0,slow=5.8,SNR=47							
MSAI	**Masohi**	**23.67**	**224**	P		**P**	**15 11 27.3**	**+0.9**
	comp=Z,33nm,1.3s							
MNI	**Manado**	**23.73**	**240**	P		**P**	**15 11 28.5**	**+1.5**
	comp=Z,122nm,1.2s,comp=Z,3μm							
AAI	**Ambon**	**24.42**	**225**	P		**P**	**15 11 33.2**	**0.0**
	comp=Z,298nm,1.4s,comp=Z,4μm							
NACB	**Ninganchiao**	**24.42**	**298**	*e*P		**P**	**15 11 33.3**	**+0.2**
YULB	**Yu-li**	**24.43**	**296**	*e*P		**P**	**15 11 32.6**	**-0.6**
	comp=Z,46nm,0.6s							
TATO	**Taipei**	**24.80**	**299**	PFAKE			15 11 50.0	+13
TATO				LR		LR		
	comp=Z,2μm,20.0s							
SSLB	**Suanglung**	**24.85**	**296**	*e*P		**P**	**15 11 37.6**	**+0.6**
	comp=Z,168nm,1.3s							
KMSI	**Cibinong**	**24.92**	**239**	P		**P**	**15 11 40.2**	**+2.4**
	comp=Z,363nm,1.0s							
TPUB	**Ta-pu**	**24.98**	**295**	*e*P		**P**	**15 11 37.5**	**-0.8**
	comp=Z,50nm,1.0s							
MRSI	**Marisa**	**26.70**	**242**	P		**P**	**15 11 54.6**	**+0.8**
	comp=Z,84nm,1.

MDJ **Mudanjiang** 33.21 339 *e*P **P** 15 12 50.7 -0.3
comp=Z,77nm,1.0s
MDJ LR LR
comp=Z,1μm,19.0s
SNY Shenyang 33.40 330 ⇑P **P** **15 12 53.0 +0.4**
SNY S **S** **15 18 01.1 -4.0**
SNY pmax pmax
comp=Z,15nm,0.6s
SNY LR LR
comp=N,250nm,19.2s
SNY LR LR
comp=E,440nm,16.8s
SNY LR LR
comp=Z,340nm,20.4s
CTA Charters Tower 33.98 178 P **P** **15 12 57.9 +0.1**
CTA Charters Tower 33.98 178 P **P** **15 12 57.9 +0.1**
comp=Z,50nm,0.9s,baz=2.0,slow=9.9,SNR=34
CTAO Charters Tower 33.98 178 *e*P **P** **15 12 57.8 0.0**
CTAO pmax pmax
comp=Z,291nm,1.6s
CTAO MLR MLR
comp=Z,2μm,20.0s
CTAO Charters Tower 33.98 178 *e*P **P** **15 12 57.8 0.0**
comp=Z,291nm,1.6s
CTAO LR LR
comp=Z,2μm,20.0s
CN2 Changchun 34.10 334 ⇑P **P** **15 12 59.4 +0.7**
CN2 *e*pP **pP** **15 13 26.5 +1.6**
CN2 *e*sP **sP** **15 13 40.8 +2.2**
CN2 *e*PP **PP** **15 14 18.1 -0.2**
CN2 *e*S **S** **15 18 16.9 +1.0**
CN2 pmax pmax
comp=Z,50nm,0.8s
CN2 pmax pmax
comp=Z,200nm,4.0s
QIZ Qiongzhong 34.21 283 P **P** **15 13 00.8 +0.8**
QIZ S **S** **15 18 18.0 -0.1**
QIZ sS **sS** **15 19 01.9 -1.9**
QIZ LR LR
comp=N,620nm,18.5s
QIZ LR LR
comp=Z,600nm,22.5s
QIZ Qiongzhong 34.21 283 PFAKE 15 13 10.0 +10
QIZ LR LR
comp=Z,740nm,21.0s
SBUM Sibu 34.57 253 P **P** **15 13 04.1 +1.0**
comp=Z,21nm,1.3s
HABR Khabarovsk 35.30 348 *e*P **P** **15 13 08.1 -0.8**
HABR *PP **pP** **15 13 38.1 +2.9**
HABR *e*SP **sP** **15 13 48.6 -0.3**
HABR *e* 15 14 30.0
HABR *e* 15 15 35.0
HABR *e*S **S** **15 18 33.9 -0.2**
HABR *SS **sS** **15 19 20.3 +0.4**
HABR *e* 15 23 13.8
HABR pmax pmax
comp=E,15nm,0.9s
HABR pmax pmax
comp=N,25nm,1.9s
HABR pmax pmax
comp=Z,69nm,1.9s
HABR MLR MLR
comp=Z,350nm,20.0s
WRAB Tennant Creek 35.45 198 P **P** **15 13 09.0 -1.5**
comp=Z,571nm,0.8s,SNR=24
WRAB Tennant Creek 35.45 198 *e*P **P** **15 13 09.5 -1.0**
WRAB pmax pmax
comp=Z,100nm,1.0s
WRAB MLR MLR
comp=Z,2μm,19.0s
WRAB Tennant Creek 35.45 198 *e*P **P** **15 13 09.5 -1.0**
comp=Z,100nm,1.0s
WRAB LR LR
comp=Z,2μm,19.0s
WRA Warramunga Arr 35.46 198 P **P** **15 13 09.7 -1.0**
WRA S **S** **15 18 36.0 -1.2**
WRA ScP **ScP** **15 19 11.8 -1.1**
WRA PKiKP **PKiKP** **15 22 58.0 -0.9**
WRA Warramunga Arr 35.46 198 P **P** **15 13 09.7 -1.0**
comp=Z,54nm,0.8s,baz=19,slow=9.4,SNR=144
WRA S **S** **15 18 36.0 -1.2**
comp=Z,3.0nm,1.1s,baz=20,slow=14,SNR=4.5
WRA ScP **ScP** **15 19 11.8 -1.1**
comp=Z,11nm,1.0s,baz=18,slow=3.9,SNR=8.3
WRA PKiKP **PKiKP** **15 22 58.0 -0.9**
comp=Z,0.5nm,0.4s,baz=331,slow=1.5,SNR=17
WRA LR LR 15 27 24.6
comp=Z,1μm,21.1s,baz=280,slow=36
STKI Sintang 36.17 250 P **P** **15 13 16.8 0.0**
comp=Z,54nm,0.6s,comp=Z,18μm
BJT Baijiatuau 36.25 321 *e*P **P** **15 13 15.9 -1.3**
comp=Z,32nm,0.4s
BJT LR LR
comp=Z,719nm,20.0s
BJI Beijing 36.26 321 P **P** **15 13 18.1 +0.8**
BJI pmax pmax
comp=Z,50nm,1.2s
BJI pmax pmax
comp=Z,370nm,10.7s
BJI LR LR
comp=N,690nm,18.8s
BJI LR LR
comp=E,210nm,17.6s
ENH Enshi 36.60 302 *e*P **P** **15 13 20.5 +0.1**
comp=E,31nm,0.4s
ENH LR LR
comp=Z,605nm,22.0s
KSM Kuching 36.70 253 *e*P **P** **15 13 20.2 -1.1**
comp=Z,30nm,1.0s
KSM *epP **pP** **15 13 47.1 -0.6**
KSM LR LR
comp=Z,367nm,22.0s
KSM Kuching 36.70 253 P **P** **15 13 22.1 +0.8**
KLR Kul'dur 36.75 345 ⇓*i*P P 15 13 17.8 -3.5
KLR pmax pmax
comp=E,70nm,1.8s
KLR pmax pmax
comp=Z,160nm,1.8s
KHKI Kahang-Kahang 36.88 235 P **P** **15 13 23.5 +0.7**
SKR Severo-Kuril's 37.56 11 *e*P P 15 13 23.5 -4.6
SKR pmax pmax
comp=Z,80nm,0.5s
GYA Guiyang 38.04 295 ⇑*i*P **P** **15 13 34.8 +2.1**
GYA pP **pP** **15 13 59.9 +0.6**
GYA sP **sP** **15 14 13.0 +0.2**
GYA PP **PnPn** **15 15 08.6 +3.8**
GYA PcP **PcP** **15 15 47.0 +1.2**
GYA S **S** **15 19 18.8 +2.1**
GYA ScP **ScP** **15 19 21.8 -0.9**
GYA sS **sS** **15 20 03.5 +0.6**
GYA SS **SS** **15 22 04.3 -4.4**
GYA ScS **ScS** **15 23 32.3 -0.3**
GYA pmax pmax
comp=Z,40nm,0.7s
GYA pmax pmax
comp=Z,280nm,4.8s
BLJI Banyuglugur 38.13 237 P pP 15 13 59.4 -0.6
comp=Z,105nm,1.6s,comp=Z,6μm
XAN Xi'an 38.35 308 P **P** **15 13 35.9 +0.9**
XAN pP **pP** **15 14 01.3 -0.4**
XAN sP **sP** **15 14 14.3 -0.9**
XAN PP **PnPn** **15 15 10.3 +2.1**
XAN S **S** **15 19 20.1 -0.9**
XAN pmax pmax
comp=Z,13nm,0.6s
XAN pmax pmax
comp=Z,140nm,8.3s
XAN LR LR
comp=N,410nm,12.7s
XAN LR LR
comp=E,140nm,14.9s
XAN LR LR
comp=Z,130nm,18.1s
GMJI Gumukmas 38.56 237 P pP 15 14 03.9 +0.3
comp=Z,107nm,1.1s
AS31 Alice Springs 39.11 197 *e*P **P** **15 13 40.5 -1.0**
ASAR Alice Springs 39.11 197 P **P** **15 13 40.8 -0.7**
ASAR PP **PP** **15 15 14.9 +1.2**
ASAR ScP **ScP** **15 19 26.4 -0.2**
ASAR S **S** **15 19 31.2 -1.3**
ASAR Alice Springs 39.11 197 P **P** **15 13 40.8 -0.7**
comp=Z,13nm,0.7s,baz=17,slow=6.4,SNR=247
ASAR PP **PP** **15 15 14.9 +1.2**
comp=Z,11nm,1.1s,baz=20,slow=10,SNR=4.4
ASAR ScP **ScP** **15 19 26.4 -0.2**
comp=Z,2.2nm,0.8s,baz=22,slow=3.6,SNR=5.0
ASAR S **S** **15 19 31.2 -1.3**
comp=Z,4.2nm,1.2s,baz=23,slow=23,SNR=4.8
ASAR LR LR 15 29 50.0
comp=Z,836nm,21.1s,baz=15,slow=36
HHC Hu-ho-hao-te 39.61 319 *e*P **P** **15 13 47.0 +1.4**
HHC pP **pP** **15 14 13.1 +0.8**
HHC sP **sP** **15 14 25.8 0.0**
HHC PP **PnPn** **15 15 24.1 +1.0**
HHC S **S** **15 19 42.1 +2.2**
HHC sS **sS** **15 20 25.0 -1.2**
HHC SS **SS** **15 22 34.6 -5.1**
HHC ScS **ScS** **15 23 41.3 +0.1**
HHC pmax pmax
comp=Z,60nm,0.8s
HHC pmax pmax
comp=Z,1μm,7.0s
HHC LR LR
comp=N,1μm,15.4s
HHC LR LR
comp=E,990nm,12.7s
HHC LR LR
comp=Z,3μm,15.7s
EIDS Eidsvold 39.63 172 *e*P **P** **15 13 44.0 -1.6**
comp=Z,48nm,1.3s
SJI Sawahan 39.63 239 P pP 15 14 11.3 -1.5
comp=Z,7μmcomp=Z,127nm,0.9s
PWJI Pagerwojo 39.76 238 P pP 15 14 12.4 -1.3
PEA0B Petropavlovsk- 40.17 12 *e*P **P** **15 13 49.2 -0.7**
PETK Petropavlovsk- 40.17 12 P **P** **15 13 49.2 -0.7**
PETK 15 15 51.8
PETK Petropavlovsk- 40.17 12 P **P** **15 13 49.2 -0.7**
PETK PcP **PcP** **15 15 51.8 -0.1**
PETK Petropavlovsk- 40.17 12 P **P** **15 13 49.2 -0.7**
comp=Z,9.7nm,0.4s,baz=164,slow=7.3,SNR=72
PETK PcP **PcP** **15 15 51.8 -0.1**
comp=Z,6.6nm,0.6s,baz=188,slow=5.4,SNR=4.5
PETK LR LR 15 29 42.5
comp=Z,194nm,20.1s,baz=191,slow=35
PET Petropavlovsk 40.29 13 *e*P **P** **15 13 50.7 -0.1**
BTO Baotou 40.48 317 *e*P **P** **15 13 53.3 +0.5**
FUNA Funafuti 40.53 122 PFAKE 15 14 00.0 +6.7
FUNA LR LR
comp=Z,4μm,19.0s
HIA Hailar 40.83 334 *e*P **P** **15 13 55.2 -0.2**
comp=Z,90nm,1.0s
HIA LR LR
comp=Z,440nm,19.0s
BJII Banjamegara 41.15 241 P sP 15 14 35.3 -3.6
KMI Kunming 41.32 292 P **P** **15 14 01.8 +1.8**
KMI sP **sP** **15 14 40.3 -0.1**
KMI PP **PP** **15 15 39.1 +1.3**
KMI S **S** **15 20 07.3 +1.3**
KMI pmax pmax
comp=Z,12nm,1.0s
KMI pmax pmax
comp=Z,200nm,6.1s
KMI LR LR
comp=N,750nm,11.2s
KMI LR LR
comp=E,480nm,15.5s
KMI LR LR
comp=Z,700nm,16.3s
NOUC Port Laguerre 41.49 150 *e*P **P** **15 14 00.7 -0.3**
NOUC *e*S **pP** **15 14 31.1 +3.2**
CD2 Chengdu 41.52 301 P **P** **15 14 02.0 +0.7**
CD2 pP **pP** **15 14 28.3 +0.1**
CD2 sP **sP** **15 14 41.6 -0.1**
CD2 PP **PnPn** **15 15 42.8 -2.6**
CD2 PcP **PcP** **15 15 58.3 +1.6**
CD2 S **S** **15 20 08.6 +0.3**
CD2 sS **sS** **15 20 54.3 -0.7**
CD2 ScS **ScS** **15 23 51.5 -1.4**
CD2 pmax pmax
comp=Z,30nm,0.5s
CD2 pmax pmax
comp=Z,280nm,10.2s
CD2 LR LR
comp=N,880nm,15.6s
CD2 LR LR
comp=E,710nm,13.2s
CD2 LR LR
comp=Z,510nm,14.4s
DZM Mont Dzumac 41.53 150 *e*P **P** **15 14 01.8 +0.3**
comp=Z,153nm,1.2s
LZH Lanzhou 42.97 308 *e*P **P** **15 14 14.9 +1.8**
LZH sP **sP** **15 14 54.3 +0.6**
LZH S **S** **15 20 31.0 +1.3**
LZH sS **sS** **15 21 15.3 -1.3**
LZH SS **SS** **15 23 40.5 -5.5**
LZH pmax pmax
comp=Z,52nm,1.0s
LZH pmax pmax
comp=Z,360nm,7.8s
LZH LR LR
comp=N,740nm,15.4s
LZH LR LR
comp=E,410nm,13.8s
LZH LR LR
comp=Z,770nm,16.5s
CHTO Chiang Mai 44.52 283 PFAKE 15 14 40.0 +14
CHTO LR LR
comp=Z,378nm,21.0s
CM31 Chiang Mai Arr 44.53 282 *e*P **P** **15 14 26.5 +0.8**
comp=Z,9.4nm,0.7s
CMAR Chiang Mai Arr 44.53 282 P **P** **15 14 26.9 +1.3**
CMAR pP **pP** **15 14 54.1 +1.2**
CMAR PcP **PcP** **15 16 08.4 +1.4**
CMAR ScP **ScP** **15 19 48.2 -0.1**
CMAR Chiang Mai Arr 44.53 282 P **P** **15 14 26.9 +1.3**
comp=Z,5.7nm,0.6s,baz=78,slow=6.9,SNR=54
CMAR pP **pP** **15 14 54.1 +1.2**
comp=Z,6.0nm,1.0s,baz=84,slow=6.6,SNR=6.0
CMAR PcP **PcP** **15 16 08.4 +1.4**
comp=Z,15nm,0.8s,baz=96,slow=1.8,SNR=14
CMAR ScP **ScP** **15 19 48.2 -0.1**
comp=Z,2.8nm,1.1s,baz=118,slow=2.2,SNR=4.3
CMAR LR LR 15 33 00.1
comp=Z,306nm,19.7s,baz=85,slow=36
IPM Ipoh 44.56 262 *e*P **P** **15 14 25.2 -0.7**
IPM *epP **pP** **15 14 54.2 +1.0**
IPM Ipoh 44.56 262 P **P** **15 14 27.0 +1.1**
FX1 Attu Island--F 44.62 24 *e*P **P** **15 14 26.8 +1.0**
ARMA Armidale 44.68 172 *e*P **P** **15 14 25.9 -0.8**
ARMA *epP **pP** **15 14 51.9 -2.0**
KULM Kulim 44.71 263 *e*P **P** **15 14 27.3 +0.1**
comp=Z,30nm,1.2s
KULM *epP **pP** **15 14 54.0 -0.4**
KULM LR LR
comp=Z,473nm,21.0s
MSVF Nonsavu 45.27 133 *e*P **P** **15 14 32.5 +0.9**
MSVF pmax pmax
comp=Z,405nm,2.2s
MSVF MLR MLR
comp=Z,2μm,20.0s
MSVF Nonsavu 45.27 133 *e*P **P** **15 14 32.5 +0.9**
comp=Z,405nm,2.2s
MSVF LR LR
comp=Z,2μm,20.0s
CLNS Chul'man 45.40 344 *e*P **P** **15 14 32.0 0.0**
CLNS *e* 15 16 10.7
CLNS *e* 15 16 21.2
CLNS *ePPP PPP 15 17 01.1
CLNS *eS **S** **15 21 09.1 +5.0**
CLNS *e* 15 24 17.0
CLNS pmax pmax
comp=Z,41nm,1.0s
CLNS pmax pmax
comp=N,25nm,1.1s
CLNS pmax pmax
comp=E,10.0nm,1.1s
CLNS pmax pmax
comp=E,11nm,1.0s
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=Z,10.0nm,1.0s
CLNS smax smax
comp=E,244nm,17.7s
CLNS smax smax
comp=N,322nm,18.0s
CIT Chita 45.53 333 *e*P **P** **15 14 34.9 +1.8**
CIT *e* 15 15 01.9
CIT *e* 15 15 14.6
CIT pmax pmax
comp=Z,161nm,2.1s
STKA Stephens Creek 45.83 184 *e*P **P** **15 14 34.4 -1.2**
comp=Z,12nm,1.0s
STKA Stephens Creek 45.83 184 P **P** **15 14 34.8 -0.8**
comp=Z,59nm,1.0s,baz=1.3,slow=7.7,SNR=141
STKA LR LR 15 34 00.3
comp=Z,810nm,19.0s,baz=344,slow=36
ULN Ulaanbaatar 46.16 325 *e*P **P** **15 14 39.5 +1.2**
ULN LR LR
comp=Z,661nm,20.0s
AMKA Amchitka 46.21 29 *e*P **P** **15 14 39.5 +1.1**
comp=Z,219nm,0.9s
SONM Songino Array 46.52 324 P **P** **15 14 42.1 +1.1**
SONM ScP **ScP** **15 19 55.5 -0.8**
SONM Songino Array 46.52 324 P **P** **15 14 42.1 +1.1**
comp=Z,7.0nm,0.4s,baz=143,slow=7.0,SNR=32
SONM ScP **ScP** **15 19 55.5 -0.8**
comp=Z,6.5nm,1.1s,baz=142,slow=2.2,SNR=6.4
SONM LR LR 15 32 48.4
comp=Z,507nm,20.5s,baz=124,slow=34
GTA Gaotai 47.09 311 *e*P **P** **15 14 47.1 +1.4**
GTA pP **pP** **15 15 12.3 -0.9**
GTA sP **sP** **15 15 25.5 -1.0**
GTA ScP **ScP** **15 19 58.5 -0.3**
GTA S **S** **15 21 30.5 +1.4**
GTA sS **sS** **15 22 16.6 +0.1**
GTA SS **SS** **15 24 51.8 -5.8**
GTA pmax pmax
comp=Z,19nm,1.2s
GTA pmax pmax
comp=Z,340nm,9.7s
GTA LR LR
comp=N,610nm,19.7s
GTA LR LR
comp=E,440nm,17.6s
GTA LR LR
comp=Z,370nm,17.3s
BBOO Buckleboo 47.44 190 *e*P **P** **15 14 47.7 -0.5**
comp=Z,1μm,0.9s
FORT Forrest 47.56 200 *e*P **P** **15 14 48.4 -0.7**
comp=Z,127nm,0.8s
YAK Yakutsk 49.15 350 *c i*P **P** **15 14 59.8 -1.1**
YAK *e*PP pP 15 15 23.0 -5.6
YAK *e* 15 16 51.5
YAK *eS S 15 21 47.6 -9.4
YAK pmax pmax
comp=Z,81nm,0.8s
YAK pmax pmax
comp=N,11nm,1.1s
YAK pmax pmax
comp=E,8.0nm,0.8s
YAK pmax pmax
comp=Z,8.0nm,0.5s
YAK smax smax
comp=E,65nm,2.5s
CAN Canberra 49.27 176 PFAKE 15 15 10.0 +7.8
CAN LR LR
comp=Z,1μm,19.0s
ZAK Zakamensk 49.61 326 *e*P **P** **15 15 04.9 +0.1**
ZAK *e* 15 15 29.8
ZAK pmax pmax
comp=Z,10.0nm,1.3s
IRK Irkutsk 50.10 328 ⇓*i*P **P** **15 15 09.5 +1.2**
IRK *e* 15 15 37.0
IRK pmax pmax
comp=Z,50nm,2.2s
TLY Talaya 50.11 327 *c i*P **P** **15 15 09.2 +0.7**
TLY *e* 15 15 35.5
TLY *e* 15 17 00.9
TLY *eS **S** **15 22 12.8 +1.9**
TLY *ePS S 15 22 20.4 +10
TLY *e* 15 24 48.0
TLY pmax pmax
comp=Z,26nm,1.6s
TLY Talaya 50.11 327 P **P** **15 15 09.2 +0.7**
comp=Z,65nm,0.5s,SNR=6.8
AFI Afiamalu 50.87 121 PFAKE 15 15 30.0 +15
AFI LR LR
comp=Z,1μm,19.0s
SHL Shillong 51.15 292 *e*PKP **P** **15 15 18.0 +1.1**
SHL *eS **sS** **15 23 17.0 +2.7**
MOY Mondy 51.51 326 *e*P **P** **15 15 20.2 +1.1**
MOY *e* 15 15 47.8
MOY pmax pmax
comp=Z,45nm,2.2s
LSA Lhasa 52.06 297 *e*P **P** **15 15 24.0 0.0**
LSA pmax pmax
comp=Z,30nm,0.8s
LSA MLR MLR
comp=Z,430nm,21.0s
LSA Lhasa 52.06 297 *e*P **P** **15 15 24.0 0.0**
comp=Z,30nm,0.8s
LSA LR LR
comp=Z,430nm,21.0s
NWAO Narrogin (SRO) 53.85 209 PFAKE 15 15 50.0 +14
NWAO LR LR
comp=Z,1μm,19.0s
KIP Kipapa 54.33 74 *e*P **P** **15 15 42.3 +2.2**
KIP Kipapa 54.33 74 *e*P **P** **15 15 42.3 +2.2**
UNV Unalaska Valle 54.74 33 *e*P **P** **15 15 42.4 0.0**
comp=Z,221nm,0.5s
TAPN Taplejung 54.95 294 *e*P **P** **15 15 45.2 +0.3**
comp=Z,25nm,0.4s
ODAN Odare 55.22 293 *e*P **P** **15 15 46.9 +0.1**
comp=Z,59nm,1.1s
AKUT Akutan 55.25 33 *e*P **P** **15 15 46.4 +0.2**
BILL Bilibino 55.62 9 *c i*P **P** **15 15 47.2 -1.4**
BILL *e* 15 16 33.9
BILL *e* 15 16 44.0
BILL pmax pmax
comp=Z,114nm,1.5s
BILL MLR MLR
comp=Z,100nm,16.0s
BILL Bilibino 55.62 9 PFAKE 15 16 00.0 +11
BILL LR LR
comp=Z,352nm,22.0s
RAO Raoul Island 55.90 141 PFAKE 15 16 00.0 +8.9
RAO LR LR
comp=Z,3μm,21.0s
RAMN Ramite 55.93 293 *e*P **P** **15 15 52.0 +0.2**
comp=Z,48nm,1.0s
OUZ Omahuta 55.94 152 *e*P **P** **15 15 53.6 +2.3**
comp=Z,60nm,1.1s
GUN Gumba 56.58 294 *e*P **P** **15 15 57.2 +0.6**
comp=Z,77nm,0.5s
POHA Pohakuloa 56.75 75 *e*P **P** **15 15 59.8 +2.0**
FALS False Pass 56.81 33 *e*P **P** **15 15 57.5 +0.3**
PKI Pulchoki 57.00 294 *e*P **P** **15 15 59.3 -0.2**
comp=Z,34nm,0.8s
PKIN Phulchoki 57.01 294 *e*P **P** **15 15 59.5 0.0**
comp=Z,16nm,0.4s
WMQ Urumqi 57.03 313 P **P** **15 16 00.3 +1.1**
WMQ pP **pP** **15 16 30.1 +2.5**
WMQ sP **sP** **15 16 39.9 -0.8**
WMQ PcP **PcP** **15 16 54.0 +1.1**
WMQ PP **PP** **15 18 10.0 +3.0**
WMQ *eS **S** **15 23 44.0 -0.7**
WMQ sS **sS** **15 24 31.0 -2.6**
WMQ pmax pmax
comp=Z,44nm,1.0s
WMQ pmax pmax
comp=Z,200nm,4.6s
WMQ LR LR
comp=N,840nm,17.6s
WMQ LR LR
comp=E,390nm,19.7s
WMQ LR LR
comp=Z,370nm,23.6s
KKN Kakani 57.11 294 *e*P **P** **15 16 00.5 +0.3**
comp=Z,16nm,0.5s
DMN Daman 57.27 294 *e*P **P** **15 16 01.7 +0.4**
comp=Z,27nm,0.5s
XMAS Kiritimati 57.88 97 *e*P **P** **15 16 06.6 +1.1**
comp=Z,48nm,1.2s
TIXI Tiksi 58.38 354 ⇓*e*P **P** **15 16 07.0 -0.9**
TIXI pmax pmax
comp=Z,9.0nm,1.0s
DANN Dangsing 58.46 295 *e*P **P** **15 16 10.2 +0.5**
comp=Z,52nm,0.5s
SDPT Sand Point 58.55 33 *e*P **P** **15 16 09.5 +0.1**
KOLN Koldanda 58.60 294 *e*P **P** **15 16 10.7 +0.1**
comp=Z,22nm,0.5s
PYUN Piuthan 59.14 294 *e*P **P** **15 16 14.3 0.0**
comp=Z,103nm,1.0s
CHGN Chignik 59.98 32 *e*P **P** **15 16 18.1 -1.1**

URZ	Urewera	60.05	151	P	P		15 16 19.4	-0.5
URZ	Urewera	60.05	151	P	P		15 16 19.4	-0.5
	comp=Z,5.6nm,0.5s,baz=47,slow=15,SNR=8.8							
MK31	Makanchi Array	61.36	316	eP	P		15 16 29.5	+0.6
MK31	Makanchi Array	61.36	316	eP	P		15 16 29.5	+0.6
MKAR	Makanchi Array	61.36	316	P	P		15 16 29.6	+0.7
MKAR	Makanchi Array	61.36	316	P	P		15 16 29.6	+0.7
MKAR				⇑e			15 45 47.8	
MKAR	Makanchi Array	61.36	316	P	P		15 16 29.6	+0.7
	comp=Z,14nm,0.4s,baz=91,slow=8.3,SNR=166							
MKAR				LR	LR		15 42 09.2	
	comp=Z,330nm,18.1s,baz=93,slow=35							
MKAR				PKP2bc			15 45 47.8	
	comp=Z,1.0nm,1.0s,baz=282,slow=2.4,SNR=6.4							
ZAA0	Zalesovo Array	61.41	324	eP	P		15 16 27.5	-1.5
ZALV	Zalesovo Beam	61.41	324	P	P		15 16 28.4	-0.6
ZALV				*PP	pP		15 16 57.0	-0.8
ZALV	Zalesovo Beam	61.41	324	P	P		15 16 28.4	-0.6
ZALV				pP	pP		15 16 57.0	-0.8
ZALV	Zalesovo Beam	61.41	324	P	P		15 16 28.4	-0.6
	comp=Z,5.7nm,0.4s,baz=118,slow=8.3,SNR=20							
ZALV				pP	pP		15 16 57.0	-0.8
	comp=Z,4.7nm,0.5s,baz=91,slow=6.3,SNR=2.8							
ZALV				LR	LR		15 43 47.7	
	comp=Z,380nm,18.1s,baz=251,slow=36							
SNZO	South Karori	61.50	155	PFAKE			15 16 40.0	+10
SNZO				LR	LR			
	comp=Z,2μm,22.0s							
RPZ	Rata Peaks	62.19	159	P	P		15 16 32.8	-1.4
RPZ				epP	pP		15 16 59.6	-3.6
RPZ	Rata Peaks	62.19	159	P	P		15 16 32.8	-1.4
	comp=Z,24nm,0.9s,baz=154,slow=11,SNR=5.3							
NVS	Novosibirsk	62.55	325	⇑iP	P		15 16 36.6	0.0
NVS				i			15 17 04.8	
NVS				iS	S		15 24 54.3	-0.5
NVS				pmax	pmax			
	comp=Z,43nm,1.5s							
NVS				pmax	pmax			
	comp=N,19nm,1.8s							
NVS				pmax	pmax			
	comp=E,27nm,1.4s							
NVS				smax	smax			
	comp=N,75nm,3.4s							
NVS				smax	smax			
	comp=E,41nm,3.4s							
OHAK	Old Harbor	62.95	32	eP	P		15 16 39.5	+0.3
SVW2	Sparrevohn	63.09	28	eP	P		15 16 40.7	+0.6
KDAK	Kodiak Island	63.48	32	P	P		15 16 43.3	+0.6
	comp=E,643nm,0.4s,SNR=76							
KDAK	Kodiak Island	63.48	32	P	P		15 16 42.4	-0.3
KDAK				LR	LR			
	comp=Z,529nm,21.0s							
KDAK	Kodiak Island	63.48	32	P	P		15 16 42.4	-0.3
	comp=Z,48nm,0.3s,baz=265,slow=2.4,SNR=196							
KURK	Kurchatov	64.42	320	P	P		15 16 49.8	+0.8
	comp=Z,164nm,1.0s,SNR=36							
KURK	Kurchatov	64.42	320	ceP	P		15 16 48.9	0.0
KURK				pmax	pmax			
	comp=Z,86nm,1.2s							
KURK	Kurchatov	64.42	320	eP	P		15 16 49.0	0.0
KURK				*PP	pP		15 17 18.4	+0.4
KURK				pmax	pmax			
	comp=Z,95nm,1.3s							
KURK				MLR	MLR			
	comp=Z,701nm,20.0s							
KURK	Kurchatov	64.42	320	eP	P		15 16 49.0	0.0
	comp=Z,95nm,1.3s							
KURK				pP	pP		15 17 18.4	+0.4
KURK				⇑e			15 45 40.8	
KURK				LR	LR			
	comp=Z,701nm,20.0s							
KURBB	Kurchatov Arra	64.46	320	P	P		15 16 49.3	0.0
	comp=Z,17nm,0.6s,baz=102,slow=6.8,SNR=192							
KURBB				pP	pP		15 17 18.4	+0.1
	comp=Z,25nm,0.9s,baz=100,slow=6.3,SNR=3.7							
KURBB				PKP2bc			15 45 40.8	
	comp=Z,1.8nm,0.9s,baz=283,slow=2.9,SNR=11							
KSH	Kashi	65.20	307	P	P		15 16 57.4	+2.9
KSH				epP	PcP		15 17 24.9	-1.2
KSH				ePcP	pP		15 17 28.3	+4.7
KSH				esP	sP		15 17 37.3	+0.8
KSH				ePP	PP		15 19 24.3	+5.1
KSH				eS	S		15 25 28.1	-0.4
KSH				pmax	pmax			
	comp=Z,10.0nm,0.7s							
KSH				pmax	pmax			
	comp=Z,440nm,4.7s							
KSH				LR	LR			
	comp=N,390nm,7.3s							
KSH				LR	LR			
	comp=E,230nm,6.1s							
KSH				LR	LR			
	comp=Z,260nm,7.2s							
TKM2	Tokmak 2	65.64	311	iP	P		15 16 57.9	+0.6
TKM2	Tokmak 2	65.64	311	eP	P		15 16 58.0	+0.6
TKM2				MLR	MLR			
	comp=Z,280nm,19.0s							
TKM2	Tokmak 2	65.64	311	eP	P		15 16 58.0	+0.6
TKM2				LR	LR			
	comp=Z,280nm,19.0s							
TKM2	Tokmak 2	65.64	311	P	P		15 16 58.0	+0.6
	SNR=10							
RC01	Rabbit Creek A	65.78	29	eP	P		15 16 57.5	-0.2
KZA	Kyzart	65.85	310	P	P		15 17 00.5	+1.5
	SNR=45							
KBK	Karagaybulak	66.10	311	P	P		15 17 00.9	+0.6
	SNR=11							
TRF	Thorofare Moun	66.19	26	eP	P		15 16 58.9	-1.5
PMR	Palmer	66.20	28	eP	P		15 16 59.5	-0.7
PMR	Palmer	66.20	28	eP	P		15 16 59.5	-0.7
CHMS	Chumysh	66.26	311	P	P		15 17 01.5	+0.4
	SNR=5.1							
AAK	Ala-Archa	66.44	311	⇑eP	P		15 17 02.9	+0.6
AAK				pmax	pmax			
	comp=Z,21nm,1.0s							
AAK	Ala-Archa	66.44	311	eP	P		15 17 03.0	+0.6
	comp=Z,10nm,0.4s							
AAK				LR	LR			
	comp=Z,245nm,19.0s							
AAK	Ala-Archa	66.44	311	P	P		15 17 03.0	+0.6
	SNR=8.1							
USP	Ospenovka	66.46	311	P	P		15 17 02.8	+0.4
	SNR=11							
SML	Sawmill	66.62	28	eP	P		15 17 02.8	-0.2
SML				pmax	pmax			
	comp=Z,45nm,1.0s							
SML	Sawmill	66.62	28	eP	P		15 17 02.8	-0.2
	comp=Z,45nm,1.0s							
MCK	McKinley	66.85	26	eP	P		15 17 03.9	-0.5
MCK	McKinley	66.85	26	eP	P		15 17 03.9	-0.5
EKS2	Erkin-Say	66.97	311	eP	P		15 17 06.4	+0.7
EKS2				MLR	MLR			
	comp=Z,319nm,20.0s							
EKS2	Erkin-Say	66.97	311	eP	P		15 17 06.4	+0.7
EKS2				LR	LR			
	comp=Z,319nm,20.0s							
AML	Almayashu	67.01	310	P	P		15 17 07.4	+1.1
	SNR=22							
COLD	Coldfoot	67.37	22	eP	P		15 17 07.8	+0.2
COLA	College	67.61	25	eP	P		15 17 08.9	-0.2
COLA				MLR	MLR			
	comp=Z,285nm,21.0s							
COLA	College	67.61	25	eP	P		15 17 08.8	-0.2
COLA				LR	LR			
	comp=Z,285nm,21.0s							
DIV	Divide	67.67	29	eP	P		15 17 10.3	+0.7
ILAR	Eielson Array	67.98	25	P	P		15 17 09.7	-1.8
ILAR	Eielson Array	67.98	25	P	P		15 17 09.7	-1.8
	comp=Z,25nm,0.6s,baz=252,slow=5.6,SNR=129							
PAX	Paxson	68.18	27	eP	P		15 17 12.5	-0.4
PAX				pmax	pmax			
	comp=Z,41nm,0.6s							
PAX	Paxson	68.18	27	eP	P		15 17 12.4	-0.4
	comp=Z,41nm,0.6s							
POO	Poona	68.24	285	ePKP	P		15 17 10.0	-4.0
DOT	Dot Lake	68.94	27	eP	P		15 17 16.9	-0.6
	comp=Z,50nm,0.7s							
MENT	Mentasta	68.96	28	eP	P		15 17 17.6	-0.1
VOSK	Vostochnaya	69.36	321	P	P		15 17 19.5	-0.8
VOSK				pmax	pmax			
	comp=Z,23nm,1.3s							
KK31	Karatay Array	69.37	311	ceP	P		15 17 20.6	0.0
KK31				pmax	pmax			
	comp=Z,4.0nm,0.4s							
KKAR	Karatay Array	69.37	311	eP	P		15 17 20.2	-0.4
KKAR				pmax	pmax			
	comp=Z,5.0nm,0.4s							
KKAR	Karatay Array	69.37	311	eP	P		15 17 20.1	-0.4
	comp=Z,4.5nm,0.4s							
BVA0	Borovoye Array	69.74	322	iP	P		15 17 22.4	-0.2
BVA0				pmax	pmax			
	comp=Z,13nm,0.5s							
BVAR	Borovoye Array	69.74	322	P	P		15 17 22.6	0.0
BVAR	Borovoye Array	69.74	322	P	P		15 17 22.6	0.0
BVAR	Borovoye Array	69.74	322	P	P		15 17 22.6	0.0
	comp=Z,17nm,0.4s,baz=105,slow=7.5,SNR=64							
BRVK	Borovoye	69.81	322	P	P		15 17 23.3	+0.3
	comp=Z,157nm,0.5s,SNR=10.0							
BRVK	Borovoye	69.81	322	ciP	P		15 17 23.0	0.0
BRVK				pmax	pmax			
	comp=Z,12nm,0.7s							
BRVK	Borovoye	69.81	322	eP	P		15 17 22.6	-0.4
BRVK				LR	LR			
	comp=Z,444nm,19.0s							
EGAK	Eagle	70.39	26	eP	P		15 17 26.0	-0.3
EGAK				LR	LR			
	comp=Z,466nm,19.0s							
ZRNK	Zerenda	70.57	321	iP	P		15 17 27.1	-0.6
ZRNK				pmax	pmax			
	comp=Z,30nm,1.3s							
PNL	Peninsula	70.58	31	eP	P		15 17 28.2	+0.6
	comp=Z,61nm,0.6s							
KBL	Kabul	70.85	302	eP	P		15 17 28.0	-2.0
KBL				pmax	pmax			
	comp=Z,18nm,0.9s							
KBL	Kabul	70.85	302	eP	P		15 17 28.0	-2.0
	comp=Z,18nm,0.9s							
SKAG	Skagway	72.63	32	eP	P		15 17 39.7	-0.2
	comp=Z,34nm,0.8s							
INK	Inuvik	73.79	23	P	P		15 17 45.9	-0.6
INK	Inuvik	73.79	23	P	P		15 17 45.9	-0.6
	comp=Z,20nm,0.8s,baz=285,slow=6.9,SNR=34							
WRAK	Wrangell Islan	74.22	35	PFAKE			15 18 00.0	+11
WRAK				LR	LR			
	comp=Z,324nm,20.0s							
SVE	Sverdlovsk	75.37	326	⇓eP	P		15 17 56.0	+0.1
SVE				pmax	pmax			
	comp=Z,20nm,1.2s							
AB31	Akbulak array	76.39	318	ceP	P		15 18 01.1	-0.7
AB31				pmax	pmax			
	comp=Z,3.0nm,0.4s							
ABKAR	Akbulak array	76.39	318	eP	P		15 18 01.1	-0.7
	comp=Z,5.9nm,0.6s							
ARU	Arti	76.55	325	ciP	P		15 18 02.0	-0.5
ARU				*PP	pP		15 18 32.7	+0.3
ARU							15 20 53.2	
ARU				S	S		15 27 40.5	+1.7
ARU				pmax	pmax			
	comp=Z,13nm,1.0s							
SOKR	Solikamsk	77.18	329	ciP	P		15 18 05.9	-0.1
SOKR				S	pS		15 28 19.8	-2.3
SOKR				pmax	pmax			
	comp=Z,8.0nm,0.7s							
SOKR				MLR	MLR			
	comp=Z,560nm,28.0s							
ABKT	Ailbek	79.22	306	P	P		15 18 18.1	+0.3
	comp=Z,87nm,0.8s,SNR=6.9							
OOW	Octopus West	80.13	43	P	P		15 18 24.5	+2.0
OSR	Olympics--Salm	80.32	43	P	P		15 18 25.3	+1.8
NLWA	Neilton Lookou	80.40	44	eP	P		15 18 24.2	+0.2
	comp=Z,158nm,1.0s							
NLWA				LR	LR			
	comp=Z,409nm,21.0s							
PGC	Sidney	80.45	42	eP	P		15 18 23.0	-1.1
	comp=Z,7.5nm,1.0s							
KEBM	Edson Butte	80.90	48	eP	P		15 18 27.6	+0.9
	comp=Z,176nm,1.2s							
CMW	Cultus Mountai	81.36	42	P	P		15 18 30.4	+1.3
KRMB	Red Mountain	81.47	49	eP	P		15 18 29.4	-0.5
	comp=Z,51nm,1.5s							
JCW	Jim Creek	81.53	43	P	P		15 18 31.1	+1.2
TDL	Tradedollar La	81.71	44	P	P		15 18 32.3	+1.2
KHMM	Horse Mountain	81.72	50	eP	P		15 18 31.8	+0.5
	comp=Z,108nm,1.0s							
LON	Longmire	81.90	44	eP	P		15 18 31.3	-0.7
LON				pmax	pmax			
	comp=Z,44nm,1.2s							
LON	Longmire	81.90	44	eP	P		15 18 31.3	-0.7
	comp=Z,44nm,1.2s							
HUMO	Hull Mountain	81.94	48	eP	P		15 18 32.8	+0.5
	comp=Z,122nm,1.3s							
KCPM	Cahto Peak	82.07	51	eP	P		15 18 32.2	-0.8
	comp=Z,156nm,1.4s							
WPW	White Pass	82.09	44	P	P		15 18 33.8	+0.8
IRO	Indian Ridge	82.16	47	P	P		15 18 34.4	+0.8
YKW3	Yellowknife Ar	82.25	27	eP	P		15 18 31.8	-1.5
	comp=Z,0.2nm,0.4s							
YKW3				ePcP	PcP		15 18 38.8	+0.4
VLL	Laurance Lake	82.26	45	P	P		15 18 35.0	+1.1
YKA	Yellowknife Ar	82.27	27	P	P		15 18 32.9	-0.6
YKA				PKiKP	PKiKP		15 23 53.6	-0.5
YKA	Yellowknife Ar	82.27	27	P	P		15 18 32.9	-0.6
	comp=Z,9.0nm,0.4s,baz=285,slow=5.1,SNR=118							
YKA				PKiKP	PKiKP		15 23 53.6	-0.5
	comp=Z,1.0nm,0.7s,baz=293,slow=1.4,SNR=4.4							
YBH	Yreka Blue Hor	82.30	49	eP	P		15 18 35.1	+0.9
	comp=Z,93nm,1.0s							
VBEM	Beaver Butte	82.41	46	P	P		15 18 35.7	+0.9
WDC	Whiskeytown Da	82.67	50	eP	P		15 18 34.6	-1.4
WDC				pmax	pmax			
	comp=Z,81nm,1.2s							
WDC	Whiskeytown Da	82.67	50	eP	P		15 18 34.6	-1.4
	comp=Z,81nm,1.2s							
VIPM	Ingram Point	83.20	46	P	P		15 18 39.8	+0.9
VIPM	Ingram Point	83.20	46	P	P		15 18 39.8	+0.9
HAWA	Hanford	83.52	44	eP	P		15 18 39.4	-0.9
	comp=Z,61nm,0.8s							
HAWA				LR	LR			
	comp=Z,317nm,22.0s							
SPITS	Spitsbergen Ar	83.62	351	LR	LR		15 55 31.1	
	comp=Z,206nm,21.9s,baz=40,slow=35							
KBS	Kingsbay	83.76	352	eP	P		15 18 40.7	-0.1
KBS				pmax	pmax			
	comp=Z,12nm,1.0s							
KBS				MLR	MLR			
	comp=Z,283nm,21.0s							
KBS	Kingsbay	83.76	352	eP	P		15 18 40.7	-0.1
	comp=Z,12nm,1.0s							
KBS				LR	LR			
	comp=Z,283nm,21.0s							
OD2	Odessa Site #2	83.83	43	P	P		15 18 42.3	+0.4
RES	Resolute Bay	84.00	13	P	P		15 18 42.1	0.0
RES	Resolute Bay	84.00	13	P	P		15 18 42.1	0.0
	comp=Z,4.0nm,0.3s,baz=2.4,slow=1.8,SNR=13							
MOD	Modoc	84.02	48	eP	P		15 18 42.8	-0.3
	comp=Z,94nm,1.0s							
CASY	Casey	84.16	193	PFAKE			15 18 50.0	+7.1
CASY				LR	LR			
	comp=Z,609nm,22.0s							
BEKR	Beckworth	84.46	50	eP	P		15 18 45.7	+0.3
	comp=Z,46nm,1.0s							
NEW	Newport	84.64	42	eP	P		15 18 46.5	+0.4
	comp=Z,152nm,0.9s							
NEW				LR	LR			
	comp=Z,271nm,21.0s							
NEW	Newport	84.64	42	P	P		15 18 46.4	+0.4
	comp=Z,55nm,0.5s,baz=289,slow=4.0,SNR=103							
CMB	Columbia Colle	84.87	52	eP	P		15 18 47.5	+0.2
CMB				pmax	pmax			
	comp=Z,73nm,1.0s							
CMB	Columbia Colle	84.87	52	eP	P		15 18 47.5	+0.2
	comp=Z,73nm,1.0s							
WVOR	Wild Horse Val	85.09	48	eP	P		15 18 48.7	+0.2
WVOR				pmax	pmax			
	comp=Z,77nm,1.0s							
WVOR				MLR	MLR			
	comp=Z,278nm,20.0s							
WVOR	Wild Horse Val	85.09	48	eP	P		15 18 48.7	+0.2
	comp=Z,77nm,1.0s							
WVOR				LR	LR			
	comp=Z,278nm,20.0s							
KLMR	Klimovskoe	85.27	332	eP	P		15 18 46.2	-2.5
KLMR				pmax	pmax			
	comp=Z,35nm,1.9s							
C11A	Tepee Creek (N	85.32	42	⇑P	P		15 18 50.1	+0.7
	baz=85,SNR=111							
A12A	Yaak River Ran	85.41	41	⇓P	P		15 18 51.0	+1.2
	baz=85,SNR=23							
BMO	Blue Mountains	85.41	45	eP	P		15 18 50.6	+0.6
BMO				pmax	pmax			
	comp=Z,221nm,1.2s							
BMO				MLR	MLR			
	comp=Z,250nm,20.0s							
BMO	Blue Mountains	85.41	45	eP	P		15 18 50.5	+0.6
	comp=Z,220nm,1.2s							
BMO				LR	LR			
	comp=Z,250nm,20.0s							
B12A	Libby	85.57	41	⇑P	P		15 18 51.6	+1.0
	baz=86,SNR=10							
SMMC	Simmler	85.83	55	⇓P	P		15 18 53.4	+1.3
	baz=86							
C12B	Naegeli Ranch,	85.86	42	⇓P	P		15 18 52.7	+0.6
	baz=86,SNR=43							
PKM	Peak Mountain	86.07	55	⇑P	P		15 18 54.7	+1.2
	baz=86							
D12A	Red Ives Fores	86.12	43	⇓P	P		15 18 54.1	+0.6
	baz=86							
KEV	Kevo	86.15	342	eP	P		15 18 52.2	-0.7
KEV				pmax	pmax			
	comp=Z,13nm,0.5s							
KEV	Kevo	86.15	342	ep	P		15 18 52.2	-0.7
	comp=Z,13nm,0.5s							
KEV	Kevo	86.15	342	PFAKE			15 19 00.0	+7.1
KEV				LR	LR			
	comp=Z,466nm,20.0s							
MLAC	Mammoth Lakes	86.16	52	⇑P	P		15 18 55.1	+1.1
	baz=86							
E12A	Beaver Dam Sad	86.16	43	⇑P	P		15 18 54.1	+0.4
	baz=86,SNR=319							
RCTC	Rector, Farmer	86.18	54	⇑P	P		15 18 54.3	+0.6
	baz=86							
A13A	Flathead Natio	86.19	41	⇑P	P		15 18 55.1	+1.4
	baz=86,SNR=108							
BSMT	Bassoo Peak	86.26	42	eP	P		15 18 55.0	+0.8
	comp=Z,318nm,1.0s							
SBC	Santa Barbara	86.27	56	⇓P	P		15 18 55.2	+0.9
	baz=86							
B13A	Whitefish	86.32	41	⇑P	P		15 18 55.4	+1.1
	baz=86,SNR=115							
NVAR	Mina Array Bea	86.36	51	P	P		15 18 56.0	+1.0
NVAR	Mina Array Bea	86.36	51	P	P		15 18 56.0	+1.0
	comp=Z,30nm,0.8s,baz=264,slow=6.2,SNR=216							
VES	Vestal, Richgr	86.42	54	⇓P	P		15 18 54.9	-0.1
	baz=86							
C13A	Hot Springs	86.45	42	⇓P	P		15 18 55.4	+0.4
	baz=86,SNR=110							
WALA	Waterton Lakes	86.47	40	eP	P		15 18 55.8	+0.6
	comp=Z,3.7nm,1.0s							
NV11	Mina Array Sit	86.47	51	eP	P		15 18 56.2	+0.8
BLMT	Blacktail Moun	86.49	41	eP	P		15 18 56.1	+0.7
	comp=Z,214nm,0.9s							
JTMT	Jette	86.62	42	eP	P		15 18 55.8	-0.2
	comp=Z,76nm,1.1s							
BMN	Battle Mountai	86.64	49	eP	P		15 18 56.5	+0.3
BMN				pmax	pmax			
	comp=Z,62nm,1.0s							
BMN				MLR	MLR			
	comp=Z,284nm,20.0s							
BMN	Battle Mountai	86.64	49	eP	P		15 18 56.5	+0.3
	comp=Z,62nm,1.0s							
BMN				LR	LR			
	comp=Z,284nm,20.0s							
D13A	Huson	86.70	42	⇑P	P		15 18 56.2	0.0
	baz=87,SNR=64							
ARCES	ARCESS Array B	86.71	342	P	P		15 18 55.0	-0.7
ARCES	ARCESS Array B	86.71	342	P	P		15 18 55.0	-0.7
	comp=Z,28nm,0.9s,baz=69,slow=6.6,SNR=24							
YBMT	Yellow Bay	86.76	41	eP	P		15 18 56.9	+0.3
	comp=Z,93nm,1.0s							
TIN	Tinemaha	86.77	53	⇑P	P		15 18 57.5	+0.6
	baz=87							
ARVC	Arvin	86.80	55	⇓P	P		15 18 57.6	+0.8
	baz=87							
A14A	Double T Ranch	86.80	40	⇑P	P		15 18 57.9	+1.1
	baz=87,SNR=162							
MFID	Camas Ranch	86.83	46	eP	P		15 18 57.9	+0.9
	comp=Z,206nm,0.9s							
MFID	Camas Ranch	86.83	46	⇓P	P		15 18 58.0	+1.1
	baz=87,SNR=166							
SWMT	Swartz Lake	86.87	42	eP	P		15 18 56.5	-0.7
	comp=Z,62nm,1.2s							
ISA	Isabella	86.94	54	eP	P		15 18 56.2	-1.5
ISA				pmax	pmax			
	comp=Z,59nm,1.6s							
ISA	Isabella	86.94	54	eP	P		15 18 56.2	-1.5
	comp=Z,59nm,1.6s							
ISA	Isabella	86.94	54	⇑P	P		15 18 57.8	+0.2
	baz=87							
OSI	Osito Adit	87.02	55	⇑P	P		15 18 58.8	+0.8
	baz=87							
CWC	Cottonwood Cre	87.05	53	⇓P	P		15 18 58.6	+0.3
	baz=87							
B14A	Marquette Ranc	87.08	41	⇑P	P		15 18 58.7	+0.6
	baz=87,SNR=77							
MSO	Missoula	87.11	42	eP	P		15 18 57.8	-0.4
	comp=Z,37nm,1.2s							
MSO				LR	LR			
	comp=Z,179nm,22.0s							
H12A	Diamond D Ranc	87.17	45	⇓P	P		15 18 59.1	+0.4
	baz=87,SNR=74							
A15A	Johnson Ranch,	87.23	40	⇓P	P		15 18 59.3	+0.5
	baz=87,SNR=118							
TPH	Tonopah	87.27	52	PFAKE			15 19 10.0	+11
TPH				LR	LR			
	comp=Z,256nm,21.0s							
SLMT	Seeley Lake	87.28	42	eP	P		15 18 58.7	-0.4
	comp=Z,136nm,1.4s							
D14A	Greenough	87.32	42	⇓P	P		15 18 58.9	-0.4
	baz=87,SNR=29							
DECC	Green Verdugo	87.42	55	⇑P	P		15 19 00.5	+0.6
	baz=87							
GRAC	Grapevine Rang	87.45	53	⇓P	P		15 19 00.9	+0.8
	baz=87,SNR=17							
EDW2	Edwards Air Fo	87.53	55	⇑P	P		15 19 01.4	+0.9
	baz=87,SNR=29							
CHMT	Chamberlain Mo	87.54	42	eP	P		15 19 00.1	-0.3
	comp=Z,35nm,1.1s							
CHMT				ePP	PP		15 22 23.7	-2.9
B15A	Bradely Ranch,	87.55	41	⇑P	P		15 19 00.4	+0.1
	baz=87,SNR=107							
PASC	Pasadena Art C	87.56	56	eP	P		15 19 00.9	+0.3
	comp=Z,220nm,1.8s							
SCI	San Clemente I	87.58	57	⇑P	P		15 19 01.1	+0.5
	baz=88							
CIS	Catalina Islan	87.58	56	⇑P	P		15 19 00.9	+0.2
	baz=88,SNR=10							
FMP	Fort Macarthur	87.59	56	⇓P	P		15 19 01.2	+0.5
	baz=88							
LRMC	Laurel Mountai	87.61	54	⇑P	P		15 19 01.8	+0.9
	baz=88,SNR=31							
MPMC	Manual Prospec	87.61	54	⇓P	P		15 19 02.0	+1.0
	baz=88,SNR=95							
MWC	Mount Wilson	87.65	55	eP	P		15 19 00.6	-0.6
MWC				pmax	pmax			
	comp=Z,64nm,1.2s							
MWC	Mount Wilson	87.65	55	eP	P		15 19 00.6	-0.6
	comp=Z,64nm,1.2s							
C15A	Salmond Ranch,	87.69	41	⇑P	P		15 19 01.1	0.0
	baz=88,SNR=68							
HLID	Hailey	87.77	46	eP	P		15 19 02.5	+0.9
	comp=Z,120n

GSC pmax pmax
comp=Z,76nm,1.0s
GSC Goldstone 88.35 54 *e*P **P 15 19 04.7 +0.3**
comp=Z,76nm,1.0s
GSC Goldstone 88.35 54 ⇓P **P 15 19 05.4 +1.0**
baz=88,SNR=37
F15A Butte 88.37 43 ⇑P **P 15 19 04.8 +0.4**
baz=88,SNR=79
LRM Limekiln Ridge 88.41 43 *e*P **P 15 19 04.9 +0.3**
comp=Z,801nm,1.0s
R11A Troy Canyon, C 88.44 51 ⇓P **P 15 19 05.9 +1.0**
baz=88,SNR=106
MCMT McKenzie Canyo 88.45 44 *e*P **P 15 19 05.4 +0.6**
comp=Z,36nm,1.1s
DLMT Dillon 88.46 44 *e*P **P 15 19 04.7 0.0**
comp=Z,63nm,1.2s
MURC Murrieta 88.50 56 ⇑P **P 15 19 05.6 +0.6**
baz=88,SNR=6.7
A17A Triple J Farms 88.51 40 ⇓P **P 15 19 05.2 +0.4**
baz=88,SNR=23
HRY Holter Researc 88.53 42 *e*P **P 15 19 05.3 +0.3**
comp=Z,78nm,0.8s
BBRC Big Bear Solar 88.54 55 ⇓P **P 15 19 05.8 +0.3**
baz=88
SHOC Shoshone 88.60 53 ⇓P **P 15 19 06.3 +0.8**
baz=88,SNR=39
D16A Dana Ranch, Ca 88.61 42 ⇓P **P 15 19 05.9 +0.5**
baz=88,SNR=20
E16A East Helena 88.69 42 ⇑P **P 15 19 06.4 +0.7**
baz=89,SNR=44
109C Camp Elliot, M 88.77 57 ⇓P **P 15 19 06.9 +0.6**
baz=89
DAG Danmarks Havn 88.81 356 *i* P **P 15 19 03.8 -1.8**
comp=Z,10nm,0.8s
GNI Garni 88.84 311 PFAKE 15 19 20.0 +13
GNI LR LR
comp=Z,193nm,21.0s
HEC Hector,Ludlow 88.86 54 ⇓P **P 15 19 07.7 +1.0**
baz=89,SNR=57
OBN Obninsk 88.86 327⇑ *e*P **P 15 19 05.4 -0.8**
OBN *e**PP **pP 15 19 36.7 -0.2**
OBN *e*SS SS 15 35 38.5 +0.5
OBN pmax pmax
comp=Z,9.0nm,0.5s
OBN MLR MLR
comp=Z,300nm,16.0s
VSR Storozhevoye 88.89 323 *e*P **P 15 19 04.3 -2.1**
VSR pmax pmax
comp=Z,40nm,1.3s
VSR pmax pmax
comp=N,7.0nm,0.6s
VSR pmax pmax
comp=E,10.0nm,1.2s
VORD Divnogorie 88.90 323 *e*P **P 15 19 04.4 -2.1**
VORD pmax pmax
comp=Z,10.0nm,0.7s
VORD pmax pmax
comp=N,4.0nm,0.4s
VORD pmax pmax
comp=E,7.0nm,0.9s
C17A Wharram Farm, 88.91 41 ⇓P **P 15 19 06.6 -0.2**
baz=89,SNR=23
F16A Kennard Place, 88.97 43 ⇓P **P 15 19 07.5 +0.4**
baz=89,SNR=31
TUQ Turquoise Moun 89.00 54 ⇓P **P 15 19 08.2 +0.7**
baz=89,SNR=41
BOZ Bozeman (W) 89.01 43 *e*P **P 15 19 07.1 -0.3**
BOZ pmax pmax
comp=Z,53nm,1.4s
BOZ MLR MLR
comp=Z,202nm,20.0s
BOZ Bozeman (W) 89.01 43 *e*P **P 15 19 07.1 -0.3**
comp=Z,53nm,1.4s
BOZ LR LR
comp=Z,202nm,20.0s
KBZ Khabaz 89.05 315 P **P 15 19 05.9 -1.4**
KBZ Khabaz 89.05 315 P **P 15 19 05.8 -1.4**
KBZ Khabaz 89.05 315 P **P 15 19 05.8 -1.4**
comp=Z,5.3nm,0.9s,baz=249,slow=4.5,SNR=5.4
A18A Metzger Ranch, 89.05 40 ⇑P **P 15 19 07.5 +0.1**
baz=89,SNR=34
PFO Pinyon Flat Ob 89.10 56 P **P 15 19 08.0 0.0**
comp=Z,188nm,0.7s,SNR=16
PFO Pinyon Flat Ob 89.10 56 PFAKE 15 19 20.0 +12
PFO LR LR
comp=Z,282nm,19.0s
PFO Pinyon Flat Ob 89.10 56 ⇓P **P 15 19 08.7 +0.8**
baz=89,SNR=21
KIV Kislovodsk 89.12 315⇑ *e*P **P 15 19 06.8 -1.0**
KIV pmax pmax
comp=Z,14nm,1.0s
D17A Six Diamond Ra 89.12 41 ⇓P **P 15 19 08.1 +0.2**
baz=89,SNR=27
BAR Barrett 89.18 57 *e*P **P 15 19 07.1 -1.2**
comp=Z,38nm,0.9s
E17A Martindale 89.25 42 ⇓P **P 15 19 09.0 +0.6**
baz=89,SNR=22
B18A Beardsley Farm 89.27 40 ⇓P **P 15 19 08.3 -0.1**
baz=89,SNR=12
MONP Monument Peak 89.33 56 ⇓P **P 15 19 09.8 +0.7**
baz=89,SNR=48
BELC Belle Mtn. Jos 89.35 55 ⇓P **P 15 19 09.6 +0.4**
baz=89,SNR=35
GMRC Granite Mounta 89.40 54 ⇑P **P 15 19 10.4 +1.0**
baz=89,SNR=59
QLMT Earthquake Lak 89.41 44 *e*PKP **P 15 19 10.0 +0.6**
comp=Z,13nm,1.0s
EGMT Eagleton 89.42 40 *e*P **P 15 19 08.8 -0.3**
comp=Z,52nm,0.9s
EGMT LR LR
comp=Z,253nm,20.0s
HVU Hansel Valley 89.46 47 *e*P **P 15 19 10.0 +0.5**
HVU pmax pmax
comp=Z,97nm,1.1s
HVU Hansel Valley 89.46 47 *e*P **P 15 19 10.0 +0.5**
comp=Z,97nm,1.1s
F17A Fitzpatrick Pl 89.56 43 ⇑P **P 15 19 10.4 +0.5**
baz=89,SNR=15
H16A Russell Place, 89.57 44 ⇓P **P 15 19 11.3 +1.2**
baz=90,SNR=45
DVTC Desert V Tower 89.65 56 ⇓P **P 15 19 11.5 +1.0**
baz=90,SNR=19
D18A Linhart Farms, 89.67 41 ⇑P **P 15 19 10.6 +0.3**
baz=90,SNR=7.9
I16A Newdale 89.69 45 ⇑P **P 15 19 12.0 +1.4**
baz=90,SNR=48
G17A Pierce Place, 89.71 43 ⇓P **P 15 19 12.1 +1.5**
baz=90
A19A Klindworth Far 89.72 39 ⇓P **P 15 19 10.7 +0.2**
baz=90,SNR=50
LDFC Landfair 89.75 54 *e*P **P 15 19 11.9 +1.0**
comp=Z,156nm,0.9s
MIB Mutribah 89.76 301 *e*P **P 15 19 09.3 -1.7**
MIB AMb AMB 15 19 10.7
comp=Z,29nm,0.7s
B19A Brinkman Farms 89.77 40 ⇓P **P 15 19 10.7 0.0**
baz=90
YMR Madison River 89.78 44 *e*P **P 15 19 11.1 0.0**
comp=Z,110nm,0.9s
SWSC Sam W. Stewart 89.81 56 ⇓P **P 15 19 11.7 +0.6**
baz=90,SNR=7.7
E18A Harlowton 89.82 42 ⇑P **P 15 19 11.7 +0.6**
baz=90,SNR=36
BC3 Big Chuckawall 89.89 55 ⇑P **P 15 19 12.4 +0.8**
baz=90,SNR=36
DUG Dugway 89.93 49 *e*P **P 15 19 12.4 +0.6**
DUG pmax pmax
comp=Z,93nm,1.0s
DUG MLR MLR
comp=Z,266nm,21.0s
DUG Dugway 89.93 49 *e*P **P 15 19 12.4 +0.6**
comp=Z,93nm,1.0s
DUG LR LR
comp=Z,266nm,21.0s
YFT Old Faithful 89.94 44 *e*P **P 15 19 12.7 +0.9**
comp=Z,106nm,1.1s
C19A Slack Wire Ran 89.96 41 ⇑P **P 15 19 12.4 +0.7**
baz=90,SNR=225
RRI2 Red Ridge 89.97 45 *e*P **P 15 19 12.2 +0.1**
comp=Z,157nm,1.4s
IRM Iron Mountain 89.98 55 ⇑P **P 15 19 12.9 +0.9**
baz=90,SNR=38
IBDR Badra 89.99 304 *e*P P 15 19 27.6 +16
IBDR *e*SKS **S 15 29 51.0 -4.2**
IBDR *e*S ScS 15 30 22.7 +24
NAY Al-Naaiem 89.99 300 *e*P **P 15 19 10.2 -1.8**
NAY AMb AMB 15 19 12.8
comp=Z,26nm,0.9s
IMW Indian Meadow 90.05 45 *e*P **P 15 19 13.1 +0.6**
comp=Z,62nm,1.0s
IMW *e*pP **pP 15 19 42.7 -0.5**
H17A Grant Village 90.13 44 ⇑P **P 15 19 15.1 +2.3**
baz=90,SNR=34
TPAW Teton Pass 90.18 45 *e*P **P 15 19 12.5 -0.5**
comp=Z,48nm,1.0s
F18A Big Timber 90.18 42 ⇓P **P 15 19 13.6 +0.9**
baz=90,SNR=38
LKWY Lake 90.19 44 *e*P **P 15 19 10.9 -2.1**
LKWY pmax pmax
comp=Z,69nm,1.1s
LKWY MLR MLR
comp=Z,459nm,21.0s
LKWY Lake 90.19 44 *e*P **P 15 19 10.9 -2.1**
comp=Z,69nm,1.1s
LKWY LR LR
comp=Z,459nm,21.0s
ARUT Antelope Range 90.22 51 *e*P **P 15 19 13.5 +0.3**
ARUT pmax pmax
comp=Z,51nm,1.1s
ARUT Antelope Range 90.22 51 *e*P **P 15 19 13.5 +0.3**
comp=Z,51nm,1.1s
NEE2 Needles Airpor 90.22 54 ⇑P **P 15 19 14.1 +1.1**
baz=90,SNR=10.0
MOOW Moose Ponds 90.23 45 *e*P **P 15 19 14.1 +0.9**
comp=Z,48nm,1.0s
A20A Cobblestone Ra 90.24 39 ⇑P **P 15 19 13.0 +0.1**
baz=90
GCMT Greycliff 90.25 42 *e*P **P 15 19 13.1 0.0**
comp=Z,25nm,0.9s
D19A Cripps Ranch, 90.27 41 ⇓P **P 15 19 13.3 +0.2**
baz=90,SNR=31
SNOW Snow King Moun 90.32 45 *e*P **P 15 19 13.1 -0.6**
comp=Z,11nm,0.5s
B20A Solberg Farm, 90.35 40 ⇑P **P 15 19 13.4 0.0**
baz=90,SNR=18
CCUT Cedar City 90.35 51 *e*P **P 15 19 14.0 +0.1**
comp=Z,48nm,1.1s
HWUT Hardware Ranch 90.38 47 *e*P **P 15 19 12.8 -1.0**
comp=Z,80nm,0.9s
HWUT LR LR
comp=Z,275nm,20.0s
LOHW Long Hollow 90.38 45 *e*P **P 15 19 12.7 -1.1**
comp=Z,40nm,1.2s
KAF Kangasniemi 90.40 336 *e*P **P 15 19 10.6 -2.7**
KAF pmax pmax
comp=Z,6.0nm,0.5s
KAF Kangasniemi 90.40 336 *e*p **P 15 19 10.6 -2.7**
comp=Z,5.5nm,0.5s
G18A Lazy EL Ranch, 90.49 43 ⇓P **P 15 19 14.8 +0.5**
baz=90,SNR=17
GLA Glamis 90.56 56 *e*P **P 15 19 13.1 -1.6**
GLA pmax pmax
comp=Z,42nm,0.6s
GLA Glamis 90.56 56 *e*P **P 15 19 13.1 -1.6**
comp=Z,42nm,0.6s
GLA Glamis 90.56 56 ⇑P **P 15 19 16.1 +1.4**
baz=90,SNR=13
E19A Rath Farm, Rou 90.59 42 ⇑P **P 15 19 14.6 0.0**
baz=90,SNR=22
Y12C Blythe 90.60 55 ⇓P **P 15 19 16.0 +1.2**
baz=90,SNR=12
C20A Veseth Ranch, 90.63 40 ⇓P **P 15 19 15.3 +0.6**
baz=90,SNR=50
H18A Shoshone NF, C 90.64 44 ⇓P **P 15 19 16.3 +1.2**
baz=90,SNR=13
W13A Hualapai Mount 90.70 54 ⇑P **P 15 19 16.8 +1.3**
baz=91
F19A Roth Farm, Mol 90.70 42 ⇑P **P 15 19 15.6 +0.4**
baz=91,SNR=21
PDMCI Parker Dam,Lak 90.74 54 ⇑P **P 15 19 16.5 +1.1**
baz=91,SNR=34
RLMT Red Lodge 90.75 43 *e*P **P 15 19 13.8 -1.8**
comp=Z,60nm,1.1s
RLMT LR LR
comp=Z,250nm,20.0s
D20A Manuel Ranch, 90.77 41 ⇑P **P 15 19 15.9 +0.4**
baz=91,SNR=32
JLU Jordanelle 90.79 48 *e*P **P 15 19 14.1 -1.8**
comp=Z,70nm,1.1s
FIA1 FINESS Array S 90.85 335 *e*P **P 15 19 13.5 -1.8**
MPU Male Canyon 90.85 48 *e*P P 15 19 11.7 -4.4
comp=Z,20nm,0.7s
FINES FINESS Array B 90.85 335 P **P 15 19 13.5 -1.8**
FINES PP **PP 15 22 51.6 -0.5**
FINES FINESS Array B 90.85 335 P **P 15 19 13.5 -1.8**
comp=Z,7.4nm,0.5s,baz=65,slow=4.8,SNR=115
FINES PP **PP 15 22 51.6 -0.5**
comp=Z,1.6nm,0.6s,baz=72,slow=8.8,SNR=4.0
FINES LR LR 15 58 55.9
comp=Z,306nm,20.9s,baz=44,slow=35
MSEY Mahe Island 90.86 265 PFAKE 15 19 30.0 +14
MSEY LR LR
comp=Z,190nm,19.0s
I18A Diamond G Ranc 90.88 44 ⇑P **P 15 19 17.4 +1.2**
baz=91,SNR=24
MVU Marysvale 90.91 50 *e*P **P 15 19 15.3 -1.2**
comp=Z,32nm,1.0s
MVU LR LR
comp=Z,191nm,19.0s
MSU Marysvale 90.94 50 *e*P **P 15 19 16.3 -0.3**
MSU pmax pmax
comp=Z,36nm,1.1s
MSU Marysvale 90.94 50 *e*P **P 15 19 16.2 -0.3**
comp=Z,36nm,1.1s
B21A Ellsworth Farm 90.97 39 ⇓P **P 15 19 16.6 +0.4**
baz=91
DAU Daniels Canyon 90.99 48 *e*P **P 15 19 15.8 -1.1**
DAU pmax pmax
comp=Z,45nm,1.0s
DAU Daniels Canyon 90.99 48 *e*P **P 15 19 15.8 -1.1**
comp=Z,45nm,1.0s
E20A Meyer Farm, Mu 90.99 41 ⇓P **P 15 19 16.6 +0.2**
baz=91,SNR=21
M17A Scullys Gap (B 91.06 47 ⇓P **P 15 19 17.4 +0.3**
baz=91
H19A Powell 91.10 43 ⇓P **P 15 19 18.4 +1.3**
baz=91,SNR=26
C21A Desert Coulee 91.15 40 ⇓P **P 15 19 17.6 +0.5**
baz=91,SNR=29
BHD Baghdad 91.18 305 *e*P P 15 19 29.0 +12
BHD *e*SKS **SKKSac 15 29 55.0 +0.3**
BHD *e*S ScS 15 30 31.8 +23
FFC Flin Flon 91.22 32 P **P 15 19 16.5 -0.7**
comp=Z,103nm,0.5s,SNR=11
FFC Flin Flon 91.22 32 *i* P **P 15 19 17.2 0.0**
FFC Flin Flon 91.22 32 *e*P **P 15 19 14.5 -2.7**
comp=Z,15nm,0.8s
FFC LR LR
comp=Z,273nm,22.0s
F20A Billings 91.24 42 ⇑P **P 15 19 17.9 +0.2**
baz=91,SNR=7.9
I19A Meeteetse 91.32 44 ⇑P **P 15 19 19.2 +1.0**
baz=91,SNR=41
L18A Fontenelle, Gr 91.35 46 ⇑P **P 15 19 18.8 +0.4**
baz=91,SNR=5.8
BW06 Boulder Array 91.39 45 *e*P **P 15 19 15.7 -2.9**
comp=Z,25nm,1.1s
BW06 LR LR
comp=Z,241nm,19.0s
PDAR Pinedale Array 91.39 45 P **P 15 19 18.6 +0.1**
PDAR PP **PP 15 22 56.5 -0.8**
PDAR Pinedale Array 91.39 45 P **P 15 19 18.6 +0.1**
comp=Z,6.9nm,0.5s,baz=279,slow=2.9,SNR=52
PDAR PP **PP 15 22 56.5 -0.8**
comp=Z,1.5nm,0.9s,baz=286,slow=6.0,SNR=4.6
G20A Bridger 91.41 43 ⇑P **P 15 19 18.8 +0.3**
baz=91,SNR=32
A22A Carney Farms, 91.42 39 ⇓P **P 15 19 17.7 -0.7**
baz=91,SNR=12
113A Mohawk Valley, 91.50 56 ⇓P **P 15 19 19.9 +0.9**
baz=91
D21A La Casta Ranch 91.51 41 ⇑P **P 15 19 19.1 +0.3**
baz=91,SNR=11
U15A North Rim 91.52 52 ⇓P **P 15 19 20.7 +1.3**
baz=91,SNR=70
Q16A Castle Valley 91.55 49 ⇑P **P 15 19 20.4 +1.0**
baz=91,SNR=18
J19A Crowheart 91.56 45 ⇓P **P 15 19 20.1 +0.9**
baz=91,SNR=143
B22A Reddig Ranch S 91.65 39 ⇑P **P 15 19 19.4 -0.1**
baz=92,SNR=11
E21A Keefer Ranch, 91.66 41 ⇓P **P 15 19 19.8 +0.3**
baz=92,SNR=14
Y14A Wickenburg 91.75 55 ⇓P **P 15 19 21.3 +1.1**
baz=92
L19A Farson 91.76 46 ⇑P **P 15 19 20.8 +0.5**
baz=92
H20A Greybull 91.82 43 ⇑P **P 15 19 20.9 +0.5**
baz=92,SNR=25
K19A Absolon Red Bu 91.86 45 ⇑P **P 15 19 20.5 -0.2**
baz=92,SNR=65
F21A Absaloka Mine, 91.90 42 ⇑P **P 15 19 20.8 +0.1**
baz=92
I20A Worland 91.94 44 ⇓P **P 15 19 21.6 +0.7**
baz=92,SNR=43
C22A Vida 91.94 40 ⇓P **P 15 19 20.6 -0.2**
baz=92,SNR=12
VNDA Vanda 91.94 176 P **P 15 19 20.9 +0.9**
VNDA pP **pP 15 19 49.1 -1.6**
VNDA Vanda 91.94 176 P **P 15 19 20.9 +0.9**
comp=Z,3.3nm,1.0s,baz=320,slow=4.5,SNR=11
VNDA pP **pP 15 19 49.1 -1.6**
comp=Z,4.2nm,1.0s,baz=322,slow=4.7,SNR=4.6
SRU San Rafael 91.96 49 ⇑P **P 15 19 21.7 +0.4**
baz=92
Z14A Wintersburg 91.97 55 ⇑P **P 15 19 22.4 +1.3**
baz=92
D22A Cohagen 91.99 40 ⇓P **P 15 19 21.4 +0.4**
baz=92,SNR=23
A23A Redstone 92.06 38 ⇓P **P 15 19 21.1 -0.2**
baz=92
G21A Lodge Grass 92.07 42 ⇑P **P 15 19 22.1 +0.6**
baz=92,SNR=12
M19A Rock Springs 92.11 46 ⇓P **P 15 19 22.0 0.0**
baz=92
B23A Brockton 92.20 39 ⇓P **P 15 19 21.8 -0.2**
baz=92
K20A Yellowstone Ra 92.26 45 ⇑P **P 15 19 22.9 +0.3**
baz=92,SNR=114
C23A Lambert 92.35 39 ⇑P **P 15 19 23.2 +0.6**
baz=92,SNR=36
H21A Big Horn, Sher 92.41 43 ⇑P **P 15 19 24.1 +1.0**
baz=92,SNR=55
E22A Miles City 92.41 41 ⇑P **P 15 19 23.2 +0.1**
baz=92,SNR=30
L20A Wamsutter 92.50 46 ⇓P **P 15 19 24.4 +0.7**
baz=92,SNR=19
WUAZ Wupatki 92.52 53 *e*P **P 15 19 23.5 -0.4**
comp=Z,52nm,0.9s
WUAZ LR LR
comp=Z,212nm,22.0s
214A Organ Pipe Nat 92.52 56 ⇓P **P 15 19 25.1 +1.3**
baz=92
I21A Big Trails, Te 92.55 44 ⇑P **P 15 19 24.1 +0.2**
baz=92,SNR=73
O19A Miners Draw (B 92.56 47 ⇑P **P 15 19 24.1 +0.1**
baz=92,SNR=9.3
D23A Lindsay 92.59 40 ⇑P **P 15 19 24.3 +0.5**
baz=92,SNR=20
SBA Scott Base 92.59 176 PFAKE 15 19 30.0 +7.1
SBA LR LR
comp=Z,880nm,21.0s
A24A Westby 92.60 38 ⇑P **P 15 19 23.4 -0.4**
baz=92
J21A Lysite 92.62 44 ⇑P **P 15 19 24.8 +0.6**
baz=92,SNR=78
G22A Birney 92.67 42 ⇑P **P 15 19 24.6 +0.3**
baz=92,SNR=21
DGMT Dagmar 92.68 39 *e*P **P 15 19 22.2 -2.0**
comp=Z,26nm,0.9s
DGMT LR LR
comp=Z,312nm,22.0s
M20A Sweetwater, Wa 92.80 46 ⇓P **P 15 19 25.9 +0.7**
baz=93,SNR=44
E23A Ismay 92.80 41 ⇑P **P 15 19 25.0 +0.3**
baz=93,SNR=35
X16A Lo Mia Camp, P 92.82 54 ⇑P **P 15 19 26.8 +1.5**
baz=93
H22A Clearmont 92.87 43 ⇓P **P 15 19 25.8 +0.5**
baz=93,SNR=21
P19A Cripple Cowboy 92.90 48 ⇑P **P 15 19 26.2 +0.6**
baz=93,SNR=35
C24A Savage 92.93 40 ⇑P **P 15 19 25.7 +0.4**
baz=93,SNR=6.1
N20A Spence Gulch, 92.98 47 ⇑P **P 15 19 26.2 +0.2**
baz=93,SNR=24
F23A Volborg 93.05 41 ⇑P **P 15 19 26.1 +0.1**
baz=93,SNR=11
I22A 9 Mile Ranch, 93.06 43 ⇓P **P 15 19 26.6 +0.5**
baz=93,SNR=21
D24A Glendive 93.16 40 ⇓P **P 15 19 26.7 +0.3**
baz=93,SNR=16
L21A Rawlins 93.19 45 ⇓P **P 15 19 27.3 +0.4**
baz=93,SNR=38
J22A Midwest 93.25 44 ⇓P **P 15 19 27.1 +0.1**
baz=93,SNR=35
JMIC Jan Mayen 93.25 352 LR LR 16 02 11.9
comp=Z,36nm,20.1s,baz=251,slow=36
O20A White River Ci 93.25 47 ⇓P **P 15 19 27.5 +0.3**
baz=93,SNR=17
G23A Biddle 93.26 42 ⇓P **P 15 19 27.2 +0.2**
baz=93,SNR=26
M21A Separation Pea 93.33 46 ⇑P **P 15 19 27.8 +0.2**
baz=93
P20A De Beque 93.37 48 ⇓P **P 15 19 28.0 +0.2**
baz=93,SNR=6.0
PV04 Paradox Valley 93.39 49 *e*P **P 15 19 25.4 -2.4**
E24A Baker 93.40 40 ⇓P **P 15 19 27.8 +0.2**
baz=93,SNR=9.1
SUMG Summit 93.50 1 *i* P **P 15 19 26.5 -1.4**
K22A Casper 93.51 45 ⇑P **P 15 19 28.5 +0.2**
baz=93,SNR=18
H23A Clabaugh Cattl 93.51 42 ⇑P **P 15 19 28.3 +0.1**
baz=93
N21A Black Mountain 93.53 47 ⇑P **P 15 19 28.9 +0.4**
baz=93,SNR=43
F24A Ekalaka 93.61 41 ⇓P **P 15 19 28.4 -0.2**
baz=94,SNR=7.7
Q20A Ridgley Place, 93.64 49 ⇑P **P 15 19 29.6 +0.6**
baz=94,SNR=60
I23A Meade Ranch, G 93.71 43 ⇑P **P 15 19 28.9 -0.2**
baz=94
PV01 Paradox Valley 93.73 49 *e*P **P 15 19 28.3 -1.2**
comp=Z,2µm,0.8s
O21A Pagoda 93.77 47 ⇓P **P 15 19 29.8 +0.1**
baz=94
L22A Ellis Ranch, M 93.81 45 ⇑P **P 15 19 30.5 +0.8**
baz=94,SNR=21
G24A Alzada 93.84 42 ⇑P **P 15 19 29.4 -0.3**
baz=94,SNR=11
R20A Redvale 93.85 49 ⇓P **P 15 19 30.3 +0.3**
baz=94,SNR=20
J23A Dilts Ranch, B 93.87 44 ⇑P **P 15 19 29.6 -0.3**
baz=94
W18A Petrified Fore 93.91 53 ⇓P **P 15 19 31.4 +1.1**
baz=94,SNR=8.0
M22A Cedar Creek Ra 93.94 46 ⇓P **P 15 19 30.9 +0.5**
baz=94,SNR=9.2
X18A Snowflake 93.95 53 ⇓P **P 15 19 31.7 +1.2**
baz=94,SNR=8.8
H24A Dirks Ranch, A 93.99 42 ⇓P **P 15 19 30.2 -0.2**
baz=94,SNR=34
S20A Disappointment 94.00 50 ⇓P **P 15 19 30.8 +0.1**
baz=94,SNR=15
TUC Tucson 94.03 55 *e*P **P 15 19 28.6 -2.2**
TUC pmax pmax
comp=Z,36nm,1.4s
TUC MLR MLR
comp=Z,275nm,19.0s
TUC Tucson 94.03 55 *e*P **P 15 19 28.6 -2.2**
comp=Z,36nm,1.4s
TUC LR LR
comp=Z,275nm,19.0s
P21A Newcastle 94.04 48 ⇑P **P 15 19 31.3 +0.4**
baz=94
MALT Malatya 94.07 311 PFAKE 15 19 40.0 +9.1
MALT LR LR
comp=Z,177nm,21.0s
K23A Bowen Ranch, D 94.08 44 ⇑P **P 15 19 30.9 0.0**
baz=94,SNR=22
Q21A Lamborn Mesa, 94.21 48 ⇑P **P 15 19 32.4 +0.8**
baz=94,SNR=18
N22A Wattenberg Ran 94.27 46 ⇓P **P 15 19 32.5 +0.6**
baz=94,SNR=16
L23A Garrett 94.28 45 ⇓P **P 15 19 32.0 0.0**
baz=94,SNR=25
I24A Kuemmerle Ranc 94.30 43 ⇓P **P 15 19 31.7 -0.2**
baz=94,SNR=15
R21A Cimarron 94.40 49 ⇑P **P 15 19 33.4 +0.8**
baz=94,SNR=37
U20A Newcomb 94.40 51 ⇓P **P 15 19 33.2 +0.7**
baz=94,SNR=8.8
O22A Kremmling 94.44 47 ⇓P **P 15 19 33.0 +0.1**

baz=94,SNR=17
S21A Coal Bank Pass 94.48 50 ⇓P P 15 19 33.5 +0.5
baz=94,SNR=15
J24A Dixon Ranch, L 94.50 43 ⇓P P 15 19 32.5 -0.2
baz=94,SNR=5.1
P22A Eagle 94.51 47 ⇑P P 15 19 33.6 +0.5
baz=94,SNR=11
M23A Laramie 94.52 45 ⇓P P 15 19 33.6 +0.5
baz=94
RSSD Black Hills 94.58 43 *e*P P 15 19 31.6 -1.7
RSSD pmax pmax
comp=Z,45nm,1.0s
RSSD Black Hills 94.58 43 *e*P P 15 19 31.6 -1.7
comp=Z,45nm,1.0s
N23A Red Feather La 94.59 46 ⇓P P 15 19 34.3 +0.9
baz=94,SNR=25
K24A Anderson Ranch 94.64 44 ⇓P P 15 19 33.4 0.0
baz=94,SNR=8.9
V20A Brimhall 94.64 52 ⇑P P 15 19 34.3 +0.6
baz=94,SNR=16
Q22A Crested Butte, 94.68 48 ⇑P P 15 19 34.5 +0.6
baz=95,SNR=9.9
PHWY Pilot Hill 94.77 46 *e*P P 15 19 32.5 -1.8
comp=Z,86nm,1.8s
KIEV Kiev 94.81 325 PFAKE 15 19 40.0 +6.2
KIEV LR LR
comp=Z,425nm,21.0s
L24A Wheatland 94.83 45 ⇓P P 15 19 35.1 +0.8
baz=95
W20A Ramah 94.86 52 ⇓P P 15 19 35.3 +0.6
baz=95,SNR=15
O23A Lake Granby, G 94.87 47 ⇓P P 15 19 35.5 +0.8
baz=95
T21A Navajo Lake 94.91 50 ⇑P P 15 19 35.5 +0.6
baz=95
R22A Saguache, Gunn 95.03 49 ⇓P P 15 19 36.4 +0.9
baz=95,SNR=11
U21A Nageezi 95.03 51 ⇓P P 15 19 36.1 +0.6
baz=95,SNR=14
J25A Sunshine Ranch 95.04 43 ⇓P P 15 19 35.1 -0.1
baz=95,SNR=29
X20A Quemado 95.06 53 ⇑P P 15 19 37.2 +1.5
baz=95,SNR=21
M24A Cheyenne 95.14 45 ⇓P P 15 19 36.7 +0.8
baz=95,SNR=8.6
S22A 4UR Ranch, Cre 95.16 49 ⇑P P 15 19 36.6 +0.5
baz=95,SNR=18
ISCO Idaho Springs 95.25 47 *e*P P 15 19 35.4 -1.1
ISCO pmax pmax
comp=Z,12nm,1.2s
ISCO MLR MLR
comp=Z,223nm,20.0s
ISCO Idaho Springs 95.25 47 *e*P P 15 19 35.4 -1.1
comp=Z,12nm,1.2s
ISCO LR LR
comp=Z,223nm,20.0s
V21A Milan 95.27 51 ⇓P P 15 19 37.0 +0.4
baz=95
K25A Mack Ranch, Ha 95.32 44 ⇑P P 15 19 37.0 +0.5
baz=95,SNR=7.9
N24A Carr 95.35 46 ⇓P P 15 19 37.7 +0.9
baz=95,SNR=5.6
T22A Edith 95.38 50 ⇓P P 15 19 37.5 +0.5
baz=95,SNR=8.0
Y20A Horse Springs, 95.38 53 ⇑P P 15 19 38.5 +1.3
baz=95,SNR=17
Q23A Hartsel 95.44 48 ⇓P P 15 19 37.6 +0.1
baz=95
L25A Engebretsen Ra 95.44 44 ⇑P P 15 19 37.6 +0.5
baz=95,SNR=5.4
Z20A Nine Sixteen R 95.50 54 ⇑P P 15 19 39.1 +1.5
baz=95,SNR=32
O24A Longmont 95.50 46 ⇑P P 15 19 38.5 +1.0
baz=95
W21A San Fidel 95.51 52 ⇑P P 15 19 38.6 +0.9
baz=95
319A Douglas 95.55 56 ⇑P P 15 19 39.2 +1.4
baz=96
U22A Llaves 95.65 50 ⇓P P 15 19 39.1 +0.8
baz=96
X21A Alamocita Cree 95.65 53 ⇑P P 15 19 39.3 +1.0
baz=96,SNR=7.1
120A U Bar Ranch, L 95.66 55 ⇓P P 15 19 39.6 +1.3
baz=96,SNR=12
M25A Palm-Egli Farm 95.68 45 ⇓P P 15 19 39.0 +0.8
baz=96
MDND Maddock 95.71 38 ⇑P P 15 19 37.7 -0.3
baz=96
R23A Moffat 95.72 48 ⇓P P 15 19 39.3 +0.6
baz=96,SNR=6.5
K26A Motz Farm, Whi 95.75 44 ⇑P P 15 19 38.3 -0.2
baz=96,SNR=9.6
V22A San Miguel Ran 95.78 51 ⇑P P 15 19 39.4 +0.5
baz=96
P24A Kohler Place, 95.86 47 ⇓P P 15 19 39.8 +0.7
baz=96
Y21A Point of Rocks 95.89 53 ⇓P P 15 19 40.8 +1.4
baz=96,SNR=10.0
Q24A Divide 95.91 48 ⇓P P 15 19 39.8 +0.3
baz=96
N25A Grover 95.91 46 ⇑P P 15 19 39.4 +0.1
baz=96
220A Playas Peak, P 95.97 55 ⇓P P 15 19 40.9 +1.1
baz=96,SNR=11
T23A Casias Ranch, 96.01 50 ⇑P P 15 19 40.5 +0.5
baz=96
L26A Underwood Farm 96.09 44 ⇓P P 15 19 40.4 +0.3
baz=96
W22A Albuquerque 96.12 52 ⇓P P 15 19 41.6 +1.2
baz=96
Z21A St. Cloud Mine 96.15 54 ⇑P P 15 19 42.1 +1.4
baz=96,SNR=5.7
U23A El Rito 96.16 50 ⇑P P 15 19 41.3 +0.6
baz=96
320A Kipp Ranch, An 96.17 56 ⇑P P 15 19 42.3 +1.6
baz=96
O25A Wiggins 96.17 46 ⇑P P 15 19 41.0 +0.5
baz=96
R24A Sanders Place, 96.22 48 ⇓P P 15 19 41.5 +0.6
baz=96
M26A McRoberts Ranc 96.29 45 ⇑P P 15 19 41.4 +0.4
baz=96
121A Cookes Peak, D 96.34 54 ⇑P P 15 19 42.9 +1.4
baz=96,SNR=7.3
K27A Flueckinger Fa 96.37 43 ⇓P P 15 19 41.0 -0.2
baz=96
S24A Houchin Ranch, 96.38 49 ⇓P P 15 19 42.0 +0.3
baz=96,SNR=7.8
P25A Willow Gulch B 96.38 47 ⇑P P 15 19 42.1 +0.6
baz=96
V23A Ortiz Mt. (NFS 96.39 51 ⇓P P 15 19 43.0 +1.4
baz=96
Y22D IRIS PASSCAL I 96.45 53 ⇓P P 15 19 43.0 +1.1
baz=96
Y22A Socorro 96.47 53 ⇑P P 15 19 42.8 +0.8
baz=96,SNR=5.7
ANMO Albuquerque 96.48 52 *e*P P 15 19 39.5 -2.6
comp=Z,4.8nm,0.9s
ANMO LR LR
comp=Z,213nm,21.0s
N26A Koester Ranch, 96.50 45 ⇓P P 15 19 41.7 -0.2
baz=96
Q25A Bedland, Calha 96.57 47 ⇑P P 15 19 42.6 +0.2
baz=96,SNR=6.4
L27A T5 Ranch, Ells 96.59 44 ⇓P P 15 19 42.3 0.0
baz=96
W23A Werner Place, 96.64 51 ⇑P P 15 19 43.5 +0.7
baz=96,SNR=6.1
BNM Barren Site 96.65 52 *e*P P 15 19 42.0 -0.8
comp=Z,1.8nm,0.6s
ULM Lac du Bonnet 96.65 34 P P 15 19 42.0 -0.2
ULM Lac du Bonnet 96.65 34 P P 15 19 42.0 -0.2
comp=Z,3.6nm,0.5s,baz=289,slow=2.1,SNR=4.3
O26A Horse Wrangler 96.68 46 ⇓P P 15 19 42.9 +0.1
baz=97,SNR=5.4
NB2 NORSAR Subarra 96.70 339 P P 15 19 40.2 -2.1
comp=Z,2.0nm,0.6s,baz=49,slow=4.6
NB2 NORSAR Subarra 96.70 339 P P 15 19 40.2 -2.1
baz=49,slow=4.6
NOA NORSAR Array B 96.70 339 P P 15 19 40.9 -1.4
NOA PP PP 15 23 36.6 -1.2
NOA NORSAR Array B 96.70 339 P P 15 19 40.9 -1.4
comp=Z,0.9nm,0.9s,baz=51,slow=4.2,SNR=9.8
NOA PP PP 15 23 36.6 -1.2
comp=Z,1.5nm,0.9s,baz=31,slow=7.4,SNR=4.3
J28A Allard Ranch, 96.72 42 ⇑P P 15 19 42.7 -0.1
baz=97
Z22A Elephant Butte 96.72 53 ⇑P P 15 19 44.2 +1.1
baz=97,SNR=12
M27A Reverse DX Ran 96.78 44 ⇑P P 15 19 43.1 0.0
baz=97
U24A Moreno Valley 96.81 50 ⇑P P 15 19 44.6 +0.9
baz=97
X23A Hourglass Bar 96.83 52 ⇓P P 15 19 44.1 +0.5
baz=97
R25A Fountain Ranch 96.85 48 ⇓P P 15 19 43.5 -0.1
baz=97
122A Conniff Cattle 96.89 54 ⇑P P 15 19 45.5 +1.6
baz=97
S25A Robets Cordova 96.94 49 ⇓P P 15 19 44.1 0.0
baz=97
P26A Davis Ranch, A 96.94 46 ⇓P P 15 19 44.5 +0.5
baz=97
BRTR Keskin Array B 96.96 314 P P 15 19 42.6 -1.4
BRTR Keskin Array B 96.96 314 P P 15 19 42.6 -1.4
comp=Z,2.4nm,0.9s,baz=60,slow=3.0,SNR=4.1
N27A Anderson Farm, 96.98 45 ⇓P P 15 19 44.3 +0.2
baz=97
222A Williams Famil 97.03 55 ⇓P Pdif 15 19 45.5 +0.9
baz=97,SNR=5.3
V24A Rampart Ranch, 97.08 51 ⇓P Pdif 15 19 45.9 +1.0
baz=97,SNR=8.9
Q26A Hugo 97.08 47 ⇑P Pdif 15 19 44.9 +0.2
baz=97,SNR=7.2
T25A Trinidad 97.17 49 ⇓P Pdif 15 19 45.6 +0.4
baz=97,SNR=5.5
Y23A Lovelace Mesa, 97.17 53 ⇑P Pdif 15 19 45.7 +0.4
baz=97,SNR=12
W24A Lazy 6 Ranch, 97.18 51 ⇑P Pdif 15 19 46.1 +0.7
baz=97,SNR=18
OGNE Ogallala 97.27 45 PFAKE 15 20 00.0 +15
OGNE LR LR
comp=Z,239nm,21.0s
O27A Beecher Island 97.28 46 ⇓P P 15 19 45.1 -0.4
baz=97
Z23A Rita Site, Whi 97.29 53 ⇓P Pdif 15 19 46.6 +0.9
baz=97
R26A Arlington 97.39 48 ⇑P P 15 19 45.9 -0.1
baz=97
X24A Lazy VL Ranch, 97.41 52 ⇑P Pdif 15 19 46.9 +0.5
baz=97
U25A Circle Dot Ran 97.46 50 ⇑P Pdif 15 19 46.5 0.0
baz=97,SNR=13
P27A Ficken Ranch, 97.48 46 ⇑P P 15 19 46.4 -0.1
baz=97
ANTO Ankara 97.49 314 PFAKE 15 20 00.0 +14
ANTO LR LR
comp=Z,136nm,20.0s
123A Bell Site, Whi 97.50 54 ⇑P Pdif 15 19 47.4 +0.8
baz=97
M28A Bar X Bar Ranc 97.52 44 ⇑P P 15 19 45.8 -0.7
baz=97
V25A Rancho No Teng 97.53 50 ⇑P Pdif 15 19 47.1 +0.3
baz=97,SNR=8.5
223A Chaparral, Ant 97.60 54 ⇓P Pdif 15 19 48.0 +0.9
baz=98
Y24A Capitan 97.65 52 ⇑P P 15 19 47.3 -0.1
baz=98
S26A Kim 97.65 48 ⇑P P 15 19 47.0 -0.3
baz=98,SNR=8.6
AGMN Agassiz Nation 97.67 36 PFAKE 15 20 00.0 +13
AGMN LR LR
comp=Z,312nm,19.0s
KSCO Kaye Shedlock' 97.68 47 ⇓P Pdif 15 19 47.5 +0.1
baz=98
BRSD Miller 97.71 41 ⇓P P 15 19 46.3 -0.9
baz=98
N28A Pribbeno Ranch 97.72 45 ⇑P P 15 19 47.1 -0.3
baz=98
T26A Comanche Natio 97.75 49 ⇑P P 15 19 47.4 -0.3
baz=98,SNR=10
L29A Maesberg Ranch 97.82 43 ⇑P P 15 19 47.4 -0.4
baz=98
R27A Eads 97.86 47 ⇑P P 15 19 48.0 -0.1
baz=98
Z24A Sheeppen Canyo 97.93 53 ⇓P Pdif 15 19 49.1 +0.4
baz=98
U26A Atchley Ranch, 97.95 49 ⇓P Pdif 15 19 48.9 +0.1
baz=98,SNR=5.7
M29A Burnside Ranch 97.96 44 ⇑P P 15 19 48.1 -0.3
baz=98
X25A Clemmons Ranch 98.01 52 ⇓P Pdif 15 19 49.1 +0.2
baz=98
S27A Las Animas 98.04 48 ⇓P Pdif 15 19 49.2 +0.2
baz=98
P28A Saint Francis 98.05 46 ⇓P P 15 19 48.7 -0.2
baz=98
124A Stringfield Ra 98.10 53 ⇓P Pdif 15 19 49.8 +0.3
baz=98,SNR=6.1
V26A Tequesquite Ra 98.16 50 ⇓Pdiff Pdif 15 19 49.9 +0.3
baz=98
Q28A Sharon Springs 98.22 46 ⇓Pdiff P 15 19 49.6 -0.1
baz=98
Y25A Mesa, Roswell 98.22 52 ⇓Pdiff Pdif 15 19 50.0 +0.1
baz=98
KONO Kongsberg 98.27 339 PFAKE 15 20 00.0 +11
KONO LR LR
comp=Z,338nm,19.0s
N29A Votaw Ranch, W 98.28 44 ⇑Pdiff P 15 19 49.8 -0.1
baz=98
224A Cornudas Mount 98.28 54 ⇓Pdiff Pdif 15 19 50.9 +0.7
baz=98
SFJD Kangerlussuaq 98.31 6 PFAKE 15 20 00.0 +11
SFJD LR LR
comp=Z,216nm,20.0s
SFJD Kangerlussuaq 98.31 6 *i* P Pdif 15 20 01.8 +12
comp=Z,15nm,0.9s
SFJD *i* pP pP 15 20 56.4 +36
T27A Campo 98.43 49 ⇑Pdiff Pdif 15 19 50.9 +0.2
baz=98
Z25A Roswell 98.45 53 ⇓Pdiff Pdif 15 19 51.2 +0.3
baz=98
W26A Owens Ranch, T 98.46 51 ⇑Pdiff Pdif 15 19 51.0 +0.1
baz=98
M30A Dale-Ortello V 98.47 43 ⇑Pdiff P 15 19 50.2 -0.5
baz=98
O29A 4D Ranch, Culb 98.47 45 ⇑Pdiff P 15 19 50.4 -0.3
baz=98
MNTX Cornudas Mount 98.54 54 *e*P P 15 19 49.0 -2.2
comp=Z,12nm,1.1s
MNTX LR LR
comp=Z,230nm,21.0s
R28A Tribune 98.54 47 ⇑Pdiff P 15 19 50.9 -0.3
baz=98
324A Moseley Ranch, 98.56 55 ⇑Pdiff Pdif 15 19 51.5 0.0
baz=98
P29A Atwood 98.61 46 ⇓Pdiff P 15 19 50.9 -0.5
baz=98
U27A Thompson Grove 98.62 49 ⇑Pdiff P 15 19 51.4 -0.2
baz=98
X26A CR and CF Fran 98.64 51 ⇓Pdiff P 15 19 51.7 -0.1
baz=98
125A Gardner Draw, 98.74 53 ⇓Pdiff Pdif 15 19 52.3 +0.1
baz=99
S28A Manter 98.80 48 ⇑Pdiff P 15 19 51.9 -0.4
baz=99
T28A Walsh 98.84 48 ⇓Pdiff Pdif 15 19 52.7 +0.1
baz=99
Y26A Elida 98.88 52 ⇑Pdiff P 15 19 52.8 -0.1
baz=99
V27A Dan Oppiter Fa 98.89 50 ⇑Pdiff Pdif 15 19 52.9 +0.1
baz=99
KWP Kalwaria Pacla 98.93 326 PFAKE 15 20 00.0 +7.5
KWP LR LR
comp=Z,421nm,19.0s
O30A MW Ranch, Wils 98.96 45 ⇓Pdiff P 15 19 52.1 -0.8
baz=99
R29A Marienthal 98.98 47 ⇑Pdiff Pdif 15 19 53.2 +0.1
baz=99
325A Bean Ranch, Si 98.99 55 ⇑Pdiff Pdif 15 19 53.8 +0.4
baz=99
W27A Bowe Ranch, En 99.00 50 ⇓Pdiff 15 19 52.3
baz=99
Z26A Caprock 99.02 52 ⇓Pdiff Pdif 15 19 53.5 0.0
baz=99
U28A Mallet 99.08 49 ⇑Pdiff Pdif 15 19 53.6 0.0
baz=99
P30A Selden 99.11 45 ⇓Pdiff Pdif 15 19 53.1 -0.5
baz=99
X27A F and S Farms, 99.14 51 ⇑Pdiff Pdif 15 19 54.1 +0.2
baz=99
CSS Prodhromos 99.15 309 PFAKE 15 20 00.0 +6.2
CSS LR LR
comp=Z,168nm,20.0s
425A Indio Mountain 99.20 55 ⇓Pdiff Pdif 15 19 55.0 +0.7
baz=99
126A Clayton Basin, 99.24 53 ⇑Pdiff Pdif 15 19 55.0 +0.6
baz=99
V28A Channing 99.34 50 ⇓Pdiff Pdif 15 19 55.1 +0.3
baz=99
226B Tecolote Peak, 99.35 54 ⇑Pdiff Pdif 15 19 55.6 +0.8
baz=99
S29A Ulysses 99.35 47 ⇓Pdiff Pdif 15 19 55.1 +0.4
baz=99
Y27A Causey 99.40 52 ⇓Pdiff Pdif 15 19 55.4 +0.3
baz=99
T29A Hugoton 99.42 48 ⇑Pdiff Pdif 15 19 55.3 +0.3
baz=99
ECSD EROS Data Cent 99.53 40 *e*Pdif Pdif 15 19 52.4 -2.9
comp=Z,2.9nm,0.6s
ECSD LR LR
comp=Z,254nm,20.0s
W28A Vega 99.56 50 ⇑Pdiff Pdif 15 19 56.2 +0.5
baz=99
Z27A Tatum 99.59 52 ⇑Pdiff Pdif 15 19 56.2 +0.2
baz=100
R30A Dighton 99.65 47 ⇓Pdiff Pdif 15 19 56.3 +0.3
baz=100
MSTX Muleshoe 99.67 51 ⇓Pdiff Pdif 15 19 56.1 -0.2
baz=100
P31A Stockton 99.72 45 ⇑Pdiff Pdif 15 19 56.0 -0.3
baz=100
127A Arkansas Junct 99.74 53 ⇑Pdiff Pdif 15 19 56.6 -0.1
baz=100
U29A Oasis Ranch, S 99.74 49 ⇑Pdiff Pdif 15 19 56.6 +0.1
baz=100
326A Caldwell Ranch 99.79 54 ⇓Pdiff Pdif 15 19 57.2 +0.4
baz=100
S30A Montezuma 99.81 47 ⇓Pdiff Pdif 15 19 56.9 +0.1
baz=100
V29A Stinnett 99.81 49 ⇓Pdiff Pdif 15 19 56.9 +0.1
baz=100
X28A Dimmitt 99.87 51 ⇓Pdiff Pdif 15 19 57.3 +0.1
baz=100
Q31A Ellis 99.95 46 ⇓Pdiff Pdif 15 19 57.2 -0.1
baz=100
ISP Isparta 99.97 313 PFAKE 15 20 10.0 +12
ISP LR LR
comp=Z,166nm,22.0s
426A McDonald Obser 100.00 55 ⇓Pdiff Pdif 15 19 58.4 +0.5
baz=100
T30A Plains 100.02 48 ⇓Pdiff Pdif 15 19 57.7 0.0
baz=100
W29A Amraillo 100.03 50 ⇓Pdiff Pdif 15 19 57.9 +0.1
baz=100
227A Bennet, Jal 100.06 53 ⇑Pdiff Pdif 15 19 58.2 +0.2
baz=100
Y28A McKinney Farm, 100.09 51 ⇑Pdiff Pdif 15 19 58.1 -0.1
baz=100
AMTX Amarillo 100.11 50 PFAKE 15 20 10.0 +12
AMTX LR LR
comp=Z,297nm,22.0s
327A Balmorhea Ranc 100.15 54 ⇑Pdiff Pdif 15 19 58.3 -0.1
baz=100
R31A Burdett 100.18 46 ⇓Pdiff Pdif 15 19 58.4 0.0
baz=100
526A Mary Lane Ranc 100.19 55 ⇓Pdiff Pdif 15 19 58.7 0.0
baz=100
Z28A Tucker Farm, M 100.24 52 ⇓Pdiff Pdif 15 19 58.8 -0.1
baz=100
X29A Tulia 100.28 51 ⇑Pdiff Pdif 15 19 59.4 +0.5
baz=100
EYMN Ely 100.32 35 PFAKE 15 20 10.0 +11
EYMN LR LR
comp=Z,212nm,20.0s
626A Big Bend Ranch 100.35 56 ⇑Pdiff Pdif 15 19 59.8 +0.5
baz=100
427A Hayter Ranch, 100.43 55 ⇓Pdiff Pdif 15 20 00.3 +0.6
baz=100
128A Castleberry Fa 100.44 53 ⇓Pdiff Pdif 15 19 59.8 +0.1
baz=100
V30A Spur Ranch, Mi 100.46 49 ⇓Pdiff Pdif 15 19 60.0 +0.2
baz=100
S31A Mullinville 100.51 47 ⇓Pdiff Pdif 15 19 59.5 -0.4
baz=100
527A Woodward Ranch 100.54 55 ⇑Pdiff Pdif 15 19 59.9 -0.4
baz=100
Y29A Porterfield Fa 100.54 51 ⇓Pdiff Pdif 15 20 00.1 -0.1
baz=100
228A UT Block 9, Go 100.56 53 ⇑Pdiff Pdif 15 20 00.8 +0.6
baz=100
T31A Randall Ranch, 100.61 47 ⇑Pdiff Pdif 15 20 00.2 -0.1
baz=100
328A Wristen Ranch, 100.68 54 ⇓Pdiff Pdif 15 20 01.4 +0.6
baz=101
Z29A Hungry Hill Ra 100.77 52 ⇑Pdiff Pdif 15 20 01.6 +0.5
baz=101
W30A Crocket Farms 100.80 50 ⇓Pdiff Pdif 15 20 01.5 +0.2
baz=101
U31A Nine Bar Ranch 100.81 48 ⇓Pdiff Pdif 15 20 01.7 +0.5
baz=101
TXAR Lajitas Array 100.81 56 P Pdif 15 20 02.4 +0.9
TXAR PP PP 15 24 08.9 -1.4
TXAR PKiKP PKiKP 15 24 27.3 +0.5
TXAR Lajitas Array 100.81 56 P Pdif 15 20 02.4 +0.9
comp=Z,0.9nm,0.5s,baz=286,slow=3.4,SNR=11
TXAR PP PP 15 24 08.9 -1.4
comp=Z,1.0nm,0.8s,baz=282,slow=6.3,SNR=5.8
TXAR PKiKP PKiKP 15 24 27.3 +0.5
comp=Z,0.5nm,0.5s,baz=216,slow=0.7,SNR=5.6
X30A Coker Ranch, T 100.89 50 ⇓Pdiff Pdif 15 20 02.3 +0.7
baz=101
129A Stewart Farms, 100.91 52 ⇑Pdiff Pdif 15 20 01.1 -0.7
baz=101
627A Terlingua Ranc 100.99 56 ⇓Pdiff Pdif 15 20 02.1 -0.1
baz=101
428A Kincaid Ranch, 101.04 54 ⇑Pdiff Pdif 15 20 01.7 -0.7
baz=101
V31A Spring Creek L 101.08 49 ⇑Pdiff Pdif 15 20 02.8 +0.4
baz=101
SPMN St. Paul 101.08 38 ⇑Pdiff Pdif 15 20 01.9 -0.3
baz=101
Y30A Stafford Cattl 101.12 51 ⇑Pdiff Pdif 15 20 02.8 +0.1
baz=101
528A Cox Ranch, San 101.19 55 ⇓Pdiff Pdif 15 20 03.3 +0.2
baz=101
Z30A Sanderson Ranc 101.20 51 ⇓Pdiff Pdif 15 20 03.4 +0.4
baz=101
229A Bryant Ranch, 101.22 53 ⇓Pdiff Pdif 15 20 03.5 +0.4
baz=101
W31A Holland Ranch, 101.26 49 ⇑Pdiff Pdif 15 20 03.7 +0.4
baz=101
329A Wagon Wheel Ra 101.29 53 ⇓Pdiff Pdif 15 20 03.3 -0.2
baz=101
PSZ Piszkesteto 101.44 326 PFAKE 15 20 10.0 +6.2
PSZ LR LR
comp=Z,350nm,19.0s
X31A McDonald Ranch 101.48 50 ⇓Pdiff Pdif 15 20 04.2 0.0
baz=101
Y31A Rekieta Farm, 101.56 51 ⇓Pdiff Pdif 15 20 04.9 +0.3
baz=101
130A Snyder 101.61 52 ⇑Pdiff Pdif 15 20 05.4 +0.5
baz=102
529A Stev Forest Ra 101.65 55 ⇑Pdiff Pdif 15 20 04.7 -0.4
baz=102
429A Davenport Ranc 101.71 54 ⇓Pdiff Pdif 15 20 05.1 -0.3
baz=102
230A Sterling City 101.80 53 ⇓Pdiff Pdif 15 20 06.2 +0.5
baz=102
KSU1 Kansas State U 101.81 44 PFAKE 15 20 20.0 +14
KSU1 LR LR
comp=Z,250nm,21.0s
Z31A Sharp Cattle R 101.93 51 ⇓Pdiff Pdif 15 20 06.5 +0.3
baz=102
330A Mertzon 101.95 53 ⇓Pdiff Pdif 15 20 06.4 0.0
baz=102
131A Roby 102.02 52 ⇓Pdiff Pdif 15 20 06.8 +0.1
baz=102
Y32A R-V Farms, Ver 102.16 50 ⇓Pdiff Pdif 15 20 07.0 -0.3
baz=102
430A Baggett Ranch, 102.16 54 ⇓Pdiff Pdif 15 20 07.7 +0.3
baz=102
WMOK Wichita Mounta 102.32 49 PFAKE 15 20 20.0 +12
WMOK LR LR
comp=Z,202nm,20.0s
530A J-C Ranch, Com 102.34 54 ⇓Pdiff Pdif 15 20 08.4 +0.2
baz=102
231A Bronte 102.39 52 ⇓Pdiff Pdif 15 20 07.6 -0.7
baz=102
Z32A Haskell 102.43 51 ⇑Pdiff Pdif 15 20 08.9 +0.4
baz=102
331A San Angelo 102.57 53 ⇓Pdiff Pdif 15 20 08.6 -0.6
baz=102
ABTX Abilene, Hawle 102.61 52 ⇓Pdiff Pdif 15 20 08.7 -0.5

baz=102
SCIA State Center 102.61 41 PFAKE 15 20 20.0 +11
SCIA LR LR
comp=Z,255nm,19.0s
431A Sonora 102.69 54 ⇓Pdiff **Pdif 15 20 09.5 -0.2**
baz=103
COWI Conover 102.70 35 PFAKE 15 20 20.0 +11
COWI LR LR
comp=Z,165nm,21.0s
CLL Collm 102.76 332 *e*PP PP 15 24 22.0 -1.8
CLL LmV 16 12 00.0
comp=Z,200nm,18.2s
232A Coleman 102.92 52 ⇓Pdiff **Pdif 15 20 10.9 +0.2**
baz=103
531A Rocksprings 102.96 54 ⇓Pdiff **Pdif 15 20 11.0 +0.1**
baz=103
332A Millersview 103.07 53 ⇑Pdiff **Pdif 15 20 11.5 +0.1**
baz=103
432A Menard 103.25 53 ⇓Pdiff **Pdif 15 20 11.9 -0.3**
baz=103
631A Perdido Creek 103.25 55 ⇓Pdiff **Pdif 15 20 11.6 -0.5**
baz=103
JCT Junction City 103.41 54 PFAKE 15 20 20.0 +7.1
JCT LR LR
comp=Z,202nm,19.0s
532A Rocksprings 103.48 54 ⇓Pdiff **Pdif 15 20 13.0 -0.2**
baz=103
632A Uvalde 103.83 54 ⇑Pdiff **Pdif 15 20 14.9 +0.1**
baz=104
JFWS Jewell Farm 103.90 39 PFAKE 15 20 30.0 +15
JFWS LR LR
comp=Z,218nm,21.0s
QSPA South Pole Qui 103.92 180 PFAKE 15 20 30.0 +16
QSPA LR LR
comp=Z,494nm,20.0s
GERES GERESS Array B 104.08 329 PP PP 15 24 33.5 -0.3
GERES GERESS Array B 104.08 329 PP PP 15 24 33.5 -0.3
comp=Z,0.6nm,0.6s,baz=46,slow=6.5,SNR=4.8
WHTX Lake Whitney 104.55 51 ⇓Pdiff **Pdif 15 20 17.2 -0.7**
baz=104
TIR Tirane 105.27 320 PFAKE 15 24 50.0
TIR LR LR
comp=Z,323nm,20.0s
HDIL Hopedale 105.83 40 *e*PKPdf **PKiKP 15 24 34.0 -1.4**
HDIL LR LR
comp=Z,286nm,21.0s
ESK Eskdalemuir 105.90 342 PFAKE 15 24 50.0
ESK LR LR
comp=Z,220nm,19.0s
GLMI Grayling 106.00 34 PFAKE 15 24 50.0
GLMI LR LR
comp=Z,243nm,20.0s
KVTX Kingsville 106.18 56 PFAKE 15 24 50.0
KVTX LR LR
comp=Z,283nm,20.0s
WLF Walferdange 107.00 334 PFAKE 15 24 50.0
WLF LR LR
comp=Z,458nm,20.0s
BFO Black Forest 107.01 332 PFAKE 15 24 50.0
BFO LR LR
comp=Z,252nm,21.0s
CDF Champ du Feu 107.43 332 *e*PKiKP **PKiKP 15 24 37.4 -1.0**
comp=Z,3.0nm,0.6s
CDF Champ du Feu 107.43 332 *e*PKPdf **PKiKP 15 24 37.4 -1.0**
ECH Echery 107.63 332 PFAKE 15 24 50.0
ECH LR LR
comp=Z,200nm,20.0s
KMBO Kilima Mbogo 107.68 273 PFAKE 15 24 50.0
KMBO LR LR
comp=Z,178nm,20.0s
TUE Stuetta 107.84 330 PFAKE 15 24 50.0
TUE LR LR
comp=Z,364nm,20.0s
AAM Ann Arbor 108.14 36 PFAKE 15 24 50.0
AAM LR LR
comp=Z,253nm,20.0s
TIP Timpagrande 108.47 320 PFAKE 15 24 50.0
TIP LR LR
comp=Z,228nm,21.0s
AQU L'Aquila 108.49 324 PFAKE 15 24 50.0
AQU LR LR
comp=Z,368nm,20.0s
CUC Castrocucco 108.56 321 PFAKE 15 24 50.0
CUC LR LR
comp=Z,166nm,20.0s
VLC Villacollemand 108.93 327 PFAKE 15 24 50.0
VLC LR LR
comp=Z,254nm,20.0s
CEL Celeste 109.56 320 PFAKE 15 24 50.0
CEL LR LR
comp=Z,224nm,22.0s
VBMS Vicksburg 109.57 48 PFAKE 15 24 50.0
VBMS LR LR
comp=Z,268nm,21.0s
LPL La Plagne 109.80 330 *e*PKiKP **PKiKP 15 24 42.8 -0.3**
LPL La Plagne 109.80 330 *e*PKPdf **PKiKP 15 24 42.8 -0.3**
LPG La Plagne 109.81 330 *e*PKiKP **PKiKP 15 24 42.9 -0.3**
LPG La Plagne 109.81 330 *e*PKPdf **PKiKP 15 24 42.9 -0.3**
ACSO Alum Creek Sta 109.86 37 PFAKE 15 24 50.0
ACSO LR LR
comp=Z,295nm,22.0s
SSF Saint Saulge 110.13 333 *e*PKiKP **PKiKP 15 24 42.7 -0.6**
comp=Z,2.2nm,0.4s
SSF Saint Saulge 110.13 333 *e*PKiKP **PKiKP 15 24 42.7 -0.6**
SSF Saint Saulge 110.13 333 *e*PKPdf **PKiKP 15 24 42.7 -0.6**
BNI Bardonecchia 110.17 330 PFAKE 15 24 50.0
BNI LR LR
comp=Z,353nm,21.0s
ERPA Erie 110.31 34 PFAKE 15 25 00.0
ERPA LR LR
comp=Z,286nm,20.0s
ORIF Oris-en-Rattie 110.65 330 *e*PKiKP **PKiKP 15 24 44.0 -0.5**
comp=Z,4.7nm,0.6s
ORIF Oris-en-Rattie 110.65 330 *e*PKiKP **PKiKP 15 24 44.0 -0.5**
ORIF Oris-en-Rattie 110.65 330 *e*PKPdf **PKiKP 15 24 44.0 -0.5**
PGF Pioggiola 110.77 327 *e*PKiKP **PKiKP 15 24 45.2 +0.4**
comp=Z,18nm,0.8s
PGF Pioggiola 110.77 327 *e*PKiKP **PKiKP 15 24 45.2 +0.4**
PGF Pioggiola 110.77 327 *e*PKPdf **PKiKP 15 24 45.2 +0.4**
SSB Saint Sauveur 111.01 331 PFAKE 15 25 00.0
SSB LR LR
comp=Z,272nm,21.0s
VIVF Saint-Julien-l 111.27 331 *e*PKiKP **PKiKP 15 24 46.7 +1.1**
comp=Z,5.6nm,0.7s
VIVF Saint-Julien-l 111.27 331 *e*PKiKP **PKiKP 15 24 46.7 +1.1**
VIVF Saint-Julien-l 111.27 331 *e*PKPdf **PKiKP 15 24 46.7 +1.1**
LONY Lake Ozonia 111.30 29 PFAKE 15 25 00.0
LONY LR LR
comp=Z,234nm,22.0s
LMR La Mourre 111.50 329 *e*PKiKP **PKiKP 15 24 45.9 -0.1**
comp=Z,20nm,0.9s
LMR La Mourre 111.50 329 *e*PKiKP **PKiKP 15 24 45.9 -0.1**
LMR La Mourre 111.50 329 *e*PKPdf **PKiKP 15 24 45.9 -0.1**
LRAL Lakeview Retre 111.61 46 PFAKE 15 25 00.0
LRAL LR LR
comp=Z,190nm,20.0s
NCB Newcomb 111.95 30 PFAKE 15 25 00.0
NCB LR LR
comp=Z,661nm,19.0s
BINY Binghamton 112.38 32 PFAKE 15 25 00.0
BINY LR LR
comp=Z,275nm,20.0s
VSL Villasalto 112.66 324 PFAKE 15 25 00.0
VSL LR LR
comp=Z,200nm,21.0s
BRAL Brewton 112.70 47 PFAKE 15 25 00.0
BRAL LR LR
comp=Z,273nm,22.0s
LBNH Lisbon 112.82 28 PFAKE 15 25 00.0
LBNH LR LR
comp=Z,166nm,20.0s
BLA Blacksburg 113.34 38 PFAKE 15 25 00.0
BLA LR LR
comp=Z,250nm,22.0s
MBAR Mbarara 113.85 276 PFAKE 15 25 00.0
MBAR LR LR
comp=Z,984nm,21.0s
CBN Corbin 114.45 36 PFAKE 15 25 00.0 +8.2
CBN LR LR
comp=Z,252nm,19.0s
ETSF Etsaut 115.18 333 *e*PKiKP **PKiKP 15 24 52.8 -0.4**
comp=Z,5.9nm,0.8s
ETSF Etsaut 115.18 333 *e*PKiKP **PKiKP 15 24 52.8 -0.4**
ETSF Etsaut 115.18 333 *e*PKPdf **PKiKP 15 24 52.8 -0.4**
NHSC New Hope 116.14 42 PFAKE 15 25 10.0 +15
NHSC LR LR
comp=Z,257nm,21.0s
CNNC Cliffs of the 116.17 39 PFAKE 15 25 10.0 +15
CNNC LR LR
comp=Z,243nm,20.0s
TEIG Tepich 117.33 58 PFAKE 15 25 10.0 +12
TEIG LR LR
comp=Z,240nm,22.0s
LSZ Lusaka 119.25 260 *e*PKPdf **PKPdf 15 25 00.9 -0.8**
LSZ LR LR
comp=Z,289nm,19.0s
ESDC Sonseca Array 119.29 333 PP PP 15 26 23.1 +0.6
ESDC Sonseca Array 119.29 333 PP PP 15 26 23.1 +0.6
comp=Z,1.6nm,0.6s,baz=24,slow=6.5,SNR=8.9
SNAA Sanae 119.33 191 *e*PKP **PKPdf 15 24 59.5 -0.8**
SNAA Sanae 119.33 191 *e*pPKP pPKPdf 15 25 29.7 -2.6
SNAA Sanae 119.33 191 *e*PP PP 15 26 20.3 -2.4
PAB San Pablo 119.57 333 PFAKE 15 25 10.0 +8.2
PAB LR LR
comp=Z,249nm,19.0s
MTE Manteigas 120.17 336 *e*PKPdf **PKPdf 15 25 02.4 -0.5**
MTE Manteigas 120.17 336 PFAKE 15 25 10.0 +7.1
MTE LR LR
comp=Z,352nm,22.0s
PMRV Marv??o 120.94 335 *e*PKPdf **PKPdf 15 25 04.2 -0.1**
TGUH Tegucigalpa,Un 121.01 64 PFAKE 15 25 20.0 +15
TGUH LR LR
comp=Z,187nm,19.0s
VNA1 Neumayer--Stat 121.16 190 *e*PKP **PKPdf 15 25 05.3 +1.7**
PMTG Montargil 121.58 336 *e*PKPdf **PKPdf 15 25 05.6 +0.1**
PBAR Barrancos 121.86 334 *e*PKPdf **PKPdf 15 25 06.5 +0.4**
EVO Evora 121.96 335 *e*PKiKP **PKPdf 15 25 06.1 -0.2**
EVOP Sao Brissos 122.01 335 *e*PKiKP **PKPdf 15 25 06.1 -0.2**
EVOP Sao Brissos 122.01 335 *e*PKPdf **PKPdf 15 25 06.1 -0.2**
PBEJ Beja 122.33 335 *e*PKPdf **PKPdf 15 25 08.0 +1.0**
PNCL Nicolau / Gran 122.53 336 *e*PKPdf **PKPdf 15 25 07.7 +0.3**
PCVE Castro Verde 122.74 335 *e*PKPdf **PKPdf 15 25 08.6 +0.8**
BOSA Boshof 122.76 245 PKP **PKPdf 15 25 08.8 +0.6**
BOSA Boshof 122.76 245 PKP **PKPdf 15 25 08.8 +0.6**
comp=Z,2.4nm,0.5s,baz=144,slow=2.2,SNR=11
PVAQ Vaqueiros 122.80 334 *e*PKPdf **PKPdf 15 25 08.6 +0.7**
PTEO Sao Teotonio 123.09 335 *e*PKPdf **PKPdf 15 25 08.4 -0.1**
RTC Rabat Centre 125.29 332 PFAKE 15 25 20.0 +7.2
RTC LR LR
comp=Z,196nm,19.0s
TAM Tamanrasset 126.13 312 *e*PKiKP **PKPdf 15 25 14.5 -0.4**
TAM MLR MLR
comp=Z,171nm,20.0s
TAM Tamanrasset 126.13 312 *e*PKPdf **PKPdf 15 25 14.5 -0.4**
TAM LR LR
comp=Z,171nm,20.0s
MTDJ Mount Denham 127.03 54 PFAKE 15 25 30.0 +13
MTDJ LR LR
comp=Z,121nm,22.0s
GTBY Guantanamo Bay 127.89 50 PFAKE 15 25 30.0 +12
GTBY LR LR
comp=Z,224nm,21.0s
BCIP Isla Barro Col 129.70 65 PFAKE 15 25 30.0 +8.3
BCIP LR LR
comp=Z,312nm,21.0s
TSUM Tsumeb 129.70 257 PFAKE 15 25 30.0 +8.3
TSUM LR LR
comp=Z,208nm,19.0s
SDDR Presa de Saban 131.30 49 PFAKE 15 25 40.0 +15
SDDR LR LR
comp=Z,282nm,21.0s
OTAV Otavalo 134.51 75 PFAKE 15 25 40.0 +8.6
OTAV LR LR
comp=Z,251nm,19.0s
TORD Torodi Ar. Bea 134.85 305 PKP **PKPdf 15 25 30.8 -0.6**
TORD SKPbc **SKPbc 15 28 49.7 -1.4**
TORD Torodi Ar. Bea 134.85 305 PKhKP PKPpre 15 25 17.0
comp=Z,0.4nm,0.4s,baz=53,slow=2.0,SNR=8.8
TORD PKP **PKPdf 15 25 30.8 -0.6**
comp=Z,2.3nm,0.4s,baz=136,slow=1.2,SNR=27
TORD SKPbc **SKPbc 15 28 49.7 -1.4**
comp=Z,5.8nm,0.9s,baz=48,slow=2.1,SNR=9.1
SDV Santo Domingo 137.75 59 PFAKE 15 25 50.0 +13
SDV LR LR
comp=Z,4.0nm,20.0s
ANWB Willy Bob 138.71 41 PFAKE 15 25 50.0 +12
ANWB LR LR
comp=Z,248nm,20.0s
PLCA Paso Flores 139.08 137 PKP **PKPdf 15 25 39.0 +0.4**
PLCA pPKP **pPKPdf 15 26 11.2 +0.5**
PLCA Paso Flores 139.08 137 PKP **PKPdf 15 25 39.0 +0.4**
comp=Z,11nm,1.2s,baz=223,slow=2.6,SNR=8.8
PLCA pPKP **pPKPdf 15 26 11.2 +0.5**
comp=Z,5.4nm,0.7s,baz=233,slow=2.1,SNR=4.2
GRGR Grenville 142.76 47 PFAKE 15 26 00.0 +14
GRGR LR LR
comp=Z,334nm,19.0s
DBIC Dimbokro 143.83 303 PKP PKPab 15 25 45.2 +0.2
DBIC *e*PKPdf PKPbc 15 25 45.5 -0.2
DBIC Dimbokro 143.83 303 PKP PKPab 15 25 45.2 +0.2
comp=Z,14nm,0.5s,baz=31,slow=4.2,SNR=28
LIC Lamto 144.22 302 ⇑*i*PKiKP **PKPab 15 25 46.4 -0.1**
comp=Z,51nm,0.6s
LIC Lamto 144.22 302 ⇑*i*PKPdf **PKPab 15 25 46.4 -0.1**
TRQA Tornquist 146.08 140 *e*PKPab **PKPbc 15 25 52.4 +0.3**
LVC Limon Verde 146.59 110 *e*PKPbc **PKPbc 15 25 54.2 0.0**
LPAZ La Paz 147.78 98 *e*PKPdf **PKPdf 15 25 55.2 +0.1**
LPAZ PKPbc **PKPdf 15 25 56.4 +1.3**
LPAZ La Paz 147.78 98 PKPbc **PKPdf 15 25 56.4 +1.3**
comp=Z,15nm,0.8s,baz=233,slow=2.8,SNR=37
TRIS Tristan da Cun 149.57 217 PFAKE 15 26 10.0 +3.3
TRIS LR LR
comp=Z,2μm,20.0s
SAML Samuel 151.74 83 *e*PKPdf **PKPdf 15 26 01.0 +0.3**
SAML *e*PKPbc **PKPbc 15 26 07.1 -0.1**
SAML LR LR
comp=Z,245nm,21.0s
CPUP Villa Florida 155.65 123 PKP **PKPdf 15 26 06.0 +0.1**
CPUP PKPbc PKPab 15 26 15.4 -17
CPUP Villa Florida 155.65 123 PKP **PKPdf 15 26 06.0 +0.1**
comp=Z,0.5nm,0.3s,baz=206,slow=12,SNR=3.4
CPUP PKPbc PKPab 15 26 15.4 -17
comp=Z,0.8nm,0.3s,baz=253,slow=1.5,SNR=4.7
SPB Sao Paulo 164.76 130 PFAKE 15 26 30.0 +14
SPB LR LR
comp=Z,251nm,19.0s
RCBR Riachuelo 171.72 8 PFAKE 15 26 30.0 +8.9
RCBR LR LR
comp=Z,128nm,21.0s

CASC 19 15:18:00.5±1.9, 13.74N×91.32W, h22km±16km, MD3.6, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.65**	**332**	*e*P	Pb	15 18 13.2	0.0
FUG	**Fuego 3**	**0.84**	**33**	*e*P	Pb	15 18 16.3	-0.4
PCG	**Pacaya**	**0.94**	**47**	*e*P	Pb	15 18 18.6	0.0
NBG	**Las Nubes**	**1.26**	**48**	*e*P	Pb	15 18 23.8	-0.2
NBG				*e*S	Sb	15 18 42.4	+2.4
RBDL	**Robledal**	**1.63**	**77**	*e*P	Pn	15 18 27.7	-0.3
RBDL				*e*S	Sn	15 18 48.9	+0.4
RTR	**El Retiro**	**1.63**	**84**	*e*P	Pn	15 18 28.1	0.0
RTR				*e*S	Sb	15 18 49.7	-0.8
SBLS	**San Blas**	**1.65**	**86**	*e*P	Pn	15 18 28.0	-0.5
SBLS				*e*S	Sn	15 18 49.9	+0.7
SNJE	**San Jose**	**1.67**	**85**	*e*P	Pn	15 18 28.2	-0.4
SNJE				*e*S	Sn	15 18 49.9	+0.3
BOQS	**Boqueron**	**1.98**	**90**	*e*P	Pn	15 18 33.0	0.0
BOQS				*e*S	Sn	15 18 58.5	+1.2
MRL	**Marmol**	**2.05**	**50**	*e*P	Pn	15 18 34.3	+0.4
LFRS	**El Faro**	**2.19**	**93**	*e*P	Pn	15 18 36.1	+0.3
LFRS				*e*S	Sn	15 19 03.3	+0.8
LBRS	**Las Brisas**	**2.21**	**90**	*e*P	Pn	15 18 36.8	+0.8
LBRS				*e*S	Sn	15 19 02.6	-0.1
SNVI	**San Vicente**	**2.41**	**93**	*e*P	Pn	15 18 39.4	+0.5
SNVI				*e*S	Sn	15 19 08.8	+0.9
CNCH	**Conchagua**	**3.42**	**97**	*e*P	Pn	15 18 52.9	+0.2
CNCH				*e*S	Sn	15 19 34.1	+1.4

*IDC **19** 15:23:60.0±0.8, 50.22N×135.67E, h0km, mb3.7/7, mb1 3.9/9, mb1mx3.7/26, mbtmp3.6/9, ML2.7/2, MS4.3/1, Ms1 4.3/1, ms1mx2.6/46, Error ellipse: s-maj=28.4km s-min=17.7km az=125.0*
*SKHL **19** 15:24:01.6±0.1, 50.30N×135.87E, h21km±1km, mb4.4/7, Ms3.9/2*

ISC 19 15:24:02.1±1.2, 50.20N±0.05×135.95E±0.04, h20km±5km, n23, σ1.979/24, mb3.6/7, 1C, Southeastern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GRNR	**Gornyy**	**0.64**	**28**	⇑*i*Pg	**Pb**	**15 24 13.2**	**-1.5**
GRNR				AMB	AMB	15 24 15.8	
	370nm,0.5s						
GRNR				*e*Sg	**Sb**	**15 24 21.6**	**-1.6**
KLR	**Kul'dur**	**2.89**	**252**	*e*Pn	**Pn**	**15 24 46.2**	**-0.8**
KLR				*e*Sg	**Sb**	**15 25 28.2**	**+0.3**
EKMR	**Ekimchan**	**3.42**	**328**	*e*Pn	**Pn**	**15 24 52.7**	**-1.7**
EKMR				*e*Pg	**Pb**	**15 25 01.7**	**-0.4**
EKMR				AMB	AMB	15 25 05.2	
	70nm,0.5s						
EKMR				AMB	AMB	15 25 05.2	
	39nm,0.5s						
EKMR				AMB	AMB	15 25 05.2	
	92nm,0.5s						
EKMR				*e*Sn	**Sn**	**15 25 32.6**	**-1.8**
EKMR				*e*Sg	Sb	15 25 45.6	+2.3
EKMR				A	A	15 25 51.7	
	380nm,0.5s						
EKMR				A	A	15 25 51.7	
	330nm,0.5s						
EKMR				A	A	15 25 51.7	
	290nm,0.5s						
UGL	**Uglegorsk**	**4.13**	**103**	*e*Pg	Pb	15 25 17.5	+3.4
UGL				AMB	AMB	15 25 20.5	
	112nm,1.0s						
UGL				*e*Sg	**Sg**	**15 26 12.5**	**-2.2**
UGL				A	A	15 26 14.5	
	329nm,0.9s						
UGL				A	A	15 26 14.5	
	230nm,0.9s						
NKL	**Nikolayevsk**	**4.17**	**43**	*e*Pg	**Pb**	**15 25 15.0**	**+0.3**
NKL				AMB	AMB	15 25 16.5	
	39nm,0.4s						
NKL				sPg	Sn	15 25 24.6	-28
NKL				*e*Sg	Sb	15 26 10.0	+5.4
NKL				A	A	15 26 14.3	
	360nm,0.5s						
NKL				A	A	15 26 14.3	
	180nm,0.5s						
NKL				AMS	AMS	15 26 40.0	
	700nm,5.0s						
NKL				AMS	AMS	15 26 40.0	
	500nm,5.0s						
NKL				AMS	AMS	15 26 40.0	
	600nm,5.0s						
TYV	**Tymovskoe**	**4.33**	**79**	*e*Pg	Pb	15 25 21.0	+3.5
TYV				AMB	AMB	15 25 24.0	
	15nm,0.8s						
TYV				AMB	AMB	15 25 24.0	
	33nm,0.8s						
TYV				AMB	AMB	15 25 24.0	
	55nm,0.8s						
TYV				*e*Sg	**Sg**	**15 26 18.0**	**-3.0**
TYV				A	A	15 26 31.1	
	182nm,0.9s						
TYV				AMS	AMS	15 27 36.0	
	400nm,15.0s						
TYV				AMS	AMS	15 27 36.0	
	600nm,15.0s						
TYV				AMS	AMS	15 27 36.0	
	500nm,15.0s						
TEY	**Ternei**	**5.19**	**175**	*e*Pg	Pb	15 25 37.0	+4.9
TEY				*e*rx	rx	15 26 41.0	
TEY				*e*Sg	**Sg**	**15 26 45.2**	**-3.3**
TEY				A	A	15 26 52.5	
	90nm,0.9s						
OKH	**Okha**	**5.47**	**50**	*e*Sg	**Sg**	**15 26 59.1**	**+1.5**
YSS	**Yuzh-Sakhalins**	**5.56**	**123**	*e*Pn	**Pn**	**15 25 25.0**	**+1.3**
YSS				*e*rx	rx	15 26 45.0	
YSS				*e*Sg	**Sg**	**15 26 57.8**	**-2.8**
YSS				A	A	15 27 11.5	
	31nm,1.0s						
BMKR	**Bomnak**	**6.26**	**319**	*e*Pn	**Pn**	**15 25 32.2**	**-1.1**
BMKR				pPn	**pPn**	**15 25 39.6**	**+1.6**
BMKR				*e*Pg	Pb	15 25 52.8	+2.4
BMKR				AMB	AMB	15 25 59.2	
	9.0nm,0.6s						
BMKR				AMB	AMB	15 25 59.2	
	15nm,0.6s						
BMKR				*e*Sg	Sb	15 27 12.1	+7.3
BMKR				A	A	15 27 17.9	
	80nm,0.5s						
BMKR				A	A	15 27 17.9	
	85nm,0.5s						
ZEA	**Zeya**	**6.43**	**307**	*e*Sg	Sg	15 27 18.6	-10
ZEA				A	A	15 27 20.4	
	150nm,0.7s						
USRK	**Ussuriysk Arra**	**6.58**	**206**	Pn	**Pn**	**15 25 36.2**	**-1.5**
	0.4nm,0.3s,baz=23,slow=16,SNR=5.8						
USRK				Lg	Lg	15 27 28.8	
	1.9nm,0.3s,baz=11,slow=27,SNR=7.7						
KROS	**Kirovskiy**	**6.94**	**311**	*e*Pn	**Pn**	**15 25 41.6**	**-1.0**
KROS				AMB	AMB	15 25 42.3	
	6.0nm,0.5s						
KROS				AMB	AMB	15 25 42.3	
	8.0nm,0.5s						
KROS				*e*Sg	Sg	15 27 33.8	-11
KROS				A	A	15 27 39.0	
	95nm,0.7s						
KROS				A	A	15 27 39.0	
	45nm,0.7s						
MAT	**Matsushiro**	**13.75**	**172**	P	**P**	**15 27 26.4**	**+2.1**
PETK	**Petropavlovsk-**	**13.80**	**69**	Pn	Pn	15 27 20.4	+3.9
	0.1nm,0.3s,baz=271,slow=13,SNR=3.7						
MKAR	**Makanchi Array**	**35.08**	**286**	P	**P**	**15 30 53.4**	**-0.3**
	0.3nm,0.7s,baz=63,slow=8.3,SNR=4.5						
ILAR	**Eielson Array**	**41.11**	**39**	P	**P**	**15 31 45.6**	**+1.5**
	1.2nm,0.8s,baz=284,slow=8.8,SNR=11						
FINES	**FINESS Array B**	**55.46**	**327**	P	**P**	**15 33 34.9**	**+0.1**
	2.0nm,0.8s,baz=46,slow=8.2,SNR=8.9						
GERES	**GERESS Array B**	**69.59**	**323**	LR	LR	16 11 07.6	
	comp=Z,206nm,18.0s,baz=43,slow=41						
NVAR	**Mina Array Bea**	**70.29**	**53**	P	P	15 35 16.5	+2.3
	0.3nm,0.6s,baz=303,slow=5.2,SNR=2.7						
PDAR	**Pinedale Array**	**71.20**	**45**	P	**P**	**15 35 20.8**	**+1.1**
	0.4nm,0.6s,baz=274,slow=3.4,SNR=3.6						
ASAR	**Alice Springs**	**73.56**	**182**	P	**P**	**15 35 34.4**	**+0.9**
	0.5nm,0.9s,baz=11,slow=6.6,SNR=3.8						
TXAR	**Lajitas Array**	**84.86**	**49**	P	P	15 36 38.0	+2.5
	0.2nm,0.6s,baz=289,slow=2.8,SNR=3.7						

*IDC **19** 15:35:25.5±1.1, 1.90S×151.92E, h0km, mb4.0/13, mb1 4.1/13, mb1mx4.0/20, mbtmp4.0/13, Error ellipse: s-maj=39.7km s-min=17.4km az=107.0*
*ISCJB **19** 15:35:28.8±0.9, 1.94S±0.09×151.9E±0.2, h33km, mb4.0/15, Error ellipse: s-maj=31.0km s-min=10.9km az=15.3*
*NEIC **19** 15:35:32.7±5.8, 1.94S×151.87E, h52km±54km, mb4.5/2, Error ellipse: s-maj=21.6km s-min=11.6km az=101.0*

ISC 19 15:35:30.8±1.0, 1.9S±0.1×151.9E±0.2, h35km, n29, σ0.844/29, mb4.0/15, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRAB	**Tennant Creek**	**24.78**	**223**	*e*P	**P**	**15 40 49.7**	**0.0**
	23nm,1.3s						
WRA	**Warramunga Arr**	**24.79**	**223**	P	**P**	**15 40 50.1**	**+0.3**
WRA	**Warramunga Arr**	**24.79**	**223**	P	**P**	**15 40 50.1**	**+0.3**
	5.5nm,0.7s,baz=50,slow=9.8,SNR=77						
AS31	**Alice Springs**	**27.75**	**217**	*e*P	**P**	**15 41 16.2**	**-0.3**
ASAR	**Alice Springs**	**27.75**	**217**	P	**P**	**15 41 16.5**	**0.0**
ASAR	**Alice Springs**	**27.75**	**217**	P	**P**	**15 41 16.5**	**0.0**
	2.5nm,0.6s,baz=48,slow=8.7,SNR=40						
STKA	**Stephens Creek**	**31.33**	**197**	P	**P**	**15 41 48.2**	**+0.1**
STKA	**Stephens Creek**	**31.33**	**197**	P	**P**	**15 41 48.2**	**+0.1**
	3.3nm,0.9s,baz=0.3,slow=9.3,SNR=3.6						
KSRS	**Korea Array**	**45.04**	**333**	P	**P**	**15 43 43.9**	**+0.6**
	1.3nm,1.0s,baz=140,slow=9.6,SNR=3.6						
KSAR	**Wonju Array Be**	**45.05**	**333**	P	**P**	**15 43 43.9**	**+0.5**
ASAJ	**Asahikawa**	**46.59**	**351**	P	**P**	**15 43 55.6**	**+0.2**
ASAJ	**Asahikawa**	**46.59**	**351**	P	**P**	**15 43 55.6**	**+0.2**
	1.3nm,0.7s,baz=140,slow=7.9,SNR=3.6						
PETK	**Petropavlovsk-**	**55.05**	**4**	P	**P**	**15 44 59.4**	**+0.3**
PETK	**Petropavlovsk-**	**55.05**	**4**	P	**P**	**15 44 59.4**	**+0.3**
	2.3nm,0.8s,baz=174,slow=7.6,SNR=4.7						
CMAR	**Chiang Mai Arr**	**55.86**	**294**	P	**P**	**15 45 05.5**	**0.0**
CMAR	**Chiang Mai Arr**	**55.86**	**294**	P	**P**	**15 45 05.5**	**0.0**
	1.1nm,0.8s,baz=92,slow=5.4,SNR=6.5						
SONM	**Songino Array**	**63.42**	**328**	P	**P**	**15 45 56.3**	**-0.9**

SONM	**Songino Array**	**63.42**	**328**	P		**P**		**15 45 56.3**	**-0.9**
	0.2nm,0.4s,baz=120,slow=8.5,SNR=2.4								
MKAR	**Makanchi Array**	**77.58**	**319**	P		**P**		**15 47 23.1**	**-0.4**
MKAR	**Makanchi Array**	**77.58**	**319**	P		**P**		**15 47 23.1**	**-0.4**
	1.3nm,1.1s,baz=115,slow=8.5,SNR=4.0								
ILAR	**Eielson Array**	**79.86**	**22**	P		**P**		**15 47 35.0**	**-0.6**
ILAR	**Eielson Array**	**79.86**	**22**	P		**P**		**15 47 35.0**	**-0.6**
	0.8nm,0.7s,baz=246,slow=6.1,SNR=7.6								
KURK	**Kurchatov**	**80.96**	**322**	P		**P**		**15 47 41.9**	**+0.1**
KURBB	**Kurchatov Array**	**80.99**	**322**	P		**P**		**15 47 41.9**	**-0.1**
	0.3nm,0.6s,baz=100,slow=4.3,SNR=6.3								
KKAR	**Karatay Array**	**85.01**	**313**	*e*P		**P**		**15 48 02.6**	**-0.4**
	3.6nm,0.9s								
BVAR	**Borovoye Array**	**86.41**	**323**	P		**P**		**15 48 10.4**	**+0.7**
BVAR	**Borovoye Array**	**86.41**	**323**	P		**P**		**15 48 10.4**	**+0.7**
	0.8nm,0.5s,baz=93,slow=6.5,SNR=4.6								
YKA	**Yellowknife Ar**	**93.32**	**28**	P		**P**		**15 48 42.2**	**+0.3**
YKA	**Yellowknife Ar**	**93.32**	**28**	P		**P**		**15 48 42.2**	**+0.3**
	0.5nm,0.7s,baz=272,slow=4.7,SNR=7.8								

ISK ***19*** *15:36:31.8,39.°13N×29.°07E,h5km,MD2.8*
ISCJB ***19*** *15:36:32.2±0.4,39.°12N±0.°02×29.°06E±0.°03,h5km±5km, Error ellipse: s-maj=4.2km s-min=3.8km az=152.0*
DDA ***19*** *15:36:32.3,39.°11N×29.°06E,h9km,MD2.8*
CSEM ***19*** *15:36:32.4±0.1,39.°12N×29.°07E,h6km,MD2.8, Error ellipse: s-maj=1.5km s-min=1.4km az=61.0*

ISC 19 15:36:32.6±0.9,39.°13N±0.°02×29.°06E±0.°02,h12km±9km, n48,σθ°44/64,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
DEMI	**Demirci**	**0.28**	**253**	*i* P		**Pg**	**15 36 38.5**	**0.0**
DEMI				*i* S		**Sg**	**15 36 42.4**	**+0.1**
DEMI	**Demirci**	**0.28**	**253**	*i* P		**Pg**	**15 36 38.5**	**0.0**
DEMI				*i* S		**Sg**	**15 36 42.4**	**+0.1**
GDZ	**Gediz**	**0.33**	**96**	*i* P		**Pg**	**15 36 39.3**	**0.0**
GDZ				*i* S		**Sg**	**15 36 44.1**	**+0.3**
GDZ	**Gediz**	**0.33**	**96**	*i* P		**Pg**	**15 36 39.3**	**0.0**
GDZ				*i* S		**Sg**	**15 36 44.1**	**+0.3**
TVSB	**Tavsanli**	**0.45**	**44**	*e*PG		**Pg**	**15 36 41.0**	**-0.5**
TVSB				*e*SG		**Sg**	**15 36 47.5**	**0.0**
TVSB	**Tavsanli**	**0.45**	**44**	*e*Pg		**Pg**	**15 36 41.0**	**-0.5**
TVSB				*e*Sg		**Sg**	**15 36 47.5**	**0.0**
DURS	**Dursunbey**	**0.66**	**316**	*i* P		**Pb**	**15 36 45.9**	**-0.2**
DURS				*i* S		**Sg**	**15 36 54.4**	**+0.3**
DURS	**Dursunbey**	**0.66**	**316**	*i* P		**Pb**	**15 36 45.9**	**-0.2**
DURS				*i* S		**Sg**	**15 36 54.4**	**+0.3**
KULA	**Kula-Manisa**	**0.69**	**207**	*e*PG		**Pg**	**15 36 45.5**	**-0.5**
KULA	**Kula-Manisa**	**0.69**	**207**	*e*Pg		**Pg**	**15 36 45.5**	**-0.5**
MANT	**Manisa**	**0.75**	**212**	*i* P		**Pg**	**15 36 46.9**	**-0.2**
MANT				*i* S		**Sg**	**15 36 56.1**	**-0.8**
MANT	**Manisa**	**0.75**	**212**	*i* P		**Pg**	**15 36 46.9**	**-0.2**
MANT				*i* S		**Sg**	**15 36 56.1**	**-0.8**
ALT	**Altintas**	**0.82**	**95**	*e*PG		**Pg**	**15 36 48.0**	**-0.5**
ALT	**Altintas**	**0.82**	**95**	*e*Pg		**Pg**	**15 36 48.0**	**-0.5**
KHAL	**Karahalli**	**0.83**	**156**	*i* P		**Pg**	**15 36 48.5**	**-0.1**
KHAL				*i* S		**Sg**	**15 36 59.3**	**-0.2**
KHAL	**Karahalli**	**0.83**	**156**	*i* P		**Pg**	**15 36 48.5**	**-0.1**
KHAL				*i* S		**Sg**	**15 36 59.3**	**-0.2**
KHL	**Karahalli**	**0.88**	**156**	*e*PG		**Pg**	**15 36 49.2**	**-0.4**
KHL	**Karahalli**	**0.88**	**156**	*e*Pg		**Pg**	**15 36 49.2**	**-0.4**
ORLT	**Orhaneli**	**0.93**	**352**	*e*PG		**Pg**	**15 36 49.7**	**-0.8**
ORLT	**Orhaneli**	**0.93**	**352**	*e*Pg		**Pg**	**15 36 49.7**	**-0.8**
AKHS	**Akhisar**	**1.00**	**256**	*i* P		**Pb**	**15 36 52.1**	**+0.1**
AKHS				*i* S		**Sb**	**15 37 05.2**	**+0.1**
AKHS	**Akhisar**	**1.00**	**256**	*i* P		**Pb**	**15 36 52.1**	**+0.1**
AKHS				*i* S		**Sb**	**15 37 05.2**	**+0.1**
ULDT	**Uludag**	**1.02**	**3**	*i* P		**Pg**	**15 36 52.0**	**-0.3**
ULDT				*i* S		**Sg**	**15 37 05.3**	**-0.2**
ULDT	**Uludag**	**1.02**	**3**	*i* P		**Pg**	**15 36 52.0**	**-0.3**
ULDT				*i* S		**Sg**	**15 37 05.3**	**-0.2**
BALB	**Balikesir**	**1.05**	**300**	*e*PG		**Pg**	**15 36 52.4**	**-0.4**
BALB	**Balikesir**	**1.05**	**300**	*e*Pg		**Pg**	**15 36 52.4**	**-0.4**
CAVI	**Cavuskoy**	**1.23**	**29**	*e*PN		**Pn**	**15 36 55.6**	**-0.1**
CAVI	**Cavuskoy**	**1.23**	**29**	*e*Pn		**Pn**	**15 36 55.7**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.25**	**354**	*e*PN		**Pn**	**15 36 56.0**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.25**	**354**	*e*Pn		**Pn**	**15 36 56.1**	**+0.1**
KCTX	**Karacabey (Bur**	**1.26**	**335**	*e*PN		**Pn**	**15 36 56.5**	**+0.4**
KCTX	**Karacabey (Bur**	**1.26**	**335**	*e*Pn		**Pn**	**15 36 56.5**	**+0.4**
SHUT	**Suhut-Afyon**	**1.30**	**116**	*e*PN		**Pn**	**15 36 57.0**	**+0.3**
SHUT	**Suhut-Afyon**	**1.30**	**116**	*e*Pn		**Pn**	**15 36 57.0**	**+0.3**
GEMT	**Gemlik**	**1.31**	**4**	*e*PN		**Pn**	**15 36 57.3**	**+0.5**
GEMT	**Gemlik**	**1.31**	**4**	*e*Pn		**Pn**	**15 36 57.3**	**+0.5**
GONE	**Gonen-Balikesi**	**1.40**	**311**	*e*PN		**Pb**	**15 36 58.8**	**0.0**
GONE	**Gonen-Balikesi**	**1.40**	**311**	*e*Pn		**Pb**	**15 36 58.8**	**0.0**
ADVT	**Abdulvahap**	**1.41**	**22**	*e*PN		**Pn**	**15 36 58.8**	**+0.7**
ADVT	**Abdulvahap**	**1.41**	**22**	*e*Pn		**Pn**	**15 36 58.8**	**+0.7**
ESKT	**Eskisehir**	**1.44**	**74**	*e*PN		**Pn**	**15 36 59.0**	**+0.3**
ESKT	**Eskisehir**	**1.44**	**74**	*e*Pn		**Pn**	**15 36 59.1**	**+0.3**
ARMT	**Armutlu**	**1.45**	**354**	*e*PN		**Pn**	**15 36 59.4**	**+0.7**
ARMT	**Armutlu**	**1.45**	**354**	*e*Pn		**Pn**	**15 36 59.4**	**+0.7**
YLV	**Yalova**	**1.46**	**9**	*e*PN		**Pn**	**15 36 59.6**	**+0.7**
YLV	**Yalova**	**1.46**	**9**	*e*Pn		**Pn**	**15 36 59.6**	**+0.7**
GULT	**Gulveren**	**1.72**	**40**	*e*PN		**Pn**	**15 37 03.4**	**+0.9**
GULT	**Gulveren**	**1.72**	**40**	*e*Pn		**Pn**	**15 37 03.4**	**+0.9**

IDC 19 15:37:14.9±1.8,2.°62N×128.°29E,h0km,mb3.8/4, mb1 4.0/4,mb1mx3.6/22,mbtmp3.8/4,Error ellipse: s-maj=126.9km s-min=23.0km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.20**	**165**	P		P	15 42 24.6	+1.0
	0.9nm,0.3s,baz=344,slow=11,SNR=15							
ASAR	**Alice Springs**	**26.69**	**168**	P		P	15 42 56.1	+0.1
	1.0nm,0.5s,baz=355,slow=7.6,SNR=18							
STKA	**Stephens Creek**	**36.56**	**161**	P		P	15 44 21.4	-1.2
	3.2nm,0.9s,baz=329,slow=11,SNR=7.7							
MKAR	**Makanchi Array**	**59.35**	**325**	P		P	15 47 19.1	+0.2
	0.2nm,0.4s,baz=112,slow=8.3,SNR=4.0							

ISK ***19*** *15:40:24.6,35.°08N×28.°43E,h5km,MD3.9*
IDC ***19*** *15:40:25.5±1.6,35.°17N×28.°50E,h0km,mb3.6/5, mb1 3.6/10,mb1mx3.4/29,mbtmp3.5/10,ML3.6/4,MS3.9/1, Ms1 3.9/1,ms1mx2.7/46,Error ellipse: s-maj=28.8km s-min=19.3km az=24.0*
DDA ***19*** *15:40:29.2,35.°42N×28.°72E,h9km,MD3.6*
ISCJB ***19*** *15:40:30.3±0.3,35.°21N±0.°02×28.°53E±0.°03,h55km±6km, mb3.5/6,MS3.8/1,Error ellipse: s-maj=4.3km s-min=3.4km az=36.3*
CSEM ***19*** *15:40:31.7±0.2,35.°25N×28.°50E,h40km,Mw3.3,Error ellipse: s-maj=4.6km s-min=3.0km az=47.0*
HLW ***19*** *15:40:32.8,35.°43N×28.°79E,h32km±15km,Md3.6,Ml3.5*
ATH ***19*** *15:40:33.5,35.°64N×28.°42E,h81km±14km*
NIC ***19*** *15:40:35.6±0.2,35.°45N×28.°94E,h56km,mb4.0,ML3.6, MW3.3*
THE ***19*** *15:40:36.3,35.°54N×28.°36E,h29km±23km,ML3.7/2,Error ellipse: s-maj=23.6km s-min=1.1km az=120.0*

ISC 19 15:40:31.5±1.0,35.°26N±0.°03×28.°54E±0.°03,h41km±15km, n129,σ1§63/157,mb3.6/6,4C,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ARG	**Arkhangelos**	**1.01**	**341**	P		**Pn**	**15 40 49.1**	**-0.1**
ARG				S		**Sn**	**15 40 58.4**	**-3.9**
ARG	**Arkhangelos**	**1.01**	**341**	*e*P		**Pn**	**15 40 49.2**	**0.0**
ARG	**Arkhangelos**	**1.01**	**341**	*e*P		**Pn**	**15 40 49.2**	**0.0**
ARG				S		**Sn**	**15 40 58.4**	**-3.9**
KARP	**Karpathos**	**1.16**	**285**	P		**Pn**	**15 40 52.7**	**+1.4**
KARP				S		**Sn**	**15 41 05.4**	**-0.6**
KARP	**Karpathos**	**1.16**	**285**	*e*P		**Pn**	**15 40 52.8**	**+1.4**
KARP				*e*S		**Sn**	**15 41 08.7**	**+2.7**
KARP	**Karpathos**	**1.16**	**285**	P		**Pn**	**15 40 52.7**	**+1.4**
KARP				S		**Sn**	**15 41 05.4**	**-0.6**
AKAS	**Kas**	**1.30**	**41**	*i* P		**Pn**	**15 40 53.3**	**0.0**
AKAS				*i* S		**Sn**	**15 41 10.6**	**+1.0**
AKAS	**Kas**	**1.30**	**41**	*i* P		**Pn**	**15 40 53.3**	**0.0**
AKAS				*i* S		**Sn**	**15 41 10.6**	**+1.0**
FETY	**Fethiye**	**1.44**	**18**	*e*PN		**Pn**	**15 40 55.2**	**0.0**
FETY	**Fethiye**	**1.44**	**18**	*e*Pn		**Pn**	**15 40 55.2**	**0.0**
DALY	**Dalyan (Mu¨la**	**1.56**	**3**	*e*PN		**Pn**	**15 40 57.4**	**+0.7**
DALY				*e*SN		**Sn**	**15 41 20.6**	**+4.9**
DALY	**Dalyan (Mu¨la**	**1.56**	**3**	*e*Pn		**Pn**	**15 40 57.4**	**+0.7**
DALY				*e*Sn		**Sn**	**15 41 20.6**	**+4.9**
TURN	**Turunc**	**1.61**	**2**	*i* P		**Pn**	**15 40 56.6**	**-0.8**
TURN				*i* S		**Sn**	**15 41 15.5**	**-1.5**
TURN	**Turunc**	**1.61**	**2**	*i* P		**Pn**	**15 40 56.6**	**-0.8**
TURN				*i* S		**Sn**	**15 41 15.5**	**-1.5**
DAT	**Datca**	**1.66**	**332**	*e*PN		**Pn**	**15 40 57.4**	**-0.8**
DAT	**Datca**	**1.66**	**332**	*e*Pn		**Pn**	**15 40 57.4**	**-0.8**
NIS1	**Nisyros Isl.**	**1.74**	**321**	P		**Pn**	**15 40 59.3**	**+0.1**
NIS1				S		**Sn**	**15 41 17.1**	**-3.1**
NIS1	**Nisyros Isl.**	**1.74**	**321**	P		**Pn**	**15 40 59.3**	**+0.1**
NIS1				S		**Sn**	**15 41 17.1**	**-3.1**
YER	**Yerkesik**	**1.89**	**354**	*e*PN		**Pn**	**15 41 01.6**	**+0.3**
YER	**Yerkesik**	**1.89**	**354**	*e*Pn		**Pn**	**15 41 01.6**	**+0.3**
GLHS	**Glhisar (BURDU**	**2.05**	**22**	*e*PN		**Pn**	**15 41 04.1**	**+0.6**
GLHS	**Glhisar (BURDU**	**2.05**	**22**	*e*Pn		**Pn**	**15 41 04.1**	**+0.6**
BODT	**Bodrum**	**2.06**	**331**	*e*PN		**Pn**	**15 41 03.0**	**-0.6**
BODT	**Bodrum**	**2.06**	**331**	*e*Pn		**Pn**	**15 41 03.0**	**-0.6**
MLSB	**Milas**	**2.12**	**343**	*e*PN		**Pn**	**15 41 04.4**	**-0.1**
MLSB	**Milas**	**2.12**	**343**	*e*Pn		**Pn**	**15 41 04.4**	**-0.1**
GOLH	**Golhisar**	**2.14**	**22**	*i* P		**Pn**	**15 41 06.3**	**+1.5**
GOLH				*i* S		**Sn**	15 41 53.2	+23
GOLH	**Golhisar**	**2.14**	**22**	*i* P		**Pn**	**15 41 06.3**	**+1.5**
KORT	**Korkueli**	**2.27**	**40**	*i* P		**Pn**	**15 41 05.3**	**-1.3**
KORT				*i* S		**Sn**	**15 41 36.3**	**+2.7**
KORT	**Korkueli**	**2.27**	**40**	*i* P		**Pn**	**15 41 05.3**	**-1.3**
ANTB	**Antalya**	**2.37**	**46**	*e*PN		**Pn**	**15 41 08.4**	**+0.6**
ANTB	**Antalya**	**2.37**	**46**	*e*Pn		**Pn**	**15 41 08.4**	**+0.6**
NPS	**Neapolis**	**2.40**	**271**	P		**Pn**	**15 41 10.8**	**+2.6**
NPS	**Neapolis**	**2.40**	**271**	*e*P		Pn	15 41 11.6	+3.4
NPS	**Neapolis**	**2.40**	**271**	P		**Pn**	**15 41 10.8**	**+2.6**
DNZL	**Cakiroluk**	**2.46**	**9**	*i* P		**Pn**	**15 41 09.0**	**-0.3**
DNZL				*i* S		**Sn**	**15 41 39.3**	**+1.1**
DNZL	**Cakiroluk**	**2.46**	**9**	*i* P		**Pn**	**15 41 09.0**	**-0.3**
DNZL				*i* S		**Sn**	**15 41 39.3**	**+1.1**
LAST	**Lasithi**	**2.51**	**269**	*e*P		**Pn**	15 41 13.1	+3.3
DENT	**Denizli**	**2.52**	**9**	*e*PN		**Pn**	**15 41 10.6**	**+0.6**
DENT	**Denizli**	**2.52**	**9**	*e*Pn		**Pn**	**15 41 10.6**	**+0.6**
BCK	**Bucak**	**2.75**	**36**	*e*PN		**Pn**	**15 41 14.0**	**+0.8**
BCK	**Bucak**	**2.75**	**36**	*e*Pn		**Pn**	**15 41 14.0**	**+0.8**
SMG	**Samos**	**2.81**	**331**	P		**Pn**	**15 41 13.7**	**-0.1**
SMG				S		**Sn**	**15 41 42.7**	**-3.7**
SMG	**Samos**	**2.81**	**331**	P		**Pn**	**15 41 13.7**	**-0.1**
SMG				S		**Sn**	**15 41 42.7**	**-3.7**
IDI	**Anoyia**	**2.99**	**272**	*e*P		**Pn**	**15 41 18.8**	**+2.4**
ISP	**Isparta**	**3.02**	**31**	*e*PN		**Pn**	**15 41 18.4**	**+1.6**
ISP	**Isparta**	**3.02**	**31**	*e*Pn		**Pn**	**15 41 18.5**	**+1.6**
APE	**Apeiranthos**	**3.03**	**307**	*e*PN		**Pn**	**15 41 16.4**	**-0.6**
APE	**Apeiranthos**	**3.03**	**307**	P		**Pn**	**15 41 17.1**	**+0.1**
APE				S		**Sn**	**15 41 49.8**	**-2.3**
APE	**Apeiranthos**	**3.03**	**307**	*e*Pn		**Pn**	**15 41 16.4**	**-0.6**
APE	**Apeiranthos**	**3.03**	**307**	P		**Pn**	**15 41 17.1**	**+0.1**
APE				S		**Sn**	**15 41 49.8**	**-2.3**
AKMC	**Akamas**	**3.11**	**93**	P		**Pn**	**15 41 18.4**	**+0.3**
AKMC	**Akamas**	**3.11**	**93**	P		**Pn**	**15 41 18.4**	**+0.3**
PPCY	**Paphos**	**3.14**	**96**	P		**Pn**	**15 41 19.0**	**+0.6**
PPCY	**Paphos**	**3.14**	**96**	P		**Pn**	**15 41 19.0**	**+0.6**
KHL	**Karahalli**	**3.16**	**14**	*e*PN		**Pn**	**15 41 20.0**	**+1.2**
KHL	**Karahalli**	**3.16**	**14**	*e*Pn		**Pn**	**15 41 20.0**	**+1.2**
GAZI	**Gazipasa**	**3.22**	**71**	*i* P		**Pn**	**15 41 19.3**	**-0.2**
GAZI				*i* S		**Sn**	**15 41 53.7**	**-3.0**
GAZI	**Gazipasa**	**3.22**	**71**	*i* P		**Pn**	**15 41 19.3**	**-0.2**
GAZI				*i* S		**Sn**	**15 41 53.7**	**-3.0**
KULA	**Kula-Manisa**	**3.25**	**2**	*e*PN		**Pn**	**15 41 21.3**	**+1.3**
KULA	**Kula-Manisa**	**3.25**	**2**	*e*Pn		**Pn**	**15 41 21.3**	**+1.3**
IZM	**Izmir**	**3.30**	**342**	*e*PN		**Pn**	**15 41 21.2**	**+0.5**
IZM	**Izmir**	**3.30**	**342**	*e*Pn		**Pn**	**15 41 21.2**	**+0.5**
ALFC	**Alevga**	**3.33**	**91**	⇑P		**Pn**	**15 41 21.2**	**+0.2**
	3.0nm,0.2s							
ALFC				S		**Sn**	**15 41 57.0**	**-2.3**
ALFC	**Alevga**	**3.33**	**91**	⇑P		**Pn**	**15 41 21.2**	**+0.2**
	3.0nm,0.2s							
ALFC				S		**Sn**	**15 41 57.0**	**-2.3**
BLCB	**Balcova**	**3.34**	**339**	*e*PN		**Pn**	**15 41 21.7**	**+0.5**
BLCB	**Balcova**	**3.34**	**339**	*e*Pn		**Pn**	**15 41 21.7**	**+0.5**
LEF	**Lefka**	**3.56**	**91**	*e*PN		**Pn**	**15 41 23.5**	**-0.8**
LEF	**Lefka**	**3.56**	**91**	*e*Pn		**Pn**	**15 41 23.5**	**-0.8**
GVD	**Gavdhos**	**3.68**	**265**	*e*P		Pn	15 41 29.4	+3.6
ERMK	**Ermenek**	**3.81**	**67**	*i* P		**Pn**	**15 41 29.4**	**+1.6**
ERMK				*i* S		**Sn**	**15 42 11.9**	**+0.5**
ERMK	**Ermenek**	**3.81**	**67**	*i* P		**Pn**	**15 41 29.4**	**+1.6**
ERMK				*i* S		**Sn**	**15 42 11.9**	**+0.5**
MAMC	**Mammari**	**3.83**	**90**	P		**Pn**	**15 41 28.8**	**+0.9**
MAMC	**Mammari**	**3.83**	**90**	P		**Pn**	**15 41 28.8**	**+0.9**
CSS	**Prodhromos**	**3.94**	**93**	⇑P		**Pn**	**15 41 30.0**	**+0.6**
	1.0nm,0.3s							
CSS				S		**Sn**	**15 42 13.0**	**-1.4**
CSS	**Prodhromos**	**3.94**	**93**	*e*PN		**Pn**	**15 41 29.7**	**+0.3**
CSS	**Prodhromos**	**3.94**	**93**	*e*Pn		**Pn**	**15 41 29.7**	**+0.3**
CSS	**Prodhromos**	**3.94**	**93**	⇑P		**Pn**	**15 41 30.0**	**+0.6**
	1.0nm,0.3s							
CSS				S		**Sn**	**15 42 13.0**	**-1.4**
ALT	**Altintas**	**3.99**	**18**	*e*PN		**Pn**	**15 41 31.8**	**+1.5**
ALT	**Altintas**	**3.99**	**18**	*e*Pn		**Pn**	**15 41 31.8**	**+1.5**
KONT	**Konya--Tatoy**	**4.08**	**48**	*e*PN		**Pn**	**15 41 33.1**	**+1.7**
KONT	**Konya--Tatoy**	**4.08**	**48**	*e*Pn		**Pn**	**15 41 33.1**	**+1.7**
LFK	**Lefkose**	**4.08**	**88**	*e*PN		**Pn**	**15 41 31.6**	**+0.1**
LFK	**Lefkose**	**4.08**	**88**	*e*Pn		**Pn**	**15 41 31.6**	**+0.1**
TVSB	**Tavsanli**	**4.25**	**10**	*e*PN		**Pn**	**15 41 35.6**	**+1.8**
TVSB	**Tavsanli**	**4.25**	**10**	*e*Pn		**Pn**	**15 41 35.6**	**+1.8**
LADK	**Ladik-KONYA**	**4.25**	**45**	*e*PN		**Pn**	**15 41 35.5**	**+1.7**
LADK	**Ladik-KONYA**	**4.25**	**45**	*e*Pn		**Pn**	**15 41 35.5**	**+1.7**
KIZT	**Kizilcal**	**4.50**	**35**	*e*PN		**Pn**	**15 41 39.1**	**+1.9**
KIZT	**Kizilcal**	**4.50**	**35**	*e*Pn		**Pn**	**15 41 39.1**	**+1.9**
PHNC	**Paralimni**	**4.51**	**92**	P		Pn	15 41 40.9	+3.7
	1.5nm,0.5s							
PHNC				S		**Sn**	**15 42 30.9**	**+2.5**
PHNC	**Paralimni**	**4.51**	**92**	P		Pn	15 41 40.9	+3.7
	1.5nm,0.5s							
PHNC				S		**Sn**	**15 42 30.9**	**+2.5**
EREN	**Erenkoy**	**4.61**	**85**	*e*PN		**Pn**	**15 41 39.2**	**+0.7**
EREN	**Erenkoy**	**4.61**	**85**	*e*Pn		**Pn**	**15 41 39.2**	**+0.7**
KIZK	**Mersin**	**4.71**	**73**	*i* P		**Pn**	**15 41 41.0**	**+1.0**
KIZK				*i* S		**Sn**	**15 42 31.3**	**-2.1**
KIZK	**Mersin**	**4.71**	**73**	*i* P		**Pn**	**15 41 41.0**	**+1.0**
KIZK				*i* S		**Sn**	**15 42 31.3**	**-2.1**
HBRG	**Burj al 'Arab**	**4.80**	**166**	S		**Sn**	**15 42 34.1**	**-1.4**
KOT	**Kottamia**	**6.00**	**152**	S		**Sn**	**15 43 00.4**	**-4.7**
	baz=154							
BRTR	**Keskin Array B**	**6.03**	**41**	Pn		**Pn**	**15 41 57.1**	**-1.0**
	0.2nm,0.3s,baz=216,slow=14,SNR=5.6							
BRTR				Sn		**Sn**	**15 43 06.8**	**+0.8**
	0.6nm,0.3s,baz=206,slow=19,SNR=8.1							
AMAG	**Maghara**	**6.05**	**138**	P		**Pn**	**15 41 58.5**	**0.0**
	baz=140							
AMAG	**Maghara**	**6.05**	**138**	P		Pn	15 41 58.4	0.0
HHAG	**Hagoal**	**6.08**	**149**	P		Pn	**15 41 59.3**	**+0.4**
	baz=152							
HHAG	**Hagoal**	**6.08**	**149**	P		**Pn**	**15 41 59.3**	**+0.4**
RSH		**6.10**	**133**	P		**Pn**	**15 41 59.3**	**+0.2**
	baz=135							
RSH		**6.10**	**133**	P		Pn	**15 41 59.3**	**+0.2**
MMAI	**Mount Meron Ar**	**6.11**	**110**	Pn		Pn	15 41 55.8	-3.5
	5.2nm,0.3s,baz=298,slow=12,SNR=18							
MMAI				Sn		**Sn**	**15 43 10.6**	**+2.5**
	6.4nm,0.3s,baz=298,slow=25,SNR=6.3							
GLL	**Jalalah**	**6.26**	**154**	P		Pn	**15 42 02.6**	**+1.2**
	baz=156							
GLL	**Jalalah**	**6.26**	**154**	P		Pn	**15 42 02.6**	**+1.2**
SUZ		**6.50**	**145**	P		Pn	**15 42 05.7**	**+1.0**
	baz=147							
SUZ		**6.50**	**145**	P		**Pn**	**15 42 05.7**	**+1.0**
SWA2		**6.54**	**204**	S		**Sn**	**15 43 17.8**	**-0.6**
	baz=206							
SWA2				AMP			15 43 00.0	
	comp=E,30μm,0.5s,logA/T=4.8,baz=206							
SWA2		**6.54**	**204**	S		**Sn**	**15 43 17.8**	**-0.6**
ASF	**Jabal al Asfar**	**7.61**	**111**	Sn		**Sn**	**15 43 40.4**	**-4.6**
	baz=192,slow=5.0,SNR=3.1							
EIL	**Elat**	**7.77**	**134**	Pn		**Pn**	**15 42 20.4**	**-1.6**
	comp=E,0.8nm,0.3s,baz=329,slow=6.9,SNR=21							
EIL				Sn		**Sn**	**15 43 44.1**	**-4.5**
	comp=E,3.0nm,0.3s,baz=310,slow=9.0,SNR=9.7							
HKAT	**Jabal Katrina**	**8.16**	**144**	P		**Pn**	**15 42 28.3**	**+0.8**
	baz=145							
HKAT	**Jabal Katrina**	**8.16**	**144**	P		Pn	**15 42 28.3**	**+0.8**
AKASG	**Malin Array Be**	**15.44**	**2**	Pn		Pn	**15 44 07.1**	**+0.8**
	baz=193,slow=12,SNR=2.8							
PGF	**Pioggiola**	**16.84**	**301**	*e*P		**Pn**	**15 44 22.6**	**-1.7**
GERES	**GERESS Array B**	**17.44**	**326**	P		**Pn**	**15 44 32.2**	**+0.5**
	comp=E,0.1nm,0.3s,baz=131,slow=12,SNR=2.9							
LPG	**La Plagne**	**19.44**	**308**	*e*P		**P**	**15 44 55.2**	**+0.5**
	comp=E,1.9nm,0.4s							
CABF	**La Chapelle**	**20.33**	**311**	*e*P		**P**	**15 45 04.1**	**-0.1**
	comp=E,7.8nm,0.8s							
SMF	**Signal de Mont**	**21.76**	**309**	*e*P		**P**	**15 45 19.3**	**-0.1**
	comp=E,2.5nm,0.6s							
ESDC	**Sonseca Array**	**26.09**	**289**	P		**P**	**15 46 00.4**	**-0.9**
	comp=E,0.3nm,0.3s,baz=96,slow=11,SNR=3.7							
AKTO	**Aktyubinsk**	**26.18**	**45**	P		**P**	**15 46 01.5**	**-0.5**
	comp=E,1.8nm,0.6s,baz=205,slow=7.4,SNR=4.0							
FINES	**FINESS Array B**	**26.25**	**357**	P		**P**	**15 46 02.3**	**-0.1**
	comp=E,1.3nm,0.7s,baz=159,slow=12,SNR=3.6							
ROSF	**Rostrenen**	**26.87**	**309**	*e*P		**P**	**15 46 06.1**	**-2.1**
KMBO	**Kilima Mbogo**	**37.10**	**165**	LR		LR	16 04 30.9	
	comp=E,164nm,19.0s,baz=30,slow=39							
KURBB	**Kurchatov Arra**	**38.91**	**51**	P		**P**	**15 47 53.1**	**+0.1**
	comp=E,0.8nm,0.7s,baz=274,slow=8.5,SNR=5.5							
MKAR	**Makanchi Array**	**41.41**	**57**	P		**P**	**15 48 15.2**	**+1.4**
	comp=E,0.2nm,0.4s,baz=277,slow=6.6,SNR=4.9							

ISK ***19*** *15:48:10.9,35.°27N×28.°59E,h7km,MD3.9*
IDC ***19*** *15:48:10.3±0.9,35.°33N×28.°62E,h0km,mb3.8/10, mb1 3.9/15,mb1mx3.8/31,mbtmp3.8/15,ML4.0/5,MS3.6/3, Ms1 3.7/3,ms1mx2.9/42,Error ellipse: s-maj=19.6km s-min=15.3km az=2.0*
HLW ***19*** *15:48:12.8,35.°47N×28.°59E,h32km±16km,Md3.9,Ml3.8*
ISCJB ***19*** *15:48:14.3±0.2,35.°27N±0.°02×28.°61E±0.°02,h54km±4km, mb3.7/12,MS4.0/2,Error ellipse: s-maj=3.3km s-min=2.5km az=24.8*
CSEM ***19*** *15:48:15.8±0.1,35.°32N×28.°60E,h54km±2km,ML3.9/3, Mw3.3,Error ellipse: s-maj=2.8km s-min=2.1km az=36.0*
*DD

CHOS	**Chios Island**	**3.69**	**327**	P		**Pn**	**15 49 10.2**	**-0.6**
CHOS				S		**Sn**	**15 49 51.0**	**-2.1**
GVD	**Gavdhos**	**3.73**	**264**	*eP*		**Pn**	**15 49 12.0**	**+0.7**
GVD	**Gavdhos**	**3.73**	**264**	*eP*		**Pn**	**15 49 12.0**	**+0.7**
ERMK	**Ermenek**	**3.74**	**68**	*i P*		Pn	15 49 14.0	+2.4
ERMK				*i S*		**Sn**	**15 49 56.1**	**+1.6**
ERMK	**Ermenek**	**3.74**	**68**	*i P*		Pn	15 49 14.0	+2.4
ERMK				*i S*		**Sn**	**15 49 56.1**	**+1.6**
MAMC	**Mammari**	**3.78**	**91**	P		**Pn**	**15 49 12.7**	**+0.8**
MAMC	**Mammari**	**3.78**	**91**	P		**Pn**	**15 49 12.7**	**+0.8**
CSS	**Prodhromos** 2.5nm,0.3s	**3.89**	**94**	P		**Pn**	**15 49 13.8**	**+0.3**
CSS				S		**Sn**	**15 49 55.6**	**-2.2**
CSS	**Prodhromos**	**3.89**	**94**	*e*PN		**Pn**	**15 49 13.3**	**-0.1**
CSS	**Prodhromos**	**3.89**	**94**	P		**Pn**	**15 49 13.7**	**+0.3**
CSS				S		**Sn**	**15 49 56.0**	**-1.8**
CSS	**Prodhromos**	**3.89**	**94**	*e*Pn		**Pn**	**15 49 13.3**	**-0.1**
CSS	**Prodhromos**	**3.89**	**94**	P		**Pn**	**15 49 13.7**	**+0.3**
CSS				S		**Sn**	**15 49 56.0**	**-1.8**
ALT	**Altintas**	**3.93**	**17**	*e*PN		**Pn**	**15 49 14.1**	**0.0**
ALT	**Altintas**	**3.93**	**17**	*e*Pn		**Pn**	**15 49 14.1**	**0.0**
KONT	**Konya--Tatoy**	**4.01**	**48**	*e*PN		**Pn**	**15 49 15.2**	**+0.1**
KONT	**Konya--Tatoy**	**4.01**	**48**	*e*Pn		**Pn**	**15 49 15.2**	**+0.1**
LFK	**Lefkose**	**4.03**	**89**	*e*PN		**Pn**	**15 49 15.0**	**-0.4**
LFK	**Lefkose**	**4.03**	**89**	*e*Pn		**Pn**	**15 49 15.0**	**-0.4**
LADK	**Ladik-KONYA**	**4.18**	**45**	*e*PN		**Pn**	**15 49 17.6**	**+0.1**
LADK	**Ladik-KONYA**	**4.18**	**45**	*e*Pn		**Pn**	**15 49 17.6**	**+0.1**
TVSB	**Tavsanli**	**4.19**	**9**	*e*PN		**Pn**	**15 49 17.0**	**-0.7**
TVSB	**Tavsanli**	**4.19**	**9**	*e*Pn		**Pn**	**15 49 17.0**	**-0.7**
HMAT	**Matruh** comp=N,100μm,0.4s,logA/T=5.4,baz=197	**4.38**	**197**	AMP			15 50 00.0	
HMAT	**Matruh**	**4.38**	**197**	S		**Sn**	**15 50 07.2**	**-2.9**
KIZT	**Kizilcal**	**4.43**	**35**	*e*PN		**Pn**	**15 49 21.2**	**+0.3**
KIZT	**Kizilcal**	**4.43**	**35**	*e*Pn		**Pn**	**15 49 21.2**	**+0.3**
PHNC	**Paralimni** comp=N,2.0nm,0.9s	**4.46**	**92**	P		Pn	15 49 25.2	+4.0
PHNC				S		**Sn**	**15 50 13.0**	**+1.2**
PHNC	**Paralimni** comp=N,2.0nm,0.9s	**4.46**	**92**	P		Pn	15 49 25.2	+4.0
PHNC				S		**Sn**	**15 50 13.0**	**+1.2**
EREN	**Erenkoy**	**4.55**	**86**	*e*PN		**Pn**	**15 49 22.8**	**+0.3**
EREN	**Erenkoy**	**4.55**	**86**	*e*Pn		**Pn**	**15 49 22.8**	**+0.3**
KYTH	**Kithira**	**4.63**	**284**	*e*P		**Pn**	**15 49 23.3**	**-0.3**
KYTH	**Kithira**	**4.63**	**284**	*e*P		**Pn**	**15 49 23.3**	**-0.3**
SLUM	baz=217	**4.74**	**218**	P		**Pn**	**15 49 24.2**	**-1.0**
SLUM		**4.74**	**218**	P		**Pn**	**15 49 24.2**	**-1.0**
VLI	**Veliai**	**4.81**	**289**	*e*P		**Pn**	**15 49 25.7**	**-0.3**
VLI	**Veliai**	**4.81**	**289**	*e*P		**Pn**	**15 49 25.7**	**-0.3**
HBRG	**Burj al 'Arab** baz=167	**4.83**	**167**	S		**Sn**	**15 50 18.5**	**-2.5**
HBRG	**Burj al 'Arab**	**4.83**	**167**	S		**Sn**	**15 50 18.5**	**-2.5**
GELI	**Tayfur-Gelibol**	**5.36**	**342**	*e*PN		**Pn**	**15 49 33.4**	**-0.2**
GELI	**Tayfur-Gelibol**	**5.36**	**342**	*e*Pn		**Pn**	**15 49 33.4**	**-0.2**
GULE	**Gulek**	**5.36**	**67**	*i* P		Pn	15 49 36.4	+2.6
GULE				*i* S		**Sn**	**15 50 35.7**	**+1.4**
GULE	**Gulek**	**5.36**	**67**	*i* P		Pn	15 49 36.4	+2.6
GULE				*i* S		**Sn**	**15 50 35.7**	**+1.4**
KRTS	**Karatas**	**5.64**	**75**	*e*PN		**Pn**	**15 49 38.0**	**+0.7**
KRTS	**Karatas**	**5.64**	**75**	*e*Pn		**Pn**	**15 49 38.1**	**+0.7**
HNAT	**Natroun** baz=163	**5.91**	**163**	P		Pn	**15 49 40.6**	**-0.5**
HNAT	**Natroun**	**5.91**	**163**	P		Pn	**15 49 40.6**	**-0.5**
BRTR	**Keskin Array B** comp=N,0.1nm,0.3s,baz=211,slow=14,SNR=3.9	**5.96**	**41**	Pn		**Pn**	**15 49 40.0**	**-2.0**
BRTR				Sn		**Sn**	**15 50 50.1**	**+1.3**
KOT	**Kottamia** baz=152	**6.01**	**152**	P		**Pn**	**15 49 41.7**	**-0.9**
KOT	**Kottamia**	**6.01**	**152**	P		Pn	**15 49 41.7**	**-0.9**
AMAG	**Maghara** baz=139	**6.05**	**139**	P		Pn	**15 49 42.6**	**-0.5**
AMAG	**Maghara**	**6.05**	**139**	P		**Pn**	**15 49 42.6**	**-0.5**
MMAI	**Mount Meron Ar** comp=N,5.1nm,0.3s,baz=308,slow=12,SNR=14	**6.08**	**110**	Pn		**Pn**	**15 49 41.0**	**-2.6**
MMAI				Sn		**Sn**	**15 50 51.7**	**-0.2**
HHAG	**Hagoal** baz=150	**6.09**	**150**	P		**Pn**	**15 49 43.0**	**-0.8**
HHAG	**Hagoal**	**6.09**	**150**	P		**Pn**	**15 49 43.0**	**-0.8**
RSH	baz=134	**6.10**	**134**	P		**Pn**	**15 49 43.5**	**-0.3**
RSH		**6.10**	**134**	P		**Pn**	**15 49 43.5**	**-0.3**
HWQ	**Hawqa**	**6.13**	**98**	*e*P		**Pn**	**15 49 44.6**	**+0.4**
HWQ	**Hawqa**	**6.13**	**98**	*e*P		**Pn**	**15 49 44.6**	**+0.4**
HSAF	**As Saff** baz=155	**6.19**	**155**	P		**Pn**	**15 49 44.3**	**-0.8**
HSAF	**As Saff**	**6.19**	**155**	P		**Pn**	**15 49 44.3**	**-0.8**
SUZ	baz=146	**6.51**	**146**	P		**Pn**	**15 49 48.7**	**-0.7**
SUZ		**6.51**	**146**	P		**Pn**	**15 49 48.7**	**-0.7**
SWA2	baz=204	**6.61**	**205**	P		**Pn**	**15 49 50.2**	**-0.5**
SWA2	comp=E,60μm,0.5s,logA/T=5.1,baz=204			AMP			15 51 00.0	
SWA2		**6.61**	**205**	P		**Pn**	**15 49 50.2**	**-0.5**
AWBH	baz=177	**6.97**	**178**	P		**Pn**	**15 49 55.1**	**-0.6**
AWBH		**6.97**	**178**	P		**Pn**	**15 49 55.1**	**-0.6**
HNKL	**Nakhl** baz=139	**7.02**	**138**	P		**Pn**	**15 49 56.1**	**-0.3**
HNKL				S		**Sn**	**15 51 10.1**	**-4.9**
HNKL	**Nakhl** baz=139	**7.02**	**138**	P		**Pn**	**15 49 56.1**	**-0.3**
ASF	**Jabal al Asfar** comp=E,120nm,20.8s,baz=99,slow=48	**7.58**	**112**	LR		LR	15 54 12.0	
EIL	**Elat** comp=E,2.2nm,0.3s,baz=301,slow=7.3,SNR=36	**7.76**	**135**	Pn		**Pn**	**15 50 06.2**	**-0.4**
EIL				Sn		Sn	15 51 25.5	-7.7
HKAT	**Jabal Katrina** baz=145	**8.16**	**144**	P		**Pn**	**15 50 11.7**	**-0.7**
HKAT	**Jabal Katrina**	**8.16**	**144**	P		**Pn**	**15 50 11.6**	**-0.7**
HSFG	baz=151	**9.83**	**151**	P		**Pn**	**15 50 34.9**	**0.0**
HSFG		**9.83**	**151**	P		**Pn**	**15 50 34.9**	**0.0**
STON	**Ston**	**11.35**	**315**	*e*Pn		**Pn**	**15 50 53.4**	**-2.1**
STON	**Ston**	**11.35**	**315**	*e*Pn		**Pn**	**15 50 53.4**	**-2.1**
UDBI	**Udbina**	**13.47**	**317**	*e*Pn		**Pn**	**15 51 23.8**	**-0.9**
UDBI	**Udbina**	**13.47**	**317**	*e*Pn		**Pn**	**15 51 23.8**	**-0.9**
NVLJ	**Novalja**	**14.00**	**315**	*e*Pn		**Pn**	**15 51 29.5**	**-2.3**
NVLJ	**Novalja**	**14.00**	**315**	*e*Pn		**Pn**	**15 51 29.4**	**-2.3**
VYHS	**Vyhne**	**15.03**	**331**	*e*PN		**P**	**15 51 51.8**	**+1.1**
AKASG	**Malin Array Be** comp=E,0.7nm,0.3s,baz=192,slow=12,SNR=4.3	**15.40**	**1**	Pn		**P**	**15 51 51.8**	**-2.0**
KEST	**Kesra** comp=E,0.2nm,0.3s,baz=99,slow=4.7,SNR=5.5	**15.69**	**277**	Pn		**Pn**	**15 51 54.6**	**+0.5**
VRAC	**Vranov** comp=E,0.4nm,0.3s,baz=163,slow=14,SNR=2.1	**16.55**	**331**	Pn		**Pn**	**15 52 04.7**	**0.0**
PGF	**Pioggiola**	**16.86**	**301**	*e*P		**Pn**	**15 52 05.7**	**-3.2**
GERES	**GERESS Array B** comp=E,0.2nm,0.3s,baz=134,slow=11,SNR=7.5	**17.43**	**325**	P		**Pn**	**15 52 16.0**	**+0.1**
SBF	**Sospel**	**18.38**	**304**	*e*P		**P**	**15 52 26.0**	**-1.1**
SBF	**Sospel**	**18.38**	**304**	*e*P		**P**	**15 52 26.0**	**-1.1**
FRF	**La Foret Royal**	**18.82**	**303**	*e*P		**P**	**15 52 30.8**	**-1.0**
FRF	**La Foret Royal**	**18.82**	**303**	*e*P		**P**	**15 52 30.8**	**-1.0**
LPL	**La Plagne** comp=E,5.7nm,0.6s	**19.47**	**308**	*e*P		**P**	**15 52 39.8**	**+0.6**
LPL	**La Plagne** comp=E,5.0nm,0.6s	**19.47**	**308**	*e*P		**P**	**15 52 39.8**	**+0.6**
CABF	**La Chapelle** comp=E,17nm,0.9s	**20.34**	**311**	*e*P		**P**	**15 52 48.3**	**-0.1**
CABF	**La Chapelle** comp=E,16nm,0.9s	**20.34**	**311**	*e*P		**P**	**15 52 48.3**	**-0.1**
SMF	**Signal de Mont**	**21.77**	**309**	*e*P		**P**	**15 53 02.0**	**-1.7**
SMF	**Signal de Mont**	**21.77**	**309**	*e*P		**P**	**15 53 02.0**	**-1.7**
LOR	**Lormes**	**22.00**	**310**	*e*P		**P**	**15 53 05.1**	**-1.1**
LOR	**Lormes**	**22.00**	**310**	*e*P		**P**	**15 53 05.1**	**-1.1**
AVF	**Avril sur Loir**	**22.13**	**309**	*e*P		**P**	**15 53 06.9**	**-0.7**
AVF	**Avril sur Loir**	**22.13**	**309**	*e*P		**P**	**15 53 06.9**	**-0.7**
SSF	**Saint Saulge** comp=E,11nm,0.7s	**22.14**	**310**	*e*P		**P**	**15 53 06.7**	**-1.0**
SSF	**Saint Saulge** comp=E,11nm,0.7s	**22.14**	**310**	*e*P		**P**	**15 53 06.7**	**-1.0**
MFF	**Saint Martin d**	**24.34**	**306**	*e*P		**P**	**15 53 28.4**	**-0.9**
MFF	**Saint Martin d**	**24.34**	**306**	*e*P		**P**	**15 53 28.4**	**-0.9**
FLN	**La Foliniere**	**25.27**	**311**	*e*P		**P**	**15 53 36.5**	**-1.2**
FLN	**La Foliniere**	**25.27**	**311**	*e*P		**P**	**15 53 36.5**	**-1.2**
GRR	**Gorron** comp=E,10nm,0.6s	**25.37**	**310**	*e*P		**P**	**15 53 37.6**	**-1.1**
GRR	**Gorron** comp=E,10.0nm,0.6s	**25.37**	**310**	*e*P		**P**	**15 53 37.6**	**-1.1**
AKTO	**Aktyubinsk** comp=E,1.4nm,0.6s,baz=257,slow=8.6,SNR=5.4	**26.11**	**46**	P		**P**	**15 53 45.1**	**-0.2**
ESDC	**Sonseca Array** comp=E,1.0nm,0.4s,baz=83,slow=9.8,SNR=9.7	**26.12**	**289**	P		**P**	**15 53 46.1**	**+0.4**
FINES	**FINESS Array B** comp=E,1.4nm,0.6s,baz=185,slow=12,SNR=9.8	**26.21**	**357**	P		**P**	**15 53 45.5**	**-0.5**
HFS	**Hagfors** comp=E,0.8nm,0.4s,baz=145,slow=11,SNR=9.5	**26.66**	**343**	P		**P**	**15 53 50.7**	**+0.5**
ATD	**Arta Tunnel** comp=E,16nm,18.3s,baz=45,slow=38	**26.97**	**148**	LR		LR	16 05 19.7	
TORD	**Torodi Ar. Bea** comp=E,0.5nm,0.7s,baz=60,slow=10,SNR=3.5	**32.80**	**234**	P		**P**	**15 54 45.7**	**+0.6**
ARCES	**ARCESS Array B** comp=E,1.9nm,0.8s,baz=185,slow=8.7,SNR=3.7	**34.33**	**358**	P		**P**	**15 54 57.0**	**-0.8**
KURBB	**Kurchatov Arra** comp=E,0.9nm,0.6s,baz=273,slow=8.6,SNR=13	**38.84**	**51**	P		**P**	**15 55 36.8**	**+0.5**
MKAR	**Makanchi Array** comp=E,0.5nm,0.7s,baz=282,slow=7.5,SNR=8.7	**41.34**	**57**	P		**P**	**15 55 58.0**	**+0.9**
ZALV	**Zalesovo Beam** comp=E,0.5nm,0.6s,baz=279,slow=13,SNR=2.6	**42.87**	**46**	P		**P**	**15 56 10.8**	**+1.3**
SONM	**Songino Array** comp=E,0.2nm,0.4s,baz=293,slow=4.1,SNR=2.7	**57.20**	**52**	P		**P**	**15 57 58.2**	**-0.2**
BDFB	**Brasilia** comp=E,143nm,18.6s,baz=47,slow=37	**88.38**	**250**	LR		LR	16 42 41.4	
ASAR	**Alice Springs** comp=E,0.5nm,1.1s,baz=308,slow=1.1,SNR=4.6	**115.31**	**102**	PKP		**PKPdf**	**16 06 52.7**	**0.0**

IDC 19 15:54:29.4±1.7, 0.66N×125.82E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/22, mbtmp3.7/4, Error ellipse: s-maj=159.8km s-min=23.1km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr** 1.8nm,0.6s,baz=336,slow=11,SNR=38	**22.11**	**158**	P		P	15 59 26.1	-0.4
ASAR	**Alice Springs** 1.3nm,0.3s,baz=347,slow=13,SNR=60	**25.42**	**163**	P		P	15 59 59.6	+0.6
STKA	**Stephens Creek** 0.8nm,0.6s,baz=340,slow=8.1,SNR=4.5	**35.64**	**157**	P		P	16 01 28.6	-0.5
MKAR	**Makanchi Array** 0.2nm,0.3s,baz=123,slow=7.5,SNR=8.0	**59.58**	**327**	P		P	16 04 34.9	-0.1

IDC 19 16:15:19.4±1.2, 27.19N×101.53E, h0km, mb3.4/6, mb1 3.5/6, mb1mx3.4/26, mbtmp3.4/6, Error ellipse: s-maj=40.6km s-min=21.5km az=71.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=8.5,slow=17,SNR=10.0	**9.02**	**196**	Pg		Pn	16 18 05.6	+35
CMAR				Lg		Lg	16 20 02.7	
SONM	**Songino Array** 0.3nm,0.5s,baz=188,slow=8.2,SNR=2.4	**20.96**	**9**	P		P	16 20 04.6	+0.6
MKAR	**Makanchi Array** 0.4nm,0.8s,baz=132,slow=11,SNR=5.1	**24.76**	**327**	P		P	16 20 42.6	-0.1
KURBB	**Kurchatov Arra** 0.2nm,0.5s,baz=152,slow=7.8,SNR=3.0	**29.23**	**329**	P		P	16 21 22.5	-0.3
USRK	**Ussuriysk Arra** 1.6nm,0.6s,baz=241,slow=8.0,SNR=4.5	**29.77**	**47**	P		P	16 21 27.7	+0.1
WRA	**Warramunga Arr** 0.7nm,1.0s,baz=331,slow=7.7,SNR=3.5	**56.62**	**142**	P		P	16 25 04.6	+0.2
ASAR	**Alice Springs** 0.4nm,0.8s,baz=324,slow=5.6,SNR=4.0	**59.45**	**145**	P		P	16 25 23.5	-0.7

OTT 19 16:25:55.6±0.6, 73.09N×71.24W, h18km, ML3.5/12, Baffin Bay Seismic Zone. 226km east from Pond Inlet, Nu, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
GIFN	**Gifford Fjord,**	**4.53**	**232**	PN		Pn	16 27 03.6	+0.4
GIFN				SN		Sn	16 27 53.6	-1.7
GIFN	comp=E,6.4nm,0.1s			Trac			16 27 58.0	
ILON	**Igloolik, Nuna**	**5.06**	**228**	PN		Pn	16 27 10.4	0.0
ILON				SN		Sn	16 28 04.9	-3.3
ILON	comp=E,7.1nm,0.1s			Trac			16 28 09.2	
AP3N	**Apex site 3 Nu**	**5.60**	**236**	PN		Pn	16 27 17.6	-0.3
AP3N				SN		Sn	16 28 18.9	-2.7
AP3N	comp=E,5.6nm,0.1s			Trac			16 28 22.7	
LAIN	**Lailor River,**	**5.64**	**231**	PN		Pn	16 27 18.1	-0.3
LAIN				SN		Sn	16 28 19.2	-3.5
LAIN	comp=Z,11nm,0.2s			Trac			16 28 22.6	
SRLN	**Sarcpa Lake, N**	**6.04**	**227**	PN		Pn	16 27 23.6	-0.3
SRLN				SN		Sn	16 28 28.5	-4.0
SRLN	comp=Z,12nm,0.2s			Trac			16 28 32.3	
RES	**Resolute Bay**	**6.75**	**295**	PN		Pn	16 27 32.9	-0.7
RES				SN		Sn	16 28 44.9	-4.9
RES	comp=Z,4.9nm,0.6s			Trac			16 28 48.9	
EUNU	**Eureka**	**7.79**	**340**	PN		Pn	16 27 45.9	-2.1
EUNU				SN		Sn	16 29 05.5	-10
KUGN	**Kugaaruk Camp,**	**7.99**	**241**	PN		Pn	16 27 48.9	-1.8
KUGN				SN		Sn	16 29 14.0	-6.5
KUGN	comp=Z,6.6nm,0.2s			Trac			16 29 16.5	
QILN	**Qililugaq Expl**	**8.28**	**226**	PN		Pn	16 27 52.9	-1.6
QILN				SN		Sn	16 29 19.9	-7.4
QILN	comp=Z,6.1nm,0.2s			Trac			16 29 22.6	
STLN	**Stellar Camp,**	**9.32**	**243**	PN		Pn	16 28 09.0	+0.2
STLN				SN		Sn	16 29 44.5	-8.6
STLN	comp=Z,2.0nm,0.1s			Trac			16 29 52.3	
FRB	**Frobisher Bay**	**9.44**	**173**	SN		Sn	16 29 47.1	-8.8
WAGN	**Wager Bay**	**9.60**	**230**	PN		Pn	16 28 11.4	-1.2
WAGN				SN		Sn	16 29 51.6	-8.2
BULN	**Bullion Camp,**	**10.06**	**239**	PN		Pn	16 28 17.9	-1.0
BULN				SN		Sn	16 30 03.4	-7.8
BULN	comp=Z,1.5nm,0.2s			Trac			16 30 07.5	
NUNN	**Nunuq Camp, NU**	**10.53**	**232**	PN		Pn	16 28 23.4	-2.0
NUNN				SN		Sn	16 30 13.6	-9.1
NUNN	comp=Z,1.8nm,0.1s			Trac			16 30 20.4	
SEDN	**First Sedna Si**	**12.26**	**227**	PN		Pn	16 28 44.9	-4.1
SEDN				SN		Sn	16 30 53.5	-12
SEDN	comp=Z,4.2nm,0.5s			Trac			16 30 59.0	
JOSN	**Second Sedna S**	**12.41**	**227**	PN		Pn	16 28 47.9	-3.2
JOSN				SN		Sn	16 30 57.2	-12
AKVQ	**Akulivik**	**12.62**	**196**	PN		Pn	16 28 50.1	-3.7
AKVQ				SN		Sn	16 30 58.8	-15
JERN	**Jeri Cho Mine,**	**15.41**	**263**	PN		Pn	16 29 28.3	-3.5
JERN				SN		Sn	16 32 08.7	-13

IDC 19 16:27:52.4±4.8, 16.24S×175.05W, h0km, mb4.0/3, mb1 4.1/3, mb1mx3.6/18, mbtmp4.0/3, Error ellipse: s-maj=167.6km s-min=97.0km az=155.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
STKA	**Stephens Creek** 4.1nm,1.0s,baz=80,slow=11,SNR=6.2	**42.24**	**240**	P		P	16 35 47.9	+0.3
WRA	**Warramunga Arr** 0.4nm,0.4s,baz=94,slow=7.1,SNR=19	**48.11**	**258**	P		P	16 36 34.3	-0.2
ASAR	**Alice Springs** 1.4nm,0.6s,baz=90,slow=8.0,SNR=37	**48.34**	**253**	P		P	16 36 35.8	-0.5
ASAR	0.7nm,1.1s,baz=101,slow=3.8,SNR=6.7			PcP		PcP	16 38 02.9	-0.2

*NEIC **19** 16:32:33.3, 19.16N×66.44W, h22km, MD3.1(RSPR), After RSPR.*

RSPR 19 16:32:33.3, 19.16N×66.44W, h22km±15km, MD3.1/11, 10C-12D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AOPR	**Arecibo Observ**	**0.86**	**200**	*e*P		Pb	16 32 47.3	-2.3
AOPR	**Arecibo Observ**	**0.86**	**200**	*e*P		Pb	16 32 47.5	-2.1
AOPR				*e*S		Sb	16 32 58.6	-2.3
AOPR	**Arecibo Observ**	**0.86**	**200**	*e*P		Pb	16 32 47.3	-2.3
AOPR				*e*P		Pn	16 32 47.5	-2.6
AOPR				*e*S		Sb	16 32 58.6	-2.3
AGPR	**Aguadilla, PR**	**0.94**	**223**	*e*S		Sb	16 32 59.7	-3.2
AGPR	**Aguadilla, PR**	**0.94**	**223**	*e*Pn		Pb	16 32 50.2	-0.6
LRS	**Lares**	**0.95**	**204**	*e*P		Pb	16 32 48.5	-2.6
LRS				*e*S		Sb	16 33 00.9	-2.4
LRS	**Lares**	**0.95**	**204**	*e*P		Pb	16 32 48.5	-2.6
LRS				*e*S		Sb	16 33 00.9	-2.4
SJG	**San Juan**	**1.08**	**165**	*e*P		Pn	16 32 50.7	-2.4
SJG				*e*S		Sb	16 33 04.1	-2.9
SJG	**San Juan**	**1.08**	**165**	*e*P		Pn	16 32 50.7	-2.4
SJG				*e*S		Sb	16 33 04.1	-2.9
CELP	**Cerrillos**	**1.09**	**187**	*e*P		Pn	16 32 50.7	-2.6
CELP				*e*S		Sb	16 33 04.5	-2.8
CELP	**Cerrillos**	**1.09**	**187**	*e*P		Pn	16 32 50.7	-2.6
CELP				*e*Pn		Pb	16 32 50.9	-2.6
CELP				*e*S		Sb	16 33 04.5	-2.8
CELP				*e*Sn		Sn	16 33 06.0	-1.7
OBIP	**Obispado Ponce**	**1.12**	**188**	*e*P		Pn	16 32 51.5	-2.2
OBIP	**Obispado Ponce**	**1.12**	**188**	*e*S		Sb	16 33 05.3	-3.0
OBIP	**Obispado Ponce**	**1.12**	**188**	*e*P		Pn	16 32 51.5	-2.2
OBIP				*e*S		Sb	16 33 05.3	-3.0
LSP	**Las Mesas**	**1.16**	**212**	*i* P		Pn	16 32 51.7	-2.5
LSP				*e*S		Sb	16 33 06.1	-3.1
LSP	**Las Mesas**	**1.16**	**212**	*e*Pn		Pn	16 32 51.2	-3.0
LSP				*i* P		Pb	16 32 51.7	-2.9
LSP				*e*S		Sb	16 33 06.1	-3.1
LSP				*e*Sn		Sn	16 33 06.4	-2.9
CPD	**Cerro la Pandu**	**1.23**	**156**	*e*P		Pn	16 32 52.6	-2.5
CPD	**Cerro la Pandu**	**1.23**	**156**	*e*S		Sn	16 33 07.9	-3.2
CPD	**Cerro la Pandu**	**1.23**	**156**	*e*P		Pn	16 32 52.6	-2.5
CPD				*e*S		Sn	16 33 07.9	-3.2
GBPR	**Guanica, Bosqu**	**1.25**	**199**	*e*S		Sn	16 33 08.9	-2.7
CRPR	**Cabo Rojo, PR**	**1.31**	**209**	*e*P		Sn	16 32 53.9	-2.4
CRPR	**Cabo Rojo, PR**	**1.31**	**209**	*e*S		Sn	16 33 09.8	-3.3
CRPR	**Cabo Rojo, PR**	**1.31**	**209**	*e*P		Pn	16 32 53.9	-2.4
CRPR				*e*S		Sn	16 33 09.8	-3.3
MTP	**Monte Pirata**	**1.35**	**141**	*e*P		Pn	16 32 54.3	-2.5
MTP	**Monte Pirata**	**1.35**	**141**	*e*S		Sn	16 33 10.2	-3.9
MTP	**Monte Pirata**	**1.35**	**141**	*e*P		Pn	16 32 54.3	-2.5
MTP				*e*S		Sn	16 33 10.2	-3.9
STVI	**Saint Thomas**	**1.62**	**120**	*e*P		Pn	16 32 58.5	-2.1
STVI	**Saint Thomas**	**1.62**	**120**	*e*S		Sn	16 33 17.6	-3.2
STVI	**Saint Thomas**	**1.62**	**120**	*e*P		Pn	16 32 58.5	-2.1
STVI				*e*S		Sn	16 33 17.6	-3.2
TBVI	**Tortola**	**1.88**	**113**	*e*S		Sn	16 33 24.0	-3.1
SDDR	**Presa de Saban**	**4.59**	**269**	*e*Pn		Pn	16 33 37.5	-4.0
SDDR				*e*Sn		Sn	16 34 33.4	-0.8

IDC 19 16:48:13.5±26.0, 24.07S×174.57W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.8/18, mbtmp4.1/4, Error ellipse: s-maj=473.9km s-min=134.7km az=82.0, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CTA	**Charters Tower** 2.9nm,0.5s,baz=78,slow=11,SNR=3.9	**36.44**	**268**	P		P	16 55 21.7	+1.4
STKA	**Stephens Creek** 4.9nm,1.0s,baz=100,slow=11,SNR=2.4	**39.28**	**249**	P		P	16 55 42.3	-1.8
ASAR	**Alice Springs** 0.4nm,0.3s,baz=94,slow=7.2,SNR=26	**46.90**	**259**	P		P	16 56 45.9	-0.2
WRA	**Warramunga Arr** 0.6nm,0.3s,baz=101,slow=7.9,SNR=46	**47.34**	**265**	P		P	16 56 50.0	+0.4

*ISCJB **19** 16:51:43.4±0.6, 39.63N±0.03×39.74E±0.06, h8km±5km, Error ellipse: s-maj=7.7km s-min=5.4km az=166.0*
*DDA **19** 16:51:43.5, 39.63N×39.67E, h6km, MD2.8*
*ISK **19** 16:51:43.0, 39.66N×39.72E, h5km, MD2.9*
*CSEM **19** 16:51:43.6±0.2, 39.65N×39.68E, h5km, MD2.8, Error ellipse: s-maj=4.6km s-min=3.8km az=94.0*

ISC 19 16:51:43.2±0.9, 39.65N±0.03×39.69E±0.04, h11km±5km, n21, σ0.51/27, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
EUZM	**Uzumlu**	**0.06**	**3**	*i* P		**Pg**	**16 51 45.7**	**+0.1**
EUZM				*i* S		**Sg**	**16 51 47.3**	**0.0**
EUZM	**Uzumlu**	**0.06**	**3**	*i* P		**Pg**	**16 51 45.7**	**+0.1**
EUZM				*i* S		**Sg**	**16 51 47.3**	**0.0**
ERZN	**Erzincan**	**0.07**	**161**	*e*PG		**Pg**	**16 51 45.0**	**-0.6**
EZC	**Erzincan**	**0.28**	**291**	*e*Pg		Pg	16 51 45.0	-4.0
KELT	**Kelkit**	**0.60**	**326**	*i* P		**Pg**	**16 51 55.3**	**+0.4**
KELT				*i* S		**Sn**	**16 52 06.5**	**-1.3**
KELT	**Kelkit**	**0.60**	**326**	*i* P		**Pg**

KULM	**Kulim**	**25.10**	**272**	*e*P		**P**	**17 52 45.7**	**+0.8**
	8.6nm,0.9s							
KULM	**Kulim**	**25.10**	**272**	P		**P**	**17 52 45.6**	**+0.8**
	13nm,1.3s							
WRAB	**Tennant Creek**	**25.97**	**161**	*e*P		**P**	**17 52 53.2**	**+0.6**
	13nm,0.9s							
WRA	**Warramunga Arr**	**25.97**	**161**	P		**P**	**17 52 52.5**	**-0.1**
WRA	**Warramunga Arr**	**25.97**	**161**	P		**P**	**17 52 52.5**	**-0.1**
	5.2nm,0.5s,baz=342,slow=10,SNR=70							
PSI	**Prapat**	**26.93**	**267**	P		**P**	**17 53 03.0**	**+1.5**
PSI	**Prapat**	**26.93**	**267**	P		**P**	**17 53 03.0**	**+1.5**
	3.9nm,0.6s,baz=29,slow=7.1,SNR=6.2							
PBKT	**Sadao Pong**	**27.05**	**298**	P		**P**	**17 53 04.5**	**+2.1**
	15nm,0.7s							
WHN	**Wuhan**	**27.80**	**338**	P		**P**	**17 53 07.8**	**-1.2**
GYA	**Guiyang**	**28.28**	**322**	*e*P		**P**	**17 53 14.8**	**+1.3**
GYA				pmax	pmax			
	comp=Z,10.0nm,0.9s							
AS31	**Alice Springs**	**29.37**	**165**	*e*P		**P**	**17 53 22.3**	**-0.7**
ASAR	**Alice Springs**	**29.37**	**165**	P		**P**	**17 53 22.8**	**-0.3**
ASAR	**Alice Springs**	**29.37**	**165**	P		**P**	**17 53 22.8**	**-0.3**
	comp=Z,1.4nm,0.5s,baz=338,slow=6.9,SNR=74							
CM31	**Chiang Mai Arr**	**29.57**	**300**	P		**P**	**17 53 22.2**	**-2.7**
	comp=Z,3.1nm,0.6s							
CMAR	**Chiang Mai Arr**	**29.57**	**300**	P		**P**	**17 53 24.5**	**-0.4**
CMAR	**Chiang Mai Arr**	**29.57**	**300**	P		**P**	**17 53 24.5**	**-0.4**
	comp=Z,2.4nm,0.9s,baz=119,slow=7.5,SNR=9.5							
CHTO	**Chiang Mai**	**29.72**	**300**	*e*P		**P**	**17 53 27.6**	**+1.4**
	comp=Z,23nm,1.7s							
KSAR	**Wonju Array Be**	**32.54**	**3**	P		**P**	**17 53 51.0**	**+0.2**
KSRS	**Korea Array**	**32.55**	**3**	P		**P**	**17 53 51.0**	**+0.1**
	comp=Z,3.9nm,0.7s,baz=184,slow=10,SNR=19							
CD2	**Chengdu**	**33.26**	**324**	*e*P		**P**	**17 53 58.1**	**+0.8**
CD2				pP		**pP**	**17 54 11.6**	**+4.2**
CD2				sP		sP	17 54 18.0	+6.4
CD2				PP		**PP**	**17 55 11.6**	**-1.3**
CD2				S		**S**	**17 59 13.9**	**-1.4**
CD2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
CD2				pmax	pmax			
	comp=Z,30nm,4.8s							
CD2				LR	LR			
	comp=N,190nm,14.2s							
CD2				LR	LR			
	comp=Z,210nm,10.2s							
HHC	**Hu-ho-hao-te**	**38.11**	**342**	*e*P		**P**	**17 54 38.9**	**+0.1**
HHC				pP		**pP**	**17 54 53.0**	**+4.0**
HHC				sP		sP	17 54 59.9	+6.6
HHC				S		**S**	**18 00 28.4**	**-1.2**
HHC				ScS		**ScS**	**18 04 43.0**	**-5.2**
HHC				pmax	pmax			
	comp=Z,28nm,0.7s							
HHC				pmax	pmax			
	comp=Z,150nm,5.2s							
HHC				LR	LR			
	comp=N,200nm,12.3s							
HHC				LR	LR			
	comp=E,150nm,13.7s							
SHL	**Shillong**	**38.53**	**306**	*e*PKP		**P**	**17 54 44.0**	**+1.3**
STKA	**Stephens Creek**	**39.44**	**159**	*e*P		**P**	**17 54 50.1**	**+0.2**
	comp=E,1.3nm,0.8s							
STKA	**Stephens Creek**	**39.44**	**159**	P		**P**	**17 54 50.2**	**+0.2**
	comp=E,1.8nm,0.6s,baz=98,slow=22,SNR=6.3							
USRK	**Ussuriysk Arra**	**39.61**	**7**	P		**P**	**17 54 51.5**	**+0.3**
	comp=E,2.6nm,0.5s,baz=195,slow=7.7,SNR=10							
MDJ	**Mudanjiang**	**39.79**	**4**	P		**P**	**17 54 52.3**	**-0.4**
MDJ				pmax	pmax			
	comp=Z,10.0nm,0.9s							
MDJ				pmax	pmax			
	comp=Z,48nm,9.5s							
MDJ	**Mudanjiang**	**39.79**	**4**	*e*P		**P**	**17 54 50.3**	**-2.4**
	comp=Z,8.4nm,0.9s							
LSA	**Lhasa**	**41.07**	**311**	*e*P		**P**	**17 55 04.3**	**+0.2**
	comp=Z,3.8nm,0.6s							
TAPN	**Taplejung**	**42.67**	**306**	*e*P		**P**	**17 55 17.6**	**+0.6**
	comp=Z,18nm,0.8s							
ODAN	**Odare**	**42.73**	**305**	*e*P		**P**	**17 55 18.1**	**+0.7**
	comp=Z,24nm,0.8s							
RAMN	**Ramite**	**43.41**	**305**	*e*P		**P**	**17 55 23.8**	**+0.8**
	comp=Z,22nm,0.8s							
GUN	**Gumba**	**44.38**	**306**	*e*P		**P**	**17 55 31.3**	**+0.4**
	comp=Z,41nm,0.7s							
PKI	**Pulchoki**	**44.63**	**305**	*e*P		**P**	**17 55 32.9**	**+0.1**
	comp=Z,15nm,0.9s							
PKIN	**Phulchoki**	**44.64**	**305**	*e*P		**P**	**17 55 32.8**	**-0.1**
	comp=Z,22nm,1.3s							
KKN	**Kakani**	**44.82**	**305**	*e*P		**P**	**17 55 34.5**	**+0.3**
	comp=Z,16nm,0.9s							
DMN	**Daman**	**44.89**	**305**	*e*P		**P**	**17 55 35.1**	**+0.2**
	comp=Z,21nm,1.0s							
ULN	**Ulaanbaatar**	**45.83**	**342**	P		**P**	**17 55 39.5**	**-2.4**
	comp=Z,3.3nm,1.4s							
SONM	**Songino Array**	**46.01**	**342**	P		**P**	**17 55 40.8**	**-2.4**
SONM				PcP		**PcP**	**17 57 19.2**	**-0.2**
SONM	**Songino Array**	**46.01**	**342**	P		**P**	**17 55 40.8**	**-2.4**
	comp=Z,0.3nm,0.6s,baz=131,slow=7.9,SNR=3.1							
SONM				PcP		**PcP**	**17 57 19.2**	**-0.2**
	comp=Z,0.3nm,0.6s,baz=162,slow=5.9,SNR=2.5							
KOLN	**Koldanda**	**46.19**	**304**	*e*P		**P**	**17 55 44.9**	**-0.1**
	comp=Z,35nm,0.7s							
DANN	**Dangsing**	**46.28**	**305**	*e*P		**P**	**17 55 45.5**	**-0.3**
	comp=Z,38nm,0.6s							
PYUN	**Piuthan**	**46.81**	**305**	*e*P		**P**	**17 55 49.9**	**0.0**
	comp=Z,43nm,0.8s							
WMQ	**Urumqi**	**51.34**	**325**	*e*P		**P**	**17 56 25.3**	**+1.1**
WMQ				pP		**pP**	**17 56 39.0**	**+4.3**
WMQ				pmax	pmax			
	comp=Z,6.0nm,0.5s							
WMQ				pmax	pmax			
	comp=Z,55nm,4.8s							
PETK	**Petropavlovsk-**	**54.78**	**23**	P		**P**	**17 56 50.0**	**+0.7**
PETK	**Petropavlovsk-**	**54.78**	**23**	P		**P**	**17 56 50.0**	**+0.7**
	comp=Z,3.8nm,0.6s,baz=191,slow=4.1,SNR=24							
MK31	**Makanchi Array**	**56.17**	**325**	*e*P		**P**	**17 56 58.2**	**-1.2**
MKAR	**Makanchi Array**	**56.17**	**325**	P		**P**	**17 56 58.4**	**-1.1**
MKAR	**Makanchi Array**	**56.17**	**325**	P		**P**	**17 56 58.4**	**-1.1**
	comp=Z,2.0nm,0.6s,baz=123,slow=8.3,SNR=34							
ZALV	**Zalesovo Beam**	**59.23**	**333**	P		**P**	**17 57 18.3**	**-2.5**
ZALV	**Zalesovo Beam**	**59.23**	**333**	P		**P**	**17 57 18.3**	**-2.5**
	comp=Z,0.4nm,0.4s,baz=108,slow=9.3,SNR=2.9							
EKS2	**Erkin-Say**	**59.46**	**318**	P		**P**	**17 57 22.1**	**-0.7**
	comp=Z,2.0nm,0.8s							
KURK	**Kurchatov**	**60.37**	**328**	*e*P		P	17 57 25.2	-3.4
	comp=Z,1.8nm,0.6s							
KKAR	**Karatay Array**	**61.85**	**317**	P		P	17 57 34.7	-4.1
BRVK	**Borovoye**	**66.02**	**327**	P		**P**	**17 58 05.8**	**-0.3**
	comp=Z,5.6nm,1.0s							
ABKAR	**Akbulak array**	**70.76**	**321**	*e*P		**P**	**17 58 33.7**	**-2.2**
	comp=Z,1.2nm,0.6s							
OHAK	**Old Harbor**	**81.03**	**33**	P		**P**	**17 59 34.4**	**+0.1**
	comp=Z,4.1nm,0.7s							
COLD	**Coldfoot**	**83.25**	**23**	*e*P		**P**	**17 59 47.4**	**+1.6**
	comp=Z,4.7nm,1.0s							
MCK	**McKinley**	**83.60**	**26**	P		**P**	**17 59 44.9**	**-2.7**
	comp=Z,4.6nm,0.6s							
ILAR	**Eielson Array**	**84.52**	**25**	P		**P**	**17 59 49.3**	**-2.9**
ILAR	**Eielson Array**	**84.52**	**25**	P		**P**	**17 59 49.3**	**-2.9**
	comp=Z,0.8nm,0.6s,baz=244,slow=6.1,SNR=9.0							
VNDA	**Vanda**	**84.60**	**173**	*e*P		**P**	**17 59 52.0**	**-0.4**
	comp=Z,1.2nm,0.8s							
VNDA	**Vanda**	**84.60**	**173**	P		**P**	**17 59 52.9**	**+0.6**
	comp=Z,0.5nm,0.7s,baz=301,slow=5.9,SNR=2.5							
FINES	**FINESS Array B**	**90.47**	**332**	P		**P**	**18 00 18.1**	**-2.9**
FINES	**FINESS Array B**	**90.47**	**332**	P		**P**	**18 00 18.1**	**-2.9**
	comp=Z,1.6nm,0.9s,baz=40,slow=4.5,SNR=6.5							
YKA	**Yellowknife Ar**	**98.89**	**24**	P		**P**	**18 00 59.2**	**-0.2**
YKA	**Yellowknife Ar**	**98.89**	**24**	P		**P**	**18 00 59.2**	**-0.2**
	comp=Z,0.4nm,0.8s,baz=299,slow=5.4,SNR=4.9							
TXAR	**Lajitas Array**	**121.63**	**51**	PKP		**PKPdf**	**18 06 14.4**	**+0.4**
TXAR	**Lajitas Array**	**121.63**	**51**	PKP		**PKPdf**	**18 06 14.4**	**+0.4**
	comp=Z,0.1nm,0.5s,baz=343,slow=1.2,SNR=2.6							
TORD	**Torodi Ar. Bea**	**121.74**	**289**	PKP		**PKPdf**	**18 06 13.2**	**-1.2**
TORD	**Torodi Ar. Bea**	**121.74**	**289**	PKP		**PKPdf**	**18 06 13.2**	**-1.2**
	comp=Z,0.7nm,0.7s,baz=59,slow=1.4,SNR=5.1							

DJA 19 18:04:08.1±0.6,0°N±8°×12°4E±°, h88km±16km, M4.1/5, mb4.5/1, mBt4.5/1, MLv3.9/5, Mw(mB)3.7/1, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.56**	**300**	P	Pn	18 04 24.2	+1.0
MNI	**Manado**	**1.20**	**18**	P	Pn	18 04 35.5	+5.4
LUWI	**Luwuk**	**2.15**	**232**	P	Pn	18 04 42.0	-0.3
LUWI				S	Sn	18 05 09.9	+1.5
MRSI	**Marisa**	**2.54**	**274**	P	Pn	18 04 46.9	-0.5
TNTI	**Ternate**	**2.94**	**81**	P	Pn	18 04 53.9	+1.2
LBMI	**Labuha**	**3.17**	**107**	P	Pn	18 04 54.6	-1.3
TTSI	**Tana Toraja**	**5.71**	**234**	P	Pn	18 05 29.9	-0.5

WEL 19 18:04:27.2±2.4, 36.76S×177.03E, h257km±18km, ML3.9/7, 1D, Error ellipse: s-maj=10.8km s-min=6.5km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.30**	**129**	PN	Pn	18 05 04.7	-0.1
MXZ				AML	AML	18 05 34.6	
MXZ				AML	AML	18 05 35.1	
URZ	**Urewera**	**1.50**	**178**	PN	Pn	18 05 06.0	-0.2
URZ				AML	AML	18 05 38.5	
URZ				AML	AML	18 05 38.9	
MWZ	**Matawai**	**1.62**	**166**	PN	Pn	18 05 07.5	+0.3
MWZ				AML	AML	18 05 41.8	
MWZ				AML	AML	18 05 42.2	
PUZ	**Puketiti**	**1.64**	**144**	PN	Pn	18 05 07.1	-0.2
PUZ				AML	AML	18 05 39.9	
PUZ				AML	AML	18 05 41.9	
CNGZ	**Carnagh Statio**	**1.96**	**152**	PN	Pn	18 05 10.4	+0.5
KNZ	**Kokohu**	**2.32**	**167**	PN	Pn	18 05 13.2	+0.1
BKZ	**Black Stump Fm**	**2.44**	**190**	PN	Pn	18 05 14.2	-0.2
BKZ				AML	AML	18 07 10.8	
WNVZ	**Wahianoa**	**2.80**	**203**	PN	Pn	18 05 18.6	+0.3
BHHZ	**Black Hill Sta**	**2.83**	**195**	PN	Pn	18 05 18.2	-0.2
BHHZ				SN	S	18 05 58.5	-0.6
MOVZ	**Moawhango**	**2.83**	**200**	PN	Pn	18 05 18.3	-0.1
KAHZ	**Kahuranaki**	**3.04**	**182**	PN	Pn	18 05 20.3	-0.2
PNHZ	**Pukenui**	**3.22**	**191**	PN	Pn	18 05 21.9	-0.6
PXZ	**Pawanui**	**3.27**	**182**	AML	AML	18 05 14.9	
PXZ				PN	Pn	18 05 22.6	-0.4
PXZ				AML	AML	18 06 34.7	
WPHZ	**Waipukurau**	**3.33**	**188**	PN	Pn	18 05 25.0	+1.2
WPHZ				SN	S	18 06 07.7	-0.9
TSZ	**Takapari Road**	**3.40**	**194**	PN	Pn	18 05 23.8	-0.7
DVHZ	**Dannevirke**	**3.60**	**191**	PN	Pn	18 05 25.7	-1.1
BFZ	**Birch Farm**	**3.96**	**189**	PN	Pn	18 05 30.4	-0.5
MRZ	**Mangatainoka R**	**4.06**	**196**	PN	Pn	18 05 30.7	-1.2
MRZ				SN	S	18 06 21.3	-2.2
MRZ				AML	AML	18 06 26.1	
HOWZ	**Holdsworth Sta**	**4.30**	**195**	PN	Pn	18 05 33.6	-1.2
OGWZ	**Otaki Gorge**	**4.31**	**199**	PN	Pn	18 05 33.5	-1.4
MTW	**Mount Morrison**	**4.55**	**195**	PN	Pn	18 05 36.4	-1.4
CAW	**Cannon Point**	**4.61**	**199**	PN	Pn	18 05 36.6	-1.8
TCW	**Tory Channel**	**4.94**	**205**	PN	Pn	18 05 41.2	-1.2
TUWZ	**Tuamarina**	**5.25**	**206**	PN	Pn	18 05 44.7	-1.4
NNZ	**Nelson**	**5.28**	**211**	PN	Pn	18 05 44.7	-1.8
QRZ	**Quartz Range**	**5.37**	**219**	PN	Pn	18 05 46.0	-1.7
THZ	**Tophouse**	**5.93**	**211**	PN	Pn	18 05 53.5	-1.2
KHZ	**Kahutara**	**6.26**	**204**	PN	Pn	18 05 57.3	-1.3
LTZ	**Lake Taylor**	**7.04**	**210**	PN	Pn	18 06 06.7	-1.8

*ISK **19** 18:12:50.3, 38°.96N×24°.65E, h9km, MD3.8*
*DDA **19** 18:12:50.5, 39°.03N×24°.74E, h23km, MD3.4, ML3.9*
*ISCJB **19** 18:12:52.0±0.7, 38°.98N±0°.01×24°.82E±0°.02, h6km±5km, mb3.4/7, Error ellipse: s-maj=2.5km s-min=2.0km az=174.5*
*IDC **19** 18:12:52.3±1.2, 38°.93N×24°.83E, h0km, mb3.4/7, mb1 3.6/12, mb1mx3.5/30, mbtmp3.5/12, ML3.4/5, Error ellipse: s-maj=20.5km s-min=17.2km az=109.0*
*THE **19** 18:12:53.4, 38°.97N×24°.84E, h11km±1km, ML3.7/10, Error ellipse: s-maj=1.2km s-min=0.5km az=98.0*
*CSEM **19** 18:12:53.1±0.1, 38°.96N×24°.81E, h10km, MD3.4, Error ellipse: s-maj=2.1km s-min=1.5km az=166.0*
*ATH **19** 18:12:53.3, 38°.98N×24°.83E, h35km±1km, MD3.4/30, ML3.7*

ISC 19 18:12:53.2±1.1, 38°.96N±0°.02×24°.82E±0°.01, h9km±8km, n260, s0682/308, mb3.5/7, 8C-4D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AOS	**Alonnisos**	**0.76**	**286**	P	Pg	18 13 08.2	+0.3
AOS				S	Sb	18 13 19.5	+0.3
AOS	**Alonnisos**	**0.76**	**286**	*e*PN	Pb	18 13 08.4	-0.3
AOS				*e*SN	Sb	18 13 19.8	+0.6
AOS	**Alonnisos**	**0.76**	**286**	P	Pg	18 13 08.2	+0.3
AOS				S	Sb	18 13 19.5	+0.3
SIGR	**SIGRI**	**0.84**	**72**	P	Pg	18 13 09.3	-0.1
SIGR				S	Sb	18 13 20.9	-0.5
SIGR	**SIGRI**	**0.84**	**72**	P	Pg	18 13 09.3	-0.1
SIGR				S	Sb	18 13 20.9	-0.5
MRMA	**Marmari**	**0.97**	**201**	P	Pb	18 13 12.1	-0.1
MRMA	**Marmari**	**0.97**	**201**	P	Pb	18 13 12.1	-0.1
LIA	**Limnos Island**	**0.98**	**16**	P	Pg	18 13 11.6	-0.4
LIA				S	Sb	18 13 25.0	-0.3
LIA	**Limnos Island**	**0.98**	**16**	*e*PN	Pg	18 13 11.7	-0.3
LIA				*e*SN	Sb	18 13 25.2	-0.1
LIA	**Limnos Island**	**0.98**	**16**	P	Pg	18 13 11.6	-0.4
LIA				S	Sb	18 13 25.0	-0.3
MRKA	**Markates**	**1.00**	**256**	P	Pg	18 13 12.5	+0.1
MRKA	**Markates**	**1.00**	**256**	P	Pg	18 13 12.5	+0.1
SKIA	**Skiathos**	**1.08**	**281**	P	Pg	18 13 13.8	-0.1
SKIA	**Skiathos**	**1.08**	**281**	P	Pg	18 13 13.8	-0.1
CHOS	**Chios island**	**1.12**	**120**	P	Pb	18 13 14.6	-0.2
CHOS				S	Sn	18 13 30.2	-0.5
CHOS	**Chios island**	**1.12**	**120**	*e*PN	Pb	18 13 14.7	-0.1
CHOS				*e*SN	Sb	18 13 30.0	+0.5
CHOS	**Chios island**	**1.12**	**120**	P	Pb	18 13 14.6	-0.2
CHOS				*e*Sn	Sb	18 13 30.0	+0.5
PRK	**Paraskevi**	**1.16**	**75**	P	Pb	18 13 14.5	-1.0
PRK	**Paraskevi**	**1.16**	**75**	*e*PN	Pb	18 13 14.7	-0.8
PRK				*e*SN	Sb	18 13 30.5	-0.1
PRK	**Paraskevi**	**1.16**	**75**	*e*Pn	Pb	18 13 14.7	-0.8
PRK				*e*Sn	Sb	18 13 30.5	-0.1
PTL	**Penteli**	**1.18**	**220**	P	Pb	18 13 14.8	-1.0
PTL	**Penteli**	**1.18**	**220**	*e*PN	Pb	18 13 14.9	-0.9
PTL				*e*SN	Sg	18 13 31.3	0.0
PTL	**Penteli**	**1.18**	**220**	*e*Pn	Pb	18 13 14.9	-0.9
PTL				*e*Sn	Sg	18 13 31.3	0.0
ATHU	**Athens Univers**	**1.29**	**220**	P	Pn	18 13 16.1	-1.3
ATHU	**Athens Univers**	**1.29**	**220**	P	Pn	18 13 16.1	-1.3
NEO	**Neokhori**	**1.29**	**286**	P	Pn	18 13 16.8	-0.7
NEO	**Neokhori**	**1.29**	**286**	*e*PN	Pn	18 13 16.9	-0.6
NEO				*e*SN	Sb	18 13 33.9	-0.5
NEO	**Neokhori**	**1.29**	**286**	*e*Pn	Pn	18 13 16.9	-0.6
NEO				*e*Sn	Sb	18 13 33.9	-0.5
BOZC	**Bozcaada**	**1.30**	**47**	*i* P	Pn	18 13 15.9	-1.6
BOZC				*i* S	Sb	18 13 34.0	-0.5
PAIG	**Paliouri**	**1.31**	**318**	P	Pn	18 13 16.6	-1.1
PAIG				S	Sg	18 13 35.5	+0.1
PAIG	**Paliouri**	**1.31**	**318**	*e*PN	Pn	18 13 16.8	-0.9
PAIG				*e*SN	Sb	18 13 33.8	-1.1
PAIG	**Paliouri**	**1.31**	**318**	*e*Pn	Pn	18 13 16.8	-0.9
PAIG				*e*Sn	Sb	18 13 33.8	-1.1
PAIG				S	Sg	18 13 35.5	+0.1
ATH	**Athens Observa**	**1.32**	**222**	P	Pn	18 13 16.8	-0.9
ATH	**Athens Observa**	**1.32**	**222**	*e*PB	Pn	18 13 16.9	-0.8
ATH				*e*SN	Sb	18 13 34.6	-0.4
ATH	**Athens Observa**	**1.32**	**222**	P	Pn	18 13 16.8	-0.9
ATH				*e*Sn	Sb	18 13 34.6	-0.4
XOR	**Xorichti**	**1.33**	**288**	P	Pn	18 13 16.8	-1.2
XOR				S	Sg	18 13 36.0	-0.1
XOR	**Xorichti**	**1.33**	**288**	P	Pn	18 13 16.8	-1.2
XOR				S	Sg	18 13 36.0	-0.1
ATAL	**Atalanti**	**1.43**	**260**	P	Pn	18 13 18.6	-0.8
ATAL	**Atalanti**	**1.43**	**260**	P	Pn	18 13 18.6	-0.8
EZN	**Ezine**	**1.45**	**53**	*e*PN	Pn	18 13 18.8	-0.8
EZN				*e*SN	Sg	18 13 39.6	-0.1
EZN	**Ezine**	**1.45**	**53**	*e*Pn	Pn	18 13 18.8	-0.8
EZN				*e*Sn	Sg	18 13 39.7	-0.1
AYVA	**Ayvalik**	**1.49**	**76**	*i* P	Pn	18 13 18.5	-1.7
AYVA				*i* S	Sn	18 13 39.0	-0.7
AYVA	**Ayvalik**	**1.49**	**76**	*i* P	Pn	18 13 18.5	-1.7
AYVA				*i* S	Sn	18 13 39.0	-0.7
URLA	**Izmir**	**1.51**	**113**	*i* P	Pn	18 13 20.1	-0.4
URLA				*i* S	Sg	18 13 42.6	+0.8
URLA	**Izmir**	**1.51**	**113**	*i* P	Pn	18 13 20.1	-0.4
URLA				*i* S	Sg	18 13 42.6	+0.8
OUR	**Ouranopolis**	**1.52**	**335**	P	Pn	18 13 19.5	-1.0
OUR				S	Sn	18 13 39.3	-1.1
OUR	**Ouranopolis**	**1.52**	**335**	P	Pn	18 13 19.5	-1.0
OUR				S	Sn	18 13 39.3	-1.1
NAIG	**Nisos Aigina**	**1.59**	**222**	*e*PN	Pn	18 13 20.5	-1.1
NAIG	**Nisos Aigina**	**1.59**	**222**	*e*PN	Pn	18 13 20.5	-1.1
SMTH	**Samothraki Isl**	**1.60**	**20**	*e*PN	Pn	18 13 20.1	-1.6
SMTH				*e*SN	Sn	18 13 41.0	-1.6
SMTH	**Samothraki Isl**	**1.60**	**20**	*e*Pn	Pn	18 13 20.1	-1.6
SMTH				*e*Sn	Sn	18 13 41.0	-1.6
AXAR	**Agios Charalam**	**1.70**	**264**	P	Pn	18 13 22.7	-0.4
AXAR	**Agios Charalam**	**1.70**	**264**	P	Pn	18 13 22.7	-0.4
LTK	**Loutraki**	**1.73**	**238**	P	Pn	18 13 22.6	-0.9
LTK	**Loutraki**	**1.73**	**238**	P	Pn	18 13 22.6	-0.9
PLG	**Polygyros**	**1.77**	**323**	P	Pn	18 13 23.2	-0.8
PLG	**Polygyros**	**1.77**	**323**	*e*PN	Pn	18 13 23.0	-1.0
PLG	**Polygyros**	**1.77**	**323**	P	Pn	18 13 23.2	-0.8
BLCB	**Balcova**	**1.83**	**108**	*e*PN	Pn	18 13 24.6	-0.2
BLCB				*e*SN	Sb	18 13 49.4	-0.4
BLCB	**Balcova**	**1.83**	**108**	*e*Pn	Pn	18 13 24.6	-0.2
BLCB				*e*Sn	Sb	18 13 49.4	-0.4
DSF	**Desfina**	**1.88**	**254**	P	Pn	18 13 24.9	-0.7
DSF	**Desfina**	**1.88**	**254**	P	Pn	18 13 24.9	-0.7
DID	**Didima**	**1.92**	**221**	P	Pn	18 13 25.2	-0.9
DID	**Didima**	**1.92**	**221**	P	Pn	18 13 25.2	-0.9
GELI	**Tayfur-Gelibol**	**1.92**	**41**	*e*PN	Pn	18 13 24.8	-1.2
GELI	**Tayfur-Gelibol**	**1.92**	**41**	*e*Pn	Pn	18 13 24.8	-1.2
AGG	**Agios Georgios**	**1.94**	**273**	P	Pn	18 13 26.4	0.0
AGG	**Agios Georgios**	**1.94**	**273**	*e*PN	Pn	18 13 26.2	-0.2
AGG	**Agios Georgios**	**1.94**	**273**	*e*Pn	Pn	18 13 26.2	-0.2
DIDY	**Didyma**	**1.95**	**221**	P	Pn	18 13 25.6	-1.0
DIDY	**Didyma**	**1.95**	**221**	P	Pn	18 13 25.6	-1.0
APE	**Apeiranthos**	**1.97**	**163**	*e*PN	Pn	18 13 25.6	-1.2
APE	**Apeiranthos**	**1.97**	**163**	P	Pn	18 13 25.4	-1.4
APE				S	Sn	18 13 51.2	-0.5
APE	**Apeiranthos**	**1.97**	**163**	*e*PN	Pn	18 13 25.3	-1.5
APE	**Apeiranthos**	**1.97**	**163**	*i* P	Pn	18 13 25.4	-1.8
APE	**Apeiranthos**	**1.97**	**163**	*e*Pn	Pn	18 13 25.6	-1.2
APE				S	Sn	18 13 51.2	-0.5
IZM	**Izmir**	**1.99**	**106**	*e*PN	Pn	18 13 26.8	-0.3
IZM	**Izmir**	**1.99**	**106**	*e*Pn	Pn	18 13 26.8	-0.3
SMG	**Samos**	**2.02**	**128**	*e*PN	Pn	18 13 26.9	-0.5
SMG	**Samos**	**2.02**	**128**	*e*Pn	Pn	18 13 26.9	-0.5
ENEZ	**Enez**	**2.05**	**30**	*e*PN	Pn	18 13 26.4	-1.4
ENEZ	**Enez**	**2.05**	**30**	*e*Pn	Pn	18 13 26.4	-1.4
KAVA	**Kavala**	**2.05**	**353**	P	Pn	18 13 26.6	-1.2
KAVA				S	Sn	18 13 52.9	-0.6
KAVA	**Kavala**	**2.05**	**353**	P	Pn	18 13 26.6	-1.2
KAVA				S	Sn	18 13 52.9	-0.6
LPK	**Lapseki**	**2.05**	**46**	*e*PN	Pn	18 13 26.9	-1.0
LPK	**Lapseki**	**2.05**	**46**	*e*Pn	Pn	18 13 26.9	-1.0
HORT	**Hortiatis**	**2.11**	**321**	P	Pn	18 13 28.4	-0.3
HORT	**Hortiatis**	**2.11**	**321**	P	Pn	18 13 28.4	-0.3
LIT	**Litokhoron**	**2.13**	**303**	P	Pn	18 13 28.7	-0.3
LIT	**Litokhoron**	**2.13**	**303**	*e*PN	Pn	18 13 28.8	-0.3
LIT	**Litokhoron**	**2.13**	**303**	P	Pn	18 13 28.7	-0.3
ERIK	**Erikli-Kesan**	**2.15**	**37**	*e*PN	Pn	18 13 28.2	-1.0
ERIK	**Erikli-Kesan**	**2.15**	**37**	*e*Pn	Pn	18 13 28.2	-1.0
ALN	**Alexandroupoli**	**2.15**	**26**	P	Pn	18 13 28.0	-1.2
ALN				S	Sn	18 13 56.1	+0.1
ALN	**Alexandroupoli**	**2.15**	**26**	*e*PN	Pn	18 13 28.2	-1.0
ALN	**Alexandroupoli**	**2.15**	**26**	*e*Pn	Pn	18 13 28.2	-1.0
ALN				S	Sn	18 13 56.1	+0.1
SOH	**Sokhos**	**2.17**	**329**	P	Pn	18 13 29.4	-0.2
SOH	**Sokhos**	**2.17**	**329**	*e*PN	Pn	18 13 29.5	-0.2
SOH	**Sokhos**	**2.17**	**329**	P	Pn	18 13 29.4	-0.2
KALE	**Kalithea**	**2.18**	**256**	P	Pn	18 13 29.4	-0.3
KALE	**Kalithea**	**2.18**	**256**	P	Pn	18 13 29.4	-0.3
GUR	**Goura**	**2.20**	**243**	P	Pn	18 13 29.6	-0.4
GUR	**Goura**	**2.20**	**243**	P	Pn	18 13 29.6	-0.4
TRIZ	**Trizonia**	**2.23**	**255**	P	Pn	18 13 30.1	-0.3
TRIZ	**Trizonia**	**2.23**	**255**	P	Pn	18 13 30.1	-0.3
RDO	**Rodhopi**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CTKS	Kestanelik-??a	3.62	50	ePn	Pn	18 13 49.7	+0.2
TVSB	Tavsanli	3.64	81	ePN	Pn	18 13 50.5	+0.7
TVSB	Tavsanli	3.64	81	ePn	Pn	18 13 50.5	+0.7
CTYL	Yal??k??y-??at	3.65	45	ePN	Pn	18 13 50.0	+0.2
CTYL	Yal??k??y-??at	3.65	45	ePn	Pn	18 13 50.1	+0.2
DALY	Dalyan (Mu˜la	3.71	124	ePN	Pn	18 13 51.1	+0.4
DALY	Dalyan (Mu˜la	3.71	124	ePn	Pn	18 13 51.1	+0.4
KHL	Karahalli	3.73	98	ePN	Pn	18 13 51.9	+0.8
KHL	Karahalli	3.73	98	ePn	Pn	18 13 51.9	+0.8
BGKT	Bogazkoy	3.75	53	ePN	Pn	18 13 51.9	+0.6
BGKT	Bogazkoy	3.75	53	ePn	Pn	18 13 51.9	+0.6
VTS	Vitosha	3.83	342	⇑iP	Pn	18 13 53.2	+0.7
VTS	Vitosha	3.83	342	S	Sn	18 14 39.7	+2.1
IZI	Iznik	3.84	68	ePN	Pn	18 13 53.3	+0.7
IZI	Iznik	3.84	68	ePn	Pn	18 13 53.3	+0.7
ISK	Istanbul-Kandi	3.87	56	ePN	Pn	18 13 53.6	+0.7
ISK	Istanbul-Kandi	3.87	56	ePn	Pn	18 13 53.6	+0.7
KLYT	Kilyos	3.96	53	ePN	Pn	18 13 54.8	+0.7
KLYT	Kilyos	3.96	53	ePn	Pn	18 13 54.8	+0.7
KEK	Kerkira	3.97	282	ePN	Pn	18 13 55.0	+0.8
KEK	Kerkira	3.97	282	ePn	Pn	18 13 55.0	+0.8
ADVT	Abdulvahap	4.07	67	ePN	Pn	18 13 56.5	+0.9
ADVT	Abdulvahap	4.07	67	ePn	Pn	18 13 56.5	+0.9
CAVI	Cavuskoy	4.07	71	ePN	Pn	18 13 56.3	+0.6
CAVI	Cavuskoy	4.07	71	ePn	Pn	18 13 56.3	+0.6
ALT	Altintas	4.12	87	ePN	Pn	18 13 57.2	+0.8
ALT	Altintas	4.12	87	ePn	Pn	18 13 57.2	+0.8
SILT	Sile	4.30	58	ePN	Pn	18 13 59.5	+0.8
SILT	Sile	4.30	58	ePn	Pn	18 13 59.5	+0.8
BARS	Barje	4.47	330	⇑iPn	Pn	18 14 01.7	+0.5
BARS	Barje	4.47	330	⇑iPn	Pn	18 14 01.7	+0.5
ZAPS	Zavoj	4.61	340	ePn	Pn	18 14 04.4	+1.2
ZAPS	Zavoj	4.61	340	ePn	Pn	18 14 04.6	+1.4
GULT	Gulveren	4.63	70	ePN	Pn	18 14 04.9	+1.5
GULT	Gulveren	4.63	70	ePn	Pn	18 14 04.9	+1.5
ESKT	Eskisehir	4.71	81	ePN	Pn	18 14 05.4	+0.8
ESKT	Eskisehir	4.71	81	ePn	Pn	18 14 05.4	+0.8
MDUB	Mudurnu	5.14	71	ePN	Pn	18 14 11.9	+1.5
MDUB	Mudurnu	5.14	71	ePn	Pn	18 14 11.9	+1.5
GRUS	Gruza	5.81	329	ePn	Pn	18 14 19.6	+0.1
GRUS	Gruza	5.81	329	ePn	Pn	18 14 19.6	+0.1
TIRR	Tirgusor	6.11	25	⇑iP	Pn	18 14 22.9	-0.8
DIVS	Divibare	6.28	326	ePn	Pn	18 14 26.0	-0.1
DIVS	Divibare	6.28	326	ePn	Pn	18 14 26.0	-0.1
BBLS	Lazići	6.37	322	ePn	Pn	18 14 24.6	-2.7
BBLS	Lazići	6.37	322	ePn	Pn	18 14 24.6	-2.7
VOIR		6.47	1	⇓iP	Pn	18 14 29.0	+0.3
MLR	Muntele Rosu	6.58	7	⇓iP	Pn	18 14 31.2	+1.0
MLR	Muntele Rosu	6.58	7	Pn	Pn	18 14 31.0	+0.8
	0.1nm,0.3s,baz=184,slow=5.8,SNR=14						
MLR				Lg	Lg	18 16 23.1	
	0.1nm,0.3s,baz=140,slow=17,SNR=1.9						
BRTR	Keskin Array B	6.88	81	Pn	Pn	18 14 35.1	+0.7
	0.5nm,0.3s,baz=260,slow=13,SNR=10						
PLOR	Plostina	7.02	11	⇑iP	Pn	18 14 36.0	-0.1
VRI	Vrincioaia	7.04	11	⇑iP	Pn	18 14 36.4	-0.1
BZS	Buzias	7.06	341	⇓iP	Pn	18 14 36.6	-0.1
TESR	Tescani	7.66	9	⇑iP	Pn	18 14 45.5	+0.5
BURAR	Bucovina Array	8.65	2	⇑iP	Pn	18 15 00.6	+2.0
MMAI	Mount Meron Ar	10.42	121	Pn	Pn	18 15 21.8	-1.1
	1.1nm,0.3s,baz=301,slow=12,SNR=10						
AKASG	Malin Array Be	12.14	13	Pn	Pn	18 15 45.7	-0.6
	0.5nm,0.3s,baz=199,slow=12,SNR=3.5						
DAVOX	Davos/Dischmat	13.45	310	Pn	Pn	18 16 03.0	-1.3
	0.2nm,0.3s,baz=167,slow=14,SNR=3.0						
ESDC	Sonseca Array	22.25	281	P	P	18 17 51.6	+1.2
	0.3nm,0.3s,baz=69,slow=9.7,SNR=5.1						
HFS	Hagfors	22.33	345	P	P	18 17 52.1	+1.1
	2.9nm,0.9s,baz=97,slow=12,SNR=4.4						
FINES	FINESS Array B	22.52	2	P	P	18 17 55.4	+2.4
	1.0nm,0.7s,baz=118,slow=11,SNR=4.0						
NB2	NORSAR Subarra	23.67	343	P	P	18 18 04.9	+0.1
	comp=Z,2.2nm,1.0s,baz=153,slow=9.3						
NB2	NORSAR Subarra	23.67	343	P	P	18 18 04.9	+0.1
	comp=Z,2.2nm,1.0s,baz=153,slow=9.1,SNR=6.4						
NOA	NORSAR Array B	23.67	343	P	P	18 18 04.0	-0.8
	comp=Z,1.4nm,0.6s,baz=149,slow=9.2,SNR=6.5						
TORD	Torodi Ar. Bea	32.87	225	P	P	18 19 27.8	+0.3
	comp=Z,0.3nm,0.4s,baz=42,slow=8.8,SNR=5.2						
MKAR	Makanchi Array	42.00	60	P	P	18 20 45.5	+0.8
	comp=Z,0.2nm,0.7s,baz=276,slow=1.3,SNR=3.2						
ZALV	Zalesovo Beam	42.64	49	P	P	18 20 50.0	+0.3
	comp=Z,0.3nm,0.3s,baz=279,slow=11,SNR=3.1						

*ISCJB **19** 18:13:19.8±0.3, 63.°92N±0.°02×22.°04W±0.°04, h5km±2km, mb4.1/45, MS3.5/14, Error ellipse: s-maj=3.3km s-min=2.6km az=5.8*

*REY **19** 18:13:19.9, 63.°88N×22.°09W, h4km, ML3.8, ML3.2*

*CSEM **19** 18:13:20.3±0.1, 63.°93N×21.°97W, h2km, mb4.2/21, Ms3.2, Error ellipse: s-maj=4.1km s-min=3.4km az=17.0*

*IDC **19** 18:13:20.9±0.7, 63.°96N×22.°09W, h0km, mb3.7/15, mb1 3.9/16, mb1mx3.8/32, mbtmp3.7/16, ML4.0/1, MS3.5/17, Ms1 3.5/17, ms1mx3.3/43, Error ellipse: s-maj=13.1km s-min=9.5km az=103.0*

*NEIC **19** 18:13:21.3±0.3, 63.°92N×22.°09W, h5km, mb4.5/26, ML4.2(REY), Error ellipse: s-maj=7.0km s-min=4.8km az=211.0*

ISC 19 18:13:20.5±0.8**, 63.°90N**±0.°02×**22.°04W**±0.°02**, h3**km±5km**, n191, σ1§27**/185**, mb4.2**/45**, MS3.5**/14**, Iceland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRI	Krysuvik	0.03	217	P	Pg	18 13 20.9	-0.3
IKRI	Krysuvik	0.03	217	P	Pg	18 13 20.8	-0.3
IKRI				S	Sg	18 13 21.6	-0.1
IKAS	Kald??rsel	0.15	34	P	Pg	18 13 23.8	+0.4
IKAS				S	Sg	18 13 27.5	+2.1
IKAS	Kald??rsel	0.15	34	P	Pg	18 13 23.6	+0.2
IKAS				S	Sg	18 13 27.5	+2.1
IVOS	Vogsosar	0.15	107	P	Pg	18 13 23.8	+0.2
IVOS				S	Sg	18 13 27.0	+1.4
IVOS	Vogsosar	0.15	107	P	Pg	18 13 23.7	+0.2
IVOS				S	Sg	18 13 27.0	+1.4
IVOG	Vogar	0.17	294	P	Pg	18 13 23.4	-0.4
IVOG	Vogar	0.17	294	P	Pg	18 13 23.4	-0.4
IVOG				S	Sg	18 13 25.7	-0.4
IGRV	Grindav??k	0.19	257	P	Pg	18 13 23.4	-0.8
IGRV	Grindav??k	0.19	257	P	Pg	18 13 23.4	-0.8
ISAN	Sandskeio	0.26	53	P	Pg	18 13 25.4	-0.1
ISAN	Sandskeio	0.26	53	P	Pg	18 13 25.4	-0.1
INYL	Nylenda	0.32	284	P	Pg	18 13 25.6	-1.0
INYL				S	Sg	18 13 30.0	-0.7
IBJA	Bjarnastaoir	0.33	82	P	Pg	18 13 26.7	-0.1
IBJA				S	Sb	18 13 32.2	-2.5
IKUD	Kuludalsa	0.43	10	P	Pg	18 13 27.9	-0.8
IKUD				S	Sg	18 13 34.5	+0.2
IKRO	Krokur	0.45	63	P	Pg	18 13 28.6	-0.6
IHEI	Heioarbar	0.46	49	P	Pg	18 13 28.8	-0.6
IHEI				S	Sb	18 13 36.8	-1.8
ISOL	Solvholt	0.48	86	P	Pg	18 13 29.1	-0.7
ISOL				S	Sg	18 13 36.6	+0.5
IASM	Asmuli	0.63	95	P	Pg	18 13 31.6	-1.0
IASM				S	Sg	18 13 40.7	-0.1
ISAU	Saurbar	0.72	82	P	Pg	18 13 33.2	-1.1
ISAU				S	Sg	18 13 44.0	+0.3
IGYG	Gygjarholskot	0.89	64	P	Pg	18 13 36.1	-1.4
IGYG				S	Sb	18 13 49.2	-1.6
BORG	Borgarnes	0.91	20	eP	Pg	18 13 36.0	-1.9
BORG				eS	Sg	18 13 49.1	-0.5
BORG				Lg	Lg	18 13 49.2	
BORG				Rg	Rg	18 13 58.0	
BORG	Borgarnes	0.91	20	Pg	Pg	18 13 36.0	-1.9
	312nm,0.3s,baz=287,slow=15,SNR=576						
BORG				Lg	Lg	18 13 49.2	
	890nm,0.3s,baz=276,slow=22,SNR=26						
BORG				Rg	Rg	18 13 58.0	
	4µm,0.7s,baz=121,slow=9.5,SNR=4.2						
BORG	Borgarnes	0.91	20	eP	Pg	18 13 36.0	-1.9
BORG				eS	Sg	18 13 49.1	-0.5
IVES	Vestmannaeyjar	0.91	120	P	Pg	18 13 36.1	-1.7
IVES				S	Sg	18 13 48.2	-1.4
IASB	`sbjarnarst	0.91	20	P	Pg	18 13 35.9	-2.0
IASB				S	Sg	18 13 49.0	-0.6
IHAU	Haukadalur	0.92	85	P	Pg	18 13 36.5	-1.6
IHAU				S	Sg	18 13 49.5	-0.5
IMID	Miomork	0.99	103	P	Pg	18 13 37.3	-2.1
IMID				S	Sg	18 13 51.2	-1.0
IGOD	Go??abunga	1.23	100	P	Pg	18 13 41.4	-2.7
IGOD				S	Sg	18 13 58.8	-1.2
IVAT	Vatnsfell	1.40	77	P	Pn	18 13 44.5	-2.5
IVAT				S	Sb	18 14 03.3	-2.4
IHVE	Hveravellir	1.45	47	P	Pn	18 13 45.0	-2.7
ISNB	Snabyli	1.52	95	P	Pn	18 13 46.0	-2.6
ISKR	Skrokkalda	1.73	66	P	Pn	18 13 49.8	-1.8
IKAL	Kalfafell	1.92	87	P	Pn	18 13 52.1	-2.0
IKAL				S	Sn	18 14 17.7	-1.1
IGRF	Grimsfjall	2.15	74	P	Pn	18 13 56.7	-0.8
IHRN	Hraun	2.36	19	P	Pn	18 13 59.2	-1.0
IHRN				S	Sn	18 14 29.5	-0.2
IFAG	Fagurholsmyri	2.38	88	P	Pn	18 13 59.3	-1.1
IFAG				S	Sn	18 14 29.8	-0.3
ISVA	Svartarkot	2.52	53	P	Pn	18 14 02.4	+0.1
IHLA	Hella	2.58	36	P	Pn	18 14 02.1	-1.0
ISIG	Siglufjorour	2.60	29	P	Pn	18 14 01.9	-1.6
IASK	Askja	2.60	61	P	Pn	18 14 03.0	-0.6
IKRE	Kreppuhraun	2.62	68	P	Pn	18 14 02.6	-1.1
IMKO	Mokollar	2.70	64	P	Pn	18 14 04.4	-0.4
SCO	Scoresbysund	6.62	0	iP	Pn	18 15 00.1	+1.6
SCO				iS	Sb	18 16 29.4	-6.0
JMIC	Jan Mayen	8.79	30	LR	LR	18 17 57.1	
	comp=Z,175nm,19.3s,baz=233,slow=32						
SUMG	Summit	10.58	332	Pn	Pn	18 15 54.0	+0.9
	4.1nm,0.8s						
SUMG	Summit	10.58	332	Pn	Pn	18 15 54.0	+0.9
	4.1nm,0.8s						
ESK	Eskdalemuir	12.79	124	Pn	Pn	18 16 21.8	-1.3
	75nm,1.7s						
ESK	Eskdalemuir	12.79	124	Pn	Pn	18 16 21.8	-1.3
	75nm,1.7s						
EKA	Eskdalemuir Ar	12.79	123	Pn	Pn	18 16 24.2	+1.1
EKA	Eskdalemuir Ar	12.79	123	Pn	Pn	18 16 24.2	+1.1
	baz=323,slow=12,SNR=6.7						
EKA	Eskdalemuir Ar	12.79	123	Pn	Pn	18 16 24.2	+1.1
NOA	NORSAR Array B	15.53	85	LR	LR	18 22 46.1	
	comp=Z,86nm,18.7s,baz=305,slow=36						
ROSF	Rostrenen	18.66	138	eP	Pn	18 17 38.5	-1.0
	60nm,1.2s						
ROSF	Rostrenen	18.66	138	eP	Pn	18 17 38.5	-1.0
	60nm,1.2s						
ROSF	Rostrenen	18.66	138	eP	Pn	18 17 38.5	-1.0
	30nm,1.2s						
SGMF	Saint Gilles	18.94	137	eP	Pn	18 17 43.1	+0.1
	63nm,1.3s						
SGMF	Saint Gilles	18.94	137	eP	Pn	18 17 43.1	+0.1
	63nm,1.3s						
ARCES	ARCESS Array B	19.17	52	LR	LR	18 23 44.9	
	comp=Z,187nm,19.6s,baz=73,slow=33						
LDF	La Druitiere	19.42	132	eP	Pn	18 17 48.1	-0.6
	24nm,1.1s						
LDF	La Druitiere	19.42	132	eP	Pn	18 17 48.1	-0.6
	24nm,1.1s						
LDF	La Druitiere	19.42	132	eP	Pn	18 17 48.1	-0.6
	12nm,1.1s						
BAIF	Baives	19.71	122	eP	Pn	18 17 54.1	+1.9
	29nm,1.0s						
BAIF	Baives	19.71	122	eP	Pn	18 17 54.1	+1.9
	29nm,1.0s						
GIVF	Givet	19.91	121	eP	Pn	18 17 55.6	+1.1
	18nm,1.0s						
GIVF	Givet	19.91	121	eP	Pn	18 17 55.6	+1.1
	18nm,1.0s						
FRB	Frobisher Bay	20.17	291	P	Pn	18 17 56.0	-1.5
FRB	Frobisher Bay	20.17	291	P	Pn	18 17 56.0	-1.5
	1.8nm,0.5s,baz=76,slow=15,SNR=3.1						
FRB	Frobisher Bay	20.17	291	P	Pn	18 17 56.0	-1.5
TNS	Taunus Mts	21.22	116	eP	P	18 18 10.8	+3.6
	comp=Z,28nm,1.4s						
MEZF	Maizieres J'vi	21.31	124	eP	P	18 18 09.2	+1.1
	comp=Z,15nm,0.6s						
MEZF	Maizieres J'vi	21.31	124	eP	P	18 18 09.2	+1.1
	comp=Z,15nm,0.6s						
MEZF	Maizieres J'vi	21.31	124	eP	P	18 18 09.2	+1.1
	comp=Z,7.4nm,0.6s						
PAGF	Fort de Pagny	21.51	122	eP	P	18 18 11.4	+1.1
	comp=Z,3.4nm,0.8s						
PAGF	Fort de Pagny	21.51	122	eP	P	18 18 11.4	+1.1
	comp=Z,3.4nm,0.8s						
PAGF	Fort de Pagny	21.51	122	eP	P	18 18 11.4	+1.1
	comp=Z,1.7nm,0.8s						
SFTF	Sexfontaines	21.55	124	eP	P	18 18 11.4	+0.7
	comp=Z,30nm,0.9s						
SFTF	Sexfontaines	21.55	124	eP	P	18 18 11.4	+0.7
	comp=Z,30nm,0.9s						
SFTF	Sexfontaines	21.55	124	eP	P	18 18 11.4	+0.7
	comp=Z,15nm,0.9s						
FINES	FINESS Array B	21.81	74	P	P	18 18 14.8	+1.4
FINES	FINESS Array B	21.81	74	P	P	18 18 14.8	+1.4
	comp=Z,2.0nm,0.7s,baz=350,slow=7.7,SNR=4.5						
FINES				LR	LR	18 26 18.3	
	comp=Z,110nm,18.2s,baz=235,slow=36						
FINES	FINESS Array B	21.81	74	P	P	18 18 14.8	+1.4
NEUB	Neuenburg	21.82	110	eP	P	18 18 15.7	+2.1
	comp=Z,22nm,1.2s						
LOR	Lormes	21.92	127	eP	P	18 18 14.9	+0.2
	comp=Z,21nm,0.9s						
LOR				eR			
	comp=Z,106nm,17.0s						
LOR	Lormes	21.92	127	eP	P	18 18 14.9	+0.2
	comp=Z,21nm,0.9s						
LOR	Lormes	21.92	127	eP	P	18 18 14.9	+0.2
	comp=Z,11nm,0.9s						
SSF	Saint Saulge	21.97	128	eP	P	18 18 15.3	0.0
	comp=Z,18nm,1.0s						
SSF	Saint Saulge	21.97	128	eP	P	18 18 15.3	0.0
	comp=Z,18nm,1.0s						
SSF	Saint Saulge	21.97	128	eP	P	18 18 15.3	0.0
	comp=Z,8.9nm,1.0s						
AVF	Avril sur Loir	22.15	129	eP	P	18 18 16.9	-0.3
	comp=Z,8.7nm,0.8s						
AVF	Avril sur Loir	22.15	129	eP	P	18 18 16.9	-0.3
	comp=Z,8.7nm,0.8s						
AVF	Avril sur Loir	22.15	129	eP	P	18 18 16.9	-0.3
	comp=Z,4.3nm,0.8s						
HAU	Haudompre	22.20	122	eP	P	18 18 18.7	+0.9
	comp=Z,51nm,1.3s						
HAU				eR			
	comp=Z,156nm,22.5s						
HAU	Haudompre	22.20	122	eP	P	18 18 18.7	+0.9
	comp=Z,51nm,1.3s						
HAU	Haudompre	22.20	122	eP	P	18 18 18.7	+0.9
	comp=Z,26nm,1.3s						
TCF	Toulx Ste Croi	22.20	131	eP	P	18 18 18.0	+0.2
	comp=Z,44nm,1.2s						
TCF	Toulx Ste Croi	22.20	131	eP	P	18 18 18.0	+0.2
	comp=Z,44nm,1.2s						
TCF	Toulx Ste Croi	22.20	131	eP	P	18 18 18.0	+0.2
	comp=Z,22nm,1.2s						
CDF	Champ du Feu	22.22	120	eP	P	18 18 19.2	+1.2
	comp=Z,35nm,1.3s						
CDF	Champ du Feu	22.22	120	eP	P	18 18 19.2	+1.2
	comp=Z,35nm,1.3s						
CDF	Champ du Feu	22.22	120	eP	P	18 18 19.2	+1.2
	comp=Z,18nm,1.3s						
CLL	Collm	22.26	108	e(P)	P	18 18 22.0	+3.7
ECH	Echery	22.33	121	eP	P	18 18 20.6	+1.4
	comp=Z,15nm,1.1s						
ECH	Echery	22.33	121	eP	P	18 18 20.6	+1.4
	comp=Z,15nm,1.1s						
SMF	Signal de Mont	22.45	128	eP	P	18 18 20.3	-0.1
	comp=Z,26nm,1.1s						
SMF	Signal de Mont	22.45	128	eP	P	18 18 20.3	-0.1
	comp=Z,26nm,1.1s						
SMF	Signal de Mont	22.45	128	eP	P	18 18 20.3	-0.1
	comp=Z,13nm,1.1s						
PLN	Plauen	22.52	110	eP	P	18 18 21.3	+0.1
	comp=Z,48nm,1.3s						
HINF	Hinteralfeld	22.55	122	eP	P	18 18 22.1	+0.6
	comp=Z,14nm,1.0s						
HINF	Hinteralfeld	22.55	122	eP	P	18 18 22.1	+0.6
	comp=Z,14nm,1.0s						
HINF	Hinteralfeld	22.55	122	eP	P	18 18 22.1	+0.6
	comp=Z,6.9nm,1.0s						
BFO	Black Forest	22.69	119	eP	P	18 18 24.2	+1.2
	comp=Z,10.0nm,1.1s						
BFO	Black Forest	22.69	119	eP	P	18 18 22.3	-0.7
	comp=Z,10nm,1.1s						
BFO	Black Forest	22.69	119	eP	P	18 18 22.3	-0.7
	comp=Z,10nm,1.1s						
GUNZ	Gunzen	22.69	110	eP	P	18 18 23.0	0.0
	comp=Z,4.0nm,0.8s						
TANN	Tannenbergstha	22.70	110	eP	P	18 18 24.9	+1.8
	comp=Z,12nm,1.2s						
GRF	Grafenberg Arr	22.75	113	eP	P	18 18 26.4	+2.8
	comp=Z,11nm,0.9s						
WERN	Wernitzgruen	22.77	110	eP	P	18 18 27.1	+3.3
	comp=Z,9.0nm,1.4s						
BRG	Berggiesshubel	22.98	108	eP	P	18 18 27.6	+1.7
	comp=Z,5.0nm,1.0s						
BRG	Berggiesshubel	22.98	108	eP	P	18 18 27.5	+1.6
	comp=Z,6.0nm,1.1s						
ROTZ	Rotzenmuhle	23.10	112	eP	P	18 18 30.5	+3.3
	comp=Z,18nm,1.6s						
CABF	La Chapelle	23.28	125	eP	P	18 18 30.5	+1.3
	comp=Z,17nm,1.0s						
CABF	La Chapelle	23.28	125	eP	P	18 18 30.5	+1.3
	comp=Z,17nm,1.0s						
CABF	La Chapelle	23.28	125	eP	P	18 18 30.5	+1.3
	comp=Z,8.3nm,1.0s						
WET	Wettzell	23.86	112	eP	P	18 18 35.6	+0.8
	comp=Z,3.0nm,0.9s						
SCHQ	Schefferville	24.06	269	eP	P	18 18 36.3	-0.4
	comp=Z,9.5nm,1.2s						
SCHQ	Schefferville	24.06	269	P	P	18 18 36.7	0.0
	comp=Z,1.6nm,0.5s,baz=48,slow=7.6,SNR=5.0						
SCHQ				LR	LR	18 26 08.4	
	comp=Z,60nm,20.1s,baz=189,slow=32						
SCHQ	Schefferville	24.06	269	eP	P	18 18 36.3	-0.4
	comp=Z,9.5nm,1.2s						
KHC	Kasperske Hory	24.16	111	eP	P	18 18 38.0	+0.4
GERES	GERESS Array B	24.43	111	P	P	18 18 41.2	+1.0
GERES	GERESS Array B	24.43	111	P	P	18 18 41.2	+1.0
	comp=Z,0.2nm,0.4s,baz=334,slow=8.7,SNR=3.2						
GERES				LR	LR	18 28 20.9	
	comp=Z,75nm,18.2s,baz=300,slow=37						
GERES	GERESS Array B	24.43	111	P	P	18 18 41.2	+1.0
DAVOX	Davos/Dischmat	24.56	119	LR	LR	18 27 41.1	
	comp=Z,114nm,21.7s,baz=264,slow=35						
ORIF	Oris-en-Rattie	24.66	127	eP	P	18 18 42.9	+0.6
	comp=Z,13nm,1.0s						
ORIF				eR			
	comp=Z,140nm,19.8s						
ORIF	Oris-en-Rattie	24.66	127	eP	P	18 18 42.9	+0.6
	comp=Z,13nm,1.0s						
ORIF	Oris-en-Rattie	24.66	127	eP	P	18 18 42.9	+0.6
	comp=Z,6.7nm,1.0s						
RJOB	Jochberg	24.94	114	eP	P	18 18 46.0	+1.3
	comp=Z,8.0nm,0.9s						
MBDF	Montbardon	25.14	126	eP	P	18 18 48.9	+2.2
MBDF	Montbardon	25.14	126	eP	P	18 18 48.9	+2.2
MBDF	Montbardon	25.14	126	eP	P	18 18 48.9	+2.2
VRAC	Vranov	25.28	107	LR	LR	18 28 43.1	
	comp=Z,70nm,19.4s,baz=131,slow=36						
MORC	Moravsky Berou	25.33	105	eP	P	18 18 48.2	-0.1
	comp=Z,5.5nm,1.1s						
MORC	Moravsky Berou	25.33	105	eP	P	18 18 48.2	-0.1
	comp=Z,5.5nm,1.1s						
RES	Resolute Bay	25.94	325	LR	LR	18 29 11.3	
	comp=Z,106nm,18.5s,baz=195,slow=37						
ESDC	Sonseca Array	26.51	148	P	P	18 18 59.1	0.0
ESDC	Sonseca Array	26.51	148	P	P	18 18 59.1	0.0
	comp=Z,0.8nm,0.5s,baz=349,slow=7.8,SNR=4.6						
ESDC				LR	LR	18 29 14.7	
	comp=Z,135nm,18.0s,baz=345,slow=36						
ESDC	Sonseca Array	26.51	148	P	P	18 18 59.1	0.0
ESLA	Sonseca Array	26.51	148	P	P	18 19 01.9	+2.8
PAB	San Pablo	26.55	148	P	P	18 19 00.7	+1.3
	comp=Z,5.2nm,1.0s						
PAB	San Pablo	26.55	148	P	P	18 19 00.7	+1.3
	comp=Z,5.2nm,1.0s						
CRVS	Cervenica-Dubn	27.67	102	eP	P	18 19 12.0	+2.6
CUC	Castrocucco	32.60	119	P	P	18 19 51.0	-2.1
	comp=Z,7.3nm,1.1s						
CUC	Castrocucco	32.60	119	P	P	18 19 51.0	-2.1
	comp=Z,7.3nm,1.1s						
MDT	Midelt	32.95	152	P	P	18 19 58.4	+2.1
MDT	Midelt	32.95	152	P	P	18 19 58.4	+2.1
	comp=Z,2.8nm,1.1s,baz=335,slow=11,SNR=5.4						
MDT	Midelt	32.95	152	P	P	18 19 58.4	+2.1
KEST	Kesra	34.04	131	P	P	18 20 06.8	+1.1
KEST	Kesra	34.04	131	P	P	18 20 06.8	+1.1
	comp=Z,0.7nm,0.6s,baz=25,slow=1.7,SNR=4.1						
KEST	Kesra	34.04	131	P	P	18 20 06.8	+1.1
YKA	Yellowknife Ar	38.27	312	P	P	18 20 42.0	+0.5
YKA	Yellowknife Ar	38.27	312	P	P	18 20 42.0	+0.5
	comp=Z,0.3nm,0.4s,baz=46,slow=8.7,SNR=7.0						
YKA	Yellowknife Ar	38.27	312	P	P	18 20 42.0	+0.5
ULM	Lac du Bonnet	39.94	286	LR	LR	18 36 58.5	
	comp=Z,72nm,18.0s,baz=20,slow=36						
BRTR	Keskin Array B	40.25	100	P	P	18 21 00.4	+1.9
BRTR	Keskin Array B	40.25	100	P	P	18 21 00.4	+1.9
	comp=Z,0.9nm,0.8s,baz=320,slow=5.6,SNR=3.9						
BRTR	Keskin Array B	40.25	100	P	P	18 21 00.4	+1.9
AKTO	Aktyubinsk	42.41	69	LR	LR	18 38 40.3	
	comp=Z,94nm,18.2s,baz=334,slow=36						
ILAR	Eielson Array	45.41	330	P	P	18 21 40.5	+0.7
ILAR	Eielson Array	45.41	330	P	P	18 21 40.5	+0.7
	comp=Z,0.9nm,0.9s,baz=27,slow=7.2,SNR=9.0						
ILAR				LR	LR	18 42 49.8	
	comp=Z,67nm,20.6s,baz=237,slow=39						
ILAR	Eielson Array	45.41	330	P	P	18 21 40.5	+0.7
HRY	Holter Researc	49.32	295	eP	P	18 22 11.6	+1.0
	comp=Z,3.5nm,0.6s						
HRY	Holter Researc	49.32	295	eP	P	18 22 11.6	+1.0
	comp=Z,3.5nm,0.6s						
SLMT	Seeley Lake	49.55	296	eP	P	18 22 12.5	+0.1
	comp=Z,2.3nm,0.9s						
SLMT	Seeley Lake	49.55	296	eP	P	18 22 12.5	+0.1
	comp=Z,2.3nm,0.9s						
ZALV	Zalesovo Beam	49.64	48	LR	LR	18 43 33.6	
	comp=Z,31nm,18.4s,baz=340,slow=36						
PDAR	Pinedale Array	51.62	290	P	P	18 22 27.5	-0.7
PDAR	Pinedale Array	51.62	290	P	P	18 22 27.5	-0.7
	comp=Z,1.8nm,0.8s,baz=65,slow=8.4,SNR=8.2						
PDAR				LR	LR	18 43 04.1	
	comp=Z,49nm,18.8s,baz=268,slow=35						
PDAR	Pinedale Array	51.62	290	P	P	18 22 27.5	-0.7
TORD	Torodi Ar. Bea	53.33	151	P	P	18 22 40.1	-0.7
TORD	Torodi Ar. Bea	53.33	151	P	P	18 22 40.1	-0.7
	comp=Z,1.0nm,0.7s,baz=341,slow=8.3,SNR=6.3						
TORD	Torodi Ar. Bea	53.33	151	P	P	18 22 40.1	-0.7
MKAR	Makanchi Array	54.80	55	P	P	18 22 53.6	+2.3
MKAR	Makanchi Array	54.80	55	P	P	18 22 53.6	+2.3
	comp=Z,0.3nm,0.8s,baz=331,slow=5.6,SNR=4.2						
MKAR	Makanchi Array	54.80	55	P	P	18 22 53.6	+2.3
NVAR	Mina Array Bea	58.85	294	P	P	18 23 21.8	+1.4
NVAR	Mina Array Bea	58.85	294	P	P	18 23 21.8	+1.4
	comp=Z,1.2nm,0.9s,baz=33,slow=5.4,SNR=3.5						
NVAR				LR	LR	18 48 45.4	
	comp=Z,80nm,18.7s,baz=56,slow=36						
NVAR	Mina Array Bea	58.85	294	P	P	18 23 21.8	+1.4
SONM	Songino Array	61.48	37	P	P	18 23 40.5	+2.4
SONM	Songino Array	61.48	37	P	P	18 23 40.5	+2.4
	comp=Z,0.7nm,0.9s,baz=319,slow=6.5,SNR=4.2						
SONM	Songino Array	61.48	37	P	P	18 23 40.5	+2.4
BOSA	Boshof	99.41	139	LR	LR	19 10 30.4	
	comp=Z,94nm,20.9s,baz=165,slow=34						

*NEIC **19** 18:29:48.9, 19.°17N×64.°69W, h73km, MD3.5(RSPR), After RSPR.*

RSPR 19 18:29:48.9, 19.°17N×64.°69W, h73km±6km**, 12C, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	Saint Thomas	0.85	197	⇑eP	Pn	18 30 04.8	-0.8
STVI	Saint Thomas	0.85	197	⇑eP	Pn	18 30 04.8	-0.8
STVI				eS	Sn	18 30 17.7	-0.4
STVI	Saint Thomas	0.85	197	⇑eP	Pn	18 30 04.8	-0.8
STVI				eS	Sn	18 30 17.7	-0.4
MTP	Monte Pirata	1.34	218	⇑eP	Pn	18 30 11.1	-0.7
MTP	Monte Pirata	1.34	218	⇑eP	Pn	18 30 11.1	-0.7
MTP				eS	Sn	18 30 28.6	-0.5
MTP	Monte Pirata	1.34	218	⇑eP	Pn	18 30 11.1	-0.7
MTP				eS	Sn	18 30 28.6	-0.5
HUMP	Col San Antoni	1.50	227	⇑eP	Pn	18 30 13.3	-0.5
HUMP	Col San Antoni	1.50	227	⇑eP	Pn	18 30 13.3	-0.5
HUMP				eS	Sn	18 30 32.1	-0.7
HUMP	Col San Antoni	1.50	227	⇑eP	Pn	18 30 13.3	-0.5
HUMP				eS	Sn	18 30 32.1	-0.7
CPD	Cerro la Pandu	1.61	226	⇑eP	Pn	18 30 14.8	-0.7
CPD	Cerro la Pandu	1.61	226	⇑eP	Pn	18 30 14.8	-0.7
CPD	Cerro la Pandu	1.61	226	⇑eP	Pn	18 30 14.8	-0.7

*ISK **19** 19:04:54.8, 35.°27N×28.°58E, h15km, MD3.6*

*ISCJB **19** 19:04:55.8±1.8, 35.°28N±0.°07×28.°58E±0.°06, h18km±15km, Error ellipse: s-maj=12.4km s-min=6.6km az=26.0*

*CSEM **19** 19:04:56.3±0.7, 35.°26N×28.°50E, h20km, MD3.2, Error ellipse: s-maj=18.3km s-min=5.5km az=37.0*

DDA ***19*** *19:05:00.1,35˚.58N×28˚.60E,h30km,MD3.2*
ISC 19 19:04:57.1±2.1,35˚.32N±0˚.09×28˚.52E±0˚.07,h27km±16km, n46,σ1ᵗ10/54,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
AKAS	**Kas**	**1.27**	**44**	*i*	P		**Pb**	**19 05 20.3**	**-0.2**
AKAS				*i*	S		**Sn**	**19 05 34.4**	**-1.0**
AKAS	**Kas**	**1.27**	**44**	*i*	P		**Pb**	**19 05 20.3**	**-0.2**
FETY	**Fethiye**	**1.39**	**19**	*e*	Pn		**Pn**	**19 05 20.3**	**-0.4**
FETY	**Fethiye**	**1.39**	**19**	*e*	Pn		**Pn**	**19 05 20.3**	**-0.4**
DALY	**Dalyan (Mu˘la**	**1.50**	**4**	*e*	Pn		**Pn**	**19 05 22.3**	**+0.2**
DALY	**Dalyan (Mu˘la**	**1.50**	**4**	*e*	Pn		**Pn**	**19 05 22.3**	**+0.2**
TURN	**Turunc**	**1.55**	**3**	*i*	P		**Pn**	**19 05 22.6**	**-0.3**
TURN				*i*	S		**Sn**	**19 05 40.3**	**-1.7**
TURN	**Turunc**	**1.55**	**3**	*i*	P		**Pn**	**19 05 22.6**	**-0.3**
DAT	**Datca**	**1.60**	**332**	*e*	PN		**Pn**	**19 05 24.3**	**+0.6**
DAT				*e*	SN		**Sb**	**19 05 45.7**	**-0.1**
DAT	**Datca**	**1.60**	**332**	*e*	Pn		**Pn**	**19 05 24.3**	**+0.6**
DAT				*e*	Sn		**Sb**	**19 05 45.7**	**-0.1**
ELL	**Elmali**	**1.82**	**38**	*e*	PN		**Pn**	**19 05 26.9**	**+0.2**
ELL	**Elmali**	**1.82**	**38**	*e*	Pn		**Pn**	**19 05 26.9**	**+0.2**
YER	**Yerkesik**	**1.82**	**354**	*e*	PN		**Pn**	**19 05 27.5**	**+0.8**
YER	**Yerkesik**	**1.82**	**354**	*e*	Pn		**Pn**	**19 05 27.5**	**+0.8**
BODT	**Bodrum**	**1.99**	**331**	*e*	PN		**Pn**	**19 05 29.7**	**+0.7**
BODT	**Bodrum**	**1.99**	**331**	*e*	Pn		**Pn**	**19 05 29.7**	**+0.7**
GLHS	**Glhisar (BURDU**	**2.00**	**23**	*e*	PN		**Pn**	**19 05 29.6**	**+0.5**
GLHS	**Glhisar (BURDU**	**2.00**	**23**	*e*	Pn		**Pn**	**19 05 29.6**	**+0.5**
MLSB	**Milas**	**2.06**	**343**	*e*	PN		**Pn**	**19 05 30.7**	**+0.8**
MLSB	**Milas**	**2.06**	**343**	*e*	Pn		**Pn**	**19 05 30.7**	**+0.8**
GOLH	**Golhisar**	**2.09**	**24**	*i*	P		**Pn**	**19 05 32.4**	**+2.0**
GOLH				*i*	S		**Sn**	**19 05 56.8**	**+1.2**
GOLH	**Golhisar**	**2.09**	**24**	*i*	P		**Pn**	**19 05 32.4**	**+2.0**
ANTB	**Antalya**	**2.34**	**47**	*e*	PN		**Pn**	**19 05 33.9**	**+0.2**
ANTB	**Antalya**	**2.34**	**47**	*e*	Pn		**Pn**	**19 05 33.9**	**+0.2**
DNZL	**Cakiroluk**	**2.40**	**10**	*i*	P		**Pn**	**19 05 35.6**	**+0.8**
DNZL				*i*	S		**Sn**	**19 05 59.6**	**-3.8**
DNZL	**Cakiroluk**	**2.40**	**10**	*i*	P		**Pn**	**19 05 35.6**	**+0.8**
DENT	**Denizli**	**2.46**	**10**	*e*	PN		**Pn**	**19 05 36.4**	**+0.9**
DENT	**Denizli**	**2.46**	**10**	*e*	Pn		**Pn**	**19 05 36.4**	**+0.9**
BCK	**Bucak**	**2.71**	**37**	*e*	PN		**Pn**	**19 05 39.0**	**+0.1**
BCK	**Bucak**	**2.71**	**37**	*e*	Pn		**Pn**	**19 05 39.0**	**+0.1**
KHL	**Karahalli**	**3.10**	**15**	*e*	PN		**Pn**	**19 05 45.5**	**+1.2**
KHL	**Karahalli**	**3.10**	**15**	*e*	Pn		**Pn**	**19 05 45.5**	**+1.2**
KULA	**Kula-Manisa**	**3.19**	**2**	*e*	PN		**Pn**	**19 05 47.0**	**+1.5**
KULA	**Kula-Manisa**	**3.19**	**2**	*e*	Pn		**Pn**	**19 05 47.0**	**+1.5**
GAZI	**Gazipasa**	**3.22**	**72**	*i*	P		**Pn**	**19 05 45.9**	**0.0**
GAZI				*i*	S		**Sn**	**19 06 22.5**	**-0.8**
GAZI	**Gazipasa**	**3.22**	**72**	*i*	P		**Pn**	**19 05 45.9**	**0.0**
LEF	**Lefka**	**3.59**	**92**	*e*	PN		**Pn**	**19 05 50.2**	**-0.7**
LEF	**Lefka**	**3.59**	**92**	*e*	Pn		**Pn**	**19 05 50.2**	**-0.7**
ERMK	**Ermenek**	**3.80**	**68**	*i*	P		**Pn**	**19 05 55.8**	**+1.8**
ERMK				*i*	S		**Sn**	**19 06 40.5**	**+2.6**
ERMK	**Ermenek**	**3.80**	**68**	*i*	P		**Pn**	**19 05 55.8**	**+1.8**
CSS	**Prodhromos**	**3.96**	**94**	*e*	PN		**Pn**	**19 05 56.2**	**+0.1**
CSS	**Prodhromos**	**3.96**	**94**	*e*	Pn		**Pn**	**19 05 56.2**	**+0.1**
KONT	**Konya--Tatoy**	**4.05**	**49**	*e*	PN		**Pn**	**19 05 58.4**	**+1.1**
KONT	**Konya--Tatoy**	**4.05**	**49**	*e*	Pn		**Pn**	**19 05 58.4**	**+1.1**
LFK	**Lefkose**	**4.10**	**89**	*e*	PN		**Pn**	**19 05 58.3**	**+0.3**
LFK	**Lefkose**	**4.10**	**89**	*e*	Pn		**Pn**	**19 05 58.3**	**+0.3**

IDC 19 19:12:24.8±9.0,17˚.93S×178˚.32W,h462km±100km, mb3.3/8,mb1 3.6/8,mb1mx3.4/18,mbtmp3.3/8,Error ellipse: s-maj=33.3km s-min=28.5km az=33.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.69**	**241**		P		P	19 19 08.4	+0.7
	2.4nm,0.5s,baz=90,slow=9.7,SNR=6.7								
WRA	**Warramunga Arr**	**44.71**	**260**		P		P	19 19 55.2	-0.7
	0.6nm,0.3s,baz=95,slow=7.1,SNR=18								
ASAR	**Alice Springs**	**44.86**	**254**		P		P	19 19 56.9	-0.2
	7.5nm,0.5s,baz=89,slow=8.4,SNR=250								
VNDA	**Vanda**	**60.43**	**185**		P		P	19 21 47.5	-0.4
	0.4nm,0.5s,baz=3.2,slow=6.2,SNR=4.1								
ILAR	**Eielson Array**	**85.89**	**13**		P		P	19 24 13.8	-0.5
	0.4nm,0.5s,baz=229,slow=5.9,SNR=5.5								
TXAR	**Lajitas Array**	**85.94**	**58**		P		P	19 24 16.7	+1.1
	2.7nm,0.8s,baz=223,slow=6.1,SNR=28								
PDAR	**Pinedale Array**	**87.31**	**43**		P		P	19 24 20.8	-1.2
	1.0nm,0.7s,baz=250,slow=3.0,SNR=7.2								
CMAR	**Chiang Mai Arr**	**88.97**	**290**		P		P	19 24 30.3	+0.4
	0.8nm,0.9s,baz=114,slow=2.3,SNR=4.5								
BRTR	**Keskin Array B**	**144.86**	**315**		PKP		PKPdf	19 31 08.7	-0.2
	0.6nm,0.7s,baz=88,slow=4.5,SNR=3.5								
GERES	**GERESS Array B**	**147.66**	**345**		PKPbc		PKPbc	19 31 15.7	-0.9
	0.2nm,0.4s,baz=0.0,slow=2.8,SNR=4.9								

NIED ***19*** *19:22:00,32˚.80N×135˚.10E,h5km,Mw4.4 Best double couple: M₀4.66000×10¹⁵ NP1:φ₀221.00000°,δ79.00000°, λ44.00000°. NP2:φ₀121.00000°,δ47.00000°,λ165.00000°.*
IDC ***19*** *19:22:14.1±0.7,32˚.78N×135˚.02E,h0km,mb4.0/20, mb1 4.2/23,mb1mx4.1/32,mbtmp4.0/23,ML3.8/3,MS3.8/13, Ms1 3.8/13,ms1mx3.5/46,Error ellipse: s-maj=17.0km s-min=16.4km az=40.0*
JMA ***19*** *19:22:15.1±0.1,32˚.75N×135˚.06E,h50km±2km,M4.3*
ISCJB ***19*** *19:22:15.4±0.8,32˚.83N±0˚.03×134˚.97E±0˚.03,h19km±4km, mb4.4/66,MS4.2/23,Error ellipse: s-maj=6.0km s-min=3.7km az=161.6*
NEIC ***19*** *19:22:15.7±0.5,32˚.75N×134˚.92E,h10km,mb4.6/26, MW4.4(NIED),Error ellipse: s-maj=10.6km s-min=7.9km az=161.0*
BJI ***19*** *19:22:16.3,32˚.74N×135˚.01E,h26km,mB4.8/30,mb4.5/30, Ms4.7/34,Ms7 4.4/31*
MOS ***19*** *19:22:17.8±1.1,32˚.94N×135˚.01E,h33km,mb4.7/24, MS4.1/7,Error ellipse: s-maj=10.7km s-min=6.1km az=109.6*
ISC 19 19:22:19.1±0.5,32˚.91N±0˚.05×134˚.97E±0˚.03,h28km±2km, h27km:pP-P,n160,σ1ᵗ81/207,mb4.5/66,MS4.3/24,16C-4D, Shikoku

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MRT2	**Murotomisaki 2**	**0.84**	**305**	⇑	P		**Pb**	**19 22 33.1**	**-2.1**
MRT2					S		**Sb**	**19 22 45.8**	**-0.4**
JWZ	**Kozaga**	**0.88**	**45**		P		Pn	19 22 32.4	-3.3
JWZ					S		**Sb**	**19 22 45.2**	**-2.0**
JAI	**Aioi**	**0.98**	**334**	⇑	P		**Pn**	**19 22 35.2**	**-1.9**
JAI					S		**Sb**	**19 22 49.4**	**-0.8**
JWM	**Minabe**	**0.99**	**19**	⇑	P		**Pn**	**19 22 34.8**	**-2.5**
JWM					S		**Sn**	**19 22 49.2**	**-1.2**
JMN	**Monobe**	**1.23**	**312**	⇑	P		**Pn**	**19 22 39.0**	**-1.5**
JWY	**Kouya**	**1.41**	**22**	⇑	P		**Pn**	**19 22 41.0**	**-2.0**
JAJ2	**Tsuna**	**1.51**	**357**		P		**Pn**	**19 22 43.0**	**-1.4**
JKU	**Kubokawa**	**1.65**	**285**	⇑	P		**Pn**	**19 22 44.0**	**-2.3**
JKU					S		**Sn**	**19 23 04.3**	**-2.3**
JJS	**Sakaide**	**1.70**	**330**	⇑	P		**Pn**	**19 22 45.7**	**-1.3**
JKN2	**Miekihoku**	**1.72**	**39**	⇑	P		**Pn**	**19 22 44.8**	**-2.4**
JKN2					S		**Sn**	**19 23 06.9**	**-1.3**
JTO	**Tosashimizu**	**1.82**	**269**	⇑	P		Pn	19 22 45.4	-3.3
JTO					S		**Sn**	**19 23 07.5**	**-3.4**
JET	**Tanbara**	**1.83**	**299**	⇑	P		**Pn**	**19 22 47.0**	**-1.8**
JET					S		**Sn**	**19 23 10.4**	**-0.6**
JHE	**Heguri**	**1.84**	**19**		P		**Pn**	**19 22 47.2**	**-1.7**
JHE					S		**Sn**	**19 23 10.1**	**-1.2**
UWA2	**Uwa jima 2**	**1.99**	**279**	⇑	P		**Pn**	**19 22 48.8**	**-2.2**
UWA2					S		**Sn**	**19 23 12.2**	**-2.9**
JIE	**Ise**	**2.07**	**44**	⇓	P		**Pn**	**19 22 50.1**	**-2.0**
JKS	**Kasai**	**2.07**	**357**		P		**Pn**	**19 22 51.1**	**-1.0**
JNU	**Nakatsue**	**3.44**	**275**	*e*	Pn		**Pn**	**19 23 08.7**	**-2.3**
JNU					Sn		**Sn**	**19 23 50.4**	**-0.5**
JNU	**Nakatsue**	**3.44**	**275**		Pn		**Pn**	**19 23 09.2**	**-1.8**
	16nm,0.3s,baz=87,slow=7.4,SNR=125								
JNU					Sn		**Sn**	**19 23 50.4**	**-0.5**
	12nm,0.3s,baz=76,slow=3.4,SNR=6.4								
JHJ	**Hachijo jima 2**	**4.05**	**86**		LR		LR	19 24 52.4	
	comp=Z,504nm,18.2s,baz=109,slow=39								
MAJO	**Matsushiro**	**4.50**	**35**	*e*	P		**Pn**	**19 23 24.2**	**-1.3**
MAJO	**Matsushiro**	**4.50**	**35**	*e*	Pn		**Pn**	**19 23 24.2**	**-1.3**
MAT	**Matsushiro**	**4.50**	**35**		P		**Pn**	**19 23 24.7**	**-0.8**
MAT				*e*	S		**Sb**	**19 24 26.1**	**-5.1**
KSRS	**Korea Array**	**7.34**	**310**		Pn		**Pn**	**19 24 03.4**	**-1.0**
	3.0nm,0.3s,baz=123,slow=14,SNR=40								
KSRS					Sn		**Sn**	**19 25 24.7**	**-2.1**
	1.5nm,0.3s,baz=128,slow=24,SNR=7.1								
KSRS					LR		LR	19 27 05.8	
	comp=Z,431nm,19.1s,baz=148,slow=39								
KSAR	**Wonju Array Be**	**7.36**	**310**		Pn		**Pn**	**19 24 03.4**	**-1.3**
KSAR					Sn		**Sn**	**19 25 24.7**	**-2.6**
INCN	**Inchon**	**8.21**	**306**		P		**Pn**	**19 24 15.6**	**-0.9**
USRK	**Ussuriysk Arra**	**11.51**	**349**		Pn		Pn	19 24 57.8	-3.8
	0.1nm,0.3s,baz=169,slow=12,SNR=2.9								
USRK					LR		LR	19 29 24.8	
	comp=Z,573nm,18.3s,baz=67,slow=37								
MDJ	**Mudanjiang**	**12.42**	**342**		P		**Pn**	**19 25 14.9**	**+0.9**
MDJ					S		**Sn**	**19 27 34.4**	**+3.0**
MDJ					PcP		**PcP**	**19 30 54.3**	**+0.8**
MDJ					ScP		**ScP**	**19 34 26.3**	**+1.7**
MDJ					PcS		**PcS**	**19 34 27.9**	**+0.4**
MDJ					ScS		**ScS**	**19 38 03.8**	**+3.3**
MDJ					pmax		pmax		
	comp=Z,6.0nm,1.5s								
MDJ					pmax		pmax		
	comp=Z,62nm,5.7s								
MDJ					LR		LR		
	comp=N,520nm,11.4s								
MDJ					LR		LR		
	comp=E,500nm,11.6s								
MDJ	**Mudanjiang**	**12.42**	**342**	*e*	Pn		**Pn**	**19 25 15.3**	**+1.3**
	comp=E,15nm,1.0s								
ASAJ	**Asahikawa**	**12.68**	**26**		Pn		**Pn**	**19 25 15.8**	**-1.7**
ASAJ	**Asahikawa**	**12.68**	**26**		Pn		**Pn**	**19 25 15.8**	**-1.7**
	comp=E,0.4nm,0.3s,baz=265,slow=12,SNR=4.0								
ASAJ					LR		LR	19 30 33.6	
	comp=E,552nm,18.4s,baz=226,slow=39								
CN2	**Changchun**	**13.18**	**328**	*e*	P		**P**	**19 25 34.9**	**+0.7**
CN2				*e*	sP			19 25 49.0	
CN2				*e*	S		Sn	19 28 00.0	+10
CN2					pmax		pmax		
	comp=Z,10.0nm,0.8s								
CN2					LR		LR		
	comp=N,900nm,14.0s								
CN2					LR		LR		
	comp=E,1μm,14.0s								
CN2					LR		LR		
	comp=Z,900nm,16.0s								
NJ2	**Nanjing**	**13.64**	**271**	*e*	P		Pn	19 25 26.4	-4.3
NJ2					pmax		pmax		
	comp=Z,20nm,0.5s								
NJ2					pmax		pmax		
	comp=Z,230nm,5.3s								
NJ2					LR		LR		
	comp=N,2μm,13.9s								
NJ2					LR		LR		
	comp=E,630nm,12.8s								
NJ2					LR		LR		
	comp=Z,5μm,10.6s								
YUK	**Yuzh-Kuril'sk**	**13.99**	**34**	*c*	P		**P**	**19 25 45.6**	**+2.5**
YUK					MLR		MLR		
	comp=N,161nm,18.0s								
YUK					MLR		MLR		
	comp=Z,297nm,18.0s								
YUK					MLR		MLR		
	comp=E,206nm,18.0s								
YSS	**Yuzh-Sakhalins**	**15.23**	**21**	*e*	P		**Pn**	**19 25 51.0**	**-1.2**
YSS					MLR		MLR		
	comp=Z,500nm,12.0s								
YSS					MLR		MLR		
	comp=N,1μm,14.0s								
YSS					MLR		MLR		
	comp=E,900nm,14.0s								
HABR	**Khabarovsk**	**15.55**	**0**	*e*	P		**Pn**	**19 25 55.2**	**-1.1**
HABR								19 28 44.1	
HABR					pmax		pmax		
	comp=E,33nm,1.8s								
HABR					pmax		pmax		
	comp=Z,90nm,2.4s								
HABR					pmax		pmax		
	comp=N,41nm,1.8s								
HABR					MLR		MLR		
	comp=Z,449nm,15.0s								
KLR	**Kul'dur**	**16.48**	**353**	*e*	P		**Pn**	**19 26 07.0**	**-1.3**
KLR				*e*	S		**Sn**	**19 29 12.5**	**+2.1**
KLR					MLR		MLR		
	comp=E,1μm,12.0s								
KLR					MLR		MLR		
	comp=Z,5μm,12.0s								
BJT	**Baijiatuan**	**16.69**	**300**	*e*	Pn		**P**	**19 26 14.3**	**+1.2**
	comp=Z,65nm,1.0s								
BJI	**Beijing**	**16.69**	**301**		P		**P**	**19 26 15.3**	**+2.2**
BJI					pmax		pmax		
	comp=Z,61nm,1.2s								
BJI					pmax		pmax		
	comp=Z,180nm,3.5s								
BJI					LR		LR		
	comp=N,1μm,10.1s								
BJI					LR		LR		
	comp=E,2μm,14.6s								
BJI					LR		LR		
	comp=Z,540nm,14.6s								
WHN	**Wuhan**	**17.70**	**268**		P		**P**	**19 26 26.5**	**+2.2**
WHN					S		**Sn**	**19 29 41.4**	**+1.3**
WHN					LR		LR		
	comp=N,1μm,11.6s								
WHN					LR		LR		
	comp=E,3μm,10.7s								
WHN					LR		LR		
	comp=Z,3μm,10.7s								
HIA	**Hailar**	**19.91**	**330**	*e*	P		**Pn**	**19 26 49.6**	**-0.6**
	comp=Z,60nm,1.1s								
HHC	**Hu-ho-hao-te**	**20.29**	**300**	*e*	P		**P**	**19 26 51.8**	**-1.0**
HHC					pP		**pP**	**19 27 03.8**	**+3.5**
HHC					sP		sP	19 27 09.6	+5.7
HHC					PP		**PnPn**	**19 27 13.8**	**+3.9**
HHC					S		S	19 30 30.6	-8.5
HHC					sS		Sn	19 30 46.1	+3.3
HHC					PcP		**PcP**	**19 31 08.8**	**+3.1**
HHC					pmax		pmax		
	comp=Z,46nm,1.0s								
HHC					pmax		pmax		
	comp=Z,310nm,5.4s								
HHC					LR		LR		
	comp=N,2μm,14.9s								
HHC					LR		LR		
	comp=E,2μm,13.1s								
HHC					LR		LR		
	comp=Z,2μm,13.1s								
GUMO	**Guam**	**21.25**	**153**		P		**P**	**19 27 03.8**	**+0.6**
	comp=Z,110nm,1.2s								
BTO	**Baotou**	**21.37**	**298**	*e*	P		**P**	**19 27 08.9**	**+4.4**
ENH	**Enshi**	**21.85**	**270**	*e*	P		**P**	**19 27 10.5**	**+0.9**
	comp=Z,45nm,0.9s								
CIT	**Chita**	**24.63**	**327**	*e*	P		**P**	**19 27 37.1**	**-0.1**
CIT				*e*				19 27 44.2	
CIT					pmax		pmax		
	comp=Z,39nm,2.0s								
GYA	**Guiyang**	**25.37**	**263**	*e*	P		**P**	**19 27 41.3**	**-2.9**
GYA					PP		**PnPn**	**19 28 20.4**	**+0.8**
GYA					S		**S**	**19 32 04.0**	**-5.2**
GYA					SS		**SnSn**	**19 33 04.3**	**+2.3**
GYA					pmax		pmax		
	comp=Z,10.0nm,0.8s								
GYA					pmax		pmax		
	comp=Z,80nm,4.9s								
GYA					LR		LR		
	comp=N,420nm,15.0s								
GYA					LR		LR		
	comp=E,390nm,16.5s								
GYA					LR		LR		
	comp=Z,450nm,15.3s								
LZH	**Lanzhou**	**25.79**	**286**	*e*	P		**P**	**19 27 49.5**	**+1.5**
LZH					pP		**pP**	**19 28 00.0**	**+3.9**
LZH				*e*	S		**S**	**19 32 11.0**	**-4.8**
LZH					sS		**sS**	**19 32 31.0**	**+1.8**
LZH					SS		**SnSn**	**19 33 14.5**	**+2.3**
LZH					pmax		pmax		
	comp=Z,44nm,1.6s								
LZH					pmax		pmax		
	comp=Z,130nm,5.2s								
LZH					LR		LR		
	comp=N,640nm,12.6s								
LZH					LR		LR		
	comp=E,740nm,10.9s								
LZH					LR		LR		
	comp=Z,710nm,13.1s								
ULN	**Ulaanbaatar**	**25.81**	**314**	*e*	P		**P**	**19 27 48.1**	**+0.1**
	comp=Z,8.2nm,1.2s								
PETK	**Petropavlovsk-**	**25.95**	**32**		P		**P**	**19 27 49.4**	**+0.3**
PETK	**Petropavlovsk-**	**25.95**	**32**		P		**P**	**19 27 49.4**	**+0.3**
PETK	**Petropavlovsk-**	**25.95**	**32**		P		**P**	**19 27 49.4**	**+0.3**
	comp=Z,3.4nm,0.9s,baz=208,slow=7.9,SNR=4.2								
SONM	**Songino Array**	**26.20**	**313**		P		**P**	**19 27 51.8**	**+0.2**
SONM	**Songino Array**	**26.20**	**313**		P		**P**	**19 27 51.8**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=122,slow=8.9,SNR=11								
SONM					LR		LR	19 39 21.8	
	comp=Z,164nm,19.4s,baz=127,slow=39								
QIZ	**Qiongzhong**	**26.40**	**245**		P		**P**	**19 27 54.4**	**+1.0**
QIZ					S		**S**	**19 32 22.3**	**-2.9**
CD2	**Chengdu**	**26.52**	**274**	*e*	P		**P**	**19 27 54.4**	**-0.2**
CD2					pP		**pP**	**19 27 59.0**	**-3.6**
CD2					sP		**sP**	**19 28 02.3**	**-3.7**
CD2					PP		**PnPn**	**19 28 37.1**	**+1.9**
CD2					S		**S**	**19 32 24.8**	**-2.4**
CD2					SS		**SnSn**	**19 33 33.8**	**+3.8**
CD2					pmax		pmax		
	comp=Z,20nm,0.9s								
CD2					pmax		pmax		
	comp=Z,100nm,4.8s								
CD2					LR		LR		
	comp=N,3μm,14.2s								
CD2					LR		LR		
	comp=E,1μm,13.2s								
CD2					LR		LR		
	comp=Z,840nm,10.7s								
GTA	**Gaotai**	**28.99**	**293**	*e*	P		**P**	**19 28 16.5**	**-0.1**
GTA					pP		**pP**	**19 28 28.1**	**+3.4**
GTA					sP		sP	19 28 33.8	+5.7
GTA					S		**S**	**19 33 00.3**	**-5.8**
GTA					sS		**sS**	**19 33 19.9**	**+0.4**
GTA					pmax		pmax		
	comp=Z,3.0nm,1.0s								
GTA					pmax		pmax		
	comp=Z,52nm,5.9s								
GTA					LR		LR		
	comp=N,910nm,15.2s								
GTA					LR		LR		
	comp=E,440nm,13.5s								
GTA					LR		LR		
	comp=Z,600nm,12.4s								
ZAK	**Zakamensk**	**29.12**	**316**	*e*	P		**P**	**19 28 19.0**	**+1.4**
ZAK					pmax		pmax		
	comp=Z,2.0nm,1.3s								
KMI	**Kunming**	**29.15**	**263**		P		**P**	**19 28 17.6**	**-0.7**
KMI					sP		**sP**	**19 28 34.4**	**+4.6**
KMI					PP		**PnPn**	**19 29 11.3**	**0.0**
KMI					S		S	19 33 01.9	-7.1
KMI					sS		**sS**	**19 33 21.8**	**-0.6**
KMI					pmax		pmax		
	comp=Z,120nm,6.4s								
KMI					LR		LR		
	comp=N,670nm,11.8s								
KMI					LR		LR		
	comp=E,780nm,9.0s								
KMI					LR		LR		
	comp=Z,670nm,7.8s								
YAK	**Yakutsk**	**29.34**	**355**	*e*	P		**P**	**19 28 18.2**	**-1.0**
YAK				*e**	PP		**pP**	**19 28 27.2**	**-0.1**
YAK				*e*				19 29 13.8	
YAK				*e*	PPP		PPP	19 29 25.0	
YAK				*e*	S		**S**	**19 33 13.9**	**+3.2**
YAK				*e*	SS		**SnSn**	**19 34 36.5**	**-1.3**
YAK					pmax		pmax		
	comp=N,4.0nm,1.2s								
YAK					pmax		pmax		
	comp=Z,5.0nm,1.2s								
YAK					pmax		pmax		
	comp=E,338nm,12.6s								
YAK					pmax		pmax		
	comp=Z,3.0nm,0.5s								
YAK					smax		smax		
	comp=E,36nm,10.6s								
YAK					smax		smax		
	comp=N,182nm,14.3s								
YAK					MLR		MLR		
	comp=N,478nm,17.0s								
YAK					MLR		MLR		
	comp=Z,624nm,17.0s								
CHTO	**Chiang Mai**	**35.14**	**255**	*e*	P		**P**	**19 29 08.2**	**-2.4**
CHTO					pmax		pmax		
	comp=Z,12nm,1.4s								
CHTO	**Chiang Mai**	**35.14**	**255**	*e*	P		**P**	**19 29 08.2**	**-2.4**
	comp=Z,12nm,1.4s								
CM31	**Chiang Mai Arr**	**35.32**	**255**		P		**P**	**19 29 10.6**	**-1.6**
	comp=Z,2.3nm,0.7s								
CMAR	**Chiang Mai Arr**	**35.32**	**255**		P		**P**	**19 29 12.7**	**+0.5**
CMAR	**Chiang Mai Arr**	**35.32**	**255**		P		**P**	**19 29 12.7**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=48,slow=7.8,SNR=3.8								
CMAR					LR		LR	19 46 09.9	
	comp=Z,88nm,18.5s,baz=55,slow=41								
WMQ	**Urumqi**	**38.17**	**301**	*e*	P		**P**	**19 29 37.4**	**+1.2**
WMQ					pP		**pP**	**19 29 42.0**	**-2.5**
WMQ					sP		**sP**	**19 29 44.5**	**-3.3**
WMQ					PP		**PnPn**	**19 31 08.0**	**+2.7**
WMQ				*e*	S		**S**	**19 35 29.0**	**+1.1**
WMQ					sS		**sS**	**19 35 40.0**	**-1.4**
WMQ					pmax		pmax		
	comp=Z,10.0nm,1.2s								
WMQ					pmax		pmax		
	comp=Z,100nm,5.0s								
WMQ					LR		LR		
	comp=N,350nm,14.8s								
WMQ					LR		LR		
	comp=E,300nm,12.3s								
WMQ					LR		LR		
	comp=Z,280nm,15.4s								
TIXI	**Tiksi**	**38.94**	**357**	⇓	P		**P**	**19 29 42.1**	**-0.1**
TIXI					pmax		pmax		
	comp=Z,3.0nm,0.8s								
TIXI					MLR		MLR		
	comp=Z,566nm,16.0s								
BILL	**Bilibino**	**39.52**	**18**	*d*	P		**P**	**19 29 48.2**	**+1.1**
BILL				*e**	PP		**pP**	**19 29 56.5**	**+1.1**
BILL					pmax		pmax		
	comp=Z,25nm,1.2s	

KSH pmax pmax
comp=Z,3.0nm,0.4s
KSH pmax pmax
comp=Z,220nm,5.3s
KSH LR LR
comp=N,500nm,10.6s
KSH LR LR
comp=E,570nm,11.2s
KSH LR LR
comp=Z,620nm,11.8s
AAK Ala-Archa 47.87 300‖ *eP* **P 19 30 56.0 +1.1**
AAK pmax pmax
comp=Z,14nm,2.5s
AAK MLR MLR
comp=Z,281nm,18.0s
HNR Honiara 48.37 146 LR LR 19 49 30.3
comp=Z,108nm,19.5s,baz=27,slow=34
BVAR Borovoye Array 49.53 314 P **P** **19 31 07.4 +0.1**
BVAR 19 32 29.1
BVAR Borovoye Array 49.53 314 P **P** **19 31 07.4 +0.1**
BVAR PcP **PcP** **19 32 29.1 +0.3**
BVAR Borovoye Array 49.53 314 P **P** **19 31 07.4 +0.1**
comp=Z,3.4nm,0.7s,baz=98,slow=9.1,SNR=22
BVAR PcP **PcP** **19 32 29.1 +0.3**
comp=Z,0.4nm,0.5s,baz=79,slow=7.6,SNR=3.3
BRVK Borovoye 49.59 314 *eP* **P** **19 31 08.1 +0.4**
BRVK pmax pmax
comp=Z,8.0nm,0.8s
BRVK Borovoye 49.59 314 *eP* **P** **19 31 08.1 +0.4**
comp=Z,8.1nm,0.8s
KKAR Karatay Array 50.67 301 *eP* **P** **19 31 15.5 -0.5**
KKAR pmax pmax
comp=Z,4.0nm,0.8s
KKAR Karatay Array 50.67 301 *eP* **P** **19 31 15.5 -0.5**
comp=Z,4.3nm,0.8s
WRA Warramunga Arr 52.55 181 P P 19 31 26.5 -3.8
WRA Warramunga Arr 52.55 181 P P 19 31 26.5 -3.8
comp=Z,3.9nm,0.9s,baz=358,slow=8.0,SNR=13
SVE Sverdlovsk 54.79 320‖ *eP* **P** **19 31 46.8 +0.5**
SVE *e*PPP PPP 19 34 57.8
SVE pmax pmax
comp=Z,18nm,1.4s
SVE MLR MLR
comp=Z,182nm,12.0s
RC01 Rabbit Creek A 54.80 35 *eP* P 19 31 54.9 +8.6
comp=Z,8.8nm,0.6s
PMR Palmer 55.05 34 *eP* **P** **19 31 50.8 +2.8**
PMR Palmer 55.05 34 *eP* **P** **19 31 50.8 +2.8**
SML Sawmill 55.41 34 *eP* **P** **19 31 48.8 -1.9**
SML pmax pmax
comp=Z,2.0nm,0.6s
SML Sawmill 55.41 34 *eP* **P** **19 31 48.8 -1.9**
comp=Z,1.7nm,0.6s
ILAR Eielson Array 55.76 30 P **P** **19 31 52.7 -0.5**
ILAR Eielson Array 55.76 30 P **P** **19 31 52.7 -0.5**
comp=Z,0.8nm,0.8s,baz=288,slow=9.1,SNR=5.5
ILAR LR LR 20 00 39.9
comp=Z,55nm,18.3s,baz=56,slow=41
ARU Arti 55.98 319*c* *iP* **P** **19 31 54.8 0.0**
ARU 19 33 58.9
ARU PPP PPP 19 35 13.5
ARU S **S** **19 39 41.6 +0.5**
ARU pmax pmax
comp=Z,20nm,1.2s
ASAR Alice Springs 56.27 181 P **P** **19 31 55.8 -1.4**
ASAR Alice Springs 56.27 181 P **P** **19 31 55.8 -1.4**
comp=Z,0.7nm,0.6s,baz=9.9,slow=13,SNR=12
ABKAR Akbulak array 56.57 311 *eP* **P** **19 31 59.0 -0.1**
comp=Z,7.7nm,0.7s
DIV Divide 56.71 35 *eP* P 19 32 06.6 +6.5
comp=Z,12nm,0.7s
AKTO Aktyubinsk 57.51 312 P **P** **19 32 06.0 +0.2**
AKTO Aktyubinsk 57.51 312 P **P** **19 32 06.0 +0.2**
AKTO Aktyubinsk 57.51 312 P **P** **19 32 06.0 +0.2**
comp=Z,4.7nm,0.7s,baz=74,slow=14,SNR=17
KLMR Klimovskoe 64.38 327 P P 19 32 48.9 -3.4
KLMR pmax pmax
comp=Z,20nm,1.5s
ARCES ARCESS Array B 65.95 339 LR LR 20 06 37.9
comp=Z,116nm,19.7s,baz=48,slow=40
OBN Obninsk 68.16 322 *eP* **P** **19 33 17.0 +0.4**
OBN *e**PP **pP** **19 33 25.3 0.0**
OBN *e**SP **sP** **19 33 30.1 +1.6**
OBN *e* 19 33 40.4
OBN *e*SS **SS** **19 46 37.5 +0.6**
OBN pmax pmax
comp=Z,5.0nm,1.4s
OBN MLR MLR
comp=Z,200nm,16.0s
KBZ Khabaz 69.49 309 P **P** **19 33 25.9 +0.8**
KBZ Khabaz 69.49 309 P **P** **19 33 25.9 +0.8**
KBZ Khabaz 69.49 309 P **P** **19 33 25.9 +0.8**
comp=Z,3.5nm,1.0s,baz=141,slow=4.1,SNR=4.0
KIV Kislovodsk 69.53 310‖ *eP* **P** **19 33 26.7 +1.3**
KIV *e**PP **pP** **19 33 34.7 +0.6**
KIV *e**SP **sP** **19 33 40.0 +2.6**
KIV *e* 19 33 47.7
KIV pmax pmax
comp=Z,8.0nm,1.2s
KIV MLR MLR
comp=Z,100nm,16.0s
FINES FINESS Array B 69.92 331 P **P** **19 33 26.3 -1.1**
FINES FINESS Array B 69.92 331 P **P** **19 33 26.3 -1.1**
comp=Z,2.9nm,0.8s,baz=68,slow=6.0,SNR=10.0
YKA Yellowknife Ar 69.96 28 P **P** **19 33 26.3 -1.3**
YKA Yellowknife Ar 69.96 28 P **P** **19 33 26.3 -1.3**
comp=Z,0.3nm,0.8s,baz=299,slow=6.3,SNR=3.8
ANN Anapa 72.47 312 *eP* P 19 33 34.8 -8.3
ANN *e**PP pP 19 33 45.1 -6.8
ANN *e* 19 33 55.8
ANN pmax pmax
comp=Z,25nm,1.6s
MIB Mutribah 72.69 295 *eP* **P** **19 33 42.6 -2.1**
MIB AMb AMB 19 33 54.6
comp=Z,16nm,0.9s
RDF Al-Radifah 72.94 294 *eP* **P** **19 33 44.6 -1.6**
RDF AMb AMB 19 33 54.7
comp=Z,22nm,0.8s
NAY Al-Naaiem 73.02 294 *eP* **P** **19 33 44.6 -2.1**
NAY AMb AMB 19 33 56.0
comp=Z,14nm,1.2s
AKASG Malin Array Be 74.21 321 P **P** **19 33 52.8 -0.5**
AKASG Malin Array Be 74.21 321 P **P** **19 33 52.8 -0.5**
AKASG Malin Array Be 74.21 321 P **P** **19 33 52.8 -0.5**
comp=Z,1.9nm,0.7s,baz=52,slow=6.2,SNR=7.7
AK01 Malin Array Si 74.22 320 *eP* **P** **19 33 52.7 -0.6**
KIEV Kiev 74.22 321 *eP* **P** **19 33 52.5 -0.8**
KIEV pmax pmax
comp=Z,4.0nm,0.8s
KIEV Kiev 74.22 321 *eP* **P** **19 33 52.5 -0.8**
comp=Z,3.7nm,0.8s
AK02 Malin Array Si 74.24 320 *eP* **P** **19 33 53.1 -0.3**
NB2 NORSAR Subarra 75.83 335 P **P** **19 34 02.2 -0.3**
comp=Z,6.0nm,1.1s,baz=43,slow=5.6
NOA NORSAR Array B 75.83 335 P **P** **19 34 02.1 -0.4**
NOA NORSAR Array B 75.83 335 P **P** **19 34 02.1 -0.4**
comp=Z,1.2nm,0.8s,baz=50,slow=5.7,SNR=4.2
BR131 Keskin Array S 77.48 309 *eP* **P** **19 34 11.2 -1.2**
comp=Z,1.0nm,0.8s
BRTR Keskin Array B 77.48 309 P **P** **19 34 12.4 0.0**
BRTR Keskin Array B 77.48 309 P **P** **19 34 12.4 0.0**
comp=Z,1.8nm,1.0s,baz=91,slow=4.9,SNR=8.9
BUR08 Bucovina Ar. S 78.11 319 *eP* **P** **19 34 12.9 -2.8**
BMO Blue Mountains 78.58 44 *eP* **P** **19 34 20.8 +2.4**
BMO pmax pmax
comp=Z,1.0nm,0.8s
BMO Blue Mountains 78.58 44 *eP* **P** **19 34 20.8 +2.4**
comp=Z,1.3nm,0.8s
SLMT Seeley Lake 79.32 40 P **P** **19 34 23.2 +0.8**
comp=Z,6.7nm,1.2s
FFC Flin Flon 79.96 30 P **P** **19 34 26.2 +0.7**
FFC pmax pmax
comp=Z,6.0nm,1.1s
FFC Flin Flon 79.96 30 P **P** **19 34 26.2 +0.7**
comp=Z,6.2nm,1.1s
LRM Limekiln Ridge 80.75 41 P **P** **19 34 32.0 +1.6**
comp=Z,31nm,1.0s
HLID Hailey 81.03 44 P **P** **19 34 33.3 +1.6**
comp=Z,2.4nm,0.8s
NVAR Mina Array Bea 81.69 49 P **P** **19 34 36.9 +1.5**
NVAR Mina Array Bea 81.69 49 P **P** **19 34 36.9 +1.5**
comp=Z,0.2nm,0.4s,baz=244,slow=7.9,SNR=2.9
GERES GERESS Array B 83.25 325 P **P** **19 34 43.0 -0.2**
GERES GERESS Array B 83.25 325 P **P** **19 34 43.0 -0.2**
comp=Z,0.6nm,0.8s,baz=0.0,slow=4.5,SNR=5.3
GERES LR LR 20 15 24.9
comp=Z,116nm,19.0s,baz=201,slow=38
HWUT Hardware Ranch 83.89 44 P P 19 34 38.9 -7.8
comp=Z,6.7nm,1.1s
PDAR Pinedale Array 84.29 42 P **P** **19 34 49.5 +0.6**
PDAR Pinedale Array 84.29 42 P **P** **19 34 49.5 +0.6**
comp=Z,0.4nm,0.6s,baz=283,slow=4.5,SNR=2.9
PDAR LR LR 20 11 45.5
comp=Z,29nm,18.4s,baz=242,slow=35
CDF Champ du Feu 86.53 328 *eP* **P** **19 34 58.2 -1.5**
comp=Z,1.9nm,0.5s
CDF Champ du Feu 86.53 328 *eP* **P** **19 34 58.2 -1.5**
CDF pmax pmax
comp=Z,2.0nm,0.5s
CDF Champ du Feu 86.53 328 *eP* **P** **19 34 58.2 -1.5**
comp=Z,1.9nm,0.5s
SFTF Sexfontaines 87.67 329 *eP* P 19 35 01.7 -3.4
comp=Z,10nm,0.7s
SFTF Sexfontaines 87.67 329 *eP* P 19 35 01.7 -3.4
comp=Z,10nm,0.7s
PV01 Paradox Valley 87.88 45 P P 19 35 13.4 +6.8
comp=Z,376nm,1.2s

IDC 19 19:26:50.6±1.0, 56.31S×25.60W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.8/16, mbtmp3.9/3, Error ellipse: s-maj=45.7km s-min=30.9km az=87.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CPUP	**Villa Florida**	**37.65**	**309**	P		P		19 34 07.1	-0.1
	0.3nm,0.3s,baz=190,slow=8.0,SNR=3.7								
VNDA	**Vanda**	**46.35**	**182**	P		P		19 35 17.7	-0.1
	1.3nm,0.7s,baz=187,slow=7.9,SNR=6.9								
TORD	**Torodi Ar. Bea**	**72.86**	**28**	P		P		19 38 21.2	+0.1
	1.2nm,0.6s,baz=200,slow=5.7,SNR=14								
SONM	**Songino Array**	**149.86**	**86**	PKPbc		PKPbc		19 46 41.1	-0.7
	0.6nm,0.6s,baz=224,slow=1.4,SNR=4.4								
ILAR	**Eielson Array**	**150.95**	**311**	PKPbc		PKPbc		19 46 43.5	-0.3
	1.4nm,0.9s,baz=117,slow=1.5,SNR=10								

*IDC **19** 19:37:11.2±1.3, 56.01N×162.49E, h0km, mb3.7/4, mb1 4.0/6, mb1mx3.5/28, mbtmp3.8/6, ML3.4/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/39, Error ellipse: s-maj=40.5km s-min=20.9km az=149.0*
*MOS **19** 19:37:13.6±1.1, 55.77N×162.59E, h35km, mb4.1/4, Error ellipse: s-maj=16.0km s-min=8.2km az=74.6*
*ISCJB **19** 19:37:14.1±0.4, 55.74N±0.02×162.51E±0.05, h41km±7km, mb3.7/5, MS3.5/2, Error ellipse: s-maj=4.3km s-min=3.3km az=8.1*
*KRSC **19** 19:37:14.6±0.2, 55.75N×162.39E, h33km±23km, ML4.0*

ISC 19 19:37:14.3±1.1, 55.75N±0.03×162.50E±0.03, h27km±9km, n59, σ1.330/97, mb3.9/5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KBG	**Krutoberegovo**	**0.52**	**13**	PN		**Pb**		**19 37 24.6**	**-0.3**
KBG				*i* S		**Sb**		**19 37 32.8**	**+0.7**
KBG	**Krutoberegovo**	**0.52**	**13**	*e*P		**Pb**		**19 37 24.6**	**-0.3**
KBG				*i* S		**Sb**		**19 37 32.8**	**+0.7**
ZLN	**Zelenaya**	**0.99**	**286**	P		**Pn**		**19 37 31.9**	**-0.7**
ZLN				*i* S		**Sn**		**19 37 44.1**	**-1.6**
SMKR	**Semkarok**	**1.01**	**326**	*i* P		**Pn**		**19 37 32.1**	**-0.7**
SMKR				*i* S		**Sn**		**19 37 44.9**	**-1.3**
BZGR	**Bezymyannyi-Gr**	**1.04**	**281**	*i* P		**Pn**		**19 37 32.3**	**-0.9**
BZGR				*i* S		**Sn**		**19 37 45.3**	**-1.5**
CIRR	**Tsirk**	**1.05**	**291**	P		**Pn**		**19 37 32.7**	**-0.7**
CIRR				*i* S		**Sn**		**19 37 45.7**	**-1.6**
LGNR	**Loginova**	**1.07**	**289**	P		**Pn**		**19 37 33.3**	**-0.5**
LGNR				*i* S		**Sn**		**19 37 47.3**	**-0.7**
BDR	**Baidarnaya**	**1.09**	**319**	P		**Pn**		**19 37 33.6**	**-0.3**
BDR				*i* S		**Sn**		**19 37 47.0**	**-1.2**
BZMR	**Bezymyannaya**	**1.15**	**280**	*e*P		**Pn**		**19 37 34.1**	**-0.7**
BZMR				*i* S		**Sn**		**19 37 48.0**	**-1.7**
BZWR	**Bezymyannyi-We**	**1.15**	**281**	*i* P		**Pn**		**19 37 34.3**	**-0.5**
BZWR				*i* S		**Sn**		**19 37 47.7**	**-2.0**
SRKR	**Sorokina**	**1.17**	**321**	P		**Pn**		**19 37 34.6**	**-0.4**
SRKR				*i* S		**Sn**		**19 37 49.3**	**-0.8**
KLY	**Klyuchi**	**1.18**	**299**	PN		**Pn**		**19 37 32.7**	**-2.3**
KLY				S		**Sn**		**19 37 46.5**	**-3.7**
KLY	**Klyuchi**	**1.18**	**299**	*e*P		**Pn**		**19 37 32.7**	**-2.3**
KLY				*i* S		**Sn**		**19 37 46.5**	**-3.7**
KRSR	**Krestovskiy**	**1.19**	**294**	*i* P		**Pn**		**19 37 34.1**	**-1.1**
KRSR				*i* S		**Sn**		**19 37 48.2**	**-2.3**
KIRR	**Kirishev**	**1.23**	**280**	*i* P		**Pn**		**19 37 35.6**	**-0.3**
KIRR				*i* S		**Sn**		**19 37 51.0**	**-0.8**
MKZ	**Mys Kozlova**	**1.28**	**201**	PN		**Pn**		**19 37 35.6**	**-0.7**
MKZ				S		**Sn**		**19 37 50.0**	**-2.5**
MKZ	**Mys Kozlova**	**1.28**	**201**	P		**Pn**		**19 37 35.6**	**-0.7**
MKZ				*i* S		**Sn**		**19 37 50.0**	**-2.5**
KMNR	**Kamenistaya**	**1.28**	**271**	*i* P		**Pn**		**19 37 36.5**	**0.0**
KMNR				*i* S		**Sn**		**19 37 53.3**	**+0.5**
KPT	**Kopyto**	**1.30**	**280**	*i* P		**Pn**		**19 37 36.6**	**-0.2**
KPT				*i* S		**Sn**		**19 37 53.3**	**-0.1**
TUMR	**Tumrok**	**1.42**	**252**	*i* P		**Pn**		**19 38 37.7**	**+0.3**
TUMR				*i* S		**Sn**		**19 37 56.4**	**+0.1**
KOZR	**Kozyr**	**1.50**	**283**	PN		**Pn**		**19 37 40.4**	**+0.9**
KOZR				S		**Sn**		**19 37 59.6**	**+1.5**
KOZ	**Kozyrevsk**	**1.51**	**283**	*i* P		**Pn**		**19 37 40.4**	**+0.8**
KOZ				*i* S		**Sn**		**19 37 59.6**	**+1.2**
SRDR	**Sredinnyy**	**1.66**	**291**	P		**Pn**		**19 37 42.1**	**+0.4**
SRDR				*i* S		**Sn**		**19 38 02.8**	**+0.6**
BKI	**Bering**	**2.05**	**104**	PN		**Pn**		**19 37 46.7**	**-0.2**
BKI				S		**Sn**		**19 38 10.8**	**-0.8**
BKI	**Bering**	**2.05**	**104**	P		**Pn**		**19 37 46.7**	**-0.2**
BKI				*i* S		**Sn**		**19 38 10.8**	**-0.8**
ESO	**Esso**	**2.15**	**276**	PN		**Pn**		**19 37 49.2**	**+0.8**
ESO				S		**Sn**		**19 38 13.9**	**-0.3**
ESO	**Esso**	**2.15**	**276**	*e*P		**Pn**		**19 37 49.2**	**+0.8**
ESO				*i* S		**Sn**		**19 38 13.9**	**-0.3**
KII	**Karymskiy**	**2.46**	**227**	*e*P		**Pn**		**19 37 53.6**	**+0.9**
KII				*e*S		**Sn**		**19 38 21.6**	**-0.3**
SPN	**Mys Shipunski**	**3.03**	**210**	PN		**Pn**		**19 37 59.7**	**-0.7**
SPN	**Mys Shipunski**	**3.03**	**210**	*e*P		**Pn**		**19 37 59.7**	**-0.7**
SPN				*i* S		**Sn**		**19 38 33.5**	**-2.2**
NLC	**Nalytchevo**	**3.17**	**217**	PN		**Pn**		**19 38 02.3**	**-0.1**
NLC	**Nalytchevo**	**3.17**	**217**	*e*P		**Pn**		**19 38 02.3**	**-0.1**
NLC				*i* S		**Sn**		**19 38 37.7**	**-1.6**
SDLR	**Sedlovina**	**3.25**	**222**	P		**Pn**		**19 38 04.5**	**+0.9**
SDLR				*i* S		**Sn**		**19 38 40.4**	**-1.1**
KRER	**Koryakskii**	**3.29**	**223**	*e*P		**Pn**		**19 38 05.7**	**+1.6**
KRER				*e*S		**Sn**		**19 38 43.0**	**+0.6**
SMAR	**Somma**	**3.30**	**222**	*e*P		**Pn**		**19 38 04.8**	**+0.5**
SMAR				*e*S		**Sn**		**19 38 41.4**	**-1.3**
AVH	**Avacha**	**3.32**	**223**	P		**Pn**		**19 38 06.6**	**+2.1**
AVH				*i* S		**Sn**		**19 38 43.9**	**+0.8**
UGLR	**Uglovaya**	**3.33**	**222**	P		**Pn**		**19 38 05.5**	**+0.8**
KOK	**Koryaka**	**3.34**	**224**	P		**Pn**		**19 38 06.2**	**+1.4**
KOK				*i* S		**Sn**		**19 38 43.7**	**+0.1**
GNL	**Ganaly**	**3.35**	**234**	P		**Pn**		**19 38 06.0**	**+1.0**
PET	**Petropavlovsk**	**3.54**	**221**	*e*PN		**Pn**		**19 38 09.1**	**+1.7**
PET				pmax	pmax				
	comp=Z,43nm,0.5s								
PET	**Petropavlovsk**	**3.54**	**221**	P		**Pn**		**19 38 09.5**	**+2.1**
PET				*i* S		**Sn**		**19 38 48.0**	**-0.3**
PETK	**Petropavlovsk-**	**3.86**	**229**	PN		**Pn**		**19 38 12.8**	**+1.0**
PETK								19 39 04.1	
PETK				pmax	pmax				
	comp=Z,2.0nm,0.3s								
PETK				smax	smax				
	comp=N,1.0nm,0.3s								
PETK				MLR	MLR				
	comp=Z,164nm,18.7s								
PETK	**Petropavlovsk-**	**3.86**	**229**	Pn		**Pn**		**19 38 12.8**	**+1.0**
	comp=Z,1.6nm,0.3s,baz=68,slow=15,SNR=24								
PETK				Sn		**Sb**		**19 39 04.1**	**-3.8**
	comp=Z,0.5nm,0.3s,baz=133,slow=52,SNR=1.7								
PETK				LR	LR			19 39 56.8	
	comp=Z,164nm,18.7s,baz=84,slow=41								
RUS	**Russkaya**	**4.07**	**217**	PN		**Pn**		**19 38 14.7**	**0.0**
RUS	**Russkaya**	**4.07**	**217**	P		**Pn**		**19 38 14.7**	**0.0**
RUS				*i* S		**Sn**		**19 38 59.5**	**-1.9**
MTVR	**Mutnovka**	**4.14**	**220**	*e*P		**Pn**		**19 38 17.0**	**+1.1**
MTVR				*i* S		**Sn**		**19 39 04.2**	**+0.7**
APC	**Apacha**	**4.22**	**230**	P		**Pn**		**19 38 18.4**	**+1.6**
ASAK	**Asacha**	**4.33**	**221**	*e*P		**Pn**		**19 38 19.9**	**+1.5**
ASAK				*i* S		**Sn**		**19 39 08.0**	**+0.1**
BILL	**Bilibino**	**12.46**	**7**	*e*PN		**Pn**		**19 40 09.9**	**+0.4**
BILL				pmax	pmax				
	comp=Z,8.0nm,1.2s								
ASAJ	**Asahikawa**	**17.24**	**236**	P		**P**		**19 41 16.1**	**+1.8**
	comp=Z,0.3nm,0.3s,baz=36,slow=7.6,SNR=4.1								
ASAJ				LR	LR			19 48 57.3	
	comp=Z,43nm,18.3s,baz=87,slow=41								
ERM	**Erimo**	**18.64**	**231**	*i* P		**P**		**19 41 30.1**	**+0.4**
TIXI	**Tiksi**	**21.34**	**331**	*i* P		**P**		**19 42 00.6**	**+1.8**
TIXI				pmax	pmax				
	comp=Z,4.0nm,0.8s								
ILAR	**Eielson Array**	**25.97**	**49**	P		**P**		**19 42 43.7**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=265,slow=8.3,SNR=7.4								
BBB	**Bella Bella**	**39.42**	**65**	LR		LR		20 00 11.9	
	comp=Z,46nm,20.0s,baz=343,slow=35								
MKAR	**Makanchi Array**	**48.29**	**295**	P		**P**		**19 45 53.0**	**+0.2**
MKAR	**Makanchi Array**	**48.29**	**295**	P		**P**		**19 45 53.0**	**+0.2**
	comp=Z,0.3nm,0.8s,baz=67,slow=4.8,SNR=3.6								
FINES	**FINESS Array B**	**58.23**	**337**	P		**P**		**19 47 04.6**	**-1.0**
	comp=Z,2.7nm,0.9s,baz=38,slow=7.5,SNR=6.6								
SCHQ	**Schefferville**	**62.64**	**30**	LR		LR		20 16 36.9	
	comp=Z,40nm,19.7s,baz=337,slow=38								
TXAR	**Lajitas Array**	**68.34**	**70**	P		**P**		**19 48 13.9**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=298,slow=3.7,SNR=8.5								

IDC 19 19:37:44.3±0.6, 5.18N×125.99E, h0km, mb4.0/15, mb1 4.1/15, mb1mx4.0/24, mbtmp4.0/15, 1C-1D, Error ellipse: s-maj=39.9km s-min=12.3km az=74.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.92**	**348**	Pn		Pb		19 38 20.1	-0.1
	42nm,0.3s,baz=246,slow=10.0,SNR=2.6								
DAV				Sn		Sg		19 38 47.7	+1.6
	46nm,0.3s,baz=334,slow=20,SNR=6.5								
DMPH	**Davao City--Mi**	**1.95**	**346‖**	*e*P		Pg		19 38 24.7	+3.0
DMPH				*e*S		Sg		19 38 49.2	+2.2
CTDH	**Cotabato--PC H**	**2.67**	**319‖**	*i*P		Pg		19 38 35.4	-0.1
CGP	**Cagayan de Oro**	**3.50**	**338**	*e*P		Pb		19 38 44.6	-2.5
FITZ	**Fitzroy Crossi**	**23.14**	**181**	P		P		19 42 53.6	+1.3
	1.2nm,0.4s,baz=3.1,slow=11,SNR=14								
WRA	**Warramunga Arr**	**26.28**	**162**	P		P		19 43 21.5	-0.2
	3.6nm,0.6s,baz=343,slow=10.0,SNR=23								
CMAR	**Chiang Mai Arr**	**29.52**	**299**	P		P		19 43 52.2	+1.5
	0.9nm,0.7s,baz=117,slow=7.5,SNR=3.0								
ASAR	**Alice Springs**	**29.69**	**165**	P		P		19 43 51.6	-0.5
	1.0nm,0.6s,baz=351,slow=7.1,SNR=18								
ASAR				PcP		PcP		19 46 56.1	-0.5
	0.8nm,0.8s,baz=352,slow=2.2,SNR=5.2								
KSRS	**Korea Array**	**32.17**	**3**	P		P		19 44 15.5	+1.7
	0.5nm,0.5s,baz=186,slow=11,SNR=3.3								
USRK	**Ussuriysk Arra**	**39.22**	**7**	P		P		19 45 14.2	0.0
	1.3nm,0.6s,baz=212,slow=7.0,SNR=4.0								
STKA	**Stephens Creek**	**39.74**	**159**	P		P		19 45 18.6	-0.2
	2.5nm,0.6s,baz=344,slow=9.1,SNR=6.9								
SONM	**Songino Array**	**45.70**	**342**	P		P		19 46 07.3	+0.2
	0.5nm,0.5s,baz=159,slow=7.6,SNR=5.4								
SONM				PcP		PcP		19 47 44.8	-0.4
	0.3nm,0.5s,baz=158,slow=4.7,SNR=2.9								
MKAR	**Makanchi Array**	**55.95**	**325**	P		P		19 47 24.4	0.0
	0.7nm,0.4s,baz=118,slow=7.1,SNR=31								
MKAR				PcP		PcP		19 48 21.4	-1.5
	0.7nm,0.7s,baz=106,slow=4.3,SNR=3.8								
ZALV	**Zalesovo Beam**	**58.97**	**333**	P		P		19 47 45.0	-0.5
	0.4nm,0.4s,baz=134,slow=6.4,SNR=3.5								
KURBB	**Kurchatov Arra**	**60.13**	**327**	P		P		19 47 52.9	-0.7
	1.8nm,0.7s,baz=118,slow=8.3,SNR=23								
ILAR	**Eielson Array**	**84.12**	**25**	P		P		19 50 17.2	+0.2
	0.2nm,0.5s,baz=262,slow=4.8,SNR=4.5								
VNDA	**Vanda**	**84.95**	**173**	P		P		19 50 22.1	+1.3
	0.6nm,0.7s,baz=299,slow=6.8,SNR=3.4								
ARCES	**ARCESS Array B**	**88.84**	**340**	P		P		19 50 38.6	-1.4
	4.8nm,0.9s,baz=82,slow=6.5,SNR=3.1								
FINES	**FINESS Array B**	**90.22**	**332**	P		P		19 50 45.4	-1.1
	1.5nm,0.8s,baz=60,slow=6.7,SNR=5.3								
TORD	**Torodi Ar. Bea**	**121.77**	**289**	PKP		PKPdf		19 56 40.8	-0.7
	0.3nm,0.4s,baz=64,slow=1.6,SNR=5.0								

*ISK **19** 19:38:17.8, 37.92N×36.61E, h5km, MD3.4*
*ISCJB **19** 19:38:19.2±0.5, 37.93N±0.02×36.59E±0.03, h2km±5km, Error ellipse: s-maj=3.9km s-min=3.1km az=173.5*
*DDA **19** 19:38:19.2, 37.90N×36.56E, h8km, MD3.1*
*CSEM **19** 19:38:19.3±0.2, 37.92N×36.59E, h2km, MD3.1, Error ellipse: s-maj=4.0km s-min=3.5km az=95.0*

ISC 19 19:38:19.3±1.1, 37.92N±0.02×36.61E±0.02, h8km±9km, n51, σ0.980/72, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.40**	**211**	*i* P		**Pg**		**19 38 26.7**	**-0.4**
ANDN				*i* S		**Sg**		**19 38 32.8**	**+0.5**
ANDN	**Andirin**	**0.40**	**211**	*i* P		**Pg**		**19 38 26.7**	**-0.4**
ANDN				*i* S		**Sg**		**19 38 32.8**	**+0.5**
KMRS	**Kahramanmaras**	**0.48**	**151**	*e*PG		**Pg**		**19 38 28.4**	**-0.1**
KMRS				*e*SG		**Sg**		**19 38 35.4**	**+0.7**
KMRS	**Kahramanmaras**	**0.48**	**151**	*e*Pg		**Pg**		**19 38 28.4**	**-0.1**
KMRS				*e*Sg		**Sg**		**19 38 35.4**	**+0.7**
SARI	**SarD1z-Kayseri**	**0.51**	**343**	*e*PG		**Pg**		**19 38 29.0**	**-0.1**
SARI				*e*SG		**Sb**		**19 38 37.2**	**-1.0**
SARI	**SarD1z-Kayseri**	**0.51**	**343**	*e*Pg		**Pg**		**19 38 29.0**	**-0.1**
AYKD	**Aykdinkavak**	**0.53**	**163**	*i* P		**Pg**		**19 38 29.7**	**+0.2**
AYKD				*i* S		**Sg**		**19 38 36.7**	**+0.3**
KOZT	**Kozan**	**0.76**	**235**	*e*PG		**Pg**		**19 38 33.5**	**-0.4**
KOZT				*e*SG		**Sb**		**19 38 45.5**	**+0.2**
KOZT	**Kozan**	**0.76**	**235**	*e*Pg		**Pg**		**19 38 33.5**	**-0.4**
KOZT				*e*Sg		**Sb**		**19 38 45.5**	**+0.2**
PINB	**Pinarbasi**	**0.77**	**348**	*i* P		**Pg**		**19 38 34.0**	**-0.2**
PINB				*i* S		**Sb**		**19 38 46.2**	**+0.3**
PINB	**Pinarbasi**	**0.77**	**348**	*i* P		**Pg**		**19 38 34.0**	**-0.2**
PINB				*i* S		**Sb**		**19 38 46.2**	**+0.3**
GAZ	**Gaziantep**	**0.89**	**147**	*e*PG		**Pg**		**19 38 35.9**	**-0.5**
GAZ	**Gaziantep**	**0.89**	**147**	*e*Pg		**Pg**		**19 38 35.9**	**-0.5**
DARE	**Darende-Malaty**	**0.95**	**47**	*e*PG		**Pg**		**19 38 36.9**	**-0.6**
GZT	**Gaziantep**	**0.95**	**126**	*i* P		**Pg**		**19 38 37.8**	**+0.3**
GZT				*i* S		**Sn**		**19 38 52.6**	**-0.3**
AKCD	**Akcadag**	**1.10**	**70**	*i* P		**Pg**		**19 38 40.4**	**0.0**
AKCD				*i* S		**Sn**	

IDC 19 19:40:55.7±1.1,5°27N×125°96E,h0km,mb3.8/7, mb1 3.9/7,mb1mx3.7/23,mbtmp3.8/7,1C,Error ellipse: s-maj=119.7km s-min=16.7km az=70.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**1.83**	**348**	Sn	Sg	19 41 57.9	+3.4
	61nm,0.3s,baz=91,slow=19,SNR=2.1						
CTBH	**Cotabato--PC H**	**2.58**	**319**	⇑*i*P	Pg	19 41 47.1	+1.9
CGP	**Cagayan de Oro**	**3.41**	**338**	*e*P	Pb	19 41 58.4	+1.4
FITZ	**Fitzroy Crossi**	**23.23**	**181**	P	P	19 46 05.1	+0.5
	1.5nm,0.8s,baz=9.5,slow=12,SNR=2.5						
WRA	**Warramunga Arr**	**26.37**	**162**	P	P	19 46 33.8	0.0
	1.1nm,0.5s,baz=343,slow=10.0,SNR=5.3						
ASAR	**Alice Springs**	**29.79**	**165**	P	P	19 47 05.1	+0.8
	0.6nm,0.5s,baz=347,slow=6.9,SNR=7.0						
ASAR				PcP	PcP	19 50 07.2	-1.0
	0.5nm,0.6s,baz=347,slow=2.9,SNR=4.2						
STKA	**Stephens Creek**	**39.83**	**159**	P	P	19 48 30.6	-0.4
	2.0nm,0.5s,baz=343,slow=12,SNR=4.5						
SONM	**Songino Array**	**45.60**	**342**	P	P	19 49 19.4	+1.6
	0.3nm,0.3s,baz=153,slow=11,SNR=4.7						
MKAR	**Makanchi Array**	**55.86**	**325**	P	P	19 50 35.6	+0.5
	0.4nm,0.3s,baz=120,slow=7.2,SNR=12						
MKAR				PcP	PcP	19 51 33.1	-0.9
	0.6nm,0.8s,baz=123,slow=4.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**58.88**	**333**	P	P	19 50 54.8	-1.5
	0.5nm,0.3s,baz=134,slow=6.2,SNR=3.7						
TORD	**Torodi Ar. Bea**	**121.71**	**289**	PKP	PKPdf	19 59 51.6	-1.1
	0.5nm,0.7s,baz=32,slow=4.1,SNR=3.1						

*ISCJB **19** 19:47:09.1±0.2,42°.31N±0°.01×13°.38E±0°.02,h13km±2km, Error ellipse: s-maj=2.3km s-min=1.7km az=152.9*
*LDG **19** 19:47:09.1±0.1,42°.31N×13°.36E,h2km,Ml3.2/5,Error ellipse: s-maj=3.3km s-min=2.2km az=44.0*
*ROM **19** 19:47:09.5±0.1,42°.30N×13°.38E,h9km,Ml3.2/38,Error ellipse: s-maj=0.8km s-min=0.6km az=54.0*
*CSEM **19** 19:47:09.6±0.1,42°.31N×13°.38E,h8km,ML3.8/32,Error ellipse: s-maj=2.2km s-min=1.7km az=63.0*
*BEO **19** 19:47:12.6±2.9,42°.15N×13°.26E,h40km±1km,ML3.4/7*
ISC 19 19:47:09.9±0.7,42°30N±0°.01×13°37E±0°.01,h14km±4km, n149,σ1§26/234,7C-2D,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.06**	**20**	Pg	**Pg**	**19 47 12.0**	**-0.7**
AQU				Sg	**Sg**	**19 47 13.9**	**-0.7**
	30μm,0.5s						
AQU	**L'Aquila**	**0.06**	**20**	Pg	**Pg**	**19 47 12.0**	**-0.7**
AQU				Sg	**Sg**	**19 47 13.9**	**-0.7**
	30μm,0.5s						
FAGN	**Fagnano**	**0.16**	**102**	Pg	**Pg**	**19 47 13.3**	**-0.6**
FAGN				Sg	**Sg**	**19 47 16.5**	**-0.1**
	30μm,0.5s						
FAGN	**Fagnano**	**0.16**	**102**	Pg	**Pg**	**19 47 13.3**	**-0.6**
FAGN				Sg	**Sg**	**19 47 16.5**	**-0.1**
	30μm,0.5s						
FIAM	**Fiamignano**	**0.19**	**261**	Pg	**Pb**	**19 47 14.3**	**-1.0**
FIAM				Sg	**Sg**	**19 47 17.7**	**+0.2**
	4μm,0.5s						
FIAM	**Fiamignano**	**0.19**	**261**	Pg	**Pb**	**19 47 14.3**	**-1.0**
FIAM				Sg	**Sg**	**19 47 17.7**	**+0.2**
	4μm,0.5s						
CAMP	**Campotosto**	**0.24**	**6**	Pg	**Pg**	**19 47 14.5**	**-0.7**
CAMP				Sg	**Sg**	**19 47 19.7**	**+0.9**
	5μm,0.6s						
CAMP	**Campotosto**	**0.24**	**6**	Pg	**Pg**	**19 47 14.5**	**-0.7**
CAMP				Sg	**Sg**	**19 47 19.7**	**+0.9**
	5μm,0.6s						
PTQR	**Pietraquaria**	**0.28**	**176**	Pg	**Pg**	**19 47 15.5**	**-0.3**
PTQR				Sg	**Sb**	**19 47 20.1**	**-1.2**
PTQR	**Pietraquaria**	**0.28**	**176**	Pg	**Pg**	**19 47 15.5**	**-0.3**
PTQR				Sg	**Sb**	**19 47 20.1**	**-1.2**
VCEL	**Villa Celiera**	**0.36**	**74**	Pg	**Pg**	**19 47 16.5**	**-0.7**
VCEL				Sg	**Sb**	**19 47 23.3**	**-0.4**
	7μm,0.5s						
VCEL	**Villa Celiera**	**0.36**	**74**	Pg	**Pg**	**19 47 16.5**	**-0.7**
VCEL				Sg	**Sb**	**19 47 23.3**	**-0.4**
	7μm,0.5s						
TERO	**Teramo**	**0.36**	**28**	⇑*i*Pg	**Pg**	**19 47 16.8**	**-0.6**
TERO				Sg	**Sg**	**19 47 22.5**	**+0.1**
	5μm,0.6s						
TERO	**Teramo**	**0.36**	**28**	⇑*i*Pg	**Pg**	**19 47 16.8**	**-0.6**
TERO				Sg	**Sg**	**19 47 22.5**	**+0.1**
	5μm,0.6s						
LNSS	**Leonessa**	**0.39**	**321**	Pg	**Pg**	**19 47 17.5**	**-0.3**
LNSS				Sg	**Sb**	**19 47 24.5**	**-0.1**
	3μm,0.4s						
LNSS	**Leonessa**	**0.39**	**321**	Pg	**Pg**	**19 47 17.5**	**-0.3**
LNSS				Sg	**Sb**	**19 47 24.5**	**-0.1**
	3μm,0.4s						
CERT	**Cerreto**	**0.46**	**220**	Pg	**Pg**	**19 47 18.6**	**-0.4**
CERT				Sg	**Sb**	**19 47 25.8**	**-0.6**
	4μm,0.4s						
CERT	**Cerreto**	**0.46**	**220**	Pg	**Pg**	**19 47 18.6**	**-0.4**
CERT				Sg	**Sb**	**19 47 25.8**	**-0.6**
	4μm,0.4s						
VVLD	**Villa Vallelon**	**0.47**	**157**	Pg	**Pg**	**19 47 18.7**	**-0.5**
VVLD				Sg	**Sb**	**19 47 26.8**	**+0.1**
	645nm,0.5s						
VVLD	**Villa Vallelon**	**0.47**	**157**	Pg	**Pg**	**19 47 18.7**	**-0.5**
VVLD				Sg	**Sb**	**19 47 26.8**	**+0.1**
	645nm,0.5s						
INTR	**Introdacqua**	**0.49**	**126**	Pg	**Pg**	**19 47 18.9**	**-0.7**
INTR				Sg	**Sb**	**19 47 27.1**	**-0.2**
	2μm,0.5s						
INTR	**Introdacqua**	**0.49**	**126**	Pg	**Pg**	**19 47 18.9**	**-0.7**
INTR				Sg	**Sb**	**19 47 27.1**	**-0.2**
	2μm,0.5s						
GUAR	**Guarcino**	**0.51**	**185**	Pg	**Pb**	**19 47 20.2**	**-0.4**
GUAR				Sg	**Sb**	**19 47 28.0**	**+0.2**
	1μm,0.5s						
GUAR	**Guarcino**	**0.51**	**185**	Pg	**Pb**	**19 47 20.2**	**-0.4**
GUAR				Sg	**Sb**	**19 47 28.0**	**+0.2**
	1μm,0.5s						
MNS	**Montasola**	**0.52**	**280**	Pg	**Pg**	**19 47 19.5**	**-0.7**
MNS				Sg	**Sb**	**19 47 27.9**	**-0.4**
	1μm,0.5s						
MNS	**Montasola**	**0.52**	**280**	Pg	**Pg**	**19 47 19.5**	**-0.7**
MNS				Sg	**Sb**	**19 47 27.9**	**-0.4**
	1μm,0.5s						
MTCE	**Montecelio**	**0.55**	**240**	Pg	**Pg**	**19 47 20.2**	**-0.4**
MTCE				Sg	**Sb**	**19 47 28.6**	**-0.3**
	1μm,0.3s						
MTCE	**Montecelio**	**0.55**	**240**	Pg	**Pg**	**19 47 20.2**	**-0.4**
MTCE				Sg	**Sb**	**19 47 28.6**	**-0.3**
	1μm,0.3s						
NRCA	**Norcia**	**0.57**	**340**	Pg	**Pg**	**19 47 20.3**	**-0.8**
NRCA				Sg	**Sb**	**19 47 29.2**	**-0.5**
	1μm,0.2s						
NRCA	**Norcia**	**0.57**	**340**	Pg	**Pg**	**19 47 20.3**	**-0.8**
NRCA				Sg	**Sb**	**19 47 29.2**	**-0.5**
	1μm,0.2s						
POFI	**Posta Fibreno**	**0.63**	**156**	Pg	**Pg**	**19 47 21.8**	**-0.5**
POFI	**Posta Fibreno**	**0.63**	**156**	Pg	**Pg**	**19 47 21.8**	**-0.5**
TRTR	**Tortoreto Alta**	**0.65**	**38**	Pg	**Pb**	**19 47 22.6**	**-0.4**
TRTR	**Tortoreto Alta**	**0.65**	**38**	Pg	**Pb**	**19 47 22.6**	**-0.4**
LPEL	**Lama dei Pelig**	**0.65**	**112**	Pg	**Pg**	**19 47 21.4**	**-1.3**
LPEL				Sg	**Sb**	**19 47 31.7**	**-0.4**
	870nm,0.3s						
LPEL	**Lama dei Pelig**	**0.65**	**112**	Pg	**Pg**	**19 47 21.4**	**-1.3**
LPEL				Sg	**Sb**	**19 47 31.7**	**-0.4**
	870nm,0.3s						
CESX	**Cesi**	**0.67**	**298**	Pg	**Pg**	**19 47 22.2**	**-0.7**
CESX				Sg	**Sb**	**19 47 32.3**	**-0.1**
	818nm,0.4s						
CESX	**Cesi**	**0.67**	**298**	Pg	**Pg**	**19 47 22.2**	**-0.7**
CESX				Sg	**Sb**	**19 47 32.3**	**-0.1**
	818nm,0.4s						
SDI	**San Donato**	**0.67**	**151**	Pg	**Pg**	**19 47 22.1**	**-0.9**
SDI				Sg	**Sb**	**19 47 32.0**	**-0.6**
SDI	**San Donato**	**0.67**	**151**	Pg	**Pg**	**19 47 22.1**	**-0.9**
SDI				Sg	**Sb**	**19 47 32.0**	**-0.6**
OFFI	**Offida**	**0.68**	**20**	Pg	**Pg**	**19 47 22.8**	**-0.3**
	3μm,0.5s						
OFFI	**Offida**	**0.68**	**20**	Pg	**Pg**	**19 47 22.8**	**-0.3**
	3μm,0.5s						
RMP	**Rome, Mte Porz**	**0.70**	**226**	Pg	**Pg**	**19 47 22.9**	**-0.6**
RMP				Sg	**Sb**	**19 47 33.5**	**+0.2**
	1μm,0.6s						
RMP	**Rome, Mte Porz**	**0.70**	**226**	Pg	**Pg**	**19 47 22.9**	**-0.6**
RMP				Sg	**Sb**	**19 47 33.5**	**+0.2**
	1μm,0.6s						
CAFR	**Castel Frentan**	**0.73**	**95**	Pg	**Pg**	**19 47 23.4**	**-0.6**
CAFR	**Castel Frentan**	**0.73**	**95**	Pg	**Pg**	**19 47 23.4**	**-0.6**
RDP	**Rocca di Papa**	**0.73**	**222**	Pg	**Pb**	**19 47 24.3**	**-0.1**
RDP				Sg	**Sb**	**19 47 33.6**	**-0.7**
	2μm,0.5s						
RDP	**Rocca di Papa**	**0.73**	**222**	Pg	**Pb**	**19 47 24.3**	**-0.1**
RDP				Sg	**Sb**	**19 47 33.6**	**-0.7**
	2μm,0.5s						
GIUL	**Giuliano Di Ro**	**0.75**	**187**	Pg	**Pb**	**19 47 24.4**	**-0.3**
GIUL				Sg	**Sb**	**19 47 34.7**	**0.0**
	601nm,0.7s						
GIUL	**Giuliano Di Ro**	**0.75**	**187**	Pg	**Pb**	**19 47 24.4**	**-0.3**
GIUL				Sg	**Sb**	**19 47 34.7**	**0.0**
	601nm,0.7s						
FDMO	**Fiordimonte**	**0.77**	**344**	Pg	**Pg**	**19 47 23.6**	**-1.2**
FDMO				Sg	**Sb**	**19 47 35.9**	**+0.5**
	572nm,0.5s						
FDMO	**Fiordimonte**	**0.77**	**344**	Pg	**Pg**	**19 47 23.6**	**-1.2**
FDMO				Sg	**Sb**	**19 47 35.9**	**+0.5**
	572nm,0.5s						
CESI	**CESI - Serrava**	**0.79**	**334**	Pg	**Pg**	**19 47 24.4**	**-0.8**
CESI				Sg	**Sb**	**19 47 36.2**	**+0.2**
	321nm,0.5s						
CESI	**CESI - Serrava**	**0.79**	**334**	Pg	**Pg**	**19 47 24.4**	**-0.8**
CESI				Sg	**Sb**	**19 47 36.2**	**+0.2**
	321nm,0.5s						
LAV9	**Lanuvio**	**0.80**	**219**	Pg	**Pb**	**19 47 25.5**	**-0.1**
	2μm,0.3s						
LAV9	**Lanuvio**	**0.80**	**219**	Pg	**Pb**	**19 47 25.5**	**-0.1**
	2μm,0.3s						
RNI2	**Rionero Sannit**	**0.83**	**136**	Pg	**Pg**	**19 47 25.6**	**-0.4**
RNI2				Sg	**Sg**	**19 47 36.2**	**-0.8**
	823nm,0.7s						
RNI2	**Rionero Sannit**	**0.83**	**136**	Pg	**Pg**	**19 47 25.6**	**-0.4**
RNI2				Sg	**Sg**	**19 47 36.2**	**-0.8**
	823nm,0.7s						
CERA	**Filignano**	**0.85**	**145**	Pg	**Pg**	**19 47 25.5**	**-0.9**
CERA				Sg	**Sb**	**19 47 37.8**	**+0.1**
	850nm,0.6s						
CERA	**Filignano**	**0.85**	**145**	Pg	**Pg**	**19 47 25.5**	**-0.9**
CERA				Sg	**Sb**	**19 47 37.8**	**+0.1**
	850nm,0.6s						
GUMA	**Gualdo di Mace**	**0.87**	**28**	Pg	**Pg**	**19 47 24.0**	**-2.7**
GUMA				Sg	**Sg**	**19 47 35.6**	**-2.5**
	3μm,0.3s						
GUMA	**Gualdo di Mace**	**0.87**	**28**	Pg	**Pg**	**19 47 24.0**	**-2.7**
GUMA				Sg	**Sg**	**19 47 35.6**	**-2.5**
	3μm,0.3s						
ASSB	**Assisi San Ben**	**0.91**	**325**	Pg	**Pg**	**19 47 26.7**	**-0.9**
ASSB				Sg	**Sb**	**19 47 39.5**	**0.0**
	581nm,0.4s						
ASSB	**Assisi San Ben**	**0.91**	**325**	Pg	**Pg**	**19 47 26.7**	**-0.9**
ASSB				Sg	**Sb**	**19 47 39.5**	**0.0**
	581nm,0.4s						
MIDA	**Miranda**	**0.93**	**135**	Pg	**Pg**	**19 47 26.3**	**-1.6**
MIDA				Sg	**Sg**	**19 47 39.4**	**-0.6**
	620nm,0.6s						
MIDA	**Miranda**	**0.93**	**135**	Pg	**Pg**	**19 47 26.3**	**-1.6**
MIDA				Sg	**Sg**	**19 47 39.4**	**-0.6**
	620nm,0.6s						
SNTG	**Esanatoglia**	**1.01**	**342**	Pg	**Pg**	**19 47 27.9**	**-1.5**
SNTG				Sg	**Sb**	**19 47 42.5**	**+0.2**
	241nm,0.6s						
SNTG	**Esanatoglia**	**1.01**	**342**	Pg	**Pg**	**19 47 27.9**	**-1.5**
SNTG				Sg	**Sb**	**19 47 42.5**	**+0.2**
	241nm,0.6s						
TRIV	**Trivento**	**1.02**	**121**	Pg	**Pg**	**19 47 28.7**	**-1.0**
	545nm,0.9s						
TRIV	**Trivento**	**1.02**	**121**	Pg	**Pg**	**19 47 28.7**	**-1.0**
	545nm,0.9s						
TOLF	**Tolfa**	**1.05**	**258**	Pg	**Pn**	**19 47 29.9**	**-0.3**
TOLF				Sg	**Sb**	**19 47 43.3**	**-0.1**
	314nm,0.7s						
TOLF	**Tolfa**	**1.05**	**258**	Pg	**Pn**	**19 47 29.9**	**-0.3**
TOLF				Sg	**Sb**	**19 47 43.3**	**-0.1**
	314nm,0.7s						
CING	**Cingoli**	**1.08**	**353**	Pg	**Pb**	**19 47 29.5**	**-1.0**
CING				Sg	**Sb**	**19 47 44.7**	**+0.2**
	362nm,0.3s						
CING	**Cingoli**	**1.08**	**353**	Pg	**Pb**	**19 47 29.5**	**-1.0**
CING				Sg	**Sb**	**19 47 44.7**	**+0.2**
	362nm,0.3s						
VAGA	**Valle Agricola**	**1.09**	**144**	Pg	**Pg**	**19 47 30.6**	**-0.4**
VAGA				Sg	**Sb**	**19 47 45.2**	**+0.5**
	260nm,0.4s						
VAGA	**Valle Agricola**	**1.09**	**144**	Pg	**Pg**	**19 47 30.6**	**-0.4**
VAGA				Sg	**Sb**	**19 47 45.2**	**+0.5**
	260nm,0.4s						
MURB	**Monte Urbino**	**1.15**	**327**	Pg	**Pb**	**19 47 31.2**	**-0.4**
MURB				Sg	**Sg**	**19 47 46.4**	**-0.7**
	1μm,0.3s						
MURB	**Monte Urbino**	**1.15**	**327**	Pg	**Pb**	**19 47 31.2**	**-0.4**
MURB				Sg	**Sg**	**19 47 46.4**	**-0.7**
	1μm,0.3s						
BSSO	**Busso**	**1.18**	**129**	Pg	**Pb**	**19 47 31.5**	**-0.6**
	658nm,1.3s						
BSSO	**Busso**	**1.18**	**129**	Pg	**Pb**	**19 47 31.5**	**-0.6**
	658nm,1.3s						
SGG	**Gregorio Mates**	**1.18**	**140**	Pg	**Pb**	**19 47 31.6**	**-0.5**
	268nm,0.6s						
SGG	**Gregorio Mates**	**1.18**	**140**	Pg	**Pb**	**19 47 31.6**	**-0.5**
	268nm,0.6s						
SACS	**San Casciano d**	**1.21**	**297**	Pg	**Pg**	**19 47 32.9**	**-0.4**
	338nm,0.9s						
ARVD	**Arcevia**	**1.24**	**345**	Pg	**Pn**	**19 47 32.1**	**-0.7**
ARVD				Sg	**Sb**	**19 47 48.9**	**-0.1**
	365nm,0.8s						
ARVD	**Arcevia**	**1.24**	**345**	Pg	**Pn**	**19 47 32.1**	**-0.7**
ARVD				Sg	**Sb**	**19 47 48.9**	**-0.1**
	365nm,0.8s						
AOI	**Ancona**	**1.26**	**8**	Pg	**Pn**	**19 47 33.1**	**0.0**
	251nm,0.4s						
AOI	**Ancona**	**1.26**	**8**	Pg	**Pn**	**19 47 33.1**	**0.0**
	251nm,0.4s						
PIEI	**Pieia**	**1.38**	**334**	Pg	**Pb**	**19 47 35.1**	**-0.4**
	140nm,0.4s						
PIEI	**Pieia**	**1.38**	**334**	Pg	**Pb**	**19 47 35.1**	**-0.4**
	140nm,0.4s						
FSSB	**Fossombrone**	**1.46**	**343**	Pg	**Pb**	**19 47 36.3**	**-0.6**
FSSB				Sg	**Sb**	**19 47 55.7**	**+0.4**
FSSB	**Fossombrone**	**1.46**	**343**	Pg	**Pb**	**19 47 36.3**	**-0.6**
FSSB				Sg	**Sb**	**19 47 55.7**	**+0.4**
BADI	**Badiali**	**1.47**	**326**	Pg	**Pb**	**19 47 37.0**	**0.0**
	49μm,19.0s						
BADI	**Badiali**	**1.47**	**326**	Pg	**Pb**	**19 47 37.0**	**0.0**
	49μm,19.0s						
NVLJ	**Novalja**	**2.51**	**25**	*e*Pn	**Pn**	**19 47 50.8**	**+0.5**
NVLJ				Sn	**Sn**	**19 48 20.2**	**-0.4**
NVLJ	**Novalja**	**2.51**	**25**	*e*Pn	**Pn**	**19 47 50.8**	**+0.5**
NVLJ				Sn	**Sn**	**19 48 20.2**	**-0.4**
MAIM	**Mastiano**	**2.66**	**308**	P	**Pn**	**19 47 51.8**	**-0.5**
UDBI	**Udbina**	**2.83**	**37**	*e*Pn	**Pn**	**19 47 56.2**	**+1.4**
UDBI				Sn	**Sn**	**19 48 31.5**	**+2.9**
UDBI	**Udbina**	**2.83**	**37**	*e*Pn	**Pn**	**19 47 56.1**	**+1.4**
UDBI				Sn	**Sn**	**19 48 31.5**	**+2.9**
STON	**Ston**	**3.25**	**78**	*e*Pn	**Pn**	**19 48 00.7**	**+0.4**
STON				Sn	**Sn**	**19 48 38.8**	**+0.1**
STON	**Ston**	**3.25**	**78**	*e*Pn	**Pn**	**19 48 01.0**	**+0.7**
STON	**Ston**	**3.25**	**78**	*e*Pn	**Pn**	**19 48 00.7**	**+0.4**
STON				Sn	**Sn**	**19 48 38.8**	**+0.1**
PGF	**Pioggiola**	**3.25**	**276**	*e*P	**Pn**	**19 48 01.5**	**+1.0**
PGF				*e*Sn	**Sn**	**19 48 34.1**	**-4.9**
	7.0nm,0.5s						
PGF	**Pioggiola**	**3.25**	**276**	*e*P	**Pn**	**19 48 01.5**	**+1.0**
SKDS	**Skadanscina**	**3.28**	**8**	*i* Pn	**Pn**	**19 48 01.9**	**+1.0**
SKDS				*i* Sn	**Sn**	**19 48 41.0**	**+1.3**
SKDS	**Skadanscina**	**3.28**	**8**	Pn	**Pn**	**19 48 01.9**	**+1.0**
SKDS				*i* Sn	**Sn**	**19 48 41.0**	**+1.3**
BOJS	**Bojanci**	**3.48**	**22**	*i* Pn	**Pn**	**19 48 05.5**	**+1.9**
BOJS				*i* Sn	**Sn**	**19 48 47.3**	**+2.8**
BOJS	**Bojanci**	**3.48**	**22**	*i* Pn	**Pn**	**19 48 05.5**	**+1.9**
BOJS				*i* Sn	**Sn**	**19 48 47.3**	**+2.8**
JAVS	**Javornik**	**3.63**	**8**	*i* Pn	**Pn**	**19 48 06.4**	**+0.7**
JAVS				*i* Sn	**Sn**	**19 48 50.1**	**+1.7**
JAVS	**Javornik**	**3.63**	**8**	*i* Pn	**Pn**	**19 48 06.4**	**+0.7**
JAVS				*i* Sn	**Sn**	**19 48 50.1**	**+1.7**
VOJV	**Vojsko**	**3.75**	**6**	*e*Sn	**Sn**	**19 48 51.4**	**0.0**
ROBS	**Robic**	**3.95**	**1**	*i* Sn	**Sn**	**19 48 57.7**	**+1.6**
OBKA	**Obir**	**4.29**	**11**	⇑*e*Pn	**Pb**	**19 48 25.2**	**0.0**
	2.9nm,0.7s						
OBKA				⇑*i*Sn	**Sb**	**19 49 20.4**	**+3.5**
	19nm,0.7s						
PDG	**Podgorica**	**4.36**	**86**	*e*Pn	**Pn**	**19 48 17.7**	**+2.0**
PDG	**Podgorica**	**4.36**	**86**	*e*Pn	**Pn**	**19 48 17.7**	**+2.0**
ABTA	**Abfaltersbach**	**4.49**	**352**	⇓*i*Pn	**Pn**	**19 48 20.1**	**+2.5**
	6.9nm,0.5s						
ABTA				⇑*i*Sn	**Sn**	**19 49 12.7**	**+3.1**
	13nm,0.6s						
ABTA	**Abfaltersbach**	**4.49**	**352**	Pn	**Pn**	**19 48 20.1**	**+2.5**
	6.9nm,0.5s						
ABTA				Sn	**Sn**	**19 49 12.7**	**+3.1**
	13nm,0.6s						
SOKA	**Soboth**	**4.54**	**15**	⇑*i*Pn	Pn	19 48 21.8	+3.6
	1.8nm,0.4s						
SOKA	**Soboth**	**4.54**	**15**	Pn	Pn	19 48 21.8	+3.6
	1.8nm,0.4s						
SBF	**Sospel**	**4.62**	**292**	*e*P	**Pn**	**19 48 20.5**	**+1.1**
SBF				*e*Sn	**Sn**	**19 49 07.6**	**-5.3**
	38nm,1.0s						
SBF	**Sospel**	**4.62**	**292**	*e*P	**Pn**	**19 48 20.5**	**+1.1**
BBLS	**Lazići**	**4.69**	**68**	*e*Sn	**Sn**	**19 49 14.9**	**+0.5**
BBLS	**Lazići**	**4.69**	**68**	*e*Sn	**Sn**	**19 49 14.9**	**+0.5**
FRF	**La Foret Royal**	**5.10**	**287**	*e*Pn	**Pn**	**19 48 25.6**	**-0.2**
FRF	**La Foret Royal**	**5.10**	**287**	*e*Pn	**Pn**	**19 48 25.6**	**-0.2**
WTTA	**Wattenberg**	**5.12**	**347**	⇑*i*Pn	Pn	19 48 31.4	+5.1
	6.0nm,0.8s						
WTTA	**Wattenberg**	**5.12**	**347**	Pn	Pn	19 48 31.4	+5.1
	6.0nm,0.8s						
LMR	**La Mourre**	**5.16**	**284**	*e*Pn	**Pn**	**19 48 25.9**	**-0.7**
LMR	**La Mourre**	**5.16**	**284**	*e*Pn	**Pn**	**19 48 25.9**	**-0.7**
DIVS	**Divibare**	**5.16**	**67**	*e*Pn	**Pn**	**19 48 29.0**	**+2.2**
ARSA	**Arzberg**	**5.18**	**16**	⇓*i*Pn	Pn	19 48 31.6	+4.6
	1.6nm,0.4s						
ARSA	**Arzberg**	**5.18**	**16**	*e*Pn	**Pn**	**19 48 29.2**	**+2.2**
ARSA	**Arzberg**	**5.18**	**16**	*e*Pn	**Pn**	**19 48 29.2**	**+2.2**
GRUS	**Gruza**	**5.61**	**71**	*e*Pn	**Pn**	**19 48 34.2**	**+1.4**
SMRF	**Simiane la Rot**	**5.95**	**289**	*e*Pn	**Pn**	**19 48 35.3**	**-2.2**
SMRF	**Simiane la Rot**	**5.95**	**289**	*e*P	**Pn**	**19 48 39.8**	**+2.3**
SMRF	**Simiane la Rot**	**5.95**	**289**	*e*P	**Pn**	**19 48 39.8**	**+2.3**
BARS	**Barje**	**6.25**	**82**	*e*Pn	**Pn**	**19 48 43.3**	**+1.6**
BARS				*e*Sn	**Sn**	**19 49 51.3**	**-1.7**
BARS	**Barje**	**6.25**	**82**	*e*Pn	**Pn**	**19 48 43.3**	**+1.6**
BARS				*e*Sn	**Sn**	**19 49 51.3**	**-1.7**
CABF	**La Chapelle**	**6.76**	**312**	*e*Pn	**Pn**	**19 48 47.3**	**-1.5**
CABF	**La Chapelle**	**6.76**	**312**	*e*Pn	**Pn**	**19 48 47.3**	**-1.5**
VIVF	**Saint-Julien-l**	**6.82**	**295**	*e*P	**Pn**	**19 48 52.3**	**+2.8**
VIVF	**Saint-Julien-l**	**6.82**	**295**	*e*P	**Pn**	**19 48 52.3**	**+2.8**
ZAPS	**Zavoj**	**6.88**	**79**	*e*Pn	**Pn**	**19 48 51.7**	**+1.3**
ZAPS				*e*Sn	**Sn**	**19 50 05.8**	**-2.7**
ZAPS	**Zavoj**	**6.88**	**79**	*e*Pn	**Pn**	**19 48 51.7**	**+1.3**
HINF	**Hinteralfeld**	**7.19**	**322**	*e*Pn	**Pn**	**19 48 53.5**	**-1.1**
HINF				*e*Sn	**Sn**	**19 50 10.8**	**-5.3**
	3.8nm,0.5s						
HINF	**Hinteralfeld**	**7.19**	**322**	*e*Pn	**Pn**	**19 48 53.5**	**-1.1**
CDF	**Champ du Feu**	**7.47**	**327**	*e*Pn	**Pn**	**19 48 58.1**	**-0.4**
CDF				*e*Sn	Sn	19 50 16.2	-6.8
	3.8nm,0.6s						
CDF	**Champ du Feu**	**7.47**	**327**	*e*Pn	**Pn**	**19 48 58.1**	**-0.4**
HAU	**Haudompre**	**7.56**	**321**	*e*Sn	Sn	19 50 18.3	-6.9
	5.7nm,0.4s						

MEX 19 20:02:47.0±0.4,16°.61N×94°.92W,h105km±12km,MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.42**	**234**	*i* P	Pn	20 03 11.3	-1.2
HUIG				*i* S	Sn	20 03 30.2	-1.7
TGIG		**1.73**	**84**	*e*P	Pn	20 03 15.3	-1.1
TGIG				*i* S	Sn	20 03 37.1	-1.7
PCIG		**1.86**	**119**	*e*P	Pn	20 03 16.6	-1.4
PCIG				*i* S	Sn	20 03 40.9	-0.8
CCIG	**Comitan**	**2.69**	**97**	*i* P	Pn	20 03 27.6	-1.4
CCIG				*i* S	Sn	20 03 59.7	-1.5
PNIG	**Pinotepa**	**3.09**	**266**	*e*P	Pn	20 03 33.6	-0.4
PNIG				*i* S	Sn	20 04 08.3	-2.1

*ISCJB **19** 20:35:51.5±0.5,30°.75S±0°.03×71°.37W±0°.07,h67km±4km, mb4.2/18,Error ellipse: s-maj=10.6km s-min=4.4km az=8.5*
*GU

	comp=N,9.4nm,0.9s								
PLCA	**Paso Flores**	**9.98**	**176**	P		**Pn**	**20 38 12.0**	**-0.7**	
	comp=N,0.4nm,0.3s,baz=349,slow=13,SNR=7.2								
PLCA				LR		LR	20 42 19.5		
	comp=N,82nm,21.4s,baz=169,slow=39								
TRQA	**Tornquist**	**10.63**	**136**	*e*Pn		**Pn**	**20 38 21.6**	**0.0**	
	comp=N,36nm,1.6s								
TRQA				*e*Sn		**Sn**	**20 40 14.0**	**-5.0**	
CPUP	**Villa Florida**	**13.10**	**74**	P		**Pn**	**20 38 54.1**	**-1.1**	
CPUP	**Villa Florida**	**13.10**	**74**	P		**Pn**	**20 38 54.1**	**-1.1**	
	comp=N,2.3nm,0.3s,baz=225,slow=9.9,SNR=10								
CPUP				LR		LR	20 44 20.3		
	comp=N,178nm,20.3s,baz=188,slow=39								
LPAZ	**La Paz**	**14.70**	**12**	P		**Pn**	**20 39 18.0**	**+0.7**	
LPAZ	**La Paz**	**14.70**	**12**	P		**Pn**	**20 39 18.0**	**+0.7**	
	comp=N,0.4nm,0.3s,baz=180,slow=5.3,SNR=20								
SIV	**San Ignacio**	**17.45**	**35**	P		**Pn**	**20 39 51.4**	**-0.2**	
SIV	**San Ignacio**	**17.45**	**35**	P		**Pn**	**20 39 51.4**	**-0.2**	
	comp=N,1.4nm,0.3s,baz=217,slow=10,SNR=27								
SIV				LR		LR	20 47 57.3		
	comp=N,46nm,21.0s,slow=42								
SPB	**Sao Paulo**	**22.42**	**77**	*e*P		**P**	**20 40 46.0**	**0.0**	
	comp=N,12nm,0.8s								
SAML	**Samuel**	**23.00**	**21**	*e*P		**P**	**20 40 50.5**	**-1.5**	
	comp=N,4.7nm,1.2s								
EFI	**East Falkland**	**23.10**	**159**	P		**P**	**20 40 55.5**	**+2.8**	
	comp=N,80nm,1.1s								
USHA	**Ushuaia**	**24.15**	**176**	P		**P**	**20 41 03.1**	**+0.7**	
USHA	**Ushuaia**	**24.15**	**176**	P		**P**	**20 41 03.1**	**+0.7**	
	comp=N,6.6nm,0.6s,baz=13,slow=5.7,SNR=6.6								
BDFB	**Brasilia**	**26.13**	**60**	P		**P**	**20 41 20.1**	**-0.8**	
BDFB	**Brasilia**	**26.13**	**60**	P		**P**	**20 41 20.1**	**-0.8**	
	comp=N,11nm,0.6s,baz=231,slow=8.3,SNR=5.0								
BDFB				LR		LR	20 52 48.9		
	comp=N,116nm,20.4s,baz=55,slow=39								
SDV	**Santo Domingo**	**39.42**	**1**	P		**P**	**20 43 17.1**	**+0.5**	
	comp=N,0.3nm,0.7s								
TEIG	**Tepich**	**53.24**	**340**	*e*P		**P**	**20 45 05.3**	**+0.7**	
	comp=N,6.0nm,0.6s								
SNAA	**Sanae**	**54.38**	**159**	*e*P		**P**	**20 45 12.1**	**-0.4**	
	comp=N,5.9nm,0.8s								
SNAA				*e*			20 45 27.4		
QSPA	**South Pole Qui**	**59.47**	**180**	*e*P		**P**	**20 45 48.9**	**+0.2**	
	comp=N,6.9nm,1.1s								
QSPA				*e*			20 46 04.9		
QSPA				pP		**pP**	**20 46 05.2**	**+0.8**	
QSPA	**South Pole Qui**	**59.47**	**180**	P		**P**	**20 45 49.2**	**+0.4**	
	comp=N,1.9nm,0.7s,baz=188,slow=4.9,SNR=9.3								
QSPA				pP		**pP**	**20 46 05.2**	**+0.8**	
	comp=N,2.4nm,0.6s,baz=160,slow=2.2,SNR=5.7								
TXAR	**Lajitas Array**	**67.22**	**330**	P		**P**	**20 46 41.6**	**+1.3**	
TXAR				sP		**sP**	**20 47 03.5**	**+0.7**	
TXAR	**Lajitas Array**	**67.22**	**330**	P		**P**	**20 46 41.6**	**+1.3**	
	comp=N,0.7nm,0.5s,baz=146,slow=8.4,SNR=5.8								
TXAR				sP		**sP**	**20 47 03.5**	**+0.7**	
	comp=N,0.7nm,0.7s,baz=137,slow=7.9,SNR=3.8								
VNDA	**Vanda**	**67.39**	**191**	P		**P**	**20 46 41.8**	**+1.2**	
	comp=N,0.9nm,0.9s								
DBIC	**Dimbokro**	**73.61**	**72**	P		**P**	**20 47 19.5**	**0.0**	
DBIC				sP		**sP**	**20 47 43.1**	**+1.0**	
DBIC	**Dimbokro**	**73.61**	**72**	P		**P**	**20 47 19.5**	**0.0**	
	comp=N,4.0nm,0.5s,baz=214,slow=7.2,SNR=16								
DBIC				sP		**sP**	**20 47 43.1**	**+1.0**	
	comp=N,5.2nm,0.9s,baz=202,slow=9.3,SNR=2.6								
DBIC				LR		LR	21 20 55.2		
	comp=N,48nm,19.2s,baz=16,slow=37								
ECSD	**EROS Data Cent**	**77.65**	**342**	*e*P		**P**	**20 47 41.8**	**-0.2**	
	comp=N,4.6nm,0.7s								
TSUM	**Tsumeb**	**79.55**	**106**	P		**P**	**20 47 52.9**	**-0.4**	
	comp=N,3.2nm,1.0s								
TOA0	**Torodi Ar. Sit**	**82.56**	**70**	*e*P		**P**	**20 48 08.8**	**-0.3**	
TOA0				*e*			20 48 24.1		
TORD	**Torodi Ar. Bea**	**82.56**	**70**	P		**P**	**20 48 09.0**	**-0.1**	
TORD				pP		**pP**	**20 48 24.2**	**-1.3**	
TORD				sP		**sP**	**20 48 31.4**	**-0.5**	
TORD	**Torodi Ar. Bea**	**82.56**	**70**	P		**P**	**20 48 09.0**	**-0.1**	
	comp=N,1.5nm,0.4s,baz=271,slow=5.5,SNR=52								
TORD				pP		**pP**	**20 48 24.2**	**-1.3**	
	comp=N,1.0nm,0.5s,baz=268,slow=6.0,SNR=4.2								
TORD				sP		**sP**	**20 48 31.4**	**-0.5**	
	comp=N,2.4nm,0.7s,baz=258,slow=4.9,SNR=5.2								
LBTB	**Lobatse**	**83.14**	**115**	*e*P		**P**	**20 48 10.8**	**-1.4**	
	comp=N,3.4nm,0.8s								
CASY	**Casey**	**83.26**	**181**	*e*P		**P**	**20 48 12.4**	**+0.5**	
	comp=N,5.2nm,1.0s								
LSZ	**Lusaka**	**90.26**	**108**	P		**P**	**20 48 48.1**	**+1.0**	
	comp=N,2.6nm,1.0s								
WRA	**Warramunga Arr**	**123.86**	**209**	PKP		**PKPdf**	**20 54 42.8**	**-1.4**	
WRA				pPKP		**pPKPdf**	**20 55 01.3**	**0.0**	
WRA	**Warramunga Arr**	**123.86**	**209**	PKP		**PKPdf**	**20 54 42.8**	**-1.4**	
	comp=N,0.2nm,0.5s,baz=159,slow=1.8,SNR=4.1								
WRA				pPKP		**pPKPdf**	**20 55 01.3**	**0.0**	
	comp=N,0.4nm,0.5s,baz=162,slow=1.6,SNR=2.1								
ZALV	**Zalesovo Beam**	**151.16**	**30**	PKPbc		**PKPbc**	**20 55 38.1**	**0.0**	
ZALV				pPKPbc		**pPKPbc**	**20 55 54.8**	**-0.5**	
ZALV	**Zalesovo Beam**	**151.16**	**30**	PKPbc		**PKPbc**	**20 55 38.1**	**0.0**	
	comp=N,1.5nm,0.4s,baz=323,slow=3.0,SNR=9.6								
ZALV				pPKPbc		**pPKPbc**	**20 55 54.8**	**-0.5**	
	comp=N,4.9nm,0.5s,baz=303,slow=3.0,SNR=12								
MKAR	**Makanchi Array**	**154.12**	**44**	PKPab		**PKPab**	**20 55 59.4**	**+0.4**	
MKAR	**Makanchi Array**	**154.12**	**44**	PKPab		**PKPab**	**20 55 59.4**	**+0.4**	
	comp=N,0.4nm,0.6s,baz=287,slow=4.7,SNR=5.7								

*ISCJB **19** 20:37:12.8±0.3,63°.91N±0°.02×22°.05W±0°.04,h8$^{km}_{\pm 2km}$, mb3.9/28,MS3.5/19,Error ellipse: s-maj=4.0km s-min=2.7km az=176.4*

*IDC **19** 20:37:13.4±0.8,63°.96N×22°.13W,h0^{km},mb3.7/11, mb1 3.8/14,mb1mx3.7/33,mbtmp3.7/14,ML3.7/3,MS3.5/24, Ms1 3.5/24,ms1mx3.4/47,Error ellipse: s-maj=15.3km s-min=9.9km az=107.0*

*CSEM **19** 20:37:13.0±0.2,63°.92N×22°.01W,h1$^{km}_{\pm 1km}$,mb4.1/16, Ms3.1,Error ellipse: s-maj=4.4km s-min=3.7km az=170.0*

*REY **19** 20:37:13.0,63°.89N×22°.09W,h5^{km},ML3.8,MS3.2*

ISC 19 20:37:13.7±0.9,63°.89N±0°.03×22°.03W±0°.02,h4$^{km}_{\pm 6km}$, n122,σ1°18/125,mb4.0/28,MS3.5/20,Iceland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKRI	**Krysuvik**	**0.02**	**242**	P	**Pg**	**20 37 14.0**	**-0.5**
IVOS	**Vogsosar**	**0.15**	**104**	P	**Pg**	**20 37 16.8**	**+0.2**
IVOS				S	**Sg**	**20 37 19.8**	**+1.2**
IKAS	**Kald??rsel**	**0.16**	**30**	P	**Pg**	**20 37 16.7**	**-0.1**
IKAS				S	**Sg**	**20 37 19.8**	**+1.0**
IVOG	**Vogar**	**0.18**	**297**	P	**Pg**	**20 37 16.4**	**-0.8**
IVOG				S	**Sg**	**20 37 18.9**	**-0.6**
IGRV	**Grindav??k**	**0.19**	**261**	P	**Pg**	**20 37 16.5**	**-0.9**
IGRV				S	**Sg**	**20 37 19.2**	**-0.7**
ISAN	**Sandskeio**	**0.26**	**50**	P	**Pg**	**20 37 18.6**	**-0.2**
ISAN				S	**Sg**	**20 37 23.0**	**+0.8**
INYL	**Nylenda**	**0.32**	**286**	P	**Pg**	**20 37 18.7**	**-1.2**
INYL				S	**Sg**	**20 37 22.9**	**-1.2**
IBJA	**Bjarnastaoir**	**0.33**	**80**	P	**Pg**	**20 37 19.8**	**-0.2**
IBJA				S	**Sg**	**20 37 24.7**	**+0.5**
IKUD	**Kuludalsa**	**0.44**	**9**	P	**Pg**	**20 37 20.9**	**-1.2**
IKUD				S	**Sg**	**20 37 27.0**	**-0.8**
IKRO	**Krokur**	**0.45**	**62**	P	**Pg**	**20 37 21.8**	**-0.6**
IHEI	**Heioarbar**	**0.47**	**48**	P	**Pg**	**20 37 21.8**	**-0.9**
IHEI				S	**Sg**	**20 37 28.7**	**-0.1**
ISOL	**Solvholt**	**0.48**	**85**	P	**Pg**	**20 37 22.2**	**-0.7**
ISOL				S	**Sg**	**20 37 29.3**	**+0.1**
IASM	**Asmuli**	**0.63**	**94**	P	**Pg**	**20 37 24.7**	**-1.0**
IASM				S	**Sg**	**20 37 33.9**	**0.0**
ISAU	**Saurbar**	**0.72**	**81**	P	**Pg**	**20 37 26.2**	**-1.3**
ISAU				S	**Sg**	**20 37 36.9**	**+0.1**
IGYG	**Gygjarholskot**	**0.89**	**63**	P	**Pg**	**20 37 29.0**	**-1.7**
IGYG				S	**Sg**	**20 37 41.8**	**-0.4**
IVES	**Vestmannaeyjar**	**0.90**	**119**	P	**Pg**	**20 37 29.0**	**-1.9**
IVES				S	**Sg**	**20 37 41.4**	**-1.1**
BORG	**Borgarnes**	**0.92**	**19**	Pg	**Pg**	**20 37 28.6**	**-2.6**
	440nm,0.3s,baz=203,slow=8.1,SNR=630						
BORG				Lg	Lg	20 37 42.0	
	2μm,0.3s,baz=94,slow=19,SNR=65						
IASB	**`sbjarnarst**	**0.92**	**19**	P	**Pg**	**20 37 28.8**	**-2.4**
IASB				S	**Sb**	**20 37 42.3**	**-2.3**
IHAU	**Haukadalur**	**0.92**	**84**	P	**Pg**	**20 37 29.5**	**-1.7**
IHAU				S	**Sg**	**20 37 42.7**	**-0.4**
IMID	**Miomork**	**0.98**	**103**	P	**Pg**	**20 37 30.3**	**-2.2**
IMID				S	**Sg**	**20 37 44.1**	**-1.0**
IGOD	**Go??abunga**	**1.23**	**100**	S	**Sg**	**20 37 51.2**	**-1.8**
IVAT	**Vatnsfell**	**1.40**	**76**	P	**Pn**	**20 37 37.1**	**-2.9**
IVAT				S	**Sg**	**20 37 56.6**	**-2.1**
ISKR	**Skrokkalda**	**1.73**	**65**	P	**Pn**	**20 37 42.4**	**-2.2**
IKAL	**Kalfafell**	**1.92**	**86**	P	**Pn**	**20 37 45.4**	**-1.7**
IKAL				S	**Sn**	**20 38 10.7**	**-0.9**
IGRF	**Grimsfjall**	**2.15**	**74**	P	**Pn**	**20 37 49.0**	**-1.5**
IHRN	**Hraun**	**2.37**	**19**	P	**Pn**	**20 37 51.7**	**-1.6**
IFAG	**Fagurholsmyri**	**2.38**	**88**	P	**Pn**	**20 37 51.5**	**-1.9**
ISVA	**Svartarkot**	**2.52**	**53**	P	**Pn**	**20 37 53.8**	**-1.6**
IHLA	**Hella**	**2.58**	**35**	P	**Pn**	**20 37 54.6**	**-1.6**
SCO	**Scoresbysund**	**6.63**	**0**	*i* P	**Pn**	**20 38 52.3**	**+0.7**
SCO	**Scoresbysund**	**6.63**	**0**	*i* P	**Pn**	**20 38 52.3**	**+0.7**
SFJD	**Kangerlussuaq**	**12.23**	**297**	LR	LR	20 44 13.8	
	comp=Z,562nm,19.7s,baz=112,slow=35						
EKA	**Eskdalemuir Ar**	**12.79**	**123**	Pn	**Pn**	**20 40 15.9**	**-0.1**
	baz=325,slow=12,SNR=8.4						
NOA	**NORSAR Array B**	**15.53**	**85**	Pn	**Pn**	**20 40 53.4**	**+0.2**
	0.1nm,0.3s,baz=303,slow=14,SNR=2.6						
NOA				LR	LR	20 46 53.8	
	comp=Z,146nm,18.2s,baz=300,slow=37						
HFS	**Hagfors**	**17.03**	**86**	LR	LR	20 47 20.7	
	comp=Z,225nm,18.4s,baz=285,slow=36						
SPITS	**Spitsbergen Ar**	**18.38**	**24**	LR	LR	20 46 39.8	
	comp=Z,207nm,21.9s,baz=230,slow=31						
SGMF	**Saint Gilles**	**18.93**	**137**	*e*P	**Pn**	**20 41 35.8**	**0.0**
	32nm,1.2s						
SGMF	**Saint Gilles**	**18.93**	**137**	*e*P	**Pn**	**20 41 35.8**	**0.0**
	16nm,1.2s						
FLN	**La Foliniere**	**19.14**	**132**	*e*P	**Pn**	**20 41 38.3**	**-0.1**
	13nm,0.8s						
FLN				*e*R			
	171nm,20.5s						
FLN	**La Foliniere**	**19.14**	**132**	*e*P	**Pn**	**20 41 38.3**	**-0.1**
	6.7nm,0.8s						
ARCES	**ARCESS Array B**	**19.17**	**52**	P	**Pn**	**20 41 39.7**	**+1.1**
	0.2nm,0.3s,baz=285,slow=11,SNR=3.7						
ARCES				LR	LR	20 47 32.7	
	comp=Z,104nm,20.6s,baz=275,slow=32						
BAIF	**Baives**	**19.70**	**122**	*e*P	**Pn**	**20 41 45.9**	**+0.9**
	19nm,0.9s						
BAIF	**Baives**	**19.70**	**122**	*e*P	**Pn**	**20 41 45.9**	**+0.9**
	9.4nm,0.9s						
GIVF	**Givet**	**19.90**	**121**	*e*P	**Pn**	**20 41 48.6**	**+1.2**
	14nm,0.7s						
FRB	**Frobisher Bay**	**20.18**	**291**	LR	LR	20 49 00.4	
	comp=Z,237nm,19.7s,baz=38,slow=35						
MFF	**Saint Martin d**	**21.15**	**135**	*e*P	**P**	**20 42 00.7**	**+1.3**
	8.1nm,0.8s						
MFF	**Saint Martin d**	**21.15**	**135**	*e*P	**P**	**20 42 00.7**	**+1.3**
	4.1nm,0.8s						
MEZF	**Maizieres J'vi**	**21.30**	**124**	*e*P	**P**	**20 42 02.4**	**+1.4**
	29nm,0.8s						
MEZF	**Maizieres J'vi**	**21.30**	**124**	*e*P	**P**	**20 42 02.4**	**+1.4**
	14nm,0.8s						
PAGF	**Fort de Pagny**	**21.50**	**122**	*e*P	**P**	**20 42 04.1**	**+0.9**
PAGF	**Fort de Pagny**	**21.50**	**122**	*e*P	**P**	**20 42 04.1**	**+0.9**
SFTF	**Sexfontaines**	**21.54**	**124**	*e*P	**P**	**20 42 04.2**	**+0.6**
	18nm,0.7s						
SFTF	**Sexfontaines**	**21.54**	**124**	*e*P	**P**	**20 42 04.2**	**+0.6**
	8.8nm,0.7s						
FINES	**FINESS Array B**	**21.81**	**74**	P	**P**	**20 42 06.7**	**+0.3**
	3.2nm,0.8s,baz=310,slow=11,SNR=11						
FINES				LR	LR	20 50 19.4	
	comp=Z,102nm,18.2s,baz=112,slow=36						
LOR	**Lormes**	**21.91**	**127**	*e*P	**P**	**20 42 07.6**	**0.0**
	9.4nm,0.8s						
LOR				*e*R			
	135nm,22.0s						
LOR	**Lormes**	**21.91**	**127**	*e*P	**P**	**20 42 07.6**	**0.0**
	4.7nm,0.8s						
SSF	**Saint Saulge**	**21.96**	**128**	*e*P	**P**	**20 42 08.5**	**+0.4**
	12nm,0.9s						
SSF	**Saint Saulge**	**21.96**	**128**	*e*P	**P**	**20 42 08.5**	**+0.4**
	6.1nm,0.9s						
AVF	**Avril sur Loir**	**22.14**	**129**	*e*P	**P**	**20 42 09.7**	**-0.4**
	4.3nm,0.5s						
AVF	**Avril sur Loir**	**22.14**	**129**	*e*P	**P**	**20 42 09.7**	**-0.4**
	2.2nm,0.5s						
BGF	**Bois d'Agland**	**22.17**	**130**	*e*P	**P**	**20 42 10.2**	**-0.2**
	8.8nm,0.6s						
BGF	**Bois d'Agland**	**22.17**	**130**	*e*P	**P**	**20 42 10.2**	**-0.2**
	4.4nm,0.6s						
HAU	**Haudompre**	**22.19**	**122**	*e*P	**P**	**20 42 11.5**	**+0.9**
	13nm,0.9s						
HAU				*e*R			
	88nm,17.8s						
HAU	**Haudompre**	**22.19**	**122**	*e*P	**P**	**20 42 11.5**	**+0.9**
	6.5nm,0.9s						
TCF	**Toulx Ste Croi**	**22.19**	**131**	*e*P	**P**	**20 42 10.6**	**0.0**
	30nm,1.3s						
TCF	**Toulx Ste Croi**	**22.19**	**131**	*e*P	**P**	**20 42 10.6**	**0.0**
	15nm,1.3s						
CDF	**Champ du Feu**	**22.21**	**120**	*e*P	**P**	**20 42 11.9**	**+1.0**
	8.8nm,0.9s						
CDF	**Champ du Feu**	**22.21**	**120**	*e*P	**P**	**20 42 11.9**	**+1.0**
	4.4nm,0.9s						
CLL	**Collm**	**22.25**	**108**	*e*P	**P**	**20 42 13.0**	**+1.8**
CLL				*e*S	**S**	**20 46 13.0**	**-3.3**
CLL				Lm	MLR	20 50 00.0	
	comp=Z,100nm,22.0s						
SMF	**Signal de Mont**	**22.44**	**128**	*e*P	**P**	**20 42 13.1**	**-0.2**
	comp=Z,11nm,0.7s						
SMF	**Signal de Mont**	**22.44**	**128**	*e*P	**P**	**20 42 13.1**	**-0.2**
	comp=Z,5.3nm,0.7s						
HINF	**Hinteralfeld**	**22.54**	**122**	*e*P	**P**	**20 42 15.0**	**+0.7**
	comp=Z,11nm,0.9s						
HINF	**Hinteralfeld**	**22.54**	**122**	*e*P	**P**	**20 42 15.0**	**+0.7**
	comp=Z,5.5nm,0.9s						
RJF	**Les Rejaudoux**	**22.84**	**133**	*e*P	**P**	**20 42 18.6**	**+1.1**
RJF				*e*R			
	comp=Z,149nm,17.3s						
RJF	**Les Rejaudoux**	**22.84**	**133**	*e*P	**P**	**20 42 18.6**	**+1.1**
BRG	**Berggiesshubel**	**22.97**	**108**	*e*P	**P**	**20 42 20.3**	**+1.5**
	comp=Z,3.2nm,0.6s						
BRG							
	comp=N,207nm,14.8s						
BRG							
	comp=E,114nm,13.8s						
BRG							
	comp=Z,259nm,15.8s						
CABF	**La Chapelle**	**23.27**	**125**	*e*P	**P**	**20 42 23.3**	**+1.3**
	comp=Z,47nm,1.3s						
CABF	**La Chapelle**	**23.27**	**125**	*e*P	**P**	**20 42 23.3**	**+1.3**
	comp=Z,24nm,1.3s						
CAF	**Calviac**	**23.35**	**133**	*e*P	**P**	**20 42 21.6**	**-1.2**
CAF	**Calviac**	**23.35**	**133**	*e*P	**P**	**20 42 21.6**	**-1.2**
SCHQ	**Schefferville**	**24.06**	**269**	P	**P**	**20 42 28.4**	**-1.3**
	comp=Z,3.3nm,0.6s,baz=53,slow=11,SNR=6.1						
SCHQ				LR	LR	20 50 34.1	
	comp=Z,130nm,19.7s,baz=255,slow=33						
KHC	**Kasperske Hory**	**24.15**	**111**	*e*P	**P**	**20 42 31.0**	**+0.5**
KHC	**Kasperske Hory**	**24.15**	**111**	P	**P**	**20 42 31.0**	**+0.5**
GERES	**GERESS Array B**	**24.42**	**111**	P	**P**	**20 42 33.7**	**+0.6**
	comp=Z,0.6nm,0.7s,baz=316,slow=8.4,SNR=5.7						
GERES				LR	LR	20 52 43.9	
	comp=Z,161nm,18.1s,baz=308,slow=38						
LPL	**La Plagne**	**24.44**	**125**	*e*P	**P**	**20 42 32.6**	**-0.8**
LPL	**La Plagne**	**24.44**	**125**	*e*P	**P**	**20 42 32.6**	**-0.8**
LPG	**La Plagne**	**24.46**	**125**	*e*P	**P**	**20 42 33.6**	**-0.1**
LPG	**La Plagne**	**24.46**	**125**	*e*P	**P**	**20 42 33.6**	**-0.1**
EPF	**Esparros**	**24.52**	**138**	*e*P	**P**	**20 42 33.7**	**-0.3**
	comp=Z,13nm,1.0s						
EPF	**Esparros**	**24.52**	**138**	*e*P	**P**	**20 42 33.7**	**-0.3**
	comp=Z,6.3nm,1.0s						
DAVOX	**Davos/Dischmat**	**24.55**	**119**	P	**P**	**20 42 35.9**	**+1.5**
	comp=Z,0.5nm,0.3s,baz=318,slow=17,SNR=3.7						
DAVOX				LR	LR	20 51 43.5	
	comp=Z,108nm,19.8s,baz=265,slow=35						
ORIF	**Oris-en-Rattie**	**24.65**	**127**	*e*P	**P**	**20 42 34.9**	**-0.3**
	comp=Z,9.4nm,1.0s						
ORIF				*e*R			
	comp=Z,105nm,21.0s						
ORIF	**Oris-en-Rattie**	**24.65**	**127**	*e*P	**P**	**20 42 34.9**	**-0.3**
	comp=Z,4.7nm,1.0s						
MBDF	**Montbardon**	**25.13**	**126**	*e*P	**P**	**20 42 40.1**	**+0.5**
	comp=Z,12nm,0.6s						
MBDF	**Montbardon**	**25.13**	**126**	*e*P	**P**	**20 42 40.1**	**+0.5**
	comp=Z,6.1nm,0.6s						
VRAC	**Vranov**	**25.27**	**107**	LR	LR	20 52 04.0	
	comp=Z,99nm,19.5s,baz=309,slow=35						
RES	**Resolute Bay**	**25.95**	**325**	LR	LR	20 52 43.6	
	comp=Z,139nm,18.6s,baz=34,slow=36						
ESDC	**Sonseca Array**	**26.50**	**148**	P	**P**	**20 42 53.4**	**+1.5**
	comp=Z,0.3nm,0.3s,baz=340,slow=9.3,SNR=5.3						
VYHS	**Vyhne**	**26.85**	**106**	*e*	**P**	**20 42 55.6**	**+0.6**
VYHS	**Vyhne**	**26.85**	**106**	*e*P	**P**	**20 42 55.6**	**+0.6**
KECS	**Kecovo**	**27.57**	**104**	*e*	**P**	**20 43 02.5**	**+1.2**
KECS	**Kecovo**	**27.57**	**104**	*e*P	**P**	**20 43 02.6**	**+1.2**
KOLS	**Kolonicke sedl**	**28.00**	**101**	*e*	**P**	**20 43 07.9**	**+2.7**
KOLS	**Kolonicke sedl**	**28.00**	**101**	*e*P	**P**	**20 43 07.9**	**+2.7**
MLR	**Muntele Rosu**	**32.24**	**102**	LR	LR	20 56 44.9	
	comp=Z,21nm,20.9s,baz=334,slow=36						
KEST	**Kesra**	**34.03**	**131**	LR	LR	20 56 58.6	
	comp=Z,45nm,18.1s,baz=250,slow=35						
YKA	**Yellowknife Ar**	**38.28**	**312**	P	**P**	**20 44 34.9**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=49,slow=7.9,SNR=3.9						
ULM	**Lac du Bonnet**	**39.95**	**286**	LR	LR	21 00 23.7	
	comp=Z,133nm,18.2s,baz=61,slow=35						
BRTR	**Keskin Array B**	**40.24**	**100**	P	**P**	**20 44 52.4**	**+1.1**
	comp=Z,0.9nm,0.7s,baz=329,slow=7.0,SNR=4.3						
KBZ	**Khabaz**	**41.09**	**87**	LR	LR	21 02 10.2	
	comp=Z,160nm,20.7s,baz=41,slow=36						
AKTO	**Aktyubinsk**	**42.41**	**69**	LR	LR	21 02 20.8	
	comp=Z,82nm,19.1s,baz=331,slow=36						
GNI	**Garni**	**44.79**	**89**	LR	LR	21 04 48.3	
	comp=Z,97nm,20.6s,baz=167,slow=37						
ILAR	**Eielson Array**	**45.42**	**330**	LR	LR	21 04 45.1	
	comp=Z,51nm,18.8s,baz=52,slow=36						
EIL	**Elat**	**49.34**	**106**	LR	LR	21 09 20.8	
	comp=Z,47nm,18.1s,baz=281,slow=39						
ZALV	**Zalesovo Beam**	**49.65**	**48**	LR	LR	21 10 16.9	
	comp=Z,40nm,19.2s,baz=251,slow=40						
PDAR	**Pinedale Array**	**51.63**	**290**	P	**P**	**20 46 20.9**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=31,slow=7.6,SNR=8.2						
TORD	**Torodi Ar. Bea**	**53.32**	**151**	P	**P**	**20 46 33.0**	**-0.7**
	comp=Z,0.9nm,0.7s,baz=343,slow=8.1,SNR=7.1						
MKAR	**Makanchi Array**	**54.80**	**55**	P	**P**	**20 46 45.1**	**+0.9**
	comp=Z,0.3nm,0.7s,baz=325,slow=7.0,SNR=3.8						
SONM	**Songino Array**	**61.48**	**37**	P	**P**	**20 47 33.1**	**+2.0**
	comp=Z,0.6nm,0.9s,baz=328,slow=5.1,SNR=3.4						
SONM				LR	LR	21 15 31.5	
	comp=Z,42nm,18.6s,baz=67,slow=37						
PETK	**Petropavlovsk-**	**63.34**	**0**	LR	LR	21 13 22.9	
	comp=Z,26nm,19.4s,baz=236,slow=34						
KSRS	**Korea Array**	**76.22**	**24**	LR	LR	21 21 05.5	
	comp=Z,19nm,20.2s,baz=235,slow=35						
ASAR	**Alice Springs**	**136.75**	**33**	PKP	**PKPdf**	**20 56 38.3**	**+1.4**
	comp=Z,0.6nm,1.0s,baz=42,slow=1.5,SNR=3.8						

*IDC **19** 20:38:17.9±1.1,55°.88N×166°.30E,h0^{km},mb3.4/5, mb1 3.6/6,mb1mx3.4/27,mbtmp3.4/6,ML3.7/1,MS2.9/5, Ms1 2.9/5,ms1mx2.8/26,Error ellipse: s-maj=45.0km s-min=20.6km az=159.0*

*MOS **19** 20:38:18.7±1.9,55°.54N×166°.43E,h25^{km},mb4.0/3,Error ellipse: s-maj=19.7km s-min=12.1km az=53.0*

*KRSC **19** 20:38:18.1±0.5,55°.29N×166°.55E,h22$^{km}_{\pm 22km}$,ML4.3*

*ISCJB **19** 20:38:20.4±0.7,55°.26N±0°.04×166°.47E±0°.06,h41$^{km}_{\pm 7km}$, mb3.6/6,MS2.9/3,Error ellipse: s-maj=5.9km s-min=5.7km az=164.4*

ISC 19 20:38:19.2±1.0,55°.32N±0°.06×166°.60E±0°.08,h21$^{km}_{\pm 3km}$, n57,σ1°37/84,mb3.5/6,MS2.9/3,Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.38**	**252**	PN	**Pb**	**20 38 26.7**	**-0.3**
BKI				S	**Sb**	**20 38 32.7**	**+0.4**
BKI	**Bering**	**0.38**	**252**	*i* P	**Pb**	**20 38 26.7**	**-0.3**
BKI				*i* S	**Sb**	**20 38 32.7**	**+0.4**
KBG	**Krutoberegovo**	**2.39**	**295**	S	**Sn**	**20 39 22.7**	**-2.9**

comp=Z,0.2nm,0.4s,baz=47,slow=6.9,SNR=4.7
OBN Obninsk 62.59 330 *e*P **P 20 48 41.0 -0.1**
OBN pmax pmax
comp=Z,4.0nm,1.0s
TXAR Lajitas Array 66.28 73 P **P 20 49 06.8 +1.0**
comp=Z,0.3nm,0.5s,baz=324,slow=4.5,SNR=4.0
ASAR Alice Springs 83.48 210 P P 20 50 49.9 +5.0
comp=Z,0.2nm,0.7s,baz=12,slow=5.1,SNR=3.3

MEX 19 20:40:23.4±0.4, 16.41N×98.10W, h5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.03**	**231**	*i* P	Pg	20 40 23.8	-0.7
PNIG				*i* S	Sg	20 40 24.8	-0.5
HUIG	**Huatulco**	**2.02**	**108**	*e*P	Pn	20 40 55.6	-2.6
HUIG				*e*S	Sn	20 41 19.7	-4.2
CAIG	**El Cayaco**	**2.17**	**287**	*e*P	Pn	20 40 57.9	-2.3
CAIG				*i* S	Sn	20 41 23.8	-3.7
YAIG	**Yautepec**	**2.60**	**339**	*i* P	Pn	20 41 03.9	-2.5
YAIG				*i* S	Sn	20 41 34.2	-4.4
ARIG	**Puente Sto Nin**	**2.84**	**311**	*i* P	Pn	20 41 06.1	-3.3
ARIG				*i* S	Sn	20 41 41.1	-3.0

*WAR **19** 20:54:26.4, 51.51N×16.12E*
*ISCJB **19** 20:54:26.1±0.7, 51.39N±0.04×16.13E±0.04, h0km, Error ellipse: s-maj=5.3km s-min=3.0km az=20.3*
*IPEC **19** 20:54:26.0±0.3, 51.52N×16.27E, h0km, ML1.7/3, Error ellipse: s-maj=2.0km s-min=1.5km az=33.0*
*CSEM **19** 20:54:27.0±0.3, 51.42N×16.13E, h2km, ML2.9/8, Error ellipse: s-maj=5.3km s-min=3.1km az=9.0*
*PRU **19** 20:54:28.0, 51.41N×16.15E, h0km*
*VIE **19** 20:54:29.3, 51.27N×16.22E, h0km, ML2.1 58 km WNW of Wroclaw Suspected Mining induced.*

ISC 19 20:54:26.9±1.2, 51.47N±0.05×16.13E±0.03, h0km, n31, σ0.58/58, 1C-3D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.63**	**170**	*e*Pg	**Pg**	**20 54 39.1**	**+0.1**
KSP				*e*Sg	**Sg**	**20 54 47.5**	**+0.3**
KSP	**Ksiaz**	**0.63**	**170**	⇓*i*Pg	**Pg**	**20 54 39.2**	**+0.2**
KSP				*e*Sg	**Sg**	**20 54 47.1**	**-0.1**
UPC	**Upice**	**0.96**	**184**	*e*PG	**Pg**	**20 54 45.3**	**0.0**
UPC	**Upice**	**0.96**	**184**	Pg	**Pg**	**20 54 45.3**	**0.0**
DPC	**Dobruska-Polom**	**1.12**	**174**	*e*PG	**Pg**	**20 54 47.9**	**-0.5**
DPC				*e*SG	**Sg**	**20 55 02.3**	**-0.7**
DPC	**Dobruska-Polom**	**1.12**	**174**	Pg	**Pg**	**20 54 47.9**	**-0.5**
DPC				Sg	**Sg**	**20 55 02.3**	**-0.7**
PVCC	**Panska Ves**	**1.36**	**227**	*e*PG	**Pn**	**20 54 52.5**	**-0.6**
PVCC				*e*SG	**Sb**	**20 55 11.3**	**+0.2**
	comp=Z,43nm,0.2s						
PVCC	**Panska Ves**	**1.36**	**227**	Pg	**Pn**	**20 54 52.5**	**-0.6**
PVCC				Sg	**Sb**	**20 55 11.3**	**+0.2**
	43nm,0.2s						
KRLC	**Kraliky**	**1.45**	**163**	*e*PG	**Pn**	**20 54 53.7**	**-0.8**
KRLC				*e*SG	**Sg**	**20 55 12.5**	**-1.0**
KRLC	**Kraliky**	**1.45**	**163**	Pg	**Pn**	**20 54 53.7**	**-0.8**
KRLC				Sg	**Sg**	**20 55 12.5**	**-1.0**
BRG	**Berggiesshubel**	**1.50**	**248**	PN	**Pn**	**20 54 54.5**	**-0.5**
BRG				PG	**Pg**	**20 54 55.3**	**-0.3**
BRG				SG	**Sn**	**20 55 15.6**	**+0.4**
	14nm,0.4s						
PRU	**Pruhonice**	**1.79**	**215**	*e*PN	**Pn**	**20 54 58.7**	**-0.3**
PRU				*e*PG	**Pb**	**20 55 00.0**	**-0.5**
PRU				*e*SG	**Sn**	**20 55 22.5**	**+0.1**
	comp=Z,6.7nm,0.4s						
PRU	**Pruhonice**	**1.79**	**215**	Pn	**Pn**	**20 54 58.7**	**-0.3**
PRU	**Pruhonice**	**1.79**	**215**	Pg	**Pb**	**20 55 00.0**	**-0.5**
PRU				Sg	**Sn**	**20 55 22.5**	**+0.1**
	6.7nm,0.4s						
MORC	**Moravsky Berou**	**1.92**	**151**	*e*Pn	**Pn**	**20 54 59.8**	**-1.1**
	baz=336						
MORC				*e*Sg	**Sn**	**20 55 26.3**	**+0.6**
	4.5nm,0.2s,baz=336						
CLL	**Collm**	**1.96**	**267**	*e*Pg	**Pg**	**20 55 04.0**	**-0.5**
CLL				*e*		20 55 07.0	
CLL				*i* Sg	**Sg**	**20 55 30.0**	**+0.1**
	comp=Z,12nm,0.6s						
OKC	**Ostrava-Krasne**	**2.08**	**141**	*e*PG	**Pg**	**20 55 06.3**	**-0.4**
OKC				*e*SG	**Sn**	**20 55 30.6**	**+1.1**
OKC	**Ostrava-Krasne**	**2.08**	**141**	Pg	**Pg**	**20 55 06.3**	**-0.4**
OKC				Sg	**Sn**	**20 55 30.6**	**+1.1**
VRAC	**Vranov**	**2.18**	**172**	*e*Pn	**Pn**	**20 55 04.2**	**-0.2**
	baz=355						
VRAC				*e*Sg	**Sb**	**20 55 35.5**	**+0.7**
	comp=Z,4.4nm,0.2s,baz=355						
TREC	**Trest**	**2.21**	**191**	*e*PN	**Pn**	**20 55 04.7**	**-0.2**
TREC				*e*PG	**Pb**	**20 55 07.9**	**+0.1**
TREC	**Trest**	**2.21**	**191**	Pn	**Pn**	**20 55 04.7**	**-0.2**
KRUC	**Moravsky**	**2.41**	**176**	*e*Pn	**Pn**	**20 55 07.5**	**-0.1**
	baz=358						
KRUC				*e*Sg	**Sb**	**20 55 43.1**	**+1.7**
	comp=Z,4.5nm,0.4s,baz=358						
NKC	**Novy Kostel**	**2.64**	**244**	*e*PN	**Pn**	**20 55 10.8**	**+0.1**
NKC				*e*PG	**Pg**	**20 55 17.0**	**-0.4**
NKC				*e*SG	**Sg**	**20 55 52.0**	**+0.4**
	comp=Z,10nm,0.3s						
NKC	**Novy Kostel**	**2.64**	**244**	Pn	**Pn**	**20 55 10.8**	**+0.1**
OJC	**Ojcow**	**2.64**	**117**	*e*Pg	**Pg**	**20 55 17.4**	**-0.1**
OJC				*e*Sg	**Sg**	**20 55 51.8**	**+0.1**
OJC	**Ojcow**	**2.64**	**117**	*e*Pg	**Pg**	**20 55 17.4**	**-0.1**
OJC				*e*Sg	**Sg**	**20 55 51.8**	**+0.1**
KHC	**Kasperske Hory**	**2.85**	**216**	*e*PN	**Pn**	**20 55 13.5**	**-0.2**
KHC				*e*PG	**Pb**	**20 55 19.5**	**+0.8**
KHC				*e*SG	**Sg**	**20 55 59.5**	**+1.0**
KHC	**Kasperske Hory**	**2.85**	**216**	Pn	**Pn**	**20 55 13.5**	**-0.2**
CONA	**Conrad Observa**	**3.54**	**183**	⇓*e*Pn	**Pg**	**20 55 34.2**	**-0.6**
CONA				⇑*i*Sg	**Sg**	**20 56 20.5**	**-0.2**
	comp=Z,3.8nm,0.4s						
ARSA	**Arzberg**	**4.24**	**186**	⇑*i*Sg	**Sg**	**20 56 42.4**	**-0.6**
	comp=Z,0.8nm,0.1s						
ARSA	**Arzberg**	**4.24**	**186**	Sg	**Sg**	**20 56 42.4**	**-0.6**
	comp=Z,0.8nm,0.1s						

IDC 19 21:00:46.2±3.6, 6.19S×141.19E, h0km, mb3.4/1, mb1 3.9/3, mb1mx3.5/14, mbtmp3.7/3, ML3.8/2, Error ellipse: s-maj=115.3km s-min=27.6km az=99.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.21**	**205**	Pn	Pn	21 04 21.8	-0.7
	0.3nm,0.3s,baz=28,slow=14,SNR=9.7						
WRA				Sn	Sn	21 07 11.2	-0.5
	0.2nm,0.3s,baz=24,slow=22,SNR=3.6						
WRA				Lg	Lg	21 08 47.3	
	0.0nm,0.3s,baz=29,slow=28,SNR=3.1						
ASAR	**Alice Springs**	**18.74**	**201**	P	Pn	21 05 07.7	+0.6
	0.4nm,0.3s,baz=32,slow=11,SNR=33						
ASAR				Lg	Lg	21 10 50.6	
	baz=33,slow=26,SNR=3.5						
MKAR	**Makanchi Array**	**74.04**	**322**	P	P	21 12 23.9	-0.1
	0.2nm,0.6s,baz=108,slow=7.7,SNR=5.6						

IDC 19 21:03:38.6±1.2, 43.05S×72.16W, h0km, mb3.8/5, mb1 4.0/6, mb1mx3.9/18, mbtmp3.9/6, ML4.2/1, MS3.1/1, Ms1 3.0/1, ms1mx2.6/19, Error ellipse: s-maj=48.9km s-min=18.9km az=117.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.61**	**28**	Pn	Pn	21 04 23.7	+1.5
	10nm,0.3s,baz=205,slow=13,SNR=130						
PLCA				Pg	Pb	21 04 26.1	-0.4
	9.8nm,0.3s,baz=220,slow=17,SNR=128						
PLCA				Lg	Lg	21 05 01.0	
	49nm,0.3s,baz=112,slow=14,SNR=19						
PLCA				LR	LR	21 05 34.7	
	comp=Z,339nm,20.9s,baz=224,slow=44						
LVC	**Limon Verde**	**20.56**	**9**	P	P	21 08 19.8	+0.5
	3.5nm,0.8s,baz=182,slow=12,SNR=5.8						
CPUP	**Villa Florida**	**20.61**	**41**	P	Pn	21 08 22.4	+0.8
	0.4nm,0.3s,baz=214,slow=11,SNR=4.0						
LPAZ	**La Paz**	**26.90**	**9**	P	P	21 09 22.7	+0.6
	1.3nm,0.9s,baz=207,slow=9.0,SNR=4.5						
SIV	**San Ignacio**	**28.59**	**23**	P	P	21 09 35.9	-0.6
	0.7nm,0.4s,baz=216,slow=12,SNR=5.0						
TXAR	**Lajitas Array**	**77.64**	**332**	P	P	21 15 36.1	-0.6
	0.3nm,0.7s,baz=150,slow=7.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**87.43**	**69**	P	P	21 16 26.6	-1.5
	0.7nm,0.8s,baz=218,slow=4.4,SNR=3.8						
GERES	**GERESS Array B**	**118.41**	**49**	PKP	PKPdf	21 22 27.9	+0.3
	0.2nm,0.4s,baz=230,slow=5.8,SNR=3.8						
ILAR	**Eielson Array**	**122.13**	**331**	PKP	PKPdf	21 22 33.8	-0.3
	0.3nm,0.7s,baz=162,slow=3.4,SNR=4.2						
MKAR	**Makanchi Array**	**161.56**	**69**	PKPab	PKPab	21 24 26.5	+0.8
	0.4nm,0.8s,baz=245,slow=5.2,SNR=5.2						

*NSSC **19** 21:22:08.8±2.2, 35.26N×28.65E, h0km±369km, MD2.0, ML2.9*
*IDC **19** 21:22:08.2±1.0, 35.35N×28.49E, h0km, mb3.7/7, mb1 3.6/12, mb1mx3.6/29, mbtmp3.6/12, ML3.6/5, Error ellipse: s-maj=21.3km s-min=17.0km az=10.0*
*HLW **19** 21:22:11.5, 35.25N×28.64E, h23km±15km, Md3.5, Ml3.4*
*ISK **19** 21:22:11.2, 35.30N×28.61E, h59km, MD3.8*
*ATH **19** 21:22:13.1, 35.43N×28.55E, h45km, MD4.0/10*
*DDA **19** 21:22:13.1, 35.39N×28.59E, h47km, MD3.6*
*CSEM **19** 21:22:13.5±0.1, 35.36N×28.62E, h60km, Mw3.0, Error ellipse: s-maj=3.5km s-min=2.3km az=14.0*
*NIC **19** 21:22:17.4±0.2, 35.33N×28.98E, h55km, mb4.1, ML3.6, MW3.0*

ISC 19 21:22:11.4±1.3, 35.29N±0.03×28.61E±0.02, h26km±11km, n148, σ1.39/184, mb3.5/7, 6C, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**1.01**	**337**	*e*P	**Pn**	**21 22 30.4**	**+0.5**
ARG	**Arkhangelos**	**1.01**	**337**	*e*P	**Pn**	**21 22 30.4**	**+0.5**
KARP	**Karpathos**	**1.21**	**283**	*e*P	**Pb**	**21 22 34.2**	**+0.4**
KARP				*e*S	**Sn**	**21 22 49.2**	**+0.8**
KARP	**Karpathos**	**1.21**	**283**	*e*P	**Pb**	**21 22 34.2**	**+0.4**
KARP				*e*S	**Sn**	**21 22 49.2**	**+0.8**
AKAS	**Kas**	**1.24**	**40**	*i* P	**Pn**	**21 22 35.0**	**+1.7**
AKAS				*i* S	**Sb**	**21 22 51.0**	**+1.0**
AKAS	**Kas**	**1.24**	**40**	*i* P	**Pn**	**21 22 35.0**	**+1.7**
AKAS				*i* S	**Sb**	**21 22 51.0**	**+1.0**
FETY	**Fethiye**	**1.40**	**16**	*e*PN	**Pn**	**21 22 35.2**	**-0.1**
FETY				*e*SN	**Sn**	**21 22 53.3**	**+0.3**
FETY	**Fethiye**	**1.40**	**16**	*e*Pn	**Pn**	**21 22 35.2**	**-0.1**
FETY				*e*Sn	**Sn**	**21 22 53.3**	**+0.3**
DALY	**Dalyan (Mu¨la**	**1.53**	**1**	*e*PN	**Pn**	**21 22 36.8**	**-0.2**
DALY	**Dalyan (Mu¨la**	**1.53**	**1**	*e*Pn	**Pn**	**21 22 36.8**	**-0.2**
TURN	**Turunc**	**1.58**	**360**	*i* P	**Pn**	**21 22 37.8**	**0.0**
TURN				*i* S	**Sn**	**21 22 56.8**	**-0.6**
TURN	**Turunc**	**1.58**	**360**	*i* P	**Pn**	**21 22 37.8**	**0.0**
TURN				*i* S	**Sn**	**21 22 56.8**	**-0.6**
DAT	**Datca**	**1.67**	**330**	*e*PN	**Pn**	**21 22 39.1**	**0.0**
DAT	**Datca**	**1.67**	**330**	*e*Pn	**Pn**	**21 22 39.1**	**0.0**
ELL	**Elmali**	**1.80**	**35**	*e*PN	**Pn**	**21 22 40.8**	**-0.1**
ELL	**Elmali**	**1.80**	**35**	*e*Pn	**Pn**	**21 22 40.8**	**-0.1**
YER	**Yerkesik**	**1.86**	**352**	*e*PN	**Pn**	**21 22 41.6**	**-0.1**
YER	**Yerkesik**	**1.86**	**352**	*e*Pn	**Pn**	**21 22 41.6**	**-0.1**
GLHS	**Glhisar (BURDU**	**2.00**	**21**	*e*PN	**Pn**	**21 22 43.8**	**+0.2**
GLHS	**Glhisar (BURDU**	**2.00**	**21**	*e*Pn	**Pn**	**21 22 43.8**	**+0.2**
GOLH	**Golhisar**	**2.09**	**21**	*i* P	**Pn**	**21 22 47.4**	**+2.5**
GOLH				*i* S	**Sn**	**21 23 11.9**	**+1.8**
GOLH	**Golhisar**	**2.09**	**21**	*i* P	**Pn**	**21 22 47.4**	**+2.5**
GOLH				*i* S	**Sn**	**21 23 11.9**	**+1.8**
MLSB	**Milas**	**2.11**	**342**	*e*PN	**Pn**	**21 22 45.5**	**+0.3**
MLSB	**Milas**	**2.11**	**342**	*e*Pn	**Pn**	**21 22 45.5**	**+0.3**
KORT	**Korkueli**	**2.21**	**39**	*i* P	**Pb**	**21 22 50.4**	**-0.5**
KORT				*i* S	**Sb**	**21 23 17.1**	**-0.8**
KORT	**Korkueli**	**2.21**	**39**	*i* P	**Pb**	**21 22 50.4**	**-0.5**
KORT				*i* S	**Sb**	**21 23 17.1**	**-0.8**
ANTB	**Antalya**	**2.31**	**45**	*e*PN	**Pn**	**21 22 48.1**	**+0.3**
ANTB	**Antalya**	**2.31**	**45**	*e*Pn	**Pn**	**21 22 48.1**	**+0.3**
DNZL	**Cakiroluk**	**2.42**	**8**	*i* P	**Pn**	**21 22 50.4**	**+0.9**
DNZL				*i* S	**Sn**	**21 23 17.0**	**-1.5**
DNZL	**Cakiroluk**	**2.42**	**8**	*i* P	**Pn**	**21 22 50.4**	**+0.9**
DNZL				*i* S	**Sn**	**21 23 17.0**	**-1.5**
AYDN	**Tasoluk**	**2.44**	**346**	*i* P	**Pn**	**21 22 50.8**	**+1.1**
AYDN				*i* S	**Sn**	**21 23 17.9**	**-0.8**
AYDN	**Tasoluk**	**2.44**	**346**	*i* P	**Pn**	**21 22 50.8**	**+1.1**
AYDN				*i* S	**Sn**	**21 23 17.9**	**-0.8**
NPS	**Neapolis**	**2.45**	**270**	*e*P	**Pn**	**21 22 52.1**	**+2.3**
NPS	**Neapolis**	**2.45**	**270**	*e*P	**Pn**	**21 22 52.1**	**+2.3**
DENT	**Denizli**	**2.48**	**8**	*e*PN	**Pn**	**21 22 50.5**	**+0.2**
DENT	**Denizli**	**2.48**	**8**	*e*Pn	**Pn**	**21 22 50.5**	**+0.2**
LAST	**Lasithi**	**2.57**	**268**	*e*P	**Pn**	**21 22 53.6**	**+2.2**
LAST	**Lasithi**	**2.57**	**268**	*e*P	**Pn**	**21 22 53.6**	**+2.2**
GCAM	**G?zelcaml?**	**2.65**	**336**	*i* P	**Pn**	**21 22 52.3**	**-0.2**
GCAM				*i* S	**Sn**	**21 23 20.5**	**-3.3**
GCAM	**G?zelcaml?**	**2.65**	**336**	*i* P	**Pn**	**21 22 52.3**	**-0.2**
GCAM				*i* S	**Sn**	**21 23 20.5**	**-3.3**
BCK	**Bucak**	**2.69**	**36**	*e*PN	**Pn**	**21 22 53.5**	**+0.4**
BCK	**Bucak**	**2.69**	**36**	*e*Pn	**Pn**	**21 22 53.5**	**+0.4**
SMG	**Samos**	**2.81**	**330**	*e*P	**Pn**	**21 22 54.6**	**-0.1**
SMG	**Samos**	**2.81**	**330**	*e*P	**Pn**	**21 22 54.6**	**-0.1**
ISP	**Isparta**	**2.96**	**31**	*e*PN	**Pn**	**21 22 57.5**	**+0.6**
ISP	**Isparta**	**2.96**	**31**	*e*Pn	**Pn**	**21 22 57.5**	**+0.6**
IDI	**Anoyia**	**3.04**	**271**	*e*P	**Pn**	**21 22 58.7**	**+0.7**
IDI	**Anoyia**	**3.04**	**271**	*e*P	**Pn**	**21 22 58.7**	**+0.7**
AKMC	**Akamas**	**3.06**	**94**	⇑*i*P	**Pn**	**21 22 59.9**	**+1.8**
AKMC	**Akamas**	**3.06**	**94**	⇑*i*P	**Pn**	**21 22 59.9**	**+1.8**
APE	**Apeiranthos**	**3.06**	**306**	*e*PN	**Pn**	**21 22 58.7**	**+0.5**
APE	**Apeiranthos**	**3.06**	**306**	*e*P	**Pn**	**21 22 58.5**	**+0.3**
APE	**Apeiranthos**	**3.06**	**306**	*e*Pn	**Pn**	**21 22 58.7**	**+0.5**
PPCY	**Paphos**	**3.09**	**96**	P	**Pn**	**21 23 00.4**	**+1.9**
PPCY	**Paphos**	**3.09**	**96**	P	**Pn**	**21 23 00.4**	**+1.9**
KHL	**Karahalli**	**3.12**	**13**	*e*PN	**Pn**	**21 22 59.5**	**+0.5**
KHL	**Karahalli**	**3.12**	**13**	*e*Pn	**Pn**	**21 22 59.5**	**+0.5**
SIVA	**Sivas**	**3.13**	**266**	*e*P	**Pn**	**21 23 01.5**	**+2.5**
SIVA	**Sivas**	**3.13**	**266**	*e*P	**Pn**	**21 23 01.5**	**+2.5**
GAZI	**Gazipasa**	**3.16**	**72**	*i* P	**Pn**	**21 23 00.5**	**+1.0**
GAZI				*i* S	**Sn**	**21 23 35.1**	**-1.2**
GAZI	**Gazipasa**	**3.16**	**72**	*i* P	**Pn**	**21 23 00.5**	**+1.0**
GAZI				*i* S	**Sn**	**21 23 35.1**	**-1.2**
KHAL	**Karahalli**	**3.16**	**13**	*i* P	**Pn**	**21 23 00.3**	**+0.7**
KHAL				*i* S	**Sn**	**21 23 35.1**	**-1.3**
KHAL	**Karahalli**	**3.16**	**13**	*i* P	**Pn**	**21 23 00.3**	**+0.7**
KHAL				*i* S	**Sn**	**21 23 35.1**	**-1.3**
KULA	**Kula-Manisa**	**3.22**	**1**	*e*PN	**Pn**	**21 23 00.9**	**+0.5**
KULA	**Kula-Manisa**	**3.22**	**1**	*e*Pn	**Pn**	**21 23 00.9**	**+0.5**
ALFC	**Alevga**	**3.27**	**91**	⇑P	**Pn**	**21 23 02.8**	**+1.8**
	7.8nm,0.2s						
ALFC				S	**Sn**	**21 23 37.9**	**-1.2**
ALFC	**Alevga**	**3.27**	**91**	⇑P	**Pn**	**21 23 02.8**	**+1.8**
	7.8nm,0.2s						
ALFC				S	**Sn**	**21 23 37.9**	**-1.2**
IZM	**Izmir**	**3.29**	**341**	*e*PN	**Pn**	**21 23 01.6**	**+0.3**
IZM	**Izmir**	**3.29**	**341**	*e*Pn	**Pn**	**21 23 01.6**	**+0.3**
BLCB	**Balcova**	**3.34**	**338**	*e*PN	**Pn**	**21 23 02.6**	**+0.6**
BLCB	**Balcova**	**3.34**	**338**	*e*Pn	**Pn**	**21 23 02.6**	**+0.6**
LEF	**Lefka**	**3.51**	**92**	*e*PN	**Pn**	**21 23 04.8**	**+0.6**
LEF	**Lefka**	**3.51**	**92**	*e*Pn	**Pn**	**21 23 04.8**	**+0.6**
SHUT	**Suhut-Afyon**	**3.61**	**25**	*e*PN	**Pn**	**21 23 06.6**	**+0.8**
SHUT	**Suhut-Afyon**	**3.61**	**25**	*e*Pn	**Pn**	**21 23 06.6**	**+0.8**
GVD	**Gavdhos**	**3.74**	**264**	*e*P	**Pn**	**21 23 09.3**	**+1.9**
GVD	**Gavdhos**	**3.74**	**264**	*e*P	**Pn**	**21 23 09.3**	**+1.9**
ERMK	**Ermenek**	**3.74**	**68**	*i* P	Pn	21 23 11.7	+4.0
ERMK				*i* S	**Sn**	**21 23 54.4**	**+3.4**
ERMK	**Ermenek**	**3.74**	**68**	*i* P	Pn	21 23 11.7	+4.0
ERMK				*i* S	**Sn**	**21 23 54.4**	**+3.4**
MAMC	**Mammari**	**3.77**	**90**	P	**Pn**	**21 23 09.8**	**+1.9**
MAMC	**Mammari**	**3.77**	**90**	P	**Pn**	**21 23 09.8**	**+1.9**
CSS	**Prodhromos**	**3.88**	**93**	⇑P	**Pn**	**21 23 11.0**	**+1.6**
	1.9nm,0.2s						
CSS				S	**Sn**	**21 23 53.5**	**-0.7**
CSS	**Prodhromos**	**3.88**	**93**	*e*PN	**Pn**	**21 23 10.9**	**+1.4**
CSS	**Prodhromos**	**3.88**	**93**	⇑P	**Pn**	**21 23 11.0**	**+1.6**
	1.9nm,0.2s						
CSS				S	**Sn**	**21 23 53.5**	**-0.7**
ALT	**Altintas**	**3.95**	**17**	*e*PN	**Pn**	**21 23 11.4**	**+1.0**
ALT	**Altintas**	**3.95**	**17**	*e*Pn	**Pn**	**21 23 11.4**	**+1.0**
KONT	**Konya--Tatoy**	**4.02**	**48**	*e*PN	**Pn**	**21 23 12.5**	**+1.2**
KONT	**Konya--Tatoy**	**4.02**	**48**	*e*Pn	**Pn**	**21 23 12.5**	**+1.2**
LFK	**Lefkose**	**4.03**	**89**	*e*PN	**Pn**	**21 23 12.7**	**+1.2**
LFK	**Lefkose**	**4.03**	**89**	*e*Pn	**Pn**	**21 23 12.7**	**+1.2**
LADK	**Ladik-KONYA**	**4.19**	**45**	*e*PN	**Pn**	**21 23 14.6**	**+0.9**
LADK	**Ladik-KONYA**	**4.19**	**45**	*e*Pn	**Pn**	**21 23 14.6**	**+0.9**
TVSB	**Tavsanli**	**4.21**	**9**	*e*PN	**Pn**	**21 23 14.3**	**+0.3**
TVSB	**Tavsanli**	**4.21**	**9**	*e*Pn	**Pn**	**21 23 14.3**	**+0.3**
HMAT	**Matruh**	**4.37**	**197**	AMP		21 24 00.0	
	comp=E,70μm,0.3s,logA/T=5.4,baz=198						
KIZT	**Kizilcal**	**4.44**	**35**	*e*PN	**Pn**	**21 23 18.1**	**+0.9**
KIZT	**Kizilcal**	**4.44**	**35**	*e*Pn	**Pn**	**21 23 18.1**	**+0.9**
PHNC	**Paralimni**	**4.45**	**92**	P	Pn	21 23 23.0	+5.8
PHNC				S	**Sn**	**21 24 10.3**	**+2.1**
PHNC	**Paralimni**	**4.45**	**92**	P	Pn	21 23 23.0	+5.8
PHNC				S	**Sn**	**21 24 10.3**	**+2.1**
EREN	**Erenkoy**	**4.55**	**85**	*e*PN	**Pn**	**21 23 19.8**	**+1.3**
EREN	**Erenkoy**	**4.55**	**85**	*e*Pn	**Pn**	**21 23 19.8**	**+1.3**
KIZK	**Mersin**	**4.65**	**74**	*i* P	**Pn**	**21 23 21.8**	**+1.9**
KIZK				*i* S	**Sn**	**21 24 12.2**	**-0.8**
KIZK	**Mersin**	**4.65**	**74**	*i* P	**Pn**	**21 23 21.8**	**+1.9**
KIZK				*i* S	**Sn**	**21 24 12.2**	**-0.8**
SLUM		**4.73**	**218**	P	**Pn**	**21 23 19.7**	**-1.4**
	baz=219						
SLUM				AMP		21 24 00.0	
	comp=N,40μm,0.3s,logA/T=5.2,baz=219						
SLUM		**4.73**	**218**	P	**Pn**	**21 23 19.7**	**-1.4**
GONE	**Gonen-Balikesi**	**4.81**	**351**	*e*PN	**Pn**	**21 23 22.9**	**+0.8**
GONE	**Gonen-Balikesi**	**4.81**	**351**	*e*Pn	**Pn**	**21 23 22.9**	**+0.8**
VLI	**Veliai**	**4.82**	**289**	*e*P	**Pn**	**21 23 23.0**	**+0.7**
VLI	**Veliai**	**4.82**	**289**	*e*P	**Pn**	**21 23 23.0**	**+0.7**
SULT	**Sultanhani-AKS**	**4.89**	**52**	*e*PN	**Pn**	**21 23 24.8**	**+1.4**
SULT	**Sultanhani-AKS**	**4.89**	**52**	*e*Pn	**Pn**	**21 23 24.8**	**+1.4**
GELI	**Tayfur-Gelibol**	**5.38**	**342**	*e*PN	**Pn**	**21 23 30.9**	**+1.0**
GELI	**Tayfur-Gelibol**	**5.38**	**342**	*e*Pn	**Pn**	**21 23 30.9**	**+1.0**
HMYD	**Mayadein**	**5.78**	**161**	P	**Pn**	**21 23 34.0**	**-1.6**
	baz=160						
BRTR	**Keskin Array B**	**5.96**	**41**	Pn	**Pn**	**21 23 39.9**	**+1.7**
	comp=N,0.2nm,0.3s,baz=229,slow=15,SNR=6.1						
BRTR				Sn	**Sn**	**21 24 46.0**	**+0.3**
	comp=N,0.8nm,0.3s,baz=217,slow=23,SNR=15						
KOT	**Kottamia**	**5.99**	**152**	P	**Pn**	**21 23 36.5**	**-2.0**
	baz=152						
ARNB	**Al Arnab**	**6.03**	**82**	*e*P	**Pn**	**21 23 40.4**	**+1.5**
ARNB				*e*S	**Sn**	**21 24 44.9**	**-2.2**
ARNB				AML	AML	21 24 50.4	
	comp=E,14nm,0.4s						
ARNB				AML	AML	21 24 50.7	
	comp=Z,22nm,0.2s						
ARNB				AML	AML	21 24 54.6	
	comp=N,25nm,0.3s						
ARNB	**Al Arnab**	**6.03**	**82**	*e*P	**Pn**	**21 23 39.4**	**+0.4**
ARNB				*e*S	**Sn**	**21 24 44.9**	**-2.2**
ARNB				AML	AML	21 24 50.4	
	comp=E,14nm,0.4s						
ARNB				AML	AML	21 24 50.7	
	comp=Z,22nm,0.2s						
ARNB				AML	AML	21 24 54.6	
	comp=N,25nm,0.3s						
ARNB	**Al Arnab**	**6.03**	**82**	*e*P	**Pn**	**21 23 39.4**	**+0.4**
	SNR=45						
AMAG	**Maghara**	**6.03**	**139**	P	**Pn**	**21 23 36.8**	**-2.2**
	baz=138						
MMAI	**Mount Meron Ar**	**6.07**	**110**	Pn	**Pn**	**21 23 40.5**	**+0.9**
	comp=N,5.1nm,0.3s,baz=314,slow=12,SNR=52						
MMAI				Sn	**Sn**	**21 24 45.6**	**-2.6**
	comp=N,7.8nm,0.3s,baz=311,slow=23,SNR=9.3						
HHAG	**Hagoal**	**6.08**	**150**	P	**Pn**	**21 23 37.9**	**-1.8**
	baz=150						
RSH		**6.08**	**134**	P	**Pn**	**21 23 38.1**	**-1.6**
	baz=133						
HSAF	**As Saff**	**6.17**	**155**	P	**Pn**	**21 23 39.1**

RDX	**Rancho Dawling**	**0.75**	**182**	⇓*iP*		Pg	21 32 29.5	-1.8
RDX				⇑*e*			21 32 43.4	
	comp=N,687nm,0.3s							
EMX	**El Mayor**	**0.90**	**140**	⇓*iP*		Pg	21 32 32.2	-1.6
GLA	**Glamis**	**0.99**	**68**	*ePg*		Pg	21 32 33.3	-2.3
GLA				*eSg*		Sg	21 32 47.1	-1.4
PFO	**Pinyon Flat Ob**	**1.03**	**334**	*eP*		Pg	21 32 34.4	-2.2
PFO				*eS*		Sg	21 32 47.9	-2.3
PBX	**Punta Banda**	**1.16**	**217**	⇓*eP*		Pg	21 32 37.2	-1.7
ECNX	**Esteban Cantu**	**1.17**	**210**	⇓*eP*		Pg	21 32 37.4	-1.9
ZAX	**El Zacaton**	**1.20**	**195**	⇓*eP*		Pg	21 32 37.8	-2.0
ECBX	**El Chinero**	**1.41**	**148**	*e*		Sn	21 33 04.2	+1.9
	comp=N,202nm,0.8s							
SPX	**San Pedro Mart**	**1.68**	**167**	⇑*ePN*		Pn	21 32 46.9	-0.4
SPX				*eS*		Sn	21 33 08.6	-1.0
MWC	**Mount Wilson**	**2.36**	**311**	*ePn*		Pn	21 32 56.1	-0.5
MWC				*eSn*		Sn	21 33 25.7	-0.6
PASC	**Pasadena Art C**	**2.41**	**309**	*ePn*		Pn	21 32 55.0	-2.0
PASC				*eSn*		Sn	21 33 27.9	+0.7
GSC	**Goldstone**	**2.72**	**344**	*ePn*		Pb	21 33 05.7	-0.3
GSC				*eSn*		Sb	21 33 37.5	-2.4
ISA	**Isabella**	**3.65**	**325**	*ePb*		Pb	21 33 22.2	+0.2
ISA				*ePg*		Pg	21 33 26.0	-0.7
ISA				*eSg*		Sb	21 34 09.1	+2.3

IDC 19 21:32:59.7±10.0, **9°.88N**×**92°.43E**, **h0**km, **mb3.3**/2, **mb1 3.5**/3, **mb1mx3.2**/26, **mbtmp3.2**/3, **ML3.5/1, Error ellipse: s-maj=244.3km s-min=46.8km az=97.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**10.61**	**36**	Pn	Pn	21 35 32.5	-0.6
	0.1nm,0.3s,baz=224,slow=15,SNR=5.3						
WRA	**Warramunga Arr**	**50.80**	**126**	P	P	21 42 02.1	-0.2
	0.1nm,0.4s,baz=301,slow=9.8,SNR=2.2						
ASAR	**Alice Springs**	**52.49**	**130**	P	P	21 42 15.1	+0.1
	0.5nm,1.0s,baz=302,slow=7.3,SNR=4.4						

ISK ***19*** *21:42:51.8, 37°.57N×26°.71E, h13km, MD3.7*
ATH ***19*** *21:42:51.4, 37°.60N×26°.80E, h22km, ML3.5*
ISCJB ***19*** *21:42:51.6±0.5, 37°.55N±0°.02×26°.73E±0°.02, h6km±4km, Error ellipse: s-maj=2.8km s-min=2.7km az=18.0*
DDA ***19*** *21:42:52.5, 37°.59N×26°.81E, h2km, ML3.7*
CSEM ***19*** *21:42:52.3±0.1, 37°.55N×26°.74E, h5km, ML3.5, Error ellipse: s-maj=1.8km s-min=1.5km az=169.0*
THE ***19*** *21:42:52.4, 37°.56N×26°.78E, h0km, ML3.6/5, Error ellipse: s-maj=0.8km s-min=0.4km az=260.0*

ISC 19 21:42:52.8±1.0, **37°.56N**±0°.02×**26°.76E**±0°.02, **h6**km±8km, **n225**, σ0$64/264, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.16**	**22**	P	**Pg**	21 42 56.0	**-0.1**
SMG				S	**Sg**	21 42 58.5	**+0.1**
SMG	**Samos**	**0.16**	**22**	*ePB*	**Pg**	21 42 56.0	**-0.1**
SMG				*eSB*	**Sg**	21 42 58.5	**+0.1**
SMG	**Samos**	**0.16**	**22**	*ePb*	**Pg**	21 42 56.0	**-0.1**
SMG				S	**Sg**	21 42 58.5	**+0.1**
GCAM	**G?zelcaml?**	**0.40**	**69**	*i* P	**Pg**	21 43 00.5	**0.0**
GCAM				*i* S	**Sg**	21 43 06.1	**+0.2**
BODT	**Bodrum**	**0.66**	**138**	*ePG*	**Pg**	21 43 05.8	**+0.3**
URLA	**Izmir**	**0.81**	**351**	*i* P	**Pg**	21 43 07.8	**-0.6**
URLA	**Izmir**	**0.81**	**351**	*i* P	**Pg**	21 43 07.8	**-0.6**
MLSB	**Milas**	**0.85**	**108**	*ePG*	**Pg**	21 43 08.5	**-0.6**
MLSB				*eSG*	**Sb**	21 43 22.7	**+1.1**
BLCB	**Balcova**	**0.86**	**15**	*ePG*	**Pg**	21 43 08.5	**-0.8**
BLCB	**Balcova**	**0.86**	**15**	*ePg*	**Pg**	21 43 08.5	**-0.8**
AYDN	**Tasoluk**	**0.90**	**83**	*i* P	**Pg**	21 43 09.4	**-0.5**
AYDN				*i* S	**Sg**	21 43 21.3	**-0.3**
AYDN	**Tasoluk**	**0.90**	**83**	*i* P	**Pg**	21 43 09.4	**-0.5**
AYDN				*i* S	**Sg**	21 43 21.3	**-0.3**
IZM	**Izmir**	**0.93**	**25**	*ePG*	**Pg**	21 43 09.8	**-0.8**
IZM	**Izmir**	**0.93**	**25**	*ePg*	**Pg**	21 43 09.8	**-0.8**
CHOS	**Chios island**	**1.00**	**326**	P	**Pg**	21 43 11.7	**-0.2**
CHOS				S	**Sb**	21 43 26.4	**+0.5**
CHOS	**Chios island**	**1.00**	**326**	P	**Pg**	21 43 11.7	**-0.2**
CHOS				S	**Sb**	21 43 26.4	**+0.5**
DAT	**Datca**	**1.05**	**141**	*ePN*	**Pg**	21 43 12.2	**-0.8**
APE	**Apeiranthos**	**1.09**	**244**	*ePN*	**Pg**	21 43 12.9	**-0.8**
APE				*eSN*	**Sg**	21 43 27.7	**-0.2**
APE	**Apeiranthos**	**1.09**	**244**	P	**Pg**	21 43 14.0	**+0.2**
APE				S	**Sb**	21 43 29.8	**+1.1**
APE	**Apeiranthos**	**1.09**	**244**	*ePN*	**Pg**	21 43 13.3	**-0.5**
APE				*eSN*	**Sb**	21 43 29.7	**+1.1**
APE	**Apeiranthos**	**1.09**	**244**	*ePn*	**Pg**	21 43 13.3	**-0.5**
APE	**Apeiranthos**	**1.09**	**244**	P	**Pg**	21 43 14.0	**+0.2**
APE				*eSn*	**Sb**	21 43 29.7	**+1.1**
YER	**Yerkesik**	**1.28**	**109**	*ePN*	**Pn**	21 43 16.5	**-0.8**
YER	**Yerkesik**	**1.28**	**109**	*ePn*	**Pn**	21 43 16.5	**-0.8**
AKHS	**Akhisar**	**1.56**	**32**	*i* P	**Pn**	21 43 21.6	**+0.6**
AKHS				*i* S	**Sg**	21 43 42.8	**-0.1**
AKHS	**Akhisar**	**1.56**	**32**	*i* P	**Pn**	21 43 21.6	**+0.6**
AKHS				*i* S	**Sg**	21 43 42.8	**-0.1**
THR1	**Thera Island**	**1.58**	**222**	P	**Pn**	21 43 20.0	**-1.3**
THR1	**Thera Island**	**1.58**	**222**	P	**Pn**	21 43 20.0	**-1.3**
TURN	**Turunc**	**1.62**	**114**	*i* P	Pn	21 43 18.1	-3.8
TURN				*i* S	**Sn**	21 43 39.7	**-3.3**
DALY	**Dalyan (Mu¨la**	**1.68**	**115**	*ePN*	**Pn**	21 43 22.3	**-0.4**
DALY	**Dalyan (Mu¨la**	**1.68**	**115**	*ePn*	**Pn**	21 43 22.3	**-0.4**
ARG	**Arkhangelos**	**1.73**	**140**	P	**Pn**	21 43 22.7	**-0.6**
ARG				S	**Sn**	21 43 46.1	**+0.4**
ARG	**Arkhangelos**	**1.73**	**140**	*ePN*	**Pn**	21 43 22.4	**-0.9**
ARG				*eSN*	**Sn**	21 43 45.7	**0.0**
ARG	**Arkhangelos**	**1.73**	**140**	*ePn*	**Pn**	21 43 22.4	**-0.9**
ARG	**Arkhangelos**	**1.73**	**140**	P	**Pn**	21 43 22.7	**-0.6**
ARG				*eSn*	**Sn**	21 43 45.7	**0.0**
ARG				S	**Sn**	21 43 46.1	**+0.4**
PRK	**Paraskevi**	**1.73**	**347**	P	**Pn**	21 43 22.7	**-0.6**
PRK				S	**Sn**	21 43 45.8	**+0.1**
PRK	**Paraskevi**	**1.73**	**347**	*ePN*	**Pn**	21 43 21.7	**-1.6**
PRK				*eSN*	**Sn**	21 43 44.4	**-1.3**
PRK	**Paraskevi**	**1.73**	**347**	*ePn*	**Pn**	21 43 21.7	**-1.6**
PRK	**Paraskevi**	**1.73**	**347**	P	**Pn**	21 43 22.7	**-0.6**
PRK				*eSn*	**Sn**	21 43 44.4	**-1.3**
PRK				S	**Sn**	21 43 45.8	**+0.1**
AYVA	**Ayvalik**	**1.75**	**358**	*i* P	**Pn**	21 43 24.3	**+0.7**
AYVA				*i* S	**Sg**	21 43 49.8	**+0.8**
AYVA	**Ayvalik**	**1.75**	**358**	*i* P	**Pn**	21 43 24.3	**+0.7**
AYVA				*i* S	**Sg**	21 43 49.8	**+0.8**
KULA	**Kula-Manisa**	**1.78**	**57**	*ePN*	**Pn**	21 43 23.2	**-0.9**
KULA	**Kula-Manisa**	**1.78**	**57**	*ePn*	**Pn**	21 43 23.2	**-0.9**
SIGR	**SIGRI**	**1.80**	**337**	P	**Pn**	21 43 23.0	**-1.3**
SIGR				S	**Sn**	21 43 47.7	**+0.3**
SIGR	**SIGRI**	**1.80**	**337**	P	**Pn**	21 43 23.0	**-1.3**
SIGR				S	**Sn**	21 43 47.7	**+0.3**
DENT	**Denizli**	**1.81**	**83**	*ePN*	**Pn**	21 43 24.0	**-0.6**
DENT	**Denizli**	**1.81**	**83**	*ePn*	**Pn**	21 43 24.0	**-0.6**
DNZL	**Cakiroluk**	**1.82**	**85**	*i* P	**Pn**	21 43 24.4	**-0.4**
DNZL				*i* S	**Sg**	21 43 51.7	**+0.4**
DNZL	**Cakiroluk**	**1.82**	**85**	*i* P	**Pn**	21 43 24.4	**-0.4**
DNZL				*i* S	**Sg**	21 43 51.7	**+0.4**
MRMA	**Marmari**	**1.95**	**286**	P	**Pn**	21 43 26.1	**-0.3**
MRMA	**Marmari**	**1.95**	**286**	P	**Pn**	21 43 26.1	**-0.3**
KARP	**Karpathos**	**2.03**	**171**	P	**Pn**	21 43 26.5	**-1.0**
KARP				S	**Sn**	21 43 53.5	**+0.3**
KARP	**Karpathos**	**2.03**	**171**	P	**Pn**	21 43 26.5	**-1.0**
KARP				S	**Sn**	21 43 53.5	**+0.3**
FETY	**Fethiye**	**2.07**	**116**	*ePN*	**Pn**	21 43 27.9	**-0.2**
FETY	**Fethiye**	**2.07**	**116**	*ePn*	**Pn**	21 43 27.9	**-0.2**
DEMI	**Demirci**	**2.14**	**45**	*i* P	**Pb**	21 43 32.4	**+0.5**
DEMI				*i* S	**Sg**	21 44 00.6	**-0.9**
DEMI	**Demirci**	**2.14**	**45**	*i* P	**Pb**	21 43 32.4	**+0.5**
DEMI				*i* S	**Sg**	21 44 00.6	**-0.9**
GLHS	**Glhisar (BURDU**	**2.22**	**100**	*ePN*	**Pn**	21 43 30.0	**-0.2**
GLHS	**Glhisar (BURDU**	**2.22**	**100**	*ePn*	**Pn**	21 43 30.0	**-0.2**
BALB	**Balikesir**	**2.26**	**23**	*ePN*	**Pn**	21 43 30.3	**-0.3**
BALB	**Balikesir**	**2.26**	**23**	*ePn*	**Pn**	21 43 30.3	**-0.3**
BALY	**Balya**	**2.28**	**17**	*i* P	**Pb**	21 43 34.0	**-0.4**
BALY				*i* S	**Sg**	21 44 05.4	**-0.7**
BALY	**Balya**	**2.28**	**17**	*i* P	**Pb**	21 43 34.0	**-0.4**
KHL	**Karahalli**	**2.31**	**70**	*ePN*	**Pn**	21 43 30.8	**-0.7**
KHL	**Karahalli**	**2.31**	**70**	*ePn*	**Pn**	21 43 30.8	**-0.7**
PTL	**Penteli**	**2.34**	**283**	P	**Pn**	21 43 31.4	**-0.4**
PTL	**Penteli**	**2.34**	**283**	P	**Pn**	21 43 31.4	**-0.4**
DURS	**Dursunbey**	**2.44**	**33**	*i* P	**Pb**	21 43 36.4	**-0.8**
DURS				*i* S	**Sg**	21 44 11.3	**0.0**
DURS	**Dursunbey**	**2.44**	**33**	*i* P	**Pb**	21 43 36.4	**-0.8**

ATH	**Athens Observa**	**2.45**	**281**	P		**Pn**	21 43 33.0	**-0.2**
ATH	**Athens Observa**	**2.45**	**281**	*ePB*		**Pn**	21 43 33.2	**0.0**
ATH	**Athens Observa**	**2.45**	**281**	P		**Pn**	21 43 33.0	**-0.2**
NPS	**Neapolis**	**2.47**	**202**	P		**Pn**	21 43 32.7	**-0.8**
NPS	**Neapolis**	**2.47**	**202**	*ePN*		**Pn**	21 43 32.4	**-1.1**
NPS	**Neapolis**	**2.47**	**202**	*ePn*		**Pn**	21 43 32.4	**-1.1**
NPS	**Neapolis**	**2.47**	**202**	P		**Pn**	21 43 32.7	**-0.8**
ZKR	**Zakros**	**2.48**	**190**	*ePB*		**Pn**	21 43 34.0	**+0.4**
GONE	**Gonen-Balikesi**	**2.59**	**16**	*ePN*		**Pn**	21 43 34.3	**-0.9**
GONE	**Gonen-Balikesi**	**2.59**	**16**	*ePn*		**Pn**	21 43 34.3	**-0.9**
NAIG	**Nisos Aigina**	**2.60**	**275**	*ePN*		**Pn**	21 43 34.6	**-0.8**
NAIG	**Nisos Aigina**	**2.60**	**275**	*ePn*		**Pn**	21 43 34.6	**-0.8**
LAST	**Lasithi**	**2.60**	**204**	*ePN*		**Pn**	21 43 35.0	**-0.5**
LAST	**Lasithi**	**2.60**	**204**	*ePn*		**Pn**	21 43 35.0	**-0.5**
ELL	**Elmali**	**2.64**	**107**	*ePN*		**Pn**	21 43 36.2	**+0.2**
ELL	**Elmali**	**2.64**	**107**	*ePn*		**Pn**	21 43 36.2	**+0.2**
LIA	**Limnos Island**	**2.64**	**333**	P		Pn	21 43 35.3	-0.6
LIA				S		**Sn**	21 44 08.9	**+0.7**
LIA	**Limnos Island**	**2.64**	**333**	*ePN*		**Pn**	21 43 35.2	**-0.6**
LIA	**Limnos Island**	**2.64**	**333**	P		Pn	21 43 35.3	-0.6
LIA				S		**Sn**	21 44 08.9	**+0.7**
IDI	**Anoyia**	**2.72**	**214**	P		**Pn**	21 43 36.5	**-0.6**
IDI	**Anoyia**	**2.72**	**214**	*ePN*		**Pn**	21 43 36.4	**-0.6**
IDI				*eSN*		**Sn**	21 44 09.9	**-0.4**
IDI	**Anoyia**	**2.72**	**214**	P		**Pn**	21 43 36.5	**-0.6**
IDI				*eSn*		**Sn**	21 44 09.9	**-0.4**
MRKA	**Markates**	**2.75**	**296**	P		**Pn**	21 43 36.9	**-0.5**
MRKA	**Markates**	**2.75**	**296**	P		**Pn**	21 43 36.9	**-0.5**
DID	**Didima**	**2.80**	**270**	P		**Pn**	21 43 37.4	**-0.7**
DID	**Didima**	**2.80**	**270**	*ePN*		**Pn**	21 43 37.3	**-0.8**
DID	**Didima**	**2.80**	**270**	P		**Pn**	21 43 37.4	**-0.7**
LPK	**Lapseki**	**2.81**	**0**	*ePN*		**Pn**	21 43 38.0	**-0.2**
LPK	**Lapseki**	**2.81**	**0**	*ePn*		**Pn**	21 43 38.0	**-0.2**
TVSB	**Tavsanli**	**2.84**	**47**	*ePN*		**Pn**	21 43 38.8	**+0.1**
TVSB	**Tavsanli**	**2.84**	**47**	*ePn*		**Pn**	21 43 38.8	**+0.1**
GELI	**Tayfur-Gelibol**	**2.85**	**356**	*ePN*		**Pn**	21 43 37.7	**-1.0**
GELI	**Tayfur-Gelibol**	**2.85**	**356**	*ePn*		**Pn**	21 43 37.7	**-1.0**
KRBG	**Karabiga-Canak**	**2.86**	**8**	*ePN*		**Pn**	21 43 37.7	**-1.2**
KRBG	**Karabiga-Canak**	**2.86**	**8**	*ePn*		**Pn**	21 43 37.7	**-1.2**
BNT	**Bandirma**	**2.94**	**18**	*ePN*		**Pn**	21 43 40.3	**+0.3**
BNT	**Bandirma**	**2.94**	**18**	*ePn*		**Pn**	21 43 40.3	**+0.3**
VAM	**Vamos**	**2.98**	**225**	*ePN*		**Pn**	21 43 40.8	**+0.3**
VAM	**Vamos**	**2.98**	**225**	*ePn*		**Pn**	21 43 40.8	**+0.3**
KCTX	**Karacabey (Bur**	**2.98**	**24**	*ePN*		**Pn**	21 43 40.5	**0.0**
KCTX	**Karacabey (Bur**	**2.98**	**24**	*ePn*		**Pn**	21 43 40.5	**0.0**
SIVA	**Sivas**	**2.98**	**212**	*ePN*		**Pn**	21 43 40.6	**0.0**
SIVA	**Sivas**	**2.98**	**212**	*ePn*		**Pn**	21 43 40.6	**0.0**
ORLT	**Orhaneli**	**2.99**	**33**	*ePN*		**Pn**	21 43 40.7	**-0.1**
ORLT	**Orhaneli**	**2.99**	**33**	*ePn*		**Pn**	21 43 40.7	**-0.1**
ISP	**Isparta**	**3.00**	**84**	*ePN*		**Pn**	21 43 40.8	**-0.1**
ISP	**Isparta**	**3.00**	**84**	*ePn*		**Pn**	21 43 40.8	**-0.1**
ALT	**Altintas**	**3.03**	**59**	*ePN*		**Pn**	21 43 41.2	**-0.1**
ALT	**Altintas**	**3.03**	**59**	*ePn*		**Pn**	21 43 41.3	**-0.1**
LTK	**Loutraki**	**3.04**	**280**	P		**Pn**	21 43 41.2	**-0.2**
LTK	**Loutraki**	**3.04**	**280**	*ePN*		**Pn**	21 43 41.2	**-0.2**
LTK	**Loutraki**	**3.04**	**280**	P		**Pn**	21 43 41.2	**-0.2**
BCK	**Bucak**	**3.05**	**91**	*ePN*		**Pn**	21 43 41.4	**-0.1**
BCK	**Bucak**	**3.05**	**91**	*ePn*		**Pn**	21 43 41.4	**-0.1**
SKIA	**Skiathos**	**3.05**	**303**	P		**Pn**	21 43 41.3	**-0.2**
SKIA	**Skiathos**	**3.05**	**303**	P		**Pn**	21 43 41.3	**-0.2**
SMTH	**Samothraki Isl**	**3.06**	**342**	*ePN*		**Pn**	21 43 41.2	**-0.5**
SMTH	**Samothraki Isl**	**3.06**	**342**	*ePn*		**Pn**	21 43 41.2	**-0.5**
ERIK	**Erikli-Kesan**	**3.12**	**357**	*ePN*		**Pn**	21 43 41.4	**-1.0**
ERIK	**Erikli-Kesan**	**3.12**	**357**	*ePn*		**Pn**	21 43 41.4	**-1.0**
RKY	**Sarkoy-Tekirda**	**3.14**	**6**	*ePN*		**Pn**	21 43 43.0	**+0.1**
RKY	**Sarkoy-Tekirda**	**3.14**	**6**	*ePn*		**Pn**	21 43 43.0	**+0.1**
SHUT	**Suhut-Afyon**	**3.15**	**70**	*ePN*		**Pn**	21 43 43.0	**-0.1**
SHUT	**Suhut-Afyon**	**3.15**	**70**	*ePn*		**Pn**	21 43 43.0	**-0.1**
ATAL	**Atalanti**	**3.16**	**292**	P		**Pn**	21 43 42.8	**-0.2**
ATAL	**Atalanti**	**3.16**	**292**	P		**Pn**	21 43 42.8	**-0.2**
VLI	**Veliai**	**3.17**	**256**	P		**Pn**	21 43 42.5	**-0.5**
VLI	**Veliai**	**3.17**	**256**	*ePN*		**Pn**	21 43 42.6	**-0.5**
VLI	**Veliai**	**3.17**	**256**	*ePn*		**Pn**	21 43 42.6	**-0.5**
ANTB	**Antalya**	**3.18**	**101**	*ePN*		**Pn**	21 43 43.5	**+0.3**
ANTB	**Antalya**	**3.18**	**101**	*ePn*		**Pn**	21 43 43.5	**+0.3**
ENEZ	**Enez**	**3.21**	**352**	*ePN*		**Pn**	21 43 42.6	**-1.1**
ENEZ	**Enez**	**3.21**	**352**	*ePn*		**Pn**	21 43 42.6	**-1.1**
MFT	**Murefte**	**3.25**	**7**	*ePN*		**Pn**	21 43 44.5	**+0.2**
MFT	**Murefte**	**3.25**	**7**	*ePn*		**Pn**	21 43 44.5	**+0.2**
MDNY	**Mudanya-Bursa**	**3.26**	**30**	*ePN*		**Pn**	21 43 44.4	**0.0**
MDNY	**Mudanya-Bursa**	**3.26**	**30**	*ePn*		**Pn**	21 43 44.4	**0.0**
NEO	**Neokhori**	**3.28**	**303**	*ePN*		**Pn**	21 43 44.4	**-0.3**
NEO	**Neokhori**	**3.28**	**303**	*ePn*		**Pn**	21 43 44.4	**-0.3**
PAIG	**Paliouri**	**3.38**	**315**	P		**Pn**	21 43 45.5	**-0.5**
PAIG	**Paliouri**	**3.38**	**315**	*ePN*		**Pn**	21 43 45.6	**-0.8**
PAIG	**Paliouri**	**3.38**	**315**	*ePn*		**Pn**	21 43 45.2	**-0.8**
PAIG	**Paliouri**	**3.38**	**315**	P		**Pn**	21 43 45.5	**-0.5**
ALN	**Alexandroupoli**	**3.38**	**351**	P		**Pn**	21 43 45.1	**-0.9**
ALN	**Alexandroupoli**	**3.38**	**351**	*ePN*		**Pn**	21 43 44.5	**-1.5**
ALN	**Alexandroupoli**	**3.38**	**351**	*ePn*		**Pn**	21 43 44.5	**-1.5**
ALN	**Alexandroupoli**	**3.38**	**351**	P		**Pn**	21 43 45.1	**-0.9**
ARMT	**Armutlu**	**3.42**	**28**	*ePN*		**Pn**	21 43 47.0	**+0.4**
ARMT	**Armutlu**	**3.42**	**28**	*ePn*		**Pn**	21 43 47.0	**+0.4**
GEMT	**Gemlik**	**3.44**	**33**	*ePN*		**Pn**	21 43 46.7	**-0.2**
GEMT	**Gemlik**	**3.44**	**33**	*ePn*		**Pn**	21 43 46.7	**-0.2**
VLX	**Vlachokerasia**	**3.49**	**268**	P		**Pn**	21 43 47.5	**-0.1**
VLX	**Vlachokerasia**	**3.49**	**268**	*ePN*		**Pn**	21 43 48.0	**+0.4**
VLX	**Vlachokerasia**	**3.49**	**268**	P		**Pn**	21 43 47.5	**-0.1**
VLX	**Vlachokerasia**	**3.49**	**268**	*ePn*		**Pn**	21 43 48.0	**+0.4**
OUR	**Ouranopolis**	**3.52**	**323**	P		**Pn**	21 43 47.5	**-0.4**
OUR	**Ouranopolis**	**3.52**	**323**	P		**Pn**	21 43 47.5	**-0.4**
GUR	**Goura**	**3.52**	**278**	P		**Pn**	21 43 48.0	**-0.1**
GUR	**Goura**	**3.52**	**278**	P		**Pn**	21 43 48.0	**-0.1**
CAVI	**Cavuskoy**	**3.57**	**41**	*ePN*		**Pn**	21 43 48.9	**+0.2**
CAVI	**Cavuskoy**	**3.57**	**41**	*ePn*		**Pn**	21 43 48.9	**+0.2**
YLV	**Yalova**	**3.63**	**33**	*ePN*		**Pn**	21 43 50.1	**+0.6**
YLV	**Yalova**	**3.63**	**33**	*ePn*		**Pn**	21 43 50.1	**+0.6**
ADVT	**Abdulvahap**	**3.69**	**38**	*ePN*		**Pn**	21 43 50.9	**+0.6**
ADVT	**Abdulvahap**	**3.69**	**38**	*ePn*		**Pn**	21 43 50.9	**+0.6**
RDO	**Rodhopi**	**3.71**	**346**	P		**Pn**	21 43 50.0	**-0.5**
RDO	**Rodhopi**	**3.71**	**346**	*ePN*		**Pn**	21 43 50.0	**-0.5**
RDO	**Rodhopi**	**3.71**	**346**	P		**Pn**	21 43 50.0	**-0.5**
ESKT	**Eskisehir**	**3.76**	**57**	*ePN*		**Pn**	21 43 51.8	**+0.4**
ESKT	**Eskisehir**	**3.76**	**57**	*ePn*		**Pn**	21 43 51.8	**+0.4**
BUY	**Buyukada**	**3.77**	**28**	*ePN*		**Pn**	21 43 51.8	**+0.5**
BUY	**Buyukada**	**3.77**	**28**	*ePn*		**Pn**	21 43 51.8	**+0.5**
AGG	**Agios Georgios**	**3.78**	**294**	P		**Pn**	21 43 51.6	**0.0**
AGG	**Agios Georgios**	**3.78**	**294**	*ePN*		**Pn**	21 43 51.5	**0.0**
AGG	**Agios Georgios**	**3.78**	**294**	*ePn*		**Pn**	21 43 51.5	**0.0**
SLVT	**Silivri**	**3.84**	**17**	*ePN*		**Pn**	21 43 52.8	**+0.5**
SLVT	**Silivri**	**3.84**	**17**	*ePn*		**Pn**	21 43 52.8	**+0.5**
KAVA	**Kavala**	**3.85**	**334**	P		**Pn**	21 43 51.6	**-0.9**
KAVA	**Kavala**	**3.85**	**334**	P		**Pn**	21 43 51.6	**-0.9**
GPA	**Golpazari**	**3.89**	**44**	*ePN*		**Pn**	21 43 53.6	**+0.6**
GPA	**Golpazari**	**3.89**	**44**	*ePn*		**Pn**	21 43 53.6	**+0.6**
CTKS	**Kestanelik-??a**	**3.92**	**20**	*ePN*		**Pn**	21 43 53.3	**-0.1**
CTKS	**Kestanelik-??a**	**3.92**	**20**	*ePn*		**Pn**	21 43 53.3	**-0.1**
ISK	**Istanbul-Kandi**	**3.93**	**26**	*ePN*		**Pn**	21 43 54.0	**+0.4**
ISK	**Istanbul-Kandi**	**3.93**	**26**	*ePn*		**Pn**	21 43 54.0	**+0.4**
BGKT	**Bogazkoy**	**3.94**	**23**	*ePN*		**Pn**	21 43 54.3	**+0.6**
BGKT	**Bogazkoy**	**3.94**	**23**	*ePn*		**Pn**	21 43 54.3	**+0.6**
HRT	**Hereke**	**3.97**	**34**	*ePN*		**Pn**	21 43 54.7	**+0.6**
HRT	**Hereke**	**3.97**	**34**	*ePn*		**Pn**	21 43 54.7	**+0.6**
AMT	**Artemida-Makis**	**4.01**	**271**	*ePN*		**Pn**	21 43 55.4	**+0.6**
AMT	**Artemida-Makis**	**4.01**	**271**	*ePn*		**Pn**	21 43 55.4	**+0.6**
KLYT	**Kilyos**	**4.09**	**25**	*ePN*		**Pn**	21 43 56.5	**+0.7**
KLYT	**Kilyos**	**4.09**	**25**	*ePn*		**Pn**	21 43 56.5	**+0.7**
GULT	**Gulveren**	**4.10**	**44**	*ePN*		**Pn**	21 43 56.5	**+0.5**
GULT	**Gulveren**	**4.10**	**44**	*ePn*		**Pn**	21 43 56.5	**+0.5**
SVRH	**Sivrihisar-ESK**	**4.19**	**62**	*ePN*		**Pn**	21 43 57.8	**+0.6**
SVRH	**Sivrihisar-ESK**	**4.19**	**62**	*ePn*		**Pn**	21 43 57.8	**+0.6**
LIT	**Litokhoron**	**4.19**	**309**	*ePN*		**Pn**	21 43 57.2	**0.0**
LIT	**Litokhoron**	**4.19**	**309**	*ePn*		**Pn**	21 43 57.2	**0.0**
SOH	**Sokhos**	**4.20**	**322**	*ePN*		**Pn**	21 43 56.8	**-0.5**
SOH	**Sokhos**	**4.20**	**322**	*ePn*		**Pn**	21 43 56.8	**-0.5**
THL	**Klokotos Trika**	**4.22**	**300**	*ePN*		**Pn**	21 43 57.8	**+0.2**
THL	**Klokotos Trika**	**4.22**	**300**	*ePn*		**Pn**	21 43 57.8	**+0.2**
KIZT	**Kizilcal**	**4.24**	**70**	*ePN*		**Pn**	21 43 58.6	**+0.6**
KIZT	**Kizilcal**	**4.24**	**70**	*ePn*		**Pn**	21 43 58.6	**+0.6**
NVR	**Nevrokopi**	**4.40**	**330**	*ePN*		**Pn**	21 44 00.0	**-0.1**
NVR	**Nevrokopi**	**4.40**	**330**	*ePn*		**Pn**	21 44 00.0	**-0.1**
KONT	**Konya--Tatoy**	**4.46**	**83**	*ePN*		**Pn**	21 44 01.6	**+0.8**
KONT	**Konya--Tatoy**	**4.46**	**83**	*ePn*		**Pn**	21 44 01.7	**+0.8**
LADK	**Ladik-KONYA**	**4.48**	**80**	*ePN*		**Pn**	21 44 01.7	**+0.4**
LADK	**Ladik-KONYA**	**4.48**	**80**	*ePn*		**Pn**	21 44 01.7	**+0.4**
MDUB	**Mudurnu**	**4.52**	**49**	*ePN*		**Pn**	21 44 02.5	**+0.7**
MDUB

SULT	**Sultanhani-AKS**	**4.91**	**52**	*e*PN	**Pn**	**21 50 53.0**	**+1.4**
SULT	**Sultanhani-AKS**	**4.91**	**52**	*e*Pn	**Pn**	**21 50 53.0**	**+1.4**
HNAT	**Natroun**	**5.89**	**163**	P	**Pn**	**21 51 03.1**	**-1.9**
	baz=163						
BRTR	**Keskin Array B**	**5.98**	**41**	Pn	**Pn**	**21 51 08.1**	**+1.8**
	0.2nm,0.3s,baz=226,slow=14,SNR=6.0						
BRTR				Sn	**Sn**	**21 52 12.8**	**-0.7**
	0.6nm,0.3s,baz=212,slow=24,SNR=12						
AMAG	**Maghara**	**6.04**	**139**	P	**Pn**	**21 51 04.7**	**-2.4**
	baz=138						
ARNB	**Al Arnab**	**6.04**	**82**	*e*P	**Pn**	**21 51 05.0**	**-2.2**
ARNB				*e*S	Sn	21 52 08.8	-6.4
ARNB				AML	AML	21 52 14.6	
	comp=N,18nm,0.2s						
ARNB				AML	AML	21 52 15.9	
	comp=Z,19nm,0.2s						
ARNB				AML	AML	21 52 22.1	
	comp=E,8.6nm,0.4s						
RSH		**6.09**	**134**	P	**Pn**	**21 51 05.1**	**-2.6**
	baz=133						
HSAF	**As Saff**	**6.18**	**155**	P	**Pn**	**21 51 07.0**	**-2.0**
	baz=156						
GLL	**Jalalah**	**6.27**	**154**	P	Pn	21 51 07.5	-2.7
	baz=155						
BRBR	**Barbar**	**6.37**	**105**	*e*P	**Pn**	**21 51 12.1**	**+0.3**
BRBR				*e*S	**Sn**	**21 52 19.1**	**-4.2**
BRBR				AML	AML	21 52 23.7	
	comp=E,14nm,0.2s						
BRBR				AML	AML	21 52 25.9	
	comp=N,31nm,0.6s						
BRBR				AML	AML	21 52 26.7	
	comp=Z,26nm,0.8s						
BRBR	**Barbar**	**6.37**	**105**	*e*P	**Pn**	**21 51 12.1**	**+0.3**
	SNR=45						
BTCH	**Batrach**	**6.45**	**81**	*e*S	Sn	21 52 18.2	-6.9
BTCH				AML	AML	21 52 33.0	
	comp=Z,14nm,0.2s						
BTCH				AML	AML	21 52 33.7	
	comp=N,31nm,0.4s						
BTCH				AML	AML	21 52 36.7	
	comp=E,26nm,0.6s						
TCHB	**Talchebab**	**6.66**	**111**	*e*P	**Pn**	**21 51 15.5**	**-0.1**
TCHB				*e*S	**Sn**	**21 52 29.5**	**-0.8**
TCHB				AML	AML	21 52 34.1	
	comp=E,32nm,0.7s						
TCHB	**Talchebab**	**6.66**	**111**	*e*P	**Pn**	**21 51 15.5**	**-0.1**
	SNR=45						
TCHB				*e*S	**Sn**	**21 52 29.5**	**-0.8**
	comp=E,32nm,0.7s,SNR=40						
AWBH		**6.95**	**178**	P	**Pn**	**21 51 18.3**	**-1.2**
	baz=179						
HNKL	**Nakhl**	**7.01**	**138**	P	**Pn**	**21 51 17.8**	**-2.6**
	baz=138						
HFRF	**Wahat Farafira**	**8.12**	**182**	P	**Pn**	**21 51 34.4**	**-1.1**
	baz=184						
HFRF	**Wahat Farafira**	**8.12**	**182**	P	**Pn**	**21 51 34.4**	**-1.1**
HKAT	**Jabal Katrina**	**8.16**	**144**	P	**Pn**	**21 51 33.8**	**-2.5**
	baz=144						
KECS	**Kecovo**	**14.49**	**338**	*e*	**P**	**21 53 07.8**	**-1.0**
STHS	**Stebnicka Huta**	**15.12**	**341**	*e*PN	**Pn**	**21 53 11.2**	**+0.2**
FINES	**FINESS Array B**	**26.23**	**357**	P	**P**	**21 55 10.4**	**-1.0**
	comp=E,2.9nm,0.9s,baz=159,slow=12,SNR=5.5						
TORD	**Torodi Ar. Bea**	**32.78**	**234**	P	**P**	**21 56 11.2**	**+1.1**
	comp=E,0.3nm,0.3s,baz=44,slow=8.0,SNR=3.3						
KURBB	**Kurchatov Arra**	**38.86**	**51**	P	**P**	**21 57 03.3**	**+1.5**
	comp=E,0.2nm,0.6s,baz=277,slow=8.7,SNR=3.7						
MKAR	**Makanchi Array**	**41.36**	**57**	P	**P**	**21 57 24.1**	**+1.5**
	comp=E,0.3nm,0.7s,baz=277,slow=6.9,SNR=2.7						

*ISK **19** 22:29:19.6, 39.˝11N×27.˝96E, h5km, MD2.9*
*ISCJB **19** 22:29:20.1±0.4, 39.˝13N±0.˝02×27.˝98E±0.˝04, h6km±6km, Error ellipse: s-maj=4.9km s-min=3.8km az=171.9*
*DDA **19** 22:29:20.1, 39.˝13N×28.˝00E, h7km, MD2.8*
*CSEM **19** 22:29:20.3±0.1, 39.˝12N×27.˝97E, h10km, MD2.8, Error ellipse: s-maj=3.2km s-min=2.4km az=77.0*

ISC 19 22:29:20.2±1.0, 39.13N±0.02×27.97E±0.03, h14km±11km, n30, σ0s32/46, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
AKHS	**Akhisar**	**0.28**	**206**	*i* P		**Pg**	**22 29 26.0**	**-0.1**
AKHS				*i* S		**Sb**	**22 29 31.0**	**-0.6**
AKHS	**Akhisar**	**0.28**	**206**	*i* P		**Pg**	**22 29 26.0**	**-0.1**
AKHS				*i* S		**Sb**	**22 29 31.0**	**-0.6**
BALB	**Balikesir**	**0.52**	**352**	*e*PG		**Pg**	**22 29 30.3**	**-0.1**
BALB				*e*SG		**Sb**	**22 29 38.4**	**-0.1**
BALB	**Balikesir**	**0.52**	**352**	*e*Pg		**Pg**	**22 29 30.3**	**-0.1**
BALB				*e*Sg		**Sb**	**22 29 38.4**	**-0.1**
DEMI	**Demirci**	**0.59**	**98**	*i* P		**Pg**	**22 29 31.8**	**+0.1**
DEMI				*i* S		**Sg**	**22 29 39.8**	**+0.3**
DEMI	**Demirci**	**0.59**	**98**	*i* P		**Pg**	**22 29 31.8**	**+0.1**
DEMI				*i* S		**Sg**	**22 29 39.8**	**+0.3**
DURS	**Dursunbey**	**0.61**	**39**	*i* P		**Pg**	**22 29 31.9**	**-0.4**
DURS				*i* S		**Sg**	**22 29 40.4**	**0.0**
DURS	**Dursunbey**	**0.61**	**39**	*i* P		**Pg**	**22 29 31.9**	**-0.4**
DURS				*i* S		**Sg**	**22 29 40.4**	**0.0**
BALY	**Balya**	**0.67**	**336**	*i* P		**Pg**	**22 29 33.2**	**-0.2**
BALY				*i* S		**Sb**	**22 29 43.1**	**+0.1**
BALY	**Balya**	**0.67**	**336**	*i* P		**Pg**	**22 29 33.2**	**-0.2**
BALY				*i* S		**Sb**	**22 29 43.1**	**+0.1**
MANT	**Manisa**	**0.78**	**144**	*i* P		**Pb**	**22 29 35.8**	**0.0**
MANT				*i* S		**Sg**	**22 29 46.1**	**+0.3**
MANT	**Manisa**	**0.78**	**144**	*i* P		**Pb**	**22 29 35.8**	**0.0**
MANT				*i* S		**Sg**	**22 29 46.1**	**+0.3**
KULA	**Kula-Manisa**	**0.81**	**138**	*e*PG		**Pg**	**22 29 35.7**	**-0.3**
KULA				*e*SG		**Sb**	**22 29 47.4**	**+0.2**
KULA	**Kula-Manisa**	**0.81**	**138**	*e*Pg		**Pg**	**22 29 35.7**	**-0.3**
KULA				*e*Sg		**Sb**	**22 29 47.4**	**+0.2**
GONE	**Gonen-Balikesi**	**0.94**	**347**	*e*PG		**Pb**	**22 29 38.4**	**0.0**
GONE	**Gonen-Balikesi**	**0.94**	**347**	*e*Pg		**Pb**	**22 29 38.4**	**0.0**
BLCB	**Balcova**	**1.04**	**225**	*e*PG		**Pb**	**22 29 39.7**	**-0.3**
BLCB				*e*SG		**Sb**	**22 29 54.2**	**+0.7**
BLCB	**Balcova**	**1.04**	**225**	*e*Pg		**Pb**	**22 29 39.7**	**-0.3**
BLCB				*e*Sg		**Sb**	**22 29 54.2**	**+0.7**
ORLT	**Orhaneli**	**1.16**	**38**	*e*PN		**Pg**	**22 29 43.3**	**+0.7**
ORLT	**Orhaneli**	**1.16**	**38**	*e*Pn		**Pg**	**22 29 43.3**	**+0.7**
KCTX	**Karacabey (Bur**	**1.18**	**15**	*e*PN		**Pb**	**22 29 42.1**	**-0.3**
KCTX	**Karacabey (Bur**	**1.18**	**15**	*e*Pn		**Pb**	**22 29 42.1**	**-0.3**
TVSB	**Tavsanli**	**1.20**	**74**	*e*PN		**Pg**	**22 29 43.1**	**-0.3**
TVSB	**Tavsanli**	**1.20**	**74**	*e*Pn		**Pg**	**22 29 43.1**	**-0.3**
EZN	**Ezine**	**1.45**	**299**	*e*PN		**Pb**	**22 29 47.2**	**+0.1**
EZN	**Ezine**	**1.45**	**299**	*e*Pn		**Pb**	**22 29 47.2**	**+0.1**
ARMT	**Armutlu**	**1.59**	**25**	*e*PN		**Pb**	**22 29 49.4**	**-0.1**
ARMT	**Armutlu**	**1.59**	**25**	*e*Pn		**Pb**	**22 29 49.4**	**-0.1**
YLV	**Yalova**	**1.80**	**36**	*e*PN		**Pb**	**22 29 52.6**	**-0.3**
YLV	**Yalova**	**1.80**	**36**	*e*Pn		**Pb**	**22 29 52.7**	**-0.3**

IDC 19 22:46:24.6±1.7, 4.˝98S×146.˝37E, h0km, mb4.0/5, mb1 4.3/6, mb1mx3.9/17, mbtmp4.0/6, ML4.0/1, Error ellipse: s-maj=53.2km s-min=22.1km az=113.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**4.47**	**170**	Sn		Sn	22 48 31.6	+5.3
	12nm,0.3s,baz=158,slow=19,SNR=17							
WRA	**Warramunga Arr**	**18.94**	**217**	P		Pn	22 50 48.3	+0.5
	0.5nm,0.3s,baz=40,slow=11,SNR=41							
ASAR	**Alice Springs**	**22.13**	**212**	P		P	22 51 22.9	+0.9
	1.7nm,0.6s,baz=37,slow=8.0,SNR=26							
FITZ	**Fitzroy Crossi**	**24.10**	**236**	P		P	22 51 40.7	-1.5
	6.3nm,0.4s,baz=48,slow=10,SNR=36							
KSRS	**Korea Array**	**45.58**	**339**	P		P	22 54 48.2	+1.8
	1.6nm,0.8s,baz=158,slow=7.9,SNR=5.2							
CMAR	**Chiang Mai Arr**	**52.22**	**298**	P		P	22 55 37.3	-0.6
	0.7nm,0.4s,baz=123,slow=6.7,SNR=4.0							
ILAR	**Eielson Array**	**84.79**	**23**	P		P	22 58 59.8	-0.8
	1.2nm,0.7s,baz=251,slow=4.7,SNR=10							

*CSEM **19** 22:50:04.3±0.2, 41.˝35N×22.˝67E, h8km, ML1.7, Error ellipse: s-maj=3.5km s-min=2.6km az=95.0*
*ATH **19** 22:50:04.5, 41.˝32N×22.˝70E, h18km±2km, MD3.3/7*
*THE **19** 22:50:04.8, 41.˝32N×22.˝68E, h0km±1km, ML2.0/9, Error ellipse: s-maj=1.5km s-min=0.4km az=329.0*
*SKO **19** 22:50:04.2, 41.˝34N×22.˝66E, h10km, M1.1, ML1.4*
*ISCJB **19** 22:50:04.0±0.4, 41.˝36N±0.˝02×22.˝67E±0.˝03, h9km±3km, Error ellipse: s-maj=4.4km s-min=3.3km az=23.4*
*SOF **19** 22:50:05.9, 41.˝37N×22.˝80E, h10km, MD2.5*
*BEO **19** 22:50:06.2±0.4, 41.˝36N×22.˝60E, h0km, ML1.7/4*

ISC 19 22:50:04.3±0.9, 41.34N±0.02×22.68E±0.02, h7km±6km, n46, σ0s62/83, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
VAY	**Valandovo**	**0.08**	**259**	P		**Pg**	**22 50 06.3**	**0.0**
VAY				S		**Sg**	**22 50 08.0**	**+0.3**
VAY	**Valandovo**	**0.08**	**259**	*i* Pg		**Pg**	**22 50 06.4**	**+0.1**
VAY				*i* Sg		**Sg**	**22 50 08.1**	**+0.3**
VAY				*e*Lg		Lg	22 50 08.4	
	comp=E,209nm,0.3s							
VAY				*e*Lg		Lg	22 50 09.0	
	comp=N,405nm,0.2s							
VAY	**Valandovo**	**0.08**	**259**	P		**Pg**	**22 50 06.3**	**0.0**
VAY				*i* Sg		**Sg**	**22 50 08.2**	**+0.4**
KNT	**Kendrikon**	**0.24**	**137**	P		**Pg**	**22 50 09.4**	**+0.3**
KNT				S		**Sg**	**22 50 12.8**	**+0.5**
KNT	**Kendrikon**	**0.24**	**137**	P		**Pg**	**22 50 09.4**	**+0.3**
KNT				S		**Sg**	**22 50 12.8**	**+0.5**
GRG	**Griva**	**0.43**	**209**	P		**Pg**	**22 50 13.2**	**+0.5**
GRG				S		**Sg**	**22 50 19.5**	**+1.1**
GRG	**Griva**	**0.43**	**209**	*e*PB		**Pg**	**22 50 13.3**	**+0.5**
GRG				*e*SB		**Sg**	**22 50 19.1**	**+0.7**
GRG	**Griva**	**0.43**	**209**	P		**Pg**	**22 50 13.2**	**+0.5**
GRG				*e*Sb		**Sg**	**22 50 19.1**	**+0.7**
KKB	**Krupnik**	**0.61**	**30**	*i* P		**Pg**	**22 50 16.4**	**+0.3**
KKB	**Krupnik**	**0.61**	**30**	*i* P		**Pg**	**22 50 16.4**	**+0.3**
SOH	**Sokhos**	**0.72**	**135**	P		**Pg**	**22 50 18.1**	**-0.2**
SOH				S		**Sb**	**22 50 29.2**	**-0.2**
SOH	**Sokhos**	**0.72**	**135**	*e*PN		**Pg**	**22 50 18.0**	**-0.2**
SOH				*e*SN		**Sg**	**22 50 27.5**	**-0.2**
SOH	**Sokhos**	**0.72**	**135**	P		**Pg**	**22 50 18.1**	**-0.2**
SOH				*e*Sn		**Sg**	**22 50 27.5**	**-0.2**
SOH				S		**Sb**	**22 50 29.2**	**-0.2**
THE	**Thessaloniki**	**0.74**	**163**	P		**Pg**	**22 50 18.4**	**-0.1**
THE				S		**Sg**	**22 50 28.8**	**+0.8**
THE	**Thessaloniki**	**0.74**	**163**	P		**Pg**	**22 50 18.4**	**-0.1**
THE				S		**Sg**	**22 50 28.8**	**+0.8**
HORT	**Hortiatis**	**0.81**	**157**	P		**Pg**	**22 50 19.7**	**-0.1**
HORT				S		**Sb**	**22 50 31.4**	**-0.4**
HORT	**Hortiatis**	**0.81**	**157**	P		**Pg**	**22 50 19.7**	**-0.1**
HORT				S		**Sb**	**22 50 31.4**	**-0.4**
MMB	**Musomiste**	**0.83**	**72**	*i* P		**Pg**	**22 50 20.3**	**+0.1**
MMB	**Musomiste**	**0.83**	**72**	*i* P		**Pg**	**22 50 20.3**	**+0.1**
NVR	**Nevrokopi**	**0.89**	**89**	P		**Pg**	**22 50 21.3**	**-0.1**
NVR				S		**Sn**	**22 50 35.2**	**-1.2**
NVR	**Nevrokopi**	**0.89**	**89**	*e*PN		**Pg**	**22 50 21.8**	**+0.4**
NVR				*e*SN		**Sg**	**22 50 33.0**	**0.0**
NVR	**Nevrokopi**	**0.89**	**89**	P		**Pg**	**22 50 21.3**	**-0.1**
NVR	**Nevrokopi**	**0.89**	**89**	*e*Pn		**Pg**	**22 50 21.8**	**+0.4**
NVR				*e*Sn		**Sg**	**22 50 33.0**	**0.0**
NVR				S		**Sn**	**22 50 35.2**	**-1.2**
BIA	**Bitola**	**1.07**	**253**	*e*Pn		**Pb**	**22 50 24.9**	**-0.3**
PLG	**Polygyros**	**1.12**	**149**	P		**Pb**	**22 50 25.3**	**-0.8**
PLG				S		**Sg**	**22 50 41.4**	**+0.9**
PLG	**Polygyros**	**1.12**	**149**	*e*PN		**Pb**	**22 50 25.2**	**-0.8**
PLG				*e*SN		**Sb**	**22 50 40.6**	**-0.3**
PLG	**Polygyros**	**1.12**	**149**	P		**Pb**	**22 50 25.3**	**-0.8**
PLG				*e*Sn		**Sb**	**22 50 40.6**	**-0.3**
PLG				S		**Sg**	**22 50 41.4**	**+0.9**
FNA	**Florina**	**1.13**	**241**	P		**Pb**	**22 50 25.7**	**-0.5**
FNA				S		**Sn**	**22 50 42.6**	**+0.2**
FNA	**Florina**	**1.13**	**241**	*e*PN		**Pb**	**22 50 25.7**	**-0.5**
FNA	**Florina**	**1.13**	**241**	P		**Pb**	**22 50 25.7**	**-0.5**
FNA				S		**Sn**	**22 50 42.6**	**+0.2**
LIT	**Litokhoron**	**1.24**	**187**	P		**Pn**	**22 50 27.8**	**-0.3**
LIT				S		**Sn**	**22 50 46.0**	**+0.8**
LIT	**Litokhoron**	**1.24**	**187**	*e*PN		**Pb**	**22 50 28.2**	**+0.1**
LIT	**Litokhoron**	**1.24**	**187**	P		**Pn**	**22 50 27.8**	**-0.3**
LIT	**Litokhoron**	**1.24**	**187**	*e*Pn		**Pb**	**22 50 28.2**	**+0.1**
LIT				S		**Sn**	**22 50 46.0**	**+0.8**
VTS	**Vitosha**	**1.31**	**17**	P		**Pg**	**22 50 29.7**	**+0.2**
VTS	**Vitosha**	**1.31**	**17**	*i* P		**Pg**	**22 50 30.0**	**+0.5**
VTS	**Vitosha**	**1.31**	**17**	*e*Pg		**Pg**	**22 50 30.3**	**+0.8**
VTS				*e*Sg		**Sg**	**22 50 47.7**	**+1.1**
VTS	**Vitosha**	**1.31**	**17**	P		**Pg**	**22 50 29.7**	**+0.2**
VTS	**Vitosha**	**1.31**	**17**	*e*Pg		**Pg**	**22 50 30.3**	**+0.8**
VTS				*e*Sg		**Sg**	**22 50 47.7**	**+1.1**
OUR	**Ouranopolis**	**1.41**	**135**	P		**Pb**	**22 50 31.1**	**+0.2**
OUR				S		**Sg**	**22 50 50.8**	**+1.3**
OUR	**Ouranopolis**	**1.41**	**135**	P		**Pb**	**22 50 31.1**	**+0.2**
OUR				S		**Sg**	**22 50 50.8**	**+1.3**
PAIG	**Paliouri**	**1.60**	**151**	*e*PN		**Pb**	**22 50 33.7**	**-0.5**
PAIG				*e*SN		**Sb**	**22 50 54.4**	**-0.2**
PAIG	**Paliouri**	**1.60**	**151**	*e*Pn		**Pb**	**22 50 33.7**	**-0.5**
PAIG				*e*Sn		**Sb**	**22 50 54.4**	**-0.2**
BARS	**Barje**	**1.61**	**337**	*e*Pg		**Pb**	**22 50 33.7**	**-0.7**
BARS				*i* Sg		**Sg**	**22 50 56.1**	**0.0**
BARS	**Barje**	**1.61**	**337**	*e*Pg		**Pb**	**22 50 33.7**	**-0.7**
BARS				*i* Sg		**Sg**	**22 50 56.1**	**0.0**
PLD	**Plovdiv**	**1.70**	**62**	*e*Pn		**Pg**	**22 50 37.9**	**+1.1**
PLD				*e*Sg		**Sg**	**22 51 01.0**	**+2.2**

*BEO **19** 23:01:06.9, 37.˝65N×22.˝30E, h0km*
*ATH **19** 23:01:13.9, 38.˝30N×22.˝04E, h14km, ML3.3*
*THE **19** 23:01:14.7, 38.˝29N×22.˝07E, h0km±1km, ML3.5/9, Error ellipse: s-maj=1.7km s-min=0.6km az=248.0*
*ISCJB **19** 23:01:14.2±0.3, 38.˝30N±0.˝01×22.˝04E±0.˝02, h7km±2km, mb3.8/6, MS3.0/4, Error ellipse: s-maj=2.5km s-min=2.0km az=165.6*
*CSEM **19** 23:01:14.3±0.1, 38.˝29N×22.˝06E, h0km, ML3.3, Error ellipse: s-maj=2.3km s-min=1.9km az=65.0*
*IDC **19** 23:01:23.6±4.0, 38.˝38N×22.˝04E, h85km±39km, mb3.5/7, mb1 3.6/9, mb1mx3.4/29, mbtmp3.4/9, MS3.0/5, Ms1 3.0/5, ms1mx2.5/39, Error ellipse: s-maj=28.4km s-min=18.2km az=145.0*

ISC 19 23:01:14.9±0.7, 38.30N±0.01×22.06E±0.01, h8km±4km, n195, σ1s03/248, mb4.0/6, MS3.1/4, 4C-3D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
LAKA	**Lakka**	**0.09**	**229**	P		**Pg**	**23 01 16.6**	**-0.5**
LAKA				S		**Sg**	**23 01 18.2**	**-0.5**
LAKA	**Lakka**	**0.09**	**229**	*e*PG		**Pg**	**23 01 16.6**	**-0.5**
LAKA				*e*SG		**Sg**	**23 01 18.4**	**-0.3**
LAKA	**Lakka**	**0.09**	**229**	P		**Pg**	**23 01 16.6**	**-0.5**
LAKA				S		**Sg**	**23 01 18.2**	**-0.5**
KALE	**Kalithea**	**0.11**	**33**	P		**Pg**	**23 01 17.2**	**-0.3**
KALE				S		**Sg**	**23 01 19.4**	**+0.1**
KALE	**Kalithea**	**0.11**	**33**	*e*PG		**Pg**	**23 01 17.3**	**-0.3**
KALE				*e*SG		**Sg**	**23 01 19.6**	**+0.3**
KALE	**Kalithea**	**0.11**	**33**	P		**Pg**	**23 01 17.2**	**-0.3**
KALE				S		**Sg**	**23 01 19.4**	**+0.1**
EFP	**Efpalio**	**0.18**	**316**	P		**Pg**	**23 01 17.9**	**-0.6**
EFP				S		**Sg**	**23 01 20.5**	**-0.6**
EFP	**Efpalio**	**0.18**	**316**	*e*PG		**Pg**	**23 01 18.0**	**-0.6**
EFP				*e*SG		**Sg**	**23 01 21.2**	**+0.1**
EFP	**Efpalio**	**0.18**	**316**	*e*Pg		**Pg**	**23 01 18.0**	**-0.6**
EFP				S		**Sg**	**23 01 20.5**	**-0.6**
EFP				*e*Sg		Sg	23 01 21.2	+0.1
KLV	**Kalavryta, Ach**	**0.26**	**165**	*e*PG		**Pg**	**23 01 19.9**	**-0.2**
KLV				*e*SG		**Sg**	**23 01 24.0**	**+0.3**
KLV	**Kalavryta, Ach**	**0.26**	**165**	*e*Pg		**Pg**	**23 01 19.9**	**-0.2**
KLV				*e*Sg		**Sg**	**23 01 24.0**	**+0.3**
DSF	**Desfina**	**0.38**	**73**	P		**Pg**	**23 01 22.1**	**-0.3**
DSF				S		**Sb**	**23 01 28.4**	**-1.7**
DSF	**Desfina**	**0.38**	**73**	P		**Pg**	**23 01 22.1**	**-0.3**
DSF				S		**Sb**	**23 01 28.4**	**-1.7**
GUR	**Goura**	**0.42**	**149**	P		**Pg**	**23 01 22.5**	**-0.6**
GUR				S		**Sg**	**23 01 29.7**	**+1.0**
GUR	**Goura**	**0.42**	**149**	*e*PB		**Pg**	**23 01 22.6**	**-0.6**
GUR				*e*SB		**Sg**	**23 01 28.8**	**+0.1**
GUR	**Goura**	**0.42**	**149**	*e*Pb		**Pg**	**23 01 22.6**	**-0.6**
GUR				*e*Sb		**Sg**	**23 01 28.8**	**+0.1**
GUR				S		**Sg**	**23 01 29.7**	**+1.0**
RLS	**Riolos of Patr**	**0.53**	**243**	P		**Pg**	**23 01 24.4**	**-0.7**
RLS	**Riolos of Patr**	**0.53**	**243**	*e*PB		**Pg**	**23 01 24.4**	**-0.7**
RLS				*e*SB		**Sg**	**23 01 31.5**	**-0.5**
RLS	**Riolos of Patr**	**0.53**	**243**	P		**Pg**	**23 01 24.4**	**-0.7**
RLS				*e*Sb		**Sg**	**23 01 31.5**	**-0.5**
THAL	**Thalero**	**0.54**	**119**	P		**Pg**	**23 01 25.1**	**-0.2**
THAL	**Thalero**	**0.54**	**119**	P		**Pg**	**23 01 25.1**	**-0.2**
AXS	**Araxos**	**0.55**	**260**	P		**Pg**	**23 01 24.8**	**-0.8**
AXS				S		**Sg**	**23 01 32.7**	**-0.1**
AXS	**Araxos**	**0.55**	**260**	P		**Pg**	**23 01 24.8**	**-0.8**
AXS				S		**Sg**	**23 01 32.7**	**-0.1**
EVR	**Evrytania**	**0.65**	**342**	P		**Pg**	**23 01 26.9**	**-0.6**
EVR				S		**Sb**	**23 01 37.4**	**-0.5**
EVR	**Evrytania**	**0.65**	**342**	*e*PB		**Pg**	**23 01 26.3**	**-1.2**
EVR				*e*SB		**Sg**	**23 01 36.0**	**0.0**
EVR	**Evrytania**	**0.65**	**342**	*e*Pb		**Pg**	**23 01 26.3**	**-1.2**
EVR	**Evrytania**	**0.65**	**342**	P		**Pg**	**23 01 26.9**	**-0.6**
EVR				*e*Sb		**Sg**	**23 01 36.0**	**0.0**
EVR				S		**Sb**	**23 01 37.4**	**-0.5**
AXAR	**Agios Charalam**	**0.66**	**45**	P		**Pg**	**23 01 26.8**	**-0.9**
AXAR				S		**Sb**	**23 01 37.2**	**-0.9**
AXAR	**Agios Charalam**	**0.66**	**45**	P		**Pg**	**23 01 26.8**	**-0.9**
MAKR	**Makrakomi, Fth**	**0.72**	**4**	P		**Pg**	**23 01 28.3**	**-0.4**
MAKR	**Makrakomi, Fth**	**0.72**	**4**	P		**Pg**	**23 01 28.3**	**-0.4**
AGG	**Agios Georgios**	**0.75**	**16**	P		**Pg**	**23 01 28.2**	**-1.2**
AGG				S		**Sb**	**23 01 39.9**	**-0.9**
AGG	**Agios Georgios**	**0.75**	**16**	*e*PG		**Pg**	**23 01 27.9**	**-1.5**
AGG				*e*SB		**Sg**	**23 01 39.1**	**-0.1**
AGG	**Agios Georgios**	**0.75**	**16**	*e*Pg		**Pg**	**23 01 27.9**	**-1.5**
AGG	**Agios Georgios**	**0.75**	**16**	P		**Pg**	**23 01 28.2**	**-1.2**
AGG				*e*Sb		**Sg**	**23 01 39.1**	**-0.1**
LTK	**Loutraki**	**0.76**	**111**	P		**Pg**	**23 01 29.8**	**+0.2**
LTK				S		**Sb**	**23 01 41.0**	**0.0**
LTK	**Loutraki**	**0.76**	**111**	*e*PB		**Pg**	**23 01 29.3**	**-0.3**
LTK				*e*SB		**Sg**	**23 01 39.7**	**+0.2**
LTK	**Loutraki**	**0.76**	**111**	*e*Pb		**Pg**	**23 01 29.3**	**-0.3**
LTK	**Loutraki**	**0.76**	**111**	P		**Pg**	**23 01 29.8**	**+0.2**
LTK				*e*Sb		**Sg**	**23 01 39.7**	**+0.2**
LTK				S		**Sb**	**23 01 41.0**	**0.0**
AMT	**Artemida-Makis**	**0.81**	**200**	*e*PB		**Pg**	**23 01 29.5**	**-1.1**
AMT				*e*SB		**Sg**	**23 01 40.8**	**-0.3**
AMT	**Artemida-Makis**	**0.81**	**200**	*e*Pb		**Pg**	**23 01 29.5**	**-1.1**
AMT				*e*Sb		**Sg**	**23 01 40.8**	**-0.3**
ATAL	**Atalanti**	**0.85**	**62**	P		**Pg**	**23 01 30.1**	**-1.1**
ATAL				S		**Sb**	**23 01 43.0**	**-0.5**
ATAL	**Atalanti**	**0.85**	**62**	P		**Pg**	**23 01 30.1**	**-1.1**
ATAL				S		**Sb**	**23 01 43.0**	**-0.5**
VIL2	**Platees**	**0.95**	**95**	P		**Pg**	**23 01 32.2**	**-1.0**
VLX	**Vlachokerasia**	**0.96**	**165**	P		**Pg**	**23 01 32.2**	**-1.1**
VLX				S		**Sb**	**23 01 47.3**	**+0.6**
VLX	**Vlachokerasia**	**0.96**	**165**	*e*PG		**Pg**	**23 01 31.9**	**-1.4**
VLX	**Vlachokerasia**	**0.96**	**165**	*e*Pg		**Pg**	**23 01 31.9**	**-1.4**
VLX	**Vlachokerasia**	**0.96**	**165**	P		**Pg**	**23 01 32.2**	**-1.1**
VLX				S		**Sb**	**23 01 47.3**	**+0.6**
KFL	**Anninata**	**1.02**	**260**	P		**Pg**	**23 01 33.6**	**-0.9**
KFL	**Anninata**	**1.02**	**260**	P		**Pg**	**23 01 33.6**	**-0.9**
SMIA	**Simia**	**1.07**	**57**	P		**Pg**	**23 01 34.5**	**-0.9**
SMIA	**Simia**	**1.07**	**57**	P		**Pg**	**23 01 34.5**	**-0.9**
ITM	**Ithomi**	**1.12**	**186**	P		**Pg**	**23 01 35.3**	**-1.1**
ITM				S		**Sg**	**23 01 51.1**	**+0.1**
ITM	**Ithomi**	**1.12**	**186**	*e*PN		**Pg**	**23 01 35.0**	**-1.4**
ITM				*e*SB		**Sg**	**23 01 51.2**	**+0.2**
ITM	**Ithomi**	**1.12**	**186**	P		**Pg**	**23 01 35.3**	**-1.1**
ITM				*e*Sb		**Sg**	**23 01 51.2**	**+0.2**
VLS	**Valsamata**	**1.17**	**265**	P		**Pg**	**23 01 35.3**	**-2.0**
VLS	**Valsamata**	**1.17**	**265**	*e*PG		**Pg**	**23 01 35.2**	**-2.0**

PHP	**Peshkopia**	**3.60**	**340**	*e*PN		Pb	23 02 15.4	-3.6
PHP	**Peshkopia**	**3.60**	**340**	P		**Pn**	**23 02 13.0**	**+1.8**
PHP	**Peshkopia**	**3.60**	**340**	P		**Pn**	**23 02 13.0**	**+1.8**
PHP	**Peshkopia**	**3.60**	**340**	*e*Pn		Pb	23 02 15.4	-3.6
PUK	**Puka**	**4.09**	**337**	*e*PN		**Pn**	**23 02 20.5**	**+2.6**
PUK	**Puka**	**4.09**	**337**	*e*Pn		**Pn**	**23 02 20.5**	**+2.6**
BCI	**Bajram Curri**	**4.34**	**340**	*e*PN		Pn	23 02 25.2	+4.0
BCI	**Bajram Curri**	**4.34**	**340**	*e*Pn		Pn	23 02 25.2	+4.0
VTS	**Vitosha**	**4.38**	**11**	P		**Pn**	**23 02 23.6**	**+1.7**
VTS	**Vitosha**	**4.38**	**11**	⇑*i*P		**Pn**	**23 02 22.7**	**+0.8**
VTS	**Vitosha**	**4.38**	**11**	P		**Pn**	**23 02 23.6**	**+1.7**
BARS	**Barje**	**4.52**	**358**	*e*Pn		**Pn**	**23 02 24.7**	**+1.0**
BARS	**Barje**	**4.52**	**358**	*e*Pn		**Pn**	**23 02 24.7**	**+1.0**
ZAPS	**Zavoj**	**4.99**	**5**	*e*Pn		**Pn**	**23 02 31.1**	**+0.9**
STON	**Ston**	**5.65**	**325**	*i* Pn		**Pn**	**23 02 38.2**	**-0.9**
STON					Sn	**Sn**	**23 03 40.9**	**-3.2**
STON	**Ston**	**5.65**	**325**	*i* Pn		**Pn**	**23 02 38.2**	**-0.9**
GRUS	**Gruza**	**5.68**	**350**	*e*Pn		**Pn**	**23 02 41.2**	**+1.6**
GRUS	**Gruza**	**5.68**	**350**	*e*Pn		**Pn**	**23 02 41.2**	**+1.6**
BBLS	**Lazići**	**5.91**	**341**	*e*Pn		**Pn**	**23 02 44.1**	**+1.2**
BBLS	**Lazići**	**5.91**	**341**	*e*Pn		**Pn**	**23 02 44.1**	**+1.2**
DIVS	**Divibare**	**6.00**	**346**	*e*Pn		**Pn**	**23 02 45.0**	**+0.9**
DIVS	**Divibare**	**6.00**	**346**	*e*Pn		**Pn**	**23 02 45.0**	**+0.9**
VOIR		**7.47**	**16**	⇑*i*P		**Pn**	**23 03 06.4**	**+2.1**
MLR	**Muntele Rosu**	**7.75**	**21**	⇑*i*P		Pn	23 03 14.3	+6.2
MLR	**Muntele Rosu**	**7.75**	**21**	P		Pn	23 03 12.4	+4.3
	0.1nm,0.3s,baz=190,slow=6.3,SNR=10							
AQU	**L'Aquila**	**7.76**	**304**	⇓*i*P		Pn	23 03 16.3	+8.1
UDBI	**Udbina**	**7.82**	**325**	*i* Pn		**Pn**	**23 03 09.9**	**+0.9**
UDBI					Sn	**Sn**	**23 04 36.9**	**-0.9**
UDBI	**Udbina**	**7.82**	**325**	*i* Pn		**Pn**	**23 03 09.9**	**+0.9**
UDBI					Sn	**Sn**	**23 04 36.8**	**-0.9**
NVLJ	**Novalja**	**8.27**	**322**	*e*Pn		**Pn**	**23 03 15.0**	**-0.1**
NVLJ					Sn	**Sn**	**23 04 46.1**	**-2.5**
NVLJ	**Novalja**	**8.27**	**322**	*e*Pn		**Pn**	**23 03 15.0**	**-0.1**
PLOR	**Plostina**	**8.28**	**23**	⇑*i*P		**Pn**	**23 03 18.3**	**+3.0**
VRI	**Vrincioaia**	**8.32**	**23**	⇓*i*P		**Pn**	**23 03 18.4**	**+2.6**
PSZ	**Piszkesteto**	**9.74**	**351**	⇓*i*P		**Pn**	**23 03 37.6**	**+2.2**
GERES	**GERESS Array B**	**12.15**	**333**	P		Pn	23 04 13.6	+5.2
	0.1nm,0.3s,baz=149,slow=16,SNR=6.2							
DAVOX	**Davos/Dischmat**	**12.34**	**317**	LR		LR	23 08 48.4	
	comp=Z,30nm,18.7s,baz=278,slow=36							
SMF	**Signal de Mont**	**15.80**	**308**	*e*P		**P**	**23 05 04.1**	**+2.5**
	15nm,1.0s							
AVF	**Avril sur Loir**	**16.16**	**308**	*e*P		**P**	**23 05 06.8**	**+1.2**
	8.0nm,0.9s							
SSF	**Saint Saulge**	**16.18**	**309**	*e*P		**P**	**23 05 07.2**	**+1.4**
	14nm,1.0s							
BGF	**Bois d'Agland**	**16.39**	**306**	*e*P		**P**	**23 05 12.3**	**+4.2**
	28nm,1.2s							
ESDC	**Sonseca Array**	**20.26**	**282**	P		**P**	**23 05 50.8**	**0.0**
	1.6nm,0.7s,baz=81,slow=11,SNR=13							
HFS	**Hagfors**	**22.49**	**349**	P		**P**	**23 06 14.5**	**-0.1**
	3.4nm,0.9s,baz=156,slow=12,SNR=4.4							
HFS					LR	LR	23 14 50.7	
	comp=Z,20nm,18.3s,baz=69,slow=36							
NB2	**NORSAR Subarra**	**23.76**	**347**	P		**P**	**23 06 28.4**	**+0.8**
	comp=Z,2.8nm,1.0s,baz=151,slow=10							
NB2	**NORSAR Subarra**	**23.76**	**347**	P		**P**	**23 06 28.4**	**+0.8**
	comp=Z,2.8nm,1.0s,SNR=5.0							
NOA	**NORSAR Array B**	**23.76**	**347**	P		**P**	**23 06 27.8**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=159,slow=8.8,SNR=5.0							
EKA	**Eskdalemuir Ar**	**24.05**	**323**	P		**P**	**23 06 30.1**	**-0.2**
	comp=Z,5.8nm,0.9s,baz=118,slow=11,SNR=7.2							
TORD	**Torodi Ar. Bea**	**30.90**	**221**	P		**P**	**23 07 32.9**	**+0.7**
	comp=Z,1.0nm,0.5s,baz=32,slow=8.8,SNR=17							
ARCES	**ARCESS Array B**	**31.35**	**2**	LR		LR	23 21 42.8	
	comp=Z,37nm,18.2s,baz=97,slow=39							
JMIC	**Jan Mayen**	**36.38**	**344**	LR		LR	23 25 13.9	
	comp=Z,26nm,18.3s,baz=64,slow=39							
SPITS	**Spitsbergen Ar**	**40.06**	**358**	LR		LR	23 26 32.7	
	comp=Z,36nm,19.1s,baz=255,slow=38							
MKAR	**Makanchi Array**	**44.20**	**59**	P		**P**	**23 09 23.6**	**-0.8**
	comp=Z,1.4nm,0.6s,baz=282,slow=6.7,SNR=16							
ZALV	**Zalesovo Beam**	**44.70**	**48**	P		**P**	**23 09 27.6**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=271,slow=7.2,SNR=5.4							

CSEM ***19*** *23:12:50.4,38.57N×29.27W,h5km,ML2.0,After PDA*
PDA 19 23:12:50.4±1.1,38.57N×29.27W,h5km,MD3.6,ML2.0,
Error ellipse: s-maj=15.8km s-min=9.6km az=1.0,
Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.45**	**88**	*e*P	Pg	23 12 58.0	-1.1
CALA	**Caldeira**	**0.45**	**88**	*e*P	Pg	23 12 58.0	-1.1
HOR	**Horta**	**0.50**	**95**	*e*P	Pg	23 12 59.0	-1.1
HOR				*e*S	Sg	23 13 05.9	-0.7
HOR	**Horta**	**0.50**	**95**	*e*P	Pg	23 12 59.0	-1.1
HOR				*e*S	Sg	23 13 05.9	-0.7
PCAN	**Candelaria**	**0.62**	**99**	*e*P	Pg	23 13 00.8	-1.6
PCAN				*e*S	Sg	23 13 08.5	-2.1
PCAN				A	A	23 13 09.4	
	27nm,0.3s						
PCAN	**Candelaria**	**0.62**	**99**	*e*P	Pg	23 13 00.8	-1.6
PCAN				*e*S	Sg	23 13 08.5	-2.1
PICO	**Pico**	**0.67**	**96**	*e*P	Pg	23 13 02.1	-1.2
PICO	**Pico**	**0.67**	**96**	*e*P	Pg	23 13 02.1	-1.2
ROSA	**Rosais**	**0.82**	**79**	*e*P	Pg	23 13 03.3	-2.9
ROSA				*i* P	Pb	23 13 07.7	+0.6
ROSA				*e*S	Sg	23 13 13.3	-3.5
ROSA				A	A	23 13 13.8	
	34nm,0.2s						
ROSA	**Rosais**	**0.82**	**79**	*e*P	Pg	23 13 03.3	-2.9
ROSA				*e*S	Sg	23 13 13.3	-3.5
PID	**Ribeirinha**	**0.91**	**98**	*e*P	Pg	23 13 05.3	-2.6
PMAN	**Manadas**	**0.93**	**86**	*e*P	Pg	23 13 05.6	-2.6
PMAN				*e*S	Sg	23 13 16.6	-3.7
PMAN				A	A	23 13 17.3	
	30nm,0.2s						
PMAN	**Manadas**	**0.93**	**86**	*e*P	Pg	23 13 05.6	-2.6
PMAN				*e*S	Sg	23 13 16.6	-3.7

CSEM ***19*** *23:18:57.9±0.4,36.67N×59.43E,h2km,ML3.7,Error*
ellipse: s-maj=9.3km s-min=4.3km az=53.0
TEH ***19*** *23:18:58.8,36.65N×59.42E,h12km,ML3.7*
ISC 19 23:18:58.3±1.1,36.65N±0.05×59.40E±0.04,h13km±12km,
n18,σ1§42/24,1C-2D,Iran-Turkmenistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m	ISC
ISRO	**Mashad**	**0.34**	**170**	*e*Pg	**Pg**	**23 19 04.7**	**-0.7**
ISRO	**Mashad**	**0.34**	**170**	⇓*e*Pg	**Pg**	**23 19 04.7**	**-0.7**
MHI	**Mashad**	**0.34**	**170**	*e*		23 19 10.8	
	comp=Z,94µm,0.0s						
MHI				*e*Pg	**Pg**	**23 19 05.6**	**+0.2**
MHI				*e*Sg	**Sg**	**23 19 09.9**	**-0.2**
IPAY	**Payeh**	**0.38**	**238**	*e*Sg	**Sg**	**23 19 11.5**	**+0.3**
IPAY				*e*Pg	**Pg**	**23 19 06.4**	**+0.4**
IPAY				*e*		23 19 11.8	
	comp=Z,62µm,0.1s						
IAKL	**Akhelmad**	**0.52**	**265**	*e*	**Sg**	**23 19 16.8**	**+1.3**
	comp=Z,95µm,0.1s						
IAKL				*e*Pg	**Pg**	**23 19 08.5**	**-0.1**
IMOG	**Moghan**	**0.54**	**185**	*e*Sg	**Sg**	**23 19 15.2**	**-1.1**
IMOG				*e*Pg	**Pg**	**23 19 09.0**	**0.0**
IMOG				*e*		23 19 16.6	
	comp=Z,77µm,0.0s						
IMYA	**Miami**	**0.65**	**118**	*e*	**Sg**	**23 19 22.7**	**+3.2**
	comp=Z,24µm,0.1s						
IMYA				*e*Pg	**Pg**	**23 19 09.9**	**-1.1**
IKRD	**Kardeh**	**0.72**	**280**	*e*	Pg	23 19 08.2	-4.2
	comp=Z,763nm,0.1s						
IKRD				⇑*e*Pg	Px	23 19 02.5	
IKRD				*e*Sg	Sx	23 19 04.9	
IQHU	**Qucahn**	**0.81**	**302**	*e*Pg	**Pg**	**23 19 13.7**	**-0.3**
IQHU				*e*		23 19 27.0	
	comp=Z,4µm,0.1s						
IQHU	**Qucahn**	**0.81**	**302**	*e*Pg	**Pg**	**23 19 13.7**	**-0.3**
IEMG	**Emamgholi**	**0.97**	**322**	*e*Pg	**Pb**	**23 19 16.6**	**-0.6**
IEMG				*e*	Sg	23 19 40.1	+10
	comp=Z,13µm,0.2s						
IEMG	**Emamgholi**	**0.97**	**322**	*e*Pg	**Pb**	**23 19 16.6**	**-0.6**
ISFR	**Sfrayin**	**1.19**	**290**	*e*Pg	**Pn**	**23 19 20.5**	**-0.5**
ISFR				*e*	Sg	23 19 43.8	+6.9
	comp=Z,19µm,0.1s						
ISFR	**Sfrayin**	**1.19**	**290**	*e*Pg	**Pn**	**23 19 20.5**	**-0.5**
BJRD	**Bojnurd**	**1.90**	**304**	*e*Pg	**Pb**	**23 19 33.6**	**+0.6**
BJRD				*e*Sg	**Sg**	**23 20 00.7**	**+1.1**
MRVT	**Maraveh tapeh**	**2.83**	**292**	*e*Pn	**Pb**	**23 19 46.2**	**-2.6**
SHRT	**Shahrakht**	**3.08**	**166**	*e*Pn	**Pn**	**23 19 48.3**	**+1.4**
SHRT				*e*Sg	**Sg**	**23 20 34.9**	**-2.5**
TABS	**Tabas**	**3.53**	**213**	*e*Pn	**Pn**	**23 19 55.6**	**+2.6**

NNC ***19*** *23:21:37.0±4.0,40.42N×77.53E,h0km,mb3.6,mpv3.2,*
Error ellipse: s-maj=36.3km s-min=30.7km az=27.0
ISC 19 23:21:39.1±3.3,40.7N±0.2×77.70E±0.1,h10km,n13,
σ1§67/10,5C-4D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**1.88**	**325**	P	**Pb**	**23 22 13.2**	**-0.6**
	SNR=42						
KZA	**Kyzart**	**2.29**	**307**	P	**Pb**	**23 22 19.1**	**-1.7**
	SNR=39						
KNDC	**Almaty**	**2.56**	**348**	⇓Pn	**Pb**	**23 22 23.8**	**-1.5**
	19nm,0.6s						
KNDC				⇑Lg	Lg	23 23 08.8	
	59nm,0.6s						
TKM2	**Tokmak 2**	**2.71**	**325**	⇑Pn	**Pn**	**23 22 24.5**	**+1.6**
	12nm,0.7s						
TKM2				⇓Lg	Lg	23 23 09.8	
	29nm,0.6s						
TKM2	**Tokmak 2**	**2.71**	**325**	P	**Pb**	**23 22 25.1**	**-2.7**
	SNR=18						
KBK	**Karagaybulak**	**2.83**	**314**	P	**Pb**	**23 22 28.9**	**-1.0**
	SNR=8.5						
AAK	**Ala-Archa**	**3.07**	**310**	P	**Pb**	**23 22 32.6**	**-1.4**
	SNR=6.0						
CHMS	**Chumysh**	**3.17**	**317**	P	**Sg**	**23 23 21.7**	**+0.7**
	SNR=9.4						
USP	**Ospenovka**	**3.49**	**318**	P	**Pb**	**23 22 40.8**	**-0.3**
	SNR=14						
KK31	**Karatay Array**	**5.87**	**296**	⇑Pg	Pb	23 23 26.2	+4.7
	1.1nm,0.5s,baz=137,slow=16,SNR=9.3						
KK31				⇑Lg	Lg	23 24 39.6	
	3.9nm,0.8s,baz=133,slow=28,SNR=6.6						
MK31	**Makanchi Array**	**6.93**	**27**	Pn	**Pn**	**23 23 21.6**	**+0.9**
	0.2nm,0.4s,baz=219,slow=14,SNR=5.5						
MK31				⇑Lg	Lg	23 25 23.8	
	1.2nm,0.7s,baz=213,slow=30						
KUR14	**Kurchatov Arra**	**9.92**	**3**	⇓Lg	Lg	23 26 59.9	
	1.1nm,0.8s						
KURK	**Kurchatov**	**10.03**	**3**	⇓Lg	Lg	23 27 01.1	
	4.9nm,1.3s						

DDA ***19*** *23:41:53.8,38.59N×30.85E,h7km,MD2.8*
ISK ***19*** *23:41:53.5,38.65N×30.85E,h7km,MD2.6*
CSEM ***19*** *23:41:53.9±0.1,38.65N×30.85E,h10km,MD2.8,Error*
ellipse: s-maj=3.8km s-min=2.7km az=168.0
ISCJB ***19*** *23:41:54.0±0.5,38.65N±0.04×30.84E±0.03,h8km±5km,*
Error ellipse: s-maj=7.5km s-min=4.0km az=170.6
ISC 19 23:41:54.2±0.8,38.65N±0.03×30.84E±0.02,h13km±5km,
n26,σ0§44/38,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLV	**Bolvadin**	**0.11**	**53**	*i* P	**Pg**	**23 41 57.5**	**0.0**
BOLV				*i* S	**Sg**	**23 41 59.7**	**-0.1**
BOLV	**Bolvadin**	**0.11**	**53**	*i* P	**Pg**	**23 41 57.5**	**0.0**
BOLV				*i* S	**Sg**	**23 41 59.7**	**-0.1**
SHUT	**Suhut-Afyon**	**0.25**	**246**	*e*PG	**Pg**	**23 41 59.2**	**-0.3**
SHUT				*e*SG	**Sg**	**23 42 03.0**	**-0.1**
SHUT	**Suhut-Afyon**	**0.25**	**246**	*e*Pg	**Pg**	**23 41 59.2**	**-0.3**
SHUT				*e*Sg	**Sg**	**23 42 03.0**	**-0.1**
ALT	**Altintas**	**0.70**	**305**	*e*PG	**Pg**	**23 42 07.2**	**-0.6**
ALT				*e*SG	**Sb**	**23 42 17.8**	**0.0**
ALT	**Altintas**	**0.70**	**305**	*e*Pg	**Pg**	**23 42 07.2**	**-0.6**
ALT				*e*Sg	**Sb**	**23 42 17.8**	**0.0**
KIZT	**Kizilcal**	**0.84**	**74**	*e*PG	**Pg**	**23 42 10.0**	**-0.6**
KIZT				*e*SG	**Sb**	**23 42 22.1**	**0.0**
KIZT	**Kizilcal**	**0.84**	**74**	*e*Pg	**Pg**	**23 42 10.0**	**-0.6**
KIZT				*e*Sg	**Sb**	**23 42 22.1**	**0.0**
ISP	**Isparta**	**0.86**	**197**	*e*PG	**Pg**	**23 42 10.8**	**-0.2**
ISP	**Isparta**	**0.86**	**197**	*e*Pg	**Pg**	**23 42 10.8**	**-0.2**
ESKT	**Eskisehir**	**0.87**	**1**	*e*PG	**Pb**	**23 42 11.2**	**+0.1**
ESKT	**Eskisehir**	**0.87**	**1**	*e*Pg	**Pb**	**23 42 11.2**	**+0.1**
SVRH	**Sivrihisar-ESK**	**0.96**	**34**	*e*PG	**Pg**	**23 42 11.6**	**-1.1**
SVRH	**Sivrihisar-ESK**	**0.96**	**34**	*e*Pg	**Pg**	**23 42 11.6**	**-1.1**
KDHN	**Kadinhani**	**1.01**	**97**	*i* P	**Pg**	**23 42 13.0**	**-0.7**
KDHN				*i* S	**Sb**	**23 42 27.1**	**+0.4**
KDHN	**Kadinhani**	**1.01**	**97**	*i* P	**Pg**	**23 42 13.0**	**-0.7**
KDHN				*i* S	**Sb**	**23 42 27.1**	**+0.4**
KHL	**Karahalli**	**1.08**	**253**	*e*PN	**Pg**	**23 42 14.7**	**-0.4**
KHL	**Karahalli**	**1.08**	**253**	*e*Pn	**Pg**	**23 42 14.7**	**-0.4**
KHAL	**Karahalli**	**1.09**	**255**	*i* P	**Pb**	**23 42 14.5**	**-0.5**
KHAL				*i* S	**Sn**	**23 42 30.3**	**+0.1**
KHAL	**Karahalli**	**1.09**	**255**	*i* P	**Pb**	**23 42 14.5**	**-0.5**
KHAL				*i* S	**Sn**	**23 42 30.3**	**+0.1**
BORA	**Eskisehir**	**1.26**	**346**	*i* P	**Pg**	**23 42 18.7**	**+0.2**
BORA	**Eskisehir**	**1.26**	**346**	*i* P	**Pg**	**23 42 18.7**	**+0.2**
TVSB	**Tavsanli**	**1.34**	**307**	*e*PN	**Pn**	**23 42 19.2**	**+0.6**
TVSB	**Tavsanli**	**1.34**	**307**	*e*Pn	**Pn**	**23 42 19.2**	**+0.6**
KONT	**Konya--Tatoy**	**1.39**	**120**	*e*PN	**Pb**	**23 42 20.1**	**+0.1**
KONT	**Konya--Tatoy**	**1.39**	**120**	*e*Pn	**Pb**	**23 42 20.1**	**+0.1**

IDC ***19*** *23:50:52.0±1.1,39.01N×143.50E,h0km,mb3.8/8,*
mb1 3.9/11,mb1mx3.8/29,mbtmp3.9/11,ML3.9/2,MS4.0/1,
Ms1 3.9/1,ms1mx3.1/19,Error ellipse: s-maj=29.5km
s-min=18.3km az=78.0
JMA ***19*** *23:50:54.7±0.1,39.10N×143.38E,h23km±3km,M4.3*
NEIC ***19*** *23:50:56.1±4.0,39.10N×143.49E,h28km±29km,mb4.5/2,*
Error ellipse: s-maj=19.1km s-min=11.5km az=102.0
ISC 19 23:50:52.9±3.0,39.07N±0.05×143.36E±0.08,h4km±17km,
n40,σ1§02/46,mb4.0/10,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.30**	**293**	P	**Pn**	**23 51 17.6**	**-0.2**
MIYJ				*e*S	**Sg**	**23 51 34.4**	**-0.2**
OFUJ	**Ofunato**	**1.32**	**271**	P	**Pn**	**23 51 18.2**	**+0.2**
JTH	**Tanohata**	**1.45**	**307**	P	**Pn**	**23 51 19.6**	**-0.2**
JTH				*e*S	**Sn**	**23 51 38.5**	**-0.8**
JOM	**Ohasama**	**1.66**	**285**	P	**Pn**	**23 51 23.2**	**+0.5**
JMK	**Ichinoseki**	**1.67**	**267**	P	**Pn**	**23 51 23.5**	**+0.6**
JMK				*e*S	**Sn**	**23 51 44.7**	**-0.1**
JIO	**Ouri**	**1.69**	**249**	P	**Pb**	**23 51 23.7**	**-0.8**
JRG	**Rokugo**	**2.14**	**280**	P	**Pn**	**23 51 30.7**	**+1.3**
JRG				*e*S	**Sn**	**23 51 56.8**	**+0.4**
JOU	**Okura**	**2.23**	**252**	P	**Pn**	**23 51 31.4**	**+0.9**
JOU				*e*S	**Sn**	**23 51 58.6**	**+0.1**
JYK	**Kaneyama**	**2.34**	**267**	P	**Pn**	**23 51 33.5**	**+1.3**
JMM	**Marumori**	**2.35**	**240**	P	**Pn**	**23 51 33.1**	**+0.9**
JAH	**Hinai**	**2.38**	**299**	P	**Pn**	**23 51 33.4**	**+0.7**
JTM	**Tenmabayashi**	**2.46**	**315**	P	**Pn**	**23 51 34.2**	**+0.5**
JTM				*e*S	**Sn**	**23 52 02.9**	**-1.3**
JFT	**Otama**	**2.84**	**238**	P	**Pn**	**23 51 40.1**	**+1.1**
ERM	**Erimo**	**2.95**	**357**	*e*Pn	**Pn**	**23 51 40.9**	**+0.5**
ERM				*e*Sn	**Sn**	**23 52 16.3**	**+0.1**
MAJO	**Matsushiro**	**4.80**	**240**	*e*Pn	**Pn**	**23 52 08.3**	**+2.4**
MAT	**Matsushiro**	**4.80**	**240**	P	Pn	23 52 08.8	+2.9
MAT				S	**Sn**	**23 52 59.9**	**-2.1**
ASAJ	**Asahikawa**	**5.08**	**354**	*e*Pn	**Pn**	**23 52 09.0**	**-0.7**
ASAJ	**Asahikawa**	**5.08**	**354**	Pn	**Pn**	**23 52 09.3**	**-0.4**
	2.4nm,0.3s,baz=153,slow=14,SNR=3.9						
JHJ	**Hachijo jima 2**	**6.61**	**207**	Pn	**Pn**	**23 52 30.1**	**-0.6**
	19nm,0.3s,baz=260,slow=20,SNR=7.7						
USRK	**Ussuriysk Arra**	**9.93**	**305**	Pn	**Pn**	**23 53 18.7**	**+2.5**
	0.3nm,0.3s,baz=127,slow=12,SNR=3.8						
ULN	**Ulaanbaatar**	**27.57**	**301**	*e*P	**P**	**23 56 41.5**	**+0.5**
SONM	**Songino Array**	**28.01**	**300**	P	**P**	**23 56 45.7**	**+0.8**
SONM	**Songino Array**	**28.01**	**300**	P	**P**	**23 56 45.7**	**+0.8**
	0.7nm,0.6s,baz=98,slow=9.5,SNR=6.1						
ZALV	**Zalesovo Beam**	**41.72**	**311**	P	**P**	**23 58 43.7**	**+1.1**
ZALV	**Zalesovo Beam**	**41.72**	**311**	P	**P**	**23 58 43.7**	**+1.1**
	1.1nm,0.4s,baz=90,slow=7.9,SNR=5.3						
MK31	**Makanchi Array**	**44.37**	**301**	*e*P	**P**	**23 59 04.2**	**-0.1**
MKAR	**Makanchi Array**	**44.37**	**301**	P	**P**	**23 59 04.7**	**+0.4**
MKAR	**Makanchi Array**	**44.37**	**301**	P	**P**	**23 59 04.7**	**+0.4**
	1.7nm,0.9s,baz=87,slow=8.6,SNR=14						
KURK	**Kurchatov**	**45.92**	**307**	*e*P	**P**	**23 59 13.7**	**-2.7**
	3.2nm,0.8s						
KURBB	**Kurchatov Arra**	**45.99**	**307**	P	**P**	**23 59 17.2**	**+0.2**
	1.3nm,0.5s,baz=82,slow=8.5,SNR=13						
ILAR	**Eielson Array**	**46.95**	**33**	P	**P**	**23 59 24.1**	**-0.2**
ILAR	**Eielson Array**	**46.95**	**33**	P	**P**	**23 59 24.1**	**-0.2**
	1.2nm,0.8s,baz=262,slow=7.1,SNR=9.6						
BVAR	**Borovoye Array**	**50.36**	**311**	P	**P**	**23 59 51.7**	**+0.9**
BVAR	**Borovoye Array**	**50.36**	**311**	P	**P**	**23 59 51.7**	**+0.9**
	0.5nm,0.4s,baz=77,slow=9.0,SNR=4.1						

WRAB	**Tennant Creek**	**59.30**	**190**	*e*P		**P**	**00 00 55.5**	**-0.3**
	9.2nm,1.2s								
WRA	**Warramunga Arr**	**59.31**	**190**	P		**P**	**00 00 55.0**	**-0.9**
WRA	**Warramunga Arr**	**59.31**	**190**	P		**P**	**00 00 55.0**	**-0.9**
	0.8nm,0.5s,baz=8.3,slow=7.1,SNR=14								
ASAR	**Alice Springs**	**63.03**	**190**	P		**P**	**00 01 20.9**	**-0.2**
ASAR	**Alice Springs**	**63.03**	**190**	P		**P**	**00 01 20.9**	**-0.2**
	0.6nm,0.8s,baz=13,slow=8.6,SNR=3.7								
STKA	**Stephens Creek**	**70.61**	**182**	LR		LR	00 30 22.3		
	comp=Z,99nm,18.9s,baz=24,slow=34								

NIED ***19*** *23:52:00,39.10N×143.40E,h17km,Mw4.6 Best double*
couple: M0 8.51000×10^15 NP1:φs29.00000°,δ62.00000°,
λ95.00000°, NP2:φs198.00000°,δ29.00000°,λ81.00000°.
IDC ***19*** *23:52:01.9±0.7,39.03N×143.31E,h0km,mb4.4/21,*
mb1 4.5/26,mb1mx4.4/34,mbtmp4.4/26,ML3.9/5,MS4.0/5,
Ms1 4.0/5,ms1mx3.6/21,Error ellipse: s-maj=17.0km
s-min=14.4km az=111.0
ISCJB ***19*** *23:52:04.0±0.9,39.08N±0.04×143.31E±0.04,h20km±5km,*
mb4.7/102,MS4.5/28,Error ellipse: s-maj=6.9km
s-min=4.1km az=141.9
JMA ***19*** *23:52:05.3±0.2,39.09N×143.29E,h27km±4km,M4.6*
JMA Felt I J1.
BJI ***19*** *23:52:06.7,39.17N×142.96E,h30km,mB5.0/24,mb4.8/41,*
Ms4.6/38,Ms7 4.4/34
MOS ***19*** *23:52:07.5±0.8,39.33N×143.07E,h33km,mb5.2/30,*
MS4.4/13,Error ellipse: s-maj=9.0km s-min=4.9km
az=109.4
NEIC ***19*** *23:52:07.6±1.4,39.08N×143.27E,h35km±9km,mb5.1/32,*
MW4.6(NIED),Error ellipse: s-maj=7.1km s-min=4.3km
az=138.0
NEIC Recorded [1 JMA] in Iwate.
SZGRF ***19*** *23:52:12.6,40.04N×143.95E,h33km,mb4.8,MS4.3,Off*
east coast of Honshu, Japan
ISC 19 23:52:07.0±0.4,39.11N±0.04×143.26E±0.04,h29km±1km,
h28km:pP-P,n308,σ1§37/376,mb4.8/106,MS4.6/28,
31C-15D,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.21**	**293**	P	**Pn**	**23 52 27.1**	**-0.8**
MIYJ				*e*S	**Sn**	**23 52 43.4**	**0.0**
OFUJ	**Ofunato**	**1.24**	**269**	⇑P	**Pn**	**23 52 27.6**	**-0.8**
OFUJ				*e*S	**Sn**	**23 52 43.7**	**-0.4**
JTH	**Tanohata**	**1.36**	**308**	P	**Pn**	**23 52 29.5**	**-0.5**
JOM	**Ohasama**	**1.57**	**284**	P	**Pn**	**23 52 32.8**	**-0.1**
JMK	**Ichinoseki**	**1.60**	**265**	P	**Pn**	**23 52 33.1**	**-0.2**
JMK				*e*S	**Sn**	**23 52 53.5**	**+0.6**
JIO	**Ouri**	**1.63**	**247**	P	**Pn**	**23 52 33.0**	**-0.8**
JANG	**Nango**	**1.84**	**314**	P	**Pn**	**23 52 36.7**	**0.0**
JYK	**Kaneyama**	**2.27**	**266**	P	**Pn**	**23 52 43.3**	**+0.8**
JMM	**Marumori**	**2.30**	**238**	P	**Pn**	**23 52 42.4**	**-0.6**
JMM				*e*S	**Sn**	**23 53 10.4**	**+0.1**
ERM	**Erimo**	**2.90**	**358**	*e*P	**Pn**	**23 52 50.7**	**-0.4**
ERM	**Erimo**	**2.90**	**358**	*e*Pn	**Pn**	**23 52 50.7**	**-0.

	comp=E,970nm,16.8s								
SNY				LR	LR				
	comp=Z,920nm,16.5s								
PETK	**Petropavlovsk-**	**17.16**	**31**	P	**P**		**23 56 05.5**	**-0.4**	
PETK	**Petropavlovsk-**	**17.16**	**31**	Pn	**P**		**23 56 05.5**	**-0.4**	
PETK	**Petropavlovsk-**	**17.16**	**31**	Pn	**P**		**23 56 05.5**	**-0.4**	
	comp=E,0.1nm,0.3s,baz=207,slow=9.2,SNR=5.4								
HIA	**Hailar**	**19.61**	**309**	*e*P	**P**		**23 56 29.0**	**-3.9**	
	comp=Z,36nm,1.0s								
TIA	**Tai'an**	**20.87**	**270**	P	**P**		**23 56 46.6**	**-0.1**	
BJI	**Beijing**	**20.87**	**281**	P	**P**		**23 56 44.1**	**-2.5**	
BJI				S	**S**		**00 00 37.4**	**-0.5**	
BJI				pmax	pmax				
	comp=Z,21nm,1.2s								
BJI				pmax	pmax				
	comp=Z,130nm,3.8s								
BJI				LR	LR				
	comp=N,350nm,11.9s								
BJI				LR	LR				
	comp=E,860nm,15.6s								
CLNS	**Chul'man**	**21.46**	**332**	*e*P	**P**		**23 56 51.0**	**-1.8**	
CLNS				*e**PP	**pP**		**23 57 02.5**	**+1.9**	
CLNS				*e*			23 57 11.4		
CLNS				*e*S	**S**		**00 00 47.1**	**-2.1**	
CLNS				*e*			00 00 52.7		
CLNS				*e*SS	**SnSn**		**00 01 19.2**	**+6.1**	
CLNS				pmax	pmax				
	comp=Z,19nm,1.4s								
CLNS				pmax	pmax				
	comp=N,19nm,1.2s								
CLNS				pmax	pmax				
	comp=E,8.0nm,1.2s								
CLNS				pmax	pmax				
	comp=Z,9.0nm,0.9s								
CLNS				pmax	pmax				
	comp=N,11nm,0.8s								
CLNS				pmax	pmax				
	comp=E,16nm,1.2s								
CLNS				smax	smax				
	comp=E,119nm,12.2s								
CLNS				smax	smax				
	comp=N,29nm,13.2s								
CLNS				MLR	MLR				
	comp=Z,559nm,14.0s								
CLNS				MLR	MLR				
	comp=N,652nm,14.0s								
CLNS				MLR	MLR				
	comp=E,450nm,15.0s								
HHC	**Hu-ho-hao-te**	**24.28**	**284**	*e*P	**P**		**23 57 19.6**	**-2.3**	
HHC				pP	**pP**		**23 57 27.6**	**-2.6**	
HHC				sP	**sP**		**23 57 30.8**	**-2.9**	
HHC				PP	**PnPn**		**23 57 56.6**	**+4.4**	
HHC				PcP	**PcP**		**00 01 03.3**	**+2.0**	
HHC				S	**S**		**00 01 35.4**	**-3.6**	
HHC				sS	sS		00 01 46.1	-6.6	
HHC				SS	**SnSn**		**00 02 28.9**	**+6.3**	
HHC				pmax	pmax				
	comp=Z,32nm,1.0s								
HHC				pmax	pmax				
	comp=Z,200nm,6.1s								
HHC				LR	LR				
	comp=N,610nm,14.3s								
HHC				LR	LR				
	comp=E,2µm,14.3s								
HHC				LR	LR				
	comp=Z,2µm,14.3s								
YAK	**Yakutsk**	**24.41**	**344**	*e*P	**P**		**23 57 21.1**	**-1.5**	
YAK				*e**PP	**pP**		**23 57 27.0**	**-4.0**	
YAK				*e*			23 57 50.6		
YAK				*e*S	**S**		**00 01 38.4**	**-1.9**	
YAK				pmax	pmax				
	comp=E,7.0nm,1.0s								
YAK				pmax	pmax				
	comp=Z,45nm,1.0s								
YAK				pmax	pmax				
	comp=N,24nm,1.3s								
YAK				pmax	pmax				
	comp=Z,32nm,0.9s								
YAK				pmax	pmax				
	comp=E,14nm,1.1s								
YAK				pmax	pmax				
	comp=N,46nm,1.5s								
YAK				smax	smax				
	comp=N,64nm,2.5s								
YAK				smax	smax				
	comp=E,50nm,2.3s								
YAK				MLR	MLR				
	comp=N,246nm,10.0s								
YAK				MLR	MLR				
	comp=Z,419nm,14.0s								
YAK				MLR	MLR				
	comp=E,179nm,15.0s								
WHN	**Wuhan**	**25.14**	**259**	⇓*i*P	**P**		**23 57 29.8**	**+0.2**	
WHN				pmax	pmax				
	comp=Z,150nm,1.1s								
WHN				LR	LR				
	comp=N,1µm,10.1s								
WHN				LR	LR				
	comp=E,920nm,7.9s								
WHN				LR	LR				
	comp=Z,2µm,14.6s								
ULN	**Ulaanbaatar**	**27.48**	**300**	*e*P	**P**		**23 57 50.2**	**-0.5**	
	comp=Z,12nm,0.9s								
SONM	**Songino Array**	**27.91**	**300**	P	**P**		**23 57 54.9**	**+0.3**	
SONM	**Songino Array**	**27.91**	**300**	P	**P**		**23 57 54.9**	**+0.3**	
	comp=Z,2.8nm,0.4s,baz=96,slow=9.0,SNR=21								
XAN	**Xi'an**	**27.93**	**270**	P	**P**		**23 57 54.8**	**0.0**	
ENH	**Enshi**	**29.00**	**263**	*e*P	**P**		**23 58 03.5**	**-0.8**	
	comp=Z,42nm,1.0s								
TLY	**Talaya**	**30.14**	**308**	*e*P	**P**		**23 58 14.8**	**+0.6**	
TLY				*e*			23 59 14.2		
TLY				*e*S	**S**		**00 03 14.2**	**+3.0**	
TLY				pmax	pmax				
	comp=Z,12nm,1.3s								
TLY				MLR	MLR				
	comp=Z,577nm,15.0s								
ZAK	**Zakamensk**	**30.20**	**305**	*e*P	**P**		**23 58 14.0**	**-0.8**	
ZAK				pmax	pmax				
	comp=Z,8.0nm,1.2s								
LZH	**Lanzhou**	**31.21**	**277**	*e*P	P		23 58 34.5	+11	
LZH				pP	pP		23 58 44.0	+12	
LZH				sP	sP		23 58 49.3	+13	
LZH				pmax	pmax				
	comp=Z,13nm,1.0s								
LZH				pmax	pmax				
	comp=Z,56nm,4.3s								
LZH				LR	LR				
	comp=N,660nm,14.4s								
LZH				LR	LR				
	comp=E,1µm,16.4s								
LZH				LR	LR				
	comp=Z,690nm,14.5s								
BILL	**Bilibino**	**31.62**	**16**	*i* P	**P**		**23 58 26.6**	**-0.4**	
BILL				*e**PP	**pP**		**23 58 35.8**	**+0.4**	
BILL				*e**SP	**sP**		**23 58 43.1**	**+4.2**	
BILL				*e*SS	**SnSn**		**00 05 20.9**	**+0.1**	
BILL				pmax	pmax				
	comp=Z,7.0nm,1.4s								
BILL				MLR	MLR				
	comp=Z,100nm,14.0s								
MOY	**Mondy**	**31.77**	**307**	*e*P	**P**		**23 58 29.1**	**+0.4**	
GYA	**Guiyang**	**33.03**	**259**	⇑*i*P	**P**		**23 58 39.4**	**-0.6**	
GYA				pP	**pP**		**23 58 48.9**	**+0.5**	
GYA				PP	**PnPn**		**23 59 47.8**	**-1.9**	
GYA				PcP	**PcP**		**00 01 26.5**	**+3.2**	
GYA				S	S		00 03 50.8	-6.2	
GYA				sS	**sS**		**00 04 06.4**	**-4.5**	
GYA				pmax	pmax				
	comp=Z,20nm,0.9s								
GYA				pmax	pmax				
	comp=Z,80nm,5.4s								
GYA				LR	LR				
	comp=N,590nm,14.9s								
GYA				LR	LR				
	comp=E,500nm,15.2s								
GYA				LR	LR				
	comp=Z,660nm,16.1s								
CD2	**Chengdu**	**33.16**	**268**	*e*P	**P**		**23 58 40.6**	**-0.4**	
CD2				pP	**pP**		**23 58 47.3**	**-2.1**	
CD2				sP	**sP**		**23 58 50.3**	**-2.6**	
CD2				PP	**PnPn**		**23 59 51.3**	**0.0**	
CD2				S	**S**		**00 03 56.8**	**-2.1**	
CD2				sS	**sS**		**00 04 07.8**	**-4.9**	
CD2				SS	**SnSn**		**00 05 57.0**	**-2.2**	
CD2				pmax	pmax				
	comp=Z,30nm,1.1s								
CD2				pmax	pmax				
	comp=Z,260nm,7.2s								
CD2				LR	LR				
	comp=N,700nm,14.2s								
CD2				LR	LR				
	comp=E,400nm,14.2s								
CD2				LR	LR				
	comp=Z,860nm,16.6s								
GTA	**Gaotai**	**33.40**	**285**	*e*P	**P**		**23 58 44.1**	**+1.0**	
GTA				pP	**pP**		**23 58 49.8**	**-1.7**	
GTA				sP	**sP**		**23 58 52.8**	**-2.2**	
GTA				S	**S**		**00 04 01.8**	**-0.7**	
GTA				sS	sS		00 04 10.8	-5.6	
GTA				SS	**SnSn**		**00 06 01.0**	**-3.8**	
GTA				pmax	pmax				
	comp=Z,14nm,1.0s								
GTA				pmax	pmax				
	comp=Z,110nm,5.9s								
GTA				LR	LR				
	comp=N,340nm,20.2s								
GTA				LR	LR				
	comp=E,850nm,17.8s								
GTA				LR	LR				
	comp=Z,1µm,17.3s								
TIXI	**Tiksi**	**33.42**	**352**	*ce*P	**P**		**23 58 41.9**	**-0.8**	
TIXI				pmax	pmax				
	comp=Z,5.0nm,1.1s								
TIXI				MLR	MLR				
	comp=Z,357nm,19.0s								
KMI	**Kunming**	**36.74**	**260**	P	**P**		**23 59 12.5**	**+0.4**	
KMI				pP	**pP**		**23 59 18.6**	**-2.0**	
KMI				sP	**sP**		**23 59 22.0**	**-2.0**	
KMI				PP	**PnPn**		**00 00 38.0**	**+2.0**	
KMI				S	**S**		**00 04 54.3**	**0.0**	
KMI				sS	**sS**		**00 05 05.3**	**-2.9**	
KMI				SS	**SnSn**		**00 07 20.8**	**-5.4**	
KMI				pmax	pmax				
	comp=Z,35nm,1.1s								
KMI				LR	LR				
	comp=N,430nm,12.9s								
KMI				LR	LR				
	comp=E,410nm,12.3s								
KMI				LR	LR				
	comp=Z,470nm,13.8s								
KRAR	**Krasnoyarsk**	**37.02**	**314**	*i* P	**P**		**23 59 14.4**	**+0.6**	
WMQ	**Urumqi**	**41.24**	**295**	P	**P**		**23 59 50.3**	**+0.9**	
WMQ				pP	**pP**		**00 00 00.0**	**+2.1**	
WMQ				sP	**sP**		**00 00 04.0**	**+2.6**	
WMQ				PP	**PnPn**		**00 01 29.0**	**-0.3**	
WMQ				*e*S	**S**		**00 06 02.0**	**+0.6**	
WMQ				sS	**sS**		**00 06 19.0**	**+3.5**	
WMQ				pmax	pmax				
	comp=Z,23nm,1.0s								
WMQ				pmax	pmax				
	comp=Z,150nm,4.0s								
WMQ				LR	LR				
	comp=N,560nm,16.2s								
WMQ				LR	LR				
	comp=E,540nm,14.0s								
WMQ				LR	LR				
	comp=Z,450nm,17.5s								
ZALV	**Zalesovo Beam**	**41.63**	**311**	P	**P**		**23 59 51.8**	**-0.5**	
ZALV							00 01 49.4		
ZALV	**Zalesovo Beam**	**41.63**	**311**	P	**P**		**23 59 51.8**	**-0.5**	
ZALV				PcP	**PcP**		**00 01 49.4**	**+0.5**	
ZALV	**Zalesovo Beam**	**41.63**	**311**	P	**P**		**23 59 51.8**	**-0.5**	
	comp=Z,3.1nm,0.4s,baz=84,slow=7.4,SNR=11								
ZALV				PcP	**PcP**		**00 01 49.4**	**+0.5**	
	comp=Z,1.6nm,0.5s,baz=103,slow=3.3,SNR=3.6								
NVS	**Novosibirsk**	**42.49**	**312**	⇑*i*P	**P**		**23 59 58.9**	**-0.5**	
NVS				pmax	pmax				
	comp=Z,16nm,1.7s								
NVS				pmax	pmax				
	comp=N,6.0nm,1.5s								
NVS				pmax	pmax				
	comp=E,23nm,2.5s								
SVW2	**Sparrevohn**	**42.99**	**39**	*e*P	**P**		**00 00 03.7**	**+0.3**	
	comp=E,9.9nm,1.0s								
SVW2				*e*PcP	**PcP**		**00 01 55.5**	**+2.3**	
CHTO	**Chiang Mai**	**43.23**	**255**	*e*P	**P**		**00 00 05.9**	**+0.1**	
CHTO	**Chiang Mai**	**43.23**	**255**	*e*P	**P**		**00 00 05.9**	**+0.1**	
CMAR	**Chiang Mai Arr**	**43.44**	**255**	P	**P**		**00 00 07.1**	**-0.4**	
CMAR	**Chiang Mai Arr**	**43.44**	**255**	P	**P**		**00 00 07.1**	**-0.4**	
	comp=E,3.2nm,0.9s,baz=46,slow=5.8,SNR=7.9								
MK31	**Makanchi Array**	**44.28**	**301**	*e*P	**P**		**00 00 13.0**	**-1.0**	
MK31	**Makanchi Array**	**44.28**	**301**	*e*P	**P**		**00 00 13.0**	**-1.0**	
MKAR	**Makanchi Array**	**44.28**	**301**	P	**P**		**00 00 13.6**	**-0.4**	
MKAR	**Makanchi Array**	**44.28**	**301**	P	**P**		**00 00 13.6**	**-0.4**	
MKAR	**Makanchi Array**	**44.28**	**301**	P	**P**		**00 00 13.6**	**-0.4**	
	comp=E,12nm,0.9s,baz=86,slow=8.6,SNR=30								
KURK	**Kurchatov**	**45.83**	**307**	P	**P**		**00 00 26.2**	**+0.1**	
KURK				pmax	pmax				
	comp=Z,6.0nm,0.4s								
KURK	**Kurchatov**	**45.83**	**307**	*e*P	**P**		**00 00 25.4**	**-0.7**	
KURBB	**Kurchatov Arra**	**45.90**	**307**	P	**P**		**00 00 26.2**	**-0.5**	
	comp=Z,5.6nm,0.4s,baz=81,slow=8.4,SNR=26								
ILAR	**Eielson Array**	**46.96**	**33**	P	**P**		**00 00 34.8**	**-0.1**	
ILAR	**Eielson Array**	**46.96**	**33**	P	**P**		**00 00 34.8**	**-0.1**	
	comp=Z,4.7nm,0.8s,baz=262,slow=6.3,SNR=19								
TAPN	**Taplejung**	**47.27**	**273**	*e*P	**P**		**00 00 38.5**	**+0.4**	
	comp=Z,55nm,1.4s								
ODAN	**Odare**	**47.76**	**273**	*e*P	**P**		**00 00 41.3**	**-0.5**	
	comp=Z,8.4nm,0.3s								
RAMN	**Ramite**	**48.33**	**273**	*e*P	**P**		**00 00 46.2**	**-0.1**	
	comp=Z,41nm,0.9s								
GUN	**Gumba**	**48.42**	**275**	*e*P	**P**		**00 00 47.3**	**+0.2**	
	comp=Z,110nm,1.1s								
KKN	**Kakani**	**48.94**	**275**	*e*P	**P**		**00 00 51.0**	**0.0**	
	comp=Z,53nm,1.0s								
PKIN	**Phulchoki**	**48.95**	**275**	*e*P	**P**		**00 00 51.1**	**0.0**	
	comp=Z,20nm,0.9s								
DMN	**Daman**	**49.16**	**275**	*e*P	**P**		**00 00 53.1**	**+0.4**	
	comp=Z,67nm,1.2s								
ULHL	**Ulahol**	**49.73**	**296**	P	**P**		**00 00 56.9**	**+0.1**	
	SNR=8.1								
DANN	**Dangsing**	**49.85**	**276**	*e*P	**P**		**00 00 58.3**	**+0.3**	
	comp=Z,44nm,0.4s								
TKM2	**Tokmak 2**	**49.95**	**297**	*e*P	**P**		**00 00 59.1**	**+0.7**	
TKM2				pmax	pmax				
	comp=Z,29nm,1.0s								
TKM2	**Tokmak 2**	**49.95**	**297**	*e*P	**P**		**00 00 59.0**	**+0.7**	
	comp=Z,29nm,1.0s								
TKM2	**Tokmak 2**	**49.95**	**297**	P	**P**		**00 00 59.1**	**+0.7**	
	SNR=16								
KOLN	**Koldanda**	**50.25**	**276**	*e*P	**P**		**00 01 01.0**	**+0.1**	
	comp=Z,36nm,0.9s								
BVAR	**Borovoye Array**	**50.27**	**311**	P	**P**		**00 01 00.4**	**-0.1**	
BVAR	**Borovoye Array**	**50.27**	**311**	P	**P**		**00 01 00.4**	**-0.1**	
BVAR	**Borovoye Array**	**50.27**	**311**	P	**P**		**00 01 00.4**	**-0.1**	
	comp=Z,6.2nm,0.9s,baz=78,slow=7.7,SNR=16								
BRVK	**Borovoye**	**50.33**	**311**	*c i*P	**P**		**00 01 00.7**	**-0.2**	
BRVK				pmax	pmax				
	comp=Z,15nm,1.2s								
BRVK				MLR	MLR				
	comp=Z,380nm,17.0s								
BRVK	**Borovoye**	**50.33**	**311**	*e*P	**P**		**00 01 00.5**	**-0.4**	
	comp=Z,13nm,1.1s								
KZA	**Kyzart**	**50.48**	**297**	P	**P**		**00 01 03.9**	**+1.1**	
	SNR=7.2								
KBK	**Karagaybulak**	**50.48**	**297**	P	**P**		**00 01 03.0**	**+0.5**	
	SNR=11								
PYUN	**Piuthan**	**50.56**	**277**	*e*P	**P**		**00 01 03.6**	**+0.3**	
	comp=Z,154nm,1.1s								
USP	**Ospenovka**	**50.58**	**298**	P	**P**		**00 01 03.5**	**+0.4**	
	SNR=6.1								
AAK	**Ala-Archa**	**50.81**	**297**	*e*P	**P**		**00 01 05.2**	**+0.3**	
AAK	**Ala-Archa**	**50.81**	**297**	*e*P	**P**		**00 01 05.2**	**+0.3**	
AAK	**Ala-Archa**	**50.81**	**297**	P	**P**		**00 01 05.0**	**+0.1**	
	comp=Z,1.7nm,0.3s,baz=121,slow=5.9,SNR=8.9								
KSH	**Kashi**	**50.91**	**293**	*e*P	**P**		**00 01 08.6**	**+2.9**	
KSH				*ep*P	**pP**		**00 01 16.3**	**+1.9**	
KSH				*es*P	**sP**		**00 01 19.3**	**+1.5**	
KSH				*e*PcP	**PcP**		**00 02 24.4**	**+2.6**	
KSH				*e*PP	**PP**		**00 03 05.4**	**+3.5**	
KSH				*e*S	**S**		**00 08 21.8**	**+1.4**	
KSH				*es*S	**sS**		**00 08 35.0**	**+0.2**	
KSH				pmax	pmax				
	comp=Z,15nm,0.9s								
KSH				LR	LR				
	comp=N,240nm,8.2s								
KSH				LR	LR				
	comp=E,240nm,6.5s								
KSH				LR	LR				
	comp=Z,730nm,10.5s								
EKS2	**Erkin-Say**	**51.29**	**298**	*e*P	**P**		**00 01 08.9**	**+0.4**	
EKS2				pmax	pmax				
	comp=Z,5.0nm,0.9s								
EKS2	**Erkin-Say**	**51.29**	**298**	*e*P	**P**		**00 01 08.9**	**+0.4**	
	comp=Z,5.3nm,0.9s								
AML	**Almayashu**	**51.54**	**297**	P	**P**		**00 01 11.7**	**+1.0**	
	SNR=11								
INK	**Inuvik**	**51.87**	**28**	P	**P**		**00 01 12.6**	**+0.3**	
INK	**Inuvik**	**51.87**	**28**	P	**P**		**00 01 12.6**	**+0.3**	
	comp=Z,2.6nm,0.4s,baz=281,slow=5.9,SNR=8.6								
KKAR	**Karatay Array**	**53.36**	**299**	*e*P	**P**		**00 01 23.6**	**-0.1**	
KKAR	**Karatay Array**	**53.36**	**299**	*e*P	**P**		**00 01 23.6**	**-0.1**	
SVE	**Sverdlovsk**	**54.57**	**318**	⇑*i*P	**P**		**00 01 32.9**	**+0.7**	
SVE				pmax	pmax				
	comp=Z,28nm,1.2s								
SVE				MLR	MLR				
	comp=Z,713nm,16.0s								
ARU	**Arti**	**55.78**	**318**	*c i*P	**P**		**00 01 40.4**	**-0.5**	
ARU							00 02 40.3		
ARU							00 03 41.8		
ARU				PPP	PPP		00 04 57.5		
ARU				S	**S**		**00 09 24.7**	**-1.1**	
ARU				SS	**SS**		**00 13 06.1**	**-4.8**	
ARU				pmax	pmax				
	comp=Z,28nm,1.2s								
ARU				MLR	MLR				
	comp=Z,551nm,16.0s								
ARU	**Arti**	**55.78**	**318**	P	**P**		**00 01 40.5**	**-0.5**	
	comp=Z,105nm,1.1s,SNR=6.9								
ABKAR	**Akbulak array**	**57.73**	**310**	*e*P	**P**		**00 01 54.6**	**-0.3**	
KBL	**Kabul**	**58.04**	**291**	*e*P	**P**		**00 01 57.5**	**-0.2**	
KBL				pmax	pmax				
	comp=Z,26nm,1.0s								
KBL	**Kabul**	**58.04**	**291**	*e*P	**P**		**00 01 57.5**	**-0.2**	
	comp=Z,26nm,1.0s								
AKTO	**Aktyubinsk**	**58.38**	**312**	P	**P**		**00 01 59.5**	**0.0**	
AKTO	**Aktyubinsk**	**58.38**	**312**	P	**P**		**00 01 59.5**	**0.0**	
AKTO	**Aktyubinsk**	**58.38**	**312**	P	**P**		**00 01 59.5**	**0.0**	
	comp=Z,3.5nm,0.7s,baz=60,slow=8.8,SNR=10								
WRA	**Warramunga Arr**	**59.34**	**190**	P	**P**		**00 02 04.8**	**-1.6**	
WRA	**Warramunga Arr**	**59.34**	**190**	P	**P**		**00 02 04.8**	**-1.6**	
	comp=Z,1.6nm,0.4s,baz=7.6,slow=6.9,SNR=14								
YKA	**Yellowknife Ar**	**61.28**	**31**	P	**P**		**00 02 19.1**	**-0.1**	
YKA	**Yellowknife Ar**	**61.28**	**31**	P	**P**		**00 02 19.0**	**-0.1**	
	comp=Z,0.2nm,0.4s,baz=298,slow=6.5,SNR=5.5								
APA	**Apatity**	**61.39**	**336**	⇑*e*P	P		00 02 16.0	-3.9	
APA				MLR	MLR				
	comp=Z,800nm,18.0s								
ARCES	**ARCESS Array B**	**62.56**	**339**	P	**P**		**00 02 27.3**	**-0.5**	
ARCES	**ARCESS Array B**	**62.56**	**339**	P	**P**		**00 02 27.3**	**-0.5**	
	comp=Z,5.5nm,1.1s,baz=23,slow=7.2,SNR=6.4								
KLMR	**Klimovskoe**	**62.78**	**328**	*e*P	**P**		**00 02 26.2**	**-3.1**	
KLMR				pmax	pmax				
	comp=Z,21nm,1.5s								
KLMR				MLR	MLR				
	comp=Z,226nm,16.0s								
ASAR	**Alice Springs**	**63.06**	**190**	P	**P**		**00 02 30.0**	**-1.6**	
ASAR	**Alice Springs**	**63.06**	**190**	P	**P**		**00 02 30.0**	**-1.6**	
	comp=Z,1.0nm,0.9s,baz=13,slow=7.3,SNR=5.9								
ASAR				LR	LR		00 26 19.7		
	comp=Z,119nm,20.2s,baz=348,slow=33								
DAG	**Danmarks Havn**	**63.83**	**355**	⇑*i*P	**P**		**00 02 35.4**	**-0.6**	
	comp=Z,4.4nm,0.9s								
DZM	**Mont Dzumac**	**64.62**	**156**	*e*LR	LR		00 25 00.8		
	comp=Z,134nm,22.4s								
OBN	**Obninsk**	**67.30**	**323**	⇑*i*P	**P**		**00 02 56.4**	**-2.3**	
OBN				*e*			00 03 06.6		
OBN				*e*			00 05 25.0		
OBN				*e*S	**S**		**00 11 50.5**	**-1.3**	
OBN				pmax	pmax				
	comp=Z,16nm,1.2s								
OBN				MLR	MLR				
	comp=Z,300nm,16.0s								
FINES	**FINESS Array B**	**67.65**	**332**	P	**P**		**00 03 00.2**	**-0.6**	
FINES	**FINESS Array B**	**67.65**	**332**	P	**P**		**00 03 00.2**	**-0.6**	
	comp=Z,6.1nm,0.9s,baz=38,slow=7.0,SNR=12								
MAK	**Makhachkala**	**68.32**	**308**	*e*P	P		00 03 12.9	+7.5	
MAK				MLR	MLR				
	comp=Z,315nm,14.0s								
VSR	**Storozhevoye**	**68.33**	**319**	*e*P	**P**		**00 03 04.6**	**-0.7**	
VSR				pmax	pmax				
	comp=Z,10.0nm,1.1s								
VSR				pmax	pmax				
	comp=N,10.0nm,0.8s								
VSR				pmax	pmax				
	comp=E,10.0nm,0.9s								
VORD	**Divnogorie**	**68.41**	**319**	*e*P	**P**		**00 03 05.2**	**-0.6**	
VORD				pmax	pmax				
	comp=Z,10.0nm,1.0s								
VORD				pmax	pmax				
	comp=N,7.0nm,0.9s								
VORD				pmax	pmax				
	comp=E,10.0nm,0.8s								
SUMG	**Summit**	**68.60**	**1**	*e*P	**P**		**00 03 07.3**	**+0.1**	
SUMG				pmax	pmax				
	comp=Z,7.0nm,0.7s								
SUMG	**Summit**	**68.60**	**1**	*e*P	**P**		**00 03 07.3**	**+0.1**	
	comp=Z,6.5nm,0.7s								
SUMG	**Summit**	**68.60**	**1**	*i* P	**P**		**00 03 07.7**	**+0.5**	
	comp=Z,6.2nm,0.8s								
KIV	**Kislovodsk**	**70.64**	**311**	*c i*P	**P**		**00 03 20.1**	**+0.2**	
KIV				*e**PP	**pP**		**00 03 30.8**	**+1.9**	
KIV				*e**SP	**sP**		**00 03 35.5**	**+3.3**	
KIV				pmax	pmax				
	comp=Z,48nm,1.2s								
KIV	**Kislovodsk**	**70.64**	**311**	P	**P**		**00 03 19.2**	**-0.7**	
	comp=Z,193nm,1.0s,SNR=8.2								
KBZ	**Khabaz**	**70.65**	**311**	P	**P**		**00 03 20.1**	**+0.4**	
KBZ	**Khabaz**	**70.65**	**311**	P	**P**		**00 03 20.1**	**+0.4**	
KBZ	**Khabaz**	**70.65**	**311**	P	**P**		**00 03 20.1**	**+0.4**	
	comp=Z,8.5nm,0.9s,baz=45,slow=5.7,SNR=10								
FFC	**Flin Flon**	**71.17**	**34**	*i* P	**P**		**00 03 23.8**	**+1.1**	
GNI	**Garni**	**71.63**	**307**	*e*P	**P**		**00 03 26.7**	**+0.7**	
	comp=Z,23nm,1.4s								
LRM	**Limekiln Ridge**	**71.65**	**46**	*e*P	**P**		**00 03 26.2**	**+0.1**	
NB2	**NORSAR Subarra**	**72.82**	**338**	P	**P**		**00 03 31.8**	**-0.8**	
	comp=Z,10nm,1.1s,baz=39,slow=6.2								
NOA	**NORSAR Array B**	**72.82**	**338**	P	**P**		**00 03 32.3**	**-0.3**	
NOA	**NORSAR Array B**	**72.82**	**338**	P	**P**		**00 03 32.3**	**-0.3**	
	comp=Z,6.4nm,0.9s,baz=36,slow=5.8,SNR=9.0								
AKASG	**Malin Array Be**	**73.54**	**323**	P	**P**		**00 03 36.2**	**-0.7**	
AKASG	**Malin Array Be**	**73.54**	**323**	P	**P**		**00 03 36.1**	**-0.7**	
AKASG	**Malin Array Be**	**73.54**	**323**	P	**P**		**00 03 36.1**	**-0.7**	
	comp=Z,1.8nm,0.4s,baz=44,slow=6.2,SNR=18								
AK01	**Malin Array Si**	**73.55**	**323**	*e*P	**P**		**00 03 36.3**	**-0.6**	
KIEV	**Ki

comp=Z,18nm,1.0s
OJC Ojcow 78.11 327 *e*P **P** 00 04 03.3 +0.2
comp=Z,18nm,1.0s
OJC Ojcow 78.11 327 *e*P **P** 00 04 03.2 +0.2
PV10 Paradox Valley 78.31 50 *e*P **P** 00 04 06.1 +1.3
TRPA Tarpa 78.45 324⇑ *i*P **P** 00 04 06.0 +1.1
BRTR Keskin Array B 78.55 312 P **P** 00 04 05.8 -0.1
BRTR Keskin Array B 78.55 312 P **P** 00 04 05.8 -0.1
comp=Z,7.1nm,1.2s,baz=85,slow=2.3,SNR=12
ISR Istrita 78.69 320⇑ P **P** 00 04 08.1 +1.6
ISR Istrita 78.69 320⇑ *i*P **P** 00 04 08.1 +1.6
MLR Muntele Rosu 78.73 320⇑ *i*P **P** 00 04 05.8 -0.9
BSEG Bad Segeberg 78.85 334 *e*P **P** 00 04 07.8 +0.8
comp=Z,30nm,1.2s
KSP Ksiaz 79.09 329 *e*P **P** 00 04 08.6 +0.2
KSP Ksiaz 79.09 329 *e*P **P** 00 04 08.8 +0.4
OKC Ostrava-Krasne 79.10 327 *i* P **P** 00 04 09.3 +0.8
OKC *e**PP **pP** 00 04 19.0 +1.4
OKC MLR MLR
comp=Z,200nm,13.5s
MORC Moravsky Berou 79.40 328⇓ P **P** 00 04 10.5 +0.3
MORC Moravsky Berou 79.40 328 *e*P **P** 00 04 09.0 -1.3
comp=Z,10.0nm,1.0s
MORC Moravsky Berou 79.40 328⇓ *i*P **P** 00 04 10.5 +0.3
DPC Dobruska-Polom 79.46 329 *i* P **P** 00 04 11.6 +1.1
DPC *e**PP **pP** 00 04 21.0 +1.3
UPC Upice 79.46 329 *i* P **P** 00 04 11.2 +0.7
UPC *e**PP **pP** 00 04 20.6 +1.0
KRLC Kraliky 79.48 328 *i* P **P** 00 04 11.5 +0.8
PSZ Piszkesteto 79.80 325⇑ P **P** 00 04 12.7 +0.2
PSZ Piszkesteto 79.80 325⇑ *i*P **P** 00 04 12.7 +0.2
VYHS Vyhne 79.83 326 *e*P **P** 00 04 13.0 +0.5
VYHS pmax pmax
comp=Z,4.0nm,1.2s
BRG Berggiesshubel 79.99 330 *e*P **P** 00 04 13.3 0.0
comp=Z,7.6nm,1.0s
BRG
comp=N,1μm,15.0s
BRG
comp=E,1μm,17.0s
BRG
comp=Z,1μm,15.3s
BRG Berggiesshubel 79.99 330 *e*P **P** 00 04 13.8 +0.5
comp=Z,8.0nm,1.0s
BRG Berggiesshubel 79.99 330 *e*P **P** 00 04 13.3 0.0
BRG pmax pmax
comp=Z,8.0nm,1.0s
BRG MLR MLR
comp=N,1μm,15.0s
BRG MLR MLR
comp=E,1μm,17.0s
BRG MLR MLR
comp=Z,1μm,15.3s
CLL Collm 80.00 331 *e*P **P** 00 04 13.6 +0.2
comp=Z,12nm,0.9s
CLL Collm 80.00 331⇑ *i*P **P** 00 04 13.2 -0.2
CLL *i* *PP **pP** 00 04 22.6 +0.1
CLL *e*S S 00 14 09.0 -6.3
CLL pmax pmax
comp=Z,12nm,0.9s
CLL Collm 80.00 331⇑ *i*P **P** 00 04 13.2 -0.2
comp=Z,12nm,0.9s
CLL *i* pP **pP** 00 04 22.6 +0.1
CLL *e*S S 00 14 09.0 -6.3
CLL *e*SKSac **SKSac** 00 14 28.0 -0.6
CLL LmH 00 42 00.0
comp=Z,100nm,20.2s
PVCC Panska Ves 80.02 330 *i* P **P** 00 04 14.1 +0.6
PVCC *e**PP **pP** 00 04 24.1 +1.5
NRDL Niedersach Rie 80.10 333 *e*P **P** 00 04 14.3 +0.5
comp=Z,6.0nm,1.1s
VRAC Vranov 80.16 328⇑ *i*P **P** 00 04 13.9 -0.4
FBE Freiberg 80.18 330 *e*P **P** 00 04 15.1 +0.7
comp=Z,18nm,1.3s
PRU Pruhonice 80.46 329 *i* P **P** 00 04 16.7 +0.8
PRU *e**PP **pP** 00 04 26.5 +1.5
PRU MLR MLR
comp=Z,200nm,16.3s
CLZ Clausthal 80.54 333 *e*P **P** 00 04 17.1 +0.7
comp=Z,8.0nm,1.0s
NEUB Neuenburg 80.55 331 *e*P **P** 00 04 16.7 +0.4
comp=Z,15nm,1.0s
TREC Trest 80.62 328 *i* P **P** 00 04 17.1 +0.3
TREC *e**PP **pP** 00 04 26.8 +0.9
TREC MLR MLR
comp=Z,300nm,15.8s
BZS Buzias 80.73 323⇑ P **P** 00 04 18.0 +0.6
BZS Buzias 80.73 323⇑ *i*P **P** 00 04 18.0 +0.6
WERD Werda 80.96 331 *e*P **P** 00 04 19.0 +0.4
comp=Z,11nm,1.5s
PLN Plauen 80.98 331 *e*P **P** 00 04 19.2 +0.5
comp=Z,49nm,1.5s
GUNZ Gunzen 81.02 331 *e*P **P** 00 04 19.5 +0.6
comp=Z,5.0nm,0.9s
MOX Moxa 81.06 331 *e*P **P** 00 04 19.6 +0.5
comp=Z,6.0nm,1.1s
WERN Wernitzgruen 81.06 331 *e*P **P** 00 04 19.9 +0.7
comp=Z,10.0nm,1.1s
IBBN Ibbenburen 81.07 334 *e*P **P** 00 04 19.5 +0.4
comp=Z,11nm,0.9s
NKC Novy Kostel 81.08 331 *i* P **P** 00 04 19.7 +0.5
RAYN Ar Rayn 81.20 293 *e*P **P** 00 04 20.1 -0.3
comp=Z,5.0nm,0.8s
MANZ Manzenberg 81.41 331 *e*P **P** 00 04 21.5 +0.5
comp=Z,7.0nm,1.0s
KHC Kasperske Hory 81.52 329 *e*P **P** 00 04 22.0 +0.4
CONA Conrad Observa 81.53 327⇓ *i*PcP **P** 00 04 23.0 +1.2
comp=Z,6.2nm,1.0s
ROTZ Rotzenmuhle 81.55 330 *e*P **P** 00 04 22.7 +1.0
comp=Z,10.0nm,1.3s
GEC2 GERESS Array S 81.70 329 *e*P **P** 00 04 23.1 +0.5
comp=Z,289nm,6.1s
GERES GERESS Array B 81.70 329 P **P** 00 04 22.3 -0.3
GERES GERESS Array B 81.70 329 P **P** 00 04 22.3 -0.3
comp=Z,1.1nm,0.5s,baz=41,slow=5.2,SNR=14
WET Wettzell 81.78 330 *e*P **P** 00 04 23.8 +0.8
comp=Z,10.0nm,1.3s
CSS Prodhromos 81.92 309 *e*P **P** 00 04 24.8 +0.8
comp=Z,6.8nm,1.0s
GRF Grafenberg Arr 81.98 331 *e*P **P** 00 04 25.0 +1.0
comp=Z,20nm,1.1s
GRF *e*L L 00 45 53.4
comp=Z,118nm,19.1s
GRFO Grafenberg 81.98 331 *e*P **P** 00 04 24.9 +0.9
GRFO pmax pmax
comp=Z,16nm,1.0s
GRFO Grafenberg 81.98 331 *e*P **P** 00 04 24.9 +0.9
comp=Z,16nm,1.0s
VTS Vitosha 82.18 320⇓ P **P** 00 04 26.5 +1.1
VTS Vitosha 82.18 320⇓ *i*P **P** 00 04 26.5 +1.1
MOA Molln 82.26 328⇓ *i*P **P** 00 04 24.4 -1.2
comp=Z,7.5nm,1.6s
SOKA Soboth 82.86 327⇓ *i*P **P** 00 04 29.1 +0.4
comp=Z,15nm,1.3s
RJOB Jochberg 82.95 329 *e*P **P** 00 04 30.0 +0.8
comp=Z,10.0nm,1.2s
STU Stuttgart 83.50 331 *e*P **P** 00 04 32.5 +0.6
comp=Z,9.0nm,0.9s
MOTA Moosalm 83.94 330⇓ *i*PcP **P** 00 04 34.7 +0.4
comp=Z,9.6nm,1.0s
RETA Reutte 83.96 330⇓ *i*PcP **P** 00 04 34.8 +0.5
comp=Z,13nm,1.1s
BAIF Baives 84.16 335 *e*P **P** 00 04 34.7 -0.5
BAIF Baives 84.16 335 *e*P **P** 00 04 34.7 -0.5
BAIF Baives 84.16 335 *e*P **P** 00 04 34.7 -0.5
BFO Black Forest 84.19 332 *e*P **P** 00 04 35.7 +0.2
comp=Z,24nm,1.5s
BFO Black Forest 84.19 332 *e*P **P** 00 04 35.3 -0.1
BFO pmax pmax
comp=Z,24nm,1.5s
BFO Black Forest 84.19 332 *e*P **P** 00 04 35.3 -0.1
comp=Z,24nm,1.5s
PPT2 Papeete2 84.30 118 *e*LR LR 00 30 29.0
comp=Z,137nm,22.8s
FETA Feichten 84.35 330⇑ *i*PcP **P** 00 04 36.9 +0.5
comp=Z,8.3nm,1.1s
DAVA Damuels 84.46 330⇓ *i*P **P** 00 04 36.7 -0.4
comp=Z,11nm,0.9s
CDF Champ du Feu 84.50 332 *e*P **P** 00 04 37.0 -0.1
comp=Z,31nm,1.3s
CDF Champ du Feu 84.50 332 *e*P **P** 00 04 37.0 -0.1
CDF pmax pmax
comp=Z,31nm,1.3s
CDF Champ du Feu 84.50 332 *e*P **P** 00 04 37.0 -0.1
comp=Z,31nm,1.3s
PAGF Fort de Pagny 84.93 333 *e*P **P** 00 04 39.4 +0.2
comp=Z,8.4nm,1.0s
PAGF Fort de Pagny 84.93 333 *e*P **P** 00 04 39.4 +0.2
comp=Z,8.4nm,1.0s
HAU Haudompre 85.18 333 *e*P **P** 00 04 40.1 -0.4
comp=Z,17nm,1.1s
HAU *e*R
comp=Z,134nm,20.5s
HAU Haudompre 85.18 333 *e*P **P** 00 04 40.1 -0.4
HAU pmax pmax
comp=Z,17nm,1.1s
HAU Haudompre 85.18 333 *e*P **P** 00 04 40.1 -0.4
comp=Z,17nm,1.1s
MEZF Maizieres J'vi 85.21 334 *e*P **P** 00 04 40.7 +0.1
comp=Z,18nm,0.9s
MEZF Maizieres J'vi 85.21 334 *e*P **P** 00 04 40.7 +0.1
comp=Z,18nm,0.9s
SFTF Sexfontaines 85.47 333 *e*P **P** 00 04 41.7 -0.2
comp=Z,18nm,0.9s
SFTF Sexfontaines 85.47 333 *e*P **P** 00 04 41.7 -0.2
comp=Z,18nm,0.9s
LOR Lormes 86.69 334 *e*P **P** 00 04 47.6 -0.3
comp=Z,26nm,1.1s
LOR *e*R
comp=Z,128nm,17.2s
LOR Lormes 86.69 334 *e*P **P** 00 04 47.6 -0.3
comp=Z,26nm,1.1s
FLN La Foliniere 86.79 337 *e*P **P** 00 04 48.0 -0.4
FLN *e*R
comp=Z,155nm,22.8s
FLN La Foliniere 86.79 337 *e*P **P** 00 04 48.0 -0.4
FLN La Foliniere 86.79 337 *e*P **P** 00 04 48.0 -0.4
LDF La Druitiere 86.83 337 *e*P **P** 00 04 48.1 -0.5
comp=Z,23nm,1.2s
LDF La Druitiere 86.83 337 *e*P **P** 00 04 48.1 -0.5
LDF pmax pmax
comp=Z,23nm,1.2s
LDF La Druitiere 86.83 337 *e*P **P** 00 04 48.1 -0.5
comp=Z,23nm,1.2s
SSF Saint Saulge 86.98 334 *e*P **P** 00 04 49.2 -0.2
comp=Z,13nm,1.0s
SSF Saint Saulge 86.98 334 *e*P **P** 00 04 49.2 -0.2
SSF pmax pmax
comp=Z,13nm,1.0s
SSF Saint Saulge 86.98 334 *e*P **P** 00 04 49.2 -0.2
comp=Z,13nm,1.0s
HYF Humbligny 87.10 334 *e*P **P** 00 04 50.2 +0.3
HYF Humbligny 87.10 334 *e*P **P** 00 04 50.2 +0.3
LPL La Plagne 87.14 331 *e*P **P** 00 04 50.4 -0.1
comp=Z,19nm,1.2s
LPL La Plagne 87.14 331 *e*P **P** 00 04 50.4 -0.1
LPL pmax pmax
comp=Z,19nm,1.2s
LPL La Plagne 87.14 331 *e*P **P** 00 04 50.4 -0.1
comp=Z,19nm,1.2s
LPG La Plagne 87.15 331 *e*P **P** 00 04 50.5 -0.1
LPG La Plagne 87.15 331 *e*P **P** 00 04 50.5 -0.1
LPG La Plagne 87.15 331 *e*P **P** 00 04 50.5 -0.1
SMF Signal de Mont 87.23 333 *e*P **P** 00 04 50.4 -0.2
comp=Z,44nm,1.4s
SMF Signal de Mont 87.23 333 *e*P **P** 00 04 50.4 -0.2
SMF pmax pmax
comp=Z,45nm,1.4s
SMF Signal de Mont 87.23 333 *e*P **P** 00 04 50.4 -0.2
comp=Z,44nm,1.4s
GRR Gorron 87.24 337 *e*P **P** 00 04 50.4 -0.1
comp=Z,54nm,1.5s
GRR Gorron 87.24 337 *e*P **P** 00 04 50.4 -0.1
GRR pmax pmax
comp=Z,54nm,1.5s
GRR Gorron 87.24 337 *e*P **P** 00 04 50.4 -0.1
comp=Z,54nm,1.5s
AVF Avril sur Loir 87.27 334 *e*P **P** 00 04 50.7 0.0
comp=Z,33nm,1.1s
AVF Avril sur Loir 87.27 334 *e*P **P** 00 04 50.7 0.0
AVF pmax pmax
comp=Z,33nm,1.1s
AVF Avril sur Loir 87.27 334 *e*P **P** 00 04 50.7 0.0
comp=Z,33nm,1.1s
TCF Toulx Ste Croi 88.10 334 *e*P **P** 00 04 54.8 0.0
TCF Toulx Ste Croi 88.10 334 *e*P **P** 00 04 54.8 0.0
TCF Toulx Ste Croi 88.10 334 *e*P **P** 00 04 54.8 0.0
RJF Les Rejaudoux 89.20 334 *e*P **P** 00 05 00.1 +0.2
comp=Z,8.5nm,0.9s
RJF *e*R
comp=Z,154nm,17.0s
RJF Les Rejaudoux 89.20 334 *e*P **P** 00 05 00.1 +0.2
RJF pmax pmax
comp=Z,9.0nm,0.9s
RJF Les Rejaudoux 89.20 334 *e*P **P** 00 05 00.1 +0.2
comp=Z,8.5nm,0.9s
CAF Calviac 89.34 334 *e*P **P** 00 05 00.9 +0.3
CAF Calviac 89.34 334 *e*P **P** 00 05 00.9 +0.3
CAF Calviac 89.34 334 *e*P **P** 00 05 00.9 +0.3
LFF La Frestale 89.78 334 *e*P **P** 00 05 03.1 +0.5
comp=Z,16nm,1.0s
LFF La Frestale 89.78 334 *e*P **P** 00 05 03.1 +0.5
LFF pmax pmax
comp=Z,16nm,1.0s
LFF La Frestale 89.78 334 *e*P **P** 00 05 03.1 +0.5
comp=Z,16nm,1.0s
TORD Torodi Ar. Bea 116.85 317 PKP **PKPdf** 00 10 47.9 -1.3
TORD Torodi Ar. Bea 116.85 317 PKP **PKPdf** 00 10 47.9 -1.3
comp=Z,0.2nm,0.4s,baz=20,slow=2.4,SNR=9.1
SIV San Ignacio 148.63 50 PKPbc **PKPbc** 00 11 50.5 -1.2
SIV San Ignacio 148.63 50 PKPbc **PKPbc** 00 11 50.5 -1.2
comp=Z,1.3nm,0.5s,baz=313,slow=2.3,SNR=6.0

ROM 20 00:01:48.4±0.1, 42°41N×13°42E, h5km±3km, Md1.7/6, Ml1.3/1, Error ellipse: s-maj=3.5km s-min=1.2km az=24.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**195**	Pg	Pg		00 01 50.2	+0.2
AQU				Sg	Sg		00 01 51.1	0.0
	171nm,0.3s							
FAGN	**Fagnano**	**0.19**	**141**	Pg	Pg		00 01 53.2	+1.0
FAGN				Sg	Sg		00 01 55.5	+0.7
	65nm,0.6s							
NRCA	**Norcia**	**0.48**	**332**	Pg	Pb		00 01 58.7	-0.8
NRCA				Sg	Sb		00 02 06.3	-0.6

CASC 20 00:27:16.6±1.4, 13°66N×90°70W, h64km±14km, MD3.6, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.56**	**25**	*e*P		Pn	00 27 30.0	+0.2
IXG				*e*S		Sn	00 27 40.6	+1.2
PCG	**Pacaya**	**0.73**	**7**	*e*P		Pn	00 27 31.9	0.0
PCG				*e*S		Sn	00 27 43.8	+0.7
FUG	**Fuego 3**	**0.80**	**350**	*e*P		Pn	00 27 32.3	-0.2
NBG	**Las Nubes**	**0.98**	**20**	*e*P		Pn	00 27 35.2	+0.2
NBG				*e*S		Sn	00 27 50.7	+2.2
RTR	**El Retiro**	**1.05**	**77**	*e*P		Pn	00 27 35.8	+0.2
RTR				*e*S		Sn	00 27 50.8	+1.0
SBLS	**San Blas**	**1.06**	**80**⇑	*e*P		Pn	00 27 36.0	+0.1
SBLS				*e*S		Sn	00 27 50.9	+0.6
RBDL	**Robledal**	**1.08**	**65**	*e*P		Pn	00 27 35.6	-0.5
RBDL				*e*S		Sn	00 27 50.6	0.0
SNJE	**San Jose**	**1.08**	**79**	*e*P		Pn	00 27 35.9	-0.2
SNJE				*e*S		Sn	00 27 51.5	+0.8
JAT	**Jato**	**1.12**	**306**	*e*P		Pn	00 27 38.1	+1.7
JAT				*e*S		Sn	00 27 50.9	-0.3
BOQS	**Boqueron**	**1.38**	**87**	*e*P		Pn	00 27 40.0	-0.1
LFRS	**El Faro**	**1.59**	**91**	*e*P		Pn	00 27 42.8	+0.1
MRL	**Marmol**	**1.70**	**35**	*e*P		Pn	00 27 44.5	+0.1

*ATH **20** 00:27:30.3, 36°13N×27°49E, h18km±3km, MD3.8/13*
*DDA **20** 00:27:30.8, 36°17N×27°49E, h14km, MD3.2*
*THE **20** 00:27:31.1, 36°10N×27°54E, h3km±1km, ML2.9/2, Error ellipse: s-maj=1.9km s-min=0.6km az=128.0*
*ISK **20** 00:27:31.4, 36°11N×27°65E, h7km, MD3.7*
*CSEM **20** 00:27:31.3±0.1, 36°07N×27°53E, h10km, ML2.9/2, Error ellipse: s-maj=3.9km s-min=2.6km az=147.0*
*ISCJB **20** 00:27:31.4±0.5, 36°03N±0°02×27°54E±0°02, h21km±5km, mb3.3/2, Error ellipse: s-maj=4.2km s-min=2.9km az=150.1*
*IDC **20** 00:27:36.4±4.0, 36°78N×26°93E, h63km±44km, mb3.2/2, mb1 3.2/4, mb1mx3.0/26, mbtmp3.2/4, ML3.6/2, Error ellipse: s-maj=70.6km s-min=22.6km az=147.0*
*NSSC **20** 00:27:38.6±16.0, 36°29N×28°21E, h0km±999km, MD2.2, ML2.7*

ISC 20 00:27:31.4±0.9, 36°07N±0°02×27°56E±0°02, h17km±7km, n138, σ1s 26/175, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.48**	**72**	P		Pg	**00 27 40.9**	**-0.2**
ARG				S		Sb	**00 27 48.5**	**+0.2**
ARG	**Arkhangelos**	**0.48**	**72**	*e*PN		Pg	**00 27 40.9**	**-0.2**
ARG				*e*SN		Sb	**00 27 48.2**	**-0.1**
ARG	**Arkhangelos**	**0.48**	**72**	P		Pg	**00 27 40.9**	**-0.2**
ARG				*e*Sn		Sb	**00 27 48.2**	**-0.1**
KARP	**Karpathos**	**0.61**	**212**	P		Pg	**00 27 43.1**	**-0.3**
KARP				S		Sb	**00 27 53.4**	**+1.4**
KARP	**Karpathos**	**0.61**	**212**	*e*PN		Pg	**00 27 43.1**	**-0.3**
KARP				*e*SN		Sg	**00 27 51.5**	**-0.1**
KARP	**Karpathos**	**0.61**	**212**	P		Pg	**00 27 43.1**	**-0.3**
KARP				*e*Sn		Sg	**00 27 51.5**	**-0.1**
KARP				S		Sb	**00 27 53.4**	**+1.4**
DAT	**Datca**	**0.66**	**1**	*e*PG		Pg	**00 27 44.4**	**-0.1**
DAT				*e*SG		Sb	**00 27 53.5**	**-0.1**
DAT	**Datca**	**0.66**	**1**	*e*Pg		Pg	**00 27 44.4**	**-0.1**
DAT				*e*Sg		Sb	**00 27 53.5**	**-0.1**
BODT	**Bodrum**	**1.01**	**349**	*e*PG		Pb	**00 27 50.6**	**+0.1**
BODT				*e*SG		Sn	**00 28 04.7**	**-0.1**
BODT	**Bodrum**	**1.01**	**349**	*e*Pg		Pb	**00 27 50.7**	**+0.1**
BODT				*e*Sg		Sn	**00 28 04.7**	**-0.1**
DALY	**Dalyan (Mu¨la**	**1.16**	**49**	*e*PG		Pn	**00 27 52.4**	**-0.4**
DALY				*e*SG		Sb	**00 28 07.5**	**-0.2**
DALY	**Dalyan (Mu¨la**	**1.16**	**49**	*e*Pg		Pn	**00 27 52.4**	**-0.4**
DALY				*e*Sg		Sb	**00 28 07.5**	**-0.2**
TURN	**Turunc**	**1.17**	**46**	*i* P		Pn	00 27 47.6	-5.3
TURN				*i* S		Sb	00 27 59.9	-8.1
YER	**Yerkesik**	**1.22**	**28**	*e*PN		Pn	**00 27 53.5**	**-0.2**
YER				*e*SN		Sn	**00 28 09.9**	**+0.1**
YER	**Yerkesik**	**1.22**	**28**	*e*Pn		Pn	**00 27 53.5**	**-0.2**
YER				*e*Sn		Sn	**00 28 10.0**	**+0.1**
MLSB	**Milas**	**1.24**	**8**	*e*PN		Pn	**00 27 54.1**	**+0.1**
MLSB	**Milas**	**1.24**	**8**	*e*Pn		Pn	**00 27 54.1**	**+0.1**
FETY	**Fethiye**	**1.35**	**65**	*e*PN		Pn	**00 27 55.8**	**+0.2**
FETY	**Fethiye**	**1.35**	**65**	*e*Pn		Pn	**00 27 55.8**	**+0.2**
ZKR	**Zakros**	**1.45**	**229**	P		Pn	**00 27 57.0**	**+0.1**
ZKR				S		Sb	**00 28 16.8**	**+0.7**
ZKR	**Zakros**	**1.45**	**229**	*e*PN		Pb	**00 27 58.0**	**+0.1**
ZKR	**Zakros**	**1.45**	**229**	P		Pn	**00 27 57.0**	**+0.1**
ZKR	**Zakros**	**1.45**	**229**	*e*Pn		Pb	**00 27 58.0**	**+0.1**
ZKR				S		Sb	**00 28 16.8**	**+0.7**
AYDN	**Tasoluk**	**1.61**	**9**	*i* P		Pn	**00 27 59.9**	**+0.7**
AYDN				*i* S		Sg	**00 28 23.1**	**-0.3**
AYDN	**Tasoluk**	**1.61**	**9**	*i* P		Pn	**00 27 59.9**	**+0.7**
AYDN				*i* S		Sg	**00 28 23.1**	**-0.3**
GCAM	**G?zelcaml?**	**1.65**	**351**	*i* P		Pn	**00 28 00.2**	**+0.6**
GCAM				*i* S		Sg	**00 28 25.8**	**+1.1**
GCAM	**G?zelcaml?**	**1.65**	**351**	*i* P		Pn	**00 28 00.2**	**+0.6**
AKAS	**Kas**	**1.66**	**84**	*i* P		Pb	**00 28 01.9**	**+0.2**
AKAS				*i* S		Sg	**00 28 25.8**	**+0.7**
AKAS	**Kas**	**1.66**	**84**	*i* P		Pb	**00 28 01.9**	**+0.2**
AKAS				*i* S		Sg	**00 28 25.8**	**+0.7**
SMG	**Samos**	**1.74**	**341**	P		Pn	**00 28 00.3**	**-0.6**
SMG				S		Sn	**00 28 22.1**	**-0.6**
SMG	**Samos**	**1.74**	**341**	*e*PN		Pn	**00 28 00.6**	**-0.3**
SMG	**Samos**	**1.74**	**341**	P		Pn	**00 28 00.3**	**-0.6**
SMG	**Samos**	**1.74**	**341**	*e*Pn		Pn	**00 28 00.6**	**-0.3**
SMG				S		Sn	**00 28 22.1**	**-0.6**
THR2	**Thira island,**	**1.76**	**283**	P		Pn	**00 28 00.6**	**-0.5**
THR2	**Thira island,**	**1.76**	**283**	P		Pn	**00 28 00.6**	**-0.5**
NPS	**Neapolis**	**1.78**	**244**	P		Pn	**00 28 01.3**	**-0.1**
NPS	**Neapolis**	**1.78**	**244**	*e*PN		Pn	**00 28 01.4**	**0.0**
NPS	**Neapolis**	**1.78**	**244**	*e*Pn		Pn	**00 28 01.4**	**0.0**
THR3	**Thira Island,**	**1.78**	**282**	P		Pn	**00 28 01.1**	**-0.3**
THR3	**Thira Island,**	**1.78**	**282**	P		Pn	**00 28 01.1**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.90**	**54**	*e*PN		Pn	**00 28 04.4**	**+1.2**
GLHS	**Glhisar (BURDU**	**1.90**	**54**	*e*Pn		Pn	**00 28 04.4**	**+1.2**
APE	**Apeiranthos**	**1.92**	**302**	*e*PN		Pb	**00 28 06.4**	**+0.4**
APE	**Apeiranthos**	**1.92**	**302**	P		Pn	**00 28 02.8**	**-0.5**
APE				S		Sn	**00 28 27.0**	**-0.1**
APE	**Apeiranthos**	**1.92**	**302**	*e*PN		Pn	**00 28 02.8**	**-0.5**
APE	**Apeiranthos**	**1.92**	**302**	P		Pn	**00 28 02.8**	**-0.5**
APE				S		Sn	**00 28 27.0**	**-0.1**
LAST	**Lasithi**	**1.92**	**243**	P		Pn	**00 28 03.5**	**+0.1**
LAST	**Lasithi**	**1.92**	**243**	*e*PN		Pn	**00 28 03.9**	**+0.5**
LAST	**Lasithi**	**1.92**	**243**	P		Pn	**00 28 03.5**	**+0.1**
LAST	**Lasithi**	**1.92**	**243**	*e*Pn		Pn	**00 28 03.9**	**+0.5**
GOLH	**Golhisar**	**1.99**	**53**	*i* P		Pb	**00 28 07.0**	**-0.2**
GOLH				*i* S		Sg	**00 28 34.6**	**-0.8**
GOLH	**Golhisar**	**1.99**	**53**	*i* P		Pb	**00 28 07.0**	**-0.2**
GOLH				*i* S		Sg	**00 28 34.6**	**-0.8**
DNZL	**Cakiroluk**	**2.01**	**36**	*i* P		Pb	**00 28 07.0**	**-0.7**
DNZL				*i* S		Sb	**00 28 33.5**	**+1.0**
DNZL	**Cakiroluk**	**2.01**	**36**	*i* P		Pb	**00 28 07.0**	**-0.7**
DNZL				*i* S		Sb	**00 28 33.5**	**+1.0**
ELL	**Elmali**	**2.01**	**70**	*e*PN		Pn	**00 28 05.5**	**+0.8**
ELL	**Elmali**	**2.01**	**70**	*e*Pn		Pn	**00 28 05.5**	**+0.8**
DENT	**Denizli**	**2.06**	**35**	*e*PN		Pn	**00 28 06.3**	**+1.0**
DENT	**Denizli**	**2.06**	**35**	*e*Pn		Pn	**00 28 06.3**	**+1.0**
IDI	**Anoyia**	**2.31**	**251**	P		Pn	**00 28 08.5**	**-0.2**
IDI	**Anoyia**	**2.31**	**251**	*e*PB		Pn	**00 28 08.9**	**+0.2**
IDI	**Anoyia**	**2.31**	**251**	P		Pn	**00 28 08.5**	**-0.2**
IDI	**Anoyia**	**2.31**	**251**	*e*Pb		Pn	**00 28 08.9**	**+0.2**
IZM	**Izmir**	**2.34**	**354**	*e*PN		Pn	**00 28 10.5**	**+1.3**
IZM	**Izmir**	**2.34**	**354**	*e*Pn		Pn	**00 28 10.5**	**+1.3**
BLCB	**Balcova**	**2.35**	**350**	*e*PN		Pn	**00 28 10.9**	**+1.6**
BLCB	**Balcova**	**2.35**	**350**	*e*Pn		Pn	**00 28 10.9**	**+1.6**
KORT	**Korkueli**	**2.43**	**67**	*i* P		Pb	**00 28 14.5**	**-0.3**
KORT	**Korkueli**	**2.43**	**67**	*i* P		Pb	**00 28 14.5**	**-0.3**
SIVA	**Sivas**	**2.47**	**246**	P		Pn	**00 28 11.4**	**+0.5**
SIVA	**Sivas**	**2.47**	**246**	*e*PB		Pn	**00 28 12.2**	**+1.3**
SIVA	**Sivas**	**2.47**	**246**	P		Pn	**00 28 11.4**	**+0.5**
SIVA	**Sivas**	**2.47**	**246**	*e*Pb		Pn	**00 28 12.2**	**+1.3**
MANT	**Manisa**	**2.55**	**18**	*i* P		Pn	**00 28 13.4**	**+1.2**
MANT				*i* S		Sg	**00 28 51.6**	**-1.7**
MANT	**Manisa**	**2.55**	**18**	*i* P		Pn	**00 28 13.4**	**+1.2**
KULA	**Kula-Manisa**	**2.60**	**19**	*e*PN		Pn	**00 28 14.1**	**+1.4**
KULA	**Kula-Manisa**	**2.60**	**19**	P		Pn	**00 28 11.8**	**-0.9**
KULA	**Kula-Manisa**	**2.60**	**19**	P		Pn	**00 28 11.8**	**-0.9**
KULA	**Kula-Manisa**	**2.60**	**19**	*e*Pn		Pn	**00 28 14.1**	**+1.4**
CHOS	**Chios island**	**2.61**	**333**	P		Pn	**00 28 12.4**	**-0.5**
CHOS				S		Sn	**00 28 45.0**	**+0.7**
CHOS	**Chios island**	**2.61**	**333**	P		Pn	**00 28 12.4**	**-0.5**
CHOS				S		Sn	**00 28 45.0**	**+0.7**
ANTB	**Antalya**	**2.63**	**71**	*e*PN		Pn	**00 28 14.3**	**+1.2**
ANTB	**Antalya**	**2.63**	**71**	*e*Pn		Pn	**00 28 14.3**	**+1.2**
KHL	**Karahalli**	**2.75**	**34**	*e*PN		Pn	**00 28 15.9**	**+1.1**
KHL	**Karahalli**	**2.75**	**34**	*e*Pn		Pn	**00 28 15.9**	**+1.1**
BCK	**Bucak**	**2.80**	**59**	*e*PN		Pn	**00 28 16.7**	**+1.2**
BCK	**Bucak**	**2.80**	**59**	*e*Pn		Pn	**00 28 16.7**	**+1.2**
VAM	**Vamos**	**2.81**	**257**	P		Pn	**00 28 15.4**	**-0.2**
VAM	**Vamos**	**2.81**	**257**	*e*PN		Pn	**00 28 16.1**	**+0.5**
VAM	**Vamos**	**2.81**	**257**	P		Pn	**00 28 15.4**	**-0.2**
VAM	**Vamos**	**2.81**	**257**	*e*Pn		Pn	**00 28 16.1**	**+0.5**
ISP	**Isparta**	**2.95**	**53**	*e*PN		Pn	**00 28 19.4**	**+1.8**
ISP	**Isparta**	**2.95**	**53**	*e*Pn		Pn	**00 28 19.4**	**+1.8**
GVD	**Gavdhos**	**3.09**	**248**	*e*PN		Pn	**00 28 21.0**	**+1.6**
GVD	**Gavdhos**	**3.09**	**248**	*e*Pn		Pn	**00 28 21.0**	**+1.6**
DEMI	**Demirci**	**3.11**	**17**	*i* P		Pn	**00 28 20.1**	**+0.3**
DEMI				*i* S		Sn	**00 28 55.4**	**-1.2**
DEMI	**Demirci**	**3.11**	**17**	*i* P		Pn	**00 28 20.1**	**+0.3**
DEMI				*i* S		Sn	**00 28 55.4**	**-1.2**
SIGR	**SIGRI**	**3.42**	**337**	P		Pn	**00 28 23.3**	**-0.6**
SIGR	**SIGRI**	**3.42**	**337**	P		Pn	**00 28

GONE	**Gonen-Balikesi**	**3.98**	**1**	*e*PN	**Pn**	**00 28 33.9**	**+2.3**
GONE	**Gonen-Balikesi**	**3.98**	**1**	*e*Pn	**Pn**	**00 28 33.9**	**+2.3**
ORLT	**Orhaneli**	**4.11**	**14**	*e*PN	**Pn**	**00 28 35.1**	**+1.6**
ORLT	**Orhaneli**	**4.11**	**14**	*e*Pn	**Pn**	**00 28 35.1**	**+1.6**
KONT	**Konya--Tatoy**	**4.28**	**63**	*e*PN	**Pn**	**00 28 38.0**	**+2.2**
KONT	**Konya--Tatoy**	**4.28**	**63**	*e*Pn	**Pn**	**00 28 38.0**	**+2.2**
ERMK	**Ermenek**	**4.36**	**81**	*i* P	Pn	00 28 40.9	+3.8
ERMK				*i* S	**Sn**	**00 29 31.5**	**+3.9**
ERMK	**Ermenek**	**4.36**	**81**	*i* P	Pn	00 28 40.9	+3.8
ERMK				*i* S	**Sn**	**00 29 31.5**	**+3.9**
CSS	**Prodhromos**	**4.83**	**101**	P	**Pn**	**00 28 44.0**	**+0.6**
CSS	**Prodhromos**	**4.83**	**101**	P	**Pn**	**00 28 44.0**	**+0.6**
BRTR	**Keskin Array B**	**6.04**	**51**	P	Pn	00 29 03.3	+3.2
	0.4nm,0.3s,baz=232,slow=15,SNR=14						
BRTR				S	**Sn**	**00 30 12.1**	**+3.2**
	0.1nm,0.3s,baz=222,slow=25,SNR=2.7						
ARNB	**Al Arnab**	**6.83**	**89**	*e*P	**Pn**	**00 29 11.1**	**+0.2**
ARNB				*e*S	**Sn**	**00 30 25.0**	**-3.3**
ARNB				AML	AML	00 30 37.5	
	comp=E,4.9nm,0.6s						
ARNB				AML	AML	00 30 39.2	
	comp=Z,8.9nm,0.7s						
ARNB				AML	AML	00 30 40.0	
	comp=N,9.2nm,0.3s						
BIDA	**Albida**	**7.22**	**96**	*e*P	Pn	00 29 07.7	-8.6
BIDA				*e*S	Sn	00 30 23.9	-14
BIDA				AML	AML	00 30 30.6	
	comp=Z,11nm,0.3s						
BIDA				AML	AML	00 30 35.3	
	comp=E,54nm,0.3s						
BIDA				AML	AML	00 30 35.8	
	comp=N,27nm,0.3s						
HAWK	**Haweek**	**7.39**	**99**	*e*P	**Pn**	**00 29 17.4**	**-1.3**
HAWK				*e*S	**Sn**	**00 30 37.1**	**-5.2**
HAWK				AML	AML	00 30 40.4	
	comp=Z,15nm,0.5s						
HAWK				AML	AML	00 30 43.2	
HAWK				AML	AML	00 30 49.1	
	comp=E,8.6nm,0.4s						
HAWK	**Haweek**	**7.39**	**99**	*e*P	**Pn**	**00 29 18.1**	**-0.6**
HAWK				*e*S	Sn	00 30 35.7	-6.5
HAWK				*e*S	**Sn**	**00 30 39.2**	**-3.0**
HAWK				AML	AML	00 30 40.4	
	comp=Z,15nm,0.5s						
HAWK				AML	AML	00 30 41.2	
	comp=N,12nm,0.5s						
HAWK				AML	AML	00 30 49.1	
	comp=E,8.6nm,0.4s						
HAWK	**Haweek**	**7.39**	**99**	*e*P	**Pn**	**00 29 17.4**	**-1.3**
	SNR=45						
BRBR	**Barbar**	**7.40**	**109**	*e*P	**Pn**	**00 29 19.8**	**+1.0**
BRBR				*e*S	**Sn**	**00 30 37.5**	**-4.9**
BRBR				AML	AML	00 30 42.4	
BRBR				AML	AML	00 30 43.5	
	comp=E,13nm,0.8s						
BRBR				AML	AML	00 30 44.1	
	comp=N,25nm,0.3s						
BRBR	**Barbar**	**7.40**	**109**	*e*P	**Pn**	**00 29 18.9**	**+0.1**
BRBR				*e*S	**Sn**	**00 30 37.3**	**-5.2**
BRBR				AML	AML	00 30 42.8	
	comp=Z,33nm,0.9s						
BRBR				AML	AML	00 30 43.5	
	comp=E,13nm,0.8s						
BRBR				AML	AML	00 30 44.1	
	comp=N,25nm,0.3s						
BRBR	**Barbar**	**7.40**	**109**	*e*P	**Pn**	**00 29 19.8**	**+1.0**
	SNR=45						
TCHB	**Talchebab**	**7.73**	**114**	*e*P	Pn	00 29 18.8	-4.5
VYHS	**Vyhne**	**13.98**	**335**	*e*PN	Pn	00 30 44.8	-3.9
AKASG	**Malin Array Be**	**14.68**	**4**	P	Pn	00 30 51.2	-7.0
	comp=N,1.0nm,0.3s,baz=185,slow=8.9,SNR=4.1						
TORD	**Torodi Ar. Bea**	**32.58**	**232**	P	**P**	**00 34 02.2**	**+0.2**
	comp=N,0.4nm,0.3s,baz=31,slow=8.9,SNR=28						
MKAR	**Makanchi Array**	**41.64**	**58**	P	**P**	**00 35 18.7**	**-0.1**
	comp=N,0.1nm,0.5s,baz=294,slow=7.1,SNR=3.5						

PRU 20 00:35:15.7,50°23N×19°11E,h0km,Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.44**	**91**	*e*Pg	Pg	00 35 22.5	-1.7
OJC				*e*Sg	Sg	00 35 28.5	-1.5
OKC	**Ostrava-Krasne**	**0.73**	**238**	*e*SG	Sg	00 35 39.2	-0.1
KRLC	**Kraliky**	**1.51**	**265**	*e*SG	Sg	00 36 03.0	-1.3
DPC	**Dobruska-Polom**	**1.79**	**275**	*e*SG	Sg	00 36 13.3	-0.2

MOS ***20*** *00:40:35.0±0.9,54°57N×162°19E,h32km,mb4.2/5,Error ellipse: s-maj=16.7km s-min=9.6km az=75.4*
ISCJB ***20*** *00:40:36.2±0.5,54°60N±0°02×162°07E±0°06,h44km±6km, mb3.7/9,Error ellipse: s-maj=6.0km s-min=2.6km az=17.8*
KRSC ***20*** *00:40:36.4±0.6,54°61N×161°96E,h30km±20km,ML4.0*
IDC ***20*** *00:40:39.9±2.9,54°85N×161°63E,h63km±29km,mb3.3/7, mb1 3.6/8,mb1mx3.3/27,mbtmp3.3/8,ML3.2/1,Error ellipse: s-maj=29.3km s-min=19.0km az=138.0*

ISC 20 00:40:35.6±1.0,54°59N±0°03×162°18E±0°03,h26km±7km, n62,σ1§21/103,mb3.8/9,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.26**	**263**	PN	**Pb**	**00 40 42.2**	**+0.1**
MKZ				S	**Sb**	**00 40 46.3**	**-0.2**
MKZ	**Mys Kozlova**	**0.26**	**263**	P	**Pb**	**00 40 42.2**	**+0.1**
MKZ				*i* S	**Sb**	**00 40 46.3**	**-0.2**
TUMR	**Tumrok**	**1.36**	**301**	*i* P	**Pn**	**00 40 58.3**	**-0.7**
TUMR				*e*S	**Sn**	**00 41 14.3**	**-2.0**
BZGR	**Bezymyannyi-Gr**	**1.60**	**329**	*i* P	**Pn**	**00 41 02.0**	**-0.3**
BZGR				*i* S	**Sn**	**00 41 20.2**	**-1.9**
KMNR	**Kamenistaya**	**1.61**	**317**	P	**Pn**	**00 41 02.4**	**-0.1**
KMNR				*i* S	**Sn**	**00 41 21.2**	**-1.3**
ZLN	**Zelenaya**	**1.63**	**332**	P	**Pn**	**00 41 02.8**	**+0.1**
ZLN				*i* S	**Sn**	**00 41 22.1**	**-0.8**
BZMR	**Bezymyannaya**	**1.66**	**325**	*i* P	**Pn**	**00 41 03.4**	**+0.3**
BZMR				*e*S	**Sn**	**00 41 23.1**	**-0.6**
BZWR	**Bezymyannyi-We**	**1.68**	**326**	*i* P	**Pn**	**00 41 03.8**	**+0.3**
BZWR				*e*S	**Sn**	**00 41 24.0**	**-0.2**
KII	**Karymskiy**	**1.69**	**252**	*e*P	**Pn**	**00 41 03.3**	**-0.2**
KII				*i* S	**Sn**	**00 41 22.5**	**-1.9**
KBG	**Krutoberegovo**	**1.70**	**10**	PN	**Pn**	**00 41 04.5**	**+1.0**
KBG				S	**Sn**	**00 41 24.6**	**+0.3**
KBG	**Krutoberegovo**	**1.70**	**10**	*e*P	**Pn**	**00 41 04.5**	**+1.0**
KBG				*i* S	**Sn**	**00 41 24.6**	**+0.3**
LGNR	**Loginova**	**1.72**	**331**	P	**Pn**	**00 41 04.5**	**+0.4**
LGNR				*i* S	**Sn**	**00 41 25.5**	**+0.1**
KIRR	**Kirishev**	**1.72**	**323**	P	**Pn**	**00 41 04.0**	**0.0**
KIRR				*i* S	**Sn**	**00 41 24.2**	**-1.1**
CIRR	**Tsirk**	**1.73**	**332**	P	**Pn**	**00 41 04.4**	**+0.2**
KPT	**Kopyto**	**1.78**	**322**	*i* P	**Pn**	**00 41 04.9**	**+0.2**
KRSR	**Krestovskiy**	**1.87**	**331**	P	**Pn**	**00 41 05.7**	**-0.3**
KRSR				*i* S	**Sn**	**00 41 27.0**	**-1.9**
KLY	**Klyuchi**	**1.93**	**334**	PN	**Pn**	**00 41 06.5**	**-0.3**
KLY				S	**Sn**	**00 41 28.2**	**-2.0**
KLY	**Klyuchi**	**1.93**	**334**	*e*P	**Pn**	**00 41 06.5**	**-0.3**
KLY				*i* S	**Sn**	**00 41 28.2**	**-2.0**
SPN	**Mys Shipunski**	**1.96**	**221**	PN	Pn	00 41 05.5	-1.7
SPN				S	**Sn**	**00 41 26.9**	**-4.1**
SPN	**Mys Shipunski**	**1.96**	**221**	*e*P	Pn	00 41 05.5	-1.7
SPN				*i* S	**Sn**	**00 41 26.9**	**-4.1**
KOZR	**Kozyr**	**1.97**	**320**	PN	**Pn**	**00 41 07.9**	**+0.6**
KOZR				S	**Sn**	**00 41 31.1**	**-0.1**
KOZ	**Kozyrevsk**	**1.98**	**319**	*e*P	**Pn**	**00 41 07.9**	**+0.5**
KOZ				*i* S	**Sn**	**00 41 31.1**	**-0.2**
SMKR	**Semkarok**	**2.04**	**349**	*e*P	**Pn**	**00 41 08.6**	**+0.3**
SMKR				*i* S	**Sn**	**00 41 32.1**	**-0.8**
BDR	**Baidarnaya**	**2.06**	**345**	*e*P	**Pn**	**00 41 08.8**	**+0.2**
BDR				*i* S	**Sn**	**00 41 33.0**	**-0.4**
SRKR	**Sorokina**	**2.15**	**345**	*e*P	**Pn**	**00 41 09.8**	**0.0**
SRKR				*i* S	**Sn**	**00 41 34.0**	**-1.6**
NLC	**Nalytchevo**	**2.20**	**231**	PN	**Pn**	**00 41 09.8**	**-0.6**
NLC				S	**Sn**	**00 41 34.2**	**-2.5**
NLC	**Nalytchevo**	**2.20**	**231**	*e*P	**Pn**	**00 41 09.8**	**-0.6**
NLC				*i* S	**Sn**	**00 41 34.2**	**-2.5**
SRDR	**Sredinnyy**	**2.23**	**322**	P	**Pn**	**00 41 10.8**	**-0.1**
SRDR				*i* S	**Sn**	**00 41 35.5**	**-2.1**
BKI	**Bering**	**2.28**	**73**	PN	**Pn**	**00 41 11.3**	**-0.2**
BKI				S	**Sn**	**00 41 36.4**	**-2.2**
BKI	**Bering**	**2.28**	**73**	*e*P	**Pn**	**00 41 11.3**	**-0.2**
BKI				*i* S	**Sn**	**00 41 36.4**	**-2.2**
SDLR	**Sedlovina**	**2.35**	**237**	P	**Pn**	**00 41 12.9**	**+0.3**
SDLR				*i* S	**Sn**	**00 41 39.6**	**-1.0**
ESO	**Esso**	**2.40**	**305**	PN	**Pn**	**00 41 13.2**	**0.0**
ESO				S	**Sn**	**00 41 39.8**	**-1.9**
ESO	**Esso**	**2.40**	**305**	*e*P	**Pn**	**00 41 13.2**	**0.0**
ESO				*e*S	**Sn**	**00 41 39.8**	**-1.9**
SMAR	**Somma**	**2.40**	**238**	*e*P	**Pn**	**00 41 13.6**	**+0.2**
SMAR				*i* S	**Sn**	**00 41 40.7**	**-1.3**
KRER	**Koryakskii**	**2.40**	**239**	P	**Pn**	**00 41 14.2**	**+0.8**
KRER				*i* S	**Sn**	**00 41 42.0**	**0.0**
UGLR	**Uglovaya**	**2.42**	**236**	P	**Pn**	**00 41 14.0**	**+0.5**
UGLR				*i* S	**Sn**	**00 41 41.1**	**-1.2**
AVH	**Avacha**	**2.43**	**238**	P	**Pn**	**00 41 14.5**	**+0.9**
AVH				*i* S	**Sn**	**00 41 41.6**	**-0.9**
KOK	**Koryaka**	**2.46**	**240**	P	**Pn**	**00 41 14.8**	**+0.6**
KOK				*i* S	**Sn**	**00 41 42.9**	**-0.5**
PET	**Petropavlovsk**	**2.61**	**235**	*e*PN	**Pn**	**00 41 17.3**	**+1.2**
PET				*e*S	**Sn**	**00 41 46.7**	**-0.2**
PET				pmax	pmax		
	comp=Z,65nm,0.5s						
PET				smax	smax		
	comp=E,297nm,0.5s						
PET				smax	smax		
	comp=N,190nm,0.4s						
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
PET	**Petropavlovsk**	**2.61**	**235**	P	**Pn**	**00 41 16.5**	**+0.4**
PET				*i* S	**Sn**	**00 41 45.3**	**-1.6**
GNL	**Ganaly**	**2.65**	**252**	P	**Pn**	**00 41 17.5**	**+0.8**
PETK	**Petropavlovsk-**	**3.04**	**243**	PN	**Pn**	**00 41 22.5**	**+0.5**
PETK				S	**Sn**	**00 41 58.5**	**+1.0**
PETK				pmax	pmax		
	comp=Z,4.0nm,0.3s						
PETK				smax	smax		
	comp=N,5.0nm,0.3s						
PETK	**Petropavlovsk-**	**3.04**	**243**	P	**Pn**	**00 41 22.5**	**+0.5**
	comp=N,3.8nm,0.3s,baz=77,slow=18,SNR=78						
PETK				S	**Sn**	**00 41 58.5**	**+1.0**
	comp=N,5.2nm,0.3s,baz=88,slow=23,SNR=6.0						
RUS	**Russkaya**	**3.07**	**227**	PN	**Pn**	**00 41 22.8**	**+0.4**
RUS				S	**Sn**	**00 41 57.1**	**-1.2**
RUS	**Russkaya**	**3.07**	**227**	*e*P	**Pn**	**00 41 22.8**	**+0.4**
RUS				*i* S	**Sn**	**00 41 57.1**	**-1.2**
MTVR	**Mutnovka**	**3.18**	**230**	*e*P	**Pn**	**00 41 25.4**	**+1.3**
MTVR				*i* S	**Sn**	**00 42 01.2**	**0.0**
GRL	**Gorelyy**	**3.19**	**232**	P	**Pn**	**00 41 25.7**	**+1.6**
GRL				*i* S	**Sn**	**00 42 01.5**	**+0.2**
ASAK	**Asacha**	**3.38**	**231**	*e*P	**Pn**	**00 41 28.4**	**+1.7**
ASAK				*i* S	**Sn**	**00 42 06.0**	**0.0**
APC	**Apacha**	**3.41**	**243**	P	**Pn**	**00 41 28.5**	**+1.4**
APC				*i* S	**Sn**	**00 42 06.1**	**-0.6**
MIPR	**Malaya Ipel'ka**	**3.98**	**237**	P	**Pn**	**00 41 37.2**	**+2.2**
YKA	**Yellowknife Ar**	**41.23**	**44**	P	**P**	**00 48 17.5**	**-0.3**
	comp=N,0.5nm,0.6s,baz=300,slow=7.7,SNR=2.9						
MKAR	**Makanchi Array**	**48.62**	**296**	P	P	00 49 13.0	-3.8
MKAR	**Makanchi Array**	**48.62**	**296**	P	P	00 49 13.0	-3.8
	comp=N,0.1nm,0.4s,baz=57,slow=5.7,SNR=3.0						
PDAR	**Pinedale Array**	**55.73**	**63**	P	**P**	**00 50 11.8**	**+1.8**
	comp=N,0.3nm,0.5s,baz=270,slow=2.7,SNR=2.6						
JOF	**Joensuu**	**56.72**	**336**	*e*P	**P**	**00 50 15.7**	**-0.7**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
JOF	**Joensuu**	**56.72**	**336**	*e*p	**P**	**00 50 15.7**	**-0.7**
	comp=Z,1.1nm,0.4s						
KAF	**Kangasniemi**	**58.58**	**337**	*e*P	**P**	**00 50 28.1**	**-1.4**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KAF	**Kangasniemi**	**58.58**	**337**	*e*p	**P**	**00 50 28.1**	**-1.4**
	comp=Z,1.3nm,0.5s,baz=28,slow=6.6						
FINES	**FINESS Array B**	**59.23**	**337**	P	P	00 50 31.7	-2.2
	comp=Z,1.0nm,0.5s,baz=31,slow=6.7,SNR=16						
TXAR	**Lajitas Array**	**68.93**	**69**	P	**P**	**00 51 39.3**	**+1.0**
	comp=Z,0.4nm,0.5s,baz=306,slow=5.2,SNR=8.1						
WRA	**Warramunga Arr**	**77.97**	**207**	P	**P**	**00 52 31.1**	**-0.2**
	comp=Z,0.4nm,0.7s,baz=24,slow=6.3,SNR=5.1						
ASAR	**Alice Springs**	**81.64**	**206**	P	**P**	**00 52 51.7**	**+0.6**
	comp=Z,0.5nm,0.5s,baz=16,slow=4.9,SNR=7.1						

IDC ***20*** *00:55:25.9±0.7,54°76N×161°74E,h0km,mb4.2/20, mb1 4.4/20,mb1mx4.3/27,mbtmp4.2/20,MS3.4/4, Ms1 3.4/4,ms1mx2.8/30,Error ellipse: s-maj=19.5km s-min=15.2km az=170.0*
MOS ***20*** *00:55:28.3±1.2,54°63N×162°16E,h28km,mb4.7/16,Error ellipse: s-maj=10.4km s-min=5.9km az=89.6*
BJI ***20*** *00:55:28.5,54°70N×162°00E,h35km,mB4.7/5,mb4.5/7, Ms3.8/3,Ms7 3.6/3*
KRSC ***20*** *00:55:30.5±0.5,54°60N×162°03E,h34km±23km,ML4.6*
ISCJB ***20*** *00:55:30.7±0.4,54°60N±0°02×162°11E±0°05,h50km±3km, mb4.3/54,MS3.5/6,Error ellipse: s-maj=4.7km s-min=2.4km az=21.9*
NEIC ***20*** *00:55:31.1±0.3,54°68N×162°01E,h35km,mb4.5/17,Error ellipse: s-maj=11.0km s-min=6.7km az=155.0*

ISC 20 00:55:29.8±0.6,54°59N±0°03×162°14E±0°03,h31km±3km, n205,σ1§29/262,mb4.3/54,MS3.3/6,20C-4D,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.24**	**263**	PN	**Pn**	**00 55 36.9**	**-0.4**
MKZ	**Mys Kozlova**	**0.24**	**263**	P	**Pn**	**00 55 36.9**	**-0.4**
TUMR	**Tumrok**	**1.35**	**302**	P	**Pn**	**00 55 53.2**	**+0.6**
TUMR				*i* S	**Sn**	**00 56 09.5**	**0.0**
BZGR	**Bezymyannyi-Gr**	**1.59**	**329**	P	**Pn**	**00 55 56.8**	**+0.9**
BZGR				*i* S	**Sn**	**00 56 15.9**	**+0.4**
KMNR	**Kamenistaya**	**1.60**	**318**	P	**Pn**	**00 55 57.0**	**+0.9**
KMNR				*i* S	**Sn**	**00 56 16.3**	**+0.5**
ZLN	**Zelenaya**	**1.62**	**332**	P	**Pn**	**00 55 57.5**	**+1.1**
BZMR	**Bezymyannaya**	**1.65**	**326**	P	**Pn**	**00 55 57.5**	**+0.7**
BZMR				*i* S	**Sn**	**00 56 17.7**	**+0.7**
BZWR	**Bezymyannyi-We**	**1.67**	**326**	P	**Pn**	**00 55 58.3**	**+1.2**
BZWR				*i* S	**Sn**	**00 56 18.4**	**+0.8**
KII	**Karymskiy**	**1.67**	**252**	*i* P	**Pn**	**00 55 58.1**	**+1.1**
KII				*i* S	**Sn**	**00 56 18.4**	**+1.0**
KBG	**Krutoberegovo**	**1.70**	**11**	PN	**Pn**	**00 55 58.6**	**+1.2**
KBG				S	**Sn**	**00 56 19.0**	**+0.9**
KBG	**Krutoberegovo**	**1.70**	**11**	*i* P	**Pn**	**00 55 58.6**	**+1.2**
KBG				*i* S	**Sn**	**00 56 19.0**	**+0.9**
KIRR	**Kirishev**	**1.71**	**324**	P	**Pn**	**00 55 58.5**	**+0.8**
KIRR				*i* S	**Sn**	**00 56 18.7**	**+0.1**
LGNR	**Loginova**	**1.71**	**332**	P	**Pn**	**00 55 59.2**	**+1.4**
LGNR				*i* S	**Sn**	**00 56 20.3**	**+1.5**
CIRR	**Tsirk**	**1.73**	**333**	P	**Pn**	**00 55 59.3**	**+1.1**
KPT	**Kopyto**	**1.77**	**322**	P	**Pn**	**00 55 59.4**	**+1.1**
KPT				*i* S	**Sn**	**00 56 20.2**	**+0.4**
KRSR	**Krestovskiy**	**1.86**	**332**	P	**Pn**	**00 56 00.3**	**+0.6**
KRSR				*i* S	**Sn**	**00 56 22.0**	**-0.3**
KLY	**Klyuchi**	**1.93**	**334**	PN	**Pn**	**00 56 00.9**	**+0.4**
KLY				S	**Sn**	**00 56 23.3**	**-0.3**
KLY	**Klyuchi**	**1.93**	**334**	P	**Pn**	**00 56 00.9**	**+0.4**
KLY				*i* S	**Sn**	**00 56 23.3**	**-0.3**
SPN	**Mys Shipunski**	**1.95**	**221**	PN	**Pn**	**00 56 00.3**	**-0.5**
SPN				S	**Sn**	**00 56 21.7**	**-2.5**
SPN	**Mys Shipunski**	**1.95**	**221**	*e*P	**Pn**	**00 56 00.3**	**-0.5**
SPN				*i* S	**Sn**	**00 56 21.7**	**-2.5**
KOZR	**Kozyr**	**1.96**	**320**	PN	**Pn**	**00 56 02.6**	**+1.6**
KOZR				S	**Sn**	**00 56 26.3**	**+1.8**
KOZ	**Kozyrevsk**	**1.96**	**320**	P	**Pn**	**00 56 02.6**	**+1.6**
KOZ				*i* S	**Sn**	**00 56 26.3**	**+1.7**
SMKR	**Semkarok**	**2.04**	**349**	P	**Pn**	**00 56 03.3**	**+1.2**
SMKR				*i* S	**Sn**	**00 56 27.3**	**+0.8**
BDR	**Baidarnaya**	**2.06**	**345**	P	**Pn**	**00 56 03.4**	**+1.1**
BDR				*i* S	**Sn**	**00 56 27.5**	**+0.6**
SRKR	**Sorokina**	**2.15**	**345**	P	**Pn**	**00 56 04.5**	**+1.0**
SRKR				*i* S	**Sn**	**00 56 28.8**	**-0.3**
NLC	**Nalytchevo**	**2.18**	**231**	PN	**Pn**	**00 56 04.2**	**+0.3**
NLC				S	**Sn**	**00 56 28.9**	**-0.9**
NLC	**Nalytchevo**	**2.18**	**231**	*e*P	**Pn**	**00 56 04.2**	**+0.3**
NLC				*i* S	**Sn**	**00 56 28.9**	**-0.9**
SRDR	**Sredinnyy**	**2.22**	**322**	P	**Pn**	**00 56 05.4**	**+0.9**
SRDR				*i* S	**Sn**	**00 56 30.3**	**-0.6**
BKI	**Bering**	**2.30**	**73**	PN	**Pn**	**00 56 05.9**	**+0.4**
BKI				S	**Sn**	**00 56 31.4**	**-1.3**
BKI	**Bering**	**2.30**	**73**	*i* P	**Pn**	**00 56 05.9**	**+0.4**
BKI				*i* S	**Sn**	**00 56 31.4**	**-1.3**
SDLR	**Sedlovina**	**2.33**	**237**	P	**Pn**	**00 56 07.6**	**+1.5**
SDLR				*i* S	**Sn**	**00 56 34.2**	**+0.5**
SMAR	**Somma**	**2.38**	**237**	P	**Pn**	**00 56 08.3**	**+1.4**
SMAR				*i* S	**Sn**	**00 56 35.5**	**+0.4**
KRER	**Koryakskii**	**2.38**	**239**	P	**Pn**	**00 56 08.9**	**+2.0**
KRER				*i* S	**Sn**	**00 56 36.7**	**+1.6**
ESO	**Esso**	**2.38**	**306**	PN	**Pn**	**00 56 07.8**	**+1.0**
ESO				S	**Sn**	**00 56 35.2**	**+0.3**
ESO	**Esso**	**2.38**	**306**	*e*P	**Pn**	**00 56 07.8**	**+1.0**
ESO				*e*S	**Sn**	**00 56 35.2**	**+0.3**
UGLR	**Uglovaya**	**2.40**	**236**	P	**Pn**	**00 56 08.7**	**+1.6**
UGLR				*i* S	**Sn**	**00 56 35.7**	**+0.2**
AVH	**Avacha**	**2.41**	**238**	P	**Pn**	**00 56 09.1**	**+1.9**
AVH				*i* S	**Sn**	**00 56 37.3**	**+1.7**
KOK	**Koryaka**	**2.44**	**239**	P	**Pn**	**00 56 09.4**	**+1.7**
KOK				*i* S	**Sn**	**00 56 37.7**	**+1.2**
PET	**Petropavlovsk**	**2.59**	**234**	‖ *i* PN	**Pn**	**00 56 11.9**	**+2.3**
PET				*e*S	**Sn**	**00 56 41.3**	**+1.2**
PET				pmax	pmax		
	comp=Z,200nm,0.5s						
PET				pmax	pmax		
	comp=Z,264nm,0.5s						
PET				smax	smax		
	comp=N,1μm,0.7s						
PET				smax	smax		
	comp=N,1μm,0.9s						
PET				smax	smax		
	comp=E,1μm,0.7s						
PET				smax	smax		
	comp=E,1μm,0.7s						
PET				MLR	MLR		
	comp=Z,700nm,13.0s						
PET				MLR	MLR		
	comp=Z,400nm,12.0s						
PET	**Petropavlovsk**	**2.59**	**234**	P	**Pn**	**00 56 11.4**	**+1.8**
PET				*i* S	**Sn**	**00 56 40.6**	**+0.5**
GNL	**Ganaly**	**2.63**	**252**	P	**Pn**	**00 56 12.0**	**+1.8**
PEA0B	**Petropavlovsk-**	**3.02**	**242**	*e*Pn	**Pn**	**00 56 17.1**	**+1.6**
PEA0B				*e*Sn	**Sn**	**00 56 53.9**	**+3.3**
PETK	**Petropavlovsk-**	**3.02**	**242**	PN	**Pn**	**00 56 17.2**	**+1.7**
PETK						00 56 53.5	
PETK	**Petropavlovsk-**	**3.02**	**242**	Pn	**Pn**	**00 56 17.2**	**+1.7**
PETK				Sn	**Sn**	**00 56 53.5**	**+2.9**
PETK	**Petropavlovsk-**	**3.02**	**242**	Pn	**Pn**	**00 56 17.2**	**+1.7**
	comp=Z,20nm,0.3s,baz=74,slow=17,SNR=147						
PETK				Sn	**Sn**	**00 56 53.5**	**+2.9**
	comp=Z,19nm,0.3s,baz=88,slow=23,SNR=6.7						
RUS	**Russkaya**	**3.06**	**227**	PN	**Pn**	**00 56 17.9**	**+1.9**
RUS				S	**Sn**	**00 56 52.2**	**+0.7**
RUS	**Russkaya**	**3.06**	**227**	*e*P	**Pn**	**00 56 17.9**	**+1.9**
RUS				*i* S	**Sn**	**00 56 52.2**	**+0.7**
MTVR	**Mutnovka**	**3.17**	**230**	P	**Pn**	**00 56 20.0**	**+2.4**
MTVR				*i* S	**Sn**	**00 56 55.9**	**+1.5**
GRL	**Gorelyy**	**3.17**	**232**	P	**Pn**	**00 56 20.0**	**+2.4**
GRL				*i* S	**Sn**	**00 56 55.6**	**+1.2**
ASAK	**Asacha**	**3.36**	**231**	P	**Pn**	**00 56 23.0**	**+2.7**
ASAK				*i* S	**Sn**	**00 57 01.6**	**+2.5**
APC	**Apacha**	**3.39**	**243**	*e*P	**Pn**	**00 56 23.2**	**+2.6**
APC				*e*S	**Sn**	**00 57 01.6**	**+1.8**
MIPR	**Malaya Ipel'ka**	**3.96**	**236**	P	**Pn**	**00 56 31.2**	**+2.7**
PALN	**Palana**	**4.67**	**346**	P	**Pn**	**00 56 39.3**	**+1.2**
SKR	**Severo-Kuril's**	**5.36**	**226**	*e*PN	Pb	00 56 55.9	-6.7
FX1	**Attu Island--F**	**6.76**	**100**	*e*Pn	**Pn**	**00 57 06.7**	**-0.2**
FX1				*e*Sn	**Sn**	**00 58 19.5**	**-3.2**
BILL	**Bilibino**	**13.64**	**7**	‖ *e*P	Pn	00 58 44.7	+3.9
BILL				*e*S	Sn	01 01 04.8	-6.3
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ASAJ	**Asahikawa**	**16.43**	**238**	Pn	**Pn**	**00 59 19.2**	**+1.2**
ASAJ	**Asahikawa**	**16.43**	**238**	Pn	**Pn**	**00 59 19.2**	**+1.2**
	comp=Z,1.3nm,0.3s,baz=73,slow=20,SNR=2.6						
ERM	**Erimo**	**17.75**	**233**	*e*P	**Pn**	**00 59 32.7**	**-1.7**
ERM				pmax	pmax		
	comp=Z,12nm,0.5s						
ERM	**Erimo**	**17.75**	**233**	*e*Pn	**Pn**	**00 59 32.7**	**-1.7**
	comp=Z,12nm,0.5s						
YAK	**Yakutsk**	**18.44**	**307**	*e*P	**P**	**00 59 41.6**	**-0.9**
YAK				pmax	pmax		
	comp=Z,25nm,1.1s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,11nm,1.3s						
USRK	**Ussuriysk Arra**	**22.03**	**254**	LR	LR	01 09 03.3	
	comp=E,98nm,18.4s,baz=194,slow=37						
TIXI	**

BSMT Bassoo Peak 49.58 61 *e*P **P 01 04 20.2 +2.3**
comp=Z,4.5nm,0.6s
BRVK Borovoye 50.44 309 *ce*P **P 01 04 23.1 -1.0**
BRVK pmax pmax
comp=Z,1.0nm,0.7s
SLMT Seeley Lake 50.65 61 *e*P **P 01 04 27.3 +1.3**
comp=Z,2.3nm,0.7s
CHMT Chamberlain Mo 50.99 61 *e*P **P 01 04 29.4 +0.8**
comp=Z,0.9nm,0.7s
ARCES ARCESS Array B 52.24 342 P **P 01 04 36.6 -0.7**
ARCES PcP **PcP 01 05 48.7 +0.3**
ARCES ARCESS Array B 52.24 342 P **P 01 04 36.6 -0.7**
comp=Z,4.2nm,0.9s,baz=25,slow=9.0,SNR=6.5
ARCES PcP **PcP 01 05 48.7 +0.3**
comp=Z,3.5nm,0.9s,baz=60,slow=7.2,SNR=4.3
SUMG Summit 52.32 8 *i*P **P 01 04 38.6 +0.2**
comp=Z,6.9nm,1.0s
ARU Arti 53.12 318 *d i*P **P 01 04 43.1 -0.9**
ARU S **S 01 12 11.0 -0.9**
ARU pmax pmax
comp=Z,14nm,2.5s
NVAR Mina Array Bea 54.11 72 P **P 01 04 54.4 +2.6**
NVAR Mina Array Bea 54.11 72 P **P 01 04 54.4 +2.6**
comp=Z,2.7nm,0.8s,baz=315,slow=9.5,SNR=2.5
PDAR Pinedale Array 55.75 63 P **P 01 05 05.8 +2.2**
PDAR Pinedale Array 55.75 63 P **P 01 05 05.8 +2.2**
comp=Z,1.4nm,0.6s,baz=329,slow=1.7,SNR=10
JOF Joensuu 56.72 336 *e*P **P 01 05 09.2 -0.7**
JOF pmax pmax
comp=Z,5.0nm,0.4s
JOF Joensuu 56.72 336 *e*p **P 01 05 09.2 -0.7**
comp=Z,4.8nm,0.4s
ABKAR Akbulak array 57.74 311 *e*P **P 01 05 15.4 -1.9**
comp=Z,0.6nm,0.4s
KAF Kangasniemi 58.58 337 *e*P **P 01 05 21.6 -1.4**
KAF pmax pmax
comp=Z,4.0nm,0.4s
KAF Kangasniemi 58.58 337 *e*p **P 01 05 21.6 -1.4**
comp=Z,4.3nm,0.4s
FINES FINESS Array B 59.22 337 P **P 01 05 26.6 -0.9**
FINES FINESS Array B 59.22 337 P **P 01 05 26.6 -0.9**
comp=Z,5.5nm,0.4s,baz=33,slow=7.9,SNR=86
FINES LR LR 01 33 46.1
comp=Z,33nm,18.1s,baz=6.2,slow=39
NB2 NORSAR Subarra 62.44 345 P **P 01 05 48.6 -0.8**
comp=Z,1.4nm,0.5s,baz=21,slow=6.9
NOA NORSAR Array B 62.44 345 P **P 01 05 48.9 -0.6**
NOA NORSAR Array B 62.44 345 P **P 01 05 48.9 -0.6**
comp=Z,1.6nm,0.6s,baz=21,slow=6.8,SNR=8.3
SCHQ Schefferville 63.76 29 P **P 01 05 58.4 +0.2**
SCHQ Schefferville 63.76 29 P **P 01 05 58.4 +0.2**
comp=Z,2.3nm,0.6s,baz=274,slow=6.2,SNR=7.1
MNTX Cornudas Mount 66.19 69 *e*P **P 01 06 15.7 +1.3**
comp=Z,1.4nm,0.7s
WMOK Wichita Mounta 67.32 62 *e*P **P 01 06 21.7 +0.1**
WMOK pmax pmax
comp=Z,3.0nm,0.8s
WMOK Wichita Mounta 67.32 62 *e*P **P 01 06 21.7 +0.1**
comp=Z,2.8nm,0.8s
AKASG Malin Array Be 67.94 330 *ce*P **P 01 06 24.3 -0.9**
AKASG pmax pmax
comp=Z,2.0nm,0.3s
AKASG Malin Array Be 67.94 330 P **P 01 06 24.4 -0.9**
AKASG Malin Array Be 67.94 330 P **P 01 06 24.4 -0.9**
comp=Z,2.3nm,0.3s,baz=28,slow=6.8,SNR=7.2
TXAR Lajitas Array 68.95 69 P **P 01 06 34.1 +2.1**
TXAR Lajitas Array 68.95 69 P **P 01 06 34.1 +2.1**
comp=Z,2.3nm,0.6s,baz=300,slow=5.1,SNR=43
KBZ Khabaz 69.27 317 P **P 01 06 32.8 -0.8**
KBZ Khabaz 69.27 317 P **P 01 06 32.8 -0.8**
KBZ Khabaz 69.27 317 P **P 01 06 32.8 -0.8**
comp=Z,0.9nm,0.5s,baz=150,slow=4.4,SNR=3.6
KWP Kalwaria Pacla 70.71 333 *e*P **P 01 06 43.0 +0.6**
KWP pmax pmax
comp=Z,13nm,1.1s
KWP Kalwaria Pacla 70.71 333 *e*P **P 01 06 43.0 +0.6**
comp=Z,12nm,1.1s
KWP Kalwaria Pacla 70.71 333 ⇑*i*P **P 01 06 42.8 +0.4**
STHS Stebnicka Huta 71.29 334 *e*P **P 01 06 46.5 +0.6**
STHS pmax pmax
comp=Z,3.0nm,1.0s
STHS Stebnicka Huta 71.29 334 *e*P **P 01 06 46.5 +0.6**
CLL Collm 71.38 340 *e*P **P 01 06 46.0 -0.3**
CLL Collm 71.38 340 *e*P **P 01 06 46.0 -0.3**
KOLS Kolonicke sedl 71.47 333 *e*P **P 01 06 47.2 +0.2**
KOLS pmax pmax
comp=Z,6.0nm,1.4s
KOLS Kolonicke sedl 71.47 333 *e*P **P 01 06 47.2 +0.2**
UPC Upice 71.50 338 *e*P **P 01 06 46.9 -0.3**
UPC Upice 71.50 338 *e*P **P 01 06 46.9 -0.3**
DPC Dobruska-Polom 71.58 338 *e*P **P 01 06 48.7 +1.0**
DPC Dobruska-Polom 71.58 338 *e*P **P 01 06 48.7 +1.0**
OKC Ostrava-Krasne 71.65 336 *e*P **P 01 06 47.1 -0.9**
OKC Ostrava-Krasne 71.65 336 *e*P **P 01 06 47.1 -0.9**
CRVS Cervenica-Dubn 71.71 334 *e*P **P 01 06 48.1 -0.3**
CRVS pmax pmax
comp=Z,17nm,2.5s
CRVS Cervenica-Dubn 71.71 334 *e*P **P 01 06 48.1 -0.3**
MORC Moravsky Berou 71.85 337 ⇑P **P 01 06 49.6 +0.3**
MORC Moravsky Berou 71.85 337 ⇑*i*P **P 01 06 49.6 +0.3**
BUR08 Bucovina Ar. S 71.85 331 *e*P **P 01 06 49.1 -0.3**
BURAR Bucovina Array 71.87 331 ⇑*i*P **P 01 06 49.4 -0.1**
TRPA Tarpa 72.14 333 ⇑*i*P **P 01 06 50.7 -0.2**
VRAC Vranov 72.50 337 ⇑*i*P **P 01 06 53.7 +0.5**
VYHS Vyhne 72.74 335 *e*P **P 01 06 54.9 +0.3**
VYHS pmax pmax
comp=Z,8.0nm,2.2s
VYHS Vyhne 72.74 335 *e*P **P 01 06 54.9 +0.3**
CFR Carcaliu 73.21 328 ⇑P **P 01 06 57.3 -0.1**
CFR Carcaliu 73.21 328 ⇑*i*P **P 01 06 57.3 -0.1**
GERES GERESS Array B 73.57 339 P **P 01 06 59.1 -0.5**
GERES GERESS Array B 73.57 339 P **P 01 06 59.1 -0.5**
comp=Z,0.9nm,0.7s,baz=28,slow=6.0,SNR=9.0
MLR Muntele Rosu 73.59 329 ⇑*i*P **P 01 07 00.1 +0.3**
TIRR Tirgusor 73.77 327 ⇑P **P 01 07 00.2 -0.5**
TIRR Tirgusor 73.77 327 ⇑*i*P **P 01 07 00.2 -0.5**
VOIR 73.90 330 ⇑P **P 01 07 02.2 +0.6**
VOIR 73.90 330 ⇑*i*P **P 01 07 02.2 +0.6**
BZS Buzias 74.70 332 ⇓P **P 01 07 06.0 -0.1**
BZS Buzias 74.70 332 ⇓*i*P **P 01 07 06.0 -0.1**
CDF Champ du Feu 75.21 343 *e*P **P 01 07 09.2 +0.1**
comp=Z,4.0nm,0.5s
CDF Champ du Feu 75.21 343 *e*P **P 01 07 09.2 +0.1**
CDF pmax pmax
comp=Z,4.0nm,0.5s
CDF Champ du Feu 75.21 343 *e*P **P 01 07 09.2 +0.1**
comp=Z,4.0nm,0.5s
PAGF Fort de Pagny 75.33 344 *e*P **P 01 07 10.1 +0.4**
comp=Z,2.8nm,0.7s
PAGF Fort de Pagny 75.33 344 *e*P **P 01 07 10.1 +0.4**
comp=Z,2.8nm,0.7s
SFTF Sexfontaines 75.78 344 *e*P **P 01 07 12.3 0.0**
comp=Z,7.7nm,0.5s
SFTF Sexfontaines 75.78 344 *e*P **P 01 07 12.3 0.0**
comp=Z,7.7nm,0.5s
FLN La Foliniere 75.99 348 *e*P **P 01 07 13.2 -0.2**
FLN La Foliniere 75.99 348 *e*P **P 01 07 13.2 -0.2**
FLN La Foliniere 75.99 348 *e*P **P 01 07 13.2 -0.2**
LDF La Druitiere 76.11 348 *e*P **P 01 07 14.3 +0.2**
LDF La Druitiere 76.11 348 *e*P **P 01 07 14.3 +0.2**
LDF La Druitiere 76.11 348 *e*P **P 01 07 14.3 +0.2**
BRTR Keskin Array B 76.22 322 P **P 01 07 14.8 -0.3**
BRTR Keskin Array B 76.22 322 P **P 01 07 14.8 -0.3**
comp=Z,1.4nm,0.6s,baz=19,slow=2.7,SNR=7.0
GRR Gorron 76.40 348 *e*P **P 01 07 15.5 -0.3**
GRR Gorron 76.40 348 *e*P **P 01 07 15.5 -0.3**
GRR Gorron 76.40 348 *e*P **P 01 07 15.5 -0.3**
LOR Lormes 76.87 345 *e*P **P 01 07 19.2 +0.7**
LOR Lormes 76.87 345 *e*P **P 01 07 19.2 +0.7**
VTS Vitosha 77.04 330 ⇑P **P 01 07 19.0 -0.7**
VTS Vitosha 77.04 330 ⇑*i*P **P 01 07 19.0 -0.7**
WRA Warramunga Arr 77.96 207 P **P 01 07 25.7 +1.0**
WRA Warramunga Arr 77.96 207 P **P 01 07 25.7 +1.0**
comp=Z,2.1nm,0.7s,baz=20,slow=6.1,SNR=18
MFF Saint Martin d 78.07 348 *e*P **P 01 07 24.6 -0.6**
MFF Saint Martin d 78.07 348 *e*P **P 01 07 24.6 -0.6**
MFF Saint Martin d 78.07 348 *e*P **P 01 07 24.6 -0.6**
LPL La Plagne 78.11 343 *e*P **P 01 07 26.8 +1.1**
comp=Z,4.6nm,0.7s
LPL La Plagne 78.11 343 *e*P **P 01 07 26.8 +1.1**
LPL pmax pmax
comp=Z,5.0nm,0.6s
LPL La Plagne 78.11 343 *e*P **P 01 07 26.8 +1.1**
comp=Z,4.6nm,0.6s
LPG La Plagne 78.12 343 *e*P **P 01 07 27.1 +1.2**
comp=Z,7.7nm,0.8s
LPG La Plagne 78.12 343 *e*P **P 01 07 27.1 +1.2**
LPG pmax pmax
comp=Z,8.0nm,0.8s
LPG La Plagne 78.12 343 *e*P **P 01 07 27.1 +1.2**
comp=Z,7.7nm,0.8s
MIB Mutribah 79.05 307 *e*P **P 01 07 29.5 -1.4**
MIB AMb AMB 01 07 30.2
comp=Z,8.2nm,0.5s
NAY Al-Naaiem 79.56 306 *e*P **P 01 07 31.9 -1.7**
NAY AMb AMB 01 07 33.9
comp=Z,3.7nm,0.8s
RDF Al-Radifah 79.69 306 *e*P **P 01 07 33.5 -0.9**
RDF AMb AMB 01 07 34.7
comp=Z,15nm,1.1s
ASAR Alice Springs 81.63 206 P **P 01 07 46.5 +1.9**
ASAR Alice Springs 81.63 206 P **P 01 07 46.5 +1.9**
comp=Z,2.5nm,0.5s,baz=17,slow=5.3,SNR=36
ETSF Etsaut 81.77 347 *e*P **P 01 07 47.3 +1.9**
ETSF Etsaut 81.77 347 *e*P **P 01 07 47.3 +1.9**
ETSF Etsaut 81.77 347 *e*P **P 01 07 47.3 +1.9**
RAYN Ar Rayn 85.23 305 *e*P **P 01 08 02.7 -0.7**
comp=Z,3.2nm,0.6s
ESDC Sonseca Array 85.36 349 P **P 01 08 04.4 +0.6**
ESDC Sonseca Array 85.36 349 P **P 01 08 04.4 +0.6**
comp=Z,0.6nm,0.5s,baz=3.5,slow=4.7,SNR=7.4
KEST Kesra 87.04 338 P **P 01 08 12.6 +0.3**
KEST Kesra 87.04 338 P **P 01 08 12.6 +0.3**
comp=Z,0.5nm,0.7s,baz=14,slow=4.2,SNR=2.4
QSPA South Pole Qui 144.34 180 PKP PKPbc 01 14 59.9 +0.1
QSPA South Pole Qui 144.34 180 PKP PKPbc 01 14 59.9 +0.1
comp=Z,1.6nm,0.7s,baz=31,slow=0.3,SNR=5.6

*ECX **20** 01:00:29.9±0.8, 32.82N×118.08W, h15km, MD4.1, ML4.2*
*NEIC **20** 01:00:30.6, 32.90N×118.01W, h14km, ML4.1(PAS), After PAS.*
NEIC Felt [IV] at Laguna Hills, [III] at Newport Coast and [II] at Avalon and along the coast from Los Angeles to San Diego. Felt as far inland as Fontana, Redlands and Ramona.

ISC 20 01:00:30.0±1.8, **32.84N**±0.04×**118.03W**±0.05, **h14**km±13km, **n35**, σ1%**43**/**55**, **12C**, **Off coast of California**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CPE	**Camp Elliot**	**0.78**	**86**	⇑*i*P		**Pg**		**01 00 44.7**	**-0.4**
DPP	**Dos Picos Cty**	**0.93**	**80**	⇑*i*P		**Pb**		**01 00 47.0**	**-0.9**
EML	**El Monte Cty P**	**0.99**	**87**	⇑*i*P		**Pb**		**01 00 48.0**	**-1.1**
PLM	**Palomar**	**1.10**	**62**	⇑*i*P		**Pb**		**01 00 49.3**	**-1.7**
BAR	**Barrett**	**1.15**	**98**	*e*Pn		**Pn**		**01 00 50.3**	**-1.5**
BAR				*e*Sn		**Sb**		**01 01 06.3**	**-0.3**
BAR	**Barrett**	**1.15**	**98**	⇑*i*P		**Pn**		**01 00 50.6**	**-1.2**
DGR	**Domenigoni Val**	**1.17**	**46**	⇑*i*P		**Pn**		**01 00 50.1**	**-2.0**
CBX	**Cerro Bola**	**1.27**	**114**	⇑*e*P		**Pn**		**01 00 52.8**	**-0.7**
CBX				*e*S		**Sb**		**01 01 09.4**	**-0.5**
PASC	**Pasadena Art C**	**1.33**	**354**	*e*Pn		**Pn**		**01 00 52.2**	**-2.1**
PASC				*e*Sn		**Sn**		**01 01 09.2**	**-2.5**
PFO	**Pinyon Flat Ob**	**1.52**	**59**	*e*Pn		**Pn**		**01 00 55.9**	**-1.1**
PFO				*e*Sn		**Sn**		**01 01 15.6**	**-1.1**
PBX	**Punta Banda**	**1.56**	**135**	*e*P		**Pn**		**01 00 56.5**	**-0.8**
PBX				*e*S		**Sn**		**01 01 17.1**	**-0.3**
PBX				⇑*e*				01 01 23.5	
	comp=N,3μm,0.8s								
RMX	**La Rumorosa**	**1.66**	**98**	⇑*e*P		**Pn**		**01 00 58.7**	**-0.2**
RMX				⇑*e*				01 01 23.8	
	comp=N,2μm,0.4s								
ECNX	**Esteban Cantu**	**1.69**	**134**	*e*PN		**Pn**		**01 00 58.8**	**-0.5**
ECNX				*e*S		**Sn**		**01 01 21.0**	**+0.2**
OSI	**Osito Adit**	**1.86**	**342**	*e*Pn		**Pn**		**01 01 00.6**	**-0.9**
OSI				*e*Pg		**Pb**		**01 01 03.9**	**+0.1**
OSI				*e*Sn		**Sn**		**01 01 23.1**	**-1.8**
OSI				*e*Sg		**Sb**		**01 01 27.9**	**+0.9**
RDX	**Rancho Dawling**	**1.99**	**117**	*e*P		**Pn**		**01 01 03.5**	**+0.1**
RDX				*e*S		**Sn**		**01 01 29.0**	**+0.8**
RDX				⇑*e*				01 01 34.0	
	comp=E,3μm,0.4s								
RDX				⇑*e*				01 01 42.3	
	comp=N,1μm,0.6s								
ZAX	**El Zacaton**	**1.99**	**131**	*e*P		**Pn**		**01 01 03.3**	**-0.1**
GSC	**Goldstone**	**2.65**	**22**	*e*Pn		**Pn**		**01 01 12.0**	**-0.5**
GSC				*e*Pg		**Pb**		**01 01 18.3**	**+0.9**
GSC				*e*Sn		**Sn**		**01 01 43.1**	**-1.5**
GSC				*e*Sg		**Sb**		**01 01 51.1**	**+1.2**
GLA	**Glamis**	**2.70**	**85**	*e*Pn		**Pn**		**01 01 12.6**	**-0.4**
GLA				*e*Pg		**Pb**		**01 01 18.5**	**+0.4**
GLA				*e*Sg		**Sb**		**01 01 51.6**	**+0.5**
SPX	**San Pedro Mart**	**2.82**	**129**	*e*PN		**Pn**		**01 01 15.2**	**+0.1**
ISA	**Isabella**	**2.84**	**353**	*e*Pn		**Pn**		**01 01 14.8**	**-0.2**
ISA				*e*Pg		**Pb**		**01 01 20.7**	**+0.2**
ISA				*e*Sn		**Sn**		**01 01 47.9**	**-1.2**
ISA				*e*Sg		**Sb**		**01 01 55.9**	**+0.7**
LDFC	**Landfair**	**3.29**	**47**	*e*Pn		**Pb**		**01 01 28.6**	**+0.3**
LDFC				*e*Sg		**Sb**		**01 02 11.2**	**+2.9**
CMB	**Columbia Colle**	**5.53**	**340**	*e*Pn		**Pn**		**01 01 52.5**	**+0.6**
CMB				*e*Sg		**Sb**		**01 03 15.0**	**+2.5**
NV11	**Mina Array Sit**	**5.58**	**359**	*e*Pg		Pb		01 02 11.4	+4.1
NV11				*e*Sg		Sg		01 03 21.8	-7.3
CCUT	**Cedar City**	**6.05**	**38**	*e*Pn		**Pn**		**01 02 01.3**	**+2.0**
CCUT				*e*Pg		Pb		01 02 20.4	+5.0
CCUT				*e*Sg		**Sb**		**01 03 33.3**	**+5.5**
WUAZ	**Wupatki**	**6.12**	**62**	*e*Pn		**Pn**		**01 02 01.6**	**+1.3**
	comp=N,8.8nm,0.4s								
TUC	**Tucson**	**6.14**	**93**	*e*Pn		**Pn**		**01 02 01.0**	**+0.6**
ARUT	**Antelope Range**	**6.20**	**36**	*e*Pn		**Pn**		**01 02 02.4**	**+1.2**
	comp=N,14nm,0.4s								
MVU	**Marysvale**	**7.37**	**38**	*e*Pn		**Pn**		**01 02 16.1**	**-1.3**
	comp=N,7.0nm,0.6s								
MSU	**Marysvale**	**7.39**	**38**	*e*Pn		**Pn**		**01 02 16.4**	**-1.3**
	comp=N,8.4nm,0.7s								
DUG	**Dugway**	**8.45**	**28**	*e*Pn		**Pn**		**01 02 31.7**	**-0.4**
PV04	**Paradox Valley**	**9.26**	**51**	*e*Pn		**Pn**		**01 02 42.4**	**-0.9**
PV01	**Paradox Valley**	**9.34**	**53**	*e*Pn		**Pn**		**01 02 46.7**	**+2.2**
	comp=N,359nm,0.6s								
ANMO	**Albuquerque**	**9.84**	**75**	*e*Pn		**Pn**		**01 02 50.4**	**-0.9**
HLID	**Hailey**	**11.07**	**14**	*e*Pn		**Pn**		**01 03 07.8**	**-0.3**
NEW	**Newport**	**15.42**	**2**	*e*Pn		**Pn**		**01 04 06.9**	**-0.2**

*IDC **20** 01:06:20.4±4.1, 30.27S×177.88W, h51km±33km, mb4.2/3, mb1 4.4/3, mb1mx3.7/17, mbtmp4.2/3, Error ellipse: s-maj=43.5km s-min=27.1km az=134.0*
*ISCJB **20** 01:06:21.2±1.1, 30.1S±0.1×178.5W±0.2, h33km, mb4.5/6, Error ellipse: s-maj=27.6km s-min=8.6km az=42.5*
*NEIC **20** 01:06:23.9±1.9, 29.90S×178.03W, h75km±17km, mb4.5/3, Error ellipse: s-maj=35.4km s-min=24.2km az=178.0*

ISC 20 01:06:19.6±1.2, **30.33S**±0.09×**177.8W**±0.2, **h46**km, **n21**, σ0%**59**/**22**, **mb4.6**/**6**, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.08**	**354**	P		**Pn**		**01 06 38.5**	**+0.2**
RAO				S		**Sn**		**01 06 52.0**	**-0.2**
RAO	**Raoul Island**	**1.08**	**354**	P		**Pn**		**01 06 38.5**	**+0.2**
	106nm,0.3s,baz=165,slow=18,SNR=9.1								
RAO				S		**Sn**		**01 06 52.0**	**-0.2**
	940nm,0.3s,baz=161,slow=21,SNR=18								
CTAO	**Charters Tower**	**33.97**	**279**	*e*P		**P**		**01 12 59.8**	**+0.9**
	7.0nm,0.7s								
STKA	**Stephens Creek**	**34.68**	**257**	P		**P**		**01 13 05.0**	**+0.1**
STKA	**Stephens Creek**	**34.68**	**257**	P		**P**		**01 13 05.0**	**+0.1**
	7.9nm,0.7s,baz=110,slow=12,SNR=14								
AS31	**Alice Springs**	**43.30**	**267**	*e*P		**P**		**01 14 16.6**	**-0.5**
ASAR	**Alice Springs**	**43.30**	**267**	P		**P**		**01 14 16.9**	**-0.3**
ASAR	**Alice Springs**	**43.30**	**267**	P		**P**		**01 14 16.9**	**-0.3**
	1.7nm,0.5s,baz=104,slow=7.3,SNR=30								
WRAB	**Tennant Creek**	**44.28**	**272**	*e*P		**P**		**01 14 24.3**	**-0.7**
	4.8nm,0.6s								
WRA	**Warramunga Arr**	**44.28**	**272**	P		**P**		**01 14 24.1**	**-0.9**
WRA	**Warramunga Arr**	**44.28**	**272**	P		**P**		**01 14 24.1**	**-0.9**
	3.2nm,0.3s,baz=110,slow=8.1,SNR=149								
QSPA	**South Pole Qui**	**59.78**	**180**	*e*P		P		01 16 26.4	+6.6
	1.9nm,0.4s								
QSPA	**South Pole Qui**	**59.78**	**180**	P		P		01 16 26.9	+7.1
	4.3nm,0.7s,baz=42,slow=0.9,SNR=12								
KURK	**Kurchatov**	**121.14**	**314**	*e*PKPdf		**PKPdf**		**01 25 07.4**	**+0.5**
FINES	**FINESS Array B**	**145.14**	**340**	PKPbc		**PKPbc**		**01 25 50.5**	**-0.4**
FINES	**FINESS Array B**	**145.14**	**340**	PKPbc		**PKPbc**		**01 25 50.5**	**-0.4**
	1.3nm,0.3s,baz=36,slow=2.6,SNR=16								
AKASG	**Malin Array Be**	**151.36**	**323**	PKPbc		**PKPbc**		**01 26 07.4**	**-0.4**
AKASG	**Malin Array Be**	**151.36**	**323**	PKPbc		**PKPbc**		**01 26 07.4**	**-0.4**
	0.7nm,0.4s,baz=46,slow=2.6,SNR=4.7								
BUR08	**Bucovina Ar. S**	**155.29**	**321**	*e*PKPdf		**PKPdf**		**01 26 08.9**	**+1.2**
BUR08				*e*PKPab		**PKPab**		**01 26 32.5**	**-0.5**
TORD	**Torodi Ar. Bea**	**162.90**	**178**	PKPab		**PKPab**		**01 27 06.3**	**-0.2**
TORD	**Torodi Ar. Bea**	**162.90**	**178**	PKPab		**PKPab**		**01 27 06.3**	**-0.2**
	1.1nm,1.1s,baz=176,slow=4.0,SNR=4.1								

*ISCJB **20** 01:24:51.2±0.5, 38.31N±0.03×22.05E±0.04, h12km±4km, Error ellipse: s-maj=5.3km s-min=5.0km az=2.6*
*CSEM **20** 01:24:51.3±0.1, 38.32N×22.05E, h8km, MD2.9, Error ellipse: s-maj=2.1km s-min=2.0km az=109.0*
*ATH **20** 01:24:51.5, 38.31N×22.04E, h10km±1km, MD2.9/8*
*THE **20** 01:24:51.7, 38.31N×22.04E, h9km±1km, ML1.2/4, Error ellipse: s-maj=1.1km s-min=0.4km az=239.0*

ISC 20 01:24:51.2±1.0, **38.31N**±0.02×**22.05E**±0.02, **h11**km±5km, **n29**, σ0%**41**/**46**, **Greece**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LAKA	**Lakka**	**0.09**	**216**	P		**Pg**		**01 24 53.6**	**-0.2**
LAKA				S		**Sg**		**01 24 55.6**	**-0.2**
LAKA	**Lakka**	**0.09**	**216**	*e*PG		**Pg**		**01 24 53.8**	**0.0**
LAKA				*e*SG		**Sg**		**01 24 55.6**	**-0.2**
LAKA	**Lakka**	**0.09**	**216**	*e*Pg		**Pg**		**01 24 53.8**	**0.0**
LAKA				S		**Sg**		**01 24 55.6**	**-0.2**
KALE	**Kalithea**	**0.11**	**43**	P		**Pg**		**01 24 54.4**	**+0.3**
KALE				S		**Sg**		**01 24 56.3**	**+0.1**
KALE	**Kalithea**	**0.11**	**43**	*e*PG		**Pg**		**01 24 54.3**	**+0.2**
KALE				*e*SG		**Sg**		**01 24 56.4**	**+0.2**
KALE	**Kalithea**	**0.11**	**43**	P		**Pg**		**01 24 54.4**	**+0.3**
KALE				S		**Sg**		**01 24 56.3**	**+0.1**
EFP	**Efpalio**	**0.16**	**316**	P		**Pg**		**01 24 54.9**	**+0.2**
EFP				S		**Sg**		**01 24 57.9**	**+0.6**
EFP	**Efpalio**	**0.16**	**316**	*e*PG		**Pg**		**01 24 55.0**	**+0.2**
EFP				*e*SG		**Sg**		**01 24 58.0**	**+0.6**
EFP	**Efpalio**	**0.16**	**316**	*e*Pg		**Pg**		**01 24 55.0**	**+0.2**
EFP				S		**Sg**		**01 24 57.9**	**+0.6**
KLV	**Kalavryta, Ach**	**0.28**	**163**	*e*PG		**Pg**		**01 24 57.0**	**+0.1**
KLV				*e*SG		**Sg**		**01 25 01.7**	**+0.9**
KLV	**Kalavryta, Ach**	**0.28**	**163**	*e*Pg		**Pg**		**01 24 57.0**	**+0.1**
KLV				*e*Sg		**Sg**		**01 25 01.7**	**+0.9**
DSF	**Desfina**	**0.39**	**75**	P		**Pg**		**01 24 59.0**	**+0.1**
DSF				S		**Sb**		**01 25 05.5**	**-0.6**
DSF	**Desfina**	**0.39**	**75**	P		**Pg**		**01 24 59.0**	**+0.1**
DSF				S		**Sb**		**01 25 05.5**	**-0.6**
GUR	**Goura**	**0.44**	**148**	P		**Pg**		**01 25 00.0**	**+0.1**
GUR				S		**Sg**		**01 25 06.7**	**+0.9**
GUR	**Goura**	**0.44**	**148**	*e*PG		**Pg**		**01 24 59.8**	**-0.1**
GUR	**Goura**	**0.44**	**148**	P		**Pg**		**01 25 00.0**	**+0.1**
GUR				S		**Sg**		**01 25 06.7**	**+0.9**
RLS	**Riolos of Patr**	**0.52**	**241**	P		**Pg**		**01 25 01.7**	**+0.3**
RLS	**Riolos of Patr**	**0.52**	**241**	*e*PG		**Pg**		**01 25 01.3**	**-0.1**
RLS	**Riolos of Patr**	**0.52**	**241**	*e*Pg		**Pg**		**01 25 01.3**	**-0.1**
RLS	**Riolos of Patr**	**0.52**	**241**	P		**Pg**		**01 25 01.7**	**+0.3**
AXS	**Araxos**	**0.54**	**258**	P		**Pg**		**01 25 02.0**	**+0.3**
AXS				S		**Sb**		**01 25 09.8**	**-0.6**
AXS	**Araxos**	**0.54**	**258**	P		**Pg**		**01 25 02.0**	**+0.3**
AXS				S		**Sb**		**01 25 09.8**	**-0.6**
EVR	**Evrytania**	**0.63**	**343**	P		**Pg**		**01 25 03.7**	**+0.3**
EVR	**Evrytania**	**0.63**	**343**	*e*PB		**Pg**		**01 25 03.5**	**+0.1**
EVR	**Evrytania**	**0.63**	**343**	P		**Pg**		**01 25 03.7**	**+0.3**
AGG	**Agios Georgios**	**0.74**	**17**	P		**Pg**		**01 25 05.3**	**-0.2**
AGG	**Agios Georgios**	**0.74**	**17**	P		**Pg**		**01 25 05.3**	**-0.2**
AMT	**Artemida-Makis**	**0.82**	**199**	*e*PB		**Pb**		**01 25 07.4**	**-0.1**
AMT	**Artemida-Makis**	**0.82**	**199**	*e*Pb		**Pb**		**01 25 07.4**	**-0.1**

IDC 20 01:38:38.9±4.8, **3.26S**×**129.06E**, **h54**km±42km, **mb3.6**/**4**, **mb1 4.0**/**7**, **mb1mx3.7**/**22**, **mbtmp3.8**/**7**, **ML4.1**/**3**, **MS3.2**/**1**, **Ms1 3.2**/**1**, **ms1mx2.4**/**31**, **Error ellipse: s-maj=59.0km s-min=14.5km az=73.0**, **Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.45**	**259**	P		Pn		01 40 54.0	+1.6
	1.3nm,0.3s,baz=80,slow=8.4,SNR=7.6								
FITZ	**Fitzroy Crossi**	**15.13**	**193**	P		Pn		01 42 09.5	+0.1
	0.5nm,0.3s,baz=12,slow=8.9,SNR=18								
FITZ				LR		LR		01 48 05.6	
	comp=Z,86nm,18.5s,baz=7.8,slow=38								
WRA	**Warramunga Arr**	**17.37**	**163**	P		Pn		01 42 37.9	+0.2
	0.9nm,0.3s,baz=340,slow=13,SNR=19								
ASAR	**Alice Springs**	**20.82**	**167**	P		P		01 43 17.1	+0.9
	6.4nm,0.5s,baz=349,slow=11,SNR=89								
ASAR				S		S		01 47 05.8	+0.2
	1.3nm,0.6s,baz=350,slow=21,SNR=4.8								
SONM	**Songino Array**	**54.62**	**341**	P		P		01 48 02.6	+0.5
	0.4nm,0.4s,baz=154,slow=6.9,SNR=3.5								
MKAR	**Makanchi Array**	**64.61**	**326**	P		P		01 49 09.7	-1.1
	0.3nm,0.5s,baz=120,slow=8.1,SNR=5.7								
VNDA	**Vanda**	**76.25**	**173**	P		P		01 50 21.4	+0.2
	0.6nm,0.6s,baz=315,slow=6.8,SNR=7.8								

*ISCJB **20** 01:53:50.4±0.6, 43.69N±0.05×146.51E±0.07, h80km±5km, mb3.4/11, Error ellipse: s-maj=10.9km s-min=5.7km az=137.2*
*MOS **20** 01:53:50.3±1.3, 43.71N×146.54E, h85km, mb4.1/1, Error ellipse: s-maj=19.5km s-min=13.7km az=

YSS				pmax	pmax			
	comp=E,20nm,0.7s							
YSS				pmax	pmax			
	comp=Z,30nm,0.7s							
YSS				smax	smax			
	comp=N,20nm,0.8s							
YSS				smax	smax			
	comp=E,50nm,0.8s							
PETK	**Petropavlovsk-**	**12.01**	**34**	PN	**Pn**	**01 56 38.9**	**+0.1**	
PETK	**Petropavlovsk-**	**12.01**	**34**	P	**Pn**	**01 56 38.9**	**+0.1**	
	comp=E,0.3nm,0.3s,baz=181,slow=14,SNR=4.6							
SONM	**Songino Array**	**28.11**	**293**	P	**P**	**01 59 35.6**	**-0.4**	
	comp=E,1.0nm,0.7s,baz=89,slow=8.1,SNR=5.3							
ILAR	**Eielson Array**	**41.83**	**36**	P	**P**	**02 01 33.2**	**0.0**	
	comp=E,0.5nm,0.5s,baz=270,slow=7.0,SNR=11							
MKAR	**Makanchi Array**	**44.25**	**298**	P	**P**	**02 01 52.2**	**-0.8**	
MKAR	**Makanchi Array**	**44.25**	**298**	P	**P**	**02 01 52.2**	**-0.8**	
	comp=E,0.6nm,0.7s,baz=80,slow=8.2,SNR=7.8							
WRA	**Warramunga Arr**	**64.26**	**193**	P	**P**	**02 04 19.3**	**+0.8**	
	comp=E,0.4nm,0.9s,baz=8.9,slow=6.7,SNR=3.4							
FINES	**FINESS Array B**	**64.77**	**333**	P	**P**	**02 04 20.9**	**-0.5**	
	comp=E,0.2nm,0.4s,baz=16,slow=8.5,SNR=5.0							
ASAR	**Alice Springs**	**67.98**	**193**	P	**P**	**02 04 44.1**	**+1.8**	
	comp=E,0.2nm,0.6s,baz=16,slow=6.9,SNR=3.4							
NVAR	**Mina Array Bea**	**68.00**	**58**	P	**P**	**02 04 42.5**	**-0.1**	
	comp=E,0.6nm,0.5s,baz=288,slow=7.1,SNR=4.0							
NOA	**NORSAR Array B**	**69.54**	**339**	P	**P**	**02 04 51.9**	**+0.3**	
	comp=E,0.3nm,0.5s,baz=33,slow=5.2,SNR=2.7							
PDAR	**Pinedale Array**	**70.31**	**49**	P	**P**	**02 04 57.5**	**+0.6**	
	comp=E,0.6nm,0.5s,baz=236,slow=1.6,SNR=5.6							
AKASG	**Malin Array Be**	**71.41**	**323**	P	**P**	**02 05 02.0**	**-1.1**	
AKASG	**Malin Array Be**	**71.41**	**323**	P	**P**	**02 05 02.0**	**-1.1**	
	comp=E,0.3nm,0.4s,baz=32,slow=7.1,SNR=2.8							
TXAR	**Lajitas Array**	**83.07**	**56**	P	**P**	**02 06 07.3**	**-1.5**	
	comp=E,0.3nm,0.6s,baz=299,slow=4.0,SNR=5.2							

*IDC **20** 02:11:16.9±5.3, 0.06S×123.40E, h42km±55km, mb3.5/6, mb1 3.6/8, mb1mx3.4/23, mbtmp3.5/8, ML3.5/2, MS2.6/1, Ms1 2.6/1, ms1mx2.1/18, Error ellipse: s-maj=50.7km s-min=18.9km az=62.0*
*DJA **20** 02:11:22.5±3.4, 0.5S±8.8×12.3E±*, h32km±49km, M4.7/6, mb5.2/1, MLv4.4/6*

ISC 20 02:11:21.5±1.1, 0.39S±0.06×122.93E±0.05, h35km, n14, σ2.8s16/12, mb3.9/6, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MRSI	**Marisa**	**1.32**	**311**	P		**Pn**	**02 11 43.3**	**-0.1**
MRSI				S		**Sn**	**02 11 59.9**	**+0.2**
KMSI	**Cibinong**	**1.42**	**47**	P		**Pn**	**02 11 46.3**	**+1.5**
KMSI				S		**Sn**	**02 12 03.3**	**+1.0**
SKSI	**Soroako, Sulaw**	**2.66**	**217**	P		**Pn**	**02 12 04.9**	**+3.0**
TTSI	**Tana Toraja**	**4.08**	**230**	P		**Pn**	**02 12 24.5**	**+3.1**
LBMI	**Labuha**	**4.57**	**93**	P		**Pn**	**02 12 30.5**	**+2.3**
NLAI	**Namlea**	**5.03**	**124**	P		**Pn**	**02 12 34.6**	**+0.1**
KAPI	**Kappang**	**5.58**	**215**	P		**Pn**	**02 12 43.3**	**+1.2**
	1.5nm,0.3s,baz=22,slow=5.4,SNR=4.6							
KAPI				S		**Sn**	**02 13 43.5**	**-1.6**
	baz=37,slow=20,SNR=2.7							
KAPI				LR		LR	02 15 04.9	
	comp=Z,54nm,20.9s,baz=324,slow=37							
FITZ	**Fitzroy Crossi**	**17.80**	**172**	P		**Pn**	**02 15 26.2**	**-0.4**
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=3.1							
WRA	**Warramunga Arr**	**22.41**	**151**	P		P	02 16 12.7	-4.6
	0.6nm,0.5s,baz=330,slow=11,SNR=9.6							
ASAR	**Alice Springs**	**25.47**	**156**	P		**P**	**02 16 43.1**	**-3.4**
	0.2nm,0.4s,baz=342,slow=15,SNR=3.2							
ASAR				PcP		PcP	02 20 11.4	-6.5
	0.3nm,0.5s,baz=331,slow=1.9,SNR=4.9							
CMAR	**Chiang Mai Arr**	**30.11**	**310**	P		P	02 17 24.8	-3.4
	0.5nm,0.3s,baz=142,slow=7.7,SNR=4.3							
USRK	**Ussuriysk Arra**	**45.13**	**9**	P		P	02 19 25.1	-9.4
	1.5nm,0.7s,baz=165,slow=6.7,SNR=5.4							
SONM	**Songino Array**	**50.15**	**346**	P		P	02 20 07.4	-6.2
	2.3nm,0.8s,baz=159,slow=9.6,SNR=9.8							
MKAR	**Makanchi Array**	**58.91**	**328**	P		P	02 21 11.1	-6.0
	0.5nm,0.3s,baz=125,slow=8.5,SNR=16							

JMA 20 02:11:38.4±0.1, 29.68N×140.50E, h222km, M3.9, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
CBIJ	**Chichi jima**	**2.97**	**150**	P		Pn	02 12 29.0	0.0
CBIJ				S		S	02 13 07.8	-0.6
JHHJ	**Haha-jima-NKT**	**3.38**	**154**	P		Pn	02 12 34.2	+0.5
JHHJ				S		S	02 13 16.5	-0.4
JHJ2	**Mitsune**	**3.47**	**350**	P		Pn	02 12 35.4	+0.8
BSO1	**Boso 1**	**4.98**	**5**	P		Pn	02 12 53.9	+1.6
BSO3	**Boso 3**	**5.11**	**0**	P		Pn	02 12 55.1	+0.8
BSO3				*eS*		S	02 13 54.0	-0.4
BSO4	**Boso 4**	**5.30**	**359**	P		Pn	02 12 57.8	+0.9
BSO4				S		S	02 13 58.4	-0.7
JOD2	**Odawara 2**	**5.69**	**348**	P		Pn	02 13 03.8	+1.7
JOD2				S		S	02 14 07.8	-0.7
JRY	**Ryogami san**	**6.46**	**348**	P		Pn	02 13 12.5	+0.7
JAG	**Ashikaga**	**6.78**	**353**	P		Pn	02 13 15.3	-0.6
JHO	**Hitachi**	**6.91**	**0**	P		Pn	02 13 17.6	0.0

*ISCJB **20** 02:23:23.7±0.5, 37.28N±0.03×27.51E±0.05, h4km±7km, Error ellipse: s-maj=6.6km s-min=4.2km az=148.6*
*ISK **20** 02:23:23.8, 37.89N×27.41E, h19km, MD2.6*
*DDA **20** 02:23:23.4, 37.88N×27.55E, h7km, MD2.8*
*CSEM **20** 02:23:24.1±0.2, 37.88N×27.54E, h10km, MD2.8, Error ellipse: s-maj=6.8km s-min=3.4km az=63.0*

ISC 20 02:23:23.6±1.0, 37.86N±0.02×27.52E±0.03, h9km±9km, n21, σ0.947/34, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GCAM	**G?zelcaml?**	**0.28**	**235**	*i* Pg		**Pg**	**02 23 29.1**	**0.0**
GCAM				*i* Sg		**Sg**	**02 23 32.4**	**-0.4**
AYDN	**Tasoluk**	**0.34**	**125**	*i* P		**Pg**	**02 23 30.4**	**0.0**
AYDN				*i* S		**Sg**	**02 23 34.4**	**-0.6**
AYDN	**Tasoluk**	**0.34**	**125**	*i* P		**Pg**	**02 23 30.4**	**0.0**
AYDN				*i* S		**Sg**	**02 23 34.4**	**-0.6**
IZM	**Izmir**	**0.58**	**339**	*e*PG		**Pg**	**02 23 34.9**	**+0.1**
IZM				*e*SG		**Sg**	**02 23 42.5**	**+0.2**
IZM	**Izmir**	**0.58**	**339**	*e*Pg		**Pg**	**02 23 34.9**	**+0.1**
IZM				*e*Sg		**Sg**	**02 23 42.5**	**+0.2**
MLSB	**Milas**	**0.60**	**160**	*e*PG		**Pb**	**02 23 37.1**	**+1.0**
MLSB				*e*SG		**Sn**	**02 23 47.1**	**-0.9**
MLSB	**Milas**	**0.60**	**160**	*e*Pg		**Pb**	**02 23 37.1**	**+1.0**
MLSB				*e*Sg		**Sn**	**02 23 47.1**	**-0.9**
BLCB	**Balcova**	**0.65**	**324**	*e*PG		**Pg**	**02 23 36.2**	**+0.1**
BLCB				*e*SG		**Sg**	**02 23 44.2**	**-0.3**
BLCB	**Balcova**	**0.65**	**324**	*e*Pg		**Pg**	**02 23 36.2**	**+0.1**
BLCB				*e*Sg		**Sg**	**02 23 44.3**	**-0.3**
BODT	**Bodrum**	**0.81**	**192**	*e*PG		**Pb**	**02 23 40.0**	**+0.2**
BODT	**Bodrum**	**0.81**	**192**	*e*Pg		**Pb**	**02 23 40.0**	**+0.2**
URLA	**Izmir**	**0.89**	**305**	*e*P		**Pb**	**02 23 41.5**	**+0.4**
URLA				*e*S		**Sb**	**02 23 52.9**	**-0.1**
URLA	**Izmir**	**0.89**	**305**	*e*P		**Pb**	**02 23 41.5**	**+0.4**
URLA				*e*S		**Sb**	**02 23 52.9**	**-0.1**
YER	**Yerkesik**	**0.94**	**140**	*e*PG		**Pn**	**02 23 43.8**	**+0.8**
YER	**Yerkesik**	**0.94**	**140**	*e*Pg		**Pn**	**02 23 43.8**	**+0.8**
AKHS	**Akhisar**	**1.04**	**13**	*e*P		**Pb**	**02 23 43.9**	**+0.1**
AKHS				*e*S		**Sg**	**02 23 56.9**	**-0.4**
AKHS	**Akhisar**	**1.04**	**13**	*e*P		**Pb**	**02 23 43.9**	**+0.1**
AKHS				*e*S		**Sg**	**02 23 56.9**	**-0.4**
KULA	**Kula-Manisa**	**1.11**	**54**	*e*PN		**Pn**	**02 23 45.5**	**+0.1**
KULA	**Kula-Manisa**	**1.11**	**54**	*e*Pn		**Pn**	**02 23 45.5**	**+0.1**
DAT	**Datca**	**1.13**	**178**	*e*PN		**Pn**	**02 23 45.6**	**0.0**
DAT	**Datca**	**1.13**	**178**	*e*Pn		**Pn**	**02 23 45.6**	**0.0**

KRSC 20 02:24:02.7±1.3, 53.36N×158.00E, h255km±35km, ML3.8, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GNL	**Ganaly**	**0.34**	**354**	*i* P		Pn	02 24 36.7	+0.9
GNL				*e*S		S	02 25 01.5	-0.5
KOK	**Koryaka**	**0.39**	**100**	*e*P		Pn	02 24 37.4	+1.4
AVH	**Avacha**	**0.45**	**102**	*e*P		Pn	02 24 37.4	+1.3
SMAR	**Somma**	**0.49**	**101**	*e*P		Pn	02 24 37.5	+1.1
UGLR	**Uglovaya**	**0.52**	**107**	*i* P		Pn	02 24 38.0	+1.6
SDLR	**Sedlovina**	**0.54**	**98**	*e*P		Pn	02 24 37.7	+1.3
APC	**Apacha**	**0.67**	**230**	*e*P		Pn	02 24 37.6	+0.9
NLC	**Nalytchevo**	**0.83**	**103**	P		Pn	02 24 38.6	+1.3
NLC				S		S	02 25 04.9	+0.3
MTVR	**Mutnovka**	**0.89**	**173**	S		S	02 25 06.5	+0.9
RUS	**Russkaya**	**0.98**	**161**	*i* P		Pn	02 24 39.0	+0.8
RUS				S		S	02 25 05.6	-0.4
ASAK	**Asacha**	**0.98**	**184**	*i* P		Pn	02 24 39.9	+1.6
SPN	**Mys Shipunski**	**1.24**	**101**	*i* P		Pn	02 24 40.5	+0.8
SPN				*e*S		S	02 25 08.1	-0.7
MIPR	**Malaya Ipel'ka**	**1.32**	**215**	P		Pn	02 24 40.1	-0.2
TUMR	**Tumrok**	**2.30**	**32**	*e*P		Pn	02 24 49.9	+1.5
MKZ	**Mys Kozlova**	**2.51**	**60**	*e*P		Pn	02 24 50.7	+0.5
MKZ				*e*S		S	02 25 25.2	-2.7
ESO	**Esso**	**2.60**	**9**	P		Pn	02 24 51.9	+0.7
SRDR	**Sredinnyy**	**3.12**	**18**	*e*P		Pn	02 24 57.7	+0.9
KRSR	**Krestovskiy**	**3.23**	**26**	*e*P		Pn	02 24 58.8	+0.9
BDR	**Baidarnaya**	**3.71**	**29**	*e*P		Pn	02 25 05.1	+1.8
SMKR	**Semkarok**	**3.80**	**30**	P		Pn	02 25 06.8	+2.5
BKI	**Bering**	**5.02**	**65**	*e*S		S	02 26 18.3	-1.2

*IDC **20** 02:28:53.6±2.7, 31.17N×49.72E, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.5/27, mbtmp3.6/8, Error ellipse: s-maj=61.5km s-min=32.2km az=142.0*
*THR **20** 02:28:54.0±0.3, 30.79N×49.56E, h37km±3km, ML3.6*
*CSEM **20** 02:28:57.8±0.3, 31.18N×49.72E, h2km, ML3.6, Error ellipse: s-maj=7.7km s-min=3.3km az=16.0*
*TEH **20** 02:29:00.1, 31.17N×49.75E, h15km, ML3.7*

ISC 20 02:28:58.2±1.8, 31.17N±0.05×49.72E±0.04, h8km±13km, n59, σ1.912/59, mb3.5/8, Western Iran

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SHGR	**Shooshtar-Gavs**	**1.22**	**320**	*e*Pg		**Pg**	**02 29 20.7**	**-0.9**
SHGR	**Shooshtar-Gavs**	**1.22**	**320**	*e*Pg		**Pg**	**02 29 20.7**	**-0.9**
IPIR	**Pirpir**	**1.81**	**33**	*e*Pn		**Pn**	**02 29 30.2**	**+0.1**
IPIR				*e*Sg		**Sb**	**02 29 56.9**	**+2.1**
IPIR				*e*			02 29 58.5	
	comp=Z,10µm,0.3s							
IPIR	**Pirpir**	**1.81**	**33**	*e*Pn		**Pn**	**02 29 30.2**	**+0.1**
IPIR				*e*Sg		**Sb**	**02 29 56.9**	**+2.1**
IGAR	**Gharneh**	**2.33**	**58**	*e*Pn		**Pn**	**02 29 37.9**	**+0.8**
IGAR				*e*			02 30 12.4	
	comp=Z,2µm,0.3s							
UMR	**Umm Al-Rimmam**	**2.36**	**228**	*e*P		**Pn**	**02 29 38.3**	**+1.0**
MIB	**Mutribah**	**2.46**	**237**	*e*P		**Pn**	**02 29 39.7**	**+1.0**
MIB				AML		AML	02 30 18.9	
	comp=Z,117nm,0.7s							
KHMZ	**Khomeyn**	**2.57**	**5**	*e*Pn		**Pn**	**02 29 40.7**	**+0.3**
KHMZ				AML		AML	02 30 22.9	
	comp=E,281nm,0.4s							
KHMZ				AML		AML	02 30 27.2	
	comp=N,149nm,0.4s							
KHMZ	**Khomeyn**	**2.57**	**5**	*e*Pn		**Pn**	**02 29 40.7**	**+0.3**
KBD	**Kabd**	**2.65**	**222**	*e*P		**Pn**	**02 29 42.5**	**+1.3**
KBD				AML		AML	02 30 24.8	
	comp=Z,42nm,0.4s							
IKLH	**Kolahrood**	**2.66**	**36**	*e*Pn		**Pn**	**02 29 42.4**	**+0.7**
IKLH				*e*			02 30 32.9	
	comp=Z,4µm,0.4s							
IKLH	**Kolahrood**	**2.66**	**36**	*e*Pn		**Pn**	**02 29 42.4**	**+0.7**
IZEF	**Zefreh**	**2.81**	**52**	*e*Pn		**Pn**	**02 29 44.3**	**+0.6**
IZEF				*e*			02 29 50.2	
	comp=Z,973nm,0.3s							
IZEF				*e*Sg		**Sb**	**02 30 26.4**	**+2.9**
IZEF	**Zefreh**	**2.81**	**52**	*e*Pn		**Pn**	**02 29 44.3**	**+0.6**
IZEF				*e*Sg		**Sb**	**02 30 26.4**	**+2.9**
RDF	**Al-Radifah**	**2.92**	**221**	*e*P		**Pn**	**02 29 46.2**	**+1.3**
RDF				AML		AML	02 30 30.2	
	comp=Z,79nm,0.6s							
NASN	**Na'in**	**3.09**	**57**	*e*Pn		**Pn**	**02 29 47.1**	**-0.6**
NASN	**Na'in**	**3.09**	**57**	*e*Pn		**Pn**	**02 29 47.1**	**-0.6**
ASAO	**Ashtian**	**3.38**	**4**	*e*Pn		**Pn**	**02 29 51.9**	**+0.3**
ASAO				Sn		**Sn**	**02 30 34.2**	**+2.2**
ASAO				AML		AML	02 30 55.1	
	comp=E,115nm,0.6s							
ASAO				AML		AML	02 30 59.5	
	comp=N,94nm,0.6s							
ASAO	**Ashtian**	**3.38**	**4**	*e*Pn		**Pn**	**02 29 51.9**	**+0.3**
ISAD	**Sadrabad**	**3.47**	**77**	*e*Pn		**Pn**	**02 29 53.2**	**+0.4**
ISAD				*e*			02 30 36.7	
	comp=Z,1µm,0.3s							
ISAD	**Sadrabad**	**3.47**	**77**	*e*Pn		**Pn**	**02 29 53.2**	**+0.4**
IKOM	**Komasi**	**3.53**	**329**	*e*Pn		**Pn**	**02 29 54.3**	**+0.8**
IKOM				*e*			02 30 42.5	
	comp=Z,1µm,0.1s							
IKOM	**Komasi**	**3.53**	**329**	*e*Pn		**Pn**	**02 29 54.3**	**+0.8**
GHVR	**GHOM**	**3.56**	**22**	*e*Pn		**Pn**	**02 29 54.2**	**+0.3**
GHVR				AML		AML	02 30 50.1	
	comp=N,64nm,0.6s							
GHVR				AML		AML	02 30 59.5	
	comp=E,76nm,0.6s							
GHVR	**GHOM**	**3.56**	**22**	*e*Pn		**Pn**	**02 29 54.2**	**+0.3**
IBDR	**Badra**	**3.75**	**302**	*e*Pn		**Pg**	**02 30 08.8**	**-1.2**
IBDR				*e*Sn		**Sg**	**02 31 01.9**	**+3.3**
IBDR				*i* Lg		Lg	02 31 17.1	
IBDR				*i* Sg		Sb	02 31 24.1	+34
IGHG	**Ghaleghazi**	**4.12**	**321**	*e*Pn		**Pn**	**02 30 02.6**	**+0.9**
IGHG				*e*			02 31 35.8	
	comp=Z,1µm,0.3s							
IGHG	**Ghaleghazi**	**4.12**	**321**	*e*Pn		**Pn**	**02 30 02.6**	**+0.9**
ICHK	**Chekchek**	**4.14**	**74**	*e*Pn		**Pn**	**02 30 02.1**	**+0.1**
ICHK				*e*			02 30 52.4	
	comp=Z,1µm,0.3s							
ICHK	**Chekchek**	**4.14**	**74**	*e*Pn		**Pn**	**02 30 02.1**	**+0.1**
IVRN	**Varamin**	**4.17**	**23**	*e*Pn		**Pn**	**02 30 02.5**	**+0.2**
IVRN				*e*			02 30 40.8	
	comp=Z,561nm,0.2s							
IVRN	**Varamin**	**4.17**	**23**	*e*Pn		**Pn**	**02 30 02.5**	**+0.2**
IMEH	**Mehriz**	**4.20**	**86**	*e*Pn		**Pn**	**02 30 03.0**	**+0.2**
IMEH				*e*			02 30 54.6	
	comp=Z,455nm,0.3s							
IMEH	**Mehriz**	**4.20**	**86**	*e*Pn		**Pn**	**02 30 03.0**	**+0.2**
IRAZ	**Razeghan**	**4.23**	**2**	*e*Pn		**Pn**	**02 30 03.6**	**+0.4**
IRAZ				*e*			02 31 22.9	
	comp=Z,841nm,0.4s							
IRAZ	**Razeghan**	**4.23**	**2**	*e*Pn		**Pn**	**02 30 03.6**	**+0.4**
SNGE	**Sanandaj**	**4.39**	**334**	*e*Pn		**Pn**	**02 30 04.4**	**-1.0**
SNGE				AML		AML	02 30 58.7	
	comp=E,43nm,0.6s							
SNGE				AML		AML	02 31 34.9	
	comp=N,36nm,0.6s							
SNGE	**Sanandaj**	**4.39**	**334**	*e*Pn		**Pn**	**02 30 04.4**	**-1.0**
ILIN	**Lien**	**4.40**	**329**	*e*Pn		**Pn**	**02 30 05.8**	**+0.3**
ILIN				*e*			02 31 04.7	
	comp=Z,1µm,0.2s							
ILIN	**Lien**	**4.40**	**329**	*e*Pn		**Pn**	**02 30 05.8**	**+0.3**
IR3	**Iran Long-Peri**	**4.43**	**14**	*e*Pn		**Pn**	**02 30 06.4**	**+0.5**
IR3	**Iran Long-Peri**	**4.43**	**14**	*e*Pn		**Pn**	**02 30 06.4**	**+0.5**
IDHR	**Dehrash**	**4.50**	**322**	*e*Pn		**Pn**	**02 30 07.5**	**+0.6**
IDHR				*e*			02 31 00.7	
	comp=Z,2µm,0.1s							
IDHR	**Dehrash**	**4.50**	**322**	*e*Pn		**Pn**	**02 30 07.5**	**+0.6**
BHD	**Baghdad**	**4.98**	**296**	*e*Pn		Pb	02 30 20.0	-5.7
BHD				*e*Pg		Pg	02 30 42.0	+8.3
BHD				*e*Sn		Sb	02 31 19.8	-6.0
BHD				*e*Sg		**Sg**	**02 31 38.0**	**-0.2**
IBAF	**Bafgh**	**5.02**	**84**	*e*Pn		**Pn**	**02 30 14.1**	**0.0**
IBAF				*e*			02 30 30.2	
	comp=Z,235nm,0.4s							
IBAF	**Bafgh**	**5.02**	**84**	*e*Pn		**Pn**	**02 30 14.1**	**0.0**
ISHM	**Shahmirzad**	**5.51**	**32**	*e*Pn		**Pn**	**02 30 21.0**	**+0.2**
ISHM	**Shahmirzad**	**5.51**	**32**	*e*Pn		**Pn**	**02 30 21.0**	**+0.2**
BRTR	**Keskin Array B**	**15.62**	**308**	Pn		**P**	**02 32 42.0**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=125,slow=14,SNR=5.5							
AKTO	**Aktyubinsk**	**20.22**	**15**	P		**P**	**02 33 31.6**	**-1.9**
	comp=Z,0.9nm,0.5s,baz=180,slow=11,SNR=2.4							
MLR	**Muntele Rosu**	**23.38**	**314**	P		**P**	**02 34 06.6**	**-0.9**
	comp=Z,1.0nm,0.9s,baz=100,slow=8.4,SNR=3.6							
AKASG	**Malin Array Be**	**24.76**	**328**	P		P	02 34 15.2	-5.0
	comp=Z,0.4nm,0.4s,baz=148,slow=8.6,SNR=3.2							
BVAR	**Borovoye Array**	**26.51**	**29**	P		P	02 34 31.9	-4.1
	comp=Z,0.5nm,0.5s,baz=236,slow=6.9,SNR=4.1							
FINES	**FINESS Array B**	**34.01**	**340**	P		P	02 35 38.6	-3.7
	comp=Z,3.3nm,0.9s,baz=164,slow=7.7,SNR=7.7							
NOA	**NORSAR Array B**	**39.07**	**331**	P		**P**	**02 36 23.4**	**-2.1**
	comp=Z,0.9nm,0.8s,baz=121,slow=8.3,SNR=2.8							
TORD	**Torodi Ar. Bea**	**47.55**	**259**	P		P	02 37 31.5	-3.1
	comp=Z,0.3nm,0.7s,baz=63,slow=7.8,SNR=2.5							
ILAR	**Eielson Array**	**83.50**	**7**	P		P	02 41 23.6	-2.7
	comp=Z,0.4nm,0.7s,baz=332,slow=4.3,SNR=5.8							
YKA	**Yellowknife Ar**	**85.81**	**353**	P		P	02 41 33.3	-4.7
	comp=Z,0.4nm,0.7s,baz=14,slow=5.9,SNR=3.3							

*ATH **20** 02:31:43.4, 41.41N×19.49E, h15km, MD3.8/8*
*ISCJB **20** 02:31:44.7±0.6, 41.38N±0.02×19.48E±0.04, h3km±4km, Error ellipse: s-maj=5.9km s-min=2.9km az=147.9*
*THE **20** 02:31:45.1, 41.50N×19.49E, h7km±1km, ML2.7/4, Error ellipse: s-maj=2.5km s-min=1.2km az=6.0*
*CSEM **20** 02:31:45.2±0.2, 41.36N×19.46E, h5km, ML2.6, Error ellipse: s-maj=5.2km s-min=2.6km az=62.0*
*PDG **20** 02:31:46.0±0.4, 41.42N×19.54E, h20km, ML2.5/9, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*BEO **20** 02:31:46.5±0.8, 41.38N×19.51E, h8km±3km, ML2.6/8*

ISC 20 02:31:45.5±1.0, 41.39N±0.02×19.48E±0.03, h12km±8km, n70, σ0.988/107, 5C-7D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
TIR	**Tirane**	**0.30**	**98**	P		**Pg**	**02 31 51.7**	**+0.1**
TIR				S		**Sg**	**02 31 55.9**	**+0.3**
TIR	**Tirane**	**0.30**	**98**	*e*Pg		**Pg**	**02 31 51.7**	**+0.1**
TIR				*i* Sg		**Sg**	**02 31 56.3**	**+0.7**
TIR	**Tirane**	**0.30**	**98**	P		**Pg**	**02 31 51.7**	**+0.1**
TIR				S		**Sg**	**02 31 55.9**	**+0.3**
TIR				*i* Sg		**Sg**	**02 31 56.3**	**+0.7**
ULC	**Ulcinj**	**0.60**	**343**	*e*Pg		**Pb**	**02 31 57.5**	**-0.5**
ULC				*e*Sg		**Sb**	**02 32 06.9**	**+0.5**
ULC	**Ulcinj**	**0.60**	**343**	*e*Pg		**Pb**	**02 31 57.5**	**-0.5**
ULC				*e*Sg		**Sb**	**02 32 06.9**	**+0.5**
PHP	**Peshkopia**	**0.78**	**68**	P		**Pg**	**02 31 59.0**	**-1.6**
PHP	**Peshkopia**	**0.78**	**68**	P		**Pg**	**02 31 59.0**	**-1.6**
BUM	**Brajici-Budva**	**1.01**	**335**	*e*Pg		**Pg**	**02 32 03.9**	**-1.0**
BUM				*e*Sg		**Sn**	**02 32 20.2**	**+0.4**
BUM	**Brajici-Budva**	**1.01**	**335**	*e*Pg		**Pg**	**02 32 03.9**	**-1.0**
BUM				*e*Sg		**Sn**	**02 32 20.2**	**+0.4**
PDG	**Podgorica**	**1.05**	**351**	*e*Pg		**Pb**	**02 32 05.5**	**-0.2**
PDG	**Podgorica**	**1.05**	**351**	*e*Pg		**Pb**	**02 32 05.5**	**-0.2**
PDG				*e*Sg		**Sn**	**02 32 21.6**	**+0.9**
TTG	**Podgorica**	**1.05**	**351**	*i*Pg		**Pg**	**02 32 05.2**	**-0.6**
TTG				*e*Sg		**Sn**	**02 32 21.6**	**+0.9**
PVY	**Plav**	**1.25**	**16**	*i*Pg		**Pb**	**02 32 08.0**	**-1.2**
PVY				*e*Sg		**Sn**	**02 32 27.0**	**+1.0**
HCY	**Herceg Novi**	**1.28**	**326**	*i*Pg		**Pg**	**02 32 10.2**	**0.0**
HCY				*e*Sg		**Sn**	**02 32 29.1**	**+2.6**
HCY	**Herceg Novi**	**1.28**	**326**	*i*Pg		**Pg**	**02 32 10.2**	**0.0**
HCY				*e*Sg		**Sn**	**02 32 29.1**	**+2.6**
BIA	**Bitola**	**1.44**	**104**	P		**Pn**	**02 32 11.3**	**-0.3**
BIA	**Bitola**	**1.44**	**104**	*e*Pn		**Pn**	**02 32 10.8**	**-0.8**
BIA	**Bitola**	**1.44**	**104**	P		**Pn**	**02 32 11.3**	**-0.3**
NKY	**Niksic**	**1.47**	**346**	*i*Pg		**Pb**	**02 32 12.7**	**-0.1**
NKY				*e*Sg		**Sg**	**02 32 33.2**	**+0.5**
NKY	**Niksic**	**1.47**	**346**	*i*Pg		**Pb**	**02 32 12.7**	**-0.1**
NKY				*e*Sg		**Sg**	**02 32 33.2**	**+0.5**
BEY	**Berane**	**1.51**	**12**	*e*Sg		**Sg**	**02 32 33.7**	**-0.5**
IVA	**Berane**	**1.51**	**12**	*e*Pg		**Pn**	**02 32 13.0**	**+0.4**
IVA				*e*Sg		**Sg**	**02 32 33.7**	**-0.5**
NEST	**Nestorio**	**1.54**	**129**	P		**Pb**	**02 32 13.8**	**

MOS ***20*** *02:52:59.1±0.8,39˚.37N×143˚.15E,h33km,mb5.5/94, MS5.4/28,Error ellipse: s-maj=6.5km s-min=3.7km az=106.0*

GCMT ***20*** *02:53:00.8±0.2,39˚.16N×143˚.44E,h22km,MW5.3, Moment Tensor Solution. s63,c108; s91,c166; Moment tensor: Scale 10^{17}Nm; M_{rr}0.00; $M_{\theta\theta}$0.00; $M_{\phi\phi}$0.00; $M_{r\theta}$0.00; $M_{r\phi}$0.00; $M_{\theta\phi}$0.00; Best double couple: M_o1.20000×10^{17} NP1:ϕ_s196.00000°,δ18.00000°, λ85.00000°. NP2:ϕ_s22.00000°,δ72.00000°,λ92.00000°. Principal axes: T 1.1400, Plg63.0000°, Azm294.0000°; N 0.0500, Plg2.0000°, Azm201.0000°; P -1.1900, Plg27.0000°, Azm110.0000°; Data Used: II IU IC G CN.*

NIED ***20*** *02:53:00,39˚.10N×143˚.40E,h23km,Mw5.3 Best double couple: M_o9.35000×10^{16} NP1:ϕ_s23.00000°,δ63.00000°, λ91.00000°. NP2:ϕ_s199.00000°,δ27.00000°,λ87.00000°.*

DJA ***20*** *02:53:05.6±3.7,39˚N±9˚×14˚3E±1˚4,h94km±34km, M5.2/21,mB5.7/14,mb5.2/21,Mw(mB)5.2/14*

ISC 20 02:52:58.2±0.3, 39.15N±0.03×143.25E±0.03, h26km±1km, h25km:pP-P, n958, σ1s31/1132, mb5.2/285, MS5.3/74, 140C-48D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.19**	**291**	⇓P	**Pn**	**02 53 18.4**	**-0.8**
MIYJ				*e*S	**Sn**	**02 53 34.6**	**+0.1**
OFUJ	**Ofunato**	**1.23**	**267**	⇓P	**Pn**	**02 53 18.9**	**-0.9**
OFUJ				*e*S	**Sn**	**02 53 35.7**	**+0.1**
JTH	**Tanohata**	**1.33**	**307**	⇑P	**Pn**	**02 53 20.5**	**-0.6**
JOM	**Ohasama**	**1.56**	**283**	⇑P	**Pn**	**02 53 24.2**	**0.0**
JMK	**Ichinoseki**	**1.60**	**264**	⇑P	**Pn**	**02 53 24.5**	**-0.2**
JIO	**Ouri**	**1.64**	**246**	⇑P	**Pn**	**02 53 24.4**	**-1.0**
JIO				*e*S	**Sn**	**02 53 44.7**	**-0.9**
JKZ	**Kuzumaki**	**1.71**	**300**	⇑P	**Pn**	**02 53 26.3**	**0.0**
JANG	**Nango**	**1.81**	**313**	⇑P	**Pn**	**02 53 26.7**	**-1.0**
JRG	**Rokugo**	**2.05**	**278**	⇑P	**Pn**	**02 53 31.3**	**+0.3**
JOU	**Okura**	**2.17**	**250**	⇑P	**Pn**	**02 53 32.4**	**-0.3**
JOU				*e*S	**Sn**	**02 54 00.1**	**+1.4**
JYK	**Kaneyama**	**2.27**	**265**	⇑P	**Pn**	**02 53 34.3**	**+0.3**
JAH	**Hinai**	**2.27**	**298**	⇑P	**Pn**	**02 53 34.3**	**+0.3**
JMM	**Marumori**	**2.32**	**237**	⇑P	**Pn**	**02 53 33.4**	**-1.2**
JTM	**Tenmabayashi**	**2.34**	**315**	⇑P	**Pn**	**02 53 34.5**	**-0.5**
JTM				*e*S	**Sn**	**02 54 03.7**	**+0.8**
JYW	**Yuwa**	**2.39**	**280**	⇑P	**Pn**	**02 53 36.4**	**+0.7**
JFK	**Kawauchi**	**2.58**	**227**	P	**Pn**	**02 53 36.7**	**-1.7**
JYS	**Shirataka**	**2.66**	**251**	⇑P	**Pn**	**02 53 39.6**	**+0.2**
JOT	**Ohata**	**2.80**	**324**	P	**Pn**	**02 53 41.2**	**0.0**
JOT				*e*S	**Sn**	**02 54 14.2**	**+0.1**
JFT	**Otama**	**2.81**	**236**	⇑P	**Pn**	**02 53 41.2**	**-0.3**
JFT				*e*S	**Sn**	**02 54 15.5**	**+0.9**
ONAJ	**Iwakimizuishiy**	**2.82**	**224**	⇑P	**Pn**	**02 53 39.9**	**-1.7**
JYA	**Atsumi**	**2.82**	**260**	⇑P	**Pn**	**02 53 42.0**	**+0.5**
ERM	**Erimo**	**2.86**	**359**	Pn	**Pn**	**02 53 41.8**	**-0.3**
	2μm,1.0s,SNR=68						
ERM	**Erimo**	**2.86**	**359**	⇓*e*P	**Pn**	**02 53 40.4**	**-1.7**
ERM				pmax	pmax		
	comp=Z,337nm,1.0s						
ERM	**Erimo**	**2.86**	**359**	*e*Pn	**Pn**	**02 53 40.6**	**-1.5**
JEM	**Erimo**	**2.86**	**359**	⇑P	**Pn**	**02 53 40.4**	**-1.7**
JTB	**Tobi-shima**	**2.87**	**272**	⇑P	**Pn**	**02 53 42.3**	**0.0**
JIW	**Iwasaki**	**2.88**	**301**	P	**Pn**	**02 53 43.9**	**+1.4**
JSI2	**Shiura 2**	**2.90**	**312**	P	**Pn**	**02 53 42.6**	**0.0**
JAW	**Awa shima**	**3.21**	**259**	⇑P	**Pn**	**02 53 47.3**	**+0.5**
JFY	**Yanaizu**	**3.29**	**239**	P	**Pn**	**02 53 48.2**	**+0.1**
JHO	**Hitachi**	**3.31**	**221**	⇑P	**Pn**	**02 53 46.0**	**-2.3**
JHK	**Hiroka**	**3.84**	**242**	P	**Pn**	**02 53 55.7**	**+0.1**
JKT	**Katashina**	**3.96**	**234**	P	**Pn**	**02 53 59.2**	**+1.9**
JAG	**Ashikaga**	**4.06**	**229**	⇑P	**Pn**	**02 53 57.9**	**-0.7**
JSD	**Sado**	**4.07**	**256**	⇑P	**Pn**	**02 53 58.7**	**0.0**
JRY	**Ryogami san**	**4.66**	**229**	P	**Pn**	**02 54 06.2**	**-0.7**
JKK2	**Kamakawa 2**	**4.73**	**356**	P	**Pn**	**02 54 06.7**	**-1.2**
BSO4	**Boso 4**	**4.76**	**210**	P	**Pn**	**02 54 06.9**	**-1.3**
MAJO	**Matsushiro**	**4.77**	**238**	*e*P	**Pn**	**02 54 09.5**	**+1.1**
MAJO	**Matsushiro**	**4.77**	**238**	*e*Pn	**Pn**	**02 54 09.5**	**+1.1**
MAT	**Matsushiro**	**4.77**	**238**	P	**Pn**	**02 54 09.5**	**+1.1**
MAT				S	**Sn**	**02 55 08.2**	**+5.4**
MAT	**Matsushiro**	**4.77**	**238**	P	**Pn**	**02 54 09.4**	**+1.1**
JTKR	**Abashiri--Toko**	**4.84**	**6**	⇑P	**Pn**	**02 54 07.4**	**-1.9**
BSO1	**Boso 1**	**4.84**	**203**	P	**Pn**	**02 54 06.8**	**-2.1**
JMP	**Maruseppu**	**4.85**	**1**	P	**Pn**	**02 54 07.5**	**-2.0**
BSO3	**Boso 3**	**4.86**	**208**	P	**Pn**	**02 54 06.9**	**-2.5**
JNG	**Nsakai**	**4.92**	**238**	P	**Pn**	**02 54 11.3**	**+0.8**
ASAJ	**Asahikawa**	**4.99**	**355**	*e*Pn	**Pn**	**02 54 10.7**	**-0.6**
ASAJ				Sn	**Sn**	**02 55 08.6**	**+0.4**
ASAJ	**Asahikawa**	**4.99**	**355**	Pn	**Pn**	**02 54 10.7**	**-0.6**
	comp=Z,16nm,0.3s,baz=208,slow=15,SNR=104						
ASAJ				Sn	**Sn**	**02 55 08.6**	**+0.4**
	comp=Z,12nm,0.3s,baz=54,slow=31,SNR=5.3						
ASAJ				LR	LR	02 56 53.8	
	comp=Z,15μm,20.2s,baz=187,slow=47						
JOD2	**Odawara 2**	**5.11**	**222**	P	**Pn**	**02 54 12.1**	**-1.0**
JNT	**Takato**	**5.22**	**233**	P	**Pn**	**02 54 15.1**	**+0.5**
JYN	**Shimod**	**5.23**	**227**	P	**Pn**	**02 54 14.6**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**5.26**	**21**	*d*/*i*P	**Pn**	**02 54 12.3**	**-2.7**
YUK				*i* S	**Sn**	**02 55 09.3**	**-5.4**
YUK				pmax	pmax		
	comp=E,36nm,0.1s						
YUK				pmax	pmax		
	comp=N,80nm,0.3s						
YUK				pmax	pmax		
	comp=Z,180nm,0.3s						
YUK				smax	smax		
	comp=E,623nm,0.3s						
YUK				smax	smax		
	comp=N,2μm,1.0s						
YUK				MLR	MLR		
	comp=Z,6μm,18.0s						
YUK				MLR	MLR		
	comp=N,4μm,18.0s						
YUK				MLR	MLR		
	comp=E,4μm,18.0s						
JIM2	**Oshima 3**	**5.38**	**216**	P	**Pn**	**02 54 14.5**	**-2.3**
JGN	**Niukaw**	**5.54**	**240**	P	**Pn**	**02 54 20.5**	**+1.4**
JNY	**Yasuok**	**5.73**	**230**	P	**Pn**	**02 54 21.8**	**+0.2**
SHZ3	**Shizuoka 3**	**5.73**	**226**	P	**Pn**	**02 54 22.3**	**+0.6**
HMMJ	**Hamamatsu 2**	**6.16**	**228**	P	**Pn**	**02 54 27.9**	**+0.4**
JGM	**Miyama**	**6.24**	**239**	P	**Pn**	**02 54 29.6**	**+1.0**
JHJ	**Hachijo jima 2**	**6.64**	**206**	Pn	**Pn**	**02 54 31.6**	**-2.4**
	comp=E,25nm,0.3s,baz=239,slow=23,SNR=15						
JHJ				Sn	Sn	02 55 41.9	-7.0
	comp=E,81nm,0.3s,baz=237,slow=23,SNR=6.4						
KUR	**Kuril'sk**	**6.98**	**28**	⇑*i*P	**Pn**	**02 54 38.4**	**-0.2**
KUR				*i* S	**Sn**	**02 55 51.6**	**-5.5**
KUR				pmax	pmax		
	comp=Z,131nm,0.8s						
KUR				pmax	pmax		
	comp=N,52nm,0.8s						
KUR				pmax	pmax		
	comp=E,13nm,0.2s						
KUR				smax	smax		
	comp=E,535nm,0.9s						
KUR				smax	smax		
	comp=N,220nm,0.9s						
KUR				MLR	MLR		
	comp=N,2μm,15.0s						
KUR				MLR	MLR		
	comp=E,5μm,15.0s						
KUR				MLR	MLR		
	comp=Z,2μm,15.0s						
JKN2	**Miekihoku**	**7.45**	**231**	P	**Pn**	**02 54 46.1**	**+1.0**
YSS	**Yuzh-Sakhalins**	**7.81**	**357**	*o*e*P	**Pn**	**02 54 50.0**	**0.0**
YSS				*e*S	**Sn**	**02 56 17.0**	**-0.5**
YSS				pmax	pmax		
	comp=N,70nm,0.8s						
YSS				pmax	pmax		
	comp=E,80nm,0.8s						
YSS				pmax	pmax		
	comp=Z,80nm,0.8s						
YSS				smax	smax		
	comp=E,2μm,9.0s						
YSS				MLR	MLR		
	comp=N,7μm,16.0s						
YSS				MLR	MLR		
	comp=E,6μm,16.0s						
YSS				MLR	MLR		
	comp=Z,6μm,16.0s						
VLA	**Vladivostok**	**9.45**	**298**	*i* P	**Pn**	**02 55 13.8**	**+1.3**
VLA				pmax	pmax		
	comp=Z,223nm,1.9s						
USRK	**Ussuriysk Arra**	**9.82**	**305**	Pn	Pn	02 55 21.1	+3.5
	comp=Z,3.6nm,0.3s,baz=100,slow=12,SNR=54						
USRK				LR	LR	02 58 57.2	
	comp=Z,12μm,19.7s,baz=104,slow=37						
UGL	**Uglegorsk**	**9.96**	**355**	*e*P	**Pn**	**02 55 19.0**	**-0.5**
UGL				pmax	pmax		
	comp=Z,134nm,1.0s						
UGL				MLR	MLR		
	comp=N,6μm,20.0s						
UGL				MLR	MLR		
	comp=E,15μm,20.0s						
HABR	**Khabarovsk**	**11.04**	**330**	*e*P	**Pn**	**02 55 32.3**	**-1.9**
HABR				*e*		02 57 36.3	
HABR				pmax	pmax		
	comp=E,79nm,2.7s						
HABR				pmax	pmax		
	comp=Z,90nm,1.8s						
HABR				pmax	pmax		
	comp=N,70nm,2.7s						
HABR				MLR	MLR		
	comp=N,7μm,17.0s						
HABR				MLR	MLR		
	comp=Z,10μm,17.0s						
HABR				MLR	MLR		
	comp=E,9μm,13.0s						
MDJ	**Mudanjiang**	**11.55**	**303**	P	**Pn**	**02 55 42.4**	**+1.1**
MDJ				sP		02 55 54.1	
MDJ				S	Sn	02 57 55.8	+6.4
MDJ				SS	**SnSn**	**02 58 07.4**	**+6.2**
MDJ				PcP	**PcP**	**03 01 31.9**	**+0.2**
MDJ				PcS	**PcS**	**03 05 04.4**	**-1.1**
MDJ				pmax	pmax		
	comp=Z,110nm,1.7s						
MDJ				pmax	pmax		
	comp=Z,2μm,8.9s						
MDJ				LR	LR		
	comp=N,7μm,15.3s						
MDJ				LR	LR		
	comp=E,11μm,15.0s						
MDJ				LR	LR		
	comp=Z,18μm,15.6s						
MDJ	**Mudanjiang**	**11.55**	**303**	*e*Pn	**Pn**	**02 55 43.4**	**+2.1**
	comp=Z,121nm,1.1s						
JNU	**Nakatsue**	**11.67**	**243**	*e*Pn	**Pn**	**02 55 43.1**	**+0.1**
JNU	**Nakatsue**	**11.67**	**243**	Pn	**Pn**	**02 55 43.0**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=64,slow=6.9,SNR=21						
JNU				LR	LR	03 00 45.6	
	comp=Z,13μm,18.2s,baz=53,slow=40						
KSRS	**Korea Array**	**12.16**	**267**	Pn	**Pn**	**02 55 52.8**	**+3.0**
	comp=Z,0.8nm,0.3s,baz=82,slow=14,SNR=20						
KSRS				LR	LR	03 00 13.4	
	comp=Z,8μm,18.6s,baz=75,slow=36						
KSAR	**Wonju Array Be**	**12.20**	**267**	Pn	**Pn**	**02 55 52.8**	**+2.6**
KLR	**Kul'dur**	**13.01**	**324**	*e*P	Pn	02 55 57.0	-4.2
KLR				pmax	pmax		
	comp=Z,2μm,11.5s						
KLR				MLR	MLR		
	comp=E,7μm,13.0s						
KLR				MLR	MLR		
	comp=Z,24μm,13.0s						
CN2	**Changchun**	**14.13**	**295**	*e*P	**Pn**	**02 56 15.3**	**-1.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=N,9μm,15.0s						
CN2				LR	LR		
	comp=E,8μm,15.0s						
CN2				LR	LR		
	comp=Z,9μm,17.0s						
SKR	**Severo-Kuril's**	**14.67**	**34**	*e*P	**Pn**	**02 56 25.4**	**+1.6**
SNY	**Shenyang**	**15.21**	**286**	⇓P	**Pn**	**02 56 32.3**	**+1.2**
SNY				S	**Sn**	**02 59 24.6**	**+6.0**
SNY				pmax	pmax		
	comp=Z,24nm,1.5s						
SNY				pmax	pmax		
	comp=Z,1μm,14.5s						
SNY				LR	LR		
	comp=N,2μm,13.8s						
SNY				LR	LR		
	comp=E,8μm,17.4s						
SNY				LR	LR		
	comp=Z,9μm,18.6s						
DL2	**Dalian**	**16.81**	**276**	P	**Pn**	**02 56 51.9**	**+0.3**
DL2				S	**Sn**	**03 00 01.4**	**+3.9**
DL2				pmax	pmax		
	comp=Z,170nm,1.0s						
DL2				pmax	pmax		
	comp=Z,2μm,9.3s						
DL2				LR	LR		
	comp=N,3μm,14.9s						
DL2				LR	LR		
	comp=E,3μm,16.8s						
DL2				LR	LR		
	comp=Z,5μm,17.1s						
PEA0B	**Petropavlovsk-**	**17.13**	**31**	*e*Pn	**Pn**	**02 56 56.0**	**+0.3**
PETK	**Petropavlovsk-**	**17.13**	**31**	P	**Pn**	**02 56 54.6**	**-1.0**
PETK	**Petropavlovsk-**	**17.13**	**31**	Pn	**Pn**	**02 56 54.6**	**-1.0**
PETK	**Petropavlovsk-**	**17.13**	**31**	Pn	**Pn**	**02 56 54.6**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=207,slow=9.6,SNR=11						
PET	**Petropavlovsk**	**17.45**	**32**	*e*P	**P**	**02 57 00.8**	**+0.1**
PET				*e*S	**Sn**	**03 00 14.7**	**+1.7**
PET				pmax	pmax		
	comp=Z,600nm,3.5s						
PET				pmax	pmax		
	comp=Z,45nm,0.9s						
PET				MLR	MLR		
	comp=Z,3μm,14.0s						
PET				MLR	MLR		
	comp=Z,3μm,15.0s						
JOW	**Kunigami**	**17.54**	**230**	*e*Pn	**Pn**	**02 57 00.8**	**-0.1**
	comp=Z,34nm,1.2s						
HIA	**Hailar**	**19.58**	**309**	*e*P	**P**	**02 57 21.4**	**-2.8**
	comp=Z,134nm,1.0s						
SSE	**Sheshan**	**19.73**	**253**	⇓P	**Pn**	**02 57 26.6**	**-0.8**
SSE				pP	**pP**	**02 57 33.1**	**+0.3**
SSE				S	**S**	**03 01 03.9**	**-2.9**
SSE				sS	**sS**	**03 01 15.9**	**-2.2**
SSE				pmax	pmax		
	comp=Z,83nm,0.9s						
SSE				pmax	pmax		
	comp=Z,660nm,9.1s						
SSE				LR	LR		
	comp=N,4μm,16.1s						
SSE				LR	LR		
	comp=E,2μm,16.1s						
SSE				LR	LR		
	comp=Z,4μm,15.9s						
BJI	**Beijing**	**20.86**	**281**	P	**P**	**02 57 35.4**	**-2.7**
BJI				S	**S**	**03 01 32.1**	**+2.7**
BJI				pmax	pmax		
	comp=Z,47nm,1.1s						
BJI				pmax	pmax		
	comp=Z,740nm,13.2s						
BJI				LR	LR		
	comp=N,3μm,13.1s						
BJI				LR	LR		
	comp=E,8μm,15.2s						
BJI				LR	LR		
	comp=Z,4μm,16.1s						
TIA	**Tai'an**	**20.86**	**270**	⇑P	**P**	**02 57 35.6**	**-2.6**
TIA				LR	LR		
	comp=N,4μm,13.4s						
TIA				LR	LR		
	comp=E,7μm,14.9s						
TIA				LR	LR		
	comp=Z,8μm,14.3s						
BJT	**Baijiatuau**	**20.87**	**281**	*e*P	**P**	**02 57 35.4**	**-2.8**
	comp=Z,113nm,0.9s						
NJ2	**Nanjing**	**21.03**	**258**	*e*P	**P**	**02 57 41.5**	**+1.6**
NJ2				pP	**pP**	**02 57 48.9**	**+1.9**
NJ2				sP	**sP**	**02 57 52.6**	**+2.3**
NJ2				PP	**PnPn**	**02 58 03.6**	**+4.5**
NJ2				pmax	pmax		
	comp=Z,40nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,710nm,9.9s						
CLNS	**Chul'man**	**21.42**	**332**	*c*/*i*P	**P**	**02 57 43.0**	**-1.0**
CLNS				*e*		02 57 55.2	
CLNS				*e*S	**S**	**03 01 38.7**	**-1.6**
CLNS				*e*		03 01 45.4	
CLNS				*e*SS	**SnSn**	**03 02 11.9**	**+8.1**
CLNS				pmax	pmax		
	comp=Z,43nm,0.8s						
CLNS				pmax	pmax		
	comp=N,58nm,1.2s						
CLNS				pmax	pmax		
	comp=E,24nm,1.0s						
CLNS				pmax	pmax		
	comp=E,43nm,1.1s						
CLNS				pmax	pmax		
	comp=N,52nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,60nm,0.9s						
CLNS				smax	smax		
	comp=E,322nm,11.9s						
CLNS				smax	smax		
	comp=N,492nm,12.7s						
CLNS				MLR	MLR		
	comp=Z,6μm,17.0s						
CLNS				MLR	MLR		
	comp=N,6μm,16.0s						
CLNS				MLR	MLR		
	comp=E,4μm,15.0s						
TATO	**Taipei**	**23.16**	**239**	*e*P	**P**	**02 58 01.2**	**-1.5**
	comp=E,201nm,1.3s						
CIT	**Chita**	**24.25**	**312**	*e*P	P	02 58 06.9	-6.1
CIT				*e*		02 58 20.5	
CIT				pmax	pmax		
	comp=Z,461nm,2.5s						
HHC	**Hu-ho-hao-te**	**24.27**	**284**	*e*P	**P**	**02 58 10.9**	**-2.4**
HHC				pP	**pP**	**02 58 17.4**	**-3.5**
HHC				sP	**sP**	**02 58 20.8**	**-3.3**
HHC				PP	**PnPn**	**02 58 46.4**	**+2.9**
HHC				S	**S**	**03 02 25.6**	**-5.0**
HHC				sS	sS	03 02 34.9	-8.2
HHC				SS	**SnSn**	**03 03 17.5**	**+3.6**
HHC				PcS	**PcS**	**03 05 32.8**	**+0.1**
HHC				pmax	pmax		
	comp=E,84nm,1.0s						
HHC				pmax	pmax		
	comp=Z,1μm,5.0s						
HHC				LR	LR		
	comp=E,17μm,15.5s						
HHC				LR	LR		
	comp=Z,22μm,15.5s						
SSLB	**Suanglung**	**24.33**	**238**	*e*P	**P**	**02 58 11.9**	**-1.9**
	comp=Z,54nm,0.9s						
YAK	**Yakutsk**	**24.37**	**344**	*e*P	**P**	**02 58 12.1**	**-1.8**
YAK				*e**PP	**pP**	**02 58 21.6**	**+0.1**
YAK				*e*S	**S**	**03 02 29.8**	**-1.7**
YAK				pmax	pmax		
	comp=Z,175nm,0.9s						
YAK				pmax	pmax		
	comp=N,59nm,1.3s						
YAK				pmax	pmax		
	comp=E,39nm,1.1s						
YAK				pmax	pmax		
	comp=Z,125nm,0.9s						
YAK				pmax	pmax		
	comp=N,118nm,1.5s						
YAK				pmax	pmax		
	comp=E,43nm,1.2s						
YAK				smax	smax		
	comp=E,2μm,7.8s						
YAK				smax	smax		
	comp=N,1μm,7.2s						
YAK				MLR	MLR		
	comp=Z,4μm,14.0s						
YAK				MLR	MLR		
	comp=N,4μm,16.0s						
YAK				MLR	MLR		
	comp=E,2μm,14.0s						
YULB	**Yu-li**	**24.38**	**236**	*e*P	**P**	**02 58 10.8**	**-3.5**
	comp=E,17nm,0.6s						
FX1	**Attu Island--F**	**24.68**	**46**	*e*P	**P**	**02 58 18.4**	**+1.6**
TPUB	**Ta-pu**	**24.88**	**237**	*e*P	**P**	**02 58 16.1**	**-2.7**
	comp=E,289nm,1.9s						
TWG	**Pinlang**	**24.93**	**236**	*e*P	**P**	**02 58 19.2**	**-0.1**
	comp=E,231nm,0.9s						
WHN	**Wuhan**	**25.15**	**259**	⇓P	**P**	**02 58 21.3**	**+0.1**
WHN				pP	**pP**	**02 58 30.6**	**+1.8**
WHN				LR	LR		
	comp=N,7μm,13.9s						
WHN				LR	LR		
	comp=E,18μm,14.7s						
WHN				LR	LR		
	comp=Z,19μm,14.5s						
BTO	**Baotou**	**25.46**	**284**	*e*P	**P**	**02 58 22.0**	**-2.1**
ULN	**Ulaanbaatar**	**27.45**	**300**	P	**P**	**02 58 42.5**	**+0.4**
	SNR=31						
ULN	**Ulaanbaatar**	**27.45**	**300**	*e*P	**P**	**02 58 42.4**	**+0.3**
	comp=Z,48nm,1.0s						
ULN	**Ulaanbaatar**	**27.45**	**300**	P	**P**	**02 58 42.5**	**+0.4**
	comp=Z,74nm,1.2s,comp=Z,2μm						
SONM	**Songino Array**	**27.89**	**300**	P	**P**	**02 58 46.7**	**+0.7**
SONM				ScP	**ScP**	**03 05 41.6**	**+1.5**
SONM	**Songino Array**	**27.89**	**300**	P	**P**	**02 58 46.7**	**+0.7**
	comp=Z,28nm,0.6s,baz=92,slow=8.9,SNR=127						
SONM				ScP	**ScP**	**03 05 41.6**	**+1.5**
	comp=Z,2.2nm,1.1s,baz=90,slow=1.4,SNR=5.0						
SONM				LR	LR	03 10 27.2	
	comp=Z,7μm,18.2s,baz=79,slow=38						
XAN	**Xi'an**	**27.93**	**270**	P	**P**	**02 58 45.1**	**-1.2**
XAN				pP	**pP**	**02 58 52.4**	**-1.6**
XAN				sP	**sP**	**02 58 55.8**	**-1.4**
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
XAN				pmax	pmax		
	comp=Z,170nm,9.8s						
XAN				LR	LR		
	comp=N,1μm,13.4s						
XAN				LR	LR		
	comp=E,1μm,12.2s						
XAN				LR	LR		
	comp=Z,2μm,12.6s						
ENH	**Enshi**	**29.00**	**263**	*e*P	**P**	**02 58 55.2**	**-0.7**
	comp=Z,107nm,0.8s						
IRK	**Irkutsk**	**29.83**	**309**	*e*P	**P**	**02 59 02.8**	**-0.2**
IRK				pmax	pmax		
	comp=Z,78nm,1.8s						
TLY	**Talaya**	**30.11**	**308**	*e*P	**P**	**02 59 06.0**	**+0.4**
TLY				*e*S	**S**	**03 04 03.5**	**+0.9**
TLY				*e*SS	**ScP**	**03 05 44.5**	**-2.4**
TLY				pmax	pmax		
	comp=Z,66nm,1.5s						
TLY				MLR	MLR		
	comp=Z,5μm,15.0s						
TLY	**Talaya**	**30.11**	**308**	P	**P**	**02 59 05.9**	**+0.4**
	comp=Z,151nm,1.5s,SNR=11						
ZAK	**Zakamensk**	**30.17**	**305**	⇓*i*P	**P**	**02 59 05.9**	**-0.2**
ZAK				*e*		02 59 16.2	
ZAK				pmax	pmax		
	comp=Z,118nm,0.9s						
LZH	**Lanzhou**	**31.20**	**277**	*e*P	**P**	**02 59 16.3**	**+0.9**
LZH				pP	**pP**	**02 59 23.3**	**+0.2**
LZH				sP	**sP**	**02 59 25.5**	**-0.8**
LZH				PP	**PnPn**	**03 00 16.4**	**-1.1**
LZH				*e*S	**S**	**03 04 19.6**	**-0.6**
LZH				sS	**sS**	**03 04 31.6**	**-1.2**
LZH				pmax	pmax		
	comp=Z,44nm,1.0s						
LZH				pmax	pmax		
	comp=Z,200nm,4.8s						
LZH				LR	LR		
	comp=N,2μm,12.1s						
LZH				LR	LR		
	comp=E,7μm,13.7s						
LZH				LR	LR		
	comp=Z,7μm,13.6s						
BILL	**Bilibino**	**31.59**	**16**	⇓*i*P	**P**	**02 59 18.4**	**+0.1**
BILL				*e*		03 00 22.2	
BILL				*i* S	**S**	**03 04 25.4**	**+0.1**
BILL				pmax	pmax		
	comp=Z,21nm,1.1s						
BILL				MLR	MLR		
	comp=Z,1μm,16.0s						
BILL	**Bilibino**	**31.59**	**16**	*e*P	**P**	**02 59 17.8**	**-0.5**
	comp=Z,20nm,1.0s						
MOY	**Mondy**	**31.75**	**307**	*e*P	**P**	**02 59 20.2**	**+0.1**
MOY				pmax	pmax		
	comp=Z,72nm,2.5s						
GYA	**Guiyang**	**33.04**	**259**	⇑*i*P	**P**	**02 59 30.9**	**-0.7**
GYA				pP	**pP**	**02 59 38.8**	**-0.5**
GYA				PP	**PnPn**	**03 00 39.9**	**-1.4**
GYA				PcP	**PcP**	**03 02 15.4**	**+0.5**
GYA				S	**S**	**03 04 44.5**	**-4.4**
GYA				ScP	**ScP**	**03 05 55.8**	**-1.5**
GYA				SS	**SnSn**	**03 06 41.6**	**-6.3**
GYA				pmax	pmax		
	comp=Z,30nm,0.7s						
GYA				pmax	pmax		
	comp=Z,290nm,7.2s						
GYA				LR	LR		
	comp=N,3μm,14.9s						

GYA LR LR
comp=E,3μm,16.8s
GYA LR LR
comp=Z,4μm,17.7s
CD2 Chengdu 33.16 268 *e*P **P 02 59 31.8 -0.8**
CD2 pP **pP 02 59 37.8 -2.5**
CD2 sP **sP 02 59 40.8 -2.6**
CD2 PP **PnPn 03 00 42.3 -0.4**
CD2 PcP **PcP 03 02 15.5 +0.4**
CD2 S **S 03 04 47.9 -2.7**
CD2 sS sS 03 04 57.9 -5.4
CD2 SS **SnSn 03 06 47.8 -2.9**
CD2 ScS **ScS 03 09 56.3 -1.9**
CD2 pmax pmax
comp=Z,80nm,1.2s
CD2 pmax pmax
comp=Z,700nm,10.2s
CD2 LR LR
comp=N,6μm,13.2s
CD2 LR LR
comp=E,3μm,13.2s
CD2 LR LR
comp=Z,7μm,15.6s
GTA Gaotai 33.38 285 *e*P **P 02 59 34.8 +0.3**
GTA pP **pP 02 59 39.8 -2.4**
GTA sP **sP 02 59 42.8 -2.6**
GTA PcP **PcP 03 02 16.9 +1.2**
GTA S **S 03 04 53.4 -0.7**
GTA sS **sS 03 05 02.8 -4.0**
GTA SS **SnSn 03 06 54.3 -1.7**
GTA pmax pmax
comp=Z,62nm,1.6s
GTA pmax pmax
comp=Z,570nm,5.2s
GTA LR LR
comp=N,3μm,19.5s
GTA LR LR
comp=E,9μm,17.8s
GTA LR LR
comp=Z,11μm,17.1s
TIXI Tiksi 33.38 352⇑ *e*P **P 02 59 33.5 -0.5**
TIXI pmax pmax
comp=Z,13nm,1.0s
TIXI MLR MLR
comp=Z,2μm,18.0s
QIZ Qiongzhong 35.13 245 P **P 02 59 49.5 -0.2**
QIZ pP **pP 02 59 53.3 -4.1**
QIZ sP **sP 02 59 58.5 -2.1**
QIZ S **S 03 05 20.6 -0.5**
QIZ pmax pmax
comp=Z,19nm,2.2s
QIZ pmax pmax
comp=Z,410nm,9.8s
QIZ LR LR
comp=N,3μm,17.3s
QIZ LR LR
comp=E,2μm,15.4s
QIZ LR LR
comp=Z,7μm,15.3s
KMI Kunming 36.74 260 ⇑P **P 03 00 03.5 -0.2**
KMI pP **pP 03 00 10.0 -1.4**
KMI sP **sP 03 00 13.5 -1.1**
KMI PP **PP 03 01 28.8 +1.3**
KMI S **S 03 05 42.3 -3.8**
KMI sS **sS 03 05 57.3 -1.6**
KMI SS **SnSn 03 08 11.4 -6.4**
KMI pmax pmax
comp=Z,110nm,1.0s
KMI pmax pmax
comp=Z,600nm,3.6s
KMI LR LR
comp=N,3μm,14.8s
KMI LR LR
comp=E,4μm,14.8s
KMI LR LR
comp=Z,4μm,15.4s
KRAR Krasnoyarsk 36.99 314 *i* P **P 03 00 04.1 -1.1**
KRAR pmax pmax
comp=Z,109nm,1.4s
KRAR MLR MLR
comp=Z,2μm,17.0s
MYLDM Lahad Datu 40.56 220 P **P 03 00 38.2 +2.7**
MYLDM Lahad Datu 40.56 220 P **P 03 00 38.5 +3.0**
comp=Z,60nm,1.1s,comp=Z,1μm
UBPT Khong Chiam 40.73 245 P **P 03 00 39.2 +2.2**
comp=Z,39nm,1.7s,comp=Z,1μm
SDKM Sandakan 40.84 222 P **P 03 00 38.3 +0.4**
KKM Kota Kinabalu 41.01 224 *e*P **P 03 00 38.2 -1.1**
MNI Manado 41.13 209 P **P 03 00 40.4 +0.2**
comp=Z,98nm,0.8s
WMQ Urumqi 41.22 295⇑ *i*P **P 03 00 41.5 +0.7**
WMQ pP **pP 03 00 47.4 -1.2**
WMQ sP **sP 03 00 50.5 -1.3**
WMQ PP **PnPn 03 02 20.0 -0.6**
WMQ ScP **ScP 03 06 30.0 +2.5**
WMQ S **S 03 06 53.5 +0.6**
WMQ sS **sS 03 07 06.0 +0.2**
WMQ SS **SS 03 09 51.0 -5.2**
WMQ pmax pmax
comp=Z,89nm,0.9s
WMQ pmax pmax
comp=Z,900nm,4.7s
WMQ LR LR
comp=N,3μm,15.1s
WMQ LR LR
comp=E,2μm,15.1s
WMQ LR LR
comp=Z,2μm,16.3s
JAY Jayapura 41.53 184 P **P 03 00 45.2 +1.7**
comp=Z,60nm,0.6s,comp=Z,12μm
ZAA0 Zalesovo Array 41.60 311 *e*P **P 03 00 43.0 -0.7**
ZAA0 *e*PcP **PcP 03 02 40.5 +0.2**
ZALV Zalesovo Beam 41.60 311 P **P 03 00 44.1 +0.4**
ZALV 03 02 40.5
ZALV Zalesovo Beam 41.60 311 P **P 03 00 44.0 +0.4**
ZALV PcP **PcP 03 02 40.5 +0.1**
ZALV Zalesovo Beam 41.60 311 P **P 03 00 44.0 +0.4**
comp=Z,19nm,0.6s,baz=86,slow=7.9,SNR=83
ZALV PcP **PcP 03 02 40.5 +0.1**
comp=Z,12nm,0.8s,baz=83,slow=3.4,SNR=4.9
ZALV LR LR 03 18 47.0
comp=Z,3μm,19.3s,baz=73,slow=37
TSM Tawau 41.64 220 P **P 03 00 45.8 +1.3**
LBMI Labuha 42.15 204 P **P 03 00 49.5 +0.9**
comp=Z,61nm,1.0s
NVS Novosibirsk 42.47 312⇑ *i*P **P 03 00 50.4 -0.3**
NVS *e*S **S 03 07 10.1 -0.7**
NVS pmax pmax
comp=N,15nm,1.8s
NVS pmax pmax
comp=E,56nm,1.8s
NVS pmax pmax
comp=Z,82nm,1.8s
NVS smax smax
comp=E,40nm,2.4s
SVW2 Sparrevohn 42.96 39 *e*P **P 03 00 56.2 +1.5**
comp=E,18nm,0.9s
PBKT Sadao Pong 43.12 251 P **P 03 00 57.1 +0.6**
comp=E,21nm,1.0s
CMMT Chiang Mai 43.23 255 P **P 03 00 58.9 +1.5**
comp=E,1.5nm,0.8s,comp=E,26nm
CHTO Chiang Mai 43.23 255 *e*P **P 03 00 57.5 +0.1**
CHTO *e**PP **pP 03 01 06.9 +1.7**
CHTO pmax pmax
comp=Z,85nm,1.5s
CHTO Chiang Mai 43.23 255 P **P 03 00 58.2 +0.9**
SNR=8.2
CHTO Chiang Mai 43.23 255 *e*P **P 03 00 57.5 +0.1**
comp=Z,85nm,1.5s
CHTO *e*pP **pP 03 01 06.9 +1.7**
CHTO Chiang Mai 43.23 255 P **P 03 00 58.4 +1.0**
comp=Z,47nm,1.1s,comp=Z,800nm
CMAR Chiang Mai Arr 43.45 255 P **P 03 00 59.4 +0.2**
CMAR PcP **PcP 03 02 47.9 +0.7**
CMAR Chiang Mai Arr 43.45 255 P **P 03 00 59.4 +0.2**
comp=Z,8.6nm,0.7s,baz=43,slow=7.4,SNR=43
CMAR PcP **PcP 03 02 47.9 +0.7**
comp=Z,2.5nm,1.0s,baz=25,slow=3.2,SNR=4.8
CMAR LR LR 03 20 01.9
comp=Z,587nm,18.0s,baz=30,slow=37
LSA Lhasa 43.49 274 P **P 03 01 01.3 +1.4**
LSA pmax pmax
comp=Z,30nm,0.9s
LSA pmax pmax
comp=Z,450nm,8.6s

LSA LR LR
comp=N,1μm,16.0s
LSA LR LR
comp=E,4μm,15.0s
LSA LR LR
comp=Z,6μm,15.0s
LSA Lhasa 43.49 274 *e*P **P 03 01 00.9 +1.0**
LSA pmax pmax
comp=Z,24nm,0.8s
LSA Lhasa 43.49 274 *e*P **P 03 01 00.9 +1.0**
comp=Z,24nm,0.8s
OHAK Old Harbor 44.22 44 *e*P **P 03 01 04.8 -0.1**
comp=Z,31nm,0.9s
OHAK *e*pP **pP 03 01 14.2 +1.5**
MK31 Makanchi Array 44.26 301 *ce*P **P 03 01 05.4 0.0**
MK31 pmax pmax
comp=Z,74nm,1.0s
MK31 Makanchi Array 44.26 301 *e*P **P 03 01 05.1 -0.2**
MKAR Makanchi Array 44.26 301 *e*P **P 03 01 05.5 +0.1**
MKAR Makanchi Array 44.26 301 *e*P **P 03 01 05.5 +0.1**
MKAR Makanchi Array 44.26 301 P **P 03 01 05.3 0.0**
comp=Z,33nm,0.9s,baz=84,slow=7.3,SNR=139
MKAR LR LR 03 20 25.2
comp=Z,3μm,18.2s,baz=80,slow=37
MSAI Masohi 44.30 201 P **P 03 01 06.5 +0.6**
comp=Z,9.5nm,1.8s,comp=Z,2μm
RSO Redoubt South 44.35 40 *e*P **P 03 01 06.6 +0.5**
KDAK Kodiak Island 44.56 43 LR LR 03 19 44.9
comp=Z,892nm,18.8s,baz=248,slow=36
PPLA Purkeypile 44.60 36 *e*P **P 03 01 09.7 +1.7**
comp=Z,48nm,1.4s
CHBT CHBT 44.67 245 P **P 03 01 10.2 +1.3**
comp=Z,72nm,1.3s,comp=Z,4μm
SPU Mount Spurr 44.67 39 *e*P **P 03 01 10.3 +1.7**
SHL Shillong 44.90 268 *e*PKP **P 03 01 12.0 +1.1**
SHL *ex* x 03 06 46.0
TRF Thorofare Moun 45.47 35 *e*P **P 03 01 14.9 -0.1**
comp=Z,16nm,0.8s
COLD Coldfoot 45.60 30 *e*P **P 03 01 16.5 +0.8**
comp=Z,9.7nm,0.9s
KURK Kurchatov 45.80 307 P **P 03 01 17.6 +0.1**
comp=Z,472nm,0.9s,SNR=67
KURK Kurchatov 45.80 307 P **P 03 01 18.0 +0.5**
KURK pmax pmax
comp=Z,46nm,0.8s
KURK Kurchatov 45.80 307 *e*P **P 03 01 17.3 -0.2**
comp=Z,76nm,0.9s
RC01 Rabbit Creek A 45.80 39 *e*P **P 03 01 17.5 +0.1**
comp=Z,31nm,0.8s
KURBB Kurchatov Arra 45.88 307 P **P 03 01 18.0 -0.1**
comp=Z,46nm,0.8s,baz=81,slow=8.7,SNR=21
PMR Palmer 46.06 38 *e*P **P 03 01 19.5 +0.1**
PMR pmax pmax
comp=Z,23nm,0.9s
PMR Palmer 46.06 38 *e*P **P 03 01 19.5 +0.1**
comp=Z,23nm,0.9s
MCK McKinley 46.07 35 *e*P **P 03 01 20.4 +0.9**
MCK pmax pmax
comp=Z,18nm,0.8s
MCK McKinley 46.07 35 *e*P **P 03 01 20.4 +0.9**
comp=Z,18nm,0.8s
SBUM Sibu 46.18 226 P **P 03 01 21.2 +0.3**
SBUM Sibu 46.18 226 P **P 03 01 19.8 -1.1**
comp=Z,17nm,1.0s
SML Sawmill 46.43 38 *e*P **P 03 01 22.2 -0.2**
SML pmax pmax
comp=Z,9.0nm,0.8s
SML Sawmill 46.43 38 *e*P **P 03 01 22.2 -0.2**
comp=Z,9.0nm,0.8s
COLA College 46.52 33 *e*P **P 03 01 24.5 +1.6**
COLA pmax pmax
comp=Z,29nm,1.0s
COLA College 46.52 33 *e*P **P 03 01 24.4 +1.6**
comp=Z,29nm,1.0s
ILAR Eielson Array 46.93 33 P **P 03 01 26.4 +0.2**
ILAR Eielson Array 46.93 33 P **P 03 01 26.4 +0.2**
comp=Z,18nm,0.8s,baz=265,slow=6.2,SNR=149
TAPN Taplejung 47.26 273 *e*P **P 03 01 29.7 0.0**
comp=Z,289nm,1.6s
PAX Paxson 47.67 36 *e*P **P 03 01 33.3 +1.2**
PAX pmax pmax
comp=Z,106nm,2.4s
PAX Paxson 47.67 36 *e*P **P 03 01 33.3 +1.2**
comp=Z,106nm,2.4s
DIV Divide 47.72 38 *e*P **P 03 01 34.3 +1.9**
comp=Z,40nm,0.9s
ODAN Odare 47.75 273 *e*P **P 03 01 33.5 +0.1**
comp=Z,96nm,0.8s
KSM Kuching 48.06 227 *e*P **P 03 01 36.0 +0.5**
comp=Z,24nm,0.8s
KSM Kuching 48.06 227 P **P 03 01 36.4 +0.9**
comp=Z,32nm,1.2s,comp=Z,616nm
DOT Dot Lake 48.24 35 *e*P **P 03 01 36.6 +0.2**
comp=Z,11nm,0.9s
RAMN Ramite 48.32 273 *e*P **P 03 01 37.7 -0.1**
comp=Z,230nm,1.1s
GUN Gumba 48.41 275 *e*P **P 03 01 38.7 +0.1**
comp=Z,236nm,0.9s
PMG Port Moresby 48.44 175 *e*P **P 03 01 38.2 -0.2**
PMG Port Moresby 48.44 175 LR LR 03 17 44.7
comp=Z,500nm,20.1s,baz=224,slow=31
AAA Alma-Ata 48.88 297 *i* P **P 03 01 43.1 +1.4**
AAA *i* S S 03 08 52.8 +9.2
AAA pmax pmax
comp=Z,600nm,5.0s
AAA smax smax
comp=E,700nm,10.7s
AAA MLR MLR
comp=Z,5μm,16.0s
KKN Kakani 48.93 275 *e*P **P 03 01 42.7 +0.2**
comp=Z,158nm,0.8s
PKI Pulchoki 48.94 275 *e*P **P 03 01 42.5 -0.2**
comp=Z,239nm,1.4s
PKIN Phulchoki 48.95 275 *e*P **P 03 01 42.3 -0.3**
comp=Z,148nm,1.2s
KAPI Kappang 49.02 212 *e*P **P 03 01 42.2 -0.6**
comp=Z,104nm,1.4s
KAPI Kappang 49.02 212 P **P 03 01 42.0 -0.9**
comp=Z,51nm,1.5s,comp=Z,727nm
KAPI Kappang 49.02 212 P **P 03 01 41.8 -1.1**
comp=Z,13nm,0.8s,baz=189,slow=2.1,SNR=7.5
DMN Daman 49.16 275 *e*P **P 03 01 43.8 -0.4**
comp=Z,435nm,1.7s
EGAK Eagle 49.38 33 *e*P **P 03 01 45.4 +0.3**
comp=Z,128nm,2.0s
ULHL Ulahol 49.71 296 P **P 03 01 48.3 0.0**
SNR=26
DANN Dangsing 49.84 276 *e*P **P 03 01 49.9 +0.4**
comp=Z,551nm,0.8s
TKM2 Tokmak 2 49.92 297 *e*P **P 03 01 50.2 +0.3**
TKM2 pmax pmax
comp=Z,65nm,0.9s
TKM2 Tokmak 2 49.92 297 *e*P **P 03 01 50.2 +0.3**
comp=Z,65nm,0.9s
TKM2 Tokmak 2 49.92 297 P **P 03 01 50.5 +0.6**
SNR=66
VOSK Vostochnaya 49.98 311 P **P 03 01 49.3 -0.5**
VOSK pmax pmax
comp=Z,56nm,1.1s
KOLN Koldanda 50.24 276 *e*P **P 03 01 52.5 0.0**
comp=Z,213nm,1.1s
BVA0 Borovoye Array 50.24 311 *i* P **P 03 01 51.8 -0.1**
BVA0 pmax pmax
comp=Z,27nm,0.8s
BVAR Borovoye Array 50.24 311 P **P 03 01 51.9 0.0**
BVAR 03 03 10.9
BVAR Borovoye Array 50.24 311 P **P 03 01 51.9 0.0**
BVAR PcP **PcP 03 03 10.9 +0.3**
BVAR Borovoye Array 50.24 311 P **P 03 01 51.9 0.0**
comp=Z,20nm,0.7s,baz=80,slow=9.2,SNR=66
BVAR PcP **PcP 03 03 10.9 +0.3**
comp=Z,9.1nm,0.8s,baz=64,slow=3.4,SNR=5.0
BRVK Borovoye 50.30 311 P **P 03 01 52.5 +0.2**
comp=Z,199nm,0.8s,SNR=8.6
BRVK Borovoye 50.30 311 *e*P **P 03 01 52.4 +0.2**
BRVK pmax pmax
comp=Z,32nm,0.9s
BRVK Borovoye 50.30 311 *e*P **P 03 01 52.4 +0.1**
comp=Z,32nm,0.9s
KZA Kyzart 50.46 296 P **P 03 01 55.4 +1.2**
SNR=34
KBK Karagaybulak 50.46 297 P **P 03 01 54.5 +0.6**
SNR=56
CHMS Chumysh 50.48 298 P **P 03 01 54.0 +0.2**
SNR=5.7
PYUN Piuthan 50.55 277 *e*P **P 03 01 55.0 +0.2**
comp=Z,692nm,1.0s

USP Ospenovka 50.56 298 P **P 03 01 54.6 +0.2**
SNR=18
HNR Honiara 50.77 159 LR LR 03 21 26.7
comp=Z,878nm,19.4s,baz=327,slow=34
AAK Ala-Archa 50.78 297 P **P 03 01 56.7 +0.4**
comp=Z,120nm,1.4s,SNR=6.9
AAK Ala-Archa 50.78 297 *c i*P **P 03 01 56.3 0.0**
AAK pmax pmax
comp=Z,111nm,1.7s
AAK MLR MLR
comp=Z,4μm,18.0s
AAK Ala-Archa 50.78 297 *e*P **P 03 01 56.4 +0.1**
comp=Z,36nm,1.2s
AAK Ala-Archa 50.78 297 P **P 03 01 56.5 +0.1**
SNR=8.5
AAK Ala-Archa 50.78 297 P **P 03 01 56.4 +0.1**
comp=Z,12nm,0.9s,baz=103,slow=4.8,SNR=29
KSH Kashi 50.89 293 P P 03 02 01.1 +4.0
KSH *ep*P pP 03 02 07.4 +2.3
KSH *es*P sP 03 02 09.3 +1.1
KSH *e*PcP **PcP 03 03 17.3 +3.9**
KSH *e*PP **PP 03 03 58.0 +4.7**
KSH *e*ScP **ScP 03 07 11.0 +3.2**
KSH *e*PcS **PcS 03 07 13.4 +2.4**
KSH *e*S **S 03 09 15.6 +3.6**
KSH *es*S sS 03 09 25.3 +0.2
KSH pmax pmax
comp=Z,53nm,1.0s
KSH pmax pmax
comp=Z,500nm,3.7s
KSH LR LR
comp=N,4μm,14.6s
KSH LR LR
comp=E,7μm,15.7s
KSH LR LR
comp=Z,8μm,16.8s
KULM Kulim 51.13 240 *e*P **P 03 01 58.9 -0.1**
comp=Z,28nm,1.4s
KULM Kulim 51.13 240 P **P 03 02 00.6 +1.6**
KULM Kulim 51.13 240 P **P 03 01 58.8 -0.2**
comp=Z,32nm,1.7s,comp=Z,729nm
EKS2 Erkin-Say 51.27 298 *e*P **P 03 01 59.7 -0.2**
EKS2 pmax pmax
comp=Z,22nm,0.8s
EKS2 Erkin-Say 51.27 298 *e*P **P 03 01 59.7 -0.2**
comp=Z,22nm,0.8s
EKS2 Erkin-Say 51.27 298 P **P 03 02 00.2 +0.2**
SNR=17
IPM Ipoh 51.48 239 *e*P **P 03 02 01.4 -0.2**
comp=Z,22nm,0.9s
IPM *ep*P **pP 03 02 10.9 +1.3**
IPM Ipoh 51.48 239 P **P 03 02 02.4 +0.8**
IPM Ipoh 51.48 239 P **P 03 02 01.4 -0.2**
comp=Z,38nm,1.8s,comp=Z,665nm
AML Almayashu 51.52 297 P **P 03 02 02.9 +0.7**
SNR=37
SKAG Skagway 53.14 39 *e*P P 03 02 18.7 +5.4
comp=Z,14nm,1.0s
KK31 Karatay Array 53.34 299 *ce*P **P 03 02 14.6 -0.5**
KK31 pmax pmax
comp=Z,17nm,0.9s
KKAR Karatay Array 53.34 299 *e*P **P 03 02 14.8 -0.3**
KKAR pmax pmax
comp=Z,10.0nm,0.8s
KKAR Karatay Array 53.34 299 *e*P **P 03 02 14.8 -0.3**
comp=Z,10nm,0.8s
THN Thein Dam 54.06 285 *ex* P 03 02 16.5 -4.0
PSI Prapat 54.12 239 P **P 03 02 21.4 +0.1**
PSI Prapat 54.12 239 P **P 03 02 21.4 +0.1**
comp=Z,14nm,0.7s,baz=80,slow=3.4,SNR=10
SVE Sverdlovsk 54.54 318 *d i*P **P 03 02 24.3 +0.7**
SVE *e* 03 04 30.1
SVE *eS* **S 03 10 03.9 +2.9**
SVE pmax pmax
comp=Z,87nm,1.0s
SVE MLR MLR
comp=Z,7μm,16.0s
NDI New Delhi 54.71 280 *e*PKP **P 03 02 23.0 -2.3**
ARU Arti 55.75 318 *c i*P **P 03 02 32.4 0.0**
ARU 03 04 36.9
ARU PPP PPP 03 05 53.2
ARU S **S 03 10 20.3 +3.0**
ARU SS **SS 03 13 56.9 -5.3**
ARU pmax pmax
comp=Z,128nm,1.7s
ARU MLR MLR
comp=Z,5μm,16.0s
ARU Arti 55.75 318 P **P 03 02 32.3 -0.1**
comp=Z,333nm,1.0s,SNR=8.1
VIS Vishakhapatnam 55.83 265 *e*PKP **P 03 02 33.8 +0.3**
VIS AMB AMB 03 02 34.7
comp=Z,211nm,1.8s
BHPL Bhopal 57.35 275 *e*PKP **P 03 02 44.4 +0.1**
BHPL AMB AMB 03 02 55.7
comp=Z,22nm,1.8s
AB31 Akbulak array 57.70 310 *ce*P **P 03 02 46.1 -0.2**
AB31 pmax pmax
comp=Z,32nm,0.6s
ABKAR Akbulak array 57.70 310 *e*P **P 03 02 46.1 -0.2**
AJM Ajmer 57.79 279 *e*PKP **P 03 02 45.9 -1.5**
KBL Kabul 58.02 291 *e*P **P 03 02 48.8 -0.3**
KBL pmax pmax
comp=Z,100nm,0.9s
KBL Kabul 58.02 291 *e*P **P 03 02 48.8 -0.3**
comp=Z,100nm,0.9s
KBS Kingsbay 58.82 350 *ce*P **P 03 02 55.2 +1.5**
KBS pmax pmax
comp=Z,55nm,2.5s
KBS MLR MLR
comp=Z,464nm,16.0s
KBS Kingsbay 58.82 350 *e*P **P 03 02 54.9 +1.1**
comp=Z,30nm,1.0s
FITZ Fitzroy Crossi 59.29 200 *e*P **P 03 02 56.9 -0.7**
comp=Z,21nm,1.1s
FITZ Fitzroy Crossi 59.29 200 P **P 03 02 57.1 -0.5**
comp=Z,7.4nm,0.8s,baz=68,slow=3.1,SNR=12
FITZ LR LR 03 28 36.4
comp=Z,229nm,18.5s,baz=32,slow=36
WRAB Tennant Creek 59.36 190 P **P 03 02 56.0 -2.1**
comp=Z,174nm,0.9s,SNR=7.9
WRAB Tennant Creek 59.36 190 *e*P **P 03 02 56.1 -2.1**
WRAB pmax pmax
comp=Z,25nm,0.9s
WRAB Tennant Creek 59.36 190 *e*P **P 03 02 56.1 -2.1**
comp=Z,25nm,0.9s
WRA Warramunga Arr 59.37 190 P **P 03 02 56.5 -1.7**
WRA Warramunga Arr 59.37 190 P **P 03 02 56.5 -1.7**
comp=Z,8.2nm,0.8s,baz=8.2,slow=6.9,SNR=44
HYB Hyderabad 59.71 268 *i* P **P 03 03 01.0 +0.2**
LVZ Lovozero 60.78 336 *i* P **P 03 03 07.0 -0.4**
MDRS Chennai 60.98 263 *e*PKP **P 03 03 09.1 -0.3**
YKW3 Yellowknife Ar 61.21 31 *e*P **P 03 03 10.1 -0.2**
YKA Yellowknife Ar 61.25 31 P **P 03 03 10.7 +0.1**
YKA Yellowknife Ar 61.25 31 P **P 03 03 10.7 +0.1**
comp=Z,2.6nm,0.8s,baz=301,slow=6.6,SNR=21
APA Apatity 61.36 336⇑ *e*P **P 03 03 11.8 +0.5**
APA MLR MLR
comp=Z,2μm,16.0s
ARCES ARCESS Array B 62.53 339 P **P 03 03 18.9 -0.3**
ARCES ARCESS Array B 62.53 339 P **P 03 03 18.9 -0.3**
comp=Z,8.8nm,0.8s,baz=46,slow=8.7,SNR=12
ARCES LR LR 03 33 40.5
comp=Z,914nm,21.5s,baz=37,slow=39
POO Poona 62.73 272 *e*PKP **P 03 03 21.3 0.0**
KLMR Klimovskoe 62.75 328 *e*P **P 03 03 20.2 -0.5**
KLMR pmax pmax
comp=Z,51nm,1.4s
KLMR MLR MLR
comp=Z,2μm,15.0s
AS31 Alice Springs 63.10 190 *e*P **P 03 03 23.7 +0.3**
ASAR Alice Springs 63.10 190 P **P 03 03 22.0 -1.4**
ASAR Alice Springs 63.10 190 P **P 03 03 22.0 -1.4**
comp=Z,7.4nm,0.8s,baz=12,slow=5.8,SNR=24
ASAR LR LR 03 30 57.1
comp=Z,320nm,18.4s,baz=1.5,slow=36
IMYA Miami 63.52 296 *e*P **P 03 03 27.0 +0.5**
DAG Danmarks Havn 63.79 355⇑ *i*P **P 03 03 27.0 -0.3**
comp=Z,18nm,0.9s
DAG
comp=Z,440nm,15.0s
MBWA Marble Bar 63.91 205 *e*P **P 03 03 28.7 0.0**
comp=Z,9.6nm,0.8s
ISRO Mashad 63.98 297 *e*P **P 03 03 29.3 -0.1**
IAKL Akhelmad 64.32 297 *e*P **P 03 03 32.0 +0.1**
DZM Mont Dzumac 64.66 156 *e*S S 03 12 36.4 +24

JOF	**Joensuu**	**64.78**	**332**	*e*P	**P**	**03 03 34.3**	**+0.3**
JOF				pmax	pmax		
	comp=Z,17nm,0.8s						
JOF	**Joensuu**	**64.78**	**332**	*e*p	**P**	**03 03 34.3**	**+0.3**
	comp=Z,17nm,0.8s						
LON	**Longmire**	**65.76**	**49**	*e*P	**P**	**03 03 38.4**	**-2.4**
LON				pmax	pmax		
	comp=Z,11nm,1.1s						
LON	**Longmire**	**65.76**	**49**	*e*P	**P**	**03 03 38.4**	**-2.4**
	comp=Z,11nm,1.1s						
MOS	**Moscow**	**66.42**	**324**	*e*P	P	03 03 39.7	-5.0
MOS				*e*		03 04 09.8	
MOS				*e*		03 07 44.1	
MOS				*i* S	S	03 12 22.2	-11
MOS				pmax	pmax		
	comp=Z,115nm,1.4s						
MOS				MLR	MLR		
	comp=N,2μm,15.0s						
MOS				MLR	MLR		
	comp=Z,3μm,15.0s						
MOS				MLR	MLR		
	comp=E,2μm,15.0s						
KAF	**Kangasniemi**	**67.09**	**333**	*e*P	**P**	**03 03 48.5**	**-0.4**
KAF				pmax	pmax		
	comp=Z,29nm,1.1s						
KAF	**Kangasniemi**	**67.09**	**333**	*e*p	**P**	**03 03 48.5**	**-0.4**
	comp=Z,29nm,1.1s						
OBN	**Obninsk**	**67.27**	**323**	⇓*e*P	**P**	**03 03 48.4**	**-1.7**
OBN				*e*		03 06 17.6	
OBN				*i* S	**S**	**03 12 40.2**	**-3.1**
OBN				*e*SS	**SS**	**03 16 56.3**	**-5.9**
OBN				pmax	pmax		
	comp=Z,16nm,1.2s						
OBN				MLR	MLR		
	comp=Z,3μm,16.0s						
NEW	**Newport**	**67.61**	**45**	*e*P	**P**	**03 03 53.5**	**+0.9**
	comp=Z,13nm,0.9s						
NEW	**Newport**	**67.61**	**45**	P	**P**	**03 03 52.1**	**-0.4**
	baz=67						
FIA1	**FINESS Array S**	**67.61**	**332**	*e*P	**P**	**03 03 51.5**	**-0.7**
FIA1				*e*pP	**pP**	**03 04 02.0**	**+1.6**
FINES	**FINESS Array B**	**67.62**	**332**	P	**P**	**03 03 52.0**	**-0.3**
FINES	**FINESS Array B**	**67.62**	**332**	P	**P**	**03 03 52.0**	**-0.3**
	comp=Z,28nm,0.8s,baz=57,slow=7.0,SNR=52						
FINES				LR	LR	03 36 07.9	
	comp=Z,3μm,18.2s,baz=36,slow=38						
VSR	**Storozhevoye**	**68.30**	**319**	*e*P	**P**	**03 03 56.2**	**-0.5**
VSR				pmax	pmax		
	comp=Z,50nm,1.0s						
VSR				pmax	pmax		
	comp=N,30nm,0.9s						
VSR				pmax	pmax		
	comp=E,30nm,1.0s						
VSR				MLR	MLR		
	comp=Z,3μm,18.0s						
VSR				MLR	MLR		
	comp=N,1μm,17.0s						
VSR				MLR	MLR		
	comp=E,2μm,18.0s						
MAK	**Makhachkala**	**68.30**	**308**	*e*P	**P**	**03 03 54.0**	**-2.8**
MAK				*e*S	**S**	**03 12 52.5**	**-3.5**
MAK				pmax	pmax		
	comp=Z,60nm,1.0s						
MAK				MLR	MLR		
	comp=Z,3μm,14.0s						
C11A	**Tepee Creek (N**	**68.33**	**45**	⇓P	**P**	**03 03 56.9**	**-0.1**
	baz=68,SNR=9.4						
VORD	**Divnogorie**	**68.38**	**319**	*e*P	**P**	**03 03 55.9**	**-1.3**
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
VORD				pmax	pmax		
	comp=N,40nm,0.4s						
VORD				pmax	pmax		
	comp=E,110nm,0.5s						
VORD				MLR	MLR		
	comp=Z,2μm,19.0s						
VORD				MLR	MLR		
	comp=N,2μm,29.0s						
VORD				MLR	MLR		
	comp=E,2μm,20.0s						
ISHM	**Shahmirzad**	**68.49**	**299**	*e*P	**P**	**03 03 58.5**	**-0.1**
SUMG	**Summit**	**68.57**	**1**	*e*P	**P**	**03 03 58.9**	**+0.4**
SUMG				*e**PP	**pP**	**03 04 09.0**	**+2.2**
SUMG				pmax	pmax		
	comp=Z,34nm,0.9s						
SUMG	**Summit**	**68.57**	**1**	*e*P	**P**	**03 03 58.9**	**+0.4**
	comp=Z,34nm,0.9s						
SUMG				*e*pP	**pP**	**03 04 09.0**	**+2.2**
SUMG	**Summit**	**68.57**	**1**	⇑*i*P	**P**	**03 03 59.1**	**+0.6**
	comp=Z,26nm,0.9s						
SUMG				*i*		03 12 58.1	
SUMG							
	comp=Z,990nm,22.0s						
WALA	**Waterton Lakes**	**68.90**	**43**	*e*P	**P**	**03 04 01.0**	**+0.3**
	comp=Z,0.4nm,0.9s						
B13A	**Whitefish**	**69.00**	**44**	⇑P	**P**	**03 04 01.5**	**+0.2**
	baz=69,SNR=11						
BSMT	**Bassoo Peak**	**69.13**	**45**	*e*P	**P**	**03 04 02.8**	**+0.6**
A14A	**Double T Ranch**	**69.21**	**43**	⇓P	**P**	**03 04 03.6**	**+0.9**
	baz=69,SNR=6.8						
D12A	**Red Ives Fores**	**69.28**	**46**	P	**P**	**03 04 03.1**	**+0.1**
	baz=69						
MOD	**Modoc**	**69.31**	**52**	*e*P	**P**	**03 04 04.2**	**+0.8**
C13A	**Hot Springs**	**69.35**	**45**	⇓P	**P**	**03 04 03.1**	**-0.4**
	baz=69,SNR=6.2						
VSU	**Vasula**	**69.36**	**330**	*d*iP	**P**	**03 04 03.4**	**+0.2**
VSU				pmax	pmax		
	comp=Z,35nm,0.7s						
VSU				MLR	MLR		
	comp=Z,11nm,17.0s						
BMO	**Blue Mountains**	**69.44**	**49**	*e*P	**P**	**03 04 04.0**	**-0.1**
BMO				*e**PP	**pP**	**03 04 13.9**	**+1.6**
BMO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BMO	**Blue Mountains**	**69.44**	**49**	*e*P	**P**	**03 04 04.0**	**-0.1**
	comp=Z,6.3nm,0.8s						
BMO				*e*pP	**pP**	**03 04 13.9**	**+1.6**
JTMT	**Jette**	**69.47**	**45**	*e*P	**P**	**03 04 04.5**	**+0.3**
E12A	**Beaver Dam Sad**	**69.53**	**46**	⇓P	**P**	**03 04 04.4**	**-0.2**
	baz=69,SNR=16						
YBMT	**Yellow Bay**	**69.55**	**45**	*e*P	**P**	**03 04 06.1**	**+1.3**
	comp=Z,11nm,1.1s						
A15A	**Johnson Ranch,**	**69.58**	**43**	P	**P**	**03 04 04.6**	**-0.3**
	baz=69						
B14A	**Marquette Ranc**	**69.65**	**44**	P	**P**	**03 04 06.2**	**+0.8**
	baz=70,SNR=9.6						
C14A	**Swan Lake**	**69.75**	**44**	P	**P**	**03 04 06.1**	**+0.1**
	baz=70						
D13A	**Huson**	**69.75**	**45**	⇓P	**P**	**03 04 05.8**	**-0.1**
	baz=70,SNR=9.2						
SWMT	**Swartz Lake**	**69.76**	**45**	*e*P	**P**	**03 04 06.4**	**+0.4**
IVRN	**Varamin**	**70.00**	**299**	*e*P	**P**	**03 04 06.2**	**-1.5**
WVOR	**Wild Horse Val**	**70.03**	**51**	*e*P	**P**	**03 04 07.2**	**-0.6**
WVOR				pmax	pmax		
	comp=Z,21nm,1.4s						
WVOR	**Wild Horse Val**	**70.03**	**51**	*e*P	**P**	**03 04 07.2**	**-0.6**
	comp=Z,21nm,1.4s						
B15A	**Bradely Ranch,**	**70.06**	**44**	⇓P	**P**	**03 04 07.1**	**-0.8**
	baz=70,SNR=14						
SCO	**Scoresbysund**	**70.15**	**355**	*i* P	**P**	**03 04 09.1**	**+1.3**
	comp=Z,4.2nm,1.0s						
SCO							
	comp=Z,440nm,13.0s						
A16A	**West Butte Ran**	**70.19**	**43**	P	**P**	**03 04 08.2**	**-0.5**
	baz=70						
MSO	**Missoula**	**70.19**	**45**	*e*P	**P**	**03 04 08.9**	**+0.2**
	comp=Z,7.8nm,1.0s						
MSO				*e*pP	**pP**	**03 04 18.8**	**+1.8**
MSO	**Missoula**	**70.19**	**45**	P	**P**	**03 04 08.2**	**-0.5**
	baz=70						
SLMT	**Seeley Lake**	**70.20**	**45**	*e*P	**P**	**03 04 09.4**	**+0.6**
D14A	**Greenough**	**70.28**	**45**	⇑P	**P**	**03 04 09.1**	**-0.2**
	baz=70,SNR=8.7						
C15A	**Salmond Ranch,**	**70.36**	**44**	⇓P	**P**	**03 04 09.2**	**-0.6**
	baz=70,SNR=13						
GUDG	**Gudauri**	**70.42**	**309**	P	**P**	**03 04 10.8**	**+0.5**
G12A	**Big Creek, Yel**	**70.42**	**47**	P	**P**	**03 04 09.8**	**-0.4**
	baz=70						
BEKR	**Beckworth**	**70.43**	**54**	*e*P	**P**	**03 04 10.6**	**+0.2**
	comp=Z,6.5nm,1.0s						
DGRG	**David-gareji**	**70.46**	**308**	P	**P**	**03 04 12.3**	**+1.9**
DUS	**Dusheti**	**70.50**	**309**	P	**P**	**03 04 13.3**	**+2.7**
CHMT	**Chamberlain Mo**	**70.52**	**45**	*e*P	**P**	**03 04 11.5**	**+0.6**
KIV	**Kislovodsk**	**70.61**	**311**	⇓*i*P	**P**	**03 04 11.8**	**+0.5**
KIV				*e*		03 06 49.3	
KIV				*i* S	**S**	**03 13 26.3**	**+2.8**
KIV				pmax	pmax		
	comp=Z,120nm,1.0s						
KIV	**Kislovodsk**	**70.61**	**311**	P	**P**	**03 04 12.6**	**+1.3**
	comp=Z,583nm,1.0s,SNR=13						
KBZ	**Khabaz**	**70.62**	**311**	P	**P**	**03 04 12.0**	**+0.8**
KBZ	**Khabaz**	**70.62**	**311**	P	**P**	**03 04 12.0**	**+0.8**
KBZ	**Khabaz**	**70.62**	**311**	P	**P**	**03 04 12.0**	**+0.8**
	comp=Z,28nm,0.9s,baz=41,slow=5.6,SNR=37						
KBZ				LR	LR	03 40 32.7	
	comp=Z,2μm,18.8s,baz=281,slow=40						
A17A	**Triple J Farms**	**70.67**	**42**	⇑P	**P**	**03 04 10.2**	**-1.3**
	baz=70,SNR=7.3						
TBLG	**Delisi**	**70.68**	**308**	*e*P	**P**	**03 04 13.6**	**+1.9**
TBLG	**Delisi**	**70.68**	**308**	P	**P**	**03 04 13.6**	**+1.9**
STKA	**Stephens Creek**	**70.68**	**181**	P	**P**	**03 04 10.6**	**-0.9**
STKA	**Stephens Creek**	**70.68**	**181**	P	**P**	**03 04 10.6**	**-0.9**
	comp=Z,4.1nm,1.0s,baz=3.1,slow=2.8,SNR=2.5						
STKA				LR	LR	03 30 47.0	
	comp=Z,458nm,20.9s,baz=12,slow=32						
C16A	**Fuhringer Ranc**	**70.81**	**44**	⇓P	**P**	**03 04 11.2**	**-1.2**
	baz=71,SNR=9.8						
GOR	**Gori**	**70.92**	**309**	P	**P**	**03 04 13.5**	**+0.4**
ONI	**Oni**	**70.96**	**310**	P	**P**	**03 04 15.3**	**+1.9**
IRAZ	**Razeghan**	**70.98**	**300**	*e*P	**P**	**03 04 14.3**	**+0.5**
FORT	**Forrest**	**71.00**	**194**	*e*P	**P**	**03 04 13.1**	**-0.3**
	comp=Z,29nm,0.8s						
FORT				*e*pP	**pP**	**03 04 23.0**	**+1.4**
B17A	**L&G Farms, Che**	**71.01**	**43**	P	**P**	**03 04 13.7**	**+0.1**
	baz=71						
H12A	**Diamond D Ranc**	**71.03**	**48**	P	**P**		
	baz=71					**03 04 13.9**	**0.0**
KZR	**Kazreti**	**71.08**	**308**	P	**P**	**03 04 13.9**	**-0.3**
F14A	**Wisdom**	**71.12**	**46**	P	**P**	**03 04 14.3**	**-0.1**
	baz=71						
A18A	**Metzger Ranch,**	**71.12**	**42**	P	**P**		
	baz=71					**03 04 14.3**	**0.0**
MFID	**Camas Ranch**	**71.14**	**49**	*e*P	**P**	**03 04 14.8**	**+0.3**
	comp=Z,14nm,1.3s						
FFC	**Flin Flon**	**71.14**	**34**	P	**P**	**03 04 14.5**	**+0.3**
	comp=Z,80nm,0.9s,SNR=5.7						
FFC	**Flin Flon**	**71.14**	**34**	*e*P	**P**	**03 04 14.0**	**-0.2**
FFC				pmax	pmax		
	comp=Z,12nm,0.9s						
FFC	**Flin Flon**	**71.14**	**34**	*e*P	**P**	**03 04 14.0**	**-0.2**
	comp=Z,12nm,0.9s						
I12A	**Atlanta**	**71.32**	**48**	P	**P**	**03 04 15.5**	**-0.2**
	baz=71						
D16A	**Dana Ranch, Ca**	**71.38**	**44**	⇑P	**P**	**03 04 15.8**	**-0.1**
	baz=71,SNR=7.2						
HRY	**Holter Researc**	**71.42**	**45**	*e*P	**P**	**03 04 16.8**	**+0.5**
C17A	**Wharram Farm,**	**71.44**	**43**	P	**P**	**03 04 15.0**	**-1.3**
	baz=71						
CMB	**Columbia Colle**	**71.47**	**56**	*e*P	**P**	**03 04 16.7**	**+0.2**
CMB				pmax	pmax		
	comp=Z,13nm,1.3s						
CMB	**Columbia Colle**	**71.47**	**56**	*e*P	**P**	**03 04 16.7**	**+0.2**
	comp=Z,13nm,1.3s						
B18A	**Beardsley Farm**	**71.49**	**42**	⇓P	**P**	**03 04 16.3**	**-0.2**
	baz=71,SNR=8.8						
MICGM	**Minsk**	**71.55**	**326**	*e*	**P**	**03 04 15.0**	**-1.7**
MNK	**Minsk**	**71.58**	**326**	*e*P	**P**	**03 04 15.0**	**-1.8**
MNK				MLR	MLR		
	comp=Z,4μm,14.0s						
F15A	**Butte**	**71.59**	**46**	⇑P	**P**	**03 04 17.2**	**-0.1**
	baz=71,SNR=18						
GNI	**Garni**	**71.60**	**307**	*e*P	**P**	**03 04 18.8**	**+1.3**
	comp=Z,33nm,1.1s						
LRM	**Limekiln Ridge**	**71.62**	**46**	*e*P	**P**	**03 04 18.1**	**+0.6**
	comp=Z,187nm,1.0s						
LRM				*e*pP	**pP**	**03 04 28.4**	**+2.5**
AKH	**Akhalkalaki**	**71.63**	**309**	P	**P**	**03 04 19.6**	**+2.0**
A19A	**Klindworth Far**	**71.69**	**41**	P	**P**	**03 04 18.0**	**+0.3**
	baz=72						
EGMT	**Eagleton**	**71.73**	**43**	*e*P	**P**	**03 04 19.1**	**+1.1**
	comp=Z,17nm,0.9s						
EGMT	**Eagleton**	**71.73**	**43**	P	**P**	**03 04 18.2**	**+0.3**
	baz=72						
NACGM	**Naroch**	**71.75**	**327**	*e*	**P**	**03 04 16.0**	**-1.8**
D17A	**Six Diamond Ra**	**71.77**	**44**	P	**P**	**03 04 18.1**	**-0.2**
	baz=72						
DLMT	**Dillon**	**71.82**	**46**	*e*P	**P**	**03 04 19.2**	**+0.6**
	comp=Z,16nm,1.0s						
WBK	**Wadi Bani Khal**	**71.82**	**285**	P	**P**	**03 04 21.1**	**+2.2**
	SNR=5.8						
HLID	**Hailey**	**71.88**	**48**	*e*P	**P**	**03 04 20.2**	**+1.1**
	comp=Z,4.8nm,0.9s						
HLID	**Hailey**	**71.88**	**48**	P	**P**	**03 04 18.8**	**-0.3**
	baz=72						
MCMT	**McKenzie Canyo**	**72.01**	**47**	*e*P	**P**	**03 04 19.2**	**-0.7**
	comp=Z,2.9nm,1.2s						
BMN	**Battle Mountai**	**72.06**	**52**	*e*P	**P**	**03 04 20.7**	**+0.5**
BMN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BMN	**Battle Mountai**	**72.06**	**52**	*e*P	**P**	**03 04 20.7**	**+0.5**
	comp=Z,7.8nm,0.8s						
F16A	**Kennard Place,**	**72.11**	**45**	P	**P**	**03 04 20.3**	**-0.1**
	baz=72						
E17A	**Martinsdale**	**72.11**	**44**	⇓P	**P**	**03 04 20.8**	**+0.4**
	baz=72,SNR=9.7						
BOZ	**Bozeman (W)**	**72.19**	**45**	*e*P	**P**	**03 04 21.4**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
BOZ	**Bozeman (W)**	**72.19**	**45**	*e*P	**P**	**03 04 21.4**	**+0.5**
	comp=Z,8.4nm,0.8s						
I14A	**Mackay**	**72.21**	**48**	⇑P	**P**	**03 04 21.6**	**+0.5**
	baz=72,SNR=9.3						
C19A	**Slack Wire Ran**	**72.28**	**42**	⇓P	**P**	**03 04 22.1**	**+0.9**
	baz=72,SNR=12						
HOQ	**Hoqain**	**72.50**	**286**	P	**P**	**03 04 23.4**	**+0.5**
	SNR=6.4						
SOC	**Sochi**	**72.56**	**312**	*c* iP	**P**	**03 04 22.5**	**-0.4**
SOC				*e**PP	**pP**	**03 04 29.2**	**-1.9**
SOC				*e*		03 04 38.3	
SOC				*e*S	**S**	**03 13 45.2**	**-0.5**
SOC				*e*		03 14 21.7	
SOC				*e*SS	**SS**	**03 18 24.8**	**+0.7**
SOC				pmax	pmax		
	comp=Z,58nm,0.9s						
SOC				MLR	MLR		
	comp=Z,2μm,18.0s						
F17A	**Fitzpatrick Pl**	**72.56**	**45**	P	**P**	**03 04 23.0**	**0.0**
	baz=72						
NVAR	**Mina Array Bea**	**72.57**	**55**	P	**P**	**03 04 22.9**	**-0.4**
NVAR	**Mina Array Bea**	**72.57**	**55**	P	**P**	**03 04 22.9**	**-0.4**
	comp=Z,2.9nm,0.9s,baz=286,slow=7.7,SNR=7.0						
NVAR				LR	LR	03 33 55.9	
	comp=Z,362nm,18.0s,baz=258,slow=34						
JMDO	**Jabal Madar**	**72.61**	**285**	P	**P**	**03 04 23.9**	**+0.3**
	SNR=6.1						
DBOC	**Borcka**	**72.77**	**309**	*i* P	**P**	**03 04 24.8**	**+0.5**
NB2	**NORSAR Subarra**	**72.79**	**338**	P	**P**	**03 04 23.8**	**-0.2**
	comp=Z,45nm,1.0s,baz=39,slow=6.2						
NB2	**NORSAR Subarra**	**72.79**	**338**	P	**P**	**03 04 23.8**	**-0.2**
	baz=39,slow=6.2						
NOA	**NORSAR Array B**	**72.79**	**338**	P	**P**	**03 04 23.9**	**-0.2**
NOA	**NORSAR Array B**	**72.79**	**338**	P	**P**	**03 04 23.9**	**-0.2**
	comp=Z,18nm,0.8s,baz=38,slow=5.9,SNR=55						
NOA				LR	LR	03 41 44.7	
	comp=Z,1μm,19.4s,baz=35,slow=40						
C20A	**Veseth Ranch,**	**72.84**	**42**	P	**P**	**03 04 24.5**	**-0.1**
	baz=73						
DDEM	**Demirkent**	**72.99**	**309**	*i* P	**P**	**03 04 26.5**	**+0.8**
NAO01	**NORSAR Array S**	**73.04**	**338**	*e*P	**P**	**03 04 25.2**	**-0.3**
	comp=Z,22nm,1.0s						
NAO01				*e*pP	**pP**	**03 04 35.0**	**+1.3**
BSY	**Bisya**	**73.08**	**286**	P	**P**	**03 04 27.0**	**+0.7**
	SNR=6.5						
F18A	**Big Timber**	**73.08**	**44**	⇑P	**P**	**03 04 26.4**	**+0.3**
	baz=73,SNR=9.7						
A22A	**Carney Farms,**	**73.08**	**40**	P	**P**	**03 04 25.9**	**-0.1**
	baz=73						
ANN	**Anapa**	**73.10**	**314**	*c* iP	**P**	**03 04 24.3**	**-1.8**
ANN				*e**PP	**pP**	**03 04 34.8**	**+0.5**
ANN				*e*S	**S**	**03 13 51.8**	**0.0**
ANN				pmax	pmax		
	comp=Z,65nm,1.3s						
ANN				MLR	MLR		
	comp=Z,1μm,15.0s						
D20A	**Manuel Ranch,**	**73.17**	**43**	P	**P**	**03 04 26.3**	**-0.3**
	baz=73						
GCMT	**Greycliff**	**73.17**	**44**	*e*P	**P**	**03 04 27.8**	**+1.0**
	comp=Z,6.1nm,1.0s						
E19A	**Rath Farm, Rou**	**73.22**	**43**	⇑P	**P**	**03 04 26.9**	**0.0**
	baz=73,SNR=10						
ARQ	**Araqi**	**73.24**	**287**	P	**P**	**03 04 28.4**	**+1.1**
	SNR=6.6						
TUTA	**Tutak**	**73.24**	**307**	*e*P	**P**	**03 04 28.2**	**+0.9**
I16A	**Newdale**	**73.36**	**47**	⇓P	**P**	**03 04 29.1**	**+1.2**
	baz=73,SNR=8.8						
AKASG	**Malin Array Be**	**73.50**	**323**	P	**P**	**03 04 28.0**	**-0.3**
AKASG						03 07 10.2	
AKASG	**Malin Array Be**	**73.50**	**323**	P	**P**	**03 04 28.0**	**-0.3**
AKASG				PP	**PP**	**03 07 10.2**	**-1.5**
AKASG	**Malin Array Be**	**73.50**	**323**	P	**P**	**03 04 28.0**	**-0.3**
	comp=Z,18nm,0.8s,baz=43,slow=6.0,SNR=52						
AKASG				PP	**PP**	**03 07 10.2**	**-1.5**
	comp=Z,3.4nm,0.9s,baz=43,slow=9.3,SNR=4.1						
AKASG				LR	LR	03 40 28.4	
	comp=Z,1μm,18.7s,baz=0.0,slow=39						
AK01	**Malin Array Si**	**73.52**	**323**	*e*P	**P**	**03 04 27.8**	**-0.6**
KIEV	**Kiev**	**73.52**	**323**	*e*P	**P**	**03 04 27.6**	**-0.8**
KIEV				*e**PP	**pP**	**03 04 37.7**	**+1.0**
KIEV				pmax	pmax		
	comp=Z,32nm,1.0s						
KIEV	**Kiev**	**73.52**	**323**	*e*P	**P**	**03 04 27.6**	**-0.8**
	comp=Z,32nm,1.0s						
KIEV				*e*pP	**pP**	**03 04 37.7**	**+1.0**
F19A	**Roth Farm, Mol**	**73.53**	**44**	⇑P	**P**	**03 04 29.0**	**+0.2**
	baz=73,SNR=6.0						
AK02	**Malin Array Si**	**73.54**	**323**	*e*P	**P**	**03 04 28.1**	**-0.4**
E20A	**Meyer Farm, Mu**	**73.55**	**43**	⇓P	**P**	**03 04 29.2**	**+0.4**
	baz=73,SNR=6.4						
H17A	**Grant Village**	**73.55**	**46**	⇑P	**P**	**03 04 30.5**	**+1.4**
	baz=73,SNR=8.0						
SFJD	**Kangerlussuaq**	**73.65**	**6**	*i* P	**P**	**03 04 29.7**	**+0.8**
	comp=Z,12nm,0.9s						
SFJD				*i*		03 13 57.6	
IMW	**Indian Meadow**	**73.66**	**46**	*e*P	**P**	**03 04 31.2**	**+1.4**
	comp=Z,8.6nm,0.8s						
RRI2	**Red Ridge**	**73.79**	**47**	*e*P	**P**	**03 04 31.7**	**+1.2**
	comp=Z,12nm,0.8s						
HAKT	**HAKKARI**	**73.79**	**305**	*e*P	**P**	**03 04 30.6**	**0.0**
MOOW	**Moose Ponds**	**73.86**	**46**	*e*P	**P**	**03 04 32.3**	**+1.4**
	comp=Z,7.7nm,1.1s						
SUW	**Suwalki**	**73.88**	**328**	*e*P	**P**	**03 04 30.0**	**-0.5**
SUW	**Suwalki**	**73.88**	**328**	*e*P	**P**	**03 04 30.0**	**-0.5**
B23A	**Brockton**	**73.89**	**40**	P	**P**	**03 04 30.7**	**0.0**
	baz=74						
TPAW	**Teton Pass**	**73.91**	**47**	*e*P	**P**	**03 04 32.1**	**+0.9**
	comp=Z,25nm,1.4s						
LOHW	**Long Hollow**	**74.03**	**47**	*e*P	**P**	**03 04 33.1**	**+1.3**
D22A	**Cohagen**	**74.15**	**42**	P	**P**	**03 04 32.4**	**+0.1**
	baz=74						
KOPT	**Kop Dagi**	**74.28**	**309**	*e*P	**P**	**03 04 34.3**	**+0.8**
G20A	**Bridger**	**74.33**	**44**	P	**P**	**03 04 32.9**	**-0.5**
	baz=74						
MPMC	**Manual Prospec**	**74.50**	**56**	P	**P**	**03 04 34.9**	**+0.1**
	baz=74						
D23A	**Lindsay**	**74.64**	**41**	P	**P**	**03 04 35.2**	**+0.1**
	baz=74						
SIRN	**S¨¨rnak**	**74.64**	**306**	*e*P	**P**	**03 04 35.1**	**-0.2**
HWUT	**Hardware Ranch**	**74.74**	**49**	*e*P	**P**	**03 04 36.9**	**+0.9**
	comp=Z,19nm,1.3s						
SIM	**Simferopol'**	**74.83**	**316**	*e*P	**P**	**03 04 36.9**	**+0.7**
SIM				*e**PP	**pP**	**03 04 47.0**	**+2.5**
SIM				*e*PPP	PPP	03 09 12.0	
SIM				*e*S	**S**	**03 14 12.0**	**+0.7**
SIM				pmax	pmax		
	comp=Z,31nm,0.9s						
G21A	**Lodge Grass**	**74.86**	**44**	P	**P**	**03 04 36.6**	**+0.1**
	baz=75						
DUG	**Dugway**	**74.88**	**50**	*e*P	**P**	**03 04 37.6**	**+0.8**
DUG				*e**PP	**pP**	**03 04 47.7**	**+2.6**
DUG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DUG	**Dugway**	**74.88**	**50**	*e*P	**P**	**03 04 37.6**	**+0.8**
	comp=Z,9.1nm,0.9s						
DUG				*e*pP	**pP**	**03 04 47.7**	**+2.6**
DUG	**Dugway**	**74.88**	**50**	⇓P	**P**	**03 04 37.3**	**+0.6**
	baz=75,SNR=6.0						
EDW2	**Edwards Air Fo**	**74.89**	**57**	P	**P**	**03 04 36.3**	**-0.6**
	baz=75						
KELT	**Kelkit**	**74.95**	**310**	*e*P	**P**	**03 04 38.3**	**+1.1**
IBDR	**Badra**	**75.01**	**300**	*e*P	P	03 04 33.6	-3.8
IBDR				*e*S	**SKiKP**	**03 14 02.0**	**+2.4**
J19A	**Crowheart**	**75.12**	**46**	P	**P**	**03 04 38.3**	**+0.1**
	baz=75						
D24A	**Glendive**	**75.12**	**41**	P	**P**	**03 04 37.9**	**0.0**
	baz=75						
BW06	**Boulder Array**	**75.16**	**47**	*e*P	**P**	**03 04 39.0**	**+0.6**
	comp=Z,4.7nm,0.9s						
PDAR	**Pinedale Array**	**75.16**	**47**	P	**P**	**03 04 37.6**	**-0.8**
PDAR	**Pinedale Array**	**75.16**	**47**	P	**P**	**03 04 37.6**	**-0.8**
	comp=Z,2.7nm,0.8s,baz=271,slow=2.6,SNR=17						
M17A	**Scullys Gap (B**	**75.34**	**48**	P	**P**	**03 04 39.5**	**0.0**
	baz=75						
JLU	**Jordanelle**	**75.44**	**49**	*e*P	**P**	**03 04 42.4**	**+2.3**
	comp=Z,25nm,1.6s						
F23A	**Volborg**	**75.49**	**42**	P	**P**	**03 04 40.0**	**-0.1**
	baz=75						
J20A	**Shoshoni**	**75.60**	**46**	P	**P**	**03 04 40.2**	**-0.7**
	baz=75						
DAU	**Daniels Canyon**	**75.67**	**49**	*e*P	**P**	**03 04 43.4**	**+1.9**
DAU				pmax	pmax		
	comp=Z,11nm,1.0s						
DAU	**Daniels Canyon**	**75.67**	**49**	*e*P	**P**	**03 04 43.4**	**+1.9**
	comp=Z,10nm,1.0s						
BORG	**Borgarnes**	**75.73**	**353**	*e*P	**P**	**03 04 42.6**	**+1.6**
	comp=Z,37nm,1.0s						
I21A	**Big Trails, Te**	**75.74**	**45**	P	**P**	**03 04 41.8**	**+0.1**
	baz=76						
MARD	**Mardin**	**75.78**	**307**	*i* P	**P**	**03 04 42.7**	**+0.7**
K20A	**Yellowstone Ra**	**75.91**	**46**	P	**P**	**03 04 42.3**	**-0.3**
	baz=76						
BHD	**Baghdad**	**75.94**	**301**

LVV eS S 03 14 30.6 +0.8
LVV PS PnS 03 14 59.9 -9.2
LVV MLR MLR
comp=N,2µm,15.0s
LVV MLR MLR
comp=E,2µm,15.0s
LVV MLR MLR
comp=Z,3µm,15.0s
H24A Dirks Ranch, A 76.59 43 P P 03 04 46.0 -0.4
baz=76
MALT Malatya 76.60 309⇑ iP P 03 04 56.3 +10
PFO Pinyon Flat Ob 76.67 58 eP P 03 04 47.6 +0.5
comp=Z,4.8nm,0.9s
PFO Pinyon Flat Ob 76.67 58 LR LR 03 32 01.5
comp=Z,219nm,20.2s,baz=306,slow=31
COP Copenhagen 76.68 334 i P P 03 04 47.2 +0.7
comp=Z,31nm,0.8s
COP
comp=Z,860nm,18.0s
M20A Sweetwater, Wa 76.76 47 P P 03 04 47.3 -0.3
baz=77
GKP Gorka Klasztor 76.81 330 eP P 03 04 48.2 +0.9
GKP Gorka Klasztor 76.81 330 eP P 03 04 48.2 +0.9
L21A Rawlins 76.91 46 P P 03 04 48.4 -0.1
baz=77
AKCD Akcadag 76.92 309 i P P 03 04 49.7 +1.3
SRU San Rafael 76.94 50 ⇓P P 03 04 48.4 -0.2
baz=77,SNR=9.5
ULM Lac du Bonnet 76.94 34 P P 03 04 46.5 -1.7
ULM Lac du Bonnet 76.94 34 P P 03 04 46.5 -1.7
comp=Z,2.7nm,0.6s,baz=346,slow=8.3,SNR=2.7
MUD Monsted U'grnd 77.13 336 i P P 03 04 49.0 0.0
comp=Z,20nm,0.9s
N20A Spence Gulch, 77.14 48 P P 03 04 49.6 -0.1
baz=77
M21A Separation Pea 77.15 47 ⇓P P 03 04 49.5 -0.3
baz=77,SNR=5.2
ATAB Bozova 77.22 308 i P P 03 04 51.3 +1.3
KWP Kalwaria Pacla 77.25 325 ⇓P P 03 04 50.8 +0.9
KWP Kalwaria Pacla 77.25 325 eP P 03 04 50.5 +0.7
comp=Z,92nm,1.1s
KWP Kalwaria Pacla 77.25 325 ⇓iP P 03 04 50.8 +0.9
KWP Kalwaria Pacla 77.25 325 eP P 03 04 50.6 +0.7
RSSD Black Hills 77.29 43 eP P 03 04 51.1 +0.6
RSSD pmax pmax
comp=Z,3.0nm,0.8s
RSSD Black Hills 77.29 43 eP P 03 04 51.1 +0.6
comp=Z,2.5nm,0.8s
TLCR 77.46 319⇑ P P 03 04 51.8 +0.7
TLCR 77.46 319⇑ iP P 03 04 51.8 +0.7
BALT Daday 77.47 314 eP P 03 04 52.3 +0.8
BUR08 Bucovina Ar. S 77.53 322 eP P 03 04 51.7 0.0
BUR08 epP PcP 03 05 01.3 -0.6
BURAR Bucovina Array 77.54 322 ⇓iP P 03 04 52.4 +0.7
U15A North Rim 77.57 53 P P 03 04 51.9 -0.4
baz=77
PINB Pinarbasi 77.59 310 i P P 03 04 53.2 +0.9
ILGA Ilgaz 77.60 313 eP P 03 04 52.1 -0.2
O20A White River Ci 77.61 48 P P 03 04 52.1 -0.3
baz=77
N21A Black Mountain 77.62 47 P P 03 04 52.1 -0.4
baz=77
TESR Tescani 77.63 321 ⇓iP P 03 04 52.9 +0.8
CFR Carcaliu 77.81 319 ⇓P P 03 04 53.4 +0.3
CFR Carcaliu 77.81 319 ⇓iP P 03 04 53.4 +0.3
KOLS Kolonicke sedl 77.95 325 eP P 03 04 54.9 +1.1
KOLS pmax pmax
comp=Z,15nm,1.2s
KOLS Kolonicke sedl 77.95 325 eP P 03 04 54.9 +1.1
VRI Vrincioaia 78.04 320⇑ P P 03 04 55.3 +0.9
VRI Vrincioaia 78.04 320⇑ iP P 03 04 55.3 +0.9
STHS Stebnicka Huta 78.05 326 eP P 03 04 55.8 +1.4
STHS pmax pmax
comp=Z,13nm,0.9s
STHS Stebnicka Huta 78.05 326 eP P 03 04 55.8 +1.4
OJC Ojcow 78.08 327 eP P 03 04 55.0 +0.5
OJC e*SP sP 03 05 05.0 -0.9
OJC eS pS 03 14 54.3 -2.9
OJC MLR MLR
comp=Z,2µm,18.0s
OJC Ojcow 78.08 327 eP P 03 04 55.0 +0.5
OJC esP sP 03 05 05.0 -0.9
OJC eS pS 03 14 54.3 -2.9
OJC L L 03 42 13.3
comp=Z,2µm,18.0s
AYKD Aykdinkavak 78.16 309 i P P 03 04 56.3 +1.1
CDAG Cicekdag 78.17 312 i P P 03 04 55.9 +0.6
TIRR Tirgusor 78.17 318⇑ P P 03 04 55.3 +0.2
N22A Wattenberg Ran 78.19 47 P P 03 04 55.8 +0.1
baz=78
ANDN Andirin 78.33 309 eP P 03 04 55.2 -1.1
CRVS Cervenica-Dubn 78.34 325 eP P 03 04 54.8 -1.2
CRVS pmax pmax
comp=Z,37nm,1.8s
CRVS Cervenica-Dubn 78.34 325 eP P 03 04 54.8 -1.2
PV04 Paradox Valley 78.36 50 eP P 03 04 57.5 +0.9
AGMN Agassiz Nation 78.37 36 eP P 03 04 55.5 -0.7
comp=Z,11nm,1.1s
TRPA Tarpa 78.42 324⇑ iP P 03 04 57.4 +1.0
TRPA Tarpa 78.42 324⇑ eP P 03 04 57.2 +0.8
N23A Red Feather La 78.42 46 ⇑P P 03 04 57.7 +0.8
baz=78,SNR=6.8
AVNT Avonos 78.44 311 eP P 03 04 57.5 +0.6
NIE Niedzica 78.46 326 eP P 03 04 58.1 +1.4
NIE e*SP sP 03 05 08.1 +0.1
NIE Niedzica 78.46 326 eP P 03 04 58.1 +1.4
NIE esP sP 03 05 08.1 +0.1
P21A Newcastle 78.47 48 P P 03 04 56.7 -0.5
baz=78
BR131 Keskin Array S 78.52 312 eP P 03 04 57.2 -0.1
comp=Z,17nm,1.2s
BRTR Keskin Array B 78.52 312 P P 03 04 57.5 +0.1
BRTR PP PP 03 07 54.8 +0.2
BRTR Keskin Array B 78.52 312 P P 03 04 57.5 +0.1
comp=Z,11nm,1.1s,baz=37,slow=4.1,SNR=32
BRTR PP PP 03 07 54.8 +0.2
comp=Z,2.1nm,0.8s,baz=60,slow=6.3,SNR=4.4
BRTR LR LR 03 46 24.7
comp=Z,619nm,18.1s,baz=197,slow=41
O22A Kremmling 78.57 47 P P 03 04 57.2 -0.6
baz=78
M24A Cheyenne 78.66 45 P P 03 04 58.1 0.0
baz=78
ISR Istrita 78.66 320⇑ P P 03 04 59.5 +1.6
ISR Istrita 78.66 320⇑ iP P 03 04 59.5 +1.6
MLR Muntele Rosu 78.70 320 P P 03 04 58.6 +0.4
MLR Muntele Rosu 78.70 320⇑ iP P 03 04 58.5 +0.4
MLR Muntele Rosu 78.70 320 P P 03 04 58.6 +0.4
baz=44,slow=3.2
Y14A Wickenburg 78.70 55 P P 03 04 58.6 +0.3
baz=79
PV01 Paradox Valley 78.73 50 eP P 03 04 59.0 +0.3
comp=Z,1µm,1.1s
RUE Ruedersdorf 78.75 331 eP P 03 04 59.2 +1.1
comp=Z,65nm,1.2s
RUE Ruedersdorf 78.75 331 eP P 03 04 58.4 +0.3
comp=Z,9.2nm,0.5s
BSEG Bad Segeberg 78.82 334 eP P 03 04 59.4 +0.9
comp=Z,66nm,1.0s
P22A Eagle 78.83 48 P P 03 04 58.7 -0.4
baz=79
PSN Preselentsi 78.83 318 eP P 03 04 58.9 +0.1
RAC Raciborz 78.86 327 eP P 03 04 59.9 +1.1
RAC MLR MLR
comp=Z,2µm,19.6s
ANTO Ankara 78.91 313⇑ P P 03 05 00.0 +0.6
ANTO Ankara 78.91 313 P P 03 05 00.8 +1.4
SNR=7.7
ANTO Ankara 78.91 313 eP P 03 05 00.2 +0.8
comp=Z,35nm,1.0s
ANTO Ankara 78.91 313⇑ iP P 03 05 00.0 +0.6
KSP Ksiaz 79.06 329⇑ eP P 03 05 00.4 +0.5
KSP e*PP PcP 03 05 10.0 +1.7
KSP e 03 07 58.5
KSP eS S 03 14 58.0 +0.8
KSP MLR MLR
comp=Z,3µm,18.9s
KSP Ksiaz 79.06 329 eP P 03 05 00.3 +0.4
OKC Ostrava-Krasne 79.07 327 i P P 03 05 00.3 +0.4
OKC e 03 05 10.1
OKC e 03 05 10.2
OKC eS S 03 14 57.3 0.0
OKC MLR MLR
comp=Z,2µm,15.3s

OKC Ostrava-Krasne 79.07 327 i P P 03 05 00.3 +0.4
OKC epP PcP 03 05 10.1 +1.7
OKC eS S 03 14 57.3 0.0
OKC AMS AMS 03 44 20.0
comp=Z,2µm,15.3s
KECS Kecovo 79.08 325 eP P 03 05 01.1 +1.0
KECS pmax pmax
comp=Z,5.0nm,1.0s
KECS Kecovo 79.08 325 eP P 03 05 01.1 +1.0
VOIR 79.18 321⇑ P P 03 05 02.1 +1.4
VOIR 79.18 321⇑ iP P 03 05 02.1 +1.4
Q22A Crested Butte, 79.23 48 P P 03 05 01.5 0.0
baz=79
DRGR 79.32 323 ⇓iP P 03 05 01.9 +0.4
ISCO Idaho Springs 79.34 47 eP P 03 05 03.4 +1.3
ISCO pmax pmax
comp=Z,10.0nm,1.1s
ISCO Idaho Springs 79.34 47 eP P 03 05 03.4 +1.3
comp=Z,10nm,1.1s
ISCO Idaho Springs 79.34 47 P P 03 05 02.0 -0.1
baz=79
MORC Moravsky Berou 79.37 328⇑ P P 03 05 02.9 +1.2
MORC Moravsky Berou 79.37 328 eP P 03 05 01.5 -0.2
comp=Z,36nm,1.0s
MORC Moravsky Berou 79.37 328⇑ iP P 03 05 02.9 +1.2
DPC Dobruska-Polom 79.42 329 iP P 03 05 02.8 +0.8
DPC e 03 05 12.6
DPC eS S 03 15 06.4 +5.2
DPC Dobruska-Polom 79.42 329 iP P 03 05 02.8 +0.8
DPC epP pP 03 05 12.6 +2.3
DPC eS S 03 15 06.4 +5.2
UPC Upice 79.43 329 iP P 03 05 02.6 +0.7
UPC Upice 79.43 329 iP P 03 05 02.6 +0.7
KRLC Kraliky 79.45 328 iP P 03 05 02.6 +0.5
KRLC Kraliky 79.45 328 iP P 03 05 02.6 +0.5
YAYL Yayladag 79.49 308 eP P 03 05 02.3 -0.4
PRD Provadia 79.58 318 iP P 03 05 03.4 +0.6
PSZ Piszkesteto 79.77 325 eP P 03 05 04.1 +0.2
PSZ e*PP pP 03 05 15.2 +3.0
PSZ pmax pmax
comp=Z,39nm,1.1s
PSZ Piszkesteto 79.77 325⇑ iP P 03 05 04.6 +0.7
PSZ Piszkesteto 79.77 325 eP P 03 05 04.1 +0.2
comp=Z,39nm,1.1s
PSZ epP pP 03 05 15.2 +3.0
PSZ Piszkesteto 79.77 325⇑ iP P 03 05 04.6 +0.7
PSZ Piszkesteto 79.77 325⇑ eP P 03 05 04.5 +0.7
VYHS Vyhne 79.80 326 eP P 03 05 04.5 +0.5
VYHS pmax pmax
comp=Z,13nm,1.1s
VYHS Vyhne 79.80 326 eP P 03 05 04.4 +0.5
BRG Berggiesshubel 79.96 330 eP P 03 05 05.0 +0.2
comp=Z,28nm,1.1s
BRG ePCP pP 03 05 13.8 +0.7
comp=Z,15nm,0.8s
BRG ePP PP 03 08 04.7 -1.2
comp=Z,18nm,1.9s
BRG Berggiesshubel 79.96 330 eP P 03 05 05.5 +0.7
comp=Z,28nm,1.0s
BRG Berggiesshubel 79.96 330 eP P 03 05 05.0 +0.2
BRG e 03 05 13.8
BRG e 03 08 04.7
BRG pmax pmax
comp=Z,28nm,1.1s
BRG pmax pmax
comp=Z,15nm,0.8s
BRG pmax pmax
comp=Z,18nm,1.9s
CLL Collm 79.97 331 eP P 03 05 05.3 +0.5
comp=Z,46nm,0.9s
CLL epP pP 03 05 14.7 +1.5
CLL Collm 79.97 331⇑ iP P 03 05 04.7 -0.1
CLL i*SP sP 03 05 15.0 -1.2
CLL eS S 03 15 08.0 +1.2
CLL pmax pmax
comp=Z,46nm,0.9s
CLL MLR MLR
comp=Z,1µm,19.1s
CLL Collm 79.97 331⇑ iP P 03 05 04.7 -0.1
comp=Z,46nm,0.9s
CLL i sP sP 03 05 15.0 -1.2
comp=Z,35nm,0.9s
CLL e(PP) 03 07 58.0
CLL ePPIp 03 08 11.0
CLL ePPP PPP 03 10 00.0
CLL ePPPP 03 11 12.0
CLL eS S 03 15 08.0 +1.2
CLL ePS PnS 03 15 56.0 +3.3
CLL eSS SS 03 20 06.0 -10
CLL e 03 21 12.0
CLL eSSS SSS 03 23 42.0
CLL eSSSS 03 26 30.0
CLL LmH 03 43 00.0
comp=Z,1µm,19.1s
O25A Wiggins 79.97 46 P P 03 05 05.9 +0.6
baz=80
PVCC Panska Ves 79.99 330 iP P 03 05 05.9 +1.0
PVCC e 03 05 14.4
PVCC MLR MLR
comp=Z,2µm,15.3s
PVCC Panska Ves 79.99 330 iP P 03 05 05.9 +1.0
PVCC epP pP 03 05 14.4 +1.1
PVCC AMS AMS 03 45 10.0
comp=Z,2µm,15.3s
S22A 4UR Ranch, Cre 80.02 49 P P 03 05 05.9 +0.2
baz=80
NRDL Niedersach Rie 80.07 333 eP P 03 05 05.9 +0.7
comp=Z,15nm,1.0s
214A Organ Pipe Nat 80.09 57 P P 03 05 07.1 +1.2
baz=80
VRAC Vranov 80.12 328 P P 03 05 06.7 +1.0
VRAC Vranov 80.12 328 ⇓iP P 03 05 06.9 +1.2
VRAC Vranov 80.12 328 P P 03 05 06.7 +1.0
baz=48,slow=7.6
FBE Freiberg 80.15 330 eP P 03 05 06.7 +0.9
comp=Z,44nm,1.1s
FBE epP pP 03 05 16.2 +2.1
RAR Rarotonga 80.26 127 LR LR 03 35 58.7
comp=Z,798nm,19.4s,baz=286,slow=32
SZH Strazhica 80.28 319 iP P 03 05 06.0 -0.7
R23A Moffat 80.31 48 P P 03 05 08.1 +0.8
baz=80
V20A Brimhall 80.33 52 P P 03 05 08.2 +0.9
baz=80
P25A Willow Gulch B 80.36 46 P P 03 05 08.4 +1.0
baz=80
PRA Prague 80.40 329 P P 03 05 08.0 +0.8
PRA AMS AMS 03 44 00.0
U21A Nageezi 80.41 51 P P 03 05 08.5 +0.8
baz=80
PRU Pruhonice 80.42 329 iP P 03 05 07.7 +0.4
PRU e 03 05 14.7
PRU e 03 08 12.8
PRU eS S 03 15 11.1 -0.6
PRU MLR MLR
comp=Z,2µm,17.3s
PRU Pruhonice 80.42 329 iP P 03 05 07.7 +0.4
PRU epP PcP 03 05 14.7 +0.4
PRU ePP PP 03 08 12.8 +3.0
PRU eS S 03 15 11.1 -0.6
PRU AMS AMS 03 43 40.0
comp=Z,2µm,17.3s
T22A Edith 80.47 50 P P 03 05 08.8 +0.7
baz=80
BUD Budapest 80.48 325⇑ eP P 03 05 08.1 +0.5
CLZ Clausthal 80.51 333 eP P 03 05 08.7 +0.9
comp=Z,44nm,1.1s
CLZ epP pP 03 05 18.1 +2.0
NEUB Neuenburg 80.51 331 eP P 03 05 08.3 +0.6
comp=Z,49nm,1.0s
NEUB epP pP 03 05 17.8 +1.7
EYMN Ely 80.57 34 eP P 03 05 08.2 +0.1
comp=Z,19nm,1.4s
TREC Trest 80.59 328 iP P 03 05 08.8 +0.6
TREC e 03 05 18.5
TREC MLR MLR
comp=Z,2µm,15.0s
TREC Trest 80.59 328 iP P 03 05 08.8 +0.6
TREC epP pP 03 05 18.5 +1.9
TREC AMS AMS 03 44 50.0
comp=Z,2µm,15.0s
R24A Sanders Place, 80.69 48 P P 03 05 10.0 +0.7
baz=80
BOLV Bolvadin 80.74 313 i P P 03 05 09.6 +0.2

ZST Bratislava 80.77 327 eP P 03 05 10.8 +1.6
ZST Bratislava 80.77 327 eP P 03 05 10.8 +1.6
PKSG 80.83 326⇓ eP P 03 05 11.0 +1.5
TANN Tannenbergstha 80.89 331 eP P 03 05 10.6 +0.7
comp=Z,11nm,1.0s
WERD Werda 80.93 331 eP P 03 05 10.7 +0.7
comp=Z,20nm,1.1s
PLN Plauen 80.95 331 eP P 03 05 10.9 +0.8
comp=Z,129nm,1.5s
GUNZ Gunzen 80.98 331 eP P 03 05 11.2 +0.8
comp=Z,28nm,1.1s
GUNZ epP pP 03 05 20.6 +1.9
MOX Moxa 81.03 331 eP P 03 05 11.1 +0.6
comp=Z,26nm,1.1s
WERN Wernitzgruen 81.03 331 eP P 03 05 11.5 +0.9
comp=Z,29nm,0.9s
WERN epP pP 03 05 21.6 +2.7
IBBN Ibbenburen 81.04 334 eP P 03 05 11.1 +0.6
comp=Z,43nm,1.0s
NKC Novy Kostel 81.04 331 i P P 03 05 11.0 +0.3
NKC e 03 05 19.9
NKC MLR MLR
comp=Z,1µm,14.6s
NKC Novy Kostel 81.04 331 i P P 03 05 11.0 +0.3
NKC epP pP 03 05 19.9 +0.9
NKC AMS AMS 03 47 50.0
comp=Z,1µm,14.6s
PKST T"s 81.09 326⇓ eP P 03 05 11.6 +0.7
Q26A Hugo 81.13 47 P P 03 05 11.9 +0.4
baz=81
X20A Quemado 81.15 53 P P 03 05 12.1 +0.4
baz=81
RAYN Ar Rayn 81.18 293 P P 03 05 11.2 -0.7
comp=Z,140nm,0.9s,SNR=5.0
V22A San Miguel Ran 81.20 51 P P 03 05 12.8 +0.7
baz=81
R25A Fountain Ranch 81.22 47 P P 03 05 11.8 -0.2
baz=81
GDZ Gediz 81.32 314 eP P 03 05 09.1 -3.4
MPEP Malo Peshtene 81.33 320 iP P 03 05 12.0 -0.3
U23A El Rito 81.35 50 P P 03 05 12.8 0.0
baz=81
ECSD EROS Data Cent 81.36 39 eP P 03 05 11.7 -0.7
comp=Z,21nm,1.4s
MANZ Manzenberg 81.37 331 eP P 03 05 13.1 +0.7
comp=Z,23nm,1.0s
SOP Sopron 81.40 327⇑ eP P 03 05 13.5 +1.0
S25A Robets Cordova 81.47 48 P P 03 05 13.4 0.0
baz=81
KHC Kasperske Hory 81.49 329 eP P 03 05 13.0 -0.1
KHC e 03 05 23.0
KHC Kasperske Hory 81.49 329 eP P 03 05 13.0 -0.1
KHC epP pP 03 05 23.0 +1.6
CONA Conrad Observa 81.50 327 iP P 03 05 14.1 +0.9
comp=Z,35nm,1.1s,SNR=16
ROTZ Rotzenmuhle 81.51 330 eP P 03 05 14.3 +1.2
comp=Z,37nm,1.3s
DURS Dursunbey 81.52 315 eP P 03 05 13.4 -0.1
R26A Arlington 81.60 47 P P 03 05 14.1 +0.1
baz=81
PKSM Moragy 81.62 325 ⇓P P 03 05 14.3 +0.6
PKSM Moragy 81.62 325 ⇓iP P 03 05 14.3 +0.6
PKSM Moragy 81.62 325⇑ eP P 03 05 13.5 -0.2
GAZI Gazipasa 81.64 310 eP P 03 05 12.0 -2.1
Y20A Horse Springs, 81.64 53 P P 03 05 15.1 +0.7
baz=82
WTSB Winterswijk 81.64 334 eP P 03 05 11.0 -2.7
X21A Alamocita Cree 81.65 52 P P 03 05 15.2 +0.8
baz=82
GEC2 GERESS Array S 81.66 329 eP P 03 05 14.5 +0.4
comp=Z,15nm,1.2s
GERES GERESS Array B 81.66 329 P P 03 05 14.1 0.0
GERES GERESS Array B 81.66 329 P P 03 05 14.1 0.0
comp=Z,5.8nm,0.8s,baz=35,slow=5.1,SNR=45
GERES LR LR 03 45 00.0
comp=Z,1µm,18.2s,baz=12,slow=38
KDZ Kurdzhali 81.71 318 iP P 03 05 15.9 +1.6
PLD Plovdiv 81.75 319 iP P 03 05 14.9 +0.4
WET Wettzell 81.75 330 eP P 03 05 15.4 +1.0
comp=Z,27nm,1.2s
KHAL Karahalli 81.81 313 eP P 03 05 13.5 -1.5
T25A Trinidad 81.84 48 P P 03 05 15.7 +0.3
baz=82
CSS Prodhromos 81.89 309 eP P 03 05 15.1 -0.3
comp=Z,23nm,0.8s
MMAI Mount Meron Ar 81.91 306 P P 03 05 16.5 +0.9
MMAI Mount Meron Ar 81.91 306 P P 03 05 16.5 +0.9
comp=Z,25nm,0.8s,baz=44,slow=6.4
BUG Bochum--Univer 81.93 334 eP P 03 05 15.6 +0.4
comp=Z,25nm,1.1s
GRF Grafenberg Arr 81.95 331 eP P 03 05 16.6 +1.1
comp=Z,67nm,1.0s
GRF eL L 03 46 45.7
comp=Z,1µm,18.6s
GRFO Grafenberg 81.95 331 eP P 03 05 16.0 +0.5
GRFO e*PP pP 03 05 26.3 +2.5
GRFO pmax pmax
comp=Z,39nm,0.8s
GRFO Grafenberg 81.95 331 eP P 03 05 16.0 +0.5
comp=Z,39nm,0.8s
GRFO epP pP 03 05 26.3 +2.5
Z20A Nine Sixteen R 82.03 54 P P 03 05 17.0 +0.6
baz=82
RZN Rozhen 82.04 318 iP P 03 05 15.4 -0.9
S26A Kim 82.05 47 P P 03 05 16.3 -0.1
baz=82
LAZ Ladron 82.07 52 eP P 03 05 17.8 +1.2
comp=Z,3.7nm,1.1s
ANMO Albuquerque 82.12 51 eP P 03 05 18.0 +1.1
comp=Z,4.6nm,0.9s
VTS Vitosha 82.15 320 ⇓P P 03 05 17.8 +1.0
VTS Vitosha 82.15 320 eP P 03 05 16.5 -0.3
VTS Vitosha 82.15 320 ⇓iP P 03 05 17.8 +1.0
ARSA Arzberg 82.17 327⇑ iP P 03 05 17.2 +0.5
comp=Z,20nm,1.1s
T26A Comanche Natio 82.29 48 P P 03 05 17.3 -0.4
baz=82
AKHS Akhisar 82.39 315 iP P 03 05 17.5 -0.5
Z21A St. Cloud Mine 82.48 53 ⇓P P 03 05 19.6 +0.8
baz=82,SNR=5.6
X23A Hourglass Bar 82.53 51 P P 03 05 19.3 +0.3
baz=82
TNS Taunus Mts 82.53 333 eP P 03 05 19.1 +0.5
comp=Z,21nm,1.1s
DNZL Cakiroluk 82.54 313 eP P 03 05 18.7 -0.3
W24A Lazy 6 Ranch, 82.57 50 P P 03 05 20.2 +1.0
baz=82
MMB Musomiste 82.62 319 eP P 03 05 19.4 +0.2
KKB Krupnik 82.75 319 iP P 03 05 20.4 +0.6
319A Douglas 82.75 55 P P 03 05 20.4 +0.3
baz=83
R29A Marienthal 82.81 46 P P 03 05 20.2 0.0
baz=83
PERS Pernice 82.83 327 iP P 03 05 20.2 0.0
PERS i 03 05 30.5
SOKA Soboth 82.83 327⇑ iP P 03 05 20.4 +0.2
comp=Z,41nm,1.0s
SOKA ⇑ isP sP 03 05 30.7 -0.9
comp=Z,31nm,0.9s
220A Playas Peak, P 82.88 55 P P 03 05 21.0 +0.2
baz=83
SCHQ Schefferville 82.90 17 eP P 03 05 20.1 -0.2
comp=Z,11nm,0.8s
SCHQ Schefferville 82.90 17 P P 03 05 20.4 +0.1
comp=Z,8.7nm,0.8s,baz=348,slow=5.5,SNR=13
SCHQ LR LR 03 45 30.4
comp=Z,300nm,19.4s,baz=1.7,slow=38
RJOB Jochberg 82.91 329 eP P 03 05 21.8 +1.2
comp=Z,40nm,1.0s
TOD Tromm 82.92 332 eP P 03 05 21.1 +0.6
TOD Tromm 82.92 332 eP P 03 05 21.1 +0.6
Q30A Quinter 82.92 45 P P 03 05 20.5 -0.3
baz=83
HGN Heimansgroeve 82.95 334 eP P 03 05 20.2 -0.4
comp=Z,29nm,1.1s
HGN ePP PP 03 08 34.0 +3.5
HGN eS S 03 15 38.2 +0.5
HGN eSS SS 03 20 27.0 -33
S28A Manter 82.97 47 P P 03 05 21.0 -0.2
baz=83
P31A Stockton 82.99 44 P P 03 05 20.4 -0.7
baz=83
BEBN Eben Emael 83.01 334 P P 03 05 21.5 +0.6
BEBN AP pP 03 05 31.0 +1.7
Y23A Lovelace Mesa, 83.05 52 ⇑P P 03 05 21.6 -0.1
baz=83,SNR=8.2

MEM Membach 83.06 334 P P 03 05 21.8 +0.6
comp=Z,15nm,1.1s
MEM AP pP 03 05 31.5 +1.9
URZ Urewera 83.08 154 LR LR 03 39 16.4
comp=Z,583nm,18.1s,baz=340,slow=34
W25A X Bar L Ranch, 83.13 50 P P 03 05 22.2 +0.1
baz=83
FUR Furstenfeldbru 83.17 330 *e*P **P 03 05 22.9 +1.0**
comp=Z,56nm,1.2s
OBKA Obir 83.17 327⇑*i*P **P 03 05 22.5 +0.5**
comp=Z,13nm,0.8s
OBKA ⇑*i*sP **sP 03 05 32.8 -0.6**
comp=Z,16nm,0.8s
AYDN Tasoluk 83.22 314 *i* P **P 03 05 23.1 +0.8**
KBA Koelnbreinsper 83.22 328⇑*i*PcP **P 03 05 23.7 +1.4**
comp=Z,19nm,0.9s
KBA ⇑*i*sP **sP 03 05 33.1 -0.6**
comp=Z,34nm,0.9s
MYKA Terra Mystica 83.45 328⇑*i*P **P 03 05 23.1 -0.4**
comp=Z,21nm,1.1s
BCLA Clavier 83.46 334 P **P 03 05 23.3 +0.1**
comp=Z,15nm,1.5s
RUP Ruppelstein 83.46 333 *e*P **P 03 05 24.5 +1.1**
RUP Ruppelstein 83.46 333 *e*P **P 03 05 24.5 +1.1**
STU Stuttgart 83.46 331 *e*P **P 03 05 23.9 +0.6**
comp=Z,36nm,0.9s
STU *e*pP **pP 03 05 33.6 +1.9**
STU Stuttgart 83.46 331 *e*P **P 03 05 23.2 -0.1**
STU *e**PP **pP 03 05 33.3 +1.6**
STU pmax pmax
comp=Z,32nm,0.8s
STU Stuttgart 83.46 331 *e*P **P 03 05 23.2 -0.1**
comp=Z,32nm,0.8s
STU *e*pP **pP 03 05 33.3 +1.6**
LJU Ljubljana 83.55 327 *i* P **P 03 05 23.8 -0.1**
LJU *i* 03 05 33.6
BOJS Bojanci 83.66 326 *i* P **P 03 05 24.5 +0.1**
BOJS *i* 03 05 34.7
WTTA Wattenberg 83.76 329⇓*i*PcP **P 03 05 25.6 +0.5**
comp=Z,26nm,1.2s
LANF Langenberg 83.80 332 *e*P **P 03 05 26.2 +1.1**
LANF Langenberg 83.80 332 *e*P **P 03 05 26.2 +1.1**
LANF Langenberg 83.80 332 *e*P **P 03 05 26.2 +1.1**
WLF Walferdange 83.81 334 P **P 03 05 25.3 +0.3**
comp=Z,28nm,2.1s
WLF Walferdange 83.81 334 *e*P **P 03 05 25.2 +0.1**
comp=Z,61nm,1.9s
WLF Walferdange 83.81 334 *e*P **P 03 05 24.6 -0.5**
WLF pmax pmax
comp=Z,19nm,1.1s
WLF Walferdange 83.81 334 *e*P **P 03 05 24.6 -0.5**
comp=Z,18nm,1.1s
ABTA Abfaltersbach 83.83 328⇑*i*P **P 03 05 25.5 +0.2**
comp=Z,19nm,1.0s
JAVS Javornik 83.86 327 *i* P **P 03 05 24.5 -1.1**
JAVS *i* 03 05 35.0
GIVF Givet 83.89 335 *e*P **P 03 05 25.0 -0.5**
comp=Z,26nm,1.1s
GIVF Givet 83.89 335 *e*P **P 03 05 25.0 -0.5**
GIVF pmax pmax
comp=Z,26nm,1.1s
GIVF Givet 83.89 335 *e*P **P 03 05 25.0 -0.5**
comp=Z,26nm,1.1s
MOTA Moosalm 83.91 330⇑*i*P **P 03 05 25.9 +0.1**
comp=Z,30nm,1.0s,SNR=16
RETA Reutte 83.92 330⇑*i*PcP **P 03 05 26.3 +0.5**
comp=Z,43nm,1.0s
RETA ⇑*i*sP **sP 03 05 37.1 -0.1**
SQTA Sankt Quirin 83.97 329⇑*i*PcP **P 03 05 28.0 +1.9**
DOU Dourbes 83.97 335 P **P 03 05 25.8 0.0**
DOU AP **pP 03 05 35.9 +1.7**
X26A CR and CF Fran 83.98 50⇑P **P 03 05 26.3 -0.1**
baz=84,SNR=6.3
W27A Bowe Ranch, En 84.06 49 P **P 03 05 26.6 -0.2**
baz=84
BAIF Baives 84.13 335 *e*P **P 03 05 26.3 -0.4**
comp=Z,21nm,1.1s
BAIF Baives 84.13 335 *e*P **P 03 05 26.3 -0.4**
BAIF pmax pmax
comp=Z,21nm,1.1s
BAIF Baives 84.13 335 *e*P **P 03 05 26.3 -0.4**
comp=Z,21nm,1.1s
BFO Black Forest 84.15 332 P **P 03 05 27.3 +0.4**
comp=Z,108nm,1.6s,SNR=6.9
BFO Black Forest 84.15 332 *e*P **P 03 05 27.4 +0.5**
comp=Z,71nm,1.6s
BFO Black Forest 84.15 332 *e*P **P 03 05 26.4 -0.5**
BFO *e**PP **pP 03 05 37.0 +1.7**
BFO pmax pmax
comp=Z,19nm,0.9s
BFO Black Forest 84.15 332 *e*P **P 03 05 26.4 -0.5**
comp=Z,19nm,0.9s
BFO *e*pP **pP 03 05 37.0 +1.7**
SPAK Spaichingen-Ko 84.17 331 *e*P **P 03 05 27.5 +0.4**
124A Stringfield Ra 84.26 52 P **P 03 05 27.7 -0.3**
baz=84
PPT Papeete 84.31 118 LR LR 03 36 27.0
comp=Z,648nm,19.2s,baz=310,slow=31
Z25A Roswell 84.31 51 P **P 03 05 28.1 0.0**
baz=84
FETA Feichten 84.32 330⇑*i*P **P 03 05 28.1 +0.1**
comp=Z,28nm,1.1s,SNR=8.0
FETA ⇑*i*sP **sP 03 05 39.0 -0.3**
comp=Z,30nm,1.0s
Y26A Elida 84.41 50⇓P **P 03 05 28.9 +0.3**
baz=84,SNR=5.9
EIL Elat 84.42 304 P **P 03 05 28.3 -0.3**
EIL Elat 84.42 304 P **P 03 05 28.3 -0.3**
comp=Z,14nm,0.8s,baz=58,slow=2.6
DAVA Damuels 84.43 330⇓*i*PcP **P 03 05 29.1 +0.6**
comp=Z,49nm,0.9s,SNR=20
DAVA ⇑*i*sP **sP 03 05 39.7 -0.2**
comp=Z,41nm,0.9s
CDF Champ du Feu 84.47 332⇑*i*P **P 03 05 28.4 -0.2**
comp=Z,61nm,1.1s
CDF Champ du Feu 84.47 332⇑*i*P **P 03 05 28.4 -0.2**
CDF pmax pmax
comp=Z,61nm,1.1s
CDF Champ du Feu 84.47 332⇑*i*P **P 03 05 28.4 -0.2**
comp=Z,61nm,1.1s
224A Cornudas Mount 84.64 53⇓P **P 03 05 29.6 -0.3**
baz=84,SNR=7.9
FELD Feldberg im Sc 84.65 332 *e*P **P 03 05 29.8 +0.2**
ECH Echery 84.68 332 *e*P **P 03 05 29.2 -0.3**
ECH *e**PP **pP 03 05 39.8 +1.9**
ECH pmax pmax
comp=Z,27nm,1.0s
ECH Echery 84.68 332 *e*P **P 03 05 29.2 -0.3**
comp=Z,27nm,1.0s
ECH *e*pP **pP 03 05 39.8 +1.9**
ECH Echery 84.68 332 *e*P **P 03 05 30.1 +0.6**
Z26A Caprock 84.76 51⇑P **P 03 05 30.1 -0.3**
baz=85,SNR=6.6
125A Gardner Draw, 84.78 52 P **P 03 05 29.5 -0.9**
baz=85
Y27A Causey 84.83 50 P **P 03 05 30.2 -0.5**
baz=85
PAGF Fort de Pagny 84.90 333⇑*i*P **P 03 05 30.7 +0.1**
comp=Z,30nm,1.0s
PAGF Fort de Pagny 84.90 333⇑*i*P **P 03 05 30.7 +0.1**
comp=Z,30nm,1.0s
MNTX Cornudas Mount 84.99 53 *e*P **P 03 05 31.3 -0.2**
comp=Z,4.7nm,0.9s
MOF Molkenrain 84.99 332 *e*P **P 03 05 32.1 +0.9**
MOF Molkenrain 84.99 332 *e*P **P 03 05 32.1 +0.9**
MOF Molkenrain 84.99 332 *e*P **P 03 05 32.1 +0.9**
AMTX Amarillo 85.00 48 *e*P **P 03 05 32.3 +0.8**
comp=Z,15nm,0.9s
AMTX *e*pP **pP 03 05 42.1 +2.3**
THEF They Montfort 85.09 333 *e*P **P 03 05 32.6 +1.0**
THEF They Montfort 85.09 333 *e*P **P 03 05 32.6 +1.0**
THEF They Montfort 85.09 333 *e*P **P 03 05 32.6 +1.0**
324A Moseley Ranch, 85.10 53 P **P 03 05 31.8 -0.3**
baz=85
HINF Hinteralfeld 85.12 332⇑*i*P **P 03 05 31.2 -0.6**
comp=Z,54nm,1.6s
HINF Hinteralfeld 85.12 332⇑*i*P **P 03 05 31.2 -0.6**
HINF pmax pmax
comp=Z,54nm,1.6s
HINF Hinteralfeld 85.12 332⇑*i*P **P 03 05 31.2 -0.6**
comp=Z,54nm,1.6s
HAU Haudompre 85.14 333⇑*i*P **P 03 05 31.4 -0.5**
comp=Z,34nm,0.9s
HAU *e*R
comp=Z,1µm,17.2s
HAU Haudompre 85.14 333⇑*i*P **P 03 05 31.4 -0.5**
HAU pmax pmax
comp=Z,34nm,0.9s
HAU Haudompre 85.14 333⇑*i*P **P 03 05 31.4 -0.5**
comp=Z,34nm,0.9s
BBS Basel-Blauen 85.18 332 *e*P **P 03 05 32.6 +0.5**
BBS Basel-Blauen 85.18 332 *e*P **P 03 05 32.6 +0.5**
MEZF Maizieres J'vi 85.18 334⇑*i*P **P 03 05 32.1 +0.1**
comp=Z,73nm,1.1s
MEZF Maizieres J'vi 85.18 334⇑*i*P **P 03 05 32.1 +0.1**
comp=Z,73nm,1.1s
Z27A Tatum 85.19 50⇑P **P 03 05 31.1 -1.4**
baz=85,SNR=7.6
TUE Stuetta 85.31 330 *e*P **P 03 05 33.1 +0.1**
comp=Z,25nm,0.9s
Y28A McKinney Farm, 85.35 49 P **P 03 05 32.5 -0.9**
baz=85
SFTF Sexfontaines 85.44 333⇑*i*P **P 03 05 33.2 -0.1**
comp=Z,83nm,1.0s
SFTF Sexfontaines 85.44 333⇑*i*P **P 03 05 33.2 -0.1**
comp=Z,83nm,1.0s
325A Bean Ranch, Si 85.47 53 P **P 03 05 34.1 +0.1**
baz=85
LOMF Lomont 85.53 332 *e*P **P 03 05 34.2 +0.3**
LOMF Lomont 85.53 332 *e*P **P 03 05 34.2 +0.3**
LOMF Lomont 85.53 332 *e*P **P 03 05 34.2 +0.3**
Z28A Tucker Farm, M 85.71 50 P **P 03 05 34.9 -0.2**
baz=86
425A Indio Mountain 85.86 53 P **P 03 05 35.4 -0.5**
baz=86
Z29A Hungry Hill Ra 86.13 50 P **P 03 05 37.3 +0.1**
baz=86
X31A McDonald Ranch 86.16 48 P **P 03 05 37.2 0.0**
baz=86
RPZ Rata Peaks 86.23 160 LR LR 03 41 14.9
comp=Z,534nm,19.5s,baz=336,slow=34
CABF La Chapelle 86.42 332 *e*P **P 03 05 38.0 -0.3**
comp=Z,56nm,1.4s
CABF La Chapelle 86.42 332 *e*P **P 03 05 38.0 -0.3**
CABF pmax pmax
comp=Z,56nm,1.4s
CABF La Chapelle 86.42 332 *e*P **P 03 05 38.0 -0.3**
comp=Z,56nm,1.4s
Z30A Sanderson Ranc 86.45 49 P **P 03 05 38.6 -0.1**
baz=86
426A McDonald Obser 86.54 53 P **P 03 05 39.2 -0.1**
baz=86
LOR Lormes 86.65 334⇑*i*P **P 03 05 39.0 -0.4**
comp=Z,85nm,1.0s
LOR *e*R
comp=Z,1µm,17.5s
LOR Lormes 86.65 334⇑*i*P **P 03 05 39.0 -0.4**
comp=Z,85nm,1.0s
FLN La Foliniere 86.75 337 *e*P **P 03 05 39.4 -0.4**
comp=Z,30nm,0.9s
FLN *e*R
comp=Z,1µm,22.8s
FLN La Foliniere 86.75 337 *e*P **P 03 05 39.4 -0.4**
FLN pmax pmax
comp=Z,30nm,0.9s
FLN La Foliniere 86.75 337 *e*P **P 03 05 39.4 -0.4**
comp=Z,30nm,0.9s
WMOK Wichita Mounta 86.77 47 *e*P **P 03 05 39.3 -0.9**
WMOK pmax pmax
comp=Z,8.0nm,1.0s
WMOK Wichita Mounta 86.77 47 *e*P **P 03 05 39.3 -0.9**
comp=Z,7.6nm,1.0s
LDF La Druitiere 86.79 337⇑*i*P **P 03 05 39.5 -0.5**
comp=Z,49nm,1.1s
LDF La Druitiere 86.79 337⇑*i*P **P 03 05 39.5 -0.5**
LDF pmax pmax
comp=Z,49nm,1.1s
LDF La Druitiere 86.79 337⇑*i*P **P 03 05 39.5 -0.5**
comp=Z,49nm,1.1s
SSF Saint Saulge 86.95 334⇑*i*P **P 03 05 40.5 -0.3**
comp=Z,51nm,1.0s
SSF Saint Saulge 86.95 334⇑*i*P **P 03 05 40.5 -0.3**
SSF pmax pmax
comp=Z,51nm,1.0s
SSF Saint Saulge 86.95 334⇑*i*P **P 03 05 40.5 -0.3**
comp=Z,51nm,1.0s
AQU L'Aquila 86.98 325 *e*P **P 03 05 41.1 0.0**
comp=Z,48nm,1.2s
HYF Humbligny 87.07 334 *e*P **P 03 05 41.6 +0.2**
HYF Humbligny 87.07 334 *e*P **P 03 05 41.6 +0.2**
LPL La Plagne 87.11 331⇑*i*P **P 03 05 41.8 -0.1**
comp=Z,28nm,1.0s
LPL La Plagne 87.11 331⇑*i*P **P 03 05 41.8 -0.1**
LPL pmax pmax
comp=Z,28nm,1.0s
LPL La Plagne 87.11 331⇑*i*P **P 03 05 41.8 -0.1**
comp=Z,28nm,1.0s
LPG La Plagne 87.12 331 *e*P **P 03 05 41.9 -0.1**
comp=Z,34nm,0.9s
LPG La Plagne 87.12 331 *e*P **P 03 05 41.9 -0.1**
LPG pmax pmax
comp=Z,34nm,0.9s
LPG La Plagne 87.12 331 *e*P **P 03 05 41.9 -0.1**
comp=Z,34nm,0.9s
SMF Signal de Mont 87.19 333 *e*P **P 03 05 41.8 -0.2**
comp=Z,164nm,1.6s
SMF Signal de Mont 87.19 333 *e*P **P 03 05 41.8 -0.2**
SMF pmax pmax
comp=Z,164nm,1.6s
SMF Signal de Mont 87.19 333 *e*P **P 03 05 41.8 -0.2**
comp=Z,164nm,1.6s
GRR Gorron 87.20 337⇑*i*P **P 03 05 41.8 -0.2**
comp=Z,86nm,1.1s
GRR Gorron 87.20 337⇑*i*P **P 03 05 41.8 -0.2**
GRR pmax pmax
comp=Z,86nm,1.1s
GRR Gorron 87.20 337⇑*i*P **P 03 05 41.8 -0.2**
comp=Z,86nm,1.1s
AVF Avril sur Loir 87.24 334⇑*i*P **P 03 05 42.0 -0.2**
comp=Z,92nm,1.0s
AVF Avril sur Loir 87.24 334⇑*i*P **P 03 05 42.0 -0.2**
AVF pmax pmax
comp=Z,92nm,1.0s
AVF Avril sur Loir 87.24 334⇑*i*P **P 03 05 42.0 -0.2**
comp=Z,92nm,1.0s
GVD Gavdhos 87.37 314 *e*P **P 03 05 42.5 -0.6**
BNI Bardonecchia 87.52 331 *e*P **P 03 05 44.5 +0.7**
BNI pmax pmax
comp=Z,13nm,1.2s
BNI Bardonecchia 87.52 331 *e*P **P 03 05 44.5 +0.7**
comp=Z,13nm,1.2s
BGF Bois d'Agland 87.61 334 *e*P **P 03 05 43.9 -0.1**
comp=Z,24nm,1.0s
BGF Bois d'Agland 87.61 334 *e*P **P 03 05 43.9 -0.1**
BGF pmax pmax
comp=Z,24nm,1.0s
BGF Bois d'Agland 87.61 334 *e*P **P 03 05 43.9 -0.1**
comp=Z,24nm,1.0s
TXAR Lajitas Array 87.69 54 P **P 03 05 44.7 -0.2**
TXAR Lajitas Array 87.69 54 P **P 03 05 44.7 -0.2**
comp=Z,1.3nm,0.7s,baz=287,slow=3.1,SNR=7.8
TXAR LR LR 03 46 51.7
comp=Z,198nm,19.1s,baz=100,slow=37
SGMF Saint Gilles 87.83 338 *e*P **P 03 05 44.9 -0.1**
comp=Z,62nm,1.3s
SGMF Saint Gilles 87.83 338 *e*P **P 03 05 44.9 -0.1**
SGMF pmax pmax
comp=Z,62nm,1.3s
SGMF Saint Gilles 87.83 338 *e*P **P 03 05 44.9 -0.1**
comp=Z,62nm,1.3s
TIP Timpagrande 87.93 321 *e*P **P 03 05 45.7 0.0**
comp=Z,25nm,1.6s
ORIF Oris-en-Rattie 87.94 331 *e*P **P 03 05 45.5 -0.2**
comp=Z,29nm,1.2s
ORIF *e*R
comp=Z,1µm,21.0s
ORIF Oris-en-Rattie 87.94 331 *e*P **P 03 05 45.5 -0.2**
ORIF pmax pmax
comp=Z,29nm,1.2s
ORIF Oris-en-Rattie 87.94 331 *e*P **P 03 05 45.5 -0.2**
comp=Z,29nm,1.2s
AGO Saint Agoulin 87.95 333 *e*P **P 03 05 47.2 +1.5**
AGO Saint Agoulin 87.95 333 *e*P **P 03 05 47.2 +1.5**
ROSF Rostrenen 87.96 338 *e*P **P 03 05 45.4 -0.2**
comp=Z,97nm,1.4s
ROSF Rostrenen 87.96 338 *e*P **P 03 05 45.4 -0.2**
ROSF pmax pmax
comp=Z,97nm,1.4s
ROSF Rostrenen 87.96 338 *e*P **P 03 05 45.4 -0.2**
comp=Z,97nm,1.4s
TCF Toulx Ste Croi 88.07 334⇑*i*P **P 03 05 46.2 0.0**
comp=Z,49nm,1.3s
TCF Toulx Ste Croi 88.07 334⇑*i*P **P 03 05 46.2 0.0**
TCF pmax pmax
comp=Z,49nm,1.3s
TCF Toulx Ste Croi 88.07 334⇑*i*P **P 03 05 46.2 0.0**
comp=Z,49nm,1.3s
PYM Petit Puy Mans 88.26 333 *e*P **P 03 05 48.5 +1.3**
PYM Petit Puy Mans 88.26 333 *e*P **P 03 05 48.5 +1.3**
PYM Petit Puy Mans 88.26 333 *e*P **P 03 05 48.5 +1.3**
QUIF Quistinic 88.31 338 *e*P **P 03 05 47.4 +0.1**
QUIF Quistinic 88.31 338 *e*P **P 03 05 47.4 +0.1**
QUIF Quistinic 88.31 338 *e*P **P 03 05 47.4 +0.1**
232A Coleman 88.32 49 P **P 03 05 47.5 -0.3**
baz=88
TBI Tubuai 88.39 122 *e*S **S 03 16 33.5 +1.8**
VIVF Saint-Julien-l 88.44 332 *e*P **P 03 05 47.8 -0.2**
comp=Z,26nm,1.1s
VIVF Saint-Julien-l 88.44 332 *e*P **P 03 05 47.8 -0.2**
VIVF pmax pmax
comp=Z,26nm,1.1s
VIVF Saint-Julien-l 88.44 332 *e*P **P 03 05 47.8 -0.2**
comp=Z,26nm,1.1s
MFF Saint Martin d 88.57 336 *e*P **P 03 05 48.7 +0.2**
comp=Z,48nm,1.1s
MFF Saint Martin d 88.57 336 *e*P **P 03 05 48.7 +0.2**
MFF pmax pmax
comp=Z,48nm,1.1s
MFF Saint Martin d 88.57 336 *e*P **P 03 05 48.7 +0.2**
comp=Z,48nm,1.1s
332A Millersview 88.63 50 P **P 03 05 49.2 0.0**
baz=88
RJF Les Rejaudoux 89.16 334 *e*P **P 03 05 51.6 +0.2**
comp=Z,36nm,1.1s
RJF *e*R
comp=Z,2µm,17.5s
RJF Les Rejaudoux 89.16 334 *e*P **P 03 05 51.6 +0.2**
RJF pmax pmax
comp=Z,36nm,1.1s
RJF Les Rejaudoux 89.16 334 *e*P **P 03 05 51.6 +0.2**
comp=Z,36nm,1.1s
JCT Junction City 89.24 50 *e*P **P 03 05 52.0 -0.1**
JCT pmax pmax
comp=Z,6.0nm,0.8s
JCT Junction City 89.24 50 *e*P **P 03 05 52.0 -0.1**
comp=Z,5.9nm,0.8s
JCT Junction City 89.24 50 P **P 03 05 51.9 -0.1**
baz=89
CAF Calviac 89.31 334⇑*i*P **P 03 05 52.5 +0.4**
comp=Z,23nm,0.8s
CAF Calviac 89.31 334⇑*i*P **P 03 05 52.5 +0.4**
CAF pmax pmax
comp=Z,23nm,0.8s
CAF Calviac 89.31 334⇑*i*P **P 03 05 52.5 +0.4**
comp=Z,23nm,0.8s
OLIL Olney 89.31 38 *e*P **P 03 05 52.0 -0.1**
comp=Z,7.0nm,0.4s
LASF Ste Croix 89.41 332 *e*P **P 03 05 52.6 0.0**
LASF Ste Croix 89.41 332 *e*P **P 03 05 52.6 0.0**
532A Rocksprings 89.44 51 P **P 03 05 53.1 +0.1**
baz=89
SIUC Southern Illin 89.58 39 *e*P **P 03 05 53.1 -0.4**
comp=Z,17nm,1.0s
LFF La Frestale 89.74 334 *e*P **P 03 05 54.5 +0.4**
comp=Z,40nm,0.9s
LFF La Frestale 89.74 334 *e*P **P 03 05 54.5 +0.4**
LFF pmax pmax
comp=Z,40nm,0.9s
LFF La Frestale 89.74 334 *e*P **P 03 05 54.5 +0.4**
comp=Z,40nm,0.9s
ACSO Alum Creek Sta 90.41 34 *e*P **P 03 05 57.2 -0.1**
comp=Z,9.9nm,0.8s
MTLF Montolieu 90.63 333 *e*P **P 03 05 58.4 +0.1**
MTLF Montolieu 90.63 333 *e*P **P 03 05 58.4 +0.1**
MTLF Montolieu 90.63 333 *e*P **P 03 05 58.4 +0.1**
WVT Waverly 91.51 39 *e*P **P 03 06 01.3 -1.1**
WVT pmax pmax
comp=Z,3.0nm,0.8s
WVT Waverly 91.51 39 *e*P **P 03 06 01.3 -1.1**
comp=Z,3.1nm,0.8s
EPF Esparros 91.56 334 *e*P **P 03 06 02.2 -0.5**
comp=Z,13nm,1.1s
EPF Esparros 91.56 334 *e*P **P 03 06 02.2 -0.5**
EPF pmax pmax
comp=Z,13nm,1.1s
EPF Esparros 91.56 334 *e*P **P 03 06 02.2 -0.5**
comp=Z,13nm,1.1s
ETSF Etsaut 91.99 334 *e*P **P 03 06 04.9 +0.2**
comp=Z,13nm,1.0s
ETSF Etsaut 91.99 334 *e*P **P 03 06 04.9 +0.2**
ETSF pmax pmax
comp=Z,13nm,1.0s
ETSF Etsaut 91.99 334 *e*P **P 03 06 04.9 +0.2**
comp=Z,13nm,1.0s
SJPF Ste Jean 92.02 335 *e*P **P 03 06 05.0 +0.3**
comp=Z,26nm,1.1s
SJPF Ste Jean 92.02 335 *e*P **P 03 06 05.0 +0.3**
SJPF pmax pmax
comp=Z,26nm,1.1s
SJPF Ste Jean 92.02 335 *e*P **P 03 06 05.0 +0.3**
comp=Z,26nm,1.1s
CPCT Cooper Cave 93.64 37 *e*P **P 03 06 12.6 +0.3**
KEST Kesra 94.19 324 *e*P **P 03 06 14.7 -0.3**
KEST Kesra 94.19 324 P **P 03 06 15.0 0.0**
comp=Z,0.7nm,0.8s,baz=95,slow=2.5,SNR=3.8
KEST LR LR 03 53 35.3
comp=Z,369nm,18.2s,baz=170,slow=39
ESDC Sonseca Array 96.01 335 P **P 03 06 23.0 -0.2**
ESDC Sonseca Array 96.01 335 P **P 03 06 23.0 -0.2**
comp=Z,0.8nm,0.6s,baz=17,slow=4.2,SNR=8.6
ESDC LR LR 03 55 01.3
comp=Z,886nm,18.6s,baz=20,slow=39
RKT Rikitea 98.22 113 *e*LR LR 03 38 00.3
comp=Z,976nm,23.2s
KMBO Kilima Mbogo 103.10 279 *e*P **Pdif 03 06 56.0 +0.5**
comp=Z,4.2nm,1.2s
KMBO Kilima Mbogo 103.10 279 Pdiff **Pdif 03 06 56.5 +1.0**
comp=Z,2.6nm,1.1s,baz=37,slow=14,SNR=3.6
TAM Tamanrasset 106.79 320 *e*PKP **PKiKP 03 11 20.4 -1.4**
TAM *e*PP **PP 03 11 36.5 -0.1**
TORD Torodi Ar. Bea 116.82 317 PKP **PKPdf 03 11 40.6 -0.2**
TORD PP PP 03 12 38.5 -10
TORD Torodi Ar. Bea 116.82 317 PKP **PKPdf 03 11 40.6 -0.2**
comp=Z,1.1nm,0.9s,baz=14,slow=5.4,SNR=4.8
TORD PP PP 03 12 38.5 -10
comp=Z,1.4nm,0.8s,baz=38,slow=6.5,SNR=3.8
LBTB Lobatse 126.29 266 *e*PKPdf **PKPdf 03 11 58.5 -0.3**
QSPA South Pole Qui 128.89 180 *e*PKPdf **PKPdf 03 12 01.8 -0.6**
SAML Samuel 141.73 45 *e*PKPdf **PKPdf 03 12 25.1 -2.8**
SNAA Sanae 143.19 197 *e*P PKPab 03 12 23.9 -0.6
SNAA Sanae 143.19 197 *e*off 03 12 29.1
SNAA Sanae 143.19 197 *e*PKPdf PKPab 03 12 24.2 -0.3
LPAZ La Paz 144.37 59 PKP **PKPab 03 12 30.4 -0.9**
LPAZ *e*PKPdf PKPbc 03 12 31.5 0.0
LPAZ La Paz 144.37 59 PKP **PKPab 03 12 30.4 -0.9**
comp=Z,1.6nm,0.8s,baz=17,slow=4.6,SNR=4.5
VNA1 Neumayer--Stat 145.15 196 *e*off **PKPbc 03 12 32.5 +0.8**
RCBR Riachuelo 146.82 358 *e*PKPbc **PKPbc 03 12 38.1 -0.4**
LVC Limon Verde 148.06 68 *e*PKPbc **PKPbc 03 12 41.1 -0.9**
LCO Las Campanas 150.26 81 *e*PKPdf **PKPdf 03 12 40.6 -1.6**
LCO *e*PKPbc **PKPbc 03 12 47.1 -0.3**
BDFB Brasilia 154.58 26 PKPbc **PKPbc 03 12 57.2 0.0**
BDFB Brasilia 154.58 26 PKPbc **PKPbc 03 12 57.2 0.0**
comp=Z,2.0nm,0.8s,baz=262,slow=1.7,SNR=3.6

IDC 20 03:10:48.5±26.0, 19°44S×173°78W, h0km, mb4.3/4, mb1 4.4/4, mb1mx3.9/20, mbtmp4.3/4, Error ellipse: s-maj=483.2km s-min=157.0km az=74.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.56**	**262**	P	P		03 18 05.3	+0.5
	2.1nm,0.3s,baz=94,slow=8.6,SNR=2.4							
STKA	**Stephens Creek**	**41.82**	**244**	P	P		03 18 39.9	-0.3
	2.5nm,0.8s,baz=83,slow=13,SNR=3.8							
ASAR	**Alice Springs**	**48.63**	**255**	P	P		03 19 34.3	-0.2
	3.9nm,0.5s,baz=98,slow=7.9,SNR=65							
WRA	**Warramunga Arr**	**48.69**	**260**	P	P		03 19 34.5	-0.4
	1.1nm,0.3s,baz=96,slow=7.4,SNR=141							

IDC 20 03:25:02.5±8.5, 8°37S×130°02E, h99km±94km, mb3.5/1, mb1 3.3/4, mb1mx3.1/18, mbtmp3.1/4, ML3.3/3, Error ellipse: s-maj=58.6km s-min=42.5km az=19.0, Tanimbar Islands region

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

FITZ	**Fitzroy Crossi**	**10.57**	**203**	P	Pn	03 27 32.1	+1.0
	0.2nm,0.3s,baz=31,slow=12,SNR=11								
FITZ				S	Sn	03 29 28.7	+1.2
	0.5nm,0.3s,baz=182,slow=18,SNR=6.8								
WRA	**Warramunga Arr**	**12.24**	**160**	P	Pn	03 27 52.0	-1.5
	0.2nm,0.3s,baz=338,slow=13,SNR=15								
WRA				S	Sn	03 30 08.2	0.0
	0.5nm,0.3s,baz=337,slow=23,SNR=7.6								
ASAR	**Alice Springs**	**15.66**	**167**	P	Pn	03 28 38.1	+0.4
	0.1nm,0.3s,baz=334,slow=8.7,SNR=6.2								
ASAR				S	Sn	03 31 31.9	+1.0
	0.1nm,0.3s,baz=325,slow=16,SNR=3.5								
MKAR	**Makanchi Array**	**69.38**	**327**	P	P	03 35 59.7	0.0
	0.5nm,0.5s,baz=128,slow=4.0,SNR=11								

IDC 20 03:32:17.1±0.6, 22°23S×68°27W, h99km±7km, mb3.9/4, mb1 3.7/9, mb1mx3.6/22, mbtmp3.6/9, Error ellipse: s-maj=21.3km s-min=14.1km az=127.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.71**	**237**	P	Pn	03 32 35.9	+1.1
	62nm,0.3s,baz=14,slow=6.8,SNR=751						
LVC				S	Sn	03 32 49.3	+1.2
	225nm,0.3s,baz=156,slow=20,SNR=74						
LPAZ	**La Paz**	**5.91**	**1**	P	Pn	03 33 43.6	+0.6
	0.5nm,0.3s,baz=195,slow=5.5,SNR=13						
SIV	**San Ignacio**	**9.21**	**49**	P	Pn	03 34 26.1	-1.0
	0.7nm,0.3s,baz=246,slow=12,SNR=84						
SIV				S	Sn	03 36 04.0	-5.0
	baz=290,slow=21,SNR=4.0						
CFAA	**Coronel Fontan**	**9.34**	**180**	P	Pn	03 34 28.6	-0.3
	0.1nm,0.3s,baz=357,slow=12,SNR=6.9						
CFAA				S	Sn	03 36 07.5	-4.7
	0.2nm,0.3s,baz=88,slow=23,SNR=6.6						
CPUP	**Villa Florida**	**10.78**	**114**	P	Pn	03 34 50.1	+1.6
	0.2nm,0.3s,baz=264,slow=16,SNR=5.0						
PLCA	**Paso Flores**	**18.55**	**185**	P	Pn	03 36 27.3	-0.2
	0.3nm,0.3s,baz=9.5,slow=14,SNR=6.4						
BDFB	**Brasilia**	**20.24**	**75**	P	P	03 36 45.5	+0.8
	3.7nm,0.7s,baz=251,slow=14,SNR=8.5						
RCBR	**Riachuelo**	**35.26**	**67**	P	P	03 39 03.1	+0.5
	6.5nm,1.0s,baz=24,slow=8.7,SNR=5.0						
TORD	**Torodi Ar. Bea**	**77.04**	**70**	P	P	03 44 00.1	+0.2
	1.7nm,0.7s,baz=252,slow=4.6,SNR=12						
YKA	**Yellowknife Ar**	**92.07**	**340**	P	P	03 45 12.9	-1.7
	0.8nm,0.8s,baz=135,slow=4.5,SNR=8.0						
ASAR	**Alice Springs**	**129.54**	**207**	PKP	PKPdf	03 51 14.9	-0.3
	0.8nm,0.9s,baz=144,slow=2.0,SNR=4.7						
WRA	**Warramunga Arr**	**132.62**	**209**	PKP	PKPdf	03 51 19.9	-1.2
	0.8nm,0.9s,baz=158,slow=1.9,SNR=7.0						
MKAR	**Makanchi Array**	**145.86**	**37**	PKPbc	PKPbc	03 51 44.9	-0.1
	1.6nm,0.8s,baz=329,slow=2.3,SNR=20						

*NIED **20** 03:44:00, 24°.20N×122°.50E, h56km, Mw4.7 Best double couple: M₀1.37000×10¹⁶ NP1:φ=334.00000°, δ=83.00000°, λ=-35.00000°. NP2:φ=68.00000°, δ=56.00000°, λ=-172.00000°.*

*BJI **20** 03:44:26.8, 24°.09N×122°.52E, h40km, mB4.8/30, mb4.7/43, ML4.4/9, Ms4.3/35, Ms7 4.1/33*

*ISCJB **20** 03:44:28.8±0.2, 24°.06N±0°.02×122°.50E±0°.01, h60km±1km, mb4.7/84, MS4.0/19, Error ellipse: s-maj=2.7km s-min=1.8km az=156.6*

*NEIC **20** 03:44:29.1±0.4, 24°.05N×122°.51E, h52km±3km, mb4.8/53, Error ellipse: s-maj=4.3km s-min=3.8km az=135.0*

NEIC Felt at Taipei. Recorded [3 TAP] in Hua-lien; [2 TAP] in Chang-hua, I-lan and T'ai-tung; [1 TAP] in Chia-i, Nan-t'ou, T'ai-chung and T'ai-pei. Recorded [1 JMA] on Iriomote-jima, Ishigaki-jima and Yonaguni-jima, Ryukyu Islands.

*JMA **20** 03:44:29.0±0.2, 24°.15N×122°.45E, h70km±3km, M5.0*

JMA Felt I J1.

*IDC **20** 03:44:29.8±2.2, 24°.15N×122°.59E, h57km±19km, mb4.2/26, mb1 4.4/27, mb1mx4.3/32, mbtmp4.2/27, ML4.2/1, MS3.9/17, Ms1 3.9/17, ms1mx3.6/47, Error ellipse: s-maj=16.5km s-min=11.5km az=65.0*

*TAP **20** 03:44:29.4, 24°.04N×122°.44E, h49km, ML5.4, B*

*DJA **20** 03:44:31.7±1.0, 24°N±6°×12°2E±1°1, h65km±8km, M4.8/8, mB5.5/1, mb4.5/8, MLv4.9/1, Mw(mB)4.9/1*

ISC 20 03:44:29.4±0.4, 24°.05N±0°.02×122°.50E±0°.02, h52km±3km, h52km:pP-P, n284, σ1=65/394, mb4.7/84, MS3.9/20, 21C-6D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YOJ	**Yonaguni jima**	**0.62**	**48**	⇓*i*P	**Pn**	**03 44 42.9**	**+0.6**
	baz=50						
YOJ				*i* S	**Sn**	**03 44 52.9**	**+1.4**
	baz=50						
YOJ	**Yonaguni jima**	**0.62**	**48**	P	**Pn**	**03 44 42.9**	**+0.6**
YOJ				*e*S	**Sn**	**03 44 53.1**	**+1.6**
EHP	**Heping Village**	**0.74**	**291**	*e*P	**Pn**	**03 44 43.2**	**-0.7**
	baz=293						
EHP				*e*S	**Sn**	**03 44 54.2**	**-0.1**
	baz=293						
ENA	**Nanau**	**0.79**	**299**	⇑P	**Pn**	**03 44 44.0**	**-0.5**
	baz=307						
TWC	**Suao**	**0.82**	**313**	⇑*i*P	**Pn**	**03 44 44.1**	**-0.7**
	baz=316						
HWA	**Hwalien**	**0.82**	**265**	*e*P	**Pn**	**03 44 44.0**	**-0.8**
	baz=256						
TWD	**Chiawan**	**0.83**	**272**	⇓P	**Pn**	**03 44 43.7**	**-1.2**
	baz=273						
TWD				S	**Sn**	**03 44 53.8**	**-2.4**
	baz=273						
NACB	**Ninganchiao**	**0.84**	**279**	*e*Pn	**Pn**	**03 44 43.8**	**-1.3**
NACB				*e*Sn	**Sn**	**03 44 53.3**	**-3.2**
ESF	**Shoufeng Towns**	**0.93**	**259**	*e*P	**Pn**	**03 44 44.9**	**-1.3**
	baz=256						
ESF				*e*S	**Sn**	**03 44 56.9**	**-1.7**
	baz=256						
TEGC	**Jichi Village**	**0.94**	**249**	*e*P	**Pn**	**03 44 45.4**	**-1.1**
	baz=248						
TEGC				*e*S	**Sn**	**03 44 57.5**	**-1.4**
	baz=248						
ILA	**Ilan**	**0.99**	**316**	*e*P	**Pn**	**03 44 47.7**	**+0.6**
	baz=313						
ILA				*e*S	**Sn**	**03 45 01.1**	**+1.0**
	baz=313						
ESL	**Shilin**	**1.01**	**257**	*e*P	**Pn**	**03 44 45.8**	**-1.5**
	baz=250						
TWE	**Neicheng**	**1.01**	**312**	⇑*i*P	**Pn**	**03 44 47.5**	**+0.1**
	baz=314						
TWE				S	**Sn**	**03 45 00.3**	**-0.4**
	baz=314						
ENTT	**Nioudou**	**1.04**	**305**	⇑*i*P	**Pn**	**03 44 47.6**	**-0.1**
	baz=297						
TWB1	**Santiao Chiao**	**1.06**	**334**	P	**Pn**	**03 44 47.7**	**-0.4**
	baz=347						
TWB1				S	**Sn**	**03 45 01.3**	**-0.6**
	baz=347						
NNS	**Nan Shan**	**1.10**	**291**	⇑P	**Pn**	**03 44 48.2**	**-0.5**
	baz=292						
NNS				*e*S	**Sn**	**03 45 02.1**	**-0.9**
	baz=292						
WHF	**Hehuan Shan**	**1.14**	**275**	⇑*i*P	**Pn**	**03 44 48.5**	**-0.9**
	baz=275						
IRIF	**Iriomote-Funau**	**1.16**	**75**	P	**Pn**	**03 44 50.1**	**+0.8**
IRIF				*e*S	**Sn**	**03 45 06.1**	**+2.0**
HATJ	**Hateruma jima**	**1.19**	**89**	P	**Pn**	**03 44 50.8**	**+1.0**
HATJ				*e*S	**Sn**	**03 45 06.7**	**+1.8**
EHY	**Hungye**	**1.21**	**244**	*e*P	**Pn**	**03 44 48.9**	**-1.2**
	baz=236						
NWF	**Wu-fen Shan**	**1.21**	**327**	P	**Pn**	**03 44 50.0**	**-0.2**
	baz=329						
NWF				S	**Sn**	**03 45 05.0**	**-0.5**
	baz=329						
TWT	**Tachien**	**1.23**	**280**	⇑*e*P	**Pn**	**03 44 50.5**	**0.0**
	baz=271						
TWT				*e*S	**Sn**	**03 45 05.2**	**-0.9**
	baz=271						
YULB	**Yu-li**	**1.28**	**240**	*e*Pn	**Pn**	**03 44 49.8**	**-1.3**
YULB				*e*Sn	**Sn**	**03 45 05.4**	**-1.8**
TWF1	**Yuli**	**1.30**	**238**	⇓P	**Pn**	**03 44 50.4**	**-1.0**
	baz=230						
TWF1				*e*S	**Sn**	**03 45 06.1**	**-1.6**
	baz=230						
TATO	**Taipei**	**1.31**	**315**	*e*Pn	**Pn**	**03 44 51.8**	**+0.5**
TATO				*e*Sn	**Sn**	**03 45 07.7**	**0.0**
TAP1	**Taipei**	**1.33**	**318**	*e*P	**Pn**	**03 44 51.7**	**+0.1**
	baz=331						
TAP1				*e*S	**Sn**	**03 45 08.6**	**+0.3**
	baz=331						
TAP	**Taipei**	**1.34**	**318**	*e*P	**Pn**	**03 44 52.2**	**+0.4**
	baz=331						
TAP				*e*S	**Sn**	**03 45 09.1**	**+0.6**
	baz=331						
JKRS	**Kuro-shima**	**1.39**	**82**	P	**Pn**	**03 44 53.7**	**+1.2**
JKRS				*e*S	**Sn**	**03 45 12.0**	**+2.3**
CHKT	**Chengkung**	**1.41**	**228**	*e*P	**Pn**	**03 44 51.1**	**-1.6**
	baz=221						
CHKT				*e*S	**Sn**	**03 45 07.0**	**-3.2**
	baz=221						
SSLB	**Suanglung**	**1.44**	**260**	*e*Pn	**Pn**	**03 44 52.9**	**-0.3**
SSLB				*e*Sn	**Sn**	**03 45 09.6**	**-1.4**
TWS1	**Kuangyinshan**	**1.44**	**317**	⇑*e*P	**Pn**	**03 44 53.5**	**+0.3**
	baz=330						
TWS1				*e*S	**Sn**	**03 45 12.2**	**+1.3**
	baz=330						
TWY	**Chenhua**	**1.47**	**326**	*e*P	**Pn**	**03 44 53.4**	**-0.2**
	baz=328						
SMLT	**Sun Moon Lake**	**1.48**	**264**	⇑*i*P	**Pn**	**03 44 53.6**	**-0.1**
	baz=264						
SMLT				*e*S	**Sn**	**03 45 11.0**	**-0.9**
	baz=264						
NSTT	**Nanjuang**	**1.49**	**293**	⇑*i*P	**Pn**	**03 44 54.5**	**+0.7**
	baz=294						
NSTT				S	**Sn**	**03 45 12.3**	**+0.2**
	baz=294						
NCU	**National Centr**	**1.51**	**308**	*e*P	**Pn**	**03 44 54.4**	**+0.3**
	baz=309						
NCU				*e*S	**Sn**	**03 45 13.6**	**+0.9**
	baz=309						
TYC	**Yuchr**	**1.51**	**265**	⇑*i*P	**Pn**	**03 44 54.0**	**-0.1**
	baz=265						
TYC				*e*S	**Sn**	**03 45 11.2**	**-1.5**
	baz=265						
YUS	**Yu-Shan**	**1.52**	**249**	*e*P	**Pn**	**03 44 54.6**	**-0.2**
	baz=240						
JIJ	**Ishigaki jima**	**1.53**	**78**	P	**Pn**	**03 44 54.8**	**+0.4**
JIJ				*e*S	**Sn**	**03 45 13.7**	**+0.5**
HSN	**Hsinchu**	**1.59**	**299**	*e*P	**Pn**	**03 44 55.5**	**+0.4**
	baz=301						
HSN				*e*S	**Sn**	**03 45 14.4**	**-0.1**
	baz=301						
TWQ1	**Liyutan**	**1.61**	**281**	⇑*i*P	**Pn**	**03 44 56.3**	**+0.8**
	baz=282						
TWQ1				*e*S	**Sn**	**03 45 16.0**	**+0.9**
	baz=282						
ELDTW	**Lidau**	**1.61**	**238**	⇓P	**Pn**	**03 44 54.4**	**-1.1**
	baz=237						
PCYT	**Pengchaiyu**	**1.62**	**346**	⇑*i*P	**Pn**	**03 44 55.9**	**+0.2**
	baz=335						
PCYT				*e*S	**Sn**	**03 45 16.0**	**+0.6**
	baz=335						
NSY	**Sanyi**	**1.63**	**283**	⇑P	**Pn**	**03 44 56.8**	**+1.0**
	baz=284						
NSY				*e*S	**Sn**	**03 45 16.7**	**+1.1**
	baz=284						
ALS	**Alishan**	**1.64**	**251**	⇑P	**Pn**	**03 44 56.4**	**+0.2**
	baz=252						
ALS				*e*S	**Sn**	**03 45 15.1**	**-1.3**
	baz=252						
TCU	**Taichung**	**1.67**	**274**	⇑*e*P	**Pn**	**03 44 57.2**	**+0.9**
	baz=274						
TCU				*e*S	**Sn**	**03 45 17.9**	**+1.3**
	baz=274						
WNT	**Mingjian**	**1.67**	**265**	*e*P	**Pn**	**03 44 57.4**	**+1.1**
	baz=265						
WNT				*e*S	**Sn**	**03 45 17.3**	**+0.7**
	baz=265						
CHN5	**Tsauling**	**1.73**	**255**	*e*P	**Pn**	**03 44 57.8**	**+0.6**
	baz=255						
TTN	**Taitung**	**1.79**	**224**	*e*P	**Pn**	**03 44 56.9**	**-1.1**
	baz=216						
TTN				*e*S	**Sn**	**03 45 19.9**	**+0.4**
	baz=216						
TWG	**Pinlang**	**1.79**	**227**	*e*P	**Pn**	**03 44 56.5**	**-1.5**
	baz=238						
TWG				*e*S	**Sn**	**03 45 17.1**	**-2.6**
	baz=238						
TWG	**Pinlang**	**1.79**	**227**	*e*Pn	**Pn**	**03 44 56.4**	**-1.6**
TWG				*e*Sn	**Sn**	**03 45 17.6**	**-2.0**
WGK	**Gukeng**	**1.81**	**259**	*e*P	**Pn**	**03 44 59.2**	**+1.0**
	baz=259						
WGK				*e*S	**Sn**	**03 45 21.0**	**+0.9**
	baz=259						
TPUB	**Ta-pu**	**1.87**	**247**	*e*Pn	**Pn**	**03 44 59.4**	**+0.3**
TPUB				*e*Sn	**Sn**	**03 45 22.2**	**+0.6**
WTP	**Ta-pu**	**1.91**	**246**	⇑P	**Pn**	**03 45 00.5**	**+0.9**
	baz=246						
WTP				*e*S	**Sn**	**03 45 23.4**	**+0.9**
	baz=246						
CHY	**Chiayi**	**1.98**	**254**	*e*P	**Pn**	**03 45 01.6**	**+1.1**
	baz=255						
CHY				*e*S	**Sn**	**03 45 25.4**	**+1.3**
	baz=255						
CHN1	**Nanshi**	**2.00**	**245**	⇑*e*P	**Pn**	**03 45 01.8**	**+0.9**
	baz=246						
CHN1				S	**Sn**	**03 45 26.4**	**+1.6**
	baz=246						
TWK	**Hsinying**	**2.00**	**248**	*e*P	**Pn**	**03 45 02.1**	**+1.2**
	baz=248						
TWK				*e*S	**Sn**	**03 45 26.3**	**+1.5**
	baz=248						
ECL	**Taimali**	**2.03**	**225**	*e*P	**Pn**	**03 44 59.5**	**-1.7**
	baz=232						
WTCT	**Ta-ch'eng**	**2.04**	**265**	*e*P	**Pn**	**03 45 02.0**	**+0.7**
	baz=279						
WTCT				*e*S	**Sn**	**03 45 27.0**	**+1.4**
	baz=279						
JTJ	**Tarama**	**2.09**	**73**	P	**Pn**	**03 45 02.7**	**+0.7**
JTJ				*e*S	**Sn**	**03 45 27.9**	**+1.0**
WSF	**Szhu**	**2.13**	**259**	*e*P	**Pn**	**03 45 03.4**	**+0.9**
	baz=260						
WSF				*e*S	**Sn**	**03 45 29.3**	**+1.5**
	baz=260						
LAY	**Lan-yu**	**2.18**	**204**	*e*P	**Pn**	**03 45 01.5**	**-1.8**
	baz=202						
CHN3	**Shinhua**	**2.19**	**244**	*e*P	**Pn**	**03 45 06.0**	**+2.6**
	baz=245						
CHN3				*e*S	**Sn**	**03 45 31.7**	**+2.4**
	baz=245						
CHN8	**Yiju**	**2.21**	**252**	*e*P	**Pn**	**03 45 03.8**	**+0.1**
	baz=253						
CHN8				*e*S	**Sn**	**03 45 30.8**	**+1.0**
	baz=253						
TAW	**Tawu**	**2.24**	**222**	*e*P	**Pn**	**03 45 03.1**	**-0.9**
	baz=228						
EAST	**Anshuo**	**2.25**	**223**	⇓*e*P	**Pn**	**03 45 02.8**	**-1.5**
	baz=222						
TWM1	**Shoushan**	**2.27**	**238**	*e*P	**Pn**	**03 45 07.3**	**+2.8**
	baz=237						
SGLT	**Jiouru**	**2.27**	**235**	*e*P	**Pn**	**03 45 06.7**	**+2.2**
	baz=234						
SCLT	**Jiali**	**2.29**	**248**	*e*P	**Pn**	**03 45 05.8**	**+1.0**
	baz=249						
SCLT				*e*S	**Sn**	**03 45 33.2**	**+1.5**
	baz=249						
TAI1	**Yung-k'ang**	**2.32**	**245**	*e*P	**Pn**	**03 45 06.6**	**+1.5**
	baz=257						
TAI1				*e*S	**Sn**	**03 45 34.7**	**+2.4**
	baz=257						
SCZT	**Fangliau**	**2.40**	**226**	*e*P	**Pn**	**03 45 06.3**	**-0.1**
	baz=222						
SCZT				*e*S	**Sn**	**03 45 35.2**	**+0.6**
	baz=222						
KAU	**Kaohsiung**	**2.50**	**234**	*e*P	**Pn**	**03 45 09.8**	**+2.2**
	baz=234						
TWP	**Hsiaoliuchiu**	**2.60**	**230**	*e*P	Pn	03 45 11.9	+2.9
	baz=244						
TWP				*e*S	**Sn**	**03 45 42.8**	**+3.5**
	baz=244						
TSEB	**Hengchuen, Pin**	**2.60**	**215**	*e*P	**Pn**	**03 45 09.4**	**+0.4**
	baz=222						
TSEB				*e*S	**Sn**	**03 45 39.1**	**-0.3**
	baz=222						
HEN	**Hengchun**	**2.60**	**219**	*e*P	**Pn**	**03 45 09.2**	**+0.2**
	baz=219						
HEN				*e*S	**Sn**	**03 45 39.7**	**+0.3**
	baz=219						
TWK1	**Hengchun**	**2.61**	**217**	*e*P	**Pn**	**03 45 08.8**	**-0.4**
	baz=216						
JMJ	**Miyako jima 2**	**2.66**	**73**	*e*P	**Pn**	**03 45 10.9**	**+1.1**
	baz=73						
JMJ	**Miyako jima 2**	**2.66**	**73**	P	**Pn**	**03 45 10.8**	**+1.0**
JMJ				*e*S	**Sn**	**03 45 42.0**	**+1.2**
WDGT	**Dungji**	**2.72**	**254**	*e*P	**Pn**	**03 45 10.5**	**-0.1**
	baz=255						
WDGT				*e*S	**Sn**	**03 45 40.9**	**-1.5**
	baz=255						
JOGS	**Gusukube**	**2.74**	**74**	P	**Pn**	**03 45 12.3**	**+1.4**
JOGS				*e*S	**Sn**	**03 45 44.6**	**+1.7**
PNG	**Penghu**	**2.74**	**261**	*e*P	**Pn**	**03 45 10.4**	**-0.5**
	baz=274						
PNG				*e*S	**Sn**	**03 45 41.7**	**-1.1**
	baz=274						
QZH	**Quanzhou**	**3.67**	**285**	⇓*i*P	**Pn**	**03 45 23.5**	**-0.2**
QZH				S	**Sn**	**03 46 02.6**	**-3.1**
QZH				smax	smax		
	comp=N,2μm,0.6s						
QZH				smax	smax		
	comp=E,2μm,0.7s						
KNM	**Kinmen**	**3.73**	**276**	*e*P	**Pn**	**03 45 25.2**	**+0.7**
	baz=276						
KNM				*e*S	**Sn**	**03 46 07.1**	**-0.1**
	baz=276						
JKE	**Kume jima 2**	**4.50**	**59**	P	**Pn**	**03 45 35.2**	**+0.2**
JKE				*e*S	**Sn**	**03 46 27.4**	**+1.4**
JAGN	**Aguni-jima**	**4.98**	**58**	P	**Pn**	**03 45 41.7**	**+0.1**
JAGN				*e*S	**Sn**	**03 46 37.7**	**-0.2**
JJT2	**Tamagusuku 2**	**5.19**	**65**	P	**Pn**	**03 45 45.0**	**+0.4**
JIH	**Iheya**	**5.76**	**58**	P	**Pn**	**03 45 51.8**	**-0.6**
JIH				*e*S	**Sn**	**03 46 54.0**	**-3.2**
JOW	**Kunigami**	**5.91**	**61**	*e*P	**Pn**	**03 45 53.5**	**-0.9**
	baz=62						
JOW	**Kunigami**	**5.91**	**61**	*e*Pn	**Pn**	**03 45 53.4**	**-1.0**
JOW				*e*Sn	**Sn**	**03 46 57.3**	**-3.5**
JOW	**Kunigami**	**5.91**	**61**	P	**Pn**	**03 45 53.4**	**-1.0**
PIP	**Pasuquin**	**5.96**	**197**	⇑*e*P	**Pn**	**03 45 56.2**	**+1.1**
JTK	**Tokunoshima**	**6.90**	**56**	P	**Pn**	**03 46 06.5**	**-1.4**
JTK				*e*S	**Sn**	**03 47 23.0**	**-2.1**
SSE	**Sheshan**	**7.12**	**351**	⇑P	**Pn**	**03 46 10.8**	**-0.1**
SSE				S	**Sn**	**03 47 34.3**	**+3.9**
SSE				pmax	pmax		
	comp=Z,160nm,0.6s						
SSE				pmax	pmax		
	comp=Z,140nm,5.3s						
SSE				smax	smax		
	comp=N,110nm,0.9s						
SSE				smax	smax		
	comp=E,110nm,1.3s						
SSE				LR	LR		
	comp=N,110nm,26.0s						
SSE				LR	LR		
	comp=E,750nm,26.1s						
JAMN	**Amaminishikomi**	**7.31**	**54**	P	**Pn**	**03 46 11.7**	**-1.9**
JAMN				*e*S	**Sn**	**03 47 32.9**	**-2.2**
JAM	**Amami Oshima**	**7.72**	**54**	P	**Pn**	**03 46 17.3**	**-1.9**
JAM				*e*S	**Sn**	**03 47 41.3**	**-3.9**
JMZ	**Minamidaito 2**	**8.11**	**76**	P	Pn	03 46 21.0	-3.5
JMZ				*e*S	Sn	03 47 44.6	-10
NJ2	**Nanjing**	**8.60**	**339**	*e*P	**Pn**	**03 46 30.0**	**-1.2**
NJ2				sP		03 46 45.8	
NJ2				S	**Sn**	**03 48 07.0**	**+0.2**
NJ2				PcP	**PcP**	**03 52 56.0**	**-1.1**
NJ2				pmax	pmax		
	comp=Z,30nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,250nm,5.5s						
NJ2				smax	smax		
	comp=N,160nm,0.8s						
NJ2				smax	smax		
	comp=E,180nm,1.2s						
NJ2				LR	LR		
	comp=N,380nm,12.5s						
NJ2				LR	LR		
	comp=E,880nm,12.3s						
NJ2				LR	LR		
	comp=Z,410nm,13.7s						
WHN	**Wuhan**	**9.71**	**314**	P	**Pn**	**03 46 44.8**	**-1.7**
WHN				pP		03 46 50.8	
WHN				S	Sn	03 48 27.4	-6.8
WHN				LR	LR		
	comp=E,3μm,4.3s						
WHN				LR	LR		
	comp=Z,2μm,16.4s						
JNU	**Nakatsue**	**11.65**	**37**	P	**Pn**	**03 47 14.2**	**+1.2**
JNU	**Nakatsue**	**11.65**	**37**	P	**Pn**	**03 47 14.2**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=228,slow=9.9,SNR=6.1						
JNU				LR	LR	03 51 49.7	
	comp=Z,369nm,19.1s,baz=213,slow=38						
QIZ	**Qiongzhong**	**12.79**	**249**	P	**Pn**	**03 47 28.1**	**-0.6**
QIZ				S	**Sn**	**03 49 49.6**	**0.0**
QIZ				pmax	pmax		
	comp=Z,17nm,1.5s						
QIZ				pmax	pmax		
	comp=Z,230nm,4.0s						
QIZ				LR	LR		
	comp=N,590nm,17.7s						
QIZ				LR	LR		
	comp=Z,490nm,20.1s						
QIZ	**Qiongzhong**	**12.79**	**249**	*e*Pn	**Pn**	**03 47 29.2**	**+0.6**
QIZ				*e*Sn	**Sn**	**03 49 48.7**	**-0.9**
ENH	**Enshi**	**13.14**	**301**	*e*Pn	**Pn**	**03 47 33.9**	**+0.6**
	comp=Z,134nm,1.6s						
INCN	**Inchon**	**13.85**	**14**	*e*Pn	**Pn**	**03 47 43.4**	**+0.4**
	comp=Z,32nm,0.8s						
KSAR	**Wonju Array Be**	**14.13**	**18**	P	**Pn**	**03 47 46.0**	**-0.7**
KSRS	**Korea Array**	**14.15**	**18**	P	**Pn**	**03 47 46.0**	**-1.0**
	comp=Z,1.2nm,0.3s,baz=199,slow=13,SNR=28						
KSRS				LR	LR	03 53 19.6	
	comp=Z,115nm,18.4s,baz=200,slow=38						
GYA	**Guiyang**	**14.53**	**283**	P	**Pn**	**03 47 52.8**	**+0.6**
GYA				pP	P	03 48 01.3	+3.7
GYA				sP		03 48 10.0	
GYA				S	**Sn**	**03 50 31.4**	**-0.7**
GYA				sS	**S**	**03 50 45.0**	**-4.2**
GYA				SS	**SnSn**	**03 50 49.3**	**+4.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,80nm,5.0s						
GYA				LR	LR		
	comp=N,440nm,14.5s						
GYA				LR	LR		
	comp=E,360nm,15.4s						
GYA				LR	LR		
	comp=Z,480nm,13.9s						
XAN	**Xi'an**	**15.48**	**313**	P	**Pn**	**03 48 03.8**	**-0.7**
XAN				pP	**P**	**03 48 12.6**	**+4.6**
XAN				S	**Sn**	**03 50 52.4**	**-2.6**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,52nm,4.9s						
XAN				LR	LR		
	comp=N,210nm,8.4s						
XAN				LR	LR		
	comp=E,120nm,14.5s						
XAN				LR	LR		
	comp=Z,160nm,15.7s						
BJI	**Beijing**	**16.81**	**343**	P	**P**	**03 48 23.0**	**+0.3**
BJI				S	**Sn**	**03 51 30.3**	**+3.2**
BJI				pmax	pmax		
	comp=Z,17nm,0.8s						
BJI				LR	LR		
	comp=N,220nm,24.6s						
BJI				LR	LR		
	comp=E,480nm,23.7s						
BJI				LR	LR		
	comp=Z,140nm,18.5s						
CD2	**Chengdu**	**17.97**	**296**	*e*P	**Pn**	**03 48 35.6**	**0.0**
CD2				pP	**pP**	**03 48 45.4**	**-1.9**
CD2				PP	**PnPn**	**03 48 50.8**	**+3.1**
CD2				S	**Sn**	**03 51 52.0**	**-

KMI					SS	SnSn	03 52 18.0	+7.4	
KMI					pmax	pmax			
	comp=Z,36nm,0.5s								
KMI					pmax	pmax			
	comp=Z,400nm,4.7s								
KMI					LR	LR			
	comp=N,560nm,11.6s								
KMI					LR	LR			
	comp=E,570nm,11.6s								
KMI					LR	LR			
	comp=Z,580nm,13.8s								
UBPT	Khong Chiam	18.24	245		P	Pn	03 48 43.1	+4.1	
MAJO	Matsushiro	18.38	44		eP	Pn	03 48 40.7	+0.2	
	comp=Z,8.0nm,0.8s								
MAT	Matsushiro	18.38	44		P	P	03 48 38.0	-2.0	
KKM	Kota Kinabalu	18.89	200		eP	P	03 48 44.9	-1.0	
	comp=Z,16nm,0.8s								
KKM	Kota Kinabalu	18.89	200		P	Pn	03 48 46.4	-0.5	
	comp=Z,26nm,1.5s								
HHC	Hu-ho-hao-te	19.10	334		eP	P	03 48 47.8	-0.2	
HHC					pP	pP	03 48 59.4	-0.3	
HHC					sP	sP	03 49 05.8	-0.5	
HHC					PP	PnPn	03 49 07.4	+4.2	
HHC					S	S	03 52 17.4	-4.5	
HHC					sS	sS	03 52 32.5	-8.3	
HHC					SS	SnSn	03 52 44.1	+6.8	
HHC					pmax	pmax			
	comp=Z,80nm,1.1s								
HHC					pmax	pmax			
	comp=Z,400nm,5.0s								
HHC					LR	LR			
	comp=N,790nm,14.5s								
HHC					LR	LR			
	comp=E,2μm,13.2s								
HHC					LR	LR			
	comp=Z,520nm,13.9s								
MYLDM	Lahad Datu	19.15	192		P	Pn	03 48 52.6	+2.7	
	comp=Z,32nm,1.0s								
CN2	Changchun	19.85	6		eP	P	03 48 56.3	+0.3	
CN2					pmax	pmax			
	comp=Z,30nm,0.8s								
CN2					pmax	pmax			
	comp=Z,200nm,4.0s								
CN2					LR	LR			
	comp=N,200nm,11.0s								
CN2					LR	LR			
	comp=E,200nm,11.0s								
CN2					LR	LR			
	comp=Z,300nm,13.0s								
LZH	Lanzhou	20.08	311		eP	Pn	03 49 00.8	-0.2	
LZH					pP	pP	03 49 12.3	+1.8	
LZH					sP	sP	03 49 18.3	+1.2	
LZH					eS	S	03 52 41.8	+0.1	
LZH					SS	SnSn	03 53 10.3	+9.0	
LZH					pmax	pmax			
	comp=Z,38nm,1.1s								
LZH					pmax	pmax			
	comp=Z,150nm,4.4s								
LZH					LR	LR			
	comp=N,440nm,13.1s								
LZH					LR	LR			
	comp=E,170nm,14.4s								
LZH					LR	LR			
	comp=Z,710nm,15.4s								
MDJ	Mudanjiang	21.32	14		P	P	03 49 13.4	+1.5	
MDJ					pP	pP	03 49 23.0	-0.8	
MDJ					sP	sP	03 49 28.1	-2.2	
MDJ					S	S	03 53 08.8	+3.0	
MDJ					pmax	pmax			
	comp=Z,14nm,2.2s								
MDJ					pmax	pmax			
	comp=Z,160nm,12.3s								
MDJ					LR	LR			
	comp=N,180nm,38.2s								
MDJ					LR	LR			
	comp=E,200nm,31.8s								
MDJ					LR	LR			
	comp=Z,140nm,23.6s								
PBKT	Sadao Pong	21.50	254		P	P	03 49 15.4	+1.3	
	comp=Z,11nm,1.1s,comp=Z,2μm								
USRK	Ussuriysk Arra	21.55	19		P	P	03 49 12.7	-1.7	
	comp=Z,11nm,0.7s,baz=205,slow=11,SNR=19								
USRK					LR	LR	03 58 15.3		
	comp=Z,195nm,19.2s,baz=293,slow=38								
CHBT	CHBT	22.16	243		P	P	03 49 25.5	+4.4	
CHTO	Chiang Mai	22.53	261		eP	P	03 49 26.2	+1.1	
	comp=Z,33nm,1.5s								
CHTO	Chiang Mai	22.53	261		P	P	03 49 25.9	+0.8	
	comp=Z,17nm,1.7s								
CMAR	Chiang Mai Arr	22.64	260		P	P	03 49 27.4	+1.1	
CMAR	Chiang Mai Arr	22.64	260		P	P	03 49 27.4	+1.1	
	comp=Z,1.4nm,0.3s,baz=61,slow=8.4,SNR=16								
SBUM	Sibu	23.66	206		P	P	03 49 36.9	+0.6	
	comp=Z,12nm,0.9s								
GTA	Gaotai	24.54	314		eP	P	03 49 45.3	+0.9	
GTA					pP	pP	03 49 57.3	-0.3	
GTA					sP	sP	03 50 03.0	-0.8	
GTA					S	S	03 54 01.3	-0.3	
GTA					sS	sS	03 54 19.3	-4.5	
GTA					SS	SnSn	03 54 59.1	+8.7	
GTA					pmax	pmax			
	comp=Z,9.0nm,0.8s								
GTA					pmax	pmax			
	comp=Z,210nm,7.1s								
GTA					LR	LR			
	comp=N,330nm,15.0s								
GTA					LR	LR			
	comp=E,430nm,14.7s								
GTA					LR	LR			
	comp=Z,380nm,16.9s								
ASAJ	Asahikawa	25.91	34		eP	P	03 49 54.6	-1.9	
	comp=Z,2.6nm,0.3s								
ASAJ	Asahikawa	25.91	34		P	P	03 49 55.1	-1.5	
	comp=Z,6.6nm,0.3s,baz=230,slow=11,SNR=17								
ASAJ					LR	LR	03 59 22.7		
	comp=Z,312nm,20.3s,baz=350,slow=35								
ULN	Ulaanbaatar	26.75	337		eP	P	03 50 03.5	-0.8	
	comp=Z,10nm,0.7s								
ULN	Ulaanbaatar	26.75	337		P	P	03 50 02.6	-1.8	
	comp=Z,18nm,1.1s								
SONM	Songino Array	26.97	336		P	P	03 50 05.7	-0.6	
SONM					ScP	ScP	03 57 01.9	-0.9	
SONM	Songino Array	26.97	336		P	P	03 50 05.7	-0.6	
	comp=Z,26nm,0.9s,baz=149,slow=9.5,SNR=107								
SONM					ScP	ScP	03 57 01.9	-0.9	
	comp=Z,0.6nm,0.6s,baz=90,slow=7.4,SNR=3.7								
SONM					LR	LR	04 01 01.1		
	comp=Z,212nm,18.5s,baz=124,slow=37								
NLAI	Namlea	27.49	170		P	P	03 50 13.7	+2.7	
SHL	Shillong	27.81	280		ePKP	P	03 50 14.0	-0.1	
IPM	Ipoh	28.40	230		eP	P	03 50 18.5	-0.7	
LSA	Lhasa	28.47	288		eP	P	03 50 20.9	+0.6	
	comp=Z,9.8nm,0.6s								
KAPI	Kappang	29.01	186		LR	LR	04 04 10.5		
	comp=Z,82nm,18.0s,baz=241,slow=40								
PSI	Prapat	31.07	231		LR	LR	04 03 54.8		
	comp=Z,180nm,18.6s,baz=221,slow=37								
TAPN	Taplejung	31.46	283		eP	P	03 50 47.4	+0.8	
	comp=Z,36nm,0.8s								
ODAN	Odare	31.77	283		eP	P	03 50 49.8	+0.6	
	comp=Z,34nm,0.7s								
RAMN	Ramite	32.47	283		eP	P	03 50 55.9	+0.6	
	comp=Z,49nm,1.1s								
GUN	Gumba	33.07	285		eP	P	03 51 01.2	+0.5	
	comp=Z,56nm,0.8s								
PKI	Pulchoki	33.50	284		eP	P	03 51 04.3	-0.1	
	comp=Z,28nm,1.0s								
PKIN	Phulchoki	33.51	284		eP	P	03 51 04.4	-0.1	
	comp=Z,5.2nm,0.2s								
KKN	Kakani	33.60	284		eP	P	03 51 05.5	+0.3	
	comp=Z,32nm,0.7s								
DMN	Daman	33.76	284		eP	P	03 51 06.7	0.0	
	comp=Z,43nm,0.9s								
WMQ	Urumqi	34.62	313		eP	P	03 51 13.9	+0.2	
WMQ					pP	pP	03 51 26.0	-1.1	
WMQ					pmax	pmax			
	comp=Z,8.0nm,0.6s								
WMQ					pmax	pmax			
	comp=Z,93nm,4.4s								
WMQ					LR	LR			
	comp=Z,250nm,20.7s								
DANN	Dangsing	34.92	286		eP	P	03 51 17.1	+0.4	
	comp=Z,56nm,0.9s								
KOLN	Koldanda	35.09	285		eP	P	03 51 18.2	+0.1	
	comp=Z,26nm,0.8s								
PYUN	Piuthan	35.61	285		eP	P	03 51 23.0	+0.4	
	comp=Z,47nm,0.8s								
MK31	Makanchi Array	39.27	316		eP	P	03 51 52.7	-0.4	
MKAR	Makanchi Array	39.27	316		P	P	03 51 52.9	-0.3	
MKAR					PcP	PcP	03 54 00.7	-0.4	
MKAR					ScP	ScP	03 57 43.7	-1.7	
MKAR	Makanchi Array	39.27	316		P	P	03 51 52.9	-0.3	
	comp=Z,5.4nm,0.7s,baz=104,slow=9.5,SNR=45								
MKAR					PcP	PcP	03 54 00.7	-0.4	
	comp=Z,1.6nm,0.6s,baz=88,slow=4.7,SNR=4.4								
MKAR					ScP	ScP	03 57 43.7	-1.7	
	comp=Z,0.3nm,0.8s,baz=127,slow=5.0,SNR=3.8								
MKAR					LR	LR	04 08 47.4		
	comp=Z,141nm,19.2s,baz=12,slow=37								
PETK	Petropavlovsk-	39.31	33		LR	LR	04 09 21.2		
	comp=Z,130nm,18.2s,baz=233,slow=38								
ZAA0	Zalesovo Array	41.02	327		eP	P	03 52 05.7	-1.7	
ZAA0					epP	pP	03 52 18.3	-2.7	
ZALV	Zalesovo Beam	41.02	327		P	P	03 52 06.0	-1.4	
ZALV					PcP	PcP	03 54 05.9	-0.6	
ZALV	Zalesovo Beam	41.02	327		P	P	03 52 06.0	-1.4	
	comp=Z,9.0nm,0.5s,baz=111,slow=8.1,SNR=27								
ZALV					PcP	PcP	03 54 05.9	-0.6	
	comp=Z,1.0nm,0.3s,baz=106,slow=5.1,SNR=2.4								
ZALV					LR	LR	04 10 34.3		
	comp=Z,133nm,18.8s,baz=160,slow=38								
PMG	Port Moresby	41.06	141		eP	P	03 52 06.7	-1.4	
	comp=Z,31nm,1.0s								
KSH	Kashi	41.98	303		P	P	03 52 19.3	+3.6	
KSH					epP	pP	03 52 31.4	+2.1	
KSH					esP	sP	03 52 36.1	+0.7	
KSH					ePP	PnPn	03 54 00.3	+1.4	
KSH					ePcP	PcP	03 54 13.3	+3.1	
KSH					eS	S	03 58 35.1	+4.2	
KSH					esS	sS	03 58 56.3	+2.4	
KSH					pmax	pmax			
	comp=Z,47nm,1.1s								
KSH					pmax	pmax			
	comp=Z,90nm,3.7s								
KSH					LR	LR			
	comp=N,170nm,4.6s								
KSH					LR	LR			
	comp=E,310nm,6.5s								
KSH					LR	LR			
	comp=Z,360nm,11.3s								
ULHL	Ulahol	42.20	307		P	P	03 52 18.5	+0.9	
	SNR=38								
TKM2	Tokmak 2	42.80	308		eP	P	03 52 23.0	+0.6	
	comp=Z,28nm,0.8s								
TKM2	Tokmak 2	42.80	308		P	P	03 52 23.3	+1.0	
	SNR=33								
COEN	Coen	42.84	150		eP	P	03 52 22.8	+0.2	
	comp=Z,229nm,1.2s								
KZA	Kyzart	42.90	307		P	P	03 52 24.9	+1.4	
	SNR=18								
KURK	Kurchatov	42.97	320		eP	P	03 52 22.5	-0.8	
	comp=Z,12nm,1.0s								
KURBB	Kurchatov Arra	42.99	320		P	P	03 52 23.0	-0.5	
	comp=Z,4.7nm,0.8s,baz=111,slow=8.6,SNR=24								
CHMS	Chumysh	43.42	308		P	P	03 52 28.3	+1.1	
	SNR=9.7								
UCH	Uchtor	43.47	307		P	P	03 52 29.9	+1.8	
	SNR=5.7								
AAK	Ala-Archa	43.55	307		eP	P	03 52 28.7	+0.4	
	comp=Z,10nm,0.8s								
AAK	Ala-Archa	43.55	307		P	P	03 52 29.6	+1.3	
	SNR=5.5								
AAK	Ala-Archa	43.55	307		P	P	03 52 29.2	+0.9	
	comp=Z,6.1nm,0.5s,baz=132,slow=5.3,SNR=13								
AAK					LR	LR	04 13 02.7		
	comp=Z,219nm,18.3s,baz=82,slow=39								
USP	Ospenovka	43.65	308		P	P	03 52 30.0	+1.0	
	SNR=6.4								
AML	Almayashu	44.05	306		P	P	03 52 34.5	+1.8	
	SNR=23								
EKS2	Erkin-Say	44.07	307		eP	P	03 52 33.2	+0.6	
	comp=Z,9.0nm,0.8s								
EKS2	Erkin-Say	44.07	307		P	P	03 52 33.7	+1.2	
	SNR=10								
WRAB	Tennant Creek	45.21	164		eP	P	03 52 41.1	-0.5	
	comp=Z,11nm,1.0s								
WRA	Warramunga Arr	45.22	164		P	P	03 52 41.5	-0.1	
WRA					PcP	PcP	03 54 20.5	-0.6	
WRA	Warramunga Arr	45.22	164		P	P	03 52 41.5	-0.1	
	comp=Z,4.8nm,0.7s,baz=347,slow=8.8,SNR=44								
WRA					PcP	PcP	03 54 20.5	-0.6	
	comp=Z,1.7nm,0.8s,baz=340,slow=4.4,SNR=3.3								
KKAR	Karatay Array	46.51	307		eP	P	03 52 51.9	+0.2	
	comp=Z,5.1nm,0.6s								
KBL	Kabul	47.31	296		eP	P	03 52 58.6	+0.3	
	comp=Z,12nm,0.7s								
BVAR	Borovoye Array	48.54	320		P	P	03 53 07.0	-0.3	
BVAR					PcP	PcP	03 54 31.9	-0.6	
BVAR					PP	PP	03 54 54.7	-5.6	
BVAR	Borovoye Array	48.54	320		P	P	03 53 07.0	-0.3	
	comp=Z,3.0nm,0.6s,baz=107,slow=7.8,SNR=18								
BVAR					PcP	PcP	03 54 31.9	-0.6	
	comp=Z,0.9nm,0.4s,baz=116,slow=3.4,SNR=3.5								
BVAR					PP	PP	03 54 54.7	-5.6	
	comp=Z,1.6nm,0.8s,baz=97,slow=6.0,SNR=3.9								
BRVK	Borovoye	48.61	321		eP	P	03 53 07.2	-0.7	
	comp=Z,2.7nm,0.6s								
AS31	Alice Springs	48.70	166		eP	P	03 53 09.3	+0.5	
ASAR	Alice Springs	48.70	166		P	P	03 53 09.6	+0.7	
ASAR	Alice Springs	48.70	166		P	P	03 53 09.6	+0.7	
	comp=Z,6.8nm,1.0s,baz=343,slow=6.4,SNR=32								
CTA	Charters Tower	49.60	150		P	P	03 53 17.5	+1.8	
CTA	Charters Tower	49.60	150		P	P	03 53 17.5	+1.8	
	comp=Z,2.4nm,0.4s,baz=341,slow=12,SNR=3.4								
CTAO	Charters Tower	49.60	150		eP	P	03 53 15.5	-0.2	
	comp=Z,19nm,1.3s								
ABKAR	Akbulak array	54.40	314		eP	P	03 53 51.1	0.0	
	comp=Z,8.7nm,0.6s								
ABKAR					epPcP	PcP	03 54 52.9	-1.5	
AKTO	Aktyubinsk	55.71	316		P	P	03 54 00.9	+0.3	
AKTO	Aktyubinsk	55.71	316		P	P	03 54 00.9	+0.3	
	comp=Z,1.5nm,0.4s,baz=97,slow=6.0,SNR=6.1								
STKA	Stephens Creek	58.53	161		P	P	03 54 19.0	-1.6	
STKA	Stephens Creek	58.53	161		P	P	03 54 19.0	-1.6	
	comp=Z,4.3nm,0.8s,baz=339,slow=12,SNR=4.5								
MIB	Mutribah	66.18	293		eP	P	03 55 11.4	-0.6	
MIB					AMb	AMB	03 55 12.1		
	comp=Z,30nm,0.5s								
NAY	Al-Naaiem	66.41	293		eP	P	03 55 12.7	-0.7	
NAY					AMb	AMB	03 55 13.4		
	comp=Z,16nm,0.6s								
KBZ	Khabaz	66.50	309		P	P	03 55 14.0	+0.3	
KBZ	Khabaz	66.50	309		P	P	03 55 14.0	+0.3	
	comp=Z,4.2nm,0.8s,baz=117,slow=4.1,SNR=7.5								
IBDR	Badra	66.52	297		eP	P	03 55 24.8	+11	
IBDR					eS	S	04 04 00.3	-0.8	
OHAK	Old Harbor	67.03	36		eP	P	03 55 16.0	-0.9	
	comp=Z,6.5nm,0.7s								
KDAK	Kodiak Island	67.32	35		LR	LR	04 25 36.7		
	comp=Z,98nm,19.2s,baz=125,slow=37								
BHD	Baghdad	67.73	298		eP	P	03 55 30.5	+8.7	
BHD					eS	S	04 04 12.0	-3.8	
MCK	McKinley	68.09	29		eP	P	03 55 23.1	-0.4	
	comp=Z,13nm,0.7s								
COLA	College	68.36	27		eP	P	03 55 24.9	-0.1	
	comp=Z,5.6nm,0.7s								
PMR	Palmer	68.39	31		eP	P	03 55 24.3	-1.1	
	comp=Z,9.0nm,0.6s								
SML	Sawmill	68.72	31		eP	P	03 55 27.0	-0.5	
	comp=Z,4.0nm,1.0s								
ILAR	Eielson Array	68.78	27		P	P	03 55 26.7	-1.1	
ILAR	Eielson Array	68.78	27		P	P	03 55 26.7	-1.1	
	comp=Z,2.2nm,0.7s,baz=302,slow=8.7,SNR=8.5								
ILAR					LR	LR	04 29 32.7		
	comp=Z,63nm,18.4s,baz=342,slow=39								
JOF	Joensuu	69.42	331		ep	P	03 55 31.5	-0.2	
	comp=Z,1.4nm,0.4s								
KEV	Kevo	69.55	338		ep	P	03 55 32.0	-0.4	
	comp=Z,7.7nm,0.6s								
DIV	Divide	70.07	31		eP	P	03 55 35.4	-0.5	
	comp=Z,34nm,1.1s								
ARCES	ARCESS Array B	70.11	338		P	P	03 55 34.4	-1.5	
ARCES	ARCESS Array B	70.11	338		P	P	03 55 34.4	-1.5	
	comp=Z,4.7nm,0.7s,baz=63,slow=7.5,SNR=13								
DOT	Dot Lake	70.23	28		eP	P	03 55 35.9	-0.9	
	comp=Z,4.0nm,0.7s								
FINES	FINESS Array B	72.17	330		P	P	03 55 48.1	-0.3	
FINES	FINESS Array B	72.17	330		P	P	03 55 48.1	-0.3	
	comp=Z,3.1nm,0.6s,baz=60,slow=5.4,SNR=34								
FINES					LR	LR	04 30 57.3		
	comp=Z,102nm,18.3s,baz=89,slow=39								
INK	Inuvik	72.90	22		LR	LR	04 30 26.2		
	comp=Z,105nm,20.2s,baz=316,slow=38								
PNL	Peninsula	73.52	32		eP	P	03 55 56.6	0.0	
	comp=Z,36nm,0.9s								
AKASG	Malin Array Be	73.77	319		P	P	03 55 56.9	-1.3	
AKASG	Malin Array Be	73.77	319		P	P	03 55 56.9	-1.3	
	comp=Z,0.6nm,0.4s,baz=63,slow=4.4,SNR=5.4								
BR131	Keskin Array S	74.22	307		eP	P	03 56 01.0	-0.2	
	comp=Z,2.8nm,0.8s								
BRTR	Keskin Array B	74.22	307		P	P	03 56 01.2	0.0	
BRTR	Keskin Array B	74.22	307		P	P	03 56 01.2	0.0	
	comp=Z,3.7nm,0.8s,baz=102,slow=6.0,SNR=22								
SKAG	Skagway	75.52	31		eP	P	03 56 08.8	+0.7	
	comp=Z,29nm,0.9s								
CSS	Prodhromos	75.99	302		eP	P	03 56 11.0	-0.3	
	comp=Z,11nm,0.7s								
DAG	Danmarks Havn	76.68	351		*i* P	P	03 56 12.1	-2.3	
	comp=Z,2.3nm,0.8s								
BUR08	Bucovina Ar. S	77.29	317		eP	P	03 56 18.0	-0.5	
WRAK	Wrangell Islan	78.22	33		eP	P	03 56 23.8	+0.5	
	comp=Z,32nm,1.0s								
KOLS	Kolonicke sedl	78.61	319		eP	P	03 56 17.1	-8.6	
NB2	NORSAR Subarra	78.90	332		P	P	03 56 26.4	-0.7	
	comp=Z,1.9nm,0.6s,baz=57,slow=5.6								
NOA	NORSAR Array B	78.90	332		P	P	03 56 25.8	-1.3	
NOA	NORSAR Array B	78.90	332		P	P	03 56 25.8	-1.3	
	comp=Z,3.1nm,0.7s,baz=60,slow=5.2,SNR=9.5								
NAO01	NORSAR Array S	79.14	332		eP	P	03 56 27.2	-1.2	
	comp=Z,5.9nm,0.9s								
RPZ	Rata Peaks	80.81	147		eP	P	03 56 35.2	-2.3	
VYHS	Vyhne	80.86	319		eP	P	03 56 37.6	-0.3	
MORC	Moravsky Berou	81.05	321		eP	P	03 56 39.6	+0.6	
YKW3	Yellowknife Ar	82.58	23		eP	P	03 56 45.6	-1.0	
YKA	Yellowknife Ar	82.62	23		P	P	03 56 46.4	-0.5	
YKA	Yellowknife Ar	82.62	23		P	P	03 56 46.4	-0.5	
	comp=Z,17nm,0.8s,baz=314,slow=5.0,SNR=157								
SUMG	Summit	82.76	354		*i* P	P	03 56 47.0	-0.9	
	comp=Z,5.3nm,1.0s								
CLL	Collm	82.88	323		eP	P	03 56 49.0	+0.6	
CLL					LmV		04 39 00.0		
	comp=Z,100nm,20.7s								
GVD	Gavdhos	83.08	305		eP	P	03 56 48.5	-1.3	
	comp=Z,47nm,1.1s								
GERES	GERESS Array B	83.71	321		P	P	03 56 52.3	-0.6	
GERES	GERESS Array B	83.71	321		P	P	03 56 52.3	-0.6	
	comp=Z,1.0nm,0.8s,baz=41,slow=4.3,SNR=8.2								
KMBO	Kilima Mbogo	86.11	267		eP	P	03 57 06.3	+0.5	
	comp=Z,5.0nm,1.2s								
KMBO	Kilima Mbogo	86.11	267		P	P	03 57 06.7	+0.9	
	comp=Z,2.0nm,0.9s,baz=38,slow=16,SNR=4.0								
TIP	Timpagrande	86.44	311		eP	P	03 57 06.5	-0.3	
	comp=Z,6.7nm,1.1s								
WLF	Walferdange	87.46	324		eP	P	03 57 11.3	-0.1	
	comp=Z,14nm,1.2s								
LPG	La Plagne	89.50	321		eP	P	03 57 21.0	-0.5	
LPG	La Plagne	89.50	321		eP	P	03 57 21.0	-0.5	
LPL	La Plagne	89.50	321		eP	P	03 57 20.9	-0.5	
	comp=Z,3.2nm,0.6s								
LPL	La Plagne	89.50	321		eP	P	03 57 20.9	-0.5	
	comp=Z,3.2nm,0.6s								
BNI	Bardonecchia	89.80	320		eP	P	03 57 22.4	-0.3	
	comp=Z,15nm,1.4s								
NEW	Newport	90.42	35		eP	P	03 57 25.6	+0.1	
	comp=Z,7.3nm,0.8s								
SMF	Signal de Mont	90.48	323		eP	P	03 57 24.8	-0.9	
SMF	Signal de Mont	90.48	323		eP	P	03 57 24.8	-0.9	
AVF	Avril sur Loir	90.66	323		eP	P	03 57 26.2	-0.3	
AVF	Avril sur Loir	90.66	323		eP	P	03 57 26.2	-0.3	
BSMT	Bassoo Peak	91.90	35		eP	P	03 57 33.0	+0.5	
	comp=Z,5.9nm,0.8s								
JTMT	Jette	92.23	34		eP	P	03 57 34.1	+0.2	
	comp=Z,4.5nm,0.7s								
YBMT	Yellow Bay	92.30	34		eP	P	03 57 34.5	+0.2	
	comp=Z,2.2nm,0.7s								
BMO	Blue Mountains	92.42	38		eP	P	03 57 34.9	0.0	
	comp=Z,2.6nm,0.7s								
MOD	Modoc	92.42	42		eP	P	03 57 35.4	+0.4	
	comp=Z,6.4nm,1.0s								
SWMT	Swartz Lake	92.53	34		eP	P	03 57 35.2	-0.1	
	comp=Z,3.1nm,0.7s								
FFC	Flin Flon	92.77	24		eP	P	03 57 35.4	-0.7	
	comp=Z,18nm,1.1s								
SLMT	Seeley Lake	92.97	34		eP	P	03 57 37.3	-0.1	
	comp=Z,5.5nm,0.7s								
MSO	Missoula	93.00	35		eP	P	03 57 36.9	-0.6	
	comp=Z,3.3nm,1.1s								
KEST	Kesra	93.26	311		eP	P	03 57 38.6	-0.3	
BEKR	Beckworth	93.57	43		eP	P	03 57 40.2	-0.1	
	comp=Z,2.4nm,1.0s								
MFID	Camas Ranch	94.14	38		eP	P	03 57 43.3	+0.4	
	comp=Z,1.6nm,0.9s								
HRY	Holter Reservc	94.17	34		eP	P	03 57 43.6	+0.7	
	comp=Z,5.8nm,0.7s								
EGMT	Eagleton	94.32	32		eP	P	03 57 43.6	+0.1	
	comp=Z,9.0nm,1.0s								
DLMT	Dillon	94.67	35		eP	P	03 57 45.2	0.0	
	comp=Z,4.7nm,0.8s								
HLID	Hailey	94.85	38		eP	P	03 57 46.6	+0.5	
	comp=Z,2.4nm,0.7s								
PPT	Papeete	95.16	107		LR	LR	04 38 10.0		
	comp=Z,112nm,18.4s,baz=323,slow=34								
NVAR	Mina Array Bea	95.70	44		P	P	03 57 50.6	+0.4	
NVAR	Mina Array Bea	95.70	44		P	P	03 57 50.6	+0.4	
	comp=Z,1.5nm,0.7s,baz=289,slow=5.4,SNR=9.4								
PDAR	Pinedale Array	98.03	36		P	P	03 58 00.6	-0.1	
PDAR	Pinedale Array	98.03	36		P	P	03 58 00.6	-0.1	
	comp=Z,0.4nm,0

CFAA **Coronel Fontan** 17.61 168 P P 04 04 17.0 -1.4
0.2nm,0.3s,baz=339,slow=11,SNR=38
CFAA LR LR 04 11 08.7
comp=Z,42nm,21.6s,baz=291,slow=37
CPUP Villa Florida 18.58 132 P P 04 04 29.4 +0.3
CPUP Villa Florida 18.58 132 P P 04 04 29.4 +0.3
4.5nm,0.3s,baz=298,slow=11,SNR=108
ROSC El Rosal 19.19 355 eP Pn 04 04 38.7 +0.7
BDFB Brasilia 23.77 96 P P 04 05 23.6 -0.1
BDFB Brasilia 23.77 96 P P 04 05 23.6 -0.1
14nm,0.8s,baz=261,slow=12,SNR=30
TRQA Tornquist 25.39 160 eP P 04 05 38.2 0.0
8.2nm,0.9s
SPB Sao Paulo 25.46 115 eP P 04 05 39.0 +0.2
25nm,1.1s
PLCA Paso Flores 26.32 177 eP P 04 05 46.2 -0.4
6.8nm,1.0s
PLCA ePP pP 04 06 09.4 +3.3
PLCA Paso Flores 26.32 177 P P 04 05 46.0 -0.5
3.8nm,0.8s,baz=338,slow=8.8,SNR=6.7
USHA Ushuaia 40.50 176 P P 04 07 49.2 +0.2
USHA Ushuaia 40.50 176 P P 04 07 49.2 +0.2
18nm,1.1s,baz=337,slow=15,SNR=3.2
GOGA Godfrey 48.64 348 eP P 04 08 50.0 -4.1
9.8nm,1.4s
LRAL Lakeview Retre 49.11 344 eP P 04 08 56.9 -0.9
6.7nm,1.1s
KMSC Kings Mountain 49.94 351 P P 04 09 04.8 +0.8
baz=50,SNR=9.2
732A Laxson Ranch, 50.38 328 P P 04 09 07.6 +0.2
baz=51,SNR=10
PMSA Palmer Station 50.68 175 eP P 04 09 07.8 -1.3
489nm,1.8s
CPCT Cooper Cave 50.83 347 eP P 04 09 10.9 +0.3
CPCT ePcP PcP 04 10 26.1 -0.2
632A Uvalde 50.92 329 P P 04 09 12.2 +0.8
baz=51,SNR=5.5
631A Perdido Creek 51.24 328 P P 04 09 13.9 +0.1
baz=52,SNR=9.8
532A Rocksprings 51.48 329 P P 04 09 16.1 +0.3
baz=52,SNR=8.7
TZTN Tazewell 51.69 349 eP P 04 09 17.3 +0.2
5.8nm,0.8s
JCT Junction City 51.72 330 eP P 04 09 17.7 +0.2
3.8nm,0.8s
531A Rocksprings 51.83 329 P P 04 09 18.6 +0.3
baz=52
BLA Blacksburg 51.84 352 eP P 04 09 19.1 +0.8
5.6nm,0.6s
WHTX Lake Whitney 51.90 333 P P 04 09 18.6 -0.1
baz=52
432A Menard 52.05 330 P P 04 09 19.9 0.0
baz=52,SNR=8.7
530A J-C Ranch, Com 52.22 328 P P 04 09 21.6 +0.4
baz=52,SNR=8.1
WVT Waverly 52.26 344 eP P 04 09 20.0 -1.3
17nm,1.6s
WVT ePcP PcP 04 10 31.1 -0.5
431A Sonora 52.29 329 P P 04 09 21.8 +0.1
baz=52,SNR=16
332A Millersview 52.44 331 P P 04 09 22.9 +0.2
baz=53,SNR=16
CBN Corbin 52.49 355 eP P 04 09 23.9 +0.9
13nm,0.6s
628A Black Gap, Mar 52.51 326 P P 04 09 24.1 +0.8
baz=53
529A Stev Forest Ra 52.66 327 P P 04 09 24.8 +0.3
baz=53,SNR=28
430A Baggett Ranch, 52.68 329 ⇑P P 04 09 24.6 -0.1
baz=53,SNR=12
331A San Angelo 52.71 330 P P 04 09 24.9 +0.1
baz=53,SNR=12
627A Terlingua Ranc 52.75 326 P P 04 09 25.6 +0.3
baz=53,SNR=15
TXAR Lajitas Array 52.81 326 P P 04 09 25.7 0.0
TXAR Lajitas Array 52.81 326 P P 04 09 25.7 0.0
7.8nm,0.6s,baz=150,slow=8.3,SNR=34
232A Coleman 52.81 331 P P 04 09 25.8 +0.2
baz=53,SNR=20
429A Davenport Ranc 52.89 328 P P 04 09 26.4 +0.2
baz=53,SNR=14
528A Cox Ranch, San 52.98 327 P P 04 09 27.0 +0.1
baz=53,SNR=8.4
231A Bronte 53.17 330 P P 04 09 28.7 +0.5
baz=53
626A Big Bend Ranch 53.24 325 P P 04 09 29.4 +0.6
baz=53,SNR=18
428A Kincaid Ranch, 53.38 327 P P 04 09 30.3 +0.5
baz=54
527A Woodward Ranch 53.41 326 P P 04 09 30.2 +0.1
baz=54,SNR=16
ABTX Abilene, Hawle 53.42 331 P P 04 09 30.4 +0.4
baz=54,SNR=12
526A Mary Lane Ranc 53.60 326 P P 04 09 31.9 +0.4
baz=54,SNR=9.0
329A Wagon Wheel Ra 53.62 329 P P 04 09 31.7 +0.1
baz=54
427A Hayter Ranch, 53.85 327 P P 04 09 33.4 +0.2
baz=54,SNR=9.8
WCI Wyandotte Cave 53.88 347 eP P 04 09 32.3 -1.0
10nm,0.4s
Z32A Haskell 53.92 332 P P 04 09 33.7 +0.1
baz=54
229A Bryant Ranch, 53.93 329 P P 04 09 33.8 0.0
baz=54
USIN University of 53.95 345 eP P 04 09 33.4 -0.3
25nm,0.8s
328A Wristen Ranch, 53.96 328 P P 04 09 34.2 +0.2
baz=54,SNR=8.7
426A McDonald Obser 54.05 326 P P 04 09 35.0 +0.2
baz=54,SNR=15
SIUC Southern Illin 54.12 344 eP P 04 09 34.6 -0.3
27nm,0.7s
MVL Millersville 54.21 356 eP P 04 09 36.5 +0.9
12nm,0.7s
Z31A Sharp Cattle R 54.23 331 ⇑P P 04 09 36.1 +0.2
baz=54,SNR=24
228A UT Block 9, Go 54.44 329 P P 04 09 37.4 -0.1
baz=55,SNR=5.7
Y32A R-V Farms, Ver 54.49 333 P P 04 09 38.1 +0.4
baz=55,SNR=9.6
326A Caldwell Ranch 54.52 327 P P 04 09 38.2 0.0
baz=55,SNR=13
425A Indio Mountain 54.66 326 P P 04 09 39.2 0.0
baz=55,SNR=9.7
Z30A Sanderson Ranc 54.67 331 P P 04 09 39.2 +0.1
baz=55,SNR=32
227A Bennet, Jal 54.71 328 P P 04 09 40.0 +0.5
baz=55,SNR=5.8
128A Castleberry Fa 54.79 329 P P 04 09 40.0 0.0
baz=55,SNR=6.5
OLIL Olney 54.79 345 eP P 04 09 39.3 -0.5
16nm,0.8s
OLIL ePcP PcP 04 10 41.3 +0.1
WMOK Wichita Mounta 54.82 334 eP P 04 09 39.4 -0.8
4.1nm,0.9s
WMOK ePcP PcP 04 10 41.6 +0.1
Y31A Rekieta Farm, 54.82 332 P P 04 09 40.5 +0.4
baz=55,SNR=21
BLO Bloomington 54.84 347 eP P 04 09 39.4 -0.7
18nm,0.5s
BLO ePcP PcP 04 10 41.5 +0.2
Z29A Hungry Hill Ra 54.92 330 P P 04 09 40.6 -0.4
baz=55,SNR=6.9
Y30A Stafford Cattl 55.05 331 P P 04 09 41.9 0.0
baz=55
325A Bean Ranch, Si 55.10 326 P P 04 09 42.2 -0.2
baz=55,SNR=8.8
ACSO Alum Creek Sta 55.18 350 eP P 04 09 42.4 -0.2
12nm,0.7s
226B Tecolote Peak, 55.22 327 ⇑P P 04 09 43.7 +0.5
baz=55,SNR=9.9
X31A McDonald Ranch 55.25 333 P P 04 09 43.4 +0.1
baz=56,SNR=29
127A Arkansas Junct 55.27 328 P P 04 09 43.5 0.0
baz=56
Z28A Tucker Farm, M 55.28 330 P P 04 09 43.1 -0.4
baz=56,SNR=6.1
Y29A Porterfield Fa 55.40 331 P P 04 09 44.2 -0.2
baz=56,SNR=15
GDL2 Guadalupe Moun 55.42 327 eP P 04 09 45.1 +0.5
324A Moseley Ranch, 55.43 326 P P 04 09 44.1 -0.6
baz=56,SNR=8.5
X30A Coker Ranch, T 55.51 332 P P 04 09 44.8 -0.4
baz=56,SNR=14
MNTX Cornudas Mount 55.57 326 eP P 04 09 45.0 -0.6
2.5nm,0.7s
MNTX ePcP PcP 04 10 43.6 -0.9

126A Clayton Basin, 55.59 328 P P 04 09 46.3 +0.5
baz=56
225A Deer Hill, Car 55.59 327 P P 04 09 46.0 +0.1
baz=56,SNR=11
W31A Holland Ranch, 55.70 333 P P 04 09 46.0 -0.4
baz=56
Z27A Tatum 55.71 329 P P 04 09 46.4 -0.2
baz=56,SNR=23
X29A Tulia 55.89 331 P P 04 09 47.6 -0.3
baz=56,SNR=5.4
125A Gardner Draw, 55.93 327 P P 04 09 48.0 -0.2
baz=56,SNR=6.9
224A Cornudas Mount 55.94 326 P P 04 09 48.0 -0.4
baz=56,SNR=23
MSTX Muleshoe 56.02 330 P P 04 09 48.6 -0.3
baz=56,SNR=8.3
Z26A Caprock 56.06 328 P P 04 09 49.2 0.0
baz=56,SNR=7.2
Y27A Causey 56.14 329 P P 04 09 49.4 -0.4
baz=56,SNR=20
V31A Spring Creek L 56.16 333 P P 04 09 50.6 +0.9
baz=56
ALLY Alegheny Colle 56.18 353 eP P 04 09 49.7 0.0
18nm,0.6s
AMTX Amarillo 56.24 331 eP P 04 09 49.8 -0.6
3.9nm,0.7s
AMTX ePcP PcP 04 10 47.5 +0.4
BINY Binghamton 56.38 357 eP P 04 09 52.1 +1.0
23nm,0.6s
124A Stringfield Ra 56.38 327 P P 04 09 51.5 -0.1
baz=57,SNR=11
Z25A Roswell 56.45 328 P P 04 09 51.8 -0.2
baz=57,SNR=15
ERPA Erie 56.62 353 eP P 04 09 53.6 +0.8
23nm,0.6s
Z24A Sheeppen Canyo 56.82 327 P P 04 09 54.7 0.0
baz=57,SNR=22
222A Williams Famil 56.83 325 P P 04 09 55.2 +0.6
baz=57
Y25A Mesa, Roswell 56.94 328 P P 04 09 55.0 -0.4
baz=57,SNR=9.3
X26A CR and CF Fran 56.99 329 P P 04 09 55.8 0.0
baz=57,SNR=8.4
W27A Bowe Ranch, En 57.04 330 P P 04 09 56.1 0.0
baz=57
U30A WK& Inc. Balk 57.14 333 P P 04 09 57.2 +0.5
baz=57
T31A Randall Ranch, 57.20 334 P P 04 09 57.6 +0.5
baz=58
V28A Channing 57.20 331 P P 04 09 57.7 +0.4
baz=57
Z23A Rita Site, Whi 57.23 326 P P 04 09 58.0 +0.5
baz=57
220A Playas Peak, P 57.48 324 P P 04 09 59.8 +0.5
baz=58,SNR=7.3
121A Cookes Peak, D 57.53 325 ⇑P P 04 10 00.4 +0.7
baz=58,SNR=5.0
319A Douglas 57.53 323 P P 04 10 00.4 +0.7
baz=58,SNR=7.7
Z22A Elephant Butte 57.62 326 P P 04 10 00.5 +0.2
baz=58
Y23A Lovelace Mesa, 57.65 327 P P 04 10 01.5 +0.9
baz=58
U28A Mallet 57.72 332 P P 04 10 00.7 -0.1
baz=58
X24A Lazy VL Ranch, 57.82 328 P P 04 10 01.4 -0.3
baz=58
W25A X Bar L Ranch, 57.85 329 P P 04 10 01.6 -0.2
baz=58
T29A Hugoton 57.95 333 P P 04 10 02.5 +0.1
baz=58
V26A Tequesquite Ra 57.98 330 P P 04 10 02.6 -0.1
baz=58
120A U Bar Ranch, L 58.02 324 P P 04 10 03.6 +0.5
baz=58
Z21A St. Cloud Mine 58.05 325 P P 04 10 03.8 +0.5
baz=58
NCB Newcomb 58.08 359 eP P 04 10 03.8 +0.7
73nm,2.0s
MDV Middlebury 58.09 359 eP P 04 10 04.4 +1.2
BNM Barren Site 58.12 327 eP P 04 10 04.2 +0.3
5.9nm,1.1s
R31A Burdett 58.16 335 P P 04 10 04.2 +0.4
baz=58
LPM Los Pinos Moun 58.25 327 eP P 04 10 06.3 +1.7
S29A Ulysses 58.26 334 P P 04 10 04.9 +0.4
baz=58
T28A Walsh 58.28 332 P P 04 10 04.7 -0.1
baz=58
W24A Lazy 6 Ranch, 58.31 329 P P 04 10 05.0 -0.1
baz=58
Z20A Nine Sixteen R 58.41 325 P P 04 10 06.7 +0.9
baz=59,SNR=9.9
V25A Rancho No Teng 58.42 330 P P 04 10 05.9 +0.1
baz=59,SNR=8.3
U26A Atchley Ranch, 58.44 331 P P 04 10 06.0 +0.1
baz=59,SNR=25
T27A Campo 58.51 332 ⇑P P 04 10 06.2 -0.1
baz=59,SNR=5.5
LAZ Ladron 58.59 327 eP P 04 10 07.7 +0.7
1.9nm,0.6s
LAZ ePcP PcP 04 10 56.6 +0.2
ANMO Albuquerque 58.65 328 eP P 04 10 07.5 +0.1
35nm,2.3s
ANMO ePcP PcP 04 10 57.0 +0.3
V24A Rampart Ranch, 58.65 329 P P 04 10 07.5 0.0
baz=59,SNR=6.9
U25A Circle Dot Ran 58.76 330 ⇓P P 04 10 08.6 +0.4
baz=59,SNR=7.3
FRNY Flat Rock 58.93 359 eP P 04 10 10.0 +1.0
12nm,0.8s
X21A Alamocita Cree 58.97 326 ⇑P P 04 10 10.5 +0.8
baz=59,SNR=8.9
TUC Tucson 59.09 322 eP P 04 10 10.9 +0.5
226nm,2.9s
R28A Tribune 59.16 333 P P 04 10 10.8 0.0
baz=59,SNR=10
U24A Moreno Valley 59.20 330 P P 04 10 12.1 +0.7
baz=59
S26A Kim 59.31 332 P P 04 10 12.7 +0.8
baz=60
T25A Trinidad 59.36 331 P P 04 10 13.0 +0.7
baz=60
X20A Quemado 59.43 326 ⇑P P 04 10 13.8 +0.9
baz=60,SNR=7.9
U23A El Rito 59.59 329 P P 04 10 14.6 +0.6
baz=60
V22A San Miguel Ran 59.63 328 P P 04 10 15.1 +0.8
baz=60,SNR=8.5
S25A Robles Cordova 59.79 331 P P 04 10 15.9 +0.7
baz=60
P29A Atwood 59.85 335 P P 04 10 15.7 +0.2
baz=60
R26A Arlington 59.85 332 P P 04 10 15.9 +0.3
baz=60,SNR=11
W20A Ramah 59.87 326 P P 04 10 16.3 +0.4
baz=60
U22A Llaves 59.96 328 P P 04 10 17.4 +0.9
baz=60
T23A Casias Ranch, 60.06 329 P P 04 10 18.0 +0.7
baz=60
S24A Houchin Ranch, 60.14 330 P P 04 10 18.6 +0.8
baz=60,SNR=6.2
P28A Saint Francis 60.17 334 P P 04 10 18.3 +0.6
baz=60
O29A 4D Ranch, Culb 60.24 335 P P 04 10 18.9 +0.7
baz=60
V20A Brimhall 60.35 327 P P 04 10 19.8 +0.6
baz=61
Q26A Hugo 60.39 333 P P 04 10 20.1 +0.8
baz=61,SNR=5.2
U21A Nageezi 60.41 328 P P 04 10 20.2 +0.7
baz=61,SNR=6.9
T22A Edith 60.48 329 ⇑P P 04 10 21.0 +1.0
baz=61,SNR=6.9
R24A Sanders Place, 60.56 331 P P 04 10 21.6 +1.1
baz=61,SNR=10
Q25A Bedland, Calha 60.72 332 P P 04 10 21.8 +0.3
baz=61
N29A Votaw Ranch, W 60.76 336 P P 04 10 22.1 +0.4
baz=61
T21A Navajo Lake 60.78 328 P P 04 10 22.7 +0.6
baz=61
U20A Newcomb 60.82 327 P P 04 10 22.6 +0.3
baz=61
P26A Davis Ranch, A 60.84 333 P P 04 10 22.8 +0.5
baz=61
R23A Moffat 60.87 330 ⇑P P 04 10 23.7 +1.0
baz=61,SNR=14

X16A Lo Mia Camp, P 60.98 324 P P 04 10 24.5 +1.1
baz=61,SNR=9.8
O27A Beecher Island 60.99 334 P P 04 10 24.4 +1.1
baz=61
S22A 4UR Ranch, Cre 61.01 329 P P 04 10 24.4 +0.7
baz=61
P25A Willow Gulch B 61.17 332 P P 04 10 25.4 +0.8
baz=61,SNR=11
S21A Coal Bank Pass 61.43 329 P P 04 10 27.1 +0.6
baz=62
Y14A Wickenburg 61.56 322 P P 04 10 27.9 +0.7
baz=62
WUAZ Wupatki 61.74 325 P P 04 10 29.2 +0.7
baz=62
P23A Jefferson 61.82 331 P P 04 10 30.3 +1.1
baz=62
S20A Disappointment 61.84 328 P P 04 10 30.3 +1.0
baz=62
R21A Cimarron 61.85 329 P P 04 10 30.2 +0.9
baz=62
ECSD EROS Data Cent 61.86 340 eP P 04 10 28.1 -0.8
38nm,1.9s
ECSD ePcP PcP 04 11 09.0 -0.1
ISCO Idaho Springs 62.05 332 eP P 04 10 31.2 +0.5
4.7nm,0.8s
ISCO ePcP PcP 04 11 10.7 +0.3
ISCO Idaho Springs 62.05 332 P P 04 10 31.2 +0.5
baz=62,SNR=8.1
O24A Longmont 62.07 332 P P 04 10 31.3 +0.7
baz=62
R20A Redvale 62.13 329 P P 04 10 32.2 +1.1
baz=62,SNR=7.2
PV01 Paradox Valley 62.18 328 eP P 04 10 31.6 0.0
P22A Eagle 62.43 331 P P 04 10 33.8 +0.7
baz=63,SNR=6.2
O23A Lake Granby, G 62.52 332 P P 04 10 34.6 +0.8
baz=63,SNR=9.8
PV04 Paradox Valley 62.55 328 eP P 04 10 34.3 +0.4
K28A Ten Mile Ranch 62.66 336 P P 04 10 35.4 +1.0
baz=63,SNR=5.8
M25A Palm-Egli Farm 62.69 334 P P 04 10 35.6 +0.9
baz=63
P21A Newcastle 62.70 330 P P 04 10 36.1 +1.2
baz=63
O22A Kremmling 62.77 331 P P 04 10 35.8 +0.2
baz=63,SNR=6.8
U15A North Rim 62.91 325 P P 04 10 37.2 +0.7
baz=63
K27A Flueckinger Fa 62.99 336 P P 04 10 37.4 +0.8
baz=63
M24A Cheyenne 63.05 333 P P 04 10 38.1 +0.9
baz=63,SNR=5.9
N23A Red Feather La 63.08 332 P P 04 10 38.1 +0.6
baz=63
P20A De Beque 63.14 330 P P 04 10 38.6 +0.8
baz=63
PHWY Pilot Hill 63.19 333 eP P 04 10 39.0 +0.7
5.5nm,0.6s
N22A Wattenberg Ran 63.24 332 P P 04 10 39.6 +1.0
baz=64
M23A Laramie 63.44 333 P P 04 10 40.4 +0.6
baz=64,SNR=8.2
P19A Cripple Cowboy 63.54 329 P P 04 10 41.1 +0.6
baz=64
O20A White River Ci 63.56 330 P P 04 10 41.4 +0.8
baz=64,SNR=8.6
N21A Black Mountain 63.70 331 ⇓P P 04 10 42.9 +1.4
baz=64,SNR=6.0
GMRC Granite Mounta 63.73 321 P P 04 10 42.5 +0.8
baz=64
M22A Cedar Creek Ra 63.78 332 P P 04 10 43.1 +1.0
baz=64
L23A Garrett 63.95 333 P P 04 10 43.8 +0.7
baz=64,SNR=5.2
N20A Spence Gulch, 64.11 331 P P 04 10 45.0 +0.8
baz=64,SNR=8.4
M21A Separation Pea 64.30 332 P P 04 10 46.0 +0.6
baz=64,SNR=8.7
EYMN Ely 64.30 346 eP P 04 10 44.4 -0.6
7.1nm,0.7s
CCUT Cedar City 64.31 325 eP P 04 10 47.1 +1.6
5.1nm,0.7s
CCUT ePcP PcP 04 11 20.6 +1.0
MSU Marysvale 64.35 326 eP P 04 10 47.2 +1.4
MVU Marysvale 64.36 326 eP P 04 10 47.0 +1.1
4.8nm,0.8s
MVU ePcP PcP 04 11 20.5 +0.7
ARUT Antelope Range 64.52 325 eP P 04 10 48.0 +1.1
11nm,1.3s
K22A Casper 64.75 333 P P 04 10 48.9 +0.6
baz=65,SNR=8.6
RSSD Black Hills 64.90 335 eP P 04 10 49.9 +0.6
5.3nm,0.7s
K21A Alcova 65.06 332 P P 04 10 51.2 +0.8
baz=65
L20A Wamsutter 65.06 331 P P 04 10 51.3 +0.9
baz=65
J22A Midwest 65.34 333 ⇓P P 04 10 52.2 +0.1
baz=66,SNR=8.2
JLU Jordanelle 65.51 328 eP P 04 10 54.5 +1.2
8.7nm,0.9s
K20A Yellowstone Ra 65.57 332 P P 04 10 53.7 +0.1
baz=66,SNR=7.6
L19A Farson 65.61 331 ⇓P P 04 10 54.3 +0.3
baz=66,SNR=5.5
H24A Dirks Ranch, A 65.62 336 P P 04 10 54.1 +0.3
baz=66
J21A Lysite 65.71 333 P P 04 10 55.1 +0.6
baz=66,SNR=11
I22A 9 Mile Ranch, 65.73 334 P P 04 10 55.0 +0.4
baz=66,SNR=9.8
AGMN Agassiz Nation 65.75 343 eP P 04 10 54.3 -0.1
20nm,0.6s
DUG Dugway 65.91 327 eP P 04 10 56.8 +1.0
68nm,2.1s
DUG Dugway 65.91 327 ⇑P P 04 10 56.8 +1.0
baz=66,SNR=9.4
K19A Absolon Red Bu 65.93 332 P P 04 10 55.9 0.0
baz=66
J20A Shoshoni 66.00 332 P P 04 10 56.9 +0.6
baz=66,SNR=8.6
I21A Big Trails, Te 66.01 333 P P 04 10 56.4 0.0
baz=66,SNR=14
ISA Isabella 66.04 320 P P 04 10 57.5 +0.9
baz=66
G24A Alzada 66.05 336 P P 04 10 57.1 +0.6
baz=66
R11A Troy Canyon, C 66.12 324 P P 04 10 58.3 +1.1
baz=66
BW06 Boulder Array 66.22 331 eP P 04 10 57.2 -0.6
5.2nm,1.1s
PDAR Pinedale Array 66.22 331 P P 04 10 57.6 -0.2
PDAR Pinedale Array 66.22 331 P P 04 10 57.6 -0.2
1.7nm,0.7s,baz=137,slow=7.6,SNR=13
E26A Carlson Angus 66.27 338 P P 04 10 58.6 +0.8
baz=66
HWUT Hardware Ranch 66.31 329 eP P 04 10 58.4 -0.1
6.2nm,1.1s
G23A Biddle 66.33 335 P P 04 10 58.7 +0.4
baz=67,SNR=7.9
MDND Maddock 66.47 341 P P 04 11 00.0 +1.0
baz=67,SNR=10
F24A Ekalaka 66.49 336 P P 04 10 59.8 +0.4
baz=67,SNR=10.0
I20A Worland 66.49 333 P P 04 10 59.9 +0.4
baz=67,SNR=8.0
E25A Miller Ranch, 66.64 337 P P 04 11 01.1 +0.8
baz=67
F23A Volborg 66.77 336 P P 04 11 01.4 +0.4
baz=67
H20A Greybull 66.86 333 P P 04 11 01.8 +0.1
baz=67,SNR=7.0
HVU Hansel Valley 67.05 328 eP P 04 11 03.5 +0.5
8.1nm,0.8s
LOHW Long Hollow 67.36 331 eP P 04 11 05.4 +0.3
3.8nm,0.8s
E23A Ismay 67.37 336 P P 04 11 05.2 +0.4
baz=68
TPAW Teton Pass 67.43 331 eP P 04 11 05.9 +0.3
4.1nm,0.7s
D24A Glendive 67.50 337 P P 04 11 06.8 +1.1
baz=68,SNR=6.4
ULM Lac du Bonnet 67.53 344 eP P 04 11 05.3 -0.4
12nm,0.6s
ULM Lac du Bonnet 67.53 344 P P 04 11 04.8 -0.9
15nm,0.7s,baz=162,slow=5.9,SNR=19
MOOW Moose Ponds 67.53 331 eP P 04 11 06.3 +0.2

4.6nm,1.1s
IMW Indian Meadow 67.73 331 eP P 04 11 08.1 +0.6
6.0nm,0.7s
H18A Shoshone NF, C 67.75 332 P P 04 11 08.0 +0.5
baz=68,SNR=5.7
NVAR Mina Array Bea 67.75 323 P P 04 11 08.4 +0.8
NVAR pP pP 04 11 30.0 +0.4
NVAR Mina Array Bea 67.75 323 P P 04 11 08.4 +0.8
1.3nm,0.8s,baz=150,slow=7.6,SNR=7.4
NVAR pP pP 04 11 30.0 +0.4
0.7nm,0.4s,baz=344,slow=42,SNR=3.9
D23A Lindsay 67.89 337 P P 04 11 09.2 +1.1
baz=68
RLMT Red Lodge 67.92 333 eP P 04 11 08.8 +0.3
14nm,1.1s
E21A Keefer Ranch, 68.11 335 P P 04 11 10.1 +0.7
baz=68
VNA1 Neumayer--Stat 68.12 161 eP P 04 11 10.5 +1.3
G18A Lazy EL Ranch, 68.20 333 P P 04 11 10.8 +0.6
baz=68,SNR=21
D22A Cohagen 68.25 336 P P 04 11 11.6 +1.2
baz=68,SNR=20
F19A Roth Farm, Mol 68.35 334 P P 04 11 11.3 +0.3
baz=69,SNR=11
D21A La Casta Ranch 68.50 335 P P 04 11 13.1 +1.1
baz=69,SNR=7.4
E20A Meyer Farm, Mu 68.52 334 P P 04 11 12.9 +0.9
baz=69,SNR=9.4
DGMT Dagmar 68.59 338 eP P 04 11 13.5 +1.2
15nm,0.8s
DGMT Dagmar 68.59 338 P P 04 11 13.6 +1.2
baz=69,SNR=5.5
C22A Vida 68.62 337 P P 04 11 13.5 +0.9
baz=69,SNR=9.1
QLMT Earthquake Lak 68.67 331 eP P 04 11 15.0 +1.8
F18A Big Timber 68.72 333 P P 04 11 14.2 +0.8
baz=69,SNR=14
E19A Rath Farm, Rou 68.76 334 P P 04 11 14.3 +0.7
baz=69,SNR=14
B23A Brockton 68.87 338 P P 04 11 15.6 +1.4
baz=69,SNR=6.4
A24A Westby 68.90 338 P P 04 11 15.8 +1.5
baz=69,SNR=5.2
I14A Mackay 68.97 330 P P 04 11 16.2 +1.2
baz=69,SNR=7.7
D20A Manuel Ranch, 68.99 335 P P 04 11 15.7 +0.7
baz=69,SNR=6.6
SCHQ Schefferville 69.11 4 P P 04 11 15.2 -0.2
SCHQ pP PcP 04 11 38.6 -0.2
SCHQ Schefferville 69.11 4 P P 04 11 15.2 -0.2
4.2nm,0.9s,baz=187,slow=6.6,SNR=4.4
SCHQ pP PcP 04 11 38.6 -0.2
2.9nm,0.6s,baz=220,slow=5.7,SNR=3.6
B22A Reddig Ranch S 69.12 337 P P 04 11 16.9 +1.1
baz=69,SNR=6.4
F17A Fitzpatrick Pl 69.14 333 P P 04 11 17.1 +1.1
baz=69,SNR=6.8
C21A Desert Coulee 69.16 336 P P 04 11 16.9 +1.0
baz=69
HLID Hailey 69.18 329 eP P 04 11 17.3 +1.0
2.7nm,0.7s
HLID Hailey 69.18 329 P P 04 11 17.4 +1.0
baz=69,SNR=5.5
E18A Harlowton 69.32 333 P P 04 11 18.2 +1.0
baz=70
MCMT McKenzie Canyo 69.34 331 eP P 04 11 18.6 +1.1
1.4nm,0.7s
D19A Cripps Ranch, 69.35 334 P P 04 11 18.1 +0.9
baz=70
BOZ Bozeman (W) 69.38 332 eP P 04 11 17.6 +0.1
3.3nm,0.7s
C20A Veseth Ranch, 69.43 335 P P 04 11 18.0 +0.3
baz=70
B21A Ellsworth Farm 69.61 336 P P 04 11 19.8 +1.1
baz=70
DLMT Dillon 69.62 331 eP P 04 11 19.4 +0.5
A22A Carney Farms, 69.66 337 P P 04 11 20.1 +1.1
baz=70
E17A Martinsdale 69.66 333 P P 04 11 20.1 +0.8
baz=70,SNR=8.7
I12A Atlanta 69.70 329 P P 04 11 20.6 +1.0
baz=70
MFID Camas Ranch 69.79 328 eP P 04 11 20.6 +0.5
114nm,2.3s
MFID Camas Ranch 69.79 328 P P 04 11 21.3 +1.2
baz=70,SNR=17
C19A Slack Wire Ran 69.87 335 P P 04 11 21.1 +0.7
baz=70,SNR=9.5
F15A Butte 69.93 331 P P 04 11 21.8 +0.8
baz=70
B20A Solberg Farm, 70.02 336 P P 04 11 22.0 +0.8
baz=70,SNR=8.4
H12A Diamond D Ranc 70.11 329 P P 04 11 22.9 +0.9
baz=70
SNAA Sanae 70.11 162 eP P 04 11 22.0 +0.4
SNAA Sanae 70.11 162 eP P 04 11 21.8 +0.2
17nm,0.6s
SNAA Sanae 70.11 162 P P 04 11 22.1 +0.5
5.8nm,0.5s,baz=279,slow=7.5,SNR=216
D17A Six Diamond Ra 70.11 333 P P 04 11 22.7 +0.7
baz=70,SNR=11
DBIC Dimbokro 70.35 77 eP P 04 11 23.5 -0.4
30nm,1.3s
DBIC Dimbokro 70.35 77 P P 04 11 23.6 -0.3
14nm,1.1s,baz=252,slow=4.0,SNR=5.3
EGMT Eagleton 70.40 334 eP P 04 11 24.0 +0.3
6.6nm,0.8s
EGMT Eagleton 70.40 334 ⇓P P 04 11 24.1 +0.5
baz=71,SNR=5.4
D16A Dana Ranch, Ca 70.40 333 P P 04 11 24.9 +1.2
baz=71,SNR=5.5
B19A Brinkman Farms 70.40 335 P P 04 11 24.5 +0.9
baz=71
C17A Wharram Farm, 70.52 334 P P 04 11 24.9 +0.6
baz=71,SNR=11
B18A Beardsley Farm 70.70 335 P P 04 11 26.3 +0.9
baz=71,SNR=6.3
A19A Klindworth Far 70.70 336 P P 04 11 26.1 +0.7
baz=71,SNR=6.4
C16A Fuhringer Ranc 71.07 333 P P 04 11 28.6 +0.8
baz=71,SNR=10
A18A Metzger Ranch, 71.14 335 P P 04 11 28.7 +0.6
baz=71
MOD Modoc 71.18 324 eP P 04 11 29.9 +1.3
8.7nm,0.7s
D14A Greenough 71.32 332 P P 04 11 30.1 +0.8
baz=72
MSO Missoula 71.33 331 eP P 04 11 30.7 +1.4
14nm,1.5s
MSO Missoula 71.33 331 P P 04 11 30.4 +1.0
baz=72,SNR=7.1
SLMT Seeley Lake 71.43 332 eP P 04 11 31.1 +1.1
C15A Salmond Ranch, 71.43 333 P P 04 11 31.2 +1.2
baz=72,SNR=14
A17A Triple J Farms 71.51 335 ⇑P P 04 11 31.1 +0.8
baz=72,SNR=8.3
B16A M & M Farms, S 71.52 334 P P 04 11 31.0 +0.5
baz=72
BMO Blue Mountains 71.56 328 eP P 04 11 30.8 0.0
7.7nm,1.2s
D13A Huson 71.77 331 P P 04 11 32.4 +0.5
baz=72
E12A Beaver Dam Sad 71.80 330 P P 04 11 32.8 +0.6
baz=72,SNR=5.0
B15A Bradely Ranch, 71.82 333 P P 04 11 32.8 +0.6
baz=72,SNR=6.8
SWMT Swartz Lake 71.86 332 eP P 04 11 33.9 +1.3
A16A West Butte Ran 71.89 334 P P 04 11 33.4 +0.8
baz=72
C14A Swan Lake 71.94 332 P P 04 11 33.9 +0.9
baz=72
D12A Red Ives Fores 72.16 331 P P 04 11 35.0 +0.8
baz=72
JTMT Jette 72.17 332 eP P 04 11 35.8 +1.4
B14A Marquette Ranc 72.17 333 P P 04 11 35.3 +0.9
baz=72,SNR=6.0
C13A Hot Springs 72.25 332 P P 04 11 35.9 +1.1
baz=72,SNR=6.9
A15A Johnson Ranch, 72.39 334 P P 04 11 35.7 +0.1
baz=73
BSMT Bassoo Peak 72.47 332 eP P 04 11 36.4 +0.1
A14A Double T Ranch 72.69 333 P P 04 11 38.2 +0.7
baz=73
B13A Whitefish 72.71 332 P P 04 11 38.4 +0.9
baz=73
A13A Flathead Natio 73.10 333 P P 04 11 40.9 +1.0
baz=73
C11A Tepee Creek (N 73.15 331 P P 04 11 41.0 +0.9
baz=73,SNR=11
FFC Flin Flon 73.21 343 eP P 04 11 39.6 -0.6
5.5nm,0.7s
QSPA South Pole Qui 75.77 180 eP P 04 11 55.2 0.0
10nm,1.3s
QSPA South Pole Qui 75.77 180 P P 04 11 55.5 +0.3
4.1nm,0.6s,baz=141,slow=2.2,SNR=23
TOA0 Torodi Ar. Sit 78.47 73 eP P 04 12 10.5 -0.5
TORD Torodi Ar. Bea 78.47 73 P P 04 12 10.8 -0.2
TORD pP pP 04 12 35.9 +2.3
TORD Torodi Ar. Bea 78.47 73 P P 04 12 10.8 -0.2
8.2nm,0.8s,baz=246,slow=4.8,SNR=41
TORD pP pP 04 12 35.9 +2.3
4.6nm,1.1s,baz=261,slow=4.8,SNR=3.3
VNDA Vanda 83.21 190 eP P 04 12 35.4 +0.2
7.6nm,1.4s
VNDA Vanda 83.21 190 P P 04 12 35.8 +0.6
1.0nm,0.6s,baz=123,slow=4.8,SNR=5.7
YKA Yellowknife Ar 83.35 342 P P 04 12 35.9 -0.1
YKA Yellowknife Ar 83.35 342 P P 04 12 35.8 -0.1
7.8nm,0.7s,baz=136,slow=5.3,SNR=85
ESDC Sonseca Array 83.36 46 P P 04 12 37.7 +1.1
ESDC Sonseca Array 83.36 46 P P 04 12 37.7 +1.1
3.5nm,0.7s,baz=260,slow=4.9,SNR=24
YKW3 Yellowknife Ar 83.41 342 eP P 04 12 35.6 -0.6
0.1nm,0.8s
SYO Syowa Base 84.36 160⇓ eP P 04 12 39.8 -1.3
TAM Tamanrasset 84.88 65 eP P 04 12 46.2 +1.3
13nm,1.3s
SUMG Summa 89.63 10 eP P 04 13 08.5 +1.6
22nm,0.8s
BOSA Boshof 89.93 119 P P 04 13 09.6 +0.5
BOSA Boshof 89.93 119 P P 04 13 09.6 +0.5
3.1nm,0.9s,baz=173,slow=5.0,SNR=4.3
LBTB Lobatse 91.23 116 eP P 04 13 15.5 +0.3
15nm,1.4s
LBTB Lobatse 91.23 116 P P 04 13 16.0 +0.8
2.7nm,0.9s,baz=288,slow=4.8,SNR=4.7
MAW Mawson 92.11 164 P P 04 13 18.7 +0.6
MAW Mawson 92.11 164 P P 04 13 18.7 +0.6
4.3nm,0.7s,baz=228,slow=6.4,SNR=5.9
EGAK Eagle 94.08 336 eP P 04 13 27.3 +0.1
DOT Dot Lake 94.78 335 eP P 04 13 30.9 +0.5
SML Sawmill 95.96 332 eP P 04 13 35.6 -0.3
ILAR Eielson Array 96.35 335 P P 04 13 37.0 -0.5
ILAR Eielson Array 96.35 335 P P 04 13 37.0 -0.5
1.5nm,0.6s,baz=131,slow=2.3,SNR=27
COLA College 96.77 335 eP P 04 13 39.4 0.0
4.3nm,0.6s
PPLA Purkeypile 98.00 333 eP P 04 13 44.4 -0.8
11nm,1.1s
GERES GERESS Array B 98.27 42 P P 04 13 46.8 +0.1
GERES GERESS Array B 98.27 42 P P 04 13 46.8 +0.1
0.4nm,0.6s,baz=263,slow=7.5,SNR=3.8
BRTR Keskin Array B 111.46 53 PKiKP PKiKP 04 18 42.8 -0.8
BRTR Keskin Array B 111.46 53 PKiKP PKiKP 04 18 42.8 -0.8
0.9nm,1.0s,baz=328,slow=5.1,SNR=3.5
KBZ Khabaz 118.18 48 PKP PKPdf 04 18 57.2 +1.1
KBZ Khabaz 118.18 48 PKP PKPdf 04 18 57.2 +1.1
3.4nm,0.7s,baz=223,slow=2.1,SNR=6.6
STKA Stephens Creek 123.53 215 PKP PKPdf 04 19 06.6 -0.2
STKA Stephens Creek 123.53 215 PKP PKPdf 04 19 06.6 -0.2
3.0nm,0.6s,baz=75,slow=2.0,SNR=6.9
PETK Petropavlovsk- 124.76 326 PKP PKPdf 04 19 08.6 +0.2
PETK Petropavlovsk- 124.76 326 PKP PKPdf 04 19 08.6 +0.2
0.9nm,0.6s,baz=90,slow=2.9,SNR=3.0
ABKAR Akbulak array 128.00 38 ePKPdf PKPdf 04 19 16.0 +1.3
ASAR Alice Springs 134.17 215 PKP PKPdf 04 19 26.9 -0.4
ASAR pPKP pPKPdf 04 19 52.5 +1.1
ASAR Alice Springs 134.17 215 PKP PKPdf 04 19 26.9 -0.4
2.1nm,0.6s,baz=127,slow=2.0,SNR=28
ASAR pPKP pPKPdf 04 19 52.5 +1.1
0.9nm,0.7s,baz=123,slow=1.6,SNR=3.5
AS31 Alice Springs 134.17 215 ePKPdf PKPdf 04 19 27.0 -0.3
COEN Coen 134.77 233 ePKPdf PKPdf 04 19 28.1 -0.5
ZALV Zalesovo Beam 136.71 19 PKP PKPdf 04 19 32.0 +1.0
ZALV Zalesovo Beam 136.71 19 PKP PKPdf 04 19 32.0 +1.0
5.5nm,0.7s,baz=294,slow=2.6,SNR=14
WRA Warramunga Arr 136.82 219 PKPpre PKPpre 04 19 18.6
WRA PKP PKPdf 04 19 32.0 -0.4
WRA Warramunga Arr 136.82 219 PKhKP PKPpre 04 19 18.6
0.3nm,0.6s,baz=152,slow=2.8,SNR=8.1
WRA PKP PKPdf 04 19 32.0 -0.4
4.2nm,0.5s,baz=140,slow=1.9,SNR=78
WRAB Tennant Creek 136.82 219 ePKPdf PKPdf 04 19 32.0 -0.3
KURK Kurchatov 136.92 27 ePKPdf PKPdf 04 19 32.7 +1.2
EKS2 Erkin-Say 139.62 39 ePKPdf PKPdf 04 19 38.1 +1.2
TKM2 Tokmak 2 140.56 38 ePKPdf PKPdf 04 19 40.1 +1.3
MK31 Makanchi Array 141.46 28 ePKPpre PKPpre 04 19 35.2
MKAR Makanchi Array 141.46 28 PKPpre PKPpre 04 19 35.2
MKAR PKP PKPdf 04 19 40.1 +0.1
MKAR Makanchi Array 141.46 28 PKhKP PKPpre 04 19 35.2
1.1nm,0.6s,baz=336,slow=3.3,SNR=14
MKAR PKP PKPdf 04 19 40.1 +0.1
1.7nm,0.8s,baz=335,slow=1.2,SNR=9.5
KSH Kashi 142.74 42 ePKP PKPdf 04 19 42.1 -0.5
KSH AMB AMB
comp=Z,87nm,4.6s
KSH LR LR
comp=N,140nm,3.8s
KSH LR LR
comp=E,200nm,4.3s
KSH LR LR
comp=Z,170nm,6.0s
FITZ Fitzroy Crossi 143.06 210 PKPpre PKPpre 04 19 39.3
FITZ Fitzroy Crossi 143.06 210 PKhKP PKPpre 04 19 39.3
comp=Z,1.7nm,0.5s,baz=197,slow=5.0,SNR=12
USRK Ussuriysk Arra 143.64 330 PKP PKPab 04 19 41.1 +0.4
comp=Z,2.1nm,0.6s,baz=42,slow=5.9,SNR=7.3
MDJ Mudanjiang 144.45 332 PKP PKPab 04 19 43.4 -0.3
MAJO Matsushiro 144.75 314 ePKPdf PKPab 04 19 44.3 -0.8
MAT Matsushiro 144.75 314 PKP PKPab 04 19 43.9 -1.2
WMQ Urumqi 146.16 26 ePKPbc PKPbc 04 19 50.0 +0.6
WMQ pPKP pPKPdf 04 20 13.0 +0.6
WMQ LR LR
comp=Z,140nm,22.6s
ULN Ulaanbaatar 146.61 0 ePKPbc PKPbc 04 19 51.3 +0.5
SONM Songino Array 146.63 1 PKPbc PKPbc 04 19 51.6 +0.8
SONM pPKPbc pPKPbc 04 20 13.5 -1.0
SONM Songino Array 146.63 1 PKPbc PKPbc 04 19 51.6 +0.8
comp=Z,8.2nm,0.6s,baz=326,slow=1.8,SNR=53
SONM pPKPbc pPKPbc 04 20 13.5 -1.0
comp=Z,2.1nm,0.5s,baz=319,slow=2.9,SNR=3.0
KSRS Korea Array 150.66 325 PKPbc PKPbc 04 20 01.8 +0.5
comp=Z,4.5nm,0.6s,baz=5.7,slow=2.4,SNR=14
KSRS PKPab PKPab 04 20 08.2 -0.1
comp=Z,4.3nm,0.7s,baz=46,slow=3.6,SNR=7.1
KSRS pPKPbc pPKPbc 04 20 27.2 +2.1
comp=Z,6.2nm,1.0s,baz=21,slow=1.5,SNR=4.8
KSAR Wonju Array Be 150.69 325 PKPbc PKPbc 04 20 01.8 +0.4
KSAR PKPab PKPab 04 20 08.2 -0.2
KSAR pPKPbc pPKPbc 04 20 27.2 +2.0
HHC Hu-ho-hao-te 153.38 353 ePKPbc PKPdf 04 19 55.8 -4.1
HHC pPKP pPKPdf 04 20 22.6 -1.4
HHC sPKP 04 20 33.3
HHC PKS PKSdf 04 23 28.8 -5.5
HHC PP PP 04 23 52.8 +0.2
HHC AMB AMB
comp=Z,230nm,8.8s
HHC LR LR
comp=N,160nm,19.1s
HHC LR LR
comp=E,270nm,19.9s
HHC LR LR
comp=Z,130nm,20.6s
GTA Gaotai 154.18 14 ePKPbc PKPdf 04 20 02.8 +1.7
NJ2 Nanjing 159.53 331 ePKP PKPdf 04 20 10.8 +2.8
CD2 Chengdu 163.21 11 ePKP PKPdf 04 20 10.4 -1.6
CD2 sPKP 04 20 39.8
CD2 PKPab PKPab 04 21 03.3 +0.9
CD2 PP PP 04 24 48.8 +2.6
CD2 SKKS 04 31 27.6
CD2 SS SS 04 45 05.3 +1.2
CD2 AMB AMB
comp=Z,120nm,10.2s
CD2 LR LR
comp=N,150nm,21.0s
CD2 LR LR
comp=Z,160nm,20.2s
GYA Guiyang 167.96 3 ePKP PKPdf 04 20 14.0 -2.1
GYA sPKP 04 20 42.5
GYA PKPab PKPab 04 21 23.0 -0.5
GYA PKS PKSdf 04 23 45.6 -3.3
GYA PP PP 04 25 14.8 +3.9
GYA AMB AMB
comp=Z,90nm,7.8s
KMI Kunming 168.44 22 PKP PKPdf 04 20 15.9 -0.7

*BJI **20** 04:00:25.6,5.°40S×105.°60E,h174km,mB4.9/17,mb4.6/31*
*NEIC **20** 04:00:26.8±0.8,5.°42S×105.°59E,h184km±6km,mb4.6/27,*
Error ellipse: s-maj=8.5km s-min=5.6km az=49.0
*ISCJB **20** 04:00:27.9±0.3,5.°50S±0.°03×105.°62E±0.°03,h208km±2km,*
mb4.3/52,Error ellipse: s-maj=6.3km s-min=4.3km
az=37.2
*IDC **20** 04:00:28.7±0.7,5.°38S×105.°67E,h199km±6km,mb4.1/23,*
mb1 4.1/24,mb1mx4.1/28,mbtmp4.1/24,Error ellipse:
s-maj=11.9km s-min=8.3km az=57.0
*DJA **20** 04:00:30.7±0.3,6.°S±3.°×10.°6E±.°,h177km±4km,M4.5/14,*
mb4.6/6,mB5.1/5,MLv4.5/14,Mw(mB)4.5/5
ISC 20 04:00:27.8±0.4,5.°50S±0.°04×105.°64E±0.°04,h193km±2km,
h193km:pP-P,n239,σ1%43/303,mb4.5/52,11C-14D,Sunda
Strait

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BLSI	**Bandar Lampung**	**0.41**	**289**	P	**Pn**	**04 00 56.5**	**+2.7**
BLSI				S	**Sn**	**04 01 13.7**	**-0.1**
SBJI	**Serang**	**0.79**	**141**	P	**Pn**	**04 00 57.3**	**+1.8**
SBJI				S	**Sn**	**04 01 19.5**	**+2.5**
KASI	**Kota Agung**	**1.13**	**269**	P	**Pn**	**04 01 00.6**	**+2.8**
KASI				S	**Sn**	**04 01 22.3**	**+1.3**
LWLI	**Liwa**	**1.64**	**287**	P	**Pn**	**04 01 05.0**	**+2.6**
LWLI				S	**Sn**	**04 01 31.7**	**+2.6**
SKJI	**Sukabumi**	**1.75**	**149**	P	**Pn**	**04 01 04.0**	**+0.7**
SKJI				S	**Sn**	**04 01 30.0**	**-1.0**
CNJI	**Cibinong**	**2.33**	**140**	P	**Pn**	**04 01 09.2**	**-0.2**
LEM	**Lembang**	**2.37**	**124**	P	**Pn**	**04 01 12.1**	**+2.1**
PPBI	**Pangkal Pinang**	**3.36**	**9**	P	Pn	04 01 24.8	+3.4
PPBI				S	**Sn**	**04 02 05.2**	**+1.7**
TPI	**Tanjungpandan**	**3.39**	**36**	P	**Pn**	**04 01 24.1**	**+2.3**
TPI				S	**Sn**	**04 02 06.4**	**+2.2**
KSI	**Kapahiang**	**3.55**	**301**	P	Pn	04 01 26.8	+3.0
KSI				S	**Sn**	**04 02 09.3**	**+1.6**
TGJI	**Tegal**	**3.72**	**112**	P	**Pn**	**04 01 27.9**	**+2.0**
CLJI	**Cilicap**	**4.01**	**123**	P	**Pn**	**04 01 32.4**	**+2.9**
BJII	**Banjamegara**	**4.44**	**114**	P	**Pn**	**04 01 36.3**	**+1.3**
XMIS	**Christmas Isla**	**4.95**	**180**	ePn	Pn	04 01 38.9	-2.5
	771nm,0.3s						
PCJI	**Pacitan**	**6.12**	**116**	P	**Pn**	**04 01 58.9**	**+2.4**
	144nm,0.8s,4μm0.8nm						
SJI	**Sawahan**	**6.48**	**110**	P	**Pn**	**04 02 02.8**	**+1.4**
PWJI	**Pagerwojo**	**6.62**	**113**	P	Pn	04 02 10.2	+7.2
PPI	**Padang Panjang**	**7.25**	**314**	P	**Pn**	**04 02 11.7**	**+0.4**
	76nm,0.6s,1μm0.3nm						
PPI				S	**Sn**	**04 03 32.4**	**-0.9**
	76nm,0.6s,1μm0.3nm						
MNSI	**Mandailing Nat**	**8.70**	**316**	P	**Pn**	**04 02 30.6**	**+0.3**
	144nm,0.8s,3μm						
SBUM	**Sibu**	**10.28**	**40**	P	P	04 02 55.2	-3.6
SBUM	**Sibu**	**10.28**	**40**	P	Pn	04 02 54.7	+3.8
	32nm,1.1s,535nm						
PSI	**Prapat**	**10.63**	**321**	P	**Pn**	**04 02 53.4**	**-2.1**
PSI	**Prapat**	**10.63**	**321**	P	**Pn**	**04 02 53.4**	**-2.1**
	1.7nm,0.3s,baz=150,slow=9.8,SNR=12						
IPM	**Ipoh**	**10.93**	**335**	ePn	**Pn**	**04 02 57.8**	**-1.6**
KULM	**Kulim**	**11.82**	**335**	ePn	**Pn**	**04 03 07.9**	**-2.8**
KAPI	**Kappang**	**14.06**	**89**	P	**P**	**04 03 41.5**	**+0.6**
KAPI	**Kappang**	**14.06**	**89**	P	**P**	**04 03 41.5**	**+0.6**
	1.5nm,0.3s,baz=161,slow=10,SNR=4.0						
TTSI	**Tana Toraja**	**14.35**	**81**	P	P	04 03 48.9	+4.8
	24nm,1.0s,4μm						
BKSI	**Bulukumba**	**14.42**	**90**	P	**P**	**04 03 47.8**	**+2.9**
KKM	**Kota Kinabalu**	**15.59**	**43**	eP	**Pn**	**04 03 58.0**	**+0.2**
	27nm,0.7s						
KKM	**Kota Kinabalu**	**15.59**	**43**	P	**P**	**04 04 00.4**	**+2.5**
SDKM	**Sandakan**	**15.99**	**46**	P	**Pn**	**04 04 03.9**	**+1.3**
KDM	**Kudat**	**16.64**	**42**	P	**Pn**	**04 04 12.5**	**+2.2**
MYLDM	**Lahad Datu**	**16.66**	**51**	P	**Pn**	**04 04 14.4**	**+3.8**
MYLDM	**Lahad Datu**	**16.66**	**51**	P	**Pn**	**04 04 14.6**	**+4.1**
FITZ	**Fitzroy Crossi**	**23.20**	**124**	P	**P**	**04 05 17.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**23.20**	**124**	P	**P**	**04 05 17.6**	**-0.1**
	4.7nm,0.6s,baz=299,slow=6.5,SNR=21						
CMAR	**Chiang Mai Arr**	**24.71**	**345**	PcP	**PcP**	**04 09 04.5**	**+1.2**
CMAR				ScP	**ScP**	**04 12 23.6**	**-0.4**
CMAR	**Chiang Mai Arr**	**24.71**	**345**	PcP	**PcP**	**04 09 04.5**	**+1.2**
	2.7nm,0.6s,baz=210,slow=2.8,SNR=11						
CMAR				ScP	**ScP**	**04 12 23.6**	**-0.4**
	1.4nm,0.4s,baz=191,slow=3.6,SNR=8.0						
QIZ	**Qiongzhong**	**24.73**	**10**	P	**P**	**04 05 31.9**	**+0.3**
QIZ				S	**S**	**04 09 43.3**	**+4.0**
CHTO	**Chiang Mai**	**25.05**	**345**	eP	**P**	**04 05 33.5**	**-1.0**
	5.1nm,0.8s						
PALK	**Pallekele**	**27.93**	**297**	eP	**P**	**04 05 58.1**	**-2.3**
	27nm,1.1s						
KMI	**Kunming**	**30.57**	**355**	P	P	04 06 27.0	+3.2
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WRA	**Warramunga Arr**	**31.38**	**120**	P	**P**	**04 06 30.9**	**+0.1**
WRA				PcP	**PcP**	**04 09 20.0**	**+0.1**
WRA				S	**S**	**04 11 19.4**	**-4.7**
WRA				ScP	**ScP**	**04 12 43.5**	**-1.3**
WRA	**Warramunga Arr**	**31.38**	**120**	P	**P**	**04 06 30.9**	**+0.1**
	comp=Z,4.5nm,0.3s,baz=308,slow=9.5,SNR=126						
WRA				PcP	**PcP**	**04 09 20.0**	**+0.1**
	comp=Z,1.4nm,0.4s,baz=314,slow=1.8,SNR=7.4						
WRA				S	**S**	**04 11 19.4**	**-4.7**
	comp=Z,2.1nm,0.8s,baz=298,slow=17,SNR=9.8						
WRA				ScP	**ScP**	**04 12 43.5**	**-1.3**
	comp=Z,1.0nm,0.6s,baz=313,slow=2.6,SNR=8.8						
WRAB	**Tennant Creek**	**31.39**	**120**	eP	**P**	**04 06 30.9**	**0.0**
	comp=Z,12nm,0.7s						
GYA	**Guiyang**	**31.79**	**2**	eP	**P**	**04 06 36.5**	**+2.2**
GYA				pP	**pP**	**04 07 12.8**	**-1.3**
GYA				sP	**sP**	**04 07 34.4**	**-2.0**
GYA				PP	**PP**	**04 07 49.0**	**-1.3**
GYA				PcP	**PcP**	**04 09 22.5**	**+1.6**
GYA				S	**S**	**04 11 33.3**	**+3.0**
GYA				sS	**sS**	**04 12 38.0**	**-2.9**
GYA				ScP	**ScP**	**04 12 47.5**	**+1.4**
GYA				PcS	**PcS**	**04 13 05.9**	**0.0**
GYA				ScS	**ScS**	**04 16 45.8**	**+0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AS31	**Alice Springs**	**32.66**	**126**	eP	**P**	**04 06 42.1**	**+0.1**
ASAR	**Alice Springs**	**32.66**	**126**	P	**P**	**04 06 42.4**	**+0.4**
ASAR				pP	**pP**	**04 07 23.9**	**+2.1**
ASAR				PcP	**PcP**	**04 09 23.6**	**+0.4**
ASAR				S	**S**	**04 11 40.8**	**-3.0**
ASAR				ScP	**ScP**	**04 12 48.2**	**-0.8**
ASAR	**Alice Springs**	**32.66**	**126**	P	**P**	**04 06 42.4**	**+0.4**
	comp=Z,7.2nm,0.4s,baz=297,slow=7.6,SNR=146						
ASAR				pP	**pP**	**04 07 23.9**	**+2.1**
	comp=Z,1.4nm,0.8s,baz=308,slow=7.8,SNR=1.3						
ASAR				PcP	**PcP**	**04 09 23.6**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=307,slow=2.3,SNR=11						
ASAR				S	**S**	**04 11 40.8**	**-3.0**
	comp=Z,7.5nm,1.0s,baz=294,slow=16,SNR=20						
ASAR				ScP	**ScP**	**04 12 48.2**	**-0.8**
	comp=Z,0.4nm,0.7s,baz=336,slow=2.7,SNR=4.1						
ENH	**Enshi**	**35.76**	**6**	eP	**P**	**04 07 07.7**	**-0.8**
	comp=Z,5.4nm,0.6s						
CD2	**Chengdu**	**36.25**	**357**	eP	**P**	**04 07 14.3**	**+1.7**
CD2				pP	**pP**	**04 07 51.8**	**-1.3**
CD2				sP	**sP**	**04 08 11.8**	**-3.4**
CD2				PP	**PnPn**	**04 08 44.4**	**+2.8**
CD2				S	**S**	**04 12 42.3**	**+3.6**
CD2				sS	**sS**	**04 13 47.8**	**-2.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,30nm,6.2s						
LSA	**Lhasa**	**37.66**	**339**	eP	**P**	**04 07 24.4**	**-0.6**
	comp=Z,9.2nm,0.4s						
COEN	**Coen**	**37.89**	**106**	eP	**P**	**04 07 25.8**	**-0.9**
NJ2	**Nanjing**	**39.41**	**18**	eP	**P**	**04 07 38.3**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**39.45**	**4**	P	**P**	**04 07 39.3**	**0.0**
XAN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,37nm,7.0s						
PMG	**Port Moresby**	**41.34**	**98**	eP	**P**	**04 07 54.9**	**-0.2**
	comp=Z,25nm,0.6s						
CTAO	**Charters Tower**	**42.03**	**114**	eP	**P**	**04 08 01.1**	**+0.3**
	comp=Z,13nm,0.9s						

STKA	**Stephens Creek**	**42.64**	**132**	*e*P		**P**	**04 08 06.5**	**+1.0**
	comp=Z,28nm,2.1s							
STKA				pP		**pP**	**04 08 49.1**	**+2.1**
STKA				PcP		**PcP**	**04 09 54.0**	**+0.1**
STKA	**Stephens Creek**	**42.64**	**132**	P		**P**	**04 08 05.9**	**+0.5**
	comp=Z,11nm,0.6s,baz=303,slow=8.3,SNR=27							
STKA				pP		**pP**	**04 08 49.1**	**+2.1**
	comp=Z,4.2nm,0.7s,baz=313,slow=14,SNR=2.0							
STKA				PcP		**PcP**	**04 09 54.0**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=333,slow=4.5,SNR=2.6							
GTA	**Gaotai**	**45.01**	**354**	*e*P		**P**	**04 08 25.3**	**+1.0**
GTA				pP		**pP**	**04 09 04.0**	**-2.3**
GTA				sP		sP	04 09 23.5	-4.4
GTA				pmax		pmax		
	comp=Z,12nm,0.8s							
BJI	**Beijing**	**46.35**	**11**	P		**P**	**04 08 32.1**	**-2.4**
BJI				pmax		pmax		
	comp=Z,17nm,0.8s							
HHC	**Hu-ho-hao-te**	**46.45**	**6**	*e*P		**P**	**04 08 37.1**	**+1.7**
HHC				pP		**pP**	**04 09 15.9**	**-1.8**
HHC				sP		**sP**	**04 09 35.8**	**-3.5**
HHC				PP		**PP**	**04 10 28.8**	**+1.4**
HHC				PcS		**PcS**	**04 14 02.3**	**+0.5**
HHC				S		**S**	**04 15 11.6**	**+3.0**
HHC				sS		**sS**	**04 16 19.8**	**-2.8**
HHC				ScS		**ScS**	**04 18 10.6**	**+0.5**
HHC				SS		**SS**	**04 18 35.0**	**-2.3**
HHC				pmax		pmax		
	comp=Z,34nm,1.2s							
HHC				pmax		pmax		
	comp=Z,120nm,5.0s							
KSAR	**Wonju Array Be**	**47.49**	**24**	P		**P**	**04 08 43.9**	**+0.4**
KSRS	**Korea Array**	**47.52**	**24**	P		**P**	**04 08 43.9**	**+0.2**
	comp=Z,3.8nm,0.9s,baz=206,slow=8.3,SNR=11							
WMQ	**Urumqi**	**51.70**	**343**	*e*P		**P**	**04 09 15.3**	**+0.1**
WMQ				pmax		pmax		
	comp=Z,11nm,1.0s							
WMQ				pmax		pmax		
	comp=Z,130nm,6.9s							
MAJO	**Matsushiro**	**51.75**	**34**	*e*P		**P**	**04 09 14.2**	**-1.5**
	comp=Z,7.1nm,0.6s							
MAT	**Matsushiro**	**51.75**	**34**	P		**P**	**04 09 14.2**	**-1.5**
CN2	**Changchun**	**52.24**	**18**	*e*P		**P**	**04 09 18.8**	**-0.3**
CN2				pmax		pmax		
	comp=Z,20nm,0.8s							
SONM	**Songino Array**	**53.11**	**1**	P		**P**	**04 09 26.3**	**+0.7**
SONM				PcP		**PcP**	**04 10 30.7**	**-0.5**
SONM				ScP		**ScP**	**04 14 10.2**	**-0.3**
SONM	**Songino Array**	**53.11**	**1**	P		**P**	**04 09 26.3**	**+0.7**
	comp=Z,8.5nm,0.6s,baz=177,slow=9.6,SNR=46							
SONM				PcP		**PcP**	**04 10 30.7**	**-0.5**
	comp=Z,1.4nm,0.5s,baz=179,slow=4.5,SNR=5.4							
SONM				ScP		**ScP**	**04 14 10.2**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=186,slow=2.6,SNR=2.8							
ULN	**Ulaanbaatar**	**53.16**	**1**	*e*P		**P**	**04 09 26.6**	**+0.6**
	comp=Z,8.6nm,0.6s							
MDJ	**Mudanjiang**	**54.34**	**21**	P		**P**	**04 09 34.9**	**+0.5**
MDJ				sP		sP	04 10 32.1	-7.1
MDJ				S		**S**	**04 17 02.0**	**+4.8**
MDJ				sS		sS	04 18 08.1	-5.1
MDJ				pmax		pmax		
	comp=Z,8.0nm,1.6s							
MDJ				pmax		pmax		
	comp=Z,140nm,14.1s							
MDJ				LR		LR		
	comp=Z,68nm,20.5s							
USRK	**Ussuriysk Arra**	**54.87**	**23**	P		**P**	**04 09 38.4**	**+0.2**
	comp=Z,38nm,0.7s,baz=202,slow=5.2,SNR=90							
TKM2	**Tokmak 2**	**55.36**	**333**	*e*P		**P**	**04 09 41.1**	**-1.0**
	comp=Z,8.2nm,0.5s							
AAK	**Ala-Archa**	**55.63**	**332**	PcP		**PcP**	**04 10 41.2**	**+0.1**
AAK				ScP		**ScP**	**04 14 20.3**	**-1.4**
AAK	**Ala-Archa**	**55.63**	**332**	PcP		**PcP**	**04 10 41.2**	**+0.1**
	comp=Z,4.1nm,0.7s,baz=131,slow=2.9,SNR=5.8							
AAK				ScP		**ScP**	**04 14 20.3**	**-1.4**
	comp=Z,2.0nm,0.4s,baz=207,slow=3.3,SNR=4.4							
EKS2	**Erkin-Say**	**55.99**	**332**	*e*P		**P**	**04 09 45.8**	**-0.6**
	comp=Z,3.3nm,0.8s							
MK31	**Makanchi Array**	**56.03**	**341**	*e*P		**P**	**04 09 45.2**	**-1.3**
MKAR	**Makanchi Array**	**56.03**	**341**	*e*P		**P**	**04 09 45.3**	**-1.2**
MKAR				ScP		**ScP**	**04 14 21.7**	**-1.4**
MKAR	**Makanchi Array**	**56.03**	**341**	P		**P**	**04 09 45.4**	**-1.1**
	comp=Z,6.7nm,0.5s,baz=150,slow=8.8,SNR=130							
MKAR				ScP		**ScP**	**04 14 21.7**	**-1.4**
	comp=Z,0.4nm,0.7s,baz=131,slow=7.9,SNR=3.9							
ERM	**Erimo**	**58.34**	**32**	*e*P		**P**	**04 10 02.2**	**-0.4**
	comp=Z,6.3nm,0.4s							
OPO	**Ambohidratompo**	**58.38**	**252**	P		**P**	**04 10 05.2**	**+1.5**
OPO	**Ambohidratompo**	**58.38**	**252**	P		**P**	**04 10 05.2**	**+1.5**
	comp=Z,2.1nm,0.8s,baz=71,slow=12,SNR=5.7							
ASAJ	**Asahikawa**	**59.55**	**30**	*e*P		**P**	**04 10 10.8**	**-0.1**
	comp=Z,6.9nm,0.6s							
ASAJ	**Asahikawa**	**59.55**	**30**	P		**P**	**04 10 10.7**	**-0.3**
	comp=Z,16nm,0.7s,baz=236,slow=8.1,SNR=13							
KURBB	**Kurchatov Arra**	**60.59**	**341**	P		**P**	**04 10 16.6**	**-1.3**
	comp=Z,4.1nm,0.6s,baz=155,slow=6.2,SNR=22							
KURBB				PcP		**PcP**	**04 10 60.0**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=148,slow=3.6,SNR=9.2							
KURK	**Kurchatov**	**60.64**	**341**	*e*P		**P**	**04 10 16.0**	**-2.2**
	comp=Z,5.9nm,0.7s							
KURK				PcP		**PcP**	**04 10 60.0**	**-0.6**
ZALV	**Zalesovo Beam**	**61.76**	**346**	P		**P**	**04 10 24.3**	**-1.4**
ZALV	**Zalesovo Beam**	**61.76**	**346**	P		**P**	**04 10 24.3**	**-1.4**
	comp=Z,6.5nm,0.5s,baz=143,slow=4.7,SNR=25							
BRVK	**Borovoye**	**65.54**	**337**	*e*P		**P**	**04 10 48.9**	**-1.5**
	comp=Z,4.7nm,0.5s							
ABKAR	**Akbulak array**	**67.44**	**329**	*e*P		**P**	**04 11 01.4**	**-1.2**
KMBO	**Kilima Mbogo**	**68.38**	**271**	*e*P		**P**	**04 11 11.0**	**+1.6**
	comp=Z,2.3nm,0.7s							
KMBO	**Kilima Mbogo**	**68.38**	**271**	P		**P**	**04 11 10.6**	**+1.1**
	comp=Z,2.2nm,0.7s,baz=56,slow=12,SNR=6.2							
PETK	**Petropavlovsk-**	**72.97**	**30**	P		**P**	**04 11 35.2**	**-0.8**
PETK	**Petropavlovsk-**	**72.97**	**30**	P		**P**	**04 11 35.2**	**-0.8**
	comp=Z,4.8nm,0.7s,baz=204,slow=6.5,SNR=9.0							
KBZ	**Khabaz**	**74.64**	**318**	P		**P**	**04 11 46.2**	**+0.3**
KBZ	**Khabaz**	**74.64**	**318**	P		**P**	**04 11 46.2**	**+0.3**
	comp=Z,1.3nm,0.4s,baz=166,slow=5.9,SNR=4.4							
SYO	**Syowa Base**	**76.44**	**200**	pX		P	04 11 47.4	-8.3
SYO	**Syowa Base**	**76.44**	**200**	epPKiKP		pPKiKP	04 18 25.6	-3.1
VNDA	**Vanda**	**77.68**	**169**	*e*P		**P**	**04 12 03.9**	**+1.4**
	comp=Z,2.5nm,1.2s							
VNDA	**Vanda**	**77.68**	**169**	P		**P**	**04 12 03.4**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=294,slow=5.6,SNR=9.5							
LBTB	**Lobatse**	**78.68**	**246**	*e*P		**P**	**04 12 10.2**	**+1.0**
	comp=Z,5.4nm,0.9s							
LBTB	**Lobatse**	**78.68**	**246**	P		**P**	**04 12 10.4**	**+1.2**
	comp=Z,2.6nm,0.6s,baz=86,slow=15,SNR=5.1							
CSS	**Prodhromos**	**78.81**	**307**	*e*P		**P**	**04 12 09.3**	**-0.3**
BOSA	**Boshof**	**78.95**	**242**	*e*P		**P**	**04 12 11.4**	**+0.7**
	comp=Z,24nm,1.7s							
BOSA	**Boshof**	**78.95**	**242**	P		**P**	**04 12 11.6**	**+0.9**
	comp=Z,2.0nm,0.8s,baz=254,slow=21,SNR=4.3							
BR131	**Keskin Array S**	**79.83**	**312**	*e*P		**P**	**04 12 14.2**	**-0.9**
	comp=Z,6.2nm,0.9s							
BRTR	**Keskin Array B**	**79.83**	**312**	P		**P**	**04 12 14.7**	**-0.5**
BRTR				pP		**pP**	**04 13 02.7**	**+0.7**
BRTR	**Keskin Array B**	**79.83**	**312**	P		**P**	**04 12 14.7**	**-0.5**
	comp=Z,3.7nm,0.8s,baz=137,slow=7.5,SNR=26							
BRTR				pP		**pP**	**04 13 02.7**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=134,slow=8.8,SNR=1.9							
SUR	**Sutherland**	**82.72**	**238**	P		**P**	**04 12 32.3**	**+1.7**
SUR	**Sutherland**	**82.72**	**238**	P		**P**	**04 12 32.3**	**+1.7**
	comp=Z,3.0nm,0.8s,baz=80,slow=6.1,SNR=3.4							
AKASG	**Malin Array Be**	**85.69**	**322**	P		**P**	**04 12 44.1**	**-0.7**
AKASG	**Malin Array Be**	**85.69**	**322**	P		**P**	**04 12 44.1**	**-0.7**
	comp=Z,4.2nm,0.8s,baz=85,slow=5.3,SNR=10.0							
KIEV	**Kiev**	**85.70**	**322**	*e*P		**P**	**04 12 43.8**	**-1.1**
	comp=Z,5.5nm,0.8s							
GVD	**Gavdhos**	**86.21**	**305**	*e*P		**P**	**04 12 46.7**	**-1.1**
	comp=Z,41nm,1.1s							
VRI	**Vrincioaia**	**86.23**	**317**	↓*i*P		**P**	**04 12 49.0**	**+1.3**
PLOR	**Plostina**	**86.28**	**317**	↑*i*P		**P**	**04 12 49.4**	**+1.4**
TSUM	**Tsumeb**	**86.38**	**251**	*e*P		**P**	**04 12 49.2**	**+0.1**
	comp=Z,10nm,1.0s							
TESR	**Tescani**	**86.42**	**317**	↓*i*P		**P**	**04 12 49.4**	**+0.8**
MLR	**Muntele Rosu**	**86.70**	**316**	↓*i*P		**P**	**04 12 51.1**	**+1.0**
VOIR		**87.31**	**316**	↑*i*P		**P**	**04 12 53.1**	**+0.1**
ARR	**Arges**	**87.58**	**316**	↓*i*P		**P**	**04 12 54.8**	**+0.6**
BURAR	**Bucovina Array**	**87.60**	**318**	↓*i*P		**P**	**04 12 55.9**	**+1.6**
BUR08	**Bucovina Ar. S**	**87.61**	**318**	*e*P		**P**	**04 12 55.2**	**+0.8**
JOF	**Joensuu**	**87.80**	**334**	ep		**P**	**04 12 55.4**	**+0.7**
VTS	**Vitosha**	**88.13**	**313**	↑*i*P		**P**	**04 12 56.6**	**-0.4**
KOLS	**Kolonicke sedl**	**89.76**	**319**	*e*P		**P**	**04 13 05.1**	**+0.8**
FINES	**FINESS Array B**	**89.82**	**332**	P		**P**	**04 13 03.8**	**-0.4**
FINES	**FINESS Array B**	**89.82**	**332**	P		**P**	**04 13 03.8**	**-0.4**
	comp=Z,1.1nm,0.5s,baz=127,slow=5.0,SNR=11							
ARCES	**ARCESS Array B**	**91.67**	**340**	P		**P**	**04 13 10.6**	**-2.2**
ARCES	**ARCESS Array B**	**91.67**	**340**	P		**P**	**04 13 10.6**	**-2.2**
	comp=Z,2.8nm,0.9s,baz=80,slow=7.5,SNR=4.0							
MORC	**Moravsky Berou**	**92.93**	**320**	*e*P		**P**	**04 13 18.2**	**-0.8**
	comp=Z,1.8nm,0.7s							
ILAR	**Eielson Array**	**102.37**	**25**	PP		PP	04 18 19.3	+3.4
ILAR	**Eielson Array**	**102.37**	**25**	PP		PP	04 18 19.3	+3.4
	comp=Z,0.1nm,0.6s,baz=287,slow=7.9,SNR=6.1							
TORD	**Torodi Ar. Bea**	**104.78**	**282**	SKP		**SKiKP**	**04 21 41.7**	**-2.8**
	comp=Z,0.3nm,0.7s,baz=92,slow=1.3,SNR=4.3							
YKA	**Yellowknife Ar**	**115.92**	**19**	PKP		**PKPdf**	**04 18 46.6**	**-0.6**
YKA	**Yellowknife Ar**	**115.92**	**19**	PKP		**PKPdf**	**04 18 46.6**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=336,slow=1.9,SNR=12							
C11A	**Tepee Creek (N**	**124.72**	**33**	⇓P		**PKPdf**	**04 19 05.0**	**+0.3**
	baz=125							
A13A	**Flathead Natio**	**125.04**	**31**	⇑P		**PKPdf**	**04 19 05.7**	**+0.4**
	baz=125							
B13A	**Whitefish**	**125.36**	**32**	P		**PKPdf**	**04 19 06.4**	**+0.5**
	baz=125,SNR=6.0							
BSMT	**Bassoo Peak**	**125.51**	**32**	*e*PKPdf		**PKPdf**	**04 19 06.6**	**+0.2**
D12A	**Red Ives Fores**	**125.68**	**34**	⇑P		**PKPdf**	**04 19 06.3**	**-0.3**
	baz=126							
C13A	**Hot Springs**	**125.73**	**33**	⇑P		**PKPdf**	**04 19 06.2**	**-0.4**
	baz=126							
A15A	**Johnson Ranch,**	**125.86**	**30**	⇓P		**PKPdf**	**04 19 06.6**	**-0.3**
	baz=126							
E12A	**Beaver Dam Sad**	**125.94**	**34**	P		**PKPdf**	**04 19 06.8**	**-0.4**
	baz=126							
B14A	**Marquette Ranc**	**125.99**	**31**	P		**PKPdf**	**04 19 06.9**	**-0.3**
	baz=126							
FFC	**Flin Flon**	**126.11**	**19**	*e*PKPdf		**PKPdf**	**04 19 06.5**	**-0.5**
FFC				*e*PKPdf		**PKiKP**	**04 19 06.9**	**-0.6**
C14A	**Swan Lake**	**126.11**	**32**	P		**PKPdf**	**04 19 07.3**	**-0.1**
	baz=126							
D13A	**Huson**	**126.15**	**33**	⇓P		**PKPdf**	**04 19 07.1**	**-0.3**
	baz=126							
B15A	**Bradely Ranch,**	**126.38**	**31**	⇑P		**PKPdf**	**04 19 07.2**	**-0.7**
	baz=126,SNR=6.2							
MSO	**Missoula**	**126.59**	**33**	*e*PKPdf		**PKPdf**	**04 19 08.4**	**+0.1**
MSO	**Missoula**	**126.59**	**33**	⇓P		**PKPdf**	**04 19 07.6**	**-0.7**
	baz=126							
D14A	**Greenough**	**126.67**	**33**	⇓P		**PKPdf**	**04 19 08.4**	**-0.1**
	baz=126							
C15A	**Salmond Ranch,**	**126.70**	**31**	P		**PKPdf**	**04 19 08.9**	**+0.3**
	baz=127,SNR=9.5							
B16A	**M & M Farms, S**	**126.75**	**30**	P		**PKPdf**	**04 19 08.7**	**+0.1**
	baz=127							
A17A	**Triple J Farms**	**126.89**	**29**	⇓P		**PKPdf**	**04 19 09.2**	**+0.3**
	baz=127							
C16A	**Fuhringer Ranc**	**127.13**	**31**	⇓P		**PKPdf**	**04 19 09.4**	**+0.1**
	baz=127							
B17A	**L&G Farms, Che**	**127.28**	**30**	P		**PKPdf**	**04 19 09.5**	**-0.1**
	baz=127							
H12A	**Diamond D Ranc**	**127.44**	**36**	P		**PKPdf**	**04 19 10.4**	**+0.3**
	baz=127							
MFID	**Camas Ranch**	**127.50**	**37**	*e*PKPdf		**PKPdf**	**04 19 11.8**	**+1.6**
MFID	**Camas Ranch**	**127.50**	**37**	P		**PKPdf**	**04 19 11.2**	**+1.0**
	baz=127							
I12A	**Atlanta**	**127.71**	**37**	P		**PKPdf**	**04 19 11.0**	**+0.3**
	baz=128							
D16A	**Dana Ranch, Ca**	**127.73**	**32**	P		**PKPdf**	**04 19 11.0**	**+0.4**
	baz=128							
C17A	**Wharram Farm,**	**127.74**	**30**	P		**PKPdf**	**04 19 10.7**	**+0.2**
	baz=128							
EGMT	**Eagleton**	**127.98**	**30**	*e*PKPdf		**PKPdf**	**04 19 12.1**	**+1.2**
F15A	**Butte**	**127.99**	**33**	P		**PKPdf**	**04 19 11.8**	**+0.6**
	baz=128							
D17A	**Six Diamond Ra**	**128.10**	**31**	P		**PKPdf**	**04 19 11.5**	**+0.2**
	baz=128							
DLMT	**Dillon**	**128.23**	**34**	*e*PKPdf		**PKPdf**	**04 19 12.5**	**+0.9**
PTRM	**Twisselman Ran**	**128.31**	**48**	*e*PKPdf		PKPdf	04 19 18.5	+6.6
NVAR	**Mina Array Bea**	**128.46**	**44**	PKP		**PKPdf**	**04 19 13.5**	**+1.2**
NVAR				SKPab		SKiKP	04 22 15.1	-16
NVAR	**Mina Array Bea**	**128.46**	**44**	PKP		**PKPdf**	**04 19 13.5**	**+1.2**
	comp=Z,0.3nm,0.5s,baz=267,slow=2.6,SNR=5.4							
NVAR				SKPab		SKiKP	04 22 15.1	-16
	comp=Z,0.5nm,0.7s,baz=278,slow=4.4,SNR=3.6							
B20A	**Solberg Farm,**	**128.52**	**28**	P		**PKPdf**	**04 19 12.5**	**+0.5**
	baz=128							
C19A	**Slack Wire Ran**	**128.52**	**29**	P		**PKPdf**	**04 19 12.6**	**+0.7**
	baz=128							
F17A	**Fitzpatrick Pl**	**128.93**	**32**	P		**PKPdf**	**04 19 13.7**	**+0.8**
	baz=129							
A22A	**Carney Farms,**	**129.08**	**26**	P		**PKPdf**	**04 19 13.8**	**+0.8**
	baz=129							
B23A	**Brockton**	**129.88**	**26**	P		**PKPdf**	**04 19 15.2**	**+0.7**
	baz=130							
C22A	**Vida**	**130.02**	**27**	P		**PKPdf**	**04 19 16.1**	**+1.3**
	baz=130							
SCHQ	**Schefferville**	**130.44**	**354**	PKP		**PKPdf**	**04 19 15.4**	**+0.1**
SCHQ				SKPbc		**SKPbc**	**04 22 18.9**	**-1.8**
SCHQ	**Schefferville**	**130.44**	**354**	PKP		**PKPdf**	**04 19 15.4**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=16,slow=1.9,SNR=14							
SCHQ				SKPbc		**SKPbc**	**04 22 18.9**	**-1.8**
	comp=Z,2.6nm,0.6s,baz=51,slow=7.3,SNR=8.1							
G20A	**Bridger**	**130.67**	**31**	P		**PKPdf**	**04 19 16.5**	**+0.2**
	baz=130							
D23A	**Lindsay**	**130.75**	**27**	P		**PKPdf**	**04 19 17.4**	**+1.2**
	baz=131							
H20A	**Greybull**	**131.28**	**32**	P		**PKPdf**	**04 19 18.8**	**+1.4**
	baz=131							
PDAR	**Pinedale Array**	**131.57**	**35**	PKP		**PKPdf**	**04 19 18.6**	**+0.4**
PDAR				SKPbc		**SKPbc**	**04 22 22.9**	**-2.7**
PDAR	**Pinedale Array**	**131.57**	**35**	PKP		**PKPdf**	**04 19 18.6**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=59,slow=0.4,SNR=9.6							
PDAR				SKPbc		**SKPbc**	**04 22 22.9**	**-2.7**
	comp=Z,1.0nm,0.9s,baz=318,slow=2.0,SNR=5.0							
I20A	**Worland**	**131.57**	**32**	P		**PKPdf**	**04 19 18.8**	**+0.9**
	baz=131							
ULM	**Lac du Bonnet**	**131.88**	**18**	PKP		**PKPdf**	**04 19 18.0**	**-0.1**
ULM				SKPbc		**SKPbc**	**04 22 23.7**	**-2.4**
ULM	**Lac du Bonnet**	**131.88**	**18**	PKP		**PKPdf**	**04 19 18.0**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=347,slow=4.7,SNR=3.7							
ULM				SKPbc		**SKPbc**	**04 22 23.7**	**-2.4**
	comp=Z,4.7nm,0.6s,baz=336,slow=5.7,SNR=5.3							
J20A	**Shoshoni**	**132.00**	**33**	P		**PKPdf**	**04 19 19.6**	**+0.8**
	baz=132							
J21A	**Lysite**	**132.35**	**33**	P		**PKPdf**	**04 19 19.8**	**+0.2**
	baz=132							
MVU	**Marysvale**	**132.52**	**41**	*e*PKPdf		**PKPdf**	**04 19 21.4**	**+1.4**
MSU	**Marysvale**	**132.53**	**41**	*e*PKPdf		**PKPdf**	**04 19 21.8**	**+1.8**
J22A	**Midwest**	**132.82**	**32**	P		**PKPdf**	**04 19 19.9**	**-0.5**
	baz=133							
H24A	**Dirks Ranch, A**	**132.84**	**29**	P		**PKPdf**	**04 19 20.2**	**-0.1**
	baz=133							
RSSD	**Black Hills**	**133.55**	**29**	*e*PKPdf		**PKPdf**	**04 19 21.9**	**+0.1**
RSSD				*e*SKP			04 22 30.5	
M21A	**Separation Pea**	**133.56**	**34**	P		**PKPdf**	**04 19 22.2**	**+0.2**
	baz=133							
U15A	**North Rim**	**133.60**	**43**	P		**PKPdf**	**04 19 23.1**	**+0.9**
	baz=134							
PLCA	**Paso Flores**	**133.86**	**184**	SKPbc		**SKPbc**	**04 22 33.1**	**-0.2**
PLCA	**Paso Flores**	**133.86**	**184**	SKPbc		**SKPbc**	**04 22 33.1**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=27,slow=4.5,SNR=3.7							
O20A	**White River Ci**	**134.01**	**36**	P		**PKPdf**	**04 19 24.1**	**+1.3**
	baz=134							
N21A	**Black Mountain**	**134.03**	**35**	P		**PKPdf**	**04 19 23.3**	**+0.4**
	baz=134							
U21A	**Nageezi**	**136.67**	**40**	P		**PKPdf**	**04 19 28.4**	**+0.5**
	baz=137							
W20A	**Ramah**	**136.88**	**42**	P		**PKPdf**	**04 19 29.2**	**+0.9**
	baz=137							
ECSD	**EROS Data Cent**	**137.18**	**24**	*e*PKPdf		**PKPdf**	**04 19 28.4**	**+0.1**
ECSD				*e*SKP			04 22 41.5	
ANMO	**Albuquerque**	**138.34**	**41**	*e*PKPdf		**PKPdf**	**04 19 32.1**	**+1.2**
ANMO				*e*SKP			04 22 44.5	
LPM	**Los Pinos Moun**	**138.61**	**42**	*e*PKPdf		**PKPdf**	**04 19 29.4**	**-2.0**
R28A	**Tribune**	**138.90**	**33**	P		**PKPdf**	**04 19 32.3**	**+0.5**
	baz=139							
Q29A	**Oakley**	**138.95**	**32**	P		**PKPdf**	**04 19 32.4**	**+0.6**
	baz=139							
Y24A	**Capitan**	**139.63**	**41**	P		**PKPdf**	**04 19 34.3**	**+1.0**
	baz=140							
Z24A	**Sheeppen Canyo**	**140.04**	**42**	P		**PKPdf**	**04 19 35.3**	**+1.2**
	baz=140							
WMOK	**Wichita Mounta**	**143.18**	**35**	*e*PKPpre		PKPpre	04 19 36.0	
WMOK				*e*PKPdf		**PKiKP**	**04 19 42.2**	**-0.6**
WMOK				*e*SKPbc		**SKPbc**	**04 22 57.2**	**-2.4**
Z31A	**Sharp Cattle R**	**143.38**	**38**	⇑P		PKPbc	04 19 37.2	-0.4
	baz=143,SNR=5.0							
TXAR	**Lajitas Array**	**143.55**	**46**	PKP		PKPbc	04 19 38.5	+0.3
TXAR				SKPbc		**SKPbc**	**04 23 00.0**	**-0.8**
TXAR	**Lajitas Array**	**143.55**	**46**	PKP		PKPbc	04 19 38.5	+0.3
	comp=Z,2.5nm,0.5s,baz=283,slow=1.0,SNR=15							
TXAR				SKPbc		**SKPbc**	**04 23 00.0**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=148,slow=2.8,SNR=4.3							
Z32A	**Haskell**	**143.79**	**37**	P		PKPbc	04 19 38.6	-0.1
	baz=144,SNR=6.9							
CPUP	**Villa Florida**	**144.30**	**207**	PKP		**PKPdf**	**04 19 41.6**	**+0.1**
CPUP				SKPbc		**SKPbc**	**04 23 01.4**	**-1.1**
CPUP	**Villa Florida**	**144.30**	**207**	PKP		**PKPdf**	**04 19 41.6**	**+0.1**
	comp=Z,0.6nm,0.5s,baz=135,slow=5.7,SNR=2.8							
CPUP				SKPbc		**SKPbc**	**04 23 01.4**	**-1.1**
	comp=Z,0.2nm,0.4s,baz=100,slow=4.7,SNR=5.2							
331A	**San Angelo**	**144.55**	**40**	P		**PKPab**	**04 19 41.0**	**+0.1**
	baz=144,SNR=12							
ACSO	**Alum Creek Sta**	**144.56**	**11**	*e*PKPdf		**PKPab**	**04 19 39.7**	**-0.9**
OLIL	**Olney**	**144.65**	**19**	*e*PKPdf		**PKPab**	**04 19 40.6**	**-0.3**
232A	**Coleman**	**144.66**	**39**	P		**PKPab**	**04 19 41.2**	**-0.1**
	baz=144,SNR=7.0							
BLO	**Bloomington**	**144.72**	**16**	*e*PKPdf		**PKPab**	**04 19 40.8**	**-0.5**
431A	**Sonora**	**144.84**	**41**	P		**PKPab**	**04 19 42.2**	**+0.2**
	baz=145,SNR=13							
SIUC	**Southern Illin**	**145.19**	**21**	*e*PKPdf		**PKPbc**	**04 19 42.5**	**-0.3**
432A	**Menard**	**145.25**	**40**	P		**PKPbc**	**04 19 43.4**	**+0.2**
	baz=145,SNR=8.5							
JCT	**Junction City**	**145.50**	**41**	*e*PKPbc		**PKPbc**	**04 19 44.4**	**+0.3**
JCT				*e*SKPbc		**SKPbc**	**04 23 04.2**	**-1.1**
JCT	**Junction City**	**145.50**	**41**	P		**PKPab**	**04 19 44.6**	**+0.1**
	baz=145,SNR=22							
MVL	**Millersville**	**145.61**	**3**	*e*PKPdf		**PKPdf**	**04 19 43.6**	**+0.1**
532A	**Rocksprings**	**145.66**	**41**	⇑P		**PKPdf**	**04 19 44.4**	**+0.4**
	baz=146,SNR=12							
WCI	**Wyandotte Cave**	**145.66**	**17**	*e*PKPbc		**PKPdf**	**04 19 43.4**	**-0.2**
631A	**Perdido Creek**	**145.67**	**43**	⇑P		**PKPdf**	**04 19 44.2**	**+0.3**
	baz=146,SNR=8.2							
632A	**Uvalde**	**146.14**	**42**	⇓P		**PKPdf**	**04 19 45.2**	**+0.5**
	baz=146,SNR=10							
BDFB	**Brasilia**	**146.50**	**231**	PKPbc		**PKPab**	**04 19 50.1**	**+1.3**
BDFB	**Brasilia**	**146.50**	**231**	PKPbc		**PKPab**	**04 19 50.1**	**+1.3**
	comp=Z,1.0nm,0.6s,baz=120,slow=8.1,SNR=3.8							
732A	**Laxson Ranch,**	**146.51**	**43**	P		**PKPdf**	**04 19 46.1**	**+0.9**
	baz=146,SNR=13							
WVT	**Waverly**	**147.10**	**20**	*e*PKPbc

South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**3.31**	**321**	P	Pn	05 36 07.8	+2.2
BKI				S	Sn	05 36 46.2	+1.6
MKZ	**Mys Kozlova**	**5.04**	**295**	*e*P	Pn	05 36 30.7	+1.2
MKZ				*e*S	Sn	05 37 27.4	0.0
SPN	**Mys Shipunski**	**5.81**	**278**	S	Sn	05 37 50.4	+4.0
TUMR	**Tumrok**	**6.15**	**299**	P	Pn	05 36 48.6	+3.7
SDLR	**Sedlovina**	**6.50**	**279**	P	Pn	05 36 53.3	+3.6
SMAR	**Somma**	**6.55**	**279**	P	Pn	05 36 53.8	+3.3
AVH	**Avacha**	**6.59**	**279**	P	Pn	05 36 54.8	+4.0
RUS	**Russkaya**	**6.77**	**272**	P	Pn	05 36 56.4	+3.2
ASAK	**Asacha**	**7.14**	**272**	P	Pn	05 37 01.7	+3.2
ASAK				S	Sn	05 38 21.1	+1.7

*ROM **20** 05:41:16.0±0.1, 42°.32N×13°.37E, h10km, Ml3.0/13, Error ellipse: s-maj=1.0km s-min=0.7km az=59.0*
*LDG **20** 05:41:16.6±0.2, 42°.35N×13°.33E, h2km, Ml3.0/4, Error ellipse: s-maj=7.8km s-min=5.4km az=54.0*
*CSEM **20** 05:41:16.0±0.1, 42°.34N×13°.37E, h10km, ML3.5/10, Error ellipse: s-maj=3.1km s-min=2.3km az=58.0*

ISC 20 05:41:15.9±0.8, 42°.34N±0°.02×13°.37E±0°.02, h16km±4km, n90, σ1§27/128, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.03**	**68**	Pg	**Pg**	**05 41 18.4**	**-0.5**
AQU				Sg	**Sg**	**05 41 19.7**	**-1.2**
	3μm,0.2s						
AQU	**L'Aquila**	**0.03**	**68**	Pg	**Pg**	**05 41 18.4**	**-0.5**
AQU				Sg	**Sg**	**05 41 19.7**	**-1.2**
	3μm,0.2s						
FAGN	**Fagnano**	**0.18**	**116**	Pg	**Pg**	**05 41 20.4**	**0.0**
FAGN				Sg	**Sg**	**05 41 23.6**	**+0.2**
	12μm,0.4s						
FAGN	**Fagnano**	**0.18**	**116**	Pg	**Pg**	**05 41 20.4**	**0.0**
FAGN				Sg	**Sg**	**05 41 23.6**	**+0.2**
	12μm,0.4s						
CAMP	**Campotosto**	**0.19**	**8**	Pg	**Pg**	**05 41 20.7**	**0.0**
CAMP				Sg	**Sb**	**05 41 24.8**	**+0.1**
	5μm,0.4s						
CAMP	**Campotosto**	**0.19**	**8**	Pg	**Pg**	**05 41 20.7**	**0.0**
CAMP				Sg	**Sb**	**05 41 24.8**	**+0.1**
	5μm,0.4s						
FIAM	**Fiamignano**	**0.20**	**248**	Pg	**Pg**	**05 41 21.0**	**+0.2**
FIAM				Sg	**Sg**	**05 41 24.2**	**+0.1**
	4μm,0.6s						
FIAM	**Fiamignano**	**0.20**	**248**	Pg	**Pg**	**05 41 21.0**	**+0.2**
FIAM				Sg	**Sg**	**05 41 24.2**	**+0.1**
	4μm,0.6s						
PTQR	**Pietraquaria**	**0.32**	**176**	Pg	**Pg**	**05 41 22.8**	**0.0**
PTQR				Sg	**Sg**	**05 41 27.7**	**+0.3**
PTQR	**Pietraquaria**	**0.32**	**176**	Pg	**Pg**	**05 41 22.8**	**0.0**
PTQR				Sg	**Sg**	**05 41 27.7**	**+0.3**
TERO	**Teramo**	**0.33**	**32**	Pg	**Pg**	**05 41 22.7**	**-0.1**
TERO				Sg	**Sb**	**05 41 28.7**	**+0.2**
	3μm,0.4s						
TERO	**Teramo**	**0.33**	**32**	Pg	**Pg**	**05 41 22.7**	**-0.1**
TERO				Sg	**Sb**	**05 41 28.7**	**+0.2**
	3μm,0.4s						
VCEL	**Villa Celiera**	**0.35**	**82**	Pg	**Pg**	**05 41 23.3**	**0.0**
VCEL				Sg	**Sb**	**05 41 29.2**	**0.0**
	3μm,0.6s						
VCEL	**Villa Celiera**	**0.35**	**82**	Pg	**Pg**	**05 41 23.3**	**0.0**
VCEL				Sg	**Sb**	**05 41 29.2**	**0.0**
	3μm,0.6s						
LNSS	**Leonessa**	**0.36**	**317**	Pg	**Pg**	**05 41 23.5**	**+0.1**
LNSS				Sg	**Sb**	**05 41 30.4**	**+1.0**
	1μm,0.5s						
LNSS	**Leonessa**	**0.36**	**317**	Pg	**Pg**	**05 41 23.5**	**+0.1**
LNSS				Sg	**Sb**	**05 41 30.4**	**+1.0**
	1μm,0.5s						
CERT	**Cerreto**	**0.49**	**216**	Pg	**Pg**	**05 41 25.7**	**0.0**
CERT				Sg	**Sg**	**05 41 32.7**	**+0.4**
	2μm,0.4s						
CERT	**Cerreto**	**0.49**	**216**	Pg	**Pg**	**05 41 25.7**	**0.0**
CERT				Sg	**Sg**	**05 41 32.7**	**+0.4**
	2μm,0.4s						
VVLD	**Villa Vallelon**	**0.51**	**158**	Pg	**Pg**	**05 41 25.8**	**-0.3**
	297nm,0.4s						
VVLD	**Villa Vallelon**	**0.51**	**158**	Pg	**Pg**	**05 41 25.8**	**-0.3**
	297nm,0.4s						
MNS	**Montasola**	**0.51**	**275**	Pg	**Pg**	**05 41 26.0**	**-0.2**
	423nm,0.5s						
MNS	**Montasola**	**0.51**	**275**	Pg	**Pg**	**05 41 26.0**	**-0.2**
	423nm,0.5s						
INTR	**Introdacqua**	**0.52**	**130**	Pg	**Pg**	**05 41 26.1**	**-0.2**
INTR				Sg	**Sb**	**05 41 34.6**	**+0.6**
	625nm,0.5s						
INTR	**Introdacqua**	**0.52**	**130**	Pg	**Pg**	**05 41 26.1**	**-0.2**
INTR				Sg	**Sb**	**05 41 34.6**	**+0.6**
	625nm,0.5s						
NRCA	**Norcia**	**0.52**	**339**	Pg	**Pg**	**05 41 26.2**	**-0.2**
NRCA				Sg	**Sb**	**05 41 35.2**	**+1.0**
	1μm,0.2s						
NRCA	**Norcia**	**0.52**	**339**	Pg	**Pg**	**05 41 26.2**	**-0.2**
NRCA				Sg	**Sb**	**05 41 35.2**	**+1.0**
	1μm,0.2s						
GUAR	**Guarcino**	**0.55**	**185**	Pg	**Pg**	**05 41 26.8**	**-0.1**
	552nm,0.5s						
GUAR	**Guarcino**	**0.55**	**185**	Pg	**Pg**	**05 41 26.8**	**-0.1**
	552nm,0.5s						
MTCE	**Montecelio**	**0.57**	**236**	Pg	**Pg**	**05 41 27.0**	**-0.2**
	207nm,0.3s						
MTCE	**Montecelio**	**0.57**	**236**	Pg	**Pg**	**05 41 27.0**	**-0.2**
	207nm,0.3s						
TRTR	**Tortoreto Alta**	**0.61**	**41**	Pg	**Pb**	**05 41 29.1**	**+0.8**
TRTR	**Tortoreto Alta**	**0.61**	**41**	Pg	**Pb**	**05 41 29.1**	**+0.8**
OFFI	**Offida**	**0.63**	**21**	Pg	**Pb**	**05 41 28.9**	**+0.3**
OFFI	**Offida**	**0.63**	**21**	Pg	**Pb**	**05 41 28.9**	**+0.3**
CESX	**Cesi**	**0.64**	**295**	Pg	**Pb**	**05 41 29.0**	**+0.2**
CESX	**Cesi**	**0.64**	**295**	Pg	**Pb**	**05 41 29.0**	**+0.2**
LPEL	**Lama dei Pelig**	**0.67**	**116**	Pg	**Pg**	**05 41 28.6**	**-0.5**
LPEL				Sg	**Sb**	**05 41 39.0**	**+0.6**
LPEL	**Lama dei Pelig**	**0.67**	**116**	Pg	**Pg**	**05 41 28.6**	**-0.5**
LPEL				Sg	**Sb**	**05 41 39.0**	**+0.6**
POFI	**Posta Fibreno**	**0.68**	**158**	Pg	**Pg**	**05 41 28.8**	**-0.4**
POFI	**Posta Fibreno**	**0.68**	**158**	Pg	**Pg**	**05 41 28.8**	**-0.4**
SDI	**San Donato**	**0.71**	**153**	Pg	**Pg**	**05 41 29.4**	**-0.5**
SDI	**San Donato**	**0.71**	**153**	Pg	**Pg**	**05 41 29.4**	**-0.5**
FDMO	**Fiordimonte**	**0.72**	**343**	Pg	**Pg**	**05 41 29.7**	**-0.4**
FDMO				Sg	**Sb**	**05 41 41.1**	**+1.3**
FDMO	**Fiordimonte**	**0.72**	**343**	Pg	**Pg**	**05 41 29.7**	**-0.4**
FDMO				Sg	**Sb**	**05 41 41.1**	**+1.3**
CAFR	**Castel Frentan**	**0.73**	**99**	Pg	**Pg**	**05 41 30.4**	**+0.1**
CAFR	**Castel Frentan**	**0.73**	**99**	Pg	**Pg**	**05 41 30.4**	**+0.1**
CESI	**CESI - Serrava**	**0.74**	**333**	Pg	**Pg**	**05 41 30.5**	**0.0**
CESI				Sg	**Sb**	**05 41 42.2**	**+1.7**
CESI	**CESI - Serrava**	**0.74**	**333**	Pg	**Pg**	**05 41 30.5**	**0.0**
CESI				Sg	**Sb**	**05 41 42.2**	**+1.7**
GUMA	**Gualdo di Mace**	**0.83**	**30**	Pg	**Pg**	**05 41 29.9**	**-2.2**
GUMA	**Gualdo di Mace**	**0.83**	**30**	Pg	**Pg**	**05 41 29.9**	**-2.2**
ASSB	**Assisi San Ben**	**0.87**	**323**	Pg	**Pg**	**05 41 32.5**	**-0.4**
ASSB				Sg	**Sn**	**05 41 46.1**	**+0.1**
ASSB	**Assisi San Ben**	**0.87**	**323**	Pg	**Pg**	**05 41 32.5**	**-0.4**
ASSB				Sg	**Sn**	**05 41 46.1**	**+0.1**
CERA	**Filignano**	**0.89**	**147**	Pg	**Pg**	**05 41 32.1**	**-1.1**
CERA	**Filignano**	**0.89**	**147**	Pg	**Pg**	**05 41 32.1**	**-1.1**
MIDA	**Miranda**	**0.96**	**137**	Pg	**Pb**	**05 41 33.5**	**-0.8**
MIDA	**Miranda**	**0.96**	**137**	Pg	**Pb**	**05 41 33.5**	**-0.8**
CING	**Cingoli**	**1.04**	**353**	Pg	**Pb**	**05 41 35.6**	**0.0**
CING	**Cingoli**	**1.04**	**353**	Pg	**Pb**	**05 41 35.6**	**0.0**
MGAB	**Montegabbione**	**1.09**	**302**	Pg	**Pg**	**05 41 37.1**	**+0.1**
MGAB	**Montegabbione**	**1.09**	**302**	Pg	**Pg**	**05 41 37.1**	**+0.1**
MURB	**Monte Urbino**	**1.11**	**326**	Pg	**Pn**	**05 41 37.4**	**+0.5**
MURB	**Monte Urbino**	**1.11**	**326**	Pg	**Pn**	**05 41 37.4**	**+0.5**
ARVD	**Arcevia**	**1.20**	**345**	Pg	**Pn**	**05 41 38.3**	**+0.3**
ARVD	**Arcevia**	**1.20**	**345**	Pg	**Pn**	**05 41 38.3**	**+0.3**
AOI	**Ancona**	**1.22**	**8**	Pg	**Pg**	**05 41 39.5**	**+0.1**
AOI	**Ancona**	**1.22**	**8**	Pg	**Pg**	**05 41 39.5**	**+0.1**
PIEI	**Pieia**	**1.34**	**333**	Pg	**Pb**	**05 41 41.2**	**+0.5**
PIEI	**Pieia**	**1.34**	**333**	Pg	**Pb**	**05 41 41.2**	**+0.5**
NVLJ	**Novalja**	**2.47**	**26**	*e*Pn	**Pn**	**05 41 57.5**	**+1.9**
NVLJ				Sn	**Sn**	**05 42 27.9**	**+2.6**
NVLJ	**Novalja**	**2.47**	**26**	*e*Pn	**Pn**	**05 41 57.4**	**+1.9**
NVLJ				Sn	**Sn**	**05 42 27.9**	**+2.6**
UDBI	**Udbina**	**2.79**	**38**	*e*Pn	**Pn**	**05 42 03.1**	**+3.0**
UDBI				Sn	**Sn**	**05 42 38.0**	**-1.4**
UDBI	**Udbina**	**2.79**	**38**	*e*Pn	**Pn**	**05 42 03.0**	**+3.0**
UDBI				Sn	**Sb**	**05 42 38.0**	**-1.4**
PGF	**Pioggiola**	**3.24**	**275**	*e*P	**Pn**	**05 42 08.1**	**+1.9**
PGF				*e*Sn	**Sn**	**05 42 40.6**	**-3.9**
	39nm,1.0s						
PGF	**Pioggiola**	**3.24**	**275**	*e*P	**Pn**	**05 42 08.1**	**+1.9**
SBF	**Sospel**	**4.60**	**291**	*e*P	**Pn**	**05 42 27.0**	**+2.1**
SBF	**Sospel**	**4.60**	**291**	*e*P	**Pn**	**05 42 27.0**	**+2.1**
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**05 42 32.3**	**+0.9**
FRF	**La Foret Royal**	**5.08**	**286**	*e*Pn	**Pn**	**05 42 32.3**	**+0.9**
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	**Pn**	**05 42 32.2**	**0.0**
LMR	**La Mourre**	**5.14**	**283**	*e*Pn	**Pn**	**05 42 32.2**	**0.0**
SMRF	**Simiane la Rot**	**5.93**	**289**	*e*P	**Pn**	**05 42 46.1**	**+3.0**
SMRF	**Simiane la Rot**	**5.93**	**289**	*e*P	**Pn**	**05 42 46.1**	**+3.0**
CABF	**La Chapelle**	**6.73**	**312**	*e*Pn	**Pn**	**05 42 53.5**	**-0.6**
CABF	**La Chapelle**	**6.73**	**312**	*e*Pn	**Pn**	**05 42 53.5**	**-0.6**
HINF	**Hinteralfeld**	**7.16**	**322**	*e*Pn	**Pn**	**05 42 59.4**	**-0.5**
HINF				*e*Sn	**Sn**	**05 44 17.0**	**-3.8**
	2.1nm,0.4s						
HINF	**Hinteralfeld**	**7.16**	**322**	*e*Pn	**Pn**	**05 42 59.4**	**-0.5**
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**05 43 04.7**	**+1.0**
CDF				*e*Sn	**Sn**	**05 44 22.6**	**-5.0**
	0.7nm,0.3s						
CDF	**Champ du Feu**	**7.43**	**327**	*e*Pn	**Pn**	**05 43 04.7**	**+1.0**
HAU	**Haudompre**	**7.53**	**321**	*e*Pn	**Pn**	**05 43 05.0**	**+0.1**
HAU				*e*Sn	**Sn**	**05 44 24.8**	**-5.1**
	1.6nm,0.3s						
HAU	**Haudompre**	**7.53**	**321**	*e*Pn	**Pn**	**05 43 05.0**	**+0.1**

IDC 20 05:51:18.8±4.0, 2°.27N×98°.08E, h81km±28km, mb3.6/8, mb1 3.7/8, mb1mx3.4/27, mbtmp3.6/8, Error ellipse: s-maj=60.2km s-min=16.1km az=57.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**0.99**	**58**	P	Pn	05 51 37.6	-0.3
	51nm,0.3s,baz=295,slow=4.4,SNR=198						
PSI				S	Sn	05 51 51.7	-0.6
	56nm,0.3s,baz=60,slow=20,SNR=41						
WRA	**Warramunga Arr**	**41.87**	**124**	P	P	05 59 01.3	-0.1
	4.9nm,0.6s,baz=302,slow=9.1,SNR=56						
ASAR	**Alice Springs**	**43.35**	**129**	P	P	05 59 13.2	-0.1
	0.7nm,0.5s,baz=297,slow=7.7,SNR=12						
SONM	**Songino Array**	**45.95**	**8**	P	P	05 59 34.1	+0.2
	0.3nm,0.4s,baz=176,slow=8.7,SNR=2.9						
MKAR	**Makanchi Array**	**46.43**	**345**	P	P	05 59 37.7	+0.2
	0.6nm,0.4s,baz=157,slow=7.5,SNR=7.2						
MKAR				pP	pP	05 59 54.6	-2.5
	0.2nm,0.3s,baz=157,slow=7.7,SNR=1.7						
KURBB	**Kurchatov Arra**	**50.94**	**344**	P	P	06 00 12.3	+0.4
	0.8nm,0.5s,baz=164,slow=7.1,SNR=9.4						
ZALV	**Zalesovo Beam**	**52.65**	**350**	P	P	06 00 23.7	-0.9
	1.0nm,0.3s,baz=185,slow=6.7,SNR=2.8						
ZALV				pP	pP	06 00 40.6	-4.1
	1.2nm,0.3s,baz=167,slow=6.4,SNR=2.4						
BVAR	**Borovoye Array**	**55.54**	**340**	P	P	06 00 45.2	-0.4
	0.7nm,0.5s,baz=120,slow=11,SNR=3.1						
FINES	**FINESS Array B**	**79.46**	**332**	P	P	06 03 16.1	-0.1
	2.1nm,0.9s,baz=116,slow=8.7,SNR=6.1						

MAN 20 06:07:52.7±7.3, 7°.37N×124°.49E, h31km, mb3.8, ML2.6, MS2.2, Mindanao

IDC 20 06:13:17.4±61.0, 21°.99S×178°.72W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/18, mbtmp3.9/3, MS3.2/1, Ms1 3.2/1, ms1mx2.1/29, Error ellipse: s-maj=1110.0km s-min=160.4km az=85.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**23.27**	**199**	LR	LR	06 25 28.2	
	comp=Z,54nm,18.4s,baz=113,slow=31						
STKA	**Stephens Creek**	**36.55**	**246**	P	P	06 20 25.7	+0.6
	2.2nm,0.7s,baz=74,slow=4.7,SNR=3.1						
ASAR	**Alice Springs**	**43.55**	**258**	P	P	06 21 22.9	-0.4
	0.5nm,0.8s,baz=104,slow=9.2,SNR=6.5						
WRA	**Warramunga Arr**	**43.75**	**264**	P	P	06 21 24.7	-0.3
	0.6nm,0.3s,baz=102,slow=8.4,SNR=25						

*ISCJB **20** 06:26:36.4±0.4, 3°.90N±0°.05×124°.92E±0°.06, h300km, mb3.6/13, Error ellipse: s-maj=10.1km s-min=5.1km az=143.0*
*DJA **20** 06:26:39.8±0.6, 4°.N±8°×12°.5E±°, h275km±7km, M4.5/8, mB4.9/5, mb4.3/8, MLv4.8/6, Mw(mB)4.2/5*
*IDC **20** 06:26:41.6±3.4, 3°.62N×124°.50E, h344km±35km, mb3.3/13, mb1 3.5/13, mb1mx3.4/24, mbtmp3.3/13, Error ellipse: s-maj=27.7km s-min=10.5km az=69.0*

ISC 20 06:26:37.6±0.5, 3°.75N±0°.07×124°.89E±0°.08, h300km, n37, σ1§45/43, mb3.6/13, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**2.29**	**181**	P	**Pn**	**06 27 27.8**	**+0.9**
MNI				S	**S**	**06 28 06.1**	**0.0**
GAMI	**Galela, Maluku**	**3.46**	**123**	P	**Pn**	**06 27 40.7**	**+2.5**
GAMI				S	**S**	**06 28 27.3**	**+0.8**
LBMI	**Labuha**	**5.08**	**149**	P	**Pn**	**06 27 57.7**	**+1.5**
	198nm,0.7s,12μm4.0nm						
LBMI				S	**S**	**06 28 59.3**	**0.0**
	198nm,0.7s,12μm4.0nm						
MYLDM	**Lahad Datu**	**6.53**	**283**	P	**Pn**	**06 28 13.9**	**+0.6**
	105nm,0.9s,0.4nm						
MSAI	**Masohi**	**8.12**	**150**	P	**Pn**	**06 28 35.2**	**+2.4**
	17nm,0.7s,775nm0.1nm						
TTSI	**Tana Toraja**	**8.44**	**217**	P	**Pn**	**06 28 37.8**	**+1.2**
	18nm,1.0s,854nm0.1nm						
BBKI	**Banjar Baru**	**12.33**	**235**	P	**Pn**	**06 29 26.3**	**+2.0**
	77nm,1.0s,3μm						
SBUM	**Sibu**	**12.71**	**265**	P	**Pn**	**06 29 30.2**	**+1.3**
	32nm,0.9s,329nm						
KSM	**Kuching**	**14.74**	**262**	P	**P**	**06 29 53.9**	**+1.9**
	24nm,0.8s						
PWJI	**Pagerwojo**	**17.52**	**228**	P	**Pn**	**06 30 26.4**	**+0.7**
FITZ	**Fitzroy Crossi**	**21.72**	**178**	P	**P**	**06 31 04.7**	**-0.6**
	5.0nm,0.4s,baz=3.8,slow=7.8,SNR=47						
FITZ				S	**S**	**06 34 39.9**	**-4.2**
	0.8nm,0.6s,baz=90,slow=16,SNR=2.5						
WRA	**Warramunga Arr**	**25.31**	**159**	P	**P**	**06 31 37.6**	**-0.1**
	2.3nm,0.5s,baz=334,slow=11,SNR=43						
WRA				PcP	**PcP**	**06 35 01.5**	**-0.5**
	0.5nm,0.4s,baz=329,slow=2.4,SNR=5.9						
WRA				S	**S**	**06 35 37.8**	**-3.4**
	1.3nm,0.8s,baz=321,slow=20,SNR=4.5						
ASAR	**Alice Springs**	**28.63**	**163**	P	**P**	**06 32 07.7**	**+0.4**
	0.6nm,0.5s,baz=342,slow=7.3,SNR=17						
ASAR				PcP	**PcP**	**06 35 09.6**	**-0.4**
	0.7nm,0.6s,baz=324,slow=2.0,SNR=7.2						
ASAR				S	**S**	**06 36 31.2**	**-2.2**
	1.4nm,0.9s,baz=333,slow=12,SNR=6.0						
CMAR	**Chiang Mai Arr**	**29.29**	**302**	P	**P**	**06 32 12.3**	**-0.8**
	1.4nm,0.8s,baz=104,slow=7.6,SNR=5.2						
STKA	**Stephens Creek**	**38.83**	**157**	P	**P**	**06 33 35.8**	**+1.4**
	2.6nm,0.8s,baz=321,slow=6.5,SNR=3.6						
TAPN	**Taplejung**	**42.53**	**307**	*e*P	**P**	**06 34 04.7**	**-0.3**
	6.2nm,0.4s						
ODAN	**Odare**	**42.57**	**307**	*e*P	**P**	**06 34 05.1**	**-0.1**
	14nm,0.6s						
RAMN	**Ramite**	**43.24**	**306**	*e*P	**P**	**06 34 10.5**	**-0.1**
	18nm,0.8s						
GUN	**Gumba**	**44.24**	**307**	*e*P	**P**	**06 34 18.2**	**-0.4**
	34nm,0.4s						
PKI	**Pulchoki**	**44.47**	**306**	*e*P	**P**	**06 34 19.5**	**-0.9**
	14nm,0.7s						
PKIN	**Phulchoki**	**44.48**	**306**	*e*P	P	06 34 19.4	-1.0
	5.9nm,0.4s						
KKN	**Kakani**	**44.66**	**307**	*e*P	**P**	**06 34 21.2**	**-0.6**
	13nm,0.4s						
DMN	**Daman**	**44.73**	**306**	*e*P	**P**	**06 34 21.7**	**-0.6**
	7.1nm,0.5s						
KOLN	**Koldanda**	**46.01**	**306**	*e*P	**P**	**06 34 32.0**	**-0.3**
	39nm,0.5s						
DANN	**Dangsing**	**46.12**	**306**	*e*P	**P**	**06 34 32.7**	**-0.5**
	37nm,0.5s						
PYUN	**Piuthan**	**46.64**	**306**	*e*P	**P**	**06 34 36.8**	**-0.3**
	30nm,0.5s						
SONM	**Songino Array**	**46.72**	**343**	P	**P**	**06 34 37.0**	**-0.3**
	1.1nm,0.8s,baz=170,slow=6.7,SNR=5.6						
SONM				PcP	**PcP**	**06 36 05.1**	**-0.4**
	1.0nm,0.8s,baz=165,slow=4.7,SNR=4.4						
PETK	**Petropavlovsk-**	**56.12**	**23**	P	**P**	**06 35 49.0**	**+2.6**
	1.9nm,0.8s,baz=200,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**56.50**	**326**	P	**P**	**06 35 48.5**	**-0.6**
	3.0nm,0.4s,baz=121,slow=8.2,SNR=85						
MKAR				PcP	**PcP**	**06 36 40.1**	**-2.0**
	0.9nm,0.5s,baz=117,slow=4.7,SNR=7.0						
ZALV	**Zalesovo Beam**	**59.75**	**334**	P	P	06 36 09.7	-1.6
	0.9nm,0.5s,baz=171,slow=6.4,SNR=4.7						
VNDA	**Vanda**	**83.68**	**172**	P	**P**	**06 38 31.3**	**-1.2**
	0.7nm,0.8s,baz=320,slow=8.9,SNR=3.4						
ILAR	**Eielson Array**	**85.88**	**25**	P	**P**	**06 38 43.0**	**-0.7**
	0.2nm,0.4s,baz=254,slow=4.0,SNR=6.1						
BRTR	**Keskin Array B**	**88.59**	**310**	P	P	06 38 55.0	-2.3
	0.4nm,0.5s,baz=95,slow=3.0,SNR=3.1						
FINES	**FINESS Array B**	**90.95**	**332**	P	P	06 39 05.2	-2.4
	0.9nm,0.5s,baz=48,slow=5.7,SNR=8.9						
SCHQ	**Schefferville**	**120.82**	**8**	PKP	**PKPdf**	**06 44 53.8**	**-0.4**
	0.7nm,0.3s,baz=281,slow=5.2,SNR=4.6						
TORD	**Torodi Ar. Bea**	**121.16**	**288**	PKP	**PKPdf**	**06 44 54.3**	**-1.7**
	0.7nm,0.3s,baz=73,slow=1.6,SNR=22						
TXAR	**Lajitas Array**	**123.03**	**51**	PKP	**PKPdf**	**06 44 58.5**	**-0.8**
	0.4nm,0.6s,baz=0.0,slow=0.1,SNR=4.5						

IDC 20 06:54:00.7±2.0, 6°.88S×129°.18E, h0km, mb3.5/1, mb1 3.8/4, mb1mx3.6/20, mbtmp3.7/4, ML3.7/3, Error ellipse: s-maj=79.2km s-min=27.2km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.67**	**197**	Pn	Pn	06 56 47.2	-1.4
	0.4nm,0.3s,baz=14,slow=8.3,SNR=12						
FITZ				Sn	Sn	06 58 41.0	-19
	0.8nm,0.3s,baz=279,slow=22,SNR=3.6						
WRA	**Warramunga Arr**	**13.92**	**159**	Pn	Pn	06 57 19.7	+0.3
	0.3nm,0.3s,baz=339,slow=12,SNR=12						
WRA				Sn	Sn	06 59 39.4	-15
	1.2nm,0.3s,baz=337,slow=22,SNR=17						
ASAR	**Alice Springs**	**17.30**	**165**	P	P	06 58 04.7	-0.6
	0.3nm,0.3s,baz=343,slow=11,SNR=28						
ASAR				S	Sn	07 00 57.6	-19
	0.1nm,0.3s,baz=345,slow=25,SNR=3.6						
MKAR	**Makanchi Array**	**67.68**	**327**	P	P	07 04 59.9	+0.1
	0.3nm,0.4s,baz=124,slow=8.0,SNR=9.1						

IDC 20 06:58:51.7±3.3, 4°.15S×152°.24E, h0km, mb3.5/3, mb1 3.8/3, mb1mx3.4/19, mbtmp3.6/3, Error ellipse: s-maj=121.0km s-min=45.9km az=121.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.47**	**227**	P	P	07 04 02.5	-0.7
	0.6nm,0.4s,baz=52,slow=9.7,SNR=5.2						
ASAR	**Alice Springs**	**26.26**	**221**	P	P	07 04 29.9	+0.9
	0.2nm,0.3s,baz=53,slow=9.1,SNR=3.6						
FITZ	**Fitzroy Crossi**	**29.49**	**240**	P	P	07 04 57.8	-0.1
	0.2nm,0.9s,baz=49,slow=9.1,SNR=3.6						
TORD	**Torodi Ar. Bea**	**149.57**	**289**	PKPbc	PKPbc	07 18 43.6	-0.8
	0.4nm,0.8s,baz=86,slow=2.7,SNR=4.1						

IDC 20 07:03:13.8±2.0, 2°.67S×139°.03E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.4/18, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=69.8km s-min=26.5km az=87.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.77**	**195**	P	Pn	07 07 21.4	-1.4
	0.1nm,0.3s,baz=15,slow=13,SNR=6.4						
WRA				S	Sn	07 10 31.0	-11
	0.0nm,0.3s,baz=9.4,slow=24,SNR=3.3						
FITZ	**Fitzroy Crossi**	**20.19**	**220**	P	P	07 07 50.8	+0.6
	0.9nm,0.7s,baz=52,slow=17,SNR=3.5						
ASAR	**Alice Springs**	**21.46**	**193**	P	P	07 08 03.6	-0.3
	0.5nm,0.6s,baz=23,slow=9.7,SNR=8.4						
MKAR	**Makanchi Array**	**69.95**	**322**	P	P	07 14 27.0	-0.1
	0.1nm,0.5s,baz=101,slow=7.5,SNR=2.3						
VNDA	**Vanda**	**75.80**	**175**	P	P	07 15 01.7	+0.5
	0.7nm,0.7s,baz=326,slow=4.4,SNR=3.9						

**IDC 20 07:23:05.1±1.6, 20°.67S×68°.48W, h120km±16km, mb3.3/4, mb1 3.4/7, mb1mx3.3/20, mbtmp3.3/7, MS3.0/1, Ms1 2.9/1, ms1mx2.2/9, Error ellipse: s

JAM	**Amami Oshima**	**6.25**	**59**	P		**Pn**	07 34 56.5	**-0.4**
JMZ	**Minamidaito 2**	**6.95**	**84**	P		**Pn**	**07 35 04.7**	**-1.7**
JMZ				S		Sn	07 36 16.4	-7.8
SONM	**Songino Array**	**26.28**	**333**	P		**P**	**07 38 51.8**	**+2.0**
	0.5nm,0.6s,baz=129,slow=11,SNR=2.4							
MKAR	**Makanchi Array**	**39.09**	**314**	P		**P**	**07 40 41.2**	**+0.3**
	0.1nm,0.3s,baz=99,slow=8.5,SNR=4.9							
WRA	**Warramunga Arr**	**46.16**	**166**	P		**P**	**07 41 37.9**	**-0.2**
	2.0nm,0.5s,baz=348,slow=8.9,SNR=57							
WRA				pP		pP	07 42 08.6	-0.5
	0.4nm,0.8s,baz=349,slow=9.9,SNR=1.8							
ASAR	**Alice Springs**	**49.68**	**168**	P		**P**	**07 42 05.5**	**+0.2**
	0.5nm,0.4s,baz=354,slow=7.3,SNR=12							
YKA	**Yellowknife Ar**	**81.12**	**24**	P		**P**	**07 45 27.1**	**+0.2**
	0.2nm,0.6s,baz=308,slow=5.0,SNR=5.5							

KRSC 20 07:50:33.3±0.7, 49°.88N×156°.99E, h69km±81km, ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.98**	**325**	P	Pn	07 50 51.7	+0.3
SKR				*eS*	Sn	07 51 04.7	-0.2
PAU	**Pauzhetka**	**1.59**	**356**	*i* P	Pn	07 51 01.4	+2.0
PAU				*eS*	Sn	07 51 22.1	+2.9
MIPR	**Malaya Ipel'ka**	**2.40**	**357**	*eP*	Pn	07 51 11.7	+1.3
ASAK	**Asacha**	**2.57**	**13**	*eP*	Pn	07 51 16.2	+3.5
ASAK				S	Sn	07 51 46.7	+3.7
MTVR	**Mutnovka**	**2.71**	**16**	*eP*	Pn	07 51 18.4	+3.7
MTVR				*eS*	Sn	07 51 51.1	+4.5
RUS	**Russkaya**	**2.73**	**20**	*i* P	Pn	07 51 17.8	+3.1
RUS				*eS*	Sn	07 51 50.7	+4.1
GRL	**Gorelyy**	**2.76**	**14**	*eP*	Pn	07 51 19.3	+3.9
APC	**Apacha**	**3.05**	**2**	P	Pn	07 51 21.7	+2.6
PET	**Petropavlovsk**	**3.32**	**18**	*eP*	Pn	07 51 26.1	+3.4
UGLR	**Uglovaya**	**3.52**	**18**	*eP*	Pn	07 51 29.9	+4.2
AVH	**Avacha**	**3.56**	**17**	*eP*	Pn	07 51 30.1	+3.9
KOK	**Koryaka**	**3.57**	**16**	*eP*	Pn	07 51 30.7	+4.4
SMAR	**Somma**	**3.57**	**18**	P	Pn	07 51 30.1	+3.6
KRER	**Koryakskii**	**3.60**	**17**	*eP*	Pn	07 51 30.8	+3.9
SDLR	**Sedlovina**	**3.60**	**18**	*eP*	Pn	07 51 30.3	+3.5
NLC	**Nalytchevo**	**3.61**	**23**	*eP*	Pn	07 51 29.2	+2.5
SPN	**Mys Shipunski**	**3.74**	**29**	*eP*	Pn	07 51 32.4	+3.9
GNL	**Ganaly**	**3.87**	**8**	*eP*	Pn	07 51 33.3	+2.9
MKZ	**Mys Kozlova**	**5.51**	**30**	*eP*	Pn	07 51 54.9	+2.2
MKZ				S	Sn	07 52 55.4	+0.8
TUMR	**Tumrok**	**5.74**	**18**	P	Pn	07 52 00.3	+4.3
BKI	**Bering**	**7.64**	**42**	S	Sn	07 53 46.8	+0.1

*CSEM **20** 07:56:46.2±0.1, 38°.17N×21°.54E, h24km±1km, MD3.0, Error ellipse: s-maj=3.2km s-min=1.8km az=147.0*
*ATH **20** 07:56:47.1, 38°.18N×21°.58E, h20km±1km, MD3.0/8*
THE 20 07:56:47.3, 38°.18N×21°.59E, h19km±2km, ML1.9/4, Error ellipse: s-maj=2.1km s-min=0.4km az=266.0, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RLS	**Riolos of Patr**	**0.16**	**219**	P	Pg	07 56 51.8	0.0
RLS				S	Sg	07 56 55.2	+0.4
RLS	**Riolos of Patr**	**0.16**	**219**	*e*PB	Pg	07 56 51.7	-0.1
RLS				*e*SB	Sg	07 56 55.2	+0.4
RLS	**Riolos of Patr**	**0.16**	**219**	P	Pg	07 56 51.8	0.0
RLS				S	Sg	07 56 55.2	+0.4
AXS	**Araxos**	**0.17**	**275**	P	Pg	07 56 51.8	-0.1
AXS				S	Sg	07 56 55.2	+0.1
AXS	**Araxos**	**0.17**	**275**	P	Pg	07 56 51.8	-0.1
AXS				S	Sg	07 56 55.2	+0.1
LAKA	**Lakka**	**0.31**	**79**	P	Pg	07 56 54.0	-0.1
LAKA				S	Sg	07 56 58.9	+0.1
LAKA	**Lakka**	**0.31**	**79**	*e*PB	Pg	07 56 54.0	-0.1
LAKA				*e*SB	Sb	07 56 59.0	0.0
LAKA	**Lakka**	**0.31**	**79**	P	Pg	07 56 54.0	-0.1
LAKA				*e*Sb	Sb	07 56 59.0	0.0
EFP	**Efpalio**	**0.35**	**45**	P	Pg	07 56 54.6	-0.1
EFP				S	Sg	07 56 59.8	0.0
EFP	**Efpalio**	**0.35**	**45**	*e*PB	Pg	07 56 54.5	-0.2
EFP	**Efpalio**	**0.35**	**45**	P	Pg	07 56 54.6	-0.1
EFP				S	Sg	07 56 59.8	0.0
TRIZ	**Trizonia**	**0.42**	**64**	P	Pg	07 56 55.9	-0.1
TRIZ				S	Sb	07 57 02.5	+0.3
TRIZ	**Trizonia**	**0.42**	**64**	*e*PB	Pg	07 56 55.9	-0.1
TRIZ				*e*SB	Sb	07 57 02.6	+0.4
TRIZ	**Trizonia**	**0.42**	**64**	P	Pg	07 56 55.9	-0.1
TRIZ				S	Sb	07 57 02.5	+0.3
KLV	**Kalavryta, Ach**	**0.46**	**107**	*e*PB	Pg	07 56 56.4	-0.4
KLV				*e*SB	Sb	07 57 03.5	0.0
KLV	**Kalavryta, Ach**	**0.46**	**107**	*e*Pb	Pg	07 56 56.4	-0.4
KLV				*e*Sb	Sb	07 57 03.5	0.0
KALE	**Kalithea**	**0.48**	**64**	P	Pg	07 56 56.7	-0.5
KALE				S	Sb	07 57 04.1	+0.1
KALE	**Kalithea**	**0.48**	**64**	*e*PB	Pg	07 56 56.8	-0.4
KALE				*e*SB	Sb	07 57 04.3	+0.3
KALE	**Kalithea**	**0.48**	**64**	*e*Pb	Pg	07 56 56.8	-0.4
KALE				S	Sb	07 57 04.1	+0.1
GUR	**Goura**	**0.64**	**112**	P	Pg	07 56 59.1	-0.9
GUR				S	Sg	07 57 08.8	-0.1
GUR	**Goura**	**0.64**	**112**	*e*PB	Pb	07 56 59.0	-1.0
GUR	**Goura**	**0.64**	**112**	P	Pb	07 56 59.1	-0.9
GUR				S	Sg	07 57 08.8	-0.1
AMT	**Artemida-Makis**	**0.66**	**172**	*e*PN	Pb	07 57 00.1	0.0
AMT	**Artemida-Makis**	**0.66**	**172**	*e*Pn	Pb	07 57 00.1	0.0
DSF	**Desfina**	**0.77**	**72**	P	Pb	07 57 01.4	-0.8
DSF				S	Sg	07 57 13.2	+0.3
DSF	**Desfina**	**0.77**	**72**	P	Pb	07 57 01.4	-0.8
DSF				S	Sg	07 57 13.2	+0.3

CASC 20 07:57:06.2±2.6, 16°.09N×86°.95W, h20km±252km, MD4.1, North of Honduras

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGUH	**Tegucigalpa,Un**	**2.04**	**189**	*e*P	Pn	07 57 37.5	-2.0
TGUH				*e*S	Sn	07 58 05.7	+1.4
CAHU	**Cacacuatique**	**2.60**	**208**	*e*P	Pn	07 57 48.1	+0.7
MRL	**Marmol**	**2.83**	**249**	*e*P	Pn	07 57 42.2	-8.3
MRL				*e*S	Sn	07 58 24.2	0.0
CNCH	**Conchagua**	**2.92**	**197**	*e*P	Pn	07 57 51.7	0.0
RBDL	**Robledal**	**3.29**	**234**	*e*P	Pn	07 57 56.5	-0.3
SBLS	**San Blas**	**3.41**	**229**	*e*P	Pn	07 57 59.1	+0.4
NBG	**Las Nubes**	**3.60**	**246**	*e*P	Pn	07 57 54.2	-7.0
NBG				*e*S	Sb	07 58 50.3	-2.7

PRE 20 08:06:50.8±2.9, 26°.42S×27°.48E, h2km, ML3.9, 2C-4D, South Africa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KLOF	**Kloof**	**0.14**	**59**	⇓*i*P	Pg	08 06 54.8	+1.1
KLOF				*e*S	Sg	08 06 56.2	+0.5
KLOF				AML	AML	08 06 56.7	
	comp=Z,37μm,0.1s						
PRYS	**Parys**	**0.51**	**192**	*e*P	Pb	08 07 02.3	-0.6
PRYS				*e*S	Sg	08 07 08.5	+0.7
PRYS				AML	AML	08 07 11.8	
	comp=Z,667nm,0.4s						
ERPM	**east rand prop**	**0.69**	**84**	⇓*i*P	Pg	08 07 05.0	+0.7
ERPM				*e*S	Sg	08 07 12.7	-0.7
ERPM				AML	AML	08 07 14.3	
	comp=Z,1μm,0.4s						
KSR	**Koster**	**0.77**	**317**	⇓*i*P	Pb	08 07 06.8	-0.4
KSR				*e*S	Sg	08 07 16.6	+0.5
KSR				AML	AML	08 07 24.1	
	comp=Z,940nm,0.4s						
SLR	**Silverton**	**0.99**	**47**	⇑*i*P	Pg	08 07 10.2	+0.1
SLR				*e*S	Sg	08 07 22.1	-1.0
SLR				AML	AML	08 07 29.9	
	comp=Z,684nm,0.2s						
SWZ	**Schweizer**	**2.06**	**248**	*e*P	Pb	08 07 28.1	-1.2
SWZ				*e*S	Sb	08 07 56.1	+0.6
SWZ				AML	AML	08 07 57.8	
	comp=Z,1μm,0.2s						
LBTB	**Lobatse**	**2.20**	**309**	⇓*i*P	Pb	08 07 30.6	-0.9
LBTB				*e*S	Sn	08 07 56.4	-0.1
LBTB				AML	AML	08 08 02.4	
	comp=Z,724nm,0.4s						
BOSA	**Boshof**	**2.94**	**222**	⇑*i*P	Pn	08 07 39.8	+0.9
BOSA				*e*S	Sn	08 08 14.6	-0.3
BOSA				AML	AML	08 08 25.3	
	comp=Z,148nm,0.3s						

POGA	**Pongola**	**3.81**	**105**	*e*P		Pn	08 07 52.6	+2.1
POGA				*e*S		Sn	08 08 37.8	+1.8
POGA				AML		AML	08 08 58.0	
	comp=Z,257nm,0.6s							
KSD	**Kokstad**	**4.45**	**158**	*e*P		Pn	08 08 01.4	+1.9
KSD				*e*S		Sn	08 08 49.8	-2.2
KSD				AML		AML	08 09 11.8	
	comp=Z,153nm,0.6s							
HVD	**Gariep Dam**	**4.52**	**202**	*e*P		Pn	08 08 00.6	0.0
HVD				*e*S		Sn	08 08 51.6	-2.2
HVD				AML		AML	08 09 16.4	
	comp=Z,60nm,0.5s							
GRM	**Grahamstown**	**6.92**	**187**	*e*P		Pn	08 08 34.1	+0.8
GRM				*e*S		Sn	08 09 48.0	-4.8
GRM				AML		AML	08 10 35.6	
	comp=Z,34nm,0.5s							
BUFB	**Buffelsbos**	**8.06**	**196**	*e*P		Pn	08 08 49.5	+0.6
BUFB				*e*S		Sn	08 10 18.1	-2.5
BUFB				AML		AML	08 11 13.8	
	comp=Z,29nm,0.6s							
SUR	**Sutherland**	**8.31**	**223**	*e*P		Pn	08 08 53.7	+1.1
SUR				*e*S		Sn	08 10 23.3	-4.0
SUR				AML		AML	08 11 19.6	
	comp=Z,25nm,0.6s							
CVNA	**Calvinia**	**8.43**	**231**	*e*P		Pn	08 08 55.0	+0.8
CVNA				*e*S		Sn	08 10 24.4	-5.8
CVNA				AML		AML	08 11 16.9	
	comp=Z,63nm,0.5s							
KOMG	**Komaggas**	**9.44**	**247**	*e*P		Pn	08 09 08.7	+0.7
KOMG				*e*S		Sn	08 10 48.6	-6.1
KOMG				AML		AML	08 12 02.0	
	comp=Z,31nm,0.6s							
ELIM	**Elim**	**10.53**	**217**	*e*S		Sn	08 11 13.1	-8.3
ELIM				AML		AML	08 12 42.5	
	comp=Z,20nm,0.6s							
LSZ	**Lusaka**	**11.11**	**4**	*e*P		Pn	08 09 30.4	-0.5
LSZ				*e*S		Sn	08 11 29.1	-6.8
TSUM	**Tsumeb**	**11.61**	**306**	*e*P		Pn	08 09 37.6	-0.2
TSUM				*e*S		Sn	08 11 42.7	-5.5

*ISCJB **20** 08:12:33.6±1.0, 13°.78N±0°.09×91°.33W±0°.07, h73km±9km, mb3.6/6, Error ellipse: s-maj=16.3km s-min=8.6km az=31.4*
*CASC **20** 08:12:34.7±1.1, 13°.74N×91°.19W, h18km±5km, MD3.8, ML3.8*
*IDC **20** 08:12:43.0±6.9, 14°.29N×90°.87W, h130km±47km, mb3.3/6, mb1 3.5/8, mb1mx3.3/25, mbtmp3.3/8, Error ellipse: s-maj=54.2km s-min=30.4km az=174.0*
ISC 20 08:12:35.1±1.3, 13°.88N±0°.08×91°.28W±0°.07, h68km±10km, n25, σ1°19/31, mb3.8/6, 2C-4D, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAT	**Jato**	**0.56**	**322**	⇓*i*P	Pn	**08 12 47.9**	**-0.5**
FUG	**Fuego 3**	**0.71**	**37**	⇓*e*P	Pn	**08 12 49.0**	**-1.2**
PCG	**Pacaya**	**0.83**	**52**	*e*P	Pn	**08 12 51.1**	**-0.6**
GCG	**Guatemala City**	**1.01**	**46**	*e*P	Pn	**08 12 54.5**	**+0.6**
GCG				*e*S	Sn	**08 13 08.8**	**+1.0**
NBG	**Las Nubes**	**1.15**	**52**	*e*P	Pn	**08 12 56.4**	**+0.7**
NBG				*e*S	Sn	**08 13 13.3**	**+2.2**
RBDL	**Robledal**	**1.57**	**81**	⇑*e*P	Pn	**08 13 00.6**	**-0.5**
RBDL				*e*S	Sn	**08 13 21.0**	**+0.3**
RTR	**El Retiro**	**1.59**	**89**	*e*P	Pn	**08 13 01.1**	**-0.3**
SBLS	**San Blas**	**1.61**	**91**	*e*P	Pn	**08 13 01.1**	**-0.7**
SBLS				*e*S	Sn	**08 13 21.7**	**-0.2**
SNJE	**San Jose**	**1.63**	**90**	*e*P	Pn	**08 13 01.4**	**-0.5**
MRL	**Marmol**	**1.94**	**52**	⇓*e*P	Pn	**08 13 06.7**	**+0.6**
SNET	**Serv Nac Est T**	**2.00**	**95**	AML	AML	08 13 34.4	
	comp=Z,1μm,0.3s						
LFRS	**El Faro**	**2.17**	**96**	*e*P	Pn	**08 13 08.9**	**-0.3**
LFRS				*e*S	Sn	**08 13 35.1**	**-0.1**
LBRS	**Las Brisas**	**2.18**	**93**	⇑*e*P	Pn	**08 13 08.7**	**-0.5**
SNVI	**San Vicente**	**2.39**	**96**	*e*P	Pn	**08 13 11.9**	**-0.3**
CNCH	**Conchagua**	**3.41**	**100**	⇓*e*P	Pn	**08 13 25.7**	**-0.2**
TEIG	**Tepich**	**6.94**	**24**	P	Pn	**08 14 14.7**	**+0.5**
	comp=Z,12nm,0.3s,baz=220,slow=2.5,SNR=92						
TEIG				S	Sn	**08 15 28.0**	**-3.6**
	comp=Z,3.6nm,0.3s,baz=236,slow=23,SNR=8.0						
TXAR	**Lajitas Array**	**19.19**	**325**	P	Pn	**08 16 55.0**	**0.0**
	comp=Z,0.2nm,0.3s,baz=146,slow=10,SNR=6.3						
TKL	**Tuckaleechee C**	**22.71**	**16**	P	P	**08 17 30.1**	**-1.2**
	comp=Z,2.2nm,0.5s,baz=181,slow=10,SNR=11						
ANMO	**Albuquerque**	**25.05**	**329**	P	P	**08 17 54.0**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=141,slow=13,SNR=3.3						
NVAR	**Mina Array Bea**	**34.20**	**321**	P	P	**08 19 16.1**	**+1.6**
	comp=Z,1.1nm,0.7s,baz=145,slow=6.9,SNR=7.9						
NVAR				PcP	PcP	**08 21 50.6**	**+0.7**
	comp=Z,0.6nm,0.8s,baz=183,slow=4.5,SNR=3.3						
SCHQ	**Schefferville**	**45.10**	**20**	P	P	08 20 41.0	-3.3
	comp=Z,0.8nm,0.5s,baz=263,slow=8.1,SNR=3.9						
YKA	**Yellowknife Ar**	**51.30**	**346**	P	P	**08 21 30.0**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=149,slow=7.7,SNR=13						
YKA				PcP	PcP	**08 22 44.5**	**-1.6**
	comp=Z,0.1nm,0.3s,baz=149,slow=3.5,SNR=5.4						
ILAR	**Eielson Array**	**63.23**	**337**	P	P	**08 22 57.5**	**+1.5**
	comp=Z,0.4nm,0.9s,baz=121,slow=6.4,SNR=4.3						
WRA	**Warramunga Arr**	**136.04**	**256**	PKP	PKPdf	**08 31 49.8**	**+0.5**
	comp=Z,0.2nm,0.5s,baz=87,slow=2.9,SNR=3.7						
CMAR	**Chiang Mai Arr**	**146.32**	**342**	PKPbc	PKPdf	**08 32 07.8**	**0.0**
	comp=Z,1.6nm,0.5s,baz=335,slow=3.3,SNR=6.9						

MEX 20 08:19:23.7±0.3, 18°.37N×100°.27W, h56km±2km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARIG	**Puente Sto Nin**	**0.11**	**220**	*e*P	Pn	08 19 30.8	-1.5
ARIG				*e*S	Sn	08 19 36.7	-1.8
MEIG	**Mezcala**	**0.76**	**125**	*i* P	Pn	08 19 37.1	-1.5
MEIG				*i* S	Sn	08 19 47.6	-1.9
YAIG	**Yautepec**	**1.24**	**66**	*e*P	Pn	08 19 43.5	-1.6
YAIG				*i* S	Sn	08 19 58.9	-2.1
CAIG	**El Cayaco**	**1.31**	**180**	*e*P	Pn	08 19 44.4	-1.4
CAIG				*e*S	Sn	08 20 00.5	-1.7
ZIIG	**Zihuatanejo**	**1.37**	**237**	*e*P	Pn	08 19 45.0	-1.5
ZIIG				*e*S	Sn	08 20 01.5	-2.1
MOIG	**Morelia**	**1.57**	**326**	*i* P	Pn	08 19 48.5	-1.0
MOIG				*i* S	Sn	08 20 07.0	-2.0
PPM	**Popocatepetl**	**1.71**	**66**	*e*P	Pn	08 19 50.8	-1.0
PPM				*i* S	Sn	08 20 10.7	-2.3
MMIG	**Aquila**	**2.92**	**269**	*i* P	Pn	08 20 06.4	-1.3
MMIG				*i* S	Sn	08 20 39.8	-1.9

*ISCJB **20** 08:19:29.5±0.2, 47°.85N±0°.01×8°.73E±0°.02, h7km±3km, Error ellipse: s-maj=2.2km s-min=2.0km az=21.3*
*ZUR **20** 08:19:30.4, 47°.82N×8°.74E, h12km±1km, ML2.1/7*
*LDG **20** 08:19:30.8±0.1, 47°.83N×8°.74E, h4km, Md2.3/2, Ml2.5/12, Error ellipse: s-maj=0.9km s-min=0.8km az=78.0*
*CSEM **20** 08:19:30.1±0.1, 47°.83N×8°.72E, h15km, ML2.6/18, Error ellipse: s-maj=1.2km s-min=1.1km az=175.0*
*VIE **20** 08:19:31.6±0.9, 47°.85N×8°.89E, h8km, mb1.5/1, ML1.9/3, Error ellipse: s-maj=5.3km s-min=4.5km az=123.0 12 km NNE of Hohentwiel*
*BGR **20** 08:19:31.1±0.4, 47°.86N×8°.74E, h10km, ML2.1/5, Error ellipse: s-maj=4.4km s-min=2.2km az=26.0*
*STR **20** 08:19:31.0±0.3, 47°.86N×8°.71E, h10km, Ml2.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 20 08:19:30.2±0.8, 47°.83N±0°.01×8°.73E±0°.01, h17km±4km, n93, σ0°63/162, 17C-8D, Switzerland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SLE	**Schleitheim**	**0.17**	**248**	⇑*i*Pg	Pg	**08 19 34.7**	**+0.1**
	2μm,0.2s						
SLE				*i* Sg	Sg	**08 19 37.5**	**-0.1**
	2μm,0.2s						
SLE	**Schleitheim**	**0.17**	**248**	⇑*i*Pg	Pg	**08 19 34.7**	**+0.1**
	2μm,0.2s						
SLE				*i* Sg	Sg	**08 19 37.5**	**-0.1**
TRULL	**Truellikon**	**0.18**	**189**	⇑*i*Pg	Pg	**08 19 34.7**	**-0.1**
	448nm,0.3s						
TRULL				*e*Sg	Sg	**08 19 37.6**	**-0.3**
	448nm,0.3s						
TRULL	**Truellikon**	**0.18**	**189**	⇑*i*Pg	Pg	**08 19 34.7**	**-0.1**
	448nm,0.3s						
TRULL				*e*Sg	Sg	**08 19 37.6**	**-0.3**
	448nm,0.3s						
STEIN	**Stein am Rhein**	**0.19**	**149**	⇓*i*Pg	Pg	**08 19 34.6**	**-0.2**
	168nm,0.3s						
STEIN				*e*Sg	Sg	**08 19 37.2**	**-0.8**
	168nm,0.3s						
STEIN	**Stein am Rhein**	**0.19**	**149**	⇓*i*Pg	Pg	**08 19 34.6**	**-0.2**
	168nm,0.3s						
STEIN				*e*Sg	Sg	**08 19 37.2**	**-0.8**
	168nm,0.3s						
SISB	**Singen-Schiene**	**0.21**	**131**	⇓*i*P*	Pg	**08 19 35.1**	**-0.2**
SISB				S*	Sg	**08 19 38.5**	**-0.2**
SISB	**Singen-Schiene**	**0.21**	**131**	Pb	Pg	**08 19 35.1**	**-0.2**
SISB				Sb	Sg	**08 19 38.5**	**-0.2**
SPAK	**Spaichingen-Ko**	**0.28**	**8**	⇑*i*P*	Pb	**08 19 36.4**	**-0.4**
SPAK				PmP		08 19 40.1	
SPAK				S*	Sb	**08 19 40.6**	**-0.6**
SPAK	**Spaichingen-Ko**	**0.28**	**8**	Pg	Pb	**08 19 36.3**	**-0.4**
SPAK				Sg	Sb	**08 19 40.1**	**-1.1**
FLACH	**Flaach**	**0.28**	**203**	⇑*i*Pg	Pb	**08 19 36.5**	**-0.2**
	191nm,0.3s						
FLACH				*e*Sg	Sb	**08 19 40.7**	**-0.4**
	191nm,0.3s						
FLACH	**Flaach**	**0.28**	**203**	⇑*i*Pg	Pb	**08 19 36.5**	**-0.2**
	191nm,0.3s						
FLACH				*e*Sg	Sb	**08 19 40.7**	**-0.4**
	191nm,0.3s						
GUT	**Gutenstein**	**0.36**	**47**	⇑*i*P*	Pb	**08 19 37.5**	**-0.6**
GUT				S*	Sb	**08 19 42.4**	**-1.0**
GUT	**Gutenstein**	**0.36**	**47**	Pb	Pb	**08 19 37.5**	**-0.6**
GUT				Sb	Sb	**08 19 42.4**	**-1.0**
WILA	**Wila**	**0.43**	**163**	*i* Pg	Pb	**08 19 39.2**	**-0.2**
	482nm,0.3s						
WILA				*e*Sg	Sb	**08 19 45.4**	**-0.2**
	482nm,0.3s						
WILA	**Wila**	**0.43**	**163**	*i* Pg	Pb	**08 19 39.2**	**-0.2**
	482nm,0.3s						
WILA				*e*Sg	Sb	**08 19 45.4**	**-0.2**
	482nm,0.3s						
ZUR	**Degenried**	**0.47**	**192**	⇑*i*Pg	Pb	**08 19 39.9**	**-0.1**
	210nm,0.2s						
ZUR				*e*Sg	Sb	**08 19 46.4**	**-0.3**
	210nm,0.2s						
ZUR	**Degenried**	**0.47**	**192**	⇑*i*Pg	Pb	**08 19 39.9**	**-0.1**
	210nm,0.2s						
ZUR				*e*Sg	Sb	**08 19 46.4**	**-0.3**
	210nm,0.2s						
FELD	**Feldberg im Sc**	**0.49**	**276**	⇓*i*P*	Pb	**08 19 40.4**	**0.0**
FELD				PmP		08 19 42.2	
FELD				S*	Sb	**08 19 47.2**	**-0.1**
FELD				SmS		08 19 50.4	
FELD	**Feldberg im Sc**	**0.49**	**276**	Pg	Pb	**08 19 40.3**	**-0.1**
FELD				Sg	Sb	**08 19 46.6**	**-0.7**
FELD				Sb	Sb	**08 19 47.2**	**-0.1**
SULZ	**Cheisacher**	**0.51**	**234**	⇑*i*Pg	Pb	**08 19 40.9**	**+0.2**
	163nm,0.1s						
SULZ	**Cheisacher**	**0.51**	**234**	⇑*i*Pg	Pb	**08 19 40.9**	**+0.2**
	163nm,0.1s						
KIZ	**Kirchzarten**	**0.56**	**284**	P*	Pb	**08 19 41.5**	**0.0**
KIZ				PmP		08 19 43.0	
KIZ				S*	Sb	**08 19 49.2**	**0.0**
KIZ	**Kirchzarten**	**0.56**	**284**	Pb	Pb	**08 19 41.5**	**0.0**
KIZ				Sb	Sb	**08 19 49.2**	**0.0**
BFO	**Black Forest**	**0.57**	**332**	⇓*i*P*	Pb	**08 19 41.7**	**0.0**
BFO				*e*Pg	Pb	**08 19 41.7**	**0.0**
BFO				*e*Sg	Sb	**08 19 49.1**	**-0.4**
BFO				S*	Sb	**08 19 49.1**	**-0.4**
BFO				SmS		08 19 52.4	
BFO	**Black Forest**	**0.57**	**332**	Pb	Pb	**08 19 41.7**	**0.0**
BFO				Sb	Sb	**08 19 49.1**	**-0.4**
TUBL	**Tuebingen-Lenn**	**0.73**	**19**	P*	Pb	**08 19 44.8**	**+0.3**
TUBL				S*	Sb	**08 19 54.3**	**0.0**
TUBL	**Tuebingen-Lenn**	**0.73**	**19**	Pb	Pb	**08 19 44.8**	**+0.3**
TUBL				Sb	Sb	**08 19 54.3**	**0.0**
BUCH	**Bad Urach**	**0.75**	**34**	⇑P*	Pb	**08 19 44.9**	**+0.1**
BUCH				PmP		08 19 46.0	
BUCH				S*	Sb	**08 19 55.2**	**+0.4**
BUCH				SmS		08 19 57.3	
BUCH	**Bad Urach**	**0.75**	**34**	Pb	Pb	**08 19 44.9**	**+0.1**
BUCH				Sb	Sb	**08 19 55.2**	**+0.4**
LIBD	**Limburg**	**0.82**	**294**	Pg	Pn	**08 19 47.1**	**+0.2**
LIBD				Sg	Sb	**08 19 57.4**	**+0.7**
LBG	**Lerchenberg**	**0.84**	**3**	⇑P*	Pb	**08 19 46.5**	**+0.2**
LBG				PmP		08 19 46.9	
LBG				S*	Sb	**08 19 57.4**	**+0.2**
LBG				SmS		08 19 58.5	
LBG	**Lerchenberg**	**0.84**	**3**	Pb	Pb	**08 19 46.5**	**+0.2**
LBG				Sb	Sb	**08 19 57.4**	**+0.2**
BBS	**Basel-Blauen**	**0.90**	**247**	P*	Pn	**08 19 47.9**	**-0.2**
BBS				PmP		08 19 48.5	
BBS	**Basel-Blauen**	**0.90**	**247**	Pg	Pn	**08 19 47.8**	**-0.2**
UBR	**Ueberruh**	**0.94**	**99**	⇓P*	Pn	**08 19 49.0**	**+0.3**
UBR				S*	Sb	**08 20 01.5**	**+1.1**
UBR				SmS		08 20 02.3	
UBR	**Ueberruh**	**0.94**	**99**	Pb	Pn	**08 19 49.0**	**+0.3**
UBR				Sb	Sb

MOTA				Sg		Sg	08 20 23.9	-0.5	
	8.2nm,0.1s								
FUR	Furstenfeldbru	1.75	78	eSg		Sg	08 20 26.1	-0.3	
FUR	Furstenfeldbru	1.75	78	Sg		Sg	08 20 26.1	-0.3	
PAGF	Fort de Pagny	2.13	291	ePg		Pg	08 20 10.4	-0.7	
	baz=114								
PAGF				eSg		Sg	08 20 37.9	-0.9	
	1.2nm,0.2s								
PAGF	Fort de Pagny	2.13	291	ePg		Pg	08 20 10.4	-0.7	
	baz=114								
PAGF				eSg		Sg	08 20 37.9	-0.9	
	0.6nm,0.2s								
CABF	La Chapelle	2.17	237	ePg		Pg	08 20 11.3	-0.5	
CABF				eSg		Sg	08 20 40.0	0.0	
	2.2nm,0.2s								
CABF	La Chapelle	2.17	237	ePg		Pg	08 20 11.3	-0.5	
CABF				eSg		Sg	08 20 40.0	0.0	
	1.1nm,0.2s								
RUP	Ruppelstein	2.17	330	Pg		Pg	08 20 11.8	-0.1	
TNS	Taunus Mts	2.40	356	eSg		Sg	08 20 47.1	-0.3	
TNS	Taunus Mts	2.40	356	Sg		Sg	08 20 47.1	-0.3	
GRA1	Grafenberg Arr	2.49	41	Pg		Pg	08 20 17.1	-0.8	
GRF	Grafenberg Arr	2.49	41	ePg		Pg	08 20 17.1	-0.8	
GRF				eSg		Sg	08 20 48.7	-1.5	
SFTF	Sexfontaines	2.50	280	eSg		Sg	08 20 49.8	-0.8	
	6.1nm,0.2s								
SFTF	Sexfontaines	2.50	280	eSg		Sg	08 20 49.8	-0.8	
	3.0nm,0.2s								
MEZF	Maizieres J'vi	2.55	287	eSg		Sg	08 20 50.8	-1.3	
	2.2nm,0.2s								
MEZF	Maizieres J'vi	2.55	287	eSg		Sg	08 20 50.8	-1.3	
	1.1nm,0.2s								
LPL	La Plagne	2.69	211	ePg		Pg	08 20 20.7	-1.0	
LPL				eSg		Sg	08 20 56.0	-0.6	
	0.9nm,0.3s								
LPL	La Plagne	2.69	211	ePg		Pg	08 20 20.7	-1.0	
LPL				eSg		Sg	08 20 56.0	-0.6	
	0.4nm,0.3s								
LPG	La Plagne	2.70	211	ePg		Pg	08 20 21.2	-0.7	
LPG				eSg		Sg	08 20 56.6	-0.3	
	0.7nm,0.2s								
LPG	La Plagne	2.70	211	ePg		Pg	08 20 21.2	-0.7	
LPG				eSg		Sg	08 20 56.6	-0.3	
	0.3nm,0.2s								
LOR	Lormes	3.34	262	eSg		Sg	08 21 15.6	-1.9	
	2.5nm,0.2s								
LOR	Lormes	3.34	262	eSg		Sg	08 21 15.6	-1.9	
	1.2nm,0.2s								
HYF	Humbligny	4.16	265	ePn		Pn	08 20 33.2	+0.4	
HYF	Humbligny	4.16	265	ePn		Pn	08 20 33.2	+0.4	

NSSC ***20*** *08:28:13.0±2.4, 37°.39N×26°.07E, h29km±999km*
HLW ***20*** *08:28:15.1, 38°.22N×26°.83E, h23km±14km, Md4.6, Ml4.5*
BJI ***20*** *08:28:15.6, 37°.45N×26°.25E, h17km, mB5.2/25, mb4.8/41, Ms4.9/20, Ms7 4.5/23*
SZGRF ***20*** *08:28:18.5, 37°.63N×27°.51E, h10km, mb4.4, Turkey*
ISCJB ***20*** *08:28:18.8±0.3, 37°.63N±0°.01×26°.94E±0°.01, h8km±2km, mb4.7/120, MS4.5/40, Error ellipse: s-maj=2.0km s-min=1.4km az=24.9*
IDC ***20*** *08:28:18.7±0.4, 37°.61N×26°.89E, h0km, mb4.4/30, mb1 4.4/39, mb1mx4.4/43, mbtmp4.4/39, ML4.1/8, MS4.4/30, Ms1 4.4/30, ms1mx4.2/42, Error ellipse: s-maj=10.8km s-min=10.4km az=5.0*
ISK ***20*** *08:28:18.6, 37°.65N×26°.75E, h11km, ML4.9*
NEIC ***20*** *08:28:19.0, 37°.68N×26°.86E, h12km, mb4.8/85, ML5.0(ISK), ML4.8(ATH), After ATH.*
NEIC Felt on Samos. Also felt at Izmir, Turkey.
CSEM ***20*** *08:28:19.4±0.1, 37°.61N×26°.93E, h2km, mb4.8/62, Ms4.0, Mw5.1, Error ellipse: s-maj=2.2km s-min=1.5km az=32.0*
ATH ***20*** *08:28:19.0, 37°.68N×26°.86E, h12km, MD4.2/40, ML4.8*
BEO ***20*** *08:28:20.9±1.2, 37°.65N×27°.22E, h20km±2km, ML5.0/1*
THE ***20*** *08:28:20.1, 37°.66N×26°.84E, h3km±1km, ML5.2/4, Error ellipse: s-maj=1.1km s-min=0.5km az=42.0*
DDA ***20*** *08:28:20.2, 37°.65N×26°.88E, h3km, MD4.7*
TEH ***20*** *08:28:22.0, 37°.67N×27°.07E, h10km, ML5.3*
PDA ***20*** *08:28:22.4, 37°.60N×27°.00E, h17km, mb4.8*
MOS ***20*** *08:28:23.2±1.3, 37°.81N×27°.00E, h33km, mb5.0/47, MS4.5/21, Error ellipse: s-maj=4.4km s-min=2.7km az=112.5*
GCMT ***20*** *08:28:23.9±0.2, 37°.58N×26°.96E, h12km, MW5.1, Moment Tensor Solution. s35,c46; s84,c138; Moment tensor: Scale 10^{16}Nm; M_{rr}=4.97±.10; $M_{\theta\theta}$=4.65±.09; $M_{\phi\phi}$=0.32±.09; $M_{r\theta}$=1.53±.31; $M_{\theta\phi}$=-1.23±.08; $M_{\phi r}$=-0.41±.43; Best double couple: M_o=5.20000×10^{16} NP1:ϕ_1=105.00000°, δ36.00000°, λ=-90.00000°. NP2:ϕ_2=285.00000°, δ54.00000°, λ=-90.00000°. Principal axes: T 5.2200, Plg9.0000°, Azm15.0000°; N -0.0100, Plg0.0000°, Azm105.0000°; P -5.2200, Plg81.0000°, Azm195.0000°; Data Used: II IU CN IC G.*
PDG ***20*** *08:28:27.2±0.4, 38°.14N×26°.79E, h27km±4km, ML4.4/7 Error ellipse: s-maj=3.4km s-min=4.6km az=0.0*

ISC 20 08:28:21.0±0.3, 37°.65N±0°.02×26°.87E±0°.02, h12km±1km, h12km:pP-P, n1260, σ1945/1340, mb4.8/129, MS4.4/40, 56C-39D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time		Res
				Op		ISC	h m s		ISC
SMG	**Samos**	**0.07**	**335**	P		**Pg**	**08 28 20.8**		**-2.8**
SMG				S		**Sg**	**08 28 22.7**		**-2.8**
SMG	**Samos**	**0.07**	**335**	*e*PG		**Pg**	**08 28 21.8**		**-1.8**
SMG				*e*SG		**Sg**	**08 28 22.6**		**-2.9**
SMG	**Samos**	**0.07**	**335**	P		**Pg**	**08 28 20.8**		**-2.8**
SMG	**Samos**	**0.07**	**335**	*e*Pg		**Pg**	**08 28 21.8**		**-1.8**
SMG				*e*Sg		**Sg**	**08 28 22.6**		**-2.9**
GCAM	**G?zelcaml?**	**0.29**	**79**	*i* P		**Pg**	**08 28 25.9**		**-1.1**
GCAM				*i* S		**Sg**	**08 28 30.3**		**-0.6**
GCAM	**G?zelcaml?**	**0.29**	**79**	*i* P		**Pg**	**08 28 25.9**		**-1.1**
GCAM				*i* S		**Sg**	**08 28 30.3**		**-0.6**
BODT	**Bodrum**	**0.68**	**149**	*e*PG		**Pg**	**08 28 33.2**		**-1.0**
BODT				*e*SG		**Sb**	**08 28 44.9**		**+0.8**
BODT	**Bodrum**	**0.68**	**149**	Pg		**Pg**	**08 28 33.2**		**-1.0**
BODT	**Bodrum**	**0.68**	**149**	*e*Pg		**Pg**	**08 28 33.2**		**-1.0**
URLA	**Izmir**	**0.75**	**343**	*i* P		**Pg**	**08 28 35.2**		**-0.3**
URLA				*i* S		**Sb**	**08 28 46.0**		**-0.1**
BLCB	**Balcova**	**0.75**	**10**	*e*PG		**Pg**	**08 28 34.1**		**-1.5**
BLCB				*e*SG		**Sg**	**08 28 44.9**		**-0.5**
BLCB	**Balcova**	**0.75**	**10**	Pg		**Pg**	**08 28 33.3**		**-2.3**
BLCB	**Balcova**	**0.75**	**10**	*e*Pg		**Pg**	**08 28 34.1**		**-1.5**
BLCB				*e*Sg		**Sg**	**08 28 44.9**		**-0.5**
AYDN	**Tasoluk**	**0.80**	**89**	*i* P		**Pg**	**08 28 34.7**		**-1.8**
AYDN	**Tasoluk**	**0.80**	**89**	*i* P		**Pg**	**08 28 34.7**		**-1.8**
MLSB	**Milas**	**0.80**	**116**	*e*PG		**Pg**	**08 28 35.7**		**-0.8**
MLSB				*e*SG		**Sn**	**08 28 48.9**		**-1.0**
MLSB	**Milas**	**0.80**	**116**	*e*Pg		**Pg**	**08 28 35.7**		**-0.8**
CHOS	**Chios island**	**0.98**	**319**	P		**Pg**	**08 28 38.3**		**-1.7**
CHOS				S		**Sg**	**08 28 52.4**		**-0.4**
CHOS	**Chios island**	**0.98**	**319**	*e*PN		**Pg**	**08 28 38.0**		**-2.0**
CHOS				*e*SB		**Sg**	**08 28 50.8**		**-2.0**
CHOS	**Chios island**	**0.98**	**319**	P		**Pg**	**08 28 38.3**		**-1.7**
CHOS				*e*Sb		**Sg**	**08 28 50.8**		**-2.0**
CHOS				S		**Sg**	**08 28 52.4**		**-0.4**
NIS1	**Nisyros Isl.**	**1.07**	**167**	P		**Pb**	**08 28 40.6**		**-0.9**
NIS1				S		**Sg**	**08 28 56.0**		**+0.5**
NIS1	**Nisyros Isl.**	**1.07**	**167**	*e*PN		**Pb**	**08 28 40.5**		**-0.9**
NIS1	**Nisyros Isl.**	**1.07**	**167**	*e*Pn		**Pb**	**08 28 40.5**		**-0.9**
NIS1				S		**Sg**	**08 28 56.0**		**+0.5**
DAT	**Datca**	**1.07**	**148**	*e*PN		**Pb**	**08 28 40.7**		**-0.9**
DAT	**Datca**	**1.07**	**148**	*e*Pn		**Pb**	**08 28 40.7**		**-0.9**
APE	**Apeiranthos**	**1.22**	**242**	P		**Pn**	**08 28 42.3**		**-1.6**
APE				S		**Sb**	**08 28 58.8**		**-0.8**
APE	**Apeiranthos**	**1.22**	**242**	*e*PB		**Pn**	**08 28 42.2**		**-1.6**
APE				*e*SB		**Sb**	**08 28 59.0**		**-0.6**
APE	**Apeiranthos**	**1.22**	**242**	P		**Pn**	**08 28 42.3**		**-1.6**
APE				*e*Sb		**Sb**	**08 28 59.0**		**-0.6**
YER	**Yerkesik**	**1.23**	**114**	*e*PN		**Pn**	**08 28 43.0**		**-1.1**
YER	**Yerkesik**	**1.23**	**114**	P		**Pn**	**08 28 43.0**		**-1.1**
YER	**Yerkesik**	**1.23**	**114**	Pn		**Pn**	**08 28 43.0**		**-1.1**
YER	**Yerkesik**	**1.23**	**114**	*e*Pn		**Pn**	**08 28 43.0**		**-1.1**
AKHS	**Akhisar**	**1.44**	**31**	*i* P		**Pn**	**08 28 44.7**		**-2.2**
MANT	**Manisa**	**1.57**	**57**	*i* P		**Pn**	**08 28 47.0**		**-1.9**
MANT	**Manisa**	**1.57**	**57**	*i* P		**Pn**	**08 28 47.0**		**-1.9**
TURN	**Turunc**	**1.58**	**119**	*i* P		Pn	08 28 45.2		-3.6
TURN	**Turunc**	**1.58**	**119**	*i* P		Pn	08 28 45.2		-3.6
DALY	**Dalyan (Mu˘la**	**1.64**	**120**	*e*PN		**Pn**	**08 28 49.0**		**-0.6**
KULA	**Kula-Manisa**	**1.66**	**58**	*e*PN		**Pn**	**08 28 48.8**		**-1.1**
KULA	**Kula-Manisa**	**1.66**	**58**	P		**Pn**	**08 28 48.6**		**-1.3**
THR2	**Thira island,**	**1.66**	**224**	P		**Pn**	**08 28 49.0**		**-0.9**
THR2	**Thira island,**	**1.66**	**224**	P		**Pn**	**08 28 49.0**		**-0.9**
AYVA	**Ayvalik**	**1.67**	**355**	*i* P		**Pn**	**08 28 48.1**		**-1.9**
AYVA	**Ayvalik**	**1.67**	**355**	*i* P		**Pn**	**08 28 48.1**		**-1.9**
PRK	**Paraskevi**	**1.67**	**344**	P		**Pn**	**08 28 48.4**		**-1.6**
PRK	**Paraskevi**	**1.67**	**344**	*e*PB		**Pn**	**08 28 49.6**		**-0.4**
PRK				*e*SB		**Sb**	**08 28 12.3**		**-0.2**
PRK	**Paraskevi**	**1.67**	**344**	P		**Pn**	**08 28 48.4**		**-1.6**
PRK				*e*Sb		**Sb**	**08 28 12.3**		**-0.2**
THR1	**Thera Island**	**1.70**	**222**	P		**Pn**	**08 28 49.0**		**-1.5**
THR1				S		**Sn**	**08 28 11.8**		**-0.5**
THR1	**Thera Island**	**1.70**	**222**	P		**Pn**	**08 28 49.0**		**-1.5**
THR1				S		**Sn**	**08 28 11.8**		**-0.5**
DENT	**Denizli**	**1.72**	**86**	*e*PN		**Pn**	**08 28 50.1**		**-0.6**
DENT	**Denizli**	**1.72**	**86**	*e*Pn		**Pn**	**08 28 50.1**		**-0.6**
DNZL	**Cakiroluk**	**1.72**	**88**	*i* P		**Pn**	**08 28 51.1**		**+0.1**
DNZL				*i* S		**Sg**	**08 29 17.0**		**+0.5**
ARG	**Arkhangelos**	**1.74**	**145**	P		**Pn**	**08 28 50.2**		**-0.9**
ARG				S		**Sn**	**08 29 13.8**		**+0.6**
ARG	**Arkhangelos**	**1.74**	**145**	*e*PN		**Pn**	**08 28 51.3**		**+0.2**
ARG				*e*SN		**Sb**	**08 29 15.8**		**+1.0**
ARG	**Arkhangelos**	**1.74**	**145**	*e*Pn		**Pn**	**08 28 51.3**		**+0.2**
ARG				S		**Sn**	**08 29 13.8**		**+0.6**
SIGR	**SIGRI**	**1.76**	**333**	P		**Pn**	**08 28 49.7**		**-1.5**
SIGR				S		**Sn**	**08 29 12.7**		**-0.8**
SIGR	**SIGRI**	**1.76**	**333**	P		**Pn**	**08 28 49.7**		**-1.5**
SIGR				S		**Sn**	**08 29 12.7**		**-0.8**
DEMI	**Demirci**	**2.01**	**46**	*i* P		**Pn**	**08 28 53.1**		**-1.7**
DEMI	**Demirci**	**2.01**	**46**	*i* P		**Pn**	**08 28 53.1**		**-1.7**
MRMA	**Marmari**	**2.02**	**283**	P		**Pn**	**08 28 54.3**		**-0.5**
MRMA	**Marmari**	**2.02**	**283**	P		**Pn**	**08 28 54.3**		**-0.5**
FETY	**Fethiye**	**2.03**	**119**	*e*PN		**Pn**	**08 28 55.0**		**+0.4**
KARP	**Karpathos**	**2.11**	**174**	P		**Pn**	**08 28 55.0**		**-1.1**
KARP	**Karpathos**	**2.11**	**174**	*e*PN		**Pn**	**08 28 56.6**		**+0.5**
KARP				*e*SN		**Sb**	**08 29 24.6**		**-0.7**
KARP	**Karpathos**	**2.11**	**174**	P		**Pn**	**08 28 55.0**		**-1.1**
KARP	**Karpathos**	**2.11**	**174**	*e*Pn		**Pn**	**08 28 56.6**		**+0.5**
BALB	**Balikesir**	**2.14**	**21**	*e*PN		**Pn**	**08 28 55.8**		**-0.7**
BALB	**Balikesir**	**2.14**	**21**	*e*Pn		**Pn**	**08 28 55.8**		**-0.7**
GLHS	**Glhisar (BURDU**	**2.15**	**102**	*e*PN		**Pn**	**08 28 57.3**		**+0.6**
BALY	**Balya**	**2.17**	**15**	*i* P		**Pn**	**08 28 55.3**		**-1.7**
BALY	**Balya**	**2.17**	**15**	*i* P		**Pn**	**08 28 55.3**		**-1.7**
GOLH	**Golhisar**	**2.18**	**100**	*i* P		**Pn**	**08 28 57.3**		**+0.2**
KHAL	**Karahalli**	**2.19**	**70**	*i* P		**Pn**	**08 28 56.5**		**-0.8**
BOZC	**Bozcaada**	**2.29**	**344**	*i* P		**Pn**	**08 28 57.1**		**-1.4**
DURS	**Dursunbey**	**2.32**	**32**	*i* P		**Pn**	**08 28 57.2**		**-1.9**
DURS	**Dursunbey**	**2.32**	**32**	*i* P		**Pn**	**08 28 57.2**		**-1.9**
PTL	**Penteli**	**2.42**	**281**	*e*PB		**Pn**	**08 28 59.7**		**-0.6**
ATHU	**Athens Univers**	**2.47**	**278**	P		**Pn**	**08 29 00.5**		**-0.5**
ATHU	**Athens Univers**	**2.47**	**278**	P		**Pn**	**08 29 00.5**		**-0.5**
GONE	**Gonen-Balikesi**	**2.48**	**15**	*e*PN		**Pn**	**08 29 00.8**		**-0.3**
GONE	**Gonen-Balikesi**	**2.48**	**15**	*e*Pn		**Pn**	**08 29 00.9**		**-0.3**
GDZ	**Gediz**	**2.50**	**54**	*i* P		**Pn**	**08 29 01.4**		**-0.2**
GDZ	**Gediz**	**2.50**	**54**	*i* P		**Pn**	**08 29 01.4**		**-0.2**
ATH	**Athens Observa**	**2.52**	**278**	P		**Pn**	**08 29 01.4**		**-0.3**
ATH	**Athens Observa**	**2.52**	**278**	*e*PN		**Pn**	**08 29 01.6**		**-0.1**
ATH	**Athens Observa**	**2.52**	**278**	*e*Pn		**Pn**	**08 29 01.6**		**-0.1**
ZKR	**Zakros**	**2.58**	**192**	*e*PN		**Pn**	**08 29 03.5**		**+0.9**
ZKR	**Zakros**	**2.58**	**192**	*e*Pn		**Pn**	**08 29 03.5**		**+0.9**
ELL	**Elmali**	**2.58**	**109**	*e*PN		**Pn**	**08 29 03.6**		**+0.9**
ELL	**Elmali**	**2.58**	**109**	*e*Pn		**Pn**	**08 29 03.6**		**+0.9**
NPS	**Neapolis**	**2.59**	**204**	P		**Pn**	**08 29 01.3**		**-1.4**
NPS	**Neapolis**	**2.59**	**204**	P		**Pn**	**08 29 01.3**		**-1.4**
AKAS	**Kas**	**2.60**	**122**	*i* P		**Pn**	**08 29 03.9**		**+0.9**
AKAS	**Kas**	**2.60**	**122**	*i* P		**Pn**	**08 29 03.9**		**+0.9**
LIA	**Limnos Island**	**2.61**	**330**	P		**Pn**	**08 29 02.0**		**-0.9**
LIA	**Limnos Island**	**2.61**	**330**	P		**Pn**	**08 29 02.0**		**-0.9**
KSL	**Kastellorizon**	**2.63**	**124**	*e*PN		**Pn**	**08 29 04.2**		**+0.9**
NAIG	**Nisos Aigina**	**2.69**	**273**	*e*PB		**Pn**	**08 29 03.6**		**-0.4**
TVSB	**Tavsanli**	**2.71**	**48**	*e*PN		**Pn**	**08 29 04.8**		**+0.3**
TVSB	**Tavsanli**	**2.71**	**48**	*e*Pn		**Pn**	**08 29 04.8**		**+0.3**
LAST	**Lasithi**	**2.72**	**205**	*e*PN		**Pn**	**08 29 04.6**		**0.0**
LAST	**Lasithi**	**2.72**	**205**	*e*Pn		**Pn**	**08 29 04.6**		**0.0**
LPK	**Lapseki**	**2.72**	**358**	*e*PN		**Pn**	**08 29 03.6**		**-1.0**
LPK	**Lapseki**	**2.72**	**358**	*e*Pn		**Pn**	**08 29 03.6**		**-1.0**
KRBG	**Karabiga-Canak**	**2.76**	**7**	*e*PN		**Pn**	**08 29 03.6**		**-1.4**
KRBG	**Karabiga-Canak**	**2.76**	**7**	*e*Pn		**Pn**	**08 29 03.6**		**-1.4**
GELI	**Tayfur-Gelibol**	**2.77**	**354**	*e*PN		**Pn**	**08 29 04.2**		**-0.9**
GELI	**Tayfur-Gelibol**	**2.77**	**354**	*e*Pn		**Pn**	**08 29 04.2**		**-0.9**
MRKA	**Markates**	**2.80**	**293**	P		**Pn**	**08 29 04.7**		**-0.9**
MRKA	**Markates**	**2.80**	**293**	P		**Pn**	**08 29 04.7**		**-0.9**
AOS	**Alonnisos**	**2.80**	**304**	P		**Pn**	**08 29 04.9**		**-0.7**
AOS	**Alonnisos**	**2.80**	**304**	*e*PN		**Pn**	**08 29 05.2**		**-0.4**
AOS				*e*SN		**Sn**	**08 29 40.3**		**+1.0**
AOS	**Alonnisos**	**2.80**	**304**	P		**Pn**	**08 29 05.2**		**-0.7**
AOS	**Alonnisos**	**2.80**	**304**	*e*Pn		**Pn**	**08 29 05.2**		**-0.4**
AOS				*e*Sn		**Sn**	**08 29 40.3**		**+1.0**
BNT	**Bandirma**	**2.83**	**16**	*e*PN		**Pn**	**08 29 04.8**		**-1.1**
BNT	**Bandirma**	**2.83**	**16**	*e*Pn		**Pn**	**08 29 04.8**		**-1.1**
IDI	**Anoyia**	**2.84**	**215**	P		**Pn**	**08 29 05.6**		**-0.7**
IDI	**Anoyia**	**2.84**	**215**	*e*PN		**Pn**	**08 29 06.6**		**+0.3**
IDI	**Anoyia**	**2.84**	**215**	*e*Pn		**Pn**	**08 29 05.3**		**-1.0**
IDI				*e*Pg		**Pg**	**08 29 14.3**		**-1.3**
IDI	**Anoyia**	**2.84**	**215**	*e*Pn		**Pn**	**08 29 05.3**		**-1.0**
IDI	**Anoyia**	**2.84**	**215**	P		**Pn**	**08 29 05.6**		**-0.7**
KORT	**Korkueli**	**2.84**	**102**	*i* P		**Pn**	**08 29 07.8**		**+1.5**
KORT	**Korkueli**	**2.84**	**102**	*i* P		**Pn**	**08 29 07.8**		**+1.5**
DID	**Didima**	**2.89**	**268**	P		**Pn**	**08 29 06.1**		**-0.8**
DID				S		**Sn**	**08 29 41.1**		**-0.5**
DID	**Didima**	**2.89**	**268**	*e*PN		**Pn**	**08 29 07.2**		**+0.3**
DID				*e*SN		**Sn**	**08 29 42.6**		**+1.0**
DID	**Didima**	**2.89**	**268**	P		**Pn**	**08 29 06.1**		**-0.8**
DID	**Didima**	**2.89**	**268**	*e*Pn		**Pn**	**08 29 07.2**		**+0.3**
DID				S		**Sn**	**08 29 41.1**		**-0.5**
DID				*e*Sn		**Sn**	**08 29 42.6**		**+1.0**
ISP	**Isparta**	**2.90**	**85**	*e*PN		**Pn**	**08 29 08.2**		**+1.1**
ISP	**Isparta**	**2.90**	**85**	P		**Pn**	**08 29 06.3**		**-0.7**
ISP	**Isparta**	**2.90**	**85**	*e*P		**Pn**	**08 29 06.3**		**-0.7**
ISP	**Isparta**	**2.90**	**85**	*e*Pn		**Pn**	**08 29 06.3**		**-0.7**
ISP				*e*S		**Sg**	**08 29 57.3**		**+3.2**
ISP	**Isparta**	**2.90**	**85**	Pn		**Pn**	**08 29 06.7**		**-0.3**
ALT	**Altintas**	**2.91**	**60**	*e*PN		**Pn**	**08 29 08.3**		**+1.2**
ALT	**Altintas**	**2.91**	**60**	*e*Pn		**Pn**	**08 29 08.3**		**+1.2**
DIDY	**Didyma**	**2.92**	**268**	P		**Pn**	**08 29 06.3**		**-1.0**
DIDY	**Didyma**	**2.92**	**268**	P		**Pn**	**08 29 06.3**		**-1.0**
BCK	**Bucak**	**2.96**	**92**	*e*PN		**Pn**	**08 29 08.3**		**+0.5**
BCK	**Bucak**	**2.96**	**92**	*e*Pn		**Pn**	**08 29 08.3**		**+0.5**
SMTH	**Samothraki Isl**	**3.01**	**340**	*e*PN		**Pn**	**08 29 08.3**		**-0.2**
SMTH	**Samothraki Isl**	**3.01**	**340**	*e*Pn		**Pn**	**08 29 08.3**		**-0.2**
ERIK	**Erikli-Kesan**	**3.03**	**355**	*e*PN		**Pn**	**08 29 07.8**		**-1.0**
ERIK	**Erikli-Kesan**	**3.03**	**355**	*e*Pn		**Pn**	**08 29 07.8**		**-1.0**
SHUT	**Suhut-Afyon**	**3.04**	**72**	*e*PN		**Pn**	**08 29 09.8**		**+0.8**
SHUT	**Suhut-Afyon**	**3.04**	**72**	*e*Pn		**Pn**	**08 29 09.8**		**+0.8**
RKY	**Sarkoy-Tekirda**	**3.05**	**4**	*e*PN		**Pn**	**08 29 07.9**		**-1.1**
RKY	**Sarkoy-Tekirda**	**3.05**	**4**	*e*Pn		**Pn**	**08 29 07.9**		**-1.1**
SART	**Tekirdag**	**3.05**	**4**	*i* P		**Pn**	**08 29 07.9**		**-1.1**
SART	**Tekirdag**	**3.05**	**4**	*i* P		**Pn**	**08 29 07.9**		**-1.1**
ULDT	**Uludag**	**3.05**	**35**	*i* P		**Pb**	**08 29 16.9**		**+1.5**
SKIA	**Skiathos**	**3.08**	**301**	P		**Pn**	**08 29 09.1**		**-0.3**
SKIA	**Skiathos**	**3.08**	**301**	P		**Pn**	**08 29 09.1**		**-0.3**
VAM	**Vamos**	**3.10**	**225**	P		**Pn**	**08 29 09.4**		**-0.4**
VAM	**Vamos**	**3.10**	**225**	*e*PN		**Pn**	**08 29 09.9**		**+0.1**
VAM	**Vamos**	**3.10**	**225**	P		**Pn**	**08 29 09.4**		**-0.4**
VAM	**Vamos**	**3.10**	**225**	*e*Pn		**Pn**	**08 29 09.9**		**+0.1**
ANTB	**Antalya**	**3.11**	**103**	*e*PN		**Pn**	**08 29 11.0**		**+1.3**
ANTB	**Antalya**	**3.11**	**103**	*e*Pn		**Pn**	**08 29 11.0**		**+1.3**
SIVA	**Sivas**	**3.11**	**213**	*e*PN		**Pn**	**08 29 10.6**		**+0.8**
SIVA	**Sivas**	**3.11**	**213**	*e*Pn		**Pn**	**08 29 10.6**		**+0.8**
LTK	**Loutraki**	**3.12**	**278**	P		**Pn**	**08 29 09.7**		**-0.2**
LTK	**Loutraki**	**3.12**	**278**	*e*PN		**Pn**	**08 29 09.9**		**0.0**
LTK				*e*SN		**Sn**	**08 29 47.8**		**+0.7**
LTK	**Loutraki**	**3.12**	**278**	*e*Pn		**Pn**	**08 29 09.9**		**0.0**
LTK				*e*Sn		**Sn**	**08 29 47.8**		**+0.7**
ENEZ	**Enez**	**3.14**	**350**	*e*PN		**Pn**	**08 29 09.5**		**-0.7**
ENEZ	**Enez**	**3.14**	**350**	*e*Pn		**Pn**	**08 29 09.5**		**-0.7**
MDNY	**Mudanya-Bursa**	**3.14**	**29**	*e*PN		**Pn**	**08 29 10.2**		**0.0**
MDNY	**Mudanya-Bursa**	**3.14**	**29**	*e*Pn		**Pn**	**08 29 10.2**		**0.0**
MFT	**Murefte**	**3.15**	**6**	*e*PN		**Pn**	**08 29 09.4**		**-1.1**
MFT	**Murefte**	**3.15**	**6**	*e*Pn		**Pn**	**08 29 09.4**		**-1.1**
ATAL	**Atalanti**	**3.21**	**290**	P		**Pn**	**08 29 11.0**		**-0.2**
ATAL	**Atalanti**	**3.21**	**290**	P		**Pn**	**08 29 11.0**		**-0.2**
VLI	**Veliai**	**3.28**	**255**	P		**Pn**	**08 29 11.2**		**-0.9**
VLI	**Veliai**	**3.28**	**255**	*e*PN		**Pn**	**08 29 12.0**		**-0.1**
VLI	**Veliai**	**3.28**	**255**	P		**Pn**	**08 29 11.2**		**-0.9**
VLI	**Veliai**	**3.28**	**255**	*e*Pn		**Pn**	**08 29 12.0**		**-0.1**
ALN	**Alexandroupoli**	**3.31**	**349**	P		**Pn**	**08 29 11.4**		**-1.2**
ALN	**Alexandroupoli**	**3.31**	**349**	*e*PN		**Pn**	**08 29 12.3**		**-0.3**
ALN				*e*SN		**Sn**	**08 29 52.0**		**+0.2**
ALN	**Alexandroupoli**	**3.31**	**349**	P		**Pn**	**08 29 11.4**		**-1.2**
ALN	**Alexandroupoli**	**3.31**	**349**	*e*Pn		**Pn**	**08 29 12.3**		**-0.3**
ALN				*e*Sn		**Sn**	**08 29 52.0**		**+0.2**
NEO	**Neokhori**	**3.31**	**301**	P		**Pn**	**08 29 12.2**		**-0.4**
NEO	Neokhori	3.31	301	*e*P		Pn	08 29 12.2		-0.4
XOR	**Xorichti**	**3.36**	**302**	P		**Pn**	**08 29 12.5**		**-0.8**
XOR	**Xorichti**	**3.36**	**302**	P		**Pn**	**08 29 12.5**		**-0.8**
PAIG	**Paliouri**	**3.38**	**313**	P		**Pn**	**08 29 13.1**		**-0.4**
PAIG	**Paliouri**	**3.38**	**313**	*e*PN		**Pn**	**08 29 13.6**		**+0.1**
PAIG	**Paliouri**	**3.38**	**313**	P		**Pn**	**08 29 13.1**		**-0.4**
PAIG	**Paliouri**	**3.38**	**313**	*e*Pn		**Pn**	**08 29 13.6**		**+0.1**
TKR	**Tekirdag**	**3.38**	**9**	*e*PN		**Pn**	**08 29 12.4**		**-1.1**
TKR	**Tekirdag**	**3.38**	**9**	*e*Pn		**Pn**	**08 29 12.4**		**-1.1**
**B

comp=Z,294nm,1.0s
ANTO Ankara 5.13 63 *e*Pn Pn 08 29 39.3 +1.6
comp=Z,294nm,1.0s
ANTO *e*Pg **Pg 08 29 57.9 -1.3**
ANTO *e*S **Sg 08 31 11.0 +5.3**
ANTO Ankara 5.13 63⇑*i*P Pg 08 29 57.3 -2.0
ANTO Ankara 5.13 63 *e*P Pn 08 29 39.3 +1.6
comp=Z,294nm,1.0s
FNA Florina 5.29 308 *e*PN Pn 08 29 41.3 +1.4
FNA Florina 5.29 308 *e*Pn Pn 08 29 41.3 +1.4
NEST Nestorio 5.31 303 P Pn 08 29 41.7 +1.5
NEST Nestorio 5.31 303 P Pn 08 29 41.7 +1.5
BIA Bitola 5.46 310 *i* Pn Pn 08 29 43.6 +1.4
VTS Vitosha 5.68 332 ⇑P Pn 08 29 45.6 +0.3
VTS Vitosha 5.68 332 *e*Pn Pn 08 29 45.8 +0.5
VTS *e*Sn **Sn 08 30 50.4 -0.1**
VTS Vitosha 5.68 332⇑*i*P Pn 08 29 45.6 +0.3
VTS Vitosha 5.68 332 P Pn 08 29 45.6 +0.3
VTS *e*Sn **Sn 08 30 50.4 -0.1**
BR131 Keskin Array S 5.69 67 *e*Pn Pn 08 29 46.0 +0.6
comp=Z,52nm,0.6s
BR131 *e*Pg Pg 08 30 15.2 +5.4
BR131 Keskin Array S 5.69 67 *e*Pn Pn 08 29 46.0 +0.6
comp=Z,52nm,0.6s
BRTR Keskin Array B 5.69 67 Pn Pn 08 29 46.2 +0.8
BRTR Sn **Sn 08 30 48.1 -2.5**
BRTR Lg Lg 08 31 31.8
BRTR Keskin Array B 5.69 67 Pn Pn 08 29 46.2 +0.8
comp=Z,4.1nm,0.3s,baz=248,slow=14,SNR=35
BRTR Sn **Sn 08 30 48.1 -2.5**
comp=Z,2.8nm,0.3s,baz=257,slow=16,SNR=3.7
BRTR Lg Lg 08 31 31.8
baz=262,slow=22,SNR=2.4
BRTR LR LR 08 31 53.0
comp=Z,1μm,19.8s,baz=63,slow=38
BRTR Keskin Array B 5.69 67 P Pn 08 29 46.2 +0.8
BRTR S **Sn 08 30 48.1 -2.5**
CSS Prodhromos 5.86 115 *e*Pn Pn 08 29 46.3 -1.4
CSS Prodhromos 5.86 115 *e*Pn Pn 08 29 46.3 -1.4
KEK Kerkira 5.91 293 P Pn 08 29 50.6 +2.3
KEK Kerkira 5.91 293 *e*PN Pn 08 29 50.2 +1.9
KEK Kerkira 5.91 293 *e*Pn Pn 08 29 50.2 +1.9
KEK Kerkira 5.91 293 P Pn 08 29 50.6 +2.3
KIZK Mersin 5.93 99 *i* P Pn 08 29 49.9 +1.3
KIZK Mersin 5.93 99 *i* P Pn 08 29 49.9 +1.3
SKO Skopje 6.01 318 *e*Pn Pn 08 29 51.0 +1.2
SKO *i* Sn Sn 08 30 43.2 -15
SKO *e*Lg Lg 08 31 43.1
comp=E,2μm,2.8s
SKO *e*Lg Lg 08 32 15.9
comp=N,2μm,3.1s
CDAG Cicekdag 6.19 69 *i* P Pn 08 29 53.3 +1.0
CDAG Cicekdag 6.19 69 *i* P Pn 08 29 53.3 +1.0
SLUM 6.29 193 P Pn 08 29 51.9 -1.6
ZAPS Zavoj 6.48 331 *e*Pn Pn 08 29 57.2 +1.0
TIR Tirane 6.56 306 *e*P Pn 08 30 01.0 +3.7
TIR Tirane 6.56 306 *e*Pn Pn 08 30 00.9 +3.7
TIRR Tirgusor 6.90 9 ⇓P Pn 08 30 01.0 -0.9
TIRR Tirgusor 6.90 9⇓*i*P Pn 08 30 01.0 -0.9
TIRR Tirgusor 6.90 9 P Pn 08 30 01.0 -0.9
HUMR Humele 7.02 349⇓*i*P Pn 08 30 02.1 -1.5
SELS Selova 7.09 324 *e*Pn Pn 08 30 04.4 -0.1
BOLS Boljevac 7.22 330 *e*Pn Pn 08 30 05.3 -0.9
BOLS *e*Sn **Sn 08 31 25.0 -3.1**
BOLS Boljevac 7.22 330 *e*Pn Pn 08 30 05.3 -0.9
PVY Plav 7.24 315⇑*i*Pn Pn 08 30 08.1 +1.3
PVY *e*Sn Sn 08 31 22.4 -6.6
ULC Ulcinj 7.29 309⇓*i*Pn Pn 08 30 08.4 +1.2
ULC *e*Sn **Sn 08 31 24.4 -5.4**
ULC Ulcinj 7.29 309⇓*i*Pn Pn 08 30 08.4 +1.2
BEY Berane 7.46 317⇑*i*Pn Pn 08 30 11.4 +1.7
IVA Berane 7.46 317⇑*i*Pn Pn 08 30 11.4 +1.7
IVA *e*Sn Sn 08 31 26.9 -7.4
ISR Istrita 7.47 358⇓*i*P Pn 08 30 11.5 +1.7
ARNB Al Arnab 7.52 101 *e*P Pn 08 30 10.0 -0.5
ARNB Al Arnab 7.52 101 *e*P Pn 08 30 10.0 -0.5
SNR=90
PDG Podgorica 7.55 312⇑*i*Pn Pn 08 30 13.1 +2.3
TTG Podgorica 7.55 312⇑*i*Pn Pn 08 30 13.1 +2.3
CFR Carcaliu 7.58 7 ⇓P Pn 08 30 10.0 -1.3
CFR Carcaliu 7.58 7⇓*i*P Pn 08 30 10.0 -1.3
CFR Carcaliu 7.58 7 P Pn 08 30 10.0 -1.3
TLCR 7.67 10 ⇑P Pn 08 30 11.8 -0.7
TLCR 7.67 10⇑*i*P Pn 08 30 11.8 -0.7
TLCR 7.67 10 P Pn 08 30 11.8 -0.7
BUM Brajici-Budva 7.69 310⇑*i*Pn Pn 08 30 14.2 +1.4
BUM *e*Sn Sn 08 31 33.8 -6.0
BUM Brajici-Budva 7.69 310⇑*i*Pn Pn 08 30 14.2 +1.4
GRER 7.73 1⇑*i*P Pn 08 30 13.5 +0.2
DJES Djerdap 7.74 336 *e*Pn Pn 08 30 12.3 -1.2
GRUS Gruza 7.79 325 *e*Pn Pn 08 30 14.0 -0.1
GRUS Gruza 7.79 325 *e*Pn Pn 08 30 14.0 -0.1
BTCH Batrach 7.85 99 *e*P Pn 08 30 13.8 -1.3
BTCH Batrach 7.85 99 *e*P Pn 08 30 13.8 -1.3
SNR=90
MLR Muntele Rosu 7.87 355 Pn Pn 08 30 15.2 -0.1
MLR Sn **Sn 08 31 43.2 -1.2**
MLR Lg Lg 08 32 33.1
MLR Muntele Rosu 7.87 355⇓*i*P Pn 08 30 15.3 -0.1
MLR Muntele Rosu 7.87 355 Pn Pn 08 30 15.2 -0.1
comp=N,0.3nm,0.3s,baz=202,slow=3.9,SNR=37
MLR Sn **Sn 08 31 43.2 -1.2**
comp=N,0.7nm,0.3s,baz=149,slow=19,SNR=1.8
MLR Lg Lg 08 32 33.1
comp=N,0.0nm,0.3s,baz=4.1,slow=14,SNR=2.2
MLR Muntele Rosu 7.87 355 P Pn 08 30 15.2 -0.1
MLR S **Sn 08 31 43.2 -1.2**
ARR Arges 7.90 348⇓*i*P Pn 08 30 14.6 -1.0
VOIR 7.90 351 ⇑P Pn 08 30 14.7 -1.0
VOIR 7.90 351⇑*i*P Pn 08 30 14.6 -1.1
VOIR 7.90 351 P Pn 08 30 14.7 -1.0
NKY Niksic 7.93 313 *e*Pn Pn 08 30 17.0 +0.8
NKY *e*Sn Sn 08 31 39.7 -6.2
NKY Niksic 7.93 313 *e*Pn Pn 08 30 17.0 +0.8
WRDH Warideh 7.96 103⇑*e*P Pn 08 30 16.5 -0.1
WRDH Warideh 7.96 103⇑*e*P Pn 08 30 16.5 -0.1
SNR=90
HCY Herceg Novi 8.02 309⇑*i*Pn Pn 08 30 19.4 +2.2
HCY *e*Sn Sn 08 31 41.6 -6.2
HCY Herceg Novi 8.02 309⇑*i*Pn Pn 08 30 19.4 +2.2
PETR Petresti 8.07 2⇓*i*P Pn 08 30 24.9 +6.9
HWQ Hawqa 8.09 112 *e*P Pn 08 30 16.0 -2.3
TIP Timpagrande 8.09 284 *e*Pn Pn 08 30 19.2 +0.9
TIP Timpagrande 8.09 284 *e*Pn Pn 08 30 19.2 +0.9
LOT Lotru 8.13 344⇓*i*P Pn 08 30 17.7 -1.2
HNTI Hanita 8.16 121 Pn Pn 08 30 17.9 -1.4
PLOR Plostina 8.20 359 ⇓P Pn 08 30 19.7 -0.1
PLOR Plostina 8.20 359⇓*i*P Pn 08 30 19.7 -0.1
PLOR Plostina 8.20 359 P Pn 08 30 19.7 -0.1
VRI Vrincioaia 8.21 359 ⇓P Pn 08 30 19.8 -0.2
VRI Vrincioaia 8.21 359⇓*i*P Pn 08 30 19.8 -0.2
VRI Vrincioaia 8.21 359 P Pn 08 30 19.8 -0.2
UPM Unac-Piva 8.23 315⇑*i*Pn Pn 08 30 21.9 +1.6
UPM *e*Sn Sn 08 31 46.1 -7.2
UPM Unac-Piva 8.23 315⇑*i*Pn Pn 08 30 21.9 +1.6
BRY Bratogost 8.25 312 *e*Pn Pn 08 30 21.7 +1.1
BRY *e*Sn Sn 08 31 47.5 -6.3
BRY Bratogost 8.25 312 *e*Pn Pn 08 30 21.7 +1.1
DIVS Divibare 8.29 323⇓*i*Pn Pn 08 30 21.3 +0.3
DIVS Divibare 8.29 323⇓*i*Pn Pn 08 30 21.3 +0.3
OFRI 'Ofer 8.32 125 Pn Pn 08 30 19.9 -1.6
MMC7 Mount Meron ar 8.35 121 Pn Pn 08 30 19.3 -2.6
MMA0 Mount Meron ar 8.36 121 Pn Pn 08 30 19.6 -2.4
MMAI Mount Meron Ar 8.36 121 Pn Pn 08 30 19.7 -2.3
MMAI Sn Sn 08 31 50.2 -6.2
MMAI Mount Meron Ar 8.36 121 Pn Pn 08 30 19.7 -2.3
comp=N,48nm,0.3s,baz=303,slow=11,SNR=140
MMAI Sn Sn 08 31 50.2 -6.2
comp=N,20nm,0.3s,baz=308,slow=23,SNR=6.2
MMAI Mount Meron Ar 8.36 121 Pn Pn 08 30 19.7 -2.3
BLGI Bet Lehem HaGe 8.39 123 Pn Pn 08 30 21.1 -1.2
DOPR Dopca 8.39 353⇓*i*P Pn 08 30 22.6 +0.3
RCY Rachaya 8.39 117 *e*P Pn 08 30 20.2 -2.3
KSDI Kefar Szold 8.43 119 Pn Pn 08 30 20.9 -2.1
KSDI Sn **Sn 08 31 54.7 -3.4**
SWA2 8.46 188 P Pn 08 30 22.3 -1.1
baz=188
SWA2 AMP 08 32 00.0
comp=N,140μm,0.8s,logA/T=5.3,baz=188
SWA2 8.46 188 P Pn 08 30 22.3 -1.1
HNAT Natroun 8.58 158 P Pn 08 30 23.7 -1.3
baz=158
HNAT Natroun 8.58 158 P Pn 08 30 23.7 -1.3
SEV Sevastopol' 8.59 35 *e*P Pn 08 30 20.1 -4.9
SEV *e*S Sn 08 31 54.2 -7.6
SLTI Sal'it 8.60 126 Pn Pn 08 30 24.0 -1.3
SLTI Sn **Sn 08 32 00.4 -1.8**
FYM Al Fayyum 8.66 155 P Pn 08 30 24.9 -1.2
baz=156
FYM Al Fayyum 8.66 155 P Pn 08 30 24.9 -1.2
AYT Al 'Ayyat 8.69 155 P Pn 08 30 25.1 -1.3
baz=155
AYT Al 'Ayyat 8.69 155 P Pn 08 30 25.1 -1.3
MDB Medias 8.69 348 ⇑P Pn 08 30 27.3 +0.8
MDB Medias 8.69 348⇑*i*P Pn 08 30 27.3 +0.8
MDB Medias 8.69 348 P Pn 08 30 27.3 +0.8
CEL Celeste 8.70 277 *e*Pn Pn 08 30 27.1 +0.5
CEL *e*Sn **Sn 08 32 03.2 -1.4**
CEL Celeste 8.70 277 *e*Pn Pn 08 30 27.1 +0.5
MMLI Mount Malkishu 8.72 124 Pn Pn 08 30 25.6 -1.4
KOT Kottamia 8.73 150 P Pn 08 30 25.9 -1.2
baz=152
KOT S Sn 08 31 59.5 -6.0
baz=152
KOT Kottamia 8.73 150 P Pn 08 30 25.9 -1.2
AMAG Maghara 8.73 141 P Pn 08 30 24.8 -2.4
baz=143
AMAG Maghara 8.73 141 P Pn 08 30 24.8 -2.4
DEV Deva 8.75 341 ⇑P Pn 08 30 27.7 +0.5
DEV Deva 8.75 341⇑*i*P Pn 08 30 27.7 +0.5
DEV Deva 8.75 341 P Pn 08 30 27.7 +0.5
RSH 8.75 138 P Pn 08 30 24.9 -2.4
baz=139
RSH 8.75 138 P Pn 08 30 24.9 -2.4
YAL Yalta 8.77 37 *e*P Pn 08 30 44.0 +16
YAL *e*S **Sn 08 32 01.4 -4.8**
HHAG Hagoal 8.82 149 P Pn 08 30 26.5 -1.8
baz=150
HHAG Hagoal 8.82 149 P Pn 08 30 26.5 -1.8
TEKS Tekeris 8.85 324 *e*Pn Pn 08 30 29.3 +0.7
TEKS Tekeris 8.85 324 *e*Pn Pn 08 30 29.3 +0.7
TESR Tescani 8.86 359⇑*i*P Pn 08 30 28.7 -0.1
BZS Buzias 8.88 335⇑*i*P Pn 08 30 27.4 -1.7
TOTH TOTAH 8.88 116 *e*P Pn 08 30 28.1 -1.1
TOTH *e*S **Sn 08 32 03.4 -5.8**
TOTH TOTAH 8.88 116 *e*P Pn 08 30 28.1 -1.1
SNR=90
HSAF As Saff 8.90 153 P Pn 08 30 28.2 -1.3
baz=154
HSAF As Saff 8.90 153 P Pn 08 30 28.2 -1.3
HMDT Nahal Hemdat 8.91 125 Pn Pn 08 30 28.6 -0.9
HMDT Sn **Sn 08 32 06.3 -3.4**
CUC Castrocucco 8.94 289 *e*Pn Pn 08 30 31.6 +1.6
CUC Castrocucco 8.94 289 *e*Pn Pn 08 30 31.6 +1.6
TCHB Talchebab 8.95 121 *e*P Pn 08 30 28.8 -1.2
TCHB *e*S **Sn 08 32 05.0 -5.7**
TCHB Talchebab 8.95 121 *e*P Pn 08 30 28.8 -1.2
SNR=90
GLL Jalalah 9.00 152 P Pn 08 30 29.4 -1.4
baz=153
GLL Jalalah 9.00 152 P Pn 08 30 29.4 -1.4
SIM Simferopol' 9.10 34 *e*P Pn 08 30 31.5 -0.6
SIM *e*S **Sn 08 32 14.0 -0.5**
SIM pmax pmax
comp=Z,45nm,0.4s
SIM MLR MLR
comp=Z,380nm,10.0s
SIM Simferopol' 9.10 34 *e*P Pn 08 30 31.5 -0.6
comp=Z,45nm,0.4s
SIM *e*S **Sn 08 32 14.0 -0.5**
comp=Z,380nm,10.0s
ROOS tl_alroos 9.13 109 *e*P Pn 08 30 32.2 -0.4
ROOS *e*S **Sn 08 32 14.1 -1.3**
MALT Malatya 9.15 82 ⇓P Pn 08 30 46.4 +13
MALT Malatya 9.15 82⇓*i*P Pn 08 30 46.4 +13
KZIT Kziot 9.16 135 Pn Pn 08 30 30.6 -2.3
RTMI Retamim 9.22 133 Pn Pn 08 30 31.2 -2.5
SUZ 9.23 146 P Pn 08 30 32.4 -1.5
baz=147
SUZ 9.23 146 P Pn 08 30 32.4 -1.5
DSI Dead Sea 9.26 128 Pn Pn 08 30 33.8 -0.6
HBNS Bani Suwayf 9.40 156 P Pn 08 30 35.2 -1.0
baz=157
HBNS Bani Suwayf 9.40 156 P Pn 08 30 35.2 -1.0
MZDA Masada 9.43 130 Pn Pn 08 30 34.4 -2.2
SALA Sala 9.45 118 *e*P Pn 08 30 36.0 -1.1
SALA Sala 9.45 118 *e*P Pn 08 30 36.0 -1.1
SNR=90
KIS Kishinev 9.46 8 *e*P Pn 08 30 34.0 -2.9
KIS *e*S **Sn 08 32 19.0 -4.1**
KIS MLR MLR
comp=Z,6μm,12.0s
KIS MLR MLR
comp=N,5μm,11.0s
KIS MLR MLR
comp=E,3μm,11.0s
KIS MLR MLR
comp=Z,6μm,12.0s
KIS Kishinev 9.46 8 *e*P Pn 08 30 34.0 -2.9
KIS *e*S **Sn 08 32 19.0 -4.1**
KIS *e*Li 08 32 50.0
KIS *i* Lg1 08 33 10.0
KIS *i* Lg2 08 33 22.0
KIS *e*Rg Rg 08 34 00.0
KIS LRM MLR 08 34 40.0
comp=Z,6μm,12.0s
SUDU Sudak 9.47 38 *e*P Pn 08 30 34.0 -3.1
SUDU *e*S **Sn 08 32 18.1 -5.4**
ZAF 9.59 149 P Pn 08 30 37.3 -1.6
baz=150
ZAF 9.59 149 P Pn 08 30 37.3 -1.6
RMNI Mount Ramon 9.60 135 Pn Pn 08 30 36.5 -2.5
DRGR 9.64 343 ⇑P Pn 08 30 39.4 -0.2
DRGR 9.64 343⇑*i*P Pn 08 30 39.4 -0.2
DRGR 9.64 343 P Pn 08 30 39.4 -0.2
HNKL Nakhl 9.70 140 P Pn 08 30 37.7 -2.7
baz=142
HNKL S Sn 08 32 21.2 -8.1
baz=142
HNKL Nakhl 9.70 140 P Pn 08 30 37.7 -2.7
ZALF Zalf 9.76 116 *e*P Pn 08 30 39.9 -1.3
ZALF Zalf 9.76 116 *e*P Pn 08 30 39.9 -1.3
SNR=90
ZFRI Zfri 9.87 133 Pn Pn 08 30 40.5 -2.1
ASF Jabal al Asfar 9.87 121 Pn Pn 08 30 41.6 -1.2
ASF Sn **Sn 08 32 35.3 +1.6**
ASF Jabal al Asfar 9.87 121 Pn Pn 08 30 41.6 -1.2
comp=Z,3.6nm,0.3s,baz=193,slow=5.9,SNR=21
ASF Sn **Sn 08 32 35.3 +1.6**
comp=Z,0.5nm,0.3s,baz=176,slow=19,SNR=2.3
ASF LR LR 08 35 27.0
comp=Z,838nm,18.4s,baz=172,slow=44
PRNI Paran 9.92 135 Pn Pn 08 30 41.0 -2.4
KRMI Paran Flat 9.94 137 Pn Pn 08 30 41.2 -2.5
BURAR Bucovina Array 10.04 354⇑*i*P Pn 08 30 45.7 +0.7
BUR08 Bucovina Ar. S 10.07 354 *e*Pn Pn 08 30 45.3 -0.1
BUR08 Bucovina Ar. S 10.07 354 *e*Pn Pn 08 30 45.3 -0.1
HRFI Mount Harif 10.18 136 Pn Pn 08 30 44.2 -2.7
HRFI Sn **Sn 08 32 39.5 -1.5**
MBRI Mt Berech 10.30 137 Pn Pn 08 30 46.4 -2.2
EIL Elat 10.41 137 Pn Pn 08 30 48.1 -2.1
EIL Sn **Sn 08 32 41.2 -5.6**
EIL Elat 10.41 137 Pn Pn 08 30 48.1 -2.1
comp=Z,2.0nm,0.3s,baz=326,slow=11,SNR=20
EIL Sn **Sn 08 32 41.2 -5.6**
comp=Z,2.3nm,0.3s,baz=12,slow=19,SNR=4.1
EIL LR LR 08 36 05.7
comp=Z,155nm,18.1s,baz=297,slow=45
EIL Elat 10.41 137 Pn Pn 08 30 48.1 -2.1
PKSM Moragy 10.52 327 ⇓P Pn 08 30 51.8 +0.3
PKSM Moragy 10.52 327⇓*i*P Pn 08 30 51.8 +0.3
PKSM Moragy 10.52 327 P Pn 08 30 51.8 +0.3
ANN Anapa 10.69 45 *e*P Pn 08 30 51.9 -1.9
ANN *e*S **Sn 08 32 50.2 -3.0**
ANN pmax pmax
comp=Z,27nm,1.4s
ANN pmax pmax
comp=Z,231nm,10.4s
ANN MLR MLR
comp=Z,449nm,9.0s
ANN Anapa 10.69 45 *e*P Pn 08 30 51.9 -1.9
comp=Z,231nm,10.4s
HKAT Jabal Katrina 10.88 145 P Pn 08 30 55.0 -1.7
baz=146
HKAT Jabal Katrina 10.88 145 P Pn 08 30 54.9 -1.7
AQU L'Aquila 11.35 299 *e*Pn Pn 08 31 05.0 +2.1
AQU L'Aquila 11.35 299 *e*P Pn 08 31 05.0 +2.1
SOC Sochi 11.42 55*c i*P Pn 08 31 05.6 +1.8
SOC *e* 08 33 16.1
SOC pmax pmax
comp=Z,6.0nm,0.6s
SOC MLR MLR
comp=Z,1μm,14.0s
SOC MLR MLR
comp=N,1μm,14.0s
SOC MLR MLR
comp=E,684nm,14.0s
SOC Sochi 11.42 55 *i* P Pn 08 31 05.6 +1.8
comp=E,6.0nm,0.6s
PSZ Piszkesteto 11.47 336 ⇑P Pn 08 31 04.8 +0.2
PSZ Piszkesteto 11.47 336 *e*Pn Pn 08 31 04.8 +0.2
PSZ Piszkesteto 11.47 336⇑*i*P Pn 08 31 04.8 +0.2
PSZ Piszkesteto 11.47 336 P Pn 08 31 04.8 +0.2
KOLS Kolonicke sedl 11.77 345 *e*P Pn 08 31 09.4 +0.8
KOLS Kolonicke sedl 11.77 345 *e*PN Pn 08 31 09.4 +0.8
KOLS Kolonicke sedl 11.77 345 *e*P Pn 08 31 09.4 +0.8
KECS Kecovo 11.79 339 *e*P Pn 08 31 05.5 -3.4
KECS Kecovo 11.79 339 *e*PN Pn 08 31 05.5 -3.4
CRVS Cervenica-Dubn 11.92 342 *e*P Pn 08 31 09.3 -1.3
CRVS Cervenica-Dubn 11.92 342 *e*PN Pn 08 31 09.3 -1.3
CRVS Cervenica-Dubn 11.92 342 *e*P Pn 08 31 09.3 -1.3
VYHS Vyhne 12.32 334 *e*P Pn 08 31 16.3 +0.1
VYHS Vyhne 12.32 334 *e*PN Pn 08 31 16.3 +0.1
VYHS Vyhne 12.32 334 *e*P Pn 08 31 16.3 +0.1
LVV L'vov 12.34 351 *e*P P 08 31 36.2 +7.6
LVV MLR MLR
comp=N,3μm,15.0s
LVV MLR MLR
comp=E,3μm,15.0s
LVV MLR MLR
comp=Z,3μm,15.0s
KWP Kalwaria Pacla 12.35 347 ⇑P Pn 08 31 14.9 -1.7
KWP Kalwaria Pacla 12.35 347 *e*Pn Pn 08 31 17.0 +0.4
comp=Z,18nm,0.9s
KWP Kalwaria Pacla 12.35 347⇑*i*P Pn 08 31 14.9 -1.7
KWP Kalwaria Pacla 12.35 347 *e*P Pn 08 31 17.5 +0.9
KWP Kalwaria Pacla 12.35 347 P Pn 08 31 14.9 -1.7
KWP Kalwaria Pacla 12.35 347 *e*Pn Pn 08 31 17.0 +0.4
comp=Z,18nm,0.9s
STHS Stebnicka Huta 12.45 343 *e*P Pn 08 31 19.8 +1.9
STHS Stebnicka Huta 12.45 343 *e*PN Pn 08 31 19.8 +1.9
STHS Stebnicka Huta 12.45 343 *e*P Pn 08 31 19.8 +1.9
NIE Niedzica 12.69 340 *e*P Pn 08 31 22.5 +1.3
NIE Niedzica 12.69 340 *e*P Pn 08 31 22.5 +1.3
NIE Niedzica 12.69 340 *e*P Pn 08 31 22.5 +1.3
CONA Conrad Observa 13.06 325⇓*i*P Pn 08 31 28.1 +1.8
comp=Z,13nm,1.1s
CONA Conrad Observa 13.06 325 P Pn 08 31 28.1 +1.8
comp=Z,13nm,1.1s
AKASG Malin Array Be 13.16 7 P Pn 08 31 26.8 -0.8
AKASG Malin Array Be 13.16 7 Pn Pn 08 31 26.8 -0.8
AKASG Lg Lg 08 35 16.9
AKASG Malin Array Be 13.16 7 Pn Pn 08 31 26.8 -0.8
comp=Z,1.9nm,0.3s,baz=199,slow=13,SNR=4.0
AKASG Lg Lg 08 35 16.9
comp=Z,1.3nm,0.3s,baz=185,slow=28,SNR=4.3
AKASG LR LR 08 37 14.7
comp=Z,2μm,18.6s,baz=185,slow=41
AKASG Malin Array Be 13.16 7 P Pn 08 31 26.8 -0.8
AKH Akhalkalaki 13.37 69 P Pn 08 31 34.3 +3.7
KIV Kislovodsk 13.53 57⇑*e*P Pn 08 31 30.8 -1.9
KIV *e*S **Sn 08 34 06.1 +3.2**
KIV pmax pmax
comp=Z,31nm,1.2s
KIV MLR MLR
comp=Z,1μm,17.0s
KIV Kislovodsk 13.53 57 *e*P Pn 08 31 30.8 -1.9
comp=Z,31nm,1.2s
KBZ Khabaz 13.58 58 P Pn 08 31 35.5 +2.1
KBZ Khabaz 13.58 58 Pn Pn 08 31 35.5 +2.1
KBZ Khabaz 13.58 58 Pn Pn 08 31 35.5 +2.1
comp=Z,0.1nm,0.3s,baz=259,slow=9.0,SNR=6.7
KBZ LR LR 08 38 14.0
comp=Z,2μm,18.4s,baz=257,slow=44
ONI Oni 13.61 64 P Pn 08 31 36.8 +3.0
OKC Ostrava-Krasne 13.71 336 *e*P P 08 31 50.0 +6.2
OKC MLR MLR
comp=Z,2μm,8.7s
OKC Ostrava-Krasne 13.71 336 *ex* P 08 31 50.0 +6.2
OKC AMS AMS 08 37 50.0
comp=Z,2μm,8.7s
KBA Koelnbreinsper 13.73 318⇓*i*P Pn 08 31 38.7 +3.2
comp=Z,39nm,1.5s
MOA Molln 13.76 322⇓*i*Pn Pn 08 31 33.6 -2.2
comp=Z,11nm,1.2s
VRAC Vranov 13.82 331 Pn Pn 08 31 38.0 +1.3
VRAC Vranov 13.82 331 Pn Pn 08 31 38.0 +1.3
comp=Z,0.6nm,0.3s,baz=150,slow=6.7,SNR=3.8
VRAC LR LR 08 37 25.2
comp=Z,2μm,18.1s,baz=148,slow=39
VRAC Vranov 13.82 331 *e*Pn Pn 08 31 37.7 +1.0
VRAC Vranov 13.82 331 P Pn 08 31 38.0 +1.3
MORC Moravsky Berou 13.86 334 ⇑P Pn 08 31 37.0 -0.2
MORC Moravsky Berou 13.86 334 *e*Pn Pn 08 31 38.0 +0.8
MORC Moravsky Berou 13.86 334⇑*i*P Pn 08 31 37.0 -0.2
MORC Moravsky Berou 13.86 334 P Pn 08 31 37.0 -0.2
MORC Moravsky Berou 13.86 334 *e*Pn Pn 08 31 38.0 +0.8
GNI Garni 14.14 74 LR LR 08 37 08.5
comp=Z,1μm,20.6s,baz=89,slow=38
GNI Garni 14.14 74 *e*P Pn 08 31 40.4 -0.8
comp=Z,3.0nm,0.2s
KEST Kesra 14.20 268 *e*Pn Pn 08 31 44.7 +2.8
KEST Kesra 14.20 268 Pn Pn 08 31 44.5 +2.6
comp=Z,0.1nm,0.3s,baz=360,slow=5.2,SNR=12
TREC Trest 14.26 328 *e*P P 08 31 51.3 +1.4
TREC MLR MLR
comp=Z,3μm,10.5s
TREC Trest 14.26 328 *e*P P 08 31 51.3 +1.4
TREC AMS AMS 08 38 20.0
comp=Z,3μm,10.5s
TBLG Delisi 14.35 68 P Pn 08 31 46.6 +2.8
TBLG Delisi 14.35 68 P Pn 08 31 46.6 +2.8
KRLC Kraliky 14.38 333 *e*P Pn 08 31 44.2 -0.1
KRLC Kraliky 14.38 333 *e*P Pn 08 31 44.2 -0.1
KRLC *e*pP P 08 31 52.6 +1.3
PGF Pioggiola 14.53 295 *e*P Pn 08 31 45.5 -0.9
comp=Z,178nm,1.5s
PGF Pioggiola 14.53 295 *e*P Pn 08 31 45.5 -0.9
PGF pmax pmax
comp=Z,178nm,1.5s
PGF Pioggiola 14.53 295 *e*P Pn 08 31 45.5 -0.9
comp=Z,178nm,1.5s
GEC2 GERESS Array S 14.72 324 *e*P P 08 31 57.1 +2.0
comp=Z,16nm,1.1s
GERES GERESS Array B 14.72 324 Pn Pn 08 31 51.5 +2.5
GERES GERESS Array B 14.72 324 Pn Pn 08 31 51.5 +2.5
comp=Z,0.3nm,0.3s,baz=137,slow=14,SNR=5.1
GERES GERESS Array B 14.72 324 Pn Pn 08 31 51.5 +2.5
DGRG David-gareji 14.77 69 P Pn 08 31 52.5 +2.8
WTTA Wattenberg 14.77 315⇑*i*P Pn 08 31 52.2 +2.5
comp=Z,27nm,1.0s
DPC Dobruska-Polom 14.78 333 *e*P Pn 08 31 49.2 -0.5
DPC Dobruska-Polom 14.78 333 *e*P Pn 08 31 49.2 -0.5
DPC *e*pP P 08 32 00.0 +4.3
ISHB Shabestar 14.80 82 *e*P Pn 08 31 51.3 +1.0
BHD Baghdad 14.92 102 *e*P Pn 08 31 48.0 -3.6
BHD *e*S **Sn 08 34 31.5 -5.3**
KHC Kasperske Hory 14.98 324 *e*P P 08 31 58.3 +0.3
KHC pmax pmax
comp=Z,22nm,1.0s
KHC Kasperske Hory 14.98 324 *e*P P 08 31 58.3 +0.3
KHC *ex* x 08 32 06.0
KHC *e*S Sn 08 34 45.3 +7.1
KHC AMS AMS 08 38 20.0
comp=Z,4μm,8.9s
KHC Kasperske Hory 14.98 324 *e*P P 08 31 58.3 +0.3
comp=Z,22nm,1.0s
KHC Kasperske Hory 14.98 324 *e*P P 08 31 58.3 +0.3
comp=Z,22nm,1.0s
UPC Upice 15.02 332 *e*P Pn 08 31 54.1 +1.2
UPC Upice 15.02 332 *e*P Pn 08 31 54.1 +1.2
UPC *e*pP **pP 08 32 03.3 +1.5**
FETA Feichten 15.15 313⇑*i*P Pn 08 31 57.2 +2.3
comp=Z,34nm,1.0s
PRU Pruhonice 15.19 328 *e*P P 08 32 01.1 +0.9
PRU *e* 08 34 49.2
PRU MLR MLR
comp=Z,4μm,10.8s
PRU Pruhonice 15.19 328 *e*P P 08 32 01.1 +0.9

PRU ex x 08 32 08.9
PRU eS **Sn** **08 34 49.2 +6.0**
PRU AMS AMS 08 38 40.0
comp=Z,4µm,10.8s
PRU Pruhonice 15.19 328 eP **P** **08 32 01.1 +0.9**
KSP Ksiaz 15.19 334 eP **Pn** **08 31 54.6 -0.7**
KSP eS **Sn** **08 34 50.5 +7.1**
KSP Ksiaz 15.19 334 eP Pn 08 31 47.6 -7.7
WET Wettzell 15.32 323 eP **P** **08 32 03.1 +1.4**
comp=Z,33nm,1.4s
RETA Reutte 15.39 315⇓ *i*sP sP 08 32 05.6 -2.0
comp=Z,15nm,0.7s
DAVOX Davos/Dischmat 15.53 311 Pn **Pn** **08 32 01.9 +2.1**
DAVOX Davos/Dischmat 15.53 311 Pn **Pn** **08 32 01.9 +2.1**
comp=Z,0.4nm,0.3s,baz=137,slow=18,SNR=6.7
DAVOX Davos/Dischmat 15.53 311 Pn **Pn** **08 32 01.9 +2.1**
CMAH Djebel Manchou 15.55 272 P **P** **08 32 03.2 -1.2**
CMAH Djebel Manchou 15.55 272 P **P** **08 32 03.2 -1.2**
ABSA Djebel Ababsia 15.57 271 P **P** **08 32 04.4 -0.2**
ABSA Djebel Ababsia 15.57 271 P **P** **08 32 04.4 -0.2**
PVCC Panska Ves 15.59 330 eP **P** **08 32 05.9 +1.2**
PVCC MLR MLR
comp=Z,4µm,9.2s
PVCC Panska Ves 15.59 330 eP **P** **08 32 05.9 +1.2**
PVCC AMS AMS 08 39 10.0
comp=Z,4µm,9.2s
PVCC Panska Ves 15.59 330 eP **P** **08 32 05.9 +1.2**
comp=Z,4µm,9.2s
TUE Stuetta 15.70 310 eP **P** **08 32 04.3 -1.8**
comp=Z,20nm,1.1s
TUE Stuetta 15.70 310 eP **P** **08 32 04.3 -1.8**
comp=Z,20nm,1.1s
DAVA Damuels 15.78 313⇓ *i*P **P** **08 32 05.7 -1.3**
comp=Z,37nm,1.4s
DAVA Damuels 15.78 313 P **P** **08 32 05.7 -1.3**
comp=Z,37nm,1.4s
IHRS Heris 15.92 81 eP **P** **08 32 07.5 -1.2**
IHRS Heris 15.92 81 eP **P** **08 32 07.5 -1.2**
SBF Sospel 15.97 299 eP **Pn** **08 32 07.1 +1.6**
comp=Z,207nm,1.2s
SBF Sospel 15.97 299 eP **Pn** **08 32 07.1 +1.6**
SBF pmax pmax
comp=Z,207nm,1.2s
SBF Sospel 15.97 299 eP **Pn** **08 32 07.1 +1.6**
comp=Z,207nm,1.2s
SBF Sospel 15.97 299 eP **Pn** **08 32 07.1 +1.6**
comp=Z,104nm,1.2s
CAEH 'Ain El Ouahch 15.98 273 P **P** **08 32 09.8 +0.7**
CAEH 'Ain El Ouahch 15.98 273 P **P** **08 32 09.8 +0.7**
VORD Divnogorie 15.98 30 eP **Pn** **08 32 03.4 -2.0**
REVF Revere 15.98 298 eP **P** **08 32 08.7 -0.4**
REVF Revere 15.98 298 eP **P** **08 32 08.7 -0.4**
REVF Revere 15.98 298 eP **P** **08 32 08.7 -0.4**
REVF Revere 15.98 298 eP **P** **08 32 08.7 -0.4**
AUTN L'Aution 16.01 299 eP **Pn** **08 32 07.9 +1.7**
AUTN L'Aution 16.01 299 eP **Pn** **08 32 07.9 +1.7**
AUTN L'Aution 16.01 299 eP **Pn** **08 32 07.9 +1.7**
AUTN L'Aution 16.01 299 eP **Pn** **08 32 07.9 +1.7**
ROTZ Rotzenmuhle 16.07 324 eP **P** **08 32 10.3 +0.3**
comp=Z,17nm,1.2s
BRG Berggiesshubel 16.11 329 eP **P** **08 32 11.3 +0.9**
comp=Z,18nm,1.2s
BRG *i* 08 32 14.8
comp=Z,110nm,2.0s
BRG S **Sn** **08 35 09.0 +3.4**
BRG SS **S** **08 35 23.0 +4.0**
BRG
comp=N,2µm,9.8s
BRG pmax pmax
comp=E,2µm,16.2s
BRG
comp=Z,3µm,10.7s
BRG Berggiesshubel 16.11 329 eP **P** **08 32 11.9 +1.5**
comp=Z,110nm,2.0s
BRG Berggiesshubel 16.11 329 eP **P** **08 32 11.3 +0.9**
BRG S **Sn** **08 35 09.0 +3.4**
BRG pmax pmax
comp=Z,19nm,1.2s
BRG pmax pmax
comp=Z,110nm,2.0s
BRG MLR MLR
comp=N,2µm,9.8s
BRG MLR MLR
comp=E,2µm,16.2s
BRG MLR MLR
comp=Z,3µm,10.7s
BRG Berggiesshubel 16.11 329 eP **P** **08 32 11.3 +0.9**
comp=Z,110nm,2.0s
VSR Storozhevoye 16.13 29 eP **Pn** **08 32 05.3 -2.0**
TOUF Mont Tournerai 16.14 299 eP **P** **08 32 10.3 -0.8**
TOUF Mont Tournerai 16.14 299 eP **P** **08 32 10.3 -0.8**
TOUF Mont Tournerai 16.14 299 eP **P** **08 32 10.3 -0.8**
TOUF Mont Tournerai 16.14 299 eP **P** **08 32 10.3 -0.8**
CKFL Kef-Lekhel 16.15 272 P **P** **08 32 09.9 -1.2**
CKFL Kef-Lekhel 16.15 272 P **P** **08 32 09.9 -1.2**
IBDR Badra 16.18 101 eP **Pn** **08 32 08.1 -0.1**
IBDR eS **Sn** **08 35 07.3 -0.3**
NKC Novy Kostel 16.28 325 AMS AMS 08 39 10.0
comp=Z,3µm,8.8s
CALN Calern 16.32 298 eP **Pn** **08 32 07.9 -2.1**
CALN Calern 16.32 298 eP **Pn** **08 32 07.9 -2.1**
CALN Calern 16.32 298 eP **Pn** **08 32 07.9 -2.1**
WERN Wernitzgruen 16.35 325 eP **P** **08 32 14.5 +1.3**
comp=Z,16nm,1.0s
CASM Ain Smara 16.36 271 P **P** **08 32 13.2 -0.1**
CASM Ain Smara 16.36 271 P **P** **08 32 13.2 -0.1**
FBE Freiberg 16.39 328 eP **P** **08 32 15.3 +1.8**
comp=Z,54nm,1.2s
TANN Tannenbergstha 16.40 326 eP **P** **08 32 15.2 +1.4**
comp=Z,22nm,1.2s
GUNZ Gunzen 16.43 325 eP **P** **08 32 15.6 +1.6**
comp=Z,35nm,1.5s
FRF La Foret Royal 16.44 297 eP **P** **08 32 14.1 -0.1**
comp=Z,118nm,1.3s
FRF La Foret Royal 16.44 297 eP **P** **08 32 14.1 -0.1**
FRF pmax pmax
comp=Z,118nm,1.3s
FRF La Foret Royal 16.44 297 eP **P** **08 32 14.1 -0.1**
comp=Z,118nm,1.3s
FRF La Foret Royal 16.44 297 eP **P** **08 32 14.1 -0.1**
comp=Z,59nm,1.3s
LMR La Mourre 16.49 297 eP **P** **08 32 13.8 -0.9**
comp=Z,116nm,1.5s
LMR La Mourre 16.49 297 eP **P** **08 32 13.8 -0.9**
LMR pmax pmax
comp=Z,116nm,1.5s
LMR La Mourre 16.49 297 eP **P** **08 32 13.8 -0.9**
comp=Z,116nm,1.5s
LMR La Mourre 16.49 297 eP **P** **08 32 13.8 -0.9**
comp=Z,58nm,1.5s
GRF Grafenberg Arr 16.49 322 eP **P** **08 32 16.0 +1.3**
comp=Z,22nm,1.3s
SUW Suwalki 16.57 352 eP **Pn** **08 32 10.1 -2.8**
SUW Suwalki 16.57 352 eP **Pn** **08 32 10.1 -2.8**
PLN Plauen 16.59 325 eP **P** **08 32 17.5 +1.7**
comp=Z,150nm,1.2s
MAK Makhachkala 16.60 65 eP Pn 08 32 08.1 -5.3
MAK eS Sn 08 35 10.1 -7.4
MAK pmax pmax
comp=Z,167nm,2.2s
MAK MLR MLR
comp=Z,636nm,9.0s
MBDF Montbardon 16.68 301 eP **P** **08 32 17.3 +0.3**
comp=Z,44nm,1.0s
MBDF Montbardon 16.68 301 eP **P** **08 32 17.3 +0.3**
MBDF pmax pmax
comp=Z,44nm,1.0s
MBDF Montbardon 16.68 301 eP **P** **08 32 17.3 +0.3**
comp=Z,44nm,1.0s
MBDF Montbardon 16.68 301 eP **P** **08 32 17.3 +0.3**
comp=Z,22nm,1.0s
DFRA Djebel Bou Aff 16.79 273 P **P** **08 32 19.2 +1.0**
DFRA Djebel Bou Aff 16.79 273 P **P** **08 32 19.2 +1.0**
CLL Collm 16.83 329 eP **P** **08 32 19.9 +1.5**
comp=Z,22nm,1.2s
CLL Collm 16.83 329 eP **Pn** **08 32 16.0 -0.3**
CLL Collm 16.83 329 epP **Pn** **08 32 16.0 -0.3**
CLL *i* sP **sP** **08 32 19.7 -3.7**
comp=Z,142nm,2.5s
CLL esPPP 08 32 34.0
CLL eSS **S** **08 35 32.0 -1.6**
SPAK Spaichingen-Ko 16.84 314 eP **Pn** **08 32 16.3 -0.2**
BNI Bardonecchia 16.85 302 eP **P** **08 32 19.9 +1.1**
BNI pmax pmax
comp=Z,44nm,1.3s
BNI Bardonecchia 16.85 302 eP **P** **08 32 19.9 +1.1**
comp=Z,44nm,1.3s
MNK Minsk 16.87 2 eP **Pn** **08 32 14.0 -2.8**
MNK eS **Sn** **08 35 24.0 0.0**
MNK pmax pmax
comp=Z,140nm,1.0s
MICGM Minsk 16.87 2 eP **Pn** **08 32 14.0 -2.8**
SENIN Lac Senin/Sane 16.92 307 eP **P** **08 32 21.7 +2.0**
comp=Z,124nm,1.8s
SENIN Lac Senin/Sane 16.92 307 eP **P** **08 32 21.7 +2.0**
comp=Z,124nm,1.8s
LPG La Plagne 16.95 304 eP **P** **08 32 21.3 +1.2**
comp=Z,66nm,1.0s
LPG La Plagne 16.95 304 eP **P** **08 32 21.3 +1.2**
LPG pmax pmax
comp=Z,66nm,1.0s
LPG La Plagne 16.95 304 eP **P** **08 32 21.3 +1.2**
comp=Z,66nm,1.0s
LPG La Plagne 16.95 304 eP **P** **08 32 21.3 +1.2**
comp=Z,33nm,1.0s
LPL La Plagne 16.97 304 eP **P** **08 32 20.2 0.0**
LPL La Plagne 16.97 304 eP **P** **08 32 20.2 0.0**
LPL La Plagne 16.97 304 eP **P** **08 32 20.2 0.0**
LPL La Plagne 16.97 304 eP **P** **08 32 20.2 0.0**
RSL Roselend 17.10 304 eP **P** **08 32 26.0 +4.4**
RSL Roselend 17.10 304 eP **P** **08 32 26.0 +4.4**
RSL Roselend 17.10 304 eP **P** **08 32 26.0 +4.4**
BFO Black Forest 17.22 314 eP **P** **08 32 25.4 +2.6**
comp=Z,23nm,1.1s
BFO Black Forest 17.22 314 eP **P** **08 32 24.8 +2.0**
BFO pmax pmax
comp=Z,20nm,1.1s
BFO Black Forest 17.22 314 eP **P** **08 32 24.8 +2.0**
comp=Z,20nm,1.1s
BFO Black Forest 17.22 314 eP **P** **08 32 24.8 +2.0**
comp=Z,20nm,1.1s
SET Setif 17.23 272 P **P** **08 32 23.0 -0.1**
SET Setif 17.23 272 P **P** **08 32 23.0 -0.1**
NACGM Naroch 17.26 360 eP **Pn** **08 32 20.0 -1.6**
BBS Basel-Blauen 17.27 311 eP **P** **08 32 23.0 -0.4**
BBS Basel-Blauen 17.27 311 eP **P** **08 32 23.0 -0.4**
BBS Basel-Blauen 17.27 311 eP **P** **08 32 23.0 -0.4**
NEUB Neuenburg 17.28 327 eP **P** **08 32 25.6 +2.3**
comp=Z,59nm,1.4s
SMRF Simiane la Rot 17.30 298 eP **Pn** **08 32 20.7 -1.6**
SMRF Simiane la Rot 17.30 298 eP **Pn** **08 32 20.7 -1.6**
OG01 Vacheresse 17.30 306 eP **P** **08 32 25.9 +2.1**
OG01 Vacheresse 17.30 306 eP **P** **08 32 25.9 +2.1**
OG01 Vacheresse 17.30 306 eP **P** **08 32 25.9 +2.1**
ORIF Oris-en-Rattie 17.34 301 eP **Pn** **08 32 22.5 -0.4**
comp=Z,57nm,1.2s
ORIF *e*R
comp=Z,1µm,18.0s
ORIF Oris-en-Rattie 17.34 301 eP **Pn** **08 32 22.5 -0.4**
ORIF pmax pmax
comp=Z,57nm,1.2s
ORIF Oris-en-Rattie 17.34 301 eP **Pn** **08 32 22.5 -0.4**
comp=Z,57nm,1.2s
ORIF Oris-en-Rattie 17.34 301 eP **Pn** **08 32 22.5 -0.4**
comp=Z,29nm,1.2s
RUE Ruedersdorf 17.44 332 eP **P** **08 32 25.6 +0.5**
comp=Z,14nm,0.5s
RUE Ruedersdorf 17.44 332 eP **P** **08 32 25.6 +0.5**
comp=Z,14nm,0.5s
MOF Molkenrain 17.68 311 eP **Pn** **08 32 27.2 +0.2**
MOF Molkenrain 17.68 311 eP **Pn** **08 32 27.2 +0.2**
MOF Molkenrain 17.68 311 eP **Pn** **08 32 27.2 +0.2**
MOF Molkenrain 17.68 311 eP **Pn** **08 32 27.2 +0.2**
CABF La Chapelle 17.79 307 eP **P** **08 32 29.2 0.0**
comp=Z,42nm,0.8s
CABF La Chapelle 17.79 307 eP **P** **08 32 29.2 0.0**
CABF pmax pmax
comp=Z,42nm,0.8s
CABF La Chapelle 17.79 307 eP **P** **08 32 29.2 0.0**
comp=Z,42nm,0.8s
CABF La Chapelle 17.79 307 eP **P** **08 32 29.2 0.0**
comp=Z,21nm,0.8s
HINF Hinteralfeld 17.83 311 eP **Pn** **08 32 27.5 -1.3**
comp=Z,27nm,1.0s
HINF Hinteralfeld 17.83 311 eP **Pn** **08 32 27.5 -1.3**
HINF pmax pmax
comp=Z,27nm,1.0s
HINF Hinteralfeld 17.83 311 eP **Pn** **08 32 27.5 -1.3**
comp=Z,27nm,1.0s
HINF Hinteralfeld 17.83 311 eP **Pn** **08 32 27.5 -1.3**
comp=Z,14nm,1.0s
ECH Echery 17.84 313 eP **P** **08 32 33.4 +3.8**
ECH pmax pmax
comp=Z,21nm,1.2s
ECH Echery 17.84 313 eP **P** **08 32 33.4 +3.8**
comp=Z,20nm,1.2s
ECH Echery 17.84 313 eP Pn 08 32 21.4 -7.5
LANF Langenberg 17.86 315 eP **P** **08 32 31.4 +1.6**
LANF Langenberg 17.86 315 eP **P** **08 32 31.4 +1.6**
LANF Langenberg 17.86 315 eP **P** **08 32 31.4 +1.6**
LANF Langenberg 17.86 315 eP **P** **08 32 31.4 +1.6**
CDF Champ du Feu 17.87 313 eP **Pn** **08 32 28.9 -0.4**
comp=Z,48nm,1.2s
CDF Champ du Feu 17.87 313 eP **Pn** **08 32 28.9 -0.4**
CDF pmax pmax
comp=Z,48nm,1.2s
CDF Champ du Feu 17.87 313 eP **Pn** **08 32 28.9 -0.4**
comp=Z,48nm,1.2s
CDF Champ du Feu 17.87 313 eP **Pn** **08 32 28.9 -0.4**
comp=Z,24nm,1.2s
OG35 Corcelles 17.91 305 eP **P** **08 32 32.4 +1.9**
VIVF Saint-Julien-l 18.15 300 eP **P** **08 32 34.6 +1.5**
comp=Z,33nm,1.1s
VIVF Saint-Julien-l 18.15 300 eP **P** **08 32 34.6 +1.5**
VIVF pmax pmax
comp=Z,33nm,1.1s
VIVF Saint-Julien-l 18.15 300 eP **P** **08 32 34.6 +1.5**
comp=Z,33nm,1.1s
VIVF Saint-Julien-l 18.15 300 eP **P** **08 32 34.6 +1.5**
comp=Z,16nm,1.1s
TNS Taunus Mts 18.22 319 eP **P** **08 32 34.8 +1.0**
comp=Z,39nm,1.4s
HAU Haudompre 18.22 311 eP **P** **08 32 37.1 +3.3**
comp=Z,39nm,1.0s
HAU *e*R
comp=Z,2µm,20.2s
HAU Haudompre 18.22 311 eP **P** **08 32 37.1 +3.3**
HAU pmax pmax
comp=Z,39nm,1.0s
HAU Haudompre 18.22 311 eP **P** **08 32 37.1 +3.3**
comp=Z,39nm,1.0s
CLZ Clausthal 18.34 326 eP **P** **08 32 36.1 +0.9**
comp=Z,39nm,1.4s
LASF Ste Croix 18.53 298 eP **Pn** **08 32 39.0 +1.6**
comp=Z,102nm,1.4s
LASF Ste Croix 18.53 298 eP **Pn** **08 32 39.0 +1.6**
comp=Z,102nm,1.4s
LASF Ste Croix 18.53 298 eP **Pn** **08 32 39.0 +1.6**
comp=Z,51nm,1.4s
THEF They Montfort 18.54 311 eP **Pn** **08 32 37.6 +0.1**
THEF They Montfort 18.54 311 eP **Pn** **08 32 37.6 +0.1**
THEF They Montfort 18.54 311 eP **Pn** **08 32 37.6 +0.1**
THEF They Montfort 18.54 311 eP **Pn** **08 32 37.6 +0.1**
IRAZ Razeghan 18.66 90 eP **Pn** **08 32 39.8 +0.5**
IRAZ Razeghan 18.66 90 eP **Pn** **08 32 39.8 +0.5**
RUP Ruppelstein 18.66 317 eP **Pn** **08 32 40.2 +1.2**
RUP Ruppelstein 18.66 317 eP **Pn** **08 32 40.2 +1.2**
RUP Ruppelstein 18.66 317 eP **Pn** **08 32 40.2 +1.2**
OBN Obninsk 18.68 18⇑ eP **P** **08 32 35.7 -3.0**
OBN eS **Sn** **08 36 03.8 -3.8**
OBN pmax pmax
comp=Z,8.0nm,1.0s
OBN MLR MLR
comp=Z,2µm,19.0s
IGZV Ghazvin 18.68 87 eP **Pn** **08 32 40.7 +1.2**
IGZV Ghazvin 18.68 87 eP **Pn** **08 32 40.7 +1.2**
PAGF Fort de Pagny 18.84 312 eP **Pn** **08 32 44.1 +3.0**
comp=Z,23nm,1.4s
PAGF Fort de Pagny 18.84 312 eP **Pn** **08 32 44.1 +3.0**
comp=Z,23nm,1.4s
NRDL Niedersach Rie 18.92 327 eP **Pn** **08 32 42.7 +0.7**
comp=Z,25nm,1.2s
NAY Al-Naaiem 18.92 110 eP **P** **08 32 40.2 -1.4**
NAY AMb AMB 08 32 51.0
comp=Z,17nm,0.8s
NAY Al-Naaiem 18.92 110 eP **P** **08 32 40.2 -1.4**
comp=Z,17nm,0.8s
SFTF Sexfontaines 19.09 310 eP **Pn** **08 32 46.0 +1.8**
comp=Z,68nm,1.0s
SFTF Sexfontaines 19.09 310 eP **Pn** **08 32 46.0 +1.8**
comp=Z,68nm,1.0s
SFTF Sexfontaines 19.09 310 eP **Pn** **08 32 46.0 +1.8**
comp=Z,34nm,1.0s
WLF Walferdange 19.14 315 P **Pn** **08 32 45.7 +1.0**
comp=Z,32nm,2.1s
WLF Walferdange 19.14 315 eP **Pn** **08 32 46.7 +2.0**
comp=Z,45nm,1.5s
WLF Walferdange 19.14 315 eP **Pn** **08 32 45.1 +0.4**
WLF pmax pmax
comp=Z,21nm,1.0s
WLF Walferdange 19.14 315 eP **Pn** **08 32 45.1 +0.4**
comp=Z,21nm,1.0s
WLF Walferdange 19.14 315 eP **Pn** **08 32 45.1 +0.4**
comp=Z,21nm,1.0s
EMHD Djebel Mahouad 19.17 273 P **Pn** **08 32 46.0 +0.6**
EMHD Djebel Mahouad 19.17 273 P **Pn** **08 32 46.0 +0.6**
MEZF Maizieres J'vi 19.21 311 eP **Pn** **08 32 47.2 +1.5**
comp=Z,116nm,1.2s
MEZF Maizieres J'vi 19.21 311 eP **Pn** **08 32 47.2 +1.5**
comp=Z,116nm,1.2s
MEZF Maizieres J'vi 19.21 311 eP **Pn** **08 32 47.2 +1.5**
comp=Z,58nm,1.2s
LBL Lubilhac 19.22 301 eP **Pn** **08 32 47.4 +1.5**
LBL Lubilhac 19.22 301 eP **Pn** **08 32 47.4 +1.5**
LBL Lubilhac 19.22 301 eP **Pn** **08 32 47.4 +1.5**
LBL Lubilhac 19.22 301 eP **Pn** **08 32 47.4 +1.5**
SMF Signal de Mont 19.25 305 eP **Pn** **08 32 47.3 +1.2**
comp=Z,42nm,0.9s
SMF Signal de Mont 19.25 305 eP **Pn** **08 32 47.3 +1.2**
SMF pmax pmax
comp=Z,42nm,0.9s
SMF Signal de Mont 19.25 305 eP **Pn** **08 32 47.3 +1.2**
comp=Z,42nm,0.9s
SMF Signal de Mont 19.25 305 eP **Pn** **08 32 47.3 +1.2**
comp=Z,21nm,0.9s
KBD Kabd 19.30 110 eP **P** **08 32 44.1 -1.6**
KBD AMb AMB 08 32 49.5
comp=Z,29nm,1.0s
KBD Kabd 19.30 110 eP **P** **08 32 44.1 -1.6**
comp=Z,29nm,1.0s
RDF Al-Radifah 19.32 111 eP **P** **08 32 44.8 -1.2**
RDF AMb AMB 08 32 49.7
comp=Z,64nm,1.4s
RDF Al-Radifah 19.32 111 eP **P** **08 32 44.8 -1.2**
comp=Z,64nm,1.4s
LOR Lormes 19.45 307 eP **Pn** **08 32 49.5 +0.9**
comp=Z,63nm,1.1s
LOR *e*R
comp=Z,1µm,20.8s
LOR Lormes 19.45 307 eP **Pn** **08 32 49.5 +0.9**
comp=Z,63nm,1.1s
LOR Lormes 19.45 307 eP **Pn** **08 32 49.5 +0.9**
comp=Z,32nm,1.1s
MOS Moscow 19.50 18 eP P 08 32 42.5 -5.2
MOS eS **Sn** **08 36 25.2 -2.3**
MOS pmax pmax
comp=Z,89nm,2.0s
MOS pmax pmax
comp=Z,400nm,3.2s
MOS MLR MLR
comp=E,1µm,14.0s
MOS MLR MLR
comp=Z,3µm,15.0s
MOS MLR MLR
comp=N,2µm,14.0s
IR3 Iran Long-Peri 19.51 89 eP **Pn** **08 32 49.3 -0.1**
IR3 Iran Long-Peri 19.51 89 eP **Pn** **08 32 49.3 -0.1**
PYM Petit Puy Mans 19.52 302 eP **Pn** **08 32 52.3 +2.8**
PYM Petit Puy Mans 19.52 302 eP **Pn** **08 32 52.3 +2.8**
PYM Petit Puy Mans 19.52 302 eP **Pn** **08 32 52.3 +2.8**
AGO Saint Agoulin 19.53 303 eP **Pn** **08 32 51.1 +1.6**
AGO Saint Agoulin 19.53 303 eP **Pn** **08 32 51.1 +1.6**
MTLF Montolieu 19.56 295 eP **Pn** **08 32 50.9 +1.0**
comp=N,33nm,1.2s
MTLF Montolieu 19.56 295 eP **Pn** **08 32 50.9 +1.0**
MTLF pmax pmax
comp=Z,33nm,1.2s
MTLF Montolieu 19.56 295 eP **Pn** **08 32 50.9 +1.0**
comp=Z,33nm,1.2s
MTLF Montolieu 19.56 295 eP **Pn** **08 32 50.9 +1.0**
comp=Z,16nm,1.2s
SSF Saint Saulge 19.60 306 eP **Pn** **08 32 51.5 +1.2**
comp=Z,58nm,0.9s
SSF Saint Saulge 19.60 306 eP **Pn** **08 32 51.5 +1.2**
SSF pmax pmax
comp=Z,58nm,0.9s
SSF Saint Saulge 19.60 306 eP **Pn** **08 32 51.5 +1.2**
comp=Z,58nm,0.9s
SSF Saint Saulge 19.60 306 eP **Pn** **08 32 51.5 +1.2**
comp=Z,29nm,0.9s
AVF Avril sur Loir 19.61 305 eP **Pn** **08 32 51.2 +0.8**
comp=Z,65nm,1.1s
AVF Avril sur Loir 19.61 305 eP **Pn** **08 32 51.2 +0.8**
AVF pmax pmax
comp=Z,65nm,1.1s
AVF Avril sur Loir 19.61 305 eP **Pn** **08 32 51.2 +0.8**
comp=Z,65nm,1.1s
AVF Avril sur Loir 19.61 305 eP **Pn** **08 32 51.2 +0.8**
comp=Z,32nm,1.1s
MEM Membach 19.72 318 P **Pn** **08 32 52.4 +0.7**
IBBN Ibbenburen 19.85 324 eP **Pn** **08 32 55.4 +2.2**
comp=Z,39nm,1.1s
BGF Bois d'Agland 19.87 304 eP **Pn** **08 32 54.1 +0.6**
comp=Z,138nm,1.2s
BGF Bois d'Agland 19.87 304 eP **Pn** **08 32 54.1 +0.6**
BGF pmax pmax
comp=Z,138nm,1.2s
BGF Bois d'Agland 19.87 304 eP **Pn** **08 32 54.1 +0.6**
comp=Z,138nm,1.2s
BGF Bois d'Agland 19.87 304 eP **Pn** **08 32 54.1 +0.6**
comp=Z,69nm,1.2s
CAF Calviac 19.96 299 eP **Pn** **08 32 55.4 +0.7**
comp=Z,35nm,1.2s
CAF Calviac 19.96 299 eP **Pn** **08 32 55.4 +0.7**
CAF pmax pmax
comp=Z,35nm,1.2s
CAF Calviac 19.96 299 eP **Pn** **08 32 55.4 +0.7**
comp=Z,35nm,1.2s
CAF Calviac 19.96 299 eP **Pn** **08 32 55.4 +0.7**
comp=Z,17nm,1.2s
BCLA Clavier 20.00 317 P **Pn** **08 32 54.7 -0.3**
comp=Z,18nm,1.3s
GIVF Givet 20.10 315 eP Pn 08 32 56.6 +0.4
comp=Z,79nm,1.3s
GIVF Givet 20.10 315 eP Pn 08 32 56.6 +0.4
GIVF pmax pmax
comp=Z,79nm,1.3s
GIVF Givet 20.10 315 eP Pn 08 32 56.6 +0.4
comp=Z,79nm,1.3s
GIVF Givet 20.10 315 eP Pn 08 32 56.6 +0.4
comp=Z,40nm,1.3s
IVRN Varamin 20.19 90 eP **P** **08 32 56.1 +0.6**
IVRN Varamin 20.19 90 eP **P** **08 32 56.1 +0.6**
TCF Toulx Ste Croi 20.21 303 eP Pn 08 32 56.9 -0.7
comp=Z,31nm,1.1s
TCF Toulx Ste Croi 20.21 303 eP Pn 08 32 56.9 -0.7
TCF pmax pmax
comp=Z,31nm,1.1s
TCF Toulx Ste Croi 20.21 303 eP Pn 08 32 56.9 -0.7
comp=Z,31nm,1.1s
TCF Toulx Ste Croi 20.21 303 eP Pn 08 32 56.9 -0.7
comp=Z,16nm,1.1s
DOU Dourbes 20.23 315 P Pn 08 32 57.9 +0.3
comp=Z,15nm,1.7s
IPIR Pirpir 20.23 97 eP **P** **08 32 56.9 +0.6**
IPIR Pirpir 20.23 97 eP **P** **08 32 56.9 +0.6**
HYF Humbligny 20.23 306 eP Pn 08 32 58.7 +0.9
HYF Humbligny 20.23 306 eP Pn 08 32 58.7 +0.9
HYF Humbligny 20.23 306 eP Pn 08 32 58.7 +0.9
EBNR Beni Rached 20.28 274 P **P** **08 32 55.0 -1.5**
EBNR Beni Rached 20.28 274 P **P** **08 32 55.0 -1.5**
IDMV Damavand 20.29 88 eP **P** **08 32 56.6 -0.2**
IDMV Damavand 20.29 88 eP **P** **08 32 56.6 -0.2**
BAIF Baives 20.43 315 eP **P** **08 32 58.5 +0.6**
comp=Z,120nm,1.5s
BAIF Baives 20.43 315 eP **P** **08 32 58.5 +0.6**
BAIF pmax pmax
comp=Z,120nm,1.5s
BAIF Baives 20.43 315 eP **P** **08 32 58.5 +0.6**
comp=Z,120nm,1.5s
BAIF Baives 20.43 315 eP **P** **08 32 58.5 +0.6**
comp=Z,60nm,1.5s
RJF Les Rejaudoux 20.43 300 eP Pn 08 33 01.1 +1.0
comp=Z,48nm,1.2s

RJF *e*R
comp=Z,576nm,18.8s
RJF Les Rejaudoux 20.43 300 *e*P Pn 08 33 01.1 +1.0
RJF pmax pmax
comp=Z,48nm,1.2s
RJF Les Rejaudoux 20.43 300 *e*P Pn 08 33 01.1 +1.0
comp=Z,48nm,1.2s
ECHA Ech Chlef 20.44 274 P P 08 32 52.2 -5.9
ETRT Tiaret 20.66 272 P P 08 32 52.0 -8.7
EANR 'Ain N'Sour 20.69 273 P **P 08 33 00.0 -1.0**
EANR 'Ain N'Sour 20.69 273 P **P 08 33 00.0 -1.0**
VSU Vasula 20.83 360*c i*P **P 08 33 01.5 -0.7**
VSU pmax pmax
comp=Z,30nm,1.0s
VSU Vasula 20.83 360 *i* P **P 08 33 01.5 -0.7**
comp=Z,30nm,1.0s
RESF Ens 20.87 293 *e*P **P 08 33 03.4 +0.5**
RESF Ens 20.87 293 *e*P **P 08 33 03.4 +0.5**
RESF Ens 20.87 293 *e*P **P 08 33 03.4 +0.5**
EPF Esparros 20.89 293 *e*P Pn 08 33 05.7 +0.1
EPF pmax pmax
comp=Z,18nm,1.0s
EPF Esparros 20.89 293 *e*P Pn 08 33 05.7 +0.1
comp=Z,18nm,1.0s
EPF Esparros 20.89 293 *e*P Pn 08 33 05.7 +0.1
comp=Z,9.1nm,1.0s
LFF La Frestale 20.89 299 *e*P Pn 08 33 05.4 0.0
LFF La Frestale 20.89 299 *e*P Pn 08 33 05.4 0.0
LFF La Frestale 20.89 299 *e*P Pn 08 33 05.4 0.0
LFF La Frestale 20.89 299 *e*P Pn 08 33 05.4 0.0
LABF Labassere 21.08 293 *e*P **P 08 33 06.0 +0.9**
LABF Labassere 21.08 293 *e*P **P 08 33 06.0 +0.9**
LABF Labassere 21.08 293 *e*P **P 08 33 06.0 +0.9**
IGAR Gharneh 21.24 97 *e*Pn **P 08 33 07.1 0.0**
RAYN Ar Rayn 21.28 126 *e*Pn **P 08 33 09.0 +1.6**
comp=Z,35nm,1.3s
RAYN Ar Rayn 21.28 126 *e*Pn **P 08 33 09.0 +1.6**
comp=Z,35nm,1.3s
IZEF Zefreh 21.29 95 *e*P **P 08 33 07.7 0.0**
IZEF Zefreh 21.29 95 *e*P **P 08 33 07.7 0.0**
ETSF Etsaut 21.53 293 *e*P **P 08 33 11.4 +1.4**
comp=Z,36nm,1.0s
ETSF Etsaut 21.53 293 *e*P **P 08 33 11.4 +1.4**
ETSF pmax pmax
comp=Z,36nm,1.0s
ETSF Etsaut 21.53 293 *e*P **P 08 33 11.4 +1.4**
comp=Z,36nm,1.0s
ETSF Etsaut 21.53 293 *e*P **P 08 33 11.4 +1.4**
comp=Z,18nm,1.0s
MFF Saint Martin d 21.86 303 *e*P **P 08 33 15.6 +2.2**
comp=Z,161nm,1.4s
MFF Saint Martin d 21.86 303 *e*P **P 08 33 15.6 +2.2**
MFF pmax pmax
comp=Z,161nm,1.4s
MFF Saint Martin d 21.86 303 *e*P **P 08 33 15.6 +2.2**
comp=Z,161nm,1.4s
MFF Saint Martin d 21.86 303 *e*P **P 08 33 15.6 +2.2**
comp=Z,81nm,1.4s
SJPF Ste Jean 22.04 293 *e*P **P 08 33 16.9 +1.6**
comp=Z,160nm,1.4s
SJPF Ste Jean 22.04 293 *e*P **P 08 33 16.9 +1.6**
SJPF pmax pmax
comp=Z,160nm,1.4s
SJPF Ste Jean 22.04 293 *e*P **P 08 33 16.9 +1.6**
comp=Z,160nm,1.4s
SJPF Ste Jean 22.04 293 *e*P **P 08 33 16.9 +1.6**
comp=Z,80nm,1.4s
LDF La Druitiere 22.42 308 *e*P **P 08 33 21.0 +1.6**
comp=Z,133nm,1.4s
LDF La Druitiere 22.42 308 *e*P **P 08 33 21.0 +1.6**
LDF pmax pmax
comp=Z,133nm,1.4s
LDF La Druitiere 22.42 308 *e*P **P 08 33 21.0 +1.6**
comp=Z,133nm,1.4s
LDF La Druitiere 22.42 308 *e*P **P 08 33 21.0 +1.6**
comp=Z,67nm,1.4s
FLN La Foliniere 22.70 308 *e*P **P 08 33 23.3 +0.9**
comp=Z,80nm,1.1s
FLN *e*R
comp=Z,962nm,20.0s
FLN La Foliniere 22.70 308 *e*P **P 08 33 23.3 +0.9**
FLN pmax pmax
comp=Z,80nm,1.1s
FLN La Foliniere 22.70 308 *e*P **P 08 33 23.3 +0.9**
comp=Z,80nm,1.1s
FLN La Foliniere 22.70 308 *e*P **P 08 33 23.3 +0.9**
comp=Z,40nm,1.1s
GRR Gorron 22.82 307⇑ *i*P **P 08 33 26.0 +2.4**
comp=Z,76nm,0.9s
GRR Gorron 22.82 307⇑ *i*P **P 08 33 26.0 +2.4**
GRR pmax pmax
comp=Z,76nm,0.9s
GRR Gorron 22.82 307⇑ *i*P **P 08 33 26.0 +2.4**
comp=Z,76nm,0.9s
GRR Gorron 22.82 307⇑ *i*P **P 08 33 26.0 +2.4**
comp=Z,38nm,0.9s
TAM Tamanrasset 23.58 237 *e*P **P 08 33 34.0 +2.3**
TAM pmax pmax
comp=Z,17nm,1.0s
TAM Tamanrasset 23.58 237 *e*P **P 08 33 34.0 +2.3**
comp=Z,17nm,1.0s
TAM Tamanrasset 23.58 237 *e*P **P 08 33 34.0 +2.3**
comp=Z,16nm,1.0s
FINES FINESS Array B 23.83 359 P **P 08 33 33.1 -0.4**
FINES FINESS Array B 23.83 359 P **P 08 33 33.1 -0.4**
comp=Z,11nm,0.9s,baz=158,slow=9.1,SNR=17
FINES FINESS Array B 23.83 359 P **P 08 33 33.2 -0.4**
FIA1 FINESS Array S 23.83 359 *e*P **P 08 33 33.0 -0.6**
FIA1 FINESS Array S 23.83 359 *e*P **P 08 33 33.0 -0.6**
SGMF Saint Gilles 23.87 306 *e*P **P 08 33 35.0 +0.9**
comp=Z,79nm,1.0s
SGMF Saint Gilles 23.87 306 *e*P **P 08 33 35.0 +0.9**
SGMF pmax pmax
comp=Z,79nm,1.0s
SGMF Saint Gilles 23.87 306 *e*P **P 08 33 35.0 +0.9**
comp=Z,79nm,1.0s
SGMF Saint Gilles 23.87 306 *e*P **P 08 33 35.0 +0.9**
comp=Z,40nm,1.0s
HFS Hagfors 24.02 344 P **P 08 33 33.9 -1.6**
HFS Hagfors 24.02 344 P **P 08 33 33.9 -1.6**
comp=Z,6.6nm,0.6s,baz=148,slow=8.7,SNR=20
HFS LR LR 08 43 47.3
comp=Z,1µm,18.4s,baz=160,slow=39
HFS Hagfors 24.02 344 P **P 08 33 33.9 -1.6**
ESDC Sonseca Array 24.11 284 P **P 08 33 36.0 -0.5**
ESDC Sonseca Array 24.11 284 P **P 08 33 36.0 -0.5**
comp=Z,11nm,1.0s,baz=80,slow=11,SNR=16
ESDC Sonseca Array 24.11 284 P **P 08 33 36.0 -0.5**
ESLA Sonseca Array 24.11 284 *e*P **P 08 33 37.0 +0.5**
comp=Z,8.6nm,1.3s
ESLA Sonseca Array 24.11 284 *e*P **P 08 33 37.0 +0.5**
comp=Z,8.6nm,1.3s
QUIF Quistinic 24.18 305 *e*P **P 08 33 38.4 +1.4**
comp=Z,204nm,1.4s
QUIF Quistinic 24.18 305 *e*P **P 08 33 38.4 +1.4**
QUIF pmax pmax
comp=Z,204nm,1.4s
QUIF Quistinic 24.18 305 *e*P **P 08 33 38.4 +1.4**
comp=Z,204nm,1.4s
QUIF Quistinic 24.18 305 *e*P **P 08 33 38.4 +1.4**
comp=Z,102nm,1.4s
ROSF Rostrenen 24.35 306 *e*P **P 08 33 39.6 +1.0**
comp=Z,56nm,1.1s
ROSF Rostrenen 24.35 306 *e*P **P 08 33 39.6 +1.0**
ROSF pmax pmax
comp=Z,56nm,1.1s
ROSF Rostrenen 24.35 306 *e*P **P 08 33 39.6 +1.0**
comp=Z,56nm,1.1s
ROSF Rostrenen 24.35 306 *e*P **P 08 33 39.6 +1.0**
comp=Z,28nm,1.1s
PAB San Pablo 24.42 284 *e*P **P 08 33 41.2 +1.8**
PAB pmax pmax
comp=Z,30nm,1.3s
PAB San Pablo 24.42 284 *e*P **P 08 33 41.2 +1.8**
comp=Z,30nm,1.3s
PAB San Pablo 24.42 284 *e*P **P 08 33 41.2 +1.8**
comp=Z,30nm,1.3s
KAF Kangasniemi 24.50 359 *e*P **P 08 33 41.3 +1.5**
KAF pmax pmax
comp=Z,20nm,0.8s
KAF Kangasniemi 24.50 359 *e*p **P 08 33 41.3 +1.5**
comp=Z,20nm,0.8s,baz=174,slow=7.7
KAF Kangasniemi 24.50 359 *e*P **P 08 33 41.3 +1.5**
comp=Z,20nm,0.8s

KLMR Klimovskoe 24.56 15 *e*P **P 08 33 39.4 -1.0**
KLMR pmax pmax
comp=Z,45nm,1.0s
KLMR MLR MLR
comp=Z,3µm,19.0s
KLMR Klimovskoe 24.56 15 *e*P **P 08 33 39.4 -1.0**
comp=Z,3µm,19.0s
KONO Kongsberg 24.65 339 *e*P **P 08 33 42.5 +1.3**
KONO pmax pmax
comp=Z,22nm,0.8s
KONO Kongsberg 24.65 339 *e*P **P 08 33 42.5 +1.3**
comp=Z,22nm,0.8s
KONO Kongsberg 24.65 339 *e*P **P 08 33 42.5 +1.3**
comp=Z,22nm,0.8s
NAO01 NORSAR Array S 25.32 342 *e*P **P 08 33 46.6 -0.6**
comp=Z,32nm,0.9s
NAO01 NORSAR Array S 25.32 342 *e*P **P 08 33 46.6 -0.6**
comp=Z,32nm,0.9s
NB2 NORSAR Subarra 25.41 342 P **P 08 33 47.2 -0.9**
comp=Z,57nm,1.7s,baz=153,slow=10
NB2 NORSAR Subarra 25.41 342 P **P 08 33 47.2 -0.9**
comp=Z,57nm,1.7s,SNR=7.3
NOA NORSAR Array B 25.41 342 P **P 08 33 47.6 -0.4**
NOA NORSAR Array B 25.41 342 P **P 08 33 47.6 -0.4**
comp=Z,4.6nm,0.6s,baz=152,slow=11,SNR=13
NOA LR LR 08 44 58.2
comp=Z,1µm,18.6s,baz=150,slow=39
NOA NORSAR Array B 25.41 342 P **P 08 33 47.6 -0.4**
JOF Joensuu 25.45 5 *e*P **P 08 33 49.1 +0.7**
JOF pmax pmax
comp=Z,12nm,0.7s
JOF Joensuu 25.45 5 *e*p **P 08 33 49.1 +0.7**
comp=Z,12nm,0.7s
JOF Joensuu 25.45 5 *e*P **P 08 33 49.1 +0.7**
comp=Z,12nm,0.7s
AKTK Aktyubinsk 25.57 50 P **P 08 33 50.0 +0.3**
AKTO Aktyubinsk 25.57 50 P **P 08 33 50.0 +0.4**
AKTO Aktyubinsk 25.57 50 P **P 08 33 50.0 +0.4**
AKTO Aktyubinsk 25.57 50 P **P 08 33 50.0 +0.4**
comp=Z,7.1nm,0.8s,baz=248,slow=10,SNR=14
AKTO LR LR 08 47 26.8
comp=Z,430nm,20.1s,baz=111,slow=45
AKTO Aktyubinsk 25.57 50 P **P 08 33 50.0 +0.4**
PBRG Braganca 26.09 290 *e*P **P 08 33 53.4 -1.1**
comp=Z,30nm,1.7s
PBRG Braganca 26.09 290 *e*P **P 08 33 53.4 -1.1**
comp=Z,30nm,1.7s
MDT Midelt 26.10 269 P **P 08 33 55.4 +0.7**
MDT Midelt 26.10 269 P **P 08 33 55.4 +0.7**
comp=Z,9.5nm,1.0s,baz=82,slow=11,SNR=17
MDT Midelt 26.10 269 P **P 08 33 55.4 +0.7**
MVO Moncorvo 26.33 288 *e*P **P 08 33 55.3 -1.4**
comp=Z,24nm,2.5s
MVO *e*S **S 08 38 34.6 +5.1**
MVO *e*LR LR 08 45 07.9
comp=Z,250nm,16.0s
MVO Moncorvo 26.33 288 *e*P **P 08 33 55.3 -1.4**
comp=Z,24nm,2.5s
ABKAR Akbulak array 26.45 53 *e*P **P 08 33 58.5 +0.9**
comp=Z,2.8nm,0.6s
ABKAR Akbulak array 26.45 53 *e*P **P 08 33 58.5 +0.9**
comp=Z,2.8nm,0.6s
PBAR Barrancos 26.68 282 *e*P **P 08 34 00.0 +0.2**
comp=Z,32nm,1.8s
PBAR Barrancos 26.68 282 *e*P **P 08 34 00.0 +0.2**
comp=Z,32nm,1.8s
PMRV Marv??o 26.77 285 *e*P **P 08 34 02.7 +2.1**
comp=Z,22nm,1.7s
PMRV *e*S **S 08 38 42.9 +6.6**
PMRV *e*LR LR 08 44 49.4
comp=Z,204nm,14.0s
PMRV Marv??o 26.77 285 *e*P **P 08 34 02.7 +2.1**
comp=Z,22nm,1.7s
MTE Manteigas 26.78 287 *e*S S 08 38 44.1 +7.5
MTE *e*LR LR 08 44 38.0
comp=Z,376nm,14.0s
PCBR Castelo Branco 26.79 285 *e*P **P 08 34 00.4 -0.4**
comp=Z,18nm,1.3s
PCBR Castelo Branco 26.79 285 *e*P **P 08 34 00.4 -0.4**
comp=Z,18nm,1.3s
EKA Eskdalemuir Ar 26.90 321 P **P 08 34 03.0 +1.4**
EKA Eskdalemuir Ar 26.90 321 P **P 08 34 03.0 +1.4**
comp=Z,1.9nm,0.6s,baz=107,slow=11,SNR=6.3
EKA Eskdalemuir Ar 26.90 321 P **P 08 34 03.0 +1.4**
PVIS Viseu 27.02 287 *e*P **P 08 34 06.0 +3.1**
comp=Z,29nm,1.8s
PGAV Gavieira, Arco 27.22 290 *e*S S 08 38 59.2 +16
PGAV *e*LR LR 08 44 38.7
comp=Z,232nm,20.0s
PVAQ Vaqueiros 27.35 280 *e*P **P 08 34 05.9 +0.1**
comp=Z,50nm,1.7s
PVAQ *e*S **S 08 38 50.1 +4.8**
PVAQ *e*LR LR 08 44 41.6
comp=Z,284nm,15.8s
PVAQ Vaqueiros 27.35 280 *e*P **P 08 34 05.9 +0.1**
comp=Z,50nm,1.7s
PBEJ Beja 27.35 282 *e*P **P 08 34 06.8 +1.0**
comp=Z,25nm,1.4s
PBEJ Beja 27.35 282 *e*P **P 08 34 06.8 +1.0**
comp=Z,25nm,1.4s
PMTG Montargil 27.46 284 *e*P **P 08 34 09.8 +3.0**
comp=Z,19nm,1.1s
PBDV Barranco-do-Ve 27.55 280 *e*P **P 08 34 08.8 +1.2**
comp=Z,63nm,1.2s
PBDV Barranco-do-Ve 27.55 280 *e*P **P 08 34 08.8 +1.2**
comp=Z,63nm,1.2s
MESJ Messejana 27.66 281 *e*P **P 08 34 09.4 +0.8**
MESJ AMb AMB 08 35 05.0
comp=Z,36nm,1.2s
MESJ *e*S **S 08 38 51.9 +1.7**
MESJ Messejana 27.66 281 *e*P **P 08 34 09.4 +0.8**
comp=Z,36nm,1.2s
MESJ *e*S **S**
MESJ Messejana 27.66 281 *e*P **P 08 34 09.4 +0.8**
MESJ *e*S **S 08 38 51.9 +1.7**
MESJ Messejana 27.66 281 *e*P **P 08 34 09.4 +0.8**
comp=Z,36nm,1.2s
MESJ *e*S **S 08 38 51.9 +1.7**
PNCL Nicolau / Gran 27.85 282 *e*P **P 08 34 11.8 +1.5**
comp=Z,33nm,1.5s
PNCL Nicolau / Gran 27.85 282 *e*P **P 08 34 11.8 +1.5**
comp=Z,33nm,1.5s
MORF Marmelete 28.09 280 *e*P **P 08 34 13.3 +0.7**
MORF *e*S **S 08 38 59.2 +1.9**
MORF Marmelete 28.09 280 *e*P **P 08 34 13.3 +0.7**
MORF *e*S **S 08 38 59.2 +1.9**
LIS Lisbon 28.23 283 *e*P **P 08 34 14.5 +0.9**
LIS AMb AMB 08 34 45.7
comp=Z,106nm,1.6s
LIS Lisbon 28.23 283 *e*P **P 08 34 14.5 +0.9**
comp=Z,106nm,1.6s
LIS Lisbon 28.23 283 *e*P **P 08 34 14.5 +0.9**
LIS Lisbon 28.23 283 *e*P **P 08 34 14.5 +0.9**
comp=Z,106nm,1.6s
ARU Arti 28.24 38*d i*P **P 08 34 13.9 +0.3**
ARU PPP PPP 08 35 07.9
ARU 08 37 24.4
ARU S **S 08 39 01.6 +2.5**
ARU SS **SnSn 08 40 16.8 +1.3**
ARU pmax pmax
comp=Z,14nm,1.2s
ARU MLR MLR
comp=Z,552nm,16.0s
ARU Arti 28.24 38 *i* P **P 08 34 13.9 +0.3**
comp=Z,14nm,1.2s
ARU S **S 08 39 01.6 +2.5**
SOKR Solikamsk 29.12 31 *e*P **P 08 34 23.7 +2.4**
SOKR SS SS 08 40 50.8 -25
SOKR pmax pmax
comp=Z,20nm,1.3s
SOKR MLR MLR
comp=Z,810nm,20.0s
SOKR Solikamsk 29.12 31 *e*P **P 08 34 23.7 +2.4**
comp=Z,810nm,20.0s
SVE Sverdlovsk 29.44 38 *e*P **P 08 34 25.2 +0.9**
SVE *e* 08 35 34.4
SVE *e*S **S 08 39 18.5 +0.5**
SVE pmax pmax
comp=Z,19nm,1.5s
SVE MLR MLR
comp=Z,732nm,14.0s
SVE Sverdlovsk 29.44 38 *e*P **P 08 34 25.2 +0.9**
comp=Z,19nm,1.5s
SVE *e*S **S 08 39 18.5 +0.5**
comp=Z,732nm,14.0s
APA Apatity 30.20 5⇑ *i*P **P 08 34 33.0 +2.2**

APA *e*S **S 08 39 32.0 +2.4**
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,2µm,12.0s
APA Apatity 30.20 5 *i* P **P 08 34 33.0 +2.2**
comp=Z,13nm,1.0s
APA *e*S **S 08 39 32.0 +2.4**
comp=Z,2µm,12.0s
ARCES ARCESS Array B 31.96 359 P **P 08 34 45.8 -0.5**
ARCES ARCESS Array B 31.96 359 P **P 08 34 45.8 -0.5**
comp=Z,8.7nm,0.9s,baz=174,slow=9.5,SNR=8.8
ARCES LR LR 08 48 15.2
comp=Z,1µm,18.1s,baz=177,slow=37
ARCES ARCESS Array B 31.96 359 P **P 08 34 45.8 -0.5**
TORD Torodi Ar. Bea 33.15 229 P **P 08 34 56.9 -0.4**
TORD PcP **PcP 08 37 39.1 -1.2**
TORD Torodi Ar. Bea 33.15 229 P **P 08 34 56.9 -0.4**
comp=Z,5.3nm,0.5s,baz=37,slow=8.3,SNR=76
TORD PcP **PcP 08 37 39.1 -1.2**
comp=Z,1.5nm,0.8s,baz=24,slow=2.7,SNR=4.3
TORD LR LR 08 50 26.8
comp=Z,330nm,18.7s,baz=35,slow=40
TORD Torodi Ar. Bea 33.15 229 P **P 08 34 56.9 -0.4**
TORD Torodi Ar. Bea 33.15 229 PcP **PcP 08 37 39.1 -1.2**
KKAR Karatay Array 33.40 67 *e*P **P 08 34 59.5 +0.2**
KKAR pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 33.40 67 *e*P **P 08 34 59.5 +0.2**
comp=Z,4.3nm,0.7s
KKAR Karatay Array 33.40 67 *e*P **P 08 34 59.5 +0.2**
comp=Z,4.3nm,0.7s
BRVK Borovoye 33.59 49 *e*P **P 08 35 01.8 +1.0**
BRVK pmax pmax
comp=Z,19nm,2.9s
BRVK Borovoye 33.59 49 *e*P **P 08 35 02.6 +1.8**
comp=Z,2.2nm,0.6s
BRVK Borovoye 33.59 49 *e*P **P 08 35 01.8 +1.0**
comp=Z,19nm,2.9s
BVAR Borovoye Array 33.65 49 P **P 08 35 01.9 +0.6**
BVAR Borovoye Array 33.65 49 P **P 08 35 01.9 +0.6**
BVAR Borovoye Array 33.65 49 P **P 08 35 01.9 +0.6**
comp=Z,1.7nm,0.9s,baz=249,slow=7.6
BVAR LR LR 08 51 21.8
comp=Z,373nm,19.6s,baz=260,slow=41
BVAR Borovoye Array 33.65 49 P **P 08 35 01.9 +0.6**
EKS2 Erkin-Say 35.84 67 *e*P **P 08 35 21.0 +0.5**
EKS2 pmax pmax
comp=Z,8.0nm,0.9s
EKS2 Erkin-Say 35.84 67 *e*P **P 08 35 21.0 +0.5**
comp=Z,7.9nm,0.9s
EKS2 Erkin-Say 35.84 67 *e*P **P 08 35 21.0 +0.5**
comp=Z,7.8nm,0.9s
AAK Ala-Archa 36.36 67 P **P 08 35 25.4 +0.4**
AAK pmax pmax
comp=Z,10.0nm,0.9s
AAK Ala-Archa 36.36 67 *e*P **P 08 35 25.5 +0.4**
comp=Z,9.4nm,0.9s
AAK Ala-Archa 36.36 67 P **P 08 35 25.4 +0.4**
comp=Z,9.6nm,0.9s,baz=252,slow=5.9,SNR=12
AAK Ala-Archa 36.36 67 P **P 08 35 25.4 +0.4**
comp=Z,10.0nm,0.9s
TKM2 Tokmak 2 37.12 66 *e*P **P 08 35 32.3 +0.7**
TKM2 pmax pmax
comp=Z,6.0nm,0.9s
TKM2 Tokmak 2 37.12 66 *e*P **P 08 35 32.3 +0.7**
comp=Z,6.3nm,0.9s
TKM2 Tokmak 2 37.12 66 *e*P **P 08 35 32.3 +0.7**
comp=Z,6.3nm,0.9s
KSH Kashi 38.05 72 *e*P **P 08 35 38.3 -1.1**
KSH *e*pP **pP 08 35 42.8 -0.4**
KSH *e*sP **sP 08 35 45.4 +0.7**
KSH *e*PP **PnPn 08 37 07.1 -0.5**
KSH *e*S **S 08 41 26.6 -5.1**
KSH pmax pmax
comp=Z,5.0nm,0.3s
KSH pmax pmax
comp=Z,180nm,3.9s
KSH LR LR
comp=N,230nm,6.1s
KSH LR LR
comp=E,290nm,7.0s
KSH LR LR
comp=Z,300nm,7.1s
MBAR Mbarara 38.23 174 P **P 08 35 41.0 0.0**
MBAR Mbarara 38.23 174 P **P 08 35 41.0 0.0**
comp=Z,2.8nm,0.2s,baz=347,slow=22,SNR=6.2
MBAR Mbarara 38.23 174 P **P 08 35 41.0 0.0**
KURBB Kurchatov Arra 38.51 53 P **P 08 35 43.0 +0.1**
comp=Z,9.4nm,0.6s,baz=278,slow=8.7,SNR=56
KURBB PcP **PcP 08 37 55.2 -0.3**
comp=Z,2.7nm,0.9s,baz=279,slow=4.8,SNR=5.5
KURK Kurchatov 38.56 53 P **P 08 35 43.0 -0.4**
KURK 08 37 55.3
KURK pmax pmax
comp=Z,9.0nm,0.6s
KURK pmax pmax
comp=Z,3.0nm,0.9s
KURK Kurchatov 38.56 53 *e*P **P 08 35 43.4 0.0**
comp=Z,7.5nm,0.8s
KURK PcP **PcP 08 37 55.2 -0.5**
KURK Kurchatov 38.56 53 *e*P **P 08 35 43.4 0.0**
comp=Z,7.5nm,0.8s
KURK Kurchatov 38.56 53 PcP **PcP 08 37 55.3 -0.5**
comp=Z,3.0nm,0.9s
KMBO Kilima Mbogo 39.76 164 LR LR 08 54 53.0
comp=Z,271nm,18.6s,baz=284,slow=40
SPITS Spitsbergen Ar 40.88 357 P **P 08 36 04.0 +1.6**
SPITS Spitsbergen Ar 40.88 357 P **P 08 36 04.0 +1.6**
comp=Z,17nm,1.2s,baz=180,slow=6.7,SNR=4.0
SPITS Spitsbergen Ar 40.88 357 P **P 08 36 04.0 +1.6**
MK31 Makanchi Array 41.28 59 *e*P **P 08 36 06.3 +0.2**
MK31 Makanchi Array 41.28 59 *e*P **P 08 36 06.3 +0.2**
MK31 Makanchi Array 41.28 59 *e*P **P 08 36 06.3 +0.2**
MKAR Makanchi Array 41.28 59*c e*P **P 08 36 06.1 0.0**
MKAR pmax pmax
comp=Z,7.0nm,0.7s
MKAR Makanchi Array 41.28 59 *e*P **P 08 36 06.4 +0.3**
MKAR Makanchi Array 41.28 59 P **P 08 36 06.2 +0.2**
comp=Z,6.6nm,0.7s,baz=282,slow=6.1,SNR=33
MKAR LR LR 08 54 53.3
comp=Z,267nm,21.3s,baz=130,slow=39
MKAR Makanchi Array 41.28 59 *e*P **P 08 36 06.1 0.0**
comp=Z,7.0nm,0.7s
NVS Novosibirsk 41.37 47⇓ *i*P **P 08 36 07.2 +0.6**
NVS pmax pmax
comp=Z,75nm,2.5s
NVS pmax pmax
comp=N,14nm,2.1s
NVS pmax pmax
comp=E,10.0nm,1.4s
NVS Novosibirsk 41.37 47 *i* P **P 08 36 07.2 +0.6**
comp=E,14nm,2.1s
SCO Scoresbysund 41.54 338 *i* P **P 08 36 11.0 +3.2**
comp=E,8.7nm,0.9s
KBS Kingsbay 41.84 356 *e*P **P 08 36 10.3 +0.1**
KBS pmax pmax
comp=Z,28nm,1.7s
KBS Kingsbay 41.84 356 *e*P **P 08 36 10.3 +0.1**
comp=Z,28nm,1.7s
DBIC Dimbokro 42.20 231 *e*P **P 08 36 13.7 -0.1**
comp=Z,14nm,0.9s
DBIC Dimbokro 42.20 231 P **P 08 36 13.4 -0.4**
comp=Z,7.8nm,0.7s,baz=50,slow=9.0,SNR=8.6
DBIC LR LR 08 57 01.3
comp=Z,326nm,18.2s,baz=250,slow=41
DBIC Dimbokro 42.20 231 P **P 08 36 13.4 -0.4**
comp=Z,327nm,18.2s
ZALV Zalesovo Beam 42.30 48 P **P 08 36 14.0 -0.2**
ZALV Zalesovo Beam 42.30 48 P **P 08 36 14.0 -0.2**
ZALV Zalesovo Beam 42.30 48 P **P 08 36 14.0 -0.2**
comp=Z,2.8nm,0.3s,baz=266,slow=8.7,SNR=2.7
ZALV LR LR 08 57 07.8
comp=Z,283nm,18.4s,baz=249,slow=41
ZALV Zalesovo Beam 42.30 48 P **P 08 36 14.0 -0.2**
LIC Lamto 42.65 231 *e*P **P 08 36 16.1 -1.4**
comp=Z,34nm,0.8s
LIC *e*R
comp=Z,508nm,19.8s
LIC Lamto 42.65 231 *e*P **P 08 36 16.1 -1.4**
comp=Z,34nm,0.8s
LIC Lamto 42.65 231 *e*P **P 08 36 16.1 -1.4**
comp=Z,17nm,0.8s
DAG Danmarks Havn 43.95 346 *i* P **P 08 36 28.4 +1.1**
comp=Z,3.4nm,1.0s
WMQ Urumqi 45.59 62 P **P 08 36 41.5 +0.6**

WMQ pP **pP** 08 36 46.8 +2.0
WMQ sP **sP** 08 36 49.5 +3.2
WMQ PP **PP** 08 38 28.0 +0.5
WMQ S **S** 08 43 23.0 -0.1
WMQ SS **ScS** 08 46 38.0 +0.9
WMQ pmax pmax
comp=Z,15nm,0.9s
WMQ pmax pmax
comp=Z,210nm,3.6s
WMQ LR LR
comp=N,830nm,17.3s
WMQ LR LR
comp=E,800nm,12.8s
WMQ LR LR
comp=Z,700nm,27.7s
SUMG Summit 47.17 338 *e*P **P** 08 36 55.0 +1.7
SUMG pmax pmax
comp=Z,256nm,2.7s
SUMG Summit 47.17 338 *e*P **P** 08 36 55.0 +1.7
comp=Z,256nm,2.7s
SUMG Summit 47.17 338 *i* P **P** 08 36 55.6 +2.3
comp=Z,9.7nm,0.8s
SUMG Summit 47.17 338 *e*P **P** 08 36 55.0 +1.7
comp=Z,256nm,2.7s
PYUN Piuthan 47.47 84 *e*P **P** 08 36 56.3 +0.2
comp=Z,39nm,0.7s
DANN Dangsing 47.97 84 *e*P **P** 08 37 00.3 +0.3
comp=Z,74nm,0.6s
KOLN Koldanda 48.10 84 *e*P **P** 08 37 00.9 0.0
comp=Z,21nm,0.6s
DMN Daman 49.37 84 *e*P **P** 08 37 10.7 0.0
comp=Z,68nm,0.9s
KKN Kakani 49.42 84 *e*P **P** 08 37 10.8 -0.3
comp=Z,12nm,0.5s
PKIN Phulchoki 49.61 84 *e*P **P** 08 37 12.2 -0.4
comp=Z,27nm,0.9s
PKI Pulchoki 49.62 84 *e*P **P** 08 37 12.4 -0.4
comp=Z,32nm,1.0s
GUN Gumba 49.84 83 *e*P **P** 08 37 14.0 -0.4
comp=Z,52nm,1.1s
RAMN Ramite 50.85 84 *e*P **P** 08 37 21.4 -0.6
comp=Z,137nm,1.5s
ODAN Odare 51.51 83 *e*P **P** 08 37 26.5 -0.4
comp=Z,28nm,1.0s
TAPN Taplejung 51.54 83 *e*P **P** 08 37 26.8 -0.4
LSZ Lusaka 52.65 178 *e*P **P** 08 37 34.8 -0.4
comp=Z,6.3nm,1.3s
LSZ Lusaka 52.65 178 *e*P **P** 08 37 34.8 -0.4
comp=Z,6.3nm,1.3s
LSA Lhasa 53.16 78 *e*P **P** 08 37 39.7 +0.3
LSA pmax pmax
comp=Z,8.0nm,0.6s
LSA Lhasa 53.16 78 *e*P **P** 08 37 39.7 +0.3
comp=Z,8.0nm,0.6s
LSA Lhasa 53.16 78 *e*P **P** 08 37 39.7 +0.3
comp=Z,8.0nm,0.6s
TLY Talaya 53.91 49 *e*P **P** 08 37 45.5 +1.4
TLY pmax pmax
comp=Z,18nm,1.5s
TLY MLR MLR
comp=Z,175nm,20.0s
TLY Talaya 53.91 49 *e*P **P** 08 37 45.5 +1.4
comp=Z,175nm,20.0s
ZAK Zakamensk 54.08 50⇑ *i*P **P** 08 37 45.6 +0.2
ZAK pmax pmax
comp=Z,6.0nm,1.2s
ZAK Zakamensk 54.08 50 *i* P **P** 08 37 45.6 +0.2
comp=Z,6.0nm,1.2s
GTA Gaotai 55.60 64 *e*P **P** 08 37 56.4 -0.2
GTA pP **pP** 08 38 00.5 -0.1
GTA sP **sP** 08 38 03.6 +1.5
GTA S **S** 08 45 38.8 -3.5
GTA pmax pmax
comp=Z,4.0nm,1.1s
GTA pmax pmax
comp=Z,110nm,4.7s
GTA LR LR
comp=N,110nm,11.4s
GTA LR LR
comp=E,180nm,11.6s
GTA LR LR
comp=Z,170nm,13.3s
SHL Shillong 55.67 82 *e*PKP P 08 38 04.5 +7.1
SONM Songino Array 56.86 52 P **P** 08 38 05.9 +0.4
SONM Songino Array 56.86 52 P **P** 08 38 05.9 +0.4
comp=Z,4.4nm,0.8s,baz=290,slow=7.6,SNR=12
SONM LR LR 09 05 42.2
comp=Z,433nm,18.8s,baz=145,slow=39
SONM Songino Array 56.86 52 P **P** 08 38 05.9 +0.4
TSUM Tsumeb 57.22 190 *e*P **P** 08 38 07.6 -0.6
comp=Z,12nm,1.4s
TSUM Tsumeb 57.22 190 *e*P **P** 08 38 07.6 -0.6
comp=Z,12nm,1.4s
ULN Ulaanbaatar 57.26 52 *e*P **P** 08 38 09.1 +0.7
comp=Z,8.6nm,0.9s
ULN Ulaanbaatar 57.26 52 *e*P **P** 08 38 09.1 +0.7
comp=Z,8.6nm,0.9s
TIXI Tiksi 58.36 21 *e*P **P** 08 38 14.5 -1.0
TIXI pmax pmax
comp=Z,6.0nm,1.7s
TIXI MLR MLR
comp=Z,894nm,19.0s
TIXI Tiksi 58.36 21 *e*P **P** 08 38 14.5 -1.0
comp=Z,894nm,19.0s
LZH Lanzhou 59.89 66 *e*P **P** 08 38 25.9 -1.0
LZH pP **pP** 08 38 29.8 -1.1
LZH PcP **PcP** 08 39 13.1 -0.2
LZH PP **PP** 08 40 42.5 +3.7
LZH *e*S S 08 46 32.4 -6.3
LZH pmax pmax
comp=Z,35nm,1.2s
LZH pmax pmax
comp=Z,160nm,4.9s
SCHQ Schefferville 62.20 319 *e*P **P** 08 38 42.5 +0.4
comp=Z,4.3nm,0.8s
SCHQ Schefferville 62.20 319 P **P** 08 38 42.7 +0.6
comp=Z,2.9nm,0.8s,baz=91,slow=9.6,SNR=5.3
SCHQ LR LR 09 05 18.5
comp=Z,252nm,18.2s,baz=55,slow=36
SCHQ Schefferville 62.20 319 *e*P **P** 08 38 42.5 +0.4
comp=Z,4.3nm,0.8s
CD2 Chengdu 62.24 71 *e*P **P** 08 38 43.0 +0.2
CD2 pP **pP** 08 38 48.4 +1.6
CD2 sP **sP** 08 38 51.0 +2.7
CD2 PP **PP** 08 41 01.8 +2.2
CD2 S **S** 08 47 05.4 -3.2
CD2 pmax pmax
comp=Z,40nm,1.4s
CD2 pmax pmax
comp=Z,120nm,4.8s
CD2 LR LR
comp=N,260nm,14.2s
CD2 LR LR
comp=Z,270nm,11.9s
LBTB Lobatse 62.34 181 *e*P **P** 08 38 43.9 +0.6
comp=Z,15nm,1.3s
LBTB Lobatse 62.34 181 *e*P **P** 08 38 43.9 +0.6
comp=Z,15nm,1.3s
HHC Hu-ho-hao-te 63.13 58 *e*P **P** 08 38 50.3 +1.7
HHC PP **PP** 08 41 10.3 +3.1
HHC PcS 08 43 30.3
HHC S **S** 08 47 19.5 -0.1
HHC ScS **SKKSac** 08 48 40.6 -0.9
HHC SS **SS** 08 51 26.5 +1.6
HHC pmax pmax
comp=Z,40nm,1.1s
HHC pmax pmax
comp=Z,410nm,5.2s
HHC LR LR
comp=N,310nm,15.7s
HHC LR LR
comp=E,600nm,17.2s
HHC LR LR
comp=Z,450nm,16.2s
HIA Hailar 64.31 47 *e*P **P** 08 38 56.2 0.0
comp=Z,14nm,0.8s
HIA Hailar 64.31 47 *e*P **P** 08 38 56.2 0.0
comp=Z,14nm,0.8s
KMI Kunming 64.37 77 P **P** 08 38 57.5 +0.3
KMI S **S** 08 47 34.4 -1.3
KMI pmax pmax
comp=Z,11nm,1.2s
KMI LR LR
comp=Z,170nm,28.8s
XAN Xi'an 64.53 66 P **P** 08 38 58.3 +0.4
XAN pmax pmax
comp=Z,4.0nm,1.5s
XAN pmax pmax
comp=Z,33nm,4.9s
CMAR Chiang Mai Arr 64.95 85 P **P** 08 39 00.4 -0.4
CMAR Chiang Mai Arr 64.95 85 P **P** 08 39 00.4 -0.4
comp=Z,2.1nm,0.8s,baz=298,slow=7.8,SNR=9.0
CMAR Chiang Mai Arr 64.95 85 P **P** 08 39 00.4 -0.4
BOSA Boshof 65.93 182 *e*P **P** 08 39 06.7 -0.2
comp=Z,8.9nm,1.1s
BOSA Boshof 65.93 182 P **P** 08 39 06.9 0.0
comp=Z,7.4nm,1.1s,baz=21,slow=7.8,SNR=4.7
BOSA LR LR 09 11 38.3
comp=Z,332nm,18.0s,baz=236,slow=39
BOSA Boshof 65.93 182 *e*P **P** 08 39 06.7 -0.2
comp=Z,8.9nm,1.1s
BJI Beijing 66.60 57 P **P** 08 39 11.8 +0.7
BJI pmax pmax
comp=Z,13nm,1.2s
BJI pmax pmax
comp=Z,170nm,4.7s
BJI LR LR
comp=N,280nm,19.7s
BJI LR LR
comp=E,260nm,16.8s
BJI LR LR
comp=Z,180nm,29.9s
GYA Guiyang 66.69 74 *e*P **P** 08 39 11.5 -0.6
GYA PP **PP** 08 41 41.0 +2.2
GYA ScP 08 43 43.3
GYA S **S** 08 48 01.6 -2.2
GYA SKS **SKSac** 08 49 03.9 -5.1
GYA SS **SS** 08 52 19.4 -1.7
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,120nm,3.8s
GYA LR LR
comp=N,450nm,20.5s
GYA LR LR
comp=E,410nm,21.4s
GYA LR LR
comp=Z,480nm,20.9s
ENH Enshi 66.84 69 *e*P **P** 08 39 12.7 -0.1
comp=Z,45nm,1.3s
ENH Enshi 66.84 69 *e*P **P** 08 39 12.7 -0.1
comp=Z,45nm,1.3s
SUR Sutherland 69.89 185 LR LR 09 14 03.6
comp=Z,390nm,18.8s,baz=291,slow=39
BILL Bilibino 70.31 15⇑ *e*P **P** 08 39 32.8 -1.1
BILL *e* 08 42 06.9
BILL *e*S **S** 08 48 49.4 +4.0
BILL pmax pmax
comp=Z,3.0nm,1.2s
BILL Bilibino 70.31 15 *e*P **P** 08 39 32.8 -1.1
comp=Z,3.0nm,1.2s
CN2 Changchun 70.50 49 *e*P **P** 08 39 34.1 -1.3
MDJ Mudanjiang 72.49 47 P **P** 08 39 47.1 -0.3
MDJ pP **pP** 08 39 50.8 -0.6
MDJ sP **sP** 08 39 52.1 -0.8
MDJ S **S** 08 49 09.3 -2.0
MDJ pmax pmax
comp=Z,5.0nm,0.9s
MDJ pmax pmax
comp=Z,39nm,4.4s
MDJ LR LR
comp=N,100nm,32.0s
MDJ LR LR
comp=E,130nm,33.3s
MDJ LR LR
comp=Z,160nm,18.7s
NJ2 Nanjing 72.67 63 *e*P **P** 08 39 47.8 -0.9
NJ2 pmax pmax
comp=Z,20nm,0.5s
QIZ Qiongzhong 73.20 79 P **P** 08 39 51.8 -0.2
QIZ S **S** 08 49 20.0 -0.1
PSI Prapat 74.11 99 P **P** 08 39 56.7 -0.8
PSI Prapat 74.11 99 P **P** 08 39 56.7 -0.8
comp=Z,8.4nm,1.0s,baz=216,slow=4.3,SNR=5.2
USRK Ussuriysk Arra 74.12 46 P **P** 08 39 54.2 -2.8
comp=Z,3.5nm,0.9s,baz=249,slow=3.3,SNR=6.4
USRK LR LR 09 18 05.7
comp=Z,198nm,18.4s,baz=70,slow=40
COLD Coldfoot 75.43 359 *e*P **P** 08 40 04.9 +0.7
comp=Z,22nm,1.7s
COLD Coldfoot 75.43 359 *e*P **P** 08 40 04.9 +0.7
comp=Z,22nm,1.7s
YKW3 Yellowknife Ar 75.45 343 *e*P **P** 08 40 03.4 -1.0
YKW3 Yellowknife Ar 75.45 343 *e*P **P** 08 40 03.4 -1.0
YKA Yellowknife Ar 75.50 343 P **P** 08 40 03.5 -1.2
YKA Yellowknife Ar 75.50 343 P **P** 08 40 03.5 -1.2
comp=Z,2.3nm,0.8s,baz=35,slow=5.6,SNR=34
YKA Yellowknife Ar 75.50 343 P **P** 08 40 03.5 -1.2
comp=Z,2.0nm,0.8s
KSAR Wonju Array Be 75.67 54 P **P** 08 40 05.7 -0.4
KSAR Wonju Array Be 75.67 54 P **P** 08 40 05.7 -0.4
KSRS Korea Array 75.69 54 P **P** 08 40 05.7 -0.5
comp=Z,9.6nm,1.0s,baz=303,slow=5.0,SNR=13
KSRS LR LR 09 16 53.5
comp=Z,196nm,18.4s,baz=314,slow=38
KSRS Korea Array 75.69 54 P **P** 08 40 05.7 -0.5
comp=Z,196nm,18.4s
EGAK Eagle 77.48 355 *e*P **P** 08 40 17.8 +1.9
comp=Z,52nm,2.1s
COLA College 77.73 358 *e*P **P** 08 40 19.3 +2.1
COLA pmax pmax
comp=Z,30nm,1.7s
COLA College 77.73 358 *e*P **P** 08 40 19.3 +2.1
comp=Z,30nm,1.7s
ILAR Eielson Array 77.80 357 P **P** 08 40 16.8 -0.9
ILAR Eielson Array 77.80 357 P **P** 08 40 16.8 -0.9
comp=Z,1.2nm,1.0s,baz=12,slow=4.6,SNR=6.3
ILAR LR LR 09 17 21.5
comp=Z,176nm,20.2s,baz=292,slow=38
ILAR Eielson Array 77.80 357 P **P** 08 40 16.8 -0.9
FFC Flin Flon 78.08 333 *e*P **P** 08 40 18.7 -0.7
FFC pmax pmax
comp=Z,10.0nm,0.8s
FFC Flin Flon 78.08 333 *e*P **P** 08 40 18.7 -0.7
comp=Z,10nm,0.8s
YSS Yuzh-Sakhalins 78.13 39 *e*P P 08 40 24.0 +4.2
YSS *e*S S 08 50 20.0 +6.3
YSS MLR MLR
comp=Z,400nm,18.0s
YSS MLR MLR
comp=E,400nm,17.0s
MCK McKinley 78.91 358 *e*P **P** 08 40 22.9 -1.0
MCK pmax pmax
comp=Z,15nm,1.3s
MCK McKinley 78.91 358 *e*P **P** 08 40 22.9 -1.0
comp=Z,15nm,1.3s
ULM Lac du Bonnet 79.01 327 P **P** 08 40 23.5 -1.1
ULM Lac du Bonnet 79.01 327 P **P** 08 40 23.5 -1.1
comp=Z,2.4nm,0.5s,baz=77,slow=4.2,SNR=4.4
ULM LR LR 09 15 55.1
comp=Z,333nm,18.3s,baz=86,slow=36
TRF Thorofare Moun 79.22 359 *e*P **P** 08 40 27.9 +2.2
comp=Z,35nm,1.8s
PETK Petropavlovsk- 80.07 28 LR LR 09 21 43.8
comp=Z,235nm,18.7s,baz=310,slow=40
JNU Nakatsue 80.24 56 *e*P **P** 08 40 33.6 +1.9
comp=Z,6.7nm,1.1s
JNU Nakatsue 80.24 56 P **P** 08 40 33.9 +2.2
comp=Z,12nm,1.0s,baz=21,slow=8.1,SNR=3.6
AGMN Agassiz Nation 80.44 325 *e*P **P** 08 40 34.2 +1.7
comp=Z,33nm,2.3s
PMR Palmer 81.06 358 *e*P **P** 08 40 34.5 -0.9
PMR pmax pmax
comp=Z,36nm,1.6s
PMR Palmer 81.06 358 *e*P **P** 08 40 34.5 -0.9
comp=Z,36nm,1.6s
MJAR Matsushiro Arr 82.65 49 P **P** 08 40 44.4 0.0
MJAR Matsushiro Arr 82.65 49 P **P** 08 40 44.4 0.0
comp=Z,1.1nm,0.3s,baz=319,slow=4.9,SNR=7.9
CPCT Cooper Cave 83.41 310 *e*P **P** 08 40 48.4 +0.1
A22A Carney Farms, 84.12 331 ⇓P **P** 08 40 51.4 -0.4
baz=84
ECSD EROS Data Cent 84.17 323 *e*P **P** 08 40 54.1 +2.0
comp=Z,15nm,1.8s
B23A Brockton 84.18 330 ⇓P **P** 08 40 51.9 -0.2
baz=84
C24A Savage 84.71 329 ⇑P **P** 08 40 54.5 -0.2
baz=84
B22A Reddig Ranch S 84.71 331 ⇑P **P** 08 40 54.7 -0.1
baz=84
E26A Carlson Angus 84.73 328 ⇓P **P** 08 40 54.3 -0.6
baz=84
A20A Cobblestone Ra 84.97 332 ⇓P **P** 08 40 55.4 -0.7
baz=85
C22A Vida 85.12 330 ⇓P **P** 08 40 56.8 0.0
baz=85
D23A Lindsay 85.31 329 ⇓P **P** 08 40 57.2 -0.6
baz=85
B20A Solberg Farm, 85.37 332 ⇑P **P** 08 40 57.4 -0.7
baz=85
C21A Desert Coulee 85.53 331 ⇓P **P** 08 40 58.6 -0.2
baz=85
A18A Metzger Ranch, 85.64 333 P **P** 08 40 58.8 -0.6
baz=85,SNR=11
D22A Cohagen 85.72 330 ⇑P **P** 08 40 59.6 -0.2
baz=85
E23A Ismay 85.90 329 ⇓P **P** 08 40 59.9 -0.8
baz=86
A17A Triple J Farms 85.93 334 ⇑P **P** 08 41 00.4 -0.4
baz=86
C20A Veseth Ranch, 85.97 331 P **P** 08 41 00.4 -0.6
baz=86,SNR=10
B18A Beardsley Farm 86.06 333 P **P** 08 41 01.1 -0.5
baz=86,SNR=18
F24A Ekalaka 86.07 328 ⇑P **P** 08 41 01.5 -0.1
baz=86
D21A La Casta Ranch 86.11 330 ⇓P **P** 08 41 01.9 +0.1
baz=86
A16A West Butte Ran 86.24 334 P **P** 08 41 01.0 -1.5
baz=86
C19A Slack Wire Ran 86.34 332 P **P** 08 41 01.8 -1.2
baz=86
EGMT Eagleton 86.36 332 *e*P **P** 08 41 01.8 -1.2
comp=Z,31nm,1.0s
EGMT Eagleton 86.36 332 P **P** 08 41 02.7 -0.4
baz=86,SNR=22
D20A Manuel Ranch, 86.53 331 P **P** 08 41 03.5 -0.3
baz=86,SNR=11
LRAL Lakeview Retre 86.55 310 *e*P **P** 08 41 04.2 +0.1
comp=Z,23nm,1.5s
F23A Volborg 86.56 329 P **P** 08 41 02.8 -1.3
baz=86,SNR=11
A15A Johnson Ranch, 86.61 335 P **P** 08 41 03.1 -1.1
baz=86,SNR=17
B16A M & M Farms, S 86.73 334 P **P** 08 41 03.0 -1.9
baz=86
D19A Cripps Ranch, 86.75 332 P **P** 08 41 03.2 -1.7
baz=86
A14A Double T Ranch 86.84 335 P **P** 08 41 04.1 -1.4
baz=86,SNR=5.5
E20A Meyer Farm, Mu 87.02 331 P **P** 08 41 04.5 -1.7
baz=87
C17A Wharram Farm, 87.06 333 P **P** 08 41 05.1 -1.3
baz=87
D18A Linhart Farms, 87.07 332 P **P** 08 41 05.4 -1.1
baz=87
B15A Bradely Ranch, 87.12 334 P **P** 08 41 05.0 -1.7
baz=87,SNR=13
C16A Fuhringer Ranc 87.27 334 P **P** 08 41 05.9 -1.6
baz=87
E19A Rath Farm, Rou 87.30 331 P **P** 08 41 06.8 -0.9
baz=87,SNR=11
E18A Harlowton 87.64 332 P **P** 08 41 08.6 -0.7
baz=87,SNR=7.4
B13A Whitefish 87.71 335 P **P** 08 41 08.9 -0.6
baz=87
D16A Dana Ranch, Ca 87.85 333 P **P** 08 41 09.2 -1.1
baz=88
F19A Roth Farm, Mol 87.87 331 P **P** 08 41 09.4 -1.0
baz=88
BDFB Brasilia 87.91 249 P **P** 08 41 10.5 -0.5
BDFB Brasilia 87.91 249 P **P** 08 41 10.5 -0.5
comp=Z,2.4nm,0.6s,baz=41,slow=12,SNR=4.4
BDFB LR LR 09 20 25.5
comp=Z,303nm,19.4s,baz=189,slow=36
C14A Swan Lake 87.99 335 P **P** 08 41 09.8 -1.1
baz=88
YBMT Yellow Bay 88.00 335 *e*P **P** 08 41 10.2 -0.8
comp=Z,18nm,1.5s
E17A Martinsdale 88.08 332 P **P** 08 41 10.9 -0.7
baz=88
JTMT Jette 88.19 335 *e*P **P** 08 41 11.5 -0.4
GCMT Greycliff 88.20 331 *e*P P 08 41 15.7 +3.6
comp=Z,11nm,1.6s
HRY Holter Researc 88.23 333 *e*P P 08 41 15.5 +3.4
SWMT Swartz Lake 88.30 335 *e*P **P** 08 41 11.7 -0.8
SLMT Seeley Lake 88.36 334 *e*P **P** 08 41 13.6 +0.8
comp=Z,40nm,1.9s
F17A Fitzpatrick Pl 88.48 332 P **P** 08 41 12.7 -0.6
baz=88
D14A Greenough 88.50 334 P **P** 08 41 12.0 -1.4
baz=88
CHMT Chamberlain Mo 88.56 334 *e*P **P** 08 41 14.9 +1.1
NEW Newport 88.66 337 *e*P **P** 08 41 13.2 -0.8
comp=Z,37nm,1.9s
NEW Newport 88.66 337 P **P** 08 41 13.1 -0.9
baz=88
D13A Huson 88.82 335 P **P** 08 41 13.9 -1.0
baz=88
BOZ Bozeman (W) 89.06 332 *e*P **P** 08 41 15.7 -0.4
BOZ pmax pmax
comp=Z,24nm,2.0s
BOZ Bozeman (W) 89.06 332 *e*P **P** 08 41 15.7 -0.4
comp=Z,24nm,2.0s
F15A Butte 89.21 333 P **P** 08 41 15.3 -1.6
baz=89
LRM Limekiln Ridge 89.21 333 *e*P **P** 08 41 16.0 -1.0
comp=Z,122nm,1.7s
DLMT Dillon 89.66 333 *e*P **P** 08 41 21.2 +2.3
comp=Z,20nm,1.8s
PDAR Pinedale Array 90.69 329 P **P** 08 41 23.9 +0.1
PDAR Pinedale Array 90.69 329 P **P** 08 41 23.9 +0.1
comp=Z,0.6nm,0.8s,baz=40,slow=2.5,SNR=4.1
PDAR LR LR 09 24 38.3
comp=Z,195nm,19.2s,baz=39,slow=37
NVAR Mina Array Bea 97.78 333 P Pdif 08 41 57.0 +0.5
NVAR Mina Array Bea 97.78 333 P Pdif 08 41 57.0 +0.5
comp=Z,0.2nm,0.5s,baz=54,slow=4.6,SNR=2.9
NVAR LR LR 09 26 14.4
comp=Z,176nm,20.4s,baz=244,slow=36
SIV San Ignacio 98.00 256 LR LR 09 29 17.3
comp=Z,96nm,21.7s,slow=37
TXAR Lajitas Array 98.86 318 LR LR 09 27 37.3
comp=Z,109nm,18.1s,baz=5.0,slow=36
WRA Warramunga Arr 115.49 96 PKP **PKPdf** 08 47 01.2 -1.9
WRA Warramunga Arr 115.49 96 PKP **PKPdf** 08 47 01.2 -1.9
comp=Z,0.6nm,0.8s,baz=315,slow=1.5,SNR=4.9
ASAR Alice Springs 117.12 100 PKP **PKPdf** 08 47 04.8 -1.4
ASAR Alice Springs 117.12 100 PKP **PKPdf** 08 47 04.8 -1.4
comp=Z,0.7nm,0.8s,baz=333,slow=1.5,SNR=7.6
CTA Charters Tower 125.01 89 PKP **PKPdf** 08 47 20.7 -0.7
CTA Charters Tower 125.01 89 PKP **PKPdf** 08 47 20.7 -0.7
comp=Z,2.0nm,0.4s,baz=7.9,slow=0.6,SNR=4.2

ROM 20 08:29:02.0±0.1, 42°30N×13°39E, h5km, Md1.7/5, Error ellipse: s-maj=1.5km s-min=1.0km az=9.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.06**	**11**	Pg	Pg	08 29 03.7	+0.2
AQU				Sg	Sg	08 29 04.8	+0.2
FAGN	**Fagnano**	**0.15**	**103**	Pg	Pg	08 29 05.4	+0.3
FAGN				Sg	Sg	08 29 08.4	+1.2
FIAM	**Fiamignano**	**0.20**	**261**	Pg	Pg	08 29 06.6	+0.4
FIAM				Sg	Sg	08 29 10.3	+1.3

NNC 20 08:39:43.4±4.2, 43°34N×80°89E, h0km, mb3.7, mpv3.4, 6C-10D, Error ellipse: s-maj=45.9km s-min=13.2km az=138.0, Kazakhstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KNDC	**Almaty**	**2.87**	**269**	⇓Pn	Pb	08 40 35.1	-0.4
	46nm,0.7s						
KNDC				⇑Sn	Sn	08 41 06.7	+0.9
	110nm,0.6s						
MK31	**Makanchi Array**	**3.59**	**16**	⇑Pn	Pn	08 40 42.5	+2.1
	1.0nm,0.2s,baz=201,slow=14,SNR=104						
MK31				⇓Pg	Pg	08 40 52.5	+0.2
	6.0nm,0.3s,baz=199,slow=17,SNR=50						
MK31				⇓Sn	Sb	08 41 28.2	-3.7
	2.5nm,0.3s,baz=183,slow=17,SNR=6.2						
MK31				⇓Lg	Lg	08 41 40.9	
	12nm,0.6s,baz=194,slow=28,SNR=5.4						
TKM2	**Tokmak 2**	**3.90**	**266**	⇓Pn	Pn	08 40 40.8	-4.0
	3.5nm,0.4s						
TKM2				⇓Pg	Pb	08 40 50.1	-3.2
	6.7nm,0.4s						

KUR17	**Kurchatov Arra**	**7.48**	**348**	⇓Pn	Pn	08 41 35.5	+1.9
	0.4nm,0.8s						
KUR17				⇓Sn	Sn	08 43 01.4	+2.3
KUR17				⇓Lg	Lg	08 43 43.3	
	4.1nm,0.9s						
KURK	**Kurchatov**	**7.54**	**349**	⇑Pn	Pn	08 41 35.0	+0.5
	1.0nm,0.6s						
KURK				⇑Sn	Sn	08 43 01.7	+1.1
	1.9nm,0.8s						
KURK				⇑Lg	Lg	08 43 43.9	
	7.7nm,1.0s						
KK31	**Karatay Array**	**7.58**	**272**	⇑Pg	Pb	08 41 60.0	+4.1
	0.9nm,0.5s,baz=80,slow=15,SNR=9.4						
KK31				⇓Lg	Lg	08 43 38.9	
	2.0nm,0.5s,baz=96,slow=30,SNR=6.7						

ISCJB ***20*** *08:43:56.9±0.5, 37.85N±0.02×27.53E±0.04, h6km±6km, Error ellipse: s-maj=5.4km s-min=3.6km az=151.2*
ISK ***20*** *08:43:56.1, 37.88N×27.57E, h18km, MD2.9*
DDA ***20*** *08:43:57.3, 37.86N×27.53E, h7km, MD2.8*
CSEM ***20*** *08:43:57.1±0.2, 37.84N×27.53E, h10km, MD2.8, Error ellipse: s-maj=4.2km s-min=3.1km az=61.0*

ISC 20 08:43:57.0±0.9, 37.85N±0.02×27.53E±0.02, h11km±9km, n26, σ0.59/46, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.28**	**238**	*i* P	**Pg**	**08 44 02.6**	**0.0**
GCAM				*i* S	**Sg**	**08 44 06.4**	**0.0**
GCAM	**G?zelcaml?**	**0.28**	**238**	*i* P	**Pg**	**08 44 02.6**	**0.0**
GCAM				*i* S	**Sg**	**08 44 06.4**	**0.0**
AYDN	**Tasoluk**	**0.34**	**124**	*i* P	**Pg**	**08 44 03.9**	**+0.1**
AYDN				*i* S	**Sg**	**08 44 08.2**	**-0.1**
AYDN	**Tasoluk**	**0.34**	**124**	*i* P	**Pg**	**08 44 03.9**	**+0.1**
AYDN				*i* S	**Sg**	**08 44 08.2**	**-0.1**
IZM	**Izmir**	**0.59**	**339**	*e*PG	**Pg**	**08 44 08.5**	**0.0**
IZM				*e*SG	**Sg**	**08 44 16.5**	**+0.2**
IZM	**Izmir**	**0.59**	**339**	*e*Pg	**Pg**	**08 44 08.5**	**0.0**
IZM				*e*Sg	**Sg**	**08 44 16.5**	**+0.2**
BLCB	**Balcova**	**0.66**	**325**	*e*PG	**Pg**	**08 44 09.6**	**-0.2**
BLCB				*e*SG	**Sg**	**08 44 18.6**	**+0.1**
BLCB	**Balcova**	**0.66**	**325**	*e*Pg	**Pg**	**08 44 09.6**	**-0.2**
BLCB				*e*Sg	**Sg**	**08 44 18.6**	**+0.1**
BODT	**Bodrum**	**0.80**	**192**	*e*PG	**Pg**	**08 44 12.9**	**+0.4**
BODT				*e*SG	**Sb**	**08 44 25.1**	**+1.3**
BODT	**Bodrum**	**0.80**	**192**	*e*Pg	**Pg**	**08 44 12.9**	**+0.4**
BODT				*e*Sg	**Sb**	**08 44 25.1**	**+1.3**
URLA	**Izmir**	**0.90**	**305**	*i* P	**Pn**	**08 44 16.0**	**+0.4**
URLA	**Izmir**	**0.90**	**305**	*i* P	**Pn**	**08 44 16.0**	**+0.4**
YER	**Yerkesik**	**0.93**	**140**	*e*PG	**Pg**	**08 44 14.4**	**-0.6**
YER				*e*SG	**Sb**	**08 44 27.9**	**+0.3**
YER	**Yerkesik**	**0.93**	**140**	*e*Pg	**Pg**	**08 44 14.4**	**-0.6**
YER				*e*Sg	**Sb**	**08 44 27.9**	**+0.3**
MANT	**Manisa**	**1.04**	**51**	*i* P	**Pg**	**08 44 17.2**	**+0.2**
MANT				*i* S	**Sb**	**08 44 29.4**	**-1.4**
MANT	**Manisa**	**1.04**	**51**	*i* P	**Pg**	**08 44 17.2**	**+0.2**
MANT				*i* S	**Sb**	**08 44 29.4**	**-1.4**
AKHS	**Akhisar**	**1.05**	**12**	*i* P	**Pb**	**08 44 17.3**	**0.0**
AKHS				*i* S	**Sg**	**08 44 31.8**	**+0.7**
AKHS	**Akhisar**	**1.05**	**12**	*i* P	**Pb**	**08 44 17.3**	**0.0**
AKHS				*i* S	**Sg**	**08 44 31.8**	**+0.7**
DAT	**Datca**	**1.12**	**178**	*e*PN	**Pb**	**08 44 17.8**	**-0.6**
DAT	**Datca**	**1.12**	**178**	*e*Pn	**Pb**	**08 44 17.8**	**-0.6**
DNZL	**Cakiroluk**	**1.21**	**97**	*i* P	**Pg**	**08 44 21.5**	**+1.1**
DNZL				*i* S	**Sg**	**08 44 36.1**	**-0.1**
DNZL	**Cakiroluk**	**1.21**	**97**	*i* P	**Pg**	**08 44 21.5**	**+1.1**
DNZL				*i* S	**Sg**	**08 44 36.1**	**-0.1**
TURN	**Turunc**	**1.30**	**138**	*i* P	**Pb**	**08 44 21.4**	**0.0**
TURN				*i* S	**Sb**	**08 44 37.3**	**-0.7**
TURN	**Turunc**	**1.30**	**138**	*i* P	**Pb**	**08 44 21.4**	**0.0**
TURN				*i* S	**Sb**	**08 44 37.3**	**-0.7**
APE	**Apeiranthos**	**1.77**	**245**	*e*PN	**Pn**	**08 44 27.1**	**-0.5**
APE	**Apeiranthos**	**1.77**	**245**	*e*Pn	**Pn**	**08 44 27.1**	**-0.5**

MEX 20 08:56:16.2±0.3, 24.89N×100.26W, h20km, MD3.5, Central Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNIG	**Linares**	**0.72**	**89**	*e*P	Pb	08 56 27.9	-2.3
LNIG				*e*		08 56 27.9	
	baz=269,slow=18						
LNIG				*i* S	Sb	08 56 37.0	-2.7

MEX 20 08:57:50.8±0.3, 24.88N×100.26W, h20km, MD3.7, Central Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNIG	**Linares**	**0.72**	**88**	*i*	Pb	08 58 02.5	-2.3
	baz=268,slow=16						
LNIG				*i* P	Pb	08 58 02.5	-2.3
LNIG				*i* S	Sb	08 58 11.6	-2.7

CSEM ***20*** *09:13:12.4, 33.43N×35.46E, h4km, ML2.6, After GRAL*
GRAL 20 09:13:12.4±0.5, 33.43N×35.46E, h5km±15km, MD2.6, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATL	**Matarih**	**0.12**	**301**	*e*P	Pg	09 13 14.7	-0.2
MATL	**Matarih**	**0.12**	**301**	*e*P	Pg	09 13 14.7	-0.2
RCY	**Rachaya**	**0.33**	**77**	*e*P	Pg	09 13 18.1	-0.8
RCY				*e*S	Sg	09 13 22.8	-0.6
HWQ	**Hawqa**	**0.94**	**26**	*e*P	Pg	09 13 30.6	-0.1
HWQ				*e*S	Sg	09 13 41.9	-1.3

MEX 20 09:15:26.9±0.4, 17.03N×95.28W, h75km±31km, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.48**	**212**	*i* P	Pn	09 15 50.2	-1.6
HUIG				*i* S	Sn	09 16 09.0	-1.6
TGIG		**2.08**	**97**	*e*P	Pn	09 15 59.2	-0.7
TGIG				*e*S	Sn	09 16 23.2	-1.9
PCIG		**2.38**	**123**	*e*P	Pn	09 16 03.2	-0.5
PCIG				*i* S	Sn	09 16 39.9	-1.2
PNIG	**Pinotepa**	**2.80**	**257**	*e*P	Pn	09 16 08.6	-0.9
PNIG				*i* S	Sn	09 16 41.0	-1.3
CCIG	**Comitan**	**3.11**	**103**	*i* P	Pn	09 16 12.8	-1.1
CCIG				*i* S	Sn	09 16 48.5	-1.6

MOS ***20*** *09:21:21.4±0.9, 4.80S×103.18E, h33km, mb6.1/82, MS4.7/18, Error ellipse: s-maj=7.6km s-min=4.2km az=117.7*
BJI ***20*** *09:21:23.5, 5.00S×103.00E, h43km, mB5.3/34, mb5.9/68, Ms5.0/60, Ms7 4.8/62*
NEIC ***20*** *09:21:23.9±0.6, 4.99S×103.05E, h46km±4km, mb5.8/110, MW5.4, Error ellipse: s-maj=4.3km s-min=3.2km az=54.0, Moment Tensor Solution. s36 Moment tensor: Scale 10^17Nm; Mrr1.68; Mθθ-0.59; Mϕϕ-1.09; Mrθ0.61; Mrϕ0.50; Mθϕ-0.21; Best double couple: M0 1.70000×10^17 NP1: ϕs337.00000°, δ37.00000°, λ107.00000°. NP2: ϕs136.00000°, δ55.00000°, λ78.00000°. Principal axes: T 1.8400, Plg76.0000°, Azm7.0000°; N -0.3500, Plg10.0000°, Azm143.0000°; P -1.4800, Plg9.0000°, Azm235.0000°;*
NEIC Felt [V] at Bintuhan, [IV] at Bengkulu and [III] at Kapahiang, Liwa, Pagaralam and Pasarseluma.
IDC ***20*** *09:21:25.7±0.3, 4.90S×103.17E, h59km±2km, mb5.4/43, mb1 5.4/45, mb1mx5.4/45, mbtmp5.4/45, MS4.5/36, Ms1 4.6/36, ms1mx4.5/43 Error ellipse: s-maj=8.2km s-min=6.1km az=49.0*
ISCJB ***20*** *09:21:25.1±0.3, 4.95S±0.02×103.10E±0.02, h69km±2km, mb5.8/250, Error ellipse: s-maj=3.9km s-min=2.6km az=37.1*
DJA ***20*** *09:21:25.2±0.3, 5.52S±2.10×103.32E±., h48km±3km, M5.7/80, mb5.9/80, mB6.1/60, MLv6.0/16, Mw(mB)5.7/60, Mwp5.7/3*
TEH ***20*** *09:21:25.0, 4.97S×103.04E, h55km, ML5.6*
GCMT ***20*** *09:21:27.5±0.1, 5.31S×102.89E, h60km, MW5.4, Moment Tensor Solution. s91,c159; s16,c16; Moment tensor: Scale 10^17Nm; Mrr1.28±.03; Mθθ-1.01±.02; Mϕϕ-0.27±.03; Mrθ-0.78±.02; Mrϕ0.83±.02; Mθϕ-0.37±.02; Best double couple: M0 1.70000×10^17 NP1: ϕs309.00000°, δ30.00000°, λ100.00000°. NP2: ϕs118.00000°, δ61.00000°, λ84.00000°. Principal axes: T 1.5300, Plg74.0000°, Azm14.0000°; N 0.2600, Plg5.0000°, Azm121.0000°; P -1.7900, Plg16.0000°, Azm212.0000°; Data Used: ll IU IC G CN. Surface waves: sta= 87, comp=159, per= 50.*

ISC 20 09:21:25.1±0.2, 4.93S±0.03×103.09E±0.03, h56km±1km, h56km:pP-P, n1396, σ1.17/1757, mb5.9/263, MS4.7/73, 208C-53D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LWLI	**Liwa**	**0.97**	**95**	P	**Pn**	**09 21 43.8**	**+1.1**
LWLI				S	**Sn**	**09 21 57.8**	**+2.1**
LHSI	**Lahat**	**1.18**	**22**	P	Pn	09 21 48.8	+3.4
KSI	**Kapahiang**	**1.36**	**339**	P	**Pn**	**09 21 49.6**	**+1.6**
KSI				S	**Sn**	**09 22 08.0**	**+2.9**
KASI	**Kota Agung**	**1.52**	**113**	P	**Pn**	**09 21 50.7**	**+0.7**
KASI				S	**Sn**	**09 22 09.1**	**+0.4**
BLSI	**Bandar Lampung**	**2.19**	**101**	P	**Pn**	**09 22 00.6**	**+1.5**
BLSI				S	**Sn**	**09 22 30.7**	**+5.6**
SBJI	**Serang**	**3.25**	**111**	P	**Pn**	**09 22 15.2**	**+1.6**
SKJI	**Sukabumi**	**4.02**	**121**	P	**Pn**	**09 22 23.6**	**-0.6**
SKJI				S	**Sn**	**09 23 11.5**	**+1.5**
PPBI	**Pangkal Pinang**	**4.10**	**48**	P	**Pn**	**09 22 28.2**	**+2.9**
RGRI	**Rengat**	**4.61**	**351**	P	Pn	09 22 36.1	+3.7
LEM	**Lembang**	**4.88**	**113**	P	**Pn**	**09 22 39.2**	**+3.0**
TPI	**Tanjungpandan**	**5.04**	**65**	P	**Pn**	**09 22 40.4**	**+2.2**
	599nm,1.0s,9μm4.3nm						
PPI	**Padang Panjang**	**5.20**	**329**	P	**Pn**	**09 22 41.1**	**+0.8**
	2μm,0.8s,41μm16nm						
PPI				S	**Sn**	**09 23 42.4**	**+3.5**
	2μm,0.8s,41μm16nm						
XMIS	**Christmas Isla**	**6.07**	**155**	*e*Pn	Pn	09 22 44.5	-7.8
	1μm,0.5s						
XMIS				*e*Sn	Sn	09 23 50.2	-10
TGJI	**Tegal**	**6.30**	**108**	P	Pn	09 23 00.2	+4.7
	907nm,1.1s,14μm4.7nm						
CLJI	**Cilicap**	**6.51**	**115**	P	Pn	09 23 02.7	+4.4
	367nm,0.7s						
MNSI	**Mandailing Nat**	**6.68**	**328**	P	Pn	09 23 07.2	+6.5
MYKOM	**Kota Tinggi**	**6.72**	**7**	P	Pn	09 23 05.6	+4.3
MYKOM	**Kota Tinggi**	**6.72**	**7**	P	Pn	09 23 04.9	+3.7
	913nm,0.8s,11μm24μm3.9nm						
KGM	**Kluang**	**6.91**	**2**	P	Pn	09 23 07.8	+4.0
BJII	**Banjamegara**	**7.00**	**110**	P	**Pn**	**09 23 07.4**	**+2.2**
	604nm,1.0s,8μm2.5nm						
YOGI	**Yogyakarta**	**7.71**	**112**	P	**Pn**	**09 23 14.2**	**-0.7**
	2μm,0.8s,23μm7.8nm						
FRIM	**Kepong**	**8.24**	**350**	P	**Pn**	**09 23 25.3**	**+3.1**
PCJI	**Pacitan**	**8.66**	**112**	P	**Pn**	**09 23 26.8**	**-1.1**
	803nm,0.9s,8μm						
PSI	**Prapat**	**8.74**	**331**	P	**Pn**	**09 23 27.3**	**-1.7**
PSI				PcP	**PcP**	**09 29 53.4**	**+0.5**
PSI				ScP	**ScP**	**09 33 20.3**	**-0.1**
PSI	**Prapat**	**8.74**	**331**	P	**Pn**	**09 23 27.3**	**-1.7**
	4.0nm,0.3s,baz=324,slow=22,SNR=18						
PSI				LR	LR	09 27 25.4	
	comp=Z,4μm,21.4s,baz=40,slow=42						
PSI				PcP	**PcP**	**09 29 53.4**	**+0.5**
	1.0nm,0.3s,baz=326,slow=3.6,SNR=3.6						
PSI				ScP	**ScP**	**09 33 20.3**	**-0.1**
	baz=218,slow=7.0,SNR=3.7						
PBKI	**Pangkalan Bun**	**8.84**	**76**	P	**Pn**	**09 23 32.9**	**+2.6**
	785nm,1.0s,6μm						
SJI	**Sawahan**	**9.06**	**108**	P	**Pn**	**09 23 34.0**	**+0.6**
	812nm,0.8s,7μm						
PWJI	**Pagerwojo**	**9.19**	**110**	P	**Pn**	**09 23 34.6**	**-0.4**
	619nm,0.7s,8μm						
COCO	**West Island**	**9.50**	**220**	Pn	Pn	09 23 35.4	-3.9
	12μm,0.9s,SNR=22						
COCO	**West Island**	**9.50**	**220**	*e*P	Pn	09 23 35.0	-4.3
COCO	**West Island**	**9.50**	**220**	*e*Pn	Pn	09 23 35.0	-4.3
COCO				*e*Sn	Sn	09 25 12.4	-12
COCO	**West Island**	**9.50**	**220**	P	Pn	09 23 34.6	-4.7
	2μm,1.5s,25μm						
TSI	**Tuntungan**	**9.52**	**332**	P	**Pn**	**09 23 41.1**	**+1.5**
	496nm,1.2s,6μm						
IPM	**Ipoh**	**9.57**	**348**	*e*Pn	**Pn**	**09 23 43.0**	**+2.6**
IPM				*e*Sn	Sn	09 25 36.6	+10
IPM	**Ipoh**	**9.57**	**348**	P	**Pn**	**09 23 43.1**	**+2.8**
IPM	**Ipoh**	**9.57**	**348**	P	**Pn**	**09 23 41.9**	**+1.6**
	338nm,1.0s,3μm						
KSM	**Kuching**	**9.62**	**49**	*e*Pn	**Pn**	**09 23 44.0**	**+3.0**
KSM				*e*Sn	Sn	09 25 37.0	+9.4
KSM	**Kuching**	**9.62**	**49**	P	Pn	09 23 44.7	+3.8
KSM	**Kuching**	**9.62**	**49**	P	Pn	09 23 44.2	+3.3
	260nm,0.7s,2μm						
KTGM	**Kuala Trenggan**	**10.19**	**0**	P	Pn	09 23 52.4	+3.6
KULM	**Kulim**	**10.44**	**346**	*e*Pn	**Pn**	**09 23 52.3**	**+0.1**
KULM				Sn	Sn	09 26 00.7	+13
KULM	**Kulim**	**10.44**	**346**	P	**Pn**	**09 23 53.6**	**+1.4**
KULM	**Kulim**	**10.44**	**346**	P	**Pn**	**09 23 53.4**	**+1.2**
	298nm,1.0s,3μm						
GMJI	**Gumukmas**	**10.81**	**108**	P	**Pn**	**09 23 59.6**	**+2.4**
	648nm,0.7s,7μm						
BLJI	**Banyuglugur**	**10.81**	**106**	P	**Pn**	**09 23 57.9**	**+0.7**
	889nm,0.5s,12μm						
SBUM	**Sibu**	**11.71**	**51**	P	Pn	09 24 14.2	+4.7
SBUM	**Sibu**	**11.71**	**51**	P	Pn	09 24 14.0	+4.5
	566nm,1.0s,4μm						
BBKI	**Banjar Baru**	**11.81**	**83**	P	Pn	09 24 14.7	+3.8
	508nm,1.1s,6μm						
SRBI	**Singaraja**	**12.45**	**105**	P	**Pn**	**09 24 20.2**	**+0.6**
	948nm,0.7s,8μm11μm						
IGBI	**Denpasar**	**12.58**	**109**	P	**Pn**	**09 24 20.3**	**-1.1**
	278nm,0.7s,39μm						
DNP	**Denpasar**	**12.60**	**108**	P	**Pn**	**09 24 21.6**	**-0.1**
	2μm,0.9s,34μm						
BTM	**Bintulu**	**12.84**	**51**	P	P	09 24 30.9	-3.3
KHKI	**Kahang-Kahang**	**12.89**	**106**	P	**Pn**	**09 24 24.8**	**-0.9**
	569nm,0.8s,5μm						
BSI	**Banda Aceh**	**12.96**	**323**	P	Pn	09 24 23.0	-3.6
	255nm,0.9s,3μm						
KBKI	**Kotabaru**	**13.14**	**83**	P	Pn	09 24 32.4	+3.3
	904nm,0.9s,7μm						
SMKI	**Samarinda**	**14.79**	**73**	P	P	09 25 01.2	+5.4
SGKI	**Sangatta, Kali**	**15.14**	**74**	P	P	09 25 06.0	+6.3
KAPI	**Kappang**	**16.60**	**91**	Pn	**Pn**	**09 25 14.8**	**+0.5**
	2μm,0.7s,SNR=35						
KAPI	**Kappang**	**16.60**	**91**	P	**Pn**	**09 25 14.0**	**-0.2**
	15nm,0.7s						
KAPI				*e*PcP	**PcP**	**09 30 00.9**	**-1.3**
KAPI	**Kappang**	**16.60**	**91**	P	**Pn**	**09 25 13.2**	**-1.1**
	269nm,1.1s,3μm						
KAPI	**Kappang**	**16.60**	**91**	P	**Pn**	**09 25 14.0**	**-0.2**
	9.3nm,0.3s,baz=268,slow=9.2,SNR=29						
KAPI				LR	LR	09 32 07.2	
	comp=Z,3μm,21.2s,baz=278,slow=39						
SPSI	**Sidrap Palu**	**16.66**	**87**	P	**P**	**09 25 16.6**	**0.0**
	923nm,0.9s,7μm						
TTSI	**Tana Toraja**	**16.79**	**84**	P	**P**	**09 25 20.6**	**+2.5**
	706nm,1.0s,6μm						
BKSI	**Bulukumba**	**16.97**	**92**	P	**Pn**	**09 25 19.6**	**+0.7**
	890nm,0.9s,8μm						
KKM	**Kota Kinabalu**	**17.05**	**50**	*e*P	**P**	**09 25 22.6**	**+1.6**
	278nm,1.0s						
KKM				*e*S	**S**	**09 28 36.5**	**+0.5**
KKM	**Kota Kinabalu**	**17.05**	**50**	P	**P**	**09 25 22.8**	**+1.8**
KKM	**Kota Kinabalu**	**17.05**	**50**	P	**P**	**09 25 23.2**	**+2.2**
	334nm,1.1s,4μm						
BSSI	**Bau Bau, Buton**	**17.36**	**95**	P	**Pn**	**09 25 23.6**	**-0.1**
	286nm,1.1s,4μm						
TSM	**Tawau**	**17.38**	**58**	P	**P**	**09 25 27.8**	**+3.2**
SDKM	**Sandakan**	**17.57**	**53**	P	**P**	**09 25 29.2**	**+2.5**
WSI	**Waingapu**	**17.70**	**106**	P	Pn	09 25 23.1	-4.8
	3μm,0.8s,23μm						
KDM	**Kudat**	**18.07**	**49**	P	**Pn**	**09 25 35.6**	**+3.2**
BASI	**Baing, Sumba**	**18.11**	**108**	P	**P**	**09 25 30.0**	**-2.6**
	3μm,0.9s,23μm						
SKSI	**Soroako, Sulaw**	**18.36**	**83**	P	**Pn**	**09 25 37.7**	**+1.7**
	392nm,1.0s,4μm						
MYLDM	**Lahad Datu**	**18.38**	**57**	P	**Pn**	**09 25 39.8**	**+3.7**
MYLDM	**Lahad Datu**	**18.38**	**57**	P	**Pn**	**09 25 39.6**	**+3.5**
	737nm,0.9s,13μm21μm						
BBSI	**Bau Bau**	**19.41**	**93**	P	**P**	**09 25 46.2**	**-0.7**
	259nm,0.8s,3μm						
MRSI	**Marisa**	**19.58**	**75**	P	**P**	**09 25 49.9**	**+1.1**
	986nm,0.8s,8μm						
UBPT	**Khong Chiam**	**20.22**	**7**	P	**P**	**09 25 55.7**	**+0.1**
	419nm,1.1s						
DGPR	**DIGLIPUR**	**20.63**	**331**	*e*PKP	**P**	**09 25 59.1**	**-1.0**
DGPR				AMB	AMB	09 26 02.6	
	comp=Z,530nm,6.9s						

PBKT	**Sadao Pong**	**21.47**	**354**	P	**P**	**09 26 09.7**	**+0.7**
	comp=Z,349nm,0.8s						
KMSI	**Cibinong**	**21.57**	**76**	P	**P**	**09 26 11.8**	**+1.5**
	comp=Z,966nm,0.8s,comp=Z,12μm						
MNI	**Manado**	**22.63**	**74**	P	**P**	**09 26 21.5**	**-0.2**
	comp=Z,667nm,0.9s,comp=Z,7μm						
MBWA	**Marble Bar**	**22.83**	**136**	P	**P**	**09 26 24.2**	**+0.6**
	SNR=8.6						
MBWA	**Marble Bar**	**22.83**	**136**	*e*P	**P**	**09 26 23.1**	**-0.5**
	comp=Z,375nm,1.5s						
MBWA				*e*PcP	**PcP**	**09 30 13.9**	**+0.6**
MBWA				*e*S	**S**	**09 30 30.2**	**+1.3**
CMAR	**Chiang Mai Arr**	**23.60**	**350**	P	**P**	**09 26 30.1**	**-1.0**
CMAR				PcP	**PcP**	**09 30 16.1**	**+1.2**
CMAR				ScP	**ScP**	**09 33 48.9**	**+0.2**
CMAR				PKiKP	**PKiKP**	**09 37 58.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**23.60**	**350**	P	**P**	**09 26 30.1**	**-1.0**
	comp=Z,230nm,0.6s,baz=182,slow=8.7,SNR=508						
CMAR				PcP	**PcP**	**09 30 16.1**	**+1.2**
	comp=Z,26nm,0.8s,baz=206,slow=3.3,SNR=12						
CMAR				ScP	**ScP**	**09 33 48.9**	**+0.2**
	comp=Z,6.3nm,0.9s,baz=205,slow=3.3,SNR=10						
CMAR				LR	LR	09 35 48.7	
	comp=Z,2μm,21.9s,baz=175,slow=37						
CMAR				PKiKP	**PKiKP**	**09 37 58.1**	**-0.7**
	comp=Z,0.6nm,0.3s,baz=249,slow=1.8,SNR=4.8						
CHTO	**Chiang Mai**	**23.95**	**350**	*e*P	**P**	**09 26 33.5**	**-0.8**
CHTO				*e*		09 30 17.1	
CHTO				pmax	pmax		
	comp=Z,291nm,0.8s						
CHTO	**Chiang Mai**	**23.95**	**350**	P	**P**	**09 26 33.8**	**-0.5**
	SNR=87						
CHTO	**Chiang Mai**	**23.95**	**350**	*e*P	**P**	**09 26 33.5**	**-0.8**
	comp=Z,291nm,0.8s						
CHTO				*e*PcP	**PcP**	**09 30 17.1**	**+1.4**
CHTO				*e*ScP	**ScP**	**09 33 49.6**	**+0.1**
CHTO	**Chiang Mai**	**23.95**	**350**	P	**P**	**09 26 33.4**	**-0.8**
	comp=Z,457nm,0.8s,comp=Z,4μm						
NLAI	**Namlea**	**24.01**	**87**	P	**P**	**09 26 34.5**	**-0.4**
	comp=Z,413nm,1.0s,comp=Z,4μm						
DCPH	**Dipolog City**	**24.26**	**56**	*e*P	**P**	**09 26 36.9**	**-0.3**
CTBH	**Cotabato--PC H**	**24.32**	**60**	*e*P	**P**	**09 26 39.5**	**+1.8**
QIZ	**Qiongzhong**	**24.72**	**15**	P	**P**	**09 26 43.0**	**+1.7**
QIZ				sP	**sP**	**09 27 00.8**	**-1.1**
QIZ				S	**S**	**09 31 03.3**	**+3.7**
QIZ				pmax	pmax		
	comp=Z,94nm,1.5s						
QIZ				LR	LR		
	comp=N,1μm,25.9s						
QIZ				LR	LR		
	comp=E,400nm,23.1s						
QIZ				LR	LR		
	comp=Z,2μm,28.8s						
QIZ	**Qiongzhong**	**24.72**	**15**	*e*P	**P**	**09 26 41.6**	**+0.2**
	comp=Z,199nm,1.3s						
LBMI	**Labuha**	**24.75**	**81**	P	**P**	**09 26 43.2**	**+1.5**
	comp=Z,2μm,0.8s,comp=Z,16μm						
AAI	**Ambon**	**25.07**	**88**	P	**P**	**09 26 42.2**	**-2.4**
	comp=Z,184nm,0.8s,comp=Z,2μm						
DAV	**Davao City (W)**	**25.42**	**62**	P	**P**	**09 26 51.1**	**+3.3**
	SNR=14						
DAV	**Davao City (W)**	**25.42**	**62**	⇑*i*P	**P**	**09 26 49.9**	**+2.1**
DAV	**Davao City (W)**	**25.42**	**62**	P	**P**	**09 26 48.6**	**+0.9**
DAV	**Davao City (W)**	**25.42**	**62**	P	**P**	**09 26 50.7**	**+3.0**
	comp=Z,1μm,0.9s,comp=Z,13μm						
DAV	**Davao City (W)**	**25.42**	**62**	P	**P**	**09 26 48.6**	**+0.9**
	comp=Z,656nm,0.7s,baz=45,slow=1.7,SNR=20						
DAV				LR	LR	09 37 48.5	
	comp=Z,1μm,18.5s,baz=296,slow=39						
PALK	**Pallekele**	**25.42**	**298**	P	**P**	**09 26 52.2**	**+4.4**
	comp=Z,68nm,1.0s						
RCP	**Roxas**	**25.51**	**50**	*e*P	**P**	**09 26 50.1**	**+1.5**
RCP	**Roxas**	**25.51**	**50**	*e*P	**P**	**09 26 50.1**	**+1.5**
GAMI	**Galela, Maluku**	**25.58**	**75**	P	**P**	**09 26 47.6**	**-1.6**
	comp=Z,941nm,1.0s,comp=Z,10μm						
FITZ	**Fitzroy Crossi**	**25.64**	**123**	*e*P	**P**	**09 26 49.5**	**-0.1**
	comp=Z,4.0nm,0.5s						
FITZ				*e*PcP	**PcP**	**09 30 20.4**	**+1.0**
FITZ	**Fitzroy Crossi**	**25.64**	**123**	P	**P**	**09 26 49.8**	**+0.1**
	comp=Z,242nm,0.8s,baz=298,slow=5.6,SNR=545						
FITZ				PcP	**PcP**	**09 30 20.4**	**+1.0**
	comp=Z,32nm,0.7s,baz=293,slow=4.5,SNR=3.3						
MSAI	**Masohi**	**25.82**	**88**	P	**P**	**09 26 54.4**	**+3.0**
	comp=Z,35nm,0.8s,comp=Z,1μm						
TGY	**Tagaytay City**	**25.91**	**43**	P	**P**	**09 26 54.1**	**+1.9**
TGY	**Tagaytay City**	**25.91**	**43**	P	**P**	**09 26 54.1**	**+1.9**
	comp=Z,664nm,0.7s,baz=207,slow=4.1,SNR=21						
TGY				LR	LR	09 37 39.9	
	comp=Z,5.1nm,19.5s,baz=39,slow=38						
TRD	**Trivandrum**	**29.28**	**297**	⇓*e*PKP	P	09 27 37.5	+15
TRD				*e*S	S	09 32 23.5	+12
VIS	**Vishakhapatnam**	**29.78**	**320**	*e*PKP	**P**	**09 27 28.1**	**+1.3**
VIS				AMB	AMB	09 27 29.0	
	comp=Z,128nm,1.5s						
KMI	**Kunming**	**29.88**	**359**	⇑P	**P**	**09 27 29.4**	**+1.6**

QZH LR LR
comp=Z,70nm,0.7s
SSLB Suanglung 33.44 31 *e*P **P** **09 27 59.4 +0.5**
SSLB *e*PcP **PcP** **09 30 39.9 +0.6**
WRA Warramunga Arr 33.87 119 P **P** **09 28 02.6 -0.1**
WRA PcP **PcP** **09 30 40.9 +0.3**
WRA S **S** **09 33 19.8 -3.6**
WRA ScP **ScP** **09 34 21.2 +0.3**
WRA Warramunga Arr 33.87 119 P **P** **09 28 02.6 -0.1**
comp=Z,305nm,0.7s,baz=296,slow=9.3,SNR=2496
WRA PcP **PcP** **09 30 40.9 +0.3**
comp=Z,38nm,0.7s,baz=299,slow=2.4,SNR=7.7
WRA S **S** **09 33 19.8 -3.6**
comp=Z,11nm,0.8s,baz=299,slow=17,SNR=5.7
WRA ScP **ScP** **09 34 21.2 +0.3**
comp=Z,11nm,0.9s,baz=306,slow=2.7,SNR=4.7
WRA LR LR 09 44 20.4
comp=Z,516nm,18.2s,baz=295,slow=41
WRAB Tennant Creek 33.88 119 P **P** **09 28 02.3 -0.5**
comp=Z,4μm,0.7s
WRAB Tennant Creek 33.88 119 *e*P **P** **09 28 02.7 -0.1**
WRAB pmax pmax
comp=Z,424nm,0.8s
WRAB Tennant Creek 33.88 119 *e*P **P** **09 28 02.7 -0.1**
comp=Z,424nm,0.8s
NACB Ninganchiao 34.09 31 *e*P **P** **09 28 05.3 +0.8**
comp=Z,147nm,0.9s
TATO Taipei 34.70 30 *e*P **P** **09 28 10.2 +0.5**
comp=Z,76nm,0.8s
FORT Forrest 34.83 140 *e*P **P** **09 28 10.2 -0.6**
comp=Z,137nm,0.8s
FORT *e*PcP **PcP** **09 30 44.2 +1.1**
LATR Latur 34.96 312 *ex* P 09 28 08.7 -3.4
NGP Nagpur 35.04 319 *e*PKP **P** **09 28 11.4 -1.3**
NGP *ex* x 09 28 14.1
comp=Z,269nm,1.0s
NGP *e*S **S** **09 33 41.5 +0.1**
ASAR Alice Springs 35.05 125 P **P** **09 28 13.2 +0.3**
ASAR PcP **PcP** **09 30 44.5 +0.5**
ASAR S **S** **09 33 39.1 -2.5**
ASAR ScP **ScP** **09 34 25.1 0.0**
ASAR Alice Springs 35.05 125 P **P** **09 28 13.2 +0.3**
comp=Z,292nm,0.8s,baz=298,slow=7.7,SNR=1652
ASAR PcP **PcP** **09 30 44.5 +0.5**
comp=Z,46nm,0.8s,baz=306,slow=3.1,SNR=13
ASAR S **S** **09 33 39.1 -2.5**
comp=Z,14nm,0.7s,baz=293,slow=16,SNR=10
ASAR ScP **ScP** **09 34 25.1 0.0**
comp=Z,15nm,0.8s,baz=307,slow=4.0,SNR=6.4
ASAR LR LR 09 43 37.8
comp=Z,893nm,19.9s,baz=297,slow=38
AS31 Alice Springs 35.05 125 *e*P **P** **09 28 13.2 +0.2**
AS31 *e*PcP **PcP** **09 30 45.0 +1.0**
AS31 *e*S **S** **09 33 39.0 -2.6**
ODAN Odare 35.07 335 *e*P **P** **09 28 13.1 -0.1**
comp=Z,822nm,0.8s
TAPN Taplejung 35.37 336 *e*P **P** **09 28 16.2 +0.4**
comp=Z,1μm,0.9s
GOA Goa 35.38 306 *e*PKP **P** **09 28 15.7 0.0**
GOA AMB AMB 09 28 18.0
comp=Z,119nm,2.3s
RAMN Ramite 35.48 334 *e*P **P** **09 28 17.2 +0.4**
comp=Z,444nm,0.8s
ENH Enshi 35.54 10 *e*P **P** **09 28 16.2 -0.7**
comp=Z,74nm,0.7s
ENH *e*PcP **PcP** **09 30 45.4 +0.2**
CD2 Chengdu 35.65 1⇓ *i*P **P** **09 28 17.9 0.0**
CD2 pP **pP** **09 28 31.9 -0.2**
CD2 sP **sP** **09 28 38.4 -0.3**
CD2 PP **PP** **09 29 40.5 +0.7**
CD2 PcP **PcP** **09 30 44.5 -1.0**
CD2 S **S** **09 33 48.6 -1.8**
CD2 sS **sS** **09 34 13.9 -0.7**
CD2 SS **SnSn** **09 36 14.3 -2.1**
CD2 ScS **ScS** **09 38 28.3 -3.7**
CD2 pmax pmax
comp=Z,490nm,0.6s
CD2 pmax pmax
comp=Z,270nm,9.2s
CD2 LR LR
comp=N,4μm,19.0s
CD2 LR LR
comp=E,2μm,17.8s
CD2 LR LR
comp=Z,4μm,16.6s
KAD Karad 36.10 308 *i*P **P** **09 28 23.2 +1.2**
LSA Lhasa 36.29 342 P **P** **09 28 24.3 +0.4**
LSA S S 09 33 54.0 -7.1
LSA pmax pmax
comp=Z,250nm,0.9s
LSA pmax pmax
comp=Z,260nm,11.0s
LSA LR LR
comp=N,580nm,21.3s
LSA LR LR
comp=E,1μm,23.5s
LSA LR LR
comp=Z,1μm,22.0s
LSA Lhasa 36.29 342 *e*P **P** **09 28 24.0 +0.1**
LSA *e* 09 30 49.1
LSA pmax pmax
comp=Z,250nm,0.9s
LSA Lhasa 36.29 342 *e*P **P** **09 28 24.0 +0.1**
comp=Z,250nm,0.9s
LSA *e*PcP **PcP** **09 30 49.1 +1.0**
PKI Pulchoki 36.55 333 *e*P **P** **09 28 25.9 -0.1**
comp=Z,348nm,0.7s
PKIN Phulchoki 36.56 333 *e*P **P** **09 28 25.8 -0.2**
comp=Z,253nm,0.7s
GUN Gumba 36.63 334 *e*P **P** **09 28 27.1 +0.4**
comp=Z,1μm,0.7s
DMN Daman 36.72 333 *e*P **P** **09 28 27.5 +0.2**
comp=Z,695nm,0.9s
KKN Kakani 36.79 333 *e*P **P** **09 28 28.1 +0.2**
comp=Z,796nm,0.7s
WHN Wuhan 36.88 16 ⇑P **P** **09 28 29.0 +0.6**
WHN sP **sP** **09 28 48.9 -0.3**
WHN LR LR
comp=Z,5μm,20.8s
POO Poona 37.07 310⇑ *i*P **P** **09 28 28.0 -2.2**
comp=Z,290nm,1.0s
POO *e*PKP **P** **09 28 31.2 +1.0**
POO AMB AMB 09 28 31.8
comp=Z,136nm,1.0s
KOLN Koldanda 37.56 331 *e*P **P** **09 28 35.0 +0.6**
comp=Z,1μm,0.8s
BHPL Bhopal 37.58 319 *e*PKP **P** **09 28 35.3 +0.8**
BHPL AMB AMB 09 28 35.8
comp=Z,192nm,0.5s
JAY Jayapura 37.61 88 P **P** **09 28 34.1 -0.8**
comp=Z,100nm,0.6s
DANN Dangsing 37.97 332 *e*P **P** **09 28 38.3 +0.3**
PYUN Piuthan 38.13 331 *e*P **P** **09 28 39.7 +0.4**
comp=Z,1μm,1.0s
XAN Xi'an 39.15 8 P **P** **09 28 47.4 -0.1**
XAN pP **pP** **09 29 02.4 +0.5**
XAN sP **sP** **09 29 09.4 +1.0**
XAN PP **PnPn** **09 30 21.5 +0.2**
XAN S **ScP** **09 34 40.9 +0.8**
XAN sS **sS** **09 35 07.0 -0.9**
XAN SS SS 09 37 27.6 -11
XAN pmax pmax
comp=Z,93nm,0.8s
XAN pmax pmax
comp=Z,120nm,8.0s
XAN LR LR
comp=N,700nm,14.0s
XAN LR LR
comp=E,350nm,15.1s
XAN LR LR
comp=Z,350nm,16.9s
NJ2 Nanjing 39.72 21 *e*P **P** **09 28 53.3 +1.1**
NJ2 pP **pP** **09 29 08.4 +1.8**
NJ2 PP **PnPn** **09 30 29.5 +1.5**
NJ2 S **S** **09 34 52.5 +0.4**
NJ2 sS sS 09 35 11.0 -5.5
NJ2 pmax pmax
comp=Z,130nm,0.8s
NJ2 pmax pmax
comp=Z,350nm,9.8s
NJ2 LR LR
comp=N,1μm,30.6s
NJ2 LR LR
comp=E,670nm,20.0s

NJ2 LR LR
comp=Z,2μm,29.9s
SSE Sheshan 39.78 25 ⇑P **P** **09 28 54.0 +1.3**
SSE pP **pP** **09 29 07.0 -0.1**
SSE sP **sP** **09 29 13.3 -0.3**
SSE S **S** **09 34 54.8 +1.9**
SSE pmax pmax
comp=Z,140nm,1.0s
SSE pmax pmax
comp=Z,280nm,11.7s
SSE LR LR
comp=N,700nm,22.3s
SSE LR LR
comp=E,310nm,22.4s
SSE LR LR
comp=Z,690nm,34.5s
JOW Kunigami 39.89 36 *e*P **P** **09 28 54.2 +0.5**
comp=Z,72nm,0.9s
JOW *e*PcP **PcP** **09 30 59.9 +1.3**
COEN Coen 40.49 106 *e*P **P** **09 28 57.3 -1.6**
comp=Z,525nm,0.8s
COEN *e*PcP **PcP** **09 31 01.8 +1.0**
LGTI Lohaghat 40.62 329 *e*PKP **P** **09 29 01.7 +2.0**
LGTI *ex* x 09 35 18.1
PTH Pithoragarh 40.71 329 *ex* x 09 28 52.1
PTH *ex* x 09 30 50.1
LZH Lanzhou 40.81 1⇑ *i*P **P** **09 29 02.0 +0.6**
LZH pP **pP** **09 29 17.4 +1.6**
LZH sP **sP** **09 29 23.8 +1.4**
LZH PP **PnPn** **09 30 41.1 +0.1**
LZH PcP **PcP** **09 31 02.8 +1.2**
LZH ScP **ScP** **09 34 47.8 +1.2**
LZH *e*S **S** **09 35 11.0 +2.4**
LZH SS **SS** **09 38 10.6 -1.0**
LZH pmax pmax
comp=Z,90nm,1.3s
LZH pmax pmax
comp=Z,210nm,4.6s
LZH LR LR
comp=N,2μm,17.2s
LZH LR LR
comp=E,610nm,14.1s
LZH LR LR
comp=Z,2μm,18.8s
BBOO Buckleboo 41.41 136 *e*P **P** **09 29 06.2 0.0**
comp=Z,2μm,1.1s
BBOO *e*PcP **PcP** **09 31 03.9 +0.3**
AJM Ajmer 41.64 320 *i*P **P** **09 29 08.0 -0.2**
NDI New Delhi 41.68 325 *e*PKP **P** **09 29 06.5 -1.9**
NDI *ex* x 09 35 16.5
DDI Dehra Dun 42.47 327 *ex* x 09 29 14.0
DDI *e*PKP **P** **09 29 15.1 +0.2**
DDI AMB AMB 09 29 15.4
comp=Z,899nm,1.5s
BHJ Bhuj 43.01 312 *e*PKP **P** **09 29 19.6 +0.2**
BHJ AMB AMB 09 29 21.2
comp=Z,286nm,4.1s
SMLA Simla 43.57 327 *i*P **P** **09 29 23.8 +0.1**
SMLA AMb AMB 09 29 25.4
comp=Z,982nm,0.3s
SMLA *i* x x 09 35 46.8
PMG Port Moresby 43.93 98 P **P** **09 29 26.1 -0.8**
comp=Z,23nm,0.5s
PMG PcP **PcP** **09 31 13.3 +1.0**
PMG Port Moresby 43.93 98 P **P** **09 29 26.4 -0.5**
comp=Z,353nm,0.8s,comp=Z,3μm
PMG Port Moresby 43.93 98 P **P** **09 29 26.1 -0.8**
comp=Z,222nm,0.6s,baz=151,slow=0.9,SNR=80
PMG PcP **PcP** **09 31 13.3 +1.0**
comp=Z,34nm,0.7s,baz=14,slow=4.5,SNR=2.8
SDNR Sundarnagar 43.97 327 *e*PKP **P** **09 29 27.6 +0.6**
BHK Bhakra 44.20 327 *e*PKP **P** **09 29 27.2 -1.6**
GTA Gaotai 44.23 356 ⇑P **P** **09 29 29.4 +0.4**
GTA pP **pP** **09 29 41.8 -1.8**
GTA sP **sP** **09 29 47.0 -3.1**
GTA PcP **PP** **09 31 13.3 +0.2**
GTA S **S** **09 35 59.4 +0.7**
GTA sS **sS** **09 36 21.3 -2.0**
GTA SS **SS** **09 39 12.3 -6.4**
GTA ScS **ScS** **09 39 19.8 -2.8**
GTA pmax pmax
comp=Z,220nm,0.9s
GTA pmax pmax
comp=Z,260nm,7.4s
GTA LR LR
comp=N,2μm,17.8s
GTA LR LR
comp=E,1μm,18.5s
GTA LR LR
comp=Z,3μm,17.8s
CTA Charters Tower 44.59 114 P **P** **09 29 32.7 +0.5**
CTA PcP **PcP** **09 31 15.8 +1.3**
CTA S **S** **09 36 01.7 -2.6**
CTA Charters Tower 44.59 114 P **P** **09 29 32.7 +0.5**
comp=Z,155nm,0.7s,baz=282,slow=11,SNR=139
CTA PcP **PcP** **09 31 15.8 +1.3**
comp=Z,26nm,0.9s,baz=350,slow=6.1,SNR=1.6
CTA S **S** **09 36 01.7 -2.6**
comp=Z,12nm,0.9s,baz=82,slow=16,SNR=11
CTAO Charters Tower 44.59 114 *e*P **P** **09 29 32.6 +0.5**
CTAO *e*S **S** **09 36 04.5 +0.2**
CTAO pmax pmax
comp=Z,239nm,0.8s
CTAO Charters Tower 44.59 114 *e*P **P** **09 29 32.6 +0.5**
comp=Z,239nm,0.8s
CTAO *e*ScP **ScP** **09 35 03.2 +1.1**
CTAO *e*S **S** **09 36 04.5 +0.2**
DHRM DHARAMSHALA 44.90 327 *e*PKP **P** **09 29 34.3 -0.4**
DHRM AMB AMB 09 29 51.0
comp=Z,393nm,4.3s
STKA Stephens Creek 44.91 131 *e*P **P** **09 29 35.1 +0.6**
comp=Z,35nm,0.6s
STKA *e* 09 31 15.8
STKA S S 09 36 19.6 +11
STKA Stephens Creek 44.91 131 P **P** **09 29 35.2 +0.7**
comp=Z,208nm,0.6s,baz=303,slow=9.4,SNR=576
STKA S S 09 36 19.6 +11
comp=Z,6.1nm,0.6s,baz=118,slow=17,SNR=3.6
STKA LR LR 09 48 22.8
comp=Z,563nm,21.6s,baz=302,slow=36
DLH Dalhousie 45.31 327 *e*PKP **P** **09 29 37.0 -0.9**
DLH *ex* x 09 29 55.0
THN Thein Dam 45.36 327 *i*x x 09 29 34.7
THN *ex* x 09 36 14.5
GUMO Guam 45.37 66 *e*P **P** **09 29 35.7 -2.7**
comp=Z,340nm,0.5s
BTO Baotou 45.76 7 *e*P **P** **09 29 39.8 -1.4**
JNU Nakatsue 46.11 33 P **P** **09 29 44.1 +0.1**
comp=Z,16nm,0.8s
JNU *e*PcP **PcP** **09 31 19.5 0.0**
JNU Nakatsue 46.11 33 P **P** **09 29 44.1 +0.1**
comp=Z,206nm,0.9s,baz=208,slow=2.9,SNR=81
JNU LR LR 09 49 24.2
comp=Z,319nm,19.3s,baz=150,slow=36
HHC Hu-ho-hao-te 46.22 9 *e*P **P** **09 29 45.8 +1.0**
HHC pP **pP** **09 30 01.3 +1.9**
HHC sP **sP** **09 30 08.4 +2.5**
HHC PP **PP** **09 31 35.6 +1.4**
HHC PcS **PcS** **09 35 13.3 -1.0**
HHC S **S** **09 36 29.8 +2.5**
HHC sS **sS** **09 36 55.5 +3.4**
HHC ScS **ScS** **09 39 32.5 -2.8**
HHC SS **SS** **09 39 47.9 -5.6**
HHC pmax pmax
comp=Z,450nm,0.8s
HHC pmax pmax
comp=Z,680nm,5.0s
HHC LR LR
comp=N,3μm,17.8s
HHC LR LR
comp=E,2μm,17.7s
HHC LR LR
comp=Z,3μm,16.3s
BJT Baijiatuau 46.32 14 *e*P **P** **09 29 45.8 +0.3**
comp=Z,277nm,0.8s
BJT *e*PcP **PcP** **09 31 20.6 +0.6**
BJI Beijing 46.34 14 P **P** **09 29 46.0 +0.4**
BJI pP **pP** **09 30 01.4 +1.1**
BJI sP **sP** **09 30 07.4 +0.6**
BJI PP **PP** **09 31 38.1 +2.8**
BJI S **S** **09 36 29.3 +0.4**
BJI pmax pmax
comp=Z,79nm,0.8s
BJI LR LR
comp=N,1μm,24.5s
BJI LR LR
comp=E,490nm,24.9s
BJI LR LR
comp=Z,1μm,24.9s
DL2 Dalian 46.87 20 P **P** **09 29 49.8 0.0**
DL2 S **S** **09 36 36.0 -0.5**
DL2 pmax pmax
comp=Z,60nm,0.8s
DL2 pmax pmax
comp=Z,300nm,6.2s
DL2 LR LR
comp=N,460nm,19.9s
DL2 LR LR
comp=Z,460nm,25.3s
INCN Inchon 47.56 26 *e*P **P** **09 29 54.7 -0.5**
comp=Z,35nm,0.5s
KSAR Wonju Array Be 48.07 27 P **P** **09 29 59.6 +0.5**
KSAR PcP **PcP** **09 31 26.4 +0.1**
KSAR ScP **ScP** **09 35 15.9 -0.3**
KSRS Korea Array 48.10 27 P **P** **09 29 59.6 +0.3**
comp=Z,63nm,0.6s,baz=223,slow=7.4,SNR=275
KSRS PcP **PcP** **09 31 26.4 +0.1**
comp=Z,30nm,0.8s,baz=215,slow=2.9,SNR=13
KSRS ScP **ScP** **09 35 15.9 -0.4**
comp=Z,5.5nm,0.9s,baz=218,slow=4.5,SNR=7.9
SNY Shenyang 50.15 20 ⇑P **P** **09 30 14.0 -0.9**
SNY pmax pmax
comp=Z,59nm,1.1s
SNY pmax pmax
comp=Z,180nm,6.0s
SNY LR LR
comp=N,440nm,20.4s
SNY LR LR
comp=E,620nm,18.9s
SNY LR LR
comp=Z,850nm,25.8s
EIDS Eidsvold 50.24 119 *e*P **P** **09 30 16.4 +0.4**
comp=Z,223nm,1.4s
EIDS *e*PcP **PcP** **09 31 33.5 -1.0**
WMQ Urumqi 50.48 346⇑ *i*P **P** **09 30 18.0 +0.5**
WMQ pP **pP** **09 30 33.0 +0.7**
WMQ sP **sP** **09 30 40.0 +1.2**
WMQ ScP **ScP** **09 35 25.0 -1.4**
WMQ S **S** **09 37 26.0 -1.3**
WMQ sS **sS** **09 37 53.0 +0.7**
WMQ ScS **ScS** **09 40 01.0 -2.6**
WMQ pmax pmax
comp=Z,500nm,1.2s
WMQ pmax pmax
comp=Z,1μm,3.6s
WMQ LR LR
comp=N,1μm,15.4s
WMQ LR LR
comp=E,1μm,16.0s
WMQ LR LR
comp=Z,1μm,27.0s
KBL Kabul 50.71 323 *e*P **P** **09 30 19.1 -0.5**
KBL S **S** **09 37 28.8 -2.3**
KBL pmax pmax
comp=Z,141nm,1.0s
KBL Kabul 50.71 323 *e*P **P** **09 30 19.1 -0.5**
comp=Z,141nm,1.0s
KBL S **S** **09 37 28.8 -2.3**
KSH Kashi 50.81 333⇑ *i*P **P** **09 30 18.8 -1.4**
KSH pP **pP** **09 30 34.5 -0.5**
KSH sP **sP** **09 30 40.4 -1.1**
KSH PcP **PcP** **09 31 35.8 -0.6**
KSH PP **PP** **09 32 17.9 +1.0**
KSH S S 09 37 25.8 -6.4
KSH sS **sS** **09 37 52.8 -4.5**
KSH pmax pmax
comp=Z,520nm,0.8s
KSH LR LR
comp=N,660nm,8.4s
KSH LR LR
comp=E,430nm,8.4s
KSH LR LR
comp=Z,500nm,8.2s
WBK Wadi Bani Khal 51.07 304 P **P** **09 30 24.4 +2.1**
SNR=7.8
JHJ Hachijo jima 2 51.39 40 P **P** **09 30 23.7 -0.8**
comp=Z,158nm,1.0s,baz=150,slow=7.7,SNR=3.7
JHJ LR LR 09 52 56.5
comp=Z,226nm,18.5s,baz=260,slow=37
JMDO Jabal Madar 51.69 303 ⇑P **P** **09 30 27.9 +1.0**
SNR=8.6
CAN Canberra 51.97 132 *e*P **P** **09 30 29.6 +0.7**
CAN pmax pmax
comp=Z,226nm,1.0s
CAN Canberra 51.97 132 *e*P **P** **09 30 29.6 +0.7**
comp=Z,226nm,1.0s
SMDO Samad 52.03 304 ⇓P **P** **09 30 30.7 +1.2**
SNR=14
ARMA Armidale 52.20 125 *e*P **P** **09 30 32.3 +1.6**
comp=Z,114nm,0.9s
CN2 Changchun 52.53 20 ⇑P **P** **09 30 32.3 -0.5**
CN2 *e*pP **pP** **09 30 45.0 -2.7**
CN2 PcP **PcP** **09 31 42.9 +0.4**
CN2 *e*S **S** **09 37 55.6 +0.1**
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,800nm,21.0s
CN2 LR LR
comp=E,500nm,21.0s
CN2 LR LR
comp=Z,600nm,23.0s
BSY Bisya 52.60 303 ⇑P **P** **09 30 35.5 +1.8**
SNR=10
SONM Songino Array 52.62 3 P **P** **09 30 34.3 +0.8**
SONM PcP **PcP** **09 31 43.1 +0.2**
SONM ScP **ScP** **09 35 34.6 -1.1**
SONM Songino Array 52.62 3 P **P** **09 30 34.3 +0.8**
comp=Z,233nm,0.9s,baz=182,slow=8.3,SNR=517
SONM PcP **PcP** **09 31 43.1 +0.2**
comp=Z,38nm,0.5s,baz=184,slow=4.2,SNR=19
SONM ScP **ScP** **09 35 34.6 -1.1**
comp=Z,3.7nm,0.8s,baz=198,slow=4.6,SNR=5.4
SONM LR LR 09 55 28.7
comp=Z,784nm,19.4s,baz=182,slow=39
ULN Ulaanbaatar 52.69 3 P **P** **09 30 34.9 +0.9**
SNR=82
ULN Ulaanbaatar 52.69 3 *e*P **P** **09 30 34.5 +0.5**
comp=Z,150nm,0.9s
ULN *e*PcP **PcP** **09 31 42.6 -0.7**
ULN Ulaanbaatar 52.69 3 P **P** **09 30 34.2 +0.2**
comp=Z,185nm,1.0s,comp=Z,2μm
MAJO Matsushiro 52.72 36 *e*P **P** **09 30 32.9 -1.4**
MAJO *e* 09 31 43.4
MAJO pmax pmax
comp=Z,77nm,0.8s
MAJO Matsushiro 52.72 36 *e*P **P** **09 30 32.9 -1.4**
comp=Z,77nm,0.8s
MAJO *e*PcP **PcP** **09 31 43.4 0.0**
MAJO ScP **ScP** **09 35 36.5 +0.3**
MAT Matsushiro 52.72 36 P **P** **09 30 33.0 -1.3**
MJAR Matsushiro Arr 52.72 36 P **P** **09 30 33.1 -1.2**
MJAR PcP **PcP** **09 31 43.7 +0.2**
MJAR ScP **ScP** **09 35 36.2 -0.1**
MJAR Matsushiro Arr 52.72 36 P **P** **09 30 33.1 -1.2**
comp=Z,115nm,0.9s,baz=216,slow=7.3,SNR=233
MJAR PcP **PcP** **09 31 43.7 +0.2**
comp=Z,36nm,0.8s,baz=174,slow=2.7,SNR=10
MJAR ScP **ScP** **09 35 36.2 -0.1**
comp=Z,5.4nm,1.0s,baz=216,slow=4.5,SNR=6.7
MJAR LR LR 09 53 58.0
comp=Z,140nm,19.9s,baz=180,slow=37
HOQ Hoqain 52.87 304 ⇑P **P** **09 30 37.5 +1.9**
SNR=6.5
ULHL Ulahol 52.92 335 P **P** **09 30 36.1 +0.2**
SNR=15
KZA Kyzart 53.21 334 P **P** **09 30 38.5 +0.2**
SNR=212
ARQ Araqi 53.42 304 ⇓P **P** **09 30 40.9 +1.2**
SNR=8.8
UCH Uchtor 53.65 334 P **P** **09 30 41.7 +0.1**
SNR=17
TKM2 Tokmak 2 53.75 335 *e*P **P** **09 30 42.0 0.0**
TKM2 pmax pmax
comp=Z,330nm,0.5s
TKM2 MLR MLR
comp=Z,567nm,21.0s
TKM2 Tokmak 2 53.75 335 *e*P **P** **09 30 42.0 0.0**
comp=Z,330nm,0.5s
TKM2 LR LR

comp=Z,567nm,21.0s
TKM2 Tokmak 2 53.75 335 P **P** **09 30 42.1 0.0**
SNR=514
KBK Karagaybulak 53.81 334 P **P** **09 30 43.0 +0.6**
SNR=148
ABTO Aybut 53.91 296 ⇑P **P** **09 30 44.5 +1.0**
SNR=7.0
AML Almayashu 53.94 333 P **P** **09 30 43.8 +0.2**
SNR=212
AAK Ala-Archa 53.99 334 P **P** **09 30 44.0 +0.3**
comp=Z,454nm,0.6s,SNR=24
AAK Ala-Archa 53.99 334 *e*P **P** **09 30 43.7 0.0**
AAK *e* 09 31 49.3
AAK *e*S **S** **09 38 17.8 +2.1**
AAK pmax pmax
comp=Z,60nm,0.8s
AAK Ala-Archa 53.99 334 *e*P **P** **09 30 43.7 0.0**
comp=Z,60nm,0.8s
AAK *e*PcP **PcP** **09 31 49.3 +1.0**
AAK PcP **PcP** **09 31 49.6 +1.3**
AAK *e*S **S** **09 38 17.8 +2.1**
AAK Ala-Archa 53.99 334 P **P** **09 30 44.1 +0.3**
SNR=37
AAK Ala-Archa 53.99 334 P **P** **09 30 44.0 +0.3**
comp=Z,36nm,0.5s,baz=141,slow=6.0,SNR=97
AAK PcP **PcP** **09 31 49.6 +1.3**
comp=Z,62nm,0.6s,baz=179,slow=5.2,SNR=6.3
AAK LR LR 09 58 16.9
comp=Z,461nm,19.0s,baz=151,slow=41
CHMS Chumysh 54.17 335 P **P** **09 30 44.6 -0.2**
SNR=48
EKS2 Erkin-Say 54.33 334 *e*P **P** **09 30 46.5 +0.4**
EKS2 *e* 09 31 50.6
EKS2 *e*S **S** **09 38 20.5 +0.4**
EKS2 pmax pmax
comp=Z,257nm,0.7s
EKS2 Erkin-Say 54.33 334 *e*P **P** **09 30 46.5 +0.4**
comp=Z,257nm,0.7s
EKS2 *e*PcP **PcP** **09 31 50.6 +1.1**
EKS2 *e*S **S** **09 38 20.5 +0.4**
EKS2 Erkin-Say 54.33 334 P **P** **09 30 46.5 +0.4**
SNR=430
TAU Tasmania Unive 54.38 141 P **P** **09 30 47.9 +1.6**
comp=Z,611nm,0.7s,SNR=8.5
TAU Tasmania Unive 54.38 141 *e*P **P** **09 30 46.1 -0.2**
TAU pmax pmax
comp=Z,60nm,0.7s
TAU Tasmania Unive 54.38 141 *e*P **P** **09 30 46.1 -0.2**
comp=Z,60nm,0.7s
UOSS Wadi Hilu 54.38 305 P **P** **09 30 47.0 +0.3**
comp=Z,310nm,1.5s,SNR=6.3
VLA Vladivostok 54.47 26*c i*P **P** **09 30 47.2 +0.3**
VLA pmax pmax
comp=Z,153nm,1.0s
USP Ospenovka 54.50 335 P **P** **09 30 47.1 -0.1**
SNR=174
MK31 Makanchi Array 54.70 343*c e*P **P** **09 30 48.3 -0.3**
MK31 pmax pmax
comp=Z,201nm,0.7s
MK31 Makanchi Array 54.70 343 *e*P **P** **09 30 48.2 -0.4**
MKAR Makanchi Array 54.70 343 P **P** **09 30 48.3 -0.3**
MKAR 09 31 50.7
MKAR S **S** **09 38 23.6 -1.2**
MKAR Makanchi Array 54.70 343 P **P** **09 30 48.2 -0.3**
MKAR PcP **PcP** **09 31 50.7 -0.1**
MKAR S **S** **09 38 23.6 -1.2**
MKAR P'P' 10 00 59.3
MKAR ⇑*e* 10 01 20.6
MKAR Makanchi Array 54.70 343 P **P** **09 30 48.2 -0.3**
comp=Z,231nm,0.7s,baz=141,slow=7.8,SNR=1502
MKAR PcP **PcP** **09 31 50.7 -0.1**
comp=Z,34nm,0.9s,baz=155,slow=4.8,SNR=1.7
MKAR S **S** **09 38 23.6 -1.2**
comp=Z,4.8nm,1.0s,baz=155,slow=15,SNR=5.1
MKAR LR LR 09 58 13.9
comp=Z,477nm,21.9s,baz=156,slow=40
MKAR PKPPKP **P'P'df** **10 00 59.3 +1.5**
comp=Z,0.6nm,0.8s,baz=111,slow=1.7,SNR=3.9
MKAR PKP2bc 10 01 20.6
comp=Z,0.7nm,0.9s,baz=318,slow=3.3,SNR=4.4
MDJ Mudanjiang 54.76 23 P **P** **09 30 48.9 -0.1**
MDJ sP **sP** **09 31 06.0 -4.4**
MDJ PP **PP** **09 32 53.8 +1.5**
MDJ S **S** **09 38 25.4 -0.2**
MDJ pmax pmax
comp=Z,100nm,0.9s
MDJ pmax pmax
comp=Z,230nm,9.9s
MDJ LR LR
comp=N,330nm,33.9s
MDJ LR LR
comp=E,410nm,26.3s
MDJ LR LR
comp=Z,580nm,33.3s
MDJ Mudanjiang 54.76 23 *e*P **P** **09 30 48.8 -0.3**
comp=Z,115nm,1.0s
MDJ *e*PP **PP** **09 32 51.2 -1.1**
ZAK Zakamensk 55.09 0 *e*P **P** **09 30 51.4 -0.1**
ZAK *e* 09 31 52.0
ZAK pmax pmax
comp=Z,55nm,0.9s
USRK Ussuriysk Arra 55.39 25 P **P** **09 30 53.6 +0.1**
comp=Z,280nm,0.9s,baz=219,slow=6.2,SNR=363
USRK LR LR 09 58 01.5
comp=Z,458nm,19.3s,baz=20,slow=40
IDAH Dahanechah 55.53 316 *e*P **P** **09 30 55.9 +0.7**
HIA Hailar 55.89 13 *e*P **P** **09 30 56.4 -0.7**
comp=Z,218nm,1.2s
HIA *e*PcP **PcP** **09 31 55.2 -0.1**
IKOO Kooshah 55.96 315 *e*P **P** **09 30 57.9 -0.4**
OPO Ambohidratompo 56.16 251 P **P** **09 31 01.6 +1.8**
OPO pP **pP** **09 31 17.1 +2.2**
OPO Ambohidratompo 56.16 251 P **P** **09 31 01.6 +1.8**
comp=Z,8.1nm,0.7s,baz=81,slow=4.6,SNR=14
OPO pP **pP** **09 31 17.1 +2.2**
comp=Z,26nm,0.8s,baz=70,slow=5.0,SNR=16
OPO LR LR 09 49 55.7
comp=Z,931nm,20.3s,baz=146,slow=30
KK31 Karatay Array 56.17 332*c e*P **P** **09 30 57.6 -1.6**
KK31 pmax pmax
comp=Z,12nm,0.3s
KKAR Karatay Array 56.17 332 *e*P **P** **09 30 58.3 -0.9**
KKAR pmax pmax
comp=Z,60nm,0.7s
KKAR Karatay Array 56.17 332 *e*P **P** **09 30 58.3 -0.9**
comp=Z,60nm,0.7s
ABPO Ambohimpanom 56.17 250 *e*P **P** **09 31 00.2 +0.3**
ABPO pmax pmax
comp=Z,51nm,0.9s
ABPO Ambohimpanom 56.17 250 *e*P **P** **09 31 00.2 +0.3**
comp=Z,50nm,0.9s
TLY Talaya 56.39 0*c i*P **P** **09 31 01.5 +0.8**
TLY *e* 09 31 15.7
TLY *e* 09 31 57.4
TLY *e*S **S** **09 38 46.4 -0.8**
TLY pmax pmax
comp=Z,170nm,1.0s
TLY MLR MLR
comp=Z,647nm,18.0s
TLY Talaya 56.39 0 P **P** **09 31 01.1 +0.4**
comp=Z,893nm,0.8s,SNR=41
ITEG Tejag 56.40 315 *e*P **P** **09 31 01.6 +0.3**
MOY Mondy 56.41 358 *e*P **P** **09 31 01.0 +0.1**
MOY pmax pmax
comp=Z,147nm,2.3s
HNR Honiara 56.54 98 *e*P **P** **09 31 01.6 -0.7**
comp=Z,230nm,0.7s
HNR *e*PcP **PcP** **09 31 58.6 0.0**
HNR Honiara 56.54 98 P **P** **09 31 01.6 -0.7**
comp=Z,392nm,0.7s,baz=236,slow=1.1,SNR=23
HNR LR LR 09 57 05.2
comp=Z,248nm,21.0s,baz=15,slow=38
IRK Irkutsk 56.96 1⇑*i*P **P** **09 31 04.7 0.0**
IRK pmax pmax
comp=Z,177nm,2.1s
CIT Chita 57.43 8 *e*P **P** **09 31 08.5 +0.5**
CIT *e* 09 31 17.0
CIT *e* 09 31 23.1
CIT *e* 09 32 01.8
CIT pmax pmax
comp=Z,292nm,1.3s
IMYA Miami 57.45 319 *e*P **P** **09 31 07.8 -0.8**
IMOG Moghan 57.81 319 *e*P **P** **09 31 11.1 -0.2**
ISRO Mashad 57.84 319 *e*P **P** **09 31 09.0 -2.3**
IBAF Bafgh 58.02 312 *e*P **P** **09 31 13.0 +0.3**

IPAY Payeh 58.23 319 *e*P **P** **09 31 13.7 -0.5**
IMEH Mehriz 58.63 311 *e*P **P** **09 31 16.1 -1.0**
IKRD Kardeh 58.74 319 *e*P P 09 31 13.5 -4.2
ISRV Sarvestan 58.83 309 *e*P **P** **09 31 19.0 +0.4**
IPAR Pars 59.09 309 *e*P **P** **09 31 20.8 +0.4**
ICHK Chekchek 59.20 312 *e*P **P** **09 31 20.9 -0.1**
KURBB Kurchatov Arra 59.24 342 P **P** **09 31 20.4 -0.2**
comp=Z,163nm,0.7s,baz=161,slow=6.6,SNR=976
KURBB PcP **PcP** **09 32 08.3 -0.1**
comp=Z,50nm,0.6s,baz=154,slow=3.5,SNR=15
KURBB S **S** **09 39 22.6 -1.8**
comp=Z,4.4nm,1.1s,baz=155,slow=12,SNR=6.0
KURBB PKPPKP **P'P'df** **10 00 50.8 -0.1**
comp=Z,1.0nm,1.0s,baz=308,slow=3.0,SNR=4.1
KURBB PKP2bc 10 01 02.8
comp=Z,6.4nm,0.9s,baz=330,slow=2.8,SNR=18
ERM Erimo 59.25 34 P **P** **09 31 20.5 -0.4**
comp=Z,692nm,0.8s,SNR=27
ERM Erimo 59.25 34*d i*P **P** **09 31 20.7 -0.1**
ERM pmax pmax
comp=Z,117nm,1.0s
ERM Erimo 59.25 34 *e*P **P** **09 31 20.4 -0.4**
comp=Z,96nm,0.8s
KURK Kurchatov 59.30 342 P **P** **09 31 20.5 -0.5**
KURK Kurchatov 59.30 342 *e*P **P** **09 31 20.5 -0.5**
KURK *e* 09 32 08.2
KURK S **S** **09 39 22.7 -2.4**
KURK Kurchatov 59.30 342 *e*P **P** **09 31 20.5 -0.5**
KURK *e*PcP **PcP** **09 32 08.2 -0.4**
KURK S **S** **09 39 22.6 -2.4**
KURK P'P' 10 00 50.8
KURK ⇑*e* 10 01 02.8
KLR Kul'dur 59.43 21⇓*i*P P 09 31 18.6 -3.3
KLR pmax pmax
comp=E,150nm,1.8s
KLR pmax pmax
comp=Z,530nm,1.8s
ISAD Sadrabad 59.57 312 *e*P **P** **09 31 22.1 -1.5**
ABKT Ailbek 59.66 320 P **P** **09 31 24.3 +0.5**
comp=Z,2μm,1.0s,SNR=60
HABR Khabarovsk 60.08 24 *e*P **P** **09 31 24.0 -2.4**
HABR *e**PP **pP** **09 31 37.7 -3.9**
HABR *e* 09 32 09.1
HABR *e*S **S** **09 39 33.8 -1.5**
HABR *e**SS **sS** **09 39 57.5 -3.4**
HABR *e* 09 41 09.6
HABR SS **SS** **09 43 31.9 -1.2**
HABR pmax pmax
comp=N,77nm,2.2s
HABR pmax pmax
comp=Z,315nm,2.0s
HABR pmax pmax
comp=E,187nm,2.2s
HABR pmax pmax
comp=Z,545nm,2.7s
HABR MLR MLR
comp=Z,412nm,21.0s
LBOS 60.35 289 *e*P **P** **09 31 30.8 +1.6**
ASAJ Asahikawa 60.37 32 *e*P **P** **09 31 28.2 -0.2**
comp=Z,67nm,0.6s
ASAJ *e*PcP **PcP** **09 32 12.6 -0.4**
ASAJ Asahikawa 60.37 32 P **P** **09 31 28.3 -0.2**
comp=Z,170nm,0.6s,baz=232,slow=9.1,SNR=169
ASAJ LR LR 09 58 09.4
comp=Z,318nm,19.6s,baz=169,slow=36
ZAA0 Zalesovo Array 60.63 348 *e*P **P** **09 31 29.3 -0.8**
ZALV Zalesovo Beam 60.63 348 P **P** **09 31 29.5 -0.6**
ZALV Zalesovo Beam 60.63 348 P **P** **09 31 29.5 -0.6**
ZALV P'P' 10 00 50.7
ZALV ⇑*e* 10 00 58.6
ZALV P'P'ab **P'P'ab** **10 01 08.6 +0.2**
ZALV Zalesovo Beam 60.63 348 P **P** **09 31 29.5 -0.6**
comp=Z,215nm,0.8s,baz=160,slow=4.7,SNR=200
ZALV PKPPKP **P'P'df** **10 00 50.7 +2.2**
comp=Z,3.3nm,0.8s,baz=270,slow=1.5,SNR=4.3
ZALV PKP2bc 10 00 58.6
comp=Z,5.0nm,1.0s,baz=302,slow=2.8,SNR=7.0
ZALV LR LR 10 01 01.2
comp=Z,1μm,20.0s,baz=228,slow=39
ZALV PKP2ab 10 01 08.6
comp=Z,2.1nm,0.7s,baz=14,slow=1.8,SNR=4.1
IGAR Gharneh 61.03 311 *e*P **P** **09 31 33.1 -0.4**
IZEF Zefreh 61.05 312 *e*P **P** **09 31 32.8 -0.9**
IANJ Anjilo 61.16 315 *e*P **P** **09 31 33.8 -0.6**
KRAR Krasnoyarsk 61.31 353 *e*P **P** **09 31 32.8 -1.8**
KRAR pmax pmax
comp=Z,280nm,1.2s
CASY Casey 61.46 177 P **P** **09 31 35.5 0.0**
comp=Z,101nm,1.1s
IGLO Ghaloghah 61.75 316 *e*P **P** **09 31 38.8 +0.5**
ISHM Shahmirzad 61.77 315 *e*P **P** **09 31 38.0 -0.5**
ILAS Lasjerd 61.79 315 *e*P **P** **09 31 38.3 -0.3**
NVS Novosibirsk 61.81 347⇑*i*P **P** **09 31 36.6 -1.4**
NVS *i**PP **pP** **09 31 52.3 -1.0**
NVS *e* 09 32 17.1
NVS *i*S **S** **09 39 55.0 -2.0**
NVS *i*PS 09 41 19.7
NVS pmax pmax
comp=Z,182nm,1.3s
NVS pmax pmax
comp=N,113nm,1.4s
NVS pmax pmax
comp=E,73nm,1.2s
NVS smax smax
comp=N,38nm,1.7s
NVS smax smax
comp=E,64nm,1.7s
MIR Mirnyy 61.91 185⇑*i*P **pP** **09 31 56.0 +2.2**
MIR *i* 09 32 04.0
MIR pmax pmax
comp=Z,118nm,1.3s
IPIR Pirpir 62.02 311 *e*P **P** **09 31 41.6 +1.3**
IFIR Firoozkooh 62.06 315 *e*P **P** **09 31 40.5 0.0**
ATD Arta Tunnel 62.11 286 LR LR 09 56 30.2
comp=Z,242nm,18.1s,baz=65,slow=34
IALA Alasht 62.24 315 *e*P **P** **09 31 41.9 +0.2**
YSS Yuzh-Sakhalins 62.41 30⇑*i*P **P** **09 31 43.0 +0.8**
YSS *e**PP **pP** **09 31 58.0 +0.5**
YSS *e* 09 32 21.2
YSS *e*S **S** **09 40 04.0 -0.9**
YSS *e**SS **sS** **09 40 29.0 -1.6**
YSS pmax pmax
comp=N,80nm,0.8s
YSS pmax pmax
comp=E,50nm,0.8s
YSS pmax pmax
comp=Z,210nm,0.8s
YSS MLR MLR
comp=E,200nm,18.0s
YSS MLR MLR
comp=Z,200nm,18.0s
IVRN Varamin 62.48 314 *e*P **P** **09 31 43.4 +0.3**
IDMV Damavand 62.55 314 *e*P **P** **09 31 43.7 0.0**
IPRN Peran 62.66 315 *e*P **P** **09 31 44.5 +0.2**
RAYN Ar Rayn 62.85 299 P **P** **09 31 46.5 +0.8**
comp=Z,336nm,0.8s,SNR=40
KBD Kabd 63.04 306 *e*P **P** **09 31 47.3 +0.6**
KBD AMb AMB 09 31 48.8
comp=Z,388nm,1.0s
RDF Al-Radifah 63.06 306 *e*P **P** **09 31 47.5 +0.6**
RDF AMb AMB 09 31 48.9
comp=Z,836nm,1.0s
UMR Umm Al-Rimmam 63.17 307 *e*P **P** **09 31 48.1 +0.5**
UMR AMb AMB 09 31 49.1
comp=Z,862nm,0.7s
IR3 Iran Long-Peri 63.22 314 *e*P **P** **09 31 48.3 +0.3**
NOUC Port Laguerre 63.36 112 *e*P **P** **09 31 50.4 +1.3**
IR5 Iran Long-Peri 63.41 313 *e*P **P** **09 31 50.0 +0.7**
NAY Al-Naaiem 63.43 306 *e*P **P** **09 31 49.6 +0.2**
NAY AMb AMB 09 31 51.0
comp=Z,318nm,0.9s
DZM Mont Dzumac 63.49 112 *e*P **P** **09 31 49.7 -0.3**
comp=Z,196nm,1.4s
DZM Mont Dzumac 63.49 112 *e*LR LR 09 51 54.4
comp=Z,980nm,25.2s
DZM Mont Dzumac 63.49 112 P **P** **09 31 50.5 +0.5**
DZM Mont Dzumac 63.49 112 P **P** **09 31 50.5 +0.5**
comp=Z,29nm,0.7s,baz=263,slow=19,SNR=29
DZM LR LR 09 57 05.5
comp=Z,390nm,21.5s,baz=30,slow=34
IMHD Mahdasht 63.57 314 *e*P **P** **09 31 50.6 +0.3**
KUR Kuril'sk 63.94 34*c i*P **P** **09 31 52.1 -0.3**
KUR pmax pmax
comp=Z,50nm,0.8s
KUR pmax pmax
comp=E,13nm,0.4s
KUR pmax pmax
comp=N,11nm,0.4s
IRAZ Razeghan 63.98 313 *e*P **P** **09 31 53.6 +0.5**
BVA0 Borovoye Array 64.00 339 P **P** **09 31 51.7 -0.9**
BVA0 pmax pmax
comp=Z,239nm,0.6s
BVAR Borovoye Array 64.00 339 PKPPKP **P'P'df** **10 00 47.7 +4.2**
comp=Z,0.9nm,0.6s,baz=342,slow=1.9,SNR=4.5
BVAR LR LR 10 04 59.4
comp=Z,410nm,19.9s,baz=144,slow=41
BRVK Borovoye 64.06 339 P **P** **09 31 52.6 -0.4**
comp=Z,2μm,0.6s,SNR=81
BRVK Borovoye 64.06 339 *e*P **P** **09 31 52.4 -0.6**
BRVK pmax pmax
comp=Z,174nm,0.6s
BRVK Borovoye 64.06 339 *e*P **P** **09 31 52.4 -0.6**
comp=Z,174nm,0.6s
CLNS Chul'man 64.08 13 *e*P **P** **09 31 53.0 -0.2**
CLNS *e**PP **pP** **09 32 05.3 -3.2**
CLNS *e* 09 32 27.1
CLNS *e* 09 34 13.8
CLNS *e*PPP PPP 09 35 45.3
CLNS *e*S **S** **09 40 29.1 +3.5**
CLNS pmax pmax
comp=Z,120nm,0.9s
CLNS pmax pmax
comp=E,58nm,1.0s
CLNS pmax pmax
comp=N,69nm,0.8s
CLNS pmax pmax
comp=E,8.0nm,0.9s
CLNS pmax pmax
comp=Z,9.0nm,1.1s
CLNS pmax pmax
comp=N,11nm,1.2s
CLNS smax smax
comp=E,120nm,10.8s
CLNS smax smax
comp=N,193nm,17.8s
CLNS MLR MLR
comp=Z,992nm,26.0s
CLNS MLR MLR
comp=N,999nm,25.0s
CLNS MLR MLR
comp=E,701nm,17.0s
IGZV Ghazvin 64.22 314 *e*P **P** **09 31 55.0 +0.2**
IKOM Komasi 65.22 311 *e*P **P** **09 32 01.6 +0.4**
AB31 Akbulak array 65.68 331*ce*P **P** **09 32 03.0 -0.7**
AB31 pmax pmax
comp=Z,241nm,0.6s
ABKAR Akbulak array 65.68 331 *e*P **P** **09 32 03.1 -0.5**
comp=Z,202nm,0.7s
KMBO Kilima Mbogo 65.83 271 *e*P **P** **09 32 06.1 +0.5**
KMBO Kilima Mbogo 65.83 271 *e*P **P** **09 32 06.6 +1.0**
comp=Z,41nm,1.1s
KMBO pP **pP** **09 32 21.0 0.0**
KMBO Kilima Mbogo 65.83 271 P **P** **09 32 06.8 +1.2**
comp=Z,12nm,0.9s,baz=62,slow=9.2,SNR=21
KMBO pP **pP** **09 32 21.0 0.0**
comp=Z,25nm,1.0s,baz=52,slow=7.0,SNR=13
KMBO LR LR 09 55 23.4
comp=Z,422nm,21.0s,baz=90,slow=31
ILIN Lien 65.94 312 *e*P **P** **09 32 05.2 -0.7**
IBDR Badra 65.98 309 *e*P **P** **09 32 04.0 -1.9**
IBDR *e*S S 09 40 42.6 -7.0
IGHG Ghaleghazi 65.99 311 *e*P **P** **09 32 05.6 -0.7**
IDHR Dehrash 66.28 311 *e*P **P** **09 32 06.6 -1.5**
DRV Dumont d'Urvil 66.69 165 P PcP 09 32 45.0 +6.5
DRV S **S** **09 40 52.0 -5.1**
DRV SS SS 09 44 43.0 -33
DRV L L 09 48 00.0
DRV P 09 51 00.0
BHD Baghdad 67.24 309 *e*P P 09 32 10.0 -3.9
BHD *e*S S 09 40 57.7 -7.1
IHRS Heris 67.36 315 *e*P **P** **09 32 14.2 -0.7**
AKTO Aktyubinsk 67.40 331 P'P'ab P'P'ab 10 00 42.0 -0.3
AKTO Aktyubinsk 67.40 331 PKP2ab **P'P'bc** **10 00 42.0 +1.4**
comp=Z,0.5nm,0.3s,baz=289,slow=6.1,SNR=4.5
AKTO LR LR 10 07 23.6
comp=Z,343nm,20.6s,baz=264,slow=41
IAZR Azarshahr 67.83 314 *e*P **P** **09 32 17.9 0.0**
ITBZ Tabriz 67.95 315 *e*P **P** **09 32 17.9 -0.7**
MAW Mawson 68.26 195 P **P** **09 32 20.3 +0.7**
MAW pP **pP** **09 32 36.2 +1.0**
MAW P'P'ab **P'P'ab** **10 00 35.6 -4.3**
MAW Mawson 68.26 195 P **P** **09 32 20.3 +0.7**
comp=Z,17nm,0.8s,baz=40,slow=4.5,SNR=23
MAW pP **pP** **09 32 36.2 +1.0**
comp=Z,29nm,0.9s,baz=33,slow=8.6,SNR=10
MAW LR LR 09 55 55.2
comp=Z,2μm,21.6s,baz=36,slow=30
MAW PKP2ab 10 00 35.6
comp=Z,6.3nm,0.8s,baz=195,slow=4.9,SNR=8.8
ISHB Shabestar 68.35 314 *e*P **P** **09 32 20.8 -0.3**
IMRD Marand 68.47 315 *e*P **P** **09 32 22.3 +0.5**
MAK Makhachkala 69.18 320 *e*P P 09 32 20.1 -5.8
MAK *e* 09 34 56.7
MAK *e*PPP PPP 09 36 44.8
MAK *e*SS SS 09 46 00.6 +5.5
MAK pmax pmax
comp=Z,46nm,0.4s
JCZ Jackson Bay 69.20 135 PN **P** **09 32 26.8 +0.6**
HAKT HAKKARI 69.42 313 *i* P **P** **09 32 27.8 -0.1**
GNI Garni 69.76 316⇓P **P** **09 32 30.5 +0.8**
SNR=5.2
GNI Garni 69.76 316 *e*P **P** **09 32 30.3 +0.5**
comp=Z,58nm,0.8s
GNI Garni 69.76 316 LR LR 10 04 49.3
comp=Z,136nm,21.0s,baz=286,slow=37
YAK Yakutsk 69.83 13*c i*P **P** **09 32 28.0 -1.5**
YAK *e**PP **pP** **09 32 42.9 -2.1**
YAK *e* 09 32 49.6
YAK *e* 09 35 01.7
YAK *e*S **S** **09 41 32.2 -2.4**
YAK *e**SS sS 09 41 55.1 -5.6
YAK *e* 09 42 22.1
YAK pmax pmax
comp=Z,150nm,0.9s
YAK pmax pmax
comp=N,66nm,1.5s
YAK pmax pmax
comp=E,51nm,1.5s
YAK pmax pmax
comp=Z,21nm,1.2s
YAK pmax pmax
comp=N,16nm,1.2s
YAK smax smax
comp=N,28nm,2.0s
YAK smax smax
comp=E,46nm,2.3s
YAK MLR MLR
comp=Z,684nm,27.0s
YAK MLR MLR
comp=E,340nm,25.0s
YAK MLR MLR
comp=N,605nm,27.0s
DGRG David-gareji 69.90 317 P **P** **09 32 31.7 +1.3**
TARA Tarawa 70.04 87 *e*P **P** **09 32 32.1 +0.3**
comp=N,241nm,0.8s
GEVA Gevas 70.19 314 *i* P **P** **09 32 31.9 -0.6**
WVZ Waitaha Valley 70.38 134 PN **P** **09 32 32.9 -0.4**
TBLG Delisi 70.45 317 *i* P **P** **09 32 34.3 +0.5**
TBLG Delisi 70.45 317 P **P** **09 32 34.3 +0.5**
KZR Kazreti 70.51 317 P pP 09 32 45.6 -4.2
SVE Sverdlovsk 70.56 337*d i*P **P** **09 32 34.3 +0.2**
SVE *e* 09 32 49.8
SVE *e*PPP PPP 09 36 53.3
SVE *e*S **S** **09 41 48.1 +4.8**
SVE pmax pmax
comp=Z,507nm,1.0s
DUS Dusheti 70.63 318 P **P** **09 32 36.7 +1.8**
RPZ Rata Peaks 70.74 135 *e*P **P** **09 32 35.5 -0.1**
comp=Z,58nm,0.6s
RPZ Rata Peaks 70.74 135 P **P** **09 32 35.7 +0.1**
comp=Z,48nm,0.5s,baz=244,slow=2.0,SNR=55
GUDG Gudauri 70.94 318 P **P** **09 32 37.8 +0.8**
ARU Arti 71.12 336*c i*P **P** **09 32 37.2 -0.3**
ARU 09 35 15.3
ARU PPP PPP 09 37 00.5
ARU S **S** **09 41 52.5 +2.7**
ARU pmax pmax
comp=Z,444nm,1.0s
ARU MLR MLR

comp=Z,695nm,26.0s
ARU Arti 71.12 336 P **P** **09 32 37.4 -0.1**
comp=Z,2µm,0.8s,SNR=90
AKH Akhalkalaki 71.15 317 P **P** **09 32 38.6 +0.3**
POGA Pongola 71.30 243 *eP* **P** **09 32 38.8 -0.5**
POGA AMB AMB 09 32 56.1
comp=Z,69nm,1.1s
OXZ Oxford 71.36 134 PN **P** **09 32 38.6 -0.8**
KBSD Kabsdagh 71.54 312 *eP* P 09 32 36.5 -4.0
SKR Severo-Kuril's 71.62 32 *eP* P 09 32 35.2 -5.4
SKR *e* 10 32 43.1
SKR pmax pmax
comp=Z,200nm,0.9s
SKR pmax pmax
comp=Z,1µm,3.0s
ONI Oni 71.68 318 P P 09 32 45.0 +3.8
THZ Tophouse 71.71 132 PN **P** **09 32 41.3 -0.2**
BNGL BINGOL 71.82 314 *iP* **P** **09 32 43.1 +0.7**
ERZM Erzurum 72.03 315 *iP* **P** **09 32 44.7 +1.0**
DDEM Demirkent 72.14 316 *iP* **P** **09 32 44.0 -0.2**
DIYA Diyarbakir 72.19 312 *iP* **P** **09 32 45.3 +0.9**
DBAD Bademkaya 72.23 316 *iP* **P** **09 32 45.3 +0.6**
KHZ Kahutara 72.29 133 *eP* **P** **09 32 44.6 -0.2**
comp=Z,116nm,1.2s
MBAR Mbarara 72.36 271⇑*iP* **P** **09 32 46.5 +0.5**
MBAR Mbarara 72.36 271 LR LR 10 01 23.2
comp=Z,534nm,19.5s,baz=271,slow=33
KBZ Khabaz 72.53 319 P **P** **09 32 46.6 +0.4**
KBZ Khabaz 72.53 319 P **P** **09 32 46.6 +0.4**
KBZ Khabaz 72.53 319 P **P** **09 32 46.6 +0.4**
comp=Z,164nm,0.8s,baz=117,slow=4.9,SNR=226
HIZ Hauiti 72.69 129 PN **P** **09 32 48.8 +1.4**
KIV Kislovodsk 72.76 319⇑*iP* **P** **09 32 47.8 +0.1**
KIV *e* 09 35 26.5
KIV *iS* **S** **09 42 06.4 -3.0**
KIV pmax pmax
comp=Z,146nm,1.0s
KIV Kislovodsk 72.76 319 P **P** **09 32 48.6 +0.9**
comp=Z,850nm,0.9s,SNR=16
ELZG Elazig 73.23 313 *iP* **P** **09 32 51.1 +0.4**
KSD Kokstad 73.45 240 *eP* **P** **09 32 50.7 -1.5**
KSD AMB AMB 09 33 09.7
comp=Z,87nm,1.1s
MALT Malatya 73.58 312⇑P P 09 33 01.6 +8.9
MALT Malatya 73.58 312 *eP* P 09 33 01.7 +8.9
comp=Z,103nm,1.2s
MALT LR LR
comp=Z,208nm,22.0s
MALT Malatya 73.58 312⇑*iP* P 09 33 01.6 +8.9
KELT Kelkit 73.62 314 *iP* **P** **09 32 53.7 +0.7**
EIL Elat 73.69 303 LR LR 10 04 10.1
comp=Z,423nm,20.1s,baz=100,slow=35
PEA0B Petropavlovsk- 73.75 31 *eP* **P** **09 32 52.3 -0.9**
PETK Petropavlovsk- 73.75 31 P **P** **09 32 52.5 -0.8**
PETK Petropavlovsk- 73.75 31 P **P** **09 32 52.5 -0.8**
PETK Petropavlovsk- 73.75 31 P **P** **09 32 52.5 -0.8**
comp=Z,52nm,0.7s,baz=207,slow=6.4,SNR=93
PETK LR LR 10 08 38.2
comp=Z,115nm,18.5s,baz=250,slow=38
KEMA Kemaliye 73.86 313 *iP* **P** **09 32 54.9 +0.6**
GZT Gaziantep 73.90 311 *iP* **P** **09 32 55.5 +0.8**
BRBR Barbar 73.92 307 *eP* **P** **09 32 57.1 +2.2**
SOKR Solikamsk 73.94 338*c iP* **P** **09 32 54.5 +0.4**
SOKR S **PnS** **09 43 02.9 +1.1**
SOKR pmax pmax
comp=Z,280nm,0.6s
SOKR MLR MLR
comp=Z,940nm,27.0s
AKCD Akcadag 73.94 312 *iP* **P** **09 32 55.2 +0.3**
RCY Rachaya 74.04 307 *eP* **P** **09 32 56.9 +1.4**
BKZ Black Stump Fm 74.04 129 PN **P** **09 32 55.4 0.0**
KUZU Kuzuini 74.08 310 *iP* **P** **09 32 56.5 +1.0**
BIDA Albida 74.11 308 *eP* P 09 32 51.9 -3.9
LSZ Lusaka 74.17 256 *eP* **P** **09 32 57.2 +0.6**
LSZ Lusaka 74.17 256 P **P** **09 32 57.5 +0.9**
SNR=7.7
LSZ Lusaka 74.17 256 *eP* **P** **09 32 57.0 +0.4**
comp=Z,63nm,0.9s
LSZ pP **pP** **09 33 13.3 +1.1**
LSZ Lusaka 74.17 256 P **P** **09 32 57.1 +0.6**
comp=Z,23nm,0.8s,baz=72,slow=7.9,SNR=20
LSZ pP **pP** **09 33 13.3 +1.1**
comp=Z,46nm,0.8s,baz=67,slow=7.5,SNR=15
HWQ Hawqa 74.18 308 *eP* **P** **09 32 57.3 +0.9**
SLR Silverton 74.19 245 *eP* **P** **09 32 57.8 +1.2**
SLR AMB AMB 09 33 13.5
comp=Z,67nm,1.3s
PET Petropavlovsk 74.20 31⇑*iP* **P** **09 32 55.1 -0.7**
PET *e**PP **PcP** **09 33 09.0 -1.5**
PET *eS* **S** **09 42 24.6 -0.4**
PET *eSS* **SS** **09 47 12.9 +1.3**
PET pmax pmax
comp=Z,281nm,0.7s
PET pmax pmax
comp=Z,200nm,13.3s
MSVF Nonsavu 74.20 107 *eP* **P** **09 32 57.1 +0.4**
MSVF pmax pmax
comp=Z,43nm,0.8s
MSVF Nonsavu 74.20 107 *eP* **P** **09 32 57.1 +0.4**
comp=Z,43nm,0.8s
ERPM east rand prop 74.25 244 *eP* **P** **09 32 59.4 +2.4**
ERPM AMB AMB 09 33 14.6
comp=Z,43nm,3.7s
BHL Bhannes 74.30 307 *eP* **P** **09 32 58.4 +1.4**
BTCH Batrach 74.32 309 *eP* **P** **09 32 57.7 +0.7**
SUSE Susehri 74.40 314 *iP* **P** **09 32 58.0 +0.5**
URZ Urewera 74.42 128 *eP* **P** **09 32 56.9 -0.6**
comp=Z,26nm,0.6s
URZ Urewera 74.42 128 P **P** **09 32 56.8 -0.6**
comp=Z,34nm,0.9s,baz=296,slow=5.2,SNR=14
AYKD Aykdinkavak 74.49 311 *iP* **P** **09 32 58.5 +0.5**
SOC Sochi 74.58 318*c iP* **P** **09 32 57.7 -0.6**
SOC *e**PP **pP** **09 33 13.8 -0.1**
SOC *eS* **S** **09 42 31.9 +2.2**
SOC pmax pmax
comp=Z,137nm,0.7s
YAYL Yayladag 74.59 309 *iP* **P** **09 32 59.2 +0.6**
GRSN GIRESUNGRSN 74.60 315 *iP* **P** **09 32 57.9 -0.6**
COBT Iskenderun 74.62 310 *iP* **P** **09 32 59.4 +0.5**
ARNB Al Arnab 74.64 309 *eP* **P** **09 32 59.2 +0.4**
ANDN Andirin 74.89 311 *iP* **P** **09 33 00.9 +0.6**
PRYS Parys 75.06 244 *eP* **P** **09 33 01.5 -0.1**
PRYS AMB AMB 09 33 18.4
comp=Z,60nm,1.4s
YURE YUREGIR 75.19 310 *iP* **P** **09 33 03.1 +1.1**
PINB Pinarbasi 75.20 312 *iP* **P** **09 33 02.4 +0.1**
KSR Koster 75.44 245 *eP* P 09 33 08.8 +4.9
KSR AMB AMB 09 33 34.0
comp=Z,24nm,4.8s
FUNA Funafuti 75.57 98 *eP* **P** **09 33 04.8 +0.3**
comp=Z,148nm,1.0s
ERBA Erbaa 75.60 314 *iP* **P** **09 33 04.4 +0.2**
PHNC Paralimni 75.90 308 P **P** **09 33 07.8 +1.7**
comp=Z,1.3nm,0.7s
GULE Gulek 75.98 310 *iP* **P** **09 33 07.5 +0.8**
GRM Grahamstown 76.09 237 *eP* **P** **09 33 09.3 +2.0**
GRM AMB AMB 09 33 36.9
comp=Z,76nm,4.6s
SYO Syowa Base 76.12 199⇓*eP* **P** **09 33 05.0 -1.6**
SYO Syowa Base 76.12 199⇑*eX* **PcP** **09 33 15.6 -2.9**
KIZK Mersin 76.23 309 *iP* **P** **09 33 07.4 -0.5**
AVNT Avonos 76.38 312 *iP* **P** **09 33 08.8 -0.1**
CSS Prodhromos 76.44 308 P **P** **09 33 09.9 +0.8**
comp=Z,3.8nm,0.8s
CSS Prodhromos 76.44 308 P **P** **09 33 09.7 +0.5**
CSS Prodhromos 76.44 308 *eP* **P** **09 33 10.0 +0.8**
comp=Z,312nm,0.9s
HAVZ Havza 76.47 314 *iP* **P** **09 33 09.4 +0.2**
ANN Anapa 76.56 318 *eP* **P** **09 33 08.1 -1.4**
ANN *e**PP **pP** **09 33 25.7 +0.4**
ANN *eS* **S** **09 42 52.3 +0.9**
ANN pmax pmax
comp=Z,62nm,1.3s
MAMC Mammari 76.59 308 P **P** **09 33 11.2 +1.2**
LBTB Lobatse 76.60 246⇑*iP* **P** **09 33 10.6 +0.3**
LBTB AMB AMB 09 33 27.5
comp=Z,54nm,1.1s
LBTB Lobatse 76.60 246 *eP* **P** **09 33 10.4 0.0**
comp=Z,43nm,0.9s
LBTB pP **pP** **09 33 27.4 +1.3**
LBTB Lobatse 76.60 246 P **P** **09 33 10.7 +0.3**
comp=Z,6.1nm,0.6s,baz=110,slow=5.4,SNR=14
LBTB pP **pP** **09 33 27.4 +1.3**
comp=Z,36nm,0.8s,baz=109,slow=4.9,SNR=16

SZAC Souni-Zanaja 76.74 307 P **P** **09 33 11.7 +0.8**
HVD Gariep Dam 76.83 240 *eP* P 09 33 08.0 -3.7
HVD AMB AMB 09 33 33.2
comp=Z,34nm,1.6s
SWZ Schweizer 76.88 243 *eP* **P** **09 33 12.2 +0.2**
SWZ AMB AMB 09 33 29.5
comp=Z,112nm,1.1s
BOSA Boshof 76.98 242⇑*iP* **P** **09 33 12.0 -0.5**
BOSA AMB AMB 09 33 29.3
comp=Z,52nm,1.1s
BOSA Boshof 76.98 242 *eP* **P** **09 33 12.1 -0.4**
comp=Z,42nm,0.8s
BOSA pP **pP** **09 33 29.2 +1.0**
BOSA PKKPbc **PKKPbc** **09 52 20.0 -1.0**
BOSA Boshof 76.98 242 P **P** **09 33 12.9 +0.4**
comp=Z,14nm,0.9s,baz=84,slow=6.1,SNR=16
BOSA pP **pP** **09 33 29.2 +1.0**
comp=Z,43nm,0.8s,baz=80,slow=5.1,SNR=14
BOSA PKKPbc **PKKPbc** **09 52 20.0 -1.0**
comp=Z,3.6nm,0.7s,baz=165,slow=7.1,SNR=6.9
BOSA LR LR 10 00 51.3
comp=Z,874nm,20.8s,baz=166,slow=31
CDAG Cicekdag 76.99 312 *iP* **P** **09 33 12.0 -0.3**
CTKT Corum 77.00 313 *iP* **P** **09 33 12.4 +0.1**
ALFC Alevga 77.07 308 P **P** **09 33 13.0 +0.3**
comp=Z,3.2nm,0.7s
PPCY Paphos 77.20 307 P **P** **09 33 13.2 -0.2**
ERMK Ermenek 77.23 309 *iP* **P** **09 33 14.2 +0.4**
AKMC Akamas 77.25 307 P **P** **09 33 14.0 +0.3**
BRTR Keskin Array B 77.56 312 P **P** **09 33 15.1 -0.4**
BRTR PKKPbc **PKKPbc** **09 52 18.5 -2.1**
BRTR P'P' 09 59 52.1
BRTR Keskin Array B 77.56 312 P **P** **09 33 15.1 -0.4**
comp=Z,104nm,0.7s,baz=131,slow=7.2,SNR=239
BRTR PKKPbc **PKKPbc** **09 52 18.5 -2.1**
comp=Z,0.9nm,0.7s,baz=250,slow=2.5,SNR=4.6
BRTR PKPPKP P'P'df 09 59 52.1 -30
comp=Z,0.8nm,0.9s,baz=16,slow=9.1,SNR=3.7
BRTR LR LR 10 10 13.6
comp=Z,256nm,20.5s,baz=100,slow=38
BR131 Keskin Array S 77.56 312 *eP* **P** **09 33 15.1 -0.4**
comp=Z,55nm,0.6s
GAZI Gazipasa 77.58 309 *iP* **P** **09 33 15.2 -0.3**
BUFB Buffelsbos 77.61 236 *eP* **P** **09 33 13.9 -1.9**
BUFB AMB AMB 09 33 27.9
comp=Z,58nm,2.3s
VORD Divnogorie 77.76 325 *eP* **P** **09 33 15.4 -0.7**
VORD *e**SP sP 09 33 32.2 -5.9
VORD *eS* **S** **09 43 00.2 -4.0**
VORD pmax pmax
comp=Z,100nm,0.6s
VORD pmax pmax
comp=N,100nm,1.1s
VORD pmax pmax
comp=E,170nm,0.9s
VORD smax smax
comp=Z,50nm,1.8s
VORD smax smax
comp=N,220nm,3.0s
VORD smax smax
comp=E,90nm,1.2s
ILGA Ilgaz 77.90 314 *iP* **P** **09 33 17.4 -0.1**
VSR Storozhevoye 77.93 325 *eP* **P** **09 33 16.4 -0.7**
VSR *e**SP sP 09 33 32.6 -6.5
VSR *eS* **S** **09 43 01.0 -5.1**
VSR pmax pmax
comp=Z,310nm,0.7s
VSR pmax pmax
comp=N,80nm,0.8s
VSR pmax pmax
comp=E,200nm,0.8s
VSR smax smax
comp=Z,30nm,1.9s
VSR smax smax
comp=N,180nm,1.1s
VSR smax smax
comp=E,380nm,2.6s
VOR Voronezh 78.12 325 *eP* **P** **09 33 18.0 -0.1**
VOR pmax pmax
comp=Z,500nm,1.2s
ANTO Ankara 78.23 312 *eP* **P** **09 33 19.1 -0.1**
ANTO pmax pmax
comp=Z,71nm,0.8s
ANTO Ankara 78.23 312 P **P** **09 33 19.4 +0.3**
SNR=20
ANTO Ankara 78.23 312 *eP* **P** **09 33 19.1 -0.1**
comp=Z,71nm,0.8s
ANTO Ankara 78.23 312⇑*iP* **P** **09 33 19.0 -0.1**
TIXI Tiksi 78.28 8*c iP* **P** **09 33 16.6 -2.0**
TIXI pmax pmax
comp=Z,69nm,0.7s
TIXI MLR MLR
comp=Z,897nm,20.0s
BALT Daday 78.28 314 *iP* **P** **09 33 19.9 +0.4**
KDHN Kadinhani 78.36 311 *iP* **P** **09 33 19.6 -0.3**
VNDA Vanda 78.71 169 *eP* **P** **09 33 20.9 -0.1**
comp=Z,82nm,1.2s
VNDA PKKPbc **PKKPbc** **09 52 13.8 -5.1**
VNDA P'P' 10 00 13.9
VNDA Vanda 78.71 169 P **P** **09 33 21.2 +0.2**
comp=Z,8.8nm,0.7s,baz=309,slow=5.5,SNR=35
VNDA PKKPbc **PKKPbc** **09 52 13.8 -5.1**
comp=Z,1.1nm,0.8s,baz=247,slow=1.8,SNR=5.1
VNDA PKPPKP P'P'df 10 00 13.9 -5.2
comp=Z,0.7nm,0.6s,baz=47,slow=2.9,SNR=3.9
VNDA LR LR 10 03 32.4
comp=Z,716nm,21.2s,baz=306,slow=32
SIM Simferopol' **78.83 317** *eP* **P** **09 33 22.6 +0.4**
SIM *e**PP **pP** **09 33 39.0 +1.0**
SIM *eS* **S** **09 43 15.0 -1.0**
SIM pmax pmax
comp=Z,175nm,0.8s
BOLV Bolvadin 79.29 311 *iP* **P** **09 33 25.2 +0.1**
KORT Korkueli 79.31 309 *iP* **P** **09 33 25.1 -0.1**
ISP Isparta 79.38 310 P **P** **09 33 24.7 -0.9**
ISP Isparta 79.38 310 *eP* **P** **09 33 25.1 -0.4**
ISP pmax pmax
comp=Z,61nm,0.9s
ISP Isparta 79.38 310 *eP* **P** **09 33 25.1 -0.4**
comp=Z,61nm,0.9s
ISP Isparta 79.38 310⇓*iP* **P** **09 33 24.9 -0.7**
SEYT Eskypehyr 79.57 311 *iP* **P** **09 33 26.5 -0.1**
AKAS Kas 79.70 308 *iP* **P** **09 33 26.5 -0.8**
SBA Scott Base 79.80 169 *eP* **P** **09 33 26.1 -0.8**
SBA pmax pmax
comp=Z,118nm,1.3s
SBA Scott Base 79.80 169 *eP* **P** **09 33 26.1 -0.8**
comp=Z,118nm,1.3s
BORA Eskisehir 79.96 312 *iP* **P** **09 33 28.5 -0.1**
GOLH Golhisar 79.98 309 *iP* **P** **09 33 28.3 -0.5**
ALT Altintas 80.01 311 P **P** **09 33 28.7 -0.2**
KHAL Karahalli 80.31 310 *iP* **P** **09 33 30.3 -0.3**
DNZL Cakiroluk 80.48 309 *iP* **P** **09 33 30.3 -1.3**
GDZ Gediz 80.49 311 *iP* **P** **09 33 31.5 -0.1**
MOS Moscow 80.59 329 *eP* P 09 33 26.3 -5.2
MOS *e**PP **PcP** **09 33 39.6 +1.4**
MOS *eS* S 09 43 25.9 -8.2
MOS pmax pmax
comp=Z,672nm,0.9s
MOS pmax pmax
comp=Z,800nm,0.9s
TURN Turunc 80.64 308 *iP* **P** **09 33 33.8 +1.6**
ARG Arkhangelos 80.86 308 P **P** **09 33 33.9 +0.5**
ARG Arkhangelos 80.86 308 *eP* **P** **09 33 32.5 -0.9**
SUR Sutherland 80.86 238 P **P** **09 33 35.5 +1.7**
comp=Z,148nm,1.1s,SNR=8.7
SUR Sutherland 80.86 238⇓*iP* **P** **09 33 35.0 +1.1**
SUR AML AML 09 33 55.9
comp=Z,16nm,0.7s
SUR Sutherland 80.86 238 *eP* **P** **09 33 34.8 +1.0**
comp=Z,48nm,0.8s
SUR pP **pP** **09 33 51.5 +1.9**
SUR Sutherland 80.86 238 P **P** **09 33 35.2 +1.4**
comp=Z,16nm,0.9s,baz=95,slow=7.0,SNR=24
SUR pP **pP** **09 33 51.5 +1.9**
comp=Z,39nm,0.7s,baz=111,slow=5.0,SNR=14
OBN Obninsk 80.90 328⇑*iP* **P** **09 33 33.4 +0.3**
OBN *e* 09 36 37.0
OBN *iS* S 09 43 31.3 -6.0
OBN *eSS* **SS** **09 48 53.5 +1.1**
OBN pmax pmax
comp=Z,811nm,1.7s
KULA Kula-Manisa 80.97 310 P **P** **09 33 34.1 0.0**
ULDT Uludag 81.01 312 *iP* **P** **09 33 34.7 +0.3**
MANT Manisa 81.05 310 *iP* **P** **09 33 34.7 +0.1**

BUY Buyukada 81.20 312 *iP* **P** **09 33 34.0 -1.1**
ISK Istanbul-Kandi 81.29 313 P **P** **09 33 35.6 0.0**
DURS Dursunbey 81.37 311 *iP* **P** **09 33 35.7 -0.5**
AYDN Tasoluk 81.38 309 *iP* **P** **09 33 37.1 +0.9**
KARP Karpathos 81.48 307 P **P** **09 33 37.7 +0.9**
KARP Karpathos 81.48 307 *eP* **P** **09 33 38.0 +1.2**
AKHS Akhisar 81.70 310 *iP* **P** **09 33 38.4 +0.6**
ELIM Elim 81.75 236 *eP* **P** **09 33 36.4 -1.8**
ELIM AMB AMB 09 33 56.3
comp=Z,69nm,2.4s
CVNA Calvinia 81.76 239 *eP* **P** **09 33 41.3 +2.8**
CVNA AMB AMB 09 33 49.4
comp=Z,50nm,5.5s
KLMR Klimovskoe 81.80 334*c iP* **P** **09 33 38.0 +0.2**
KLMR pmax pmax
comp=Z,599nm,1.2s
GCAM G?zelcaml? 81.89 309 *iP* **P** **09 33 39.4 +0.7**
BALY Balya 82.05 311 *iP* **P** **09 33 40.0 +0.4**
ZKR Zakros 82.15 306 P **P** **09 33 41.0 +0.8**
TLCR 82.50 317⇑P **P** **09 33 42.6 +0.8**
TLCR 82.50 317⇑*iP* **P** **09 33 42.6 +0.8**
URLA Izmir 82.52 310 *iP* **P** **09 33 42.8 +0.6**
PSN Preselentsi 82.56 315 *iP* **P** **09 33 42.3 +0.1**
TIRR Tirgusor 82.59 316⇑P **P** **09 33 42.5 +0.2**
TIRR Tirgusor 82.59 316 *eP* **P** **09 33 42.4 +0.1**
comp=Z,82nm,0.8s
TIRR Tirgusor 82.59 316⇑*iP* **P** **09 33 42.5 +0.2**
NPS Neapolis 82.66 306 P **P** **09 33 44.0 +1.1**
NPS Neapolis 82.66 306 *eP* **P** **09 33 44.0 +1.1**
LAST Lasithi 82.75 306 P **P** **09 33 44.2 +0.7**
LAST Lasithi 82.75 306 *eP* **P** **09 33 44.0 +0.5**
CHOS Chios island 82.94 309 P **P** **09 33 45.4 +1.0**
CHOS Chios island 82.94 309 *eP* **P** **09 33 45.5 +1.0**
PRK Paraskevi 82.96 310 P **P** **09 33 45.7 +1.4**
PRK Paraskevi 82.96 310 *eP* **P** **09 33 45.0 +0.7**
KIS Kishinev 82.96 318⇑*iP* **P** **09 33 43.0 -1.2**
KIS *e* 09 34 01.0
KIS pmax pmax
comp=Z,340nm,2.0s
KIS Kishinev 82.96 318 *iP* **P** **09 33 43.0 -1.2**
KIS XM 09 33 44.0
comp=Z,300nm,2.0s
CFR Carcaliu 82.96 317⇑P **P** **09 33 44.5 +0.3**
CFR Carcaliu 82.96 317⇑*iP* **P** **09 33 44.5 +0.3**
PRD Provadia 83.00 314 *iP* **P** **09 33 45.2 +0.7**
THR3 Thira Island, 83.05 307 P **P** **09 33 45.8 +0.9**
APE Apeiranthos 83.08 308 P **P** **09 33 44.8 -0.3**
APE Apeiranthos 83.08 308⇑P **P** **09 33 44.6 -0.5**
APE Apeiranthos 83.08 308 *eP* **P** **09 33 45.0 -0.1**
APE Apeiranthos 83.08 308⇑*iP* **P** **09 33 44.6 -0.5**
EDRB Edirne 83.17 313 P **P** **09 33 45.0 -0.4**
LEOM Leova 83.20 318⇑P **P** **09 33 46.1 +0.7**
LEOM Leova 83.20 318⇑*iP* **P** **09 33 46.1 +0.7**
IDI Anoyia 83.25 306 P **P** **09 33 46.4 +0.4**
IDI Anoyia 83.25 306 *eP* **P** **09 33 47.0 +1.0**
IDI Anoyia 83.25 306 *eP* **P** **09 33 46.5 +0.5**
comp=Z,150nm,0.9s
SIVA Sivas 83.26 306 P **P** **09 33 46.8 +0.8**
SIVA Sivas 83.26 306 *eP* **P** **09 33 47.0 +1.0**
SIGR SIGRI 83.27 310 P **P** **09 33 46.1 +0.2**
JMB Yambol 83.42 314 P **P** **09 33 47.7 +1.1**
JMB Yambol 83.42 314 *iP* **P** **09 33 47.8 +1.1**
ALN Alexandroupoli 83.47 312 P **P** **09 33 46.1 -0.9**
ALN Alexandroupoli 83.47 312 *eP* **P** **09 33 47.5 +0.5**
AK02 Malin Array Si 83.67 322 *eP* **P** **09 33 47.4 -0.4**
AKASG Malin Array Be 83.67 322 P **P** **09 33 47.5 -0.3**
AKASG 09 36 55.7
AKASG Malin Array Be 83.67 322 P **P** **09 33 47.5 -0.3**
AKASG PP PP 09 36 55.6 -5.6
AKASG Malin Array Be 83.67 322 P **P** **09 33 47.5 -0.3**
comp=Z,61nm,0.7s,baz=87,slow=4.9,SNR=152
AKASG PP PP 09 36 55.6 -5.6
comp=Z,9.3nm,0.7s,baz=85,slow=7.0,SNR=5.0
AKASG LR LR 10 20 01.7
comp=Z,197nm,19.0s,baz=70,slow=42
AK01 Malin Array Si 83.68 322 *eP* **P** **09 33 47.4 -0.4**
KIEV Kiev 83.68 322 *eP* **P** **09 33 47.4 -0.4**
KIEV pmax pmax
comp=Z,70nm,0.8s
KIEV Kiev 83.68 322 *eP* **P** **09 33 47.4 -0.4**
comp=Z,70nm,0.8s
KOMG Komaggas 83.77 241 *eP* **P** **09 33 47.4 -1.4**
KOMG AMB AMB 09 34 07.4
comp=Z,36nm,0.8s
SMTH Samothraki Isl 83.77 311 *eP* **P** **09 33 48.5 0.0**
GRER 83.80 317⇑*iP* **P** **09 33 50.7 +2.1**
GVD Gavdhos 83.81 306 P **P** **09 33 49.1 +0.3**
GVD Gavdhos 83.81 306 *eP* **P** **09 33 49.1 +0.3**
comp=Z,357nm,0.8s
VAM Vamos 83.82 306 P **P** **09 33 50.2 +1.3**
VAM Vamos 83.82 306 *eP* **P** **09 33 50.0 +1.1**
LIA Limnos Island 83.91 311 P **P** **09 33 48.6 -0.6**
ISR Istrita 84.04 316⇑P **P** **09 33 51.3 +1.4**
ISR Istrita 84.04 316⇑*iP* **P** **09 33 51.3 +1.4**
SZH Strazhica 84.06 314 *iP* **P** **09 33 49.6 -0.3**
VRI Vrincioaia 84.08 317⇑P **P** **09 33 51.1 +1.1**
VRI Vrincioaia 84.08 317⇑*iP* **P** **09 33 51.1 +1.1**
DIM Dimitrovgrad 84.09 313 *iP* **P** **09 33 50.2 +0.1**
AFI Afiamalu 84.12 103 P **P** **09 33 52.0 +1.1**
comp=Z,189nm,1.0s
PLOR Plostina 84.13 317⇑P **P** **09 33 51.1 +0.8**
PLOR Plostina 84.13 317⇑*iP* **P** **09 33 51.1 +0.8**
TSUM Tsumeb 84.16 251⇑*iP* **P** **09 33 51.8 +0.7**
TSUM Tsumeb 84.16 251 *eP* **P** **09 33 51.6 +0.4**
comp=Z,69nm,1.1s
TSUM Tsumeb 84.16 251 P **P** **09 33 51.7 +0.6**
comp=Z,22nm,0.9s,baz=90,slow=3.8,SNR=38
MRMA Marmari 84.17 309 P **P** **09 33 51.3 +0.7**
TESR Tescani 84.28 318⇑*iP* **P** **09 33 51.8 +0.8**
SECR 84.35 316⇑*iP* **P** **09 33 52.7 +1.3**
PVL Pavlikeni 84.48 314 *iP* **P** **09 33 52.8 +0.8**
MLR Muntele Rosu 84.53 316⇑*iP* **P** **09 33 53.2 +0.7**
PTL Penteli 84.57 309 P **P** **09 33 52.4 -0.3**
ATHU Athens Univers 84.62 309 P **P** **09 33 52.5 -0.4**
RZN Rozhen 84.62 313 *iP* **P** **09 33 53.6 +0.6**
KAVA Kavala 84.63 312 P **P** **09 33 52.9 0.0**
ATH Athens Observa 84.67 309 P **P** **09 33 52.9 -0.2**
PLD Plovdiv 84.71 313 P **P** **09 33 53.2 0.0**
PLD Plovdiv 84.71 313 *iP* **P** **09 33 53.6 +0.4**
PRAR RASCA 84.76 318⇓*iP* **P** **09 33 54.3 +0.9**
AOS Alonnisos 84.76 310 P **P** **09 33 51.5 -2.1**
BILL Bilibino 84.84 20⇑*iP* **P** **09 33 52.5 -0.8**
BILL *e* 09 37 13.0
BILL *eS* **S** **09 44 18.8 +1.8**
BILL pmax pmax
comp=Z,52nm,1.2s
BILL Bilibino 84.84 20 *eP* **P** **09 33 52.5 -0.8**
comp=Z,34nm,0.9s
OUR Ouranopolis 84.90 311 P **P** **09 33 54.4 +0.2**
KYTH Kithira 84.91 307 *eP* **P** **09 33 55.0 +0.6**
DID Didima 84.96 308 P **P** **09 33 53.9 -0.7**
DID Didima 84.96 308 *eP* **P** **09 33 54.0 -0.7**
DIDY Didyma 84.97 308 P **P** **09 33 53.9 -0.9**
QSPA South Pole Qui 85.05 180 *eP* **P** **09 33 54.2 -0.5**
comp=Z,99nm,1.4s
QSPA S S 09 44 10.5 -8.9
QSPA PKKP **PKKPdf** **09 52 00.1 +3.8**
QSPA LR LR
comp=Z,790nm,19.0s
QSPA South Pole Qui 85.05 180 P **P** **09 33 54.5 -0.2**
comp=Z,13nm,0.9s,baz=305,slow=1.4,SNR=29
QSPA S S 09 44 10.5 -8.9
comp=Z,2.0nm,1.1s,baz=22,slow=20,SNR=8.7
QSPA PKKP **PKKPdf** **09 52 00.1 +3.8**
comp=Z,6.2nm,1.0s,baz=198,slow=1.6,SNR=9.3
PAIG Paliouri 85.05 311 P **P** **09 33 54.9 -0.1**
VLI Veliai 85.06 307 P **P** **09 33 54.2 -0.9**
SKIA Skiathos 85.08 310 P **P** **09 33 54.4 -0.8**
VOIR 85.14 316⇑P **P** **09 33 55.5 +0.1**
VOIR 85.14 316⇑*iP* **P** **09 33 55.5 +0.1**
NVR Nevrokopi 85.18 312 P **P** **09 33 54.4 -1.3**
PGB Panagyurishte 85.19 313 *iP* **P** **09 33 55.6 -0.1**
SMIA Simia 85.22 310 P **P** **09 33 55.2 -0.7**
LTK Loutraki 85.26 309 P **P** **09 33 54.8 -1.3**
NEO Neokhori 85.29 310 P **P** **09 33 55.3 -1.0**
PLG Polygyros 85.31 311 P **P** **09 33 56.2 -0.2**
XOR Xorichti 85.32 310 P **P** **09 33 55.5 -0.9**
MMB Musomiste 85.32 312 *iP* **P** **09 33 55.6 -0.8**
ATAL Atalanti 85.33 309 P **P** **09 33 55.6 -0.9**
SRS Serrai 85.34 312 P **P** **09 33 55.7 -0.7**
SOH Sokhos 85.46 311 P **P** **09 33 56.9 -0.2**
MICGM Minsk 85.47 326⇑*iP* **P** **09 33 54.0 -2.7**

BURAR	**Bucovina Array**	85.48 318	⇑	*i*	P	P	09 33 58.5	+1.4
MNK	**Minsk**	85.50 326	⇑	*i*	P	P	09 33 54.0	-2.9
MNK					pmax	pmax		
	comp=Z,490nm,1.5s							
BUR08	**Bucovina Ar. S**	85.50 318		*e*	P	P	09 33 58.0	+0.8
BUR08				*e*	S	S	09 44 21.7	-2.9
DYR	**Agios Nikonas**	85.55 307		P	P	P	09 33 58.0	+0.4
DYR	**Agios Nikonas**	85.55 307		*e*	P	P	09 33 58.5	+0.9
VLX	**Vlachokerasia**	85.61 308		P	P	P	09 33 58.0	0.0
AXAR	**Agios Charalam**	85.63 309		P	P	P	09 33 57.0	-0.9
MPEP	**Malo Peshtene**	85.65 314		*i*	P	P	09 33 58.3	+0.4
DSF	**Desfina**	85.67 309		P	P	P	09 33 57.1	-1.1
THE	**Thessaloniki**	85.72 311		P	P	P	09 33 57.8	-0.5
GUR	**Goura**	85.73 309		P	P	P	09 33 58.1	-0.5
GUR	**Goura**	85.73 309		*e*	P	P	09 33 58.5	-0.1
MAIT	**Maitri**	85.83 199		*e*	P	P	09 33 49.9	-8.3
MAIT				*e*			09 34 06.7	
KNT	**Kendrikon**	85.86 312		P	P	P	09 33 58.7	-0.3
VTS	**Vitosha**	85.89 313		P	P	P	09 33 59.4	+0.1
VTS	**Vitosha**	85.89 313	⇑	P	P	P	09 33 59.5	+0.1
VTS	**Vitosha**	85.89 313		*i*	P	P	09 33 59.0	-0.3
VTS	**Vitosha**	85.89 313	⇑	*i*	P	P	09 33 59.5	+0.1
KLV	**Kalavryta, Ach**	85.90 309		*e*	P	P	09 33 59.5	+0.1
AGG	**Agios Georgios**	85.92 310		P	P	P	09 33 58.2	-1.2
AGG	**Agios Georgios**	85.92 310		*e*	P	P	09 33 58.5	-0.9
ITM	**Ithomi**	85.94 308		P	P	P	09 33 59.4	-0.1
KALE	**Kalithea**	85.97 309		P	P	P	09 33 59.3	-0.4
LIT	**Litokhoron**	85.98 311		P	P	P	09 33 58.9	-0.8
TRIZ	**Trizonia**	86.01 309		P	P	P	09 33 59.4	-0.4
PYL	**PYLOS**	86.04 307		P	P	P	09 33 59.7	-0.3
LAKA	**Lakka**	86.07 309		P	P	P	09 34 00.1	0.0
MAKR	**Makrakomi, Fth**	86.07 310		P	P	P	09 33 59.7	-0.5
VAY	**Valandovo**	86.13 312		P	P	P	09 33 59.5	-0.8
VAY	**Valandovo**	86.13 312	⇑	*i*	P	P	09 33 59.3	-1.0
EFP	**Efpalio**	86.15 309		P	P	P	09 34 00.4	-0.1
EFP	**Efpalio**	86.15 309		*e*	P	P	09 34 01.0	+0.5
NACGM	**Naroch**	86.19 326		*e*	P	P	09 33 57.0	-3.3
GRG	**Griva**	86.19 311		P	P	P	09 34 00.1	-0.6
THL	**Klokotos Trika**	86.25 310		P	P	P	09 33 59.7	-1.3
EVR	**Evrytania**	86.31 309		P	P	P	09 34 02.2	+0.8
RLS	**Riolos of Patr**	86.44 309		P	P	P	09 34 02.7	+0.8
AXS	**Araxos**	86.53 309		P	P	P	09 34 03.1	+0.8
KZN	**Kozani**	86.56 311		P	P	P	09 34 01.6	-1.0
LVZ	**Lovozero**	86.59 339		*c i*	P	P	09 34 01.6	-0.5
LVZ					pmax	pmax		
	comp=Z,298nm,0.8s							
LVZ	**Lovozero**	86.59 339			P	P	09 34 01.0	-1.1
	comp=Z,2µm,0.7s,SNR=17							
BMR	**Baia Mare**	86.64 318	⇓	*i*	P	P	09 34 03.9	+1.2
BMR	**Baia Mare**	86.64 318	⇓	*i*	P	P	09 34 03.9	+1.2
DEV	**Deva**	86.70 316	⇑	P	P	P	09 34 04.7	+1.7
DEV	**Deva**	86.70 316	⇑	*i*	P	P	09 34 04.7	+1.7
LVV	**L'vov**	86.71 320		*e*	P	P	09 33 59.0	-4.0
LVV				*e*			09 37 26.0	
LVV				*e*	S	S	09 44 29.0	-7.0
APA	**Apatity**	86.91 339	⇑	*i*	P	P	09 34 03.6	0.0
APA				*i*			09 34 20.2	
APA				*i*			09 37 23.0	
APA					pmax	pmax		
	comp=Z,160nm,1.0s							
APA					MLR	MLR		
	comp=Z,1µm,22.0s							
FNA	**Florina**	86.93 311		P	P	P	09 34 03.3	-1.1
KFL	**Anninata**	86.97 308		P	P	P	09 34 05.0	+0.5
DRGR		87.00 317	⇓	*i*	P	P	09 34 05.3	+0.7
DRGR		87.00 317	⇓	*i*	P	P	09 34 05.3	+0.7
VSU	**Vasula**	87.08 329		*c i*	P	P	09 34 04.8	+0.2
VSU					pmax	pmax		
	comp=Z,205nm,0.9s							
NEST	**Nestorio**	87.12 311		P	P	P	09 34 05.1	-0.3
VLS	**Valsamata**	87.14 309		P	P	P	09 34 05.3	-0.1
JAN	**Janina**	87.16 310		P	P	P	09 34 06.1	+0.6
LKD2	**Lefkada island**	87.17 306		P	P	P	09 34 05.8	+0.2
TRPA	**Tarpa**	87.35 319	⇑	*i*	P	P	09 34 06.8	+0.7
TRPA	**Tarpa**	87.35 319	⇑	*e*	P	P	09 34 07.0	+0.9
KWP	**Kalwaria Pacla**	87.51 320		*e*	P	P	09 34 07.7	+0.8
KWP				*e*	*PP	pP	09 34 24.5	+1.5
KWP					pmax	pmax		
	comp=Z,100nm,0.9s							
KWP	**Kalwaria Pacla**	87.51 320		*e*	P	P	09 34 07.5	+0.6
	comp=Z,65nm,0.8s							
KWP	**Kalwaria Pacla**	87.51 320	⇑	*i*	P	P	09 34 07.2	+0.3
KWP	**Kalwaria Pacla**	87.51 320		*e*	P	P	09 34 07.6	+0.7
KWP				*e*	pP	pP	09 34 24.4	+1.5
KWP					LMZ	LR	10 09 22.6	
IGT	**Igoumenitsa**	87.53 310		P	P	P	09 34 07.6	+0.4
BZS	**Buzias**	87.54 316	⇑	P	P	P	09 34 07.6	+0.5
BZS	**Buzias**	87.54 316	⇑	*i*	P	P	09 34 07.6	+0.5
KOLS	**Kolonicke sedl**	87.67 319		*e*	P	P	09 34 09.1	+1.4
KOLS					pmax	pmax		
	comp=Z,180nm,1.0s							
KOLS	**Kolonicke sedl**	87.67 319		*e*	P	P	09 34 09.1	+1.4
KOLS				*e*	pP	pP	09 34 26.2	+2.5
KOLS				*e*	PP	PP	09 37 34.1	+0.4
PHP	**Peshkopia**	87.77 312		P	P	P	09 34 07.7	-0.7
SRN	**Sarande**	87.84 310		P	P	P	09 34 08.8	+0.2
KEK	**Kerkira**	87.97 310		P	P	P	09 34 09.6	+0.3
SUW	**Suwalki**	88.05 324	⇑	*e*	P	P	09 34 09.5	+0.2
SUW				*e*	*PP	pP	09 34 26.1	+0.8
SUW				*e*	S	S	09 44 48.6	-0.1
SUW	**Suwalki**	88.05 324		*e*	P	P	09 34 09.5	+0.2
SUW				*e*	pP	pP	09 34 26.1	+0.8
SUW				*e*	S	S	09 44 48.5	-0.1
SUW				*e*	ScS	ScS	09 44 56.1	+1.4
FINES	**FINESS Array B**	88.13 332		P	P	P	09 34 09.8	+0.3
FINES				PKKP	PKKPdf	PKKPdf	09 51 52.9	+1.9
FINES	**FINESS Array B**	88.13 332		P	P	P	09 34 09.8	+0.3
	comp=Z,109nm,0.7s,baz=109,slow=5.1,SNR=385							
FINES				PKKP	PKKPdf	PKKPdf	09 51 52.9	+1.9
	comp=Z,2.2nm,0.8s,baz=90,slow=2.8,SNR=5.3							
FINES				LR	LR	LR	10 17 13.9	
	comp=Z,242nm,21.8s,baz=217,slow=38							
TIR	**Tirane**	88.15 312		*e*	P	P	09 34 10.2	+0.1
TIR					pmax	pmax		
	comp=Z,53nm,0.8s							
TIR	**Tirane**	88.15 312		*e*	P	P	09 34 10.2	+0.1
	comp=Z,53nm,0.8s							
CRVS	**Cervenica-Dubn**	88.19 319		*e*	P	P	09 34 08.6	-1.6
CRVS					pmax	pmax		
	comp=Z,116nm,2.1s							
CRVS	**Cervenica-Dubn**	88.19 319		*e*	P	P	09 34 08.6	-1.6
CRVS				*e*	pP	pP	09 34 26.3	+0.1
CRVS				*e*	PP	PP	09 37 36.6	-1.3
PVY	**Plav**	88.26 313	⇑	*i*	P	P	09 34 10.7	-0.1
IVA	**Berane**	88.34 313	⇑	*i*	P	P	09 34 11.4	+0.3
STHS	**Stebnicka Huta**	88.42 320		*e*	P	P	09 34 12.5	+1.3
STHS					pmax	pmax		
	comp=Z,72nm,0.7s							
STHS	**Stebnicka Huta**	88.42 320		*e*	P	P	09 34 12.5	+1.3
STHS				*e*	pP	pP	09 34 29.3	+2.0
DIVS	**Divibare**	88.45 314		P	P	P	09 34 12.0	+0.4
ULC	**Ulcinj**	88.69 312	⇑	*i*	P	P	09 34 12.6	-0.1
PDG	**Podgorica**	88.75 313		P	P	P	09 34 13.0	+0.1
TTG	**Podgorica**	88.75 313	⇑	*i*	P	P	09 34 13.2	+0.3
KECS	**Kecovo**	88.76 319		*e*	P	P	09 34 13.6	+0.8
KECS					pmax	pmax		
	comp=Z,31nm,0.8s							
KECS	**Kecovo**	88.76 319		*e*	P	P	09 34 13.6	+0.8
KECS				*e*	pP	pP	09 34 30.0	+1.1
PLE	**Pljevlja**	88.77 313	⇑	*i*	P	P	09 34 14.0	+0.8
PKSN	**Nyarlorinc**	88.94 317	⇓	*e*	P	P	09 34 15.4	+1.7
BUM	**Brajici-Budva**	89.00 312	⇑	*i*	P	P	09 34 14.3	+0.1
NIE	**Niedzica**	89.02 320		*e*	P	P	09 34 15.6	+1.5
NIE				*e*	*PP	pP	09 34 32.4	+2.3
NIE	**Niedzica**	89.02 320		*e*	P	P	09 34 15.6	+1.5
NIE				*e*	pP	pP	09 34 32.4	+2.3
PSZ	**Piszkesteto**	89.07 318	⇓	P	P	P	09 34 15.0	+0.6
PSZ	**Piszkesteto**	89.07 318		*e*	P	P	09 34 14.4	+0.1
	comp=Z,141nm,1.3s							
PSZ	**Piszkesteto**	89.07 318	⇓	*i*	P	P	09 34 15.0	+0.6
PSZ	**Piszkesteto**	89.07 318	⇑	*e*	P	P	09 34 15.2	+0.8
BEL	**Belsk**	89.09 322		*e*	P	P	09 34 15.3	+1.0
BEL				*e*	*PP	pP	09 34 32.0	+1.7
BEL					pmax	pmax		
	comp=Z,300nm,0.8s							
BEL	**Belsk**	89.09 322		*e*	P	P	09 34 15.2	+1.0
BEL				*e*	pP	pP	09 34 32.0	+1.7
BEL					LMZ	LR	10 22 05.9	
UPM	**Unac-Piva**	89.11 313	⇑	*i*	P	P	09 34 14.8	0.0
HCY	**Herceg Novi**	89.31 313	⇑	*i*	P	P	09 34 15.7	+0.1
PKS2	**Kecel**	89.33 317	⇓	*e*	P	P	09 34 17.1	+1.6
BRY	**Bratogost**	89.33 313	⇑	*i*	P	P	09 34 16.2	+0.4
PKS7	**Kunszentmiklos**	89.44 317	⇑	*e*	P	P	09 34 17.1	+1.1
OJC	**Ojcow**	89.47 320		*e*	P	P	09 34 16.8	+0.7
OJC				*e*	*PP	pP	09 34 33.0	+0.8
OJC				*e*			09 37 48.1	
OJC	**Ojcow**	89.47 320		*e*	P	P	09 34 16.8	+0.7
OJC				*e*	pP	pP	09 34 33.0	+0.8
OJC				*e*	PP	PP	09 37 48.1	+0.1
BUD	**Budapest**	89.59 318	⇑	*e*	P	P	09 34 17.4	+0.7
PKSM	**Moragy**	89.69 316	⇑	P	P	P	09 34 17.8	+0.6
PKSM	**Moragy**	89.69 316	⇑	*i*	P	P	09 34 17.8	+0.6
PKSM	**Moragy**	89.69 316	⇑	*e*	P	P	09 34 18.0	+0.8
KEV	**Kevo**	89.81 340		*e*	P	P	09 34 16.8	-0.4
KEV					pmax	pmax		
	comp=Z,129nm,0.9s							
KEV	**Kevo**	89.81 340		*e*	P	P	09 34 16.8	-0.4
	comp=Z,129nm,0.9s							
VYHS	**Vyhne**	89.85 319		*e*	P	P	09 34 18.6	+0.6
VYHS					pmax	pmax		
	comp=Z,44nm,1.4s							
VYHS	**Vyhne**	89.85 319		*e*	P	P	09 34 18.6	+0.6
VYHS				*e*	pP	pP	09 34 35.4	+1.4
VYHS				*e*	PP	PP	09 37 52.1	+1.0
PKS9	**Tamasi**	89.98 317	⇑	*e*	P	P	09 34 19.4	+0.8
PKSG		90.01 317	⇑	*e*	P	P	09 34 19.5	+0.8
CSKK	**Cs˘‡kako**	90.09 317	⇓	*e*	P	P	09 34 20.4	+1.3
PKST	**T˜'s**	90.23 317	⇑	*e*	P	P	09 34 20.6	+0.8
TIP	**Timpagrande**	90.24 309		P	P	P	09 34 21.2	+1.1
TIP	**Timpagrande**	90.24 309		*e*	P	P	09 34 21.2	+1.1
	comp=Z,77nm,1.0s							
ARCES	**ARCESS Array B**	90.26 340		P	P	P	09 34 19.5	+0.1
ARCES	**ARCESS Array B**	90.26 340		P	P	P	09 34 19.5	+0.1
	comp=Z,108nm,0.8s,baz=96,slow=5.5,SNR=145							
ARCES					LR	LR	10 18 01.5	
	comp=Z,443nm,21.8s,baz=84,slow=38							
ARE0	**ARCESS Array S**	90.26 340	⇑	*i*	P	P	09 34 19.5	+0.1
ARE0	**ARCESS Array S**	90.26 340		*e*	P	P	09 34 19.5	+0.1
SNAA	**Sanae**	90.31 198		*e*	P	P	09 34 21.1	+1.2
SNAA	**Sanae**	90.31 198		*e*	pP	pP	09 34 34.2	-1.6
SNAA	**Sanae**	90.31 198		*e*	sP	sP	09 34 42.1	+0.1
SNAA	**Sanae**	90.31 198	⇑	*i*	P	P	09 34 21.0	+1.2
SNAA	**Sanae**	90.31 198		*e*	P	P	09 34 19.6	-0.1
	comp=Z,56nm,1.1s							
SNAA					pP	pP	09 34 36.3	+0.5
SNAA					PKKP	PKKPdf	09 51 46.8	+0.1
SNAA	**Sanae**	90.31 198		P	P	P	09 34 20.7	+1.0
	comp=Z,3.8nm,1.0s,baz=131,slow=4.2,SNR=28							
SNAA					pP	pP	09 34 36.3	+0.5
	comp=Z,14nm,1.0s,baz=97,slow=4.5,SNR=18							
SNAA					PKKP	PKKPdf	09 51 46.8	+0.1
	comp=Z,2.1nm,0.7s,baz=272,slow=2.0,SNR=24							
OKC	**Ostrava-Krasne**	90.47 320	⇑	*i*	P	P	09 34 21.7	+0.9
OKC				*e*			09 34 35.8	
OKC				*e*			09 37 55.3	
OKC				*e*			09 45 08.8	
OKC					MLR	MLR		
	comp=Z,400nm,22.0s							
OKC	**Ostrava-Krasne**	90.47 320		*i*	P	P	09 34 21.7	+0.9
OKC				*e*	pP	pP	09 34 35.8	-1.1
OKC				*e*	PP	PP	09 37 55.3	-0.7
OKC				*e*	S	S	09 45 08.8	-2.7
OKC					AMS	AMS	10 23 40.0	
	comp=Z,400nm,22.0s							
RAC	**Raciborz**	90.47 320		*e*	P	P	09 34 22.2	+1.4
RAC				*e*	S	S	09 45 11.7	+0.2
SMOL	**Smolenice**	90.78 318		*e*	P	P	09 34 23.1	+0.8
SMOL	**Smolenice**	90.78 318		*e*	P	P	09 34 23.0	+0.8
CEL	**Celeste**	90.82 308		*e*	P	P	09 34 23.9	+1.1
	comp=Z,180nm,1.1s							
MORC	**Moravsky Berou**	90.85 320	⇑	P	P	P	09 34 23.3	+0.7
MORC	**Moravsky Berou**	90.85 320		*e*	P	P	09 34 22.9	+0.3
	comp=Z,56nm,0.9s							
MORC				*e*	PP	PP	09 37 59.6	+0.5
MORC	**Moravsky Berou**	90.85 320	⇑	*i*	P	P	09 34 23.3	+0.7
KTK1	**Kautokeino**	90.94 339	⇑	*i*	P	P	09 34 22.3	-0.3
KTK1					AMB	AMB	09 34 23.6	
	comp=Z,594nm,1.4s							
ZST	**Bratislava**	90.96 318		*e*	P	P	09 34 23.2	+0.1
ZST	**Bratislava**	90.96 318		*e*	P	P	09 34 23.2	+0.1
BEHE	**Becsehely**	91.00 316	⇑	*e*	P	P	09 34 24.8	+1.5
CUC	**Castrocucco**	91.05 310		*e*	P	P	09 34 23.1	-0.6
	comp=Z,36nm,0.8s							
SOP	**Sopron**	91.27 318	⇑	*e*	P	P	09 34 25.0	+0.4
KRLC	**Kraliky**	91.37 320	⇑	*e*	P	P	09 34 26.1	+1.0
KRLC				*e*			09 34 43.0	
KRLC				*e*			09 38 03.7	
KRLC	**Kraliky**	91.37 320	⇑	*i*	P	P	09 34 26.1	+1.0
KRLC				*e*	sP	sP	09 34 43.0	-4.3
KRLC				*e*	PP	PP	09 38 03.7	+0.5
VRAC	**Vranov**	91.42 319	⇑	*i*	P	P	09 34 26.2	+1.0
DPC	**Dobruska-Polom**	91.69 320	⇑	*i*	P	P	09 34 27.9	+1.4
DPC				*e*			09 34 44.5	
DPC				*e*			09 38 05.8	
DPC				*e*			09 45 20.9	
DPC	**Dobruska-Polom**	91.69 320	⇑	*i*	P	P	09 34 27.9	+1.4
DPC				*e*	sP	sP	09 34 44.5	-4.3
DPC				*e*	PP	PP	09 38 05.8	+0.1
DPC				*e*	S	S	09 45 20.9	-1.9
DPC					AMS	AMS	10 24 20.0	
KSP	**Ksiaz**	91.76 321	⇑	*e*	P	P	09 34 27.7	+0.9
KSP				*e*	*PP	pP	09 34 44.6	+1.8
KSP				*e*			09 38 03.1	
KSP				*e*	S	S	09 45 22.5	-0.7
KSP	**Ksiaz**	91.76 321		*e*	P	P	09 34 27.7	+0.9
KSP				*e*	pP	pP	09 34 44.6	+1.8
KSP					LMZ	LR	10 23 18.9	
CONA	**Conrad Observa**	91.76 318	⇑	*i*	PcP	P	09 34 27.4	+0.4
	comp=Z,24nm,1.4s,SNR=7.9							
UPC	**Upice**	91.91 320	⇑	*i*	P	P	09 34 28.8	+1.3
UPC				*e*			09 34 45.2	
UPC				*e*			09 38 07.7	
UPC	**Upice**	91.91 320	⇑	*i*	P	P	09 34 28.8	+1.3
UPC				*e*	sP	sP	09 34 45.2	-4.5
UPC				*e*	PP	PP	09 38 07.7	+0.3
ARSA	**Arzberg**	91.93 317	⇑	*i*	PcP	PcP	09 34 28.4	-0.1
	comp=Z,26nm,0.9s							
BOJS	**Bojanci**	91.96 315		*i*	P	P	09 34 28.6	+0.7
BOJS				*i*			09 34 44.9	
BOJS				*i*	PP	PP	09 38 10.5	+2.6
TREC	**Trest**	92.14 319	⇑	*i*	P	P	09 34 29.4	+0.8
TREC				*e*			09 34 46.1	
TREC					MLR	MLR		
	comp=Z,300nm,21.3s							
TREC	**Trest**	92.14 319	⇑	*i*	P	P	09 34 29.4	+0.8
TREC				*e*	sP	sP	09 34 46.1	-4.7
TREC					AMS	AMS	10 24 50.0	
	comp=Z,300nm,21.3s							
PERS	**Pernice**	92.15 316		*i*	P	P	09 34 29.7	+1.0
PERS				*i*			09 34 46.6	
SOKA	**Soboth**	92.22 316	⇑	*i*	PcP	PcP	09 34 30.0	+0.1
	comp=Z,48nm,1.0s							
SOKA				⇑	*i*	sP	sP	09 34 47.4	-3.9
	comp=Z,54nm,1.2s							
GAMB	**Gambell**	92.27 26		*e*	P	P	09 34 28.5	-0.3
	comp=Z,145nm,1.5s							
VNA1	**Neumayer--Stat**	92.31 198		*e*	P	P	09 34 30.9	+2.0
VNA1	**Neumayer--Stat**	92.31 198		*e*	pP	pP	09 34 47.0	+2.0
VNA1	**Neumayer--Stat**	92.31 198		*e*	sP	sP	09 34 52.0	+0.8
LJU	**Ljubljana**	92.51 316		*i*	P	P	09 34 31.6	+1.2
LJU				*i*			09 34 48.1	
TRO	**Tromso**	92.55 340		*e*	P	P	09 34 29.5	-0.5
TRO					AMB	AMB	09 34 30.6	
	comp=Z,68nm,1.1s							
PRU	**Pruhonice**	92.80 320	⇑	*i*	P	P	09 34 32.3	+0.7
PRU				*e*			09 34 49.0	
PRU				*e*			09 38 14.1	
PRU				*e*			09 45 05.9	
PRU					MLR	MLR		
	comp=Z,300nm,20.2s							
PRU	**Pruhonice**	92.80 320	⇑	*i*	P	P	09 34 32.3	+0.7
PRU				*e*	pP	pP	09 34 49.0	+1.3
PRU				*e*	PP	PP	09 38 14.1	-0.3
PRU				*e*	SKS	SKSac	09 45 05.9	+5.2
PRU					AMS	AMS	10 24 50.0	
	comp=Z,300nm,20.2s							
JAVS	**Javornik**	92.82 316		*i*	P	P	09 34 32.5	+0.6
PVCC	**Panska Ves**	92.83 320	⇑	*i*	P	P	09 34 32.8	+1.1
PVCC				*e*			09 34 45.0	
PVCC	**Panska Ves**	92.83 320	⇑	*i*	P	P	09 34 32.8	+1.1
PVCC				*e*	pP	pP	09 34 45.0	-2.8
MOA	**Molln**	92.83 318	⇑	*i*	PcP	P	09 34 32.2	+0.4
	comp=Z,15nm,0.9s							
PRA	**Prague**	92.88 320	⇑	P	P	P	09 34 32.0	+0.1
PRA				*ex*		x	09 34 50.0	
PRA					AMS	AMS	10 25 00.0	
MYKA	**Terra Mystica**	93.17 316	⇑	*i*	P	P	09 34 33.4	0.0
	comp=Z,38nm,1.8s							
BRG	**Berggiesshubel**	93.25 321		*i*	P	P	09 34 34.3	+0.7
	comp=Z,36nm,0.8s							
BRG				*e*	pP	pP	09 34 50.9	+1.2
	comp=Z,17nm,0.7s							
BRG					PP	PP	09 38 10.0	-7.9
BRG					S	S	09 45 25.0	-11
BRG					SS	SS	09 51 45.0	-8.1
BRG								
	comp=N,164nm,19.2s							
BRG								
	comp=E,151nm,20.7s							
BRG								
	comp=Z,319nm,26.2s							
BRG	**Berggiesshubel**	93.25 321		*e*	P	P	09 34 34.3	+0.7
	comp=Z,36nm,0.8s							
BRG				*e*	pP	pP	09 34 51.2	+1.5
BRG				*e*	PP	PP	09 38 18.0	+0.1
BRG	**Berggiesshubel**	93.25 321		*i*	P	P	09 34 34.3	+0.7
BRG				*e*	*PP	pP	09 34 50.9	+1.2
BRG					pmax	pmax		
	comp=Z,36nm,0.8s							
BRG					pmax	pmax		
	comp=Z,17nm,0.7s							
BRG					MLR	MLR		
	comp=N,164nm,19.2s							
BRG					MLR	MLR		
	comp=E,151nm,20.7s							
BRG					MLR	MLR		
	comp=Z,319nm,26.2s							
GEC2	**GERESS Array S**	93.27 319		*e*	P	P	09 34 34.5	+0.5
	comp=Z,29nm,0.9s							
GEC2				*e*	pP	pP	09 34 51.4	+1.4
GEC2				*e*	PP	PP	09 38 19.5	+1.3
GERES	**GERESS Array B**	93.27 319		P	P	P	09 34 34.4	+0.5
GERES					PP	PP	09 38 19.6	+1.3
GERES	**GERESS Array B**	93.27 319		P	P	P	09 34 34.4	+0.5
	comp=Z,11nm,0.7s,baz=87,slow=3.6,SNR=98							
GERES					PP	PP	09 38 19.6	+1.3
	comp=Z,5.2nm,0.8s,baz=95,slow=6.7,SNR=6.4							
KHC	**Kasperske Hory**	93.37 319	⇑	*i*	P	P	09 34 34.7	+0.4
KHC				*e*			09 34 49.9	
KHC				*e*			09 38 22.9	
KHC				*e*			09 45 37.0	
KHC					MLR	MLR		
	comp=Z,400nm,21.9s							
KHC	**Kasperske Hory**	93.37 319	⇑	*i*	P	P	09 34 34.7	+0.4
KHC				*e*	pP	pP	09 34 49.9	-0.5
KHC				*e*	PP	PP	09 38 22.9	+4.0
KHC				*e*	S	S	09 45 37.0	-0.7
KHC					AMS	AMS	10 25 10.0	
	comp=Z,400nm,21.9s							
KHC	**Kasperske Hory**	93.37 319		*e*	P	P	09 34 33.9	-0.4
	comp=Z,10nm,0.7s							
KBA	**Koelnbreinsper**	93.40 317	⇑	*i*	P	P	09 34 34.2	-0.5
	comp=Z,12nm,0.8s							
RUE	**Ruedersdorf**	93.45 322		*e*	P	P	09 34 35.3	+0.8
	comp=Z,51nm,1.1s							
RUE	**Ruedersdorf**	93.45 322		*e*	P	P	09 34 35.0	+0.5
	comp=Z,31nm,0.7s							
FBE	**Freiberg**	93.62 321		*e*	P	P	09 34 36.3	+1.0
	comp=Z,32nm,0.9s							
FBE				*e*	pP	pP	09 34 53.0	+1.6
STEI	**Steigen**	93.72 338		*e*	P	P	09 34 35.1	-0.2
STEI					AMB	AMB	09 34 36.4	
	comp=Z,160nm,1.3s							
RJOB	**Jochberg**	93.81 317		*e*	P	P	09 34 36.2	-0.2
	comp=Z,14nm,1.0s							
WET	**Wettzell**	93.83 319		*e*	P	P	09 34 37.1	+0.7
	comp=Z,32nm,0.9s							
WET				*e*	pP	pP	09 34 53.4	+0.9
CLL	**Collm**	93.87 321		*e*	P	P	09 34 36.6	+0.2
	comp=Z,25nm,1.1s							
CLL				*e*	pP	pP	09 34 53.3	+0.8
CLL	**Collm**	93.87 321	⇑	*i*	P	P	09 34 36.4	0.0
CLL				*i*	*PP	pP	09 34 49.4	-3.1
CLL				*e*	S	S	09 45 40.0	-1.9
CLL					pmax	pmax		
	comp=Z,25nm,1.1s							
CLL					MLR	MLR		
	comp=Z,200nm,21.4s							
CLL	**Collm**	93.87 321	⇑	*i*	P	P	09 34 36.4	0.0
	comp=Z,25nm,1.1s							
CLL				*i*	pP	pP	09 34 49.4	-3.1
CLL				*i*

NB2	**NORSAR Subarra**	**95.19**	**331**	P		**P**		**09 34 42.0**	**-0.4**	
	baz=94,slow=5.3									
NOA	**NORSAR Array B**	**95.19**	**331**	P		**P**		**09 34 41.9**	**-0.4**	
NOA				PP		**PP**		**09 38 31.2**	**-1.5**	
NOA				PKKP		**PKKPdf**		**09 51 36.4**	**-2.2**	
NOA	**NORSAR Array B**	**95.19**	**331**	P		**P**		**09 34 41.9**	**-0.4**	
	comp=Z,15nm,0.8s,baz=92,slow=4.7,SNR=44									
NOA				PP		**PP**		**09 38 31.2**	**-1.5**	
	comp=Z,5.5nm,0.8s,baz=102,slow=7.2,SNR=4.0									
NOA				PKKP		**PKKPdf**		**09 51 36.4**	**-2.2**	
	comp=Z,1.7nm,0.8s,baz=281,slow=2.2,SNR=5.3									
NAO01	**NORSAR Array S**	**95.35**	**331**	*e*P		**P**		**09 34 42.7**	**-0.3**	
	comp=Z,6.3nm,0.7s									
CLZ	**Clausthal**	**95.52**	**321**	*e*P		**P**		**09 34 44.5**	**+0.4**	
	comp=Z,17nm,1.0s									
BSEG	**Bad Segeberg**	**95.59**	**324**	*e*P		**P**		**09 34 44.7**	**+0.5**	
	comp=Z,34nm,1.2s									
NRDL	**Niedersach Rie**	**95.70**	**322**	*e*P		**P**		**09 34 45.4**	**+0.7**	
	comp=Z,22nm,1.1s									
UBBA	**Unterbreizbach**	**95.74**	**320**	*e*P		**P**		**09 34 45.3**	**+0.4**	
	comp=Z,22nm,1.5s									
DAVOX	**Davos/Dischmat**	**95.76**	**316**	PKKPbc		PKKPbc		09 51 35.7	-1.2	
DAVOX	**Davos/Dischmat**	**95.76**	**316**	PKKPbc		PKKPbc		09 51 35.7	-1.2	
	comp=Z,0.9nm,0.4s,baz=303,slow=6.3,SNR=3.9									
DAVA	**Damuels**	**95.77**	**317**	⇑*i* PcP		**PcP**		**09 34 45.9**	**+0.2**	
	comp=Z,24nm,1.0s									
KEST	**Kesra**	**95.89**	**305**	*e*P		**P**		**09 34 47.4**	**+1.2**	
KEST	**Kesra**	**95.89**	**305**	P		**P**		**09 34 47.6**	**+1.4**	
	comp=Z,7.6nm,0.9s,baz=103,slow=0.6,SNR=22									
KEST				LR		LR		10 18 25.5		
	comp=Z,99nm,20.2s,baz=26,slow=36									
KONO	**Kongsberg**	**95.99**	**329**	*e*P		**P**		**09 34 45.9**	**-0.1**	
KONO				pmax		pmax				
	comp=Z,15nm,0.8s									
KONO	**Kongsberg**	**95.99**	**329**	*e*P		**P**		**09 34 45.9**	**-0.1**	
	comp=Z,15nm,0.8s									
PGF	**Pioggiola**	**96.32**	**312**	*e*P		**P**		**09 34 48.2**	**+0.2**	
PGF	**Pioggiola**	**96.32**	**312**	*e*P		**P**		**09 34 48.2**	**+0.2**	
PGF	**Pioggiola**	**96.32**	**312**	*e*P		**P**		**09 34 48.2**	**+0.2**	
TNS	**Taunus Mts**	**96.73**	**320**	*e*P		**P**		**09 34 50.2**	**+0.5**	
	comp=Z,25nm,0.9s									
BFO	**Black Forest**	**96.82**	**318**	*e*P		**P**		**09 34 50.0**	**-0.1**	
	comp=Z,10.0nm,1.0s									
BFO	**Black Forest**	**96.82**	**318**	*e*P		**P**		**09 34 49.7**	**-0.4**	
BFO				pmax		pmax				
	comp=Z,8.0nm,0.8s									
BFO	**Black Forest**	**96.82**	**318**	*e*P		**P**		**09 34 49.6**	**-0.4**	
	comp=Z,7.8nm,0.8s									
MOL	**Molde**	**96.91**	**332**	*e*P		**P**		**09 34 50.5**	**+0.5**	
SBF	**Sospel**	**97.47**	**313**	*e*P		Pdif		09 34 53.2	0.0	
	comp=Z,62nm,1.0s									
SBF	**Sospel**	**97.47**	**313**	*e*P		Pdif		09 34 53.2	0.0	
SBF				pmax		pmax				
	comp=Z,62nm,1.0s									
SBF	**Sospel**	**97.47**	**313**	*e*P		Pdif		09 34 53.2	0.0	
	comp=Z,62nm,1.0s									
CDF	**Champ du Feu**	**97.52**	**318**	*i* P		**P**		**09 34 53.0**	**-0.3**	
	comp=Z,15nm,0.9s									
CDF	**Champ du Feu**	**97.52**	**318**	*i* P		**P**		**09 34 53.0**	**-0.3**	
CDF				pmax		pmax				
	comp=Z,15nm,0.9s									
CDF	**Champ du Feu**	**97.52**	**318**	⇑*i* P		**P**		**09 34 53.0**	**-0.3**	
	comp=Z,15nm,0.9s									
HINF	**Hinteralfeld**	**97.82**	**317**	*e*P		**P**		**09 34 54.1**	**-0.5**	
HINF	**Hinteralfeld**	**97.82**	**317**	*e*P		**P**		**09 34 54.1**	**-0.5**	
HINF	**Hinteralfeld**	**97.82**	**317**	*e*P		**P**		**09 34 54.1**	**-0.5**	
MBDF	**Montbardon**	**97.93**	**314**	*e*P		Pdif		09 34 55.4	0.0	
MBDF	**Montbardon**	**97.93**	**314**	*e*P		Pdif		09 34 55.4	0.0	
MBDF	**Montbardon**	**97.93**	**314**	*e*P		Pdif		09 34 55.4	0.0	
LPG	**La Plagne**	**97.94**	**315**	⇑*i* P		Pdif		09 34 55.6	+0.1	
	comp=Z,17nm,0.8s									
LPG	**La Plagne**	**97.94**	**315**	⇑*i* P		Pdif		09 34 55.6	+0.1	
LPG				pmax		pmax				
	comp=Z,17nm,0.8s									
LPG	**La Plagne**	**97.94**	**315**	⇑*i* P		Pdif		09 34 55.6	+0.1	
	comp=Z,17nm,0.8s									
LPL	**La Plagne**	**97.95**	**315**	⇑*i* P		Pdif		09 34 55.6	+0.1	
	comp=Z,22nm,0.8s									
LPL	**La Plagne**	**97.95**	**315**	⇑*i* P		Pdif		09 34 55.6	+0.1	
LPL				pmax		pmax				
	comp=Z,22nm,0.8s									
LPL	**La Plagne**	**97.95**	**315**	⇑*i* P		Pdif		09 34 55.6	+0.1	
	comp=Z,22nm,0.8s									
FRF	**La Foret Royal**	**98.04**	**313**	*e*P		Pdif		09 34 55.9	+0.2	
	comp=Z,130nm,1.5s									
FRF	**La Foret Royal**	**98.04**	**313**	*e*P		Pdif		09 34 55.9	+0.2	
FRF				pmax		pmax				
	comp=Z,130nm,1.5s									
FRF	**La Foret Royal**	**98.04**	**313**	*e*P		Pdif		09 34 55.9	+0.2	
	comp=Z,130nm,1.5s									
HAU	**Haudompre**	**98.15**	**318**	⇑*i* P		**P**		**09 34 55.9**	**-0.2**	
	comp=Z,20nm,0.8s									
HAU				*e*R						
	comp=Z,261nm,20.8s									
HAU	**Haudompre**	**98.15**	**318**	⇑*i* P		**P**		**09 34 55.9**	**-0.2**	
HAU				pmax		pmax				
	comp=Z,20nm,0.8s									
HAU	**Haudompre**	**98.15**	**318**	⇑*i* P		**P**		**09 34 55.9**	**-0.2**	
	comp=Z,20nm,0.8s									
ORIF	**Oris-en-Rattie**	**98.56**	**315**	*e*P		Pdif		09 34 58.3	+0.2	
ORIF				*e*R						
	comp=Z,331nm,20.2s									
ORIF	**Oris-en-Rattie**	**98.56**	**315**	*e*P		Pdif		09 34 58.3	+0.2	
ORIF	**Oris-en-Rattie**	**98.56**	**315**	*e*P		Pdif		09 34 58.3	+0.2	
SMRF	**Simiane la Rot**	**98.81**	**314**	*e*P		Pdif		09 34 59.4	+0.2	
	comp=Z,25nm,1.0s									
SMRF	**Simiane la Rot**	**98.81**	**314**	*e*P		Pdif		09 34 59.4	+0.2	
	comp=Z,25nm,1.0s									
TAM	**Tamanrasset**	**98.86**	**292**	*e*P		Pdif		09 35 00.8	+0.8	
TAM				pmax		pmax				
	comp=Z,2.0nm,0.3s									
TAM	**Tamanrasset**	**98.86**	**292**	*e*P		Pdif		09 35 00.8	+0.8	
	comp=Z,2.0nm,0.3s									
MEZF	**Maizieres J'vi**	**99.00**	**318**	⇑*i* P		Pdif		09 34 59.9	+0.1	
	comp=Z,16nm,0.8s									
MEZF	**Maizieres J'vi**	**99.00**	**318**	⇑*i* P		Pdif		09 34 59.9	+0.1	
	comp=Z,16nm,0.8s									
SFTF	**Sexfontaines**	**99.02**	**318**	⇑*i* P		**Pdif**		**09 35 00.0**	**+0.1**	
	comp=Z,52nm,0.8s									
SFTF	**Sexfontaines**	**99.02**	**318**	⇑*i* P		**Pdif**		**09 35 00.0**	**+0.1**	
	comp=Z,52nm,0.8s									
GIVF	**Givet**	**99.07**	**320**	*e*P		**Pdif**		**09 35 00.1**	**0.0**	
	comp=Z,8.9nm,0.6s									
GIVF	**Givet**	**99.07**	**320**	*e*P		**Pdif**		**09 35 00.1**	**0.0**	
GIVF				pmax		pmax				
	comp=Z,9.0nm,0.6s									
GIVF	**Givet**	**99.07**	**320**	*e*P		**Pdif**		**09 35 00.1**	**0.0**	
	comp=Z,8.9nm,0.6s									
VIVF	**Saint-Julien-l**	**99.42**	**315**	*e*P		**Pdif**		**09 35 02.0**	**+0.1**	
VIVF	**Saint-Julien-l**	**99.42**	**315**	*e*P		**Pdif**		**09 35 02.0**	**+0.1**	
VIVF	**Saint-Julien-l**	**99.42**	**315**	*e*P		**Pdif**		**09 35 02.0**	**+0.1**	
BAIF	**Baives**	**99.46**	**320**	⇑*i* P		**Pdif**		**09 35 02.2**	**+0.4**	
	comp=Z,22nm,0.8s									
BAIF	**Baives**	**99.46**	**320**	⇑*i* P		**Pdif**		**09 35 02.2**	**+0.4**	
BAIF				pmax		pmax				
	comp=Z,22nm,0.8s									
BAIF	**Baives**	**99.46**	**320**	⇑*i* P		**Pdif**		**09 35 02.2**	**+0.4**	
	comp=Z,22nm,0.8s									
LOR	**Lormes**	**99.87**	**317**	*e*P		**Pdif**		**09 35 03.9**	**+0.1**	
LOR				*e*R						
	comp=Z,260nm,22.2s									
LOR	**Lormes**	**99.87**	**317**	*e*P		**Pdif**		**09 35 03.9**	**+0.1**	
SMF	**Signal de Mont**	**99.92**	**316**	*e*P		**Pdif**		**09 35 04.0**	**0.0**	
	comp=Z,25nm,1.2s									
SMF	**Signal de Mont**	**99.92**	**316**	*e*P		**Pdif**		**09 35 04.0**	**0.0**	
SMF				pmax		pmax				
	comp=Z,25nm,1.2s									
SMF	**Signal de Mont**	**99.92**	**316**	*e*P		**Pdif**		**09 35 04.0**	**0.0**	
	comp=Z,25nm,1.2s									
AVF	**Avril sur Loir**	**100.24**	**317**	*e*P		**Pdif**		**09 35 05.6**	**+0.2**	
AVF	**Avril sur Loir**	**100.24**	**317**	*e*P		**Pdif**		**09 35 05.6**	**+0.2**	
AVF	**Avril sur Loir**	**100.24**	**317**	*e*P		**Pdif**		**09 35 05.6**	**+0.2**	
BGF	**Bois d'Agland**	**100.61**	**316**	*e*P		**Pdif**		**09 35 07.5**	**+0.5**	
BGF	**Bois d'Agland**	**100.61**	**316**	*e*P		**Pdif**		**09 35 07.5**	**+0.5**	
BGF	**Bois d'Agland**	**100.61**	**316**	*e*P		**Pdif**		**09 35 07.5**	**+0.5**	
COLD	**Coldfoot**	**100.96**	**22**	*e*Pdif		**Pdif**		**09 35 07.9**	**-0.3**	
	comp=Z,6.9nm,0.9s									
PPLA	**Purkeypile**	**101.06**	**27**	*e*Pdif		**Pdif**		**09 35 08.5**	**-0.4**	
	comp=Z,6.8nm,0.8s									
CAF	**Calviac**	**101.27**	**315**	*e*P		**Pdif**		**09 35 10.7**	**+0.6**	
CAF	**Calviac**	**101.27**	**315**	*e*P		**Pdif**		**09 35 10.7**	**+0.6**	
CAF	**Calviac**	**101.27**	**315**	*e*P		**Pdif**		**09 35 10.7**	**+0.6**	
RJF	**Les Rejaudoux**	**101.63**	**315**	*e*P		**Pdif**		**09 35 12.3**	**+0.7**	
RJF				*e*R						
	comp=Z,210nm,21.5s									
RJF	**Les Rejaudoux**	**101.63**	**315**	*e*P		**Pdif**		**09 35 12.3**	**+0.7**	
RJF	**Les Rejaudoux**	**101.63**	**315**	*e*P		**Pdif**		**09 35 12.3**	**+0.7**	
DAG	**Danmarks Havn**	**101.76**	**348**	⇑*i* P		**Pdif**		**09 35 10.0**	**-1.5**	
	comp=Z,22nm,0.9s									
TRF	**Thorofare Moun**	**101.79**	**26**	*e*Pdif		**Pdif**		**09 35 10.7**	**-1.4**	
	comp=Z,7.0nm,0.8s									
TORD	**Torodi Ar. Bea**	**102.18**	**282**	P		**Pdif**		**09 35 14.8**	**+0.1**	
TORD				pP				09 35 32.6		
TORD				PP		**PP**		**09 39 30.7**	**+3.3**	
TORD				PKiKP		**PKiKP**		**09 39 36.4**	**-0.5**	
TORD				PKKPbc		**PKKPbc**		**09 51 15.7**	**-1.8**	
TORD	**Torodi Ar. Bea**	**102.18**	**282**	P		**Pdif**		**09 35 14.8**	**+0.1**	
	comp=Z,2.9nm,1.0s,baz=102,slow=3.5,SNR=11									
TORD				pP				09 35 32.6		
	comp=Z,3.4nm,1.0s,baz=72,slow=4.8,SNR=7.9									
TORD				PP		**PP**		**09 39 30.7**	**+3.3**	
	comp=Z,1.9nm,1.0s,baz=84,slow=5.8,SNR=4.6									
TORD				PKiKP		**PKiKP**		**09 39 36.4**	**-0.5**	
	comp=Z,2.0nm,0.8s,baz=77,slow=2.1,SNR=5.3									
TORD				PKKPbc		**PKKPbc**		**09 51 15.7**	**-1.8**	
	comp=Z,2.8nm,0.7s,baz=298,slow=2.5,SNR=12									
MCK	**McKinley**	**102.32**	**26**	*e*P		**Pdif**		**09 35 13.1**	**-1.2**	
MCK				pmax		pmax				
	comp=Z,13nm,0.8s									
MCK	**McKinley**	**102.32**	**26**	*e*Pdif		**Pdif**		**09 35 13.1**	**-1.2**	
	comp=Z,13nm,0.8s									
LDF	**La Druitiere**	**102.42**	**319**	*e*P		**Pdif**		**09 35 15.2**	**+0.2**	
	comp=Z,21nm,0.9s									
LDF	**La Druitiere**	**102.42**	**319**	*e*P		**Pdif**		**09 35 15.2**	**+0.2**	
LDF				pmax		pmax				
	comp=Z,21nm,0.9s									
LDF	**La Druitiere**	**102.42**	**319**	*e*P		**Pdif**		**09 35 15.2**	**+0.2**	
	comp=Z,21nm,0.9s									
FLN	**La Foliniere**	**102.63**	**319**	*e*P		**Pdif**		**09 35 16.1**	**+0.1**	
	comp=Z,19nm,0.9s									
FLN				*e*R						
	comp=Z,278nm,22.5s									
FLN	**La Foliniere**	**102.63**	**319**	*e*P		**Pdif**		**09 35 16.1**	**+0.1**	
FLN				pmax		pmax				
	comp=Z,19nm,0.9s									
FLN	**La Foliniere**	**102.63**	**319**	*e*P		**Pdif**		**09 35 16.1**	**+0.1**	
	comp=Z,19nm,0.9s									
PMR	**Palmer**	**102.74**	**28**	*e*P		**Pdif**		**09 35 15.4**	**-0.7**	
PMR				pmax		pmax				
	comp=Z,8.0nm,0.9s									
PMR	**Palmer**	**102.74**	**28**	*e*Pdif		**Pdif**		**09 35 15.3**	**-0.7**	
	comp=Z,8.2nm,0.9s									
ILAR	**Eielson Array**	**102.91**	**24**	P		**Pdif**		**09 35 14.8**	**-2.1**	
ILAR				PP		PP		09 39 21.4	-10	
ILAR				PKiKP		**PKiKP**		**09 39 34.6**	**-2.2**	
ILAR				PKKPbc		**PKKPbc**		**09 51 14.9**	**-2.1**	
ILAR	**Eielson Array**	**102.91**	**24**	P		**Pdif**		**09 35 14.8**	**-2.1**	
	comp=Z,2.0nm,0.7s,baz=285,slow=3.2,SNR=20									
ILAR				PP		PP		09 39 21.4	-10	
	comp=Z,2.2nm,1.1s,baz=303,slow=7.5,SNR=5.2									
ILAR				PKiKP		**PKiKP**		**09 39 34.6**	**-2.2**	
	comp=Z,2.7nm,0.8s,baz=292,slow=7.3,SNR=7.5									
ILAR				PKKPbc		**PKKPbc**		**09 51 14.9**	**-2.1**	
	comp=Z,0.6nm,0.7s,baz=132,slow=2.2,SNR=6.6									
SML	**Sawmill**	**103.06**	**28**	*e*P		**Pdif**		**09 35 17.0**	**-0.6**	
SML				pmax		pmax				
	comp=Z,5.0nm,0.8s									
SML	**Sawmill**	**103.06**	**28**	*e*Pdif		**Pdif**		**09 35 17.0**	**-0.6**	
	comp=Z,4.7nm,0.8s									
TBI	**Tubuai**	**103.94**	**115**	*e*LR		LR		10 10 16.1		
	comp=Z,489nm,27.2s,baz=250									
PAX	**Paxson**	**104.03**	**26**	*e*P		**Pdif**		**09 35 21.6**	**-0.4**	
PAX				pmax		pmax				
	comp=Z,2.0nm,0.7s									
PAX	**Paxson**	**104.03**	**26**	*e*Pdif		**Pdif**		**09 35 21.6**	**-0.4**	
	comp=Z,2.3nm,0.7s									
MENT	**Mentasta**	**104.80**	**26**	*e*Pdif		**Pdif**		**09 35 25.6**	**+0.3**	
PPT2	**Papeete2**	**104.92**	**110**	*e*LR		LR		10 12 26.6		
	comp=Z,611nm,23.0s,baz=238									
PPT	**Papeete**	**104.93**	**110**	Pdif		**Pdif**		**09 35 28.7**	**+1.9**	
PPT	**Papeete**	**104.93**	**110**	Pdiff		**Pdif**		**09 35 28.7**	**+1.9**	
	comp=Z,24nm,0.9s,baz=99,slow=19,SNR=2.6									
EGAK	**Eagle**	**105.23**	**24**	*e*PKPdf		**PKiKP**		**09 39 41.2**	**+0.1**	
ESDC	**Sonseca Array**	**106.25**	**310**	PKiKP		**PKiKP**		**09 39 43.0**	**-0.8**	
ESDC				PP		**PP**		**09 39 57.0**	**-0.1**	
ESDC				PKKPbc		**PKKPbc**		**09 51 05.4**	**-0.7**	
ESDC				PKKPab		**PKKPab**		**09 51 21.6**	**+0.3**	
ESDC	**Sonseca Array**	**106.25**	**310**	PKiKP		**PKiKP**		**09 39 43.0**	**-0.8**	
	comp=Z,0.2nm,0.3s,baz=9.9,slow=2.0,SNR=4.1									
ESDC				PP		**PP**		**09 39 57.0**	**-0.1**	
	comp=Z,1.1nm,0.6s,baz=69,slow=7.2,SNR=5.5									
ESDC				PKKPbc		**PKKPbc**		**09 51 05.4**	**-0.7**	
	comp=Z,0.6nm,0.5s,baz=301,slow=4.2,SNR=5.6									
ESDC				PKKPab		**PKKPab**		**09 51 21.6**	**+0.3**	
	comp=Z,0.3nm,0.3s,baz=291,slow=7.2,SNR=4.5									
INK	**Inuvik**	**106.45**	**19**	PKiKP		**PKiKP**		**09 39 43.0**	**-0.2**	
INK				PKKP		**PKKPdf**		**09 51 18.5**	**+0.7**	
INK	**Inuvik**	**106.45**	**19**	PKiKP		**PKiKP**		**09 39 43.0**	**-0.2**	
	baz=263,slow=1.9									
INK				PKKP		**PKKPdf**		**09 51 18.5**	**+0.7**	
	comp=Z,2.1nm,0.8s,baz=63,slow=3.6,SNR=5.2									
DBIC	**Dimbokro**	**108.35**	**275**	PKiKP		**PKiKP**		**09 39 47.5**	**-0.8**	
DBIC				PKKPbc		**PKKPbc**		**09 51 00.2**	**+1.6**	
DBIC	**Dimbokro**	**108.35**	**275**	PKiKP		**PKiKP**		**09 39 47.5**	**-0.8**	
	comp=Z,3.3nm,0.6s,baz=270,slow=2.0,SNR=4.2									
DBIC				PKKPbc		**PKKPbc**		**09 51 00.2**	**+1.6**	
	comp=Z,1.6nm,0.5s,baz=270,slow=8.8,SNR=4.2									
SUMG	**Summit**	**108.45**	**349**	*e*P		**Pdif**		**09 35 41.8**	**-0.1**	
SUMG				pmax		pmax				
	comp=Z,9.0nm,0.8s									
SUMG	**Summit**	**108.45**	**349**	*e*Pdif		**Pdif**		**09 35 41.8**	**-0.1**	
	comp=Z,8.6nm,0.8s									
SUMG	**Summit**	**108.45**	**349**	*i* P		**Pdif**		**09 35 42.3**	**+0.4**	
	comp=Z,8.0nm,0.8s									
DLBC	**Dease Lake**	**112.78**	**27**	PKiKP		**PKiKP**		**09 39 56.0**	**+0.5**	
DLBC				PKKPbc		**PKKPbc**		**09 50 42.7**	**-3.1**	
DLBC	**Dease Lake**	**112.78**	**27**	PKiKP		**PKiKP**		**09 39 56.0**	**+0.5**	
	comp=Z,8.3nm,0.9s,baz=292,slow=3.0,SNR=13									
DLBC				PKKPbc		**PKKPbc**		**09 50 42.7**	**-3.1**	
	comp=Z,3.0nm,0.7s,baz=60,slow=9.0,SNR=9.0									
YKW3	**Yellowknife Ar**	**116.16**	**18**	*e*PKPdf		**PKPdf**		**09 40 00.7**	**-1.0**	
YKA	**Yellowknife Ar**	**116.21**	**18**	PKP		**PKPdf**		**09 40 00.9**	**-0.9**	
YKA				PKKPbc		**PKKPbc**		**09 50 31.8**	**-2.3**	
YKA				SKKP				09 54 35.1		
YKA	**Yellowknife Ar**	**116.21**	**18**	PKP		**PKPdf**		**09 40 00.9**	**-0.9**	
	comp=Z,10nm,0.8s,baz=325,slow=1.9,SNR=87									
YKA				PKKPbc		**PKKPbc**		**09 50 31.7**	**-2.3**	
	comp=Z,0.3nm,0.6s,baz=137,slow=3.8,SNR=6.0									
YKA				SKKP				09 54 35.1		
	comp=Z,0.1nm,0.3s,baz=140,slow=3.5,SNR=3.9									
BBB	**Bella Bella**	**116.85**	**33**	PKP		**PKPdf**		**09 40 03.5**	**+0.1**	
BBB	**Bella Bella**	**116.85**	**33**	PKP		**PKPdf**		**09 40 03.5**	**+0.1**	
	comp=Z,24nm,0.8s,baz=350,slow=3.8,SNR=7.3									
RKT	**Rikitea**	**116.87**	**119**	*e*LR		LR		10 16 01.8		
	comp=Z,302nm,32.0s									
USHA	**Ushuaia**	**120.03**	**186**	PKP		**PKPdf**		**09 40 10.9**	**+1.4**	
USHA	**Ushuaia**	**120.03**	**186**	PKP		**PKPdf**		**09 40 10.9**	**+1.4**	
	comp=Z,12nm,0.8s,baz=101,slow=5.2,SNR=3.6									
HDW	**Hoodsport**	**121.98**	**35**	P		**PKPdf**		**09 40 14.5**	**+1.0**	
TDL	**Tradedollar La**	**123.16**	**36**	P		**PKPdf**		**09 40 16.6**	**+0.6**	
LON	**Longmire**	**123.18**	**35**	*e*PKiKP		**PKPdf**		**09 40 15.8**	**0.0**	
LON	**Longmire**	**123.18**	**35**	*e*PKPdf		**PKPdf**		**09 40 15.8**	**0.0**	
TWW	**Teanaway**	**123.51**	**35**	P		**PKPdf**		**09 40 17.5**	**+1.0**	
KEBM	**Edson Butte**	**123.61**	**41**	*e*PKPdf		**PKPdf**		**09 40 17.4**	**+0.6**	
WTV	**Waterville**	**123.70**	**34**	P		**PKPdf**		**09 40 16.9**	**+0.1**	
VLL	**Laurance Lake**	**123.95**	**37**	P		**PKPdf**		**09 40 18.3**	**+0.9**	
BROR	**Big Rock Looko**	**124.11**	**38**	P		**PKPdf**		**09 40 18.2**	**+0.7**	
HUMO	**Hull Mountain**	**124.62**	**40**	*e*PKPdf		**PKPdf**		**09 40 18.9**	**+0.2**	
WRD	**Warden**	**124.67**	**34**	P		**PKPdf**		**09 40 19.3**	**+0.7**	
HAWA	**Hanford**	**124.69**	**35**	*e*PKPdf		**PKPdf**		**09 40 19.3**	**+0.7**	
NEW	**Newport**	**124.89**	**32**	*e*PKPdf		**PKPdf**		**09 40 18.9**	**-0.1**	
NEW	**Newport**	**124.89**	**32**	PKP		**PKPdf**		**09 40 19.0**	**-0.1**	
	comp=Z,19nm,0.8s,baz=306,slow=1.8,SNR=35									
NEW	**Newport**	**124.89**	**32**	P		**PKPdf**		**09 40 19.1**	**+0.1**	
	baz=125,SNR=23									
KHMM	**Horse Mountain**	**124.94**	**42**	*e*PKPdf		**PKPdf**		**09 40 20.6**	**+1.0**	
KHMM				*es*PKPdf		**sPKPdf**		**09 40 38.4**	**-3.8**	
YBH	**Yreka Blue Hor**	**125.21**	**41**	PKP		**PKPdf**		**09 40 20.0**	**+0.1**	
YBH				*e*PKPdf		**PKiKP**		**09 40 20.3**	**0.0**	
YBH	**Yreka Blue Hor**	**125.21**	**41**	PKP		**PKPdf**		**09 40 20.0**	**+0.1**	
	comp=Z,16nm,1.0s,baz=342,slow=4.9,SNR=24									
A12A	**Yaak River Ran**	**125.22**	**30**	P		**PKPdf**		**09 40 19.8**	**+0.1**	
	baz=125,SNR=9.8									
B12A	**Libby**	**125.55**	**31**	⇓P		**PKPdf**		**09 40 20.8**	**+0.5**	
	baz=126,SNR=6.2									
C11A	**Tepee Creek (N**	**125.61**	**32**	⇑P		**PKPdf**		**09 40 20.4**	**-0.1**	
	baz=126									
A13A	**Flathead Natio**	**125.83**	**30**	⇓P		**PKPdf**		**09 40 21.5**	**+0.6**	
	baz=126									
WDC	**Whiskeytown Da**	**125.87**	**42**	*e*PKiKP		**PKPdf**		**09 40 21.2**	**+0.1**	
WDC	**Whiskeytown Da**	**125.87**	**42**	*e*PKPdf		**PKPdf**		**09 40 21.1**	**+0.1**	
WDC				*e*SKPdf		**SKPdf**		**09 43 48.8**	**-3.2**	
WALA	**Waterton Lakes**	**126.00**	**29**	*e*PKPdf		**PKPdf**		**09 40 20.9**	**-0.4**	
WALA				*e*PP		**PP**		**09 42 12.8**	**-1.8**	
C12B	**Naegeli Ranch,**	**126.09**	**31**	⇑P		**PKPdf**		**09 40 21.1**	**-0.3**	
	baz=126,SNR=11									
B13A	**Whitefish**	**126.18**	**30**	P		**PKPdf**		**09 40 21.8**	**+0.2**	
	baz=126,SNR=51									
A14A	**Double T Ranch**	**126.29**	**29**	⇓P		**PKPdf**		**09 40 21.6**	**-0.3**	
	baz=126,SNR=8.3									
BSMT	**Bassoo Peak**	**126.36**	**31**	*e*PKPdf		**PKPdf**		**09 40 21.7**	**-0.4**	
FFC	**Flin Flon**	**126.38**	**18**	*e*PKIKP		**PKPdf**		**09 40 21.2**	**-0.4**	
FFC				*e*				09 42 16.5		
FFC	**Flin Flon**	**126.38**	**18**	*e*PKPdf		**PKPdf**		**09 40 21.2**	**-0.4**	
FFC				*e*PP		**PP**		**09 42 16.5**	**-0.1**	
BLMT	**Blacktail Moun**	**126.47**	**31**	*e*PKPdf		**PKPdf**		**09 40 22.1**	**-0.2**	
C13A	**Hot Springs**	**126.58**	**31**	⇑P		**PKPdf**		**09 40 22.0**	**-0.4**	
	baz=127,SNR=31									
D12A	**Red Ives Fores**	**126.58**	**32**	⇓P		**PKPdf**		**09 40 21.3**	**-1.1**	
	baz=127									
A15A	**Johnson Ranch,**	**126.62**	**29**	⇓P		**PKPdf**		**09 40 22.0**	**-0.4**	
	baz=127									
MOD	**Modoc**	**126.68**	**40**	*e*PKPdf		**PKPdf**		**09 40 23.8**	**+1.0**	
JTMT	**Jette**	**126.68**	**31**	*e*PKPdf		**PKPdf**		**09 40 22.4**	**-0.3**	
YBMT	**Yellow Bay**	**126.75**	**30**	*e*PKPdf		**PKPdf**		**09 40 22.4**	**-0.3**	
YBMT				*e*PP		**PP**		**09 42 18.0**	**-1.6**	
B14A	**Marquette Ranc**	**

baz=130
G17A **Pierce Place,** 130.12 31 P PKPdf 09 40 29.7 +0.4
baz=130
B22A **Reddig Ranch S** 130.16 25 P PKPdf 09 40 29.6 +0.5
baz=130
RCTC **Rector, Farmer** 130.19 45 P PKPdf 09 40 29.6 +0.2
baz=130
F18A **Big Timber** 130.23 30 P PKPdf 09 40 29.7 +0.3
baz=130,SNR=21
H16A **Russell Place,** 130.28 32 P PKPdf 09 40 30.3 +0.6
baz=130
E19A **Rath Farm, Rou** 130.29 29 ⇓P PKPdf 09 40 29.2 -0.3
baz=130,SNR=13
GCMT **Greycliff** 130.34 30 *e*PKPdf PKPdf 09 40 29.7 0.0
GCMT *e*SKPbc **SKPbc** 09 43 48.4 0.0
B23A **Brockton** 130.45 24 P PKPdf 09 40 29.9 +0.2
baz=130
YMR **Madison River** 130.46 32 *e*PKPdf PKPdf 09 40 31.0 +1.0
A24A **Westby** 130.49 23 P PKPdf 09 40 29.9 +0.2
baz=130
ELK **Elko** 130.50 38 *e*PKPdf PKPdf 09 40 30.3 0.0
ELK *e*SKPbc **SKPab** 09 43 48.5 -0.7
E20A **Meyer Farm, Mu** 130.56 28 P PKPdf 09 40 29.5 -0.5
baz=130
C22A **Vida** 130.64 26 P PKPdf 09 40 30.4 +0.4
baz=131
F19A **Roth Farm, Mol** 130.65 29 ⇓P PKPdf 09 40 29.2 -1.0
baz=131,SNR=9.1
D21A **La Casta Ranch** 130.67 27 P PKPdf 09 40 30.6 +0.4
baz=131
YFT **Old Faithful** 130.67 32 *e*PKPdf PKPdf 09 40 32.5 +2.1
YFT *e*SKPbc **SKPab** 09 43 51.5 +1.7
I16A **Newdale** 130.71 33 P PKPdf 09 40 31.0 +0.5
baz=131
DGMT **Dagmar** 130.77 24 *e*PKPdf PKPdf 09 40 30.7 +0.5
DGMT **Dagmar** 130.77 24 P PKPdf 09 40 31.1 +0.8
baz=131
LKWY **Lake** 130.82 31 *e*PKIKP PKPdf 09 40 32.3 +1.5
LKWY **Lake** 130.82 31 *e*PKPdf PKPdf 09 40 32.3 +1.5
LKWY *e*SKPbc **SKPab** 09 43 51.2 +0.8
C23A **Lambert** 130.89 25 P PKPdf 09 40 31.4 +0.9
baz=131
D22A **Cohagen** 130.97 26 P PKPdf 09 40 31.6 +0.9
baz=131
IMW **Indian Meadow** 130.99 32 *e*PKPdf PKPdf 09 40 31.3 +0.1
IMW *e*SKPbc **SKPab** 09 43 51.8 +0.6
RLMT **Red Lodge** 131.01 30 *e*PKPdf PKPdf 09 40 29.5 -1.5
RLMT *e*SKPbc **SKPbc** 09 43 50.5 -0.4
E21A **Keefer Ranch,** 131.03 27 P PKPdf 09 40 30.9 +0.1
baz=131
E21A ⇓SKP 09 43 50.6
baz=131,SNR=6.7
ISA **Isabella** 131.04 46 *e*PKIKP PKPdf 09 40 31.9 +0.7
ISA **Isabella** 131.04 46 *e*PKPdf PKPdf 09 40 31.9 +0.7
ISA *e*SKPbc **SKPab** 09 43 51.3 -0.1
ISA **Isabella** 131.04 46 P PKPdf 09 40 31.7 +0.4
baz=131
DCID1 **Drake Creek** 131.06 33 *e*PKPdf PKPdf 09 40 32.7 +1.5
DCID1 *e*SKPbc **SKPab** 09 43 52.1 +0.7
RRI2 **Red Ridge** 131.15 33 *e*PKPdf PKPdf 09 40 32.0 +0.5
RRI2 *e*SKPbc **SKPab** 09 43 52.0 +0.1
MOOW **Moose Ponds** 131.19 32 *e*PKPdf PKPdf 09 40 32.0 +0.5
MOOW *e*SKPbc **SKPab** 09 43 52.3 +0.3
TPAW **Teton Pass** 131.26 33 *e*PKPdf PKPdf 09 40 30.6 -1.1
TPAW *e*SKPbc **SKPab** 09 43 52.2 -0.1
HVU **Hansel Valley** 131.35 36 *e*PKIKP PKPdf 09 40 32.1 +0.4
HVU **Hansel Valley** 131.35 36 *e*PKPdf PKPdf 09 40 32.1 +0.4
HVU *e*SKPbc **SKPab** 09 43 52.9 +0.3
LOHW **Long Hollow** 131.36 32 *e*PKPdf PKPdf 09 40 32.0 +0.3
LOHW *e*SKPbc **SKPab** 09 43 52.9 +0.2
D23A **Lindsay** 131.37 26 P PKPdf 09 40 32.1 +0.6
baz=131
SNOW **Snow King Moun** 131.38 33 *e*PKPpre PKPpre 09 40 19.3
SNOW *e*PKPdf **PKPdf** 09 40 31.9 0.0
SNOW *e*SKPbc **SKPab** 09 43 53.0 +0.2
REDW **Red Top Meadow** 131.40 33 *e*PKPdf PKPdf 09 40 31.8 0.0
REDW *e*SKPbc **SKPab** 09 43 53.4 +0.5
C24A **Savage** 131.42 25 P PKPdf 09 40 32.1 +0.6
baz=131
C24A ⇑SKP 09 43 51.8
baz=131,SNR=12
H19A **Powell** 131.47 30 P PKPdf 09 40 32.3 +0.5
baz=131,SNR=18
MPMC **Manual Prospec** 131.55 45 P PKPdf 09 40 33.0 +0.6
baz=132
E22A **Miles City** 131.61 27 P PKPdf 09 40 32.1 +0.2
baz=132
E22A ⇑SKP 09 43 52.5
baz=132,SNR=8.4
R11A **Troy Canyon, C** 131.63 41 P PKPdf 09 40 33.1 +0.7
baz=132
EDW2 **Edwards Air Fo** 131.77 46 P PKPdf 09 40 33.5 +0.9
baz=132
FURC **Furnace Creek,** 131.78 44 P PKPdf 09 40 33.0 +0.6
baz=132
D24A **Glendive** 131.79 25 P PKPdf 09 40 33.0 +0.7
baz=132
D24A ⇑SKP 09 43 53.3
baz=132,SNR=12
E23A **Ismay** 131.85 26 P PKPdf 09 40 32.6 +0.3
baz=132
E23A SKP 09 43 54.3
baz=132,SNR=6.7
I19A **Meeteetse** 131.91 31 P PKPdf 09 40 32.8 0.0
baz=132,SNR=6.7
G21A **Lodge Grass** 131.94 29 P PKPdf 09 40 33.3 +0.6
baz=132,SNR=9.8
PASC **Pasadena Art C** 131.96 47 *e*PKPdf PKPdf 09 40 33.8 +0.9
PASC *e*SKPbc **SKPab** 09 43 54.9 -0.4
H20A **Greybull** 132.09 30 P PKPdf 09 40 33.2 +0.2
baz=132,SNR=24
ULM **Lac du Bonnet** 132.10 16 PKP PKPdf 09 40 32.3 -0.4
ULM SKPbc **SKPbc** 09 43 53.0 -1.4
ULM SKP 09 44 03.5
ULM **Lac du Bonnet** 132.10 16 PKP PKPdf 09 40 32.3 -0.4
comp=Z,42nm,0.7s,baz=343,slow=3.4,SNR=40
ULM SKPbc **SKPbc** 09 43 53.0 -1.4
comp=Z,13nm,0.6s,baz=334,slow=4.5,SNR=9.0
ULM SKP 09 44 03.5
comp=Z,16nm,0.8s,baz=172,slow=2.2,SNR=5.3
HWUT **Hardware Ranch** 132.16 35 *e*PKPdf PKPdf 09 40 33.5 +0.1
HWUT *e*SKPbc **SKPbc** 09 43 55.6 +0.5
E24A **Baker** 132.24 25 P PKPdf 09 40 33.4 +0.3
baz=132
E24A SKP 09 43 55.7
baz=132,SNR=6.6
DUG **Dugway** 132.31 37 *e*PKIKP PKPdf 09 40 33.3 -0.3
DUG **Dugway** 132.31 37 *e*PKPdf PKPdf 09 40 33.3 -0.3
DUG *e*SKPbc **SKPab** 09 43 56.7 0.0
DUG **Dugway** 132.31 37 P PKPdf 09 40 34.1 +0.6
baz=132
BFSC **Mount Baldy Ra** 132.31 47 P PKPdf 09 40 34.1 +0.4
baz=132
BFSC ⇑SKP 09 43 55.7
baz=132,SNR=5.7
G22A **Birney** 132.38 28 P PKPdf 09 40 33.8 +0.3
baz=132
G22A ⇓SKP 09 43 56.1
baz=132,SNR=14
F23A **Volborg** 132.41 27 P PKPdf 09 40 33.5 0.0
baz=132
F23A SKP 09 43 55.4
baz=132,SNR=12
GSC **Goldstone** 132.41 45 *e*PKIKP PKPdf 09 40 34.3 +0.5
GSC **Goldstone** 132.41 45 *e*PKPdf PKPdf 09 40 34.3 +0.5
GSC *e*SKPbc **SKPab** 09 43 56.8 -0.5
GSC **Goldstone** 132.41 45 P PKPdf 09 40 34.2 +0.3
baz=132
I20A **Worland** 132.42 30 P PKPdf 09 40 34.4 +0.7
baz=132,SNR=25
J19A **Crowheart** 132.42 32 P PKPdf 09 40 34.2 +0.4
baz=132
H21A **Big Horn, Sher** 132.46 29 P PKPdf 09 40 34.0 +0.2
baz=132,SNR=8.7
SHOC **Shoshone** 132.47 44 P PKPdf 09 40 34.3 +0.4
baz=132
RRX **Edison Barstow** 132.48 46 P PKPdf 09 40 34.4 +0.5
baz=132
BW06 **Boulder Array** 132.50 33 *e*PKPpre PKPpre 09 40 22.6
BW06 *e*PKPdf **PKPdf** 09 40 33.9 0.0
BW06 *e*SKPbc **SKPbc** 09 43 56.1 -0.3
PDAR **Pinedale Array** 132.50 33 PKPpre PKPpre 09 40 16.5
PDAR PKP **PKPdf** 09 40 33.2 -0.8
PDAR SKPbc **SKPbc** 09 43 55.8 -0.6
PDAR **Pinedale Array** 132.50 33 PKhKP PKPpre 09 40 16.5
comp=Z,0.9nm,0.7s,baz=241,slow=0.5,SNR=6.6
PDAR PKP **PKPdf** 09 40 33.2 -0.8
comp=Z,4.3nm,0.7s,baz=238,slow=0.5,SNR=6.5
PDAR SKPbc **SKPbc** 09 43 55.8 -0.6
comp=Z,13nm,1.1s,baz=294,slow=1.5,SNR=11
E25A **Miller Ranch,** 132.67 25 P PKPdf 09 40 34.1 +0.2
baz=133
F24A **Ekalaka** 132.74 26 P PKPdf 09 40 34.5 +0.3
baz=133
F24A SKP 09 43 57.4
baz=133,SNR=7.1
M17A **Scullys Gap (B** 132.75 35 P PKPdf 09 40 34.9 +0.4
baz=133
L18A **Fontenelle, Gr** 132.81 34 P PKPdf 09 40 34.8 +0.2
baz=133
G23A **Biddle** 132.81 27 P PKPdf 09 40 34.4 +0.1
baz=133
G23A SKP 09 43 57.4
baz=133,SNR=6.0
H22A **Clearmont** 132.82 29 P PKPdf 09 40 34.5 +0.1
baz=133
H22A SKP 09 43 57.7
baz=133,SNR=6.0
K19A **Absolon Red Bu** 132.84 32 P PKPdf 09 40 34.4 -0.2
baz=133
J20A **Shoshoni** 132.86 31 ⇑P PKPdf 09 40 34.2 -0.3
baz=133,SNR=15
J20A ⇑SKP 09 43 57.2
baz=133,SNR=7.4
JLU **Jordanelle** 132.87 36 *e*PKPdf PKPdf 09 40 34.7 0.0
JLU *e*SKPbc **SKPbc** 09 43 57.4 -0.4
I21A **Big Trails, Te** 132.93 30 ⇓P PKPdf 09 40 34.3 -0.4
baz=133,SNR=12
I21A ⇓SKP 09 43 57.0
baz=133,SNR=8.7
MURC **Murrieta** 132.95 48 ⇓SKP 09 43 58.4
baz=133,SNR=8.0
HEC **Hector,Ludlow** 132.98 46 ⇓SKP 09 43 59.2
baz=133,SNR=14
MDND **Maddock** 133.02 21 P PKPdf 09 40 34.7 +0.2
baz=133
L19A **Farson** 133.06 33 P PKPdf 09 40 35.1 0.0
baz=133
DAU **Daniels Canyon** 133.10 36 *e*PKIKP PKPdf 09 40 35.8 +0.5
DAU **Daniels Canyon** 133.10 36 *e*PKPdf PKPdf 09 40 35.8 +0.5
DAU *e*SKPbc **SKPbc** 09 43 59.3 +0.7
MPU **Maple Canyon** 133.13 37 *e*PKPdf PKPdf 09 40 35.5 +0.3
MPU *e*SKPbc **SKPbc** 09 43 59.2 +0.7
G24A **Alzada** 133.15 27 ⇑SKP 09 43 57.9
baz=133,SNR=6.3
J21A **Lysite** 133.19 31 P PKPdf 09 40 35.4 +0.2
baz=133,SNR=11
J21A ⇓SKP 09 43 58.1
baz=133,SNR=9.5
K20A **Yellowstone Ra** 133.22 32 P PKPdf 09 40 35.2 -0.1
baz=133
K20A ⇑SKP 09 43 58.6
baz=133,SNR=13
I22A **9 Mile Ranch,** 133.27 29 ⇓P PKPdf 09 40 35.0 -0.2
baz=133,SNR=10
I22A SKP 09 43 59.1
baz=133,SNR=8.9
ARUT **Antelope Range** 133.35 40 *e*PKIKP PKPdf 09 40 35.6 0.0
ARUT **Antelope Range** 133.35 40 *e*PKPdf PKPdf 09 40 35.6 0.0
ARUT *e*SKPbc **SKPab** 09 44 00.4 -1.0
109C **Camp Elliot, M** 133.35 48 P PKPdf 09 40 35.8 +0.2
baz=133
109C ⇑SKP 09 43 59.9
baz=133,SNR=6.7
GMRC **Granite Mounta** 133.48 45 ⇑SKP 09 44 00.8
baz=134,SNR=30
PFO **Pinyon Flat Ob** 133.49 47 PKPpre PKPpre 09 40 28.0
PFO PKP **PKPdf** 09 40 36.2 +0.2
PFO *e*PKPdf **PKiKP** 09 40 36.5 -0.7
PFO *e*SKPbc **SKPbc** 09 44 00.0 +0.1
PFO SKPbc **SKPbc** 09 44 00.7 +0.8
PFO **Pinyon Flat Ob** 133.49 47 PKhKP PKPpre 09 40 28.0
comp=Z,4.9nm,0.8s,baz=290,slow=4.1,SNR=8.8
PFO PKP **PKPdf** 09 40 36.2 +0.2
comp=Z,22nm,0.9s,baz=291,slow=2.6,SNR=24
PFO SKPbc **SKPbc** 09 44 00.7 +0.8
comp=Z,32nm,1.0s,baz=279,slow=2.2,SNR=16
PFO **Pinyon Flat Ob** 133.49 47 ⇓SKP 09 44 00.9
baz=134,SNR=19
CCUT **Cedar City** 133.53 41 *e*PKPdf PKPdf 09 40 37.8 +1.7
CCUT *e*SKPbc **SKPbc** 09 44 01.1 +1.0
H24A **Dirks Ranch, A** 133.54 27 ⇓SKP 09 43 59.6
baz=134,SNR=7.8
J22A **Midwest** 133.63 30 P PKPdf 09 40 35.5 -0.5
baz=134,SNR=24
J22A SKP 09 44 00.1
baz=134,SNR=14
BELC **Belle Mtn. Jos** 133.63 46 ⇑SKP 09 44 00.4
baz=134,SNR=15
L20A **Wamsutter** 133.68 32 P PKPdf 09 40 36.5 +0.3
baz=134
L20A ⇑SKP 09 44 00.3
baz=134,SNR=7.3
MVU **Marysvale** 133.71 39 *e*PKPdf PKPdf 09 40 36.2 -0.2
MVU *e*PP **PP** 09 43 04.0 -1.2
MVU *e*SKPbc **SKPbc** 09 44 01.7 +1.1
LDFC **Landfair** 133.71 45 *e*PKPdf PKPdf 09 40 37.7 +1.4
LDFC *e*SKPbc **SKPab** 09 44 01.9 -1.1
MSU **Marysvale** 133.72 39 *e*PKIKP PKPdf 09 40 36.4 0.0
MSU **Marysvale** 133.72 39 *e*PKPdf PKPdf 09 40 36.4 0.0
MSU *e*SKPbc **SKPbc** 09 44 01.4 +0.7
BAR **Barrett** 133.77 48 *e*PKPdf PKPdf 09 40 36.1 -0.3
BAR *e*PP **PP** 09 43 02.5 -3.2
BAR *e*SKPbc **SKPbc** 09 44 01.7 +0.9
K21A **Alcova** 133.81 31 ⇑P PKPdf 09 40 35.9 -0.5
baz=134,SNR=6.3
K21A SKP 09 44 01.1
baz=134,SNR=11
AGMN **Agassiz Nation** 133.85 18 *e*PKPdf PKPdf 09 40 34.8 -1.2
MONP **Monument Peak** 133.86 48 P PKPdf 09 40 36.7 -0.1
baz=134
MONP ⇓SKP 09 44 02.1
baz=134,SNR=26
Q16A **Castle Valley** 134.09 38 SKP 09 44 03.1
baz=134,SNR=5.7
M20A **Sweetwater, Wa** 134.12 33 P PKPdf 09 40 37.2 +0.1
baz=134
M20A SKP 09 44 02.6
baz=134,SNR=5.8
IRM **Iron Mountain** 134.16 46 SKP 09 44 03.5
baz=134,SNR=18
K22A **Casper** 134.16 31 P PKPdf 09 40 36.8 -0.2
baz=134,SNR=23
K22A SKP 09 44 02.0
baz=134,SNR=9.2
PLCA **Paso Flores** 134.19 187 PKPpre PKPpre 09 40 31.2
PLCA PKP **PKiKP** 09 40 38.2 -0.2
PLCA SKPbc **SKPbc** 09 44 00.9 -1.0
PLCA **Paso Flores** 134.19 187 PKhKP PKPpre 09 40 31.2
comp=Z,1.9nm,0.8s,baz=29,slow=12,SNR=2.9
PLCA PKP **PKiKP** 09 40 38.2 -0.2
comp=Z,3.8nm,0.9s,baz=40,slow=1.2,SNR=4.1
PLCA SKPbc **SKPbc** 09 44 00.9 -1.0
comp=Z,11nm,0.9s,baz=185,slow=5.8,SNR=8.2
I24A **Kuemmerle Ranc** 134.19 28 P PKPdf 09 40 36.8 -0.2
baz=134
BC3 **Big Chuckawall** 134.20 46 P PKPdf 09 40 38.7 +1.4
baz=134
BC3 SKP 09 44 03.4
baz=134,SNR=17
DVTC **Desert V Tower** 134.21 48 P PKPdf 09 40 38.6 +1.3
baz=134
DVTC SKP 09 44 03.8
baz=134,SNR=13
L21A **Rawlins** 134.22 32 ⇓P PKPdf 09 40 37.0 -0.3
baz=134,SNR=8.3
L21A SKP 09 44 02.4
baz=134,SNR=6.8
RSSD **Black Hills** 134.26 27 *e*PKIKP PKPdf 09 40 37.6 +0.4
RSSD **Black Hills** 134.26 27 *e*PKPdf PKPdf 09 40 37.5 +0.4
SRU **San Rafael** 134.36 37 P PKPdf 09 40 37.4 -0.1
baz=134
SRU SKP 09 44 03.4
baz=134,SNR=6.7
O19A **Miners Draw (B** 134.41 35 P PKPdf 09 40 37.7 +0.2
baz=134
M21A **Separation Pea** 134.48 32 P PKPdf 09 40 37.6 -0.1
baz=134
M21A SKP 09 44 03.4
baz=134,SNR=8.6
N20A **Spence Gulch,** 134.53 34 P PKPdf 09 40 38.1 +0.2
baz=134
N20A SKP 09 44 04.3
baz=134,SNR=8.4
K23A **Bowen Ranch, D** 134.54 30 P PKPdf 09 40 37.5 -0.2
baz=134,SNR=6.0
K23A SKP 09 44 03.0
baz=134,SNR=5.7
W13A **Hualapai Mount** 134.55 44 ⇑SKP 09 44 04.2
baz=134,SNR=8.1
J24A **Dixon Ranch, L** 134.57 28 P PKPdf 09 40 37.6 -0.1
baz=134,SNR=13
PDMCI **Parker Dam,Lak** 134.80 45 ⇑SKP 09 44 04.5
baz=135,SNR=9.9
Y12C **Blythe** 134.82 46 SKP 09 44 05.8
baz=135,SNR=8.6
U15A **North Rim** 134.88 41 ⇓SKP 09 44 05.7
baz=135,SNR=11
P19A **Cripple Cowboy** 134.93 35 SKP 09 44 05.6
baz=135,SNR=6.3
GLA **Glamis** 134.95 47 *e*PKIKP PKPdf 09 40 39.2 +0.6
GLA **Glamis** 134.95 47 *e*PKPdf PKPdf 09 40 39.2 +0.6
GLA *e*SKPbc **SKPbc** 09 44 05.6 +1.0
GLA **Glamis** 134.95 47 P PKPdf 09 40 39.1 +0.6
baz=135
GLA ⇓SKP 09 44 04.9
baz=135,SNR=10
K24A **Anderson Ranch** 134.96 29 ⇑P PKPdf 09 40 38.2 -0.3
baz=135,SNR=7.8
L23A **Garrett** 134.97 30 P PKPdf 09 40 38.3 -0.4
baz=135,SNR=9.2
L23A SKP 09 44 04.4
baz=135,SNR=12
N21A **Black Mountain** 134.99 33 P PKPdf 09 40 38.7 0.0
baz=135
N21A SKP 09 44 05.5
baz=135,SNR=9.0
O20A **White River Ci** 135.02 34 P PKPdf 09 40 39.3 +0.5
baz=135
O20A ⇓SKP 09 44 05.2
baz=135,SNR=6.7
EYMN **Ely** 135.36 14 *e*PKPdf PKPdf 09 40 38.5 -0.4
P20A **De Beque** 135.36 35 P PKPdf 09 40 39.2 -0.2
baz=135
P20A SKP 09 44 06.2
baz=135,SNR=10
O21A **Pagoda** 135.39 34 P PKPdf 09 40 39.7 +0.2
baz=135
L24A **Wheatland** 135.41 30 P PKPdf 09 40 39.4 0.0
baz=135
M23A **Laramie** 135.43 31 ⇓SKP 09 44 06.5
baz=135,SNR=6.1
N22A **Wattenberg Ran** 135.53 32 P PKPdf 09 40 40.3 +0.5
baz=136
N22A SKP 09 44 07.1
baz=136,SNR=5.7
N23A **Red Feather La** 135.73 32 P PKPdf 09 40 40.6 +0.5
baz=136,SNR=8.8
Y14A **Wickenburg** 135.79 45 SKP 09 44 08.6
baz=136,SNR=11
PV04 **Paradox Valley** 135.79 37 *e*PKPdf PKPdf 09 40 40.6 +0.4
PV04 *e*SKPbc **SKPbc** 09 44 08.1 +0.9
M24A **Cheyenne** 135.89 30 P PKPdf 09 40 40.6 +0.3
baz=136,SNR=8.8
WUAZ **Wupatki** 136.02 42 *e*PKPdf PKPdf 09 40 41.2 +0.6
WUAZ *e*SKPbc **SKPbc** 09 44 08.4 +0.4
PV01 **Paradox Valley** 136.16 37 *e*PKPdf PKPdf 09 40 41.3 +0.3
R20A **Redvale** 136.24 36 PKiKP **PKiKP** 09 40 42.2 -0.6
baz=136
R20A SKP 09 44 09.7
baz=136,SNR=6.5
Q21A **Lamborn Mesa,** 136.28 35 PKiKP **PKiKP** 09 40 42.1 -0.7
baz=136
Q21A SKP 09 44 10.0
baz=136,SNR=7.4
S20A **Disappointment** 136.49 37 PKiKP **PKPdf** 09 40 42.4 +0.7
baz=136
S20A ⇑SKP 09 44 10.3
baz=136,SNR=5.2
X16A **Lo Mia Camp, P** 136.60 43 PKiKP **PKiKP** 09 40 42.8 -0.8
baz=137
X16A SKP 09 44 11.7
baz=137,SNR=8.6
ISCO **Idaho Springs** 136.69 33 *e*PKIKP PKPdf 09 40 41.8 -0.2
ISCO **Idaho Springs** 136.69 33 *e*PKPdf PKPdf 09 40 41.8 -0.2
CAM4 **Nova Friburgo** 136.82 230 ⇑*i*P PKPdf 09 40 41.5 -1.2
CAM4 *i* 09 40 43.2
CAM4 *i* 09 40 49.0
CAM4 *i* 09 40 56.4
CAM4 *i* 09 41 03.5
CAM4 *i* 09 41 07.4
CAM4 *i* 09 41 18.6
CAM4 *i* 09 41 30.3
S21A **Coal Bank Pass** 136.94 37 PKiKP **PKPdf** 09 40 43.5 +0.9
baz=137
S21A SKP 09 44 12.2
baz=137,SNR=7.5
ECSD **EROS Data Cent** 137.63 21 *e*PKPdf PKPdf 09 40 42.9 -0.3
ECSD *e*SKPbc **SKPbc** 09 44 12.3 0.0
COWI **Conover** 137.64 13 *e*PKPdf PKPdf 09 40 42.9 -0.3
COWI *e*SKPbc **SKPbc** 09 44 12.1 -0.1
RCBR **Riachuelo** 137.68 256 PKP PKPdf 09 40 45.0 +0.8
RCBR **Riachuelo** 137.68 256 PKP PKPdf 09 40 45.0 +0.8
comp=Z,11nm,0.9s,baz=23,slow=3.1,SNR=4.1
PQI **Presque Isle** 137.71 351 *e*PKPdf PKPdf 09 40 42.8 -0.5
O27A **Beecher Island** 138.02 30 ⇑PKiKP PKPdf 09 40 44.2 0.0
baz=138
P26A **Davis Ranch, A** 138.06 31 ⇑PKiKP PKPdf 09 40 44.7 +0.3
baz=138
Q25A **Bedland, Calha** 138.07 32 ⇑PKiKP PKPdf 09 40 44.9 +0.5
baz=138
R24A **Sanders Place,** 138.09 34 ⇑PKiKP PKPdf 09 40 44.7 +0.2
baz=138
N28A **Pribbenno Ranch** 138.09 28 ⇑PKiKP PKPdf 09 40 44.7 +0.4
baz=138
W20A **Ramah** 138.13 40 ⇓PKiKP PKiKP 09 40 46.1 -0.6
baz=138
TUC **Tucson** 138.24 45 *e*PKIKP PKPdf 09 40 45.4 +0.6
TUC **Tucson** 138.24 45 *e*PKPdf PKPdf 09 40 45.4 +0.6
TUC *e*SKPab **SKPab** 09 44 24.2 +1.2
Z20A **Nine Sixteen R** 139.29 43 ⇑PKiKP PKiKP 09 40 48.4 -0.7
baz=139
Y21A **Point of Rocks** 139.35 41 ⇓PKiKP PKiKP 09 40 48.5 -0.8
baz=139
S26A **Kim** 139.43 33 ⇓PKiKP PKPdf 09 40 47.8 +1.0
baz=139
LAZ **Ladron** 139.45 40 *e*PKPdf PKPdf 09 40 47.2 +0.1
LAZ *e*PP **PP** 09 43 41.5 +0.3
LAZ *e*SKPbc **SKPbc** 09 44 19.3 +1.3
X22A **Bernardo** 139.47 40 ⇑PKiKP PKiKP 09 40 48.3 -1.1
baz=139
ANMO **Albuquerque** 139.53 39 PKPpre PKPpre 09 40 41.0
ANMO *e*PKPdf **PKPdf** 09 40 47.3 0.0
ANMO SKPbc **SKPbc** 09 44 18.4 +0.2
ANMO *e*SKPdf **SKPdf** 09 44 18.5 +1.0
ANMO **Albuquerque** 139.53 39 PKhKP PKPpre 09 40 41.0
comp=Z,2.9nm,0.5s,baz=329,slow=3.8,SNR=25
ANMO PKP **PKPdf** 09 40 47.2 0.0
comp=Z,22nm,0.9s,baz=212,slow=0.8,SNR=22
ANMO SKPbc **SKPbc** 09 44 18.4 +0.2
comp=Z,12nm,0.9s,baz=270,slow=4.3,SNR=10
120A **U Bar Ranch, L** 139.60 43 ⇑PKiKP PKiKP 09 40 48.7 -1.0
baz=140
SPB **Sao Paulo** 139.62 224 *e*PKPdf PKPdf 09 40 48.3 +0.9
T26A **Comanche Natio** 139.68 34 ⇓PKiKP PKPdf 09 40 48.1 +0.7
baz=140
GLMI **Grayling** 139.70 8 *e*PKPdf PKPdf 09 40 38.7 -8.2
GLMI *e*SKPdf **SKPbc** 09 44 17.8 -0.3
V24A **Rampart Ranch,** 139.73 37 ⇑PKiKP PKiKP 09 40 49.1 -0.9
baz=140
Q29A **Oakley** 139.76 30 ⇑PKiKP PKPdf 09 40 48.0 +0.6
baz=140
U25A **Circle Dot Ran** 139.77 35 ⇑PKiKP PKPdf 09 40 48.8 +1.2
baz=140
Y22D **IRIS PASSCAL I** 139.80 40 ⇑PKiKP PKiKP 09 40 49.3 -0.8
baz=140
LPM **Los Pinos Moun** 139.83 40 *e*PKPdf PKPdf 09 40 48.8 +1.0
Y22A **Socorro** 139.86 40 ⇓PKiKP PKPdf 09 40 49.0 +1.2
baz=140
BNM **Barren Site** 139.94 40 *e*PKPdf PKPdf 09 40 48.4 +0.3
BNM *e*SKPdf **SKPbc** 09 44 20.1 +0.8
SADO **Sadowa** 140.27 2 PKPpre PKPpre 09 40 40.6
SADO PKP **PKPdf** 09 40 47.9 -0.1
SADO SKP 09 44 16.9
SADO **Sadowa** 140.27 2 PKhKP PKPpre 09 40 40.6
comp=Z,12nm,0.7s,baz=307,slow=2.3,SNR=15
SADO PKP **PKPdf** 09 40 47.9 -0.1
comp=Z,31nm,0.8s,baz=296,slow=2.4,SNR=19

SADO SKP 09 44 16.9
comp=Z,4.4nm,0.7s,baz=287,slow=4.2,SNR=3.7
JFWS Jewell Farm 140.37 15 *e*PKIKP **PKPdf** **09 40 47.6 -0.6**
JFWS *e* 09 43 44.7
JFWS Jewell Farm 140.37 15 *e*PKPdf **PKPdf** **09 40 47.6 -0.6**
JFWS *e*PP **PP** **09 43 44.7 -1.0**
JFWS *e*SKPdf **SKPdf** **09 44 18.5 0.0**
SCIA State Center 140.41 19 *e*PKPdf **PKPdf** **09 40 47.9 -0.5**
SCIA *e*SKPdf **SKPbc** **09 44 19.7 -0.4**
LONY Lake Ozonia 140.42 357 *e*PKPdf PKPdf 09 40 40.1 -8.1
LONY *e*PP **PP** **09 43 45.9 0.0**
LONY *e*SKPdf **SKPdf** **09 44 19.1 +0.6**
MDV Middlebury 140.95 356 *e*PKPdf **SKPdf** **09 40 49.4 +0.2**
KSU1 Kansas State U 141.59 25 *e*PKPdf PKPdf 09 40 45.0 -5.6
TRY Troy 142.25 356 *e*PKPpre PKPpre 09 40 43.9
HRV Adam Dziewonsk 142.28 354 *e*PKIKP **PKPdf** **09 40 48.2 -3.5**
HRV Adam Dziewonsk 142.28 354 *e*PKPpre PKPpre 09 40 48.1
MNTX Cornudas Mount 142.30 42 *e*PKPpre PKPpre 09 40 47.1
MNTX *e*PKPdf **PKPdf** **09 40 52.2 +0.1**
MNTX *e*SKPbc **SKPbc** **09 44 25.5 +0.2**
AMTX Amarillo 142.41 34 *e*PKPpre PKPpre 09 40 46.5
GDL2 Guadalupe Moun 142.64 40 *e*PKPpre PKPpre 09 40 48.4
CFAA Coronel Fontan 142.74 192 PKPpre PKPpre 09 40 48.1
CFAA PKP **PKPdf** **09 40 53.2 +0.3**
CFAA Coronel Fontan 142.74 192 PKhKP PKPpre 09 40 48.1
comp=Z,1.3nm,0.6s,baz=190,slow=2.3,SNR=19
CFAA PKP **PKPdf** **09 40 53.2 +0.3**
comp=Z,2.0nm,0.8s,baz=177,slow=1.8,SNR=22
ERPA Erie 142.87 4 PKPdf **PKPdf** **09 40 48.8 -4.0**
BINY Binghamton 142.88 359 *e*PKPpre PKPpre 09 40 48.0
BINY *e*PP **PP** **09 44 00.4 -0.5**
CLNB Carlsbad 142.91 40 *e*PKPpre PKPpre 09 40 50.0
ALLY Alegheny Colle 143.33 4 *e*PKPpre PKPpre 09 40 49.5
CPUP Villa Florida 143.59 210 PKP PKPbc 09 40 51.8 -0.1
CPUP SKPbc **SKPbc** **09 44 26.8 -1.7**
CPUP Villa Florida 143.59 210 PKP PKPbc 09 40 51.8 -0.1
comp=Z,14nm,0.8s,baz=125,slow=2.9,SNR=32
CPUP SKPbc **SKPbc** **09 44 26.8 -1.7**
comp=Z,4.3nm,0.9s,baz=64,slow=5.5,SNR=3.2
WMOK Wichita Mounta 144.09 32 *e*PKIKP **PKPab** **09 40 52.5 -0.2**
WMOK Wichita Mounta 144.09 32 *e*PKPdf **PKPab** **09 40 52.5 -0.2**
CPNY Central Park 144.20 356 *e*PKPdf **PKPab** **09 40 52.9 0.0**
SLM Saint Louis 144.33 18 *e*PKIKP **PKPab** **09 40 53.0 -0.4**
SLM Saint Louis 144.33 18 *e*PKPdf **PKPab** **09 40 53.0 -0.4**
SLM *e*SKPbc **SKPbc** **09 44 29.5 -0.4**
ACSO Alum Creek Sta 144.43 8 *e*PKPdf **PKPab** **09 40 53.1 -0.7**
BLO Bloomington 144.82 13 *e*PKIKP **PKPab** **09 40 54.7 -0.5**
BLO Bloomington 144.82 13 *e*PKPdf **PKPab** **09 40 54.7 -0.5**
BLO *e*SKPbc **SKPbc** **09 44 30.2 -0.8**
BDFB Brasilia 144.84 234 PKP **PKPdf** **09 40 56.7 -0.4**
BDFB Brasilia 144.84 234 PKP **PKPdf** **09 40 56.7 -0.4**
comp=Z,36nm,0.8s,baz=124,slow=2.9,SNR=49
OLIL Olney 144.85 15 *e*PKPdf **PKPab** **09 40 54.9 -0.4**
TXAR Lajitas Array 144.93 43 PKP **PKPdf** **09 40 56.7 -0.2**
TXAR SKPbc **SKPbc** **09 44 30.2 -1.5**
TXAR Lajitas Array 144.93 43 PKP **PKPdf** **09 40 56.7 -0.2**
comp=Z,166nm,0.7s,baz=300,slow=1.8,SNR=1269
TXAR SKPbc **SKPbc** **09 44 30.2 -1.5**
comp=Z,7.7nm,0.9s,baz=192,slow=1.2,SNR=4.0
SIUC Southern Illin 145.49 17 *e*PKPdf **PKPdf** **09 40 57.2 -0.3**
SDMD Soldier's Deli 145.68 360 *e*PKPbc **PKPdf** **09 40 57.4 -0.3**
USIN University of 145.69 15 *e*PKPbc **PKPdf** **09 40 57.7 0.0**
LCO Las Campanas 145.73 190 *e*PKPbc **PKPab** **09 40 59.4 +0.2**
PARMO Parma 146.29 19 *e*PKPdf **PKPdf** **09 40 59.0 +0.2**
PARMO *e*PKPbc **PKPbc** **09 40 59.9 -0.1**
RFTA Plano 146.52 31 *e*PKPbc **PKPbc** **09 41 00.9 +0.2**
PVMO Portageville 146.54 19 *e*PKPbc **PKPbc** **09 41 00.9 +0.2**
JCT Junction City 146.67 38 *e*PKP2 **PKPdf** **09 41 00.0 +0.3**
JCT Junction City 146.67 38 *e*PKPdf **PKPdf** **09 41 00.0 +0.3**
JCT *e*PKPbc **PKPbc** **09 41 01.7 +0.3**
GLAT Glass 146.80 18 *e*PKPdf **PKPdf** **09 40 59.6 -0.1**
GLAT *e*PKPbc **PKPbc** **09 41 01.6 +0.1**
GNAR Gosnell 146.84 20 *e*PKPdf **PKPdf** **09 41 00.2 +0.5**
GNAR *e*PKPbc **PKPbc** **09 41 02.1 +0.5**
UTMT University of 146.87 18 *e*PKPdf **PKPdf** **09 40 59.8 0.0**
UTMT *e*PKPbc **PKPbc** **09 41 01.6 -0.1**
CBN Corbin 146.88 1 *e*PKPdf **PKPdf** **09 40 59.3 -0.5**
CBN *e*PKPbc **PKPbc** **09 41 01.3 -0.3**
HBAR Harrisburg 146.99 21 *e*PKPdf **PKPdf** **09 41 00.6 +0.5**
HBAR *e*PKPbc **PKPbc** **09 41 02.2 +0.1**
UALR University of 147.04 24 *e*PKPdf **PKPdf** **09 40 59.7 -0.4**
UALR *e*PKPbc **PKPbc** **09 41 01.8 -0.4**
HALT Halls 147.11 19 *e*PKPdf **PKPdf** **09 41 00.3 0.0**
HALT *e*PKPbc **PKPbc** **09 41 02.4 0.0**
WVT Waverly 147.37 17 *e*PKIKP **PKPdf** **09 41 00.0 -0.6**
WVT *e* 09 41 02.8
WVT *e* 09 41 04.8
WVT Waverly 147.37 17 *e*PKPdf **PKPdf** **09 41 00.0 -0.6**
WVT *e*PKPbc **PKPbc** **09 41 02.8 -0.3**
WVT *e*PKPab **PKPab** **09 41 04.8 -0.2**
JSRW J. Sargeant Re 147.38 1 *e*PKPdf **PKPdf** **09 41 01.0 +0.4**
JSRW *e*PKPbc **PKPbc** **09 41 02.9 -0.1**
BLA Blacksburg 147.71 5 *e*PKIKP **PKPdf** **09 41 00.8 -0.5**
BLA *e* 09 41 03.6
BLA *e* 09 41 06.2
BLA Blacksburg 147.71 5 *e*PKPdf **PKPdf** **09 41 00.8 -0.5**
BLA *e*PKPbc **PKPbc** **09 41 03.6 -0.4**
BLA *e*PKPab **PKiKP** **09 41 06.2 +0.1**
TZTN Tazewell 147.95 10 *e*PKPdf **PKPdf** **09 41 00.2 -1.5**
TZTN *e*PKPbc **PKPbc** **09 41 04.0 -0.7**
TZTN *e*PKPab **PKiKP** **09 41 07.0 +0.4**
TKL Tuckaleechee C 148.78 11 PKP **PKPdf** **09 41 03.1 +0.1**
TKL PKPbc **PKPbc** **09 41 06.4 -0.5**
TKL Tuckaleechee C 148.78 11 PKP **PKPdf** **09 41 03.1 +0.1**
comp=Z,192nm,0.7s,baz=121,slow=2.6,SNR=36
TKL PKPbc **PKPbc** **09 41 06.4 -0.5**
baz=127,slow=2.6
ANIG Ahuacatlan 148.78 57 P **PKPbc** **09 41 08.2 +0.8**
CPCT Cooper Cave 148.83 12 *e*PKPdf **PKPdf** **09 41 03.1 0.0**
CPCT *e*PKPbc **PKPbc** **09 41 06.7 -0.3**
CPCT *e*PKPab **PKPab** **09 41 10.2 -0.6**
CJM Chamela 149.00 60 P **PKPbc** **09 41 08.3 +0.5**
ZAIG Zacatecas 149.52 52 P **PKPbc** **09 41 10.9 +1.4**
CNNC Cliffs of the 149.83 2 *e*PKPdf **PKPdf** **09 41 04.4 -0.3**
CNNC *e*PKPbc **PKPbc** **09 41 09.5 +0.1**
CNNC *e*PKPab **PKPab** **09 41 14.6 -0.2**
CNNC *e*SKPdf **SKPdf** **09 44 33.4 -0.4**
KVTX Kingsville 149.92 39 *e*PKPbc **PKPbc** **09 41 11.8 +1.9**
VBMS Vicksburg 150.01 24 *e*PKPbc **PKPbc** **09 41 10.3 +0.3**
VBMS *e*PKPab **PKPab** **09 41 16.3 +0.6**
BBSR BB Station 150.41 339 *e*PKPdf **PKPdf** **09 41 05.8 +0.1**
BBSR *e*PKPbc **PKPbc** **09 41 10.9 0.0**
BBSR *e*PKPab **PKPab** **09 41 18.0 +0.6**
LRAL Lakeview Retre 150.50 17 *e*PKPdf **PKPdf** **09 41 05.5 -0.3**
LRAL *e*PKPbc **PKPbc** **09 41 10.4 -0.7**
LRAL *e*PKPab **PKPab** **09 41 16.9 -0.8**
LNIG Linares 150.62 45 P **PKPbc** **09 41 11.6 -0.1**
MMIG Aquila 150.96 61 P **PKPbc** **09 41 12.7 +0.1**
LVC Limon Verde 151.53 196 *e*PKPdf **PKPdf** **09 41 09.3 +1.3**
LVC PKP **PKPdf** **09 41 09.8 +1.8**
LVC PKPbc **PKiKP** **09 41 15.5 +0.9**
LVC *e*PKPbc PKPab 09 41 15.9 -6.7
LVC Limon Verde 151.53 196 PKP **PKPdf** **09 41 09.8 +1.8**
comp=Z,9.5nm,0.9s,baz=278,slow=2.8,SNR=14
LVC PKPbc **PKiKP** **09 41 15.5 +0.9**
comp=Z,32nm,0.9s,baz=256,slow=1.6,SNR=19
NHSC New Hope 151.80 6 *e*PKPdf **PKPdf** **09 41 08.0 +0.2**
NHSC *e*PKPbc **PKPbc** **09 41 14.3 +0.2**
NHSC *e*PKPab **PKPab** **09 41 23.1 0.0**
BRAL Brewton 152.36 19 *e*PKPdf **PKPdf** **09 41 09.3 +0.6**
BRAL *e*PKPbc **PKiKP** **09 41 15.8 +0.1**
BRAL *e*PKPab **PKPab** **09 41 25.4 -0.1**
SIV San Ignacio 153.96 217 PKP **PKPdf** **09 41 11.5 0.0**
SIV PKPab **PKPab** **09 41 30.5 -2.3**
SIV San Ignacio 153.96 217 PKP **PKPdf** **09 41 11.5 0.0**
comp=Z,12nm,0.8s,baz=136,slow=2.7,SNR=57
SIV PKPab **PKPab** **09 41 30.5 -2.3**
comp=Z,13nm,0.8s,baz=113,slow=1.1,SNR=12
LPAZ La Paz 157.20 202 *e*PKPdf **PKPdf** **09 41 16.4 -0.1**
LPAZ PKP PKP 09 41 17.0
LPAZ PKPab **PKPab** **09 41 48.1 +0.9**
LPAZ La Paz 157.20 202 PKP **PKPdf** **09 41 17.0 +0.5**
comp=Z,11nm,0.9s,baz=83,slow=1.4,SNR=39
LPAZ PKPab **PKPab** **09 41 48.1 +0.9**
comp=Z,4.7nm,0.7s,baz=178,slow=6.5,SNR=7.0
SAML Samuel 160.57 225 *e*PKPdf **PKPdf** **09 41 19.7 0.0**
TEIG Tepich 161.20 35 PKP **PKPdf** **09 41 19.4 -0.8**
TEIG PKPab **PKPab** **09 42 03.8 0.0**
TEIG Tepich 161.20 35 PKP **PKPdf** **09 41 19.4 -0.8**
comp=Z,14nm,1.1s,baz=31,slow=8.2,SNR=4.0
TEIG PKPab **PKPab** **09 42 03.7 0.0**
comp=Z,27nm,0.8s,baz=223,slow=2.3,SNR=11
CELP Cerrillos 163.49 323 *e*PKPdf **PKPdf** **09 41 22.6 0.0**
CELP *e*PKPab **PKPab** **09 42 14.6 +0.7**
CRPR Cabo Rojo, PR 163.85 324 *e*PKPab **PKPab** **09 42 16.0 +0.6**
TGUH Tegucigalpa,Un 166.34 48 *e*PKPdf **PKPdf** **09 41 24.7 -0.4**
OTAV Otavalo 175.09 162 *e*PKPdf **PKPdf** **09 41 30.2 -0.3**
ROSC El Rosal 177.43 268 *e*PKPdf **PKPdf** **09 41 30.3 -0.5**
ROSC *e*PKPab PKPab 09 43 16.6 0.0
ROSC PKPab PKPab 09 43 16.7 +0.2
ROSC El Rosal 177.43 268 PKP **PKPdf** **09 41 30.4 -0.5**
comp=Z,14nm,0.9s,baz=82,slow=19,SNR=10
ROSC PKPab PKPab 09 43 16.7 +0.2
comp=Z,12nm,0.5s,baz=104,slow=16,SNR=4.5

CSEM ***20*** *09:32:42.6, 42.27N×13.49E, h10km, After ROM*
ROM 20 09:32:42.6±0.1, 42.27N×13.49E, h10km, MI1.6/4, 1D,
Error ellipse: s-maj=1.4km s-min=0.6km az=16.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAGN	**Fagnano**	**0.07**	**89**	Pg	Pg	09 32 45.3	+0.3
FAGN				Sg	Sg	09 32 47.0	+0.3
FAGN	**Fagnano**	**0.07**	**89**	Pg	Pg	09 32 45.3	+0.3
FAGN				Sg	Sg	09 32 47.0	+0.3
AQU	**L'Aquila**	**0.11**	**325**	Pg	Pg	09 32 45.9	+0.5
AQU				Sg	Sg	09 32 47.8	+0.4
AQU	**L'Aquila**	**0.11**	**325**	*i*P	Pg	09 32 45.8	+0.4
AQU	**L'Aquila**	**0.11**	**325**	Pg	Pg	09 32 45.9	+0.5
AQU				Sg	Sg	09 32 47.8	+0.4
FIAM	**Fiamignano**	**0.27**	**271**	Pg	Pg	09 32 48.8	+0.5
FIAM				Sg	Sb	09 32 53.4	-1.2
42nm,0.5s							
FIAM	**Fiamignano**	**0.27**	**271**	Pg	Pg	09 32 48.8	+0.5
FIAM				Sg	Sb	09 32 53.4	-1.2
42nm,0.5s							
VCEL	**Villa Celiera**	**0.29**	**64**	Pg	Pb	09 32 49.5	-0.7
VCEL				Sg	Sg	09 32 53.9	+1.1
96nm,1.0s							
VCEL	**Villa Celiera**	**0.29**	**64**	Pg	Pb	09 32 49.5	-0.7
VCEL				Sg	Sg	09 32 53.9	+1.1
96nm,1.0s							
INTR	**Introdacqua**	**0.40**	**129**	Pg	Pg	09 32 50.9	+0.2
INTR				Sg	Sg	09 32 57.1	+1.0
66nm,0.2s							
INTR	**Introdacqua**	**0.40**	**129**	Pg	Pg	09 32 50.9	+0.2
INTR				Sg	Sg	09 32 57.1	+1.0
66nm,0.2s							
LPEL	**Lama dei Pelig**	**0.56**	**113**	Pg	Pg	09 32 53.5	-0.2
LPEL				Sg	Sb	09 33 02.1	-0.7
52nm,0.3s							
LPEL	**Lama dei Pelig**	**0.56**	**113**	Pg	Pg	09 32 53.5	-0.2
LPEL				Sg	Sb	09 33 02.1	-0.7
52nm,0.3s							

MEX 20 09:35:09.0±0.7, 16.82N×94.93W, h109km±22km, MD3.6,
Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.55**	**227**	*e*P	Pn	09 35 34.8	-1.6
HUIG				*e*S	Sn	09 35 55.7	-1.4
TGIG		**1.73**	**91**	*e*P	Pn	09 35 38.2	-0.4
TGIG				*i* S	Sn	09 35 59.4	-1.9
PCIG		**1.98**	**124**	*e*P	Pn	09 35 41.3	-0.4
PCIG				*i* S	Sn	09 36 04.8	-1.9
CCIG	**Comitan**	**2.73**	**101**	*e*P	Pn	09 35 49.5	-2.2
CCIG				*i* S	Sn	09 36 22.7	-1.7

IDC ***20*** *09:37:04.5±0.8, 31.11S×176.77W, h0km, mb4.4/10,*
mb1 4.5/11, mb1mx4.2/23, mbtmp4.4/11, ML3.9/1, Error
ellipse: s-maj=27.2km s-min=18.3km az=66.0
NEIC ***20*** *09:37:06.0±0.7, 31.19S×176.84W, h10km, mb4.6/1, Error*
ellipse: s-maj=20.8km s-min=14.0km az=84.0
ISCJB ***20*** *09:37:09.5±0.9, 31.37S±0.05×177.3W±0.2, h33km,*
mb4.4/11, Error ellipse: s-maj=20.2km s-min=6.8km
az=10.6
ISC 20 09:37:10.3±0.7, 31.26S±0.06×177.1W±0.1, h35km, n45,
σ1s 32/50, mb4.5/11, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.12**	**341**	Pn	**Pn**	**09 37 41.7**	**-1.5**
RAO				Sn	**Sn**	**09 38 07.4**	**-0.8**
RAO	**Raoul Island**	**2.12**	**341**	Pn	**Pn**	**09 37 41.7**	**-1.5**
35nm,0.3s,baz=246,slow=20,SNR=2.2							
RAO				Sn	**Sn**	**09 38 07.4**	**-0.8**
398nm,0.3s,baz=168,slow=19,SNR=7.4							
URZ	**Urewera**	**8.43**	**213**	Pn	**Pn**	**09 39 08.9**	**-1.0**
URZ				Sn	**Sn**	**09 40 43.9**	**+0.1**
URZ	**Urewera**	**8.43**	**213**	Pn	**Pn**	**09 39 08.9**	**-1.0**
0.8nm,0.3s,baz=17,slow=11,SNR=9.2							
URZ				Sn	**Sn**	**09 40 43.9**	**+0.1**
4.7nm,0.3s,baz=177,slow=19,SNR=9.6							
BKZ	**Black Stump Fm**	**9.45**	**212**	PN	Pn	09 39 20.6	-3.3
BKZ				SN	**Sn**	**09 41 07.8**	**-1.2**
MRZ	**Mangatainoka R**	**11.08**	**210**	PN	**Pn**	**09 39 43.3**	**-2.9**
MRZ				SN	Sn	09 41 41.1	-7.7
RPZ	**Rata Peaks**	**15.55**	**214**	Pn	Pn	09 40 41.8	-5.0
RPZ				Sn	Sn	09 43 27.3	-11
RPZ	**Rata Peaks**	**15.55**	**214**	Pn	Pn	09 40 41.8	-5.0
2.4nm,0.3s,baz=43,slow=4.2,SNR=13							
RPZ				Sn	Sn	09 43 27.3	-11
0.4nm,0.3s,baz=29,slow=19,SNR=4.7							
JCZ	**Jackson Bay**	**16.95**	**217**	*e*PN	Pn	09 40 59.6	-5.1
CTA	**Charters Tower**	**34.68**	**280**	P	P	09 44 00.1	+3.4
CTA	**Charters Tower**	**34.68**	**280**	P	P	09 44 00.1	+3.4
1.2nm,0.3s,baz=100,slow=11,SNR=4.9							
STKA	**Stephens Creek**	**35.02**	**258**	P	**P**	**09 44 01.9**	**+2.3**
STKA	**Stephens Creek**	**35.02**	**258**	P	**P**	**09 44 01.9**	**+2.3**
7.9ns,baz=84,slow=6.4,SNR=6.3							
ASAR	**Alice Springs**	**43.81**	**267**	P	**P**	**09 45 14.1**	**+1.1**
ASAR				PcP	**PcP**	**09 46 60.0**	**+0.7**
ASAR	**Alice Springs**	**43.81**	**267**	P	**P**	**09 45 14.1**	**+1.1**
4.3nm,0.9s,baz=105,slow=7.7,SNR=24							
ASAR				PcP	**PcP**	**09 46 60.0**	**+0.7**
1.4nm,0.9s,baz=116,slow=4.6,SNR=3.7							
WRAB	**Tennant Creek**	**44.87**	**273**	*e*P	**P**	**09 45 21.9**	**+0.4**
9.1nm,1.1s							
WRA	**Warramunga Arr**	**44.88**	**273**	P	**P**	**09 45 22.0**	**+0.5**
WRA				PcP	**PcP**	**09 47 04.0**	**+1.1**
WRA	**Warramunga Arr**	**44.88**	**273**	P	**P**	**09 45 22.0**	**+0.5**
6.1nm,0.8s,baz=114,slow=7.7,SNR=32							
WRA				PcP	**PcP**	**09 47 04.0**	**+1.1**
1.3nm,0.9s,baz=111,slow=3.1,SNR=3.4							
FITZ	**Fitzroy Crossi**	**53.10**	**270**	P	**P**	**09 46 26.1**	**+1.5**
FITZ	**Fitzroy Crossi**	**53.10**	**270**	P	**P**	**09 46 26.1**	**+1.5**
6.8nm,1.2s,baz=125,slow=10,SNR=4.2							
QSPA	**South Pole Qui**	**58.85**	**180**	P	**P**	**09 47 06.6**	**+1.4**
QSPA	**South Pole Qui**	**58.85**	**180**	P	**P**	**09 47 06.6**	**+1.4**
6.2nm,1.2s,baz=36,slow=6.1,SNR=4.5							
MAW	**Mawson**	**71.76**	**200**	P	**P**	**09 48 30.4**	**+1.8**
MAW	**Mawson**	**71.76**	**200**	P	**P**	**09 48 30.4**	**+1.8**
1.1nm,0.3s,baz=137,slow=4.2,SNR=3.7							
SNAA	**Sanae**	**77.27**	**178**	P	**P**	**09 49 00.5**	**-0.1**
SNAA	**Sanae**	**77.27**	**178**	P	**P**	**09 49 00.5**	**-0.1**
0.6nm,0.7s,baz=195,slow=6.6,SNR=7.1							
USRK	**Ussuriysk Arra**	**88.29**	**326**	P	**P**	**09 49 58.8**	**+1.0**
2.6nm,0.8s,baz=108,slow=6.2,SNR=6.1							
CMAR	**Chiang Mai Arr**	**94.39**	**289**	P	**P**	**09 50 29.4**	**+2.5**
CMAR	**Chiang Mai Arr**	**94.39**	**289**	P	**P**	**09 50 29.4**	**+2.5**
0.9nm,0.5s,baz=180,slow=2.9,SNR=5.4							
KURK	**Kurchatov**	**122.18**	**313**	PKP	**PKPdf**	**09 56 00.3**	**-0.6**
KURBB	**Kurchatov Arra**	**122.22**	**313**	PKP	**PKPdf**	**09 56 00.3**	**-0.6**
0.1nm,0.2s,baz=85,slow=1.9,SNR=4.8							
KBZ	**Khabaz**	**146.21**	**303**	PKPbc	**PKPab**	**09 56 48.9**	**+1.4**
KBZ	**Khabaz**	**146.21**	**303**	PKPbc	**PKPab**	**09 56 48.9**	**+1.4**
2.1nm,0.7s,baz=98,slow=1.5,SNR=3.4							
FINES	**FINESS Array B**	**146.21**	**340**	PKPbc	**PKPdf**	**09 56 45.4**	**+0.3**
FINES	**FINESS Array B**	**146.21**	**340**	PKPbc	**PKPdf**	**09 56 45.4**	**+0.3**
6.1nm,0.8s,baz=94,slow=2.5,SNR=15							
HFS	**Hagfors**	**150.23**	**349**	PKPbc	**PKPbc**	**09 56 55.8**	**-1.1**
HFS	**Hagfors**	**150.23**	**349**	PKPbc	**PKPbc**	**09 56 55.8**	**-1.1**
4.1nm,0.8s,baz=216,slow=4.8,SNR=7.1							
AKASG	**Malin Array Be**	**152.44**	**322**	PKPbc	**PKPbc**	**09 57 00.2**	**-2.0**
AKASG				PKPab	**PKPab**	**09 57 11.5**	**-1.0**
AKASG	**Malin Array Be**	**152.44**	**322**	PKPbc	**PKPbc**	**09 57 00.2**	**-2.0**
0.3nm,0.3s,baz=52,slow=3.7,SNR=4.5							
AKASG				PKPab	**PKPab**	**09 57 11.5**	**-1.0**
0.4nm,0.4s,baz=44,slow=5.6,SNR=6.6							
BRTR	**Keskin Array B**	**153.66**	**297**	PKPab	**PKPab**	**09 57 17.7**	**-0.7**
BRTR	**Keskin Array B**	**153.66**	**297**	PKPab	**PKPab**	**09 57 17.7**	**-0.7**
0.5nm,0.7s,baz=134,slow=4.6,SNR=3.6							
GERES	**GERESS Array B**	**160.62**	**338**	PKPab	**PKPab**	**09 57 47.4**	**-0.5**
GERES	**GERESS Array B**	**160.62**	**338**	PKPab	**PKPab**	**09 57 47.4**	**-0.5**
0.2nm,0.5s,baz=55,slow=5.1,SNR=3.9							
TORD	**Torodi Ar. Bea**	**161.94**	**176**	PKPab	**PKPab**	**09 57 54.0**	**-0.2**
TORD	**Torodi Ar. Bea**	**161.94**	**176**	PKPab	**PKPab**	**09 57 54.0**	**-0.2**
1.3nm,1.1s,baz=176,slow=2.5,SNR=3.5							

IDC ***20*** *09:41:19.6±46.0, 43.12N×146.58E, h0km, mb3.8/4,*
mb1 3.9/4, mb1mx3.5/25, mbtmp3.8/4, Error ellipse:
s-maj=1025.0km s-min=79.6km az=156.0
ISCJB ***20*** *09:41:23.0±1.3, 42.76N±0.07×146.38E±0.08,*
h42km±10km, mb3.8/5, Error ellipse: s-maj=13.9km
s-min=7.2km az=149.9
JMA ***20*** *09:41:23.0±0.2, 42.76N×146.37E, h51km±3km, M3.3*
MOS ***20*** *09:41:33.7±1.1, 44.43N×145.35E, h33km, mb4.0/4, Error*
ellipse: s-maj=41.9km s-min=29.1km az=40.8
ISC 20 09:41:23.9±2.2, 42.77N±0.08×146.36E±0.07, h33km±6km,
n18, σ0s 80/25, mb3.9/5, 1D, Off southeast coast of
Hokkaido

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.75**	**323**	P	**Pn**	**09 41 37.6**	**-0.5**
NEM2				*e*S	**Sb**	**09 41 48.3**	**-0.2**
JAK	**Akkeshi**	**1.24**	**281**	P	**Pn**	**09 41 44.4**	**-0.5**
JAK				*e*S	**Sn**	**09 41 59.3**	**-1.2**
YUK	**Yuzh-Kuril'sk**	**1.32**	**344**	*d i*PN	**Pn**	**09 41 45.7**	**-0.3**
YUK				pmax	pmax		
comp=N,14nm,0.2s							
YUK				pmax	pmax		
comp=Z,110nm,0.2s							
YUK				pmax	pmax		
comp=E,12nm,0.1s							
JNK	**Nakash**	**1.45**	**305**	P	**Pn**	**09 41 47.0**	**-0.8**
JNK				*e*S	**Sn**	**09 42 04.3**	**-1.4**
JRA	**Rausu**	**1.48**	**323**	P	**Pn**	**09 41 48.2**	**+0.1**
JRA				*e*S	**Sn**	**09 42 06.3**	**0.0**
JOB	**Onbets**	**1.86**	**275**	*e*S	**Sn**	**09 42 15.7**	**0.0**
JAR	**Ashorobuto**	**1.97**	**286**	P	**Pn**	**09 41 54.9**	**0.0**
JAR				*e*S	**Sn**	**09 42 18.3**	**-0.1**
JTKR	**Abashiri--Toko**	**2.15**	**305**	P	**Pn**	**09 41 58.0**	**+0.6**
JTKR				*e*S	**Sn**	**09 42 24.9**	**+1.9**
JCH	**Churui**	**2.21**	**267**	P	**Pn**	**09 41 58.9**	**+0.6**
JCH				*e*S	**Sn**	**09 42 24.9**	**+0.5**
JMP	**Maruseppu**	**2.51**	**301**	P	**Pn**	**09 42 03.7**	**+1.3**
KUR	**Kuril'sk**	**2.70**	**23**	*e*PN	**Pn**	**09 42 05.4**	**+0.5**
KUR				*e*S	**Sn**	**09 42 35.8**	**-0.6**
KUR				pmax	pmax		
comp=Z,19nm,0.1s							
KUR				smax	smax		
comp=E,22nm,0.5s							
KUR				smax	smax		
comp=N,35nm,0.5s							
JNBK	**Urakawa-nobuka**	**2.71**	**261**	P	**Pn**	**09 42 04.4**	**-0.7**
SONM	**Songino Array**	**28.33**	**294**	P	**P**	**09 47 15.1**	**+0.5**
comp=N,1.1nm,0.6s,baz=95,slow=7.5,SNR=5.4							
MKAR	**Makanchi Array**	**44.53**	**298**	P	**P**	**09 49 32.8**	**+0.5**
MKAR				pmax	pmax		
comp=Z,1.0nm,0.8s							
MKAR	**Makanchi Array**	**44.53**	**298**	P	**P**	**09 49 32.8**	**+0.5**
comp=Z,0.6nm,0.8s,baz=81,slow=9.4,SNR=5.1							
KURK	**Kurchatov**	**45.60**	**305**	P	P	09 49 41.2	+0.6
KURK				pmax	pmax		
comp=Z,1.0nm,0.6s							
KURBB	**Kurchatov Arra**	**45.69**	**304**	P	**P**	**09 49 41.2**	**-0.1**
comp=Z,0.9nm,0.6s,baz=70,slow=9.0,SNR=7.8							
FINES	**FINESS Array B**	**65.48**	**333**	P	**P**	**09 52 02.5**	**-0.8**
comp=Z,2.2nm,0.8s,baz=59,slow=8.4,SNR=5.1							

IDC ***20*** *09:51:45.7±1.1, 4.65N×96.36E, h0km, mb3.9/9,*
mb1 4.0/10, mb1mx3.8/27, mbtmp3.9/10, ML4.0/1, Error
ellipse: s-maj=52.1km s-min=15.2km az=53.0
ISCJB ***20*** *09:51:49.0±0.6, 4.68N±0.08×96.38E±0.05, h33km,*
mb4.0/10, Error ellipse: s-maj=12.3km s-min=6.3km
az=26.3
NEIC ***20*** *09:51:51.0±0.6, 4.65N×96.40E, h35km, mb4.7/1, Error*
ellipse: s-maj=8.1km s-min=8.6km az=223.0
ISC 20 09:51:50.6±0.7, 4.71N±0.08×96.38E±0.08, h33km, n31,
σ1s 29/35, mb3.9/10, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.17**	**127**	Pn	**Pn**	**09 52 39.0**	**+0.7**
PSI				Sn	**Sn**	**09 53 14.8**	**-0.2**
PSI	**Prapat**	**3.17**	**127**	Pn	**Pn**	**09 52 39.0**	**+0.7**
15nm,0.3s,baz=310,slow=13,SNR=25							
PSI				Sn	**Sn**	**09 53 14.8**	**-0.2**
baz=342,slow=20,SNR=5.0							
KULM	**Kulim**	**4.30**	**82**	*e*Pn	**Pn**	**09 52 54.0**	**+0.3**
KULM	

HWQ	**Hawqa**	**0.75**	**9**	*eP*	**Pg**	**10 12 52.8**	**+0.3**
HWQ				*eS*	**Sg**	**10 13 02.4**	**+0.1**
HAWK	**Haweek**	**1.10**	**27**	*eP*	**Pb**	**10 12 58.6**	**-0.5**
HAWK				*eS*	**Sn**	**10 13 14.4**	**-0.4**
HAWK				AML	AML	10 13 21.5	
	comp=Z,12nm,0.6s						
HAWK	**Haweek**	**1.10**	**27**	*eP*	**Pb**	**10 12 58.6**	**-0.5**
	SNR=57						
HAWK				*eS*	**Sn**	**10 13 14.4**	**-0.4**
	comp=Z,12nm,0.6s,SNR=49						
SALA	**Sala**	**1.13**	**136**	*eP*	**Pb**	**10 13 00.1**	**+0.4**
SALA				AML	AML	10 13 19.7	
	comp=Z,23nm,0.5s						
SALA	**Sala**	**1.13**	**136**	*eP*	**Pb**	**10 13 00.1**	**+0.4**
	SNR=57						
ZALF	**Zalf**	**1.42**	**115**	*eP*	**Pb**	**10 13 04.8**	**+0.3**
ZALF				*eS*	**Sn**	**10 13 22.9**	**+0.4**
ZALF				AML	AML	10 13 27.7	
	comp=Z,5.4nm,0.3s						
ZALF	**Zalf**	**1.42**	**115**	*eP*	**Pb**	**10 13 04.8**	**+0.3**
	SNR=57						
ZALF				*eS*	**Sn**	**10 13 22.9**	**+0.4**
	comp=Z,5.4nm,0.3s,SNR=49						

*STR **20** 10:14:32.5±0.2, 43°.01N×0°.17E, h5km, Ml2.8, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*CSEM **20** 10:14:32.2±0.1, 43°.06N×0°.22E, h5km, ML2.7/13, Error ellipse: s-maj=2.1km s-min=1.7km az=168.0*
*MDD **20** 10:14:33.5±0.2, 43°.01N×0°.19E, h0km, mbLg2.1/26, Error ellipse: s-maj=2.3km s-min=1.4km az=10.0*
*LDG **20** 10:14:33.3±0.1, 43°.02N×0°.21E, h2km, Md2.5/3, Ml2.8/14, Error ellipse: s-maj=1.5km s-min=1.3km az=158.0*

ISC 20 10:14:33.5±0.8, 43°.05N±0°.02×0°.19E±0°.01, h10km±5km, n95, σ1s61/127, 1C-1D, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LABF	**Labassere**	**0.09**	**268**	Pg	**Pg**	**10 14 35.2**	**-0.8**
LABF				Sg	**Sg**	**10 14 37.0**	**-0.7**
LABF	**Labassere**	**0.09**	**268**	Pg	**Pg**	**10 14 35.2**	**-0.8**
LABF				Sg	**Sg**	**10 14 37.0**	**-0.7**
EPF	**Esparros**	**0.11**	**100**	*e*Pg	**Pg**	**10 14 35.7**	**-0.6**
EPF				*e*Sg	**Sg**	**10 14 37.4**	**-0.8**
	174nm,0.2s,SNR=1.0						
EPF	**Esparros**	**0.11**	**100**	Pg	**Pg**	**10 14 35.7**	**-0.6**
EPF				*e*Sg	**Sg**	**10 14 37.4**	**-0.8**
	87nm,0.2s,SNR=1.0						
VIEF	**Viey**	**0.21**	**217**	Pg	**Pg**	**10 14 36.5**	**-1.4**
VIEF				Sg	**Sg**	**10 14 38.7**	**-2.1**
VIEF	**Viey**	**0.21**	**217**	Pg	**Pg**	**10 14 36.5**	**-1.4**
VIEF				Sg	**Sg**	**10 14 38.7**	**-2.1**
VIEF				Lg	Lg	10 14 39.2	
RESF	**Ens**	**0.27**	**156**	Pg	**Pg**	**10 14 37.7**	**-1.2**
RESF				Sg	**Sg**	**10 14 41.5**	**-1.0**
RESF	**Ens**	**0.27**	**156**	Pg	**Pg**	**10 14 37.7**	**-1.2**
RESF				Sg	**Sg**	**10 14 41.5**	**-1.0**
EBIE	**Bielsa**	**0.37**	**186**	⇑Pg	**Pg**	**10 14 39.3**	**-1.5**
	9.5nm,0.1s,SNR=18						
EBIE				Lg	Lg	10 14 43.9	
	78nm,0.2s,SNR=5.0						
EBIE	**Bielsa**	**0.37**	**186**	Pg	**Pg**	**10 14 39.3**	**-1.5**
	9.5nm,0.1s,SNR=18						
EBIE				Lg	Lg	10 14 43.9	
	78nm,0.2s,SNR=5.0						
REYF	**Montagne du Re**	**0.43**	**273**	Pg	**Pg**	**10 14 40.4**	**-1.5**
REYF				Sg	**Sg**	**10 14 46.3**	**-1.3**
REYF	**Montagne du Re**	**0.43**	**273**	Pg	**Pg**	**10 14 40.5**	**-1.5**
REYF				Sg	**Sg**	**10 14 46.3**	**-1.3**
MELF	**Melles**	**0.45**	**113**	Pg	**Pg**	**10 14 41.0**	**-1.4**
MELF				Lg	Lg	10 14 47.8	
ETSF	**Etsaut**	**0.57**	**255**	*e*Pg	**Pg**	**10 14 43.2**	**-1.4**
	SNR=1.0						
ETSF				*e*Sg	**Sg**	**10 14 50.3**	**-1.9**
	60nm,0.3s,SNR=1.0						
ETSF	**Etsaut**	**0.57**	**255**	Pg	**Pg**	**10 14 43.2**	**-1.4**
ETSF				*e*Sg	**Sg**	**10 14 50.3**	**-1.9**
	30nm,0.3s,SNR=1.0						
FDAF	**Les Forges d'A**	**0.60**	**248**	Pg	**Pg**	**10 14 43.9**	**-1.3**
FDAF				Lg	Lg	10 14 51.4	
MLS	**Moulis**	**0.67**	**98**	Pg	**Pg**	**10 14 44.4**	**-2.0**
MLS				Sg	**Sg**	**10 14 55.5**	**+0.3**
MLS	**Moulis**	**0.67**	**98**	Pg	**Pg**	**10 14 44.9**	**-1.5**
MLS				Sg	**Sg**	**10 14 55.5**	**+0.3**
SALF	**Salau**	**0.79**	**111**	Pg	**Pg**	**10 14 47.6**	**-1.1**
SALF				Sg	**Sg**	**10 14 57.7**	**-1.3**
SALF	**Salau**	**0.79**	**111**	Pg	**Pg**	**10 14 47.6**	**-1.1**
SALF				Lg	Lg	10 14 57.4	
ORDF	**Ordiarp**	**0.84**	**282**	Lg	Lg	10 14 58.7	
CTRE	**Tremp**	**0.84**	**149**	Pg	**Pg**	**10 14 48.4**	**-1.4**
CTRE				Lg	Lg	10 15 00.2	
	22nm,0.2s						
CTRE	**Tremp**	**0.84**	**149**	Pg	**Pg**	**10 14 48.4**	**-1.4**
CTRE				Lg	Lg	10 15 00.2	
	22nm,0.2s						
CEST	**Esterri de Car**	**0.90**	**120**	Pg	**Pg**	**10 14 49.9**	**-1.0**
CEST				Lg	Lg	10 15 02.6	
	31nm,0.1s						
CEST	**Esterri de Car**	**0.90**	**120**	Pg	**Pg**	**10 14 49.9**	**-1.0**
CEST				Lg	Lg	10 15 02.6	
	31nm,0.1s						
CSOR	**Sort**	**0.97**	**134**	⇓Pg	**Pg**	**10 14 50.8**	**-1.3**
	0.9nm,0.1s,SNR=18						
CSOR				Lg	Lg	10 15 03.3	
	20nm,0.2s,SNR=5.0						
CSOR	**Sort**	**0.97**	**134**	Pg	**Pg**	**10 14 50.8**	**-1.3**
	0.9nm,0.1s,SNR=18						
CSOR				Lg	Lg	10 15 03.3	
	20nm,0.2s,SNR=5.0						
GRBF	**Gourbit**	**1.01**	**102**	Lg	Lg	10 15 05.3	
SJPF	**Ste Jean**	**1.04**	**274**	*e*Pn	**Pg**	**10 14 52.3**	**-1.2**
	SNR=1.0						
SJPF				*e*Sg	**Sg**	**10 15 06.4**	**-0.6**
	14nm,0.2s,SNR=1.0						
SJPF	**Ste Jean**	**1.04**	**274**	Pn	**Pg**	**10 14 52.3**	**-1.2**
SJPF				*e*Sg	**Sg**	**10 15 06.4**	**-0.6**
	7.0nm,0.2s,SNR=1.0						
IELO	**Elcoad**	**1.07**	**259**	Pg	**Pg**	**10 14 53.0**	**-1.1**
	0.7nm,0.1s,SNR=7.9						
IELO				Lg	Lg	10 15 07.8	
	13nm,0.1s,SNR=7.9						
IELO	**Elcoad**	**1.07**	**259**	Pg	**Pg**	**10 14 53.0**	**-1.1**
	0.7nm,0.1s,SNR=7.9						
IELO				Lg	Lg	10 15 07.8	
	13nm,0.1s,SNR=7.9						
IEPA	**Eparoz**	**1.11**	**256**	Pg	**Pg**	**10 14 53.8**	**-0.9**
	1.2nm,0.1s,SNR=7.9						
IEPA				Lg	Lg	10 15 08.8	
	9.8nm,0.2s,SNR=7.9						
IEPA	**Eparoz**	**1.11**	**256**	Pg	**Pg**	**10 14 53.8**	**-0.9**
	1.2nm,0.1s,SNR=7.9						
IEPA				Lg	Lg	10 15 08.8	
	9.8nm,0.2s,SNR=7.9						
CORG	**Organya**	**1.17**	**134**	Pg	**Pg**	**10 14 54.6**	**-1.3**
CORG				Lg	Lg	10 15 10.7	
	5.6nm,0.3s						
CORG	**Organya**	**1.17**	**134**	Pg	**Pg**	**10 14 54.6**	**-1.3**
CORG				Lg	Lg	10 15 10.7	
	5.6nm,0.3s						
IZUN	**Zunzarren**	**1.23**	**262**	Lg	Lg	10 15 13.2	
	3.0nm,0.1s,SNR=7.9						
IZUN	**Zunzarren**	**1.23**	**262**	Lg	Lg	10 15 13.2	
	3.0nm,0.1s,SNR=7.9						
CAVN	**Les Avellanes**	**1.24**	**160**	Pg	**Pg**	**10 14 55.6**	**-1.7**
CAVN				Lg	Lg	10 15 12.1	
	33nm,0.2s						
CAVN	**Les Avellanes**	**1.24**	**160**	Pg	**Pg**	**10 14 55.6**	**-1.7**
CAVN				Lg	Lg	10 15 12.1	
	33nm,0.2s						
EALK	**Alkurruntz**	**1.26**	**278**	Pn	**Pg**	**10 14 57.2**	**-0.4**
	0.4nm,0.1s,SNR=7.9						
EALK				Pg	**Pb**	**10 14 58.6**	**+1.3**
	1.1nm,0.1s,SNR=6.5						
EALK				Lg	Lg	10 15 13.6	
	9.8nm,0.2s,SNR=10						
EALK	**Alkurruntz**	**1.26**	**278**	Pn	**Pg**	**10 14 57.2**	**-0.4**
	0.4nm,0.1s,SNR=7.9						
ELIZ	**Elizondo**	**1.27**	**276**	Pn	**Pn**	**10 14 57.0**	**-0.3**
	0.5nm,0.1s,SNR=7.9						
ELIZ				Pg	**Pb**	**10 14 58.9**	**+1.4**
	5.7nm,0.2s,SNR=7.9						
ELIZ				Lg	Lg	10 15 15.0	
	7.6nm,0.2s,SNR=7.9						
ELIZ	**Elizondo**	**1.27**	**276**	Pn	**Pn**	**10 14 57.0**	**-0.3**
	0.5nm,0.1s,SNR=7.9						
IUNC	**Unciti**	**1.28**	**257**	Pg	**Pb**	**10 14 58.2**	**+0.5**
	2.3nm,0.1s,SNR=7.9						
IUNC				Lg	Lg	10 15 14.8	
	20nm,0.2s,SNR=7.9						
IUNC	**Unciti**	**1.28**	**257**	Pg	**Pb**	**10 14 58.2**	**+0.5**
	2.3nm,0.1s,SNR=7.9						
IUNC				Lg	Lg	10 15 14.8	
	20nm,0.2s,SNR=7.9						
IUSE	**Utxeti**	**1.28**	**266**	Pn	**Pn**	**10 14 56.9**	**-0.6**
	0.3nm,0.0s,SNR=4.0						
IUSE				Pg	**Pb**	**10 14 58.8**	**+1.0**
	1.5nm,0.1s,SNR=7.9						
IUSE				Lg	Lg	10 15 14.0	
	6.2nm,0.1s,SNR=7.9						
IUSE	**Utxeti**	**1.28**	**266**	Pn	**Pn**	**10 14 56.9**	**-0.6**
	0.3nm,0.0s,SNR=4.0						
IUSE	**Utxeti**	**1.28**	**266**	Pg	**Pb**	**10 14 58.8**	**+1.0**
	1.5nm,0.1s,SNR=7.9						
IUSE				Lg	Lg	10 15 14.0	
	6.2nm,0.1s,SNR=7.9						
ESAC	**San Caprasio**	**1.42**	**200**	Pg	**Pn**	**10 14 59.4**	**0.0**
	39nm,0.2s,SNR=7.9						
ESAC				Lg	Lg	10 15 17.6	
	54nm,0.2s,SNR=9.2						
ESAC	**San Caprasio**	**1.42**	**200**	Pg	**Pn**	**10 14 59.4**	**0.0**
	39nm,0.2s,SNR=7.9						
ESAC				Lg	Lg	10 15 17.6	
	54nm,0.2s,SNR=9.2						
CLLI	**Llivia**	**1.43**	**113**	Pg	**Pn**	**10 14 59.8**	**+0.1**
	0.3nm,0.1s,SNR=8.0						
CLLI				Lg	Lg	10 15 18.8	
	3.3nm,0.1s,SNR=15						
CLLI	**Llivia**	**1.43**	**113**	Pg	**Pn**	**10 14 59.8**	**+0.1**
	0.3nm,0.1s,SNR=8.0						
CLLI				Lg	Lg	10 15 18.8	
	3.3nm,0.1s,SNR=15						
VALF	**Valcebollere**	**1.49**	**115**	Lg	Lg	10 15 21.9	
EMIR	**Miracle**	**1.50**	**139**	Pg	**Pn**	**10 15 00.8**	**+0.2**
	1.7nm,0.1s,SNR=25						
EMIR				Lg	Lg	10 15 21.1	
	28nm,0.3s,SNR=11						
EMIR	**Miracle**	**1.50**	**139**	Pg	**Pn**	**10 15 00.8**	**+0.2**
	1.7nm,0.1s,SNR=25						
EMIR				Lg	Lg	10 15 21.1	
	28nm,0.3s,SNR=11						
MTLF	**Montolieu**	**1.51**	**78**	*e*Pg	**Pn**	**10 15 01.3**	**+0.7**
	SNR=1.0						
MTLF				*e*Sg	**Sn**	**10 15 20.9**	**+0.5**
	16nm,0.2s,SNR=1.0						
MTLF	**Montolieu**	**1.51**	**78**	Pg	**Pn**	**10 15 01.3**	**+0.7**
MTLF				*e*Sg	**Sn**	**10 15 20.9**	**+0.5**
	7.8nm,0.2s,SNR=1.0						
EPOB	**Poblet**	**1.82**	**159**	Pg	**Pn**	**10 15 05.6**	**+0.6**
	5.2nm,0.2s,SNR=28						
EPOB				Lg	Lg	10 15 29.7	
	3.7nm,0.2s,SNR=9.1						
EPOB	**Poblet**	**1.82**	**159**	Pg	**Pn**	**10 15 05.6**	**+0.6**
	5.2nm,0.2s,SNR=28						
EPOB				Lg	Lg	10 15 29.7	
	3.7nm,0.2s,SNR=9.1						
LFF	**La Frestale**	**1.93**	**12**	*e*Pn	**Pn**	**10 15 05.9**	**-0.5**
	SNR=1.0						
LFF	**La Frestale**	**1.93**	**12**	*e*Pg	**Pb**	**10 15 09.2**	**+0.4**
LFF				*e*Sg	**Sb**	**10 15 35.0**	**+2.1**
	24nm,0.2s,SNR=1.0						
LFF	**La Frestale**	**1.93**	**12**	Pn	**Pn**	**10 15 05.9**	**-0.5**
LFF	**La Frestale**	**1.93**	**12**	Pg	**Pb**	**10 15 09.2**	**+0.4**
LFF				*e*Sg	**Sb**	**10 15 35.0**	**+2.1**
	12nm,0.2s,SNR=1.0						
EJON	**La Jonquera**	**2.08**	**106**	Pg	**Pg**	**10 15 12.4**	**-0.9**
	0.4nm,0.1s,SNR=7.9						
EJON				Lg	Lg	10 15 40.3	
	1.2nm,0.1s,SNR=7.9						
EJON	**La Jonquera**	**2.08**	**106**	Pg	**Pg**	**10 15 12.4**	**-0.9**
	0.4nm,0.1s,SNR=7.9						
EJON				Lg	Lg	10 15 40.3	
	1.2nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**2.10**	**177**	Lg	Lg	10 15 38.9	
	3.5nm,0.1s,SNR=7.9						
ERTA	**Horta de San J**	**2.10**	**177**	Lg	Lg	10 15 38.9	
	3.5nm,0.1s,SNR=7.9						
CFON	**Fontmartina**	**2.10**	**127**	Pn	**Pn**	**10 15 09.7**	**+0.9**
	0.5nm,0.1s,SNR=7.9						
CFON				Pg	**Pb**	**10 15 12.3**	**+0.6**
	4.0nm,0.2s,SNR=10.0						
CFON				Lg	Lg	10 15 39.3	
	37nm,0.2s,SNR=9.0						
CFON	**Fontmartina**	**2.10**	**127**	Pn	**Pn**	**10 15 09.7**	**+0.9**
	0.5nm,0.1s,SNR=7.9						
CAF	**Calviac**	**2.31**	**35**	*e*Pg	**Pb**	**10 15 16.7**	**+1.4**
CAF				*e*Sn	**Sn**	**10 15 38.0**	**-2.2**
CAF				*e*Sg	**Sb**	**10 15 46.5**	**+2.6**
	9.8nm,0.2s,SNR=1.0						
CAF	**Calviac**	**2.31**	**35**	Pg	**Pb**	**10 15 16.7**	**+1.4**
CAF				Sn	**Sn**	**10 15 38.0**	**-2.2**
CAF				*e*Sg	**Sb**	**10 15 46.5**	**+2.6**
	4.9nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.45**	**22**	*e*Pg	**Pb**	**10 15 19.4**	**+1.8**
	SNR=1.0						
RJF				*e*Sg	**Sb**	**10 15 49.0**	**+1.2**
	15nm,0.2s,SNR=1.0						
RJF	**Les Rejaudoux**	**2.45**	**22**	Pg	**Pb**	**10 15 19.4**	**+1.8**
RJF				*e*Sg	**Sb**	**10 15 49.0**	**+1.2**
	7.5nm,0.2s,SNR=1.0						
EMOS	**Mosqueruela**	**2.73**	**191**	Pn	**Pn**	**10 15 18.4**	**+0.8**
	0.1nm,0.1s,SNR=7.9						
EMOS				Pg	**Pb**	**10 15 22.4**	**-0.2**
	0.4nm,0.1s,SNR=7.9						
EMOS				Lg	Lg	10 15 56.9	
	3.6nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**2.73**	**191**	Pn	**Pn**	**10 15 18.4**	**+0.8**
	0.1nm,0.1s,SNR=7.9						
ETOR	**Torete**	**2.79**	**218**	Pn	**Pn**	**10 15 18.9**	**+0.6**
	1.7nm,0.1s,SNR=7.9						
ETOR				Lg	Lg	10 15 59.6	
	5.5nm,0.1s,SNR=7.9						
ETOR	**Torete**	**2.79**	**218**	Pn	**Pn**	**10 15 18.9**	**+0.6**
	1.7nm,0.1s,SNR=7.9						
ETOR				Lg	Lg	10 15 59.6	
	5.5nm,0.1s,SNR=7.9						
LASF	**Ste Croix**	**2.85**	**68**	*e*Pn	**Pn**	**10 15 18.3**	**-0.8**
	SNR=1.0						
LASF	**Ste Croix**	**2.85**	**68**	*e*Pg	**Pb**	**10 15 26.0**	**+1.5**
LASF				*e*Sg	**Sb**	**10 16 01.0**	**+1.5**
	4.9nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**2.85**	**68**	Pn	**Pn**	**10 15 18.3**	**-0.8**
LASF	**Ste Croix**	**2.85**	**68**	Pg	**Pb**	**10 15 26.0**	**+1.5**
LASF				*e*Sg	**Sb**	**10 16 01.0**	**+1.5**
	2.5nm,0.2s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.54**	**23**	*e*Pg	**Pg**	**10 15 39.4**	**-1.9**
TCF				*e*Sg	**Sb**	**10 16 24.1**	**+4.7**
	5.9nm,0.3s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.54**	**23**	Pg	**Pg**	**10 15 39.4**	**-1.9**
TCF				*e*Sg	**Sb**	**10 16 24.1**	**+4.7**
	3.0nm,0.3s,SNR=1.0						
MFF	**Saint Martin d**	**3.56**	**356**	*e*Pg	**Pb**	**10 15 38.4**	**+1.9**
MFF				*e*Sg	**Sb**	**10 16 24.1**	**+4.3**
	3.5nm,0.3s,SNR=1.0						
MFF	**Saint Martin d**	**3.56**	**356**	Pg	**Pb**	**10 15 38.4**	**+1.9**
MFF				*e*Sg	**Sb**	**10 16 24.1**	**+4.3**
	1.8nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**3.70**	**59**	*e*Pg	**Pg**	**10 15 42.0**	**-2.4**
VIVF				*e*Sg	**Sg**	**10 16 29.6**	**-2.8**
	2.1nm,0.2s,SNR=1.0						
VIVF	**Saint-Julien-l**	**3.70**	**59**	Pg	**Pg**	**10 15 42.0**	**-2.4**
VIVF				*e*Sg	**Sg**	**10 16 29.6**	**-2.8**
	1.0nm,0.2s,SNR=1.0						
BGF	**Bois d'Agland**	**3.98**	**27**	*e*Sg	**Sg**	**10 16 39.2**	**-2.1**
	17nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**3.98**	**27**	*e*Sg	**Sg**	**10 16 39.2**	**-2.1**
	8.4nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**4.36**	**30**	*e*Sg	**Sg**	**10 16 50.4**	**-3.1**
	3.8nm,0.5s						
AVF	**Avril sur Loir**	**4.36**	**30**	*e*Sg	**Sg**	**10 16 50.4**	**-3.1**
	1.9nm,0.5s						
SMF	**Signal de Mont**	**4.43**	**35**	*e*Sg	**Sg**	**10 16 53.7**	**-2.1**
	2.0nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**4.43**	**35**	*e*Sg	**Sg**	**10 16 53.7**	**-2.1**
	1.0nm,0.3s,SNR=1.0						
GRR	**Gorron**	**5.39**	**353**	*e*Sg	Sb	10 17 20.3	+7.9
	5.7nm,0.8s,SNR=1.0						

*CSEM **20** 10:16:28.8±0.2, 37°.63N×26°.78E, h2km, ML3.1/5, Error ellipse: s-maj=5.1km s-min=3.4km az=64.0*
*ISK **20** 10:16:28.2, 37°.68N×26°.83E, h5km, MD3.4*
*DDA **20** 10:16:29.6, 37°.71N×26°.90E, h5km, MD3.4*
*ISCJB **20** 10:16:29.0±0.5, 37°.67N±0°.02×26°.83E±0°.03, h2km±4km, Error ellipse: s-maj=4.2km s-min=2.9km az=152.8*
*THE **20** 10:16:29.4, 37°.70N×26°.81E, h5km, ML3.1/5, Error ellipse: s-maj=1.5km s-min=0.8km az=80.0*
*ATH **20** 10:16:29.0, 37°.66N×26°.78E, h5km±4km, MD3.3/5*

ISC 20 10:16:29.0±0.8, 37°.67N±0°.02×26°.82E±0°.02, h7km±4km, n85, σ0s96/120, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.04**	**15**	P	**Pg**	**10 16 30.4**	**-0.1**
SMG				S	**Sg**	**10 16 31.3**	**-0.3**
SMG	**Samos**	**0.04**	**15**	*e*PG	**Pg**	**10 16 30.4**	**-0.1**
SMG				*e*SG	**Sg**	**10 16 31.3**	**-0.3**
SMG	**Samos**	**0.04**	**15**	P	**Pg**	**10 16 30.4**	**-0.1**
SMG				S	**Sg**	**10 16 31.3**	**-0.3**
GCAM	**G?zelcaml?**	**0.33**	**84**	*i* P	**Pg**	**10 16 35.1**	**-0.3**
GCAM				*i* S	**Sg**	**10 16 39.7**	**0.0**
GCAM	**G?zelcaml?**	**0.33**	**84**	*i* P	**Pg**	**10 16 35.1**	**-0.3**
GCAM				*i* S	**Sg**	**10 16 39.7**	**0.0**
URLA	**Izmir**	**0.71**	**345**	*i* P	**Pb**	**10 16 43.7**	**-0.1**
URLA				*i* S	**Sb**	**10 16 52.9**	**-1.0**
URLA	**Izmir**	**0.71**	**345**	*i* P	**Pb**	**10 16 43.7**	**-0.1**
URLA				*i* S	**Sb**	**10 16 52.9**	**-1.0**
BODT	**Bodrum**	**0.72**	**147**	*e*PG	**Pg**	**10 16 42.8**	**0.0**
BODT				*e*SG	**Sb**	**10 16 53.9**	**-0.1**
BODT	**Bodrum**	**0.72**	**147**	*e*Pg	**Pg**	**10 16 42.8**	**0.0**
BODT				*e*Sg	**Sb**	**10 16 53.9**	**-0.1**
BLCB	**Balcova**	**0.74**	**14**	*e*PG	**Pg**	**10 16 42.7**	**-0.5**
BLCB				*e*SG	**Sg**	**10 16 53.3**	**+0.5**
BLCB	**Balcova**	**0.74**	**14**	*e*Pg	**Pg**	**10 16 42.7**	**-0.5**
BLCB				*e*Sg	**Sg**	**10 16 53.3**	**+0.5**
IZM	**Izmir**	**0.81**	**25**	*e*PG	**Pg**	**10 16 43.7**	**-0.8**
IZM				*e*SG	**Sb**	**10 16 57.2**	**+0.6**
IZM	**Izmir**	**0.81**	**25**	*e*Pg	**Pg**	**10 16 43.7**	**-0.8**
IZM				*e*Sg	**Sb**	**10 16 57.2**	**+0.6**
AYDN	**Tasoluk**	**0.84**	**90**	*i* P	**Pg**	**10 16 44.6**	**-0.5**
AYDN				*i* S	**Sg**	**10 16 55.2**	**-0.8**
AYDN	**Tasoluk**	**0.84**	**90**	*i* P	**Pg**	**10 16 44.6**	**-0.5**
AYDN				*i* S	**Sg**	**10 16 55.2**	**-0.8**
MLSB	**Milas**	**0.84**	**116**	*e*PG	**Pb**	**10 16 46.1**	**+0.1**
MLSB				*e*SG	**Sb**	**10 16 57.7**	**+0.1**
MLSB	**Milas**	**0.84**	**116**	*e*Pg	**Pb**	**10 16 46.1**	**+0.1**
MLSB				*e*Sg	**Sb**	**10 16 57.7**	**+0.1**
CHOS	**Chios island**	**0.94**	**320**	P	**Pg**	**10 16 46.7**	**-0.4**
CHOS				S	**Sb**	**10 17 00.1**	**-0.3**
CHOS	**Chios island**	**0.94**	**320**	*e*PB	**Pg**	**10 16 46.9**	**-0.2**
CHOS				*e*SB	**Sb**	**10 17 00.5**	**+0.1**
CHOS	**Chios island**	**0.94**	**320**	*e*Pb	**Pg**	**10 16 46.9**	**-0.2**
CHOS				S	**Sb**	**10 17 00.1**	**-0.3**
NIS1	**Nisyros lsl.**	**1.10**	**165**	P	**Pb**	**10 16 50.6**	**+0.2**
NIS1				S	**Sn**	**10 17 06.7**	**+0.3**
NIS1	**Nisyros lsl.**	**1.10**	**165**	*e*PB	**Pg**	**10 16 50.2**	**+0.1**
NIS1	**Nisyros lsl.**	**1.10**	**165**	*e*Pb	**Pg**	**10 16 50.2**	**+0.1**
NIS1	**Nisyros lsl.**	**1.10**	**165**	P	**Pb**	**10 16 50.6**	**+0.2**
DAT	**Datca**	**1.11**	**147**	*e*PN	**Pg**	**10 16 50.3**	**-0.1**
DAT				*e*SN	**Sn**	**10 17 07.0**	**+0.2**
DAT	**Datca**	**1.11**	**147**	*e*Pn	**Pg**	**10 16 50.3**	**-0.1**
DAT				*e*Sn	**Sn**	**10 17 07.0**	**+0.2**
APE	**Apeiranthos**	**1.19**	**240**	*e*PN	**Pb**	**10 16 52.1**	**+0.2**
APE	**Apeiranthos**	**1.19**	**240**	P	**Pg**	**10 16 50.8**	**-1.1**
APE				S	**Sn**	**10 17 09.1**	**+0.5**
APE	**Apeiranthos**	**1.19**	**240**	*e*PB	**Pg**	**10 16 51.0**	**-0.9**
APE	**Apeiranthos**	**1.19**	**240**	*e*Pb	**Pg**	**10 16 51.0**	**-0.9**
APE	**Apeiranthos**	**1.19**	**240**	*e*Pn	**Pb**	**10 16 52.1**	**+0.2**
YER	**Yerkesik**	**1.28**	**114**	*e*PN	**Pn**	**10 16 53.8**	**+0.4**
YER	**Yerkesik**	**1.28**	**114**	*e*Pn	**Pn**	**10 16 53.8**	**+0.4**
AKHS	**Akhisar**	**1.44**	**33**	*i* P	**Pn**	**10 16 55.9**	**+0.4**
AKHS				*i* S	**Sb**	**10 17 13.2**	**-1.5**
AKHS	**Akhisar**	**1.44**	**33**	*i* P	**Pn**	**10 16 55.9**	**+0.4**
AKHS				*i* S	**Sb**	**10 17 13.2**	**-1.5**
MANT	**Manisa**	**1.60**	**59**	*i* P	**Pb**	**10 16 58.9**	**-0.1**
MANT				*i* S	**Sn**	**10 17 17.6**	**-1.3**
MANT	**Manisa**	**1.60**	**59**	*i* P	**Pb**	**10 16 58.9**	**-0.1**
MANT				*i* S	**Sn**	**10 17 17.6**	**-1.3**
PRK	**Paraskevi**	**1.63**	**345**	P	**Pn**	**10 16 57.9**	**-0.3**
PRK	**Paraskevi**	**1.63**	**345**	*e*PN	**Pn**	**10 16 58.2**	**0.0**
PRK	**Paraskevi**	**1.63**	**345**

KMSI			S	**Sn**	**10 21 37.2**	**+0.6**
LBMI	**Labuha**	**2.50**	**119**	P	**Pn**	**10 21 36.7**	**+0.8**
LBMI				S	**Sn**	**10 22 06.5**	**+1.3**
MRSI	**Marisa**	**3.38**	**268**	P	**Pn**	**10 21 48.8**	**+0.7**
MRSI				S	**Sn**	**10 22 25.9**	**-1.1**
NLAI	**Namlea**	**4.21**	**155**	P	**Pn**	**10 21 58.7**	**-0.7**
NLAI				S	**Sn**	**10 22 45.0**	**-2.3**
MSAI	**Masohi** 17nm,0.7s,1µm0.1nm	**5.33**	**137**	P	**Pn**	**10 22 17.0**	**+2.2**
TTSI	**Tana Toraja** 52nm,0.7s,851nm0.2nm	**6.59**	**237**	P	Pn	10 22 34.5	+2.4
TTSI				S	**Sn**	**10 23 45.6**	**-0.5**
	52nm,0.7s,851nm0.2nm						
SPSI	**Sidrap Palu**	**7.17**	**231**	P	**Pn**	**10 22 41.9**	**+1.8**
SPSI				S	**Sn**	**10 24 03.9**	**+3.5**
WRA	**Warramunga Arr** 1.3nm,0.5s,baz=335,slow=11,SNR=24	**22.25**	**157**	P	**P**	**10 25 49.8**	**-1.9**
ASAR	**Alice Springs** 0.9nm,0.5s,baz=337,slow=7.1,SNR=24	**25.52**	**161**	P	**P**	**10 26 22.9**	**-0.2**
ASAR				PcP	**PcP**	**10 29 53.9**	**-0.5**
	0.2nm,0.5s,baz=349,slow=1.9,SNR=4.1						
JNU	**Nakatsue** 4.1nm,0.8s,baz=184,slow=14,SNR=2.5	**32.77**	**9**	P	**P**	**10 27 28.6**	**+1.1**
STKA	**Stephens Creek** 3.1nm,0.8s,baz=328,slow=10,SNR=6.6	**35.79**	**156**	P	**P**	**10 27 54.8**	**+1.0**
PETK	**Petropavlovsk-** 0.7nm,0.6s,baz=214,slow=4.9,SNR=3.3	**58.84**	**22**	P	**P**	**10 30 53.0**	**+0.3**
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=125,slow=7.3,SNR=4.9	**59.35**	**327**	P	**P**	**10 30 54.7**	**-1.7**
KURBB	**Kurchatov Arra** 0.5nm,0.7s,baz=134,slow=6.2,SNR=2.9	**63.63**	**329**	P	**P**	**10 31 23.2**	**-2.0**

TIR ***20*** *10:21:10.6, 41˚.15N×20˚.21E, h7km, ML3.1*
SKO ***20*** *10:21:11.5, 41˚.11N×20˚.26E, h0km*
PDG ***20*** *10:21:12.4±0.3, 41˚.19N×20˚.23E, h5km, ML2.3/7, Error ellipse: s-maj=0.6km s-min=0.8km az=0.0*
CSEM ***20*** *10:21:12.1±0.5, 41˚.17N×20˚.22E, h2km, ML3.1, Error ellipse: s-maj=12.2km s-min=6.6km az=54.0*

ISC 20 10:21:11.8±1.1, 41˚.16N±0˚.03×20˚.20E±0˚.03, h5km±10km, n26, σ1§14/52, 8C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.32**	**307**	*e*PG	**Pg**	**10 21 17.5**	**-0.5**
TIR				*i* SG	**Sg**	**10 21 22.5**	**+0.2**
TIR	**Tirane**	**0.32**	**307**	*e*Pg	**Pg**	**10 21 17.5**	**-0.5**
TIR				*i* Sg	**Sg**	**10 21 22.5**	**+0.2**
PHP	**Peshkopia**	**0.56**	**19**	*e*PG	**Pg**	**10 21 21.7**	**-0.9**
PHP				*i* SG	**Sg**	**10 21 30.1**	**+0.2**
PHP	**Peshkopia**	**0.56**	**19**	*e*Pg	**Pg**	**10 21 21.7**	**-0.9**
PHP				*i* Sg	**Sg**	**10 21 30.1**	**+0.2**
KBN	**Korca**	**0.69**	**140**	*e*PG	**Pb**	**10 21 26.4**	**0.0**
KBN				*i* SG	**Sg**	**10 21 34.7**	**+0.7**
KBN	**Korca**	**0.69**	**140**	*e*Pg	**Pb**	**10 21 26.4**	**0.0**
KBN				*i* Sg	**Sg**	**10 21 34.7**	**+0.7**
BIA	**Bitola**	**0.86**	**99**	*i* Pn	**Pg**	**10 21 27.4**	**-0.8**
BIA				*e*Sg	**Sb**	**10 21 42.1**	**+1.0**
PUK	**Puka**	**0.92**	**345**	*e*PG	**Pg**	**10 21 28.8**	**-0.6**
PUK				*i* SG	**Sb**	**10 21 42.6**	**-0.3**
PUK	**Puka**	**0.92**	**345**	*e*Pg	**Pg**	**10 21 28.8**	**-0.6**
PUK				*i* Sg	**Sb**	**10 21 42.6**	**-0.3**
ULC	**Ulcinj**	**1.08**	**319**	⇑*i*Pg	**Pg**	**10 21 30.9**	**-1.7**
ULC				*e*Sg	**Sn**	**10 21 48.5**	**-0.7**
ULC	**Ulcinj**	**1.08**	**319**	⇑*i*Pg	**Pg**	**10 21 30.9**	**-1.7**
ULC				*e*Sg	**Sn**	**10 21 48.5**	**-0.7**
SKO	**Skopje**	**1.24**	**48**	*i* Pn	**Pn**	**10 21 35.7**	**-0.1**
SKO				*e*Sg	**Sn**	**10 21 53.3**	**+0.4**
PVY	**Plav**	**1.45**	**353**	⇓*i*Pg	**Pn**	**10 21 38.1**	**-0.8**
PVY				*e*Sg	**Sg**	**10 22 00.9**	**+2.5**
PVY	**Plav**	**1.45**	**353**	⇓*i*Pg	**Pn**	**10 21 38.1**	**-0.8**
PVY				*e*Sg	**Sg**	**10 22 00.9**	**+2.5**
PDG	**Podgorica**	**1.46**	**331**	⇑*i*Pg	**Pb**	**10 21 39.0**	**-0.5**
PDG				*e*Sg	**Sg**	**10 22 01.2**	**+2.5**
TTG	**Podgorica**	**1.46**	**331**	⇑*i*Pg	**Pb**	**10 21 39.0**	**-0.5**
TTG				*e*Sg	**Sg**	**10 22 01.2**	**+2.5**
BUM	**Brajici-Budva**	**1.51**	**320**	⇓*i*Pg	**Pg**	**10 21 40.6**	**-0.1**
BUM				*e*Sg	**Sg**	**10 22 02.8**	**+2.5**
BUM	**Brajici-Budva**	**1.51**	**320**	⇓*i*Pg	**Pg**	**10 21 40.6**	**-0.1**
BUM				*e*Sg	**Sg**	**10 22 02.8**	**+2.5**
BEY	**Berane**	**1.73**	**352**	*e*Pn	**Pb**	**10 21 43.8**	**-0.4**
BEY				*e*Sn	**Sg**	**10 22 08.2**	**+0.7**
IVA	**Berane**	**1.73**	**352**	*e*Pn	**Pb**	**10 21 43.8**	**-0.4**
IVA				*e*Sn	**Sg**	**10 22 08.2**	**+0.7**
HCY	**Herceg Novi**	**1.82**	**316**	⇓*i*Pn	**Pb**	**10 21 45.1**	**-0.5**
HCY				*e*Sn	**Sg**	**10 22 10.8**	**+0.6**
HCY	**Herceg Novi**	**1.82**	**316**	⇓*i*Pn	**Pb**	**10 21 45.1**	**-0.5**
HCY				*e*Sn	**Sg**	**10 22 10.8**	**+0.6**
BRY	**Bratogost**	**2.14**	**325**	⇑*i*Pn	**Pb**	**10 21 49.8**	**-1.4**
BRY				*e*Sn	**Sb**	**10 22 18.8**	**+0.6**
BRY	**Bratogost**	**2.14**	**325**	⇑*i*Pn	**Pb**	**10 21 49.8**	**-1.4**
BRY				*e*Sn	**Sb**	**10 22 18.8**	**+0.6**
UPM	**Unac-Piva**	**2.26**	**335**	⇑*i*Pn	**Pn**	**10 21 51.4**	**+1.3**
UPM				*e*Sn	**Sb**	**10 22 21.5**	**-0.2**
UPM	**Unac-Piva**	**2.26**	**335**	⇑*i*Pn	**Pn**	**10 21 51.4**	**+1.3**
UPM				*e*Sn	**Sb**	**10 22 21.5**	**-0.2**

NIED ***20*** *10:51:00, 39˚.20N×143˚.40E, h26km, Mw3.7 Best double couple: M0 3.38000×10^14 NP1:φs=35.00000°, δ67.00000°, λ115.00000°. NP2:φs=166.00000°, δ34.00000°, λ46.00000°.*
IDC ***20*** *10:51:31.4±1.3, 39˚.17N×143˚.45E, h0km, mb3.4/5, mb1 3.6/7, mb1mx3.4/26, mbtmp3.4/7, ML3.3/2, Error ellipse: s-maj=30.5km s-min=22.4km az=97.0*
JMA ***20*** *10:51:33.7±0.2, 39˚.20N×143˚.39E, h32km±4km, M3.5*

ISC 20 10:51:33.3±4.0, 39˚.24N±0˚.05×143˚.30E±0˚.08, h10km±25km, n20, σ1§00/25, mb3.6/6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.20**	**287**	P	**Pb**	**10 51 55.7**	**-0.4**
OFUJ	**Ofunato**	**1.28**	**264**	P	**Pn**	**10 51 57.0**	**-0.2**
OFUJ				*e*S	**Sb**	**10 52 13.9**	**0.0**
JTH	**Tanohata**	**1.31**	**303**	P	**Pn**	**10 51 57.6**	**-0.2**
JTH				*e*S	**Sb**	**10 52 15.1**	**+0.1**
JOM	**Ohasama**	**1.57**	**279**	P	**Pn**	**10 52 01.6**	**+0.3**
JMK	**Ichinoseki**	**1.64**	**261**	P	**Pn**	**10 52 02.5**	**+0.2**
JIO	**Ouri**	**1.71**	**244**	P	**Pn**	**10 52 02.7**	**-0.5**
JIO				*e*S	**Sn**	**10 52 24.0**	**-1.1**
JANG	**Nango**	**1.78**	**310**	P	**Pn**	**10 52 04.4**	**+0.2**
JANG				*e*S	**Sn**	**10 52 26.1**	**-0.9**
JYK	**Kaneyama**	**2.31**	**263**	P	**Pn**	**10 52 12.2**	**+0.7**
JFT	**Otama**	**2.89**	**235**	P	**Pn**	**10 52 19.7**	**+0.2**
JNBK	**Urakawa-nobuka**	**3.07**	**352**	P	**Pn**	**10 52 22.3**	**+0.4**
JNBK				*e*S	**Sn**	**10 52 58.6**	**-0.1**
JCH	**Churui**	**3.38**	**1**	P	**Pn**	**10 52 25.0**	**-1.1**
MJAR	**Matsushiro Arr** 1.5nm,0.3s,baz=33,slow=15,SNR=25	**4.84**	**238**	Pn	**Pn**	**10 52 48.2**	**+1.9**
MAT	**Matsushiro**	**4.84**	**238**	P	**Pn**	**10 52 48.3**	**+2.0**
ASAJ	**Asahikawa** 1.1nm,0.3s,baz=160,slow=12,SNR=9.3	**4.91**	**354**	Pn	**Pn**	**10 52 47.6**	**+0.5**
ASAJ				Sn	**Sn**	**10 53 46.2**	**+2.2**
	0.3nm,0.3s,baz=170,slow=17,SNR=2.3						
SONM	**Songino Array** 0.7nm,0.6s,baz=91,slow=8.6,SNR=3.4	**27.88**	**300**	P	**P**	**10 57 23.6**	**+0.2**
ZALV	**Zalesovo Beam** 1.0nm,0.5s,baz=74,slow=11,SNR=4.5	**41.57**	**311**	P	P	10 59 25.0	+4.0
MKAR	**Makanchi Array** 0.2nm,0.6s,baz=96,slow=8.8,SNR=3.3	**44.25**	**301**	P	**P**	**10 59 44.0**	**+1.2**
KURBB	**Kurchatov Arra** 0.7nm,0.5s,baz=82,slow=8.2,SNR=8.0	**45.85**	**307**	P	**P**	**10 59 55.3**	**-0.2**
WRA	**Warramunga Arr** 0.5nm,1.0s,baz=6.5,slow=7.1,SNR=3.3	**59.46**	**190**	P	**P**	**11 01 35.2**	**-1.3**
YKA	**Yellowknife Ar** 0.1nm,0.4s,baz=315,slow=7.8,SNR=2.7	**61.16**	**31**	P	**P**	**11 01 47.7**	**0.0**

NIED ***20*** *10:53:00, 39˚.10N×143˚.30E, h17km, Mw3.5 Best double couple: M0 2.14000×10^14 NP1:φs=7.00000°, δ77.00000°, λ88.00000°. NP2:φs=196.00000°, δ13.00000°, λ99.00000°.*

JMA 20 10:53:49.6±0.2, 39˚.11N×143˚.32E, h19km±3km, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.25**	**292**	P	Pn	10 54 11.9	-0.2
MIYJ				*e*S	Sb	10 54 28.0	-0.4
OFUJ	**Ofunato**	**1.28**	**269**	P	Pn	10 54 12.4	-0.1
JTH	**Tanohata**	**1.40**	**307**	P	Pn	10 54 14.1	0.0
JOM	**Ohasama**	**1.61**	**284**	P	Pn	10 54 17.6	+0.5
JOM				*e*S	Sb	10 54 38.5	-0.3
JMK	**Ichinoseki**	**1.64**	**265**	P	Pn	10 54 18.3	+0.9
JIO	**Ouri**	**1.67**	**248**	P	Pn	10 54 18.5	+0.6
JIO				*e*S	Sn	10 54 39.1	+0.3
JANG	**Nango**	**1.88**	**313**	P	Pn	10 54 20.8	+0.1
JRG	**Rokugo**	**2.10**	**279**	P	Pn	10 54 25.4	+1.6
JOU	**Okura**	**2.21**	**251**	P	Pn	10 54 26.6	+1.4
JOU				*e*S	Sn	10 54 53.4	+1.4
JYK	**Kaneyama**	**2.31**	**266**	P	Pn	10 54 28.1	+1.4
JAH	**Hinai**	**2.33**	**298**	P	Pn	10 54 28.0	+1.0
JMM	**Marumori**	**2.34**	**239**	P	Pn	10 54 27.9	+0.9
JMM				*e*S	Sn	10 54 54.8	-0.4
JTM	**Tenmabayashi**	**2.41**	**315**	P	Pn	10 54 29.0	+1.0
MAT	**Matsushiro**	**4.79**	**239**	P	Pn	10 55 04.1	+3.3

IDC 20 11:10:58.5±3.2, 3˚.63N×95˚.68E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.4/27, mbtmp3.5/4, Error ellipse: s-maj=63.5km s-min=44.8km az=54.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat** 3.0nm,0.3s,baz=307,slow=14,SNR=11	**3.35**	**104**	Pn	Pn	11 11 52.9	+0.6
PSI				Sn	Sn	11 12 34.6	+1.7
	2.3nm,0.3s,baz=329,slow=23,SNR=3.7						
CMAR	**Chiang Mai Arr** baz=197,slow=11,SNR=4.1	**15.08**	**12**	Pn	Pn	11 14 32.8	-0.2
WRA	**Warramunga Arr** 0.6nm,0.4s,baz=301,slow=9.1,SNR=9.6	**44.62**	**123**	P	P	11 19 12.7	-0.4
ASAR	**Alice Springs** 0.2nm,0.4s,baz=301,slow=7.6,SNR=14	**46.08**	**128**	P	P	11 19 24.7	+0.1

NEIC ***20*** *11:15:45.8, 63˚.31N×166˚.84W, h10km, ML4.3(AEIC), After AEIC.*
NEIC Felt at Emmonak and Nome, Alaska.
ISCJB ***20*** *11:15:47.4±0.5, 63˚.51N±0˚.05×166˚.37W±0˚.07, h10km, mb3.6/6, Error ellipse: s-maj=7.9km s-min=3.9km az=19.1*
IDC ***20*** *11:15:49.2±1.0, 63˚.37N×166˚.82W, h0km, mb3.6/6, mb1 3.9/8, mb1mx3.6/30, mbtmp3.7/8, ML4.1/2, Error ellipse: s-maj=24.7km s-min=12.0km az=15.0*

ISC 20 11:15:49.5±0.8, 63˚.49N±0˚.06×166˚.70W±0˚.05, h10km, n36, σ1§84/41, mb3.7/6, Bering Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNA	**Tin City**	**2.15**	**346**	*e*Pn	**Pn**	**11 16 24.1**	**-1.2**
TNA				S	**Sb**	**11 16 57.3**	**+2.2**
TNA				*e*Sg	**Sg**	**11 16 59.1**	**+0.5**
GAMB	**Gambell**	**2.25**	**280**	P	**Pn**	**11 16 24.4**	**-2.4**
GAMB				S	**Sb**	**11 16 55.7**	**-2.5**
GCSA	**Galena City Sc**	**4.49**	**69**	P	Pn	11 16 53.9	-3.5
GCSA				S	**Sn**	**11 17 48.0**	**-1.6**
TT01	**Tatalina**	**4.87**	**92**	P	Pn	11 16 58.8	-4.0
TT01				S	**Sn**	**11 17 56.9**	**-2.1**
IM3	**Indian Mountai**	**6.08**	**60**	P	**Pn**	**11 17 17.2**	**-2.1**
CHUM	**Lake Minchumin**	**6.41**	**80**	P	Pn	11 17 20.2	-3.6
SPIA	**Saint Paul Isl**	**6.57**	**197**	P	Pn	11 17 19.6	-6.4
PPLA	**Purkeypile** 30nm,0.6s	**6.59**	**89**	*e*Pn	**Pn**	**11 17 25.7**	**-0.8**
PPLA				*e*Sg	**Sg**	**11 19 20.8**	**0.0**
RSO	**Redoubt South** 142nm,0.5s	**7.23**	**108**	*e*Pn	**Pn**	**11 17 34.7**	**-0.6**
TRF	**Thorofare Moun** 19nm,0.8s	**7.35**	**83**	*e*Pn	**Pn**	**11 17 34.9**	**-2.0**
TRF				*e*Sn	**Sn**	**11 18 56.0**	**-4.3**
COLD	**Coldfoot** 6.6nm,0.7s	**7.84**	**54**	*e*Pn	**Pn**	**11 17 42.1**	**-1.3**
MCK	**McKinley** 11nm,0.7s	**7.92**	**80**	*e*Pn	**Pn**	**11 17 43.7**	**-0.8**
PMR	**Palmer** 9.2nm,0.6s	**8.33**	**95**	*e*Pn	**Pn**	**11 17 50.6**	**+0.4**
COLA	**College** 17nm,0.4s	**8.34**	**72**	*e*Pn	**Pn**	**11 17 48.3**	**-1.9**
COLA				*e*Sn	Sn	11 19 19.4	-4.9
SML	**Sawmill** 6.2nm,0.8s	**8.62**	**93**	*e*Pn	**Pn**	**11 17 55.0**	**+0.9**
ILAR	**Eielson Array**	**8.75**	**73**	Pn	**Pn**	**11 17 53.9**	**-2.0**
ILAR				Sn	Sn	11 19 28.3	-6.2
ILAR	**Eielson Array** 0.9nm,0.3s,baz=271,slow=14,SNR=104	**8.75**	**73**	Pn	**Pn**	**11 17 53.9**	**-2.0**
ILAR				Sn	Sn	11 19 28.3	-6.2
	0.8nm,0.3s,baz=272,slow=23,SNR=5.1						
KDAK	**Kodiak Island**	**8.97**	**123**	Pn	**Pn**	**11 17 57.1**	**-1.9**
KDAK				Sn	**Sn**	**11 19 39.6**	**-0.3**
KDAK	**Kodiak Island** 2.2nm,0.3s,baz=333,slow=7.7,SNR=14	**8.97**	**123**	Pn	**Pn**	**11 17 57.1**	**-1.9**
KDAK				Sn	**Sn**	**11 19 39.6**	**-0.3**
	baz=322,slow=18,SNR=1.5						
PAX	**Paxson** 14nm,0.9s	**9.58**	**84**	*e*Pn	**Pn**	**11 18 07.5**	**+0.1**
PAX				*e*Sn	**Sn**	**11 19 58.2**	**+3.2**
MENT	**Mentasta**	**10.37**	**83**	*e*Pn	**Pn**	**11 18 17.0**	**-1.2**
EGAK	**Eagle** 3.5nm,0.7s	**11.20**	**72**	*e*Pn	**Pn**	**11 18 27.6**	**-1.9**
INK	**Inuvik** 0.2nm,0.3s,baz=262,slow=11,SNR=8.8	**14.25**	**56**	Pn	**P**	**11 19 16.5**	**-1.9**
YKW3	**Yellowknife Ar**	**23.11**	**69**	*e*P	**P**	**11 20 55.0**	**-0.2**
YKA	**Yellowknife Ar**	**23.15**	**69**	P	**P**	**11 20 56.2**	**+0.7**
YKA	**Yellowknife Ar** 1.0nm,0.8s,baz=293,slow=9.2,SNR=9.1	**23.15**	**69**	P	**P**	**11 20 56.2**	**+0.7**
NVAR	**Mina Array Bea**	**38.07**	**108**	P	**P**	**11 23 10.6**	**+2.3**
NVAR	**Mina Array Bea** 1.4nm,0.8s,baz=297,slow=6.8,SNR=2.3	**38.07**	**108**	P	**P**	**11 23 10.6**	**+2.3**
PDAR	**Pinedale Array**	**38.38**	**95**	P	**P**	**11 23 12.8**	**+2.0**
PDAR	**Pinedale Array** 0.4nm,0.7s,baz=304,slow=8.6,SNR=2.4	**38.38**	**95**	P	**P**	**11 23 12.8**	**+2.0**
SONM	**Songino Array**	**47.42**	**294**	P	**P**	**11 24 23.4**	**-0.4**
SONM	**Songino Array** 0.3nm,0.3s,baz=43,slow=6.5,SNR=3.0	**47.42**	**294**	P	**P**	**11 24 23.4**	**-0.4**
ZALV	**Zalesovo Beam**	**50.46**	**313**	P	**P**	**11 24 49.1**	**+2.2**
ZALV	**Zalesovo Beam** 0.5nm,0.3s,baz=27,slow=7.1,SNR=2.9	**50.46**	**313**	P	**P**	**11 24 49.1**	**+2.2**
KURK	**Kurchatov**	**55.20**	**315**	P	P	11 25 25.0	+3.1
KURBB	**Kurchatov Arra** 0.4nm,0.6s,baz=38,slow=7.3,SNR=4.8	**55.31**	**315**	P	**P**	**11 25 25.0**	**+2.3**

JMA ***20*** *11:15:48.0±0.7, 47˚.92N×153˚.43E, h30km, M4.4*
ISCJB ***20*** *11:15:50.1±0.5, 47˚.87N±0˚.07×153˚.2E±0˚.1, h100km, mb3.7/17, Error ellipse: s-maj=14.1km s-min=4.0km az=135.1*
MOS ***20*** *11:15:50.2±1.3, 47˚.96N×153˚.20E, h100km, mb3.9/8, Error ellipse: s-maj=19.7km s-min=8.1km az=62.1*
IDC ***20*** *11:15:54.0±2.5, 47˚.95N×153˚.11E, h118km±23km, mb3.3/13, mb1 3.6/17, mb1mx3.5/31, mbtmp3.5/17, MS2.9/1, Ms1 2.9/1, ms1mx2.2/28, Error ellipse: s-maj=22.6km s-min=12.4km az=139.0*

ISC 20 11:15:50.6±0.6, 47˚.96N±0˚.10×153˚.3E±0˚.1, h100km, n53, σ2§03/50, mb3.7/17, 2C, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.28**	**33**	*e*Pn	Pn	11 16 38.0	-2.0
SKR				*e*S	**Sn**	**11 17 15.7**	**-2.4**
SKR				pmax	pmax		
	comp=N,70nm,0.5s						
SKR				pmax	pmax		
	comp=E,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				smax	smax		
	comp=N,100nm,0.5s						
SKR				smax	smax		
	comp=E,200nm,0.7s						
KUR	**Kuril'sk**	**4.65**	**236**	*e*PN	Pn	11 17 00.3	+1.9
KUR				*e*S	**Sn**	**11 17 54.3**	**+3.1**
KUR				pmax	pmax		
	comp=Z,45nm,0.5s						
KUR				pmax	pmax		
	comp=N,19nm,0.5s						
KUR				pmax	pmax		
	comp=E,9.0nm,0.3s						
KUR				smax	smax		
	comp=N,62nm,0.5s						
KUR				smax	smax		
	comp=E,25nm,0.4s						
PETK	**Petropavlovsk-**	**5.86**	**27**	*e*PN	**Pn**	**11 17 17.9**	**+3.1**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK	**Petropavlovsk-** comp=Z,2.2nm,0.3s,baz=192,slow=14,SNR=33	**5.86**	**27**	P	**Pn**	**11 17 17.9**	**+3.1**
PET	**Petropavlovsk**	**6.10**	**32**	*e*PN	**Pn**	**11 17 20.3**	**+2.2**
PET				*e*S	**Sn**	**11 18 27.4**	**+1.0**
PET				pmax	pmax		
	comp=Z,27nm,0.6s						
PET				smax	smax		
	comp=N,38nm,0.6s						
PET				smax	smax		
	comp=E,49nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**6.51**	**236**	*e*PN	**Pn**	**11 17 24.0**	**+0.2**
JRA	**Rausu**	**6.99**	**238**	P	**Pn**	**11 17 30.5**	**+0.3**
NEM2	**Nemuro 2**	**7.02**	**232**	P	**Pn**	**11 17 28.1**	**-2.6**
NEM2				*e*S	Sn	11 18 41.8	-7.2
YSS	**Yuzh-Sakhalins**	**7.24**	**266**	PN	Pn	11 17 44.1	+11
JNK	**Nakash**	**7.44**	**237**	P	**Pn**	**11 17 35.9**	**-0.5**
JNK				*e*S	**Sn**	**11 18 57.6**	**-1.5**
JTKR	**Abashiri--Toko**	**7.68**	**242**	P	**Pn**	**11 17 40.7**	**+1.1**
JAK	**Akkeshi**	**7.83**	**234**	P	**Pn**	**11 17 39.1**	**-2.6**
JAK				*e*S	Sn	11 19 01.3	-7.4
JMP	**Maruseppu**	**7.99**	**244**	P	Pn	11 17 45.8	+2.0
JAR	**Ashorobuto**	**8.16**	**239**	P	**Pn**	**11 17 46.1**	**-0.1**
JAR				*e*S	**Sn**	**11 19 14.7**	**-1.9**
JOB	**Onbets**	**8.37**	**236**	P	**Pn**	**11 17 47.8**	**-1.2**
JOB				*e*S	**Sn**	**11 19 16.1**	**-5.7**
ASAJ	**Asahikawa**	**8.39**	**247**	P	Pn	11 17 52.0	+2.6
ASAJ	**Asahikawa** comp=E,2.5nm,0.3s,baz=77,slow=13,SNR=26	**8.39**	**247**	P	Pn	11 17 52.0	+2.6
JKK2	**Kamakawa 2**	**8.43**	**245**	P	Pn	11 17 51.5	+1.6
JKK2				*e*S	**Sn**	**11 19 26.4**	**+3.2**
JCH	**Churui**	**8.82**	**236**	P	**Pn**	**11 17 52.8**	**-2.4**
JCH				*e*S	Sn	11 19 24.3	-8.5
JFR	**Furan**	**8.92**	**241**	P	**Pn**	**11 17 58.1**	**+1.5**
JAB	**Ashibetsu**	**8.95**	**244**	P	Pn	11 17 59.4	+2.5
JBT2	**Biratori 2**	**9.29**	**240**	P	**Pn**	**11 18 01.7**	**+0.2**
JEM	**Erimo**	**9.34**	**234**	P	**Pn**	**11 18 00.4**	**-1.7**
JEM				*e*S	Sn	11 19 37.6	-7.6
ERM	**Erimo**	**9.34**	**234**	*e*PN	**Pn**	**11 18 00.9**	**-1.2**
JNBK	**Urakawa-nobuka**	**9.38**	**237**	P	**Pn**	**11 17 59.7**	**-3.1**
JNBK				*e*S	Sn	11 19 38.3	-8.1
JKB	**Kayabe**	**10.62**	**240**	P	**Pn**	**11 18 16.8**	**-2.8**
JKB				*e*S	Sn	11 20 06.2	-10
JTM	**Tenmabayashi**	**11.32**	**235**	P	Pn	11 18 24.1	-5.0
JTM				*e*S	Sn	11 20 20.9	-13
JANG	**Nango**	**11.37**	**232**	P	Pn	11 18 23.7	-6.1
JANG				*e*S	Sn	11 20 20.5	-14
JIO	**Ouri**	**12.89**	**227**	*e*S	Sn	11 20 58.1	-14
USRK	**Ussuriysk Arra** comp=E,0.3nm,0.3s,baz=67,slow=11,SNR=6.4	**15.26**	**264**	P	**P**	**11 19 22.1**	**-0.8**
MJA0	**Matsu Arr-Jizo**	**15.93**	**230**	*e*P	**Pn**	**11 19 27.7**	**-1.2**
MJAR	**Matsushiro Arr** comp=E,0.2nm,0.3s,baz=27,slow=14,SNR=5.7	**15.95**	**230**	P	**Pn**	**11 19 27.3**	**-1.9**
MJAR				LR	LR	11 25 33.7	
	comp=E,40nm,20.4s,baz=55,slow=37						
JHJ	**Hachijo jima 2** comp=E,7.0nm,0.3s,baz=86,slow=19,SNR=3.6	**18.01**	**219**	P	**Pn**	**11 19 54.3**	**0.0**
BILL	**Bilibino**	**21.18**	**13**⇑	*e*P	**P**	**11 20 29.6**	**+2.1**
BILL				*e*S	**S**	**11 24 16.0**	**-1.0**
BILL				pmax	pmax		
	comp=Z,17nm,1.2s						
KSRS	**Korea Array** comp=Z,2.3nm,0.8s,baz=43,slow=11,SNR=6.5	**21.32**	**250**	P	**P**	**11 20 30.5**	**+1.2**
TIXI	**Tiksi**	**26.35**	**343**	*e*P	**P**	**11 21 17.1**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ILAR	**Eielson Array** comp=Z,0.4nm,0.5s,baz=269,slow=5.0,SNR=4.0	**35.52**	**40**	P	**P**	**11 22 38.8**	**+1.5**
INK	**Inuvik** comp=Z,1.1nm,0.6s,baz=198,slow=19,SNR=6.3	**40.55**	**33**	P	**P**	**11 23 22.4**	**+2.9**
MKAR	**Makanchi Array**	**46.52**	**296**	P	**P**	**11 24 08.3**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MKAR	**Makanchi Array** comp=Z,0.5nm,0.8s,baz=73,slow=9.0,SNR=4.6	**46.52**	**296**	P	**P**	**11 24 08.3**	**+0.6**
KURK	**Kurchatov**	**46.82**	**303**	P	**P**	**11 24 11.2**	**+1.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	**Kurchatov Arra** comp=Z,1.0nm,0.6s,baz=69,slow=8.6,SNR=11	**46.91**	**303**	P	**P**	**11 24 11.2**	**+0.5**
YKA	**Yellowknife Ar** comp=Z,0.4nm,0.6s,baz=299,slow=7.4,SNR=4.5	**49.87**	**37**	P	**P**	**11 24 35.9**	**+2.7**
BRVK	**Borovoye**	**50.24**	**309**	*e*P	**P**	**11 24 37.3**	**+1.1**
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NVAR	**Mina Array Bea** comp=Z,0.4nm,0.5s,baz=290,slow=6.8,SNR=4.0	**61.75**	**63**	P	**P**	**11 26 01.4**	**+2.8**
FINES	**FINESS Array B** comp=Z,2.6nm,1.0s,

142nm,0.7s,1µm0.5nm
TTSI S Sn 11 47 11.0 +6.6
142nm,0.7s,1µm0.5nm
TSM Tawau 8.13 286 P **Pn** **11 45 42.0 +0.6**
SPSI Sidrap Palu 8.48 225 P Pn 11 45 50.1 +3.9
71nm,0.9s,831nm
SDKM Sandakan 9.20 293 P **Pn** **11 45 56.5 +0.4**
KAPI Kappang 9.26 220 *e*Pn **Pn** **11 45 56.3 -0.6**
KAPI *e*Sn **Sn** **11 47 42.3 +2.4**
KAPI Sn **Sn** 11 47 43.1 +3.2
KAPI Kappang 9.26 220 Pn **Pn** **11 45 59.2 +2.3**
1.3nm,0.3s,baz=43,slow=11,SNR=6.2
KAPI Sn **Sn** **11 47 43.1 +3.2**
1.6nm,0.3s,baz=345,slow=19,SNR=2.2
KAPI LR LR 11 50 04.8
comp=Z,405nm,19.0s,baz=74,slow=42
KDM Kudat 10.06 299 P Pn 11 46 11.4 +3.6
KKM Kota Kinabalu 10.25 293 Pn **Pn** **11 46 11.0 +0.5**
KKM *e*Sn **Sn** **11 48 05.3 +1.0**
KKM Kota Kinabalu 10.25 293 P **Pn** **11 46 13.0 +2.5**
KKM Kota Kinabalu 10.25 293 P **Pn** **11 46 11.8 +1.3**
56nm,1.0s,592nm
BTM Bintulu 12.67 275 P **P** **11 46 55.2 +1.2**
SBUM Sibu 13.49 272 P **P** **11 47 00.7 -2.5**
SBUM Sibu 13.49 272 P P 11 47 07.2 +4.0
SBUM Sibu 13.49 272 P **Pn** **11 46 56.9 +2.1**
39nm,1.0s
STKI Sintang 14.38 262 P **P** **11 47 14.2 +1.1**
KSM Kuching 15.42 268 *e*P **P** **11 47 25.0 +0.4**
36nm,0.9s
KSM Kuching 15.42 268 P **P** **11 47 27.0 +2.3**
KSM Kuching 15.42 268 P **P** **11 47 26.4 +1.8**
57nm,1.1s,531nm
FITZ Fitzroy Crossi 20.10 180 P **P** **11 48 15.8 -0.3**
20nm,0.9s
FITZ S **S** **11 51 56.5 -3.3**
FITZ Fitzroy Crossi 20.10 180 P **P** **11 48 15.8 -0.3**
6.0nm,0.5s,baz=12,slow=9.9,SNR=43
FITZ S **S** **11 51 56.5 -3.3**
4.0nm,1.1s,baz=305,slow=16,SNR=3.2
MYKOM Kota Tinggi 21.86 270 P **P** **11 48 39.4 +4.2**
MYKOM Kota Tinggi 21.86 270 P **P** **11 48 37.4 +2.2**
23nm,1.4s
KGM Kluang 22.39 270 P **P** **11 48 43.8 +2.9**
KTGM Kuala Trenggan 22.76 279 P **P** **11 48 45.6 +0.7**
QIZ Qiongzhong 22.89 318 P **P** **11 48 46.6 +0.4**
QIZ S **S** **11 52 55.0 +1.8**
WRAB Tennant Creek 23.50 159 *e*P **P** **11 48 51.4 -0.8**
35nm,0.3s
WRA Warramunga Arr 23.50 159 P **P** **11 48 51.3 -1.0**
WRA PcP **PcP** **11 52 37.6 +0.3**
WRA S **S** **11 53 00.8 -2.5**
WRA PKiKP **PKiKP** **12 00 20.1 -1.2**
WRA Warramunga Arr 23.50 159 P **P** **11 48 51.3 -1.0**
21nm,0.3s,baz=334,slow=11,SNR=2.3
WRA PcP **PcP** **11 52 37.6 +0.3**
2.9nm,0.7s,baz=326,slow=2.2,SNR=4.6
WRA S **S** **11 53 00.8 -2.5**
22nm,0.7s,baz=342,slow=18,SNR=11
WRA PKiKP **PKiKP** **12 00 20.1 -1.2**
0.4nm,0.8s,baz=320,slow=1.4,SNR=6.8
COEN Coen 23.55 133 *e*P **P** **11 48 52.0 -0.7**
167nm,0.9s
MBWA Marble Bar 23.87 194 *e*P **P** **11 48 55.1 -0.6**
158nm,2.1s
UBPT Khong Chiam 23.87 304 P **P** **11 48 54.7 -1.0**
26nm,1.2s
PMG Port Moresby 24.24 119 P **P** **11 49 00.2 +1.0**
PMG Port Moresby 24.24 119 P **P** **11 49 00.2 +1.0**
22nm,1.0s,baz=285,slow=20,SNR=3.7
JOW Kunigami 24.69 5 *e*P **P** **11 49 03.6 +0.4**
24nm,1.1s
IPM Ipoh 24.76 276 *e*P **P** **11 49 04.4 +0.4**
40nm,1.1s
IPM Ipoh 24.76 276 P **P** **11 49 03.8 -0.2**
IPM Ipoh 24.76 276 P **P** **11 49 03.6 -0.4**
35nm,1.1s
KULM Kulim 25.21 278 *e*P **P** **11 49 08.4 +0.4**
47nm,1.2s
KULM Kulim 25.21 278 P **P** **11 49 09.5 +1.4**
PPI Padang Panjang 25.45 265 P P 11 49 15.3 +5.1
PSI Prapat 26.78 272 P **P** **11 49 19.4 -2.9**
PSI Prapat 26.78 272 P P **11 49 19.4 -2.9**
8.7nm,0.7s,baz=159,slow=3.1,SNR=7.5
AS31 Alice Springs 26.84 163 *e*P **P** **11 49 22.7 0.0**
AS31 *e*PcP **PcP** **11 52 45.6 +0.8**
ASAR Alice Springs 26.84 163 P **P** **11 49 22.6 0.0**
ASAR PcP **PcP** **11 52 45.5 +0.7**
ASAR S **S** **11 53 55.2 -1.3**
ASAR Alice Springs 26.84 163 P **P** **11 49 22.6 0.0**
4.0nm,0.4s,baz=339,slow=7.4,SNR=123
ASAR PcP **PcP** **11 52 45.5 +0.7**
3.4nm,0.6s,baz=349,slow=2.1,SNR=9.0
ASAR S **S** **11 53 55.2 -1.3**
2.5nm,0.8s,baz=347,slow=22,SNR=5.4
ASAR LR LR 11 59 30.7
comp=Z,94nm,19.0s,baz=230,slow=35
GYA Guiyang 30.34 325 P **P** **11 49 54.5 +0.6**
GYA pP **pP** **11 50 05.3 +0.2**
GYA PP **PnPn** **11 50 55.6 +2.4**
GYA PcP **PcP** **11 52 53.4 -0.1**
GYA S **S** **11 54 52.0 +0.3**
GYA ScP **ScP** **11 56 33.8 +0.9**
GYA ScS **ScS** **12 00 27.5 -1.6**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,90nm,4.9s
GYA LR LR
comp=N,480nm,18.5s
GYA LR LR
comp=E,360nm,17.0s
GYA LR LR
comp=Z,450nm,18.3s
CMAR Chiang Mai Arr 30.86 304 P **P** **11 49 57.5 -1.0**
CMAR PcP **PcP** **11 52 55.0 +0.1**
CMAR Chiang Mai Arr 30.86 304 P **P** **11 49 57.5 -1.0**
comp=Z,1.2nm,0.8s,baz=128,slow=8.2,SNR=6.9
CMAR PcP **PcP** **11 52 55.0 +0.1**
comp=Z,0.7nm,0.6s,baz=116,slow=1.4,SNR=4.7
CMAR LR LR 12 03 07.8
comp=Z,70nm,18.1s,baz=145,slow=38
KMI Kunming 31.84 318 P **P** **11 50 09.6 +2.3**
KMI pmax pmax
comp=Z,7.0nm,0.9s
KSAR Wonju Array Be 35.20 3 P **P** **11 50 36.5 +0.4**
KSAR PcP **PcP** **11 53 07.1 +0.5**
KSRS Korea Array 35.22 3 P **P** **11 50 36.5 +0.3**
comp=Z,5.4nm,0.8s,baz=180,slow=9.9,SNR=15
KSRS PcP **PcP** **11 53 07.1 +0.5**
comp=Z,1.5nm,0.8s,baz=185,slow=2.8,SNR=4.4
CD2 Chengdu 35.38 326 *e*P **P** **11 50 40.3 +2.5**
CD2 pP **pP** **11 50 50.3 +1.2**
CD2 sP **sP** **11 50 54.6 +0.6**
CD2 PP **PP** **11 52 00.8 +2.1**
CD2 S **S** **11 56 12.3 +2.6**
CD2 sS **sS** **11 56 29.0 +0.4**
CD2 SS **SnSn** **11 58 31.9 +0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,50nm,4.8s
CD2 LR LR
comp=N,360nm,13.2s
CD2 LR LR
comp=Z,390nm,13.2s
NWAO Narrogin (SRO) 35.77 192 P **P** **11 50 40.7 -0.4**
NWAO Narrogin (SRO) 35.77 192 P **P** **11 50 40.7 -0.4**
comp=Z,11nm,0.6s,baz=41,slow=8.1,SNR=8.3
MJAR Matsushiro Arr 36.14 17 P **P** **11 50 43.2 -1.1**
MJAR Matsushiro Arr 36.14 17 P **P** **11 50 43.2 -1.1**
comp=Z,5.7nm,0.8s,baz=199,slow=8.6,SNR=36
MJAR LR LR 12 05 57.1
comp=Z,58nm,19.1s,baz=125,slow=37
MAJO Matsushiro 36.14 17 *e*P **P** **11 50 43.5 -0.7**
MAT Matsushiro 36.14 17 P **P** **11 50 43.2 -1.0**
STKA Stephens Creek 37.02 157 *e*P **P** **11 50 52.3 +0.6**
STKA Stephens Creek 37.02 157 P **P** **11 50 52.4 +0.6**
comp=Z,24nm,0.8s,baz=332,slow=8.2,SNR=27
BJI Beijing 38.73 348 P **P** **11 51 08.4 +2.4**
BJI S **S** **11 57 04.3 +4.0**
BJI pmax pmax
comp=Z,9.0nm,0.9s
BJI LR LR
comp=Z,60nm,21.0s

LZH Lanzhou 39.40 332 *e*P P 11 51 16.6 +4.7
LZH pP pP 11 51 24.5 +1.1
LZH sP sP 11 51 27.5 -0.8
LZH pmax pmax
comp=Z,20nm,1.4s
SHL Shillong 40.05 309 *e*PKP **P** **11 51 20.0 +2.5**
HHC Hu-ho-hao-te 40.62 343 *e*P **P** **11 51 24.8 +2.9**
HHC pP **pP** **11 51 34.6 +1.2**
HHC sP **sP** **11 51 38.6 +0.3**
HHC PP **PnPn** **11 53 02.8 +2.5**
HHC PcS **PcS** **11 57 15.8 +1.6**
HHC S **S** **11 57 33.3 +4.3**
HHC sS **sS** **11 57 49.5 +1.4**
HHC SS **SS** **12 00 30.3 0.0**
HHC ScS **ScS** **12 01 25.3 +0.9**
HHC pmax pmax
comp=Z,32nm,1.1s
HHC pmax pmax
comp=Z,100nm,5.1s
HHC LR LR
comp=N,310nm,13.7s
HHC LR LR
comp=E,300nm,11.6s
HHC LR LR
comp=Z,240nm,13.7s
ARMA Armidale 40.72 145 *e*P **P** **11 51 24.0 +1.2**
comp=Z,30nm,0.8s
CN2 Changchun 41.50 360 *e*P P 11 51 35.6 +6.6
CN2 pmax pmax
comp=Z,10.0nm,0.6s
USRK Ussuriysk Arra 42.27 7 P **P** **11 51 35.7 +0.5**
comp=Z,3.9nm,0.5s,baz=190,slow=6.0,SNR=23
USRK LR LR 12 09 29.1
comp=Z,69nm,21.1s,baz=327,slow=37
MDJ Mudanjiang 42.45 4 P **P** **11 51 37.3 +0.6**
MDJ pmax pmax
comp=Z,16nm,1.3s
MDJ pmax pmax
comp=Z,85nm,8.1s
MDJ Mudanjiang 42.45 4 *e*P **P** **11 51 36.9 +0.1**
comp=Z,6.7nm,0.7s
GTA Gaotai 43.98 331 *e*P **P** **11 51 48.4 -0.9**
GTA pP **pP** **11 51 57.8 -3.1**
GTA sP **sP** **11 52 02.0 -3.7**
GTA S **S** **11 58 17.9 -0.6**
GTA sS **sS** **11 58 34.3 -3.4**
GTA SS SS 12 01 26.5 -10
GTA pmax pmax
comp=Z,4.0nm,0.9s
GTA pmax pmax
comp=Z,66nm,6.4s
GTA LR LR
comp=N,120nm,9.5s
GTA LR LR
comp=E,120nm,9.5s
GTA LR LR
comp=Z,180nm,14.3s
ASAJ Asahikawa 44.42 17 *e*P **P** **11 51 53.4 +0.8**
comp=Z,5.3nm,0.8s
SONM Songino Array 48.51 343 P **P** **11 52 23.2 -1.6**
SONM PcP **PcP** **11 53 49.5 -0.8**
SONM Songino Array 48.51 343 P **P** **11 52 23.2 -1.6**
comp=Z,0.3nm,0.4s,baz=156,slow=8.2,SNR=5.7
SONM PcP **PcP** **11 53 49.5 -0.8**
comp=Z,1.6nm,0.6s,baz=147,slow=5.5,SNR=6.4
WMQ Urumqi 53.48 326 *e*P **P** **11 53 04.0 +1.9**
WMQ pP **pP** **11 53 14.0 +0.1**
WMQ pmax pmax
comp=Z,7.0nm,0.8s
WMQ pmax pmax
comp=Z,150nm,4.0s
WMQ LR LR
comp=Z,150nm,21.8s
PEA0B Petropavlovsk- 57.29 22 *e*P **P** **11 53 28.6 -0.7**
PETK Petropavlovsk- 57.29 22 P **P** **11 53 29.6 +0.3**
PETK Petropavlovsk- 57.29 22 P **P** **11 53 29.6 +0.3**
comp=Z,4.4nm,0.6s,baz=184,slow=4.2,SNR=20
MK31 Makanchi Array 58.31 326 *e*P **P** **11 53 35.0 -1.6**
MK31 *e*PcP **PcP** **11 54 26.2 -1.2**
MKAR Makanchi Array 58.31 326 P **P** **11 53 34.6 -2.0**
MKAR PcP **PcP** **11 54 26.5 -0.9**
MKAR Makanchi Array 58.31 326 P **P** **11 53 34.6 -2.0**
comp=Z,1.1nm,0.5s,baz=122,slow=7.8,SNR=19
MKAR PcP **PcP** **11 54 26.5 -0.9**
comp=Z,6.3nm,0.7s,baz=121,slow=4.3,SNR=20
ZALV Zalesovo Beam 61.57 334 P **P** **11 53 56.2 -2.6**
ZALV Zalesovo Beam 61.57 334 P **P** **11 53 56.2 -2.6**
comp=Z,0.6nm,0.4s,baz=104,slow=6.1,SNR=3.3
KURBB Kurchatov Arra 62.55 328 P **P** **11 54 03.5 -1.9**
comp=Z,2.2nm,0.7s,baz=127,slow=6.1,SNR=22
KURK Kurchatov 62.56 328 *e*P **P** **11 54 03.5 -2.1**
comp=Z,4.5nm,0.6s
BVAR Borovoye Array 68.12 328 P **P** **11 54 39.4 -2.1**
BVAR Borovoye Array 68.12 328 P **P** **11 54 39.4 -2.1**
comp=Z,1.6nm,0.7s,baz=96,slow=9.0,SNR=5.2
CASY Casey 69.11 187 *e*P **P** **11 54 48.0 +0.6**
comp=Z,7.8nm,0.9s
ABKAR Akulak array 72.76 321 *e*P **P** **11 55 07.7 -2.2**
comp=Z,0.8nm,0.5s
AKTO Aktyubinsk 74.29 322 P **P** **11 55 16.5 -2.4**
AKTO Aktyubinsk 74.29 322 P **P** **11 55 16.5 -2.4**
comp=Z,1.2nm,0.6s,baz=144,slow=4.2,SNR=4.6
OPO Ambohidratompo 79.81 251 P **P** **11 55 50.1 -0.6**
OPO Ambohidratompo 79.81 251 P **P** **11 55 50.1 -0.6**
comp=Z,2.8nm,0.9s,baz=72,slow=6.4,SNR=4.1
MAW Mawson 81.91 200 P **P** **11 56 01.0 +0.4**
MAW Mawson 81.91 200 P **P** **11 56 01.0 +0.4**
comp=Z,2.3nm,0.5s,baz=61,slow=6.0,SNR=12
VNDA Vanda 81.97 173 *e*P **P** **11 56 01.6 +0.8**
comp=Z,8.3nm,0.9s
VNDA Vanda 81.97 173 P **P** **11 56 01.7 +0.8**
comp=Z,5.8nm,0.6s,baz=319,slow=5.8,SNR=27
RSO Redoubt South 83.98 30 *e*P **P** **11 56 11.9 0.0**
comp=Z,20nm,0.6s
COLD Coldfoot 85.76 23 *e*P **P** **11 56 21.9 +1.5**
comp=Z,4.7nm,0.5s
PMR Palmer 85.83 29 P **P** **11 56 21.5 +0.6**
comp=Z,8.4nm,1.0s
ILAR Eielson Array 86.98 25 P **P** **11 56 25.1 -1.4**
ILAR Eielson Array 86.98 25 P **P** **11 56 25.1 -1.4**
comp=Z,1.2nm,0.9s,baz=249,slow=4.6,SNR=14
ASF Jabal al Asfar 87.89 302 P **P** **11 56 30.9 -0.8**
ASF Jabal al Asfar 87.89 302 P **P** **11 56 30.9 -0.8**
comp=Z,1.8nm,0.8s,baz=59,slow=5.9,SNR=3.2
KMBO Kilima Mbogo 88.51 269 P **P** **11 56 34.8 -0.5**
KMBO Kilima Mbogo 88.51 269 P **P** **11 56 34.8 -0.5**
comp=Z,0.7nm,0.3s,baz=60,slow=20,SNR=4.4
JOF Joesuu 90.14 333 *ep* **P** **11 56 39.6 -1.9**
comp=Z,4.2nm,0.6s
SYO Syowa Base 90.57 201↑ *e*P **P** **11 56 42.6 -0.7**
ARCES ARCESS Array B 91.60 340 P **P** **11 56 46.5 -1.6**
ARCES ARCESS Array B 91.60 340 P **P** **11 56 46.5 -1.6**
comp=Z,3.8nm,0.8s,baz=76,slow=5.1,SNR=6.1
QSPA South Pole Qui 92.04 180 P **P** **11 56 51.0 +0.7**
QSPA South Pole Qui 92.04 180 P **P** **11 56 51.0 +0.7**
comp=Z,2.2nm,0.6s,baz=40,slow=0.6,SNR=13
KAF Kangasniemi 92.55 332 *ep* **P** **11 56 50.7 -1.9**
FINES FINESS Array B 92.76 332 P **P** **11 56 51.5 -2.1**
FINES FINESS Array B 92.76 332 P **P** **11 56 51.5 -2.1**
comp=Z,1.0nm,0.4s,baz=65,slow=4.1,SNR=20
BUR08 Bucovina Ar. S 95.53 318 *e*P **P** **11 57 06.5 -0.4**
LSZ Lusaka 97.82 255 P **P** **11 57 16.3 -1.6**
LSZ Lusaka 97.82 255 P **P** **11 57 16.3 -1.6**
comp=Z,1.3nm,0.6s,baz=355,slow=9.7,SNR=3.8
HFS Hagfors 98.96 332 P **P** **11 57 19.5 -2.4**
HFS Hagfors 98.96 332 P **P** **11 57 19.5 -2.4**
comp=Z,1.0nm,0.6s,baz=55,slow=7.6,SNR=8.6
NB2 NORSAR Subarra 99.77 333 P **Pdif** **11 57 22.7 -2.8**
comp=Z,1.9nm,0.7s,baz=69,slow=4.4
NB2 NORSAR Subarra 99.77 333 P **Pdif** **11 57 22.7 -2.8**
baz=69,slow=4.4
NOA NORSAR Array B 99.77 333 P **Pdif** **11 57 22.9 -2.6**
NOA NORSAR Array B 99.77 333 P **Pdif** **11 57 22.9 -2.6**
comp=Z,1.1nm,0.6s,baz=68,slow=4.5,SNR=4.4
YKA Yellowknife Ar 101.37 24 P **Pdif** **11 57 32.4 -0.1**
YKA PKiKP **PKiKP** **12 01 57.0 +0.3**
YKA Yellowknife Ar 101.37 24 P **Pdif** **11 57 32.4 -0.1**
comp=Z,0.6nm,0.9s,baz=295,slow=5.1,SNR=7.8
YKA PKiKP **PKiKP** **12 01 56.9 +0.3**
comp=Z,0.2nm,0.7s,baz=300,slow=1.8,SNR=4.2
NVAR Mina Array Bea 108.72 48 PKKPab PKKPab 12 13 33.2 -0.4
NVAR Mina Array Bea 108.72 48 PKKPab PKKPab 12 13 33.2 -0.4
comp=Z,0.4nm,0.7s,baz=116,slow=4.1,SNR=3.8
PDAR Pinedale Array 113.22 41 PKKPab PKKPab 12 13 12.2 -1.4
PDAR Pinedale Array 113.22 41 PKKPab PKKPab 12 13 12.2 -1.4
comp=Z,0.8nm,0.6s,baz=122,slow=6.7,SNR=6.3
SCHQ Schefferville 122.30 9 PKP **PKPdf** **12 02 36.4 0.0**
SCHQ Schefferville 122.30 9 PKP **PKPdf** **12 02 36.4 0.0**
comp=Z,3.1nm,0.6s,baz=62,slow=0.4,SNR=13
TORD Torodi Ar. Bea 122.44 287 PKP **PKPdf** **12 02 37.0 -0.8**
TORD Torodi Ar. Bea 122.44 287 PKP **PKPdf** **12 02 37.0 -0.8**
comp=Z,2.1nm,0.6s,baz=69,slow=1.6,SNR=17
TXAR Lajitas Array 123.37 53 PKP **PKPdf** **12 02 40.9 +1.5**
TXAR Lajitas Array 123.37 53 PKP **PKPdf** **12 02 40.9 +1.5**
comp=Z,0.7nm,0.8s,baz=300,slow=2.7,SNR=7.0
JCT Junction City 125.86 49 *e*PKPdf **PKPdf** **12 02 43.8 -0.3**
DBIC Dimbokro 129.90 280 PKP **PKPdf** **12 02 52.1 0.0**
DBIC Dimbokro 129.90 280 PKP **PKPdf** **12 02 52.1 0.0**
comp=Z,1.6nm,0.5s,baz=77,slow=18,SNR=2.4
TKL Tuckaleechee C 133.39 33 PKP **PKPdf** **12 02 58.5 +0.4**
TKL Tuckaleechee C 133.39 33 PKP **PKPdf** **12 02 58.5 +0.4**
comp=Z,3.1nm,0.8s,baz=274,slow=19,SNR=6.5
PLCA Paso Flores 138.84 161 PKP **PKPdf** **12 03 10.0 +1.8**
PLCA Paso Flores 138.84 161 PKP **PKPdf** **12 03 10.0 +1.8**
comp=Z,2.7nm,0.8s,baz=297,slow=4.5,SNR=4.0
CFAA Coronel Fontan 147.85 157 PKPbc **PKPab** **12 03 28.4 -1.3**
CFAA Coronel Fontan 147.85 157 PKPbc **PKPab** **12 03 28.4 -1.3**
comp=Z,1.0nm,0.8s,baz=236,slow=3.0,SNR=10
LCO Las Campanas 149.02 151 *e*PKPbc **PKPbc** **12 03 32.3 +1.7**
CPUP Villa Florida 155.75 173 PKPbc PKPdf 12 03 45.5 +9.3
CPUP PKPab **PKPab** **12 04 03.5 +1.1**
CPUP Villa Florida 155.75 173 PKPbc PKPdf 12 03 45.5 +9.3
comp=Z,0.7nm,0.3s,baz=190,slow=7.0,SNR=3.5
CPUP PKPab **PKPab** **12 04 03.5 +1.1**
comp=Z,0.8nm,0.4s,baz=153,slow=3.2,SNR=2.9
ROSC El Rosal 158.80 71 PKPab **PKPab** **12 04 18.3 +1.5**
ROSC El Rosal 158.80 71 PKPab **PKPab** **12 04 18.3 +1.5**
comp=Z,6.5nm,0.5s,baz=311,slow=15,SNR=4.8
LPAZ La Paz 160.40 137 PKP **PKPdf** **12 03 44.1 +1.3**
LPAZ La Paz 160.40 137 PKP **PKPdf** **12 03 44.1 +1.3**
comp=Z,0.9nm,0.3s,baz=239,slow=15,SNR=3.9

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*IGIL **20** 11:49:35.1,34.54N×3.72W,h2km,ML3.0*
*INMG **20** 11:49:35.9±1.5,34.57N×3.90W,h0km,ML2.7,Error ellipse: s-maj=4.3km s-min=3.1km az=138.0*
*SFS **20** 11:49:35.0,34.52N×3.86W,h0km,ML3.9*
*PDA **20** 11:49:35.9±1.5,34.57N×3.90W,h0km,ML2.7,Error ellipse: s-maj=4.3km s-min=3.1km az=138.0*
*IDC **20** 11:49:35.2±2.0,34.66N×4.40W,h0km,mb2.9/1,mb1 3.2/3,mb1mx3.0/31,mbtmp3.0/3,ML3.6/2,Error ellipse: s-maj=69.3km s-min=13.6km az=99.0*
*ISCJB **20** 11:49:36.3±0.5,34.62N±0.02×3.98W±0.03,h17km±5km,mb2.9/1,Error ellipse: s-maj=3.8km s-min=2.5km az=24.5*
*CNRM **20** 11:49:36.9,34.59N×3.90W,h2km,MD3.4*
*MDD **20** 11:49:36.3±0.4,34.58N×3.88W,h0km,mb3.9/16,Error ellipse: s-maj=4.8km s-min=2.8km az=127.0*
*CSEM **20** 11:49:36.3±0.2,34.59N×3.91W,h10km,MD3.4,Error ellipse: s-maj=4.0km s-min=2.8km az=129.0*

ISC 20 11:49:35.9±1.1,34.58N±0.02×3.91W±0.02,h7km±9km,
n130,σ1§28/239,1C,Morocco

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TOU	**Touzarine**	**0.40**	**19**	P		P	**Pg**	**11 49 43.0**	**-0.7**
TOU				S		S	**Sg**	**11 49 49.0**	**0.0**
TOU	**Touzarine**	**0.40**	**19**	*i* P		P	**Pg**	**11 49 43.0**	**-0.7**
TOU				*i* S		S	**Sg**	**11 49 49.0**	**0.0**
MPAL	**Palemas**	**0.64**	**358**	P		P	**Pg**	**11 49 49.0**	**+0.8**
MPAL				S		S	**Sg**	**11 49 56.0**	**-0.6**
MPAL	**Palemas**	**0.64**	**358**	*i* P		P	**Pg**	**11 49 49.0**	**+0.8**
MPAL				*e*S		S	**Sg**	**11 49 56.0**	**-0.6**
ZAI	**Zaio**	**1.04**	**68**	P		P	**Pb**	**11 49 55.0**	**-1.2**
ZAI				S		S	**Sb**	**11 50 11.0**	**+1.0**
ZAI	**Zaio**	**1.04**	**68**	*i* P		P	**Pb**	**11 49 55.0**	**-1.2**
ZAI				*i* S		S	**Sb**	**11 50 11.0**	**+1.0**
EMEL	**Melilla**	**1.06**	**47**	⇑P		P	**Pb**	**11 49 55.5**	**-1.1**
	198nm,0.2s,SNR=18								
EMEL				S		S	**Sb**	**11 50 10.2**	**-0.5**
	333nm,0.2s								
EMLI	**Melilla**	**1.07**	**48**	P		P	**Pb**	**11 49 55.5**	**-1.2**
	198nm,0.2s,SNR=18								
EMLI				S		S	**Sb**	**11 50 10.2**	**-0.6**
	333nm,0.2s								
MELI	**Melilla**	**1.07**	**48**	P		P	**Pb**	**11 49 55.4**	**-1.3**
	228nm,0.2s,SNR=7.9								
MELI				S		S	**Sb**	**11 50 10.5**	**-0.5**
	271nm,0.3s,SNR=7.9								
MELI	**Melilla**	**1.07**	**48**	*i* P		P	**Pb**	**11 49 55.6**	**-1.2**
MELI				S		S	**Sb**	**11 50 10.5**	**-0.5**
	271nm,0.3s,SNR=7.9								
TGT	**Taghat**	**1.07**	**242**	P		P	**Pb**	**11 49 56.0**	**-0.9**
TGT				S		S	**Sn**	**11 50 13.0**	**+0.3**
TGT	**Taghat**	**1.07**	**242**	*i* P		P	**Pb**	**11 49 56.0**	**-0.9**
TGT				*i* S		S	**Sn**	**11 50 13.0**	**+0.3**
DKH	**Dar Kharkhour**	**1.49**	**308**	P		P	**Pn**	**11 50 03.0**	**-0.2**
DKH				S		S	**Sg**	**11 50 25.0**	**+1.2**
DKH	**Dar Kharkhour**	**1.49**	**308**	*i* P		P	**Pn**	**11 50 03.0**	**-0.2**
DKH				S		S	**Sg**	**11 50 25.0**	**+1.2**
EALB	**Alboran**	**1.53**	**28**	P		P	**Pn**	**11 50 02.4**	**-1.2**
	9.4nm,0.2s,SNR=21								
EALB				S		S	**Sn**	**11 50 23.4**	**-0.4**
	61nm,0.4s								
EALB	**Alboran**	**1.53**	**28**	P		P	**Pn**	**11 50 02.4**	**-1.2**
	9.4nm,0.2s,SNR=21								
EALB				S		S	**Sn**	**11 50 23.4**	**-0.4**
	61nm,0.4s								
MIF	**Mishlifen**	**1.60**	**223**	P		P	**Pn**	**11 50 04.0**	**-0.9**
MIF				S		S	**Sn**	**11 50 24.0**	**-1.9**
MIF	**Mishlifen**	**1.60**	**223**	*i* P		P	**Pn**	**11 50 04.0**	**-0.9**
MIF				*i* S		S	**Sn**	**11 50 24.0**	**-1.9**
RSA	**Sarsar**	**1.60**	**281**	P		P	**Pn**	**11 50 03.0**	**-1.7**
RSA				S		S	**Sn**	**11 50 25.0**	**-0.7**
RSA	**Sarsar**	**1.60**	**281**	*i* P		P	**Pn**	**11 50 03.0**	**-1.7**
RSA				*i* S		S	**Sn**	**11 50 25.0**	**-0.7**
CZD	**Col de Zad**	**1.81**	**212**	P		P	**Pn**	**11 50 08.0**	**+0.2**
CZD				S		S	**Sn**	**11 50 30.0**	**-1.1**
CZD	**Col de Zad**	**1.81**	**212**	*i* P		P	**Pn**	**11 50 08.0**	**+0.2**
CZD				*i* S		S	**Sn**	**11 50 30.0**	**-1.1**
MDT	**Midelt**	**1.86**	**199**	Pn		P	**Pn**	**11 50 07.3**	**-1.0**
	14nm,0.3s,baz=20,slow=14,SNR=283								
MDT				Pg		P	**Pb**	**11 50 09.8**	**-0.4**
	26nm,0.3s,baz=18,slow=17,SNR=283								
MDT				Lg		Lg		11 50 34.1	
	39nm,0.3s,baz=60,slow=20,SNR=16								
EMIJ	**Mijas**	**2.10**	**341**	P		P	**Pn**	**11 50 09.1**	**-2.4**
	1.6nm,0.2s,SNR=10.0								
EMIJ				S		S	**Sn**	**11 50 38.0**	**+0.2**
	26nm,0.4s,SNR=4.8								
EMIJ	**Mijas**	**2.10**	**341**	P		P	**Pn**	**11 50 09.1**	**-2.4**
	1.6nm,0.2s,SNR=10.0								
EMIJ				S		S	**Sn**	**11 50 38.0**	**+0.2**
	26nm,0.4s,SNR=4.8								
EJIF	**Jimena Fronter**	**2.25**	**326**	P		P	**Pn**	**11 50 15.4**	**+1.8**
	2.2nm,0.3s,SNR=7.9								
EJIF	**Jimena Fronter**	**2.25**	**326**	P		P	**Pn**	**11 50 15.4**	**+1.8**
	2.2nm,0.3s,SNR=7.9								
ERON	**Agron**	**2.43**	**2**	P		P	**Pn**	**11 50 14.7**	**-1.5**
	1.4nm,0.3s,SNR=7.9								
ERON				S		S	**Sn**	**11 50 44.6**	**-1.6**
	9.5nm,0.4s,SNR=7.9								
ERON	**Agron**	**2.43**	**2**	P		P	**Pn**	**11 50 14.7**	**-1.5**
	1.4nm,0.3s,SNR=7.9								
ERON				S		S	**Sn**	**11 50 44.6**	**-1.6**
	9.5nm,0.4s,SNR=7.9								
EBER	**Berja**	**2.45**	**20**	P		P	**Pn**	**11 50 15.2**	**-1.3**
	2.2nm,0.2s,SNR=16								
EBER				S		S	**Sn**	**11 50 45.5**	**-1.4**
	28nm,0.4s,SNR=9.0								
EBER	**Berja**	**2.45**	**20**	P		P	**Pn**	**11 50 15.2**	**-1.3**
	2.2nm,0.2s,SNR=16								
EBER				S		S	**Sn**	**11 50 45.5**	**-1.4**
	28nm,0.4s,SNR=9.0								
ELOJ	**Sierra Loja**	**2.56**	**356**	P		P	**Pn**	**11 50 18.8**	**+0.8**
	0.7nm,0.1s,SNR=6.5								
ELOJ				S		S	**Sn**	**11 50 50.3**	**+0.8**
	6.7nm,0.3s,SNR=8.2								
ELOJ	**Sierra Loja**	**2.56**	**356**	P		P	**Pn**	**11 50 18.8**	**+0.8**
	0.7nm,0.1s,SNR=6.5								
ELOJ				S		S	**Sn**	**11 50 50.3**	**+0.8**
	6.7nm,0.3s,SNR=8.2								
ZFT	**Errachidia**	**2.57**	**188**	P		P	**Pn**	**11 50 19.0**	**+0.9**
ZFT				S		S	**Sn**	**11 50 50.0**	**+0.3**
ZFT	**Errachidia**	**2.57**	**188**	*i* P		P	**Pn**	**11 50 19.0**	**+0.9**
ZFT				*i* S		S	**Sn**	**11 50 50.0**	**+0.3**
LIJA	**Lijar**	**2.61**	**333**	P		P	**Pn**	**11 50 19.2**	**+0.6**
LIJA	**Lijar**	**2.61**	**333**	P		P	**Pn**	**11 50 19.2**	**+0.6**
EQUE	**Quentar**	**2.64**	**8**	P		P	**Pn**	**11 50 19.5**	**+0.4**

		1.6nm,0.2s,SNR=5.1							
EQUE					S		Sn	11 50 51.9	+0.5
		6.2nm,0.3s,SNR=4.8							
EQUE	**Quentar**		**2.64**	**8**	P		Pn	11 50 19.5	+0.4
		1.6nm,0.2s,SNR=5.1							
EQUE					S		Sn	11 50 51.9	+0.5
		6.2nm,0.3s,SNR=4.8							
KIB	**El Ksiba**		**2.68**	**222**	P		Pn	11 50 20.0	+0.5
KIB					S		Sn	11 50 52.0	-0.2
KIB	**El Ksiba**		**2.68**	**222**	*i* P		Pn	11 50 20.0	+0.5
KIB					*i* S		Sn	11 50 52.0	-0.2
ECOG	**Cogollos-Vega**		**2.70**	**6**	P		Pn	11 50 20.8	+0.9
		2.0nm,0.1s,SNR=7.9							
ECOG	**Cogollos-Vega**		**2.70**	**6**	P		Pn	11 50 20.8	+0.9
		2.0nm,0.1s,SNR=7.9							
ENIJ	**Nijar**		**2.76**	**30**	P		Pn	11 50 18.7	-1.8
		3.6nm,0.2s,SNR=7.9							
ENIJ					S		Sn	11 50 53.5	-0.6
		9.9nm,0.3s,SNR=7.9							
ENIJ	**Nijar**		**2.76**	**30**	P		Pn	11 50 18.7	-1.8
		3.6nm,0.2s,SNR=7.9							
ENIJ					S		Sn	11 50 53.5	-0.6
		9.9nm,0.3s,SNR=7.9							
TZC	**Tazercounte**		**3.25**	**222**	P		Pn	11 50 26.0	-1.4
TZC					S		Sn	11 51 04.0	-2.5
TZC	**Tazercounte**		**3.25**	**222**	*i* P		Pn	11 50 26.0	-1.4
TZC					S		Sn	11 51 04.0	-2.5
EQES	**Quesada**		**3.28**	**12**	P		Pn	11 50 29.0	+1.1
		0.1nm,0.2s,SNR=13							
EQES					S		Sn	11 51 07.0	-0.2
		18nm,0.3s							
EQES	**Quesada**		**3.28**	**12**	P		Pn	11 50 29.0	+1.1
		0.1nm,0.2s,SNR=13							
EQES					S		Sn	11 51 07.0	-0.2
		18nm,0.3s							
EHUE	**Huescar**		**3.40**	**18**	P		Pn	11 50 31.2	+1.8
		1.3nm,0.2s,SNR=7.9							
EHUE					S		Sn	11 51 11.0	+1.0
		SNR=7.9							
EHUE	**Huescar**		**3.40**	**18**	P		Pn	11 50 31.2	+1.8
		1.3nm,0.2s,SNR=7.9							
EHUE					S		Sn	11 51 11.0	+1.0
		SNR=7.9							
EADA	**Adamuz**		**3.62**	**352**	P		Pn	11 50 33.1	+0.7
		1.6nm,0.3s,SNR=14							
EADA					S		Sn	11 51 15.1	-0.2
		11nm,0.4s,SNR=4.7							
EADA	**Adamuz**		**3.62**	**352**	P		Pn	11 50 33.1	+0.7
		1.6nm,0.3s,SNR=14							
EADA					S		Sn	11 51 15.1	-0.2
		11nm,0.4s,SNR=4.7							
EMIN	**Mina Concepcio**		**3.88**	**326**	P		Pn	11 50 35.6	-0.4
		1.1nm,0.3s,SNR=15							
EMIN					S		Sn	11 51 20.5	-1.3
		2.5nm,0.4s,SNR=7.9							
EMIN	**Mina Concepcio**		**3.88**	**326**	P		Pn	11 50 35.6	-0.4
		1.1nm,0.3s,SNR=15							
EMIN					S		Sn	11 51 20.5	-1.3
		2.5nm,0.4s,SNR=7.9							
EMUR	**La Murta**		**3.90**	**33**	P		Pn	11 50 35.9	-0.4
		2.7nm,0.4s,SNR=7.9							
EMUR					S		Sn	11 51 20.3	-2.1
		10nm,0.9s,SNR=7.9							
EMUR	**La Murta**		**3.90**	**33**	P		Pn	11 50 35.9	-0.4
		2.7nm,0.4s,SNR=7.9							
EMUR					S		Sn	11 51 20.3	-2.1
		10nm,0.9s,SNR=7.9							
EGRO	**El Granado**		**4.13**	**317**	P		Pn	11 50 39.5	+0.2
		18nm,0.3s,SNR=35							
EGRO					S		Sn	11 51 28.3	+0.5
		17nm,0.4s							
EGRO	**El Granado**		**4.13**	**317**	P		Pn	11 50 39.5	+0.2
		18nm,0.3s,SNR=35							
EGRO					S		Sn	11 51 28.3	+0.5
		17nm,0.4s							
PVAQ	**Vaqueiros**		**4.17**	**313**	*e*Pn		Pn	11 50 39.6	-0.4
PVAQ					*e*Sn		Sn	11 51 28.9	-0.1
PVAQ					A		A	11 51 30.3	
		12nm,0.3s							
PVAQ	**Vaqueiros**		**4.17**	**313**	P		Pn	11 50 39.6	-0.4
PVAQ					S		Sn	11 51 28.9	-0.1
		12nm,0.3s							
PVAQ	**Vaqueiros**		**4.17**	**313**	P		Pn	11 50 39.6	-0.4
PVAQ					S		Sn	11 51 28.9	-0.1
		12nm,0.3s							
PBDV	**Barranco-do-Ve**		**4.20**	**310**	*e*Pn		Pn	11 50 41.1	+0.7
PBDV					*e*Sn		Sn	11 51 29.8	0.0
PBDV					A		A	11 51 34.6	
		9.2nm,0.4s							
PBDV	**Barranco-do-Ve**		**4.20**	**310**	P		Pn	11 50 41.1	+0.7
PBDV					S		Sn	11 51 29.8	0.0
		9.2nm,0.4s							
PBDV	**Barranco-do-Ve**		**4.20**	**310**	P		Pn	11 50 41.1	+0.7
PBDV					S		Sn	11 51 29.8	0.0
		9.2nm,0.4s							
PBAR	**Barrancos**		**4.38**	**326**	*e*Pn		Pn	11 50 42.9	+0.1
PBAR					*e*Sn		Sn	11 51 33.0	-1.1
PBAR					A		A	11 51 36.9	
		12nm,0.4s							
PBAR	**Barrancos**		**4.38**	**326**	P		Pn	11 50 42.9	+0.1
PBAR					S		Sn	11 51 33.0	-1.1
		12nm,0.4s							
PBAR	**Barrancos**		**4.38**	**326**	P		Pn	11 50 42.9	+0.1
PBAR					S		Sn	11 51 33.0	-1.1
		12nm,0.4s							
ETOB	**Tobarra**		**4.48**	**24**	P		Pn	11 50 45.4	+1.2
		6.2nm,0.3s,SNR=22							
ETOB					S		Sn	11 51 36.4	-0.2
		7.8nm,0.6s							
ETOB	**Tobarra**		**4.48**	**24**	P		Pn	11 50 45.4	+1.2
		6.2nm,0.3s,SNR=22							
ETOB					S		Sn	11 51 36.4	-0.2
		7.8nm,0.6s							
PCVE	**Castro Verde**		**4.52**	**314**	*e*Pn		Pn	11 50 45.2	+0.5
PCVE					*e*Sn		Sn	11 51 35.7	-1.8
PCVE					A		A	11 51 41.5	
		11nm,0.4s							
PCVE	**Castro Verde**		**4.52**	**314**	P		Pn	11 50 45.2	+0.5
PCVE					S		Sn	11 51 35.7	-1.8
		11nm,0.4s							
PCVE	**Castro Verde**		**4.52**	**314**	P		Pn	11 50 45.2	+0.5
PCVE					S		Sn	11 51 35.7	-1.8
		11nm,0.4s							
MORF	**Marmelete**		**4.71**	**307**	*e*Pn		Pn	11 50 47.4	+0.1
MORF					*e*Sn		Sn	11 51 41.4	-0.8
MORF					A		A	11 51 49.3	
		8.8nm,0.2s							
MORF	**Marmelete**		**4.71**	**307**	P		Pn	11 50 47.4	+0.1
MORF					S		Sn	11 51 41.4	-0.8
		8.8nm,0.2s							
MORF	**Marmelete**		**4.71**	**307**	P		Pn	11 50 47.4	+0.1
MORF					S		Sn	11 51 41.4	-0.8
		8.8nm,0.2s							
PFVI	**Vila Bisbo**		**4.73**	**304**	*e*Pn		Pn	11 50 47.7	+0.1
PFVI					*e*Sn		Sn	11 51 41.4	-1.4
PFVI					A		A	11 51 49.2	
		9.0nm,0.6s							
PFVI	**Vila Bisbo**		**4.73**	**304**	P		Pn	11 50 47.1	-0.5
		0.6nm,0.0s,SNR=12							
PFVI					S		Sn	11 51 40.9	-1.9
		9.7nm,0.3s,SNR=5.7							
PFVI	**Vila Bisbo**		**4.73**	**304**	P		Pn	11 50 47.1	-0.5
		0.6nm,0.0s,SNR=12							
PFVI	**Vila Bisbo**		**4.73**	**304**	*e*Pn		Pn	11 50 47.7	+0.1
PFVI					S		Sn	11 51 40.9	-1.9
		9.7nm,0.3s,SNR=5.7							
PFVI					*e*Sn		Sb	11 51 41.4	-15
		9.0nm,0.6s							
OUK	**Oukaimeden**		**4.73**	**226**	P		Pn	11 50 50.0	+2.0
OUK					S		Sn	11 51 41.0	-2.3
OUK	**Oukaimeden**		**4.73**	**226**	*i* P		Pn	11 50 50.0	+2.0
OUK					*i* S		Sn	11 51 41.0	-2.3
MESJ	**Messejana**		**4.76**	**314**	*e*P		Pn	11 50 48.1	0.0
MESJ					*e*S		Sn	11 51 40.6	-2.9
MESJ					AML		AML	11 51 48.0	
		comp=N,23nm,0.3s							
MESJ	**Messejana**		**4.76**	**314**	*e*P		Pn	11 50 48.1	0.0
MESJ					*e*S		Sn	11 51 40.6	-2.9
MESJ	**Messejana**		**4.76**	**314**	P		Pn	11 50 48.1	0.0
MESJ					S		Sn	11 51 40.6	-2.9
MESJ	**Messejana**		**4.76**	**314**	P		Pn	11 50 48.1	0.0
MESJ					S		Sn	11 51 40.6	-2.9
EBAD	**Badajoz**		**4.85**	**330**	P		Pn	11 50 49.3	0.0
		comp=N,1.3nm,0.2s,SNR=10.0							
EBAD					S		Sn	11 51 43.5	-2.2
		comp=N,3.3nm,0.2s							
EBAD	**Badajoz**		**4.85**	**330**	P		Pn	11 50 49.3	0.0
		comp=N,1.3nm,0.2s,SNR=10.0							
EBAD					S		Sn	11 51 43.5	-2.2
		comp=N,3.3nm,0.2s							
PTEO	**Sao Teotonio**		**4.89**	**309**	*e*Pn		Pn	11 50 50.4	+0.6
PTEO					*e*Sn		Sn	11 51 46.1	-0.6
PTEO					A		A	11 51 54.6	
		comp=N,9.8nm,0.7s							
PTEO	**Sao Teotonio**		**4.89**	**309**	P		Pn	11 50 50.4	+0.6
PTEO					S		Sn	11 51 46.1	-0.6
		comp=N,4.9nm,0.7s							
PTEO	**Sao Teotonio**		**4.89**	**309**	P		Pn	11 50 50.4	+0.6
PTEO					S		Sn	11 51 46.1	-0.6
		comp=N,4.9nm,0.7s							
CIA	**Chichaoua**		**5.06**	**235**	P		Pn	11 50 54.0	+1.8
CIA					S		Sn	11 51 48.0	-2.9
CIA	**Chichaoua**		**5.06**	**235**	*i* P		Pn	11 50 54.0	+1.8
CIA					S		Sn	11 51 48.0	-2.9
EBEN	**Beniarda**		**5.07**	**35**	P		Pn	11 50 52.9	+0.6
		comp=N,0.3nm,0.3s,SNR=7.9							
EBEN	**Beniarda**		**5.07**	**35**	P		Pn	11 50 52.9	+0.6
		comp=N,0.3nm,0.3s,SNR=7.9							
ESDC	**Sonseca Array**		**5.08**	**360**	P		Pn	11 50 52.8	+0.3
		comp=N,1.4nm,0.3s,baz=180,slow=12,SNR=11							
ESDC	**Sonseca Array**		**5.08**	**360**	Pn		Pn	11 50 51.9	-0.6
		comp=N,0.8nm,0.3s,baz=181,slow=12,SNR=10							
ESDC					Sn		Sn	11 51 50.3	-1.2
		comp=N,0.6nm,0.3s,baz=184,slow=22,SNR=4.4							
ESDC	**Sonseca Array**		**5.08**	**360**	P		Pn	11 50 52.8	+0.3
		comp=N,1.4nm,0.3s,baz=180,slow=12,SNR=11							
PNCL	**Nicolau / Gran**		**5.12**	**315**	*e*Pn		Pn	11 50 52.8	-0.2
PNCL					*e*Sn		Sn	11 51 50.6	-1.8
PNCL					A		A	11 51 57.0	
		comp=N,6.3nm,0.4s							
PNCL	**Nicolau / Gran**		**5.12**	**315**	*e*Pn		Pn	11 50 52.8	-0.2
PNCL					*e*Sn		Sn	11 51 50.6	-1.8
		comp=N,6.3nm,0.4s							
EVO	**Evora**		**5.14**	**321**	*e*Pn		Pn	11 50 55.2	+2.0
EVO					*e*Sn		Sn	11 51 54.4	+1.6
EVO	**Evora**		**5.14**	**321**	P		Pn	11 50 55.2	+2.0
EVO					S		Sn	11 51 54.4	+1.6
EVO	**Evora**		**5.14**	**321**	P		Pn	11 50 55.2	+2.0
EVO					S		Sn	11 51 54.4	+1.6
PESTR	**Estremoz**		**5.19**	**326**	*e*Pn		Pn	11 50 54.2	+0.2
PESTR					*e*Sn		Sn	11 51 53.4	-0.8
PESTR					A		A	11 51 58.5	
		comp=N,5.5nm,0.4s							
PESTR	**Estremoz**		**5.19**	**326**	P		Pn	11 50 54.2	+0.2
PESTR					S		Sn	11 51 53.4	-0.8
		comp=N,5.5nm,0.4s							
PESTR	**Estremoz**		**5.19**	**326**	P		Pn	11 50 54.2	+0.2
PESTR					S		Sn	11 51 53.4	-0.8
		comp=N,5.5nm,0.4s							
MOE	**Montemor**		**5.31**	**319**	*e*Pn		Pn	11 50 57.5	+1.9
MOE					*e*Sn		Sn	11 51 58.4	+1.4
MOE	**Montemor**		**5.31**	**319**	P		Pn	11 50 57.5	+1.9
MOE					S		Sn	11 51 58.4	+1.4
MOE	**Montemor**		**5.31**	**319**	P		Pn	11 50 57.5	+1.9
MOE					S		Sn	11 51 58.4	+1.4
PMRV	**Marv??o**		**5.58**	**331**	*e*Pn		Pn	11 50 59.4	+0.1
PMRV					*e*Sn		Sn	11 52 02.5	-1.2
PMRV					A		A	11 52 19.2	
		comp=N,4.4nm,0.4s							
PMRV	**Marv??o**		**5.58**	**331**	P		Pn	11 50 59.4	+0.1
PMRV					S		Sn	11 52 02.5	-1.2
		comp=N,4.4nm,0.4s							
PMRV	**Marv??o**		**5.58**	**331**	P		Pn	11 50 59.4	+0.1
PMRV					S		Sn	11 52 02.5	-1.2
		comp=N,4.4nm,0.4s							
PMTG	**Montargil**		**5.66**	**324**	*e*Pn		Pn	11 51 00.4	+0.1
PMTG					*e*Sn		Sn	11 52 03.5	-2.0
PMTG					A		A	11 52 17.4	
		comp=N,4.1nm,0.4s							
PMTG	**Montargil**		**5.66**	**324**	*e*Pn		Pn	11 51 00.4	+0.1
PMTG					*e*Sn		Sn	11 52 03.5	-2.0
		comp=N,4.1nm,0.4s							
PCBR	**Castelo Branco**		**5.97**	**333**	*e*Pn		Pn	11 51 04.4	-0.2
PCBR					*e*Sn		Sn	11 52 08.8	-4.4
PCBR	**Castelo Branco**		**5.97**	**333**	P		Pn	11 51 04.4	-0.2
PCBR					S		Sn	11 52 08.8	-4.4
PCBR	**Castelo Branco**		**5.97**	**333**	P		Pn	11 51 04.4	-0.2
GUD	**Guadarrama**		**6.05**	**358**	P		Pn	11 51 06.5	+0.6
		comp=N,2.6nm,0.4s,SNR=7.9							
GUD	**Guadarrama**		**6.05**	**358**	P		Pn	11 51 06.5	+0.6
		comp=N,2.6nm,0.4s,SNR=7.9							
PMAFR	**Mafra**		**6.13**	**317**	P		Pn	11 51 07.9	+1.0
		comp=N,3.8nm,0.3s,SNR=7.9							
PMAFR					S		Sn	11 52 15.3	-2.0
		comp=N,7.1nm,0.2s,SNR=7.9							
PMAFR	**Mafra**		**6.13**	**317**	P		Pn	11 51 07.9	+1.0
		comp=N,3.8nm,0.3s,SNR=7.9							
PMAFR					S		Sn	11 52 15.3	-2.0
		comp=N,7.1nm,0.2s,SNR=7.9							
ETOR	**Torete**		**6.40**	**13**	P		Pn	11 51 10.8	+0.2
		comp=N,2.4nm,0.3s,SNR=7.9							
ETOR	**Torete**		**6.40**	**13**	P		Pn	11 51 10.8	+0.2
		comp=N,2.4nm,0.3s,SNR=7.9							
MVO	**Moncorvo**		**7.01**	**340**	*e*Pn		Pn	11 51 18.8	-0.3
MVO					*e*Sn		Sn	11 52 36.2	-2.9
MVO	**Moncorvo**		**7.01**	**340**	P		Pn	11 51 18.7	-0.3
		comp=N,0.6nm,0.2s,SNR=7.9							
MVO	**Moncorvo**		**7.01**	**340**	*e*Pn		Pn	11 51 18.8	-0.3
MVO					*e*Sn		Sn	11 52 36.2	-2.9
POLO	**Lamas de Olo**		**7.44**	**337**	*e*Pn		Pn	11 51 24.9	0.0
POLO	**Lamas de Olo**		**7.44**	**337**	*e*Pn		Pn	11 51 24.9	0.0
GERES	**GERESS Array B**		**19.32**	**37**	P		Pn	11 54 04.8	+2.1
		comp=N,0.1nm,0.3s,baz=224,slow=12,SNR=2.3							
TORD	**Torodi Ar. Bea**		**21.94**	**165**	P		**P**	**11 54 31.7**	**+1.6**
		comp=N,0.5nm,1.0s,baz=342,slow=10,SNR=3.0							

*IDC **20** 11:55:23.2±1.8, 1°.68N×125°.68E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/23, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=111.7km s-min=19.1km az=66.0*
*DJA **20** 11:55:25.0±1.4, 2°.N±11°.×12°.6E±°, h24km±12km, M3.8/4, MLv3.8/4*
*ISCJB **20** 11:55:27.2±0.9, 1°.6N±0°.1×125°.73E±0°.05, h41km, mb3.4/3, Error ellipse: s-maj=19.1km s-min=7.7km az=176.3*

ISC 20 11:55:28.6±1.2, 1°.8N±0°.1×125°.66E±0°.06, h41km, n9, σ2s09/11, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
MNI	**Manado**	**0.90**	**246**	P		**Pn**	**11 55 42.9**	**-1.9**
MNI				S		**Sn**	**11 55 57.5**	**+0.8**
KMSI	**Cibinong**	**2.08**	**234**	P		**Pn**	**11 56 02.9**	**+1.8**
GAMI	**Galela, Maluku**	**2.12**	**89**	P		**Pn**	**11 56 01.3**	**-0.3**
LBMI	**Labuha**	**3.05**	**143**	P		Pn	11 56 17.8	+3.4
MRSI	**Marisa**	**3.95**	**250**	P		**Pn**	**11 56 25.7**	**-1.1**
MRSI				S		**Sn**	**11 57 12.3**	**+0.4**
FITZ	**Fitzroy Crossi**	**19.79**	**180**	P		**P**	**11 59 54.2**	**-1.3**
	0.1nm,0.3s,baz=10,slow=12,SNR=5.6							
WRA	**Warramunga Arr**	**23.23**	**159**	P		**P**	**12 00 30.0**	**-2.4**
	1.0nm,0.3s,baz=336,slow=11,SNR=33							
WRA				S		**S**	**12 04 45.4**	**+3.7**
	1.4nm,0.7s,baz=342,slow=18,SNR=7.4							
ASAR	**Alice Springs**	**26.56**	**163**	P		**P**	**12 01 01.6**	**-1.4**
	0.6nm,0.5s,baz=341,slow=7.0,SNR=10							
MKAR	**Makanchi Array**	**58.53**	**326**	P		**P**	**12 05 22.6**	**+1.5**
	0.1nm,0.3s,baz=116,slow=7.5,SNR=4.8							

IDC 20 12:20:01.2±1.3, 4°.74S×145°.54E, h0km, mb3.7/5, mb1 3.9/7, mb1mx3.7/19, mbtmp3.7/7, ML3.5/2, MS3.6/1, Ms1 3.6/1, ms1mx2.6/33, Error ellipse: s-maj=38.5km s-min=21.7km az=104.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.91**	**161**	P		Pn	12 21 17.2	+0.9
	3.3nm,0.3s,baz=12,slow=22,SNR=12							
PMG				S		Sn	12 22 08.9	-4.9
	3.0nm,0.3s,baz=307,slow=20,SNR=7.7							
WRA	**Warramunga Arr**	**18.64**	**215**	P		P	12 24 20.4	-0.3
	0.4nm,0.3s,baz=34,slow=11,SNR=40							
ASAR	**Alice Springs**	**21.91**	**210**	P		P	12 24 56.0	-0.2
	0.9nm,0.4s,baz=41,slow=7.3,SNR=21							
FITZ	**Fitzroy Crossi**	**23.56**	**234**	P		P	12 25 14.1	+0.6
	3.6nm,0.6s,baz=49,slow=9.4,SNR=25							
STKA	**Stephens Creek**	**27.25**	**187**	P		P	12 25 46.2	-1.0
	1.9nm,0.4s,baz=5.9,slow=12,SNR=9.0							
MJAR	**Matsushiro Arr**	**41.64**	**351**	LR		LR	12 44 08.5	
	comp=Z,68nm,18.3s,baz=50,slow=35							
MKAR	**Makanchi Array**	**75.61**	**321**	P		P	12 31 49.3	+1.1
	0.1nm,0.6s,baz=103,slow=6.5,SNR=2.1							
ILAR	**Eielson Array**	**84.91**	**23**	P		P	12 32 37.4	-0.5
	0.4nm,0.6s,baz=245,slow=5.6,SNR=8.5							

IDC 20 12:20:55.0±1.4, 28°.70N×95°.50E, h0km, mb3.3/6, mb1 3.5/6, mb1mx3.3/28, mbtmp3.4/6, MS3.6/12, Ms1 3.6/12, ms1mx3.3/28, Error ellipse: s-maj=69.0km s-min=19.8km az=64.0, Eastern Xizang-India border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
SHL	**Shillong**	**4.49**	**227**	*e*PKP		Pg	12 22 36.0	+15
CMAR	**Chiang Mai Arr**	**10.67**	**162**	Pn		Pn	12 23 36.1	+6.9
	0.1nm,0.3s,baz=343,slow=15,SNR=3.2							
CMAR				LR		LR	12 27 46.4	
	comp=Z,624nm,20.6s,baz=350,slow=39							
MKAR	**Makanchi Array**	**20.82**	**334**	P		P	12 25 36.7	-1.4
	0.8nm,1.0s,baz=144,slow=12,SNR=3.0							
SONM	**Songino Array**	**20.89**	**21**	P		P	12 25 38.7	-0.3
	0.3nm,0.4s,baz=196,slow=9.9,SNR=2.9							
AAK	**Ala-Archa**	**21.94**	**315**	LR		LR	12 35 38.0	
	comp=Z,159nm,19.8s,baz=114,slow=40							
KURBB	**Kurchatov Arra**	**25.38**	**334**	P		P	12 26 23.8	0.0
	1.1nm,1.0s,baz=143,slow=9.4,SNR=6.1							
PSI	**Prapat**	**25.96**	**172**	LR		LR	12 36 22.2	
	comp=Z,218nm,20.4s,baz=204,slow=36							
ZALV	**Zalesovo Beam**	**26.42**	**346**	P		P	12 26 34.3	+1.1
	0.5nm,0.5s,baz=144,slow=11,SNR=3.1							
BVAR	**Borovoye Array**	**30.55**	**330**	LR		LR	12 41 07.7	
	comp=Z,100nm,19.8s,baz=268,slow=40							
JNU	**Nakatsue**	**30.58**	**73**	LR		LR	12 39 39.2	
	comp=Z,182nm,19.2s,baz=271,slow=37							
ASAJ	**Asahikawa**	**40.34**	**55**	LR		LR	12 48 03.9	
	comp=Z,66nm,18.2s,baz=312,slow=40							
KAPI	**Kappang**	**40.84**	**141**	LR		LR	12 46 31.5	
	comp=Z,105nm,18.6s,baz=141,slow=38							
GNI	**Garni**	**42.88**	**299**	LR		LR	12 48 59.4	
	comp=Z,36nm,18.3s,baz=115,slow=39							
KBZ	**Khabaz**	**44.29**	**304**	LR		LR	12 51 30.7	
	comp=Z,39nm,18.7s,baz=0.7,slow=41							
ASF	**Jabal al Asfar**	**50.12**	**289**	LR		LR	12 54 27.8	
	comp=Z,45nm,18.8s,baz=325,slow=40							
MMAI	**Mount Meron Ar**	**51.17**	**291**	LR		LR	12 57 26.7	
	comp=Z,41nm,19.2s,baz=175,slow=43							
WRA	**Warramunga Arr**	**61.19**	**138**	P		P	12 31 11.4	-0.4
	0.5nm,0.7s,baz=323,slow=8.3,SNR=64							
NOA	**NORSAR Array B**	**62.62**	**327**	LR		LR	13 01 06.2	
	comp=Z,52nm,18.5s,baz=90,slow=38							
ASAR	**Alice Springs**	**63.86**	**141**	P		P	12 31 30.3	+0.7
	0.2nm,0.8s,baz=325,slow=7.2,SNR=3.3							

IDC 20 12:26:16.1±1.1, 17°.87S×178°.61W, h551km±14km, mb3.7/18, mb1 3.9/20, mb1mx3.7/29, mbtmp3.7/20, Error ellipse: s-maj=16.3km s-min=8.1km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.66**	**60**	P		P	12 28 08.7	-2.0
	18nm,0.3s,baz=223,slow=2.1,SNR=22							
AFI				S		S	12 29 41.6	-3.0
	1.2nm,0.3s,baz=204,slow=10.0,SNR=1.8							
DZM	**Mont Dzumac**	**14.66**	**251**	P		P	12 29 22.5	+0.3
	2.8nm,0.3s,baz=98,slow=20,SNR=21							
URZ	**Urewera**	**20.66**	**190**	P		P	12 30 16.4	-1.5
	8.8nm,0.8s,baz=349,slow=19,SNR=5.4							
RPZ	**Rata Peaks**	**27.20**	**197**	P		P	12 31 15.8	-0.2
	4.2nm,0.5s,baz=355,slow=12,SNR=4.2							
CTA	**Charters Tower**	**33.26**	**260**	P		P	12 32 08.9	+0.4
	9.5nm,0.6s,baz=90,slow=10,SNR=16							
STKA	**Stephens Creek**	**38.48**	**241**	P		P	12 32 52.9	+1.5
	21nm,0.5s,baz=92,slow=9.8,SNR=62							
WRA	**Warramunga Arr**	**44.45**	**260**	P		P	12 33 38.3	-0.5
	6.8nm,0.5s,baz=91,slow=7.0,SNR=269							
WRA				S		S	12 39 31.9	-2.3
	0.3nm,0.8s,baz=98,slow=11,SNR=2.9							
ASAR	**Alice Springs**	**44.62**	**254**	P		P	12 33 40.5	+0.4
	83nm,0.6s,baz=88,slow=8.2,SNR=1697							
ASAR				ScP		ScP	12 38 12.0	+1.1
	0.7nm,0.7s,baz=106,slow=3.7,SNR=4.0							
ASAR				S		S	12 39 34.1	-2.4
	0.5nm,0

VES				⇑Sn		Sn	12 33 34.6	-1.5		
	baz=1.5									
RCTC	**Rector, Farmer**	1.54	64	⇓Pn		Pn	12 33 14.6	-1.3		
	baz=1.5,SNR=317									
RCTC				⇑Sn		Sn	12 33 34.8	-1.6		
	baz=1.5									
SBC	**Santa Barbara**	1.56	139	Pn		Pn	12 33 14.9	-1.2		
	baz=1.6,SNR=414									
ARVC	**Arvin**	1.80	106	⇓Pn		Pn	12 33 18.0	-1.5		
	baz=1.8,SNR=134									
ISA	**Isabella**	2.02	88	*e*Pn		Pn	12 33 21.5	-1.0		
ISA				*e*Sn		Sn	12 33 46.5	-1.7		
ISA	**Isabella**	2.02	88	⇑Pn		Pn	12 33 21.2	-1.3		
	baz=2.0,SNR=338									
ISA				⇑Sn		Sn	12 33 46.2	-2.0		
	baz=2.0									
OSI	**Osito Adit**	2.09	118	*e*Pn		Pn	12 33 22.4	-1.1		
OSI				*e*Sn		Sb	12 33 51.5	-1.0		
OSI	**Osito Adit**	2.09	118	⇑Pn		Pn	12 33 22.2	-1.3		
	baz=2.1,SNR=139									
SAC	**San Andreas**	2.28	329	*e*Pn		Pn	12 33 24.6	-1.3		
SAC				*e*Sg		Sg	12 34 00.3	-0.5		
CMB	**Columbia Colle**	2.44	11	*e*Pn		Pn	12 33 27.9	-0.4		
CMB				*e*Sn		Sn	12 33 58.4	-0.2		
EDW2	**Edwards Air Fo**	2.54	106	⇓Pn		Pn	12 33 28.2	-1.4		
	baz=2.5,SNR=183									
DECC	**Green Verdugo**	2.56	122	⇓Pn		Pn	12 33 28.5	-1.3		
	baz=2.6,SNR=121									
MTUM	**Tungsten Hills**	2.58	48	*e*Pn		Pn	12 33 31.1	+0.8		
LRMC	**Laurel Mountai**	2.66	92	⇓Pn		Pn	12 33 30.3	-1.2		
	baz=2.7,SNR=39									
PASC	**Pasadena Art C**	2.70	122	*e*Pn		Pn	12 33 30.7	-1.1		
PASC				*e*Sn		Sn	12 34 03.6	-1.3		
MPMC	**Manual Prospec**	2.84	80	⇑Pn		Pn	12 33 33.2	-0.7		
	baz=2.8,SNR=216									
FMP	**Fort Macarthur**	2.91	130	⇓Pn		Pn	12 33 32.8	-1.9		
	baz=2.9									
MCCM	**Marconi Confer**	2.95	329	*e*Pn		Pn	12 33 33.4	-1.8		
MCCM				*e*Sn		Sn	12 34 10.8	-0.1		
BFSC	**Mount Baldy Ra**	3.04	116	Pn		Pn	12 33 35.1	-1.6		
	baz=3.0,SNR=339									
CIS	**Catalina Islan**	3.06	136	Pn		Pn	12 33 34.6	-2.2		
	baz=3.1,SNR=19									
CIS				⇓Sn		Sn	12 34 11.8	-2.0		
	baz=3.1									
SCI	**San Clemente I**	3.31	142	Pn		Pn	12 33 38.8	-1.4		
	baz=3.3,SNR=44									
RRX	**Edison Barstow**	3.32	102	⇓Pn		Pn	12 33 39.0	-1.4		
	baz=3.3,SNR=12									
GSC	**Goldstone**	3.40	94	*e*Pn		Pn	12 33 39.9	-1.6		
GSC				*e*Sn		Sn	12 34 22.2	-0.1		
GSC	**Goldstone**	3.40	94	⇑Pn		Pn	12 33 40.1	-1.4		
	baz=3.4,SNR=84									
FURC	**Furnace Creek,**	3.42	75	⇓Pb		Pb	12 33 47.0	-1.8		
	baz=3.4,SNR=80									
NVAR	**Mina Array Bea**	3.50	36	Pn		Pn	12 33 44.1	+1.0		
NVAR				Pg		Pb	12 33 49.1	-1.3		
NVAR				Sn		Sb	12 34 36.8	+3.5		
NVAR	**Mina Array Bea**	3.50	36	Pn		Pn	12 33 44.1	+1.0		
	7.1nm,0.3s,baz=216,slow=16,SNR=75									
NVAR				Pg		Pb	12 33 49.1	-1.3		
	39nm,0.3s,baz=221,slow=20,SNR=152									
NVAR				Sn		Sb	12 34 36.8	+3.5		
	27nm,0.3s,baz=338,slow=24,SNR=5.3									
NV11	**Mina Array Sit**	3.58	38	*e*Pn		Pn	12 33 45.1	+1.0		
NV11				*e*Sg		Sb	12 34 39.2	+3.8		
BBRC	**Big Bear Solar**	3.58	111	⇓Pn		Pn	12 33 42.6	-1.6		
	baz=3.6,SNR=23									
MURC	**Murrieta**	3.70	122	⇓Pn		Pn	12 33 43.6	-2.0		
	baz=3.7,SNR=73									
OHCM	**Honcut**	3.72	354	*e*Pn		Pn	12 33 46.0	+0.1		
HOPS	**Hopland**	3.76	334	*e*Pn		Pn	12 33 44.7	-1.7		
HOPS				*e*Sg		Sg	12 34 51.7	+3.4		
HEC	**Hector,Ludlow**	3.87	101	⇑Pn		Pn	12 33 46.1	-1.8		
	baz=3.9,SNR=18									
TUQ	**Turquoise Moun**	4.10	91	⇓Pn		Pn	12 33 49.7	-1.6		
	baz=4.1,SNR=29									
109C	**Camp Elliot, M**	4.20	130	⇓Pn		Pn	12 33 50.4	-2.0		
	baz=4.2,SNR=20									
PFO	**Pinyon Flat Ob**	4.22	117	*e*Pn		Pn	12 33 51.5	-1.4		
PFO				Sn		Sn	12 34 47.8	+5.1		
PFO	**Pinyon Flat Ob**	4.22	117	Pn		Pn	12 33 51.4	-1.5		
	14nm,0.3s,baz=295,slow=10,SNR=120									
PFO				Sn		Sn	12 34 47.8	+5.1		
	15nm,0.3s,baz=216,slow=16,SNR=3.7									
PFO	**Pinyon Flat Ob**	4.22	117	Pn		Pn	12 33 51.4	-1.5		
	baz=4.2,SNR=65									
BEKR	**Beckworth**	4.25	6	*e*Pn		Pn	12 33 54.2	+0.8		
BEKR				*e*Sn		Sn	12 34 48.6	+5.1		
BELC	**Belle Mtn. Jos**	4.39	110	⇑Pn		Pn	12 33 53.6	-1.6		
	baz=4.4,SNR=86									
GMRC	**Granite Mounta**	4.41	100	Pn		Pn	12 33 53.1	-2.4		
	baz=4.4,SNR=37									
KCPM	**Cahto Peak**	4.55	333	Pn		Pn	12 33 57.7	+0.3		
BAR	**Barrett**	4.61	128	*e*Pn		Pn	12 33 56.3	-1.8		
BAR				*e*Sn		Sn	12 34 49.2	-2.9		
MONP	**Monument Peak**	4.64	125	Pn		Pn	12 33 57.5	-1.2		
	baz=4.6,SNR=128									
LDFC	**Landfair**	4.80	95	*e*Pn		Pn	12 33 58.2	-2.7		
LDFC				*e*Sg		Sb	12 35 15.7	+5.0		
BC3	**Big Chuckawall**	4.94	112	Pn		Pn	12 34 00.4	-2.3		
	baz=4.9,SNR=52									
IRM	**Iron Mountain**	4.99	105	⇓Pn		Pn	12 34 01.4	-1.9		
	baz=5.0,SNR=15									
DVTC	**Desert V Tower**	5.00	125	Pn		Pn	12 34 02.3	-1.1		
	baz=5.0,SNR=35									
WDC	**Whiskeytown Da**	5.10	346	*e*Pn		Pn	12 34 02.2	-2.6		
	20nm,0.6s									
NEE2	**Needles Airpor**	5.25	98	Pn		Pn	12 34 05.2	-1.8		
	baz=5.2,SNR=18									
Y12C	**Blythe**	5.62	108	⇓Pn		Pn	12 34 09.7	-2.2		
	baz=5.6,SNR=7.5									
BMN	**Battle Mountai**	5.62	30	Pn		Pn	12 34 09.8	-2.3		
BMN				*e*Sg		Sg	12 35 46.6	-1.6		
GLA	**Glamis**	5.68	115	*e*Pn		Pn	12 34 11.6	-1.3		
GLA				*e*Sg		Sg	12 35 50.1	0.0		
GLA	**Glamis**	5.68	115	⇓Pn		Pn	12 34 11.6	-1.3		
	baz=5.7,SNR=6.8									
W13A	**Hualapai Mount**	5.80	93	⇑Pn		Pn	12 34 13.2	-1.4		
	baz=5.8,SNR=30									
YBH	**Yreka Blue Hor**	6.24	348	Pn		Pn	12 34 20.9	+0.3		
	7.5nm,0.6s									
YBH				Sn		Sb	12 35 46.2	-5.8		
YBH				*e*Sg		Sg	12 36 04.8	-3.4		
YBH	**Yreka Blue Hor**	6.24	348	Pn		Pn	12 34 23.6	+2.9		
	0.8nm,0.3s,baz=163,slow=6.2,SNR=35									
YBH				Sn		Sb	12 35 46.2	-5.8		
	baz=210,slow=17,SNR=3.1									
MOD	**Modoc**	6.28	4	Pn		Pn	12 34 22.5	+1.3		
CCUT	**Cedar City**	6.40	70	*e*Pn		Pn	12 34 22.9	+0.1		
ARUT	**Antelope Range**	6.40	68	*e*Pn		Pn	12 34 24.2	+1.3		
	227nm,1.3s									
ARUT				*e*Sg		Sg	12 36 10.4	-2.9		
ELK	**Elko**	6.80	40	*e*Pn		Pn	12 34 30.1	+1.7		
ELK				*e*Sg		Sg	12 36 22.8	-3.2		
WVOR	**Wild Horse Val**	7.03	14	*e*Pn		Pn	12 34 34.1	+2.7		
	31nm,1.1s									
HUMO	**Hull Mountain**	7.14	348	Pn		Pn	12 34 32.3	-0.5		
MVU	**Marysvale**	7.55	65	*e*Pn		Pn	12 34 41.5	+2.8		
MVU				*e*Sg		Sg	12 36 43.4	-6.6		
MSU	**Marysvale**	7.58	65	*e*Pn		Pn	12 34 38.8	-0.3		
MSU				*e*Sg		Sg	12 36 48.2	-2.8		
KEBM	**Edson Butte**	7.69	341	Pn		Pn	12 34 38.6	-1.9		
WUAZ	**Wupatki**	7.80	88	*e*Pn		Pn	12 34 42.9	+0.8		
	32nm,0.8s									
DUG	**Dugway**	7.88	52	Pn		Pn	12 34 42.8	-0.3		
MPU	**Maple Canyon**	8.57	57	*e*Pn		Pn	12 34 51.6	-1.1		
MFID	**Camas Ranch**	8.72	25	Pn		Pn	12 34 55.3	+0.7		
HVU	**Hansel Valley**	8.86	44	*e*Pn		Pn	12 35 01.7	+5.1		
JLU	**Jordanelle**	8.98	54	Pn		Pn	12 34 59.8	+1.5		
DAU	**Daniels Canyon**	9.01	55	*e*Pn		Pn	12 35 03.4	+4.6		
TUC	**Tucson**	9.07	109	*e*Pn		Pn	12 34 57.2	-2.2		
TUC				Sn		Sn	12 36 39.3	-2.7		
HLID	**Hailey**	9.39	30	Pn		Pn	12 35 04.4	+0.6		
HWUT	**Hardware Ranch**	9.46	48	*e*Pn		Pn	12 35 10.9	+6.1		
	3.0nm,0.8s									
PV04	**Paradox Valley**	10.02	70	Pn		Pn	12 35 12.0	-0.5		
PV01	**Paradox Valley**	10.23	72	*e*Pn		Pn	12 35 18.2	+2.9		
	66nm,0.2s									
HAWA	**Hanford**	10.80	5	Pn		Pn	12 35 16.8	-6.2		
TPAW	**Teton Pass**	11.00	41	*e*Pn		Pn	12 35 32.5	+6.6		
SNOW	**Snow King Moun**	11.09	42	*e*Pn		Pn	12 35 32.9	+5.8		
LON	**Longmire**	11.13	357	*e*Pn		Pn	12 35 35.0	+7.5		
LOHW	**Long Hollow**	11.27	42	*e*Pn		Pn	12 35 31.5	+1.8		
IMW	**Indian Meadow**	11.28	40	Pn		Pn	12 35 33.6	+3.7		
MOOW	**Moose Ponds**	11.28	41	*e*Pn		Pn	12 35 34.5	+4.6		
BW06	**Boulder Array**	11.35	48	Pn		Pn	12 35 35.7	+5.0		
PDAR	**Pinedale Array**	11.35	48	Pn		Pn	12 35 35.5	+4.9		
PDAR				Lg		Lg	12 38 40.9			
PDAR	**Pinedale Array**	11.35	48	Pn		Pn	12 35 35.5	+4.9		
	0.1nm,0.3s,baz=242,slow=11,SNR=7.1									
PDAR				Lg		Lg	12 38 40.9			
	0.0nm,0.3s,baz=220,slow=27,SNR=2.6									
LAZ	**Ladron**	11.39	92	*e*Pn		Pn	12 35 32.6	+1.3		
	5.3nm,1.0s									
ANMO	**Albuquerque**	11.87	89	*e*Pn		Pn	12 35 37.9	+0.1		
ANMO				Lg		Lg	12 39 02.1			
ANMO	**Albuquerque**	11.87	89	Pn		Pn	12 35 41.0	+3.3		
	0.1nm,0.3s,baz=294,slow=15,SNR=5.7									
ANMO				Lg		Lg	12 39 02.1			
	0.1nm,0.3s,baz=184,slow=19,SNR=4.2									
ISCO	**Idaho Springs**	12.83	67	*e*Pn		Pn	12 35 55.9	+4.8		
NEW	**Newport**	12.94	11	Pn		Pn	12 35 57.5	+5.3		
NEW				Lg		Lg	12 39 35.0			
NEW	**Newport**	12.94	11	Pn		Pn	12 35 57.5	+5.3		
	0.2nm,0.3s,baz=193,slow=13,SNR=9.5									
NEW				Lg		Lg	12 39 35.0			
	0.1nm,0.3s,baz=135,slow=1.4,SNR=2.0									
NEW				LR		LR	12 40 51.6			
	comp=Z,206nm,21.1s,baz=193,slow=37									
PHWY	**Pilot Hill**	13.39	60	*e*Pn		P	12 36 08.6	+0.2		
MNTX	**Cornudas Mount**	13.55	102	*e*Pn		Pn	12 35 59.9	-0.7		
	6.5nm,1.3s									
WALA	**Waterton Lakes**	14.38	19	*e*P		P	12 36 16.1	-3.0		
EGMT	**Eagleton**	14.91	30	*e*P		P	12 36 26.2	+1.1		
RSSD	**Black Hills**	15.49	52	Pn		Pn	12 36 26.4	-0.6		
	5.3nm,1.1s									
TXAR	**Lajitas Array**	15.87	108	Pn		Pn	12 36 33.6	+1.7		
TXAR	**Lajitas Array**	15.87	108	Pn		Pn	12 36 33.7	+1.7		
	0.1nm,0.3s,baz=296,slow=9.1,SNR=35									
TXAR				LR		LR	12 43 04.6			
	comp=Z,242nm,20.6s,baz=125,slow=39									
BBB	**Bella Bella**	17.32	345	LR		LR	12 42 55.0			
	comp=Z,72nm,20.9s,baz=237,slow=35									
DGMT	**Dagmar**	17.82	39	*e*Pn		P	12 36 58.7	+1.5		
	170nm,1.9s									
WMOK	**Wichita Mounta**	18.14	86	*e*Pn		Pn	12 37 00.3	-0.2		
	8.9nm,1.3s									
JCT	**Junction City**	18.45	100	*e*P		Pn	12 37 06.0	+1.8		
	29nm,1.7s									
JCT				*e*S		Sn	12 40 27.9	-2.8		
ECSD	**EROS Data Cent**	20.35	59	*e*P		P	12 37 24.3	-0.7		
	11nm,1.2s									
AGMN	**Agassiz Nation**	22.42	48	*e*P		P	12 37 46.0	-1.2		
	7.1nm,0.9s									
FFC	**Flin Flon**	23.17	29	*e*P		P	12 37 55.0	0.0		
	18nm,1.2s									
ULM	**Lac du Bonnet**	23.31	43	*e*P		P	12 37 54.6	-1.9		
	31nm,1.5s									
ULM	**Lac du Bonnet**	23.31	43	P		P	12 37 55.3	-1.2		
	7.2nm,0.8s,baz=233,slow=9.4,SNR=5.3									
ULM				LR		LR	12 47 44.9			
	comp=Z,297nm,18.6s,baz=253,slow=39									
DLBC	**Dease Lake**	23.59	348	LR		LR	12 47 23.0			
	comp=Z,310nm,19.0s,baz=311,slow=37									
TKL	**Tuckaleechee C**	30.10	79	LR		LR	12 51 03.3			
	comp=Z,88nm,19.8s,baz=277,slow=37									
KDAK	**Kodiak Island**	30.54	326	LR		LR	12 48 27.3			
	comp=Z,177nm,19.2s,baz=114,slow=31									
PMR	**Palmer**	31.49	334	*e*P		P	12 39 09.2	-0.9		
	5.6nm,0.9s									
ILAR	**Eielson Array**	33.07	340	P		P	12 39 26.1	+2.1		
ILAR				PcP		PcP	12 42 08.2	+1.0		
ILAR	**Eielson Array**	33.07	340	P		P	12 39 26.1	+2.1		
	1.7nm,0.7s,baz=159,slow=7.9,SNR=16									
ILAR				PcP		PcP	12 42 08.2	+1.0		
	0.4nm,0.8s,baz=147,slow=1.4,SNR=4.1									
ILAR				LR		LR	12 52 22.0			
	comp=Z,96nm,18.2s,baz=156,slow=35									
SCHQ	**Schefferville**	41.47	45	LR		LR	12 57 38.3			
	comp=Z,53nm,18.3s,baz=296,slow=36									
PETK	**Petropavlovsk-**	57.55	315	P		P	12 42 39.6	+1.5		
PETK	**Petropavlovsk-**	57.55	315	P		P	12 42 39.6	+1.5		
	2.3nm,0.6s,baz=89,slow=11,SNR=5.9									
LPAZ	**La Paz**	71.87	126	P		P	12 44 12.1	-0.6		
LPAZ	**La Paz**	71.87	126	P		P	12 44 12.1	-0.6		
	1.6nm,0.6s,baz=334,slow=6.3,SNR=6.3									
ARCES	**ARCESS Array B**	72.29	12	LR		LR	13 18 52.7			
	comp=Z,46nm,20.9s,baz=54,slow=38									
NOA	**NORSAR Array B**	76.08	22	P		P	12 44 37.3	+1.2		
NOA	**NORSAR Array B**	76.08	22	P		P	12 44 37.3	+1.2		
	0.6nm,0.7s,baz=336,slow=5.2,SNR=2.2									
USRK	**Ussuriysk Arra**	76.64	315	P		P	12 44 41.2	+1.7		
	2.9nm,0.9s,baz=90,slow=3.8,SNR=5.1									
MJAR	**Matsushiro Arr**	77.27	306	P		P	12 44 44.8	+1.5		
MJAR	**Matsushiro Arr**	77.27	306	P		P	12 44 44.7	+1.5		
	1.5nm,1.3s,baz=31,slow=4.2,SNR=6.9									
MDJ	**Mudanjiang**	77.75	316	P		P	12 44 45.4	-0.3		
MDJ				PcP		PcP	12 44 55.4	-0.4		
MDJ				S		S	12 54 38.3	-0.4		
MDJ				pmax		pmax				
	comp=Z,14nm,2.0s									
MDJ				pmax		pmax				
	comp=Z,86nm,6.0s									
MDJ				LR		LR				
	comp=N,59nm,30.9s									
MDJ				LR		LR				
	comp=E,44nm,31.6s									
MDJ				LR		LR				
	comp=Z,57nm,21.8s									
FINES	**FINESS Array B**	79.61	15	P		P	12 44 56.3	+0.7		
FINES	**FINESS Array B**	79.61	15	P		P	12 44 56.3	+0.7		
	comp=Z,2.6nm,0.9s,baz=306,slow=5.0,SNR=3.5									
FINES				LR		LR	13 19 22.5			
	comp=Z,66nm,19.8s,baz=120,slow=35									
GERES	**GERESS Array B**	86.72	28	LR		LR	13 26 40.8			
	comp=Z,79nm,18.6s,baz=316,slow=37									
SONM	**Songino Array**	86.75	330	P		P	12 45 34.3	+1.3		
SONM	**Songino Array**	86.75	330	P		P	12 45 34.3	+1.3		
	comp=Z,1.2nm,0.8s,baz=35,slow=5.4,SNR=6.2									
SONM				LR		LR	13 23 36.5			
	comp=Z,110nm,18.2s,baz=261,slow=35									
ZALV	**Zalesovo Beam**	88.04	345	P		P	12 45 40.1	+1.2		
ZALV	**Zalesovo Beam**	88.04	345	P		P	12 45 40.1	+1.2		
	comp=Z,0.7nm,0.3s,baz=34,slow=5.4,SNR=3.0									
HHC	**Hu-ho-hao-te**	89.90	323	*e*P		P	12 45 45.9	-2.2		
HHC				PP		PP	12 49 21.3	+1.5		
HHC				SKS		SKSac	12 56 17.3	-2.5		
HHC				S		S	12 56 37.0	-4.3		
HHC				SS		SS	13 02 35.0	-2.3		
HHC				pmax		pmax				
	comp=Z,140nm,5.0s									
HHC				LR		LR				
	comp=N,220nm,18.7s									
HHC				LR		LR				
	comp=E,220nm,16.9s									
HHC				LR		LR				
	comp=Z,230nm,16.9s									
AKASG	**Malin Array Be**	90.10	18	P		P	12 45 49.2	+0.5		
AKASG	**Malin Array Be**	90.10	18	P		P	12 45 49.2	+0.5		
	comp=Z,0.8nm,0.6s,baz=326,slow=4.5,SNR=4.9									
BVAR	**Borovoye Array**	91.16	353	P		P	12 45 54.8	+1.2		
BVAR	**Borovoye Array**	91.16	353	P		P	12 45 54.8	+1.2		
	comp=Z,1.3nm,0.8s,baz=20,slow=4.6									
KURK	**Kurchatov**	92.31	348	P		P	12 45 60.0	+1.1		
KURBB	**Kurchatov Arra**	92.41	348	P		P	12 45 60.0	+0.6		
	comp=Z,1.1nm,0.7s,baz=18,slow=4.4,SNR=14									
AKTO	**Aktyubinsk**	94.30	1	P		P	12 46 10.1	+2.0		
AKTO	**Aktyubinsk**	94.30	1	P		P	12 46 10.1	+2.0		
	comp=Z,0.9nm,0.5s,baz=336,slow=20									
MKAR	**Makanchi Array**	95.33	344	P		P	12 46 14.4	+1.5		
MKAR	**Makanchi Array**	95.33	344	P		P	12 46 14.4	+1.5		
	comp=Z,0.2nm,0.5s,baz=33,slow=3.1,SNR=2.9									
MKAR				LR		LR	13 32 41.6			
	comp=Z,46nm,19.1s,baz=260,slow=38									
WMQ	**Urumqi**	96.74	340	*e*P		P	12 46 21.5	+2.1		
WMQ				pP		pP	12 46 28.0	+7.1		
WMQ				LR		LR				
	comp=Z,100nm,26.8s									
CD2	**Chengdu**	101.60	322	*e*P		Pdif	12 46 41.1	-0.3		
CD2				pmax		pmax				
	comp=Z,20nm,5.8s									
LSZ	**Lusaka**	145.76	62	*e*PKPdf		PKPdf	12 52 27.6	-0.6		
LSZ				*e*PKPbc		PKPab	12 52 29.3	+0.4		
MAW	**Mawson**	147.91	183	PKPbc		PKPbc	12 52 33.2	+0.3		
MAW	**Mawson**	147.91	183	PKPbc		PKPbc	12 52 33.2	+0.3		
	comp=Z,2.7nm,0.8s,baz=157,slow=11,SNR=5.4									
BOSA	**Boshof**	150.64	86	PKPbc		PKPbc	12 52 41.4	+0.1		
BOSA	**Boshof**	150.64	86	PKPbc		PKPbc	12 52 41.4	+0.1		
	comp=Z,2.2nm,1.0s,baz=330,slow=20,SNR=3.1									

*ISCJB **20** 12:38:50.2±0.5, 32.27N±0.03×115.54W±0.04, h14km±6km, Error ellipse: s-maj=6.0km s-min=4.4km az=170.1*
*ECX **20** 12:38:51.9±0.8, 32.24N×115.53W, h8km, MD3.6, ML3.7*
*NEIC **20** 12:38:51.9, 32.24N×115.53W, h10km, ML3.7(ECX), ML3.5(PAS), After ECX.*
NEIC Felt at Chula Vista, Lakeside, Lemon Grove and Santee, California.

ISC 20 12:38:51.1±1.0, 32°24.N±0.03×115°53.W±0.04, h22km±11km, n16, σ1s00/23, 3C-5D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
EMX	**El Mayor**	0.35	135	*i* P			Pb	12 38 58.3	-0.4
EMX					*e*S		Sb	12 39 03.3	-0.5
SGL	**Mount Signal**	0.44	339	⇓*i* P			Pb	12 39 00.2	0.0
RDX	**Rancho Dawling**	0.46	229	*i* P			Pb	12 39 00.0	-0.7
RDX				⇓*e*				12 39 08.7	
	comp=N,3μm,0.4s								
YUH	**Yuha Desert**	0.53	322	⇓*i* P			Pb	12 39 01.2	-0.5
RMX	**La Rumorosa**	0.59	309	*i* P			Pb	12 39 02.3	-0.6
RMX				*i* P			Pb	12 39 02.3	-0.6
RMX				⇓*e*				12 39 10.0	
	comp=E,7μm,0.1s								
ECBX	**El Chinero**	0.86	151	*e*P			Pb	12 39 06.5	-0.9
ECBX				*e*				12 39 37.1	
	comp=N,1μm,0.4s								
ZAX	**El Zacaton**	0.95	221	⇑*i* P			Pn	12 39 09.0	-0.2
ZAX				*e*S			Sn	12 39 21.5	-0.7
GLA	**Glamis**	1.01	36	*e*Pg			Pb	12 39 09.8	-0.1
GLA				*e*Sg			Sn	12 39 23.1	-0.4
BAR	**Barrett**	1.06	295	*e*Pg			Pb	12 39 10.5	-0.3
BAR				*e*Sg			Sb	12 39 23.4	-0.8
ECNX	**Esteban Cantu**	1.07	238	⇑*i* P			Pb	12 39 11.1	+0.1
SPX	**San Pedro Mart**	1.19	177	⇑*e*			Sg	12 39 31.3	+3.4
	comp=E,1μm,0.5s								
SPX				⇓*e*				12 39 34.5	
	comp=N,1μm,0.5s								
PFO	**Pinyon Flat Ob**	1.57	331	*e*Pn			Pn	12 39 17.6	-0.2
PFO				*e*Sn			Sn	12 39 36.4	-1.2
LDFC	**Landfair**	2.86	7	*e*Pn			Pn	12 39 36.0	+0.6
LDFC				*e*Sg			Sb	12 40 26.0	+10
PASC	**Pasadena Art C**	2.94	312	*e*Pn			Pb	12 39 42.4	-0.4
PASC				*e*Sn			Sb	12 40 18.4	0.0
GSC	**Goldstone**	3.24	341	*e*Pn			Pn	12 39 41.6	+1.0
GSC				*e*Sg			Sb	12 40 35.0	+8.1
TUC	**Tucson**	4.02	88	*e*Pn			Pn	12 39 50.8	-0.6
TUC				*e*Sg			Sb	12 40 57.8	+8.2

*ISCJB **20** 12:40:25.7±0.4, 12°21S±0.06×166°02E±0.09, h30km, mb4.3/22, MS4.0/12, Error ellipse: s-maj=12.8km s-min=8.5km

YKA	**Yellowknife Ar**	**95.89**	**27**	P		**P**	**12 53 50.8**	**-0.1**
YKA	**Yellowknife Ar**	**95.89**	**27**	P		**P**	**12 53 50.8**	**-0.1**
	0.1nm,0.6s,baz=265,slow=4.8,SNR=4.1							
SNAA	**Sanae**	**95.97**	**184**	P		**P**	**12 53 50.3**	**-1.0**
SNAA	**Sanae**	**95.97**	**184**	P		**P**	**12 53 50.3**	**-1.0**
	0.5nm,0.8s,baz=94,slow=3.9,SNR=6.5							
TXAR	**Lajitas Array**	**96.17**	**61**	LR		LR	13 30 43.0	
	comp=Z,104nm,18.5s,baz=90,slow=31							
KURK	**Kurchatov**	**97.69**	**320**	P		**P**	**12 53 58.6**	**-0.7**
KURBB	**Kurchatov Arra**	**97.73**	**320**	P		**P**	**12 53 58.7**	**-0.9**
	0.3nm,0.5s,baz=90,slow=4.6,SNR=3.9							
ARCES	**ARCESS Array B**	**117.52**	**345**	PKP		**PKPdf**	**12 59 09.4**	**-0.5**
ARCES	**ARCESS Array B**	**117.52**	**345**	PKP		**PKPdf**	**12 59 09.4**	**-0.5**
	3.6nm,0.9s,baz=69,slow=3.0,SNR=4.0							
FINES	**FINESS Array B**	**122.94**	**338**	PKP		**PKPdf**	**12 59 20.4**	**0.0**
FINES	**FINESS Array B**	**122.94**	**338**	PKP		**PKPdf**	**12 59 20.4**	**0.0**
	1.3nm,0.9s,baz=99,slow=8.6,SNR=2.9							
KEST	**Kesra**	**148.49**	**322**	PKPbc		**PKPbc**	**13 00 12.2**	**+0.3**
KEST	**Kesra**	**148.49**	**322**	PKPbc		**PKPbc**	**13 00 12.2**	**+0.3**
	1.6nm,0.9s,baz=175,slow=2.6,SNR=4.0							
ESDC	**Sonseca Array**	**151.24**	**344**	PKPbc		**PKPbc**	**13 00 17.0**	**-1.4**
ESDC	**Sonseca Array**	**151.24**	**344**	PKPbc		**PKPbc**	**13 00 17.0**	**-1.4**
	0.1nm,0.3s,baz=44,slow=3.9,SNR=3.9							
TORD	**Torodi Ar. Bea**	**164.66**	**275**	PKP		**PKPdf**	**13 00 28.9**	**-0.5**
TORD				PKPab		**PKPab**	**13 01 24.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**164.66**	**275**	PKP		**PKPdf**	**13 00 28.9**	**-0.5**
	2.0nm,1.2s,baz=180,slow=3.0,SNR=6.2							
TORD				PKPab		**PKPab**	**13 01 24.6**	**-0.3**
	0.9nm,1.1s,baz=55,slow=1.7,SNR=3.5							

*ISCJB **20** 12:47:54.5±0.5, 36.43N±0.03×70.08E±0.06, h204km, mb3.4/9, Error ellipse: s-maj=7.6km s-min=4.2km az=157.8*

*IDC **20** 12:47:56.2±3.2, 36.35N×70.29E, h220km±30km, mb3.3/10, mb1 3.4/15, mb1mx3.2/32, mbtmp3.3/15, Error ellipse: s-maj=21.9km s-min=19.0km az=47.0*

*NNC **20** 12:48:01.0±7.5, 36.92N×70.26E, h184km±66km, mb3.0, mpv4.0, Error ellipse: s-maj=61.0km s-min=38.1km az=10.0*

ISC 20 12:47:55.9±0.6, 36.51N±0.05×70.25E±0.07, h204km, n43, σ1§77/54, mb3.5/9, 7C-7D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CEP	**Cherat**	**3.00**	**153**	⇓P		**Pn**	**12 48 48.4**	**+2.4**
CEP				S		**S**	**12 49 27.0**	**+2.5**
CHCP	**Chirah Chowk**	**3.76**	**138**	P		**Pn**	**12 48 57.7**	**+2.7**
SARP	**Sargodha**	**4.99**	**156**	P		**Pn**	**12 49 11.5**	**+1.1**
THN	**Thein Dam**	**6.07**	**130**	*e*S		Pn	12 49 30.5	+6.3
DLH	**Dalhousie**	**6.15**	**128**	*e*PKP		**Pn**	**12 49 27.0**	**+1.5**
DLH				*e*S		**S**	**12 50 36.0**	**-0.1**
AML	**Almayashu**	**6.22**	**24**	P		**Pn**	**12 49 27.8**	**+1.5**
	SNR=87							
DHRM	**DHARAMSHALA**	**6.56**	**129**	*e*PKP		**Pn**	**12 49 31.6**	**+0.8**
DHRM				*e*S		**S**	**12 50 44.2**	**-1.4**
DHRM				AML		AML	12 50 46.3	
	comp=E,400nm,0.4s							
DHRM				AML		AML	12 50 46.4	
	comp=N,215nm,0.3s							
KK31	**Karatay Array**	**6.59**	**2**	⇓P		**Pn**	**12 49 31.8**	**+1.0**
	comp=N,2.0nm,0.4s,baz=184,slow=13,SNR=47							
KK31				⇑S		**S**	**12 50 42.7**	**-3.2**
	comp=N,6.9nm,0.5s,baz=188,slow=24							
UCH	**Uchtor**	**6.60**	**29**	P		**S**	**12 50 46.2**	**-0.5**
	SNR=7.3							
EKS2	**Erkin-Say**	**6.72**	**23**	P		**Pn**	**12 49 34.5**	**+1.9**
	SNR=18							
KZA	**Kyzart**	**6.78**	**33**	P		**Pn**	**12 49 34.9**	**+1.3**
	SNR=50							
AAK	**Ala-Archa**	**6.94**	**27**	P		**Pn**	**12 49 37.5**	**+2.1**
	SNR=12							
AAK	**Ala-Archa**	**6.94**	**27**	P		**Pn**	**12 49 37.2**	**+1.8**
	comp=N,4.9nm,0.3s,baz=178,slow=1.7,SNR=17							
AAK				S		**S**	**12 50 54.5**	**+0.2**
	comp=N,2.2nm,0.3s,baz=137,slow=19,SNR=7.7							
KBK	**Karagaybulak**	**7.13**	**29**	P		**Pn**	**12 49 39.9**	**+2.0**
	SNR=15							
CHMS	**Chumysh**	**7.35**	**27**	P		**Pn**	**12 49 41.9**	**+1.3**
	SNR=14							
ULHL	**Ulahol**	**7.37**	**37**	P		**Pn**	**12 49 42.8**	**+1.7**
	SNR=32							
SDNR	**Sundarnagar**	**7.48**	**130**	*e*PKP		**Pn**	**12 49 43.0**	**+0.5**
SDNR				*e*S		**S**	**12 51 04.0**	**-3.2**
USP	**Ospenovka**	**7.50**	**24**	P		**Pn**	**12 49 43.4**	**+0.8**
	SNR=14							
TKM2	**Tokmak 2**	**7.61**	**31**	⇑P		**Pn**	**12 49 45.3**	**+1.1**
	comp=N,22nm,0.8s							
TKM2				⇓S		S	12 51 02.5	-7.9
	comp=N,7.6nm,0.8s							
TKM2	**Tokmak 2**	**7.61**	**31**	P		**Pn**	**12 49 45.7**	**+1.5**
	SNR=27							
SMLA	**Simla**	**7.86**	**131**	*e*PKP		**Pn**	**12 49 47.7**	**+0.3**
SMLA				*e*S		**S**	**12 51 11.3**	**-4.9**
SMLA				AML		AML	12 51 15.6	
	comp=E,94nm,0.5s							
SMLA				AML		AML	12 51 17.2	
	comp=N,95nm,0.5s							
BHJ	**Bhuj**	**13.22**	**182**	*ex*		**P**	**12 51 01.4**	**+2.5**
MK31	**Makanchi Array**	**13.64**	**37**	P		**Pn**	**12 51 01.2**	**+0.1**
	comp=N,1.3nm,0.5s,baz=214,slow=12,SNR=31							
MK31				⇓S		**S**	**12 53 32.8**	**+0.1**
	comp=N,11nm,1.2s,baz=95,slow=7.2,SNR=28							
MKAR	**Makanchi Array**	**13.64**	**37**	P		**Pn**	**12 51 01.6**	**+0.4**
	comp=N,0.5nm,0.3s,baz=228,slow=13,SNR=38							
AB31	**Akbulak array**	**14.79**	**333**	⇑P		**Pn**	**12 51 14.8**	**-0.5**
	comp=N,1.1nm,0.5s,baz=146,slow=12,SNR=17							
AB31				⇓S		**S**	**12 53 58.8**	**-0.4**
	comp=N,0.8nm,0.6s							
KUR17	**Kurchatov Arra**	**15.31**	**20**	⇓P		**Pn**	**12 51 21.2**	**-0.3**
	comp=N,1.1nm,1.4s							
KURBB	**Kurchatov Arra**	**15.32**	**20**	P		**Pn**	**12 51 21.8**	**+0.2**
	comp=N,0.1nm,0.3s,baz=208,slow=11,SNR=10							
KURK	**Kurchatov**	**15.42**	**20**	⇑P		P	12 51 28.7	+5.7
	comp=N,2.9nm,1.1s							
VOSK	**Vostochnaya**	**16.22**	**2**	⇑P		**Pn**	**12 51 33.1**	**+0.5**
	comp=N,2.5nm,1.0s							
ZRNK	**Zerenda**	**16.47**	**357**	⇑P		**Pn**	**12 51 35.8**	**+0.3**
	comp=N,1.3nm,0.5s							
ZRNK				⇓S		**S**	**12 54 35.9**	**-0.3**
	comp=N,1.5nm,0.8s							
AKTO	**Aktyubinsk**	**16.48**	**331**	⇑P		**P**	**12 51 35.2**	**+0.5**
	comp=N,2.8nm,0.6s							
AKTO	**Aktyubinsk**	**16.48**	**331**	P		**Pn**	**12 51 35.8**	**+0.2**
	comp=N,0.7nm,0.3s,baz=142,slow=8.8,SNR=11							
AKTO				S		**S**	**12 54 34.5**	**-2.1**
	comp=N,0.1nm,0.3s,baz=217,slow=20,SNR=2.6							
BVAR	**Borovoye Array**	**16.52**	**0**	P		**Pn**	**12 51 36.6**	**+0.6**
	comp=N,0.3nm,0.3s,baz=171,slow=10,SNR=6.6							
BVAR				S		**S**	**12 54 39.9**	**+2.6**
	comp=N,0.2nm,0.3s,baz=172,slow=20,SNR=3.9							
ZALV	**Zalesovo Beam**	**20.16**	**26**	P		**P**	**12 52 15.9**	**+1.4**
	comp=N,2.6nm,0.4s,baz=224,slow=12,SNR=3.6							
FINES	**FINESS Array B**	**37.14**	**326**	P		**P**	**12 54 47.9**	**+1.1**
	comp=N,2.2nm,0.9s,baz=133,slow=13,SNR=4.0							
ARCES	**ARCESS Array B**	**40.91**	**338**	P		**P**	**12 55 17.3**	**-0.5**
	comp=N,5.5nm,1.0s,baz=36,slow=9.0,SNR=4.1							
NOA	**NORSAR Array B**	**44.01**	**323**	P		**P**	**12 55 42.6**	**-0.3**
	comp=N,0.3nm,0.5s,baz=98,slow=7.2,SNR=3.0							
TORD	**Torodi Ar. Bea**	**65.12**	**268**	P		**P**	**12 58 13.2**	**-2.0**
	comp=N,0.3nm,0.4s,baz=44,slow=5.8,SNR=6.5							
ILAR	**Eielson Array**	**74.93**	**16**	P		**P**	**12 59 13.0**	**-1.1**
	comp=N,0.2nm,0.5s,baz=307,slow=4.5,SNR=5.2							
BOSA	**Boshof**	**77.37**	**220**	P		**P**	**12 59 27.0**	**-1.4**
	comp=N,1.2nm,0.7s,baz=79,slow=10,SNR=2.5							
YKA	**Yellowknife Ar**	**81.26**	**2**	P		**P**	**12 59 48.0**	**-0.8**
	comp=N,0.5nm,0.6s,baz=351,slow=5.4,SNR=9.7							
YKA				pP		**pP**	**13 00 42.9**	**+4.8**
	comp=N,0.4nm,0.6s,baz=351,slow=5.5,SNR=7.1							
WRA	**Warramunga Arr**	**82.51**	**121**	P		**P**	**12 59 53.9**	**-2.1**
	comp=N,0.5nm,0.8s,baz=326,slow=4.7,SNR=6.2							
ASAR	**Alice Springs**	**84.75**	**124**	P		**P**	**13 00 05.5**	**-1.8**
	comp=N,0.4nm,0.7s,baz=311,slow=4.8,SNR=6.3							

*ISCJB **20** 12:58:16.5±0.4, 39.70N±0.02×29.44E±0.03, h0km, Error ellipse: s-maj=3.5km s-min=3.4km az=168.1*

*DDA **20** 12:58:16.2, 39.69N×29.44E, h7km, MD2.8*

*CSEM **20** 12:58:16.2, 39.69N×29.44E, h7km, MD2.8, After DDA*

ISC 20 12:58:16.6±0.8, 39.69N±0.02×29.44E±0.02, h0km, n26, σ0§79/41, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
TVSB	**Tavsanli**	**0.24**	**176**	*e*PG		**Pg**	**12 58 21.1**	**-0.1**
TVSB				*e*SG		**Sg**	**12 58 25.7**	**+1.5**
ULDT	**Uludag**	**0.51**	**333**	*i* P		**Pg**	**12 58 26.4**	**0.0**
ULDT				*i* S		**Sg**	**12 58 34.1**	**+1.0**
ULDT	**Uludag**	**0.51**	**333**	*i* P		**Pg**	**12 58 26.4**	**0.0**
ULDT				*i* S		**Sg**	**12 58 34.1**	**+1.0**
ORLT	**Orhaneli**	**0.55**	**311**	*e*PG		**Pg**	**12 58 27.5**	**+0.3**
GDZ	**Gediz**	**0.60**	**177**	*i* P		**Pg**	**12 58 27.4**	**-0.7**
GDZ				*i* S		**Sg**	**12 58 37.2**	**+1.4**
GDZ	**Gediz**	**0.60**	**177**	*i* P		**Pg**	**12 58 27.4**	**-0.7**
GDZ				*i* S		**Sg**	**12 58 37.2**	**+1.4**
CAVI	**Cavuskoy**	**0.60**	**31**	*e*PG		**Pg**	**12 58 28.0**	**-0.1**
DURS	**Dursunbey**	**0.75**	**264**	*i* P		**Pg**	**12 58 30.8**	**-0.2**
DURS				*i* S		**Sg**	**12 58 42.1**	**+1.4**
DURS	**Dursunbey**	**0.75**	**264**	*i* P		**Pg**	**12 58 30.8**	**-0.2**
DURS				*i* S		**Sg**	**12 58 42.1**	**+1.4**
GEMT	**Gemlik**	**0.77**	**346**	*e*PG		**Pb**	**12 58 32.7**	**-0.2**
MDNY	**Mudanya-Bursa**	**0.80**	**328**	*e*PG		**Pb**	**12 58 32.9**	**-0.6**
BORA	**Eskisehir**	**0.81**	**76**	*i* P		**Pg**	**12 58 31.0**	**-1.0**
BORA				*i* S		**Sg**	**12 58 43.9**	**+1.4**
BORA	**Eskisehir**	**0.81**	**76**	*i* P		**Pg**	**12 58 31.0**	**-1.0**
BORA				*i* S		**Sg**	**12 58 43.9**	**+1.4**
DEMI	**Demirci**	**0.85**	**221**	*i* P		**Pg**	**12 58 33.0**	**0.0**
DEMI				*i* S		**Sb**	**12 58 46.9**	**+0.5**
DEMI	**Demirci**	**0.85**	**221**	*i* P		**Pg**	**12 58 33.0**	**0.0**
DEMI				*i* S		**Sb**	**12 58 46.9**	**+0.5**
YLV	**Yalova**	**0.88**	**357**	*e*PG		**Pb**	**12 58 35.0**	**+0.1**
ARMT	**Armutlu**	**0.98**	**333**	*e*PG		**Pb**	**12 58 36.3**	**-0.3**
KCTX	**Karacabey (Bur**	**1.01**	**305**	*e*PG		**Pg**	**12 58 36.0**	**-0.1**
SEYT	**Eskypehyr**	**1.10**	**98**	*i* P		**Pg**	**12 58 37.5**	**-0.3**
SEYT				*i* S		**Sn**	**12 58 55.4**	**0.0**
SEYT	**Eskypehyr**	**1.10**	**98**	*i* P		**Pg**	**12 58 37.5**	**-0.3**
SEYT				*i* S		**Sn**	**12 58 55.4**	**0.0**
GULT	**Gulveren**	**1.11**	**48**	*e*PN		**Pb**	**12 58 38.6**	**-0.2**
HRT	**Hereke**	**1.15**	**9**	*e*PN		**Pg**	**12 58 38.7**	**+0.1**
BALB	**Balikesir**	**1.21**	**268**	*e*PN		**Pg**	**12 58 38.6**	**-1.1**
GONE	**Gonen-Balikesi**	**1.40**	**285**	*e*PN		**Pn**	**12 58 42.8**	**-0.6**
BALY	**Balya**	**1.41**	**273**	*i* P		**Pn**	**12 58 42.5**	**-1.0**
BALY				*i* S		**Sg**	**12 59 01.9**	**+0.1**
BALY	**Balya**	**1.41**	**273**	*i* P		**Pn**	**12 58 42.5**	**-1.0**
BALY				*i* S		**Sg**	**12 59 01.9**	**+0.1**

*ISCJB **20** 13:04:29.9±0.6, 23.04N±0.06×101.2E±0.1, h10km, mb3.7/7, Error ellipse: s-maj=16.0km s-min=6.9km az=25.1*

*IDC **20** 13:04:30.4±0.9, 23.07N×101.22E, h0km, mb3.9/8, mb1 3.9/9, mb1mx3.6/29, mbtmp3.8/9, ML3.9/1, MS3.1/1, Ms1 3.3/1, ms1mx2.4/32, Error ellipse: s-maj=29.1km s-min=14.0km az=84.0*

*BJI **20** 13:04:31.5, 23.00N×100.99E, h5km, ML3.6/3*

ISC 20 13:04:31.8±1.0, 23.0N±0.1×101.1E±0.2, h10km, n10, σ0§63/10, mb3.8/7, Yunnan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KMI	**Kunming**	**2.54**	**35**	Pg		**Pg**	**13 05 20.4**	**-0.1**
KMI				Sg		**Sg**	**13 05 53.8**	**+0.3**
KMI				smax		smax		
	comp=N,230nm,1.1s							
KMI				smax		smax		
	comp=E,380nm,1.2s							
CMAR	**Chiang Mai Arr**	**5.00**	**205**	Pn		**Pn**	**13 05 46.9**	**-0.1**
	comp=E,1.1nm,0.3s,baz=16,slow=12,SNR=8.1							
CMAR				Pg		Pg	13 06 03.6	-4.0
	comp=E,1.2nm,0.3s,baz=27,slow=14,SNR=6.0							
CMAR				Lg		Lg	13 07 10.9	
	comp=E,6.3nm,0.3s,baz=20,slow=32,SNR=11							
CMAR				LR		LR	13 07 49.1	
	comp=E,182nm,18.6s,baz=25,slow=39							
PSI	**Prapat**	**20.23**	**186**	P		Pn	13 09 08.5	-0.8
	comp=E,2.6nm,0.4s,baz=282,slow=9.3,SNR=4.7							
SONM	**Songino Array**	**25.10**	**8**	P		**P**	**13 09 55.7**	**-1.1**
	comp=E,0.3nm,0.4s,baz=206,slow=9.5,SNR=2.8							
MKAR	**Makanchi Array**	**28.15**	**332**	P		**P**	**13 10 25.1**	**+1.0**
	comp=E,0.6nm,0.5s,baz=137,slow=8.3,SNR=8.9							
KURBB	**Kurchatov Arra**	**32.69**	**333**	P		**P**	**13 11 04.1**	**0.0**
	comp=E,0.8nm,0.2s,baz=144,slow=8.7,SNR=4.5							
ZALV	**Zalesovo Beam**	**33.23**	**342**	P		**P**	**13 11 09.6**	**+0.7**
	comp=E,0.4nm,0.3s,baz=154,slow=11,SNR=2.8							
BVAR	**Borovoye Array**	**37.97**	**330**	P		**P**	**13 11 49.4**	**-0.3**
	comp=E,0.6nm,0.6s,baz=112,slow=11,SNR=4.1							
WRA	**Warramunga Arr**	**53.61**	**140**	P		**P**	**13 13 53.8**	**+0.3**
	comp=E,0.4nm,0.3s,baz=330,slow=7.8,SNR=39							
ASAR	**Alice Springs**	**56.29**	**143**	P		**P**	**13 14 12.9**	**0.0**
	comp=E,1.1nm,0.8s,baz=322,slow=7.0,SNR=11							

*ATH **20** 13:30:37.5, 41.27N×22.71E, h25km±1km, MD2.9/5*

*CSEM **20** 13:30:37.6±0.2, 41.29N×22.72E, h8km, ML1.9, Error ellipse: s-maj=4.3km s-min=3.4km az=85.0*

*SKO **20** 13:30:37.3, 41.32N×22.70E, h15km, M1.6, ML1.9*

*THE **20** 13:30:37.9, 41.31N×22.72E, h0km±1km, ML2.3/5, Error ellipse: s-maj=1.8km s-min=0.5km az=12.0*

*ISCJB **20** 13:30:37.5±0.4, 41.30N±0.02×22.70E±0.04, h12km±3km, Error ellipse: s-maj=4.6km s-min=4.0km az=179.7*

*BEO **20** 13:30:39.1±0.8, 41.32N×22.62E, h5km±3km, ML1.9/5*

ISC 20 13:30:37.6±0.8, 41.29N±0.02×22.67E±0.02, h11km±5km, n42, σ0§59/65, 1D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VAY	**Valandovo**	**0.08**	**290**	P		**Pg**	**13 30 40.1**	**0.0**
VAY				S		**Sg**	**13 30 42.2**	**+0.2**
VAY	**Valandovo**	**0.08**	**290**	*e*Pg		**Pg**	**13 30 40.1**	**0.0**
VAY				*e*Sg		**Sg**	**13 30 42.2**	**+0.2**
VAY	**Valandovo**	**0.08**	**290**	⇓*i*Pg		**Pg**	**13 30 40.1**	**0.0**
VAY				*e*Lg		Lg	13 30 42.4	
	comp=N,697nm,0.3s							
VAY				*i* Sg		**Sg**	**13 30 42.4**	**+0.3**
VAY				*e*Lg		Lg	13 30 42.4	
	comp=E,773nm,0.2s							
VAY	**Valandovo**	**0.08**	**290**	P		**Pg**	**13 30 40.1**	**0.0**
VAY				S		**Sg**	**13 30 42.2**	**+0.2**
KNT	**Kendrikon**	**0.21**	**127**	P		**Pg**	**13 30 42.3**	**+0.1**
KNT				S		**Sg**	**13 30 45.5**	**+0.2**
KNT	**Kendrikon**	**0.21**	**127**	P		**Pg**	**13 30 42.3**	**+0.1**
KNT				S		**Sg**	**13 30 45.5**	**+0.2**
GRG	**Griva**	**0.39**	**211**	P		**Pb**	**13 30 46.1**	**-0.5**
GRG				S		**Sb**	**13 30 52.3**	**-0.3**
GRG	**Griva**	**0.39**	**211**	*e*PB		**Pb**	**13 30 46.4**	**-0.2**
GRG				*e*SB		**Sb**	**13 30 52.6**	**-0.6**
GRG	**Griva**	**0.39**	**211**	P		**Pb**	**13 30 46.1**	**-0.5**
GRG	**Griva**	**0.39**	**211**	*e*Pb		**Pb**	**13 30 46.4**	**-0.2**
GRG				*e*Sb		**Sb**	**13 30 52.0**	**-0.6**
SOH	**Sokhos**	**0.70**	**132**	P		**Pg**	**13 30 50.8**	**-0.4**
SOH				S		**Sg**	**13 31 00.7**	**+0.4**
SOH	**Sokhos**	**0.70**	**132**	*e*PN		**Pg**	**13 30 50.7**	**-0.4**
SOH				*e*SN		**Sg**	**13 31 00.7**	**+0.4**
SOH	**Sokhos**	**0.70**	**132**	P		**Pg**	**13 30 50.8**	**-0.4**
SOH				S		**Sg**	**13 31 00.7**	**+0.4**
SRS	**Serrai**	**0.72**	**104**	P		**Pg**	**13 30 51.0**	**-0.5**
SRS	**Serrai**	**0.72**	**104**	P		**Pg**	**13 30 51.0**	**-0.5**
HORT	**Hortiatis**	**0.77**	**155**	P		**Pg**	**13 30 52.4**	**0.0**
HORT				S		**Sb**	**13 31 03.9**	**+0.5**
HORT	**Hortiatis**	**0.77**	**155**	P		**Pg**	**13 30 52.4**	**0.0**
HORT				S		**Sb**	**13 31 03.9**	**+0.5**
NVR	**Nevrokopi**	**0.90**	**86**	P		**Pg**	**13 30 54.4**	**-0.5**
NVR	**Nevrokopi**	**0.90**	**86**	*e*PN		**Pg**	**13 30 54.3**	**-0.6**
NVR				*e*SN		**Sg**	**13 31 06.9**	**+0.2**
NVR	**Nevrokopi**	**0.90**	**86**	P		**Pg**	**13 30 54.4**	**-0.5**
NVR				*e*Sn		**Sg**	**13 31 06.9**	**+0.2**
PLG	**Polygyros**	**1.09**	**147**	P		**Pb**	**13 30 57.9**	**-0.5**
PLG	**Polygyros**	**1.09**	**147**	*e*PN		**Pb**	**13 30 57.0**	**-1.4**
PLG				*e*SN		**Sb**	**13 31 11.8**	**-0.9**
PLG	**Polygyros**	**1.09**	**147**	*e*Pn		**Pb**	**13 30 57.0**	**-1.4**
PLG	**Polygyros**	**1.09**	**147**	P		**Pb**	**13 30 57.9**	**-0.5**
PLG				*e*Sn		**Sb**	**13 31 11.8**	**-0.9**
FNA	**Florina**	**1.10**	**243**	*e*PN		**Pg**	**13 30 58.8**	**-0.1**
FNA	**Florina**	**1.10**	**243**	*e*Pn		**Pg**	**13 30 58.8**	**-0.1**
LIT	**Litokhoron**	**1.20**	**187**	*e*PN		**Pb**	**13 31 00.3**	**0.0**
LIT	**Litokhoron**	**1.20**	**187**	*e*Pn		**Pb**	**13 31 00.3**	**0.0**
VTS	**Vitosha**	**1.36**	**17**	P		**Pb**	**13 31 02.9**	**-0.2**
VTS	**Vitosha**	**1.36**	**17**	*e*Pg		**Pg**	**13 31 03.8**	**+0.1**
VTS	**Vitosha**	**1.36**	**17**	P		**Pb**	**13 31 02.9**	**-0.2**
VTS	**Vitosha**	**1.36**	**17**	*e*Pg		**Pg**	**13 31 03.8**	**+0.1**
OUR	**Ouranopolis**	**1.38**	**133**	P		**Pb**	**13 31 03.0**	**-0.4**
OUR				S		**Sg**	**13 31 23.8**	**+1.8**
OUR	**Ouranopolis**	**1.38**	**133**	P		**Pb**	**13 31 03.0**	**-0.4**
OUR				S		**Sg**	**13 31 23.8**	**+1.8**
PAIG	**Paliouri**	**1.56**	**150**	*e*PN		**Pn**	**13 31 05.5**	**+0.2**
PAIG	**Paliouri**	**1.56**	**150**	*e*Pn		**Pn**	**13 31 05.5**	**+0.2**
BARS	**Barje**	**1.65**	**338**	*e*Pn		**Pn**	**13 31 06.8**	**+0.3**
BARS				*e*Sg		**Sg**	**13 31 30.6**	**-0.1**
BARS	**Barje**	**1.65**	**338**	*e*Pn		**Pn**	**13 31 06.8**	**+0.3**
BARS				*e*Sg		**Sg**	**13 31 30.6**	**-0.1**
PLD	**Plovdiv**	**1.72**	**61**	*e*Sg		**Sg**	**13 31 34.8**	**+1.8**
THL	**Klokotos Trika**	**1.80**	**196**	*e*PN		**Pn**	**13 31 08.8**	**+0.3**
THL	**Klokotos Trika**	**1.80**	**196**	*e*Pn		**Pn**	**13 31 08.8**	**+0.3**
ZAPS	**Zavoj**	**1.98**	**359**	*e*Pn		**Pb**	**13 31 13.3**	**-0.3**
ZAPS				*e*Sn		**Sb**	**13 31 38.4**	**+0.1**

IDC 20 13:44:18.0±4.2, 3.45S×140.72E, h0km, mb3.4/3, mb1 3.9/4, mb1mx3.6/18, mbtmp3.7/4, ML4.3/1, Error ellipse: s-maj=127.2km s-min=31.4km az=94.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**17.54**	**200**	P		P	13 48 25.2	-0.1
	1.2nm,0.3s,baz=21,slow=12,SNR=84							
WRA				S		Sn	13 51 28.2	-12
	0.1nm,0.3s,baz=22,slow=23,SNR=4.1							
FITZ	**Fitzroy Crossi**	**20.75**	**224**	P		P	13 48 60.0	-0.5
	1.7nm,1.0s,baz=45,slow=13,SNR=6.3							
FITZ				S		S	13 52 40.0	-13
	1.2nm,0.9s,baz=77,slow=18,SNR=3.8							
ASAR	**Alice Springs**	**21.15**	**198**	P		P	13 49 04.7	-0.2
	1.0nm,0.5s,baz=29,slow=9.6,SNR=10							
MKAR	**Makanchi Array**	**71.60**	**322**	P		P	13 55 41.5	+0.1
	0.4nm,0.8s,baz=121,slow=5.6,SNR=3.5							

*IDC **20** 13:59:26.3±1.1, 39.26N×21.12E, h0km, mb3.5/7, mb1 3.5/7, mb1mx3.4/28, mbtmp3.5/7, MS2.8/1, Ms1 2.8/1, ms1mx2.1/36, Error ellipse: s-maj=29.6km s-min=23.9km az=105.0*

*ISCJB **20** 13:59:28.4±0.5, 39.20N±0.01×21.09E±0.02, h8km±4km, mb3.4/7, MS2.6/1, Error ellipse: s-maj=3.2km s-min=2.4km az=160.7*

*ATH **20** 13:59:28.9, 39.20N×21.15E, h18km±1km, MD3.3/26, ML3.1*

*CSEM **20** 13:59:28.8±0.1, 39.19N×21.10E, h8km, ML3.3/11, Error ellipse: s-maj=3.6km s-min=2.8km az=69.0*

*THE **20** 13:59:29.2, 39.21N×21.11E, h3km, ML3.3/11, Error ellipse: s-maj=0.9km s-min=0.4km az=231.0*

ISC 20 13:59:29.1±0.9, 39.21N±0.01×21.11E±0.02, h14km±7km, n140, σ1§106/181, mb3.5/7, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
JAN	**Janina**	**0.49**	**336**	P		**Pg**	**13 59 38.5**	**-0.2**
JAN				S		**Sg**	**13 59 45.8**	**+0.5**
JAN	**Janina**	**0.49**	**336**	*e*PN		**Pg**	**13 59 38.6**	**-0.2**
JAN				*e*SN		**Sg**	**13 59 46.0**	**+0.7**
JAN	**Janina**	**0.49**	**336**	*e*Pn		**Pg**	**13 59 38.6**	**-0.2**
JAN				*e*Sn		**Sg**	**13 59 46.0**	**+0.7**
LKD2	**Lefkada island**	**0.55**	**220**	P		**Pg**	**13 59 39.7**	**-0.2**
LKD2	**Lefkada island**	**0.55**	**220**	*e*PN		**Pg**	**13 59 39.8**	**-0.2**
LKD2				*e*SN		**Sb**	**13 59 48.4

XOR	Xorichti	1.62	84	P		Pn	13 59 57.9	+0.5
NEO	Neokhori	1.64	86	P		Pn	13 59 58.3	+0.6
NEO	Neokhori	1.64	86	*e*PN		Pn	13 59 58.3	+0.6
NEO	Neokhori	1.64	86	P		Pn	13 59 58.3	+0.6
AMT	Artemida-Makis	1.74	164	*e*Pn		Pn	14 00 00.1	+1.1
AMT	Artemida-Makis	1.74	164	*e*Pn		Pn	14 00 00.1	+1.1
BIA	Bitola	1.81	5	*i* Pn		Pb	14 00 02.7	+0.5
BIA				*e*Sg		Sg	14 00 28.6	+1.2
LTK	Loutraki	1.88	129	*e*PN		Pn	14 00 02.3	+1.4
LTK	Loutraki	1.88	129	*e*Pn		Pn	14 00 02.3	+1.4
GRG	Griva	2.00	29	*e*PN		Pn	14 00 03.8	+1.2
GRG	Griva	2.00	29	*e*Pn		Pn	14 00 03.8	+1.2
VLX	Vlachokerasia	2.09	151	*e*PN		Pn	14 00 05.1	+1.2
VLX	Vlachokerasia	2.09	151	*e*Pn		Pn	14 00 05.1	+1.2
PAIG	Paliouri	2.11	69	*e*PN		Pn	14 00 04.9	+0.9
PAIG	Paliouri	2.11	69	*e*Pn		Pn	14 00 04.9	+0.9
PLG	Polygyros	2.14	56	P		Pn	14 00 05.1	+0.6
PLG	Polygyros	2.14	56	*e*PB		Pn	14 00 04.9	+0.4
PLG	Polygyros	2.14	56	P		Pn	14 00 05.1	+0.6
AOS	Alonnisos	2.15	90	P		Pn	14 00 05.2	+0.6
AOS	Alonnisos	2.15	90	*e*PB		Pn	14 00 05.1	+0.5
AOS	Alonnisos	2.15	90	P		Pn	14 00 05.2	+0.6
SOH	Sokhos	2.36	46	*e*PN		Pn	14 00 08.9	+1.4
SOH	Sokhos	2.36	46	*e*Pn		Pn	14 00 08.9	+1.4
NAIG	Nisos Aigina	2.36	127	*e*PN		Pn	14 00 08.7	+1.2
NAIG	Nisos Aigina	2.36	127	*e*Pn		Pn	14 00 08.7	+1.2
PYL	PYLOS	2.37	168	*e*PN		Pn	14 00 09.7	+2.1
PYL	PYLOS	2.37	168	*e*Pn		Pn	14 00 09.7	+2.1
KNT	Kendrikon	2.38	35	P		Pn	14 00 09.0	+1.2
KNT	Kendrikon	2.38	35	P		Pn	14 00 09.0	+1.2
VAY	Valandovo	2.38	27	P		Pn	14 00 08.8	+1.0
VAY	Valandovo	2.38	27	*e*Pn		Pn	14 00 08.6	+1.8
VAY	Valandovo	2.38	27	P		Pn	14 00 08.8	+1.0
DID	Didima	2.39	135	*e*PB		Pn	14 00 09.2	+1.3
DID	Didima	2.39	135	*e*Pb		Pn	14 00 09.2	+1.3
ATH	Athens Observa	2.39	120	*e*PB		Pn	14 00 09.4	+1.5
ATH	Athens Observa	2.39	120	*e*Pb		Pn	14 00 09.4	+1.5
PTL	Penteli	2.45	117	*e*PN		Pn	14 00 09.6	+0.8
PTL	Penteli	2.45	117	*e*Pn		Pn	14 00 09.6	+0.8
OUR	Ouranopolis	2.48	62	P		Pn	14 00 10.2	+1.1
OUR	Ouranopolis	2.48	62	P		Pn	14 00 10.2	+1.1
DYR	Agios Nikonas	2.63	158	*e*PB		Pn	14 00 13.1	+1.9
DYR	Agios Nikonas	2.63	158	*e*Pb		Pn	14 00 13.1	+1.9
SKO	Skopje	2.77	5	*i* Pn		Pn	14 00 16.4	+3.3
VLI	Veliai	2.88	149	*e*PB		Pn	14 00 16.9	+2.3
VLI	Veliai	2.88	149	*e*Pb		Pn	14 00 16.9	+2.3
NVR	Nevrokopi	3.00	44	*e*PN		Pn	14 00 17.8	+1.5
NVR	Nevrokopi	3.00	44	*e*Pn		Pn	14 00 17.8	+1.5
LIA	Limnos Island	3.22	76	*e*PN		Pn	14 00 19.7	+0.4
LIA	Limnos Island	3.22	76	*e*Pn		Pn	14 00 19.7	+0.4
SMTH	Samothraki Isl	3.63	68	*e*PN		Pn	14 00 25.8	+0.9
SMTH	Samothraki Isl	3.63	68	*e*Pn		Pn	14 00 25.8	+0.9
PRK	Paraskevi	4.01	88	*e*PN		Pn	14 00 30.2	+0.1
PRK	Paraskevi	4.01	88	*e*Pn		Pn	14 00 30.2	+0.1
ALN	Alexandroupoli	4.14	64	*e*PN		Pn	14 00 33.0	+1.0
ALN	Alexandroupoli	4.14	64	*e*Pn		Pn	14 00 33.0	+1.0
STON	Ston	4.47	326	*e*Pn		Pn	14 00 36.0	-0.6
STON				Sn		Sn	14 01 26.0	-2.3
STON	Ston	4.47	326	*e*Pn		Pn	14 00 35.9	-0.6
STON				Sn		Sn	14 01 26.0	-2.3
UDBI	Udbina	6.64	325	*i* Pn		Pn	14 01 07.5	+1.1
UDBI				Sn		Sn	14 02 19.4	-2.5
UDBI	Udbina	6.64	325	*i* Pn		Pn	14 01 07.5	+1.1
UDBI				Sn		Sn	14 02 19.4	-2.5
MLR	Muntele Rosu	7.22	28	Pn		Pn	14 01 18.0	+3.6
	0.1nm,0.3s,baz=221,slow=9.3,SNR=3.1							
MLR				Sn		Sn	14 02 39.8	+3.5
	0.1nm,0.3s,baz=150,slow=16,SNR=1.9							
HFS	Hagfors	21.46	350	P		P	14 04 16.7	-0.2
	1.4nm,0.7s,baz=156,slow=14,SNR=4.7							
HFS				LR		LR	14 11 48.5	
	comp=Z,24nm,18.0s,baz=130,slow=35							
FINES	FINESS Array B	22.47	6	P		P	14 04 25.2	-2.5
	0.5nm,0.6s,baz=167,slow=13,SNR=3.2							
NOA	NORSAR Array B	22.70	347	P		P	14 04 29.6	-0.6
	0.7nm,0.7s,baz=154,slow=10,SNR=3.3							
EKA	Eskdalemuir Ar	22.87	323	P		P	14 04 30.1	-1.8
	0.3nm,0.4s,baz=111,slow=11,SNR=4.9							
TORD	Torodi Ar. Bea	31.12	219	P		P	14 05 47.4	0.0
	0.7nm,0.9s,baz=33,slow=9.1,SNR=5.4							
MKAR	Makanchi Array	44.37	59	P		P	14 07 38.3	-0.8
	0.7nm,0.6s,baz=280,slow=7.8,SNR=12							
ZALV	Zalesovo Beam	44.66	49	P		P	14 07 40.4	-0.8
	1.0nm,0.4s,baz=279,slow=9.7,SNR=3.9							
WRA	Warramunga Arr	120.11	92	PKP		PKPdf	14 18 18.5	-1.4
	0.3nm,1.0s,baz=302,slow=1.7,SNR=2.8							
ASAR	Alice Springs	121.82	96	PKP		PKPdf	14 18 21.9	-1.2
	0.4nm,1.1s,baz=298,slow=1.4,SNR=3.2							

SOF ***20*** *14:10:39.7, 44.2°29N×25.2°75E, h2km, MD3.2*
THE ***20*** *14:10:40.1, 44.4°44N×25.5°80E, h16km±4km, ML4.0/3, Error ellipse: s-maj=6.0km s-min=1.2km az=25.0*
IDC ***20*** *14:10:40.1±1.2, 44.1°7N×25.7°88E, h0km, mb3.4/3, mb1 3.4/7, mb1mx3.3/27, mbtmp3.4/7, ML2.9/4, Error ellipse: s-maj=26.8km s-min=13.5km az=90.0*
ISCJB ***20*** *14:10:42.0±0.3, 44.1°4N±0.0°01×25.1°69E±0.0°02, h10km±2km, mb3.3/3, Error ellipse: s-maj=2.8km s-min=2.1km az=31.7*
CSEM ***20*** *14:10:42.7±0.1, 44.1°9N×25.1°70E, h12km, MD3.9/10, Error ellipse: s-maj=2.6km s-min=2.0km az=118.0*
BUC ***20*** *14:10:42.4±0.7, 44.1°7N×25.1°72E, h15km±4km, MD3.9/10, Error ellipse: s-maj=5.7km s-min=4.4km az=339.0*
BEO ***20*** *14:10:46.6±0.8, 44.1°3N×25.1°36E, h11km±6km, ML3.6/1*

ISC 20 14:10:42.0±1.1, 44.1°19N±0.0°01×25.7°3E±0.0°2, h13km±8km, n199, σ1°12/257, mb3.2/3, 73C-30D, Romania

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
BUC1	Bucharest	0.27	53	⇑*i*P		Pb	14 10 48.9	+0.2
BUC1	Bucharest	0.27	53	⇑*i*P		Pb	14 10 48.9	+0.2
BUC1				*i* S		Sb	14 10 53.7	+0.5
BUC1	Bucharest	0.27	53	⇑*i*P		Pb	14 10 48.9	+0.2
BUC1				*i* S		Sb	14 10 53.7	+0.5
CIOR	Ciorogarla	0.28	23	⇑*i*P		Pb	14 10 49.0	0.0
CIOR	Ciorogarla	0.28	23	⇑*i*P		Pb	14 10 49.0	0.0
CIOR				*i* S		Sb	14 10 53.9	+0.2
CIOR	Ciorogarla	0.28	23	⇑*i*P		Pb	14 10 49.0	0.0
CIOR				*i* S		Sb	14 10 53.9	+0.2
INCR	INCERC-Sediu C	0.40	51	⇑*i*P		Pb	14 10 51.0	0.0
INCR	INCERC-Sediu C	0.40	51	⇑*i*P		Pb	14 10 51.0	0.0
INCR				*i* S		Sb	14 10 57.3	+0.3
INCR	INCERC-Sediu C	0.40	51	⇑*i*P		Pb	14 10 51.0	0.0
INCR				*i* S		Sb	14 10 57.3	+0.3
ZIMR		0.59	206	⇑*i*P		Pn	14 10 56.0	-0.1
ZIMR				S		Sn	14 11 05.9	+0.3
ZIMR		0.59	206	⇑*i*P		Pn	14 10 56.0	-0.1
ZIMR				*i* S		Sn	14 11 05.9	+0.3
SULR		0.62	37	⇑*i*P		Pb	14 10 54.9	+0.2
SULR		0.62	37	⇑*i*P		Pb	14 10 54.9	+0.2
SULR				*i* S		Sb	14 11 04.4	+1.1
SULR		0.62	37	⇑*i*P		Pb	14 10 54.9	+0.2
SULR				*i* S		Sb	14 11 04.4	+1.1
HUMR	Humele	0.64	303	⇓*i*P		Pb	14 10 55.6	+0.6
HUMR	Humele	0.64	303	⇓*i*P		Pb	14 10 55.6	+0.6
HUMR				*i* S		Sb	14 11 04.9	+1.1
HUMR	Humele	0.64	303	⇓*i*P		Pb	14 10 55.6	+0.6
HUMR				*i* S		Sb	14 11 04.9	+1.1
PLAR	PLOIESTI	0.76	16	⇑*i*P		Pn	14 10 58.2	-0.2
PLAR	PLOIESTI	0.76	16	⇑*i*P		Pn	14 10 58.2	-0.2
PLAR	PLOIESTI	0.76	16	⇑*i*P		Pn	14 10 58.2	-0.2
GOLR		0.85	320	⇓*i*P		Pn	14 11 00.1	+0.4
GOLR		0.85	320	⇓*i*P		Pn	14 11 00.1	+0.4
GOLR				*i* S		Sn	14 11 13.0	+0.9
GOLR		0.85	320	⇓*i*P		Pn	14 11 00.1	+0.4
SECR		0.88	16	⇑*i*P		Pb	14 10 59.9	+0.7
SECR		0.88	16	⇑*i*P		Pb	14 10 59.9	+0.7
SECR				*i* S		Sn	14 11 13.8	+0.9
SECR		0.88	16	⇑*i*P		Pb	14 10 59.9	+0.7
SECR				*i* S		Sn	14 11 13.8	+0.9
SZH	Strazhica	0.93	171	*i* P		Pn	14 11 01.2	+0.4
SZH	Strazhica	0.93	171	*i* P		Pn	14 11 01.2	+0.4
PVL	Pavlikeni	1.01	197	*i* P		Pn	14 11 04.0	+2.1
PVL	Pavlikeni	1.01	197	*i* P		Pn	14 11 04.0	+2.1
ISR	Istrita	1.10	32	⇑*i*P		Pn	14 11 03.5	+0.3
ISR	Istrita	1.10	32	⇑*i*P		Pn	14 11 03.5	+0.3
ISR				*i* S		Sn	14 11 19.5	+1.2
ISR	Istrita	1.10	32	⇑*i*P		Pn	14 11 03.5	+0.3
ISR				*i* S		Sn	14 11 19.5	+1.2
MTUR	Matau	1.14	336	⇑*i*P		Pg	14 11 04.6	+0.6
MTUR	Matau	1.14	336	⇑*i*P		Pg	14 11 04.6	+0.6
MTUR	Matau	1.14	336	⇑*i*P		Pg	14 11 04.6	+0.6
PGOR	Pogoanele	1.15	51	⇑*i*P		Pn	14 11 04.1	+0.3
PGOR	Pogoanele	1.15	51	⇑*i*P		Pn	14 11 04.1	+0.3
PGOR				*i* S		Sn	14 11 21.1	+1.6
PGOR	Pogoanele	1.15	51	⇑*i*P		Pn	14 11 04.1	+0.3
PGOR				*i* S		Sn	14 11 21.1	+1.6
AMRR	Amara	1.23	69	⇓*i*P		Pb	14 11 05.2	+0.1
AMRR	Amara	1.23	69	⇓*i*P		Pb	14 11 05.2	+0.1
AMRR				*i* S		Sn	14 11 22.0	+0.7
AMRR	Amara	1.23	69	⇓*i*P		Pb	14 11 05.2	+0.1
AMRR				*i* S		Sn	14 11 22.0	+0.7
MLR	Muntele Rosu	1.31	7	⇑*i*P		Pb	14 11 07.3	+0.7
MLR	Muntele Rosu	1.31	7	⇑*i*P		Pb	14 11 07.3	+0.7
MLR				*i* S		Sg	14 11 25.7	+1.3
MLR	Muntele Rosu	1.31	7	Pn		Pb	14 11 07.0	+0.4
	19nm,0.3s,baz=232,slow=0.7,SNR=520							
MLR				Sn		Sg	14 11 25.6	+1.3
	19nm,0.3s,baz=232,slow=19,SNR=46							
MLR	Muntele Rosu	1.31	7	⇑*i*P		Pb	14 11 07.3	+0.7
MLR				*i* S		Sg	14 11 25.7	+1.3
VOIR		1.34	339	⇓*i*P		Pb	14 11 07.7	+0.7
VOIR		1.34	339	⇓*i*P		Pb	14 11 07.7	+0.7
VOIR				*i* S		Sn	14 11 24.9	+0.6
VOIR		1.34	339	⇓*i*P		Pb	14 11 07.7	+0.7
VOIR				*i* S		Sn	14 11 24.9	+0.6
ARR	Arges	1.41	327	⇓*i*P		Pn	14 11 07.3	-0.2
ARR	Arges	1.41	327	⇓*i*P		Pn	14 11 07.3	-0.2
ARR				*i* S		Sn	14 11 26.7	+0.6
ARR	Arges	1.41	327	⇓*i*P		Pn	14 11 07.3	-0.2
ARR				*i* S		Sn	14 11 26.7	+0.6
GRER		1.49	36	⇑*i*P		Pg	14 11 10.4	-0.2
GRER		1.49	36	⇑*i*P		Pg	14 11 10.4	-0.2
GRER		1.49	36	⇑*i*P		Pg	14 11 10.4	-0.2
PRD	Provadia	1.56	129	*i* P		Pn	14 11 10.3	+0.8
PRD				*i* Pg		Pg	14 11 12.7	+0.7
PRD	Provadia	1.56	129	*i* P		Pn	14 11 10.3	+0.8
ROIA	ROIAK	1.62	132	*i* P		Pn	14 11 10.8	+0.5
HARR	Harsova	1.66	72	⇑*i*P		Pb	14 11 12.0	-0.4
HARR	Harsova	1.66	72	⇑*i*P		Pb	14 11 12.0	-0.4
HARR	Harsova	1.66	72	⇑*i*P		Pb	14 11 12.0	-0.4
CVD	Cernavoda	1.66	85	⇑*i*P		Pn	14 11 11.5	+0.7
CVD	Cernavoda	1.66	85	⇑*i*P		Pn	14 11 11.5	+0.7
CVD				*i* S		Sg	14 11 34.4	-1.0
CVD	Cernavoda	1.66	85	⇑*i*P		Pn	14 11 11.5	+0.7
CVD				*i* S		Sg	14 11 34.4	-1.0
MPEP	Malo Peshtene	1.66	241	*i* P		Pn	14 11 11.6	+0.7
MPEP				*i* Pg		Pg	14 11 15.3	+1.4
PLOR	Plostina	1.79	21	⇓*i*P		Pn	14 11 13.3	+0.7
PLOR	Plostina	1.79	21	⇓*i*P		Pn	14 11 13.3	+0.7
PLOR				*i* S		Sb	14 11 36.6	-0.4
PLOR	Plostina	1.79	21	⇓*i*P		Pn	14 11 13.3	+0.7
PLOR				*i* S		Sb	14 11 36.6	-0.4
DOPR	Dopca	1.80	352	⇑*i*P		Pn	14 11 13.0	+0.3
DOPR	Dopca	1.80	352	⇑*i*P		Pn	14 11 13.0	+0.3
DOPR	Dopca	1.80	352	⇑*i*P		Pn	14 11 13.0	+0.3
VRI	Vrincioaia	1.82	23	⇑*i*P		Pn	14 11 14.1	+1.0
VRI	Vrincioaia	1.82	23	⇑*i*P		Pn	14 11 14.1	+1.0
VRI				*i* S		Sb	14 11 38.6	+0.6
VRI	Vrincioaia	1.82	23	⇑*i*P		Pn	14 11 14.1	+1.0
VRI				*i* S		Sb	14 11 38.6	+0.6
JMB	Yambol	1.83	160	P		Pn	14 11 13.4	+0.2
JMB	Yambol	1.83	160	*i* P		Pb	14 11 15.1	-0.2
JMB	Yambol	1.83	160	P		Pn	14 11 13.4	+0.2
PSN	Preselentsi	1.84	105	*i* P		Pn	14 11 12.9	-0.5
PSN	Preselentsi	1.84	105	*i* P		Pn	14 11 12.9	-0.5
PETR	Petresti	1.87	34	⇓*i*P		Pn	14 11 15.1	+1.4
PETR	Petresti	1.87	34	⇓*i*P		Pn	14 11 15.1	+1.4
PETR	Petresti	1.87	34	⇓*i*P		Pn	14 11 15.1	+1.4
LOT	Lotru	1.88	313	⇓*i*P		Pn	14 11 14.1	+0.1
LOT	Lotru	1.88	313	⇓*i*P		Pn	14 11 14.1	+0.1
LOT				*i* S		Sb	14 11 39.9	+0.2
LOT	Lotru	1.88	313	⇓*i*P		Pn	14 11 14.1	+0.1
LOT				*i* S		Sb	14 11 39.9	+0.2
TIRR	Tirgusor	1.95	81	⇓*i*P		Pn	14 11 16.1	+1.4
TIRR	Tirgusor	1.95	81	⇓*i*P		Pn	14 11 16.1	+1.4
TIRR				*i* S		Sb	14 11 41.1	-0.4
TIRR	Tirgusor	1.95	81	⇓*i*P		Pn	14 11 16.1	+1.4
TIRR				*i* S		Sb	14 11 41.1	-0.4
CFR	Carcaliu	1.98	59	⇑*i*P		Pn	14 11 15.0	-0.3
CFR	Carcaliu	1.98	59	⇑*i*P		Pn	14 11 15.0	-0.3
CFR				*i* S		Sb	14 11 42.0	+0.1
CFR	Carcaliu	1.98	59	⇑*i*P		Pn	14 11 15.0	-0.3
CFR				*i* S		Sb	14 11 42.6	+0.1
PGB	Panagyurishte	1.99	215	*i* P		Pn	14 11 16.5	+1.0
PGB				*i* Pg		Pg	14 11 21.1	+0.8
PGB	Panagyurishte	1.99	215	*i* P		Pn	14 11 16.5	+1.0
EFOR	EFORIE	2.09	92	⇑*i*P		Pb	14 11 18.8	-1.0
EFOR	EFORIE	2.09	92	⇑*i*P		Pb	14 11 18.8	-1.0
EFOR	EFORIE	2.09	92	⇑*i*P		Pb	14 11 18.8	-1.0
DIM	Dimitrovgrad	2.14	184	*i* Pg		Pg	14 11 23.8	+0.7
DIM	Dimitrovgrad	2.14	184	*i* Pg		Pg	14 11 23.8	+0.7
PLD	Plovdiv	2.21	200	*i* Pg		Pg	14 11 23.9	-0.5
PLD	Plovdiv	2.21	200	*e*Pn		Pg	14 11 23.8	-0.6
PLD				*e*Sn		Sn	14 11 46.0	+0.4
PLD				*e*Sg		Sg	14 11 52.7	-0.4
PLD	Plovdiv	2.21	200	*i* Pg		Pg	14 11 23.9	-0.5
PLD				*e*Sn		Sn	14 11 46.0	+0.4
PLD				*e*Sg		Sg	14 11 52.7	-0.4
DJES	Djerdap	2.35	283	*e*Pn		Pn	14 11 20.8	+0.5
DJES				*e*Sn		Sn	14 11 46.7	-2.3
DJES	Djerdap	2.35	283	*e*Pn		Pn	14 11 20.8	+0.5
DJES				*e*Sn		Sn	14 11 46.7	-2.3
TESR	Tescani	2.41	15	⇑*i*P		Pn	14 11 21.0	-0.2
TESR	Tescani	2.41	15	⇑*i*P		Pn	14 11 21.0	-0.2
TESR	Tescani	2.41	15	⇑*i*P		Pn	14 11 21.0	-0.2
TLCR		2.42	65	⇑*i*P		Pn	14 11 21.3	+0.1
TLCR		2.42	65	⇑*i*P		Pn	14 11 21.3	+0.1
TLCR				*i* S		Sn	14 11 51.2	+0.5
TLCR		2.42	65	⇑*i*P		Pn	14 11 21.3	+0.1
TLCR				*i* S		Sn	14 11 51.2	+0.5
GZR	Gura Zlata	2.42	301	*e*Pn		Pn	14 11 21.9	+0.5
GZR				*e*Sn		Sn	14 11 52.7	+1.8
GZR	Gura Zlata	2.42	301	⇑*i*P		Pn	14 11 21.9	+0.5
GZR	Gura Zlata	2.42	301	⇑*i*P		Pn	14 11 21.9	+0.5
GZR	Gura Zlata	2.42	301	⇑*i*P		Pn	14 11 21.9	+0.5
GZR				*e*Sn		Sn	14 11 52.7	+1.8
VTS	Vitosha	2.43	230	P		Pn	14 11 22.0	+0.5
VTS	Vitosha	2.43	230	*i* P		Pn	14 11 22.1	+0.5
VTS				*i* Pg		Pg	14 11 28.1	-0.6
VTS	Vitosha	2.43	230	⇑*i*P		Pn	14 11 22.1	+0.5
VTS	Vitosha	2.43	230	⇑*i*P		Pn	14 11 22.1	+0.5
VTS	Vitosha	2.43	230	⇑*i*P		Pn	14 11 22.1	+0.5
VTS	Vitosha	2.43	230	⇑*i*P		Pn	14 11 22.1	+0.5
VTS	Vitosha	2.43	230	⇑*i*P		Pn	14 11 22.1	+0.5
EDRB	Edirne	2.46	162	P		Pn	14 11 22.6	+0.8
EDRB	Edirne	2.46	162	P		Pn	14 11 22.6	+0.8
KDZ	Kurdzhali	2.55	185	*i* P		Pn	14 11 24.3	+1.2
KDZ	Kurdzhali	2.55	185	*i* P		Pn	14 11 24.3	+1.2
RZN	Rozhen	2.61	197	*i* P		Pn	14 11 25.4	+1.4
RZN				*i* Pg		Pg	14 11 32.0	0.0
RZN	Rozhen	2.61	197	*i* P		Pn	14 11 25.4	+1.4
DEV	Deva	2.62	311	⇓*i*P		Pn	14 11 24.8	+0.7
DEV	Deva	2.62	311	⇓*i*P		Pn	14 11 24.8	+0.7
DEV	Deva	2.62	311	⇓*i*P		Pn	14 11 24.8	+0.7
BOLS	Boljevac	2.75	264	*e*Sn		Sn	14 11 57.3	-1.5
BOLS	Boljevac	2.75	264	*e*Sn		Sn	14 11 57.3	-1.5
MMB	Musomiste	2.98	210	*i* P		Pn	14 11 30.8	+1.7
MMB	Musomiste	2.98	210	*i* P		Pn	14 11 30.8	+1.7
KKB	Krupnik	3.02	221	*i* P		Pn	14 11 30.8	+1.2
KKB				*i* Pg		Pg	14 11 39.4	-0.5
KKB	Krupnik	3.02	221	*i* P		Pn	14 11 30.8	+1.2
NVR	Nevrokopi	3.15	206	P		Pn	14 11 32.6	+1.2
NVR				S		Sn	14 12 13.1	+4.2
NVR	Nevrokopi	3.15	206	*e*P		Pn	14 11 33.0	+1.6
NVR	Nevrokopi	3.15	206	P		Pn	14 11 32.6	+1.2
NVR				S		Sn	14 12 13.1	+4.2
BZS	Buzias	3.25	297	*e*Pn		Pn	14 11 32.4	-0.3
BZS	Buzias	3.25	297	⇑*i*P		Pn	14 11 32.0	-0.7
BZS	Buzias	3.25	297	⇑*i*P		Pn	14 11 32.0	-0.7
BZS				*i* S		Sn	14 12 12.9	+1.6
BZS	Buzias	3.25	297	⇑*i*P		Pn	14 11 32.0	-0.7
BZS	Buzias	3.25	297	*e*Pn		Pn	14 11 32.4	-0.3
BZS				*i* S		Sn	14 12 12.9	+1.6
ALN	Alexandroupoli	3.30	176	P		Pn	14 11 34.3	+1.0
ALN				S		Sb	14 12 17.4	-3.0
ALN	Alexandroupoli	3.30	176	*e*P		Pn	14 11 34.5	+1.2
ALN	Alexandroupoli	3.30	176	P		Pn	14 11 34.3	+1.0
ALN				S		Sb	14 12 17.4	-3.0
KAVA	Kavala	3.31	196	P		Pn	14 11 34.6	+1.0
KAVA	Kavala	3.31	196	P		Pn	14 11 34.6	+1.0
DRGR		3.36	322	*e*Pn		Pb	14 11 38.9	-2.6
DRGR		3.36	322	⇑*i*P		Pn	14 11 33.9	-0.4
DRGR		3.36	322	⇑*i*P		Pn	14 11 33.9	-0.4
DRGR		3.36	322	⇑*i*P		Pn	14 11 33.9	-0.4
DRGR		3.36	322	*e*Pn		Pb	14 11 38.9	-2.6
SRS	Serrai	3.45	208	P		Pn	14 11 37.1	+1.6
SRS				S		Sn	14 12 20.8	+4.6
SRS	Serrai	3.45	208	P		Pn	14 11 37.1	+1.6
SRS				S		Sn	14 12 20.8	+4.6
SELS	Selova	3.48	255	*e*Pn		Pn	14 11 38.4	+2.5
SELS	Selova	3.48	255	*e*Pn		Pn	14 11 38.4	+2.5
KIS	Kishinev	3.55	37	*e*		Pg	14 11 48.0	-2.0
GRUS	Gruza	3.63	267	*e*Pn		Pn	14 11 38.8	+0.9
GRUS	Gruza	3.63	267	*e*Pn		Pn	14 11 38.8	+0.9
KNT	Kendrikon	3.67	216	P		Pn	14 11 39.7	+1.2
KNT	Kendrikon	3.67	216	P		Pn	14 11 39.7	+1.2
VAY	Valandovo	3.69	220	P		Pn	14 11 39.6	+0.9
VAY	Valandovo	3.69	220	*i* Pn		Pg	14 11 51.1	-1.6
VAY	Valandovo	3.69	220	P		Pn	14 11 39.6	+0.9
SMTH	Samothraki Isl	3.72	182	*e*P		Pn	14 11 40.0	+0.9
SOH	Sokhos	3.79	208	*e*P		Pn	14 11 41.5	+1.3
GRG	Griva	4.06	218	*e*P		Pn	14 11 45.0	+1.2
DIVS	Divibare	4.13	271	P		Pn	14 11 43.4	-1.5
DIVS	Divibare	4.13	271	*e*Pn		Pn	14 11 44.5	-0.4
DIVS	Divibare	4.13	271	P		Pn	14 11 43.4	-1.5
DIVS	Divibare	4.13	271	*e*Pn		Pn	14 11 44.5	-0.4
PLG	Polygyros	4.17	205	P		Pn	14 11 46.4	+1.0
PLG	Polygyros	4.17	205	*e*P		Pn	14 11 46.5	+1.0
PLG	Pol

NEZ	**North Egmont**	**0.34**	**346**	PN	Pn	15 14 35.2	0.0		
RAEZ	**Rainy Point**	**0.34**	**26**	PN	Pn	15 14 34.8	-0.2		
PKE	**Pukeiti**	**0.43**	**337**	PN	Pn	15 14 35.0	-0.3		
WAZ	**Wanganui**	**0.63**	**105**	PN	Pn	15 14 36.7	+0.8		
WAZ				SN	S	15 14 59.3	+0.7		
VRZ	**Vera Road**	**0.64**	**43**	⇓PN	Pn	15 14 35.3	-0.7		
VRZ				SN	S	15 14 58.0	-0.7		
PKVZ	**Pokaka**	**0.94**	**71**	PN	Pn	15 14 37.5	-0.1		
MTVZ	**Mangateitei**	**1.00**	**78**	PN	Pn	15 14 38.1	+0.1		
TRVZ	**Turoa**	**1.08**	**75**	PN	Pn	15 14 38.7	-0.1		
TWVZ	**Taurewa**	**1.09**	**62**	PN	Pn	15 14 38.2	-0.5		
FWVZ	**Far West T-bar**	**1.10**	**72**	PN	Pn	15 14 38.5	-0.3		
WPVZ	**Whakapapa**	**1.11**	**70**	PN	Pn	15 14 38.6	-0.2		
WNVZ	**Wahianoa**	**1.11**	**76**	PN	Pn	15 14 39.0	+0.1		
HIZ	**Hauiti**	**1.20**	**25**	⇓PN	Pn	15 14 38.3	-1.0		
OTVZ	**Oturere**	**1.21**	**70**	PN	Pn	15 14 39.5	-0.1		
MOVZ	**Moawhango**	**1.22**	**82**	⇓PN	Pn	15 14 39.2	-0.3		
MOVZ				SN	S	15 15 02.7	-2.1		
KIW	**Kapiti Island**	**1.38**	**157**	PN	Pn	15 14 40.4	-0.2		
KIW				AML	AML	15 15 06.5			
KIW				AML	AML	15 15 07.1			
OGWZ	**Otaki Gorge**	**1.43**	**149**	PN	Pn	15 14 41.1	+0.1		
TSZ	**Takapari Road**	**1.43**	**109**	⇓PN	Pn	15 14 41.3	+0.2		
TSZ				SN	S	15 15 07.1	-0.6		
TSZ				AML	AML	15 15 07.3			
POWZ	**Post Office Ro**	**1.44**	**124**	PN	Pn	15 14 41.2	+0.1		
BHHZ	**Black Hill Sta**	**1.44**	**86**	PN	Pn	15 14 40.8	-0.5		
BHHZ				SN	S	15 15 05.9	-2.1		
WATZ	**Wairara**	**1.48**	**54**	PN	Pn	15 14 41.2	-0.4		
MRZ	**Mangatainoka R**	**1.50**	**136**	PN	Pn	15 14 41.6	0.0		
MRZ				AML	AML	15 15 09.8			
MRZ				AML	AML	15 15 10.4			
PNHZ	**Pukenui**	**1.57**	**102**	PN	Pn	15 14 42.5	+0.2		
HOWZ	**Holdsworth Sta**	**1.64**	**143**	PN	Pn	15 14 42.8	-0.1		
CAW	**Cannon Point**	**1.65**	**157**	PN	Pn	15 14 42.6	-0.3		
CAW				AML	AML	15 15 12.0			
CAW				AML	AML	15 15 12.1			
DVHZ	**Dannevirke**	**1.67**	**116**	⇓PN	Pn	15 14 43.2	+0.1		
NNZ	**Nelson**	**1.74**	**201**	PN	Pn	15 14 42.9	-0.8		
WEL	**Wellington**	**1.74**	**166**	PN	Pn	15 14 43.6	-0.1		
TIWZ	**Tintock**	**1.75**	**133**	PN	Pn	15 14 43.8	0.0		
SNZO	**South Karori**	**1.75**	**167**	PN	Pn	15 14 43.1	-0.7		
SNZO				AML	AML	15 15 12.8			
SNZO				AML	AML	15 15 12.8			
QRZ	**Quartz Range**	**1.77**	**226**	⇑PN	Pn	15 14 42.4	-1.6		
WPHZ	**Waipukurau**	**1.79**	**106**	PN	Pn	15 14 44.5	+0.3		
BKZ	**Black Stump Fm**	**1.83**	**77**	⇓PN	Pn	15 14 44.2	-0.5		
BKZ				AML	AML	15 15 14.2			
BKZ				AML	AML	15 15 14.4			
TUWZ	**Tuamarina**	**1.84**	**186**	PN	Pn	15 14 44.0	-0.6		
TUWZ				AML	AML	15 15 12.4			
TUWZ				AML	AML	15 15 13.3			
MTW	**Mount Morrison**	**1.85**	**148**	PN	Pn	15 14 44.3	-0.4		
MTW				AML	AML	15 15 14.1			
MTW				AML	AML	15 15 14.9			
BFZ	**Birch Farm**	**1.91**	**125**	PN	Pn	15 14 45.2	-0.1		
MCHZ	**McNeill Hill**	**1.94**	**86**	⇓PN	Pn	15 14 46.3	+0.7		
MSWZ	**Moikau Station**	**1.98**	**157**	PN	Pn	15 14 45.4	-0.7		
MSWZ				AML	AML	15 15 17.2			
MSWZ				AML	AML	15 15 18.0			
TMWZ	**Te Maipa**	**1.99**	**140**	PN	Pn	15 14 45.9	-0.2		
PAWZ	**Paruwai Farm**	**2.01**	**153**	PN	Pn	15 14 45.8	-0.5		
PAWZ				AML	AML	15 15 17.3			
PAWZ				AML	AML	15 15 17.7			
KAHZ	**Kahuranaki**	**2.07**	**96**	PN	Pn	15 14 47.5	+0.4		
PXZ	**Pawanui**	**2.10**	**103**	⇓PN	Pn	15 14 47.5	+0.3		
PXZ				AML	AML	15 15 19.1			
PXZ				AML	AML	15 15 19.7			
PXZ				AML	AML	15 15 20.4			
PXZ				AML	AML	15 15 20.4			
TRWZ	**Traveller**	**2.13**	**148**	PN	Pn	15 14 47.1	-0.4		
TRWZ				AML	AML	15 15 19.4			
TRWZ				AML	AML	15 15 20.5			
PLWZ	**Palliser**	**2.13**	**158**	PN	Pn	15 14 46.7	-0.8		
BSWZ	**Blackbirch Sta**	**2.13**	**187**	PN	Pn	15 14 46.9	-0.6		
BSWZ				AML	AML	15 15 18.8			
BSWZ				AML	AML	15 15 20.9			
RAHZ	**Arahi**	**2.34**	**74**	PN	Pn	15 14 49.5	-0.3		
THZ	**Tophouse**	**2.38**	**204**	⇑PN	Pn	15 14 48.8	-1.4		
URZ	**Urewera**	**2.63**	**60**	PN	Pn	15 14 51.1	-1.8		
URZ				AML	AML	15 15 24.8			
URZ				AML	AML	15 15 25.4			
KNZ	**Kokohu**	**2.75**	**79**	PN	Pn	15 14 53.8	-0.4		
DSZ	**Denniston Nort**	**2.82**	**220**	⇑PN	Pn	15 14 52.9	-2.1		
KHZ	**Kahutara**	**2.86**	**190**	PN	Pn	15 14 54.1	-1.3		
LTZ	**Lake Taylor**	**3.50**	**204**	PN	Pn	15 15 00.7	-2.2		
MXZ	**Matakaoa Point**	**3.80**	**59**	PN	Pn	15 15 04.7	-1.9		
MXZ				AML	AML	15 16 02.6			
CRLZ	**Canterbury Las**	**4.15**	**196**	⇑PN	Pn	15 15 07.5	-3.2		
MQZ	**McQueen's Vall**	**4.27**	**195**	PN	Pn	15 15 08.7	-3.5		
WVZ	**Waitaha Valley**	**4.34**	**216**	⇑PN	Pn	15 15 09.6	-3.6		
RPZ	**Rata Peaks**	**4.74**	**209**	PN	Pn	15 15 14.8	-3.4		
FOZ	**Fox Glacier**	**5.21**	**219**	PN	Pn	15 15 19.1	-4.9		
LBZ	**Lake Benmore**	**5.64**	**211**	PN	Pn	15 15 25.6	-4.0		
JCZ	**Jackson Bay**	**6.04**	**220**	PN	Pn	15 15 30.4	-4.4		
ODZ	**Otahua Downs**	**6.05**	**205**	PN	Pn	15 15 31.5	-3.1		
EAZ	**Earnscleugh**	**6.69**	**211**	PN	Pn	15 15 38.5	-4.5		
TUZ	**Tuapeka**	**7.19**	**206**	PN	Pn	15 15 46.0	-3.3		
SYZ	**Scrubby Hill**	**7.86**	**206**	PN	Pn	15 15 55.1	-2.9		

IDC 20 15:53:25.4±3.7, 19.71S×175.29W, h66km±43km, mb3.8/4, mb1 3.9/6, mb1mx3.6/22, mbtmp3.8/6, Error ellipse: s-maj=57.3km s-min=26.0km az=113.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.67**	**31**	P	Pn	15 55 00.8	-0.2
	1.4nm,0.3s,baz=204,slow=19,SNR=2.6						
AFI				S	Sn	15 56 09.5	-6.3
	3.2nm,0.3s,baz=229,slow=20,SNR=3.3						
URZ	**Urewera**	**19.63**	**198**	P	P	15 57 48.6	0.0
	0.6nm,0.3s,baz=329,slow=18,SNR=4.2						
STKA	**Stephens Creek**	**40.42**	**244**	P	P	16 00 57.7	+0.3
	4.7nm,1.2s,baz=90,slow=10,SNR=2.1						
ASAR	**Alice Springs**	**47.18**	**256**	P	P	16 01 52.0	+0.2
	1.9nm,0.6s,baz=99,slow=8.2,SNR=36						
ASAR				PcP	PcP	16 03 22.1	-0.4
	0.6nm,0.6s,baz=101,slow=4.1,SNR=6.1						
WRA	**Warramunga Arr**	**47.24**	**261**	P	P	16 01 51.5	-0.8
	0.7nm,0.3s,baz=96,slow=7.5,SNR=57						
WRA				PcP	PcP	16 03 22.1	-0.7
	0.4nm,0.6s,baz=92,slow=3.2,SNR=3.7						
MJAR	**Matsushiro Arr**	**71.13**	**322**	P	P	16 04 37.3	+0.4
	0.3nm,0.6s,baz=151,slow=6.5,SNR=4.5						

ROM 20 15:59:17.8±0.2, 40.62N×15.60E, h10km, Md1.7/3, MI1.1/2, Error ellipse: s-maj=2.3km s-min=0.9km az=108.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRLC	**Muro Lucano**	**0.16**	**328**	Pg	Pg	15 59 22.1	+0.6
MRLC				Sg	Sg	15 59 24.8	+0.8
	62nm,0.4s						
SGO	**Sicignano**	**0.23**	**256**	Pg	Pg	15 59 23.3	+0.7
SGO				Sg	Sg	15 59 27.4	+1.5
	9.0nm,0.2s						
CDRU	**Civita di Ruta**	**0.26**	**241**	Pg	Pg	15 59 23.7	+0.5
CDRU				Sg	Sb	15 59 28.2	-1.2
	14nm,0.1s						

*DDA **20** 16:00:51.0, 40.15N×28.85E, h18km, MD3.1*
*ISCJB **20** 16:00:51.5±0.3, 40.17N±0.02×28.85E±0.02, h8km±2km, Error ellipse: s-maj=2.6km s-min=2.6km az=16.2*
*CSEM **20** 16:00:51.6±0.1, 40.17N×28.86E, h8km, MD3.0, Error ellipse: s-maj=1.8km s-min=1.8km az=109.0*
*ISK **20** 16:00:51.1, 40.17N×28.85E, h6km, MD3.0*
ISC 20 16:00:51.6±0.8, 40.17N±0.01×28.85E±0.01, h13km±5km, n107, σ0.69/147, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ORLT	**Orhaneli**	**0.12**	**163**	PG	**Pg**	**16 00 54.4**	**-0.5**
ORLT				*e*SG	**Sg**	**16 00 56.9**	**-0.4**
ORLT	**Orhaneli**	**0.12**	**163**	*i* Pg	**Pg**	**16 00 54.4**	**-0.5**
ORLT				*e*Sg	**Sg**	**16 00 56.9**	**-0.4**
MDNY	**Mudanya-Bursa**	**0.20**	**8**	PG	**Pg**	**16 00 56.3**	**+0.2**
MDNY				*e*SG	**Sg**	**16 00 59.8**	**+0.6**
MDNY	**Mudanya-Bursa**	**0.20**	**8**	*i* Pg	**Pg**	**16 00 56.3**	**+0.2**
MDNY				*e*Sg	**Sg**	**16 00 59.8**	**+0.6**
ULDT	**Uludag**	**0.22**	**96**	*i* P	**Pg**	**16 00 56.4**	**-0.1**
ULDT				*i* S	**Sg**	**16 00 59.7**	**-0.2**
ULDT	**Uludag**	**0.22**	**96**	*i* P	**Pg**	**16 00 56.4**	**-0.1**
ULDT				*i* S	**Sg**	**16 00 59.7**	**-0.2**
GEMT	**Gemlik**	**0.37**	**44**	PG	**Pb**	**16 00 59.3**	**-0.8**
GEMT				*e*SG	**Sb**	**16 01 04.9**	**-1.0**
GEMT	**Gemlik**	**0.37**	**44**	*i* Pg	**Pb**	**16 00 59.3**	**-0.8**
GEMT				*e*Sg	**Sb**	**16 01 04.9**	**-1.0**
KCTX	**Karacabey (Bur**	**0.39**	**285**	PG	**Pg**	**16 00 59.4**	**0.0**
KCTX				*e*SG	**Sb**	**16 01 05.4**	**-0.9**
KCTX	**Karacabey (Bur**	**0.39**	**285**	*i* Pg	**Pg**	**16 00 59.4**	**0.0**
KCTX				*e*Sg	**Sb**	**16 01 05.4**	**-0.9**
ARMT	**Armutlu**	**0.40**	**1**	PG	**Pb**	**16 00 59.9**	**-0.7**
ARMT				*e*SG	**Sb**	**16 01 05.7**	**-1.0**
ARMT	**Armutlu**	**0.40**	**1**	*i* Pg	**Pb**	**16 00 59.9**	**-0.7**
ARMT				*e*Sg	**Sb**	**16 01 05.7**	**-1.0**
YLV	**Yalova**	**0.57**	**45**	PG	**Pg**	**16 01 02.7**	**0.0**
YLV	**Yalova**	**0.57**	**45**	*i* Pg	**Pg**	**16 01 02.7**	**0.0**
DURS	**Dursunbey**	**0.63**	**207**	*i* P	**Pg**	**16 01 03.5**	**-0.5**
DURS				*i* S	**Sg**	**16 01 12.6**	**+0.3**
DURS	**Dursunbey**	**0.63**	**207**	*i* P	**Pg**	**16 01 03.5**	**-0.5**
DURS				*i* S	**Sg**	**16 01 12.6**	**+0.3**
BUY	**Buyukada**	**0.72**	**17**	*e*PG	**Pb**	**16 01 05.4**	**-0.6**
BUY	**Buyukada**	**0.72**	**17**	*i* P	**Pb**	**16 01 05.6**	**-0.4**
BUY				*i* S	**Sb**	**16 01 16.1**	**+0.4**
BUY	**Buyukada**	**0.72**	**17**	*i* P	**Pb**	**16 01 05.6**	**-0.4**
BUY				*i* S	**Sb**	**16 01 16.1**	**+0.4**
ADVT	**Abdulvahap**	**0.73**	**68**	*e*PG	**Pg**	**16 01 05.2**	**-0.6**
ADVT	**Abdulvahap**	**0.73**	**68**	*e*Pg	**Pg**	**16 01 05.2**	**-0.6**
BNT	**Bandirma**	**0.73**	**285**	*e*PG	**Pg**	**16 01 05.7**	**-0.2**
BNT				*e*SG	**Sb**	**16 01 17.0**	**+0.7**
BNT	**Bandirma**	**0.73**	**285**	*e*Pg	**Pg**	**16 01 05.7**	**-0.2**
BNT				*e*Sg	**Sb**	**16 01 17.0**	**+0.7**
HRT	**Hereke**	**0.91**	**43**	*e*PG	**Pg**	**16 01 08.3**	**-0.8**
HRT	**Hereke**	**0.91**	**43**	*e*Pg	**Pg**	**16 01 08.3**	**-0.8**
BALB	**Balikesir**	**0.91**	**235**	*e*PG	**Pb**	**16 01 09.2**	**-0.1**
BALB	**Balikesir**	**0.91**	**235**	*e*Pg	**Pb**	**16 01 09.2**	**-0.1**
ISK	**Istanbul-Kandi**	**0.91**	**10**	*e*PG	**Pg**	**16 01 08.9**	**-0.3**
ISK	**Istanbul-Kandi**	**0.91**	**10**	*e*Pg	**Pg**	**16 01 08.9**	**-0.3**
BGKT	**Bogazkoy**	**1.02**	**357**	*e*PG	**Pb**	**16 01 11.0**	**-0.1**
BGKT	**Bogazkoy**	**1.02**	**357**	*e*Pg	**Pb**	**16 01 11.0**	**-0.1**
ELBA	**Catalca**	**1.03**	**342**	*e*P	**Pg**	**16 01 10.5**	**-1.0**
ELBA				*i* S	**Sb**	**16 01 25.0**	**+0.2**
ELBA	**Catalca**	**1.03**	**342**	*e*P	**Pg**	**16 01 10.5**	**-1.0**
ELBA				*i* S	**Sb**	**16 01 25.0**	**+0.2**
BALY	**Balya**	**1.04**	**246**	*i* P	**Pg**	**16 01 10.8**	**-0.8**
BALY				*i* S	**Sg**	**16 01 23.7**	**-1.4**
BALY	**Balya**	**1.04**	**246**	*i* P	**Pg**	**16 01 10.8**	**-0.8**
BALY				*i* S	**Sg**	**16 01 23.7**	**-1.4**
KLYT	**Kilyos**	**1.10**	**8**	*e*PN	**Pg**	**16 01 12.0**	**-0.7**
KLYT	**Kilyos**	**1.10**	**8**	*e*Pn	**Pg**	**16 01 12.0**	**-0.7**
CTKS	**Kestanelik-??a**	**1.10**	**346**	*e*PN	**Pb**	**16 01 12.4**	**-0.1**
CTKS	**Kestanelik-??a**	**1.10**	**346**	*e*Pn	**Pb**	**16 01 12.4**	**-0.1**
GPA	**Golpazari**	**1.12**	**83**	*e*PN	**Pg**	**16 01 12.7**	**-0.6**
GPA	**Golpazari**	**1.12**	**83**	*e*Pn	**Pg**	**16 01 12.7**	**-0.6**
DEMI	**Demirci**	**1.13**	**185**	*i* P	**Pg**	**16 01 12.9**	**-0.4**
DEMI				*i* S	**Sn**	**16 01 29.1**	**+0.5**
DEMI	**Demirci**	**1.13**	**185**	*i* P	**Pg**	**16 01 12.9**	**-0.4**
DEMI				*i* S	**Sn**	**16 01 29.1**	**+0.5**
SILT	**Sile**	**1.16**	**31**	*e*PN	**Pg**	**16 01 12.9**	**-1.0**
SILT	**Sile**	**1.16**	**31**	*e*Pn	**Pg**	**16 01 12.9**	**-1.0**
SLVT	**Silivri**	**1.17**	**336**	*e*PN	**Pg**	**16 01 13.6**	**-0.5**
SLVT	**Silivri**	**1.17**	**336**	*e*Pn	**Pg**	**16 01 13.6**	**-0.5**
GDZ	**Gediz**	**1.18**	**155**	*i* P	**Pn**	**16 01 14.2**	**+0.2**
GDZ				*i* S	**Sg**	**16 01 29.3**	**-0.5**
GDZ	**Gediz**	**1.18**	**155**	*i* P	**Pn**	**16 01 14.2**	**+0.2**
GDZ				*i* S	**Sg**	**16 01 29.3**	**-0.5**
KRBG	**Karabiga-Canak**	**1.21**	**281**	*e*PN	**Pg**	**16 01 14.8**	**0.0**
KRBG	**Karabiga-Canak**	**1.21**	**281**	*e*Pn	**Pg**	**16 01 14.8**	**0.0**
SPNC	**Sapanca-Adapaz**	**1.23**	**65**	*e*PN	**Pn**	**16 01 14.6**	**+0.1**
SPNC	**Sapanca-Adapaz**	**1.23**	**65**	*e*Pn	**Pn**	**16 01 14.6**	**+0.1**
BORA	**Eskisehir**	**1.27**	**103**	*i* P	**Pn**	**16 01 15.1**	**0.0**
BORA				*i* S	**Sn**	**16 01 32.7**	**+0.7**
BORA	**Eskisehir**	**1.27**	**103**	*i* P	**Pn**	**16 01 15.1**	**0.0**
BORA				*i* S	**Sn**	**16 01 32.7**	**+0.7**
GULT	**Gulveren**	**1.30**	**78**	*e*PN	**Pb**	**16 01 16.1**	**+0.1**
GULT	**Gulveren**	**1.30**	**78**	*e*Pn	**Pb**	**16 01 16.1**	**+0.1**
MFT	**Murefte**	**1.35**	**298**	*e*PN	**Pb**	**16 01 16.6**	**-0.2**
MFT	**Murefte**	**1.35**	**298**	*e*Pn	**Pb**	**16 01 16.6**	**-0.2**
CTYL	**Yal??k??y-??at**	**1.38**	**342**	*e*PN	**Pn**	**16 01 16.8**	**+0.3**
CTYL	**Yal??k??y-??at**	**1.38**	**342**	*e*Pn	**Pn**	**16 01 16.8**	**+0.3**
SART	**Tekirdag**	**1.38**	**293**	*i* P	**Pg**	**16 01 17.7**	**-0.4**
SART				*i* S	**Sg**	**16 01 36.3**	**+0.3**
SART	**Tekirdag**	**1.38**	**293**	*i* P	**Pg**	**16 01 17.7**	**-0.4**
SART				*i* S	**Sg**	**16 01 36.3**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.38**	**293**	*e*PN	**Pg**	**16 01 17.6**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.38**	**293**	*e*Pn	**Pg**	**16 01 17.6**	**-0.5**
ALT	**Altintas**	**1.48**	**138**	*e*PN	**Pb**	**16 01 19.1**	**+0.1**
ALT	**Altintas**	**1.48**	**138**	*e*Pn	**Pb**	**16 01 19.1**	**+0.1**
AKHS	**Akhisar**	**1.51**	**212**	*i* P	**Pn**	**16 01 18.1**	**-0.3**
AKHS				*i* S	**Sb**	**16 01 38.7**	**0.0**
AKHS	**Akhisar**	**1.51**	**212**	*i* P	**Pn**	**16 01 18.1**	**-0.3**
AKHS				*i* S	**Sb**	**16 01 38.7**	**0.0**
LPK	**Lapseki**	**1.61**	**278**	*e*PN	**Pb**	**16 01 20.9**	**-0.3**
LPK	**Lapseki**	**1.61**	**278**	*e*Pn	**Pb**	**16 01 20.9**	**-0.3**
KULA	**Kula-Manisa**	**1.66**	**185**	*e*PN	**Pb**	**16 01 21.8**	**-0.3**
KULA	**Kula-Manisa**	**1.66**	**185**	*e*Pn	**Pb**	**16 01 21.8**	**-0.3**
SEYT	**Eskypehyr**	**1.67**	**112**	*i* P	**Pn**	**16 01 21.1**	**+0.3**
SEYT				*e*S	**Sb**	**16 01 43.9**	**+0.6**
SEYT	**Eskypehyr**	**1.67**	**112**	*i* P	**Pn**	**16 01 21.0**	**+0.3**
SEYT				*e*S	**Sb**	**16 01 43.9**	**+0.6**
MANT	**Manisa**	**1.69**	**188**	*i* P	**Pb**	**16 01 23.1**	**+0.4**
MANT	**Manisa**	**1.69**	**188**	*i* P	**Pb**	**16 01 23.1**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.83**	**278**	*e*PN	**Pb**	**16 01 24.1**	**-0.8**
GELI	**Tayfur-Gelibol**	**1.83**	**278**	*e*Pn	**Pb**	**16 01 24.1**	**-0.8**
ERIK	**Erikli-Kesan**	**1.85**	**287**	*e*PN	**Pb**	**16 01 24.4**	**-0.9**
ERIK	**Erikli-Kesan**	**1.85**	**287**	*e*Pn	**Pb**	**16 01 24.4**	**-0.9**
KHAL	**Karahalli**	**1.86**	**164**	*i* P	**Pn**	**16 01 23.6**	**+0.3**
KHAL				*i* S	**Sn**	**16 01 47.1**	**+0.4**
KHAL	**Karahalli**	**1.86**	**164**	*i* P	**Pn**	**16 01 23.6**	**+0.3**
KHAL				*i* S	**Sn**	**16 01 47.1**	**+0.4**
AYVA	**Ayvalik**	**1.87**	**243**	*e*P	**Pb**	**16 01 24.5**	**-1.1**
AYVA				*e*S	**Sn**	**16 01 46.8**	**0.0**
AYVA	**Ayvalik**	**1.87**	**243**	*e*P	**Pb**	**16 01 24.5**	**-1.1**
AYVA				*e*S	**Sn**	**16 01 46.8**	**0.0**
KHL	**Karahalli**	**1.91**	**164**	*e*PN	**Pn**	**16 01 25.1**	**+1.1**
KHL	**Karahalli**	**1.91**	**164**	*e*Pn	**Pn**	**16 01 25.1**	**+1.1**
SHUT	**Suhut-Afyon**	**2.08**	**140**	*e*PN	**Pn**	**16 01 27.5**	**+1.1**
SHUT	**Suhut-Afyon**	**2.08**	**140**	*e*Pn	**Pn**	**16 01 27.5**	**+1.1**
ENEZ	**Enez**	**2.13**	**286**	*e*PN	**Pn**	**16 01 28.1**	**+1.2**
ENEZ	**Enez**	**2.13**	**286**	*e*Pn	**Pn**	**16 01 28.1**	**+1.2**
IZM	**Izmir**	**2.15**	**215**	*e*PN	**Pb**	**16 01 28.9**	**-1.6**
IZM	**Izmir**	**2.15**	**215**	*e*Pn	**Pb**	**16 01 28.9**	**-1.6**
SVRH	**Sivrihisar-ESK**	**2.18**	**108**	*e*PN	**Pn**	**16 01 28.8**	**+1.1**
SVRH	**Sivrihisar-ESK**	**2.18**	**108**	*e*Pn	**Pn**	**16 01 28.8**	**+1.1**
BLCB	**Balcova**	**2.26**	**219**	*e*PN	**Pn**	**16 01 30.2**	**+1.5**
BLCB	**Balcova**	**2.26**	**219**	*e*Pn	**Pn**	**16 01 30.2**	**+1.5**
EDRB	**Edirne**	**2.31**	**317**	*e*PN	**Pn**	**16 01 30.6**	**+1.1**
EDRB	**Edirne**	**2.31**	**317**	*e*Pn	**Pn**	**16 01 30.6**	**+1.1**
KIZT	**Kizilcal**	**2.67**	**118**	*e*PN	**Pn**	**16 01 36.0**	**+1.5**
KIZT	**Kizilcal**	**2.67**	**118**	*e*Pn	**Pn**	**16 01 36.0**	**+1.5**

IDC 20 16:05:35.2±1.4, 24.05S×66.78W, h193km±18km, mb3.2/1, mb1 3.4/4, mb1mx3.2/18, mbtmp3.3/4, Error ellipse: s-maj=25.2km s-min=20.9km az=137.0, Salta Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.42**	**306**	P	Pn	16 06 19.0	+0.8
	10nm,0.3s,baz=130,slow=6.7,SNR=257						
LVC				S	Sn	16 06 51.7	+0.1
	22nm,0.3s,baz=15,slow=19,SNR=39						
CFAA	**Coronel Fontan**	**7.64**	**189**	P	Pn	16 07 23.1	-0.6
	0.1nm,0.3s,baz=355,slow=10,SNR=9.0						
CFAA				S	Sn	16 08 42.5	-7.6
	0.3nm,0.3s,baz=132,slow=19,SNR=16						
SIV	**San Ignacio**	**9.64**	**35**	P	Pn	16 07 49.5	-0.6
	0.4nm,0.3s,baz=225,slow=12,SNR=6.9						
BDFB	**Brasilia**	**19.52**	**68**	P	P	16 09 49.3	+1.1
	0.5nm,0.3s,baz=224,slow=11,SNR=8.7						
TORD	**Torodi Ar. Bea**	**76.40**	**69**	P	P	16 17 03.0	-0.8
	0.4nm,0.4s,baz=259,slow=5.6,SNR=8.1						
ASAR	**Alice Springs**	**128.50**	**204**	PKP	PKPdf	16 24 20.3	+0.5
	0.6nm,1.0s,baz=149,slow=2.0,SNR=4.2						
WRA	**Warramunga Arr**	**131.68**	**207**	PKP	PKPdf	16 24 25.7	-0.2
	0.3nm,0.8s,baz=145,slow=1.9,SNR=4.7						

IDC 20 16:06:49.5±2.2, 2.55N×127.77E, h0km, mb3.1/3, mb1 3.3/3, mb1mx3.2/21, mbtmp3.1/3, MS3.8/1, Ms1 3.8/1, ms1mx2.6/9, Error ellipse: s-maj=169.3km s-min=24.8km az=67.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.27**	**164**	P	P	16 11 58.6	-0.3
	0.4nm,0.7s,baz=344,slow=10.0,SNR=8.9						
ASAR	**Alice Springs**	**26.74**	**167**	P	P	16 12 30.8	-0.3
	0.2nm,0.9s,baz=354,slow=7.5,SNR=3.1						
NWAO	**Narrogin (SRO)**	**36.67**	**195**	LR	LR	16 30 05.7	
	comp=Z,135nm,19.1s,baz=9.3,slow=38						
MKAR	**Makanchi Array**	**59.11**	**325**	P	P	16 16 52.2	+0.3
	0.1nm,0.5s,baz=116,slow=6.7,SNR=3.0						

*ISCJB **20** 16:12:43.0±1.7, 32.51N±0.04×137.89E±0.04, h22km±14km, mb3.4/6, Error ellipse: s-maj=6.5km s-min=5.3km az=30.1*
*JMA **20** 16:12:43.6±0.1, 32.50N×137.91E, h72km, M3.4*
*IDC **20** 16:12:45.7±0.8, 32.47N×138.09E, h25km±6km, mb3.4/6, mb1 3.6/7, mb1mx3.4/26, mbtmp3.4/7, ML3.0/1, Error ellipse: s-maj=21.9km s-min=15.9km az=99.0*
ISC 20 16:12:45.4±0.9, 32.50N±0.06×137.88E±0.04, h26km±6km, n24, σ1.55/41, mb3.4/6, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TK01	**Tokai 1**	**1.28**	**349**	S	**Sn**	**16 13 22.5**	**-1.0**
TTO3	**TONANKAI O.B.S**	**1.41**	**344**	P	**Pn**	**16 13 08.3**	**-1.0**
TTO3				S	**Sn**	**16 13 25.8**	**-1.3**
TTO2	**TONANKAI O.B.S**	**1.42**	**330**	P	**Pn**	**16 13 08.3**	**-1.0**
TTO2				S	**Sb**	**16 13 27.6**	**-1.0**
TK02	**Tokai 2**	**1.44**	**356**	P	**Pn**	**16 13 08.2**	**-1.5**
TK02				S	**Sn**	**16 13 27.1**	**-0.6**
TTO1	**TONANKAI O.B.S**	**1.45**	**321**	P	**Pn**	**16 13 08.6**	**-1.0**
TTO1				S	**Sn**	**16 13 27.1**	**-0.5**
TTO4	**TONANKAI O.B.S**	**1.53**	**349**	P	**Pn**	**16 13 09.0**	**-1.8**
TTO4				S	**Sn**	**16 13 28.5**	**-1.2**
TK03	**Tokai 3**	**1.66**	**2**	S	**

NEST				S	Sn	17 00 46.4	-0.1
NEST	**Nestorio**	**1.02**	**141**	P	Pg	17 00 30.5	-0.3
NEST				S	Sn	17 00 46.4	-0.1
ULC	**Ulcinj**	**1.04**	**317**	⇑*i*Pg	Pg	17 00 29.9	-1.4
ULC				*e*Sg	Sb	17 00 46.2	+0.7
ULC	**Ulcinj**	**1.04**	**317**	⇑*i*Pg	Pg	17 00 29.9	-1.4
ULC				*e*Sg	Sb	17 00 46.2	+0.7
BCI	**Bajram Curri**	**1.16**	**355**	*e*PG	Pn	17 00 35.9	+2.0
BCI	**Bajram Curri**	**1.16**	**355**	*e*Pg	Pn	17 00 35.9	+2.0
SKO	**Skopje**	**1.20**	**50**	*e*Pn	Pn	17 00 36.2	+1.8
SRN	**Sarande**	**1.33**	**187**	P	Pg	17 00 36.8	0.0
SRN	**Sarande**	**1.33**	**187**	P	Pg	17 00 36.8	0.0
PDG	**Podgorica**	**1.41**	**330**	⇑*i*Pg	Pn	17 00 36.8	-0.5
PDG				*e*Sg	Sg	17 00 59.9	+3.2
TTG	**Podgorica**	**1.41**	**330**	⇑*i*Pg	Pn	17 00 36.8	-0.5
TTG				*e*Sg	Sg	17 00 59.9	+3.2
BUM	**Brajici-Budva**	**1.47**	**319**	⇓*i*Pg	Pb	17 00 38.9	0.0
BUM				*e*Sg	Sg	17 01 00.3	+1.8
BUM	**Brajici-Budva**	**1.47**	**319**	⇓*i*Pg	Pb	17 00 38.9	0.0
BUM				*e*Sg	Sg	17 01 00.3	+1.8
KZN	**Kozani**	**1.49**	**127**	*e*P	Pn	17 00 38.4	0.0
KZN				*e*S	Sg	17 01 01.3	+2.1
KZN	**Kozani**	**1.49**	**127**	*e*Pn	Pn	17 00 38.4	0.0
KZN				*e*Sn	Sg	17 01 01.3	+2.1
KEK	**Kerkira**	**1.52**	**192**	P	Pb	17 00 39.8	+0.1
KEK				S	Sg	17 01 02.2	+2.0
KEK	**Kerkira**	**1.52**	**192**	*e*P	Pg	17 00 40.9	+0.5
KEK	**Kerkira**	**1.52**	**192**	P	Pb	17 00 39.8	+0.1
KEK	**Kerkira**	**1.52**	**192**	*e*Pb	Pg	17 00 40.9	+0.5
KEK				S	Sg	17 01 02.2	+2.0
JAN	**Janina**	**1.62**	**162**	*e*P	Pg	17 00 42.3	-0.1
JAN	**Janina**	**1.62**	**162**	*e*Pn	Pg	17 00 42.3	-0.1
BEY	**Berane**	**1.68**	**352**	⇑*i*Pn	Pb	17 00 42.1	-0.4
BEY				*e*Sn	Sg	17 01 06.2	+0.9
IVA	**Berane**	**1.68**	**352**	⇑*i*Pn	Pb	17 00 42.1	-0.4
IVA				*e*Sn	Sg	17 01 06.2	+0.9
HCY	**Herceg Novi**	**1.78**	**315**	⇓*i*Pn	Pn	17 00 42.8	+0.4
HCY				*e*Sn	Sg	17 01 07.8	-0.7
HCY	**Herceg Novi**	**1.78**	**315**	⇓*i*Pn	Pn	17 00 42.8	+0.4
HCY				*e*Sn	Sg	17 01 07.8	-0.7
VAY	**Valandovo**	**1.79**	**86**	*i* Pn	Pb	17 00 44.0	-0.3
BRY	**Bratogost**	**2.10**	**324**	⇑*i*Pn	Pn	17 00 47.1	+0.2
BRY				*e*Sn	Sb	17 01 15.5	-0.5
BRY	**Bratogost**	**2.10**	**324**	⇑*i*Pn	Pn	17 00 47.1	+0.2
BRY				*e*Sn	Sb	17 01 15.5	-0.5
THL	**Klokotos Trika**	**2.15**	**139**	*e*P	Pn	17 00 48.5	+1.2
THL				*e*S	Sb	17 01 17.5	+0.4
THL	**Klokotos Trika**	**2.15**	**139**	*e*Pb	Pn	17 00 48.5	+1.2
THL				*e*Sn	Sb	17 01 17.5	+0.4
UPM	**Unac-Piva**	**2.22**	**335**	⇑*i*Pn	Pn	17 00 49.4	+0.9
UPM				*e*Sn	Sb	17 01 19.0	-0.4
UPM	**Unac-Piva**	**2.22**	**335**	⇑*i*Pn	Pn	17 00 49.4	+0.9
UPM				*e*Sn	Sb	17 01 19.0	-0.4
EVR	**Evrytania**	**2.60**	**151**	*e*P	Pb	17 00 55.9	-2.2
EVR	**Evrytania**	**2.60**	**151**	*e*Pn	Pb	17 00 55.9	-2.2
AGG	**Agios Georgios**	**2.72**	**143**	*e*P	Pn	17 00 57.2	+1.9
AGG	**Agios Georgios**	**2.72**	**143**	*e*Pn	Pn	17 00 57.2	+1.9
VLS	**Valsamata**	**3.04**	**174**	*e*PN	Pn	17 00 59.4	-0.3
VLS	**Valsamata**	**3.04**	**174**	*e*Pn	Pn	17 00 59.4	-0.3
TRIZ	**Trizonia**	**3.18**	**152**	*e*PN	Pn	17 00 58.7	-2.9
TRIZ	**Trizonia**	**3.18**	**152**	*e*Pn	Pn	17 00 58.7	-2.9
KALE	**Kalithea**	**3.18**	**151**	*e*PN	Pn	17 00 59.6	-2.1
KALE	**Kalithea**	**3.18**	**151**	*e*Pn	Pn	17 00 59.6	-2.1
LAKA	**Lakka**	**3.26**	**155**	*e*PN	Pn	17 00 59.0	-3.7
LAKA	**Lakka**	**3.26**	**155**	*e*Pn	Pn	17 00 59.0	-3.7
KLV	**Kalavryta, Ach**	**3.50**	**154**	*e*PN	Pn	17 01 02.5	-3.5
KLV	**Kalavryta, Ach**	**3.50**	**154**	*e*Pn	Pn	17 01 02.5	-3.5

IDC 20 17:03:58.6±1.3, 27°68S×67°60W, h114km±13km, mb3.9/1, mb1 3.3/3, mb1mx3.2/18, mbtmpg3.3/3, Error ellipse: s-maj=29.0km s-min=11.0km az=90.0, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**3.95**	**188**	P	Pn	17 04 59.0	+1.6
	0.1nm,0.3s,baz=346,slow=11,SNR=32						
CFAA				S	Sn	17 05 43.0	-0.1
	3.1nm,0.3s,baz=41,slow=20,SNR=34						
LVC	**Limon Verde**	**5.18**	**346**	P	Pn	17 05 15.8	+1.5
	2.0nm,0.3s,baz=197,slow=7.6,SNR=15						
LVC				S	Sn	17 06 12.5	-0.8
	1.3nm,0.3s,baz=20,slow=5.5,SNR=3.3						
CPUP	**Villa Florida**	**9.26**	**84**	P	Pn	17 06 08.4	-0.6
	0.2nm,0.3s,baz=231,slow=17,SNR=2.5						
TORD	**Torodi Ar. Bea**	**78.40**	**68**	P	P	17 15 46.9	-0.1
	2.1nm,0.7s,baz=270,slow=6.0,SNR=15						
ASAR	**Alice Springs**	**124.90**	**204**	PKP	PKPdf	17 22 44.8	-1.0
	0.2nm,0.4s,baz=131,slow=1.7,SNR=9.1						
WRA	**Warramunga Arr**	**128.12**	**207**	PKP	PKPdf	17 22 51.4	-0.6
	0.5nm,0.9s,baz=132,slow=1.4,SNR=6.7						
ZALV	**Zalesovo Beam**	**146.86**	**30**	PKPbc	PKPbc	17 23 27.7	+0.6
	0.4nm,0.3s,baz=270,slow=4.3,SNR=2.8						
MKAR	**Makanchi Array**	**149.63**	**43**	PKPbc	PKPbc	17 23 34.2	-0.4
	0.2nm,0.6s,baz=306,slow=3.5,SNR=3.0						

*ISCJB **20** 17:04:39.2±0.4, 38°.30N±0°.02×22°.03E±0°.04, h11km±3km, Error ellipse: s-maj=4.7km s-min=4.0km az=13.0*
*CSEM **20** 17:04:39.2±0.1, 38°.31N×22°.04E, h8km, MD3.0, Error ellipse: s-maj=3.1km s-min=2.5km az=98.0*
*THE **20** 17:04:39.8, 38°.31N×22°.03E, h7km±1km, ML2.0/5, Error ellipse: s-maj=1.3km s-min=0.5km az=221.0*
*ATH **20** 17:04:39.3, 38°.31N×22°.05E, h10km±1km, MD3.0/7*

ISC 20 17:04:38.9±0.9, 38°31N±0°.02×22°.04E±0°.02, h12km±5km, n30, σ0°37/53, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.07**	**25**	P	Pg	17 04 41.4	+0.1
TRIZ				S	Sg	17 04 42.8	-0.3
TRIZ	**Trizonia**	**0.07**	**25**	*e*PG	Pg	17 04 41.4	+0.1
TRIZ				*e*SG	Sg	17 04 42.9	-0.2
TRIZ	**Trizonia**	**0.07**	**25**	P	Pg	17 04 41.4	+0.1
TRIZ				*e*Sg	Sg	17 04 42.9	-0.2
LAKA	**Lakka**	**0.08**	**215**	P	Pg	17 04 41.8	+0.3
LAKA				S	Sg	17 04 43.2	-0.2
LAKA	**Lakka**	**0.08**	**215**	*e*PG	Pg	17 04 41.8	+0.3
LAKA				*e*SG	Sg	17 04 43.5	+0.1
LAKA	**Lakka**	**0.08**	**215**	P	Pg	17 04 41.8	+0.3
LAKA				S	Sg	17 04 43.2	-0.2
KALE	**Kalithea**	**0.12**	**44**	P	Pg	17 04 42.4	+0.4
KALE				S	Sg	17 04 44.7	+0.5
KALE	**Kalithea**	**0.12**	**44**	*e*PG	Pg	17 04 42.5	+0.4
KALE				*e*SG	Sg	17 04 44.8	+0.5
KALE	**Kalithea**	**0.12**	**44**	P	Pg	17 04 42.4	+0.4
KALE				S	Sg	17 04 44.7	+0.5
EFP	**Efpalio**	**0.16**	**319**	P	Pg	17 04 42.9	+0.3
EFP				S	Sg	17 04 45.4	+0.3
EFP	**Efpalio**	**0.16**	**319**	P	Pg	17 04 42.9	+0.3
EFP				S	Sg	17 04 45.4	+0.3
KLV	**Kalavryta, Ach**	**0.28**	**161**	*e*PG	Pg	17 04 45.1	+0.5
KLV				*e*SG	Sg	17 04 49.1	+0.6
KLV	**Kalavryta, Ach**	**0.28**	**161**	*e*Pg	Pg	17 04 45.1	+0.5
KLV				*e*Sg	Sg	17 04 49.1	+0.6
DSF	**Desfina**	**0.40**	**75**	P	Pg	17 04 47.2	+0.3
DSF				S	Sb	17 04 53.8	-0.3
DSF	**Desfina**	**0.40**	**75**	P	Pg	17 04 47.2	+0.3
DSF				S	Sb	17 04 53.8	-0.3
GUR	**Goura**	**0.44**	**147**	P	Pg	17 04 48.1	+0.5
GUR				S	Sb	17 04 55.0	-0.3
GUR	**Goura**	**0.44**	**147**	P	Pg	17 04 48.1	+0.5
GUR				S	Sb	17 04 55.0	-0.3
RLS	**Riolos of Patr**	**0.51**	**241**	*e*PB	Pb	17 04 49.5	-0.4
RLS				*e*SB	Sb	17 04 57.4	+0.1
RLS	**Riolos of Patr**	**0.51**	**241**	*e*Pb	Pb	17 04 49.5	-0.4
RLS				*e*Sb	Sb	17 04 57.4	+0.1
AXS	**Araxos**	**0.53**	**258**	P	Pg	17 04 49.8	+0.5
AXS				S	Sb	17 04 57.5	-0.3
AXS	**Araxos**	**0.53**	**258**	P	Pg	17 04 49.8	+0.5
AXS				S	Sb	17 04 57.5	-0.3
EVR	**Evrytania**	**0.64**	**344**	P	Pg	17 04 51.5	+0.2
EVR				S	Sb	17 05 01.3	+0.3
EVR	**Evrytania**	**0.64**	**344**	*e*PG	Pg	17 04 51.4	+0.2
EVR	**Evrytania**	**0.64**	**344**	P	Pg	17 04 51.5	+0.2
EVR				S	Sb	17 05 01.3	+0.3
MAKR	**Makrakomi, Fth**	**0.71**	**6**	P	Pb	17 04 53.4	+0.1
MAKR	**Makrakomi, Fth**	**0.71**	**6**	P	Pb	17 04 53.4	+0.1
AGG	**Agios Georgios**	**0.75**	**18**	P	Pg	17 04 53.1	-0.4
AGG	**Agios Georgios**	**0.75**	**18**	P	Pg	17 04 53.1	-0.4
ITM	**Ithomi**	**1.13**	**184**	*e*PG	Pb	17 04 59.7	-0.7
ITM	**Ithomi**	**1.13**	**184**	*e*Pg	Pb	17 04 59.7	-0.7

IDC 20 17:12:35.7±1.9, 5°41N×125°56E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/24, mbtmpg3.5/4, Error ellipse: s-maj=116.5km s-min=23.7km az=68.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**23.36**	**180**	P	P	17 17 45.1	-0.9
	1.0nm,0.8s,baz=0.0,slow=9.1,SNR=2.7						
WRA	**Warramunga Arr**	**26.63**	**161**	P	P	17 18 15.9	-0.3
	2.3nm,0.8s,baz=342,slow=10,SNR=12						
ASAR	**Alice Springs**	**30.02**	**165**	P	P	17 18 47.5	+1.0
	0.2nm,0.3s,baz=345,slow=10,SNR=12						
MKAR	**Makanchi Array**	**55.52**	**325**	P	P	17 22 12.6	-0.1
	0.2nm,0.5s,baz=140,slow=7.8,SNR=3.8						

IDC 20 17:16:29.6±2.8, 15°22S×173°33W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/21, mbtmpg3.7/3, Error ellipse: s-maj=164.4km s-min=22.9km az=144.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.99**	**49**	Pn	Pn	17 17 03.4	-1.3
	119nm,0.3s,baz=16,slow=1.6,SNR=118						
AFI				Sn	Sn	17 17 22.6	-7.8
	331nm,0.3s,baz=74,slow=20,SNR=17						
STKA	**Stephens Creek**	**44.18**	**240**	P	P	17 24 41.3	+0.8
	1.6nm,0.8s,baz=85,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**49.95**	**257**	P	P	17 25 25.1	-0.7
	0.3nm,0.5s,baz=89,slow=7.0,SNR=17						
ASAR	**Alice Springs**	**50.23**	**252**	P	P	17 25 26.6	-1.2
	0.8nm,0.5s,baz=91,slow=7.5,SNR=39						
GERES	**GERESS Array B**	**145.97**	**352**	PKPbc	PKPab	17 36 11.7	-0.1
	0.3nm,0.6s,baz=325,slow=1.6,SNR=2.4						
BRTR	**Keskin Array B**	**146.06**	**321**	PKPbc	PKPdf	17 36 11.6	+0.4
	1.4nm,0.9s,baz=45,slow=2.2,SNR=6.8						

JMA 20 17:24:15.4, 34°.89N×135°.52E, h9km, M3.2, 3C-5D Broadband fault plane solution: P waves. NP1: ϕs156.00000°, δ73.00000°, λ-20.00000°. NP2: ϕs252.00000°, δ71.00000°, λ-162.00000°. Principal axes: T Plg1.0000°, Azm204.0000°; N Plg64.0000°, Azm296.0000°; P Plg26.0000°, Azm114.0000°; Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHE	**Heguri**	**0.27**	**150**	⇓P	Pg	17 24 20.8	-0.1
JHE				S	Sg	17 24 24.6	0.0
JWT	**Wachi**	**0.40**	**346**	⇑P	Pg	17 24 23.6	+0.2
JWT				S	Sg	17 24 28.9	+0.2
JKS	**Kasai**	**0.56**	**280**	⇓P	Pg	17 24 26.4	+0.1
JKS				S	Sg	17 24 33.9	+0.2
JWY	**Kouya**	**0.67**	**175**	⇑P	Pg	17 24 28.1	-0.4
JWY				S	Sg	17 24 36.9	-0.5
JAJ2	**Tsuna**	**0.70**	**228**	⇑P	Pg	17 24 28.7	-0.3
JAJ2				S	Sg	17 24 38.2	0.0
TSUJ	**Tsu 2**	**0.76**	**103**	⇓P	Pg	17 24 29.7	-0.4
TSUJ				S	Sg	17 24 39.7	-0.3
JKY	**Yasaka**	**0.81**	**335**	P	Pg	17 24 31.0	-0.1
JKY				S	Sg	17 24 41.8	+0.1
JKN2	**Miekihoku**	**0.90**	**136**	⇓P	Pg	17 24 32.0	-0.7
JKN2				S	Sg	17 24 43.5	-0.9
JKSM	**Kasumi**	**0.99**	**315**	⇓P	Pg	17 24 34.0	-0.4
JKSM				S	Sg	17 24 47.1	-0.2
MAT	**Matsushiro**	**2.74**	**52**	P	Pn	17 25 00.6	+1.0
MAT				S	Sb	17 25 40.9	+2.6

*ISK **20** 17:24:35.8, 39°.52N×26°.13E, h19km, MD2.9*
*ISCJB **20** 17:24:36.7±1.4, 39°.53N±0°.07×26°.15E±0°.10, h25km±5km, Error ellipse: s-maj=15.5km s-min=6.6km az=141.1*
*DDA **20** 17:24:36.3, 39°.50N×26°.16E, h27km, MD2.7*
*CSEM **20** 17:24:36.6±0.4, 39°.53N×26°.14E, h19km, MD2.9, Error ellipse: s-maj=8.5km s-min=3.6km az=54.0*

ISC 20 17:24:37.1±1.7, 39°55N±0°.06×26°19E±0°.07, h18km±10km, n27, σ0°44/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EZN	**Ezine**	**0.30**	**21**	PG	Pg	17 24 43.6	+0.1
EZN				*e*SG	Sb	17 24 48.9	+0.4
EZN	**Ezine**	**0.30**	**21**	*i* Pg	Pg	17 24 43.6	+0.1
EZN				*e*Sg	Sb	17 24 48.9	+0.4
BOZC	**Bozcaada**	**0.31**	**341**	*i* P	Pb	17 24 44.0	-0.1
BOZC				*i* S	Sb	17 24 48.9	+0.1
AYVA	**Ayvalik**	**0.46**	**122**	*e*P	Pb	17 24 46.5	-0.2
AYVA				*e*S	Sb	17 24 54.1	+0.9
AYVA	**Ayvalik**	**0.46**	**122**	*e*P	Pb	17 24 46.5	-0.2
AYVA				*e*S	Sb	17 24 54.1	+0.9
GELI	**Tayfur-Gelibol**	**0.88**	**15**	*e*PG	Pb	17 24 53.7	-0.1
GELI				*e*SG	Sn	17 25 07.2	+0.4
GELI	**Tayfur-Gelibol**	**0.88**	**15**	*e*Pg	Pb	17 24 53.7	-0.1
GELI				*e*Sg	Sn	17 25 07.2	+0.4
LPK	**Lapseki**	**0.93**	**28**	*e*PG	Pb	17 24 54.9	+0.1
LPK	**Lapseki**	**0.93**	**28**	*e*Pg	Pb	17 24 54.9	+0.1
BALY	**Balya**	**1.12**	**80**	*i* P	Pn	17 24 57.5	-0.5
BALY				*i* S	Sb	17 25 11.5	-0.9
BALY	**Balya**	**1.12**	**80**	*i* P	Pn	17 24 57.5	-0.5
BALY				*i* S	Sb	17 25 11.5	-0.9
ERIK	**Erikli-Kesan**	**1.15**	**13**	*e*PN	Pn	17 24 58.0	-0.3
ERIK	**Erikli-Kesan**	**1.15**	**13**	*e*Pn	Pn	17 24 58.0	-0.3
ENEZ	**Enez**	**1.19**	**359**	*e*PN	Pn	17 24 58.1	-0.7
ENEZ	**Enez**	**1.19**	**359**	*e*Pn	Pn	17 24 58.1	-0.7
KRBG	**Karabiga-Canak**	**1.20**	**45**	*e*PN	Pn	17 24 59.0	0.0
KRBG	**Karabiga-Canak**	**1.20**	**45**	*e*Pn	Pn	17 24 59.0	0.0
GONE	**Gonen-Balikesi**	**1.26**	**66**	*e*PN	Pn	17 24 59.4	-0.4
GONE	**Gonen-Balikesi**	**1.26**	**66**	*e*Pn	Pn	17 24 59.4	-0.4
RKY	**Sarkoy-Tekirda**	**1.37**	**34**	*e*PN	Pn	17 25 01.3	-0.1
RKY	**Sarkoy-Tekirda**	**1.37**	**34**	*e*Pn	Pn	17 25 01.3	-0.1
MFT	**Murefte**	**1.49**	**34**	*e*PN	Pn	17 25 02.9	-0.3
MFT	**Murefte**	**1.49**	**34**	*e*Pn	Pn	17 25 02.9	-0.3
ARMT	**Armutlu**	**2.29**	**63**	*e*PN	Pn	17 25 14.0	-0.1
ARMT	**Armutlu**	**2.29**	**63**	*e*Pn	Pn	17 25 14.0	-0.1
EDRB	**Edirne**	**2.33**	**10**	*e*PN	Pn	17 25 14.5	-0.1
EDRB	**Edirne**	**2.33**	**10**	*e*Pn	Pn	17 25 14.5	-0.1

*ISCJB **20** 17:25:36.2±0.4, 39°.00N±0°.05×15°.43E±0°.08, h270km±3km, mb3.5/7, Error ellipse: s-maj=9.6km s-min=7.5km az=179.0*
*ROM **20** 17:25:36.3±0.3, 38°.92N×15°.42E, h269km±3km, Ml3.1/29, Error ellipse: s-maj=5.7km s-min=2.9km az=110.0*
*CSEM **20** 17:25:36.3, 38°.92N×15°.42E, h269km, After ROM*
*IDC **20** 17:25:38.1±3.2, 39°.19N×15°.00E, h282km±37km, mb3.1/8, mb1 3.0/11, mb1mx2.9/32, mbtmpg3.0/11, Error ellipse: s-maj=18.2km s-min=15.8km az=94.0*

ISC 20 17:25:36.4±0.7, 38°99N±0°.06×15°35E±0°.08, h265km±6km, n88, σ1°21/101, mb3.5/7, Sicily

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOPP	**Joppolo**	**0.57**	**132**	Pg	Pn	17 26 11.9	+0.6
JOPP				Sg	S	17 26 38.3	-0.5
	116nm,0.4s						
JOPP	**Joppolo**	**0.57**	**132**	Pg	Pn	17 26 11.9	+0.6
JOPP				Sg	S	17 26 38.3	-0.5
	116nm,0.4s						
LLI	**Lipari**	**0.63**	**210**	Pg	Pn	17 26 13.1	+1.6
	367nm,0.7s						
LLI	**Lipari**	**0.63**	**210**	Pg	Pn	17 26 13.1	+1.6
	367nm,0.7s						
VPL	**Vulcano Piano**	**0.67**	**205**	Pg	Pn	17 26 12.6	+0.9
	92nm,0.3s						
VPL	**Vulcano Piano**	**0.67**	**205**	Pg	Pn	17 26 12.6	+0.9
	92nm,0.3s						
MILZ	**Milazzo**	**0.72**	**187**	Pg	Pn	17 26 12.2	+0.4
MILZ				Sg	S	17 26 39.8	+0.1
	65nm,0.4s						
MILZ	**Milazzo**	**0.72**	**187**	Pg	Pn	17 26 12.2	+0.4
MILZ				Sg	S	17 26 39.8	+0.1
	65nm,0.4s						
CARO	**Carolei**	**0.73**	**68**	Pg	Pn	17 26 12.5	+0.7
CARO				Sg	S	17 26 38.9	-0.9
	338nm,0.8s						
CARO	**Carolei**	**0.73**	**68**	Pg	Pn	17 26 12.5	+0.7
CARO				Sg	S	17 26 38.9	-0.9
	338nm,0.8s						
MSRU	**Castanea**	**0.73**	**170**	Pg	Pn	17 26 12.0	+0.1
MSRU				Sg	S	17 26 39.1	-0.8
	103nm,0.3s						
MSRU	**Castanea**	**0.73**	**170**	Pg	Pn	17 26 12.0	+0.1
MSRU				Sg	S	17 26 39.1	-0.8
	103nm,0.3s						
MSCL	**Scilla**	**0.83**	**155**	Pg	Pn	17 26 12.6	+0.2
MSCL	**Scilla**	**0.83**	**155**	Pg	Pn	17 26 12.6	+0.2
CEL	**Celeste**	**0.84**	**149**	Pg	Pn	17 26 12.6	+0.2
CEL				Sg	S	17 26 39.6	-1.2
	56nm,0.5s						
CEL	**Celeste**	**0.84**	**149**	Pg	Pn	17 26 12.6	+0.2
CEL				Sg	S	17 26 39.6	-1.2
	56nm,0.5s						
GRI	**Girifalco**	**0.85**	**101**	Pg	Pn	17 26 13.7	+1.3
	145nm,0.6s						
GRI	**Girifalco**	**0.85**	**101**	Pg	Pn	17 26 13.7	+1.3
	145nm,0.6s						
IACL	**Alicudi**	**0.90**	**240**	Pg	Pn	17 26 13.6	+1.0
	63nm,0.4s						
IACL	**Alicudi**	**0.90**	**240**	Pg	Pn	17 26 13.6	+1.0
	63nm,0.4s						
PLAC	**Placanica**	**1.01**	**122**	Pg	Pn	17 26 14.1	+0.9
	93nm,0.3s						
PLAC	**Placanica**	**1.01**	**122**	Pg	Pn	17 26 14.1	+0.9
	93nm,0.3s						
TDS	**Terranova Siba**	**1.02**	**49**	Pg	Pn	17 26 14.7	+1.6
	37nm,0.2s						
TDS	**Terranova Siba**	**1.02**	**49**	Pg	Pn	17 26 14.7	+1.6
	37nm,0.2s						
MTTG	**Motta San Giov**	**1.02**	**165**	Pg	Pn	17 26 14.1	+0.8
MTTG	**Motta San Giov**	**1.02**	**165**	Pg	Pn	17 26 14.1	+0.8
SERS	**Sersale**	**1.04**	**87**	Pg	Pn	17 26 14.6	+1.2
SERS				Sg	S	17 26 42.0	-0.6
	77nm,0.3s						
SERS	**Sersale**	**1.04**	**87**	Pg	Pn	17 26 14.6	+1.2
SERS				Sg	S	17 26 42.0	-0.6
	77nm,0.3s						
MMME	**Mongiuffi-Meli**	**1.05**	**184**	Pg	Pn	17 26 14.3	+0.8
MMME				Sg	S	17 26 42.1	-0.7
	64nm,0.5s						
MMME	**Mongiuffi-Meli**	**1.05**	**184**	Pg	Pn	17 26 14.3	+0.8
MMME				Sg	S	17 26 42.1	-0.7
	64nm,0.5s						
CUC	**Castrocucco**	**1.07**	**20**	Pg	Pn	17 26 14.5	+1.1
	27nm,0.5s						
CUC	**Castrocucco**	**1.07**	**20**	Pg	Pn	17 26 14.5	+1.1
	27nm,0.5s						
SOI	**Samo**	**1.07**	**149**	Pg	Pn	17 26 14.1	+0.6
	34nm,0.3s						
SOI	**Samo**	**1.07**	**149**	Pg	Pn	17 26 14.1	+0.6
	34nm,0.3s						
TIP	**Timpagrande**	**1.11**	**80**	Pg	Pn	17 26 15.1	+1.4
TIP				Sg	S	17 26 42.8	-0.4
	111nm,0.8s						
TIP	**Timpagrande**	**1.11**	**80**	Pg	Pn	17 26 15.1	+1.4
TIP				Sg	S	17 26 42.8	-0.4
	111nm,0.8s						
MPAZ	**Palizzi**	**1.16**	**153**	Pg	Pn	17 26 14.6	+0.6
MPAZ				Sg	S	17 26 42.4	-1.3
	96nm,0.2s						
MPAZ	**Palizzi**	**1.16**	**153**	Pg	Pn	17 26 14.6	+0.6
MPAZ				Sg	S	17 26 42.4	-1.3
	96nm,0.2s						
MGR	**Morigerati**	**1.16**	**8**	Pg	Pn	17 26 15.3	+1.4
	24nm,0.3s						
MGR	**Morigerati**	**1.16**	**8**	Pg	Pn	17 26 15.3	+1.4
	24nm,0.3s						
CMPR	**Campora**	**1.33**	**358**	Pg	Pn	17 26 16.6	+1.6
	40nm,0.9s						
CMPR	**Campora**	**1.33**	**358**	Pg	Pn	17 26 16.6	+1.6
	40nm,0.9s						
SCHR	**S. Chirico Rap**	**1.33**	**25**	Pg	Pn	17 26 16.7	+1.6
	42nm,0.9s						
SCHR	**S. Chirico Rap**	**1.33**	**25**	Pg	Pn	17 26 16.7	+1.6
	42nm,0.9s						
MCEL	**Monticello**	**1.38**	**14**	Pg	Pn	17 26 17.2	+1.8
	27nm,0.4s						
MCEL	**Monticello**	**1.38**	**14**	Pg	Pn	17 26 17.2	+1.8
	27nm,0.4s						
GALF	**Gagliano Caste**	**1.42**	**206**	Pg	Pn	17 26 17.5	+1.8
	41nm,0.5s						
GALF	**Gagliano Caste**	**1.42**	**206**	Pg	Pn	17 26 17.5	+1.8
	41nm,0.5s						
ECNV	**Catenanuova**	**1.48**	**200**	Pg	Pn	17 26 18.5	+2.4
	230nm,1.3s						
ECNV	**Catenanuova**	**1.48**	**200**	Pg	Pn

*CSEM **20** 17:33:04.4±0.3,33.78N×35.75E,h2km,ML1.3,Error ellipse: s-maj=8.3km s-min=3.5km az=88.0*
*GRAL **20** 17:33:05.1±0.3,33.80N×35.79E,h0km±35km,MD2.8*
ISC 20 17:33:03.6±1.2,**33.75N**±0.03×**35.72E**±0.08,**h12**km±12km,
n13,σ0°**83**/23,**Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BHL	**Bhannes**	**0.16**	**339**	*eP*	**Pg**	**17 33 07.8**	**+0.4**
BHL	**Bhannes**	**0.16**	**339**	*eP*	**Pg**	**17 33 07.8**	**+0.4**
RCY	**Rachaya**	**0.27**	**160**	*eP*	**Pb**	**17 33 10.5**	**0.0**
RCY				*eS*	**Sb**	**17 33 14.6**	**-0.5**
RCY	**Rachaya**	**0.27**	**160**	*eP*	**Pb**	**17 33 10.5**	**0.0**
RCY				*eS*	**Sb**	**17 33 14.6**	**-0.5**
BRBR	**Barbar**	**0.39**	**151**	*eP*	Pg	17 33 07.1	-4.2
BRBR				*eS*	**Sg**	**17 33 15.2**	**-1.4**
BRBR				AML	AML	17 33 17.2	
	comp=E,41nm,0.4s						
BRBR				AML	AML	17 33 17.3	
	comp=N,72nm,0.4s						
HWQ	**Hawqa**	**0.56**	**19**	*eP*	**Pg**	**17 33 14.1**	**-0.4**
HWQ				*eS*	**Sg**	**17 33 20.6**	**-1.3**
HWQ	**Hawqa**	**0.56**	**19**	*eP*	**Pg**	**17 33 14.1**	**-0.4**
HWQ				*eS*	**Sg**	**17 33 20.6**	**-1.3**
HAWK	**Haweek**	**0.95**	**36**	*eP*	**Pb**	**17 33 22.3**	**+0.1**
HAWK				*eS*	**Sg**	**17 33 35.4**	**+0.9**
HAWK				AML	AML	17 33 44.0	
	comp=N,15nm,0.6s						
HAWK				AML	AML	17 33 44.1	
	comp=E,9.4nm,0.4s						
HAWK	**Haweek**	**0.95**	**36**	*eP*	**Pb**	**17 33 22.3**	**+0.1**
	SNR=67						
HAWK				*eS*	**Sg**	**17 33 35.4**	**+0.9**
	comp=E,9.4nm,0.4s,SNR=59						
SALA	**Sala**	**1.34**	**141**	*eP*	**Pb**	**17 33 30.2**	**+1.5**
SALA				*eS*	**Sb**	**17 33 46.1**	**+0.2**
SALA				AML	AML	17 33 58.0	
	comp=E,1.2nm,0.3s						
SALA				AML	AML	17 33 58.4	
	comp=N,9.8nm,0.3s						
SALA	**Sala**	**1.34**	**141**	*eP*	**Pb**	**17 33 30.2**	**+1.5**
	SNR=57						
SALA				*eS*	**Sb**	**17 33 46.1**	**+0.2**
	comp=N,9.8nm,0.3s,SNR=49						
ZALF	**Zalf**	**1.58**	**121**	*eP*	**Pg**	**17 33 33.8**	**-0.1**
ZALF				*eS*	**Sg**	**17 33 54.1**	**-0.4**
ZALF				AML	AML	17 33 58.2	
	comp=E,7.9nm,0.4s						
ZALF	**Zalf**	**1.58**	**121**	*eP*	**Pg**	**17 33 33.8**	**-0.1**
	SNR=57						
ZALF				*eS*	**Sg**	**17 33 54.1**	**-0.4**
	comp=E,7.9nm,0.4s,SNR=49						

*ISCJB **20** 17:37:04.0±0.7,3.72S±0.05×127.63E±0.08,h42km,mb3.9/7,Error ellipse: s-maj=11.5km s-min=7.7km az=4.4*
*DJA **20** 17:37:06.5±0.4,4.5S±4.2×12.8E±°,h25km,MA4.7/6,mB5.0/4,MLv4.1/7,Mw(mB)4.3/4*
*IDC **20** 17:37:08.7±3.9,3.69S×127.69E,h72km±37km,mb3.7/8,mb1 3.8/10,mb1mx3.6/25,mbtmp3.7/10,ML3.5/2,MS3.2/1,Ms1 3.2/1,ms1mx2.4/38,Error ellipse: s-maj=37.1km s-min=18.9km az=70.0*
ISC 20 17:37:06.2±0.8,**3.71S**±0.07×**127.47E**±0.07,**h42**km,**n21**,
σ1°**33**/19,**mb4.1/7**,**Seram**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.50**	**76**	P	**Pn**	**17 37 32.5**	**+1.8**
LBMI	**Labuha**	**3.06**	**1**	P	**Pn**	**17 37 52.9**	**+0.8**
LBMI				S	**Sn**	**17 38 28.3**	**+0.9**
BBSI	**Bau Bau**	**5.19**	**250**	P	**Pn**	**17 38 22.4**	**+1.0**
	22nm,1.1s,0.1nm						
KMSI	**Cibinong**	**5.50**	**321**	P	**Pn**	**17 38 26.9**	**+1.2**
	259nm,0.7s,4μm1.4nm						
MNI	**Manado**	**5.76**	**333**	P	**Pn**	**17 38 30.1**	**+0.9**
	110nm,0.8s,2μm0.5nm						
SKSI	**Soroako, Sulaw**	**6.24**	**281**	P	**Pn**	**17 38 37.2**	**+1.3**
	14nm,0.9s,0.1nm						
MRSI	**Marisa**	**6.92**	**307**	P	**Pn**	**17 38 46.8**	**+1.6**
	50nm,0.9s,454nm						
BSSI	**Bau Bau, Buton**	**7.36**	**251**	P	Pn	17 38 55.1	+3.9
KAPI	**Kappang**	**7.80**	**260**	P	Pn	17 39 02.2	+4.8
	2.0nm,0.3s,baz=138,slow=5.3,SNR=5.5						
FITZ	**Fitzroy Crossi**	**14.41**	**187**	LR	LR	17 45 44.6	
	comp=Z,100nm,20.4s,baz=322,slow=36						
WRA	**Warramunga Arr**	**17.47**	**158**	P	**Pn**	**17 41 04.8**	**-2.0**
	0.1nm,0.3s,baz=342,slow=12,SNR=13						
ASAR	**Alice Springs**	**20.79**	**163**	P	**P**	**17 41 45.4**	**+1.3**
	17nm,0.8s,baz=345,slow=12,SNR=187						
MJAR	**Matsushiro Arr**	**41.28**	**13**	P	**P**	**17 44 46.2**	**-1.5**
	1.8nm,0.9s,baz=184,slow=11,SNR=6.2						
USRK	**Ussuriysk Arra**	**47.87**	**4**	P	**P**	**17 45 39.0**	**-1.0**
	1.4nm,0.7s,baz=182,slow=9.0,SNR=5.8						
SONM	**Songino Array**	**54.56**	**343**	P	**P**	**17 46 30.4**	**+0.1**
	0.7nm,0.9s,baz=164,slow=7.0,SNR=5.0						
MKAR	**Makanchi Array**	**64.12**	**327**	P	**P**	**17 47 36.4**	**+0.1**
	2.2nm,0.8s,baz=129,slow=7.5,SNR=22						
ZALV	**Zalesovo Beam**	**67.55**	**334**	P	**P**	**17 47 57.1**	**-1.0**
	1.7nm,0.8s,baz=108,slow=4.8,SNR=7.4						
KURBB	**Kurchatov Arra**	**68.41**	**329**	P	**P**	**17 48 03.3**	**-0.4**
	2.3nm,0.8s,baz=131,slow=5.5,SNR=31						
BVAR	**Borovoye Array**	**73.96**	**328**	P	**P**	**17 48 37.6**	**+0.4**
	0.5nm,0.6s,baz=126,slow=7.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**125.65**	**283**	PKP	**PKPdf**	**17 56 03.1**	**-1.1**
	0.6nm,0.7s,baz=64,slow=1.2,SNR=3.5						
CPUP	**Villa Florida**	**149.77**	**171**	PKPbc	**PKPdf**	**17 56 49.9**	**+2.1**
	0.7nm,0.5s,baz=201,slow=8.6,SNR=4.3						

*MAN **20** 17:39:12,4.73N×126.70E,h88km,mb4.9,ML3.8,MS3.8*
*IDC **20** 17:39:20.9±1.7,5.14N×125.83E,h45km±15km,mb3.9/14,mb1 4.0/14,mb1mx3.8/25,mbtmp3.9/14,MS3.4/2,Ms1 3.4/2,ms1mx2.8/42,Error ellipse: s-maj=39.3km s-min=11.7km az=74.0*
*ISCJB **20** 17:39:21.1±0.5,5.25N±0.07×126.3E±0.1,h66km,mb3.9/15,Error ellipse: s-maj=20.5km s-min=7.5km az=160.2*
ISC 20 17:39:23.2±0.6,**5.25N**±0.08×**126.3E**±0.1,**h66**km,**n27**,
σ1°**68**/31,**mb4.0**/15,**1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.69**	**358**	*eP*	**Pn**	**17 39 48.2**	**-2.4**
DAV	**Davao City (W)**	**1.95**	**338**	P	**Pn**	**17 39 53.1**	**-1.0**
	35nm,0.3s,baz=162,slow=3.0,SNR=5.3						
DAV				S	**Sn**	**17 40 19.5**	**+1.8**
	89nm,0.3s,baz=114,slow=21,SNR=6.7						
CTBH	**Cotabato--PC H**	**2.84**	**314**	⇑*iP*	**Pn**	**17 40 05.3**	**-1.0**
BUKP	**Musuan**	**2.90**	**335**	*eP*	**Pn**	**17 40 06.0**	**-1.0**
CGP	**Cagayan de Oro**	**3.57**	**333**	*eP*	**Pn**	**17 40 14.1**	**-2.1**
BUTP	**Butuan**	**3.76**	**349**	*eP*	**Pn**	**17 40 20.5**	**+1.7**
PAGZ	**Pagadian**	**3.90**	**312**	*eP*	**Pn**	**17 40 21.0**	**+0.4**
MSLP	**Maasin**	**5.07**	**344**	*eP*	**Pn**	**17 40 35.2**	**-1.4**
FITZ	**Fitzroy Crossi**	**23.21**	**182**	P	**P**	**17 44 24.9**	**+0.1**
	1.4nm,0.4s,baz=43,slow=4.1,SNR=15						
PMG	**Port Moresby**	**25.37**	**125**	LR	LR	17 55 58.9	
	comp=Z,55nm,19.1s,baz=190,slow=39						
WRA	**Warramunga Arr**	**26.25**	**163**	P	**P**	**17 44 51.9**	**-0.5**
	2.4nm,0.5s,baz=347,slow=10,SNR=18						
WRA				ScP	**ScP**	**17 51 55.4**	**+3.5**
	0.3nm,0.6s,baz=340,slow=3.1,SNR=6.8						
ASAR	**Alice Springs**	**29.68**	**166**	P	**P**	**17 45 22.4**	**-0.6**
	0.9nm,0.5s,baz=353,slow=7.3,SNR=14						
ASAR				ScP	**ScP**	**17 52 06.0**	**+3.5**
	0.2nm,0.6s,baz=348,slow=3.2,SNR=6.8						
CMAR	**Chiang Mai Arr**	**29.77**	**298**	P	**P**	**17 45 25.7**	**+1.8**
	0.5nm,0.7s,baz=119,slow=7.3,SNR=3.2						
KSRS	**Korea Array**	**32.09**	**2**	P	**P**	**17 45 45.7**	**+1.7**
	0.6nm,0.5s,baz=181,slow=9.3,SNR=5.0						
STKA	**Stephens Creek**	**39.69**	**159**	P	**P**	**17 46 48.9**	**-0.2**
	2.8nm,0.6s,baz=324,slow=12,SNR=10						
SONM	**Songino Array**	**45.74**	**341**	P	**P**	**17 47 37.3**	**-0.8**
	0.6nm,0.8s,baz=153,slow=8.3,SNR=3.5						
SONM				PcP	**PcP**	**17 49 15.1**	**+0.2**
	0.2nm,0.4s,baz=140,slow=4.7,SNR=3.1						
PETK	**Petropavlovsk-**	**54.19**	**23**	P	**P**	**17 48 44.1**	**+2.2**
	0.8nm,0.6s,baz=198,slow=8.9,SNR=3.8						
MKAR	**Makanchi Array**	**56.08**	**325**	P	**P**	**17 48 54.6**	**-1.1**
	1.8nm,0.4s,baz=118,slow=7.3,SNR=24						
MKAR				PcP	**PcP**	**17 49 52.8**	**-0.3**
	0.9nm,0.7s,baz=130,slow=3.9,SNR=4.9						
MKAR				ScP	**ScP**	**17 53 48.9**	**+2.1**
	0.7nm,0.8s,baz=133,slow=5.1,SNR=5.3						
ZALV	**Zalesovo Beam**	**59.06**	**333**	P	**P**	**17 49 14.3**	**-2.0**
	0.5nm,0.4s,baz=122,slow=7.2,SNR=3.5						
KURBB	**Kurchatov Arra**	**60.25**	**327**	P	**P**	**17 49 23.3**	**-1.3**
	2.0nm,0.7s,baz=124,slow=6.8,SNR=20						
AKTO	**Aktyubinsk**	**72.22**	**321**	P	**P**	**17 50 39.8**	**-1.6**
	1.9nm,0.7s,baz=89,slow=8.9,SNR=7.3						
ARCES	**ARCESS Array B**	**88.89**	**340**	P	**P**	**17 52 08.8**	**-1.2**
	1.9nm,0.7s,baz=72,slow=7.8,SNR=6.0						
SPITS	**Spitsbergen Ar**	**88.92**	**349**	LR	LR	18 34 35.8	
	comp=Z,30nm,19.7s,baz=85,slow=37						
FINES	**FINESS Array B**	**90.31**	**332**	P	**P**	**17 52 15.3**	**-1.5**
	1.8nm,0.8s,baz=60,slow=6.2,SNR=9.5						
NOA	**NORSAR Array B**	**97.25**	**334**	P	**P**	**17 52 47.0**	**-1.7**
	1.0nm,0.8s,baz=67,slow=4.7,SNR=3.8						
TXAR	**Lajitas Array**	**120.99**	**51**	PKP	**PKPdf**	**17 58 08.9**	**-0.2**
	0.2nm,0.6s,baz=253,slow=0.9,SNR=2.2						
TORD	**Torodi Ar. Bea**	**122.05**	**289**	PKP	**PKPdf**	**17 58 10.8**	**-0.6**
	0.5nm,0.7s,baz=68,slow=1.3,SNR=3.9						

IDC 20 17:47:44.3±1.3,**23.08N**×**144.17E**,**h58**km±8km,**mb3.1/7**,
mb1 3.3/7,**mb1mx3.2/26**,**mbtmp3.1/7**,**MS3.8/1**,**Ms1 3.8/1**,
ms1mx2.6/14,**Error ellipse: s-maj=37.9km**
s-min=20.6km az=85.0,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.01**	**319**	P	P	17 52 12.7	+0.5
	1.5nm,0.7s,baz=136,slow=12,SNR=6.4						
WRA	**Warramunga Arr**	**43.83**	**193**	P	P	17 55 44.7	-0.1
	0.2nm,0.8s,baz=16,slow=8.8,SNR=5.4						
WRA				LR	LR	18 12 27.4	
	comp=Z,114nm,21.8s,baz=75,slow=34						
ASAR	**Alice Springs**	**47.53**	**193**	P	P	17 56 13.8	-0.2
	0.2nm,0.8s,baz=8.7,slow=6.9,SNR=4.9						
MKAR	**Makanchi Array**	**54.44**	**312**	P	P	17 57 05.2	-0.5
	0.2nm,0.5s,baz=87,slow=10,SNR=3.7						
MKAR				pP	pP	17 57 20.9	-0.4
	0.7nm,0.7s,baz=91,slow=9.2,SNR=5.5						
KURBB	**Kurchatov Arra**	**57.15**	**316**	P	P	17 57 24.9	0.0
	0.2nm,0.4s,baz=92,slow=8.5,SNR=6.1						
KURBB				pP	pP	17 57 40.4	-0.2
	2.6nm,0.7s,baz=96,slow=7.7,SNR=26						
ILAR	**Eielson Array**	**60.40**	**27**	P	P	17 57 47.0	-0.3
	0.2nm,0.5s,baz=257,slow=7.3,SNR=2.7						
FINES	**FINESS Array B**	**82.33**	**335**	P	P	18 00 00.3	+0.8
	1.2nm,0.9s,baz=94,slow=7.6,SNR=3.9						
FINES				pP	pP	18 00 16.4	+0.5
	1.2nm,0.5s,baz=82,slow=5.7,SNR=2.9						

*DJA **20** 18:09:19.9±1.0,9.5S±5.5×107.8E±°,h11km±10km,M4.3/14,mb4.4/2,MLv4.2/14*
*ISCJB **20** 18:09:20.5±1.1,9.41S±0.07×107.76E±0.05,h38km±10km,mb3.8/9,Error ellipse: s-maj=11.8km s-min=7.7km az=26.7*
*IDC **20** 18:09:22.6±1.1,9.16S×107.92E,h30km±5km,mb3.7/9,mb1 3.8/10,mb1mx3.6/24,mbtmp3.7/10,ML3.2/1,Error ellipse: s-maj=41.9km s-min=14.7km az=57.0*
ISC 20 18:09:22.2±1.0,**9.27S**±0.07×**107.86E**±0.06,**h27**km±6km,
n26,σ1°**30**/34,**mb4.0**/9,**South of Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CISI	**Cisompet, Garu**	**1.70**	**359**	P	**Pn**	**18 09 49.9**	**-0.3**
CISI				S	**Sn**	**18 10 12.6**	**+1.5**
CLJI	**Cilicap**	**1.92**	**37**	P	**Pn**	**18 09 53.9**	**+0.8**
CLJI				S	**Sb**	**18 10 18.8**	**-1.2**
LEM	**Lembang**	**2.44**	**354**	P	**Pn**	**18 10 01.8**	**+1.4**
LEM				S	**Sb**	**18 10 36.8**	**+1.7**
SKJI	**Sukabumi**	**2.59**	**330**	P	**Pn**	**18 10 02.6**	**+0.2**
BJII	**Banjamegara**	**2.66**	**44**	P	**Pn**	**18 10 03.5**	**+0.2**
BJII				S	**Sb**	**18 10 38.0**	**-3.3**
TGJI	**Tegal**	**2.69**	**28**	P	**Pn**	**18 10 03.9**	**+0.1**
DBJI	**Dramaga**	**2.91**	**338**	P	**Pn**	**18 10 07.8**	**+1.0**
UGM	**Wanagama**	**2.96**	**63**	P	**Pn**	**18 10 07.1**	**-0.4**
SMRI	**Semarang**	**3.38**	**49**	P	**Pn**	**18 10 14.6**	**+1.4**
PCJI	**Pacitan**	**3.45**	**72**	P	**Pn**	**18 10 14.7**	**+0.5**
PWJI	**Pagerwojo**	**4.09**	**73**	P	**Pn**	**18 10 23.2**	**+0.2**
SJI	**Sawahan**	**4.16**	**69**	P	**Pn**	**18 10 25.3**	**+1.3**
SJI				S	**Sn**	**18 11 15.9**	**+4.2**
KASI	**Kota Agung**	**5.00**	**318**	P	**Pn**	**18 10 35.6**	**+0.2**
	38nm,1.0s,0.2nm						
GMJI	**Gumukmas**	**5.61**	**80**	P	**Pn**	**18 10 43.8**	**-0.1**
MRSI	**Marisa**	**17.04**	**56**	P	**P**	**18 13 20.4**	**0.0**
FITZ	**Fitzroy Crossi**	**19.36**	**119**	P	**P**	**18 13 46.0**	**+0.1**
	0.1nm,0.3s,baz=307,slow=10,SNR=4.0						
WRA	**Warramunga Arr**	**27.69**	**115**	P	**P**	**18 15 07.8**	**-0.6**
	0.8nm,0.6s,baz=287,slow=12,SNR=12						
ASAR	**Alice Springs**	**28.71**	**123**	P	**P**	**18 15 16.9**	**-0.5**
	0.4nm,0.9s,baz=301,slow=7.6,SNR=6.5						
CMAR	**Chiang Mai Arr**	**28.92**	**342**	P	**P**	**18 15 17.6**	**-1.6**
	0.3nm,0.4s,baz=175,slow=8.8,SNR=3.8						
STKA	**Stephens Creek**	**36.51**	**131**	P	**P**	**18 16 43.2**	**+0.8**
	2.0nm,0.7s,baz=311,slow=11,SNR=6.3						
SONM	**Songino Array**	**56.87**	**359**	P	**P**	**18 19 04.6**	**-0.1**
	1.7nm,0.6s,baz=174,slow=8.2,SNR=19						
SONM				pP	**pP**	**18 19 13.3**	**+0.3**
	1.2nm,0.5s,baz=175,slow=8.2,SNR=6.7						
ULN	**Ulaanbaatar**	**56.88**	**359**	P	**P**	**18 19 05.4**	**+0.6**
MKAR	**Makanchi Array**	**60.29**	**340**	P	**P**	**18 19 28.1**	**-0.4**
	2.2nm,0.5s,baz=141,slow=7.8,SNR=40						
MKAR				pP	**pP**	**18 19 36.9**	**0.0**
	1.4nm,0.5s,baz=152,slow=8.1,SNR=9.8						
ZALV	**Zalesovo Beam**	**65.93**	**345**	P	**P**	**18 20 04.1**	**-1.5**
	0.8nm,0.5s,baz=132,slow=6.2,SNR=6.0						
ZALV				pP	**pP**	**18 20 14.3**	**+0.2**
	0.5nm,0.4s,baz=136,slow=4.1,SNR=3.4						
PETK	**Petropavlovsk-**	**75.16**	**28**	P	**P**	**18 21 01.1**	**-0.9**
	1.5nm,1.0s,baz=212,slow=5.1,SNR=2.8						
QSPA	**South Pole Qui**	**80.73**	**180**	P	**P**	**18 21 33.6**	**+0.6**
	0.6nm,0.6s,baz=347,slow=1.8,SNR=3.6						

IDC 20 18:20:04.2±8.7,**14.00N**×**145.22E**,**h55**km±82km,**mb3.4/9**,
mb1 3.7/9,**mb1mx3.5/26**,**mbtmp3.5/9**,**Error ellipse:**
s-maj=41.1km s-min=14.8km az=90.0,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JNU	**Nakatsue**	**23.09**	**328**	P	P	18 25 05.8	+0.5
	7.1nm,1.1s,baz=106,slow=7.4,SNR=3.7						
MJAR	**Matsushiro Arr**	**23.31**	**346**	P	P	18 25 07.4	0.0
	1.1nm,0.5s,baz=168,slow=9.7,SNR=9.5						
WRA	**Warramunga Arr**	**35.39**	**198**	P	P	18 26 54.6	-0.3
	1.5nm,0.5s,baz=18,slow=9.0,SNR=27						
ASAR	**Alice Springs**	**39.04**	**197**	P	P	18 27 25.4	-0.3
	0.2nm,0.4s,baz=16,slow=6.3,SNR=26						
STKA	**Stephens Creek**	**45.74**	**184**	P	P	18 28 20.2	+0.1
	1.4nm,0.4s,baz=340,slow=12,SNR=9.7						
SONM	**Songino Array**	**46.60**	**324**	P	P	18 28 27.5	+0.6
	0.2nm,0.5s,baz=140,slow=9.1,SNR=2.5						
MKAR	**Makanchi Array**	**61.44**	**316**	P	P	18 30 14.3	-0.6
	0.3nm,0.4s,baz=93,slow=8.2,SNR=8.7						
ILAR	**Eielson Array**	**68.05**	**25**	P	P	18 30 56.2	-1.5
	0.3nm,0.5s,baz=258,slow=6.4,SNR=3.0						
NVAR	**Mina Array Bea**	**86.40**	**51**	P	P	18 32 42.7	+1.5
	0.2nm,0.3s,baz=280,slow=5.4,SNR=2.9						

*IDC **20** 18:40:13.5±7.5,9.33S×114.11E,h44km±57km,mb3.5/3,mb1 3.7/5,mb1mx3.3/23,mbtmp3.6/5,ML3.4/2,Error ellipse: s-maj=67.4km s-min=31.1km az=94.0*
*DJA **20** 18:40:14.0±1.8,10.5S±15.1×11.4E±°,h23km±16km,M3.8/7,MLv3.8/7*
ISC 20 18:40:13.2±0.9,**9.38S**±0.09×**114.16E**±0.04,**h31**km,**n12**,
σ1°**77**/16,**mb3.5/3**,**South of Bali**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IGBI	**Denpasar**	**1.12**	**60**	P	**Pn**	**18 40 34.1**	**+1.3**
DNP	**Denpasar**	**1.25**	**56**	P	**Pb**	**18 40 38.2**	**+2.0**
GMJI	**Gumukmas**	**1.30**	**327**	P	**Pb**	**18 40 37.2**	**0.0**
BLJI	**Banyuglugur**	**1.71**	**341**	P	**Pb**	**18 40 44.6**	**+0.5**
KHKI	**Kahang-Kahang**	**1.75**	**55**	P	**Pb**	**18 40 44.3**	**-0.4**
PWJI	**Pagerwojo**	**2.69**	**300**	P	**Pn**	**18 40 56.5**	**+2.1**
PWJI				S	**Sn**	**18 41 28.0**	**+2.0**
SJI	**Sawahan**	**2.88**	**304**	P	**Pn**	**18 40 59.2**	**+2.2**
SJI				S	**Sb**	**18 41 34.7**	**-4.0**
KAPI	**Kappang**	**7.04**	**52**	P	**Pn**	**18 41 55.1**	**+0.9**
	1.9nm,0.3s,baz=219,slow=17,SNR=15						
KAPI				S	**Sn**	**18 43 12.7**	**-0.5**
	0.8nm,0.3s,baz=210,slow=20,SNR=4.1						
FITZ	**Fitzroy Crossi**	**14.12**	**129**	P	**Pn**	**18 43 31.1**	**-0.1**
	0.1nm,0.3s,baz=311,slow=9.3,SNR=3.6						
FITZ				S	Sn	18 45 53.5	-13
	0.1nm,0.3s,baz=180,slow=20,SNR=4.2						
WRA	**Warramunga Arr**	**22.14**	**121**	P	**P**	**18 45 07.2**	**+0.6**
	0.3nm,0.4s,baz=294,slow=12,SNR=4.6						
ASAR	**Alice Springs**	**23.62**	**129**	P	**P**	**18 45 20.8**	**-1.1**
	0.7nm,0.5s,baz=303,slow=8.9,SNR=43						
ASAR				PcP	**PcP**	**18 49 04.8**	**-1.6**
	0.2nm,0.4s,baz=301,slow=1.9,SNR=8.3						
STKA	**Stephens Creek**	**33.88**	**135**	P	**P**	**18 46 53.0**	**-0.4**
	1.6nm,0.5s,baz=304,slow=7.3,SNR=9.5						

*MOS **20** 19:14:33.9±1.4,50.42N×156.78E,h22km,mb4.2/1,Error ellipse: s-maj=36.9km s-min=13.1km az=71.0*
KRSC 20 19:14:34.0±1.0,**50.31N**×**157.39E**,**h5**km±5km,**ML4.0**,
1C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.90**	**295**	⇓*iPN*	Pg	19 14 45.2	-6.0
SKR				*e*		19 14 50.0	
SKR				pmax	pmax		
	comp=Z,200nm,0.4s						
SKR				pmax	pmax		
	comp=N,90nm,0.3s						
SKR				pmax	pmax		
	comp=E,110nm,0.3s						
SKR				smax	smax		
	comp=N,2μm,0.3s						
SKR				smax	smax		
	comp=E,6μm,0.2s						
SKR				smax	smax		
	comp=N,3μm,0.6s						
SKR				smax	smax		
	comp=E,5μm,0.6s						
SKR	**Severo-Kuril's**	**0.90**	**295**	*eP*	Pg	19 14 49.7	-1.5
SKR				*iS*	Sg	19 15 00.6	-2.2
MIPR	**Malaya Ipel'ka**	**2.01**	**349**	*eP*	Pn	19 15 09.4	+0.8
ASAK	**Asacha**	**2.10**	**9**	*eP*	Pb	19 15 11.7	-1.0
ASAK				*iS*	Sb	19 15 39.3	+0.1
MTVR	**Mutnovka**	**2.23**	**13**	*eP*	Pn	19 15 12.6	+0.8
MTVR				*iS*	Sn	19 15 40.8	+0.9
RUS	**Russkaya**	**2.24**	**18**	PN	Pn	19 15 12.3	+0.6
RUS				S	Sn	19 15 40.7	+1.0
RUS	**Russkaya**	**2.24**	**18**	*eP*	Pn	19 15 12.3	+0.6
RUS				*iS*	Sn	19 15 40.7	+1.0
GRL	**Gorelyy**	**2.29**	**11**	*eP*	Pn	19 15 14.0	+1.5
GRL				*iS*	Sb	19 15 43.0	-1.6
APC	**Apacha**	**2.62**	**357**	*eP*	Pn	19 15 17.9	+0.9
PET	**Petropavlovsk**	**2.83**	**16**	⇑*iPN*	Pn	19 15 21.7	+1.9
PET				*eS*	Sn	19 15 55.8	+1.6
PET				pmax	pmax		
	comp=Z,11nm,0.5s						
PET				smax	smax		
	comp=E,95nm,0.6s						
PET				smax	smax		
	comp=N,78nm,0.5s						
PET	**Petropavlovsk**	**2.83**	**16**	*eP*	Pn	19 15 21.5	+1.7
PET				*iS*	Sn	19 15 56.5	+2.3
NLC	**Nalytchevo**	**3.11**	**22**	PN	Pn	19 15 23.7	0.0
NLC				S	Sn	19 16 00.2	-1.0
NLC	**Nalytchevo**	**3.11**	**22**	*eP*	Pn	19 15 23.7	0.0
NLC				*iS*	Sn	19 16 00.2	-1.0
SDLR	**Sedlovina**	**3.11**	**17**	*eP*	Pn	19 15 25.9	+2.0
SDLR				*iS*	Sn	19 16 04.3	+2.7
KRER	**Koryakskii**	**3.12**	**15**	*eP*	Pn	19 15 26.1	+2.1
SPN	**Mys Shipunski**	**3.24**	**29**	PN	Pn	19 15 26.9	+1.5
SPN				S	Sn	19 16 05.7	+1.4
SPN	**Mys Shipunski**	**3.24**	**29**	*eP*	Pn	19 15 26.9	+1.5
SPN				*iS*	Sn	19 16 05.7	+1.4
GNL	**Ganaly**	**3.41**	**6**	*eP*	Pn	19 15 29.9	+2.0
MKZ	**Mys Kozlova**	**5.01**	**30**	PN	Pn	19 15 50.0	+0.2
MKZ	**Mys Kozlova**	**5.01**	**30**	*eP*	Pn	19 15 50.0	+0.2
MKZ				*iS*	Sn	19 16 46.0	-2.0
ERM	**Erimo**	**12.87**	**235**	*e*PN	Pn	19 17 35.6	-1.9
ERM				pmax	pmax		
	comp=Z,2.0nm,0.3s						

*ROM **20** 19:19:33.8±0.1,46.66N×10.56E,h11km±1km,Md2.2/7,Ml1.7/3,Error ellipse: s-maj=1.7km s-min=1.3km az=170.0*
*ISCJB **20** 19:19:33.7±0.5,46.67N±0.02×10.59E±0.03,h12km±6km,Error ellipse: s-maj=3.3km s-min=2.9km

DAVA				⇑*i*Sg		**Sb**	**19 19 60.0**	**+1.1**
	3.5nm,0.1s							
DAVA	**Damuels**	**0.76**	**323**	Pn		**Pn**	**19 19 50.9**	**+0.9**
	0.5nm,0.1s							
DAVA				Sg		**Sb**	**19 20 00.0**	**+1.1**
	3.5nm,0.1s							
MOTA	**Moosalm**	**0.76**	**29**	⇑*i*Pg		**Pb**	**19 19 49.1**	**+0.5**
	0.4nm,0.1s,SNR=13							
MOTA				⇑*i*Sg		**Sg**	**19 19 59.0**	**+0.8**
	9.3nm,0.1s							
MOTA	**Moosalm**	**0.76**	**29**	Pg		**Pb**	**19 19 49.1**	**+0.5**
	0.4nm,0.1s,SNR=13							
MOTA				Sg		**Sg**	**19 19 59.0**	**+0.8**
	9.3nm,0.1s							
RETA	**Reutte**	**0.81**	**10**	⇑*i*Pg		**Pn**	**19 19 50.4**	**-0.3**
	0.6nm,0.1s							
RETA				⇓*i*Sg		**Sn**	**19 20 02.2**	**-0.4**
	3.9nm,0.2s							
RETA	**Reutte**	**0.81**	**10**	Pg		**Pn**	**19 19 50.4**	**-0.3**
	0.6nm,0.1s							
RETA				Sg		**Sn**	**19 20 02.2**	**-0.4**
	3.9nm,0.2s							
PANI	**Panarotta**	**0.82**	**140**	*e*Pg		**Pn**	**19 19 50.9**	**0.0**
PANI				*e*Sg		**Sb**	**19 20 01.2**	**+0.5**
PANI	**Panarotta**	**0.82**	**140**	*e*Pg		**Pn**	**19 19 50.9**	**0.0**
PANI				*e*Sg		**Sb**	**19 20 01.2**	**+0.5**
WTTA	**Wattenberg**	**0.94**	**52**	⇑*e*Pg		**Pn**	**19 19 52.4**	**-0.1**
	1.0nm,0.1s							
WTTA				⇑*i*Sg		**Sg**	**19 20 04.3**	**+0.3**
	6.7nm,0.2s							
WTTA	**Wattenberg**	**0.94**	**52**	Pg		**Pn**	**19 19 52.4**	**-0.1**
	1.0nm,0.1s							
WTTA				Sg		**Sg**	**19 20 04.3**	**+0.3**
	6.7nm,0.2s							
AGOR	**Agordo**	**1.11**	**111**	*e*Pg		**Pn**	**19 19 55.1**	**+0.5**
CGRP	**Cima Grappa**	**1.18**	**133**	*e*Pg		**Pg**	**19 19 57.1**	**+0.9**
CGRP				*e*Sg		**Sn**	**19 20 12.2**	**+0.4**
CGRP	**Cima Grappa**	**1.18**	**133**	*e*Pg		**Pg**	**19 19 57.1**	**+0.9**
CGRP				*e*Sg		**Sn**	**19 20 12.2**	**+0.4**
ABTA	**Abfaltersbach**	**1.35**	**87**	⇓*e*Pg		**Pg**	**19 19 59.4**	**0.0**
	1.0nm,0.1s							
ABTA				⇓*i*Sg		**Sg**	**19 20 17.3**	**+0.4**
	2.4nm,0.1s							
ABTA	**Abfaltersbach**	**1.35**	**87**	Pg		**Pg**	**19 19 59.4**	**0.0**
	1.0nm,0.1s							
ABTA				Sg		**Sg**	**19 20 17.3**	**+0.4**
	2.4nm,0.1s							
KBA	**Koelnbreinsper**	**1.95**	**77**	⇓*i*Pg		**Pg**	**19 20 10.9**	**0.0**
	0.8nm,0.1s							
KBA				⇑*i*Sg		**Sg**	**19 20 37.4**	**+1.1**
	1.3nm,0.2s							
KBA	**Koelnbreinsper**	**1.95**	**77**	Pg		**Pg**	**19 20 10.9**	**0.0**
	0.8nm,0.1s							
KBA				Sg		**Sg**	**19 20 37.4**	**+1.1**
	1.3nm,0.2s							
KHC	**Kasperske Hory**	**3.18**	**39**	*e*PG		**Pg**	**19 20 32.7**	**-1.7**
KHC				*e*SG		**Sg**	**19 21 13.7**	**-1.9**
	comp=Z,3.9nm,0.5s							
KHC	**Kasperske Hory**	**3.18**	**39**	Pg		**Pg**	**19 20 32.7**	**-1.7**
KHC				Sg		**Sg**	**19 21 13.7**	**-1.9**
	3.9nm,0.5s							

*ISCJB **20** 19:36:32.2±0.6,37.°59N±0.°06×102.°49E±0.°08,h10km, mb3.4/1,Error ellipse: s-maj=11.7km s-min=5.3km az=139.4*
*BJI **20** 19:36:32.4,37.°52N×102.°29E,h13km,ML3.7/8*
*IDC **20** 19:36:33.6±1.7,37.°56N×102.°19E,h0km,mb3.3/3, mb1 3.5/6,mb1mx3.3/31,mbtmp3.5/6,ML3.3/3,Error ellipse: s-maj=30.0km s-min=24.5km az=75.0*
ISC 20 19:36:31.8±0.9,**37.°59N**±0.°06×**102.°29E**±0.°05,**h10**km,**n10**, σ2.°**08**/12,**Gansu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**1.95**	**140**	Pg	**Pg**	**19 37 08.9**	**-0.2**
LZH				Sg	**Sg**	**19 37 34.4**	**0.0**
LZH				smax	smax		
	comp=N,1μm,0.8s						
LZH				smax	smax		
	comp=E,1μm,0.7s						
GTA	**Gaotai**	**2.66**	**314**	Pn	**Pb**	**19 37 18.6**	**-1.0**
GTA				Pg	**Pg**	**19 37 21.8**	**-1.0**
GTA				Sn	**Sb**	**19 37 52.4**	**0.0**
GTA				Sg	**Sg**	**19 37 56.8**	**-0.5**
GTA				smax	smax		
	comp=N,540nm,0.8s						
GTA				smax	smax		
	comp=E,470nm,0.7s						
GTA				LR	LR		
	comp=N,490nm,6.6s						
GTA				LR	LR		
	comp=E,670nm,7.4s						
GTA				LR	LR		
	comp=Z,540nm,7.6s						
XAN	**Xi'an**	**6.45**	**121**	Pg	Pg	19 38 30.9	-4.3
XAN				Sg	**Sg**	**19 39 54.1**	**-4.6**
XAN				smax	smax		
	comp=N,19nm,0.7s						
XAN				smax	smax		
	comp=E,6.0nm,1.0s						
BTO	**Baotou**	**6.72**	**61**	*e*Pg	**Pg**	**19 38 42.1**	**+1.6**
BTO				Sg	**Sb**	**19 39 48.3**	**-0.9**
BTO				SMZ			
	comp=E,13nm,0.6s						
BTO				smax	smax		
	comp=N,15nm,1.1s						
BTO				smax	smax		
	comp=E,8.0nm,0.6s						
SONM	**Songino Array**	**10.67**	**15**	Pn	Pn	19 39 09.8	+5.0
	comp=E,0.7nm,0.3s,baz=198,slow=14,SNR=8.3						
SONM				Lg	Lg	19 42 15.2	
	comp=E,0.4nm,0.3s,baz=197,slow=28,SNR=3.9						
MKAR	**Makanchi Array**	**17.40**	**308**	P	**P**	**19 40 37.0**	**+1.1**
	comp=E,0.0nm,0.3s,baz=122,slow=14,SNR=4.2						
CMAR	**Chiang Mai Arr**	**19.29**	**190**	P	**Pn**	**19 41 00.1**	**+2.4**
	comp=E,0.0nm,0.3s,baz=3.2,slow=11,SNR=6.5						
ZALV	**Zalesovo Beam**	**20.31**	**329**	P	Pn	19 41 10.8	+1.1
	comp=E,1.0nm,0.6s,baz=127,slow=12,SNR=5.2						
KSRS	**Korea Array**	**20.32**	**83**	P	Pn	19 41 11.1	+1.2
	comp=E,0.7nm,0.6s,baz=285,slow=9.6,SNR=6.5						
KURBB	**Kurchatov Arra**	**21.35**	**315**	P	**P**	**19 41 21.4**	**+2.4**
	comp=E,1.5nm,0.8s,baz=137,slow=9.7,SNR=16						

*ISCJB **20** 19:47:26.2±0.4,49.°91N±0.°03×18.°41E±0.°03,h0km,Error ellipse: s-maj=4.8km s-min=2.4km az=7.5*
*IPEC **20** 19:47:27.0±0.2,49.°84N×18.°53E,h0km,ML2.0/3,Error ellipse: s-maj=2.1km s-min=1.1km az=161.0*
*VIE **20** 19:47:27.7±1.8,49.°95N×18.°41E,h0km,mb2.0/3,ML2.4/3, Error ellipse: s-maj=10.2km s-min=8.7km az=40.0 18 km NE of Ostrava Suspected Mining induced.*
*CSEM **20** 19:47:27.7±0.2,49.°85N×18.°41E,h2km,ML2.5/6,Error ellipse: s-maj=6.4km s-min=3.5km az=6.0*
*PRU **20** 19:47:28.3,49.°89N×18.°39E,h0km*
ISC 20 19:47:27.8±0.8,**49.°86N**±0.°03×**18.°43E**±0.°02,**h0**km,**n33**, σ1°**08**/58,**1C-1D**,**Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.18**	**265**	*e*PG	**Pg**	**19 47 32.2**	**+1.0**
OKC				*e*SG	**Sg**	**19 47 34.6**	**+1.0**
	comp=Z,83nm,0.3s						
OKC	**Ostrava-Krasne**	**0.18**	**265**	Pg	**Pg**	**19 47 32.2**	**+1.0**
OKC				Sg	**Sg**	**19 47 34.6**	**+1.0**
	83nm,0.3s						
RAC	**Raciborz**	**0.27**	**327**	*e*Pg	**Pg**	**19 47 33.9**	**+0.9**
RAC				*e*Sg	**Sg**	**19 47 38.9**	**+2.3**
MORC	**Moravsky Berou**	**0.58**	**263**	*e*Pg	**Pg**	**19 47 39.0**	**+0.2**
MORC				*e*Sg	**Sg**	**19 47 47.1**	**+0.8**
	33nm,0.4s,baz=84						
OJC	**Ojcow**	**0.96**	**67**	*e*Pg	**Pg**	**19 47 44.7**	**-1.4**
OJC				*e*Sg	**Sg**	**19 47 57.5**	**-1.1**
OJC	**Ojcow**	**0.96**	**67**	*e*Pg	**Pg**	**19 47 44.7**	**-1.4**
OJC				*e*Sg	**Sg**	**19 47 57.5**	**-1.1**
NIE	**Niedzica**	**1.30**	**109**	*e*Pg	**Pg**	**19 47 52.3**	**-0.4**
NIE				*e*Sg	**Sg**	**19 48 10.7**	**+1.1**
NIE	**Niedzica**	**1.30**	**109**	*e*Pg	**Pg**	**19 47 52.3**	**-0.4**
NIE				*e*Sg	**Sg**	**19 48 10.7**	**+1.1**
VRAC	**Vranov**	**1.31**	**246**	*e*Pg	**Pg**	**19 47 52.5**	**-0.4**
	baz=66						
VRAC				*e*Sg	**Sg**	**19 48 09.8**	**-0.1**
	32nm,0.4s,baz=66						
VYHS	**Vyhne**	**1.39**	**169**	*e*PN	**Pn**	**19 47 53.6**	**-0.8**
VYHS				*e*SN	**Sg**	**19 48 11.8**	**-0.6**
VYHS	**Vyhne**	**1.39**	**169**	*e*Pn	**Pn**	**19 47 53.6**	**-0.8**
VYHS				*e*Sn	**Sg**	**19 48 11.8**	**-0.6**
DPC	**Dobruska-Polom**	**1.44**	**291**	*e*PG	**Pn**	**19 47 54.6**	**-0.6**
DPC				*e*SG	**Sg**	**19 48 13.2**	**-0.9**
DPC	**Dobruska-Polom**	**1.44**	**291**	Pg	**Pn**	**19 47 54.6**	**-0.6**
DPC				Sg	**Sg**	**19 48 13.2**	**-0.9**
KRUC	**Moravsky**	**1.54**	**240**	*e*Pg	**Pn**	**19 47 56.0**	**-0.6**
	baz=60						
KRUC				*e*Sg	**Sn**	**19 48 17.1**	**-0.2**
	10nm,0.2s,baz=60						
UPC	**Upice**	**1.68**	**294**	*e*PG	**Pn**	**19 47 58.2**	**-0.3**
UPC	**Upice**	**1.68**	**294**	Pg	**Pn**	**19 47 58.2**	**-0.3**
KSP	**Ksiaz**	**1.69**	**307**	*e*Pg	**Pn**	**19 47 58.7**	**+0.2**
KSP				*e*Sg	**Sg**	**19 48 21.6**	**-0.3**
STHS	**Stebnicka Huta**	**1.88**	**102**	*e*PN	**Pb**	**19 48 03.3**	**+0.2**
STHS				*e*SN	**Sb**	**19 48 28.1**	**+0.9**
STHS	**Stebnicka Huta**	**1.88**	**102**	*e*Pn	**Pb**	**19 48 03.3**	**+0.2**
STHS				*e*Sn	**Sb**	**19 48 28.1**	**+0.9**
KECS	**Kecovo**	**1.93**	**135**	*e*PN	**Pn**	**19 48 00.3**	**-1.5**
KECS				*e*SN	**Sn**	**19 48 26.4**	**-0.3**
KECS	**Kecovo**	**1.93**	**135**	*e*Pn	**Pn**	**19 48 00.3**	**-1.5**
KECS				*e*Sn	**Sn**	**19 48 26.4**	**-0.3**
CRVS	**Cervenica-Dubn**	**2.20**	**115**	*e*PN	**Pn**	**19 48 06.3**	**+0.7**
CRVS				*e*SN	**Sn**	**19 48 33.3**	**-0.2**
CRVS	**Cervenica-Dubn**	**2.20**	**115**	*e*Pn	**Pn**	**19 48 06.3**	**+0.7**
CRVS				*e*Sn	**Sn**	**19 48 33.3**	**-0.2**
PRU	**Pruhonice**	**2.51**	**275**	*e*PG	**Pb**	**19 48 13.2**	**-0.6**
PRU				*e*SG	**Sb**	**19 48 45.5**	**+0.3**
	comp=Z,5.0nm,0.3s						
CONA	**Conrad Observa**	**2.56**	**222**	⇓Pn	**Pn**	**19 48 10.6**	**-0.1**
	0.5nm,0.2s						
CONA				⇑Sn	**Sn**	**19 48 43.6**	**+1.0**
	2.7nm,0.5s						
CONA	**Conrad Observa**	**2.56**	**222**	Pn	**Pn**	**19 48 10.6**	**-0.1**
	0.5nm,0.2s						
CONA				Sn	**Sn**	**19 48 43.6**	**+1.0**
	2.7nm,0.5s						
KOLS	**Kolonicke sedl**	**2.68**	**109**	*e*	**Pg**	**19 48 20.0**	**+0.9**
KOLS	**Kolonicke sedl**	**2.68**	**109**	*e*SG	**Sg**	**19 48 55.3**	**+1.5**
KOLS	**Kolonicke sedl**	**2.68**	**109**	*e*Sg	**Sg**	**19 48 55.3**	**+1.5**
BRG	**Berggiesshubel**	**3.05**	**291**	PG	**Pb**	**19 48 23.8**	**+1.0**
BRG				SG	**Sg**	**19 49 03.6**	**-2.0**
	6.2nm,0.5s						
KHC	**Kasperske Hory**	**3.24**	**259**	*e*SG	**Sg**	**19 49 09.3**	**-2.6**
	comp=Z,3.2nm,0.3s						
KHC	**Kasperske Hory**	**3.24**	**259**	Sg	**Sg**	**19 49 09.3**	**-2.6**
	3.2nm,0.3s						
CLL	**Collm**	**3.75**	**295**	*e*Sg	**Sg**	**19 49 26.0**	**-2.2**

IDC 20 20:18:36.5±10.0,**15.°65S**×**167.°38E**,**h165**km±94km, **mb3.3/2**,**mb1 3.6/3**,**mb1mx3.2/20**,**mbtmp3.5/3**,**Error ellipse: s-maj=89.1km s-min=42.8km az=175.0**,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.45**	**188**	P	Pn	20 20 09.9	+0.4
	5.9nm,0.3s,baz=83,slow=17,SNR=33						
DZM				S	Sn	20 21 22.4	-0.2
	7.3nm,0.3s,baz=292,slow=23,SNR=12						
WRA	**Warramunga Arr**	**31.72**	**257**	P	P	20 24 44.5	-0.5
	0.5nm,0.8s,baz=86,slow=8.8,SNR=3.9						
ASAR	**Alice Springs**	**32.46**	**250**	P	P	20 24 51.9	+0.3
	0.8nm,0.4s,baz=77,slow=9.0,SNR=41						
ARCES	**ARCESS Array B**	**121.16**	**345**	PKP	PKPdf	20 37 08.8	-0.3
	6.1nm,1.0s,baz=39,slow=3.5,SNR=5.3						

*NNC **20** 20:38:37.4±15.0,36.°27N×71.°12E,h0km,mb3.8,mpv3.8, Error ellipse: s-maj=173.1km s-min=112.9km az=112.0*
ISC 20 20:38:46.0±4.0,**36.°4N**±0.°3×**70.°8E**±0.°2,**h188**km,**n8**, σ0°**52**/8,**2C-1D**,**Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**6.15**	**21**	P	**Pn**	**20 40 14.8**	**-0.5**
	SNR=16						
KZA	**Kyzart**	**6.64**	**30**	P	**Pn**	**20 40 21.2**	**-0.5**
	SNR=6.1						
EKS2	**Erkin-Say**	**6.66**	**19**	P	**Pn**	**20 40 21.6**	**-0.2**
	SNR=6.9						
KK31	**Karatay Array**	**6.70**	**358**	P	**Pn**	**20 40 21.5**	**-0.6**
	2.6nm,0.4s,baz=173,slow=13,SNR=89						
KK31				⇑S	**Sn**	**20 41 38.5**	**+0.2**
	1.1nm,0.4s,baz=173,slow=20						
AAK	**Ala-Archa**	**6.85**	**23**	P	**Pn**	**20 40 24.4**	**+0.2**
	SNR=6.8						
CHMS	**Chumysh**	**7.26**	**24**	P	**Pn**	**20 40 29.8**	**+0.3**
	SNR=7.9						
AB31	**Akbulak array**	**15.10**	**332**	⇑P	**P**	**20 42 11.0**	**+0.5**
	0.4nm,0.3s,baz=158,slow=11,SNR=26						
AKTO	**Aktyubinsk**	**16.79**	**331**	⇓P	Pn	20 42 35.2	+5.0
	1.8nm,0.9s						

*IDC **20** 20:45:37.1±1.1,31.°77N×50.°86E,h0km,mb3.8/7, mb1 3.8/8,mb1mx3.5/27,mbtmp3.8/8,ML3.6/1,MS2.8/1, Ms1 2.8/1,ms1mx1.9/41,Error ellipse: s-maj=27.2km s-min=21.7km az=142.0*
*KISR **20** 20:45:39.0±0.6,31.°52N×50.°87E,h34km±53km,ML3.1*
*CSEM **20** 20:45:40.6±0.5,31.°88N×51.°16E,h30km,ML3.1,Error ellipse: s-maj=21.7km s-min=5.2km az=122.0*
ISC 20 20:45:37.8±1.0,**31.°5N**±0.°1×**50.°9E**±0.°1,**h10**km,**n22**, σ1°**48**/27,**mb4.0**/7,**Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UMR	**Umm Al-Rimmam**	**3.36**	**235**	*e*P	**Pb**	**20 46 37.0**	**-0.6**
UMR				*e*S	**Sb**	**20 47 20.6**	**+2.1**
UMR				AML	AML	20 47 22.0	
	comp=Z,27nm,0.4s						
UMR	**Umm Al-Rimmam**	**3.36**	**235**	*e*P	**Pb**	**20 46 37.0**	**-0.6**
UMR				*e*S	**Sb**	**20 47 20.6**	**+2.1**
	comp=Z,27nm,0.4s						
MIB	**Mutribah**	**3.50**	**242**	*e*P	**Pb**	**20 46 38.3**	**-1.6**
MIB				*e*S	**Sb**	**20 47 23.4**	**+0.9**
MIB				AML	AML	20 47 27.2	
	comp=Z,38nm,0.7s						
MIB	**Mutribah**	**3.50**	**242**	*e*P	**Pb**	**20 46 38.3**	**-1.6**
MIB				*e*S	**Sb**	**20 47 23.4**	**+0.9**
KBD	**Kabd**	**3.61**	**230**	*e*P	**Pb**	**20 46 40.3**	**-1.6**
KBD				*e*S	**Sb**	**20 47 25.6**	**-0.2**
KBD				AML	AML	20 47 27.1	
	comp=Z,16nm,0.4s						
KBD	**Kabd**	**3.61**	**230**	*e*P	**Pb**	**20 46 40.3**	**-1.6**
KBD				*e*S	**Sb**	**20 47 25.6**	**-0.2**
	comp=Z,16nm,0.4s						
RDF	**Al-Radifah**	**3.87**	**229**	*e*P	Pb	20 46 43.6	-2.7
RDF				*e*S	**Sb**	**20 47 31.8**	**-1.4**
RDF				AML	AML	20 47 32.4	
	comp=Z,20nm,0.4s						
RDF	**Al-Radifah**	**3.87**	**229**	*e*P	Pb	20 46 43.6	-2.7
RDF				*e*S	**Sb**	**20 47 31.8**	**-1.4**
NAY	**Al-Naaiem**	**3.88**	**235**	*e*P	Pb	20 46 43.6	-2.7
NAY				*e*S	**Sb**	**20 47 32.0**	**-1.3**
NAY				AML	AML	20 47 38.2	
	comp=Z,32nm,0.7s						
NAY	**Al-Naaiem**	**3.88**	**235**	*e*P	Pb	20 46 43.6	-2.7
NAY				*e*S	**Sb**	**20 47 32.0**	**-1.3**
	comp=Z,32nm,0.7s						
ASF	**Jabal al Asfar**	**11.91**	**277**	Pn	**Pn**	**20 48 28.6**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=312,slow=12,SNR=4.3						
BRTR	**Keskin Array B**	**16.21**	**305**	Pn	**Pn**	**20 49 28.1**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=131,slow=13,SNR=7.3						
ATD	**Arta Tunnel**	**21.24**	**202**	LR	LR	20 59 44.5	
	comp=Z,27nm,19.6s,baz=50,slow=40						
AKASG	**Malin Array Be**	**25.00**	**326**	P	**P**	**20 51 00.9**	**-0.8**
	comp=Z,0.9nm,0.4s,baz=120,slow=7.6,SNR=5.2						
MKAR	**Makanchi Array**	**28.50**	**49**	P	**P**	**20 51 33.9**	**+0.6**
	comp=Z,0.4nm,0.3s,baz=239,slow=11,SNR=3.3						
FINES	**FINESS Array B**	**34.03**	**339**	P	**P**	**20 52 19.9**	**-1.8**
	comp=Z,1.8nm,0.9s,baz=134,slow=11,SNR=6.4						
NB2	**NORSAR Subarra**	**39.24**	**331**	P	**P**	**20 53 04.6**	**-1.7**
	comp=Z,1.1nm,0.7s,baz=120,slow=8.6						
NB2	**NORSAR Subarra**	**39.24**	**331**	P	**P**	**20 53 04.6**	**-1.7**
	comp=Z,1.1nm,0.7s,SNR=4.6						
NOA	**NORSAR Array B**	**39.24**	**331**	P	**P**	**20 53 04.6**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=121,slow=8.2,SNR=4.9						
TORD	**Torodi Ar. Bea**	**48.60**	**259**	P	**P**	**20 54 23.4**	**+1.5**
	comp=Z,1.7nm,0.7s,baz=54,slow=7.5,SNR=15						
KSRS	**Korea Array**	**62.13**	**61**	P	**P**	**20 55 58.6**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=287,slow=6.0,SNR=4.5						
BOSA	**Boshof**	**64.59**	**205**	P	**P**	**20 56 17.5**	**+2.0**
	comp=Z,1.2nm,0.7s,baz=34,slow=7.7,SNR=2.7						

*ISK **20** 20:49:27.6,37.°65N×26.°83E,h3km,MD3.4*
*ATH **20** 20:49:27.1,37.°65N×26.°96E,h19km±2km,MD3.1/7*
*ISCJB **20** 20:49:28.7±0.5,37.°65N±0.°02×26.°85E±0.°03,h9km±3km, Error ellipse: s-maj=5.0km s-min=3.2km az=151.5*
*CSEM **20** 20:49:28.7±0.2,37.°63N×26.°81E,h8km,ML2.9/5,Error ellipse: s-maj=4.7km s-min=3.1km az=60.0*
*DDA **20** 20:49:29.4,37.°67N×26.°92E,h7km,MD3.2*
*THE **20** 20:49:29.3,37.°75N×26.°93E,h6km±1km,ML2.9/5,Error ellipse: s-maj=2.2km s-min=0.9km az=261.0*
ISC 20 20:49:28.9±0.8,**37.°64N**±0.°02×**26.°86E**±0.°02,**h12**km±5km, **n87**,σ0°**96**/107,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.07**	**346**	P	**Pg**	**20 49 31.3**	**-0.1**
SMG				S	**Sg**	**20 49 32.9**	**-0.3**
SMG	**Samos**	**0.07**	**346**	*e*PB	**Pg**	**20 49 31.3**	**-0.1**
SMG				*e*SB	**Sg**	**20 49 33.1**	**-0.1**
SMG	**Samos**	**0.07**	**346**	P	**Pg**	**20 49 31.3**	**-0.1**
SMG				*e*Sb	**Sg**	**20 49 33.1**	**-0.1**
GCAM	**G?zelcaml?**	**0.30**	**79**	*i* Pg	**Pg**	**20 49 34.9**	**-0.2**
GCAM				*i* Sg	**Sg**	**20 49 39.3**	**+0.1**
BODT	**Bodrum**	**0.68**	**148**	*e*PG	**Pg**	**20 49 42.0**	**-0.1**
BODT				*e*SG	**Sb**	**20 49 52.2**	**0.0**
BODT	**Bodrum**	**0.68**	**148**	*e*Pg	**Pg**	**20 49 42.0**	**-0.1**
URLA	**Izmir**	**0.74**	**344**	*i* P	**Pg**	**20 49 43.1**	**-0.2**
URLA				*i* S	**Sb**	**20 49 54.3**	**+0.3**
URLA	**Izmir**	**0.74**	**344**	*i* P	**Pg**	**20 49 43.1**	**-0.2**
URLA				*i* S	**Sb**	**20 49 54.3**	**+0.3**
BLCB	**Balcova**	**0.76**	**11**	*e*PG	**Pg**	**20 49 42.8**	**-0.7**
BLCB				*e*SG	**Sb**	**20 49 54.0**	**-0.2**
BLCB	**Balcova**	**0.76**	**11**	*e*Pg	**Pg**	**20 49 42.8**	**-0.7**
BLCB				*e*Sg	**Sb**	**20 49 54.0**	**-0.2**
MLSB	**Milas**	**0.81**	**115**	*e*PG	**Pg**	**20 49 43.8**	**-0.8**
MLSB	**Milas**	**0.81**	**115**	*e*Pg	**Pg**	**20 49 43.8**	**-0.8**
AYDN	**Tasoluk**	**0.81**	**88**	*e*P	**Pg**	**20 49 44.3**	**-0.3**
AYDN				*e*S	**Sg**	**20 49 55.0**	**-0.2**
AYDN	**Tasoluk**	**0.81**	**88**	*e*P	**Pg**	**20 49 44.3**	**-0.3**
AYDN				*e*S	**Sg**	**20 49 55.0**	**-0.2**
IZM	**Izmir**	**0.82**	**23**	*e*PG	**Pg**	**20 49 44.2**	**-0.5**
IZM	**Izmir**	**0.82**	**23**	*e*Pg	**Pg**	**20 49 44.2**	**-0.5**
CHOS	**Chios island**	**0.98**	**320**	P	**Pg**	**20 49 47.6**	**-0.1**
CHOS				S	**Sb**	**20 50 01.1**	**+0.4**
CHOS	**Chios island**	**0.98**	**320**	*e*PN	**Pg**	**20 49 47.6**	**-0.1**
CHOS				*e*SN	**Sb**	**20 50 01.7**	**+1.0**
CHOS	**Chios island**	**0.98**	**320**	P	**Pg**	**20 49 47.6**	**-0.1**
CHOS				S	**Sb**	**20 50 01.1**	**+0.4**
NIS1	**Nisyros Isl.**	**1.07**	**166**	P	**Pn**	**20 49 50.2**	**+0.5**
NIS1	**Nisyros Isl.**	**1.07**	**166**	*e*PN	**Pg**	**20 49 47.7**	**-1.8**
NIS1	**Nisyros Isl.**	**1.07**	**166**	*e*Pn	**Pg**	**20 49 47.7**	**-1.8**
NIS1	**Nisyros Isl.**	**1.07**	**166**	P	**Pn**	**20 49 50.2**	**+0.5**
DAT	**Datca**	**1.08**	**148**	*e*PN	**Pg**	**20 49 49.4**	**-0.3**
DAT	**Datca**	**1.08**	**148**	*e*Pn	**Pg**	**20 49 49.4**	**-0.3**
APE	**Apeiranthos**	**1.20**	**242**	*e*PN	**Pn**	**20 49 51.1**	**-0.5**
APE	**Apeiranthos**	**1.20**	**242**	P	**Pg**	**20 49 52.4**	**+0.4**
APE				S	**Sn**	**20 50 10.9**	**+3.1**
APE	**Apeiranthos**	**1.20**	**242**	*e*PN	**Pn**	**20 49 51.2**	**-0.4**
APE	**Apeiranthos**	**1.20**	**242**	*e*Pn	**Pn**	**20 49 51.1**	**-0.5**
APE	**Apeiranthos**	**1.20**	**242**	P	**Pg**	**20 49 52.4**	**+0.4**
YER	**Yerkesik**	**1.24**	**114**	*e*PN	**Pn**	**20 49 52.1**	**0.0**
YER	**Yerkesik**	**1.24**	**114**	*e*Pn	**Pn**	**20 49 52.2**	**0.0**
AKHS	**Akhisar**	**1.45**	**31**	*e*P	**Pn**	**20 49 55.4**	**+0.5**
AKHS				*e*S	**Sb**	**20 50 14.5**	**+0.4**
AKHS	**Akhisar**	**1.45**	**31**	*e*P	**Pn**	**20 49 55.4**	**+0.5**
AKHS				*e*S	**Sb**	**20 50 14.5**	**+0.4**
DALY	**Dalyan (Mu¨la**	**1.65**	**119**	*e*PN	**Pb**	**20 49 59.2**	**-0.1**
DALY	**Dalyan (Mu¨la**	**1.65**	**119**	*e*Pn	**Pb**	**20 49 59.2**	**-0.1**
PRK	**Paraskevi**	**1.67**	**344**	P	**Pn**	**20 49 57.0**	**-0.9**
PRK				S	**Sn**	**20 50 17.8**	**-2.0**
PRK	**Paraskevi**	**1.67**	**344**	*e*PN	**Pn**	**20 49 57.5**	**-0.4**
PRK	**Paraskevi**	**1.67**	**344**	P	**Pn**	**20 49 57.0**	**-0.9**
PRK	**Paraskevi**	**1.67**	**344**	*e*Pn	**Pn**	**20 49 57.5**	**-0.4**
KULA	**Kula-Manisa**	**1.67**	**58**	*e*PN	**Pb**	**20 49 59.0**	**-0.6**
THR3	**Thira Island,**	**1.70**	**224**	P	**Pb**	**20 50 00.8**	**+0.8**
DENT	**Denizli**	**1.73**	**86**	*e*PN	**Pb**	**20 50 00.2**	**-0.3**
DENT	**Denizli**	**1.73**	**86**	*e*Pn	**Pb**	**20 50 00.3**	**-0.3**

YER	**Yerkesik**	**1.32**	**33**	*e*Pn	**Pg**	**20 51 11.2**	**-0.2**
FETY	**Fethiye**	**1.51**	**66**	*e*PN	**Pg**	**20 51 14.5**	**-0.4**
FETY	**Fethiye**	**1.51**	**66**	*e*Pn	**Pg**	**20 51 14.5**	**-0.4**
NPS	**Neapolis**	**1.62**	**242**	*e*P	**Pn**	**20 51 12.9**	**-0.5**
NPS	**Neapolis**	**1.62**	**242**	*e*P	**Pn**	**20 51 12.9**	**-0.5**
SMG	**Samos**	**1.73**	**346**	*e*P	**Pg**	**20 51 20.8**	**+1.7**
LAST	**Lasithi**	**1.77**	**241**	*e*P	**Pn**	**20 51 15.8**	**+0.4**
LAST	**Lasithi**	**1.77**	**241**	*e*P	**Pn**	**20 51 15.8**	**+0.4**
APE	**Apeiranthos**	**1.81**	**306**	*e*PN	**Pb**	**20 51 18.8**	**+0.5**
APE				*e*SN	**Sg**	**20 51 43.0**	**-1.0**
APE	**Apeiranthos**	**1.81**	**306**	*e*Pn	**Pb**	**20 51 18.8**	**+0.5**
APE				*e*Sn	**Sg**	**20 51 43.1**	**-1.0**
GLHS	**Glhisar (BURDU**	**2.05**	**56**	*e*PN	**Pb**	**20 51 23.0**	**+0.6**
GLHS	**Glhisar (BURDU**	**2.05**	**56**	*e*Pn	**Pb**	**20 51 23.0**	**+0.6**
IDI	**Anoyia**	**2.15**	**251**	*e*P	**Pn**	**20 51 21.2**	**+0.5**
IDI	**Anoyia**	**2.15**	**251**	*e*P	**Pn**	**20 51 21.2**	**+0.5**
ELL	**Elmali**	**2.17**	**70**	*e*PN	**Pb**	**20 51 24.5**	**0.0**
ELL	**Elmali**	**2.17**	**70**	*e*Pn	**Pb**	**20 51 24.5**	**0.0**
BLCB	**Balcova**	**2.37**	**354**	*e*PN	**Pb**	**20 51 26.1**	**-1.7**
BLCB	**Balcova**	**2.37**	**354**	*e*Pn	**Pb**	**20 51 26.1**	**-1.7**
ANTB	**Antalya**	**2.79**	**71**	*e*PN	**Pb**	**20 51 33.6**	**-1.3**
ANTB	**Antalya**	**2.79**	**71**	*e*Pn	**Pb**	**20 51 33.6**	**-1.3**
BCK	**Bucak**	**2.95**	**60**	*e*PN	**Pb**	**20 51 35.8**	**-2.0**
BCK	**Bucak**	**2.95**	**60**	*e*Pn	**Pb**	**20 51 35.8**	**-2.0**

*ISCJB **20** 21:02:56.6±0.7, 37.°65N±0.°03×26.°93E±0.°06, h12km, Error ellipse: s-maj=7.6km s-min=4.3km az=161.5*
*CSEM **20** 21:02:56.8±0.1, 37.°66N×26.°96E, h15km, MD2.5, Error ellipse: s-maj=4.6km s-min=2.2km az=72.0*
*ISK **20** 21:02:56.0, 37.°66N×26.°91E, h9km, MD2.5*
*DDA **20** 21:02:57.7, 37.°70N×26.°96E, h7km, MD2.7*

ISC 20 21:02:56.8±0.9, 37.°66N±0.°03×26.°94E±0.°05, h12km, n16, σ0.°41/24, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.24**	**80**	*e*P	**Pb**	**21 03 02.5**	**-0.5**
GCAM				*e*S	**Sg**	**21 03 06.1**	**+1.0**
GCAM	**G?zelcaml?**	**0.24**	**80**	*e*P	**Pb**	**21 03 02.5**	**-0.5**
GCAM				*e*S	**Sg**	**21 03 06.1**	**+1.0**
BODT	**Bodrum**	**0.67**	**154**	*e*PG	**Pg**	**21 03 09.9**	**+0.2**
BODT				*e*SG	**Sb**	**21 03 19.1**	**-0.4**
BODT	**Bodrum**	**0.67**	**154**	*e*Pg	**Pg**	**21 03 09.9**	**+0.2**
BODT				*e*Sg	**Sb**	**21 03 19.1**	**-0.4**
BLCB	**Balcova**	**0.73**	**6**	*e*PG	**Pg**	**21 03 10.5**	**-0.4**
BLCB				*e*SG	**Sb**	**21 03 21.6**	**+0.2**
BLCB	**Balcova**	**0.73**	**6**	*e*Pg	**Pg**	**21 03 10.5**	**-0.4**
BLCB				*e*Sg	**Sb**	**21 03 21.6**	**+0.2**
URLA	**Izmir**	**0.75**	**339**	*e*P	**Pb**	**21 03 11.9**	**+0.1**
URLA				*e*S	**Sb**	**21 03 22.2**	**+0.1**
URLA	**Izmir**	**0.75**	**339**	*e*P	**Pb**	**21 03 11.9**	**+0.1**
URLA				*e*S	**Sb**	**21 03 22.2**	**+0.1**
MLSB	**Milas**	**0.76**	**118**	*e*PG	**Pb**	**21 03 11.8**	**-0.1**
MLSB	**Milas**	**0.76**	**118**	*e*Pg	**Pb**	**21 03 11.8**	**-0.1**
IZM	**Izmir**	**0.78**	**19**	*e*PG	**Pg**	**21 03 11.7**	**-0.2**
IZM	**Izmir**	**0.78**	**19**	*e*Pg	**Pg**	**21 03 11.7**	**-0.2**
DAT	**Datca**	**1.06**	**151**	*e*PG	**Pb**	**21 03 17.0**	**-0.1**
DAT	**Datca**	**1.06**	**151**	*e*Pg	**Pb**	**21 03 17.0**	**-0.1**
APE	**Apeiranthos**	**1.27**	**243**	*e*PN	**Pn**	**21 03 20.1**	**-0.3**
APE	**Apeiranthos**	**1.27**	**243**	*e*Pn	**Pn**	**21 03 20.1**	**-0.3**

IDC 20 21:13:09.7±4.2, 5.°99S×148.°74E, h81km±46km, mb3.8/4, mb1 4.0/6, mb1mx3.6/18, mbtmp3.8/6, ML3.9/2, Error ellipse: s-maj=75.2km s-min=24.3km az=126.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.74**	**205**	P	Pn	21 14 07.1	+2.0
	18nm,0.3s,baz=0.2,slow=5.5,SNR=54						
PMG				S	Sn	21 14 47.1	-0.9
	14nm,0.3s,baz=344,slow=19,SNR=5.5						
WRA	**Warramunga Arr**	**19.71**	**224**	P	Pn	21 17 34.2	-0.8
	1.0nm,0.3s,baz=50,slow=11,SNR=23						
ASAR	**Alice Springs**	**22.64**	**218**	P	P	21 18 05.4	+1.1
	3.0nm,0.6s,baz=50,slow=9.5,SNR=37						
ASAR				pP	pP	21 18 23.1	+2.2
	4.1nm,0.7s,baz=44,slow=13,SNR=19						
FITZ	**Fitzroy Crossi**	**25.56**	**240**	P	P	21 18 32.3	+1.0
	8.5nm,0.7s,baz=83,slow=7.1,SNR=29						
PETK	**Petropavlovsk-**	**59.36**	**6**	P	P	21 23 04.8	+1.5
	0.7nm,0.4s,baz=174,slow=6.7,SNR=4.8						
MKAR	**Makanchi Array**	**78.60**	**320**	P	P	21 25 01.1	-1.6
	0.1nm,0.6s,baz=96,slow=6.3,SNR=2.7						
ILAR	**Eielson Array**	**84.80**	**23**	P	P	21 25 34.4	-0.5
	0.6nm,0.6s,baz=250,slow=4.7,SNR=6.0						
TORD	**Torodi Ar. Bea**	**146.76**	**285**	PKPbc	PKPdf	21 32 41.5	-0.2
	0.2nm,0.3s,baz=83,slow=2.6,SNR=7.4						

*ISCJB **20** 21:44:52.8±0.2, 44.°60N±0.°01×6.°74E±0.°02, h10km±2km, Error ellipse: s-maj=2.8km s-min=2.1km az=150.6*
*ROM **20** 21:44:53.1±0.3, 44.°62N×6.°78E, h10km, Md2.3/5, Ml2.1/5, Error ellipse: s-maj=3.2km s-min=1.4km az=59.0*
*CSEM **20** 21:44:53.4±0.1, 44.°60N×6.°76E, h10km, ML2.5/17, Error ellipse: s-maj=2.5km s-min=1.9km az=56.0*
*STR **20** 21:44:54.7±0.4, 44.°55N×6.°73E, h5km, Ml2.4, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*LDG **20** 21:44:54.4±0.1, 44.°58N×6.°76E, h2km, Md2.4/2, Ml2.5/14, Error ellipse: s-maj=3.5km s-min=1.8km az=54.0*
*GEN **20** 21:44:54.3, 44.°63N×6.°85E, h0km, ML1.9*

ISC 20 21:44:53.1±0.8, 44.°60N±0.°01×6.°74E±0.°02, h10km±5km, n77, σ0.°92/133, France

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MBDF	**Montbardon**	**0.13**	**9**	*e*Pg	**Pg**	**21 44 55.9**	**-0.3**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**21 44 57.7**	**-0.7**
	631nm,0.3s						
MBDF	**Montbardon**	**0.13**	**9**	*e*Pg	**Pg**	**21 44 55.9**	**-0.3**
	SNR=1.0						
MBDF				*e*Sg	**Sg**	**21 44 57.7**	**-0.7**
	316nm,0.3s						
SURF	**Saint Ours**	**0.13**	**157**	Pg	**Pg**	**21 44 56.4**	**+0.1**
SURF				Sg	**Sg**	**21 44 58.6**	**+0.1**
SURF	**Saint Ours**	**0.13**	**157**	Pg	**Pg**	**21 44 56.4**	**+0.1**
SURF				Sg	**Sg**	**21 44 58.6**	**+0.1**
PZZ	**Stroppo**	**0.28**	**109**	Pg	**Pg**	**21 44 59.2**	**+0.3**
PZZ				Sg	**Sg**	**21 45 03.6**	**+0.9**
	364nm,0.2s						
DOI	**San Damiano**	**0.37**	**105**	Pg	**Pg**	**21 45 00.8**	**+0.3**
DOI				Sg	**Sg**	**21 45 06.3**	**+0.8**
	185nm,0.3s						
DOI	**San Damiano**	**0.37**	**105**	Pg	**Pg**	**21 45 00.8**	**+0.3**
DOI				Sg	**Sg**	**21 45 06.3**	**+0.8**
	185nm,0.3s						
BNI	**Bardonecchia**	**0.45**	**354**	Pg	**Pg**	**21 45 02.2**	**+0.2**
BNI				Sg	**Sg**	**21 45 08.1**	**+0.1**
	26nm,0.4s						
BNI	**Bardonecchia**	**0.45**	**354**	Pg	**Pg**	**21 45 02.2**	**+0.2**
BNI				Sg	**Sg**	**21 45 08.1**	**+0.1**
	26nm,0.4s						
OG25	**Le Caire**	**0.53**	**244**	Pg	**Pb**	**21 45 04.2**	**-0.4**
OG25				Sg	**Sg**	**21 45 11.0**	**+0.5**
OG25	**Le Caire**	**0.53**	**244**	Pg	**Pb**	**21 45 04.2**	**-0.4**
OG25				Sg	**Sg**	**21 45 11.0**	**+0.5**
ENR	**Entracque**	**0.61**	**127**	P	**Pg**	**21 45 05.6**	**+0.6**
ENR				S	**Sg**	**21 45 13.1**	**0.0**
RSP	**Reno Superiore**	**0.66**	**34**	Pg	**Pg**	**21 45 06.1**	**+0.1**
RSP				Sg	**Sg**	**21 45 14.6**	**0.0**
	61nm,0.1s						
RSP	**Reno Superiore**	**0.66**	**34**	P	**Pg**	**21 45 06.0**	**+0.1**
RSP				S	**Sg**	**21 45 14.2**	**-0.4**
RSP				Sg	**Sg**	**21 45 14.6**	**0.0**
	61nm,0.1s						
ORIF	**Oris-en-Rattie**	**0.69**	**298**	*e*Pg	**Pg**	**21 45 05.9**	**-0.6**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**21 45 15.6**	**+0.1**
	36nm,0.4s						
ORIF	**Oris-en-Rattie**	**0.69**	**298**	*e*Pg	**Pg**	**21 45 05.9**	**-0.6**
	SNR=1.0						
ORIF				*e*Sg	**Sg**	**21 45 15.6**	**+0.1**
	18nm,0.4s						
TOUF	**Mont Tournerai**	**0.69**	**148**	Pg	**Pg**	**21 45 06.8**	**+0.3**
TOUF	**Mont Tournerai**	**0.69**	**148**	Pg	**Pg**	**21 45 06.8**	**+0.3**
MVIF	**Mont Vial**	**0.76**	**157**	Pg	**Pb**	**21 45 08.5**	**-0.1**
MVIF				Sg	**Sg**	**21 45 17.6**	**-0.2**
MVIF	**Mont Vial**	**0.76**	**157**	Pg	**Pb**	**21 45 08.5**	**-0.1**
MVIF				Sg	**Sg**	**21 45 17.6**	**-0.2**
AUTN	**L'Aution**	**0.78**	**141**	Pg	**Pb**	**21 45 09.4**	**+0.5**
AUTN				Sg	**Sb**	**21 45 19.3**	**-0.3**
AUTN	**L'Aution**	**0.78**	**141**	Pg	**Pb**	**21 45 09.4**	**+0.5**
AUTN				Sg	**Sb**	**21 45 19.3**	**-0.3**
SAOF	**Saorge**	**0.85**	**136**	Pg	**Pb**	**21 45 10.0**	**+0.1**
SAOF				Sg	**Sg**	**21 45 21.0**	**+0.5**
SAOF	**Saorge**	**0.85**	**136**	Pg	**Pb**	**21 45 10.0**	**+0.1**
SAOF				Sg	**Sg**	**21 45 21.0**	**+0.5**
CALN	**Calern**	**0.86**	**173**	Pg	**Pb**	**21 45 10.3**	**+0.2**
CALN	**Calern**	**0.86**	**173**	Pg	**Pb**	**21 45 10.3**	**+0.2**
SBF	**Sospel**	**0.89**	**146**	*e*Pg	**Pg**	**21 45 10.4**	**+0.2**
	SNR=1.0						
SBF	**Sospel**	**0.89**	**146**	*e*Pn	**Pn**	**21 45 11.4**	**-0.3**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**21 45 21.9**	**+0.1**
	40nm,0.3s,SNR=1.0						
SBF	**Sospel**	**0.89**	**146**	*e*Pg	**Pg**	**21 45 10.4**	**+0.2**
	SNR=1.0						
SBF	**Sospel**	**0.89**	**146**	*e*Pn	**Pn**	**21 45 11.4**	**-0.3**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**21 45 21.9**	**+0.1**
	20nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**0.90**	**0**	*e*Pg	**Pg**	**21 45 10.3**	**-0.1**
	SNR=1.0						
LPG				*e*Sg	**Sg**	**21 45 22.3**	**+0.2**
	17nm,0.2s,SNR=1.0						
LPG	**La Plagne**	**0.90**	**0**	*e*Pg	**Pg**	**21 45 10.3**	**-0.1**
	SNR=1.0						
LPL	**La Plagne**	**0.92**	**360**	*e*Pg	**Pg**	**21 45 10.6**	**-0.1**
	SNR=1.0						
LPL				*e*Sg	**Sb**	**21 45 23.5**	**0.0**
	29nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**0.92**	**360**	*e*Pg	**Pg**	**21 45 10.6**	**-0.1**
	SNR=1.0						
REVF	**Revere**	**0.97**	**152**	Pg	**Pb**	**21 45 12.6**	**+0.6**
REVF				Sg	**Sb**	**21 45 25.7**	**+0.7**
REVF	**Revere**	**0.97**	**152**	Pg	**Pb**	**21 45 12.6**	**+0.6**
REVF				Sg	**Sb**	**21 45 25.7**	**+0.7**
NEGI	**Seborga**	**1.02**	**137**	P	**Pb**	**21 45 13.2**	**+0.3**
NEGI				S	**Sb**	**21 45 26.5**	**+0.1**
FRF	**La Foret Royal**	**1.04**	**184**	*e*Pg	**Pb**	**21 45 13.4**	**+0.2**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**21 45 25.0**	**-1.7**
	12nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**1.04**	**184**	*e*Pg	**Pb**	**21 45 13.4**	**+0.2**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**21 45 25.0**	**-1.7**
	5.8nm,0.2s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.05**	**234**	*e*Pn	**Pn**	**21 45 14.9**	**+1.0**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**21 45 28.6**	**+0.1**
	16nm,0.3s						
SMRF	**Simiane la Rot**	**1.05**	**234**	*e*Pn	**Pn**	**21 45 14.9**	**+1.0**
	SNR=1.0						
SMRF				*e*Sn	**Sn**	**21 45 28.6**	**+0.1**
	7.9nm,0.3s						
RORO	**Rocca Rossa**	**1.07**	**117**	P	**Pg**	**21 45 13.2**	**-0.4**
RORO				S	**Sg**	**21 45 26.4**	**-1.1**
TRAV	**Traversella**	**1.16**	**38**	P	**Pb**	**21 45 15.2**	**0.0**
TRAV				S	**Sg**	**21 45 29.0**	**-1.4**
ROTM	**Rocchetta Tana**	**1.17**	**77**	P	**Pn**	**21 45 16.2**	**+0.6**
LMR	**La Mourre**	**1.28**	**188**	*e*Pn	**Pn**	**21 45 15.4**	**-1.6**
	SNR=1.0						
LMR	**La Mourre**	**1.28**	**188**	*e*Pg	**Pg**	**21 45 17.9**	**+0.3**
	SNR=1.0						
LMR				*e*Sg	**Sn**	**21 45 34.5**	**+0.3**
	10nm,0.2s,SNR=1.0						
LMR	**La Mourre**	**1.28**	**188**	*e*Pn	**Pn**	**21 45 15.4**	**-1.6**
	SNR=1.0						
LMR	**La Mourre**	**1.28**	**188**	*e*Pg	**Pg**	**21 45 17.9**	**+0.3**
	SNR=1.0						
LMR				*e*Sg	**Sn**	**21 45 34.5**	**+0.3**
	5.1nm,0.2s,SNR=1.0						
PCP	**Piancastagn**	**1.29**	**92**	P	**Pn**	**21 45 16.9**	**-0.3**
PCP				S	**Sb**	**21 45 32.4**	**-1.7**
VIVF	**Saint-Julien-l**	**1.50**	**281**	*e*Pn	**Pb**	**21 45 21.0**	**0.0**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**21 45 40.0**	**+0.3**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**21 45 42.3**	**+1.1**
	12nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.50**	**281**	*e*Pn	**Pb**	**21 45 21.0**	**0.0**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**21 45 40.0**	**+0.3**
	SNR=1.0						
VIVF				*e*Sg	**Sg**	**21 45 42.3**	**+1.1**
	6.1nm,0.3s,SNR=1.0						
CABF	**La Chapelle**	**2.06**	**347**	*e*Pn	**Pb**	**21 45 30.5**	**-0.2**
	SNR=1.0						
CABF				*e*Sg	**Sb**	**21 45 57.1**	**+0.7**
	6.6nm,0.5s,SNR=1.0						
CABF	**La Chapelle**	**2.06**	**347**	*e*Pn	**Pb**	**21 45 30.5**	**-0.2**
	SNR=1.0						
LASF	**Ste Croix**	**2.14**	**257**	*e*Pn	**Pn**	**21 45 28.0**	**-0.8**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**21 45 54.6**	**-0.8**
	3.3nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**2.14**	**257**	*e*Pn	**Pn**	**21 45 28.0**	**-0.8**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**21 45 54.6**	**-0.8**
	1.6nm,0.2s,SNR=1.0						
PGF	**Pioggiola**	**2.63**	**141**	*e*Pn	**Pn**	**21 45 36.2**	**+0.5**
PGF				*e*Sn	**Sn**	**21 46 06.6**	**-1.1**
	4.6nm,0.3s,SNR=1.0						
PGF	**Pioggiola**	**2.63**	**141**	*e*Pn	**Pn**	**21 45 36.2**	**+0.5**
PGF				*e*Sn	**Sn**	**21 46 06.6**	**-1.1**
	2.3nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**2.88**	**316**	*e*Pn	**Pn**	**21 45 42.0**	**+2.9**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**21 46 23.2**	**-2.5**
	2.1nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**2.88**	**316**	*e*Pn	**Pn**	**21 45 42.0**	**+2.9**
	SNR=1.0						
SMF				*e*Sg	**Sg**	**21 46 23.2**	**-2.5**
	1.0nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**3.23**	**314**	*e*Pn	**Pn**	**21 45 45.5**	**+1.7**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**21 46 35.7**	**-1.1**
	1.6nm,0.4s,SNR=1.0						
AVF	**Avril sur Loir**	**3.23**	**314**	*e*Pn	**Pn**	**21 45 45.5**	**+1.7**
	SNR=1.0						
AVF				*e*Sg	**Sg**	**21 46 35.7**	**-1.1**
	0.8nm,0.4s,SNR=1.0						
LOR	**Lormes**	**3.34**	**324**	*e*Pn	**Pn**	**21 45 46.0**	**+0.6**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**21 46 26.2**	**+1.1**
	1.5nm,0.3s,SNR=1.0						
LOR	**Lormes**	**3.34**	**324**	*e*Pn	**Pn**	**21 45 46.0**	**+0.6**
	SNR=1.0						
LOR				*e*Sn	**Sn**	**21 46 26.2**	**+1.1**
	0.8nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**3.34**	**319**	*e*Pn	**Pn**	**21 45 46.0**	**+0.6**
	SNR=1.0						
SSF	**Saint Saulge**	**3.34**	**319**	*e*Pn	**Pn**	**21 45 46.0**	**+0.6**
	SNR=1.0						
CAF	**Calviac**	**3.35**	**277**	*e*Pn	**Pn**	**21 45 46.5**	**+1.0**
	SNR=1.0						
CAF	**Calviac**	**3.35**	**277**	*e*Pn	**Pn**	**21 45 46.5**	**+1.0**
	SNR=1.0						
BGF	**Bois d'Agland**	**3.36**	**307**	*e*Pn	**Pn**	**21 45 48.0**	**+2.3**
	SNR=1.0						
BGF	**Bois d'Agland**	**3.36**	**307**	*e*Pn	**Pn**	**21 45 48.0**	**+2.3**
	SNR=1.0						
HAU	**Haudompre**	**3.42**	**356**	*e*Pn	**Pn**	**21 45 48.5**	**+2.1**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**21 46 25.7**	**-1.3**
	2.7nm,0.4s,SNR=1.0						
HAU	**Haudompre**	**3.42**	**356**	*e*Pn	**Pn**	**21 45 48.5**	**+2.1**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**21 46 25.7**	**-1.3**
	1.4nm,0.4s,SNR=1.0						
TCF	**Toulx Ste Croi**	**3.61**	**299**	*e*Pn	**Pn**	**21 45 50.5**	**+1.4**
	SNR=1.0						
TCF	**Toulx Ste Croi**	**3.61**	**299**	*e*Pn	**Pn**	**21 45 50.5**	**+1.4**
	SNR=1.0						
CDF	**Champ du Feu**	**3.83**	**5**	*e*Pn	**Pn**	**21 45 52.5**	**+0.3**
	SNR=1.0						
CDF	**Champ du Feu**	**3.83**	**5**	*e*Pn	**Pn**	**21 45 52.5**	**+0.3**
	SNR=1.0						
QUIF	**Quistinic**	**7.62**	**299**	*e*Pn	**Pn**	**21 46 43.7**	**-0.5**
	SNR=1.0						
QUIF	**Quistinic**	**7.62**	**299**	*e*Pn	**Pn**	**21 46 43.7**	**-0.5**
	SNR=1.0						

*ISCJB **20** 21:46:34.7±0.7, 51.°68N±0.°09×179.°27W±0.°03, h10km±5km, mb3.7/9, MS3.6/1, Error ellipse: s-maj=14.6km s-min=3.0km az=178.6*
*NEIC **20** 21:46:34.5, 51.°66N×179.°26W, h8km, mb3.9/3, ML3.8(AEIC), After AEIC.*
*IDC **20** 21:46:39.2±2.0, 51.°93N×179.°01W, h0km, mb3.6/7, mb1 4.0/7, mb1mx3.6/29, mbtmp3.6/7, MS3.6/1, Ms1 3.6/1, ms1mx2.6/36, Error ellipse: s-maj=52.6km s-min=29.1km az=4.0*

ISC 20 21:46:34.0±1.5, 51.°66N±0.°09×179.°27W±0.°02, h1km±12km, n40, σ1.°09/43, mb3.8/9, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAKI	**Gareloi-Kavalg**	**0.30**	**110**	P	**Pb**	**21 46 41.4**	**-0.7**
GALAA	**Gareloi Lava P**	**0.33**	**71**	P	**Pb**	**21 46 42.0**	**-0.6**
GANE	**Gareloi Northe**	**0.34**	**62**	P	**Pb**	**21 46 42.0**	**-0.9**
GAEA	**Gareloi East**	**0.35**	**69**	P	**Pb**	**21 46 42.1**	**-0.8**
CERAA	**Semis' Rag'd T**	**0.70**	**291**	P	**Pb**	**21 46 48.5**	**-0.4**
TANO	**Tanaga North**	**0.76**	**70**	P	**Pb**	**21 46 49.4**	**-0.5**
CESW	**Semis' Southwe**	**0.77**	**289**	P	**Pb**	**21 46 49.4**	**-0.6**
TASE	**Tanaga Southea**	**0.78**	**76**	P	**Pb**	**21 46 49.9**	**-0.5**
CEAP	**Semis' Anvil P**	**0.80**	**296**	P	**Pb**	**21 46 50.2**	**-0.4**
CETU	**Semis' Tuman**	**0.83**	**292**	P	**Pb**	**21 46 50.7**	**-0.5**
TAFP	**Tanaga Falls P**	**0.83**	**73**	P	**Pg**	**21 46 50.4**	**+0.5**
TAPA	**Tanaga Point A**	**0.92**	**80**	P	**Pg**	**21 46 51.9**	**+0.3**
AMKA	**Amchitka**	**0.94**	**253**	P	**Pb**	**21 46 52.3**	**-0.6**
AMKA				S	**Sb**	**21 47 05.4**	**-0.4**
KIKV	**Kanaga Island**	**1.32**	**80**	P	**Pn**	**21 46 58.7**	**-0.8**
KIKV				S	**Sb**	**21 47 16.0**	**-0.9**
KINC	**Kanaga Island**	**1.36**	**78**	P	**Pn**	**21 46 59.3**	**-0.7**
KIRH	**Kanaga Island**	**1.37**	**79**	P	**Pn**	**21 46 59.4**	**-0.8**
LSSE	**Little Sitkin**	**1.37**	**282**	P	**Pb**	**21 46 59.8**	**-0.6**
LSSE				S	**Sb**	**21 47 15.6**	**-2.8**
LSPA	**Little Sitkin**	**1.37**	**283**	P	**Pn**	**21 46 59.7**	**-0.5**
LSPA				S	**Sg**	**21 47 18.8**	**+0.7**
LSSA	**Little Sitkin**	**1.41**	**283**	P	**Pn**	**21 47 00.2**	**-0.5**
LSSA				S	**Sb**	**21 47 18.7**	**-0.8**
LSNW	**Little Sitkin**	**1.41**	**284**	P	**Pn**	**21 47 00.0**	**-0.7**
ADAG	**Mount Adagdak**	**1.69**	**78**	P	**Pn**	**21 47 04.4**	**-0.1**
ETKA	**Kagalaska Isla**	**1.79**	**82**	P	**Pn**	**21 47 05.9**	**0.0**
ETKA				S	**Sb**	**21 47 28.9**	**-1.5**
GSCK	**Great Sitkin C**	**1.96**	**78**	P	**Pn**	**21 47 08.2**	**0.0**
GSTD	**Great Sitkin T**	**1.98**	**77**	P	**Pn**	**21 47 08.0**	**-0.5**
GSTD				S	**Sb**	**21 47 34.3**	**-1.5**
GSMY	**Great Sitkin M**	**2.03**	**78**	P	**Pn**	**21 47 08.9**	**-0.3**
GSTR	**Great Sitkin T**	**2.04**	**76**	*e*Pn	**Pn**	**21 47 08.4**	**-0.9**
GSTR				*e*Sn	**Sn**	**21 47 34.8**	**-0.6**
KOKL	**Mount Kliuchef**	**3.20**	**76**	P	**Pn**	**21 47 26.0**	**+0.6**
KOFP	**Korovin Flat P**	**3.26**	**77**	P	**Pn**	**21 47 27.1**	**+1.0**
FX1	**Attu Island--F**	**4.81**	**288**	P	**Pn**	**21 47 47.7**	**+0.3**
TRF	**Thorofare Moun**	**19.31**	**41**	*e*P	**P**	**21 50 59.8**	**-0.5**
	4.1nm,0.8s						
COLD	**Coldfoot**	**21.17**	**32**	*e*P	**P**	**21 51 18.5**	**-1.7**
	4.2nm,0.9s						
ILAR	**Eielson Array**	**21.21**	**39**	P	**P**	**21 51 23.0**	**+2.3**
	0.6nm,0.6s,baz=240,slow=10,SNR=7.9						
EGAK	**Eagle**	**23.53**	**41**	*e*P	**P**	**21 51 46.0**	**+0.9**
	4.4nm,0.3s						
INK	**Inuvik**	**27.40**	**35**	P	**P**	**21 52 23.6**	**+3.2**
	2.0nm,1.0s,baz=263,slow=8.9,SNR=5.4						
YKA	**Yellowknife Ar**	**35.25**	**47**	P	**P**	**21 53 30.7**	**+1.2**
	1.0nm,0.7s,baz=283,slow=8.5,SNR=3.9						
NVAR	**Mina Array Bea**	**43.80**	**83**	P	P	21 54 46.2	+4.9
	0.7nm,0.7s,baz=292,slow=8.3,SNR=4.5						
SONM	**Songino Array**	**46.26**	**296**	P	P	21 55 06.4	+5.7
	0.7nm,0.6s,baz=57,slow=11,SNR=3.8						
PDAR	**Pinedale Array**	**46.50**	**72**	P	P	21 55 07.3	+4.6
	0.5nm,0.6s,baz=298,slow=6.0,SNR=3.5						
FRB	**Frobisher Bay**	**52.94**	**31**	LR	LR	22 22 05.9	
	comp=Z,53nm,19.1s,baz=221,slow=40						
TXAR	**Lajitas Array**	**58.90**	**81**	P	P	21 56

FINES	**FINESS Array B**	**67.66**	**333**	LR	LR	22 32 00.2
	comp=Z,43nm,19.3s,baz=16,slow=38					
KBZ	**Khabaz**	**70.71**	**311**	P	P	22 00 46.1 +2.8
	1.0nm,0.7s,baz=27,slow=6.3,SNR=3.5					
NOA	**NORSAR Array B**	**72.82**	**338**	P	P	22 00 56.7 +0.8
	1.0nm,0.8s,baz=38,slow=6.2,SNR=3.6					
BRTR	**Keskin Array B**	**78.61**	**312**	LR	LR	22 41 36.7
	comp=Z,21nm,18.9s,baz=197,slow=40					

*DDA **20** 21:50:48.9, 37.63N×36.23E, h12km, MD3.1*
*ISK **20** 21:50:48.7, 37.61N×36.25E, h3km, MD3.3*
*ISCJB **20** 21:50:49.3±0.5, 37.62N±0.03×36.23E±0.02, h0km±5km, Error ellipse: s-maj=4.4km s-min=3.3km az=10.3*
*CSEM **20** 21:50:49.5±0.1, 37.62N×36.23E, h2km, MD3.3, Error ellipse: s-maj=2.5km s-min=2.1km az=173.0*

ISC 20 21:50:49.7±0.9, 37.62N±0.02×36.22E±0.02, h7km±8km, n47, σ0s60/65, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.10**	**112**	*i*	Pg	**Pg**		**21 50 51.9**	**-0.2**
ANDN				*i*	Sg	**Sg**		**21 50 54.1**	**+0.3**
KOZT	**Kozan**	**0.34**	**247**	*e*	PG	**Pg**		**21 50 56.9**	**+0.5**
KOZT				*e*	SG	**Sb**		**21 51 02.4**	**-1.4**
KOZT	**Kozan**	**0.34**	**247**	*e*	Pg	**Pg**		**21 50 56.9**	**+0.5**
KOZT				*e*	Sg	**Sb**		**21 51 02.4**	**-1.4**
AYKD	**Aykdinkavak**	**0.51**	**114**	*i*	P	**Pg**		**21 50 59.2**	**-0.3**
AYKD				*i*	S	**Sg**		**21 51 05.5**	**-0.6**
KMRS	**Kahramanmaras**	**0.55**	**102**	*e*	PG	**Pg**		**21 50 59.5**	**-0.8**
KMRS				*e*	SG	**Sg**		**21 51 07.0**	**-0.5**
KMRS	**Kahramanmaras**	**0.55**	**102**	*e*	Pg	**Pg**		**21 50 59.5**	**-0.8**
KMRS				*e*	Sg	**Sg**		**21 51 07.0**	**-0.5**
CEYT	**Ceyhan**	**0.72**	**212**	*e*	PG	**Pg**		**21 51 03.4**	**0.0**
CEYT	**Ceyhan**	**0.72**	**212**	*e*	Pg	**Pg**		**21 51 03.4**	**0.0**
SARI	**SarD1z-Kayseri**	**0.80**	**11**	*e*	PG	**Pg**		**21 51 04.7**	**-0.4**
SARI				*e*	SG	**Sb**		**21 51 16.8**	**-0.3**
GAZ	**Gaziantep**	**0.90**	**119**	*e*	PG	**Pg**		**21 51 06.5**	**-0.5**
GAZ	**Gaziantep**	**0.90**	**119**	*e*	Pg	**Pg**		**21 51 06.5**	**-0.5**
KARA	**Karaisali**	**1.00**	**249**	*e*	PG	**Pg**		**21 51 08.0**	**-0.8**
KARA	**Karaisali**	**1.00**	**249**	*e*	Pg	**Pg**		**21 51 08.0**	**-0.8**
PINB	**Pinarbasi**	**1.07**	**8**	*e*	P	**Pg**		**21 51 09.6**	**-0.6**
PINB				*e*	S	**Sg**		**21 51 24.1**	**+0.1**
PINB	**Pinarbasi**	**1.07**	**8**	*e*	P	**Pg**		**21 51 09.6**	**-0.6**
PINB				*e*	S	**Sg**		**21 51 24.1**	**+0.1**
KUZU	**Kuzuini**	**1.08**	**141**	*e*	P	**Pg**		**21 51 10.3**	**-0.2**
KUZU				*e*	S	**Sg**		**21 51 24.5**	**0.0**
KUZU	**Kuzuini**	**1.08**	**141**	*e*	P	**Pg**		**21 51 10.3**	**-0.2**
KUZU				*e*	S	**Sg**		**21 51 24.5**	**0.0**
GZT	**Gaziantep**	**1.10**	**103**	*e*	P	**Pg**		**21 51 10.2**	**-0.5**
GZT				*e*	S	**Sb**		**21 51 26.2**	**+0.6**
GULE	**Gulek**	**1.20**	**254**	*e*	P	**Pg**		**21 51 12.3**	**-0.4**
GULE				*e*	S	**Sb**		**21 51 28.9**	**+0.3**
GULE	**Gulek**	**1.20**	**254**	*e*	P	**Pg**		**21 51 12.3**	**-0.4**
GULE				*e*	S	**Sb**		**21 51 28.9**	**+0.3**
BNN	**Bunyan**	**1.27**	**347**	*e*	PN	**Pg**		**21 51 13.6**	**-0.4**
BNN	**Bunyan**	**1.27**	**347**	*e*	Pn	**Pg**		**21 51 13.6**	**-0.4**
NIG	**Nigde**	**1.37**	**291**	*e*	PN	**Pb**		**21 51 15.8**	**+0.1**
NIG	**Nigde**	**1.37**	**291**	*e*	Pn	**Pb**		**21 51 15.8**	**+0.1**
DARE	**Darende-Malaty**	**1.38**	**46**	*e*	PN	**Pb**		**21 51 15.9**	**+0.1**
HTY	**Hatay**	**1.50**	**183**	*e*	PN	**Pb**		**21 51 17.5**	**-0.2**
HTY	**Hatay**	**1.50**	**183**	*e*	Pn	**Pg**		**21 51 17.5**	**-0.2**
AKCD	**Akcadag**	**1.50**	**63**	*e*	P	**Pg**		**21 51 17.9**	**-0.5**
AKCD				*e*	S	**Sg**		**21 51 37.8**	**-0.2**
AKCD	**Akcadag**	**1.50**	**63**	*e*	P	**Pg**		**21 51 18.0**	**-0.5**
AKCD				*e*	S	**Sg**		**21 51 37.8**	**-0.2**
AVNT	**Avonos**	**1.58**	**317**	*e*	P	**Pn**		**21 51 18.6**	**+0.3**
AVNT				*e*	S	**Sg**		**21 51 40.4**	**-0.2**
AVNT	**Avonos**	**1.58**	**317**	*e*	P	**Pn**		**21 51 18.6**	**+0.3**
AVNT				*e*	S	**Sg**		**21 51 40.4**	**-0.2**
MYA	**Malataya**	**1.88**	**67**	*e*	PN	**Pn**		**21 51 23.1**	**+0.8**
MYA	**Malataya**	**1.88**	**67**	*e*	Pn	**Pn**		**21 51 23.1**	**+0.8**
URFA	**Urfa**	**2.07**	**94**	*e*	PN	**Pn**		**21 51 25.5**	**+0.6**
URFA	**Urfa**	**2.07**	**94**	*e*	Pn	**Pn**		**21 51 25.5**	**+0.6**
YOZ	**Yozgat**	**2.14**	**341**	*e*	PN	**Pn**		**21 51 26.2**	**+0.3**
YOZ	**Yozgat**	**2.14**	**341**	*e*	Pn	**Pn**		**21 51 26.2**	**+0.3**
SULT	**Sultanhani-AKS**	**2.22**	**286**	*e*	PN	**Pn**		**21 51 27.3**	**+0.4**
SULT	**Sultanhani-AKS**	**2.22**	**286**	*e*	Pn	**Pn**		**21 51 27.3**	**+0.4**
SVSK	**Karacayir**	**2.37**	**15**	*e*	PN	**Pn**		**21 51 29.7**	**+0.8**
SVSK	**Karacayir**	**2.37**	**15**	*e*	Pn	**Pn**		**21 51 29.7**	**+0.8**
ILIC	**ilic-Erzincan**	**2.59**	**44**	*e*	PN	**Pn**		**21 51 33.2**	**+1.1**
ILIC	**ilic-Erzincan**	**2.59**	**44**	*e*	Pn	**Pn**		**21 51 33.2**	**+1.1**
PTK	**Pertek**	**2.80**	**62**	*e*	PN	**Pn**		**21 51 36.1**	**+1.1**
PTK	**Pertek**	**2.80**	**62**	*e*	Pn	**Pn**		**21 51 36.1**	**+1.1**
CORM	**Corum**	**2.84**	**335**	*e*	PN	**Pn**		**21 51 36.5**	**+0.9**
CORM	**Corum**	**2.84**	**335**	*e*	Pn	**Pn**		**21 51 36.5**	**+0.9**

*CSEM **20** 22:12:03.9±0.2, 39.09N×33.25E, h5km, MD2.9, Error ellipse: s-maj=4.6km s-min=3.9km az=137.0*
*ISK **20** 22:12:03.4, 39.11N×33.27E, h6km, MD2.9*
*DDA **20** 22:12:04.4, 39.13N×33.30E, h8km, MD2.9*

ISC 20 22:12:04.3±1.1, 39.11N±0.03×33.27E±0.02, h7km±11km, n30, σ0s58/43, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFSR	**Afˆar-Bala (A**	**0.38**	**336**	*e*	PG	**Pg**		**22 12 11.0**	**-0.7**
AFSR				*e*	SG	**Sg**		**22 12 16.9**	**+0.3**
AFSR	**Afˆar-Bala (A**	**0.38**	**336**	*e*	Pg	**Pg**		**22 12 11.0**	**-0.7**
AFSR				*e*	Sg	**Sg**		**22 12 16.9**	**+0.3**
KAMT	**Kaman**	**0.43**	**52**	*e*	PG	**Pg**		**22 12 12.2**	**-0.6**
KAMT				*e*	SG	**Sg**		**22 12 18.8**	**+0.3**
KAMT	**Kaman**	**0.43**	**52**	*e*	Pg	**Pg**		**22 12 12.2**	**-0.6**
KAMT				*e*	Sg	**Sg**		**22 12 18.8**	**+0.3**
BBAL	**Bala**	**0.45**	**345**	*i*	P	**Pg**		**22 12 13.1**	**0.0**
BBAL				*i*	S	**Sg**		**22 12 19.9**	**+0.8**
BBAL	**Bala**	**0.45**	**345**	*i*	P	**Pg**		**22 12 13.1**	**0.0**
BBAL				*i*	S	**Sg**		**22 12 19.9**	**+0.8**
ANTO	**Ankara**	**0.85**	**334**	*e*	PG	**Pg**		**22 12 20.2**	**-0.4**
ANTO	**Ankara**	**0.85**	**334**	*e*	Pg	**Pg**		**22 12 20.2**	**-0.4**
SULT	**Sultanhani-AKS**	**0.93**	**168**	*e*	PG	**Pg**		**22 12 21.6**	**-0.5**
SULT	**Sultanhani-AKS**	**0.93**	**168**	*e*	Pg	**Pg**		**22 12 21.6**	**-0.5**
CDAG	**Cicekdag**	**1.00**	**58**	*i*	P	**Pg**		**22 12 23.0**	**-0.5**
CDAG				*i*	S	**Sg**		**22 12 36.2**	**-0.3**
CDAG	**Cicekdag**	**1.00**	**58**	*i*	P	**Pg**		**22 12 23.0**	**-0.5**
CDAG				*i*	S	**Sg**		**22 12 36.2**	**-0.3**
KDHN	**Kadinhani**	**1.07**	**237**	*i*	P	**Pg**		**22 12 24.7**	**-0.2**
KDHN				*i*	S	**Sn**		**22 12 41.4**	**+0.2**
KDHN	**Kadinhani**	**1.07**	**237**	*i*	P	**Pg**		**22 12 24.7**	**-0.2**
KDHN				*i*	S	**Sn**		**22 12 41.4**	**+0.2**
KIZT	**Kizilcal**	**1.11**	**259**	*e*	PN	**Pg**		**22 12 25.6**	**0.0**
KIZT	**Kizilcal**	**1.11**	**259**	*e*	Pn	**Pg**		**22 12 25.6**	**0.0**
LADK	**Ladik-KONYA**	**1.15**	**218**	*e*	PN	**Pg**		**22 12 25.7**	**-0.7**
LADK	**Ladik-KONYA**	**1.15**	**218**	*e*	Pn	**Pg**		**22 12 25.7**	**-0.7**
AVNT	**Avonos**	**1.28**	**104**	*i*	P	**Pg**		**22 12 29.3**	**+0.4**
AVNT				*i*	S	**Sn**		**22 12 46.3**	**0.0**
AVNT	**Avonos**	**1.28**	**104**	*i*	P	**Pg**		**22 12 29.3**	**+0.4**
AVNT				*i*	S	**Sn**		**22 12 46.3**	**0.0**
KONT	**Konya--Tatoy**	**1.36**	**212**	*e*	PN	**Pn**		**22 12 29.8**	**0.0**
KONT	**Konya--Tatoy**	**1.36**	**212**	*e*	Pn	**Pn**		**22 12 29.8**	**0.0**
SVRH	**Sivrihisar-ESK**	**1.40**	**285**	*e*	PN	**Pn**		**22 12 30.0**	**-0.4**
SVRH	**Sivrihisar-ESK**	**1.40**	**285**	*e*	Pn	**Pn**		**22 12 30.0**	**-0.4**
CORM	**Corum**	**1.50**	**44**	*e*	PN	**Pn**		**22 12 31.3**	**-0.5**
CORM	**Corum**	**1.50**	**44**	*e*	Pn	**Pn**		**22 12 31.3**	**-0.5**
YOZ	**Yozgat**	**1.68**	**71**	*e*	PN	**Pn**		**22 12 33.9**	**-0.4**
YOZ	**Yozgat**	**1.68**	**71**	*e*	Pn	**Pn**		**22 12 33.9**	**-0.4**
CTKT	**Corum**	**1.92**	**37**	*i*	P	**Pb**		**22 12 39.9**	**+0.2**
CTKT				*i*	S	**Sg**		**22 13 08.2**	**+2.3**
CTKT	**Corum**	**1.92**	**37**	*i*	P	**Pb**		**22 12 39.9**	**+0.2**

*ISCJB **20** 22:21:15.0±0.4, 23.01N±0.04×101.15E±0.03, h10km, mb3.8/7, MS3.0/4, Error ellipse: s-maj=6.0km s-min=3.4km az=31.1*
*PLV **20** 22:21:14.2±3.0, 23.01N×100.99E, h17km±32km, MD3.5*
*IDC **20** 22:21:15.6±0.9, 23.03N×101.16E, h0km, mb3.9/7, mb1 4.0/8, mb1mx3.7/28, mbtmp3.9/8, ML3.8/1, MS3.2/4, Ms1 3.2/4, ms1mx2.7/38, Error ellipse: s-maj=35.8km s-min=15.8km az=73.0*

ISC 20 22:21:17.4±0.6, 22.88N±0.05×101.01E±0.05, h10km, n29, σ2s08/38, mb3.9/7, MS3.3/5, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DBV	**Dienbien**	**2.39**	**128**	*e*	Pg	**Pg**		**22 22 02.9**	**-0.4**
DBV				*e*	Sg	**Sg**		**22 22 32.7**	**-1.6**
KMI	**Kunming**	**2.74**	**35**	*e*	Pg	**Pb**		**22 22 05.4**	**-1.2**
KMI					Sg	**Sb**		**22 22 39.6**	**-0.7**
KMI					smax	smax			
	comp=N,390nm,0.8s								
KMI					smax	smax			
	comp=E,790nm,1.1s								
KMI					LR	LR			
	comp=N,3μm,4.4s								
KMI					LR	LR			
	comp=E,3μm,4.5s								
SLVN	**Son La**	**3.10**	**119**	*e*	Pg	**Pg**		**22 22 16.1**	**-0.8**
SLVN				*e*	Sg	**Sg**		**22 22 58.1**	**+1.1**
TTVN	**Tram Tau**	**3.41**	**114**	*e*	Pn	**Pn**		**22 22 07.8**	**-2.9**
TTVN				*e*	Pg	**Pb**		**22 22 19.4**	**+1.5**
TTVN				*e*	Sg	**Sg**		**22 23 06.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**4.81**	**204**		Pn	**Pn**		**22 22 32.1**	**+2.2**
	comp=E,0.9nm,0.3s,baz=18,slow=12,SNR=18								
CMAR					Pg	**Pg**		**22 22 48.6**	**-1.0**
	comp=E,2.2nm,0.3s,baz=21,slow=14,SNR=8.9								
CMAR					Lg	Lg		22 23 49.2	
	comp=E,2.7nm,0.3s,baz=22,slow=19,SNR=5.2								
GYA	**Guiyang**	**6.26**	**54**		Pn	**Pn**		**22 22 48.0**	**-1.9**
GYA					Sg	**Sn**		**22 24 03.4**	**+1.8**
GYA					smax	smax			
	comp=N,50nm,1.7s								
GYA					smax	smax			
	comp=E,50nm,1.2s								
TAPN	**Taplejung**	**12.84**	**293**	*e*	P	**Pn**		**22 24 21.1**	**+0.8**
	comp=E,17nm,0.8s								
ODAN	**Odare**	**12.98**	**291**	*e*	P	**Pn**		**22 24 21.7**	**-0.5**
	comp=E,33nm,0.8s								
LZH	**Lanzhou**	**13.39**	**10**	*e*	P	**P**		**22 24 37.0**	**-0.3**
LZH					pP	Pn		22 24 43.5	+16
LZH					sP			22 24 45.0	
LZH					pmax	pmax			
	comp=Z,16nm,1.4s								
RAMN	**Ramite**	**13.68**	**290**	*e*	P	**Pn**		**22 24 31.8**	**0.0**
	comp=Z,17nm,0.6s								
GUN	**Gumba**	**14.55**	**293**	*e*	P	**Pn**		**22 24 45.0**	**+1.2**
	comp=Z,76nm,0.8s								
PKI	**Pulchoki**	**14.86**	**291**	*e*	P	**Pn**		**22 24 48.3**	**+0.3**
	comp=Z,31nm,0.8s								
PKIN	**Phulchoki**	**14.88**	**292**	*e*	P	**Pn**		**22 24 48.0**	**-0.1**
	comp=Z,23nm,0.8s								
KKN	**Kakani**	**15.03**	**292**	*e*	P	**Pn**		**22 24 50.4**	**+0.2**
	comp=Z,34nm,0.8s								
DMN	**Daman**	**15.13**	**291**	*e*	P	**Pn**		**22 24 51.7**	**+0.1**
	comp=Z,34nm,0.8s								
KOLN	**Koldanda**	**16.47**	**291**	*e*	P	**Pn**		**22 25 08.5**	**-0.4**
	comp=Z,10.0nm,0.9s								
DANN	**Dangsing**	**16.47**	**293**	*e*	P	**Pn**		**22 25 10.0**	**+1.0**
	comp=Z,32nm,1.1s								
GTA	**Gaotai**	**16.51**	**357**	*e*	P	**P**		**22 25 11.5**	**-0.4**
GTA					pP	**pP**		**22 25 15.8**	**+1.1**
GTA					sP	**sP**		**22 25 19.0**	**+3.0**
GTA					pmax	pmax			
	comp=Z,5.0nm,1.0s								
HHC	**Hu-ho-hao-te**	**20.00**	**24**	*e*	P	**Pn**		**22 25 51.6**	**-0.4**
HHC					PP	**PnPn**		**22 26 11.4**	**+5.1**
HHC					S	**S**		**22 29 32.6**	**-2.7**
HHC					SS	**SnSn**		**22 29 59.8**	**+8.1**
HHC					pmax	pmax			
	comp=Z,36nm,0.7s								
HHC					pmax	pmax			
	comp=Z,380nm,5.4s								
HHC					LR	LR			
	comp=N,560nm,11.6s								
HHC					LR	LR			
	comp=E,530nm,12.2s								
HHC					LR	LR			
	comp=Z,520nm,12.7s								
PSI	**Prapat**	**20.07**	**186**		LR	LR		22 33 55.2	
	comp=Z,115nm,18.4s,baz=225,slow=37								
SONM	**Songino Array**	**25.27**	**9**		P	**P**		**22 26 43.6**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=196,slow=7.4,SNR=6.8								
KSRS	**Korea Array**	**27.31**	**52**		LR	LR		22 37 41.0	
	comp=Z,40nm,19.3s,baz=270,slow=36								
MKAR	**Makanchi Array**	**28.23**	**332**		P	**P**		**22 27 10.1**	**-0.5**
	comp=Z,2.3nm,0.8s,baz=142,slow=9.7,SNR=27								
KURBB	**Kurchatov Arra**	**32.77**	**333**		P	**P**		**22 27 49.6**	**-0.9**
	comp=Z,1.3nm,0.9s,baz=142,slow=9.2,SNR=5.0								
USRK	**Ussuriysk Arra**	**33.15**	**43**		LR	LR		22 40 47.5	
	comp=Z,55nm,18.4s,baz=188,slow=36								
ZALV	**Zalesovo Beam**	**33.34**	**343**		P	**P**		**22 27 53.7**	**-1.8**
	comp=Z,0.5nm,0.5s,baz=146,slow=8.6,SNR=4.3								
ZALV					LR	LR		22 41 29.6	
	comp=Z,12nm,21.6s,baz=160,slow=36								
BVAR	**Borovoye Array**	**38.04**	**330**		P	**P**		**22 28 34.1**	**-1.8**
	comp=Z,1.3nm,0.8s,baz=122,slow=11,SNR=6.5								
WRA	**Warramunga Arr**	**53.58**	**140**		P	**P**		**22 30 38.4**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=330,slow=8.0,SNR=9.8								
ASAR	**Alice Springs**	**56.24**	**143**		P	**P**		**22 30 58.0**	**-0.2**
	comp=Z,1.3nm,0.8s,baz=326,slow=6.9,SNR=12								

*ISCJB **20** 22:23:19.6±0.3, 23.47N±0.02×121.69E±0.02, h32km±2km, Error ellipse: s-maj=3.4km s-min=2.4km az=145.5*
*TAP **20** 22:23:19.7, 23.49N×121.62E, h41km, ML3.4, C*
*JMA **20** 22:23:20.7±0.3, 23.57N×121.76E, h89km, M2.8*

ISC 20 22:23:19.1±1.1, 23.48N±0.02×121.66E±0.02, h24km±13km, n50, σ0s59/93, 12C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TEGC	**Jichi Village**	**0.26**	**334**		P	**Pn**		**22 23 27.1**	**-0.3**
	baz=350								
TEGC					S	**Sn**		**22 23 33.7**	**+1.1**
	baz=350								
EHY	**Hungye**	**0.32**	**275**	*i*	P	**Pn**		**22 23 27.8**	**-0.4**
	baz=274								
EHY				*i*	S	**Sn**		**22 23 33.2**	**-0.8**
	baz=274								
TWF1	**Yuli**	**0.36**	**250**	⇑*i*	P	**Pn**		**22 23 28.5**	**-0.3**
	baz=256								
TWF1				*i*	S	**Sn**		**22 23 34.5**	**-0.6**
	baz=256								
ESL	**Shilin**	**0.40**	**328**	⇑*i*	P	**Pn**		**22 23 28.5**	**-0.8**
	baz=327								
ESL				*i*	S	**Sn**		**22 23 35.0**	**-1.1**
	baz=327								
CHKT	**Chengkung**	**0.47**	**216**		P	**Pn**		**22 23 29.7**	**-0.5**
	baz=204								
CHKT				*e*	S	**Sn**		**22 23 37.7**	**-0.1**
	baz=204								
HWA	**Hwalien**	**0.50**	**354**	*e*	P	**Pn**		**22 23 30.6**	**-0.1**
	baz=6.0								
HWA				*e*	S	**Sn**		**22 23 38.1**	**-0.5**
	baz=6.0								
TWD	**Chiawan**	**0.60**	**354**		P	**Pb**		**22 23 31.5**	**+0.5**
	baz=349								
TWD				*e*	S	**Sn**		**22 23 40.6**	**-0.6**
	baz=349								
YUS	**Yu-Shan**	**0.65**	**271**	⇑*i*	P	**Pn**		**22 23 33.0**	**-0.3**
	baz=277								
YUS				*i*	S	**Sb**		**22 23 41.5**	**+0.5**
	baz=277								
ELDTW	**Lidau**	**0.66**	**244**	⇑*i*	P	**Pb**		**22 23 31.9**	**-0.1**
	baz=236								
ELDTW				*e*	S	**Sb**		**22 23 40.5**	**-0.3**
	baz=236								
WHF	**Hehuan Shan**	**0.76**	**331**	*e*	P	**Pb**		**22 23 33.6**	**-0.3**
	baz=335								
WHF					S	**Sb**		**22 23 43.9**	**-0.1**
	baz=335								
ALS	**Alishan**	**0.79**	**273**	⇑*i*	P	**Pn**		**22 23 35.0**	**0.0**
	baz=279								
ALS				*i*	S	**Sn**		**22 23 45.5**	**-0.7**
	baz=279								
SMLT	**Sun Moon Lake**	**0.81**	**300**	⇑*i*	P	**Pn**		**22 23 34.8**	**-0.3**
	baz=304								
SMLT					S	**Sb**		**22 23 45.6**	**+0.5**
	baz=304								
TWG	**Pinlang**	**0.85**	**220**	*e*	P	**Pb**		**22 23 34.2**	**-1.0**
	baz=223								
TWG				*e*	S	**Sb**		**22 23 45.6**	**-0.6**
	baz=223								
TYC	**Yuchr**	**0.85**	**300**	⇑*i*	P	**Pn**		**22 23 35.3**	**-0.3**
	baz=302								
TYC					S	**Sn**		**22 23 46.7**	**-0.6**
	baz=302								
TTN	**Taitung**	**0.86**	**214**	*e*	P	**Pb**		**22 23 34.9**	**-0.5**
	baz=218								
TWT	**Tachien**	**0.89**	**330**	*e*	P	**Pb**		**22 23 36.0**	**0.0**
	baz=337								
TWT				*e*	S	**Sb**		**22 23 46.6**	**-0.9**
	baz=337								
CHN5	**Tsauling**	**0.91**	**278**	⇑	P	**Pn**		**22 23 36.8**	**+0.3**
	baz=277								
CHN5					S	**Sn**		**22 23 49.5**	**+0.6**
	baz=277								
ENA	**Nanau**	**0.95**	**4**	*e*	P	**Pn**		**22 23 37.4**	**+0.5**
	baz=17								
ENA				*e*	S	**Sn**		**22 23 49.8**	**+0.1**
	baz=17								
WNT	**Mingjian**	**0.98**	**294**	*e*	P	**Pb**		**22 23 37.6**	**+0.2**
	baz=295								
WNT				*e*	S	**Sn**		**22 23 50.9**	**+0.4**
	baz=295								
WTP	**Ta-pu**	**0.99**	**257**	⇑	P	**Pb**		**22 23 37.9**	**+0.3**
	baz=255								
WTP				*e*	S	**Sn**		**22 23 51.3**	**+0.4**
	baz=255								
NNS	**Nan Shan**	**0.99**	**345**	*e*	P	**Pb**		**22 23 38.1**	**+0.4**
	baz=348								
NNS				*e*	S	**Sb**		**22 23 49.5**	**-1.0**
	baz=348								
WGK	**Gukeng**	**1.03**	**282**	*e*	P	**Pb**		**22 23 38.2**	**-0.1**
	baz=282								
WGK				*e*	S	**Sn**		**22 23 52.3**	**+0.6**
	baz=282								
CHN1	**Nanshi**	**1.08**	**255**	⇑	P	**Pb**		**22 23 39.4**	**+0.2**
	baz=253								
CHN1				*e*	S	**Sn**		**22 23 53.7**	**+0.7**
	baz=253								
TWK	**Hsinying**	**1.10**	**259**	*e*	P	**Pb**		**22 23 39.3**	**-0.2**
	baz=258								
TWK				*e*	S	**Sn**		**22 23 54.1**	**+0.6**
	baz=258								
TCU	**Taichung**	**1.12**	**307**	⇑	*i*P	**Pb**		**22 23 40.1**	**+0.3**
	baz=308								
TCU				*e*	S	**Sn**		**22 23 54.1**	**+0.1**
	baz=308								
CHY	**Chiayi**	**1.14**	**271**	*e*	P	**Pb**		**22 23 39.6**	**-0.4**
	baz=271								
CHY				*e*	S	**Sb**		**22 23 55.9**	**+1.5**
	baz=271								
TWC	**Suao**	**1.14**	**9**	*e*	P	**Pn**		**22 23 39.7**	**+0.2**
	baz=12								
TWC				*e*	S	**Sb**		**22 23 54.8**	**+0.3**
	baz=12								
ENTT	**Nioudou**	**1.16**	**356**	*e*	P	**Pb**		**22 23 40.3**	**-0.2**
	baz=351								
ENTT				*e*	S	**Sn**		**22 23 54.1**	**-0.8**
	baz=351								
TWQ1	**Liyutan**	**1.19**	**317**	*e*	P	**Pb**		**22 23 40.9**	**-0.1**
	baz=318								
TWQ1					S	**Sb**		**22 23 56.3**	**+0.4**
	baz=318								
NSK	**Sanguang**	**1.23**	**347**	*e*	P	**Pn**		**22 23 40.8**	**0.0**
	baz=359								
NSK					S	**Sn**		**22 23 55.3**	**-1.3**
	baz=359								
TWE	**Neicheng**	**1.24**	**0**	*e*	P	**Pb**		**22 23 41.7**	**-0.1**
	baz=355								
TWE				*e*	S	**Sb**		**22 23 58.1**	**+0.8**
	baz=355								
NSY	**Sanyi**	**1.25**	**319**	*e*	P	**Pb**		**22 23 41.6**	**-0.4**
	baz=333								
NSY				*e*	S	**Sb**		**22 23 57.8**	**+0.2**
	baz=333								
CHN3	**Shinhua**	**1.26**	**252**	*e*	P	**Pb**		**22 23 43.1**	**+1.0**
	baz=265								
ILA	**Ilan**	**1.28**	**3**	*e*	P	**Pb**		**22 23 42.1**	**-0.4**
	baz=356								
ILA				*e*	S	**Sb**		**22 23 58.5**	**-0.1**
	baz=356								
NSTT	**Nanjuang**	**1.30**	**332**	*e*	P	**Pn**		**22 23 42.0**	**+0.3**
	baz=334								
NSTT				*e*	S	**Sn**		**22 23 58.2**	**-0.2**
	baz=334								
TWM1	**Shoushan**	**1.31**	**241**	*e*	P	**Pb**		**22 23 44.4**	**+1.3**
	baz=238								
TAW	**Tawu**	**1.32**	**213**	*e*	P	**Pb**		**22 23 43.9**	**+0.7**
	baz=209								
EAST	**Anshuo**	**1.32**	**215**	*e*	P	**Pb**		**22 23 42.6**	**-0.7**
	baz=212								
WTCT	**Ta-ch'eng**	**1.32**	**287**	*e*	P	**Pn**		**22 23 42.1**	**0.0**
	baz=276								
WTCT				*e*	S	**Sb**		**22 23 59.3**	**-0.5**
	baz=276								
CHN8	**Yiju**	**1.34**	**265**	⇑	*i*P	**Pn**		**22 23 42.

KMNR	**Kamenistaya**	**2.91**	**330**	*e*P	Pn	22 33 36.8	+2.4
KMNR				*e*S	Sn	22 34 10.4	+2.3
GNL	**Ganaly**	**2.92**	**281**	*e*P	Pn	22 33 37.2	+2.6
BZGR	**Bezymyannyi-Gr**	**2.95**	**337**	*e*P	Pn	22 33 36.9	+2.0
BZGR				*e*S	Sn	22 34 10.5	+1.4
ZLN	**Zelenaya**	**2.99**	**338**	*e*P	Pn	22 33 38.0	+2.5
ZLN				*e*S	Sn	22 34 12.2	+2.0
BZMR	**Bezymyannaya**	**2.99**	**334**	P	Pn	22 33 39.8	+4.2
KBG	**Krutoberegovo**	**3.00**	**359**	P	Pn	22 33 37.0	+1.5
KBG				*e*S	Sn	22 34 10.3	+0.1
BZWR	**Bezymyannyi-We**	**3.02**	**335**	P	Pn	22 33 38.3	+2.3
BZWR				S	Sn	22 34 13.1	+2.1
LGNR	**Loginova**	**3.08**	**338**	*e*P	Pn	22 33 39.1	+2.2
LGNR				*e*S	Sn	22 34 14.1	+1.4
ASAK	**Asacha**	**3.09**	**255**	P	Pn	22 33 37.7	+0.9
ASAK				*e*S	Sn	22 34 12.3	-0.3
KPT	**Kopyto**	**3.09**	**332**	P	Pn	22 33 39.9	+3.0
KPT				S	Sn	22 34 15.6	+2.9
KRSR	**Krestovskiy**	**3.23**	**337**	*e*P	Pn	22 33 40.7	+1.9
KRSR				*e*S	Sn	22 34 17.4	+1.3
KOZ	**Kozyrevsk**	**3.27**	**330**	P	Pn	22 33 42.5	+3.2
KOZ				S	Sn	22 34 20.0	+3.1
APC	**Apacha**	**3.41**	**267**	P	Pn	22 33 44.6	+3.6
APC				*e*S	Sn	22 34 24.1	+4.0
SMKR	**Semkarok**	**3.41**	**348**	P	Pn	22 33 43.8	+2.5
SMKR				*e*S	Sn	22 34 22.5	+1.9
BDR	**Baidarnaya**	**3.44**	**345**	*e*P	Pn	22 33 44.0	+2.4
BDR				*e*S	Sn	22 34 22.8	+1.7
SRKR	**Sorokina**	**3.53**	**345**	*e*P	Pn	22 33 44.8	+2.0
SRKR				*e*S	Sn	22 34 24.7	+1.4
SRDR	**Sredinnyy**	**3.54**	**331**	*e*P	Pn	22 33 44.7	+1.7
SRDR				*e*S	Sn	22 34 24.3	+0.7
ESO	**Esso**	**3.57**	**320**	*e*P	Pn	22 33 46.1	+2.7
ESO				*e*S	Sn	22 34 26.6	+2.3

*NEIC **20** 22:42:48.8±0.8, 16°.68S×174°.08W, h65km±7km, mb4.8/43, Error ellipse: s-maj=8.4km s-min=4.5km az=139.0*
*IDC **20** 22:42:48.9±2.9, 16°.47S×174°.09W, h59km±26km, mb4.2/17, mb1 4.4/19, mb1mx4.3/27, mbtmp4.3/19, MS3.5/8, Ms1 3.5/8, ms1mx3.3/33, Error ellipse: s-maj=21.1km s-min=12.8km az=140.0*
*BJI **20** 22:42:48.2, 16°.56S×173°.88W, h78km, mB5.3/9, mb4.9/13, Ms5.1/3, Ms7 4.8/5*
*SZGRF **20** 22:42:51.2, 17°.25S×173°.84W, h87km, Tonga Islands*
*ISCJB **20** 22:42:53.9±0.3, 16°.81S±0°.08×174°.00W±0°.06, h124km, mb4.6/62, Error ellipse: s-maj=12.0km s-min=6.9km az=147.6*

ISC 20 22:42:55.4±0.5, 16°.8S±0°.1×173°.94W±0°.08, h124km, n384, σ0s75/380, mb4.6/63, 34C-24D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.56**	**36**	*e*Pn		Pn	22 43 40.3	-9.0
AFI				*e*Sn		Sn	22 44 13.5	-18
AFI	**Afiamalu**	**3.56**	**36**	P		Pn	22 43 40.7	-8.6
	48nm,0.3s,baz=196,slow=1.1,SNR=84							
AFI				S		Sn	22 44 15.2	-16
	661nm,0.3s,baz=49,slow=22,SNR=26							
AFI				LR		LR	22 44 37.0	
	comp=Z,454nm,19.5s,baz=220,slow=32							
MSVF	**Nonsavu**	**7.70**	**262**	*e*Pn		Pn	22 44 38.3	-6.7
MSVF				*e*			22 44 48.8	
RAR	**Rarotonga**	**14.10**	**110**	P		Pn	22 46 07.9	-1.8
RAR	**Rarotonga**	**14.10**	**110**	P		Pn	22 46 07.9	-1.8
	5.5nm,0.3s,baz=270,slow=8.7,SNR=11							
RAR				LR		LR	22 50 20.1	
	comp=Z,189nm,18.9s,baz=91,slow=31							
DZM	**Mont Dzumac**	**19.21**	**251**	*e*LR		LR	22 52 25.3	
	440nm,31.6s							
DZM	**Mont Dzumac**	**19.21**	**251**	P		**Pn**	**22 47 11.2**	**-1.1**
DZM	**Mont Dzumac**	**19.21**	**251**	P		**Pn**	**22 47 11.2**	**-1.1**
	0.2nm,0.3s,baz=270,slow=20,SNR=2.2							
URZ	**Urewera**	**22.77**	**198**	*e*P		**P**	**22 47 46.3**	**-0.9**
	128nm,1.8s							
URZ	**Urewera**	**22.77**	**198**	P		**P**	**22 47 47.7**	**+0.5**
	14nm,0.8s,baz=358,slow=6.0,SNR=5.7							
PPT2	**Papeete2**	**23.29**	**96**	*e*LR		LR	22 53 02.4	
	354nm,30.8s							
PPT	**Papeete**	**23.29**	**95**	LR		LR	22 55 42.3	
	comp=Z,76nm,18.8s,baz=198,slow=33							
TBI	**Tubuai**	**23.88**	**110**	*e*LR		LR	22 53 29.2	
	254nm,33.2s							
XMAS	**Kiritimati**	**24.82**	**43**	*e*P		**P**	**22 48 04.6**	**-1.6**
	60nm,0.8s							
PMOR	**Pomariorio Ree**	**25.11**	**90**	*e*P		**P**	**22 48 09.0**	**+0.1**
	44nm,1.4s							
HNR	**Honiara**	**26.44**	**283**	*e*P		P	22 48 13.9	-7.0
	39nm,1.0s							
HNR	**Honiara**	**26.44**	**283**	LR		LR	22 56 06.6	
	comp=Z,94nm,18.1s,baz=104,slow=30							
RPZ	**Rata Peaks**	**29.68**	**202**	P		**P**	**22 48 49.1**	**-0.4**
WHZ	**Wether Hill Ro**	**32.70**	**204**	*e*P		**P**	**22 49 15.7**	**-0.2**
	347nm,3.0s							
ARMA	**Armidale**	**34.18**	**240**	*e*P		P	22 49 25.3	-3.8
	178nm,2.3s							
STKA	**Stephens Creek**	**42.89**	**241**	*e*P		**P**	**22 50 40.7**	**-1.1**
	2.7nm,1.0s							
STKA	**Stephens Creek**	**42.89**	**241**	P		**P**	**22 50 42.2**	**+0.5**
	7.0nm,0.8s,baz=90,slow=11,SNR=14							
STKA				LR		LR	23 05 10.9	
	comp=Z,99nm,20.3s,baz=25,slow=31							
WRA	**Warramunga Arr**	**49.03**	**258**	P		**P**	**22 51 29.1**	**-1.0**
WRA	**Warramunga Arr**	**49.03**	**258**	P		**P**	**22 51 29.1**	**-1.0**
	0.9nm,0.3s,baz=96,slow=6.7,SNR=45							
AS31	**Alice Springs**	**49.19**	**253**	*e*P		**P**	**22 51 30.4**	**-1.0**
ASAR	**Alice Springs**	**49.19**	**253**	P		**P**	**22 51 30.8**	**-0.6**
ASAR	**Alice Springs**	**49.19**	**253**	P		**P**	**22 51 30.8**	**-0.6**
	6.9nm,0.8s,baz=88,slow=8.5,SNR=78							
ASAR				LR		LR	23 12 01.1	
	comp=Z,100nm,19.1s,baz=77,slow=36							
VNDA	**Vanda**	**61.93**	**186**	P		P	22 53 05.9	+4.4
VNDA	**Vanda**	**61.93**	**186**	P		P	22 53 05.9	+4.4
	1.9nm,1.0s,baz=352,slow=4.8,SNR=5.6							
MJAR	**Matsushiro Arr**	**69.68**	**320**	P		**P**	**22 53 49.0**	**-2.8**
MJAR	**Matsushiro Arr**	**69.68**	**320**	P		**P**	**22 53 49.0**	**-2.8**
	1.1nm,0.7s,baz=150,slow=6.2,SNR=5.0							
JNU	**Nakatsue**	**72.38**	**314**	P		**P**	**22 54 07.7**	**-0.5**
JNU	**Nakatsue**	**72.38**	**314**	P		**P**	**22 54 07.7**	**-0.5**
	12nm,0.7s,baz=103,slow=3.3,SNR=9.4							
MONP	**Monument Peak**	**73.90**	**48**	P		**P**	**22 54 17.4**	**+0.1**
	baz=74							
CMB	**Columbia Colle**	**74.16**	**41**	*e*P		**P**	**22 54 18.9**	**+0.3**
	5.2nm,0.9s							
PFO	**Pinyon Flat Ob**	**74.26**	**47**	LR		LR	23 20 36.5	
	comp=Z,51nm,18.6s,baz=188,slow=31							
MPMC	**Manual Prospec**	**74.91**	**44**	P		**P**	**22 54 23.3**	**+0.2**
	baz=75							
MTUM	**Tungsten Hills**	**74.93**	**43**	*e*P		**P**	**22 54 23.9**	**+0.7**
GSC	**Goldstone**	**74.94**	**45**	*e*P		**P**	**22 54 23.2**	**0.0**
	15nm,1.3s							
GSC	**Goldstone**	**74.94**	**45**	P		**P**	**22 54 23.1**	**-0.1**
	baz=75							
HEC	**Hector,Ludlow**	**75.01**	**46**	P		**P**	**22 54 23.7**	**+0.1**
	baz=75							
YBH	**Yreka Blue Hor**	**75.03**	**37**	*e*P		**P**	**22 54 24.1**	**+0.5**
	34nm,1.4s							
YBH	**Yreka Blue Hor**	**75.03**	**37**	P		**P**	**22 54 24.1**	**+0.5**
	11nm,0.6s,baz=158,slow=2.0,SNR=25							
LBCM	**Butte Creek Ri**	**75.27**	**39**	P		**P**	**22 54 25.1**	**+0.1**
BEKR	**Beckworth**	**75.28**	**40**	*e*P		**P**	**22 54 24.7**	**-0.4**
	1.5nm,0.8s							
GMRC	**Granite Mounta**	**75.45**	**46**	P		**P**	**22 54 26.4**	**+0.3**
	baz=76							
HUMO	**Hull Mountain**	**75.45**	**36**	*e*P		**P**	**22 54 26.8**	**+0.9**
	19nm,1.4s							
IRM	**Iron Mountain**	**75.47**	**47**	P		**P**	**22 54 26.6**	**+0.5**
	baz=76							
NVAR	**Mina Array Bea**	**75.72**	**42**	P		**P**	**22 54 28.1**	**+0.4**
NVAR	**Mina Array Bea**	**75.72**	**42**	P		**P**	**22 54 28.1**	**+0.4**
	6.8nm,0.8s,baz=227,slow=8.5,SNR=26							
113A	**Mohawk Valley,**	**75.73**	**49**	P		**P**	**22 54 27.9**	**+0.3**
	baz=76							
214A	**Organ Pipe Nat**	**76.01**	**50**	P		**P**	**22 54 29.6**	**+0.3**
	baz=76							
MOD	**Modoc**	**76.55**	**38**	*e*P		**P**	**22 54 32.7**	**+0.5**
	21nm,1.3s							
Z14A	**Wintersburg**	**76.63**	**49**	P		**P**	**22 54 33.2**	**+0.5**
	baz=77							
KSRS	**Korea Array**	**76.80**	**316**	P		**P**	**22 54 34.3**	**+0.8**
	1.0nm,0.7s,baz=133,slow=6.0,SNR=5.3							
KSRS				LR		LR	23 25 46.9	
	comp=Z,17nm,19.1s,baz=169,slow=34							
KSAR	**Wonju Array Be**	**76.82**	**316**	P		**P**	**22 54 34.3**	**+0.7**
W13A	**Hualapai Mount**	**76.85**	**47**	P		**P**	**22 54 34.4**	**+0.3**
	baz=77							
Y14A	**Wickenburg**	**76.88**	**48**	P		**P**	**22 54 34.5**	**+0.3**
	baz=77							
R11A	**Troy Canyon, C**	**77.44**	**43**	P		**P**	**22 54 37.5**	**+0.2**
	baz=78							
TUC	**Tucson**	**77.68**	**51**	*e*P		**P**	**22 54 39.5**	**+0.7**
	26nm,0.9s							
WVOR	**Wild Horse Val**	**77.86**	**39**	*e*P		**P**	**22 54 39.5**	**+0.1**
	13nm,1.0s							
X16A	**Lo Mia Camp, P**	**78.24**	**49**	P		**P**	**22 54 42.6**	**+0.7**
	baz=78							
319A	**Douglas**	**78.37**	**52**	P		**P**	**22 54 42.9**	**+0.4**
	baz=78							
CCUT	**Cedar City**	**78.49**	**45**	*e*P		**P**	**22 54 43.8**	**+0.5**
	11nm,1.0s							
ARUT	**Antelope Range**	**78.57**	**45**	*e*P		**P**	**22 54 43.8**	**+0.2**
	9.3nm,1.1s							
U15A	**North Rim**	**78.65**	**46**	P		**P**	**22 54 44.6**	**+0.4**
	baz=79							
HDW	**Hoodsport**	**78.65**	**32**	P		**P**	**22 54 44.0**	**+0.3**
RSO	**Redoubt South**	**78.88**	**11**	*e*P		**P**	**22 54 43.8**	**-1.0**
	22nm,0.8s							
320A	**Kipp Ranch, An**	**78.92**	**52**	⇑P		**P**	**22 54 46.7**	**+1.1**
	baz=79,SNR=5.5							
ELK	**Elko**	**78.98**	**41**	*e*P		**P**	**22 54 46.2**	**+0.3**
	11nm,1.1s							
SVW2	**Sparrevohn**	**79.03**	**9**	*e*P		**P**	**22 54 44.6**	**-0.7**
220A	**Playas Peak, P**	**79.18**	**52**	⇓P		**P**	**22 54 48.0**	**+1.0**
	baz=79,SNR=14							
X18A	**Snowflake**	**79.36**	**49**	P		**P**	**22 54 49.1**	**+1.0**
	baz=80							
120A	**U Bar Ranch, L**	**79.40**	**51**	P		**P**	**22 54 49.2**	**+1.0**
	baz=80							
SPU	**Mount Spurr**	**79.68**	**11**	*e*P		**P**	**22 54 47.7**	**-1.2**
Z20A	**Nine Sixteen R**	**79.69**	**51**	⇓P		**P**	**22 54 50.8**	**+1.0**
	baz=80,SNR=9.7							
HAWA	**Hanford**	**79.73**	**35**	*e*P		**P**	**22 54 49.9**	**+0.4**
	19nm,1.4s							
MSU	**Marysvale**	**79.79**	**45**	*e*P		**P**	**22 54 50.2**	**-0.1**
GBB	**Gable Butte**	**79.81**	**35**	P		**P**	**22 54 50.1**	**+0.2**
MDJ	**Mudanjiang**	**79.82**	**323**	P		P	22 54 45.3	-4.7
MDJ					pmax	pmax		
	comp=Z,55nm,3.1s							
121A	**Cookes Peak, D**	**80.03**	**52**	P		**P**	**22 54 52.7**	**+1.0**
	baz=80,SNR=7.4							
MFID	**Camas Ranch**	**80.11**	**39**	*e*P		**P**	**22 54 52.0**	**+0.2**
	comp=Z,7.9nm,0.9s							
MFID	**Camas Ranch**	**80.11**	**39**	⇑P		**P**	**22 54 51.8**	**+0.1**
	baz=80,SNR=9.1							
Y20A	**Horse Springs,**	**80.22**	**50**	P		**P**	**22 54 54.2**	**+1.5**
	baz=80							
DUG	**Dugway**	**80.25**	**43**	*e*P		**P**	**22 54 52.5**	**-0.1**
	comp=Z,10nm,1.3s							
DUG	**Dugway**	**80.25**	**43**	P		**P**	**22 54 52.7**	**+0.1**
	baz=80							
X20A	**Quemado**	**80.43**	**50**	⇑P		**P**	**22 54 55.2**	**+1.4**
	baz=81,SNR=5.5							
Z21A	**St. Cloud Mine**	**80.47**	**51**	⇑P		**P**	**22 54 55.3**	**+1.3**
	baz=81,SNR=13							
W20A	**Ramah**	**80.70**	**49**	P		**P**	**22 54 56.5**	**+1.2**
	baz=81,SNR=12							
I12A	**Atlanta**	**80.74**	**39**	P		**P**	**22 54 55.5**	**+0.3**
	baz=81,SNR=20							
Y21A	**Point of Rocks**	**80.78**	**50**	⇓P		**P**	**22 54 57.2**	**+1.5**
	baz=81,SNR=8.5							
DIV	**Divide**	**80.88**	**13**	*e*P		**P**	**22 54 54.3**	**-1.1**
	comp=Z,16nm,0.9s							
HLID	**Hailey**	**81.04**	**39**	*e*P		**P**	**22 54 57.1**	**+0.3**
	comp=Z,12nm,0.9s							
HLID	**Hailey**	**81.04**	**39**	P		**P**	**22 54 57.3**	**+0.5**
	baz=81,SNR=23							
SRU	**San Rafael**	**81.21**	**45**	P		**P**	**22 54 58.4**	**+0.6**
	baz=81							
U20A	**Newcomb**	**81.27**	**48**	P		**P**	**22 54 58.9**	**+0.7**
	baz=81							
324A	**Moseley Ranch,**	**81.30**	**54**	P		**P**	**22 54 59.0**	**+0.6**
	baz=82,SNR=8.3							
W21A	**San Fidel**	**81.31**	**49**	P		**P**	**22 54 59.8**	**+1.3**
	baz=82							
H12A	**Diamond D Ranc**	**81.32**	**38**	P		**P**	**22 54 58.7**	**+0.4**
	baz=82							
JLU	**Jordanelle**	**81.34**	**43**	*e*P		**P**	**22 54 59.0**	**+0.4**
	comp=Z,6.9nm,1.1s							
G12A	**Big Creek, Yel**	**81.37**	**38**	P		**P**	**22 54 58.2**	**-0.3**
	baz=82,SNR=25							
425A	**Indio Mountain**	**81.40**	**54**	P		**P**	**22 54 59.6**	**+0.6**
	baz=82							
MNTX	**Cornudas Mount**	**81.48**	**53**	*e*P		**P**	**22 54 59.5**	**+0.3**
	comp=Z,7.2nm,1.2s							
224A	**Cornudas Mount**	**81.54**	**53**	⇑P		**P**	**22 55 00.7**	**+1.0**
	baz=82,SNR=8.3							
626A	**Big Bend Ranch**	**81.55**	**56**	P		**P**	**22 55 00.3**	**+0.6**
	baz=82,SNR=6.5							
V21A	**Milan**	**81.64**	**49**	P		**P**	**22 55 01.1**	**+0.9**
	baz=82							
325A	**Bean Ranch, Si**	**81.66**	**54**	P		**P**	**22 55 00.8**	**+0.5**
	baz=82,SNR=11							
LPM	**Los Pinos Moun**	**81.69**	**51**	*e*P		**P**	**22 55 01.1**	**+0.6**
	comp=Z,2.9nm,0.9s							
526A	**Mary Lane Ranc**	**81.79**	**55**	⇑P		**P**	**22 55 01.7**	**+0.6**
	baz=82,SNR=7.2							
I14A	**Maxey**	**81.83**	**39**	P		**P**	**22 55 01.3**	**+0.4**
	baz=82,SNR=6.5							
TXAR	**Lajitas Array**	**81.83**	**56**	P		**P**	**22 55 01.8**	**+0.6**
TXAR	**Lajitas Array**	**81.83**	**56**	P		**P**	**22 55 01.8**	**+0.6**
	comp=Z,7.5nm,1.2s,baz=227,slow=5.0,SNR=21							
124A	**Stringfield Ra**	**81.86**	**52**	P		**P**	**22 55 02.0**	**+0.6**
	baz=82							
U21A	**Nageezi**	**81.91**	**48**	⇑P		**P**	**22 55 02.4**	**+0.8**
	baz=82,SNR=22							
Y23A	**Lovelace Mesa,**	**81.95**	**51**	P		**P**	**22 55 02.1**	**+0.3**
	baz=82							
E12A	**Beaver Dam Sad**	**81.95**	**37**	P		**P**	**22 55 02.2**	**+0.7**
	baz=82							
PV04	**Paradox Valley**	**81.96**	**46**	*e*P		**P**	**22 55 02.6**	**+0.8**
PV01	**Paradox Valley**	**82.07**	**46**	*e*P		**P**	**22 55 03.0**	**+0.5**
	comp=Z,1μm,1.3s							
S20A	**Disappointment**	**82.07**	**47**	⇓P		**P**	**22 55 03.3**	**+0.9**
	baz=82,SNR=6.7							
225A	**Deer Hill, Car**	**82.09**	**53**	P		**P**	**22 55 03.6**	**+1.0**
	baz=82,SNR=6.3							
426A	**McDonald Obser**	**82.09**	**55**	P		**P**	**22 55 03.5**	**+0.8**
	baz=82,SNR=13							
627A	**Terlingua Ranc**	**82.10**	**56**	⇑P		**P**	**22 55 03.5**	**+0.9**
	baz=82,SNR=9.3							
TRF	**Thorofare Moun**	**82.10**	**10**	*e*P		**P**	**22 55 00.1**	**-1.8**
	comp=Z,14nm,0.8s							
ANMO	**Albuquerque**	**82.10**	**50**	*e*P		**P**	**22 55 03.2**	**+0.6**
	comp=Z,10nm,1.3s							
ANMO	**Albuquerque**	**82.10**	**50**	P		**P**	**22 55 03.3**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=218,slow=5.4,SNR=12							
NEW	**Newport**	**82.16**	**34**	P		**P**	**22 55 01.6**	**-0.8**
NEW	**Newport**	**82.16**	**34**	P		**P**	**22 55 01.6**	**-0.8**
	comp=Z,2.1nm,0.6s,baz=281,slow=2.1,SNR=5.2							
527A	**Woodward Ranch**	**82.21**	**55**	⇑P		**P**	**22 55 03.6**	**+0.4**
	baz=82,SNR=6.9							
V22A	**San Miguel Ran**	**82.21**	**49**	P		**P**	**22 55 03.6**	**+0.4**
	baz=82							
R20A	**Redvale**	**82.23**	**46**	P		**P**	**22 55 03.8**	**+0.6**
	baz=82							
T21A	**Navajo Lake**	**82.26**	**48**	⇑P		**P**	**22 55 04.0**	**+0.6**
	baz=82,SNR=5.4							
C11A	**Tepee Creek (N**	**82.39**	**35**	P		**P**	**22 55 03.6**	**-0.1**
	baz=82							
S21A	**Coal Bank Pass**	**82.39**	**47**	P		**P**	**22 55 04.8**	**+0.7**
	baz=82,SNR=13							
Y24A	**Capitan**	**82.41**	**51**	⇓P		**P**	**22 55 04.6**	**+0.3**
	baz=83,SNR=9.0							
W23A	**Werner Place,**	**82.42**	**50**	⇓P		**P**	**22 55 05.2**	**+0.9**
	baz=83,SNR=5.2							
D12A	**Red Ives Fores**	**82.44**	**36**	P		**P**	**22 55 03.5**	**-0.4**
	baz=83							
125A	**Gardner Draw,**	**82.45**	**53**	P		**P**	**22 55 04.8**	**+0.5**
	baz=83							
U22A	**Llaves**	**82.46**	**49**	P		**P**	**22 55 05.0**	**+0.5**
	baz=83							
P19A	**Cripple Cowboy**	**82.51**	**45**	P		**P**	**22 55 04.6**	**0.0**
	baz=83							
628A	**Black Gap, Mar**	**82.51**	**56**	P		**P**	**22 55 05.3**	**+0.6**
	baz=83							
226B	**Tecolote Peak,**	**82.58**	**53**	⇑P		**P**	**22 55 05.9**	**+0.9**
	baz=83,SNR=8.4							
MCK	**McKinley**	**82.60**	**11**	*e*P		**P**	**22 55 03.8**	**-0.5**
	comp=Z,29nm,0.8s							
Q20A	**Ridgley Place,**	**82.65**	**46**	⇓P		**P**	**22 55 05.7**	**+0.4**
	baz=83,SNR=10							
427A	**Hayter Ranch,**	**82.66**	**55**	⇓P		**P**	**22 55 06.0**	**+0.5**
	baz=83,SNR=6.2							
V23A	**Ortiz Mt. (NFS**	**82.66**	**49**	P		**P**	**22 55 06.9**	**+1.4**
	baz=83,SNR=9.6							
Z25A	**Roswell**	**82.67**	**52**	P		**P**	**22 55 06.4**	**+0.9**
	baz=83							
MCMT	**McKenzie Canyo**	**82.67**	**39**	*e*P		**P**	**22 55 05.9**	**+0.5**
	comp=Z,7.2nm,1.1s							
X24A	**Lazy VL Ranch,**	**82.69**	**51**	P		**P**	**22 55 06.0**	**+0.3**
	baz=83							
T22A	**Edith**	**82.72**	**48**	P		**P**	**22 55 06.5**	**+0.6**
	baz=83							
P20A	**De Beque**	**82.84**	**45**	P		**P**	**22 55 07.0**	**+0.7**
	baz=83							
528A	**Cox Ranch, San**	**82.86**	**56**	⇑P		**P**	**22 55 07.6**	**+1.1**
	baz=83,SNR=5.8							
R21A	**Cimarron**	**82.89**	**47**	⇑P		**P**	**22 55 07.4**	**+0.7**
	baz=83,SNR=13							
F14A	**Wisdom**	**82.89**	**38**	⇓P		**P**	**22 55 06.5**	**0.0**
	baz=83,SNR=7.1							
U23A	**El Rito**	**82.92**	**49**	P		**P**	**22 55 07.7**	**+0.8**
	baz=83,SNR=13							
126A	**Clayton Basin,**	**82.93**	**53**	P		**P**	**22 55 07.5**	**+0.7**
	baz=83							
QIZ	**Qiongzhong**	**82.95**	**292**	P		**P**	**22 55 07.8**	**+0.7**
Y25A	**Mesa, Roswell**	**82.96**	**52**	P		**P**	**22 55 07.5**	**+0.4**
	baz=83,SNR=7.9							
D13A	**Huson**	**82.97**	**36**	P		**P**	**22 55 06.2**	**-0.5**
	baz=83,SNR=14							
W24A	**Lazy 6 Ranch,**	**82.99**	**50**	P		**P**	**22 55 08.0**	**+0.7**
	baz=83,SNR=7.0							
Q21A	**Lamborn Mesa,**	**83.09**	**46**	P		**P**	**22 55 08.2**	**+0.5**
	baz=83							
S22A	**4UR Ranch, Cre**	**83.11**	**47**	P		**P**	**22 55 08.8**	**+0.9**
	baz=83,SNR=18							
DLMT	**Dillon**	**83.11**	**39**	*e*P		**P**	**22 55 07.7**	**+0.2**
	comp=Z,13nm,0.9s							
MSO	**Missoula**	**83.12**	**37**	*e*P		**P**	**22 55 07.0**	**-0.5**
	comp=Z,6.6nm,1.3s							
MSO	**Missoula**	**83.12**	**37**	P		**P**	**22 55 07.0**	**-0.5**
	baz=83,SNR=7.2							
428A	**Kincaid Ranch,**	**83.17**	**55**	P		**P**	**22 55 09.1**	**+1.0**
	baz=83							
DLBC	**Dease Lake**	**83.20**	**22**	P		**P**	**22 55 07.0**	**-0.6**
DLBC	**Dease Lake**	**83.20**	**22**	P		**P**	**22 55 07.0**	**-0.6**
	comp=Z,2.8nm,0.8s,baz=213,slow=12,SNR=4.2							
BSMT	**Basso Peak**	**83.21**	**36**	*e*P		**P**	**22 55 07.4**	**-0.6**
Z26A	**Caprock**	**83.22**	**52**	P		**P**	**22 55 08.8**	**+0.4**
	baz=83,SNR=11							
C13A	**Hot Springs**	**83.23**	**36**	P		**P**	**22 55 07.4**	**-0.6**
	baz=83							
O20A	**White River Ci**	**83.25**	**45**	P		**P**	**22 55 08.9**	**+0.5**
	baz=83,SNR=5.3							
X25A	**Clemmons Ranch**	**83.25**	**51**	P		**P**	**22 55 09.1**	**+0.6**
	baz=83,SNR=6.6							
529A	**Stev Forest Ra**	**83.30**	**56**	P		**P**	**22 55 08.9**	**+0.1**
	baz=84							
M19A	**Rock Springs**	**83.30**	**43**	P		**P**	**22 55 08.7**	**0.0**
	baz=84							
328A	**Wristen Ranch,**	**83.34**	**55**	P		**P**	**22 55 09.0**	**+0.1**
	baz=84							
T23A	**Casias Ranch,**	**83.34**	**48**	P		**P**	**22 55 09.2**	**+0.2**
	baz=84							
R22A	**Saguache, Gunn**	**83.38**	**47**	P		**P**	**22 55 10.3**	**+1.0**
	baz=84,SNR=9.8							
F15A	**Butte**	**83.43**	**38**	⇑P		**P**	**22 55 09.2**	**0.0**
	baz=84,SNR=8.9							
LRM	**Limekiln Ridge**	**83.44**	**38**	*e*P		**P**	**22 55 09.5**	**+0.1**
127A	**Arkansas Junct**	**83.45**	**53**	P		**P**	**22 55 10.2**	**+0.7**
	baz=84							
L19A	**Farson**	**83.46**	**43**	P		**P**	**22 55 10.0**	**+0.5**
	baz=84,SNR=7.6							
DOT	**Dot Lake**	**83.49**	**13**	*e*P		**P**	**22 55 08.7**	**-0.2**
	comp=Z,6.2nm,0.8s							
P21A	**Newcastle**	**83.50**	**46**	P		**P**	**22 55 10.3**	**+0.6**
	baz=84							
D14A	**Greenough**	**83.50**	**37**	⇑P		**P**	**22 55 08.6**	**-0.9**
	baz=84,SNR=11							
QLMT	**Earthquake Lak**	**83.53**	**39**	*e*P		**P**	**22 55 10.6**	**+0.

I19A	**Meeteetse** baz=85	84.64	41	P		P	22 55 15.9 +0.5
531A	**Rocksprings** baz=85	84.65	56	P		P	22 55 15.9 +0.4
L21A	**Rawlins** baz=85,SNR=5.6	84.69	43	⇓P		P	22 55 15.5 -0.2
B15A	**Bradely Ranch,** baz=85,SNR=8.0	84.71	36	⇑P		P	22 55 14.6 -0.9
U26A	**Atchley Ranch,** baz=85	84.72	50	P		P	22 55 16.3 +0.3
S25A	**Robets Cordova** baz=85	84.77	48	P		P	22 55 17.0 +0.8
J20A	**Shoshoni** baz=85,SNR=7.4	84.89	42	⇑P		P	22 55 16.4 -0.1
C16A	**Fuhringer Ranc** baz=85,SNR=6.7	84.90	37	⇓P		P	22 55 16.5 0.0
G18A	**Lazy EL Ranch,** baz=85,SNR=7.2	84.92	40	⇑P		P	22 55 17.1 +0.4
A15A	**Johnson Ranch,** baz=85,SNR=10	84.97	35	⇓P		P	22 55 16.3 -0.5
RLMT	**Red Lodge** comp=Z,10nm,1.1s	85.01	40	*e*P		P	22 55 17.4 +0.1
K21A	**Alcova** baz=85	85.08	43	P		P	22 55 17.6 -0.1
GCMT	**Greycliff** comp=Z,4.7nm,1.0s	85.09	39	*e*P		P	22 55 18.0 +0.4
EGAK	**Eagle** comp=Z,10nm,1.1s	85.11	13	*e*P		P	22 55 16.2 -0.7
F18A	**Big Timber** baz=85,SNR=7.0	85.12	39	⇓P		P	22 55 18.3 +0.6
532A	**Rocksprings** baz=85	85.14	57	P		P	22 55 19.0 +0.9
N23A	**Red Feather La** baz=85	85.15	45	P		P	22 55 18.8 +0.6
D17A	**Six Diamond Ra** baz=85,SNR=19	85.18	38	P		P	22 55 18.1 +0.2
Y29A	**Porterfield Fa** baz=85,SNR=5.5	85.22	53	⇓P		P	22 55 18.7 +0.3
B16A	**M & M Farms, S** baz=85,SNR=18	85.24	36	P		P	22 55 17.6 -0.5
J21A	**Lysite** baz=85,SNR=8.9	85.29	42	P		P	22 55 19.0 +0.3
E18A	**Harlowton** baz=86,SNR=6.9	85.34	38	P		P	22 55 19.5 +0.7
L22A	**Ellis Ranch, M** baz=86	85.34	44	P		P	22 55 19.2 +0.2
C17A	**Wharram Farm,** baz=86,SNR=29	85.38	37	P		P	22 55 18.7 -0.1
Z30A	**Sanderson Ranc** baz=86	85.41	53	P		P	22 55 19.3 0.0
S26A	**Kim** baz=86	85.44	49	P		P	22 55 20.2 +0.7
H20A	**Greybull** baz=86	85.48	41	P		P	22 55 19.2 -0.3
231A	**Bronte** baz=86	85.51	55	P		P	22 55 19.9 +0.1
F19A	**Roth Farm, Mol** baz=86,SNR=6.8	85.56	39	P		P	22 55 20.1 +0.2
A16A	**West Butte Ran** baz=86	85.59	36	P		P	22 55 19.8 -0.1
COLD	**Coldfoot** comp=Z,9.4nm,1.1s	85.61	9	*e*P		P	22 55 20.0 +0.6
I21A	**Big Trails, Te** baz=86,SNR=6.8	85.61	42	⇑P		P	22 55 19.9 -0.3
B17A	**L&G Farms, Che** baz=86,SNR=9.3	85.70	37	P		P	22 55 19.9 -0.5
R26A	**Arlington** baz=86	85.75	48	P		P	22 55 20.5 -0.4
332A	**Millersview** baz=86	85.75	56	P		P	22 55 21.2 +0.2
E19A	**Rath Farm, Rou** baz=86	85.96	39	P		P	22 55 21.8 0.0
232A	**Coleman** baz=86	86.02	55	P		P	22 55 23.2 +0.8
BJI	**Beijing**	86.06	314	P		P	22 55 22.6 +0.4
BJI	comp=Z,7.0nm,0.6s			pmax	pmax		
A17A	**Triple J Farms** baz=86,SNR=19	86.09	36	P		P	22 55 22.5 +0.2
EGMT	**Eagleton** comp=Z,8.4nm,0.9s	86.16	37	*e*P		P	22 55 22.2 -0.5
EGMT	**Eagleton** baz=86	86.16	37	P		P	22 55 22.8 +0.1
Z31A	**Sharp Cattle R** baz=86	86.18	54	P		P	22 55 23.0 -0.1
D19A	**Cripps Ranch,** baz=86,SNR=6.2	86.25	38	⇑P		P	22 55 23.4 +0.3
ABTX	**Abilene, Hawle** baz=86	86.30	54	P		P	22 55 24.2 +0.5
B18A	**Beardsley Farm** baz=86,SNR=7.2	86.34	37	P		P	22 55 23.4 -0.1
C19A	**Slack Wire Ran** baz=87,SNR=15	86.43	38	⇑P		P	22 55 24.4 +0.4
A18A	**Metzger Ranch,** baz=87,SNR=9.5	86.56	36	P		P	22 55 24.6 0.0
D20A	**Manuel Ranch,** baz=87,SNR=8.2	86.66	39	⇑P		P	22 55 25.5 +0.4
Z32A	**Haskell** baz=87	86.69	54	P		P	22 55 26.3 +0.8
B19A	**Brinkman Farms** baz=87,SNR=6.4	86.85	37	⇓P		P	22 55 26.3 +0.3
R28A	**Tribune** baz=87	86.93	49	P		P	22 55 26.6 -0.1
C20A	**Veseth Ranch,** baz=87,SNR=5.8	87.04	38	⇑P		P	22 55 27.5 +0.5
A19A	**Klindworth Far** baz=87	87.20	37	P		P	22 55 27.7 0.0
B20A	**Solberg Farm,** baz=88	87.38	37	P		P	22 55 28.9 +0.3
A20A	**Cobblestone Ra** baz=88	87.64	37	P		P	22 55 29.9 +0.1
H24A	**Dirks Ranch, A** baz=88	87.79	42	P		P	22 55 30.1 -0.6
D22A	**Cohagen** baz=88	87.86	39	P		P	22 55 31.3 +0.4
B21A	**Ellsworth Farm** baz=88	87.96	38	P		P	22 55 31.9 +0.6
GYA	**Guiyang**	88.24	298	*e*P		P	22 55 32.9 -0.4
GYA				pP	pP	22 55 51.8	-13
GYA				sP	sP	22 56 01.5	-17
GYA				PP	**PP**	**22 59 01.3**	**-1.2**
GYA				SKS	**SKSac**	**23 05 51.0**	**0.0**
GYA				S	**S**	**23 06 08.8**	**+0.7**
GYA				sS	sS	23 06 41.3	-22
GYA				SS	**SS**	**23 12 02.0**	**+1.5**
GYA	comp=Z,10.0nm,1.0s			pmax	pmax		
GYA	comp=Z,90nm,5.0s			pmax	pmax		
GYA	comp=N,380nm,20.5s			LR	LR		
GYA	comp=E,260nm,21.0s			LR	LR		
GYA	comp=Z,350nm,20.3s			LR	LR		
B22A	**Reddig Ranch S** baz=89	88.50	38	P		P	22 55 34.5 +0.6
C23A	**Lambert** baz=89	88.76	39	P		P	22 55 35.5 +0.4
B23A	**Brockton** baz=89	89.17	38	P		P	22 55 37.4 +0.4
HHC	**Hu-ho-hao-te**	89.60	313	*e*P		P	22 55 39.0 -0.3
HHC				pP	pP	22 55 59.8	-11
HHC				sP	sP	22 56 08.0	-16
HHC				PP	**PP**	**22 59 13.4**	**+0.4**
HHC				SKS	**SKSac**	**23 06 00.5**	**+2.1**
HHC				S	**ScS**	**23 06 21.8**	**-2.5**
HHC				sS	sS	23 06 56.9	-18
HHC				SS	**SS**	**23 12 21.6**	**+2.0**
HHC	comp=Z,33nm,1.1s			pmax	pmax		
HHC	comp=Z,400nm,5.1s			pmax	pmax		
HHC	comp=Z,320nm,17.2s			LR	LR		
DGMT	**Dagmar** comp=Z,19nm,0.8s	89.65	39	*e*P		P	22 55 40.4 +1.2
DGMT	**Dagmar** baz=90	89.65	39	P		P	22 55 40.1 +0.8
INK	**Inuvik**	89.76	14	P		P	22 55 37.2 -2.0
INK	**Inuvik** comp=Z,4.7nm,0.9s,baz=184,slow=5.8,SNR=12	89.76	14	P		P	22 55 37.2 -2.0
A24A	**Westby** baz=90	89.96	38	P		P	22 55 41.1 +0.4
KMI	**Kunming**	91.16	296	P		P	22 55 45.1 -2.0
KMI	comp=Z,6.0nm,2.0s			pmax	pmax		
YKA	**Yellowknife Ar**	91.59	24	P		P	22 55 47.0 -0.9
YKA	**Yellowknife Ar** comp=Z,0.7nm,0.6s,baz=242,slow=4.3,SNR=9.1	91.59	24	P		P	22 55 46.9 -0.9
CD2	**Chengdu**	92.10	302	*e*P		P	22 55 51.3 +0.2
CD2				pP	pP	22 56 10.6	-12
CD2				sP	sP	22 56 18.3	-18
CD2				PP	**PP**	**22 59 33.8**	**+0.9**
CD2				SKS	**SKSac**	**23 06 16.3**	**+3.3**
CD2				S	**ScS**	**23 06 44.3**	**-1.0**
CD2				sS	sS	23 07 17.6	-21
CD2				SS	**SS**	**23 12 57.5**	**+1.6**
CD2	comp=Z,10.0nm,1.0s			pmax	pmax		
CD2	comp=Z,40nm,6.2s			pmax	pmax		
CD2	comp=Z,260nm,13.2s			LR	LR		
CMAR	**Chiang Mai Arr**	92.56	288	P		P	22 55 55.9 +2.5
CMAR	**Chiang Mai Arr** comp=Z,0.7nm,0.4s,baz=105,slow=2.6,SNR=7.2	92.56	288	P		P	22 55 55.9 +2.5
ARCES	**ARCESS Array B**	125.92	352	PKP		PKPdf	23 01 42.2 +0.1
ARCES	**ARCESS Array B** comp=Z,0.7nm,0.9s,baz=336,slow=2.0,SNR=3.7	125.92	352	PKP		PKPdf	23 01 42.2 +0.1
KMBO	**Kilima Mbogo**	144.44	243	PKP		PKPdf	23 02 19.3 +0.9
KMBO	**Kilima Mbogo** comp=Z,2.2nm,0.8s,baz=142,slow=2.2,SNR=6.7	144.44	243	PKP		PKPdf	23 02 19.3 +0.9
IBBN	**Ibbenburen**	144.56	358	*e*PKPbc		PKPdf	23 02 16.8 -0.3
KWP	**Kalwaria Pacla**	144.59	341	*e*PKPdf		PKPbc	23 02 16.3 +0.1
KWP	**Kalwaria Pacla**	144.59	341	⇓*i*P		PKPdf	23 02 16.9 -0.4
KWP	**Kalwaria Pacla**	144.59	341	*e*PKP		PKPbc	23 02 16.4 +0.1
OJC	**Ojcow**	144.88	345	*e*PKP		PKPdf	23 02 17.5 -0.2
CLZ	**Clausthal**	144.88	355	*e*PKPbc		PKPdf	23 02 17.9 +0.2
KSP	**Ksiaz**	145.07	349	*e*PKP		PKPdf	23 02 18.5 +0.5
CLL	**Collm**	145.14	352	*e*PKPbc		PKPdf	23 02 18.6 +0.5
CLL	**Collm** comp=Z,5.0nm,0.8s	145.14	352	*i* PKPdf		PKPbc	23 02 17.5 -0.4
STHS	**Stebnicka Huta**	145.22	343	*e*PKP		PKPdf	23 02 18.7 +0.3
KOLS	**Kolonicke sedl**	145.34	341	*e*PKP		PKPab	23 02 19.5 +0.6
NEUB	**Neuenburg**	145.38	354	*e*PKPbc		PKPab	23 02 19.1 +0.2
BRG	**Berggiesshubel** comp=Z,5.1nm,0.9s	145.44	351	*e*PKP		PKPdf	23 02 18.8 +0.1
BRG	**Berggiesshubel**	145.44	351	*e*PKPbc		PKPab	23 02 19.3 +0.1
BUG	**Bochum--Univer**	145.44	359	*e*PKPbc		PKPab	23 02 19.1 0.0
UPC	**Upice**	145.44	349	*e*PKP		PKPab	23 02 19.3 +0.1
BUR08	**Bucovina Ar. S**	145.45	337	*e*PKPdf		PKPab	23 02 19.4 -0.1
BURAR	**Bucovina Array**	145.47	337	⇑*i*P		PKPab	23 02 19.6 +0.1
FBE	**Freiberg**	145.47	352	*e*PKPbc		PKPab	23 02 19.8 +0.5
NIE	**Niedzica**	145.48	344	*e*PKP		PKPab	23 02 20.5 +1.1
DPC	**Dobruska-Polom**	145.54	348	*e*PKP		PKPab	23 02 19.9 +0.3
DPC				*ex*	x		23 02 52.6
CRVS	**Cervenica-Dubn**	145.62	342	*e*PKP		PKPdf	23 02 18.1 -1.0
CRVS				*e*			23 22 36.3
OKC	**Ostrava-Krasne**	145.63	346	*e*PKP		PKPab	23 02 19.8 -0.1
PVCC	**Panska Ves**	145.68	350	*e*PKP		PKPab	23 02 20.3 +0.2
MORC	**Moravsky Berou**	145.83	347	*e*PKPdf		PKPdf	23 02 19.5 +0.1
MORC	**Moravsky Berou**	145.83	347	⇓*i*P		PKPbc	23 02 20.1 -0.1
UBBA	**Unterbreizbach**	145.93	356	*e*PKPbc		PKPab	23 02 20.8 -0.1
MOX	**Moxa**	145.95	354	*e*PKPbc		PKPab	23 02 21.1 0.0
PLN	**Plauen**	146.05	353	*e*PKPbc		PKPab	23 02 21.4 -0.1
PLN				*es*PKPbc	sPKPbc		23 02 54.7 -12
WERD	**Werda**	146.07	353	*e*PKPbc		PKPab	23 02 21.6 0.0
WERD				*es*PKPbc	sPKPbc		23 02 54.7 -12
TANN	**Tannenbergstha**	146.08	353	*e*PKPbc		PKPab	23 02 21.7 0.0
GUNZ	**Gunzen**	146.15	353	*e*PKPbc		PKPab	23 02 22.0 +0.1
GUNZ				*es*PKPbc	sPKPbc		23 02 55.5 -11
PRU	**Pruhonice**	146.20	350	*e*PKP		PKPbc	23 02 21.1 -0.1
PRU				*ex*	x		23 02 55.0
WERN	**Wernitzgruen**	146.22	353	*e*PKPbc		PKPab	23 02 22.3 +0.1
WERN				*es*PKPbc	sPKPbc		23 02 55.9 -11
NKC	**Novy Kostel**	146.26	353	*e*PKP		PKPbc	23 02 21.6 +0.2
KECS	**Kecovo**	146.28	343	*e*PKP		PKPab	23 02 22.3 -0.1
VRI	**Vrincioaia**	146.28	334	⇑*i*P		PKPbc	23 02 23.2 +0.6
MEM	**Membach**	146.28	0	PKP		PKPbc	23 02 21.6 +0.2
BCLA	**Clavier**	146.47	1	PKP		PKPab	23 02 22.7 -0.4
VRAC	**Vranov**	146.47	347	⇓*i*P		PKPab	23 02 22.6 -0.6
MANZ	**Manzenberg**	146.55	353	*e*PKPbc		PKPab	23 02 23.2 -0.3
TNS	**Taunus Mts**	146.62	357	*e*PKPbc		PKPab	23 02 23.3 -0.5
TREC	**Trest**	146.71	349	*e*PKP		PKPbc	23 02 22.8 +0.1
VYHS	**Vyhne**	146.72	344	*e*PKP		PKPbc	23 02 23.0 +0.2
ROTZ	**Rotzenmuhle**	146.75	353	*e*PKPbc		PKPab	23 02 23.9 -0.4
DOU	**Dourbes**	146.78	2	PKP		PKPbc	23 02 23.2 +0.4
BRTR	**Keskin Array B**	146.90	319	PKPbc		PKPbc	23 02 24.4 +0.6
BRTR	**Keskin Array B** comp=Z,5.2nm,0.9s,baz=124,slow=2.8,SNR=25	146.90	319	PKPbc		PKPbc	23 02 24.4 +0.6
DRGR		147.07	339	⇓*i*P		PKPbc	23 02 24.0 +0.1
KHC	**Kasperske Hory**	147.19	351	*e*PKP		PKPbc	23 02 24.7 +0.6
KHC	**Kasperske Hory**	147.19	351	*e*PKPdf		PKPdf	23 02 22.5 +0.8
KHC				*e*PKPbc		PKPbc	23 02 24.4 +0.2
WLF	**Walferdange**	147.23	360	PKP		PKPbc	23 02 23.2 -0.9
WLF	**Walferdange**	147.23	360	*e*PKPbc		PKPab	23 02 25.5 -0.6
WLF	**Walferdange**	147.23	360	*e*PKPdf		PKPdf	23 02 21.6 -0.2
WLF				*e*PKPbc		PKPbc	23 02 25.0 +0.9
VOIR		147.33	335	⇑*i*P		PKPbc	23 02 23.6 -1.1
GEC2	**GERESS Array S**	147.45	351	*e*PKPbc		PKPbc	23 02 25.7 +0.8
GERES	**GERESS Array B**	147.45	351	PKPbc		PKPbc	23 02 25.2 +0.3
GERES	**GERESS Array B** comp=Z,1.9nm,0.7s,baz=27,slow=2.5,SNR=21	147.45	351	PKPbc		PKPbc	23 02 25.2 +0.3
CONA	**Conrad Observa** comp=Z,5.2nm,0.8s	147.94	348	⇑*i*PKPab		PKPbc	23 02 26.9 +0.7
STU	**Stuttgart**	148.02	356	*e*PKPbc		PKPbc	23 02 27.2 +0.9
MOA	**Molln** comp=Z,6.6nm,1.1s	148.32	349	⇓*i*PKiKP		PKPbc	23 02 28.0 +0.8
FUR	**Furstenfeldbru**	148.44	353	*e*PKPbc		PKPbc	23 02 28.5 +1.0
BZS	**Buzias**	148.47	339	⇑*i*P		PKPbc	23 02 28.0 +0.4
BFO	**Black Forest**	148.51	357	*e*PKPbc		PKPbc	23 02 28.5 +0.8
BFO	**Black Forest**	148.51	357	*e*PKPbc		PKPbc	23 02 27.2 -0.5
RJOB	**Jochberg**	148.66	351	*e*PKPbc		PKPbc	23 02 28.9 +0.8
WTTA	**Wattenberg** comp=Z,5.8nm,0.6s	149.28	353	⇑*i*PKiKP		PKPbc	23 02 30.2 +0.4
DAVA	**Damuels** comp=Z,9.0nm,1.0s	149.44	355	⇑*i*PKiKP		PKPbc	23 02 30.4 +0.2
ABTA	**Abfaltersbach** comp=Z,8.9nm,1.1s	149.67	351	⇓*i*PKPbc		PKPbc	23 02 30.4 -0.3
VTS	**Vitosha**	150.42	334	⇑*i*P		PKPbc	23 02 33.9 +1.2
ESDC	**Sonseca Array**	155.60	19	PKPab		PKPab	23 03 00.6 -0.7
ESDC	**Sonseca Array** comp=Z,2.6nm,0.9s,baz=324,slow=3.0,SNR=11	155.60	19	PKPab		PKPab	23 03 00.6 -0.7
TORD	**Torodi Ar. Bea**	174.43	130	PKPab		PKPab	23 04 26.4 +1.8
TORD	**Torodi Ar. Bea** comp=Z,2.4nm,0.8s,baz=252,slow=4.7,SNR=10	174.43	130	PKPab		PKPbc	23 04 26.4 +1.8

CSEM ***20*** *22:44:05.6,34°.43N×25°.64E,h35km, MD3.5, After ATH*

ATH 20 22:44:05.6,34°.43N×25°.64E, h35km±8km, MD3.5/7, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAST	**Lasithi**	**0.74**	**350**	*e*PN	Pn	22 44 19.9	+0.2
LAST				*e*SN	Sn	22 44 30.5	+0.6
LAST	**Lasithi**	**0.74**	**350**	*e*Pn	Pn	22 44 19.9	+0.2
LAST				*e*Sn	Sn	22 44 30.5	+0.6
NPS	**Neapolis**	**0.83**	**358**	*e*PN	Pn	22 44 21.4	+0.5
NPS				*e*SN	Sn	22 44 34.2	+2.3
NPS	**Neapolis**	**0.83**	**358**	*e*Pn	Pn	22 44 21.4	+0.5
NPS				*e*Sn	Sn	22 44 34.2	+2.3
ZKR	**Zakros**	**0.83**	**35**	*e*PN	Pn	22 44 21.6	+0.7
ZKR				*e*SN	Sn	22 44 34.5	+2.6
ZKR	**Zakros**	**0.83**	**35**	*e*Pn	Pn	22 44 21.6	+0.7
ZKR				*e*Sn	Sn	22 44 34.5	+2.6
SIVA	**Sivas**	**0.90**	**311**	*e*PN	Pn	22 44 23.5	+1.7
SIVA	**Sivas**	**0.90**	**311**	*e*Pn	Pn	22 44 23.5	+1.7
IDI	**Anoyia**	**1.05**	**324**	*e*PN	Pn	22 44 25.6	+1.6
IDI	**Anoyia**	**1.05**	**324**	*e*Pn	Pn	22 44 25.6	+1.6
GVD	**Gavdhos**	**1.34**	**288**	*e*PN	Pn	22 44 29.8	+1.9
GVD	**Gavdhos**	**1.34**	**288**	*e*Pn	Pn	22 44 29.8	+1.9
VAM	**Vamos**	**1.53**	**310**	*e*PN	Pn	22 44 32.6	+2.1
VAM	**Vamos**	**1.53**	**310**	*e*Pn	Pn	22 44 32.6	+2.1

IDC 20 22:55:05.4±2.8,13°.06N×142°.66E,h0km,mb3.4/5, mb1 3.6/5,mb1mx3.4/26,mbtmp3.4/5, Error ellipse: s-maj=123.6km s-min=21.4km az=85.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr** 0.9nm,0.5s,baz=165,slow=8.4,SNR=5.5	**23.72**	**351**	P	P	23 00 19.6	+0.5
WRA	**Warramunga Arr** 0.5nm,0.5s,baz=18,slow=9.5,SNR=6.3	**33.80**	**194**	P	P	23 01 49.7	+0.3
ASAR	**Alice Springs** 0.1nm,0.4s,baz=17,slow=11,SNR=3.6	**37.49**	**193**	P	P	23 02 20.9	-0.2
MKAR	**Makanchi Array** 0.1nm,0.4s,baz=96,slow=8.6,SNR=4.1	**60.38**	**317**	P	P	23 05 17.4	+0.9
KURBB	**Kurchatov Arra** 0.3nm,0.4s,baz=107,slow=6.8,SNR=2.8	**63.64**	**320**	P	P	23 05 37.2	-1.2

TRN 20 23:15:36.9,17°.44N×61°.18W,h21km, MD3.6, M3.7(FDF), 7C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BPA	**Boggy Peak**	**0.76**	**239**	*e*P	Pn	23 15 54.4	+2.0
BPA				*e*S	Sn	23 16 06.0	+2.6
SEG	**Port Louis**	**1.08**	**197**	⇓*e*P	Pb	23 15 57.8	+1.0
DEG	**La Desirade**	**1.12**	**174**	*e*P	Pb	23 15 57.9	+0.1
MBRV		**1.16**	**237**	⇑*e*P	Pb	23 15 59.9	+1.7
SFG	**Saint Francois**	**1.18**	**181**	*e*P	Pb	23 15 59.5	+0.9
MBRY		**1.19**	**232**	⇑*i*P	Pb	23 16 00.1	+1.3
MBRY				*i* S	Sn	23 16 17.2	+3.3
MBWH		**1.19**	**235**	⇑*i*P	Pb	23 15 59.7	+0.8
MBWH				*e*S	Sn	23 16 17.4	+3.3
MLYT	**Lee's Yard**	**1.20**	**234**	⇑*i*P	Pb	23 15 60.0	+0.9
MLYT	**Lee's Yard**	**1.20**	**234**	*i* P	Pb	23 16 00.1	+1.1
MLYT				*i* S	Sn	23 16 17.2	+2.8
MLYT				*i* S	Sb	23 16 17.8	+3.6
MBGB		**1.23**	**235**	⇑*i*P	Pb	23 16 00.4	+1.0
MBGB				*i* S	Sn	23 16 17.4	+2.5
NEV	**Hard Times**	**1.36**	**257**	⇑*i*P	Pb	23 16 02.9	+1.1
BCG	**Bois Riant Cap**	**1.41**	**198**	*e*P	Pb	23 16 03.5	+0.9
LZG	**Guadaloupe-1**	**1.41**	**204**	*e*P	Pb	23 16 03.4	+0.8
DOG	**Dongo Capester**	**1.46**	**197**	⇑*i*P	Pb	23 16 04.3	+0.8
SCG	**Saint Claude**	**1.48**	**199**	*e*P	Pb	23 16 04.1	+0.2
SKI	**Saint Kitts**	**1.49**	**266**	*i* P	Pb	23 16 03.9	-0.1
SKI				*e*S	Sb	23 16 24.4	+1.9
MGG	**Marie-Galante**	**1.52**	**185**	*e*P	Pb	23 16 04.7	+0.3
HMG	**Houelmont**	**1.53**	**199**	*e*P	Pb	23 16 05.2	+0.5
TBG	**Guadaloupe-3**	**1.64**	**196**	*e*P	Pb	23 16 06.4	-0.1

ISC 20 23:17:17.5±2.0,44°.86N±0°.06×14°.59E±0°.08,h5km±14km, n6,σ0°.84/11, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NVLJ	**Novalja**	**0.36**	**145**	*e*Pg	**Pb**	**23 17 26.4**	**+0.1**
NVLJ				*e*Sg	**Sb**	**23 17 32.4**	**+0.2**
SKDS	**Skadanscina**	**0.80**	**330**	*i* Pg	**Pb**	**23 17 34.6**	**+0.7**
SKDS				*i* Sg	**Sn**	**23 17 46.6**	**-1.1**
BOJS	**Bojanci**	**0.80**	**36**	*i* Pg	**Pg**	**23 17 31.5**	**-1.3**
BOJS				*i* Sg	**Sg**	**23 17 42.9**	**-0.3**
UDBI	**Udbina**	**0.90**	**111**	Sg	**Sb**	**23 17 48.3**	**+0.3**
VISS	**Visnje**	**0.96**	**11**	*i* Pg	**Pg**	**23 17 35.7**	**-0.3**
VISS				*i* Sg	**Sg**	**23 17 48.5**	**+0.1**
GCIS	**Gornji Cirnik**	**1.25**	**36**	*i* Pg	**Pg**	**23 17 42.4**	**+1.1**
GCIS				*i* Sg	**Sn**	**23 17 58.8**	**0.0**

ISCJB ***20*** *23:21:14.2±0.5,51°.48N±0°.03×16°.10E±0°.03,h0km, mb3.0/1, Error ellipse: s-maj=4.2km s-min=2.7km az=8.9*
IPEC ***20*** *23:21:14.8±0.4,51°.59N×16°.23E,h0km, ML2.9/4, Error ellipse: s-maj=4.7km s-min=2.2km az=80.0*
IDC ***20*** *23:21:15.8±1.0,51°.46N×16°.21E,h0km, mb3.2/1, mb1 3.4/4,mb1mx3.2/25,mbtmp3.3/4, ML2.7/2, Error ellipse: s-maj=20.5km s-min=9.6km az=134.0*
CSEM ***20*** *23:21:15.1±0.3,51°.54N×16°.11E,h2km, ML3.7/8, Error ellipse: s-maj=4.8km s-min=3.5km az=179.0*
WAR ***20*** *23:21:16.2,51°.54N×16°.13E*
PRU ***20*** *23:21:16.2,51°.50N×16°.12E,h0km*

ISC 20 23:21:14.8±0.9,51°.59N±0°.04×16°.13E±0°.02,h0km,n55, σ1°.08/91,4C-2D,Poland

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.76**	**172**	*e*Pg	**Pg**	**23 21 29.4**	**+0.1**
KSP				*e*Sg	**Sg**	**23 21 38.9**	**-0.2**
KSP	**Ksiaz**	**0.76**	**172**	⇓*i*Pg	**Pg**	**23 21 29.4**	**+0.1**
KSP				*e*Sg	**Sg**	**23 21 38.6**	**-0.5**
UPC	**Upice**	**1.09**	**184**	*e*PG	**Pg**	**23 21 35.3**	**-0.4**
UPC	**Upice**	**1.09**	**184**	Pg	**Pg**	**23 21 35.3**	**-0.4**
DPC	**Dobruska-Polom**	**1.25**	**174**	*e*PG	**Pg**	**23 21 38.2**	**-0.6**
DPC				*e*SG	**Sg**	**23 21 53.1**	**-1.9**
DPC	**Dobruska-Polom**	**1.25**	**174**	Pg	**Pg**	**23 21 38.2**	**-0.6**
DPC				Sg	**Sg**	**23 21 53.1**	**-1.9**
PVCC	**Panska Ves**	**1.45**	**223**	*e*PG	**Pn**	**23 21 41.7**	**-0.6**
PVCC				*e*SG	**Sg**	**23 22 01.1**	**-0.4**
PVCC	comp=Z,318nm,0.7s **Panska Ves**	**1.45**	**223**	Pg	**Pn**	**23 21 41.7**	**-0.6**
PVCC	318nm,0.7s			Sg	**Sg**	**23 22 01.1**	**-0.4**
BRG	**Berggiesshubel**	**1.55**	**243**	PN	**Pn**	**23 21 42.8**	**-0.9**
BRG				PG	**Pb**	**23 21 44.3**	**-0.1**
BRG	124nm,0.4s			SG	**Sn**	**23 22 04.5**	**-0.1**
PRU	**Pruhonice**	**1.90**	**213**	*e*PN	**Pn**	**23 21 47.5**	**-0.9**
PRU				*e*PG	**Pn**	**23 21 49.5**	**+1.1**
PRU	comp=Z,62nm,0.6s			*e*SG	**Sn**	**23 22 13.0**	**0.0**
PRU	**Pruhonice**	**1.90**	**213**	Pn	**Pn**	**23 21 47.5**	**-0.9**
PRU	**Pruhonice**	**1.90**	**213**	Pg	**Pn**	**23 21 49.5**	**+1.1**
PRU	62nm,0.6s			Sg	**Sn**	**23 22 13.0**	**0.0**
CLL	**Collm**	**1.98**	**263**	*i* Pn	**Pn**	**23 21 48.6**	**-0.9**
CLL				*e*Pg	**Pb**	**23 21 52.0**	**+0.3**
CLL				*i*		23 21 55.7	
CLL	comp=Z,60nm,0.8s			*i* Sg	**Sb**	**23 22 18.0**	**+1.1**
RAC	**Raciborz**	**2.00**	**138**	*e*Pg	**Pg**	**23 21 53.2**	**+0.1**

	comp=Z,55nm,0.6s							
CONA	**Conrad Observa**	**3.67**	**183**	Pn	**Pn**	**23 22 13.0**	**+0.1**	
	SNR=12							
CONA				Sg	**Sg**	**23 23 11.1**	**-1.7**	
	comp=Z,55nm,0.6s							
STHS	**Stebnicka Huta**	**3.92**	**122**	*e*PN	**Pn**	**23 22 17.9**	**+1.6**	
STHS				*e*		23 22 30.7		
STHS	**Stebnicka Huta**	**3.92**	**122**	*e*Pn	**Pn**	**23 22 17.9**	**+1.6**	
STHS				*e*Sg	**Sg**	**23 23 19.5**	**-1.3**	
MOA	**Molln**	**3.94**	**199**	*i* Pn	**Pn**	**23 22 16.4**	**-0.1**	
	SNR=15							
MOA	**Molln**	**3.94**	**199**	Pn	**Pn**	**23 22 16.4**	**-0.1**	
	SNR=15							
KECS	**Kecovo**	**4.19**	**136**	*e*PN	**Pn**	**23 22 20.2**	**+0.3**	
KECS				*e*		23 22 35.3		
KECS	**Kecovo**	**4.19**	**136**	*e*Pn	**Pn**	**23 22 20.2**	**+0.3**	
KECS				*e*Sg	**Sg**	**23 23 28.0**	**-1.4**	
CRVS	**Cervenica-Dubn**	**4.35**	**126**	*e*SG	**Sg**	**23 23 32.1**	**-2.5**	
CRVS	**Cervenica-Dubn**	**4.35**	**126**	*e*Sg	**Sg**	**23 23 32.1**	**-2.5**	
ARSA	**Arzberg**	**4.37**	**185**⇑	*e*Pn	**Pn**	**23 22 23.7**	**+1.3**	
ARSA				⇑*i* Sg	**Sg**	**23 23 34.0**	**-1.0**	
	comp=Z,52nm,0.6s							
ARSA	**Arzberg**	**4.37**	**185**	Pn	**Pn**	**23 22 23.7**	**+1.3**	
ARSA				Sg	**Sg**	**23 23 34.0**	**-1.0**	
	comp=Z,52nm,0.6s							
KOLS	**Kolonicke sedl**	**4.75**	**122**	*e*PN	**Pn**	**23 22 28.2**	**+0.5**	
KOLS				*e*		23 22 46.5		
KOLS	**Kolonicke sedl**	**4.75**	**122**	*e*Pn	**Pn**	**23 22 28.2**	**+0.5**	
KOLS				*e*Sg	**Sg**	**23 23 44.4**	**-3.0**	
WTTA	**Wattenberg**	**5.23**	**216**⇑	*i* Sg	**Sg**	**23 24 04.6**	**+1.8**	
	comp=Z,16nm,0.5s							
WTTA	**Wattenberg**	**5.23**	**216**	Sg	**Sg**	**23 24 04.6**	**+1.8**	
	comp=Z,16nm,0.5s							
AKASG	**Malin Array Be**	**8.28**	**91**	Pn	Pn	23 23 12.3	-3.7	
	baz=282,slow=12,SNR=4.6							
FINES	**FINESS Array B**	**11.28**	**25**	Pn	Pn	23 23 55.0	-2.0	
	comp=Z,0.1nm,0.3s,baz=210,slow=17,SNR=7.0							
TORD	**Torodi Ar. Bea**	**40.08**	**202**	P	**P**	**23 28 51.8**	**-0.1**	
	comp=Z,0.4nm,0.9s,baz=27,slow=6.2,SNR=2.1							

*ISCJB **20** 23:24:19.9±0.8, 6°.90N±0°.10×73°.00W±0°.09, h166km, mb3.3/2, Error ellipse: s-maj=15.8km s-min=9.5km az=144.4*
*IDC **20** 23:24:22.1±4.1, 6°.55N×73°.26W, h180km±26km, mb3.0/2, mb1 3.5/2, mb1mx2.9/22, mbtmp3.0/2, Error ellipse: s-maj=77.7km s-min=28.0km az=81.0*
*FUNV **20** 23:24:25.8, 7°.02N×72°.76W, h152km, MW3.2*

ISC 20 23:24:20.9±1.1, 6°.9N±0°.1×72°.88W±0°.09, h166km±6km, n21, σ1°.53/24, 3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.09**	**31**⇓	*i* P	**Pn**	**23 24 49.5**	**+1.3**
CAPV				*e*S	**Sn**	**23 25 08.0**	**-1.2**
SOCV	**Socops**	**2.42**	**56**⇓	*e*P	**Pn**	**23 25 03.7**	**+1.8**
SOCV				*e*S	**Sn**	**23 25 30.5**	**-3.2**
VIGV	**El Vigia**	**2.42**	**38**⇓	*e*P	**Pn**	**23 25 03.9**	**+1.9**
VIGV				*e*S	**Sn**	**23 25 31.6**	**-2.2**
ROSC	**El Rosal**	**2.51**	**215**	P	**Pn**	**23 25 01.1**	**-2.2**
	50nm,0.3s,baz=285,slow=15,SNR=63						
ROSC				S	Sn	23 25 28.5	-7.8
	15nm,0.3s,baz=91,slow=16,SNR=6.2						
ELOV	**Elorza**	**3.38**	**89**	*e*P	**Pn**	**23 25 15.1**	**+1.5**
QARV	**Quebrada Arrib**	**4.01**	**35**	*e*P	**Pn**	**23 25 23.1**	**+1.4**
SANV	**Sanarito**	**4.18**	**52**	*e*P	**Pn**	**23 25 25.2**	**+1.1**
CURV	**Curarigua**	**4.21**	**43**	*e*P	**Pn**	**23 25 26.2**	**+1.7**
DABV	**Dabajuro**	**4.55**	**29**	*e*P	**Pn**	**23 25 29.6**	**+0.9**
TEPV	**Terepaima**	**4.74**	**50**	*e*P	**Pn**	**23 25 31.8**	**+0.6**
SIQV	**Siquisique**	**4.79**	**39**	*e*P	**Pn**	**23 25 32.7**	**+0.8**
BAUV	**El Baul**	**5.20**	**67**	*e*P	**Pn**	**23 25 37.9**	**+0.7**
MAPV	**Macapo**	**5.24**	**56**	*e*P	**Pn**	**23 25 38.6**	**+0.7**
MONV	**Montecano**	**5.76**	**30**	*e*P	**Pn**	**23 25 45.1**	**+0.4**
TURV	**Turiamo**	**6.09**	**55**	*e*P	**Pn**	**23 25 50.5**	**+1.5**
BIRV	**Birongo**	**7.43**	**61**	*e*P	**Pn**	**23 26 07.5**	**+0.8**
CUPV	**Cœpira**	**7.67**	**66**	*e*P	**Pn**	**23 26 10.7**	**+0.7**
TXAR	**Lajitas Array**	**36.57**	**311**	P	**P**	**23 31 11.2**	**+0.1**
	0.3nm,0.7s,baz=128,slow=10,SNR=4.2							
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**23 34 31.7**	**+0.4**
	0.6nm,0.6s,baz=133,slow=6.9,SNR=6.8							
ASAR	**Alice Springs**	**149.36**	**234**	PKPbc	**PKPdf**	**23 43 48.1**	**+1.5**
	0.3nm,0.6s,baz=121,slow=3.0,SNR=4.1							
WRA	**Warramunga Arr**	**150.59**	**241**	PKPbc	**PKPbc**	**23 43 52.8**	**-1.3**
	0.2nm,0.4s,baz=108,slow=2.5,SNR=9.9							

*CSEM **20** 23:25:39.9±0.1, 43°.23N×10°.78E, h15km, ML3.1/10, Error ellipse: s-maj=2.7km s-min=2.2km az=28.0*
*LDG **20** 23:25:39.6±0.4, 43°.33N×11°.04E, h25km, Ml2.6/4, Error ellipse: s-maj=11.5km s-min=6.2km az=149.0*
*ISCJB **20** 23:25:40.1±0.4, 43°.22N±0°.02×10°.75E±0°.04, h22km±5km, Error ellipse: s-maj=5.0km s-min=3.7km az=153.9*
*ROM **20** 23:25:40.2±0.2, 43°.25N×10°.81E, h9km±2km, Md2.3/13, Ml2.2/10, Error ellipse: s-maj=2.6km s-min=1.8km az=59.0*
*GEN **20** 23:25:41.1, 43°.28N×10°.81E, h2km, ML2.3*

ISC 20 23:25:39.6±0.9, 43°.25N±0°.02×10°.77E±0°.02, h15km±7km, n49, σ0°.82/77, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRFL	**Gerfalco**	**0.18**	**123**	Pg	**Pg**	**23 25 43.9**	**0.0**
GRFL				Sg	**Sg**	**23 25 46.2**	**-0.7**
GRFL	**Gerfalco**	**0.18**	**123**	Pg	**Pg**	**23 25 43.9**	**0.0**
GRFL				Sg	**Sg**	**23 25 46.2**	**-0.7**
CSNT	**Castellina Chi**	**0.44**	**59**	Pg	**Pg**	**23 25 48.6**	**+0.2**
CSNT				Sg	**Sg**	**23 25 54.5**	**0.0**
	237nm,0.4s						
CSNT	**Castellina Chi**	**0.44**	**59**	Pg	**Pg**	**23 25 48.6**	**+0.2**
CSNT				Sg	**Sg**	**23 25 54.5**	**0.0**
	237nm,0.4s						
PII	**Pisa**	**0.51**	**340**	Pg	**Pb**	**23 25 50.7**	**+0.5**
PII				Sg	**Sb**	**23 25 58.0**	**+0.6**
	124nm,0.2s						
PII	**Pisa**	**0.51**	**340**	Pg	**Pb**	**23 25 50.7**	**+0.5**
PII				Sg	**Sb**	**23 25 58.0**	**+0.6**
	124nm,0.2s						
ARCI	**Arcidosso**	**0.65**	**127**	Pg	**Pb**	**23 25 52.8**	**+0.1**
ARCI				Sg	**Sg**	**23 26 00.8**	**-0.2**
	123nm,0.3s						
ARCI	**Arcidosso**	**0.65**	**127**	Pg	**Pb**	**23 25 52.8**	**+0.1**
ARCI				Sg	**Sg**	**23 26 00.8**	**-0.2**
	123nm,0.3s						
GROG	**Isola di Gorgo**	**0.66**	**286**	Pg	**Pn**	**23 25 53.9**	**-0.6**
GROG				Sg	**Sb**	**23 26 03.4**	**+1.5**
	174nm,0.2s						
GROG	**Isola di Gorgo**	**0.66**	**286**	Pg	**Pn**	**23 25 53.9**	**-0.6**
GROG				Sg	**Sb**	**23 26 03.4**	**+1.5**
	174nm,0.2s						
MAIM	**Mastiano**	**0.70**	**343**	Pg	**Pb**	**23 25 53.9**	**+0.5**
MAIM				Sg	**Sb**	**23 26 03.2**	**+0.3**
	107nm,0.5s						
MAIM	**Mastiano**	**0.70**	**343**	P	**Pb**	**23 25 53.9**	**+0.5**
MAIM				Sg	**Sb**	**23 26 03.2**	**+0.3**
	107nm,0.5s						
BDI	**Bagni Di Lucca**	**0.82**	**351**	Pg	**Pn**	**23 25 56.2**	**-0.6**
BDI				Sg	**Sb**	**23 26 07.0**	**+0.4**
	90nm,0.7s						
BDI	**Bagni Di Lucca**	**0.82**	**351**	Pg	**Pn**	**23 25 56.2**	**-0.6**
BDI				Sg	**Sb**	**23 26 07.0**	**+0.4**
	90nm,0.7s						
MAON	**Monte Argentar**	**0.86**	**162**	Pg	**Pn**	**23 25 57.4**	**+0.2**
MAON				Sg	**Sg**	**23 26 08.5**	**+1.0**
	105nm,0.4s						
MAON	**Monte Argentar**	**0.86**	**162**	Pg	**Pn**	**23 25 57.4**	**+0.2**
MAON				Sg	**Sg**	**23 26 08.5**	**+1.0**
	105nm,0.4s						
VMG	**Vicchio**	**0.91**	**38**	Pg	**Pn**	**23 25 57.9**	**0.0**
VMG				Sg	**Sn**	**23 26 10.0**	**-0.8**
	69nm,0.2s						
VMG	**Vicchio**	**0.91**	**38**	Pg	**Pn**	**23 25 57.9**	**0.0**
VMG				Sg	**Sn**	**23 26 10.0**	**-0.8**
	69nm,0.2s						
SEI	**Scarperia**	**0.91**	**28**	Pg	**Pn**	**23 25 58.0**	**0.0**
	159nm,0.2s						
SEI	**Scarperia**	**0.91**	**28**	Pg	**Pn**	**23 25 58.0**	**0.0**
	159nm,0.2s						
CRE	**Caprese Michel**	**0.94**	**66**	Pg	**Pn**	**23 25 58.2**	**-0.2**
	30nm,0.6s						
CRE	**Caprese Michel**	**0.94**	**66**	Pg	**Pn**	**23 25 58.2**	**-0.2**
	30nm,0.6s						
VLC	**Villacollemand**	**0.95**	**343**	Pg	**Pn**	**23 25 58.9**	**+0.4**
	142nm,1.4s						
VLC	**Villacollemand**	**0.95**	**343**	Pg	**Pn**	**23 25 58.9**	**+0.4**
	142nm,1.4s						
FNVD	**Fontana Vidola**	**0.96**	**16**	Pg	**Pn**	**23 25 58.9**	**+0.3**
FNVD				Sg	**Sn**	**23 26 11.5**	**-0.5**
	101nm,0.4s						
FNVD	**Fontana Vidola**	**0.96**	**16**	Pg	**Pn**	**23 25 58.9**	**+0.3**
FNVD				Sg	**Sn**	**23 26 11.5**	**-0.5**
	101nm,0.4s						
VINC	**Vinca**	**1.00**	**334**	P	**Pn**	**23 25 59.5**	**+0.3**
SFI	**Santa Sofia**	**1.02**	**50**	Pg	**Pn**	**23 25 59.5**	**0.0**
SFI	**Santa Sofia**	**1.02**	**50**	Pg	**Pn**	**23 25 59.5**	**0.0**
MGAB	**Montegabbione**	**1.04**	**108**	Pg	**Pn**	**23 25 59.7**	**0.0**
MGAB	**Montegabbione**	**1.04**	**108**	Pg	**Pn**	**23 25 59.7**	**0.0**
BACM	**Baccana**	**1.15**	**334**	S	**Sn**	**23 26 16.7**	**+0.1**
PIEI	**Pieia**	**1.32**	**77**	Pg	**Pg**	**23 26 04.7**	**-0.3**
	83nm,1.5s						
PIEI	**Pieia**	**1.32**	**77**	Pg	**Pg**	**23 26 04.7**	**-0.3**
	83nm,1.5s						
CODM	**Codolo**	**1.32**	**330**	S	**Sg**	**23 26 21.6**	**-0.7**
GRAM	**Graiana**	**1.34**	**338**	S	**Sg**	**23 26 22.8**	**-0.1**
PGF	**Pioggiola**	**1.48**	**242**	*e*Pn	**Pn**	**23 26 05.9**	**+0.2**
PGF				*e*Sn	**Sn**	**23 26 24.9**	**+0.1**
PGF	**Pioggiola**	**1.48**	**242**	*e*Pn	**Pn**	**23 26 05.9**	**+0.2**
PGF				*e*Sn	**Sn**	**23 26 24.9**	**+0.1**
NEGI	**Seborga**	**2.31**	**286**	P	**Pn**	**23 26 17.0**	**-0.1**
SBF	**Sospel**	**2.50**	**285**	*e*Pn	**Pn**	**23 26 19.9**	**+0.1**
SBF				*e*Sn	**Sn**	**23 26 48.7**	**-1.4**
	3.6nm,0.2s						
SBF	**Sospel**	**2.50**	**285**	*e*Pn	**Pn**	**23 26 19.9**	**+0.1**
SBF				*e*Sn	**Sn**	**23 26 48.7**	**-1.4**
	1.8nm,0.2s						
FRF	**La Foret Royal**	**3.02**	**277**	*e*Pn	**Pn**	**23 26 26.9**	**0.0**
FRF				*e*Sn	**Sn**	**23 27 00.7**	**-2.1**
	2.2nm,0.2s						
FRF	**La Foret Royal**	**3.02**	**277**	*e*Pn	**Pn**	**23 26 26.9**	**0.0**
FRF				*e*Sn	**Sn**	**23 27 00.7**	**-2.1**
	1.1nm,0.2s						
LMR	**La Mourre**	**3.11**	**273**	*e*Pn	**Pn**	**23 26 28.0**	**-0.1**
LMR				*e*Sn	**Sn**	**23 27 02.8**	**-2.2**
	2.1nm,0.2s						
LMR	**La Mourre**	**3.11**	**273**	*e*Pn	**Pn**	**23 26 28.0**	**-0.1**
LMR				*e*Sn	**Sn**	**23 27 02.8**	**-2.2**
	1.0nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.90**	**297**	*e*P	**Pn**	**23 26 41.5**	**+2.5**
ORIF	**Oris-en-Rattie**	**3.90**	**297**	*e*P	**Pn**	**23 26 41.5**	**+2.5**
LASF	**Ste Croix**	**5.08**	**282**	*e*Pn	**Pn**	**23 26 54.5**	**-0.7**
LASF	**Ste Croix**	**5.08**	**282**	*e*Pn	**Pn**	**23 26 54.5**	**-0.7**

*CSEM **20** 23:40:05.8±0.2, 37°.73N×36°.26E, h2km, MD2.7, Error ellipse: s-maj=5.1km s-min=4.4km az=175.0*
*DDA **20** 23:40:06.9, 37°.59N×36°.27E, h11km, MD2.7*
*ISK **20** 23:40:06.4, 37°.47N×36°.28E, h10km, MD2.6*
*ISCJB **20** 23:40:07.2±0.6, 37°.50N±0°.04×36°.25E±0°.03, h2km±8km, Error ellipse: s-maj=7.3km s-min=4.5km az=173.1*

ISC 20 23:40:07.2±0.9, 37°.60N±0°.04×36°.25E±0°.02, h8km±6km, n16, σ0°.69/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.08**	**104**	*i* P	**Pg**	**23 40 09.0**	**-0.4**
ANDN				*i* S	**Sg**	**23 40 11.5**	**+0.6**
ANDN	**Andirin**	**0.08**	**104**	*i* P	**Pg**	**23 40 09.0**	**-0.4**
ANDN				*i* S	**Sg**	**23 40 11.5**	**+0.6**
KOZT	**Kozan**	**0.36**	**251**	*e*PG	**Pg**	**23 40 13.8**	**-0.4**
KOZT				*e*SG	**Sg**	**23 40 19.7**	**+0.8**
KOZT	**Kozan**	**0.36**	**251**	*e*Pg	**Pg**	**23 40 13.8**	**-0.4**
KOZT				*e*Sg	**Sg**	**23 40 19.7**	**+0.8**
AYKD	**Aykdinkavak**	**0.48**	**112**	*i* P	**Pg**	**23 40 16.4**	**-0.2**
AYKD				*i* S	**Sg**	**23 40 22.9**	**+0.1**
KMRS	**Kahramanmaras**	**0.53**	**100**	*e*PG	**Pg**	**23 40 16.7**	**-0.7**
KMRS				*e*SG	**Sg**	**23 40 23.9**	**-0.3**
KMRS	**Kahramanmaras**	**0.53**	**100**	*e*Pg	**Pg**	**23 40 16.7**	**-0.7**
KMRS				*e*Sg	**Sg**	**23 40 24.0**	**-0.3**
SARI	**SarD1z-Kayseri**	**0.82**	**9**	*e*PG	**Pn**	**23 40 25.0**	**-0.3**
SARI				*e*SG	**Sn**	**23 40 38.5**	**+0.8**
SARI	**SarD1z-Kayseri**	**0.82**	**9**	*e*Pg	**Pn**	**23 40 25.0**	**-0.3**
SARI				*e*Sg	**Sn**	**23 40 38.5**	**+0.8**
KARA	**Karaisali**	**1.01**	**251**	*e*PG	**Pg**	**23 40 25.8**	**-0.8**
KARA	**Karaisali**	**1.01**	**251**	*e*Pg	**Pg**	**23 40 25.8**	**-0.8**
KUZU	**Kuzuini**	**1.05**	**141**	*i* P	**Pb**	**23 40 27.6**	**-0.2**
KUZU				*i* S	**Sn**	**23 40 44.4**	**+1.1**
KUZU	**Kuzuini**	**1.05**	**141**	*i* P	**Pb**	**23 40 27.6**	**-0.2**
KUZU				*i* S	**Sn**	**23 40 44.4**	**+1.1**
NIG	**Nigde**	**1.39**	**292**	*e*PN	**Pb**	**23 40 33.5**	**-0.2**
NIG	**Nigde**	**1.39**	**292**	*e*Pn	**Pb**	**23 40 33.5**	**-0.2**
AKCD	**Akcadag**	**1.50**	**62**	*i* P	**Pg**	**23 40 35.3**	**-0.6**
AKCD				*i* S	**Sg**	**23 40 56.7**	**+1.4**

*IDC **20** 23:42:03.5±0.8, 16°.21N×94°.03W, h0km, mb4.1/11, mb1 4.3/13, mb1mx4.1/27, mbtmp4.1/13, ML4.7/2, MS3.3/8, Ms1 3.3/8, ms1mx3.2/29, Error ellipse: s-maj=33.3km s-min=13.6km az=64.0*
*SSS **20** 23:42:04.9, 16°.10N×94°.23W, h10km, mb4.5(NEIC)*
*NEIC **20** 23:42:05.0±0.4, 16°.09N×94°.23W, h10km, mb4.5/44, Error ellipse: s-maj=8.0km s-min=5.3km az=38.0*
*MEX **20** 23:42:05.3±0.3, 16°.28N×94°.19W, h88km±6km, MD4.4*
*ISCJB **20** 23:42:07.9±1.5, 16°.24N±0°.03×94°.41W±0°.03, h33km±12km, mb4.3/43, MS3.5/8, Error ellipse: s-maj=6.3km s-min=3.4km az=29.5*
*BJI **20** 23:42:08.7, 16°.20N×94°.20W, h35km, mB5.3/1, Ms7 4.7/1*
*CASC **20** 23:42:08.3±1.2, 14°.80N×94°.71W, h0km±999km, MD4.3, mb4.5(NEIC)*

ISC 20 23:42:09.6±0.9, 16°.22N±0°.05×94°.25W±0°.04, h41km±9km, n237, σ1°.33/216, mb4.3/44, MS3.3/8, 39C-38D, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**1.11**	**117**	*e*P	Pn	23 42 24.6	-4.1
PCIG				*i* S	**Sn**	**23 42 39.9**	**-3.0**
PCIG		**1.11**	**117**	*e*P	Pn	23 42 24.6	-4.1
PCIG				*i* S	**Sn**	**23 42 39.9**	**-3.0**
TGIG		**1.21**	**63**	*i* P	Pn	23 42 25.2	-4.9
TGIG				*i* S	**Sn**	**23 42 40.9**	**-4.5**
TGIG		**1.21**	**63**	*i* P	Pn	23 42 25.2	-4.9
TGIG				*i* S	**Sn**	**23 42 40.9**	**-4.5**
HUIG	**Huatulco**	**1.85**	**256**	*i* P	Pn	23 42 35.5	-3.3
HUIG				*e*S	**Sn**	**23 42 57.9**	**-3.1**
HUIG	**Huatulco**	**1.85**	**256**	*i* P	Pn	23 42 35.5	-3.3
HUIG				*e*S	**Sn**	**23 42 57.9**	**-3.1**
CCIG	**Comitan**	**2.03**	**88**	*i* P	Pn	23 42 35.9	-5.5
CCIG				*i* S	Sn	23 43 00.3	-5.4
CCIG	**Comitan**	**2.03**	**88**	*i* P	Pn	23 42 35.9	-5.5
CCIG				*i* S	Sn	23 43 00.3	-5.4
THIG		**2.31**	**124**	*i* P	Pn	23 42 39.9	-5.3
THIG				*i* S	Sn	23 43 07.6	-4.8
THIG		**2.31**	**124**	*i* P	Pn	23 42 39.9	-5.3
THIG				*i* S	Sn	23 43 07.6	-4.8
JAT	**Jato**	**3.15**	**127**⇓	*e*P	**Pn**	**23 42 57.6**	**+0.9**
FUG	**Fuego 3**	**3.73**	**118**	*e*P	**Pn**	**23 43 06.9**	**+2.1**
PNIG	**Pinotepa**	**3.73**	**273**	*e*P	Pn	23 43 01.4	-3.4
PNIG				*e*S	**Sn**	**23 43 44.0**	**-3.5**
PNIG	**Pinotepa**	**3.73**	**273**	*e*P	Pn	23 43 01.4	-3.4
PNIG				*e*S	**Sn**	**23 43 44.0**	**-3.5**
PCG	**Pacaya**	**3.95**	**117**	*e*P	Pn	23 43 11.0	+3.0
NBG	**Las Nubes**	**4.10**	**113**	*e*P	Pn	23 43 15.7	+5.7
IXG	**Ixpaco**	**4.19**	**119**	*e*P	**Pn**	**23 43 13.5**	**+2.3**
MRL	**Marmol**	**4.54**	**104**	*e*P	**Pn**	**23 43 15.2**	**-0.7**
RBDL	**Robledal**	**4.88**	**115**	*e*P	Pn	23 43 24.3	+3.7
RTR	**El Retiro**	**5.01**	**117**	*e*P	**Pn**	**23 43 24.7**	**+2.3**
SBLS	**San Blas**	**5.05**	**117**	*e*P	**Pn**	**23 43 25.4**	**+2.2**
SBLS				*e*S	Sn	23 44 25.9	+5.5
SNJE	**San Jose**	**5.06**	**117**	*e*P	Pn	23 43 25.8	+2.6
BOQS	**Boqueron**	**5.40**	**117**	*e*P	**Pn**	**23 43 30.3**	**+2.4**
BOQS				*e*S	Sn	23 44 34.9	+6.0
LBRS	**Las Brisas**	**5.60**	**115**	*e*P	Pn	23 43 34.3	+3.8
LFRS	**El Faro**	**5.64**	**117**	*e*P	Pn	23 43 34.0	+3.0
LFRS				*e*S	Sn	23 44 40.1	+5.5
CAIG	**El Cayaco**	**5.83**	**279**	*i* P	Pn	23 43 29.3	-4.3
CAIG				*i* S	Sn	23 44 35.2	-4.0
CAIG	**El Cayaco**	**5.83**	**279**	*i* P	Pn	23 43 29.3	-4.3
CAIG				*i* S	Sn	23 44 35.2	-4.0
ARIG	**Puente Sto Nin**	**6.18**	**290**	*i* P	Pn	23 43 34.5	-3.9
ARIG				*i* S	Sn	23 44 42.5	-5.3
CNCH	**Conchagua**	**6.86**	**114**	*e*P	Pn	23 43 51.6	+3.7
CNCH				*e*S	Sn	23 45 09.9	+5.1
TEIG	**Tepich**	**6.93**	**54**	*e*Pn	Pn	23 43 44.3	-4.3
TEIG				*e*Sn	Sn	23 45 00.6	-5.7
TEIG	**Tepich**	**6.93**	**54**	Pn	Pn	23 43 44.8	-3.9
	41nm,0.3s,baz=259,slow=2.5,SNR=151						
TGUH	**Tegucigalpa,Un**	**7.07**	**107**	*e*Pn	**Pn**	**23 43 49.7**	**-0.8**
732A	**Laxson Ranch,**	**13.52**	**338**	⇓P	**Pn**	**23 45 17.8**	**-1.1**
	baz=14,SNR=9.6						
632A	**Uvalde**	**14.17**	**340**	P	**Pn**	**23 45 27.0**	**-0.8**
	baz=14,SNR=18						
631A	**Perdido Creek**	**14.36**	**337**	P	**Pn**	**23 45 29.5**	**-0.8**
	baz=14,SNR=25						
532A	**Rocksprings**	**14.78**	**340**	P	**Pn**	**23 45 35.7**	**-0.3**
	baz=15,SNR=53						
531A	**Rocksprings**	**15.03**	**339**	⇑P	**Pn**	**23 45 39.2**	**-0.1**
	baz=15,SNR=28						
JCT	**Junction City**	**15.08**	**341**	*e*Pn	**Pn**	**23 45 40.5**	**+0.6**
	27nm,0.6s						
JCT				*e*Sn	**Sn**	**23 48 22.8**	**-3.0**
530A	**J-C Ranch, Com**	**15.31**	**336**	⇑P	**Pn**	**23 45 43.4**	**+0.4**
	baz=16,SNR=11						
432A	**Menard**	**15.44**	**342**	⇑P	**Pn**	**23 45 44.9**	**+0.2**
	baz=16,SNR=11						
431A	**Sonora**	**15.53**	**339**	⇓P	**Pn**	**23 45 46.6**	**+0.8**
	baz=16,SNR=21						
627A	**Terlingua Ranc**	**15.62**	**329**	⇓P	**Pn**	**23 45 48.6**	**+1.5**
	baz=16,SNR=27						
529A	**Stev Forest Ra**	**15.65**	**334**	⇓P	**Pn**	**23 45 49.0**	**+1.6**
	baz=16,SNR=7.2						
TXAR	**Lajitas Array**	**15.67**	**328**	Pn	**Pn**	**23 45 48.0**	**+0.3**
TXAR	**Lajitas Array**	**15.67**	**328**	Pn	**Pn**	**23 45 48.0**	**+0.3**
	0.4nm,0.3s,baz=141,slow=12,SNR=12						
TXAR				LR	LR	23 51 47.9	
	comp=Z,54nm,20.4s,baz=190,slow=37						
430A	**Baggett Ranch,**	**15.85**	**337**	⇓P	**Pn**	**23 45 51.5**	**+1.6**
	baz=16,SNR=29						
332A	**Millersview**	**15.90**	**343**	P	**Pn**	**23 45 50.3**	**-0.3**
	baz=16,SNR=22						
528A	**Cox Ranch, San**	**15.93**	**332**	⇑P	**Pn**	**23 45 51.8**	**+0.7**
	baz=16,SNR=21						
429A	**Davenport Ranc**	**15.95**	**335**	⇓P	**Pn**	**23 45 51.2**	**-0.1**
	baz=16,SNR=34						
WHTX	**Lake Whitney**	**15.97**	**350**	⇓P	**Pn**	**23 45 50.8**	**-0.6**
	baz=16,SNR=13						
331A	**San Angelo**	**16.04**	**341**	⇓P	**Pn**	**23 45 52.9**	**+0.5**
	baz=16,SNR=7.0						
626A	**Big Bend Ranch**	**16.08**	**327**	⇓P	**Pn**	**23 45 53.4**	**+0.5**
	baz=16,SNR=16						
527A	**Woodward Ranch**	**16.30**	**330**	⇑P	**Pn**	**23 45 55.2**	**-0.7**
	baz=16,SNR=9.1						
232A	**Coleman**	**16.35**	**343**	P	**Pn**	**23 45 55.7**	**-0.6**
	baz=16,SNR=23						
428A	**Kincaid Ranch,**	**16.37**	**333**	⇑P	**Pn**	**23 45 58.0**	**+1.4**
	baz=17,SNR=9.2						
330A	**Mertzon**	**16.38**	**339**	⇑P	**Pn**	**23 45 55.3**	**-1.4**
	baz=17,SNR=15						
526A	**Mary Lane Ranc**	**16.47**	**328**	⇑P	**Pn**	**23 45 57.9**	**0.0**
	baz=17,SNR=23						
231A	**Bronte**	**16.59**	**342**	P	**Pn**	**23 46 00.3**	**+1.0**
	baz=17,SNR=8.9						
329A	**Wagon Wheel Ra**	**16.75**	**336**	⇓P	**Pn**	**23 46 03.0**	**+1.6**
	baz=17,SNR=18						
427A	**Hayter Ranch,**	**16.80**	**332**	⇓P	**Pn**	**23 46 03.2**	**+1.2**
	baz=17,SNR=12						
230A	**Sterling City**	**16.80**	**339**	P	**Pn**	**23 46 03.0**	**+1.0**
	baz=17,SNR=16						
RFTA	**Plano**	**16.86**	**353**	*e*Pn	**Pn**	**23 46 01.3**	**-1.4**
426A	**McDonald Obser**	**16.94**	**330**	⇓P	**Pn**	**23 46 03.5**	**-0.3**
	baz=17,SNR=11						
328A	**Wristen Ranch,**	**16.99**	**334**	P	**Pn**	**23 46 05.8**	**+1.4**
	baz=17,SNR=41						
ABTX	**Abilene, Hawle**	**17.05**	**344**	P	**Pn**	**23 46 06.3**	**+1.2**

baz=17,SNR=19
229A Bryant Ranch, 17.12 338 ⇓P Pn 23 46 06.3 +0.4
baz=17,SNR=5.4
425A Indio Mountain 17.51 328 P Pn 23 46 11.5 +0.6
baz=18
228A UT Block 9, Go 17.55 336 ⇑P Pn 23 46 13.1 +1.8
baz=18,SNR=7.3
Z32A Haskell 17.66 345 ⇑P Pn 23 46 12.2 -0.4
baz=18,SNR=10
129A Stewart Farms, 17.74 338 P Pn 23 46 14.7 +1.0
baz=18,SNR=14
Z31A Sharp Cattle R 17.84 344 ⇓P Pn 23 46 15.3 +0.5
baz=18,SNR=20
325A Bean Ranch, Si 17.97 329 P Pn 23 46 16.8 +0.2
baz=18
LRAL Lakeview Retre 17.98 20 *e*Pn Pn 23 46 16.9 +0.5
15nm,0.6s
Z30A Sanderson Ranc 18.09 341 P P 23 46 19.1 +1.1
baz=18,SNR=20
CLNB Carlsbad 18.21 333 *e*Pn Pn 23 46 21.2 +1.8
Z29A Hungry Hill Ra 18.26 340 P P 23 46 21.0 +1.2
baz=18,SNR=17
324A Moseley Ranch, 18.29 328 P P 23 46 18.8 -1.5
baz=18,SNR=11
Y32A R-V Farms, Ver 18.32 346 ⇓P P 23 46 21.1 +0.7
baz=18,SNR=6.1
GDL2 Guadalupe Moun 18.37 332 *e*Pn P 23 46 22.3 +1.2
MNTX Cornudas Mount 18.44 329 *e*Pn P 23 46 21.0 -0.8
4.5nm,0.9s
Y31A Rekieta Farm, 18.48 344 ⇓P P 23 46 23.2 +1.0
baz=19,SNR=14
Z28A Tucker Farm, M 18.52 338 P P 23 46 21.5 -1.2
baz=19,SNR=11
UALR University of 18.56 5 *e*P P 23 46 23.6 +0.6
31nm,0.9s
Y30A Stafford Cattl 18.57 342 ⇑P P 23 46 25.1 +1.8
baz=19,SNR=10
Y29A Porterfield Fa 18.80 341 ⇓P P 23 46 26.1 +0.3
baz=19,SNR=7.0
224A Cornudas Mount 18.82 329 ⇓P P 23 46 25.9 -0.2
baz=19,SNR=9.7
Z27A Tatum 18.85 336 P P 23 46 25.9 -0.5
baz=19,SNR=31
WMOK Wichita Mounta 18.88 348 *e*Pn P 23 46 28.4 +1.8
17nm,0.8s
125A Gardner Draw, 18.89 332 P P 23 46 25.3 -1.5
baz=19
Y28A McKinney Farm, 19.03 339 ⇑P P 23 46 28.7 +0.3
baz=19,SNR=9.1
X30A Coker Ranch, T 19.10 343 ⇓P P 23 46 29.6 +0.6
baz=19,SNR=7.2
Z26A Caprock 19.12 334 ⇑P P 23 46 30.1 +0.7
baz=19,SNR=11
MSTX Muleshoe 19.27 338 ⇓P P 23 46 30.2 -0.7
baz=20,SNR=9.6
124A Stringfield Ra 19.30 330 P P 23 46 32.1 +0.7
baz=20,SNR=5.3
Y27A Causey 19.34 337 ⇓P P 23 46 32.0 +0.3
baz=20,SNR=9.7
X29A Tulia 19.34 341 ⇑P P 23 46 32.0 +0.2
baz=20,SNR=7.4
Z25A Roswell 19.44 333 ⇓P P 23 46 33.0 +0.1
baz=20,SNR=8.2
PLAL Pickwick Lake 19.48 15 *e*P P 23 46 34.3 +1.1
42nm,1.7s
X28A Dimmitt 19.57 340 P P 23 46 34.4 +0.1
baz=20
Y26A Elida 19.63 336 ⇓P P 23 46 34.9 0.0
baz=20,SNR=13
GOGA Godfrey 19.69 28 *e*Pn P 23 46 37.4 +2.0
10nm,0.7s
AMTX Amarillo 19.75 342 *e*P P 23 46 37.6 +1.5
39nm,0.9s
Z24A Sheeppen Canyo 19.78 331 ⇓P P 23 46 36.3 -0.3
baz=20,SNR=14
320A Kipp Ranch, An 19.90 322 P P 23 46 37.9 0.0
baz=20
Y25A Mesa, Roswell 19.98 334 ⇑P P 23 46 38.8 0.0
baz=20,SNR=26
X27A F and S Farms, 20.00 338 ⇑P P 23 46 39.5 +0.6
baz=20,SNR=6.3
GNAR Gosnell 20.02 10 *e*P P 23 46 39.3 +0.3
1um,0.4s
Z23A Rita Site, Whi 20.13 330 P P 23 46 41.0 +0.6
baz=20
X26A CR and CF Fran 20.17 337 ⇑P P 23 46 41.1 +0.3
baz=20,SNR=10
220A Playas Peak, P 20.31 323 P P 23 46 42.1 -0.3
baz=20
Y24A Capitan 20.31 332 ⇑P P 23 46 42.3 -0.1
baz=20,SNR=12
121A Cookes Peak, D 20.36 325 ⇑P P 23 46 43.2 +0.3
baz=20,SNR=9.8
W27A Bowe Ranch, En 20.36 339 ⇑P P 23 46 41.4 -1.4
baz=21,SNR=9.0
GLAT Glass 20.45 12 *e*P P 23 46 43.9 +0.3
Y23A Lovelace Mesa, 20.59 331 ⇑P P 23 46 45.4 0.0
baz=21,SNR=6.6
UTMT University of 20.61 12 *e*P P 23 46 44.7 -0.6
54nm,0.6s
WVT Waverly 20.64 15 *e*P P 23 46 45.9 +0.2
14nm,1.1s
V28A Channing 20.71 341 ⇓P P 23 46 45.0 -1.7
baz=21,SNR=13
Z21A St. Cloud Mine 20.89 327 ⇓P P 23 46 48.1 -0.6
baz=21,SNR=14
CPCT Cooper Cave 21.03 23 *e*P P 23 46 50.5 +0.5
Y22A Socorro 21.03 329 ⇓P P 23 46 49.7 -0.5
baz=21,SNR=9.3
BNM Barren Site 21.04 330 *e*P P 23 46 49.9 -0.5
8.5nm,0.9s
LPM Los Pinos Moun 21.18 331 *e*P P 23 46 51.4 -0.4
X23A Hourglass Bar 21.20 332 ⇑P P 23 46 51.3 -0.7
baz=21,SNR=12
LENM Lemitar 21.22 330 *e*P P 23 46 53.8 +1.5
Z20A Nine Sixteen R 21.24 325 ⇑P P 23 46 53.2 +0.8
baz=21,SNR=15
V26A Tequesquite Ra 21.27 338 ⇓P P 23 46 54.2 +1.5
baz=22,SNR=31
U28A Mallet 21.30 342 P P 23 46 54.2 +1.3
baz=22
T31A Randall Ranch, 21.34 348 P P 23 46 54.2 +0.9
baz=22
W24A Lazy 6 Ranch, 21.39 334 ⇓P P 23 46 53.8 -0.2
baz=22,SNR=12
Y21A Point of Rocks 21.44 328 ⇑P P 23 46 55.0 +0.4
baz=22,SNR=16
LAZ Ladron 21.49 330 *e*P P 23 46 54.8 -0.3
TKL Tuckaleechee C 21.50 24 *e*P P 23 46 55.8 +0.8
TKL S S 23 50 43.0 -8.2
TKL Tuckaleechee C 21.50 24 P P 23 46 53.5 -1.4
14nm,0.8s,baz=196,slow=13,SNR=18
TKL S S 23 50 43.0 -8.2
2.5nm,0.6s,baz=34,slow=7.3,SNR=2.9
TKL LR LR 23 57 57.0
comp=Z,77nm,19.5s,baz=256,slow=44
X22A Bernardo 21.52 330 ⇑P P 23 46 56.2 +0.9
baz=22,SNR=5.7
U27A Thompson Grove 21.52 341 ⇓P P 23 46 53.5 -1.8
baz=22,SNR=9.7
V25A Rancho No Teng 21.62 337 ⇑P P 23 46 55.4 -1.0
baz=22,SNR=25
ANMO Albuquerque 21.62 332 *e*P P 23 46 55.7 -0.8
7.4nm,0.6s
ANMO Albuquerque 21.62 332 P P 23 46 55.6 -0.8
7.3nm,0.7s,baz=145,slow=12,SNR=28
ANMO LR LR 23 57 06.7
comp=Z,23nm,18.9s,baz=192,slow=42
Y20A Horse Springs, 21.73 327 P P 23 46 57.4 -0.4
baz=22
V24A Rampart Ranch, 21.78 335 ⇑P P 23 46 57.7 -0.5
baz=22,SNR=6.5
U26A Atchley Ranch, 21.80 339 P P 23 46 57.0 -1.4
baz=22,SNR=14
X21A Alamocita Cree 21.85 329 ⇓P P 23 46 58.8 -0.1
baz=22,SNR=11
SIUC Southern Illin 21.87 11 *e*P P 23 46 59.9 +1.0
25nm,0.9s
TUC Tucson 21.95 320 *e*P P 23 46 59.8 -0.2
37nm,0.9s
S30A Montezuma 22.03 347 P P 23 47 01.6 +0.8
baz=22
U25A Circle Dot Ran 22.04 338 P P 23 47 00.4 -0.5
baz=22
V23A Ortiz Mt. (NFS 22.17 334 P P 23 47 02.4 0.0
baz=22,SNR=13
OTAV Otavalo 22.25 134 *e*P P 23 47 04.3 +0.6
7.1nm,1.0s

TZTN Tazewell 22.36 23 *e*P P 23 47 05.0 +0.7
14nm,1.0s
USIN University of 22.42 14 *e*P P 23 47 05.2 +0.3
14nm,0.6s
ROSC El Rosal 22.57 118 *e*P P 23 47 08.0 +0.9
SLM Saint Louis 22.61 8 *e*P P 23 47 08.0 +1.1
12nm,0.6s
V22A San Miguel Ran 22.63 332 ⇑P P 23 47 06.8 -0.5
baz=23,SNR=9.3
U23A El Rito 22.67 334 P P 23 47 07.8 0.0
baz=23,SNR=15
T25A Trinidad 22.70 339 ⇑P P 23 47 07.6 -0.5
baz=23,SNR=9.2
WCI Wyandotte Cave 23.02 16 *e*P P 23 47 11.0 -0.1
16nm,0.7s
R28A Tribune 23.02 345 ⇑P P 23 47 10.7 -0.6
baz=23,SNR=8.8
OLIL Olney 23.07 12 *e*P P 23 47 12.6 +1.1
22nm,0.9s
S25A Robets Cordova 23.18 339 ⇑P P 23 47 11.3 -1.6
baz=23,SNR=6.2
U21A Nageezi 23.39 332 ⇑P P 23 47 14.8 -0.3
baz=24,SNR=16
R26A Arlington 23.44 342 ⇑P P 23 47 16.0 +0.6
baz=24,SNR=6.0
T22A Edith 23.55 334 ⇓P P 23 47 16.7 0.0
baz=24,SNR=9.9
R25A Fountain Ranch 23.56 340 ⇑P P 23 47 15.7 -0.9
baz=24,SNR=11
T21A Navajo Lake 23.81 333 P P 23 47 18.9 -0.1
baz=24
BLO Bloomington 23.84 15 *e*P P 23 47 19.6 +0.5
12nm,0.9s
R23A Moffat 24.14 337 ⇓P P 23 47 22.0 -0.2
baz=24,SNR=15
SDV Santo Domingo 24.16 105 *e*P P 23 47 22.9 +0.4
9.5nm,0.8s
BLA Blacksburg 24.23 28 *e*P P 23 47 22.2 -0.4
14nm,0.8s
S21A Coal Bank Pass 24.48 333 ⇑P P 23 47 25.5 +0.2
baz=25,SNR=11
WUAZ Wupatki 24.56 325 *e*P P 23 47 27.0 +1.1
15nm,1.0s
HDIL Hopedale 24.63 9 *e*P P 23 47 25.8 -0.4
10nm,0.6s
S20A Disappointment 24.87 333 ⇓P P 23 47 29.5 +0.7
baz=25,SNR=11
GLA Glamis 25.04 316 *e*P P 23 47 31.4 +1.2
5.6nm,0.8s
R20A Redvale 25.17 333 P P 23 47 32.1 +0.6
baz=25
PV01 Paradox Valley 25.21 333 *e*P P 23 47 32.5 +0.6
ISCO Idaho Springs 25.50 339 *e*P P 23 47 33.1 -1.5
5.5nm,0.9s
ISCO Idaho Springs 25.50 339 ⇓P P 23 47 33.3 -1.2
baz=26,SNR=7.7
PV04 Paradox Valley 25.57 333 *e*P P 23 47 34.4 -0.7
SCIA State Center 25.61 2 *e*P P 23 47 35.9 +0.7
14nm,0.5s
JSRW J. Sargeant Re 25.81 31 *e*P P 23 47 39.4 +2.4
ACSO Alum Creek Sta 25.85 20 *e*P P 23 47 38.5 +1.1
8.6nm,0.9s
MPR Mayaguez 25.96 82 *e*P P 23 47 40.6 +2.0
66nm,1.4s
PFO Pinyon Flat Ob 26.47 315 LR LR 23 57 37.8
comp=Z,105nm,21.4s,baz=145,slow=35
JFWS Jewell Farm 26.82 7 *e*P P 23 47 46.6 +0.5
24nm,0.6s
MSU Marysvale 27.23 328 P P 23 47 49.3 -0.7
20nm,1.7s
ARUT Antelope Range 27.35 325 *e*P P 23 47 52.2 +1.0
ECSD EROS Data Cent 27.50 356 *e*P P 23 47 54.3 +2.2
8.5nm,0.9s
PDAR Pinedale Array 29.52 337 P P 23 48 15.9 +5.4
PDAR Pinedale Array 29.52 337 P P 23 48 15.9 +5.4
0.4nm,0.5s,baz=159,slow=11,SNR=3.3
HVU Hansel Valley 30.05 332 *e*P P 23 48 15.3 +0.2
3.6nm,0.8s
REDW Red Top Meadow 30.53 336 *e*P P 23 48 18.1 -1.2
0.6nm,0.7s
NVAR Mina Array Bea 30.59 321 P P 23 48 20.9 +1.0
NVAR Mina Array Bea 30.59 321 P P 23 48 20.9 +1.0
1.7nm,0.7s,baz=131,slow=7.8,SNR=9.3
MOOW Moose Ponds 30.81 336 *e*P P 23 48 23.6 +1.7
3.0nm,1.0s
AGMN Agaaz Nation 32.02 358 *e*P P 23 48 32.8 +0.7
5.0nm,0.7s
HLID Hailey 32.20 332 *e*P P 23 48 33.7 -0.3
27nm,2.5s
D22A Cohagen 32.39 345 ⇓P P 23 48 36.4 +0.9
baz=33,SNR=8.4
MCMT McKenzie Canyo 32.55 335 *e*P P 23 48 35.4 -1.7
1.4nm,1.0s
F17A Fitzpatrick Pl 32.63 339 ⇓P P 23 48 37.4 -0.3
baz=33,SNR=8.1
DLMT Dillon 32.89 336 *e*P P 23 48 41.6 +1.6
4.4nm,1.0s
LRM Limekiln Ridge 33.22 336 *e*P P 23 48 45.4 +2.4
F15A Butte 33.25 336 ⇑P P 23 48 45.1 +1.9
baz=33,SNR=5.5
WVOR Wild Horse Val 33.45 326 *e*P P 23 48 46.5 +1.5
5.2nm,1.1s
HRY Holter Researc 33.74 338 *e*P P 23 48 48.3 +1.0
ULM Lac du Bonnet 33.97 358 LR LR 00 05 05.4
comp=Z,51nm,19.8s,baz=30,slow=41
CHMT Chamberlain Mo 34.43 337 *e*P P 23 48 55.8 +2.3
C16A Fuhringer Ranc 34.64 339 ⇑P P 23 48 57.3 +2.2
baz=35,SNR=6.3
D13A Huson 35.05 336 ⇑P P 23 48 59.5 +0.9
baz=35,SNR=5.5
SWMT Swartz Lake 35.21 337 *e*P P 23 49 01.8 +1.8
2.5nm,1.1s
A14A Double T Ranch 36.22 339 ⇑P P 23 49 09.9 +1.2
baz=36,SNR=5.3
LPAZ La Paz 41.32 140 *e*P P 23 49 51.5 -0.8
2.6nm,0.9s
LPAZ La Paz 41.32 140 P P 23 49 51.4 -0.9
2.1nm,0.8s,baz=329,slow=3.9,SNR=11
LPAZ LR LR 00 05 31.0
comp=Z,46nm,21.6s,baz=266,slow=34
SCHQ Schefferville 43.96 23 LR LR 00 11 08.9
comp=Z,77nm,20.8s,baz=78,slow=40
SIV San Ignacio 45.78 133 P P 23 50 25.5 -2.1
SIV San Ignacio 45.78 133 P P 23 50 25.5 -2.1
2.0nm,0.6s,baz=310,slow=7.7,SNR=16
YKA Yellowknife Ar 48.39 348 P P 23 50 48.6 +1.3
YKA Yellowknife Ar 48.39 348 P P 23 50 48.6 +1.3
1.7nm,0.6s,baz=152,slow=7.7,SNR=13
CFAA Coronel Fontan 53.71 152 P P 23 51 27.2 -0.5
CFAA Coronel Fontan 53.71 152 P P 23 51 27.2 -0.5
0.6nm,0.7s,baz=334,slow=9.1,SNR=8.9
CPUP Villa Florida 55.47 139 P P 23 51 37.7 -2.8
CPUP Villa Florida 55.47 139 P P 23 51 37.7 -2.8
0.3nm,0.4s,baz=324,slow=8.7,SNR=3.3
CPUP LR LR 00 13 06.5
comp=Z,66nm,21.3s,baz=353,slow=34
ILAR Eielson Array 59.96 337 P P 23 52 12.6 +1.1
ILAR Eielson Array 59.96 337 P P 23 52 12.6 +1.1
0.9nm,0.9s,baz=134,slow=6.4,SNR=6.8
TRF Thorofare Moun 60.72 335 *e*P P 23 52 19.2 +2.3
5.9nm,1.0s
PLCA Paso Flores 60.79 160 P P 23 52 17.1 -0.4
PLCA Paso Flores 60.79 160 P P 23 52 17.1 -0.4
5.1nm,1.0s,baz=18,slow=10,SNR=5.3
ARCES ARCESS Array B 84.71 18 P P 23 54 37.1 -1.9
ARCES ARCESS Array B 84.71 18 P P 23 54 37.1 -1.9
1.8nm,0.9s,baz=308,slow=4.1,SNR=4.8
HHC Hu-ho-hao-te 118.37 338 *e*PKP **PKPdf** **00 00 51.8 -1.4**
HHC sPKP 00 01 06.0
HHC PP **PP** **00 02 09.6 +1.0**
HHC PKS **PKSdf** **00 04 27.1 -2.9**
HHC SKS **SKSdf** **00 07 58.9 -3.5**
HHC SKKS SKKSac 00 08 59.8 -7.4
HHC Hu-ho-hao-te 118.37 338 SS SS **00 18 20.3 -1.2**
HHC AMB AMB
comp=Z,98nm,6.7s
HHC LR LR
comp=N,210nm,19.9s
HHC LR LR
comp=E,180nm,19.4s
HHC LR LR
comp=Z,180nm,19.4s
HHC Hu-ho-hao-te 118.37 338 *e*PKP **PKPdf** **00 00 51.8 -1.4**
HHC sPKP 00 01 06.0
HHC PP **PP** **00 02 09.6 +1.0**
HHC PKS **PKSdf** **00 04 27.1 -2.9**
HHC SKS **SKSdf** **00 07 58.9 -3.5**
HHC SKKS SKKSac 00 08 59.8 -7.4
HHC SS **SS** **00 18 20.3 -1.2**
HHC AMB AMB
comp=Z,98nm,6.7s
HHC LR LR
comp=Z,180nm,19.4s
WMQ Urumqi 120.23 358 *e*PKP **PKPdf** **00 00 56.4 -0.2**
CD2 Chengdu 130.04 340 *e*P **PKPdf** **00 01 14.8 -1.0**
CD2 Chengdu 130.04 340 *e*PKP **PKPdf** **00 01 14.8 -1.0**
WRA Warramunga Arr 133.79 258 PKP **PKPdf** **00 01 22.5 -0.5**
WRA Warramunga Arr 133.79 258 PKP **PKPdf** **00 01 22.5 -0.5**
comp=Z,0.3nm,1.0s,baz=89,slow=2.7,SNR=2.7

GUC 20 23:43:30.2±0.8, 32°32S×71°79W, h25km±5km, MD3.6, ML2.6, 7D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.50**	**29**	⇓*i*P	Pb	23 43 40.1	-0.3
CHNG				*i* S	Sb	23 43 48.0	+0.8
CHNG				AML	AML	23 43 48.5	
	comp=E,214nm,0.2s						
JACH	**Jahuel**	**1.07**	**110**	⇓*i*P	Pn	23 43 49.1	-0.6
JACH				*i* S	Sb	23 44 03.6	-0.3
PEL	**Peldehue**	**1.24**	**132**	⇓*i*P	Pn	23 43 51.8	-0.3
PEL				*i* S	Sb	23 44 08.4	-0.3
PEL				AML	AML	23 44 10.2	
	comp=E,273nm,0.3s						
CMCH	**Combarbala**	**1.32**	**31**	⇓*i*P	Pn	23 43 52.8	-0.4
CMCH				*i* S	Sn	23 44 10.4	+0.3
CMCH				AML	AML	23 44 20.2	
	comp=E,510nm,0.7s						
TACH	**Talagante**	**1.51**	**152**	⇓*i*P	Pn	23 43 56.1	+0.4
TACH				*i* S	Sn	23 44 15.2	+0.6
PCH	**Pirque**	**1.68**	**141**	*e*P	Pn	23 43 58.8	+0.7
CHCH	**Chadas Angostu**	**1.87**	**150**	⇓*i*P	Pn	23 44 02.2	+1.5
CHCH				*e*S	Sb	23 44 25.9	-0.9
LMEL	**Las Melosas**	**2.02**	**139**	⇓*i*P	Pn	23 44 04.0	+1.0
LMEL				*i* S	Sb	23 44 30.6	-0.8
LMEL				AML	AML	23 44 34.4	
	comp=N,75nm,0.2s						

*IDC **20** 23:56:44.0±2.5, 36°04N×9°68E, h0km, mb3.6/1, mb1 3.7/3, mb1mx3.4/30, mbtmp3.6/3, ML4.0/2, MS2.6/1, Ms1 2.6/1, ms1mx1.9/35, Error ellipse: s-maj=42.7km s-min=16.1km az=127.0*
*CSEM **20** 23:56:50.7±0.3, 36°07N×8°97E, h5km, MD3.4, Error ellipse: s-maj=9.9km s-min=7.9km az=13.0*
*TUN **20** 23:56:51.8, 35°99N×9°20E, h6km, MD3.4*
*CRAAG **20** 23:57:08.7, 36°42N×7°31E, Ml2.9*

ISC 20 23:56:48.7±0.8, 35°91N±0°04×9°03E±0°04, h10km, n41, σ1§71/43, Tunisia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEST	**Kesra**	**0.31**	**125**	Pg	**Pg**	**23 56 52.4**	**-2.6**
	298nm,0.3s,baz=276,slow=5.0						
KEST				Lg	Lg	23 56 57.0	
	baz=151,slow=12						
KRIT	**Krib**	**0.43**	**5**	*i* P	**Pb**	**23 56 59.0**	**+0.6**
BLIT	**Baltah**	**0.80**	**356**	*i* P	**Pn**	**23 57 07.8**	**+1.7**
GHAT	**Ghardimaou**	**0.83**	**315**	*i* P	**Pn**	**23 57 08.6**	**+2.2**
ZGN	**Zaghouan**	**0.98**	**62**	*i* P	**Pn**	**23 57 07.3**	**-1.2**
SYA	**Sidi Yaiche**	**1.18**	**189**	*i* P	Pg	23 57 16.3	+5.0
ABSA	**Djebel Ababsia**	**1.31**	**287**	P	**Pn**	**23 57 13.3**	**+0.2**
ABSA	**Djebel Ababsia**	**1.31**	**287**	P	**Pn**	**23 57 13.3**	**+0.2**
KCHT	**Kechabta**	**1.40**	**31**	*i* P	**Pg**	**23 57 15.9**	**+0.3**
OAR	**Oum El Arais**	**1.47**	**201**	*i* P	Pg	23 57 21.7	+4.8
CMAH	**Djebel Manchou**	**1.48**	**299**	P	**Pn**	**23 57 14.8**	**-0.7**
CMAH	**Djebel Manchou**	**1.48**	**299**	P	**Pn**	**23 57 14.8**	**-0.7**
MBZ	**Menzel Bouzelf**	**1.53**	**59**	*i* P	**Pg**	**23 57 18.4**	**+0.4**
BERT	**Berda**	**1.67**	**181**	*i* P	**Pg**	**23 57 22.7**	**+2.1**
CKFL	**Kef-Lekhel**	**1.93**	**285**	P	**Pn**	**23 57 21.5**	**-0.2**
CKFL	**Kef-Lekhel**	**1.93**	**285**	P	**Pn**	**23 57 21.5**	**-0.2**
MEDT	**Meda**	**1.94**	**158**	*i* P	**Pn**	**23 57 21.5**	**-0.2**
CASM	**Ain Smara**	**2.09**	**280**	P	**Pn**	**23 57 23.7**	**-0.1**
CASM	**Ain Smara**	**2.09**	**280**	P	**Pn**	**23 57 23.7**	**-0.1**
SGNT	**Sidi Gnaou**	**2.35**	**163**	*i* P	**Pb**	**23 57 30.5**	**-0.5**
MART	**Mareth**	**2.53**	**156**	*i* P	Pn	23 57 25.5	-4.3
DFRA	**Djebel Bou Aff**	**2.63**	**285**	P	**Pn**	**23 57 31.6**	**+0.3**
DFRA	**Djebel Bou Aff**	**2.63**	**285**	P	**Pn**	**23 57 31.6**	**+0.3**
SET	**Setif**	**2.96**	**277**	P	**Pb**	**23 57 40.0**	**-1.5**
SET	**Setif**	**2.96**	**277**	P	**Pb**	**23 57 40.0**	**-1.5**
ETOS	**Mallorca**	**6.25**	**310**	P	**Pn**	**23 58 21.2**	**+0.3**
	1.5nm,0.2s,SNR=6.2						
ETOS				S	**Sn**	**23 59 28.6**	**-3.8**
	1.1nm,0.3s,SNR=7.9						
EBEN	**Beniarda**	**7.88**	**293**	P	**Pn**	**23 58 46.6**	**+3.2**
	0.5nm,0.3s,SNR=7.9						
EBEN				S	**Sn**	**00 00 11.1**	**-1.7**
	1.0nm,0.5s,SNR=7.9						
EMUR	**La Murta**	**8.45**	**286**	P	**Pn**	**23 58 53.9**	**+2.7**
	1.0nm,0.3s,SNR=7.9						
CLLI	**Llivia**	**8.54**	**322**	P	**Pn**	**23 58 51.6**	**-0.9**
	0.4nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**8.71**	**304**	P	**Pn**	**23 58 55.8**	**+1.0**
	0.5nm,0.2s,SNR=6.4						
EMOS				S	**Sn**	**00 00 29.9**	**-3.2**
	0.2nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**8.86**	**291**	P	**Pn**	**23 58 59.8**	**+2.9**
	0.8nm,0.3s,SNR=6.4						
ETOB				S	**Sn**	**00 00 36.5**	**-0.3**
	0.3nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**9.41**	**311**	P	**Pn**	**23 59 04.7**	**+0.3**
	3.0nm,0.1s,SNR=7.9						
EBIE	**Bielsa**	**9.65**	**317**	P	**Pn**	**23 59 07.7**	**-0.1**
	0.7nm,0.3s,SNR=7.9						
EBER	**Berja**	**9.66**	**279**	P	**Pn**	**23 59 08.1**	**+0.2**
	0.9nm,0.3s,SNR=7.5						
EQES	**Quesada**	**9.88**	**285**	P	**Pn**	**23 59 14.0**	**+3.1**
	0.6nm,0.3s,SNR=7.9						
EQES				S	**Sn**	**00 01 01.8**	**-0.1**
	0.1nm,0.2s,SNR=7.9						
ETOR	**Torete**	**9.99**	**303**	P	**Pn**	**23 59 13.6**	**+1.3**
	0.7nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**10.95**	**294**	Pn	**Pn**	**23 59 27.7**	**+2.3**
	0.6nm,0.3s,baz=98,slow=14,SNR=9.1						
ESDC	**Sonseca Array**	**10.95**	**294**	P	**Pn**	**23 59 27.1**	**+1.7**
	1.3nm,0.3s,SNR=6.0						
GUD	**Guadarrama**	**11.39**	**298**	P	**Pn**	**23 59 33.2**	**+1.7**
	1.4nm,0.4s,SNR=6.5						
MDT	**Midelt**	**11.69**	**259**	Pn	**Pn**	**23 59 38.8**	**+3.2**
	0.1nm,0.3s,baz=93,slow=11,SNR=6.2						
MDT				LR	LR	00 03 49.8	
	comp=Z,25nm,18.3s,baz=65,slow=35						
TORD	**Torodi Ar. Bea**	**23.61**	**198**	P	**P**	**00 01 58.8**	**-1.0**
	1.1nm,0.7s,baz=4.1,slow=9.5,SNR=14						

*IDC **21** 00:01:14.7±4.3, 44°10N×88°64E, h34km±34km, mb3.7/7, mb1 3.8/11, mb1mx3.5/33, mbtmp3.6/11, ML3.4/4, MS2.9/2, Ms1 2.9/2, ms1mx2.3/32, Error ellipse: s-maj=54.3km s-min=16.2km az=46.0*
*NNC **21** 00:01:17.6±3.4, 44°43N×87°95E, h0km, mb3.7, mpv3.5, Error ellipse: s-maj=30.2km s-min=21.7km az=83.0*

ISC 21 00:01:15.6±1.0, 44°1N±0°1×88°4E±0°1, h35km, n24, σ1§93/30, mb4.0/8, 15C-9D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MK31	**Makanchi Array**	**5.04**	**304**	Pn	**Pn**	**00 02 30.3**	**+1.7**
	0.9nm,0.1s,baz=122,slow=13,SNR=107						
MK31				Pg		00 02 42.5	
	baz=119,slow=15						
MK31				⇑Sn	**Sn**	**00 03 25.8**	**+0.1**
	44nm,0.8s,baz=120,slow=26,SNR=18						
MK31				⇑Lg	Lg	00 03 45.9	
	37nm,0.8s,baz=120,slow=27,SNR=4.4						
MKAR	**Makanchi Array**	**5.04**	**304**	Pn	**Pn**	**00 02 30.6**	**+2.0**
	1.0nm,0.3s,baz=122,slow=14,SNR=49						
MKAR				Sn	**Sn**	**00 03 28.6**	**+2.9**
	7.4nm,0.3s,baz=120,slow=26,SNR=24						
MKAR				Lg	Lg	00 04 01.9	
	6.9nm,0.3s,baz=119,slow=27,SNR=6.4						
KURBB	**Kurchatov Arra**	**9.32**	**318**	⇑Pn	**Pn**	**00 03 28.4**	**+1.2**
	0.8nm,0.3s						
KURBB				⇓Sn	**Sn**	**00 05 10.0**	**-0.7**
	33nm,0.8s						
KURBB				⇓Lg	Lg	00 06 00.2	
	20nm,0.9s						
KURBB	**Kurchatov Arra**	**9.32**	**318**	Pn	**Pn**	**00 03 27.9**	**+0.7**
	0.2nm,0.3s,baz=133,slow=12,SNR=10						

KURBB					Sn	**Sn**	**00 05 08.9**	**-1.8**
	0.2nm,0.3s,baz=125,slow=25,SNR=4.0							
KURBB					Lg	Lg	00 06 15.9	
	baz=131,slow=30,SNR=3.3							
KURK	**Kurchatov**	**9.34**	**318**	⇑	Pn	**Pn**	**00 03 27.7**	**+0.2**
	0.5nm,0.3s							
KURK					⇓Sn	**Sn**	**00 05 10.1**	**-1.0**
	8.9nm,0.8s							
KURK					Lg	Lg	00 06 00.3	
TKM2	**Tokmak 2**	**9.35**	**267**	⇓	Pn	Pn	00 03 31.5	+3.6
	2.5nm,0.8s							
TKM2					⇓Lg	Lg	00 06 07.4	
	5.2nm,0.7s							
ZALV	**Zalesovo Beam**	**10.12**	**348**		Pn	**Pn**	**00 03 39.5**	**+1.3**
	0.4nm,0.3s,baz=169,slow=8.5,SNR=4.7							
ZALV					Sn	**Sn**	**00 05 30.5**	**+0.2**
	2.8nm,0.3s,baz=165,slow=26,SNR=18							
KK31	**Karatay Array**	**12.98**	**272**	⇑	Pn	**Pn**	**00 04 19.3**	**+1.9**
	0.6nm,0.6s,baz=71,slow=12,SNR=6.7							
KK31					⇓Lg	Lg	00 08 00.5	
	1.2nm,0.7s,baz=70,slow=27,SNR=3.7							
SONM	**Songino Array**	**13.09**	**67**		Lg	Lg	00 08 08.0	
	baz=270,slow=33,SNR=2.4							
VOSK	**Vostochnaya**	**14.37**	**313**	⇑	Pn	**Pn**	**00 04 37.4**	**+1.0**
	2.1nm,1.1s							
VOSK					⇑Sn	**Sn**	**00 07 10.5**	**-3.8**
	2.5nm,0.6s							
VOSK					⇑Lg	Lg	00 08 39.8	
	5.8nm,0.9s							
BVA0	**Borovoye Array**	**14.83**	**313**		Pn	**Pn**	**00 04 42.9**	**+0.4**
	1.6nm,0.9s,baz=116,slow=13,SNR=4.1							
BVA0					⇑Sn	**Sn**	**00 07 22.3**	**-3.3**
	1.3nm,0.5s,baz=111,slow=25,SNR=4.6							
BVA0					⇑Lg	Lg	00 08 55.4	
	9.6nm,1.2s,baz=121,slow=29							
BVAR	**Borovoye Array**	**14.83**	**313**		Pn	**Pn**	**00 04 41.9**	**-0.6**
	0.2nm,0.3s,baz=112,slow=14,SNR=3.4							
BVAR					Sn	Sn	00 07 18.6	-6.9
	0.8nm,0.3s,baz=112,slow=19,SNR=8.2							
BVAR					LR	LR	00 11 05.9	
	comp=Z,33nm,19.5s,baz=108,slow=39							
BRVK	**Borovoye**	**14.91**	**313**	⇑	Pn	**Pn**	**00 04 43.7**	**+0.2**
	2.8nm,1.1s							
BRVK					⇑Sn	**Sn**	**00 07 23.2**	**-4.1**
	3.2nm,0.5s							
BRVK					⇑Lg	Lg	00 08 57.0	
	5.0nm,0.7s							
ZRNK	**Zerenda**	**15.54**	**312**	⇑	Pn	**Pn**	**00 04 53.0**	**+1.2**
	3.0nm,1.2s							
ZRNK					⇓Sn	**Sn**	**00 07 38.0**	**-4.6**
	1.1nm,0.5s							
ZRNK					⇑Lg	Lg	00 09 17.2	
	4.5nm,1.2s							
AB31	**Akbulak array**	**20.10**	**295**	⇓	Pn	**P**	**00 05 45.7**	**-0.3**
	0.3nm,0.4s							
AKTO	**Aktyubinsk**	**21.44**	**298**	⇓	Pn	P	00 06 06.1	+5.7
	1.1nm,0.7s							
FINES	**FINESS Array B**	**39.71**	**318**		P	**P**	**00 08 44.7**	**+0.7**
	4.2nm,1.1s,baz=120,slow=8.2,SNR=4.1							
PETK	**Petropavlovsk-**	**45.04**	**53**		LR	LR	00 30 02.8	
	comp=Z,15nm,18.5s,baz=269,slow=38							
NOA	**NORSAR Array B**	**46.85**	**319**		P	**P**	**00 09 42.0**	**+0.2**
	1.2nm,1.0s,baz=74,slow=7.9,SNR=4.7							
EKA	**Eskdalemuir Ar**	**56.06**	**318**		P	**P**	**00 10 50.6**	**0.0**
	0.8nm,0.6s,baz=53,slow=7.2,SNR=4.4							
ESDC	**Sonseca Array**	**65.26**	**302**		P	**P**	**00 11 53.7**	**+0.1**
	0.2nm,0.4s,baz=54,slow=5.5,SNR=3.6							
FITZ	**Fitzroy Crossi**	**70.67**	**142**		P	**P**	**00 12 26.2**	**-1.5**
	1.1nm,0.6s,baz=0.0,slow=9.1,SNR=3.1							
WRA	**Warramunga Arr**	**76.36**	**136**		P	**P**	**00 12 59.7**	**-1.5**
	1.5nm,0.6s,baz=339,slow=6.3,SNR=32							
ASAR	**Alice Springs**	**79.30**	**138**		P	**P**	**00 13 16.1**	**-1.3**
	1.1nm,0.5s,baz=332,slow=5.7,SNR=28							

IDC ***21*** *00:06:05.5±0.8,24˚.06N×127˚.07E,h0km,mb4.0/15, mb1 4.2/17,mb1mx4.0/29,mbtmp4.0/17,ML3.3/2,MS3.4/10, Ms1 3.4/10,ms1mx2.9/50,Error ellipse: s-maj=27.8km s-min=16.2km az=77.0*

MOS ***21*** *00:06:08.7±0.8,24˚.08N×127˚.11E,h33km,mb4.7/14,Error ellipse: s-maj=18.0km s-min=8.5km az=117.9*

ISCJB ***21*** *00:06:09.0±0.4,24˚.15N±0˚.04×126˚.92E±0˚.03,h34km, mb4.2/28,MS3.5/10,Error ellipse: s-maj=6.2km s-min=3.3km az=151.2*

JMA ***21*** *00:06:09.0±0.5,24˚.21N×126˚.92E,h94km,M3.4*

NEIC ***21*** *00:06:11.7±0.7,24˚.08N×126˚.91E,h45km,mb4.3/5,Error ellipse: s-maj=14.5km s-min=10.9km az=134.0*

ISC 21 00:06:11.1±0.7,24˚.13N±0˚.07×126˚.95E±0˚.05,h34km,n91, σ1$54/97,mb4.3/28,MS3.6/10,1D,Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**1.54**	**294**	P	**Pn**	**00 06 35.4**	**-0.7**
JOGS				*e*S	**Sn**	**00 06 54.1**	**-0.8**
JMJ	**Miyako jima 2**	**1.65**	**295**	P	**Pn**	**00 06 36.1**	**-1.6**
JMJ				*e*S	**Sn**	**00 06 57.4**	**-0.4**
JTJ	**Tarama**	**2.11**	**284**	P	**Pn**	**00 06 42.6**	**-1.4**
JTJ				*e*S	**Sn**	**00 07 06.9**	**-2.1**
JJT2	**Tamagusuku 2**	**2.13**	**20**	P	**Pn**	**00 06 42.2**	**-2.1**
JJT2				*e*S	**Sn**	**00 07 08.5**	**-1.0**
JKE	**Kume jima 2**	**2.19**	**356**	P	**Pn**	**00 06 43.8**	**-1.3**
JKE				*e*S	**Sn**	**00 07 09.2**	**-1.9**
JAGN	**Aguni-jima**	**2.46**	**6**	P	**Pn**	**00 06 47.4**	**-1.5**
JAGN				*e*S	**Sn**	**00 07 14.1**	**-3.7**
JIJ	**Ishigaki jima**	**2.57**	**276**	P	**Pn**	**00 06 48.2**	**-2.1**
JIJ				*e*S	Sn	00 07 16.0	-4.4
JKRS	**Kuro-shima**	**2.68**	**273**	P	**Pn**	**00 06 50.7**	**-1.2**
JKRS				*e*S	**Sn**	**00 07 19.9**	**-3.3**
HATJ	**Hateruma jima**	**2.87**	**269**	P	**Pn**	**00 06 52.7**	**-1.8**
HATJ				*e*S	**Sn**	**00 07 24.1**	**-3.8**
IRIF	**Iriomote-Funau**	**2.94**	**275**	P	**Pn**	**00 06 54.1**	**-1.4**
IRIF				*e*S	**Sn**	**00 07 27.9**	**-1.7**
JOW	**Kunigami**	**2.95**	**24**	*e*Pn	**Pn**	**00 06 53.9**	**-1.6**
JOW	**Kunigami**	**2.95**	**24**	P	**Pn**	**00 06 54.3**	**-1.2**
JIH	**Iheya**	**3.04**	**17**	P	**Pn**	**00 06 55.0**	**-1.8**
JIH				*e*S	**Sn**	**00 07 28.3**	**-3.6**
YOJ	**Yonaguni jima**	**3.60**	**276**	P	**Pn**	**00 07 03.2**	**-1.4**
YOJ				*e*S	**Sn**	**00 07 42.2**	**-3.8**
JTK	**Tokunoshima**	**4.06**	**26**	P	**Pn**	**00 07 09.2**	**-1.7**
JTK				*e*S	**Sn**	**00 07 53.4**	**-3.9**
JMZ	**Minamidaito 2**	**4.23**	**66**	P	Pn	00 07 09.6	-3.6
JMZ				*e*S	Sn	00 07 54.4	-7.0
JAMN	**Amaminishikomi**	**4.56**	**26**	P	**Pn**	**00 07 16.5**	**-1.2**
JAMN				*e*S	**Sn**	**00 08 06.4**	**-3.1**
JAM	**Amami Oshima**	**4.89**	**29**	P	**Pn**	**00 07 20.5**	**-1.7**
NACB	**Ninganchiao**	**4.89**	**272**	*e*Pn	Pn	00 07 19.5	-2.8
TATO	**Taipei**	**5.04**	**281**	*e*Pn	**Pn**	**00 07 24.0**	**-0.3**
YULB	**Yu-li**	**5.23**	**263**	*e*Pn	Pn	00 07 23.5	-3.5
	35nm,0.8s						
YULB				*e*Sn	Sn	00 08 20.9	-5.2
SSLB	**Suanglung**	**5.49**	**268**	*e*Pn	**Pn**	**00 07 29.6**	**-1.0**
SSLB				*e*Sn	**Sn**	**00 08 32.2**	**-0.4**
TPUB	**Ta-pu**	**5.85**	**263**	*e*Pn	**Pn**	**00 07 33.5**	**-1.9**
	83nm,0.8s						
TPUB				*e*Sn	**Sn**	**00 08 38.2**	**-3.2**
JNU	**Nakatsue**	**9.60**	**20**	*e*Pn	**Pn**	**00 08 25.4**	**-1.5**
JNU	**Nakatsue**	**9.60**	**20**	Pn	**Pn**	**00 08 25.3**	**-1.7**
	0.4nm,0.3s,baz=180,slow=11,SNR=9.1						
KSAR	**Wonju Array Be**	**13.29**	**3**	Pn	**Pn**	**00 09 17.4**	**0.0**
KSRS	**Korea Array**	**13.31**	**3**	Pn	**Pn**	**00 09 17.4**	**-0.1**
	0.1nm,0.3s,baz=180,slow=14,SNR=7.6						
KSRS				LR	LR	00 15 13.2	
	comp=Z,104nm,18.1s,baz=348,slow=41						
MJAR	**Matsushiro Arr**	**15.72**	**35**	Pn	**P**	**00 09 56.8**	**+3.2**
MJAR	**Matsushiro Arr**	**15.72**	**35**	Pn	**P**	**00 09 56.8**	**+3.2**
	0.1nm,0.3s,baz=211,slow=12,SNR=5.6						
USRK	**Ussuriysk Arra**	**20.44**	**10**	P	Pn	00 10 46.5	-1.2
	3.8nm,0.9s,baz=199,slow=12,SNR=6.3						
ASAJ	**Asahikawa**	**23.70**	**29**	LR	LR	00 20 46.7	
	comp=Z,20nm,18.4s,baz=170,slow=37						
YSS	**Yuzh-Sakhalins**	**26.06**	**25**	*e*P	P	00 11 46.5	+5.3
CHTO	**Chiang Mai**	**26.57**	**264**	*e*P	**P**	**00 11 46.5**	**+0.3**
CHTO	**Chiang Mai**	**26.57**	**264**	*e*P	**P**	**00 11 46.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**26.67**	**263**	P	**P**	**00 11 47.8**	**+0.7**
CMAR	**Chiang Mai Arr**	**26.67**	**263**	P	**P**	**00 11 47.8**	**+0.7**
	2.1nm,0.8s,baz=61,slow=8.2,SNR=9.9						
ULN	**Ulaanbaatar**	**28.47**	**331**	*e*P	**P**	**00 12 04.1**	**+0.9**
	4.5nm,1.0s						
SONM	**Songino Array**	**28.74**	**331**	P	**P**	**00 12 06.5**	**+1.0**
SONM	**Songino Array**	**28.74**	**331**	P	**P**	**00 12 06.5**	**+1.0**
	3.2nm,0.8s,baz=141,slow=9.3,SNR=9.1						
SONM				LR	LR	00 25 24.5	
	comp=Z,98nm,18.2s,baz=41,slow=40						
YAK	**Yakutsk**	**37.93**	**2**	*e*P	**P**	**00 13 25.3**	**+0.3**
YAK				pmax	pmax		
	comp=Z,11nm,1.0s						
MK31	**Makanchi Array**	**42.10**	**314**	*e*P	**P**	**00 14 00.5**	**+0.5**
MK31	**Makanchi Array**	**42.10**	**314**	*e*P	**P**	**00 14 00.5**	**+0.5**
MKAR	**Makanchi Array**	**42.10**	**314**	P	**P**	**00 14 00.6**	**+0.6**
MKAR	**Makanchi Array**	**42.10**	**314**	P	**P**	**00 14 00.6**	**+0.6**
MKAR	**Makanchi Array**	**42.10**	**314**	P	**P**	**00 14 00.6**	**+0.6**
	comp=Z,1.7nm,0.6s,baz=98,slow=10.0,SNR=22						
MKAR				LR	LR	00 32 20.9	
	comp=Z,22nm,20.8s,baz=179,slow=37						
ZALV	**Zalesovo Beam**	**43.24**	**325**	*i* P	**P**	**00 14 08.6**	**-0.4**
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZALV	**Zalesovo Beam**	**43.24**	**325**	P	**P**	**00 14 08.4**	**-0.7**
ZALV	**Zalesovo Beam**	**43.24**	**325**	P	**P**	**00 14 08.4**	**-0.7**
	comp=Z,1.5nm,0.5s,baz=110,slow=8.6,SNR=10						
ZALV				LR	LR	00 33 39.7	
	comp=Z,48nm,19.8s,baz=249,slow=38						
WRAB	**Tennant Creek**	**44.39**	**170**	*e*P	**P**	**00 14 17.4**	**-1.2**
WRAB	**Tennant Creek**	**44.39**	**170**	*e*P	**P**	**00 14 17.4**	**-1.2**
WRA	**Warramunga Arr**	**44.40**	**170**	P	**P**	**00 14 17.2**	**-1.4**
WRA	**Warramunga Arr**	**44.40**	**170**	P	**P**	**00 14 17.2**	**-1.4**
	comp=Z,4.2nm,0.9s,baz=352,slow=8.6,SNR=19						
KURK	**Kurchatov**	**45.57**	**318**	*e*P	**P**	**00 14 27.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURK	**Kurchatov**	**45.57**	**318**	*e*P	**P**	**00 14 27.5**	**-0.2**
	comp=Z,5.5nm,1.0s						
KURBB	**Kurchatov Arra**	**45.60**	**318**	P	**P**	**00 14 28.3**	**+0.4**
	comp=Z,2.7nm,0.8s,baz=107,slow=8.1,SNR=22						
TKM2	**Tokmak 2**	**45.97**	**307**	*e*P	**P**	**00 14 32.7**	**+1.5**
TKM2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TKM2	**Tokmak 2**	**45.97**	**307**	*e*P	**P**	**00 14 32.7**	**+1.5**
	comp=Z,7.0nm,1.0s						
AAK	**Ala-Archa**	**46.74**	**307**	*e*P	**P**	**00 14 39.5**	**+2.2**
AAK				pmax	pmax		
	comp=Z,18nm,2.5s						
ASAR	**Alice Springs**	**47.99**	**171**	P	**P**	**00 14 45.9**	**-1.0**
ASAR	**Alice Springs**	**47.99**	**171**	P	**P**	**00 14 45.9**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=358,slow=7.4,SNR=9.0						
KKAR	**Karatay Array**	**49.70**	**307**	*e*P	**P**	**00 15 00.9**	**+1.0**
KKAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KKAR	**Karatay Array**	**49.70**	**307**	*e*P	**P**	**00 15 00.9**	**+1.0**
	comp=Z,2.1nm,1.0s						
BILL	**Bilibino**	**50.02**	**18**	*e*P	**P**	**00 15 01.4**	**-0.5**
BILL				*i*		00 16 21.8	
BILL				*i*		00 16 58.8	
BILL				pmax	pmax		
	comp=Z,12nm,1.0s						
BVAR	**Borovoye Array**	**51.09**	**320**	P	**P**	**00 15 10.8**	**+0.6**
BVAR	**Borovoye Array**	**51.09**	**320**	P	**P**	**00 15 10.8**	**+0.6**
BVAR	**Borovoye Array**	**51.09**	**320**	P	**P**	**00 15 10.8**	**+0.6**
	comp=Z,1.7nm,0.7s,baz=111,slow=8.2,SNR=9.7						
BRVK	**Borovoye**	**51.16**	**320**	*e*P	**P**	**00 15 11.9**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SVE	**Sverdlovsk**	**57.22**	**323**	*e*P	**P**	**00 15 55.6**	**+0.8**
SVE				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ABKAR	**Akbulak array**	**57.25**	**314**	*e*P	**P**	**00 15 56.0**	**+0.9**
	comp=Z,5.3nm,0.7s						
ARU	**Arti**	**58.33**	**323**	*d iP*	**P**	**00 16 02.9**	**+0.3**
ARU						00 18 09.7	
ARU				S	**S**	**00 24 03.0**	**+0.4**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AKTO	**Aktyubinsk**	**58.49**	**316**	P	**P**	**00 16 04.7**	**+0.8**
AKTO	**Aktyubinsk**	**58.49**	**316**	P	**P**	**00 16 04.7**	**+0.8**
AKTO	**Aktyubinsk**	**58.49**	**316**	P	**P**	**00 16 04.7**	**+0.8**
	comp=Z,2.5nm,0.8s,baz=110,slow=8.7,SNR=8.4						
KIV	**Kislovodsk**	**69.68**	**310**	*e*P	P	00 17 21.3	+3.7
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,41nm,18.0s						
OBN	**Obninsk**	**70.77**	**323**	*e*P	**P**	**00 17 24.9**	**+1.0**
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ARCES	**ARCESS Array B**	**71.53**	**339**	LR	LR	00 56 01.9	
	comp=Z,39nm,19.6s,baz=70,slow=42						
FINES	**FINESS Array B**	**74.11**	**331**	P	**P**	**00 17 43.2**	**-0.5**
FINES	**FINESS Array B**	**74.11**	**331**	P	**P**	**00 17 43.2**	**-0.5**
	comp=Z,3.0nm,1.0s,baz=50,slow=7.4,SNR=5.7						
BRTR	**Keskin Array B**	**77.40**	**308**	P	**P**	**00 18 03.2**	**+0.1**
BRTR	**Keskin Array B**	**77.40**	**308**	P	**P**	**00 18 03.2**	**+0.1**
	comp=Z,0.9nm,0.9s,baz=79,slow=7.0,SNR=5.2						
NB2	**NORSAR Subarra**	**80.67**	**334**	P	**P**	**00 18 20.2**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=59,slow=5.1						
NOA	**NORSAR Array B**	**80.67**	**334**	P	**P**	**00 18 19.9**	**-0.6**
NOA	**NORSAR Array B**	**80.67**	**334**	P	**P**	**00 18 19.9**	**-0.6**
	comp=Z,0.9nm,0.7s,baz=55,slow=8.0,SNR=4.9						
NOA				LR	LR	00 58 26.9	
	comp=Z,28nm,21.8s,baz=310,slow=39						
YKA	**Yellowknife Ar**	**80.91**	**24**	P	**P**	**00 18 21.4**	**-0.3**
YKA	**Yellowknife Ar**	**80.91**	**24**	P	**P**	**00 18 21.4**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=307,slow=5.1,SNR=5.5						
VRAC	**Vranov**	**84.30**	**322**	LR	LR	00 58 23.1	
	comp=Z,31nm,19.6s,baz=211,slow=37						
CLL	**Collm**	**85.20**	**325**	*i* P	**P**	**00 18 45.4**	**+1.4**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	**Collm**	**85.20**	**325**	*i* P	**P**	**00 18 45.4**	**+1.4**
	comp=Z,4.0nm,1.0s						
GERES	**GERESS Array B**	**86.16**	**323**	P	**P**	**00 18 49.1**	**+0.2**
GERES	**GERESS Array B**	**86.16**	**323**	P	**P**	**00 18 49.1**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=43,slow=3.3,SNR=8.7						
GERES				LR	LR	01 02 59.3	
	comp=Z,25nm,20.2s,baz=277,slow=40						
DAVOX	**Davos/Dischmat**	**89.45**	**322**	LR	LR	01 03 30.8	
	comp=Z,41nm,19.5s,baz=266,slow=38						

IDC 21 00:13:31.2±2.8,23˚.08S×179˚.79W,h0km,mb3.9/4, mb1 4.2/4,mb1mx3.8/19,mbtmp3.9/4,Error ellipse: s-maj=253.3km s-min=31.8km az=164.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**42.37**	**260**	P	P	00 21 27.3	-0.3
	0.4nm,0.5s,baz=93,slow=7.6,SNR=11						
WRA	**Warramunga Arr**	**42.66**	**265**	P	P	00 21 30.3	+0.3
	1.4nm,0.3s,baz=102,slow=8.1,SNR=73						
FITZ	**Fitzroy Crossi**	**51.09**	**265**	P	P	00 22 35.3	-0.6
	1.1nm,0.6s,baz=120,slow=8.1,SNR=5.3						
TXAR	**Lajitas Array**	**89.83**	**58**	P	P	00 26 32.4	0.0
	0.5nm,0.7s,baz=206,slow=7.4,SNR=6.5						

MEX 21 00:37:09.5±0.8,17˚.12N×100˚.82W,h16km±8km,MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.54**	**98**	*i* P	Pg	00 37 18.7	-1.5
CAIG				*i* S	Sg	00 37 24.6	-2.8
ZIIG	**Zihuatanejo**	**0.78**	**308**	*i* P	Pb	00 37 21.9	-2.9
ZIIG				*e*S	Sb	00 37 31.5	-3.6
ARIG	**Puente Sto Nin**	**1.24**	**21**	*e*P	Pn	00 37 28.0	-4.2
ARIG				*i* S	Sb	00 37 43.4	-5.1
MEIG	**Mezcala**	**1.40**	**55**	*i* P	Pn	00 37 31.8	-2.7
MEIG				*i* S	Sn	00 37 48.1	-4.7
YAIG	**Yautepec**	**2.41**	**44**	*i* P	Pn	00 37 45.4	-3.1
YAIG				*e*S	Sn	00 38 12.5	-5.3
PNIG	**Pinotepa**	**2.68**	**105**	*i* P	Pn	00 37 48.9	-3.2
PNIG				*e*S	Sn	00 38 20.4	-3.8

CSEM ***21*** *00:50:23.5±0.2,41˚.17N×20˚.20E,h2km,ML3.4,Error ellipse: s-maj=6.6km s-min=2.9km az=44.0*

TIR ***21*** *00:50:23.6,41˚.19N×20˚.21E,h8km,ML3.4*

BEO ***21*** *00:50:23.9±0.9,41˚.03N×20˚.09E,h7km±3km,ML2.6/7*

PDG ***21*** *00:50:24.7±0.2,41˚.24N×20˚.17E,h11km,ML2.7/9,Error ellipse: s-maj=0.5km s-min=0.5km az=0.0*

THE ***21*** *00:50:24.2,41˚.23N×20˚.23E,h0km±3km,ML2.5/2,Error ellipse: s-maj=3.3km s-min=0.6km az=29.0*

ISC 21 00:50:24.5±1.0,41˚.23N±0˚.02×20˚.20E±0˚.02,h14km±8km, n61,σ1$20/100,8C-10D,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.28**	**296**	*e*PG	**Pg**	**00 50 29.5**	**-0.9**
TIR				*i* SG	**Sb**	**00 50 35.5**	**-0.4**
TIR	**Tirane**	**0.28**	**296**	P	**Pg**	**00 50 29.8**	**-0.6**
TIR				S	**Sb**	**00 50 34.3**	**-1.6**
TIR	**Tirane**	**0.28**	**296**	*e*Sg	**Sb**	**00 50 36.3**	**+0.4**
TIR	**Tirane**	**0.28**	**296**	*e*Pg	**Pg**	**00 50 29.5**	**-0.9**
TIR	**Tirane**	**0.28**	**296**	P	**Pg**	**00 50 29.8**	**-0.6**
TIR				*i* Sg	**Sb**	**00 50 35.5**	**-0.4**
PHP	**Peshkopia**	**0.49**	**22**	*e*PG	**Pb**	**00 50 34.7**	**-0.3**
PHP				*i* SG	**Sb**	**00 50 42.1**	**-0.1**
PHP	**Peshkopia**	**0.49**	**22**	P	**Pg**	**00 50 33.9**	**-0.4**
PHP	**Peshkopia**	**0.49**	**22**	P	**Pg**	**00 50 33.9**	**-0.4**
PHP	**Peshkopia**	**0.49**	**22**	*e*Pg	**Pb**	**00 50 34.7**	**-0.3**
PHP				*i* Sg	**Sb**	**00 50 42.1**	**-0.1**
KBN	**Korca**	**0.75**	**143**	P	**Pg**	**00 50 38.2**	**-0.8**
KBN				S	**Sg**	**00 50 49.6**	**+0.7**
KBN	**Korca**	**0.75**	**143**	P	**Pg**	**00 50 38.2**	**-0.8**
PUK	**Puka**	**0.85**	**344**	*e*PG	**Pn**	**00 50 41.5**	**-0.7**
PUK				*i* SG	**Sn**	**00 50 53.1**	**-1.4**
PUK	**Puka**	**0.85**	**344**	*e*Pg	**Pn**	**00 50 41.5**	**-0.7**
PUK				*i* Sg	**Sn**	**00 50 53.1**	**-1.4**
BIA	**Bitola**	**0.88**	**103**	P	**Pg**	**00 50 39.8**	**-1.6**
BIA	**Bitola**	**0.88**	**103**	*i* Pg	**Pg**	**00 50 39.6**	**-1.8**
BIA				*i* Sg	**Sb**	**00 50 54.3**	**+1.2**
BIA	**Bitola**	**0.88**	**103**	P	**Pg**	**00 50 39.8**	**-1.6**
FNA	**Florina**	**0.99**	**116**	P	**Pg**	**00 50 42.3**	**-1.4**
FNA				S	**Sg**	**00 50 56.8**	**+0.1**
FNA	**Florina**	**0.99**	**116**	P	**Pg**	**00 50 42.3**	**-1.4**
ULC	**Ulcinj**	**1.03**	**316**	⇓ *i* Pg	**Pg**	**00 50 42.9**	**-1.4**
ULC				*e*Sg	**Sn**	**00 50 58.9**	**+0.1**
ULC	**Ulcinj**	**1.03**	**316**	⇓ *i* Pg	**Pg**	**00 50 42.9**	**-1.4**
ULC				*e*Sg	**Sn**	**00 50 58.9**	**+0.1**
NEST	**Nestorio**	**1.04**	**141**	P	**Pb**	**00 50 43.9**	**-0.4**
NEST				S	**Sb**	**00 50 58.6**	**+0.8**
NEST	**Nestorio**	**1.04**	**141**	P	**Pb**	**00 50 43.9**	**-0.4**
NEST				S	**Sb**	**00 50 58.6**	**+0.8**
BCI	**Bajram Curri**	**1.15**	**355**	*e*PG	**Pb**	**00 50 45.3**	**-0.8**
BCI				*i* SG	Sb	00 50 51.7	-9.2
BCI	**Bajram Curri**	**1.15**	**355**	*e*Pg	**Pb**	**00 50 45.3**	**-0.8**
SKO	**Skopje**	**1.19**	**51**	*e*Pn	**Pg**	**00 50 47.6**	**+0.2**
PVY	**Plav**	**1.38**	**353**	⇓ *i* Pg	**Pb**	**00 50 49.9**	**-0.3**
PVY				*e*Sg	**Sg**	**00 51 11.6**	**+2.6**
PVY	**Plav**	**1.38**	**353**	⇓ *i* Pg	**Pb**	**00 50 49.9**	**-0.3**
PVY				*e*Sg	**Sg**	**00 51 11.6**	**+2.6**
PDG	**Podgorica**	**1.40**	**330**	*e*Pn	**Pg**	**00 50 50.6**	**-0.7**
PDG				*e*Sg	**Sg**	**00 51 13.8**	**+4.3**
PDG	**Podgorica**	**1.40**	**330**	⇑ *i* Pg	**Pb**	**00 50 49.8**	**-0.6**
PDG	**Podgorica**	**1.40**	**330**	*e*Pn	**Pg**	**00 50 50.6**	**-0.7**
PDG				*e*Sg	**Sg**	**00 51 12.1**	**+2.6**
TTG	**Podgorica**	**1.40**	**330**	⇑ *i* Pg	**Pb**	**00 50 49.8**	**-0.6**
TTG				*e*Sg	**Sg**	**00 51 12.1**	**+2.6**
BUM	**Brajici-Budva**	**1.45**	**318**	*e*Pg	**Pb**	**00 50 51.0**	**-0.4**
BUM				*e*Sg	**Sg**	**00 51 12.8**	**+1.5**
BUM	**Brajici-Budva**	**1.45**	**318**	*e*Pg	**Pb**	**00 50 51.0**	**-0.4**
BUM				*e*Sg	**Sg**	**00 51 12.8**	**+1.5**
BEY	**Berane**	**1.66**	**352**	*e*Pn	**Pb**	**00 50 54.2**	**-0.8**
BEY				*e*Sn	**Sg**	**00 51 18.8**	**+0.8**
IVA	**Berane**	**1.66**	**352**	*e*Pn	**Pb**	**00 50 54.2**	**-0.8**
IVA				*e*Sn	**Sg**	**00 51 18.8**	**+0.8**
GRG	**Griva**	**1.69**	**98**	P	**Pn**	**00 50 54.3**	**+0.7**
GRG	**Griva**	**1.69**	**98**	P	**Pn**	**00 50 54.3**	**+0.7**
HCY	**Herceg Novi**	**

AYDN				*i*	S		**Sn**	**00 52 35.1**	**+0.1**
DENT	**Denizli**	**2.49**	**9**	*e*	PN		**Pn**	**00 52 07.5**	**+0.3**
DENT	**Denizli**	**2.49**	**9**	*e*	PN		**Pn**	**00 52 07.5**	**+0.3**
LAST	**Lasithi**	**2.53**	**268**	*e*	PN		**Pb**	**00 52 11.7**	**-2.0**
LAST	**Lasithi**	**2.53**	**268**	*e*	PN		**Pb**	**00 52 11.7**	**-2.0**
GCAM	**G?zelcaml?**	**2.63**	**336**	*i*	P		**Pn**	**00 52 09.9**	**+0.8**
GCAM	**G?zelcaml?**	**2.63**	**336**	*i*	P		**Pn**	**00 52 09.9**	**+0.8**
BCK	**Bucak**	**2.71**	**36**	*e*	PN		**Pn**	**00 52 11.0**	**+0.7**
BCK	**Bucak**	**2.71**	**36**	*e*	PN		**Pn**	**00 52 11.0**	**+0.7**
IDI	**Anoyia**	**3.01**	**271**	*e*	PN		Pn	00 52 17.8	+3.5
IDI	**Anoyia**	**3.01**	**271**	*e*	PN		Pn	00 52 17.8	+3.5
APE	**Apeiranthos**	**3.03**	**307**	*e*	PN		**Pn**	**00 52 14.9**	**+0.3**
APE	**Apeiranthos**	**3.03**	**307**	*e*	PN		**Pn**	**00 52 14.9**	**+0.3**
KHL	**Karahalli**	**3.12**	**14**	*e*	PN		**Pn**	**00 52 16.6**	**+0.6**
KHL	**Karahalli**	**3.12**	**14**	*e*	Pn		**Pn**	**00 52 16.6**	**+0.6**
GAZI	**Gazipasa**	**3.19**	**72**	*i*	P		**Pn**	**00 52 18.0**	**+1.1**
GAZI				*i*	S		**Sn**	**00 52 49.3**	**-4.5**
GAZI	**Gazipasa**	**3.19**	**72**	*i*	P		**Pn**	**00 52 18.0**	**+1.1**
KULA	**Kula-Manisa**	**3.22**	**1**	*e*	PN		**Pn**	**00 52 17.8**	**+0.5**
KULA	**Kula-Manisa**	**3.22**	**1**	*e*	PN		**Pn**	**00 52 17.8**	**+0.5**
IZM	**Izmir**	**3.27**	**342**	*e*	PN		**Pn**	**00 52 18.4**	**+0.4**
IZM	**Izmir**	**3.27**	**342**	*e*	PN		**Pn**	**00 52 18.4**	**+0.4**
BLCB	**Balcova**	**3.32**	**339**	*e*	PN		**Pn**	**00 52 18.9**	**+0.3**
BLCB	**Balcova**	**3.32**	**339**	*e*	PN		**Pn**	**00 52 18.9**	**+0.3**
LEF	**Lefka**	**3.55**	**92**	*e*	PN		**Pn**	**00 52 22.4**	**+0.7**
LEF	**Lefka**	**3.55**	**92**	*e*	PN		**Pn**	**00 52 22.4**	**+0.7**
SHUT	**Suhut-Afyon**	**3.62**	**25**	*e*	PN		**Pn**	**00 52 23.9**	**+1.0**
SHUT	**Suhut-Afyon**	**3.62**	**25**	*e*	PN		**Pn**	**00 52 23.9**	**+1.0**
ERMK	**Ermenek**	**3.78**	**68**	*i*	P		Pn	00 52 28.4	+3.3
ERMK	**Ermenek**	**3.78**	**68**	*i*	P		Pn	00 52 28.4	+3.3
CSS	**Prodhromos**	**3.92**	**93**	*e*	PN		**Pn**	**00 52 28.5**	**+1.6**
CSS	**Prodhromos**	**3.92**	**93**	*e*	PN		**Pn**	**00 52 28.5**	**+1.6**
ALT	**Altintas**	**3.96**	**18**	*e*	PN		**Pn**	**00 52 28.4**	**+1.0**
ALT	**Altintas**	**3.96**	**18**	*e*	PN		**Pn**	**00 52 28.4**	**+1.0**
KONT	**Konya--Tatoy**	**4.04**	**48**	*e*	PN		**Pn**	**00 52 30.0**	**+1.5**
KONT	**Konya--Tatoy**	**4.04**	**48**	*e*	PN		**Pn**	**00 52 30.0**	**+1.5**
LFK	**Lefkose**	**4.06**	**89**	*e*	PN		**Pn**	**00 52 30.2**	**+1.3**
LFK	**Lefkose**	**4.06**	**89**	*e*	PN		**Pn**	**00 52 30.2**	**+1.3**
LADK	**Ladik-KONYA**	**4.21**	**45**	*e*	PN		**Pn**	**00 52 32.5**	**+1.6**
LADK	**Ladik-KONYA**	**4.21**	**45**	*e*	Pn		**Pn**	**00 52 32.6**	**+1.6**
TVSB	**Tavsanli**	**4.21**	**10**	*e*	PN		**Pn**	**00 52 31.4**	**+0.4**
TVSB	**Tavsanli**	**4.21**	**10**	*e*	Pn		**Pn**	**00 52 31.4**	**+0.4**
HMAT	**Matruh**	**4.36**	**197**	S			**Sn**	**00 53 20.6**	**-2.1**
SLUM		**4.71**	**217**	P			**Pn**	**00 52 40.4**	**+2.7**
GONE	**Gonen-Balikesi**	**4.80**	**352**	*e*	PN		**Pn**	**00 52 39.0**	**+0.1**
GONE	**Gonen-Balikesi**	**4.80**	**352**	*e*	Pn		**Pn**	**00 52 39.0**	**+0.1**
AMAG	**Maghara**	**6.06**	**139**	P			**Pn**	**00 52 56.7**	**+0.4**
RSH		**6.11**	**134**	P			**Pn**	**00 52 57.6**	**+0.6**
GLL	**Jalalah**	**6.29**	**154**	P			**Pn**	**00 53 00.9**	**+1.5**
HKAT	**Jabal Katrina**	**8.17**	**144**	P			**Pn**	**00 53 26.3**	**+0.9**

*MAN **21** 00:53:20, 4.˚81N×126.˚58E, h23km, mb4.4, ML3.3, MS3.2*
*ISCJB **21** 00:53:28.5±0.7, 5.˚38N±0.˚10×126.˚9E±0.˚2, h84km, mb3.5/7, Error ellipse: s-maj=30.8km s-min=7.7km az=156.8*
*IDC **21** 00:53:33.0±1.7, 5.˚24N×126.˚34E, h116km±16km, mb3.2/7, mb1 3.4/7, mb1mx3.2/24, mbtmp3.2/7, MS3.4/3, Ms1 3.4/3, ms1mx3.0/14, Error ellipse: s-maj=55.4km s-min=14.5km az=77.0*

ISC 21 00:53:29.8±0.9, 5.˚4N±0.˚1×126.˚8E±0.˚2, h84km, n13, σ2^{2}8/12, mb3.3/7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
MATI	**Mati**	**1.65**	**341**	*e*	P	**Pn**	**00 53 55.2**	**-2.1**
MATI				*e*	S	**Sn**	**00 54 16.6**	**-1.4**
DAV	**Davao City (W)**	**2.08**	**324**	P		Pn	00 54 05.3	+2.5
	43nm,0.3s,baz=111,slow=14,SNR=3.4							
DAV				S		**Sn**	**00 54 31.7**	**+3.7**
	30nm,0.3s,baz=287,slow=21,SNR=6.0							
BUKP	**Musuan**	**3.03**	**325**	*e*	P	**Pn**	**00 54 12.7**	**-3.0**
BUKP				*e*	S	**Sn**	**00 54 53.5**	**+2.5**
CTBH	**Cotabato--PC H**	**3.13**	**306**	⇑*i*	P	Pn	00 54 11.7	-5.3
FITZ	**Fitzroy Crossi**	**23.36**	**183**	P		**P**	**00 58 31.8**	**+0.8**
	1.0nm,0.7s,baz=0.0,slow=8.1,SNR=2.9							
PMG	**Port Moresby**	**25.05**	**126**	LR		LR	01 10 04.4	
	comp=Z,54nm,19.1s,baz=163,slow=39							
WRA	**Warramunga Arr**	**26.23**	**164**	P		**P**	**00 58 55.8**	**-1.3**
	0.5nm,0.6s,baz=344,slow=10.0,SNR=5.4							
JNU	**Nakatsue**	**27.86**		LR		LR	01 09 45.2	
	comp=Z,96nm,18.2s,baz=160,slow=35							
ASAR	**Alice Springs**	**29.69**	**167**	P		**P**	**00 59 28.4**	**+0.5**
	0.4nm,0.7s,baz=345,slow=7.7,SNR=6.5							
ASAR				LR		LR	01 13 20.3	
	comp=Z,60nm,18.1s,baz=346,slow=40							
USRK	**Ussuriysk Arra**	**38.94**	**6**	P		**P**	**01 00 49.5**	**+2.1**
	1.6nm,0.6s,baz=191,slow=7.1,SNR=5.0							
SONM	**Songino Array**	**45.77**	**341**	P		**P**	**01 01 43.0**	**-0.1**
	1.0nm,0.7s,baz=142,slow=7.3,SNR=4.0							
MKAR	**Makanchi Array**	**56.26**	**325**	P		**P**	**01 02 59.7**	**-1.9**
	0.7nm,0.7s,baz=127,slow=7.4,SNR=9.0							
ILAR	**Eielson Array**	**83.59**	**25**	P		**P**	**01 05 50.0**	**+1.4**
	0.2nm,0.6s,baz=260,slow=5.3,SNR=4.2							

IDC 21 00:53:33.8±1.9, 52.˚89S×46.˚26W, h0km, mb3.9/4, mb1 4.0/4, mb1mx3.8/15, mbtmp4.0/4, MS3.6/1, Ms1 3.5/1, ms1mx3.1/20, Error ellipse: s-maj=66.8km s-min=31.0km az=28.0, South Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
PLCA	**Paso Flores**	**20.48**	**297**	P		P	00 58 13.2	+0.1
	3.5nm,1.0s,baz=159,slow=7.3,SNR=4.2							
BDFB	**Brasilia**	**37.19**	**357**	P		P	01 00 45.5	-1.2
	0.7nm,0.4s,baz=153,slow=4.5,SNR=3.3							
BDFB				LR		LR	01 15 03.7	
	comp=Z,83nm,19.6s,baz=178,slow=35							
BOSA	**Boshof**	**56.78**	**95**	P		P	01 03 18.7	-1.0
	1.5nm,0.6s,baz=212,slow=7.5,SNR=5.9							
TORD	**Torodi Ar. Bea**	**77.55**	**48**	P		P	01 05 32.6	+1.2
	1.1nm,0.9s,baz=207,slow=6.2,SNR=8.6							
KURBB	**Kurchatov Arra**	**146.46**	**71**	PKPbc		PKPbc	01 13 15.4	-0.4
	0.7nm,1.0s,baz=243,slow=4.1,SNR=4.8							
MKAR	**Makanchi Array**	**146.87**	**79**	PKPbc		PKPbc	01 13 16.3	-0.9
	0.3nm,0.6s,baz=255,slow=2.1,SNR=2.3							

*ISCJB **21** 00:55:17.4±0.3, 42.˚28N±0.˚02×13.˚47E±0.˚03, h4km±3km, Error ellipse: s-maj=3.3km s-min=2.5km az=157.0*
*ROM **21** 00:55:17.3±0.1, 42.˚28N×13.˚48E, h10km, MI3.2/14, Error ellipse: s-maj=0.9km s-min=0.7km az=59.0*
*CSEM **21** 00:55:17.5±0.1, 42.˚28N×13.˚47E, h2km, ML3.5/10, Error ellipse: s-maj=2.8km s-min=2.0km az=69.0*

ISC 21 00:55:18.1±0.8, 42.˚27N±0.˚02×13.˚48E±0.˚02, h7km±5km, n84, σ1^{1}1/113, 2C-3D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
FAGN	**Fagnano**	**0.08**	**95**	Pg		**Pg**	**00 55 19.9**	**-0.2**
FAGN				Sg		**Sg**	**00 55 21.4**	**-0.1**
	85µm,0.3s							
FAGN	**Fagnano**	**0.08**	**95**	Pg		**Pg**	**00 55 19.9**	**-0.2**
FAGN				Sg		**Sg**	**00 55 21.4**	**-0.1**
	85µm,0.3s							
AQU	**L'Aquila**	**0.10**	**325**	Pg		**Pg**	**00 55 20.3**	**-0.1**
AQU				Sg		**Sg**	**00 55 22.1**	**0.0**
	12µm,0.5s							
AQU	**L'Aquila**	**0.10**	**325**	Pg		**Pg**	**00 55 20.3**	**-0.1**
AQU				Sg		**Sg**	**00 55 22.1**	**0.0**
	12µm,0.5s							
PTQR	**Pietraquaria**	**0.26**	**193**	Pg		**Pg**	**00 55 23.4**	**+0.2**
PTQR				Sg		**Sb**	**00 55 27.8**	**-1.9**
PTQR	**Pietraquaria**	**0.26**	**193**	Pg		**Pg**	**00 55 23.4**	**+0.2**
PTQR				Sg		**Sb**	**00 55 27.8**	**-1.9**
CAMP	**Campotosto**	**0.27**	**349**	Pg		**Pg**	**00 55 23.2**	**-0.2**
CAMP				Sg		**Sg**	**00 55 27.1**	**0.0**
	2µm,0.5s							
CAMP	**Campotosto**	**0.27**	**349**	Pg		**Pg**	**00 55 23.2**	**-0.2**
CAMP				Sg		**Sg**	**00 55 27.1**	**0.0**
	2µm,0.5s							
FIAM	**Fiamignano**	**0.27**	**269**	Pg		**Pg**	**00 55 23.6**	**+0.2**
FIAM				Sg		**Sg**	**00 55 27.6**	**+0.6**
	5µm,0.8s							
FIAM	**Fiamignano**	**0.27**	**269**	Pg		**Pg**	**00 55 23.6**	**+0.2**
FIAM				Sg		**Sg**	**00 55 27.6**	**+0.6**
	5µm,0.8s							
VCEL	**Villa Celiera**	**0.29**	**65**	Pg		**Pg**	**00 55 23.8**	**-0.1**
VCEL				Sg		**Sg**	**00 55 28.5**	**+0.7**
	5µm,0.5s							
VCEL	**Villa Celiera**	**0.29**	**65**	Pg		**Pg**	**00 55 23.8**	**-0.1**
VCEL				Sg		**Sg**	**00 55 28.5**	**+0.7**
	5µm,0.5s							
TERO	**Teramo**	**0.36**	**15**	Pg		**Pg**	**00 55 24.5**	**-0.7**
TERO				Sg		**Sg**	**00 55 30.4**	**+0.4**
TERO	**Teramo**	**0.36**	**15**	Pg		**Pg**	**00 55 24.5**	**-0.7**
TERO				Sg		**Sg**	**00 55 30.4**	**+0.4**
INTR	**Introdacqua**	**0.41**	**129**	Pg		**Pg**	**00 55 25.9**	**-0.2**
INTR				Sg		**Sb**	**00 55 32.2**	**-1.9**
	3µm,0.3s							
INTR	**Introdacqua**	**0.41**	**129**	Pg		**Pg**	**00 55 25.9**	**-0.2**
INTR				Sg		**Sb**	**00 55 32.2**	**-1.9**
	3µm,0.3s							
VVLD	**Villa Vallelon**	**0.41**	**165**	Pg		**Pg**	**00 55 26.0**	**-0.2**
VVLD				Sg		**Sb**	**00 55 32.8**	**-1.5**
	892nm,0.5s							
VVLD	**Villa Vallelon**	**0.41**	**165**	Pg		**Pg**	**00 55 26.0**	**-0.2**
VVLD				Sg		**Sb**	**00 55 32.8**	**-1.5**
	892nm,0.5s							
LNSS	**Leonessa**	**0.46**	**316**	Pg		**Pg**	**00 55 26.6**	**-0.5**
LNSS				Sg		**Sg**	**00 55 32.9**	**-0.3**
	1µm,0.5s							
LNSS	**Leonessa**	**0.46**	**316**	Pg		**Pg**	**00 55 26.6**	**-0.5**
LNSS				Sg		**Sg**	**00 55 32.9**	**-0.3**
	1µm,0.5s							
CERT	**Cerreto**	**0.49**	**229**	Pg		**Pg**	**00 55 27.3**	**-0.3**
CERT				Sg		**Sg**	**00 55 34.4**	**+0.4**
	2µm,0.4s							
CERT	**Cerreto**	**0.49**	**229**	Pg		**Pg**	**00 55 27.3**	**-0.3**
CERT				Sg		**Sg**	**00 55 34.4**	**+0.4**
	2µm,0.4s							
GUAR	**Guarcino**	**0.49**	**195**	Pg		**Pg**	**00 55 27.4**	**-0.2**
	1µm,0.3s							
GUAR	**Guarcino**	**0.49**	**195**	Pg		**Pg**	**00 55 27.4**	**-0.2**
	1µm,0.3s							
POFI	**Posta Fibreno**	**0.58**	**163**	Pg		**Pg**	**00 55 28.6**	**-0.7**
	385nm,0.5s							
POFI	**Posta Fibreno**	**0.58**	**163**	Pg		**Pg**	**00 55 28.6**	**-0.7**
	385nm,0.5s							
MNS	**Montasola**	**0.60**	**281**	Pg		**Pg**	**00 55 28.9**	**-0.8**
	853nm,0.8s							
MNS	**Montasola**	**0.60**	**281**	Pg		**Pg**	**00 55 28.9**	**-0.8**
	853nm,0.8s							
MTCE	**Montecelio**	**0.60**	**246**	Pg		**Pg**	**00 55 29.1**	**-0.6**
	492nm,0.5s							
MTCE	**Montecelio**	**0.60**	**246**	Pg		**Pg**	**00 55 29.1**	**-0.6**
	492nm,0.5s							
SDI	**San Donato**	**0.61**	**156**	Pg		**Pg**	**00 55 29.4**	**-0.5**
SDI				Sg		**Sb**	**00 55 39.1**	**-0.9**
SDI	**San Donato**	**0.61**	**156**	Pg		**Pg**	**00 55 29.4**	**-0.5**
SDI				Sg		**Sb**	**00 55 39.1**	**-0.9**
NRCA	**Norcia**	**0.62**	**334**	Pg		**Pg**	**00 55 29.1**	**-1.0**
NRCA	**Norcia**	**0.62**	**334**	Pg		**Pg**	**00 55 29.1**	**-1.0**
TRTR	**Tortoreto Alta**	**0.62**	**31**	Pg		**Pb**	**00 55 30.6**	**-0.7**
TRTR	**Tortoreto Alta**	**0.62**	**31**	Pg		**Pb**	**00 55 30.6**	**-0.7**
CAFR	**Castel Frentan**	**0.65**	**94**	Pg		**Pg**	**00 55 30.4**	**-0.1**
CAFR	**Castel Frentan**	**0.65**	**94**	Pg		**Pg**	**00 55 30.4**	**-0.1**
OFFI	**Offida**	**0.68**	**13**	Pg		**Pg**	**00 55 31.0**	**-0.2**
OFFI	**Offida**	**0.68**	**13**	Pg		**Pg**	**00 55 31.0**	**-0.2**
GIUL	**Giuliano Di Ro**	**0.73**	**193**	Pg		**Pg**	**00 55 31.4**	**-0.8**
GIUL	**Giuliano Di Ro**	**0.73**	**193**	Pg		**Pg**	**00 55 31.4**	**-0.8**
CESX	**Cesi**	**0.75**	**297**	Pg		**Pg**	**00 55 31.3**	**-1.1**
CESX	**Cesi**	**0.75**	**297**	Pg		**Pg**	**00 55 31.3**	**-1.1**
RNI2	**Rionero Sannit**	**0.76**	**138**	Pg		**Pg**	**00 55 32.2**	**-0.5**
RNI2	**Rionero Sannit**	**0.76**	**138**	Pg		**Pg**	**00 55 32.2**	**-0.5**
RDP	**Rocca di Papa**	**0.77**	**228**	Pg		**Pb**	**00 55 33.2**	**-0.5**
RDP	**Rocca di Papa**	**0.77**	**228**	Pg		**Pb**	**00 55 33.2**	**-0.5**
CERA	**Filignano**	**0.79**	**149**	Pg		**Pg**	**00 55 32.0**	**-1.2**
CERA	**Filignano**	**0.79**	**149**	Pg		**Pg**	**00 55 32.0**	**-1.2**
FDMO	**Fiordimonte**	**0.82**	**339**	Pg		**Pg**	**00 55 32.4**	**-1.4**
FDMO	**Fiordimonte**	**0.82**	**339**	Pg		**Pg**	**00 55 32.4**	**-1.4**
CESI	**CESI - Serrava**	**0.85**	**330**	Pg		**Pg**	**00 55 33.1**	**-1.2**
CESI	**CESI - Serrava**	**0.85**	**330**	Pg		**Pg**	**00 55 33.1**	**-1.2**
MIDA	**Miranda**	**0.85**	**137**	Pg		**Pg**	**00 55 33.3**	**-1.2**
MIDA	**Miranda**	**0.85**	**137**	Pg		**Pg**	**00 55 33.3**	**-1.2**
GUMA	**Gualdo di Mace**	**0.86**	**23**	Pg		**Pg**	**00 55 32.7**	**-1.9**
GUMA	**Gualdo di Mace**	**0.86**	**23**	Pg		**Pg**	**00 55 32.7**	**-1.9**
ASSB	**Assisi San Ben**	**0.98**	**322**	Pg		**Pg**	**00 55 35.6**	**-1.3**
ASSB	**Assisi San Ben**	**0.98**	**322**	Pg		**Pg**	**00 55 35.6**	**-1.3**
VAGA	**Valle Agricola**	**1.02**	**146**	Pg		**Pg**	**00 55 36.0**	**-1.7**
VAGA	**Valle Agricola**	**1.02**	**146**	Pg		**Pg**	**00 55 36.0**	**-1.7**
BSSO	**Busso**	**1.10**	**131**	Pg		**Pg**	**00 55 38.1**	**-1.1**
BSSO	**Busso**	**1.10**	**131**	Pg		**Pg**	**00 55 38.1**	**-1.1**
CING	**Cingoli**	**1.12**	**349**	Pg		**Pg**	**00 55 38.0**	**-1.6**
CING	**Cingoli**	**1.12**	**349**	Pg		**Pg**	**00 55 38.0**	**-1.6**
MGAB	**Montegabbione**	**1.20**	**303**	Pg		**Pg**	**00 55 40.1**	**-0.9**
MGAB	**Montegabbione**	**1.20**	**303**	Pg		**Pg**	**00 55 40.1**	**-0.9**
ARVD	**Arcevia**	**1.29**	**342**	Pg		**Pn**	**00 55 40.9**	**-1.6**
ARVD	**Arcevia**	**1.29**	**342**	Pg		**Pn**	**00 55 40.9**	**-1.6**
PIEI	**Pieia**	**1.44**	**332**	Pg		**Pn**	**00 55 43.9**	**-0.7**
PIEI	**Pieia**	**1.44**	**332**	Pg		**Pn**	**00 55 43.9**	**-0.7**
FSSB	**Fossombrone**	**1.51**	**340**	Pg		**Pn**	**00 55 45.4**	**-0.1**
FSSB	**Fossombrone**	**1.51**	**340**	Pg		**Pn**	**00 55 45.4**	**-0.1**
NVLJ	**Novalja**	**2.50**	**23**	*e*	Pn	**Pn**	**00 55 59.4**	**+0.2**
NVLJ					Sn	**Sn**	**00 56 30.8**	**+0.8**
NVLJ	**Novalja**	**2.50**	**23**	*e*	Pn	**Pn**	**00 55 59.4**	**+0.2**
NVLJ					Sn	**Sn**	**00 56 30.7**	**+0.8**
UDBI	**Udbina**	**2.80**	**36**	*e*	Pn	**Pn**	**00 56 04.6**	**+1.3**
UDBI					Sn	**Sn**	**00 56 39.5**	**+2.1**
UDBI	**Udbina**	**2.80**	**36**	*e*	Pn	**Pn**	**00 56 04.6**	**+1.3**
UDBI					Sn	**Sn**	**00 56 39.5**	**+2.1**
ABTA	**Abfaltersbach**	**4.53**	**352**	⇓*i*	Pn	**Pn**	**00 56 28.4**	**+1.3**
	4.5nm,0.4s							
ABTA	**Abfaltersbach**	**4.53**	**352**	Pn		**Pn**	**00 56 28.4**	**+1.3**
	4.5nm,0.4s							
MOTA	**Moosalm**	**5.35**	**342**	⇓*e*	Sn	**Sn**	**00 57 43.3**	**+3.1**
	1.6nm,0.4s							
MOTA	**Moosalm**	**5.35**	**342**	Sn		**Sn**	**00 57 43.3**	**+3.1**
	1.6nm,0.4s							
MOA	**Molln**	**5.61**	**5**	⇑*e*	Pn	**Pn**	**00 56 43.9**	**+2.1**
	1.1nm,0.2s							
DAVA	**Damuels**	**5.63**	**334**	⇑*e*	Pn	**Pn**	**00 56 45.0**	**+2.7**
	3.6nm,0.5s							
DAVA				⇓*e*	Sn	**Sn**	**00 57 49.7**	**+2.4**
	4.3nm,0.4s							

*IDC **21** 00:58:16.5±0.7, 42.˚56N×45.˚48E, h0km, mb3.6/10, mb1 3.8/12, mb1mx3.6/28, mbtmp3.7/12, ML4.0/2, MS2.7/1, Ms1 2.7/1, ms1mx1.7/42, Error ellipse: s-maj=11.4km s-min=10.2km az=51.0*
*TIF **21** 00:58:20.7, 42.˚60N×45.˚73E, h11km±1km*
*MOS **21** 00:58:22.2±1.0, 42.˚73N×45.˚75E, h54km, mb3.9/9, Error ellipse: s-maj=7.4km s-min=5.8km az=40.9*
*CSEM **21** 00:58:23.3±0.1, 42.˚75N×45.˚80E, h49km±2km, mb3.7/9, Error ellipse: s-maj=5.3km s-min=3.6km az=19.0*
*NNC **21** 00:58:25.8±2.7, 42.˚90N×46.˚73E, h0km, mb3.9, Error ellipse: s-maj=40.7km s-min=24.1km az=119.0*
*AZER **21** 00:58:28.3, 42.˚15N×45.˚95E, h38km*

ISC 21 00:58:21.7±0.9, 42.˚65N±0.˚02×45.˚75E±0.˚02, h33km±3km, n136, σ1^{1}52/169, mb3.5/15, 16C-18D, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time	Res
				Op			h m s	ISC
BTLR	**Botlikh**	**0.35**	**88**	*e*	P	**Pb**	**00 58 29.0**	**-1.2**
BTLR				*e*	S	**Sb**	**00 58 35.6**	**-0.3**
GRO	**Groznyy**	**0.67**	**360**	⇓*i*	P	**Pn**	**00 58 34.8**	**-0.1**
GRO				*i*	S	**Sb**	**00 58 45.1**	**+0.9**
GRO	**Groznyy**	**0.67**	**360**	*i*	P	**Pn**	**00 58 34.8**	**-0.1**
GRO				*i*	S	**Sb**	**00 58 45.1**	**+0.9**
DLMR	**Dylym**	**0.77**	**57**	⇓*i*	P	**Pb**	**00 58 36.4**	**-0.4**
DLMR				*i*	S	**Sb**	**00 58 48.1**	**+1.1**
DLMR					pmax	pmax		
	comp=Z,688nm,0.3s							
DLMR	**Dylym**	**0.77**	**57**	*i*	P	**Pb**	**00 58 36.4**	**-0.4**
	comp=Z,688nm,0.3s							
DLMR				*i*	S	**Sb**	**00 58 48.1**	**+1.1**
SNJR	**Sundja**	**0.81**	**301**	⇓*i*	P	**Pb**	**00 58 38.2**	**+0.7**
SNJR				*e*	S	**Sb**	**00 58 50.8**	**+2.7**
SNJR	**Sundja**	**0.81**	**301**	*i*	P	**Pb**	**00 58 38.2**	**+0.7**
SNJR				*e*	S	**Sb**	**00 58 50.8**	**+2.7**
KRNR	**Karanay**	**0.87**	**78**	⇑*i*	P	**Pn**	**00 58 37.5**	**-0.2**
KRNR				*i*	S	**Sb**	**00 58 49.8**	**0.0**
KRNR					pmax	pmax		
	comp=Z,223nm,0.3s							
KRNR	**Karanay**	**0.87**	**78**	*i*	P	**Pn**	**00 58 37.5**	**-0.2**
	comp=Z,223nm,0.3s							
KRNR				*i*	S	**Sb**	**00 58 49.8**	**0.0**
DBC	**Dubki**	**0.87**	**65**	*i*	P	**Pb**	**00 58 38.5**	**0.0**
DBC				*i*	S	**Sb**	**00 58 51.1**	**+1.1**
DBC	**Dubki**	**0.87**	**65**	*i*	P	**Pb**	**00 58 38.5**	**0.0**
DBC				*i*	S	**Sb**	**00 58 51.1**	**+1.1**
VLKR	**Vladikavkaz**	**0.89**	**297**	*e*	P	**Pb**	**00 58 39.4**	**+0.7**
VLKR				*e*	S	**Sb**	**00 58 52.9**	**+2.6**
VLKR	**Vladikavkaz**	**0.89**	**297**	*e*	P	**Pb**	**00 58 39.4**	**+0.7**
VLKR				*e*	S	**Sb**	**00 58 52.9**	**+2.6**
ARKR	**Arakani**	**0.92**	**93**	⇓*i*	P	**Pb**	**00 58 38.8**	**-0.4**
ARKR				*e*	S	**Sb**	**00 58 52.0**	**+0.8**
ARKR					pmax	pmax		
	comp=Z,158nm,0.3s							
ARKR	**Arakani**	**0.92**	**93**	*i*	P	**Pb**	**00 58 38.8**	**-0.4**
	comp=Z,158nm,0.3s							
ARKR				*e*	S	**Sb**	**00 58 52.0**	**+0.8**
DUS	**Dusheti**	**0.96**	**235**	P		**Pn**	**00 58 39.3**	**+0.4**
DUS				S		**Sb**	**00 58 53.2**	**+0.8**
GUDG	**Gudauri**	**0.96**	**259**	P		**Pn**	**00 58 38.8**	**-0.3**
GUDG				S		**Sn**	**00 58 52.0**	**+0.3**
BUJR	**Buynaksk**	**1.01**	**80**	*e*	P	**Pb**	**00 58 42.0**	**+1.2**
BUJR				*e*	S	**Sb**	**00 58 58.5**	**+4.6**
BUJR					pmax	pmax		
	comp=Z,271nm,0.3s							
BUJR	**Buynaksk**	**1.01**	**80**	*e*	P	**Pb**	**00 58 42.0**	**+1.2**
	comp=Z,271nm,0.3s							
LACR	**Lac**	**1.09**	**280**	⇓*i*	P	**Pn**	**00 58 41.4**	**+0.6**
LACR				*e*	S	**Sb**	**00 58 57.1**	**+1.0**
LACR	**Lac**	**1.09**	**280**	*i*	P	**Pn**	**00 58 41.4**	**+0.6**
LACR				*e*	S	**Sb**	**00 58 57.1**	**+1.0**
KMKR	**Kumukh**	**1.12**	**117**	*e*	P	**Pn**	**00 58 41.5**	**+0.2**
KMKR				*i*	S	**Sb**	**00 58 58.0**	**+0.8**
KMKR					pmax	pmax		
	comp=Z,252nm,0.4s							
KMKR	**Kumukh**	**1.12**	**117**	*e*	P	**Pn**	**00 58 41.5**	**+0.2**
	comp=Z,252nm,0.4s							
BTKR	**Batakoyurt**	**1.15**	**309**	*e*	P	**Pb**	**00 58 43.7**	**+0.6**
BTKR				*e*	S	**Sb**	**00 59 00.7**	**+3.1**
BTKR	**Batakoyurt**	**1.15**	**309**	*e*	P	**Pb**	**00 58 43.7**	**+0.6**
TBLG	**Delisi**	**1.19**	**220**	*i*	P	**Pn**	**00 58 42.4**	**+0.3**
TBLG				*i*	S	**Sn**	**00 58 58.6**	**+1.5**
TBLG	**Delisi**	**1.19**	**220**	P		**Pn**	**00 58 42.4**	**+0.3**
TBLG				S		**Sn**	**00 58 58.6**	**+1.5**
TBLG	**Delisi**	**1.19**	**220**	*i*	P	**Pn**	**00 58 42.4**	**+0.3**
TBLG				*i*	S	**Sn**	**00 58 58.6**	**+1.5**
ARNR	**Ardon**	**1.21**	**297**	⇑*i*	P	**Pb**	**00 58 44.2**	**+0.1**
ARNR				*i*	S	**Sb**	**00 59 01.7

AKTO								01 03 02.4	
AKTO					pmax	pmax			
	comp=Z,1.0nm,0.3s								
AKTO	**Aktyubinsk**	**11.47**	**43**	Pn	**Pn**		**01 01 02.9**	**-0.2**	
	comp=Z,1.0nm,0.3s,baz=227,slow=14,SNR=12								
AKTO				Sn	Sn		01 03 02.4	-7.7	
	comp=Z,0.4nm,0.3s,baz=58,slow=19,SNR=3.0								
AKTO	**Aktyubinsk**	**11.47**	**43**	Pn	**Pn**		**01 01 01.8**	**-1.3**	
	comp=Z,4.5nm,0.6s								
AB31	**Akbulak array**	**11.87**	**51**	Pn	**Pn**		**01 01 06.9**	**-1.7**	
	comp=Z,0.9nm,0.5s,baz=236,slow=13,SNR=38								
AB31				⇑Sn	Sn		01 03 13.2	-6.5	
	comp=Z,2.0nm,0.5s,baz=241,slow=22,SNR=4.3								
AB31	**Akbulak array**	**11.87**	**51**	Pn	**Pn**		**01 01 06.9**	**-1.7**	
	comp=Z,0.9nm,0.5s,baz=236,SNR=38								
MMAI	**Mount Meron Ar**	**12.62**	**224**	LR	LR		01 06 57.2		
	comp=Z,31nm,18.6s,baz=85,slow=42								
OBN	**Obninsk**	**13.84**	**337**	*e*P	**Pn**		**01 01 34.6**	**-0.8**	
OBN				pmax	pmax				
	comp=Z,3.0nm,0.8s								
ARU	**Arti**	**16.06**	**26**	*e*P	**Pn**		**01 02 01.4**	**-3.5**	
ARU				S	**Sn**		**01 04 57.9**	**-3.9**	
SVE	**Sverdlovsk**	**17.09**	**29**	*e*P	**Pn**		**01 02 16.6**	**-1.2**	
SVE				*e*S	Sn		01 05 19.2	-7.3	
SVE				pmax	pmax				
	comp=Z,11nm,0.6s								
SVE	**Sverdlovsk**	**17.09**	**29**	*e*P	**Pn**		**01 02 16.6**	**-1.2**	
	comp=Z,11nm,0.6s								
KK31	**Karatay Array**	**18.14**	**80**	Pn	**Pn**		**01 02 30.3**	**-0.7**	
	comp=Z,1.8nm,0.7s,baz=286,slow=13,SNR=23								
KK31	**Karatay Array**	**18.14**	**80**	Pn	**Pn**		**01 02 30.3**	**-0.7**	
	comp=Z,1.8nm,0.7s,baz=286,SNR=23								
ZRNK	**Zerenda**	**18.63**	**48**	⇓Pn	**P**		**01 02 36.1**	**-0.2**	
	comp=Z,2.5nm,0.7s								
ZRNK	**Zerenda**	**18.63**	**48**	Pn	**P**		**01 02 36.1**	**-0.2**	
	comp=Z,2.5nm,0.7s								
BRVK	**Borovoye**	**19.38**	**49**	⇑Pn	**P**		**01 02 44.9**	**+0.4**	
	comp=Z,6.7nm,1.0s								
BRVK	**Borovoye**	**19.38**	**49**	*e*P	**P**		**01 02 44.6**	**+0.1**	
BRVK				pmax	pmax				
	comp=Z,4.0nm,1.2s								
BRVK	**Borovoye**	**19.38**	**49**	*e*P	**P**		**01 02 44.6**	**+0.1**	
	comp=Z,4.0nm,1.2s								
BRVK	**Borovoye**	**19.38**	**49**	Pn	**P**		**01 02 44.9**	**+0.4**	
	comp=Z,6.7nm,1.0s								
BVA0	**Borovoye Array**	**19.43**	**49**	⇑Pn	**Pn**		**01 02 45.7**	**-0.7**	
	comp=Z,2.9nm,0.9s,baz=246,slow=12,SNR=7.7								
BVA0	**Borovoye Array**	**19.43**	**49**	Pn	**Pn**		**01 02 45.7**	**-0.7**	
	comp=Z,2.9nm,0.9s,baz=246,SNR=7.7								
BVAR	**Borovoye Array**	**19.43**	**49**	P	**P**		**01 02 45.6**	**+0.6**	
BVAR	**Borovoye Array**	**19.43**	**49**	P	**P**		**01 02 45.6**	**+0.6**	
	comp=Z,0.4nm,0.3s,baz=249,slow=12,SNR=8.6								
BVAR	**Borovoye Array**	**19.43**	**49**	P	**P**		**01 02 45.6**	**+0.6**	
VOSK	**Vostochnaya**	**19.65**	**50**	⇓Pn	**Pn**		**01 02 49.1**	**0.0**	
	comp=Z,2.4nm,0.8s								
AAK	**Ala-Archa**	**21.10**	**80**	*e*P	**P**		**01 03 04.3**	**+0.8**	
AAK				pmax	pmax				
	comp=Z,3.0nm,1.0s								
AAK	**Ala-Archa**	**21.10**	**80**	P	**P**		**01 03 07.3**	**+3.7**	
	comp=Z,2.1nm,0.5s,baz=233,slow=7.4,SNR=3.6								
AAK	**Ala-Archa**	**21.10**	**80**	*e*P	**P**		**01 03 04.3**	**+0.8**	
	comp=Z,3.0nm,1.0s								
JOF	**Joensuu**	**22.00**	**342**	*e*P	**P**		**01 03 12.4**	**-0.3**	
JOF				pmax	pmax				
	comp=Z,3.0nm,0.5s								
JOF	**Joensuu**	**22.00**	**342**	*e*p	**P**		**01 03 12.4**	**-0.3**	
	comp=Z,2.9nm,0.5s								
JOF	**Joensuu**	**22.00**	**342**	*e*P	**P**		**01 03 12.4**	**-0.3**	
	comp=Z,2.0nm,0.5s								
FINES	**FINESS Array B**	**22.21**	**335**	P	**P**		**01 03 14.8**	**-0.2**	
	comp=Z,1.7nm,0.6s,baz=134,slow=12,SNR=15								
FINES	**FINESS Array B**	**22.21**	**335**	P	**P**		**01 03 14.8**	**-0.2**	
	comp=Z,2.2nm,0.6s								
KAF	**Kangasniemi**	**22.65**	**336**	*e*P	**P**		**01 03 19.1**	**-0.6**	
KAF				pmax	pmax				
	comp=Z,1.0nm,0.5s								
KAF	**Kangasniemi**	**22.65**	**336**	*e*p	**P**		**01 03 19.1**	**-0.6**	
	comp=Z,1.0nm,0.5s								
KAF	**Kangasniemi**	**22.65**	**336**	*e*P	**P**		**01 03 19.1**	**-0.6**	
	comp=Z,1.0nm,0.5s								
GERES	**GERESS Array B**	**23.09**	**297**	P	**P**		**01 03 23.0**	**-1.6**	
	comp=Z,0.3nm,0.7s,baz=103,slow=8.5,SNR=2.5								
GERES	**GERESS Array B**	**23.09**	**297**	P	**P**		**01 03 23.0**	**-1.6**	
KURBB	**Kurchatov Arra**	**23.72**	**59**	P	**P**		**01 03 29.1**	**-1.4**	
	comp=Z,1.3nm,0.8s,baz=269,slow=9.4,SNR=16								
KURK	**Kurchatov**	**23.79**	**59**	P	**P**		**01 03 29.2**	**-2.0**	
KURK				pmax	pmax				
	comp=Z,1.0nm,0.8s								
KURK	**Kurchatov**	**23.79**	**59**	P	**P**		**01 03 29.2**	**-2.0**	
	comp=Z,1.0nm,0.8s								
MKAR	**Makanchi Array**	**26.13**	**68**	P	**P**		**01 03 53.4**	**+0.8**	
MKAR	**Makanchi Array**	**26.13**	**68**	P	**P**		**01 03 53.4**	**+0.8**	
	comp=Z,0.3nm,0.6s,baz=269,slow=7.9,SNR=3.4								
MKAR	**Makanchi Array**	**26.13**	**68**	P	**P**		**01 03 53.4**	**+0.8**	
HFS	**Hagfors**	**26.19**	**323**	P	**P**		**01 03 53.1**	**+0.2**	
	comp=Z,2.0nm,0.7s,baz=118,slow=8.3,SNR=15								
HFS	**Hagfors**	**26.19**	**323**	P	**P**		**01 03 53.1**	**+0.2**	
	comp=Z,2.0nm,0.7s								
NB2	**NORSAR Subarra**	**27.69**	**324**	P	**P**		**01 04 06.1**	**-0.4**	
	comp=Z,0.7nm,0.8s,baz=115,slow=8.6								
NOA	**NORSAR Array B**	**27.69**	**324**	P	**P**		**01 04 05.7**	**-0.8**	
	comp=Z,1.0nm,0.8s,baz=118,slow=8.5,SNR=4.1								
NOA	**NORSAR Array B**	**27.69**	**324**	P	**P**		**01 04 05.7**	**-0.8**	
	comp=Z,1.0nm,0.8s								
ARCES	**ARCESS Array B**	**28.91**	**345**	P	**P**		**01 04 17.6**	**+0.4**	
	comp=Z,4.7nm,1.0s,baz=158,slow=9.7,SNR=5.3								
ARCES	**ARCESS Array B**	**28.91**	**345**	P	**P**		**01 04 17.6**	**+0.4**	
	comp=Z,5.0nm,1.0s								
EKA	**Eskdalemuir Ar**	**33.79**	**309**	P	**P**		**01 05 00.7**	**+0.4**	
	comp=Z,0.3nm,0.6s,baz=98,slow=8.7,SNR=3.4								
EKA	**Eskdalemuir Ar**	**33.79**	**309**	P	**P**		**01 05 00.7**	**+0.4**	
TORD	**Torodi Ar. Bea**	**48.01**	**246**	P	**P**		**01 06 57.2**	**-0.5**	
	comp=Z,0.3nm,0.6s,baz=31,slow=8.2,SNR=5.0								
KSRS	**Korea Array**	**60.74**	**65**	P	**P**		**01 08 30.0**	**0.0**	
	comp=Z,0.8nm,0.6s,baz=290,slow=6.4,SNR=4.8								
KSRS	**Korea Array**	**60.74**	**65**	P	**P**		**01 08 30.0**	**0.0**	
	comp=Z,1.0nm,0.6s								
YKA	**Yellowknife Ar**	**74.02**	**351**	P	**P**		**01 09 53.7**	**+0.1**	
	comp=Z,0.6nm,0.7s,baz=14,slow=6.1,SNR=4.5								

MEX 21 01:00:14.7±0.8, 16°25N×94°23W, h40km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
PCIG		**1.11**	**119**	*e*P	Pn	01 00 31.4			-2.4
PCIG				*i* S	Sn	01 00 46.4			-1.6
TGIG		**1.19**	**64**	*i* P	Pn	01 00 32.6			-2.4
TGIG				*i* S	Sn	01 00 47.6			-2.3
TUIG	**Tuzandepetl**	**1.78**	**354**	*i* P	Pn	01 00 40.9			-2.2
TUIG				*i* S	Sn	01 01 03.1			-1.4
HUIG	**Huatulco**	**1.87**	**255**	*i* P	Pn	01 00 43.0			-1.2
HUIG				*i* S	Sn	01 01 05.0			-1.6
CCIG	**Comitan**	**2.01**	**89**	*i* P	Pn	01 00 45.5			-0.9
CCIG				*i* S	Sn	01 01 08.5			-2.1
THIG		**2.32**	**125**	*i* P	Pn	01 00 49.7			-0.7
THIG				*i* S	Sn	01 01 15.7			-2.0
TPIG	**Tehuac#an**	**3.69**	**306**	*i* S	Sn	01 01 50.7			-1.2
PNIG	**Pinotepa**	**3.74**	**273**	*i* P	Pn	01 01 09.2			-0.8
PNIG				*i* S	Sn	01 01 50.8			-2.2

NIED ***21*** *01:03:00, 24°.20N×126°.90E, h5km, Mw4.1 Best double couple: M0 1.50000×10^15 NP1:φ=53.00000°, δ47.00000°, λ-70.00000°. NP2:φ=205.00000°, δ46.00000°, λ-110.00000°.*

IDC ***21*** *01:03:16.8±0.7, 24°.06N×127°.04E, h0km, mb4.1/19, mb1 4.2/21, mb1mx4.2/30, mbtmp4.1/21, ML3.9/2, MS3.5/9, Ms1 3.5/9, ms1mx3.1/32, Error ellipse: s-maj=24.2km s-min=14.7km az=76.0*

BJI ***21*** *01:03:17.3, 24°.09N×126°.82E, h4km, mB4.7/19, mb4.5/26, Ms4.3/22, Ms7 4.1/21*

NEIC ***21*** *01:03:18.4±0.4, 24°.04N×126°.95E, h10km, mb4.4/10, Error ellipse: s-maj=8.6km s-min=7.0km az=133.0*

JMA ***21*** *01:03:20.6±0.3, 24°.18N×126°.93E, h82km, M3.6*

MOS ***21*** *01:03:20.0±0.9, 24°.06N×127°.07E, h33km, mb4.7/21, Error ellipse: s-maj=14.5km s-min=7.6km az=115.9*

ISCJB ***21*** *01:03:20.5±0.3, 24°.15N±0°.03×126°.94E±0°.03, h34km, mb4.3/46, MS3.8/16, Error ellipse: s-maj=5.1km s-min=3.1km az=150.8*

ISC 21 01:03:22.1±0.5, 24°.14N±0°.04×126°.97E±0°.03, h34km, n133, σ1.9 89/157, mb4.4/46, MS3.8/17, 5C-1D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time			Res
				Op	ISC	h	m	s	ISC
JOGS	**Gusukube**	**1.55**	**294**	P	**Pn**	**01 03 46.4**			**-1.0**
JOGS				S	**Sn**	**01 04 05.1**			**-1.2**
JMJ	**Miyako jima 2**	**1.67**	**294**	P	**Pn**	**01 03 48.2**			**-0.8**
JMJ				*e*S	**Sn**	**01 04 08.3**			**-0.9**
JJT2	**Tamagusuku 2**	**2.11**	**19**	P	**Pn**	**01 03 53.8**			**-1.2**
JJT2				*e*S	**Sn**	**01 04 18.9**			**-1.1**
JTJ	**Tarama**	**2.13**	**284**	P	**Pn**	**01 03 53.9**			**-1.4**
JTJ				S	**Sn**	**01 04 18.1**			**-2.4**
JKE	**Kume jima 2**	**2.18**	**356**	P	**Pn**	**01 03 55.1**			**-0.9**
JKE				*e*S	**Sn**	**01 04 21.4**			**-0.4**
JAGN	**Aguni-jima**	**2.45**	**6**	P	**Pn**	**01 03 58.9**			**-0.8**
JAGN				*e*S	**Sn**	**01 04 27.6**			**-0.8**
JIJ	**Ishigaki jima**	**2.59**	**275**	P	**Pn**	**01 03 59.8**			**-1.9**
JIJ				*e*S	**Sn**	**01 04 28.2**			**-3.8**
JKRS	**Kuro-shima**	**2.71**	**273**	P	**Pn**	**01 04 02.0**			**-1.2**
JKRS				*e*S	**Sn**	**01 04 32.3**			**-2.5**
HATJ	**Hateruma jima**	**2.90**	**269**	P	**Pn**	**01 04 03.9**			**-1.9**
HATJ				*e*S	**Sn**	**01 04 35.1**			**-4.4**
JOW	**Kunigami**	**2.93**	**23**	*e*Pn	**Pn**	**01 04 04.7**			**-1.6**
JOW	**Kunigami**	**2.93**	**23**	P	**Pn**	**01 04 05.4**			**-0.9**
JOW				*e*S	**Sn**	**01 04 38.7**			**-1.6**
IRIF	**Iriomote-Funau**	**2.97**	**274**	P	**Pn**	**01 04 05.3**			**-1.5**
IRIF				*e*S	**Sn**	**01 04 38.6**			**-2.6**
JIH	**Iheya**	**3.02**	**17**	P	**Pn**	**01 04 06.5**			**-1.0**
JIH				*e*S	**Sn**	**01 04 39.4**			**-3.1**
YOJ	**Yonaguni jima**	**3.63**	**276**	P	**Pn**	**01 04 14.2**			**-1.7**
YOJ				*e*S	**Sn**	**01 04 53.9**			**-3.6**
JTK	**Tokunoshima**	**4.04**	**26**	P	**Pn**	**01 04 20.7**			**-0.9**
JTK				*e*S	**Sn**	**01 05 04.7**			**-3.1**
JMZ	**Minamidaito 2**	**4.20**	**66**	P	Pn	01 04 19.5			-4.3
JMZ				*e*S	Sn	01 05 06.5			-6.2
JAMN	**Amaminishikomi**	**4.54**	**25**	P	**Pn**	**01 04 27.6**			**-0.8**
JAMN				*e*S	**Sn**	**01 05 16.1**			**-3.9**
JAM	**Amami Oshima**	**4.87**	**29**	P	**Pn**	**01 04 31.4**			**-1.5**
NACB	**Ninganchiao**	**4.91**	**271**	*e*Pn	**Pn**	**01 04 30.4**			**-3.2**
JZK	**Kikaishima**	**4.95**	**32**	P	**Pn**	**01 04 33.2**			**-0.9**
YULB	**Yu-li**	**5.25**	**263**	*e*Pn	Pn	01 04 34.6			-3.6
	27nm,0.7s								
YULB				*e*Sn	Sn	01 05 29.8			-7.9
SSLB	**Suanglung**	**5.52**	**268**	*e*Pn	Pn	01 04 38.3			-3.6
TPUB	**Ta-pu**	**5.87**	**263**	*e*Pn	**Pn**	**01 04 44.8**			**-2.0**
TPUB				*e*Sn	**Sn**	**01 05 49.2**			**-3.8**
JNU	**Nakatsue**	**9.58**	**20**	*e*Pn	**Pn**	**01 05 36.4**			**-1.3**
JNU	**Nakatsue**	**9.58**	**20**	Pn	**Pn**	**01 05 36.6**			**-1.1**
	2.1nm,0.3s,baz=180,slow=6.8,SNR=15								
NJ2	**Nanjing**	**10.65**	**320**	*e*P	**Pn**	**01 05 51.6**			**-0.6**
NJ2				S	**Sn**	**01 07 51.5**			**+1.2**
NJ2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
NJ2				pmax	pmax				
	comp=Z,330nm,7.4s								
NJ2				LR	LR				
	comp=N,1μm,13.8s								
NJ2				LR	LR				
	comp=E,340nm,15.8s								
NJ2				LR	LR				
	comp=Z,720nm,12.2s								
WHN	**Wuhan**	**12.90**	**302**	P	**Pn**	**01 06 22.9**			**-0.1**
KSAR	**Wonju Array Be**	**13.28**	**3**	Pn	**Pn**	**01 06 28.4**			**+0.1**
KSRS	**Korea Array**	**13.29**	**3**	Pn	**Pn**	**01 06 28.4**			**-0.1**
	comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=9.2								
KSRS				LR	LR	01 12 23.7			
	comp=Z,108nm,18.3s,baz=161,slow=41								
MJAR	**Matsushiro Arr**	**15.69**	**35**	Pn	**P**	**01 07 08.0**			**+3.6**
MJAR	**Matsushiro Arr**	**15.69**	**35**	Pn	**P**	**01 07 08.0**			**+3.6**
	comp=Z,0.2nm,0.3s,baz=213,slow=12,SNR=7.7								
QIZ	**Qiongzhong**	**16.72**	**256**	P	**Pn**	**01 07 11.3**			**-2.6**
QIZ				S	**Sn**	**01 10 17.8**			**-0.8**
QIZ				pmax	pmax				
	comp=Z,150nm,4.3s								
QIZ				LR	LR				
	comp=N,460nm,4.5s								
QIZ				LR	LR				
	comp=Z,250nm,5.8s								
BJI	**Beijing**	**18.28**	**333**	P	**Pn**	**01 07 34.3**			**+1.3**
BJI				pmax	pmax				
	comp=Z,18nm,0.8s								
BJI				pmax	pmax				
	comp=Z,110nm,3.3s								
BJI				LR	LR				
	comp=N,270nm,14.2s								
BJI				LR	LR				
	comp=E,180nm,15.2s								
GYA	**Guiyang**	**18.51**	**281**	*e*P	**P**	**01 07 34.3**			**-1.4**
GYA				S	**Sn**	**01 10 58.6**			**-3.4**
GYA				SS	**SnSn**	**01 11 21.3**			**+5.4**
GYA				pmax	pmax				
	comp=Z,10.0nm,0.8s								
GYA				LR	LR				
	comp=N,320nm,11.9s								
GYA				LR	LR				
	comp=E,280nm,12.6s								
GYA				LR	LR				
	comp=Z,390nm,11.5s								
CN2	**Changchun**	**19.65**	**357**	*e*P	**Pn**	**01 07 50.8**			**+1.3**
CN2				pmax	pmax				
	comp=Z,10.0nm,0.5s								
USRK	**Ussuriysk Arra**	**20.43**	**10**	P	Pn	01 07 58.3			-0.3
	comp=Z,4.6nm,0.8s,baz=195,slow=9.9,SNR=11								
HHC	**Hu-ho-hao-te**	**21.07**	**326**	*e*P	**P**	**01 08 03.4**			**-0.2**
HHC				pP	pP	01 08 07.5			-5.1
HHC				sP	sP	01 08 10.4			-6.5
HHC				PP	**PnPn**	**01 08 26.8**			**+3.6**
HHC				S	**S**	**01 11 54.3**			**-2.1**
HHC				sS	Sn	01 12 00.4			-3.3
HHC				PcS	**PcS**	**01 15 45.6**			**-1.7**
HHC				pmax	pmax				
	comp=Z,22nm,1.1s								
HHC				pmax	pmax				
	comp=Z,240nm,5.1s								
HHC				LR	LR				
	comp=N,500nm,11.3s								
HHC				LR	LR				
	comp=E,640nm,11.0s								
HHC				LR	LR				
	comp=Z,580nm,12.3s								
CD2	**Chengdu**	**21.64**	**293**	*e*P	**P**	**01 08 09.8**			**+0.1**
CD2				pP	**pP**	**01 08 14.3**			**-4.4**
CD2				sP	sP	01 08 17.0			-6.0
CD2				PP	**PnPn**	**01 08 34.5**			**+3.6**
CD2				S	**S**	**01 12 04.8**			**-2.8**
CD2				sS	Sn	01 12 10.5			-6.8
CD2				SS	**SnSn**	**01 12 40.4**			**+7.7**
CD2				pmax	pmax				
	comp=Z,30nm,1.0s								
CD2				pmax	pmax				
	comp=Z,100nm,4.8s								
CD2				LR	LR				
	comp=E,680nm,16.7s								
CD2				LR	LR				
	comp=Z,250nm,9.5s								
KMI	**Kunming**	**22.05**	**278**	P	**P**	**01 08 13.3**			**-0.9**
KMI				pP	pP	01 08 17.1			-6.2
KMI				sP	sP	01 08 18.8			-8.8
KMI				S	**S**	**01 12 13.3**			**-2.5**
KMI				pmax	pmax				
	comp=Z,9.0nm,1.0s								
KMI				pmax	pmax				
	comp=Z,73nm,4.0s								
KMI				LR	LR				
	comp=N,320nm,12.9s								
KMI				LR	LR				
	comp=E,200nm,13.3s								
KMI				LR	LR				
	comp=Z,180nm,14.5s								
LZH	**Lanzhou**	**23.22**	**306**	*e*P	P	01 08 37.3			+11
LZH				pP	pP	01 08 41.3			+5.7
LZH				sP	sP	01 08 44.0			+4.1
LZH				PP	PnPn	01 09 08.5			+16
LZH				*e*S	Sn	01 12 49.3			-6.0
LZH				sS	sS	01 12 54.0			+1.7
LZH				SS	SnSn	01 13 32.5			+21
LZH				pmax	pmax				
	comp=Z,16nm,1.0s								
LZH				pmax	pmax				
	comp=Z,76nm,4.0s								
LZH				LR	LR				
	comp=N,580nm,11.5s								
LZH				LR	LR				
	comp=E,570nm,10.9s								
LZH				LR	LR				
	comp=Z,640nm,13.5s								

HABR	**Khabarovsk**	**25.11**	**13**	*e*P	**P**		**01 08 43.1**	**-0.5**	
HABR				*e**SP	**sP**		**01 08 56.9**	**-0.6**	
HABR				*e*			01 09 17.4		
HABR							01 12 16.8		
HABR				*e*S	**S**		**01 13 06.0**	**0.0**	
HABR				*e**SS	**sS**		**01 13 22.3**	**+0.2**	
HABR				*e*SS	**SnSn**		**01 13 58.1**	**+0.8**	
HABR				pmax	pmax				
	comp=Z,46nm,1.7s								
HABR				pmax	pmax				
	comp=N,27nm,1.7s								
HABR				pmax	pmax				
	comp=E,36nm,1.7s								
HABR				MLR	MLR				
	comp=Z,41nm,16.0s								
KLR	**Kul'dur**	**25.32**	**7**	*e*P	**P**		**01 08 43.0**	**-2.6**	
KLR				pmax	pmax				
	comp=Z,90nm,2.2s								
YSS	**Yuzh-Sakhalins**	**26.04**	**25**	*e*P	**P**		**01 08 55.3**	**+3.2**	
YSS				*e*			01 09 10.0		
YSS				*e*			01 09 28.0		
CHTO	**Chiang Mai**	**26.59**	**264**	*e*P	**P**		**01 08 58.1**	**+0.7**	
CHTO				pmax	pmax				
	comp=Z,7.0nm,0.9s								
CHTO	**Chiang Mai**	**26.59**	**264**	*e*P	**P**		**01 08 58.1**	**+0.7**	
	comp=Z,6.5nm,0.9s								
CMAR	**Chiang Mai Arr**	**26.69**	**263**	P	**P**		**01 08 59.5**	**+1.2**	
CMAR	**Chiang Mai Arr**	**26.69**	**263**	P	**P**		**01 08 59.5**	**+1.2**	
	comp=Z,1.2nm,0.3s,baz=67,slow=8.7,SNR=8.7								
CMAR				LR	LR		01 20 53.8		
	comp=Z,34nm,19.2s,baz=50,slow=40								
GTA	**Gaotai**	**27.52**	**310**	*e*P	**P**		**01 09 07.3**	**+1.6**	
GTA				pP	**pP**		**01 09 11.3**	**-4.1**	
GTA				sP	sP		01 09 13.8	-5.8	
GTA				PP	**PnPn**		**01 09 56.8**	**+5.6**	
GTA				S	**S**		**01 13 47.5**	**+2.9**	
GTA				pmax	pmax				
	comp=Z,4.0nm,0.5s								
GTA				pmax	pmax				
	comp=Z,100nm,7.6s								
GTA				LR	LR				
	comp=N,180nm,17.1s								
GTA				LR	LR				
	comp=E,180nm,15.7s								
GTA				LR	LR				
	comp=Z,240nm,13.3s								
ULN	**Ulaanbaatar**	**28.47**	**331**	*e*P	**P**		**01 09 14.4**	**+0.2**	
	comp=Z,5.1nm,1.0s								
SONM	**Songino Array**	**28.74**	**330**	P	P		01 09 20.5	+4.0	
SONM	**Songino Array**	**28.74**	**330**	P	P		01 09 20.5	+4.0	
	comp=Z,3.0nm,0.5s,baz=149,slow=10,SNR=14								
LSA	**Lhasa**	**32.33**	**288**	*e*P	**P**		**01 09 50.9**	**+2.1**	
LSA	**Lhasa**	**32.33**	**288**	*e*P	**P**		**01 09 50.9**	**+2.1**	
WMQ	**Urumqi**	**37.58**	**311**	*e*P	P		01 10 36.3	+2.8	
WMQ				pP	pP		01 10 43.0	-0.4	
WMQ				pmax	pmax				
	comp=Z,11nm,0.9s								
WMQ				pmax	pmax				
	comp=Z,100nm,4.0s								
WMQ				LR	LR				
	comp=N,320nm,13.8s								
WMQ				LR	LR				
	comp=E,400nm,10.6s								
WMQ				LR	LR				
	comp=Z,320nm,17.0s								
MK31	**Makanchi Array**	**42.11**	**314**	*e*P	**P**		**01 11 11.4**	**+0.4**	
MK31	**Makanchi Array**	**42.11**	**314**	*e*P	**P**		**01 11 11.4**	**+0.4**	
MKAR	**Makanchi Array**	**42.11**	**314**	*ce*P	**P**		**01 11 11.8**	**+0.8**	
MKAR				pmax	pmax				
	comp=Z,2.0nm,0.6s								
MKAR	**Makanchi Array**	**42.11**	**314**	*e*P	**P**		**01 11 11.9**	**+0.9**	
MKAR				PcP	**PcP**		**01 13 05.8**	**+0.6**	
MKAR	**Makanchi Array**	**42.11**	**314**	P	**P**		**01 11 11.6**	**+0.6**	
	comp=Z,1.6nm,0.7s,baz=95,slow=8.8,SNR=20								
MKAR				PcP	**PcP**		**01 13 05.8**	**+0.6**	
	comp=Z,0.4nm,0.6s,baz=87,slow=4.9,SNR=3.3								
MKAR				LR	LR		01 30 14.8		
	comp=Z,49nm,19.1s,baz=166,slow=38								
ZAA0	**Zalesovo Array**	**43.25**	**325**	*e*P	**P**		**01 11 19.9**	**-0.1**	
ZALV	**Zalesovo Beam**	**43.25**	**325**	*i* P	**P**		**01 11 20.0**	**-0.1**	
ZALV				pmax	pmax				
	comp=Z,3.0nm,0.6s								
ZALV	**Zalesovo Beam**	**43.25**	**325**	P	**P**		**01 11 19.8**	**-0.3**	
ZALV	**Zalesovo Beam**	**43.25**	**325**	P	**P**		**01 11 19.8**	**-0.3**	
	comp=Z,2.5nm,0.6s,baz=114,slow=8.1,SNR=11								
ZALV				LR	LR		01 30 30.1		
	comp=Z,42nm,18.5s,baz=69,slow=38								
WRAB	**Tennant Creek**	**44.40**	**170**	*e*P	**P**		**01 11 28.0**	**-1.6**	
WRAB				pmax	pmax				
	comp=Z,6.0nm,0.9s								
WRAB	**Tennant Creek**	**44.40**	**170**	*e*P	**P**		**01 11 27.9**	**-1

	comp=Z,9.0nm,1.0s							
AKTO	**Aktyubinsk**	**58.50**	**316**	P	**P**		**01 13 16.0**	**+1.1**
AKTO	**Aktyubinsk**	**58.50**	**316**	P	**P**		**01 13 16.0**	**+1.1**
AKTO	**Aktyubinsk**	**58.50**	**316**	P	**P**		**01 13 16.0**	**+1.1**
	comp=Z,3.2nm,0.8s,baz=79,slow=9.9,SNR=6.4							
MCK	**McKinley**	**66.04**	**29**	*e*P	**P**		**01 14 05.9**	**+0.7**
MCK				pmax	pmax			
	comp=Z,3.0nm,0.7s							
MCK	**McKinley**	**66.04**	**29**	*e*P	**P**		**01 14 05.8**	**+0.7**
	comp=Z,3.3nm,0.7s							
ILAR	**Eielson Array**	**66.81**	**28**	P	**P**		**01 14 10.8**	**+0.7**
ILAR	**Eielson Array**	**66.81**	**28**	P	**P**		**01 14 10.8**	**+0.7**
	comp=Z,0.3nm,0.8s,baz=271,slow=6.2,SNR=5.0							
APA	**Apatity**	**69.28**	**336**	*e*P	P		01 14 13.0	-13
APA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
APA				MLR	MLR			
	comp=Z,600nm,24.0s							
KIV	**Kislovodsk**	**69.69**	**310**	*e*P	**P**		**01 14 26.9**	**-1.8**
KIV				pmax	pmax			
	comp=Z,5.0nm,1.1s							
OBN	**Obninsk**	**70.78**	**323**	*e*P	**P**		**01 14 34.4**	**-0.5**
OBN				pmax	pmax			
	comp=Z,4.0nm,1.2s							
ARCES	**ARCESS Array B**	**71.53**	**339**	LR	LR		01 53 22.2	
	comp=Z,32nm,19.8s,baz=168,slow=42							
FINES	**FINESS Array B**	**74.11**	**331**	P	**P**		**01 14 55.1**	**+0.4**
FINES	**FINESS Array B**	**74.11**	**331**	P	**P**		**01 14 55.1**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=64,slow=4.4,SNR=7.0							
FINES				LR	LR		01 50 25.5	
	comp=Z,29nm,20.5s,baz=40,slow=38							
AKASG	**Malin Array Be**	**76.38**	**320**	P	**P**		**01 15 07.9**	**0.0**
AKASG	**Malin Array Be**	**76.38**	**320**	P	**P**		**01 15 07.9**	**0.0**
AKASG	**Malin Array Be**	**76.38**	**320**	P	**P**		**01 15 07.9**	**0.0**
	comp=Z,1.0nm,0.6s,baz=56,slow=6.4,SNR=4.7							
KIEV	**Kiev**	**76.39**	**320**	*e*P	**P**		**01 15 08.0**	**0.0**
KIEV	**Kiev**	**76.39**	**320**	*e*P	**P**		**01 15 08.0**	**0.0**
BR131	**Keskin Array S**	**77.41**	**308**	*e*P	**P**		**01 15 15.0**	**+0.9**
	comp=Z,0.5nm,0.6s							
BRTR	**Keskin Array B**	**77.41**	**308**	P	**P**		**01 15 14.6**	**+0.4**
BRTR	**Keskin Array B**	**77.41**	**308**	P	**P**		**01 15 14.6**	**+0.4**
	comp=Z,1.1nm,1.0s,baz=162,slow=4.7,SNR=4.9							
BUR08	**Bucovina Ar. S**	**80.00**	**318**	*e*P	**P**		**01 15 28.9**	**+0.7**
HFS	**Hagfors**	**80.13**	**332**	P	**P**		**01 15 28.1**	**-0.4**
HFS	**Hagfors**	**80.13**	**332**	P	**P**		**01 15 28.1**	**-0.4**
	comp=Z,1.4nm,0.7s,baz=151,slow=3.4,SNR=4.4							
MLR	**Muntele Rosu**	**80.43**	**316**	P	**P**		**01 15 31.6**	**+1.0**
MLR	**Muntele Rosu**	**80.43**	**316**	P	**P**		**01 15 31.6**	**+1.0**
	comp=Z,0.4nm,0.9s,baz=99,slow=19,SNR=4.1							
NB2	**NORSAR Subarra**	**80.67**	**334**	P	**P**		**01 15 31.7**	**+0.2**
	comp=Z,1.0nm,0.7s,baz=57,slow=5.3							
NOA	**NORSAR Array B**	**80.67**	**334**	P	**P**		**01 15 30.9**	**-0.6**
NOA	**NORSAR Array B**	**80.67**	**334**	P	**P**		**01 15 30.9**	**-0.6**
	comp=Z,1.2nm,0.7s,baz=56,slow=5.3,SNR=7.9							
NOA				LR	LR		01 55 37.1	
	comp=Z,39nm,19.9s,baz=65,slow=39							
YKA	**Yellowknife Ar**	**80.89**	**24**	P	**P**		**01 15 33.0**	**+0.5**
YKA	**Yellowknife Ar**	**80.89**	**24**	P	**P**		**01 15 33.0**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=296,slow=5.2,SNR=7.2							
BRG	**Berggiesshubel**	**84.94**	**324**	*e*P	P		01 15 56.9	+3.2
	comp=Z,14nm,1.8s							
BRG	**Berggiesshubel**	**84.94**	**324**	*e*P	P		01 15 56.9	+3.2
BRG				pmax	pmax			
	comp=Z,14nm,1.8s							
CLL	**Collm**	**85.20**	**325**	*e*P	**P**		**01 15 56.0**	**+1.0**
CLL				pmax	pmax			
	comp=Z,5.0nm,0.9s							
CLL	**Collm**	**85.20**	**325**	*e*P	**P**		**01 15 56.0**	**+1.0**
	comp=Z,5.0nm,0.9s							
GERES	**GERESS Array B**	**86.16**	**323**	P	**P**		**01 16 00.9**	**+0.9**
GERES	**GERESS Array B**	**86.16**	**323**	P	**P**		**01 16 00.9**	**+0.9**
	comp=Z,1.1nm,0.8s,baz=46,slow=5.7,SNR=12							
NEW	**Newport**	**87.94**	**37**	LR	LR		01 50 44.1	
	comp=Z,42nm,20.1s,baz=88,slow=32							
FFC	**Flin Flon**	**90.96**	**26**	*ce*P	**P**		**01 16 24.0**	**+1.5**
DLMT	**Dillon**	**92.17**	**37**	*e*P	**P**		**01 16 29.9**	**+1.3**
	comp=Z,1.6nm,0.9s							
TORD	**Torodi Ar. Bea**	**114.96**	**299**	PKP	PKPdf		01 22 00.1	-0.3
TORD	**Torodi Ar. Bea**	**114.96**	**299**	PKP	PKPdf		01 22 00.1	-0.3
	comp=Z,0.7nm,1.2s,baz=43,slow=2.0,SNR=3.7							

*IDC **21** 01:06:14.6±1.3, 35°.37N×28°.56E, h0km, mb3.7/4, mb1 3.7/7, mb1mx3.5/27, mbtmp3.6/7, ML3.6/3, Error ellipse: s-maj=23.1km s-min=22.6km az=21.0*
*ISK **21** 01:06:16.5, 35°.23N×28°.45E, h64km, MD3.7*
*DDA **21** 01:06:17.9, 35°.27N×28°.52E, h11km, MD3.4*
*ISCJB **21** 01:06:18.2±0.3, 35°.28N±0°.02×28°.62E±0°.03, h55km±8km, mb3.4/4, Error ellipse: s-maj=3.9km s-min=3.6km az=13.9*
*ATH **21** 01:06:19.3, 35°.54N×28°.51E, h83km±1km*
*CSEM **21** 01:06:19.8±0.1, 35°.33N×28°.58E, h40km, ML3.0/2, Error ellipse: s-maj=2.7km s-min=2.5km az=73.0*
*THE **21** 01:06:21.2, 35°.41N×28°.55E, h47km±4km, ML3.0/2, Error ellipse: s-maj=5.0km s-min=1.2km az=335.0*
*HLW **21** 01:06:23.8, 35°.08N×28°.68E, h32km±15km, Md3.2, Ml3.4*

ISC 21 01:06:19.3±1.5, 35°.32N±0°.04×28°.59E±0°.03, h37km±2km, n145, σ0s93/159, mb3.4/4, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ARG	**Arkhangelos**	**0.97**	**337**	P		**Pn**	**01 06 36.6**	**+0.2**
ARG				S		**Sn**	**01 06 48.7**	**-0.1**
ARG	**Arkhangelos**	**0.97**	**337**	*e*P		**Pn**	**01 06 36.5**	**+0.2**
ARG				*e*S		**Sn**	**01 06 48.9**	**+0.1**
ARG	**Arkhangelos**	**0.97**	**337**	P		**Pn**	**01 06 36.6**	**+0.2**
ARG				*e*S		**Sn**	**01 06 48.9**	**+0.1**
KARP	**Karpathos**	**1.19**	**281**	P		**Pn**	**01 06 40.3**	**+0.9**
KARP				S		**Sn**	**01 06 54.6**	**+0.3**
KARP	**Karpathos**	**1.19**	**281**	*e*P		**Pn**	**01 06 40.4**	**+1.0**
KARP				*e*S		**Sn**	**01 06 56.4**	**+2.1**
KARP	**Karpathos**	**1.19**	**281**	P		**Pn**	**01 06 40.3**	**+0.9**
KARP				S		**Sn**	**01 06 54.6**	**+0.3**
AKAS	**Kas**	**1.23**	**42**	*i* P		**Pn**	**01 06 41.6**	**+1.5**
AKAS	**Kas**	**1.23**	**42**	*i* P		**Pn**	**01 06 41.6**	**+1.5**
FETY	**Fethiye**	**1.37**	**17**	*e*PN		**Pn**	**01 06 41.9**	**0.0**
FETY	**Fethiye**	**1.37**	**17**	*e*Pn		**Pn**	**01 06 41.9**	**0.0**
DALY	**Dalyan (Mu˘la**	**1.49**	**2**	*e*PN		**Pn**	**01 06 43.4**	**-0.1**
DALY				*e*SN		**Sn**	**01 07 03.3**	**+1.6**
DALY	**Dalyan (Mu˘la**	**1.49**	**2**	*e*Pn		**Pn**	**01 06 43.4**	**-0.1**
DALY				*e*Sn		**Sn**	**01 07 03.3**	**+1.6**
TURN	**Turunc**	**1.55**	**0**	*i* P		**Pn**	**01 06 44.2**	**-0.1**
TURN	**Turunc**	**1.55**	**0**	*i* P		**Pn**	**01 06 44.2**	**-0.1**
DAT	**Datca**	**1.62**	**330**	*e*PN		**Pn**	**01 06 45.1**	**-0.4**
DAT	**Datca**	**1.62**	**330**	*e*Pn		**Pn**	**01 06 45.1**	**-0.4**
ELL	**Elmali**	**1.78**	**37**	*e*PN		**Pn**	**01 06 48.4**	**+0.7**
ELL	**Elmali**	**1.78**	**37**	*e*Pn		**Pn**	**01 06 48.4**	**+0.7**
YER	**Yerkesik**	**1.82**	**352**	*e*PN		**Pn**	**01 06 47.9**	**-0.3**
YER	**Yerkesik**	**1.82**	**352**	*e*Pn		**Pn**	**01 06 47.9**	**-0.3**
ZKR	**Zakros**	**1.95**	**265**	P		**Pn**	**01 06 51.2**	**+1.3**
ZKR				S		**Sn**	**01 07 13.6**	**+0.5**
ZKR	**Zakros**	**1.95**	**265**	*e*P		**Pn**	**01 06 51.3**	**+1.3**
ZKR	**Zakros**	**1.95**	**265**	P		**Pn**	**01 06 51.2**	**+1.3**
ZKR				S		**Sn**	**01 07 13.6**	**+0.5**
GLHS	**Glhisar (BURDU**	**1.97**	**22**	*e*PN		**Pn**	**01 06 50.8**	**+0.5**
GLHS	**Glhisar (BURDU**	**1.97**	**22**	*e*Pn		**Pn**	**01 06 50.8**	**+0.5**
BODT	**Bodrum**	**2.02**	**330**	*e*PN		**Pn**	**01 06 49.8**	**-1.0**
BODT	**Bodrum**	**2.02**	**330**	*e*Pn		**Pn**	**01 06 49.8**	**-1.0**
GOLH	**Golhisar**	**2.06**	**22**	*i* P		**Pn**	**01 06 53.7**	**+2.2**
GOLH	**Golhisar**	**2.06**	**22**	*i* P		**Pn**	**01 06 53.7**	**+2.2**
MLSB	**Milas**	**2.07**	**342**	*e*PN		**Pn**	**01 06 51.1**	**-0.5**
MLSB	**Milas**	**2.07**	**342**	*e*Pn		**Pn**	**01 06 51.1**	**-0.5**
ANTB	**Antalya**	**2.30**	**46**	*e*PN		**Pn**	**01 06 55.4**	**+0.8**
ANTB	**Antalya**	**2.30**	**46**	*e*Pn		**Pn**	**01 06 55.4**	**+0.8**
DNZL	**Cakiroluk**	**2.39**	**9**	*i* P		**Pn**	**01 06 57.0**	**+0.9**
DNZL	**Cakiroluk**	**2.39**	**9**	*i* P		**Pn**	**01 06 57.0**	**+0.9**
NPS	**Neapolis**	**2.43**	**269**	P		**Pn**	**01 06 58.1**	**+1.6**
NPS	**Neapolis**	**2.43**	**269**	*e*P		**Pn**	**01 06 58.2**	**+1.7**
NPS	**Neapolis**	**2.43**	**269**	P		**Pn**	**01 06 58.1**	**+1.6**
DENT	**Denizli**	**2.45**	**8**	*e*PN		**Pn**	**01 06 57.1**	**+0.4**
DENT	**Denizli**	**2.45**	**8**	*e*Pn		**Pn**	**01 06 57.2**	**+0.4**
LAST	**Lasithi**	**2.55**	**267**	P		**Pn**	**01 06 59.8**	**+1.6**
LAST	**Lasithi**	**2.55**	**267**	*e*P		**Pn**	**01 06 59.8**	**+1.6**
LAST	**Lasithi**	**2.55**	**267**	*e*P		**Pn**	**01 06 59.8**	**+1.6**
BCK	**Bucak**	**2.67**	**37**	*e*PN		**Pn**	**01 07 00.8**	**+0.9**
BCK	**Bucak**	**2.67**	**37**	*e*Pn		**Pn**	**01 07 00.8**	**+0.9**
SANT	**Santorini**	**2.75**	**293**	P		**Pn**	**01 07 00.9**	**0.0**
SANT				S		**Sn**	**01 07 32.5**	**-0.3**
SANT	**Santorini**	**2.75**	**293**	*e*P		**Pn**	**01 07 00.8**	**-0.1**
SANT	**Santorini**	**2.75**	**293**	P		**Pn**	**01 07 00.9**	**0.0**
SANT				S		**Sn**	**01 07 32.5**	**-0.3**
THR3	**Thira Island,**	**2.81**	**294**	P		**Pn**	**01 07 01.7**	**+0.1**
THR3	**Thira Island,**	**2.81**	**294**	P		**Pn**	**01 07 01.7**	**+0.1**
ISP	**Isparta**	**2.94**	**31**	*e*PN		**Pn**	**01 07 04.8**	**+1.3**
ISP	**Isparta**	**2.94**	**31**	*e*Pn		**Pn**	**01 07 04.8**	**+1.3**
APE	**Apeiranthos**	**3.02**	**306**	*e*PN		**Pn**	**01 07 03.1**	**-1.5**
APE	**Apeiranthos**	**3.02**	**306**	P		**Pn**	**01 07 04.8**	**+0.1**
APE	**Apeiranthos**	**3.02**	**306**	*e*P		**Pn**	**01 07 04.5**	**-0.2**
APE	**Apeiranthos**	**3.02**	**306**	*e*Pn		**Pn**	**01 07 03.1**	**-1.5**
APE	**Apeiranthos**	**3.02**	**306**	P		**Pn**	**01 07 04.8**	**+0.1**
IDI	**Anoyia**	**3.02**	**270**	P		**Pn**	**01 07 05.5**	**+0.8**
IDI	**Anoyia**	**3.02**	**270**	*e*P		**Pn**	**01 07 05.7**	**+1.0**
IDI	**Anoyia**	**3.02**	**270**	P		**Pn**	**01 07 05.5**	**+0.8**
KHL	**Karahalli**	**3.09**	**14**	*e*PN		**Pn**	**01 07 05.8**	**+0.2**
KHL	**Karahalli**	**3.09**	**14**	*e*Pn		**Pn**	**01 07 05.8**	**+0.2**
SIVA	**Sivas**	**3.11**	**265**	P		**Pn**	**01 07 06.9**	**+1.1**
SIVA	**Sivas**	**3.11**	**265**	*e*P		**Pn**	**01 07 07.5**	**+1.7**
SIVA	**Sivas**	**3.11**	**265**	P		**Pn**	**01 07 06.9**	**+1.1**
GAZI	**Gazipasa**	**3.16**	**72**	*i* P		**Pn**	**01 07 07.1**	**+0.5**
GAZI	**Gazipasa**	**3.16**	**72**	*i* P		**Pn**	**01 07 07.1**	**+0.5**
KULA	**Kula-Manisa**	**3.19**	**1**	*e*PN		**Pn**	**01 07 07.1**	**+0.2**
KULA	**Kula-Manisa**	**3.19**	**1**	P		**Pn**	**01 07 07.4**	**+0.5**
KULA	**Kula-Manisa**	**3.19**	**1**	*e*Pn		**Pn**	**01 07 07.1**	**+0.2**
KULA	**Kula-Manisa**	**3.19**	**1**	P		**Pn**	**01 07 07.4**	**+0.5**
IZM	**Izmir**	**3.25**	**341**	*e*PN		**Pn**	**01 07 08.0**	**+0.3**
IZM	**Izmir**	**3.25**	**341**	*e*Pn		**Pn**	**01 07 08.0**	**+0.3**
BLCB	**Balcova**	**3.30**	**338**	*e*PN		**Pn**	**01 07 07.9**	**-0.4**
BLCB	**Balcova**	**3.30**	**338**	*e*Pn		**Pn**	**01 07 07.9**	**-0.4**
LEF	**Lefka**	**3.53**	**92**	*e*PN		**Pn**	**01 07 11.9**	**+0.4**
LEF	**Lefka**	**3.53**	**92**	*e*Pn		**Pn**	**01 07 11.9**	**+0.4**
SHUT	**Suhut-Afyon**	**3.59**	**25**	*e*PN		**Pn**	**01 07 13.8**	**+1.3**
SHUT	**Suhut-Afyon**	**3.59**	**25**	*e*Pn		**Pn**	**01 07 13.8**	**+1.3**
VAM	**Vamos**	**3.59**	**273**	P		**Pn**	**01 07 13.0**	**+0.6**
VAM	**Vamos**	**3.59**	**273**	*e*P		**Pn**	**01 07 13.3**	**+0.9**
VAM	**Vamos**	**3.59**	**273**	P		**Pn**	**01 07 13.0**	**+0.6**
GVD	**Gavdhos**	**3.72**	**264**	P		**Pn**	**01 07 15.1**	**+0.8**
GVD	**Gavdhos**	**3.72**	**264**	*e*P		**Pn**	**01 07 15.0**	**+0.8**
GVD	**Gavdhos**	**3.72**	**264**	*e*P		**Pn**	**01 07 15.0**	**+0.8**
ERMK	**Ermenek**	**3.75**	**68**	*i* P		Pn	01 07 18.0	+3.3
ERMK	**Ermenek**	**3.75**	**68**	*i* P		Pn	01 07 18.0	+3.3
CSS	**Prodhromos**	**3.90**	**94**	*e*PN		**Pn**	**01 07 17.7**	**+1.0**
CSS	**Prodhromos**	**3.90**	**94**	P		**Pn**	**01 07 17.6**	**+0.9**
CSS	**Prodhromos**	**3.90**	**94**	P		**Pn**	**01 07 17.6**	**+0.9**
ALT	**Altintas**	**3.92**	**18**	*e*PN		**Pn**	**01 07 18.1**	**+1.2**
ALT	**Altintas**	**3.92**	**18**	*e*Pn		**Pn**	**01 07 18.2**	**+1.2**
KONT	**Konya--Tatoy**	**4.01**	**48**	*e*PN		**Pn**	**01 07 19.8**	**+1.6**
KONT	**Konya--Tatoy**	**4.01**	**48**	*e*Pn		**Pn**	**01 07 19.8**	**+1.6**
LFK	**Lefkose**	**4.04**	**89**	*e*PN		**Pn**	**01 07 18.9**	**+0.2**
LFK	**Lefkose**	**4.04**	**89**	*e*Pn		**Pn**	**01 07 18.9**	**+0.2**
LADK	**Ladik-KONYA**	**4.17**	**45**	*e*PN		**Pn**	**01 07 22.1**	**+1.5**
LADK	**Ladik-KONYA**	**4.17**	**45**	*e*Pn		**Pn**	**01 07 22.1**	**+1.5**
TVSB	**Tavsanli**	**4.18**	**9**	*e*PN		**Pn**	**01 07 20.8**	**+0.2**
TVSB	**Tavsanli**	**4.18**	**9**	*e*Pn		**Pn**	**01 07 20.8**	**+0.2**
BALB	**Balikesir**	**4.34**	**353**	*e*PN		**Pn**	**01 07 23.2**	**+0.5**
BALB	**Balikesir**	**4.34**	**353**	*e*Pn		**Pn**	**01 07 23.2**	**+0.5**
HMAT	**Matruh**	**4.40**	**197**	S		Sn	01 08 07.8	-5.8
	baz=199							
KIZT	**Kizilcal**	**4.42**	**36**	*e*PN		**Pn**	**01 07 25.3**	**+1.4**
KIZT	**Kizilcal**	**4.42**	**36**	*e*Pn		**Pn**	**01 07 25.3**	**+1.4**
SLUM		**4.75**	**217**	P		**Pn**	**01 07 29.9**	**+1.5**
	baz=221							
SLUM				AMP			01 08 00.0	
	comp=N,30µm,0.3s,logA/T=5.0,baz=221							
SLUM		**4.75**	**217**	P		**Pn**	**01 07 29.9**	**+1.5**
GONE	**Gonen-Balikesi**	**4.77**	**352**	*e*PN		**Pn**	**01 07 29.2**	**+0.7**
GONE	**Gonen-Balikesi**	**4.77**	**352**	*e*Pn		**Pn**	**01 07 29.3**	**+0.7**
VLI	**Veliai**	**4.79**	**289**	P		**Pn**	**01 07 29.3**	**+0.5**
VLI				S		**Sn**	**01 08 21.2**	**-1.8**
VLI	**Veliai**	**4.79**	**289**	P		**Pn**	**01 07 29.3**	**+0.5**
VLI				S		**Sn**	**01 08 21.2**	**-1.8**
DID	**Didima**	**4.83**	**298**	P		**Pn**	**01 07 30.5**	**+1.0**
DID	**Didima**	**4.83**	**298**	P		**Pn**	**01 07 30.5**	**+1.0**
HNAT	**Natroun**	**5.93**	**163**	P		**Pn**	**01 07 44.9**	**+0.3**
	baz=162							
HNAT	**Natroun**	**5.93**	**163**	P		**Pn**	**01 07 44.8**	**+0.3**
BRTR	**Keskin Array B**	**5.95**	**41**	Pn		**Pn**	**01 07 44.3**	**-0.7**
	comp=N,0.1nm,0.3s,baz=220,slow=16,SNR=4.1							
BRTR				Sn		**Sn**	**01 08 52.9**	**+1.0**
	comp=N,0.3nm,0.3s,baz=216,slow=24,SNR=7.2							
KOT	**Kottamia**	**6.04**	**152**	P		**Pn**	**01 07 46.5**	**+0.4**
	baz=151							
KOT	**Kottamia**	**6.04**	**152**	P		**Pn**	**01 07 46.5**	**+0.4**
AMAG	**Maghara**	**6.07**	**139**	P		**Pn**	**01 07 46.8**	**+0.2**
	baz=138							
AMAG	**Maghara**	**6.07**	**139**	P		**Pn**	**01 07 46.8**	**+0.2**
MMAI	**Mount Meron Ar**	**6.10**	**110**	Pn		**Pn**	**01 07 47.0**	**0.0**
	comp=N,2.4nm,0.3s,baz=295,slow=14,SNR=14							
MMAI				Sn		**Sn**	**01 08 54.5**	**-1.0**
	comp=N,3.5nm,0.3s,baz=306,slow=25,SNR=6.8							
RSH		**6.12**	**134**	P		**Pn**	**01 07 47.2**	**0.0**
	baz=132							
RSH		**6.12**	**134**	P		**Pn**	**01 07 47.2**	**0.0**
HSAF	**As Saff**	**6.22**	**155**	P		**Pn**	**01 07 48.5**	**0.0**
	baz=155							
HSAF	**As Saff**	**6.22**	**155**	P		**Pn**	**01 07 48.5**	**0.0**
GLL	**Jalalah**	**6.31**	**154**	P		**Pn**	**01 07 49.7**	**-0.1**
	baz=154							
GLL	**Jalalah**	**6.31**	**154**	P		**Pn**	**01 07 49.7**	**-0.1**
SUZ		**6.54**	**146**	P		**Pn**	**01 07 53.5**	**+0.6**
	baz=145							
SUZ		**6.54**	**146**	P		**Pn**	**01 07 53.5**	**+0.6**
SWA2		**6.62**	**204**	P		**Pn**	**01 07 55.6**	**+1.6**
	baz=207							
SWA2				AMP			01 09 00.0	
	comp=N,40µm,0.5s,logA/T=4.9,baz=207							
SWA2		**6.62**	**204**	P		**Pn**	**01 07 55.6**	**+1.6**
AWBH		**6.99**	**178**	P		**Pn**	**01 07 58.9**	**-0.2**
	baz=178							
AWBH		**6.99**	**178**	P		**Pn**	**01 07 58.9**	**-0.2**
HNKL	**Nakhl**	**7.04**	**138**	P		**Pn**	**01 08 00.2**	**+0.3**
	baz=137							
HNKL	**Nakhl**	**7.04**	**138**	P		**Pn**	**01 08 00.2**	**+0.3**
EIL	**Elat**	**7.79**	**135**	Pn		**Pn**	**01 08 09.8**	**-0.3**
	comp=N,1.1nm,0.3s,baz=347,slow=19,SNR=29							
EIL				Sn		**Sn**	**01 09 34.6**	**-2.4**
	comp=N,1.8nm,0.3s,baz=32,slow=15,SNR=6.1							
HFRF	**Wahat Farafira**	**8.15**	**182**	P		**Pn**	**01 08 15.2**	**+0.1**
	baz=183							
HFRF	**Wahat Farafira**	**8.15**	**182**	P		**Pn**	**01 08 15.2**	**+0.1**
HKAT	**Jabal Katrina**	**8.19**	**144**	P		**Pn**	**01 08 15.8**	**0.0**
	baz=143							
HKAT	**Jabal Katrina**	**8.19**	**144**	P		**Pn**	**01 08 15.8**	**0.0**
GERES	**GERESS Array B**	**17.41**	**325**	P		**P**	**01 10 19.9**	**-0.3**
	comp=N,0.1nm,0.3s,baz=131,slow=12,SNR=4.2							
ESDC	**Sonseca Array**	**26.11**	**289**	P		**P**	**01 11 49.7**	**+0.1**
	comp=N,0.2nm,0.3s,baz=80,slow=9.0,SNR=5.8							
FINES	**FINESS Array B**	**26.19**	**357**	P		**P**	**01 11 49.7**	**-0.3**
	comp=N,2.7nm,0.8s,baz=171,slow=11,SNR=4.5							
HFS	**Hagfors**	**26.64**	**343**	P		**P**	**01 11 54.1**	**0.0**
	comp=N,0.6nm,0.6s,baz=170,slow=9.8,SNR=6.0							
TORD	**Torodi Ar. Bea**	**32.80**	**234**	P		**P**	**01 12 49.7**	**+0.5**
	comp=N,0.4nm,0.6s,baz=37,slow=8.8,SNR=6.9							

*SKO **21** 01:17:26.3, 41°.75N×22°.60E, h28km, M2.1, ML2.5*
*CSEM **21** 01:17:26.9±0.1, 41°.79N×22°.62E, h5km, ML1.9/8, Error ellipse: s-maj=2.8km s-min=1.7km az=84.0*
*THE **21** 01:17:28.0, 41°.74N×22°.66E, h5km, ML1.9/8, Error ellipse: s-maj=1.0km s-min=0.6km az=150.0*
*BEO **21** 01:17:28.2±0.4, 41°.78N×22°.64E, h0km, ML1.9/4*

ISC 21 01:17:27.0±1.0, 41°.79N±0°.02×22°.62E±0°.03, h8km±10km, n31, σ0s31/55, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VAY	**Valandovo**	**0.47**	**184**	P		**Pg**	**01 17 36.0**	**0.0**
VAY				S		**Sg**	**01 17 42.3**	**+0.1**
VAY	**Valandovo**	**0.47**	**184**	*e*Pg		**Pg**	**01 17 36.1**	**0.0**
VAY				*i* Sg		**Sg**	**01 17 42.4**	**+0.2**
VAY	**Valandovo**	**0.47**	**184**	*i* Pg		**Pg**	**01 17 36.1**	**0.0**
VAY				*e*Lg		Lg	01 17 42.4	
	comp=E,216nm,0.3s							
VAY				*i* Sg		**Sg**	**01 17 42.5**	**+0.2**
VAY				*e*Lg		Lg	01 17 42.5	
	comp=N,228nm,0.3s							
VAY	**Valandovo**	**0.47**	**184**	*e*Pg		**Pg**	**01 17 36.1**	**0.0**
VAY				S		**Sg**	**01 17 42.3**	**+0.1**
KNT	**Kendrikon**	**0.66**	**161**	P		**Pg**	**01 17 39.7**	**0.0**
KNT				S		**Sg**	**01 17 48.2**	**-0.2**
KNT	**Kendrikon**	**0.66**	**161**	P		**Pg**	**01 17 39.7**	**0.0**
KNT				S		**Sg**	**01 17 48.2**	**-0.2**
GRG	**Griva**	**0.85**	**191**	P		**Pg**	**01 17 43.1**	**-0.2**
GRG				S		**Sg**	**01 17 54.5**	**+0.2**
GRG	**Griva**	**0.85**	**191**	P		**Pg**	**01 17 43.1**	**-0.2**
GRG				S		**Sg**	**01 17 54.5**	**+0.2**
VTS	**Vitosha**	**0.91**	**29**	P		**Pb**	**01 17 45.3**	**+0.1**
VTS	**Vitosha**	**0.91**	**29**	*e*Pg		**Pb**	**01 17 45.6**	**+0.4**
VTS	**Vitosha**	**0.91**	**29**	P		**Pb**	**01 17 45.3**	**+0.1**
VTS	**Vitosha**	**0.91**	**29**	*e*Pg		**Pb**	**01 17 45.6**	**+0.4**
SRS	**Serrai**	**0.99**	**132**	P		**Pg**	**01 17 45.5**	**-0.6**
SRS				S		**Sg**	**01 17 59.3**	**+0.3**
SRS	**Serrai**	**0.99**	**132**	P		**Pg**	**01 17 45.5**	**-0.6**
SRS				S		**Sg**	**01 17 59.3**	**+0.3**
NVR	**Nevrokopi**	**1.03**	**115**	P		**Pg**	**01 17 46.5**	**-0.3**
NVR				S		**Sg**	**01 18 00.5**	**+0.3**
NVR	**Nevrokopi**	**1.03**	**115**	P		**Pg**	**01 17 46.5**	**-0.3**
NVR				S		**Sg**	**01 18 00.5**	**+0.3**
SOH	**Sokhos**	**1.11**	**150**	P		**Pg**	**01 17 47.8**	**-0.6**
SOH				S		**Sg**	**01 18 02.5**	**-0.3**
SOH	**Sokhos**	**1.11**	**150**	P		**Pg**	**01 17 47.8**	**-0.6**
SOH				S		**Sg**	**01 18 02.5**	**-0.3**
BARS	**Barje**	**1.19**	**330**	*e*Pg		**Pg**	**01 17 49.4**	**-0.4**
BARS				*i* Sg		**Sg**	**01 18 05.3**	**+0.1**
BARS	**Barje**	**1.19**	**330**	*e*Pg		**Pg**	**01 17 49.4**	**-0.4**
FNA	**Florina**	**1.37**	**223**	P		**Pn**	**01 17 52.7**	**+0.2**
FNA				S		**Sg**	**01 18 11.4**	**+0.3**
FNA	**Florina**	**1.37**	**223**	P		**Pn**	**01 17 52.7**	**+0.2**
FNA				S		**Sg**	**01 18 11.4**	**+0.3**
ZAPS	**Zavoj**	**1.48**	**0**	*e*Pg		**Pb**	**01 17 55.2**	**+0.4**
ZAPS				*e*Sg		**Sg**	**01 18 15.3**	**+0.6**
PLG	**Polygyros**	**1.55**	**156**	P		**Pn**	**01 17 55.0**	**+0.2**
PLG	**Polygyros**	**1.55**	**156**	P		**Pn**	**01 17 55.0**	**+0.2**
KAVA	**Kav

0.3nm,0.3s,baz=299,slow=19,SNR=5.5
RCBR LR LR 01 46 37.4
comp=Z,91nm,18.1s,baz=330,slow=32
RCBR T T 01 52 58.0
0.6nm,0.3s,baz=59,slow=8.3,SNR=4.8
DBIC Dimbokro 24.47 76 P P 01 46 46.6 +0.1
7.0nm,0.8s,baz=242,slow=12,SNR=9.9
BDFB Brasilia 25.11 229 LR LR 01 56 37.3
comp=Z,88nm,18.4s,baz=157,slow=36
TORD Torodi Ar. Bea 32.50 66 P P 01 47 57.9 -0.4
0.9nm,0.5s,baz=256,slow=9.4,SNR=25
GERES GERESS Array B 60.15 31 P P 01 51 34.7 -0.4
0.8nm,0.8s,baz=235,slow=6.8,SNR=6.2
BRTR Keskin Array B 68.50 47 P P 01 52 30.9 +0.9
0.3nm,0.7s,baz=251,slow=4.4,SNR=3.2
AKASG Malin Array Be 69.64 35 P P 01 52 36.4 -0.3
0.4nm,0.5s,baz=244,slow=7.2,SNR=4.2
FINES FINESS Array B 73.22 24 P P 01 52 58.5 +0.3
1.6nm,0.8s,baz=203,slow=5.6,SNR=3.7
BVAR Borovoye Array 94.86 37 LR LR 02 41 01.7
comp=Z,29nm,21.2s,baz=70,slow=38

IDC 21 01:45:00.9±3.3,4°61'S×151°17'E,h0km,mb3.5/3, mb1 3.7/3,mb1mx3.4/19,mbtmp3.5/3,Error ellipse: s-maj=122.9km s-min=45.2km az=120.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.38**	**226**	P	P	01 50 00.1	-1.0
	0.4nm,0.5s,baz=51,slow=10.0,SNR=4.7						
ASAR	**Alice Springs**	**25.23**	**220**	P	P	01 50 28.6	-0.2
	0.5nm,0.7s,baz=52,slow=9.4,SNR=4.6						
FITZ	**Fitzroy Crossi**	**28.34**	**240**	P	P	01 50 57.4	+0.6
	0.7nm,0.4s,baz=52,slow=12,SNR=4.7						
TORD	**Torodi Ar. Bea**	**148.70**	**286**	PKPbc	PKPbc	02 04 50.8	-0.5
	0.2nm,0.3s,baz=87,slow=2.3,SNR=17						

IDC 21 01:58:59.7±1.9,7°56'N×126°51'E,h159km±15km,mb3.5/10, mb1 3.6/10,mb1mx3.4/25,mbtmp3.5/10,MS3.2/1, Ms1 3.2/1,ms1mx2.3/20,1D,Error ellipse: s-maj=48.2km s-min=14.0km az=70.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**1.04**	**242**	P	Pn	01 59 26.1	+0.4
	95nm,0.3s,baz=250,slow=6.6,SNR=13						
DAV				S	Sn	01 59 45.8	+0.2
	56nm,0.3s,baz=270,slow=20,SNR=11						
CGP	**Cagayan de Oro**	**2.00**	**296**	*e*P	Pn	01 59 34.7	-0.8
CGP				*i* S	Sn	02 00 02.0	-1.0
CTBH	**Cotabato--PC H**	**2.27**	**262**	*i* P	Pn	01 59 38.3	-0.2
TBP	**Tagbilaran**	**3.36**	**309**	*e*P	Pn	01 59 51.1	-1.0
FITZ	**Fitzroy Crossi**	**25.52**	**182**	P	P	02 04 13.2	-0.4
	1.5nm,0.7s,baz=358,slow=11,SNR=3.4						
WRA	**Warramunga Arr**	**28.40**	**164**	P	P	02 04 39.2	-0.2
	0.1nm,0.3s,baz=347,slow=9.5,SNR=8.6						
MJAR	**Matsushiro Arr**	**30.76**	**19**	LR	LR	02 16 09.5	
	comp=Z,39nm,18.7s,baz=100,slow=34						
ASAR	**Alice Springs**	**31.87**	**167**	P	P	02 05 09.8	-0.2
	0.2nm,0.3s,baz=341,slow=7.0,SNR=6.3						
MKAR	**Makanchi Array**	**54.32**	**324**	P	P	02 08 10.2	+0.5
	2.5nm,0.4s,baz=115,slow=7.5,SNR=46						
MKAR				PcP	PcP	02 09 11.6	-0.1
	1.1nm,0.7s,baz=123,slow=4.4,SNR=7.3						
ZALV	**Zalesovo Beam**	**57.10**	**332**	P	P	02 08 28.9	-0.4
	0.9nm,0.4s,baz=123,slow=5.2,SNR=3.6						
ILAR	**Eielson Array**	**81.76**	**26**	P	P	02 11 00.3	-0.1
	0.3nm,0.6s,baz=267,slow=5.1,SNR=5.4						
JOF	**Joensuu**	**85.69**	**333**	*e*p	P	02 11 20.4	0.0
	0.8nm,0.3s						
ARCES	**ARCESS Array B**	**86.80**	**340**	P	P	02 11 24.9	-0.9
	2.0nm,0.8s,baz=81,slow=5.6,SNR=3.2						
VNDA	**Vanda**	**87.23**	**173**	P	P	02 11 28.5	+1.0
	2.1nm,1.3s,baz=342,slow=5.6,SNR=3.7						
BRTR	**Keskin Array B**	**87.42**	**310**	P	P	02 11 28.9	-0.7
	0.4nm,0.7s,baz=115,slow=6.4,SNR=3.2						
KAF	**Kangasniemi**	**88.12**	**332**	*e*p	P	02 11 32.0	-0.1
	0.3nm,0.3s						
FINES	**FINESS Array B**	**88.37**	**332**	P	P	02 11 33.2	-0.1
	1.9nm,0.8s,baz=76,slow=5.9,SNR=17						
TORD	**Torodi Ar. Bea**	**121.45**	**290**	PKP	PKPdf	02 17 34.8	-0.5
	1.4nm,1.2s,baz=69,slow=1.7,SNR=12						

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*ISCJB **21** 02:05:02.2±0.6,38°.70N±0°.02×20°.59E±0°.05,h3km±6km, Error ellipse: s-maj=6.2km s-min=3.7km az=178.7*
*THE **21** 02:05:02.8,38°.71N×20°.59E,h0km±1km,ML2.1/7,Error ellipse: s-maj=1.6km s-min=0.5km az=264.0*
*ATH **21** 02:05:02.8,38°.68N×20°.67E,h5km±3km,MD3.5/14*
*CSEM **21** 02:05:02.7±0.3,38°.71N×20°.67E,h8km,ML2.1/7,Error ellipse: s-maj=7.0km s-min=4.5km az=71.0*

ISC 21 02:05:02.7±0.9,38°69N±0°.02×20°64E±0°.03,h6km±7km, n49,σ0s59/66,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.10**	**8**	P	**Pg**	**02 05 04.8**	**-0.1**
LKD2				S	**Sg**	**02 05 06.4**	**0.0**
LKD2	**Lefkada island**	**0.10**	**8**	*e*PG	**Pg**	**02 05 04.9**	**0.0**
LKD2				*e*SG	**Sg**	**02 05 06.5**	**0.0**
LKD2	**Lefkada island**	**0.10**	**8**	*e*Pg	**Pg**	**02 05 04.9**	**0.0**
LKD2				*e*Sg	**Sg**	**02 05 06.5**	**0.0**
VLS	**Valsamata**	**0.52**	**184**	P	**Pg**	**02 05 12.7**	**+0.1**
VLS				S	**Sb**	**02 05 21.0**	**-0.8**
VLS	**Valsamata**	**0.52**	**184**	*e*PG	**Pg**	**02 05 12.6**	**0.0**
VLS				*e*SB	**Sb**	**02 05 21.3**	**-0.5**
VLS	**Valsamata**	**0.52**	**184**	P	**Pg**	**02 05 12.7**	**+0.1**
VLS				S	**Sb**	**02 05 21.0**	**-0.8**
KFL	**Anninata**	**0.59**	**169**	P	**Pg**	**02 05 14.3**	**+0.2**
KFL				S	**Sb**	**02 05 23.6**	**-0.4**
KFL	**Anninata**	**0.59**	**169**	P	**Pg**	**02 05 14.3**	**+0.2**
KFL				S	**Sb**	**02 05 23.6**	**-0.4**
AXS	**Araxos**	**0.76**	**130**	P	**Pb**	**02 05 17.7**	**-0.6**
AXS				S	**Sb**	**02 05 29.3**	**+0.5**
AXS	**Araxos**	**0.76**	**130**	P	**Pb**	**02 05 17.7**	**-0.6**
AXS				S	**Sb**	**02 05 29.3**	**+0.5**
IGT	**Igoumenitsa**	**0.87**	**344**	P	**Pg**	**02 05 18.7**	**-0.8**
IGT				S	**Sg**	**02 05 31.0**	**+0.2**
IGT	**Igoumenitsa**	**0.87**	**344**	P	**Pg**	**02 05 18.7**	**-0.8**
IGT				S	**Sg**	**02 05 31.0**	**+0.2**
RLS	**Riolos of Patr**	**0.91**	**134**	P	**Pb**	**02 05 20.4**	**-0.4**
RLS	**Riolos of Patr**	**0.91**	**134**	*e*PB	**Pg**	**02 05 19.5**	**-0.6**
RLS	**Riolos of Patr**	**0.91**	**134**	*e*Pb	**Pg**	**02 05 19.5**	**-0.6**
RLS	**Riolos of Patr**	**0.91**	**134**	P	**Pb**	**02 05 20.4**	**-0.4**
EVR	**Evrytania**	**0.94**	**76**	P	**Pg**	**02 05 20.6**	**-0.1**
EVR				S	**Sn**	**02 05 36.0**	**-0.3**
EVR	**Evrytania**	**0.94**	**76**	*e*PN	**Pb**	**02 05 21.0**	**-0.4**
EVR	**Evrytania**	**0.94**	**76**	P	**Pg**	**02 05 20.6**	**-0.1**
EVR	**Evrytania**	**0.94**	**76**	*e*Pn	**Pb**	**02 05 21.0**	**-0.4**
EFP	**Efpalio**	**1.03**	**105**	P	**Pg**	**02 05 22.4**	**0.0**
EFP				S	**Sn**	**02 05 37.8**	**-0.4**
EFP	**Efpalio**	**1.03**	**105**	*e*PN	**Pg**	**02 05 22.2**	**-0.2**
EFP	**Efpalio**	**1.03**	**105**	P	**Pg**	**02 05 22.4**	**0.0**
EFP				S	**Sn**	**02 05 37.8**	**-0.4**
LAKA	**Lakka**	**1.14**	**113**	P	**Pg**	**02 05 24.3**	**-0.3**
LAKA	**Lakka**	**1.14**	**113**	*e*PB	**Pg**	**02 05 24.2**	**-0.3**
LAKA	**Lakka**	**1.14**	**113**	P	**Pg**	**02 05 24.3**	**-0.3**
MAKR	**Makrakomi, Fth**	**1.21**	**74**	P	**Pn**	**02 05 26.4**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.21**	**74**	P	**Pn**	**02 05 26.4**	**+0.3**
KEK	**Kerkira**	**1.21**	**328**	*e*PB	**Pn**	**02 05 26.5**	**+0.4**
KEK	**Kerkira**	**1.21**	**328**	*e*Pb	**Pn**	**02 05 26.5**	**+0.4**
KALE	**Kalithea**	**1.21**	**104**	*e*PG	**Pg**	**02 05 25.1**	**-0.8**
KALE	**Kalithea**	**1.21**	**104**	*e*Pg	**Pg**	**02 05 25.1**	**-0.8**
KLV	**Kalavryta, Ach**	**1.35**	**118**	*e*PG	**Pn**	**02 05 27.3**	**-0.8**
KLV	**Kalavryta, Ach**	**1.35**	**118**	*e*Pg	**Pn**	**02 05 27.3**	**-0.8**
AGG	**Agios Georgios**	**1.36**	**75**	P	**Pg**	**02 05 28.6**	**-0.2**
AGG	**Agios Georgios**	**1.36**	**75**	P	**Pg**	**02 05 28.6**	**-0.2**
THL	**Klokotos Trika**	**1.38**	**50**	P	**Pb**	**02 05 28.8**	**0.0**
THL				S	**Sn**	**02 05 49.1**	**+2.2**
THL	**Klokotos Trika**	**1.38**	**50**	P	**Pb**	**02 05 28.8**	**0.0**
AMT	**Artemida-Makis**	**1.43**	**144**	*e*PN	**Pn**	**02 05 28.0**	**-1.2**
AMT	**Artemida-Makis**	**1.43**	**144**	*e*Pn	**Pn**	**02 05 28.0**	**-1.2**
GUR	**Goura**	**1.54**	**119**	P	**Pn**	**02 05 30.9**	**+0.2**
GUR				S	**Sg**	**02 05 53.2**	**+1.1**
GUR	**Goura**	**1.54**	**119**	*e*PG	**Pn**	**02 05 30.9**	**+0.2**
GUR	**Goura**	**1.54**	**119**	P	**Pn**	**02 05 30.9**	**+0.2**
ITM	**Ithomi**	**1.82**	**146**	*e*PN	**Pb**	**02 05 36.7**	**+0.3**
ITM	**Ithomi**	**1.82**	**146**	*e*Pn	**Pb**	**02 05 36.7**	**+0.3**
PYL	**PYLOS**	**1.99**	**154**	*e*PG	**Pn**	**02 05 38.1**	**+1.2**
PYL	**PYLOS**	**1.99**	**154**	*e*Pg	**Pn**	**02 05 38.1**	**+1.2**
DID	**Didima**	**2.37**	**119**	*e*PG	**Pb**	**02 05 45.9**	**+0.2**
DID	**Didima**	**2.37**	**119**	*e*Pg	**Pb**	**02 05 45.9**	**+0.2**

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*ISCJB **21** 02:14:34.3±0.5,37°.13N±0°.03×137°.71E±0°.04,h28km±5km, mb3.5/1,Error ellipse: s-maj=6.2km s-min=4.7km az=146.5*
*JMA **21** 02:14:34.6,37°.13N×137°.70E,h14km±1km,M3.4*
JMA Felt I,I,I.
*IDC **21** 02:14:35.6±4.2,37°.12N×137°.93E,h29km±24km,mb3.4/1, mb1 3.6/2,mb1mx3.0/27,mbtmp3.4/2,ML3.1/1,Error ellipse: s-maj=37.7km s-min=23.7km az=172.0*

ISC 21 02:14:34.1±1.0,37°14N±0°.04×137°76E±0°.04,h15km±9km, n12,σ0s73/21,1C-5D,Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JJN	**Nakama**	**0.33**	**97**	⇓P	**Pb**	**02 14 42.2**	**+0.5**
JJN				S	**Sb**	**02 14 47.9**	**+1.2**
JSZ	**Suzu**	**0.44**	**314**	⇓P	**Pg**	**02 14 42.8**	**-0.1**
JSZ				S	**Sg**	**02 14 48.9**	**0.0**
JTT	**Ttatey**	**0.64**	**212**	⇑P	**Pg**	**02 14 46.3**	**-0.3**
JTT				S	**Sg**	**02 14 54.6**	**-0.4**
MAT	**Matsushiro**	**0.70**	**149**	P	**Pg**	**02 14 47.7**	**-0.1**
MAT				S	**Sg**	**02 14 57.4**	**+0.3**
MAT	**Matsushiro**	**0.70**	**149**	P	**Pg**	**02 14 47.8**	**-0.1**
MAT				S	**Sg**	**02 14 57.2**	**+0.1**
MJAR	**Matsushiro Arr**	**0.70**	**149**	Pg	**Pn**	**02 14 48.4**	**-1.1**
	30nm,0.3s,baz=337,slow=16,SNR=250						
MJAR				Lg	Lg	02 14 57.5	
	41nm,0.3s,baz=313,slow=16,SNR=26						
JNG	**Nsakai**	**0.79**	**159**	⇓P	**Pg**	**02 14 49.5**	**+0.1**
JNG				S	**Sg**	**02 15 00.1**	**+0.3**
JHG	**Hegura jima**	**0.97**	**317**	⇓P	**Pb**	**02 14 52.2**	**-0.4**
JHG				S	**Sg**	**02 15 05.3**	**-0.3**
JSD	**Sado**	**0.98**	**24**	P	**Pb**	**02 14 52.2**	**-0.6**
JSD				S	**Sb**	**02 15 05.6**	**+0.1**
JHK	**Hiroka**	**1.01**	**84**	⇓P	**Pb**	**02 14 53.3**	**0.0**
JHK				S	**Sn**	**02 15 07.6**	**-0.1**
KSRS	**Korea Array**	**7.84**	**275**	Pn	**Pn**	**02 16 29.8**	**+2.1**
	0.2nm,0.3s,baz=92,slow=14,SNR=4.1						
WRA	**Warramunga Arr**	**56.87**	**184**	P	**P**	**02 24 17.4**	**-0.8**
	0.3nm,0.7s,baz=360,slow=7.6,SNR=9.3						

IDC 21 02:30:53.4±1.3,3°69N×126°36E,h0km,mb3.7/8, mb1 3.8/8,mb1mx3.6/27,mbtmp3.7/8,MS2.7/1,Ms1 2.7/1, ms1mx2.1/24,Error ellipse: s-maj=111.3km s-min=16.5km az=67.0,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**10.87**	**217**	LR	LR	02 37 59.8	
	comp=Z,39nm,21.0s,baz=340,slow=39						
FITZ	**Fitzroy Crossi**	**21.66**	**182**	P	P	02 35 45.6	-0.1
	0.6nm,0.4s,baz=7.2,slow=9.4,SNR=3.6						
WRA	**Warramunga Arr**	**24.76**	**162**	P	P	02 36 16.8	-0.2
	1.7nm,0.6s,baz=341,slow=11,SNR=28						
ASAR	**Alice Springs**	**28.16**	**165**	P	P	02 36 47.4	-0.3
	0.2nm,0.5s,baz=341,slow=8.9,SNR=6.4						
STKA	**Stephens Creek**	**38.22**	**159**	P	P	02 38 15.6	+0.4
	1.9nm,0.8s,baz=318,slow=12,SNR=4.7						
MKAR	**Makanchi Array**	**57.38**	**325**	P	P	02 40 43.0	-0.6
	0.2nm,0.4s,baz=120,slow=8.5,SNR=6.4						
KURBB	**Kurchatov Arra**	**61.58**	**328**	P	P	02 41 11.8	-0.8
	0.2nm,0.4s,baz=127,slow=7.9,SNR=5.5						
BVAR	**Borovoye Array**	**67.15**	**327**	P	P	02 41 49.7	+0.6
	0.6nm,0.6s,baz=116,slow=6.6,SNR=4.4						
AKTO	**Aktyubinsk**	**73.46**	**322**	P	P	02 42 28.6	+0.8
	1.3nm,0.8s,baz=148,slow=5.7,SNR=4.1						

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*IDC **21** 02:37:19.3±0.6,52°.28N×168°.80W,h0km,mb4.3/31, mb1 4.4/32,mb1mx4.4/37,mbtmp4.3/32,ML3.5/1,MS3.5/16, Ms1 3.5/16,ms1mx3.2/40,Error ellipse: s-maj=18.7km s-min=10.5km az=169.0*
*ISCJB **21** 02:37:21.7±0.9,52°.14N±0°.04×168°.69W±0°.04,h26km±5km, mb4.6/119,MS3.7/24,Error ellipse: s-maj=6.8km s-min=3.5km az=154.4*
*NEIC **21** 02:37:21.9,52°.21N×168°.65W,h9km,mb4.5/41, ML4.0(AEIC),After AEIC.*
*MOS **21** 02:37:23.1±1.1,52°.26N×168°.72W,h33km,mb5.0/47, Error ellipse: s-maj=13.1km s-min=5.4km az=91.7*
*BJI **21** 02:37:24.8,52°.73N×169°.20W,h33km,mB4.9/17, mb4.8/32,Ms4.8/9,Ms7 4.5/11*

ISC 21 02:37:22.0±1.0,52°23N±0°.06×168°67W±0°.04,h17km±5km, n337,σ0s00/345,mb4.7/120,MS3.7/23,12C-11D,Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**0.76**	**352**	P	**Pb**	**02 37 37.0**	**+0.4**
NIKH				S	**Sn**	**02 37 48.9**	**+0.1**
OKSP	**Okmok Steeple**	**1.05**	**13**	P	**Pb**	**02 37 41.8**	**+0.1**
OKSO	**Okmok South**	**1.18**	**15**	P	**Pb**	**02 37 43.6**	**-0.2**
OKSO				S	**Sn**	**02 38 00.7**	**+1.5**
OKCE	**Okmok Cone E**	**1.24**	**14**	P	**Pn**	**02 37 44.6**	**+0.1**
OKCE				S	**Sn**	**02 38 02.3**	**+1.4**
OKFG	**Magazine Ridge**	**1.27**	**21**	P	**Pb**	**02 37 45.2**	**-0.2**
OKFG				S	**Sn**	**02 38 03.5**	**+2.0**
MREP	**Makushin Rep't**	**1.97**	**35**	P	**Pn**	**02 37 55.3**	**+0.8**
MCIR	**Makushin Cirqu**	**2.03**	**31**	P	**Pn**	**02 37 56.9**	**+1.5**
UNV	**Unalaska Valle**	**2.08**	**38**	P	**Pn**	**02 37 56.3**	**+0.3**
UNV				S	**Sb**	**02 38 24.6**	**-0.2**
MTBL	**Makushin Table**	**2.12**	**34**	P	**Pn**	**02 37 57.2**	**+0.6**
AKRB	**Akutan Reef Bi**	**2.47**	**38**	P	**Pn**	**02 38 03.0**	**+1.7**
AKGG	**Akutan Green G**	**2.55**	**38**	P	**Pn**	**02 38 03.9**	**+1.4**
AKGG				S	**Sb**	**02 38 36.8**	**-1.4**
AKUT	**Akutan**	**2.59**	**41**	*e*Pn	**Pn**	**02 38 03.6**	**+0.7**
KOFP	**Korovin Flat P**	**3.34**	**273**	P	**Pn**	**02 38 15.2**	**+1.9**
KOKL	**Mount Kliuchef**	**3.40**	**274**	P	**Pn**	**02 38 14.8**	**+0.7**
FALS	**False Pass**	**4.09**	**48**	P	**Pn**	**02 38 25.4**	**+1.8**
GSMY	**Great Sitkin M**	**4.55**	**271**	P	**Pn**	**02 38 31.7**	**+1.7**
GSTD	**Great Sitkin T**	**4.61**	**271**	P	**Pn**	**02 38 32.5**	**+1.9**
GSCK	**Great Sitkin C**	**4.62**	**270**	P	**Pn**	**02 38 32.6**	**+1.7**
DT1	**Dutton Round H**	**4.77**	**50**	P	**Pn**	**02 38 34.7**	**+1.7**
ADAG	**Mount Adagdak**	**4.90**	**270**	P	**Pn**	**02 38 37.0**	**+2.3**
SPIA	**Saint Paul Isl**	**5.04**	**350**	P	Pn	02 38 39.6	+3.0
TAFL	**Tanaga Flats**	**5.72**	**269**	P	**Pn**	**02 38 48.0**	**+2.0**
SDPT	**Sand Point**	**5.78**	**54**	P	**Pn**	**02 38 48.3**	**+1.6**
GANE	**Gareloi Northe**	**6.25**	**270**	P	**Pn**	**02 38 55.4**	**+2.1**
CEPE	**Semis' Perret**	**7.20**	**273**	P	**Pn**	**02 39 09.1**	**+2.8**
CHGN	**Chignik**	**7.26**	**52**	*e*Pn	**Pn**	**02 39 09.2**	**+2.2**
AMKA	**Amchitka**	**7.51**	**268**	P	**Pn**	**02 39 12.3**	**+1.8**
KDAK	**Kodiak Island**	**10.77**	**53**	Pn	**Pn**	**02 39 54.1**	**-1.0**
KDAK	**Kodiak Island**	**10.77**	**53**	Pn	**Pn**	**02 39 54.1**	**-1.0**
	2.1nm,0.3s,baz=238,slow=4.0,SNR=11						
RC01	**Rabbit Creek A**	**13.63**	**42**	*e*Pn	**Pn**	**02 40 33.8**	**-0.4**
TRF	**Thorofare Moun**	**14.84**	**34**	*e*Pn	**Pn**	**02 40 53.6**	**+2.8**
MCK	**McKinley**	**15.48**	**34**	*e*P	**Pn**	**02 41 00.4**	**+1.2**
MCK	**McKinley**	**15.48**	**34**	*e*Pn	**Pn**	**02 41 00.4**	**+1.2**
COLA	**College**	**16.58**	**32**	*e*P	**Pn**	**02 41 12.0**	**-1.2**
COLA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
COLA	**College**	**16.58**	**32**	*e*Pn	**Pn**	**02 41 11.9**	**-1.2**
	comp=Z,8.5nm,1.0s						
ILAR	**Eielson Array**	**16.83**	**33**	Pn	**Pn**	**02 41 14.9**	**-1.5**
ILAR	**Eielson Array**	**16.83**	**33**	Pn	**Pn**	**02 41 14.9**	**-1.5**
	comp=Z,0.1nm,0.3s,baz=240,slow=10,SNR=17						
ILAR				LR	LR	02 48 12.0	
	comp=Z,122nm,19.1s,baz=194,slow=39						
COLD	**Coldfoot**	**17.57**	**24**	*e*Pn	**Pn**	**02 41 26.3**	**+0.7**
	comp=Z,13nm,1.2s						
PNL	**Peninsula**	**17.89**	**54**	*e*Pn	**P**	**02 41 30.5**	**+0.3**
EGAK	**Eagle**	**18.89**	**38**	*e*P	**P**	**02 41 40.5**	**-0.6**
	comp=Z,7.8nm,1.1s						
SKAG	**Skagway**	**19.90**	**56**	*e*Pn	**Pn**	**02 41 54.6**	**+0.7**
	comp=Z,21nm,1.0s						
BILL	**Bilibino**	**19.93**	**332**	*e*P	**P**	**02 41 52.7**	**+0.2**
BILL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BILL				MLR	MLR		
	comp=Z,200nm,17.0s						
BILL	**Bilibino**	**19.93**	**332**	*e*P	**Pn**	**02 41 54.1**	**-0.1**
	comp=Z,9.0nm,0.9s						
PEA0B	**Petropavlovsk-**	**20.31**	**286**	*e*P	**P**	**02 41 56.6**	**-0.2**
PETK	**Petropavlovsk-**	**20.31**	**286**	P	**P**	**02 41 56.7**	**-0.1**
PETK	**Petropavlovsk-**	**20.31**	**286**	P	**P**	**02 41 56.7**	**-0.1**
PETK	**Petropavlovsk-**	**20.31**	**286**	P	**P**	**02 41 56.7**	**-0.1**
	comp=Z,19nm,0.5s,baz=93,slow=11,SNR=104						
PETK				LR	LR	02 47 22.5	
	comp=Z,25nm,21.8s,baz=268,slow=30						
DLBC	**Dease Lake**	**22.59**	**59**	P	**P**	**02 42 22.6**	**+1.3**
DLBC	**Dease Lake**	**22.59**	**59**	P	**P**	**02 42 22.6**	**+1.3**
	comp=Z,2.3nm,0.9s,baz=281,slow=12,SNR=3.2						
INK	**Inuvik**	**23.23**	**33**	P	**P**	**02 42 26.0**	**-1.8**
INK	**Inuvik**	**23.23**	**33**	P	**P**	**02 42 26.0**	**-1.8**
	comp=Z,2.7nm,0.6s,baz=245,slow=9.2,SNR=9.5						
BBB	**Bella Bella**	**24.63**	**74**	LR	LR	02 50 24.1	
	comp=Z,151nm,19.2s,baz=251,slow=32						
YKW3	**Yellowknife Ar**	**30.00**	**49**	*e*P	**P**	**02 43 30.0**	**+0.8**
YKA	**Yellowknife Ar**	**30.01**	**49**	P	**P**	**02 43 30.1**	**+0.8**
YKA				PcP	**PcP**	**02 46 30.2**	**-0.7**
YKA	**Yellowknife Ar**	**30.01**	**49**	P	**P**	**02 43 30.1**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=272,slow=8.4,SNR=15						
YKA				PcP	**PcP**	**02 46 30.2**	**-0.7**
	comp=Z,0.5nm,0.7s,baz=281,slow=2.2,SNR=5.3						
YBH	**Yreka Blue Hor**	**32.55**	**90**	P	**P**	**02 43 52.9**	**+0.9**
YBH	**Yreka Blue Hor**	**32.55**	**90**	P	**P**	**02 43 52.9**	**+0.9**
	comp=Z,2.9nm,0.9s,baz=260,slow=6.1,SNR=3.9						
ASAJ	**Asahikawa**	**32.95**	**276**	P	**P**	**02 43 54.6**	**-0.7**
ASAJ	**Asahikawa**	**32.95**	**276**	P	**P**	**02 43 54.6**	**-0.7**
	comp=Z,18nm,1.1s,baz=268,slow=7.5,SNR=4.3						
ASAJ				LR	LR	02 55 27.9	
	comp=Z,110nm,20.7s,baz=198,slow=33						
TIXI	**Tiksi**	**33.08**	**329**	*e*P	**P**	**02 43 55.8**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TIXI				MLR	MLR		
	comp=Z,271nm,22.0s						
BSMT	**Bassoo Peak**	**34.21**	**75**	*e*P	**P**	**02 44 07.5**	**+0.9**
	comp=Z,1.2nm,0.7s						
MSO	**Missoula**	**35.20**	**76**	*e*P	**P**	**02 44 15.5**	**+0.5**
	comp=Z,3.6nm,1.3s						
CHMT	**Chamberlain Mo**	**35.58**	**76**	*e*P	**P**	**02 44 18.2**	**-0.1**
MCMT	**McKenzie Canyo**	**36.88**	**79**	*e*P	**P**	**02 44 30.4**	**+0.9**
	comp=Z,2.0nm,0.6s						
KLR	**Kul'dur**	**36.91**	**290**	*e*P	P	02 44 23.0	-6.4
NVAR	**Mina Array Bea**	**37.23**	**91**	P	**P**	**02 44 34.8**	**+2.2**
NVAR	**Mina Array Bea**	**37.23**	**91**	P	**P**	**02 44 34.8**	**+2.2**
	comp=Z,0.3nm,0.6s,baz=299,slow=10,SNR=2.7						
NVAR				LR	LR	02 58 06.5	
	comp=Z,46nm,19.3s,baz=134,slow=33						
MTUM	**Tungsten Hills**	**37.75**	**93**	*e*P	P	02 44 48.8	+12
FFC	**Flin Flon**	**38.43**	**59**	*e*P	**P**	**02 44 42.2**	**0.0**
FFC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FFC	**Flin Flon**	**38.43**	**59**	*e*P	**P**	**02 44 42.2**	**0.0**
	comp=Z,1.4nm,0.6s						
MOOW	**Moose Ponds**	**38.74**	**79**	*e*P	**P**	**02 44 45.7**	**+0.5**
USRK	**Ussuriysk Arra**	**39.34**	**283**	P	**P**	**02 44 47.9**	**-2.0**
	comp=Z,1.7nm,0.6s,baz=74,slow=8.7,SNR=5.6						
BW06	**Boulder Array**	**40.01**	**79**	*e*P	**P**	**02 44 56.6**	**+0.7**
	comp=Z,2.9nm,0.9s						
PDAR	**Pinedale Array**	**40.01**	**79**	P	**P**	**02 44 56.1**	**+0.3**
PDAR	**Pinedale Array**	**40.01**	**79**	P	**P**	**02 44 56.1**	**+0.3**
	comp=Z,3.2nm,0.6s,baz=310,slow=5.6,SNR=26						
MJAR	**Matsushiro Arr**	**40.12**	**269**	P	**P**	**02 44 55.2**	**-1.4**
MJAR	**Matsushiro Arr**	**40.12**	**269**	P	**P**	**02 44 55.2**	**-1.4**
	comp=Z,2.8nm,0.9s,baz=48,slow=7.6,SNR=7.9						
MJAR				LR	LR	03 00 17.7	
	comp=Z,74nm,18.0s,baz=110,slow=34						
MAJO	**Matsushiro**	**40.12**	**269**	*e*P	**P**	**02 44 56.9**	**+0.3**
MAJO				pmax	pmax		
	comp=Z,13nm,1.1s						
MAJO	**Matsushiro**	**40.12**	**269**	*e*P	**P**	**02 44 56.9**	**+0.3**
	comp=Z,13nm,1.1s						
MAT	**Matsushiro**	**40.12**	**269**	P	**P**	**02 44 56.6**	**0.0**
PV01	**Paradox Valley**	**43.40**	**84**	*e*P	**

comp=Z,4.5nm,1.1s
ZALV Zalesovo Beam 57.82 318 *i* P **P 02 47 12.5 +0.6**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV Zalesovo Beam 57.82 318 P **P 02 47 11.6 -0.3**
ZALV Zalesovo Beam 57.82 318 P **P 02 47 11.6 -0.3**
comp=Z,0.5nm,0.3s,baz=28,slow=6.7,SNR=4.9
ZALV LR LR 03 13 47.6
comp=Z,53nm,18.4s,baz=69,slow=38
ARCES ARCESS Array B 58.11 354 P **P 02 47 12.7 -1.1**
ARCES ARCESS Array B 58.11 354 P **P 02 47 12.7 -1.1**
comp=Z,1.8nm,0.7s,baz=14,slow=7.6,SNR=6.4
ARCES LR LR 03 15 39.2
comp=Z,53nm,19.4s,baz=37,slow=40
WHN Wuhan 58.79 281 P P 02 47 16.3 -2.7
APA Apatity 59.38 350⇓ *e*P P 02 47 30.0 +7.4
APA MLR MLR
comp=Z,700nm,18.0s
GTA Gaotai 60.92 298 *e*P **P 02 47 33.8 0.0**
GTA pP pP 02 47 44.8 +5.4
GTA sP sP 02 47 50.1 +8.6
GTA pmax pmax
comp=Z,6.0nm,0.7s
LZH Lanzhou 61.04 292 *e*P **P 02 47 35.3 +0.7**
LZH pP pP 02 47 47.1 +6.9
LZH sP sP 02 47 52.0 +10
LZH PP **PP 02 49 52.0 +3.2**
LZH *e*S S 02 55 47.0 -5.6
LZH sS **sS 02 56 00.8 -1.0**
LZH SS SS 02 59 44.8 -6.8
LZH pmax pmax
comp=Z,17nm,1.0s
LZH pmax pmax
comp=Z,130nm,4.6s
LZH LR LR
comp=N,320nm,16.2s
LZH LR LR
comp=E,400nm,15.9s
LZH LR LR
comp=Z,530nm,18.7s
ENH Enshi 61.90 284 *e*P **P 02 47 40.4 +0.1**
comp=Z,9.4nm,0.8s
KURK Kurchatov 62.77 319 *e*P **P 02 47 45.4 -0.4**
KURK pmax pmax
comp=Z,4.0nm,0.7s
KURK Kurchatov 62.77 319 *e*P **P 02 47 45.4 -0.4**
comp=Z,4.3nm,0.7s
KURBB Kurchatov Arra 62.87 319 P **P 02 47 46.1 -0.4**
comp=Z,4.1nm,0.8s,baz=35,slow=7.5,SNR=30
WMQ Urumqi 63.96 308 *e*P **P 02 47 54.6 +0.7**
WMQ pP pP 02 48 07.0 +7.5
WMQ pmax pmax
comp=Z,12nm,0.6s
WMQ pmax pmax
comp=Z,90nm,3.8s
WMQ LR LR
comp=N,160nm,20.4s
WMQ LR LR
comp=E,130nm,22.0s
WMQ LR LR
comp=Z,140nm,17.4s
SVE Sverdlovsk 64.02 332⇑ *e*P **P 02 47 54.5 +0.5**
SVE pmax pmax
comp=Z,11nm,1.1s
BRVK Borovoye 64.08 325 *ce*P **P 02 47 55.0 +0.6**
BRVK pmax pmax
comp=Z,6.0nm,0.7s
BRVK Borovoye 64.08 325 *e*P **P 02 47 54.4 0.0**
comp=Z,6.3nm,0.9s
JOF Joensuu 64.12 350 *e*P **P 02 47 53.0 -1.6**
JOF pmax pmax
comp=Z,4.0nm,0.6s
JOF Joensuu 64.12 350 *e*p **P 02 47 53.0 -1.6**
comp=Z,3.6nm,0.6s
MK31 Makanchi Array 64.21 314 *e*P **P 02 47 54.4 -1.1**
MK31 Makanchi Array 64.21 314 *e*P **P 02 47 54.4 -1.1**
MKAR Makanchi Array 64.21 314 P **P 02 47 54.5 -1.0**
MKAR Makanchi Array 64.21 314 P **P 02 47 54.5 -1.0**
MKAR Makanchi Array 64.21 314 P **P 02 47 54.5 -1.0**
comp=Z,3.3nm,0.7s,baz=48,slow=7.3,SNR=48
MKAR LR LR 03 17 08.3
comp=Z,53nm,18.9s,baz=174,slow=37
CD2 Chengdu 64.82 288 *e*P **P 02 48 00.4 +0.7**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,30nm,5.8s
ARU Arti 64.94 333 *d i*P **P 02 48 00.1 +0.1**
ARU 02 50 21.1
ARU S **S 02 56 40.6 +0.2**
ARU pmax pmax
comp=Z,8.0nm,1.2s
KAF Kangasniemi 65.39 352 *e*P **P 02 48 01.6 -1.2**
KAF pmax pmax
comp=Z,9.0nm,0.7s
KAF Kangasniemi 65.39 352 *e*p **P 02 48 01.6 -1.2**
comp=Z,8.5nm,0.7s
FIA1 FINESS Array S 66.07 352 *e*P **P 02 48 06.3 -0.9**
FINES FINESS Array B 66.07 352 P **P 02 48 06.4 -0.8**
FINES FINESS Array B 66.07 352 P **P 02 48 06.4 -0.8**
comp=Z,4.8nm,0.6s,baz=23,slow=7.5,SNR=50
FINES LR LR 03 19 12.3
comp=Z,43nm,19.9s,baz=10,slow=38
GYA Guiyang 66.38 283 *e*P **P 02 48 10.0 +0.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s
NB2 NORSAR Subarra 67.08 0 P **P 02 48 13.3 -0.5**
comp=Z,3.9nm,0.8s,baz=359,slow=6.2
NOA NORSAR Array B 67.08 0 P **P 02 48 13.5 -0.3**
NOA NORSAR Array B 67.08 0 P **P 02 48 13.5 -0.3**
comp=Z,3.8nm,0.8s,baz=340,slow=5.2,SNR=12
NOA LR LR 03 15 49.8
comp=Z,10nm,20.0s,baz=205,slow=34
KMI Kunming 69.72 285 P **P 02 48 31.5 +0.4**
KMI pP pP 02 48 42.3 +5.6
KMI sP sP 02 48 47.4 +8.6
KMI pmax pmax
comp=Z,13nm,0.7s
KMI pmax pmax
comp=Z,120nm,3.8s
KMI LR LR
comp=Z,33nm,21.7s
TKM2 Tokmak 2 70.20 315 *e*P **P 02 48 34.3 +0.6**
TKM2 Tokmak 2 70.20 315 *e*P **P 02 48 34.3 +0.6**
ABKAR Akbulak array 70.78 329 *e*P **P 02 48 37.1 +0.2**
AAK Ala-Archa 70.90 316 *e*P **P 02 48 38.5 +0.5**
AAK pmax pmax
comp=Z,7.0nm,0.7s
AAK Ala-Archa 70.90 316 *e*P **P 02 48 38.5 +0.5**
comp=Z,6.5nm,0.7s
OBN Obninsk 71.00 345⇓ *i*P **P 02 48 36.6 -1.4**
OBN *i* 02 48 49.8
OBN pmax pmax
comp=Z,20nm,1.6s
EKS2 Erkin-Say 71.19 316 *e*P **P 02 48 40.5 +0.8**
EKS2 Erkin-Say 71.19 316 *e*P **P 02 48 40.5 +0.8**
KKAR Karatay Array 72.18 319 *e*P **P 02 48 45.7 +0.2**
KKAR pmax pmax
comp=Z,4.0nm,0.7s
KKAR Karatay Array 72.18 319 *e*P **P 02 48 45.7 +0.2**
comp=Z,3.9nm,0.7s
KSH Kashi 72.79 313 *e*P P 02 48 53.0 +3.7
KSH *e*pP **PcP 02 49 02.9 -3.6**
KSH *e*sP sP 02 49 06.9 +10
KSH *e*PcP pP 02 49 09.6 +15
KSH *e*PP PP 02 51 36.8 +6.1
KSH *e*S **S 02 58 14.8 +0.6**
KSH *e*sS SKiKP 02 58 31.1 +9.3
KSH *e*SKS **SKSac 02 58 50.6 -3.2**
KSH pmax pmax
comp=Z,26nm,0.9s
KSH pmax pmax
comp=Z,140nm,4.1s
KSH LR LR
comp=N,410nm,8.3s
KSH LR LR
comp=E,310nm,8.1s
KSH LR LR
comp=Z,180nm,8.7s
VSR Storozhevoye 74.28 342 *e*P **P 02 48 56.8 -0.9**
VSR pmax pmax
comp=Z,6.0nm,0.6s
VSR pmax pmax
comp=N,5.0nm,0.7s
VSR pmax pmax
comp=E,6.0nm,0.8s
VORD Divnogorie 74.50 342 *e*P **P 02 48 58.1 -0.8**
VORD pmax pmax
comp=N,7.0nm,0.6s
VORD pmax pmax
comp=E,8.0nm,0.6s
VORD pmax pmax
comp=Z,6.0nm,0.6s
CLZ Clausthal 76.30 1 *e*P **P 02 49 10.5 +1.1**
comp=Z,9.0nm,1.1s
CLZ Clausthal 76.30 1 *e*P **P 02 49 10.5 +1.1**
CLZ pmax pmax
comp=Z,39nm,1.1s
AKASG Malin Array Be 76.33 348 P **P 02 49 08.5 -1.0**
AKASG Malin Array Be 76.33 348 P **P 02 49 08.5 -1.0**
AKASG Malin Array Be 76.33 348 P **P 02 49 08.5 -1.0**
comp=Z,3.0nm,0.6s,baz=13,slow=5.8,SNR=12
KIEV Kiev 76.34 348 *e*P **P 02 49 08.5 -1.1**
KIEV pmax pmax
comp=Z,7.0nm,0.9s
KIEV Kiev 76.34 348 *e*P **P 02 49 08.5 -1.1**
comp=Z,6.8nm,0.9s
AK02 Malin Array Si 76.38 348 *e*P **P 02 49 08.3 -1.5**
AK02 *e*pP **PcP 02 49 19.5 -2.1**
CLL Collm 76.83 359 *e*P **P 02 49 12.8 +0.5**
comp=Z,4.0nm,1.1s
CLL Collm 76.83 359 *i* P **P 02 49 12.2 -0.1**
CLL pmax pmax
comp=Z,4.0nm,1.1s
CLL Collm 76.83 359 *i* P **P 02 49 12.2 -0.1**
comp=Z,4.0nm,1.1s
CMAR Chiang Mai Arr 77.07 283 P **P 02 49 14.6 +0.4**
CMAR Chiang Mai Arr 77.07 283 P **P 02 49 14.6 +0.4**
comp=Z,6.0nm,0.8s,baz=27,slow=7.1,SNR=23
CMAR LR LR 03 26 41.7
comp=Z,35nm,18.3s,baz=125,slow=38
BRG Berggiesshubel 77.25 358 *e*(P) **P 02 49 15.8 +1.1**
comp=Z,3.4nm,1.1s
BRG Berggiesshubel 77.25 358 *e*P **P 02 49 15.8 +1.1**
BRG pmax pmax
comp=Z,3.0nm,1.1s
MOX Moxa 77.50 360 *e*P **P 02 49 17.0 +0.9**
comp=Z,6.0nm,1.1s
MOX Moxa 77.50 360 *e*P **P 02 49 17.0 +0.9**
MOX pmax pmax
comp=Z,17nm,1.1s
PVCC Panska Ves 77.58 358 *e*P **P 02 49 17.5 +0.9**
PVCC Panska Ves 77.58 358 *e*P **P 02 49 17.5 +0.9**
OJC Ojcow 77.68 354 *e*P **P 02 49 18.3 +1.2**
OJC Ojcow 77.68 354 *e*P **P 02 49 18.3 +1.2**
DPC Dobruska-Polom 77.71 357 *e*P **P 02 49 18.4 +1.1**
DPC *e* 02 49 28.0
DPC Dobruska-Polom 77.71 357 *e*P **P 02 49 18.4 +1.1**
DPC *e*PCP **PcP 02 49 28.0 +0.6**
GIVF Givet 77.90 4 *e*P **P 02 49 18.7 +0.4**
comp=Z,25nm,1.1s
GIVF Givet 77.90 4 *e*P **P 02 49 18.7 +0.4**
GIVF pmax pmax
comp=Z,25nm,1.1s
GIVF Givet 77.90 4 *e*P **P 02 49 18.7 +0.4**
comp=Z,25nm,1.1s
BAIF Baives 77.91 5 *e*P **P 02 49 19.0 +0.6**
comp=Z,8.7nm,0.9s
BAIF Baives 77.91 5 *e*P **P 02 49 19.0 +0.6**
BAIF pmax pmax
comp=Z,9.0nm,0.9s
BAIF Baives 77.91 5 *e*P **P 02 49 19.0 +0.6**
comp=Z,8.7nm,0.9s
NKC Novy Kostel 77.91 359 *e*P **P 02 49 19.3 +0.9**
NKC Novy Kostel 77.91 359 *e*P **P 02 49 19.3 +0.9**
KWP Kalwaria Pacla 78.06 352⇓ P **P 02 49 20.4 +1.2**
KWP Kalwaria Pacla 78.06 352 *e*P **P 02 49 19.9 +0.6**
comp=Z,13nm,0.9s
KWP Kalwaria Pacla 78.06 352⇓ *i*P **P 02 49 20.4 +1.2**
PRU Pruhonice 78.12 358 *e*P **P 02 49 20.8 +1.2**
PRU *e* 02 49 30.5
PRU Pruhonice 78.12 358 *e*P **P 02 49 20.8 +1.2**
PRU *e*PCP **PcP 02 49 30.5 +1.4**
OKC Ostrava-Krasne 78.15 355 *e*P **P 02 49 19.8 +0.1**
OKC Ostrava-Krasne 78.15 355 *e*P **P 02 49 19.8 +0.1**
MORC Moravsky Berou 78.24 356⇓ P **P 02 49 19.7 -0.6**
MORC Moravsky Berou 78.24 356 *e*P **P 02 49 20.4 +0.1**
comp=Z,5.8nm,1.1s
MORC Moravsky Berou 78.24 356⇓ *i*P **P 02 49 19.7 -0.6**
STHS Stebnicka Huta 78.38 353 *e*P **P 02 49 22.6 +1.5**
STHS pmax pmax
comp=Z,6.0nm,1.1s
STHS Stebnicka Huta 78.38 353 *e*P **P 02 49 22.6 +1.5**
NIE Niedzica 78.44 354 *e*P **P 02 49 22.5 +1.1**
NIE Niedzica 78.44 354 *e*P **P 02 49 22.5 +1.1**
GRF Grafenberg Arr 78.46 0 *e*P **P 02 49 23.0 +1.5**
comp=Z,10.0nm,1.1s
GRF Grafenberg Arr 78.46 0 *e*P **P 02 49 23.0 +1.5**
GRF pmax pmax
comp=Z,22nm,1.1s
VRAC Vranov 78.74 356⇓ *i*P **P 02 49 24.5 +1.5**
KOLS Kolonicke sedl 78.79 353 *e*P **P 02 49 23.9 +0.6**
KOLS pmax pmax
comp=Z,3.0nm,1.0s
KOLS Kolonicke sedl 78.79 353 *e*P **P 02 49 23.9 +0.6**
TREC Trest 78.79 357 *e*P **P 02 49 24.0 +0.7**
TREC Trest 78.79 357 *e*P **P 02 49 24.0 +0.7**
FLN La Foliniere 78.89 8 *e*P **P 02 49 23.9 +0.1**
comp=Z,16nm,1.0s
FLN *e*R
comp=Z,51nm,18.8s
FLN La Foliniere 78.89 8 *e*P **P 02 49 23.9 +0.1**
FLN pmax pmax
comp=Z,16nm,1.0s
FLN La Foliniere 78.89 8 *e*P **P 02 49 23.9 +0.1**
comp=Z,16nm,1.0s
KHC Kasperske Hory 79.00 358 *e*P **P 02 49 25.4 +0.9**
KHC pmax pmax
comp=Z,8.0nm,1.2s
KHC Kasperske Hory 79.00 358 *e*P **P 02 49 25.4 +0.9**
KHC *e*PCP **PcP 02 49 35.2 +2.2**
KHC Kasperske Hory 79.00 358 *e*P **P 02 49 25.4 +0.9**
comp=Z,8.0nm,1.2s
LDF La Druitiere 79.08 8 *e*P **P 02 49 24.8 -0.1**
LDF La Druitiere 79.08 8 *e*P **P 02 49 24.8 -0.1**
LDF La Druitiere 79.08 8 *e*P **P 02 49 24.8 -0.1**
GEC2 GERESS Array S 79.28 358 *e*P **P 02 49 27.1 +1.0**
comp=Z,5.0nm,1.2s
GEC2 GERESS Array S 79.28 358 *e*P **P 02 49 27.1 +1.0**
GEC2 pmax pmax
comp=Z,16nm,1.2s
GERES GERESS Array B 79.28 358 P **P 02 49 26.5 +0.4**
GERES GERESS Array B 79.28 358 P **P 02 49 26.5 +0.4**
comp=Z,1.5nm,0.9s,baz=13,slow=6.0,SNR=12
KECS Kecovo 79.36 354 *e*P **P 02 49 27.4 +1.0**
KECS pmax pmax
comp=Z,2.0nm,1.0s
KECS Kecovo 79.36 354 *e*P **P 02 49 27.4 +1.0**
VYHS Vyhne 79.45 355 *e*P **P 02 49 27.9 +1.0**
VYHS pmax pmax
comp=Z,4.0nm,1.1s
VYHS Vyhne 79.45 355 *e*P **P 02 49 27.9 +1.0**
VYHS *e*pP **PcP 02 49 35.9 +0.9**
PAGF Fort de Pagny 79.48 4 *e*P **P 02 49 28.2 +1.1**
comp=Z,10.0nm,1.2s
PAGF Fort de Pagny 79.48 4 *e*P **P 02 49 28.2 +1.1**
comp=Z,10.0nm,1.2s
CDF Champ du Feu 79.68 3 *e*P **P 02 49 28.8 +0.5**
comp=Z,6.4nm,0.8s
CDF Champ du Feu 79.68 3 *e*P **P 02 49 28.8 +0.5**
CDF pmax pmax
comp=Z,6.0nm,0.8s
CDF Champ du Feu 79.68 3 *e*P **P 02 49 28.8 +0.5**
comp=Z,6.4nm,0.8s
BUR08 Bucovina Ar. S 79.80 351 *e*P **P 02 49 28.8 -0.2**
SFTF Sexfontaines 79.80 4 *e*P **P 02 49 29.5 +0.7**
comp=Z,16nm,1.0s
SFTF Sexfontaines 79.80 4 *e*P **P 02 49 29.5 +0.7**
comp=Z,16nm,1.0s
BURAR Bucovina Array 79.83 351⇓ *i*P **P 02 49 29.3 +0.2**
PSZ Piszkesteto 79.97 354 *e*P **P 02 49 31.1 +1.3**
PSZ Piszkesteto 79.97 354 *e*P **P 02 49 31.1 +1.3**
KBL Kabul 79.99 315 *e*P **P 02 49 29.3 -1.1**
KBL pmax pmax
comp=Z,6.0nm,0.6s
KBL Kabul 79.99 315 *e*P **P 02 49 29.3 -1.1**
comp=Z,5.9nm,0.6s
HAU Haudompre 80.06 3 *e*P **P 02 49 30.8 +0.6**
comp=Z,8.3nm,1.0s
HAU *e*R
comp=Z,47nm,21.8s
HAU Haudompre 80.06 3 *e*P **P 02 49 30.8 +0.6**
HAU pmax pmax
comp=Z,8.0nm,1.0s
HAU Haudompre 80.06 3 *e*P **P 02 49 30.8 +0.6**
comp=Z,8.3nm,1.0s
CONA Conrad Observa 80.15 357⇑ *e*P **P 02 49 30.9 +0.1**
comp=Z,11nm,1.2s
HINF Hinteralfeld 80.26 3 *e*P **P 02 49 31.8 +0.4**
comp=Z,4.3nm,0.7s
HINF Hinteralfeld 80.26 3 *e*P **P 02 49 31.8 +0.4**
HINF pmax pmax
comp=Z,4.0nm,0.7s
HINF Hinteralfeld 80.26 3 *e*P **P 02 49 31.8 +0.4**
comp=Z,4.3nm,0.7s
RJOB Jochberg 80.41 359 *e*P **P 02 49 33.2 +1.0**
comp=Z,11nm,1.3s
KIV Kislovodsk 80.44 338 *e*P **P 02 49 33.7 +1.2**
KIV pmax pmax
comp=Z,9.0nm,1.1s
HYF Humbligny 80.60 6 *e*P **P 02 49 34.0 +0.8**
HYF Humbligny 80.60 6 *e*P **P 02 49 34.0 +0.8**
KBZ Khabaz 80.61 337 P **P 02 49 34.1 +0.9**
KBZ Khabaz 80.61 337 P **P 02 49 34.1 +0.9**
KBZ Khabaz 80.61 337 P **P 02 49 34.1 +0.9**
comp=Z,4.4nm,0.9s,baz=315,slow=4.3,SNR=8.8
LOR Lormes 80.68 5 *e*P **P 02 49 34.2 +0.6**
comp=Z,11nm,1.0s
LOR *e*R
comp=Z,38nm,18.0s
LOR Lormes 80.68 5 *e*P **P 02 49 34.2 +0.6**
comp=Z,11nm,1.0s
MOTA Moosalm 80.81 0⇑ *e*P **P 02 49 34.2 -0.2**
comp=Z,11nm,1.1s
SSF Saint Saulge 80.86 5 *e*P **P 02 49 35.2 +0.7**
comp=Z,16nm,1.1s
SSF Saint Saulge 80.86 5 *e*P **P 02 49 35.2 +0.7**
SSF pmax pmax
comp=Z,16nm,1.1s
SSF Saint Saulge 80.86 5 *e*P **P 02 49 35.2 +0.7**
comp=Z,16nm,1.1s
DRGR 80.88 352⇑ P **P 02 49 35.6 +0.9**
DRGR 80.88 352⇑ *i*P **P 02 49 35.6 +0.9**
WTTA Wattenberg 80.89 360 *e*P **P 02 49 36.2 +1.3**
comp=Z,7.0nm,1.0s
KBA Koelnbreinsper 81.06 359 *e*P **P 02 49 37.6 +1.8**
comp=Z,19nm,1.1s
MFF Saint Martin d 81.06 8 *e*P **P 02 49 36.3 +0.7**
comp=Z,22nm,1.0s
MFF Saint Martin d 81.06 8 *e*P **P 02 49 36.3 +0.7**
MFF pmax pmax
comp=Z,22nm,1.0s
MFF Saint Martin d 81.06 8 *e*P **P 02 49 36.3 +0.7**
comp=Z,22nm,1.0s
AVF Avril sur Loir 81.12 6 *e*P **P 02 49 36.4 +0.5**
comp=Z,26nm,1.3s
AVF Avril sur Loir 81.12 6 *e*P **P 02 49 36.4 +0.5**
AVF pmax pmax
comp=Z,26nm,1.3s
AVF Avril sur Loir 81.12 6 *e*P **P 02 49 36.4 +0.5**
comp=Z,26nm,1.3s
FETA Feichten 81.13 0⇑ *i*P **P 02 49 37.2 +1.0**
comp=Z,8.9nm,1.1s
SMF Signal de Mont 81.30 5 *e*P **P 02 49 37.4 +0.5**
comp=Z,21nm,1.1s
SMF Signal de Mont 81.30 5 *e*P **P 02 49 37.4 +0.5**
SMF pmax pmax
comp=Z,21nm,1.1s
SMF Signal de Mont 81.30 5 *e*P **P 02 49 37.4 +0.5**
comp=Z,21nm,1.1s
SOKA Soboth 81.42 357⇑ *e*pP **P 02 49 39.4 +1.7**
comp=Z,19nm,1.2s
CABF La Chapelle 81.44 4 *e*P **P 02 49 38.8 +1.1**
comp=Z,32nm,1.1s
CABF La Chapelle 81.44 4 *e*P **P 02 49 38.8 +1.1**
CABF pmax pmax
comp=Z,32nm,1.1s
CABF La Chapelle 81.44 4 *e*P **P 02 49 38.8 +1.1**
comp=Z,32nm,1.1s
TCF Toulx Ste Croi 81.55 6 *e*P **P 02 49 38.6 +0.3**
comp=Z,9.8nm,1.1s
TCF Toulx Ste Croi 81.55 6 *e*P **P 02 49 38.6 +0.3**
TCF pmax pmax
comp=Z,10.0nm,1.1s
TCF Toulx Ste Croi 81.55 6 *e*P **P 02 49 38.6 +0.3**
comp=Z,9.8nm,1.1s
OBKA Obir 81.60 358⇑ *e*P **P 02 49 39.1 +0.5**
comp=Z,24nm,2.0s
PKSM Moragy 81.74 355⇓ P P 02 49 30.9 -8.3
PKSM Moragy 81.74 355⇓ *i*P P 02 49 30.9 -8.3
GZR Gura Zlata 82.26 352⇑ P **P 02 49 42.1 +0.1**
GZR Gura Zlata 82.26 352⇑ *i*P **P 02 49 42.1 +0.1**
LPG La Plagne 82.58 3 *e*P **P 02 49 44.9 +0.9**
comp=Z,9.4nm,0.8s
LPG La Plagne 82.58 3 *e*P **P 02 49 44.9 +0.9**
LPG pmax pmax
comp=Z,9.0nm,0.8s
LPG La Plagne 82.58 3 *e*P **P 02 49 44.9 +0.9**
comp=Z,9.4nm,0.8s
LFF La Frestale 82.78 8 *e*P **P 02 49 45.5 +0.8**
comp=Z,8.2nm,0.6s
LFF La Frestale 82.78 8 *e*P **P 02 49 45.5 +0.8**
LFF pmax pmax
comp=Z,8.0nm,0.6s
LFF La Frestale 82.78 8 *e*P **P 02 49 45.5 +0.8**
comp=Z,8.2nm,0.6s
KAPI Kappang 82.81 252 *e*P **P 02 49 45.6 +0.4**
comp=Z,23nm,1.2s
CAF Calviac 82.90 7 *e*P **P 02 49 46.0 +0.7**
CAF Calviac 82.90 7 *e*P **P 02 49 46.0 +0.7**
CAF Calviac 82.90 7 *e*P **P 02 49 46.0 +0.7**
BNI Bardonecchia 83.02 3 *e*P **P 02 49 47.6 +1.5**
BNI pmax pmax
comp=Z,4.0nm,0.7s
BNI Bardonecchia 83.02 3 *e*P **P 02 49 47.6 +1.5**
comp=Z,4.5nm,0.7s
ORIF Oris-en-Rattie 83.12 4 *e*P **P 02 49 47.8 +1.2**
ORIF *e*R
comp=Z,50nm,19.5s
ORIF Oris-en-Rattie 83.12 4 *e*P **P 02 49 47.8 +1.2**
ORIF Oris-en-Rattie 83.12 4 *e*P **P 02 49 47.8 +1.2**
VIVF Saint-Julien-I 83.13 5 *e*P **P 02 49 47.4 +0.9**
VIVF Saint-Julien-I 83.13 5 *e*P **P 02 49 47.4 +0.9**
VIVF Saint-Julien-I 83.13 5 *e*P **P 02 49 47.4 +0.9**
SJPF Ste Jean 84.42 9 *e*P **P 02 49 53.7 +0.6**
comp=Z,5.2nm,0.7s
SJPF Ste Jean 84.42 9 *e*P **P 02 49 53.7 +0.6**
SJPF pmax pmax
comp=Z,5.0nm,0.7s
SJPF Ste Jean 84.42 9 *e*P **P 02 49 53.7 +0.6**
comp=Z,5.2nm,0.7s
MTLF Montolieu 84.48 7 *e*P **P 02 49 54.4 +0.9**
comp=Z,12nm,1.0s
MTLF Montolieu 84.48 7 *e*P **P 02 49 54.4 +0.9**
MTLF pmax pmax
comp=Z,12nm,1.0s
MTLF Montolieu 84.48 7 *e*P **P 02 49 54.4 +0.9**
comp=Z,12nm,1.0s
ETSF Etsaut 84.70 9 *e*P **P 02 49 55.7 +1.1**
comp=Z,13nm,0.8s
ETSF Etsaut 84.70 9 *e*P **P 02 49 55.7 +1.1**
ETSF pmax pmax
comp=Z,13nm,0.8s
ETSF Etsaut 84.70 9 *e*P **P 02 49 55.7 +1.1**
comp=Z,13nm,0.8s
LMR La Mourre 84.73 4 *e*P **P 02 49 55.8 +1.1**
comp=Z,64nm,1.2s
LMR La Mourre 84.73 4 *e*P **P 02 49 55.8 +1.1**
LMR pmax pmax
comp=Z,64nm,1.2s
LMR La Mourre 84.73 4 *e*P **P 02 49 55.8 +1.1**
comp=Z,64nm,1.2s
KULM Kulin 86.28 274 *e*P **P 02 50 03.0 +0.2**
comp=Z,19nm,1.3s
BR131 Keskin Array S 86.39 343 *e*P **P 02 50 03.4 +0.2**
comp=Z,1.5nm,0.8s
BRTR Keskin Array B 86.39 343 P **P 02 50 03.8 +0.6**
BRTR Keskin Array B 86.39 343 P **P 02 50 03.8 +0.6**
comp=Z,1.8nm,0.8s,baz=13,slow=3.2,SNR=12
BRTR LR LR 03 33 39.6
comp=Z,19nm,20.9s,baz=280,slow=39
WRA Warramunga Arr 87.25 232 P **P 02 50 06.4 -0.9**
WRA Warramunga Arr 87.25 232 P **P 02 50 06.4 -0.9**
comp=Z,1.0nm,0.6s,baz=34,slow=6.1,SNR=15
ESDC Sonseca Array 87.51 12 P **P 02 50 08.3 -0.3**
ESDC Sonseca Array 87.51 12 P **P 02 50 08.3 -0.3**

	comp=Z,0.3nm,0.5s,baz=349,slow=3.9,SNR=8.9							
PSI	**Prapat**	**89.28 274**		P		**P**	**02 50 17.1**	**-0.2**
PSI	**Prapat**	**89.28 274**		P		**P**	**02 50 17.1**	**-0.2**
	comp=Z,5.8nm,0.8s,baz=329,slow=20,SNR=5.4							
AS31	**Alice Springs**	**90.63 231**		*e*P		**P**	**02 50 23.0**	**-0.2**
ASAR	**Alice Springs**	**90.63 231**		P		**P**	**02 50 22.8**	**-0.4**
ASAR	**Alice Springs**	**90.63 231**		P		**P**	**02 50 22.8**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=28,slow=4.7,SNR=24							
CSS	**Prodhromos**	**91.07 342**		*e*P		**P**	**02 50 25.9**	**+0.6**
	comp=Z,17nm,1.2s							
TORD	**Torodi Ar. Bea**	**114.36**	**10**	PKP	PKPdf		02 55 60.0	-0.8
TORD	**Torodi Ar. Bea**	**114.36**	**10**	PKP	PKPdf		02 55 60.0	-0.8
	comp=Z,0.7nm,1.1s,baz=326,slow=2.4,SNR=2.7							
LBTB	**Lobatse**	**150.74 333**		*e*PKPbc		**PKPbc**	**02 57 13.4**	**+0.3**

MEX 21 02:45:37.5±0.5, 17.01N×100.11W, h6km±8km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
CAIG	**El Cayaco**	**0.15**	**284**	*i* P		Pg	02 45 39.9	-0.7
CAIG				*e*P			02 45 40.2	
CAIG				*i* S		Sg	02 45 42.7	0.0
MEIG	**Mezcala**	**1.02**	**27**	*i* P		Pg	02 45 54.5	-2.8
MEIG				*i* S		Sg	02 46 07.3	-3.4
ARIG	**Puente Sto Nin**	**1.28**	**350**	*i* P		Pn	02 45 58.8	-3.3
ARIG				*i* S		Sg	02 46 15.1	-3.8
ZIIG	**Zihuatanejo**	**1.42**	**295**	*i* P		Pn	02 45 59.6	-4.3
ZIIG				*i* S		Sb	02 46 17.6	-5.3
PNIG	**Pinotepa**	**2.00**	**108**	*i* P		Pn	02 46 09.4	-2.5
PNIG				*i* S		Sn	02 46 32.5	-4.8
YAIG	**Yautepec**	**2.09**	**28**	*e*P		Pn	02 46 10.7	-2.6
YAIG				*i* S		Sn	02 46 35.2	-4.7

*NSSP **21** 02:53:12.0, 40.28N×44.77E, h5km, Ms2.8*
*CSEM **21** 02:53:14.6±0.4, 40.36N×44.69E, h2km, ML2.8, Error ellipse: s-maj=8.2km s-min=6.8km az=83.0*
*TIF **21** 02:53:15.6, 40.37N×44.81E, h15km±3km*
*DDA **21** 02:53:21.2, 40.15N×44.20E, h2km, MD3.2*
ISC 21 02:53:12.6±0.8, 40.27N±0.02×44.76E±0.02, h11km±6km, n39, σ1s31/62, 15C-8D, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
GNI	**Garni**	**0.12**	**185**	*i* P		**Pg**	**02 53 15.9**	**+0.2**
GNI				⇓*i* S		**Sg**	**02 53 18.2**	**+0.3**
GNI	**Garni**	**0.12**	**185**	⇑*i* P		**Pg**	**02 53 15.9**	**+0.2**
GNI				*i* S		**Sg**	**02 53 18.2**	**+0.3**
ARRZ	**Ararat**	**0.42**	**186**	*e*P		Pn	02 53 46.0	+21
ARRZ				*e*S		Sb	02 53 52.5	+24
LMTZ	**Lermontov**	**0.49**	**350**	⇑*i* P		**Pb**	**02 53 21.8**	**-1.7**
LMTZ				⇑*i* S		**Sb**	**02 53 29.5**	**-1.3**
LMTZ	**Lermontov**	**0.49**	**350**	⇑P		**Pb**	**02 53 21.8**	**-1.7**
LMTZ				S		**Sb**	**02 53 29.5**	**-1.3**
SPIZ	**Spitak**	**0.67**	**326**	⇑*i* P		**Pb**	**02 53 25.1**	**-1.3**
SPIZ				⇓*i* S		**Sb**	**02 53 34.9**	**-0.9**
SPIZ	**Spitak**	**0.67**	**326**	⇑P		**Pb**	**02 53 25.1**	**-1.3**
SPIZ				S		**Sb**	**02 53 34.9**	**-0.9**
CKLZ	**Chkalov**	**0.67**	**353**	⇑*i* P		**Pb**	**02 53 25.4**	**-1.0**
CKLZ				⇑*i* S		**Sb**	**02 53 35.8**	**0.0**
CKLZ	**Chkalov**	**0.67**	**353**	⇑P		**Pb**	**02 53 25.4**	**-1.0**
CKLZ				S		**Sb**	**02 53 35.8**	**0.0**
VADZ	**Vardenis**	**0.76**	**97**	*e*P		Pn	02 53 32.0	+2.4
VADZ				*e*S		**Sn**	**02 53 42.0**	**+0.8**
VADZ	**Vardenis**	**0.76**	**97**	P		Pn	02 53 32.0	+2.4
VADZ				S		**Sn**	**02 53 42.0**	**+0.8**
STEZ	**Stepenevan**	**0.78**	**340**	⇓*i* P		**Pb**	**02 53 27.5**	**-0.8**
STEZ				⇓*i* S		**Sb**	**02 53 39.2**	**+0.2**
STEZ	**Stepenevan**	**0.78**	**340**	⇓*i* P		**Pn**	**02 53 28.4**	**-1.3**
STEZ				⇓*i* S		**Sn**	**02 53 40.4**	**-1.1**
STE	**Stepanavan**	**0.79**	**338**	⇓P		**Pb**	**02 53 27.5**	**-0.9**
STE				S		**Sn**	**02 53 40.4**	**-1.3**
GMRZ	**Gyumri**	**0.89**	**308**	*e*P		Pn	02 53 43.0	+12
GMRZ				*e*S		Sn	02 53 55.0	+11
DIGO	**Kars**	**1.07**	**278**	*i* P		**Pn**	**02 53 33.5**	**-0.3**
DIGO				*i* S		**Sn**	**02 53 48.2**	**-0.5**
DIGO	**Kars**	**1.07**	**278**	*i* P		**Pn**	**02 53 33.5**	**-0.3**
DIGO				*i* S		**Sn**	**02 53 48.2**	**-0.5**
DYDN	**Diyadin**	**1.09**	**229**	*e*P		Pn	02 53 36.8	+2.7
DYDN	**Diyadin**	**1.09**	**229**	*e*P		Pn	02 53 36.8	+2.7
KZR	**Kazreti**	**1.14**	**347**	P		**Pn**	**02 53 35.1**	**+0.5**
KZR				S		**Sn**	**02 53 51.3**	**+1.0**
DGRG	**David-gareji**	**1.27**	**21**	P		**Pn**	**02 53 38.3**	**+1.9**
DGRG				S		**Sn**	**02 53 57.6**	**+4.1**
GRS	**Goris**	**1.44**	**122**	⇑*i* P		**Pn**	**02 53 38.0**	**-0.7**
GRS				⇓*i* S		**Sg**	**02 53 58.0**	**-0.8**
GRS	**Goris**	**1.44**	**122**	⇑P		**Pn**	**02 53 38.0**	**-0.7**
GRS				S		**Sg**	**02 53 58.0**	**-0.8**
TBLG	**Delisi**	**1.46**	**359**	P		**Pg**	**02 53 40.5**	**-0.1**
TBLG				S		**Sg**	**02 54 01.0**	**+1.4**
TBLG	**Delisi**	**1.46**	**359**	P		**Pg**	**02 53 40.5**	**-0.1**
TBLG				S		**Sg**	**02 54 01.0**	**+1.4**
AKH	**Akhalkalaki**	**1.49**	**320**	P		**Pg**	**02 53 41.8**	**+0.6**
AKH				S		**Sg**	**02 54 03.1**	**+2.6**
STKZ		**1.60**	**106**	⇑*i* P		**Pg**	**02 53 44.7**	**+1.4**
STKZ				⇑*i* S		**Sg**	**02 54 03.6**	**-0.4**
STKZ		**1.60**	**106**	⇑P		**Pg**	**02 53 44.7**	**+1.4**
STKZ				S		**Sg**	**02 54 03.6**	**-0.4**
TUTA	**Tutak**	**1.73**	**241**	*i* P		**Pg**	**02 53 46.2**	**+0.5**
TUTA				*i* S		**Sg**	**02 54 10.7**	**+2.5**
TUTA	**Tutak**	**1.73**	**241**	*i* P		**Pg**	**02 53 46.2**	**+0.5**
TUTA				*i* S		**Sg**	**02 54 10.7**	**+2.5**
DUS	**Dusheti**	**1.82**	**359**	P		**Pg**	**02 53 48.4**	**+0.9**
DUS				S		**Sg**	**02 54 14.9**	**+3.8**
TVAN	**Van**	**2.03**	**211**	*i* P		**Pg**	**02 53 52.8**	**+1.3**
TVAN	**Van**	**2.03**	**211**	*i* P		**Pg**	**02 53 52.8**	**+1.3**
GUDG	**Gudauri**	**2.20**	**355**	P		**Pg**	**02 53 53.8**	**-1.0**
GUDG				S		**Sg**	**02 54 24.1**	**+0.7**
DDEM	**Demirkent**	**2.37**	**286**	*i* P		**Pg**	**02 53 58.2**	**+0.1**
DDEM	**Demirkent**	**2.37**	**286**	*i* P		**Pg**	**02 53 58.2**	**+0.1**
DBAD	**Bademkaya**	**2.45**	**289**	*i* P		**Pg**	**02 53 59.7**	**+0.2**
DBAD	**Bademkaya**	**2.45**	**289**	*i* P		**Pg**	**02 53 59.7**	**+0.2**
ONI	**Oni**	**2.52**	**338**	P		**Pg**	**02 53 59.4**	**-1.4**
ONI				S		**Sg**	**02 54 33.4**	**-0.1**

IDC 21 03:00:30.7±2.0, 4.13N×127.00E, h0km, mb3.7/4, mb1 3.8/4, mb1mx3.5/23, mbtmp3.7/4, Error ellipse: s-maj=177.0km s-min=23.5km az=65.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.98**	**163**	P		P	03 05 55.8	-0.4
	1.6nm,0.7s,baz=344,slow=10,SNR=11							
ASAR	**Alice Springs**	**28.43**	**167**	P		P	03 06 27.0	-0.4
	0.2nm,0.3s,baz=349,slow=7.6,SNR=3.4							
STKA	**Stephens Creek**	**38.40**	**160**	P		P	03 07 54.5	+0.5
	1.8nm,0.9s,baz=339,slow=8.6,SNR=2.9							
MKAR	**Makanchi Array**	**57.39**	**325**	P		P	03 10 20.9	-0.1
	0.4nm,0.4s,baz=117,slow=7.9,SNR=9.8							

TRN 21 03:19:07.8, 16.62N×59.75W, h30km, MD3.8, M3.5(FDF), 3C, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
DEG	**La Desirade**	**1.29**	**256**	*e*P		Pn	03 19 30.4	+0.5
MGG	**Marie-Galante**	**1.66**	**245**	*e*P		Pn	03 19 36.1	+1.3
SEG	**Port Louis**	**1.69**	**263**	⇑*i* P		Pn	03 19 36.8	+1.4
DWS	**Wesley**	**1.83**	**235**	*e*P		Pb	03 19 39.4	-1.2
DWS				*e*S		Sb	03 20 01.4	-1.7
DVCT	**Vielle Casse P**	**1.88**	**238**	*e*P		Pb	03 19 39.9	-1.5
DVCT				*e*S		Sb	03 20 02.7	-1.8
DOG	**Dongo Capester**	**1.88**	**252**	*e*P		Pb	03 19 40.2	-1.4
SCG	**Saint Claude**	**1.94**	**253**	*e*P		Pb	03 19 41.2	-1.4
SCG				*e*S		Sb	03 20 06.2	-0.3
HMG	**Houelmont**	**1.97**	**252**	*e*P		Pb	03 19 41.7	-1.4
LZG	**Guadaloupe-1**	**2.00**	**256**	*e*P		Pn	03 19 41.0	+1.4
BPA	**Boggy Peak**	**2.06**	**282**	*e*P		Pn	03 19 41.5	+1.1
BPA				*e*S		Sn	03 20 07.3	+2.2
FDF	**Fort de France**	**2.31**	**216**	⇑*e*P		Pn	03 19 45.2	+1.4
FDF				⇑*e*S		Sn	03 20 12.6	+1.3
MVM	**Montagne Vaucl**	**2.33**	**208**	*e*P		Pn	03 19 45.0	+0.9
NEV	**Hard Times**	**2.75**	**281**	*e*S		Sn	03 20 23.8	+1.8
SLW	**Petit Monier**	**2.83**	**204**	*e*P		Pn	03 19 52.1	+1.1
SLW				*e*S		Sn	03 20 25.2	+1.1
SLB	**Belfond**	**3.04**	**204**	*e*P		Pn	03 19 56.1	+2.1
SLB				*e*S		Sn	03 20 30.4	+1.0
MCLT	**Moule a Chique**	**3.11**	**202**	*e*P		Pn	03 19 56.7	+1.8
MCLT				*e*S		Sn	03 20 33.5	+2.4
SVB	**Belmont**	**3.63**	**204**	*e*P		Pn	03 20 04.7	+2.6
SVB				*e*S		Sn	03 20 45.8	+1.9

*ISK **21** 03:34:51.5, 38.75N×43.33E, h5km, MD3.2*
*DDA **21** 03:34:52.7, 38.72N×43.36E, h6km, MD3.3*
*CSEM **21** 03:34:52.9±0.3, 38.73N×43.36E, h2km, MD3.3, Error ellipse: s-maj=8.1km s-min=5.1km az=113.0*
ISC 21 03:34:53.2±1.0, 38.71N±0.02×43.37E±0.03, h9km±9km, n33, σ0s71/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
TVAN	**Van**	**0.18**	**172**	*i* P		**Pg**	**03 34 57.0**	**-0.1**
TVAN	**Van**	**0.18**	**172**	*i* P		**Pg**	**03 34 57.0**	**-0.1**
GEVA	**Gevas**	**0.47**	**212**	*i* P		**Pg**	**03 35 01.6**	**-0.7**
GEVA				*i* S		**Sg**	**03 35 09.1**	**+0.7**
GEVA	**Gevas**	**0.47**	**212**	*i* P		**Pg**	**03 35 01.6**	**-0.7**
GEVA				*i* S		**Sg**	**03 35 09.1**	**+0.7**
CLDR	**Caldiran**	**0.61**	**44**	*e*PG		**Pg**	**03 35 04.2**	**-0.7**
CLDR				*e*SG		**Sg**	**03 35 13.9**	**+1.0**
CLDR	**Caldiran**	**0.61**	**44**	*e*Pg		**Pg**	**03 35 04.2**	**-0.7**
CLDR				*e*Sg		**Sg**	**03 35 13.9**	**+1.0**
TUTA	**Tutak**	**0.82**	**328**	*i* P		**Pg**	**03 35 08.5**	**-0.5**
TUTA				*i* S		**Sg**	**03 35 19.8**	**+0.2**
TUTA	**Tutak**	**0.82**	**328**	*i* P		**Pg**	**03 35 08.5**	**-0.5**
TUTA				*i* S		**Sg**	**03 35 19.8**	**+0.2**
DYDN	**Diyadin**	**0.87**	**16**	*i* P		**Pg**	**03 35 09.6**	**-0.3**
DYDN				*i* S		**Sg**	**03 35 21.1**	**-0.2**
DYDN	**Diyadin**	**0.87**	**16**	*i* P		**Pg**	**03 35 09.6**	**-0.3**
DYDN				*i* S		**Sg**	**03 35 21.1**	**-0.2**
TATV	**Tatvan**	**0.89**	**257**	*i* P		**Pg**	**03 35 09.7**	**-0.6**
TATV				*i* S		**Sg**	**03 35 21.6**	**-0.3**
TATV	**Tatvan**	**0.89**	**257**	*i* P		**Pg**	**03 35 09.7**	**-0.6**
TATV				*i* S		**Sg**	**03 35 21.6**	**-0.3**
HAKT	**HAKKARI**	**1.18**	**167**	*i* P		**Pb**	**03 35 13.3**	**-2.5**
HAKT				*i* S		**Sn**	**03 35 32.8**	**+0.4**
SIRN	**S¯¯rnak**	**1.43**	**212**	*i* P		**Pg**	**03 35 20.8**	**+0.2**
SIRN				*i* S		**Sg**	**03 35 40.1**	**+1.0**
SIRN	**S¯¯rnak**	**1.43**	**212**	*i* P		**Pg**	**03 35 20.8**	**+0.2**
SIRN				*i* S		**Sg**	**03 35 40.1**	**+1.0**
CUKT	**Cukurca**	**1.47**	**173**	*e*PN		**Pb**	**03 35 21.0**	**+0.2**
CUKT	**Cukurca**	**1.47**	**173**	*e*Pn		**Pb**	**03 35 21.0**	**+0.2**
BTMT	**Batman**	**1.57**	**251**	*e*PN		**Pg**	**03 35 23.2**	**0.0**
BTMT	**Batman**	**1.57**	**251**	*e*Pn		**Pg**	**03 35 23.2**	**0.0**
BNGL	**BINGOL**	**1.75**	**279**	*i* P		**Pb**	**03 35 25.7**	**0.0**
GNI	**Garni**	**1.79**	**36**	*e*PN		**Pn**	**03 35 24.6**	**+0.2**
GNI	**Garni**	**1.79**	**36**	*e*Pn		**Pn**	**03 35 24.6**	**+0.2**
BEST	**Besiri**	**1.85**	**244**	*i* P		**Pb**	**03 35 26.6**	**-0.5**
BEST				*i* S		**Sb**	**03 35 51.0**	**+0.7**
KARS	**Kars**	**1.93**	**353**	*e*PN		**Pn**	**03 35 26.1**	**-0.2**
KARS	**Kars**	**1.93**	**353**	*e*Pn		**Pn**	**03 35 26.1**	**-0.2**
ERZM	**Erzurum**	**1.96**	**308**	*i* P		**Pb**	**03 35 29.8**	**+0.6**
ERZM	**Erzurum**	**1.96**	**308**	*i* P		**Pb**	**03 35 29.8**	**+0.6**
EZM	**Erzurum**	**1.96**	**308**	*e*PN		**Pn**	**03 35 26.6**	**-0.3**
BNGB	**Bing¨¶l**	**2.12**	**278**	*e*PN		**Pn**	**03 35 29.0**	**0.0**
BINT	**Bingol**	**2.26**	**275**	*e*Pn		**Pn**	**03 35 29.0**	**-1.9**
DDEM	**Demirkent**	**2.51**	**331**	*i* P		**Pg**	**03 35 40.8**	**-0.6**
BCA	**Borcka**	**3.04**	**334**	*e*PN		**Pn**	**03 35 42.3**	**+0.8**
BCA	**Borcka**	**3.04**	**334**	*e*Pn		**Pn**	**03 35 42.3**	**+0.8**

MEX 21 03:38:04.7±0.7, 17.07N×95.38W, h104km±24km, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
HUIG	**Huatulco**	**1.47**	**209**	*i* P		Pn	03 38 29.2	-1.7
HUIG				*i* S		Sn	03 38 49.6	-1.1
TGIG		**2.18**	**97**	*i* P		Pn	03 38 38.7	-1.1
TGIG				*i* S		Sn	03 39 04.2	-2.4
TPIG	**Tehuac#an**	**2.32**	**306**	*i* P		Pn	03 38 41.5	-0.3
TPIG				*i* S		Sn	03 39 08.9	-1.4
PCIG		**2.47**	**123**	*i* P		Pn	03 38 43.1	-0.5
PCIG				*i* S		Sn	03 39 12.0	-1.5
PNIG	**Pinotepa**	**2.72**	**256**	*i* P		Pn	03 38 45.1	-1.8
PNIG				*i* S		Sn	03 39 17.2	-2.1
CCIG	**Comitan**	**3.20**	**104**	*i* P		Pn	03 38 52.9	-0.6
CCIG				*i* S		Sn	03 39 28.8	-2.3

MAN 21 04:01:10, 8.50N×126.83E, h31km, mb4.5, ML3.4, MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BUTP	**Butuan**	**1.28**	**291**	*e*P		Pn	04 01 32.4	+0.6
MATI	**Mati**	**1.65**	**200**	*e*P		Pn	04 01 37.8	+1.0
BUKP	**Musuan**	**1.85**	**251**	*e*P		Pn	04 01 40.6	+0.9
MSLP	**Maasin**	**2.53**	**310**	*e*P		Pb	04 01 52.2	-2.6
TBP	**Tagbilaran**	**3.16**	**292**	*e*P		Pn	04 01 58.7	+1.1
CNP	**Catarman**	**4.51**	**332**	*e*P		Pn	04 02 18.1	+1.8

IDC 21 04:15:37.0±1.2, 2.09S×140.26E, h0km, mb3.5/3, mb1 3.8/4, mb1mx3.5/17, mbtmp3.6/4, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/22, Error ellipse: s-maj=58.3km s-min=25.4km az=99.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.66**	**198**	P		P	04 19 55.4	-1.3
	0.3nm,0.3s,baz=19,slow=12,SNR=23							
ASAR	**Alice Springs**	**22.31**	**196**	P		P	04 20 37.1	+0.7
	1.0nm,0.4s,baz=28,slow=11,SNR=15							
ASAJ	**Asahikawa**	**46.05**	**2**	LR		LR	04 40 43.5	
	comp=Z,18nm,20.5s,baz=136,slow=33							
MKAR	**Makanchi Array**	**70.26**	**322**	P		P	04 26 52.2	0.0
	0.4nm,0.9s,baz=111,slow=6.6,SNR=4.2							
ILAR	**Eielson Array**	**84.63**	**24**	P		P	04 28 11.8	-0.5
	0.6nm,1.1s,baz=246,slow=4.4,SNR=2.5							
LPAZ	**La Paz**	**146.53**	**124**	PKPbc		PKPbc	04 35 21.9	-0.3
	0.2nm,0.5s,baz=177,slow=4.3,SNR=2.0							

IDC 21 04:32:40.9±23.0, 21.52N×142.99E, h380km±260km, mb2.9/6, mb1 3.0/6, mb1mx2.7/28, mbtmp2.9/6, Error ellipse: s-maj=71.0km s-min=25.7km az=58.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
WRA	**Warramunga Arr**	**42.07**	**192**	P		P	04 39 57.2	-0.1
	0.3nm,0.5s,baz=15,slow=9.0,SNR=7.8							
MKAR	**Makanchi Array**	**54.69**	**313**	P		P	04 41 32.3	+0.1
	0.2nm,0.6s,baz=88,slow=8.9,SNR=3.1							
KURBB	**Kurchatov Arra**	**57.53**	**317**	P		P	04 41 51.6	-0.3
	0.4nm,0.4s,baz=96,slow=8.0,SNR=6.2							
BVAR	**Borovoye Array**	**62.69**	**320**	P		P	04 42 26.7	+0.1
	0.9nm,0.3s,baz=105,slow=8.6,SNR=7.4							
YKA	**Yellowknife Ar**	**76.69**	**28**	P		P	04 43 51.1	+0.3
	0.2nm,0.6s,baz=295,slow=5.8,SNR=3.9							
FINES	**FINESS Array B**	**83.27**	**334**	P		P	04 44 25.1	-0.5
	0.4nm,0.4s,baz=92,slow=6.3,SNR=8.5							

*ROM **21** 04:36:20.8±0.1, 44.23N×9.95E, h6km±1km, Md2.2/11, Ml1.9/2, Error ellipse: s-maj=2.3km s-min=1.1km az=31.0*
*ISCJB **21** 04:36:21.2±0.3, 44.24N±0.02×9.95E±0.02, h15km±2km, Error ellipse: s-maj=4.1km s-min=2.6km az=23.9*
*CSEM **21** 04:36:21.5±0.1, 44.21N×9.93E, h5km, ML2.5/8, Error ellipse: s-maj=4.3km s-min=2.1km az=16.0*
*GEN **21** 04:36:21.6, 44.25N×9.94E, h1km, ML2.1*
*LDG **21** 04:36:23.4±0.1, 44.14N×10.01E, h10km, Ml2.6/10, Error ellipse: s-maj=3.1km s-min=1.9km az=9.0*
ISC 21 04:36:21.6±0.9, 44.22N±0.02×9.95E±0.02, h10km±6km, n63, σ0s98/99, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID			Time	Res
				Op		ISC	h m s	ISC
BACM	**Baccana**	**0.10**	**59**	P		**Pg**	**04 36 24.0**	**-0.3**
BACM				S		**Sg**	**04 36 25.4**	**-0.8**
VINC	**Vinca**	**0.17**	**119**	P		**Pg**	**04 36 25.6**	**+0.3**
VINC				S		**Sg**	**04 36 28.5**	**+0.7**
CODM	**Codolo**	**0.18**	**337**	P		**Pg**	**04 36 24.8**	**-0.7**
CODM				S		**Sg**	**04 36 27.3**	**-0.9**
GRAM	**Graiana**	**0.28**	**18**	P		**Pg**	**04 36 27.2**	**-0.1**
GRAM				S		**Sg**	**04 36 30.8**	**-0.3**
MSSA	**Maissana**	**0.32**	**287**	Pg		**Pg**	**04 36 28.3**	**+0.2**
MSSA				Sg		**Sg**	**04 36 32.9**	**+0.5**
MSSA	**Maissana**	**0.32**	**287**	Pg		**Pg**	**04 36 28.3**	**+0.2**
MSSA				Sg		**Sg**	**04 36 32.9**	**+0.5**
VLC	**Villacollemand**	**0.32**	**101**	Pg		**Pg**	**04 36 28.2**	**+0.2**
VLC				Sg		**Sg**	**04 36 33.3**	**+1.0**
	99nm,0.7s							
VLC	**Villacollemand**	**0.32**	**101**	Pg		**Pg**	**04 36 28.2**	**+0.2**
VLC				Sg		**Sg**	**04 36 33.3**	**+1.0**
	99nm,0.7s							
SC2M	**Scurtabo**	**0.35**	**302**	Pg		**Pg**	**04 36 28.5**	**0.0**
SC2M	**Scurtabo**	**0.35**	**302**	Pg		**Pg**	**04 36 28.5**	**0.0**
ERBM	**Eremo**	**0.39**	**59**	Pg		**Pg**	**04 36 29.8**	**+0.5**
ERBM				Sg		**Sb**	**04 36 35.8**	**-0.9**
ERBM	**Eremo**	**0.39**	**59**	Pg		**Pg**	**04 36 29.8**	**+0.5**
ERBM				Sg		**Sb**	**04 36 35.8**	**-0.9**
GSCL	**Gusciola**	**0.48**	**74**	Pg		**Pg**	**04 36 31.4**	**+0.5**
GSCL				Sg		**Sg**	**04 36 37.8**	**+0.6**
	1.0nm,0.2s							
GSCL	**Gusciola**	**0.48**	**74**	Pg		**Pg**	**04 36 31.4**	**+0.5**
BDI	**Bagni Di Lucca**	**0.49**	**109**	Pg		**Pg**	**04 36 31.5**	**+0.3**
BDI				Sg		**Sg**	**04 36 38.8**	**+1.0**
BDI	**Bagni Di Lucca**	**0.49**	**109**	Pg		**Pg**	**04 36 31.5**	**+0.3**
BDI				Sg		**Sg**	**04 36 38.8**	**+1.0**
MAIM	**Mastiano**	**0.50**	**128**	Pg		**Pg**	**04 36 31.8**	**+0.5**
MAIM				Sg		**Sg**	**04 36 38.6**	**+0.7**
MAIM	**Mastiano**	**0.50**	**128**	P		**Pg**	**04 36 31.8**	**+0.5**
MAIM				S		**Sg**	**04 36 38.2**	**+0.3**
BOB	**Bobbio (Coli)**	**0.65**	**327**	Pg		**Pg**	**04 36 34.2**	**0.0**
BOB				Sg		**Sg**	**04 36 43.6**	**+0.9**
	83nm,0.5s							
BOB	**Bobbio (Coli)**	**0.65**	**327**	Pg		**Pg**	**04 36 34.2**	**0.0**
BOB				Sg		**Sg**	**04 36 43.6**	**+0.9**
	83nm,0.5s							
PII	**Pisa**	**0.65**	**140**	Pg		**Pg**	**04 36 34.6**	**+0.4**
PII				Sg		**Sb**	**04 36 43.9**	**-0.3**
	69nm,0.2s							
PII	**Pisa**	**0.65**	**140**	Pg		**Pg**	**04 36 34.6**	**+0.4**
PII				Sg		**Sb**	**04 36 43.9**	**-0.3**
	69nm,0.2s							
FNVD	**Fontana Vidola**	**0.85**	**93**	Pg		**Pg**	**04 36 37.4**	**-0.5**
FNVD	**Fontana Vidola**	**0.85**	**93**	Pg		**Pg**	**04 36 37.4**	**-0.5**
SEI	**Scarperia**	**1.03**	**99**	Pg		**Pg**	**04 36 39.7**	**-1.7**
SEI	**Scarperia**	**1.03**	**99**	Pg		**Pg**	**04 36 39.7**	**-1.7**
PCP	**Piancastagn**	**1.05**	**288**	Pg		**Pg**	**04 36 41.7**	**-0.1**
PCP	**Piancastagn**	**1.05**	**288**	P		**Pg**	**04 36 41.8**	**-0.1**
PCP				S		**Sg**	**04 36 54.7**	**-0.9**
RORO	**Rocca Rossa**	**1.36**	**266**	P		**Pn**	**04 36 46.0**	**-0.6**
NEGI	**Seborga**	**1.66**	**258**	P		**Pn**	**04 36 50.2**	**-0.6**
SBF	**Sospel**	**1.85**	**260**	*e*Pn		**Pn**	**04 36 53.8**	**+0.4**
SBF				*e*Sn		**Sn**	**04 37 16.4**	**-0.5**
	30nm,0.4s							
SBF	**Sospel**	**1.85**	**260**	*e*Pn		**Pn**	**04 36 53.8**	**+0.4**
SBF				*e*Sn		**Sn**	**04 37 16.4**	**-0.5**
	15nm,0.4s							
MBDF	**Montbardon**	**2.33**	**284**	*e*Pn		**Pn**	**04 37 00.9**	**+0.8**
MBDF				*e*Sn		**Sn**	**04 37 28.4**	**-0.5**
MBDF				*e*Sg		**Sg**	**04 37 39.3**	**+2.9**
	8.0nm,0.4s							
MBDF	**Montbardon**	**2.33**	**284**	*e*Pn		**Pn**	**04 37 00.9**	**+0.8**
MBDF				*e*Sn		**Sn**	**04 37 28.4**	**-0.5**
FRF	**La Foret Royal**	**2.48**	**256**	*e*Pn		**Pn**	**04 37 01.5**	**-0.5**
FRF				*e*Sn		**Sn**	**04 37 30.6**	**-1.7**
	5.4nm,0.3s							
FRF	**La Foret Royal**	**2.48**	**256**	*e

comp=N,140nm,1.0s
WMQ smax smax
comp=E,100nm,0.9s
GTA Gaotai 8.44 63 ⇑P **Pn** **04 48 26.8 +1.6**
GTA pP Pb 04 48 31.0 -18
GTA sP 04 48 33.1
GTA S **Sn** **04 50 01.4 +0.8**
GTA sS Sb 04 50 05.8 -24
GTA pmax pmax
comp=Z,4.0nm,0.6s
GTA pmax pmax
comp=Z,110nm,4.3s
GTA LR LR
comp=N,5μm,14.7s
GTA LR LR
comp=E,2μm,16.1s
GTA LR LR
comp=Z,2μm,13.3s
GUN Gumba 8.80 205 *e*P Pn 04 48 31.8 +1.4
comp=Z,30nm,0.9s
KKN Kakani 9.13 208 *e*P Pn 04 48 37.5 +2.7
comp=Z,18nm,0.7s
PKIN Phulchoki 9.28 207 *e*P Pn 04 48 38.4 +1.5
PKI Pulchoki 9.28 207 *e*P Pn 04 48 39.1 +2.2
comp=Z,22nm,0.8s
DANN Dangsing 9.30 217 *e*P Pn 04 48 44.1 +6.9
comp=Z,10nm,0.8s
DMN Daman 9.36 208 *e*P Pn 04 48 40.5 +2.5
comp=Z,29nm,0.7s
ODAN Odare 9.38 195 *e*P **Pn** **04 48 38.7 +0.5**
comp=Z,27nm,0.7s
RAMN Ramite 9.48 199 *e*P **Pn** **04 48 39.6 0.0**
comp=Z,36nm,0.8s
SHL Shillong 10.50 171 *e*PKP **Pn** **04 48 53.0 -0.5**
LZH Lanzhou 11.15 85 *e*P Pn 04 49 09.3 +6.9
LZH pP 04 49 12.4
LZH sP 04 49 14.4
LZH *e*S Sn 04 51 16.3 +9.1
LZH sS 04 51 20.6
LZH pmax pmax
comp=Z,16nm,1.0s
LZH pmax pmax
comp=Z,110nm,4.0s
LZH LR LR
comp=N,1μm,9.0s
LZH LR LR
comp=E,2μm,8.2s
LZH LR LR
comp=Z,2μm,10.1s
MK31 Makanchi Array 12.27 334 *i* P **Pn** **04 49 16.8 -0.8**
MK31 pmax pmax
comp=Z,14nm,1.0s
MK31 Makanchi Array 12.27 334 *e*Pn **Pn** **04 49 17.3 -0.2**
MKAR Makanchi Array 12.27 334 P **Pn** **04 49 17.1 -0.5**
MKAR MLR MLR
comp=Z,1μm,18.8s
MKAR Makanchi Array 12.27 334 *e*Pn **Pn** **04 49 17.7 +0.1**
MKAR Lg Lg 04 53 00.8
MKAR Makanchi Array 12.27 334 Pn **Pn** **04 49 17.1 -0.5**
comp=Z,0.3nm,0.3s,baz=147,slow=14,SNR=35
MKAR Lg Lg 04 53 00.8
comp=Z,0.1nm,0.3s,baz=132,slow=26,SNR=2.5
MKAR LR LR 04 54 35.9
comp=Z,1μm,18.8s,baz=151,slow=40
TKM2 Tokmak 2 13.15 306 *e*P **Pn** **04 49 31.0 +1.2**
TKM2 Tokmak 2 13.15 306 *e*Pn **Pn** **04 49 31.0 +1.2**
AAK Ala-Archa 13.76 304 *ce*P **Pn** **04 49 39.0 +0.9**
AAK pmax pmax
comp=Z,22nm,2.5s
AAK Ala-Archa 13.76 304 Pn **Pn** **04 49 38.3 +0.2**
AAK Ala-Archa 13.76 304 Pn **Pn** **04 49 38.3 +0.2**
comp=Z,0.1nm,0.3s,baz=180,slow=14,SNR=4.9
AAK LR LR 04 56 21.2
comp=Z,810nm,18.5s,baz=86,slow=43
EKS2 Erkin-Say 14.26 303 *e*P **Pn** **04 49 47.0 +2.1**
EKS2 Erkin-Say 14.26 303 *e*Pn **Pn** **04 49 47.0 +2.1**
XAN Xi'an 15.56 92 P **P** **04 50 07.0 +0.4**
XAN pmax pmax
comp=Z,3.0nm,0.9s
XAN LR LR
comp=N,1μm,18.2s
XAN LR LR
comp=E,350nm,18.2s
XAN LR LR
comp=Z,390nm,12.0s
KKAR Karatay Array 16.66 301 *e*P **Pn** **04 50 16.3 -0.1**
KKAR Karatay Array 16.66 301 *e*Pn **Pn** **04 50 16.3 -0.1**
KURBB Kurchatov Arra 16.84 334 Pn **Pn** **04 50 16.2 -2.3**
comp=Z,0.1nm,0.3s,baz=142,slow=12,SNR=43
KURBB Lg Lg 04 55 26.3
comp=Z,0.0nm,0.3s,baz=152,slow=27,SNR=3.2
KURK Kurchatov 16.89 334 *i* P **Pn** **04 50 16.5 -2.6**
KURK pmax pmax
comp=Z,14nm,1.3s
KURK Kurchatov 16.89 334 *e*Pn **Pn** **04 50 18.8 -0.3**
comp=Z,11nm,1.0s
KURK Lg Lg 04 55 26.3
SONM Songino Array 16.92 41 P **P** **04 50 21.9 +0.2**
SONM Lg Lg 04 55 25.6
SONM Songino Array 16.92 41 P **P** **04 50 21.9 +0.2**
comp=Z,0.2nm,0.3s,baz=229,slow=9.7,SNR=23
SONM Lg Lg 04 55 25.6
comp=Z,0.2nm,0.3s,baz=237,slow=32,SNR=6.9
SONM LR LR 04 57 07.0
comp=Z,1μm,18.4s,baz=59,slow=38
ZAK Zakamensk 17.27 30 ⇑*i*P **P** **04 50 27.3 +1.7**
ZAK pmax pmax
comp=Z,5.0nm,1.1s
ULN Ulaanbaatar 17.29 41 *e*Pn **P** **04 50 25.8 0.0**
comp=Z,32nm,1.3s
MOY Mondy 17.51 23 *e*P **P** **04 50 30.4 +2.2**
HHC Hu-ho-hao-te 17.51 67 *e*P **Pn** **04 50 26.3 -0.8**
HHC sP **sP** **04 50 33.3 +0.9**
HHC PP **PnPn** **04 50 40.9 +3.6**
HHC S **Sn** **04 53 37.9 -4.3**
HHC sS **S** **04 53 43.5 -6.8**
HHC SS **SnSn** **04 53 59.6 +4.1**
HHC pmax pmax
comp=Z,32nm,0.7s
HHC pmax pmax
comp=Z,280nm,5.3s
HHC LR LR
comp=N,1μm,11.0s
HHC LR LR
comp=E,1μm,12.9s
HHC LR LR
comp=Z,2μm,11.4s
HHC Hu-ho-hao-te 17.51 67 *e*P **Pn** **04 50 26.4 -0.7**
HHC sP **sP** **04 50 33.4 +1.0**
HHC PP **PnPn** **04 50 41.3 +4.0**
HHC S **Sn** **04 53 38.1 -4.1**
HHC sS **S** **04 53 44.3 -6.0**
HHC SS **SnSn** **04 53 59.4 +3.9**
HHC pmax pmax
comp=Z,32nm,0.9s
HHC pmax pmax
comp=Z,290nm,4.4s
HHC LR LR
comp=N,1μm,10.4s
HHC LR LR
comp=E,1μm,9.2s
HHC LR LR
comp=Z,1μm,10.3s
ZAA0 Zalesovo Array 18.34 350 *e*P **P** **04 50 35.5 -1.6**
ZALV Zalesovo Beam 18.34 350 P **P** **04 50 35.5 -1.6**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV MLR MLR
comp=Z,577nm,19.8s
ZALV Zalesovo Beam 18.34 350 P **P** **04 50 35.5 -1.6**
ZALV Zalesovo Beam 18.34 350 P **P** **04 50 35.5 -1.6**
comp=Z,0.7nm,0.3s,baz=165,slow=13,SNR=13
ZALV LR LR 04 57 55.8
comp=Z,577nm,19.8s,baz=235,slow=38
TLY Talaya 18.44 27 *e*P **Pn** **04 50 42.1 +3.7**
TLY *e*S **Sn** **04 53 59.4 -5.0**
TLY pmax pmax
comp=Z,7.0nm,0.9s
TLY MLR MLR
comp=Z,385nm,12.0s
CMAR Chiang Mai Arr 19.14 153 P **P** **04 50 44.4 -1.8**
CMAR Chiang Mai Arr 19.14 153 P **P** **04 50 44.4 -1.8**
comp=Z,0.0nm,0.3s,baz=335,slow=12,SNR=8.6
CMAR LR LR 04 58 09.8
comp=Z,281nm,18.4s,baz=345,slow=37
BJI Beijing 20.93 71 P **P** **04 51 05.8 +0.3**
BJI pmax pmax
comp=Z,20nm,0.9s
WHN Wuhan 20.99 98 ⇑P Pn 04 51 09.1 +0.3
WHN S **S** **04 55 01.1 +1.1**
WHN pmax pmax
comp=Z,25nm,0.7s
WHN LR LR
comp=Z,3μm,23.4s
VOSK Vostochnaya 21.49 327 P **P** **04 51 11.5 0.0**
VOSK pmax pmax
comp=Z,16nm,0.7s
BVAR Borovoye Array 21.96 327 P **P** **04 51 17.4 +0.9**
BVAR pmax pmax
comp=Z,4.0nm,0.7s
BVAR MLR MLR
comp=Z,982nm,20.9s
BVAR Borovoye Array 21.96 327 P **P** **04 51 17.4 +0.9**
BVAR Borovoye Array 21.96 327 P **P** **04 51 17.4 +0.9**
comp=Z,4.2nm,0.7s,baz=137,slow=11,SNR=23
BVAR LR LR 05 00 25.5
comp=Z,982nm,20.9s,baz=130,slow=38
BRVK Borovoye 22.03 327 *c i*P **P** **04 51 17.7 +0.5**
BRVK pmax pmax
comp=Z,19nm,1.2s
BRVK Borovoye 22.03 327 *e*P **P** **04 51 18.8 +1.6**
comp=Z,14nm,0.9s
ZRNK Zerenda 22.53 325 *i* P **P** **04 51 20.9 -1.7**
ZRNK pmax pmax
comp=Z,14nm,1.2s
NJ2 Nanjing 24.13 91 *e*P **P** **04 51 41.5 +2.6**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
QIZ Qiongzhong 24.26 129 P **P** **04 51 43.3 +3.1**
QIZ S **S** **04 56 04.1 +5.2**
QIZ pmax pmax
comp=Z,7.0nm,1.2s
QIZ LR LR
comp=N,1μm,14.8s
QIZ LR LR
comp=E,590nm,18.1s
QIZ LR LR
comp=Z,2μm,18.0s
AB31 Akbulak array 25.64 311 *i* P **P** **04 51 54.5 +2.1**
AB31 pmax pmax
comp=Z,1.0nm,0.3s
ABKAR Akbulak array 25.64 311 *e*P **P** **04 51 53.7 +1.2**
AKTO Aktyubinsk 27.22 312 LR LR 05 04 33.7
comp=Z,574nm,19.7s,baz=117,slow=40
SVE Sverdlovsk 28.72 326 *e*P **P** **04 52 21.1 +1.1**
ARU Arti 29.48 324 *d i*P **P** **04 52 27.7 +1.0**
ARU 04 53 20.5
ARU S **S** **04 57 20.2 -0.7**
ARU pmax pmax
comp=Z,5.0nm,1.2s
ARU MLR MLR
comp=Z,695nm,20.0s
KSAR Wonju Array Be 30.21 76 P **P** **04 52 33.4 -0.1**
KSRS Korea Array 30.24 76 P **P** **04 52 33.4 -0.3**
comp=Z,0.8nm,0.6s,baz=269,slow=7.9,SNR=5.4
KSRS LR LR 05 04 46.8
comp=Z,298nm,19.8s,baz=101,slow=36
USRK Ussuriysk Arra 32.81 62 LR LR 05 07 18.0
comp=Z,822nm,19.5s,baz=261,slow=38
GNI Garni 35.64 291 LR LR 05 11 43.1
comp=Z,119nm,18.7s,baz=292,slow=43
KBZ Khabaz 36.62 297 LR LR 05 11 50.3
comp=Z,208nm,19.1s,baz=73,slow=42
KIV Kislovodsk 36.76 297 *e*P **P** **04 53 31.6 +1.1**
KIV pmax pmax
comp=Z,6.0nm,0.8s
KIV MLR MLR
comp=Z,263nm,15.0s
MJAR Matsushiro Arr 38.49 74 P **P** **04 53 46.3 +1.2**
MJAR Matsushiro Arr 38.49 74 P **P** **04 53 46.3 +1.2**
comp=Z,0.3nm,0.3s,baz=290,slow=8.4,SNR=4.8
MJAR LR LR 05 10 18.9
comp=Z,298nm,19.2s,baz=300,slow=37
VSR Storozhevoye 39.07 309 *e*P **P** **04 53 50.0 +0.3**
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=Z,4.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,1.0s
ANN Anapa 40.43 299 *e*P **P** **04 54 01.1 -0.1**
ANN pmax pmax
comp=Z,18nm,1.2s
ANN MLR MLR
comp=N,141nm,16.0s
ANN MLR MLR
comp=E,353nm,16.0s
ANN MLR MLR
comp=Z,373nm,16.0s
OBN Obninsk 40.90 315 ⇑*i*P **P** **04 54 05.5 +0.7**
OBN pmax pmax
comp=Z,10.0nm,0.9s
OBN MLR MLR
comp=Z,600nm,18.0s
TIXI Tiksi 40.97 18 *d i*P **P** **04 54 07.8 +2.6**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
TIXI MLR MLR
comp=Z,320nm,14.0s
SIM Simferopol' 42.76 300 P P 04 54 29.0 +8.8
SIM S **S** **05 00 45.0 +1.0**
SIM MLR MLR
comp=Z,120nm,17.2s
YUK Yuzh-Kuril'sk 42.77 61 P P 04 54 33.5 +13
YUK MLR MLR
comp=Z,535nm,22.0s
YUK MLR MLR
comp=E,85nm,22.0s
YUK MLR MLR
comp=N,111nm,22.0s
DAV Davao City (W) 43.38 123 LR LR 05 14 46.6
comp=N,282nm,19.6s,baz=268,slow=39
BRTR Keskin Array B 44.10 293 P **P** **04 54 32.0 +0.7**
BRTR Keskin Array B 44.10 293 P **P** **04 54 32.0 +0.7**
comp=N,3.5nm,0.8s,baz=97,slow=8.7,SNR=20
AKASG Malin Array Be 45.36 309 *ce*P **P** **04 54 42.7 +1.7**
AKASG pmax pmax
comp=Z,1.0nm,0.6s
AKASG Malin Array Be 45.36 309 P **P** **04 54 40.8 -0.2**
AKASG Malin Array Be 45.36 309 P **P** **04 54 40.8 -0.2**
comp=Z,0.9nm,0.6s,baz=77,slow=6.8,SNR=6.4
AKASG LR LR 05 17 40.3
comp=Z,270nm,18.0s,baz=85,slow=41
FINES FINESS Array B 46.85 324 P **P** **04 54 52.5 -0.1**
FINES FINESS Array B 46.85 324 P **P** **04 54 52.5 -0.1**
comp=Z,1.8nm,0.7s,baz=72,slow=8.2,SNR=8.0
FINES LR LR 05 16 32.5
comp=Z,296nm,18.1s,baz=91,slow=39
ARCES ARCESS Array B 47.93 335 P **P** **04 55 01.7 +0.8**
ARCES ARCESS Array B 47.93 335 P **P** **04 55 01.7 +0.8**
comp=Z,6.0nm,1.0s,baz=91,slow=8.5,SNR=3.1
ARCES LR LR 05 15 56.6
comp=Z,205nm,20.0s,baz=279,slow=37
PETK Petropavlovsk- **49.24 47** LR LR 05 17 36.1
comp=Z,169nm,18.2s,baz=107,slow=38
KAPI Kappang 49.37 139 LR LR 05 17 51.2
comp=Z,124nm,21.4s,baz=87,slow=38
BILL Bilibino 52.06 28 *e*P **P** **04 55 34.9 +2.6**
BILL *i* 04 56 51.7
BILL *i* S S 05 02 48.2 -7.5
BILL pmax pmax
comp=Z,4.0nm,1.0s
BILL MLR MLR
comp=Z,100nm,15.0s
NB2 NORSAR Subarra 54.04 324 P **P** **04 55 46.7 -0.4**
comp=Z,1.1nm,1.0s,baz=78,slow=7.4
NOA NORSAR Array B 54.04 324 P **P** **04 55 46.6 -0.4**
NOA NORSAR Array B 54.04 324 P **P** **04 55 46.6 -0.4**
comp=Z,1.8nm,0.9s,baz=81,slow=7.2,SNR=5.7
NOA LR LR 05 19 21.2
comp=Z,183nm,19.8s,baz=90,slow=37
CLL Collm 55.30 312 *e*P **P** **04 55 56.0 -0.3**
CLL MLR MLR
comp=Z,300nm,18.9s
CLL Collm 55.30 312 *e*P **P** **04 55 56.0 -0.3**
CLL *e*S **S** **05 03 36.0 -4.1**
CLL *e*SS SS 05 07 36.0 +12
CLL LmV 05 21 00.0
comp=Z,300nm,18.9s
GERES GERESS Array B 55.57 309 P **P** **04 55 58.8 +0.4**
GERES GERESS Array B 55.57 309 P **P** **04 55 58.8 +0.4**
comp=Z,0.7nm,0.9s,baz=72,slow=4.3,SNR=6.2
GERES LR LR 05 22 05.2
comp=Z,169nm,19.8s,baz=78,slow=38
KMBO Kilima Mbogo 61.41 245 LR LR 05 23 12.8
comp=Z,130nm,21.5s,baz=280,slow=36
KEST Kesra 63.49 296 LR LR 05 29 20.8
comp=Z,45nm,19.4s,baz=252,slow=41
WRA Warramunga Arr 69.63 136 P **P** **04 57 31.2 -1.3**
WRA Warramunga Arr 69.63 136 P **P** **04 57 31.2 -1.3**
comp=Z,3.6nm,0.8s,baz=329,slow=6.1,SNR=17
ILAR Eielson Array 70.18 22 P **P** **04 57 35.0 -0.3**
ILAR Eielson Array 70.18 22 P **P** **04 57 35.0 -0.3**
comp=Z,1.3nm,0.8s,baz=311,slow=5.8,SNR=16
ILAR LR LR 05 30 43.1
comp=Z,102nm,18.1s,baz=302,slow=38
ESDC Sonseca Array 70.86 305 P **P** **04 57 39.5 -0.5**
ESDC Sonseca Array 70.86 305 P **P** **04 57 39.5 -0.5**
comp=Z,0.4nm,0.5s,baz=52,slow=7.8,SNR=6.3
ASAR Alice Springs 72.36 138 P **P** **04 57 47.9 -1.2**
ASAR Alice Springs 72.36 138 P **P** **04 57 47.9 -1.2**
comp=Z,2.3nm,0.8s,baz=335,slow=6.5,SNR=14
ASAR LR LR 05 34 19.1
comp=Z,134nm,20.5s,baz=318,slow=40
YKA Yellowknife Ar 79.87 11 P **P** **04 58 30.7 -0.5**
YKA Yellowknife Ar 79.87 11 P **P** **04 58 30.7 -0.5**
comp=Z,1.2nm,0.9s,baz=329,slow=4.8,SNR=9.2
TORD Torodi Ar. Bea 81.11 280 P **P** **04 58 38.2 -0.5**
TORD Torodi Ar. Bea 81.11 280 P **P** **04 58 38.2 -0.5**
comp=Z,0.8nm,0.9s,baz=76,slow=4.0,SNR=4.8
TORD LR LR 05 38 01.2
comp=Z,101nm,20.7s,baz=165,slow=38
STKA Stephens Creek 83.00 138 LR LR 05 35 16.4
comp=Z,142nm,20.2s,baz=346,slow=35
SCHQ Schefferville 87.39 347 LR LR 05 40 33.4
comp=Z,204nm,21.1s,baz=12,slow=37
BOSA Boshof 88.58 233 LR LR 05 38 15.2
comp=Z,96nm,19.5s,baz=346,slow=35
FFC Flin Flon 89.06 7 *ce*P P 04 59 22.5 +4.6
FFC Flin Flon 89.06 7 *e*P **P** **04 59 17.4 -0.4**
comp=Z,2.9nm,1.0s
DBIC Dimbokro 90.10 278 LR LR 05 46 08.1
comp=Z,109nm,20.8s,baz=147,slow=40
ULM Lac du Bonnet 93.98 4 LR LR 05 48 56.9
comp=Z,92nm,19.9s,baz=255,slow=40
PDAR Pinedale Array 99.60 15 LR LR 05 48 43.7
comp=Z,89nm,19.3s,baz=143,slow=38
CPUP Villa Florida 150.61 280 PKPbc **PKPbc** **05 06 13.8 -1.4**
CPUP Villa Florida 150.61 280 PKPbc **PKPbc** **05 06 13.8 -1.4**
comp=Z,3.0nm,0.8s,baz=145,slow=1.8,SNR=7.8
LPAZ La Paz 152.41 310 PKPbc **PKPbc** **05 06 18.5 -1.9**
LPAZ La Paz 152.41 310 PKPbc **PKPbc** **05 06 18.5 -1.9**
comp=Z,1.4nm,1.0s,baz=4.0,slow=6.4,SNR=6.3

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*IDC **21** 05:01:33.2±1.1,39.°51N×74.°12E, h0km, mb3.7/9, mb1 3.8/15, mb1mx3.6/33, mbtmp3.6/15, ML3.5/5, Error ellipse: s-maj=21.7km s-min=15.0km az=133.0*
*ISCJB **21** 05:01:34.4±0.8, 39.°67N±0.°07×73.°82E±0.°08, h10km, mb3.6/9, Error ellipse: s-maj=9.7km s-min=8.5km az=165.4*
*BJI **21** 05:01:35.0, 39.°73N×73.°88E, h9km, mb4.0/1, ML3.5/4*
*NNC **21** 05:01:39.4±1.7, 40.°01N×73.°85E, h0km, mb4.0, mpv3.8, Error ellipse: s-maj=14.9km s-min=7.8km az=5.0*
ISC 21 05:01:35.8±0.9, 39.°77N±0.°08×73.°99E±0.°07, h10km, n39, σ1°84/38, mb3.6/9, 14C-12D, Tajikistan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	**1.55**	**99**	Pg	Pn	05 02 00.0	-3.5
KSH				Sg	Sn	05 02 12.6	-11
KSH				smax	smax		
	comp=N,630nm,0.7s						
KSH				smax	smax		
	comp=E,420nm,0.4s						
AML	**Almayashu**	**2.38**	**355**	P	**Pb**	**05 02 17.7**	**-1.2**
	SNR=76						
UCH	**Uchtor**	**2.49**	**9**	P	**Pb**	**05 02 20.3**	**-0.6**
	SNR=16						
KZA	**Kyzart**	**2.50**	**22**	P	**Pb**	**05 02 19.7**	**-1.3**
	SNR=109						
AAK	**Ala-Archa**	**2.89**	**7**	P	**Pb**	**05 02 25.8**	**-1.7**
	SNR=50						
AAK	**Ala-Archa**	**2.89**	**7**	Pn	**Pb**	**05 02 25.8**	**-1.7**
	comp=E,22nm,0.3s,baz=159,slow=8.2,SNR=36						
AAK				Lg	Lg	05 03 04.4	
	comp=E,48nm,0.3s,baz=84,slow=20,SNR=16						
EKS2	**Erkin-Say**	**2.90**	**357**	P	**Pb**	**05 02 26.1**	**-1.5**
	SNR=40						
KBK	**Karagaybulak**	**2.98**	**14**	P	**Pb**	**05 02 27.0**	**-2.0**
	SNR=108						
ULHL	**Ulahol**	**3.01**	**34**	P	Pn	05 02 27.0	+3.4
	SNR=63						
CHMS	**Chumysh**	**3.28**	**10**	P	**Pb**	**05 02 31.5**	**-2.6**
	SNR=19						
TKM2	**Tokmak 2**	**3.38**	**20**	⇓Pn	**Pn**	**05 02 31.9**	**+3.2**
	comp=E,20nm,0.6s						
TKM2				⇑Lg	Lg	05 03 20.9	
	comp=E,58nm,0.4s						
TKM2	**Tokmak 2**	**3.38**	**20**	P	Pn	05 02 32.1	+3.4
	SNR=19						
USP	**Ospenovka**	**3.52**	**6**	P	Pb	05 02 34.5	-3.7
	SNR=10						
KNDC	**Almaty**	**4.11**	**32**	⇑Pn	Pn	05 02 42.0	+3.3
	comp=E,36nm,0.5s						
KNDC				⇑Lg	Lg	05 03 44.2	
	comp=E,518nm,0.8s						
KK31	**Karatay Array**	**4.24**	**323**	⇓Pn	**Pn**	**05 02 41.9**	**+1.5**
	comp=E,2.5nm,0.3s,baz=126,slow=12,SNR=81						
KK31				⇑Pg	**Pb**	**05 02 51.6**	**+1.2**
	comp=E,8.0nm,0.3s,baz=140,slow=14,SNR=27						
KK31				⇓Sn	**Sn**	**05 03 31.1**	**+1.1**
	comp=E,31nm,0.6s,baz=136,slow=25,SNR=5.0						
KK31				⇑Lg	Lg	05 03 48.1	
	comp=E,14nm,0.3s						
MK31	**Makanchi Array**	**9.27**	**38**	⇓Pn	**Pn**	**05 03 51.9**	**+2.5**
	comp=E,0.6nm,0.5s						
MK31				⇑Lg	Lg	05 06 26.8	
	comp=E,3.4nm,0.7s						
MKAR	**Makanchi Array**	**9.27**	**38**	Pn	**Pn**	**05 03 52.5**	**+3.1**
	comp=E,0.1nm,0.3s,baz=222,slow=16,SNR=7.5						
MKAR				Lg	Lg	05 06 24.8	
	comp=E,0.1nm,0.3s,baz=234,slow=24,SNR=2.7						
KURBB	**Kurchatov Arra**	**11.32**	**15**	⇓Lg	Lg	05 07 31.6	
	comp=E,28nm,0.8s						
KURBB	**Kurchatov Arra**	**11.32**	**15**	Pn	**Pn**	**05 04 18.7**	**+1.3**
	comp=E,0.0nm,0.3s,baz=208,slow=9.5,SNR=2.8						
KURBB				Lg	Lg	05 07 16.4	
	comp=E,0.0nm,0.3s,baz=202,slow=30,SNR=4.5						
KURK	**Kurchatov**	**11.42**	**15**	⇑Lg	Lg	05 07 35.7	
	comp=E,31nm,1.3s						
VOSK	**Vostochnaya**	**13.13**	**352**	⇑Pn	**Pn**	**05 04 43.1**	**+0.9**
	comp=E,1.7nm,0.8s						
VOSK				⇑Sn	**Sn**	**05 07 08.7**	**+0.6**
	comp=E,1.5nm,0.9s						
VOSK				⇑Lg	Lg	05 08 28.4	
	comp=E,14nm,0.9s						
BVA0	**Borovoye Array**	**13.49**	**351**	⇓Pn	**Pn**	**05 04 48.7**	**+1.6**
	comp=E,1.5nm,0.6s,baz=173,slow=8.8,SNR=6.0						
BVA0				⇓Lg	Lg	05 08 39.1	
	comp=E,9.0nm,1.0s,baz=159,slow=28,SNR=5.1						
BVAR	**Borovoye Array**	**13.49**	**351**	Pn	**Pn**	**05 04 48.2**	**+1.1**
	comp=E,0.4nm,0.3s,baz=156,slow=16,SNR=7.9						
BVAR				Lg	Lg	05 08 33.4	
	comp=E,0.1nm,0.3s,baz=169,slow=23,SNR=2.7						
BRVK	**Borovoye**	**13.54**	**350**	⇓Pn	**Pn**	**05 04 48.6**	**+0.9**
	comp=E,3.5nm,0.7s						
BRVK				⇑Lg	Lg	05 08 40.9	
	comp=E,26nm,1.0s						
ZRNK	**Zerenda**	**13.63**	**347**	⇑Pn	**Pn**	**05 04 48.9**	**0.0**
	comp=E,1.9nm,1.0s						
ZRNK				⇓Sn	**Sn**	**05 07 20.9**	**+0.6**
ZRNK				⇑Lg	Lg	05 08 43.8	
	comp=E,12nm,1.2s						
AB31	**Akbulak array**	**13.78**	**318**	⇓Pn	**Pn**	**05 04 49.4**	**-1.7**
	comp=E,1.0nm,0.4s,baz=126,slow=12,SNR=29						
AB31				⇓Sn	**Sn**	**05 07 20.2**	**-3.9**
	comp=E,1.0nm,0.6s,baz=122,slow=25,SNR=4.7						
AKTO	**Aktyubinsk**	**15.49**	**319**	⇑Pn	**Pn**	**05 05 14.8**	**+0.6**
	comp=E,2.6nm,0.8s						
AKTO				⇓Sn	**Sn**	**05 08 02.0**	**-3.8**
	comp=E,2.0nm,0.8s						
AKTO	**Aktyubinsk**	**15.49**	**319**	Pn	**P**	**05 05 15.3**	**-3.3**
	comp=E,0.3nm,0.3s,baz=118,slow=16,SNR=4.4						
ZALV	**Zalesovo Beam**	**15.97**	**24**	Pn	**Pn**	**05 05 21.2**	**+0.8**
	baz=198,slow=15,SNR=3.5						
BRTR	**Keskin Array B**	**30.84**	**283**	P	**P**	**05 07 53.9**	**+1.7**

comp=E,0.7nm,0.8s,baz=101,slow=10,SNR=3.7
FINES FINESS Array B 36.20 323 P **P 05 08 39.0 +0.7**
comp=E,1.2nm,0.4s,baz=114,slow=9.4,SNR=22
ARCES ARCESS Array B 39.10 335 P **P 05 09 03.8 +1.1**
comp=E,2.4nm,0.8s,baz=96,slow=8.7,SNR=6.5
GERES GERESS Array B 43.06 303 P **P 05 09 37.2 +1.5**
comp=E,0.4nm,0.8s,baz=65,slow=6.3,SNR=7.5
NB2 NORSAR Subarra 43.27 321 P **P 05 09 37.5 +0.3**
comp=Z,1.1nm,0.6s,baz=91,slow=8.6
NOA NORSAR Array B 43.27 321 P **P 05 09 38.0 +0.8**
comp=Z,1.3nm,0.6s,baz=91,slow=8.0,SNR=8.7
ESDC Sonseca Array 58.05 297 P **P 05 11 28.5 -0.5**
comp=Z,0.2nm,0.5s,baz=62,slow=6.5,SNR=4.3
TORD Torodi Ar. Bea 68.14 269 P **P 05 12 35.5 -0.8**
comp=Z,0.4nm,0.5s,baz=48,slow=5.2,SNR=7.7
YKA Yellowknife Ar 77.85 4 P **P 05 13 32.4 -0.7**
comp=Z,0.2nm,0.5s,baz=346,slow=5.8,SNR=3.5
WRA Warramunga Arr 81.79 124 P **P 05 13 53.2 -1.8**
comp=Z,0.4nm,0.8s,baz=326,slow=5.0,SNR=5.5

IDC ***21*** *05:09:16.3±0.9, 30.˚51S×177.˚78W, h0km, mb4.5/5, mb1 4.7/5, mb1mx4.1/18, mbtmp4.5/5, MS3.6/2, Ms1 3.6/2, ms1mx3.0/37, Error ellipse: s-maj=32.7km s-min=22.2km az=132.0*
ISCJB ***21*** *05:09:22.8±0.9, 30.˚29S±0.˚08×178.˚1W±0.˚2, h46km, mb4.5/7, MS3.6/1, Error ellipse: s-maj=22.6km s-min=8.6km az=20.9*
NEIC ***21*** *05:09:22.2±0.6, 30.˚30S×177.˚93W, h35km, mb4.6/2, Error ellipse: s-maj=21.5km s-min=13.2km az=113.0*
ISC 21 05:09:23.7±0.7, 30.˚34S±0.˚07×178.˚0W±0.˚2, h46km, n49, σ1♀99/52, mb4.6/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.08**	**3**	Pn			**Pn**	**05 09 41.4**	**-1.1**
RAO				Sn			**Sn**	**05 09 53.8**	**-2.6**
RAO	**Raoul Island**	**1.08**	**3**	Pn			**Pn**	**05 09 41.4**	**-1.1**
	415nm,0.3s,baz=32,slow=24,SNR=12								
RAO				Sn			**Sn**	**05 09 53.8**	**-2.6**
	2µm,0.3s,baz=68,slow=22,SNR=15								
URZ	**Urewera**	**8.88**	**206**	Pn			**Pn**	**05 11 28.6**	**-0.9**
URZ				Sn			**Sn**	**05 13 04.7**	**-3.4**
URZ	**Urewera**	**8.88**	**206**	Pn			**Pn**	**05 11 28.6**	**-0.9**
	0.6nm,0.3s,baz=16,slow=18,SNR=4.6								
URZ				Sn			**Sn**	**05 13 04.7**	**-3.4**
	3.3nm,0.3s,baz=186,slow=17,SNR=11								
DZM	**Mont Dzumac**	**16.20**	**297**	*e*LR			LR	05 17 23.8	
	197nm,23.1s								
DZM	**Mont Dzumac**	**16.20**	**297**	LR			LR	05 17 58.6	
	comp=Z,234nm,19.4s,baz=48,slow=32								
PPT2	**Papeete2**	**28.81**	**70**	*e*LR			LR	05 22 16.9	
	185nm,29.0s								
STKA	**Stephens Creek**	**34.50**	**257**	P			**P**	**05 16 09.4**	**+1.9**
STKA	**Stephens Creek**	**34.50**	**257**	P			**P**	**05 16 09.4**	**+1.9**
	12nm,0.7s,baz=95,slow=9.8,SNR=23								
AS31	**Alice Springs**	**43.12**	**267**	*e*P			**P**	**05 17 19.9**	**+0.1**
ASAR	**Alice Springs**	**43.12**	**267**	P			**P**	**05 17 19.5**	**-0.3**
ASAR				ScP			**ScP**	**05 23 02.5**	**+6.1**
ASAR	**Alice Springs**	**43.12**	**267**	P			**P**	**05 17 19.5**	**-0.3**
	2.2nm,0.6s,baz=106,slow=7.2,SNR=35								
ASAR				ScP			**ScP**	**05 23 02.5**	**+6.1**
	0.4nm,0.7s,baz=118,slow=3.7,SNR=5.3								
WRAB	**Tennant Creek**	**44.10**	**272**	*e*P			**P**	**05 17 27.5**	**-0.2**
	6.3nm,0.6s								
WRA	**Warramunga Arr**	**44.10**	**272**	P			**P**	**05 17 26.9**	**-0.8**
WRA	**Warramunga Arr**	**44.10**	**272**	P			**P**	**05 17 26.9**	**-0.8**
	3.7nm,0.3s,baz=111,slow=8.0,SNR=13								
QSPA	**South Pole Qui**	**59.77**	**180**	*e*P			**P**	**05 19 25.5**	**+1.7**
	4.6nm,0.9s								
SNAA	**Sanae**	**78.22**	**178**	LR			LR	05 51 31.3	
	comp=Z,28nm,18.9s,baz=126,slow=32								
PETK	**Petropavlovsk-**	**85.75**	**346**	P			**P**	**05 21 59.7**	**+2.2**
PETK	**Petropavlovsk-**	**85.75**	**346**	P			**P**	**05 21 59.7**	**+2.2**
	3.4nm,0.8s,baz=92,slow=4.5,SNR=8.0								
NVAR	**Mina Array Bea**	**88.19**	**43**	P			**P**	**05 22 10.6**	**+0.6**
NVAR	**Mina Array Bea**	**88.19**	**43**	P			**P**	**05 22 10.6**	**+0.6**
	0.9nm,0.8s,baz=212,slow=7.4,SNR=5.6								
MKAR	**Makanchi Array**	**117.74**	**310**	PKP			**PKPdf**	**05 28 03.1**	**-1.5**
MKAR	**Makanchi Array**	**117.74**	**310**	PKP			**PKPdf**	**05 28 03.1**	**-1.5**
	0.5nm,0.7s,baz=225,slow=0.2,SNR=4.8								
KURK	**Kurchatov**	**121.01**	**314**	PKP			**PKPdf**	**05 28 09.5**	**-1.2**
KURBB	**Kurchatov Arra**	**121.05**	**314**	PKP			**PKPdf**	**05 28 09.5**	**-1.3**
	1.1nm,0.7s,baz=105,slow=1.9,SNR=8.5								
KKAR	**Karatay Array**	**125.05**	**304**	*e*PKPdf			**PKPdf**	**05 28 18.5**	**-0.3**
BVAR	**Borovoye Array**	**126.37**	**316**	PKP			**PKPdf**	**05 28 20.2**	**-0.8**
BVAR	**Borovoye Array**	**126.37**	**316**	PKP			**PKPdf**	**05 28 20.2**	**-0.8**
	1.4nm,0.6s,baz=139,slow=2.9,SNR=7.8								
ARCES	**ARCESS Array B**	**138.53**	**348**	PKP			**PKPdf**	**05 28 42.0**	**-1.4**
ARCES	**ARCESS Array B**	**138.53**	**348**	PKP			**PKPdf**	**05 28 42.0**	**-1.4**
	2.4nm,0.7s,baz=45,slow=15,SNR=3.2								
JOF	**Joensuu**	**142.36**	**338**	*e*p			**PKPdf**	**05 28 52.7**	**+2.2**
	1.4nm,0.5s								
KAF	**Kangasniemi**	**144.49**	**341**	*e*p			**PKPab**	**05 28 50.6**	**-2.1**
	1.6nm,0.6s								
FINES	**FINESS Array B**	**145.09**	**340**	PKPbc			**PKPbc**	**05 28 53.5**	**-1.4**
FINES	**FINESS Array B**	**145.09**	**340**	PKPbc			**PKPbc**	**05 28 53.5**	**-1.4**
	5.6nm,0.6s,baz=51,slow=3.9,SNR=40								
NB2	**NORSAR Subarra**	**148.69**	**351**	PKP			**PKPbc**	**05 29 04.0**	**-1.3**
	comp=Z,1.7nm,0.6s,baz=13,slow=2.7								
NOA	**NORSAR Array B**	**148.69**	**351**	PKPbc			**PKPbc**	**05 29 03.9**	**-1.3**
NOA	**NORSAR Array B**	**148.69**	**351**	PKPbc			**PKPbc**	**05 29 03.9**	**-1.3**
	comp=Z,2.3nm,0.6s,baz=14,slow=4.3,SNR=11								
AKASG	**Malin Array Be**	**151.25**	**323**	PKPbc			**PKPbc**	**05 29 09.8**	**-1.9**
AKASG	**Malin Array Be**	**151.25**	**323**	PKPbc			**PKPbc**	**05 29 09.8**	**-1.9**
	comp=Z,3.5nm,0.6s,baz=48,slow=2.8,SNR=6.6								
AK01	**Malin Array Si**	**151.27**	**323**	*e*PKPbc			**PKPbc**	**05 29 11.2**	**-0.5**
AK02	**Malin Array Si**	**151.29**	**323**	*e*PKPbc			**PKPbc**	**05 29 11.1**	**-0.7**
BR131	**Keskin Array S**	**152.58**	**299**	*e*PKPbc			**PKPbc**	**05 29 17.6**	**+2.3**
BR131				*e*PKPab			**PKPab**	**05 29 26.5**	**+0.6**
BRTR	**Keskin Array B**	**152.58**	**299**	PKPbc			**PKPbc**	**05 29 17.1**	**+1.8**
BRTR	**Keskin Array B**	**152.58**	**299**	PKPbc			**PKPbc**	**05 29 17.1**	**+1.8**
	comp=Z,1.8nm,0.8s,baz=105,slow=2.8,SNR=6.7								
CLL	**Collm**	**157.51**	**342**	*e*PKPab			**PKPab**	**05 29 48.0**	**+1.7**
GERES	**GERESS Array B**	**159.48**	**338**	PKPab			**PKPab**	**05 29 56.5**	**+1.4**
GERES	**GERESS Array B**	**159.48**	**338**	PKPab			**PKPab**	**05 29 56.5**	**+1.4**
	comp=Z,0.3nm,0.7s,baz=45,slow=4.0,SNR=4.0								
TORD	**Torodi Ar. Bea**	**162.89**	**179**	PKPab			**PKPab**	**05 30 09.8**	**-0.7**
TORD	**Torodi Ar. Bea**	**162.89**	**179**	PKPab			**PKPab**	**05 30 09.8**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=185,slow=3.9,SNR=6.1								

MEX 21 05:13:22.6±0.6, 16.˚28N×98.˚05W, h5km, MD4.3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.13**	**325**	*e*P			Pg	05 13 20.6	-4.7
PNIG				*i* S			Sg	05 13 21.7	-5.6
HUIG	**Huatulco**	**1.93**	**105**	*i* P			Pn	05 13 52.5	-3.7
HUIG				*i* S			Sn	05 14 16.6	-4.3
MEIG	**Mezcala**	**2.22**	**318**	*i* P			Pn	05 13 56.4	-3.9
MEIG				*i* S			Sn	05 14 24.3	-3.9
TPIG	**Tehuac#an**	**2.22**	**17**	*i* P			Pn	05 13 57.0	-3.4
TPIG				*i* S			Sn	05 14 24.4	-4.1
CAIG	**El Cayaco**	**2.26**	**290**	*i* P			Pn	05 13 57.0	-3.7
CAIG				*i* S			Sn	05 14 25.3	-3.7
YAIG	**Yautepec**	**2.74**	**339**	*e*P			Pn	05 14 04.8	-2.7
YAIG				*i* S			Sn	05 14 36.8	-4.4
ARIG	**Puente Sto Nin**	**2.96**	**312**	*i* P			Pn	05 14 07.9	-2.5
ARIG				*i* S			Sn	05 14 43.0	-3.4
PCIG		**4.68**	**96**	*i* P			Pn	05 14 30.6	-3.3
PCIG				*i* S			Sn	05 15 25.6	-3.1

ISCJB ***21*** *05:21:00.7±0.4, 6.˚75N±0.˚04×73.˚05W±0.˚04, h161km±4km, mb4.1/31, Error ellipse: s-maj=6.2km s-min=5.5km az=41.1*
BJI ***21*** *05:21:00.2, 6.˚80N×73.˚10W, h153km*
IDC ***21*** *05:21:02.6±0.8, 6.˚80N×72.˚90W, h162km±7km, mb3.7/17, mb1 3.9/18, mb1mx3.7/26, mbtmp3.7/18, Error ellipse: s-maj=17.0km s-min=10.0km az=59.0*
NEIC ***21*** *05:21:03.0, 6.˚81N×73.˚14W, h153km, mb4.2/16, After RSNC.*
NEIC Felt at Barrancabermeja.
FUNV ***21*** *05:21:11.1, 7.˚10N×72.˚56W, h136km, MW3.8*
ISC 21 05:21:02.0±0.5, 6.˚76N±0.˚04×72.˚97W±0.˚05, h163km±4km, h163km:pP-P, n259, σ1♀23/276, mb4.1/31, 88C-69D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.28**	**31**	⇑*i*P			**Pn**	**05 21 31.9**	**+1.2**
CAPV				*e*S			**Sn**	**05 21 48.5**	**-4.3**
ROSC	**El Rosal**	**2.32**	**216**	*e*Pn			**Pn**	**05 21 43.2**	**+1.1**
ROSC				*e*Sn			**Sn**	**05 22 08.5**	**-4.5**
ROSC	**El Rosal**	**2.32**	**216**	P			**Pn**	**05 21 43.6**	**+1.5**
	208nm,0.3s,baz=68,slow=3.1,SNR=2643								
ROSC				S			**Sn**	**05 22 10.0**	**-3.0**
SOCV	**Socops**	**2.59**	**54**	⇑*i*P			**Pn**	**05 21 45.8**	**+1.0**
SOCV				*e*S			Sn	05 22 10.0	-8.1
VIGV	**El Vigia**	**2.61**	**38**	⇑*i*P			**Pn**	**05 21 46.2**	**+1.0**
VIGV				*e*S			Sn	05 22 11.4	-7.3
SDV	**Santo Domingo**	**3.14**	**47**	*e*Pn			**Pn**	**05 21 53.3**	**+1.4**
SDV				*e*Sn			**Sn**	**05 22 31.0**	**+0.5**
ELOV	**Elorza**	**3.47**	**86**	⇑*i*P			**Pn**	**05 21 57.7**	**+1.9**
QARV	**Quebrada Arrib**	**4.20**	**35**	*e*P			**Pn**	**05 22 05.8**	**+0.5**
SANV	**Sanarito**	**4.36**	**51**	⇑*e*P			**Pn**	**05 22 07.6**	**+0.2**
CURV	**Curarigua**	**4.40**	**42**	⇑*i*P			**Pn**	**05 22 08.4**	**+0.6**
DABV	**Dabajuro**	**4.74**	**29**	⇑*e*P			**Pn**	**05 22 12.5**	**+0.2**
TEPV	**Terepaima**	**4.91**	**49**	⇑*i*P			**Pn**	**05 22 15.0**	**+0.4**
SIQV	**Siquisique**	**4.97**	**39**	⇑*i*P			**Pn**	**05 22 15.3**	**0.0**
BAUV	**El Baul**	**5.35**	**66**	⇑*i*P			**Pn**	**05 22 19.7**	**-0.5**
MAPV	**Macapo**	**5.41**	**55**	⇑*i*P			**Pn**	**05 22 21.5**	**+0.4**
JACV	**Jacura**	**5.94**	**43**	*e*P			**Pn**	**05 22 27.2**	**-0.8**
MONV	**Montecano**	**5.95**	**30**	*e*P			**Pn**	**05 22 27.8**	**-0.4**
TURV	**Turiamo**	**6.26**	**54**	⇑*e*P			**Pn**	**05 22 31.9**	**-0.5**
MERV	**Las Mercedes**	**7.06**	**69**	⇑*e*P			**Pn**	**05 22 42.5**	**-0.5**
FUNV	**FUNVISIS**	**7.12**	**58**	⇑*e*P			**Pn**	**05 22 43.5**	**-0.4**
BCIP	**Isla Barro Col**	**7.21**	**290**	*e*Pn			Pn	05 22 42.1	-2.8
BCIP				*e*Sn			**Sn**	**05 24 00.5**	**-5.3**
BIRV	**Birongo**	**7.59**	**60**	⇑*i*P			**Pn**	**05 22 49.4**	**-0.5**
CUPV	**Ciepira**	**7.83**	**65**	⇑*i*P			**Pn**	**05 22 52.8**	**-0.4**
OTAV	**Otavalo**	**8.47**	**220**	*e*Pn			**Pn**	**05 23 01.0**	**-1.2**
PRGV	**PARIAGUAN**	**8.49**	**76**	⇑*i*P			**Pn**	**05 23 02.0**	**+0.1**
PCRV	**Puerto La Cruz**	**8.92**	**67**	*e*P			**Pn**	**05 23 08.0**	**+0.3**
GURV	**El Guri**	**9.86**	**84**	*e*P			**Pn**	**05 23 19.2**	**-0.9**
SDDR	**Presa de Saban**	**12.26**	**8**	*e*Pn			**Pn**	**05 23 52.9**	**+1.5**
GRGR	**Grenville**	**12.38**	**64**	Pn			**P**	**05 23 55.9**	**-2.4**
CELP	**Cerrillos**	**12.86**	**28**	*e*Pn			**Pn**	**05 23 57.8**	**-1.2**
STVI	**Saint Thomas**	**13.92**	**33**	*e*Pn			**Pn**	**05 24 12.9**	**+0.5**
STVI				*e*Sn			**Sn**	**05 26 43.8**	**-3.4**
SAML	**Samuel**	**18.40**	**148**	*e*P			**P**	**05 25 06.1**	**+1.3**
	8.6nm,0.7s								
SAML				*e*S			**S**	**05 28 24.5**	**-2.1**
TEIG	**Tepich**	**19.99**	**314**	P			**P**	**05 25 23.3**	**+1.3**
	14nm,0.5s,baz=239,slow=0.1,SNR=16								
LPAZ	**La Paz**	**23.39**	**168**	*e*P			**P**	**05 25 59.0**	**+1.9**
	81nm,2.3s								
LPAZ				*e*pP			**pP**	**05 26 30.7**	**+2.7**
LPAZ	**La Paz**	**23.39**	**168**	P			**P**	**05 25 57.9**	**+0.9**
	1.6nm,0.5s,baz=353,slow=12,SNR=8.9								
SIV	**San Ignacio**	**25.49**	**153**	P			**P**	**05 26 15.6**	**+0.2**
	2.2nm,0.8s,baz=343,slow=10,SNR=9.4								
KMSC	**Kings Mountain**	**29.28**	**346**	⇓P			**P**	**05 26 50.7**	**+1.7**
	baz=29								
LVC	**Limon Verde**	**29.46**	**172**	*e*P			**P**	**05 26 51.5**	**+0.5**
	26nm,0.5s								
BDFB	**Brasilia**	**33.27**	**132**	P			**P**	**05 27 26.2**	**+1.9**
	5.9nm,0.7s,baz=282,slow=10,SNR=11								
WCI	**Wyandotte Cave**	**33.58**	**341**	*e*P			**P**	**05 27 27.1**	**+0.5**
	4.7nm,0.6s								
632A	**Uvalde**	**33.91**	**315**	⇓P			**P**	**05 27 29.8**	**+0.2**
	baz=34								
532A	**Rocksprings**	**34.36**	**316**	⇑P			**P**	**05 27 33.6**	**0.0**
	baz=34								
631A	**Perdido Creek**	**34.41**	**314**	⇑P			**P**	**05 27 33.7**	**-0.2**
	baz=34								
BLO	**Bloomington**	**34.51**	**341**	*e*P			**P**	**05 27 36.5**	**+1.9**
	12nm,0.7s								
432A	**Menard**	**34.74**	**317**	⇓P			**P**	**05 27 37.1**	**+0.3**
	baz=35								
531A	**Rocksprings**	**34.83**	**315**	⇑P			**P**	**05 27 37.5**	**0.0**
	baz=35								
332A	**Millersview**	**35.02**	**318**	⇓P			**P**	**05 27 39.2**	**+0.1**
	baz=35								
431A	**Sonora**	**35.18**	**316**	⇓P			**P**	**05 27 40.6**	**+0.1**
	baz=35								
232A	**Coleman**	**35.27**	**319**	P			**P**	**05 27 41.9**	**+0.5**
	baz=35,SNR=6.7								
530A	**J-C Ranch, Com**	**35.37**	**315**	P			**P**	**05 27 42.6**	**+0.4**
	baz=35,SNR=6.3								
331A	**San Angelo**	**35.43**	**317**	⇑P			**P**	**05 27 43.0**	**+0.3**
	baz=35								
ABTX	**Abilene, Hawle**	**35.74**	**320**	⇑P			**P**	**05 27 45.8**	**+0.5**
	baz=36								
231A	**Bronte**	**35.75**	**318**	⇓P			**P**	**05 27 45.6**	**+0.3**
	baz=36								
TUL1	**Tulsa**	**35.77**	**327**	P			**P**	**05 27 45.4**	**0.0**
	baz=36								
SFIN	**Scholer Farm**	**35.79**	**341**	P			**P**	**05 27 46.7**	**+1.2**
	baz=36,SNR=9.4								
529A	**Stev Forest Ra**	**35.99**	**314**	⇑P			**P**	**05 27 47.5**	**+0.1**
	baz=36								
429A	**Davenport Ranc**	**36.04**	**315**	⇑P			**P**	**05 27 48.2**	**+0.3**
	baz=36								
Z32A	**Haskell**	**36.08**	**321**	P			**P**	**05 27 48.9**	**+0.7**
	baz=36,SNR=7.2								
628A	**Black Gap, Mar**	**36.12**	**312**	⇓P			**P**	**05 27 48.5**	**-0.1**
	baz=36								
230A	**Sterling City**	**36.25**	**317**	⇑P			**P**	**05 27 49.9**	**+0.2**
	baz=36								
131A	**Roby**	**36.26**	**319**	⇓P			**P**	**05 27 50.1**	**+0.4**
	baz=36								
627A	**Terlingua Ranc**	**36.47**	**312**	P			**P**	**05 27 52.5**	**+0.9**
	baz=36,SNR=7.5								
Z31A	**Sharp Cattle R**	**36.51**	**320**	⇑P			**P**	**05 27 52.5**	**+0.7**
	baz=36								
Y32A	**R-V Farms, Ver**	**36.52**	**322**	⇓P			**P**	**05 27 52.7**	**+0.8**
	baz=36								
130A	**Snyder**	**36.59**	**318**	⇑P			**P**	**05 27 53.0**	**+0.5**
	baz=36								
329A	**Wagon Wheel Ra**	**36.60**	**316**	⇓P			**P**	**05 27 53.0**	**+0.3**
	baz=36								
TXAR	**Lajitas Array**	**36.61**	**312**	P			**P**	**05 27 53.4**	**+0.6**
	1.8nm,0.7s,baz=128,slow=9.1,SNR=30								
TXAR				*e*pP			**pP**	**05 28 29.1**	**+1.3**
	0.4nm,0.6s,baz=127,slow=9.8,SNR=2.8								
TXAR				PcP			**PcP**	**05 30 14.3**	**+1.8**
	0.3nm,0.6s,baz=133,slow=5.2,SNR=4.8								
WMOK	**Wichita Mounta**	**36.62**	**323**	*e*P			**P**	**05 27 52.4**	**-0.3**
	2.8nm,0.6s								
428A	**Kincaid Ranch,**	**36.66**	**314**	P			**P**	**05 27 54.3**	**+1.1**
	baz=37,SNR=5.9								
229A	**Bryant Ranch,**	**36.77**	**317**	⇓P			**P**	**05 27 54.4**	**+0.3**
	baz=37								
527A	**Woodward Ranch**	**37.00**	**313**	⇓P			**P**	**05 27 57.2**	**+1.0**
	baz=37,SNR=5.9								
Y31A	**Rekieta Farm,**	**37.00**	**321**	P			**P**	**05 27 57.0**	**+1.1**
	baz=37,SNR=8.6								
626A	**Big Bend Ranch**	**37.07**	**312**	⇑P			**P**	**05 27 57.4**	**+0.6**
	baz=37								
328A	**Wristen Ranch,**	**37.12**	**315**	⇑P			**P**	**05 27 57.4**	**+0.4**
	baz=37								
Z30A	**Sanderson Ranc**	**37.13**	**319**	⇓P			**P**	**05 27 57.6**	**+0.5**
	baz=37								
427A	**Hayter Ranch,**	**37.24**	**314**	P			**P**	**05 27 58.4**	**+0.3**
	baz=37,SNR=8.7								
X31A	**McDonald Ranch**	**37.27**	**322**	⇑P			**P**	**05 27 58.6**	**+0.4**
	baz=37								
526A	**Mary Lane Ranc**	**37.31**	**312**	⇓P			**P**	**05 27 59.1**	**+0.3**
	baz=37								
Y30A	**Stafford Cattl**	**37.35**	**320**	⇓P			**P**	**05 27 59.6**	**+0.7**
	baz=37								
Z29A	**Hungry Hill Ra**	**37.49**	**319**	⇑P			**P**	**05 28 00.5**	**+0.3**
	baz=37,SNR=5.6								
426A	**McDonald Obser**	**37.59**	**313**	P			**P**	**05 28 01.9**	**+0.7**
	baz=38,SNR=7.5								
128A	**Castleberry Fa**	**37.62**	**317**	⇑P			**P**	**05 28 02.2**	**+0.9**
	baz=38								
W31A	**Holland Ranch,**	**37.62**	**323**	⇑P			**P**	**05 28 01.3**	**+0.1**
	baz=38								
X30A	**Coker Ranch, T**	**37.70**	**321**	⇑P			**P**	**05 28 02.6**	**+0.7**
	baz=38,SNR=6.5								
Y29A	**Porterfield Fa**	**37.84**	**319**	P			**P**	**05 28 03.7**	**+0.6**
	baz=38,SNR=9.0								
Z28A	**Tucker Farm, M**	**37.95**	**318**	P			**P**	**05 28 04.7**	**+0.6**
	baz=38								
Y28A	**McKinney Farm,**	**38.24**	**319**	P			**P**	**05 28 06.8**	**+0.3**
	baz=38,SNR=6.4								
425A	**Indio Mountain**	**38.35**	**313**	P			**P**	**05 28 08.2**	**+0.8**
	baz=38,SNR=6.4								
Z27A	**Tatum**	**38.52**	**317**	P			**P**	**05 28 09.1**	**+0.3**
	baz=38,SNR=15								
X28A	**Dimmitt**	**38.59**	**320**	P			**P**	**05 28 09.9**	**+0.5**
	baz=38,SNR=5.3								
MSTX	**Muleshoe**	**38.62**	**319**	⇓P			**P**	**05 28 10.1**	**+0.4**
	baz=39								
325A	**Bean Ranch, Si**	**38.65**	**313**	⇑P			**P**	**05 28 10.4**	**+0.4**
	baz=39								
T31A	**Randall Ranch,**	**38.78**	**325**	⇑P			**P**	**05 28 11.1**	**+0.3**
	baz=39								
Y27A	**Causey**	**38.83**	**318**	⇑P			**P**	**05 28 11.3**	**-0.1**
	baz=39								
225A	**Deer Hill, Car**	**38.94**	**315**	⇑P			**P**	**05 28 13.2**	**+0.7**
	baz=39								
Z26A	**Caprock**	**39.02**	**317**	P			**P**	**05 28 13.5**	**+0.6**
	baz=39,SNR=8.6								
V29A	**Stinnett**	**39.04**	**322**	⇑P			**P**	**05 28 14.7**	**+1.6**
	baz=39								
324A	**Moseley Ranch,**	**39.06**	**313**	P			**P**	**05 28 14.1**	**+0.7**
	baz=39,SNR=6.4								
JFWS	**Jewell Farm**	**39.10**	**340**	*e*P			**P**	**05 28 13.6**	**+0.2**
	12nm,0.6s								
MNTX	**Cornudas Mount**	**39.12**	**314**	*e*P			**P**	**05 28 14.2**	**+0.5**
	3.4nm,0.7s								
125A	**Gardner Draw,**	**39.13**	**315**	P			**P**	**05 28 14.7**	**+0.8**
	baz=39,SNR=7.2								
224A	**Cornudas Mount**	**39.42**	**314**	P			**P**	**05 28 17.7**	**+1.3**
	baz=39,SNR=16								
W27A	**Bowe Ranch, En**	**39.49**	**320**	P			**P**	**05 28 17.7**	**+0.8**
	baz=39,SNR=6.7								
Z25A	**Roswell**	**39.52**	**316**	P			**P**	**05 28 18.6**	**+1.4**
	baz=39,SNR=10								
X26A	**CR and CF Fran**	**39.66**	**318**	⇓P			**P**	**05 28 19.2**	**+0.9**
	baz=40								
Y25A	**Mesa, Roswell**	**39.88**	**317**	P			**P**	**05 28 21.4**	**+1.3**
	baz=40,SNR=6.4								
U27A	**Thompson Grove**	**40.19**	**322**	⇑P			**P**	**05 28 23.3**	**+0.7**
	baz=40								
X25A	**Clemmons Ranch**	**40.21**	**318**	⇓P			**P**	**05 28 24.1**	**+1.3**
	baz=40								
Y24A	**Capitan**	**40.39**	**316**	P			**P**	**05 28 25.6**	**+1.2**
	baz=40,SNR=12								
S28A	**Manter**	**40.40**	**324**	⇓P			**P**	**05 28 25.3**	**+1.0**
	baz=40								
V26A	**Tequesquite Ra**	**40.40**	**320**	⇓P			**P**	**05 28 25.2**	**+0.8**
	baz=40								
Q30A	**Quinter**	**40.41**	**327**	⇓P			**P**	**05 28 24.8**	**+0.5**
	baz=40								
W25A	**X Bar L Ranch,**	**40.49**	**319**	P			**P**	**05 28 26.1**	**+1.0**
	baz=40,SNR=6.9								
Z23A	**Rita Site, Whi**	**40.57**	**315**	⇑P			**P**	**05 28 27.2**	**+1.4**
	baz=40								
Y23A	**Lovelace Mesa,**	**40.81**	**316**	⇓P			**P**	**05 28 29.4**	**+1.5**
	baz=41								
P30A	**Selden**	**40.83**	**327**	⇑P			**P**	**05 28 27.9**	**+0.2**
	baz=41								
R28A	**Tribune**	**40.86**	**325**	P			**P**	**05 28 28.7**	**+0.7**
	baz=41,SNR=6.0								
V25A	**Rancho No Teng**	**40.96**	**319**	⇑P			**P**	**05 28 30.1**	**+1.0**
	baz=41								
Z22A	**Elephant Butte**	**41.08**	**315**	P			**P**	**05 28 31.

M21A	Separation Pea	46.22	324	⇑P		P	05 29 12.6	+1.5
	baz=46								
U15A	North Rim	46.47	315	⇓P		P	05 29 14.3	+1.2
	baz=46								
O19A	Miners Draw (B	46.48	322	⇑P		P	05 29 14.0	+1.1
	baz=46								
M20A	Sweetwater, Wa	46.63	323	⇓P		P	05 29 14.9	+0.7
	baz=47								
SRU	San Rafael	46.68	319	⇓P		P	05 29 15.5	+0.9
	baz=47								
K21A	Alcova	46.80	325	⇑P		P	05 29 16.7	+1.2
	baz=47								
MDND	Maddock	46.81	336	⇓P		P	05 29 16.0	+0.7
	baz=47								
J22A	Midwest	46.88	327	⇓P		P	05 29 16.3	+0.3
	baz=47								
E26A	Carlson Angus	47.00	332	⇑P		P	05 29 17.4	+0.5
	baz=47								
ULM	Lac du Bonnet	47.39	340	P		P	05 29 19.5	-0.2
	3.9nm,0.5s,baz=143,slow=6.3,SNR=4.8								
K20A	Yellowstone Ra	47.44	325	⇓P		P	05 29 21.4	+1.0
	baz=47								
I21A	Big Trails, Te	47.59	326	⇑P		P	05 29 22.0	+0.5
	baz=48								
J20A	Shoshoni	47.73	325	⇑P		P	05 29 23.7	+1.1
	baz=48								
JLU	Jordanelle	48.10	320	eP		P	05 29 26.6	+0.9
	1.0nm,0.6s								
I20A	Worland	48.14	326	⇓P		P	05 29 26.7	+1.0
	baz=48								
SCHQ	Schefferville	48.19	5	P		P	05 29 27.0	+1.2
	4.1nm,0.7s,baz=234,slow=19,SNR=13								
PDAR	Pinedale Array	48.21	324	P		P	05 29 26.9	+0.5
	2.0nm,0.9s,baz=125,slow=7.6,SNR=10.0								
PDAR				pP		pP	05 30 03.1	0.0
	0.2nm,0.4s,baz=137,slow=18,SNR=1.7								
J19A	Crowheart	48.23	325	⇓P		P	05 29 27.1	+0.7
	baz=48								
D24A	Glendive	48.34	332	⇓P		P	05 29 28.1	+1.0
	baz=48								
G21A	Lodge Grass	48.47	328	⇑P		P	05 29 28.7	+0.4
	baz=48								
C24A	Savage	48.69	332	⇑P		P	05 29 31.4	+1.6
	baz=49								
DUG	Dugway	48.76	319	⇓P		P	05 29 31.4	+0.9
	baz=49								
G20A	Bridger	49.01	327	⇑P		P	05 29 32.4	+0.1
	baz=49								
D22A	Cohagen	49.26	330	P		P	05 29 35.5	+1.3
	baz=49,SNR=6.9								
DGMT	Dagmar	49.27	333	⇓P		P	05 29 35.7	+1.5
	baz=49								
F20A	Billings	49.35	328	⇓P		P	05 29 35.9	+1.0
	baz=49								
C22A	Vida	49.54	331	⇑P		P	05 29 37.3	+1.2
	baz=50								
R11A	Troy Canyon, C	49.69	316	⇑P		P	05 29 38.5	+0.8
	baz=50								
E20A	Meyer Farm, Mu	49.80	329	⇑P		P	05 29 39.4	+1.1
	baz=50								
A23A	Redstone	49.94	333	⇑P		P	05 29 41.0	+1.8
	baz=50								
MPMC	Manual Prospec	50.03	312	⇑P		P	05 29 41.1	+0.7
	baz=50								
E19A	Rath Farm, Rou	50.12	328	⇑P		P	05 29 41.8	+1.1
	baz=50								
F18A	Big Timber	50.25	327	⇑P		P	05 29 42.9	+1.1
	baz=50								
A22A	Carney Farms,	50.44	332	P		P	05 29 44.8	+1.9
	baz=50,SNR=5.5								
D19A	Cripps Ranch,	50.63	329	P		P	05 29 45.5	+1.1
	baz=51,SNR=5.8								
F17A	Fitzpatrick Pl	50.77	327	⇓P		P	05 29 47.0	+1.4
	baz=51								
B20A	Solberg Farm,	51.05	331	P		P	05 29 49.1	+1.5
	baz=51,SNR=6.0								
C19A	Slack Wire Ran	51.09	329	⇑P		P	05 29 49.1	+1.2
	baz=51								
BOZ	Bozeman (W)	51.15	326	eP		P	05 29 48.9	+0.4
	2.1nm,1.0s								
BOZ				epP		pP	05 30 25.3	-0.2
E17A	Martinsdale	51.22	327	⇓P		P	05 29 49.9	+0.9
	baz=51								
A20A	Cobblestone Ra	51.30	331	⇑P		P	05 29 50.9	+1.5
	baz=51								
D17A	Six Diamond Ra	51.56	328	⇑P		P	05 29 52.4	+0.9
	baz=52								
HLID	Hailey	51.58	322	⇑P		P	05 29 52.6	+0.8
	baz=52								
NVAR	Mina Array Bea	51.63	315	P		P	05 29 53.1	+0.8
	0.6nm,0.3s,baz=119,slow=7.6,SNR=5.2								
A19A	Klindworth Far	51.73	331	⇓P		P	05 29 54.0	+1.4
	baz=52								
F15A	Butte	51.74	325	⇑P		P	05 29 53.9	+0.9
	baz=52								
B18A	Beardsley Farm	51.89	330	P		P	05 29 55.1	+1.2
	baz=52,SNR=6.9								
C17A	Wharram Farm,	51.91	328	⇓P		P	05 29 54.5	+0.5
	baz=52								
D16A	Dana Ranch, Ca	51.95	327	⇓P		P	05 29 55.0	+0.6
	baz=52								
I12A	Atlanta	52.14	322	⇓P		P	05 29 56.9	+1.0
	baz=52								
MFID	Camas Ranch	52.37	321	eP		P	05 29 58.3	+0.8
	2.5nm,0.8s								
MFID	Camas Ranch	52.37	321	⇑P		P	05 29 58.2	+0.7
	baz=52								
H12A	Diamond D Ranc	52.38	323	⇑P		P	05 29 58.7	+1.1
	baz=52								
A17A	Triple J Farms	52.71	330	P		P	05 30 00.1	+0.2
	baz=53								
A16A	West Butte Ran	53.17	329	P		P	05 30 03.9	+0.6
	baz=53								
B15A	Bradely Ranch,	53.28	328	⇑P		P	05 30 04.4	+0.3
	baz=53								
D13A	Huson	53.58	326	⇓P		P	05 30 07.1	+0.8
	baz=54								
C14A	Swan Lake	53.58	327	⇑P		P	05 30 07.2	+0.9
	baz=54								
B14A	Marquette Ranc	53.68	328	P		P	05 30 07.3	+0.2
	baz=54								
A15A	Johnson Ranch,	53.77	329	⇓P		P	05 30 08.4	+0.7
	baz=54								
E12A	Beaver Dam Sad	53.83	325	⇑P		P	05 30 09.0	+0.8
	baz=54								
C13A	Hot Springs	53.98	326	⇓P		P	05 30 10.4	+1.2
	baz=54								
D12A	Red Ives Fores	54.06	325	⇓P		P	05 30 10.6	+0.8
	baz=54								
C11A	Tepee Creek (N	55.01	326	⇑P		P	05 30 17.5	+0.9
	baz=55								
YKA	Yellowknife Ar	63.37	340	P		P	05 31 13.9	+0.3
	2.3nm,0.6s,baz=132,slow=6.7,SNR=64								
YKA				pP		pP	05 31 52.1	0.0
	1.2nm,0.7s,baz=129,slow=7.0,SNR=4.6								
DBIC	Dimbokro	67.59	86	P		P	05 31 41.7	0.0
	5.5nm,0.6s,baz=255,slow=7.7,SNR=8.6								
TORD	Torodi Ar. Bea	73.61	78	P		P	05 32 17.6	-0.4
	0.5nm,0.4s,baz=281,slow=6.1,SNR=14								
ILAR	Eielson Array	77.08	335	P		P	05 32 37.5	+0.5
	0.3nm,0.6s,baz=98,slow=3.7,SNR=5.6								
NB2	NORSAR Subarra	81.31	29	P		P	05 33 01.3	+1.3
	comp=Z,0.6nm,0.6s,baz=268,slow=5.6								
NOA	NORSAR Array B	81.31	29	P		P	05 33 00.7	+0.7
	comp=Z,0.7nm,0.7s,baz=267,slow=5.3,SNR=4.3								
GERES	GERESS Array B	82.77	42	P		P	05 33 07.3	-0.7
	comp=Z,0.3nm,0.6s,baz=318,slow=1.8,SNR=4.6								
ARCES	ARCESS Array B	86.68	20	P		P	05 33 27.7	+0.7
	comp=Z,4.7nm,0.9s,baz=292,slow=3.3,SNR=5.3								
SNAA	Sanae	90.24	163	P		P	05 33 43.7	-0.1
	comp=Z,0.8nm,1.0s,baz=234,slow=9.5,SNR=6.0								
ZALV	Zalesovo Beam	116.69	14	PKP		PKPdf	05 39 27.6	+0.8
	comp=Z,0.8nm,0.4s,baz=267,slow=3.0,SNR=5.2								
MKAR	Makanchi Array	122.33	20	PKP		PKPdf	05 39 38.1	+0.2
	comp=Z,0.5nm,0.4s,baz=283,slow=2.9,SNR=12								
WMQ	Urumqi	126.70	17	ePKP		PKPdf	05 39 44.9	-1.6
HHC	Hu-ho-hao-te	132.44	355	ePKP		PKPdf	05 39 55.0	-2.5
HHC				sPKP			05 40 54.3	
HHC				PP		PP	05 42 23.3	+2.1
HHC				PKS		PKSdf	05 43 29.9	-4.1
HHC				SKS		SKSdf	05 46 48.5	-5.4
LZH	Lanzhou	137.28	4	ePKP		PKPdf	05 40 06.3	-0.5
LZH				sPKP			05 41 05.3	
CD2	Chengdu	142.41	5	ePKP		PKPdf	05 40 14.4	-1.7
ASAR	Alice Springs	149.19	234	PKP		PKPdf	05 40 28.3	+0.6
	comp=Z,3.9nm,0.6s,baz=119,slow=3.3,SNR=35								
ASAR				PKPbc		PKPbc	05 40 32.1	-0.1
	comp=Z,2.2nm,0.7s,baz=129,slow=4.2,SNR=10.0								
WRAB	Tennant Creek	150.43	241	ePKPbc		PKPbc	05 40 35.4	+0.2
WRA	Warramunga Arr	150.43	241	PKP		PKPdf	05 40 30.5	+0.7
	comp=Z,3.5nm,0.6s,baz=109,slow=2.6,SNR=47								
WRA				PKPbc		PKPbc	05 40 35.1	-0.1
	comp=Z,3.5nm,0.6s,baz=111,slow=2.4,SNR=83								
CMAR	Chiang Mai Arr	153.71	18	PKPbc		PKPbc	05 40 43.1	+0.5
	comp=Z,1.5nm,0.5s,baz=325,slow=3.5,SNR=5.6								

IDC 21 05:36:40.5±3.9, 2°.95S×130°.36E, h48km±38km, mb3.7/6, mb1 4.0/8, mb1mx3.8/22, mbtmp3.9/8, ML4.2/2, Error ellipse: s-maj=50.6km s-min=11.7km az=79.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
KAPI	Kappang	10.78	259	P	Pn	05	39	13.0	+0.7
	0.8nm,0.3s,baz=73,slow=14,SNR=4.1								
WRA	Warramunga Arr	17.33	167	P	Pn	05	40	40.0	0.0
	1.4nm,0.3s,baz=348,slow=11,SNR=60								
WRA				S	Sn	05	43	40.7	-10
	0.1nm,0.3s,baz=338,slow=22,SNR=3.5								
ASAR	Alice Springs	20.88	171	P	P	05	41	18.1	-0.7
	16nm,0.6s,baz=350,slow=9.8,SNR=126								
ASAR				S	S	05	45	09.4	+0.3
	3.4nm,0.8s,baz=353,slow=19,SNR=10.0								
STKA	Stephens Creek	30.66	161	P	P	05	42	50.2	-0.3
	2.1nm,0.7s,baz=56,slow=8.3,SNR=4.7								
KSRS	Korea Array	40.27	357	P	P	05	44	12.0	-0.8
	0.8nm,0.6s,baz=173,slow=9.4,SNR=5.0								
USRK	Ussuriysk Arra	46.96	2	P	P	05	45	07.0	+0.4
	1.0nm,0.6s,baz=91,slow=7.6,SNR=4.3								
SONM	Songino Array	54.76	340	P	P	05	46	05.1	-0.3
	1.2nm,0.9s,baz=147,slow=8.1,SNR=2.9								
MKAR	Makanchi Array	65.08	326	P	P	05	47	15.6	-0.6
	0.3nm,0.6s,baz=124,slow=7.6,SNR=5.5								
CPUP	Villa Florida	149.96	166	PKPbc	PKPbc	05	56	27.6	+1.2
	0.7nm,0.5s,baz=158,slow=2.5,SNR=6.3								

ISCJB 21 05:36:40.9±0.5, 37°.27N±0°.04×27°.95E±0°.04, h10km±5km, Error ellipse: s-maj=6.6km s-min=4.6km az=19.6
DDA 21 05:36:40.7, 37°.25N×27°.96E, h15km, MD2.8
ISK 21 05:36:40.6, 37°.27N×27°.96E, h7km, MD2.6
CSEM 21 05:36:41.1±0.1, 37°.28N×27°.95E, h10km, MD2.6, Error ellipse: s-maj=2.5km s-min=1.9km az=15.0

ISC 21 05:36:40.6±0.9, 37°.24N±0°.03×27°.97E±0°.02, h15km±7km, n22, σ1°18/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
MLSB	Milas	0.16	289	ePG	Pg	05	36	44.3	-0.4
MLSB				eSG	Sg	05	36	46.7	-0.7
MLSB	Milas	0.16	289	ePg	Pg	05	36	44.3	-0.4
MLSB				eSg	Sg	05	36	46.7	-0.7
YER	Yerkesik	0.27	113	ePG	Pg	05	36	47.1	+0.6
YER				eSG	Sg	05	36	51.0	+0.5
YER	Yerkesik	0.27	113	ePg	Pg	05	36	47.1	+0.6
YER				eSg	Sg	05	36	51.0	+0.5
AYDN	Tasoluk	0.42	351	i P	Pg	05	36	48.7	-0.4
AYDN				i S	Sg	05	36	53.9	-1.1
AYDN	Tasoluk	0.42	351	i P	Pg	05	36	48.7	-0.4
AYDN				i S	Sg	05	36	53.9	-1.1
BODT	Bodrum	0.55	251	ePG	Pg	05	36	51.8	+0.2
BODT				eSG	Sb	05	36	59.9	+0.1
BODT	Bodrum	0.55	251	ePg	Pg	05	36	51.8	+0.2
BODT				eSg	Sb	05	36	59.9	+0.1
DAT	Datca	0.60	211	ePG	Pb	05	36	53.3	+0.4
DAT	Datca	0.60	211	ePg	Pb	05	36	53.3	+0.4
TURN	Turunc	0.63	126	i P	Pg	05	36	50.8	-2.1
TURN				i S	Sg	05	36	58.0	-3.2
TURN	Turunc	0.63	126	i P	Sg	05	36	50.8	-2.1
TURN				i S	Sg	05	36	58.0	-3.2
DALY	Dalyan (Mu¨la	0.69	127	ePG	Pb	05	36	55.8	+1.4
DALY	Dalyan (Mu¨la	0.69	127	ePg	Pb	05	36	55.8	+1.4
GCAM	G?zelcaml?	0.74	308	eP	Pb	05	36	55.2	0.0
GCAM				i S	Sg	05	37	03.9	-1.0
GCAM	G?zelcaml?	0.74	308	eP	Pb	05	36	55.2	0.0
GCAM				i S	Sg	05	37	03.9	-1.0
DNZL	Cakiroluk	0.97	62	eP	Pb	05	36	59.7	+0.4
DNZL				eS	Sb	05	37	12.6	+0.7
DNZL	Cakiroluk	0.97	62	eP	Pb	05	36	59.7	+0.4
DNZL				eS	Sb	05	37	12.6	+0.7
FETY	Fethiye	1.08	124	ePN	Pn	05	37	02.2	+0.9
FETY	Fethiye	1.08	124	ePn	Pn	05	37	02.2	+0.9
KULA	Kula-Manisa	1.38	23	ePN	Pg	05	37	06.8	-0.5
KULA	Kula-Manisa	1.38	23	ePn	Pg	05	37	06.8	-0.5

IDC 21 05:58:14.3±1.6, 62°.17N×151°.77W, h70km±18km, mb3.2/4, mb1 3.5/8, mb1mx3.2/28, mbtmp3.2/8, Error ellipse: s-maj=23.4km s-min=9.8km az=108.0
ISCJB 21 05:58:15.0±0.3, 62°.15N±0°.02×151°.43W±0°.06, h99km±4km, mb3.4/4, Error ellipse: s-maj=4.5km s-min=3.6km az=17.1
NEIC 21 05:58:17.3, 62°.15N×151°.47W, h82km, MG3.3(AEIC), After AEIC.

ISC 21 05:58:16.3±0.8, 62°.15N±0°.03×151°.47W±0°.03, h90km±6km, n79, σ0°80/92, mb3.3/4, Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
SKT	Skwentna	0.17	189	P	Pn	05	58	28.9	-0.2
SKT				S	Sn	05	58	38.4	-0.2
TRAP	Trapper Creek	0.61	71	P	Pn	05	58	31.8	0.0
STLK	Strandline Lak	0.67	195	P	Pn	05	58	32.2	-0.3
SUA	Susitna One	0.77	153	P	Pn	05	58	33.7	+0.1
NCG	North Capps Gl	0.81	204	P	Pn	05	58	33.7	-0.2
PPLA	Purkeypile	0.82	337	P	Pn	05	58	34.1	0.0
BGL	Barrier Glacie	0.99	207	P	Pn	05	58	36.1	+0.2
SPU	Mount Spurr	1.01	196	P	Pn	05	58	35.7	-0.3
CKL	Chakachamna La	1.04	204	P	Pn	05	58	36.4	-0.1
HUR	Hurricane	1.19	45	P	Pn	05	58	38.3	+0.2
PMR	Palmer	1.24	116	ePn	Pn	05	58	38.1	-0.6
PMR				eSn	Sn	05	58	55.4	-0.2
CAST	Castle Rocks	1.31	348	P	Pn	05	58	39.5	-0.1
CAST				S	Sn	05	58	56.0	-1.1
RC01	Rabbit Creek A	1.35	141	ePn	Pn	05	58	40.0	0.0
RC01				S	Sn	05	58	58.1	+0.1
RC01				eSn	Sn	05	58	59.0	+1.0
NKA	Nikishka	1.42	175	P	Pn	05	58	43.0	+2.2
TRF	Thorofare Moun	1.42	22	P	Pn	05	58	40.7	-0.4
TRF				S	Sn	05	58	59.5	-0.3
SML	Sawmill	1.52	102	P	Pn	05	58	42.1	-0.1
SML				S	Sn	05	59	02.4	+0.4
DFR	Drift River	1.67	201	P	Pn	05	58	44.5	+0.3
SLKM	Skilak Lake	1.75	159	P	Pn	05	58	45.4	+0.2
CHUM	Lake Minchumin	1.78	348	P	Pn	05	58	45.7	+0.2
RDWB	Redoubt West	1.79	202	P	Pn	05	58	45.6	-0.2
RSO	Redoubt South	1.80	201	ePn	Pn	05	58	46.4	+0.4
RSO				eSn	Sn	05	59	07.8	-0.8
MCK	McKinley	1.97	35	P	Pn	05	58	48.5	+0.5
DHY	Denali Highway	2.11	62	P	Pn	05	58	50.1	+0.1
SVW2	Sparrevohn	2.23	244	P	Pn	05	58	51.3	-0.1
TT01	Tatalina	2.24	292	P	Pn	05	58	51.4	-0.2
BRLK	Bradley Lake	2.41	173	P	Pn	05	58	54.7	+0.9
CNPM	China Poot	2.63	177	P	Pn	05	58	57.5	+0.7
OPT	Oil Point	2.65	200	P	Pn	05	58	57.4	+0.4
VLZ	Valdez	2.66	110	P	Pn	05	58	55.9	-1.1
NEA	Nenana	2.67	23	P	Pn	05	58	57.0	-0.2
KLU	Klutina	2.72	102	P	Pn	05	58	57.2	-0.8
WRH	Wood River Hil	2.79	32	P	Pn	05	58	58.8	0.0
PAX	Paxson	2.90	71	ePn	Pn	05	58	59.2	-1.2
PAX				eSn	Sn	05	59	34.9	+0.4
DIV	Divide	2.91	108	P	Pn	05	58	59.4	-1.1
MLY	Manley	2.91	6	P	Pn	05	59	00.9	+0.3
HARP	HAARP	2.96	82	P	Pn	05	59	01.5	+0.3
CCB	Clear Creek Bu	3.00	32	P	Pn	05	59	01.5	-0.2
MDM	Murphy Dome	3.17	26	P	Pn	05	59	04.2	+0.2
COLA	College	3.18	29	P	Pn	05	59	04.2	+0.2
EYAK	Cordova Ski Ar	3.19	118	P	Pn	05	59	02.7	-1.5
ILAR	Eielson Array	3.34	36	P	Pn	05	59	05.9	-0.4
ILAR				S	Sn	05	59	44.1	-0.8
ILAR	Eielson Array	3.34	36	P	Pn	05	59	05.9	-0.4
	3.4nm,0.3s,baz=221,slow=14,SNR=93								
ILAR				S	Sn	05	59	44.1	-0.8
	12nm,0.3s,baz=210,slow=18,SNR=12								
IL1	Eielson Array	3.34	36	P	Pn	05	59	06.0	-0.2
RIDG	Independ'e Rid	3.43	59	P	Pn	05	59	08.2	+0.8
GCSA	Galena City Sc	3.56	319	P	Pn	05	59	09.6	+0.4
MENT	Mentasta	3.68	74	ePn	Pn	05	59	10.2	-0.6
DOT	Dot Lake	3.71	63	P	Pn	05	59	11.3	0.0
DOT				Sn	Sn	05	59	55.3	+1.4
VRDI	Verde Repeater	3.93	100	P	Pn	05	59	13.6	-0.9
IM3	Indian Mountai	3.98	346	P	Pn	05	59	15.0	+0.1
MCARA	McCarthy VSAT	4.09	97	P	Pn	05	59	16.1	-0.3
BERG	Berg Lake	4.14	112	P	Pn	05	59	17.9	+0.7
KHIT	Khitrov Hills	4.32	110	P	Pn	05	59	19.6	0.0
PTPK	Patty Peak	4.40	99	P	Pn	05	59	20.6	-0.2
KDAK	Kodiak Island	4.42	188	P	Pn	05	59	20.3	-0.5
KDAK				S	Sn	06	00	08.8	-2.2
KDAK	Kodiak Island	4.42	188	P	Pn	05	59	20.4	-0.5
	0.4nm,0.3s,baz=332,slow=15,SNR=3.7								
KDAK				S	Sn	06	00	08.8	-2.2
	2.8nm,0.3s,baz=342,slow=19,SNR=6.1								
BALM	Baldy	4.50	100	P	Pn	05	59	21.1	-1.0
KIAG	Kiagna River	4.53	102	P	Pn	05	59	21.4	-1.2
BCA3	Beaver Creek A	4.57	74	P	Pn	05	59	22.4	-0.5
BARK	Barkley Ridge	4.67	108	P	Pn	05	59	24.0	-0.5
BARN	Barnard Glacie	4.81	99	P	Pn	05	59	26.3	-0.1
GRNC	Granite Creek	4.88	103	P	Pn	05	59	26.6	-0.7
COLD	Coldfoot	5.13	6	P	Pn	05	59	31.4	+0.9
EGAK	Eagle	5.32	56	ePn	Pn	05	59	31.6	-1.6
	16nm,0.6s								
SAMH	Samovar Hills	5.56	107	P	Pn	05	59	36.3	-0.2
BM3	Burnt Mountain	6.05	26	P	Pn	05	59	43.6	+0.6
PNL	Peninsula	6.39	108	P	Pn	05	59	46.2	-1.6
HYT	Haines Junctio	6.82	95	P	Pn	05	59	53.1	-0.5
INK	Inuvik	9.71	43	P	Pn	06	00	33.2	+0.5
INK	Inuvik	9.71	43	P	Pn	06	00	33.2	+0.5
	0.2nm,0.3s,baz=250,slow=20,SNR=3.3								
YKA	Yellowknife Ar	16.99	72	P	Pn	06	02	07.0	-0.9
YKA	Yellowknife Ar	16.99	72	P	Pn	06	02	07.0	-0.9
	0.0nm,0.3s,baz=280,slow=12,SNR=4.4								
NVAR	Mina Array Bea	31.21	124	P	P	06	04	28.1	+1.0
NVAR	Mina Array Bea	31.21	124	P	P	06	04	28.1	+1.0
	0.2nm,0.3s,baz=312,slow=9.5,SNR=3.9								
TXAR	Lajitas Array	45.11	114	P	P	06	06	24.9	+1.4
TXAR	Lajitas Array	45.11	114	P	P	06	06	24.9	+1.4
	0.2nm,0.6s,baz=321,slow=7.8,SNR=3.9								
ZALV	Zalesovo Beam	56.08	324	P	P	06	07	45.1	-0.3
ZALV	Zalesovo Beam	56.08	324	P	P	06	07	45.2	-0.3
	0.4nm,0.3s,baz=64,slow=6.7,SNR=3.3								
MKAR	Makanchi Array	63.21	322	P	P	06	08	33.0	-1.5
MKAR	Makanchi Array	63.21	322	P	P	06	08	33.0	-1.5
	0.3nm,0.7s,baz=43,slow=7.3,SNR=4.1								

IGQ 21 06:04:40.5, 1°.36S×80°.22W, h15km±120km, Mb4.1, Ms3.9, 6C-9D, Error ellipse: s-maj=2.5km s-min=1.3km az=2.6, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
CHIS	Cerro-Chispas-	0.59	301	⇓S	Sb	06	05	00.7	-0.2
CHIS	Cerro-Chispas-	0.59	301	⇓P	Pg	06	04	51.5	-0.7
PECV	Mancha de Ca P	0.60	17	P	Pb	06	04	53.5	+0.6
MAG1	Magdalena	1.35	19	P	Pn	06	05	04.9	-0.1
IGUA	Igualata	1.59	95	S	Sb	06	05	31.9	+1.0
IGUA	Igualata	1.59	95	P	Pb	06	05	10.4	0.0
RIOE	Riobamba	1.64	104	⇑S	Sb	06	05	32.0	+0.2
RIOE	Riobamba	1.64	104	⇑P	Pb	06	05	10.5	-0.5
PAST	Pastocalle	1.71	67	P	Pb	06	05	13.2	+0.8
BMAS	Trigal station	1.75	95	⇓S	Sg	06	05	36.9	-0.9
BMAS	Trigal station	1.75	95	⇓P	Pb	06	05	13.2	+0.3
JUI6	Juive	1.75	92	P	Pb	06	05	13.0	+0.1
PAT1	Patacocha	1.79	95	⇑S	Sg	06	05	38.6	-0.7
PAT1	Patacocha	1.79	95	⇑P	Pb	06	05	13.8	0.0
BPAT	Tungurahua Vol	1.79	95	⇑P	Pb	06	05	13.8	-0.1
RUN5	Runtun	1.80	92	S	Sg	06	05	39

NNC ***21*** *07:09:09.4±4.2,41.05N×78.24E,h0km,mb3.5,mpv3.2, Error ellipse: s-maj=32.5km s-min=22.9km az=161.0*

ISC 21 07:09:13.6±2.9,41.3N±0.2×78.04E±0.09,h10km,n15, σ1§23/13,7C-4D,Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ULHL	**Ulahol**	**1.67**	**307**	P	**Pb**	**07 09 44.1**	**-0.4**
	SNR=17						
KNDC	**Almaty**	**2.11**	**338**	⇑Pg	**Pb**	**07 09 51.6**	**-0.4**
	18nm,0.5s						
KNDC				⇓Lg	Lg	07 10 24.2	
	118nm,0.6s						
KZA	**Kyzart**	**2.25**	**292**	P	**Pn**	**07 09 50.7**	**-0.5**
	SNR=9.2						
TKM2	**Tokmak 2**	**2.46**	**313**	⇓Pn	**Pb**	**07 09 55.6**	**-2.5**
	18nm,0.5s						
TKM2				⇑Lg	Lg	07 10 35.5	
	32nm,0.5s						
TKM2	**Tokmak 2**	**2.46**	**313**	P	**Pb**	**07 09 59.0**	**+0.9**
	SNR=31						
KBK	**Karagaybulak**	**2.69**	**302**	P	**Pb**	**07 10 02.3**	**+0.3**
	SNR=13						
AAK	**Ala-Archa**	**2.98**	**298**	P	**Sg**	**07 10 49.7**	**+0.3**
	SNR=5.2						
CHMS	**Chumysh**	**3.00**	**306**	P	**Pb**	**07 10 07.7**	**+0.6**
	SNR=8.9						
USP	**Ospenovka**	**3.30**	**308**	P	**Pb**	**07 10 12.7**	**+0.4**
	SNR=6.4						
AML	**Almayashu**	**3.37**	**286**	P	**Pg**	**07 10 17.7**	**-0.5**
	SNR=6.7						
EKS2	**Erkin-Say**	**3.47**	**295**	P	**Pb**	**07 10 16.5**	**+1.2**
	SNR=5.5						
KK31	**Karatay Array**	**5.89**	**291**	⇑Pg	Pb	07 11 00.7	+4.4
	0.3nm,0.3s,baz=116,slow=15,SNR=9.6						
KK31				⇑Lg	Lg	07 12 19.7	
	0.9nm,0.5s,baz=106,slow=28,SNR=6.9						
MK31	**Makanchi Array**	**6.32**	**28**	⇓Pn	**Pn**	**07 10 46.0**	**-0.8**
	0.3nm,0.5s,baz=197,slow=15,SNR=12						
MK31				⇓Sn	**Sn**	**07 12 01.1**	**+2.1**
	1.2nm,0.7s,baz=203,slow=22,SNR=4.8						
MK31				⇑Lg	Lg	07 12 33.4	
	0.9nm,0.5s						
KURBB	**Kurchatov Arra**	**9.37**	**2**	⇑Lg	Lg	07 14 13.5	
	3.7nm,0.8s						
KURK	**Kurchatov**	**9.46**	**2**	⇑Lg	Lg	07 14 16.5	
	3.0nm,1.2s						

ISCJB ***21*** *07:10:58.3±0.3,44.25N±0.03×9.95E±0.03,h13km±3km, Error ellipse: s-maj=4.7km s-min=3.0km az=29.1*
CSEM ***21*** *07:10:58.5±0.1,44.21N×9.91E,h2km,ML2.3/5,Error ellipse: s-maj=4.3km s-min=2.2km az=15.0*
GEN ***21*** *07:10:58.5,44.25N×9.94E,h0km,ML2.1*
ROM ***21*** *07:10:58.1±0.4,44.24N×9.94E,h10km±4km,Md2.2/9, Ml1.8/2,Error ellipse: s-maj=2.8km s-min=1.3km az=22.0*
LDG ***21*** *07:11:00.0±0.2,44.11N×10.03E,h10km,Ml2.5/7,Error ellipse: s-maj=5.2km s-min=3.2km az=5.0*

ISC 21 07:10:58.6±0.9,44.23N±0.02×9.94E±0.02,h9km±6km,n50, σ1§12/88,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BACM	**Baccana**	**0.10**	**63**	P	**Pg**	**07 11 00.8**	**-0.3**
BACM				S	**Sg**	**07 11 02.3**	**-0.6**
CODM	**Codolo**	**0.17**	**338**	P	**Pg**	**07 11 01.7**	**-0.6**
CODM				S	**Sg**	**07 11 04.2**	**-0.6**
VINC	**Vinca**	**0.17**	**120**	P	**Pg**	**07 11 02.4**	**+0.1**
VINC				S	**Sg**	**07 11 05.3**	**+0.5**
GRAM	**Graiana**	**0.28**	**19**	P	**Pg**	**07 11 04.1**	**0.0**
GRAM				S	**Sg**	**07 11 08.1**	**+0.2**
MSSA	**Maissana**	**0.32**	**286**	Pg	**Pg**	**07 11 05.1**	**+0.2**
MSSA				Sg	**Sg**	**07 11 09.8**	**+0.7**
	362nm,1.2s						
MSSA	**Maissana**	**0.32**	**286**	Pg	**Pg**	**07 11 05.1**	**+0.2**
MSSA				Sg	**Sg**	**07 11 09.8**	**+0.7**
	362nm,1.2s						
VLC	**Villacollemand**	**0.33**	**102**	Pg	**Pg**	**07 11 05.1**	**0.0**
VLC				Sg	**Sg**	**07 11 10.1**	**+0.7**
	242nm,1.4s						
VLC	**Villacollemand**	**0.33**	**102**	Pg	**Pg**	**07 11 05.1**	**0.0**
VLC				Sg	**Sg**	**07 11 10.1**	**+0.7**
	242nm,1.4s						
SC2M	**Scurtabo**	**0.34**	**301**	Pg	**Pg**	**07 11 05.5**	**+0.1**
SC2M				Sg	**Sg**	**07 11 10.7**	**+0.8**
SC2M	**Scurtabo**	**0.34**	**301**	P	**Pg**	**07 11 05.4**	**+0.1**
SC2M				S	**Sg**	**07 11 09.9**	**0.0**
SC2M				Sg	**Sg**	**07 11 10.7**	**+0.8**
ERBM	**Eremo**	**0.39**	**61**	Pg	**Pg**	**07 11 05.3**	**-0.9**
ERBM				Sg	**Sb**	**07 11 13.1**	**-0.7**
ERBM	**Eremo**	**0.39**	**61**	Pg	**Pg**	**07 11 05.3**	**-0.9**
ERBM				Sg	**Sb**	**07 11 13.1**	**-0.7**
GSCL	**Gusciola**	**0.48**	**75**	Pg	**Pg**	**07 11 08.2**	**+0.3**
GSCL				Sg	**Sg**	**07 11 15.0**	**+0.8**
	1.0nm,0.2s						
GSCL	**Gusciola**	**0.48**	**75**	Pg	**Pg**	**07 11 08.2**	**+0.3**
GSCL				Sg	**Sg**	**07 11 15.0**	**+0.8**
	1.0nm,0.2s						
BDI	**Bagni Di Lucca**	**0.50**	**109**	Pg	**Pg**	**07 11 08.6**	**+0.3**
BDI				Sg	**Sg**	**07 11 15.9**	**+1.0**
BDI	**Bagni Di Lucca**	**0.50**	**109**	Pg	**Pg**	**07 11 08.6**	**+0.3**
BDI				Sg	**Sg**	**07 11 15.9**	**+1.0**
MAIM	**Mastiano**	**0.51**	**128**	Pg	**Pg**	**07 11 08.6**	**+0.2**
MAIM				Sg	**Sg**	**07 11 15.5**	**+0.5**
MAIM	**Mastiano**	**0.51**	**128**	Pg	**Pg**	**07 11 08.6**	**+0.2**
MAIM				Sg	**Sg**	**07 11 15.5**	**+0.5**
BOB	**Bobbio (Coli)**	**0.64**	**327**	Pg	**Pg**	**07 11 10.1**	**-0.9**
BOB	**Bobbio (Coli)**	**0.64**	**327**	Pg	**Pg**	**07 11 10.1**	**-0.9**
PII	**Pisa**	**0.66**	**140**	Pg	**Pg**	**07 11 11.4**	**+0.1**
PII				Sg	**Sb**	**07 11 21.0**	**-0.5**
PII	**Pisa**	**0.66**	**140**	Pg	**Pg**	**07 11 11.4**	**+0.1**
PII				Sg	**Sb**	**07 11 21.0**	**-0.5**
PCP	**Piancastagn**	**1.05**	**288**	P	**Pg**	**07 11 18.4**	**-0.3**
PCP				S	**Sg**	**07 11 31.8**	**-0.6**
RORO	**Rocca Rossa**	**1.35**	**266**	P	**Pn**	**07 11 23.7**	**0.0**
SBF	**Sospel**	**1.84**	**259**	*e*Pn	**Pn**	**07 11 30.6**	**+0.1**
SBF				*e*Sn	**Sn**	**07 11 53.3**	**-0.7**
	8.4nm,0.2s						
SBF	**Sospel**	**1.84**	**259**	*e*Pn	**Pn**	**07 11 30.6**	**+0.1**
SBF				*e*Sn	**Sn**	**07 11 53.3**	**-0.7**
	4.2nm,0.2s						
MBDF	**Montbardon**	**2.32**	**283**	*e*Pn	**Pn**	**07 11 37.9**	**+0.7**
MBDF				*e*Sn	**Sn**	**07 12 05.5**	**-0.4**
MBDF				*e*Sg	**Sg**	**07 12 16.3**	**+3.1**
	3.0nm,0.3s						
MBDF	**Montbardon**	**2.32**	**283**	*e*Pn	**Pn**	**07 11 37.9**	**+0.7**
MBDF				*e*Sn	**Sn**	**07 12 05.5**	**-0.4**
MBDF				*e*Sg	**Sg**	**07 12 16.3**	**+3.1**
	1.5nm,0.3s						
FRF	**La Foret Royal**	**2.48**	**255**	*e*Pn	**Pn**	**07 11 38.4**	**-0.7**
FRF				*e*Sn	**Sn**	**07 12 07.6**	**-1.8**
	4.0nm,0.2s						
FRF	**La Foret Royal**	**2.48**	**255**	*e*Pn	**Pn**	**07 11 38.4**	**-0.7**
FRF				*e*Sn	**Sn**	**07 12 07.6**	**-1.8**
	2.0nm,0.2s						
LPG	**La Plagne**	**2.60**	**300**	*e*P	**Pb**	**07 11 45.8**	**+0.3**
LPG	**La Plagne**	**2.60**	**300**	*e*P	**Pb**	**07 11 45.8**	**+0.3**
LPL	**La Plagne**	**2.62**	**301**	*e*Pn	**Pn**	**07 11 41.5**	**+0.2**
LPL	**La Plagne**	**2.62**	**301**	*e*Pn	**Pn**	**07 11 41.5**	**+0.2**
LMR	**La Mourre**	**2.64**	**251**	*e*Pn	**Pn**	**07 11 40.6**	**-0.8**
LMR				*e*Sn	**Sn**	**07 12 10.7**	**-2.9**
	1.5nm,0.2s						
LMR	**La Mourre**	**2.64**	**251**	*e*Pn	**Pn**	**07 11 40.6**	**-0.8**
LMR				*e*Sn	**Sn**	**07 12 10.7**	**-2.9**
	0.8nm,0.2s						
ORIF	**Oris-en-Rattie**	**2.98**	**285**	*e*Pn	**Pn**	**07 11 48.3**	**+2.1**
ORIF	**Oris-en-Rattie**	**2.98**	**285**	*e*Pn	**Pn**	**07 11 48.3**	**+2.1**
SMRF	**Simiane la Rot**	**3.16**	**267**	*e*Pn	**Pn**	**07 11 48.4**	**-0.1**
SMRF	**Simiane la Rot**	**3.16**	**267**	*e*Pn	**Pn**	**07 11 48.4**	**-0.1**
CABF	**La Chapelle**	**3.61**	**313**	*e*Pn	**Pn**	**07 11 56.9**	**+2.1**
CABF	**La Chapelle**	**3.61**	**313**	*e*Pn	**Pn**	**07 11 56.9**	**+2.1**
HINF	**Hinteralfeld**	**4.18**	**330**	*e*Pn	**Pn**	**07 12 04.2**	**+1.6**
HINF				*e*Sn	**Sn**	**07 12 50.8**	**-0.8**
	1.5nm,0.3s						
HINF	**Hinteralfeld**	**4.18**	**330**	*e*Pn	**Pn**	**07 12 04.2**	**+1.6**
HINF				*e*Sn	**Sn**	**07 12 50.8**	**-0.8**
	0.8nm,0.3s						
HAU	**Haudompre**	**4.53**	**328**	*e*Pn	**Pn**	**07 12 08.7**	**+1.4**
HAU				*e*Sn	**Sn**	**07 12 58.6**	**-1.5**
	2.5nm,0.3s						
HAU	**Haudompre**	**4.53**	**328**	*e*Pn	**Pn**	**07 12 08.7**	**+1.4**
HAU				*e*Sn	**Sn**	**07 12 58.6**	**-1.5**
	1.2nm,0.3s						
CDF	**Champ du Feu**	**4.57**	**337**	*e*Pn	**Pn**	**07 12 09.2**	**+1.2**
CDF				*e*Sn	**Sn**	**07 12 59.8**	**-1.5**
	1.0nm,0.3s						
CDF	**Champ du Feu**	**4.57**	**337**	*e*Pn	**Pn**	**07 12 09.2**	**+1.2**
CDF				*e*Sn	**Sn**	**07 12 59.8**	**-1.5**
	0.5nm,0.3s						
LOR	**Lormes**	**5.23**	**308**	*e*Pn	**Pn**	**07 12 18.4**	**+1.4**
LOR	**Lormes**	**5.23**	**308**	*e*Pn	**Pn**	**07 12 18.4**	**+1.4**

IDC ***21*** *07:19:46.9±0.6,0.68S×120.64E,h0km,mb4.2/16, mb1 4.2/17,mb1mx4.1/28,mbtmp4.2/17,ML3.9/1,MS3.4/5, Ms1 3.4/5,ms1mx2.7/33,Error ellipse: s-maj=26.2km s-min=12.1km az=74.0*
ISCJB ***21*** *07:19:52.2±0.3,0.51S±0.04×120.55E±0.05,h33km, mb4.1/16,MS3.3/5,Error ellipse: s-maj=7.1km s-min=4.9km az=154.0*
DJA ***21*** *07:19:55.1±0.2,1°S±3°×12°1E±°,h11km,M4.8/14, mb5.2/12,mB5.3/10,MLv4.8/14,Mw(mB)4.7/10*

ISC 21 07:19:53.5±0.5,0.59S±0.05×120.54E±0.06,h35km,n49, σ1§38/35,mb4.2/16,MS3.4/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.76**	**53**	P	Pn	07 20 25.4	+3.9
SKSI	**Soroako, Sulaw**	**2.08**	**158**	P	**Pn**	**07 20 27.3**	**+1.3**
SKSI				S	**Sn**	**07 20 51.2**	**+0.5**
LUWI	**Luwuk**	**2.28**	**101**	P	**Pn**	**07 20 31.3**	**+2.7**
TTSI	**Tana Toraja**	**2.54**	**196**	P	**Pn**	**07 20 33.5**	**+1.3**
SGKI	**Sangatta, Kali**	**2.94**	**271**	P	Pn	07 20 41.8	+4.1
SMKI	**Samarinda**	**3.33**	**272**	P	Pn	07 20 47.3	+4.2
SPSI	**Sidrap Palu**	**3.44**	**193**	P	**Pn**	**07 20 45.5**	**+0.9**
KMSI	**Cibinong**	**3.63**	**71**	P	Pn	07 20 52.9	+5.7
BKB	**Balikpapan**	**3.70**	**260**	P	Pn	07 20 51.5	+3.3
KAPI	**Kappang**	**4.46**	**190**	P	**Pn**	**07 20 59.4**	**+0.7**
KAPI	**Kappang**	**4.46**	**190**	Pn	Pn	07 20 55.2	-3.5
	6.0nm,0.3s,baz=356,slow=8.5,SNR=20						
KAPI				Sn	**Sn**	**07 21 47.7**	**-1.7**
	8.2nm,0.3s,baz=184,slow=16,SNR=7.4						
BKSI	**Bulukumba**	**4.72**	**185**	P	**Pn**	**07 21 02.8**	**+0.6**
MNI	**Manado**	**4.75**	**65**	P	Pn	07 21 13.2	+11
KBKI	**Kotabaru**	**5.13**	**238**	P	**Pn**	**07 21 09.8**	**+1.9**
	139nm,0.8s,3µm0.6nm						
BBSI	**Bau Bau**	**5.27**	**157**	P	**Pn**	**07 21 11.2**	**+1.4**
	96nm,0.7s,2µm0.9nm						
BSSI	**Bau Bau, Buton**	**5.51**	**181**	P	**Pn**	**07 21 14.3**	**+1.1**
	100nm,0.6s,1µm0.4nm						
MTKI	**Muara Teweh, K**	**5.65**	**266**	P	Pn	07 21 19.3	+4.2
	220nm,0.4s						
MYLDM	**Lahad Datu**	**6.08**	**340**	P	Pn	07 21 27.5	+6.5
	451nm,0.8s,5µm						
BBKI	**Banjar Baru**	**6.37**	**243**	P	Pn	07 21 27.6	+2.7
	229nm,0.8s,3µm0.7nm						
LBMI	**Labuha**	**6.96**	**90**	P	**Pn**	**07 21 34.6**	**+1.6**
	166nm,0.9s,2µm						
NLAI	**Namlea**	**7.06**	**112**	P	Pn	07 21 37.7	+3.3
	140nm,0.7s,2µm						
KKM	**Kota Kinabalu**	**7.88**	**327**	P	Pn	07 21 51.9	+6.2
	36nm,0.9s,440nm						
AAI	**Ambon**	**8.24**	**112**	P	Pn	07 21 55.2	+4.5
	240nm,1.1s,2µm						
MSAI	**Masohi**	**8.82**	**108**	P	Pn	07 22 02.3	+3.7
PSI	**Prapat**	**21.87**	**279**	LR	LR	07 33 26.6	
	comp=Z,90nm,19.7s,baz=211,slow=37						
WRA	**Warramunga Arr**	**23.50**	**146**	P	**P**	**07 24 57.8**	**-2.7**
	3.7nm,0.9s,baz=330,slow=9.9,SNR=23						
ASAR	**Alice Springs**	**26.35**	**151**	P	**P**	**07 25 23.7**	**-2.8**
	0.6nm,0.6s,baz=343,slow=16,SNR=13						
ASAR				PcP	**PcP**	**07 28 50.0**	**-2.0**
	1.0nm,0.6s,baz=328,slow=2.0,SNR=8.3						
ASAR				LR	LR	07 38 12.6	
	comp=Z,108nm,18.6s,baz=333,slow=42						
CMAR	**Chiang Mai Arr**	**28.44**	**313**	P	**P**	**07 25 46.4**	**+1.1**
	3.0nm,0.6s,baz=138,slow=6.9,SNR=15						
CMAR				LR	LR	07 38 54.5	
	comp=Z,22nm,19.6s,baz=155,slow=40						
STKA	**Stephens Creek**	**36.94**	**149**	P	P	07 26 56.7	-2.6
	2.8nm,0.8s,baz=312,slow=9.0,SNR=6.3						
STKA				LR	LR	07 42 17.8	
	comp=Z,80nm,21.0s,baz=213,slow=37						
KSRS	**Korea Array**	**38.47**	**9**	P	**P**	**07 27 12.7**	**+0.6**
	2.3nm,0.6s,baz=186,slow=9.5,SNR=16						
MJAR	**Matsushiro Arr**	**40.43**	**22**	P	P	07 27 26.2	-2.3
	0.9nm,0.7s,baz=198,slow=8.6,SNR=5.2						
ODAN	**Odare**	**41.99**	**313**	*e*P	**P**	**07 27 42.8**	**+1.0**
	15nm,0.9s						
TAPN	**Taplejung**	**42.04**	**314**	*e*P	**P**	**07 27 43.2**	**+0.9**
	12nm,0.5s						
RAMN	**Ramite**	**42.62**	**313**	*e*P	**P**	**07 27 48.1**	**+1.2**
	33nm,0.9s						
GUN	**Gumba**	**43.69**	**313**	*e*P	**P**	**07 27 56.5**	**+0.8**
	50nm,0.8s						
PKI	**Pulchoki**	**43.84**	**312**	*e*P	**P**	**07 27 57.4**	**+0.5**
	13nm,0.8s						
PKIN	**Phulchoki**	**43.85**	**312**	*e*P	**P**	**07 27 57.5**	**+0.6**
	7.7nm,0.6s						
KOLN	**Koldanda**	**45.30**	**311**	*e*P	**P**	**07 28 09.2**	**+0.8**
	11nm,0.6s						
DANN	**Dangsing**	**45.49**	**312**	*e*P	**P**	**07 28 10.5**	**+0.5**
	21nm,0.7s						
USRK	**Ussurisyk Arra**	**45.75**	**12**	P	**P**	**07 28 10.5**	**-0.9**
	1.9nm,0.5s,baz=191,slow=7.5,SNR=10						
ASAJ	**Asahikawa**	**48.67**	**21**	P	**P**	**07 28 33.6**	**-0.6**
	7.8nm,0.6s,baz=244,slow=16,SNR=9.8						
SONM	**Songino Array**	**49.78**	**348**	P	**P**	**07 28 43.0**	**+0.2**
	2.2nm,0.6s,baz=166,slow=8.6,SNR=8.5						
MKAR	**Makanchi Array**	**57.85**	**330**	P	**P**	**07 29 41.9**	**+0.1**
	3.3nm,0.7s,baz=128,slow=8.1,SNR=49						
AAK	**Ala-Archa**	**59.65**	**322**	P	**P**	**07 29 53.7**	**-0.8**
	1.5nm,0.4s,baz=173,slow=6.4,SNR=3.8						
AAK				LR	LR	07 56 04.4	
	comp=Z,35nm,21.5s,baz=45,slow=36						
PETK	**Petropavlovsk-**	**61.82**	**24**	P	**P**	**07 30 07.4**	**-1.4**
	0.7nm,0.3s,baz=282,slow=8.2,SNR=4.5						
ZALV	**Zalesovo Beam**	**61.86**	**337**	P	**P**	**07 30 07.8**	**-1.3**
	2.6nm,0.8s,baz=123,slow=5.5,SNR=8.8						
BVAR	**Borovoye Array**	**67.74**	**330**	P	**P**	**07 30 46.3**	**-1.2**
	1.7nm,0.6s,baz=146,slow=11,SNR=9.8						
AKTO	**Aktyubinsk**	**73.31**	**324**	P	**P**	**07 31 20.2**	**-1.3**
	1.9nm,0.6s,baz=91,slow=4.6,SNR=8.1						
VNDA	**Vanda**	**80.02**	**172**	P	**P**	**07 31 57.6**	**-1.3**
	0.7nm,0.6s,baz=321,slow=6.7,SNR=7.2						

IDC ***21*** *07:55:09.2±1.6,38.83N×71.82E,h0km,mb3.6/2, mb1 3.7/8,mb1mx3.4/33,mbtmp3.6/8,ML3.5/6,Error ellipse: s-maj=23.3km s-min=15.5km az=138.0*
ISCJB ***21*** *07:55:11.0±1.1,39.09N±0.08×71.16E±0.06,h10km, mb3.5/2,Error ellipse: s-maj=11.5km s-min=7.1km az=9.3*
NNC ***21*** *07:55:14.6±1.6,39.31N×71.44E,h0km,mb3.9,mpv3.6, Error ellipse: s-maj=12.0km s-min=7.2km az=10.0*

ISC 21 07:55:13.4±1.5,39.1N±0.1×71.33E±0.07,h10km,n27, σ1§64/35,6C-9D,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**3.50**	**30**	P	**Pn**	**07 56 09.8**	**+1.5**
	SNR=37						
UCH	**Uchtor**	**3.93**	**37**	P	**Pn**	**07 56 16.4**	**+2.2**
	SNR=6.3						
EKS2	**Erkin-Say**	**3.99**	**27**	P	**Pn**	**07 56 17.0**	**+2.2**
	SNR=42						
KK31	**Karatay Array**	**4.03**	**351**	Pn	Pn	07 56 15.8	+0.6
	3.2nm,0.3s,baz=169,slow=12,SNR=127						
KK31				⇑Pg	**Pb**	**07 56 25.6**	**+1.1**
	5.4nm,0.4s,baz=170,slow=15,SNR=6						
KK31				⇓Sn	**Sn**	**07 57 02.9**	**+0.5**
	22nm,0.6s,baz=172,slow=25,SNR=7.4						
KK31				⇓Lg	Lg	07 57 18.1	
	44nm,0.7s,baz=159,slow=30,SNR=4.4						
KZA	**Kyzart**	**4.20**	**44**	P	**Pn**	**07 56 18.1**	**+0.3**
	SNR=72						
AAK	**Ala-Archa**	**4.25**	**33**	P	**Pn**	**07 56 20.0**	**+1.7**
	SNR=23						
AAK	**Ala-Archa**	**4.25**	**33**	Pn	**Pn**	**07 56 19.9**	**+1.7**
	10nm,0.3s,baz=210,slow=3.1,SNR=35						
AAK				Sn	**Sn**	**07 57 11.3**	**+3.3**
	3.2nm,0.3s,baz=356,slow=22,SNR=3.5						
KBK	**Karagaybulak**	**4.47**	**37**	P	**Pn**	**07 56 22.9**	**+1.6**
	SNR=21						
CHMS	**Chumysh**	**4.66**	**33**	P	**Pn**	**07 56 25.1**	**+1.3**
	SNR=35						
USP	**Ospenovka**	**4.78**	**29**	P	**Pn**	**07 56 26.6**	**+1.1**
	SNR=20						
ULHL	**Ulahol**	**4.87**	**49**	P	**Pn**	**07 56 26.8**	**0.0**
	SNR=11						
TKM2	**Tokmak 2**	**4.98**	**39**	⇑Pn	**Pn**	**07 56 28.4**	**0.0**
	11nm,0.8s						
TKM2				⇑Pg	**Pb**	**07 56 42.5**	**+1.7**
	11nm,0.7s						
TKM2				⇓Sn	**Sn**	**07 57 24.9**	**-1.3**
	23nm,0.8s						
TKM2				⇑Lg	Lg	07 57 44.8	
	12nm,0.6s						
TKM2	**Tokmak 2**	**4.98**	**39**	P	**Pn**	**07 56 29.2**	**+0.8**
	SNR=14						
MK31	**Makanchi Array**	**11.09**	**43**	⇑Pn	**Pn**	**07 57 51.9**	**-0.1**
	0.6nm,0.7s,baz=232,slow=12,SNR=10.0						
MK31				⇓Lg	Lg	08 01 00.6	
	1.8nm,0.9s						
MKAR	**Makanchi Array**	**11.09**	**43**	Pn	**Pn**	**07 57 52.1**	**0.0**
	0.1nm,0.3s,baz=234,slow=14,SNR=12						
KURBB	**Kurchatov Arra**	**12.57**	**22**	⇓Lg	Lg	08 01 48.6	
	11nm,0.9s						
KURBB	**Kurchatov Arra**	**12.57**	**22**	Pn	**Pn**	**07 58 09.3**	**-2.9**
	0.0nm,0.3s,baz=210,slow=12,SNR=5.6						
KURBB				Lg	Lg	08 01 40.2	
	0.0nm,0.3s,baz=182,slow=32,SNR=4.8						
KURK	**Kurchatov**	**12.68**	**22**	Lg	Lg	08 01 50.9	
	9.0nm,1.3s						
AB31	**Akbulak array**	**13.00**	**325**	Pn	**Pn**	**07 58 18.2**	**+0.1**
	1.0nm,0.5s,baz=141,slow=13,SNR=29						
AB31				⇓Sn	**Sn**	**08 00 41.4**	**-1.3**
	4.9nm,0.8s,baz=128,slow=27,SNR=6.9						
VOSK	**Vostochnaya**	**13.61**	**359**	⇓Pn	**Pn**	**07 58 25.3**	**-1.1**
	1.7nm,0.8s						
VOSK				Lg	Lg	08 02 21.2	
	4.9nm,0.8s						
BVAR	**Borovoye Array**	**13.92**	**358**	Pn	**Pn**	**07 58 28.7**	**-2.0**
	0.2nm,0.3s,baz=163,slow=15,SNR=3.5						
BVAR				Sn	**Sn**	**08 01 01.9**	**-3.3**
	0.5nm,0.3s,baz=153,slow=26,SNR=5.3						
ZRNK	**Zerenda**	**13.93**	**354**	⇓Pn	**Pn**	**07 58 29.8**	**-0.9**
	1.0nm,0.7s						
ZRNK				⇓Sn	**Sn**	**08 01 01.8**	**-3.5**
	2.1nm,1.1s						
ZRNK				Lg	Lg	08 02 32.2	
	5.6nm,1.1s						
AKTO	**Aktyubinsk**	**14.72**	**325**	⇑Pn	**Pn**	**07 58 41.3**	**-0.2**
	4.6nm,0.7s						
AKTO				Sn	**Sn**	**08 01 23.8**	**-0.8**
	8.9nm,1.4s						
AKTO	**Aktyubinsk**	**14.72**	**325**	Pn	**Pn**	**07 58 43.5**	**+2.0**
	0.1nm,0.3s,baz=124,slow=19,SNR=4.4						
AKTO				Sn	**Sn**	**08 01 24.7**	**+0.1**
	0.2nm,0.3s,baz=34,slow=20,SNR=3.8						
ZALV	**Zalesovo Beam**	**17.45**	**27**	P	**Pn**	**07 59 16.2**	**-0.4**
	0.4nm,0.3s,baz=210,slow=11,SNR=8.7						
TORD	**Torodi Ar. Bea**	**66.07**	**268**	P	**P**	**08 05 59.9**	**-0.9**
	0.3nm,0.7s,baz=46,slow=6.2,SNR=2.4						
YKA	**Yellowknife Ar**	**78.62**	**3**	P	**P**	**08 07 13.9**	**-1.1**
	0.5nm,0.7s,baz=352,slow=5.7,SNR=10						

IGQ 21 08:28:07.3,2.67S×78.53W,h12km±17km,Mb4.1,Ms3.9, 8C-15D,Error ellipse: s-maj=3.5km s-min=0.9km az=3.0, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MACE	**Macas**	**0.53**	**39**	⇓P	Pg	08 28 17.2	-0.7
RIOE	**Riobamba**	**0.91**	**354**	⇓P	Pg	08 28 25.0	-0.5
ARRY	**Arrayan**	**1.16**	**4**	S	Sb	08 28 44.8	-0.2
ARRY	**Arrayan**	**1.16**	**4**	P	Pb	08 28 29.2	-0.5
PAT1	**Patacocha**	**1.16**	**5**	S	Sb	08 28 45.2	-0.2
PAT1	**Patacocha**	**1.16**	**5**	P	Pb	08 28 29.0	-0.9
BMAS	**Trigal station**	**1.16**	**2**	P	Pb	08 28 29.6	-0.3
BMAS	**Trigal station**	**1.16**	**2**	S	Sg	08 28 45.6	0.0
BPAT	**Tungurahua Vol**	**1.16**	**5**	⇓P	Pb	08 28 29.1	-0.8
BPAT	**Tungurahua Vol**	**1.16**	**5**	⇓S	Sb	08 28 45.4	-0.1
IGUA	**Igualata**	**1.17**	**355**	⇓S	Sb	08 28 46.0	0.0
IGUA	**Igualata**	**1.17**	**355**	⇓P	Pb	08 28 30.1	-0.3
BIL2	**Estacion Bilba**	**1.20**	**1**	P	Pg	08 28 30.8	-0.1
BBIL	**Ulba Tungurahu**	**1.21**	**2**	S	Sg	08 28 47.1	-0.1
BBIL	**Ulba Tungurahu**	**1.21**	**2**	P	Pb	08 28 30.6	0.0
RETU	**Refugio**	**1.21**	**4**	P	Pn	08 28 30.2	-0.6
BULB	**Ulba Tungurahu**	**1.

LMEL					AML	AML	08 32 01.8		
	comp=N,250nm,0.2s								
CACH	**El Canelo**	**3.11**	**168**	*i* P		Pn	08 31 22.8	+1.1	

*ISCJB **21** 08:38:48.6±0.5, 37.89N±0.03×27.54E±0.04, h2km±7km, Error ellipse: s-maj=5.5km s-min=4.2km az=154.0*
*DDA **21** 08:38:48.9, 37.85N×27.53E, h7km, MD2.8*
*ISK **21** 08:38:48.3, 37.90N×27.58E, h8km, MD2.9*
*CSEM **21** 08:38:48.9±0.1, 37.88N×27.56E, h8km, MD2.8, Error ellipse: s-maj=3.6km s-min=2.7km az=86.0*

ISC 21 08:38:48.9±1.0, **37.88N**±0.02×**27.55E**±0.02, **h6**km±9km, **n28**, σ0**52**/**44**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcami?**	**0.31**	**234**	*i* P	**Pg**	**08 38 54.2**	**-0.7**
GCAM				*i* S	**Sg**	**08 38 58.6**	**-0.4**
GCAM	**G?zelcami?**	**0.31**	**234**	*i* P	**Pg**	**08 38 54.2**	**-0.7**
GCAM				*i* S	**Sg**	**08 38 58.6**	**-0.4**
AYDN	**Tasoluk**	**0.34**	**130**	*i* P	**Pg**	**08 38 56.0**	**+0.4**
AYDN				*i* S	**Sg**	**08 39 00.3**	**+0.1**
AYDN	**Tasoluk**	**0.34**	**130**	*i* P	**Pg**	**08 38 56.0**	**+0.4**
AYDN				*i* S	**Sg**	**08 39 00.3**	**+0.1**
IZM	**Izmir**	**0.56**	**337**	*e*PG	**Pg**	**08 38 59.6**	**-0.1**
IZM	**Izmir**	**0.56**	**337**	*e*Pg	**Pg**	**08 38 59.7**	**-0.1**
MLSB	**Milas**	**0.61**	**163**	*e*PG	**Pg**	**08 39 00.6**	**-0.1**
MLSB				*e*SG	**Sb**	**08 39 10.2**	**-0.8**
MLSB	**Milas**	**0.61**	**163**	*e*Pg	**Pg**	**08 39 00.6**	**-0.1**
MLSB				*e*Sg	**Sb**	**08 39 10.2**	**-0.8**
BLCB	**Balcova**	**0.64**	**322**	*e*PG	**Pg**	**08 39 01.4**	**+0.2**
BLCB				*e*SG	**Sg**	**08 39 10.5**	**+0.9**
BLCB	**Balcova**	**0.64**	**322**	*e*Pg	**Pg**	**08 39 01.4**	**+0.2**
BLCB				*e*Sg	**Sg**	**08 39 10.5**	**+0.9**
BODT	**Bodrum**	**0.84**	**193**	*e*PG	**Pg**	**08 39 05.4**	**+0.4**
BODT				*e*SG	**Sb**	**08 39 17.8**	**+0.3**
BODT	**Bodrum**	**0.84**	**193**	*e*Pg	**Pg**	**08 39 05.4**	**+0.4**
BODT				*e*Sg	**Sb**	**08 39 17.8**	**+0.3**
YER	**Yerkesik**	**0.95**	**142**	*e*PG	**Pg**	**08 39 06.8**	**-0.3**
YER	**Yerkesik**	**0.95**	**142**	*e*Pg	**Pg**	**08 39 06.8**	**-0.3**
MANT	**Manisa**	**1.00**	**52**	*i* P	**Pg**	**08 39 08.2**	**+0.1**
MANT				*i* S	**Sg**	**08 39 20.3**	**-0.9**
MANT	**Manisa**	**1.00**	**52**	*i* P	**Pg**	**08 39 08.2**	**+0.1**
MANT				*i* S	**Sg**	**08 39 20.3**	**-0.9**
AKHS	**Akhisar**	**1.02**	**12**	*i* P	**Pb**	**08 39 09.2**	**+0.2**
AKHS				*i* S	**Sn**	**08 39 23.9**	**-0.5**
AKHS	**Akhisar**	**1.02**	**12**	*i* P	**Pb**	**08 39 09.2**	**+0.2**
KULA	**Kula-Manisa**	**1.08**	**54**	*e*PG	**Pg**	**08 39 08.9**	**-0.7**
KULA	**Kula-Manisa**	**1.08**	**54**	*e*Pg	**Pg**	**08 39 09.0**	**-0.7**
DAT	**Datca**	**1.15**	**179**	*e*PN	**Pg**	**08 39 10.7**	**-0.3**
DAT	**Datca**	**1.15**	**179**	*e*Pn	**Pg**	**08 39 10.7**	**-0.3**
DNZL	**Cakiroluk**	**1.20**	**99**	*i* P	**Pg**	**08 39 12.2**	**+0.2**
DNZL				*i* S	**Sn**	**08 39 30.4**	**+1.2**
DNZL	**Cakiroluk**	**1.20**	**99**	*i* P	**Pg**	**08 39 12.2**	**+0.2**
APE	**Apeiranthos**	**1.80**	**244**	*e*PN	**Pn**	**08 39 20.8**	**+0.2**
APE	**Apeiranthos**	**1.80**	**244**	*e*Pn	**Pn**	**08 39 20.8**	**+0.2**
BALY	**Balya**	**1.86**	**2**	*i* P	**Pn**	**08 39 21.6**	**+0.3**
BALY				*i* S	**Sn**	**08 39 44.4**	**-0.7**
BALY	**Balya**	**1.86**	**2**	*i* P	**Pn**	**08 39 21.6**	**+0.3**
BALY				*i* S	**Sn**	**08 39 44.4**	**-0.7**

*ISK **21** 08:42:49.7, 37.90N×27.53E, h10km, MD2.8*
*ISCJB **21** 08:42:50.0±0.6, 37.88N±0.03×27.51E±0.04, h4km±7km, Error ellipse: s-maj=6.3km s-min=4.5km az=151.8*
*DDA **21** 08:42:50.3, 37.87N×27.51E, h7km, MD2.5*
*CSEM **21** 08:42:50.2±0.2, 37.88N×27.52E, h10km, MD2.5, Error ellipse: s-maj=4.4km s-min=3.1km az=77.0*

ISC 21 08:42:50.2±1.1, **37.88N**±0.02×**27.52E**±0.03, **h5**km±10km, **n28**, σ0**47**/**39**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcami?**	**0.28**	**232**	*i* P	**Pg**	**08 42 55.6**	**-0.1**
GCAM				*i* S	**Sg**	**08 42 59.7**	**+0.2**
GCAM	**G?zelcami?**	**0.28**	**232**	*i* P	**Pg**	**08 42 55.6**	**-0.1**
GCAM				*i* S	**Sg**	**08 42 59.7**	**+0.2**
AYDN	**Tasoluk**	**0.36**	**127**	*i* P	**Pg**	**08 42 57.3**	**+0.2**
AYDN				*i* S	**Sg**	**08 43 01.4**	**-0.5**
AYDN	**Tasoluk**	**0.36**	**127**	*i* P	**Pg**	**08 42 57.3**	**+0.2**
AYDN				*i* S	**Sg**	**08 43 01.4**	**-0.5**
IZM	**Izmir**	**0.56**	**339**	*e*PG	**Pg**	**08 43 00.8**	**-0.2**
IZM	**Izmir**	**0.56**	**339**	*e*Pg	**Pg**	**08 43 00.8**	**-0.2**
MLSB	**Milas**	**0.61**	**160**	*e*PG	**Pg**	**08 43 02.7**	**+0.7**
MLSB	**Milas**	**0.61**	**160**	*e*Pg	**Pg**	**08 43 02.7**	**+0.7**
BLCB	**Balcova**	**0.63**	**324**	*e*PG	**Pg**	**08 43 02.7**	**+0.3**
BLCB				*e*SG	**Sg**	**08 43 11.0**	**+0.4**
BLCB	**Balcova**	**0.63**	**324**	*e*Pg	**Pg**	**08 43 02.7**	**+0.3**
BLCB				*e*Sg	**Sg**	**08 43 11.0**	**+0.4**
BODT	**Bodrum**	**0.83**	**192**	*e*PG	**Pb**	**08 43 07.0**	**0.0**
BODT				*e*SG	**Sb**	**08 43 18.3**	**-0.2**
BODT	**Bodrum**	**0.83**	**192**	*e*Pg	**Pb**	**08 43 07.0**	**0.0**
BODT				*e*Sg	**Sb**	**08 43 18.3**	**-0.2**
YER	**Yerkesik**	**0.96**	**140**	*e*PG	**Pg**	**08 43 08.6**	**0.0**
YER	**Yerkesik**	**0.96**	**140**	*e*Pg	**Pg**	**08 43 08.6**	**0.0**
AKHS	**Akhisar**	**1.03**	**13**	*i* P	**Pg**	**08 43 10.4**	**+0.4**
AKHS				*i* S	**Sb**	**08 43 24.9**	**+0.6**
AKHS	**Akhisar**	**1.03**	**13**	*i* P	**Pg**	**08 43 10.4**	**+0.4**
AKHS				*i* S	**Sb**	**08 43 24.9**	**+0.6**
KULA	**Kula-Manisa**	**1.10**	**54**	*e*PN	**Pg**	**08 43 10.5**	**-0.9**
KULA	**Kula-Manisa**	**1.10**	**54**	*e*Pn	**Pg**	**08 43 10.5**	**-0.9**
DAT	**Datca**	**1.15**	**178**	*e*PN	**Pg**	**08 43 12.1**	**-0.1**
DAT	**Datca**	**1.15**	**178**	*e*Pn	**Pg**	**08 43 12.1**	**-0.1**
DNZL	**Cakiroluk**	**1.23**	**98**	*i* P	**Pg**	**08 43 14.2**	**+0.5**
DNZL				*i* S	**Sn**	**08 43 32.5**	**+1.3**
DNZL	**Cakiroluk**	**1.23**	**98**	*i* P	**Pg**	**08 43 14.2**	**+0.5**
KHL	**Karahalli**	**1.65**	**74**	*e*PN	**Pn**	**08 43 19.5**	**-0.3**
KHL	**Karahalli**	**1.65**	**74**	*e*Pn	**Pn**	**08 43 19.5**	**-0.3**
APE	**Apeiranthos**	**1.77**	**244**	*e*PN	**Pn**	**08 43 21.1**	**-0.5**
APE	**Apeiranthos**	**1.77**	**244**	*e*Pn	**Pn**	**08 43 21.1**	**-0.5**
BALY	**Balya**	**1.86**	**2**	*i* S	**Sn**	**08 43 46.4**	**-0.4**
BALY	**Balya**	**1.86**	**2**	*i* S	**Sn**	**08 43 46.4**	**-0.4**

IDC 21 08:43:11.2±3.5, **4.92S**×**140.08E**, **h0**km, **mb3.4**/**1**, **mb1 3.8**/**3**, **mb1mx3.4**/**16**, **mbtmp3.5**/**3**, **ML3.6**/**2**, **Error ellipse: s-maj=118.0km s-min=34.4km az=88.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**15.94**	**200**	Pn	Pn	08 46 56.2	-0.9
	0.2nm,0.3s,baz=23,slow=12,SNR=6.8						
WRA				Sn	Sn	08 49 48.9	-5.8
	0.0nm,0.3s,baz=14,slow=23,SNR=2.2						
ASAR	**Alice Springs**	**19.57**	**197**	P	P	08 47 41.2	+0.3
	0.4nm,0.3s,baz=28,slow=9.4,SNR=33						
MKAR	**Makanchi Array**	**72.36**	**322**	P	P	08 54 39.2	+0.1
	0.2nm,0.6s,baz=109,slow=6.0,SNR=3.7						

DDA 21 08:56:02.3, 38.44N×38.29E, h7km**, MD2.5, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKCD	**Akcadag**	**0.32**	**243**	*i* P	Pg	08 56 08.8	0.0
AKCD				*i* S	Sg	08 56 14.0	+0.7
ELZG	**Elazig**	**0.55**	**84**	*i* P	Pg	08 56 13.3	+0.1
ELZG				*i* S	Sg	08 56 21.2	+0.7

*ISCJB **21** 09:14:26.5±0.5, 39.10N±0.03×27.58E±0.05, h10km±6km, Error ellipse: s-maj=6.0km s-min=4.5km az=177.8*
*ISK **21** 09:14:26.2, 39.09N×27.59E, h14km, MD2.9*
*DDA **21** 09:14:26.6, 39.09N×27.60E, h7km, MD2.8*
*CSEM **21** 09:14:26.8±0.1, 39.08N×27.60E, h15km, MD2.8, Error ellipse: s-maj=2.7km s-min=1.8km az=85.0*

ISC 21 09:14:26.8±1.2, **39.09N**±0.02×**27.60E**±0.03, **h13**km±10km, **n46**, σ0**34**/**56**, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.27**	**142**	*i* P	**Pg**	**09 14 32.6**	**+0.2**
AKHS				*i* S	**Sb**	**09 14 37.5**	**-0.4**
AKHS	**Akhisar**	**0.27**	**142**	*i* P	**Pg**	**09 14 32.6**	**+0.2**
AKHS				*i* S	**Sb**	**09 14 37.5**	**-0.4**
BALB	**Balikesir**	**0.59**	**21**	*e*PG	**Pg**	**09 14 38.1**	**-0.2**
BALB	**Balikesir**	**0.59**	**21**	*e*Pg	**Pg**	**09 14 38.1**	**-0.2**
BALY	**Balya**	**0.65**	**1**	*i* P	**Pg**	**09 14 39.1**	**-0.4**
BALY				*i* S	**Sb**	**09 14 49.9**	**+1.0**
BALY	**Balya**	**0.65**	**1**	*i* P	**Pg**	**09 14 39.1**	**-0.4**
BALY				*i* S	**Sb**	**09 14 49.9**	**+1.0**
IZM	**Izmir**	**0.74**	**201**	*e*PG	**Pg**	**09 14 40.6**	**-0.6**
IZM	**Izmir**	**0.74**	**201**	*e*Pg	**Pg**	**09 14 40.6**	**-0.6**
BLCB	**Balcova**	**0.83**	**212**	*e*PG	**Pg**	**09 14 42.7**	**-0.2**
BLCB				*e*SG	**Sb**	**09 14 54.6**	**+0.5**
BLCB	**Balcova**	**0.83**	**212**	*e*Pg	**Pg**	**09 14 42.7**	**-0.2**
BLCB				*e*Sg	**Sb**	**09 14 54.6**	**+0.5**
DEMI	**Demirci**	**0.87**	**93**	*i* P	**Pb**	**09 14 43.9**	**+0.2**
DEMI	**Demirci**	**0.87**	**93**	*i* P	**Pb**	**09 14 43.9**	**+0.2**
MANT	**Manisa**	**0.96**	**128**	*i* P	**Pb**	**09 14 45.2**	**-0.1**
MANT	**Manisa**	**0.96**	**128**	*i* P	**Pb**	**09 14 45.2**	**-0.1**
GONE	**Gonen-Balikesi**	**0.96**	**4**	*e*PG	**Pb**	**09 14 44.9**	**-0.3**
GONE				*e*SG	**Sn**	**09 14 59.1**	**-0.3**
GONE	**Gonen-Balikesi**	**0.96**	**4**	*e*Pg	**Pb**	**09 14 44.9**	**-0.3**
GONE				*e*Sg	**Sn**	**09 14 59.1**	**-0.3**
KULA	**Kula-Manisa**	**1.01**	**125**	*e*PG	**Pb**	**09 14 46.0**	**-0.1**
KULA				*e*SG	**Sn**	**09 15 00.9**	**+0.2**
KULA	**Kula-Manisa**	**1.01**	**125**	*e*Pg	**Pb**	**09 14 46.0**	**-0.1**
KULA				*e*Sg	**Sn**	**09 15 00.9**	**+0.2**
URLA	**Izmir**	**1.07**	**228**	*i* P	**Pb**	**09 14 47.3**	**+0.1**
URLA	**Izmir**	**1.07**	**228**	*i* P	**Pb**	**09 14 47.3**	**+0.1**
EZN	**Ezine**	**1.23**	**307**	*e*PN	**Pn**	**09 14 49.6**	**0.0**
EZN	**Ezine**	**1.23**	**307**	*e*Pn	**Pn**	**09 14 49.6**	**0.0**
BNT	**Bandirma**	**1.29**	**11**	*e*PN	**Pn**	**09 14 50.6**	**+0.1**
BNT	**Bandirma**	**1.29**	**11**	*e*Pn	**Pn**	**09 14 50.6**	**+0.1**
KCTX	**Karacabey (Bur**	**1.31**	**26**	*e*PN	**Pn**	**09 14 50.6**	**-0.1**
KCTX	**Karacabey (Bur**	**1.31**	**26**	*e*Pn	**Pn**	**09 14 50.6**	**-0.1**
KRBG	**Karabiga-Canak**	**1.32**	**350**	*e*PN	**Pn**	**09 14 50.7**	**-0.2**
KRBG	**Karabiga-Canak**	**1.32**	**350**	*e*Pn	**Pn**	**09 14 50.7**	**-0.2**
ORLT	**Orhaneli**	**1.38**	**46**	*e*PN	**Pn**	**09 14 51.6**	**-0.2**
ORLT	**Orhaneli**	**1.38**	**46**	*e*Pn	**Pn**	**09 14 51.6**	**-0.2**
LPK	**Lapseki**	**1.44**	**333**	*e*PN	**Pn**	**09 14 52.7**	**+0.3**
LPK	**Lapseki**	**1.44**	**333**	*e*Pn	**Pn**	**09 14 52.7**	**+0.3**
AYDN	**Tasoluk**	**1.44**	**171**	*i* P	**Pn**	**09 14 52.7**	**+0.1**
AYDN				*i* S	Sn	09 14 58.4	-13
AYDN	**Tasoluk**	**1.44**	**171**	*i* P	**Pn**	**09 14 52.7**	**+0.1**
TVSB	**Tavsanli**	**1.49**	**75**	*e*PN	**Pn**	**09 14 52.9**	**-0.3**
TVSB	**Tavsanli**	**1.49**	**75**	*e*Pn	**Pn**	**09 14 52.9**	**-0.3**
GELI	**Tayfur-Gelibol**	**1.57**	**327**	*e*PN	**Pn**	**09 14 54.1**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.57**	**327**	*e*Pn	**Pn**	**09 14 54.1**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.63**	**349**	*e*PN	**Pn**	**09 14 54.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.63**	**349**	*e*Pn	**Pn**	**09 14 54.9**	**-0.2**
MFT	**Murefte**	**1.71**	**352**	*e*PN	**Pn**	**09 14 56.3**	**-0.1**
MFT	**Murefte**	**1.71**	**352**	*e*Pn	**Pn**	**09 14 56.3**	**-0.1**
ARMT	**Armutlu**	**1.76**	**33**	*e*PN	**Pn**	**09 14 57.6**	**+0.6**
ARMT	**Armutlu**	**1.76**	**33**	*e*Pn	**Pn**	**09 14 57.6**	**+0.6**
ENEZ	**Enez**	**1.99**	**326**	*e*PN	**Pn**	**09 15 00.1**	**+0.1**
ENEZ	**Enez**	**1.99**	**326**	*e*Pn	**Pn**	**09 15 00.1**	**+0.1**

*ISCJB **21** 09:35:32.2±0.7, 37.70N±0.03×26.88E±0.05, h13km±5km, Error ellipse: s-maj=7.1km s-min=4.9km az=160.2*
*ISK **21** 09:35:32.0, 37.71N×26.89E, h18km, MD2.8*
*DDA **21** 09:35:32.2, 37.69N×26.89E, h7km, MD2.9*
*CSEM **21** 09:35:32.3±0.1, 37.71N×26.90E, h15km, MD2.9, Error ellipse: s-maj=3.6km s-min=2.4km az=68.0*

ISC 21 09:35:32.3±1.3, **37.70N**±0.03×**26.89E**±0.03, **h14**km±11km, **n24**, σ0**41**/**36**, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcami?**	**0.27**	**90**	*i* P	**Pg**	**09 35 38.1**	**+0.1**
GCAM				*i* S	**Sb**	**09 35 43.0**	**-0.5**
GCAM	**G?zelcami?**	**0.27**	**90**	*i* P	**Pg**	**09 35 38.1**	**+0.1**
GCAM				*i* S	**Sb**	**09 35 43.0**	**-0.5**
BLCB	**Balcova**	**0.69**	**10**	*e*PG	**Pg**	**09 35 45.4**	**-0.4**
BLCB				*e*SG	**Sb**	**09 35 56.4**	**+0.8**
BLCB	**Balcova**	**0.69**	**10**	*e*Pg	**Pg**	**09 35 45.4**	**-0.4**
BLCB				*e*Sg	**Sb**	**09 35 56.4**	**+0.8**
URLA	**Izmir**	**0.70**	**341**	*i* P	**Pg**	**09 35 45.6**	**-0.3**
URLA				*i* S	**Sb**	**09 35 56.5**	**+0.7**
URLA	**Izmir**	**0.70**	**341**	*i* P	**Pg**	**09 35 45.6**	**-0.3**
URLA				*i* S	**Sb**	**09 35 56.5**	**+0.7**
BODT	**Bodrum**	**0.72**	**152**	*e*PG	**Pb**	**09 35 47.0**	**+0.4**
BODT				*e*SG	**Sb**	**09 35 57.2**	**+0.8**
BODT	**Bodrum**	**0.72**	**152**	*e*Pg	**Pb**	**09 35 47.0**	**+0.4**
BODT				*e*Sg	**Sb**	**09 35 57.2**	**+0.8**
IZM	**Izmir**	**0.76**	**23**	*e*PG	**Pg**	**09 35 46.8**	**-0.2**
IZM	**Izmir**	**0.76**	**23**	*e*Pg	**Pg**	**09 35 46.8**	**-0.2**
AYDN	**Tasoluk**	**0.79**	**93**	*i* P	**Pg**	**09 35 47.3**	**-0.3**
AYDN				*i* S	**Sb**	**09 35 58.4**	**0.0**
AYDN	**Tasoluk**	**0.79**	**93**	*i* P	**Pg**	**09 35 47.3**	**-0.3**
AYDN				*i* S	**Sb**	**09 35 58.4**	**0.0**
MLSB	**Milas**	**0.81**	**120**	*e*PG	**Pb**	**09 35 48.5**	**+0.3**
MLSB	**Milas**	**0.81**	**120**	*e*Pg	**Pb**	**09 35 48.5**	**+0.3**
DAT	**Datca**	**1.11**	**150**	*e*PN	**Pb**	**09 35 53.3**	**-0.1**
DAT	**Datca**	**1.11**	**150**	*e*Pn	**Pb**	**09 35 53.3**	**-0.1**
YER	**Yerkesik**	**1.25**	**117**	*e*PN	**Pn**	**09 35 55.1**	**-0.3**
YER	**Yerkesik**	**1.25**	**117**	*e*Pn	**Pn**	**09 35 55.1**	**-0.3**
APE	**Apeiranthos**	**1.25**	**240**	*e*PN	**Pb**	**09 35 55.5**	**-0.2**
APE				*e*SN	**Sn**	**09 36 12.2**	**0.0**
APE	**Apeiranthos**	**1.25**	**240**	*e*Pn	**Pb**	**09 35 55.5**	**-0.2**
APE				*e*Sn	**Sn**	**09 36 12.2**	**0.0**
KULA	**Kula-Manisa**	**1.62**	**59**	*e*PN	**Pn**	**09 36 00.4**	**-0.1**
KULA	**Kula-Manisa**	**1.62**	**59**	*e*Pn	**Pn**	**09 36 00.4**	**-0.1**
DALY	**Dalyan (Mu˘la**	**1.66**	**122**	*e*PN	**Pn**	**09 36 00.8**	**-0.2**
DALY	**Dalyan (Mu˘la**	**1.66**	**122**	*e*Pn	**Pn**	**09 36 00.8**	**-0.2**

IDC 21 09:48:38.8±1.5, **5.13S**×**152.41E**, **h84**km±10km, **mb3.6**/**6**, **mb1 3.8**/**7**, **mb1mx3.5**/**20**, **mbtmp3.6**/**7**, **Error ellipse: s-maj=56.2km s-min=17.4km az=133.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.72**	**230**	P	Pn	09 50 16.5	+1.6
	2.5nm,0.3s,baz=295,slow=6.1,SNR=8.7						
PMG				S	Sn	09 51 30.2	+0.2
	5.5nm,0.3s,baz=140,slow=19,SNR=8.8						
WRA	**Warramunga Arr**	**22.93**	**228**	P	P	09 53 36.0	-0.2
	1.4nm,0.4s,baz=53,slow=10.0,SNR=40						
WRA				pP	pP	09 53 53.5	+0.2
	0.8nm,0.6s,baz=52,slow=10.0,SNR=4.2						
WRA				sP	sP	09 54 04.1	+0.3
	0.7nm,0.8s,baz=53,slow=10,SNR=2.5						
ASAR	**Alice Springs**	**25.64**	**222**	P	P	09 54 01.4	+0.5
	0.4nm,0.5s,baz=55,slow=9.3,SNR=14						
ASAR				pP	pP	09 54 19.8	-0.3
	0.7nm,0.6s,baz=59,slow=8.5,SNR=4.5						
FITZ	**Fitzroy Crossi**	**29.16**	**242**	P	P	09 54 31.4	-1.0
	1.4nm,0.4s						
CMAR	**Chiang Mai Arr**	**57.66**	**295**	P	P	09 58 21.4	+0.4
	0.5nm,0.4s,baz=126,slow=6.1,SNR=4.3						
ILAR	**Eielson Array**	**82.61**	**22**	P	P	10 00 51.8	-0.7
	0.9nm,0.7s,baz=247,slow=5.5,SNR=11						
YKA	**Yellowknife Ar**	**95.90**	**28**	P	P	10 01 56.5	+0.5
	0.1nm,0.3s,baz=269,slow=4.3,SNR=3.8						
TORD	**Torodi Ar. Bea**	**150.04**	**287**	PKPbc	PKPbc	10 08 20.7	-0.1
	0.9nm,0.6s,baz=83,slow=2.2,SNR=12						
TORD				PKPab	PKPab	10 08 26.3	-0.6
	0.2nm,0.4s,baz=86,slow=3.5,SNR=5.5						

IDC 21 10:12:30.5±0.8, **32.24N**×**85.09E**, **h0**km, **mb3.5**/**10**, **mb1 3.7**/**13**, **mb1mx3.6**/**28**, **mbtmp3.5**/**13**, **ML3.4**/**3**, **Error ellipse: s-maj=28.9km s-min=17.2km az=56.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.69**	**352**	Pn	Pn	10 16 00.2	+0.6
	0.0nm,0.3s,baz=155,slow=10,SNR=2.5						
CMAR	**Chiang Mai Arr**	**18.55**	**134**	P	Pn	10 16 49.5	+0.6
	0.2nm,0.3s,baz=326,slow=13,SNR=5.3						
KURBB	**Kurchatov Arra**	**19.00**	**347**	P	P	10 16 53.7	+0.1
	0.0nm,0.3s,baz=164,slow=11,SNR=7.0						
ZALV	**Zalesovo Beam**	**21.70**	**360**	P	P	10 17 22.3	-0.6
	1.5nm,0.5s,baz=191,slow=7.2,SNR=6.5						
SONM	**Songino Array**	**22.44**	**40**	P	P	10 17 32.4	+1.3
	0.7nm,0.7s,baz=224,slow=8.3,SNR=5.1						
FINES	**FINESS Array B**	**47.53**	**326**	P	P	10 21 07.5	+0.2
	0.7nm,0.7s,baz=113,slow=14,SNR=3.1						
NB2	**NORSAR Subarra**	**54.67**	**325**	P	P	10 22 01.5	+0.5
	comp=Z,0.6nm,0.7s,baz=86,slow=7.4						
NOA	**NORSAR Array B**	**54.67**	**325**	P	P	10 22 01.1	0.0
	comp=Z,1.0nm,0.8s,baz=86,slow=7.1,SNR=4.5						
GERES	**GERESS Array B**	**54.74**	**310**	P	P	10 22 02.7	+0.8
	comp=Z,0.4nm,0.6s,baz=69,slow=5.4,SNR=4.5						
WRA	**Warramunga Arr**	**70.10**	**131**	P	P	10 23 44.8	0.0
	comp=Z,0.4nm,0.7s,baz=326,slow=6.5,SNR=7.0						
ASAR	**Alice Springs**	**72.56**	**134**	P	P	10 23 59.9	+0.2
	comp=Z,0.3nm,0.6s,baz=315,slow=6.1,SNR=8.3						
ILAR	**Eielson Array**	**75.17**	**20**	P	P	10 24 14.0	-0.4
	comp=Z,0.3nm,0.7s,baz=321,slow=5.1,SNR=3.8						
TORD	**Torodi Ar. Bea**	**77.59**	**278**	P	P	10 24 28.8	-0.2
	comp=Z,0.5nm,0.8s,baz=51,slow=4.7,SNR=4.6						
YKA	**Yellowknife Ar**	**84.27**	**9**	P	P	10 25 01.8	-2.0
	comp=Z,0.1nm,0.3s,baz=336,slow=4.3,SNR=3.9						

IDC 21 10:13:54.5±2.9, **4.85S**×**153.79E**, **h0**km, **mb4.0**/**2**, **mb1 4.2**/**3**, **mb1mx3.6**/**19**, **mbtmp4.0**/**3**, **ML2.8**/**1**, **Error ellipse: s-maj=117.1km s-min=36.0km az=122.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.98**	**235**	Pn	Pn	10 15 53.8	+1.9
	0.7nm,0.3s,baz=356,slow=14,SNR=2.8						
PMG				Sn	Sn	10 17 19.8	-3.2
	0.7nm,0.3s,baz=271,slow=18,SNR=2.1						
WRA	**Warramunga Arr**	**24.16**	**230**	P	P	10 19 11.9	-0.8
	4.7nm,0.5s,baz=53,slow=9.8,SNR=88						
ASAR	**Alice Springs**	**26.79**	**224**	P	P	10 19 36.6	+0.1
	0.6nm,0.5s,baz=55,slow=9.1,SNR=26						
TORD	**Torodi Ar. Bea**	**151.25**	**289**	PKPbc	PKPbc	10 33 49.8	-1.3
	1.2nm,0.5s,baz=63,slow=2.2,SNR=16						
TORD				PKPab	PKPab	10 34 00.4	+1.4
	0.5nm,0.7s,baz=90,slow=4.1,SNR=3.0						

*IDC **21** 10:18:40.2±0.9, 39.18N×70.99E, h0km, mb3.7/10, mb1 3.9/16, mb1mx3.7/33, mbtmp3.7/16, ML3.7/6, MS2.8/2, Ms1 2.8/2, ms1mx2.3/36, Error ellipse: s-maj=17.4km s-min=13.1km az=152.0*
*ISCJB **21** 10:18:46.6±0.8, 39.63N±0.08×70.65E±0.05, h33km, mb3.7/13, Error ellipse: s-maj=10.8km s-min=5.7km az=177.9*
*NNC **21** 10:18:46.5±2.1, 39.75N×70.85E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=19.7km s-min=12.3km az=14.0*

ISC 21 10:18:47.2±0.7, **39.45N**±0.07×**70.81E**±0.07, **h35**km, **n41**, σ1**45**/**37**, **mb3.8**/**13**, **8C-12D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**3.46**	**38**	P	**Pn**	**10 19 40.1**	**+1.2**
	SNR=15						
KK31	**Karatay Array**	**3.66**	**357**	Pn	**Pn**	**10 19 42.1**	**+0.8**
	4.0nm,0.3s,baz=167,slow=11,SNR=476						
KK31				⇓Lg	Lg	10 20 34.3	
	236nm,0.5s,baz=161,slow=29,SNR=18						
EKS2	**Erkin-Say**	**3.92**	**34**	P	Pn	10 19 46.8	+1.8
	SNR=9.9						
AAK	**Ala-Archa**	**4.23**	**40**	P	Pn	10 19 51.7	+2.5
	SNR=16						
AAK	**Ala-Archa**	**4.23**	**40**	Pn	Pn	10 19 51.6	+2.3
	7.4nm,0.3s,baz=202,slow=5.3,SNR=22						
AAK				Sn	**Sn**	**10 20 37.7**	**+0.2**

NIED ***21*** *10:24:00, 39˚.20N×143˚.40E, h23km, Mw4.1 Best double couple: M₀1.69000×10¹⁵ NP1:φ=28.00000°, δ66.00000°, λ94.00000°. NP2:φ=200.00000°, δ25.00000°, λ82.00000°.*
IDC ***21*** *10:24:19.1±0.8, 39˚.14N×143˚.35E, h0km, mb4.0/18, mb1 4.1/22, mb1mx4.1/31, mbtmp4.0/22, ML3.6/4, MS3.4/7, Ms1 3.4/7, ms1mx3.0/46, Error ellipse: s-maj=19.6km s-min=15.9km az=94.0*
ISCJB ***21*** *10:24:20.3±0.4, 39˚.15N±0˚.04×143˚.44E±0˚.04, h20km, mb4.1/26, MS3.5/4, Error ellipse: s-maj=6.1km s-min=4.0km az=146.6*
JMA ***21*** *10:24:21.6±0.1, 39˚.16N×143˚.41E, h32km±4km, M4.4*
MOS ***21*** *10:24:22.1±0.8, 39˚.17N×143˚.42E, h33km, mb4.4/20, Error ellipse: s-maj=10.7km s-min=8.7km az=90.8*
NEIC ***21*** *10:24:24.7±1.1, 39˚.18N×143˚.38E, h38km±8km, mb4.6/7, MW4.1(NIED), Error ellipse: s-maj=11.1km s-min=7.5km az=108.0*

ISC 21 10:24:22.4±0.6, **39˚.23N**±0˚.05×**143˚.38E**±0˚.06, **h20**km, **n86,** σ1§**12**/100, **mb4.1**/26, **MS3.5**/4, **1C, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.26**	**287**	P			**Pn**	**10 24 44.3**	**-0.6**
MIYJ				*e*S			**Sb**	**10 25 00.5**	**-0.8**
OFUJ	**Ofunato**	**1.34**	**264**	P			**Pn**	**10 24 45.1**	**-0.9**
OFUJ				*e*S			**Sn**	**10 25 01.5**	**-1.7**
JTH	**Tanohata**	**1.37**	**302**	P			**Pn**	**10 24 46.1**	**-0.4**
JTH				*e*S			**Sn**	**10 25 04.0**	**-0.1**
JOM	**Ohasama**	**1.64**	**279**	P			**Pn**	**10 24 50.0**	**-0.1**
JOM				*e*S			**Sn**	**10 25 11.0**	**+0.4**
JMK	**Ichinoseki**	**1.71**	**261**	P			**Pn**	**10 24 50.6**	**-0.4**
JMK				*e*S			**Sn**	**10 25 11.4**	**-0.8**
JIO	**Ouri**	**1.77**	**245**	P			**Pn**	**10 24 50.6**	**-1.2**
JANG	**Nango**	**1.84**	**309**	P			**Pn**	**10 24 52.3**	**-0.6**
JRG	**Rokugo**	**2.14**	**275**	P			**Pn**	**10 24 57.0**	**0.0**
JOU	**Okura**	**2.29**	**249**	P			**Pn**	**10 24 58.6**	**-0.5**
JOU				*e*S			**Sn**	**10 25 26.0**	**-0.8**
JAH	**Hinai**	**2.33**	**295**	P			**Pn**	**10 25 00.0**	**+0.4**
JYK	**Kaneyama**	**2.37**	**264**	P			**Pn**	**10 25 00.3**	**+0.1**
JMM	**Marumori**	**2.44**	**237**	P			**Pn**	**10 25 00.0**	**-1.2**
JOT	**Ohata**	**2.80**	**321**	P			**Pn**	**10 25 06.6**	**+0.6**
JFT	**Otama**	**2.94**	**235**	P			**Pn**	**10 25 07.5**	**-0.5**
JFT				*e*S			**Sn**	**10 25 41.1**	**-1.6**
MAJO	**Matsushiro**	**4.89**	**238**	*e*P			**Pn**	**10 25 36.0**	**+1.1**
MAJO	**Matsushiro**	**4.89**	**238**	*e*Pn			**Pn**	**10 25 36.0**	**+1.1**
MAT	**Matsushiro**	**4.89**	**238**	P			**Pn**	**10 25 34.9**	**0.0**
MAT				*e*S			**Sn**	**10 26 29.1**	**-1.8**
MJAR	**Matsushiro Arr**	**4.89**	**238**	Pn			**Pn**	**10 25 35.9**	**+1.1**
MJAR				Sn			**Sn**	**10 26 33.9**	**+3.0**
MJAR	**Matsushiro Arr**	**4.89**	**238**	Pn			**Pn**	**10 25 35.9**	**+1.1**
	5.6nm,0.3s,baz=47,slow=11,SNR=12.1								
MJAR				Sn			**Sn**	**10 26 33.9**	**+3.0**
	1.6nm,0.3s,baz=57,slow=15,SNR=4.4								
ASAJ	**Asahikawa**	**4.92**	**353**	*e*Pn			**Pn**	**10 25 35.2**	**0.0**
ASAJ				Sn			**Sn**	**10 26 30.1**	**-1.5**
ASAJ	**Asahikawa**	**4.92**	**353**	Pn			**Pn**	**10 25 35.9**	**+0.6**
	4.8nm,0.3s,baz=219,slow=10,SNR=7.2								
ASAJ				Sn			**Sn**	**10 26 30.1**	**-1.5**
	1.1nm,0.3s,baz=114,slow=19,SNR=3.2								
ASAJ				LR			LR	10 28 17.0	
	comp=Z,266nm,19.5s,baz=184,slow=48								
YUK	**Yuzh-Kuril'sk**	**5.15**	**20***c*	*i*P			**Pn**	**10 25 38.6**	**+0.2**
YUK				*i* S			**Sn**	**10 26 33.9**	**-3.3**
YUK				pmax		pmax			
	comp=Z,56nm,0.5s								
YUK				pmax		pmax			
	comp=N,52nm,0.4s								
YUK				pmax		pmax			
	comp=E,14nm,0.4s								
YUK				smax		smax			
	comp=N,109nm,0.5s								
YUK				smax		smax			
	comp=E,67nm,0.4s								
JHJ	**Hachijo jima 2**	**6.75**	**207**	Pn			**Pn**	**10 25 57.6**	**-2.8**
	comp=E,12nm,0.3s,baz=51,slow=18,SNR=8.9								
JHJ				Sn			Sn	10 27 08.3	-8.4
	comp=E,40nm,0.3s,baz=246,slow=22,SNR=6.6								
KUR	**Kuril'sk**	**6.86**	**28**	*e*P			**Pn**	**10 26 03.9**	**+2.0**
KUR				*e*S			**Sn**	**10 27 15.4**	**-3.9**
KUR				pmax		pmax			
	comp=Z,24nm,0.6s								
KUR				smax		smax			
	comp=E,39nm,0.7s								
KUR				smax		smax			
	comp=N,22nm,0.7s								
USRK	**Ussuriysk Arra**	**9.85**	**304**	Pn			**Pn**	**10 26 43.5**	**+0.7**
	comp=N,1.2nm,0.3s,baz=107,slow=14,SNR=22								
USRK				LR			LR	10 30 22.0	
	comp=N,209nm,18.8s,baz=58,slow=37								
JNU	**Nakatsue**	**11.79**	**243**	Pn			**Pn**	**10 27 08.9**	**-0.6**
JNU	**Nakatsue**	**11.79**	**243**	Pn			**Pn**	**10 27 08.9**	**-0.6**
	comp=N,0.2nm,0.3s,baz=6.3,slow=18,SNR=3.9								
KSRS	**Korea Array**	**12.27**	**267**	Pn			**Pn**	**10 27 18.9**	**+3.0**
	comp=N,0.2nm,0.3s,baz=81,slow=13,SNR=8.2								
KSRS				LR			LR	10 31 39.6	
	comp=N,140nm,19.1s,baz=249,slow=36								
KSAR	**Wonju Array Be**	**12.30**	**267**	Pn			**Pn**	**10 27 18.9**	**+2.5**
ULN	**Ulaanbaatar**	**27.50**	**300**	*e*P			**P**	**10 30 07.1**	**-0.5**
	comp=N,2.8nm,0.6s								
SONM	**Songino Array**	**27.94**	**300**	P			**P**	**10 30 12.1**	**+0.7**
SONM	**Songino Array**	**27.94**	**300**	P			**P**	**10 30 12.1**	**+0.7**
	comp=N,3.3nm,0.6s,baz=94,slow=8.7,SNR=18								
SONM				LR			LR	10 41 43.3	
	comp=N,129nm,19.7s,baz=245,slow=37								
ZAK	**Zakamensk**	**30.21**	**305**	*e*P			**P**	**10 30 31.6**	**+0.1**
ZAK				pmax		pmax			
	comp=Z,2.0nm,0.9s								
ZALV	**Zalesovo Beam**	**41.63**	**311**	P			**P**	**10 32 08.7**	**-0.3**
ZALV				pmax		pmax			
	comp=Z,2.0nm,0.3s								
ZALV				MLR		MLR			
	comp=Z,52nm,19.0s								
ZALV	**Zalesovo Beam**	**41.63**	**311**	P			**P**	**10 32 08.7**	**-0.3**
ZALV	**Zalesovo Beam**	**41.63**	**311**	P			**P**	**10 32 08.7**	**-0.3**
	comp=Z,2.1nm,0.3s,baz=79,slow=9.2,SNR=8.9								
ZALV				LR			LR	10 50 11.7	
	comp=Z,52nm,19.0s,baz=80,slow=37								
CMAR	**Chiang Mai Arr**	**43.56**	**255**	P			**P**	**10 32 24.2**	**-0.9**
CMAR	**Chiang Mai Arr**	**43.56**	**255**	P			**P**	**10 32 24.2**	**-0.9**
	comp=Z,0.6nm,0.3s,baz=56,slow=4.7,SNR=4.4								
MK31	**Makanchi Array**	**44.31**	**301**	*e*P			**P**	**10 32 31.0**	**+0.2**
MK31	**Makanchi Array**	**44.31**	**301**	*e*P			**P**	**10 32 31.0**	**+0.2**
MKAR	**Makanchi Array**	**44.31**	**301**	P			**P**	**10 32 30.8**	**-0.1**
MKAR				pmax		pmax			
	comp=Z,3.0nm,0.9s								
MKAR				MLR		MLR			
	comp=Z,55nm,18.8s								
MKAR	**Makanchi Array**	**44.31**	**301**	P			**P**	**10 32 30.8**	**-0.1**
MKAR	**Makanchi Array**	**44.31**	**301**	P			**P**	**10 32 30.8**	**-0.1**
	comp=Z,3.0nm,0.9s,baz=85,slow=9.1,SNR=19								
MKAR				LR			LR	10 51 50.3	
	comp=Z,55nm,18.8s,baz=356,slow=37								
KURK	**Kurchatov**	**45.84**	**307**	*e*P			**P**	**10 32 42.8**	**-0.1**
KURK				pmax		pmax			
	comp=Z,6.0nm,0.6s								
KURK	**Kurchatov**	**45.84**	**307**	*e*P			**P**	**10 32 42.8**	**-0.1**
	comp=Z,6.4nm,0.6s								
KURBB	**Kurchatov Arra**	**45.91**	**307**	P			**P**	**10 32 43.5**	**0.0**
	comp=Z,4.0nm,0.6s,baz=81,slow=8.3,SNR=24								
ILAR	**Eielson Array**	**46.81**	**33**	P			**P**	**10 32 51.9**	**+1.5**
ILAR	**Eielson Array**	**46.81**	**33**	P			**P**	**10 32 51.9**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=269,slow=6.6,SNR=11								
TKM2	**Tokmak 2**	**49.98**	**297**	*e*P			**P**	**10 33 15.2**	**-0.1**
TKM2				pmax		pmax			
	comp=Z,5.0nm,0.7s								
TKM2	**Tokmak 2**	**49.98**	**297**	*e*P			**P**	**10 33 15.2**	**-0.1**
	comp=Z,4.7nm,0.7s								
BVAR	**Borovoye Array**	**50.27**	**311**	P			**P**	**10 33 17.5**	**+0.3**
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.4s								
BVAR	**Borovoye Array**	**50.27**	**311**	P			**P**	**10 33 17.5**	**+0.3**
BVAR	**Borovoye Array**	**50.27**	**311**	P			**P**	**10 33 17.5**	**+0.3**
	comp=Z,0.9nm,0.4s,baz=81,slow=9.5,SNR=7.3								
BRVK	**Borovoye**	**50.32**	**311**	*e*P			**P**	**10 33 18.2**	**+0.7**
BRVK				pmax		pmax			
	comp=Z,2.0nm,0.4s								
BRVK	**Borovoye**	**50.32**	**311**	*e*P			**P**	**10 33 18.2**	**+0.7**
	comp=Z,2.4nm,0.4s								
ABKAR	**Akbulak array**	**57.73**	**310**	*e*P			**P**	**10 34 11.6**	**-0.1**
	comp=Z,1.7nm,0.4s								
AKTO	**Aktyubinsk**	**58.38**	**312**	P			**P**	**10 34 16.6**	**+0.4**
AKTO				pmax		pmax			
	comp=Z,1.0nm,0.3s								
AKTO	**Aktyubinsk**	**58.38**	**312**	P			**P**	**10 34 16.6**	**+0.4**
AKTO	**Aktyubinsk**	**58.38**	**312**	P			**P**	**10 34 16.6**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=66,slow=10.0,SNR=4.3								
WRAB	**Tennant Creek**	**59.45**	**190**	*e*P			**P**	**10 34 22.5**	**-1.4**
WRAB				pmax		pmax			
	comp=Z,10.0nm,1.3s								
WRAB	**Tennant Creek**	**59.45**	**190**	*e*P			**P**	**10 34 22.5**	**-1.4**
	comp=Z,10.0nm,1.3s								
WRA	**Warramunga Arr**	**59.46**	**190**	P			**P**	**10 34 22.5**	**-1.4**
WRA	**Warramunga Arr**	**59.46**	**190**	P			**P**	**10 34 22.5**	**-1.4**
	comp=Z,0.5nm,0.5s,baz=8.2,slow=7.0,SNR=22								
YKA	**Yellowknife Ar**	**61.13**	**31**	P			**P**	**10 34 35.2**	**+0.3**
YKA	**Yellowknife Ar**	**61.13**	**31**	P			**P**	**10 34 35.2**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=305,slow=6.7,SNR=4.7								
ASAR	**Alice Springs**	**63.19**	**190**	P			**P**	**10 34 49.4**	**+0.2**
ASAR	**Alice Springs**	**63.19**	**190**	P			**P**	**10 34 49.4**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=11,slow=7.3,SNR=5.6								
FINES	**FINESS Array B**	**67.60**	**332**	P			**P**	**10 35 17.2**	**0.0**
FINES	**FINESS Array B**	**67.60**	**332**	P			**P**	**10 35 17.2**	**0.0**
	comp=Z,2.4nm,0.9s,baz=38,slow=9.6,SNR=5.6								
FINES				LR		LR		11 07 31.9	
	comp=Z,33nm,21.7s,baz=24,slow=38								
SUMG	**Summit**	**68.49**	**1**	*e*P			**P**	**10 35 23.9**	**+0.7**
SUMG				pmax		pmax			
	comp=Z,6.0nm,0.9s								
SUMG	**Summit**	**68.49**	**1**	*e*P			**P**	**10 35 23.9**	**+0.7**
	comp=Z,5.6nm,0.9s								
KBZ	**Khabaz**	**70.65**	**311**	P			**P**	**10 35 37.0**	**+0.5**
KBZ				pmax		pmax			
	comp=Z,2.0nm,0.7s								
KBZ	**Khabaz**	**70.65**	**311**	P			**P**	**10 35 37.0**	**+0.5**
KBZ	**Khabaz**	**70.65**	**311**	P			**P**	**10 35 37.0**	**+0.5**
	comp=Z,2.3nm,0.7s,baz=300,slow=0.7,SNR=4.8								
NB2	**NORSAR Subarra**	**72.76**	**338**	P			**P**	**10 35 49.2**	**+0.3**
	comp=Z,0.9nm,0.7s,baz=37,slow=6.2								
NOA	**NORSAR Array B**	**72.76**	**338**	P			**P**	**10 35 49.1**	**+0.1**
NOA	**NORSAR Array B**	**72.76**	**338**	P			**P**	**10 35 49.1**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=39,slow=6.0,SNR=7.5								
AKASG	**Malin Array Be**	**73.50**	**323**	P			**P**	**10 35 52.7**	**-0.7**
AKASG				pmax		pmax			
	comp=Z,1.0nm,0.4s								
AKASG	**Malin Array Be**	**73.50**	**323**	P			**P**	**10 35 52.7**	**-0.7**
AKASG	**Malin Array Be**	**73.50**	**323**	P			**P**	**10 35 52.7**	**-0.7**
	comp=Z,0.7nm,0.4s,baz=44,slow=6.2,SNR=5.1								
BRTR	**Keskin Array B**	**78.55**	**312**	P			**P**	**10 36 22.5**	**-0.1**
BRTR	**Keskin Array B**	**78.55**	**312**	P			**P**	**10 36 22.5**	**-0.1**
	comp=Z,0.5nm,0.6s,baz=42,slow=5.7,SNR=3.6								
GERES	**GERESS Array B**	**81.65**	**329**	P			**P**	**10 36 38.2**	**-0.9**
GERES	**GERESS Array B**	**81.65**	**329**	P			**P**	**10 36 38.2**	**-0.9**
	comp=Z,0.7nm,0.8s,baz=45,slow=4.0,SNR=6.1								
TXAR	**Lajitas Array**	**87.56**	**54**	P			**P**	**10 37 09.7**	**+0.3**
TXAR	**Lajitas Array**	**87.56**	**54**	P			**P**	**10 37 09.7**	**+0.3**
	comp=Z,0.2nm,0.7s,baz=20,slow=2.9,SNR=3.0								

ISK ***21*** *10:27:04.9, 37˚.66N×26˚.92E, h14km, MD2.7*
ISCJB ***21*** *10:27:05.0±0.8, 37˚.65N±0˚.03×26˚.89E±0˚.07, h10km±8km, Error ellipse: s-maj=9.9km s-min=5.0km az=163.3*
DDA ***21*** *10:27:05.3, 37˚.67N×26˚.89E, h7km, MD2.9*
CSEM ***21*** *10:27:05.4±0.2, 37˚.66N×26˚.94E, h15km, MD2.7, Error ellipse: s-maj=5.7km s-min=3.4km az=73.0*

ISC 21 10:27:05.3±1.1, **37.66N**±0˚.03×**26.93E**±0˚.04, **h14**km±7km, **n21,** σ0§**52**/30, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.24**	**81**	*i* P			**Pb**	**10 27 11.1**	**-0.4**
GCAM				*i* S			**Sb**	**10 27 15.7**	**+0.1**
GCAM	**G?zelcaml?**	**0.24**	**81**	*i* P			**Pb**	**10 27 11.1**	**-0.4**
GCAM				*i* S			**Sb**	**10 27 15.7**	**+0.1**
BODT	**Bodrum**	**0.67**	**153**	*e*PG			**Pg**	**10 27 18.5**	**0.0**
BODT				*e*SG			**Sb**	**10 27 28.4**	**+0.4**
BODT	**Bodrum**	**0.67**	**153**	*e*Pg			**Pg**	**10 27 18.5**	**0.0**
BODT				*e*Sg			**Sb**	**10 27 28.4**	**+0.4**
BLCB	**Balcova**	**0.72**	**7**	*e*PG			**Pg**	**10 27 19.2**	**-0.3**
BLCB				*e*SG			**Sb**	**10 27 30.4**	**+0.9**
BLCB	**Balcova**	**0.72**	**7**	*e*Pg			**Pg**	**10 27 19.2**	**-0.3**
BLCB				*e*Sg			**Sb**	**10 27 30.4**	**+0.9**
URLA	**Izmir**	**0.74**	**339**	*i* P			**Pg**	**10 27 19.4**	**-0.5**
URLA				*i* S			**Sb**	**10 27 31.1**	**+1.0**
AYDN	**Tasoluk**	**0.75**	**90**	*i* P			**Pb**	**10 27 20.2**	**0.0**
AYDN	**Tasoluk**	**0.75**	**90**	*i* P			**Pb**	**10 27 20.2**	**0.0**
MLSB	**Milas**	**0.77**	**118**	*e*PG			**Pb**	**10 27 20.4**	**-0.1**
MLSB				*e*SG			**Sb**	**10 27 31.8**	**+1.1**
MLSB	**Milas**	**0.77**	**118**	*e*Pg			**Pb**	**10 27 20.4**	**-0.1**
MLSB				*e*Sg			**Sb**	**10 27 31.8**	**+1.1**
IZM	**Izmir**	**0.78**	**20**	*e*PG			**Pg**	**10 27 20.4**	**0.0**
IZM	**Izmir**	**0.78**	**20**	*e*Pg			**Pg**	**10 27 20.5**	**0.0**
DAT	**Datca**	**1.07**	**151**	*e*PG			**Pb**	**10 27 25.1**	**-0.5**
DAT	**Datca**	**1.07**	**151**	*e*Pg			**Pb**	**10 27 25.1**	**-0.5**
YER	**Yerkesik**	**1.20**	**116**	*e*PN			**Pb**	**10 27 28.1**	**+0.2**
YER	**Yerkesik**	**1.20**	**116**	*e*Pn			**Pb**	**10 27 28.1**	**+0.2**
APE	**Apeiranthos**	**1.26**	**242**	*e*PN			**Pb**	**10 27 29.0**	**+0.1**
APE	**Apeiranthos**	**1.26**	**242**	*e*Pn			**Pb**	**10 27 29.0**	**+0.1**
KULA	**Kula-Manisa**	**1.61**	**58**	*e*PN			**Pn**	**10 27 32.8**	**-0.5**
KULA	**Kula-Manisa**	**1.61**	**58**	*e*Pn			**Pn**	**10 27 32.8**	**-0.5**

ISCJB ***21*** *10:40:15.6±1.1, 13˚.05N±0˚.08×89˚.65W±0˚.06, h43km, mb3.9/2, Error ellipse: s-maj=12.2km s-min=7.4km az=19.7*
CASC ***21*** *10:40:15.8±2.5, 13˚.09N×89˚.63W, h28km±8km, MD3.6, ML3.7*
IDC ***21*** *10:40:26.3±8.3, 13˚.63N×89˚.25W, h138km±53km, mb3.1/3, mb1 3.4/4, mb1mx3.1/23, mbtmp3.2/4, Error ellipse: s-maj=69.3km s-min=45.9km az=159.0*

ISC 21 10:40:15.8±1.4, **13˚.12N**±0˚.08×**89˚.64W**±0˚.07, **h43**km, **n19,** σ1§**56**/20, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SNET	**Serv Nac Est T**	**0.69**	**35**	*e*P			**Pn**	**10 40 29.5**	**+0.2**
SNET				*e*S			**Sn**	**10 40 40.4**	**+1.4**
SNET				AML		AML		10 40 42.4	
	comp=Z,3μm,0.3s								
SBLS	**San Blas**	**0.72**	**1**	*e*P			**Pn**	**10 40 30.5**	**+0.7**
SNJE	**San Jose**	**0.75**	**3**	*e*P			**Pn**	**10 40 30.7**	**+0.5**
LFRS	**El Faro**	**0.76**	**48**	*i* P			**Pn**	**10 40 30.3**	**+0.2**
LFU	**La Fuente**	**0.81**	**39**	*e*P			**Pn**	**10 40 31.5**	**+0.6**
LBRS	**Las Brisas**	**0.85**	**43**	*e*P			**Pn**	**10 40 32.1**	**+0.7**
LBRS				*e*S			**Sn**	**10 40 43.1**	**+0.3**
RBDL	**Robledal**	**0.99**	**357**	*e*P			**Pn**	**10 40 34.4**	**+0.9**
MTO2	**Montecristo 2**	**1.30**	**12**	*e*P			**Pn**	**10 40 35.7**	**-2.1**
VSM	**San Miguel**	**1.37**	**77**	*e*P			**Pn**	**10 40 39.3**	**+0.7**
NBG	**Las Nubes**	**1.61**	**335**	*e*P			Pn	10 40 45.2	+3.1
FUG	**Fuego 3**	**1.77**	**319**	*e*P			**Pn**	**10 40 45.4**	**+1.3**
CNCH	**Conchagua**	**1.77**	**85**	*e*P			**Pn**	**10 40 44.0**	**0.0**
CNCH				*e*S			**Sn**	**10 41 08.2**	**+2.8**
MRL	**Marmol**	**1.94**	**359**	*e*P			**Pn**	**10 40 48.8**	**+2.3**
COPN	**Copaltepe**	**3.12**	**107**	*e*P			**Pn**	**10 41 02.5**	**+0.1**
TEIG	**Tepich**	**7.19**	**10**	P			**Pn**	**10 42 00.6**	**+2.2**
	comp=Z,1.8nm,0.3s,baz=176,slow=14,SNR=16								
TEIG				S			**Sn**	**10 43 17.3**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=18,slow=16,SNR=1.8								
TXAR	**Lajitas Array**	**20.73**	**323**	P			Pn	10 44 54.6	-1.0
	comp=Z,0.4nm,0.6s,baz=144,slow=11,SNR=7.5								
SCHQ	**Schefferville**	**45.29**	**18**	P			P	10 48 25.3	-3.9
	comp=Z,1.9nm,0.6s,baz=233,slow=11,SNR=6.2								
YKA	**Yellowknife Ar**	**52.43**	**346**	P			**P**	**10 49 20.8**	**-2.9**
	comp=Z,0.4nm,0.4s,baz=142,slow=7.8,SNR=8.7								
WRA	**Warramunga Arr**	**137.39**	**255**	PKP			**PKPdf**	**10 59 36.6**	**+1.0**
	comp=Z,0.6nm,1.1s,baz=88,slow=2.3,SNR=3.2								

ISCJB ***21*** *10:44:09.8±0.4, 41˚.29N±0˚.02×22˚.69E±0˚.03, h2km±4km, Error ellipse: s-maj=3.6km s-min=3.2km az=139.6*
SKO ***21*** *10:44:09.8, 41˚.30N×22˚.70E, h15km, M1.8, ML2.2*
SOF ***21*** *10:44:10.6, 41˚.32N×22˚.74E, h2km, MD2.6*
THE ***21*** *10:44:10.8, 41˚.28N×22˚.71E, h2km±1km, ML2.2/7, Error ellipse: s-maj=1.4km s-min=0.5km az=204.0*
ATH ***21*** *10:44:10.6, 41˚.28N×22˚.72E, h7km±1km, MD3.0/6*
BEO ***21*** *10:44:10.5±1.1, 41˚.27N×22˚.65E, h6km±3km, ML2.1/4*
CSEM ***21*** *10:44:10.2±0.1, 41˚.29N×22˚.68E, h0km, ML2.1, Error ellipse: s-maj=3.2km s-min=2.8km az=61.0*

ISC 21 10:44:10.5±0.9, **41˚.29N**±0˚.02×**22˚.70E**±0˚.02, **h6**km±8km, **n54,** σ0§**49**/80, **1C, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**289**	P			**Pg**	**10 44 12.5**	**-0.2**
VAY						S	**Sg**	**10 44 14.5**	**+0.2**
VAY	**Valandovo**	**0.10**	**289**	*e*Pg			**Pg**	**10 44 12.6**	**-0.2**
VAY	**Valandovo**	**0.10**	**289**	*i* Pg			**Pg**	**10 44 12.5**	**-0.2**
VAY				*i* Sg			**Sg**	**10 44 14.4**	**+0.2**
VAY				*e*Lg		Lg	Lg	10 44 14.5	
	comp=E,2μm,0.3s								
VAY				*e*Lg		Lg	Lg	10 44 14.7	
	comp=N,2μm,0.3s								
VAY	**Valandovo**	**0.10**	**289**	*e*Pg			**Pg**	**10 44 12.6**	**-0.2**
VAY						S	**Sg**	**10 44 14.5**	**+0.2**
KNT	**Kendrikon**	**0.20**	**130**	P			**Pg**	**10 44 14.7**	**+0.3**
KNT						S	**Sg**	**10 44 17.2**	**+0.3**
KNT	**Kendrikon**	**0.20**	**130**	P			**Pg**	**10 44 14.7**	**+0.3**
KNT						S	**Sg**	**10 44 17.2**	**+0.3**
GRG	**Griva**	**0.40**	**214**	P			**Pg**	**10 44 18.3**	**+0.1**
GRG						S	**Sg**	**10 44 23.9**	**+0.4**
GRG	**Griva**	**0.40**	**214**	*e*PB			**Pg**	**10 44 18.5**	**+0.3**
GRG				*e*SB			**Sg**	**10 44 24.1**	**+0.6**
GRG	**Griva**	**0.40**	**214**	P			**Pg**	**10 44 18.3**	**+0.1**
GRG						S	**Sg**	**10 44 23.9**	**+0.4**
KKB	**Krupnik**	**0.65**	**26**	Pg			**Pg**	**10 44 22.8**	**-0.1**
KKB	**Krupnik**	**0.65**	**26**	Pg			**Pg**	**10 44 22.8**	**-0.1**
SOH	**Sokhos**	**0.68**	**133**	P			**Pg**	**10 44 23.2**	**-0.3**
SOH						S	**Sg**	**10 44 32.9**	**+0.6**
SOH	**Sokhos**	**0.68**	**133**	*e*PB			**Pg**	**10 44 23.3**	**-0.3**
SOH				*e*SB			**Sg**	**10 44 33.0**	**+0.6**
SOH	**Sokhos**	**0.68**	**133**	*e*Pb			**Pg**	**10 44 23.3**	**-0.3**
SOH						S	**Sg**	**10 44 32.9**	**+0.6**
SRS	**Serrai**	**0.69**	**104**	P			**Pg**	**10 44 23.6**	**-0.2**
SRS						S	**Sg**	**10 44 33.5**	**+0.7**
SRS	**Serrai**	**0.69**	**104**	P			**Pg**	**10 44 23.6**	**-0.2**
SRS						S	**Sg**	**10 44 33.5**	**+0.7**
HORT	**Hortiatis**	**0.75**	**156**	P			**Pg**	**10 44 24.8**	**-0.1**
HORT						S	**Sg**	**10 44 35.3**	**+0.6**
HORT	**Hortiatis**	**0.75**	**156**	P			**Pg**	**10 44 24.8**	**-0.1**
HORT						S	**Sg**	**10 44 35.3**	**+0.6**
MMB	**Musomiste**	**0.83**	**68**	Pg			**Pg**	**10 44 26.1**	**-0.3**
MMB	**Musomiste**	**0.83**	**68**	Pg			**Pg**	**10 44 26.1**	**-0.3**
NVR	**Nevrokopi**	**0.88**	**86**	P			**Pg**	**10 44 27.0**	**-0.3**
NVR						S	**Sg**	**10 44 39.4**	**+0.7**
NVR	**Nevrokopi**	**0.88**	**86**	*e*PB			**Pg**	**10 44 27.0**	**-0.3**
NVR				*e*SB			**Sg**	**10 44 38.7**	**0.0**
NVR	**Nevrokopi**	**0.88**	**86**	P			**Pg**	**10 44 27.0**	**-0.3**
NVR				*e*Sb			**Sg**	**10 44 38.7**	**0.0**
NVR				S			**Sg**	**10 44 39.4**	**+0.7**
PLG	**Polygyros**	**1.07**	**148**	*e*PG			**Pg**	**10 44 30.4**	**-0.7**
PLG	**Polygyros**	**1.07**	**148**	*e*Pg			**Pg**	**10 44 30.4**	**-0.7**
FNA	**Florina**	**1.12**	**244**	*e*PB			**Pg**	**10 44 32.1**	**+0.1**
KZN	**Kozani**	**1.21**

CING				Sg		Sb	10 55 33.1	-0.1	
	comp=Z,423nm,0.5s								
PDKS	Podkum	1.84	351	*i*	Pn	Pb	10 55 10.5	-0.8	
PDKS	Podkum	1.84	351	*i*	Pn	Pb	10 55 10.5	-0.8	
PESA	Pesaro	1.87	262		Pg	Pn	10 55 10.1	+1.0	
	comp=Z,2µm,0.4s								
PESA	Pesaro	1.87	262		Pg	Pn	10 55 10.1	+1.0	
	comp=Z,2µm,0.4s								
TRI	Trieste	1.87	322⇑	*e*	Pn	Pn	10 55 09.9	+0.8	
TRI	Trieste	1.87	322		Pg	Pn	10 55 09.9	+0.8	
TRI					Sg	Sb	10 55 35.3	+0.6	
	comp=Z,749nm,0.5s								
TRI	Trieste	1.87	322	*e*	Pn	Pn	10 55 09.9	+0.8	
TRI					Sg	Sb	10 55 35.3	+0.6	
	comp=Z,749nm,0.5s								
LJU	Ljubljana	1.90	341	*i*	Pn	Pb	10 55 11.3	-1.0	
LJU				*i*			10 55 13.1		
LJU				*i*	Sn	Sb	10 55 35.5	-0.2	
LJU									
	comp=Z,701nm,0.4s								
LJU	Ljubljana	1.90	341	*i*	Pn	Pb	10 55 11.3	-1.0	
LJU				*i*	Sn	Sb	10 55 35.5	-0.2	
	comp=Z,701nm,0.4s								
ARVD	Arcevia	1.93	248		Pg	Pn	10 55 11.0	+1.0	
ARVD					Sg	Sb	10 55 35.4	-1.0	
	comp=Z,354nm,0.6s								
ARVD	Arcevia	1.93	248		Pg	Pn	10 55 11.0	+1.0	
ARVD					Sg	Sb	10 55 35.4	-1.0	
	comp=Z,354nm,0.6s								
FSSB	Fossombrone	1.97	255		Pg	Pn	10 55 11.7	+1.1	
FSSB					Sg	Sn	10 55 35.9	+1.1	
	comp=Z,1µm,0.4s								
FSSB	Fossombrone	1.97	255		Pg	Pn	10 55 11.7	+1.1	
FSSB					Sg	Sn	10 55 35.9	+1.1	
	comp=Z,1µm,0.4s								
FDMO	Fiordimonte	2.07	235		Pg	Pn	10 55 12.7	+0.8	
	comp=Z,252nm,0.5s								
FDMO	Fiordimonte	2.07	235		Pg	Pn	10 55 12.7	+0.8	
	comp=Z,252nm,0.5s								
VOY	Vojsko	2.08	330	*e*	Sn	Sb	10 55 40.8	-0.1	
TERO	Teramo	2.08	220		Pg	Pn	10 55 12.8	+0.7	
	comp=Z,206nm,0.5s								
TERO	Teramo	2.08	220		Pg	Pn	10 55 12.8	+0.7	
	comp=Z,206nm,0.5s								
VOJS	Vojsko	2.09	330	*i*	Pn	Pn	10 55 13.3	+1.1	
VOJS	Vojsko	2.09	330	*i*	Pn	Pn	10 55 13.3	+1.1	
SABO	M.te Sabotino	2.15	324⇑	*e*	Pn	Pn	10 55 13.9	+0.8	
SABO	M.te Sabotino	2.15	324		Pg	Pn	10 55 13.9	+0.8	
	comp=Z,1µm,0.6s								
SABO	M.te Sabotino	2.15	324		Pg	Pn	10 55 13.9	+0.8	
	comp=Z,1µm,0.6s								
STON	Ston	2.16	129	*e*	Pn	Pb	10 55 15.1	-1.6	
STON				*e*	Sn	Sb	10 55 42.8	-0.3	
STON	Ston	2.16	129	*e*	Pn	Pb	10 55 15.1	-1.6	
STON				*e*	Sn	Sb	10 55 42.8	-0.3	
PIEI	Pieia	2.19	252		Pg	Pn	10 55 14.7	+1.1	
PIEI					Sg	Sb	10 55 42.3	-1.6	
PIEI	Pieia	2.19	252		Pg	Pn	10 55 14.7	+1.1	
PIEI					Sg	Sb	10 55 42.3	-1.6	
CESI	CESI - Serrava	2.19	237		Pg	Pn	10 55 14.6	+0.9	
	comp=Z,125nm,0.6s								
CESI	CESI - Serrava	2.19	237		Pg	Pn	10 55 14.6	+0.9	
	comp=Z,125nm,0.6s								
KOGS	Kog	2.29	15	*i*	Pn	Pn	10 55 15.5	+0.6	
KOGS				*e*	Sn	Sn	10 55 42.6	+0.2	
KOGS				*i*			10 55 49.3		
KOGS									
	comp=Z,528nm,0.5s								
KOGS	Kog	2.29	15	*i*	Pn	Pn	10 55 15.5	+0.6	
KOGS				*e*	Sn	Sn	10 55 42.6	+0.2	
	comp=Z,528nm,0.5s								
DRE	Drenchia	2.29	328⇑	*e*	Pn	Pn	10 55 16.0	+0.9	
DRE	Drenchia	2.29	328	*e*	Pn	Pn	10 55 16.0	+0.9	
MURB	Monte Urbino	2.30	246		Pg	Pn	10 55 16.6	+1.4	
MURB					Sg	Sn	10 55 44.0	+1.0	
	comp=Z,2µm,0.4s								
MURB	Monte Urbino	2.30	246		Pg	Pn	10 55 16.6	+1.4	
CADS	Cadrg	2.31	330	*i*	Pn	Pn	10 55 16.3	+1.1	
CADS	Cadrg	2.31	330	*i*	Pn	Pn	10 55 16.3	+1.1	
ASSB	Assisi San Ben	2.32	240		Pg	Pn	10 55 16.6	+1.1	
ASSB					Sg	Sn	10 55 44.9	+1.4	
	comp=Z,473nm,0.5s								
ASSB	Assisi San Ben	2.32	240		Pg	Pn	10 55 16.6	+1.1	
TLI	Talmassons	2.34	317⇑	*e*	Pn	Pn	10 55 16.5	+0.9	
TLI	Talmassons	2.34	317	*e*	Pn	Pn	10 55 16.5	+0.9	
OBKA	Obir	2.34	345	*e*	Pn	Pn	10 55 17.6	+1.9	
OBKA	Obir	2.34	345	*e*	Pn	Pn	10 55 17.6	+1.9	
OBKA	Obir	2.34	345⇓	*e*	Pn	Pn	10 55 17.7	+1.9	
	SNR=33								
OBKA				⇑	Sn	Sb	10 55 47.8	-0.6	
	comp=Z,459nm,0.3s								
OBKA	Obir	2.34	345		Pn	Pn	10 55 17.6	+1.9	
OBKA					Sn	Sb	10 55 47.8	-0.6	
	comp=Z,459nm,0.3s								
PARC	Parchiule	2.36	257		Pg	Pn	10 55 17.3	+1.4	
	comp=Z,447nm,0.6s								
PARC	Parchiule	2.36	257		Pg	Pn	10 55 17.3	+1.4	
	comp=Z,447nm,0.6s								
COLI	Coloredo	2.37	324⇑	*e*	Pn	Pn	10 55 17.0	+1.0	
COLI	Coloredo	2.37	324	*e*	Pn	Pn	10 55 17.0	+1.0	
LPEL	Lama dei Pelig	2.37	203		Pg	Pn	10 55 16.8	+0.7	
	comp=Z,236nm,0.7s								
LNSS	Leonessa	2.38	227		Pg	Pn	10 55 17.2	+1.0	
	comp=Z,256nm,0.4s								
LNSS	Leonessa	2.38	227		Pg	Pn	10 55 17.2	+1.0	
	comp=Z,256nm,0.4s								
FAGN	Fagnano	2.38	215		Pg	Pn	10 55 17.3	+1.1	
	comp=Z,450nm,0.5s								
FAGN	Fagnano	2.38	215		Pg	Pn	10 55 17.3	+1.1	
	comp=Z,450nm,0.5s								
PERS	Pernice	2.40	355	*i*	Pn	Pn	10 55 17.6	+1.1	
PERS				*i*			10 55 24.4		
PERS				*e*	Sn	Sn	10 55 46.5	+1.1	
PERS									
	comp=Z,263nm,0.3s								
PERS	Pernice	2.40	355	*i*	Pn	Pn	10 55 17.6	+1.1	
PERS				*e*	Sn	Sn	10 55 46.5	+1.1	
	comp=Z,263nm,0.3s								
CDCA	Citt' di Caste	2.42	252		Pg	Pn	10 55 18.2	+1.5	
	comp=Z,498nm,0.6s								
CDCA	Citt' di Caste	2.42	252		Pg	Pn	10 55 18.2	+1.5	
	comp=Z,498nm,0.6s								
BEHE	Becsehely	2.43	23⇓	*e*	Pn	Pn	10 55 17.9	+1.1	
BEHE				*e*	Sn	Sn	10 55 47.3	+1.3	
SOKA	Soboth	2.45	354⇓	*e*	Pn	Pn	10 55 18.5	+1.3	
	comp=Z,18nm,0.3s								
SOKA				⇓	*e*	Sn	10 55 48.2	+1.6	
	comp=Z,108nm,0.5s								
SOKA	Soboth	2.45	354		Pn	Pn	10 55 18.5	+1.3	
	comp=Z,18nm,0.3s								
SOKA					Sn	Sn	10 55 48.2	+1.6	
	comp=Z,108nm,0.5s								
BAD	Bernadia	2.51	323⇑	*e*	Pn	Pn	10 55 18.6	+0.6	
BAD	Bernadia	2.51	323	*e*	Pn	Pn	10 55 18.6	+0.6	
VINO	Villanova	2.51	324⇑	*e*	Pn	Pn	10 55 18.6	+0.6	
VINO	Villanova	2.51	324		Pg	Pn	10 55 18.6	+0.6	
	comp=Z,264nm,0.5s								
VINO	Villanova	2.51	324	*e*	Pn	Pn	10 55 18.6	+0.6	
MS1	Monte Sant'Ang	2.57	171	*e*	Sn	Sb	10 55 53.8	-1.1	
CRE	Caprese Michel	2.57	257		Pg	Pn	10 55 20.4	+1.5	
	comp=Z,205nm,0.6s								
LSR	Lussari	2.59	330⇑	*e*	Pn	Pn	10 55 20.4	+1.1	
LSR	Lussari	2.59	330	*e*	Pn	Pn	10 55 20.4	+1.1	
PTCC	Patocco-Chiusa	2.60	327		Pg	Pn	10 55 20.0	+0.8	
	comp=Z,451nm,0.8s								
CESX	Cesi	2.62	233		Pg	Pn	10 55 20.8	+1.3	
	comp=Z,198nm,0.5s								
MPRI	Monte Prat	2.63	320⇑	*e*	Pn	Pn	10 55 20.5	+0.9	
MPRI	Monte Prat	2.63	320	*e*	Pn	Pn	10 55 20.5	+0.9	
BOO	Bordano	2.64	323⇑	*e*	Pn	Pn	10 55 20.2	+0.5	
BOO	Bordano	2.64	323	*e*	Pn	Pn	10 55 20.2	+0.5	
BRY	Bratogost	2.65	119⇓	*i*	Pn	Pn	10 55 21.0	+1.0	
BRY				*e*	Sn	Sb	10 55 55.0	-2.2	
BRY	Bratogost	2.65	119⇓	*i*	Pn	Pn	10 55 21.0	+1.0	
BRY				*e*	Sn	Sb	10 55 55.0	-2.2	
ACOM	Acomizza, Ital	2.66	331⇑	*e*	Pn	Pn	10 55 21.6	+1.4	
ACOM	Acomizza, Ital	2.66	331		Pg	Pn	10 55 21.6	+1.4	
	comp=Z,1µm,0.7s								
ACOM	Acomizza, Ital	2.66	331	*e*	Pn	Pn	10 55 21.6	+1.4	
MYKA	Terra Mystica	2.69	333	⇑	Pn	Pn	10 55 22.1	+1.6	
	comp=Z,12nm,0.4s								
MYKA				⇑	Sg	Sg	10 56 05.0	+0.3	
	comp=Z,139nm,0.3s								
MYKA	Terra Mystica	2.69	333		Pn	Pn	10 55 22.1	+1.6	
	comp=Z,12nm,0.4s								
MYKA					Sg	Sg	10 56 05.0	+0.3	
	comp=Z,139nm,0.3s								
POLC	Polcenigo	2.72	312⇑	*e*	Pn	Pn	10 55 22.1	+1.3	
CAE	Caneva	2.74	311⇑	*e*	Pn	Pn	10 55 22.1	+0.9	
CAE	Caneva	2.74	311	*e*	Pn	Pn	10 55 22.1	+0.9	
MLNI	Malnisio	2.74	315⇑	*e*	Pn	Pn	10 55 21.9	+0.7	
MLNI	Malnisio	2.74	315	*e*	Pn	Pn	10 55 21.9	+0.7	
UPM	Unac-Piva	2.75	111⇑	*i*	Pn	Pn	10 55 22.9	+1.5	
UPM				*e*	Sn	Sn	10 55 56.2	+2.2	
UPM	Unac-Piva	2.75	111⇑	*i*	Pn	Pn	10 55 22.9	+1.5	
UPM				*e*	Sn	Sn	10 55 56.2	+2.2	
FUSE	Fusea	2.75	323⇓	*e*	Pn	Pn	10 55 22.0	+0.7	
FUSE	Fusea	2.75	323	*e*	Pn	Pn	10 55 22.0	+0.7	
ZOU	Zoufplan	2.88	324⇑	*e*	Pn	Pn	10 55 24.0	+0.8	
ZOU	Zoufplan	2.88	324⇑	*e*	Pn	Pn	10 55 24.0	+0.8	
ZOU	Zoufplan	2.88	324	*e*	Pn	Pn	10 55 24.0	+0.8	
TEOL	Teolo	2.88	294⇑	*e*	Pn	Pn	10 55 23.4	+0.3	
TEOL	Teolo	2.88	294	*e*	Pn	Pn	10 55 23.4	+0.3	
BBLS	Lazići	2.91	96	*e*	Pn	Pn	10 55 25.6	+2.1	
BBLS	Lazići	2.91	96	*e*	Pn	Pn	10 55 25.7	+2.2	
BBLS				*e*	Sn	Sn	10 56 00.1	+2.1	
BBLS	Lazići	2.91	96	*e*	Pn	Pn	10 55 25.6	+2.1	
BBLS				*e*	Sn	Sn	10 56 00.1	+2.1	
VARN	Col Varnada, M	2.92	308⇑	*e*	Pn	Pn	10 55 23.6	0.0	
VARN	Col Varnada, M	2.92	308	*e*	Pn	Pn	10 55 23.6	0.0	
CIMO	Cimolais	2.94	316⇑	*e*	Pn	Pn	10 55 24.2	+0.3	
CIMO	Cimolais	2.94	316	*e*	Pn	Pn	10 55 24.2	+0.3	
CSO	Casso	2.97	314⇑	*e*	Pn	Pn	10 55 24.7	+0.3	
CSO	Casso	2.97	314	*e*	Pn	Pn	10 55 24.7	+0.3	
NKY	Niksic	2.98	117⇓	*i*	Pn	Pn	10 55 25.7	+1.2	
NKY				*e*	Sn	Sn	10 56 02.2	+2.5	
CSMI	Casera Mimoias	2.98	320⇑	*e*	Pn	Pn	10 55 25.3	+0.7	
CSMI	Casera Mimoias	2.98	320	*e*	Pn	Pn	10 55 25.3	+0.7	
ARSA	Arzberg	3.01	2	*e*	Pn	Pn	10 55 26.1	+1.3	
ARSA				*e*	Sn	Sn	10 56 00.3	0.0	
ARSA	Arzberg	3.01	2	*e*	Pn	Pn	10 55 26.1	+1.3	
ARSA				*e*	Sn	Sn	10 56 00.3	0.0	
ARSA	Arzberg	3.01	2⇑	*e*	Pn	Pn	10 55 26.2	+1.3	
	comp=Z,9.8nm,0.2s,SNR=26								
ARSA				⇓	*e*	Sn	10 56 00.3	0.0	
	comp=Z,117nm,0.7s								
ARSA	Arzberg	3.01	2	*e*	Pn	Pn	10 55 26.1	+1.3	
ARSA	Arzberg	3.01	2	*e*	Pn	Pn	10 55 26.1	+1.3	
ARSA					Sn	Sn	10 56 00.3	0.0	
	comp=Z,117nm,0.7s								
PKSM	Moragy	3.02	48	*e*	Pn	Pn	10 55 25.8	+0.9	
PKSM				*e*	Sn	Sn	10 56 01.7	+1.2	
PKSM	Moragy	3.02	48⇓	*i*	P	Pn	10 55 26.2	+1.3	
PKSM	Moragy	3.02	48		S	Sn	10 55 59.5	-1.0	
PKSM	Moragy	3.02	48⇓	*e*	Pn	Pn	10 55 24.6	-0.3	
PKSM				*e*	Sn	Sn	10 56 00.1	-0.4	
PKSM	Moragy	3.02	48	*e*	Pn	Pn	10 55 25.8	+0.9	
PKSM				*e*	Sn	Sn	10 56 01.7	+1.2	
PLE	Pljevlja	3.03	106⇓	*i*	Pn	Pn	10 55 26.2	+1.0	
PLE				*e*	Sn	Sn	10 56 03.9	+3.0	
CGRP	Cima Grappa	3.03	304⇑	*e*	Pn	Pn	10 55 25.8	+0.5	
CGRP	Cima Grappa	3.03	304	*e*	Pn	Pn	10 55 25.8	+0.5	
PKS9	Tamasi	3.10	40⇓	*e*	pn	Pn	10 55 26.0	0.0	
PKS9					esn	Sn	10 56 00.9	-1.6	
AGOR	Agordo	3.12	312⇑	*e*	Pn	Pn	10 55 27.8	+1.4	
FAU	Forcella Aurin	3.13	311⇓	*e*	Pn	Pn	10 55 26.4	-0.2	
FAU	Forcella Aurin	3.13	311	*e*	Pn	Pn	10 55 26.4	-0.2	
KBA	Koelnbreinsper	3.18	334	*e*	Pn	Pn	10 55 28.9	+1.6	
KBA	Koelnbreinsper	3.18	334	*e*	Pn	Pn	10 55 28.9	+1.6	
KBA	Koelnbreinsper	3.18	334	⇓	*i*	Pn	10 55 29.1	+1.8	
	comp=Z,3.7nm,0.2s,SNR=10								
KBA				⇑	*e*	Sn	10 56 05.0	+0.2	
	comp=Z,32nm,0.3s								
KBA	Koelnbreinsper	3.18	334		Pn	Pn	10 55 28.9	+1.6	
KBA					Sn	Sn	10 56 05.0	+0.2	
	comp=Z,32nm,0.3s								
BUM	Brajici-Budva	3.21	126⇑	*i*	Pn	Pn	10 55 28.1	+0.5	
BUM				*e*	Sn	Sn	10 56 07.9	+2.7	
BUM	Brajici-Budva	3.21	126⇑	*i*	Pn	Pn	10 55 28.1	+0.5	
BUM				*e*	Sn	Sn	10 56 07.9	+2.7	
AFL	Alpe Faloria	3.22	316⇑	*e*	Pn	Pn	10 55 29.0	+1.0	
AFL	Alpe Faloria	3.22	316	*e*	Pn	Pn	10 55 29.0	+1.0	
ABTA	Abfaltersbach	3.22	322⇑	*i*	Pn	Pn	10 55 28.8	+1.0	
	comp=Z,2.4nm,0.2s,SNR=12								
ABTA				⇑	Pg	Pg	10 55 38.2	-1.9	
	comp=Z,119nm,0.6s								
ABTA				⇓	Sg	Sg	10 56 23.5	+1.6	
	comp=Z,241nm,0.9s								
ABTA	Abfaltersbach	3.22	322		Pn	Pn	10 55 28.8	+1.0	
	comp=Z,2.4nm,0.2s,SNR=12								
DIVS	Divibare	3.31	91	*e*	Pn	Pn	10 55 30.3	+1.3	
DIVS				*e*	Sn	Sn	10 56 08.7	+1.0	
DIVS	Divibare	3.31	91	*e*	Pn	Pn	10 55 30.3	+1.3	
DIVS				*e*	Sn	Sn	10 56 08.7	+1.0	
PDG	Podgorica	3.34	121	*e*	Pn	Pn	10 55 31.4	+2.0	
PDG				*e*	Sn	Sn	10 56 12.5	+4.0	
PDG	Podgorica	3.34	121⇑	*i*	Pn	Pn	10 55 30.4	+1.0	
PDG				*e*	Sn	Sn	10 56 11.8	+3.3	
TTG	Podgorica	3.34	121⇑	*i*	Pn	Pn	10 55 30.4	+1.0	
TTG				*e*	Sn	Sn	10 56 11.8	+3.3	
PANI	Panarotta	3.41	303⇑	*e*	Pn	Pn	10 55 31.1	+0.6	
PANI	Panarotta	3.41	303	*e*	Pn	Pn	10 55 31.1	+0.6	
PKS2	Kecel	3.50	49⇓	*e*	pn	Pn	10 55 31.7	+0.1	
PKS2					esn	Sn	10 56 11.8	-0.6	
SOP	Sopron	3.53	13⇓	*e*	Pn	Pn	10 55 31.6	+1.0	
SOP				*e*	sn	Sn	10 56 11.6	+1.8	
PKST	T˜'s	3.54	31⇓	*e*	Pn	Pn	10 55 32.4	+0.3	
PKST				*e*	sn	Sn	10 56 12.8	-0.5	
BEY	Berane	3.54	111⇓	*i*	Pn	Pn	10 55 33.5	+1.3	
BEY				*e*	Sn	Sn	10 56 15.9	+2.4	
IVA	Berane	3.54	111⇓	*i*	Pn	Pn	10 55 33.5	+1.3	
IVA				*e*	Sn	Sn	10 56 15.9	+2.4	
MAIM	Mastiano	3.55	266		P	Pn	10 55 33.9	+1.6	
RISI	Rein	3.57	320⇑	*e*	Pn	Pn	10 55 34.1	+1.4	
KOSI	Kohlern	3.60	309⇑	*e*	Pn	Pn	10 55 34.2	+1.1	
ULC	Ulcinj	3.62	128⇑	*i*	Pn	Pn	10 55 35.1	+1.8	
ULC				*e*	Sn	Sn	10 56 17.4	+2.0	
ULC	Ulcinj	3.62	128⇑	*i*	Pn	Pn	10 55 35.1	+1.8	
ULC				*e*	Sn	Sn	10 56 17.4	+2.0	
MOA	Molln	3.69	348	*e*	Pn	Pn	10 55 35.8	+1.6	
MOA	Molln	3.69	348	*e*	Pn	Pn	10 55 35.8	+1.6	
MOA	Molln	3.69	348⇑	*i*	Pn	Pn	10 55 35.8	+1.6	
	comp=Z,12nm,0.2s,SNR=57								
MOA				⇓	*e*	Sn	10 56 18.4	+1.2	
	comp=Z,103nm,0.5s								
MOA	Molln	3.69	348		Pn	Pn	10 55 35.8	+1.6	
	comp=Z,12nm,0.2s,SNR=57								
MOA					Sn	Sn	10 56 18.4	+1.2	
	comp=Z,103nm,0.5s								
CONA	Conrad Observa	3.70	5⇑	*e*	Pn	Pn	10 55 35.8	+1.4	
	comp=Z,20nm,0.2s,SNR=89								
CONA				⇓	*e*	Sn	10 56 17.7	+0.3	
	comp=Z,58nm,0.3s								
CONA	Conrad Observa	3.70	5		Pn	Pn	10 55 35.8	+1.4	
	comp=Z,20nm,0.2s,SNR=89								
CONA					Sn	Sn	10 56 17.7	+0.3	
	comp=Z,58nm,0.3s								
CSKK	Cs˘tkako	3.71	32⇓		epn	Pn	10 55 34.8	+0.4	
CSKK					esn	Sn	10 56 18.5	+1.0	
PVY	Plav	3.71	115⇑	*i*	Pn	Pn	10 55 36.2	+1.7	
PVY				*e*	Sn	Sn	10 56 20.5	+2.8	
PKS6	Bocsa	3.76	50		epn	Pn	10 55 31.9	-3.2	
PKS6					esn	Sn	10 56 18.4	-0.4	
VINC	Vinca	3.78	270		P	Pn	10 55 37.0	+1.6	
PKSG		3.78	33⇓	*e*	Pn	Pn	10 55 35.8	+0.4	
PKSG					esn	Sn	10 56 18.3	-0.9	
RNI	Roncone	3.79	299	*e*	Pn	Pn	10 55 36.7	+1.0	
RNI	Roncone	3.79	299	*e*	Pn	Pn	10 55 36.7	+1.0	
ABSI	Aberstueckl	3.80	312⇑	*e*	Pn	Pn	10 55 37.0	+1.2	
BACM	Baccana	3.83	272		P	Pn	10 55 38.6	+2.5	
GRAM	Graiana	3.83	276		P	Pn	10 55 38.2	+2.0	
GRUS	Gruza	3.85	93	*e*	Pn	Pn	10 55 37.8	+1.5	
GRUS				*e*	Sn	Sn	10 56 22.0	+1.1	
GRUS	Gruza	3.85	93	*e*	Pn	Pn	10 55 37.8	+1.5	
GRUS				*e*	Sn	Sn	10 56 22.0	+1.1	
PKS7	Kunszentmiklos	3.85	42⇓		epn	Pn	10 55 35.9	-0.4	
PKS7					esn	Sn	10 56 19.8	-1.1	
ROSI	Rosskopf	3.88	315⇑	*e*	Pn	Pn	10 55 38.3	+1.3	
BCI	Bajram Curri	3.89	117	*e*	PN	Pb	10 55 47.5	+1.3	
BCI				*i*	SN	Sg	10 56 59.6	+16	
RJOB	Jochberg	3.94	333	*e*	Pn	Pn	10 55 39.7	+2.1	
RJOB	Jochberg	3.94	333	*e*	Pn	Pn	10 55 39.7	+2.1	
RJOB	Jochberg	3.94	333		Pn	Pn	10 55 39.7	+2.1	
PUK	Puka	3.96	122	*e*	PN	Pn	10 55 38.8	+0.9	
PUK				*i*	SN	Sg	10 56 43.6	-1.7	
PUK	Puka	3.96	122	*e*	Pn	Pn	10 55 38.8	+0.9	
WTTA	Wattenberg	4.01	320	*e*	Pn	Pn	10 55 40.6	+1.9	
WTTA	Wattenberg	4.01	320	*e*	Pn	Pn	10 55 40.6	+1.9	
WTTA	Wattenberg	4.01	320⇑	*e*	Pn	Pn	10 55 40.6	+1.9	
	comp=Z,9.8nm,0.1s,SNR=38								
WTTA	Wattenberg	4.01	320		Pn	Pn	10 55 40.6	+1.9	
	comp=Z,9.8nm,0.1s,SNR=38								
PKSN	Nyarlorinc	4.11	48		epn	Pb	10 55 51.1	+1.2	
PKSN					esn	Sn	10 56 28.3	+1.0	
BUD	Budapest	4.11	37		epn	Pn	10 55 38.1	-1.8	
BUD					esn	Sn	10 56 26.8	-0.6	
ZST	Bratislava	4.13	16	*e*	PN	Pn	10 55 39.9	-0.3	
ZST				*e*	SN	Sn	10 56 24.7	-3.1	
ZST	Bratislava	4.13	16	*e*	Pn	Pn	10 55 39.9	-0.3	
MOSI	Grossmontoni	4.16	306	*e*	Pn	Pn	10 55 43.0	+2.2	
SC2M	Scurtabo	4.21	274		P	Pn	10 55 44.5	+3.1	
FETA	Feichten	4.29	312⇑	*e*	Pn	Pn	10 55 44.7	+2.1	
	comp=Z,2.9nm,0.2s,SNR=7.7								
FETA				⇑	*e*	Sn	10 56 37.1	+4.8	
	comp=Z,41nm,0.4s								
FETA	Feichten	4.29	312		Pn	Pn	10 55 44.7	+2.1	
	comp=Z,2.9nm,0.2s,SNR=7.7								
FETA					Sn	Sn	10 56 37.1	+4.8	
	comp=Z,41nm,0.4s								
MOTA	Moosalm	4.32	317⇑	*i*	Pn	Pn	10 55 45.0	+2.1	
	comp=Z,7.9nm,0.3s,SNR=24								
MOTA				⇓	*e*	Sn	10 56 37.0	+4.2	
	comp=Z,24nm,0.4s								
MOTA	Moosalm	4.32	317		Pn	Pn	10 55 45.0	+2.1	
	comp=Z,7.9nm,0.3s,SNR=24								
MOTA					Sn	Sn	10 56 37.0	+4.2	
	comp=Z,24nm,0.4s								
PHP	Peshkopia	4.50	123	*e*	PN	Pn	10 55 47.4	+2.1	
PHP				*i*	SN	Sg	10 56 59.7	-2.9	
PHP	Peshkopia	4.50	123	*e*	Pn	Pn	10 55 47.4	+2.1	
SMOL	Smolenice	4.50	17	*e*	PN	Pn	10 55 45.1	-0.1	
SMOL				*e*	SN	Sn	10 56 34.1	-2.8	
SMOL	Smolenice	4.50	17	*e*	Pn	Pn	10 55 45.1	-0.1	
RETA	Reutte	4.58	317⇓	*e*	Pn	Pn	10 55 48.3	+1.8	
	comp=Z,3.0nm,0.2s								
RETA				⇓	*e*	Sn	10 56 42.9	+3.7	
	comp=Z,22nm,0.3s								
RETA	Reutte	4.58	317		Pn	Pn	10 55 48.3	+1.8	
	comp=Z,3.0nm,0.2s								
RETA					Sn	Sn	10 56 42.9	+3.7	
	comp=Z,22nm,0.3s								
BZS	Buzias	4.62	71⇑	*i*	P	Pn	10 55 48.1	+1.1

GRF	**Grafenberg Arr**	**6.15**	**334**	*e*Pn		**Pn**	**10 56 09.5**	**+1.5**
MANZ	**Manzenberg**	**6.17**	**340**	*e*Pn		**Pn**	**10 56 08.4**	**+0.2**
MANZ				*e*Sn		**Sn**	**10 57 16.2**	**-2.0**
MANZ	**Manzenberg**	**6.17**	**340**	*e*Pn		**Pn**	**10 56 08.4**	**+0.2**
MANZ				*e*Sn		**Sn**	**10 57 16.2**	**-2.0**
MANZ	**Manzenberg**	**6.17**	**340**	Pn		**Pn**	**10 56 08.4**	**+0.2**
MBDF	**Montbardon**	**6.19**	**277**	*e*Pn		**Pn**	**10 56 08.4**	**-0.3**
	SNR=1.0							
MBDF				*e*Sn		**Sn**	**10 57 15.6**	**-3.4**
	comp=Z,57nm,0.6s,SNR=1.0							
MBDF	**Montbardon**	**6.19**	**277**	*e*Pn		**Pn**	**10 56 08.4**	**-0.3**
	SNR=1.0							
CRVS	**Cervenica-Dubn**	**6.26**	**40**	*e*PN		**Pn**	**10 56 08.5**	**-0.9**
CRVS				*e*SG		**Sn**	**10 57 15.0**	**-5.3**
CRVS	**Cervenica-Dubn**	**6.26**	**40**	*e*Pn		**Pn**	**10 56 08.5**	**-0.9**
LPG	**La Plagne**	**6.27**	**285**	*e*Pn		**Pn**	**10 56 10.4**	**+0.5**
	SNR=1.0							
LPG				*e*Sn		**Sn**	**10 57 18.6**	**-2.6**
	comp=Z,65nm,0.6s							
LPG	**La Plagne**	**6.27**	**285**	*e*Pn		**Pn**	**10 56 10.4**	**+0.5**
	SNR=1.0							
UPC	**Upice**	**6.28**	**4**	*e*PN		**Pn**	**10 56 10.5**	**+0.7**
UPC				*e*SN		**Sn**	**10 57 19.2**	**-1.7**
UPC	**Upice**	**6.28**	**4**	Pn		**Pn**	**10 56 10.5**	**+0.7**
LPL	**La Plagne**	**6.29**	**285**	*e*Pn		**Pn**	**10 56 10.6**	**+0.5**
	SNR=1.0							
LPL				*e*Sn		**Sn**	**10 57 18.4**	**-3.1**
	comp=Z,51nm,0.4s							
LPL	**La Plagne**	**6.29**	**285**	*e*Pn		**Pn**	**10 56 10.6**	**+0.5**
	SNR=1.0							
TRPA	**Tarpa**	**6.30**	**49**	⇓*e*pn		**Pg**	**10 56 41.1**	**+2.4**
FELD	**Feldberg im Sc**	**6.30**	**308**	P		**Pn**	**10 56 10.2**	**+0.1**
PVCC	**Panska Ves**	**6.31**	**355**	*e*SN		**Sn**	**10 57 20.2**	**-1.5**
NKC	**Novy Kostel**	**6.32**	**343**	*e*PN		**Pn**	**10 56 10.8**	**+0.5**
NKC				*e*SN		**Sn**	**10 57 21.2**	**-0.7**
NKC	**Novy Kostel**	**6.32**	**343**	Pn		**Pn**	**10 56 10.8**	**+0.5**
FRF	**La Foret Royal**	**6.36**	**267**	*e*Pn		**Pn**	**10 56 11.5**	**+0.6**
	SNR=1.0							
FRF				*e*Sn		**Sn**	**10 57 19.7**	**-3.2**
	comp=Z,27nm,0.6s,SNR=1.0							
FRF	**La Foret Royal**	**6.36**	**267**	*e*Pn		**Pn**	**10 56 11.5**	**+0.6**
	SNR=1.0							
BFO	**Black Forest**	**6.38**	**312**	*e*Pn		**Pn**	**10 56 11.4**	**+0.3**
BFO				*e*Pg		Pg	10 56 36.4	-3.9
BFO	**Black Forest**	**6.38**	**312**	*e*Pn		**Pn**	**10 56 11.4**	**+0.3**
BFO				*e*Pg		Pg	10 56 36.4	-3.9
BFO	**Black Forest**	**6.38**	**312**	Pn		**Pn**	**10 56 11.4**	**+0.3**
BBS	**Basel-Blauen**	**6.38**	**303**	P		**Pn**	**10 56 10.6**	**-0.6**
WERN	**Wernitzgruen**	**6.39**	**342**	*e*Pn		**Pn**	**10 56 11.6**	**+0.4**
WERN	**Wernitzgruen**	**6.39**	**342**	*e*Pn		**Pn**	**10 56 11.6**	**+0.4**
WERN	**Wernitzgruen**	**6.39**	**342**	Pn		**Pn**	**10 56 11.6**	**+0.4**
RSL	**Roselend**	**6.39**	**286**	P		**Pn**	**10 56 13.1**	**+1.7**
RSL	**Roselend**	**6.39**	**286**	P		**Pn**	**10 56 13.1**	**+1.7**
GUNZ	**Gunzen**	**6.47**	**342**	*e*Pn		**Pn**	**10 56 12.6**	**+0.3**
GUNZ	**Gunzen**	**6.47**	**342**	*e*Pn		**Pn**	**10 56 12.6**	**+0.3**
GUNZ	**Gunzen**	**6.47**	**342**	Pn		**Pn**	**10 56 12.6**	**+0.3**
TANN	**Tannenbergstha**	**6.49**	**343**	*e*Pn		**Pn**	**10 56 13.8**	**+1.1**
TANN	**Tannenbergstha**	**6.49**	**343**	*e*Pn		**Pn**	**10 56 13.8**	**+1.1**
TANN	**Tannenbergstha**	**6.49**	**343**	Pn		**Pn**	**10 56 13.8**	**+1.1**
LMR	**La Mourre**	**6.50**	**265**	*e*Pn		**Pn**	**10 56 13.3**	**+0.5**
	SNR=1.0							
LMR				*e*Sn		**Sn**	**10 57 23.8**	**-2.5**
	comp=Z,16nm,0.4s							
LMR	**La Mourre**	**6.50**	**265**	*e*Pn		**Pn**	**10 56 13.3**	**+0.5**
	SNR=1.0							
STHS	**Stebnicka Huta**	**6.54**	**36**	*e*PN		**Pn**	**10 56 15.8**	**+2.4**
STHS				*e*SN		**Sn**	**10 57 28.2**	**+0.8**
STHS	**Stebnicka Huta**	**6.54**	**36**	*e*Pn		**Pn**	**10 56 15.8**	**+2.4**
STHS				*e*Sn		**Sn**	**10 57 28.2**	**+0.8**
WERD	**Werda**	**6.55**	**342**	*e*Pn		**Pn**	**10 56 14.2**	**+0.7**
WERD	**Werda**	**6.55**	**342**	*e*Pn		**Pn**	**10 56 14.2**	**+0.7**
WERD	**Werda**	**6.55**	**342**	Pn		**Pn**	**10 56 14.2**	**+0.7**
PLN	**Plauen**	**6.62**	**342**	*e*Pn		**Pn**	**10 56 15.1**	**+0.7**
PLN	**Plauen**	**6.62**	**342**	*e*Pn		**Pn**	**10 56 15.1**	**+0.7**
PLN	**Plauen**	**6.62**	**342**	Pn		**Pn**	**10 56 15.1**	**+0.7**
KOLS	**Kolonicke sedl**	**6.66**	**43**	*e*PN		**Pn**	**10 56 17.4**	**+2.4**
KOLS				*e*PG		**Pg**	**10 56 46.5**	**+0.8**
KOLS				*e*SN		**Sn**	**10 57 29.3**	**-1.0**
KOLS	**Kolonicke sedl**	**6.66**	**43**	*e*Pn		**Pn**	**10 56 17.4**	**+2.4**
BRG	**Berggiesshubel**	**6.71**	**352**	PN		**Pn**	**10 56 17.9**	**+2.3**
BRG				*i*			10 57 28.3	
BRG	**Berggiesshubel**	**6.71**	**352**	SG		**Sb**	**10 57 55.8**	**+2.1**
	comp=Z,29nm,1.1s							
BRG	**Berggiesshubel**	**6.71**	**352**	*e*Sn		**Sn**	**10 57 28.4**	**-3.0**
BRG	**Berggiesshubel**	**6.71**	**352**	*e*Sn		**Sn**	**10 57 28.4**	**-3.0**
LKD2	**Lefkada island**	**6.73**	**142**	*e*PN		**Pn**	**10 56 16.0**	**+0.1**
LOMF	**Lomont**	**6.75**	**300**	P		**Pn**	**10 56 17.0**	**+0.7**
LOMF	**Lomont**	**6.75**	**300**	P		**Pn**	**10 56 17.0**	**+0.7**
MOF	**Molkenrain**	**6.79**	**305**	P		**Pn**	**10 56 17.7**	**+0.9**
MOF	**Molkenrain**	**6.79**	**305**	P		**Pn**	**10 56 17.7**	**+0.9**
THL	**Klokotos Trika**	**6.79**	**131**	*e*PN		**Pn**	**10 56 17.7**	**+0.9**
ORIF	**Oris-en-Rattie**	**6.83**	**279**	*e*Pn		**Pn**	**10 56 18.1**	**+0.7**
	SNR=1.0							
ORIF				*e*Sn		**Sn**	**10 57 31.6**	**-3.1**
	comp=Z,30nm,0.4s							
ORIF	**Oris-en-Rattie**	**6.83**	**279**	*e*Pn		**Pn**	**10 56 18.1**	**+0.7**
	SNR=1.0							
NVR	**Nevrokopi**	**6.86**	**112**	*e*PN		**Pn**	**10 56 19.6**	**+1.8**
MOX	**Moxa**	**6.90**	**340**	*e*Pn		**Pn**	**10 56 18.1**	**-0.1**
MOX				*e*Sn		**Sn**	**10 57 33.5**	**-2.6**
MOX	**Moxa**	**6.90**	**340**	*e*Pn		**Pn**	**10 56 18.1**	**-0.1**
MOX				*e*Sn		**Sn**	**10 57 33.5**	**-2.6**
MOX	**Moxa**	**6.90**	**340**	Pn		**Pn**	**10 56 18.1**	**-0.1**
HINF	**Hinteralfeld**	**6.94**	**304**	*e*Pn		**Pn**	**10 56 19.3**	**+0.5**
	SNR=1.0							
HINF				*e*Sn		**Sn**	**10 57 32.8**	**-4.4**
	comp=Z,23nm,0.4s,SNR=1.0							
HINF	**Hinteralfeld**	**6.94**	**304**	*e*Pn		**Pn**	**10 56 19.3**	**+0.5**
	SNR=1.0							
ECH	**Echery**	**6.96**	**308**	P		**Pn**	**10 56 19.3**	**+0.2**
ECH	**Echery**	**6.96**	**308**	P		**Pn**	**10 56 19.3**	**+0.2**
CABF	**La Chapelle**	**6.97**	**293**	*e*Pn		**Pn**	**10 56 19.7**	**+0.4**
	SNR=1.0							
CABF				*e*Sn		**Sn**	**10 57 34.7**	**-3.2**
	comp=Z,19nm,0.4s,SNR=1.0							
CABF	**La Chapelle**	**6.97**	**293**	*e*Pn		**Pn**	**10 56 19.7**	**+0.4**
	SNR=1.0							
CDF	**Champ du Feu**	**7.00**	**309**	*e*Pn		**Pn**	**10 56 19.5**	**-0.2**
	SNR=1.0							
CDF				*e*Sn		**Sn**	**10 57 34.4**	**-4.3**
	comp=Z,27nm,0.6s							
CDF	**Champ du Feu**	**7.00**	**309**	*e*Pn		**Pn**	**10 56 19.5**	**-0.2**
	SNR=1.0							
LANF	**Langenberg**	**7.06**	**315**	P		**Pn**	**10 56 20.8**	**+0.4**
LANF	**Langenberg**	**7.06**	**315**	P		**Pn**	**10 56 20.8**	**+0.4**
SMRF	**Simiane la Rot**	**7.08**	**271**	*e*Pn		**Pn**	**10 56 21.5**	**+0.7**
	SNR=1.0							
SMRF	**Simiane la Rot**	**7.08**	**271**	*e*Pn		**Pn**	**10 56 21.5**	**+0.7**
	SNR=1.0							
PLG	**Polygyros**	**7.11**	**120**	*e*PN		**Pn**	**10 56 22.4**	**+1.3**
EVR	**Evrytania**	**7.17**	**136**	*e*PN		**Pn**	**10 56 23.7**	**+1.7**
OG35	**Corcelles**	**7.18**	**288**	P		**Pn**	**10 56 23.4**	**+1.2**
VLS	**Valsamata**	**7.21**	**145**	*e*PN		**Pn**	**10 56 22.3**	**-0.3**
CLL	**Collm**	**7.25**	**348**	*e*Pn		**Pn**	**10 56 24.7**	**+1.7**
CLL	**Collm**	**7.25**	**348**	*e*Pn		**Pn**	**10 56 24.7**	**+1.7**
CLL	**Collm**	**7.25**	**348**	*e*Pn		**Pn**	**10 56 25.0**	**+2.0**
CLL				*e*Sn		**Sn**	**10 57 41.0**	**-3.7**
CLL				*e*Sb		**Sb**	**10 58 14.0**	**+4.6**
CLL				*e*Sg		Sg	10 58 28.0	-2.7
CLL	**Collm**	**7.25**	**348**	Pn		**Pn**	**10 56 24.7**	**+1.7**
HAU	**Haudompre**	**7.33**	**304**	*e*Pn		**Pn**	**10 56 24.2**	**+0.1**
	SNR=1.0							
HAU				*e*Sn		**Sn**	**10 57 42.6**	**-4.1**
	comp=Z,35nm,0.4s,SNR=1.0							
HAU	**Haudompre**	**7.33**	**304**	*e*Pn		**Pn**	**10 56 24.2**	**+0.1**
	SNR=1.0							
AGG	**Agios Georgios**	**7.36**	**133**	*e*PN		**Pn**	**10 56 25.3**	**+0.7**
PAIG	**Paliouri**	**7.52**	**122**	*e*PN		**Pn**	**10 56 27.5**	**+0.8**
EFP	**Efpalio**	**7.59**	**138**	*e*PN		**Pn**	**10 56 30.2**	**+2.4**
MLR	**Muntele Rosu**	**7.59**	**77**	Pn		Pn	10 56 34.7	+6.8
	comp=Z,0.1nm,0.3s,baz=225,slow=16,SNR=2.6							
MLR				Sn		**Sn**	**10 57 54.5**	**+1.0**
	comp=Z,0.1nm,0.3s,baz=283,slow=21,SNR=3.1							
BURAR	**Bucovina Array**	**7.63**	**60**	⇓*i*P		**Pn**	**10 56 28.1**	**-0.2**
THEF	**They Montfort**	**7.65**	**305**	P		**Pn**	**10 56 29.0**	**+0.5**
THEF	**They Montfort**	**7.65**	**305**	P		**Pn**	**10 56 29.0**	**+0.5**
RLS	**Riolos of Patr**	**7.69**	**141**	*e*PN		**Pn**	**10 56 31.2**	**+2.1**
VIVF	**Saint-Julien-l**	**7.69**	**278**	*e*Pn		**Pn**	**10 56 29.0**	**-0.1**
	SNR=1.0							
VIVF				*e*Sn		**Sn**	**10 57 51.9**	**-3.7**
	comp=Z,10.0nm,0.3s							
VIVF	**Saint-Julien-l**	**7.69**	**278**	*e*Pn		**Pn**	**10 56 29.0**	**-0.1**
	SNR=1.0							
KALE	**Kalithea**	**7.74**	**137**	*e*PN		**Pn**	**10 56 31.3**	**+1.5**
LAKA	**Lakka**	**7.78**	**138**	*e*PN		**Pn**	**10 56 31.1**	**+0.7**
PAGF	**Fort de Pagny**	**7.96**	**306**	*e*Pn		**Pn**	**10 56 32.0**	**-0.7**
	baz=119							
PAGF				*e*Sn		**Sn**	**10 57 57.4**	**-4.7**
	comp=Z,4.2nm,0.5s							
PAGF	**Fort de Pagny**	**7.96**	**306**	*e*Pn		**Pn**	**10 56 32.0**	**-0.7**
	baz=119							
KLV	**Kalavryta, Ach**	**8.02**	**138**	*e*PN		**Pn**	**10 56 34.6**	**+0.9**
AOS	**Alonnisos**	**8.12**	**126**	*e*PN		**Pn**	**10 56 36.7**	**+1.7**
GUR	**Goura**	**8.19**	**138**	*e*PN		**Pn**	**10 56 36.2**	**+0.1**
SFTF	**Sexfontaines**	**8.20**	**303**	*e*Pn		**Pn**	**10 56 36.1**	**0.0**
	baz=129							
SFTF	**Sexfontaines**	**8.20**	**303**	*e*Pn		**Pn**	**10 56 36.1**	**0.0**
	baz=129							
LASF	**Ste Croix**	**8.30**	**273**	*e*Pn		**Pn**	**10 56 37.6**	**+0.1**
LASF	**Ste Croix**	**8.30**	**273**	*e*Pn		**Pn**	**10 56 37.6**	**+0.1**
SMF	**Signal de Mont**	**8.48**	**291**	*e*Pn		**Pn**	**10 56 40.0**	**+0.1**
	SNR=1.0							
SMF				*e*Sn		**Sn**	**10 58 11.2**	**-3.7**
	comp=Z,22nm,0.3s							
SMF	**Signal de Mont**	**8.48**	**291**	*e*Pn		**Pn**	**10 56 40.0**	**+0.1**
	SNR=1.0							
LOR	**Lormes**	**8.62**	**295**	*e*Pn		**Pn**	**10 56 42.5**	**+0.7**
	baz=114,SNR=1.0							
LOR				*e*Sn		**Sn**	**10 58 14.1**	**-4.3**
	comp=Z,15nm,0.3s,SNR=1.0							
LOR	**Lormes**	**8.62**	**295**	*e*Pn		**Pn**	**10 56 42.5**	**+0.7**
	baz=114,SNR=1.0							
LBL	**Lubilhac**	**8.71**	**281**	P		**Pn**	**10 56 43.6**	**+0.4**
LBL	**Lubilhac**	**8.71**	**281**	P		**Pn**	**10 56 43.6**	**+0.4**
PYL	**PYLOS**	**8.78**	**145**	*e*PN		**Pn**	**10 56 44.0**	**-0.1**
SSF	**Saint Saulge**	**8.80**	**293**	*e*Pn		**Pn**	**10 56 45.1**	**+0.8**
SSF				*e*Sn		**Sn**	**10 58 17.9**	**-4.9**
	comp=Z,7.6nm,0.4s,SNR=1.0							
SSF	**Saint Saulge**	**8.80**	**293**	*e*Pn		**Pn**	**10 56 45.1**	**+0.8**
AVF	**Avril sur Loir**	**8.84**	**291**	*e*Pn		**Pn**	**10 56 44.9**	**+0.1**
	SNR=1.0							
AVF				*e*Sn		**Sn**	**10 58 18.9**	**-4.8**
	comp=Z,7.1nm,0.4s,SNR=1.0							
AVF	**Avril sur Loir**	**8.84**	**291**	*e*Pn		**Pn**	**10 56 44.9**	**+0.1**
	SNR=1.0							
DID	**Didima**	**8.97**	**136**	*e*PN		**Pn**	**10 56 47.2**	**+0.5**
BGF	**Bois d'Agland**	**9.13**	**289**	*e*Pn		**Pn**	**10 56 48.4**	**-0.5**
	SNR=1.0							
BGF				*e*Sn		**Sn**	**10 58 26.9**	**-4.1**
	comp=Z,22nm,0.4s							
BGF	**Bois d'Agland**	**9.13**	**289**	*e*Pn		**Pn**	**10 56 48.4**	**-0.5**
	SNR=1.0							
DYR	**Agios Nikonas**	**9.15**	**142**	*e*PN		**Pn**	**10 56 50.2**	**+1.1**
TCF	**Toulx Ste Croi**	**9.53**	**287**	*e*Sn		**Sn**	**10 58 36.5**	**-4.2**
	comp=Z,9.6nm,0.4s,SNR=1.0							
CAF	**Calviac**	**9.54**	**279**	*e*Pn		**Pn**	**10 56 54.5**	**0.0**
	SNR=1.0							
CAF				*e*Sn		**Sn**	**10 58 36.4**	**-4.8**
	comp=Z,4.7nm,0.5s,SNR=1.0							
CAF	**Calviac**	**9.54**	**279**	*e*Pn		**Pn**	**10 56 54.5**	**0.0**
	SNR=1.0							
BAIF	**Baives**	**9.59**	**311**	*e*Pn		**Pn**	**10 56 53.9**	**-1.1**
BAIF	**Baives**	**9.59**	**311**	*e*Pn		**Pn**	**10 56 53.9**	**-1.1**
KEST	**Kesra**	**9.68**	**211**	Pn		Pn	10 57 00.8	+4.2
	comp=Z,0.2nm,0.3s,baz=341,slow=7.8,SNR=3.8							
ANKY	**Antikythira Is**	**10.32**	**141**	*e*PN		**Pn**	**10 57 06.6**	**+1.4**
MFF	**Saint Martin d**	**11.18**	**288**	*e*Pn		**Pn**	**10 57 17.5**	**+0.6**
	SNR=1.0							
MFF	**Saint Martin d**	**11.18**	**288**	*e*Pn		**Pn**	**10 57 17.5**	**+0.6**
	SNR=1.0							
GRR	**Gorron**	**11.98**	**296**	*e*Pn		**Pn**	**10 57 27.3**	**-0.5**
GRR	**Gorron**	**11.98**	**296**	*e*Pn		**Pn**	**10 57 27.3**	**-0.5**
NACGM	**Naroch**	**12.95**	**31**	*e*LQ		LQ	11 27 11.0	
EKA	**Eskdalemuir Ar**	**16.27**	**320**	Pn		**P**	**10 58 28.4**	**0.0**
	baz=125,slow=14,SNR=4.7							
FINES	**FINESS Array B**	**18.35**	**16**	P		**Pn**	**10 58 52.2**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=202,slow=13,SNR=3.4							
MKAR	**Makanchi Array**	**45.65**	**62**	P		**P**	**11 02 57.0**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=282,slow=7.4,SNR=3.8							

IDC ***21*** *10:57:28.8±6.0,35°.90N×71°.61E,h75km±48km, mb3.5/8, mb1 3.5/11,mb1mx3.3/31,mbtmp3.5/11,ML3.4/3,MS4.1/1, Ms1 4.1/1,ms1mx2.4/37,Error ellipse: s-maj=57.6km s-min=35.1km az=148.0*

ISCJB ***21*** *10:57:34.5±0.4,36°.44N±0°.03×71°.57E±0°.07,h114km, mb3.8/8,Error ellipse: s-maj=8.6km s-min=4.1km az=167.3*

NNC ***21*** *10:57:40.0±3.5,36°.92N×70°.96E,h185km±36km,mb3.2, mpv4.1,Error ellipse: s-maj=30.8km s-min=21.7km az=32.0*

ISC 21 10:57:35.2±0.7,**36°.40N**±0°.05×**71°.58E**±0°.08,**h114**km,**n37,** σ1**f71**/38,**mb3.9**/8,**6C-2D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
CEP	**Cherat**	**2.58**	**174**	⇑P		**Pn**	**10 58 17.1**	**+1.1**
CEP				S		**Sn**	**10 58 51.0**	**+3.7**
CHCP	**Chirah Chowk**	**3.06**	**153**	P		**Pn**	**10 58 25.1**	**+2.9**
THW	**Thamme Wali**	**3.60**	**178**	P		**Pn**	**10 58 29.9**	**+0.6**
SARP	**Sargodha**	**4.55**	**168**	P		**Pn**	**10 58 41.8**	**-0.3**
THN	**Thein Dam**	**5.22**	**138**	*e*PKP4		**Pn**	**10 58 50.2**	**-0.9**
THN				*e*S		**Sn**	**10 59 50.5**	**+0.3**
DLH	**Dalhousie**	**5.28**	**135**	*e*PKP		**Pn**	**10 58 54.0**	**+1.9**
DLH				*e*S		**Sn**	**10 59 54.0**	**+2.1**
AML	**Almayashu**	**5.96**	**15**	P		**Pn**	**10 59 01.1**	**-0.3**
	SNR=24							
KZA	**Kyzart**	**6.35**	**26**	P		**Pn**	**10 59 06.9**	**+0.3**
	SNR=8.7							
EKS2	**Erkin-Say**	**6.48**	**14**	P		**Pn**	**10 59 08.6**	**+0.4**
	SNR=11							
AAK	**Ala-Archa**	**6.62**	**19**	P		**Pn**	**10 59 11.0**	**+0.8**
	SNR=6.2							
AAK	**Ala-Archa**	**6.62**	**19**	P		**Pn**	**10 59 10.7**	**+0.5**
	2.5nm,0.3s,baz=178,slow=4.7,SNR=10							
AAK				S		**Sn**	**11 00 22.4**	**-1.8**
	1.1nm,0.3s,baz=319,slow=20,SNR=7.7							
SDNR	**Sundarnagar**	**6.62**	**136**	*e*PKP		**Pn**	**10 59 11.0**	**+0.9**
SDNR				*e*S		**Sn**	**11 00 23.0**	**-1.2**
KK31	**Karatay Array**	**6.75**	**353**	⇓P		**Pn**	**10 59 09.7**	**-2.0**
	14nm,0.4s,baz=183,slow=14,SNR=288							
KK31				⇑S		Sn	11 00 20.4	-6.7
	14nm,0.6s,baz=189,slow=18,SNR=11							
CHMS	**Chumysh**	**7.03**	**19**	P		**Pn**	**10 59 15.7**	**+0.2**
	SNR=6.2							
TKM2	**Tokmak 2**	**7.21**	**24**	⇑P		**Pn**	**10 59 18.9**	**+0.8**
	3.3nm,0.5s							
TKM2				⇑S		**Sn**	**11 00 39.9**	**+1.2**
	3.2nm,0.8s							
TKM2	**Tokmak 2**	**7.21**	**24**	P		**Pn**	**10 59 19.0**	**+0.8**
	SNR=7.2							
RTK	**Rohtak**	**8.39**	**150**	*ex*		x	11 00 55.9	
AYAN	**Aya Nagar**	**9.18**	**148**	*e*S		**Sn**	**11 01 22.5**	**-3.6**
KUDL	**Kundal**	**9.21**	**152**	*e*S		Sn	11 01 20.8	-6.2
KUDL				AML		AML	11 01 23.4	
	comp=E,8.2nm,0.4s							
KUDL				AML		AML	11 01 24.5	
	comp=N,6.7nm,0.7s							
AGRA	**Agra**	**10.62**	**148**	*e*S		**Sn**	**11 01 56.0**	**-5.1**
AGRA				AML		AML	11 02 22.4	
	comp=E,43nm,0.6s							
AGRA				AML		AML	11 02 22.5	
	comp=N,47nm,0.6s							
MKAR	**Makanchi Array**	**13.11**	**34**	P		**Pn**	**11 00 36.3**	**-0.6**
	comp=N,0.0nm,0.3s,baz=216,slow=15,SNR=4.2							
KURBB	**Kurchatov Arra**	**15.08**	**17**	P		**P**	**11 01 04.3**	**-0.3**
	comp=N,0.1nm,0.3s,baz=207,slow=10,SNR=6.9							
AB31	**Akbulak array**	**15.40**	**330**	P		Pn	11 01 00.5	-5.7
	comp=N,1.2nm,0.3s,baz=136,slow=13,SNR=72							
AB31				⇑S		Sn	11 03 41.9	-15
	comp=N,1.6nm,0.4s,baz=152,slow=24,SNR=5.1							
BVAR	**Borovoye Array**	**16.65**	**357**	P		**Pn**	**11 01 20.5**	**-1.1**
	comp=N,0.2nm,0.3s,baz=178,slow=11,SNR=4.1							
AKTO	**Aktyubinsk**	**17.11**	**329**	⇑P		P	11 01 19.2	-7.8
	comp=N,4.0nm,0.8s							
AKTO				⇓S		Sn	11 04 21.1	-16
	comp=N,1.5nm,0.6s							
AKTO	**Aktyubinsk**	**17.11**	**329**	P		**P**	**11 01 24.8**	**-2.2**
	comp=N,0.7nm,0.3s,baz=111,slow=7.9,SNR=10							
ZALV	**Zalesovo Beam**	**19.82**	**24**	P		**P**	**11 01 57.4**	**+0.7**
	comp=N,2.3nm,0.4s,baz=212,slow=10,SNR=10							
AKASG	**Malin Array Be**	**33.38**	**309**	P		**P**	**11 04 03.5**	**+1.1**
	comp=N,0.7nm,0.4s,baz=82,slow=7.6,SNR=4.1							
JOF	**Joensuu**	**36.19**	**330**	*ep*		**P**	**11 04 27.0**	**+0.5**
	comp=N,0.7nm,0.3s							
FINES	**FINESS Array B**	**37.83**	**326**	P		**P**	**11 04 41.2**	**+0.8**
	comp=N,0.6nm,0.3s,baz=121,slow=9.6,SNR=11							
ARCES	**ARCESS Array B**	**41.42**	**337**	P		**P**	**11 05 11.2**	**+1.1**
	comp=N,4.1nm,0.9s,baz=124,slow=8.0,SNR=3.8							
VRAC	**Vranov**	**41.44**	**306**	LR		LR	11 24 53.6	
	comp=N,248nm,19.6s,baz=298,slow=39							
HFS	**Hagfors**	**43.44**	**322**	P		**P**	**11 05 26.9**	**+0.4**
	comp=N,1.4nm,0.5s,baz=88,slow=12,SNR=11							
NB2	**NORSAR Subarra**	**44.74**	**323**	P		**P**	**11 05 37.1**	**+0.2**
	comp=Z,0.7nm,0.5s,baz=95,slow=7.9							
NOA	**NORSAR Array B**	**44.74**	**323**	P		**P**	**11 05 37.1**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=96,slow=7.8,SNR=7.8							
TORD	**Torodi Ar. Bea**	**66.19**	**269**	P		**P**	**11 08 08.8**	**-2.2**
	comp=Z,0.3nm,0.5s,baz=51,slow=5.8,SNR=8.3							
YKA	**Yellowknife Ar**	**81.33**	**3**	P		**P**	**11 09 40.1**	**+1.6**
	comp=Z,0.2nm,0.6s,baz=348,slow=5.2,SNR=4.0							

BJI ***21*** *11:19:59.4,43°.98N×16°.57E,h11km,mB4.9/8,mb4.7/16, Ms4.9/9,Ms7 4.5/9*

IDC ***21*** *11:20:01.0±0.5,43°.40N×17°.43E,h0km,mb4.3/23, mb1 4.4/30,mb1mx4.3/36,mbtmp4.3/30,ML4.6/6,MS3.7/24, Ms1 3.8/24,ms1mx3.6/48,Error ellipse: s-maj=12.6km s-min=10.9km az=79.0*

SZGRF ***21*** *11:20:01.5,43°.23N×17°.74E,h10km,mb5.2,Northwestern Balkan Peninsula*

PDG ***21*** *11:20:03.0±1.1,43°.46N×17°.30E,h7km±2km,MD4.5/8, ML4.5/9,Error ellipse: s-maj=0.8km s-min=0.9km az=0.0*

THE ***21*** *11:20:03.9,43°.56N×17°.10E,h26km±6km,ML4.4/5,Error ellipse: s-maj=7.5km s-min=1.4km az=295.0*

ISCJB ***21*** *11:20:03.3±0.1,43°.487N±0°.008×17°.27E±0°.01,h16km, mb4.4/65,MS4.0/25,Error ellipse: s-maj=1.3km s-min=1.1km az=44.5*

ROM ***21*** *11:20:03.0±0.3,43°.39N×17°.34E,h6km±2km,Ml4.8/88, Error ellipse: s-maj=1.7km s-min=1.0km az=81.0*

NEIC ***21*** *11:20:03.5±0.2,43°.43N×17°.27E,h10km,mb4.6/32,Error ellipse: s-maj=4.2km s-min=2.8km az=190.0*

NEIC Felt [III] at Split. Also felt at Bol, Dubrovnik, Jasenice, Makarska, Postire, Solin and Trogir. Felt [II] at Sarajevo, Bosnia and Herzegovina. Also felt at Mostar and Visoko.

PRU ***21*** *11:20:03.3,43°.49N×17°.20E,h0km,M4.6*

MOS ***21*** *11:20:03.5±1.1,43°.46N×17°.19E,h27km,mb4.7/42,Error ellipse: s-maj=3.5km s-min=2.6km az=108.4*

VIE ***21***

10µm,1.1s
FRES Fresagrandinar 2.42 233 Pg Pn 11 20 44.1 +0.9
10µm,1.1s
GUMA Gualdo di Mace 2.46 262 Pg Pg 11 20 51.3 -0.1
10µm,0.7s
CAFR Castel Frentan 2.48 241 Pg Pn 11 20 45.2 +1.3
11µm,0.7s
CAFR Castel Frentan 2.48 241 Pg Pn 11 20 45.2 +1.3
11µm,0.7s
FGSL Fruska Gora 2.49 46 *e*Pn Pn 11 20 43.3 -0.8
FRGS Fruska Gora 2.49 46 *e*Pn Pn 11 20 43.3 -0.8
BOJS Bojanci 2.49 325 *i* Pn Pb 11 20 46.5 -2.1
BOJS *e*Sn **Sb** 11 21 18.7 -0.4
BOJS
comp=Z,6µm,0.6s
BOJS Bojanci 2.49 325 *e*Pn Pb 11 20 46.7 -1.9
BOJS Bojanci 2.49 325 *e*Pn Pb 11 20 46.7 -1.9
BOJS *e*Sn **Sb** 11 21 18.7 -0.4
comp=Z,6µm,0.6s
CIGN Sant'Elia a Pi 2.51 225 Pg Pn 11 20 45.0 +0.6
comp=Z,8µm,1.5s
CIGN Sant'Elia a Pi 2.51 225 Pg Pn 11 20 45.0 +0.6
comp=Z,8µm,1.5s
MRVN Minervino Murg 2.53 199 Pg Pn 11 20 43.9 -0.8
comp=Z,3µm,0.9s
MRVN Minervino Murg 2.53 199 Pg Pn 11 20 43.9 -0.8
comp=Z,3µm,0.9s
GRUS Gruza 2.54 79 *e*Pn Pn 11 20 45.4 +0.6
GRUS Gruza 2.54 79 *e*Pn Pn 11 20 45.4 +0.6
AMUR Altamura 2.60 191 Pg Pn 11 20 44.9 -0.8
AMUR Sg **Sn** 11 21 16.2 -0.8
comp=Z,2µm,0.6s
AMUR Altamura 2.60 191 Pg Pn 11 20 44.9 -0.8
AMUR Sg **Sn** 11 21 16.2 -0.8
comp=Z,2µm,0.6s
TRIV Trivento 2.62 231 Pg Pn 11 20 47.0 +1.0
comp=Z,5µm,0.9s
TRIV Trivento 2.62 231 Pg Pn 11 20 47.0 +1.0
comp=Z,5µm,0.9s
FG5 Orsara di Pugl 2.63 215 Pg Pn 11 20 46.8 +0.7
FG5 Orsara di Pugl 2.63 215 Pg Pn 11 20 46.8 +0.7
AOI Ancona 2.66 273 Pg Pn 11 20 48.1 +1.6
comp=Z,4µm,0.8s
AOI Ancona 2.66 273 Pg Pn 11 20 48.1 +1.6
comp=Z,4µm,0.8s
OFFI Offida 2.67 260 Pg Pn 11 20 48.9 +2.4
comp=Z,11µm,0.8s
OFFI Offida 2.67 260 Pg Pn 11 20 48.9 +2.4
comp=Z,11µm,0.8s
GCIS Gornji Cirnik 2.67 335⇓ *i* Pn Pn 11 20 48.1 +1.5
GCIS *e*Sn **Sb** 11 21 21.8 -2.3
GCIS
comp=Z,3µm,0.7s
GCIS Gornji Cirnik 2.67 335⇓ *i* Pn Pn 11 20 48.1 +1.5
GCIS *e*Sn **Sb** 11 21 21.8 -2.3
comp=Z,3µm,0.7s
BEO Beograd 2.67 59 *e*Pn Pn 11 20 45.9 -0.7
BEO Beograd 2.67 59 *e*Pn Pn 11 20 45.9 -0.7
LPEL Lama dei Pelig 2.67 239 Pg Pn 11 20 47.5 +0.8
LPEL Sg **Sn** 11 21 20.0 +1.2
comp=Z,3µm,0.5s
LPEL Lama dei Pelig 2.67 239 Pg Pn 11 20 47.5 +0.8
LPEL Sg **Sn** 11 21 20.0 +1.2
comp=Z,3µm,0.5s
NOCI Noci 2.68 183 Pg Pn 11 20 45.8 -0.9
NOCI Sg **Sn** 11 21 18.2 -0.6
comp=Z,5µm,0.5s
NOCI Noci 2.68 183 Pg Pn 11 20 45.8 -0.9
NOCI Sg **Sn** 11 21 18.2 -0.6
comp=Z,5µm,0.5s
CRES Cresnjev 2.69 332⇓ *e*Pn Pn 11 20 48.1 +1.3
CRES *e*Sn **Sb** 11 21 23.3 -1.4
CRES
comp=Z,8µm,0.7s
CRES Cresnjev 2.69 332⇓ *e*Pn Pn 11 20 48.1 +1.3
CRES *e*Sn **Sb** 11 21 23.3 -1.4
comp=Z,8µm,0.7s
PALZ Palazzo San Ge 2.70 201 Pg Pn 11 20 47.0 0.0
comp=Z,18µm,1.3s
PALZ Palazzo San Ge 2.70 201 Pg Pn 11 20 47.0 0.0
comp=Z,18µm,1.3s
SGTA Sant Agata di 2.72 212 Pg Pn 11 20 47.7 +0.4
comp=Z,4µm,0.7s
SGTA Sant Agata di 2.72 212 Pg Pn 11 20 47.7 +0.4
comp=Z,4µm,0.7s
VCEL Villa Celiera 2.73 248 Pg Pn 11 20 48.8 +1.3
comp=Z,7µm,1.1s
VCEL Villa Celiera 2.73 248 Pg Pn 11 20 48.8 +1.3
comp=Z,7µm,1.1s
BSSO Busso 2.75 227 Pg Pn 11 20 48.6 +0.8
comp=Z,3µm,0.8s
BSSO Busso 2.75 227 Pg Pn 11 20 48.6 +0.8
comp=Z,3µm,0.8s
VULT Monte Vulture 2.79 207 Pg Pn 11 20 49.8 +1.5
comp=Z,6µm,0.9s
VULT Monte Vulture 2.79 207 Pg Pn 11 20 49.8 +1.5
comp=Z,6µm,0.9s
SACR S. Croce Del S 2.80 223 Pg Pn 11 20 48.6 +0.2
comp=Z,2µm,0.5s
SACR S. Croce Del S 2.80 223 Pg Pn 11 20 48.6 +0.2
comp=Z,2µm,0.5s
TERO Teramo 2.81 254 Pg Pn 11 20 49.7 +1.2
comp=Z,3µm,0.7s
TERO Teramo 2.81 254 Pg Pn 11 20 49.7 +1.2
comp=Z,3µm,0.7s
SELS Selova 2.82 94 *e*Pn Pn 11 20 49.8 +1.1
SELS *e*Sn **Sn** 11 21 24.6 +2.2
SELS Selova 2.82 94 *e*Pn Pn 11 20 49.8 +1.1
SELS *e*Sn **Sn** 11 21 24.6 +2.2
MATE Matera 2.84 189 Pg Pn 11 20 48.3 -0.6
MATE Sg **Sn** 11 21 22.2 -0.6
comp=Z,4µm,0.7s
MATE Matera 2.84 189 Pg Pn 11 20 48.3 -0.6
MATE Sg **Sn** 11 21 22.2 -0.6
comp=Z,4µm,0.7s
ACER Acerenza 2.85 201 Pg Pn 11 20 49.2 +0.1
ACER Acerenza 2.85 201 Pg Pn 11 20 49.2 +0.1
CAFE Carife 2.86 212 Pg Pn 11 20 49.8 +0.5
comp=Z,2µm,0.6s
CAFE Carife 2.86 212 Pg Pn 11 20 49.8 +0.5
comp=Z,2µm,0.6s
TIR Tirane 2.86 137 *e*PN Pn 11 20 50.5 +1.3
TIR *i* SN **Sg** 11 21 38.4 +2.2
TIR Tirane 2.86 137 *e*P Pn 11 20 50.0 +0.8
TIR *e* 11 21 23.9
TIR Tirane 2.86 137 *e*Pn Pn 11 20 50.0 +0.8
TIR *e*Sn **Sn** 11 21 23.9 +0.6
TIR *e*Sg **Sg** 11 21 36.1 -0.1
TIR Tirane 2.86 137 *e*P Pn 11 20 50.0 +0.8
TIR Tirane 2.86 137 *e*Pn Pn 11 20 50.5 +1.3
TIR *e*Sn **Sn** 11 21 23.9 +0.6
IPES Pescosannita 2.87 220 Pg Pn 11 20 50.4 +1.1
INTR Introdacqua 2.87 241 Pg Pn 11 20 50.0 +0.6
comp=Z,6µm,0.8s
INTR Introdacqua 2.87 241 Pg Pn 11 20 50.0 +0.6
comp=Z,6µm,0.8s
MIDA Miranda 2.87 232 Pg Pn 11 20 49.9 +0.5
comp=Z,3µm,0.7s
MIDA Miranda 2.87 232 Pg Pn 11 20 49.9 +0.5
comp=Z,3µm,0.7s
PSB1 Pescosannita 2.88 220 Pg Pn 11 20 50.2 +0.7
comp=Z,3µm,0.8s
PSB1 Pescosannita 2.88 220 Pg Pn 11 20 50.2 +0.7
comp=Z,3µm,0.8s
MRB1 Monte Rocchett 2.89 217 Pg Pn 11 20 51.3 +1.7
comp=Z,4µm,0.7s
MRB1 Monte Rocchett 2.89 217 Pg Pn 11 20 51.3 +1.7
comp=Z,4µm,0.7s
RNI2 Rionero Sannit 2.90 234 Pg Pn 11 20 50.6 +0.9
comp=Z,9µm,1.3s
RNI2 Rionero Sannit 2.90 234 Pg Pn 11 20 50.6 +0.9
comp=Z,9µm,1.3s
VISS Visnje 2.91 324 *i* Pn Pn 11 20 52.2 +2.4
VISS *e*Sn **Sb** 11 21 28.5 -2.5
VISS
comp=Z,6µm,1.2s
VISS Visnje 2.91 324 *i* Pn Pn 11 20 52.2 +2.4
VISS *e*Sn **Sb** 11 21 28.5 -2.5
comp=Z,6µm,1.2s
MESG Mesagne 2.91 171 Pg Pn 11 20 49.1 -0.7
comp=Z,2µm,0.8s
MESG Mesagne 2.91 171 Pg Pn 11 20 49.1 -0.7
comp=Z,2µm,0.8s
KNDS Knezji Dol 2.92 316 *i* Pn Pn 11 20 52.6 +2.6
KNDS *i* Sn **Sb** 11 21 33.3 +2.0
KNDS
comp=Z,4µm,0.6s
KNDS Knezji Dol 2.92 316 *i* Pn Pn 11 20 52.6 +2.6
PKSM Moragy 2.92 19 ⇓P Pn 11 20 49.5 -0.4
PKSM S **Sn** 11 21 24.7 +0.1
PKSM Moragy 2.92 19 *e*Pn Pn 11 20 49.6 -0.4
PKSM Moragy 2.92 19⇓ *i* P Pn 11 20 49.5 -0.4
PKSM Moragy 2.92 19⇓ *e*Pn Pn 11 20 49.5 -0.4
PKSM *e*pPn **Pb** 11 20 57.3 +1.5
PKSM *e*Sb **Sg** 11 21 34.9 -3.0
PKSM Moragy 2.92 19 *e*Pn Pn 11 20 49.6 -0.4
PKSM S **Sn** 11 21 24.7 +0.1
PTRJ Pietraroja 2.92 225 Pg Pn 11 20 50.4 +0.4
comp=Z,6µm,0.8s
PTRJ Pietraroja 2.92 225 Pg Pn 11 20 50.4 +0.4
comp=Z,6µm,0.8s
MIGL Miglionico 2.92 192 Pg Pn 11 20 50.0 -0.1
comp=Z,24µm,1.4s
MIGL Miglionico 2.92 192 Pg Pn 11 20 50.0 -0.1
comp=Z,24µm,1.4s
SENI Senigallia 2.94 276 Pg Pn 11 20 52.4 +2.2
comp=Z,4µm,0.7s
SENI Senigallia 2.94 276 Pg Pn 11 20 52.4 +2.2
comp=Z,4µm,0.7s
TAR1 Taranto 2.94 180 *e*Pn Pn 11 20 50.0 -0.2
PHP Peshkopia 2.95 126 *e*PN Pn 11 20 53.2 +2.8
PHP *i* SN **Sg** 11 21 40.2 +1.3
PHP Peshkopia 2.95 126 *e*Pn Pn 11 20 53.2 +2.8
FAGN Fagnano 2.96 247 Pg Pn 11 20 51.9 +1.3
comp=Z,5µm,0.5s
FAGN Fagnano 2.96 247 Pg Pn 11 20 51.9 +1.3
comp=Z,5µm,0.5s
SNAL S. Angelo Dei 2.96 212 Pg Pn 11 20 51.2 +0.6
comp=Z,5µm,0.9s
SNAL S. Angelo Dei 2.96 212 Pg Pn 11 20 51.2 +0.6
comp=Z,5µm,0.9s
CING Cingoli 2.96 270 Pg Pn 11 20 52.0 +1.4
comp=Z,2µm,0.6s
CING Cingoli 2.96 270 Pg Pn 11 20 52.0 +1.4
comp=Z,2µm,0.6s
SVIS Svilajnac 2.97 73 *e*Pn Pn 11 20 50.3 -0.3
CAMP Campotosto 2.98 253 Pg Pn 11 20 51.9 +1.0
comp=Z,2µm,0.8s
CAMP Campotosto 2.98 253 Pg Pn 11 20 51.9 +1.0
comp=Z,2µm,0.8s
MRLC Muro Lucano 3.01 207 Pg Pn 11 20 50.9 -0.4
comp=Z,2µm,0.5s
MRLC Muro Lucano 3.01 207 Pg Pn 11 20 50.9 -0.4
comp=Z,2µm,0.5s
BEHE Becsehely 3.02 354⇓ *e*Pn Pn 11 20 52.8 +1.4
BEHE *e*Sn **Sn** 11 21 26.8 -0.5
VAGA Valle Agricola 3.04 229 Pg Pn 11 20 52.7 +1.0
comp=Z,3µm,0.6s
VAGA Valle Agricola 3.04 229 Pg Pn 11 20 52.7 +1.0
comp=Z,3µm,0.6s
CERA Filignano 3.04 233 Pg Pn 11 20 52.6 +0.9
comp=Z,3µm,0.8s
CERA Filignano 3.04 233 Pg Pn 11 20 52.6 +0.9
comp=Z,3µm,0.8s
AQU L'Aquila 3.05 250 Pg Pn 11 20 53.2 +1.5
comp=Z,6µm,1.1s
AQU L'Aquila 3.05 250 *e*Pn Pn 11 20 53.3 +1.5
AQU *e*Sn **Sn** 11 21 29.1 +1.2
AQU L'Aquila 3.05 250⇑ *i* P Pn 11 20 53.3 +1.5
AQU L'Aquila 3.05 250 *e*Pn Pn 11 20 53.3 +1.5
AQU *e*Sn **Sn** 11 21 29.1 +1.2
PDKS Podkum 3.06 329 *i* Pn Pn 11 20 54.0 +2.1
PDKS *e*Sn **Sn** 11 21 31.5 +3.4
PDKS
comp=Z,6µm,1.1s
PDKS Podkum 3.06 329 *i* Pn Pn 11 20 54.0 +2.1
PDKS *e*Sn **Sn** 11 21 31.5 +3.4
comp=Z,6µm,1.1s
KOGS Kog 3.07 347⇓ *i* Pn Pn 11 20 53.0 +1.0
KOGS *i* Sn **Sn** 11 21 29.7 +1.4
KOGS
comp=Z,2µm,0.7s
KOGS Kog 3.07 347⇓ *i* Pn Pn 11 20 53.0 +1.0
KOGS *i* Sn **Sn** 11 21 29.7 +1.4
comp=Z,2µm,0.7s
FDMO Fiordimonte 3.08 263 Pg Pn 11 20 53.5 +1.3
comp=Z,2µm,0.7s
FDMO Fiordimonte 3.08 263 Pg Pn 11 20 53.5 +1.3
comp=Z,2µm,0.7s
CSSN Cassano Irpino 3.09 213 Pg Pn 11 20 52.5 +0.1
CSSN Cassano Irpino 3.09 213 Pg Pn 11 20 52.5 +0.1
NRCA Norcia 3.10 260 Pg Pn 11 20 54.1 +1.6
NRCA Norcia 3.10 260 Pg Pn 11 20 54.1 +1.6
MCRV Calabrutti - M 3.10 211 Pg Pn 11 20 53.0 +0.4
comp=Z,1µm,0.5s
MCRV Calabrutti - M 3.10 211 Pg Pn 11 20 53.0 +0.4
comp=Z,1µm,0.5s
SKDS Skadanscina 3.12 313 *i* Pn Pn 11 20 54.7 +2.0
SKDS Skadanscina 3.12 313 *i* Pn Pn 11 20 54.7 +2.0
VVLD Villa Vallelon 3.12 241 Pg Pn 11 20 53.5 +0.6
comp=Z,3µm,1.0s
VVLD Villa Vallelon 3.12 241 Pg Pn 11 20 53.5 +0.6
comp=Z,3µm,1.0s
ARVD Arcevia 3.15 272 Pg Pn 11 20 54.4 +1.3
comp=Z,2µm,0.8s
ARVD Arcevia 3.15 272 Pg Pn 11 20 54.4 +1.3
comp=Z,2µm,0.8s
POFI Posta Fibreno 3.15 238 Pg Pn 11 20 53.9 +0.7
comp=Z,2µm,1.1s
POFI Posta Fibreno 3.15 238 Pg Pn 11 20 53.9 +0.7
comp=Z,2µm,1.1s
SNTG Esanatoglia 3.16 268 Pg Pn 11 20 54.6 +1.3
SNTG Esanatoglia 3.16 268 Pg Pn 11 20 54.6 +1.3
PTQR Pietraquaria 3.19 244 Pg Pn 11 20 55.2 +1.4
PTQR Pietraquaria 3.19 244 Pg Pn 11 20 55.2 +1.4
PKS9 Tamasi 3.20 13⇑ *e*Pn Pn 11 20 54.4 +0.5
PKS9 *e*sn **Sg** 11 21 48.5 +1.4
LNSS Leonessa 3.21 256 Pg Pn 11 20 55.6 +1.5
comp=Z,3µm,0.7s
LNSS Leonessa 3.21 256 Pg Pn 11 20 55.6 +1.5
comp=Z,3µm,0.7s
CESI CESI - Serrava 3.22 263 Pg Pn 11 20 55.8 +1.7
comp=Z,843nm,0.8s
CESI CESI - Serrava 3.22 263 Pg Pn 11 20 55.8 +1.7
comp=Z,843nm,0.8s
LJU Ljubljana 3.23 324 *i* Pn Pn 11 20 56.7 +2.4
LJU *e*Sn **Sb** 11 21 37.5 -2.8
LJU
comp=Z,8µm,0.9s
LJU Ljubljana 3.23 324 *i* Pn Pn 11 20 56.7 +2.4
LJU *e*Sn **Sb** 11 21 37.5 -2.8
comp=Z,8µm,0.9s
FSSB Fossombrone 3.27 276 Pg Pn 11 20 56.4 +1.6
comp=Z,3µm,0.5s
FSSB Fossombrone 3.27 276 Pg Pn 11 20 56.4 +1.6
comp=Z,3µm,0.5s
FIAM Fiamignano 3.27 250 Pg Pn 11 20 56.0 +1.1
comp=Z,3µm,0.7s
FIAM Fiamignano 3.27 250 Pg Pn 11 20 56.0 +1.1
comp=Z,3µm,0.7s
CDRU Civita di Ruta 3.31 207 Pg Pn 11 20 55.5 0.0
comp=Z,593nm,0.5s
CDRU Civita di Ruta 3.31 207 Pg Pn 11 20 55.5 0.0
comp=Z,593nm,0.5s
PKS2 Kecel 3.33 24⇑ *e*Pn Pn 11 20 56.2 +0.6
PKS2 *e*sPn **Pg** 11 21 07.7 -0.3
JAVS Javornik 3.33 318 *i* Pn Pn 11 20 58.3 +2.6
JAVS ⇑*e*Sn **Sb** 11 21 40.0 -3.2
JAVS
comp=Z,4µm,0.7s
JAVS Javornik 3.33 318 *i* Pn Pn 11 20 58.3 +2.6
JAVS *e*Sn **Sb** 11 21 40.0 -3.2
comp=Z,4µm,0.7s
TRI Trieste 3.36 313 *e*P Pn 11 20 58.0 +2.0
TRI Trieste 3.36 313 Pg Pn 11 20 57.6 +1.6
comp=Z,5µm,0.9s
TRI Trieste 3.36 313 *e*Pn Pn 11 20 58.0 +2.0
TRI *e*Sg **Sg** 11 21 54.4 +2.4
TRI Trieste 3.36 313 Pg Pn 11 20 57.6 +1.6
comp=Z,5µm,0.9s
TRI Trieste 3.36 313 *e*Pn Pn 11 20 58.0 +2.0
TRI *e*Sg **Sg** 11 21 54.4 +2.4
GUAR Guarcino 3.36 242 Pg Pn 11 20 57.2 +1.1
comp=Z,2µm,0.7s
GUAR Guarcino 3.36 242 Pg Pn 11 20 57.2 +1.1
comp=Z,2µm,0.7s
ASSB Assisi San Ben 3.39 264 Pg Pn 11 20 58.1 +1.6
comp=Z,2µm,0.5s
ASSB Assisi San Ben 3.39 264 Pg Pn 11 20 58.1 +1.6
comp=Z,2µm,0.5s
MTSN Montesano sull 3.39 200 Pg Pn 11 20 56.5 -0.1
comp=Z,2µm,0.6s
MTSN Montesano sull 3.39 200 Pg Pn 11 20 56.5 -0.1
comp=Z,2µm,0.6s
BARS Barje 3.40 99 *e*Pn Pn 11 20 58.0 +1.5
BARS Barje 3.40 99 *e*Pn Pn 11 20 58.0 +1.5
MODR Mondragone 3.42 228 Pg Pn 11 20 57.7 +0.9
comp=Z,2µm,1.2s
MODR Mondragone 3.42 228 Pg Pn 11 20 57.7 +0.9
comp=Z,2µm,1.2s
SKO Skopje 3.42 114 *e*Pn Pn 11 20 59.7 +2.8
SKO Skopje 3.42 114 *e*Pn Pn 11 20 59.5 +2.7
SKO *e*Sn **Sn** 11 21 41.2 +4.1
SKO Skopje 3.42 114 *e*Pn Pn 11 20 59.7 +2.8
BOLS Boljevac 3.42 82 *e*Pn Pn 11 20 55.9 -1.0
BOLS Boljevac 3.42 82 *e*Pn Pn 11 20 55.9 -1.0
PIEI Pieia 3.44 273 Pg Pn 11 20 58.5 +1.3
comp=Z,1µm,0.7s
PIEI Pieia 3.44 273 Pg Pn 11 20 58.5 +1.3
comp=Z,1µm,0.7s
SIRI Monte Sirino - 3.44 198 Pg Pn 11 20 56.9 -0.4
comp=Z,3µm,1.1s
SIRI Monte Sirino - 3.44 198 Pg Pn 11 20 56.9 -0.4
comp=Z,3µm,1.1s
MURB Monte Urbino 3.46 268 Pg Pn 11 20 59.4 +1.9
comp=Z,4µm,0.3s
MURB Monte Urbino 3.46 268 Pg Pn 11 20 59.4 +1.9
comp=Z,4µm,0.3s
CMPR Campora 3.47 206 Pg Pn 11 20 57.1 -0.5
comp=Z,679nm,0.5s
CMPR Campora 3.47 206 Pg Pn 11 20 57.1 -0.5
comp=Z,679nm,0.5s
CERT Cerreto 3.50 246 Pg Pn 11 20 59.2 +1.2
comp=Z,4µm,0.8s
CERT Cerreto 3.50 246 Pg Pn 11 20 59.2 +1.2
comp=Z,4µm,0.8s
VOJS Vojsko 3.52 318 *i* Pn Pn 11 21 00.8 +2.6
VOJS *i* Sn **Sb** 11 21 45.7 -2.9
VOJS
comp=Z,6µm,0.8s
VOJS Vojsko 3.52 318 *i* Pn Pn 11 21 00.9 +2.6
RSM Repubblica di 3.52 279 Pg Pn 11 20 59.5 +1.2
comp=Z,3.0nm,0.9s
RSM Repubblica di 3.52 279 Pg Pn 11 20 59.5 +1.2
comp=Z,3.0nm,0.9s
GIUL Giuliano Di Ro 3.52 239 Pg Pn 11 20 58.8 +0.5
comp=Z,1µm,0.8s
GIUL Giuliano Di Ro 3.52 239 Pg Pn 11 20 58.8 +0.5
comp=Z,1µm,0.8s
PKS6 Bocsa 3.53 27⇑ *e*Pn Pn 11 20 58.1 -0.3
PKS6 *e*sn **Sg** 11 22 00.9 +3.3
MNS Montasola 3.53 254 Pg Pn 11 21 00.2 +1.7
comp=Z,1µm,0.7s
MNS Montasola 3.53 254 Pg Pn 11 21 00.2 +1.7
comp=Z,1µm,0.7s
CESX Cesi 3.54 258 Pg Pn 11 21 00.0 +1.5
comp=Z,1µm,0.5s
CESX Cesi 3.54 258 Pg Pn 11 21 00.0 +1.5
comp=Z,1µm,0.5s
MGR Morigerati 3.56 202 Pg Pn 11 20 59.0 +0.2
comp=Z,689nm,0.4s
MGR Morigerati 3.56 202 Pg Pn 11 20 59.0 +0.2
comp=Z,689nm,0.4s
SOKA Soboth 3.58 335⇓ *e*Pn Pn 11 21 00.9 +1.7
comp=Z,629nm,0.3s
SOKA ⇓*e*Sn **Sn** 11 21 42.5 +1.4
comp=Z,2µm,0.5s
SOKA Soboth 3.58 335 Pn Pn 11 21 00.9 +1.7
comp=Z,629nm,0.3s
SOKA Sn **Sn** 11 21 42.5 +1.4
comp=Z,2µm,0.5s
OBKA Obir 3.60 329 *e*Pn Pn 11 21 01.3 +1.9
OBKA Obir 3.60 329⇑ *e*Pn Pn 11 21 01.8 +2.4
comp=Z,60nm,0.2s,SNR=86
OBKA ⇓*e*Sn **Sn** 11 21 45.3 +3.6
comp=Z,2µm,0.4s
OBKA Obir 3.60 329 Pn Pn 11 21 01.8 +2.4
comp=Z,60nm,0.2s,SNR=86
OBKA Sn **Sn** 11 21 45.3 +3.6
comp=Z,2µm,0.4s
SABO M.te Sabotino 3.62 315 Pg Pn 11 21 01.4 +1.7
comp=Z,14µm,0.7s
SABO M.te Sabotino 3.62 315 Pg Pn 11 21 01.4 +1.7
comp=Z,14µm,0.7s
MTCE Montecelio 3.63 248 Pg Pn 11 21 00.2 +0.5
comp=Z,1µm,0.7s
MTCE Montecelio 3.63 248 Pg Pn 11 21 00.2 +0.5
comp=Z,1µm,0.7s
CUC Castrocucco 3.63 198 Pg Pn 11 20 59.5 -0.4
comp=Z,2µm,0.9s
CUC Castrocucco 3.63 198 *e*Pn Pn 11 21 00.2 +0.3
CUC *e*Sn **Sn** 11 21 45.6 +3.1
CUC Castrocucco 3.63 198 Pg Pn 11 20 59.5 -0.4
comp=Z,2µm,0.9s
CUC Castrocucco 3.63 198 *e*Pn Pn 11 21 00.2 +0.3
CUC *e*Sn **Sn** 11 21 45.6 +3.1
BADI Badiali 3.65 272 Pg Pn 11 21 02.2 +2.1
comp=Z,9075µm,88.0s
BADI Badiali 3.65 272 Pg Pn 11 21 02.2 +2.1
comp=Z,9075µm,88.0s
PARC Parchiule 3.66 275 Pg Pn 11 21 01.8 +1.7
comp=Z,1µm,0.5s
PARC Parchiule 3.66 275 Pg Pn 11 21 01.8 +1.7
comp=Z,1µm,0.5s
CADS Cadrg 3.73 319⇑ *i* Pn Pn 11 21 03.7 +2.5
CADS *e*Sn **Sb** 11 21 50.8 -3.9
CADS
comp=Z,4µm,0.5s
CADS Cadrg 3.73 319⇑ *i* Pn Pn 11 21 03.7 +2.5
BZS Buzias 3.78 54 ⇑P Pn 11 20 00.7 -1.1
BZS Buzias 3.78 54 ⇑*i* P Pn 11 20 00.7 -1.1
BZS Buzias 3.78 54 P Pn 11 20 00.7 -1.1
MGAB Montegabbione 3.81 263 Pg Pn 11 21 03.9 +1.7
comp=Z,2µm,0.4s
MGAB Montegabbione 3.81 263 Pg Pn 11 21 03.9 +1.7
comp=Z,2µm,0.4s
PKS7 Kunszentmiklos 3.82 20⇑ *e*Pn Pn 11 21 02.4 0.0
PKS7 *e*pPn **pPn** 11 21 08.0 +1.8
PKST T"s 3.83 8⇑ *e*Pn Pn 11 21 03.2 +0.7
PKST *e*Sn **Sn** 11 21 50.0 +2.8
CAFI Castiglion Fio 3.86 270 Pg Pn 11 21 04.9 +1.9
CAFI Castiglion Fio 3.86 270 Pg Pn 11 21 04.9 +1.9
CRE Caprese Michel 3.87 274 Pg Pn 11 21 05.6 +2.5
comp=Z,488nm,0.6s
CRE Caprese Michel 3.87 274 Pg Pn 11 21 05.6 +2.5
comp=Z,488nm,0.6s
KBN Korca 3.87 136 *e*PN Pn 11 21 06.6 +3.5
KBN *i* SN **Sn** 11 21 49.7 +1.5
KBN Korca 3.87 136 *e*Pn Pn 11 21 06.6 +3.5
KBN *i* Sn **Sn** 11 21 49.7 +1.5
BIA Bitola 3.88 128 P Pn 11 21 04.5 +1.2
BIA Bitola 3.88 128 *e*Pn Pn 11 21 04.3 +1.0
BIA Bitola 3.88 128 P Pn 11 21 04.5 +1.2
PKSN Nyarlorinc 3.89 27⇑ *e*Pn Pn 11 21 03.9 +0.6
PKSN *e*sPn **Pg** 11 21 17.2 -1.6
PKSN *e*Sn **Sn** 11 21 49.0 +0.3
ZAPS Zavoj 3.92 91 *e*Pn Pn 11 21 06.5 +2.7
SFI Santa Sofia 3.95 278 Pg Pn 11 21 05.9 +1.7
comp=Z,2µm,0.8s
SFI Santa Sofia 3.95 278 Pg Pn 11 21 05.9 +1.7
comp=Z,2µm,0.8s
CSKK Cs˙ˇkako 3.96 10⇑ *e*Pn Pn 11 21 04.9 +0.6
SACS San Casciano d 3.96 263 Pg Pn 11 21 05.8 +1.4
comp=Z,1µm,0.9s
SACS San Casciano d 3.96 263 Pg Pn 11 21 05.8 +1.4
comp=Z,1µm,0.9s
VINO Villanova 3.97 316 Pg Pn 11 21 06.4 +1.9
comp=Z,4µm,0.7s
VINO Villanova 3.97 316 Pg Pn 11 21 06.4 +1.9
comp=Z,4µm,0.7s
DJES Djerdap 3.98 71 *e*Pn Pn 11 21 04.2 -0.3
DJES Djerdap 3.98 71 *e*Pn Pn 11 21 04.2 -0.3
ARSA Arzberg 3.98 343 *e*Pn Pn 11 21 05.8 +1.2
ARSA *e*Sn **Sn** 11 21 51.9 +1.1
ARSA Arzberg 3.98 343⇓ *e*Pn Pn 11 21 05.9 +1.4
comp=Z,478nm,0.3s,SNR=999
ARSA ⇓*e*Sn **Sn** 11 21 52.0 +1.1
comp=Z,682nm,0.5s
ARSA Arzberg 3.98 343 *e*Pn Pn 11 21 06.1 +1.5
ARSA Arzberg 3.98 343 Pg Pn 11 21 05.8 +1.2
ARSA Arzberg 3.98 343 Pn Pn 11 21 05.9 +1.4
comp=Z,478nm,0.3s,SNR=999
ARSA Sn **Sn** 11 21 52.0 +1.1
comp=Z,682nm,0.5s
PKSG 4.00 11⇑ *e*Pn Pn 11 21 05.4 +0.5
PKSG *e*Sn **Sn** 11 21 53.7 +2.2
PTCC Patocco-Chiusa 4.04 318 Pg Pn 11 21 07.6 +2.1

comp=Z,2.0nm,0.4s
PTCC Patocco-Chiusa 4.04 318 Pg Pn 11 21 07.6 +2.1
comp=Z,2.0nm,0.4s
FNA Florina 4.07 130 P Pn 11 21 07.1 +1.3
FNA S Sn 11 21 56.0 +2.9
FNA Florina 4.07 130 P Pn 11 21 07.1 +1.3
FNA S Sn 11 21 56.0 +2.9
ACOM Acomizza, Ital 4.07 321 Pg Pn 11 21 08.5 +2.5
comp=Z,16µm,1.3s
ACOM Acomizza, Ital 4.07 321 Pg Pn 11 21 08.5 +2.5
comp=Z,16µm,1.3s
MYKA Terra Mystica 4.07 322⇑ePn Pn 11 21 08.4 +2.5
comp=Z,85nm,0.5s
MYKA ⇑eSn Sn 11 21 57.3 +4.0
comp=Z,388nm,0.4s
MYKA Terra Mystica 4.07 322 Pn Pn 11 21 08.4 +2.5
comp=Z,85nm,0.5s
MYKA Sn Sn 11 21 57.3 +4.0
comp=Z,388nm,0.4s
NEST Nestorio 4.16 136 P Pn 11 21 08.3 +1.2
NEST S Sn 11 21 58.6 +3.2
NEST Nestorio 4.16 136 P Pn 11 21 08.3 +1.2
NEST S Sn 11 21 58.6 +3.2
BUD Budapest 4.20 17⇓ePn Pn 11 21 07.4 -0.2
BUD esPb Pg 11 21 22.2 -2.5
BUD eSb Sg 11 22 17.9 -1.2
KEK Kerkira 4.21 152 P Pn 11 21 08.3 +0.6
KEK Kerkira 4.21 152 eP Pn 11 21 09.5 +1.8
KEK Kerkira 4.21 152 Pg Pn 11 21 07.5 -0.2
comp=Z,762nm,1.1s
KEK Kerkira 4.21 152 Pg Pn 11 21 07.5 -0.2
comp=Z,762nm,1.1s
KEK Kerkira 4.21 152 P Pn 11 21 08.3 +0.6
SOP Sopron 4.25 354⇑ePn Pn 11 21 09.4 +1.2
SOP epPn Pb 11 21 16.1 -2.4
SOP eSn Sn 11 21 57.7 +0.3
POLC Polcenigo 4.25 309 Pg Pn 11 21 10.2 +2.0
comp=Z,8µm,0.6s
TIP Timpagrande 4.30 185 P Pn 11 21 09.4 +0.4
TIP Timpagrande 4.30 185 Pg Pn 11 21 09.2 +0.2
comp=Z,2µm,1.6s
TIP Timpagrande 4.30 185 ePn Pn 11 21 09.3 +0.2
TIP eSn Sn 11 22 00.3 +1.4
TIP Timpagrande 4.30 185 ePn Pn 11 21 09.3 +0.2
TIP eSn Sn 11 22 00.3 +1.4
VTS Vitosha 4.45 99 P Pn 11 21 12.4 +1.3
VTS Vitosha 4.45 99 ⇑P Pn 11 21 12.6 +1.5
VTS S Sn 11 22 05.0 +2.4
VTS Vitosha 4.45 99⇑iP Pn 11 21 12.6 +1.5
VTS Vitosha 4.45 99 P Pn 11 21 12.4 +1.3
VTS S Sn 11 22 05.0 +2.4
VAY Valandovo 4.48 117 P Pn 11 21 12.2 +0.8
VAY Valandovo 4.48 117 ePn Pn 11 21 12.2 +0.8
VAY eSn Sn 11 22 03.8 +0.7
VAY Valandovo 4.48 117 ePn Pn 11 21 12.1 +0.8
VAY eSn Sn 11 22 04.0 +0.9
VAY Valandovo 4.48 117 ePn Pn 11 21 12.2 +0.8
VAY eSn Sn 11 22 03.8 +0.7
KBA Koelnbreinsper 4.55 324 ePn Pn 11 21 15.2 +2.7
KBA eSn Sn 11 22 09.0 +3.9
KBA Koelnbreinsper 4.55 324⇑ePn Pn 11 21 15.2 +2.7
comp=Z,67nm,0.2s,SNR=182
KBA ⇑eSn Sn 11 22 08.5 +3.4
comp=Z,481nm,0.5s
KBA Koelnbreinsper 4.55 324 Pn Pn 11 21 15.2 +2.7
comp=Z,67nm,0.2s,SNR=182
KBA Sn Sn 11 22 08.5 +3.4
comp=Z,481nm,0.5s
IGT Igoumenitsa 4.56 149 P Pn 11 21 13.0 +0.5
IGT Igoumenitsa 4.56 149 P Pn 11 21 13.0 +0.5
GRG Griva 4.57 122 P Pn 11 21 14.0 +1.3
GRG S Sn 11 22 07.7 +2.3
GRG Griva 4.57 122 eP Pn 11 21 14.0 +1.3
GRG Griva 4.57 122 P Pn 11 21 14.0 +1.3
GRG S Sn 11 22 07.7 +2.3
CONA Conrad Observa 4.57 348⇓ePn Pn 11 21 13.5 +0.8
comp=Z,88nm,0.3s,SNR=340
CONA ⇑eSn Sn 11 22 06.2 +0.7
comp=Z,544nm,0.6s
CONA Conrad Observa 4.57 348 Pn Pn 11 21 13.5 +0.8
comp=Z,88nm,0.3s,SNR=340
CONA Sn Sn 11 22 06.2 +0.7
comp=Z,544nm,0.6s
GRFL Gerfalco 4.60 268 Pg Pn 11 21 14.0 +0.9
comp=Z,138nm,0.8s
GRFL Gerfalco 4.60 268 Pg Pn 11 21 14.0 +0.9
comp=Z,138nm,0.8s
KZN Kozani 4.61 132 P Pn 11 21 14.7 +1.3
KZN S Sn 11 22 09.3 +2.7
KZN Kozani 4.61 132 eP Pn 11 21 15.0 +1.6
KZN Kozani 4.61 132 P Pn 11 21 14.7 +1.3
KZN S Sn 11 22 09.3 +2.7
AGOR Agordo 4.66 309 Pg Pn 11 21 15.2 +1.3
JAN Janina 4.66 144 eP Pn 11 21 15.0 +1.0
DEV Deva 4.69 57 ⇑P Pn 11 21 13.9 -0.4
DEV Deva 4.69 57⇑iP Pn 11 21 13.9 -0.4
DEV Deva 4.69 57 P Pn 11 21 13.9 -0.4
ABTA Abfaltersbach 4.70 316⇑ePn Pn 11 21 16.6 +2.1
comp=Z,82nm,0.3s,SNR=46
ABTA ⇑eSn Sn 11 22 13.4 +4.7
comp=Z,857nm,0.6s
ABTA Abfaltersbach 4.70 316 Pn Pn 11 21 16.6 +2.1
comp=Z,82nm,0.3s,SNR=46
ABTA Sn Sn 11 22 13.4 +4.7
comp=Z,857nm,0.6s
ZST Bratislava 4.73 359 eP Pn 11 21 14.8 -0.1
ZST e 11 22 07.5
ZST pmax pmax
comp=N,455nm,0.5s
ZST Bratislava 4.73 359 ePN Pn 11 21 14.8 -0.1
ZST eSN Sn 11 22 07.5 -1.9
ZST Bratislava 4.73 359 ePn Pn 11 21 14.8 -0.1
ZST eSn Sn 11 22 07.5 -1.9
KNT Kendrikon 4.77 117 P Pn 11 21 16.8 +1.4
KNT Kendrikon 4.77 117 P Pn 11 21 16.8 +1.4
PSZ Piszkesteto 4.82 22 ⇑P Pn 11 21 16.1 -0.1
PSZ Piszkesteto 4.82 22 ePn Pn 11 21 15.7 -0.5
PSZ ePg Pg 11 21 33.2 -3.3
PSZ Piszkesteto 4.82 22⇑iP Pn 11 21 16.0 -0.1
PSZ Piszkesteto 4.82 22⇓ePn Pn 11 21 15.7 -0.5
PSZ esPb Pg 11 21 33.6 -2.9
PSZ Piszkesteto 4.82 22 ePn Pn 11 21 15.7 -0.5
PSZ Piszkesteto 4.82 22 P Pn 11 21 16.1 -0.1
MOA Molln 4.86 335 ePn Pn 11 21 19.0 +2.4
MOA eSn Sn 11 22 15.3 +2.7
MOA Molln 4.86 335⇓ePn Pn 11 21 19.1 +2.4
comp=N,406nm,0.3s,SNR=1180
MOA ⇓eSn Sn 11 22 15.7 +3.1
comp=N,490nm,0.3s
MOA Molln 4.86 335 Pn Pn 11 21 19.1 +2.4
comp=N,405nm,0.3s,SNR=1000
MOA Sn Sn 11 22 15.7 +3.1
comp=N,490nm,0.3s
BDI Bagni Di Lucca 4.86 279 Pg Pn 11 21 17.8 +1.0
comp=N,388nm,0.5s
BDI Bagni Di Lucca 4.86 279 Pg Pn 11 21 17.8 +1.0
comp=N,388nm,0.5s
PII Pisa 4.90 275 Pg Pn 11 21 18.5 +1.3
PII Pisa 4.90 275 Pg Pn 11 21 18.5 +1.3
MAIM Mastiano 4.93 278 P Pn 11 21 18.7 +1.1
VLC Villacollemand 5.02 280 ePn Pn 11 21 20.5 +1.5
VLC Villacollemand 5.02 280 ePn Pn 11 21 20.5 +1.5
SMOL Smolenice 5.05 1 eP Pn 11 21 20.1 +0.8
SMOL e 11 22 15.6
SMOL Smolenice 5.05 1 ePN Pn 11 21 20.1 +0.8
SMOL eSN Sn 11 22 15.6 -1.6
SMOL Smolenice 5.05 1 ePn Pn 11 21 20.1 +0.8
SMOL eSn Sn 11 22 15.6 -1.6
RISI Rein 5.05 315 Pg Pn 11 21 21.8 +2.3
comp=N,3µm,0.8s
RISI Rein 5.05 315 Pg Pn 11 21 21.8 +2.3
comp=N,3µm,0.8s
LOT Lotru 5.06 65⇑iP Pn 11 21 21.1 +1.6
DRGR 5.09 47 ⇓P Pn 11 21 19.3 -0.6
DRGR 5.09 47⇓iP Pn 11 21 19.3 -0.6
DRGR 5.09 47 P Pn 11 21 19.3 -0.6
KOSI Kohlern 5.14 308 Pg Pn 11 21 22.2 +1.6
comp=N,3µm,1.1s
KOSI Kohlern 5.14 308 Pg Pn 11 21 22.2 +1.6
comp=N,3µm,1.1s
VYHS Vyhne 5.15 12 eP Pn 11 21 21.0 +0.4
VYHS e 11 22 19.4
VYHS pmax pmax
comp=N,213nm,0.6s
VYHS Vyhne 5.15 12 ePN Pn 11 21 21.0 +0.4
VYHS ePG Pg 11 21 39.8 -2.9
VYHS eSN Sn 11 22 19.4 -0.2
VYHS Vyhne 5.15 12 ePn Pn 11 21 21.0 +0.4
VYHS eSn Sn 11 22 19.4 -0.2
LIT Litokhoron 5.16 129 P Pn 11 21 21.6 +0.9
LIT S Sn 11 22 23.4 +3.5
LIT Litokhoron 5.16 129 eP Pn 11 21 21.0 +0.3
LIT Litokhoron 5.16 129 P Pn 11 21 21.6 +0.9
LIT S Sn 11 22 23.4 +3.5
VINC Vinca 5.19 280 P Pn 11 21 22.4 +1.2
BOSI Bolzano 5.19 308 Pg Pn 11 21 22.8 +1.6
comp=N,4µm,0.7s
BOSI Bolzano 5.19 308 Pg Pn 11 21 22.8 +1.6
comp=N,4µm,0.7s
SOH Sokhos 5.24 118 eP Pn 11 21 24.0 +2.0
SRS Serrai 5.25 114 P Pn 11 21 23.5 +1.5
SRS Serrai 5.25 114 P Pn 11 21 23.5 +1.5
BACM Baccana 5.26 281 P Pn 11 21 24.0 +1.8
SALO Salr 5.28 296 Pg Pn 11 21 23.1 +0.7
comp=N,426nm,0.7s
SALO Salr 5.28 296 Pg Pn 11 21 23.1 +0.7
comp=N,426nm,0.7s
THL Klokotos Trika 5.28 136 eP Pn 11 21 22.0 -0.5
GRAM Graiana 5.29 284 P Pn 11 21 25.1 +2.4
RJOB Jochberg 5.30 325 ePn Pn 11 21 25.9 +3.2
RJOB eSn Sn 11 22 28.4 +5.0
CEL Celeste 5.30 192 ePn Pn 11 21 22.4 -0.4
CEL Celeste 5.30 192 ePn Pn 11 21 22.4 -0.4
ABSI Aberstueckl 5.32 310 Pg Pn 11 21 24.8 +1.6
comp=N,935nm,0.6s
ABSI Aberstueckl 5.32 310 Pg Pn 11 21 24.8 +1.6
comp=N,935nm,0.6s
NVR Nevrokopi 5.32 111 P Pn 11 21 24.6 +1.5
NVR Nevrokopi 5.32 111 eP Pn 11 21 25.0 +1.9
NVR Nevrokopi 5.32 111 P Pn 11 21 24.6 +1.5
LKD2 Lefkada island 5.33 150 eP Pn 11 21 22.5 -0.6
WTTA Wattenberg 5.49 316 ePn Pn 11 21 27.9 +2.5
WTTA Wattenberg 5.49 316 *i* **Pn Pn 11 21 27.9 +2.5**
comp=N,188nm,0.3s,SNR=359
WTTA Wattenberg 5.49 316 Pn Pn 11 21 27.9 +2.5
comp=N,188nm,0.3s,SNR=359
KECS Kecovo 5.50 23 eP Pn 11 21 25.8 +0.4
KECS e 11 22 27.0
KECS pmax pmax
comp=N,52nm,0.9s
KECS Kecovo 5.50 23 ePN Pn 11 21 25.8 +0.4
KECS ePG Pg 11 21 47.4 -2.0
KECS eSN Sn 11 22 27.0 -1.2
KECS Kecovo 5.50 23 ePn Pn 11 21 25.8 +0.4
KECS eSn Sn 11 22 27.0 -1.2
CJR Cluj-Napoca 5.54 52⇑iP Pn 11 21 26.5 +0.5
PLG Polygyros 5.55 122 P Pn 11 21 27.5 +1.3
PLG Polygyros 5.55 122 eP Pn 11 21 28.0 +1.8
PLG Polygyros 5.55 122 P Pn 11 21 27.5 +1.3
EVR Evrytania 5.69 141 P Pn 11 21 30.0 +1.8
EVR Evrytania 5.69 141 eP Pn 11 21 29.5 +1.3
EVR Evrytania 5.69 141 P Pn 11 21 30.0 +1.8
MAKR Makrakomi, Fth 5.77 139 P Pn 11 21 30.9 +1.8
MAKR Makrakomi, Fth 5.77 139 P Pn 11 21 30.9 +1.8
MOTA Moosalm 5.82 314 *i* **Pn Pn 11 21 32.8 +2.9**
comp=N,406nm,0.6s,SNR=544
MOTA ⇑eSn Sn 11 22 40.8 +4.4
comp=N,331nm,0.5s
MOTA Moosalm 5.82 314 Pn Pn 11 21 32.8 +2.9
comp=N,406nm,0.6s,SNR=544
FETA Feichten 5.82 310 *i* **Pn Pn 11 21 32.3 +2.3**
comp=N,31nm,0.3s,SNR=80
FETA Feichten 5.82 310 Pn Pn 11 21 32.3 +2.3
comp=N,31nm,0.3s,SNR=80
VLS Valsamata 5.86 153 eP Pn 11 21 27.0 -3.3
AGG Agios Georgios 5.86 138 P Pn 11 21 31.4 +1.0
AGG Agios Georgios 5.86 138 P Pn 11 21 31.4 +1.0
VRAC Vranov 5.86 356 Pn Pn 11 21 31.3 +0.9
VRAC Sn Sn 11 22 35.6 -1.7
VRAC Lg Lg 11 23 16.2
VRAC Vranov 5.86 356⇑iP Pn 11 21 31.1 +0.7
VRAC Vranov 5.86 356 Pn **Pn 11 21 31.3 +0.9**
comp=N,9,3nm,0.3s,baz=185,slow=13,SNR=40
VRAC Sn Sn 11 22 35.6 -1.7
comp=N,10nm,0.3s,baz=71,slow=18,SNR=2.7
VRAC Lg Lg 11 23 16.2
baz=192,slow=20,SNR=1.2
VRAC Vranov 5.86 356 Pn **Pn 11 21 31.3 +0.9**
VRAC Sn Sn 11 22 35.6 -1.7
MTUR Matau 5.86 70⇓iP Pn 11 21 33.4 +2.9
VOIR 5.91 68 ⇑P Pn 11 21 33.1 +1.9
VOIR 5.91 68⇑iP Pn 11 21 33.1 +1.9
VOIR 5.91 68 P Pn 11 21 33.1 +1.9
GEC2 GERESS Array S 5.92 337 ePn Pn 11 21 32.9 +1.6
GEC2 eSn Sn 11 22 39.6 +0.8
GEC2 GERESS Array S 5.92 337 eP Pn 11 21 32.8 +1.6
GEC2 e 11 22 37.7
GEC2 pmax pmax
comp=Z,10µm,0.5s
GEC2 GERESS Array S 5.92 337 ePn Pn 11 21 32.8 +1.6
comp=Z,18µm,0.5s
GEC2 eSn Sn 11 22 37.7 -1.1
GEC2 GERESS Array S 5.92 337 ePn Pn 11 21 32.8 +1.6
comp=Z,10µm,0.5s
GEC2 eSn Sn 11 22 37.7 -1.1
GERES GERESS Array B 5.92 337 Pn **Pn 11 21 32.9 +1.6**
GERES Sn Sn 11 22 37.5 -1.3
GERES Lg Lg 11 23 07.2
GERES GERESS Array B 5.92 337 Pn **Pn 11 21 32.9 +1.6**
comp=Z,44nm,0.3s,baz=157,slow=14,SNR=430
GERES Sn Sn 11 22 37.5 -1.3
comp=Z,50nm,0.3s,baz=134,slow=24,SNR=14
GERES Lg Lg 11 23 07.2
comp=Z,12nm,0.3s,baz=168,slow=31,SNR=3.5
GERES GERESS Array B 5.92 337 Pn **Pn 11 21 32.9 +1.6**
GERES Sn Sn 11 22 37.5 -1.3
KAVA Kavala 5.92 112 P Pn 11 21 33.1 +1.9
KAVA Kavala 5.92 112 P Pn 11 21 33.1 +1.9
TRPA Tarpa 5.95 36⇑iP Pn 11 21 31.3 -0.2
TRPA Tarpa 5.95 36⇑*es***Pg Pg** 11 22 02.8 +4.8
TRPA *es*n Sg 11 23 36.9 +22
TREC Trest 5.96 349 eP Pn 11 21 32.6 +0.9
TREC e 11 22 38.2
TREC MLR MLR
comp=Z,2µm,8.8s
TREC Trest 5.96 349 ePN Pn 11 21 32.6 +0.9
TREC eSN Sn 11 22 38.2 -1.4
TREC AMS AMS 11 23 50.0
comp=Z,2µm,8.8s
TREC Trest 5.96 349 Pn Pn **11 21 32.6 +0.9**
TREC Sn Sn 11 22 38.2 -1.4
PAIG Paliouri 5.96 124 eP Pn 11 21 32.0 +0.2
BMR Baia Mare 6.07 44⇑iP Pn 11 21 39.6 +6.4
RETA Reutte 6.09 314⇑iPn Pn 11 21 36.0 +2.4
comp=Z,34nm,0.2s,SNR=82
RETA ⇓eSn Sn 11 22 46.5 +3.6
comp=Z,244nm,0.4s
RETA Reutte 6.09 314 Pn **Pn 11 21 36.0 +2.4**
comp=Z,34nm,0.2s,SNR=82
NEO Neokhori 6.11 131 eP Pn 11 21 34.0 +0.1
CRVS Cervenica-Dubn 6.17 27 eP Pn 11 21 33.1 -1.5
CRVS MLR MLR
comp=Z,200nm,1.4s
CRVS Cervenica-Dubn 6.17 27 ePN Pn 11 21 33.1 -1.5
CRVS ePG Pg 11 22 01.5 -0.7
DAVOX Davos/Dischmat 6.18 305 Pn **Pn 11 21 37.4 +2.4**
DAVOX Sn Sn 11 22 46.5 +1.1
DAVOX Lg Lg 11 23 25.0
DAVOX Davos/Dischmat 6.18 305 Pn **Pn 11 21 37.4 +2.4**
comp=Z,22nm,0.3s,baz=128,slow=12,SNR=113
DAVOX Sn Sn 11 22 46.5 +1.1
comp=Z,8.2nm,0.3s,baz=150,slow=20,SNR=1.9
DAVOX Lg Lg 11 23 25.0
comp=Z,31nm,0.3s,baz=267,slow=17,SNR=4.2
DAVOX Davos/Dischmat 6.18 305 Pn **Pn 11 21 37.4 +2.4**
DAVOX Sn Sn 11 22 46.5 +1.1
KHC Kasperske Hory 6.21 337 eP Pn 11 21 37.0 +1.7
KHC e 11 22 47.3
KHC Kasperske Hory 6.21 337 ePN Pn 11 21 37.0 +1.7
KHC *ex* x 11 21 48.5
KHC *ex* x 11 22 20.5
KHC eSN Sn 11 22 45.6 -0.3
KHC AMS AMS 11 24 00.0
comp=Z,5µm,7.9s
KHC Kasperske Hory 6.21 337 ePn Pn 11 21 37.0 +1.7
KHC eSn Sn 11 22 47.3 +1.4
KHC Kasperske Hory 6.21 337 Pn Pn 11 21 37.0 +1.7
KHC e 11 22 47.3
KHC eSn Sn 11 22 47.3 +1.4
AXAR Agios Charalam 6.22 137 P Pn 11 21 36.8 +1.5
AXAR Agios Charalam 6.22 137 P Pn 11 21 36.8 +1.5
KALE Kalithea 6.27 142 P Pn 11 21 37.9 +1.8
KALE Kalithea 6.27 142 P Pn 11 21 37.9 +1.8
RLS Riolos of Patr 6.27 148 eP Pn 11 21 36.0 -0.1
FUR Furstenfeldbru 6.29 320 ePn Pn 11 21 38.5 +2.2
FUR Furstenfeldbru 6.29 320 eP Pn 11 21 38.5 +2.2
FUR Furstenfeldbru 6.29 320 eP Pn 11 21 38.5 +2.2
DOPR Dopca 6.31 64⇑iP Pn 11 21 39.2 +2.7
MORC Moravsky Berou 6.32 2 ⇓P Pn 11 21 37.1 +0.4
MORC Moravsky Berou 6.32 2 ePn Pn 11 21 36.6 0.0
MORC eSn Sn 11 22 48.0 -0.5
MORC Moravsky Berou 6.32 2⇓iP Pn 11 21 37.1 +0.4
MORC Moravsky Berou 6.32 2 ePn Pn 11 21 36.7 0.0
MORC Moravsky Berou 6.32 2 P Pn 11 21 37.1 +0.4
MORC eSn Sn 11 22 48.0 -0.5
NIE Niedzica 6.32 18 eP Pn 11 21 38.3 +1.6
NIE e 11 22 47.3
NIE Niedzica 6.32 18 ePn Pn 11 21 38.3 +1.6
NIE eSn Sn 11 22 47.3 -1.2
NIE Niedzica 6.32 18 ePn Pn 11 21 38.3 +1.6
NIE eSn Sn 11 22 47.3 -1.2
LAKA Lakka 6.33 144 P Pn 11 21 37.9 +1.1
LAKA Lakka 6.33 144 P Pn 11 21 37.9 +1.1
TUE Stuetta 6.37 301 ePn Pn 11 21 39.8 +2.2
TUE eSn Sn 11 22 52.8 +2.8
TUE Stuetta 6.37 301 ePn Pn 11 21 39.8 +2.2
TUE eSn Sn 11 22 52.8 +2.8
OKC Ostrava-Krasne 6.40 5 eP Pn 11 21 38.1 +0.3
OKC e 11 22 47.5
OKC MLR MLR
comp=Z,3µm,8.5s
OKC Ostrava-Krasne 6.40 5 ePN Pn 11 21 38.1 +0.3
OKC eSN Sn 11 22 47.5 -3.0
OKC AMS AMS 11 24 30.0
comp=Z,3µm,8.5s
OKC Ostrava-Krasne 6.40 5 Pn Pn 11 21 38.1 +0.3
WET Wettzell 6.44 333 ePn Pn 11 21 40.4 +2.1
WET Wettzell 6.44 333 eP Pn 11 21 40.4 +2.1
WET Wettzell 6.44 333 eP Pn 11 21 40.4 +2.1
DAVA Damuels 6.45 309 ePn Pn 11 21 41.2 +2.6
DAVA Damuels 6.45 309⇑ePn Pn 11 21 41.0 +2.4
comp=Z,43nm,0.3s,SNR=20
DAVA Damuels 6.45 309 Pn Pn 11 21 41.0 +2.4
comp=Z,43nm,0.3s,SNR=20
LKR Lokris 6.47 136 eP Pn 11 21 39.5 +0.7
KOLS Kolonicke sedl 6.48 31 eP Pn 11 21 39.5 +0.6
KOLS MLR MLR
comp=Z,200nm,1.1s
KOLS Kolonicke sedl 6.48 31 ePN Pn 11 21 39.5 +0.6
KOLS ePG Pg 11 22 06.3 -1.9
KOLS Kolonicke sedl 6.48 31 ePn Pn 11 21 39.5 +0.6
SECR 6.52 73⇓iP Pn 11 21 45.9 +6.5
MLR Muntele Rosu 6.53 69 Pn Pn 11 21 42.9 +3.1
MLR Sn Sn **11 22 58.0 +4.0**
MLR Lg Lg 11 23 40.2
MLR Muntele Rosu 6.53 69⇓iP Pn 11 21 40.7 +1.0
MLR Muntele Rosu 6.53 69 Pn Pn 11 21 42.9 +3.1
comp=Z,0.4nm,0.3s,baz=112,slow=6.8,SNR=12
MLR Sn Sn **11 22 58.0 +4.0**
comp=Z,0.7nm,0.3s,baz=263,slow=16,SNR=3.9
MLR Lg Lg 11 23 40.2
comp=Z,0.2nm,0.3s,baz=289,slow=8.6,SNR=5.9
MLR Muntele Rosu 6.53 69 P Pn 11 21 40.7 +1.0
MLR Muntele Rosu 6.53 69 Pn Pn 11 21 42.9 +3.1
MLR Sn Sn **11 22 58.0 +4.0**
STHS Stebnicka Huta 6.56 23 eP Pn 11 21 41.3 +1.4
STHS MLR MLR
comp=Z,100nm,1.1s
STHS Stebnicka Huta 6.56 23 ePN Pn 11 21 41.3 +1.4
STHS ePG Pg 11 22 06.7 -3.0
STHS Stebnicka Huta 6.56 23 ePn Pn 11 21 41.3 +1.4
KLV Kalavryta, Ach 6.56 144 eP Pn 11 21 40.5 +0.4
KRLC Kraliky 6.62 357 eP Pn 11 21 41.3 +0.5
KRLC e 11 22 53.3
KRLC Kraliky 6.62 357 ePN Pn 11 21 41.3 +0.5
KRLC eSN Sn 11 22 53.3 -2.7
KRLC Kraliky 6.62 357 Pn Pn 11 21 41.3 +0.5
PRU Pruhonice 6.79 345 eP Pn 11 21 44.3 +1.2
PRU e 11 22 58.4
PRU MLR MLR
comp=Z,3µm,8.2s
PRU Pruhonice 6.79 345 ePN Pn 11 21 44.3 +1.2
PRU eSN Sn 11 22 58.4 -1.6
PRU AMS AMS 11 24 20.0
comp=Z,3µm,8.2s
PRU Pruhonice 6.79 345 Pn Pn 11 21 44.3 +1.2
PRU Sn Sn 11 22 58.4 -1.6
AMT Artemida-Makis 6.83 149 eP Pn 11 21 44.0 +0.3
JMB Yambol 6.91 95 P Pn 11 21 46.7 +1.9
JMB Yambol 6.91 95 ePn Pn 11 21 46.5 +1.7
JMB Yambol 6.91 95 ePn Pn 11 21 46.5 +1.7
DPC Dobruska-Polom 6.92 355 eP Pn 11 21 45.4 +0.5
DPC e 11 23 00.7
DPC Dobruska-Polom 6.92 355 ePN Pn 11 21 45.4 +0.5
DPC eSN Sn 11 23 00.7 -2.6
DPC Dobruska-Polom 6.92 355 Pn Pn 11 21 45.4 +0.5
BURAR Bucovina Array 6.96 51⇑iP Pn 11 21 47.1 +1.6
BUR08 Bucovina Ar. S 6.96 50 ePn Pn 11 21 47.4 +1.8
BUR08 Bucovina Ar. S 6.96 50 ePn Pn 11 21 47.4 +1.8
OJC Ojcow 6.98 14 eP Pn 11 21 46.8 +1.1
OJC Ojcow 6.98 14 ePn Pn 11 21 47.0 +1.3
OJC Ojcow 6.98 14 ePn Pn 11 21 46.8 +1.1
OJC Ojcow 6.98 14 eP Pn 11 21 46.8 +1.1
ALN Alexandroupoli 7.01 108 P Pn 11 21 48.5 +2.3
ALN Alexandroupoli 7.01 108 P Pn 11 21 48.5 +2.3
SAOF Saorge 7.05 278 P Pn 11 21 47.5 +0.7
SAOF Saorge 7.05 278 P Pn 11 21 47.5 +0.7
SAOF Saorge 7.05 278 P Pn 11 21 47.5 +0.7
SAOF Saorge 7.05 278 P Pn 11 21 47.5 +0.7
UPC Upice 7.10 354 eP Pn 11 21 47.6 +0.3
UPC e 11 23 05.0
UPC Upice 7.10 354 ePN Pn 11 21 47.6 +0.3
UPC eSN Sn 11 23 05.0 -2.6
UPC Upice 7.10 354 Pn Pn 11 21 47.6 +0.3
PLOR Plostina 7.11 67 ⇓P Pn 11 21 47.6 +0.1
PLOR Plostina 7.11 67⇓iP Pn 11 21 47.6 +0.1
PLOR Plostina 7.11 67 P Pn 11 21 47.6 +0.1
SBF Sospel 7.14 277 eSn Sn 11 23 03.1 -5.7
comp=Z,545nm,0.9s
SBF Sospel 7.14 277 eSn Sn 11 23 03.1 -5.7
AUTN L'Aution 7.14 278 P Pn 11 21 49.1 +0.9
AUTN L'Aution 7.14 278 P Pn 11 21 49.1 +0.9
AUTN L'Aution 7.14 278 P Pn 11 21 49.1 +0.9
AUTN L'Aution 7.14 278 P Pn 11 21 49.1 +0.9
VRI Vrincioaia 7.16 67 ⇓P Pn 11 21 49.3 +1.0
VRI Vrincioaia 7.16 67⇓iP Pn 11 21 49.3 +1.0
VRI Vrincioaia 7.16 67 P Pn 11 21 49.3 +1.0
REVF Revere 7.19 276 P Pn 11 21 49.4 +0.7
REVF Revere 7.19 276 P Pn 11 21 49.4 +0.7
REVF Revere 7.19 276 P Pn 11 21 49.4 +0.7
REVF Revere 7.19 276 P Pn 11 21 49.4 +0.7
ROTZ Rotzenmuhle 7.20 333 ePn Pn 11 21 50.2 +1.5
ROTZ eSn Sn 11 23 09.3 -0.8
KWP Kalwaria Pacla 7.22 29 ⇓P Pn 11 21 49.3 +0.3
KWP Kalwaria Pacla 7.22 29 ePn Pn 11 21 50.5 +1.5
comp=Z,69nm,1.1s
KWP Kalwaria Pacla 7.22 29⇓iP Pn 11 21 49.3 +0.3
KWP Kalwaria Pacla 7.22 29 ePn Pn 11 21 52.3 +3.3
KWP Kalwaria Pacla 7.22 29 P Pn 11 21 49.3 +0.3
KWP Kalwaria Pacla 7.22 29 ePn Pn 11 21 50.5 +1.5
comp=Z,69nm,1.1s
ITM Ithomi 7.22 149 eP Pn 11 21 50.5 +1.4
TOUF Mont Tournerai 7.27 278 P Pn 11 21 51.3 +1.3
TOUF Mont Tournerai 7.27 278 P Pn 11 21 51.3 +1.3
TOUF Mont Tournerai 7.27 278 P Pn 11 21 51.3 +1.3
TOUF Mont Tournerai 7.27 278 P Pn 11 21 51.3 +1.3
PVCC Panska Ves 7.30 346 eP Pn 11 21 50.8 +0.7
PVCC e 11 23 10.5
PVCC MLR MLR
comp=Z,2µm,9.4s
PVCC Panska Ves 7.30 346 ePN Pn 11 21 50.8 +0.7
PVCC eSN Sn **11 23 10.5 -2.1**
PVCC AMS AMS 11 24 40.0
comp=Z,2µm,9.4s
PVCC Panska Ves 7.30 346 Pn Pn 11 21 50.8 +0.7
TESR Tescani 7.32 62⇑iP Pn 11 21 57.2 +6.8
MVIF Mont Vial 7.34 277 P Pn 11 21 52.1 +1.2
MVIF Mont Vial 7.34 277 P Pn 11 21 52.1 +1.2

MVIF	**Mont Vial**	**7.34 277**	P		**Pn**	**11 21 52.1 +1.2**
MVIF	**Mont Vial**	**7.34 277**	P		**Pn**	**11 21 52.1 +1.2**
ATH	**Athens Observa**	**7.36 136**	*e*P		**Pn**	**11 21 51.5 +0.6**
PTL	**Penteli**	**7.37 135**	*e*P		**Pn**	**11 21 51.5 +0.3**
KSP	**Ksiaz**	**7.41 355**	*e*P		**Pn**	**11 21 52.9 +1.3**
KSP			*e*			11 23 07.1		
KSP	**Ksiaz**	**7.41 355**	*e*Pn		**Pn**	**11 21 53.2 +1.6**
KSP	**Ksiaz**	**7.41 355**	*e*Pn		**Pn**	**11 21 52.9 +1.3**
NAIG	**Nisos Aigina**	**7.41 138**	*e*P		**Pn**	**11 21 52.5 +0.8**
MANZ	**Manzenberg**	**7.42 333**	*e*Pn		**Pn**	**11 21 52.9 +1.1**
GRFO	**Grafenberg**	**7.49 328**	*e*P		**Pn**	**11 21 54.2 +1.5**
GRFO	**Grafenberg**	**7.49 328**	*e*Pn		**Pn**	**11 21 54.2 +1.5**
GRFO	**Grafenberg**	**7.49 328**	*e*Pn		**Pn**	**11 21 54.2 +1.5**
GRA1	**Grafenberg Arr**	**7.49 328**	*e*P		**Pn**	**11 21 54.2 +1.5**
GRF	**Grafenberg Arr**	**7.49 328**	*e*Pn		**Pn**	**11 21 54.2 +1.5**
GRF	**Grafenberg Arr**	**7.49 328**	*e*P		**Pn**	**11 21 54.2 +1.5**
SPAK	**Spaichingen-Ko**	**7.52 311**	P		**Pn**	**11 21 54.1 +0.8**
SPAK	**Spaichingen-Ko**	**7.52 311**	P		**Pn**	**11 21 54.1 +0.8**
NKC	**Novy Kostel**	**7.53 336**	*e*P		**Pn**	**11 21 54.6 +1.3**
NKC			*e*			11 23 16.6		
NKC				MLR	MLR			
	comp=Z,4µm,7.8s							
NKC	**Novy Kostel**	**7.53 336**	*e*PN		**Pn**	**11 21 54.6 +1.3**
NKC			*e*SN		**Sn**	**11 23 16.6 -1.7**
NKC				AMS	AMS	11 24 50.0		
	comp=Z,4µm,7.8s							
NKC	**Novy Kostel**	**7.53 336**	Pn		**Pn**	**11 21 54.6 +1.3**
NKC			Sn		**Sn**	**11 23 16.6 -1.7**
CALN	**Calern**	**7.54 276**	P		**Pn**	**11 21 54.6 +1.1**
CALN	**Calern**	**7.54 276**	P		**Pn**	**11 21 54.6 +1.1**
CALN	**Calern**	**7.54 276**	P		**Pn**	**11 21 54.6 +1.1**
CALN	**Calern**	**7.54 276**	P		**Pn**	**11 21 54.6 +1.1**
WERN	**Wernitzgruen**	**7.60 336**	*e*Pn		**Pn**	**11 21 56.0 +1.7**
SURF	**Saint Ours**	**7.61 281**	P		**Pn**	**11 21 54.6 +0.1**
SURF	**Saint Ours**	**7.61 281**	P		**Pn**	**11 21 54.6 +0.1**
SURF	**Saint Ours**	**7.61 281**	P		**Pn**	**11 21 54.6 +0.1**
SENIN	**Lac Senin/Sane**	**7.64 296**	*e*Pn		**Pn**	**11 21 56.6 +1.6**
SENIN	**Lac Senin/Sane**	**7.64 296**	*e*Pn		**Pn**	**11 21 56.7 +1.6**
MBDF	**Montbardon**	**7.66 283**	*e*Pn		**Pn**	**11 21 54.3 -0.9**
	SNR=1.0							
MBDF			*e*Sn		**Sn**	**11 23 16.1 -5.6**
	comp=Z,262nm,0.5s							
MBDF	**Montbardon**	**7.66 283**	*e*P		**Pn**	**11 21 54.3 -0.9**
MBDF			*e*			11 23 16.1		
MBDF	**Montbardon**	**7.66 283**	*e*Pn		**Pn**	**11 21 54.3 -0.9**
MBDF			*e*Sn		**Sn**	**11 23 16.1 -5.6**
MBDF	**Montbardon**	**7.66 283**	*e*Pn		**Pn**	**11 21 54.3 -0.9**
	SNR=1.0							
GUNZ	**Gunzen**	**7.68 336**	*e*Pn		**Pn**	**11 21 57.0 +1.6**
TANN	**Tannenbergstha**	**7.69 336**	*e*Pn		**Pn**	**11 21 57.2 +1.7**
STU	**Stuttgart**	**7.71 316**	*e*Pn		**Pn**	**11 21 57.1 +1.3**
STU			*e*Sn		**Sn**	**11 23 23.1 +0.3**
STU	**Stuttgart**	**7.71 316**	*e*P		**Pn**	**11 21 56.9 +1.1**
STU	**Stuttgart**	**7.71 316**	*e*Pn		**Pn**	**11 21 56.9 +1.1**
STU	**Stuttgart**	**7.71 316**	*e*Pn		**Pn**	**11 21 56.9 +1.1**
FRF	**La Foret Royal**	**7.72 274**	*e*Pn		**Pn**	**11 21 56.1 +0.2**
	SNR=1.0							
FRF	**La Foret Royal**	**7.72 274**	*e*P		**Pn**	**11 21 56.1 +0.2**
FRF	**La Foret Royal**	**7.72 274**	*e*Pn		**Pn**	**11 21 56.1 +0.2**
FRF	**La Foret Royal**	**7.72 274**	*e*Pn		**Pn**	**11 21 56.1 +0.2**
	SNR=1.0							
DYR	**Agios Nikonas**	**7.74 148**	*e*P		**Pn**	**11 21 55.5 -0.7**
BRG	**Berggiesshubel**	**7.75 344**	PN		**Pn**	**11 21 57.9 +1.7**
BRG			*i*			11 23 27.0		
BRG	**Berggiesshubel**	**7.75 344**	SG		**Sb**	**11 23 44.7 -5.4**
	comp=Z,127nm,0.7s							
BRG								
	comp=N,2µm,7.8s							
BRG								
	comp=E,590nm,5.2s							
BRG								
	comp=Z,3µm,7.8s							
BRG	**Berggiesshubel**	**7.75 344**	*e*Pn		**Pn**	**11 21 58.5 +2.3**
BRG	**Berggiesshubel**	**7.75 344**	P		**Pn**	**11 21 57.9 +1.7**
BRG			*i*			11 23 27.0		
BRG				smax	smax			
	comp=N,127nm,0.7s							
BRG				MLR	MLR			
	comp=N,2µm,7.8s							
BRG				MLR	MLR			
	comp=E,590nm,5.3s							
BRG				MLR	MLR			
	comp=Z,3µm,7.9s							
BRG	**Berggiesshubel**	**7.75 344**	P		**Pn**	**11 21 57.9 +1.7**
WERD	**Werda**	**7.76 336**	*e*Pn		**Pn**	**11 21 58.2 +1.7**
BNI	**Bardonecchia**	**7.76 285**	*e*P		**Pn**	**11 21 56.0 -0.6**
BNI	**Bardonecchia**	**7.76 285**	*e*Pn		**Pn**	**11 21 56.0 -0.6**
BNI	**Bardonecchia**	**7.76 285**	*e*Pn		**Pn**	**11 21 56.0 -0.6**
LPG	**La Plagne**	**7.79 289**	*e*Pn		**Pn**	**11 21 56.9 -0.2**
	SNR=1.0							
LPG			*e*Sn		Sn	11 23 19.0 -6.0		
	comp=Z,288nm,0.5s,SNR=1.0							
LPG	**La Plagne**	**7.79 289**	*e*P		**Pn**	**11 21 56.9 -0.2**
LPG			*e*			11 23 19.0		
LPG	**La Plagne**	**7.79 289**	*e*Pn		**Pn**	**11 21 56.9 -0.2**
LPG			*e*Sn		Sn	11 23 19.0 -6.0		
LPG	**La Plagne**	**7.79 289**	*e*Pn		**Pn**	**11 21 56.9 -0.2**
	SNR=1.0							
LPL	**La Plagne**	**7.80 289**	*e*Pn		**Pn**	**11 21 56.6 -0.7**
	SNR=1.0							
LPL			*e*Sn		Sn	11 23 18.4 -7.0		
	comp=Z,469nm,0.7s							
LPL	**La Plagne**	**7.80 289**	*e*P		**Pn**	**11 21 56.6 -0.7**
LPL			*e*			11 23 18.4		
LPL	**La Plagne**	**7.80 289**	*e*Pn		**Pn**	**11 21 56.6 -0.7**
LPL			*e*Sn		Sn	11 23 18.4 -7.0		
LPL	**La Plagne**	**7.80 289**	*e*Pn		**Pn**	**11 21 56.6 -0.7**
	SNR=1.0							
LMR	**La Mourre**	**7.83 273**	*e*Pn		**Pn**	**11 21 57.7 +0.2**
	SNR=1.0							
LMR			*e*Sn		Sn	11 23 19.6 -6.2		
	comp=Z,38nm,0.3s,SNR=1.0							
LMR	**La Mourre**	**7.83 273**	*e*P		**Pn**	**11 21 57.7 +0.2**
LMR			*e*			11 23 19.6		
LMR	**La Mourre**	**7.83 273**	*e*Pn		**Pn**	**11 21 57.7 +0.2**
LMR			*e*Sn		Sn	11 23 19.6 -6.2		
LMR	**La Mourre**	**7.83 273**	*e*Pn		**Pn**	**11 21 57.7 +0.2**
	SNR=1.0							
PLN	**Plauen**	**7.84 335**	*e*Pn		**Pn**	**11 21 59.4 +1.9**
FELD	**Feldberg im Sc**	**7.84 307**	P		**Pn**	**11 21 58.3 +0.6**
FELD	**Feldberg im Sc**	**7.84 307**	P		**Pn**	**11 21 58.3 +0.6**
LVV	**L'vov**	**7.88 34**	*e*P		Pn	11 22 01.3 +3.3
LVV			*e*S		Sn	11 23 33.3 +6.5
LVV				MLR	MLR			
	comp=N,1µm,10.0s							
LVV				MLR	MLR			
	comp=E,800nm,10.0s							
LVV				MLR	MLR			
	comp=Z,2µm,10.0s							
LVV	**L'vov**	**7.88 34**	*e*P		Pn	11 22 01.3 +3.3
BFO	**Black Forest**	**7.90 311**	*e*Pn		**Pn**	**11 21 59.1 +0.7**
BFO	**Black Forest**	**7.90 311**	*e*P		**Pn**	**11 21 59.1 +0.7**
BFO	**Black Forest**	**7.90 311**	*e*Pn		**Pn**	**11 21 59.2 +0.7**
BFO	**Black Forest**	**7.90 311**	*e*Pn		**Pn**	**11 21 59.2 +0.8**
FBE	**Freiberg**	**7.92 342**	*e*Pn		**Pn**	**11 22 00.2 +1.6**
BBS	**Basel-Blauen**	**7.94 304**	P		**Pn**	**11 21 59.9 +1.0**
BBS	**Basel-Blauen**	**7.94 304**	P		**Pn**	**11 21 59.9 +1.0**
BBS	**Basel-Blauen**	**7.94 304**	P		**Pn**	**11 21 59.9 +1.0**
CFR	**Carcaliu**	**7.98 74**		P		**Pn**	**11 22 00.7 +1.2**
CFR	**Carcaliu**	**7.98 74**		*i*P		**Pn**	**11 22 00.6 +1.1**
CFR	**Carcaliu**	**7.98 74**	P		**Pn**	**11 22 00.7 +1.2**
VLI	**Veliai**	**8.02 145**	*e*P		**Pn**	**11 21 59.0 -1.0**
OG01	**Vacheresse**	**8.04 295**	P		**Pn**	**11 22 01.9 +1.6**
OG01	**Vacheresse**	**8.04 295**	P		**Pn**	**11 22 01.9 +1.6**
OG01	**Vacheresse**	**8.04 295**	P		**Pn**	**11 22 01.9 +1.6**
TIRR	**Tirgusor**	**8.11 79**		*i*P		Pn	11 22 06.9 +5.7
OG25	**Le Caire**	**8.13 280**	P		**Pn**	**11 22 03.0 +1.4**
OG25	**Le Caire**	**8.13 280**	P		**Pn**	**11 22 03.0 +1.4**
OG25	**Le Caire**	**8.13 280**	P		**Pn**	**11 22 03.0 +1.4**
MOX	**Moxa**	**8.15 334**	*e*Pn		**Pn**	**11 22 03.7 +1.9**
MOX	**Moxa**	**8.15 334**	*e*P		**Pn**	**11 22 03.7 +1.9**
MOX	**Moxa**	**8.15 334**	*e*P		**Pn**	**11 22 03.7 +1.9**
GDM	**Grand'Maison**	**8.18 286**	P		**Pn**	**11 22 04.1 +1.8**
GDM	**Grand'Maison**	**8.18 286**	P		**Pn**	**11 22 04.1 +1.8**
GDM	**Grand'Maison**	**8.18 286**	P		**Pn**	**11 22 04.1 +1.8**
LOMF	**Lomont**	**8.30 301**	P		**Pn**	**11 22 04.6 +0.6**
LOMF	**Lomont**	**8.30 301**	P		**Pn**	**11 22 04.6 +0.6**
LOMF	**Lomont**	**8.30 301**	P		**Pn**	**11 22 04.6 +0.6**
LOMF	**Lomont**	**8.30 301**	P		**Pn**	**11 22 04.6 +0.6**
ORIF	**Oris-en-Rattie**	**8.31 284**	*e*Pn		**Pn**	**11 22 04.4 +0.3**
	SNR=1.0							
ORIF			*e*Sn		Sn	11 23 31.0 -6.6		
	comp=Z,328nm,0.7s							
ORIF	**Oris-en-Rattie**	**8.31 284**	*e*P		**Pn**	**11 22 04.4 +0.3**
ORIF			*e*			11 23 31.0		
ORIF	**Oris-en-Rattie**	**8.31 284**	*e*Pn		**Pn**	**11 22 04.4 +0.3**
ORIF			*e*Sn		Sn	11 23 31.0 -6.6		
ORIF	**Oris-en-Rattie**	**8.31 284**	*e*Pn		**Pn**	**11 22 04.4 +0.3**
	SNR=1.0							
MOF	**Molkenrain**	**8.34 305**	P		**Pn**	**11 22 05.5 +1.0**
MOF	**Molkenrain**	**8.34 305**	P		**Pn**	**11 22 05.5 +1.0**
MOF	**Molkenrain**	**8.34 305**	P		**Pn**	**11 22 05.5 +1.0**
MOF	**Molkenrain**	**8.34 305**	P		**Pn**	**11 22 05.5 +1.0**
CLL	**Collm**	**8.36 341**	*e*Pn		**Pn**	**11 22 05.9 +1.3**
CLL	**Collm**	**8.36 341**	*e*P		**Pn**	**11 22 06.0 +1.3**
CLL			*e*			11 23 33.0		
CLL	**Collm**	**8.36 341**	*e*Pn		**Pn**	**11 22 06.0 +1.3**
CLL			*e*Pg		Pb	11 22 44.0 +16		
CLL			*e*			11 23 28.0		
CLL			*e*Sn		**Sn**	**11 23 33.0 -5.6**
CLL			*e*Sb		Sb	11 24 10.0 +2.3		
CLL			*e*Sg			11 24 29.0		
CLL			*e*Sglp			11 24 36.0		
	comp=N,600nm,17.2s							
CLL			*e*Sglp			11 24 36.0		
	comp=E,1µm,17.8s							
CLL			Lmax			11 25 18.0		
CLL	**Collm**	**8.36 341**	*e*P		**Pn**	**11 22 06.0 +1.3**
GRN	**Grenoble**	**8.44 286**	P		**Pn**	**11 22 06.6 +0.7**
GRN	**Grenoble**	**8.44 286**	P		**Pn**	**11 22 06.6 +0.7**
GRN	**Grenoble**	**8.44 286**	P		**Pn**	**11 22 06.6 +0.7**
GRN	**Grenoble**	**8.44 286**	P		**Pn**	**11 22 06.6 +0.7**
TLCR		**8.46 74**		P		**Pn**	**11 22 06.9 +0.9**
TLCR		**8.46 74**		*i*P		**Pn**	**11 22 06.9 +0.9**
TLCR		**8.46 74**	P		**Pn**	**11 22 06.9 +0.9**
TOD	**Tromm**	**8.46 319**	P		**Pn**	**11 22 07.9 +1.8**
TOD	**Tromm**	**8.46 319**	P		**Pn**	**11 22 07.9 +1.8**
TOD	**Tromm**	**8.46 319**	P		**Pn**	**11 22 07.9 +1.8**
SMRF	**Simiane la Rot**	**8.48 277**	*e*Pn		**Pn**	**11 22 06.8 +0.4**
	SNR=1.0							
SMRF	**Simiane la Rot**	**8.48 277**	*e*Pn		**Pn**	**11 22 06.8 +0.4**
SMRF	**Simiane la Rot**	**8.48 277**	*e*Pn		**Pn**	**11 22 06.8 +0.4**
	SNR=1.0							
HINF	**Hinteralfeld**	**8.49 304**	*e*Pn		**Pn**	**11 22 06.7 +0.2**
	SNR=1.0							
HINF			*e*Sn		Sn	11 23 35.6 -6.3		
	comp=E,416nm,0.8s							
HINF	**Hinteralfeld**	**8.49 304**	*e*P		**Pn**	**11 22 06.7 +0.2**
HINF			*e*			11 23 35.6		
HINF	**Hinteralfeld**	**8.49 304**	*e*Pn		**Pn**	**11 22 06.7 +0.2**
HINF			*e*Sn		Sn	11 23 35.6 -6.3		
HINF	**Hinteralfeld**	**8.49 304**	*e*Pn		**Pn**	**11 22 06.7 +0.2**
	SNR=1.0							
ECH	**Echery**	**8.50 307**	*e*P		**Pn**	**11 22 07.1 +0.5**
ECH			*e*			11 23 42.0		
ECH				pmax	pmax			
	comp=Z,27nm,0.3s							
ECH	**Echery**	**8.50 307**	*e*Pn		**Pn**	**11 22 07.1 +0.5**
	comp=Z,27nm,0.3s							
ECH			*e*Sn		**Sn**	**11 23 42.0 -0.2**
ECH	**Echery**	**8.50 307**	P		**Pn**	**11 22 07.2 +0.6**
ECH	**Echery**	**8.50 307**	*e*Pn		**Pn**	**11 22 07.1 +0.5**
	comp=Z,27nm,0.3s							
ECH			*e*Sn		**Sn**	**11 23 42.0 -0.2**
CABF	**La Chapelle**	**8.52 296**	*e*Pn		**Pn**	**11 22 06.9 0.0**
	SNR=1.0							
CABF			*e*Sn		Sn	11 23 35.3 -7.3		
	comp=Z,182nm,0.6s							
CABF	**La Chapelle**	**8.52 296**	*e*P		**Pn**	**11 22 06.9 0.0**
CABF			*e*			11 23 35.3		
CABF	**La Chapelle**	**8.52 296**	*e*Pn		**Pn**	**11 22 06.9 0.0**
CABF			*e*Sn		Sn	11 23 35.3 -7.3		
CABF	**La Chapelle**	**8.52 296**	*e*Pn		**Pn**	**11 22 06.9 0.0**
	SNR=1.0							
CDF	**Champ du Feu**	**8.54 309**	*e*Pn		**Pn**	**11 22 07.4 +0.2**
	SNR=1.0							
CDF			*e*Sn		Sn	11 23 35.7 -7.4		
	comp=Z,228nm,0.9s							
CDF	**Champ du Feu**	**8.54 309**	*e*P		**Pn**	**11 22 07.4 +0.2**
CDF			*e*			11 23 35.7		
CDF	**Champ du Feu**	**8.54 309**	*e*Pn		**Pn**	**11 22 07.4 +0.2**
CDF			*e*Sn		Sn	11 23 35.7 -7.4		
CDF	**Champ du Feu**	**8.54 309**	*e*Pn		**Pn**	**11 22 07.4 +0.2**
	SNR=1.0							
LANF	**Langenberg**	**8.56 313**	P		**Pn**	**11 22 08.0 +0.5**
LANF	**Langenberg**	**8.56 313**	P		**Pn**	**11 22 08.0 +0.5**
LANF	**Langenberg**	**8.56 313**	P		**Pn**	**11 22 08.0 +0.5**
LANF	**Langenberg**	**8.56 313**	P		**Pn**	**11 22 08.0 +0.5**
OCF	**Saint Nazaire**	**8.69 281**	P		**Pn**	**11 22 10.3 +1.0**
OCF	**Saint Nazaire**	**8.69 281**	P		**Pn**	**11 22 10.3 +1.0**
OG26	**St.-Nazaire-De**	**8.69 281**	P		**Pn**	**11 22 10.3 +1.0**
OG26	**St.-Nazaire-De**	**8.69 281**	P		**Pn**	**11 22 10.3 +1.0**
BEL	**Belsk**	**8.71 15**	*e*P		**Pn**	**11 22 11.0 +1.6**
BEL	**Belsk**	**8.71 15**	*e*P		**Pn**	**11 22 10.9 +1.6**
BEL	**Belsk**	**8.71 15**	*e*P		**Pn**	**11 22 11.0 +1.6**
OG35	**Corcelles**	**8.71 291**	P		**Pn**	**11 22 09.7 +0.2**
HAU	**Haudompre**	**8.88 305**	*e*Pn		**Pn**	**11 22 12.5 +0.7**
	SNR=1.0							
HAU	**Haudompre**	**8.88 305**	*e*P		**Pn**	**11 22 12.5 +0.7**
HAU	**Haudompre**	**8.88 305**	*e*Pn		**Pn**	**11 22 12.5 +0.7**
HAU	**Haudompre**	**8.88 305**	*e*Pn		**Pn**	**11 22 12.5 +0.7**
	SNR=1.0							
KIS	**Kishinev**	**8.89 63**	*e*P		**Pn**	**11 22 13.0 +1.1**
KIS				MLR	MLR			
	comp=Z,1µm,13.5s							
KIS	**Kishinev**	**8.89 63**	*e*P		**Pn**	**11 22 13.0 +1.1**
KIS	**Kishinev**	**8.89 63**	*e*PP		Pn	11 22 20.0 +8.1
KIS			*e*L		L	11 25 27.0		
KIS				LRM	MLR	11 26 04.0		
	comp=Z,1µm,13.5s							
KIS	**Kishinev**	**8.89 63**	*e*P		**Pn**	**11 22 13.0 +1.1**
	comp=Z,1µm,13.5s							
ANKY	**Antikythira Is**	**8.90 146**	*e*P		**Pn**	**11 22 11.5 -0.6**
APE	**Apeiranthos**	**8.98 133**	*e*P		**Pn**	**11 22 12.5 -0.8**
TNS	**Taunus Mts**	**9.06 321**	*e*Pn		**Pn**	**11 22 16.0 +1.7**
TNS	**Taunus Mts**	**9.06 321**	*e*P		**Pn**	**11 22 16.0 +1.7**
TNS	**Taunus Mts**	**9.06 321**	*e*P		**Pn**	**11 22 16.0 +1.7**
VIVF	**Saint-Julien-l**	**9.16 283**	*e*Pn		**Pn**	**11 22 14.8 -0.8**
	SNR=1.0							
VIVF	**Saint-Julien-l**	**9.16 283**	*e*P		**Pn**	**11 22 14.8 -0.8**
VIVF	**Saint-Julien-l**	**9.16 283**	*e*Pn		**Pn**	**11 22 14.8 -0.8**
VIVF	**Saint-Julien-l**	**9.16 283**	*e*Pn		**Pn**	**11 22 14.8 -0.8**
	SNR=1.0							
THEF	**They Montfort**	**9.20 305**	P		**Pn**	**11 22 17.0 +0.9**
THEF	**They Montfort**	**9.20 305**	P		**Pn**	**11 22 17.0 +0.9**
THEF	**They Montfort**	**9.20 305**	P		**Pn**	**11 22 17.0 +0.9**
THEF	**They Montfort**	**9.20 305**	P		**Pn**	**11 22 17.0 +0.9**
ABH	**Alteburg**	**9.26 317**	P		**Pn**	**11 22 18.7 +1.7**
ABH	**Alteburg**	**9.26 317**	P		**Pn**	**11 22 18.7 +1.7**
SSB	**Saint Sauveur**	**9.29 286**	*e*P		**Pn**	**11 22 16.5 -1.0**
SSB			*e*			11 24 01.0		
SSB				pmax	pmax			
	comp=Z,28nm,0.5s							
SSB	**Saint Sauveur**	**9.29 286**	*e*Pn		**Pn**	**11 22 16.5 -1.0**
	comp=Z,28nm,0.5s							
SSB			*e*Sn		**Sn**	**11 24 01.0 -0.6**
SSB	**Saint Sauveur**	**9.29 286**	P		**Pn**	**11 22 16.5 -1.0**
SSB	**Saint Sauveur**	**9.29 286**	P		**Pn**	**11 22 16.5 -1.0**
SSB			*e*Sn		**Sn**	**11 24 01.0 -0.6**
RUP	**Ruppelstein**	**9.39 315**	P		**Pn**	**11 22 21.0 +2.2**
RUP	**Ruppelstein**	**9.39 315**	P		**Pn**	**11 22 21.0 +2.2**
RUP	**Ruppelstein**	**9.39 315**	P		**Pn**	**11 22 21.0 +2.2**
PAGF	**Fort de Pagny**	**9.50 306**	*e*P		**Pn**	**11 22 22.4 +2.1**
	baz=124							
PAGF	**Fort de Pagny**	**9.50 306**	*e*P		**Pn**	**11 22 22.4 +2.1**
PAGF	**Fort de Pagny**	**9.50 306**	*e*Pn		**Pn**	**11 22 22.4 +2.1**
	baz=124							
CLZ	**Clausthal**	**9.58 333**	*e*Pn		Pn	11 22 25.1 +3.7
CLZ	**Clausthal**	**9.58 333**	*e*P		Pn	11 22 25.1 +3.7
CLZ	**Clausthal**	**9.58 333**	*e*P		Pn	11 22 25.1 +3.7
VAM	**Vamos**	**9.67 144**	*e*P		**Pn**	**11 22 20.5 -2.2**
LASF	**Ste Croix**	**9.72 278**	*e*Pn		**Pn**	**11 22 22.6 -0.7**
	SNR=1.0							
LASF	**Ste Croix**	**9.72 278**	*e*Pn		**Pn**	**11 22 22.6 -0.7**
LASF	**Ste Croix**	**9.72 278**	*e*Pn		**Pn**	**11 22 22.6 -0.7**
	SNR=1.0							
SFTF	**Sexfontaines**	**9.76 303**	*e*Pn		**Pn**	**11 22 22.3 -1.5**
	baz=124							
SFTF	**Sexfontaines**	**9.76 303**	*e*Pn		**Pn**	**11 22 22.3 -1.5**
WLF	**Walferdange**	**9.84 313**	P		**Pn**	**11 22 27.6 +2.7**
	comp=Z,23nm,1.2s							
WLF	**Walferdange**	**9.84 313**	*e*Pn		Pn	11 22 28.8 +3.8
WLF	**Walferdange**	**9.84 313**	*e*P		**Pn**	**11 22 27.5 +2.5**
WLF				pmax	pmax			
	comp=Z,37nm,0.7s							
WLF	**Walferdange**	**9.84 313**	*e*Pn		**Pn**	**11 22 27.5 +2.5**
	comp=Z,37nm,0.7s							
WLF	**Walferdange**	**9.84 313**	*e*Pn		**Pn**	**11 22 27.5 +2.5**
	comp=Z,37nm,0.7s							
KEST	**Kesra**	**9.84 221**	*e*Pn		Pn	11 22 29.2 +4.1
KEST			Sn		**Sn**	**11 24 16.9 +1.6**
KEST	**Kesra**	**9.84 221**	Pn		Pn	11 22 29.3 +4.1
	comp=Z,0.7nm,0.3s,baz=74,slow=0.9,SNR=15							
KEST			Sn		**Sn**	**11 24 16.9 +1.6**
	baz=322,slow=18,SNR=3.2							
KEST			LR		LR	11 26 44.1		
	comp=Z,216nm,20.1s,baz=55,slow=41							
KEST	**Kesra**	**9.84 221**	*e*Pn		Pn	11 22 29.2 +4.1
KEST			Sn		**Sn**	**11 24 16.9 +1.6**
MEZF	**Maizieres J'vi**	**9.88 305**	*e*Pn		**Pn**	**11 22 25.2 -0.2**
	baz=125							
MEZF	**Maizieres J'vi**	**9.88 305**	*e*P		Pn	11 22 28.8 +3.4
	SNR=1.0							
MEZF	**Maizieres J'vi**	**9.88 305**	*e*Pn		**Pn**	**11 22 25.2 -0.2**
MEZF	**Maizieres J'vi**	**9.88 305**	*e*Pn		**Pn**	**11 22 25.2 -0.2**
	baz=125							
SMF	**Signal de Mont**	**10.02 293**	*e*Pn		**Pn**	**11 22 26.7 -0.7**
	SNR=1.0							
SMF			*e*Sn		Sn	11 24 12.4 -7.0		
	comp=Z,139nm,0.4s,SNR=1.0							
SMF	**Signal de Mont**	**10.02 293**	*e*P		**Pn**	**11 22 26.7 -0.7**
SMF			*e*			11 24 12.4		
SMF	**Signal de Mont**	**10.02 293**	*e*Pn		**Pn**	**11 22 26.7 -0.7**
SMF			*e*Sn		Sn	11 24 12.4 -7.0		
SMF	**Signal de Mont**	**10.02 293**	*e*Pn		**Pn**	**11 22 26.7 -0.7**
	SNR=1.0							
IDI	**Anoyia**	**10.07 142**	*e*Pn		**Pn**	**11 22 26.4 -1.8**
IDI			*e*Sn		**Sn**	**11 24 15.4 -5.5**
IDI	**Anoyia**	**10.07 142**	*e*Pn		**Pn**	**11 22 26.4 -1.8**
IDI			*e*Sn		**Sn**	**11 24 15.4 -5.5**
GVD	**Gavdhos**	**10.11 146**	*e*Pn		**Pn**	**11 22 30.6 +1.9**
	comp=Z,55nm,0.6s							
GVD			*e*Sn		**Sn**	**11 24 18.5 -3.3**
GVD	**Gavdhos**	**10.11 146**	*e*Pn		**Pn**	**11 22 30.6 +1.9**
	comp=Z,55nm,0.6s							
GVD			*e*Sn		**Sn**	**11 24 18.5 -3.3**
LOR	**Lormes**	**10.17 297**	*e*Pn		**Pn**	**11 22 28.9 -0.6**
	baz=116,SNR=1.0							
LOR			*e*Sn		Sn	11 24 15.3 -7.8		
	comp=Z,119nm,0.4s,SNR=1.0							
LOR	**Lormes**	**10.17 297**	*e*Pn		**Pn**	**11 22 28.9 -0.6**
LOR			*e*Sn		Sn	11 24 15.3 -7.8		
LOR	**Lormes**	**10.17 297**	*e*Pn		**Pn**	**11 22 28.9 -0.6**
	baz=116,SNR=1.0							
LBL	**Lubilhac**	**10.20 285**	P		**Pn**	**11 22 29.2 -0.7**
LBL	**Lubilhac**	**10.20 285**	P		**Pn**	**11 22 29.2 -0.7**
LBL	**Lubilhac**	**10.20 285**	P		**Pn**	**11 22 29.2 -0.7**
LBL	**Lubilhac**	**10.20 285**	P		**Pn**	**11 22 29.2 -0.7**
SSF	**Saint Saulge**	**10.34 295**	*e*Pn		**Pn**	**11 22 31.0 -0.8**
	SNR=1.0							
SSF			*e*Sn		Sn	11 24 19.9 -7.4		
	comp=Z,98nm,0.6s,SNR=1.0							
SSF	**Saint Saulge**	**10.34 295**	*e*P		**Pn**	**11 22 31.0 -0.8**
SSF			*e*			11 24 19.9		
SSF	**Saint Saulge**	**10.34 295**	*e*Pn		**Pn**

comp=Z,1.5nm,0.7s
BR131 Keskin Array S 12.81 101 *e*Pn Pn 11 23 08.9 +3.1
comp=Z,1.5nm,0.7s
BRTR Keskin Array B 12.81 101 Pn **Pn 11 23 07.3 +1.5**
BRTR Keskin Array B 12.81 101 Pn **Pn 11 23 07.3 +1.5**
comp=Z,0.1nm,0.3s,baz=279,slow=8.9,SNR=4.2
BRTR Keskin Array B 12.81 101 Pn **Pn 11 23 07.3 +1.5**
FLN La Foliniere 13.39 299 *e*Pn **Pn 11 23 12.7 -0.8**
baz=121
FLN La Foliniere 13.39 299 *e*P **Pn 11 23 12.7 -0.8**
FLN La Foliniere 13.39 299 *e*Pn **Pn 11 23 12.7 -0.8**
FLN La Foliniere 13.39 299 *e*Pn **Pn 11 23 12.7 -0.8**
baz=121
GRR Gorron 13.53 298 *e*Pn **Pn 11 23 14.4 -1.0**
GRR Gorron 13.53 298 *e*P **Pn 11 23 18.5 +3.1**
SNR=1.0
GRR Gorron 13.53 298 *e*P **Pn 11 23 14.4 -1.0**
GRR Gorron 13.53 298 *e*Pn **Pn 11 23 14.4 -1.0**
GRR *e*P **Pn 11 23 18.5 +3.1**
GRR Gorron 13.53 298 *e*Pn **Pn 11 23 14.4 -1.0**
MUD Monsted U'grnd 13.99 341 *i* P **P 11 23 31.2 +1.8**
comp=Z,10nm,0.9s
MUD Monsted U'grnd 13.99 341 *e*P **P 11 23 31.3 +1.8**
comp=Z,10nm,0.9s,SNR=43
ANN Anapa 14.55 78 *e*P **Pn 11 23 27.6 -1.7**
ANN *e*S **Sn 11 26 09.8 -0.3**
ANN pmax pmax
comp=Z,11nm,1.3s
ANN MLR MLR
comp=E,74nm,8.0s
ANN MLR MLR
comp=Z,163nm,8.0s
SGMF Saint Gilles 14.61 296 *e*Pn **Pn 11 23 28.1 -2.0**
SGMF Saint Gilles 14.61 296 *e*P **Pn 11 23 28.1 -2.0**
SGMF Saint Gilles 14.61 296 *e*Pn **Pn 11 23 28.1 -2.0**
QUIF Quistinic 14.94 294 *e*Pn **Pn 11 23 32.0 -2.6**
SNR=1.0
QUIF Quistinic 14.94 294 *e*P **Pn 11 23 32.0 -2.6**
QUIF Quistinic 14.94 294 *e*Pn **Pn 11 23 32.0 -2.6**
CSS Prodhromos 15.06 119 *e*P **P 11 23 43.0 +1.5**
CSS Prodhromos 15.06 119 *e*P **P 11 23 43.0 +1.5**
ROSF Rostrenen 15.09 296 *e*Pn **Pn 11 23 34.8 -1.8**
ROSF Rostrenen 15.09 296 *e*P **Pn 11 23 34.8 -1.8**
ROSF Rostrenen 15.09 296 *e*Pn **Pn 11 23 34.8 -1.8**
VSU Vasula 16.13 18 *d* iP **Pn 11 23 49.6 -0.4**
VSU pmax pmax
comp=Z,76nm,1.1s
ESDC Sonseca Array 16.32 264 Pn **P 11 23 55.5 -0.1**
ESDC Sonseca Array 16.32 264 Pn **P 11 23 55.5 -0.1**
comp=Z,0.6nm,0.3s,baz=67,slow=12,SNR=20
ESDC LR LR 11 30 39.4
comp=Z,135nm,18.4s,baz=55,slow=39
ESDC Sonseca Array 16.32 264 Pn **P 11 23 55.5 -0.1**
ESLA Sonseca Array 16.32 264 *e*P **P 11 23 55.9 +0.3**
comp=Z,5.3nm,1.2s
ESLA Sonseca Array 16.32 264 *e*P **P 11 23 55.9 +0.3**
comp=Z,5.3nm,1.2s
PAB San Pablo 16.65 264 *e*P **P 11 24 00.4 +1.2**
PAB pmax pmax
comp=Z,11nm,1.1s
PAB San Pablo 16.65 264 *e*P **P 11 24 00.4 +1.2**
comp=Z,11nm,1.1s
PAB San Pablo 16.65 264 *e*P **P 11 24 00.4 +1.2**
comp=Z,11nm,1.1s
VORD Divnogorie 16.70 56 *e*P **Pn 11 23 57.7 +0.4**
VORD pmax pmax
comp=Z,4.0nm,0.4s
VORD pmax pmax
comp=N,10.0nm,0.9s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD MLR MLR
comp=N,340nm,10.0s
VORD MLR MLR
comp=Z,630nm,10.0s
VORD MLR MLR
comp=E,630nm,12.0s
VORD Divnogorie 16.70 56 *e*P **Pn 11 23 57.7 +0.4**
comp=E,10.0nm,0.9s
VSR Storozhevoye 16.70 55 *e*P **Pn 11 23 58.3 +0.9**
VSR pmax pmax
comp=Z,10.0nm,1.2s
VSR pmax pmax
comp=N,10.0nm,1.3s
VSR pmax pmax
comp=E,20nm,1.0s
VSR MLR MLR
comp=Z,670nm,11.0s
VSR MLR MLR
comp=N,290nm,12.0s
VSR MLR MLR
comp=E,490nm,11.0s
VSR Storozhevoye 16.70 55 *e*P **Pn 11 23 58.3 +0.9**
comp=E,290nm,12.0s
HFS Hagfors 16.83 354 Pn **Pn 11 23 58.9 0.0**
HFS Hagfors 16.83 354 Pn **Pn 11 23 58.9 0.0**
comp=E,0.7nm,0.3s,baz=156,slow=11,SNR=30
HFS LR LR 11 30 19.5
comp=E,90nm,19.0s,baz=177,slow=37
HFS Hagfors 16.83 354 Pn **Pn 11 23 58.9 0.0**
OBN Obninsk 17.09 40 ⇑ *i* P **P 11 24 03.9 0.0**
OBN pmax pmax
comp=Z,43nm,1.2s
OBN MLR MLR
comp=Z,400nm,16.0s
OBN Obninsk 17.09 40 *i* P **P 11 24 03.9 0.0**
comp=Z,400nm,16.0s
MMAI Mount Meron Ar 17.62 120 P **Pn 11 24 07.1 -2.0**
MMAI Mount Meron Ar 17.62 120 P **Pn 11 24 07.1 -2.0**
baz=276,slow=14,SNR=2.0
MMAI Mount Meron Ar 17.62 120 P **Pn 11 24 07.1 -2.0**
PBRG Braganca 17.73 273 *e*P **P 11 24 11.9 +0.8**
comp=Z,28nm,1.7s
PBRG Braganca 17.73 273 *e*P **P 11 24 11.9 +0.8**
comp=Z,28nm,1.7s
EKA Eskdalemuir Ar 17.74 319 P **P 11 24 11.6 +0.5**
EKA S **Sn 11 27 29.5 +1.9**
EKA Eskdalemuir Ar 17.74 319 P **P 11 24 11.6 +0.5**
baz=118,slow=12,SNR=20
EKA S **Sn 11 27 29.5 +1.9**
baz=115,slow=24,SNR=4.7
EKA Eskdalemuir Ar 17.74 319 P **P 11 24 11.6 +0.5**
ESK Eskdalemuir 17.75 319 *e*P **P 11 24 12.5 +1.3**
ESK pmax pmax
comp=Z,156nm,2.4s
ESK Eskdalemuir 17.75 319 *e*P **P 11 24 12.5 +1.3**
comp=Z,156nm,2.4s
ESK Eskdalemuir 17.75 319 *e*P **P 11 24 12.5 +1.3**
comp=Z,156nm,2.4s
NAO01 NORSAR Array S 17.82 350 *e*P **P 11 24 13.0 +1.0**
comp=Z,11nm,0.7s
NAO01 NORSAR Array S 17.82 350 *e*P **P 11 24 13.0 +1.0**
comp=Z,11nm,0.7s
MOS Moscow 17.94 40 *e*P **Pn 11 24 10.1 -2.7**
MOS *e* 11 27 30.1
MOS pmax pmax
comp=Z,68nm,1.0s
MOS MLR MLR
comp=Z,500nm,18.0s
NB2 NORSAR Subarra 17.97 350 P **Pn 11 24 10.9 -2.3**
comp=Z,30nm,1.4s,baz=165,slow=12
NOA NORSAR Array B 17.97 350 P **P 11 24 13.5 -0.1**
NOA NORSAR Array B 17.97 350 P **P 11 24 13.5 -0.1**
comp=Z,0.7nm,0.3s,baz=172,slow=12,SNR=13
NOA LR LR 11 31 38.0
comp=Z,96nm,18.7s,baz=175,slow=39
NOA NORSAR Array B 17.97 350 P **P 11 24 13.5 -0.1**
comp=Z,96nm,18.7s
MVO Moncorvo 18.10 271 *e*P **P 11 24 17.5 +2.3**
comp=Z,32nm,1.8s
MVO *e*LR LR 11 31 19.1
comp=Z,210nm,18.0s
MVO Moncorvo 18.10 271 *e*P **P 11 24 17.5 +2.3**
comp=Z,32nm,1.8s
KIV Kislovodsk 18.37 80 *e*P **Pn 11 24 20.4 +2.1**
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,65nm,10.0s
KIV Kislovodsk 18.37 80 *e*P **Pn 11 24 20.4 +2.1**
comp=Z,65nm,10.0s
KBZ Khabaz 18.55 80 P **Pn 11 24 23.2 +2.8**
KBZ pmax pmax
comp=Z,1.0nm,0.3s
KBZ Khabaz 18.55 80 P **Pn 11 24 23.1 +2.8**
KBZ Khabaz 18.55 80 P **Pn 11 24 23.1 +2.8**
comp=Z,0.5nm,0.3s,baz=319,slow=4.7,SNR=7.5
KBZ Khabaz 18.55 80 P **Pn 11 24 23.1 +2.8**
PVRL Vila Real 18.57 272 *e*P **Pn 11 24 23.6 +3.0**
comp=Z,50nm,1.1s
POLO Lamas de Olo 18.60 272 *e*P **P 11 24 20.2 -0.6**
comp=Z,24nm,1.2s
POLO Lamas de Olo 18.60 272 *e*P **P 11 24 20.2 -0.6**
comp=Z,24nm,1.2s
MTE Manteigas 18.69 269 *e*P **Pn 11 24 22.7 +0.6**
comp=Z,35nm,1.1s
MTE *e*LR LR 11 30 56.9
comp=Z,304nm,16.0s
MTE Manteigas 18.69 269 *e*P **P 11 24 22.1 +0.3**
comp=Z,21nm,0.9s
MTE Manteigas 18.69 269 *e*P **P 11 24 22.1 +0.3**
comp=Z,21nm,0.9s
FINES FINESS Array B 18.76 13 P **Pn 11 24 22.6 -0.1**
FINES S Sn 11 27 44.0 -8.0
FINES FINESS Array B 18.76 13 P **Pn 11 24 22.6 -0.1**
comp=Z,1.2nm,0.3s,baz=188,slow=11,SNR=45
FINES S Sn 11 27 44.0 -8.0
comp=Z,0.1nm,0.3s,baz=197,slow=19,SNR=2.9
FINES LR LR 11 32 15.9
comp=Z,196nm,21.3s,baz=350,slow=39
FINES FINESS Array B 18.76 13 P **Pn 11 24 22.6 -0.1**
comp=Z,1.0nm,0.3s
FIA1 FINESS Array S 18.76 13 *e*P **P 11 24 22.4 +0.2**
FIA1 FINESS Array S 18.76 13 *e*P **P 11 24 22.4 +0.2**
PGAV Gavieira, Arco 18.80 274 *e*P **Pn 11 24 22.8 +0.3**
comp=Z,43nm,1.5s
PGAV *e*LR LR 11 30 51.7
comp=Z,316nm,18.0s
PGAV Gavieira, Arco 18.80 274 *e*P **Pn 11 24 23.8 +0.3**
comp=Z,43nm,1.5s
PCBR Castelo Branco 18.82 267 *e*P **Pn 11 24 25.2 +1.6**
comp=Z,15nm,1.5s
PCBR Castelo Branco 18.82 267 *e*P **Pn 11 24 25.2 +1.6**
comp=Z,15nm,1.5s
PVIS Viseu 18.85 270 *e*P **Pn 11 24 25.5 +1.4**
comp=Z,23nm,1.1s
PVIS Viseu 18.85 270 *e*P **Pn 11 24 25.5 +1.4**
comp=Z,23nm,1.1s
PMRV Marv??o 18.89 266 *e*P **P 11 24 19.4 -4.5**
comp=Z,14nm,1.1s
PMRV *e*LR LR 11 31 12.3
comp=Z,146nm,16.0s
PBAR Barrancos 19.11 262 *e*P **Pn 11 24 27.3 +0.2**
comp=Z,15nm,1.8s
PBAR Barrancos 19.11 262 *e*P **Pn 11 24 27.3 +0.2**
comp=Z,15nm,1.8s
ASF Jabal al Asfar 19.13 120 P **Pn 11 24 31.5 +4.0**
ASF Jabal al Asfar 19.13 120 P **Pn 11 24 31.5 +4.0**
comp=Z,0.4nm,0.3s,baz=185,slow=1.9,SNR=3.7
ASF LR LR 11 32 31.1
comp=Z,65nm,19.7s,baz=12,slow=40
PESTR Estremoz 19.24 265 *e*P **Pn 11 24 29.0 +0.3**
comp=Z,16nm,1.2s
PESTR Estremoz 19.24 265 *e*P **Pn 11 24 29.0 +0.3**
comp=Z,16nm,1.2s
KAF Kangasniemi 19.43 13 *e*P **P 11 24 29.3 -0.2**
KAF pmax pmax
comp=Z,3.0nm,0.5s
KAF Kangasniemi 19.43 13 *e*p **P 11 24 29.3 -0.2**
comp=Z,3.0nm,0.5s
KAF Kangasniemi 19.43 13 *e*P **P 11 24 29.3 -0.2**
comp=Z,3.0nm,0.5s
PTOM Tomar 19.57 267 *e*P **Pn 11 24 32.2 -0.5**
comp=Z,37nm,1.5s
PTOM Tomar 19.57 267 *e*P **Pn 11 24 32.2 -0.5**
comp=Z,37nm,1.5s
PMTG Montargil 19.63 266 *e*P **Pn 11 24 33.2 -0.1**
comp=Z,19nm,1.4s
PMTG Montargil 19.63 266 *e*P **Pn 11 24 33.2 -0.1**
comp=Z,19nm,1.4s
EIL Elat 19.73 128 P **P 11 24 33.0 -0.1**
EIL Elat 19.73 128 P **P 11 24 33.0 -0.1**
comp=Z,0.6nm,0.3s,baz=342,slow=19,SNR=2.1
EIL Elat 19.73 128 P **P 11 24 33.0 -0.1**
PBEJ Beja 19.77 263 *e*P **Pn 11 24 36.1 +1.1**
comp=Z,13nm,2.1s
PBEJ Beja 19.77 263 *e*P **Pn 11 24 36.1 +1.1**
comp=Z,13nm,2.1s
PVAQ Vaqueiros 19.92 261 *e*P **P 11 24 36.0 +0.9**
comp=Z,20nm,1.4s
PVAQ *e*LR LR 11 31 24.3
comp=Z,198nm,20.0s
PVAQ Vaqueiros 19.92 261 *e*P **P 11 24 36.0 +0.9**
comp=Z,20nm,1.4s
PCVE Castro Verde 20.05 262 *e*P **Pn 11 24 37.9 -0.5**
comp=Z,19nm,2.1s
PCVE Castro Verde 20.05 262 *e*P **Pn 11 24 37.9 -0.5**
comp=Z,19nm,2.1s
PBDV Barranco-do-Ve 20.14 261 *e*P **Pn 11 24 38.9 -0.6**
comp=Z,26nm,1.1s
PBDV Barranco-do-Ve 20.14 261 *e*P **Pn 11 24 38.9 -0.6**
comp=Z,26nm,1.1s
MDT Midelt 20.17 246 P **P 11 24 38.5 +0.5**
MDT Midelt 20.17 246 P **P 11 24 38.5 +0.5**
comp=Z,13nm,0.8s,baz=68,slow=11,SNR=57
MDT LR LR 11 31 58.0
comp=Z,159nm,18.1s,baz=49,slow=35
MDT Midelt 20.17 246 P **P 11 24 38.5 +0.5**
PNCL Nicolau / Gran 20.21 263 *e*P **P 11 24 39.3 +1.0**
comp=Z,17nm,1.1s
PNCL Nicolau / Gran 20.21 263 *e*P **P 11 24 39.3 +1.0**
comp=Z,17nm,1.1s
GNI Garni 20.71 90 *e*P **Pn 11 24 48.3 +1.9**
comp=Z,72nm,1.2s
GNI Garni 20.71 90 P **Pn 11 24 48.3 +1.9**
comp=Z,8.5nm,0.4s,baz=68,slow=1.2,SNR=17
GNI Garni 20.71 90 *i* P **Pn 11 24 45.7 -0.7**
JOF Joensuu 21.13 18 *e*P **P 11 24 48.2 +0.1**
JOF pmax pmax
comp=Z,6.0nm,0.5s
JOF Joensuu 21.13 18 *e*p **P 11 24 48.2 +0.1**
comp=Z,6.2nm,0.5s
JOF Joensuu 21.13 18 *e*P **P 11 24 48.2 +0.1**
comp=Z,6.0nm,0.5s
MAK Makhachkala 22.00 81 *e*P **P 11 24 55.7 -1.8**
MAK MLR MLR
comp=Z,364nm,14.0s
MAK Makhachkala 22.00 81 *e*P **P 11 24 55.7 -1.8**
comp=Z,364nm,14.0s
APA Apatity 25.66 14 ⇑ *i* P **P 11 25 33.0 +0.2**
APA pmax pmax
comp=Z,38nm,1.4s
APA MLR MLR
comp=Z,400nm,10.0s
APA Apatity 25.66 14 *i* P **P 11 25 33.0 +0.2**
comp=Z,400nm,10.0s
ARCES ARCESS Array B 26.48 6 P **P 11 25 39.9 -0.4**
ARCES ARCESS Array B 26.48 6 P **P 11 25 39.9 -0.4**
comp=Z,4.4nm,0.6s,baz=183,slow=7.3,SNR=34
ARCES LR LR 11 37 45.8
comp=Z,105nm,20.3s,baz=76,slow=40
ARCES ARCESS Array B 26.48 6 P **P 11 25 39.9 -0.4**
comp=Z,105nm,20.3s
AKTK Aktyubinsk 28.39 61 P **P 11 25 55.8 -1.8**
comp=Z,2.0nm,0.6s
AKTO Aktyubinsk 28.39 61 P **P 11 25 55.8 -1.9**
AKTO pmax pmax
comp=Z,2.0nm,0.6s
AKTO Aktyubinsk 28.39 61 P **P 11 25 55.8 -1.9**
AKTO Aktyubinsk 28.39 61 P **P 11 25 55.8 -1.9**
comp=Z,1.8nm,0.6s,baz=283,slow=9.3,SNR=7.5
AKTO Aktyubinsk 28.39 61 P **P 11 25 55.8 -1.9**
ARU Arti 29.09 49 *d* iP **P 11 26 05.4 +1.6**
ARU 11 26 56.6
ARU S **S 11 30 59.2 +4.6**
ARU SS **SnSn 11 32 17.9 -0.6**
ARU pmax pmax
comp=Z,23nm,1.7s
ARU MLR MLR
comp=Z,341nm,15.0s
ARU Arti 29.09 49 *i* P **P 11 26 05.4 +1.6**
comp=Z,23nm,1.7s
ABKAR Akbulak array 29.71 64 *e*P **P 11 26 11.7 +2.3**
comp=Z,0.9nm,0.5s
ABKAR Akbulak array 29.71 64 *e*P **P 11 26 11.6 +2.3**
comp=Z,0.9nm,0.5s
SVE Sverdlovsk 30.28 48 *e*P **P 11 26 16.5 +2.2**
SVE pmax pmax
comp=Z,16nm,1.4s
SVE Sverdlovsk 30.28 48 *e*P **P 11 26 16.5 +2.2**
comp=Z,16nm,1.4s
TOA0 Torodi Ar. Sit 33.05 209 *e*P **P 11 26 39.0 0.0**
TOA0 Torodi Ar. Sit 33.05 209 *e*P **P 11 26 39.0 0.0**
TORD Torodi Ar. Bea 33.05 209 P **P 11 26 38.2 -0.8**
TORD Torodi Ar. Bea 33.05 209 P **P 11 26 38.2 -0.8**
comp=Z,1.8nm,0.5s,baz=12,slow=8.7,SNR=18
TORD LR LR 11 41 18.5
comp=Z,126nm,18.2s,baz=55,slow=39
TORD Torodi Ar. Bea 33.05 209 P **P 11 26 38.2 -0.8**
SPITS Spitsbergen Ar 34.83 360 P **P 11 26 54.1 +0.3**
SPITS PcP **PcP 11 29 26.2 -0.4**
SPITS Spitsbergen Ar 34.83 360 P **P 11 26 54.1 +0.3**
comp=Z,2.1nm,0.5s,baz=155,slow=12,SNR=7.8
SPITS PcP **PcP 11 29 26.2 -0.4**
comp=Z,8.3nm,1.0s,baz=45,slow=0.8,SNR=4.6
SPITS Spitsbergen Ar 34.83 360 P **P 11 26 54.1 +0.3**
comp=Z,2.0nm,0.5s
SPITS Spitsbergen Ar 34.83 360 PcP **PcP 11 29 26.2 -0.4**
comp=Z,8.0nm,1.0s
BRVK Borovoye 35.82 55 *c* iP **P 11 27 02.9 +0.3**
BRVK pmax pmax
comp=Z,16nm,0.7s
BRVK Borovoye 35.82 55 *e*P **P 11 27 02.5 -0.2**
comp=Z,17nm,0.6s
BRVK Borovoye 35.82 55 *i* P **P 11 27 02.9 +0.3**
comp=Z,16nm,0.7s
BVAR Borovoye Array 35.88 56 P **P 11 27 02.8 -0.4**
BVAR pmax pmax
comp=Z,7.0nm,0.7s
BVAR Borovoye Array 35.88 56 P **P 11 27 02.8 -0.4**
BVAR Borovoye Array 35.88 56 P **P 11 27 02.8 -0.4**
comp=Z,7.2nm,0.7s,baz=269,slow=7.4,SNR=12
BVAR Borovoye Array 35.88 56 P **P 11 27 02.8 -0.4**
comp=Z,7.0nm,0.7s
KKAR Karatay Array 38.21 72 *e*P **P 11 27 23.2 +0.1**
KKAR pmax pmax
comp=Z,5.0nm,0.8s
KKAR Karatay Array 38.21 72 *e*P **P 11 27 23.2 +0.1**
comp=Z,4.8nm,0.8s
KKAR Karatay Array 38.21 72 *e*P **P 11 27 23.2 +0.1**
comp=Z,4.8nm,0.8s
SUMG Summit 38.99 337 *e*P **P 11 27 30.4 +0.6**
SUMG pmax pmax
comp=Z,137nm,2.8s
SUMG Summit 38.99 337 *e*P **P 11 27 30.4 +0.6**
comp=Z,137nm,2.8s
SUMG Summit 38.99 337 *i* P **P 11 27 30.3 +0.5**
SUMG Summit 38.99 337 *i* P **P 11 27 30.3 +0.5**
SNR=25
EKS2 Erkin-Say 40.61 71 *e*P **P 11 27 43.6 +0.3**
EKS2 pmax pmax
comp=Z,8.0nm,0.9s
EKS2 Erkin-Say 40.61 71 *e*P **P 11 27 43.6 +0.3**
comp=Z,8.2nm,0.9s
EKS2 Erkin-Say 40.61 71 *e*P **P 11 27 43.6 +0.3**
comp=Z,8.2nm,0.9s
AAK Ala-Archa 41.11 71 ⇓ *e*P **P 11 27 47.3 -0.2**
AAK pmax pmax
comp=Z,15nm,1.2s
AAK Ala-Archa 41.11 71 *e*P **P 11 27 47.4 -0.1**
comp=Z,2.0nm,0.4s
AAK Ala-Archa 41.11 71 LR LR 11 48 09.3
comp=Z,93nm,20.4s,baz=297,slow=41
AAK Ala-Archa 41.11 71 *e*P **P 11 27 47.4 -0.1**
comp=Z,2.0nm,0.4s
KURK Kurchatov 41.32 58 *e*P **P 11 27 47.7 -1.2**
KURK pmax pmax
comp=Z,7.0nm,1.2s
KURK Kurchatov 41.32 58 *e*P **P 11 27 47.6 -1.2**
comp=Z,6.8nm,1.2s
KURK Kurchatov 41.32 58 *e*P **P 11 27 47.7 -1.2**
comp=Z,6.8nm,1.2s
DBIC Dimbokro 41.49 214 *e*P **P 11 27 50.8 +0.3**
comp=Z,10nm,0.6s
DBIC Dimbokro 41.49 214 P **P 11 27 49.5 -1.1**
comp=Z,8.2nm,0.5s,baz=21,slow=9.7,SNR=17
DBIC LR LR 11 46 14.5
comp=Z,102nm,18.0s,baz=261,slow=38
DBIC Dimbokro 41.49 214 *e*P **P 11 27 50.8 +0.3**
comp=Z,10nm,0.6s
NVS Novosibirsk 43.06 51 *e*P **P 11 28 02.6 -0.3**
NVS *e* 11 29 45.8
NVS pmax pmax
comp=Z,11nm,1.0s
NVS pmax pmax
comp=E,4.0nm,0.9s
NVS Novosibirsk 43.06 51 *e*P **P 11 28 02.6 -0.3**
comp=E,11nm,1.0s
KSH Kashi 43.37 74 *e*P P 11 28 09.1 +3.2
KSH *e*pP pP 11 28 13.6 +2.7
KSH *e*sP sP 11 28 17.3 +4.5
KSH *e*PP **PcP 11 29 52.3 -2.0**
KSH *e*PcP PP 11 29 56.1 +10
KSH *e*S **S 11 34 37.5 +4.4**
KSH *e*sS sS 11 34 46.3 +5.0
KSH pmax pmax
comp=Z,11nm,0.5s
KSH pmax pmax
comp=Z,210nm,3.2s
KSH LR LR
comp=N,350nm,5.5s
KSH LR LR
comp=E,280nm,7.8s
KSH LR LR
comp=Z,210nm,5.3s
ZALV Zalesovo Beam 44.17 52 P **P 11 28 11.1 -0.8**
ZALV pmax pmax
comp=Z,3.0nm,0.6s
ZALV MLR MLR
comp=Z,248nm,19.9s
ZALV Zalesovo Beam 44.17 52 P **P 11 28 11.1 -0.8**
ZALV Zalesovo Beam 44.17 52 P **P 11 28 11.1 -0.8**
comp=Z,3.0nm,0.6s,baz=285,slow=8.6,SNR=7.9
ZALV LR LR 11 48 15.3
comp=Z,248nm,19.9s,baz=250,slow=38
ZALV Zalesovo Beam 44.17 52 P **P 11 28 11.1 -0.8**
comp=Z,248nm,19.9s
MK31 Makanchi Array 44.83 62 *e*P **P 11 28 16.0 -1.3**
MK31 Makanchi Array 44.83 62 *e*P **P 11 28 16.0 -1.3**
MK31 Makanchi Array 44.83 62 *e*P **P 11 28 16.0 -1.3**
MKAR Makanchi Array 44.83 62 P **P 11 28 15.8 -1.5**
MKAR pmax pmax
comp=Z,2.0nm,0.6s
MKAR MLR MLR
comp=Z,83nm,20.8s
MKAR Makanchi Array 44.83 62 *e*P **P 11 28 16.2 -1.1**
MKAR Makanchi Array 44.83 62 P **P 11 28 15.8 -1.5**
comp=Z,1.8nm,0.6s,baz=285,slow=7.1,SNR=18
MKAR LR LR 11 48 58.1
comp=Z,83nm,20.8s,baz=301,slow=39
MKAR Makanchi Array 44.83 62 *e*P **P 11 28 16.2 -1.1**
WMQ Urumqi 49.50 64 *e*P P 11 28 50.4 -3.4
WMQ pP pP 11 28 57.0 -1.9
WMQ *e*S **S 11 35 57.0 -3.7**
WMQ pmax pmax
comp=Z,16nm,0.6s
WMQ pmax pmax
comp=Z,120nm,5.0s
WMQ LR LR
comp=N,500nm,14.1s
WMQ LR LR
comp=E,360nm,14.1s
WMQ LR LR
comp=Z,370nm,18.4s
SCHQ Schefferville 52.95 314 P **P 11 29 18.7 -0.8**
SCHQ Schefferville 52.95 314 P **P 11 29 18.7 -0.8**
comp=Z,2.4nm,0.7s,baz=54,slow=11,SNR=5.0
SCHQ Schefferville 52.95 314 P **P 11 29 18.7 -0.8**
TIXI Tiksi 55.58 21 ⇓ *i* P **P 11 29 38.1 -0.2**
TIXI pmax pmax
comp=Z,10.0nm,2.5s
TIXI Tiksi 55.58 21 *i* P **P 11 29 38.1 -0.2**
comp=Z,10.0nm,2.5s
SONM Songino Array 59.07 52 P **P 11 30 02.8 -0.8**
SONM Songino Array 59.07 52 P **P 11 30 02.8 -0.8**
comp=Z,1.2nm,0.6s,baz=288,slow=8.7,SNR=7.9
SONM LR LR 11 57 37.1
comp=Z,192nm,18.4s,baz=73,slow=38
SONM Songino Array 59.07 52 P **P 11 30 02.8 -0.8**
comp=Z,192nm,18.4s
LSZ Lusaka 59.31 168 *e*P **P 11 30 06.6 +1.2**
comp=Z,5.7nm,1.4s
LSZ Lusaka 59.31 168 *e*P **P 11 30 06.6 +1.2**
comp=Z,5.7nm,1.4s
GTA Gaotai 59.56 63 *e*P **P 11 30 09.6 +2.5**
GTA pP **pP 11 30 13.6 +1.4**
GTA sP **sP 11 30 15.8 +1.6**
GTA PcP **PcP 11 30 57.1 +2.7**
GTA pmax pmax

comp=Z,3.0nm,0.7s
LZH Lanzhou 64.08 64 *e*P P 11 30 47.4 +10
LZH pP pP 11 30 52.3 +10
LZH sP sP 11 30 54.3 +10
LZH PP PP 11 33 10.0 +12
LZH *e*S S 11 39 24.6 +11
LZH sS sS 11 39 33.6 +11
LZH Lanzhou 64.08 64 SS SS 11 43 25.4 +3.3
LZH pmax pmax
comp=Z,15nm,1.0s
LZH pmax pmax
comp=Z,110nm,4.6s
LZH LR LR
comp=N,170nm,14.8s
LZH LR LR
comp=E,170nm,13.9s
LZH LR LR
comp=Z,250nm,16.2s
HHC Hu-ho-hao-te 66.10 56 *e*P **P 11 30 49.5 -1.0**
HHC pP **pP 11 30 54.3 -1.4**
HHC sP **sP 11 30 56.5 -1.2**
HHC PP **PP 11 33 16.9 +1.2**
HHC PcS 11 35 23.3
HHC S **S 11 39 34.8 -3.4**
HHC ScS **SKSac 11 40 41.3 -4.7**
HHC SS **SS 11 43 51.0 -2.1**
HHC pmax pmax
comp=Z,35nm,1.0s
HHC pmax pmax
comp=Z,140nm,5.0s
HHC LR LR
comp=N,200nm,15.4s
HHC LR LR
comp=E,390nm,15.6s
HHC LR LR
comp=Z,170nm,15.7s
BILL Bilibino 66.40 12 *e*P **P 11 30 51.4 -0.5**
BILL *i* 11 30 57.4
BILL *i* 11 31 23.0
BILL pmax pmax
comp=Z,11nm,2.5s
BILL Bilibino 66.40 12 *e*P **P 11 30 51.4 -0.5**
comp=Z,11nm,2.5s
YKW3 Yellowknife Ar 67.52 338 *e*P **P 11 30 58.6 -0.5**
comp=Z,0.1nm,0.8s
YKW3 Yellowknife Ar 67.52 338 *e*P **P 11 30 58.6 -0.5**
comp=Z,0.1nm,0.8s
YKA Yellowknife Ar 67.57 338 P **P 11 30 59.1 -0.2**
YKA Yellowknife Ar 67.57 338 P **P 11 30 59.1 -0.2**
comp=Z,2.5nm,0.6s,baz=38,slow=6.2,SNR=44
YKA Yellowknife Ar 67.57 338 P **P 11 30 59.2 -0.2**
COLD Coldfoot 69.22 355 *e*P **P 11 31 09.8 +0.1**
comp=Z,4.5nm,0.9s
COLD Coldfoot 69.22 355 *e*P **P 11 31 09.8 +0.1**
comp=Z,4.5nm,0.9s
FFC Flin Flon 69.39 327 *i* P **P 11 31 11.4 +0.5**
FFC Flin Flon 69.39 327 *e*P **P 11 31 11.1 +0.2**
comp=Z,6.1nm,0.9s
FFC Flin Flon 69.39 327 *e*P **P 11 31 11.1 +0.2**
comp=Z,6.1nm,0.9s
ULM Lac du Bonnet 70.01 321 P **P 11 31 13.1 -1.7**
ULM Lac du Bonnet 70.01 321 P **P 11 31 13.1 -1.7**
comp=Z,2.6nm,0.7s,baz=37,slow=5.1,SNR=2.7
KMI Kunming 70.03 74 P **P 11 31 15.5 -0.1**
KMI pmax pmax
comp=Z,14nm,1.4s
EGAK Eagle 70.78 350 *e*P **P 11 31 19.9 +0.7**
comp=Z,8.2nm,1.5s
EGAK Eagle 70.78 350 *e*P **P 11 31 19.9 +0.7**
comp=Z,8.2nm,1.5s
CHTO Chiang Mai 71.37 82 *e*P **P 11 31 26.3 +2.7**
CHTO pmax pmax
comp=Z,7.0nm,1.0s
CHTO Chiang Mai 71.37 82 *e*P **P 11 31 26.3 +2.7**
comp=Z,7.4nm,1.0s
CHTO Chiang Mai 71.37 82 *e*P **P 11 31 26.3 +2.7**
comp=Z,7.4nm,1.0s
ILAR Eielson Array 71.39 353 P **P 11 31 23.2 +0.3**
ILAR Eielson Array 71.39 353 P **P 11 31 23.2 +0.3**
comp=Z,1.2nm,0.7s,baz=3.8,slow=5.9,SNR=22
ILAR Eielson Array 71.39 353 P **P 11 31 23.2 +0.3**
CMAR Chiang Mai Arr 71.60 82 P **P 11 31 23.6 -1.4**
CMAR Chiang Mai Arr 71.60 82 P **P 11 31 23.6 -1.4**
comp=Z,2.8nm,0.7s,baz=306,slow=7.4,SNR=11
CMAR LR LR 12 03 52.4
comp=Z,30nm,18.9s,baz=325,slow=37
CMAR Chiang Mai Arr 71.60 82 P **P 11 31 23.6 -1.4**
MCK McKinley 72.59 354 *e*P **P 11 31 30.6 +0.4**
MCK pmax pmax
comp=Z,9.0nm,1.1s
MCK McKinley 72.59 354 *e*P **P 11 31 30.6 +0.4**
comp=Z,8.9nm,1.1s
MCK McKinley 72.59 354 *e*P **P 11 31 30.6 +0.4**
comp=Z,8.9nm,1.1s
HABR Khabarovsk 73.39 38 P **P 11 31 35.1 -0.1**
HABR *e**PP **pP 11 31 40.0 -0.4**
HABR *e* 11 31 51.1
HABR *e* 11 34 18.2
HABR *e*PPP PPP 11 36 02.8
HABR *e* 11 41 42.9
HABR *e*SS SS 11 45 46.9 +2.3
HABR pmax pmax
comp=E,41nm,2.5s
HABR pmax pmax
comp=Z,48nm,2.5s
HABR pmax pmax
comp=N,38nm,2.5s
HABR MLR MLR
comp=Z,118nm,20.0s
WHN Wuhan 74.39 63 P P 11 31 38.0 -3.3
PMR Palmer 74.72 353 *e*P **P 11 31 42.7 0.0**
PMR pmax pmax
comp=Z,7.0nm,0.9s
PMR Palmer 74.72 353 *e*P **P 11 31 42.7 0.0**
comp=Z,6.9nm,0.9s
PMR Palmer 74.72 353 *e*P **P 11 31 42.7 0.0**
comp=Z,6.9nm,0.9s
ECSD EROS Data Cent 75.01 317 *e*P **P 11 31 45.2 +0.4**
comp=Z,8.7nm,1.3s
ECSD EROS Data Cent 75.01 317 *e*P **P 11 31 45.2 +0.4**
comp=Z,8.7nm,1.3s
USRK Ussuriysk Arra 75.10 43 P **P 11 31 44.0 -1.2**
comp=Z,0.6nm,0.5s,baz=318,slow=3.1,SNR=3.9
WVT Waverly 75.59 306 *e*P **P 11 31 47.7 -0.4**
WVT pmax pmax
comp=Z,5.0nm,0.9s
WVT Waverly 75.59 306 *e*P **P 11 31 47.7 -0.4**
comp=Z,5.5nm,0.9s
WVT Waverly 75.59 306 *e*P **P 11 31 47.7 -0.4**
comp=Z,5.5nm,0.9s
A18A Metzger Ranch, 76.97 327 P **P 11 31 56.6 +0.7**
baz=77
F24A Ekalaka 77.13 322 P **P 11 31 58.0 +1.1**
baz=77
C20A Veseth Ranch, 77.19 326 P **P 11 31 57.6 +0.5**
baz=77
LRAL Lakeview Retre 77.22 303 *e*P **P 11 31 57.3 -0.2**
comp=Z,6.2nm,0.6s
LRAL Lakeview Retre 77.22 303 *e*P **P 11 31 57.3 -0.2**
comp=Z,6.2nm,0.6s
A17A Triple J Farms 77.28 328 P **P 11 31 58.4 +0.7**
baz=77
B18A Beardsley Farm 77.36 327 P **P 11 31 58.9 +0.8**
baz=77
C19A Slack Wire Ran 77.60 326 P **P 11 32 00.8 +1.3**
baz=77
A16A West Butte Ran 77.63 328 ⇓P **P 11 31 59.7 0.0**
baz=77
F23A Volborg 77.65 323 ⇑P **P 11 32 00.4 +0.6**
baz=77
EGMT Eagleton 77.65 327 *e*P **P 11 32 01.1 +1.4**
comp=Z,32nm,1.6s
EGMT Eagleton 77.65 327 *e*P **P 11 32 01.1 +1.4**
comp=Z,32nm,1.6s
EGMT Eagleton 77.65 327 ⇑P **P 11 32 00.7 +0.9**
baz=77
D20A Manuel Ranch, 77.74 325 ⇓P **P 11 32 01.3 +1.1**
baz=78
KSAR Wonju Array Be 77.83 50 P **P 11 31 59.9 -0.9**
KSAR Wonju Array Be 77.83 50 P **P 11 31 59.9 -0.9**
KSRS Korea Array 77.84 50 P **P 11 31 59.9 -0.9**
comp=Z,1.8nm,0.9s,baz=316,slow=4.5,SNR=6.3
KSRS LR LR 12 09 24.7
comp=Z,98nm,18.2s,baz=315,slow=38
B17A L&G Farms, Che 77.85 327 ⇓P **P 11 32 00.9 +0.1**
baz=78
YSS Yuzh-Sakhalins 77.89 35 ⇑*i*P P 11 32 05.0 +4.1
PETK Petropavlovsk- 77.97 23 LR LR 12 10 52.3
comp=Z,61nm,18.2s,baz=173,slow=39
A15A Johnson Ranch, 78.03 329 ⇓P **P 11 32 01.5 -0.4**
baz=78
A14A Double T Ranch 78.29 329 ⇑P **P 11 32 03.7 +0.3**
baz=78
C17A Wharram Farm, 78.37 327 P **P 11 32 04.1 +0.3**
baz=78
WALA Waterton Lakes 78.40 330 *e*P **P 11 32 04.1 +0.1**
comp=Z,0.1nm,0.8s
WALA Waterton Lakes 78.40 330 *e*P **P 11 32 04.1 +0.1**
comp=Z,0.1nm,0.8s
B15A Bradely Ranch, 78.52 328 ⇑P **P 11 32 04.3 -0.3**
baz=78
B14A Marquette Ranc 78.74 329 ⇓P **P 11 32 05.2 -0.7**
baz=78
D16A Dana Ranch, Ca 79.17 327 ⇑P **P 11 32 08.5 +0.3**
baz=79
B13A Whitefish 79.18 330 ⇑P **P 11 32 09.3 +1.1**
baz=79
F18A Big Timber 79.34 325 ⇓P **P 11 32 09.1 -0.1**
baz=79
E17A Martinsdale 79.36 326 ⇑P **P 11 32 10.7 +1.4**
baz=79
C14A Swan Lake 79.41 329 ⇑P **P 11 32 09.8 +0.3**
baz=79
I22A 9 Mile Ranch, 79.56 322 ⇓P **P 11 32 10.5 0.0**
baz=79
JTMT Jette 79.63 329 *e*P **P 11 32 11.8 +1.1**
JTMT Jette 79.63 329 *e*P **P 11 32 11.9 +1.1**
SWMT Swartz Lake 79.72 329 *e*P **P 11 32 12.2 +0.9**
SWMT Swartz Lake 79.72 329 *e*P **P 11 32 12.1 +0.9**
SLMT Seeley Lake 79.75 328 *e*P **P 11 32 12.0 +0.5**
SLMT Seeley Lake 79.75 328 *e*P **P 11 32 12.0 +0.5**
C13A Hot Springs 79.80 329 ⇓P **P 11 32 11.2 -0.4**
baz=80
J22A Midwest 79.94 322 ⇑P **P 11 32 11.2 -1.3**
baz=80
I21A Big Trails, Te 79.98 323 ⇓P **P 11 32 11.7 -1.1**
baz=80
ASAJ Asahikawa 80.08 37 P **P 11 32 11.4 -1.6**
ASAJ Asahikawa 80.08 37 P **P 11 32 11.4 -1.6**
comp=Z,2.5nm,0.7s,baz=347,slow=16,SNR=3.5
ASAJ Asahikawa 80.08 37 P **P 11 32 11.4 -1.6**
I20A Worland 80.24 323 ⇑P **P 11 32 14.8 +0.8**
baz=80
D13A Huson 80.24 329 ⇓P **P 11 32 14.2 +0.2**
baz=80
MSO Missoula 80.27 328 P **P 11 32 14.3 +0.1**
baz=80
TUL1 Tulsa 80.28 311 P **P 11 32 14.5 +0.2**
baz=80
BOZ Bozeman (W) 80.33 326 *e*P **P 11 32 15.8 +1.2**
BOZ pmax pmax
comp=Z,2.0nm,1.0s
BOZ Bozeman (W) 80.33 326 *e*P **P 11 32 15.8 +1.2**
comp=Z,2.3nm,1.0s
BOZ Bozeman (W) 80.33 326 *e*P **P 11 32 15.8 +1.2**
comp=Z,2.2nm,1.0s
F15A Butte 80.52 327 ⇓P **P 11 32 16.0 +0.3**
baz=80
I19A Meeteetse 80.54 324 ⇑P **P 11 32 16.6 +0.7**
baz=80
K22A Casper 80.56 322 ⇑P **P 11 32 15.1 -0.7**
baz=80
D12A Red Ives Fores 80.61 329 ⇓P **P 11 32 15.8 -0.2**
baz=80
J20A Shoshoni 80.70 323 ⇓P **P 11 32 17.1 +0.5**
baz=80
Q29A Oakley 80.81 316 ⇑P **P 11 32 16.7 -0.5**
baz=81
DLMT Dillon 80.96 327 *e*P **P 11 32 19.2 +1.3**
comp=Z,3.3nm,1.0s
DLMT Dillon 80.96 327 *e*P **P 11 32 19.2 +1.3**
comp=Z,3.3nm,1.0s
E12A Beaver Dam Sad 81.23 329 ⇑P **P 11 32 19.0 -0.4**
baz=81
T31A Randall Ranch, 81.49 314 ⇑P **P 11 32 21.1 +0.4**
baz=81
MCMT McKenzie Canyo 81.50 327 *e*P **P 11 32 21.8 +0.8**
MCMT McKenzie Canyo 81.50 327 *e*P **P 11 32 21.8 +0.8**
PDAR Pinedale Array 81.81 323 P **P 11 32 22.5 -0.1**
PDAR Pinedale Array 81.81 323 P **P 11 32 22.5 -0.1**
comp=Z,1.3nm,0.7s,baz=57,slow=5.5,SNR=7.2
PDAR LR LR 12 09 44.9
comp=Z,47nm,18.7s,baz=255,slow=36
PDAR Pinedale Array 81.81 323 P **P 11 32 22.5 -0.1**
O23A Lake Granby, G 82.20 320 P **P 11 32 25.2 +0.4**
baz=82
G12A Big Creek, Yel 82.22 328 ⇓P **P 11 32 24.3 -0.4**
baz=82
M20A Sweetwater, Wa 82.23 322 P **P 11 32 25.4 +0.6**
baz=82
S28A Manter 82.27 316 P **P 11 32 25.7 +0.8**
baz=82
ISCO Idaho Springs 82.38 319 *e*P **P 11 32 26.9 +1.1**
ISCO pmax pmax
comp=Z,4.0nm,0.9s
ISCO Idaho Springs 82.38 319 *e*P **P 11 32 26.9 +1.1**
comp=Z,4.1nm,0.9s
ISCO Idaho Springs 82.38 319 *e*P **P 11 32 26.9 +1.1**
comp=Z,4.1nm,0.9s
ISCO Idaho Springs 82.38 319 ⇓P **P 11 32 26.7 +0.9**
baz=82
SDV Santo Domingo 82.44 275 *e*P **P 11 32 26.5 +0.2**
comp=Z,12nm,1.0s
SDV Santo Domingo 82.44 275 *e*P **P 11 32 26.5 +0.2**
comp=Z,12nm,1.0s
I14A Mackay 82.49 326 ⇑P **P 11 32 27.1 +1.0**
baz=82
R26A Arlington 82.50 317 P **P 11 32 27.0 +0.9**
baz=82
N21A Black Mountain 82.51 321 P **P 11 32 26.8 +0.4**
baz=82
H12A Diamond D Ranc 82.52 328 P **P 11 32 26.6 +0.3**
baz=82
O22A Kremmling 82.54 320 P **P 11 32 26.6 +0.1**
baz=82
WMOK Wichita Mounta 82.79 312 *e*P **P 11 32 28.4 +0.8**
WMOK pmax pmax
comp=Z,10.0nm,1.5s
WMOK Wichita Mounta 82.79 312 *e*P **P 11 32 28.4 +0.8**
comp=Z,10nm,1.5s
WMOK Wichita Mounta 82.79 312 *e*P **P 11 32 28.4 +0.8**
comp=Z,10nm,1.5s
N20A Spence Gulch, 82.79 322 ⇑P **P 11 32 28.6 +0.8**
baz=82
P23A Jefferson 82.82 319 P **P 11 32 28.1 -0.1**
baz=83
BMO Blue Mountains 83.20 329 *e*P **P 11 32 29.6 0.0**
comp=Z,4.1nm,1.1s
BMO Blue Mountains 83.20 329 *e*P **P 11 32 29.6 0.0**
comp=Z,4.1nm,1.1s
I12A Atlanta 83.27 327 P **P 11 32 30.4 +0.3**
baz=83
U28A Mallet 83.36 315 P **P 11 32 31.7 +1.1**
baz=83
R24A Sanders Place, 83.37 318 P **P 11 32 31.6 +0.8**
baz=83
U27A Thompson Grove 83.64 315 P **P 11 32 32.6 +0.5**
baz=83
BDFB Brasilia 83.70 242 P **P 11 32 33.0 +0.5**
BDFB Brasilia 83.70 242 P **P 11 32 33.0 +0.5**
comp=Z,4.1nm,0.7s,baz=81,slow=5.5,SNR=5.3
BDFB Brasilia 83.70 242 P **P 11 32 33.0 +0.5**
R23A Moffat 83.75 318 ⇑P **P 11 32 32.2 -0.6**
baz=84
MFID Camas Ranch 83.86 328 *e*P **P 11 32 33.7 +0.6**
comp=Z,3.9nm,0.9s
MFID Camas Ranch 83.86 328 *e*P **P 11 32 33.7 +0.6**
comp=Z,3.9nm,0.9s
MFID Camas Ranch 83.86 328 ⇑P **P 11 32 33.5 +0.4**
baz=84
S24A Touchin Ranch, 83.88 318 ⇓P **P 11 32 33.4 -0.2**
baz=84
MJAR Matsushiro Arr 83.98 44 P **P 11 32 32.3 -1.4**
MJAR Matsushiro Arr 83.98 44 P **P 11 32 32.3 -1.4**
comp=Z,1.1nm,0.6s,baz=328,slow=4.4,SNR=6.3
MJAR LR LR 12 13 00.0
comp=Z,91nm,19.5s,baz=335,slow=38
MJAR Matsushiro Arr 83.98 44 P **P 11 32 32.3 -1.4**
U26A Atchley Ranch, 84.13 316 ⇑P **P 11 32 34.7 +0.1**
baz=84
X30A Coker Ranch, T 84.13 313 P **P 11 32 35.4 +0.9**
baz=84
Y31A Rekieta Farm, 84.17 312 P **P 11 32 35.5 +0.8**
baz=84
Z32A Haskell 84.24 311 P **P 11 32 36.2 +1.1**
baz=84,SNR=9.8
U25A Circle Dot Ran 84.46 316 P **P 11 32 37.6 +1.3**
baz=84
S22A 4UR Ranch, Cre 84.59 319 P **P 11 32 37.5 +0.4**
baz=84
Z31A Sharp Cattle R 84.60 312 P **P 11 32 37.5 +0.5**
baz=84
V26A Tequesquite Ra 84.61 316 P **P 11 32 37.1 0.0**
baz=84
W27A Bowe Ranch, En 84.81 315 P **P 11 32 38.5 +0.5**
baz=85
Y28A McKinney Farm, 85.27 313 P **P 11 32 40.5 +0.1**
baz=85
W25A X Bar L Ranch, 85.41 316 P **P 11 32 41.5 +0.4**
baz=85
232A Coleman 85.41 310 P **P 11 32 42.2 +1.2**
baz=85,SNR=5.8
U22A Llaves 85.69 318 P **P 11 32 43.2 +0.6**
baz=85
Z28A Tucker Farm, M 85.83 313 P **P 11 32 43.8 +0.7**
baz=86
332A Millersview 85.84 310 P **P 11 32 44.3 +1.1**
baz=86,SNR=5.7
432A Menard 86.26 310 P **P 11 32 45.8 +0.6**
baz=86,SNR=7.1
331A San Angelo 86.28 311 P **P 11 32 45.8 +0.5**
baz=86
JCT Junction City 86.56 310 P **P 11 32 48.2 +1.4**
baz=86
ANMO Albuquerque 86.63 317 LR LR 12 11 42.5
comp=Z,92nm,18.3s,baz=143,slow=36
431A Sonora 86.86 310 P **P 11 32 49.3 +1.1**
baz=87
532A Rocksprings 86.89 309 P **P 11 32 49.5 +1.2**
baz=87
Z25A Roswell 87.06 315 P **P 11 32 49.5 +0.3**
baz=87
531A Rocksprings 87.22 310 P **P 11 32 50.4 +0.5**
baz=87
226B Tecolote Peak, 87.71 314 P **P 11 32 52.7 +0.3**
baz=88
631A Perdido Creek 87.81 309 P **P 11 32 53.3 +0.5**
baz=88
ROSC El Rosal 87.85 275 LR LR 12 06 21.8
comp=Z,64nm,21.6s,baz=323,slow=32
YBH Yreka Blue Hor 87.86 331 LR LR 12 13 53.2
comp=Z,76nm,18.2s,baz=20,slow=37
Z22A Elephant Butte 88.22 316 P **P 11 32 55.0 +0.1**
baz=88
427A Hayter Ranch, 88.26 312 P **P 11 32 55.9 +0.9**
baz=88
MNTX Cornudas Mount 88.64 314 *e*P **P 11 32 56.5 -0.2**
comp=Z,1.5nm,0.7s
MNTX Cornudas Mount 88.64 314 *e*P **P 11 32 56.5 -0.2**
comp=Z,1.5nm,0.7s
426A McDonald Obser 88.73 313 P **P 11 32 57.9 +0.5**
baz=88
324A Moseley Ranch, 88.90 314 P **P 11 32 58.0 -0.1**
baz=89
527A Woodward Ranch 88.92 312 P **P 11 32 58.5 +0.3**
baz=89
628A Black Gap, Mar 89.03 311 P **P 11 32 59.4 +0.8**
baz=89
NVAR Mina Array Bea 89.08 327 P **P 11 32 58.4 -0.5**
NVAR Mina Array Bea 89.08 327 P **P 11 32 58.4 -0.5**
comp=Z,0.4nm,0.8s,baz=70,slow=3.0,SNR=3.0
NVAR Mina Array Bea 89.08 327 P **P 11 32 58.4 -0.5**
Z20A Nine Sixteen R 89.15 317 P **P 11 33 00.3 +1.0**
baz=89
121A Cookes Peak, D 89.22 316 P **P 11 33 00.6 +1.0**
baz=89
526A Mary Lane Ranc 89.24 312 P **P 11 33 00.9 +1.2**
baz=89
627A Terlingua Ranc 89.33 311 P **P 11 33 00.7 +0.6**
baz=89
X16A Lo Mia Camp, P 89.47 320 P **P 11 33 01.5 +0.8**
baz=89
TXAR Lajitas Array 89.58 311 P **P 11 33 01.9 +0.7**
TXAR Lajitas Array 89.58 311 P **P 11 33 01.9 +0.7**
comp=Z,2.3nm,0.8s,baz=75,slow=3.8,SNR=24
TXAR Lajitas Array 89.58 311 P **P 11 33 02.0 +0.7**
626A Big Bend Ranch 89.66 312 P **P 11 33 02.1 +0.5**
baz=89
PFO Pinyon Flat Ob 92.42 323 LR LR 12 12 24.8
comp=Z,50nm,19.7s,baz=32,slow=34
CPUP Villa Florida 97.40 241 LR LR 12 20 37.8
comp=Z,118nm,20.4s,baz=330,slow=37
MAW Mawson 115.97 162 *e*PKPdf **PKPdf 11 38 45.9 +1.0**
MAW PKP **PKPdf 11 38 46.1 +1.2**
MAW Mawson 115.97 162 PKP **PKPdf 11 38 46.1 +1.2**
comp=Z,3.4nm,0.6s,baz=270,slow=8.1,SNR=10
MAW Mawson 115.97 162 PKIKP **PKPdf 11 38 46.1 +1.2**
WRA Warramunga Arr 122.97 87 PKP **PKPdf 11 38 58.0 -1.9**
WRA Warramunga Arr 122.97 87 PKP **PKPdf 11 38 58.0 -1.9**
comp=Z,2.2nm,1.2s,baz=317,slow=1.8,SNR=4.8
WRA Warramunga Arr 122.97 87 PKIKP **PKPdf 11 38 58.0 -1.9**
ASAR Alice Springs 124.96 91 PKP **PKPdf 11 39 02.4 -1.3**
ASAR Alice Springs 124.96 91 PKP **PKPdf 11 39 02.4 -1.3**
comp=Z,0.9nm,0.8s,baz=311,slow=1.7,SNR=10
ASAR Alice Springs 124.96 91 PKIKP **PKPdf 11 39 02.4 -1.3**
STKA Stephens Creek 135.20 94 PKP **PKPdf 11 39 23.3 +0.5**
STKA Stephens Creek 135.20 94 PKP **PKPdf 11 39 23.3 +0.5**
comp=Z,1.4nm,0.7s,baz=326,slow=3.6,SNR=3.7
STKA Stephens Creek 135.20 94 PKIKP **PKPdf 11 39 23.3 +0.5**

MEX 21 11:24:08.5±0.4, 16.74N×99.67W, h5km, MD 3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.65**	**298**	*i* P		Pg	11 24 20.1	-0.8
CAIG				*i* S		Sg	11 24 29.5	+0.1
MEIG	**Mezcala**	**1.18**	**2**	*i* P		Pg	11 24 27.4	-3.9
MEIG				*i* S		Sg	11 24 43.0	-3.8
PNIG	**Pinotepa**	**1.52**	**103**	*i* P		Pn	11 24 32.9	-3.5
PNIG				*i* S		Sn	11 24 51.9	-4.7
ARIG	**Puente Sto Nin**	**1.66**	**337**	*e*P		Pn	11 24 34.7	-3.7
ARIG				*i* S		Sn	11 24 55.7	-4.5
ZIIG	**Zihuatanejo**	**1.92**	**297**	*i* P		Pn	11 24 38.4	-3.5
ZIIG				*i* S		Sn	11 25 01.7	-4.7

IDC 21 11:57:03.6±2.3, 6.56S×155.14E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/18, mbtmp3.5/3, Error ellipse: s-maj=71.8km s-min=39.8km az=114.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.18**	**235**	P	P		12 02 21.9	0.0
	0.6nm,0.6s,baz=55,slow=9.7,SNR=8.7							
WRA				PcP	PcP		12 06 03.3	+0.3
	0.3nm,1.1s,baz=56,slow=2.7,SNR=6.1							
ASAR	**Alice Springs**	**26.56**	**228**	P	P		12 02 43.2	-0.4
	0.3nm,0.9s,baz=56,slow=9.2,SNR=4.6							
ASAR				pP			12 02 55.2	
	0.6nm,0.8s,baz=60,slow=8.9,SNR=3.2							
CMAR	**Chiang Mai Arr**	**60.73**	**295**	P	P		12 07 18.9	+1.4
	1.1nm,0.7s,baz=123,slow=4.4,SNR=5.2							
TORD	**Torodi Ar. Bea**	**153.04**	**286**	PKPbc	PKPbc		12 17 02.6	-1.6
	0.3nm,0.6s,baz=72,slow=3.8,SNR=2.6							
TORD				PKPab	PKPab		12 17 15.1	-0.5
	0.2nm,0.6s,baz=83,slow=3.5,SNR=2.9							

IDC ***21*** *11:57:33.2±5.1, 36.81N×71.47E, h113km±46km, mb3.4/7, mb1 3.5/11, mb1mx3.2/29, mbtmp3.4/11, Error ellipse: s-maj=36.2km s-min=18.5km az=21.0*
NNC ***21*** *11:57:36.5±3.2, 37.29N×71.04E, h142km±32km, mb3.4, mpv4.0, Error ellipse: s-maj=26.0km s-min=13.7km az=13.0*

ISC 21 11:57:33.4±0.9, 37.12N±0.07×71.03E±0.08, h88km, n41, σ1.963/40, mb3.6/7, 2C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AML	**Almayashu**	**5.41**	**21**	P		Pn	11 58 53.8	+1.9
	SNR=24							
UCH	**Uchtor**	**5.77**	**27**	P		Sn	12 00 03.5	+1.7
	SNR=9.2							
EKS2	**Erkin-Say**	**5.93**	**20**	P		Pn	11 59 00.6	+1.9
	SNR=18							

KZA	**Kyzart**	**5.93**	**32**	P		**Pn**	**11 59 00.5**	**+1.6**
	SNR=11							
KK31	**Karatay Array**	**5.99**	**356**	⇓P		**Pn**	**11 59 01.3**	**+1.8**
	7.1nm,0.3s,baz=182,slow=14,SNR=209							
KK31				S		**Sn**	**12 00 07.2**	**+0.5**
	6.4nm,0.4s,baz=174,slow=20,SNR=6.0							
THN	**Thein Dam**	**6.05**	**139**	*e*x		**Pn**	**11 59 01.0**	**+0.7**
THN				*e*S		Sn	11 59 55.3	-13
DLH	**Dalhousie**	**6.11**	**137**	*e*PKP		**Pn**	**11 59 59.0**	**-2.3**
DLH				*e*S		Sn	11 59 58.0	-12
AAK	**Ala-Archa**	**6.12**	**25**	P		**Pn**	**11 59 03.2**	**+1.8**
	SNR=11							
AAK	**Ala-Archa**	**6.12**	**25**	P		**Pn**	**11 59 03.1**	**+1.7**
	6.0nm,0.3s,baz=173,slow=5.6,SNR=20							
AAK				S		**Sn**	**12 00 11.7**	**+1.7**
	1.0nm,0.3s,baz=332,slow=21,SNR=8.3							
CHMS	**Chumysh**	**6.53**	**25**	P		**Pn**	**11 59 08.2**	**+1.4**
	SNR=14							
USP	**Ospenovka**	**6.69**	**22**	P		**Pn**	**11 59 10.0**	**+1.0**
	SNR=11							
TKM2	**Tokmak 2**	**6.77**	**30**	⇑P		**Pn**	**11 59 11.0**	**+0.7**
	6.8nm,0.6s							
TKM2				⇑S		**Sn**	**12 00 26.1**	**+0.1**
	7.0nm,0.8s							
TKM2	**Tokmak 2**	**6.77**	**30**	P		**Pn**	**11 59 11.2**	**+0.9**
	SNR=15							
SDNR	**Sundarnagar**	**7.45**	**137**	*e*PKP3		Pn	11 59 13.0	-6.4
SDNR				*e*S		Sn	12 00 27.0	-15
KALG	**Kalgarh**	**9.96**	**137**	*e*4			12 00 01.2	
KALG				*e*4			12 01 19.9	
AYAN	**Aya Nagar**	**10.02**	**148**	*e*S		Sn	12 01 23.8	-21
KUDL	**Kundal**	**10.06**	**151**	*e*PKP		Pn	11 59 46.6	-8.3
KUDL				*e*S		Sn	12 01 24.0	-22
KUDL				AML		AML	12 01 34.3	
	comp=E,6.7nm,0.5s							
KUDL				AML		AML	12 01 35.8	
	comp=N,5.3nm,0.3s							
AGRA	**Agra**	**11.46**	**147**	*e*S		Sn	12 01 56.3	-24
AGRA				AML		AML	12 02 06.3	
	comp=N,38nm,0.1s							
AGRA				AML		AML	12 02 07.0	
	comp=E,35nm,0.4s							
MK31	**Makanchi Array**	**12.78**	**37**	P		**Pn**	**12 00 30.6**	**-1.1**
	comp=E,0.6nm,0.6s,baz=222,slow=14,SNR=9.3							
MKAR	**Makanchi Array**	**12.78**	**37**	P		**Pn**	**12 00 30.6**	**-1.1**
	comp=E,0.1nm,0.3s,baz=223,slow=14,SNR=11							
KURBB	**Kurchatov Arra**	**14.53**	**19**	P		**Pn**	**12 00 54.2**	**-0.3**
	comp=E,1.7nm,0.6s							
KURBB	**Kurchatov Arra**	**14.53**	**19**	P		**P**	**12 00 57.4**	**-1.2**
	comp=E,0.1nm,0.3s,baz=208,slow=10,SNR=8.0							
AB31	**Akbulak array**	**14.56**	**330**	P		**Pn**	**12 00 54.0**	**-0.9**
	comp=E,1.7nm,0.4s,baz=137,slow=13,SNR=76							
AB31				⇓S		**Sn**	**12 03 32.7**	**-2.4**
	comp=E,0.6nm,0.3s,baz=148,slow=23,SNR=8.5							
KURK	**Kurchatov**	**14.64**	**19**	P		**Pn**	**12 00 55.0**	**-0.8**
	comp=E,1.2nm,0.6s							
VOSK	**Vostochnaya**	**15.61**	**360**	P		**Pn**	**12 01 06.3**	**-1.9**
	comp=E,2.3nm,0.7s							
ZRNK	**Zerenda**	**15.90**	**356**	P		**Pn**	**12 01 09.7**	**-2.1**
	comp=E,2.2nm,0.5s							
BVA0	**Borovoye Array**	**15.91**	**359**	P		**Pn**	**12 01 10.5**	**-1.5**
	comp=E,3.4nm,1.1s,baz=167,slow=12,SNR=12							
BVAR	**Borovoye Array**	**15.91**	**359**	P		**Pn**	**12 01 11.5**	**-0.5**
	comp=E,0.4nm,0.3s,baz=159,slow=14,SNR=12							
BRVK	**Borovoye**	**15.95**	**358**	P		**Pn**	**12 01 10.9**	**-1.5**
	comp=E,4.0nm,0.6s							
AKTO	**Aktyubinsk**	**16.26**	**329**	P		**Pn**	**12 01 14.9**	**-1.4**
	comp=E,8.3nm,0.6s							
AKTO				⇓S		**Sn**	**12 04 14.3**	**-1.9**
	comp=E,2.1nm,0.8s							
AKTO	**Aktyubinsk**	**16.26**	**329**	P		**Pn**	**12 01 17.2**	**+0.8**
	comp=E,1.4nm,0.3s,baz=132,slow=12,SNR=30							
AKTO				S		**Sn**	**12 04 12.2**	**-4.0**
	comp=E,0.1nm,0.3s,baz=44,slow=14,SNR=3.0							
ZALV	**Zalesovo Beam**	**19.34**	**25**	P		**P**	**12 01 50.6**	**-1.0**
	baz=224,slow=9.9,SNR=2.6							
BRTR	**Keskin Array B**	**29.28**	**287**	P		**P**	**12 03 29.8**	**+2.4**
	comp=E,0.4nm,0.5s,baz=102,slow=7.7,SNR=2.5							
FINES	**FINESS Array B**	**36.99**	**326**	P		**P**	**12 04 35.4**	**+1.5**
	comp=E,0.5nm,0.4s,baz=118,slow=12,SNR=3.9							
ARCES	**ARCESS Array B**	**40.59**	**337**	P		**P**	**12 05 04.2**	**+0.3**
	comp=E,2.1nm,0.8s,baz=111,slow=9.2,SNR=4.3							
NB2	**NORSAR Subarra**	**43.91**	**323**	P		**P**	**12 05 31.8**	**+0.8**
	comp=Z,0.3nm,0.4s,baz=95,slow=8.6							
NOA	**NORSAR Array B**	**43.91**	**323**	P		**P**	**12 05 32.1**	**+1.1**
	comp=Z,0.4nm,0.4s,baz=96,slow=7.8,SNR=3.8							
NOA				pP		**pP**	**12 05 54.1**	**+2.1**
	comp=Z,1.0nm,0.7s,baz=97,slow=7.6,SNR=4.2							
TORD	**Torodi Ar. Bea**	**65.76**	**268**	P		**P**	**12 08 07.7**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=56,slow=5.1,SNR=9.0							
YKA	**Yellowknife Ar**	**80.63**	**3**	pP		pP	12 09 59.3	+0.2
	comp=Z,0.4nm,0.6s,baz=349,slow=5.6,SNR=4.3							
WRA	**Warramunga Arr**	**82.29**	**122**	P		P	12 09 40.3	-5.1
	comp=Z,0.3nm,0.5s,baz=324,slow=4.9,SNR=13							
ASAR	**Alice Springs**	**84.58**	**125**	P		P	12 09 51.9	-5.3
	comp=Z,0.4nm,0.6s,baz=309,slow=5.0,SNR=9.0							

IDC 21 12:04:00.9±3.0, 19°04'S×68°09'W, h0km, mb4.1/2, mb1 4.1/3, mb1mx3.7/18, mbtmp3.9/3, ML3.0/1, Error ellipse: s-maj=85.2km s-min=46.5km az=54.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.74**	**359**	Pn	Pn	12 04 46.7	-0.3
	2.1nm,0.3s,baz=182,slow=5.1,SNR=25						
LPAZ				Sn	Sb	12 05 28.2	+1.8
	0.6nm,0.3s,baz=226,slow=17,SNR=2.1						
TORD	**Torodi Ar. Bea**	**75.81**	**71**	P	P	12 15 49.5	0.0
	1.6nm,0.8s,baz=246,slow=5.4,SNR=6.2						
YKA	**Yellowknife Ar**	**89.14**	**340**	P	P	12 16 57.8	0.0
	0.8nm,0.8s,baz=134,slow=4.4,SNR=7.4						

*NSSC **21** 12:04:59.5±2.6, 34°.20N×36°.25E, h117km±19km, MD1.2, ML1.8*
*CSEM **21** 12:04:59.0±1.7, 33°.98N×37°.29E, h60km, ML2.0, Error ellipse: s-maj=42.0km s-min=16.1km az=95.0*
*GRAL **21** 12:05:09.4±0.3, 34°.18N×36°.48E, h61km±11km, MD2.6*
ISC 21 12:04:55.8±2.3, 33°.99N±0°.04×37°.3E±0°.1, h10km, n13, σ1s96/23, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAWK	**Haweek**	**0.89**	**307**	*e*P	**Pn**	**12 05 17.4**	**+2.9**
HAWK				*e*S	**Sn**	**12 05 28.1**	**+0.6**
HAWK				AML	AML	12 05 28.9	
	comp=E,35nm,0.5s						
HAWK				AML	AML	12 05 30.0	
	comp=N,58nm,0.3s						
HAWK				AML	AML	12 05 31.9	
	comp=Z,50nm,0.4s						
HAWK	**Haweek**	**0.89**	**307**	*e*P	**Pn**	**12 05 17.4**	**+2.9**
	SNR=158						
HAWK				*e*S	**Sn**	**12 05 28.1**	**+0.6**
	comp=Z,50nm,0.4s,SNR=158						
HWQ	**Hawqa**	**1.14**	**285**	*e*P	**Pn**	**12 05 20.5**	**+2.6**
HWQ				*e*S	**Sg**	**12 05 28.8**	**-3.6**
HWQ	**Hawqa**	**1.14**	**285**	*e*P	**Pn**	**12 05 20.5**	**+2.6**
HWQ				*e*S	**Sg**	**12 05 28.8**	**-3.6**
BRBR	**Barbar**	**1.24**	**243**	*e*P	**Pg**	**12 05 20.7**	**+1.0**
BRBR				*e*S	**Sb**	**12 05 35.5**	**-0.2**
BRBR				AML	AML	12 05 42.0	
	comp=N,30nm,0.8s						
BRBR				AML	AML	12 05 48.6	
	comp=Z,28nm,0.5s						
BRBR				AML	AML	12 05 52.1	
	comp=E,14nm,0.3s						
BRBR	**Barbar**	**1.24**	**243**	*e*P	**Pg**	**12 05 20.7**	**+1.0**
	SNR=137						
BRBR				*e*S	**Sb**	**12 05 35.5**	**-0.2**
	comp=E,14nm,0.3s,SNR=137						
BIDA	**Albida**	**1.29**	**323**	*e*P	**Pn**	**12 05 19.4**	**-0.4**
BIDA				*e*S	**Sb**	**12 05 34.9**	**-1.9**
BIDA	**Albida**	**1.29**	**323**	*e*P	**Pn**	**12 05 19.5**	**-0.4**
	SNR=136						
BIDA				*e*S	**Sb**	**12 05 34.9**	**-1.9**
	SNR=136						
RCY	**Rachaya**	**1.29**	**248**	*e*P	Pg	12 05 25.2	+4.5
RCY				*e*S	**Sb**	**12 05 36.9**	**-0.1**
BHL	**Bhannes**	**1.35**	**267**	*e*P	**Pg**	**12 05 23.6**	**+1.9**
BHL	**Bhannes**	**1.35**	**267**	*e*P	**Pg**	**12 05 23.6**	**+1.9**
TCHB	**Talchebab**	**1.71**	**220**	*e*P	**Pn**	**12 05 25.8**	**+0.1**
TCHB				*e*S	**Sn**	**12 05 46.8**	**-0.9**
TCHB				AML	AML	12 05 48.6	
	comp=E,25nm,0.2s						
TCHB				AML	AML	12 05 48.9	
	comp=N,30nm,0.3s						
TCHB	**Talchebab**	**1.71**	**220**	*e*P	**Pn**	**12 05 25.8**	**+0.1**
	SNR=121						
TCHB				*e*S	**Sn**	**12 05 46.8**	**-0.9**
	comp=N,30nm,0.3s,SNR=121						

IDC 21 12:05:28.3±3.3, 3°.64S×101°.11E, h0km, mb3.9/7, mb1 4.0/7, mb1mx3.7/25, mbtmp3.9/7, Error ellipse: s-maj=148.9km s-min=17.2km az=55.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**27.99**	**123**	P	P	12 11 21.3	+0.2
	1.3nm,0.9s,baz=284,slow=8.3,SNR=2.4						
WRA	**Warramunga Arr**	**36.22**	**119**	P	P	12 12 33.0	-0.3
	0.5nm,0.5s,baz=308,slow=9.1,SNR=17						
ASAR	**Alice Springs**	**37.40**	**125**	P	P	12 12 43.3	-0.1
	0.3nm,0.4s,baz=301,slow=7.9,SNR=11						
STKA	**Stephens Creek**	**47.24**	**131**	P	P	12 14 03.2	-0.3
	3.0nm,1.0s,baz=299,slow=10,SNR=3.9						
SONM	**Songino Array**	**51.47**	**5**	P	P	12 14 35.5	-0.1
	0.9nm,0.6s,baz=186,slow=9.9,SNR=5.8						
MKAR	**Makanchi Array**	**52.90**	**344**	P	P	12 14 46.3	+0.2
	1.7nm,0.7s,baz=147,slow=8.3,SNR=26						
ZALV	**Zalesovo Beam**	**58.98**	**349**	P	P	12 15 29.1	-0.4
	2.6nm,0.4s,baz=173,slow=5.4,SNR=13						
TXAR	**Lajitas Array**	**145.28**	**40**	PKPbc	PKPbc	12 25 08.0	-0.7
	0.5nm,0.7s,baz=263,slow=0.9,SNR=8.3						

*ISCJB **21** 12:18:56.6±0.5, 38°.91N±0°.03×38°.53E±0°.04, h5km±7km, Error ellipse: s-maj=5.7km s-min=4.7km az=4.1*
*DDA **21** 12:18:56.5, 38°.92N×38°.56E, h7km, MD2.9*
*CSEM **21** 12:18:56.8±0.2, 38°.91N×38°.53E, h5km, MD2.9, Error ellipse: s-maj=5.1km s-min=3.5km az=90.0*
*ISK **21** 12:18:56.0, 38°.91N×38°.54E, h7km, MD2.9*
ISC 21 12:18:57.0±1.0, 38°.91N±0°.02×38°.53E±0°.03, h9km±10km, n29, σ0s58/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEMA	**Kemaliye**	**0.36**	**355**	*i* P	**Pg**	**12 19 03.6**	**-0.5**
KEMA				*i* S	**Sg**	**12 19 09.4**	**+0.5**
KEMA	**Kemaliye**	**0.36**	**355**	*i* P	**Pg**	**12 19 03.6**	**-0.5**
KEMA				*i* S	**Sg**	**12 19 09.4**	**+0.5**
ILIC	**ilic-Erzincan**	**0.54**	**3**	*e*Pg	**Pg**	**12 19 07.1**	**-0.4**
ILIC	**ilic-Erzincan**	**0.54**	**3**	*e*Pg	**Pg**	**12 19 07.1**	**-0.4**
ELZG	**Elazig**	**0.54**	**139**	*i* P	**Pg**	**12 19 07.2**	**-0.3**
ELZG				*i* S	**Sg**	**12 19 15.6**	**+0.9**
ELZG	**Elazig**	**0.54**	**139**	*i* P	**Pg**	**12 19 07.2**	**-0.3**
ELZG				*i* S	**Sg**	**12 19 15.6**	**+0.9**
MYA	**Malataya**	**0.59**	**188**	*e*PG	**Pg**	**12 19 08.2**	**-0.2**
MYA	**Malataya**	**0.59**	**188**	*e*Pg	**Pg**	**12 19 08.2**	**-0.2**
PTK	**Pertek**	**0.67**	**91**	*e*PG	**Pg**	**12 19 09.2**	**-0.8**
PTK				*e*SG	**Sg**	**12 19 19.4**	**+0.6**
PTK	**Pertek**	**0.67**	**91**	*e*Pg	**Pg**	**12 19 09.2**	**-0.8**
PTK				*e*Sg	**Sg**	**12 19 19.4**	**+0.6**
AKCD	**Akcadag**	**0.78**	**218**	*i* P	**Pg**	**12 19 11.8**	**-0.2**
AKCD				*i* S	**Sb**	**12 19 23.7**	**+0.3**
AKCD	**Akcadag**	**0.78**	**218**	*i* P	**Pg**	**12 19 11.8**	**-0.2**
AKCD				*i* S	**Sb**	**12 19 23.7**	**+0.3**
DARE	**Darende-Malaty**	**0.89**	**248**	*e*PG	**Pg**	**12 19 13.3**	**-0.8**
DARE	**Darende-Malaty**	**0.89**	**248**	*e*Pg	**Pg**	**12 19 13.3**	**-0.8**
EZC	**Erzincan**	**1.05**	**37**	*e*Pn	**Pb**	**12 19 17.5**	**0.0**
ERZN	**Erzincan**	**1.14**	**54**	*e*PN	**Pg**	**12 19 17.5**	**-1.5**
SUSE	**Susehri**	**1.32**	**349**	*i* P	**Pb**	**12 19 21.9**	**-0.1**
SUSE	**Susehri**	**1.32**	**349**	*i* P	**Pb**	**12 19 21.9**	**-0.1**
KELT	**Kelkit**	**1.36**	**24**	*i* P	**Pg**	**12 19 23.8**	**+0.8**
KELT				*i* S	**Sn**	**12 19 40.5**	**0.0**
KELT	**Kelkit**	**1.36**	**24**	*i* P	**Pg**	**12 19 23.8**	**+0.8**
KELT				*i* S	**Sn**	**12 19 40.5**	**0.0**
URFA	**Urfa**	**1.48**	**171**	*e*PN	**Pn**	**12 19 23.6**	**-0.3**
URFA	**Urfa**	**1.48**	**171**	*e*Pn	**Pn**	**12 19 23.6**	**-0.3**
BINT	**Bingol**	**1.53**	**91**	*e*Pn	**Pg**	**12 19 26.1**	**-0.2**
SVSK	**Karacayir**	**1.56**	**311**	*e*PN	**Pb**	**12 19 25.2**	**-0.7**
SVSK	**Karacayir**	**1.56**	**311**	*e*Pn	**Pb**	**12 19 25.2**	**-0.7**
BNGB	**Bing¶ll**	**1.68**	**87**	*e*PN	**Pn**	**12 19 26.1**	**-0.5**
GUMT	**Gumushane**	**1.71**	**25**	*e*PN	**Pn**	**12 19 27.3**	**+0.2**
GUMT	**Gumushane**	**1.71**	**25**	*e*Pn	**Pn**	**12 19 27.3**	**+0.2**
AYKD	**Aykdinkavak**	**2.02**	**223**	*i* P	**Pg**	**12 19 36.2**	**+0.5**

*ISCJB **21** 12:21:52.0±0.4, 42°.27N±0°.04×142°.99E±0°.05, h70km±3km, mb3.7/9, Error ellipse: s-maj=8.2km s-min=5.5km az=141.5*
IDC 21 12:21:53.6±1.9, 42°.28N×142°.92E, h68km±18km, mb3.5/9, mb1 3.7/13, mb1mx3.5/30, mbtmp3.6/13, MS3.4/2, Ms1 3.5/2, ms1mx2.3/29, Error ellipse: s-maj=21.3km s-min=15.8km az=111.0
*JMA **21** 12:21:53.8±0.1, 42°.34N×142°.99E, h55km±1km, M3.6 Broadband fault plane solution: P waves. NP1: φs45.00000°, δ57.00000°, λ84.00000°. NP2:φs236.00000°, δ33.00000°, λ99.00000°. Principal axes: T Plg77.0000°, Azm296.0000°; N Plg5.0000°, Azm48.0000°; P Plg12.0000°, Azm139.0000°;*
JMA Felt I J1.
*NIED **21** 12:22:00, 42°.40N×143°.00E, h56km, Mw3.9 Best double couple: M0 7.78000×10^14 NP1:φs28.00000°, δ67.00000°, λ93.00000°. NP2:φs200.00000°, δ23.00000°, λ83.00000°.*
ISC 21 12:21:53.1±0.8, 42°.34N±0°.05×142°.97E±0°.04, h61km±6km, n25, σ1s20/34, mb3.6/9, 5C-3D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNBK	**Urakawa-nobuka**	**0.17**	**251**	⇑P	**Pn**	**12 22 02.4**	**-0.1**
JNBK				*e*S	**Sn**	**12 22 09.2**	**-0.1**
JEM	**Erimo**	**0.35**	**157**	⇑P	**Pn**	**12 22 04.0**	**+0.3**
JCH	**Churui**	**0.40**	**46**	⇑P	**Pn**	**12 22 04.2**	**+0.1**
JCH				*e*S	**Sn**	**12 22 12.5**	**+0.4**
JBT2	**Biratori 2**	**0.63**	**315**	⇓P	**Pn**	**12 22 07.0**	**+0.4**
JBT2				*e*S	**Sn**	**12 22 17.3**	**+0.9**
JOB	**Onbets**	**0.85**	**48**	⇑P	**Pn**	**12 22 10.3**	**+1.1**
JOB				*e*S	**Sn**	**12 22 23.1**	**+2.0**
JFR	**Furan**	**0.87**	**341**	⇓P	**Pn**	**12 22 09.2**	**-0.3**
JAR	**Ashorobuto**	**1.12**	**31**	P	**Pn**	**12 22 13.1**	**+0.3**
JAR				*e*S	**Sn**	**12 22 28.2**	**+0.8**
JEW	**Eniwo**	**1.23**	**295**	⇓P	**Pn**	**12 22 15.1**	**+0.9**
JEW				*e*S	**Sn**	**12 22 31.3**	**+1.3**
JAB	**Ashibetsu**	**1.29**	**335**	P	**Pn**	**12 22 16.1**	**+1.1**
JAK	**Akkeshi**	**1.43**	**62**	⇑P	**Pn**	**12 22 17.2**	**+0.4**
JAK				*e*S	**Sn**	**12 22 34.5**	**-0.2**
ASAJ	**Asahikawa**	**1.80**	**351**	P	**Pn**	**12 22 23.4**	**+1.5**
	59nm,0.3s,baz=199,slow=15,SNR=290						
ASAJ				S	**Sn**	**12 22 39.5**	**-4.1**
	36nm,0.3s,baz=153,slow=6.8,SNR=16						
MAT	**Matsushiro**	**6.86**	**214**	P	**Pn**	**12 23 31.6**	**+0.6**
MAT				*e*S	**Sn**	**12 24 49.2**	**+1.5**
MJAR	**Matsushiro Arr**	**6.86**	**214**	P	**Pn**	**12 23 31.1**	**0.0**
	0.7nm,0.3s,baz=25,slow=14,SNR=14						
USRK	**Ussuriysk Arra**	**8.22**	**287**	P	**Pn**	**12 23 50.8**	**+1.2**
	0.3nm,0.3s,baz=87,slow=14,SNR=7.6						
USRK				LR	LR	12 26 18.7	
	comp=Z,47nm,18.6s,baz=327,slow=32						
JHJ	**Hachijo jima 2**	**9.54**	**196**	P	**Pn**	**12 24 05.3**	**-2.4**
	11nm,0.3s,baz=319,slow=20,SNR=6.4						
JHJ				S	Sn	12 25 44.0	-9.3
	7.2nm,0.3s,baz=241,slow=19,SNR=3.8						
KSRS	**Korea Array**	**12.54**	**252**	P	**Pn**	**12 24 49.2**	**+0.7**
	0.1nm,0.3s,baz=65,slow=13,SNR=7.7						
SONM	**Songino Array**	**26.23**	**295**	P	**P**	**12 27 21.5**	**-0.8**
	1.4nm,0.6s,baz=94,slow=8.7,SNR=8.1						
ZALV	**Zalesovo Beam**	**39.42**	**308**	P	**P**	**12 29 16.6**	**-0.1**
	1.8nm,0.5s,baz=90,slow=7.7,SNR=12						
MKAR	**Makanchi Array**	**42.52**	**298**	P	**P**	**12 29 42.4**	**0.0**
	0.6nm,0.5s,baz=83,slow=9.9,SNR=6.8						
ILAR	**Eielson Array**	**44.42**	**35**	P	**P**	**12 29 57.8**	**+0.4**
	0.4nm,0.9s,baz=267,slow=8.1,SNR=4.2						
ILAR				LR	LR	12 50 45.6	
	comp=Z,222nm,21.1s,baz=170,slow=39						
RES	**Resolute Bay**	**57.17**	**16**	P	**P**	**12 31 32.5**	**-0.5**
	2.6nm,0.8s,baz=93,slow=23,SNR=7.2						
YKA	**Yellowknife Ar**	**58.65**	**32**	P	**P**	**12 31 43.5**	**-0.1**
	0.3nm,0.7s,baz=306,slow=7.3,SNR=3.8						
WRA	**Warramunga Arr**	**62.48**	**189**	P	**P**	**12 32 09.5**	**-0.5**
	0.5nm,0.9s,baz=4.9,slow=6.8,SNR=7.3						
HFS	**Hagfors**	**69.76**	**336**	P	**P**	**12 32 55.7**	**-0.6**
	1.1nm,0.4s,baz=55,slow=8.1,SNR=4.8						
TXAR	**Lajitas Array**	**85.97**	**53**	P	**P**	**12 34 27.9**	**+1.0**
	0.3nm,0.6s,baz=284,slow=3.1,SNR=5.7						

*ISCJB **21** 12:23:52.6±0.8, 51°.52N±0°.04×16°.05E±0°.04, h0km, Error ellipse: s-maj=5.9km s-min=3.2km az=14.4*
*WAR **21** 12:23:54.9, 51°.55N×16°.09E*
*CSEM **21** 12:23:54.1±0.6, 51°.52N×16°.04E, h2km, ML3.1/7, Error ellipse: s-maj=9.3km s-min=5.3km az=7.0*
*PRU **21** 12:23:55.1, 51°.51N×16°.06E, h0km*
ISC 21 12:23:54.5±1.2, 51°.53N±0°.06×16°.06E±0°.03, h0km, n26, σ0s50/51, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.70**	**168**	*e*Pg	**Pg**	**12 24 08.4**	**+0.5**
KSP				*e*Sg	**Sg**	**12 24 17.7**	**+0.8**
KSP	**Ksiaz**	**0.70**	**168**	*e*Pg	**Pg**	**12 24 08.4**	**+0.5**
KSP				*e*Sg	**Sg**	**12 24 17.7**	**+0.8**
UPC	**Upice**	**1.02**	**182**	*e*PG	**Pg**	**12 24 14.0**	**0.0**
UPC				*e*SG	**Sg**	**12 24 27.6**	**+0.4**
	comp=Z,16nm,0.3s						
UPC	**Upice**	**1.02**	**182**	Pg	**Pg**	**12 24 14.0**	**0.0**
UPC				Sg	**Sg**	**12 24 27.6**	**+0.4**
	16nm,0.3s						
DPC	**Dobruska-Polom**	**1.19**	**172**	*e*PG	**Pg**	**12 24 17.0**	**-0.2**
DPC				*e*SG	**Sg**	**12 24 32.5**	**-0.1**
DPC	**Dobruska-Polom**	**1.19**	**172**	Pg	**Pg**	**12 24 17.0**	**-0.2**
DPC				Sg	**Sg**	**12 24 32.5**	**-0.1**
PVCC	**Panska Ves**	**1.38**	**224**	*e*PG	**Pn**	**12 24 20.4**	**-0.5**
PVCC				*e*SG	**Sb**	**12 24 39.6**	**+0.4**
	comp=Z,65nm,0.2s						
PVCC	**Panska Ves**	**1.38**	**224**	Pg	**Pn**	**12 24 20.4**	**-0.5**
PVCC				Sg	**Sb**	**12 24 39.6**	**+0.4**
	65nm,0.2s						
BRG	**Berggiesshubel**	**1.49**	**245**	PG	**Pb**	**12 24 22.7**	**-0.2**
BRG				SG	**Sg**	**12 24 42.6**	**+0.4**
	21nm,0.3s						
KRLC	**Kraliky**	**1.52**	**162**	*e*PG	**Pn**	**12 24 22.4**	**-0.6**
KRLC				*e*SG	**Sn**	**12 24 43.2**	**-0.3**
KRLC	**Kraliky**	**1.52**	**162**	Pg	**Pn**	**12 24 22.4**	**-0.6**
KRLC				Sg	**Sn**	**12 24 43.2**	**-0.3**
PRU	**Pruhonice**	**1.82**	**213**	*e*PG	**Pb**	**12 24 28.3**	**-0.3**
PRU				*e*SG	**Sb**	**12 24 52.5**	**+0.6**
	comp=Z,15nm,0.3s						
PRU	**Pruhonice**	**1.82**	**213**	Pg	**Pb**	**12 24 28.3**	**-0.3**
PRU				Sg	**Sb**	**12 24 52.5**	**+0.6**
	15nm,0.3s						
CLL	**Collm**	**1.93**	**265**	*e*Pg	**Pb**	**12 24 30.0**	**-0.5**
CLL				*e*Sg	**Sg**	**12 24 56.0**	**-0.4**
	comp=Z,8.0nm,0.6s						
MORC	**Moravsky Berou**	**1.99**	**151**	*e*Pn	**Pn**	**12 24 28.9**	**-0.5**
MORC				*e*Sg	**Sb**	**12 24 57.1**	**+0.2**
OKC	**Ostrava-Krasne**	**2.15**	**141**	*e*PG	**Pb**	**12 24 33.9**	**-0.3**
OKC				*e*SG	**Sg**	**12 25 02.9**	**-0.5**
	comp=Z,5.9nm,0.4s						
OKC	**Ostrava-Krasne**	**2.15**	**141**	Pg	**Pb**	**12 24 33.9**	**-0.3**
OKC				Sg	**Sg**	**12 25 02.9**	**-0.5**
	comp=Z,5.9nm,0.4s						
VRAC	**Vranov**	**2.25**	**171**	*e*Pn	**Pn**	**12 24 33.1**	**+0.2**
TREC	**Trest**	**2.27**	**190**	*e*PN	**Pn**	**12 24 33.9**	**+0.7**
TREC				*e*PG	**Pb**	**12 24 35.8**	**-0.4**
TREC				*e*SG	**Sg**	**12 25 07.0**	**-0.2**
	comp=Z,6.6nm,0.2s						
TREC	**Trest**	**2.27**	**190**	Pn	**Pn**	**12 24 33.9**	**+0.7**
NKC	**Novy Kostel**	**2.63**	**242**	*e*PN	**Pn**	**12 24 38.5**	**+0.3**
NKC				*e*PG	**Pb**	**12 24 43.0**	**+0.5**
NKC				*e*SG	**Sg**	**12 25 19.3**	**+0.3**
	comp=Z,10nm,0.3s						
NKC	**Novy Kostel**	**2.63**	**242**	Pn	**Pn**	**12 24 38.5**	**+0.3**
OJC	**Ojcow**	**2.70**	**118**	*e*Pg	**Pg**	**12 24 46.7**	**+0.4**
OJC				*e*Sg	**Sg**	**12 25 22.0**	**+0.7**
OJC	**Ojcow**	**2.70**	**118**	*e*Pg	**Pg**	**12 24 46.7**	**+0.4**
KHC	**Kasperske Hory**	**2.88**	**215**	*e*PN	**Pn**	**12 24 41.4**	**-0.2**
K

comp=Z,213nm,0.8s
BJO AMS AMS 12 29 25.5
comp=Z,15µm,13.2s
BJO Bjornoya 3.58 115 *e*P Pn 12 27 57.7 -3.9
comp=Z,521nm,1.4s,SNR=50
BJO *e*S Sn 12 28 32.7 -11
comp=Z,213nm,0.8s,SNR=50
DAG Danmarks Havn 5.98 286 *i* P Pn 12 28 30.0 -4.5
comp=Z,177nm,0.9s
DAG *i* 12 29 32.3
JNW Jan Mayen West 6.88 227 *e*P Pn 12 28 42.0 -4.9
JNW *e*S Sn 12 29 55.5 -9.4
JNW AML AML 12 30 00.1
comp=Z,229nm,0.4s
JNW Jan Mayen West 6.88 227 *e*P Pn 12 28 42.0 -4.9
SNR=47
JNW *e*S Sn 12 29 55.5 -9.4
comp=Z,229nm,0.4s,SNR=47
JNE Jan Mayen East 6.89 226 *e*P Pn 12 28 42.6 -4.4
JNE *e*S Sn 12 29 55.8 -9.4
JNE AML AML 12 29 59.4
comp=Z,189nm,0.3s
JNE Jan Mayen East 6.89 226 *e*P Pn 12 28 42.6 -4.4
SNR=47
JNE *e*S Sn 12 29 55.8 -9.3
comp=Z,189nm,0.3s,SNR=47
JMIC Jan Mayen 6.93 227 Pn Pn 12 28 42.6 -5.0
JMIC Sn Sn 12 29 54.3 -12
JMIC Jan Mayen 6.93 227 *e*P Pn 12 28 42.5 -5.1
JMIC *e*S Sn 12 29 54.9 -11
JMIC AML AML 12 30 00.7
comp=Z,170nm,0.6s
JMIC Jan Mayen 6.93 227 Pn Pn 12 28 41.8 -5.7
JMIC Sn Sn 12 29 57.9 -8.2
JMIC Jan Mayen 6.93 227 Pn Pn 12 28 41.8 -5.7
comp=Z,28nm,0.3s,baz=45,slow=5.8,SNR=29
JMIC Sn Sn 12 29 57.9 -8.2
comp=Z,22nm,0.3s,baz=162,slow=20,SNR=12
JMIC LR LR 12 30 45.2
comp=Z,4µm,18.5s,baz=40,slow=32
JMIC Jan Mayen 6.93 227 Pn Pn 12 28 41.8 -5.7
JMIC Jan Mayen 6.93 227 *e*P Pn 12 28 42.5 -5.1
SNR=47
JMIC *e*S Sn 12 29 54.8 -11
comp=Z,170nm,0.6s,SNR=47
JMIC Sn Sb 12 29 57.9 -31
TRO Tromso 7.58 147 *e*Pn **Pn 12 28 53.3 -3.2**
TRO Tromso 7.58 147 *e*Pn **Pn 12 28 53.3 -3.2**
SNR=50
ARA0 ARCESS Array S 8.68 133 Pn Pn 12 29 05.8 -5.8
baz=337,slow=12
ARA0 Sn Sn 12 30 35.4 -14
baz=335,slow=22
ARA0 ARCESS Array S 8.68 133 Pn Pn 12 29 05.8 -5.8
baz=337,slow=12
ARA0 Sn Sn 12 30 35.4 -14
baz=335,slow=22
ARCES ARCESS Array B 8.68 133 Pn Pn 12 29 05.8 -5.8
ARCES Sn Sn 12 30 36.0 -13
ARCES ARCESS Array B 8.68 133 Pn Pn 12 29 05.8 -5.8
comp=Z,1.8nm,0.3s,baz=329,slow=10,SNR=42
ARCES Sn Sn 12 30 36.0 -13
comp=Z,2.7nm,0.3s,baz=342,slow=20,SNR=4.4
ARCES LR LR 12 32 37.8
comp=Z,4µm,18.5s,baz=334,slow=39
ARE0 ARCESS Array S 8.68 133 *e*Pn Pn 12 29 05.7 -5.9
ARE0 ARCESS Array S 8.68 133 *e*Pn Pn 12 29 06.4 -5.1
KEV Kevo 8.76 129 *e*P Pn 12 29 08.3 -4.3
KEV Kevo 8.76 129 *e*p Pn 12 29 07.1 -5.5
comp=Z,31nm,0.6s
KEV Kevo 8.76 129 *e*Pn Pn 12 29 08.2 -4.3
KEV Kevo 8.76 129 *e*P Pn 12 29 08.3 -4.3
KTK1 Kautokeino 8.77 139 *e*Pn Pn 12 29 08.6 -4.2
KTK1 *e* 12 30 39.8
KTK1 AML AML 12 30 48.5
comp=Z,117nm,0.8s
KTK1 Kautokeino 8.77 139 *e*Pn Pn 12 29 08.6 -4.2
SNR=50
MOR8 Moi Rana 10.50 163 *e*Pn **Pn 12 29 33.4 -3.1**
MOR8 Moi Rana 10.50 163 *e*Pn **Pn 12 29 33.4 -3.1**
SNR=50
APA0 Apatity Array 11.74 125 Pn Pn 12 29 48.5 -5.0
baz=329,slow=10
APA0 Apatity Array 11.74 125 Pn Pn 12 29 48.5 -5.0
baz=329,slow=10
LVZ Lovozero 11.82 121 *d* P Pn 12 29 47.4 -7.2
LVZ Lovozero 11.82 121 Pn Pn 12 29 48.7 -5.9
comp=Z,541nm,0.8s,SNR=5.6
APA Apatity 11.86 124 ⇓ *i* P Pn 12 29 49.0 -6.0
APA *i* 12 32 11.0
APA pmax pmax
comp=Z,190nm,1.7s
APA MLR MLR
comp=Z,6µm,23.0s
SUMG Summit 12.48 276 *e*P Pn 12 29 59.9 -3.9
SUMG Summit 12.48 276 *e*Pn Pn 12 29 59.9 -3.9
SUMG Summit 12.48 276 *i* P Pn 12 30 00.9 -2.9
ALE Alert 13.10 327 Pn Pn 12 30 08.9 -3.0
comp=Z,157nm,0.5s,SNR=12
BORG Borgarnes 14.75 233 Pn **Pn 12 30 32.9 -1.5**
BORG Borgarnes 14.75 233 Pn **Pn 12 30 32.9 -1.5**
comp=Z,0.4nm,0.3s,baz=7.0,slow=4.8,SNR=4.1
BORG LR LR 12 34 46.1
comp=Z,3µm,19.0s,baz=21,slow=31
BORG Borgarnes 14.75 233 Pn **Pn 12 30 32.9 -1.5**
NB2 NORSAR Subarra 15.46 172 Pn **Pn 12 30 41.7 -2.3**
NB2 NORSAR Subarra 15.46 172 P **Pn 12 30 41.7 -2.3**
comp=Z,24nm,0.9s,baz=357,slow=11
NB2 NORSAR Subarra 15.46 172 Pn **Pn 12 30 41.7 -2.3**
NB2 NORSAR Subarra 15.46 172 Pn **Pn 12 30 41.7 -2.3**
SNR=50
NOA NORSAR Array B 15.46 172 Pn **Pn 12 30 42.0 -2.0**
NOA NORSAR Array B 15.46 172 Pn **Pn 12 30 42.0 -2.0**
comp=Z,0.2nm,0.3s,baz=348,slow=15,SNR=20
NOA LR LR 12 36 05.4
comp=Z,2µm,18.3s,baz=355,slow=35
NOA NORSAR Array B 15.46 172 Pn **Pn 12 30 42.0 -2.0**
NAO01 NORSAR Array S 15.65 173 *e*P **P 12 30 49.3 -1.2**
comp=Z,32nm,0.8s
NAO01 NORSAR Array S 15.65 173 *e*P **P 12 30 49.3 -1.2**
comp=Z,32nm,0.8s
JOF Joensuu 15.69 136 *e*P Pn 12 30 38.6 -8.3
JOF pmax pmax
comp=Z,8.0nm,0.6s
JOF Joensuu 15.69 136 *e*p Pn 12 30 38.6 -8.3
comp=Z,8.2nm,0.6s
KAF Kangasniemi 15.70 145 *e*P Pn 12 30 41.0 -6.0
KAF pmax pmax
comp=Z,31nm,0.6s
KAF Kangasniemi 15.70 145 *e*p Pn 12 30 41.0 -6.0
comp=Z,31nm,0.6s
FIA0 FINESS Array S 16.31 146 Pn Pn 12 30 49.4 -5.5
baz=350,slow=16
FIA0 FINESS Array S 16.31 146 Pn Pn 12 30 49.4 -5.5
baz=350,slow=16
FIA1 FINESS Array S 16.31 146 *e*P Pn 12 30 49.3 -5.5
FINES FINESS Array B 16.31 146 Pn Pn 12 30 49.3 -5.5
FINES FINESS Array B 16.31 146 Pn Pn 12 30 49.3 -5.5
comp=Z,0.6nm,0.3s,baz=354,slow=9.6,SNR=35
FINES LR LR 12 37 18.9
comp=Z,3µm,18.9s,baz=347,slow=38
HFS Hagfors 16.47 168 Pn **Pn 12 30 53.0 -3.9**
baz=353,slow=14
HFS Hagfors 16.47 168 Pn **Pn 12 30 53.0 -3.9**
baz=353,slow=14
HFS Hagfors 16.47 168 Pn **Pn 12 30 54.2 -2.7**
HFS Hagfors 16.47 168 Pn **Pn 12 30 54.2 -2.7**
comp=Z,0.4nm,0.3s,baz=2.9,slow=12,SNR=17
HFS LR LR 12 36 37.9
comp=Z,2µm,18.4s,baz=351,slow=35
HFS Hagfors 16.47 168 Pn **Pn 12 30 54.2 -2.7**
LRW Lerwick 16.55 195 *e*P **Pn 12 30 58.8 +0.8**
LRW AMB AMB 12 31 04.6
comp=Z,91nm,3.7s
LRW Lerwick 16.55 195 P **Pn 12 30 58.8 +0.8**
LRW AMB AMB 12 31 04.6
comp=Z,91nm,3.7s
LRW Lerwick 16.55 195 *e*P **Pn 12 30 58.8 +0.8**
KONO Kongsberg 16.82 176 *e*P **P 12 31 02.5 -0.9**
KONO pmax pmax
comp=Z,91nm,0.9s
KONO Kongsberg 16.82 176 *e*P **P 12 31 02.5 -0.9**
comp=Z,91nm,0.9s
KONO Kongsberg 16.82 176 *e*P **P 12 31 02.5 -0.9**
comp=Z,91nm,0.9s
MVH1 Achvaich 18.96 199 *e*P **P 12 31 27.2 +0.2**

MVH1 Achvaich 18.96 199 P **P 12 31 27.2 +0.2**
MVH1 Achvaich 18.96 199 *e*P **P 12 31 27.2 +0.2**
MCD Coleburn Disti 19.23 197 *e*P **Pn 12 31 30.8 -0.1**
MCD Coleburn Disti 19.23 197 P **Pn 12 31 30.8 -0.1**
MCD Coleburn Disti 19.23 197 *e*P **Pn 12 31 30.8 -0.1**
VSU Vasula 19.29 148 *i* P **P 12 31 27.5 -3.1**
VSU Vasula 19.29 148 *e*P **P 12 31 27.7 -2.9**
SNR=151
SFJD Kangerlussuaq 19.42 272 *e*P **P 12 31 30.1 -1.9**
comp=Z,101nm,1.2s
SFJD Kangerlussuaq 19.42 272 *i* P **P 12 31 30.3 -1.7**
comp=Z,4µm,1.0s
SFJD Kangerlussuaq 19.42 272 P **P 12 31 30.1 -1.9**
comp=Z,0.3nm,0.3s,baz=33,slow=10,SNR=17
SFJD LR LR 12 38 17.0
comp=Z,3µm,19.9s,baz=39,slow=35
SFJD Kangerlussuaq 19.42 272 *e*P **P 12 31 30.1 -1.9**
comp=Z,101nm,1.2s
MDO Dochfour 19.45 199 *e*P **Pn 12 31 33.4 -0.2**
MDO Dochfour 19.45 199 P **Pn 12 31 33.4 -0.2**
MDO Dochfour 19.45 199 *e*P **Pn 12 31 33.4 -0.2**
MME1 Meikle Cairn 19.48 196 *e*P **P 12 31 32.7 0.0**
MME1 Meikle Cairn 19.48 196 P **P 12 31 32.7 0.0**
MME1 Meikle Cairn 19.48 196 *e*P **P 12 31 32.7 0.0**
KPL Plockton 19.66 201 *e*P **P 12 31 35.1 +0.5**
KPL AMB AMB 12 31 48.1
comp=Z,36nm,1.5s
KPL Plockton 19.66 201 P **P 12 31 35.1 +0.5**
KPL AMB AMB 12 31 48.1
comp=Z,36nm,1.5s
KPL Plockton 19.66 201 *e*P **P 12 31 35.1 +0.5**
MUD Monsted U'grnd 20.01 177 *i* P **Pn 12 31 42.4 +2.2**
comp=Z,42nm,0.8s
EAB Aberfoyle 20.69 198 *e*P **P 12 31 46.1 +0.2**
EAB Aberfoyle 20.69 198 P **P 12 31 46.1 +0.2**
EAB Aberfoyle 20.69 198 *e*P **P 12 31 46.1 +0.2**
ESY Stoneypath 20.84 195 *e*P **P 12 31 46.9 -0.7**
ESY Stoneypath 20.84 195 P **P 12 31 46.9 -0.7**
ESY Stoneypath 20.84 195 *e*P **P 12 31 46.9 -0.7**
EDI Edinburgh 20.88 196 *e*P **P 12 31 48.4 +0.5**
EDI AMB AMB 12 31 53.0
comp=Z,51nm,1.0s
EDI Edinburgh 20.88 196 P **P 12 31 48.4 +0.5**
EDI AMB AMB 12 31 53.0
comp=Z,51nm,1.0s
EDI Edinburgh 20.88 196 *e*P **P 12 31 48.4 +0.5**
EAU Auchinoon 20.97 197 *e*P **P 12 31 49.8 +0.9**
EAU Auchinoon 20.97 197 P **P 12 31 49.8 +0.9**
EAU Auchinoon 20.97 197 *e*P **P 12 31 49.8 +0.9**
LLD Lille Linde 21.21 172 *i* P **P 12 31 51.9 +0.5**
comp=Z,105nm,0.9s
LLD Lille Linde 21.21 172 *i* P **P 12 31 51.9 +0.5**
EKA Eskdalemuir Ar 21.46 196 P **P 12 31 52.4 -1.8**
EKA Eskdalemuir Ar 21.46 196 P **P 12 31 52.4 -1.8**
comp=Z,12nm,0.9s,baz=11,slow=9.6,SNR=18
EKA Eskdalemuir Ar 21.46 196 P **P 12 31 52.3 -1.8**
ESK Eskdalemuir 21.48 196 *e*P **P 12 31 54.1 -0.3**
ESK AMB AMB 12 32 03.8
comp=Z,49nm,2.6s
ESK Eskdalemuir 21.48 196 P **P 12 31 54.1 -0.3**
ESK AMB AMB 12 32 03.8
comp=Z,49nm,2.6s
ESK Eskdalemuir 21.48 196 *e*P **P 12 31 54.3 -0.1**
ESK pmax pmax
comp=Z,29nm,1.0s
ESK Eskdalemuir 21.48 196 *e*P **P 12 31 54.3 -0.1**
comp=Z,29nm,1.0s
ESK Eskdalemuir 21.48 196 *e*P **P 12 31 54.3 -0.1**
comp=Z,29nm,1.0s
BSD Bornholm Skovb 21.54 168 *i* P **P 12 31 52.8 -2.2**
BSD Bornholm Skovb 21.54 168 *i* P **P 12 31 52.8 -2.2**
SNR=34
ECK Cauldkaine Hil 21.61 196 *e*P **P 12 31 56.5 +0.7**
ECK Cauldkaine Hil 21.61 196 P **P 12 31 56.5 +0.7**
ECK Cauldkaine Hil 21.61 196 *e*P **P 12 31 56.5 +0.7**
GCD Castle Douglas 21.98 197 *e*P **P 12 31 58.3 -1.4**
GCD Castle Douglas 21.98 197 P **P 12 31 58.3 -1.4**
GCD Castle Douglas 21.98 197 *e*P **P 12 31 58.3 -1.4**
RGN Rugen 22.03 170 *e*P **P 12 32 01.4 +1.1**
comp=Z,165nm,0.9s
RGN Rugen 22.03 170 *e*P **P 12 32 01.4 +1.1**
comp=Z,165nm,0.9s
KESW Keswick, Cumbr 22.20 196 *e*P **P 12 32 02.5 +0.4**
KESW AMB AMB 12 32 04.3
comp=Z,63nm,2.7s
KESW Keswick, Cumbr 22.20 196 P **P 12 32 02.5 +0.4**
KESW AMB AMB 12 32 04.3
comp=Z,63nm,2.7s
KESW Keswick, Cumbr 22.20 196 *e*P **P 12 32 02.5 +0.4**
BSEG Bad Segeberg 22.56 175 *e*P **P 12 32 05.6 -0.3**
comp=Z,362nm,0.9s
BSEG Bad Segeberg 22.56 175 *e*P **P 12 32 05.6 -0.3**
BSEG pmax pmax
comp=Z,34nm,0.9s
BSEG Bad Segeberg 22.56 175 *e*P **P 12 32 05.6 -0.3**
comp=Z,34nm,0.9s
RES Resolute Bay 22.57 317 P **P 12 32 05.6 -0.2**
RES Resolute Bay 22.57 317 P **P 12 32 05.6 -0.2**
comp=Z,37nm,1.2s,baz=30,slow=8.5,SNR=17
RES LR LR 12 40 44.9
comp=Z,2µm,20.4s,baz=37,slow=36
RES Resolute Bay 22.57 317 P **P 12 32 05.6 -0.2**
GMM Mts of Mourne 22.75 200 *e*P **P 12 32 06.3 -1.7**
GMM Mts of Mourne 22.75 200 P **P 12 32 06.3 -1.7**
GMM Mts of Mourne 22.75 200 *e*P **P 12 32 06.3 -1.7**
NACGM Naroch 22.77 150 *e*P P 12 32 03.0 -5.2
SUW Suwalki 23.26 155 *e*P **P 12 32 10.2 -3.0**
SUW *e*S **S 12 36 21.7 -3.0**
SUW Suwalki 23.26 155 *e*P **P 12 32 10.2 -3.0**
SUW *e*S **S 12 36 21.6 -3.1**
SUW Suwalki 23.26 155 *e*P **P 12 32 10.2 -3.0**
MNK Minsk 23.30 148 *ce*P P 12 32 05.0 -8.6
MNK *e*S S 12 36 08.0 -17
MNK pmax pmax
comp=Z,120nm,1.4s
MNK MLR MLR
comp=Z,5µm,18.0s
MICGM Minsk 23.30 148 ⇑ *e*P P 12 32 05.0 -8.6
KBI1 Birley Grange 23.44 193 *e*P **P 12 32 13.4 -1.6**
KBI1 Birley Grange 23.44 193 P **P 12 32 13.4 -1.6**
KBI1 Birley Grange 23.44 193 *e*P **P 12 32 13.4 -1.6**
GKP Gorka Klasztor 23.51 165 *e*P **P 12 32 14.9 -0.8**
GKP Gorka Klasztor 23.51 165 *e*P **P 12 32 14.9 -0.8**
GKP Gorka Klasztor 23.51 165 *e*P **P 12 32 14.9 -0.8**
MOS Moscow 23.55 134 *e*P P 12 32 10.2 -5.9
MOS *e*S **S 12 36 24.4 -5.0**
MOS pmax pmax
comp=Z,191nm,1.6s
MOS pmax pmax
comp=E,600nm,3.4s
MOS pmax pmax
comp=Z,1µm,2.8s
MOS pmax pmax
comp=N,1µm,3.9s
MOS MLR MLR
comp=N,1µm,16.0s
MOS MLR MLR
comp=Z,1µm,16.0s
MOS MLR MLR
comp=E,900nm,16.0s
SOKR Solikamsk 23.88 107 *c* *i* P **P 12 32 17.9 -1.2**
SOKR S **S 12 36 37.9 +3.4**
SOKR pmax pmax
comp=Z,150nm,1.4s
SOKR MLR MLR
comp=Z,2µm,18.0s
SOKR Solikamsk 23.88 107 *i* P **P 12 32 17.9 -1.2**
comp=Z,150nm,1.4s
YRE Yr Eifl 23.89 197 *e*P **P 12 32 19.5 +0.1**
YRE Yr Eifl 23.89 197 P **P 12 32 19.5 +0.1**
YRE Yr Eifl 23.89 197 *e*P **P 12 32 19.5 +0.1**
FOEL Foel Wylfa 23.90 195 *e*P **P 12 32 19.1 -0.4**
FOEL AMB AMB 12 32 20.9
comp=Z,53nm,1.6s
FOEL Foel Wylfa 23.90 195 P **P 12 32 19.1 -0.4**
FOEL AMB AMB 12 32 20.9
comp=Z,53nm,1.6s
FOEL Foel Wylfa 23.90 195 *e*P **P 12 32 19.1 -0.4**
OBN Obninsk 23.97 136 ⇑ *i*P **P 12 32 17.6 -2.5**
OBN *i* 12 32 24.4
OBN *i* 12 32 45.2
OBN *i* S **S 12 36 37.4 +1.4**
OBN pmax pmax
comp=Z,40nm,1.1s
OBN MLR MLR
comp=Z,2µm,18.0s
OBN Obninsk 23.97 136 *i* P **P 12 32 17.6 -2.5**
comp=Z,40nm,1.1s
NRDL Niedersach Rie 24.00 175 *e*P **P 12 32 19.5 -0.8**
comp=Z,118nm,1.0s
RUE Ruedersdorf 24.12 170 *e*P **P 12 32 19.8 -1.7**
comp=Z,70nm,1.1s
RUE Ruedersdorf 24.12 170 *e*P **P 12 32 22.7 +1.2**
comp=Z,54nm,0.9s
RUE Ruedersdorf 24.12 170 *e*P **P 12 32 22.7 +1.2**
comp=Z,54nm,0.9s
HLM1 Long Mynd 24.25 195 *e*P **P 12 32 21.2 -1.6**
HLM1 AMB AMB 12 32 24.2
comp=Z,44nm,2.5s
HLM1 Long Mynd 24.25 195 P **P 12 32 21.2 -1.6**
HLM1 AMB AMB 12 32 24.2
comp=Z,44nm,2.5s
HLM1 Long Mynd 24.25 195 *e*P **P 12 32 21.2 -1.6**
CLZ Clausthal 24.65 175 *e*P **P 12 32 25.9 -0.6**
comp=Z,70nm,1.0s
CLZ Clausthal 24.65 175 *e*P **P 12 32 25.9 -0.6**
CLZ pmax pmax
comp=Z,9.0nm,1.0s
MCH1 Michaelchurch 24.77 195 *e*P **P 12 32 25.5 -2.0**
MCH1 AMB AMB 12 32 29.3
comp=Z,49nm,1.6s
MCH1 Michaelchurch 24.77 195 P **P 12 32 25.5 -2.0**
MCH1 AMB AMB 12 32 29.3
comp=Z,49nm,1.6s
BUG Bochum--Univer 25.02 180 *e*P **P 12 32 28.1 -1.6**
comp=Z,90nm,1.0s
BEL Belsk 25.20 160 *e*P **P 12 32 30.8 -0.5**
BEL Belsk 25.20 160 *e*P **P 12 32 30.8 -0.5**
CLL Collm 25.26 171 *e*P **P 12 32 29.8 -2.1**
comp=Z,32nm,1.1s
CLL Collm 25.26 171 *e*P **P 12 32 32.0 +0.1**
CLL *i* 12 32 33.2
CLL *i* 12 32 36.6
CLL *e*S **S 12 36 58.0 +1.1**
CLL MLR MLR
comp=Z,2µm,18.7s
CLL Collm 25.26 171 *e*P **P 12 32 32.0 +0.1**
CLL *i* 12 32 33.2
comp=Z,18nm,1.1s
CLL *i* sP **sP 12 32 36.6 -0.8**
comp=Z,31nm,1.0s
CLL *i* (PP) 12 32 58.6
CLL *e*PcP PcP 12 36 10.0 +5.5
CLL *e*S **S 12 36 58.0 +1.1**
CLL *e*SS **SnSn 12 37 43.0 -4.4**
CLL *e*SSS SSS 12 38 06.0
CLL Lm MLR 12 42 00.0
comp=Z,2µm,18.7s
NEUB Neuenburg 25.32 173 *e*P **P 12 32 30.8 -1.6**
comp=Z,237nm,1.0s
VAL Valentia 25.43 205 *e*P **P 12 32 34.8 +1.5**
FBE Freiberg 25.66 171 *e*P **P 12 32 33.8 -1.7**
comp=Z,178nm,0.9s
BRG Berggiesshubel 25.73 170 *e*P **P 12 32 37.5 +1.3**
comp=Z,33nm,1.2s
BRG *i* 12 32 41.5
comp=Z,58nm,1.0s
BRG S **S 12 37 07.0 +2.6**
BRG *e*SCS **ScS 12 43 35.1 +1.9**
comp=Z,1.2nm,0.8s
BRG
comp=N,793nm,15.5s
BRG
comp=E,550nm,20.6s
BRG
comp=Z,1µm,14.6s
BRG Berggiesshubel 25.73 170 *e*P **P 12 32 34.3 -1.9**
comp=Z,58nm,1.0s
BRG Berggiesshubel 25.73 170 *e*P **P 12 32 37.5 +1.3**
BRG *i* 12 32 41.5
BRG S **S 12 37 07.0 +2.6**
BRG *e* 12 43 35.1
BRG pmax pmax
comp=Z,33nm,1.2s
BRG pmax pmax
comp=Z,58nm,1.0s
BRG pmax pmax
comp=N,1.0nm,0.8s
BRG MLR MLR
comp=N,793nm,15.5s
BRG MLR MLR
comp=E,550nm,20.6s
BRG MLR MLR
comp=Z,1µm,14.6s
KSP Ksiaz 25.88 167 *e*P **P 12 32 36.4 -1.1**
KSP *e**PP **pP 12 32 42.5 +1.1**
KSP *e*S **S 12 37 07.0 +0.4**
KSP MLR MLR
comp=Z,3µm,17.4s
KSP Ksiaz 25.88 167 *e*P **P 12 32 40.3 +2.8**
MOX Moxa 25.88 173 *e*P **P 12 32 36.1 -1.5**
comp=Z,117nm,0.9s
MOX Moxa 25.88 173 *e*P **P 12 32 36.1 -1.5**
MOX pmax pmax
comp=Z,6.0nm,0.9s
PLN Plauen 26.06 173 *e*P **P 12 32 37.9 -1.2**
comp=Z,366nm,1.0s
WERD Werda 26.10 172 *e*P **P 12 32 38.1 -1.5**
comp=Z,63nm,1.0s
PVCC Panska Ves 26.10 169 *e*P **P 12 32 41.0 +1.4**
PVCC *e* 12 32 45.7
PVCC MLR MLR
comp=Z,1µm,13.8s
PVCC Panska Ves 26.10 169 *e*P **P 12 32 41.0 +1.4**
PVCC *e*pP **pP 12 32 45.7 +2.2**
PVCC AMS AMS 12 42 40.0
comp=Z,1µm,13.8s
PVCC Panska Ves 26.10 169 P **P 12 32 41.0 +1.4**
TANN Tannenbergstha 26.14 172 *e*P **P 12 32 38.7 -1.2**
comp=Z,62nm,1.0s
GUNZ Gunzen 26.18 172 *e*P **P 12 32 39.1 -1.2**
comp=Z,61nm,1.0s
UPC Upice 26.20 167 *e*P **P 12 32 41.8 +1.4**
UPC *e* 12 32 44.2
UPC *e* 12 32 46.5
UPC Upice 26.20 167 *e*P **P 12 32 41.8 +1.4**
UPC *e*pP **pP 12 32 44.2 -0.1**
UPC *e*sP **sP 12 32 46.5 +0.5**
UPC Upice 26.20 167 P **P 12 32 41.8 +1.4**
TNS Taunus Mts 26.25 178 *e*P **P 12 32 40.5 -0.4**
comp=Z,48nm,0.9s
TNS Taunus Mts 26.25 178 *e*P **P 12 32 40.5 -0.4**
TNS pmax pmax
comp=Z,39nm,0.9s
WERN Wernitzgruen 26.26 172 *e*P **P 12 32 39.9 -1.1**
comp=Z,139nm,1.0s
NKC Novy Kostel 26.32 172 *e*P **P 12 32 41.0 -0.5**
NKC *e* 12 32 43.9
NKC *e* 12 32 47.6
NKC *e*S **S 12 37 15.6 +1.9**
NKC MLR MLR
comp=Z,2µm,16.6s
NKC Novy Kostel 26.32 172 *e*P **P 12 32 41.0 -0.5**
NKC *e*pP **pP 12 32 43.9 -1.6**
NKC *e*sP **sP 12 32 47.6 +0.5**
NKC *e*S **S 12 37 15.6 +1.9**
NKC AMS AMS 12 42 50.0
comp=Z,2µm,16.6s
NKC Novy Kostel 26.32 172 P **P 12 32 41.0 -0.5**
NKC *e*S **S 12 37 15.6 +1.9**
FRB Frobisher Bay 26.32 284 P **P 12 32 40.0 -1.4**
FRB Frobisher Bay 26.32 284 P **P 12 32 40.0 -1.4**
comp=Z,23nm,1.1s,baz=42,slow=9.5,SNR=11
FRB LR LR 12 43 05.4
comp=Z,4µm,20.4s,baz=38,slow=36
FRB Frobisher Bay 26.32 284 P **P 12 32 40.0 -1.4**
DPC Dobruska-Polom 26.37 167 *e*P **P 12 32 42.4 +0.4**
DPC *e* 12 32 46.0
DPC *e* 12 32 48.1
DPC *e*S **S 12 37 16.1 +1.6**
DPC Dobruska-Polom 26.37 167 *e*P **P 12 32 42.4 +0.4**
DPC *e*pP **pP 12 32 46.0 0.0**
DPC *e*sP **sP 12 32 48.1 +0.5**
DPC *e*S **S 12 37 16.1 +1.6**
DPC Dobruska-Polom 26.37 167 P **P 12 32 42.4 +0.4**
DPC *e*S **S 12 37 16.1 +1.6**
GIVF Givet 26.38 183 *e*P **P 12 32 41.4 -0.6**
comp=Z,62nm,1.2s
GIVF Givet 26.38 183 *e*P **P 12 32 41.4 -0.6**

GIVF pmax pmax
comp=Z,62nm,1.2s
GIVF Givet 26.38 183 *e*P P 12 32 41.4 -0.6
comp=Z,62nm,1.2s
BAIF Baives 26.43 184 *e*P P 12 32 41.9 -0.6
comp=Z,91nm,1.2s
BAIF Baives 26.43 184 *e*P P 12 32 41.9 -0.6
BAIF pmax pmax
comp=Z,91nm,1.2s
BAIF Baives 26.43 184 *e*P P 12 32 41.9 -0.6
comp=Z,91nm,1.2s
MANZ Manzenberg 26.55 173 *e*P P 12 32 44.3 +0.6
comp=Z,30nm,1.0s
PRA Prague 26.55 169 P P 12 32 45.0 +1.4
PRA AMS AMS 12 43 30.0
PRU Pruhonice 26.64 169 *e*P P 12 32 46.4 +2.0
PRU *e* 12 32 49.1
PRU *e* 12 32 50.4
PRU *e*S **S 12 37 20.7 +2.0**
PRU MLR MLR
comp=Z,1µm,14.7s
PRU Pruhonice 26.64 169 *e*P P 12 32 46.4 +2.0
PRU *ep*P **pP 12 32 49.1 +0.7**
PRU *e*sP **sP 12 32 50.4 +0.4**
PRU *e*S **S 12 37 20.7 +2.0**
PRU AMS AMS 12 43 00.0
comp=Z,1µm,14.7s
PRU Pruhonice 26.64 169 P P 12 32 46.4 +2.0
PRU *e*S **S 12 37 20.7 +2.0**
KRLC Kraliky 26.67 166 *e*P P 12 32 43.7 -1.0
KRLC *e* 12 32 46.8
KRLC *e* 12 32 50.8
KRLC Kraliky 26.67 166 *e*P P 12 32 43.7 -1.0
KRLC *ep*P **pP 12 32 46.8 -1.9**
KRLC *e*sP **sP 12 32 50.8 +0.5**
KRLC Kraliky 26.67 166 P P 12 32 43.7 -1.0
OJC Ojcow 26.73 162 *e*P P 12 32 43.7 -1.4
OJC *e**SP **sP 12 32 49.2 -1.5**
OJC *e*S **S 12 37 20.7 +0.6**
OJC MLR MLR
comp=Z,1µm,17.2s
OJC Ojcow 26.73 162 *e*P P 12 32 43.8 -1.4
comp=Z,94nm,1.2s
OJC Ojcow 26.73 162 *e*P P 12 32 43.7 -1.4
OJC *e*sP **sP 12 32 49.2 -1.5**
OJC *e*S **S 12 37 20.7 +0.6**
OJC L L 12 44 29.4
comp=Z,1µm,17.2s
OJC Ojcow 26.73 162 *e*P P 12 32 43.8 -1.4
comp=Z,94nm,1.2s
OJC *e*S **S 12 37 20.7 +0.6**
RUP Ruppelstein 26.76 180 *e*P P 12 32 47.7 +2.1
ROTZ Rotzenmuhle 26.78 173 *e*P P 12 32 44.7 -0.9
comp=Z,48nm,1.0s
GRF Grafenberg Arr 26.82 174 *e*P P 12 32 44.9 -1.2
comp=Z,79nm,1.0s
GRF *e*L L 12 43 23.1
comp=Z,980nm,19.3s
GRF Grafenberg Arr 26.82 174 *e*P P 12 32 44.9 -1.2
GRF pmax pmax
comp=Z,10.0nm,1.0s
GRF MLR MLR
comp=Z,79µm,19.3s
GRFO Grafenberg 26.82 174 *e*P P 12 32 48.9 +2.8
GRFO pmax pmax
comp=Z,64nm,1.0s
GRFO Grafenberg 26.82 174 *e*P P 12 32 48.9 +2.8
comp=Z,64nm,1.0s
TOD Tromm 26.87 178 *e*P P 12 32 47.8 +1.3
OKC Ostrava-Krasne 26.99 164 *e*P P 12 32 47.7 +0.1
OKC *e* 12 32 53.4
OKC *e*S **S 12 37 24.0 -0.2**
OKC MLR MLR
comp=Z,800nm,17.0s
OKC Ostrava-Krasne 26.99 164 *e*P P 12 32 47.7 +0.1
OKC *ep*P **pP 12 32 53.4 +1.9**
OKC *e*S **S 12 37 24.0 -0.2**
OKC AMS AMS 12 43 40.0
comp=Z,800nm,17.0s
OKC Ostrava-Krasne 26.99 164 P P 12 32 47.7 +0.1
OKC *e*S **S 12 37 24.0 -0.2**
comp=Z,800nm,17.0s
MORC Moravsky Berou 27.01 165 *e*P P 12 32 46.5 -1.3
MORC pmax pmax
comp=Z,45nm,0.9s
MORC Moravsky Berou 27.01 165 *e*P P 12 32 46.5 -1.3
comp=Z,45nm,0.9s
MORC Moravsky Berou 27.01 165 *e*P P 12 32 46.8 -1.0
ARU Arti 27.15 108 *c i*P P 12 32 48.5 -0.4
ARU 12 33 31.7
ARU PPP PPP 12 33 40.3
ARU 12 36 09.5
ARU S **S 12 37 28.8 +2.2**
ARU pmax pmax
comp=Z,42nm,1.2s
ARU MLR MLR
comp=Z,2µm,17.0s
ARU Arti 27.15 108 P P 12 32 48.2 -0.7
comp=Z,218nm,0.9s,SNR=9.2
AKASG Malin Array Be 27.19 148 P P 12 32 46.5 -2.9
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG MLR MLR
comp=Z,2µm,19.9s
AKASG Malin Array Be 27.19 148 P P 12 32 46.5 -2.9
AKASG Malin Array Be 27.19 148 P P 12 32 46.5 -2.9
comp=Z,3.0nm,0.7s,baz=343,slow=9.7,SNR=11
AKASG LR LR 12 43 39.3
comp=Z,2µm,19.9s,baz=350,slow=37
AKASG Malin Array Be 27.19 148 P P 12 32 46.5 -2.9
KIEV Kiev 27.20 148 *e*P P 12 32 47.2 -2.2
KIEV pmax pmax
comp=Z,43nm,1.1s
KIEV Kiev 27.20 148 *e*P P 12 32 47.2 -2.2
comp=Z,43nm,1.1s
KIEV Kiev 27.20 148 *e*P P 12 32 47.2 -2.2
comp=Z,43nm,1.1s
AK01 Malin Array Si 27.20 148 *e*P P 12 32 47.0 -2.5
AK01 Malin Array Si 27.20 148 *e*P P 12 32 47.0 -2.5
AK02 Malin Array Si 27.23 148 *e*P P 12 32 47.6 -2.0
AK02 Malin Array Si 27.23 148 *e*P P 12 32 47.7 -2.0
SVE Sverdlovsk 27.26 105 *e*P P 12 32 49.8 -0.1
SVE *e*S **S 12 37 29.7 +1.4**
SVE pmax pmax
comp=Z,44nm,1.4s
SVE MLR MLR
comp=Z,3µm,18.0s
TREC Trest 27.38 168 *e*P P 12 32 52.2 +1.1
TREC *e* 12 32 57.2
TREC *e*S **S 12 37 34.0 +3.6**
TREC MLR MLR
comp=Z,1µm,16.3s
TREC Trest 27.38 168 *e*P P 12 32 52.2 +1.1
TREC *ep*P **pP 12 32 57.2 +2.2**
TREC *e*S **S 12 37 34.0 +3.6**
TREC AMS AMS 12 43 30.0
comp=Z,1µm,16.3s
TREC Trest 27.38 168 P P 12 32 52.2 +1.1
WET Wettzell 27.42 172 *e*P P 12 32 50.7 -0.8
comp=Z,36nm,1.0s
WET Wettzell 27.42 172 *e*P P 12 32 50.7 -0.8
WET pmax pmax
comp=Z,33nm,1.0s
VRAC Vranov 27.42 166 P P 12 32 50.9 -0.6
VRAC Vranov 27.42 166 *j i*P P 12 32 50.1 -1.4
VRAC Vranov 27.42 166 P P 12 32 50.9 -0.6
comp=Z,97nm,1.0s,baz=1.6,slow=9.7,SNR=16
VRAC LR LR 12 44 21.4
comp=Z,511nm,18.6s,baz=250,slow=38
VRAC Vranov 27.42 166 P P 12 32 50.9 -0.6
KHC Kasperske Hory 27.46 171 *e*P P 12 32 54.2 +2.4
KHC *ep*P **pP 12 32 57.9 +2.1**
KHC *ex* x 12 33 45.5
KHC *ex* x 12 34 21.0
KHC *e*S **S 12 37 33.4 +1.7**
KHC AMS AMS 12 43 20.0
comp=Z,1µm,16.9s
KHC Kasperske Hory 27.46 171 *e*P P 12 32 53.9 +2.1
comp=Z,19nm,1.0s
KHC Kasperske Hory 27.46 171 *e*P P 12 32 53.9 +2.1
comp=Z,19nm,1.0s
KHC *e*S **S 12 37 33.4 +1.7**
comp=Z,1µm,16.9s
LANF Langenberg 27.49 179 *e*P P 12 32 54.6 +2.6
LANF Langenberg 27.49 179 *e*P P 12 32 54.6 +2.6
LVV L'vov 27.49 156 *e*P P 12 32 50.1 -1.9
LVV *e* 12 33 40.3
LVV *e*S **S 12 37 30.9 -1.1**
LVV *e*SS SS 12 39 06.3 -21
LVV MLR MLR
comp=Z,900nm,16.0s
LVV MLR MLR
comp=N,700nm,15.0s
LVV MLR MLR
comp=E,400nm,15.0s
KWP Kalwaria Pacla 27.55 158 *e*P P 12 32 51.6 -1.0
KWP pmax pmax
comp=Z,79nm,1.1s
KWP Kalwaria Pacla 27.55 158 *e*P P 12 32 51.6 -1.0
comp=Z,79nm,1.1s
KWP Kalwaria Pacla 27.55 158 *e*P P 12 32 58.0 +5.4
KWP Kalwaria Pacla 27.55 158 *e*P P 12 32 51.6 -1.0
comp=Z,79nm,1.1s
NIE Niedzica 27.56 161 *e*P P 12 32 52.7 0.0
NIE *e**SP **sP 12 32 59.3 +1.0**
NIE Niedzica 27.56 161 *e*P P 12 32 52.7 0.0
NIE *e*sP **sP 12 32 59.3 +1.0**
STHS Stebnicka Huta 27.64 160 *e*P P 12 32 53.5 +0.1
STHS *e* 12 33 00.5
STHS pmax pmax
comp=Z,29nm,1.2s
STHS Stebnicka Huta 27.64 160 *e*P P 12 32 53.5 +0.1
STHS *ep*P **pP 12 33 00.5 +3.2**
STU Stuttgart 27.71 177 *e*P P 12 32 52.7 -1.3
comp=Z,36nm,1.0s
STU Stuttgart 27.71 177 *e*P P 12 32 56.5 +2.5
STU pmax pmax
comp=Z,40nm,1.1s
STU Stuttgart 27.71 177 *e*P P 12 32 56.5 +2.5
comp=Z,40nm,1.1s
GEC2 GERESS Array S 27.75 171 *e*P P 12 32 53.7 -0.8
comp=Z,54nm,1.1s
GEC2 GERESS Array S 27.75 171 *e*P P 12 32 53.7 -0.8
GEC2 pmax pmax
comp=Z,5.0nm,1.1s
GEC2 GERESS Array S 27.75 171 *e*P P 12 32 56.8 +2.3
comp=Z,11µm,1.0s
GEC2 GERESS Array S 27.75 171 *e*P P 12 32 56.8 +2.3
comp=Z,10µm,1.0s
GERES GERESS Array B 27.75 171 P P 12 32 54.4 -0.1
GERES GERESS Array B 27.75 171 P P 12 32 54.4 -0.1
comp=Z,24nm,1.2s,baz=12,slow=7.0,SNR=41
GERES LR LR 12 43 53.6
comp=Z,1µm,18.3s,baz=359,slow=36
GERES GERESS Array B 27.75 171 P P 12 32 54.4 -0.1
FLN La Foliniere 27.87 191 *e*P P 12 32 54.1 -1.3
comp=Z,34nm,1.0s,baz=12
FLN *e*R
comp=Z,837nm,22.0s
FLN La Foliniere 27.87 191 *e*P P 12 32 54.1 -1.3
FLN pmax pmax
comp=Z,34nm,1.0s
FLN La Foliniere 27.87 191 *e*P P 12 32 54.1 -1.3
comp=Z,34nm,1.0s
PAGF Fort de Pagny 27.92 182 *e*P P 12 32 54.8 -1.1
comp=Z,19nm,1.2s
PAGF Fort de Pagny 27.92 182 *e*P P 12 32 54.8 -1.1
comp=Z,19nm,1.2s
MEZF Maizieres J'vi 27.98 183 *e*P P 12 32 55.5 -0.9
comp=Z,64nm,1.2s
MEZF Maizieres J'vi 27.98 183 *e*P P 12 32 55.5 -0.9
comp=Z,64nm,1.2s
LDF La Druitiere 28.02 190 *e*P P 12 32 54.5 -2.3
comp=Z,76nm,1.4s
LDF La Druitiere 28.02 190 *e*P P 12 32 54.5 -2.3
LDF pmax pmax
comp=Z,76nm,1.4s
LDF La Druitiere 28.02 190 *e*P P 12 32 54.5 -2.3
comp=Z,76nm,1.4s
CDF Champ du Feu 28.05 180 *e*P P 12 32 57.5 +0.3
comp=Z,48nm,1.6s
CDF Champ du Feu 28.05 180 *e*P P 12 32 57.5 +0.3
CDF pmax pmax
comp=Z,48nm,1.6s
CDF Champ du Feu 28.05 180 *e*P P 12 32 57.5 +0.3
comp=Z,48nm,1.6s
TIXI Tiksi 28.14 35 *d i*P P 12 32 59.0 +1.4
TIXI pmax pmax
comp=Z,28nm,1.7s
BFO Black Forest 28.14 178 *e*P P 12 32 59.7 +1.8
BFO pmax pmax
comp=Z,27nm,0.9s
BFO Black Forest 28.14 178 *e*P P 12 32 59.7 +1.8
comp=Z,27nm,0.9s
BFO Black Forest 28.14 178 *e*P P 12 32 59.7 +1.8
comp=Z,27nm,0.9s
VSR Storozhevoye 28.15 135 *e*P P 12 32 55.1 -2.8
VSR pmax pmax
comp=N,40nm,1.5s
VSR pmax pmax
comp=Z,20nm,1.5s
VSR pmax pmax
comp=E,10.0nm,0.9s
VSR MLR MLR
comp=Z,2µm,17.0s
VSR MLR MLR
comp=N,1µm,18.0s
VSR MLR MLR
comp=E,660nm,14.0s
CRVS Cervenica-Dubn 28.16 160 *e*P P 12 32 57.9 -0.2
CRVS *e* 12 33 06.2
CRVS pmax pmax
comp=Z,85nm,2.0s
CRVS Cervenica-Dubn 28.16 160 *e*P P 12 32 57.9 -0.2
CRVS *ep*P **pP 12 33 06.2 +4.1**
KOLS Kolonicke sedl 28.20 159 *e*P P 12 32 57.3 -1.1
KOLS *e* 12 33 04.8
KOLS pmax pmax
comp=Z,26nm,1.2s
KOLS Kolonicke sedl 28.20 159 *e*P P 12 32 57.3 -1.1
KOLS *ep*P **pP 12 33 04.8 +2.4**
ECH Echery 28.25 180 *e*P P 12 33 00.6 +1.7
ECH pmax pmax
comp=Z,24nm,1.3s
ECH Echery 28.25 180 *e*P P 12 33 00.6 +1.7
comp=Z,24nm,1.3s
ECH Echery 28.25 180 *e*P P 12 32 59.8 +0.9
ECH Echery 28.25 180 *e*P P 12 32 59.8 +0.9
GRR Gorron 28.26 191 *e*P P 12 32 57.2 -1.7
comp=Z,21nm,0.9s
GRR Gorron 28.26 191 *e*P P 12 32 57.2 -1.7
GRR pmax pmax
comp=Z,21nm,0.9s
GRR Gorron 28.26 191 *e*P P 12 32 57.2 -1.7
comp=Z,21nm,0.9s
SMOL Smolenice 28.26 165 *e*P P 12 33 00.6 +1.6
SMOL *e* 12 33 06.3
SMOL Smolenice 28.26 165 *e*P P 12 33 00.6 +1.6
SMOL *ep*P **pP 12 33 06.3 +3.4**
SFTF Sexfontaines 28.27 183 *e*P P 12 32 57.7 -1.4
comp=Z,26nm,0.9s,baz=8.5
SFTF Sexfontaines 28.27 183 *e*P P 12 32 57.7 -1.4
comp=Z,26nm,0.9s
SPAK Spaichingen-Ko 28.37 178 *e*P P 12 33 01.1 +1.1
VYHS Vyhne 28.37 163 *e*P P 12 32 59.8 -0.2
VYHS *e* 12 33 06.2
VYHS pmax pmax
comp=Z,13nm,1.0s
VYHS Vyhne 28.37 163 *e*P P 12 32 59.8 -0.2
VYHS *ep*P **pP 12 33 06.2 +2.3**
VORD Divnogorie 28.42 135 *e*P P 12 32 56.3 -4.0
VORD pmax pmax
comp=Z,30nm,1.4s
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=E,10.0nm,0.5s
VORD MLR MLR
comp=Z,2µm,19.0s
VORD MLR MLR
comp=N,2µm,17.0s
VORD MLR MLR
comp=E,1µm,18.0s
ROSF Rostrenen 28.44 195 *e*P P 12 32 59.3 -1.2
comp=E,53nm,1.3s
ROSF Rostrenen 28.44 195 *e*P P 12 32 59.3 -1.2
ROSF pmax pmax
comp=Z,53nm,1.3s
ROSF Rostrenen 28.44 195 *e*P P 12 32 59.3 -1.2
comp=Z,53nm,1.3s
HAU Haudompre 28.46 181 *e*P P 12 33 00.1 -0.7
comp=Z,36nm,0.9s
HAU *e*R
comp=Z,1µm,20.2s
HAU Haudompre 28.46 181 *e*P P 12 33 00.1 -0.7
HAU pmax pmax
comp=Z,36nm,0.9s
HAU Haudompre 28.46 181 *e*P P 12 33 00.1 -0.7
comp=Z,36nm,0.9s
SGMF Saint Gilles 28.48 194 *e*P P 12 33 00.5 -0.4
comp=Z,68nm,1.2s
SGMF Saint Gilles 28.48 194 *e*P P 12 33 00.5 -0.4
SGMF pmax pmax
comp=Z,68nm,1.2s
SGMF Saint Gilles 28.48 194 *e*P P 12 33 00.5 -0.4
comp=Z,68nm,1.2s
KECS Kecovo 28.50 161 *e*P P 12 33 00.4 -0.7
KECS *e* 12 33 07.5
KECS pmax pmax
comp=Z,9.0nm,1.0s
KECS Kecovo 28.50 161 *e*P P 12 33 00.4 -0.7
KECS *ep*P **pP 12 33 07.5 +2.4**
ZST Bratislava 28.56 166 *e*P P 12 33 03.6 +2.0
ZST *e* 12 33 07.5
ZST Bratislava 28.56 166 *e*P P 12 33 03.6 +2.0
ZST *ep*P **pP 12 33 07.5 +1.9**
FELD Feldberg im Sc 28.59 179 *e*P P 12 33 02.2 +0.1
HINF Hinteralfeld 28.65 180 *e*P P 12 33 01.5 -1.0
HINF Hinteralfeld 28.65 180 *e*P P 12 33 01.5 -1.0
HINF Hinteralfeld 28.65 180 *e*P P 12 33 01.5 -1.0
CONA Conrad Observa 28.76 168 *j ep*P P 12 33 04.7 +1.2
comp=Z,75nm,0.9s,SNR=34
MOA Molln 28.77 170 *j ep*P pP 12 33 05.7 -1.7
comp=Z,28nm,0.9s,SNR=9.1
RJOB Jochberg 28.82 172 *e*P P 12 33 03.0 -1.0
comp=Z,38nm,0.9s
QUIF Quistinic 28.85 194 *e*P P 12 33 02.9 -1.3
comp=Z,50nm,1.3s
QUIF Quistinic 28.85 194 *e*P P 12 33 02.9 -1.3
QUIF pmax pmax
comp=Z,50nm,1.3s
QUIF Quistinic 28.85 194 *e*P P 12 33 02.9 -1.3
comp=Z,50nm,1.3s
PSZ Piszkesteto 29.02 162 *j*P P 12 33 03.3 -2.5
PSZ Piszkesteto 29.02 162 *e*P P 12 33 06.1 +0.3
comp=Z,41nm,1.0s
PSZ Piszkesteto 29.02 162 *j i*P P 12 33 03.3 -2.5
PSZ Piszkesteto 29.02 162 *e*P P 12 33 12.0 +6.2
PSZ Piszkesteto 29.02 162 *e*P P 12 33 06.1 +0.3
comp=Z,41nm,1.0s
TRPA Tarpa 29.02 158 *e*P P 12 33 11.4 +5.7
SOP Sopron 29.04 167 *e*P P 12 33 12.4 +6.5
LOMF Lomont 29.11 180 *e*P P 12 33 05.3 -1.3
LOMF Lomont 29.11 180 *e*P P 12 33 05.3 -1.3
LOR Lormes 29.23 184 *e*P P 12 33 05.5 -2.1
comp=Z,22nm,0.9s,baz=5.8
LOR *e*R
comp=Z,1µm,22.2s
LOR Lormes 29.23 184 *e*P P 12 33 05.5 -2.1
comp=Z,22nm,0.9s
BUD Budapest 29.39 163 *e*P P 12 33 13.6 +4.6
ARSA Arzberg 29.42 168 *j ep*P pP 12 33 11.6 -1.6
comp=Z,29nm,0.9s,SNR=8.5
SSF Saint Saulge 29.44 185 *e*P P 12 33 07.2 -2.2
comp=Z,55nm,1.4s
SSF Saint Saulge 29.44 185 *e*P P 12 33 07.2 -2.2
SSF pmax pmax
comp=Z,55nm,1.4s
SSF Saint Saulge 29.44 185 *e*P P 12 33 07.2 -2.2
comp=Z,55nm,1.4s
PKSG 29.44 164 *j e*P P 12 33 12.0 +2.6
CSKK Cs˘ˇtkako 29.46 164 *j e*P P 12 33 09.7 +0.1
FETA Feichten 29.48 175 *j ep*P P 12 33 11.2 +1.2
KBA Koelnbreinsper 29.50 171 *j esP sP 12 33 12.8 -3.0
comp=Z,28nm,0.9s
PKST T˜'s 29.55 165 *j e*P P 12 33 12.7 +2.3
DAVOX Davos/Dischmat 29.71 176 P P 12 33 11.2 -0.8
DAVOX Davos/Dischmat 29.71 176 P P 12 33 11.2 -0.8
comp=Z,1.7nm,0.6s,baz=333,slow=18,SNR=2.6
DAVOX LR LR 12 45 55.7
comp=Z,461nm,18.7s,baz=303,slow=38
DAVOX Davos/Dischmat 29.71 176 P P 12 33 11.2 -0.8
AVF Avril sur Loir 29.71 185 *e*P P 12 33 10.6 -1.2
comp=Z,31nm,1.0s
AVF Avril sur Loir 29.71 185 *e*P P 12 33 10.6 -1.2
AVF pmax pmax
comp=Z,31nm,1.0s
AVF Avril sur Loir 29.71 185 *e*P P 12 33 10.6 -1.2
comp=Z,31nm,1.0s
BUR08 Bucovina Ar. S 29.75 155 *e*P P 12 33 11.3 -1.0
BUR08 Bucovina Ar. S 29.75 155 *e*P P 12 33 11.3 -1.0
BURAR Bucovina Array 29.79 155 *j i*P P 12 33 06.4 -6.2
PKS7 Kunszentmiklos 29.84 163 *e*P P 12 33 20.0 +7.1
SMF Signal de Mont 29.85 184 *e*P P 12 33 12.0 -1.1
comp=Z,75nm,1.4s
SMF Signal de Mont 29.85 184 *e*P P 12 33 12.0 -1.1
SMF pmax pmax
comp=Z,75nm,1.4s
SMF Signal de Mont 29.85 184 *e*P P 12 33 12.0 -1.1
comp=Z,75nm,1.4s
CABF La Chapelle 29.86 181 *e*P P 12 33 12.5 -0.7
comp=Z,39nm,0.9s
CABF La Chapelle 29.86 181 *e*P P 12 33 12.5 -0.7
CABF pmax pmax
comp=Z,39nm,0.9s
CABF La Chapelle 29.86 181 *e*P P 12 33 12.5 -0.7
comp=Z,39nm,0.9s
BGF Bois d'Agland 29.96 186 *e*P P 12 33 12.7 -1.3
comp=Z,86nm,1.1s
BGF Bois d'Agland 29.96 186 *e*P P 12 33 12.7 -1.3
BGF pmax pmax
comp=Z,86nm,1.1s
BGF Bois d'Agland 29.96 186 *e*P P 12 33 12.7 -1.3
comp=Z,86nm,1.1s
TUE Stuetta 30.01 177 *e*P P 12 33 19.8 +5.1
comp=Z,13nm,0.8s
MFF Saint Martin d 30.01 190 *e*P P 12 33 13.6 -0.9
comp=Z,44nm,1.3s
MFF Saint Martin d 30.01 190 *e*P P 12 33 13.6 -0.9
MFF pmax pmax
comp=Z,45nm,1.3s
MFF Saint Martin d 30.01 190 *e*P P 12 33 13.6 -0.9
comp=Z,44nm,1.3s
PKSN Nyarlorinc 30.04 162 *j e*P P 12 33 21.8 +7.1
SENIN Lac Senin/Sane 30.10 180 *e*P P 12 33 18.2 +2.6
comp=Z,15nm,1.0s
OBKA Obir 30.12 170 *j esP sP 12 33 18.2 -2.9
comp=Z,77nm,0.9s,SNR=8.2
PKS9 Tamasi 30.24 165 *j e*P P 12 33 23.3 +6.8
TCF Toulx Ste Croi 30.25 187 *e*P P 12 33 14.6 -2.0
comp=Z,45nm,0.9s
TCF Toulx Ste Croi 30.25 187 *e*P P 12 33 14.6 -2.0
TCF pmax pmax
comp=Z,45nm,0.9s
TCF Toulx Ste Croi 30.25 187 *e*P P 12 33 14.6 -2.0
comp=Z,45nm,0.9s
BEHE Becsehely 30.26 167 *j e*P P 12 33 23.4 +6.7
PKS6 Bocsa 30.31 163 *j e*P P 12 33 24.4 +7.3
DRGR 30.37 159 *j*P P 12 33 14.4 -3.3
DRGR 30.37 159 *j i*P P 12 33 14.4 -3.3
PKS2 Kecel 30.39 163 *j e*P P 12 33 24.4 +6.6
AGO Saint Agoulin 30.46 185 *e*P P 12 33 20.5 +2.0
AGO Saint Agoulin 30.46 185 *e*P P 12 33 20.5 +2.0
LJU Ljubljana 30.58 170 *j*P P 12 33 25.8 +6.3
PKSM Moragy 30.63 164 *j*P P 12 33 20.0 +0.1
PKSM Moragy 30.63 164 *j i*P P 12 33 20.0 +0.1
PKSM Moragy 30.63 164 *j e*P P 12 33 26.1 +6.2
PYM Petit Puy Mans 30.76 186 *e*P P 12 33 21.7 +0.5
PYM Petit Puy Mans 30.76 186 *e*P P 12 33 21.7 +0.5
KIS Kishinev 30.79 150 *e*P P 12 33 25.0 +3.7
KIS *e* 12 33 30.0
KIS *e* 12 36 15.0
KIS MLR MLR
comp=Z,2µm,16.0s
KIS MLR MLR
comp=Z,2µm,16.0s
KIS Kishinev 30.79 150 *e*P P 12 33 25.0 +3.7
KIS Kishinev 30.79 150 *e*PP PP 12 34 13.0 -18
KIS Kishinev 30.79 150 *e*PcP PcP 12 36 15.0 -3.1

KIS eL L 12 41 52.0
KIS LRM1 12 45 05.0
comp=Z,1μm,22.0s
KIS LRM2 12 45 58.0
comp=Z,2μm,16.0s
GCIS Gornji Cirnik 30.81 168 *e*P P 12 33 27.5 +6.0
TRI Trieste 30.88 171 *e*P **P** **12 33 23.1 +0.9**
TRI pmax pmax
comp=Z,80nm,1.0s
TRI Trieste 30.88 171 *e*P **P** **12 33 23.1 +0.9**
comp=Z,80nm,1.0s
TRI Trieste 30.88 171 *e*P **P** **12 33 23.1 +0.9**
comp=Z,80nm,1.0s
LPL La Plagne 30.95 180 *e*P **P** **12 33 22.4 -0.6**
comp=Z,52nm,1.1s
LPL La Plagne 30.95 180 *e*P **P** **12 33 22.4 -0.6**
LPL pmax pmax
comp=Z,52nm,1.1s
LPL La Plagne 30.95 180 *e*P **P** **12 33 22.4 -0.6**
comp=Z,52nm,1.1s
LPG La Plagne 30.97 180 *e*P **P** **12 33 22.8 -0.5**
comp=Z,100nm,1.4s
LPG La Plagne 30.97 180 *e*P **P** **12 33 22.8 -0.5**
LPG pmax pmax
comp=Z,100nm,1.4s
LPG La Plagne 30.97 180 *e*P **P** **12 33 22.8 -0.5**
comp=Z,100nm,1.4s
TESR Tescani 31.02 153⇑ *i*P **P** **12 33 22.6 -0.8**
RJF Les Rejaudoux 31.25 188 *e*P **P** **12 33 24.6 -0.8**
comp=Z,62nm,1.2s
RJF *e*R
comp=Z,966nm,19.5s
RJF Les Rejaudoux 31.25 188 *e*P **P** **12 33 24.6 -0.8**
RJF pmax pmax
comp=Z,62nm,1.2s
RJF Les Rejaudoux 31.25 188 *e*P **P** **12 33 24.6 -0.8**
comp=Z,62nm,1.2s
BZS Buzias 31.44 160⇑P **P** **12 33 27.0 -0.1**
BZS Buzias 31.44 160⇑ *i*P **P** **12 33 27.0 -0.1**
ORIF Oris-en-Rattie 31.55 182 *e*P **P** **12 33 26.7 -1.5**
comp=Z,28nm,1.0s
ORIF *e*R
comp=Z,1μm,21.5s
ORIF Oris-en-Rattie 31.55 182 *e*P **P** **12 33 26.7 -1.5**
ORIF pmax pmax
comp=Z,28nm,1.0s
ORIF Oris-en-Rattie 31.55 182 *e*P **P** **12 33 26.7 -1.5**
comp=Z,28nm,1.0s
CAF Calviac 31.61 187 *e*P **P** **12 33 26.6 -2.0**
CAF Calviac 31.61 187 *e*P **P** **12 33 26.6 -2.0**
CAF Calviac 31.61 187 *e*P **P** **12 33 26.6 -2.0**
VIVF Saint-Julien-l 31.63 183 *e*P **P** **12 33 28.1 -0.7**
comp=Z,66nm,1.4s
VIVF Saint-Julien-l 31.63 183 *e*P **P** **12 33 28.1 -0.7**
VIVF pmax pmax
comp=Z,66nm,1.4s
VIVF Saint-Julien-l 31.63 183 *e*P **P** **12 33 28.1 -0.7**
comp=Z,66nm,1.4s
LFF La Frestale 31.64 189 *e*P **P** **12 33 28.1 -0.7**
comp=Z,17nm,0.7s
LFF La Frestale 31.64 189 *e*P **P** **12 33 28.1 -0.7**
LFF pmax pmax
comp=Z,17nm,0.7s
LFF La Frestale 31.64 189 *e*P **P** **12 33 28.1 -0.7**
comp=Z,17nm,0.7s
MBDF Montbardon 31.74 180 *e*P **P** **12 33 29.3 -0.6**
comp=Z,71nm,1.3s
MBDF Montbardon 31.74 180 *e*P **P** **12 33 29.3 -0.6**
MBDF pmax pmax
comp=Z,71nm,1.3s
MBDF Montbardon 31.74 180 *e*P **P** **12 33 29.3 -0.6**
comp=Z,71nm,1.3s
VOIR 31.92 156⇑P **P** **12 33 31.5 +0.1**
VOIR 31.92 156⇑ *i*P **P** **12 33 31.5 +0.1**
MLR Muntele Rosu 31.96 155⇓ *i*P P 12 33 35.2 +3.4
VLC Villacollemand 32.34 176 *e*P **P** **12 33 37.4 +2.4**
comp=Z,43nm,1.0s
VLC Villacollemand 32.34 176 *e*P **P** **12 33 37.4 +2.4**
comp=Z,43nm,1.0s
LASF Ste Croix 32.42 184 *e*P **P** **12 33 36.0 +0.3**
comp=Z,98nm,1.3s
LASF Ste Croix 32.42 184 *e*P **P** **12 33 36.0 +0.3**
comp=Z,98nm,1.3s
SMRF Simiane la Rot 32.50 182 *e*P **P** **12 33 34.7 -1.7**
comp=Z,60nm,1.1s
SMRF Simiane la Rot 32.50 182 *e*P **P** **12 33 34.7 -1.7**
comp=Z,60nm,1.1s
SBF Sospel 32.60 180 *e*P **P** **12 33 36.5 -0.9**
comp=Z,186nm,1.3s
SBF Sospel 32.60 180 *e*P **P** **12 33 36.5 -0.9**
SBF pmax pmax
comp=Z,186nm,1.3s
SBF Sospel 32.60 180 *e*P **P** **12 33 36.5 -0.9**
comp=Z,186nm,1.3s
FRF La Foret Royal 32.91 181 *e*P **P** **12 33 39.0 -1.0**
FRF La Foret Royal 32.91 181 *e*P **P** **12 33 39.0 -1.0**
FRF La Foret Royal 32.91 181 *e*P **P** **12 33 39.0 -1.0**
BRVK Borovoye 32.96 98 P **P** **12 33 40.1 -0.2**
comp=Z,63nm,1.4s,SNR=5.4
BRVK Borovoye 32.96 98 *de*P **P** **12 33 39.5 -0.8**
BRVK pmax pmax
comp=Z,24nm,1.7s
BRVK Borovoye 32.96 98 *e*P **P** **12 33 40.7 +0.4**
comp=Z,17nm,1.1s
BRVK Borovoye 32.96 98 *e*P **P** **12 33 40.7 +0.4**
comp=Z,17nm,1.1s
LMR La Mourre 33.13 181 *e*P **P** **12 33 41.3 -0.6**
comp=Z,272nm,1.7s
LMR La Mourre 33.13 181 *e*P **P** **12 33 41.3 -0.6**
LMR pmax pmax
comp=Z,272nm,1.7s
LMR La Mourre 33.13 181 *e*P **P** **12 33 41.3 -0.6**
comp=Z,272nm,1.7s
MTLF Montolieu 33.19 186 *e*P **P** **12 33 42.2 -0.3**
comp=Z,17nm,0.9s
MTLF Montolieu 33.19 186 *e*P **P** **12 33 42.2 -0.3**
MTLF pmax pmax
comp=Z,17nm,0.9s
MTLF Montolieu 33.19 186 *e*P **P** **12 33 42.2 -0.3**
comp=Z,17nm,0.9s
SIM Simferopol' 33.48 144 *e*P P 12 33 50.0 +5.0
SIM *e*S **S** **12 39 10.0 +4.1**
SIM pmax pmax
comp=Z,13nm,1.4s
SIM pmax pmax
comp=Z,50nm,7.6s
SIM MLR MLR
comp=Z,640nm,16.9s
SJPF Ste Jean 33.54 191 *e*P **P** **12 33 44.4 -1.1**
SJPF Ste Jean 33.54 191 *e*P **P** **12 33 44.4 -1.1**
SJPF Ste Jean 33.54 191 *e*P **P** **12 33 44.4 -1.1**
EPF Esparros 33.56 189 *e*P **P** **12 33 44.1 -1.6**
comp=Z,33nm,0.9s
EPF Esparros 33.56 189 *e*P **P** **12 33 44.1 -1.6**
EPF pmax pmax
comp=Z,33nm,0.9s
EPF Esparros 33.56 189 *e*P **P** **12 33 44.1 -1.6**
comp=Z,33nm,0.9s
ETSF Etsaut 33.73 190 *e*P **P** **12 33 46.2 -1.0**
comp=Z,28nm,0.9s
ETSF Etsaut 33.73 190 *e*P **P** **12 33 46.2 -1.0**
ETSF pmax pmax
comp=Z,28nm,0.9s
ETSF Etsaut 33.73 190 *e*P **P** **12 33 46.2 -1.0**
comp=Z,28nm,0.9s
SCHQ Schefferville 33.86 274 *e*P **P** **12 33 46.2 -2.0**
comp=Z,16nm,1.1s
SCHQ Schefferville 33.86 274 P **P** **12 33 45.7 -2.5**
comp=Z,4.0nm,1.0s,baz=27,slow=8.2,SNR=4.6
SCHQ LR LR 12 46 23.7
comp=Z,2μm,21.9s,baz=27,slow=34
SCHQ Schefferville 33.86 274 *e*P **P** **12 33 46.2 -2.0**
comp=Z,16nm,1.1s
ANN Anapa 34.11 140 *e*P **P** **12 33 48.3 -2.1**
ANN *e**PP **pP** **12 33 51.7 -2.7**
ANN *e*S **S** **12 39 13.6 -2.0**
ANN *e*SS **SnSn** **12 41 14.1 -8.8**
ANN pmax pmax
comp=Z,21nm,1.2s
ANN MLR MLR
comp=E,302nm,15.0s
ANN MLR MLR
comp=Z,645nm,15.0s
ABKAR Akbulak array 34.13 111 *e*P **P** **12 33 50.2 -0.4**
comp=Z,7.9nm,0.8s
ABKAR Akbulak array 34.13 111 *e*P **P** **12 33 50.2 -0.4**
comp=Z,7.8nm,0.8s
AQU L'Aquila 34.22 172 *e*P **P** **12 33 54.0 +2.5**
comp=Z,76nm,1.0s
NVS Novosibirsk 34.38 84 *e*P **P** **12 33 52.1 -0.6**
NVS *e* 12 35 04.8
NVS pmax pmax
comp=Z,47nm,1.7s
NVS pmax pmax
comp=N,17nm,1.5s
VTS Vitosha 34.58 159⇓P P 12 34 00.0 +5.3
VTS Vitosha 34.58 159⇓ *i*P P 12 34 00.0 +5.3
SKO Skopje 35.05 161 *e*P P 12 34 05.1 +6.5
PGAV Gavieira, Arco 35.13 200 *e*LR LR 12 44 45.1
comp=N,648nm,20.0s
PLD Plovdiv 35.19 157 P P 12 34 04.0 +4.2
BILL Bilibino 35.25 13⇓ *i*P **P** **12 34 00.2 +0.2**
BILL *i* 12 35 26.5
BILL *e* 12 36 26.8
BILL pmax pmax
comp=Z,45nm,1.6s
BILL MLR MLR
comp=Z,300nm,17.0s
PHP Peshkopia 35.26 163 P P 12 34 05.6 +5.1
KRAR Krasnoyarsk 35.56 74⇑ *e*P **P** **12 34 03.6 +0.8**
KRAR pmax pmax
comp=Z,39nm,1.0s
TIR Tirane 35.56 163 *e*P P 12 34 06.3 +3.3
TIR pmax pmax
comp=Z,97nm,1.0s
TIR Tirane 35.56 163 *e*P P 12 34 06.3 +3.3
comp=Z,97nm,1.0s
ZAA0 Zalesovo Array 35.58 83 *e*P **P** **12 34 03.2 +0.2**
ZAA0 Zalesovo Array 35.58 83 *e*P **P** **12 34 03.2 +0.2**
ZALV Zalesovo Beam 35.58 83 P **P** **12 34 02.1 -0.9**
ZALV 12 36 29.3
ZALV pmax pmax
comp=Z,4.0nm,0.9s
ZALV pmax pmax
comp=Z,1.0nm,0.6s
ZALV MLR MLR
comp=Z,1μm,18.2s
ZALV Zalesovo Beam 35.58 83 P **P** **12 34 02.1 -0.9**
ZALV PcP **PcP** **12 36 29.3 -2.1**
ZALV Zalesovo Beam 35.58 83 P **P** **12 34 02.1 -0.9**
comp=Z,4.0nm,0.9s,baz=325,slow=7.6,SNR=10
ZALV PcP **PcP** **12 36 29.3 -2.1**
comp=Z,1.3nm,0.6s,baz=2.6,slow=3.2,SNR=3.7
ZALV LR LR 12 52 40.7
comp=Z,1μm,18.2s,baz=252,slow=43
ZALV Zalesovo Beam 35.58 83 P **P** **12 34 02.1 -0.9**
SOC Sochi 35.66 138 *e*P **P** **12 34 01.9 -1.8**
SOC *e*S **S** **12 39 37.8 -1.6**
SOC *e*SS **SnSn** **12 41 56.3 -4.0**
SOC MLR MLR
comp=Z,2μm,20.0s
POLO Lamas de Olo 35.68 199 *e*P **P** **12 34 06.6 +2.5**
comp=Z,16nm,2.2s
POLO Lamas de Olo 35.68 199 *e*P **P** **12 34 06.6 +2.5**
comp=Z,16nm,2.2s
PVRL Vila Real 35.77 199 *e*P **P** **12 34 07.9 +3.0**
comp=Z,36nm,1.6s
KIV Kislovodsk 35.78 134 *e*P **P** **12 34 04.1 -0.9**
KIV *e* 12 35 21.0
KIV *e*S **S** **12 39 41.8 +0.2**
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,1μm,16.0s
VAY Valandovo 35.79 160 P P 12 34 09.7 +4.8
VAY Valandovo 35.79 160 *e*P P 12 34 09.6 +4.8
MVO Moncorvo 35.83 198 *e*P **P** **12 34 06.7 +1.3**
comp=Z,24nm,1.3s
MVO *e*LR LR 12 44 20.2
comp=Z,379nm,18.0s
MVO Moncorvo 35.83 198 *e*P **P** **12 34 06.7 +1.3**
comp=Z,24nm,1.3s
NVR Nevrokopi 35.87 158 P P 12 34 10.9 +5.3
COLD Coldfoot 35.94 345 *e*P **P** **12 34 07.3 +1.3**
comp=Z,37nm,1.4s
COLD Coldfoot 35.94 345 *e*P **P** **12 34 07.3 +1.3**
comp=Z,37nm,1.4s
KNT Kendrikon 35.97 159 P P 12 34 12.1 +5.6
BIA Bitola 35.99 162 *e*P P 12 34 11.3 +4.6
KBZ Khabaz 36.04 134 P **P** **12 34 06.0 -1.0**
KBZ pmax pmax
comp=Z,11nm,1.0s
KBZ MLR MLR
comp=Z,2μm,19.0s
KBZ Khabaz 36.04 134 P **P** **12 34 06.0 -1.0**
KBZ Khabaz 36.04 134 P **P** **12 34 06.0 -1.0**
comp=Z,11nm,1.0s,baz=268,slow=3.8,SNR=12
KBZ LR LR 12 49 23.4
comp=Z,2μm,19.0s,baz=337,slow=37
KBZ Khabaz 36.04 134 P **P** **12 34 06.0 -1.0**
SRS Serrai 36.07 159 P P 12 34 12.7 +5.3
GRG Griva 36.13 160 P P 12 34 13.9 +6.0
FNA Florina 36.23 161 P P 12 34 14.0 +5.3
KAVA Kavala 36.27 157 P P 12 34 14.3 +5.2
PVIS Viseu 36.34 199 *e*P **P** **12 34 11.6 +1.8**
comp=Z,32nm,1.1s
PVIS Viseu 36.34 199 *e*P **P** **12 34 11.6 +1.8**
comp=Z,32nm,1.1s
YKW3 Yellowknife Ar 36.56 319 *e*P **P** **12 34 10.9 -0.4**
comp=Z,0.6nm,1.5s
YKW3 Yellowknife Ar 36.56 319 *e*P **P** **12 34 10.9 -0.4**
comp=Z,0.6nm,1.5s
YKA Yellowknife Ar 36.63 319 P **P** **12 34 12.2 +0.3**
YKA PcP **PcP** **12 36 32.8 -1.6**
YKA Yellowknife Ar 36.63 319 P **P** **12 34 12.1 +0.3**
comp=Z,2.7nm,0.9s,baz=12,slow=8.8,SNR=23
YKA PcP **PcP** **12 36 32.7 -1.6**
comp=Z,2.0nm,0.9s,baz=10,slow=3.1,SNR=9.4
YKA Yellowknife Ar 36.63 319 P **P** **12 34 12.1 +0.3**
YKA Yellowknife Ar 36.63 319 PcP **PcP** **12 36 32.8 -1.6**
MTE Manteigas 36.63 199 *e*P **P** **12 34 13.7 +1.5**
comp=Z,28nm,1.4s
MTE *e*LQ LQ 12 43 28.0
MTE *e*LR LR 12 44 51.5
comp=Z,330nm,20.0s
MTE Manteigas 36.63 199 *e*P **P** **12 34 12.8 +0.6**
comp=Z,14nm,0.9s
MTE Manteigas 36.63 199 *e*P **P** **12 34 12.8 +0.6**
comp=Z,14nm,0.9s
CUC Castrocucco 36.67 169 *e*P P 12 34 17.4 +4.8
comp=Z,30nm,1.0s
PLG Polygyros 36.80 159 P P 12 34 19.3 +5.7
OUR Ouranopolis 36.88 158 P P 12 34 19.6 +5.3
LIT Litokhoron 36.99 160 P P 12 34 20.7 +5.5
KURK Kurchatov 37.10 91 P **P** **12 34 16.4 +0.4**
comp=Z,216nm,1.1s,SNR=9.3
KURK Kurchatov 37.10 91 *e*P **P** **12 34 15.8 -0.2**
KURK pmax pmax
comp=Z,50nm,1.1s
KURK Kurchatov 37.10 91 *e*P **P** **12 34 15.8 -0.2**
comp=Z,50nm,1.1s
KURK Kurchatov 37.10 91 *e*P **P** **12 34 15.8 -0.2**
comp=Z,50nm,1.1s
ESDC Sonseca Array 37.11 194 P **P** **12 34 14.6 -1.7**
ESDC Sonseca Array 37.11 194 P **P** **12 34 14.6 -1.7**
comp=Z,6.4nm,0.8s,baz=1.2,slow=9.1,SNR=24
ESDC LR LR 12 48 55.7
comp=Z,264nm,20.0s,baz=15,slow=35
ESDC Sonseca Array 37.11 194 P **P** **12 34 14.6 -1.7**
ESLA Sonseca Array 37.11 194 *e*P **P** **12 34 17.6 +1.3**
comp=Z,5.0nm,1.1s
ESLA Sonseca Array 37.11 194 *e*P **P** **12 34 17.6 +1.3**
comp=Z,4.9nm,1.1s
PCBR Castelo Branco 37.18 199 *e*P **P** **12 34 19.2 +2.4**
comp=Z,26nm,1.9s
PCBR Castelo Branco 37.18 199 *e*P **P** **12 34 19.2 +2.4**
comp=Z,26nm,1.9s
YAK Yakutsk 37.21 41 *e*P P 12 34 22.4 +5.6
YAK pmax pmax
comp=Z,13nm,1.3s
YAK MLR MLR
comp=N,359nm,11.0s
YAK MLR MLR
comp=Z,485nm,14.0s
ONI Oni 37.24 134 P P 12 34 20.6 +3.2
PAB San Pablo 37.26 195 *e*P **P** **12 34 17.2 -0.4**
PAB pmax pmax
comp=Z,24nm,1.1s
PAB San Pablo 37.26 195 *e*P **P** **12 34 17.2 -0.4**
comp=Z,24nm,1.1s
PAB San Pablo 37.26 195 *e*P **P** **12 34 17.2 -0.4**
comp=Z,24nm,1.1s
PAIG Paliouri 37.26 159 P P 12 34 22.6 +5.1
PTOM Tomar 37.48 200 *e*P **P** **12 34 21.6 +2.3**
comp=Z,38nm,1.6s
PTOM Tomar 37.48 200 *e*P **P** **12 34 21.6 +2.3**
comp=Z,38nm,1.6s
THL Klokotos Trika 37.49 161 P P 12 34 24.0 +4.6
TIP Timpagrande 37.53 168 *e*P **P** **12 34 21.3 +1.4**
comp=Z,54nm,1.2s
TIP Timpagrande 37.53 168 *e*P **P** **12 34 21.3 +1.4**
comp=Z,54nm,1.2s
GUDG Gudauri 37.54 132 P **P** **12 34 22.3 +2.1**
PMRV Marv??o 37.59 198 *e*P **P** **12 34 20.3 0.0**
comp=Z,34nm,1.0s
PMRV *e*LR LR 12 44 53.9
comp=Z,282nm,20.0s
PMRV Marv??o 37.59 198 *e*P **P** **12 34 20.3 0.0**
comp=Z,34nm,1.0s
MAK Makhachkala 37.60 129 *e*P **P** **12 34 19.0 -1.3**
MAK *e* 12 35 44.5
MAK *e* 12 36 34.7
MAK *e*S **S** **12 40 09.9 +0.8**
MAK pmax pmax
comp=Z,227nm,1.6s
MAK MLR MLR
comp=Z,2μm,16.0s
EGAK Eagle 37.69 338 *e*P **P** **12 34 22.1 +1.2**
comp=Z,59nm,1.4s
EGAK Eagle 37.69 338 *e*P **P** **12 34 22.1 +1.2**
comp=Z,59nm,1.4s
XOR Xorichti 37.78 159 P P 12 34 27.3 +5.4
NEO Neokhori 37.84 159 P P 12 34 27.7 +5.3
DUS Dusheti 37.94 132 P **P** **12 34 24.3 +0.9**
SKIA Skiathos 38.00 159 P P 12 34 29.0 +5.2
PMTG Montargil 38.01 199 *e*P **P** **12 34 23.4 -0.4**
comp=Z,20nm,1.1s
PMTG Montargil 38.01 199 *e*P **P** **12 34 23.4 -0.4**
comp=Z,20nm,1.1s
AGG Agios Georgios 38.05 161 P P 12 34 29.2 +5.0
EVR Evrytania 38.11 161 P P 12 34 30.8 +6.0
COLA College 38.12 343 *e*P **P** **12 34 27.1 +2.6**
COLA pmax pmax
comp=Z,72nm,1.5s
COLA College 38.12 343 *e*P **P** **12 34 27.1 +2.6**
comp=Z,72nm,1.5s
COLA College 38.12 343 *e*P **P** **12 34 27.1 +2.6**
comp=Z,72nm,1.5s
ILAR Eielson Array 38.16 342 P P **12 34 26.6 +1.7**
ILAR Eielson Array 38.16 342 P P **12 34 26.6 +1.7**
comp=Z,7.1nm,0.9s,baz=3.2,slow=6.9,SNR=75
ILAR Eielson Array 38.16 342 P **P** **12 34 26.5 +1.7**
LKD2 Lefkada island 38.16 163 P P 12 34 30.3 +5.2
PESTR Estremoz 38.16 199 *e*P **P** **12 34 27.1 +2.0**
comp=Z,30nm,1.0s
PESTR Estremoz 38.16 199 *e*P **P** **12 34 27.1 +2.0**
comp=Z,30nm,1.0s
SIGR SIGRI 38.17 156 P P 12 34 31.0 +5.8
SMIA Simia 38.26 159 P P 12 34 32.6 +6.6
TBLG Delisi 38.30 132 *e*P P 12 34 22.8 -3.4
TBLG Delisi 38.30 132 P P 12 34 22.9 -3.4
TBLG Delisi 38.30 132 P P 12 34 22.9 -3.4
AXAR Agios Charalam 38.33 160 P P 12 34 32.1 +5.5
LIS Lisbon 38.43 201 *e*P **P** **12 34 27.7 +0.3**
LIS AMb AMB 12 34 55.7
comp=Z,64nm,1.3s
LIS *e*PP **PP** **12 35 55.6 +0.5**
LIS *e*S **S** **12 40 24.1 +2.3**
LIS Lisbon 38.43 201 *e*P **P** **12 34 27.7 +0.3**
comp=Z,64nm,1.3s
LIS Lisbon 38.43 201 *e*P **P** **12 34 27.7 +0.3**
LIS *e* 12 35 55.5
LIS *e*S **S** **12 40 24.0 +2.3**
LIS Lisbon 38.43 201 *e*P **P** **12 34 27.7 +0.3**
comp=Z,64nm,1.3s
BR131 Keskin Array S 38.55 146 *e*P **P** **12 34 28.4 -0.2**
comp=Z,10nm,0.9s
BR131 Keskin Array S 38.55 146 *e*P **P** **12 34 28.4 -0.2**
comp=Z,10nm,0.9s
BRTR Keskin Array B 38.55 146 P P **12 34 28.3 -0.2**
BRTR PP **PnPn** **12 35 59.7 +1.2**
BRTR Keskin Array B 38.55 146 P **P** **12 34 28.3 -0.2**
comp=Z,4.5nm,1.0s,baz=337,slow=5.9,SNR=16
BRTR PP **PnPn** **12 35 59.7 +1.2**
comp=Z,3.9nm,1.0s,baz=345,slow=9.0,SNR=4.0
BRTR LR LR 12 51 55.3
comp=Z,603nm,20.6s,baz=338,slow=39
BRTR Keskin Array B 38.55 146 P **P** **12 34 28.3 -0.2**
EFP Efpalio 38.61 161 P P 12 34 35.0 +6.1
KALE Kalithea 38.66 161 P P 12 34 34.7 +5.3
DSF Desfina 38.67 160 P P 12 34 34.2 +4.7
DGRG David-gareji 38.68 132 P P 12 34 19.5 -10
VLS Valsamata 38.76 163 P P 12 34 35.4 +5.2
LAKA Lakka 38.80 161 P P 12 34 36.4 +5.9
PBAR Barrancos 38.80 198 *e*P **P** **12 34 32.6 +2.1**
comp=Z,26nm,1.3s
PBAR Barrancos 38.80 198 *e*P **P** **12 34 32.6 +2.1**
comp=Z,26nm,1.3s
RLS Riolos of Patr 38.94 162 P P 12 34 39.4 +7.7
PNCL Nicolau / Gran 38.98 200 *e*P **P** **12 34 33.7 +1.7**
comp=Z,23nm,1.6s
PNCL Nicolau / Gran 38.98 200 *e*P **P** **12 34 33.7 +1.7**
comp=Z,23nm,1.6s
CHOS Chios island 39.01 156 P P 12 34 38.2 +5.9
PBEJ Beja 39.02 199 *e*P **P** **12 34 34.3 +2.0**
comp=Z,33nm,1.1s
PBEJ Beja 39.02 199 *e*P **P** **12 34 34.3 +2.0**
comp=Z,33nm,1.1s
DOT Dot Lake 39.05 340 *e*P **P** **12 34 34.5 +2.1**
comp=Z,41nm,1.2s
DOT Dot Lake 39.05 340 *e*P **P** **12 34 34.5 +2.1**
comp=Z,41nm,1.2s
GUR Goura 39.13 161 P P 12 34 38.5 +5.1
PTL Penteli 39.14 159 P P 12 34 38.7 +5.3
KULA Kula-Manisa 39.15 153 P P 12 34 39.6 +6.1
MESJ Messejana 39.23 199 *e*P **P** **12 34 34.4 +0.3**
MESJ AMb AMB 12 34 56.2
comp=Z,30nm,2.4s
MESJ *e**PP **PP** **12 36 04.4 +0.6**
MESJ *e*S **S** **12 40 35.1 +1.4**
MESJ Messejana 39.23 199 *e*P **P** **12 34 34.4 +0.3**
comp=Z,30nm,2.4s
MESJ Messejana 39.23 199 *e*P **P** **12 34 34.3 +0.3**
MESJ *e* 12 36 04.3
MESJ *e*S **S** **12 40 35.1 +1.4**
MESJ Messejana 39.23 199 *e*P **P** **12 34 34.4 +0.3**
comp=Z,30nm,2.4s
MCK McKinley 39.33 343 *e*P **P** **12 34 36.9 +2.2**
MCK pmax pmax
comp=Z,44nm,1.6s
MCK McKinley 39.33 343 *e*P **P** **12 34 36.9 +2.2**
comp=Z,44nm,1.6s
MCK McKinley 39.33 343 *e*P **P** **12 34 36.9 +2.2**
comp=Z,44nm,1.6s
PCVE Castro Verde 39.42 199 *e*P **P** **12 34 37.5 +1.8**
comp=Z,22nm,2.0s
PCVE Castro Verde 39.42 199 *e*P **P** **12 34 37.5 +1.8**
comp=Z,22nm,2.0s
PVAQ Vaqueiros 39.62 199 *e*P **P** **12 34 39.3 +2.0**
comp=Z,22nm,2.1s
PVAQ *e*LR LR 12 45 45.2
comp=Z,585nm,20.0s
PVAQ Vaqueiros 39.62 199 *e*P **P** **12 34 39.3 +2.0**
comp=Z,22nm,2.1s
DID Didima 39.63 160 P P 12 34 41.9 +4.4
DIDY Didyma 39.66 160 P P 12 34 42.2 +4.4
MENT Mentasta 39.72 340 *e*P **P** **12 34 40.3 +2.3**
MENT Mentasta 39.72 340 *e*P **P** **12 34 40.3 +2.3**
MORF Marmelete 39.79 200 *e*P **P** **12 34 38.8 0.0**
comp=Z,25nm,1.6s
MORF Marmelete 39.79 200 *e*P **P** **12 34 39.1 +0.3**
MORF *e*S **S** **12 40 43.0 +0.7**
MORF Marmelete 39.79 200 *e*P **P** **12 34 38.8 0.0**
comp=Z,25nm,1.6s
PBDV Barranco-do-Ve 39.80 199 *e*P **P** **12 34 41.1 +2.2**
comp=Z,30nm,1.6s
PBDV Barranco-do-Ve 39.80 199 *e*P **P** **12 34 41.1 +2.2**
comp=Z,30nm,1.6s
ITM Ithomi 39.85 161 P P 12 34 44.2 +4.9
PYL PYLOS 40.12 162 P P 12 34 46.3 +4.8
APE Apeiranthos 40.26 157 P P 12 34 48.1 +5.4
KEST Kesra 40.74 177 *e*P **P** **12 34 49.0 +2.3**
KEST Kesra 40.74 177 P **P** **12 34 46.5 -0.2**
comp=Z,5.1nm,1.0s,baz=308,slow=4.8,SNR=4.0
KEST LR LR 12 51 57.2
comp=Z,178nm,18.6s,baz=344,slow=37
KEST Kesra 40.74 177 *e*P **P** **12 34 49.0 +2.3**

SANT	**Santorini**	**40.95**	**157**	*eP*	**P**	**12 34 49.5 +1.1**
	comp=E,88nm,1.0s					
SANT	**Santorini**	**40.95**	**157**	*eP*	**P**	**12 34 49.5 +1.1**
	comp=E,88nm,1.0s					
SML	**Sawmill**	**41.20**	**343**	*eP*	**P**	**12 34 51.8 +1.6**
SML				pmax	pmax	
	comp=E,11nm,1.1s					
SML	**Sawmill**	**41.20**	**343**	*eP*	**P**	**12 34 51.8 +1.6**
	comp=E,11nm,1.1s					
SML	**Sawmill**	**41.20**	**343**	*eP*	**P**	**12 34 51.8 +1.6**
	comp=E,11nm,1.1s					
CLNS	**Chul'man**	**41.35**	**47**	*eP*	**P**	**12 34 50.3 -1.2**
CLNS				pmax	pmax	
	comp=N,10.0nm,1.4s					
CLNS				pmax	pmax	
	comp=E,18nm,1.3s					
CLNS				pmax	pmax	
	comp=E,6.0nm,1.1s					
CLNS				MLR	MLR	
	comp=E,364nm,12.0s					
CLNS				MLR	MLR	
	comp=E,533nm,14.0s					
CLNS				MLR	MLR	
	comp=N,442nm,13.0s					
IMRD	**Marand**	**41.40**	**132**	*eP*	**P**	**12 34 51.9 -0.4**
MOY	**Mondy**	**41.41**	**70**	*eP*	**P**	**12 34 53.6 +1.4**
MOY				pmax	pmax	
	comp=Z,96nm,3.0s					
PMR	**Palmer**	**41.47**	**343**	*eP*	**P**	**12 34 54.0 +1.7**
PMR				pmax	pmax	
	comp=Z,41nm,1.7s					
PMR	**Palmer**	**41.47**	**343**	*eP*	**P**	**12 34 54.0 +1.7**
	comp=Z,41nm,1.7s					
PMR	**Palmer**	**41.47**	**343**	*eP*	**P**	**12 34 54.0 +1.7**
	comp=Z,41nm,1.7s					
IRK	**Irkutsk**	**41.60**	**67**	*eP*	**P**	**12 34 53.4 -0.1**
IRK				*e*		12 36 36.2
IRK				pmax	pmax	
	comp=Z,65nm,2.1s					
MK31	**Makanchi Array**	**41.63**	**90**	*eP*	**P**	**12 34 53.9 0.0**
MK31	**Makanchi Array**	**41.63**	**90**	*eP*	**P**	**12 34 53.9 0.0**
MK31	**Makanchi Array**	**41.63**	**90**	*eP*	**P**	**12 34 53.9 0.0**
MKAR	**Makanchi Array**	**41.63**	**90**	P	**P**	**12 34 54.0 +0.1**
MKAR						12 36 37.6
MKAR						12 36 47.7
MKAR				pmax	pmax	
	comp=Z,1.0nm,0.5s					
MKAR				pmax	pmax	
	comp=Z,4.0nm,0.9s					
MKAR				pmax	pmax	
	comp=Z,7.0nm,1.0s					
MKAR				MLR	MLR	
	comp=Z,2µm,19.4s					
MKAR	**Makanchi Array**	**41.63**	**90**	*eP*	**P**	**12 34 54.2 +0.3**
MKAR				PP	**PnPn**	**12 36 37.5 +2.9**
MKAR				PcP	**PcP**	**12 36 47.7 -2.7**
MKAR	**Makanchi Array**	**41.63**	**90**	P	**P**	**12 34 54.0 +0.1**
	comp=Z,1.2nm,0.5s,baz=343,slow=7.6,SNR=20					
MKAR				PP	**PnPn**	**12 36 37.5 +2.9**
	comp=Z,3.6nm,0.9s,baz=334,slow=11,SNR=4.0					
MKAR				PcP	**PcP**	**12 36 47.7 -2.7**
	comp=Z,6.7nm,1.0s,baz=330,slow=7.0,SNR=4.3					
MKAR				LR	LR	12 55 25.5
	comp=Z,2µm,19.4s,baz=338,slow=41					
MKAR	**Makanchi Array**	**41.63**	**90**	*eP*	**P**	**12 34 54.2 +0.3**
FFC	**Flin Flon**	**41.72**	**305**	P	**P**	**12 34 54.1 -0.4**
	comp=Z,225nm,1.3s,SNR=7.9					
FFC	**Flin Flon**	**41.72**	**305**	*eP*	**P**	**12 34 54.7 +0.2**
FFC				pmax	pmax	
	comp=Z,60nm,1.2s					
FFC	**Flin Flon**	**41.72**	**305**	*eP*	**P**	**12 34 54.7 +0.2**
	comp=Z,60nm,1.2s					
FFC	**Flin Flon**	**41.72**	**305**	*eP*	**P**	**12 34 54.7 +0.2**
	comp=Z,60nm,1.2s					
ISHB	**Shabestar**	**41.80**	**133**	*eP*	**P**	**12 34 55.3 -0.4**
IDI	**Anoyia**	**41.97**	**158**	*eP*	**P**	**12 34 58.9 +2.1**
	comp=Z,21nm,0.9s					
IDI	**Anoyia**	**41.97**	**158**	*eP*	**P**	**12 34 58.9 +2.1**
	comp=Z,21nm,0.9s					
TLY	**Talaya**	**41.99**	**68**	*eP*	**P**	**12 34 57.5 +0.7**
TLY				*eS*	**S**	**12 41 11.5 -3.2**
TLY				pmax	pmax	
	comp=Z,14nm,1.5s					
TLY				MLR	MLR	
	comp=Z,1µm,16.0s					
KKAR	**Karatay Array**	**42.34**	**103**	*eP*	**P**	**12 35 00.5 +0.8**
KKAR				pmax	pmax	
	comp=Z,21nm,1.0s					
KKAR	**Karatay Array**	**42.34**	**103**	*eP*	**P**	**12 35 00.5 +0.8**
	comp=Z,21nm,1.0s					
KKAR	**Karatay Array**	**42.34**	**103**	*eP*	**P**	**12 35 00.5 +0.8**
	comp=Z,21nm,1.0s					
SVW2	**Sparrevohn**	**42.35**	**348**	*eP*	**P**	**12 35 01.6 +2.1**
	comp=Z,117nm,1.6s					
SVW2	**Sparrevohn**	**42.35**	**348**	*eP*	**P**	**12 35 01.6 +2.1**
	comp=Z,117nm,1.6s					
RSO	**Redoubt South**	**42.82**	**345**	*eP*	**P**	**12 35 04.6 +0.9**
RSO	**Redoubt South**	**42.82**	**345**	*eP*	**P**	**12 35 04.6 +0.9**
ZAK	**Zakamensk**	**43.13**	**69**	*eP*	**P**	**12 35 06.4 +0.3**
ZAK				*e*		12 36 44.0
ZAK				pmax	pmax	
	comp=Z,3.0nm,1.8s					
CSS	**Prodhromos**	**43.20**	**148**	*eP*	**P**	**12 35 08.8 +2.0**
	comp=Z,30nm,1.0s					
CSS	**Prodhromos**	**43.20**	**148**	*eP*	**P**	**12 35 08.8 +2.0**
	comp=Z,30nm,1.0s					
EKS2	**Erkin-Say**	**43.52**	**100**	*eP*	**P**	**12 35 11.0 +1.6**
EKS2				pmax	pmax	
	comp=Z,29nm,1.0s					
EKS2	**Erkin-Say**	**43.52**	**100**	*eP*	**P**	**12 35 11.0 +1.6**
	comp=Z,29nm,1.0s					
EKS2	**Erkin-Say**	**43.52**	**100**	*eP*	**P**	**12 35 11.0 +1.6**
	comp=Z,29nm,1.0s					
TKM2	**Tokmak 2**	**43.70**	**98**	*eP*	**P**	**12 35 12.2 +1.2**
TKM2				pmax	pmax	
	comp=Z,24nm,1.2s					
TKM2	**Tokmak 2**	**43.70**	**98**	*eP*	**P**	**12 35 12.2 +1.2**
	comp=Z,24nm,1.2s					
TKM2	**Tokmak 2**	**43.70**	**98**	*eP*	**P**	**12 35 12.2 +1.2**
	comp=Z,24nm,1.2s					
AAK	**Ala-Archa**	**43.71**	**100**	*d iP*	**P**	**12 35 10.5 -0.5**
AAK				pmax	pmax	
	comp=Z,24nm,1.7s					
AAK	**Ala-Archa**	**43.71**	**100**	*eP*	**P**	**12 35 12.5 +1.5**
	comp=Z,24nm,1.1s					
AAK	**Ala-Archa**	**43.71**	**100**	*eP*	**P**	**12 35 12.5 +1.5**
	comp=Z,24nm,1.1s					
ABKT	**Ailbek**	**44.55**	**119**	P	**P**	**12 35 18.3 +0.7**
	comp=Z,174nm,0.7s,SNR=7.3					
ULM	**Lac du Bonnet**	**44.71**	**297**	*eP*	**P**	**12 35 18.4 -0.3**
	comp=Z,44nm,1.3s					
ULM	**Lac du Bonnet**	**44.71**	**297**	P	**P**	**12 35 18.4 -0.3**
	comp=Z,11nm,1.0s,baz=19,slow=8.2,SNR=6.9					
ULM				LR	LR	12 54 42.3
	comp=Z,3µm,18.5s,baz=23,slow=37					
ULM	**Lac du Bonnet**	**44.71**	**297**	*eP*	**P**	**12 35 18.4 -0.3**
	comp=Z,44nm,1.3s					
FRNY	**Flat Rock**	**44.76**	**274**	*eP*	**P**	**12 35 18.9 -0.3**
	comp=Z,34nm,1.4s					
FRNY	**Flat Rock**	**44.76**	**274**	*eP*	**P**	**12 35 18.9 -0.3**
	comp=Z,34nm,1.4s					
MSNY	**Massena**	**44.91**	**276**	*eP*	P	12 35 23.7 +3.4
	comp=Z,248nm,1.1s					
MSNY	**Massena**	**44.91**	**276**	*eP*	P	12 35 23.7 +3.4
	comp=Z,248nm,1.1s					
IRAZ	**Razeghan**	**45.38**	**129**	*eP*	**P**	**12 35 24.9 +0.5**
IRAZ	**Razeghan**	**45.38**	**129**	*eP*	**P**	**12 35 24.9 +0.5**
KDAK	**Kodiak Island**	**45.48**	**345**	*eP*	**P**	**12 35 25.4 +0.7**
	comp=Z,80nm,1.2s					
KDAK	**Kodiak Island**	**45.48**	**345**	*eP*	**P**	**12 35 25.4 +0.7**
	comp=Z,80nm,1.2s					
IDMV	**Damavand**	**45.61**	**126**	*eP*	**P**	**12 35 26.8 +0.5**
IDMV	**Damavand**	**45.61**	**126**	*eP*	**P**	**12 35 26.8 +0.5**
ISHM	**Shahmirzad**	**45.63**	**125**	*eP*	**P**	**12 35 27.8 +1.3**
ISHM	**Shahmirzad**	**45.63**	**125**	*eP*	**P**	**12 35 27.8 +1.3**
WMQ	**Urumqi**	**45.71**	**86**	P	**P**	**12 35 28.5 +1.7**
WMQ				pP	**pP**	**12 35 35.0 +4.1**
WMQ				PP	**PP**	**12 37 16.0 +2.5**
WMQ				S	**S**	**12 42 13.0 +3.7**
WMQ				SS	**ScS**	**12 45 22.0 0.0**
WMQ				pmax	pmax	
	comp=Z,22nm,1.2s					
WMQ				pmax	pmax	
	comp=Z,340nm,5.9s					
WMQ				LR	LR	
	comp=N,2µm,17.5s					
WMQ				LR	LR	
	comp=E,2µm,18.9s					
WMQ				LR	LR	
	comp=Z,2µm,18.9s					
EYMN	**Ely**	**45.94**	**292**	*eP*	**P**	**12 35 28.7 +0.2**
	comp=Z,71nm,1.6s					
EYMN	**Ely**	**45.94**	**292**	*eP*	**P**	**12 35 28.7 +0.2**
	comp=Z,71nm,1.6s					
IAKL	**Akhelmad**	**45.97**	**119**	*eP*	P	12 35 35.4 +6.3
IANJ	**Anjilo**	**46.08**	**124**	*eP*	**P**	**12 35 31.0 +1.0**
IANJ	**Anjilo**	**46.08**	**124**	*eP*	**P**	**12 35 31.0 +1.0**
OHAK	**Old Harbor**	**46.08**	**345**	*eP*	**P**	**12 35 31.3 +1.9**
	comp=Z,186nm,1.5s					
OHAK	**Old Harbor**	**46.08**	**345**	*eP*	**P**	**12 35 31.3 +1.9**
	comp=Z,186nm,1.5s					
IVRN	**Varamin**	**46.12**	**127**	*eP*	**P**	**12 35 30.2 +0.1**
IVRN				*eP*	**pP**	**12 35 30.5 -3.7**
IVRN	**Varamin**	**46.12**	**127**	*eP*	**P**	**12 35 30.2 +0.1**
ACCN	**Adirondack Com**	**46.15**	**274**	*eP*	**P**	**12 35 32.7 +2.5**
	comp=Z,71nm,1.7s					
ACCN	**Adirondack Com**	**46.15**	**274**	*eP*	**P**	**12 35 32.7 +2.5**
	comp=Z,71nm,1.7s					
SONM	**Songino Array**	**46.21**	**67**	P	**P**	**12 35 30.5 -0.3**
SONM				PcP	**PcP**	**12 37 04.9 -1.3**
SONM	**Songino Array**	**46.21**	**67**	P	**P**	**12 35 30.5 -0.3**
	comp=Z,1.4nm,0.8s,baz=328,slow=6.7,SNR=12					
SONM				PcP	**PcP**	**12 37 04.9 -1.3**
	comp=Z,1.2nm,0.9s,baz=338,slow=1.6,SNR=2.9					
SONM				LR	LR	12 57 58.7
	comp=Z,398nm,18.6s,baz=346,slow=40					
SONM	**Songino Array**	**46.21**	**67**	P	**P**	**12 35 30.5 -0.3**
	comp=Z,1.0nm,0.8s					
SONM	**Songino Array**	**46.21**	**67**	PcP	**PcP**	**12 37 04.9 -1.3**
	comp=Z,398nm,18.6s					
ULN	**Ulaanbaatar**	**46.33**	**66**	*eP*	**P**	**12 35 32.6 +0.9**
	comp=Z,22nm,1.1s					
ULN	**Ulaanbaatar**	**46.33**	**66**	*eP*	**P**	**12 35 32.6 +0.9**
	comp=Z,22nm,1.1s					
IMYA	**Miami**	**46.50**	**117**	*eP*	**P**	**12 35 34.2 +1.0**
IMYA	**Miami**	**46.50**	**117**	*eP*	**P**	**12 35 34.2 +1.0**
AGMN	**Agassiz Nation**	**46.55**	**296**	*eP*	**P**	**12 35 33.3 0.0**
	comp=Z,56nm,1.4s					
AGMN	**Agassiz Nation**	**46.55**	**296**	*eP*	**P**	**12 35 33.3 0.0**
	comp=Z,56nm,1.4s					
IBDR	**Badra**	**46.90**	**134**	*eP*	**P**	**12 35 36.2 0.0**
IBDR				*eS*	**S**	**12 42 28.1 +1.7**
KSH	**Kashi**	**47.02**	**99**	P	P	12 35 43.3 +6.1
KSH				*epP*	pP	12 35 47.8 +6.5
KSH				*esP*	sP	12 35 50.6 +7.7
KSH				*ePcP*	**PcP**	**12 37 12.6 +3.5**
KSH				*ePP*	PP	12 37 34.6 +7.1
KSH				*eS*	S	12 42 36.1 +7.9
KSH				*esS*	sS	12 42 46.0 +11
KSH				pmax	pmax	
	comp=Z,6.0nm,0.5s					
KSH				pmax	pmax	
	comp=Z,570nm,4.8s					
KSH				LR	LR	
	comp=N,1µm,10.8s					
KSH				LR	LR	
	comp=E,1µm,11.4s					
KSH				LR	LR	
	comp=Z,1µm,15.1s					
COWI	**Conover**	**47.17**	**289**	*eP*	**P**	**12 35 37.8 -0.3**
	comp=Z,28nm,1.4s					
COWI	**Conover**	**47.17**	**289**	*eP*	**P**	**12 35 37.8 -0.3**
	comp=Z,28nm,1.4s					
CHGN	**Chignik**	**47.27**	**349**	*eP*	**P**	**12 35 38.6 -0.2**
CHGN	**Chignik**	**47.27**	**349**	*eP*	**P**	**12 35 38.6 -0.2**
A24A	**Westby**	**47.63**	**304**	⇓P	**P**	**12 35 40.9 -0.8**
	baz=48					
MDND	**Maddock**	**47.77**	**299**	⇓P	**P**	**12 35 43.2 +0.4**
	baz=48					
BINY	**Binghamton**	**47.82**	**276**	*eP*	**P**	**12 35 44.0 +0.7**
	comp=Z,95nm,1.8s					
BINY	**Binghamton**	**47.82**	**276**	*eP*	**P**	**12 35 44.0 +0.7**
	comp=Z,95nm,1.8s					
A22A	**Carney Farms,**	**47.94**	**305**	P	**P**	**12 35 45.3 +1.1**
	baz=48,SNR=6.9					
DGMT	**Dagmar**	**48.10**	**304**	*eP*	**P**	**12 35 46.8 +1.4**
	comp=Z,62nm,1.3s					
DGMT	**Dagmar**	**48.10**	**304**	*eP*	**P**	**12 35 46.8 +1.4**
	comp=Z,62nm,1.3s					
IPIR	**Pirpir**	**48.20**	**128**	*eP*	**P**	**12 35 47.4 +0.7**
IPIR	**Pirpir**	**48.20**	**128**	*eP*	**P**	**12 35 47.4 +0.7**
B23A	**Brockton**	**48.27**	**304**	⇑P	**P**	**12 35 47.7 +1.1**
	baz=48					
A19A	**Klindworth Far**	**48.54**	**308**	P	**P**	**12 35 49.4 +0.6**
	baz=48,SNR=17					
B22A	**Reddig Ranch S**	**48.62**	**305**	P	**P**	**12 35 50.0 +0.6**
	baz=48,SNR=6.8					
B21A	**Ellsworth Farm**	**48.69**	**306**	⇑P	**P**	**12 35 49.8 -0.1**
	baz=48					
A17A	**Triple J Farms**	**48.89**	**309**	P	**P**	**12 35 51.5 0.0**
	baz=49,SNR=6.8					
C23A	**Lambert**	**48.94**	**304**	⇑P	**P**	**12 35 52.6 +0.8**
	baz=49					
B19A	**Brinkman Farms**	**49.03**	**308**	⇑P	**P**	**12 35 53.2 +0.6**
	baz=49					
C24A	**Savage**	**49.05**	**303**	⇓P	**P**	**12 35 53.0 +0.3**
	baz=49					
C22A	**Vida**	**49.13**	**305**	P	**P**	**12 35 53.6 +0.3**
	baz=49,SNR=11					
A15A	**Johnson Ranch,**	**49.23**	**311**	⇓P	**P**	**12 35 53.1 -1.0**
	baz=49					
B18A	**Beardsley Farm**	**49.25**	**308**	⇓P	**P**	**12 35 54.2 0.0**
	baz=49					
C21A	**Desert Coulee**	**49.28**	**306**	⇓P	**P**	**12 35 54.9 +0.4**
	baz=49					
ICHK	**Chekchek**	**49.30**	**125**	*eP*	**P**	**12 35 55.7 +0.7**
ICHK	**Chekchek**	**49.30**	**125**	*eP*	**P**	**12 35 55.7 +0.7**
A14A	**Doole T Ranch**	**49.35**	**312**	P	**P**	**12 35 55.4 +0.2**
	baz=49,SNR=19					
WALA	**Waterton Lakes**	**49.36**	**312**	*eP*	**P**	**12 35 54.9 -0.2**
	comp=Z,1.9nm,1.5s					
WALA	**Waterton Lakes**	**49.36**	**312**	*eP*	**P**	**12 35 54.9 -0.2**
	comp=Z,1.9nm,1.5s					
D24A	**Glendive**	**49.42**	**303**	⇓P	**P**	**12 35 55.8 +0.2**
	baz=49					
PETK	**Petropavlovsk-**	**49.43**	**23**	P	**P**	**12 35 55.7 +0.2**
PETK				pmax	pmax	
	comp=Z,4.0nm,1.1s					
PETK				MLR	MLR	
	comp=Z,235nm,19.0s					
PETK	**Petropavlovsk-**	**49.43**	**23**	P	**P**	**12 35 55.7 +0.2**
PETK	**Petropavlovsk-**	**49.43**	**23**	P	**P**	**12 35 55.7 +0.2**
	comp=Z,4.0nm,1.1s,baz=48,slow=14,SNR=4.6					
PETK				LR	LR	12 57 56.8
	comp=Z,235nm,19.0s,baz=221,slow=37					
PETK	**Petropavlovsk-**	**49.43**	**23**	P	**P**	**12 35 55.7 +0.2**
	comp=Z,235nm,19.0s					
B17A	**L&G Farms, Che**	**49.53**	**309**	P	**P**	**12 35 56.9 +0.5**
	baz=49,SNR=8.8					
D23A	**Lindsay**	**49.54**	**304**	P	**P**	**12 35 57.6 +1.1**
	baz=49,SNR=6.1					
C20A	**Veseth Ranch,**	**49.57**	**307**	P	**P**	**12 35 56.9 +0.3**
	baz=49,SNR=16					
EGMT	**Eagleton**	**49.60**	**308**	*eP*	**P**	**12 35 57.6 +0.6**
	comp=Z,37nm,1.3s					
EGMT	**Eagleton**	**49.60**	**308**	*eP*	**P**	**12 35 57.6 +0.6**
	comp=Z,37nm,1.3s					
EGMT	**Eagleton**	**49.60**	**308**	P	**P**	**12 35 57.5 +0.6**
	baz=49,SNR=6.3					
PET	**Petropavlovsk**	**49.60**	**22**	*eP*	**P**	**12 35 55.9 -0.8**
PET				*eS*	S	12 42 58.1 -5.9
PET				pmax	pmax	
	comp=Z,200nm,8.1s					
PET				MLR	MLR	
	comp=Z,300nm,20.0s					
PET	**Petropavlovsk**	**49.60**	**22**	*eP*	**P**	**12 35 55.9 -0.8**
	comp=Z,200nm,8.1s					
E26A	**Carlson Angus**	**49.67**	**301**	⇑P	**P**	**12 35 58.2 +0.8**
	baz=50					
C19A	**Slack Wire Ran**	**49.74**	**307**	P	**P**	**12 35 58.8 +0.7**
	baz=50,SNR=25					
D22A	**Cohagen**	**49.76**	**305**	P	**P**	**12 35 59.1 +1.0**
	baz=50,SNR=5.4					
KLR	**Kul'dur**	**49.83**	**45**	*eP*	P	12 36 02.8 +4.3
KLR				MLR	MLR	
	comp=Z,1µm,13.0s					
E25A	**Miller Ranch,**	**49.83**	**302**	⇑P	**P**	**12 35 59.3 +0.6**
	baz=50					
B15A	**Bradely Ranch,**	**49.84**	**311**	P	**P**	**12 35 58.5 -0.3**
	baz=50,SNR=8.5					
B14A	**Marquette Ranc**	**49.92**	**311**	⇑P	**P**	**12 35 58.4 -1.0**
	baz=50					
IDAH	**Dahanechah**	**49.92**	**119**	*eP*	**P**	**12 36 01.4 +1.6**
E24A	**Baker**	**49.95**	**303**	⇓P	**P**	**12 35 59.8 +0.2**
	baz=50					
B13A	**Whitefish**	**50.12**	**312**	P	**P**	**12 36 01.2 +0.4**
	baz=50,SNR=6.7					
C17A	**Wharram Farm,**	**50.16**	**309**	⇓P	**P**	**12 36 00.7 -0.5**
	baz=50					
IBAF	**Bafgh**	**50.16**	**124**	*eP*	**P**	**12 36 01.7 +0.2**
IBAF	**Bafgh**	**50.16**	**124**	*eP*	**P**	**12 36 01.7 +0.2**
C16A	**Fuhringer Ranc**	**50.18**	**310**	P	**P**	**12 36 01.2 -0.2**
	baz=50,SNR=21					
KBL	**Kabul**	**50.18**	**108**	*eP*	**P**	**12 36 02.0 +0.3**
KBL				pmax	pmax	
	comp=Z,8.0nm,0.8s					
KBL	**Kabul**	**50.18**	**108**	*eP*	**P**	**12 36 01.9 +0.3**
	comp=Z,8.1nm,0.8s					
KBL	**Kabul**	**50.18**	**108**	*eP*	**P**	**12 36 02.0 +0.3**
	comp=Z,8.1nm,0.8s					
D20A	**Manuel Ranch,**	**50.19**	**306**	P	**P**	**12 36 02.3 +0.9**
	baz=50,SNR=16					
E23A	**Ismay**	**50.21**	**304**	⇑P	**P**	**12 36 02.6 +1.1**
	baz=50					
D19A	**Cripps Ranch,**	**50.26**	**307**	P	**P**	**12 36 02.6 +0.6**
	baz=50,SNR=11					
C15A	**Salmond Ranch,**	**50.36**	**310**	P	**P**	**12 36 02.5 -0.3**
	baz=50,SNR=11					
D18A	**Linhart Farms,**	**50.40**	**308**	⇓P	**P**	**12 36 03.4 +0.4**
	baz=50,SNR=7.5					
JFWS	**Jewell Farm**	**50.44**	**289**	*eP*	**P**	**12 36 03.2 -0.1**
JFWS				pmax	pmax	
	comp=Z,48nm,1.3s					
JFWS	**Jewell Farm**	**50.44**	**289**	*eP*	**P**	**12 36 03.2 -0.1**
	comp=Z,48nm,1.3s					
JFWS	**Jewell Farm**	**50.44**	**289**	*eP*	**P**	**12 36 03.2 -0.1**
	comp=Z,48nm,1.3s					
YBMT	**Yellow Bay**	**50.53**	**312**	*eP*	**P**	**12 36 03.8 -0.2**
	comp=Z,11nm,1.1s					
YBMT	**Yellow Bay**	**50.53**	**312**	*eP*	**P**	**12 36 03.8 -0.2**
	comp=Z,11nm,1.1s					
C14A	**Swan Lake**	**50.57**	**311**	⇑P	**P**	**12 36 04.0 -0.3**
	baz=50					
D17A	**Six Diamond Ra**	**50.61**	**309**	⇑P	**P**	**12 36 03.7 -1.0**
	baz=50					
F24A	**Ekalaka**	**50.66**	**303**	⇓P	**P**	**12 36 05.8 +0.8**
	baz=50					
BSMT	**Bassoo Peak**	**50.68**	**312**	*eP*	**P**	**12 36 05.6 +0.4**
BSMT	**Bassoo Peak**	**50.68**	**312**	*eP*	**P**	**12 36 05.6 +0.4**
NEW	**Newport**	**50.68**	**314**	*eP*	**P**	**12 36 05.8 +0.7**
	comp=Z,18nm,1.4s					
NEW	**Newport**	**50.68**	**314**	*eP*	**P**	**12 36 05.8 +0.7**
	comp=Z,18nm,1.4s					
NEW	**Newport**	**50.68**	**314**	⇓P	**P**	**12 36 05.4 +0.3**
	baz=50					
UMR	**Umm Al-Rimmam**	**50.69**	**133**	*eP*	P	12 36 11.4 +6.2
UMR				AMb	AMB	12 36 13.5
	comp=Z,261nm,1.2s					
JTMT	**Jette**	**50.69**	**312**	*eP*	**P**	**12 36 05.8 +0.5**
JTMT	**Jette**	**50.69**	**312**	*eP*	**P**	**12 36 05.8 +0.5**
E20A	**Meyer Farm, Mu**	**50.75**	**306**	P	**P**	**12 36 06.0 +0.4**
	baz=51,SNR=8.6					
C13A	**Hot Springs**	**50.80**	**312**	⇓P	**P**	**12 36 06.5 +0.4**
	baz=51,SNR=8.3					
SWMT	**Swartz Lake**	**50.87**	**312**	*eP*	**P**	**12 36 07.0 +0.3**
SWMT	**Swartz Lake**	**50.87**	**312**	*eP*	**P**	**12 36 06.9 +0.3**
BRSD	**Miller**	**50.88**	**297**	⇑P	**P**	**12 36 06.9 +0.3**
	baz=51					
D16A	**Dana Ranch, Ca**	**50.89**	**309**	P	**P**	**12 36 06.5 -0.3**
	baz=51,SNR=9.7					
NAY	**Al-Naaiem**	**50.90**	**133**	*eP*	P	12 36 12.5 +5.7
NAY				AMb	AMB	12 36 14.3
	comp=Z,49nm,1.2s					
E19A	**Rath Farm, Rou**	**50.92**	**307**	P	**P**	**12 36 07.7 +0.7**
	baz=51,SNR=10					
C12B	**Naegeli Ranch,**	**50.93**	**313**	⇑P	**P**	**12 36 07.7 +0.7**
	baz=51					
C11A	**Tepee Creek (N**	**50.94**	**314**	⇓P	**P**	**12 36 07.6 +0.5**
	baz=51					
F23A	**Volborg**	**50.97**	**304**	P	**P**	**12 36 06.9 -0.4**
	baz=51,SNR=6.2					
E18A	**Harlowton**	**51.03**	**308**	⇑P	**P**	**12 36 08.4 +0.6**
	baz=51,SNR=31					
SLMT	**Seeley Lake**	**51.04**	**311**	*eP*	**P**	**12 36 08.0 +0.1**
SLMT	**Seeley Lake**	**51.04**	**311**	*eP*	**P**	**12 36 08.0 +0.1**
KBD	**Kabd**	**51.05**	**133**	*eP*	P	12 36 14.0 +6.0
KBD				AMb	AMB	12 36 15.8
	comp=Z,124nm,1.2s					
D15A	**Lincoln**	**51.05**	**310**	⇑P	**P**	**12 36 07.6 -0.4**
	baz=51,SNR=10					
ECSD	**EROS Data Cent**	**51.06**	**295**	*eP*	**P**	**12 36 08.0 +0.1**
	comp=Z,54nm,1.2s					
ECSD	**EROS Data Cent**	**51.06**	**295**	*eP*	**P**	**12 36 08.0 +0.1**
	comp=Z,54nm,1.2s					
HABR	**Khabarovsk**	**51.10**	**42**	*eP*	**P**	**12 36 06.1 -2.0**
HABR				*e*PP*	**pP**	**12 36 09.3 -2.9**
HABR				*e*SP*	**sP**	**12 36 10.6 -3.2**
HABR						12 37 21.7
HABR				*eS*	**S**	**12 43 24.2 -0.8**
HABR				*e*SS*	**sS**	**12 43 28.7 -3.0**
HABR				*e*		12 45 56.4
HABR				*eSS*	**SS**	**12 47 00.6 +1.3**
HABR				*eSSS*	SSS	12 48 32.5
HABR				pmax	pmax	
	comp=E,82nm,3.2s					
HABR				pmax	pmax	
	comp=E,65nm,3.2s					
HABR				pmax	pmax	
	comp=N,68nm,3.2s					
HABR				MLR	MLR	
	comp=Z,287nm,16.0s					
HABR	**Khabarovsk**	**51.10**	**42**	*eP*	**P**	**12 36 06.1 -2.0**
	comp=Z,68nm,3.2s					
HABR	**Khabarovsk**	**51.10**	**42**	PcP	**PcP**	**12 37 21.7 -1.9**
G24A	**Alzada**	**51.16**	**303**	⇓P	**P**	**12 36 09.1 +0.3**
	baz=51					
D14A	**Greenough**	**51.19**	**311**	P	**P**	**12 36 08.9 -0.1**
	baz=51,SNR=11					
HRY	**Holter Researc**	**51.25**	**309**	*eP*	**P**	**12 36 09.4 0.0**
HRY	**Holter Researc**	**51.25**	**309**	*eP*	**P**	**12 36 09.4 0.0**
RDF	**Al-Radifah**	**51.27**	**133**	*eP*	P	12 36 15.0 +5.3
RDF				AMb	AMB	12 36 17.4
	comp=Z,137nm,1.2s					
E17A	**Martinsdale**	**51.31**	**309**	⇓P	**P**	**12 36 09.7 -0.3**
	baz=51		

E12A	**Beaver Dam Sad**	**52.20**	**313**	P	**P**	**12 36 16.6**	**0.0**
	baz=52,SNR=7.0									
F15A	**Butte**	**52.21**	**310**	P	**P**	**12 36 17.0**	**+0.2**
	baz=52,SNR=12									
LRM	**Limekiln Ridge**	**52.22**	**310**	*e*P	**P**	**12 36 17.1**	**+0.2**
LRM	**Limekiln Ridge**	**52.22**	**310**	*e*P	**P**	**12 36 17.0**	**+0.2**
BOZ	**Bozeman (W)**	**52.24**	**309**	*e*P	**P**	**12 36 17.2**	**+0.3**
BOZ	comp=Z,34nm,2.0s			pmax	pmax		
BOZ	**Bozeman (W)**	**52.24**	**309**	*e*P	**P**	**12 36 17.2**	**+0.3**
	comp=Z,34nm,2.0s						
BOZ	**Bozeman (W)**	**52.24**	**309**	*e*P	**P**	**12 36 17.2**	**+0.3**
	comp=Z,34nm,2.0s						
RSSD	**Black Hills**	**52.24**	**302**	*e*P	**P**	**12 36 16.3**	**-0.7**
RSSD	comp=Z,32nm,1.2s			pmax	pmax		
RSSD	**Black Hills**	**52.24**	**302**	*e*P	**P**	**12 36 16.3**	**-0.7**
	comp=Z,32nm,1.2s						
RSSD	**Black Hills**	**52.24**	**302**	*e*P	**P**	**12 36 16.3**	**-0.7**
	comp=Z,32nm,1.2s						
H22A	**Clearmont**	**52.24**	**304**	⇑P	**P**	**12 36 16.9**	**0.0**
	baz=52						
RLMT	**Red Lodge**	**52.30**	**307**	*e*P	**P**	**12 36 17.9**	**+0.4**
	comp=Z,29nm,1.1s						
RLMT	**Red Lodge**	**52.30**	**307**	*e*P	**P**	**12 36 17.9**	**+0.4**
	comp=Z,29nm,1.1s						
J28A	**Allard Ranch,**	**52.33**	**299**	⇓P	**P**	**12 36 17.4**	**-0.1**
	baz=52						
H21A	**Big Horn, Sher**	**52.35**	**305**	⇓P	**P**	**12 36 18.2**	**+0.5**
	baz=52						
H20A	**Greybull**	**52.67**	**305**	⇓P	**P**	**12 36 20.4**	**+0.4**
	baz=52,SNR=15						
H19A	**Powell**	**52.68**	**306**	P	**P**	**12 36 20.7**	**+0.5**
	baz=52,SNR=5.2						
DLMT	**Dillon**	**52.69**	**310**	*e*P	**P**	**12 36 20.6**	**+0.3**
	comp=Z,16nm,1.1s						
DLMT	**Dillon**	**52.69**	**310**	*e*P	**P**	**12 36 20.5**	**+0.3**
	comp=Z,16nm,1.1s						
GTA	**Gaotai**	**52.74**	**76**	*e*P	**P**	**12 36 21.6**	**+1.0**
GTA				pP	**pP**	**12 36 25.3**	**+0.5**
GTA				sP	**sP**	**12 36 27.6**	**+1.3**
GTA				PP	**PP**	**12 38 21.8**	**+2.3**
GTA				S	**S**	**12 43 50.4**	**+2.4**
GTA				sS	**sS**	**12 43 56.6**	**+1.8**
GTA				SS	**SS**	**12 47 25.1**	**-0.8**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,200nm,4.8s						
GTA				LR	LR		
	comp=N,360nm,20.4s						
GTA				LR	LR		
	comp=E,920nm,24.7s						
GTA				LR	LR		
	comp=Z,470nm,30.9s						
K29A	**Lazy Trails An**	**52.78**	**298**	⇓P	**P**	**12 36 20.9**	**+0.1**
	baz=53						
H18A	**Shoshone NF, C**	**52.80**	**307**	P	**P**	**12 36 21.6**	**+0.3**
	baz=53,SNR=6.3						
J25A	**Sunshine Ranch**	**52.89**	**301**	⇑P	**P**	**12 36 21.8**	**+0.1**
	baz=53						
HAWA	**Hanford**	**52.90**	**316**	*e*P	**P**	**12 36 22.8**	**+1.2**
	comp=Z,20nm,1.3s						
HAWA	**Hanford**	**52.90**	**316**	*e*P	**P**	**12 36 22.8**	**+1.2**
	comp=Z,20nm,1.3s						
I22A	**9 Mile Ranch,**	**52.94**	**304**	P	**P**	**12 36 22.6**	**+0.5**
	baz=53,SNR=9.6						
QLMT	**Earthquake Lak**	**52.99**	**308**	*e*P	**P**	**12 36 23.4**	**+0.9**
QLMT	**Earthquake Lak**	**52.99**	**308**	*e*P	**P**	**12 36 23.4**	**+0.9**
H16A	**Russell Place,**	**53.08**	**308**	P	**P**	**12 36 22.8**	**-0.4**
	baz=53,SNR=6.6						
J24A	**Dixon Ranch, L**	**53.12**	**302**	⇓P	**P**	**12 36 23.5**	**0.0**
	baz=53						
I21A	**Big Trails, Te**	**53.18**	**305**	P	**P**	**12 36 24.1**	**+0.2**
	baz=53,SNR=27						
I20A	**Worland**	**53.21**	**305**	P	**P**	**12 36 24.4**	**+0.4**
	baz=53,SNR=14						
H17A	**Grant Village**	**53.25**	**308**	⇓P	**P**	**12 36 25.0**	**+0.5**
	baz=53,SNR=5.5						
MCMT	**McKenzie Canyo**	**53.25**	**310**	*e*P	**P**	**12 36 25.2**	**+0.7**
	comp=Z,16nm,1.2s						
MCMT	**McKenzie Canyo**	**53.25**	**310**	*e*P	**P**	**12 36 25.2**	**+0.7**
	comp=Z,16nm,1.2s						
I19A	**Meeteetse**	**53.29**	**306**	⇓P	**P**	**12 36 25.3**	**+0.5**
	baz=53,SNR=11						
G12A	**Big Creek, Yel**	**53.41**	**312**	⇑P	**P**	**12 36 25.1**	**-0.5**
	baz=53						
J22A	**Midwest**	**53.41**	**304**	P	**P**	**12 36 25.1**	**-0.4**
	baz=53,SNR=13						
K26A	**Motz Farm, Whi**	**53.42**	**301**	⇑P	**P**	**12 36 25.3**	**-0.4**
	baz=53						
L29A	**Maesberg Ranch**	**53.48**	**298**	⇓P	**P**	**12 36 26.3**	**+0.3**
	baz=53						
TAM	**Tamanrasset**	**53.62**	**182**	*e*P	**P**	**12 36 27.4**	**+0.1**
TAM	comp=Z,14nm,1.0s			pmax	pmax		
TAM	**Tamanrasset**	**53.62**	**182**	*e*P	**P**	**12 36 27.4**	**+0.1**
	comp=Z,14nm,1.0s						
TAM	**Tamanrasset**	**53.62**	**182**	*e*P	**P**	**12 36 27.4**	**+0.1**
	comp=Z,14nm,1.0s						
K25A	**Mack Ranch, Ha**	**53.65**	**301**	⇓P	**P**	**12 36 26.8**	**-0.5**
	baz=54						
J21A	**Lysite**	**53.66**	**305**	P	**P**	**12 36 27.7**	**+0.2**
	baz=54,SNR=8.6						
YSS	**Yuzh-Sakhalins**	**53.74**	**36**	*e*P	**P**	**12 36 27.7**	**0.0**
YSS				*e*		12 36 35.9	
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
YSS				MLR	MLR		
	comp=E,400nm,15.0s						
J20A	**Shoshoni**	**53.78**	**305**	P	**P**	**12 36 28.8**	**+0.6**
	baz=54,SNR=16						
IMW	**Indian Meadow**	**53.80**	**308**	*e*P	**P**	**12 36 29.7**	**+1.1**
	comp=E,29nm,0.9s						
IMW	**Indian Meadow**	**53.80**	**308**	*e*P	**P**	**12 36 29.7**	**+1.1**
	comp=E,29nm,0.9s						
K23A	**Bowen Ranch, D**	**53.87**	**303**	⇓P	**P**	**12 36 28.7**	**-0.3**
	baz=54						
H12A	**Diamond D Ranc**	**53.88**	**311**	⇑P	**P**	**12 36 29.2**	**+0.1**
	baz=54,SNR=8.3						
MOOW	**Moose Ponds**	**53.90**	**308**	*e*P	**P**	**12 36 30.2**	**+0.9**
	comp=E,31nm,1.4s						
MOOW	**Moose Ponds**	**53.90**	**308**	*e*P	**P**	**12 36 30.2**	**+0.9**
	comp=E,31nm,1.4s						
I16A	**Newdale**	**53.92**	**308**	⇓P	**P**	**12 36 30.1**	**+0.7**
	baz=54,SNR=6.2						
MDJ	**Mudanjiang**	**53.92**	**48**	P	**P**	**12 36 29.4**	**+0.3**
MDJ				pP	**pP**	**12 36 32.6**	**-0.6**
MDJ				PcP	**PcP**	**12 37 35.1**	**+0.8**
MDJ				PP	**PP**	**12 38 29.3**	**-0.6**
MDJ				S	**S**	**12 44 03.3**	**-0.4**
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,130nm,5.5s						
MDJ				LR	LR		
	comp=N,350nm,21.2s						
MDJ				LR	LR		
	comp=E,830nm,22.0s						
MDJ				LR	LR		
	comp=Z,530nm,16.3s						
OLIL	**Olney**	**53.94**	**286**	*e*P	**P**	**12 36 31.0**	**+1.7**
	comp=Z,46nm,1.4s						
OLIL	**Olney**	**53.94**	**286**	*e*P	**P**	**12 36 31.0**	**+1.7**
	comp=Z,46nm,1.4s						
CN2	**Changchun**	**53.96**	**52**	*e*P	**P**	**12 36 29.9**	**+0.5**
CN2				*e*pP	**pP**	**12 36 34.4**	**+0.9**
CN2				*e*sP	**sP**	**12 36 36.9**	**+1.8**
CN2				*e*S	**S**	**12 44 01.8**	**-2.4**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
CN2				LR	LR		
	comp=N,500nm,16.0s						
CN2				LR	LR		
	comp=E,1μm,16.0s						
CN2				LR	LR		
	comp=Z,700nm,16.0s						
HHC	**Hu-ho-hao-te**	**53.99**	**65**	*e*P	**P**	**12 36 29.3**	**-0.5**
HHC				pP	**pP**	**12 36 33.9**	**0.0**
HHC				sP	**sP**	**12 36 36.3**	**+0.8**
HHC				PP	**PP**	**12 38 31.9**	**+1.1**
HHC				PcS	**PcS**	**12 41 32.8**	**-1.3**
HHC				S	**S**	**12 44 01.9**	**-3.0**
HHC				SS	**SKiKP**	**12 47 42.3**	**+1.0**
HHC				pmax	pmax		
	comp=Z,20nm,1.2s						
HHC				pmax	pmax		
	comp=Z,330nm,5.1s						
HHC				LR	LR		
	comp=N,2μm,15.7s						
HHC				LR	LR		
	comp=E,1μm,18.1s						
HHC				LR	LR		
	comp=Z,3μm,16.7s						
WCI	**Wyandotte Cave**	**54.01**	**284**	*e*P	**P**	**12 36 32.0**	**+2.1**
WCI				pmax	pmax		
	comp=Z,78nm,2.0s						
WCI	**Wyandotte Cave**	**54.01**	**284**	*e*P	**P**	**12 36 32.0**	**+2.1**
	comp=Z,78nm,2.0s						
WCI	**Wyandotte Cave**	**54.01**	**284**	*e*P	**P**	**12 36 32.0**	**+2.1**
	comp=Z,78nm,2.0s						
LOHW	**Long Hollow**	**54.01**	**307**	*e*P	**P**	**12 36 31.1**	**+1.0**
	comp=Z,22nm,1.2s						
LOHW	**Long Hollow**	**54.01**	**307**	*e*P	**P**	**12 36 31.0**	**+1.0**
	comp=Z,22nm,1.2s						
BMO	**Blue Mountains**	**54.02**	**313**	*e*P	**P**	**12 36 29.9**	**0.0**
	comp=Z,17nm,1.3s						
BMO	**Blue Mountains**	**54.02**	**313**	*e*P	**P**	**12 36 30.0**	**0.0**
	comp=Z,17nm,1.3s						
J19A	**Crowheart**	**54.05**	**306**	P	**P**	**12 36 31.1**	**+0.8**
	baz=54,SNR=24						
DCID1	**Drake Creek**	**54.13**	**308**	*e*P	**P**	**12 36 32.3**	**+1.4**
	comp=Z,26nm,0.9s						
DCID1	**Drake Creek**	**54.13**	**308**	*e*P	**P**	**12 36 32.3**	**+1.4**
	comp=Z,26nm,0.9s						
K22A	**Casper**	**54.15**	**303**	P	**P**	**12 36 30.6**	**-0.4**
	baz=54,SNR=14						
SNOW	**Snow King Moun**	**54.18**	**307**	*e*P	**P**	**12 36 32.5**	**+1.1**
	comp=Z,21nm,1.2s						
SNOW	**Snow King Moun**	**54.18**	**307**	*e*P	**P**	**12 36 32.5**	**+1.1**
	comp=Z,21nm,1.2s						
TPAW	**Teton Pass**	**54.19**	**308**	*e*P	**P**	**12 36 32.6**	**+1.2**
	comp=Z,19nm,1.0s						
TPAW	**Teton Pass**	**54.19**	**308**	*e*P	**P**	**12 36 32.6**	**+1.2**
	comp=Z,19nm,1.0s						
I14A	**Mackay**	**54.23**	**310**	⇑P	**P**	**12 36 32.1**	**+0.5**
	baz=54						
K21A	**Alcova**	**54.31**	**304**	⇓P	**P**	**12 36 32.1**	**-0.1**
	baz=54						
L24A	**Wheatland**	**54.41**	**302**	⇑P	**P**	**12 36 32.6**	**-0.3**
	baz=54						
K19A	**Absolon Red Bu**	**54.43**	**306**	⇓P	**P**	**12 36 32.5**	**-0.6**
	baz=54						
K20A	**Yellowstone Ra**	**54.50**	**305**	⇓P	**P**	**12 36 33.4**	**-0.2**
	baz=54,SNR=7.0						
L23A	**Garrett**	**54.50**	**303**	⇑P	**P**	**12 36 33.0**	**-0.7**
	baz=54						
USIN	**University of**	**54.58**	**285**	*e*P	**P**	**12 36 34.0**	**+0.1**
	comp=Z,52nm,1.3s						
USIN	**University of**	**54.58**	**285**	*e*P	**P**	**12 36 34.0**	**+0.1**
	comp=Z,52nm,1.3s						
M26A	**McRoberts Ranc**	**54.60**	**300**	⇓P	**P**	**12 36 34.6**	**+0.3**
	baz=54						
BW06	**Boulder Array**	**54.63**	**306**	*e*P	**P**	**12 36 34.4**	**-0.2**
	comp=Z,30nm,1.3s						
BW06	**Boulder Array**	**54.63**	**306**	*e*P	**P**	**12 36 34.4**	**-0.2**
	comp=Z,30nm,1.3s						
PDAR	**Pinedale Array**	**54.63**	**306**	P	**P**	**12 36 34.5**	**0.0**
PDAR	**Pinedale Array**	**54.63**	**306**	P	**P**	**12 36 34.5**	**0.0**
	comp=Z,10nm,1.1s,baz=25,slow=3.9,SNR=27						
PDAR				LR	LR	13 00 26.3	
	comp=Z,2μm,18.7s,baz=18,slow=37						
PDAR	**Pinedale Array**	**54.63**	**306**	P	**P**	**12 36 34.5**	**0.0**
L22A	**Ellis Ranch, M**	**54.73**	**303**	⇓P	**P**	**12 36 35.8**	**+0.5**
	baz=55,SNR=6.6						
USRK	**Ussuriysk Arra**	**54.74**	**46**	P	**P**	**12 36 34.3**	**-0.8**
	comp=Z,2.7nm,0.8s,baz=360,slow=7.4,SNR=5.8						
USRK				LR	LR	13 03 50.9	
	comp=Z,501nm,18.0s,baz=337,slow=40						
HLID	**Hailey**	**54.76**	**311**	*e*P	**P**	**12 36 35.8**	**+0.4**
	comp=Z,26nm,1.4s						
HLID	**Hailey**	**54.76**	**311**	*e*P	**P**	**12 36 35.8**	**+0.4**
	comp=Z,26nm,1.4s						
HLID	**Hailey**	**54.76**	**311**	P	**P**	**12 36 35.9**	**+0.4**
	baz=55,SNR=18						
OGNE	**Ogallala**	**54.88**	**299**	*e*P	**P**	**12 36 36.3**	**+0.1**
	comp=Z,115nm,1.2s						
OGNE	**Ogallala**	**54.88**	**299**	*e*P	**P**	**12 36 36.3**	**+0.1**
	comp=Z,115nm,1.2s						
OGNE	**Ogallala**	**54.88**	**299**	⇑P	**P**	**12 36 36.3**	**+0.1**
	baz=55						
L21A	**Rawlins**	**54.98**	**304**	P	**P**	**12 36 36.8**	**-0.3**
	baz=55,SNR=20						
TZTN	**Tazewell**	**54.98**	**280**	*e*P	**P**	**12 36 38.2**	**+1.3**
	comp=Z,49nm,1.4s						
TZTN	**Tazewell**	**54.98**	**280**	*e*P	**P**	**12 36 38.2**	**+1.3**
	comp=Z,49nm,1.4s						
N27A	**Anderson Farm,**	**55.11**	**299**	⇓P	**P**	**12 36 37.6**	**-0.3**
	baz=55						
L20A	**Wamsutter**	**55.12**	**305**	P	**P**	**12 36 38.6**	**+0.5**
	baz=55,SNR=9.5						
SIUC	**Southern Illin**	**55.17**	**286**	*e*P	**P**	**12 36 37.9**	**-0.3**
	comp=Z,80nm,1.6s						
SIUC	**Southern Illin**	**55.17**	**286**	*e*P	**P**	**12 36 37.9**	**-0.3**
	comp=Z,80nm,1.6s						
L19A	**Farson**	**55.23**	**306**	⇓P	**P**	**12 36 38.9**	**0.0**
	baz=55						
PHWY	**Pilot Hill**	**55.23**	**302**	*e*P	**P**	**12 36 38.8**	**-0.3**
	comp=Z,28nm,1.1s						
PHWY	**Pilot Hill**	**55.23**	**302**	*e*P	**P**	**12 36 38.8**	**-0.3**
	comp=Z,28nm,1.1s						
M21A	**Separation Pea**	**55.32**	**304**	P	**P**	**12 36 39.6**	**0.0**
	baz=55,SNR=12						
M22A	**Cedar Creek Ra**	**55.36**	**303**	⇑P	**P**	**12 36 40.1**	**+0.2**
	baz=55						
O29A	**4D Ranch, Culb**	**55.41**	**298**	⇓P	**P**	**12 36 39.6**	**-0.4**
	baz=55						
SNY	**Shenyang**	**55.51**	**54**	⇑P	**P**	**12 36 41.0**	**+0.4**
SNY				S	**S**	**12 44 27.6**	**+2.6**
SNY				pmax	pmax		
	comp=Z,19nm,1.6s						
SNY				pmax	pmax		
	comp=Z,190nm,5.8s						
SNY				LR	LR		
	comp=N,230nm,29.4s						
SNY				LR	LR		
	comp=E,590nm,25.3s						
SNY				LR	LR		
	comp=Z,340nm,25.6s						
N24A	**Carr**	**55.57**	**301**	⇓P	**P**	**12 36 41.5**	**+0.2**
	baz=55						
M20A	**Sweetwater, Wa**	**55.59**	**305**	⇑P	**P**	**12 36 41.6**	**0.0**
	baz=55,SNR=6.7						
P31A	**Stockton**	**55.69**	**296**	P	**P**	**12 36 41.0**	**-1.0**
	baz=55,SNR=6.7						
N23A	**Red Feather La**	**55.72**	**302**	P	**P**	**12 36 43.1**	**+0.6**
	baz=56,SNR=14						
BJI	**Beijing**	**55.74**	**61**	P	P	12 36 47.8	+5.5
BJI				S	S	12 44 38.3	+10
BJI				pmax	pmax		
	comp=Z,16nm,1.3s						
BJI				pmax	pmax		
	comp=Z,220nm,6.5s						
BJI				LR	LR		
	comp=N,380nm,17.5s						
BJI				LR	LR		
	comp=E,3μm,17.5s						
BJI				LR	LR		
	comp=Z,2μm,20.3s						
KMSC	**Kings Mountain**	**55.80**	**278**	⇓P	**P**	**12 36 42.6**	**-0.2**
	baz=56,SNR=6.8						
O26A	**Horse Wrangler**	**55.82**	**300**	⇑P	**P**	**12 36 42.8**	**-0.2**
	baz=56						
P30A	**Selden**	**55.85**	**297**	⇑P	**P**	**12 36 43.0**	**-0.2**
	baz=56						
N22A	**Wattenberg Ran**	**55.91**	**303**	P	**P**	**12 36 44.5**	**+0.6**
	baz=56,SNR=8.8						
P29A	**Atwood**	**55.94**	**298**	⇓P	**P**	**12 36 43.7**	**-0.1**
	baz=56						
M17A	**Scullys Gap (B**	**56.09**	**307**	P	**P**	**12 36 45.3**	**+0.2**
	baz=56,SNR=7.5						
O25A	**Wiggins**	**56.11**	**301**	⇓P	**P**	**12 36 45.3**	**+0.1**
	baz=56						
HWUT	**Hardware Ranch**	**56.13**	**308**	*e*P	**P**	**12 36 45.4**	**+0.1**
	comp=Z,46nm,1.6s						
HWUT	**Hardware Ranch**	**56.13**	**308**	*e*P	**P**	**12 36 45.4**	**+0.1**
	comp=Z,46nm,1.6s						
N21A	**Black Mountain**	**56.17**	**304**	⇑P	**P**	**12 36 45.6**	**-0.1**
	baz=56						
Q31A	**Ellis**	**56.18**	**296**	P	**P**	**12 36 45.8**	**+0.2**
	baz=56,SNR=8.7						
HVU	**Hansel Valley**	**56.19**	**309**	*e*P	**P**	**12 36 47.4**	**+1.7**
HVU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
HVU	**Hansel Valley**	**56.19**	**309**	*e*P	**P**	**12 36 47.4**	**+1.7**
	comp=Z,4.8nm,1.0s						
HVU	**Hansel Valley**	**56.19**	**309**	*e*P	**P**	**12 36 47.4**	**+1.7**
	comp=Z,4.8nm,1.0s						
RAYN	**Ar Rayn**	**56.21**	**137**	P	**P**	**12 36 46.3**	**+0.3**
	comp=Z,216nm,1.1s,SNR=5.9						
RAYN	**Ar Rayn**	**56.21**	**137**	*e*P	**P**	**12 36 46.2**	**+0.3**
	comp=Z,58nm,1.2s						
RAYN	**Ar Rayn**	**56.21**	**137**	*e*P	**P**	**12 36 46.2**	**+0.3**
	comp=Z,58nm,1.2s						
N20A	**Spence Gulch,**	**56.24**	**304**	P	**P**	**12 36 46.6**	**+0.4**
	baz=56,SNR=38						
CPCT	**Cooper Cave**	**56.25**	**281**	*e*P	**P**	**12 36 45.8**	**-0.2**
CPCT	**Cooper Cave**	**56.25**	**281**	*e*P	**P**	**12 36 45.8**	**-0.2**
O24A	**Longmont**	**56.29**	**301**	P	**P**	**12 36 47.6**	**+1.2**
	baz=56,SNR=7.0						
P27A	**Ficken Ranch,**	**56.33**	**299**	⇑P	**P**	**12 36 46.5**	**-0.2**
	baz=56						
O23A	**Lake Granby, G**	**56.38**	**302**	P	**P**	**12 36 48.3**	**+1.0**
	baz=56,SNR=14						
Q30A	**Quinter**	**56.39**	**297**	⇓P	**P**	**12 36 46.6**	**-0.5**
	baz=56						
O22A	**Kremmling**	**56.55**	**303**	P	**P**	**12 36 49.1**	**+0.6**
	baz=56,SNR=12						
Q29A	**Oakley**	**56.63**	**297**	⇓P	**P**	**12 36 48.5**	**-0.3**
	baz=56						
Q28A	**Sharon Springs**	**56.64**	**298**	⇑P	**P**	**12 36 49.3**	**+0.4**
	baz=56						
O21A	**Pagoda**	**56.68**	**304**	P	**P**	**12 36 50.2**	**+0.9**
	baz=56,SNR=6.9						
P25A	**Willow Gulch B**	**56.69**	**300**	P	**P**	**12 36 50.0**	**+0.6**
	baz=56,SNR=7.5						
ISCO	**Idaho Springs**	**56.71**	**302**	*e*P	**P**	**12 36 50.2**	**+0.5**
ISCO				pmax	pmax		
	comp=Z,22nm,1.1s						
ISCO	**Idaho Springs**	**56.71**	**302**	*e*P	**P**	**12 36 50.2**	**+0.5**
	comp=Z,22nm,1.1s						
ISCO	**Idaho Springs**	**56.71**	**302**	*e*P	**P**	**12 36 50.2**	**+0.5**
	comp=Z,22nm,1.1s						
ISCO	**Idaho Springs**	**56.71**	**302**	P	**P**	**12 36 50.2**	**+0.5**
	baz=56,SNR=26						
UOSS	**Wadi Hilu**	**56.74**	**125**	P	P	12 36 55.1	+5.4
	comp=Z,201nm,1.0s,SNR=5.2						
LZH	**Lanzhou**	**56.84**	**74**	*e*P	**P**	**12 36 50.8**	**+0.4**
LZH				pP	**pP**	**12 36 55.1**	**+0.5**
LZH				sP	**sP**	**12 36 58.0**	**+1.9**
LZH				PP	**PP**	**12 38 58.5**	**+2.1**
LZH				S	**S**	**12 44 38.4**	**-4.8**
LZH				SS	**SS**	**12 48 27.0**	**-3.6**
LZH				pmax	pmax		
	comp=Z,66nm,1.4s						
LZH				pmax	pmax		
	comp=Z,200nm,4.1s						
LZH				LR	LR		
	comp=N,270nm,12.6s						
LZH				LR	LR		
	comp=E,380nm,13.6s						
LZH				LR	LR		
	comp=Z,470nm,15.4s						
P24A	**Kohler Place,**	**56.84**	**301**	⇓P	**P**	**12 36 50.8**	**+0.3**
	baz=57						
KSCO	**Kaye Shedlock'**	**56.86**	**299**	⇓P	**P**	**12 36 50.4**	**-0.1**
	baz=57						
R31A	**Burdett**	**56.90**	**296**	⇓P	**P**	**12 36 50.3**	**-0.4**
	baz=57						
O20A	**White River Ci**	**56.91**	**304**	P	**P**	**12 36 51.6**	**+0.7**
	baz=57,SNR=29						
O19A	**Miners Draw (B**	**56.93**	**305**	P	**P**	**12 36 51.9**	**+0.9**
	baz=57,SNR=8.2						
YUK	**Yuzh-Kuril'sk**	**57.03**	**34**	*c i*P	P	12 36 42.2	-9.2
YUK				MLR	MLR		
	comp=N,293nm,22.0s						
YUK				MLR	MLR		
	comp=Z,516nm,22.0s						
YUK				MLR	MLR		
	comp=E,72nm,22.0s						
R30A	**Dighton**	**57.06**	**296**	P	**P**	**12 36 51.7**	**-0.2**
	baz=57,SNR=12						
R29A	**Marienthal**	**57.11**	**297**	⇓P	**P**	**12 36 51.1**	**-1.1**
	baz=57						
Q26A	**Hugo**	**57.13**	**300**	⇓P	**P**	**12 36 52.6**	**+0.2**
	baz=57						
P22A	**Eagle**	**57.14**	**303**	P	**P**	**12 36 52.0**	**-0.6**
	baz=57,SNR=6.9						
P23A	**Jefferson**	**57.17**	**302**	⇑P	**P**	**12 36 53.4**	**+0.5**
	baz=57						
DAU	**Daniels Canyon**	**57.23**	**307**	*e*P	**P**	**12 36 54.6**	**+1.3**
DAU	**Daniels Canyon**	**57.23**	**307**	*e*P	**P**	**12 36 54.6**	**+1.3**
DAU	**Daniels Canyon**	**57.23**	**307**	*e*P	**P**	**12 36 54.6**	**+1.3**
Q25A	**Bedland, Calha**	**57.29**	**300**	P	**P**	**12 36 53.8**	**+0.2**
	baz=57,SNR=9.5						
R28A	**Tribune**	**57.33**	**298**	⇓P	**P**	**12 36 54.0**	**+0.2**
	baz=57						
P21A	**Newcastle**	**57.34**	**303**	P	**P**	**12 36 54.9**	**+0.9**
	baz=57,SNR=18						
Q24A	**Divide**	**57.42**	**301**	P	**P**	**12 36 54.6**	**-0.1**
	baz=57,SNR=12						
P19A	**Cripple Cowboy**	**57.54**	**305**	P	**P**	**12 36 56.0**	**+0.5**
	baz=57,SNR=11						
R27A	**Eads**	**57.59**	**299**	⇑P	**P**	**12 36 54.9**	**-0.8**
	baz=57						
ELK	**Elko**	**57.64**	**311**	*e*P	**P**	**12 36 57.1**	**+1.1**
	comp=E,19nm,1.4s						
ELK	**Elko**	**57.64**	**311**	*e*P	**P**	**12 36 57.2**	**+1.1**
	comp=E,19nm,1.4s						
MPU	**Maple Canyon**	**57.68**	**307**	*e*P	**P**	**12 36 57.4**	**+1.0**
	comp=E,28nm,1.4s						
MPU	**Maple Canyon**	**57.68**	**307**	*e*P	**P**	**12 36 57.4**	**+1.0**
	comp=E,28nm,1.4s						
R26A	**Arlington**	**57.71**	**299**	⇓P	**P**	**12 36 56.5**	**0.0**
	baz=58						
DUG	**Dugway**	**57.73**	**308**	*e*P	**P**	**12 36 57.3**	**+0.7**
DUG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DUG	**Dugway**	**57.73**	**308**	*e*P	**P**	**12 36 57.3**	**+0.7**
	comp=Z,10nm,1.1s						
DUG	**Dugway**	**57.73**	**308**	*e*P	**P**	**12 36 57.3**	**+0.7**
	comp=Z,10nm,1.1s						
DUG	**Dugway**	**57.73**	**308**	P	**P**	**12 36 57.0**	**+0.4**
	baz=58,SNR=6.4						
Q22A	**Crested Butte,**	**57.88**	**303**	⇓P	**P**	**12 36 58.5**	**+0.6**
	baz=58,SNR=8.0						
S29A	**Ulysses**	**57.88**	**297**	⇓P	**P**	**12 36 57.9**	**+0.2**
	baz=58						
DL2	**Dalian**	**57.95**	**57**	P	**P**	**12 36 58.0**	**0.0**
DL2				S	**S**	**12 45 00.0**	**+2.7**
DL2				LR	LR		
	comp=N,800nm,15.9s						
DL2				LR	LR		
	comp=E,500nm,15.0s						
DL2				LR	LR		
	comp=Z,1μm,15.3s						
R25A	**Fountain Ranch**	**58.03**	**300**	⇑P	**P**	**12 36 58.5**	**-0.3**
	baz=58,SNR=6.5						
Q21A	**Lamborn Mesa,**	**58.03**	**303**	P	**P**	**12 36 59.9**	**+1.0**
	baz=58,SNR=13						
Q20A	**Ridgley Place,**	**58.06

PV04	Paradox Valley	58.72	304	eP		P		12 37 04.8	+1.1
T27A	Campo	58.76	298	⇓P		P		12 37 03.7	-0.1
	baz=59									
S23A	Nye Farm, Mont	58.81	301	⇓P		P		12 37 05.0	+0.6
	baz=59									
R20A	Redvale	58.82	304	⇓P		P		12 37 03.8	-0.6
	baz=59,SNR=12									
T26A	Comanche Natio	58.83	299	⇑P		P		12 37 04.1	-0.3
	baz=59,SNR=5.8									
U30A	WK&E Inc. Balk	58.83	296	⇑P		P		12 37 04.0	-0.3
	baz=59									
PV01	Paradox Valley	58.91	304	eP		P		12 37 05.3	+0.3
	comp=Z,4µm,1.2s									
PV01	Paradox Valley	58.91	304	eP		P		12 37 05.3	+0.3
	comp=Z,4µm,1.2s									
S22A	4UR Ranch, Cre	58.94	302	⇓P		P		12 37 05.7	+0.4
	baz=59									
T25A	Trinidad	59.03	300	⇑P		P		12 37 05.5	-0.3
	baz=59									
LRAL	Lakeview Retre	59.14	283	eP		P		12 37 06.1	-0.3
	comp=Z,5.1nm,1.0s									
LRAL	Lakeview Retre	59.14	283	eP		P		12 37 06.1	-0.3
	comp=Z,5.1nm,1.0s									
S20A	Disappointment	59.16	304	P		P		12 37 07.7	+0.9
	baz=59,SNR=9.3									
S21A	Coal Bank Pass	59.21	303	⇑P		P		12 37 07.4	+0.2
	baz=59									
MSU	Marysvale	59.24	307	eP		P		12 37 08.8	+1.5
MSU	Marysvale	59.24	307	eP		P		12 37 08.8	+1.5
MSU	Marysvale	59.24	307	eP		P		12 37 08.8	+1.5
V31A	Spring Creek L	59.39	295	⇑P		P		12 37 08.1	0.0
	baz=59									
U27A	Thompson Grove	59.40	298	⇓P		P		12 37 07.8	-0.5
	baz=59									
T23A	Casias Ranch,	59.46	301	⇑P		P		12 37 09.0	+0.1
	baz=59									
U26A	Atchley Ranch,	59.61	299	⇓P		P		12 37 10.0	+0.2
	baz=59									
T22A	Edith	59.66	302	P		P		12 37 11.1	+0.8
	baz=60,SNR=16									
U25A	Circle Dot Ran	59.74	300	P		P		12 37 11.1	+0.3
	baz=60,SNR=11									
T21A	Navajo Lake	59.81	303	P		P		12 37 11.9	+0.7
	baz=60,SNR=12									
XAN	Xi'an	59.95	70	P		P		12 37 09.4	-2.6
XAN				PP		PP		12 39 25.1	+1.3
XAN				SS		SS		12 49 24.8	+5.6
XAN				pmax		pmax				
	comp=Z,3.0nm,1.5s									
XAN				pmax		pmax				
	comp=Z,46nm,5.8s									
XAN				LR		LR				
	comp=N,1µm,16.7s									
XAN				LR		LR				
	comp=E,210nm,13.7s									
XAN				LR		LR				
	comp=Z,490nm,15.4s									
LSA	Lhasa	59.99	88	P		P		12 37 13.0	+0.2
LSA				S		S		12 45 26.1	+1.1
LSA				LR		LR				
	comp=N,610nm,23.3s									
LSA				LR		LR				
	comp=E,1µm,25.4s									
LSA				LR		LR				
	comp=Z,1µm,22.4s									
LSA	Lhasa	59.99	88	eP		P		12 37 14.3	+1.5
LSA				pmax		pmax				
	comp=Z,6.0nm,0.9s									
LSA	Lhasa	59.99	88	eP		P		12 37 14.3	+1.5
	comp=Z,6.2nm,0.9s									
LSA	Lhasa	59.99	88	eP		P		12 37 14.3	+1.5
	comp=Z,6.2nm,0.9s									
R11A	Troy Canyon, C	60.03	310	P		P		12 37 13.1	+0.4
	baz=60,SNR=18									
OHCM	Honcut	60.09	316	eP		P		12 37 13.5	+0.7
OHCM	Honcut	60.09	316	eP		P		12 37 13.5	+0.7
WMOK	Wichita Mounta	60.16	294	eP		P		12 37 13.1	-0.3
WMOK				pmax		pmax				
	comp=Z,46nm,1.3s									
WMOK	Wichita Mounta	60.16	294	eP		P		12 37 13.1	-0.3
	comp=Z,46nm,1.3s									
WMOK	Wichita Mounta	60.16	294	eP		P		12 37 13.1	-0.3
	comp=Z,46nm,1.3s									
U23A	El Rito	60.18	301	⇑P		P		12 37 14.0	+0.2
	baz=60,SNR=14									
ARUT	Antelope Range	60.18	308	eP		P		12 37 14.3	+0.6
ARUT				pmax		pmax				
	comp=Z,13nm,1.1s									
ARUT	Antelope Range	60.18	308	eP		P		12 37 14.2	+0.6
	comp=Z,13nm,1.1s									
ARUT	Antelope Range	60.18	308	eP		P		12 37 14.2	+0.6
	comp=Z,13nm,1.1s									
V26A	Tequesquite Ra	60.20	299	P		P		12 37 13.8	0.0
	baz=60,SNR=5.3									
U22A	Llaves	60.27	302	⇓P		P		12 37 15.2	+0.8
	baz=60,SNR=11									
V25A	Rancho No Teng	60.33	300	⇓P		P		12 37 14.3	-0.5
	baz=60,SNR=12									
U21A	Nageezi	60.38	303	P		P		12 37 14.3	-0.8
	baz=60,SNR=13									
CCUT	Cedar City	60.40	308	eP		P		12 37 16.6	+1.3
	comp=Z,24nm,1.4s									
CCUT	Cedar City	60.40	308	eP		P		12 37 16.6	+1.3
	comp=Z,24nm,1.4s									
NV11	Mina Array Sit	60.41	312	eP		P		12 37 15.4	+0.2
NV11	Mina Array Sit	60.41	312	eP		P		12 37 15.4	+0.2
NVAR	Mina Array Bea	60.43	313	P		P		12 37 16.0	+0.5
NVAR	Mina Array Bea	60.43	313	P		P		12 37 16.0	+0.5
	comp=Z,3.6nm,1.0s,baz=16,slow=3.6,SNR=14									
NVAR	Mina Array Bea	60.43	313	P		P		12 37 16.0	+0.5
X31A	McDonald Ranch	60.52	295	⇑P		P		12 37 16.3	+0.5
	baz=60,SNR=6.1									
KSRS	Korea Array	60.56	52	P		P		12 37 15.0	-1.1
	comp=Z,2.2nm,0.8s,baz=354,slow=6.2,SNR=11									
KSRS				LR		LR		13 05 53.0		
	comp=Z,368nm,18.1s,baz=166,slow=38									
KSRS	Korea Array	60.56	52	P		P		12 37 15.0	-1.1
	comp=Z,368nm,18.1s									
KSAR	Wonju Array Be	60.57	52	P		P		12 37 15.0	-1.1
KSAR	Wonju Array Be	60.57	52	P		P		12 37 15.0	-1.1
V24A	Rampart Ranch,	60.57	300	P		P		12 37 16.8	+0.3
	baz=60,SNR=13									
V22A	San Miguel Ran	60.72	302	⇑P		P		12 37 18.3	+0.7
	baz=61,SNR=5.5									
VBMS	Vicksburg	60.73	286	eP		P		12 37 18.2	+0.9
	comp=Z,33nm,0.8s									
VBMS	Vicksburg	60.73	286	eP		P		12 37 18.2	+0.9
	comp=Z,33nm,0.8s									
V23A	Ortiz Mt. (NFS	60.74	301	⇓P		P		12 37 18.1	+0.5
	baz=61,SNR=5.2									
W27A	Bowe Ranch, En	60.75	298	⇑P		P		12 37 18.1	+0.5
	baz=61									
X30A	Coker Ranch, T	60.89	296	P		P		12 37 19.0	+0.6
	baz=61,SNR=6.2									
Y32A	R-V Farms, Ver	61.01	294	⇓P		P		12 37 19.4	+0.2
	baz=61,SNR=5.6									
W24A	Lazy 6 Ranch,	61.10	300	⇑P		P		12 37 20.1	0.0
	baz=61									
X28A	Dimmitt	61.10	297	P		P		12 37 20.4	+0.5
	baz=61,SNR=6.2									
V20A	Brimhall	61.15	303	⇑P		P		12 37 20.7	+0.3
	baz=61,SNR=5.6									
Y31A	Rekieta Farm,	61.22	295	⇑P		P		12 37 20.9	+0.3
	baz=61									
U15A	North Rim	61.28	307	⇓P		P		12 37 21.4	+0.1
	baz=61									
RFTA	Plano	61.36	292	eP		P		12 37 24.1	+2.5
RFTA	Plano	61.36	292	eP		P		12 37 24.1	+2.5
X26A	CR and CF Fran	61.41	299	⇓P		P		12 37 23.1	+1.1
	baz=61									
MTUM	Tungsten Hills	61.53	313	eP		P		12 37 24.0	+1.1
MTUM	Tungsten Hills	61.53	313	eP		P		12 37 24.0	+1.1
ANMO	Albuquerque	61.57	301	eP		P		12 37 22.7	-0.5
	comp=Z,32nm,1.5s									
ANMO	Albuquerque	61.57	301	eP		P		12 37 22.7	-0.5
	comp=Z,32nm,1.5s									
Y29A	Porterfield Fa	61.62	296	⇓P		P		12 37 23.8	+0.4
	baz=62									
W21A	San Fidel	61.64	302	⇓P		P		12 37 23.4	-0.3
	baz=62,SNR=5.5									
Z32A	Haskell	61.68	294	P		P		12 37 24.0	+0.2
	baz=62,SNR=8.2									
Y28A	McKinney Farm,	61.70	297	⇑P		P		12 37 24.6	+0.6
	baz=62,SNR=5.5									
X24A	Lazy VL Ranch,	61.73	300	⇓P		P		12 37 24.6	+0.3
	baz=62									
MSTX	Muleshoe	61.75	297	⇑P		P		12 37 24.4	+0.1
	baz=62									
CD2	Chengdu	61.78	76	P		P		12 37 24.8	+0.3
CD2				pP		pP		12 37 29.3	+0.6
CD2				sP		sP		12 37 31.8	+1.5
CD2				PcP		PcP		12 38 05.8	+0.3
CD2				PP		PP		12 39 41.9	+1.8
CD2				S		S		12 45 45.0	-2.0
CD2				ScS		SKKSac		12 47 12.5	-3.1
CD2				SS		SS		12 49 47.5	-0.6
CD2				pmax		pmax				
	comp=Z,20nm,1.2s									
CD2				pmax		pmax				
	comp=Z,310nm,9.2s									
CD2				LR		LR				
	comp=N,2µm,19.0s									
CD2				LR		LR				
	comp=E,3µm,19.0s									
CD2				LR		LR				
	comp=Z,2µm,17.8s									
W20A	Ramah	61.80	303	⇑P		P		12 37 24.7	-0.1
	baz=62,SNR=5.7									
Z31A	Sharp Cattle R	61.82	295	⇑P		P		12 37 24.5	-0.2
	baz=62									
Y27A	Causey	61.91	298	P		P		12 37 25.8	+0.3
	baz=62,SNR=12									
WUAZ	Wupatki	61.99	306	eP		P		12 37 26.3	+0.3
	comp=Z,23nm,1.3s									
WUAZ	Wupatki	61.99	306	eP		P		12 37 26.3	+0.3
	comp=Z,23nm,1.3s									
WUAZ	Wupatki	61.99	306	⇓P		P		12 37 26.5	+0.5
	baz=62									
Y26A	Elida	62.01	298	⇓P		P		12 37 27.2	+1.0
	baz=62									
Y25A	Mesa, Roswell	62.20	299	⇑P		P		12 37 27.5	+0.2
	baz=62									
Z29A	Hungry Hill Ra	62.21	296	P		P		12 37 27.7	+0.3
	baz=62,SNR=10									
LPM	Los Pinos Moun	62.22	301	eP		P		12 37 30.2	+2.6
LPM	Los Pinos Moun	62.22	301	eP		P		12 37 30.2	+2.6
LAZ	Ladron	62.23	302	eP		P		12 37 30.2	+2.5
	comp=Z,3.3nm,1.4s									
LAZ	Ladron	62.23	302	eP		P		12 37 30.2	+2.5
	comp=Z,3.3nm,1.4s									
X21A	Alamocita Cree	62.32	302	⇓P		P		12 37 28.6	+0.3
	baz=62									
Z28A	Tucker Farm, M	62.32	297	⇓P		P		12 37 28.0	-0.2
	baz=62									
Y24A	Capitan	62.34	300	P		P		12 37 28.8	+0.4
	baz=62,SNR=13									
X20A	Quemado	62.37	303	⇑P		P		12 37 28.8	+0.2
	baz=62									
BNM	Barren Site	62.37	301	eP		P		12 37 31.3	+2.6
	comp=Z,15nm,1.4s									
BNM	Barren Site	62.37	301	eP		P		12 37 31.3	+2.6
	comp=Z,15nm,1.4s									
ABTX	Abilene, Hawle	62.38	294	⇓P		P		12 37 27.8	-0.7
	baz=62									
Y23A	Lovelace Mesa,	62.47	300	⇓P		P		12 37 29.3	0.0
	baz=62									
Z27A	Tatum	62.47	298	P		P		12 37 29.5	+0.3
	baz=62,SNR=8.0									
131A	Roby	62.49	295	⇓P		P		12 37 29.4	+0.2
	baz=62									
WHTX	Lake Whitney	62.51	292	⇓P		P		12 37 29.3	0.0
	baz=62									
MPMC	Manual Prospec	62.60	311	⇑P		P		12 37 30.2	+0.1
	baz=62									
Y22A	Socorro	62.65	301	⇓P		P		12 37 30.4	0.0
	baz=62									
Z26A	Caprock	62.67	298	⇓P		P		12 37 30.9	+0.3
	baz=62,SNR=5.5									
130A	Snyder	62.69	295	⇑P		P		12 37 30.9	+0.4
	baz=62									
Z25A	Roswell	62.82	299	⇓P		P		12 37 31.6	+0.1
	baz=63,SNR=6.9									
Z24A	Sheeppen Canyo	62.91	300	⇓P		P		12 37 32.7	+0.5
	baz=63									
BBTS	Babate	62.95	206	LR		LR		13 04 48.1		
	comp=Z,272nm,18.5s,baz=151,slow=36									
Y20A	Horse Springs,	62.96	303	⇑P		P		12 37 32.3	-0.3
	baz=63									
128A	Castleberry Fa	62.99	297	⇓P		P		12 37 32.6	0.0
	baz=63									
X16A	Lo Mia Camp, P	63.07	305	⇓P		P		12 37 33.2	-0.1
	baz=63									
232A	Coleman	63.09	294	⇓P		P		12 37 32.8	-0.4
	baz=63,SNR=5.4									
127A	Arkansas Junct	63.12	298	⇑P		P		12 37 33.4	-0.1
	baz=63									
LDFC	Landfair	63.12	309	eP		P		12 37 33.6	+0.2
	comp=Z,19nm,1.4s									
LDFC	Landfair	63.12	309	eP		P		12 37 33.7	+0.2
	comp=Z,19nm,1.4s									
ISA	Isabella	63.16	312	eP		P		12 37 35.5	+1.8
ISA				pmax		pmax				
	comp=Z,21nm,1.4s									
ISA	Isabella	63.16	312	eP		P		12 37 35.5	+1.8
	comp=Z,21nm,1.4s									
ISA	Isabella	63.16	312	eP		P		12 37 35.5	+1.8
	comp=Z,21nm,1.4s									
231A	Bronte	63.19	295	⇓P		P		12 37 33.7	-0.2
	baz=63,SNR=5.2									
MAT	Matsushiro	63.24	43	P		P		12 37 33.6	-0.6
MAT				S		S		12 46 09.2	+4.0
MJAR	Matsushiro Arr	63.24	43	P		P		12 37 34.5	+0.3
MJAR	Matsushiro Arr	63.24	43	P		P		12 37 34.5	+0.3
	comp=Z,5.2nm,1.0s,baz=345,slow=7.0,SNR=19									
MJAR				LR		LR		13 06 08.7		
	comp=Z,231nm,19.0s,baz=0.0,slow=37									
MJAR	Matsushiro Arr	63.24	43	P		P		12 37 34.5	+0.3
	comp=Z,231nm,19.0s									
TOA0	Torodi Ar. Sit	63.28	186	eP		P		12 37 33.1	-1.5
TOA0	Torodi Ar. Sit	63.28	186	eP		P		12 37 33.1	-1.5
TORD	Torodi Ar. Bea	63.28	186	P		P		12 37 33.0	-1.6
TORD	Torodi Ar. Bea	63.28	186	P		P		12 37 33.0	-1.6
	comp=Z,13nm,1.0s,baz=356,slow=5.9,SNR=46									
TORD				LR		LR		13 05 58.4		
	comp=Z,476nm,18.8s,baz=345,slow=37									
TORD	Torodi Ar. Bea	63.28	186	P		P		12 37 33.0	-1.6
126A	Clayton Basin,	63.29	298	⇑P		P		12 37 34.7	+0.1
	baz=63									
Z22A	Elephant Butte	63.31	301	⇑P		P		12 37 34.8	0.0
	baz=63									
Z21A	St. Cloud Mine	63.40	302	⇑P		P		12 37 35.6	+0.2
	baz=63									
230A	Sterling City	63.40	295	⇓P		P		12 37 35.3	-0.1
	baz=63									
125A	Gardner Draw,	63.41	299	⇑P		P		12 37 35.4	0.0
	baz=63									
229A	Bryant Ranch,	63.48	296	⇓P		P		12 37 35.8	0.0
	baz=63									
GMRC	Granite Mounta	63.51	309	⇑P		P		12 37 36.8	+0.6
	baz=63									
124A	Stringfield Ra	63.53	300	P		P		12 37 37.0	+0.6
	baz=63,SNR=8.4									
332A	Millersview	63.60	294	P		P		12 37 36.8	+0.2
	baz=63,SNR=9.6									
CLNB	Carlsbad	63.63	298	eP		P		12 37 37.9	+1.0
	comp=Z,0.9nm,0.5s									
CLNB	Carlsbad	63.63	298	eP		P		12 37 37.9	+1.0
	comp=Z,0.9nm,0.5s									
Z20A	Nine Sixteen R	63.77	303	⇑P		P		12 37 37.9	0.0
	baz=64									
GDL2	Guadalupe Moun	63.79	298	eP		P		12 37 38.0	+0.1
GDL2	Guadalupe Moun	63.79	298	eP		P		12 37 38.0	+0.1
331A	San Angelo	63.82	295	P		P		12 37 38.0	0.0
	baz=64,SNR=8.7									
226B	Tecolote Peak,	63.87	298	⇑P		P		12 37 38.8	+0.3
	baz=64,SNR=5.4									
330A	Mertzon	63.88	295	⇑P		P		12 37 38.3	-0.2
	baz=64									
329A	Wagon Wheel Ra	63.98	296	⇓P		P		12 37 38.9	-0.2
	baz=64									
NJ2	Nanjing	64.01	61	eP		P		12 37 39.5	+0.3
NJ2				pP		pP		12 37 45.3	+1.9
NJ2				sP		sP		12 37 46.6	+1.6
NJ2				S		S		12 46 17.5	+2.8
NJ2				sS		sS		12 46 21.5	-0.1
NJ2				pmax		pmax				
	comp=Z,20nm,1.1s									
NJ2				pmax		pmax				
	comp=Z,290nm,4.3s									
NJ2				LR		LR				
	comp=N,430nm,14.4s									
NJ2				LR		LR				
	comp=E,350nm,11.6s									
NJ2				LR		LR				
	comp=Z,290nm,13.0s									
432A	Menard	64.10	294	⇑P		P		12 37 39.4	-0.5
	baz=64									
121A	Cookes Peak, D	64.17	302	⇑P		P		12 37 41.1	+0.5
	baz=64									
328A	Wristen Ranch,	64.25	297	P		P		12 37 40.6	-0.3
	baz=64,SNR=7.8									
120A	U Bar Ranch, L	64.33	302	⇓P		P		12 37 42.0	+0.4
	baz=64,SNR=9.5									
431A	Sonora	64.46	295	P		P		12 37 42.4	+0.1
	baz=64,SNR=14									
JCT	Junction City	64.48	294	eP		P		12 37 42.4	0.0
JCT				pmax		pmax				
	comp=Z,44nm,1.3s									
JCT	Junction City	64.48	294	eP		P		12 37 42.4	0.0
	comp=Z,44nm,1.3s									
JCT	Junction City	64.48	294	eP		P		12 37 42.4	0.0
	comp=Z,44nm,1.3s									
JCT	Junction City	64.48	294	⇑P		P		12 37 42.2	-0.2
	baz=64,SNR=6.4									
MNTX	Cornudas Mount	64.49	299	eP		P		12 37 41.9	-0.5
	comp=Z,3.6nm,1.0s									
MNTX	Cornudas Mount	64.49	299	eP		P		12 37 41.9	-0.5
	comp=Z,3.6nm,1.0s									
430A	Baggett Ranch,	64.49	295	P		P		12 37 42.5	-0.1
	baz=64,SNR=5.8									
WHN	Wuhan	64.50	66	P		P		12 37 41.0	-1.5
WHN				S		S		12 46 28.8	+7.9
WHN				LR		LR				
	comp=N,1µm,49.8s									
WHN				LR		LR				
	comp=E,990nm,33.7s									
WHN				LR		LR				
	comp=Z,620nm,12.4s									
326A	Caldwell Ranch	64.56	298	⇑P		P		12 37 43.2	+0.2
	baz=64									
325A	Bean Ranch, Si	64.72	299	⇓P		P		12 37 43.4	-0.7
	baz=65									
324A	Moseley Ranch,	64.76	299	⇑P		P		12 37 44.4	+0.1
	baz=65									
429A	Davenport Ranc	64.79	296	⇑P		P		12 37 43.6	-0.8
	baz=65									
PFO	Pinyon Flat Ob	64.80	310	⇑P		P		12 37 45.7	+1.1
	baz=65									
532A	Rocksprings	64.84	294	P		P		12 37 44.4	-0.4
	baz=65,SNR=6.0									
428A	Kincaid Ranch,	64.86	296	⇓P		P		12 37 44.9	0.0
	baz=65,SNR=9.0									
427A	Hayter Ranch,	64.89	297	⇓P		P		12 37 45.2	0.0
	baz=65,SNR=6.4									
220A	Playas Peak, P	64.93	302	⇓P		P		12 37 45.2	-0.2
	baz=65									
531A	Rocksprings	64.94	294	⇑P		P		12 37 45.2	-0.3
	baz=65									
TUC	Tucson	64.98	304	eP		P		12 37 46.6	+0.8
TUC				pmax		pmax				
	comp=Z,231nm,1.7s									
TUC	Tucson	64.98	304	eP		P		12 37 46.5	+0.8
	comp=Z,231nm,1.7s									
TUC	Tucson	64.98	304	eP		P		12 37 46.5	+0.8
	comp=Z,231nm,1.7s									
530A	J-C Ranch, Com	65.13	295	P		P		12 37 46.5	-0.1
	baz=65,SNR=12									
426A	McDonald Obser	65.20	298	⇑P		P		12 37 46.9	-0.4
	baz=65									
425A	Indio Mountain	65.29	299	P		P		12 37 47.3	-0.4
	baz=65,SNR=26									
529A	Stev Forest Ra	65.34	296	⇓P		P		12 37 47.2	-0.8
	baz=65									
632A	Uvalde	65.42	293	⇓P		P		12 37 48.0	-0.5
	baz=65									
528A	Cox Ranch, San	65.43	296	⇓P		P		12 37 48.7	0.0
	baz=65,SNR=6.5									
319A	Douglas	65.59	303	⇓P		P		12 37 49.8	0.0
	baz=65									
527A	Woodward Ranch	65.62	297	P		P		12 37 49.6	-0.4
	baz=66,SNR=17									
526A	Mary Lane Ranc	65.80	298	⇓P		P		12 37 51.0	-0.1
	baz=66,SNR=9.4									
628A	Black Gap, Mar	66.10	296	⇑P		P		12 37 52.4	-0.6
	baz=66,SNR=5.9									
732A	Laxson Ranch,	66.21	293	P		P		12 37 53.2	-0.4
	baz=66,SNR=6.5									
627A	Terlingua Ranc	66.24	297	⇑P		P		12 37 53.8	-0.1
	baz=66									
626A	Big Bend Ranch	66.30	297	P		P		12 37 54.3	0.0
	baz=66,SNR=24									
TXAR	Lajitas Array	66.42	297	P		P		12 37 54.6	-0.4
TXAR	Lajitas Array	66.42	297	P		P		12 37 54.6	-0.4
	comp=Z,5.0nm,0.9s,baz=47,slow=4.6,SNR=35									
TXAR				LR		LR		13 08 02.2		
	comp=Z,1µm,18.2s,baz=0.0,slow=37									
TXAR	Lajitas Array	66.42	297	P		P		12 37 54.6	-0.4
	comp=Z,1µm,18.2s									
KMI	Kunming	67.11	78	P		P		12 38 01.8	+2.2
KMI				pP		pP		12 38 05.1	+1.2
KMI				sP		sP		12 38 06.3	+0.9
KMI				PP		PP		12 40 31.1	+4.0
KMI				S		S		12 46 54.1	+0.8
KMI				SS		SS		12 51 14.5	+2.9
KMI				pmax		pmax				
	comp=Z,10.0nm,0.6s									
KMI				pmax		pmax				
	comp=Z,190nm,4.4s									
KMI				LR		LR				
	comp=N,340nm,23.8s									
KMI				LR		LR				
	comp=E,910nm,21.4s									
KMI				LR		LR				
	comp=Z,890nm,17.9s									
HYB	Hyderabad	68.84	104	*i* P		P		12 38 15.0	+4.7
DBIC	Dimbokro	69.96	193	LR		LR		13 12 16.9		
	comp=Z,237nm,19.4s,baz=354,slow=39									
LIC	Lamto	70.41	193	eP		P		12 38 18.4	-1.6
LIC				eR						
	comp=Z,260nm,20.2s									
LIC	Lamto	70.41	193	eP		P

comp=Z,3.2nm,0.9s
ATAH Atahualpa 95.81 264 LR LR 13 26 45.7
comp=Z,81nm,19.2s,baz=16,slow=37
BDFB Brasilia 97.44 233 LR LR 13 16 54.4
comp=Z,196nm,21.3s,baz=1.5,slow=31
WRA Warramunga Arr 117.68 58 PKP **PKPdf 12 45 49.0 -2.7**
WRA Warramunga Arr 117.68 58 PKP **PKPdf 12 45 49.0 -2.7**
comp=Z,1.1nm,1.1s,baz=346,slow=2.3,SNR=4.3
PPT2 Papeete2 119.97 334 eLR LR 13 22 23.2
comp=Z,682nm,37.5s
ASAR Alice Springs 121.21 59 PKP **PKPdf 12 45 55.5 -2.8**
ASAR Alice Springs 121.21 59 PKP **PKPdf 12 45 55.5 -2.8**
comp=Z,1.2nm,0.9s,baz=360,slow=1.5,SNR=13
RKT Rikitea 123.47 317 eLR LR 13 24 15.8
comp=Z,294nm,29.0s
DZM Mont Dzumac 124.67 23 eLR LR 13 25 32.2
comp=Z,213nm,24.0s
TBI Tubuai 125.65 333 eLR LR 13 25 09.7
comp=Z,394nm,38.2s
SYO Syowa Base 146.52 159⇑ *e*X **PKPdf 12 46 43.4 -0.4**
SYO Syowa Base 146.52 159⇑ *e*PKPab **PKPab 12 46 49.2 +2.8**
VNA1 Neumayer--Stat 147.10 189 *e*PKP **PKPbc 12 46 46.9 0.0**
VNA1 Neumayer--Stat 147.10 189 *e*Svalbard **PKiKP 12 46 53.7 +4.4**
SNAA Sanae 147.95 186 *e*PKP **PKPbc 12 46 48.8 -0.6**
SNAA Sanae 147.95 186 *e*PKPdf **PKPbc 12 46 48.4 -1.0**
SNAA Sanae 147.95 186 *e*PKIKP **PKPbc 12 46 48.4 -1.0**

*CSEM **21** 12:31:28.1,38°.31N×21°.98E,h9km,MD2.5,After ATH*
ATH 21 12:31:28.1,38°.31N×21°.98E,h9km,MD2.5/5,Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LAKA	**Lakka**	**0.07**	**181**	*e*PG	Pg	12 31 30.3	+0.1
LAKA				*e*SG	Sg	12 31 31.8	0.0
LAKA	**Lakka**	**0.07**	**181**	*e*Pg	Pg	12 31 30.3	+0.1
LAKA				*e*Sg	Sg	12 31 31.8	0.0
TRIZ	**Trizonia**	**0.09**	**53**	*e*PG	Pg	12 31 30.6	+0.1
TRIZ				*e*SG	Sg	12 31 32.0	-0.1
TRIZ	**Trizonia**	**0.09**	**53**	*e*Pg	Pg	12 31 30.6	+0.1
TRIZ				*e*Sg	Sg	12 31 32.0	-0.1
EFP	**Efpalio**	**0.13**	**333**	*e*PG	Pg	12 31 31.0	-0.1
EFP	**Efpalio**	**0.13**	**333**	*e*Pg	Pg	12 31 31.0	-0.1
KALE	**Kalithea**	**0.15**	**57**	*e*PG	Pg	12 31 31.5	0.0
KALE				*e*SG	Sg	12 31 33.8	0.0
KALE	**Kalithea**	**0.15**	**57**	*e*Pg	Pg	12 31 31.5	0.0
KALE				*e*Sg	Sg	12 31 33.8	0.0
KLV	**Kalavryta, Ach**	**0.30**	**153**	*e*PB	Pg	12 31 34.0	-0.1
KLV	**Kalavryta, Ach**	**0.30**	**153**	*e*Pb	Pg	12 31 34.0	-0.1

IDC 21 12:32:48.5±2.5,5°.67S×130°.81E,h0km,mb3.4/1, mb1 3.5/4,mb1mx3.3/19,mbtmp3.4/4,ML3.4/2,Error ellipse: s-maj=111.3km s-min=27.9km az=78.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.35**	**202**	Pn	Pn	12 35 58.7	-0.6
	0.2nm,0.3s,baz=25,slow=11,SNR=18						
FITZ				Sn	Sn	12 38 10.9	-18
	0.2nm,0.3s,baz=163,slow=22,SNR=6.3						
WRA	**Warramunga Arr**	**14.59**	**167**	Pn	Pn	12 36 16.4	-0.1
	0.2nm,0.3s,baz=349,slow=11,SNR=10						
WRA				Sn	Sn	12 38 47.1	-12
	0.2nm,0.3s,baz=352,slow=23,SNR=5.4						
ASAR	**Alice Springs**	**18.14**	**171**	P	Pn	12 37 02.1	+0.1
	0.1nm,0.3s,baz=347,slow=10,SNR=14						
MKAR	**Makanchi Array**	**67.57**	**326**	P	P	12 43 47.0	+0.1
	0.2nm,0.4s,baz=120,slow=8.0,SNR=2.9						

MEX 21 12:45:29.2±0.6,16°.92N×99°.04W,h11km±7km,MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**1.02**	**121**	*i* P	Pg	12 45 45.4	-3.5
PNIG				*i* S	Sg	12 45 58.7	-3.5
MEIG	**Mezcala**	**1.14**	**331**	*e*P	Pb	12 45 47.6	-3.6
MEIG				*i* S	Sb	12 46 01.9	-4.3
CAIG	**El Cayaco**	**1.18**	**276**	*i* P	Pb	12 45 48.7	-3.0
CAIG				*i* S	Sb	12 46 02.1	-5.0
ARIG	**Puente Sto Nin**	**1.84**	**318**	*i* P	Pn	12 45 57.3	-3.6
ARIG				*i* S	Sn	12 46 19.2	-5.0
TPIG	**Tehuac#an**	**2.19**	**47**	*i* P	Pn	12 46 01.6	-4.2
TPIG				*i* S	Sn	12 46 27.9	-5.2

IDC 21 12:58:36.4±1.6,7°.57S×13°.45W,h0km,mb4.1/8, mb1 4.2/8,mb1mx3.9/24,mbtmp4.1/8,MS3.3/1,Ms1 3.3/1, ms1mx3.0/28,Error ellipse: s-maj=60.5km s-min=17.2km az=141.0,Ascension Island region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**25.50**	**36**	P	P	13 04 05.7	-1.0
	1.9nm,0.7s,baz=215,slow=12,SNR=8.8						
KEST	**Kesra**	**48.13**	**25**	LR	LR	13 27 40.8	
	comp=Z,29nm,18.5s,baz=228,slow=36						
GERES	**GERESS Array B**	**61.02**	**20**	P	P	13 08 50.2	-1.7
	1.5nm,0.8s,baz=189,slow=7.6,SNR=9.5						
BRTR	**Keskin Array B**	**64.07**	**39**	P	P	13 09 13.3	+0.7
	0.9nm,0.9s,baz=193,slow=5.1,SNR=4.7						
AKASG	**Malin Array Be**	**68.75**	**28**	P	P	13 09 41.1	-0.9
	1.2nm,0.6s,baz=228,slow=6.5,SNR=4.8						
NOA	**NORSAR Array B**	**71.09**	**12**	P	P	13 09 57.3	+0.9
	0.5nm,0.7s,baz=230,slow=2.4,SNR=3.1						
FINES	**FINESS Array B**	**75.37**	**18**	P	P	13 10 21.7	+0.1
	3.3nm,0.8s,baz=222,slow=2.6,SNR=9.1						
KAF	**Kangasniemi**	**75.95**	**18**	*ep*	P	13 10 24.5	-0.4
	3.6nm,0.8s						
SCHQ	**Schefferville**	**76.39**	**331**	P	P	13 10 29.2	+1.6
	1.8nm,0.6s,baz=140,slow=5.6,SNR=4.6						
JOF	**Joensuu**	**78.12**	**19**	*ep*	P	13 10 37.4	+0.3
	2.1nm,0.7s						
ARCES	**ARCESS Array B**	**81.45**	**13**	P	P	13 10 56.3	+1.2
	3.0nm,0.9s,baz=207,slow=1.4,SNR=4.3						

*ISK **21** 13:04:44.6,38°.75N×39°.29E,h16km,MD2.5*
*DDA **21** 13:04:44.8,38°.72N×39°.36E,h7km,MD2.6*
CSEM 21 13:04:45.3±0.6,38°.77N×39°.27E,h8km,MD2.5,Error ellipse: s-maj=17.7km s-min=8.4km az=122.0,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PTK	**Pertek**	**0.15**	**38**	PG	Pg	13 04 49.1	+0.2
PTK				*e*SG	Sg	13 04 52.3	+1.0
PTK	**Pertek**	**0.15**	**38**	*i* Pg	Pg	13 04 49.1	+0.2
PTK				*e*Sg	Sg	13 04 52.3	+1.0
ELZG	**Elazig**	**0.35**	**220**	*i* P	Pg	13 04 52.2	-0.3
ELZG				*i* S	Sg	13 04 58.5	+1.1
ELZG	**Elazig**	**0.35**	**220**	*i* P	Pg	13 04 52.2	-0.3
ELZG				*i* S	Sg	13 04 58.5	+1.1
KEMA	**Kemaliye**	**0.79**	**310**	*i* P	Pb	13 05 01.0	-0.4
KEMA	**Kemaliye**	**0.79**	**310**	*i* P	Pb	13 05 01.0	-0.4
MYA	**Malataya**	**0.80**	**236**	*e*PG	Pg	13 05 00.6	-0.2
MYA	**Malataya**	**0.80**	**236**	*e*Pg	Pg	13 05 00.6	-0.2
ILIC	**ilic-Erzincan**	**0.87**	**321**	*e*PG	Pg	13 05 02.4	+0.1
ILIC	**ilic-Erzincan**	**0.87**	**321**	*e*Pg	Pg	13 05 02.4	+0.1
ERZN	**Erzincan**	**0.89**	**23**	*e*PG	Pg	13 05 02.4	-0.2
EZC	**Erzincan**	**0.98**	**4**	*e*Pg	Pg	13 05 02.4	-2.0
KELT	**Kelkit**	**1.38**	**359**	*i* P	Pg	13 05 12.3	+0.2
KELT	**Kelkit**	**1.38**	**359**	*i* P	Pg	13 05 12.3	+0.3

IDC 21 13:10:51.7±2.9,20°.51S×178°.91W,h630km±33km, mb3.2/13,mb1 3.4/14,mb1mx3.3/20,mbtmp3.2/14,Error ellipse: s-maj=33.2km s-min=14.0km az=152.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**13.74**	**261**	P	P	13 13 48.6	+1.4
	0.6nm,0.3s,baz=210,slow=23,SNR=6.2						
STKA	**Stephens Creek**	**37.01**	**244**	P	P	13 17 10.3	-0.2
	5.3nm,1.2s,baz=91,slow=12,SNR=5.3						
ASAR	**Alice Springs**	**43.68**	**257**	P	P	13 18 03.4	0.0
	3.2nm,0.4s,baz=92,slow=7.5,SNR=125						
ASAR				PcP	PcP	13 19 36.0	+0.1
	0.8nm,0.5s,baz=108,slow=3.7,SNR=9.3						
ASAR				S	S	13 23 49.9	+0.3
	0.9nm,1.0s,baz=79,slow=13,SNR=4.0						
WRA	**Warramunga Arr**	**43.75**	**262**	P	P	13 18 03.6	-0.3
	1.4nm,0.3s,baz=97,slow=7.6,SNR=80						
MJAR	**Matsushiro Arr**	**69.71**	**324**	P	P	13 20 59.6	-0.6
	1.2nm,0.6s,baz=141,slow=6.3,SNR=11						
PETK	**Petropavlovsk-**	**76.06**	**346**	P	P	13 21 35.6	-0.4
	1.6nm,0.6s,baz=120,slow=8.8,SNR=5.0						
KSRS	**Korea Array**	**76.33**	**319**	P	P	13 21 38.8	+1.0
	0.2nm,0.4s,baz=118,slow=4.3,SNR=4.2						
USRK	**Ussuriysk Arra**	**78.49**	**326**	P	P	13 21 50.7	+1.5
	0.8nm,0.6s,baz=94,slow=6.1,SNR=4.8						
YBH	**Yreka Blue Hor**	**80.83**	**39**	P	P	13 22 02.3	+0.6
	1.4nm,1.0s,baz=132,slow=3.0,SNR=5.2						
NVAR	**Mina Array Bea**	**81.62**	**44**	P	P	13 22 06.4	+0.4
	0.8nm,0.6s,baz=226,slow=8.9,SNR=5.6						
TXAR	**Lajitas Array**	**87.78**	**58**	P	P	13 22 36.5	+0.7
	0.6nm,0.9s,baz=216,slow=6.2,SNR=6.0						
ILAR	**Eielson Array**	**88.52**	**13**	P	P	13 22 37.3	-1.0
	0.7nm,0.5s,baz=216,slow=5.1,SNR=18						
CMAR	**Chiang Mai Arr**	**89.31**	**290**	P	P	13 22 44.5	+1.4
	0.9nm,0.7s,baz=110,slow=2.7,SNR=4.9						
PDAR	**Pinedale Array**	**89.56**	**44**	P	P	13 22 43.0	-0.9
	0.6nm,0.5s,baz=200,slow=3.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**109.96**	**321**	PKiKP	PKiKP	13 28 11.5	-1.1
	0.4nm,0.3s,baz=107,slow=1.5,SNR=3.0						
ARCES	**ARCESS Array B**	**128.77**	**349**	PKP	PKPdf	13 28 47.5	-0.9
	7.8nm,1.1s,baz=336,slow=2.7,SNR=5.0						
FINES	**FINESS Array B**	**135.54**	**343**	PKP	PKPdf	13 29 01.4	+0.2
	0.5nm,0.4s,baz=45,slow=3.0,SNR=4.8						
AKASG	**Malin Array Be**	**142.60**	**330**	PKhKP	PKPpre	13 29 10.9	
	3.9nm,0.4s,baz=42,slow=4.2,SNR=16						
BRTR	**Keskin Array B**	**146.21**	**312**	PKPbc	PKPbc	13 29 23.2	-0.3
	1.3nm,0.6s,baz=138,slow=5.0,SNR=6.9						
CLL	**Collm**	**147.87**	**346**	*i* PKPbc	PKPbc	13 29 27.1	-0.1
	comp=Z,6.0nm,0.9s						
CLL				*i* PKPab	PKPab	13 29 32.2	0.0
	comp=Z,3.0nm,0.9s						
BRG	**Berggiesshubel**	**148.05**	**345**	*e*PKP	PKPbc	13 29 27.7	0.0
	comp=Z,3.7nm,1.1s						
GERES	**GERESS Array B**	**149.97**	**343**	PKPbc	PKPbc	13 29 32.2	-0.3
	comp=Z,0.8nm,0.6s,baz=31,slow=3.1,SNR=8.2						

*ISK **21** 13:22:50.9,37°.66N×26°.90E,h11km,MD2.6*
*DDA **21** 13:22:51.5,37°.68N×26°.91E,h7km,MD2.5*
CSEM 21 13:22:51.4±0.2,37°.66N×26°.89E,h15km,MD2.6,Error ellipse: s-maj=5.7km s-min=4.0km az=81.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.27**	**82**	*i* P	Pg	13 22 57.3	+0.1
GCAM				*i* S	Sb	13 23 02.3	-0.1
GCAM	**G?zelcaml?**	**0.27**	**82**	*i* P	Pg	13 22 57.3	+0.1
GCAM				*i* S	Sb	13 23 02.3	-0.1
BODT	**Bodrum**	**0.69**	**151**	*e*PG	Pg	13 23 04.5	-0.3
BODT				*e*SG	Sb	13 23 14.8	+0.4
BODT	**Bodrum**	**0.69**	**151**	*e*Pg	Pg	13 23 04.5	-0.3
BODT				*e*Sg	Sb	13 23 14.8	+0.4
BLCB	**Balcova**	**0.73**	**9**	*e*PG	Pg	13 23 05.4	-0.2
BLCB				*e*SG	Sb	13 23 16.1	+0.5
BLCB	**Balcova**	**0.73**	**9**	*e*Pg	Pg	13 23 05.4	-0.2
BLCB				*e*Sg	Sb	13 23 16.1	+0.5
AYDN	**Tasoluk**	**0.78**	**90**	*i* P	Pn	13 23 07.8	-0.2
AYDN				*i* S	Sb	13 23 17.3	+0.1
AYDN	**Tasoluk**	**0.78**	**90**	*i* P	Pn	13 23 07.8	-0.2
AYDN				*i* S	Sb	13 23 17.3	+0.1
IZM	**Izmir**	**0.79**	**22**	*e*PG	Pg	13 23 06.6	-0.2
IZM	**Izmir**	**0.79**	**22**	*e*Pg	Pg	13 23 06.6	-0.2
MLSB	**Milas**	**0.79**	**117**	*e*PG	Pg	13 23 06.5	-0.4
MLSB	**Milas**	**0.79**	**117**	*e*Pg	Pg	13 23 06.5	-0.4
DAT	**Datca**	**1.08**	**149**	*e*PN	Pb	13 23 11.9	+0.1
DAT	**Datca**	**1.08**	**149**	*e*Pn	Pb	13 23 11.9	+0.1
APE	**Apeiranthos**	**1.24**	**242**	*e*PN	Pb	13 23 14.8	+0.3
APE	**Apeiranthos**	**1.24**	**242**	*e*Pn	Pb	13 23 14.8	+0.3

IDC 21 13:30:51.3±2.8,10°.21S×161°.35E,h108km±18km,mb3.3/3, mb1 3.6/4,mb1mx3.2/20,mbtmp3.5/4,Error ellipse: s-maj=37.8km s-min=24.0km az=63.0,Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.58**	**299**	P	Pn	13 31 18.3	-0.7
	7.0nm,0.3s,baz=149,slow=5.9,SNR=14						
HNR				S	Sn	13 31 40.2	+0.2
	68nm,0.3s,baz=332,slow=24,SNR=6.1						
DZM	**Mont Dzumac**	**12.77**	**158**	P	Pn	13 33 49.5	+0.4
	0.4nm,0.3s,baz=95,slow=22,SNR=16						
WRA	**Warramunga Arr**	**27.78**	**246**	P	P	13 36 30.4	0.0
	0.5nm,0.6s,baz=76,slow=9.1,SNR=10						
ASAR	**Alice Springs**	**29.39**	**239**	P	P	13 36 44.5	-0.2
	0.2nm,0.4s,baz=63,slow=10,SNR=7.5						
SONM	**Songino Array**	**75.48**	**325**	P	P	13 42 24.0	+0.1
	0.9nm,0.6s,baz=134,slow=5.9,SNR=7.1						

IDC 21 13:42:10.3±2.2,2°.63N×95°.41E,h0km,mb3.6/4,mb1 3.7/6, mb1mx3.5/28,mbtmp3.6/6,ML3.5/2,Error ellipse: s-maj=63.6km s-min=22.7km az=58.0,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**3.52**	**87**	Pn	Pn	13 43 06.7	+0.2
	1.4nm,0.3s,baz=294,slow=5.8,SNR=5.4						
PSI				Sn	Sn	13 43 45.6	-3.3
	0.6nm,0.3s,baz=9.5,slow=12,SNR=2.6						
CMAR	**Chiang Mai Arr**	**16.11**	**12**	Pn	Pn	13 45 59.0	+0.6
	0.1nm,0.3s,baz=205,slow=12,SNR=8.4						
WRA	**Warramunga Arr**	**44.30**	**122**	P	P	13 50 21.7	-0.7
	0.5nm,0.6s,baz=298,slow=9.5,SNR=3.1						
MKAR	**Makanchi Array**	**45.45**	**347**	P	P	13 50 31.3	+0.2
	1.5nm,0.4s,baz=151,slow=9.5,SNR=3.8						
ASAR	**Alice Springs**	**45.68**	**127**	P	P	13 50 33.7	+0.4
	0.3nm,0.8s,baz=298,slow=7.9,SNR=8.8						
SONM	**Songino Array**	**46.03**	**10**	P	P	13 50 35.0	-0.8
	0.5nm,0.5s,baz=191,slow=8.6,SNR=4.1						

*BJI **21** 13:46:00.0,36°.67N×70°.50E,h189km,mB4.8/20,mb4.7/28*
*MOS **21** 13:46:02.7±0.9,36°.51N×70°.89E,h197km,mb4.5/39,Error ellipse: s-maj=7.0km s-min=4.1km az=93.0*
*ISCJB **21** 13:46:02.2±0.3,36°.50N±0°.02×70°.89E±0°.03,h193km±3km, mb4.2/62,Error ellipse: s-maj=3.6km s-min=2.8km az=158.1*
*NEIC **21** 13:46:03.4±0.5,36°.50N×70°.88E,h192km±5km,mb4.4/22, Error ellipse: s-maj=5.4km s-min=4.6km az=195.0*
*IDC **21** 13:46:05.5±1.6,36°.55N×70°.93E,h215km±15km,mb3.8/22, mb1 4.0/27,mb1mx3.9/34,mbtmp3.8/27,MS2.8/1, Ms1 2.8/1,ms1mx2.0/50,Error ellipse: s-maj=9.2km s-min=8.3km az=11.0*
*NNC **21** 13:46:10.9±1.2,37°.22N×70°.90E,h188km±10km,mb3.9, mpv5.0,Error ellipse: s-maj=9.2km s-min=7.6km az=11.0*
ISC 21 13:46:03.4±0.4,36°.53N±0°.03×70°.91E±0°.03,h195km±3km, h195km:pP-P,n273,σ178/332,mb4.4/62,21C-17D,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KBL	**Kabul**	**2.50**	**218**	*e*PN	Pn	**13 46 46.6**	**-0.6**
KBL				*e*		13 47 18.6	
KBL	**Kabul**	**2.50**	**218**	*e*Pn	Pn	**13 46 46.5**	**-0.6**
KBL				*e*Sn	Sn	**13 47 18.6**	**-2.7**
CEP	**Cherat**	**2.82**	**163**	⇑P	Pn	**13 46 51.3**	**+0.5**
CEP				S	Sn	**13 47 27.0**	**-0.8**
CHCP	**Chirah Chowk**	**3.45**	**145**	⇑P	Pn	**13 46 59.4**	**+1.1**
THW	**Thamme Wali**	**3.79**	**169**	P	Pn	**13 47 02.8**	**+0.4**
SARP	**Sargodha**	**4.82**	**162**	P	Pn	**13 47 15.1**	**-0.3**
KSH	**Kashi**	**4.99**	**52**	P	Pn	13 47 14.1	-3.5
KSH				*e*SP	x	13 47 53.0	
KSH				S	Sn	13 48 06.8	-9.3
JMU	**Jammu**	**5.03**	**138**	*ex*	x	13 47 21.0	
JMU				*e*S	Sn	**13 48 13.0**	**-3.8**
THN	**Thein Dam**	**5.70**	**134**	*e*PKP	Pn	**13 47 25.5**	**-1.1**
THN				*e*4		13 48 26.1	
DLH	**Dalhousie**	**5.76**	**132**	*e*PKP	Pn	**13 47 28.0**	**+0.3**
DLH				*e*S	Sn	**13 48 33.0**	**-1.3**
AML	**Almayashu**	**6.00**	**20**	*i* PN	Pn	**13 47 31.1**	**+0.3**
AML	**Almayashu**	**6.00**	**20**	P	Pn	**13 47 31.1**	**+0.3**
	SNR=360						
DHRM	**DHARAMSHALA**	**6.17**	**132**	*e*PKP	Pn	**13 47 32.9**	**-0.1**
DHRM				AMB	AMB	13 47 34.7	
	comp=Z,207nm,0.8s						
DHRM				*e*S	Sn	**13 48 41.2**	**-2.6**
UCH	**Uchtor**	**6.34**	**25**	*i* PN	Pn	**13 47 35.9**	**+0.6**
UCH	**Uchtor**	**6.34**	**25**	P	Pn	**13 47 35.9**	**+0.6**
	SNR=31						
KZA	**Kyzart**	**6.48**	**30**	*i* PN	Pn	**13 47 37.1**	**0.0**
KZA	**Kyzart**	**6.48**	**30**	P	Pn	**13 47 37.1**	**0.0**
	SNR=89						
EKS2	**Erkin-Say**	**6.51**	**19**	*e*PN	Pn	**13 47 37.7**	**+0.4**
EKS2				pmax	pmax		
	comp=Z,95nm,0.4s						
EKS2	**Erkin-Say**	**6.51**	**19**	*e*Pn	Pn	**13 47 37.7**	**+0.4**
	comp=Z,94nm,0.4s						
EKS2	**Erkin-Say**	**6.51**	**19**	P	Pn	**13 47 37.9**	**+0.7**
	SNR=39						
KK31	**Karatay Array**	**6.58**	**357**	P	Pn	**13 47 37.0**	**-0.9**
	comp=Z,24nm,0.3s,baz=192,slow=14,SNR=527						
KK31				⇓S	Sn	13 48 44.4	-8.5
	comp=Z,513nm,0.8s,baz=196,slow=28,SNR=28						
KK31	**Karatay Array**	**6.58**	**357**	*ce*PN	Pn	**13 47 37.7**	**-0.2**
KK31				pmax	pmax		
	comp=Z,50nm,0.2s						
KKAR	**Karatay Array**	**6.58**	**357**	*e*PN	Pn	**13 47 37.9**	**-0.1**
KKAR				pmax	pmax		
	comp=Z,86nm,0.4s						
KKAR	**Karatay Array**	**6.58**	**357**	*e*Pn	Pn	**13 47 37.9**	**-0.1**
	comp=Z,86nm,0.4s						
KKAR				*e*Sn	Sn	13 48 41.0	-12
AAK	**Ala-Archa**	**6.70**	**23**	*d* PN	Pn	**13 47 40.3**	**+0.6**
AAK	**Ala-Archa**	**6.70**	**23**	*e*P	Pn	**13 47 40.1**	**+0.4**
	comp=Z,81nm,0.4s						
AAK				S	Sn	**13 48 56.3**	**+0.3**
AAK	**Ala-Archa**	**6.70**	**23**	P	Pn	**13 47 40.5**	**+0.8**
	SNR=75						
AAK	**Ala-Archa**	**6.70**	**23**	P	Pn	**13 47 40.4**	**+0.8**
	comp=Z,49nm,0.3s,baz=172,slow=6.2,SNR=108						
AAK				S	Sn	**13 48 56.3**	**+0.3**
	comp=Z,9.2nm,0.3s,baz=144,slow=23,SNR=10						
AAK				LR	LR	13 50 15.8	
	comp=Z,88nm,20.6s,baz=61,slow=38						
BHK	**Bhakra**	**6.85**	**137**	*e*PKP	Pn	**13 47 40.1**	**-1.5**
BHK				*e*4		13 48 53.9	
KBK	**Karagaybulak**	**6.87**	**26**	*i* PN	Pn	**13 47 42.9**	**+1.0**
KBK	**Karagaybulak**	**6.87**	**26**	P	Pn	**13 47 42.9**	**+1.0**
	SNR=104						
ULHL	**Ulahol**	**7.05**	**34**	*i* PN	Pn	**13 47 44.6**	**+0.3**
ULHL	**Ulahol**	**7.05**	**34**	P	Pn	**13 47 44.6**	**+0.3**
	SNR=19						
SDNR	**Sundarnagar**	**7.10**	**133**	*e*PKP	Pn	**13 47 43.6**	**-1.4**
SDNR				*e*4		13 48 58.0	
CHMS	**Chumysh**	**7.11**	**23**	*i* PN	Pn	**13 47 45.4**	**+0.5**
CHMS	**Chumysh**	**7.11**	**23**	P	Pn	**13 47 45.4**	**+0.5**
	SNR=36						
USP	**Ospenovka**	**7.28**	**21**	*i* PN	Pn	**13 47 46.9**	**-0.2**
USP	**Ospenovka**	**7.28**	**21**	P	Pn	**13 47 46.9**	**-0.2**
	SNR=97						
TKM2	**Tokmak 2**	**7.33**	**28**	⇓P	Pn	**13 47 47.7**	**-0.3**
	comp=Z,156nm,0.7s						
TKM2				⇓S	Sn	13 49 04.9	-6.2
	comp=Z,59nm,0.9s						
TKM2	**Tokmak 2**	**7.33**	**28**	*e*PN	Pn	**13 47 48.5**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,132nm,0.5s						
TKM2	**Tokmak 2**	**7.33**	**28**	*e*P	Pn	**13 47 48.5**	**+0.5**
	comp=Z,132nm,0.5s						
TKM2	**Tokmak 2**	**7.33**	**28**	P	Pn	**13 47 48.5**	**+0.5**
	SNR=204						
SMLA	**Simla**	**7.49**	**134**	*i* P	Pn	**13 47 49.4**	**-0.6**
SMLA				AMB	AMB	13 47 49.8	
	comp=Z,63nm,0.2s						
SMLA				*i* 4		13 49 10.1	
KNDC	**Almaty**	**8.14**	**33**	⇑P	Pn	**13 47 58.8**	**+0.4**
	comp=Z,47nm,0.5s						
KNDC				⇓S	Sn	13 49 23.9	-6.2
	comp=Z,122nm,1.1s						
AAA	**Alma-Ata**	**8.18**	**33**	*i* PN	Pn	**13 48 00.0**	**+1.1**
AAA				pmax	pmax		
	comp=Z,300nm,0.8s						
AAA				MLR	MLR		
	comp=Z,500nm,2.0s						
DDI	**Dehra Dun**	**8.60**	**134**	*e*PKP	Pn	**13 48 03.3**	**-1.2**
DDI				AMB	AMB	13 48 12.1	
	comp=Z,242nm,2.3s						
DDI				*e*S	Sn	**13 49 36.8**	**-4.2**
NDI	**New Delhi**	**9.46**	**144**	*e*PKP9		13 48 33.5	
NDI				AMB	AMB	13 48 34.5	
	comp=Z,68nm,1.0s						
NDI				*e*S	Sn	13 50 12.4	+11
PTH	**Pithoragarh**	**10.46**	**129**	*e*4	Pn	13 48 23.5	-5.3
PTH				*e*4	Sn	13 50 09.9	-16
AJM	**Ajmer**	**10.51**	**161**	*i* P	Pn	**13 48 27.0**	**-2.4**
AJM				*i* 4	Sn	13 50 18.0	-8.7
LGTI	**Lohaghat**	**10.54**	**129**	*e*PKP	Pn	**13 48 28.6**	**-1.1**
LGTI				*e*4	Sn	13 50 20.2	-7.1
BHJ	**Bhuj**	**13.27**	**185**	*e*PKP	Pn	13 49 00.8	-3.7
BHJ				AMB	AMB	13 49 05.2	
	comp=Z,68nm,1.2s						
MK31	**Makanchi Array**	**13.31**	**36**	P	Pn	**13 49 05.3**	**+0.5**
	comp=Z,4.1nm,0.7s,baz=218,slow=11,S

comp=Z,12nm,0.9s
VOSK Vostochnaya 16.19 0 P **P** **13 49 38.9 -0.6**
VOSK S **S** **13 52 32.8 -6.1**
VOSK pmax pmax
comp=Z,8.0nm,0.5s
VOSK smax smax
comp=N,13nm,0.9s
RAMN Ramite 16.39 121 *e*P **Pn** **13 49 42.7 -0.2**
comp=N,266nm,0.9s
ZRNK Zerenda 16.48 356 ⇑P **Pn** **13 49 43.1 -0.3**
comp=N,19nm,0.8s
ZRNK ⇑S **S** **13 52 38.7 -6.0**
comp=N,17nm,1.1s
ZRNK Zerenda 16.48 356 *i* P **Pn** **13 49 43.0 -0.3**
ZRNK pmax pmax
comp=Z,22nm,0.7s
BVA0 Borovoye Array 16.50 359 ⇓P **P** **13 49 43.3 +0.4**
comp=Z,15nm,0.7s,baz=176,slow=12,SNR=85
BVA0 ⇓S **S** **13 52 39.6 -5.7**
comp=Z,30nm,1.1s
BVA0 Borovoye Array 16.50 359 *i* P **P** **13 49 43.2 +0.4**
BVA0 S **S** **13 52 42.4 -2.8**
BVA0 pmax pmax
comp=Z,15nm,0.7s
BVA0 smax smax
comp=N,30nm,1.1s
BVAR Borovoye Array 16.50 359 P **Pn** **13 49 43.9 +0.2**
BVAR S **S** **13 52 44.6 -0.6**
BVAR pmax pmax
comp=Z,2.0nm,0.3s
BVAR smax smax
comp=N,1.0nm,0.3s
BVAR Borovoye Array 16.50 359 P **Pn** **13 49 43.9 +0.2**
BVAR S **S** **13 52 44.6 -0.6**
BVAR Borovoye Array 16.50 359 P **Pn** **13 49 43.9 +0.2**
comp=N,1.9nm,0.3s,baz=170,slow=12,SNR=60
BVAR S **S** **13 52 44.6 -0.6**
comp=N,0.5nm,0.3s,baz=161,slow=24,SNR=12
BRVK Borovoye 16.54 359 ⇓P **Pn** **13 49 44.0 -0.1**
comp=N,47nm,1.0s
BRVK ⇓S **S** **13 52 40.0 -5.9**
comp=N,36nm,1.1s
BRVK Borovoye 16.54 359*d* *i*P **Pn** **13 49 44.3 +0.2**
BRVK pmax pmax
comp=Z,39nm,1.2s
BRVK Borovoye 16.54 359 *e*P **Pn** **13 49 44.4 +0.4**
comp=Z,26nm,0.9s
AKL Akola 16.65 160 *e*PKP **P** **13 49 40.9 -3.9**
AKL *e*S **S** **13 52 45.8 -2.9**
AKTO Aktyubinsk 16.72 330 ⇑P **Pn** **13 49 46.0 -0.3**
comp=Z,96nm,0.9s
AKTO ⇓S **S** **13 52 45.9 -3.9**
AKTO Aktyubinsk 16.72 330 P **Pn** **13 49 46.7 +0.4**
AKTO S **S** **13 52 48.6 -1.1**
AKTO pmax pmax
comp=Z,4.0nm,0.3s
AKTO smax smax
comp=N,1.0nm,0.3s
AKTO Aktyubinsk 16.72 330 P **Pn** **13 49 46.7 +0.4**
AKTO S **S** **13 52 48.6 -1.1**
AKTO Aktyubinsk 16.72 330 P **Pn** **13 49 46.7 +0.4**
comp=N,3.6nm,0.3s,baz=140,slow=11,SNR=131
AKTO S **S** **13 52 48.6 -1.1**
comp=N,0.5nm,0.3s,baz=335,slow=19,SNR=5.5
NGP Nagpur 16.89 153 *e*PKP **P** **13 49 47.1 -0.3**
TAPN Taplejung 16.93 118 *e*P **Pn** **13 49 49.8 +0.5**
comp=N,182nm,0.8s
ODAN Odare 17.00 120 *e*P **Pn** **13 49 50.4 +0.3**
comp=N,168nm,0.7s
LKRN Lenkeran, Azer 17.66 284 P **Pn** **13 49 58.0 +0.4**
SNR=3.7
LKRN Lenkeran, Azer 17.66 284 P **Pn** **13 49 58.0 +0.4**
SNR=3.7
SIZA Siyzn 17.73 292 P **Pn** **13 50 00.0 +1.6**
SNR=4.1
SIZA Siyzn 17.73 292 P **Pn** **13 50 00.0 +1.6**
SNR=4.1
PQL Pirkuli 17.93 291 P **Pn** **13 50 00.3 -0.5**
SNR=3.3
PQL Pirkuli 17.93 291 P **Pn** **13 50 00.3 -0.5**
SNR=3.3
GLBA Clilabad 17.97 285 P **Pn** **13 50 00.3 -0.9**
SNR=10
GLBA Clilabad 17.97 285 P **Pn** **13 50 00.3 -0.9**
SNR=10
QUBA Quba, Azerbaij 18.07 292 P **Pn** **13 50 03.1 +0.7**
SNR=5.0
QUBA Quba, Azerbaij 18.07 292 P **Pn** **13 50 03.1 +0.7**
SNR=5.0
BOK Bokaro 18.10 130 *e*PKP **P** **13 49 59.2 -1.4**
BOK AMB AMB 13 50 03.4
comp=Z,29nm,0.7s
BOK *ex* x 13 53 08.9
IML Ismayilli 18.24 290 P **Pn** **13 50 03.6 -0.8**
SNR=7.0
IML Ismayilli 18.24 290 P **Pn** **13 50 03.6 -0.8**
SNR=7.0
LSA Lhasa 18.26 106 P **Pn** **13 50 06.4 +1.3**
LSA pmax pmax
comp=Z,70nm,0.9s
LSA Lhasa 18.26 106 *e*P **Pn** **13 50 06.0 +0.9**
LSA pmax pmax
comp=Z,64nm,0.8s
LSA Lhasa 18.26 106 *e*P **Pn** **13 50 06.0 +0.9**
comp=Z,64nm,0.8s
LATR Latur 18.72 163 *e*PKP **P** **13 50 02.9 -4.4**
LATR AMB AMB 13 50 07.4
comp=Z,34nm,0.8s
LATR *ex* x 13 53 22.0
BRDA Brd 18.95 289 P **Pn** **13 50 12.1 -0.6**
SNR=4.2
BRDA Brd 18.95 289 P **Pn** **13 50 12.1 -0.6**
SNR=4.2
ZAA0 Zalesovo Array 19.92 25 *e*P **P** **13 50 21.0 +1.0**
ZALV Zalesovo Beam 19.92 25 *i* P **P** **13 50 21.2 +1.3**
ZALV pmax pmax
comp=Z,15nm,0.5s
ZALV Zalesovo Beam 19.92 25 P **P** **13 50 20.3 +0.3**
ZALV S **S** **13 53 51.2 -1.9**
ZALV Zalesovo Beam 19.92 25 P **P** **13 50 20.3 +0.3**
comp=Z,3.4nm,0.3s,baz=222,slow=11,SNR=89
ZALV S **S** **13 53 51.2 -1.9**
comp=Z,0.2nm,0.3s,baz=207,slow=35,SNR=4.7
NVS Novosibirsk 20.18 21 *e*P **P** **13 50 23.3 +0.6**
NVS *i* PPP PPP 13 50 58.5
NVS *e* 13 51 21.6
NVS *e*S **S** **13 53 56.5 -1.7**
NVS pmax pmax
comp=Z,24nm,1.3s
NVS pmax pmax
comp=N,17nm,1.2s
NVS smax smax
comp=E,51nm,2.1s
HYB Hyderabad 20.20 158 *i* P **P** **13 50 24.0 +0.7**
HYB *e*S **S** **13 54 04.0 +4.7**
HYB Hyderabad 20.20 158 *e*PKP **P** **13 50 20.4 -3.0**
HYB AMB AMB 13 50 27.1
comp=Z,83nm,1.5s
NAX Nakhchivan 20.22 285 P Pn 13 50 30.3 +2.1
SNR=4.3
NAX Nakhchivan 20.22 285 P Pn 13 50 30.3 +2.1
SNR=4.3
KBD Kabd 20.80 256 *e*P **P** **13 50 29.0 -0.7**
KBD AMb AMB 13 50 33.0
comp=Z,50nm,0.7s
GNI Garni 20.81 288 P **P** **13 50 30.5 +0.6**
GNI Garni 20.81 288 P **P** **13 50 30.5 +0.6**
comp=Z,5.0nm,0.4s,baz=211,slow=3.4,SNR=3.1
SHL Shillong 20.99 115 *e*PKP **P** **13 50 31.0 -0.8**
SHL AMB AMB 13 50 34.5
comp=Z,70nm,1.8s
SHL *e*S **S** **13 54 15.0 +0.7**
RDF Al-Radifah 21.03 256 *e*P **P** **13 50 31.5 -0.5**
NAY Al-Naaiem 21.13 257 *e*P **P** **13 50 32.5 -0.5**
NAY AMb AMB 13 50 35.0
comp=Z,23nm,0.7s
SVE Sverdlovsk 21.45 344⇑ *i*P **P** **13 50 37.4 +1.3**
SVE *e*S **S** **13 54 25.3 +4.2**
SVE pmax pmax
comp=Z,42nm,1.1s
ARU Arti 21.58 341*c* *i*P **P** **13 50 38.2 +0.7**
ARU 13 51 09.2
ARU S **S** **13 54 25.3 +2.0**
ARU pmax pmax
comp=Z,74nm,1.2s
KBZ Khabaz 22.52 297 P **P** **13 50 47.4 +0.8**
KBZ pmax pmax
comp=Z,2.0nm,0.5s
KBZ Khabaz 22.52 297 P **P** **13 50 47.4 +0.8**
KBZ Khabaz 22.52 297 P **P** **13 50 47.4 +0.8**
comp=Z,1.9nm,0.5s,baz=120,slow=13,SNR=4.3
KIV Kislovodsk 22.71 298 *e*P **P** **13 50 49.2 +0.7**
KIV *e**SP **sP** **13 51 50.4 +2.6**
KIV *e*S **S** **13 54 42.2 +0.3**
KIV pmax pmax
comp=Z,7.0nm,0.6s
KIV MLR MLR
comp=Z,37nm,13.0s
GTA Gaotai 22.93 74 *e*P **P** **13 50 53.1 +2.6**
GTA pP **pP** **13 51 30.4 +4.6**
GTA sP **sP** **13 51 51.9 +1.7**
GTA S **S** **13 54 45.5 -0.2**
GTA SS **SnSn** **13 55 51.5 +8.4**
GTA pmax pmax
comp=Z,9.0nm,0.7s
GTA pmax pmax
comp=Z,120nm,4.7s
LZH Lanzhou 26.48 81 *e*P **P** **13 51 25.1 +2.4**
LZH pP **pP** **13 52 01.3 -0.8**
LZH sP **sP** **13 52 26.3 +1.6**
LZH *e*S **S** **13 55 42.3 +0.2**
LZH sS **sS** **13 56 49.3 -3.4**
LZH SS **SnSn** **13 57 14.0 +5.2**
LZH pmax pmax
comp=Z,29nm,1.0s
LZH pmax pmax
comp=Z,120nm,4.0s
VORD Divnogorie 26.77 313 *e*P **P** **13 51 24.7 -0.1**
VORD pmax pmax
comp=Z,10.0nm,1.3s
VORD pmax pmax
comp=N,50nm,0.6s
VORD pmax pmax
comp=E,20nm,0.6s
VSR Storozhevoye 26.93 313 *e*P **P** **13 51 26.5 +0.2**
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=N,10.0nm,1.1s
VSR pmax pmax
comp=E,30nm,1.0s
ZAK Zakamensk 27.03 49 *e*P **P** **13 51 29.1 +1.8**
ZAK *e* 13 52 12.9
ZAK pmax pmax
comp=Z,1.0nm,1.0s
ZAK pmax pmax
comp=Z,6.0nm,1.6s
CD2 Chengdu 27.81 92 *e*P **P** **13 51 36.5 +2.1**
CD2 pP **pP** **13 52 15.0 +1.0**
CD2 PP **PnPn** **13 52 34.3 +1.9**
CD2 sP **sP** **13 52 38.1 +1.4**
CD2 S **S** **13 56 04.1 +1.2**
CD2 sS **sS** **13 57 12.3 -1.4**
CD2 SS **SnSn** **13 57 42.8 +2.0**
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 pmax pmax
comp=Z,120nm,5.2s
SONM Songino Array 28.38 55 P **P** **13 51 40.6 +1.2**
SONM Songino Array 28.38 55 P **P** **13 51 40.6 +1.2**
comp=Z,1.4nm,0.5s,baz=258,slow=9.1,SNR=10
BRTR Keskin Array B 29.36 288 P **P** **13 51 48.6 +0.5**
BRTR Keskin Array B 29.36 289 P **P** **13 51 48.6 +0.5**
comp=Z,0.8nm,0.6s,baz=109,slow=9.6,SNR=7.2
KMI Kunming 29.48 104 P P 13 51 54.0 +4.6
KMI pmax pmax
comp=Z,8.0nm,1.4s
OBN Obninsk 29.87 319⇑ *i*P **P** **13 51 53.1 +0.9**
OBN *e* 13 52 58.1
OBN pmax pmax
comp=Z,55nm,1.4s
OBN MLR MLR
comp=Z,100nm,18.0s
CMAR Chiang Mai Arr 30.53 119 P **P** **13 51 59.9 +1.4**
CMAR Chiang Mai Arr 30.53 119 P **P** **13 51 59.9 +1.4**
comp=Z,6.6nm,0.8s,baz=299,slow=8.1,SNR=38
HHC Hu-ho-hao-te 31.82 70 *e*P **P** **13 52 09.6 -0.2**
HHC pP **pP** **13 52 49.0 -0.9**
HHC sP **sP** **13 53 10.9 -1.4**
HHC PP **PnPn** **13 53 23.0 +0.2**
HHC S **S** **13 57 04.6 -1.0**
HHC sS **sS** **13 58 14.3 -2.5**
HHC PcS **PcS** **13 58 39.6 -1.1**
HHC SS **SnSn** **13 59 11.4 -7.0**
HHC ScS **ScS** **14 02 17.3 -2.0**
HHC pmax pmax
comp=Z,32nm,1.1s
HHC pmax pmax
comp=Z,130nm,5.0s
ENH Enshi 32.65 90 *e*P **P** **13 52 18.8 +1.8**
comp=Z,5.3nm,0.5s
AKASG Malin Array Be 32.87 309*ce*P **P** **13 52 18.7 +0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.4s
AKASG Malin Array Be 32.87 309 P **P** **13 52 18.8 +0.1**
AKASG Malin Array Be 32.87 309 P **P** **13 52 18.8 +0.1**
comp=Z,1.9nm,0.4s,baz=90,slow=6.6,SNR=23
AK01 Malin Array Si 32.88 309 *e*P **P** **13 52 19.4 +0.7**
AK02 Malin Array Si 32.88 309 *e*P **P** **13 52 18.9 +0.2**
KIEV Kiev 32.88 309 *e*P **P** **13 52 18.7 0.0**
KIEV pmax pmax
comp=Z,5.0nm,0.5s
KIEV Kiev 32.88 309 *e*P **P** **13 52 18.7 0.0**
comp=Z,5.0nm,0.5s
MLR Muntele Rosu 34.70 299 P **P** **13 52 35.1 +0.5**
MLR Muntele Rosu 34.70 299 P **P** **13 52 35.1 +0.5**
comp=Z,0.9nm,0.6s,baz=54,slow=4.2,SNR=7.1
NACGM Naroch 35.14 316 *e* **P** **13 52 35.0 -3.1**
JOF Joensuu 35.81 330 *e*P **P** **13 52 44.5 +0.9**
JOF pmax pmax
comp=Z,9.0nm,0.4s
JOF Joensuu 35.81 330 *ep* **P** **13 52 44.5 +0.9**
comp=Z,8.8nm,0.4s
VSU Vasula 36.12 322*c* *i*P **P** **13 52 46.8 +0.5**
VSU pmax pmax
comp=Z,44nm,1.2s
WHN Wuhan 36.47 87 P **P** **13 52 47.4 -2.2**
KOLS Kolonicke sedl 37.20 305 *e*P **P** **13 52 57.2 +1.6**
KOLS *e* 14 02 52.6
KOLS pmax pmax
comp=Z,9.0nm,1.7s
KOLS Kolonicke sedl 37.20 305 *e*P **P** **13 52 57.2 +1.6**
KOLS *e* 14 02 52.6
FIA1 FINESS Array S 37.42 326 *e*P **P** **13 52 57.7 +0.4**
FINES FINESS Array B 37.42 326 P **P** **13 52 58.2 +0.9**
FINES FINESS Array B 37.42 326 P **P** **13 52 58.2 +0.9**
comp=Z,8.5nm,0.8s,baz=115,slow=9.1,SNR=32
KAF Kangasniemi 37.56 327 *e*P **P** **13 52 57.8 -0.7**
KAF pmax pmax
comp=Z,7.0nm,0.9s
KAF Kangasniemi 37.56 327 *ep* **P** **13 52 57.8 -0.7**
comp=Z,6.9nm,0.9s
APA Apatity 37.58 337⇓ *e*P **P** **13 52 55.5 -3.1**
APA *e**PP pP 13 53 33.3 -6.2
APA MLR MLR
comp=Z,600nm,11.0s
CRVS Cervenica-Dubn 37.73 305 *e*P **P** **13 52 59.9 -0.2**
CRVS Cervenica-Dubn 37.73 305 *e*P **P** **13 52 59.9 -0.2**
KECS Kecovo 38.38 304 *e*P **P** **13 53 06.6 +1.1**
KECS pmax pmax
comp=Z,1.0nm,0.7s
KECS Kecovo 38.38 304 *e*P **P** **13 53 06.6 +1.1**
NIE Niedzica 38.49 306 *e*P **P** **13 53 08.7 +2.2**
NIE Niedzica 38.49 306 *e*P **P** **13 53 08.7 +2.2**
KEV Kevo 40.75 338 *e*P **P** **13 53 24.8 +0.1**
KEV pmax pmax
comp=Z,8.0nm,0.8s
KEV Kevo 40.75 338 *ep* **P** **13 53 24.8 +0.1**
comp=Z,8.0nm,0.8s
DPC Dobruska-Polom 41.06 307 *e*P **P** **13 53 28.9 +1.3**
DPC Dobruska-Polom 41.06 307 *e*P **P** **13 53 28.9 +1.3**
ARCES ARCESS Array B 41.09 338 P **P** **13 53 29.1 +1.5**
ARCES ARCESS Array B 41.09 338 P **P** **13 53 29.1 +1.5**
comp=Z,16nm,0.8s,baz=115,slow=8.1,SNR=31
UPC Upice 41.25 308 *e*P **P** **13 53 30.9 +1.8**
UPC Upice 41.25 308 *e*P **P** **13 53 30.9 +1.8**
CONA Conrad Observa 41.50 304⇑ *i*P **P** **13 53 32.3 +1.0**
comp=Z,8.7nm,1.4s
IPM Ipoh 42.22 132 *e*P **P** **13 53 37.2 -0.1**
comp=Z,21nm,1.0s
PSI Prapat 42.35 136 P **P** **13 53 38.7 +0.1**
PSI Prapat 42.35 136 P **P** **13 53 38.7 +0.1**
comp=Z,11nm,0.9s,baz=304,slow=7.8,SNR=8.4
BRG Berggiesshubel 42.55 308 *e*P **P** **13 53 40.4 +0.8**
comp=Z,13nm,1.5s
BRG
comp=N,127nm,11.3s
BRG
comp=E,1μm,18.9s
BRG
comp=Z,102nm,21.1s
BRG Berggiesshubel 42.55 308 *e*P **P** **13 53 40.4 +0.8**
BRG pmax pmax
comp=Z,13nm,1.5s
BRG MLR MLR
comp=N,127nm,11.3s
BRG MLR MLR
comp=E,1μm,18.9s
BRG MLR MLR
comp=Z,102nm,21.1s
GERES GERESS Array B 42.85 305 P **P** **13 53 42.7 +0.5**
GERES PP **PcP** **13 55 29.1 -0.3**
GERES ScP **ScP** **13 58 57.9 -3.9**
GERES GERESS Array B 42.85 305 P **P** **13 53 42.7 +0.5**
comp=Z,0.5nm,0.5s,baz=79,slow=7.2,SNR=8.3
GERES PP **PcP** **13 55 29.1 -0.3**
comp=Z,1.6nm,1.1s,baz=89,slow=9.6,SNR=5.9
GERES ScP **ScP** **13 58 57.9 -3.9**
comp=Z,0.8nm,0.8s,baz=90,slow=6.7,SNR=5.0
KHC Kasperske Hory 42.91 306 *e*P **P** **13 53 40.4 -2.2**
KHC Kasperske Hory 42.91 306 *e*P **P** **13 53 40.4 -2.2**
CLL Collm 43.12 309 *e*P **P** **13 53 47.0 +2.9**
CLL Collm 43.12 309 *e*(P) **P** **13 53 47.0 +2.9**
NKC Novy Kostel 43.54 307 *e*P **P** **13 53 48.1 +0.5**
NKC Novy Kostel 43.54 307 *e*P **P** **13 53 48.1 +0.5**
NB2 NORSAR Subarra 44.31 323 P **P** **13 53 53.7 +0.1**
comp=Z,42nm,1.4s,baz=95,slow=7.9
NB2 NORSAR Subarra 44.31 323 P **P** **13 53 53.7 +0.1**
baz=95,slow=7.9
NOA NORSAR Array B 44.31 323 P **P** **13 53 53.7 +0.1**
NOA NORSAR Array B 44.31 323 P **P** **13 53 53.7 +0.1**
comp=Z,12nm,0.9s,baz=96,slow=7.8,SNR=36
GRF Grafenberg Arr 44.38 307 *e*P **P** **13 53 55.9 +1.6**
comp=Z,25nm,1.7s
GRF Grafenberg Arr 44.38 307 *e*P **P** **13 53 55.9 +1.6**
GRF pmax pmax
comp=Z,1.0nm,1.7s
KSAR Wonju Array Be 44.91 71 P **P** **13 53 58.8 +0.2**
KSRS Korea Array 44.94 71 P **P** **13 53 58.8 0.0**
comp=Z,1.3nm,1.0s,baz=270,slow=7.6,SNR=4.0
DAVA Damuels 45.60 304⇑ *i*P **P** **13 54 03.9 -0.1**
comp=Z,6.5nm,0.5s
TIXI Tiksi 45.78 22⇑ *e*P **P** **13 54 06.3 +1.4**
TIXI pmax pmax
comp=Z,16nm,1.2s
LPG La Plagne 48.07 302 *e*P **P** **13 54 24.4 +1.0**
LPG La Plagne 48.07 302 *e*P **P** **13 54 24.4 +1.0**
LPG La Plagne 48.07 302 *e*P **P** **13 54 24.4 +1.0**
LPL La Plagne 48.08 302 *e*P **P** **13 54 23.8 +0.4**
LPL La Plagne 48.08 302 *e*P **P** **13 54 23.8 +0.4**
LPL La Plagne 48.08 302 *e*P **P** **13 54 23.8 +0.4**
MBDF Montbardon 48.23 301 *e*P **P** **13 54 25.5 +1.0**
comp=Z,8.0nm,0.5s
MBDF Montbardon 48.23 301 *e*P **P** **13 54 25.5 +1.0**
MBDF pmax pmax
comp=Z,8.0nm,0.5s
MBDF Montbardon 48.23 301 *e*P **P** **13 54 25.5 +1.0**
comp=Z,8.0nm,0.5s
CABF La Chapelle 48.27 303 *e*P **P** **13 54 24.2 -0.5**
comp=Z,15nm,0.8s
CABF La Chapelle 48.27 303 *e*P **P** **13 54 24.2 -0.5**
CABF pmax pmax
comp=Z,15nm,0.8s
CABF La Chapelle 48.27 303 *e*P **P** **13 54 24.2 -0.5**
comp=Z,15nm,0.8s
KBS Kingsbay 48.57 347⇑ *e*P **P** **13 54 28.9 +2.6**
KBS pmax pmax
comp=Z,55nm,2.5s
KMBO Kilima Mbogo 48.79 227 P **P** **13 54 30.5 +1.4**
KMBO Kilima Mbogo 48.79 227 P **P** **13 54 30.5 +1.4**
comp=Z,2.9nm,0.6s,baz=39,slow=13,SNR=10
BAIF Baives 48.82 308 *e*P **P** **13 54 29.5 +0.9**
comp=Z,6.9nm,0.9s
BAIF Baives 48.82 308 *e*P **P** **13 54 29.5 +0.9**
BAIF pmax pmax
comp=Z,7.0nm,0.9s
BAIF Baives 48.82 308 *e*P **P** **13 54 29.5 +0.9**
comp=Z,6.9nm,0.9s
KEST Kesra 48.96 288 P **P** **13 54 30.9 +0.9**
VIVF Saint-Julien-l 49.65 301 *e*P **P** **13 54 35.2 +0.1**
comp=Z,3.1nm,0.5s
VIVF Saint-Julien-l 49.65 301 *e*P **P** **13 54 35.2 +0.1**
VIVF pmax pmax
comp=Z,3.0nm,0.5s
VIVF Saint-Julien-l 49.65 301 *e*P **P** **13 54 35.2 +0.1**
comp=Z,3.1nm,0.5s
SMF Signal de Mont 49.78 304 *e*P **P** **13 54 36.0 0.0**
comp=Z,7.7nm,0.8s
SMF Signal de Mont 49.78 304 *e*P **P** **13 54 36.0 0.0**
SMF pmax pmax
comp=Z,8.0nm,0.8s
SMF Signal de Mont 49.78 304 *e*P **P** **13 54 36.0 0.0**
comp=Z,7.7nm,0.8s
AVF Avril sur Loir 50.07 304 *e*P **P** **13 54 39.4 +1.3**
comp=Z,9.1nm,0.8s
AVF Avril sur Loir 50.07 304 *e*P **P** **13 54 39.4 +1.3**
AVF pmax pmax
comp=Z,9.0nm,0.8s
AVF Avril sur Loir 50.07 304 *e*P **P** **13 54 39.4 +1.3**
comp=Z,9.1nm,0.8s
ETSF Etsaut 53.84 300 *e*P **P** **13 55 06.5 +0.4**
comp=Z,4.9nm,0.4s
ETSF Etsaut 53.84 300 *e*P **P** **13 55 06.5 +0.4**
ETSF pmax pmax
comp=Z,5.0nm,0.4s
ETSF Etsaut 53.84 300 *e*P **P** **13 55 06.5 +0.4**
comp=Z,4.9nm,0.4s
ESDC Sonseca Array 57.38 298 P **P** **13 55 31.0 -0.3**
ESDC Sonseca Array 57.38 298 P **P** **13 55 31.0 -0.3**
comp=Z,0.2nm,0.3s,baz=58,slow=8.7,SNR=7.1
BILL Bilibino 58.62 26 *e*P **P** **13 55 41.0 +1.6**
BILL *e**PP **PcP** **13 56 27.3 0.0**
BILL pmax pmax
comp=Z,8.0nm,1.2s
SUMG Summit 61.01 341 *e*P **P** **13 55 56.7 +0.6**
SUMG pmax pmax
comp=Z,8.0nm,1.0s
SUMG Summit 61.01 341 *e*P **P** **13 55 56.7 +0.6**
comp=Z,7.7nm,1.0s
TORD Torodi Ar. Bea 65.64 269 P **P** **13 56 25.3 -1.6**
TORD Torodi Ar. Bea 65.64 269 P **P** **13 56 25.3 -1.6**
comp=Z,7.5nm,0.4s,baz=50,slow=6.0,SNR=176
COLD Coldfoot 71.96 16 *e*P **P** **13 57 06.2 +1.2**
comp=Z,6.1nm,1.0s
COLA College 74.47 16 *e*P **P** **13 57 20.3 +0.6**
COLA pmax pmax
comp=Z,5.0nm,0.8s
COLA College 74.47 16 *e*P **P** **13 57 20.3 +0.6**
comp=Z,4.8nm,0.8s
LBTB Lobatse 74.65 222 *e*P **P** **13 57 21.7 +0.3**
comp=Z,5.0nm,0.6s
ILAR Eielson Array 74.77 16 P **P** **13 57 21.9 +0.4**
ILAR Eielson Array 74.77 16 P **P** **13 57 21.9 +0.4**
comp=Z,0.9nm,0.5s,baz=304,slow=4.6,SNR=22
TRF Thorofare Moun 75.11 18 *e*P **P** **13 57 24.6 +0.9**
BOSA Boshof 77.72 220 P **P** **13 57 38.5 -0.2**
BOSA Boshof 77.72 220 P **P** **13 57 38.5 -0.2**
comp=Z,1.8nm,0.4s,baz=40,slow=3.0,SNR=12
YKA Yellowknife Ar 81.22 3 P **P** **13 57 57.4 +0.4**
YKA Yellowknife Ar 81.22 3 P **P** **13 57 57.3 +0.4**
comp=Z,2.1nm,0.5s,baz=350,slow=5.4,SNR=20
WRA Warramunga Arr 82.07 122 P **P** **13 58 01.2 -0.8**
WRA Warramunga Arr 82.07 122 P **P** **13 58 01.2 -0.8**
comp=Z,6.2nm,0.7s,baz=324,slow=5.0,SNR=45
WRAB Tennant Creek 82.07 122 *e*P **P** **13 58 01.3 -0.8**
WRAB pmax pmax
comp=Z,7.0nm,0.9s
WRAB Tennant Creek 82.07 122 *e*P **P** **13 58 01.3 -0.8**
comp=Z,7.2nm,0.9s
ASAR Alice Springs 84.33 125 P **P** **13 58 12.8 -0.7**
ASAR Alice Springs 84.33 125 P **P** **13 58 12.8 -0.7**
comp=Z,4.4nm,0.7s,baz=309,slow=5.0,SNR=68
FFC Flin Flon 88.91 356 *i* P **P** **13 58 36.8 +1.5**
STKA Stephens Creek 94.87 126 P **P** **13 59 03.5 +0.4**
STKA Stephens Creek 94.87 126 P **P** **13 59 03.5 +0.4**
comp=Z,3.2nm,1.1s,baz=248,slow=20,SNR=3.4

CPUP	Villa Florida	135.14	268	PKP	PKPdf	14 04 58.6	-1.0
CPUP	Villa Florida	135.14	268	PKP	PKPdf	14 04 58.6	-1.0
	comp=Z,0.5nm,0.4s,baz=337,slow=8.9,SNR=3.8						
PLCA	Paso Flores	149.77	250	PKPbc	PKPbc	14 05 29.9	0.0
PLCA	Paso Flores	149.77	250	PKPbc	PKPbc	14 05 29.9	0.0
	comp=Z,5.6nm,0.9s,baz=102,slow=1.6,SNR=6.2						

DDA ***21*** *14:00:28.9, 40.02N×25.49E, h20km, MD4.0*
BEO ***21*** *14:00:29.1±1.5, 39.59N×25.74E, h0km, ML4.0/8*
ISK ***21*** *14:00:30.3, 39.89N×25.60E, h3km, ML4.2*
ISCJB ***21*** *14:00:31.4±0.4, 39.93N±0.01×25.63E±0.02, h6km±3km, mb3.3/7, MS3.0/1, Error ellipse: s-maj=2.2km s-min=2.0km az=30.4*
IDC ***21*** *14:00:31.8±1.2, 39.90N×25.79E, h0km, mb3.4/7, mb1 3.6/13, mb1mx3.5/33, mbtmp3.6/13, ML3.6/6, MS2.9/4, Ms1 2.9/4, ms1mx2.5/31, Error ellipse: s-maj=17.9km s-min=16.7km az=96.0*
ATH ***21*** *14:00:31.8, 39.93N×25.61E, h24km, ML3.8*
CSEM ***21*** *14:00:31.8±0.1, 39.92N×25.61E, h2km, ML3.8, Error ellipse: s-maj=1.6km s-min=1.3km az=176.0*
THE ***21*** *14:00:32.1, 39.92N×25.62E, h2km±1km, ML4.1/6, Error ellipse: s-maj=1.6km s-min=0.5km az=33.0*
SOF ***21*** *14:00:34.7, 40.19N×25.49E, h2km, MD3.7*

ISC 21 14:00:32.1±1.1, 39.91N±0.02×25.62E±0.02, h1km±8km, n342, σ0°88/377, mb3.4/7, 12C-7D, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BOZC	Bozcaada	0.34	101	*i*	P		Pg	14 00 38.5	0.0
EZN	Ezine	0.55	98		PG		Pg	14 00 42.5	-0.1
EZN					eSG		Sg	14 00 50.8	+1.1
EZN	Ezine	0.55	98	*i*	Pg		Pg	14 00 42.5	-0.1
EZN					eSg		Sg	14 00 50.8	+1.1
SMTH	Samothraki Isl	0.57	353		ePN		Pg	14 00 43.0	0.0
SMTH					eSN		Sg	14 00 50.5	+0.2
SMTH	Samothraki Isl	0.57	353		ePn		Pg	14 00 43.0	0.0
SMTH					eSn		Sg	14 00 50.5	+0.2
SIGR	SIGRI	0.72	165		P		Pg	14 00 46.2	+0.4
SIGR					S		Sb	14 00 56.8	-0.9
SIGR	SIGRI	0.72	165		P		Pg	14 00 46.2	+0.4
SIGR					S		Sb	14 00 56.8	-0.9
GELI	Tayfur-Gelibol	0.82	53		PG		Pg	14 00 47.0	-0.8
GELI					eSG		Sg	14 00 58.6	+0.2
GELI	Tayfur-Gelibol	0.82	53	*i*	Pg		Pg	14 00 47.0	-0.8
GELI					eSg		Sg	14 00 58.6	+0.2
PRK	Paraskevi	0.83	142		P		Pb	14 00 48.4	-0.9
PRK					S		Sb	14 01 00.0	-0.9
PRK	Paraskevi	0.83	142		ePN		Pb	14 00 48.6	-0.7
PRK					eSN		Sb	14 01 00.4	-0.5
PRK	Paraskevi	0.83	142		P		Pb	14 00 48.4	-0.9
PRK					S		Sb	14 01 00.0	-0.9
ENEZ	Enez	0.92	26		PG		Pg	14 00 49.3	-0.5
ENEZ	Enez	0.92	26	*i*	Pg		Pg	14 00 49.3	-0.5
LPK	Lapseki	0.99	62		PG		Pg	14 00 50.1	-1.0
LPK	Lapseki	0.99	62	*i*	Pg		Pg	14 00 50.1	-1.0
AYVA	Ayvalik	1.02	126	*i*	P		Pg	14 00 51.1	-0.5
AYVA	Ayvalik	1.02	126	*i*	P		Pg	14 00 51.1	-0.5
ERIK	Erikli-Kesan	1.02	42		ePG		Pg	14 00 50.8	-0.9
ERIK	Erikli-Kesan	1.02	42		ePg		Pg	14 00 50.8	-0.9
ALN	Alexandroupoli	1.04	18		P		Pg	14 00 51.2	-0.8
ALN					S		Sg	14 01 05.2	-0.3
ALN	Alexandroupoli	1.04	18		ePN		Pg	14 00 51.3	-0.8
ALN					eSN		Sg	14 01 05.2	-0.3
ALN	Alexandroupoli	1.04	18		P		Pg	14 00 51.2	-0.8
ALN					S		Sg	14 01 05.2	-0.3
OUR	Ouranopolis	1.33	289		P		Pg	14 00 56.5	-1.0
OUR	Ouranopolis	1.33	289		P		Pg	14 00 56.5	-1.0
KRBG	Karabiga-Canak	1.37	69		ePN		Pg	14 00 57.0	-1.4
KRBG	Karabiga-Canak	1.37	69		ePn		Pg	14 00 57.0	-1.4
KAVA	Kavala	1.38	323		P		Pn	14 00 57.0	-1.4
KAVA	Kavala	1.38	323		P		Pn	14 00 57.0	-1.4
RKY	Sarkoy-Tekirda	1.42	56		ePN		Pn	14 00 57.7	-1.4
RKY	Sarkoy-Tekirda	1.42	56		ePn		Pn	14 00 57.7	-1.4
PAIG	Paliouri	1.49	271		P		Pn	14 00 58.9	-1.1
PAIG					S		Sn	14 01 20.2	+0.1
PAIG	Paliouri	1.49	271		ePN		Pn	14 00 58.8	-1.2
PAIG					eSN		Sb	14 01 18.7	-1.3
PAIG	Paliouri	1.49	271		P		Pn	14 00 58.9	-1.1
PAIG					eSn		Sb	14 01 18.7	-1.3
PAIG					S		Sn	14 01 20.2	+0.1
AOS	Alonnisos	1.53	242		P		Pn	14 00 59.8	-0.8
AOS					S		Sg	14 01 21.3	-0.1
AOS	Alonnisos	1.53	242		ePN		Pn	14 00 59.9	-0.7
AOS					eSN		Sn	14 01 20.2	+0.1
AOS	Alonnisos	1.53	242		ePn		Pn	14 00 59.9	-0.7
AOS					eSn		Sn	14 01 20.2	-0.9
AOS					S		Sg	14 01 21.3	-0.1
MFT	Murefte	1.54	55		ePN		Pn	14 01 00.2	-0.5
MFT	Murefte	1.54	55		ePn		Pn	14 01 00.3	-0.5
BALY	Balya	1.55	96	*i*	P		Pn	14 00 60.0	-0.8
BALY	Balya	1.55	96	*i*	P		Pn	14 01 00.0	-0.8
CHOS	Chios island	1.56	167		P		Pn	14 00 59.8	-1.1
CHOS					S		Sg	14 01 22.0	-0.1
CHOS	Chios island	1.56	167		ePN		Pn	14 00 59.9	-1.0
CHOS					eSN		Sn	14 01 21.3	-0.4
CHOS	Chios island	1.56	167		ePn		Pn	14 00 59.9	-1.0
CHOS					eSn		Sn	14 01 21.3	-0.4
CHOS					S		Sg	14 01 22.0	-0.1
PLG	Polygyros	1.73	286		P		Pn	14 01 02.5	-0.8
PLG	Polygyros	1.73	286		ePN		Pn	14 01 02.4	-0.8
PLG					eSN		Sn	14 01 23.6	-2.4
PLG	Polygyros	1.73	286		P		Pn	14 01 02.5	-0.8
PLG					eSn		Sn	14 01 23.6	-2.4
KDZ	Kurdzhali	1.75	355		P		Pn	14 01 01.8	-1.7
KDZ	Kurdzhali	1.75	355		P		Pn	14 01 01.8	-1.7
BALB	Balikesir	1.76	98		ePN		Pn	14 01 03.0	-0.7
BALB	Balikesir	1.76	98		ePn		Pn	14 01 03.0	-0.7
TKR	Tekirdag	1.82	53		ePN		Pn	14 01 04.1	-0.4
TKR	Tekirdag	1.82	53		ePn		Pn	14 01 04.1	-0.4
BNT	Bandirma	1.82	75		ePN		Pn	14 01 03.3	-1.2
BNT	Bandirma	1.82	75		ePn		Pn	14 01 03.3	-1.2
SKIA	Skiathos	1.82	247		P		Pn	14 01 03.5	-1.0
SKIA	Skiathos	1.82	247		P		Pn	14 01 03.5	-1.0
BLCB	Balcova	1.88	144		ePN		Pn	14 01 04.0	-1.3
BLCB	Balcova	1.88	144		ePn		Pn	14 01 04.0	-1.3
RZN	Rozhen	1.91	339		P		Pn	14 01 04.7	-1.2
RZN	Rozhen	1.91	339		P		Pn	14 01 04.7	-1.2
NEO	Neokhori	1.95	253		P		Pn	14 01 05.0	-1.3
NEO	Neokhori	1.95	253		ePB		Pn	14 01 05.0	-1.3
NEO					eSN		Sn	14 01 30.1	-1.2
NEO	Neokhori	1.95	253		P		Pn	14 01 05.0	-1.3
NEO					eSn		Sn	14 01 30.1	-1.2
XOR	Xorichti	1.95	255		P		Pn	14 01 05.2	-1.1
XOR	Xorichti	1.95	255		P		Pn	14 01 05.2	-1.1
SOH	Sokhos	1.96	299		P		Pn	14 01 05.5	-0.9
SOH	Sokhos	1.96	299		ePN		Pn	14 01 05.5	-0.9
SOH					eSN		Sn	14 01 30.3	-1.4
SOH	Sokhos	1.96	299		P		Pn	14 01 05.5	-0.9
SOH					eSn		Sn	14 01 30.3	-1.4
SRS	Serrai	1.96	309		P		Pn	14 01 05.3	-1.2
SRS	Serrai	1.96	309		P		Pn	14 01 05.3	-1.2
NVR	Nevrokopi	1.97	318		P		Pn	14 01 05.4	-1.1
NVR	Nevrokopi	1.97	318		ePN		Pn	14 01 05.5	-1.1
NVR					eSN		Sn	14 01 30.2	-1.7
NVR	Nevrokopi	1.97	318		ePn		Pn	14 01 05.5	-1.1
NVR					eSn		Sn	14 01 30.2	-1.7
IZM	Izmir	1.98	139		ePN		Pn	14 01 06.1	-0.6
IZM	Izmir	1.98	139		ePn		Pn	14 01 06.1	-0.6
MRKA	Markates	1.98	233		P		Pn	14 01 05.6	-1.1
MRKA	Markates	1.98	233		P		Pn	14 01 05.6	-1.1
AKHS	Akhisar	1.99	120	*i*	P		Pn	14 01 06.4	-0.4
AKHS	Akhisar	1.99	120	*i*	P		Pn	14 01 06.4	-0.4
HORT	Hortiatis	2.05	290		P		Pn	14 01 06.9	-0.8
HORT	Hortiatis	2.05	290		P		Pn	14 01 06.9	-0.8
MRMA	Marmari	2.08	208		P		Pn	14 01 07.5	-0.6
MRMA	Marmari	2.08	208		P		Pn	14 01 07.5	-0.6
EDRB	Edirne	2.12	23		ePN		Pn	14 01 08.3	-0.3
EDRB	Edirne	2.12	23		P		Pn	14 01 06.7	-1.9
EDRB	Edirne	2.12	23		P		Pn	14 01 06.7	-1.9
EDRB	Edirne	2.12	23		ePn		Pn	14 01 08.3	-0.3
KCTX	Karacabey (Bur	2.13	79		ePN		Pn	14 01 07.9	-0.9
KCTX	Karacabey (Bur	2.13	79		ePn		Pn	14 01 07.9	-0.9
SMIA	Simia	2.13	242		P		Pn	14 01 08.3	-0.5
SMIA	Simia	2.13	242		P		Pn	14 01 08.3	-0.5
DIM	Dimitrovgrad	2.14	358		P		Pn	14 01 08.8	-0.1
DIM					Pg		Pb	14 01 11.7	+0.1
DIM	Dimitrovgrad	2.14	358		P		Pn	14 01 08.8	-0.1
MMB	Musomiste	2.21	320	*i*	P		Pn	14 01 08.6	-1.3
MMB	Musomiste	2.21	320	*i*	P		Pn	14 01 08.6	-1.3
PLD	Plovdiv	2.30	343		P		Pb	14 01 14.9	+0.5
PLD	Plovdiv	2.30	343		P		Pb	14 01 14.9	+0.5
PTL	Penteli	2.31	217		P		Pn	14 01 10.0	-1.2
PTL	Penteli	2.31	217		ePN		Pn	14 01 09.9	-1.2
PTL	Penteli	2.31	217		P		Pn	14 01 10.0	-1.2
ATAL	Atalanti	2.35	240		P		Pn	14 01 11.2	-0.6
ATAL	Atalanti	2.35	240		P		Pn	14 01 11.2	-0.6
SLVT	Silivri	2.37	55		ePN		Pn	14 01 12.0	-0.1
SLVT	Silivri	2.37	55		ePn		Pn	14 01 12.0	-0.1
LKR	Lokris	2.39	239		ePN		Pn	14 01 11.5	-0.8
LKR	Lokris	2.39	239		ePn		Pn	14 01 11.5	-0.8
SMG	Samos	2.39	156		ePN		Pn	14 01 11.3	-1.1
SMG	Samos	2.39	156		ePn		Pn	14 01 11.3	-1.1
LIT	Litokhoron	2.41	276		P		Pn	14 01 11.9	-0.8
LIT	Litokhoron	2.41	276		ePN		Pn	14 01 11.9	-0.8
LIT	Litokhoron	2.41	276		P		Pn	14 01 11.9	-0.8
KNT	Kendrikon	2.42	302		P		Pn	14 01 12.4	-0.4
KNT	Kendrikon	2.42	302		P		Pn	14 01 12.4	-0.4
ATH	Athens Observa	2.44	218		ePN		Pn	14 01 12.5	-0.5
ATH	Athens Observa	2.44	218		ePn		Pn	14 01 12.5	-0.5
ORLT	Orhaneli	2.52	86		ePN		Pn	14 01 13.7	-0.5
ORLT	Orhaneli	2.52	86		ePn		Pn	14 01 13.7	-0.5
MDNY	Mudanya-Bursa	2.54	79		ePN		Pn	14 01 14.7	+0.3
MDNY	Mudanya-Bursa	2.54	79		ePn		Pn	14 01 14.7	+0.3
CTYL	Yal??k??y-??at	2.56	51		ePN		Pn	14 01 14.4	-0.3
CTYL	Yal??k??y-??at	2.56	51		ePn		Pn	14 01 14.4	-0.3
AXAR	Agios Charalam	2.56	245		P		Pn	14 01 14.4	-0.3
AXAR	Agios Charalam	2.56	245		P		Pn	14 01 14.4	-0.3
ARMT	Armutlu	2.57	74		ePN		Pn	14 01 14.5	-0.3
ARMT	Armutlu	2.57	74		ePn		Pn	14 01 14.5	-0.3
CTKS	Kestanelik-??a	2.57	58		ePN		Pn	14 01 14.8	-0.4
CTKS	Kestanelik-??a	2.57	58		ePn		Pn	14 01 14.8	0.0
JMB	Yambol	2.66	16		P		Pn	14 01 15.7	-0.3
JMB	Yambol	2.66	16		P		Pg	14 01 21.6	-1.4
JMB	Yambol	2.66	16		P		Pn	14 01 15.7	-0.3
JMB					eSn		Sb	14 01 52.8	-0.8
GRG	Griva	2.67	294		P		Pn	14 01 16.0	-0.2
GRG	Griva	2.67	294		ePB		Pn	14 01 16.2	0.0
GRG	Griva	2.67	294		P		Pn	14 01 16.0	-0.2
AGG	Agios Georgios	2.70	252		P		Pn	14 01 16.2	-0.4
AGG	Agios Georgios	2.70	252		ePN		Pn	14 01 16.1	-0.5
AGG	Agios Georgios	2.70	252		ePn		Pn	14 01 16.1	-0.5
NAIG	Nisos Aigina	2.72	218		ePN		Pn	14 01 16.5	-0.3
NAIG	Nisos Aigina	2.72	218		ePn		Pn	14 01 16.5	-0.3
BGKT	Bogazkoy	2.72	61		ePN		Pn	14 01 16.7	-0.1
BGKT	Bogazkoy	2.72	61		ePn		Pn	14 01 16.7	-0.1
VAY	Valandovo	2.72	302		ePn		Pn	14 01 17.7	+0.9
VAY					eSn		Sb	14 01 54.0	-1.3
VAY	Valandovo	2.72	302		ePN		Pn	14 01 17.7	+0.9
VAY					eSN		Sb	14 01 54.0	-1.3
KULA	Kula-Manisa	2.74	120		ePN		Pn	14 01 16.6	-0.6
KULA	Kula-Manisa	2.74	120		P		Pn	14 01 16.9	-0.3
KULA	Kula-Manisa	2.74	120		P		Pn	14 01 16.9	-0.3
KKB	Krupnik	2.74	316		P		Pn	14 01 16.6	-0.6
KKB	Krupnik	2.74	316		P		Pn	14 01 16.6	-0.6
GEMT	Gemlik	2.79	78		ePN		Pn	14 01 18.2	+0.5
GEMT	Gemlik	2.79	78		ePn		Pn	14 01 18.2	+0.5
LTK	Loutraki	2.80	229		P		Pn	14 01 17.4	-0.5
LTK	Loutraki	2.80	229		ePN		Pn	14 01 17.1	-0.8
LTK	Loutraki	2.80	229		ePn		Pn	14 01 17.1	-0.8
LTK	Loutraki	2.80	229		P		Pn	14 01 17.4	-0.5
THL	Klokotos Trika	2.80	264		P		Pn	14 01 17.6	-0.4
THL	Klokotos Trika	2.80	264		ePN		Pn	14 01 17.6	-0.4
THL	Klokotos Trika	2.80	264		P		Pn	14 01 17.6	-0.4
DSF	Desfina	2.83	239		P		Pn	14 01 17.6	-0.8
DSF	Desfina	2.83	239		P		Pn	14 01 17.6	-0.8
BUY	Buyukada	2.83	69	*i*	P		Pn	14 01 17.2	-1.2
BUY				*i*	S		Sg	14 02 02.5	-0.6
BUY	Buyukada	2.83	69	*i*	P		Pn	14 01 17.2	-1.2
APE	Apeiranthos	2.83	181		ePN		Pn	14 01 18.3	-0.2
APE	Apeiranthos	2.83	181		P		Pn	14 01 17.7	-0.8
APE	Apeiranthos	2.83	181	‖	iP		Pn	14 01 18.5	0.0
APE	Apeiranthos	2.83	181		P		Pn	14 01 17.7	-0.8
APE	Apeiranthos	2.83	181		ePn		Pn	14 01 18.3	-0.2
AYDN	Tasoluk	2.85	141	*i*	P		Pn	14 01 18.1	-0.7
AYDN	Tasoluk	2.85	141	*i*	P		Pn	14 01 18.1	-0.7
PGB	Panagyurishte	2.86	338		P		Pn	14 01 17.9	-0.9
PGB	Panagyurishte	2.86	338		P		Pn	14 01 17.9	-0.9
ISK	Istanbul-Kandi	2.87	65		ePN		Pn	14 01 18.5	-0.4
ISK	Istanbul-Kandi	2.87	65		P		Pn	14 01 18.0	-0.9
ISK	Istanbul-Kandi	2.87	65		P		Pn	14 01 18.0	-0.9
ISK	Istanbul-Kandi	2.87	65		ePn		Pn	14 01 18.5	-0.4
KLYT	Kilyos	2.93	62		ePN		Pn	14 01 19.6	-0.2
KLYT	Kilyos	2.93	62		ePn		Pn	14 01 19.6	-0.2
KZN	Kozani	2.98	279		ePN		Pn	14 01 20.4	-0.1
KZN	Kozani	2.98	279		ePn		Pn	14 01 20.4	-0.1
TVSB	Tavsanli	3.00	98		ePN		Pn	14 01 20.4	-0.4
TVSB	Tavsanli	3.00	98		ePn		Pn	14 01 20.4	-0.4
DID	Didima	3.04	219		P		Pn	14 01 20.1	-1.2
DID	Didima	3.04	219		ePN		Pn	14 01 20.1	-1.2
DID	Didima	3.04	219		P		Pn	14 01 20.1	-1.2
KALE	Kalithea	3.10	242		P		Pn	14 01 21.8	-0.4
KALE	Kalithea	3.10	242		ePN		Pn	14 01 21.9	-0.3
KALE	Kalithea	3.10	242		P		Pn	14 01 21.8	-0.4
MLSB	Milas	3.11	146		ePN		Pn	14 01 20.9	-1.2
MLSB	Milas	3.11	146		ePn		Pn	14 01 21.0	-1.2
EVR	Evrytania	3.11	253		ePN		Pn	14 01 22.4	0.0
EVR	Evrytania	3.11	253		ePn		Pn	14 01 22.4	0.0
BODT	Bodrum	3.13	154		ePN		Pn	14 01 22.2	-0.4
BODT	Bodrum	3.13	154		ePn		Pn	14 01 22.2	-0.4
TRIZ	Trizonia	3.16	242		P		Pn	14 01 22.7	-0.2
TRIZ	Trizonia	3.16	242		ePN		Pn	14 01 22.8	-0.2
TRIZ	Trizonia	3.16	242		P		Pn	14 01 22.7	-0.2
ADVT	Abdulvahap	3.20	79		ePN		Pn	14 01 23.6	+0.2
ADVT	Abdulvahap	3.20	79		ePn		Pn	14 01 23.6	+0.2
HRT	Hereke	3.22	72		ePN		Pn	14 01 23.9	+0.1
HRT	Hereke	3.22	72		ePn		Pn	14 01 23.9	+0.1
GUR	Goura	3.23	233		P		Pn	14 01 23.6	-0.3
GUR	Goura	3.23	233		P		Pn	14 01 23.6	-0.3
VTS	Vitosha	3.24	327		P		Pn	14 01 24.0	-0.2
VTS	Vitosha	3.24	327		P		Pn	14 01 24.0	-0.2
VTS	Vitosha	3.24	327		ePn		Pn	14 01 25.0	+0.8
VTS	Vitosha	3.24	327	‖	iP		Pn	14 01 23.9	-0.2
VTS	Vitosha	3.24	327		P		Pn	14 01 24.0	-0.2
VTS	Vitosha	3.24	327		ePn		Pn	14 01 25.0	+0.8
EFP	Efpalio	3.24	244		ePN		Pn	14 01 24.5	+0.2
EFP	Efpalio	3.24	244		ePn		Pn	14 01 24.3	+0.2
CAVI	Cavuskoy	3.25	83		ePN		Pn	14 01 24.7	+0.5
CAVI	Cavuskoy	3.25	83		ePn		Pn	14 01 24.7	+0.5
KLV	Kalavryta, Ach	3.28	237		ePN		Pn	14 01 24.0	-0.7
KLV	Kalavryta, Ach	3.28	237		ePn		Pn	14 01 24.0	-0.7
LAKA	Lakka	3.29	241		ePN		Pn	14 01 25.1	+0.4
LAKA	Lakka	3.29	241		ePn		Pn	14 01 25.1	+0.4
SILT	Sile	3.31	67		ePN		Pn	14 01 24.7	-0.2
SILT	Sile	3.31	67		ePn		Pn	14 01 24.7	-0.2
PVL	Pavlikeni	3.31	356		P		Pn	14 01 23.5	-1.5
PVL	Pavlikeni	3.31	356		P		Pn	14 01 23.5	-1.5
FNA	Florina	3.36	286		P		Pn	14 01 25.4	-0.3
FNA	Florina	3.36	286		ePN		Pn	14 01 25.1	-0.6
FNA	Florina	3.36	286		ePn		Pn	14 01 25.1	-0.6
FNA	Florina	3.36	286		P		Pn	14 01 25.4	-0.3
SZH	Strazhica	3.37	4		P		Pn	14 01 24.9	-0.8
SZH	Strazhica	3.37	4		P		Pn	14 01 24.9	-0.8
KHL	Karahalli	3.42	116		ePN		Pn	14 01 26.1	-0.5
KHL	Karahalli	3.42	116		ePn		Pn	14 01 26.1	-0.5
DENT	Denizli	3.42	128		ePN		Pn	14 01 26.6	0.0
DENT	Denizli	3.42	128		ePn		Pn	14 01 26.6	0.0
YER	Yerkesik	3.47	142		ePN		Pn	14 01 26.6	-0.6
YER	Yerkesik	3.47	142		ePn		Pn	14 01 26.6	-0.6
DAT	Datca	3.53	154		ePN		Pn	14 01 27.1	-1.0
DAT	Datca	3.53	154		ePn		Pn	14 01 27.1	-1.0
PRD	Provadia	3.55	22		P		Pn	14 01 26.6	-1.7
PRD	Provadia	3.55	22		P		Pn	14 01 26.6	-1.7
ALT	Altintas	3.58	102		ePN		Pn	14 01 28.6	-0.1
ALT	Altintas	3.58	102		P		Pn	14 01 29.0	+0.3
ALT	Altintas	3.58	102		ePn		Pn	14 01 28.6	-0.1
ALT	Altintas	3.58	102		P		Pn	14 01 29.0	+0.3
GPA	Golpazari	3.62	82		ePN		Pn	14 01 29.3	+0.1
GPA	Golpazari	3.62	82		ePn		Pn	14 01 29.3	+0.1
SPNC	Sapanca-Adapaz	3.67	76		ePN		Pn	14 01 29.8	-0.1
SPNC	Sapanca-Adapaz	3.67	76		ePn		Pn	14 01 29.8	-0.1
MPEP	Malo Peshtene	3.72	338		P		Pn	14 01 30.3	-0.4
RLS	Riolos of Patr	3.73	242		ePN		Pn	14 01 31.1	+0.4
RLS	Riolos of Patr	3.73	242		ePn		Pn	14 01 31.1	+0.4
GULT	Gulveren	3.79	80		ePN		Pn	14 01 31.7	+0.1
GULT	Gulveren	3.79	80		ePn		Pn	14 01 31.7	+0.1
AMT	Artemida-Makis	3.87	233		ePN		Pn	14 01 32.5	-0.2
AMT	Artemida-Makis	3.87	233		ePn		Pn	14 01 32.5	-0.2
ITM	Ithomi	3.98	228		ePN		Pn	14 01 34.3	+0.2
ITM	Ithomi	3.98	228		ePn		Pn	14 01 34.3	+0.2
LKD2	Lefkada island	4.01	255		ePN		Pn	14 01 35.1	+0.5
LKD2	Lefkada island	4.01	255		ePn		Pn	14 01 35.1	+0.5
ZAPS	Zavoj	4.04	327		ePn		Pn	14 01 36.4	+1.3
SHUT	Suhut-Afyon	4.06	108		ePN		Pn	14 01 35.9	+0.5
SHUT	Suhut-Afyon	4.06	108		ePn		Pn	14 01 35.9	+0.5
DYR	Agios Nikonas	4.07	220		ePN		Pn	14 01 36.2	+0.8
DYR	Agios Nikonas	4.07	220		ePn		Pn	14 01 36.2	+0.8
BARS	Barje	4.08	317		ePN		Pn	14 01 35.5	-0.1
BARS	Barje	4.08	317		ePn		Pn	14 01 35.7	+0.1
BARS	Barje	4.08	317		ePn		Pn	14 01 35.5	-0.1
KYTH	Kithira	4.16	210		ePN		Pn	14 01 36.3	-0.3
KYTH	Kithira	4.16	210		ePn		Pn	14 01 36.3	-0.3
ARG	Arkhangelos	4.18	151		ePN		Pn	14 01 37.7	+0.7
ARG	Arkhangelos	4.18	151		ePn		Pn	14 01 37.7	+0.7
FETY	Fethiye	4.25	139		ePN		Pn	14 01 38.4	+0.4
FETY	Fethiye	4.25	139		ePn		Pn	14 01 38.4	+0.4
VLS	Valsamata	4.28	248		ePN		Pn	14 01 38.7	+0.4
VLS	Valsamata	4.28	248		ePn		Pn	14 01 38.7	+0.4
MDUB	Mudurnu	4.31	81		ePN		Pn	14 01 39.1	+0.3
MDUB	Mudurnu	4.31	81		ePn		Pn	14 01 39.1	+0.3
ISP	Isparta	4.36	117		ePN		Pn	14 01 39.1	-0.4
ISP	Isparta	4.36	117	‖	iP		Pn	14 01 39.1	-0.4
ISP	Isparta	4.36	117		ePn		Pn	14 01 39.1	-0.4
KARP	Karpathos	4.52	164		P		Pn	14 01 41.2	-0.5
KARP	Karpathos	4.52	164		P		Pn	14 01 41.2	-0.5
SVRH	Sivrihisar-ESK	4.58	94		ePN		Pn	14 01 42.1	-0.4
SVRH	Sivrihisar-ESK	4.58	94		ePn		Pn	14 01 42.1	-0.4
BCK	Bucak	4.59

JAH	Hinai	2.32 296	P		Pn	14 03 22.2	-0.3
JYK	Kaneyama	2.34 264	P		Pn	14 03 22.6	-0.3
JTM	Tenmabayashi	2.37 313	P		Pn	14 03 22.3	-0.9
JTM			*e*S		Sn	14 03 51.1	-0.2
JMM	Marumori	2.40 237	P		Pn	14 03 22.2	-1.5
JOT	Ohata	2.81 322	P		Pn	14 03 29.2	-0.1
JFT	Otama	2.90 236	P		Pn	14 03 29.8	-0.7
MJAR	Matsushiro Arr	4.85 239	Pn		Pn	14 03 58.3	+0.9
	2.6nm,0.3s,baz=47,slow=11,SNR=60						
MAT	Matsushiro	4.85 239	P		Pn	14 03 57.2	-0.2
MAT			*e*S		Sn	14 04 53.4	+0.8
ASAJ	Asahikawa	4.95 354	Pn		Pn	14 03 57.6	-1.1
	4.1nm,0.3s,baz=204,slow=11,SNR=35						
ASAJ			LR		LR	14 06 39.7	
	comp=Z,152nm,19.8s,baz=346,slow=48						
JHJ	Hachijo jima 2	6.71 207	Pn		Pn	14 04 21.8	-1.1
	7.4nm,0.3s,baz=192,slow=11,SNR=7.9						
JHJ			Sn		Sn	14 05 30.4	-7.9
	14nm,0.3s,baz=61,slow=19,SNR=4.2						
USRK	Ussuriysk Arra	9.85 304	Pn		Pn	14 05 05.7	-0.3
	0.7nm,0.3s,baz=99,slow=13,SNR=16						
USRK			LR		LR	14 08 44.5	
	comp=Z,136nm,21.8s,baz=166,slow=37						
JNU	Nakatsue	11.75 243	LR		LR	14 10 23.5	
	comp=Z,110nm,18.0s,baz=261,slow=39						
KSRS	Korea Array	12.24 267	Pn		Pn	14 05 40.2	+1.6
	0.1nm,0.3s,baz=80,slow=14,SNR=6.0						
KSRS			LR		LR	14 10 18.8	
	comp=Z,83nm,19.8s,baz=75,slow=37						
SONM	Songino Array	27.93 300	P		P	14 08 34.2	0.0
	1.5nm,0.6s,baz=93,slow=6.1,SNR=11						
SONM			LR		LR	14 19 31.8	
	comp=Z,61nm,18.9s,baz=258,slow=36						
GTA	Gaotai	33.44 284	*e*P		P	14 09 23.8	+1.0
GTA			pP		pP	14 09 31.5	0.0
GTA			sP		sP	14 09 35.1	0.0
GTA			pmax		pmax		
	comp=Z,4.0nm,0.8s						
ZALV	Zalesovo Beam	41.63 311	P		P	14 10 31.2	-0.4
	comp=Z,1.4nm,0.5s,baz=76,slow=8.8,SNR=6.1						
CMAR	Chiang Mai Arr	43.53 255	P		P	14 10 48.2	+0.6
	comp=Z,1.0nm,0.3s,baz=45,slow=9.0,SNR=4.9						
MKAR	Makanchi Array	44.30 301	P		P	14 10 53.5	+0.1
	comp=Z,1.6nm,0.9s,baz=81,slow=9.4,SNR=11						
ILAR	Eielson Array	46.86 33	P		P	14 11 14.2	+0.8
	comp=Z,0.4nm,0.7s,baz=254,slow=6.3,SNR=6.0						
BVAR	Borovoye Array	50.27 311	P		P	14 11 39.2	-0.6
	comp=Z,0.8nm,0.5s,baz=66,slow=7.3,SNR=4.6						
AKTO	Aktyubinsk	58.38 312	P		P	14 12 38.8	0.0
	comp=Z,1.1nm,0.7s,baz=72,slow=13,SNR=3.6						
WRA	Warramunga Arr	59.42 190	P		P	14 12 45.2	-1.1
	comp=Z,0.4nm,0.6s,baz=6.7,slow=7.2,SNR=3.0						
FINES	FINESS Array B	67.61 332	P		P	14 13 39.3	-0.7
	comp=Z,0.9nm,0.7s,baz=32,slow=12,SNR=2.8						
HFS	Hagfors	72.74 336	P		P	14 14 11.0	-0.3
	comp=Z,1.1nm,0.7s,baz=46,slow=6.4,SNR=5.5						
NB2	NORSAR Subarra	72.78 338	P		P	14 14 11.5	-0.1
	comp=Z,0.7nm,0.6s,baz=39,slow=5.9						
NOA	NORSAR Array B	72.78 338	P		P	14 14 11.7	0.0
	comp=Z,0.6nm,0.7s,baz=39,slow=5.9,SNR=5.7						
GERES	GERESS Array B	81.67 329	P		P	14 15 01.5	-0.3
	comp=Z,0.3nm,0.5s,baz=71,slow=35,SNR=4.1						

*SZGRF **21** 14:01:55.0, 19.°95S×178.°78W, h33km, Fiji Islands region*
IDC 21 14:02:51.6±3.8, 20.°78S×178.°05W, h564km±44km, mb3.6/16, mb1 3.7/17, mb1mx3.6/23, mbtmp3.6/17, 4C, Error ellipse: s-maj=21.7km s-min=18.9km az=169.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
URZ	Urewera	17.92	192	P		P	14 06 26.9	-0.9
	1.0nm,0.3s,baz=37,slow=3.8,SNR=10							
CTA	Charters Tower	33.41	265	P		P	14 08 44.4	-0.1
	7.5nm,0.6s,baz=95,slow=11,SNR=14							
STKA	Stephens Creek	37.62	244	P		P	14 09 20.1	+0.9
	4.6nm,0.8s,baz=68,slow=8.4,SNR=7.8							
ASAR	Alice Springs	44.41	257	P		P	14 10 13.2	0.0
	12nm,0.9s,baz=99,slow=7.6,SNR=108							
WRA	Warramunga Arr	44.51	262	P		P	14 10 13.4	-0.5
	6.3nm,0.7s,baz=97,slow=8.7,SNR=77							
FITZ	Fitzroy Crossi	52.94	263	P		P	14 11 15.7	-0.6
	2.8nm,0.7s,baz=123,slow=6.2,SNR=9.9							
MJAR	Matsushiro Arr	70.40	324	P		P	14 13 08.4	-1.1
	3.7nm,0.6s,baz=156,slow=6.0,SNR=20							
MAT	Matsushiro	70.40	324	P		P	14 13 09.0	-0.5
JNU	Nakatsue	72.44	317	P		P	14 13 21.1	-0.4
	6.5nm,0.8s,baz=143,slow=7.4,SNR=4.2							
ASAJ	Asahikawa	73.94	332	P		P	14 13 29.8	0.0
	11nm,0.8s,baz=232,slow=7.5,SNR=6.5							
PETK	Petropavlovsk-	76.52	345	P		P	14 13 43.5	-0.5
	3.4nm,0.8s,baz=134,slow=8.4,SNR=7.3							
KSRS	Korea Array	77.06	319	P		P	14 13 48.0	+0.9
	1.8nm,0.7s,baz=130,slow=5.6,SNR=12							
USRK	Ussuriysk Arra	79.16	326	P		P	14 13 59.5	+1.2
	4.8nm,0.9s,baz=159,slow=4.4,SNR=10							
NVAR	Mina Array Bea	81.26	43	P		P	14 14 10.2	+0.6
	1.7nm,0.8s,baz=222,slow=8.2,SNR=10							
TXAR	Lajitas Array	87.25	51	P		P	14 14 39.7	+0.6
	1.2nm,0.9s,baz=215,slow=6.9,SNR=11							
ILAR	Eielson Array	88.59	13	P		P	14 14 43.1	-1.2
	2.1nm,1.0s,baz=223,slow=5.1,SNR=13							
PDAR	Pinedale Array	89.20	43	P		P	14 14 48.1	+0.1
	1.3nm,0.7s,baz=188,slow=4.3,SNR=7.4							
CMAR	Chiang Mai Arr	90.16	290	P		P	14 14 53.5	+0.7
	2.9nm,0.9s,baz=122,slow=3.4,SNR=14							
MKAR	Makanchi Array	111.35	313	PKiKP		PKiKP	14 20 21.4	-0.6
	0.3nm,0.6s,baz=68,slow=2.1,SNR=4.5							
BVAR	Borovoye Array	119.26	320	PKP		PKPdf	14 20 36.3	-0.5
	1.0nm,0.5s,baz=48,slow=2.2,SNR=6.6							
FINES	FINESS Array B	136.02	344	PKP		PKPdf	14 21 07.4	-1.0
	1.1nm,0.8s,baz=29,slow=4.4,SNR=4.1							
NOA	NORSAR Array B	139.25	353	PKhKP		PKPpre	14 21 08.4	
	0.6nm,1.0s,baz=22,slow=3.9,SNR=3.3							
HFS	Hagfors	139.80	351	PKhKP		PKPpre	14 21 07.5	
	0.4nm,0.4s,baz=25,slow=3.9,SNR=4.3							
AKASG	Malin Array Ba	143.23	331	PKP		PKPab	14 21 19.2	-0.6
	5.8nm,0.6s,baz=43,slow=4.3,SNR=36							
EKA	Eskdalemuir Ar	145.28	5	PKPbc		PKPdf	14 21 25.5	+0.3
	1.9nm,0.8s,baz=353,slow=2.6,SNR=8.6							
BSEG	Bad Segeberg	146.28	351	*e*PKPbc		PKPbc	14 21 29.7	+0.5
BRTR	Keskin Array B	146.99	312	PKPbc		PKPbc	14 21 31.2	-0.6
	1.6nm,0.7s,baz=139,slow=4.9,SNR=12							
CLL	Collm	148.32	347	*e*PKPbc		PKPbc	14 21 35.1	+0.5
CLL	Collm	148.32	347	*i* PKPbc		PKPbc	14 21 34.7	+0.1
	comp=Z,12nm,0.8s							
CLL				*i* PKPab		PKPab	14 21 39.3	-0.6
	comp=Z,4.0nm,0.7s							
UPC	Upice	148.32	343↑	*e*P		PKPbc	14 21 35.2	+0.5
UPC				*ex*		x	14 21 40.3	
DPC	Dobruska-Polom	148.37	342	*e*P		PKPbc	14 21 35.2	+0.3
DPC				*ex*		x	14 21 40.7	
BRG	Berggiesshubel	148.51	345	*e*P		PKPbc	14 21 35.5	+0.4
	comp=Z,5.0nm,0.9s							
BRG				*e*			14 21 40.4	
	comp=Z,3.2nm,0.7s							
BRG	Berggiesshubel	148.51	345	*e*PKPbc		PKPbc	14 21 35.7	+0.6
PRU	Pruhonice	149.18	344↑	*e*P		PKPbc	14 21 37.1	+0.3
PLN	Plauen	149.27	347	*e*PKPbc		PKPbc	14 21 37.6	+0.6
TANN	Tannenbergstha	149.28	347	*e*PKPbc		PKPbc	14 21 37.7	+0.6
WERD	Werda	149.28	347	*e*PKPbc		PKPbc	14 21 37.7	+0.7
GUNZ	Gunzen	149.35	347	*e*PKPbc		PKPbc	14 21 38.0	+0.8
TREC	Trest	149.56	342↑	*e*P		PKPbc	14 21 38.0	+0.3
MANZ	Manzenberg	149.76	347	*e*PKPbc		PKPbc	14 21 38.9	+0.7
KHC	Kasperske Hory	150.22	345↑	*i*P		PKPbc	14 21 39.8	+0.5
KHC				*ex*		x	14 21 48.4	
GEC2	GERESS Array S	150.45	344	*e*PKPbc		PKPbc	14 21 40.2	+0.3
GERES	GERESS Array B	150.45	344	PKPbc		PKPbc	14 21 39.9	0.0
	comp=Z,1.3nm,0.6s,baz=21,slow=2.5,SNR=15							
TORD	Torodi Ar. Bea	172.41	178	PKP		PKPdf	14 21 56.5	-0.5
	comp=Z,0.8nm,0.9s,baz=264,slow=1.6,SNR=3.7							

IDC 21 14:05:22.7±1.5, 4.°55N×123.°84E, h0km, mb4.2/5, mb1 4.4/5, mb1mx3.7/26, mbtmp4.3/5, Error ellipse: s-maj=122.8km s-min=21.1km az=65.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	Fitzroy Crossi	22.58	176	P		P	14 10 24.6	-0.3
	2.3nm,0.7s,baz=13,slow=11,SNR=13							
WRA	Warramunga Arr	26.44	157	P		P	14 11 02.3	+0.8
	3.5nm,0.3s,baz=336,slow=9.7,SNR=39							
ASAR	Alice Springs	29.71	161	P		P	14 11 31.1	+0.3
	3.1nm,0.7s,baz=338,slow=7.3,SNR=46							
STKA	Stephens Creek	39.98	156	P		P	14 12 58.3	-0.9
	4.6nm,0.7s,baz=329,slow=10,SNR=18							
MKAR	Makanchi Array	55.26	326	P		P	14 14 57.8	-0.1
	1.0nm,0.4s,baz=124,slow=7.9,SNR=24							

IDC 21 14:13:36.9±2.7, 0.°26S×132.°03E, h0km, mb3.5/2, mb1 3.8/4, mb1mx3.4/22, mbtmp3.6/4, ML3.4/2, Error ellipse: s-maj=118.5km s-min=26.8km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FITZ	Fitzroy Crossi	18.81	199	P		Pn	14 17 59.3	+0.7
	0.1nm,0.3s,baz=27,slow=16,SNR=3.7							
WRA	Warramunga Arr	19.69	174	P		P	14 18 07.2	-0.7
	0.1nm,0.3s,baz=354,slow=11,SNR=3.3							
ASAR	Alice Springs	23.33	176	P		P	14 18 46.7	-0.3
	1.5nm,0.8s,baz=354,slow=8.7,SNR=16							
MKAR	Makanchi Array	63.85	324	P		P	14 24 11.5	+0.1
	0.2nm,0.5s,baz=113,slow=8.1,SNR=3.8							

*ISCJB **21** 14:19:41.2±1.1, 35.°10N±0.°08×28.°51E±0.°08, h10km, Error ellipse: s-maj=12.7km s-min=7.7km az=35.8*
*CSEM **21** 14:19:41.8±0.4, 35.°09N×28.°46E, h10km, MD3.0, Error ellipse: s-maj=11.4km s-min=5.4km az=31.0*
*ISK **21** 14:19:41.3, 35.°02N×28.°44E, h2km, MD3.7*
*DDA **21** 14:19:50.5, 35.°89N×28.°37E, h8km, MD3.0*
ISC 21 14:19:40.5±1.8, 35.°10N±0.°09×28.°44E±0.°06, h10km, n38, σ1§66/44, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
FETY	Fethiye	1.62	19	*e*PN		Pn	14 20 10.0	+0.9
FETY	Fethiye	1.62	19	*e*Pn		Pn	14 20 10.0	+0.9
DALY	Dalyan (Mu˘la	1.72	6	*e*PN		Pn	14 20 11.6	+1.1
DALY				*e*SN		Sn	14 20 33.8	+1.2
DALY	Dalyan (Mu˘la	1.72	6	*e*Pn		Pn	14 20 11.6	+1.1
DALY				*e*Sn		Sn	14 20 33.8	+1.2
DAT	Datca	1.77	337	*e*PN		Pn	14 20 12.7	+1.4
DAT	Datca	1.77	337	*e*Pn		Pn	14 20 12.7	+1.4
YER	Yerkesik	2.04	356	*e*PN		Pn	14 20 16.1	+1.2
YER	Yerkesik	2.04	356	*e*Pn		Pn	14 20 16.1	+1.2
BODT	Bodrum	2.16	335	*e*PN		Pn	14 20 17.8	+1.2
BODT	Bodrum	2.16	335	*e*Pn		Pn	14 20 17.8	+1.2
GLHS	Gihisar (BURDU	2.22	22	*e*PN		Pn	14 20 18.6	+1.1
GLHS	Gihisar (BURDU	2.22	22	*e*Pn		Pn	14 20 18.6	+1.1
MLSB	Milas	2.26	346	*e*PN		Pn	14 20 19.4	+1.5
MLSB	Milas	2.26	346	*e*Pn		Pn	14 20 19.4	+1.5
GOLH	Golhisar	2.32	23	*i* P		Pb	14 20 21.6	-0.8
GOLH				*i* S		Sn	14 20 46.1	-1.3
GOLH	Golhisar	2.32	23	*i* P		Pb	14 20 21.6	-0.8
GOLH				*i* S		Sn	14 20 46.1	-1.3
AYDN	Tasoluk	2.60	350	*i* P		Pn	14 20 24.7	+2.1
AYDN				*i* S		Sn	14 20 50.7	-3.5
AYDN	Tasoluk	2.60	350	*i* P		Pn	14 20 24.7	+2.1
AYDN				*i* S		Sn	14 20 50.7	-3.5
DNZL	Cakiroluk	2.63	10	*i* P		Pn	14 20 24.7	+1.5
DNZL				*i* S		Sn	14 20 49.9	-5.4
DNZL	Cakiroluk	2.63	10	*i* P		Pn	14 20 24.7	+1.5
DNZL				*i* S		Sn	14 20 49.9	-5.4
DENT	Denizli	2.69	10	*e*PN		Pn	14 20 25.5	+1.6
DENT	Denizli	2.69	10	*e*Pn		Pn	14 20 25.5	+1.6
BCK	Bucak	2.93	36	*e*PN		Pn	14 20 28.9	+1.8
BCK	Bucak	2.93	36	*e*Pn		Pn	14 20 28.9	+1.8
APE	Apeiranthos	3.07	311	*e*PN		Pn	14 20 30.0	+0.9
APE	Apeiranthos	3.07	311	*e*Pn		Pn	14 20 30.0	+0.9
KULA	Kula-Manisa	3.41	3	*e*PN		Pn	14 20 35.9	+2.1
KULA	Kula-Manisa	3.41	3	*e*Pn		Pn	14 20 35.9	+2.1
IZM	Izmir	3.43	344	*e*PN		Pn	14 20 36.0	+2.0
IZM	Izmir	3.43	344	*e*Pn		Pn	14 20 36.0	+2.0
BLCB	Balcova	3.47	341	*e*PN		Pn	14 20 36.6	+2.1
BLCB	Balcova	3.47	341	*e*Pn		Pn	14 20 36.6	+2.1
LEF	Lefka	3.65	88	*e*PN		Pn	14 20 37.4	+0.5
LEF	Lefka	3.65	88	*e*Pn		Pn	14 20 37.4	+0.5
CSS	Prodhromos	4.01	91	*e*PN		Pn	14 20 43.2	+1.2
CSS	Prodhromos	4.01	91	*e*Pn		Pn	14 20 43.2	+1.2
LFK	Lefkose	4.17	86	*e*PN		Pn	14 20 45.7	+1.5
LFK	Lefkose	4.17	86	*e*Pn		Pn	14 20 45.7	+1.5

IDC 21 14:26:07.7±1.9, 42.°72S×72.°79W, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.8/18, mbtmp3.8/5, ML3.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.4/21, Error ellipse: s-maj=47.5km s-min=21.4km az=138.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PLCA	Paso Flores	2.60	41	Pn		Pn	14 26 51.4	+0.3
	2.6nm,0.3s,baz=218,slow=15,SNR=53							
PLCA				Pg		Pb	14 26 54.7	-0.6
	8.3nm,0.3s,baz=222,slow=17,SNR=95							
PLCA				Lg		Lg	14 27 29.9	
	39nm,0.3s,baz=106,slow=13,SNR=21							
PLCA				LR		LR	14 28 04.0	
	comp=Z,280nm,19.1s,baz=203,slow=45							
CPUP	Villa Florida	20.67	43	P		Pn	14 30 50.7	-0.6
	2.7nm,0.9s,baz=206,slow=17,SNR=3.8							
SIV	San Ignacio	28.47	24	P		P	14 32 04.4	-0.1
	1.0nm,0.8s,baz=223,slow=13,SNR=3.8							
TXAR	Lajitas Array	77.12	333	P		P	14 38 03.1	+0.1
	0.4nm,0.8s,baz=152,slow=5.9,SNR=3.7							
TORD	Torodi Ar. Bea	87.75	70	P		P	14 38 58.1	-0.6
	0.8nm,1.0s,baz=224,slow=6.0,SNR=2.7							

*IDC **21** 14:40:33.4±0.8, 48.°14N×154.°94E, h0km, mb3.9/20, mb1 4.1/23, mb1mx4.0/33, mbtmp3.9/23, ML3.4/3, MS3.3/10, Ms1 3.3/10, ms1mx3.1/39, Error ellipse: s-maj=21.1km s-min=14.9km az=134.0*
*BJI **21** 14:40:35.7, 48.°13N×155.°68E, h56km, mB4.4/3, mb4.2/3, Ms3.8/1, Ms7 3.6/1*
*ISCJB **21** 14:40:36.7±0.6, 48.°11N±0.°07×154.°9E±0.°1, h33km, mb3.9/25, MS3.4/7, Error ellipse: s-maj=14.8km s-min=4.2km az=44.3*
*MOS **21** 14:40:37.7±1.3, 48.°19N×154.°90E, h42km, mb4.3/17, Error ellipse: s-maj=11.8km s-min=7.1km az=74.9*
ISC 21 14:40:38.2±0.8, 48.°15N±0.°10×155.°0E±0.°1, h33km, n76, σ1§79/75, mb4.1/25, MS3.4/7, 5C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
SKR	Severo-Kuril's	2.65	16	*e*PN		Pn	14 41 15.0	-3.5
SKR				*e*S		Sn	14 41 46.0	-3.4
SKR				pmax		pmax		
	comp=N,60nm,0.5s							
SKR				pmax		pmax		
	comp=Z,90nm,0.5s							
SKR				smax		smax		
	comp=N,310nm,0.5s							
SKR				smax		smax		
	comp=E,310nm,0.5s							
SKR				smax		smax		
	comp=Z,120nm,0.5s							
PETK	Petropavlovsk-	5.26	18	PN		Pn	14 41 55.6	+1.1
PETK				pmax		pmax		
	comp=Z,3.0nm,0.3s							
PETK				MLR		MLR		
	comp=Z,181nm,19.0s							
PETK	Petropavlovsk-	5.26	18	Pn		Pn	14 41 55.5	+1.1
	comp=Z,2.7nm,0.3s,baz=194,slow=14,SNR=49							
PETK				LR		LR	14 44 19.5	
	comp=Z,181nm,19.0s,baz=208,slow=43							
PET	Petropavlovsk	5.42	24	*e*PN		Pn	14 41 57.3	+0.8
PET				pmax		pmax		
	comp=Z,22nm,0.5s							
PET				MLR		MLR		
	comp=Z,200nm,14.0s							
KUR	Kuril'sk	5.69	242	*c* PN		Pn	14 42 03.5	+3.2
KUR				*e*S		Sn	14 43 08.3	+4.0
KUR				pmax		pmax		
	comp=N,24nm,0.3s							
KUR				pmax		pmax		
	comp=Z,61nm,0.6s							
KUR				pmax		pmax		
	comp=E,30nm,0.3s							
KUR				smax		smax		
	comp=E,10.0nm,0.6s							
KUR				smax		smax		
	comp=N,35nm,0.6s							
YUK	Yuzh-Kuril'sk	7.54	240↑	*i* PN		Pn	14 42 27.7	+1.9
YUK				pmax		pmax		
	comp=Z,58nm,0.4s							
YUK				pmax		pmax		
	comp=E,12nm,0.4s							
YUK				pmax		pmax		
	comp=N,27nm,0.3s							
YUK				MLR		MLR		
	comp=Z,245nm,15.0s							
NEM2	Nemuro 2	8.03	237	P		Pn	14 42 31.4	-1.0
NEM2				*e*S		Sn	14 43 56.7	-5.2
JRA	Rausu	8.04	242	P		Pn	14 42 34.5	+2.0
JNK	Nakash	8.48	241	P		Pn	14 42 39.9	+1.3
JNK				*e*S		Sn	14 44 13.0	-0.1
JTKR	Abashiri--Toko	8.75	246	P		Pn	14 42 44.9	+2.6
JAK	Akkeshi	8.85	238	P		Pn	14 42 42.6	-1.1
JAK				*e*S		Sn	14 44 16.6	-5.6
JMP	Maruseppu	9.06	247	P		Pn	14 42 49.4	+2.8
JAR	Ashorobuto	9.21	242	P		Pn	14 42 49.9	+1.3
JAR				*e*S		Sn	14 44 31.6	+0.6
JOB	Onbets	9.40	240	*e*S		Sn	14 44 32.4	-3.4
ASAJ	Asahikawa	9.48	249	P		Pn	14 42 56.3	+3.9
ASAJ	Asahikawa	9.48	249	Pn		Pn	14 42 55.9	+3.6
	comp=Z,3.7nm,0.3s,baz=73,slow=13,SNR=32							
ASAJ				LR		LR	14 46 24.6	
	comp=Z,133nm,18.8s,baz=135,slow=37							
JKK2	Kamakawa 2	9.51	248	P		Pn	14 42 55.9	+3.1
JCH	Churui	9.86	240	P		Pn	14 42 56.7	-0.8
JCH				*e*S		Sn	14 44 41.3	-5.6
JAB	Ashibetsu	10.03	247	P		Pn	14 43 03.0	+3.2
JBT2	Biratori 2	10.35	243	P		Pn	14 43 04.4	+0.2
ERM	Erimo	10.35	238↑	*e*PN		Pn	14 43 04.5	+0.2
JNBK	Urakawa-nobuka	10.42	240	P		Pn	14 43 03.4	-1.7
JKB	Kayabe	11.67	243	P		Pn	14 43 20.7	-1.6
JYM2	Yakumo 2	11.93	245	P		Pn	14 43 26.0	+0.1
JTM	Tenmabayashi	12.35	239	*e*S		Sn	14 45 37.6	-10
JANG	Nango	12.37	236	P		Pn	14 43 27.4	-4.5
JANG				*e*S		Sn	14 45 37.0	-12
HABR	Khabarovsk	13.26	279	PN		Pn	14 43 42.5	-1.4
HABR				pmax		pmax		
	comp=E,46nm,2.2s							
HABR				pmax		pmax		
	comp=Z,27nm,2.2s							
HABR				pmax		pmax		
	comp=N,18nm,2.2s							
HABR				MLR		MLR		
	comp=Z,116nm,16.0s							
USRK	Ussuriysk Arra	16.37	265	Pn		Pn	14 44 25.4	+0.2
	comp=Z,0.5nm,0.3s,baz=72,slow=13,SNR=9.9							
MJA0	Matsu Arr-Jizo	16.91	233	*e*P		Pn	14 44 30.3	-1.9
MJAR	Matsushiro Arr	16.93	233	Pn		Pn	14 44 30.3	-2.1
	comp=Z,0.2nm,0.3s,baz=27,slow=13,SNR=8.3							
MJAR				LR		LR	14 52 25.0	
	comp=Z,72nm,18.0s,baz=270,slow=42							
YAK	Yakutsk	19.88	324	*e*P		Pn	14 45 17.5	+9.4
YAK				pmax		pmax		
	comp=Z,13nm,1.3s							
BILL	Bilibino	20.75	12	*e*P		P	14 45 14.9	-0.9
BILL				pmax		pmax		
	comp=Z,15nm,1.2s							
KSRS	Korea Array	22.42	252	P		P	14 45 34.6	+0.7
	comp=Z,4.3nm,0.5s,baz=50,slow=10,SNR=29							
TIXI	Tiksi	26.50	342↑	*e*P		P	14 46 11.6	-0.5
TIXI				pmax		pmax		
	comp=Z,3.0nm,1.2s							
SONM	Songino Array	32.07	288	P		P	14 47 01.6	-0.4
	comp=Z,0.2nm,0.4s,baz=74,slow=11,SNR=4.7							
SONM				LR		LR	15 00 40.9	
	comp=Z,51nm,18.9s,baz=74,slow=38							
ILAR	Eielson Array	34.67	40	P		P	14 47 24.6	+0.4
	comp=Z,0.2nm,0.9s,baz=265,slow=9.9,SNR=2.6							
WHN	Wuhan	35.50	255	P		P	14 47 32.3	+0.6
ZALV	Zalesovo Beam	42.82	305	*e*P		P	14 48 32.6	0.0
ZALV				pmax		pmax		
	comp=Z,1.0nm,0.3s							
ZALV	Zalesovo Beam	42.82	305	P		P	14 48 31.4	-1.2
	comp=Z,0.5nm,0.3s,baz=80,slow=8.1,SNR=4.1							
ZALV				LR		LR	15 07 45.8	
	comp=Z,27nm,18.1s,baz=69,slow=38							
MKAR	Makanchi Array	47.42	297	*e*P		P	14 49 09.2	0.0
MKAR				pmax		pmax		
	comp=Z,3.0nm,0.6s							
MKAR	Makanchi Array	47.42	297	P		P	14 49 09.2	0.0
	comp=Z,2.7nm,0.6s,baz=67,slow=8.1,SNR=36							
MKAR				LR		LR	15 10 53.6	
	comp=Z,36nm,19.3s,baz=269,slow=38							
YKA	Yellowknife Ar	49.05	38	P		P	14 49 20.1	-1.4
	comp=Z,0.3nm,0.5s,baz=292,slow=6.6,SNR=3.2							
BVAR	Borovoye Array

ellipse: s-maj=4.1km s-min=3.5km az=98.0
*ISCJB **21** 14:56:27.5±1.1,34°.10N±0°.02×5°.15W±0°.03, h15km±8km,*
Error ellipse: s-maj=4.9km s-min=3.4km az=168.6
*PDA **21** 14:56:27.3±1.2,33°.98N×5°.00W, h31km, ML2.1, Error*
ellipse: s-maj=13.9km s-min=2.8km az=83.0
ISC 21 14:56:26.3±0.8,**34°.05N**±0°.03×**5°.10W**±0°.03,**h14**km±5km,
n63,σ1ᵖ**51**/110,**Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGT	**Taghat**	**0.04**	**58**	P	**Pg**	**14 56 28.0**	**-0.9**
TGT				S	**Sg**	**14 56 31.5**	**+0.8**
TGT	**Taghat**	**0.04**	**58**	S	**Sg**	**14 56 28.0**	**-0.9**
TGT				S	**Sg**	**14 56 31.5**	**+0.8**
MIF	**Mishlifen**	**0.65**	**190**	P	**Pg**	**14 56 39.0**	**+0.1**
MIF				S	**Sg**	**14 56 48.0**	**+0.5**
MIF	**Mishlifen**	**0.65**	**190**	P	**Pg**	**14 56 39.0**	**+0.1**
MIF				S	**Sg**	**14 56 48.0**	**+0.5**
CZD	**Col de Zad**	**1.01**	**177**	P	**Pb**	**14 56 45.8**	**0.0**
CZD				S	**Sb**	**14 56 59.0**	**-0.1**
CZD	**Col de Zad**	**1.01**	**177**	P	**Pb**	**14 56 45.8**	**0.0**
CZD				S	**Sb**	**14 56 59.0**	**-0.1**
TOU	**Touzarine**	**1.44**	**50**	P	**Pn**	**14 56 50.0**	**-2.1**
TOU				S	**Sn**	**14 57 09.0**	**-1.9**
TOU	**Touzarine**	**1.44**	**50**	*e*P	**Pn**	**14 56 50.0**	**-2.1**
TOU				S	**Sn**	**14 57 09.0**	**-1.9**
KIB	**El Ksiba**	**1.66**	**208**	P	**Pb**	**14 56 57.0**	**+0.2**
KIB				S	**Sb**	**14 57 18.0**	**+0.4**
KIB	**El Ksiba**	**1.66**	**208**	P	**Pb**	**14 56 57.0**	**+0.2**
KIB				S	**Sb**	**14 57 18.0**	**+0.4**
ZFT	**Errachidia**	**2.10**	**162**	P	**Pn**	**14 57 02.0**	**+0.7**
ZFT				S	**Sn**	**14 57 26.0**	**-1.4**
ZFT	**Errachidia**	**2.10**	**162**	P	**Pn**	**14 57 02.0**	**+0.7**
ZFT				*i* S	**Sn**	**14 57 26.0**	**-1.4**
EALB	**Alboran** 2.4nm,0.1s,SNR=7.9	**2.54**	**41**	P	**Pn**	**14 57 07.7**	**+0.6**
EALB				S	**Sn**	**14 57 35.3**	**-2.5**
EALB	**Alboran** 4.9nm,0.2s,SNR=7.9	**2.54**	**41**	P	**Pn**	**14 57 07.7**	**+0.6**
ESPR	**Espera** 2.4nm,0.1s,SNR=7.9	**2.88**	**348**	S	**Sn**	**14 57 48.5**	**+2.2**
ESPR	**Espera** SNR=7.9	**2.88**	**348**	S	**Sn**	**14 57 48.5**	**+2.2**
ERON	**Agron** 1.9nm,0.5s,SNR=7.9	**3.15**	**19**	P	**Pn**	**14 57 16.0**	**+0.4**
ERON				S	**Sn**	**14 57 53.4**	**+0.3**
ERON	**Agron** 1.9nm,0.5s,SNR=7.9	**3.15**	**19**	P	**Pn**	**14 57 16.0**	**+0.4**
ERON				S	**Sn**	**14 57 53.4**	**+0.3**
EBER	**Berja** 7.4nm,0.6s,SNR=7.9	**3.37**	**32**	S	**Sn**	**14 57 57.8**	**-0.8**
EBER	**Berja** 7.4nm,0.6s,SNR=7.9	**3.37**	**32**	S	**Sn**	**14 57 57.8**	**-0.8**
EQUE	**Quentar** 1.6nm,0.3s,SNR=4.0	**3.43**	**23**	P	**Pn**	**14 57 20.4**	**+0.9**
EQUE	**Quentar** 1.6nm,0.3s,SNR=4.0	**3.43**	**23**	P	**Pn**	**14 57 20.4**	**+0.9**
EMIN	**Mina Concepcio** 1.6nm,0.4s,SNR=7.9	**3.93**	**341**	P	**Pn**	**14 57 26.6**	**+0.4**
EMIN				S	**Sn**	**14 58 12.4**	**+0.3**
EMIN	**Mina Concepcio** 1.6nm,0.4s,SNR=7.9	**3.93**	**341**	P	**Pn**	**14 57 26.6**	**+0.4**
EMIN				S	**Sn**	**14 58 12.4**	**+0.3**
PBDV	**Barranco-do-Ve** 2.4nm,0.5s	**3.94**	**325**	*e*Sn	**Sn**	**14 58 10.5**	**-1.8**
PBDV				A	A	14 58 15.2	
PBDV	**Barranco-do-Ve** 2.4nm,0.5s	**3.94**	**325**	S	**Sn**	**14 58 10.5**	**-1.8**
PBDV	**Barranco-do-Ve** 2.4nm,0.5s	**3.94**	**325**	S	**Sn**	**14 58 10.5**	**-1.8**
PVAQ	**Vaqueiros**	**3.97**	**328**	*e*Pn	**Pn**	**14 57 26.3**	**-0.5**
PVAQ				*e*Sn	**Sn**	**14 58 11.1**	**-2.0**
PVAQ				A	A	14 58 12.3	
PVAQ	**Vaqueiros** 3.2nm,0.4s	**3.97**	**328**	P	**Pn**	**14 57 26.3**	**-0.5**
PVAQ				S	**Sn**	**14 58 11.1**	**-2.0**
PVAQ	**Vaqueiros** 3.2nm,0.4s	**3.97**	**328**	P	**Pn**	**14 57 26.3**	**-0.5**
PVAQ				S	**Sn**	**14 58 11.1**	**-2.0**
EGRO	**El Granado** 1.9nm,0.3s,SNR=7.9	**3.98**	**332**	P	**Pn**	**14 57 27.2**	**+0.3**
EGRO				S	**Sn**	**14 58 14.6**	**+1.2**
EGRO	**El Granado** 1.9nm,0.3s,SNR=7.9	**3.98**	**332**	P	**Pn**	**14 57 27.2**	**+0.3**
EGRO				S	**Sn**	**14 58 14.6**	**+1.2**
EQES	**Quesada** 1.3nm,0.2s,SNR=13	**4.09**	**23**	P	**Pn**	**14 57 31.0**	**+2.4**
EQES				S	**Sn**	**14 58 19.4**	**+3.0**
EQES	**Quesada** 1.3nm,0.2s,SNR=13	**4.09**	**23**	P	**Pn**	**14 57 31.0**	**+2.4**
EADA	**Adamuz** 0.3nm,0.1s,SNR=7.9	**4.13**	**6**	P	**Pn**	**14 57 30.9**	**+1.9**
EADA				S	**Sn**	**14 58 18.1**	**+0.8**
EADA	**Adamuz** 0.3nm,0.1s,SNR=7.9	**4.13**	**6**	P	**Pn**	**14 57 31.0**	**+1.9**
EADA				S	**Sn**	**14 58 18.1**	**+0.8**
PCVE	**Castro Verde** 1.2nm,0.4s	**4.30**	**327**	*e*Pn	**Pn**	**14 57 32.5**	**+1.2**
PCVE				*e*Sn	**Sn**	**14 58 19.8**	**-1.5**
PCVE				A	A	14 58 23.6	
PCVE	**Castro Verde** 1.2nm,0.4s	**4.30**	**327**	P	**Pn**	**14 57 32.5**	**+1.2**
PCVE				S	**Sn**	**14 58 19.8**	**-1.5**
PCVE	**Castro Verde** 1.2nm,0.4s	**4.30**	**327**	P	**Pn**	**14 57 32.5**	**+1.2**
PCVE				S	**Sn**	**14 58 19.8**	**-1.5**
PFVI	**Vila Bisbo** 4.4nm,0.9s	**4.32**	**316**	*e*Pn	**Pn**	**14 57 32.5**	**+0.9**
PFVI				*e*Sn	**Sn**	**14 58 21.2**	**-0.6**
PFVI				A	A	14 58 26.7	
PFVI	**Vila Bisbo** 1.2nm,0.2s,SNR=7.9	**4.32**	**316**	P	**Pn**	**14 57 32.8**	**+1.2**
PFVI				S	**Sn**	**14 58 21.3**	**-0.6**
PFVI	**Vila Bisbo** 1.9nm,0.3s,SNR=7.9	**4.32**	**316**	*e*Pn	**Pn**	**14 57 32.5**	**+0.9**
PFVI	**Vila Bisbo** 1.2nm,0.2s,SNR=7.9	**4.32**	**316**	P	**Pn**	**14 57 32.8**	**+1.2**
PFVI				S	**Sn**	**14 58 21.3**	**-0.6**
MORF	**Marmelete** 2.4nm,0.3s	**4.35**	**319**	*e*Pn	**Pn**	**14 57 33.9**	**+1.8**
MORF				*e*Sn	**Sn**	**14 58 21.2**	**-1.4**
MORF				A	A	14 58 25.3	
MORF	**Marmelete** 2.4nm,0.3s	**4.35**	**319**	P	**Pn**	**14 57 33.9**	**+1.8**
MORF				S	**Sn**	**14 58 21.2**	**-1.4**
MORF	**Marmelete** 2.4nm,0.3s	**4.35**	**319**	P	**Pn**	**14 57 33.9**	**+1.8**
MORF				S	**Sn**	**14 58 21.2**	**-1.4**
PBAR	**Barrancos** 1.3nm,0.2s	**4.41**	**340**	*e*Pn	**Pn**	**14 57 33.2**	**+0.4**
PBAR				*e*Sn	**Sn**	**14 58 21.7**	**-2.3**
PBAR				A	A	14 58 32.6	
PBAR	**Barrancos** 1.3nm,0.2s	**4.41**	**340**	P	**Pn**	**14 57 33.2**	**+0.4**
PBAR				S	**Sn**	**14 58 21.7**	**-2.3**
PBAR	**Barrancos** 1.3nm,0.2s	**4.41**	**340**	P	**Pn**	**14 57 33.2**	**+0.4**
PBAR				S	**Sn**	**14 58 21.7**	**-2.3**
PTEO	**Sao Teotonio** 4.6nm,0.5s	**4.57**	**321**	*e*Pn	**Pn**	**14 57 35.9**	**+0.9**
PTEO				*e*Sn	**Sn**	**14 58 23.4**	**-4.5**
PTEO				A	A	14 58 39.6	
PTEO	**Sao Teotonio** 2.3nm,0.5s	**4.57**	**321**	P	**Pn**	**14 57 35.9**	**+0.9**
PTEO				S	**Sn**	**14 58 23.4**	**-4.5**
PTEO	**Sao Teotonio**	**4.57**	**321**	P	**Pn**	**14 57 35.9**	**+0.9**
PTEO				*e*Sn	**Sn**	**14 58 23.4**	**-4.5**
PNCL	**Nicolau / Gran**	**4.92**	**327**	*e*Pn	**Pn**	**14 57 40.2**	**+0.4**
PNCL				*e*Sn	**Sn**	**14 58 35.2**	**-1.2**
PNCL				A	A	14 58 51.6	
PNCL	**Nicolau / Gran** 1.6nm,0.4s	**4.92**	**327**	*e*Pn	**Pn**	**14 57 40.2**	**+0.4**
PNCL				*e*Sn	**Sn**	**14 58 35.2**	**-1.2**
EBAD	**Badajoz** 1.6nm,0.4s	**4.95**	**342**	P	**Pn**	**14 57 40.5**	**+0.3**
EBAD	0.5nm,0.1s,SNR=7.8			S	**Sn**	**14 58 35.7**	**-1.5**
EBAD	**Badajoz** 1.5nm,0.2s,SNR=7.9	**4.95**	**342**	P	**Pn**	**14 57 40.5**	**+0.3**
EBAD	0.5nm,0.1s,SNR=7.8			S	**Sn**	**14 58 35.7**	**-1.5**
PESTR	**Estremoz** 1.5nm,0.2s,SNR=7.9	**5.21**	**338**	*e*Pn	**Pn**	**14 57 44.7**	**+0.8**
PESTR				*e*Sn	**Sn**	**14 58 41.7**	**-2.1**
PESTR				A	A	14 58 48.3	
PESTR	**Estremoz** 0.7nm,0.5s	**5.21**	**338**	P	**Pn**	**14 57 44.7**	**+0.8**
PESTR				S	**Sn**	**14 58 41.7**	**-2.1**
PESTR	**Estremoz** 0.3nm,0.5s	**5.21**	**338**	P	**Pn**	**14 57 44.7**	**+0.8**
PESTR				S	**Sn**	**14 58 41.7**	**-2.1**
ETOB	**Tobarra** 0.3nm,0.5s 1.2nm,0.4s,SNR=7.9	**5.41**	**31**	P	**Pn**	**14 57 48.3**	**+1.7**
ETOB	**Tobarra** 1.2nm,0.4s,SNR=7.9	**5.41**	**31**	P	**Pn**	**14 57 48.3**	**+1.7**
PMTG	**Montargil**	**5.61**	**334**	*e*Pn	**Pn**	**14 57 49.8**	**+0.5**
PMTG	**Montargil**	**5.61**	**334**	*e*Pn	**Pn**	**14 57 49.8**	**+0.5**

*ISK **21** 14:58:48.9, 37°.65N×26°.88E, h8km, MD3.1*
*ISCJB **21** 14:58:49.4±0.5, 37°.65N±0°.03×26°.89E±0°.04, h7km±4km,*
Error ellipse: s-maj=5.0km s-min=4.2km az=141.9
*CSEM **21** 14:58:49.5±0.1, 37°.64N×26°.86E, h8km, MD3.0, Error*
ellipse: s-maj=2.8km s-min=2.0km az=66.0
*ATH **21** 14:58:50.5, 37°.65N×26°.79E, h5km, MD3.0/4*
*DDA **21** 14:58:50.5, 37°.70N×26°.94E, h7km, MD3.0*
ISC 21 14:58:49.8±0.9,**37°.63N**±0°.02×**26°.88E**±0°.02,**h7**km±6km,
n35,σ0ᵖ**38**/50,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.08**	**338**	*e*PG	**Pg**	**14 58 51.8**	**0.0**
SMG				*e*SG	**Sg**	**14 58 53.2**	**0.0**
SMG	**Samos**	**0.08**	**338**	*e*Pg	**Pg**	**14 58 51.8**	**0.0**
SMG				*e*Sg	**Sg**	**14 58 53.2**	**0.0**
GCAM	**G?zelcaml?**	**0.29**	**77**	*i* P	**Pg**	**14 58 55.8**	**+0.2**
GCAM				*i* S	**Sg**	**14 59 00.1**	**+0.7**
GCAM	**G?zelcaml?**	**0.29**	**77**	*i* P	**Pg**	**14 58 55.8**	**+0.2**
GCAM				*i* S	**Sg**	**14 59 00.1**	**+0.7**
BODT	**Bodrum**	**0.67**	**149**	*e*PG	**Pg**	**14 59 02.5**	**-0.2**
BODT				*e*SG	**Sb**	**14 59 12.9**	**-0.4**
BODT	**Bodrum**	**0.67**	**149**	*e*Pg	**Pg**	**14 59 02.5**	**-0.2**
BODT				*e*Sg	**Sb**	**14 59 12.9**	**-0.4**
BLCB	**Balcova**	**0.76**	**10**	*e*PG	**Pg**	**14 59 04.0**	**-0.5**
BLCB				*e*SG	**Sg**	**14 59 14.5**	**+0.1**
BLCB	**Balcova**	**0.76**	**10**	*e*Pg	**Pg**	**14 59 04.0**	**-0.5**
BLCB				*e*Sg	**Sg**	**14 59 14.5**	**+0.1**
MLSB	**Milas**	**0.79**	**115**	*e*PG	**Pg**	**14 59 04.5**	**-0.6**
MLSB	**Milas**	**0.79**	**115**	*e*Pg	**Pg**	**14 59 04.5**	**-0.6**
AYDN	**Tasoluk**	**0.80**	**88**	*i* P	**Pg**	**14 59 05.2**	**0.0**
AYDN				*i* S	**Sg**	**14 59 15.6**	**+0.1**
AYDN	**Tasoluk**	**0.80**	**88**	*i* P	**Pg**	**14 59 05.2**	**0.0**
AYDN				*i* S	**Sg**	**14 59 15.6**	**+0.1**
IZM	**Izmir**	**0.82**	**22**	*e*PG	**Pg**	**14 59 05.0**	**-0.6**
IZM	**Izmir**	**0.82**	**22**	*e*Pg	**Pg**	**14 59 05.0**	**-0.6**
CHOS	**Chios island**	**0.99**	**320**	*e*PN	**Pg**	**14 59 08.9**	**0.0**
CHOS				*e*SB	**Sb**	**14 59 22.5**	**-0.2**
CHOS	**Chios island**	**0.99**	**320**	*e*Pn	**Pg**	**14 59 08.9**	**0.0**
CHOS				*e*Sb	**Sb**	**14 59 22.5**	**-0.2**
NIS1	**Nisyros Isl.**	**1.06**	**167**	*e*PG	**Pb**	**14 59 10.6**	**+0.1**
NIS1				*e*SB	**Sn**	**14 59 27.4**	**+1.3**
NIS1	**Nisyros Isl.**	**1.06**	**167**	*e*Pg	**Pb**	**14 59 10.6**	**+0.1**
DAT	**Datca**	**1.06**	**148**	*e*PG	**Pg**	**14 59 09.9**	**-0.3**
DAT	**Datca**	**1.06**	**148**	*e*Pg	**Pg**	**14 59 09.9**	**-0.3**
APE	**Apeiranthos**	**1.21**	**243**	*e*PN	**Pg**	**14 59 12.6**	**-0.4**
APE	**Apeiranthos**	**1.21**	**243**	*e*PB	**Pg**	**14 59 12.7**	**-0.3**
APE				*e*SB	**Sb**	**14 59 28.8**	**-0.1**
APE	**Apeiranthos**	**1.21**	**243**	*e*Pb	**Pg**	**14 59 12.7**	**-0.3**
APE				*e*Sb	**Sb**	**14 59 28.8**	**-0.1**
YER	**Yerkesik**	**1.23**	**114**	*e*PN	**Pb**	**14 59 12.9**	**-0.5**
YER	**Yerkesik**	**1.23**	**114**	*e*Pn	**Pb**	**14 59 12.9**	**-0.5**
KULA	**Kula-Manisa**	**1.66**	**58**	*e*PN	**Pn**	**14 59 19.1**	**-0.3**
KULA	**Kula-Manisa**	**1.66**	**58**	*e*Pn	**Pn**	**14 59 19.1**	**-0.3**
PRK	**Paraskevi**	**1.68**	**344**	*e*PG	**Pb**	**14 59 21.0**	**0.0**
PRK	**Paraskevi**	**1.68**	**344**	*e*Pg	**Pb**	**14 59 21.0**	**0.0**
GONE	**Gonen-Balikesi**	**2.49**	**14**	*e*PN	**Pn**	**14 59 30.8**	**0.0**
GONE	**Gonen-Balikesi**	**2.49**	**14**	*e*Pn	**Pn**	**14 59 30.8**	**0.0**
TVSB	**Tavsanli**	**2.72**	**47**	*e*PN	**Pn**	**14 59 34.0**	**0.0**
TVSB	**Tavsanli**	**2.72**	**47**	*e*Pn	**Pn**	**14 59 34.0**	**0.0**
KRBG	**Karabiga-Canak**	**2.77**	**7**	*e*PN	**Pn**	**14 59 34.8**	**+0.1**
KRBG	**Karabiga-Canak**	**2.77**	**7**	*e*Pn	**Pn**	**14 59 34.8**	**+0.1**

*CSEM **21** 15:14:36.4±0.2, 38°.36N×38°.08E, h10km, MD2.4, Error*
ellipse: s-maj=4.5km s-min=3.0km az=15.0
*ISK **21** 15:14:37.1, 38°.42N×38°.16E, h2km, MD2.4*
DDA 21 15:14:36.7,38°.26N×38°.11E,h7km,**MD2.7,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKCD	**Akcadag**	**0.16**	**285**	*i* P	Pg	15 14 40.2	+0.1
AKCD				*i* S	Sg	15 14 43.0	+0.6
AKCD	**Akcadag**	**0.16**	**285**	*i* P	Pg	15 14 40.2	+0.1
AKCD				*i* S	Sg	15 14 43.0	+0.5
MYA	**Malataya**	**0.26**	**74**	PG	Pg	15 14 42.4	+0.4
MYA				*e*SG	Sg	15 14 46.7	+1.3
MYA	**Malataya**	**0.26**	**74**	*i* Pg	Pg	15 14 42.4	+0.5
DARE	**Darende-Malaty**	**0.59**	**303**	*e*PG	Pb	15 14 49.0	-0.5
DARE				*e*SG	Sg	15 14 57.0	+1.0
DARE	**Darende-Malaty**	**0.59**	**303**	*e*Pg	Pb	15 14 49.0	-0.5
DARE				*e*Sg	Sg	15 14 57.0	+1.0
ELZG	**Elazig**	**0.73**	**70**	*i* P	Pg	15 14 50.6	-0.3
ELZG	**Elazig**	**0.73**	**70**	*i* P	Pg	15 14 50.6	-0.4
PTK	**Pertek**	**1.19**	**57**	*e*PG	Pg	15 14 58.5	-1.3
PTK				*e*SG	Sg	15 15 14.1	-1.3
PTK	**Pertek**	**1.19**	**57**	*e*Pg	Pg	15 14 58.5	-1.3
PTK				*e*Sg	Sg	15 15 14.1	-1.3

*ISK **21** 15:17:39.1, 35°.00N×28°.33E, h29km, MD3.6*
*ATH **21** 15:17:41.7, 35°.24N×28°.51E, h18km±3km, MD3.3/7*
*CSEM **21** 15:17:44.1±0.2, 35°.25N×28°.58E, h40km, Mw3.1, Error*
ellipse: s-maj=5.1km s-min=4.2km az=15.0
*THE **21** 15:17:44.9, 35°.36N×28°.58E, h46km±13km, ML2.9/1, Error*
ellipse: s-maj=14.4km s-min=1.5km az=328.0
*DDA **21** 15:17:44.5, 35°.47N×28°.44E, h41km, MD3.2*
*NIC **21** 15:17:46.1±0.2, 34°.94N×28°.85E, h91km, ML3.0, MW3.1*
*HLW **21** 15:17:47.5, 34°.96N×28°.60E, h31km±18km, Md3.3, Ml3.2*
ISC 21 15:17:41.7±1.3,**35°.24N**±0°.03×**28°.53E**±0°.02,**h21**km±4km,
n77,σ1ᵖ**43**/93,**4C,Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**1.03**	**342**	P	**Pn**	**15 18 00.8**	**-0.1**
ARG				S	**Sb**	**15 18 13.5**	**-0.3**
ARG	**Arkhangelos**	**1.03**	**342**	*e*PN	**Pn**	**15 18 01.1**	**+0.2**
ARG	**Arkhangelos**	**1.03**	**342**	P	**Pn**	**15 18 00.8**	**-0.1**
ARG	**Arkhangelos**	**1.03**	**342**	*e*Pn	**Pn**	**15 18 01.1**	**+0.2**
ARG				S	**Sb**	**15 18 13.5**	**-0.3**
KARP	**Karpathos**	**1.16**	**286**	P	**Pb**	**15 18 04.2**	**+1.2**
KARP				S	**Sn**	**15 18 19.8**	**+1.9**
KARP	**Karpathos**	**1.16**	**286**	*e*PN	**Pb**	**15 18 04.2**	**+1.2**
KARP				*e*SN	**Sn**	**15 18 19.0**	**+1.1**
KARP	**Karpathos**	**1.16**	**286**	P	**Pb**	**15 18 04.2**	**+1.2**
KARP				S	**Sn**	**15 18 19.8**	**+1.9**
FETY	**Fethiye**	**1.46**	**18**	*e*PN	**Pb**	**15 18 08.2**	**-0.1**
FETY				*e*SN	**Sb**	**15 18 29.3**	**+2.9**
FETY	**Fethiye**	**1.46**	**18**	*e*Pn	**Pb**	**15 18 08.2**	**-0.1**
FETY				*e*Sn	**Sb**	**15 18 29.3**	**+2.9**
DALY	**Dalyan (Mu˘la**	**1.58**	**4**	*e*PN	**Pn**	**15 18 09.1**	**+0.6**
DALY	**Dalyan (Mu˘la**	**1.58**	**4**	*e*Pn	**Pn**	**15 18 09.1**	**+0.6**
TURN	**Turunc**	**1.63**	**2**	*i* P	**Pn**	**15 18 08.6**	**-0.6**
TURN				*i* S	**Sn**	**15 18 27.4**	**-2.1**
TURN	**Turunc**	**1.63**	**2**	*i* P	**Pn**	**15 18 08.6**	**-0.6**
TURN				*i* S	**Sn**	**15 18 27.4**	**-2.1**
DAT	**Datca**	**1.67**	**333**	*e*PN	**Pn**	**15 18 09.9**	**0.0**
DAT	**Datca**	**1.67**	**333**	*e*Pn	**Pn**	**15 18 09.9**	**0.0**
NIS1	**Nisyros Isl.**	**1.74**	**322**	*e*PN	**Pb**	**15 18 13.6**	**+0.6**
NIS1	**Nisyros Isl.**	**1.74**	**322**	*e*Pn	**Pb**	**15 18 13.6**	**+0.6**
ZKR	**Zakros**	**1.90**	**267**	P	**Pb**	**15 18 14.7**	**-0.9**
ZKR				S	**Sb**	**15 18 37.6**	**-1.2**
ZKR	**Zakros**	**1.90**	**267**	*e*PN	**Pb**	**15 18 15.0**	**-0.6**
ZKR	**Zakros**	**1.90**	**267**	*e*Pn	**Pb**	**15 18 15.0**	**-0.6**
ZKR				S	**Sb**	**15 18 37.6**	**-1.2**
YER	**Yerkesik**	**1.90**	**354**	*e*PN	**Pn**	**15 18 13.8**	**+0.8**
YER	**Yerkesik**	**1.90**	**354**	*e*Pn	**Pn**	**15 18 13.8**	**+0.8**
BODT	**Bodrum**	**2.07**	**332**	*e*PN	**Pn**	**15 18 15.0**	**-0.2**
BODT	**Bodrum**	**2.07**	**332**	*e*Pn	**Pn**	**15 18 15.0**	**-0.2**
MLSB	**Milas**	**2.14**	**344**	*e*PN	**Pn**	**15 18 16.6**	**+0.4**
MLSB	**Milas**	**2.14**	**344**	*e*Pn	**Pn**	**15 18 16.6**	**+0.4**
GOLH	**Golhisar**	**2.16**	**22**	*i* P	**Pb**	**15 18 18.4**	**-1.8**
GOLH				*i* S	**Sn**	**15 18 42.7**	**-0.1**
GOLH	**Golhisar**	**2.16**	**22**	*i* P	**Pb**	**15 18 18.4**	**-1.8**
GOLH				*i* S	**Sn**	**15 18 42.7**	**-0.1**
NPS	**Neapolis**	**2.38**	**271**	*e*PB	**Pb**	**15 18 22.1**	**-1.8**
NPS	**Neapolis**	**2.38**	**271**	*e*Pb	**Pb**	**15 18 22.1**	**-1.8**
AYDN	**Tasoluk**	**2.47**	**348**	*i* P	**Pn**	**15 18 20.8**	**0.0**
AYDN				*i* S	**Sn**	**15 18 48.7**	**-1.7**
AYDN	**Tasoluk**	**2.47**	**348**	*i* P	**Pn**	**15 18 20.8**	**0.0**
AYDN				*i* S	**Sn**	**15 18 48.7**	**-1.7**
LAST	**Lasithi**	**2.50**	**269**	P	**Pb**	**15 18 23.4**	**-2.5**
LAST	**Lasithi**	**2.50**	**269**	*e*PN	**Pb**	**15 18 23.6**	**-2.3**
LAST	**Lasithi**	**2.50**	**269**	P	**Pb**	**15 18 23.4**	**-2.5**
DENT	**Denizli**	**2.54**	**9**	*e*PN	**Pn**	**15 18 23.4**	**+1.6**
DENT	**Denizli**	**2.54**	**9**	*e*Pn	**Pn**	**15 18 23.4**	**+1.6**
IDI	**Anoyia**	**2.98**	**272**	P	**Pn**	**15 18 29.4**	**+1.6**
IDI	**Anoyia**	**2.98**	**272**	*e*PN	**Pn**	**15 18 30.4**	**+2.6**
IDI	**Anoyia**	**2.98**	**272**	P	**Pn**	**15 18 29.4**	**+1.6**
IDI	**Anoyia**	**2.98**	**272**	*e*Pn	**Pn**	**15 18 30.4**	**+2.6**
APE	**Apeiranthos**	**3.03**	**308**	*e*PN	**Pn**	**15 18 26.4**	**-2.2**
APE				SN	**Sn**	**15 19 02.0**	**-2.2**
APE	**Apeiranthos**	**3.03**	**308**	*e*PN	**Pn**	**15 18 31.2**	**+2.7**
APE	**Apeiranthos**	**3.03**	**308**	*e*Pn	**Pn**	**15 18 31.2**	**+2.7**
APE				*i* Sn	**Sn**	**15 19 02.0**	**-2.2**
AKMC	**Akamas**	**3.13**	**93**	⇑P	**Pn**	**15 18 30.7**	**+0.9**
AKMC	**Akamas**	**3.13**	**93**	⇑*i*P	**Pn**	**15 18 30.7**	**+0.9**
PPCY	**Paphos**	**3.15**	**95**	P	**Pn**	**15 18 31.1**	**+1.0**
PPCY	**Paphos**	**3.15**	**95**	P	**Pn**	**15 18 31.1**	**+1.0**
ALFC	**Alevga**	**3.34**	**90**	⇑P	**Pn**	**15 18 33.5**	**+0.8**
ALFC				S	**Sn**	**15 19 10.9**	**-0.8**
ALFC	**Alevga**	**3.34**	**90**	⇑P	**Pn**	**15 18 33.5**	**+0.8**
ALFC				S	**Sn**	**15 19 10.9**	**-0.8**
VAM	**Vamos**	**3.54**	**274**	*e*PN	**Pn**	**15 18 38.0**	**+2.5**
VAM	**Vamos**	**3.54**	**274**	*e*Pn	**Pn**	**15 18 38.0**	**+2.5**
LEF	**Lefka**	**3.58**	**91**	*e*PN	**Pn**	**15 18 35.7**	**-0.3**
LEF	**Lefka**	**3.58**	**91**	*e*Pn	**Pn**	**15 18 35.7**	**-0.3**
CHOS	**Chios island**	**3.71**	**328**	*e*PN	Pn	15 18 40.8	+2.9
CHOS	**Chios island**	**3.71**	**328**	*e*Pn	Pn	15 18 40.8	+2.9
ERMK	**Ermenek**	**3.83**	**67**	*i* P	Pn	15 18 42.6	+3.0
ERMK				*i* S	**Sn**	**15 19 26.4**	**+2.4**
ERMK	**Ermenek**	**3.83**	**67**	*i* P	Pn	15 18 42.6	+3.0
ERMK				*i* S	**Sn**	**15 19 26.4**	**+2.4**
CSS	**Prodhromos** 0.5nm,0.3s	**3.95**	**93**	P	**Pn**	**15 18 41.8**	**+0.7**
CSS				S	**Sn**	**15 19 25.1**	**-1.7**
CSS	**Prodhromos** 0.5nm,0.3s	**3.95**	**93**	*e*PN	**Pn**	**15 18 42.2**	**+1.1**
CSS	**Prodhromos** 0.5nm,0.3s	**3.95**	**93**	P	**Pn**	**15 18 41.8**	**+0.7**
CSS	**Prodhromos**	**3.95**	**93**	*e*Pn	**Pn**	**15 18 42.2**	**+1.1**
CSS				S	**Sn**	**15 19 25.1**	**-1.7**
LFK	**Lefkose**	**4.10**	**88**	*e*PN	**Pn**	**15 18 44.2**	**+1.0**
LFK	**Lefkose**	**4.10**	**88**	*e*Pn	**Pn**	**15 18 44.2**	**+1.0**
ANKY	**Antikythira Is**	**4.30**	**280**	*e*PN	Pn	15 18 48.7	+2.7
ANKY	**Antikythira Is**	**4.30**	**280**	*e*Pn	Pn	15 18 48.7	+2.7
HMAT	**Matruh** comp=E,30µm,0.2s,logA/T=5.2,baz=199	**4.30**	**197**	AMP		15 19 00.0	
HMAT	**Matruh** baz=221	**4.30**	**197**	P	**Pn**	**15 18 46.3**	**+0.3**
SLUM		**4.65**	**217**	P	**Pn**	**15 18 51.7**	**+0.9**
AMAG	**Maghara** baz=136	**6.04**	**138**	P	**Pn**	**15 19 09.8**	**-0.1**
AMAG	**Maghara** baz=143	**6.04**	**138**	P	**Pn**	**15 19 09.8**	**-0.1**
SUZ		**6.50**	**145**	P	**Pn**	**15 19 16.0**	**-0.1**
SWA2	baz=206	**6.52**	**204**	P	**Pn**	**15 19 16.6**	**+0.2**
SWA2		**6.52**	**204**	P	**Pn**	**15 19 16.6**	**+0.2**

IDC 21 15:34:25.6±7.9,**31°.44S**×**179°.98W**,**h355**km±89km,
mb3.0/3,**mb1 3.3**/4,**mb1mx3.0**/18,**mbtmp3.2**/4,**Error**
ellipse: s-maj=95.3km s-min=31.0km az=2.0,Kermadec
Islands region

| Code | Station Name | Δ° | AZ° | Phase ID Op | IS

LVC	**Limon Verde**	**7.05**	**168**	P		Pn	15 52 07.9	-1.4
	18nm,0.3s,baz=342,slow=9.7,SNR=199							
SIV	**San Ignacio**	**9.09**	**93**	P		Pn	15 52 34.6	-1.0
	0.2nm,0.3s,baz=266,slow=16,SNR=3.5							
CFAA	**Coronel Fontan**	**15.98**	**173**	P		Pn	15 54 02.8	+0.3
	0.1nm,0.3s,baz=342,slow=11,SNR=4.7							
CPUP	**Villa Florida**	**16.22**	**133**	P		Pn	15 54 05.4	+0.1
	0.3nm,0.3s,baz=306,slow=16,SNR=2.5							
TEIG	**Tepich**	**39.73**	**333**	P		P	15 57 41.5	-0.3
	5.3nm,0.4s,baz=39,slow=5.2,SNR=6.8							
TXAR	**Lajitas Array**	**55.03**	**324**	P		P	15 59 39.3	-0.5
	0.2nm,0.6s,baz=146,slow=8.7,SNR=3.2							
ULM	**Lac du Bonnet**	**69.35**	**343**	P		P	16 01 14.1	-0.3
	4.9nm,0.6s,baz=164,slow=6.5,SNR=5.3							
TORD	**Torodi Ar. Bea**	**76.93**	**72**	P		P	16 01 58.8	-0.8
	1.2nm,0.7s,baz=277,slow=3.8,SNR=6.6							
YKA	**Yellowknife Ar**	**85.23**	**341**	P		P	16 02 42.8	+0.6
	1.1nm,0.5s,baz=134,slow=5.3,SNR=8.5							
WRA	**Warramunga Arr**	**136.98**	**215**	PKP		PKPdf	16 09 28.7	+0.1
	0.2nm,0.6s,baz=129,slow=1.4,SNR=5.7							
SONM	**Songino Array**	**147.84**	**4**	PKPbc		PKPbc	16 09 51.4	+1.2
	0.4nm,0.4s,baz=330,slow=3.4,SNR=4.3							

*DDA **21** 15:55:12.6, 40.04N×25.15E, h21km, MD3.2*
*ISK **21** 15:55:15.2, 39.92N×25.61E, h7km, MD3.3*
*ATH **21** 15:55:15.9, 39.94N×25.64E, h28km±1km, MD3.1/8*
*ISCJB **21** 15:55:15.6±0.5, 39.93N±0.02×25.61E±0.02, h6km±4km, Error ellipse: s-maj=3.2km s-min=2.9km az=35.9*
*THE **21** 15:55:16.5, 39.94N×25.67E, h8km±1km, ML2.5/5, Error ellipse: s-maj=1.7km s-min=0.4km az=73.0*
*CSEM **21** 15:55:16.3±0.1, 39.93N×25.62E, h8km, MD3.1, Error ellipse: s-maj=1.9km s-min=1.8km az=63.0*

ISC 21 15:55:16.4±1.1, **39.93N**±0.02×**25.63E**±0.02, **h9**km±9km, **n99,σ0.53/141, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EZN	**Ezine**	**0.55**	**101**	*e*PG	**Pg**	**15 55 25.9**	**-1.1**
EZN				*e*SG	**Sg**	**15 55 34.8**	**+0.7**
EZN	**Ezine**	**0.55**	**101**	*e*Pg	**Pg**	**15 55 25.9**	**-1.1**
EZN				*e*Sg	**Sg**	**15 55 34.8**	**+0.7**
SMTH	**Samothraki Isl**	**0.55**	**352**	P	**Pg**	**15 55 27.1**	**+0.1**
SMTH				S	**Sg**	**15 55 34.4**	**+0.2**
SMTH	**Samothraki Isl**	**0.55**	**352**	*e*PN	**Pg**	**15 55 27.1**	**+0.1**
SMTH				*e*SN	**Sg**	**15 55 34.9**	**+0.7**
SMTH	**Samothraki Isl**	**0.55**	**352**	P	**Pg**	**15 55 27.1**	**+0.1**
SMTH				S	**Sg**	**15 55 34.4**	**+0.2**
SIGR	**SIGRI**	**0.74**	**166**	P	**Pg**	**15 55 30.4**	**-0.3**
SIGR				S	**Sb**	**15 55 41.4**	**-0.2**
SIGR	**SIGRI**	**0.74**	**166**	P	**Pg**	**15 55 30.4**	**-0.3**
SIGR				S	**Sb**	**15 55 41.4**	**-0.2**
GELI	**Tayfur-Gelibol**	**0.80**	**54**	*e*PG	**Pg**	**15 55 30.9**	**-0.9**
GELI				*e*SG	**Sb**	**15 55 43.0**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.80**	**54**	*e*Pg	**Pg**	**15 55 30.9**	**-0.9**
GELI				*e*Sg	**Sb**	**15 55 43.0**	**-0.3**
PRK	**Paraskevi**	**0.84**	**144**	P	**Pg**	**15 55 32.4**	**-0.3**
PRK				S	**Sg**	**15 55 44.0**	**+0.3**
PRK	**Paraskevi**	**0.84**	**144**	*e*PN	**Pg**	**15 55 32.3**	**-0.4**
PRK				*e*SN	**Sb**	**15 55 44.6**	**0.0**
PRK	**Paraskevi**	**0.84**	**144**	P	**Pg**	**15 55 32.4**	**-0.3**
PRK				S	**Sg**	**15 55 44.0**	**+0.3**
ENEZ	**Enez**	**0.90**	**26**	*e*PG	**Pg**	**15 55 33.1**	**-0.7**
ENEZ				*e*SG	**Sb**	**15 55 46.2**	**0.0**
ENEZ	**Enez**	**0.90**	**26**	*e*Pg	**Pg**	**15 55 33.1**	**-0.7**
ENEZ				*e*Sg	**Sb**	**15 55 46.2**	**0.0**
LPK	**Lapseki**	**0.97**	**63**	*e*PG	**Pg**	**15 55 34.5**	**-0.6**
LPK	**Lapseki**	**0.97**	**63**	*e*Pg	**Pg**	**15 55 34.5**	**-0.6**
ERIK	**Erikli-Kesan**	**1.00**	**42**	*e*PG	**Pg**	**15 55 35.1**	**-0.6**
ERIK				*e*SG	**Sb**	**15 55 49.6**	**+0.5**
ERIK	**Erikli-Kesan**	**1.00**	**42**	*e*Pg	**Pg**	**15 55 35.1**	**-0.6**
ERIK				*e*Sg	**Sb**	**15 55 49.7**	**+0.5**
ALN	**Alexandroupoli**	**1.02**	**18**	P	**Pg**	**15 55 35.4**	**-0.6**
ALN				S	**Sg**	**15 55 49.2**	**0.0**
ALN	**Alexandroupoli**	**1.02**	**18**	*e*PN	**Pg**	**15 55 35.5**	**-0.6**
ALN				*e*SN	**Sg**	**15 55 49.2**	**0.0**
ALN	**Alexandroupoli**	**1.02**	**18**	P	**Pg**	**15 55 35.4**	**-0.6**
ALN				S	**Sg**	**15 55 49.2**	**0.0**
AYVA	**Ayvalik**	**1.03**	**127**	*i* P	**Pg**	**15 55 35.9**	**-0.3**
AYVA				*i* S	**Sn**	**15 55 50.9**	**-0.5**
AYVA	**Ayvalik**	**1.03**	**127**	*i* P	**Pg**	**15 55 35.9**	**-0.3**
AYVA				*i* S	**Sn**	**15 55 50.9**	**-0.5**
OUR	**Ouranopolis**	**1.33**	**288**	P	**Pn**	**15 55 40.8**	**-0.3**
OUR				S	**Sg**	**15 55 59.7**	**+0.6**
OUR	**Ouranopolis**	**1.33**	**288**	P	**Pn**	**15 55 40.8**	**-0.3**
OUR				S	**Sg**	**15 55 59.7**	**+0.6**
KRBG	**Karabiga-Canak**	**1.36**	**70**	*e*PN	**Pn**	**15 55 41.4**	**-0.1**
KRBG	**Karabiga-Canak**	**1.36**	**70**	*e*Pn	**Pn**	**15 55 41.4**	**-0.1**
KAVA	**Kavala**	**1.36**	**322**	P	**Pn**	**15 55 41.1**	**-0.5**
KAVA	**Kavala**	**1.36**	**322**	P	**Pn**	**15 55 41.1**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.40**	**57**	*e*PN	**Pn**	**15 55 41.4**	**-0.8**
RKY	**Sarkoy-Tekirda**	**1.40**	**57**	*e*Pn	**Pn**	**15 55 41.4**	**-0.8**
SART	**Tekirdag**	**1.41**	**57**	*i* P	**Pn**	**15 55 41.8**	**-0.5**
SART				*i* S	**Sb**	**15 56 00.9**	**0.0**
SART	**Tekirdag**	**1.41**	**57**	*i* P	**Pn**	**15 55 41.8**	**-0.5**
SART				*i* S	**Sb**	**15 56 00.9**	**0.0**
PAIG	**Paliouri**	**1.50**	**271**	P	**Pn**	**15 55 43.3**	**-0.2**
PAIG	**Paliouri**	**1.50**	**271**	*e*PN	**Pn**	**15 55 43.2**	**-0.2**
PAIG				*e*SN	**Sn**	**15 56 02.6**	**-0.5**
PAIG	**Paliouri**	**1.50**	**271**	*e*Pn	**Pn**	**15 55 43.2**	**-0.2**
PAIG				*e*Sn	**Sn**	**15 56 02.6**	**-0.5**
BALY	**Balya**	**1.54**	**96**	*i* P	**Pn**	**15 55 44.3**	**+0.2**
BALY				*i* S	**Sb**	**15 56 05.0**	**+0.2**
BALY	**Balya**	**1.54**	**96**	*i* P	**Pn**	**15 55 44.3**	**+0.2**
BALY				*i* S	**Sb**	**15 56 05.0**	**+0.2**
AOS	**Alonnisos**	**1.55**	**241**	P	**Pn**	**15 55 44.0**	**-0.2**
AOS				S	**Sb**	**15 56 05.3**	**+0.3**
AOS	**Alonnisos**	**1.55**	**241**	*e*PN	**Pn**	**15 55 44.0**	**-0.2**
AOS				*e*SN	**Sn**	**15 56 04.7**	**+0.3**
AOS	**Alonnisos**	**1.55**	**241**	P	**Pn**	**15 55 44.0**	**-0.2**
AOS				*e*Sn	**Sn**	**15 56 04.7**	**+0.3**
AOS				S	**Sb**	**15 56 05.3**	**+0.3**
CHOS	**Chios island**	**1.58**	**168**	P	**Pn**	**15 55 44.0**	**-0.6**
CHOS				S	**Sn**	**15 56 05.0**	**-0.1**
CHOS	**Chios island**	**1.58**	**168**	*e*PN	**Pn**	**15 55 44.0**	**-0.6**
CHOS				*e*SN	**Sn**	**15 56 04.8**	**-0.3**
CHOS	**Chios island**	**1.58**	**168**	P	**Pn**	**15 55 44.0**	**-0.6**
CHOS				*e*Sn	**Sn**	**15 56 04.8**	**-0.3**
GONE	**Gonen-Balikesi**	**1.58**	**85**	*e*PN	**Pn**	**15 55 44.5**	**0.0**
GONE	**Gonen-Balikesi**	**1.58**	**85**	*e*Pn	**Pn**	**15 55 44.6**	**0.0**
PLG	**Polygyros**	**1.73**	**286**	*e*PB	**Pn**	**15 55 46.1**	**-0.6**
URLA	**Izmir**	**1.74**	**154**	*i* P	**Pn**	**15 55 46.5**	**-0.3**
URLA				*i* S	**Sn**	**15 56 09.3**	**+0.3**
URLA	**Izmir**	**1.74**	**154**	*i* P	**Pn**	**15 55 46.5**	**-0.3**
URLA				*i* S	**Sn**	**15 56 09.3**	**+0.3**
BALB	**Balikesir**	**1.76**	**99**	*e*PN	**Pn**	**15 55 47.2**	**+0.2**
BALB	**Balikesir**	**1.76**	**99**	*e*Pn	**Pn**	**15 55 47.2**	**+0.2**
TKR	**Tekirdag**	**1.80**	**53**	*e*PN	**Pn**	**15 55 47.9**	**+0.3**
TKR	**Tekirdag**	**1.80**	**53**	*e*Pn	**Pn**	**15 55 47.9**	**+0.3**
BNT	**Bandirma**	**1.81**	**76**	*e*PN	**Pn**	**15 55 47.5**	**-0.2**
BNT	**Bandirma**	**1.81**	**76**	*e*Pn	**Pn**	**15 55 47.5**	**-0.2**
BLCB	**Balcova**	**1.89**	**144**	*e*PN	**Pn**	**15 55 49.1**	**+0.2**
BLCB	**Balcova**	**1.89**	**144**	*e*Pn	**Pn**	**15 55 49.1**	**+0.2**
SOH	**Sokhos**	**1.95**	**298**	*e*PB	**Pn**	**15 55 49.9**	**+0.1**
SRS	**Serrai**	**1.95**	**308**	P	**Pn**	**15 55 49.4**	**-0.3**
SRS	**Serrai**	**1.95**	**308**	P	**Pn**	**15 55 49.4**	**-0.3**
NVR	**Nevrokopi**	**1.96**	**317**	*e*PB	**Pn**	**15 55 49.7**	**-0.1**
IZM	**Izmir**	**1.99**	**140**	*e*PN	**Pn**	**15 55 50.3**	**+0.1**
IZM	**Izmir**	**1.99**	**140**	*e*Pn	**Pn**	**15 55 50.3**	**+0.1**
AKHS	**Akhisar**	**1.99**	**121**	*i* P	**Pn**	**15 55 50.3**	**0.0**
AKHS				*i* S	**Sb**	**15 56 18.9**	**+1.2**
AKHS	**Akhisar**	**1.99**	**121**	*i* P	**Pn**	**15 55 50.3**	**0.0**
AKHS				*i* S	**Sb**	**15 56 18.9**	**+1.2**
EDRB	**Edirne**	**2.09**	**23**	*e*PN	**Pn**	**15 55 52.5**	**+0.9**
EDRB	**Edirne**	**2.09**	**23**	*e*Pn	**Pn**	**15 55 52.5**	**+0.9**
KCTX	**Karacabey (Bur**	**2.12**	**80**	*e*PN	**Pn**	**15 55 52.3**	**+0.3**
KCTX	**Karacabey (Bur**	**2.12**	**80**	*e*Pn	**Pn**	**15 55 52.3**	**+0.3**
DURS	**Dursunbey**	**2.22**	**98**	*i* P	**Pn**	**15 55 53.7**	**+0.3**
DURS				*i* S	**Sn**	**15 56 20.2**	**-0.8**
DURS	**Dursunbey**	**2.22**	**98**	*i* P	**Pn**	**15 55 53.7**	**+0.3**
DURS				*i* S	**Sn**	**15 56 20.2**	**-0.8**
SLVT	**Silivri**	**2.35**	**56**	*e*PN	**Pn**	**15 55 55.8**	**+0.6**
SLVT	**Silivri**	**2.35**	**56**	*e*Pn	**Pn**	**15 55 55.8**	**+0.6**
KNT	**Kendrikon**	**2.42**	**301**	P	**Pn**	**15 55 56.2**	**+0.1**
KNT	**Kendrikon**	**2.42**	**301**	P	**Pn**	**15 55 56.2**	**+0.1**
ORLT	**Orhaneli**	**2.51**	**86**	*e*PN	**Pn**	**15 55 57.9**	**+0.5**
ORLT	**Orhaneli**	**2.51**	**86**	*e*Pn	**Pn**	**15 55 57.9**	**+0.5**
MDNY	**Mudanya-Bursa**	**2.53**	**79**	*e*PN	**Pn**	**15 55 58.2**	**+0.6**
MDNY	**Mudanya-Bursa**	**2.53**	**79**	*e*Pn	**Pn**	**15 55 58.3**	**+0.6**
CTYL	**Yal??k??y-??at**	**2.54**	**52**	*e*PN	**Pn**	**15 55 58.7**	**+0.9**
CTYL	**Yal??k??y-??at**	**2.54**	**52**	*e*Pn	**Pn**	**15 55 58.7**	**+0.9**
CTKS	**Kestanelik-??a**	**2.55**	**58**	*e*PN	**Pn**	**15 55 58.8**	**+0.9**
CTKS	**Kestanelik-??a**	**2.55**	**58**	*e*Pn	**Pn**	**15 55 58.8**	**+0.9**
ARMT	**Armutlu**	**2.55**	**75**	*e*PN	**Pn**	**15 55 58.7**	**+0.7**
ARMT	**Armutlu**	**2.55**	**75**	*e*Pn	**Pn**	**15 55 58.7**	**+0.7**
BGKT	**Bogazkoy**	**2.70**	**61**	*e*PN	**Pn**	**15 56 00.7**	**+0.7**
BGKT	**Bogazkoy**	**2.70**	**61**	*e*Pn	**Pn**	**15 56 00.7**	**+0.7**
KULA	**Kula-Manisa**	**2.75**	**120**	*e*PN	**Pn**	**15 56 00.7**	**0.0**
KULA	**Kula-Manisa**	**2.75**	**120**	*e*Pn	**Pn**	**15 56 00.7**	**0.0**
ISK	**Istanbul-Kandi**	**2.85**	**65**	*e*PN	**Pn**	**15 56 02.8**	**+0.8**
ISK	**Istanbul-Kandi**	**2.85**	**65**	*e*Pn	**Pn**	**15 56 02.8**	**+0.8**
KLYT	**Kilyos**	**2.91**	**62**	*e*PN	**Pn**	**15 56 03.8**	**+0.9**
KLYT	**Kilyos**	**2.91**	**62**	*e*Pn	**Pn**	**15 56 03.8**	**+0.9**
TVSB	**Tavsanli**	**3.00**	**98**	*e*PN	**Pn**	**15 56 04.8**	**+0.6**
TVSB	**Tavsanli**	**3.00**	**98**	*e*Pn	**Pn**	**15 56 04.8**	**+0.6**
ADVT	**Abdulvahap**	**3.19**	**80**	*e*PN	**Pn**	**15 56 07.8**	**+1.1**
ADVT	**Abdulvahap**	**3.19**	**80**	*e*Pn	**Pn**	**15 56 07.8**	**+1.1**
CAVI	**Cavuskoy**	**3.24**	**84**	*e*PN	**Pn**	**15 56 08.3**	**+0.8**
CAVI	**Cavuskoy**	**3.24**	**84**	*e*Pn	**Pn**	**15 56 08.3**	**+0.8**

*ISCJB **21** 16:09:50.4±0.8, 41.04N±0.03×139.04E±0.04, h15km±7km, mb3.8/15, MS3.0/1, Error ellipse: s-maj=5.3km s-min=4.3km az=7.3*
*IDC **21** 16:09:50.3±0.7, 41.00N×138.87E, h0km, mb3.8/13, mb1 4.0/17, mb1mx3.9/29, mbtmp3.8/17, ML3.1/4, MS3.0/3, Ms1 3.0/3, ms1mx2.6/42, Error ellipse: s-maj=18.5km s-min=15.1km az=76.0*
*JMA **21** 16:09:51.5±0.1, 41.05N×139.06E, h33km±1km, M4.2*
JMA Felt I J1.
*NEIC **21** 16:09:54.1±2.2, 41.01N×138.93E, h26km±17km, mb4.5/2, MW3.8(NIED), Error ellipse: s-maj=9.3km s-min=7.4km az=128.0*
*NIED **21** 16:10:00, 41.00N×139.00E, h5km, Mw3.9 Best double couple: M0 6.83000×10^14 NP1:φs353.00000°, δ74.00000°, λ88.00000°. NP2:φs182.00000°, δ16.00000°, λ98.00000°.*

ISC 21 16:09:50.0±1.5, **41.07N**±0.03×**139.17E**±0.04, **h1**km±10km, **n52,σ1.913/64, mb3.7/15, 6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIW	**Iwasaki**	**0.79**	**127**	⇓P	**Pb**	**16 10 07.1**	**+0.5**
JIW				S	**Sb**	**16 10 18.3**	**+0.5**
JSI2	**Shiura 2**	**0.94**	**90**	⇓P	**Pn**	**16 10 09.7**	**-0.6**
JSI2				S	**Sn**	**16 10 23.2**	**-1.1**
JOSM	**Okushiri--Mats**	**1.04**	**13**	P	**Pg**	**16 10 10.1**	**+0.2**
JOSM				*e*S	**Sg**	**16 10 24.1**	**+0.7**
JSR	**Shiriuchi**	**1.05**	**64**	⇓P	**Pn**	**16 10 11.8**	**0.0**
JSR				S	**Sn**	**16 10 26.4**	**-0.6**
JYM2	**Yakumo 2**	**1.38**	**40**	P	**Pn**	**16 10 16.4**	**0.0**
JYM2				*e*S	**Sg**	**16 10 33.9**	**-0.5**
JAH	**Hinai**	**1.42**	**128**	⇓P	**Pn**	**16 10 16.7**	**-0.2**
JAH				S	**Sg**	**16 10 35.3**	**-0.3**
JOT	**Ohata**	**1.45**	**77**	⇓P	**Pn**	**16 10 17.3**	**0.0**
JOT				*e*S	**Sg**	**16 10 36.3**	**-0.3**
JTM	**Tenmabayashi**	**1.47**	**100**	⇓P	**Pn**	**16 10 17.2**	**-0.3**
JKB	**Kayabe**	**1.62**	**59**	P	**Pb**	**16 10 20.2**	**-0.5**
JSH	**Shimam**	**1.70**	**22**	P	**Pn**	**16 10 20.8**	**0.0**
JSH				*e*S	**Sn**	**16 10 41.4**	**-1.8**
ERM	**Erimo**	**3.14**	**71**	*e*P	**Pn**	**16 10 42.2**	**+1.7**
ASAJ	**Asahikawa**	**3.96**	**39**	*e*P	Pb	16 10 57.0	-3.5
ASAJ	**Asahikawa**	**3.96**	**39**	Pn	Pb	16 10 56.9	-3.7
	0.6nm,0.3s,baz=8.7,slow=23,SNR=8.0						
MAJO	**Matsushiro**	**4.58**	**190**	*e*Pn	**Pn**	**16 11 00.7**	**+0.2**
MAT	**Matsushiro**	**4.58**	**190**	P	**Pn**	**16 10 59.9**	**-0.5**
MAT				S	**Sn**	**16 11 51.9**	**-2.4**
MJAR	**Matsushiro Arr**	**4.58**	**190**	Pn	**Sn**	**16 11 01.0**	**+0.6**
MJAR				Sn	**Sn**	**16 11 52.0**	**-2.3**
	2.6nm,0.3s,baz=9.2,slow=15,SNR=55						
MJAR				Sn	**Sn**	**16 11 52.0**	**-2.3**
	0.9nm,0.3s,baz=9.9,slow=14,SNR=5.8						
MJAR				LR	LR	16 12 42.0	
	comp=Z,125nm,19.4s,baz=195,slow=38						
USRK	**Ussuriysk Arra**	**6.14**	**303**	Pn	**Pn**	**16 11 21.3**	**-0.5**
	2.1nm,0.3s,baz=113,slow=14,SNR=34						
USRK				Sn	**Sn**	**16 12 30.9**	**-1.8**
	2.3nm,0.3s,baz=116,slow=25,SNR=14						
KSRS	**Korea Array**	**9.44**	**251**	Pn	**Pn**	**16 12 06.3**	**-0.7**
	0.4nm,0.3s,baz=62,slow=14,SNR=10						
KSRS				Sn	**Sn**	**16 13 56.4**	**+2.6**
	0.8nm,0.3s,baz=66,slow=24,SNR=32						
KSRS				LR	LR	16 15 11.9	
	comp=Z,66nm,19.0s,baz=75,slow=35						
KSAR	**Wonju Array Be**	**9.47**	**251**	Pn	**Pn**	**16 12 06.3**	**-1.2**
KSAR				Sn	**Sn**	**16 13 56.4**	**+1.8**
SONM	**Songino Array**	**24.23**	**297**	P	**P**	**16 15 07.2**	**-1.2**
SONM	**Songino Array**	**24.23**	**297**	P	**P**	**16 15 07.2**	**-1.2**
	0.3nm,0.7s,baz=108,slow=4.7,SNR=2.8						
SONM				LR	LR	16 24 59.8	
	comp=Z,44nm,18.3s,baz=194,slow=38						
ZALV	**Zalesovo Beam**	**37.97**	**309**	P	**P**	**16 17 08.4**	**-0.6**
ZALV	**Zalesovo Beam**	**37.97**	**309**	P	**P**	**16 17 08.4**	**-0.6**
	0.6nm,0.6s,baz=90,slow=7.2,SNR=2.7						
MK31	**Makanchi Array**	**40.59**	**298**	*e*P	**P**	**16 17 29.9**	**-1.1**
MKAR	**Makanchi Array**	**40.59**	**298**	P	**P**	**16 17 30.1**	**-0.9**
MKAR	**Makanchi Array**	**40.59**	**298**	P	**P**	**16 17 30.1**	**-0.9**
	0.7nm,0.9s,baz=66,slow=9.2,SNR=6.4						
KURK	**Kurchatov**	**42.14**	**304**	*e*P	**P**	**16 17 42.3**	**-1.4**
ILAR	**Eielson Array**	**47.08**	**34**	P	**P**	**16 18 24.6**	**+1.6**
ILAR	**Eielson Array**	**47.08**	**34**	P	**P**	**16 18 24.6**	**+1.6**
	0.9nm,1.0s,baz=272,slow=6.3,SNR=7.6						
ABKAR	**Akbulak array**	**54.05**	**307**	*e*P	**P**	**16 19 15.7**	**-0.2**
	5.1nm,0.6s						
WRAB	**Tennant Creek**	**60.85**	**185**	*e*P	**P**	**16 20 03.3**	**-0.7**
	1.5nm,0.5s						
WRA	**Warramunga Arr**	**60.86**	**185**	P	**P**	**16 20 03.5**	**-0.6**
WRA	**Warramunga Arr**	**60.86**	**185**	P	**P**	**16 20 03.5**	**-0.6**
	2.1nm,0.5s,baz=2.8,slow=7.5,SNR=65						
FINES	**FINESS Array B**	**64.44**	**331**	P	**P**	**16 20 27.6**	**+0.1**
FINES	**FINESS Array B**	**64.44**	**331**	P	**P**	**16 20 27.6**	**+0.1**
	2.2nm,0.7s,baz=50,slow=10,SNR=8.6						
ASAR	**Alice Springs**	**64.59**	**185**	P	**P**	**16 20 28.9**	**-0.1**
ASAR	**Alice Springs**	**64.59**	**185**	P	**P**	**16 20 28.9**	**-0.1**
	0.7nm,0.7s,baz=5.6,slow=6.6,SNR=11						
KBZ	**Khabaz**	**66.99**	**308**	P	**P**	**16 20 45.0**	**+0.7**
KBZ	**Khabaz**	**66.99**	**308**	P	**P**	**16 20 45.0**	**+0.7**
	0.8nm,0.3s,baz=78,slow=19,SNR=3.3						
NB2	**NORSAR Subarra**	**69.80**	**336**	P	**P**	**16 21 01.6**	**0.0**
	comp=Z,0.1nm,0.7s,baz=46,slow=6.5						
NOA	**NORSAR Array B**	**69.80**	**336**	P	**P**	**16 21 01.4**	**-0.2**
NOA	**NORSAR Array B**	**69.80**	**336**	P	**P**	**16 21 01.4**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=40,slow=6.0,SNR=5.0						
NVAR	**Mina Array Bea**	**73.96**	**53**	P	**P**	**16 21 29.6**	**+2.3**
NVAR	**Mina Array Bea**	**73.96**	**53**	P	**P**	**16 21 29.6**	**+2.3**
	comp=Z,0.4nm,0.7s,baz=289,slow=5.6,SNR=3.3						
BRTR	**Keskin Array B**	**74.90**	**310**	P	**P**	**16 21 31.5**	**-1.2**
BRTR	**Keskin Array B**	**74.90**	**310**	P	**P**	**16 21 31.5**	**-1.2**
	comp=Z,0.4nm,0.6s,baz=108,slow=4.7,SNR=3.3						
CLL	**Collm**	**76.74**	**329**	*e*P	**P**	**16 21 43.0**	**+0.3**
GERES	**GERESS Array B**	**78.38**	**327**	P	**P**	**16 21 51.2**	**-0.8**
GERES	**GERESS Array B**	**78.38**	**327**	P	**P**	**16 21 51.2**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=38,slow=5.0,SNR=3.9						
TXAR	**Lajitas Array**	**88.99**	**51**	P	**P**	**16 22 48.2**	**+1.4**
TXAR	**Lajitas Array**	**88.99**	**51**	P	**P**	**16 22 48.2**	**+1.4**
	comp=Z,0.2nm,0.5s,baz=293,slow=3.7,SNR=3.6						

*CSEM **21** 16:12:50.8±0.5, 38.62N×35.66E, h15km, MD2.8, Error ellipse: s-maj=14.3km s-min=8.4km az=171.0*
*ISK **21** 16:12:50.8, 38.81N×35.50E, h5km, MD2.8*
*DDA **21** 16:12:52.5, 38.88N×35.60E, h7km, MD3.0*

ISC 21 16:12:51.8±1.0, **38.80N**±0.04×**35.58E**±0.03, **h13**km±8km, **n19,σ1.924/29, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNN	**Bunyan**	**0.22**	**75**	*e*PG	**Pg**	**16 12 56.8**	**+0.1**
BNN				*e*SG	**Sg**	**16 13 00.7**	**+0.7**
BNN	**Bunyan**	**0.22**	**75**	*e*Pg	**Pg**	**16 12 56.8**	**+0.1**
BNN				*e*Sg	**Sg**	**16 13 00.7**	**+0.7**
AVNT	**Avonos**	**0.56**	**269**	*i* P	**Pb**	**16 13 04.3**	**+0.6**
AVNT				*i* S	**Sb**	**16 13 13.1**	**+1.4**
AVNT	**Avonos**	**0.56**	**269**	*i* P	**Pb**	**16 13 04.3**	**+0.6**
AVNT				*i* S	**Sb**	**16 13 13.1**	**+1.4**
PINB	**Pinarbasi**	**0.66**	**100**	*i* P	**Pg**	**16 13 02.1**	**-2.6**
PINB				*i* S	**Sb**	**16 13 15.1**	**+0.7**
PINB	**Pinarbasi**	**0.66**	**100**	*i* P	**Pg**	**16 13 02.1**	**-2.6**
YOZ	**Yozgat**	**0.87**	**347**	*e*PG	**Pg**	**16 13 07.4**	**-1.3**
YOZ				*e*SG	**Sg**	**16 13 19.2**	**-0.8**
NIG	**Nigde**	**1.02**	**228**	*e*PG	**Pg**	**16 13 10.1**	**-1.5**
NIG	**Nigde**	**1.02**	**228**	*e*Pg	**Pg**	**16 13 10.1**	**-1.5**
CDAG	**Cicekdag**	**1.25**	**312**	*i* P	**Pg**	**16 13 14.1**	**-1.8**
CDAG				*i* S	**Sn**	**16 13 32.9**	**+1.1**
CDAG	**Cicekdag**	**1.25**	**312**	*i* P	**Pg**	**16 13 14.1**	**-1.8**
CDAG				*i* S	**Sn**	**16 13 32.9**	**+1.1**
DARE	**Darende-Malaty**	**1.51**	**98**	*e*PN	**Pg**	**16 13 20.3**	**-0.6**
DARE	**Darende-Malaty**	**1.51**	**98**	*e*Pn	**Pg**	**16 13 20.3**	**-0.6**
CORM	**Corum**	**1.56**	**332**	*e*PN	**Pn**	**16 13 19.4**	**0.0**
CORM	**Corum**	**1.56**	**332**	*e*Pn	**Pn**	**16 13 19.4**	**0.0**
SVSK	**Karacayir**	**1.57**	**44**	*e*PN	**Pb**	**16 13 20.4**	**-0.3**
SVSK	**Karacayir**	**1.57**	**44**	*e*Pn	**Pb**	**16 13 20.4**	**-0.3**
CTKT	**Corum**	**1.92**	**342**	*i* P	**Pg**	**16 13 27.9**	**-0.9**
CTKT				*i* S	**Sg**	**16 13 53.2**	**-0.5**
CTKT	**Corum**	**1.92**	**342**	*i* P	**Pg**	**16 13 27.9**	**-0.9**
CTKT				*i* S	**Sg**	**16 13 53.2**	**-0.5**

MAN 21 16:21:43, 9.94N×125.65E, h116km, mb3.8, ML2.6, MS2.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.80**	**284**	*e*P	Pn	16 22 03.4	+0.6
MSLP				*e*S	Sn	16 22 14.5	-3.2
TBP	**Tagbilaran**	**1.78**	**262**	*e*P	Pn	16 22 14.2	+0.7
BUKP	**Musuan**	**2.13**	**196**	*e*P	Pn	16 22 17.6	-0.4
BUKP				*e*S	Sn	16 22 33.5	-11

IDC 21 16:28:56.7±1.8, **14.56S×174.10W, h0km, mb3.8/6, mb1 4.2/6, mb1mx3.9/19, mbtmp3.8/6, MS3.6/10, Ms1 3.7/10, ms1mx3.3/33, Error ellipse: s-maj=109.1km s-min=22.3km az=151.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.34**	**74**	Pn	Pn	16 29 29.5	-

	10µm,0.4s							
OFFI	**Offida**	**0.48**	**43**	Pg	**Pn**	**16 31 22.1**	**-1.0**
	10µm,0.4s							
CESI	**CESI - Serrava**	**0.49**	**329**	Pg	**Pg**	**16 31 20.7**	**+0.2**
CESI				Sg	**Sb**	**16 31 28.3**	**+0.1**
	450nm,0.4s							
CESI	**CESI - Serrava**	**0.49**	**329**	Pg	**Pg**	**16 31 20.7**	**+0.2**
CESI				Sg	**Sb**	**16 31 28.3**	**+0.1**
	450nm,0.4s							
CESX	**Cesi**	**0.49**	**273**	Pg	**Pg**	**16 31 20.1**	**-0.5**
CESX				Sg	**Sg**	**16 31 27.4**	**+0.2**
	2µm,0.4s							
CESX	**Cesi**	**0.49**	**273**	Pg	**Pg**	**16 31 20.1**	**-0.5**
CESX				Sg	**Sg**	**16 31 27.4**	**+0.2**
	2µm,0.4s							
TRTR	**Tortoreto Alta**	**0.54**	**65**	Pg	**Pn**	**16 31 23.6**	**-0.4**
TRTR	**Tortoreto Alta**	**0.54**	**65**	Pg	**Pn**	**16 31 23.6**	**-0.4**
PTQR	**Pietraquaria**	**0.57**	**168**	Pg	**Pg**	**16 31 22.2**	**+0.1**
PTQR				Sg	**Sb**	**16 31 30.1**	**-0.5**
	148nm,0.3s							
PTQR	**Pietraquaria**	**0.57**	**168**	Pg	**Pg**	**16 31 22.2**	**+0.1**
PTQR				Sg	**Sb**	**16 31 30.1**	**-0.5**
	148nm,0.3s							
ASSB	**Assisi San Ben**	**0.63**	**317**	Pg	**Pg**	**16 31 22.9**	**-0.2**
ASSB				Sg	**Sb**	**16 31 32.3**	**+0.1**
	1µm,0.4s							
ASSB	**Assisi San Ben**	**0.63**	**317**	Pg	**Pg**	**16 31 22.9**	**-0.2**
ASSB				Sg	**Sb**	**16 31 32.3**	**+0.1**
	1µm,0.4s							
CERT	**Cerreto**	**0.67**	**197**	Pg	**Pg**	**16 31 23.1**	**-0.7**
	3µm,0.5s							
CERT	**Cerreto**	**0.67**	**197**	Pg	**Pg**	**16 31 23.1**	**-0.7**
	3µm,0.5s							
MTCE	**Montecelio**	**0.67**	**214**	Pg	**Pg**	**16 31 23.1**	**-0.9**
	906nm,0.5s							
MTCE	**Montecelio**	**0.67**	**214**	Pg	**Pg**	**16 31 23.1**	**-0.9**
	906nm,0.5s							
GUMA	**Gualdo di Mace**	**0.70**	**47**	Pg	**Pg**	**16 31 21.5**	**-2.9**
GUMA				Sg	**Sg**	**16 31 29.7**	**-4.0**
	7µm,0.6s							
SNTG	**Esanatoglia**	**0.71**	**342**	Pg	**Pg**	**16 31 24.6**	**0.0**
	453nm,0.5s							
SNTG	**Esanatoglia**	**0.71**	**342**	Pg	**Pg**	**16 31 24.6**	**0.0**
	453nm,0.5s							
INTR	**Introdacqua**	**0.75**	**139**	Pg	**Pb**	**16 31 25.4**	**-0.3**
	1µm,0.5s							
INTR	**Introdacqua**	**0.75**	**139**	Pg	**Pb**	**16 31 25.4**	**-0.3**
	1µm,0.5s							
VVLD	**Villa Vallelon**	**0.77**	**158**	Pg	**Pn**	**16 31 26.6**	**-0.6**
	414nm,0.6s							
VVLD	**Villa Vallelon**	**0.77**	**158**	Pg	**Pn**	**16 31 26.6**	**-0.6**
	414nm,0.6s							
CING	**Cingoli**	**0.79**	**357**	Pg	**Pb**	**16 31 26.4**	**+0.1**
	790nm,0.6s							
CING	**Cingoli**	**0.79**	**357**	Pg	**Pb**	**16 31 26.4**	**+0.1**
	790nm,0.6s							
GUAR	**Guarcino**	**0.79**	**176**	Pg	**Pb**	**16 31 26.4**	**+0.1**
	830nm,0.5s							
GUAR	**Guarcino**	**0.79**	**176**	Pg	**Pb**	**16 31 26.4**	**+0.1**
	830nm,0.5s							
MURB	**Monte Urbino**	**0.86**	**322**	Pg	**Pg**	**16 31 27.5**	**0.0**
	1µm,0.4s							
MURB	**Monte Urbino**	**0.86**	**322**	Pg	**Pg**	**16 31 27.5**	**0.0**
	1µm,0.4s							
RMP	**Rome, Mte Porz**	**0.87**	**208**	Pg	**Pg**	**16 31 26.9**	**-0.8**
	866nm,0.4s							
RMP	**Rome, Mte Porz**	**0.87**	**208**	Pg	**Pg**	**16 31 26.9**	**-0.8**
	866nm,0.4s							
LPEL	**Lama dei Pelig**	**0.88**	**127**	Pg	**Pg**	**16 31 27.5**	**-0.4**
	557nm,0.7s							
LPEL	**Lama dei Pelig**	**0.88**	**127**	Pg	**Pg**	**16 31 27.5**	**-0.4**
	557nm,0.7s							
MGAB	**Montegabbione**	**0.90**	**292**	Pg	**Pg**	**16 31 27.9**	**-0.3**
MGAB	**Montegabbione**	**0.90**	**292**	Pg	**Pg**	**16 31 27.9**	**-0.3**
RDP	**Rocca di Papa**	**0.92**	**206**	Pg	**Pg**	**16 31 27.5**	**-1.0**
	3µm,0.6s							
RDP	**Rocca di Papa**	**0.92**	**206**	Pg	**Pg**	**16 31 27.5**	**-1.0**
	3µm,0.6s							
ARVD	**Arcevia**	**0.94**	**346**	Pg	**Pb**	**16 31 28.8**	**0.0**
	852nm,0.6s							
ARVD	**Arcevia**	**0.94**	**346**	Pg	**Pb**	**16 31 28.8**	**0.0**
	852nm,0.6s							
SDI	**San Donato**	**0.97**	**154**	Pg	**Pg**	**16 31 29.5**	**-0.1**
	143nm,0.3s							
SDI	**San Donato**	**0.97**	**154**	Pg	**Pg**	**16 31 29.5**	**-0.1**
	143nm,0.3s							
AOI	**Ancona**	**1.00**	**15**	Pg	**Pn**	**16 31 30.6**	**+0.3**
	461nm,0.6s							
AOI	**Ancona**	**1.00**	**15**	Pg	**Pn**	**16 31 30.6**	**+0.3**
	461nm,0.6s							
SACS	**San Casciano d**	**1.02**	**285**	Pg	**Pb**	**16 31 30.1**	**-0.1**
	593nm,0.8s							
PIEI	**Pieia**	**1.08**	**332**	Pg	**Pb**	**16 31 31.2**	**-0.1**
	411nm,0.4s							
PIEI	**Pieia**	**1.08**	**332**	Pg	**Pb**	**16 31 31.2**	**-0.1**
	411nm,0.4s							
CERA	**Filignano**	**1.14**	**149**	Pg	**Pg**	**16 31 33.1**	**+0.3**
	773nm,1.0s							
CERA	**Filignano**	**1.14**	**149**	Pg	**Pg**	**16 31 33.1**	**+0.3**
	773nm,1.0s							
CAFI	**Castiglion Fio**	**1.20**	**309**	Pg	**Pb**	**16 31 33.5**	**+0.3**
CAFI	**Castiglion Fio**	**1.20**	**309**	Pg	**Pb**	**16 31 33.5**	**+0.3**
MIDA	**Miranda**	**1.21**	**141**	Pg	**Pb**	**16 31 33.3**	**-0.1**
	211nm,0.6s							
MIDA	**Miranda**	**1.21**	**141**	Pg	**Pb**	**16 31 33.3**	**-0.1**
	211nm,0.6s							
NVLJ	**Novalja**	**2.30**	**30**	*i* Pn	**Pb**	**16 31 50.8**	**-1.3**
NVLJ				Sn	**Sb**	**16 32 20.2**	**-0.1**
NVLJ	**Novalja**	**2.30**	**30**	*i* Pn	**Pb**	**16 31 50.7**	**-1.3**
NVLJ				Sn	**Sb**	**16 32 20.2**	**-0.1**
MAIM	**Mastiano**	**2.41**	**304**	P	**Pb**	**16 31 52.1**	**-1.8**
UDBI	**Udbina**	**2.67**	**42**	*e*Pn	**Pb**	**16 31 57.2**	**-1.1**
UDBI				Sn	**Sb**	**16 32 30.9**	**-0.1**
UDBI	**Udbina**	**2.67**	**42**	*e*Pn	**Pb**	**16 31 57.2**	**-1.1**
UDBI				Sn	**Sb**	**16 32 30.8**	**-0.1**
STON	**Ston**	**3.29**	**84**	*e*Pn	**Pn**	**16 32 05.0**	**+3.1**
STON				Sn	**Sn**	**16 32 43.4**	**+2.7**
STON	**Ston**	**3.29**	**84**	*e*Pn	**Pn**	**16 32 04.9**	**+3.1**
STON				Sn	**Sn**	**16 32 43.4**	**+2.7**
VOY	**Vojsko**	**3.48**	**7**	*e*Pn	**Pn**	**16 32 07.3**	**+2.8**
VOY				*e*Sn	**Sn**	**16 32 47.9**	**+2.5**
VOY	**Vojsko**	**3.48**	**7**	Pn	**Pn**	**16 32 06.3**	**+1.8**
VOY				*e*Sn	**Sn**	**16 32 46.9**	**+1.5**
PCP	**Piancastagn**	**3.94**	**301**	P	**Pn**	**16 32 12.9**	**+2.2**
PCP				S	**Sn**	**16 32 57.3**	**+0.7**
ABTA	**Abfaltersbach**	**4.19**	**353**	⇓*e*Pn	**Pn**	**16 32 17.5**	**+3.2**
	13nm,0.4s,SNR=8.8							
ABTA	**Abfaltersbach**	**4.19**	**353**	Pn	**Pn**	**16 32 17.5**	**+3.2**
	13nm,0.4s,SNR=8.8							
SBF	**Sospel**	**4.43**	**289**	*e*Pn	**Pn**	**16 32 16.7**	**-0.9**
SBF				*e*Sn	**Sn**	**16 33 05.7**	**-3.2**
	6.0nm,0.3s							
SBF	**Sospel**	**4.43**	**289**	*e*Pn	Pn	**16 32 16.7**	**-0.9**
KBA	**Koelnbreinsper**	**4.49**	**1**	⇑*i*Pn	Pn	16 32 22.3	+3.8
	4.5nm,0.3s,SNR=7.7							
KBA	**Koelnbreinsper**	**4.49**	**1**	Pn	Pn	16 32 22.3	+3.8
	4.5nm,0.3s,SNR=7.7							
FRF	**La Foret Royal**	**4.93**	**284**	*e*Pn	**Pn**	**16 32 25.1**	**+0.8**
LMR	**La Mourre**	**5.00**	**281**	*e*Pn	**Pn**	**16 32 25.7**	**+0.4**
LMR	**La Mourre**	**5.00**	**281**	*e*Pn	**Pn**	**16 32 25.7**	**+0.4**
MOA	**Molln**	**5.31**	**7**	⇑*i*Pn	Pn	16 32 33.7	+4.1
	2.2nm,0.4s,SNR=7.6							
MOA	**Molln**	**5.31**	**7**	Pn	Pn	16 32 33.7	+4.1
	2.2nm,0.4s,SNR=7.6							
LPL	**La Plagne**	**5.53**	**304**	*e*P	Pn	16 32 36.7	+3.9
CONA	**Conrad Observa**	**5.65**	**18**	⇑*i*Pn	**Pn**	**16 32 36.9**	**+2.6**
	0.7nm,0.2s,SNR=6.9							
CONA	**Conrad Observa**	**5.65**	**18**	Pn	**Pn**	**16 32 36.9**	**+2.6**
	0.7nm,0.2s,SNR=6.9							
ORIF	**Oris-en-Rattie**	**5.82**	**296**	*e*P	Pn	16 32 41.3	+4.6
KHC	**Kasperske Hory**	**6.55**	**2**	*e*PN	**Pn**	**16 32 49.0**	**+2.4**
KHC				*ex*	x	16 32 59.5	
KHC				*e*SN	**Sn**	**16 34 00.7**	**-0.3**
KHC	**Kasperske Hory**	**6.55**	**2**	Pn	**Pn**	**16 32 49.0**	**+2.4**
HINF	**Hinteralfeld**	**6.91**	**321**	*e*Pn	**Pn**	**16 32 52.4**	**+0.9**
HINF				*e*Sn	**Sn**	**16 34 05.6**	**-4.2**
	6.7nm,0.5s							
HINF	**Hinteralfeld**	**6.91**	**321**	*e*Pn	**Pn**	**16 32 52.4**	**+0.9**
VYHS	**Vyhne**	**7.09**	**32**	*e*PN	**Pn**	**16 32 51.6**	**-2.4**
VYHS				*e*SN	Sn	16 34 00.0	-14
CDF	**Champ du Feu**	**7.18**	**326**	*e*Pn	**Pn**	**16 32 56.4**	**+1.1**
CDF				*e*Sn	**Sn**	**16 34 12.2**	**-4.3**
	3.6nm,0.5s							
CDF	**Champ du Feu**	**7.18**	**326**	*e*Pn	**Pn**	**16 32 56.4**	**+1.1**
HAU	**Haudompre**	**7.28**	**320**	*e*Pn	**Pn**	**16 32 57.5**	**+0.9**
HAU				*e*Sn	**Sn**	**16 34 14.5**	**-4.5**
	6.0nm,0.5s							
HAU	**Haudompre**	**7.28**	**320**	*e*Pn	**Pn**	**16 32 57.5**	**+0.9**
PRU	**Pruhonice**	**7.46**	**6**	*e*SN	**Sn**	**16 34 22.7**	**-0.6**

IDC 21 16:53:43.1±2.1, 1°60N×126°54E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.3/21, mbtmp3.3/3, Error ellipse: s-maj=177.1km s-min=24.8km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.74**	**161**	P	P	16 58 45.6	-1.5
	0.5nm,0.5s,baz=339,slow=11,SNR=5.3						
ASAR	**Alice Springs**	**26.12**	**165**	P	P	16 59 19.9	+0.9
	0.2nm,0.3s,baz=345,slow=12,SNR=14						
MKAR	**Makanchi Array**	**59.19**	**326**	P	P	17 03 46.0	-0.1
	0.1nm,0.3s,baz=124,slow=8.0,SNR=3.3						

IDC 21 16:56:36.6±2.2, 6°89S×129°21E, h0km, mb3.4/1, mb1 3.4/4, mb1mx3.3/20, mbtmp3.3/4, ML3.2/3, Error ellipse: s-maj=103.8km s-min=27.7km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.68**	**197**	Pn	Pn	16 59 24.7	0.0
	0.3nm,0.3s,baz=28,slow=10,SNR=26						
FITZ				Sn	Sn	17 01 21.4	-14
	0.2nm,0.3s,baz=78,slow=14,SNR=3.7						
WRA	**Warramunga Arr**	**13.90**	**160**	Pn	Pn	16 59 54.6	-0.5
	0.1nm,0.3s,baz=339,slow=15,SNR=4.5						
WRA				Sn	Sn	17 02 13.8	-16
	0.5nm,0.3s,baz=336,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.28**	**165**	P	Pn	17 00 39.9	+0.3
	0.1nm,0.3s,baz=338,slow=9.4,SNR=6.6						
ASAR				S	Sn	17 03 37.5	-15
	0.1nm,0.3s,baz=331,slow=14,SNR=7.4						
MKAR	**Makanchi Array**	**67.71**	**327**	P	P	17 07 35.9	0.0
	0.2nm,0.5s,baz=138,slow=7.6,SNR=4.9						

DDA 21 16:56:49.3, 38°41N×27°30E, h7km, MD2.9, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IZM	**Izmir**	**0.03**	**244**	*e*PG	Pg	16 56 51.2	+0.4
IZM				*e*SG	Sg	16 56 52.7	+0.9
BLCB	**Balcova**	**0.20**	**263**	*e*PG	Pg	16 56 54.6	+1.2
BALY	**Balya**	**1.35**	**11**	*i* P	Pb	16 57 14.9	-0.1
BALY				*i* S	Sn	16 57 33.1	+0.4

IDC 21 17:17:41.9±0.6, 22°12S×68°39W, h101km±6km, mb3.8/8, mb1 3.9/12, mb1mx3.8/20, mbtmp3.7/12, Error ellipse: s-maj=18.5km s-min=15.1km az=135.0, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**0.69**	**224**	P	Pn	17 18 00.7	+1.0
	606nm,0.3s,baz=43,slow=7.9,SNR=918						
LVC				S	Sn	17 18 14.0	+1.1
	734nm,0.3s,baz=232,slow=19,SNR=55						
LPAZ	**La Paz**	**5.80**	**2**	P	Pn	17 19 08.0	+1.6
	1.5nm,0.3s,baz=193,slow=6.6,SNR=34						
SIV	**San Ignacio**	**9.22**	**50**	P	Pn	17 19 50.8	-1.3
	7.8nm,0.3s,baz=243,slow=12,SNR=145						
SIV				S	Sn	17 21 29.0	-5.1
	0.2nm,0.3s,baz=310,slow=22,SNR=4.3						
CFAA	**Coronel Fontan**	**9.45**	**179**	P	Pn	17 19 52.2	-3.0
	0.2nm,0.3s,baz=351,slow=14,SNR=14						
CPUP	**Villa Florida**	**10.93**	**115**	P	Pn	17 20 14.7	-0.5
	0.6nm,0.3s,baz=262,slow=10,SNR=4.9						
PLCA	**Paso Flores**	**18.65**	**185**	P	P	17 21 51.6	-0.3
	0.4nm,0.3s,baz=359,slow=15,SNR=8.8						
BDFB	**Brasilia**	**20.32**	**75**	P	P	17 22 09.9	-0.4
	3.2nm,0.4s,baz=226,slow=9.6,SNR=12						
TXAR	**Lajitas Array**	**61.41**	**325**	P	P	17 27 46.9	-0.8
	0.3nm,0.7s,baz=157,slow=6.7,SNR=4.9						
TXAR				ScP	ScP	17 32 20.4	-1.0
	0.1nm,0.4s,baz=152,slow=4.1,SNR=3.7						
DBIC	**Dimbokro**	**68.45**	**73**	P	P	17 28 33.5	-0.1
	3.6nm,0.7s,baz=220,slow=5.4,SNR=4.6						
NVAR	**Mina Array Bea**	**76.27**	**322**	P	P	17 29 20.3	+0.4
	0.6nm,0.8s,baz=157,slow=4.6,SNR=3.9						
VNDA	**Vanda**	**76.33**	**190**	P	P	17 29 20.1	+0.8
	1.2nm,1.0s,baz=269,slow=1.3,SNR=4.8						
TORD	**Torodi Ar. Bea**	**77.11**	**70**	P	P	17 29 25.2	+0.4
	1.9nm,0.3s,baz=254,slow=5.6,SNR=52						
BOSA	**Boshof**	**82.73**	**118**	P	P	17 29 54.9	-0.3
	1.5nm,0.8s,baz=122,slow=20,SNR=3.2						
MAW	**Mawson**	**83.60**	**163**	P	P	17 29 59.0	+0.3
	0.9nm,0.4s,baz=213,slow=8.5,SNR=6.2						
ASAR	**Alice Springs**	**129.59**	**207**	PKP	PKPdf	17 36 39.2	-0.6
	0.8nm,0.8s,baz=140,slow=1.7,SNR=10						
WRA	**Warramunga Arr**	**132.66**	**210**	PKP	PKPdf	17 36 45.5	-0.3
	1.0nm,0.8s,baz=156,slow=1.8,SNR=14						
ZALV	**Zalesovo Beam**	**142.30**	**26**	PKP	PKPdf	17 37 02.5	+0.2
	1.8nm,0.6s,baz=308,slow=4.4,SNR=5.4						
MKAR	**Makanchi Array**	**145.84**	**37**	PKPbc	PKPdf	17 37 09.0	+0.2
	1.3nm,0.7s,baz=318,slow=2.6,SNR=14						
USRK	**Ussuriysk Arra**	**152.28**	**327**	PKPbc	PKPbc	17 37 25.4	-0.6
	0.7nm,0.5s,baz=104,slow=1.4,SNR=5.0						
MJAR	**Matsushiro Arr**	**152.83**	**308**	PKPbc	PKPbc	17 37 27.1	-0.4
	2.5nm,1.3s,baz=6.8,slow=1.3,SNR=4.8						
SONM	**Songino Array**	**154.00**	**8**	PKP	PKPdf	17 37 21.8	+0.1
	0.6nm,0.8s,baz=132,slow=2.1,SNR=3.3						
SONM				PKPbc	PKPbc	17 37 29.0	-0.8
	0.2nm,0.6s,baz=40,slow=2.5,SNR=3.6						

*TIR **21** 17:35:05.8, 41°.19N×20°.22E, h7km, ML3.2*
*SKO **21** 17:35:06.1, 41°.17N×20°.17E, h13km*
*CSEM **21** 17:35:06.7±0.3, 41°.19N×20°.30E, h2km, ML3.2, Error ellipse: s-maj=8.6km s-min=4.3km az=55.0*
*PDG **21** 17:35:06.7±0.3, 41°.20N×20°.16E, h0km±11km, ML2.7/7, Error ellipse: s-maj=0.7km s-min=0.9km az=0.0*
*ATH **21** 17:35:06.0, 41°.25N×20°.24E, h14km±4km, MD3.4/5*

ISC 21 17:35:06.8±1.1, 41°21N±0°.03×20°22E±0°.03, h7km±10km, n36, σ1°33/63, 8C-6D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.30**	**298**	*e*PG	**Pg**	**17 35 11.4**	**-1.3**
TIR				*i* SG	**Sg**	**17 35 17.9**	**+1.2**
TIR	**Tirane**	**0.30**	**298**	*e*Pg	**Pg**	**17 35 11.4**	**-1.3**
TIR				*i* Sg	**Sg**	**17 35 17.9**	**+1.2**
PHP	**Peshkopia**	**0.51**	**19**	*e*PG	**Pg**	**17 35 15.7**	**-0.9**
PHP				*i* SG	**Sg**	**17 35 24.1**	**+0.9**
PHP	**Peshkopia**	**0.51**	**19**	*e*Pg	**Pg**	**17 35 15.7**	**-0.9**
PHP				*i* Sg	**Sg**	**17 35 24.1**	**+0.9**
KBN	**Korca**	**0.73**	**143**	*e*PG	**Pg**	**17 35 20.6**	**-0.2**
KBN				*i* SG	**Sn**	**17 35 33.4**	**-1.5**
KBN	**Korca**	**0.73**	**143**	*e*Pg	**Pg**	**17 35 20.6**	**-0.2**
BIA	**Bitola**	**0.86**	**102**	*e*Pg	**Pg**	**17 35 21.8**	**-1.5**
BIA				*i* Sg	**Sg**	**17 35 34.7**	**+0.2**
PUK	**Puka**	**0.87**	**344**	*e*PG	**Pg**	**17 35 22.7**	**-0.8**
PUK				*i* SG	**Sb**	**17 35 37.0**	**+0.9**
PUK	**Puka**	**0.87**	**344**	*e*Pg	**Pg**	**17 35 22.7**	**-0.8**
PUK				*i* Sg	**Sb**	**17 35 37.0**	**+0.9**
FNA	**Florina**	**0.97**	**115**	*e*PB	**Pg**	**17 35 24.5**	**-1.0**
FNA				*e*SB	**Sg**	**17 35 38.3**	**+0.1**
FNA	**Florina**	**0.97**	**115**	*e*Pb	**Pg**	**17 35 24.5**	**-1.0**
FNA				*e*Sb	**Sg**	**17 35 38.3**	**+0.1**
ULC	**Ulcinj**	**1.05**	**316**	⇓*i*Pg	**Pg**	**17 35 24.8**	**-2.2**
ULC				*e*Sg	**Sb**	**17 35 42.0**	**+0.7**
ULC	**Ulcinj**	**1.05**	**316**	⇓*i*Pg	**Pg**	**17 35 24.8**	**-2.2**
ULC				*e*Sg	**Sb**	**17 35 42.0**	**+0.7**
SKO	**Skopje**	**1.19**	**50**	*e*Pg	**Pb**	**17 35 28.4**	**-1.4**
SKO				*e*Sg	**Sn**	**17 35 45.8**	**-0.5**
PVY	**Plav**	**1.40**	**352**	⇑*i*Pg	**Pn**	**17 35 33.0**	**+0.1**
PVY				*e*Sg	**Sg**	**17 35 54.5**	**+2.7**
PVY	**Plav**	**1.40**	**352**	⇑*i*Pg	**Pn**	**17 35 33.0**	**+0.1**
PVY				*e*Sg	**Sg**	**17 35 54.5**	**+2.7**
PDG	**Podgorica**	**1.42**	**330**	⇓*i*Pg	**Pn**	**17 35 32.2**	**-0.8**
PDG				*e*Sg	**Sg**	**17 35 54.9**	**+2.5**
TTG	**Podgorica**	**1.42**	**330**	⇓*i*Pg	**Pn**	**17 35 32.2**	**-0.8**
TTG				*e*Sg	**Sg**	**17 35 54.9**	**+2.5**
BUM	**Brajici-Budva**	**1.47**	**318**	⇑*i*Pg	**Pn**	**17 35 32.8**	**-1.1**
BUM				*e*Sg	**Sg**	**17 35 56.1**	**+1.9**
BUM	**Brajici-Budva**	**1.47**	**318**	⇑*i*Pg	**Pn**	**17 35 32.8**	**-1.1**
BUM				*e*Sg	**Sg**	**17 35 56.1**	**+1.9**
KEK	**Kerkira**	**1.53**	**192**	*e*PB	**Pg**	**17 35 35.6**	**-0.5**
KEK	**Kerkira**	**1.53**	**192**	*e*Pb	**Pg**	**17 35 35.6**	**-0.5**
GRG	**Griva**	**1.67**	**98**	*e*PG	**Pn**	**17 35 36.8**	**+0.3**
GRG	**Griva**	**1.67**	**98**	*e*Pg	**Pn**	**17 35 36.8**	**+0.3**
BEY	**Berane**	**1.68**	**352**	*e*Pn	**Pb**	**17 35 38.1**	**0.0**
BEY				*e*Sn	**Sg**	**17 36 03.4**	**+2.6**
IVA	**Berane**	**1.68**	**352**	*e*Pn	**Pb**	**17 35 38.1**	**0.0**
IVA				*e*Sn	**Sg**	**17 36 03.4**	**+2.6**
NKY	**Niksic**	**1.84**	**331**	⇓*i*Pn	**Pb**	**17 35 40.2**	**-0.7**
NKY				*e*Sn	**Sg**	**17 36 07.2**	**+1.1**
NKY	**Niksic**	**1.84**	**331**	⇓*i*Pn	**Pb**	**17 35 40.2**	**-0.7**
NKY				*e*Sn	**Sg**	**17 36 07.2**	**+1.1**
BRY	**Bratogost**	**2.10**	**324**	⇑*i*Pn	**Pb**	**17 35 44.5**	**-0.9**
BRY				*e*Sn	**Sb**	**17 36 13.2**	**+1.5**
BRY	**Bratogost**	**2.10**	**324**	⇑*i*Pn	**Pb**	**17 35 44.5**	**-0.9**
BRY				*e*Sn	**Sb**	**17 36 13.2**	**+1.5**
UPM	**Unac-Piva**	**2.22**	**334**	⇑*i*Pn	**Pb**	**17 35 45.9**	**-1.5**
UPM				*e*Sn	**Sb**	**17 36 16.2**	**+1.1**
UPM	**Unac-Piva**	**2.22**	**334**	⇑*i*Pn	**Pb**	**17 35 45.9**	**-1.5**
UPM				*e*Sn	**Sb**	**17 36 16.2**	**+1.1**
AGG	**Agios Georgios**	**2.72**	**143**	*e*PB	**Pn**	**17 35 52.2**	**+1.3**
AGG	**Agios Georgios**	**2.72**	**143**	*e*Pb	**Pn**	**17 35 52.2**	**+1.3**
TRIZ	**Trizonia**	**3.18**	**153**	*e*PN	**Pn**	**17 35 58.1**	**+0.9**
TRIZ	**Trizonia**	**3.18**	**153**	*e*Pn	**Pn**	**17 35 58.1**	**+0.9**

IDC 21 17:37:15.7±9.4, 22°17S×67°15W, h192km±66km, mb3.9/1, mb1 3.5/3, mb1mx3.2/17, mbtmp3.5/3, Error ellipse: s-maj=106.8km s-min=50.4km az=34.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**5.93**	**351**	P	Pn	17 38 42.6	-0.2
	2.2nm,0.3s,baz=169,slow=6.4,SNR=45						
LPAZ				S	Sn	17 39 51.6	+0.1
	baz=216,slow=18,SNR=2.9						
BDFB	**Brasilia**	**19.22**	**74**	P	P	17 41 25.6	0.0
	0.3nm,0.3s,baz=236,slow=11,SNR=3.4						
TORD	**Torodi Ar. Bea**	**76.05**	**69**	P	P	17 48 42.5	+0.1
	1.5nm,0.3s,baz=257,slow=5.6,SNR=32						

IDC 21 17:57:18.7±28.0, 23°22S×173°96W, h0km, mb4.0/4, mb1 4.1/4, mb1mx3.7/19, mbtmp4.0/4, Error ellipse: s-maj=514.3km s-min=144.3km az=79.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.04**	**267**	P	P	18 04 31.3	+0.7
	1.6nm,0.3s,baz=84,slow=12,SNR=6.8						
STKA	**Stephens Creek**	**40.11**	**248**	P	P	18 04 55.8	-0.6
	4.4nm,1.1s,baz=93,slow=12,SNR=6.8						
ASAR	**Alice Springs**	**47.61**	**259**	P	P	18 05 56.6	-0.2
	0.2nm,0.3s,baz=93,slow=7.9,SNR=16						
WRA	**Warramunga Arr**	**47.99**	**264**	P	P	18 05 59.5	-0.3
	0.7nm,0.4s,baz=102,slow=8.3,SNR=31						

IDC 21 17:59:43.6±2.1, 0°77N×126°47E, h0km, mb3.2/3, mb1 3.5/3, mb1mx3.2/21, mbtmp3.3/3, Error ellipse: s-maj=180.8km s-min=26.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.98**	**160**	P	P	18 04 38.4	-1.0
	0.8nm,0.6s,baz=338,slow=11,SNR=11						
ASAR	**Alice Springs**	**25.34**	**164**	P	P	18 05 13.1	+0.7
	0.4nm,0.3s,baz=344,slow=11,SNR=24						
MKAR	**Makanchi Array**	**59.85**	**326**	P	P	18 09 50.9	-0.1
	0.1nm,0.3s,baz=114,slow=7.2,SNR=4.2						

**IDC 21 18:16

*ISCJB **21** 18:24:44.6±0.7,51°.0S×0°.1×116°.8E±0°.3,h10km,mb4.1/7, MS3.5/5,Error ellipse: s-maj=31.8km s-min=14.6km az=14.6*
*IDC **21** 18:24:45.2±0.8,51°.02S×116°.74E,h0km,mb4.1/7, mb1 4.3/7,mb1mx4.1/16,mbtmp4.1/7,MS3.6/6,Ms1 3.6/6, ms1mx3.4/22,Error ellipse: s-maj=36.9km s-min=17.7km az=105.0*
*NEIC **21** 18:24:46.4±0.3,51°.03S×116°.74E,h10km,mb4.8/1,Error ellipse: s-maj=18.8km s-min=9.5km az=106.0*
ISC 21 18:24:46.5±0.6,51°.00S±0°.10×116°.7E±0°.2,h10km,n35, σ0s62/31,mb4.2/7,MS3.5/5,Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**18.06**	**2**	LR	LR	18 34 17.6	
	comp=Z,191nm,21.4s,baz=190,slow=32						
DRV	**Dumont d'Urvil**	**19.61**	**152**	S	**Sn**	**18 32 57.0**	**+1.1**
DRV				R		18 33 00.0	
STKA	**Stephens Creek**	**26.52**	**53**	LR	LR	18 38 26.4	
	comp=Z,112nm,19.7s,baz=28,slow=31						
ASAR	**Alice Springs**	**30.38**	**33**	P	**P**	**18 30 58.1**	**-0.5**
ASAR	**Alice Springs**	**30.38**	**33**	P	**P**	**18 30 58.1**	**-0.5**
	3.2nm,0.9s,baz=215,slow=8.5,SNR=15						
ASAR				LR	LR	18 40 58.4	
	comp=Z,61nm,18.7s,baz=178,slow=32						
VNDA	**Vanda**	**31.43**	**163**	P	**P**	**18 31 07.4**	**+0.1**
VNDA	**Vanda**	**31.43**	**163**	P	**P**	**18 31 07.4**	**+0.1**
	1.5nm,0.8s,baz=292,slow=8.0,SNR=9.1						
VNDA				LR	LR	18 42 29.6	
	comp=Z,206nm,21.2s,baz=303,slow=34						
WRA	**Warramunga Arr**	**33.99**	**31**	P	**P**	**18 31 30.0**	**-0.3**
WRA	**Warramunga Arr**	**33.99**	**31**	P	**P**	**18 31 30.0**	**-0.3**
	4.0nm,1.0s,baz=201,slow=8.7,SNR=6.9						
QSPA	**South Pole Qui**	**39.13**	**180**	P	**P**	**18 32 13.7**	**-0.2**
QSPA	**South Pole Qui**	**39.13**	**180**	P	**P**	**18 32 13.7**	**-0.2**
	1.2nm,0.6s,baz=259,slow=2.4,SNR=13						
QSPA				LR	LR	18 49 26.7	
	comp=Z,112nm,18.4s,baz=34,slow=38						
SNAA	**Sanae**	**50.45**	**201**	eP	**P**	**18 33 42.8**	**-1.0**
	18nm,1.6s						
SNAA	**Sanae**	**50.45**	**201**	P	**P**	**18 33 43.8**	**0.0**
	1.6nm,1.0s,baz=146,slow=10,SNR=6.8						
BOSA	**Boshof**	**69.16**	**250**	P	**P**	**18 35 53.2**	**0.0**
BOSA	**Boshof**	**69.16**	**250**	P	**P**	**18 35 53.2**	**0.0**
	4.0nm,0.9s,baz=153,slow=8.1,SNR=4.7						
CMAR	**Chiang Mai Arr**	**70.88**	**342**	P	**P**	**18 36 05.0**	**+1.5**
CMAR	**Chiang Mai Arr**	**70.88**	**342**	P	**P**	**18 36 05.0**	**+1.5**
	0.8nm,0.7s,baz=191,slow=5.5,SNR=6.0						
CMAR				LR	LR	19 01 18.7	
	comp=Z,30nm,21.4s,baz=190,slow=31						
NVAR	**Mina Array Bea**	**139.88**	**86**	PKP	**PKPdf**	**18 44 15.3**	**+0.7**
NVAR	**Mina Array Bea**	**139.88**	**86**	PKP	**PKPdf**	**18 44 15.3**	**+0.7**
	0.3nm,0.4s,baz=217,slow=7.2,SNR=4.7						
TXAR	**Lajitas Array**	**142.98**	**110**	PKPpre	PKPpre	18 44 16.4	
TXAR	**Lajitas Array**	**142.98**	**110**	PKhKP	PKPpre	18 44 16.4	
	0.5nm,0.9s,baz=185,slow=6.3,SNR=4.4						
ESK	**Eskdalemuir**	**144.66**	**301**	ePKPdf	**PKPdf**	**18 44 21.6**	**-0.6**
HLID	**Hailey**	**145.18**	**82**	ePKPdf	**PKPbc**	**18 44 23.1**	**-0.3**
ANMO	**Albuquerque**	**145.18**	**101**	ePKPdf	**PKPdf**	**18 44 23.9**	**+0.1**
HVU	**Hansel Valley**	**145.27**	**86**	ePKPdf	**PKPab**	**18 44 23.8**	**0.0**
HWUT	**Hardware Ranch**	**145.94**	**87**	ePKPdf	**PKPdf**	**18 44 24.5**	**-0.7**
JCT	**Junction City**	**146.09**	**113**	ePKPdf	**PKPdf**	**18 44 25.2**	**-0.4**
MCMT	**McKenzie Canyo**	**146.78**	**81**	ePKPdf	**PKPdf**	**18 44 25.8**	**-0.7**
SLMT	**Seeley Lake**	**147.48**	**77**	ePKPbc	**PKPbc**	**18 44 29.6**	**-0.5**
LRM	**Limekiln Ridge**	**147.50**	**80**	ePKPdf	**PKPdf**	**18 44 27.2**	**-0.5**
PDAR	**Pinedale Array**	**147.82**	**86**	PKPbc	**PKPbc**	**18 44 31.4**	**+0.1**
PDAR	**Pinedale Array**	**147.82**	**86**	PKPbc	**PKPbc**	**18 44 31.4**	**+0.1**
	0.5nm,0.3s,baz=247,slow=3.1,SNR=6.8						
BOZ	**Bozeman (W)**	**147.93**	**80**	ePKPbc	**PKPbc**	**18 44 30.9**	**-0.4**
YKA	**Yellowknife Ar**	**150.47**	**47**	PKPbc	**PKPbc**	**18 44 37.0**	**0.0**
YKA	**Yellowknife Ar**	**150.47**	**47**	PKPbc	**PKPbc**	**18 44 36.9**	**0.0**
	2.7nm,0.9s,baz=282,slow=1.9,SNR=15						

*CSEM **21** 18:41:14.3±0.6,36°.44N×41°.41E,h2km,MD3.4,Error ellipse: s-maj=16.9km s-min=5.3km az=152.0*
*ISK **21** 18:41:16.5,36°.56N×41°.06E,h5km,MD3.4*
DDA 21 18:41:14.6,36°.60N×41°.26E,h7km,MD3.2,Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MARD	**Mardin**	**0.81**	**332**	*i* P	Pg	18 41 28.1	-2.2
MARD				*i* S	Sb	18 41 41.9	-0.5
BEST	**Besiri**	**1.29**	**1**	*i* P	Pn	18 41 38.7	-0.4
BEST				*i* S	Sn	18 41 59.6	+2.8
SIRN	**S¨–rnak**	**1.29**	**46**	*i* P	Pn	18 41 39.2	0.0
SIRN				*i* S	Sn	18 42 02.0	+5.3
SIRN	**S¨–rnak**	**1.29**	**46**	*i* P	Pn	18 41 39.2	0.0
BTMT	**Batman**	**1.60**	**7**	ePN	Pg	18 41 46.5	+1.1
BTMT				eSN	Sg	18 42 08.3	+2.0
BTMT	**Batman**	**1.60**	**7**	ePn	Pg	18 41 46.5	+1.1
BTMT				eSn	Sg	18 42 08.3	+2.0
DIYA	**Diyarbakir**	**1.60**	**326**	*i* P	Pn	18 41 40.3	-3.1
DIYA				*i* S	Sn	18 42 03.4	-1.0
PTK	**Pertek**	**2.72**	**328**	ePN	Pb	18 42 02.3	-1.6
PTK	**Pertek**	**2.72**	**328**	ePn	Pb	18 42 02.3	-1.6
MYA	**Malataya**	**2.83**	**308**	ePN	Pb	18 42 03.4	-2.3
MYA	**Malataya**	**2.83**	**308**	ePn	Pb	18 42 03.4	-2.3
GAZ	**Gaziantep**	**3.29**	**281**	ePN	Pn	18 42 09.0	+2.3
GAZ	**Gaziantep**	**3.29**	**281**	ePn	Pn	18 42 09.0	+2.3
DARE	**Darende-Malaty**	**3.58**	**304**	ePN	Pn	18 42 13.8	+3.1
DARE	**Darende-Malaty**	**3.58**	**304**	ePn	Pn	18 42 13.8	+3.0
KMRS	**Kahramanmaras**	**3.60**	**286**	ePN	Pn	18 42 13.7	+2.8
KMRS	**Kahramanmaras**	**3.60**	**286**	ePn	Pn	18 42 13.7	+2.8

IDC 21 18:49:36.7±2.2,5°.77S×130°.74E,h0km,mb3.8/2, mb1 3.6/5,mb1mx3.3/20,mbtmp3.5/5,ML3.2/2,MS2.9/1, Ms1 2.9/1,ms1mx2.5/30,Error ellipse: s-maj=114.8km s-min=25.7km az=78.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.23**	**202**	Pn	Pn	18 52 44.9	-1.1
	0.1nm,0.3s,baz=32,slow=13,SNR=13						
FITZ				Sn	Sn	18 54 57.7	-16
	0.2nm,0.3s,baz=162,slow=20,SNR=7.5						
WRA	**Warramunga Arr**	**14.52**	**166**	Pn	Pn	18 53 05.1	+1.4
	0.1nm,0.3s,baz=352,slow=13,SNR=3.5						
WRA				Sn	Sn	18 55 30.6	-15
	0.3nm,0.3s,baz=332,slow=24,SNR=5.6						
ASAR	**Alice Springs**	**18.06**	**171**	P	Pn	18 53 48.8	-0.5
	0.0nm,0.3s,baz=347,slow=10,SNR=6.5						
ASAR				S	Sn	18 57 02.0	-9.5
	0.1nm,0.3s,baz=359,slow=28,SNR=4.3						
KSRS	**Korea Array**	**43.08**	**357**	LR	LR	19 17 42.5	
	comp=Z,13nm,18.7s,baz=90,slow=39						
MKAR	**Makanchi Array**	**67.61**	**326**	P	P	19 00 35.7	+0.4
	0.8nm,0.4s,baz=112,slow=8.1,SNR=16						
KURBB	**Kurchatov Arra**	**71.85**	**328**	P	P	19 01 01.0	-0.4
	0.3nm,0.4s,baz=130,slow=4.9,SNR=5.8						

*ISK **21** 18:58:05.9,39°.16N×29°.45E,h5km,MD2.8*
*ISCJB **21** 18:58:06.2±0.6,39°.15N±0°.03×29°.46E±0°.04,h1km±8km, Error ellipse: s-maj=5.1km s-min=4.5km az=148.9*
*DDA **21** 18:58:06.8,39°.13N×29°.43E,h7km,MD3.0*
*CSEM **21** 18:58:06.6±0.1,39°.15N×29°.49E,h5km,MD2.8,Error ellipse: s-maj=3.6km s-min=3.1km az=81.0*
ISC 21 18:58:06.8±1.1,39°.16N±0°.02×29°.46E±0°.02,h4km±11km, n36,σ0s37/50,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TVSB	**Tavsanli**	**0.29**	**0**	ePG	**Pg**	**18 58 12.1**	**-0.4**
TVSB				eSG	**Sg**	**18 58 16.2**	**-0.1**
TVSB	**Tavsanli**	**0.29**	**0**	ePg	**Pg**	**18 58 12.1**	**-0.4**
TVSB				eSg	**Sg**	**18 58 16.2**	**-0.1**
ALT	**Altintas**	**0.52**	**101**	ePG	**Pg**	**18 58 16.5**	**-0.2**
ALT				eSG	**Sg**	**18 58 24.2**	**+0.7**
ALT	**Altintas**	**0.52**	**101**	ePg	**Pg**	**18 58 16.5**	**-0.2**
ALT				eSg	**Sg**	**18 58 24.2**	**+0.7**
DEMI	**Demirci**	**0.59**	**259**	*i* P	**Pg**	**18 58 18.3**	**+0.1**
DEMI				*i* S	**Sg**	**18 58 25.8**	**0.0**
DEMI	**Demirci**	**0.59**	**259**	*i* P	**Pg**	**18 58 18.3**	**+0.1**
DEMI				*i* S	**Sg**	**18 58 25.8**	**0.0**
KHAL	**Karahalli**	**0.79**	**178**	*i* P	**Pg**	**18 58 21.7**	**-0.2**
KHAL				*i* S	**Sg**	**18 58 32.1**	**0.0**
KHAL	**Karahalli**	**0.79**	**178**	*i* P	**Pg**	**18 58 21.7**	**-0.2**
KHAL				*i* S	**Sg**	**18 58 32.1**	**0.0**
KHL	**Karahalli**	**0.84**	**177**	ePG	**Pg**	**18 58 22.4**	**-0.5**
KHL				eSG	**Sg**	**18 58 34.3**	**+0.6**
KHL	**Karahalli**	**0.84**	**177**	ePg	**Pg**	**18 58 22.4**	**-0.5**
KHL				eSg	**Sg**	**18 58 34.3**	**+0.6**
KULA	**Kula-Manisa**	**0.90**	**224**	ePG	**Pg**	**18 58 23.5**	**-0.5**
KULA				eSG	**Sg**	**18 58 35.8**	**+0.2**
KULA	**Kula-Manisa**	**0.90**	**224**	ePg	**Pg**	**18 58 23.5**	**-0.5**
KULA				eSg	**Sg**	**18 58 35.8**	**+0.2**
SHUT	**Suhut-Afyon**	**1.04**	**125**	ePG	**Pg**	**18 58 26.4**	**-0.4**
SHUT	**Suhut-Afyon**	**1.04**	**125**	ePg	**Pg**	**18 58 26.4**	**-0.4**
CAVI	**Cavuskoy**	**1.08**	**16**	ePN	**Pg**	**18 58 27.3**	**-0.3**
CAVI	**Cavuskoy**	**1.08**	**16**	ePn	**Pg**	**18 58 27.3**	**-0.3**
ESKT	**Eskisehir**	**1.14**	**71**	ePN	**Pg**	**18 58 28.3**	**-0.3**
ESKT	**Eskisehir**	**1.14**	**71**	ePn	**Pg**	**18 58 28.3**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.29**	**340**	ePN	**Pg**	**18 58 31.1**	**-0.4**
MDNY	**Mudanya-Bursa**	**1.29**	**340**	ePn	**Pg**	**18 58 31.1**	**-0.4**
ADVT	**Abdulvahap**	**1.29**	**9**	ePN	**Pg**	**18 58 31.2**	**-0.3**
ADVT	**Abdulvahap**	**1.29**	**9**	ePn	**Pg**	**18 58 31.2**	**-0.3**
BALB	**Balikesir**	**1.31**	**292**	ePN	**Pn**	**18 58 31.5**	**-0.4**
BALB	**Balikesir**	**1.31**	**292**	ePn	**Pn**	**18 58 31.5**	**-0.4**
KCTX	**Karacabey (Bur**	**1.39**	**323**	ePN	**Pn**	**18 58 32.8**	**-0.2**
KCTX	**Karacabey (Bur**	**1.39**	**323**	ePn	**Pn**	**18 58 32.8**	**-0.2**
YLV	**Yalova**	**1.41**	**357**	ePN	**Pb**	**18 58 33.8**	**+0.1**
YLV	**Yalova**	**1.41**	**357**	ePn	**Pb**	**18 58 33.8**	**+0.1**
ARMT	**Armutlu**	**1.48**	**342**	ePN	**Pn**	**18 58 34.2**	**0.0**
ARMT	**Armutlu**	**1.48**	**342**	ePn	**Pn**	**18 58 34.2**	**0.0**
GULT	**Gulveren**	**1.51**	**32**	ePN	**Pn**	**18 58 35.1**	**+0.4**
GULT	**Gulveren**	**1.51**	**32**	ePn	**Pn**	**18 58 35.1**	**+0.4**
BALY	**Balya**	**1.54**	**293**	*i* P	**Pg**	**18 58 37.0**	**+0.7**
BALY				*i* S	**Sn**	**18 58 55.3**	**-0.2**
BALY	**Balya**	**1.54**	**293**	*i* P	**Pg**	**18 58 37.0**	**+0.7**
BALY				*i* S	**Sn**	**18 58 55.3**	**-0.2**
GONE	**Gonen-Balikesi**	**1.63**	**303**	ePN	**Pn**	**18 58 36.4**	**+0.1**
GONE	**Gonen-Balikesi**	**1.63**	**303**	ePn	**Pn**	**18 58 36.4**	**+0.1**

*TIR **21** 19:05:15.2,41°.17N×20°.20E,h7km,ML3.5*
*SKO **21** 19:05:16.2,41°.12N×20°.08E,h20km*
*CSEM **21** 19:05:16.2±0.7,41°.13N×20°.18E,h2km,ML3.5,Error ellipse: s-maj=17.1km s-min=9.9km az=51.0*
*PDG **21** 19:05:17.0±0.4,41°.16N×20°.10E,h0km±11km,ML2.7/8, Error ellipse: s-maj=1.0km s-min=1.6km az=0.0*
ISC 21 19:05:16.4±1.2,41°.18N±0°.03×20°.18E±0°.03,h6km±10km, n28,σ1s65/53,10C-2D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	**Tirane**	**0.29**	**306**	ePG	**Pg**	**19 05 22.1**	**-0.1**
TIR				*i* SG	**Sg**	**19 05 26.4**	**+0.3**
TIR	**Tirane**	**0.29**	**306**	ePg	**Pg**	**19 05 22.1**	**-0.1**
TIR				*i* Sg	**Sg**	**19 05 26.4**	**+0.3**
PHP	**Peshkopia**	**0.55**	**21**	ePG	**Pg**	**19 05 26.2**	**-0.7**
PHP				*i* SG	**Sg**	**19 05 34.3**	**+0.2**
PHP	**Peshkopia**	**0.55**	**21**	ePg	**Pg**	**19 05 26.2**	**-0.7**
PHP				*i* Sg	**Sg**	**19 05 34.3**	**+0.2**
KBN	**Korca**	**0.72**	**140**	ePG	**Pg**	**19 05 29.6**	**-0.6**
KBN				*i* SG	**Sn**	**19 05 45.2**	**+0.6**
KBN	**Korca**	**0.72**	**140**	ePg	**Pg**	**19 05 29.6**	**-0.6**
KBN				*i* Sg	**Sn**	**19 05 45.2**	**+0.6**
BIA	**Bitola**	**0.88**	**100**	ePg	**Pg**	**19 05 33.4**	**+0.1**
BIA				*i* Sg	**Sb**	**19 05 46.5**	**+0.4**
PUK	**Puka**	**0.89**	**346**	ePG	**Pg**	**19 05 33.1**	**-0.5**
PUK				*i* SG	**Sb**	**19 05 47.4**	**+0.8**
PUK	**Puka**	**0.89**	**346**	ePg	**Pg**	**19 05 33.1**	**-0.5**
PUK				*i* Sg	**Sb**	**19 05 47.4**	**+0.8**
ULC	**Ulcinj**	**1.06**	**319**	¶ *i* Pg	**Pg**	**19 05 35.2**	**-1.5**
ULC				eSg	**Sn**	**19 05 52.6**	**-0.3**
ULC	**Ulcinj**	**1.06**	**319**	¶ *i* Pg	**Pg**	**19 05 35.2**	**-1.5**
ULC				eSg	**Sn**	**19 05 52.6**	**-0.3**
BCI	**Bajram Curri**	**1.19**	**356**	ePG	**Sg**	**19 05 51.3**	**-3.5**
BCI	**Bajram Curri**	**1.19**	**356**	ePg	**Sg**	**19 05 51.3**	**-3.5**
SKO	**Skopje**	**1.23**	**49**	ePg	**Pg**	**19 05 40.2**	**+0.1**
PVY	**Plav**	**1.43**	**353**	‖ *i* Pg	**Pg**	**19 05 44.2**	**+0.4**
PVY				eSg	**Sg**	**19 06 05.9**	**+3.6**
PVY	**Plav**	**1.43**	**353**	‖ *i* Pg	**Pg**	**19 05 44.2**	**+0.4**
PVY				eSg	**Sg**	**19 06 05.9**	**+3.6**
PDG	**Podgorica**	**1.43**	**331**	¶ *i* Pg	**Pn**	**19 05 42.8**	**-0.2**
PDG				eSg	**Sg**	**19 06 05.6**	**+3.1**
TTG	**Podgorica**	**1.43**	**331**	¶ *i* Pg	**Pn**	**19 05 42.8**	**-0.2**
TTG				eSg	**Sg**	**19 06 05.6**	**+3.1**
BUM	**Brajici-Budva**	**1.48**	**320**	¶ *i* Pg	**Pn**	**19 05 43.1**	**-0.6**
BUM				eSg	**Sg**	**19 06 07.4**	**+3.4**
BUM	**Brajici-Budva**	**1.48**	**320**	¶ *i* Pg	**Pn**	**19 05 43.1**	**-0.6**
BUM				eSg	**Sg**	**19 06 07.4**	**+3.4**
BEY	**Berane**	**1.71**	**353**	¶ *i* Pn	**Pg**	**19 05 49.2**	**0.0**
BEY				eSn	**Sg**	**19 06 14.8**	**+3.5**
IVA	**Berane**	**1.71**	**353**	¶ *i* Pn	**Pg**	**19 05 49.2**	**0.0**
IVA				eSn	**Sg**	**19 06 14.8**	**+3.5**
BRY	**Bratogost**	**2.12**	**325**	ePn	**Pb**	**19 05 55.0**	**-0.3**
BRY				eSn	**Sg**	**19 06 24.0**	**-0.4**
BRY	**Bratogost**	**2.12**	**325**	ePn	**Pb**	**19 05 55.0**	**-0.3**
BRY				eSn	**Sg**	**19 06 24.0**	**-0.4**
PLE	**Pljevlja**	**2.23**	**345**	ePn	**Pb**	**19 05 56.0**	**-1.2**
PLE				eSn	**Sg**	**19 06 27.3**	**-0.8**
PLE	**Pljevlja**	**2.23**	**345**	ePn	**Pb**	**19 05 56.0**	**-1.2**
PLE				eSn	**Sg**	**19 06 27.3**	**-0.8**
UPM	**Unac-Piva**	**2.24**	**335**	¶ *i* Pn	**Pb**	**19 05 57.0**	**-0.4**
UPM				eSn	**Sg**	**19 06 27.5**	**-0.8**
UPM	**Unac-Piva**	**2.24**	**335**	¶ *i* Pn	**Pb**	**19 05 57.0**	**-0.4**
UPM				eSn	**Sg**	**19 06 27.5**	**-0.8**

IDC 21 19:35:25.8±4.8,5°.27S×150°.97E,h105km±39km,mb3.4/8, mb1 3.6/9,mb1mx3.4/21,mbtmp3.4/9,MS3.4/3,Ms1 3.4/3, ms1mx2.8/18,Error ellipse: s-maj=56.4km s-min=26.1km az=116.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.58**	**222**	P	Pn	19 36 44.9	-1.6
	2.8nm,0.3s,baz=38,slow=14,SNR=7.5						
PMG				S	Sn	19 37 50.8	+1.4
	1.1nm,0.3s,baz=323,slow=20,SNR=3.2						
WRA	**Warramunga Arr**	**21.79**	**227**	P	P	19 40 09.2	-0.3
	1.0nm,0.7s,baz=53,slow=9.4,SNR=7.7						
DZM	**Mont Dzumac**	**22.43**	**140**	LR	LR	19 47 49.8	
	comp=Z,101nm,19.4s,baz=207,slow=33						
ASAR	**Alice Springs**	**24.60**	**220**	P	P	19 40 36.9	+0.5
	2.0nm,0.7s,baz=60,slow=8.8,SNR=32						
FITZ	**Fitzroy Crossi**	**27.84**	**241**	P	P	19 41 06.2	+0.6
	4.0nm,0.8s,baz=96,slow=5.9,SNR=11						
MJAR	**Matsushiro Arr**	**43.27**	**345**	LR	LR	20 00 04.8	
	comp=Z,46nm,20.4s,baz=110,slow=34						
PETK	**Petropavlovsk-**	**58.43**	**5**	LR	LR	20 07 35.7	
	comp=Z,25nm,20.1s,baz=204,slow=33						
SONM	**Songino Array**	**65.76**	**329**	P	P	19 46 00.2	+0.5
	0.6nm,0.7s,baz=150,slow=4.5,SNR=5.5						
MKAR	**Makanchi Array**	**79.48**	**319**	P	P	19 47 21.5	+0.6
	0.6nm,0.9s,baz=87,slow=6.2,SNR=5.0						
KURBB	**Kurchatov Arra**	**83.05**	**322**	P	P	19 47 38.5	-1.1
	0.6nm,1.0s,baz=111,slow=3.8,SNR=5.4						
ILAR	**Eielson Array**	**83.28**	**22**	P	P	19 47 41.6	+1.1
	0.3nm,0.7s,baz=242,slow=4.9,SNR=4.3						
BVAR	**Borovoye Array**	**88.52**	**323**	P	P	19 48 06.4	-0.2
	0.5nm,0.7s,baz=107,slow=5.0,SNR=4.1						
GERES	**GERESS Array B**	**123.48**	**327**	PKP	PKPdf	19 54 09.9	-1.2
	0.1nm,0.3s,baz=52,slow=1.6,SNR=3.4						
TORD	**Torodi Ar. Bea**	**148.71**	**287**	PKPbc	PKPbc	19 55 00.7	-1.3
	2.7nm,0.8s,baz=73,slow=2.2,SNR=17						

*MOS **21** 19:36:52.7±3.1,44°.17N×34°.35E,h22km,mb4.1/1,Error ellipse: s-maj=11.7km s-min=8.6km az=96.1*
*CSEM **21** 19:36:52.7,44°.17N×34°.35E,h22km,mb4.1,After OBN*
*IDC **21** 19:36:53.1±1.6,44°.34N×34°.21E,h0km,mb3.3/1, mb1 3.1/5,mb1mx3.0/29,mbtmp3.0/5,ML2.7/4,Error ellipse: s-maj=19.0km s-min=16.0km az=21.0*
ISC 21 19:36:53.9±1.0,44°.12N±0°.03×34°.16E±0°.04,h29km±10km, n72,σ1s42/75,11C-4D,Crimea region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
YAL	**Yalta**	**0.37**	**359**	¶ *e*P	**Pn**	**19 37 03.2**	**-0.1**
YAL				*e*	Sn	19 37 10.5	+1.0
YAL	**Yalta**	**0.37**	**359**	*e*P	**Pn**	**19 37 03.2**	**-0.1**
YAL				*e*S	**Sn**	**19 37 10.5**	**+1.0**
SEV	**Sevastopol'**	**0.55**	**320**	*e*P	**Pb**	**19 37 05.1**	**-0.1**
SEV				*e*	**Sb**	**19 37 13.8**	**+1.0**
SEV	**Sevastopol'**	**0.55**	**320**	*e*P	**Pb**	**19 37 05.1**	**-0.1**
SEV				*e*S	**Sb**	**19 37 13.8**	**+1.0**
ALU	**Alushta**	**0.59**	**17**	‖ *e*P	**Pb**	**19 37 05.9**	**+0.2**
ALU				*e*	**Sn**	**19 37 10.4**	**+2.1**
ALU	**Alushta**	**0.59**	**17**	*e*P	**Pb**	**19 37 05.9**	**+0.2**
ALU				*e*S	**Sn**	**19 37 15.4**	**+0.5**
SIM	**Simferopol'**	**0.83**	**358**	*e*P	**Pn**	**19 37 10.8**	**+1.1**
SIM				*e*	**Sn**	**19 37 23.0**	**+2.1**
SIM				pmax	pmax		
	comp=Z,14nm,0.1s						
SIM				smax	smax		
	comp=N,37nm,0.1s						
SIM				smax	smax		
	comp=E,40nm,0.1s						
SIM	**Simferopol'**	**0.83**	**358**	*e*P	**Pn**	**19 37 10.8**	**+1.1**
	comp=E,14nm,0.1s						
SIM				*e*S	**Sn**	**19 37 23.0**	**+2.1**
SUDU	**Sudak**	**0.97**	**38**	‖ *e*P	**Pb**	**19 37 12.4**	**+0.2**
SUDU	**Sudak**	**0.97**	**38**	*e*P	**Pb**	**19 37 12.4**	**+0.2**
FEO	**Feodosiya**	**1.26**	**44**	‖ *e*P	**Pb**	**19 37 17.2**	**+0.2**
FEO				*e*	Sb	19 37 35.4	+2.7
FEO	**Feodosiya**	**1.26**	**44**	*e*P	**Pb**	**19 37 17.2**	**+0.2**
FEO				*e*S	Sb	19 37 35.4	+2.7
BZK	**Bozkurt**	**2.16**	**183**	ePN	**Pb**	**19 37 33.1**	**+0.7**
BZK				eSN	**Sb**	**19 38 00.3**	**+1.5**
ANN	**Anapa**	**2.44**	**73**	‖ *e*P	Pn	19 37 27.5	-4.3
ANN	**Anapa**	**2.44**	**73**	*e*P	Pn	19 37 27.5	-4.3
KDZE	**Karadeniz Ereo**	**3.45**	**216**	ePN	**Pn**	**19 37 47.0**	**+1.3**
TLCR		**3.96**	**287**	¶ *i*P	**Pn**	**19 37 54.5**	**+1.8**
TLCR		**3.96**	**287**	S	**Sn**	**19 38 38.2**	**+0.1**
TIRR	**Tirgusor**	**4.14**	**277**	‖ *i*P	**Pn**	**19 37 56.0**	**+0.8**
TIRR	**Tirgusor**	**4.14**	**277**	S	**Sn**	**19 38 41.4**	**-1.2**
MDUB	**Mudurnu**	**4.26**	**212**	ePN	**Pn**	**19 37 58.3**	**+1.4**
BRTR	**Keskin Array B**	**4.41**	**185**	Pn	Pb	19 38 05.5	-5.3
	comp=E,0.2nm,0.3s,baz=2.1,slow=12,SNR=6.2						
BRTR				Sn	**Sn**	**19 38 50.0**	**+0.5**
	comp=E,0.2nm,0.3s,baz=7.5,slow=20,SNR=4.1						
BRTR	**Keskin Array B**	**4.41**	**185**	P	Pb	19 38 05.5	-5.3
BRTR				S	**Sn**	**19 38 50.0**	**+0.5**
CFR	**Carcaliu**	**4.43**	**286**	¶ *i*P	**Pn**	**19 38 00.3**	**+1.2**
CFR	**Carcaliu**	**4.43**	**286**	S	**Sn**	**19 38 49.4**	**+0.2**
SILT	**Sile**	**4.46**	**230**	ePN	**Pn**	**19 38 00.2**	**+0.6**
SILT	**Sile**	**4.46**	**230**	eSN	Sn	19 38 47.0	-3.5
HARR	**Harsova**	**4.50**	**279**	¶ *i*P	**Pn**	**19 38 01.7**	**+1.6**
GULT	**Gulveren**	**4.57**	**218**	ePN	**Pn**	**19 38 02.7**	**+1.5**
HRT	**Hereke**	**4.68**	**227**	ePN	**Pn**	**19 38 03.3**	**+0.7**
KLYT	**Kilyos**	**4.74**	**235**	ePN	**Pn**	**19 38 03.2**	**-0.2**
ISK	**Istanbul-Kandi**	**4.85**	**233**	ePN	**Pn**	**19 38 05.0**	**+0.1**
ADVT	**Abdulvahap**	**4.93**	**223**	ePN	**Pn**	**19 38 07.4**	**+1.3**
BGKT	**Bogazkoy**	**4.94**	**235**	ePN	**Pn**	**19 38 06.2**	**0.0**
YLV	**Yalova**	**5.02**	**227**	ePN	**Pn**	**19 38 08.3**	**+0.9**
CTYL	**Yal??k??y-??at**	**5.07**	**241**	ePN	**Pn**	**19 38 07.9**	**0.0**
CTKS	**Kestanelik-??a**	**5.07**	**237**	ePN	**Pn**	**19 38 08.0**	**+0.1**
SLVT	**Silivri**	**5.25**	**239**	ePN	**Pn**	**19 38 10.5**	**0.0**
ARMT	**Armutlu**	**5.29**	**230**	ePN	**Pn**	**19 38 11.5**	**+0

0.1nm,0.5s,baz=98,slow=12,SNR=2.6

*NEIC **21** 20:13:00.0, 13°.13N×89°.60W, h45km, mb4.4/2, MD3.8(SNET), After SNET.*
NEIC Felt [II] at San Salvador.

CASC 21 20:13:19.0±1.0, 13°.11N×89°.60W, h33km±2km, MD3.7, ML3.9, mb4.4(NEIC), 1C, El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SNET	**Serv Nac Est T**	**0.67**	**32**	*eP*	Pn	20 13 32.3	-0.1
SNET				*eS*	Sb	20 13 41.8	0.0
SNET				AML	AML	20 13 45.5	
	comp=Z,4μm,0.2s						
BOQS	**Boqueron**	**0.69**	**27**	⇑*iP*	Pn	20 13 32.7	-0.1
BOQS				*eS*	Sn	20 13 43.8	+1.1
SBLS	**San Blas**	**0.72**	**358**	*eP*	Pn	20 13 33.2	-0.1
SBLS				*eS*	Sb	20 13 44.4	+0.8
LFRS	**El Faro**	**0.73**	**46**	*eP*	Pn	20 13 33.0	-0.1
LFRS				*eS*	Sb	20 13 44.5	+1.1
SNJE	**San Jose**	**0.75**	**360**	*eP*	Pn	20 13 33.5	-0.1
SNJE				*eS*	Sb	20 13 45.1	+0.9
RTR	**El Retiro**	**0.78**	**357**	*eP*	Pn	20 13 33.6	-0.4
LFU	**La Fuente**	**0.79**	**37**	*eP*	Pn	20 13 34.0	+0.1
LFU				*eS*	Sb	20 13 45.5	+0.5
LBRS	**Las Brisas**	**0.82**	**41**	*eP*	Pn	20 13 34.5	+0.1
SNVI	**San Vicente**	**0.89**	**56**	*eP*	Pn	20 13 35.4	-0.1
SNVI				*eS*	Sn	20 13 47.6	+0.3
RBDL	**Robledal**	**1.00**	**355**	*eP*	Pn	20 13 37.0	0.0
MTO2	**Montecristo 2**	**1.30**	**10**	*eP*	Pn	20 13 40.9	-0.3
MTO2				*eS*	Sn	20 13 58.7	+1.0
VSM	**San Miguel**	**1.33**	**76**	*eP*	Pn	20 13 41.8	+0.2
VSM				*eS*	Sb	20 13 59.7	-0.9
IXG	**Ixpaco**	**1.34**	**322**	*eP*	Pn	20 13 41.8	+0.1
IXG				*eS*	Sn	20 13 59.5	+0.9
CAHU	**Cacacuatique**	**1.50**	**64**	*eP*	Pn	20 13 43.8	-0.1
CNCH	**Conchagua**	**1.73**	**84**	*eP*	Pn	20 13 46.9	0.0
CNCH				*eS*	Sn	20 14 08.6	+0.7
FUG	**Fuego 3**	**1.79**	**318**	*eP*	Pn	20 13 44.1	-3.8
TGUH	**Tegucigalpa,Un**	**2.45**	**67**	*ePn*	Pn	20 13 39.9	-17
TGUH				*eSn*	Sn	20 14 04.1	-21
TEIG	**Tepich**	**7.19**	**10**	*ePn*	Pn	20 14 41.6	-20
PAYG	**Puerto Ayora**	**13.71**	**183**	*ePn*	Pn	20 16 10.6	-21
ECSD	**EROS Data Cent**	**31.11**	**350**	*eP*	P	20 19 11.5	-23
	comp=Z,4.8nm,1.1s						
PFO	**Pinyon Flat Ob**	**31.84**	**314**	*eP*	P	20 19 17.2	-24
	comp=Z,4.7nm,0.4s						

*IDC **21** 20:22:32.2±1.0, 33°.44N×95°.42E, h0km, mb3.5/7, mb1 3.6/9, mb1mx3.4/28, mbtmp3.5/9, ML3.1/2, Error ellipse: s-maj=51.8km s-min=18.8km az=57.0*
*ISCJB **21** 20:22:35.8±0.7, 33°.65N±0°.06×95°.46E±0°.10, h33km, mb3.6/7, Error ellipse: s-maj=12.6km s-min=8.0km az=28.7*

ISC 21 20:22:38.1±0.9, 33°.69N±0°.09×95°.5E±0°.1, h35km, n19, σ1§33/19, mb3.6/6, Qinghai

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TAPN	**Taplejung**	**9.20**	**229**	*eP*	**Pn**	**20 24 50.5**	**+1.9**
	15nm,1.1s						
ODAN	**Odare**	**9.75**	**228**	*eP*	**Pn**	**20 24 57.6**	**+1.6**
	7.9nm,0.6s						
GUN	**Gumba**	**10.05**	**238**	*eP*	**Pn**	**20 25 01.1**	**+0.8**
	13nm,0.8s						
KKN	**Kakani**	**10.55**	**239**	*eP*	**Pn**	**20 25 07.6**	**+0.6**
	3.5nm,0.4s						
PKI	**Pulchoki**	**10.59**	**237**	*eP*	**Pn**	**20 25 08.1**	**+0.5**
	12nm,0.7s						
PKIN	**Phulchoki**	**10.60**	**238**	*eP*	**Pn**	**20 25 08.0**	**+0.3**
	24nm,1.3s						
DMN	**Daman**	**10.78**	**239**	*eP*	**Pn**	**20 25 10.3**	**+0.1**
	15nm,1.1s						
DANN	**Dangsing**	**11.36**	**245**	*eP*	**Pn**	**20 25 16.2**	**-2.0**
	11nm,0.5s						
KOLN	**Koldanda**	**11.79**	**243**	*eP*	**Pn**	**20 25 21.8**	**-2.1**
	4.1nm,0.5s						
CMAR	**Chiang Mai Arr**	**15.49**	**168**	Pn	**Pn**	**20 26 14.5**	**+0.5**
	0.0nm,0.3s,baz=341,slow=10,SNR=5.6						
SONM	**Songino Array**	**16.35**	**27**	Pn	**Pn**	**20 26 25.1**	**+0.1**
	0.1nm,0.3s,baz=219,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**16.47**	**326**	Pn	**Pn**	**20 26 26.1**	**-0.3**
	0.1nm,0.3s,baz=145,slow=13,SNR=5.5						
KURBB	**Kurchatov Arra**	**20.98**	**329**	P	**P**	**20 27 19.0**	**+0.9**
	2.6nm,0.9s,baz=140,slow=10,SNR=2.6						
ZALV	**Zalesovo Beam**	**21.61**	**343**	P	**P**	**20 27 27.3**	**+2.5**
	1.7nm,0.7s,baz=157,slow=9.5,SNR=7.7						
FINES	**FINESS Array B**	**51.30**	**325**	P	**P**	**20 31 38.6**	**+0.3**
	1.2nm,0.9s,baz=79,slow=7.2,SNR=3.5						
NOA	**NORSAR Array B**	**58.47**	**325**	P	**P**	**20 32 29.8**	**-0.5**
	0.5nm,0.8s,baz=76,slow=6.9,SNR=3.9						
WRA	**Warramunga Arr**	**64.95**	**139**	P	**P**	**20 33 13.0**	**-1.4**
	0.3nm,0.7s,baz=333,slow=7.5,SNR=3.0						
ASAR	**Alice Springs**	**67.77**	**142**	P	**P**	**20 33 30.8**	**-1.6**
	0.2nm,0.5s,baz=330,slow=6.2,SNR=4.6						
TORD	**Torodi Ar. Bea**	**85.91**	**283**	P	**P**	**20 35 14.7**	**-0.2**
	0.3nm,0.7s,baz=42,slow=5.8,SNR=3.8						

IDC 21 20:27:39.0±3.8, 48°.83N×151°.63E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/25, mbtmp3.4/4, Error ellipse: s-maj=117.8km s-min=38.9km az=6.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**45.13**	**295**	P	P	20 35 56.8	-0.2
	0.1nm,0.5s,baz=72,slow=9.3,SNR=2.0						
FINES	**FINESS Array B**	**61.73**	**334**	P	P	20 37 59.0	+0.4
	1.6nm,1.0s,baz=39,slow=8.2,SNR=6.6						
NOA	**NORSAR Array B**	**65.94**	**340**	P	P	20 38 25.8	-0.6
	0.2nm,0.5s,baz=27,slow=6.6,SNR=2.3						
TXAR	**Lajitas Array**	**77.33**	**60**	P	P	20 39 35.7	+0.1
	0.1nm,0.4s,baz=314,slow=4.0,SNR=4.0						

MAN 21 20:31:42, 5°.78N×125°.17E, h6km, mb3.7, ML2.5, MS2.0, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.58**	**43**	*eP*	Pn	20 32 10.3	-0.3
MATI				*eS*	Sn	20 32 20.9	-11
CTBH	**Cotabato--PC H**	**1.70**	**327**	⇓*iP*	Pb	20 32 13.0	-0.7
BUKP	**Musuan**	**2.09**	**357**	*eP*	Pn	20 32 18.5	+0.9
BUKP				*eS*	Sn	20 32 34.2	-10

IDC 21 20:44:19.9±3.1, 25°.95S×179°.64E, h515km±40km, mb3.3/7, mb1 3.5/7, mb1mx3.2/17, mbtmp3.3/7, Error ellipse: s-maj=57.1km s-min=18.5km az=149.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**33.70**	**251**	P	P	20 50 18.1	+0.2
	2.4nm,0.5s,baz=99,slow=13,SNR=20						
ASAR	**Alice Springs**	**41.42**	**263**	P	P	20 51 21.1	-0.2
	3.6nm,0.4s,baz=92,slow=7.7,SNR=116						
WRA	**Warramunga Arr**	**41.99**	**269**	P	P	20 51 25.3	-0.5
	3.0nm,0.4s,baz=103,slow=7.8,SNR=41						
WRA				S	S	20 57 07.7	+0.3
	1.0nm,1.0s,baz=97,slow=14,SNR=5.0						
MJAR	**Matsushiro Arr**	**73.41**	**326**	P	P	20 54 59.0	-0.3
	1.4nm,0.8s,baz=167,slow=5.6,SNR=6.1						
KSRS	**Korea Array**	**79.61**	**321**	P	P	20 55 34.1	+0.8
	0.8nm,0.5s,baz=130,slow=6.3,SNR=6.4						
PETK	**Petropavlovsk-**	**81.01**	**347**	P	P	20 55 40.3	0.0
	0.8nm,0.5s,baz=134,slow=10,SNR=3.1						
USRK	**Ussuriysk Arra**	**82.30**	**328**	P	P	20 55 46.9	-0.1
	0.9nm,0.8s,baz=154,slow=1.9,SNR=2.7						
FINES	**FINESS Array B**	**140.27**	**340**	PKhKP	PKPpre	21 02 42.1	
	1.1nm,0.8s,baz=56,slow=7.1,SNR=5.6						
NB2	**NORSAR Subarra**	**144.04**	**350**	PKP	PKPbc	21 02 54.4	-1.0
	comp=Z,1.0nm,0.6s,baz=13,slow=3.1						
NOA	**NORSAR Array B**	**144.04**	**350**	PKP	PKPbc	21 02 54.8	-0.6
	comp=Z,2.0nm,0.8s,baz=21,slow=2.5,SNR=13						
BRTR	**Keskin Array B**	**148.51**	**304**	PKPbc	PKPbc	21 03 08.4	-0.3
	comp=Z,0.5nm,0.5s,baz=134,slow=1.9,SNR=4.9						

*IDC **21** 21:07:18.4±0.9, 31°.41N×70°.03E, h0km, mb3.7/12, mb1 3.9/14, mb1mx3.7/33, mbtmp3.8/14, ML4.0/2, MS3.2/2, Ms1 3.2/2, ms1mx2.5/45, Error ellipse: s-maj=21.9km s-min=19.8km az=67.0*
*ISCJB **21** 21:07:21.9±0.6, 31°.58N±0°.05×70°.00E±0°.04, h33km, mb3.7/14, MS3.3/1, Error ellipse: s-maj=8.3km s-min=4.4km az=25.0*
*NNC **21** 21:07:29.7±6.0, 31°.93N×70°.51E, h55km±46km, mb3.6, Error ellipse: s-maj=46.2km s-min=26.7km az=149.0*

ISC 21 21:07:23.8±0.7, 31°.51N±0°.06×69°.96E±0°.07, h35km, n45, σ1§31/52, mb3.7/14, 9C-5D, Pakistan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THW	**Thamme Wali**	**1.98**	**49**	⇓*P*	**Pn**	**21 07 54.9**	**+0.1**
CEP	**Cherat**	**2.83**	**35**	⇓*P*	**Pn**	**21 08 07.3**	**+0.7**
CEP				*S*	**Sn**	**21 08 43.0**	**+3.4**
CHCP	**Chirah Chowk**	**3.51**	**52**	*P*	**Pn**	**21 08 16.3**	**+0.4**
DLH	**Dalhousie**	**5.20**	**77**	*e*PKP9	**Pn**	**21 08 42.0**	**+2.7**
DLH				*eS*	**Sn**	**21 09 40.0**	**+1.8**
DHRM	**DHARAMSHALA**	**5.44**	**81**	*e*PKP	**Pn**	**21 08 41.7**	**-0.9**
DHRM				*eS*	**Sn**	**21 09 44.7**	**+0.6**
DHRM				AML	AML	21 10 21.6	
	comp=E,418nm,0.8s						
DHRM				AML	AML	21 10 23.3	
	comp=N,291nm,0.6s						
BHK	**Bhakra**	**5.51**	**89**	*eS*	**Sn**	**21 09 46.5**	**+0.9**
SDNR	**Sundarnagar**	**5.98**	**88**	*e*PKP	**Pn**	**21 08 50.0**	**+0.1**
SDNR				*eS*	**Sn**	**21 09 57.0**	**-0.2**
SMLA	**Simla**	**6.18**	**92**	*iP*	**Pn**	**21 08 52.8**	**+0.4**
SMLA				*eS*	**Sn**	**21 10 02.5**	**+0.7**
SMLA				AML	AML	21 10 40.2	
	comp=N,150nm,0.7s						
SMLA				AML	AML	21 10 41.5	
	comp=E,130nm,0.9s						
DDI	**Dehra Dun**	**7.05**	**98**	*e*PKP	**Pn**	**21 09 04.9**	**+0.3**
DDI				*eS*	**Sn**	**21 10 24.2**	**+0.6**
DDI				AML	AML	21 11 24.2	
	comp=E,320nm,0.3s						
DDI				AML	AML	21 11 27.1	
	comp=N,422nm,0.9s						
BHJ	**Bhuj**	**8.23**	**182**	*eS*	**Sn**	**21 10 50.7**	**-1.8**
BHPL	**Bhopal**	**10.57**	**139**	*e*PKP	**Pn**	**21 09 52.7**	**-0.1**
BHPL				*ex*	x	21 11 43.0	
AML	**Almayashu**	**11.01**	**15**	P	**Pn**	**21 09 58.4**	**-0.7**
	SNR=40						
KZA	**Kyzart**	**11.36**	**20**	P	**Pn**	**21 10 02.5**	**-1.4**
	SNR=10						
EKS2	**Erkin-Say**	**11.54**	**14**	P	**Pn**	**21 10 05.7**	**-0.4**
	SNR=9.3						
KK31	**Karatay Array**	**11.58**	**2**	⇑*P*	**Pn**	**21 10 05.9**	**-0.7**
	comp=N,3.9nm,0.6s,baz=185,slow=13,SNR=63						
KK31				⇑*S*	**Sn**	**21 12 10.4**	**-4.2**
	comp=N,1.4nm,0.5s,baz=183,slow=24,SNR=5.3						
AAK	**Ala-Archa**	**11.67**	**17**	P	**Pn**	**21 10 07.4**	**-0.6**
	SNR=10						
AAK	**Ala-Archa**	**11.67**	**17**	Pn	**Pn**	**21 10 07.4**	**-0.6**
	comp=N,2.1nm,0.3s,baz=183,slow=7.1,SNR=22						
AAK				Sn	**Sn**	**21 12 14.0**	**-3.1**
	comp=N,0.5nm,0.3s,baz=234,slow=17,SNR=2.9						
AAK				LR	LR	21 15 06.5	
	comp=N,64nm,18.5s,baz=22,slow=40						
KBK	**Karagaybulak**	**11.81**	**18**	P	**Pn**	**21 10 08.3**	**-1.5**
	SNR=7.0						
ULHL	**Ulahol**	**11.83**	**23**	P	**Pn**	**21 10 09.3**	**-0.8**
	SNR=7.5						
CHMS	**Chumysh**	**12.08**	**17**	P	**Pn**	**21 10 12.5**	**-0.9**
	SNR=18						
TKM2	**Tokmak 2**	**12.24**	**20**	⇑*P*	**Pn**	**21 10 14.7**	**-1.1**
	comp=N,6.7nm,1.1s						
TKM2				*S*	Sn	21 12 23.1	-7.9
TKM2	**Tokmak 2**	**12.24**	**20**	*P*	**Pn**	**21 10 15.4**	**-0.3**
	SNR=6.4						
USP	**Ospenovka**	**12.27**	**16**	P	**Pn**	**21 10 15.7**	**-0.4**
	SNR=6.2						
MK31	**Makanchi Array**	**17.97**	**28**	⇓*P*	**Pn**	**21 11 28.6**	**-2.2**
	comp=N,4.9nm,1.0s						
MK31				⇓*S*	Sn	21 14 41.6	-8.5
	comp=N,0.4nm,0.7s,baz=186,slow=25,SNR=2.9						
MKAR	**Makanchi Array**	**17.97**	**28**	P	**Pn**	**21 11 30.4**	**-0.4**
	comp=N,0.3nm,0.3s,baz=211,slow=12,SNR=24						
AB31	**Akbulak array**	**19.27**	**340**	P	**Pn**	**21 11 46.4**	**0.0**
	comp=N,0.4nm,0.5s,baz=155,slow=10,SNR=10						
KURBB	**Kurchatov Arra**	**20.13**	**16**	⇑*P*	**P**	**21 11 53.4**	**-1.2**
	comp=N,4.5nm,0.7s						
KURBB	**Kurchatov Arra**	**20.13**	**16**	P	**P**	**21 11 53.6**	**-1.0**
	comp=N,4.7nm,0.8s,baz=205,slow=10,SNR=15						
KURK	**Kurchatov**	**20.24**	**16**	⇓*P*	**P**	**21 11 54.1**	**-1.7**
	comp=N,5.1nm,1.0s						
AKTO	**Aktyubinsk**	**20.90**	**338**	⇑*P*	Pn	21 12 05.3	-0.3
	comp=N,3.5nm,1.1s						
AKTO	**Aktyubinsk**	**20.90**	**338**	P	**P**	**21 12 03.7**	**+0.7**
	comp=N,0.8nm,0.6s,baz=157,slow=15,SNR=2.3						
VOSK	**Vostochnaya**	**21.21**	**2**	⇑*P*	**P**	**21 12 06.3**	**0.0**
	comp=N,2.0nm,0.7s						
ZRNK	**Zerenda**	**21.44**	**358**	⇑*P*	**P**	**21 12 09.0**	**+0.3**
	comp=N,3.4nm,0.8s						
BVA0	**Borovoye Array**	**21.50**	**1**	⇑*P*	**P**	**21 12 09.3**	**-0.1**
	comp=N,2.1nm,0.8s,baz=175,slow=12,SNR=14						
BVAR	**Borovoye Array**	**21.50**	**1**	*P*	**P**	**21 12 09.4**	**0.0**
	comp=N,1.9nm,0.7s,baz=171,slow=8.4,SNR=14						
BRVK	**Borovoye**	**21.54**	**1**	⇑*P*	**P**	**21 12 09.7**	**0.0**
	comp=N,13nm,1.2s						
ZALV	**Zalesovo Beam**	**24.84**	**21**	P	**P**	**21 12 42.2**	**-0.4**
	comp=N,3.2nm,0.6s,baz=217,slow=9.2,SNR=17						
BRTR	**Keskin Array B**	**30.48**	**296**	P	**P**	**21 13 34.5**	**+1.0**
	comp=N,0.4nm,0.7s,baz=122,slow=9.8,SNR=3.8						
SONM	**Songino Array**	**32.08**	**49**	P	**P**	**21 13 48.4**	**+0.9**
	comp=N,0.5nm,0.7s,baz=245,slow=9.2,SNR=4.2						
SONM				LR	LR	21 29 18.2	
	comp=N,56nm,18.8s,baz=166,slow=41						
FINES	**FINESS Array B**	**41.24**	**330**	P	**P**	**21 15 05.9**	**+0.8**
	comp=N,0.5nm,0.6s,baz=94,slow=8.4,SNR=3.1						
ARCES	**ARCESS Array B**	**45.47**	**340**	P	**P**	**21 15 40.4**	**+1.3**
	comp=N,1.1nm,0.6s,baz=103,slow=6.6,SNR=6.8						
TORD	**Torodi Ar. Bea**	**64.81**	**270**	P	**P**	**21 17 58.9**	**-0.5**
	comp=N,0.4nm,0.6s,baz=58,slow=5.1,SNR=8.3						
WRA	**Warramunga Arr**	**80.15**	**121**	P	**P**	**21 19 29.9**	**-0.7**
	comp=N,0.5nm,0.8s,baz=323,slow=5.1,SNR=3.6						
ASAR	**Alice Springs**	**82.16**	**124**	P	**P**	**21 19 41.1**	**-0.2**
	comp=N,0.6nm,0.8s,baz=308,slow=5.8,SNR=3.3						
YKA	**Yellowknife Ar**	**86.25**	**2**	P	**P**	**21 20 03.0**	**+1.6**
	comp=N,0.4nm,0.3s,baz=349,slow=6.0,SNR=4.4						

*IDC **21** 21:15:54.7±2.8, 19°.67S×175°.95W, h170km±25km, mb3.9/7, mb1 4.1/9, mb1mx3.7/21, mbtmp3.9/9, Error ellipse: s-maj=31.8km s-min=13.6km az=145.0*
*ISCJB **21** 21:15:55.3±0.6, 19°.85S±0°.1×175°.75W±0°.08, h204km, mb4.0/10, Error ellipse: s-maj=16.5km s-min=9.7km az=159.3*
*NEIC **21** 21:15:55.7±1.0, 19°.80S×175°.75W, h191km±10km, mb4.8/6, Error ellipse: s-maj=14.6km s-min=8.4km az=159.0*

ISC 21 21:15:55.8±0.7, 19°.9S±0°.1×175°.7W±0°.1, h204km, n37, σ1§46/32, mb4.0/10, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**6.34**	**289**	*e*Pn	**Pn**	**21 17 27.1**	**-0.5**
	96nm,0.6s						
AFI	**Afiamalu**	**6.99**	**33**	P	**Pn**	**21 17 34.8**	**-1.3**
AFI				S	S	21 18 46.6	-9.0
AFI	**Afiamalu**	**6.99**	**33**	P	**Pn**	**21 17 34.8**	**-1.3**
	5.2nm,0.3s,baz=248,slow=5.4,SNR=3.6						
AFI				S	S	21 18 46.6	-9.0
	25nm,0.3s,baz=180,slow=17,SNR=11						
RAR	**Rarotonga**	**14.93**	**98**	*eP*	**P**	**21 19 18.3**	**+0.6**
DZM	**Mont Dzumac**	**16.87**	**259**	*eP*	**Pn**	**21 19 39.4**	**-1.1**
	38nm,0.6s						
DZM	**Mont Dzumac**	**16.87**	**259**	P	**Pn**	**21 19 43.4**	**+2.9**
	3.6nm,0.3s,baz=79,slow=18,SNR=31						
URZ	**Urewera**	**19.37**	**197**	*eP*	**Pn**	**21 20 08.6**	**-1.0**
	10nm,0.7s						
URZ	**Urewera**	**19.37**	**197**	P	**Pn**	**21 20 08.2**	**-1.4**
	1.6nm,0.3s,baz=162,slow=13,SNR=7.9						
CTA	**Charters Tower**	**35.76**	**263**	P	**P**	**21 22 36.1**	**+0.6**
CTA	**Charters Tower**	**35.76**	**263**	P	**P**	**21 22 36.1**	**+0.6**
	9.2nm,0.4s,baz=95,slow=12,SNR=18						
CTAO	**Charters Tower**	**35.76**	**263**	*eP*	**P**	**21 22 35.3**	**-0.2**
	13nm,0.7s						
COEN	**Coen**	**39.76**	**272**	*eP*	**P**	**21 23 09.3**	**+0.2**
	98nm,1.1s						
STKA	**Stephens Creek**	**40.05**	**244**	*eP*	**P**	**21 23 11.6**	**+0.4**
	2.3nm,1.5s						
AS31	**Alice Springs**	**46.81**	**256**	*eP*	**P**	**21 24 06.0**	**+0.6**
ASAR	**Alice Springs**	**46.81**	**256**	P	**P**	**21 24 05.5**	**+0.1**
ASAR	**Alice Springs**	**46.81**	**256**	P	**P**	**21 24 05.5**	**+0.1**
	6.2nm,0.6s,baz=92,slow=8.3,SNR=83						
WRAB	**Tennant Creek**	**46.87**	**261**	*eP*	**P**	**21 24 05.5**	**-0.4**
	2.9nm,0.5s						
WRA	**Warramunga Arr**	**46.88**	**261**	P	**P**	**21 24 05.7**	**-0.3**
WRA	**Warramunga Arr**	**46.88**	**261**	P	**P**	**21 24 05.7**	**-0.3**
	2.5nm,0.4s,baz=99,slow=5.6,SNR=43						
MBWA	**Marble Bar**	**60.15**	**256**	*eP*	**P**	**21 25 41.6**	**-0.7**
PETK	**Petropavlovsk-**	**76.27**	**344**	P	**P**	**21 27 22.9**	**+1.3**
PETK	**Petropavlovsk-**	**76.27**	**344**	P	**P**	**21 27 22.9**	**+1.3**
	2.8nm,0.8s,baz=145,slow=11,SNR=5.7						
NVAR	**Mina Array Bea**	**79.07**	**42**	P	P	21 27 40.7	+3.0
NVAR	**Mina Array Bea**	**79.07**	**42**	P	P	21 27 40.7	+3.0
	1.6nm,0.7s,baz=230,slow=9.9,SNR=10						
TXAR	**Lajitas Array**	**84.86**	**56**	P	P	21 28 12.1	+4.1
TXAR	**Lajitas Array**	**84.86**	**56**	P	P	21 28 12.1	+4.1
	1.4nm,0.9s,baz=213,slow=8.7,SNR=14						
ILAR	**Eielson Array**	**87.24**	**12**	P	**P**	**21 28 19.6**	**+1.0**
ILAR	**Eielson Array**	**87.24**	**12**	P	**P**	**21 28 19.6**	**+1.0**
	0.6nm,0.5s,baz=219,slow=5.8,SNR=9.4						
AKASG	**Malin Array Be**	**143.50**	**333**	PKPpre	PKPpre	21 35 03.9	
AKASG	**Malin Array Be**	**143.50**	**333**	PKhKP	PKPpre	21 35 03.9	
	0.7nm,0.4s,baz=40,slow=4.2,SNR=8.6						
CLL	**Collm**	**147.90**	**350**	⇑*i*PKPbc	**PKPab**	**21 35 18.8**	**-0.9**
CLL				*i* PKPab	**PKiKP**	**21 35 20.8**	**+2.5**
BRTR	**Keskin Array B**	**148.02**	**315**	PKPbc	**PKPab**	**21 35 18.9**	**-1.9**
BRTR	**Keskin Array B**	**148.02**	**315**	PKPbc	**PKPab**	**21 35 18.9**	**-1.9**
	2.5nm,0.9s,baz=143,slow=4.4,SNR=17						
MMAI	**Mount Meron Ar**	**149.40**	**302**	PKPbc	**PKPab**	**21 35 23.5**	**-3.1**
MMAI	**Mount Meron Ar**	**149.40**	**302**	PKPbc	**PKPab**	**21 35 23.5**	**-3.1**
	2.0nm,0.5s,baz=80,slow=6.3,SNR=6.7						
GERES	**GERESS Array B**	**150.14**	**348**	PKPbc	**PKPbc**	**21 35 23.8**	**+1.4**
GERES	**GERESS Array B**	**150.14**	**348**	PKPbc	**PKPbc**	**21 35 23.8**	**+1.4**
	1.2nm,0.7s,baz=38,slow=2.4,SNR=12						

IDC 21 21:28:18.2±4.7, 8°.28S×119°.93E, h198km±54km, mb3.3/3, mb1 3.2/5, mb1mx2.9/23, mbtmp3.1/5, MS2.8/1, Ms1 2.8/1, ms1mx2.1/10, Error ellipse: s-maj=121.0km s-min=14.0km az=48.0, Flores region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.24**	**151**	P	Pn	21 30 52.6	-0.8
	0.1nm,0.3s,baz=190,slow=2.5,SNR=9.5						
FITZ				S	Sn	21 32 49.3	-10
	0.2nm,0.3s,baz=246,slow=20,SNR=4.8						
WRA	**Warramunga Arr**	**18.14**	**131**	P	P	21 32 15.7	-0.2
	0.2nm,0.3s,baz=305,slow=12,SNR=7.5						
WRA				S	S	21 35 33.3	-0.1
	0.1nm,0.3s,baz=302,slow=22,SNR=4.1						
ASAR	**Alice Springs**	**20.34**	**140**	P	P	21 32 39.6	+0.2
	1.4nm,0.4s,baz=314,slow=8.9,SNR=22						
STKA	**Stephens Creek**	**30.95**	**142**	P	P	21 34 17.8	+1.0
	1.3nm,0.3s,baz=322,slow=5.9,SNR=11						
KSRS	**Korea Array**	**46.10**	**9**	LR	LR	21 59 57.4	
	comp=Z,9.8nm,19.9s,baz=100,slow=41						
MKAR	**Makanchi Array**	**64.24**	**332**	P	P	21 38 31.8	-0.3
	0.3nm,0.4s,baz=143,slow=7.1,SNR=7.8						

*ISCJB **21** 22:42:05.0±0.8, 76°.30N±0°.05×8°.1E±0°.4, h10km, mb3.3/4, MS3.3/3, Error ellipse: s-maj=12.5km s-min=6.6km az=18.4*
*IDC **21** 22:42:06.1±1.3, 76°.36N×7°.44E, h0km, mb3.4/4, mb1 3.6/9, mb1mx3.4/31, mbtmp3.5/9, ML2.9/5, MS3.0/6, Ms1 3.0/6, ms1mx2.7/30, Error ellipse: s-maj=25.5km s-min=13.2km az=104.0*
*BER **21** 22:42:06.1±2.6, 76°.23N×7°.68E, h10km, ML3.0(NAO)*
*NAO **21** 22:42:07.1±2.3, 76°.26N×8°.67E, ML3.0*
*CSEM **21** 22:42:08.1±0.6, 76°.31N×8°.22E, h30km, ML3.0, Error ellipse: s-maj=24.3km s-min=9.3km az=94.0*

ISC 21 22:42:06.7±0.8, 76°.27N±0°.05×8°.57E±0°.08, h10km, n33, σ2§26/40, mb3.3/4, MS3.3/3, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSP	**Hornsund**	**1.78**	**62**	*eP*	**Pb**	**22 42 38.8**	**-0.6**
HSP				*eS*	**Sb**	**22 43 01.1**	**-0.6**
SPA0	**Spitsbergen Ar**	**2.58**	**38**	Pn	**Pn**	**22 42 49.5**	**+1.0**
	baz=223,slow=12						
SPA0				Sn	**Sn**	**22 43 20.6**	**+0.7**
	baz=218,slow=18						
SPA0	**

*SKO **21** 22:48:49.7, 40.64N×23.11E, h15km, M2.6, ML3.0*
*CSEM **21** 22:48:50.4±0.1, 40.67N×23.14E, h8km, ML3.4/9, Error ellipse: s-maj=3.5km s-min=2.5km az=113.0*
*ISCJB **21** 22:48:50.3±0.3, 40.69N±0.02×23.10E±0.02, h7km±2km, Error ellipse: s-maj=2.8km s-min=2.4km az=35.1*
*ATH **21** 22:48:50.5, 40.67N×23.17E, h24km, MD3.0/10, ML3.0*
*THE **21** 22:48:50.8, 40.69N×23.13E, h10km, ML3.4/9, Error ellipse: s-maj=0.7km s-min=0.3km az=69.0*
*SOF **21** 22:48:50.5, 40.74N×23.18E, h2km, MD3.0*

ISC 21 22:48:50.9±0.8, 40.68N±0.01×23.13E±0.02, h13km±4km, n139, σ1.9 11/170, 7C-5D, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HORT	**Hortiatis**	**0.08**	**196**	P	**Pg**	**22 48 53.6**	**-0.2**
HORT				S	**Sg**	**22 48 55.4**	**-0.5**
HORT	**Hortiatis**	**0.08**	**196**	P	**Pg**	**22 48 53.6**	**-0.2**
HORT				S	**Sg**	**22 48 55.4**	**-0.5**
THE	**Thessaloniki**	**0.13**	**251**	P	**Pg**	**22 48 54.1**	**-0.2**
THE				S	**Sg**	**22 48 56.1**	**-0.6**
THE	**Thessaloniki**	**0.13**	**251**	P	**Pg**	**22 48 54.1**	**-0.2**
THE				S	**Sg**	**22 48 56.1**	**-0.6**
SOH	**Sokhos**	**0.22**	**49**	P	**Pg**	**22 48 55.8**	**0.0**
SOH				S	**Sg**	**22 48 59.0**	**-0.2**
SOH	**Sokhos**	**0.22**	**49**	*e*PB	**Pg**	**22 48 55.8**	**0.0**
SOH				*e*SB	**Sg**	**22 48 59.9**	**+0.7**
SOH	**Sokhos**	**0.22**	**49**	P	**Pg**	**22 48 55.8**	**0.0**
SOH				S	**Sg**	**22 48 59.0**	**-0.2**
PLG	**Polygyros**	**0.39**	**141**	P	**Pg**	**22 48 58.6**	**-0.1**
PLG	**Polygyros**	**0.39**	**141**	*e*PB	**Pg**	**22 48 58.6**	**-0.1**
PLG				*e*SB	**Sg**	**22 49 03.7**	**-0.2**
PLG	**Polygyros**	**0.39**	**141**	P	**Pg**	**22 48 58.6**	**-0.1**
PLG				*e*Sb	**Sg**	**22 49 03.7**	**-0.2**
KNT	**Kendrikon**	**0.52**	**340**	P	**Pg**	**22 49 00.9**	**-0.2**
KNT				S	**Sg**	**22 49 07.8**	**-0.2**
KNT	**Kendrikon**	**0.52**	**340**	P	**Pg**	**22 49 00.9**	**-0.2**
KNT				S	**Sg**	**22 49 07.8**	**-0.2**
SRS	**Serrai**	**0.56**	**38**	P	**Pg**	**22 49 01.5**	**-0.5**
SRS				S	**Sg**	**22 49 09.4**	**-0.1**
SRS	**Serrai**	**0.56**	**38**	P	**Pg**	**22 49 01.5**	**-0.5**
SRS				S	**Sg**	**22 49 09.4**	**-0.1**
OUR	**Ouranopolis**	**0.73**	**117**	P	**Pb**	**22 49 04.9**	**-0.6**
OUR				S	**Sb**	**22 49 15.8**	**+0.3**
OUR	**Ouranopolis**	**0.73**	**117**	P	**Pb**	**22 49 04.9**	**-0.6**
OUR				S	**Sb**	**22 49 15.8**	**+0.3**
LIT	**Litokhoron**	**0.76**	**221**	P	**Pg**	**22 49 05.4**	**-0.1**
LIT				S	**Sb**	**22 49 16.0**	**-0.1**
LIT	**Litokhoron**	**0.76**	**221**	*e*PN	**Pg**	**22 49 05.5**	**-0.1**
LIT	**Litokhoron**	**0.76**	**221**	P	**Pg**	**22 49 05.4**	**-0.1**
LIT				S	**Sb**	**22 49 16.0**	**-0.1**
VAY	**Valandovo**	**0.77**	**327**	P	**Pg**	**22 49 05.0**	**-0.9**
VAY	**Valandovo**	**0.77**	**327**	*i* Pg	**Pg**	**22 49 05.0**	**-0.9**
VAY				*i* Sg	**Sg**	**22 49 16.1**	**+0.1**
VAY				*e*Lg	Lg	22 49 16.5	
	comp=N,380nm,0.6s						
VAY				*e*Lg	Lg	22 49 16.7	
	comp=E,548nm,0.4s						
VAY	**Valandovo**	**0.77**	**327**	P	**Pg**	**22 49 05.0**	**-0.9**
PAIG	**Paliouri**	**0.86**	**150**	P	**Pg**	**22 49 06.5**	**-1.0**
PAIG				S	**Sb**	**22 49 19.2**	**+0.1**
PAIG	**Paliouri**	**0.86**	**150**	*e*PN	**Pg**	**22 49 06.8**	**-0.7**
PAIG	**Paliouri**	**0.86**	**150**	P	**Pg**	**22 49 06.5**	**-1.0**
PAIG	**Paliouri**	**0.86**	**150**	*e*Pn	**Pg**	**22 49 06.8**	**-0.7**
PAIG				S	**Sb**	**22 49 19.2**	**+0.1**
NVR	**Nevrokopi**	**0.87**	**39**	P	**Pg**	**22 49 07.2**	**-0.6**
NVR				S	**Sb**	**22 49 19.5**	**0.0**
NVR	**Nevrokopi**	**0.87**	**39**	*e*PN	**Pg**	**22 49 07.4**	**-0.4**
NVR				*e*SN	**Sb**	**22 49 19.8**	**+0.3**
NVR	**Nevrokopi**	**0.87**	**39**	P	**Pg**	**22 49 07.2**	**-0.6**
NVR				S	**Sb**	**22 49 19.5**	**0.0**
MMB	**Musomiste**	**1.02**	**26**	*i* Pg	**Pg**	**22 49 09.5**	**-1.1**
MMB	**Musomiste**	**1.02**	**26**	*i* Pg	**Pg**	**22 49 09.5**	**-1.1**
KAVA	**Kavala**	**1.10**	**73**	P	**Pb**	**22 49 11.1**	**-0.7**
KAVA	**Kavala**	**1.10**	**73**	P	**Pb**	**22 49 11.1**	**-0.7**
KZN	**Kozani**	**1.10**	**251**	P	**Pb**	**22 49 11.2**	**-0.6**
KZN				S	**Sn**	**22 49 27.1**	**-0.1**
KZN	**Kozani**	**1.10**	**251**	*e*PN	**Pg**	**22 49 11.9**	**-0.2**
KZN				*e*SN	**Sn**	**22 49 28.4**	**+1.2**
KZN	**Kozani**	**1.10**	**251**	P	**Pb**	**22 49 11.2**	**-0.6**
KZN				S	**Sn**	**22 49 27.1**	**-0.1**
KZN				*e*Sn	**Sn**	**22 49 28.4**	**+1.2**
KKB	**Krupnik**	**1.19**	**358**	Pg	**Pb**	**22 49 12.8**	**-0.6**
KKB	**Krupnik**	**1.19**	**358**	Pg	**Pb**	**22 49 12.8**	**-0.6**
XOR	**Xorichti**	**1.31**	**178**	P	**Pn**	**22 49 14.5**	**-0.4**
XOR	**Xorichti**	**1.31**	**178**	P	**Pn**	**22 49 14.5**	**-0.4**
FNA	**Florina**	**1.34**	**275**	P	**Pb**	**22 49 15.9**	**0.0**
FNA	**Florina**	**1.34**	**275**	*e*PN	**Pb**	**22 49 15.9**	**0.0**
FNA	**Florina**	**1.34**	**275**	P	**Pb**	**22 49 15.9**	**0.0**
NEO	**Neokhori**	**1.37**	**177**	P	**Pb**	**22 49 16.0**	**-0.4**
NEO	**Neokhori**	**1.37**	**177**	P	**Pb**	**22 49 16.0**	**-0.4**
THL	**Klokotos Trika**	**1.40**	**218**	P	**Pn**	**22 49 15.9**	**-0.2**
THL	**Klokotos Trika**	**1.40**	**218**	*e*PN	**Pb**	**22 49 16.6**	**-0.3**
THL	**Klokotos Trika**	**1.40**	**218**	P	**Pn**	**22 49 15.9**	**-0.2**
BIA	**Bitola**	**1.41**	**285**	*e*Pg	**Pn**	**22 49 16.8**	**+0.4**
BIA				*e*Sg	**Sb**	**22 49 35.9**	**+0.8**
SKIA	**Skiathos**	**1.53**	**170**	P	**Pn**	**22 49 18.2**	**+0.3**
SKIA	**Skiathos**	**1.53**	**170**	P	**Pn**	**22 49 18.2**	**+0.3**
RZN	**Rozhen**	**1.57**	**49**	P	**Pb**	**22 49 19.8**	**-0.1**
RZN	**Rozhen**	**1.57**	**49**	P	**Pb**	**22 49 19.8**	**-0.1**
AOS	**Alonnisos**	**1.61**	**159**	P	**Pn**	**22 49 18.8**	**-0.2**
AOS	**Alonnisos**	**1.61**	**159**	*e*PN	**Pn**	**22 49 19.0**	**0.0**
AOS	**Alonnisos**	**1.61**	**159**	P	**Pn**	**22 49 18.8**	**-0.2**
AGG	**Agios Georgios**	**1.76**	**201**	P	**Pn**	**22 49 21.4**	**+0.2**
AGG	**Agios Georgios**	**1.76**	**201**	*e*PN	**Pn**	**22 49 21.6**	**+0.4**
AGG	**Agios Georgios**	**1.76**	**201**	P	**Pn**	**22 49 21.4**	**+0.2**
MAKR	**Makrakomi, Fth**	**1.83**	**205**	P	**Pn**	**22 49 22.4**	**+0.3**
MAKR	**Makrakomi, Fth**	**1.83**	**205**	P	**Pn**	**22 49 22.4**	**+0.3**
SMTH	**Samothraki Isl**	**1.84**	**96**	*e*PB	**Pn**	**22 49 22.0**	**-0.2**
SMTH	**Samothraki Isl**	**1.84**	**96**	*e*Pb	**Pn**	**22 49 22.0**	**-0.2**
PLD	**Plovdiv**	**1.85**	**39**	P	**Pg**	**22 49 25.7**	**-0.8**
PLD	**Plovdiv**	**1.85**	**39**	P	**Pg**	**22 49 25.7**	**-0.8**
VTS	**Vitosha**	**1.92**	**2**	P	**Pn**	**22 49 24.2**	**+0.8**
VTS	**Vitosha**	**1.92**	**2**	P	**Pb**	**22 49 24.8**	**-1.0**
VTS					Pg	**22 49 27.1**	**-0.6**
VTS	**Vitosha**	**1.92**	**2**	*i* P	**Pn**	**22 49 24.4**	**+1.0**
VTS				S	**Sg**	**22 49 53.2**	**+0.7**
VTS	**Vitosha**	**1.92**	**2**	P	**Pn**	**22 49 24.2**	**+0.8**
AXAR	**Agios Charalam**	**1.94**	**191**	P	**Pn**	**22 49 23.9**	**+0.3**
AXAR	**Agios Charalam**	**1.94**	**191**	P	**Pn**	**22 49 23.9**	**+0.3**
KDZ	**Kurdzhali**	**1.98**	**60**	P	**Pn**	**22 49 23.8**	**-0.4**
KDZ				Pg	**Pn**	**22 49 27.0**	**+0.2**
KDZ	**Kurdzhali**	**1.98**	**60**	P	**Pn**	**22 49 23.8**	**-0.4**
ATAL	**Atalanti**	**1.98**	**182**	P	**Pn**	**22 49 24.2**	**0.0**
ATAL	**Atalanti**	**1.98**	**182**	P	**Pn**	**22 49 24.2**	**0.0**
JAN	**Janina**	**2.02**	**240**	*e*PB	**Pn**	**22 49 25.9**	**+1.2**
JAN	**Janina**	**2.02**	**240**	*e*Pb	**Pn**	**22 49 25.9**	**+1.2**
LKR	**Lokris**	**2.03**	**183**	*e*PB	**Pn**	**22 49 25.1**	**+0.4**
LKR	**Lokris**	**2.03**	**183**	*e*Pb	**Pn**	**22 49 25.1**	**+0.4**
PGB	**Panagyurishte**	**2.03**	**22**	P	**Pb**	**22 49 26.2**	**-1.5**
PGB				Pg	**Pg**	**22 49 28.6**	**-1.2**
PGB	**Panagyurishte**	**2.03**	**22**	P	**Pb**	**22 49 26.2**	**-1.5**
EVR	**Evrytania**	**2.03**	**210**	P	**Pn**	**22 49 25.0**	**+0.1**
EVR	**Evrytania**	**2.03**	**210**	P	**Pn**	**22 49 25.0**	**+0.1**
ALN	**Alexandroupoli**	**2.23**	**83**	P	**Pn**	**22 49 27.7**	**+0.3**
ALN	**Alexandroupoli**	**2.23**	**83**	*e*PN	**Pn**	**22 49 27.8**	**+0.3**
ALN	**Alexandroupoli**	**2.23**	**83**	P	**Pn**	**22 49 27.7**	**+0.3**
DIM	**Dimitrovgrad**	**2.27**	**52**	P	**Pg**	**22 49 33.6**	**-0.9**
ENEZ	**Enez**	**2.30**	**88**	*e*PN	**Pb**	**22 49 30.5**	**-1.7**
ENEZ				*e*SN	**Sb**	**22 50 01.3**	**+0.8**
BOZC	**Bozcaada**	**2.39**	**109**	*i* P	**Pn**	**22 49 30.8**	**+1.1**
BOZC				*i* S	**Sg**	**22 50 07.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**2.56**	**95**	*e*PN	**Pb**	**22 49 34.3**	**-2.5**
ERIK	**Erikli-Kesan**	**2.57**	**89**	*e*PN	**Pn**	**22 49 34.0**	**+1.8**
EZN	**Ezine**	**2.59**	**108**	*e*PN	**Pn**	**22 49 33.9**	**+1.5**
EZN				SN	**Sb**	**22 50 07.8**	**-1.0**
MPEP	**Malo Peshtene**	**2.72**	**9**	P	**Pn**	**22 49 35.3**	**+1.0**
MPEP				Pg	**Pg**	**22 49 42.1**	**-0.9**
KEK	**Kerkira**	**2.73**	**250**	*e*PN	**Pn**	**22 49 36.2**	**+1.8**
KEK	**Kerkira**	**2.73**	**250**	*e*Pn	**Pn**	**22 49 36.2**	**+1.8**
ATH	**Athens Observa**	**2.74**	**170**	*e*PN	**Pn**	**22 49 35.5**	**+1.0**
ATH	**Athens Observa**	**2.74**	**170**	*e*Pn	**Pn**	**22 49 35.5**	**+1.0**
LPK	**Lapseki**	**2.78**	**95**	*e*PN	**Pn**	**22 49 36.8**	**+1.6**
EDRB	**Edirne**	**2.96**	**66**	*e*PN	**Pn**	**22 49 39.8**	**+2.1**
RKY	**Sarkoy-Tekirda**	**3.08**	**88**	*e*PN	**Pn**	**22 49 41.5**	**+2.2**
MFT	**Murefte**	**3.16**	**87**	*e*PN	**Pn**	**22 49 43.1**	**+2.8**
DID	**Didima**	**3.17**	**178**	P	**Pn**	**22 49 40.8**	**+0.3**
DID	**Didima**	**3.17**	**178**	P	**Pn**	**22 49 40.8**	**+0.3**
KRBG	**Karabiga-Canak**	**3.19**	**94**	*e*PN	**Pn**	**22 49 43.1**	**+2.4**
SZH	**Strazhica**	**3.33**	**38**	P	**Pn**	**22 49 44.1**	**+1.5**
SZH	**Strazhica**	**3.33**	**38**	P	**Pn**	**22 49 44.1**	**+1.5**
TKR	**Tekirdag**	**3.36**	**83**	*e*PN	**Pn**	**22 49 45.8**	**+2.7**
ZIMR		**3.41**	**28**	S	**Sg**	**22 50 40.9**	**+0.5**
GONE	**Gonen-Balikesi**	**3.54**	**99**	*e*PN	**Pn**	**22 49 47.5**	**+1.9**
BNT	**Bandirma**	**3.67**	**93**	*e*PN	**Pn**	**22 49 49.4**	**+2.1**
BALB	**Balikesir**	**3.78**	**104**	*e*PN	**Pn**	**22 49 51.0**	**+2.0**
SLVT	**Silivri**	**3.89**	**80**	*e*PN	**Pn**	**22 49 53.2**	**+2.9**
CTYL	**Yal??k??y-??at**	**3.98**	**77**	*e*PN	Pn	22 49 55.0	+3.4
KCTX	**Karacabey (Bur**	**4.01**	**94**	*e*PN	**Pn**	**22 49 54.7**	**+2.7**
APE	**Apeiranthos**	**4.06**	**152**	*i* P	**Pn**	**22 49 54.0**	**+1.2**
APE	**Apeiranthos**	**4.06**	**152**	S	Sn	22 50 34.1	-6.1
HUMR	**Humele**	**4.08**	**19**	*i* P	**Pn**	**22 49 54.5**	**+1.5**
HUMR	**Humele**	**4.08**	**19**	S	**Sg**	**22 51 00.2**	**-1.8**
CTKS	**Kestanelik-??a**	**4.11**	**80**	*e*PN	Pn	22 49 57.0	+3.6
BGKT	**Bogazkoy**	**4.30**	**81**	*e*PN	**Pn**	**22 49 59.0**	**+2.9**
ARMT	**Armutlu**	**4.36**	**90**	*e*PN	**Pn**	**22 49 59.3**	**+2.4**
ISK	**Istanbul-Kandi**	**4.51**	**83**	*e*PN	Pn	22 50 01.9	+3.0
KLYT	**Kilyos**	**4.51**	**81**	*e*PN	Pn	22 50 02.0	+3.1
SULR		**4.62**	**29**	S	**Sg**	**22 51 19.5**	**+0.4**
GZR	**Gura Zlata**	**4.72**	**357**	*i* P	**Pn**	**22 50 03.3**	**+1.4**
GZR	**Gura Zlata**	**4.72**	**357**	S	**Sg**	**22 51 21.5**	**-1.0**
KULA	**Kula-Manisa**	**4.79**	**115**	*e*PN	**Pn**	**22 50 05.2**	**+2.4**
LOT	**Lotru**	**4.79**	**5**	*i* P	**Pn**	**22 50 03.3**	**+0.4**
VOIR		**4.96**	**16**	*i* P	**Pn**	**22 50 06.8**	**+1.6**
BZS	**Buzias**	**5.06**	**348**	*i* P	**Pn**	**22 50 06.8**	**+0.4**
BZS	**Buzias**	**5.06**	**348**	S	**Sg**	**22 51 31.0**	**-2.3**
MLR	**Muntele Rosu**	**5.24**	**22**	*i* P	**Pn**	**22 50 11.2**	**+2.2**
TIRR	**Tirgusor**	**5.43**	**44**	S	**Sg**	**22 51 45.6**	**+0.4**
PLOR	**Plostina**	**5.78**	**25**	*i* P	**Pn**	**22 50 18.8**	**+2.5**
CFR	**Carcaliu**	**5.81**	**38**	*i* P	**Pn**	**22 50 18.7**	**+2.0**
CFR	**Carcaliu**	**5.81**	**38**	S	**Sg**	**22 51 53.7**	**-3.6**
VRI	**Vrincioaia**	**5.81**	**26**	*i* P	**Pn**	**22 50 19.3**	**+2.5**
DRGR		**6.12**	**357**	*i* P	**Pn**	**22 50 20.9**	**-0.2**
DRGR		**6.12**	**357**	S	**Sg**	**22 52 05.2**	**-2.1**

DDA 21 22:49:48.8, 37.52N×26.74E, h7km, MD3.3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.44**	**65**	*i* P	Pn	22 50 00.6	-1.0
GCAM				*i* S	Sb	22 50 05.2	-0.4
AYDN	**Tasoluk**	**0.92**	**81**	*i* P	Pg	22 50 04.1	-2.5
AYDN				*i* S	Sn	22 50 20.8	-1.0

*ISCJB **21** 23:10:10.9±0.6, 37.44N±0.05×36.13E±0.03, h2km±6km, Error ellipse: s-maj=9.0km s-min=3.9km az=170.0*
*DDA **21** 23:10:10.4, 37.43N×36.14E, h7km, MD3.0*
*ISK **21** 23:10:10.7, 37.48N×36.14E, h7km, MD2.9*
*CSEM **21** 23:10:11.0±0.2, 37.49N×36.11E, h5km, MD3.0, Error ellipse: s-maj=6.2km s-min=3.2km az=169.0*

ISC 21 23:10:11.4±0.9, 37.49N±0.04×36.12E±0.02, h8km±9km, n28, σ0.965/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.20**	**63**	*i* P	**Pg**	**23 10 14.9**	**-0.6**
ANDN				*i* S	**Sg**	**23 10 19.0**	**+0.6**
ANDN	**Andirin**	**0.20**	**63**	*i* P	**Pg**	**23 10 14.9**	**-0.6**
ANDN				*i* S	**Sg**	**23 10 19.0**	**+0.6**
KOZT	**Kozan**	**0.23**	**269**	*e*PG	**Pg**	**23 10 16.0**	**-0.1**
KOZT				*e*SG	**Sg**	**23 10 20.3**	**+1.1**
KOZT	**Kozan**	**0.23**	**269**	*e*Pg	**Pg**	**23 10 16.0**	**-0.1**
KOZT				*e*Sg	**Sg**	**23 10 20.3**	**+1.1**
AYKD	**Aykdinkavak**	**0.55**	**97**	*i* P	**Pg**	**23 10 21.2**	**-0.8**
AYKD				*i* S	**Sg**	**23 10 28.9**	**-0.4**
CEYT	**Ceyhan**	**0.56**	**212**	*e*PG	**Pg**	**23 10 21.9**	**-0.3**
CEYT	**Ceyhan**	**0.56**	**212**	*e*Pg	**Pg**	**23 10 21.9**	**-0.3**
KMRS	**Kahramanmaras**	**0.62**	**88**	*e*PG	**Pg**	**23 10 22.7**	**-0.7**
KMRS				*e*SG	**Sg**	**23 10 31.9**	**+0.4**
KMRS	**Kahramanmaras**	**0.62**	**88**	*e*Pg	**Pg**	**23 10 22.7**	**-0.7**
KMRS				*e*Sg	**Sg**	**23 10 31.9**	**+0.4**
KARA	**Karaisali**	**0.88**	**255**	*e*PG	**Pg**	**23 10 27.4**	**-0.9**
KARA	**Karaisali**	**0.88**	**255**	*e*Pg	**Pg**	**23 10 27.4**	**-0.9**
GAZ	**Gaziantep**	**0.93**	**110**	*e*PG	**Pg**	**23 10 28.8**	**-0.3**
GAZ	**Gaziantep**	**0.93**	**110**	*e*Pg	**Pg**	**23 10 28.8**	**-0.3**
GULE	**Gulek**	**1.09**	**260**	*i* P	**Pg**	**23 10 31.6**	**-1.0**
GULE				*i* S	**Sn**	**23 10 49.9**	**+1.5**
GULE	**Gulek**	**1.09**	**260**	*i* P	**Pb**	**23 10 31.6**	**-1.0**
NIG	**Nigde**	**1.35**	**298**	*e*PN	**Pn**	**23 10 36.3**	**-0.4**
NIG	**Nigde**	**1.35**	**298**	*e*Pn	**Pn**	**23 10 36.3**	**-0.4**
HTY	**Hatay**	**1.36**	**179**	*e*PN	**Pb**	**23 10 36.9**	**-0.2**
HTY	**Hatay**	**1.36**	**179**	*e*Pn	**Pb**	**23 10 36.9**	**-0.2**
BNN	**Bunyan**	**1.38**	**351**	*e*PN	**Pb**	**23 10 37.0**	**-0.5**
BNN	**Bunyan**	**1.38**	**351**	*e*Pn	**Pb**	**23 10 37.0**	**-0.5**
DARE	**Darende-Malaty**	**1.53**	**44**	*e*PN	**Pn**	**23 10 39.0**	**-0.1**
AKCD	**Akcadag**	**1.64**	**60**	*i* P	**Pb**	**23 10 42.2**	**+0.3**
AKCD				*i* S	**Sg**	**23 11 04.8**	**+0.8**
AKCD	**Akcadag**	**1.64**	**60**	*i* P	**Pb**	**23 10 42.2**	**+0.3**
MALT	**Malatya**	**2.00**	**65**	*e*PN	**Pn**	**23 10 45.6**	**0.0**
MALT	**Malatya**	**2.00**	**65**	*e*Pn	**Pn**	**23 10 45.6**	**0.0**
MYA	**Malataya**	**2.01**	**65**	*e*PN	**Pn**	**23 10 45.8**	**+0.2**
MYA	**Malataya**	**2.01**	**65**	*e*Pn	**Pn**	**23 10 45.8**	**+0.2**

*DDA **21** 23:18:50.9, 36.39N×40.81E, h8km, MD3.1*
*ISK **21** 23:18:59.2, 36.73N×41.43E, h5km, MD3.6*
*CSEM **21** 23:19:00.8±0.5, 36.77N×41.50E, h2km, MD3.6, Error ellipse: s-maj=15.5km s-min=6.9km az=173.0*

ISC 21 23:18:52.3±1.7, 36.46N±0.08×40.90E±0.04, h13km±11km, n28, σ1.9 05/28, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MARD	**Mardin**	**0.86**	**353**	*i* P	**Pn**	**23 19 09.0**	**-1.2**
MARD				*i* S	**Sn**	**23 19 22.9**	**+0.2**
BEST	**Besiri**	**1.46**	**11**	*i* P	**Pg**	**23 19 19.7**	**-0.7**
BEST				*i* S	**Sg**	**23 19 41.2**	**+1.8**
DIYA	**Diyarbakir**	**1.59**	**337**	*i* P	**Pg**	**23 19 21.5**	**-1.4**
DIYA				*i* S	**Sg**	**23 19 43.9**	**+0.4**
DIYA	**Diyarbakir**	**1.59**	**337**	*i* P	**Pg**	**23 19 21.5**	**-1.4**
DIYA				*i* S	**Sg**	**23 19 43.9**	**+0.4**
BTMT	**Batman**	**1.80**	**15**	*e*PN	**Pg**	**23 19 26.6**	**-0.2**
BTMT				*e*SN	**Sb**	**23 19 47.5**	**0.0**
BTMT	**Batman**	**1.80**	**15**	*e*Pn	**Pg**	**23 19 26.6**	**-0.2**
BTMT				*e*Sn	**Sb**	**23 19 47.5**	**0.0**
CUKT	**Cukurca**	**2.31**	**69**	*e*PN	**Pb**	**23 19 32.4**	**-1.4**
CUKT				*e*SN	**Sn**	**23 19 58.2**	**-0.2**
CUKT	**Cukurca**	**2.31**	**69**	*e*Pn	**Pb**	**23 19 32.4**	**-1.4**
CUKT				*e*Sn	**Sn**	**23 19 58.2**	**-0.2**
BINT	**Bingol**	**2.44**	**352**	*e*Pn	**Pg**	**23 19 39.8**	**+0.8**
HAKT	**HAKKARI**	**2.50**	**63**	*i* P	**Pn**	**23 19 33.7**	**+0.8**
HAKT				*i* S	**Sn**	**23 20 05.3**	**+2.0**
HAKT	**HAKKARI**	**2.50**	**63**	*i* P	**Pn**	**23 19 33.7**	**+0.8**
HAKT				*i* S	**Sn**	**23 20 05.3**	**+2.0**
BNGB	**Bing?ll**	**2.54**	**356**	*e*PN	**Pg**	**23 19 39.8**	**-1.1**
MALT	**Malatya**	**2.71**	**314**	*e*PN	Pg	23 19 47.8	+3.6
MALT	**Malatya**	**2.71**	**314**	*e*Pn	Pg	23 19 47.8	+3.6
PTK	**Pertek**	**2.71**	**334**	*e*PN	**Pg**	**23 19 44.8**	**+0.5**
PTK	**Pertek**	**2.71**	**334**	*e*Pn	**Pg**	**23 19 44.8**	**+0.5**
MYA	**Malataya**	**2.72**	**314**	*e*PN	Pg	23 19 47.7	+3.4
MYA	**Malataya**	**2.72**	**314**	*e*Pn	Pg	23 19 47.7	+3.4
GAZ	**Gaziantep**	**3.05**	**285**	*e*PN	Pg	23 19 55.7	+5.0
GAZ	**Gaziantep**	**3.05**	**285**	*e*Pn	Pg	23 19 55.7	+5.0
KMRS	**Kahramanmaras**	**3.37**	**289**	*e*PN	Pg	23 19 59.9	+3.0
KMRS	**Kahramanmaras**	**3.37**	**289**	*e*Pn	Pg	23 19 59.9	+3.0
DARE	**Darende-Malaty**	**3.44**	**309**	*e*PN	**Pg**	**23 19 58.5**	**+0.3**
DARE	**Darende-Malaty**	**3.44**	**309**	*e*Pn	**Pg**	**23 19 58.5**	**+0.3**
AGRB	**Hanur-Agry**	**3.52**	**27**	*e*PN	Pb	23 19 51.2	-3.4
AGRB	**Hanur-Agry**	**3.52**	**27**	*e*Pn	Pb	23 19 51.2	-3.4
KOZT	**Kozan**	**4.19**	**286**	*e*PN	**Pg**	**23 20 11.8**	**-0.7**
KOZT	**Kozan**	**4.19**	**286**	*e*Pn	**Pg**	**23 20 11.8**	**-0.7**

*ISK **21** 23:24:51.8, 39.93N×25.70E, h5km, MD3.2*
*THE **21** 23:24:52.8, 39.94N×25.62E, h4km±2km, ML2.3/3, Error ellipse: s-maj=2.5km s-min=0.6km az=73.0*
*CSEM **21** 23:24:52.3±0.1, 39.93N×25.58E, h5km, MD3.2, Error ellipse: s-maj=2.4km s-min=2.2km az=31.0*
*ISCJB **21** 23:24:52.0±0.6, 39.93N±0.02×25.60E±0.03, h5km±4km, Error ellipse: s-maj=3.9km s-min=3.2km az=154.4*
*DDA **21** 23:24:52.4, 40.03N×25.76E, h7km, MD3.2*
*ATH **21** 23:24:52.7, 39.95N×25.61E, h27km±2km, MD3.1/8*

ISC 21 23:24:52.5±1.1, 39.94N±0.02×25.60E±0.03, h6km±10km, n90, σ0.955/119, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMTH	**Samothraki Isl**	**0.54**	**354**	P	**Pb**	**23 25 03.7**	**-0.5**
SMTH				S	**Sg**	**23 25 11.0**	**+1.2**
SMTH	**Samothraki Isl**	**0.54**	**354**	*e*PN	**Pb**	**23 25 03.8**	**-0.5**
SMTH				*e*SN	**Sb**	**23 25 11.4**	**-0.8**
SMTH	**Samothraki Isl**	**0.54**	**354**	P	**Pb**	**23 25 03.7**	**-0.5**
SMTH				S	**Sg**	**23 25 11.0**	**+1.2**
EZN	**Ezine**	**0.57**	**101**	PG	**Pg**	**23 25 03.0**	**-0.4**
EZN				*e*SG	**Sg**	**23 25 10.4**	**-0.4**
EZN	**Ezine**	**0.57**	**101**	*i* Pg	**Pg**	**23 25 03.0**	**-0.4**
EZN				*e*Sg	**Sg**	**23 25 10.4**	**-0.4**
SIGR	**SIGRI**	**0.75**	**165**	P	**Pg**	**23 25 07.1**	**+0.2**
SIGR				S	**Sb**	**23 25 17.9**	**-0.5**
SIGR	**SIGRI**	**0.75**	**165**	P	**Pg**	**23 25 07.1**	**+0.2**
SIGR				S	**Sb**	**23 25 17.9**	**-0.5**
GELI	**Tayfur-Gelibol**	**0.81**	**55**	*e*PG	**Pg**	**23 25 07.2**	**-0.9**
GELI				*e*SG	**Sg**	**23 25 19.2**	**+0.6**
GELI	**Tayfur-Gelibol**	**0.81**	**55**	*e*Pg	**Pg**	**23 25 07.2**	**-0.9**
GELI				*e*Sg	**Sg**	**23 25 19.2**	**+0.6**
PRK	**Paraskevi**	**0.86**	**143**	P	**Pg**	**23 25 09.2**	**+0.2**
PRK				S	**Sg**	**23 25 20.9**	**+0.7**
PRK	**Paraskevi**	**0.86**	**143**	*e*PN	**Pg**	**23 25 09.2**	**+0.2**
PRK				*e*SN	**Sb**	**23 25 22.3**	**+0.7**
PRK	**Paraskevi**	**0.86**	**143**	P	**Pg**	**23 25 09.2**	**+0.2**
PRK				S	**Sg**	**23 25 20.9**	**+0.7**
PRK				*e*Sn	**Sb**	**23 25 22.3**	**+0.7**
ENEZ	**Enez**	**0.90**	**28**	*e*PG	**Pg**	**23 25 09.9**	**+0.1**
ENEZ				*e*SG	**Sb**	**23 25 23.3**	**+0.5**
ENEZ	**Enez**	**0.90**	**28**	*e*Pg	**Pg**	**23 25 09.9**	**+0.1**
ENEZ				*e*Sg	**Sb**	**23 25 23.3**	**+0.5**
LPK	**Lapseki**	**0.99**	**64**	*e*PG	**Pg**	**23 25 10.3**	**-1.1**
LPK			

PTL	Penteli	0.62 357	eP	Pn	23 28 41.1	+0.6
PTL	Penteli	0.62 357	P	Pn	23 28 40.7	+0.2
LTK	Loutraki	0.95 309	P	Pn	23 28 43.4	+0.4
LTK			S	Sn	23 28 59.8	-0.7
LTK	Loutraki	0.95 309	eP	Pn	23 28 43.2	+0.2
LTK	Loutraki	0.95 309	eP	Pn	23 28 43.2	+0.2
LTK			S	Sn	23 28 59.8	-0.7
VLI	Veliai	1.05 228	P	Pn	23 28 44.1	+0.1
VLI	Veliai	1.05 228	eP	Pn	23 28 44.3	+0.3
VLI			eS	Sn	23 29 01.8	-0.3
VLI	Veliai	1.05 228	eP	Pn	23 28 44.3	+0.3
VLI			eS	Sn	23 29 01.8	-0.3
THAL	Thalero	1.15 302	P	Pn	23 28 44.9	0.0
THAL	Thalero	1.15 302	P	Pn	23 28 44.9	0.0
VLX	Vlachokerasia	1.21 268	P	Pn	23 28 46.2	+0.6
VLX	Vlachokerasia	1.21 268	eP	Pn	23 28 46.1	+0.5
VLX			eS	Sn	23 29 04.2	-0.9
VLX	Vlachokerasia	1.21 268	eP	Pn	23 28 46.1	+0.5
VLX			eS	Sn	23 29 04.2	-0.9
GUR	Goura	1.34 293	P	Pn	23 28 47.0	+0.1
GUR			S	Sn	23 29 07.3	-0.1
GUR	Goura	1.34 293	eP	Pn	23 28 47.2	+0.3
GUR	Goura	1.34 293	P	Pn	23 28 47.0	+0.1
GUR			S	Sn	23 29 07.3	-0.1
KYTH	Kithira	1.34 211	P	Pn	23 28 47.8	+0.9
KYTH	Kithira	1.34 211	eP	Pn	23 28 46.7	-0.2
KYTH	Kithira	1.34 211	P	Pn	23 28 47.8	+0.9
APE	Apeiranthos	1.35 105	P	Pn	23 28 48.0	+1.0
APE			S	Sn	23 29 07.7	+0.2
APE	Apeiranthos	1.35 105	eP	Pn	23 28 48.1	+1.0
APE	Apeiranthos	1.35 105	P	Pn	23 28 48.0	+1.0
APE			S	Sn	23 29 07.7	+0.2
DYR	Agios Nikonas	1.42 242	P	Pn	23 28 49.0	+1.3
DYR			S	Sn	23 29 09.2	+0.4
DYR	Agios Nikonas	1.42 242	eP	Pn	23 28 48.1	+0.4
DYR	Agios Nikonas	1.42 242	eP	Pn	23 28 48.1	+0.4
DYR			S	Sn	23 29 09.2	+0.4
DSF	Desfina	1.46 312	P	Pn	23 28 48.4	+0.2
DSF			S	Sn	23 29 10.6	+0.9
DSF	Desfina	1.46 312	P	Pn	23 28 48.4	+0.2
DSF			S	Sn	23 29 10.6	+0.9
KLV	Kalavryta, Ach	1.52 294	P	Pn	23 28 48.8	0.0
KLV			S	Sn	23 29 10.4	-0.4
KLV	Kalavryta, Ach	1.52 294	eP	Pn	23 28 48.7	0.0
KLV	Kalavryta, Ach	1.52 294	P	Pn	23 28 48.8	0.0
KLV			S	Sn	23 29 10.4	-0.4
ITM	Ithomi	1.59 262	P	Pn	23 28 50.7	+1.1
ITM			S	Sn	23 29 12.6	+0.4
ITM	Ithomi	1.59 262	P	Pn	23 28 50.7	+1.1
ITM			S	Sn	23 29 12.6	+0.4
ANKY	Antikythira Is	1.63 197	P	Pn	23 28 50.7	+0.7
ANKY	Antikythira Is	1.63 197	eP	Pn	23 28 50.8	+0.7
ANKY			eS	Sn	23 29 12.1	-0.9
ANKY	Antikythira Is	1.63 197	P	Pn	23 28 50.7	+0.7
ANKY			eS	Sn	23 29 12.1	-0.9
AXAR	Agios Charalam	1.66 324	P	Pn	23 28 50.9	+0.6
AXAR	Agios Charalam	1.66 324	P	Pn	23 28 50.9	+0.6
KALE	Kalithea	1.69 305	P	Pn	23 28 51.1	+0.3
KALE	Kalithea	1.69 305	eP	Pn	23 28 51.6	+0.8
KALE	Kalithea	1.69 305	P	Pn	23 28 51.1	+0.3
TRIZ	Trizonia	1.72 303	P	Pn	23 28 51.4	+0.4
TRIZ			S	Sn	23 29 14.7	0.0
TRIZ	Trizonia	1.72 303	eP	Pn	23 28 51.9	+0.9
TRIZ	Trizonia	1.72 303	P	Pn	23 28 51.4	+0.4
TRIZ			S	Sn	23 29 14.7	0.0
LAKA	Lakka	1.72 299	P	Pn	23 28 51.9	+0.8
LAKA	Lakka	1.72 299	eP	Pn	23 28 52.0	+0.8
LAKA	Lakka	1.72 299	P	Pn	23 28 51.9	+0.8
AOS	Alonnisos	1.74 359	P	Pn	23 28 51.5	+0.3
AOS	Alonnisos	1.74 359	eP	Pn	23 28 51.5	+0.3
AOS	Alonnisos	1.74 359	eP	Pn	23 28 51.5	+0.3
AMT	Artemida-Makis	1.75 274	P	Pn	23 28 52.4	+1.0
AMT			S	Sn	23 29 16.3	+1.0
AMT	Artemida-Makis	1.75 274	eP	Pn	23 28 51.7	+0.3
AMT	Artemida-Makis	1.75 274	eP	Pn	23 28 51.7	+0.3
AMT			S	Sn	23 29 16.3	+1.0
PYL	PYLOS	1.81 253	P	Pn	23 28 52.2	+0.2
PYL	PYLOS	1.81 253	eP	Pn	23 28 52.2	+0.2
PYL			eS	Sn	23 29 16.1	-0.4
PYL	PYLOS	1.81 253	eP	Pn	23 28 52.2	+0.2
PYL			eS	Sn	23 29 16.1	-0.4
EFP	Efpalio	1.87 303	P	Pn	23 28 52.8	+0.1
EFP			S	Sn	23 29 17.9	+0.2
EFP	Efpalio	1.87 303	eP	Pn	23 28 52.5	-0.2
EFP	Efpalio	1.87 303	P	Pn	23 28 52.8	+0.1
EFP			S	Sn	23 29 17.9	+0.2
NEO	Neokhori	1.95 344	P	Pn	23 28 54.2	+0.5
NEO	Neokhori	1.95 344	eP	Pn	23 28 54.2	+0.5
NEO	Neokhori	1.95 344	eP	Pn	23 28 54.2	+0.5
CHOS	Chios island	1.95 60	P	Pn	23 28 54.7	+0.9
CHOS	Chios island	1.95 60	eP	Pn	23 28 54.8	+0.9
CHOS	Chios island	1.95 60	P	Pn	23 28 54.7	+0.9
AGG	Agios Georgios	2.02 323	P	Pn	23 28 55.0	+0.5
AGG			S	Sn	23 29 21.5	+0.5
AGG	Agios Georgios	2.02 323	eP	Pn	23 28 55.0	+0.5
AGG	Agios Georgios	2.02 323	eP	Pn	23 28 55.0	+0.5
AGG			S	Sn	23 29 21.5	+0.5
RLS	Riolos of Patr	2.03 289	eP	Pn	23 28 55.7	+1.0
RLS	Riolos of Patr	2.03 289	eP	Pn	23 28 55.7	+1.0
VAM	Vamos	2.03 173	P	Pn	23 28 55.7	+0.9
VAM	Vamos	2.03 173	eP	Pn	23 28 55.6	+0.8
VAM			eS	Sn	23 29 21.5	+0.1
VAM	Vamos	2.03 173	P	Pn	23 28 55.7	+0.9
VAM			eS	Sn	23 29 21.5	+0.1
EVR	Evrytania	2.22 313	P	Pn	23 28 57.6	+0.5
EVR	Evrytania	2.22 313	P	Pn	23 28 57.6	+0.5
IDI	Anoyia	2.28 159	P	Pn	23 28 58.9	+1.0
IDI	Anoyia	2.28 159	P	Pn	23 28 58.9	+1.0
SIGR	SIGRI	2.35 40	P	Pn	23 28 59.3	+0.7
SIGR	SIGRI	2.35 40	P	Pn	23 28 59.3	+0.7
SIVA	Sivas	2.52 163	P	Pn	23 29 01.6	+0.9
SIVA	Sivas	2.52 163	P	Pn	23 29 01.6	+0.9
NPS	Neapolis	2.57 147	eP	Pn	23 29 01.6	+0.2
NPS			eS	Sn	23 29 32.7	-0.4
NPS	Neapolis	2.57 147	eP	Pn	23 29 01.6	+0.2
NPS			eS	Sn	23 29 32.7	-0.4
THL	Klokotos Trika	2.59 326	eP	Pn	23 29 02.4	+0.7
THL	Klokotos Trika	2.59 326	eP	Pn	23 29 02.4	+0.7
LAST	Lasithi	2.60 150	P	Pn	23 29 02.4	+0.5
LAST	Lasithi	2.60 150	P	Pn	23 29 02.4	+0.5
VLS	Valsamata	2.73 287	eP	Pn	23 29 03.8	+0.4
VLS	Valsamata	2.73 287	eP	Pn	23 29 03.8	+0.4
LIT	Litokhoron	2.89 338	eP	Pn	23 29 05.9	+0.5
LIT	Litokhoron	2.89 338	eP	Pn	23 29 05.9	+0.5
LKD2	Lefkada island	2.90 299	P	Pn	23 29 05.8	+0.3
LKD2	Lefkada island	2.90 299	eP	Pn	23 29 05.8	+0.3
LKD2	Lefkada island	2.90 299	eP	Pn	23 29 05.8	+0.3
ZKR	Zakros	2.97 140	P	Pn	23 29 07.2	+0.6
ZKR	Zakros	2.97 140	P	Pn	23 29 07.2	+0.6
KARP	Karpathos	3.23 125	P	Pn	23 29 10.6	+0.7
KARP	Karpathos	3.23 125	P	Pn	23 29 10.6	+0.7
IGT	Igoumenitsa	3.50 308	P	Pn	23 29 13.6	+0.3
IGT	Igoumenitsa	3.50 308	P	Pn	23 29 13.6	+0.3
LTBQ	Tobruq	5.36 180	*i* P	Pn	23 29 38.5	+0.4
	SNR=24					
SLUM		6.02 169	S	Sn	23 30 47.9	-6.8
	baz=170					
SLUM		6.02 169	P	Pn	23 29 45.9	-1.0
HMAT	Matruh	6.85 156	P	Pn	23 29 56.7	-1.4
	baz=157					
HMAT			AMP		23 31 00.0	
	comp=N,20μm,0.2s,logA/T=5.0,baz=157					
HMAT	Matruh	6.85 156	P	Pn	23 29 56.7	-1.4
LJBD	Adjabya	7.19 206	*i* P	Pn	23 29 59.4	-3.2
	SNR=24					
STON	Ston	7.22 321	*i* Pn	Pn	23 30 00.5	-2.3
STON			Sn	Sn	23 31 13.6	-10
BRTR	Keskin Array B	7.96 70	P	Pn	23 30 16.0	+2.9
	comp=N,0.0nm,0.3s,baz=254,slow=13,SNR=5.1					
RSH		10.38 126	P	Pn	23 30 44.2	-1.1
	baz=126					
RSH		10.38 126	P	Pn	23 30 44.2	-1.1
GERES	GERESS Array B	13.61 330	P	P	23 31 31.1	-0.7
	comp=N,0.1nm,0.3s,baz=148,slow=11,SNR=4.5					
ESDC	Sonseca Array	21.88 284	P	P	23 33 03.7	+1.7
	comp=N,0.7nm,0.6s,baz=80,slow=9.5,SNR=7.3					
HFS	Hagfors	23.64 347	P	P	23 33 17.5	-1.1
	comp=N,0.4nm,0.4s,baz=156,slow=12,SNR=8.1					
FINES	FINESS Array B	24.08 3	P	P	23 33 21.4	-1.1
	comp=N,0.5nm,0.6s,baz=161,slow=8.1,SNR=6.6					
NOA	NORSAR Array B	24.95 345	P	P	23 33 29.6	-0.9
	comp=N,0.1nm,0.4s,baz=162,slow=12,SNR=1.5					
EKA	Eskdalemuir Ar	25.61 323	P	P	23 33 36.0	-0.5
	comp=N,0.5nm,0.4s,baz=118,slow=9.4,SNR=10					
TORD	Torodi Ar. Bea	31.27 225	P	P	23 34 28.4	+1.3
	comp=N,0.6nm,1.0s,baz=29,slow=9.7,SNR=4.5					
TORD			LR	LR	23 47 51.9	
	comp=N,42nm,18.5s,baz=265,slow=37					
SCHQ	Schefferville	60.81 318	P	P	23 38 17.7	+0.2
	comp=N,1.4nm,0.7s,baz=30,slow=8.1,SNR=4.5					

IDC 21 23:29:52.7±1.8, 4°94S×101°76E, h0km, mb3.5/6, mb1 3.6/6, mb1mx3.5/23, mbtmp3.5/6, Error ellipse: s-maj=78.9km s-min=21.2km az=49.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	35.03	118	P		P	23 36 47.5	-0.1
	0.2nm,0.7s,baz=294,slow=8.2,SNR=2.6							
ASAR	Alice Springs	36.14	124	P		P	23 36 56.4	-0.6
	0.4nm,0.8s,baz=296,slow=7.9,SNR=3.0							
SONM	Songino Array	52.70	4	P		P	23 39 09.2	0.0
	0.8nm,0.6s,baz=177,slow=10,SNR=6.4							
MKAR	Makanchi Array	54.31	344	P		P	23 39 20.6	-0.3
	0.4nm,0.7s,baz=147,slow=8.0,SNR=5.5							
ZALV	Zalesovo Beam	60.37	349	P		P	23 40 02.5	-0.9
	0.5nm,0.4s,baz=116,slow=3.4,SNR=4.1							
BRTR	Keskin Array B	76.59	313	P		P	23 41 45.7	+0.2
	0.3nm,0.7s,baz=118,slow=8.7,SNR=4.0							
TXAR	Lajitas Array	145.83	42	PKPbc		PKPab	23 49 35.2	0.0
	0.3nm,0.7s,baz=316,slow=2.5,SNR=3.4							

*ISCJB **21** 23:40:48.5±0.4, 36°61N±0°04×69°68E±0°07, h213km, mb3.4/9, Error ellipse: s-maj=7.4km s-min=4.9km az=0.7*
*IDC **21** 23:40:50.1±2.9, 36°46N×70°02E, h243km±28km, mb3.3/11, mb1 3.4/16, mb1mx3.2/34, mbtmp3.4/16, Error ellipse: s-maj=19.9km s-min=14.7km az=178.0*
*NNC **21** 23:40:53.9±4.0, 36°95N×69°86E, h218km±33km, mb3.2, mpv4.0, Error ellipse: s-maj=35.2km s-min=19.5km az=7.0*

ISC 21 23:40:49.2±0.7, 36°60N±0°06×69°78E±0°08, h213km, n42, σ1s14/46, mb3.4/9, 9C-4D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.27	147	P		Pn	23 41 43.8	+0.9
CEP				S		S	23 42 25.0	+0.4
CHCP	Chirah Chowk	4.10	135	⇓P		Pn	23 41 53.9	+1.2
THW	Thamme Wali	4.13	156	⇓P		Pn	23 41 52.9	-0.2
SARP	Sargodha	5.25	152	P		Pn	23 42 06.4	-0.6
AML	Almayashu	6.30	28	P		Pn	23 42 22.0	+1.3
	SNR=48							
KK31	Karatay Array	6.52	5	P		Pn	23 42 23.9	+0.7
	3.2nm,0.4s,baz=180,slow=12,SNR=62							
KK31				⇑S		S	23 43 35.4	-2.4
	16nm,0.8s,baz=188,slow=23,SNR=5.5							
UCH	Uchtor	6.71	32	P		Pn	23 42 27.6	+1.6
	SNR=9.8							
EKS2	Erkin-Say	6.79	26	P		Pn	23 42 28.5	+1.7
	SNR=24							
KZA	Kyzart	6.92	36	P		Pn	23 42 30.2	+1.5
	SNR=15							
AAK	Ala-Archa	7.04	30	P		Pn	23 42 31.7	+1.7
	SNR=18							
AAK	Ala-Archa	7.04	30	P		Pn	23 42 31.6	+1.7
	6.4nm,0.3s,baz=188,slow=6.4,SNR=40							
AAK				S		S	23 43 50.1	-0.1
	3.6nm,0.3s,baz=320,slow=23,SNR=8.5							
KBK	Karagaybulak	7.24	32	P		Pn	23 42 34.2	+1.5
	SNR=25							
CHMS	Chumysh	7.45	29	P		Pn	23 42 36.5	+1.4
	SNR=25							
ULHL	Ulahol	7.53	40	P		Pn	23 42 37.7	+1.2
	SNR=56							
USP	Ospenovka	7.58	27	P		Pn	23 42 37.9	+1.0
	SNR=11							
TKM2	Tokmak 2	7.74	34	⇓P		Pn	23 42 39.5	+0.4
	7.8nm,0.5s							
TKM2				⇑S		S	23 44 04.6	-2.2
	18nm,0.9s							
TKM2	Tokmak 2	7.74	34	P		Pn	23 42 40.2	+1.1
	SNR=14							
MK31	Makanchi Array	13.80	39	⇑P		Pn	23 43 56.3	+0.2
	2.8nm,0.5s,baz=208,slow=8.9,SNR=60							
MKAR	Makanchi Array	13.80	39	P		Pn	23 43 56.6	+0.5
	1.1nm,0.3s,baz=225,slow=15,SNR=61							
AB31	Akbulak array	14.54	334	P		P	23 44 06.6	+0.7
	0.9nm,0.7s,baz=144,slow=12,SNR=19							
KURBB	Kurchatov Arra	15.36	21	⇑P		P	23 44 14.8	-0.2
	8.3nm,0.7s							
KURBB	Kurchatov Arra	15.36	21	P		P	23 44 13.8	-1.2
	0.3nm,0.3s,baz=207,slow=12,SNR=12							
KURK	Kurchatov	15.47	21	⇑P		P	23 44 16.2	+0.1
	7.5nm,0.9s							
VOSK	Vostochnaya	16.14	3	⇓P		Pn	23 44 24.6	+0.3
	6.2nm,0.8s							
AKTO	Aktyubinsk	16.22	332	⇑P		Pn	23 44 26.1	+0.8
	1.4nm,0.6s							
AKTO	Aktyubinsk	16.22	332	P		Pn	23 44 26.5	+1.3
	0.2nm,0.3s,baz=149,slow=12,SNR=5.4							
ZRNK	Zerenda	16.36	358	⇑P		Pn	23 44 27.2	+0.3
	3.4nm,0.6s							
BVA0	Borovoye Array	16.43	1	⇑P		P	23 44 27.5	+0.8
	6.8nm,0.6s,baz=170,slow=12,SNR=58							
BVAR	Borovoye Array	16.43	1	P		Pn	23 44 28.4	+0.6
	1.6nm,0.3s,baz=166,slow=12,SNR=48							
BRVK	Borovoye	16.46	1	⇑P		P	23 44 27.4	+0.4
	12nm,0.6s							
GNI	Garni	19.93	288	P		P	23 45 06.7	+1.8
	2.7nm,0.6s,baz=235,slow=2.5,SNR=4.2							
ZALV	Zalesovo Beam	20.24	26	P		P	23 45 08.2	+0.2
	6.4nm,0.5s,baz=217,slow=12,SNR=28							
BRTR	Keskin Array B	28.47	287	P		P	23 46 25.4	+0.9
	0.6nm,0.6s,baz=94,slow=8.9,SNR=8.5							
FINES	FINESS Array B	36.85	326	P		P	23 47 37.0	+0.3
	0.8nm,0.8s,baz=77,slow=13,SNR=3.8							
FINES				pP		pP	23 48 20.4	-0.3
	0.5nm,0.7s,baz=111,slow=10,SNR=1.2							
ARCES	ARCESS Array B	40.68	339	P		P	23 48 08.8	+0.5
	4.0nm,1.0s,baz=106,slow=6.7,SNR=3.1							
HFS	Hagfors	42.38	322	P		P	23 48 22.1	-0.1
	1.0nm,0.6s,baz=83,slow=12,SNR=6.1							
HFS				pP		pP	23 49 06.6	-0.8
	0.9nm,0.6s,baz=98,slow=11,SNR=2.6							
NB2	NORSAR Subarra	43.71	323	P		P	23 48 32.0	-0.9
	comp=Z,0.4nm,0.5s,baz=96,slow=7.9							
NOA	NORSAR Array B	43.71	323	P		P	23 48 31.7	-1.2
	comp=Z,0.4nm,0.6s,baz=98,slow=7.9,SNR=6.0							
KMBO	Kilima Mbogo	48.18	226	P		P	23 49 08.4	-0.2
	comp=Z,0.6nm,0.7s,baz=34,slow=16,SNR=4.1							
TORD	Torodi Ar. Bea	64.74	268	P		P	23 51 02.8	-2.2
	comp=Z,2.4nm,0.8s,baz=50,slow=6.2,SNR=28							
WRA	Warramunga Arr	82.88	121	P		P	23 52 46.4	-3.7
	comp=Z,0.4nm,0.7s,baz=324,slow=4.8,SNR=6.3							
ASAR	Alice Springs	85.12	124	P		P	23 52 57.6	-3.7
	comp=Z,0.4nm,0.7s,baz=318,slow=5.0,SNR=5.0							

*NSSP **22** 00:06:04.8, 39°80N×44°22E, h10km, Ms3.2*
*TIF **22** 00:06:04.9, 39°82N×44°18E, h11km±1km*
*ISK **22** 00:06:07.0, 39°86N×44°16E, h5km, MD3.5*
*DDA **22** 00:06:08.0, 39°89N×44°15E, h2km, MD3.2*
*CSEM **22** 00:06:08.0±0.3, 39°94N×44°13E, h2km, MD3.2, Error ellipse: s-maj=8.3km s-min=5.6km az=123.0*

ISC 22 00:06:06.4±0.9, 39°87N±0°02×44°19E±0°02, h14km±6km, n68, σ1s29/92, 17C-19D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
VRNZ	Vardanashen	0.17	359	⇓*i*P		Pg	00 06 10.4	-0.2
VRNZ				⇓*i*S		Sg	00 06 14.1	+0.7
VRNZ	Vardanashen	0.17	359	⇓P		Pg	00 06 10.4	-0.2
NPPZ	NPP	0.30	351	⇓*i*P		Pg	00 06 12.3	-0.2
NPPZ				⇓*i*S		Sg	00 06 17.7	+0.9
NPPZ	NPP	0.30	351	⇓P		Pg	00 06 12.4	-0.2
PAAR	P'arak'ar	0.31	27	⇓*i*P		Pg	00 06 13.1	+0.2
PAAR				⇑*i*S		Sg	00 06 18.3	+1.1
ERE	Yerevan	0.36	36	⇓*i*P		Pg	00 06 11.8	-2.0
ERE				⇓S		Sg	00 06 17.8	-1.0
VNNZ	Vanand	0.37	309	⇓*i*P		Pg	00 06 13.3	-0.5
VNNZ				⇑*i*S		Sg	00 06 19.5	+0.7
VNNZ	Vanand	0.37	309	⇓P		Pg	00 06 13.3	-0.5
ARRZ	Ararat	0.39	93	⇑*i*P		Pn	00 06 36.8	+19
ARRZ				⇑S		Sn	00 06 43.2	+18
AKSZ	Araks	0.40	323	⇑*i*P		Pg	00 06 13.8	-0.6
AKSZ				⇑*i*S		Sg	00 06 20.1	+0.4
AKSZ	Araks	0.40	323	⇑P		Pg	00 06 13.8	-0.6
GNI	Garni	0.50	57	*e*PG		Pn	00 06 18.7	-0.7
GNI				*e*SG		Sn	00 06 26.8	-1.1
GNI	Garni	0.50	57	⇑*i*P		Pn	00 06 18.7	-0.7
GNI				⇑*i*S		Sn	00 06 27.2	-0.7
GNI	Garni	0.50	57	*e*Pg		Pn	00 06 18.7	-0.7
GNI				*e*Sg		Sn	00 06 26.8	-1.1
DYDN	Diyadin	0.51	230	*i* P		Pn	00 06 18.2	-1.3
DYDN				*i* S		Sn	00 06 26.0	-2.2
DYDN	Diyadin	0.51	230	*i* P		Pn	00 06 18.2	-1.3
DYDN				*i* S		Sn	00 06 26.0	-2.2
AMBZ	Amberd	0.52	5	⇓*i*P		Pg	00 06 16.2	-0.4
AMBZ				⇓*i*S		Sg	00 06 24.6	+1.1
AMBZ	Amberd	0.52	5	⇓P		Pg	00 06 16.2	-0.4
CLDR	Caldiran	0.76	196	*e*PG		Pn	00 06 22.5	-0.5
CLDR				*e*SG		Sn	00 06 33.8	-0.6
CLDR	Caldiran	0.76	196	*e*Pg		Pn	00 06 22.5	-0.5
CLDR				*e*Sg		Sn	00 06 33.8	-0.6
DIGO	Kars	0.83	311	*i* P		Pg	00 06 23.1	+0.6
DIGO				*i* S		Sn	00 06 36.0	-0.2
DIGO	Kars	0.83	311	*i* P		Pg	00 06 23.1	+0.6
LMTZ	Lermontov	0.95	21	⇑*i*P		Pb	00 06 24.6	-0.1
LMTZ				⇑*i*S		Sn	00 06 38.5	-0.4
SPIZ	Spitak	0.95	3	⇑*i*P		Pn	00 06 25.2	-0.3
SPIZ				⇑*i*S		Sn	00 06 39.4	+0.4
AGRB	Hanur-Agry	0.97	253	*e*PG		Pn	00 06 25.3	-0.5
AGRB				*e*SG		Sn	00 06 40.4	+0.8
AGRB	Hanur-Agry	0.97	253	*e*Pg		Pn	00 06 25.3	-0.5
AGRB				*e*Sg		Sn	00 06 40.4	+0.8
CKLZ	Chkalov	1.12	18	⇓*i*P		Pn	00 06 27.9	+0.1
STEZ	Stepenevan	1.14	8	⇓*i*P		Pb	00 06 27.9	0.0
STEZ				⇓*i*S		Sg	00 06 45.2	+2.1
STEZ	Stepenevan	1.14	8	⇓*i*P		Pg	00 06 28.8	+0.5
STEZ				⇑*i*S		Sg	00 06 46.4	+3.3
KARS	Kars	1.14	312	*e*PN		Pg	00 06 28.6	+0.3
KARS	Kars	1.14	312	*e*Pn		Pg	00 06 28.6	+0.3
TUTA	Tutak	1.17	247	*i* P		Pg	00 06 29.7	+0.9
TUTA				*i* S		Sg	00 06 46.1	+2.0
TUTA	Tutak	1.17	247	*i* P		Pg	00 06 29.7	+0.9
TUTA				*i* S		Sg	00 06 46.1	+2.0
VADZ	Vardenis	1.23	75	⇑*i*P		Pg	00 06 33.5	+3.5
VADZ				⇑*i*S		Sg	00 06 50.5	+4.5
TVAN	Van	1.48	205	*i* P		Pg	00 06 36.8	+2.0
TVAN	Van	1.48	205	*i* P		Pg	00 06 36.8	+2.0
KZR	Kazreti	1.52	6	P		Pg	00 06 36.0	+0.5
KZR				S		Sg	00 06 56.4	+1.2
AKH	Akhalkalaki	1.62	341	P		Pg	00 06 37.6	0.0
AKH				S		Sg	00 06 59.7	+1.0
GRS	Goris	1.69	102	⇑*i*P		Pb	00 06 37.0	-0.4
GRS				⇓*i*S		Sg	00 07 00.0	-0.8
DGRG	David-gareji	1.81	29	P		Pg	00 06 42.4	+1.2
DGRG				S		Sg	00 07 08.6	+3.9
TBLG	Delisi	1.90	12	P		Pg	00 06 42.5	-0.4
TBLG				S		Sg	00 07 08.8	+1.3
TATV	Tatvan	2.03	228	*i* P		Pg	00 06 45.5	+0.3
TATV				*i* S		Sg	00 07 13.5	+2.0
TATV	Tatvan	2.03	228	*i* P		Pg	00 06 45.5	+0.3
EZM	Erzurum	2.18	272	*e*PN		Pb	00 06 45.8	0.0
VRTB	Varto-Mus	2.23	252	*e*PN		Pb	00 06 46.2	-0.4
VRTB	Varto-Mus	2.23	252	*e*Pn		Pb	00 06 46.3	-0.4
DUS	Dusheti	2.25	10	P		Pg	00 06 50.7	+1.3
DUS				S		Sg	00 07 21.4	+2.8
BCA	Borcka	2.51	310	*e*PN		Pb	00 06 50.8	-0.4
BCA	Borcka	2.51	310	*e*Pn		Pb	00 06 50.8	-0.4
BNGL	BINGOL	2.53	250	*i* P		Pg	00 06 53.8	-1.1
BNGL				*i* S		Sg	00 07 27.9	+0.2
GUDG	Gudauri	2.60	5	P		Pg	00 06 54.9	-1.3
GUDG				S		Sg	00 07 30.1	+0.2
CUKT	Cukurca	2.66	190	*e*PN		Pb	00 06 52.3	-1.6
CUKT	Cukurca	2.66	190	*e*Pn		Pb	00 06 52.3	-1.6
BTMT	Batman	2.69	232	*e*PN		Pb	00 06 52.8	-1.7
ONI	Oni	2.77	349	P		Pg	00 06 58.1	-1.3
ONI				S		Sg	00 07 35.9	+0.5
BNGB	Bing¨¶

*CSEM **22** 00:09:19.0, 45.71N×26.55E, h150km, MD2.9/3, After BUC*

BUC 22 00:09:19.0±0.8, 45.71N×26.55E, h150km, MD2.9/3, 3C-9D, Error ellipse: s-maj=29.6km s-min=10.9km az=19.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.16**	**25**	*i*P	Pn	00 09 39.2	-0.1
PLOR	**Plostina**	**0.16**	**25**	*i*P	Pn	00 09 39.2	-0.1
PLOR	**Plostina**	**0.16**	**25**	*i*P	Pn	00 09 39.2	-0.1
VRI	**Vrincioaia**	**0.20**	**37**	*i*P	Pn	00 09 38.8	-0.5
VRI	**Vrincioaia**	**0.20**	**37**	*i*P	Pn	00 09 38.8	-0.5
VRI				*i* S	Sn	00 09 55.7	+0.9
VRI	**Vrincioaia**	**0.20**	**37**	*i*P	Pn	00 09 38.8	-0.5
VRI				*i* S	Sn	00 09 55.7	+0.9
MLR	**Muntele Rosu**	**0.48**	**244**	*i*P	Pn	00 09 40.5	+0.1
MLR	**Muntele Rosu**	**0.48**	**244**	*i*P	Pn	00 09 40.5	+0.1
MLR				*i* S	Sn	00 09 55.9	-0.8
MLR	**Muntele Rosu**	**0.48**	**244**	*i*P	Pn	00 09 40.5	+0.1
MLR				*i* S	Sn	00 09 55.9	-0.8
CFR	**Carcaliu**	**1.23**	**115**	*i*P	Pn	00 09 46.5	+0.7
CFR	**Carcaliu**	**1.23**	**115**	*i*P	Pn	00 09 46.5	+0.7
CFR				*i* S	Sn	00 10 05.7	-0.6
CFR	**Carcaliu**	**1.23**	**115**	*i*P	Pn	00 09 46.5	+0.7
CFR				*i* S	Sn	00 10 05.7	-0.6
TIRR	**Tirgusor**	**1.81**	**133**	*i* S	Sn	00 10 16.4	-0.8
TIRR	**Tirgusor**	**1.81**	**133**	*i* S	Sn	00 10 16.4	-0.8
TIRR	**Tirgusor**	**1.81**	**133**	*i* S	Sn	00 10 16.4	-0.8

MEX 22 00:10:37.4±0.6, 17.04N×99.54W, h30km±46km, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.70**	**271**	*i*P	Pb	00 10 48.5	-2.7
CAIG				*i* S	Sb	00 10 58.3	-2.2
MEIG	**Mezcala**	**0.88**	**355**	*i*P	Pn	00 10 51.1	-2.8
MEIG				*i* S	Sn	00 11 02.8	-3.0
ARIG	**Puente Sto Nin**	**1.46**	**328**	*i*P	Pn	00 11 00.2	-1.5
ARIG				*i* S	Sn	00 11 17.0	-2.8
PNIG	**Pinotepa**	**1.50**	**115**	*i*P	Pn	00 11 00.3	-2.0
PNIG				*i* S	Sn	00 11 18.5	-2.3

*ISCJB **22** 00:26:38.6±1.1, 39.26N±0.04×26.03E±0.07, h9km±6km, Error ellipse: s-maj=9.5km s-min=6.1km az=157.1*
*CSEM **22** 00:26:38.5±0.5, 39.26N×25.98E, h10km, MD3.1, Error ellipse: s-maj=10.8km s-min=5.9km az=72.0*
*DDA **22** 00:26:40.5, 39.35N×26.19E, h4km, MD3.1*
*ISK **22** 00:26:41.6, 39.45N×26.01E, h25km, MD3.0*
ISC 22 00:26:37.8±1.4, 39.29N±0.03×25.97E±0.05, h9km±10km, n32, σ0.68/45, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.56**	**87**	*i*P	**Pg**	**00 26 48.7**	**+0.1**
AYVA				*i* S	**Sg**	**00 26 55.7**	**-0.2**
AYVA	**Ayvalik**	**0.56**	**87**	*i*P	**Pg**	**00 26 48.7**	**+0.1**
AYVA				*i* S	**Sg**	**00 26 55.7**	**-0.2**
BOZC	**Bozcaada**	**0.56**	**6**	*i*P	**Pb**	**00 26 50.6**	**+0.8**
BOZC				*i* S	**Sb**	**00 26 59.2**	**+1.3**
EZN	**Ezine**	**0.61**	**27**	*e*PG	**Pb**	**00 26 50.6**	**0.0**
EZN				*e*SG	**Sb**	**00 26 59.2**	**0.0**
EZN	**Ezine**	**0.61**	**27**	*e*Pg	**Pb**	**00 26 50.6**	**0.0**
EZN				*e*Sg	**Sb**	**00 26 59.2**	**0.0**
URLA	**Izmir**	**1.04**	**152**	*i*P	**Pg**	**00 26 57.9**	**+0.1**
URLA				*i* S	**Sg**	**00 27 10.9**	**-0.5**
URLA	**Izmir**	**1.04**	**152**	*i*P	**Pg**	**00 26 57.9**	**+0.1**
URLA				*i* S	**Sg**	**00 27 10.9**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.18**	**19**	*e*PG	**Pg**	**00 27 01.2**	**+0.7**
GELI				*e*SG	**Sg**	**00 27 14.4**	**-1.3**
GELI	**Tayfur-Gelibol**	**1.18**	**19**	*e*Pg	**Pn**	**00 27 01.2**	**+0.7**
GELI				*e*Sg	**Sg**	**00 27 14.4**	**-1.3**
LPK	**Lapseki**	**1.25**	**29**	*e*PN	**Pg**	**00 27 01.8**	**+0.1**
LPK	**Lapseki**	**1.25**	**29**	*e*Pn	**Pg**	**00 27 01.8**	**+0.1**
BALY	**Balya**	**1.35**	**70**	*i*P	**Pb**	**00 27 03.4**	**+0.1**
BALY				*i* S	**Sb**	**00 27 20.7**	**-0.1**
BALY	**Balya**	**1.35**	**70**	*i*P	**Pb**	**00 27 03.4**	**+0.1**
BALY				*i* S	**Sb**	**00 27 20.7**	**-0.1**
ERIK	**Erikli-Kesan**	**1.45**	**17**	*e*PN	**Pb**	**00 27 05.1**	**+0.2**
ERIK	**Erikli-Kesan**	**1.45**	**17**	*e*Pn	**Pb**	**00 27 05.1**	**+0.2**
ENEZ	**Enez**	**1.46**	**5**	*e*PN	**Pn**	**00 27 03.9**	**-0.4**
ENEZ	**Enez**	**1.46**	**5**	*e*Pn	**Pn**	**00 27 03.9**	**-0.4**
KRBG	**Karabiga-Canak**	**1.51**	**42**	*e*PN	**Pn**	**00 27 05.1**	**+0.1**
KRBG	**Karabiga-Canak**	**1.51**	**42**	*e*Pn	**Pn**	**00 27 05.1**	**+0.1**
BALB	**Balikesir**	**1.52**	**76**	*e*PN	**Pg**	**00 27 07.4**	**+0.5**
BALB	**Balikesir**	**1.52**	**76**	*e*Pn	**Pg**	**00 27 07.4**	**+0.5**
GONE	**Gonen-Balikesi**	**1.53**	**60**	*e*PN	**Pb**	**00 27 06.3**	**0.0**
GONE	**Gonen-Balikesi**	**1.53**	**60**	*e*Pn	**Pb**	**00 27 06.3**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.68**	**33**	*e*PN	**Pb**	**00 27 09.1**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.68**	**33**	*e*Pn	**Pb**	**00 27 09.1**	**+0.2**
MFT	**Murefte**	**1.81**	**33**	*e*PN	**Pb**	**00 27 10.9**	**-0.2**
MFT	**Murefte**	**1.81**	**33**	*e*Pn	**Pb**	**00 27 10.9**	**-0.2**
GCAM	**G?zelcaml?**	**1.87**	**148**	*i*P	**Sn**	**00 27 32.8**	**-0.8**
GCAM				*i* S	Sg	00 27 46.9	+9.2
DURS	**Dursunbey**	**1.96**	**80**	*i*P	**Pn**	**00 27 11.4**	**0.0**
DURS				*i* S	**Sn**	**00 27 35.3**	**-0.9**
DURS	**Dursunbey**	**1.96**	**80**	*i*P	**Pn**	**00 27 11.4**	**0.0**
DURS				*i* S	**Sn**	**00 27 35.3**	**-0.9**
ARMT	**Armutlu**	**2.56**	**59**	*e*PN	**Pn**	**00 27 21.6**	**+2.1**
ARMT	**Armutlu**	**2.56**	**59**	*e*Pn	**Pn**	**00 27 21.6**	**+2.1**

IDC 22 00:49:08.8±5.7, 5.59S×154.51E, h137km±46km, mb3.5/9, mb1 3.7/10, mb1mx3.5/19, mbtmp3.5/10, Error ellipse: s-maj=43.4km s-min=21.2km az=98.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.22**	**242**	P	Pn	00 51 04.6	-0.6
	5.3nm,0.3s,baz=90,slow=11,SNR=4.2						
PMG				S	Sn	00 52 36.6	+0.1
	1.5nm,0.3s,baz=108,slow=19,SNR=2.9						
WRA	**Warramunga Arr**	**24.25**	**232**	P	P	00 54 13.7	+0.3
	1.9nm,0.6s,baz=54,slow=10,SNR=30						
ASAR	**Alice Springs**	**26.77**	**226**	P	P	00 54 36.2	+0.1
	0.3nm,0.4s,baz=58,slow=9.0,SNR=6.2						
STKA	**Stephens Creek**	**28.81**	**203**	P	P	00 54 54.3	+0.3
	3.3nm,0.8s,baz=53,slow=10,SNR=3.6						
KSRS	**Korea Array**	**49.48**	**332**	P	P	00 57 45.9	+0.6
	0.8nm,0.5s,baz=147,slow=6.1,SNR=4.2						
CMAR	**Chiang Mai Arr**	**59.76**	**295**	P	P	00 59 00.1	+0.3
	1.0nm,0.4s,baz=112,slow=5.1,SNR=7.1						
SONM	**Songino Array**	**67.91**	**327**	P	P	00 59 52.8	+0.1
	0.7nm,0.5s,baz=141,slow=6.1,SNR=5.3						
MKAR	**Makanchi Array**	**82.04**	**319**	P	P	01 01 13.6	-0.2
	0.4nm,0.5s,baz=102,slow=7.1,SNR=11						
ILAR	**Eielson Array**	**82.25**	**22**	P	P	01 01 14.7	+0.2
	0.4nm,0.6s,baz=241,slow=5.7,SNR=6.3						
ZALV	**Zalesovo Beam**	**82.76**	**326**	P	P	01 01 16.3	-1.0
	0.9nm,0.5s,baz=111,slow=5.5,SNR=3.8						
TORD	**Torodi Ar. Bea**	**152.17**	**288**	PKPbc	PKPbc	01 08 48.4	-0.8
	0.1nm,0.4s,baz=73,slow=1.5,SNR=6.9						

*NIED **22** 00:53:00, 39.10N×143.80E, h8km, Mw4.0 Best double couple: M0 1.06000×10^15 NP1:φ=12.00000°, δ51.00000°, λ105.00000°. NP2:φ=168.00000°, δ41.00000°, λ72.00000°.*
JMA 22 00:53:47.7±0.1, 39.14N×143.84E, h27km, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**1.63**	**286**	P	Pn	00 54 15.4	+0.8
MIYJ				*e*S	Sn	00 54 35.7	+1.1
OFUJ	**Ofunato**	**1.69**	**269**	P	Pn	00 54 16.4	+1.0
JOM	**Ohasama**	**2.00**	**280**	P	Pn	00 54 21.2	+1.4
JMK	**Ichinoseki**	**2.05**	**266**	P	Pn	00 54 21.7	+1.3
JMK				*e*S	Sn	00 54 46.4	+1.4
JOU	**Okura**	**2.60**	**254**	P	Pn	00 54 29.8	+1.8
JAH	**Hinai**	**2.69**	**294**	P	Pn	00 54 30.6	+1.5
JYK	**Kaneyama**	**2.72**	**266**	P	Pn	00 54 31.1	+1.5
JFT	**Otama**	**3.20**	**241**	P	Pn	00 54 37.8	+1.6
JFT				*e*S	Sn	00 55 14.7	+1.3
JNBK	**Urakawa-nobuka**	**3.24**	**346**	P	Pn	00 54 39.5	+2.7
JNBK				*e*S	Sn	00 55 16.6	+2.1
JCH	**Churui**	**3.49**	**354**	P	Pn	00 54 41.4	+1.2
JCH				*e*S	Sn	00 55 20.1	-0.5
MAT	**Matsushiro**	**5.16**	**242**	P	Pn	00 55 05.9	+2.7
MAT				S	Sn	00 56 02.3	+0.5

IDC 22 01:41:28.1±3.7, 18.31S×174.89W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.8/18, mbtmp3.8/4, Error ellipse: s-maj=202.4km s-min=29.3km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.85**	**259**	P	P	01 50 07.2	-0.9
	0.9nm,0.6s,baz=96,slow=8.6,SNR=31						
ASAR	**Alice Springs**	**47.90**	**254**	P	P	01 50 08.2	-0.4
	0.9nm,0.6s,baz=95,slow=8.2,SNR=10						
PDAR	**Pinedale Array**	**85.37**	**42**	P	P	01 54 06.6	-1.1
	0.3nm,0.4s,baz=256,slow=3.6,SNR=3.3						
ILAR	**Eielson Array**	**85.57**	**12**	P	P	01 54 07.0	-0.8
	0.3nm,0.6s,baz=233,slow=5.9,SNR=8.0						
MKAR	**Makanchi Array**	**111.82**	**314**	PKiKP	PKiKP	02 00 06.2	+1.1
	0.2nm,0.8s,baz=101,slow=1.5,SNR=2.9						
BRTR	**Keskin Array B**	**147.40**	**317**	PKPbc	PKPab	02 01 15.9	-0.3
	0.8nm,0.9s,baz=90,slow=2.9,SNR=5.3						

CASC 22 01:44:08.7±3.1, 8.12N×83.31W, h23km±18km, MD3.8, 1C-1D, Costa Rica

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.55**	**15**	*e*P	Pb	01 44 18.0	-1.8
ACR				*e*S	Sb	01 44 27.1	-0.2
TBS2		**0.93**	**44**	*e*P	Pb	01 44 25.4	-1.0
TBS2				*e*S	Sn	01 44 40.2	+0.7
BUS	**Buena Vista**	**1.49**	**343**	*e*P	Pn	01 44 34.4	-0.4
BUS				*e*S	Sn	01 44 54.4	+0.4
QCR	**Quepos**	**1.55**	**327**	*e*P	Pn	01 44 33.1	-1.9
QCR				*e*S	Sn	01 44 54.1	-0.2
URSC	**Urasca**	**1.77**	**345**	*e*P	Pn	01 44 38.5	+0.3
URSC				*e*S	Sn	01 44 59.8	-0.3
CGA2	**Cerro Gallo 2**	**2.20**	**329**	*e*P	Pn	01 44 44.9	+0.8
CGA2				*e*S	Sb	01 45 13.7	-1.4
PTP	**Ponta Puerca**	**19.93**	**58**	*e*S	S	01 44 24.4	-478

MEX 22 02:08:06.6±3.0, 25.03N×100.26W, h20km±507km, MD3.7, Northern Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNIG	**Linares**	**0.73**	**100**	*e*P	Pb	02 08 18.5	-2.2
LNIG				*e*		02 08 18.5	
	baz=268,slow=18						
LNIG				*i* S	Sb	02 08 27.3	-3.0
ZAIG	**Zacatecas**	**3.09**	**224**	*i*P	Pn	02 08 52.5	-2.1
ZAIG				*i* S	Sn	02 09 29.4	-1.9

*IDC **22** 02:10:39.4±0.7, 19.47N×64.42W, h0km, mb3.8/12, mb1 4.0/13, mb1mx3.9/26, mbtmp3.8/13, ML3.2/1, MS3.5/5, Ms1 3.5/5, ms1mx3.0/30, Error ellipse: s-maj=21.7km s-min=17.0km az=22.0*
*RSPR **22** 02:10:43.6, 19.21N×64.35W, h25km±22km, MD4.0/16*
*NEIC **22** 02:10:43.6, 19.21N×64.35W, h25km, mb4.4/8, MD4.0(RSPR), After RSPR.*
*TRN **22** 02:11:16.8, 17.18N×62.71W, h13km, MD3.9*
ISC 22 02:10:41.5±1.6, 19.20N±0.06×64.46W±0.03, h11km±10km, n99, σ1.35/93, mb4.0/21, MS3.6/6, 15C-13D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.80**	**191**	*e*P	**Pg**	**02 10 57.1**	**+0.2**
TBVI	**Tortola**	**0.80**	**191**	*e*P	**Pg**	**02 10 57.1**	**+0.2**
STVI	**Saint Thomas**	**0.97**	**209**	*e*P	**Pg**	**02 10 59.8**	**-0.3**
STVI				*e*S	**Sg**	**02 11 12.9**	**+0.1**
STVI	**Saint Thomas**	**0.97**	**209**	*e*P	**Pg**	**02 10 59.9**	**-0.3**
STVI	**Saint Thomas**	**0.97**	**209**	*e*P	**Pg**	**02 10 59.8**	**-0.3**
STVI				*e*S	**Sg**	**02 11 12.9**	**+0.1**
CDVI	**St. Croix**	**1.47**	**191**	*e*P	**Pn**	**02 11 06.9**	**-1.0**
CDVI				*e*S	**Sn**	**02 11 27.8**	**+0.6**
MTP	**Monte Pirata**	**1.51**	**223**	*e*S	**Sn**	**02 11 27.2**	**-0.9**
MTP	**Monte Pirata**	**1.51**	**223**	*e*P	**Pn**	**02 11 07.8**	**-0.7**
MTP	**Monte Pirata**	**1.51**	**223**	*e*Pn	**Pn**	**02 11 08.3**	**-0.2**
MTP				*e*S	**Sn**	**02 11 27.6**	**-0.5**
HUMP	**Col San Antoni**	**1.69**	**232**	*e*P	**Pn**	**02 11 10.9**	**+0.1**
HUMP				*e*S	**Sn**	**02 11 31.9**	**-0.5**
HUMP	**Col San Antoni**	**1.69**	**232**	*e*P	**Pn**	**02 11 10.6**	**-0.3**
HUMP	**Col San Antoni**	**1.69**	**232**	*e*P	**Pn**	**02 11 10.9**	**+0.1**
HUMP				*e*S	**Sn**	**02 11 31.9**	**-0.5**
CPD	**Cerro la Pandu**	**1.80**	**230**	*e*P	**Pn**	**02 11 12.5**	**0.0**
CPD	**Cerro la Pandu**	**1.80**	**230**	*e*P	**Pn**	**02 11 12.5**	**0.0**
SJG	**San Juan**	**1.93**	**236**	*e*P	**Pn**	**02 11 13.9**	**-0.4**
SJG	**San Juan**	**1.93**	**236**	*e*P	**Pn**	**02 11 13.9**	**-0.4**
CELP	**Cerrillos**	**2.30**	**241**	*e*P	**Pn**	**02 11 19.5**	**+0.2**
CELP	**Cerrillos**	**2.30**	**241**	*e*Pn	**Pn**	**02 11 19.3**	**0.0**
CELP				*e*S	**Sn**	**02 11 46.1**	**-1.6**
AOPR	**Arecibo Observ**	**2.33**	**249**	*e*P	**Pn**	**02 11 19.8**	**0.0**
AOPR	**Arecibo Observ**	**2.33**	**249**	*e*P	**Pn**	**02 11 19.8**	**0.0**
OBIP	**Obispado Ponce**	**2.34**	**241**	*e*P	**Pn**	**02 11 20.0**	**+0.2**
OBIP	**Obispado Ponce**	**2.34**	**241**	*e*S	**Sn**	**02 11 48.0**	**-0.6**
OBIP	**Obispado Ponce**	**2.34**	**241**	*e*Pn	**Pn**	**02 11 20.0**	**+0.2**
OBIP				*e*S	**Sn**	**02 11 48.9**	**+0.4**
LRS	**Lares**	**2.43**	**249**	*e*P	**Pn**	**02 11 21.0**	**-0.2**
LRS	**Lares**	**2.43**	**249**	*e*Pn	**Pn**	**02 11 21.0**	**-0.2**
SKI	**Saint Kitts**	**2.48**	**138**	*e*P	**Pn**	**02 11 22.0**	**+0.3**
GBPR	**Guanica, Bosqu**	**2.62**	**242**	*e*P	**Pn**	**02 11 24.2**	**+0.8**
GBPR	**Guanica, Bosqu**	**2.60**	**242**	*e*Pn	**Pn**	**02 11 24.2**	**+0.8**
AGPR	**Aguadilla, PR**	**2.62**	**254**	*e*P	**Pn**	**02 11 23.5**	**-0.1**
AGPR	**Aguadilla, PR**	**2.62**	**254**	*e*Pn	**Pn**	**02 11 23.1**	**-0.6**
LSP	**Las Mesas**	**2.69**	**248**	*e*P	**Pn**	**02 11 25.4**	**+0.7**
LSP	**Las Mesas**	**2.69**	**248**	*e*Pn	**Pn**	**02 11 25.0**	**+0.3**
LSP				*e*S	**Sn**	**02 12 00.4**	**+3.1**
NEV	**Hard Times**	**2.73**	**139**	*e*P	Pn	02 11 20.4	-4.8
NEV				*e*S	Pb	02 11 25.2	-5.1
CRPR	**Cabo Rojo, PR**	**2.78**	**245**	*e*P	**Pn**	**02 11 26.3**	**+0.4**
CRPR	**Cabo Rojo, PR**	**2.78**	**245**	*e*Pn	**Pn**	**02 11 26.2**	**+0.3**
CRPR				*e*S	**Sb**	**02 12 07.8**	**+2.6**
ANWB	**Willy Bob**	**2.96**	**121**	*e*Pn	**Pn**	**02 11 29.2**	**+0.7**
ANWB				*e*S	**Sb**	**02 12 07.2**	**-3.2**
BPA	**Boggy Peak**	**3.27**	**130**	*e*S	Pg	02 11 49.0	+4.7
SEG	**Port Louis**	**3.96**	**134**	*e*P	**Pn**	**02 11 41.9**	**-0.3**
LZG	**Guadaloupe-1**	**3.98**	**140**	*i*P	**Pn**	**02 11 43.0**	**+0.6**
BCG	**Bois Riant Cap**	**4.12**	**138**	*e*P	**Pn**	**02 11 44.9**	**+0.5**
SCG	**Saint Claude**	**4.12**	**140**	*e*P	**Pn**	**02 11 45.7**	**+1.2**
HMG	**Houelmont**	**4.14**	**140**	*e*P	**Pn**	**02 11 47.0**	**+2.2**
PHG	**Guadaloupe-2**	**4.16**	**139**	*e*P	**Pn**	**02 11 45.8**	**+0.8**
DOG	**Dongo Capester**	**4.16**	**139**	*e*P	**Pn**	**02 11 45.6**	**+0.7**
SMN1	**Samana, DR**	**4.55**	**271**	*e*P	**Pn**	**02 11 50.6**	**+0.3**
DR12	**Loma Pena Alta**	**4.67**	**266**	*e*P	**Pn**	**02 11 51.4**	**-0.6**
DR12	**Loma Pena Alta**	**4.67**	**266**	*e*P	**Pn**	**02 11 51.4**	**-0.6**
SDDR	**Presa de Saban**	**6.46**	**269**	*e*P	**Pn**	**02 12 17.7**	**+1.1**
SDDR	**Presa de Saban**	**6.46**	**269**	*e*Pn	**Pn**	**02 12 17.2**	**+0.6**
SDDR				*e*S	**Sn**	**02 13 28.8**	**-1.6**
SDV	**Santo Domingo**	**11.87**	**211**	*e*Pn	**Pn**	**02 13 30.1**	**-0.9**
	9.7nm,0.6s						
SDV				S	Sn	02 15 28.0	-16
ROSC	**El Rosal**	**17.20**	**215**	Pn	Pn	02 14 35.6	-6.7
ROSC	**El Rosal**	**17.20**	**215**	P	**P**	**02 14 45.9**	**+2.0**
	1.6nm,0.3s,baz=84,slow=18,SNR=7.2						
ROSC				LR	LR	02 21 49.6	
	comp=Z,180nm,19.7s,baz=189,slow=38						
JSRW	**J. Sargeant Re**	**21.83**	**330**	*e*P	**P**	**02 15 38.3**	**+4.5**
CBN	**Corbin**	**22.02**	**332**	P	**P**	**02 15 37.1**	**+1.2**
	25nm,0.3s						
CBN				*e*		02 15 51.1	
BLA	**Blacksburg**	**22.74**	**325**	P	**P**	**02 15 45.8**	**+2.1**
	16nm,0.6s						
BLA				*e*		02 15 59.7	
OTAV	**Otavalo**	**23.31**	**218**	*e*P	P	02 15 46.4	-3.8
	3.6nm,0.6s						
CPCT	**Cooper Cave**	**24.00**	**316**	*e*P	**P**	**02 15 55.8**	**-0.5**
CPCT				*e*		02 16 16.4	
CPCT				*e*S	**S**	**02 20 18.4**	**+5.4**
TZTN	**Tazewell**	**24.07**	**320**	P	**P**	**02 15 54.5**	**-2.5**
	5.6nm,0.6s						
BINY	**Binghamton**	**24.93**	**339**	P	**P**	**02 16 05.8**	**+1.2**
	6.1nm,0.4s						
ACCN	**Adirondack Com**	**25.33**	**344**	P	**P**	**02 16 09.6**	**+1.4**
	14nm,0.4s						
SAML	**Samuel**	**28.00**	**177**	*e*P	P	02 16 26.5	-6.1
	2.4nm,0.8s						
WMOK	**Wichita Mounta**	**34.08**	**304**	P	P	02 17 24.5	-1.6
	0.9nm,0.5s						
LPAZ	**La Paz**	**35.45**	**186**	P	P	02 17 43.4	+4.7
LPAZ	**La Paz**	**35.45**	**186**	P	P	02 17 43.4	+4.7
	0.5nm,0.6s,baz=328,slow=9.5,SNR=3.3						
TXAR	**Lajitas Array**	**36.99**	**293**	P	**P**	**02 17 51.7**	**+0.5**
TXAR	**Lajitas Array**	**36.99**	**293**	P	**P**	**02 17 51.7**	**+0.5**
	0.3nm,0.6s,baz=113,slow=9.6,SNR=5.3						
PDAR	**Pinedale Array**	**44.57**	**312**	P	**P**	**02 18 53.3**	**-0.5**
PDAR	**Pinedale Array**	**44.57**	**312**	P	**P**	**02 18 53.3**	**-0.5**
	0.3nm,0.3s,baz=98,slow=10,SNR=4.0						
CPUP	**Villa Florida**	**45.79**	**171**	P	**P**	**02 19 05.3**	**+2.1**
CPUP	**Villa Florida**	**45.79**	**171**	P	**P**	**02 19 05.3**	**+2.1**
	0.7nm,0.5s,baz=335,slow=11,SNR=4.8						
CPUP				LR	LR	02 41 26.5	
	comp=Z,78nm,18.5s,baz=8.5,slow=40						
NVAR	**Mina Array Bea**	**50.19**	**304**	LR	LR	02 43 34.9	
	comp=Z,44nm,18.8s,baz=100,slow=40						
YBH	**Yreka Blue Hor**	**53.91**	**308**	P	P	02 20 03.4	-1.8
YBH	**Yreka Blue Hor**	**53.91**	**308**	P	P	02 20 03.4	-1.8
	1.5nm,0.6s,baz=107,slow=2.9,SNR=3.8						
YKA	**Yellowknife Ar**	**55.20**	**334**	P	P	02 20 11.7	-2.3
YKA	**Yellowknife Ar**	**55.20**	**334**	P	P	02 20 11.6	-2.3
	0.9nm,0.7s,baz=112,slow=7.4,SNR=6.1						
ESDC	**Sonseca Array**	**55.45**	**55**	P	**P**	**02 20 15.1**	**-1.2**
ESDC	**Sonseca Array**	**55.45**	**55**	P	**P**	**02 20 15.1**	**-1.2**
	0.1nm,0.3s,baz=275,slow=6.4,SNR=5.1						
DBIC	**Dimbokro**	**59.16**	**94**	P	**P**	**02 20 42.3**	**-0.5**
DBIC	**Dimbokro**	**59.16**	**94**	P	**P**	**02 20 42.3**	**-0.5**
	4.0nm,0.8s,baz=286,slow=8.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**63.51**	**85**	P	**P**	**02 21 11.3**	**-0.9**
TORD	**Torodi Ar. Bea**	**63.51**	**85**	P	**P**	**02 21 11.3**	**-0.9**
	1.0nm,0.7s,baz=295,slow=6.2,SNR=10.0						
NOA	**NORSAR Array B**	**66.46**	**31**	LR	LR	02 46 47.1	
	comp=Z,16nm,18.6s,baz=275,slow=33						
GERES	**GERESS Array B**	**68.07**	**44**	P	P	02 21 39.0	-2.2
GERES	**GERESS Array B**	**68.07**	**44**	P	P	02 21 39.0	-2.2
	0.2nm,0.5s,baz=266,slow=5.3,SNR=4.1						
ILAR	**Eielson Array**	**69.59**	**333**	P	P	02 21 48.2	-2.1
ILAR	**Eielson Array**	**69.59**	**333**	P	P	02 21 48.3	-2.1
	0.7nm,0.7s,baz=96,slow=4.0,SNR=7.7						
FINES	**FINESS Array B**	**73.59**	**30**	P	**P**	**02 22 13.5**	**-0.9**
FINES	**FINESS Array B**	**73.59**	**30**	P	**P**	**02 22 13.5**	**-0.9**
	0.7nm,0.8s,baz=284,slow=5.6,SNR=3.7						
FINES				LR	LR	02 51 20.9	
	comp=Z,34nm,21.6s,baz=260,slow=33						
BRTR	**Keskin Array B**	**83.95**	**50**	P	**P**	**02 23 11.6**	**-0.5**
BRTR	**Keskin Array B**	**83.95**	**50**	P	**P**	**02 23 11.6**	**-0.5**
	1.4nm,0.7s,baz=281,slow=5.1,SNR=15						
WMQ	**Urumqi**	**112.29**	**21**	*e*P	**PKiKP**	**02 29 16.8**	**-0.9**
CN2	**Changchun**	**116.65**	**352**	*e*P	PKPdf	02 29 22.0	-3.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
HHC	**Hu-ho-hao-te**	**120.14**	**3**	*e*PKP	**PKPdf**	**02 29 30.0**	**-2.9**
HHC				sPKP		02 29 44.4	
HHC				PP	**PP**	**02 30 55.6**	**-0.9**
HHC				PKS	PKSdf	02 33 05.3	-4.4
HHC				SKS	SKSdf	02 36 37.3	-7.9
HHC				SKKS	SKKSac	02 37 46.9	-11
HHC	**Hu-ho-hao-te**	**120.14**	**3**	SS	SS	02 47 18.3	-4.2
HHC				AMB	AMB		
	comp=Z,74nm,7.3s						
HHC				LR	LR		
	comp=N,110nm,20.0s						
HHC				LR	LR		
	comp=E,120nm,19.2s						
HHC				LR	LR		
	comp=Z,100nm,19.7s						
LZH	**Lanzhou**	**123.91**	**11**	*e*PKP	PKPdf	02 29 35.0	-5.4
LZH				pPKP	**PKiKP**	**02 29 43.1**	**+2.5

ALN					*e*Sn	**Sn**	**02 52 40.5**	**-0.3**
ALN					S	**Sb**	**02 52 41.9**	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.67**	**31**	*e*Pn	**Pn**	**02 52 20.6**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.67**	**31**	*e*Pn	**Pn**	**02 52 20.6**	**+0.3**
SART	**Tekirdag**	**1.67**	**31**	*i* P	**Pb**	**02 52 22.1**	**+0.1**
SART				*i* S	**Sg**	**02 52 44.8**	**-0.4**
SART	**Tekirdag**	**1.67**	**31**	*i* P	**Pb**	**02 52 22.1**	**+0.1**
SART				*i* S	**Sg**	**02 52 44.8**	**-0.4**
BNT	**Bandirma**	**1.81**	**52**	*e*PN	**Pn**	**02 52 22.5**	**+0.4**
BNT	**Bandirma**	**1.81**	**52**	*e*Pn	**Pn**	**02 52 22.5**	**+0.4**
DURS	**Dursunbey**	**1.90**	**79**	*i* P	**Pn**	**02 52 23.7**	**+0.2**
DURS				*i* S	**Sn**	**02 52 45.4**	**-1.9**
DURS	**Dursunbey**	**1.90**	**79**	*i* P	**Pn**	**02 52 23.7**	**+0.2**
DURS				*i* S	**Sn**	**02 52 45.4**	**-1.9**
KCTX	**Karacabey (Bur**	**2.04**	**60**	*e*PN	**Pn**	**02 52 26.1**	**+0.8**
KCTX	**Karacabey (Bur**	**2.04**	**60**	*e*Pn	**Pn**	**02 52 26.1**	**+0.8**
KULA	**Kula-Manisa**	**2.16**	**109**	*e*PN	**Pn**	**02 52 27.9**	**+0.9**
KULA	**Kula-Manisa**	**2.16**	**109**	*e*Pn	**Pn**	**02 52 27.9**	**+0.9**
ARMT	**Armutlu**	**2.52**	**58**	*e*PN	**Pn**	**02 52 33.2**	**+1.2**
ARMT	**Armutlu**	**2.52**	**58**	*e*Pn	**Pn**	**02 52 33.2**	**+1.2**
EDRB	**Edirne**	**2.64**	**11**	*e*PN	**Pn**	**02 52 34.4**	**+0.8**
EDRB	**Edirne**	**2.64**	**11**	*e*Pn	**Pn**	**02 52 34.4**	**+0.8**
TVSB	**Tavsanli**	**2.65**	**85**	*e*PN	**Pn**	**02 52 34.7**	**+1.0**
TVSB	**Tavsanli**	**2.65**	**85**	*e*Pn	**Pn**	**02 52 34.7**	**+1.0**
CTKS	**Kestanelik-??a**	**2.73**	**43**	*e*PN	**Pn**	**02 52 35.8**	**+1.1**
CTKS	**Kestanelik-??a**	**2.73**	**43**	*e*Pn	**Pn**	**02 52 35.8**	**+1.1**

NEIC ***22*** *02:57:55.5, 19.˙10N×64.˙19W, h24km, MD3.5(RSPR), After RSPR.*

RSPR 22 02:57:55.5, 19.˙10N×64.˙19W, h24km±28km**, 8D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.79**	**211**	‖ *e*P	Pb	02 58 09.1	-1.4
TBVI	**Tortola**	**0.79**	**211**	‖ *e*P	Pb	02 58 09.1	-1.4
STVI	**Saint Thomas**	**1.04**	**224**	‖ *e*P	Pn	02 58 11.9	-2.6
STVI	**Saint Thomas**	**1.04**	**224**	*e*S	Sb	02 58 25.0	-3.0
STVI	**Saint Thomas**	**1.04**	**224**	*e*Pg	Pn	02 58 11.7	-2.8
STVI				*e*S	Sb	02 58 25.2	-2.8
MTP	**Monte Pirata**	**1.63**	**233**	‖ *e*P	Pn	02 58 20.3	-2.4
MTP	**Monte Pirata**	**1.63**	**233**	*e*Pn	Pn	02 58 20.2	-2.5
MTP				*e*S	Sn	02 58 41.3	-1.6
HUMP	**Col San Antoni**	**1.84**	**239**	‖ *e*P	Pn	02 58 23.2	-2.4
HUMP	**Col San Antoni**	**1.84**	**239**	*e*S	Sn	02 58 45.7	-2.4
HUMP	**Col San Antoni**	**1.84**	**239**	‖ *e*P	Pn	02 58 23.2	-2.4
HUMP				*e*S	Sn	02 58 45.7	-2.4
CPD	**Cerro la Pandu**	**1.95**	**237**	‖ *e*P	Pn	02 58 25.4	-1.7
CPD	**Cerro la Pandu**	**1.95**	**237**	‖ *e*P	Pn	02 58 25.4	-1.7

NEIC ***22*** *03:07:28.9, 19.˙04N×64.˙28W, h62km, MD3.2(RSPR), After RSPR.*

RSPR 22 03:07:28.9, 19.˙04N×64.˙28W, h62km±1km**, MD3.2**/3**, 4C-8D, Virgin Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.31**	**188**	‖ *e*P	Pn	03 07 38.7	-0.6
ABV	**Anegada**	**0.31**	**188**	*e*S	Sn	03 07 46.4	-0.4
ABVI	**Anegada Island**	**0.31**	**189**	‖ *e*P	Pn	03 07 38.7	-0.6
ABVI				*e*S	Sn	03 07 46.4	-0.4
TBVI	**Tortola**	**0.69**	**207**	‖ *e*P	Pn	03 07 42.6	-0.6
TBVI	**Tortola**	**0.69**	**207**	‖ *e*P	Pn	03 07 42.6	-0.6
TBVI				*e*S	Sn	03 07 53.3	-0.3
STVI	**Saint Thomas**	**0.93**	**223**	‖ *e*P	Pn	03 07 45.4	-0.8
STVI	**Saint Thomas**	**0.93**	**223**	‖ *e*P	Pn	03 07 45.4	-0.8
STVI	**Saint Thomas**	**0.93**	**223**	‖ *e*P	Pn	03 07 45.4	-0.8
STVI				*e*S	Sn	03 07 58.1	-0.8
MTP	**Monte Pirata**	**1.52**	**232**	‖ *e*P	Pn	03 07 53.3	-0.7
MTP	**Monte Pirata**	**1.52**	**232**	*e*S	Sn	03 08 12.3	-0.6
MTP	**Monte Pirata**	**1.52**	**232**	‖ *e*P	Pn	03 07 53.5	-0.6
MTP	**Monte Pirata**	**1.52**	**232**	*e*S	Sn	03 08 12.3	-0.6
MTP	**Monte Pirata**	**1.52**	**232**	*e*Pn	Pn	03 07 53.4	-0.6
MTP				*e*S	Sn	03 08 14.3	+1.4
HUMP	**Col San Antoni**	**1.73**	**239**	‖ *e*P	Pn	03 07 56.0	-0.8
HUMP	**Col San Antoni**	**1.73**	**239**	‖ *e*P	Pn	03 07 56.5	-0.3
HUMP	**Col San Antoni**	**1.73**	**239**	‖ *e*P	Pn	03 07 56.0	-0.8

DJA 22 03:08:27.7±1.1, 2˚S±5˚×12˚2E±˚, h70km±35km**, M3.6/6, MLv3.6/6, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TTSI	**Tana Toraja**	**1.84**	**251**	P	Pn	03 08 57.1	-0.1
LUWI	**Luwuk**	**1.85**	**41**	P	Pn	03 08 57.2	-0.2
LUWI				S	Sn	03 09 21.2	+1.3
SPSI	**Sidrap Palu**	**2.34**	**230**	P	Pn	03 09 04.9	+1.0
MRSI	**Marisa**	**2.93**	**7**	P	Pn	03 09 12.5	+0.5
MRSI				S	Sn	03 09 47.5	+1.4
KAPI	**Kappang**	**3.12**	**215**	P	Pn	03 09 14.0	-0.6
BKSI	**Bulukumba**	**3.19**	**207**	P	Pn	03 09 15.6	0.0

MEX 22 03:13:26.3±0.4, 16˚58N×99˚89W, h17km±8km**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.59**	**322**	*i* P	Pg	03 13 36.1	-2.0
CAIG				*i* S	Sg	03 13 43.4	-2.5
MEIG	**Mezcala**	**1.36**	**11**	*i* P	Pn	03 13 47.5	-3.3
MEIG				*i* S	Sn	03 14 03.3	-5.2
PNIG	**Pinotepa**	**1.70**	**96**	*e*P	Pn	03 13 51.5	-3.7
PNIG				*i* S	Sn	03 14 12.3	-4.3
ARIG	**Puente Sto Nin**	**1.75**	**346**	*i* P	Pn	03 13 53.1	-2.8
ARIG				*i* S	Sn	03 13 3	-4.5
YAIG	**Yautepec**	**2.40**	**19**	*i* P	Pn	03 14 02.2	-2.9
YAIG				*i* S	Sn	03 14 30.5	-3.8

NIED ***22*** *03:17:00, 27.˙80N×142.˙90E, h8km, Mw4.2 Best double couple: M0 2.38000×10^15 NP1:φs339.00000°, δ67.00000°, λ74.00000°. NP2:φs196.00000°, δ28.00000°, λ124.00000°.*
IDC ***22*** *03:17:42.9±0.6, 27.˙60N×142.˙65E, h0km, mb4.0/17, mb1 4.2/21, mb1mx4.2/28, mbtmp4.0/21, ML3.5/4, MS3.4/11, Ms1 3.4/11, ms1mx3.2/44, Error ellipse: s-maj=21.3km s-min=15.4km az=80.0*
NEIC ***22*** *03:17:43.7±3.7, 27.˙57N×142.˙67E, h6km±22km, mb4.6/6, MW4.2(NIED), Error ellipse: s-maj=11.2km s-min=7.5km az=83.0*
JMA ***22*** *03:17:44.3±0.1, 27.˙78N×142.˙89E, h36km, M4.1*
ISCJB ***22*** *03:17:46.5±0.4, 27.˙80N±0.˙03×142.˙62E±0.˙08, h30km, mb4.3/35, MS3.5/10, Error ellipse: s-maj=9.9km s-min=3.8km az=179.1*
MOS ***22*** *03:17:46.4±1.1, 27.˙55N×142.˙51E, h33km, mb4.9/14, Error ellipse: s-maj=17.2km s-min=7.1km az=111.9*

ISC 22 03:17:47.9±0.5, 27.˙69N±0.˙05×142.˙66E±0.˙10, h30km**, n94,** σ1**§42**/100**, mb4.4**/35**, MS3.6**/10**, 5C-3D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**0.73**	**215**	P	**Pn**	**03 18 01.1**	**-1.0**
CBIJ				*e*S	**Sn**	**03 18 13.3**	**+1.0**
JHHJ	**Haha-jima-NKT**	**1.14**	**202**	P	**Pn**	**03 18 06.8**	**-1.0**
JHHJ				*e*S	**Sn**	**03 18 22.8**	**+0.3**
JHCJ	**Hachijojimakas**	**5.90**	**336**	*e*S	**Sn**	**03 20 18.4**	**-1.5**
JHJ	**Hachijo jima 2**	**5.95**	**336**	Pn	**Pn**	**03 19 13.3**	**-0.6**
	2.9nm,0.3s,baz=69,slow=20,SNR=2.6						
JHJ				Sn	**Sn**	**03 20 16.0**	**-5.1**
	2.8nm,0.3s,baz=252,slow=23,SNR=3.5						
JKO	**Kozu shima**	**7.14**	**336**	*e*S	**Sn**	**03 20 55.3**	**+4.9**
JOD2	**Odawara 2**	**8.14**	**339**	P	**Pn**	**03 19 42.9**	**-1.1**
JOD2				*e*S	**Sn**	**03 21 15.6**	**+0.7**
JRY	**Ryogami san**	**8.89**	**340**	P	**Pn**	**03 19 53.2**	**-1.1**
JRY				*e*S	**Sn**	**03 21 34.0**	**+0.5**
MJAR	**Matsushiro Arr**	**9.59**	**338**	Pn	**Pn**	**03 20 03.5**	**-0.4**
MJAR				Sn	**Sn**	**03 21 49.4**	**-1.3**
MJAR	**Matsushiro Arr**	**9.59**	**338**	Pn	**Pn**	**03 20 03.5**	**-0.4**
	0.8nm,0.3s,baz=156,slow=12,SNR=9.1						
MJAR				Sn	**Sn**	**03 21 49.4**	**-1.3**
	0.3nm,0.3s,baz=84,slow=22,SNR=3.0						
MJAR				LR	LR	03 23 32.6	
	comp=Z,109nm,18.3s,baz=150,slow=36						
MAJO	**Matsushiro**	**9.59**	**338**	*e*P	**Pn**	**03 20 04.4**	**+0.4**
MAJO				*e*S	**Sn**	**03 21 55.0**	**+4.3**
MAJO	**Matsushiro**	**9.59**	**338**	*e*Pn	**Pn**	**03 20 04.4**	**+0.4**
MAJO				*e*S	**Sn**	**03 21 55.0**	**+4.3**
MAT	**Matsushiro**	**9.59**	**338**	P	**Pn**	**03 20 03.8**	**-0.2**
MAT				S	**Sn**	**03 21 50.2**	**-0.5**
JMK	**Ichinoseki**	**11.29**	**354**	*e*S	Sn	03 22 24.9	-7.4
JNU	**Nakatsue**	**11.51**	**301**	LR	LR	03 24 47.2	
	comp=Z,151nm,18.2s,baz=14,slow=37						
ERM	**Erimo**	**14.29**	**2‖**	*e*P	P	03 21 11.4	-3.6
KSRS	**Korea Array**	**15.76**	**312**	Pn	**Pn**	**03 21 27.9**	**+0.2**
	0.3nm,0.3s,baz=123,slow=13,SNR=7.2						
KSRS				LR	LR	03 27 28.9	
	comp=Z,144nm,18.2s,baz=154,slow=37						
KSAR	**Wonju Array Be**	**15.78**	**312**	Pn	**Pn**	**03 21 27.9**	**0.0**
YUK	**Yuzh-Kuril'sk**	**16.51**	**8***d*	*i* P	**P**	**03 21 39.9**	**+0.3**
YUK				*i* S	**Sn**	**03 24 34.3**	**-5.2**
YUK				pmax	pmax		
	comp=N,17nm,0.3s						
YUK				pmax	pmax		
	comp=Z,32nm,0.3s						
YUK				pmax	pmax		
	comp=E,9.0nm,0.1s						
YUK				smax	smax		
	comp=E,54nm,2.0s						
YUK				smax	smax		
	comp=N,216nm,2.0s						
USRK	**Ussuriysk Arra**	**18.57**	**335**	P	**P**	**03 22 01.1**	**-1.2**
	comp=N,0.5nm,0.3s,baz=146,slow=11,SNR=7.5						
USRK				LR	LR	03 29 30.1	
	comp=N,79nm,18.8s,baz=218,slow=38						
MDJ	**Mudanjiang**	**19.87**	**332**	*e*P	**Pn**	**03 22 17.8**	**-0.4**
	comp=N,14nm,1.0s						
HABR	**Khabarovsk**	**21.57**	**346**	*e*P	**P**	**03 22 32.8**	**-2.1**
HABR				**e*P	sP	03 23 05.2	+18
HABR				S	S	03 26 19.8	-12
HABR				*e*		03 33 48.5	
HABR				pmax	pmax		
	comp=Z,30nm,1.2s						
HABR				pmax	pmax		
	comp=N,22nm,2.2s						
HABR				pmax	pmax		
	comp=E,29nm,1.2s						
HABR				MLR	MLR		
	comp=Z,124nm,20.0s						
SONM	**Songino Array**	**34.58**	**315**	P	**P**	**03 24 33.6**	**-0.4**
SONM	**Songino Array**	**34.58**	**315**	P	**P**	**03 24 33.6**	**-0.4**
	comp=Z,0.5nm,0.3s,baz=123,slow=8.6,SNR=7.1						
ZAK	**Zakamensk**	**37.44**	**318**	*e*P	**P**	**03 24 59.5**	**+1.0**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TLY	**Talaya**	**37.74**	**320**	*e*P	**P**	**03 25 03.4**	**+2.4**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,114nm,16.0s						
CMAR	**Chiang Mai Arr**	**41.07**	**267**	LR	LR	03 42 12.3	
	comp=Z,18nm,19.0s,baz=100,slow=36						
BILL	**Bilibino**	**42.78**	**13**	P	**P**	**03 25 45.0**	**+2.6**
BILL				*e*		03 25 57.6	
TIXI	**Tiksi**	**44.66**	**354**	‖ *e*P	**P**	**03 25 58.1**	**+0.7**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRAB	**Tennant Creek**	**48.02**	**191**	*e*P	**P**	**03 26 22.9**	**-1.5**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WRAB	**Tennant Creek**	**48.02**	**191**	*e*P	**P**	**03 26 22.9**	**-1.5**
	comp=Z,5.6nm,0.6s						
WRA	**Warramunga Arr**	**48.03**	**191**	P	**P**	**03 26 23.0**	**-1.5**
WRA	**Warramunga Ar**	**48.03**	**191**	P	**P**	**03 26 23.0**	**-1.5**
	comp=Z,2.1nm,0.5s,baz=12,slow=8.6,SNR=40						
FITZ	**Fitzroy Crossi**	**48.42**	**202**	P	**P**	**03 26 26.3**	**-1.2**
FITZ	**Fitzroy Crossi**	**48.42**	**202**	P	**P**	**03 26 26.3**	**-1.2**
	comp=Z,3.6nm,0.9s,baz=14,slow=8.9,SNR=4.8						
ZAA0	**Zalesovo Array**	**49.31**	**319**	*e*P	**P**	**03 26 34.4**	**+0.4**
ZALV	**Zalesovo Beam**	**49.31**	**319**	P	**P**	**03 26 34.4**	**+0.4**
ZALV	**Zalesovo Beam**	**49.31**	**319**	P	**P**	**03 26 34.4**	**+0.4**
ZALV	**Zalesovo Beam**	**49.31**	**319**	P	**P**	**03 26 34.4**	**+0.4**
	comp=Z,9.4nm,1.1s,baz=101,slow=6.4,SNR=7.5						
NVS	**Novosibirsk**	**50.35**	**320**	*e*P	**P**	**03 26 42.2**	**+0.3**
NVS				pmax	pmax		
	comp=Z,17nm,1.4s						
NVS				pmax	pmax		
	comp=E,11nm,1.2s						
MK31	**Makanchi Array**	**50.42**	**309**	*ce*P	**P**	**03 26 42.2**	**-0.4**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MK31	**Makanchi Array**	**50.42**	**309**	*e*P	**P**	**03 26 42.5**	**-0.1**
MKAR	**Makanchi Array**	**50.42**	**309**	*e*P	**P**	**03 26 42.8**	**+0.2**
MKAR						03 28 00.4	
MKAR	**Makanchi Array**	**50.42**	**309**	*e*P	**P**	**03 26 42.8**	**+0.2**
MKAR				PcP	**PcP**	**03 28 00.4**	**-0.3**
MKAR	**Makanchi Array**	**50.42**	**309**	P	**P**	**03 26 42.5**	**-0.1**
	comp=Z,0.6nm,0.3s,baz=89,slow=9.3,SNR=22						
MKAR				PcP	**PcP**	**03 28 00.4**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=86,slow=4.6,SNR=3.6						
MKAR				LR	LR	03 48 50.6	
	comp=Z,48nm,18.6s,baz=173,slow=37						
ASAR	**Alice Springs**	**51.76**	**190**	P	**P**	**03 26 51.0**	**-1.8**
ASAR	**Alice Springs**	**51.76**	**190**	P	**P**	**03 26 51.0**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=4.7,slow=5.7,SNR=6.1						
KURK	**Kurchatov**	**52.87**	**314**	*e*P	**P**	**03 27 00.9**	**+0.2**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KURK	**Kurchatov**	**52.87**	**314**	*e*P	**P**	**03 27 00.9**	**+0.2**
	comp=Z,5.5nm,0.9s						
ILAR	**Eielson Array**	**56.99**	**29**	P	**P**	**03 27 30.1**	**-0.3**
ILAR	**Eielson Array**	**56.99**	**29**	P	**P**	**03 27 30.1**	**-0.3**
	comp=Z,0.7nm,0.9s,baz=270,slow=7.7,SNR=6.3						
VOSK	**Vostochnaya**	**57.55**	**317**	P	**P**	**03 27 35.1**	**+0.5**
VOSK				pmax	pmax		
	comp=Z,13nm,1.0s						
BVA0	**Borovoye Array**	**57.89**	**317**	*i* P	**P**	**03 27 37.7**	**+0.8**
BVA0				pmax	pmax		
	comp=Z,11nm,0.8s						
BRVK	**Borovoye**	**57.95**	**317**	*c i* P	**P**	**03 27 38.2**	**+0.9**
BRVK				pmax	pmax		
	comp=Z,15nm,0.8s						
BRVK	**Borovoye**	**57.95**	**317**	*e*P	**P**	**03 27 37.7**	**+0.4**
	comp=Z,13nm,0.9s						
ZRNK	**Zerenda**	**58.73**	**317**	*i* P	**P**	**03 27 43.4**	**+0.6**
ZRNK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KK31	**Karatay Array**	**59.08**	**306**	*ce*P	**P**	**03 27 45.1**	**-0.3**
KK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KKAR	**Karatay Array**	**59.08**	**306**	*e*P	**P**	**03 27 45.5**	**+0.1**
KKAR	**Karatay Array**	**59.08**	**306**	*e*P	**P**	**03 27 45.5**	**+0.1**
ARU	**Arti**	**64.21**	**322**	*d i* P	**P**	**03 28 19.9**	**+0.2**
ARU				S	S	03 36 44.9	-10
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AB31	**Akbulak array**	**64.98**	**314**	*ce*P	**P**	**03 28 25.4**	**+0.5**
AB31				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ABKAR	**Akbulak array**	**64.98**	**314**	*e*P	**P**	**03 28 25.6**	**+0.7**
	comp=Z,4.9nm,0.5s						
AKTO	**Aktyubinsk**	**65.90**	**316**	LR	LR	03 58 33.1	
	comp=Z,44nm,19.3s,baz=306,slow=37						
YKA	**Yellowknife Ar**	**71.42**	**29**	P	**P**	**03 29 05.0**	**0.0**
YKA	**Yellowknife Ar**	**71.42**	**29**	P	**P**	**03 29 04.9**	**0.0**
	comp=Z,1.0nm,0.8s,baz=296,slow=6.2,SNR=6.2						
ARCES	**ARCESS Array B**	**73.11**	**341**	LR	LR	04 05 15.6	
	comp=Z,14nm,19.4s,baz=204,slow=39						
VSR	**Storozhevoye**	**76.74**	**321**	*e*P	**P**	**03 29 36.8**	**+0.5**
VSR				pmax	pmax		
	comp=N,7.0nm,0.9s						
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR				pmax	pmax		
	comp=E,2.0nm,0.5s						
FINES	**FINESS Array B**	**77.60**	**334**	P	**P**	**03 29 40.7**	**-0.1**
FINES	**FINESS Array B**	**77.60**	**334**	P	**P**	**03 29 40.7**	**-0.1**
	comp=E,0.7nm,0.3s,baz=76,slow=5.9,SNR=7.1						
KBZ	**Khabaz**	**77.91**	**313**	P	**P**	**03 29 44.1**	**+1.2**
KBZ	**Khabaz**	**77.91**	**313**	P	**P**	**03 29 44.1**	**+1.2**
KBZ	**Khabaz**	**77.91**	**313**	P	**P**	**03 29 44.1**	**+1.2**
	comp=E,6.6nm,0.8s,baz=153,slow=0.5,SNR=13						
KIV	**Kislovodsk**	**77.94**	**313**	*e*P	**P**	**03 29 46.1**	**+2.8**
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KIV				MLR	MLR		
	comp=Z,36nm,18.0s						
GNI	**Garni**	**78.27**	**309**	LR	LR	04 07 13.8	
	comp=Z,27nm,18.4s,baz=273,slow=38						
NVAR	**Mina Array Bea**	**79.82**	**52**	P	**P**	**03 29 54.1**	**+0.2**
NVAR	**Mina Array Bea**	**79.82**	**52**	P	**P**	**03 29 54.1**	**+0.2**
	comp=Z,0.8nm,0.6s,baz=294,slow=6.8,SNR=3.6						
AKASG	**Malin Array Be**	**82.38**	**324**	P	**P**	**03 30 08.0**	**+1.1**
AKASG	**Malin Array Be**	**82.38**	**324**	P	**P**	**03 30 08.0**	**+1.1**
AKASG	**Malin Array Be**	**82.38**	**324**	P	**P**	**03 30 08.0**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=54,slow=5.2,SNR=3.1						
NB2	**NORSAR Subarra**	**83.21**	**338**	P	**P**	**03 30 10.5**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=38,slow=5.3						
NOA	**NORSAR Array B**	**83.21**	**338**	P	**P**	**03 30 10.7**	**-0.5**
NOA	**NORSAR Array B**	**83.21**	**338**	P	**P**	**03 30 10.7**	**-0.5**
	comp=Z,1.0nm,0.9s,baz=39,slow=5.0,SNR=5.7						
PDAR	**Pinedale Array**	**83.49**	**45**	P	**P**	**03 30 12.9**	**-0.3**
PDAR	**Pinedale Array**	**83.49**	**45**	P	**P**	**03 30 12.9**	**-0.3**
	comp=Z,0.3nm,0.4s,baz=313,slow=4.5,SNR=3.1						
BR131	**Keskin Array S**	**85.90**	**313**	*e*P	**P**	**03 30 26.5**	**+1.2**
	comp=Z,1.0nm,0.7s						
BRTR	**Keskin Array B**	**85.90**	**313**	P	**P**	**03 30 24.9**	**-0.3**
BRTR	**Keskin Array B**	**85.90**	**313**	P	**P**	**03 30 24.9**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=87,slow=4.1,SNR=11						
BRTR				LR	LR	04 09 41.9	
	comp=Z,18nm,18.2s,baz=218,slow=36						
GERES	**GERESS Array B**	**91.22**	**329**	P	**P**	**03 30 49.1**	**-1.2**
GERES	**GERESS Array B**	**91.22**	**329**	P	**P**	**03 30 49.1**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=20,slow=3.1,SNR=4.1						
GERES				LR	LR	04 16 13.9	
	comp=Z,45nm,19.1s,baz=267,slow=38						
TXAR	**Lajitas Array**	**94.91**	**53**	P	**P**	**03 31 08.5**	**+0.8**
TXAR	**Lajitas Array**	**94.91**	**53**	P	**P**	**03 31 08.5**	**+0.8**
	comp=Z,0.4nm,0.8s,baz=304,slow=5.3,SNR=5.8						
TORD	**Torodi Ar. Bea**	**124.50**	**312**	PKP	**PKPdf**	**03 36 44.3**	**-0.7**
TORD	**Torodi Ar. Bea**	**124.50**	**312**	PKP	**PKPdf**	**03 36 44.3**	**-0.7**
	comp=Z,0.5nm,0.9s,baz=27,slow=1.6,SNR=3.4						
LPAZ	**La Paz**	**149.37**	**75**	PKPbc	**PKPbc**	**03 37 36.5**	**+1.1**
LPAZ	**La Paz**	**149.37**	**75**	PKPbc	**PKPbc**	**03 37 36.5**	**+1.1**
	comp=Z,1.7nm,0.9s,baz=251,slow=2.6,SNR=5.6						

IDC ***22*** *03:24:19.9±0.6, 4.˙94N×126.˙71E, h0km, mb4.1/13, mb1 4.2/13, mb1mx4.0/24, mbtmp4.1/13, MS3.4/6, Ms1 3.4/6, ms1mx2.9/41, Error ellipse: s-maj=43.5km s-min=13.9km az=80.0*
ISCJB ***22*** *03:24:27.2±0.5, 4.˙90N±0.˙08×126.˙5E±0.˙2, h71km, mb4.0/15, Error ellipse: s-maj=25.2km s-min=9.0km az=164.1*
NEIC ***22*** *03:24:28.9±4.1, 4.˙90N×126.˙69E, h70km±39km, mb4.3/2, Error ellipse: s-maj=27.7km s-min=9.7km az=79.0*

ISC 22 03:24:28.8±0.6, 4.˙87N±0.˙09×126.˙5E±0.˙2, h71km**, n36,** σ0§95/31**, mb4.1**/15**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.36**	**338**	LR	LR	03 26 08.3	
	comp=Z,274nm,20.6s,baz=198,slow=45						
CTBH	**Cotabato--PC H**	**3.22**	**317**	‖ *i* P	**Pn**	**03 25 15.3**	**-1.7**
FITZ	**Fitzroy Crossi**	**22.84**	**182**	P	**P**	**03 29 26.3**	**0.0**
FITZ	**Fitzroy Crossi**	**22.84**	**182**	P	**P**	**03 29 26.3**	**0.0**
	2.1nm,0.7s,baz=15,slow=11,SNR=3.9						
WRAB	**Tennant Creek**	**25.84**	**163**	*e*P	**P**	**03 29 53.7**	**-0.1**
	10nm,1.2s						
WRA	**Warramunga Arr**	**25.84**	**163**	P	**P**	**03 29 54.1**	**+0.2**
WRA	**Warramunga Ar**	**25.84**	**163**	P	**P**	**03 29 54.1**	**+0.2**
	2.6nm,0.5s,baz=344,slow=10,SNR=19						
ASAR	**Alice Springs**	**29.28**	**166**	P	**P**	**03 30 23.6**	**-1.0**
ASAR	**Alice Springs**	**29.28**	**166**	P	**P**	**03 30 23.6**	**-1.0**
	0.8nm,0.6s,baz=352,slow=7.2,SNR=9.3						
KSAR	**Wonju Array Be**	**32.44**	**2**	P	**P**	**03 30 52.8**	**+0.5**
KSRS	**Korea Array**	**32.45**	**2**	P	**P**	**03 30 52.7**	**+0.4**
	0.4nm,0.3s,baz=174,slow=8.7,SNR=5.5						
MJAR	**Matsushiro Arr**	**33.31**	**17**	LR	LR	03 41 45.8	
	comp=Z,73nm,19.9s,baz=215,slow=32						
STKA	**Stephens Creek**	**39.28**	**159**	P	**P**	**03 31 50.2**	**-0.6**
STKA	**Stephens Creek**	**39.28**	**159**	P	**P**	**03 31 50.2**	**-0.6**
	2.7nm,0.5s,baz=325,slow=8.6,SNR=7.6						
ASAJ	**Asahikawa**	**41.58**	**18**	LR	LR	03 50 46.7	
	comp=Z,29nm,18.6s,baz=312,slow=38						
SONM	**Songino Array**	**46.14**	**341**	P	**P**	**03 32 48.1**	**+1.8**
SONM	**Songino Array**	**46.14**	**341**	P	**P**	**03 32 48.1**	**+1.8**

n77,σ0.84/92, mb3.4/5, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VLS	**Valsamata**	**0.47**	**36**	P	**Pg**	**03 51 00.7**	**-0.3**
VLS				S	**Sg**	**03 51 07.4**	**+0.2**
VLS	**Valsamata**	**0.47**	**36**	*e*PB	**Pg**	**03 51 00.7**	**-0.3**
VLS				*e*SB	**Sg**	**03 51 07.4**	**+0.2**
VLS	**Valsamata**	**0.47**	**36**	P	**Pg**	**03 51 00.7**	**-0.3**
VLS				S	**Sg**	**03 51 07.4**	**+0.2**
KFL	**Anninata**	**0.53**	**54**	P	**Pg**	**03 51 01.6**	**-0.6**
KFL				S	**Sg**	**03 51 09.5**	**+0.3**
KFL	**Anninata**	**0.53**	**54**	P	**Pg**	**03 51 01.6**	**-0.6**
KFL				S	**Sg**	**03 51 09.5**	**+0.3**
AXS	**Araxos**	**0.98**	**66**	P	**Pg**	**03 51 09.8**	**-0.9**
AXS				S	**Sb**	**03 51 23.9**	**+0.2**
AXS	**Araxos**	**0.98**	**66**	P	**Pg**	**03 51 09.8**	**-0.9**
AXS				S	**Sb**	**03 51 23.9**	**+0.2**
RLS	**Riolos of Patr**	**1.00**	**75**	P	**Pg**	**03 51 10.4**	**-0.7**
RLS				S	**Sb**	**03 51 24.5**	**+0.2**
RLS	**Riolos of Patr**	**1.00**	**75**	*e*PB	**Pg**	**03 51 10.2**	**-0.9**
RLS	**Riolos of Patr**	**1.00**	**75**	*e*Pb	**Pg**	**03 51 10.2**	**-0.9**
RLS	**Riolos of Patr**	**1.00**	**75**	P	**Pg**	**03 51 10.9**	**-0.2**
RLS				S	**Sb**	**03 51 24.5**	**+0.2**
LKD2	**Lefkada island**	**1.04**	**18**	P	**Pg**	**03 51 11.6**	**-0.2**
LKD2				S	**Sn**	**03 51 27.1**	**+0.3**
LKD2	**Lefkada island**	**1.04**	**18**	P	**Pg**	**03 51 11.6**	**-0.2**
LKD2				S	**Sn**	**03 51 27.1**	**+0.3**
AMT	**Artemida-Makis**	**1.20**	**103**	P	**Pg**	**03 51 14.0**	**-0.8**
AMT				S	**Sn**	**03 51 31.2**	**+0.5**
AMT	**Artemida-Makis**	**1.20**	**103**	*e*PB	**Pg**	**03 51 14.0**	**-0.8**
AMT	**Artemida-Makis**	**1.20**	**103**	P	**Pg**	**03 51 14.0**	**-0.8**
AMT				S	**Sb**	**03 51 30.6**	**+0.7**
LAKA	**Lakka**	**1.44**	**72**	P	**Pn**	**03 51 18.2**	**+0.4**
LAKA	**Lakka**	**1.44**	**72**	*e*PB	**Pn**	**03 51 18.3**	**+0.4**
LAKA	**Lakka**	**1.44**	**72**	*e*Pb	**Pn**	**03 51 18.3**	**+0.4**
EFP	**Efpalio**	**1.45**	**64**	P	**Pn**	**03 51 18.7**	**+0.7**
EFP	**Efpalio**	**1.45**	**64**	*e*PB	**Pn**	**03 51 18.6**	**+0.6**
EFP	**Efpalio**	**1.45**	**64**	*e*Pb	**Pn**	**03 51 18.6**	**+0.6**
ITM	**Ithomi**	**1.48**	**114**	P	**Pn**	**03 51 18.9**	**+0.6**
ITM	**Ithomi**	**1.48**	**114**	*e*PG	**Pn**	**03 51 18.0**	**-0.3**
ITM	**Ithomi**	**1.48**	**114**	*e*Pg	**Pn**	**03 51 18.0**	**-0.3**
ITM	**Ithomi**	**1.48**	**114**	P	**Pn**	**03 51 18.9**	**+0.6**
PYL	**PYLOS**	**1.50**	**127**	P	**Pn**	**03 51 18.8**	**+0.2**
PYL	**PYLOS**	**1.50**	**127**	*e*PG	**Pn**	**03 51 18.8**	**+0.2**
PYL	**PYLOS**	**1.50**	**127**	P	**Pn**	**03 51 18.8**	**+0.2**
KLV	**Kalavryta, Ach**	**1.53**	**80**	*e*PB	**Pb**	**03 51 20.5**	**+0.3**
KLV	**Kalavryta, Ach**	**1.53**	**80**	P	**Pn**	**03 51 19.7**	**+0.6**
KLV	**Kalavryta, Ach**	**1.53**	**80**	*e*Pb	**Pb**	**03 51 20.5**	**+0.3**
KLV				S	**Sg**	**03 51 41.2**	**+0.2**
TRIZ	**Trizonia**	**1.55**	**68**	P	**Pn**	**03 51 19.9**	**+0.6**
TRIZ	**Trizonia**	**1.55**	**68**	*e*PG	**Pn**	**03 51 19.7**	**+0.4**
TRIZ	**Trizonia**	**1.55**	**68**	*e*Pg	**Pn**	**03 51 19.7**	**+0.4**
KALE	**Kalithea**	**1.61**	**68**	P	**Pn**	**03 51 20.9**	**+0.7**
KALE	**Kalithea**	**1.61**	**68**	*e*PG	**Pn**	**03 51 21.1**	**+0.9**
KALE	**Kalithea**	**1.61**	**68**	P	**Pn**	**03 51 20.8**	**+0.6**
KALE	**Kalithea**	**1.61**	**68**	*e*Pg	**Pn**	**03 51 21.1**	**+0.9**
EVR	**Evrytania**	**1.66**	**47**	*e*PG	**Pb**	**03 51 23.0**	**+0.6**
EVR	**Evrytania**	**1.66**	**47**	*e*Pg	**Pb**	**03 51 23.0**	**+0.6**
GUR	**Goura**	**1.67**	**85**	*e*PG	**Pn**	**03 51 22.3**	**+1.3**
GUR	**Goura**	**1.67**	**85**	*e*Pg	**Pn**	**03 51 22.3**	**+1.3**
VLX	**Vlachokerasia**	**1.75**	**104**	*e*PN	**Pn**	**03 51 23.2**	**+1.0**
VLX	**Vlachokerasia**	**1.75**	**104**	*e*Pn	**Pn**	**03 51 23.2**	**+1.0**
DSF	**Desfina**	**1.90**	**71**	P	**Pn**	**03 51 25.2**	**+1.0**
DSF	**Desfina**	**1.90**	**71**	P	**Pn**	**03 51 25.2**	**+1.0**
KEK	**Kerkira**	**1.94**	**350**	*e*PN	**Pn**	**03 51 25.0**	**+0.3**
KEK	**Kerkira**	**1.94**	**350**	*e*Pn	**Pn**	**03 51 25.0**	**+0.3**
DYR	**Agios Nikonas**	**1.96**	**121**	*e*PN	**Pn**	**03 51 26.4**	**+1.4**
DYR	**Agios Nikonas**	**1.96**	**121**	*e*Pn	**Pn**	**03 51 26.4**	**+1.4**
AGG	**Agios Georgios**	**2.04**	**53**	P	**Pn**	**03 51 27.5**	**+1.4**
AGG	**Agios Georgios**	**2.04**	**53**	P	**Pn**	**03 51 27.5**	**+1.4**
LTK	**Loutraki**	**2.17**	**83**	P	**Pn**	**03 51 28.2**	**+0.4**
LTK				S	**Sb**	**03 51 57.4**	**-0.5**
LTK	**Loutraki**	**2.17**	**83**	*e*PB	**Pn**	**03 51 28.2**	**+0.4**
LTK	**Loutraki**	**2.17**	**83**	P	**Pn**	**03 51 28.2**	**+0.4**
LTK				S	**Sb**	**03 51 57.4**	**-0.5**
THL	**Klokotos Trika**	**2.24**	**38**	*e*PN	**Pn**	**03 51 30.5**	**+1.7**
THL	**Klokotos Trika**	**2.24**	**38**	*e*Pn	**Pn**	**03 51 30.5**	**+1.7**
LKR	**Lokris**	**2.33**	**68**	*e*PB	**Pn**	**03 51 30.6**	**+0.6**
LKR	**Lokris**	**2.33**	**68**	*e*Pb	**Pn**	**03 51 30.6**	**+0.6**
DID	**Didima**	**2.40**	**96**	*e*PB	**Pn**	**03 51 31.1**	**+0.1**
DID	**Didima**	**2.40**	**96**	*e*Pb	**Pn**	**03 51 31.1**	**+0.1**
VLI	**Veliai**	**2.41**	**116**	*e*PB	**Pn**	**03 51 32.0**	**+0.9**
VLI	**Veliai**	**2.41**	**116**	*e*Pb	**Pn**	**03 51 32.0**	**+0.9**
NAIG	**Nisos Aigina**	**2.57**	**90**	*e*PN	**Pn**	**03 51 33.2**	**-0.2**
NAIG	**Nisos Aigina**	**2.57**	**90**	*e*Pn	**Pn**	**03 51 33.2**	**-0.2**
KYTH	**Kithira**	**2.70**	**123**	*e*PB	**Pn**	**03 51 37.0**	**+1.8**
KYTH	**Kithira**	**2.70**	**123**	*e*Pb	**Pn**	**03 51 37.0**	**+1.8**
NEO	**Neokhori**	**2.78**	**56**	*e*PN	**Pn**	**03 51 36.5**	**+0.3**
NEO	**Neokhori**	**2.78**	**56**	*e*Pn	**Pn**	**03 51 36.5**	**+0.3**
ANKY	**Antikythira Is**	**3.12**	**127**	*e*PB	**Pn**	**03 51 43.3**	**+2.4**
ANKY	**Antikythira Is**	**3.12**	**127**	*e*Pb	**Pn**	**03 51 43.3**	**+2.4**
HFS	**Hagfors**	**22.74**	**352**	P	**P**	**03 55 52.6**	**-1.0**
	0.8nm,0.7s,baz=149,slow=12,SNR=8.0						
NOA	**NORSAR Array B**	**23.94**	**349**	P	**P**	**03 56 05.1**	**-0.6**
	0.2nm,0.6s,baz=151,slow=9.7,SNR=3.0						
FINES	**FINESS Array B**	**23.95**	**7**	P	**P**	**03 56 04.6**	**-1.0**
	0.5nm,0.5s,baz=168,slow=10.0,SNR=4.2						
ARCES	**ARCESS Array B**	**31.92**		P	**P**	**03 57 15.7**	**-1.3**
	3.3nm,1.0s,baz=184,slow=11,SNR=7.4						
MKAR	**Makanchi Array**	**45.69**	**58**	P	P	03 59 10.0	-2.5
	0.2nm,0.4s,baz=280,slow=7.6,SNR=3.3						

IDC 22 04:06:05.3±5.5, 4.45S×153.55E, h110km±45km, mb3.7/8, mb1 4.0/9, mb1mx3.7/21, mbtmp3.8/9, Error ellipse: s-maj=38.7km s-min=23.4km az=94.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.03**	**232**	P	Pn	04 07 59.6	+0.3
	6.7nm,0.3s,baz=46,slow=9.6,SNR=14						
PMG				S	Sn	04 09 29.3	+0.7
	3.8nm,0.3s,baz=131,slow=21,SNR=11						
WRA	**Warramunga Arr**	**24.24**	**229**	P	P	04 11 12.2	0.0
	9.4nm,0.6s,baz=54,slow=10.0,SNR=155						
ASAR	**Alice Springs**	**26.92**	**223**	P	P	04 11 36.4	0.0
	0.8nm,0.4s,baz=53,slow=8.8,SNR=10						
STKA	**Stephens Creek**	**29.50**	**201**	P	P	04 11 59.0	-0.3
	5.0nm,0.8s,baz=30,slow=7.8,SNR=12						
FITZ	**Fitzroy Crossi**	**30.49**	**241**	P	P	04 12 08.0	-0.1
	2.3nm,0.6s,baz=66,slow=8.6,SNR=10.0						
VNDA	**Vanda**	**73.15**	**178**	P	P	04 17 23.9	+0.4
	0.9nm,0.7s,baz=331,slow=6.3,SNR=9.5						
MKAR	**Makanchi Array**	**80.56**	**319**	P	P	04 18 06.1	+0.4
	0.3nm,0.5s,baz=94,slow=5.8,SNR=5.8						
ILAR	**Eielson Array**	**81.55**	**22**	P	P	04 18 10.2	-0.3
	0.5nm,0.8s,baz=252,slow=5.8,SNR=4.6						
BVAR	**Borovoye Array**	**89.41**	**323**	P	P	04 18 49.8	0.0
	1.1nm,0.8s,baz=104,slow=4.7,SNR=5.0						
TORD	**Torodi Ar. Bea**	**150.91**	**289**	PKPbc	PKPbc	04 25 45.8	-0.5
	1.7nm,0.8s,baz=78,slow=1.8,SNR=19						

IDC 22 04:18:52.6±4.5, 22.53S×148.05E, h0km, mb1 3.4/4, mb1mx3.3/15, mbtmp3.2/4, ML3.2/4, Error ellipse: s-maj=48.6km s-min=19.8km az=85.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**2.95**	**325**	Pn	Pn	04 19 41.0	+0.2
	3.1nm,0.3s,baz=121,slow=15,SNR=18						
CTA				Pg	Pb	04 19 46.5	+0.3
	3.6nm,0.3s,baz=139,slow=17,SNR=14						
CTA				Lg	Lg	04 20 25.8	
	7.0nm,0.3s,baz=54,slow=20,SNR=11						
STKA	**Stephens Creek**	**10.93**	**210**	Pn	Pn	04 21 30.4	0.0
	0.2nm,0.3s,baz=27,slow=12,SNR=3.3						
STKA				Lg	Lg	04 24 39.2	
	0.1nm,0.3s,baz=335,slow=14,SNR=2.6						
WRA	**Warramunga Arr**	**13.04**	**279**	Pn	Pn	04 21 59.3	-0.1
	0.1nm,0.3s,baz=101,slow=12,SNR=6.8						
WRA				Sn	Sn	04 24 26.7	+1.3
	0.1nm,0.3s,baz=328,slow=14,SNR=4.0						
WRA				Lg	Lg	04 25 48.8	
	0.1nm,0.3s,baz=108,slow=26,SNR=5.5						
ASAR	**Alice Springs**	**13.07**	**262**	Pn	Pn	04 22 00.0	+0.3
	0.1nm,0.3s,baz=89,slow=14,SNR=4.6						
ASAR				Lg	Lg	04 25 57.8	
	0.0nm,0.3s,baz=88,slow=29,SNR=6.4						

NEIC 22 04:48:09.6, 19.24N×64.28W, h25km, MD3.6(RSPR), After RSPR.

RSPR 22 04:48:09.6, 19.24N×64.28W, h25km±24km, MD3.6/12, 8C-15D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.88**	**201**	*i*P	Pb	04 48 24.2	-2.0
TBVI	**Tortola**	**0.88**	**201**	*i*P	Pb	04 48 24.2	-2.0
STVI	**Saint Thomas**	**1.09**	**216**	*i*P	Pn	04 48 26.8	-2.5
STVI	**Saint Thomas**	**1.09**	**216**	*e*S	Sn	04 48 40.1	-3.5
STVI	**Saint Thomas**	**1.09**	**216**	*i* Pu	Pn	04 48 26.8	-2.5
STVI				*e*S	Sn	04 48 40.1	-3.5
CDVI	**St. Croix**	**1.55**	**197**	*e*Pn	Pn	04 48 35.6	-0.1
CDVI				*e*S	Sb	04 48 58.6	+1.7
MTP	**Monte Pirata**	**1.66**	**227**	*i*P	Pn	04 48 34.8	-2.4
MTP	**Monte Pirata**	**1.66**	**227**	*e*S	Sn	04 48 55.1	-2.5
MTP	**Monte Pirata**	**1.66**	**227**	*e*Pn	Pn	04 48 35.0	-2.1
MTP				*e*S	Sn	04 48 56.1	-1.6
HUMP	**Col San Antoni**	**1.84**	**234**	*i*P	Pn	04 48 38.1	-1.7
HUMP	**Col San Antoni**	**1.84**	**234**	*i*P	Pn	04 48 37.3	-2.5
HUMP	**Col San Antoni**	**1.84**	**234**	*i*P	Pn	04 48 37.3	-2.5
HUMP				*e*S	Sn	04 48 59.7	-2.6
CPD	**Cerro la Pandu**	**1.96**	**233**	*i*P	Pn	04 48 39.5	-1.9
CPD	**Cerro la Pandu**	**1.96**	**233**	*i*P	Pn	04 48 39.5	-1.9
SJG	**San Juan**	**2.10**	**238**	*i*P	Pn	04 48 41.1	-2.1
SJG	**San Juan**	**2.10**	**238**	*i*P	Pn	04 48 41.1	-2.1
CELP	**Cerrillos**	**2.47**	**242**	*i*P	Pn	04 48 46.6	-1.7
CELP	**Cerrillos**	**2.47**	**242**	*e*Pn	Pn	04 48 46.5	-1.8
CELP				*e*S	Sn	04 49 17.7	0.0
AOPR	**Arecibo Observ**	**2.51**	**250**	*i*P	Pn	04 48 46.9	-1.9
AOPR	**Arecibo Observ**	**2.51**	**250**	*i*P	Pn	04 48 46.9	-1.9
OBIP	**Obispado Ponce**	**2.51**	**242**	*i*P	Pn	04 48 47.3	-1.5
OBIP	**Obispado Ponce**	**2.51**	**242**	*i*P	Pn	04 48 47.3	-1.5
LRS	**Lares**	**2.61**	**249**	*e*Pn	Pn	04 48 48.4	-1.8
AGPR	**Aguadilla, PR**	**2.79**	**254**	*i*P	Pn	04 48 50.9	-1.8
AGPR	**Aguadilla, PR**	**2.79**	**254**	*e*Pn	Pn	04 48 50.5	-2.2
LSP	**Las Mesas**	**2.86**	**249**	*i*P	Pn	04 48 52.5	-1.3
LSP	**Las Mesas**	**2.86**	**249**	*i*P	Pn	04 48 52.5	-1.3
CRPR	**Cabo Rojo, PR**	**2.95**	**246**	*i*P	Pn	04 48 53.0	-1.0
CRPR	**Cabo Rojo, PR**	**2.95**	**246**	*e*S	Sn	04 49 27.7	-1.9
CRPR	**Cabo Rojo, PR**	**2.95**	**246**	*i*P	Pn	04 48 53.9	-1.0
CRPR				*e*S	Sn	04 49 27.7	-1.9
SMN1	**Samana, DR**	**4.72**	**270**	*i*P	Pn	04 49 16.6	-2.8
DR12	**Loma Pena Alta**	**4.84**	**265**	*i*P	Pn	04 49 19.7	-1.4
DR12	**Loma Pena Alta**	**4.84**	**265**	*i*P	Pn	04 49 19.7	-1.4
SDDR	**Presa de Saban**	**6.63**	**269**	*e*Pn	Pn	04 49 44.2	-1.4
	12nm,0.4s						
SDDR				*e*S	Sn	04 50 57.0	-3.5

MEX 22 04:56:18.0±0.5, 15.74N×93.92W, h85km±8km, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.67**	**93**	*i* P	Pn	04 56 32.5	-1.3
PCIG				*i* S	Sn	04 56 44.1	-1.5
TGIG		**1.29**	**36**	*i* P	Pn	04 56 40.1	-0.8
TGIG				*i* S	Sn	04 56 56.3	-1.9
CCIG	**Comitan**	**1.79**	**72**	*i* P	Pn	04 56 46.4	-1.2
CCIG				*i* S	Sn	04 57 07.6	-2.5
THIG		**1.79**	**117**	*i* P	Pn	04 56 46.2	-1.1
THIG				*i* S	Sn	04 57 07.8	-1.9
HUIG	**Huatulco**	**2.11**	**271**	*i* P	Pn	04 56 50.5	-1.0
HUIG				*i* S	Sn	04 57 14.9	-2.2

BEO 22 05:06:38.1±0.8, 43.36N×17.03E, h0km, ML2.5/5
CSEM 22 05:06:40.2±0.3, 43.29N×17.18E, h2km, ML2.5, Error ellipse: s-maj=12.0km s-min=5.4km az=34.0

ISC 22 05:06:39.4±1.3, 43.38N±0.05×17.22E±0.05, h0km±14km, n14, σ1.43/26, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STON	**Ston**	**0.62**	**145**	*i* Pg	**Pg**	**05 06 50.3**	**-1.0**
STON				Sg	**Sg**	**05 07 00.2**	**+1.0**
STON	**Ston**	**0.62**	**145**	*e*Pg	**Pg**	**05 06 50.1**	**-1.1**
STON				*i* Sg	**Sg**	**05 07 00.3**	**+1.0**
STON	**Ston**	**0.62**	**145**	*e*Pg	**Pg**	**05 06 50.1**	**-1.1**
STON				*i* Sg	**Sg**	**05 07 00.3**	**+1.0**
BLY	**Banja Luka**	**1.37**	**359**	*e*Pg	**Pn**	**05 07 04.1**	**-1.7**
BLY				*e*Sg	**Sg**	**05 07 22.9**	**-0.5**
UDBI	**Udbina**	**1.56**	**318**	*e*Pn	**Pg**	**05 07 09.1**	**-0.1**
UDBI				Sn	**Sg**	**05 07 32.5**	**+3.0**
UDBI	**Udbina**	**1.56**	**318**	*e*Pn	**Pg**	**05 07 09.1**	**-0.1**
UDBI				Sn	**Sg**	**05 07 32.4**	**+3.0**
PDG	**Podgorica**	**1.77**	**122**	*e*Sn	**Sb**	**05 07 35.9**	**+0.4**
PDG	**Podgorica**	**1.77**	**122**	*e*Sn	**Sb**	**05 07 35.9**	**+0.4**
NVLJ	**Novalja**	**2.07**	**306**	*e*Pn	**Pb**	**05 07 16.7**	**-1.1**
NVLJ				Sn	**Sb**	**05 07 43.2**	**-0.9**
NVLJ	**Novalja**	**2.07**	**306**	*e*Pn	**Pb**	**05 07 16.7**	**-1.1**
NVLJ				Sn	**Sb**	**05 07 43.1**	**-0.9**
DIVS	**Divibare**	**2.13**	**69**	*e*Pn	**Pn**	**05 07 17.6**	**+1.2**
DIVS				*e*Sn	**Sn**	**05 07 44.5**	**+0.9**
DIVS	**Divibare**	**2.13**	**69**	*e*Pn	**Pn**	**05 07 17.6**	**+1.2**
DIVS				*e*Sn	**Sn**	**05 07 44.5**	**+0.9**
GRUS	**Gruza**	**2.59**	**77**	*e*Pn	**Pn**	**05 07 23.7**	**+1.2**
GRUS				*e*Sn	**Sb**	**05 07 57.4**	**-1.6**
GRUS	**Gruza**	**2.59**	**77**	*e*Pn	**Pn**	**05 07 23.7**	**+1.2**
GRUS				*e*Sn	**Sb**	**05 07 57.4**	**-1.6**

DDA 22 05:17:57.1, 39.92N×44.14E, h7km, MD2.8
TIF 22 05:17:57.1, 39.92N×44.15E, h13km±3km
CSEM 22 05:17:58.7±0.7, 39.90N×44.02E, h2km, MD2.8, Error ellipse: s-maj=17.4km s-min=8.3km az=113.0

ISC 22 05:17:57.1±1.3, 39.90N±0.04×44.13E±0.06, h12km±12km, n11, σ0.54/22, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYDN	**Diyadin**	**0.49**	**223**	*i* P	**Pg**	**05 18 06.7**	**-0.2**
DYDN				*i* S	**Sb**	**05 18 14.8**	**-0.4**
DYDN	**Diyadin**	**0.49**	**223**	*i* P	**Pg**	**05 18 06.7**	**-0.2**
DYDN				*i* S	**Sb**	**05 18 14.8**	**-0.4**
DIGO	**Kars**	**0.77**	**312**	*i* P	**Pg**	**05 18 12.0**	**-0.1**
DIGO				*i* S	**Sb**	**05 18 23.0**	**-0.2**
DIGO	**Kars**	**0.77**	**312**	*i* P	**Pg**	**05 18 12.0**	**-0.1**
DIGO				*i* S	**Sb**	**05 18 23.0**	**-0.2**
TUTA	**Tutak**	**1.13**	**244**	*i* P	**Pg**	**05 18 18.7**	**-0.2**
TUTA				*i* S	**Sn**	**05 18 35.2**	**+0.5**
TUTA	**Tutak**	**1.13**	**244**	*i* P	**Pg**	**05 18 18.7**	**-0.2**
TUTA				*i* S	**Sn**	**05 18 35.2**	**+0.5**
KZR	**Kazreti**	**1.49**	**8**	P	**Pb**	**05 18 24.7**	**-0.2**
KZR				S	**Sg**	**05 18 45.2**	**0.0**
AKH	**Akhalkalaki**	**1.58**	**342**	P	**Pb**	**05 18 26.3**	**-0.1**
AKH				S	**Sg**	**05 18 48.2**	**+0.2**
DGRG	**David-gareji**	**1.81**	**31**	P	**Pg**	**05 18 31.3**	**-0.6**
DGRG				S	**Sg**	**05 18 57.2**	**+1.8**
TBLG	**Delisi**	**1.88**	**14**	P	**Pg**	**05 18 32.9**	**-0.3**
TBLG				S	**Sg**	**05 18 57.8**	**+0.2**
TBLG	**Delisi**	**1.88**	**14**	P	**Pg**	**05 18 32.9**	**-0.3**
TBLG				S	**Sg**	**05 18 57.8**	**+0.2**

ISCJB 22 05:18:54.2±1.6, 35.44N±0.07×28.45E±0.06, h11km±13km, Error ellipse: s-maj=14.4km s-min=4.8km az=147.1
ATH 22 05:18:54.3, 35.36N×28.54E, h32km±8km, MD3.6/9
CSEM 22 05:18:54.8±0.3, 35.48N×28.47E, h10km, MD3.6, Error ellipse: s-maj=9.2km s-min=3.9km az=153.0
DDA 22 05:18:56.7, 35.75N×28.40E, h14km, MD3.2

ISC 22 05:18:52.7±3.2, 35.44N±0.07×28.45E±0.04, h0km±24km, n25, σ1.10/40, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.82**	**341**	*e*PN	**Pn**	**05 19 12.1**	**+0.6**
ARG				*e*SN	**Sn**	**05 19 25.0**	**+0.6**
ARG	**Arkhangelos**	**0.82**	**341**	*e*Pn	**Pn**	**05 19 12.1**	**+0.6**
ARG				*e*Sn	**Sn**	**05 19 25.0**	**+0.6**
KARP	**Karpathos**	**1.06**	**276**	*e*PN	**Pn**	**05 19 16.0**	**+1.2**
KARP	**Karpathos**	**1.06**	**276**	*e*Pn	**Pn**	**05 19 16.0**	**+1.2**
KSL	**Kastellorizon**	**1.16**	**52**	*e*PN	**Pb**	**05 19 15.8**	**+0.2**
AKAS	**Kas**	**1.23**	**49**	*i* P	**Pn**	**05 19 17.0**	**-0.2**
AKAS				*i* S	**Sb**	**05 19 33.3**	**0.0**
AKAS	**Kas**	**1.23**	**49**	*i* P	**Pn**	**05 19 17.0**	**-0.2**
AKAS				*i* S	**Sb**	**05 19 33.3**	**0.0**
ZKR	**Zakros**	**1.86**	**261**	*e*PN	**Pn**	**05 19 23.2**	**-2.5**
ZKR				*e*SN	**Sb**	**05 19 50.8**	**-0.4**
GOLH	**Golhisar**	**2.01**	**26**	*i* P	**Pn**	**05 19 29.1**	**+1.2**
GOLH				*i* S	**Sn**	**05 19 53.8**	**0.0**
GOLH	**Golhisar**	**2.01**	**26**	*i* P	**Pn**	**05 19 29.1**	**+1.2**
GOLH				*i* S	**Sn**	**05 19 53.8**	**0.0**
AYDN	**Tasoluk**	**2.27**	**348**	*i* P	**Pn**	**05 19 32.6**	**+1.2**
AYDN				*i* S	**Sn**	**05 19 59.2**	**-0.9**
AYDN	**Tasoluk**	**2.27**	**348**	*i* P	**Pn**	**05 19 32.6**	**+1.2**
AYDN				*i* S	**Sn**	**05 19 59.2**	**-0.9**
DNZL	**Cakiroluk**	**2.30**	**12**	*i* P	**Pn**	**05 19 32.5**	**+0.5**
DNZL				*i* S	**Sn**	**05 19 59.9**	**-1.2**
DNZL	**Cakiroluk**	**2.30**	**12**	*i* P	**Pn**	**05 19 32.5**	**+0.5**
DNZL				*i* S	**Sn**	**05 19 59.9**	**-1.2**
NPS	**Neapolis**	**2.33**	**267**	*e*PN	**Pn**	**05 19 34.0**	**+1.8**
NPS				*e*SN	**Sn**	**05 20 01.8**	**+0.2**
NPS	**Neapolis**	**2.33**	**267**	*e*Pn	**Pn**	**05 19 34.0**	**+1.8**
NPS				*e*Sn	**Sn**	**05 20 01.8**	**+0.2**
SMG	**Samos**	**2.61**	**331**	*e*PB	**Pb**	**05 19 39.7**	**-0.7**
SMG	**Samos**	**2.61**	**331**	*e*Pb	**Pb**	**05 19 39.7**	**-0.7**
IDI	**Anoyia**	**2.92**	**268**	*e*PN	**Pn**	**05 19 41.0**	**+0.7**
IDI				*e*SN	**Sn**	**05 20 16.2**	**+0.1**
IDI	**Anoyia**	**2.92**	**268**	*e*Pn	**Pn**	**05 19 41.0**	**+0.7**
IDI				*e*Sn	**Sn**	**05 20 16.2**	**+0.1**
ANKY	**Antikythira Is**	**4.22**	**277**	*e*PN	**Pn**	**05 19 59.8**	**+1.6**
ANKY	**Antikythira Is**	**4.22**	**277**	*e*Pn	**Pn**	**05 19 59.8**	**+1.6**
KDHN	**Kadinhani**	**4.25**	**43**	*i* P	**Pn**	**05 19 59.5**	**+0.7**
KDHN	**Kadinhani**	**4.25**	**43**	*i* P	**Pn**	**05 19 59.5**	**+0.7**
KYTH	**Kithira**	**4.48**	**282**	*e*PN	**Pn**	**05 19 59.2**	**-2.6**

IDC 22 05:19:21.5±1.3, 23.11S×67.73W, h102km±17km, mb3.9/4, mb1 3.9/6, mb1mx3.6/19, mbtmp3.9/6, Error ellipse: s-maj=25.2km s-min=16.4km az=132.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.20**	**294**	P	Pn	05 19 45.3	+0.7
	baz=115,slow=8.4						
LVC				S	Sn	05 20 01.8	-0.2
	526nm,0.3s,baz=15,slow=20,SNR=136						
LPAZ	**La Paz**	**6.79**	**357**	P	Pn	05 20 59.9	+0.5
	0.8nm,0.3s,baz=186,slow=7.8,SNR=19						
CFAA	**Coronel Fontan**	**8.48**	**183**	P	Pn	05 21 20.4	-1.1
	0.1nm,0.3s,baz=357,slow=12,SNR=7.7						
CFAA				S	Sn	05 22 49.2	-6.3
	0.1nm,0.3s,baz=265,slow=18,SNR=4.5						
SIV	**San Ignacio**	**9.46**	**43**	P	Pn	05 21 35.0	+0.1
	8.3nm,0.3s,baz=237,slow=12,SNR=86						
SIV				S	Sn	05 23 17.7	-1.8
	1.5nm,0.3s,baz=176,slow=19,SNR=8.0						
BDFB	**Brasilia**	**20.01**	**72**	P	P	05 23 47.1	+0.7
	4.9nm,0.5s,baz=246,slow=12,SNR=11						
SNAA	**Sanae**	**60.41**	**161**	P	P	05 29 20.0	+0.2
	0.6nm,0.6s,baz=263,slow=8.0,SNR=12						
DBIC	**Dimbokro**	**68.16**	**72**	P	P	05 30 11.3

ASAR	**Alice Springs**	33.46	123	P		P	06 22 07.3	-0.4
	1.7nm,0.6s,baz=303,slow=7.9,SNR=17							
STKA	**Stephens Creek**	43.16	130	*e*P		P	06 23 29.5	+0.3
	1.4nm,0.6s							
STKA	**Stephens Creek**	43.16	130	P		P	06 23 29.2	0.0
	8.5nm,0.7s,baz=299,slow=8.0,SNR=17							
CTA	**Charters Tower**	43.31	112	P		P	06 23 30.1	-0.5
CTA	**Charters Tower**	43.31	112	P		P	06 23 30.1	-0.5
	4.1nm,0.9s,baz=284,slow=7.6,SNR=3.9							
CTAO	**Charters Tower**	43.31	112	*e*P		P	06 23 30.9	+0.3
	5.2nm,0.8s							
KSAR	**Wonju Array Be**	49.75	25	P		P	06 24 21.3	+0.5
KSRS	**Korea Array**	49.78	25	P		P	06 24 21.3	+0.3
	2.0nm,0.7s,baz=221,slow=7.4,SNR=7.1							
SONM	**Songino Array**	54.71	2	P		P	06 24 58.0	+0.3
SONM	**Songino Array**	54.71	2	P		P	06 24 58.0	+0.3
	3.8nm,0.7s,baz=182,slow=9.0,SNR=22							
TKM2	**Tokmak 2**	55.88	335	*e*P		P	06 25 06.3	0.0
	9.0nm,0.6s							
EKS2	**Erkin-Say**	56.44	334	*e*P		P	06 25 10.8	+0.6
	7.7nm,0.8s							
MK31	**Makanchi Array**	56.86	343	*e*P		P	06 25 13.0	0.0
MKAR	**Makanchi Array**	56.86	343	P		P	06 25 13.0	0.0
MKAR	**Makanchi Array**	56.86	343	P		P	06 25 13.0	0.0
	4.9nm,0.9s,baz=145,slow=8.7,SNR=27							
USRK	**Ussuriysk Arra**	57.10	24	P		P	06 25 15.6	+0.9
	2.2nm,0.5s,baz=205,slow=6.3,SNR=8.4							
KURBB	**Kurchatov Arra**	61.40	342	P		P	06 25 44.4	0.0
	3.8nm,0.7s,baz=161,slow=6.1,SNR=36							
KURBB					PcP	PcP	06 26 26.5	+0.2
	0.9nm,0.8s,baz=159,slow=3.8,SNR=5.7							
KURK	**Kurchatov**	61.46	342	*e*P		P	06 25 44.7	+0.1
	7.2nm,0.9s							
KURK					PcP	PcP	06 26 26.5	0.0
ZAA0	**Zalesovo Array**	62.80	348	*e*P		P	06 25 53.5	-0.1
ZALV	**Zalesovo Beam**	62.80	348	P		P	06 25 53.5	-0.2
ZALV	**Zalesovo Beam**	62.80	348	P		P	06 25 53.5	-0.2
	5.9nm,0.6s,baz=163,slow=5.6,SNR=20							
ZALV					LR	LR	06 56 30.8	
	comp=Z,34nm,18.3s,baz=69,slow=39							
ABKAR	**Akbulak array**	67.77	331	*e*P		P	06 26 25.7	-0.3
	2.7nm,0.5s							
PETK	**Petropavlovsk-**	75.32	30	LR		LR	07 04 37.1	
	comp=Z,21nm,18.8s,baz=12,slow=39							
BRTR	**Keskin Array B**	79.35	313	P		P	06 27 33.9	-0.7
BRTR	**Keskin Array B**	79.35	313	P		P	06 27 33.9	-0.7
	1.2nm,0.7s,baz=140,slow=6.4,SNR=7.5							
AKASG	**Malin Array Be**	85.64	322	P		P	06 28 06.2	-0.7
AKASG	**Malin Array Be**	85.64	322	P		P	06 28 06.2	-0.7
	0.6nm,0.4s,baz=84,slow=5.1,SNR=6.8							
BUR08	**Bucovina Ar. S**	87.41	318	*e*P		P	06 28 17.0	+1.2
FINES	**FINESS Array B**	90.22	332	P		P	06 28 28.6	+0.1
FINES	**FINESS Array B**	90.22	332	P		P	06 28 28.6	+0.1
	0.5nm,0.4s,baz=114,slow=4.8,SNR=6.1							
ARCES	**ARCESS Array B**	92.42	340	P		P	06 28 38.7	0.0
ARCES	**ARCESS Array B**	92.42	340	P		P	06 28 38.7	0.0
	4.4nm,1.0s,baz=98,slow=5.6,SNR=4.7							
125A	**Gardner Draw,**	143.43	42	⇓P		PKPdf	06 35 04.2	+0.6
	baz=143							
Z26A	**Caprock**	143.49	41	⇑P		PKPdf	06 35 03.4	-0.3
	baz=144							
325A	**Bean Ranch, Si**	143.99	44	⇑P		PKPdf	06 35 06.0	+1.3
	baz=144							
226B	**Tecolote Peak,**	144.11	42	⇑P		PKPdf	06 35 05.2	+0.4
	baz=144							
127A	**Arkansas Junct**	144.27	41	⇓P		PKPdf	06 35 05.4	+0.3
	baz=144							
425A	**Indio Mountain**	144.32	45	⇓P		PKPdf	06 35 05.1	-0.2
	baz=144							
Z28A	**Tucker Farm, M**	144.49	39	⇓P		PKPdf	06 35 05.9	+0.4
	baz=144							
Y29A	**Porterfield Fa**	144.55	38	⇓P		PKPdf	06 35 05.0	-0.5
	baz=144							
W31A	**Holland Ranch,**	144.63	34	⇓P		PKPdf	06 35 04.9	-0.6
	baz=145							
326A	**Caldwell Ranch**	144.70	43	⇑P		PKPdf	06 35 05.3	-0.6
	baz=145							
128A	**Castleberry Fa**	144.87	40	⇑P		PKPdf	06 35 06.7	+0.6
	baz=145							
Z29A	**Hungry Hill Ra**	144.94	39	⇓P		PKPdf	06 35 06.0	-0.2
	baz=145							
Y30A	**Stafford Cattl**	145.00	37	⇑P		PKPdf	06 35 06.1	-0.2
	baz=145							
X31A	**McDonald Ranch**	145.01	35	⇓P		PKPab	06 35 05.6	+0.1
	baz=145							
426A	**McDonald Obser**	145.06	44	⇓P		PKPdf	06 35 06.4	-0.2
	baz=145,SNR=6.6							
228A	**UT Block 9, Go**	145.12	41	⇓P		PKPab	06 35 06.6	0.0
	baz=145							
129A	**Stewart Farms,**	145.25	40	⇓P		PKPab	06 35 06.6	+0.1
	baz=145							
Z30A	**Sanderson Ranc**	145.27	38	⇑P		PKPbc	06 35 06.3	-0.1
	baz=145,SNR=7.7							
Y31A	**Rekieta Farm,**	145.32	36	⇑P		PKPbc	06 35 06.6	0.0
	baz=145							
526A	**Mary Lane Ranc**	145.37	45	⇓P		PKPab	06 35 07.9	+0.7
	baz=145							
427A	**Hayter Ranch,**	145.38	43	⇑P		PKPab	06 35 08.0	+0.9
	baz=145,SNR=5.7							
328A	**Wristen Ranch,**	145.45	42	⇑P		PKPab	06 35 07.7	+0.5
	baz=145,SNR=18							
SFIN	**Scholer Farm**	145.47	14	⇑P		PKPdf	06 35 06.2	-0.5
	baz=145							
626A	**Big Bend Ranch**	145.63	46	⇑P		PKPab	06 35 08.6	+0.6
	baz=146,SNR=11							
527A	**Woodward Ranch**	145.66	45	⇓P		PKPab	06 35 08.6	+0.4
	baz=146,SNR=16							
229A	**Bryant Ranch,**	145.73	40	⇓P		PKPbc	06 35 07.9	0.0
	baz=146							
Y32A	**R-V Farms, Ver**	145.77	35	⇓P		PKPbc	06 35 07.9	0.0
	baz=146							
130A	**Snyder**	145.84	39	⇓P		PKPbc	06 35 08.3	+0.1
	baz=146							
Z31A	**Sharp Cattle R**	145.84	37	⇓P		PKPbc	06 35 08.2	0.0
	baz=146,SNR=12							
329A	**Wagon Wheel Ra**	145.93	41	⇓P		PKPab	06 35 09.0	-0.1
	baz=146,SNR=13							
428A	**Kincaid Ranch,**	145.94	43	⇓P		PKPab	06 35 10.2	+1.0
	baz=146,SNR=38							
TXAR	**Lajitas Array**	146.09	46		PKPbc	PKPbc	06 35 09.4	+0.2
TXAR	**Lajitas Array**	146.09	46		PKPbc	PKPbc	06 35 09.4	+0.2
	6.2nm,0.9s,baz=270,slow=3.8,SNR=60							
131A	**Roby**	146.14	38	⇑P		PKPab	06 35 09.6	-0.2
	baz=146							
627A	**Terlingua Ranc**	146.22	45	⇑P		PKPab	06 35 10.8	+0.5
	baz=146,SNR=24							
230A	**Sterling City**	146.22	40	⇑P		PKPab	06 35 09.9	-0.2
	baz=146,SNR=6.7							
Z32A	**Haskell**	146.25	36	⇑P		PKPbc	06 35 09.5	+0.1
	baz=146							
330A	**Mertzon**	146.50	40	⇑P		PKPbc	06 35 10.4	+0.1
	baz=146							
429A	**Davenport Ranc**	146.53	42	⇓P		PKPbc	06 35 10.5	+0.1
	baz=146							
628A	**Black Gap, Mar**	146.55	45	⇓P		PKPab	06 35 11.2	-0.3
	baz=146,SNR=16							
529A	**Stev Forest Ra**	146.63	43	⇓P		PKPab	06 35 11.6	-0.2
	baz=147							
ABTX	**Abilene, Hawle**	146.63	37	⇑P		PKPbc	06 35 10.8	+0.2
	baz=147							
231A	**Bronte**	146.69	39	⇓P		PKPab	06 35 11.4	-0.5
	baz=147							
430A	**Baggett Ranch,**	146.87	41	⇓P		PKPbc	06 35 11.9	+0.6
	baz=147							
331A	**San Angelo**	147.05	40	⇑P		PKPbc	06 35 12.2	+0.4
	baz=147							
232A	**Coleman**	147.14	38	⇓P		PKPbc	06 35 12.2	+0.1
	baz=147							
530A	**J-C Ranch, Com**	147.21	42	⇑P		PKPbc	06 35 13.1	+0.7
	baz=147,SNR=12							
431A	**Sonora**	147.34	41	⇓P		PKPbc	06 35 12.8	+0.1
	baz=147,SNR=5.0							
332A	**Millersview**	147.43	39	⇓P		PKPbc	06 35 13.1	+0.2
	baz=147,SNR=6.0							
531A	**Rocksprings**	147.72	42	⇓P		PKPbc	06 35 14.0	+0.2
	baz=148,SNR=6.4							
432A	**Menard**	147.74	40	⇑P		PKPbc	06 35 13.9	+0.1
	baz=148							
JCT	**Junction City**	148.00	40	*e*PKPbc		PKPbc	06 35 14.8	+0.3
JCT	**Junction City**	148.00	40	⇓P		PKPbc	06 35 14.9	+0.4
	baz=148							
532A	**Rocksprings**	148.16	41	⇓P		PKPbc	06 35 15.4	+0.4
	baz=148							
632A	**Uvalde**	148.65	42	⇓P		PKPbc	06 35 17.1	+1.0
	baz=149							
732A	**Laxson Ranch,**	149.03	43	⇑P		PKPbc	06 35 18.0	+0.9
	baz=149							
WVT	**Waverly**	149.23	18	*e*PKPdf		PKPdf	06 35 12.5	-0.7
WVT				*e*PKPbc		PKPbc	06 35 17.2	-0.2
KMSC	**Kings Mountain**	151.69	9	⇓P		PKPbc	06 35 22.6	-0.7
	baz=152							

DJA 22 06:23:24.6±0.7,3°S±4°×12°2E±°, h4km±4km, M3.8/7, MLv3.8/7, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SKSI	**Soroako, Sulaw**	0.43	296	P		Pg	06 23 32.0	-1.0
SKSI				S		Sg	06 23 40.1	+1.4
TTSI	**Tana Toraja**	1.93	260	P		Pn	06 23 57.7	-0.5
TTSI				S		Sn	06 24 23.2	+0.3
LUWI	**Luwuk**	1.97	32	P		Pn	06 23 58.3	-0.5
LUWI				S		Sb	06 24 25.0	-1.0
SPSI	**Sidrap Palu**	2.31	238	P		Pn	06 24 03.0	-0.4
KAPI	**Kappang**	3.01	221	P		Pn	06 24 12.8	-0.3
BKSI	**Bulukumba**	3.04	212	P		Pn	06 24 12.5	-1.0
MRSI	**Marisa**	3.18	4	P		Pn	06 24 14.9	-0.6
BSSI	**Bau Bau, Buton**	3.61	200	P		Pn	06 24 22.9	+1.5

ISCJB 22 06:32:32.8±0.5,37°.21N±0°.04×28°.19E±0°.04, h8km±6km, Error ellipse: s-maj=8.4km s-min=3.8km az=31.1
DDA 22 06:32:32.5,37°.22N×28°.22E, h7km, MD3.0
ISK 22 06:32:32.6,37°.22N×28°.18E, h7km, MD2.6
CSEM 22 06:32:32.9±0.1,37°.21N×28°.19E, h10km, MD2.6, Error ellipse: s-maj=3.1km s-min=1.9km az=32.0

ISC 22 06:32:33.1±1.1,37°23N±0°.03×28°21E±0°.03, h2km±11km, n26, σ0°97/42, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
YER	**Yerkesik**	0.11	150	*e*PG		Pg	06 32 35.4	+0.2
YER				*e*SG		Sg	06 32 37.9	+1.2
YER	**Yerkesik**	0.11	150	*e*Pg		Pg	06 32 35.4	+0.2
YER				*e*Sg		Sg	06 32 37.9	+1.2
MLSB	**Milas**	0.35	281	*e*PG		Pg	06 32 39.6	-0.3
MLSB				*e*SG		Sg	06 32 44.7	+0.2
MLSB	**Milas**	0.35	281	*e*Pg		Pg	06 32 39.6	-0.3
MLSB				*e*Sg		Sg	06 32 44.7	+0.2
TURN	**Turunc**	0.47	139	*e*P		Pg	06 32 41.3	-0.9
TURN				*e*S		Sg	06 32 48.5	+0.2
TURN	**Turunc**	0.47	139	*e*P		Pg	06 32 41.3	-0.9
TURN				*e*S		Sg	06 32 48.5	+0.2
AYDN	**Tasoluk**	0.51	328	*e*P		Pg	06 32 42.8	0.0
AYDN				*e*S		Sg	06 32 49.9	+0.6
AYDN	**Tasoluk**	0.51	328	*e*P		Pg	06 32 42.8	0.0
AYDN				*e*S		Sg	06 32 49.9	+0.6
DALY	**Dalyan (Mu¨la**	0.54	139	*e*PG		Pg	06 32 43.8	+0.3
DALY				*e*SG		Sb	06 32 51.8	-1.7
DALY	**Dalyan (Mu¨la**	0.54	139	*e*Pg		Pg	06 32 43.8	+0.3
DALY				*e*Sg		Sb	06 32 51.8	-1.7
DAT	**Datca**	0.71	226	*e*PG		Pg	06 32 46.2	-0.5
DAT	**Datca**	0.71	226	*e*Pg		Pg	06 32 46.2	-0.5
BODT	**Bodrum**	0.74	257	*e*PG		Pg	06 32 46.8	-0.5
BODT	**Bodrum**	0.74	257	*e*Pg		Pg	06 32 46.8	-0.5
DNZL	**Cakiroluk**	0.81	55	*e*P		Pg	06 32 48.8	+0.2
DNZL				*e*S		Sb	06 33 00.8	-0.6
DNZL	**Cakiroluk**	0.81	55	*e*P		Pg	06 32 48.8	+0.2
DNZL				*e*S		Sb	06 33 00.8	-0.6
GCAM	**G?zelcaml?**	0.91	301	*e*P		Pg	06 32 50.4	-0.2
GCAM				*e*S		Sg	06 33 03.0	+0.7
GCAM	**G?zelcaml?**	0.91	301	*e*P		Pg	06 32 50.4	-0.2
GCAM				*e*S		Sg	06 33 03.0	+0.7
FETY	**Fethiye**	0.92	130	*e*PG		Pg	06 32 51.0	+0.4
FETY	**Fethiye**	0.92	130	*e*Pg		Pg	06 32 51.0	+0.4
GOLH	**Golhisar**	1.08	89	*e*P		Pg	06 32 51.4	-2.3
GOLH				*e*S		Sn	06 33 13.0	+2.2
GOLH	**Golhisar**	1.08	89	*e*P		Pg	06 32 51.4	-2.3
GOLH				*e*S		Sn	06 33 13.0	+2.2
KULA	**Kula-Manisa**	1.33	15	*e*PN		Pn	06 32 58.1	-0.7
KULA	**Kula-Manisa**	1.33	15	*e*Pn		Pn	06 32 58.1	-0.7
ELL	**Elmali**	1.44	109	*e*PN		Pn	06 33 00.1	-0.2
ELL	**Elmali**	1.44	109	*e*Pn		Pn	06 33 00.1	-0.2

ISK 22 06:58:23.4,39°.47N×28°.09E, h5km, MD2.6
ISCJB 22 06:58:24.2±0.5,39°.44N±0°.03×28°.04E±0°.04, h3km±6km, Error ellipse: s-maj=4.9km s-min=4.2km az=148.7
DDA 22 06:58:24.1,39°.44N×28°.02E, h7km, MD2.8
CSEM 22 06:58:24.6±0.1,39°.45N×28°.06E, h5km, MD2.6, Error ellipse: s-maj=3.5km s-min=2.8km az=44.0

ISC 22 06:58:24.2±0.9,39°45N±0°.02×28°07E±0°.03, h14km±8km, n34, σ0°98/48, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BALB	**Balikesir**	0.24	322	*e*PG		Pg	06 58 29.3	-0.2
BALB				*e*SG		Sg	06 58 33.5	+0.5
BALB	**Balikesir**	0.24	322	*e*Pg		Pg	06 58 29.3	-0.2
BALB				*e*Sg		Sg	06 58 33.5	+0.5
DURS	**Dursunbey**	0.35	64	*i* P		Pb	06 58 32.0	-0.2
DURS				*i* S		Sb	06 58 37.8	+0.1
DURS	**Dursunbey**	0.35	64	*i* P		Pb	06 58 32.0	-0.2
DURS				*i* S		Sb	06 58 37.8	+0.1
BALY	**Balya**	0.46	310	*e*P		Pg	06 58 33.1	-0.2
BALY				*e*S		Sg	06 58 38.6	-0.8
BALY	**Balya**	0.46	310	*e*P		Pg	06 58 33.1	-0.2
BALY				*e*S		Sg	06 58 38.6	-0.8
AKHS	**Akhisar**	0.60	200	*e*P		Pg	06 58 35.7	-0.4
AKHS				*e*S		Sg	06 58 44.0	0.0
AKHS	**Akhisar**	0.60	200	*e*P		Pg	06 58 35.7	-0.4
AKHS				*e*S		Sg	06 58 44.0	0.0
DEMI	**Demirci**	0.64	129	*e*P		Pb	06 58 37.8	+0.5
DEMI				*e*S		Sb	06 58 46.3	+0.1
DEMI	**Demirci**	0.64	129	*e*P		Pb	06 58 37.8	+0.5
DEMI				*e*S		Sb	06 58 46.3	+0.1
GONE	**Gonen-Balikesi**	0.67	334	*e*PG		Pg	06 58 36.7	-0.5
GONE	**Gonen-Balikesi**	0.67	334	*e*Pg		Pg	06 58 36.7	-0.5
KCTX	**Karacabey (Bur**	0.84	15	*e*PG		Pg	06 58 40.4	-0.2
KCTX				*e*SG		Sg	06 58 52.6	+0.7
KCTX	**Karacabey (Bur**	0.84	15	*e*Pg		Pg	06 58 40.4	-0.2
KCTX				*e*Sg		Sb	06 58 52.6	+0.7
KULA	**Kula-Manisa**	1.04	154	*e*PG		Pn	06 58 44.8	+0.3
KULA	**Kula-Manisa**	1.04	154	*e*Pg		Pn	06 58 44.8	+0.3
TVSB	**Tavsanli**	1.08	90	*e*PG		Pn	06 58 45.0	0.0
TVSB	**Tavsanli**	1.08	90	*e*Pg		Pn	06 58 45.0	0.0
AYVA	**Ayvalik**	1.08	263	*e*P		Pn	06 58 45.0	+0.1
AYVA				*e*S		Sb	06 58 58.6	-0.1
AYVA	**Ayvalik**	1.08	263	*e*P		Pn	06 58 45.0	+0.1
AYVA				*e*S		Sb	06 58 58.6	-0.1
KRBG	**Karabiga-Canak**	1.11	328	*e*PN		Pn	06 58 45.8	+0.3
KRBG	**Karabiga-Canak**	1.11	328	*e*Pn		Pn	06 58 45.8	+0.3
ARMT	**Armutlu**	1.27	28	*e*PN		Pb	06 58 47.8	-0.2
ARMT	**Armutlu**	1.27	28	*e*Pn		Pb	06 58 47.8	-0.2
RKY	**Sarkoy-Tekirda**	1.42	331	*e*PN		Pg	06 58 51.2	-0.2
RKY	**Sarkoy-Tekirda**	1.42	331	*e*Pn		Pg	06 58 51.2	-0.2
MFT	**Murefte**	1.47	336	*e*PN		Pg	06 58 52.5	0.0
MFT	**Murefte**	1.47	336	*e*Pn		Pg	06 58 52.5	0.0
YLV	**Yalova**	1.50	41	*e*PN		Pg	06 58 52.5	-0.4
YLV	**Yalova**	1.50	41	*e*Pn		Pg	06 58 52.6	-0.4
GELI	**Tayfur-Gelibol**	1.55	308	*e*PN		Pg	06 58 53.4	-0.7
GELI	**Tayfur-Gelibol**	1.55	308	*e*Pn		Pg	06 58 53.4	-0.7
ERIK	**Erikli-Kesan**	1.71	316	*e*PN		Pb	06 58 55.8	+0.4
ERIK	**Erikli-Kesan**	1.71	316	*e*Pn		Pb	06 58 55.8	+0.4

IDC 22 07:18:57.5±2.1,5°99S×129°37E, h0km, mb3.7/1, mb1 3.8/4, mb1mx3.5/20, mbtmp3.6/4, ML3.6/3, Error ellipse: s-maj=94.1km s-min=27.0km az=75.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	12.57	197	Pn		Pn	07 21 58.1	+0.3
	0.3nm,0.3s,baz=14,slow=12,SNR=12							
FITZ				Sn		Sn	07 24 03.0	-16
	0.2nm,0.3s,baz=334,slow=18,SNR=2.8							
WRA	**Warramunga Arr**	14.68	161	Pn		Pn	07 22 27.5	+0.7
	0.2nm,0.3s,baz=343,slow=12,SNR=23							
WRA				Sn		Sn	07 24 59.6	-11
	0.3nm,0.3s,baz=331,slow=23,SNR=8.7							
ASAR	**Alice Springs**	18.11	167	P		Pn	07 23 10.0	-0.7
	0.3nm,0.3s,baz=341,slow=9.1,SNR=18							
ASAR				S		Sn	07 26 18.6	-15
	0.1nm,0.3s,baz=339,slow=26,SNR=3.6							
MKAR	**Makanchi Array**	67.05	327	P		P	07 29 52.6	0.0
	0.4nm,0.5s,baz=111,slow=7.9,SNR=9.6							

IDC 22 07:36:44.1±1.6,34°.52N×24°.84E, h0km, mb3.6/2, mb1 3.6/5, mb1mx3.4/28, mbtmp3.5/5, ML3.9/2, Error ellipse: s-maj=44.1km s-min=25.4km az=135.0
ISCJB 22 07:36:47.0±0.6,34°.49N±0°.03×24°.78E±0°.04, h29km±5km, mb3.4/3, Error ellipse: s-maj=5.7km s-min=5.0km az=155.2
CSEM 22 07:36:47.9±0.2,34°.53N×24°.76E, h20km, MD3.1, Error ellipse: s-maj=6.0km s-min=4.0km az=76.0
ATH 22 07:36:49.9,34°.74N×24°.73E, h36km±1km, MD3.1/8
THE 22 07:36:49.5,34°.65N×24°.74E, h1km±2km, Error ellipse: s-maj=3.3km s-min=0.9km az=178.0

ISC 22 07:36:47.8±1.2,34°54N±0°.04×24°76E±0°.03, h25km±10km, n42, σ0°87/61, mb3.5/3, 2C, Crete

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
SIVA	**Sivas**	0.47	5	P		Pb	07 36 57.3	-0.4
SIVA				S		Sb	07 37 03.4	-0.9
SIVA	**Sivas**	0.47	5	*e*PB		Pb	07 36 57.8	+0.1
SIVA				*e*SB		Sb	07 37 04.0	-0.3
SIVA	**Sivas**	0.47	5	P		Pb	07 36 57.3	-0.4
SIVA	**Sivas**	0.47	5	*e*Pb		Pb	07 36 57.8	+0.1
SIVA				S		Sb	07 37 03.4	-0.9
SIVA				*e*Sb		Sb	07 37 04.0	-0.3
GVD	**Gavdhos**	0.62	298	P		Pn	07 37 01.2	+0.2
GVD				S		Sb	07 37 09.2	+0.6
GVD	**Gavdhos**	0.62	298	*e*PN		Pn	07 37 01.3	+0.2
GVD				*e*SN		Sn	07 37 10.5	+0.2
GVD	**Gavdhos**	0.62	298	*e*Pn		Pn	07 37 01.3	+0.2
GVD				S		Sb	07 37 09.2	+0.6
GVD				*e*Sn		Sn	07 37 10.5	+0.2
IDI	**Anoyia**	0.75	8	P		Pb	07 37 01.6	-0.7
IDI				S		Sb	07 37 12.8	+0.6
IDI	**Anoyia**	0.75	8	*e*PN		Pb	07 37 01.6	-0.7
IDI	**Anoyia**	0.75	8	P		Pb	07 37 01.6	-0.7
IDI				S		Sb	07 37 12.8	+0.6
XRY	**Khrisi**	0.84	67	*e*PN		Pn	07 37 05.3	+1.3
XRY	**Khrisi**	0.84	67	*e*Pn		Pn	07 37 05.3	+1.3
LAST	**Lasithi**	0.85	44	P		Pn	07 37 04.7	+0.4
LAST				S		Sn	07 37 16.4	+0.3
LAST	**Lasithi**	0.85	44	*e*PN		Pn	07 37 05.1	+0.8
LAST				*e*SN		Sb	07 37 15.7	+0.5
LAST	**Lasithi**	0.85	44	*e*Pn		Pn	07 37 04.7	+0.4
LAST	**Lasithi**	0.85	44	*e*Pn		Pn	07 37 05.1	+0.8
LAST				*e*Sn		Sb	07 37 15.7	+0.5
LAST				S		Sn	07 37 16.4	+0.3
VAM	**Vamos**	0.97	332	P		Pb	07 37 05.7	-0.4
VAM				S		Sn	07 37 19.3	+0.4
VAM	**Vamos**	0.97	332	*e*PN		Pb	07 37 05.5	-0.6
VAM	**Vamos**	0.97	332	P		Pb	07 37 05.7	-0.4
VAM				S		Sn	07 37 19.3	+0.4
NPS	**Neapolis**	1.00	44	P		Pb	07 37 07.7	+1.1
NPS				S		Sn	07 37 21.1	+1.4
NPS	**Neapolis**	1.00	44	*e*PN		Pb	07 37 07.2	+0.6
NPS	**Neapolis**	1.00	44	*e*Pn		Pb	07 37 07.2	+0.6
NPS	**Neapolis**	1.00	44	P		Pb	07 37 07.7	+1.1
NPS				S		Sn	07 37 21.1	+1.4
KARP	**Karpathos**	2.21	62	P		Pn	07 37 26.2	-1.0
KARP	**Karpathos**	2.21	62	*e*PN		Pb	07 37 25.6	-1.6
KARP	**Karpathos**	2.21	62	*e*Pn		Pb	07 37 25.6	-1.6
KARP	**Karpathos**	2.21	62	P		Pb	07 37 26.2	-1.0
KYTH	**Kithira**	2.23	321	*e*PN		Pn	07 37 24.3	+1.1
KYTH	**Kithira**	2.23	321	*e*Pn		Pn	07 37 24.3	+1.1
SLUM		3.07	173	P		Pn	07 37 35.8	+1.1
HMAT	**Matruh**	3.96	150	P		Pn	07 37 47.1	+0.1
HMAT				S		Sn	07 38 31.9	-0.8
SWA2		5.32	173	P		Pn	07 38 07.1	+1.5
HFRF	**Wahat Farafira**	7.98	157	P		Pn	07 38 42.6	+0.4

4.8nm,0.3s,baz=204,slow=23,SNR=4.5
DZM Mont Dzumac 13.17 269 P P 07 41 04.6 +2.5
1.5nm,0.3s,baz=99,slow=19,SNR=18
URZ Urewera 16.09 190 P P 07 41 27.3 -3.7
1.6nm,0.3s,baz=339,slow=8.8,SNR=8.0
URZ S S 07 44 06.8 -7.1
0.5nm,0.3s,baz=60,slow=20,SNR=4.9
CTA Charters Tower 32.11 268 P P 07 43 53.5 +0.3
25nm,0.6s,baz=97,slow=11,SNR=34
STKA Stephens Creek 35.86 246 P P 07 44 24.5 0.0
8.7nm,0.5s,baz=91,slow=8.7,SNR=36
ASAR Alice Springs 42.90 259 P P 07 45 21.0 -0.2
22nm,0.8s,baz=102,slow=7.3,SNR=208
ASAR ScP ScP 07 49 58.8 +1.8
1.0nm,0.8s,baz=100,slow=3.8,SNR=4.7
ASAR S S 07 51 04.6 -1.3
0.8nm,1.0s,baz=102,slow=16,SNR=5.8
WRA Warramunga Arr 43.13 264 P P 07 45 22.2 -0.8
7.5nm,0.3s,baz=90,slow=5.9,SNR=281
WRA ScP ScP 07 50 00.2 +2.2
2.0nm,0.8s,baz=93,slow=3.8,SNR=13
FITZ Fitzroy Crossi 51.56 264 P P 07 46 26.3 +0.1
9.5nm,0.8s,baz=84,slow=7.6,SNR=32
VNDA Vanda 55.91 185 P P 07 46 56.3 +0.5
1.3nm,0.6s,baz=357,slow=7.4,SNR=12
MJAR Matsushiro Arr 71.02 325 P P 07 48 32.9 0.0
2.8nm,0.3s,baz=166,slow=5.5,SNR=9.8
KSRS Korea Array 77.50 320 P P 07 49 09.5 +0.1
1.5nm,0.7s,baz=141,slow=5.7,SNR=6.0
PETK Petropavlovsk- 77.80 346 P P 07 49 10.6 0.0
4.9nm,0.7s,baz=134,slow=6.4,SNR=14
MAW Mawson 79.35 200 P P 07 49 18.5 -0.3
2.4nm,0.6s,baz=90,slow=5.1,SNR=4.7
USRK Ussuriysk Arra 79.84 327 P P 07 49 22.2 +0.6
3.0nm,0.9s,baz=127,slow=5.1,SNR=7.5
NVAR Mina Array Bea 83.26 44 P P 07 49 39.4 -0.1
1.5nm,0.9s,baz=216,slow=9.7,SNR=7.6
TXAR Lajitas Array 89.13 58 P P 07 50 07.9 +0.2
1.7nm,0.9s,baz=211,slow=6.5,SNR=16
CMAR Chiang Mai Arr 89.58 290 P P 07 50 11.0 +1.2
4.6nm,0.9s,baz=132,slow=3.1,SNR=6.3
ILAR Eielson Array 90.45 13 P P 07 50 12.2 -0.5
0.3nm,0.7s,baz=232,slow=5.1,SNR=5.9
PDAR Pinedale Array 91.20 44 P P 07 50 17.0 0.0
0.8nm,0.7s,baz=236,slow=4.5,SNR=6.5
MKAR Makanchi Array 111.59 313 PKiKP PKiKP 07 55 41.1 -1.1
0.1nm,0.3s,baz=95,slow=4.8,SNR=2.4
MKAR PKKPbc PKKPbc 08 00 36.7 -2.1
0.2nm,0.6s,baz=321,slow=3.1,SNR=3.6
FINES FINESS Array B 137.22 342 PKP PKPdf 07 56 28.9 -1.5
0.6nm,0.6s,baz=28,slow=6.3,SNR=2.6
FINES SKP 07 59 11.6
1.9nm,0.8s,baz=44,slow=5.8,SNR=4.5
HFS Hagfors 141.20 350 PKhKP PKPpre 07 56 31.7
0.9nm,0.3s,baz=64,slow=3.4,SNR=14
AKASG Malin Array Be 144.03 329 PKP PKPbc 07 56 41.6 -0.9
1.8nm,0.4s,baz=44,slow=4.1,SNR=17
EKA Eskdalemuir Ar 147.00 4 PKPbc PKPdf 07 56 49.2 +1.3
0.3nm,0.4s,baz=14,slow=7.3,SNR=3.5
BRTR Keskin Array B 147.14 309 PKPbc PKPbc 07 56 51.5 -0.5
1.5nm,0.6s,baz=152,slow=3.8,SNR=6.3
TORD Torodi Ar. Bea 170.74 186 PKP PKPdf 07 57 14.1 -1.9
0.5nm,0.8s,baz=181,slow=1.1,SNR=3.4
TORD PKPab PKPab 07 58 36.0 -1.8
1.2nm,0.6s,baz=170,slow=4.5,SNR=12

*IDC **22** 07:47:24.2±1.0,35°.43N×143°.14E,h0km,mb3.4/5, mb1 3.8/7,mb1mx3.6/27,mbtmp3.5/7,ML3.6/2,MS2.6/1, Ms1mx2.6/1,ms1mx2.0/23,Error ellipse: s-maj=29.4km s-min=22.6km az=116.0*
*JMA **22** 07:47:27.5±0.4,35°.56N×142°.98E,h79km,M3.1*
*ISCJB **22** 07:47:29.3±0.8,35°.49N±0°.05×142°.87E±0°.07,h59km, mb3.4/5,Error ellipse: s-maj=7.9km s-min=6.9km az=24.8*

ISC 22 07:47:31.4±1.0,35°.49N±0°.06×142°.90E±0°.08,h59km,n17, σ1s79/22,mb3.5/5,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.78**	**243**	P	**Pn**	**07 47 57.6**	**-1.7**
BSO2	**Boso 2**	**1.91**	**248**	*e*S	**Sn**	**07 48 24.7**	**+0.7**
JHO	**Hitachi**	**2.20**	**301**	P	**Pn**	**07 48 02.4**	**-3.1**
JFT	**Otama**	**2.89**	**315**	P	**Pn**	**07 48 12.5**	**-2.5**
JFT				*e*S	**Sn**	**07 48 45.9**	**-2.7**
JAG	**Ashikaga**	**2.95**	**289**	P	**Pn**	**07 48 14.4**	**-1.3**
JOD2	**Odawara 2**	**3.12**	**267**	P	**Pn**	**07 48 16.6**	**-1.5**
JOD2				S	**Sn**	**07 48 53.8**	**-0.4**
JRY	**Ryogami san**	**3.29**	**280**	P	**Pn**	**07 48 19.6**	**-0.9**
JRY				*e*S	**Sn**	**07 48 58.7**	**+0.2**
JHJ2	**Mitsune**	**3.48**	**228**	P	**Pn**	**07 48 21.6**	**-1.4**
JHJ2				*e*S	**Sn**	**07 49 02.0**	**-1.0**
JHJ	**Hachijo jima 2**	**3.50**	**228**	Pn	**Pn**	**07 48 21.3**	**-2.0**
	20nm,0.3s,baz=68,slow=19,SNR=14						
JHJ				Sn	**Sn**	**07 49 01.6**	**-1.9**
	34nm,0.3s,baz=93,slow=22,SNR=6.6						
MJAR	**Matsushiro Arr**	**3.94**	**287**	Pn	**Pn**	**07 48 28.4**	**-1.0**
	2.3nm,0.3s,baz=100,slow=14,SNR=9.5						
MAT	**Matsushiro**	**3.95**	**287**	P	**Pn**	**07 48 28.9**	**-0.5**
MAT				S	**Sn**	**07 49 18.1**	**+3.6**
ASAJ	**Asahikawa**	**8.62**	**359**	LR	LR	07 53 12.1	
	comp=Z,42nm,20.3s,baz=86,slow=40						
MKAR	**Makanchi Array**	**45.96**	**304**	P	**P**	**07 55 50.3**	**+1.9**
	0.2nm,0.7s,baz=84,slow=5.9,SNR=2.6						
ILAR	**Eielson Array**	**50.16**	**32**	P	**P**	**07 56 20.6**	**+0.1**
	0.1nm,0.5s,baz=261,slow=6.4,SNR=7.6						
WRA	**Warramunga Arr**	**55.72**	**190**	P	**P**	**07 57 02.3**	**+0.3**
	1.8nm,1.1s,baz=8.8,slow=7.8,SNR=7.3						
ASAR	**Alice Springs**	**59.45**	**190**	P	**P**	**07 57 28.6**	**+0.5**
	0.3nm,0.8s,baz=8.9,slow=8.4,SNR=3.9						
TXAR	**Lajitas Array**	**90.10**	**53**	P	**P**	**08 00 26.0**	**+0.7**
	0.2nm,0.7s,baz=260,slow=3.6,SNR=2.8						

KRSC 22 08:19:12.8±0.3,49°.37N×155°.97E,h5km±5km,ML3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.32**	**4**	P	Pn	08 19 37.1	-0.7
SKR				*i* S	Sn	08 19 55.8	0.0
PAU	**Pauzhetka**	**2.17**	**14**	P	Pn	08 19 50.6	+1.1
PAU				*i* S	Sn	08 20 17.2	+0.5
MIPR	**Malaya Ipel'ka**	**2.95**	**9**	P	Pn	08 20 01.9	+1.6
ASAK	**Asacha**	**3.25**	**21**	P	Pn	08 20 05.0	+0.4
ASAK				*i* S	Sn	08 20 42.5	-1.3
MTVR	**Mutnovka**	**3.42**	**23**	P	Pn	08 20 07.2	+0.3
MTVR				*i* S	Sn	08 20 47.8	-0.1
RUS	**Russkaya**	**3.46**	**27**	P	Pn	08 20 07.8	+0.5
RUS				*i* S	Sn	08 20 49.4	+0.7
UGLR	**Uglovaya**	**4.24**	**24**	P	Pn	08 20 19.3	+1.1
KOK	**Koryaka**	**4.27**	**22**	P	Pn	08 20 19.7	+1.2
AVH	**Avacha**	**4.27**	**23**	P	Pn	08 20 19.4	+0.9
KRER	**Koryakskii**	**4.31**	**23**	P	Pn	08 20 20.7	+1.5
SDLR	**Sedlovina**	**4.32**	**24**	P	Pn	08 20 21.2	+1.9
GNL	**Ganaly**	**4.50**	**15**	P	Pn	08 20 23.5	+1.7
SPN	**Mys Shipunski**	**4.52**	**33**	P	Pn	08 20 22.4	+0.6
SPN				*i* S	Sn	08 21 14.5	-0.2
MKZ	**Mys Kozlova**	**6.29**	**32**	P	Pn	08 20 45.9	-0.3

*IDC **22** 08:24:04.1±0.9,35°.49N×143°.19E,h0km,mb3.5/8, mb1 3.8/11,mb1mx3.7/28,mbtmp3.6/11,ML3.7/3,MS2.9/1, Ms1 2.9/1,ms1mx2.2/38,Error ellipse: s-maj=21.6km s-min=19.0km az=104.0*
*JMA **22** 08:24:07.6±0.3,35°.60N×143°.00E,h86km,M3.4*
*ISCJB **22** 08:24:08.7±0.7,35°.54N±0°.05×142°.95E±0°.05,h59km, mb3.5/8,Error ellipse: s-maj=7.0km s-min=6.2km az=173.2*

ISC 22 08:24:09.9±1.1,35°.52N±0°.06×143°.01E±0°.08,h59km,n24, σ1s82/28,mb3.6/8,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.76**	**277**	P	**Pn**	**08 24 37.0**	**-1.0**
CHOJ				S	**Sn**	**08 24 59.1**	**-0.3**
BSO1	**Boso 1**	**1.88**	**243**	P	**Pn**	**08 24 38.0**	**-1.1**
BSO1				S	**Sn**	**08 25 02.2**	**+0.8**
BSO3	**Boso 3**	**2.17**	**251**	P	**Pn**	**08 24 43.4**	**+0.1**
JFT	**Otama**	**2.94**	**314**	P	**Pn**	**08 24 52.5**	**-1.6**
JFT				S	**Sn**	**08 25 26.1**	**-2.0**
JAG	**Ashikaga**	**3.02**	**288**	P	**Pn**	**08 24 54.0**	**-1.3**
JAG				S	**Sn**	**08 25 28.2**	**-2.0**
JOD2	**Odawara 2**	**3.21**	**267**	P	**Pn**	**08 24 56.9**	**-1.0**
JOD2				S	**Sn**	**08 25 32.2**	**-2.8**
JRY	**Ryogami san**	**3.38**	**280**	P	**Pn**	**08 24 59.6**	**-0.5**
JRY				S	**Sn**	**08 25 38.7**	**-0.3**
JHJ2	**Mitsune**	**3.57**	**229**	P	**Pn**	**08 25 01.7**	**-1.0**
JHJ2				S	**Sn**	**08 25 40.5**	**-3.2**
JHJ	**Hachijo jima 2**	**3.58**	**229**	Pn	**Pn**	**08 25 01.1**	**-1.9**
	25nm,0.3s,baz=255,slow=23,SNR=27						
JHJ				Sn	**Sn**	**08 25 40.5**	**-3.6**
	44nm,0.3s,baz=257,slow=23,SNR=9.1						
JYN	**Shimob**	**3.64**	**271**	P	**Pn**	**08 25 03.5**	**-0.3**
JMK	**Ichinoseki**	**3.71**	**338**	P	**Pn**	**08 25 02.0**	**-2.7**
JYK	**Kaneyama**	**4.00**	**329**	P	**Pn**	**08 25 06.1**	**-2.5**
MJAR	**Matsushiro Arr**	**4.02**	**286**	Pn	**Pn**	**08 25 09.3**	**+0.3**
	3.6nm,0.3s,baz=99,slow=7.7,SNR=33						
MJAR				Sn	**Sn**	**08 25 56.9**	**+2.1**
	0.8nm,0.3s,baz=79,slow=13,SNR=1.8						
MAT	**Matsushiro**	**4.02**	**286**	P	**Pn**	**08 25 09.0**	**0.0**
MAT				S	**Sn**	**08 25 56.9**	**+2.0**
ASAJ	**Asahikawa**	**8.59**	**358**	Pn	**Pn**	**08 26 09.8**	**-1.7**
	1.1nm,0.3s,baz=188,slow=7.1,SNR=4.8						
USRK	**Ussuriysk Arra**	**12.10**	**319**	LR	LR	08 31 55.9	
	comp=Z,48nm,18.8s,baz=196,slow=39						
SONM	**Songino Array**	**29.71**	**306**	P	P	08 30 13.0	+2.7
	0.2nm,0.3s,baz=92,slow=4.3,SNR=3.3						
ZALV	**Zalesovo Beam**	**43.89**	**314**	P	P	08 32 13.3	+3.0
	0.6nm,0.4s,baz=90,slow=13,SNR=2.7						
MKAR	**Makanchi Array**	**46.02**	**304**	P	P	08 32 30.4	+3.0
	0.2nm,0.6s,baz=85,slow=10,SNR=3.3						
ILAR	**Eielson Array**	**50.09**	**32**	P	**P**	**08 32 59.1**	**+0.6**
	0.6nm,0.7s,baz=254,slow=6.2,SNR=4.4						
WRA	**Warramunga Arr**	**55.77**	**190**	P	**P**	**08 33 42.5**	**+1.7**
	0.8nm,0.7s,baz=9.3,slow=7.6,SNR=9.5						
ASAR	**Alice Springs**	**59.49**	**190**	P	P	08 34 09.1	+2.2
	0.4nm,0.8s,baz=12,slow=9.2,SNR=5.2						
YKA	**Yellowknife Ar**	**64.47**	**30**	P	**P**	**08 34 41.5**	**+1.7**
	0.3nm,0.7s,baz=301,slow=6.5,SNR=3.0						
TXAR	**Lajitas Array**	**90.01**	**53**	P	P	08 37 06.5	+3.1
	0.3nm,0.8s,baz=293,slow=2.6,SNR=4.4						

IDC 22 08:37:47.4±40.0,23°.59S×175°.98W,h0km,mb3.9/3, mb1 4.1/3,mb1mx3.6/19,mbtmp3.9/3,Error ellipse: s-maj=748.7km s-min=158.6km az=88.0,Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**38.25**	**248**	P	P	08 45 07.7	-1.8
	4.0nm,1.1s,baz=96,slow=10,SNR=5.3						
ASAR	**Alice Springs**	**45.71**	**259**	P	P	08 46 10.7	0.0
	0.6nm,0.4s,baz=93,slow=7.4,SNR=12						
WRA	**Warramunga Arr**	**46.16**	**265**	P	P	08 46 14.7	+1.0
	0.4nm,0.4s,baz=101,slow=7.7,SNR=18						

*ISCJB **22** 08:49:37.3±0.7,28°.44N±0°.05×53°.63E±0°.06,h10km, mb3.5/6,Error ellipse: s-maj=7.9km s-min=6.5km az=139.8*
*IDC **22** 08:49:37.6±2.4,28°.59N×53°.51E,h0km,mb3.6/6, mb1 3.6/7,mb1mx3.4/29,mbtmp3.6/7,ML3.4/1,Error ellipse: s-maj=58.6km s-min=23.0km az=157.0*
*TEH **22** 08:49:39.3,28°.39N×53°.57E,h11km,ML3.8*
*CSEM **22** 08:49:41.2±0.5,28°.54N×53°.57E,h17km±2km,ML3.8, Error ellipse: s-maj=8.3km s-min=4.7km az=124.0*
*KISR **22** 08:49:43.2±0.6,28°.98N×52°.93E,h34km±999km,ML3.0*

ISC 22 08:49:39.1±0.8,28°.49N±0°.05×53°.52E±0°.05,h10km,n36, σ1s34/40,mb3.6/6,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GHIR	**Ghir-Karzin**	**0.51**	**247**	*e*Pg	**Pn**	**08 49 52.4**	**-0.2**
ISRV	**Sarvestan**	**0.96**	**338**	*e*Pg	**Pg**	**08 49 55.2**	**-2.4**
ISRV				*e*Sg	**Sn**	**08 50 13.0**	**+0.1**
ISRV				*e*		08 50 18.3	
	comp=Z,21μm,0.2s						
IPAR	**Pars**	**1.41**	**343**	*e*Sg	**Sg**	**08 50 26.1**	**+1.5**
IPAR				*e*Pn	**Pn**	**08 50 05.1**	**-0.1**
IPAR				*e*		08 50 28.1	
	comp=Z,16μm,0.5s						
SHI	**Shiraz**	**1.45**	**323**	*e*Sg	**Sg**	**08 50 28.0**	**+2.2**
SHI				*e*Pn	**Pg**	**08 50 06.8**	**-0.2**
SHI				*e*		08 50 30.6	
	comp=E,12μm,0.2s						
BNDS	**Bandar-Abbas**	**2.58**	**114**	*e*Pn	**Pb**	**08 50 25.6**	**0.0**
IMEH	**Mehriz**	**3.04**	**18**	*e*Pn	**Pn**	**08 50 28.3**	**+0.7**
IMEH				*e*		08 51 14.9	
	comp=Z,1μm,0.3s						
IMEH	**Mehriz**	**3.04**	**18**	*e*Pn	**Pn**	**08 50 28.3**	**+0.7**
KRBR	**Kerman**	**3.20**	**61**	*e*Sg	**Sb**	**08 51 18.2**	**+2.8**
ISAD	**Sadrabad**	**3.42**	**2**	*e*Pn	**Pn**	**08 50 33.6**	**+0.9**
ISAD				*e*		08 51 34.6	
	comp=Z,2μm,0.4s						
ISAD	**Sadrabad**	**3.42**	**2**	*e*Pn	**Pn**	**08 50 33.6**	**+0.9**
IBAF	**Bafgh**	**3.56**	**29**	*e*Pn	**Pn**	**08 50 35.4**	**+0.8**
IBAF				*e*		08 50 48.5	
	comp=Z,763nm,0.2s						
IBAF	**Bafgh**	**3.56**	**29**	*e*Pn	**Pn**	**08 50 35.4**	**+0.8**
ICHK	**Chekchek**	**3.82**	**11**	*e*Pn	**Pn**	**08 50 39.0**	**+0.8**
ICHK				*e*		08 50 49.0	
	comp=Z,1μm,0.2s						
ICHK	**Chekchek**	**3.82**	**11**	*e*Pn	**Pn**	**08 50 39.0**	**+0.8**
IGAR	**Gharneh**	**4.11**	**342**	*e*Pn	**Pn**	**08 50 42.9**	**+0.7**
IGAR				*e*		08 51 34.1	
	comp=Z,562nm,0.1s						
NASN	**Na'in**	**4.34**	**352**	*e*Pn	**Pn**	**08 50 45.7**	**+0.2**
IZEF	**Zefreh**	**4.51**	**347**	*e*Pn	**Pn**	**08 50 48.3**	**+0.5**
IZEF				*e*		08 51 41.8	
	comp=Z,272nm,0.1s						
IZEF	**Zefreh**	**4.51**	**347**	*e*Pn	**Pn**	**08 50 48.3**	**+0.5**
IPIR	**Pirpir**	**4.76**	**332**	*e*Pn	**Pn**	**08 50 51.9**	**+0.7**
IPIR				*e*		08 51 48.1	
	comp=Z,1μm,0.3s						
IPIR	**Pirpir**	**4.76**	**332**	*e*Pn	**Pn**	**08 50 51.9**	**+0.7**
IKLH	**Kolahrood**	**5.10**	**341**	*e*Pn	**Pn**	**08 50 57.0**	**+1.2**
IKLH				*e*		08 51 55.4	
	comp=N,711nm,0.2s						
IKLH	**Kolahrood**	**5.10**	**341**	*e*Pn	**Pn**	**08 50 57.0**	**+1.2**
RDF	**Al-Radifah**	**5.26**	**276**	*e*P	**Pn**	**08 51 00.5**	**+2.6**
RDF	**Al-Radifah**	**5.26**	**276**	*e*P	**Pn**	**08 51 00.5**	**+2.6**
NAY	**Al-Naaiem**	**5.56**	**279**	*e*P	**Pn**	**08 51 03.7**	**+1.8**
NAY	**Al-Naaiem**	**5.56**	**279**	*e*P	**Pn**	**08 51 03.7**	**+1.8**
MIB	**Mutribah**	**5.56**	**285**	*e*P	**Pn**	**08 51 03.7**	**+1.7**
MIB				*e*S	**Sn**	**08 52 03.8**	**-2.2**
MIB				AML	AML	08 52 06.5	
	comp=Z,11nm,0.6s						
MIB	**Mutribah**	**5.56**	**285**	*e*P	**Pn**	**08 51 03.7**	**+1.7**
KHMZ	**Khomeyn**	**6.06**	**331**	*e*Pn	**Pn**	**08 51 09.2**	**+0.2**
BRTR	**Keskin Array B**	**19.87**	**309**	P	**P**	**08 54 09.4**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=126,slow=15,SNR=3.5						
BVAR	**Borovoye Array**	**27.50**	**22**	P	**P**	**08 55 25.2**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=230,slow=6.8,SNR=4.5						
MKAR	**Makanchi Array**	**28.97**	**43**	P	**P**	**08 55 38.7**	**-0.1**
	comp=Z,0.4nm,0.8s,baz=236,slow=9.9,SNR=2.6						
KURBB	**Kurchatov Arra**	**29.08**	**34**	P	**P**	**08 55 38.4**	**-1.2**
	comp=Z,0.1nm,0.3s,baz=233,slow=8.9,SNR=2.7						
ZALV	**Zalesovo Beam**	**34.17**	**33**	P	**P**	**08 56 23.3**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=253,slow=10,SNR=3.2						
FINES	**FINESS Array B**	**37.67**	**339**	P	**P**	**08 56 53.6**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=132,slow=13,SNR=3.3						
TORD	**Torodi Ar. Bea**	**50.42**	**264**	P	**P**	**08 58 37.2**	**+0.1**
	comp=Z,1.0nm,0.7s,baz=60,slow=8.1,SNR=9.4						

IDC 22 09:04:55.1±1.2,22°.88S×112°.33W,h0km,mb3.8/5, mb1 4.2/5,mb1mx4.0/16,mbtmp3.8/5,Error ellipse: s-maj=45.4km s-min=36.4km az=41.0,Easter Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**42.04**	**89**	P	P	09 12 49.2	-0.3
	2.9nm,1.0s,baz=259,slow=2.6,SNR=5.2						
TXAR	**Lajitas Array**	**52.58**	**10**	P	P	09 14 11.2	+0.5
	0.6nm,1.1s,baz=199,slow=8.2,SNR=3.3						
NVAR	**Mina Array Bea**	**61.24**	**355**	P	P	09 15 13.1	+0.8
	1.4nm,0.8s,baz=185,slow=10.0,SNR=6.5						
PDAR	**Pinedale Array**	**65.37**	**2**	P	P	09 15 38.8	-0.7
	0.1nm,0.4s,baz=170,slow=9.0,SNR=3.9						
YKA	**Yellowknife Ar**	**85.10**	**359**	P	P	09 17 31.7	-0.7
	0.8nm,1.0s,baz=180,slow=4.8,SNR=8.2						
AKASG	**Malin Array Be**	**139.26**	**37**	PKP	PKPdf	09 24 23.3	-0.6
	0.3nm,0.3s,baz=285,slow=3.7,SNR=4.1						
ZALV	**Zalesovo Beam**	**146.38**	**342**	PKPbc	PKPdf	09 24 36.8	+0.4
	0.8nm,0.4s,baz=35,slow=5.3,SNR=2.9						
BRTR	**Keskin Array B**	**146.68**	**52**	PKPbc	PKPbc	09 24 38.8	-0.4
	1.4nm,0.7s,baz=247,slow=2.5,SNR=7.7						
BVAR	**Borovoye Array**	**149.83**	**357**	PKPbc	PKPbc	09 24 46.7	-0.2
	0.8nm,0.7s,baz=28,slow=3.9,SNR=3.6						
CMAR	**Chiang Mai Arr**	**150.44**	**267**	PKPbc	PKPbc	09 24 50.0	+0.5
	1.6nm,0.3s,baz=126,slow=1.2,SNR=7.5						
KBZ	**Khabaz**	**150.85**	**39**	PKPbc	PKPbc	09 24 50.0	+0.4
	3.7nm,0.7s,baz=302,slow=1.8,SNR=8.0						
KURBB	**Kurchatov Arra**	**151.04**	**346**	PKPbc	PKPbc	09 24 48.5	-1.3
	1.1nm,0.8s,baz=17,slow=1.6,SNR=12						
MKAR	**Makanchi Array**	**153.38**	**337**	PKPbc	PKPbc	09 24 54.4	-0.9
	0.7nm,0.7s,baz=46,slow=3.5,SNR=6.5						

IDC 22 09:12:35.3±2.5,20°.44S×177°.82W,h500km±26km, mb3.3/9,mb1 3.5/10,mb1mx3.3/22,mbtmp3.4/10,Error ellipse: s-maj=48.8km s-min=13.9km az=150.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.69**	**43**	P	P	09 14 40.9	+1.8
	2.5nm,0.3s,baz=74,slow=7.4,SNR=3.0						
AFI				S	S	09 16 17.0	-3.6
	6.0nm,0.3s,baz=24,slow=22,SNR=6.7						
CTA	**Charters Tower**	**33.66**	**264**	P	P	09 18 34.6	+0.3
	5.6nm,0.5s,baz=93,slow=12,SNR=14						
PMG	**Port Moresby**	**35.49**	**283**	P	P	09 18 49.7	+0.1
	14nm,0.7s,baz=136,slow=23,SNR=3.6						
STKA	**Stephens Creek**	**37.97**	**244**	P	P	09 19 10.2	+0.3
	2.2nm,0.8s,baz=80,slow=12,SNR=2.9						
ASAR	**Alice Springs**	**44.70**	**257**	P	P	09 20 03.2	-0.4
	6.9nm,0.5s,baz=97,slow=7.6,SNR=128						
ASAR				PcP	PcP	09 21 34.5	-1.0
	0.5nm,0.5s,baz=96,slow=3.5,SNR=4.9						
WRA	**Warramunga Arr**	**44.78**	**262**	P	P	09 20 03.3	-0.9
	2.1nm,0.3s,baz=96,slow=7.6,SNR=203						
FITZ	**Fitzroy Crossi**	**53.20**	**262**	P	P	09 21 06.7	0.0
	1.5nm,0.5s,baz=117,slow=4.2,SNR=11						
USRK	**Ussuriysk Arra**	**79.00**	**326**	P	P	09 23 48.1	+1.3
	0.8nm,0.7s,baz=108,slow=6.3,SNR=8.1						
TXAR	**Lajitas Array**	**86.88**	**57**	P	P	09 24 28.1	+1.1
	0.1nm,0.6s,baz=205,slow=8.3,SNR=2.7						
ILAR	**Eielson Array**	**88.22**	**13**	P	P	09 24 30.6	-1.7
	0.2nm,0.6s,baz=210,slow=5.2,SNR=3.3						
AKASG	**Malin Array Be**	**143.04**	**331**	PKhKP	PKPpre	09 31 08.0	
	1.5nm,0.4s,baz=43,slow=4.3,SNR=13						

*CSEM **22** 09:13:39.7,40°.27N×37°.54E,h7km,MD2.6,After DDA*
DDA 22 09:13:39.7,40°.27N×37°.54E,h7km,MD2.6,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCER	**sogukcermik**	**0.52**	**218**	*i* P	P	09 13 49.6	-0.3
SCER	**sogukcermik**	**0.52**	**218**	*i* P	Pg	09 13 49.6	-0.3
TOKA	**Tokat**	**0.81**	**274**	*i* P	Pg	09 13 55.8	+0.4
TOKA	**Tokat**	**0.81**	**274**	*i* P	Pg	09 13 55.8	+0.4
GRSN	**GIRESUNGRSN**	**0.85**	**40**	*i* P	Pg	09 13 56.5	+0.3
GRSN	**GIRESUNGRSN**	**0.85**	**40**	*i* P	Pg	09 13 56.5	+0.3
KEMA	**Kemaliye**	**1.24**	**144**	*i* P	Pn	09 14 03.1	-0.5
KEMA				*i* S	Sn	09 14 21.7	+1.0
KEMA	**Kemaliye**	**1.24**	**144**	*i* P	Pn	09 14 03.1	-0.5
KEMA				*i* S	Sn	09 14 21.7	+1.0
KELT	**Kelkit**	**1.32**	**95**	*i* P	Pn	09 14 04.0	-0.8
KELT	**Kelkit**	**1.32**	**95**	*i* P	Pn	09 14 04.0	-0.8
PINB	**Pinarbasi**	**1.82**	**209**	*i* P	Pb	09 14 13.6	-0.1
PINB	**Pinarbasi**	**1.82**	**209**	*i* P	Pb	09 14 13.6	-0.1

*IDC **22** 09:29:05.4±3.6,40°.07N×28°.62E,h0km,mb3.1/2, mb1 3.2/4,mb1mx3.0/27,mbtmp3.2/4,ML3.3/2,Error ellipse: s-maj=45.5km s-min=17.6km az=44.0*
*DDA **22** 09:29:10.6,40°.46N×29°.16E,h21km,ML3.8*
*ISCJB **22** 09:29:11.5±0.3,40°.49N±0°.02×29°.14E±0°.02,h8km±2km, mb3.1/2,Error ellipse: s-maj=2.9km s-min=2.6km az=42.6*
*ISK **22** 09:29:11.2,40°.49N×29°.14E,h6km,ML3.7*
*ATH **22** 09:29:11.8,41°.17N×28°.75E,h5km,MD3.9/7*
*CSEM **22** 09:29:13.5±0.1,40°.52N×29°.10E,h20km,ML3.7,Error ellipse: s-maj=3.6km s-min=3.3km az=35.0*

ISC 22 09:29:11.9±0.8,40°.48N±0°.02×29°.13E±0°.02,h11km±5km, n163,σ1s15/182,12C-8D,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEMT	**Gemlik**	**0.06**	**132**	PG	**Pg**	**09 29 13.8**	**-0.3**
GEMT				*e*SG	**Sg**	**09 29 15.3**	**-0.4**
YLV	**Yalova**	**0.20**	**63**	PG	**Pg**	**09 29 15.9**	**-0.4**
YLV				*e*SG	**Sg**	**09 29 19.2**	**-0.1**

MDUB	Mudurnu	1.58	89	*e*Pn	Pb	09 29 40.3 -0.9
ALT	Altintas	1.61	152	*e*PN	Pb	09 29 41.0 -0.7
ALT	Altintas	1.61	152	*e*Pn	Pb	09 29 41.0 -0.7
SEYT	Eskypehyr	1.63	125	*i* P	Pn	09 29 40.0 -0.7
SEYT	Eskypehyr	1.63	125	*i* P	Pn	09 29 40.0 -0.7
LPK	Lapseki	1.81	268	*e*PN	Pb	09 29 43.9 -1.2
LPK	Lapseki	1.81	268	*e*Pn	Pb	09 29 43.9 -1.2
AKHS	Akhisar	1.89	213	*i* P	Pn	09 29 43.1 -1.1
AKHS	Akhisar	1.89	213	*i* P	Pn	09 29 43.1 -1.1
KDZE	Karadeniz Ereo	1.94	64	*e*PN	Pn	09 29 45.5 +0.6
KDZE	Karadeniz Ereo	1.94	64	*e*Pn	Pn	09 29 45.5 +0.6
KULA	Kula-Manisa	1.99	191	*e*PN	Pb	09 29 47.4 -0.8
KULA	Kula-Manisa	1.99	191	*e*Pn	Pb	09 29 47.4 -0.8
ERIK	Erikli-Kesan	2.00	276	*e*PN	Pb	09 29 46.8 -1.6
ERIK	Erikli-Kesan	2.00	276	*e*Pn	Pb	09 29 46.8 -1.6
GELI	Tayfur-Gelibol	2.03	269	*e*PN	Pb	09 29 47.4 -1.4
GELI	Tayfur-Gelibol	2.03	269	*e*Pn	Pb	09 29 47.4 -1.4
SVRH	Sivrihisar-ESK	2.10	118	*e*PN	Pn	09 29 48.1 +0.9
SVRH	Sivrihisar-ESK	2.10	118	*e*Pn	Pn	09 29 48.1 +0.9
KHAL	Karahalli	2.12	172	*i* P	Pn	09 29 46.5 -0.9
KHAL	Karahalli	2.12	172	*i* P	Pn	09 29 46.5 -0.9
KHL	Karahalli	2.17	172	*e*PN	Pb	09 29 50.0 -1.3
KHL	Karahalli	2.17	172	*e*Pn	Pb	09 29 50.0 -1.3
SHUT	Suhut-Afyon	2.21	150	*e*PN	Pb	09 29 50.4 -1.6
SHUT	Suhut-Afyon	2.21	150	*e*Pn	Pb	09 29 50.4 -1.6
EZN	Ezine	2.25	254	*e*PN	Pn	09 29 50.3 +1.3
EZN	Ezine	2.25	254	*e*Pn	Pn	09 29 50.3 +1.3
EDRB	Edirne	2.27	308	*e*PN	Pn	09 29 49.8 +0.5
EDRB	Edirne	2.27	308	*e*Pn	Pn	09 29 49.8 +0.5
ENEZ	Enez	2.28	278	*e*PN	Pn	09 29 50.2 +0.7
ENEZ	Enez	2.28	278	*e*Pn	Pn	09 29 50.2 +0.7
ALE	Alexandroupoli	2.38	281	*e*PG	Pn	09 29 50.6 -0.3
ALN	Alexandroupoli	2.38	281	*e*Pg	Pn	09 29 50.6 -0.3
PRK	Paraskevi	2.52	242	*e*PN	Pg	09 29 58.8 -1.4
IZM	Izmir	2.53	216	*e*PN	Pn	09 29 54.2 +1.2
IZM	Izmir	2.53	216	*e*Pn	Pn	09 29 54.2 +1.2
BLCB	Balcova	2.64	218	*e*PN	Pn	09 29 55.8 +1.4
BLCB	Balcova	2.64	218	*e*Pn	Pn	09 29 55.8 +1.4
KIZT	Kizilcal	2.65	126	*e*PN	Pn	09 29 56.2 +1.5
KIZT	Kizilcal	2.65	126	*e*Pn	Pn	09 29 56.2 +1.5
SMTH	Samothraki Isl	2.75	271	*e*PB	Pn	09 29 55.3 -0.6
SMTH	Samothraki Isl	2.75	271	*e*Pb	Pn	09 29 55.3 -0.6
JMB	Yambol	2.76	317	*e*Pn	Pn	09 29 56.8 +0.7
SAFT	Safranbolu	2.80	73	*e*PN	Pn	09 29 57.8 +1.1
SAFT	Safranbolu	2.80	73	*e*Pn	Pn	09 29 57.8 +1.1
LOD	Lodumlu	2.84	101	*e*PN	Pn	09 29 58.4 +1.1
LOD	Lodumlu	2.84	101	*e*Pn	Pn	09 29 58.4 +1.1
ANTO	Ankara	2.87	101 ⇓	*i* P	Pb	09 30 02.6 -0.6
ANTO	Ankara	2.87	101 ⇓	*i* P	Pb	09 30 02.6 -0.6
CHOS	Chios island	3.17	230	*e*PB	Pb	09 30 10.0 +1.8
CHOS				*e*SN	Sg	09 30 52.5 -1.1
CHOS	Chios island	3.17	230	*e*Pb	Pb	09 30 10.0 +1.8
AFSR	Af˙ar-Bala (A	3.20	107	*e*PN	Pn	09 30 03.9 +1.7
AFSR	Af˙ar-Bala (A	3.20	107	*e*Pn	Pn	09 30 03.9 +1.7
SMG	Samos	3.29	214	*e*PN	Pg	09 30 14.1 -0.8
LADK	Ladik-KONYA	3.38	131	*e*PN	Pn	09 30 06.4 +1.6
LADK	Ladik-KONYA	3.38	131	*e*Pn	Pn	09 30 06.4 +1.6
YER	Yerkesik	3.40	192	*e*PN	Pn	09 30 06.7 +1.7
YER	Yerkesik	3.40	192	*e*Pn	Pn	09 30 06.7 +1.7
CANT	Cankiri	3.42	86	*e*PN	Pn	09 30 06.9 +1.6
BRTR	Keskin Array B	3.54	101	Pn	Pn	09 30 06.1 -0.8
	0.6nm,0.3s,baz=274,slow=12,SNR=16					
BRTR				Pg	Pb	09 30 16.4 +1.9
	2.3nm,0.3s,baz=279,slow=14,SNR=42					
BRTR				Lg	Lg	09 31 07.0
	2.5nm,0.3s,baz=280,slow=21,SNR=7.3					
KONT	Konya--Tatoy	3.56	134	*e*PN	Pn	09 30 08.9 +1.8
KONT	Konya--Tatoy	3.56	134	*e*Pn	Pn	09 30 08.9 +1.8
DALY	Dalyan (Mu˙la	3.67	186	*e*PN	Pn	09 30 10.7 +2.1
DALY	Dalyan (Mu˙la	3.67	186	*e*Pn	Pn	09 30 10.7 +2.1
BODT	Bodrum	3.69	203	*e*PN	Pn	09 30 11.3 +2.4
BODT	Bodrum	3.69	203	*e*Pn	Pn	09 30 11.3 +2.4
TOS	Tosya	3.76	80	*e*PN	Pn	09 30 11.1 +1.2
TOS	Tosya	3.76	80	*e*Pn	Pn	09 30 11.1 +1.2
DAT	Datca	3.93	199	*e*PN	Pn	09 30 14.3 +2.0
DAT	Datca	3.93	199	*e*Pn	Pn	09 30 14.3 +2.0
BZK	Bozkurt	3.96	66	*e*PN	Pn	09 30 14.3 +1.7
BZK	Bozkurt	3.96	66	*e*Pn	Pn	09 30 14.3 +1.7
TIRR	Tirgusor	4.02	353	⇑ *i*P	Pn	09 30 14.1 +0.8
TIRR	Tirgusor	4.02	353	⇑ *i*P	Pn	09 30 14.1 +0.8
NVR	Nevrokopi	4.09	284	*e*PB	Pn	09 30 14.6 +0.2
NVR	Nevrokopi	4.09	284	*e*Pb	Pn	09 30 14.6 +0.2
SULT	Sultanhani-AKS	4.09	122	*e*PN	Pn	09 30 16.0 +1.6
SULT	Sultanhani-AKS	4.09	122	*e*Pn	Pn	09 30 16.0 +1.6
PAIG	Paliouri	4.21	264	*e*PN	Pn	09 30 14.9 -1.1
PAIG	Paliouri	4.21	264	*e*Pn	Pn	09 30 14.9 -1.1
TLCR		4.71	357	⇑ *i*P	Pn	09 30 25.2 +2.3
TLCR		4.71	357	⇑ *i*P	Pn	09 30 25.2 +2.3
CFR	Carcaliu	4.76	351	⇑ *i*P	Pn	09 30 25.2 +1.7
CFR	Carcaliu	4.76	351	⇑ *i*P	Pn	09 30 25.2 +1.7
VTS	Vitosha	4.92	297	⇓ *i*P	Pn	09 30 26.2 +0.2
VTS	Vitosha	4.92	297	⇓ *i*P	Pn	09 30 26.2 +0.2
MLR	Muntele Rosu	5.53	336	⇑ *i*P	Pn	09 30 35.0 +0.7
MLR	Muntele Rosu	5.53	336	⇑ *i*P	Pn	09 30 35.0 +0.7
VRI	Vrincioaia	5.67	343	⇑ *i*P	Pn	09 30 37.1 +1.0
VRI	Vrincioaia	5.67	343	⇑ *i*P	Pn	09 30 37.1 +1.0
PLOR	Plostina	5.67	342	⇓ *i*P	Pn	09 30 38.0 +1.9
PLOR	Plostina	5.67	342	⇓ *i*P	Pn	09 30 38.0 +1.9
VOIR		5.79	330	⇓ *i*P	Pn	09 30 38.7 +0.8
VOIR		5.79	330	⇓ *i*P	Pn	09 30 38.7 +0.8
BARS	Barje	5.96	296	*e*PN	Pn	09 30 40.6 +0.5
LOT	Lotru	6.34	323	⇑ *i*P	Pn	09 30 46.6 +1.2
LOT	Lotru	6.34	323	⇑ *i*P	Pn	09 30 46.6 +1.2
GRUS	Gruza	7.12	301	*e*Pn	Pn	09 30 56.7 +0.7
AKASG	Malin Array Be	10.23	0	Pn	Pn	09 31 36.3 -2.2
	0.8nm,0.3s,baz=178,slow=12,SNR=2.7					
AKASG				Sn	Sn	09 33 36.6 +3.5
	1.0nm,0.3s,baz=184,slow=25,SNR=2.2					
FINES	FINESS Array B	21.08	356	P	P	09 33 54.5 -1.5
	1.0nm,0.6s,baz=161,slow=13,SNR=4.1					
MKAR	Makanchi Array	38.37	62	P	P	09 36 34.4 +1.4
	0.1nm,0.5s,baz=269,slow=8.5,SNR=2.0					

ISK ***22*** *09:38:13.3,38.˚64N×44.˚38E, h28km, ML3.2*
DDA ***22*** *09:38:15.9,38.˚60N×43.˚64E, h7km, MD3.3*
CSEM ***22*** *09:38:16.3±0.5, 38.˚59N×43.˚64E, h2km, MD3.3, Error ellipse: s-maj=12.5km s-min=6.9km az=110.0*
NSSP ***22*** *09:38:17.2, 38.˚67N×43.˚63E, Ms3.1*

ISC 22 09:38:16.4±1.0, 38.˚58N±0.˚02×43.˚64E±0.˚03, h11km±8km, n33, σ1°30/48, 3D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVAN	Van	0.19	254	*i* P	Pg	09 38 20.7	0.0
TVAN	Van	0.19	254	*i* P	Pg	09 38 20.7	0.0
GEVA	Gevas	0.53	240	*i* P	Pg	09 38 26.2	-0.6
GEVA	Gevas	0.53	240	*i* P	Pg	09 38 26.2	-0.6
CLDR	Caldiran	0.60	21	*e*PG	Pg	09 38 26.8	-1.4
CLDR				*e*SG	Sg	09 38 36.3	+0.2
CLDR	Caldiran	0.60	21	*e*Pg	Pg	09 38 26.8	-1.4
CLDR				*e*Sg	Sg	09 38 36.3	+0.2
DYDN	Diyadin	0.96	2	*i* P	Pb	09 38 34.8	-0.4
DYDN				*i* S	Sg	09 38 47.0	-0.6
DYDN	Diyadin	0.96	2	*i* P	Pb	09 38 34.8	-0.4
DYDN				*i* S	Sg	09 38 47.0	-0.6
HAKT	HAKKARI	1.02	177	*i* P	Pb	09 38 34.4	-1.9
HAKT				*i* S	Sg	09 38 50.9	+1.5
HAKT	HAKKARI	1.02	177	*i* P	Pb	09 38 34.4	-1.9
HAKT				*i* S	Sg	09 38 50.9	+1.5
TUTA	Tutak	1.04	322	*i* P	Pb	09 38 35.7	-0.9
TUTA	Tutak	1.04	322	*i* P	Pb	09 38 35.7	-0.9
TATV	Tatvan	1.08	267	*i* P	Pb	09 38 36.4	-0.8
TATV				*i* S	Sn	09 38 51.8	-0.9
TATV	Tatvan	1.08	267	*i* P	Pb	09 38 36.4	-0.8
TATV				*i* S	Sn	09 38 51.8	-0.9
AGRB	Hanur-Agry	1.11	333	*e*PN	Pb	09 38 37.1	-0.7
AGRB				*e*SN	Sn	09 38 56.2	+2.6
AGRB	Hanur-Agry	1.11	333	*e*Pn	Pb	09 38 37.1	-0.7
AGRB				*e*Sn	Sn	09 38 56.2	+2.6
CUKT	Cukurca	1.33	181	*e*PN	Pn	09 38 39.4	-1.6
CUKT	Cukurca	1.33	181	*e*Pn	Pn	09 38 39.4	-1.6
SIRN	S¨¯rnak	1.45	222	*i* P	Pg	09 38 46.1	+1.8
SIRN				*i* S	Sb	09 39 02.2	+0.2
SIRN	S¨¯rnak	1.45	222	*i* P	Pg	09 38 46.1	+1.8
SIRN				*i* S	Sb	09 39 02.2	+0.2
GNI	Garni	1.78	28	⇓ *i*P	Pb	09 38 49.6	+0.4
GNI				⇓ *i*S	Sg	09 39 17.0	+3.2
GNI	Garni	1.78	28	⇓ P	Pb	09 38 49.6	+0.4
DIGO	Kars	1.84	354	*i* P	Pg	09 38 51.6	-0.2
DIGO	Kars	1.84	354	*i* P	Pg	09 38 51.6	-0.2
BNGL	BINGOL	1.98	282	*i* P	Pb	09 38 53.1	+0.4
BEST	Besiri	1.99	250	*i* P	Pg	09 38 53.4	-1.1
BEST				*i* S	Sg	09 39 21.8	+1.4
ERZM	Erzurum	2.21	308	*i* P	Pg	09 38 57.3	-1.4
EZM	Erzurum	2.21	307	*e*PN	Pb	09 38 55.6	-0.9
VADZ	Vardenis	2.28	45	*e*P	Pg	09 39 00.0	0.0
VADZ				*e*S	Sg	09 39 31.0	+1.4
VADZ	Vardenis	2.28	45	P	Pg	09 39 00.0	0.0
BNGB	Bing¶l	2.35	281	*e*PN	Pb	09 38 58.3	-0.6
BINT	Bingol	2.48	278	*e*Pn	Pn	09 38 58.3	+1.4
DDEM	Demirkent	2.73	328	*i* P	Pg	09 39 06.5	-2.3

IDC 22 09:41:22.6±2.2, 21.˚08S×178.˚78W, h513km±28km, mb3.3/8, mb1 3.6/11, mb1mx3.4/22, mbtmp3.4/11, Error ellipse: s-maj=25.9km s-min=13.6km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	9.77	44	P	P	09 43 37.9	+0.1
	5.6nm,0.3s,baz=36,slow=7.9,SNR=10						
AFI				S	S	09 45 24.4	-4.5
	0.9nm,0.3s,baz=356,slow=21,SNR=1.5						
DZM	Mont Dzumac	13.79	263	P	P	09 44 20.4	+0.3
	0.7nm,0.3s,baz=87,slow=18,SNR=6.9						
URZ	Urewera	17.48	191	P	P	09 44 56.0	-1.4
	2.0nm,0.3s,baz=43,slow=16,SNR=12						
URZ				S	S	09 47 44.9	-7.8
	0.2nm,0.3s,baz=312,slow=23,SNR=1.2						
RPZ	Rata Peaks	24.11	198	P	P	09 45 57.5	+0.2
	3.2nm,0.4s,baz=358,slow=1.2,SNR=6.6						
STKA	Stephens Creek	36.88	245	P	P	09 47 48.1	+0.8
	4.1nm,0.7s,baz=61,slow=11,SNR=9.3						
ASAR	Alice Springs	43.68	257	P	P	09 48 41.8	-0.2
	4.1nm,0.9s,baz=98,slow=7.9,SNR=37						
ASAR				pP	pP	09 50 13.5	-2.4
	0.4nm,0.4s,baz=84,slow=8.2,SNR=3.7						
WRA	Warramunga Arr	43.80	263	P	P	09 48 42.3	-0.6
	0.6nm,0.2s,baz=96,slow=8.7,SNR=39						
NVAR	Mina Array Bea	81.94	44	P	P	09 52 49.3	+0.6
	1.5nm,0.6s,baz=230,slow=8.6,SNR=8.4						
TXAR	Lajitas Array	87.98	58	P	P	09 53 18.9	+0.8
	1.1nm,0.8s,baz=214,slow=5.7,SNR=15						
ILAR	Eielson Array	89.04	13	P	P	09 53 20.4	-1.7
	0.4nm,0.5s,baz=219,slow=5.6,SNR=5.8						
PDAR	Pinedale Array	89.88	44	P	P	09 53 26.3	-0.5
	1.2nm,0.6s,baz=241,slow=3.7,SNR=8.6						
AKASG	Malin Array Be	143.16	330	PKhKP	PKPpre	09 59 54.2	
	0.8nm,0.4s,baz=45,slow=4.3,SNR=6.2						

NIED ***22*** *09:50:00, 29.˚30N×129.˚30E, h53km, Mw4.1 Best double couple: Mo1.80000×10^15 NP1:φs169.00000°, δ81.00000°, λ82.00000°. NP2:φs30.00000°, δ12.00000°, λ130.00000°.*
ISCJB ***22*** *09:50:33.3±0.3, 29.˚23N±0.˚04×129.˚43E±0.˚08, h94km±5km, mb3.5/8, Error ellipse: s-maj=12.4km s-min=3.5km az=26.3*
JMA ***22*** *09:50:33.7±0.1, 29.˚25N×129.˚37E, h81km±2km, M3.9*
JMA Felt I J1.
IDC ***22*** *09:50:35.0±2.7, 29.˚17N×129.˚30E, h97km±25km, mb3.3/8, mb1 3.4/11, mb1mx3.3/28, mbtmp3.3/11, Error ellipse: s-maj=28.0km s-min=16.8km az=76.0*

ISC 22 09:50:34.2±0.7, 29.˚23N±0.˚04×129.˚44E±0.˚07, h86km±7km, n26, σ1°12/42, mb3.5/8, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.72	32	P	Pn	09 50 49.7	-0.9
JNN				*e*S	Sn	09 51 01.7	-1.1
JAM	Amami Oshima	0.82	170	P	Pn	09 50 50.8	-0.9
JAM				*e*S	Sn	09 51 04.0	-0.7
JAMN	Amaminishikomi	1.01	193	P	Pn	09 50 53.2	-0.5
JAMN				*e*S	Sn	09 51 08.0	-0.3
JZK	Kikaishima	1.02	153	P	Pn	09 50 54.7	+0.8
JZK				*e*S	Sn	09 51 11.7	+3.1
JKC	Kuchinoerabu	1.40	28	P	Pn	09 50 58.1	-0.3
JKC				*e*S	Sn	09 51 16.2	-0.5
JTK	Tokunoshima	1.50	197	P	Pn	09 50 59.6	-0.2
JTK				*e*S	Sn	09 51 19.6	+0.5
JTN	Tanegashima 3	1.95	43	P	Pn	09 51 05.2	-0.5
JTN				*e*S	Sn	09 51 29.9	+0.3
JTSR	Tashiro 2	2.32	33	P	Pn	09 51 10.1	-0.5
JTSR				*e*S	Sn	09 51 38.7	+0.3
JSU	Suzuyama	2.44	21	P	Pn	09 51 12.5	+0.4
JSJ	Shimokoshiki	2.46	5	P	Pn	09 51 12.9	+0.6
JIH	Iheya	2.54	211	P	Pn	09 51 13.8	+0.3
JIH				*e*S	Sn	09 51 43.8	+0.2
JOW	Kunigami	2.60	204	P	Pn	09 51 14.2	-0.1
JOW				*e*S	Sn	09 51 45.9	+0.9
JAGN	Aguni-jima	3.27	217	P	Pn	09 51 23.9	+0.6
JAGN				*e*S	Sn	09 52 01.7	+0.5
JJT2	Tamagusuku 2	3.42	206	P	Pn	09 51 25.7	+0.3
JJT2				*e*S	Sn	09 52 05.7	+0.8
JKE	Kume jima 2	3.73	220	P	Pn	09 51 29.6	+0.1
JKE				*e*S	Sn	09 52 12.8	+0.6
JNU	Nakatsue	4.08	17	P	Pn	09 51 36.1	+1.9
	5.3nm,0.3s,baz=195,slow=7.6,SNR=23						
JNU				S	Sn	09 52 24.9	+4.1
	0.8nm,0.3s,baz=149,slow=18,SNR=1.7						
KSRS	Korea Array	8.30	352	P	Pn	09 52 34.5	+2.8
	0.4nm,0.3s,baz=175,slow=14,SNR=7.5						
MJAR	Matsushiro Arr	10.37	43	P	Pn	09 53 00.7	+0.7
	0.3nm,0.3s,baz=238,slow=13,SNR=4.8						
SONM	Songino Array	25.73	323	P	P	09 55 55.5	-1.0
	1.2nm,0.5s,baz=137,slow=9.3,SNR=9.8						
MKAR	Makanchi Array	40.41	309	P	P	09 58 03.6	-0.3
	0.2nm,0.6s,baz=76,slow=5.8,SNR=3.6						
MKAR				pP	pP	09 58 25.7	+1.4
	0.4nm,0.8s,baz=98,slow=10,SNR=3.5						
MKAR				PcP	PcP	10 00 04.5	-0.8
	0.1nm,0.4s,baz=92,slow=3.2,SNR=4.4						
ZALV	Zalesovo Beam	40.57	320	P	P	09 58 04.5	-0.5
	0.5nm,0.3s,baz=94,slow=13,SNR=2.9						
ZALV				pP	pP	09 58 25.7	+0.2
	0.4nm,0.3s,baz=119,slow=8.8,SNR=1.9						
WRA	Warramunga Arr	49.11	174	P	P	09 59 12.1	-1.0
	0.6nm,0.4s,baz=354,slow=8.4,SNR=13						
ASAR	Alice Springs	52.76	175	P	P	09 59 40.2	-0.2
	0.4nm,0.9s,baz=7.9,slow=12,SNR=4.8						
ILAR	Eielson Array	61.30	29	P	P	10 00 40.8	+0.5
	0.2nm,0.6s,baz=287,slow=6.6,SNR=4.9						
FINES	FINESS Array B	70.80	330	P	P	10 01 39.5	-1.6
	0.3nm,0.3s,baz=46,slow=5.5,SNR=4.8						
YKA	Yellowknife Ar	75.37	26	P	P	10 02 08.9	+0.9
	0.2nm,0.5s,baz=309,slow=5.5,SNR=3.8						

JMA 22 09:59:38.9±0.6, 45.˚41N×150.˚06E, h30km, M4.3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	3.71	238	P	Pn	10 00 33.3	-0.8
NEM2				*e*S	Sn	10 01 13.0	-3.7
JRA	Rausu	3.82	249	P	Pn	10 00 37.6	+2.0
JRA				*e*S	Sn	10 01 21.8	+2.4
JNK	Nakash	4.23	246	P	Pn	10 00 42.1	+0.8
JNK				*e*S	Sn	10 01 29.5	-0.2
JAK	Akkeshi	4.55	240	P	Pn	10 00 44.9	-0.7
JAK				*e*S	Sn	10 01 34.4	-3.0
JTKR	Abashiri--Toko	4.62	254	P	Pn	10 00 47.4	+0.8
JMP	Maruseppu	4.98	256	P	Pn	10 00 53.1	+1.5
JAR	Ashorobuto	4.98	247	P	Pn	10 00 52.7	+1.1
JAR				*e*S	Sn	10 01 48.7	+0.5
JOB	Onbets	5.13	243	P	Pn	10 00 54.2	+0.6
JOB				*e*S	Sn	10 01 50.1	-1.7
ASAJ	Asahikawa	5.47	259	P	Pn	10 01 01.1	+2.8
JCH	Churui	5.58	242	P	Pn	10 00 59.6	-0.2
JCH				*e*S	Sn	10 01 59.1	-3.8
JFR	Furan	5.81	250	P	Pn	10 01 05.2	+2.2
JEM	Erimo	6.04	238	P	Pn	10 01 06.3	+0.1
JEM				*e*S	Sn	10 02 10.7	-3.6
JBT2	Biratori 2	6.13	247	P	Pn	10 01 07.3	-0.1
JNBK	Urakawa-nobuka	6.14	242	*e*S	Sn	10 02 12.8	-3.9
JNB	Noboribetsu	7.14	249	P	Pn	10 01 21.0	-0.3
JNB				*e*S	Sn	10 02 38.6	-2.8
JKB	Kayabe	7.43	245	P	Pn	10 01 24.4	-0.8
JKB				*e*S	Sn	10 02 42.0	-6.5
JYM2	Yakumo 2	7.75	248	P	Pn	10 01 29.0	-0.6
JTM	Tenmabayashi	8.04	238	*e*S	Sn	10 02 53.9	-9.5
JANG	Nango	8.04	234	P	Pn	10 01 31.5	-2.1
JANG				*e*S	Sn	10 02 54.0	-9.5
OFUJ	Ofunato	8.87	227	*e*S	Sn	10 03 13.0	-11
JRG	Rokugo	9.20	233	*e*S	Sn	10 03 22.1	-10

ISCJB ***22*** *10:02:38.9±0.6, 46.˚67N±0.˚02×10.˚58E±0.˚03, h14km±7km, Error ellipse: s-maj=4.6km s-min=3.1km az=136.4*
ZUR ***22*** *10:02:39.8, 46.˚65N×10.˚55E, h9km±1km, ML2.1/3*
VIE ***22*** *10:02:39.8±0.2, 46.˚69N×10.˚58E, h5km±4km, mb1.8/2, ML2.1/9, Error ellipse: s-maj=1.6km s-min=1.3km az=151.0 3 km NE of Glorenza*
CSEM ***22*** *10:02:39.5±0.1, 46.˚67N×10.˚57E, h10km, ML2.6/7, Error ellipse: s-maj=1.6km s-min=1.0km az=139.0*
ROM ***22*** *10:02:40.1±0.4, 46.˚64N×10.˚51E, h11km, Md2.0/4, Ml1.9/1, Error ellipse: s-maj=3.9km s-min=1.8km az=58.0*

ISC 22 10:02:39.6±0.9, 46.˚67N±0.˚02×10.˚57E±0.˚02, h10km±6km, n27, σ0°26/53, 9C-8D, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MOSI	Grossmontoni	0.06	195	⇑ *i*Pg	Pg	10 02 42.0	+0.1
MOSI				*i* Sg	Sg	10 02 43.3	-0.3
BRMO	Bormio	0.24	215	Pg	Pg	10 02 44.7	+0.2
BRMO				Sg	Sg	10 02 48.1	+0.2
	202nm,0.2s						
BRMO	Bormio	0.24	215	Pg	Pg	10 02 44.7	+0.2
BRMO				Sg	Sg	10 02 48.1	+0.2
	202nm,0.2s						
FETA	Feichten	0.37	17	⇓ *i*Pg	Pg	10 02 47.3	+0.3
	1.8nm,0.1s,SNR=84						
FETA				⇓ *i*Sg	Sg	10 02 51.7	-0.1
	14nm,0.1s						
FETA	Feichten	0.37	17	Pg	Pg	10 02 47.3	+0.3
	1.8nm,0.1s,SNR=84						
FETA				Sg	Sg	10 02 51.7	-0.1
	14nm,0.1s						
BERNI	Berninapass	0.46	236	*e*Pg	Pg	10 02 48.8	+0.2
	138nm,0.1s						
BERNI				*e*Sg	Sg	10 02 54.8	+0.1
	138nm,0.1s						
BERNI	Berninapass	0.46	236	Pg	Pg	10 02 48.8	+0.2
BERNI				Sg	Sg	10 02 54.7	+0.1
BERNI	Berninapass	0.46	236	*e*Pg	Pg	10 02 48.8	+0.2
	138nm,0.1s						
BERNI				*e*Sg	Sg	10 02 54.8	+0.1
	138nm,0.1s						
DAVOX	Davos/Dischmat	0.49	283	*e*Pg	Pg	10 02 49.2	+0.1
	247nm,0.3s						
DAVOX				*e*Sg	Sg	10 02 55.9	+0.3
	247nm,0.3s						
DAVOX	Davos/Dischmat	0.49	283	Pg	Pg	10 02 49.3	+0.1
DAVOX				Sg	Sg	10 02 55.9	+0.3
DAVOX	Davos/Dischmat	0.49	283	Pg	Pg	10 02 49.3	+0.1
DAVOX				*e*Sg	Sg	10 02 55.9	+0.3
	247nm,0.3s						
ABSI	Aberstueckl	0.52	83	⇓ *e*Pg	Pb	10 02 50.4	-0.5
ABSI				*e*Sg	Sg	10 02 57.0	+0.4
KOSI	Kohlern	0.59	110	*e*Pg	Pb	10 02 51.9	-0.3
KOSI				*e*Sg	Sg	10 02 59.1	+0.1
MABI	Malga Bissina	0.62	184	Pg	Pg	10 02 51.9	+0.3
MABI				Sg	Sg	10 02 59.3	-0.4
MABI	Malga Bissina	0.62	184	Pg	Pg	10 02 51.9	+0.3
MABI				Sg	Sg	10 02 59.3	-0.4
ROSI	Rosskopf	0.63	66	⇑ *e*Pg	Pg	10 02 52.0	+0.1
ROSI				*e*Sg	Sg	10 03 01.0	+0.8
RNI	Roncone	0.69	176	⇓ *e*Pg	Pg	10 02 53.3	+0.3

	comp=Z,268nm,18.5s,baz=68,slow=33							
AS31	**Alice Springs**	**45.26**	**261**	*e*P	**P**	**10 28 15.7**	**-0.7**
ASAR	**Alice Springs**	**45.26**	**261**	P	**P**	**10 28 15.4**	**-1.0**
ASAR				PcP	**PcP**	**10 29 56.5**	**+0.4**
ASAR	**Alice Springs**	**45.26**	**261**	P	**P**	**10 28 15.5**	**-1.0**
	0.9nm,0.4s,baz=93,slow=7.8,SNR=24							
ASAR				PcP	**PcP**	**10 29 56.5**	**+0.4**
	1.0nm,0.7s,baz=116,slow=4.0,SNR=4.9							
ASAR				LR	LR	10 46 24.2		
	comp=Z,234nm,18.2s,baz=132,slow=35							
WRA	**Warramunga Arr**	**45.82**	**266**	P	**P**	**10 28 19.7**	**-1.2**
WRA				PcP	**PcP**	**10 29 58.0**	**-0.1**
WRA	**Warramunga Arr**	**45.82**	**266**	P	**P**	**10 28 19.7**	**-1.2**
	1.4nm,0.4s,baz=104,slow=7.9,SNR=20							
WRA				PcP	**PcP**	**10 29 58.0**	**-0.1**
	1.7nm,0.8s,baz=108,slow=3.5,SNR=7.2							
VNDA	**Vanda**	**53.03**	**186**	P	**P**	**10 29 17.6**	**+2.5**
VNDA	**Vanda**	**53.03**	**186**	P	**P**	**10 29 17.6**	**+2.5**
	1.9nm,1.1s,baz=358,slow=6.8,SNR=3.2							
FITZ	**Fitzroy Crossi**	**54.22**	**265**	P	**P**	**10 29 24.6**	**-0.1**
FITZ	**Fitzroy Crossi**	**54.22**	**265**	P	**P**	**10 29 24.6**	**-0.1**
	2.1nm,0.8s,baz=129,slow=5.4							
FITZ				LR	LR	10 51 35.8		
	comp=Z,200nm,19.6s,baz=214,slow=35							
QSPA	**South Pole Qui**	**64.51**	**180**	*e*P	**P**	**10 30 36.0**	**+0.8**
	6.7nm,1.0s							
QSPA	**South Pole Qui**	**64.51**	**180**	P	**P**	**10 30 36.5**	**+1.3**
	4.6nm,0.7s,baz=56,slow=1.7,SNR=21							
MJAR	**Matsushiro Arr**	**75.31**	**323**	P	**P**	**10 31 41.5**	**-0.3**
MJAR	**Matsushiro Arr**	**75.31**	**323**	P	**P**	**10 31 41.5**	**-0.3**
	3.1nm,0.7s,baz=166,slow=6.6,SNR=12							
JNU	**Nakatsue**	**77.15**	**317**	LR	LR	11 03 04.8		
	comp=Z,71nm,18.1s,baz=180,slow=34							
MAW	**Mawson**	**77.38**	**200**	P	**P**	**10 31 54.3**	**+1.2**
MAW	**Mawson**	**77.38**	**200**	P	**P**	**10 31 54.3**	**+1.2**
	3.1nm,0.7s,baz=141,slow=8.3,SNR=10							
PETK	**Petropavlovsk-**	**81.61**	**344**	P	**P**	**10 32 17.0**	**+0.9**
PETK	**Petropavlovsk-**	**81.61**	**344**	P	**P**	**10 32 17.0**	**+0.9**
	3.1nm,0.7s,baz=118,slow=5.7,SNR=6.5							
KSRS	**Korea Array**	**81.82**	**318**	P	**P**	**10 32 18.6**	**+1.1**
	2.2nm,0.6s,baz=133,slow=6.6,SNR=11							
KSAR	**Wonju Array Be**	**81.84**	**318**	P	**P**	**10 32 18.6**	**+1.0**
SNAA	**Sanae**	**82.89**	**178**	*e*P	**P**	**10 32 22.9**	**0.0**
	10nm,1.4s							
NVAR	**Mina Array Bea**	**83.57**	**42**	P	**P**	**10 32 25.2**	**-1.8**
NVAR	**Mina Array Bea**	**83.57**	**42**	P	**P**	**10 32 25.2**	**-1.8**
	1.1nm,0.8s,baz=226,slow=6.0,SNR=6.5							
USRK	**Ussuriysk Arra**	**84.11**	**325**	P	**P**	**10 32 30.1**	**+0.8**
	1.7nm,0.8s,baz=60,slow=11,SNR=6.0							
TXAR	**Lajitas Array**	**88.37**	**56**	P	**P**	**10 32 51.6**	**+0.8**
TXAR	**Lajitas Array**	**88.37**	**56**	P	**P**	**10 32 51.6**	**+0.8**
	0.4nm,0.9s,baz=227,slow=6.6,SNR=5.7							
ANMO	**Albuquerque**	**89.26**	**50**	*e*P	**P**	**10 32 55.2**	**+0.3**
	0.8nm,0.8s							
ENH	**Enshi**	**90.30**	**304**	*e*P	**P**	**10 33 00.5**	**+0.8**
	9.5nm,0.8s							
PDAR	**Pinedale Array**	**91.49**	**43**	P	**P**	**10 33 05.6**	**+0.4**
PDAR	**Pinedale Array**	**91.49**	**43**	P	**P**	**10 33 05.6**	**+0.4**
	0.9nm,0.9s,baz=226,slow=3.9,SNR=5.3							
ILAR	**Eielson Array**	**92.88**	**12**	P	**P**	**10 33 10.8**	**0.0**
ILAR	**Eielson Array**	**92.88**	**12**	P	**P**	**10 33 10.8**	**0.0**
	0.8nm,0.8s,baz=220,slow=5.7,SNR=8.9							
CMAR	**Chiang Mai Arr**	**93.41**	**289**	P	**P**	**10 33 16.3**	**+2.0**
CMAR	**Chiang Mai Arr**	**93.41**	**289**	P	**P**	**10 33 16.3**	**+2.0**
	2.7nm,0.7s,baz=144,slow=3.3,SNR=11							
LVC	**Limon Verde**	**94.74**	**118**	LR	LR	11 07 03.2		
	comp=Z,58nm,18.4s,baz=333,slow=30							
MK31	**Makanchi Array**	**115.90**	**312**	*e*PKPdf	**PKPdf**	**10 38 40.1**	**-1.0**
MKAR	**Makanchi Array**	**115.90**	**312**	PKP	**PKPdf**	**10 38 40.3**	**-0.8**
MKAR	**Makanchi Array**	**115.90**	**312**	PKP	**PKPdf**	**10 38 40.3**	**-0.8**
	0.5nm,0.6s,baz=199,slow=1.1,SNR=6.9							
BVAR	**Borovoye Array**	**124.04**	**318**	PKP	**PKPdf**	**10 38 56.3**	**-0.2**
BVAR	**Borovoye Array**	**124.04**	**318**	PKP	**PKPdf**	**10 38 56.3**	**-0.2**
	0.5nm,0.5s,baz=46,slow=8.5,SNR=4.0							
ARCES	**ARCESS Array B**	**134.21**	**350**	PKP	**PKPdf**	**10 39 16.1**	**+0.8**
ARCES	**ARCESS Array B**	**134.21**	**350**	PKP	**PKPdf**	**10 39 16.1**	**+0.8**
	6.0nm,1.0s,baz=19,slow=7.7,SNR=3.8							
NB2	**NORSAR Subarra**	**144.21**	**354**	PKP	**PKPab**	**10 39 31.3**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=13,slow=3.7							
NOA	**NORSAR Array B**	**144.21**	**354**	PKP	**PKPab**	**10 39 31.4**	**-0.2**
NOA	**NORSAR Array B**	**144.21**	**354**	PKP	**PKPab**	**10 39 31.4**	**-0.2**
	comp=Z,3.3nm,0.9s,baz=16,slow=2.4,SNR=10.0							
AKASG	**Malin Array Be**	**148.26**	**329**	PKPbc	**PKPbc**	**10 39 43.8**	**-0.5**
AKASG	**Malin Array Be**	**148.26**	**329**	PKPbc	**PKPbc**	**10 39 43.8**	**-0.5**
	comp=Z,2.9nm,0.6s,baz=44,slow=3.7,SNR=13							
AK01	**Malin Array Si**	**148.28**	**329**	*e*PKPbc	**PKPbc**	**10 39 43.9**	**-0.4**
BRTR	**Keskin Array B**	**151.41**	**307**	PKPbc	**PKPbc**	**10 39 52.3**	**-0.3**
BRTR				PKPab	**PKPab**	**10 39 58.8**	**-2.1**
BRTR	**Keskin Array B**	**151.41**	**307**	PKPbc	**PKPbc**	**10 39 52.3**	**-0.3**
	comp=Z,1.6nm,0.9s,baz=126,slow=3.2,SNR=7.6							
BRTR				PKPab	**PKPab**	**10 39 58.8**	**-2.1**
	comp=Z,2.3nm,0.7s,baz=81,slow=3.3,SNR=9.3							
CLL	**Collm**	**153.38**	**347**	*e*PKPbc	**PKPbc**	**10 39 57.0**	**+0.6**
CLL				e(pPKPbc)		10 40 05.0		
	comp=Z,4.0nm,0.9s							
TORD	**Torodi Ar. Bea**	**167.46**	**170**	PKP	**PKPdf**	**10 40 04.8**	**-0.5**
TORD				PKPab	**PKPab**	**10 41 11.1**	**+0.6**
TORD	**Torodi Ar. Bea**	**167.46**	**170**	PKP	**PKPdf**	**10 40 04.8**	**-0.5**
	comp=Z,0.7nm,0.8s,baz=317,slow=3.5,SNR=3.5							
TORD				PKPab	**PKPab**	**10 41 11.1**	**+0.6**
	comp=Z,1.6nm,1.0s,baz=196,slow=5.2,SNR=5.5							

IDC 22 10:29:54.1±6.1, 5°47S×148°76E, h84km±47km, mb3.7/4, mb1 3.8/5, mb1mx3.4/20, mbtmp3.7/5, ML3.0/1, Error ellipse: s-maj=44.5km s-min=32.8km az=178.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**4.22**	**202**	P	Pn	10 30 56.2	0.0
	7.1nm,0.3s,baz=36,slow=10.0,SNR=27						
PMG				S	Sn	10 31 44.8	+0.5
	4.5nm,0.3s,baz=334,slow=8.8,SNR=3.6						
WRA	**Warramunga Arr**	**20.09**	**223**	P	P	10 34 21.1	-0.1
	1.7nm,0.4s,baz=51,slow=11,SNR=25						
ASAR	**Alice Springs**	**23.07**	**217**	P	P	10 34 51.8	-0.9
	0.5nm,0.4s,baz=57,slow=8.9,SNR=19						
FITZ	**Fitzroy Crossi**	**25.84**	**239**	P	P	10 35 18.5	+0.6
	2.1nm,0.7s,baz=59,slow=9.3,SNR=9.6						
URZ	**Urewera**	**41.58**	**146**	P	P	10 37 34.9	+1.2
	11nm,0.9s,baz=315,slow=10.0,SNR=3.5						
TORD	**Torodi Ar. Bea**	**146.65**	**286**	PKPbc	PKPdf	10 49 25.6	+0.1
	0.2nm,0.5s,baz=62,slow=3.9,SNR=3.7						

MEX 22 10:35:37.9±0.6, 17°77N×98°32W, h67km±15km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TPIG	**Tehuac#an**	**1.12**	**55**	*i* P	Pn	10 35 56.5	-1.5
TPIG				*i* S	Sn	10 36 11.2	-1.8
MEIG	**Mezcala**	**1.25**	**277**	*i* P	Pn	10 35 58.4	-1.2
MEIG				*i* S	Sn	10 36 13.8	-2.0
YAIG	**Yautepec**	**1.30**	**327**	*i* P	Pn	10 35 59.0	-1.3
YAIG				*i* S	Sn	10 36 14.7	-2.4
PNIG	**Pinotepa**	**1.38**	**172**	*i* P	Pn	10 35 59.7	-1.6
PNIG				*i* S	Sn	10 36 17.0	-1.8
CAIG	**El Cayaco**	**1.99**	**249**	*i* P	Pn	10 36 07.3	-2.1
CAIG				*i* S	Sn	10 36 32.0	-1.4
ARIG	**Puente Sto Nin**	**1.99**	**285**	*i* P	Pn	10 36 08.8	-0.7
ARIG				*i* S	Sn	10 36 31.5	-2.0

NIED ***22*** *10:42:00, 32°30N×132°20E, h20km, Mw3.8 Best double couple: M₀5.01000×10¹⁴ NP1:φ₀32.00000°, δ77.00000°, λ79.00000°. NP2:φ₀253.00000°, δ17.00000°, λ129.00000°.*
IDC ***22*** *10:42:41.2±3.5, 31°75N×131°22E, h0km, mb3.1/2, mb1 3.2/4, mb1mx3.1/28, mbtmp3.1/4, ML3.0/2, MS2.7/1, Ms1 2.7/1, ms1mx1.5/14, Error ellipse: s-maj=45.9km s-min=38.4km az=126.0*
JMA ***22*** *10:42:43.9, 32°32N×132°14E, h21km±1km, M3.7*
JMA Felt I J1.
ISCJB ***22*** *10:42:44.1±0.8, 32°34N±0°05×132°15E±0°05, h28km±7km, mb3.0/2, Error ellipse: s-maj=10.4km s-min=5.1km az=140.2*

ISC 22 10:42:43.6±1.5, 32°32N±0°05×132°18E±0°05, h25km±12km, n12, σ1ᵗ20/19, 2C-3D, Shikoku

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JTSN	**Tsuno**	**0.57**	**263**	⇓P	**Pb**	**10 42 54.4**	**-0.6**
JTSN				*e*S	**Sb**	**10 43 02.2**	**-0.6**
JKIT	**Kitakata**	**0.68**	**297**	⇓P	**Pn**	**10 42 56.6**	**-1.1**
JKIT				*e*S	**Sb**	**10 43 05.1**	**-0.8**
JTO	**Tosashimizu**	**0.76**	**44**	P	**Pb**	**10 42 58.2**	**+0.1**
JTO				*e*S	**Sn**	**10 43 09.1**	**-0.2**
JUS	**Usuki**	**0.83**	**334**	P	**Pn**	**10 42 59.3**	**-0.4**
JUS				*e*S	**Sn**	**10 43 10.6**	**-0.5**
UWA2	**Uwa jima 2**	**0.97**	**23**	⇑P	**Pn**	**10 43 01.7**	**+0.1**
UWA2				*e*S	**Sn**	**10 43 15.3**	**+0.7**
JTZ	**Takazaki**	**1.01**	**246**	⇓P	**Pn**	**10 43 02.0**	**-0.2**
JTZ				*e*S	**Sn**	**10 43 17.1**	**+1.4**
JNAR	**Kushima--Naru**	**1.10**	**225**	⇑P	**Pb**	**10 43 04.1**	**+0.1**
JNAR				*e*S	**Sn**	**10 43 19.7**	**+1.9**
JNU	**Nakatsue**	**1.36**	**307**	Pn	**Pb**	**10 43 08.6**	**+0.2**
	82nm,0.3s,baz=123,slow=6.5,SNR=427						
JNU				Sn	**Sb**	**10 43 27.5**	**+2.2**
	84nm,0.3s,baz=273,slow=24,SNR=16						
KSRS	**Korea Array**	**6.20**	**327**	Pn	**Pn**	**10 44 15.9**	**+2.4**
	0.3nm,0.3s,baz=148,slow=14,SNR=3.7						
KSRS				LR	LR	10 46 48.2	
	comp=Z,64nm,20.6s,baz=333,slow=39						
MJAR	**Matsushiro Arr**	**6.53**	**48**	Pn	Pb	10 44 32.2	-4.1
	0.3nm,0.3s,baz=241,slow=14,SNR=4.0						
SONM	**Songino Array**	**24.93**	**316**	P	**P**	**10 48 04.2**	**-0.6**
	0.4nm,0.7s,baz=127,slow=9.8,SNR=4.2						
MKAR	**Makanchi Array**	**40.41**	**306**	P	**P**	**10 50 18.4**	**-1.2**
	0.1nm,0.4s,baz=93,slow=6.3,SNR=2.6						

IDC 22 10:44:13.9±9.9, 7°26S×126°72E, h460km±146km, mb2.5/1, mb1 2.9/4, mb1mx2.7/20, mbtmp2.7/4, Error ellipse: s-maj=129.6km s-min=48.3km az=40.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.83**	**185**	P	P	10 46 40.2	+0.2
	0.4nm,0.3s,baz=14,slow=15,SNR=16						
WRA	**Warramunga Arr**	**14.61**	**150**	P	P	10 47 19.4	-1.4
	0.3nm,0.3s,baz=331,slow=12,SNR=33						
WRA				S	S	10 49 55.5	+0.4
	0.1nm,0.3s,baz=327,slow=23,SNR=2.8						
ASAR	**Alice Springs**	**17.71**	**158**	P	P	10 47 53.7	+0.3
	0.4nm,0.3s,baz=330,slow=8.1,SNR=24						
MKAR	**Makanchi Array**	**66.70**	**328**	P	P	10 54 18.1	-0.1
	0.2nm,0.6s,baz=130,slow=7.4,SNR=3.5						

NIED ***22*** *10:48:00, 23°00N×120°40E, h8km, Mw4.5 Best double couple: M₀7.25000×10¹⁵ NP1:φ₀68.00000°, δ79.00000°, λ72.00000°. NP2:φ₀307.00000°, δ21.00000°, λ147.00000°.*
JMA ***22*** *10:48:25.7±0.3, 22°98N×120°41E, h54km, M4.2*
TAP ***22*** *10:48:25.8, 23°42N×120°42E, h9km, ML4.5, B*
BJI ***22*** *10:48:25.3, 23°44N×120°42E, h10km, mB4.6/3, mb4.5/3, ML4.4/7, Ms4.2/4, Ms7 3.9/4*
IDC ***22*** *10:48:25.6±1.1, 23°17N×120°49E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/26, mbtmp3.6/6, ML3.4/1, MS3.5/8, Ms1 3.5/8, ms1mx3.2/37, Error ellipse: s-maj=72.5km s-min=19.1km az=67.0*
ISCJB ***22*** *10:48:26.8±0.3, 23°42N±0°01×120°39E±0°02, h12km±2km, mb3.5/6, MS3.4/7, Error ellipse: s-maj=2.7km s-min=2.3km az=7.9*

ISC 22 10:48:26.9±0.8, 23°43N±0°02×120°41E±0°02, h10km±6km, n85, σ1ᵗ12/116, mb3.6/6, MS3.4/7, 11C-17D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHY	**Chiayi**	**0.07**	**10**	⇓*i* P	**Pg**	**10 48 28.6**	**-0.5**
	baz=6.0						
TWK	**Hsinying**	**0.17**	**155**	⇑*i* P	**Pg**	**10 48 30.5**	**-0.2**
	baz=156						
TWK				*e*S	**Sg**	**10 48 34.0**	**+0.8**
	baz=156						
WTP	**Ta-pu**	**0.26**	**133**	⇑*i* P	**Pg**	**10 48 32.1**	**-0.1**
	baz=134						
CHN1	**Nanshi**	**0.26**	**156**	⇑*i* P	**Pg**	**10 48 32.1**	**-0.2**
	baz=159						
CHN1				*e*S	**Sg**	**10 48 36.3**	**+0.5**
	baz=159						
WSF	**Szhu**	**0.27**	**321**	⇑*i* P	**Pg**	**10 48 32.5**	**+0.1**
	baz=320						
WSF				*e*S	**Sb**	**10 48 38.0**	**-0.7**
	baz=320						
WGK	**Gukeng**	**0.29**	**28**	⇓*i* P	**Pg**	**10 48 33.3**	**+0.4**
	baz=26						
WGK				*e*S	**Sb**	**10 48 39.1**	**-0.2**
	baz=26						
CHN5	**Tsauling**	**0.30**	**55**	⇓*i* P	**Pg**	**10 48 32.8**	**-0.2**
	baz=53						
SCLT	**Jiali**	**0.32**	**219**	⇓P	**Pg**	**10 48 33.5**	**+0.2**
	baz=220						
CHN3	**Shinhua**	**0.35**	**187**	⇓*i* P	**Pb**	**10 48 34.6**	**-0.6**
	baz=190						
ALS	**Alishan**	**0.37**	**77**	⇓*i* P	**Pg**	**10 48 34.5**	**+0.1**
	baz=76						
ALS				*e*S	**Sb**	**10 48 40.9**	**-0.9**
	baz=76						
SGST	**Jiashian**	**0.38**	**155**	⇑*e*P	**Pg**	**10 48 34.3**	**0.0**
	baz=157						
TAI1	**Yung-k'ang**	**0.42**	**204**	⇓*e*P	**Pb**	**10 48 35.9**	**-0.5**
	baz=222						
WTCT	**Ta-ch'eng**	**0.45**	**345**	*e*P	**Pg**	**10 48 35.7**	**-0.1**
	baz=343						
WTCT				S	**Sb**	**10 48 43.1**	**-0.7**
	baz=343						
YUS	**Yu-Shan**	**0.50**	**83**	P	**Pg**	**10 48 37.0**	**+0.2**
	baz=82						
YUS				S	**Sb**	**10 48 45.1**	**-0.6**
	baz=82						
WNT	**Mingjian**	**0.52**	**29**	⇓*i* P	**Pg**	**10 48 37.1**	**+0.2**
	baz=28						
WNT				*e*S	**Sb**	**10 48 45.5**	**-0.1**
	baz=28						
TWM1	**Shoushan**	**0.60**	**179**	⇓*e*P	**Pb**	**10 48 40.1**	**+0.6**
	baz=180						
ELDTW	**Lidau**	**0.61**	**113**	⇑*i* P	**Pg**	**10 48 38.3**	**-0.4**
	baz=113						
ELDTW				S	**Sb**	**10 48 47.7**	**-0.6**
	baz=113						
TYC	**Yuchr**	**0.63**	**41**	⇓*i* P	**Pg**	**10 48 39.2**	**+0.1**
	baz=40						
TYC				S	**Sb**	**10 48 49.4**	**+0.5**
	baz=40						
SMLT	**Sun Moon Lake**	**0.64**	**44**	⇓*i* P	**Pg**	**10 48 39.4**	**0.0**
	baz=43						
SMLT				*e*S	**Sb**	**10 48 49.8**	**+0.5**
	baz=43						
SGLT	**Jiouru**	**0.70**	**174**	*e*P	**Pn**	**10 48 42.0**	**-0.9**
	baz=176						
WDGT	**Dungji**	**0.71**	**257**	⇑*i* P	**Pg**	**10 48 39.8**	**-0.8**
	baz=257						
WDGT				S	**Sg**	**10 48 50.0**	**+0.2**
	baz=257						
TCU	**Taichung**	**0.76**	**19**	*e*P	**Pg**	**10 48 41.2**	**-0.4**
	baz=17						
PNG	**Penghu**	**0.80**	**280**	⇑*i* P	**Pg**	**10 48 41.0**	**-1.2**
	baz=280						
PNG				*e*S	**Sg**	**10 48 52.4**	**-0.3**
	baz=280						
TWF1	**Yuli**	**0.82**	**95**	⇑*i* P	**Pg**	**10 48 42.2**	**-0.5**
	baz=95						
TWF1				*e*S	**Sg**	**10 48 53.3**	**-0.1**
	baz=95						
EHY	**Hungye**	**0.84**	**84**	*e*P	**Pg**	**10 48 42.7**	**-0.4**
	baz=84						
EHY				*e*S	**Sb**	**10 48 54.5**	**-0.5**
	baz=84						
TWG	**Pinlang**	**0.86**	**134**	*e*P	**Pg**	**10 48 42.9**	**-0.5**
	baz=136						
TWG				*e*S	**Sb**	**10 48 55.1**	**-0.4**
	baz=136						
KAU	**Kaohsiung**	**0.86**	**186**	*e*P	**Pb**	**10 48 43.4**	**-0.5**
	baz=203						
CHKT	**Chengkung**	**0.94**	**110**	P	**Pb**	**10 48 45.1**	**-0.1**
	baz=111						
CHKT				*e*S	**Sn**	**10 48 59.0**	**-0.6**
	baz=111						
TTN	**Taitung**	**0.95**	**134**	*e*P	**Pb**	**10 48 45.4**	**-0.1**
	baz=136						
TTN				*e*S	**Sn**	**10 49 01.2**	**+1.3**
	baz=136						
ECL	**Taimali**	**0.96**	**149**	*e*P	**Pg**	**10 48 44.9**	**-0.5**
	baz=150						
ECL				*e*S	**Sb**	**10 48 58.4**	**-0.1**
	baz=150						
TWQ1	**Liyutan**	**0.98**	**20**	⇓*e*P	**Pg**	**10 48 45.1**	**-0.6**
	baz=18						
ESL	**Shilin**	**1.01**	**67**	*i* P	**Pg**	**10 48 45.9**	**-0.5**
	baz=67						
ESL				S	**Sb**	**10 48 59.9**	**-0.2**
	baz=67						
NSY	**Sanyi**	**1.04**	**18**	⇓*e*P	**Pg**	**10 48 46.3**	**-0.5**
	baz=16						
WHF	**Hehuan Shan**	**1.06**	**47**	⇓*e*P	**Pg**	**10 48 46.5**	**-0.8**
	baz=46						
SCZT	**Fangliau**	**1.07**	**169**	*e*P	**Pg**	**10 48 46.9**	**-0.5**
	baz=158						
TWP	**Hsiaoliuchiu**	**1.07**	**182**	*e*P	**Pn**	**10 48 48.1**	**+0.1**
	baz=197						
TWT	**Tachien**	**1.08**	**40**	⇑P	**Pg**	**10 48 46.5**	**-1.2**
	baz=39						
TWT				*e*S	**Sn**	**10 49 03.0**	**-0.5**
	baz=39						
ESF	**Shoufeng Towns**	**1.10**	**66**	*e*P	**Pg**	**10 48 47.4**	**-0.7**
	baz=65						
TAW	**Tawu**	**1.15**	**157**	*e*P	**Pb**	**10 48 48.4**	**-0.5**
	baz=159						
TAW				*e*S	**Sn**	**10 49 04.7**	**-0.2**
	baz=159						
HWA	**Hwalien**	**1.23**	**63**	*e*P	**Pb**	**10 48 50.0**	**-0.2**
	baz=63						
HWA				*e*S	**Sn**	**10 49 06.6**	**-0.2**
	baz=63						
TWD	**Chiawan**	**1.27**	**59**	⇑P	**Pn**	**10 48 50.3**	**-0.4**
	baz=58						
TWD				*e*S	**Sb**	**10 49 06.6**	**-0.7**
	baz=58						
NSTT	**Nanjuang**	**1.32**	**24**	⇓*e*P	**Pn**	**10 48 50.2**	**-1.2**
	baz=23						
NSTT				*e*S	**Sb**	**10 49 08.4**	**-0.3**
	baz=23						
NNS	**Nan Shan**	**1.34**	**41**	*e*P	**Pn**	**10 48 51.2**	**-0.6**
	baz=28						
NNS				*e*S	**Sn**	**10 49 09.8**	**0.0**
	baz=28						
HEN	**Hengchun**	**1.45**	**168**	*e*P	**Pn**	**10 48 52.9**	**-0.2**
	baz=170						
HSN	**Hsinchu**	**1.46**	**20**	*e*P	**Pn**	**10 48 52.9**	**-0.5**
	baz=19						
NSK	**Sanguang**	**1.52**	**35**	*e*P	**Pn**	**10 48 53.4**	**-0.8**
	baz=26						
NSK				*e*S	**Sb**	**10 49 14.5**	**0.0**
	baz=26						
TWK1	**Hengchun**	**1.52**	**166**	*e*P	**Pn**	**10 48 53.3**	**-0.9**
	baz=168						
ENA	**Nanau**	**1.57**	**50**	*e*P	**Pn**	**10 48 55.0**	**+0.1**
	baz=50						
ENA				*e*S	**Sg**	**10 49 16.9**	**-0.7**
	baz=50						
TSEB	**Hengchuen, Pin**	**1.58**	**163**	*e*P	**Pb**	**10 48 55.8**	**-0.5**
	baz=167						
ENTT	**Nioudou**	**1.61**	**41**	⇓*i* P	**Pn**	**10 48 55.4**	**0.0**
	baz=31						
ENTT				*e*S	**Sb**	**10 49 17.2**	**+0.1**
	baz=31						
NCU	**National Centr**	**1.69**	**25**	*e*P	**Pn**	**10 48 56.0**	**-0.6**
	baz=22						
TWE	**Neicheng**	**1.73**	**41**	*e*P	**Pn**	**10 48 57.3**	**+0.2**
	baz=32						
TWE				*e*S	**Sg**	**10 49 22.0**	**-0.5**
	baz=32						
LAY	**Lan-yu**	**1.74**	**142**	*e*P	**Pn**	**10 48 56.4**	**-0.8**
	baz=144						
TWC	**Suao**	**1.77**	**48**	P	**Pb**	**10 48 58.4**	**-1.0**
	baz=47						
TWC				S	**Sb**	**10 49 22.4**	**+0.8**
	baz=47						
ILA	**Ilan**	**1.81**	**42**	*e*P	**Pb**	**10 48 59.6**	**-0.5**
	baz=40						
TAP1	**Taipei**	**1.90**	**32**	*e*P	**Pn**	**10 48 58.4**	**-1.0**
	baz=29						
TWS1	**Kuangyinshan**	**1.91**	**29**	*e*P	**Pn**	**10 48 58.7**	**-0.8**
	baz=26						
KNM	**Kinmen**	**2.06**	**299**	*e*P	**Pn**	**10 49 01.3**	**-0.3**
	baz=297						
NWF	**Wu-fen Shan**	**2.06**	**37**	*e*P	**Pn**	**10 49 01.1**	**-0.6**
	baz=16						
TWB1	**Santiao Chiao**	**2.14**	**42**	*e*P	**Pn**	**10 49 02.4**	**-0.3**
	baz=22						
TWY	**Chenhua**	**2.14**	**30**	*e*P	**Pn**	**10 49 02.3**	**-0.4**
	baz=13						
QZH	**Quanzhou**	**2.25**	**313**	⇓*i* Pg	**Pb**	**10 49 07.0**	**-0.6**
QZH				Sn	**Sb**	**10 49 36.0**	**+0.6**
QZH				smax	smax		
	comp=N,3μm,0.3s						
QZH				smax	smax		
	comp=E,2μm,0.4s						
YOJ	**Yonaguni jima**	**2.59**	**66**	*e*P	**Pn**	**10 49 09.4**	**+0.4**
	baz=66						
YOJ	**Yonaguni jima**	**2.59**	**66**	P	**Pn**	**10 49 09.3**	**+0.4**
YOJ				*e*S	**Sn**	**10 49 41.6**	**+1.1**
PCYT	**Pengchaiyu**	**2.67**	**34**	*e*P	**Pn**	**10 49 09.2**	**-0.7**
	baz=16						
IRIF	**Iriomote-Funau**	**3.17**	**73**	*e*S	**Sn**	**10 49 55.9**	**+1.1**
HATJ	**Hateruma jima**	**3.17**	**78**	*e*S	**Sn**	**10 49 53.8**	**-1.1**
JKRS	**Kuro-shima**	**3.39**	**75**	P	**Pn**	**10 49 19.5**	**-0.4**
JKRS				*e*S	**Sn**	**10 50 00.1**	**-0.2**
JIJ	**Ishigaki jima**	**3.54**	**74**	P	**Pn**	**

ISCJB ***22*** *10:54:37.2±0.3,32.°94S±0.°03×179.°89E±0.°07,h183km, mb4.5/35,Error ellipse: s-maj=8.2km s-min=3.6km az=16.1*

NEIC ***22*** *10:54:39.9±1.3,32.°67S×179.°94E,h192km±11km, mb4.8/20,Error ellipse: s-maj=11.1km s-min=8.4km az=202.0*

IDC ***22*** *10:54:39.9±0.8,32.°57S×179.°93E,h188km±7km, mb4.2/21, mb1 4.3/21,mb1mx4.3/25,mbtmp4.2/21,Error ellipse: s-maj=12.3km s-min=9.5km az=19.0*

ISC 22 10:54:40.7±0.3,33.°01S±0.°04×179.°87E±0.°06,h200km, n257,σ1°38/235,mb4.6/34,41C-44D,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.20**	**27**	S	Sn	10 56 17.1	-19
RAO	**Raoul Island**	**4.20**	**27**	S	Sn	10 56 17.1	-19
	348nm,0.3s,baz=86,slow=19,SNR=8.1						
MXZ	**Matakaoa Point**	**4.72**	**195**	*e*PN	**Pn**	**10 55 50.1**	**-1.3**
MXZ				SN	**Sn**	**10 56 46.7**	**-0.5**
WIZ	**White Island**	**5.01**	**205**	PN	**Pn**	**10 55 57.3**	**+2.1**
WIZ				SN	Sn	10 56 59.0	+5.0
KUZ	**Kuaotunu**	**5.05**	**221**	PN	Pn	10 55 59.1	+3.4
MYRZ	**Mayor Island**	**5.19**	**214**	*e*PN	Pn	10 56 02.5	+5.0
PUZ	**Puketiti**	**5.22**	**194**	PN	**Pn**	**10 55 55.6**	**-2.2**
PUZ				SN	**Sn**	**10 56 57.4**	**-1.4**
OPRZ	**Ohinepanea**	**5.53**	**208**	PN	**Pn**	**10 56 02.0**	**+0.2**
CNGZ	**Carnagh Statio**	**5.62**	**193**	*e*PN	**Pn**	**10 56 01.0**	**-2.0**
MWZ	**Matawai**	**5.64**	**199**	PN	**Pn**	**10 56 01.8**	**-1.5**
MWZ				SN	**Sn**	**10 57 09.3**	**+0.6**
OUZ	**Omahuta**	**5.65**	**245**	*e*Pn	Pn	10 56 05.7	+2.4
	82nm,0.8s						
OUZ	**Omahuta**	**5.65**	**245**	PN	Pn	10 56 05.9	+2.5
EDRZ	**Edgecumbe**	**5.69**	**206**	PN	**Pn**	**10 56 06.3**	**+2.4**
URZ	**Urewera**	**5.70**	**202**	*e*Pn	**Pn**	**10 56 05.3**	**+1.3**
URZ				*e*Sn	**Sn**	**10 57 08.9**	**-0.8**
URZ				S	**Sn**	**10 57 09.0**	**-0.8**
URZ	**Urewera**	**5.70**	**202**	*e*PN	**Pn**	**10 56 02.3**	**-1.6**
URZ				SN	**Sn**	**10 57 09.3**	**-0.5**
URZ	**Urewera**	**5.70**	**202**	P	**Pn**	**10 56 02.8**	**-1.2**
	154nm,0.3s,baz=359,slow=1.8,SNR=128						
URZ				S	**Sn**	**10 57 09.0**	**-0.8**
	220nm,0.3s,baz=340,slow=23,SNR=18						
OMRZ	**Omania**	**5.83**	**208**	*e*PN	Pn	10 56 08.9	+3.2
TARZ	**Mount Tarawera**	**5.88**	**207**	*e*PN	**Pn**	**10 56 08.8**	**+2.3**
TOZ	**Tahuroa Road**	**5.90**	**216**	PN	Pn	10 56 10.2	+3.5
RRRZ	**Republican Roa**	**5.97**	**206**	*e*PN	**Pn**	**10 56 09.2**	**+1.6**
ALRZ	**Allen Road**	**6.23**	**206**	*e*PN	**Pn**	**10 56 10.6**	**-0.3**
KNZ	**Kokohu**	**6.25**	**196**	*e*PN	**Pn**	**10 56 10.1**	**-1.0**
RAHZ	**Arahi**	**6.31**	**200**	PN	**Pn**	**10 56 08.9**	**-3.0**
MHGZ	**Mahia Peninsul**	**6.33**	**194**	*e*PN	**Pn**	**10 56 09.5**	**-2.6**
NMHZ	**Naumai**	**6.56**	**201**	*e*PN	**Pn**	**10 56 13.1**	**-2.1**
BKZ	**Black Stump Fm**	**6.72**	**203**	PN	**Pn**	**10 56 14.2**	**-3.1**
HIZ	**Hauiti**	**6.83**	**215**	*e*PN	Pn	10 56 21.6	+2.9
OTVZ	**Oturere**	**7.02**	**208**	*e*PN	**Pn**	**10 56 19.5**	**-1.7**
WPVZ	**Whakapapa**	**7.10**	**208**	*e*PN	**Pn**	**10 56 22.5**	**+0.2**
FWVZ	**Far West T-bar**	**7.14**	**208**	*e*PN	**Pn**	**10 56 22.6**	**-0.3**
KAHZ	**Kahuranaki**	**7.18**	**199**	*e*PN	Pn	10 56 19.7	-3.6
PXZ	**Pawanui**	**7.41**	**198**	*e*PN	Pn	10 56 21.3	-4.8
PNHZ	**Pukenui**	**7.49**	**202**	*e*PN	Pn	10 56 22.9	-4.4
TSZ	**Takapari Road**	**7.70**	**203**	*e*PN	Pn	10 56 25.1	-4.9
PKE	**Pukeiti**	**7.79**	**216**	PN	Pn	10 56 35.1	+3.9
ANWZ	**Angora Road**	**7.92**	**199**	*e*PN	Pn	10 56 28.0	-4.8
MRZ	**Mangatainoka R**	**8.37**	**203**	*e*PN	Pn	10 56 33.1	-5.6
HOWZ	**Holdsworth Sta**	**8.61**	**203**	*e*PN	Pn	10 56 36.2	-5.5
KIW	**Kapiti Island**	**8.78**	**205**	*e*PN	Pn	10 56 39.0	-5.0
CAW	**Cannon Point**	**8.94**	**204**	*e*PN	Pn	10 56 40.6	-5.5
MSWZ	**Moikau Station**	**9.16**	**202**	*e*PN	Pn	10 56 45.0	-4.0
SNZO	**South Karori**	**9.25**	**205**	*e*PN	Pn	10 56 44.4	-5.7
TUWZ	**Tuamarina**	**9.64**	**208**	*e*PN	Pn	10 56 49.0	-6.1
QRZ	**Quartz Range**	**9.76**	**215**	*e*PN	Pn	10 56 53.2	-3.5
CMWZ	**Cape Campbell**	**9.81**	**206**	SN	**Sn**	**10 58 45.5**	**-1.5**
BSWZ	**Blackbirch Sta**	**9.90**	**207**	PN	Pn	10 56 53.9	-4.7
THZ	**Tophouse**	**10.34**	**210**	*e*PN	Pn	10 56 59.7	-4.6
KHZ	**Kahutara**	**10.64**	**206**	*e*Pn	Pn	10 57 04.5	-3.6
	104nm,0.3s						
KHZ	**Kahutara**	**10.64**	**206**	*e*PN	Pn	10 57 02.8	-5.2
DSZ	**Denniston Nort**	**10.82**	**214**	*e*PN	Pn	10 57 07.0	-3.4
MQZ	**McQueen's Vall**	**12.08**	**206**	*e*PN	Pn	10 57 22.2	-4.2
WVZ	**Waitaha Valley**	**12.35**	**213**	*e*PN	Pn	10 57 25.7	-4.1
RPZ	**Rata Peaks**	**12.72**	**210**	*e*Pn	**Pn**	**10 57 31.5**	**-3.1**
RPZ				S	Sn	10 59 49.1	-7.2
RPZ	**Rata Peaks**	**12.72**	**210**	P	**Pn**	**10 57 31.4**	**-3.1**
	6.6nm,0.3s,baz=13,slow=2.0,SNR=40						
RPZ				S	Sn	10 59 49.1	-7.2
	8.5nm,0.3s,baz=12,slow=18,SNR=11						
ODZ	**Otahua Downs**	**13.98**	**208**	*e*Pn	**Pn**	**10 57 47.8**	**-2.4**
	11nm,0.3s						
ODZ	**Otahua Downs**	**13.98**	**208**	*e*PN	Pn	10 57 46.1	-4.1
WKZ	**Wanaka**	**14.49**	**212**	*e*PN	Pn	10 57 52.4	-4.2
TUZ	**Tuapeka**	**15.13**	**208**	*e*PN	**Pn**	**10 58 03.2**	**-1.2**
MSVF	**Nonsavu**	**15.30**	**353**	*e*Pn	Pn	10 58 01.2	-5.6
	119nm,0.8s						
SYZ	**Scrubby Hill**	**15.80**	**208**	*e*PN	**Pn**	**10 58 12.4**	**-0.1**
DZM	**Mont Dzumac**	**16.12**	**309**	*e*P	**P**	**10 58 14.3**	**-1.8**
	46nm,0.9s						
AFI	**Afiamalu**	**20.49**	**24**	P	P	10 58 55.6	-7.9
AFI	**Afiamalu**	**20.49**	**24**	P	P	10 58 55.6	-7.9
	16nm,0.3s,baz=57,slow=20,SNR=10.0						
HNR	**Honiara**	**29.81**	**317**	P	**P**	**11 00 26.9**	**-2.3**
HNR	**Honiara**	**29.81**	**317**	P	**P**	**11 00 26.9**	**-2.3**
	62nm,0.6s,baz=244,slow=4.1,SNR=4.4						
STKA	**Stephens Creek**	**32.20**	**261**	P	**P**	**11 00 52.2**	**+2.2**
STKA				pP	**pP**	**11 01 33.0**	**+2.0**
STKA	**Stephens Creek**	**32.20**	**261**	P	**P**	**11 00 52.2**	**+2.2**
	2.0nm,0.8s,baz=136,slow=21,SNR=4.5						
STKA				pP	**pP**	**11 01 33.0**	**+2.0**
	9.7nm,1.1s,baz=131,slow=10,SNR=2.7						
CTA	**Charters Tower**	**32.56**	**285**	P	**P**	**11 00 54.5**	**+1.3**
CTA	**Charters Tower**	**32.56**	**285**	P	**P**	**11 00 54.5**	**+1.3**
	16nm,0.5s,baz=113,slow=11,SNR=31						
CTAO	**Charters Tower**	**32.56**	**285**	*e*P	**P**	**11 00 53.9**	**+0.7**
	16nm,0.8s						
PMG	**Port Moresby**	**38.22**	**300**	P	**P**	**11 01 41.0**	**-0.5**
PMG	**Port Moresby**	**38.22**	**300**	P	**P**	**11 01 41.0**	**-0.5**
	25nm,0.8s,baz=48,slow=5.0,SNR=4.6						
COEN	**Coen**	**38.37**	**291**	*e*P	**P**	**11 01 42.8**	**+0.1**
	76nm,0.7s						
AS31	**Alice Springs**	**41.24**	**271**	*e*P	**P**	**11 02 06.9**	**+0.5**
ASAR	**Alice Springs**	**41.24**	**271**	P	**P**	**11 02 07.0**	**+0.7**
ASAR				pP	**pP**	**11 02 48.1**	**-0.8**
ASAR				S	**S**	**11 08 08.0**	**+2.9**
ASAR	**Alice Springs**	**41.24**	**271**	P	**P**	**11 02 07.0**	**+0.7**
	5.5nm,0.6s,baz=109,slow=7.5,SNR=54						
ASAR				pP	**pP**	**11 02 48.1**	**-0.8**
	5.2nm,0.8s,baz=110,slow=7.7,SNR=3.4						
ASAR				S	**S**	**11 08 08.0**	**+2.9**
	2.1nm,0.7s,baz=113,slow=16,SNR=10						
WRAB	**Tennant Creek**	**42.47**	**276**	*e*P	**P**	**11 02 15.6**	**-0.7**
	42nm,1.3s						
WRA	**Warramunga Arr**	**42.47**	**276**	P	**P**	**11 02 16.6**	**+0.2**
WRA				pP	**pP**	**11 02 56.1**	**-3.0**
WRA				S	**S**	**11 08 24.8**	**+1.6**
WRA	**Warramunga Arr**	**42.47**	**276**	P	**P**	**11 02 16.6**	**+0.2**
	19nm,0.8s,baz=115,slow=7.8,SNR=103						
WRA				pP	**pP**	**11 02 56.2**	**-3.0**
	4.2nm,0.7s,baz=116,slow=7.7,SNR=2.3						
WRA				S	**S**	**11 08 24.8**	**+1.6**
	2.1nm,0.8s,baz=116,slow=14,SNR=5.4						
VNDA	**Vanda**	**45.32**	**185**	P	P	11 02 43.1	+4.9
VNDA				pP	pP	11 03 22.8	+1.3
VNDA	**Vanda**	**45.32**	**185**	P	P	11 02 43.1	+4.9
	1.0nm,0.6s,baz=358,slow=6.6,SNR=3.3						
VNDA				pP	pP	11 03 22.8	+1.3
	1.6nm,0.9s,baz=78,slow=9.3,SNR=3.3						
FITZ	**Fitzroy Crossi**	**50.61**	**273**	*e*P	**P**	**11 03 20.0**	**+0.5**
FITZ				pP	**pP**	**11 03 59.5**	**-4.2**
FITZ	**Fitzroy Crossi**	**50.61**	**273**	P	**P**	**11 03 20.0**	**+0.5**
	5.5nm,0.6s,baz=146,slow=8.1,SNR=16						
FITZ				pP	**pP**	**11 03 59.5**	**-4.2**
	4.4nm,0.9s,baz=172,slow=13,SNR=2.9						
QSPA	**South Pole Qui**	**57.10**	**180**	*e*P	P	11 04 10.1	+4.1
	26nm,0.8s						
QSPA				pP	pP	11 04 51.6	+0.4
QSPA	**South Pole Qui**	**57.10**	**180**	P	P	11 04 10.3	+4.3
	59nm,0.9s,baz=26,slow=1.3,SNR=264						
QSPA				pP	pP	11 04 51.6	+0.4
	8.7nm,0.9s,baz=35,slow=0.9,SNR=2.0						
MAW	**Mawson**	**69.22**	**201**	P	**P**	**11 05 27.1**	**+1.7**
MAW	**Mawson**	**69.22**	**201**	P	**P**	**11 05 27.1**	**+1.7**
	0.8nm,0.4s,baz=153,slow=4.5,SNR=4.7						
SNAA	**Sanae**	**75.59**	**179**	*e*P	**P**	**11 06 05.5**	**+2.5**
SNAA	**Sanae**	**75.59**	**179**	*e*pP	P	11 06 15.9	+13
SNAA	**Sanae**	**75.59**	**179**	*e*PP	PP	11 08 58.7	+4.1
SNAA	**Sanae**	**75.59**	**179**	*e*P	**P**	**11 06 05.2**	**+2.2**
	21nm,0.8s						
VNA1	**Neumayer--Stat**	**76.47**	**177**	*e*P	**P**	**11 06 10.9**	**+3.0**
MJAR	**Matsushiro Arr**	**79.39**	**327**	P	**P**	**11 06 21.6**	**-2.8**
MJAR	**Matsushiro Arr**	**79.39**	**327**	P	**P**	**11 06 21.6**	**-2.8**
	4.6nm,1.0s,baz=168,slow=5.7,SNR=10						
MAT	**Matsushiro**	**79.39**	**327**	P	**P**	**11 06 22.8**	**-1.6**
PLCA	**Paso Flores**	**82.04**	**134**	P	**P**	**11 06 41.4**	**+2.6**
PLCA	**Paso Flores**	**82.04**	**134**	P	**P**	**11 06 41.4**	**+2.6**
	4.6nm,0.6s,baz=226,slow=4.1,SNR=14						
KSRS	**Korea Array**	**85.19**	**321**	P	**P**	**11 06 54.3**	**-0.1**
	4.6nm,0.8s,baz=141,slow=5.0,SNR=17						
KSAR	**Wonju Array Be**	**85.20**	**321**	P	**P**	**11 06 54.3**	**-0.2**
PEA0B	**Petropavlovsk-**	**87.91**	**347**	*e*P	**P**	**11 07 05.4**	**-1.7**
PETK	**Petropavlovsk-**	**87.91**	**347**	P	**P**	**11 07 06.2**	**-0.9**
PETK	**Petropavlovsk-**	**87.91**	**347**	P	**P**	**11 07 06.2**	**-0.9**
	15nm,0.7s,baz=138,slow=8.1,SNR=24						
PKM	**Peak Mountain**	**88.10**	**46**	⇑P	**P**	**11 07 08.7**	**-0.1**
	baz=88						
SMMC	**Simmler**	**88.27**	**45**	⇓P	**P**	**11 07 10.1**	**+0.7**
	baz=88						
USRK	**Ussuriysk Arra**	**88.36**	**328**	P	**P**	**11 07 09.6**	**+0.1**
	1.4nm,0.6s,baz=114,slow=4.6,SNR=7.4						
MURC	**Murrieta**	**88.83**	**48**	⇓P	**P**	**11 07 12.4**	**+0.4**
	baz=89						
ARVC	**Arvin**	**88.85**	**46**	⇓P	**P**	**11 07 12.1**	**0.0**
	baz=89						
MONP	**Monument Peak**	**88.85**	**49**	⇑P	**P**	**11 07 13.4**	**+1.0**
	baz=89,SNR=5.6						
BFSC	**Mount Baldy Ra**	**88.97**	**47**	⇓P	**P**	**11 07 13.0**	**+0.2**
	baz=89,SNR=7.2						
CFAA	**Coronel Fontan**	**89.11**	**128**	P	**P**	**11 07 15.4**	**+1.8**
CFAA	**Coronel Fontan**	**89.11**	**128**	P	**P**	**11 07 15.4**	**+1.8**
	0.5nm,0.8s,baz=225,slow=4.8,SNR=5.3						
VES	**Vestal, Richgr**	**89.18**	**45**	⇓P	**P**	**11 07 13.9**	**+0.3**
	baz=89						
EDW2	**Edwards Air Fo**	**89.19**	**47**	⇓P	**P**	**11 07 14.1**	**+0.4**
	baz=89,SNR=12						
PFO	**Pinyon Flat Ob**	**89.30**	**48**	P	**P**	**11 07 14.7**	**+0.3**
PFO	**Pinyon Flat Ob**	**89.30**	**48**	P	**P**	**11 07 14.7**	**+0.3**
	6.9nm,0.8s,baz=267,slow=3.2,SNR=10						
PFO	**Pinyon Flat Ob**	**89.30**	**48**	⇓P	**P**	**11 07 15.2**	**+0.8**
	baz=89						
ISA	**Isabella**	**89.42**	**46**	*e*P	**P**	**11 07 13.6**	**-1.2**
	13nm,0.9s						
BBRC	**Big Bear Solar**	**89.44**	**48**	⇓P	**P**	**11 07 15.8**	**+0.7**
	baz=89						
LRMC	**Laurel Mountai**	**89.78**	**46**	⇑P	**P**	**11 07 17.1**	**+0.6**
	baz=90,SNR=6.4						
BELC	**Belle Mtn. Jos**	**89.85**	**48**	⇑P	**P**	**11 07 17.9**	**+1.0**
	baz=90,SNR=11						
CMB	**Columbia Colle**	**89.91**	**43**	*e*P	**P**	**11 07 16.0**	**-1.0**
	8.5nm,1.1s						
BC3	**Big Chuckawall**	**89.97**	**49**	⇓P	**P**	**11 07 18.5**	**+1.1**
	baz=90,SNR=9.1						
GLA	**Glamis**	**89.97**	**50**	*e*P	**P**	**11 07 16.9**	**-0.5**
	14nm,0.9s						
GLA	**Glamis**	**89.97**	**50**	⇓P	**P**	**11 07 18.8**	**+1.4**
	baz=90,SNR=12						
CWC	**Cottonwood Cre**	**90.18**	**45**	⇓P	**P**	**11 07 18.8**	**+0.4**
	baz=90						
HEC	**Hector,Ludlow**	**90.18**	**48**	⇓P	**P**	**11 07 19.0**	**+0.6**
	baz=90,SNR=7.6						
GSC	**Goldstone**	**90.20**	**47**	*e*P	**P**	**11 07 17.6**	**-0.9**
	8.9nm,1.1s						
GSC	**Goldstone**	**90.20**	**47**	⇑P	**P**	**11 07 18.9**	**+0.5**
	baz=90,SNR=5.6						
MPMC	**Manual Prospec**	**90.28**	**46**	⇑P	**P**	**11 07 19.1**	**+0.1**
	baz=90,SNR=5.5						
113A	**Mohawk Valley,**	**90.48**	**51**	⇓P	**P**	**11 07 20.6**	**+0.9**
	baz=90						
IRM	**Iron Mountain**	**90.48**	**49**	⇑P	**P**	**11 07 20.4**	**+0.7**
	baz=90,SNR=12						
GMRC	**Granite Mounta**	**90.57**	**48**	⇓P	**P**	**11 07 20.8**	**+0.6**
	baz=90						
214A	**Organ Pipe Nat**	**90.59**	**52**	⇑P	**P**	**11 07 21.3**	**+1.0**
	baz=90,SNR=8.5						
Y12C	**Blythe**	**90.62**	**49**	⇓P	**P**	**11 07 21.4**	**+1.1**
	baz=91,SNR=5.5						
TUQ	**Turquoise Moun**	**90.83**	**47**	⇓P	**P**	**11 07 22.1**	**+0.6**
	baz=91						
SHOC	**Shoshone**	**90.91**	**47**	⇓P	**P**	**11 07 22.0**	**+0.4**
	baz=91						
FURC	**Furnace Creek,**	**90.94**	**46**	⇑P	**P**	**11 07 21.8**	**+0.1**
	baz=91						
LDFC	**Landfair**	**91.10**	**48**	*e*P	**P**	**11 07 20.8**	**-1.9**
	22nm,1.0s						
CN2	**Changchun**	**91.15**	**324**	*e*P	**P**	**11 07 22.9**	**+0.4**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
YBH	**Yreka Blue Hor**	**91.20**	**39**	P	**P**	**11 07 22.5**	**-0.4**
YBH	**Yreka Blue Hor**	**91.20**	**39**	P	**P**	**11 07 22.5**	**-0.4**
	comp=Z,2.2nm,0.7s,baz=116,slow=1.9,SNR=8.0						
PDMCI	**Parker Dam,Lak**	**91.21**	**49**	⇓P	**P**	**11 07 23.8**	**+0.8**
	baz=91,SNR=6.0						
NVAR	**Mina Array Bea**	**91.38**	**44**	P	**P**	**11 07 23.6**	**-0.4**
NVAR	**Mina Array Bea**	**91.38**	**44**	P	**P**	**11 07 23.7**	**-0.4**
	comp=Z,3.3nm,0.7s,baz=222,slow=7.6,SNR=29						
Z14A	**Wintersburg**	**91.39**	**51**	⇑P	**P**	**11 07 24.8**	**+0.9**
	baz=91						
Y14A	**Wickenburg**	**91.71**	**50**	⇑P	**P**	**11 07 26.1**	**+0.7**
	baz=92						
W13A	**Hualapai Mount**	**91.89**	**49**	⇓P	**P**	**11 07 27.1**	**+0.6**
	baz=92						
TUC	**Tucson**	**92.15**	**52**	*e*P	**P**	**11 07 26.4**	**-1.2**
	comp=Z,11nm,1.4s						
319A	**Douglas**	**92.59**	**54**	⇓P	**P**	**11 07 30.7**	**+1.1**
	baz=92						
MOD	**Modoc**	**92.61**	**40**	*e*P	**P**	**11 07 28.6**	**-0.9**
	comp=Z,4.4nm,0.7s						
R11A	**Troy Canyon, C**	**92.93**	**45**	⇑P	**P**	**11 07 30.9**	**-0.2**
	baz=93						
X16A	**Lo Mia Camp, P**	**93.02**	**50**	⇑P	**P**	**11 07 32.5**	**+0.9**
	baz=93						
320A	**Kipp Ranch, An**	**93.08**	**54**	⇓P	**P**	**11 07 32.8**	**+0.9**
	baz=93						
220A	**Playas Peak, P**	**93.42**	**54**	⇑P	**P**	**11 07 34.1**	**+0.5**
	baz=93						
U15A	**North Rim**	**93.73**	**48**	⇓P	**P**	**11 07 35.9**	**+0.9**
	baz=94						
120A	**U Bar Ranch, L**	**93.74**	**53**	⇓P	**P**	**11 07 35.8**	**+0.8**
	baz=94						
WUAZ	**Wupatki**	**93.74**	**50**	*e*P	**P**	**11 07 33.9**	**-1.0**
	comp=Z,2.4nm,0.8s						
WUAZ	**Wupatki**	**93.74**	**50**	⇑P	**P**	**11 07 35.7**	**+0.7**
	baz=94						
CCUT	**Cedar City**	**93.77**	**47**	*e*P	**P**	**11 07 34.2**	**-0.9**
	comp=Z,1.4nm,1.0s						
WVOR	**Wild Horse Val**	**93.88**	**41**	*e*P	**P**	**11 07 34.3**	**-1.1**
	comp=Z,1.7nm,0.6s						
X18A	**Snowflake**	**94.06**	**51**	⇓P	**P**	**11 07 37.4**	**+1.0**
	baz=94						
Z20A	**Nine Sixteen R**	**94.10**	**53**	⇓P	**P**	**11 07 37.1**	**+0.5**
	baz=94						
121A	**Cookes Peak, D**	**94.30**	**54**	⇑P	**P**	**11 07 38.1**	**+0.5**
	baz=94						
Y20A	**Horse Springs,**	**94.72**	**52**	⇓P	**P**	**11 07 40.0**	**+0.4**
	baz=95						
Z21A	**St. Cloud Mine**	**94.84**	**53**	⇑P	**P**	**11 07 40.7**	**+0.6**
	baz=95						
X20A	**Quemado**	**95.02**	**52**	⇑P	**P**	**11 07 41.4**	**+0.5**
	baz=95						
626A	**Big Bend Ranch**	**95.11**	**58**	⇓P	**P**	**11 07 41.8**	**+0.5**
	baz=95						
425A	**Indio Mountain**	**95.21**	**57**	⇑P	**P**	**11 07 42.2**	**+0.4**
	baz=95						
324A	**Moseley Ranch,**	**95.24**	**56**	⇑P	**P**	**11 07 41.9**	**0.0**
	baz=95						
Z22A	**Elephant Butte**	**95.29**	**54**	⇓P	**P**	**11 07 42.4**	**+0.4**
	baz=95						
TXAR	**Lajitas Array**	**95.31**	**58**	P	**P**	**11 07 42.2**	**0.0**
TXAR	**Lajitas Array**	**95.31**	**58**	P	**P**	**11 07 42.2**	**0.0**
	comp=Z,2.6nm,1.1s,baz=208,slow=7.9,SNR=14						
W20A	**Ramah**	**95.37**	**51**	⇓P	**P**	**11 07 42.9**	**+0.4**
	baz=95						
526A	**Mary Lane Ranc**	**95.43**	**58**	⇓P	**P**	**11 07 43.3**	**+0.5**
	baz=95						
X21A	**Alamocita Cree**	**95.44**	**52**	⇓P	**P**	**11 07 43.0**	**+0.2**
	baz=95						
325A	**Bean Ranch, Si**	**95.56**	**56**	⇑P	**P**	**11 07 43.6**	**+0.2**
	baz=96						
627A	**Terlingua Ranc**	**95.58**	**59**	⇑P	**P**	**11 07 43.7**	**+0.2**
	baz=96						
224A	**Cornudas Mount**	**95.58**	**55**	⇑P	**P**	**11 07 43.5**	**+0.1**
	baz=96						
527A	**Woodward Ranch**	**95.81**	**58**	⇓P	**P**	**11 07 44.5**	**0.0**
	baz=96						
426A	**McDonald Obser**	**95.82**	**57**	⇑P	**P**	**11 07 44.9**	**+0.3**
	baz=96						
628A	**Black Gap, Mar**	**95.96**	**59**	⇓P	**P**	**11 07 45.7**	**+0.7**
	baz=96						
MFID	**Camas Ranch**	**96.08**	**41**	⇓P	**P**	**11 07 44.8**	**-0.6**
	baz=96						
427A	**Hayter Ranch,**	**96.36**	**57**	⇓P	**P**	**11 07 47.3**	**+0.4**
	baz=96						
SRU	**San Rafael**	**96.48**	**47**	⇓P	**P**	**11 07 47.2**	**-0.1**
	baz=96						
Y24A	**Capitan**	**96.71**	**54**	⇑P	**P**	**11 07 49.0**	**+0.5**
	baz=97						
529A	**Stev Forest Ra**	**96.80**	**59**	⇓P	**P**	**11 07 49.2**	**+0.3**
	baz=97						
HLID	**Hailey**	**96.96**	**42**	⇑P	**P**	**11 07 49.1**	**-0.3**
	baz=97						
R20A	**Redvale**	**97.27**	**49**	⇑P	**P**	**11 07 51.3**	**+0.3**
	baz=97						
429A	**Davenport Ranc**	**97.31**	**58**	⇑P	Pdif	11 07 51.6	+0.3
	baz=97						
Z26A	**Caprock**	**97.33**	**55**	⇑P	**P**	**11 07 51.2**	**0.0**
	baz=97						
H12A	**Diamond D Ranc**	**97.35**	**41**	⇓P	**P**	**11 07 50.4**	**-0.7**
	baz=97						
530A	**J-C Ranch, Com**	**97.44**	**59**	⇑P	Pdif	11 07 52.4	+0.6
	baz=97						
G12A	**Big Creek, Yel**	**97.46**	**40**	⇑P	**P**	**11 07 51.0**	**-0.6**
	baz=97						
W24A	**Lazy 6 Ranch,**	**97.47**	**53**	⇑P	**P**	**11 07 51.9**	**0.0**
	baz=97						
I14A	**Mackay**	**97.73**	**42**	⇑P	**P**	**11 07 53.0**	**+0.1**
	baz=98						
Q20A	**Ridgley Place,**	**97.78**	**48**	⇓P	**P**	**11 07 53.1**	**-0.1**
	baz=98						
M17A	**Scullys Gap (B**	**97.83**	**45**	⇓P	**P**	**11 07 53.0**	**-0.4**
	baz=98						
128A	**Castleberry Fa**	**98.00**	**56**	⇑P	Pdif	11 07 54.8	+0.5
	baz=98						
531A	**Rocksprings**	**98.02**	**59**	⇓P	Pdif	11 07 55.0	+0.7
	baz=98						
O19A	**Miners Draw (B**	**98.06**	**47**	⇑P	**P**	**11 07 54.5**	**0.0**
	baz=98						
532A	**Rocksprings**	**98.47**	**60**	⇓P	**P**	**11 07 56.5**	**+0.2**
	baz=98						
N20A	**Spence Gulch,**	**98.91**	**47**	⇑P	Pdif	11 07 57.5	-0.8
	baz=99						
L19A	**Farson**	**98.99**	**45**	⇑P	**Pdif**	**11 07 58.8**	**+0.2**
	baz=99						
PDAR	**Pinedale Array**	**99.27**	**45**	P	**Pdif**	**11 07 56.6**	**-3.2**
PDAR	**Pinedale Array**	**99.27**	**45**	P	**Pdif**	**11 07 56.6**	**-3.2**
	comp=Z,0.5nm,0.6s,baz=208,slow=2.9,SNR=4.4						
ILAR	**Eielson Array**	**100.88**	**14**	P	**Pdif**	**11 08 05.3**	**-0.9**
ILAR				PKiKP	**PKiKP**	**11 12 29.8**	**-0.7**
ILAR	**Eielson Array**	**100.88**	**14**	P	**Pdif**	**11 08 05.3**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=225,slow=5.7,SNR=4.4						
ILAR				PKiKP	**PKiKP**	**11 12 29.8**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=247,slow=2.5,SNR=7.9						
SONM	**Songino Array**	**103.87**	**318**	PP	PP	11 12 35.5	-4.7
SONM				PKKPbc	**PKKPbc**	**11 24 12.0**	**+1.4**
SONM

PLCA	**Paso Flores**	**23.36**	**179**	P		P		11 12 43.4	+1.0
	2.0nm,0.6s,baz=358,slow=17,SNR=6.7								
TXAR	**Lajitas Array**	**56.05**	**325**	P		P		11 17 11.6	0.0
	0.2nm,0.7s,baz=152,slow=7.9,SNR=3.3								
TXAR				pP		pP		11 17 34.6	-0.2
	0.2nm,0.7s,baz=115,slow=8.1,SNR=2.4								
DBIC	**Dimbokro**	**69.56**	**76**	P		P		11 18 40.2	-1.3
	3.1nm,0.5s,baz=201,slow=7.4,SNR=8.1								
NVAR	**Mina Array Bea**	**70.97**	**322**	P		P		11 18 49.4	-0.5
	0.3nm,0.6s,baz=95,slow=10,SNR=2.9								
TORD	**Torodi Ar. Bea**	**77.90**	**72**	P		P		11 19 29.0	-1.2
	6.1nm,0.6s,baz=258,slow=5.3,SNR=54								
TORD				pP		pP		11 19 54.3	-0.4
	1.5nm,0.7s,baz=248,slow=5.7,SNR=2.6								
ESDC	**Sonseca Array**	**84.29**	**46**	P		P		11 20 03.7	0.0
	0.3nm,0.3s,baz=250,slow=5.7,SNR=4.0								
YKA	**Yellowknife Ar**	**86.58**	**341**	P		P		11 20 13.1	-1.4
	0.7nm,0.8s,baz=136,slow=5.0,SNR=7.7								
YKA				pP		pP		11 20 38.8	-0.6
	0.4nm,0.5s,baz=134,slow=5.2,SNR=2.9								
WRA	**Warramunga Arr**	**135.39**	**215**	PKP		PKPdf		11 26 52.8	+0.8
	0.3nm,0.5s,baz=140,slow=1.7,SNR=5.7								
USRK	**Ussuriysk Arra**	**146.90**	**329**	PKPbc		PKPab		11 27 14.6	-0.7
	1.6nm,0.7s,baz=318,slow=1.3,SNR=5.1								
MJAR	**Matsushiro Arr**	**147.84**	**312**	PKPbc		PKPbc		11 27 17.4	+0.8
	0.9nm,0.7s,baz=79,slow=2.5,SNR=5.3								
SONM	**Songino Array**	**149.47**	**3**	PKPbc		PKPbc		11 27 21.5	+0.9
	0.5nm,0.5s,baz=354,slow=2.9,SNR=3.3								

*HLW **22** 11:12:02.9,35.47N×22.99E,h16km±16km,Md3.3,Ml3.1*
*CSEM **22** 11:12:04.8±0.4,35.21N×22.88E,h20km,ML3.0/1, Error ellipse: s-maj=10.8km s-min=5.2km az=53.0*
*ISCJB **22** 11:12:05.4±1.1,35.26N±0.05×22.90E±0.05,h30km±9km, Error ellipse: s-maj=9.3km s-min=5.3km az=43.8*
*ATH **22** 11:12:06.8,35.38N×22.98E,h43km±5km,MD3.6/25*
*THE **22** 11:12:09.2,35.43N×23.04E,h31km±22km,ML3.0/1, Error ellipse: s-maj=22.5km s-min=0.7km az=42.0*

ISC 22 11:12:04.4±1.2,35.21N±0.05×22.86E±0.06,h45km±33km, n66,σ1§88/69,Central Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ANKY	**Antikythira Is**	**0.75**	**28**	P	**Pn**	**11 12 19.0**	**+0.4**
ANKY				S	**Sn**	**11 12 26.9**	**-2.0**
ANKY	**Antikythira Is**	**0.75**	**28**	*e*P	**Pn**	**11 12 19.0**	**+0.4**
ANKY	**Antikythira Is**	**0.75**	**28**	P	**Pn**	**11 12 19.0**	**+0.4**
GVD	**Gavdhos**	**1.07**	**110**	P	**Pn**	**11 12 27.0**	**+4.0**
GVD	**Gavdhos**	**1.07**	**110**	*e*P	**Pn**	**11 12 25.4**	**+2.4**
GVD	**Gavdhos**	**1.07**	**110**	*e*P	**Pn**	**11 12 25.4**	**+2.4**
KYTH	**Kithira**	**1.08**	**7**	P	**Pn**	**11 12 24.0**	**+0.9**
KYTH	**Kithira**	**1.08**	**7**	*e*P	**Pn**	**11 12 24.1**	**+0.9**
KYTH	**Kithira**	**1.08**	**7**	*e*P	**Pn**	**11 12 24.1**	**+0.9**
VAM	**Vamos**	**1.11**	**79**	P	**Pn**	**11 12 26.1**	**+2.6**
VAM				S	**Sn**	**11 12 38.2**	**+0.5**
VAM	**Vamos**	**1.11**	**79**	*e*P	**Pn**	**11 12 26.3**	**+2.8**
VAM	**Vamos**	**1.11**	**79**	P	**Pn**	**11 12 26.1**	**+2.6**
VAM				S	**Sn**	**11 12 38.2**	**+0.5**
VLI	**Veliai**	**1.51**	**2**	P	**Pn**	**11 12 30.2**	**+1.2**
VLI				S	**Sn**	**11 12 47.1**	**-0.3**
VLI	**Veliai**	**1.51**	**2**	*e*P	**Pn**	**11 12 30.5**	**+1.5**
VLI	**Veliai**	**1.51**	**2**	*e*P	**Pn**	**11 12 30.5**	**+1.5**
VLI				S	**Sn**	**11 12 47.1**	**-0.3**
DYR	**Agios Nikonas**	**1.61**	**345**	P	**Pn**	**11 12 32.4**	**+2.0**
DYR	**Agios Nikonas**	**1.61**	**345**	*e*P	**Pn**	**11 12 32.4**	**+2.3**
DYR	**Agios Nikonas**	**1.61**	**345**	P	**Pn**	**11 12 32.4**	**+2.0**
SIVA	**Sivas**	**1.61**	**96**	*e*P	**Pn**	**11 12 32.0**	**+1.7**
IDI	**Anoyia**	**1.66**	**87**	P	**Pn**	**11 12 33.8**	**+2.7**
IDI				S	**Sn**	**11 12 52.2**	**+0.9**
IDI	**Anoyia**	**1.66**	**87**	*e*P	**Pn**	**11 12 33.8**	**+2.7**
IDI	**Anoyia**	**1.66**	**87**	P	**Pn**	**11 12 33.8**	**+2.7**
IDI				S	**Sn**	**11 12 52.2**	**+0.9**
PYL	**PYLOS**	**1.91**	**332**	*e*P	**Pn**	**11 12 37.5**	**+3.0**
PYL	**PYLOS**	**1.91**	**332**	*e*P	**Pn**	**11 12 37.5**	**+3.0**
ITM	**Ithomi**	**2.11**	**339**	*e*P	**Pn**	**11 12 40.1**	**+2.9**
ITM	**Ithomi**	**2.11**	**339**	*e*P	**Pn**	**11 12 40.1**	**+2.9**
LAST	**Lasithi**	**2.14**	**91**	*e*P	Pn	11 12 41.5	+3.8
LAST	**Lasithi**	**2.14**	**91**	*e*P	Pn	11 12 41.5	+3.8
VLX	**Vlachokerasia**	**2.19**	**350**	*e*P	**Pn**	**11 12 41.1**	**+2.7**
VLX	**Vlachokerasia**	**2.19**	**350**	*e*P	**Pn**	**11 12 41.1**	**+2.7**
NPS	**Neapolis**	**2.25**	**88**	*e*P	Pn	11 12 42.4	+3.2
NPS	**Neapolis**	**2.25**	**88**	*e*P	Pn	11 12 42.4	+3.2
DID	**Didima**	**2.31**	**7**	P	**Pn**	**11 12 41.1**	**+1.1**
DID	**Didima**	**2.31**	**7**	P	**Pn**	**11 12 41.1**	**+1.1**
SANT	**Santorini**	**2.41**	**60**	*e*P	**Pn**	**11 12 42.2**	**+0.9**
SANT	**Santorini**	**2.41**	**60**	*e*P	**Pn**	**11 12 42.2**	**+0.9**
ZKR	**Zakros**	**2.75**	**91**	*e*P	Pn	11 12 49.2	+3.2
ZKR	**Zakros**	**2.75**	**91**	*e*P	Pn	11 12 49.2	+3.2
GUR	**Goura**	**2.75**	**351**	*e*P	**Pn**	**11 12 47.7**	**+1.5**
GUR	**Goura**	**2.75**	**351**	*e*P	**Pn**	**11 12 47.7**	**+1.5**
LTK	**Loutraki**	**2.81**	**2**	*e*P	**Pn**	**11 12 47.9**	**+1.1**
LTK	**Loutraki**	**2.81**	**2**	*e*P	**Pn**	**11 12 47.9**	**+1.1**
APE	**Apeiranthos**	**2.85**	**49**	*e*P	**Pn**	**11 12 49.7**	**+2.3**
APE				*e*S	**Sn**	**11 13 20.0**	**-0.5**
APE	**Apeiranthos**	**2.85**	**49**	*e*P	**Pn**	**11 12 49.7**	**+2.3**
APE				*e*S	**Sn**	**11 13 20.0**	**-0.5**
KLV	**Kalavryta, Ach**	**2.89**	**349**	*e*P	**Pn**	**11 12 50.9**	**+3.0**
KLV	**Kalavryta, Ach**	**2.89**	**349**	*e*P	**Pn**	**11 12 50.9**	**+3.0**
LAKA	**Lakka**	**3.11**	**347**	*e*P	**Pn**	**11 12 53.2**	**+2.3**
LAKA	**Lakka**	**3.11**	**347**	*e*P	**Pn**	**11 12 53.2**	**+2.3**
KALE	**Kalithea**	**3.23**	**350**	*e*P	**Pn**	**11 12 54.0**	**+1.4**
KALE	**Kalithea**	**3.23**	**350**	*e*P	**Pn**	**11 12 54.0**	**+1.4**
LKR	**Lokris**	**3.44**	**2**	*e*P	**Pn**	**11 12 56.2**	**+0.8**
LKR	**Lokris**	**3.44**	**2**	*e*P	**Pn**	**11 12 56.2**	**+0.8**
EVR	**Evrytania**	**3.80**	**347**	*e*P	**Pn**	**11 13 02.8**	**+2.4**
EVR	**Evrytania**	**3.80**	**347**	*e*P	**Pn**	**11 13 02.8**	**+2.4**
AGG	**Agios Georgios**	**3.83**	**354**	*e*P	**Pn**	**11 13 01.7**	**+0.8**
AGG	**Agios Georgios**	**3.83**	**354**	*e*P	**Pn**	**11 13 01.7**	**+0.8**
NEO	**Neokhori**	**4.10**	**4**	*e*P	**Pn**	**11 13 05.8**	**+1.2**
NEO	**Neokhori**	**4.10**	**4**	*e*P	**Pn**	**11 13 05.8**	**+1.2**
SLUM		**4.20**	**151**	AMP		11 13 00.0	
	comp=N,30μm,0.3s,logA/T=5.0,baz=154						
SLUM		**4.20**	**151**	P	**Pn**	**11 13 07.2**	**+1.3**
HMAT	**Matruh**	**5.43**	**138**	P	**Pn**	**11 13 23.4**	**+0.6**
	baz=140						
HMAT				S	**Sn**	**11 14 21.0**	**-2.9**
	baz=140						
HMAT	**Matruh**	**5.43**	**138**	P	**Pn**	**11 13 23.4**	**+0.6**
HMAT				S	**Sn**	**11 14 21.0**	**-2.9**
SWA2		**6.34**	**159**	P	**Pn**	**11 13 36.5**	**+1.2**
	baz=160						
SWA2		**6.34**	**159**	P	**Pn**	**11 13 36.5**	**+1.2**
AMAG	**Maghara**	**9.81**	**115**	P	**Pn**	**11 14 22.1**	**-0.8**
	baz=116						
AMAG	**Maghara**	**9.81**	**115**	P	**Pn**	**11 14 22.1**	**-0.8**

IDC 22 11:18:20.1±2.1,8.05S×129.44E,h0km,mb3.2/1, mb1 3.3/4,mb1mx3.3/20,mbtmp3.2/4,ML3.2/3,Error ellipse: s-maj=93.7km s-min=28.0km az=76.0,Timor Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**10.65**	**200**	Pn	Pn	11 20 54.2	+0.1
	0.2nm,0.3s,baz=16,slow=12,SNR=10						
FITZ				Sn	Sn	11 22 43.4	-11
	0.4nm,0.3s,baz=145,slow=23,SNR=10.0						
WRA	**Warramunga Arr**	**12.74**	**159**	Pn	Pn	11 21 21.3	-1.4
	0.1nm,0.3s,baz=334,slow=13,SNR=13						
WRA				Sn	Sn	11 23 36.3	-9.1
	0.3nm,0.3s,baz=333,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**16.11**	**165**	Pn	Pn	11 22 09.7	+1.6
	0.1nm,0.3s,baz=347,slow=11,SNR=4.1						
ASAR				Sn	Sn	11 24 56.8	-11
	0.1nm,0.3s,baz=344,slow=26,SNR=2.1						
MKAR	**Makanchi Array**	**68.80**	**327**	P	P	11 29 26.2	0.0
	0.1nm,0.3s,baz=111,slow=7.9,SNR=3.3						

*IDC **22** 11:36:21.8±2.0,31.56S×178.20W,h0km,mb4.1/3, mb1 4.3/4,mb1mx3.9/20,mbtmp4.1/4,ML3.9/1,MS3.5/1, Ms1 3.5/1,ms1mx2.3/30,Error ellipse: s-maj=46.3km s-min=37.6km az=45.0*
*ISCJB **22** 11:36:29.2±2.9,31.93S±0.08×178.7W±0.4,h45km, mb4.0/3,MS3.5/1,Error ellipse: s-maj=53.4km s-min=10.9km az=2.7*

ISC 22 11:36:29.5±1.9,31.9S±0.1×178.4W±0.3,h45km,n12, σ1§19/13,mb4.2/3,Kermadec Islands region

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

PUZ	**Puketiti**	**6.76**	**203**	PN		**Pn**		**11 38 07.2**	**+1.1**
PUZ				SN		**Sn**		**11 39 22.1**	**+0.4**
MWZ	**Matawai**	**7.25**	**206**	PN		**Pn**		**11 38 13.4**	**+0.6**
URZ	**Urewera**	**7.35**	**209**	PN		**Pn**		**11 38 14.8**	**+0.6**
URZ				SN		**Sn**		**11 39 35.5**	**-0.6**
URZ	**Urewera**	**7.35**	**209**	Pn		**Pn**		**11 38 14.7**	**+0.6**
	1.8nm,0.3s,baz=37,slow=22,SNR=16								
URZ				Sn		**Sn**		**11 39 36.0**	**-0.1**
	2.7nm,0.3s,baz=306,slow=22,SNR=9.9								
BKZ	**Black Stump Fm**	**8.37**	**208**	PN		**Pn**		**11 38 25.8**	**-2.4**
OXZ	**Oxford**	**13.69**	**211**	SN		Sn		11 41 56.5	-15
CTA	**Charters Tower**	**33.70**	**282**	P		**P**		**11 43 08.0**	**+1.5**
	1.2nm,0.3s,baz=129,slow=6.5,SNR=3.6								
ASAR	**Alice Springs**	**42.68**	**269**	P		**P**		**11 44 21.4**	**-0.7**
	0.9nm,0.7s,baz=105,slow=7.6,SNR=23								
WRA	**Warramunga Arr**	**43.80**	**274**	P		**P**		**11 44 30.4**	**-0.8**
	2.3nm,0.4s,baz=113,slow=7.9,SNR=81								
QSPA	**South Pole Qui**	**58.24**	**180**	LR		LR		12 08 50.8	
	comp=Z,36nm,18.9s,baz=124,slow=33								
FINES	**FINESS Array B**	**146.38**	**339**	PKPbc		**PKPdf**		**11 56 02.1**	**-1.3**
	0.8nm,0.4s,baz=31,slow=4.4,SNR=4.7								
TORD	**Torodi Ar. Bea**	**161.37**	**180**	PKPab		**PKPab**		**11 57 10.3**	**+0.5**
	0.8nm,1.0s,baz=170,slow=4.1,SNR=2.9								

IDC 22 11:53:06.6±1.2,25.49S×179.60E,h517km±13km, mb3.5/11,mb1 3.7/13,mb1mx3.5/22,mbtmp3.5/13,Error ellipse: s-maj=16.9km s-min=12.1km az=7.0,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.35**	**150**	P	P	11 54 27.4	-1.5
	127nm,0.3s,baz=90,slow=20,SNR=7.7						
RAO				S	S	11 55 36.6	+0.4
	112nm,0.3s,baz=91,slow=22,SNR=1.9						
DZM	**Mont Dzumac**	**12.51**	**283**	P	P	11 55 51.5	+0.8
	0.6nm,0.3s,baz=91,slow=23,SNR=5.1						
URZ	**Urewera**	**12.91**	**189**	P	P	11 55 51.3	-3.2
	4.5nm,0.3s,baz=335,slow=3.7,SNR=18						
URZ				S	S	11 58 10.5	-2.4
	1.3nm,0.3s,baz=64,slow=20,SNR=6.6						
RPZ	**Rata Peaks**	**19.48**	**199**	P	P	11 56 58.7	-0.7
	0.8nm,0.3s,baz=348,slow=5.9,SNR=4.7						
CTA	**Charters Tower**	**31.15**	**273**	P	P	11 58 44.0	+0.9
	8.7nm,0.5s,baz=98,slow=11,SNR=20						
STKA	**Stephens Creek**	**33.82**	**250**	P	P	11 59 05.7	+0.1
	3.2nm,0.7s,baz=77,slow=9.6,SNR=5.7						
ASAR	**Alice Springs**	**41.44**	**262**	P	P	12 00 08.0	-0.1
	7.0nm,1.0s,baz=91,slow=8.0,SNR=100						
ASAR				pP	pP	12 01 40.1	-1.2
	1.5nm,1.0s,baz=90,slow=9.3,SNR=4.3						
WRA	**Warramunga Arr**	**41.96**	**268**	P	P	12 00 11.5	-0.7
	4.4nm,0.5s,baz=99,slow=6.8,SNR=112						
WRA				ScP	ScP	12 04 59.6	+2.9
	1.1nm,1.0s,baz=91,slow=4.0,SNR=4.7						
WRA				S	S	12 05 52.8	-0.5
	1.0nm,0.9s,baz=98,slow=15,SNR=6.4						
FITZ	**Fitzroy Crossi**	**50.36**	**267**	P	P	12 01 16.4	+0.3
	4.1nm,0.8s,baz=170,slow=7.2,SNR=12						
QSPA	**South Pole Qui**	**64.60**	**180**	P	P	12 02 53.1	+0.4
	7.3nm,1.0s,baz=26,slow=3.4,SNR=30						
MJAR	**Matsushiro Arr**	**73.00**	**326**	P	P	12 03 42.8	-0.8
	1.1nm,0.6s,baz=146,slow=4.3,SNR=3.9						
MAW	**Mawson**	**76.14**	**201**	P	P	12 04 01.0	+0.3
	1.8nm,0.6s,baz=69,slow=5.6,SNR=3.8						
KSRS	**Korea Array**	**79.23**	**321**	P	P	12 04 18.1	+0.3
	0.6nm,0.6s,baz=126,slow=5.7,SNR=3.6						
NVAR	**Mina Array Bea**	**86.14**	**44**	P	P	12 04 53.2	+0.2
	2.4nm,0.8s,baz=226,slow=8.1,SNR=17						
TXAR	**Lajitas Array**	**91.58**	**58**	P	P	12 05 19.3	+1.0
	1.4nm,0.9s,baz=220,slow=6.5,SNR=16						
MKAR	**Makanchi Array**	**112.95**	**312**	PKiKP	PKiKP	12 10 44.0	-0.6
	0.1nm,0.5s,baz=133,slow=1.2,SNR=2.7						
ARCES	**ARCESS Array B**	**133.36**	**348**	PKP	PKPdf	12 11 23.4	+0.5
	1.7nm,0.8s,baz=80,slow=3.8,SNR=6.5						
FINES	**FINESS Array B**	**139.82**	**341**	SKPbc	SKiKP	12 14 24.1	-0.3
	1.9nm,0.7s,baz=64,slow=4.4,SNR=5.1						
NB2	**NORSAR Subarra**	**143.58**	**350**	PKP	PKPab	12 11 39.6	-0.8
	comp=Z,1.8nm,0.6s,baz=16,slow=3.2						
NOA	**NORSAR Array B**	**143.58**	**350**	PKP	PKPab	12 11 39.0	-1.3
	comp=Z,5.0nm,0.8s,baz=22,slow=3.8,SNR=20						
AKASG	**Malin Array Be**	**146.09**	**326**	PKPbc	PKPdf	12 11 45.8	-0.5
	comp=Z,0.5nm,0.3s,baz=34,slow=3.0,SNR=4.8						
BRTR	**Keskin Array B**	**148.21**	**305**	PKP	PKPdf	12 11 50.7	+0.3
	comp=Z,0.4nm,0.4s,baz=351,slow=3.6,SNR=3.4						
BRTR				PKPbc	PKPbc	12 11 54.5	0.0
	comp=Z,0.6nm,0.5s,baz=140,slow=5.6,SNR=4.7						
BRTR				PKPab	PKPab	12 11 59.1	-0.4
	comp=Z,0.7nm,0.7s,baz=122,slow=4.5,SNR=3.7						
TORD	**Torodi Ar. Bea**	**167.57**	**190**	PKP	PKPdf	12 12 13.5	-0.5
	comp=Z,0.7nm,1.0s,baz=13,slow=1.4,SNR=2.8						
TORD				PKPab	PKPab	12 13 22.4	-0.9
	comp=Z,0.8nm,0.6s,baz=170,slow=4.8,SNR=6.4						

MAN 22 11:59:46,19.28N×121.07E,h25km,mb3.6,ML2.3,MS1.9, 1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**1.04**	**204**	*i*P	Pn	12 00 04.4	-0.7
PIP				*e*S	Sn	12 00 18.9	0.0

*ISK **22** 12:10:20.4,39.48N×28.18E,h6km,MD2.7*
*DDA **22** 12:10:20.6,39.49N×28.19E,h7km,MD2.8*
*ISCJB **22** 12:10:21.0±0.5,39.50N±0.03×28.20E±0.04,h7km±6km, Error ellipse: s-maj=6.0km s-min=3.8km az=143.7*
*CSEM **22** 12:10:21.2±0.2,39.50N×28.21E,h10km,MD2.8, Error ellipse: s-maj=5.5km s-min=3.8km az=54.0*

ISC 22 12:10:21.3±0.9,39.48N±0.03×28.17E±0.03,h15km±7km, n34,σ0§76/47,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DURS	**Dursunbey**	**0.27**	**63**	*i* P	**Pg**	**12 10 26.6**	**-0.6**
DURS				*e*S	**Sg**	**12 10 32.9**	**+1.8**
DURS	**Dursunbey**	**0.27**	**63**	*i* P	**Pg**	**12 10 26.6**	**-0.6**
BALB	**Balikesir**	**0.27**	**306**	*e*PG	**Pg**	**12 10 26.7**	**-0.5**
BALB				*e*SG	**Sg**	**12 10 31.0**	**-0.2**
BALB	**Balikesir**	**0.27**	**306**	*e*Pg	**Pg**	**12 10 26.7**	**-0.5**
BALB				*e*Sg	**Sg**	**12 10 31.0**	**-0.2**
BALY	**Balya**	**0.50**	**302**	*i* P	**Pg**	**12 10 29.9**	**-1.3**
BALY				*i* S	**Sg**	**12 10 38.2**	**+0.3**
BALY	**Balya**	**0.50**	**302**	*i* P	**Pg**	**12 10 29.9**	**-1.3**
BALY				*i* S	**Sg**	**12 10 38.2**	**+0.3**
DEMI	**Demirci**	**0.61**	**135**	*i* P	**Pg**	**12 10 32.8**	**-0.5**
DEMI				*i* S	**Sb**	**12 10 42.0**	**-0.2**
DEMI	**Demirci**	**0.61**	**135**	*i* P	**Pg**	**12 10 32.8**	**-0.5**
DEMI				*i* S	**Sb**	**12 10 42.0**	**-0.2**
AKHS	**Akhisar**	**0.66**	**205**	*e*P	**Pn**	**12 10 37.1**	**+1.0**
AKHS				*e*S	**Sb**	**12 10 44.4**	**+0.9**
AKHS	**Akhisar**	**0.66**	**205**	*e*P	**Pn**	**12 10 37.1**	**+1.0**
AKHS				*e*S	**Sb**	**12 10 44.4**	**+0.9**
GONE	**Gonen-Balikesi**	**0.68**	**327**	*e*PG	**Pg**	**12 10 34.0**	**-0.6**
GONE				*e*SG	**Sb**	**12 10 44.0**	**0.0**
GONE	**Gonen-Balikesi**	**0.68**	**327**	*e*Pg	**Pg**	**12 10 34.0**	**-0.6**
GONE				*e*Sg	**Sb**	**12 10 44.0**	**0.0**
TVSB	**Tavsanli**	**1.00**	**91**	*e*PG	**Pb**	**12 10 39.9**	**-0.6**
TVSB	**Tavsanli**	**1.00**	**91**	*e*Pg	**Pb**	**12 10 39.9**	**-0.6**
MANT	**Manisa**	**1.03**	**163**	*i* P	**Pg**	**12 10 40.3**	**-1.0**
MANT				*e*S	**Sn**	**12 10 55.3**	**-0.5**
MANT	**Manisa**	**1.03**	**163**	*i* P	**Pg**	**12 10 40.3**	**-1.0**
MANT				*e*S	**Sn**	**12 10 55.3**	**-0.5**
KULA	**Kula-Manisa**	**1.04**	**158**	*e*PG	**Pg**	**12 10 40.5**	**-0.9**
KULA	**Kula-Manisa**	**1.04**	**158**	*e*Pg	**Pg**	**12 10 40.5**	**-0.9**
MDNY	**Mudanya-Bursa**	**1.04**	**32**	*e*PG	**Pb**	**12 10 40.9**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.04**	**32**	*e*Pg	**Pb**	**12 10 40.9**	**-0.2**
KRBG	**Karabiga-Canak**	**1.13**	**324**	*e*PN	**Pb**	**12 10 42.3**	**-0.3**
KRBG	**Karabiga-Canak**	**1.13**	**324**	*e*Pn	**Pb**	**12 10 42.3**	**-0.3**
ARMT	**Armutlu**	**1.21**	**26**	*e*PN	**Pg**	**12 10 44.0**	**-0.7**
ARMT	**Armutlu**	**1.21**	**26**	*e*Pn	**Pg**	**12 10 44.0**	**-0.7**
GEMT	**Gemlik**	**1.24**	**39**	*e*PN	**Pg**	**12 10 44.1**	**-1.1**
GEMT	**Gemlik**	**1.24**	**39**	*e*Pn	**Pg**	**12 10 44.1**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.43**	**328**	*e*PN	**Pb**	**12 10 47.4**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.43**	**328**	*e*Pn	**Pb**	**12 10 47.4**	**-0.2**
YLV	**Yalova**	**1.43**	**40**	*e*PN	**Pg**	**12 10 47.9**	**-0.9**
YLV	**Yalova**	**1.43**	**40**	*e*Pn	**Pg**	**12 10 47.9**	**-0.9**
MFT	**Murefte**	**1.47**	**333**	*e*PN	**Pb**	**12 10 48.6**	**+0.2**
MFT	**Murefte**	**1.47**	**333**	*e*Pn	**Pb**	**12 10 48.6**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.59**	**306**	*e*PN	**Pn**	**12 10 49.8**	**+0.9**
GELI	**Tayfur-Gelibol**	**1.59**	**306**	*e*Pn	**Pn**	**12 10 49.8**	**+0.9**

*ISCJB **22** 12:12:57.5±1.3,42.17N±0.06×76.27E±0.06,h5km±5km, Error ellipse: s-maj=11.2km s-min=5.8km az=153.8*
*NNC **22** 12:12:57.4±0.7,42.19N×76.22E,h0km,mb3.2,mpv3.0, Error ellipse: s-maj=4.6km s-min=2.1km az=3.0*
*KNET **22** 12:12:58.4±0.4,42.22N×76.15E,h0km,ml2.5,Error ellipse: s-maj=2.9km s-min=2.0km az=179.0*

ISC 22 12:12:58.8±1.1,42.25N±0.07×76.18E±0.03,h2km±12km, n13,σ0§76/20,9C-13D,Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ULHL	**Ulahol**	**0.04**	**89**	P	**Pg**	**12 12 59.5**	**-0.3**
	533nm,0.1s						
ULHL				⇓S	**Sg**	**12 13 01.3**	**+0.8**
	7μm,0.1s						
KZA	**Kyzart**	**0.71**	**257**	⇑P	**Pg**	**12 13 11.8**	**-0.7**
	20nm,0.1s,SNR=42						
KZA				⇓S	**Sg**	**12 13 22.3**	**+0.5**
	85nm,0.2s						
TKM2	**Tokmak 2**	**0.80**	**328**	⇓P	**Pg**	**12 13 14.2**	**0.0**
	6.5nm,0.3s						
TKM2				⇓S	**Sb**	**12 13 26.5**	**-0.6**
	28nm,0.3s						
TKM2	**Tokmak 2**	**0.80**	**328**	⇓P	**Pg**	**12 13 14.4**	**+0.2**
	18nm,0.1s,SNR=40						
TKM2				⇓S	**Sb**	**12 13 26.9**	**-0.2**
	134nm,0.1s						
KBK	**Karagaybulak**	**1.00**	**295**	⇑P	**Pg**	**12 13 18.0**	**-0.1**
	20nm,0.1s,SNR=41						
KBK				⇓S	**Sb**	**12 13 33.0**	**+0.2**
	102nm,0.2s						
KNDC	**Almaty**	**1.13**	**30**	⇑P	**Pg**	**12 13 19.5**	**-0.9**
	12nm,0.2s						
KNDC				⇑S	**Sb**	**12 13 35.6**	**-0.8**
	25nm,0.2s						
CHMS	**Chumysh**	**1.30**	**306**	⇑P	**Pb**	**12 13 23.5**	**-0.5**
	9.4nm,0.2s,SNR=13						
CHMS				⇓S	**Sn**	**12 13 41.7**	**-0.3**
	28nm,0.1s						
USP	**Ospenovka**	**1.61**	**310**	⇓P	**Pb**	**12 13 28.6**	**-0.6**
	9.3nm,0.1s,SNR=12						
EKS2	**Erkin-Say**	**1.83**	**284**	⇓P	**Pb**	**12 13 33.1**	**0.0**
	5.9nm,0.2s,SNR=12						
AML	**Almayashu**	**1.85**	**267**	⇑P	**Pb**	**12 13 32.9**	**-0.8**
	8.7nm,0.2s,SNR=17						
KK31	**Karatay Array**	**4.27**	**283**	⇑Pg	**Pb**	**12 14 16.0**	**+1.4**
	1.0nm,0.5s,baz=93,slow=16,SNR=8.4						
KK31				⇑Lg	Lg	12 15 14.1	
	4.2nm,0.6s,baz=106,slow=29,SNR=7.3						
MK31	**Makanchi Array**	**6.30**	**42**	⇑Pn	**Pn**	**12 14 32.7**	**-0.1**
	0.3nm,0.5s,baz=221,slow=15,SNR=3.6						
MK31				⇓Sn	**Sn**	**12 15 47.0**	**+1.6**
	0.5nm,0.6s,baz=216,slow=24,SNR=4.6						
MK31				⇓Lg	Lg	12 16 18.5	
	0.6nm,0.5s						
**KURK

	0.1nm,0.3s,baz=163,slow=11,SNR=2.9							
KSRS	**Korea Array**	**18.72**	**320**	P	Pn	13 01 10.5	+0.8	
	0.1nm,0.3s,baz=131,slow=11,SNR=5.4							
KSRS				LR	LR	13 07 46.3		
	comp=Z,19nm,18.5s,baz=120,slow=35							
USRK	**Ussuriysk Arra**	**22.25**	**339**	P	P	13 01 47.1	-0.6	
	1.2nm,0.8s,baz=146,slow=11,SNR=3.8							
WRA	**Warramunga Arr**	**44.22**	**192**	P	P	13 04 59.8	-0.6	
	0.4nm,0.4s,baz=18,slow=9.0,SNR=16							
WRA				PcP	PcP	13 06 44.9	-0.3	
	0.3nm,0.7s,baz=6.7,slow=3.5,SNR=4.7							
ASAR	**Alice Springs**	**47.93**	**191**	P	P	13 05 29.9	+0.1	
	0.4nm,0.7s,baz=15,slow=13,SNR=6.0							
MKAR	**Makanchi Array**	**53.10**	**312**	P	P	13 06 08.8	+0.2	
	0.4nm,0.6s,baz=88,slow=8.6,SNR=3.8							
KURBB	**Kurchatov Arra**	**55.83**	**316**	P	P	13 06 27.4	-0.9	
	0.3nm,0.4s,baz=93,slow=8.3,SNR=4.4							
ILAR	**Eielson Array**	**60.36**	**28**	P	P	13 06 59.4	-0.5	
	0.8nm,0.8s,baz=250,slow=6.1,SNR=10							
YKA	**Yellowknife Ar**	**74.79**	**28**	P	P	13 08 31.1	0.0	
	0.3nm,0.5s,baz=293,slow=5.7,SNR=5.6							
ARCES	**ARCESS Array B**	**76.89**	**341**	P	P	13 08 44.3	+1.3	
	5.9nm,1.1s,baz=40,slow=8.0,SNR=4.7							
KBZ	**Khabaz**	**80.73**	**314**	P	P	13 09 05.7	+1.1	
	0.8nm,0.4s,baz=121,slow=5.9,SNR=5.1							
FINES	**FINESS Array B**	**81.20**	**334**	P	P	13 09 06.4	-0.4	
	0.5nm,0.4s,baz=46,slow=5.5,SNR=4.3							
NVAR	**Mina Array Bea**	**82.11**	**52**	P	P	13 09 12.8	+0.5	
	0.3nm,0.5s,baz=271,slow=7.1,SNR=2.7							
BRTR	**Keskin Array B**	**88.72**	**313**	P	P	13 09 44.6	-0.6	
	0.5nm,0.5s,baz=61,slow=4.1,SNR=3.3							

IDC 22 13:02:11.5±14.0, 32°.70N×104°.51E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.2/27, mbtmp3.4/3, ML4.0/1, Error ellipse: s-maj=314.1km s-min=80.9km az=143.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**15.04**	**201**	Pn	Pn	13 05 45.3	-0.2
	0.2nm,0.3s,baz=5.3,slow=9.2,SNR=11						
WRA	**Warramunga Arr**	**59.61**	**147**	P	P	13 12 17.4	0.0
	0.4nm,0.5s,baz=340,slow=7.9,SNR=11						
ASAR	**Alice Springs**	**62.68**	**150**	P	P	13 12 38.2	0.0
	0.1nm,0.4s,baz=334,slow=6.6,SNR=5.4						

*NEIC **22** 13:26:20.5±0.4, 25°.67N×93°.28E, mb4.3/8, Error ellipse: s-maj=12.8km s-min=6.8km az=50.0*
*IDC **22** 13:26:20.2±0.5, 25°.73N×93°.37E, h32km±2km, mb3.9/21, mb1 4.0/22, mb1mx3.9/31, mbtmp3.8/22, ML4.1/1, MS3.1/7, Ms1 3.1/7, ms1mx2.7/32, Error ellipse: s-maj=16.4km s-min=9.7km az=50.0*

ISC 22 13:26:20.3±0.4, 25.74N±0°.07×93.34E±0°.05, h33km±2km, h32km:pP-P, n70, σ0.89/113, mb4.0/28, MS3.0/6, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**1.33**	**263**	*e*PG	**Pn**	**13 26 44.0**	**+1.2**
SHL				*i* SG	**Sb**	**13 27 01.0**	**-0.6**
LSA	**Lhasa**	**4.40**	**334**	*e*Pn	**Pn**	**13 27 27.9**	**+2.5**
TAPN	**Taplejung**	**5.30**	**289**	*e*Pn	**Pn**	**13 27 38.8**	**+1.3**
TAPN				*e*Sn	**Sn**	**13 28 38.2**	**+0.6**
	626nm,0.7s						
ODAN	**Odare**	**5.46**	**283**	*e*Pn	**Pn**	**13 27 41.8**	**+2.1**
ODAN				*e*Sn	**Sn**	**13 28 42.9**	**+1.4**
	1µm,0.6s						
RAMN	**Ramite**	**6.17**	**283**	*e*Pn	**Pn**	**13 27 50.6**	**+1.2**
RAMN				*e*Sn	**Sn**	**13 29 00.6**	**+1.6**
	617nm,0.7s						
GUN	**Gumba**	**7.01**	**290**	*e*Pn	**Pn**	**13 28 01.9**	**+0.8**
GUN				*e*Sn	**Sn**	**13 29 19.1**	**-0.8**
	169nm,0.5s						
PKI	**Pulchoki**	**7.33**	**286**	*e*Pn	**Pn**	**13 28 06.3**	**+0.8**
PKI				*e*Sn	**Sn**	**13 29 26.9**	**-0.8**
	110nm,0.5s						
KKN	**Kakani**	**7.49**	**288**	*e*Pn	**Pn**	**13 28 09.0**	**+1.4**
KKN				*e*Sn	**Sn**	**13 29 30.1**	**-1.5**
	139nm,0.8s						
DMN	**Daman**	**7.60**	**286**	*e*Pn	**Pn**	**13 28 10.3**	**+1.2**
DMN				*e*Sn	**Sn**	**13 29 33.7**	**-0.6**
	227nm,0.9s						
CHTO	**Chiang Mai**	**8.62**	**142**	*e*Pn	**Pn**	**13 28 25.3**	**+2.4**
CMAR	**Chiang Mai Arr**	**8.91**	**143**	Pn	**Pn**	**13 28 28.2**	**+1.4**
CMAR	**Chiang Mai Arr**	**8.91**	**143**	Pn	**Pn**	**13 28 28.2**	**+1.4**
	0.5nm,0.3s,baz=319,slow=12,SNR=14						
CMAR				LR	LR	13 32 26.7	
	comp=Z,66nm,19.8s,baz=320,slow=41						
DANN	**Dangsing**	**8.93**	**289**	*e*Pn	**Pn**	**13 28 27.3**	**-0.1**
DANN				*e*Sn	**Sn**	**13 30 05.5**	**-1.6**
	44nm,0.4s						
KOLN	**Koldanda**	**8.94**	**285**	*e*Pn	**Pn**	**13 28 28.9**	**+1.4**
KOLN				*e*Sn	**Sn**	**13 30 05.0**	**-2.2**
	44nm,0.3s						
ENH	**Enshi**	**14.96**	**69**	*e*P	**P**	**13 29 53.6**	**-1.1**
	24nm,0.5s						
TKM2	**Tokmak 2**	**22.48**	**324**	*e*P	**P**	**13 31 17.5**	**+0.5**
	7.9nm,1.0s						
KBL	**Kabul**	**22.73**	**298**	*e*P	**P**	**13 31 20.9**	**+1.0**
MK31	**Makanchi Array**	**22.78**	**340**	*e*P	**P**	**13 31 20.9**	**+0.8**
MKAR	**Makanchi Array**	**22.78**	**340**	P	**P**	**13 31 20.7**	**+0.7**
MKAR				PcP	**PcP**	**13 35 10.5**	**-0.4**
MKAR	**Makanchi Array**	**22.78**	**340**	P	**P**	**13 31 20.7**	**+0.7**
	1.7nm,0.6s,baz=144,slow=12,SNR=15						
MKAR				PcP	**PcP**	**13 35 10.5**	**-0.4**
	0.2nm,0.5s,baz=143,slow=0.7,SNR=2.7						
AAK	**Ala-Archa**	**22.88**	**322**	LR	LR	13 41 43.1	
	comp=Z,36nm,20.0s,baz=131,slow=40						
SONM	**Songino Array**	**24.34**	**22**	P	**P**	**13 31 36.0**	**+0.8**
SONM	**Songino Array**	**24.34**	**22**	P	**P**	**13 31 36.0**	**+0.8**
	2.3nm,0.7s,baz=202,slow=7.1,SNR=16						
ULN	**Ulaanbaatar**	**24.59**	**23**	*e*P	**P**	**13 31 38.3**	**+0.7**
	2.4nm,0.6s						
KURBB	**Kurchatov Arra**	**27.34**	**339**	P	**P**	**13 32 02.0**	**-0.1**
	0.7nm,0.5s,baz=148,slow=10.0,SNR=4.8						
KURBB				PcP	**PcP**	**13 35 19.7**	**-1.1**
	0.2nm,0.4s,baz=150,slow=2.0,SNR=3.5						
KURK	**Kurchatov**	**27.39**	**339**	*e*P	**P**	**13 32 02.9**	**+0.3**
	2.8nm,0.8s						
KURK				PcP	**PcP**	**13 35 19.7**	**-1.3**
ZALV	**Zalesovo Beam**	**28.89**	**350**	P	**P**	**13 32 16.8**	**+0.8**
ZALV				pP	**pP**	**13 32 24.9**	**-0.4**
ZALV	**Zalesovo Beam**	**28.89**	**350**	P	**P**	**13 32 16.8**	**+0.8**
	0.6nm,0.3s,baz=172,slow=12,SNR=2.2						
ZALV				pP	**pP**	**13 32 24.9**	**-0.4**
	1.2nm,0.4s,baz=171,slow=10,SNR=3.2						
ZALV				LR	LR	13 45 02.7	
	comp=Z,35nm,20.3s,baz=70,slow=39						
KSAR	**Wonju Array Be**	**31.48**	**60**	P	**P**	**13 32 38.9**	**-0.2**
KSRS	**Korea Array**	**31.52**	**60**	P	**P**	**13 32 38.9**	**-0.5**
	0.7nm,0.7s,baz=258,slow=9.5,SNR=2.4						
KSRS				LR	LR	13 46 37.4	
	comp=Z,46nm,20.1s,baz=245,slow=39						
BVAR	**Borovoye Array**	**32.24**	**334**	P	**P**	**13 32 47.1**	**+1.5**
BVAR	**Borovoye Array**	**32.24**	**334**	P	**P**	**13 32 47.1**	**+1.5**
	0.3nm,0.4s,baz=141,slow=9.3,SNR=2.1						
ABKAR	**Akbulak array**	**34.96**	**321**	*e*P	**P**	**13 33 09.7**	**+0.4**
	3.4nm,0.4s						
USRK	**Ussuriysk Arra**	**36.23**	**49**	P	**P**	**13 33 20.3**	**+0.1**
	1.1nm,0.8s,baz=232,slow=9.6,SNR=3.6						
USRK				sP	**sP**	**13 33 34.5**	**+0.8**
	1.3nm,0.7s,baz=250,slow=5.7,SNR=3.7						
USRK				LR	LR	13 50 15.1	
	comp=Z,23nm,20.1s,baz=154,slow=40						
AKTO	**Aktyubinsk**	**36.62**	**322**	P	**P**	**13 33 24.7**	**+1.2**
AKTO	**Aktyubinsk**	**36.62**	**322**	P	**P**	**13 33 24.7**	**+1.2**
	0.6nm,0.3s,baz=107,slow=11,SNR=3.8						
MJAR	**Matsushiro Arr**	**39.57**	**63**	P	**P**	**13 33 48.1**	**-0.5**
MJAR				sP	**sP**	**13 34 01.9**	**-0.2**
MJAR	**Matsushiro Arr**	**39.57**	**63**	P	**P**	**13 33 48.1**	**-0.5**
	1.1nm,0.4s,baz=273,slow=9.7,SNR=7.8						
MJAR				sP	**sP**	**13 34 01.9**	**-0.2**
	1.0nm,0.4s,baz=271,slow=9.9,SNR=3.4						
MJAR				LR	LR	13 51 30.0	
	comp=Z,42nm,18.2s,baz=330,slow=38						
RDF	**Al-Radifah**	**40.62**	**285**	*e*P	**P**	**13 33 57.8**	**+0.5**
RDF				AMb	AMB	13 34 07.3	
	comp=Z,26nm,0.9s						
MIB	**Mutribah**	**40.71**	**287**	*e*P	**P**	**13 33 58.6**	**+0.6**
MIB				AMb	AMB	13 33 59.6	
	comp=Z,7.2nm,0.9s						
NAY	**Al-Naaiem**	**40.85**	**286**	*e*P	**P**	**13 33 59.3**	**+0.1**
BRTR	**Keskin Array B**	**51.26**	**301**	P	**P**	**13 35 20.9**	**-0.4**
BRTR	**Keskin Array B**	**51.26**	**301**	P	**P**	**13 35 20.9**	**-0.4**
	comp=Z,1.1nm,0.6s,baz=113,slow=7.2,SNR=6.3						
AKASG	**Malin Array Be**	**54.29**	**315**	P	**P**	**13 35 42.4**	**-0.9**
AKASG				pP	**pP**	**13 35 52.3**	**-0.9**
AKASG	**Malin Array Be**	**54.29**	**315**	P	**P**	**13 35 42.4**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=84,slow=6.4,SNR=4.4						
AKASG				pP	**pP**	**13 35 52.3**	**-0.9**
	comp=Z,3.8nm,0.7s,baz=82,slow=6.6,SNR=3.8						
FINES	**FINESS Array B**	**56.89**	**328**	P	**P**	**13 36 01.9**	**+0.1**
FINES				pP	**pP**	**13 36 11.1**	**-0.6**
FINES	**FINESS Array B**	**56.89**	**328**	P	**P**	**13 36 01.9**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=106,slow=15,SNR=4.3						
FINES				pP	**pP**	**13 36 11.1**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=100,slow=9.9,SNR=5.9						
ARCES	**ARCESS Array B**	**58.41**	**338**	P	**P**	**13 36 12.5**	**+0.1**
ARCES				pP	**pP**	**13 36 22.4**	**+0.2**
ARCES	**ARCESS Array B**	**58.41**	**338**	P	**P**	**13 36 12.5**	**+0.1**
	comp=Z,4.1nm,0.9s,baz=106,slow=7.1,SNR=2.7						
ARCES				pP	**pP**	**13 36 22.4**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=56,slow=11,SNR=2.7						
WRA	**Warramunga Arr**	**60.40**	**135**	P	**P**	**13 36 25.9**	**-0.8**
WRA				pP	**pP**	**13 36 37.0**	**+0.3**
WRA	**Warramunga Arr**	**60.40**	**135**	P	**P**	**13 36 25.9**	**-0.8**
	comp=Z,3.0nm,0.4s,baz=322,slow=7.4,SNR=155						
WRA				pP	**pP**	**13 36 37.0**	**+0.3**
	comp=Z,2.5nm,0.5s,baz=323,slow=7.4,SNR=11						
WRAB	**Tennant Creek**	**60.40**	**135**	*e*P	**P**	**13 36 25.8**	**-1.0**
	comp=Z,2.9nm,0.6s						
WRAB				*e*		13 36 36.9	
AS31	**Alice Springs**	**62.88**	**138**	*e*P	**P**	**13 36 42.6**	**-0.9**
ASAR	**Alice Springs**	**62.88**	**138**	P	**P**	**13 36 42.9**	**-0.5**
ASAR				pP	**pP**	**13 36 53.6**	**+0.1**
ASAR				PcP	**PcP**	**13 37 21.0**	**-0.5**
ASAR	**Alice Springs**	**62.88**	**138**	P	**P**	**13 36 42.9**	**-0.5**
	comp=Z,2.2nm,0.5s,baz=321,slow=6.6,SNR=64						
ASAR				pP	**pP**	**13 36 53.6**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=320,slow=6.6,SNR=5.4						
ASAR				PcP	**PcP**	**13 37 21.0**	**-0.5**
	comp=Z,1.0nm,0.4s,baz=322,slow=3.8,SNR=8.7						
NB2	**NORSAR Subarra**	**64.06**	**328**	P	**P**	**13 36 50.0**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=84,slow=6.5						
NOA	**NORSAR Array B**	**64.06**	**328**	P	**P**	**13 36 50.0**	**-0.8**
NOA				pP	**pP**	**13 37 00.2**	**-0.7**
NOA	**NORSAR Array B**	**64.06**	**328**	P	**P**	**13 36 50.0**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=84,slow=6.6,SNR=5.3						
NOA				pP	**pP**	**13 37 00.2**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=84,slow=6.5,SNR=4.9						
GERES	**GERESS Array B**	**64.45**	**314**	P	**P**	**13 36 53.8**	**+0.2**
GERES				pP	**pP**	**13 37 03.3**	**-0.4**
GERES	**GERESS Array B**	**64.45**	**314**	P	**P**	**13 36 53.8**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=94,slow=5.8,SNR=6.5						
GERES				pP	**pP**	**13 37 03.3**	**-0.4**
	comp=Z,1.6nm,0.6s,baz=64,slow=6.1,SNR=5.0						
GERES				LR	LR	14 08 45.7	
	comp=Z,25nm,19.1s,baz=13,slow=40						
STKA	**Stephens Creek**	**73.50**	**139**	*e*P	**P**	**13 37 49.3**	**-0.6**
	comp=Z,1.1nm,0.6s						
STKA				*e*pP	**pP**	**13 37 59.9**	**-0.1**
STKA				pP	**pwP**	**13 38 00.2**	**+0.2**
STKA	**Stephens Creek**	**73.50**	**139**	P	**P**	**13 37 49.3**	**-0.6**
	comp=Z,2.7nm,0.3s,baz=312,slow=4.8,SNR=16						
STKA				pP	**pwP**	**13 38 00.2**	**+0.2**
	comp=Z,4.4nm,0.6s,baz=348,slow=3.5,SNR=3.1						
ILAR	**Eielson Array**	**78.56**	**22**	P	**P**	**13 38 16.9**	**-1.4**
ILAR				pP	**PcP**	**13 38 27.7**	**+0.4**
ILAR	**Eielson Array**	**78.56**	**22**	P	**P**	**13 38 16.9**	**-1.4**
	comp=Z,0.6nm,0.6s,baz=293,slow=4.6,SNR=8.7						
ILAR				pP	**PcP**	**13 38 27.7**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=307,slow=5.0,SNR=8.4						
BOSA	**Boshof**	**84.83**	**235**	*e*P	**P**	**13 38 52.2**	**+0.2**
	comp=Z,4.3nm,0.7s						
BOSA	**Boshof**	**84.83**	**235**	P	**P**	**13 38 52.5**	**+0.5**
	comp=Z,1.3nm,0.4s,baz=45,slow=6.5,SNR=5.2						
TORD	**Torodi Ar. Bea**	**85.85**	**283**	P	**P**	**13 38 57.8**	**+0.4**
TORD				pP	**pP**	**13 39 07.9**	**+0.2**
TORD	**Torodi Ar. Bea**	**85.85**	**283**	P	**P**	**13 38 57.8**	**+0.4**
	comp=Z,1.6nm,0.5s,baz=63,slow=4.7,SNR=30						
TORD				pP	**pP**	**13 39 07.9**	**+0.2**
	comp=Z,3.6nm,0.8s,baz=64,slow=4.3,SNR=15						
TXAR	**Lajitas Array**	**122.86**	**18**	PKP	**PKPdf**	**13 45 13.4**	**-0.3**
TXAR				pPKP	**pPKPdf**	**13 45 24.9**	**+0.5**
TXAR	**Lajitas Array**	**122.86**	**18**	PKP	**PKPdf**	**13 45 13.4**	**-0.3**
	comp=Z,0.3nm,0.5s,baz=100,slow=1.3,SNR=4.6						
TXAR				pPKP	**pPKPdf**	**13 45 24.9**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=101,slow=1.3,SNR=3.2						

KRSC 22 13:28:21.6±0.3, 51°.00N×157°.59E, h66km±66km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**0.68**	**314**	P	Pn	13 28 38.0	+2.1
SKR	**Severo-Kuril's**	**0.99**	**252**	P	Pn	13 28 41.1	+1.4
SKR				S	Sn	13 28 54.4	+1.3
MIPR	**Malaya Ipel'ka**	**1.38**	**338**	P	Pn	13 28 45.7	+0.9
ASAK	**Asacha**	**1.40**	**8**	P	Pn	13 28 47.4	+2.2
ASAK				S	Sn	13 29 05.7	+2.8
MTVR	**Mutnovka**	**1.53**	**14**	P	Pn	13 28 49.5	+2.5
MTVR				S	Sn	13 29 09.4	+3.2
RUS	**Russkaya**	**1.55**	**21**	P	Pn	13 28 49.1	+2.1
RUS				S	Sn	13 29 08.6	+2.4
APC	**Apacha**	**1.95**	**352**	P	Pn	13 28 53.3	+0.9
PET	**Petropavlovsk**	**2.13**	**18**	P	Pn	13 28 55.0	+0.1
UGLR	**Uglovaya**	**2.34**	**18**	P	Pn	13 29 00.4	+2.5
AVH	**Avacha**	**2.38**	**17**	P	Pn	13 29 00.7	+2.4
AVH				S	Sn	13 29 29.5	+3.0
KOK	**Koryaka**	**2.38**	**15**	P	Pn	13 29 01.1	+2.6
KOK				S	Sn	13 29 30.3	+3.6
SMAR	**Somma**	**2.39**	**18**	P	Pn	13 29 01.4	+2.7
KRER	**Koryakskii**	**2.42**	**17**	P	Pn	13 29 01.5	+2.5
SDLR	**Sedlovina**	**2.42**	**19**	P	Pn	13 29 01.7	+2.8
NLC	**Nalytchevo**	**2.43**	**26**	S	Sn	13 29 27.9	+0.4
SPN	**Mys Shipunski**	**2.58**	**35**	P	Pn	13 29 03.5	+2.5
SPN				S	Sn	13 29 35.0	+3.7
GNL	**Ganaly**	**2.71**	**4**	P	Pn	13 29 03.7	+0.8
MKZ	**Mys Kozlova**	**4.36**	**34**	P	Pn	13 29 26.9	+1.7
MKZ				S	Sn	13 30 15.3	+0.7

IDC 22 14:18:03.7±1.5, 6°.03S×130°.56E, h0km, mb4.1/2, mb1 3.9/5, mb1mx3.5/19, mbtmp3.7/5, ML3.6/3, Error ellipse: s-maj=68.4km s-min=23.0km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.93**	**201**	Pn	Pn	14 21 07.5	-1.3
	0.4nm,0.3s,baz=25,slow=12,SNR=19						
FITZ				Sn	Sn	14 23 14.4	-19
	0.2nm,0.3s,baz=150,slow=20,SNR=3.8						
WRA	**Warramunga Arr**	**14.31**	**165**	Pn	Pn	14 21 29.8	+1.9
	0.2nm,0.3s,baz=346,slow=11,SNR=20						
WRA				Sn	Sn	14 23 56.5	-11
	0.5nm,0.3s,baz=210,slow=20,SNR=7.3						
ASAR	**Alice Springs**	**17.83**	**170**	P	P	14 22 15.1	+0.8
	0.2nm,0.3s,baz=343,slow=9.2,SNR=17						
ASAR				S	Sn	14 25 21.7	-11
	0.1nm,0.3s,baz=344,slow=25,SNR=4.5						
STKA	**Stephens Creek**	**27.71**	**160**	P	P	14 23 53.0	-0.8
	2.5nm,0.9s,baz=333,slow=9.0,SNR=3.6						
MKAR	**Makanchi Array**	**67.73**	**326**	P	P	14 29 03.2	+0.1
	0.6nm,0.4s,baz=117,slow=8.2,SNR=15						

IDC 22 15:11:51.3±2.5, 3°.36S×130°.56E, h0km, mb3.4/2, mb1 3.7/4, mb1mx3.4/22, mbtmp3.5/4, ML3.3/2, Error ellipse: s-maj=133.4km s-min=26.4km az=75.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**15.42**	**198**	Pn	Pn	15 15 29.2	-1.1
	0.1nm,0.3s,baz=29,slow=13,SNR=3.2						
WRA	**Warramunga Arr**	**16.89**	**168**	Pn	Pn	15 15 47.6	-1.7
	0.1nm,0.3s,baz=350,slow=11,SNR=14						
WRA				Sn	Sn	15 18 43.3	-14
	0.0nm,0.3s,baz=336,slow=24,SNR=2.7						
ASAR	**Alice Springs**	**20.44**	**171**	P	Pn	15 16 31.6	-1.0
	3.2nm,0.5s,baz=352,slow=10,SNR=130						
MKAR	**Makanchi Array**	**65.53**	**326**	P	P	15 22 36.6	0.0
	0.1nm,0.4s,baz=109,slow=7.8,SNR=2.5						

*ISCJB **22** 15:15:54.2±0.5, 50°.30N±0°.04×18°.74E±0°.03, h0km, Error ellipse: s-maj=5.4km s-min=2.4km az=12.2*

*IPEC **22** 15:15:55.4±0.2, 50°.27N×18°.80E, h1km±1km, ML2.4/3, Error ellipse: s-maj=2.4km s-min=1.1km az=168.0*
*CSEM **22** 15:15:55.0±0.2, 50°.32N×18°.76E, h2km, ML2.9/6, Error ellipse: s-maj=5.3km s-min=2.1km az=10.0*
*WAR **22** 15:15:56.0, 50°.23N×18°.84E*
*PRU **22** 15:15:56.3, 50°.27N×18°.76E, h0km*

ISC 22 15:15:55.5±0.8, 50°.25N±0°.04×18°.81E±0°.02, h0km, n33, σ1.04/60, 1D, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.60**	**226**	*e*PG	**Pg**	**15 16 07.5**	**+0.6**
OKC				*e*SG	**Sg**	**15 16 15.9**	**+1.3**
	comp=Z,26nm,0.4s						
OKC	**Ostrava-Krasne**	**0.60**	**226**	Pg	**Pg**	**15 16 07.5**	**+0.6**
OKC				Sg	**Sg**	**15 16 15.9**	**+1.3**
	26nm,0.4s						
OJC	**Ojcow**	**0.64**	**93**	*i* Pg	**Pg**	**15 16 07.9**	**+0.2**
OJC				*e*Sg	**Sg**	**15 16 16.4**	**+0.5**
OJC				*e*		15 16 17.0	
MORC	**Moravsky Berou**	**0.95**	**240**	*e*Pg	**Pg**	**15 16 13.4**	**-0.2**
	baz=58						
MORC				*e*Sg	**Sg**	**15 16 25.0**	**-0.9**
	40nm,0.4s,baz=58						
NIE	**Niedzica**	**1.28**	**130**	*e*Pg	**Pb**	**15 16 20.5**	**-0.1**
NIE				*e*Sg	**Sn**	**15 16 38.4**	**-0.2**
NIE	**Niedzica**	**1.28**	**130**	*e*Pg	**Pb**	**15 16 20.5**	**-0.1**
NIE				*e*Sg	**Sn**	**15 16 38.4**	**-0.2**
KRLC	**Kraliky**	**1.32**	**263**	*e*PG	**Pg**	**15 16 19.5**	**-1.2**
KRLC	**Kraliky**	**1.32**	**263**	Pg	**Pg**	**15 16 19.5**	**-1.2**
DPC	**Dobruska-Polom**	**1.60**	**274**	*e*PG	**Pn**	**15 16 24.6**	**-0.5**
DPC				*e*SG	**Sn**	**15 16 45.2**	**-1.2**
DPC	**Dobruska-Polom**	**1.60**	**274**	Pg	**Pn**	**15 16 24.6**	**-0.5**
DPC				Sg	**Sn**	**15 16 45.2**	**-1.2**
KSP	**Ksiaz**	**1.71**	**291**	*i* Pg	**Pn**	**15 16 28.1**	**+1.5**
KSP				*e*Sg	**Sb**	**15 16 51.0**	**+1.1**
KSP	**Ksiaz**	**1.71**	**291**	↓*i* Pg	**Pn**	**15 16 28.1**	**+1.5**
KSP				*e*Sg	**Sb**	**15 16 51.0**	**+1.1**
VRAC	**Vranov**	**1.72**	**237**	*e*Pn	**Pn**	**15 16 26.6**	**-0.1**
	baz=55						
VRAC				*e*Sg	**Sn**	**15 16 49.4**	**0.0**
	33nm,0.7s,baz=55						
VYHS	**Vyhne**	**1.76**	**179**	*e*PN	**Pb**	**15 16 28.6**	**-0.1**
VYHS				*e*SN	**Sn**	**15 16 50.6**	**+0.2**
VYHS	**Vyhne**	**1.76**	**179**	*e*Pn	**Pb**	**15 16 28.6**	**-0.1**
VYHS				*e*Sn	**Sn**	**15 16 50.6**	**+0.2**
STHS	**Stebnicka Huta**	**1.79**	**117**	*e*PN	**Pn**	**15 16 27.4**	**-0.2**
STHS				*e*SN	**Sg**	**15 16 52.6**	**-0.2**
STHS	**Stebnicka Huta**	**1.79**	**117**	*e*Pn	**Pn**	**15 16 27.4**	**-0.2**
STHS				*e*Sn	**Sg**	**15 16 52.6**	**-0.2**
UPC	**Upice**	**1.81**	**279**	*e*PG	**Pn**	**15 16 28.2**	**+0.3**
UPC	**Upice**	**1.81**	**279**	Pg	**Pn**	**15 16 28.2**	**+0.3**
KRUC	**Moravsky**	**1.97**	**234**	*e*Pn	**Pn**	**15 16 29.8**	**-0.4**
	baz=52						
KRUC				*e*Sn	**Sn**	**15 16 56.3**	**+0.8**
	30nm,0.9s,baz=52						
KECS	**Kecovo**	**2.08**	**148**	*e*PN	**Pn**	**15 16 31.5**	**-0.2**
KECS				*e*		15 16 34.7	
KECS	**Kecovo**	**2.08**	**148**	*e*Pn	**Pn**	**15 16 31.5**	**-0.2**
KECS				*e*Sn	**Sn**	**15 16 55.7**	**-2.6**
CRVS	**Cervenica-Dubn**	**2.19**	**127**	*e*PN	**Pn**	**15 16 33.9**	**+0.7**
CRVS				*e*SN	**Sb**	**15 17 02.8**	**-1.0**
CRVS	**Cervenica-Dubn**	**2.19**	**127**	*e*Pn	**Pn**	**15 16 33.9**	**+0.7**
CRVS				*e*Sn	**Sb**	**15 17 02.8**	**-1.0**
KOLS	**Kolonicke sedl**	**2.61**	**119**	*e*PN	**Pn**	**15 16 38.5**	**-0.5**
KOLS				*e*		15 16 45.5	
KOLS	**Kolonicke sedl**	**2.61**	**119**	*e*Pn

0.9nm,0.5s,baz=116,slow=8.6,SNR=7.0
NVAR Mina Array Bea 76.96 42 P **P 15 36 05.9 -1.1**
NVAR Mina Array Bea 76.96 42 P **P 15 36 05.9 -1.1**
0.9nm,0.8s,baz=227,slow=11,SNR=5.0
KSRS Korea Array 78.39 316 P **P 15 36 16.6 +2.0**
1.8nm,0.8s,baz=137,slow=6.8,SNR=8.3
KSAR Wonju Array Be 78.40 316 P **P 15 36 16.6 +1.9**
PDAR Pinedale Array 84.90 42 P **P 15 36 48.1 -1.2**
PDAR Pinedale Array 84.90 42 P **P 15 36 48.1 -1.2**
0.5nm,0.7s,baz=193,slow=7.4,SNR=3.3
COLA College 85.67 11 *eP* **P 15 36 51.3 -1.0**
6.6nm,0.8s
ILAR Eielson Array 85.75 11 P **P 15 36 51.4 -1.3**
ILAR Eielson Array 85.75 11 P **P 15 36 51.4 -1.3**
1.3nm,0.7s,baz=229,slow=6.1,SNR=15
CMAR Chiang Mai Arr 93.44 288 P **P 15 37 31.5 +1.4**
CMAR Chiang Mai Arr 93.44 288 P **P 15 37 31.5 +1.4**
0.8nm,0.8s,baz=119,slow=3.2,SNR=3.9
MKAR Makanchi Array 112.98 314 PKiKP **PKiKP 15 42 50.5 -0.7**
MKAR Makanchi Array 112.98 314 PKiKP **PKiKP 15 42 50.5 -0.7**
0.4nm,0.9s,baz=71,slow=0.6,SNR=3.5
KURK Kurchatov 115.47 318 PKP **PKPdf 15 42 55.1 -0.6**
KURBB Kurchatov Arra 115.53 318 PKP **PKPdf 15 42 55.1 -0.7**
0.1nm,0.3s,baz=117,slow=1.4,SNR=3.9
BVAR Borovoye Array 120.34 321 PKP **PKPdf 15 43 05.0 -0.1**
BVAR Borovoye Array 120.34 321 PKP **PKPdf 15 43 05.0 -0.1**
0.6nm,0.5s,baz=57,slow=5.3,SNR=3.1
AKASG Malin Array Be 143.30 336 PKP PKPbc 15 43 45.1 -0.1
AKASG Malin Array Be 143.30 336 PKP PKPbc 15 43 45.1 -0.1
0.8nm,0.5s,baz=40,slow=4.7,SNR=6.7
KIS Kishinev 146.33 332 LRM MLR 15 43 28.0
200nm,18.0s
CLL Collm 147.08 352⇑ *i*PKPbc **PKPab 15 43 57.2 -1.1**
CLL comp=Z,4.0nm,0.8s *i* PKPab **PKiKP 15 43 59.9 +0.7**
CLL *ep*PKPdf **pPKPdf 15 44 07.0 +2.1**
CLL *i* pPKPbc **pPKPbc 15 44 12.8 +5.9**
comp=Z,12nm,1.0s
CLL *i* sPKiKP sPKiKP 15 44 21.7 +8.7
BRG Berggiesshubel 147.38 351 *e*PKP **PKPab 15 43 58.1 -1.4**
BRG comp=Z,2.8nm,0.8s *e* 15 44 12.3
comp=Z,7.1nm,1.0s
UPC Upice 147.38 349 *e*PKP **PKPab 15 43 59.0 -0.6**
UPC *ep*PKP pPKPdf 15 44 14.3 +8.8
DPC Dobruska-Polom 147.47 348 *e*PKP **PKPab 15 43 59.1 -0.9**
DPC *ep*PKP **pPKPdf 15 44 11.4 +5.7**
PRU Pruhonice 148.14 350 *e*PKP **PKPab 15 44 00.8 -1.8**
PRU *ep*PKP pPKPdf 15 44 15.9 +9.2
BR131 Keskin Array S 148.52 317 *e*PKPbc **PKPab 15 44 02.3 -2.3**
BRTR Keskin Array B 148.52 317 PKPbc **PKPbc 15 44 01.7 +0.4**
BRTR Keskin Array B 148.52 317 PKPbc **PKPbc 15 44 01.7 +0.4**
comp=Z,2.1nm,0.8s,baz=123,slow=2.1,SNR=13
VYHS Vyhne 148.64 344 *e*PKP **PKPbc 15 43 59.3 -1.8**
VYHS *e* 15 44 11.8
KHC Kasperske Hory 149.13 351 *e*PKP **PKPbc 15 44 02.8 +0.5**
KHC *ep*PKP pPKPdf 15 44 16.8 +8.4
GERES GERESS Array B 149.39 350 PKPbc **PKPbc 15 44 03.3 +0.2**
GERES GERESS Array B 149.39 350 PKPbc **PKPbc 15 44 03.3 +0.2**
comp=Z,0.9nm,0.6s,baz=48,slow=2.0,SNR=8.6

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*IDC **22** 15:24:42.8±0.4, 76°.25N×6°.88E, h0km, mb4.1/28, mb1 4.3/33, mb1mx4.2/41, mbtmp4.1/33, ML3.7/5, MS3.9/32, Ms1 3.9/32, ms1mx3.7/46, Error ellipse: s-maj=11.1km s-min=9.2km az=63.0*

*ISCJB **22** 15:24:42.7±0.2, 76°.31N±0°.02×7°.0E±0°.1, h10km, mb4.5/116, MS3.9/47, Error ellipse: s-maj=4.5km s-min=3.3km az=8.1*

*CSEM **22** 15:24:42.5±0.1, 76°.30N×7°.10E, h2km, mb4.6/40, Ms3.3, Mw4.7, Error ellipse: s-maj=5.4km s-min=4.2km az=74.0*

*BJI **22** 15:24:42.7, 76°.40N×6°.90E, h10km, mB4.8/17, mb4.6/25, Ms4.6/17, Ms7 4.3/18*

*MOS **22** 15:24:42.6±0.9, 76°.29N×6°.70E, h10km, mb4.7/52, Error ellipse: s-maj=24.7km s-min=3.8km az=91.5*

*NAO **22** 15:24:42.6±1.7, 76°.25N×7°.70E, ML4.1*

*BER **22** 15:24:43.2±2.3, 76°.22N×7°.45E, h10km, ML2.9, ML4.1(NAO)*

*GCMT **22** 15:24:44.0±0.3, 76°.29N×6°.44E, h12km, MW4.7, Moment Tensor Solution. s11,c11; s64,c85; Moment tensor: Scale 10^16Nm; Mrr-1.43±.06; Mθθ0.14±.06; Mϕϕ1.29±.06; Mrθ-0.03±.32; Mrϕ0.36±.06; Mθr-0.30±.26; Best double couple: M0 1.40000×10^16 NP1:ϕs198.00000°, δ39.00000°, λ-87.00000°. NP2:ϕs14.00000°, δ51.00000°, λ-93.00000°. Principal axes: T 1.4200, Plg6.0000°, Azm106.0000°; N 0.0400, Plg2.0000°, Azm16.0000°; P -1.4600, Plg84.0000°, Azm266.0000°; Data Used: ll IU IC G CN.*

*NEIC **22** 15:24:44.4±0.2, 76°.30N×6°.86E, h10km, mb4.6/35 Error ellipse: s-maj=5.2km s-min=3.9km az=79.0*

ISC 22 15:24:44.8±0.4,**76°.34N**±0°.04×**6°.76E**±0°.04,**h14**km±2km,
h13km:**pP-P,n701**,σ1s**25**/725,**mb4.6**/116,**MS3.9**/47,
137C-125D,Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**2.15**	**67**	*eP*		Pn	15 25 16.3	-3.7
HSP				*eS*		Sn	15 25 39.5	-6.9
SPA0	**Spitsbergen Ar**	**2.82**	**44**	Pn		**Pn**	**15 25 27.4**	**-2.0**
	baz=223,slow=14							
SPA0				Sn		**Sn**	**15 25 58.6**	**-4.5**
	baz=227,slow=22							
SPA0	**Spitsbergen Ar**	**2.82**	**44**	Pn		**Pn**	**15 25 27.4**	**-2.0**
	baz=223,slow=14							
SPA0				Sn		**Sn**	**15 25 58.6**	**-4.5**
	baz=227,slow=22							
SPA0	**Spitsbergen Ar**	**2.82**	**44**	Pn		**Pn**	**15 25 27.4**	**-2.0**
	baz=223,slow=13,SNR=50							
SPA0				Sn		**Sn**	**15 25 58.6**	**-4.5**
	baz=227,slow=19,SNR=50							
SPITS	**Spitsbergen Ar**	**2.82**	**44**	Pn		**Pn**	**15 25 27.2**	**-2.1**
SPITS				Sn		**Sn**	**15 25 58.4**	**-4.7**
SPITS	**Spitsbergen Ar**	**2.82**	**44**	Pn		**Pn**	**15 25 27.2**	**-2.1**
	baz=214,slow=17,SNR=443							
SPITS				Sn		**Sn**	**15 25 58.4**	**-4.7**
	baz=233,slow=26,SNR=6.2							
SPITS				LR		LR	15 26 40.1	
	comp=Z,1μm,20.3s,baz=165,slow=41							
SPITS	**Spitsbergen Ar**	**2.82**	**44**	Pn		**Pn**	**15 25 27.2**	**-2.1**
SPITS				Sn		**Sn**	**15 25 58.3**	**-4.7**
KBS	**Kingsbay**	**2.83**	**21**	Pn		**Pn**	**15 25 26.9**	**-2.6**
KBS				Sn		**Sn**	**15 25 58.5**	**-4.8**
KBS	**Kingsbay**	**2.83**	**21**	*eP*		**Pn**	**15 25 26.9**	**-2.6**
KBS				*eS*		**Sn**	**15 25 58.5**	**-4.8**
KBS				AML		AML	15 26 02.1	
	comp=Z,46nm,0.5s							
KBS	**Kingsbay**	**2.83**	**21**⇓	*iP*		**Pn**	**15 25 28.1**	**-1.4**
KBS				pmax		pmax		
	comp=Z,122nm,1.0s							
KBS	**Kingsbay**	**2.83**	**21**	*eP*		**Pn**	**15 25 27.3**	**-2.1**
KBS	**Kingsbay**	**2.83**	**21**	*eP*		**Pn**	**15 25 26.9**	**-2.6**
	SNR=50							
BJO	**Bjornoya**	**3.64**	**114**⇑	*eP*		Pn	15 25 36.0	-4.5
BJO				*eS*		Sn	15 26 10.7	-12
BJO				AML		AML	15 26 14.5	
	comp=Z,187nm,0.8s							
BJO	**Bjornoya**	**3.64**	**114**⇑	*eP*		Pn	15 25 36.0	-4.5
	SNR=50							
DAG	**Danmarks Havn**	**5.92**	**287**	*iP*		**Pn**	**15 26 08.6**	**-3.2**
DAG				*iS*		Sn	15 27 10.8	-8.4
JMIC	**Jan Mayen**	**6.86**	**226**	Pn		**Pn**	**15 26 21.8**	**-3.0**
JMIC	**Jan Mayen**	**6.86**	**226**	Pn		**Pn**	**15 26 21.8**	**-3.0**
JMIC	**Jan Mayen**	**6.86**	**226**	Pn		**Pn**	**15 26 21.7**	**-3.0**
JMIC	**Jan Mayen**	**6.86**	**226**	Pn		**Pn**	**15 26 21.7**	**-3.0**
	comp=Z,3.3nm,0.3s,baz=102,slow=2.3,SNR=4.6							
JMIC				LR		LR	15 28 18.4	
	comp=Z,733nm,19.2s,baz=221,slow=32							
JMIC	**Jan Mayen**	**6.86**	**226**	Pn		**Pn**	**15 26 21.7**	**-3.0**
ARA0	**ARCESS Array S**	**8.72**	**132**	Pn		Pn	15 26 46.6	-3.6
	baz=331,slow=14							
ARA0				Sn		Sn	15 28 14.2	-14
	baz=334,slow=22							
ARA0	**ARCESS Array S**	**8.72**	**132**	Pn		Pn	15 26 46.6	-3.6
	baz=331,slow=14							
ARA0				Sn		Sn	15 28 14.2	-14
	baz=334,slow=22							
ARA0	**ARCESS Array S**	**8.72**	**132**	Pn		Pn	15 26 46.6	-3.6
	baz=331,slow=13,SNR=50							
ARCES	**ARCESS Array B**	**8.72**	**132**	Pn		Pn	15 26 45.7	-4.5
ARCES				Sn		Sn	15 28 13.2	-15
ARCES	**ARCESS Array B**	**8.72**	**132**	Pn		Pn	15 26 45.7	-4.5
	comp=Z,2.0nm,0.3s,baz=332,slow=12,SNR=26							
ARCES				Sn		Sn	15 28 13.2	-15
	comp=Z,4.2nm,0.3s,baz=336,slow=19,SNR=14							
ARCES				LR		LR	15 30 16.9	
	comp=Z,532nm,18.0s,baz=306,slow=39							
ARCES	**ARCESS Array B**	**8.72**	**132**	Pn		Pn	15 26 45.7	-4.5
SCO	**Scoresbysund**	**9.97**	**249**	*i* P		**Pn**	**15 27 05.7**	**-1.6**
APA0	**Apatity Array**	**11.79**	**124**	Pn		Pn	15 27 27.9	-4.2
	baz=324,slow=11							
APA0	**Apatity Array**	**11.79**	**124**	Pn		Pn	15 27 27.9	-4.2
	baz=324,slow=11							
APA0	**Apatity Array**	**11.79**	**124**	Pn		Pn	15 27 28.0	-4.2
	baz=324,slow=10,SNR=50							
APA	**Apatity**	**11.90**	**123**⇑	*eP*		Pn	15 27 23.3	-10
APA				MLR		MLR		
	comp=Z,1μm,16.0s							
SUMG	**Summit**	**12.40**	**275**	*eP*		**Pn**	**15 27 39.6**	**-1.3**
SUMG				pmax		pmax		
	comp=Z,32nm,1.2s							
SUMG	**Summit**	**12.40**	**275**	*eP*		**Pn**	**15 27 39.6**	**-1.3**
	comp=Z,32nm,1.2s							
SUMG	**Summit**	**12.40**	**275**	*eP*		**Pn**	**15 27 39.6**	**-1.3**
	comp=Z,32nm,1.2s							
BORG	**Borgarnes**	**14.67**	**233**	LR		LR	15 32 20.4	
	comp=Z,467nm,19.2s,baz=262,slow=31							
NB2	**NORSAR Subarra**	**15.45**	**172**	Pn		**Pn**	**15 28 19.2**	**-2.7**
NB2	**NORSAR Subarra**	**15.45**	**172**	P		**Pn**	**15 28 19.1**	**-2.8**
	comp=Z,11nm,1.0s,baz=357,slow=11							
NB2	**NORSAR Subarra**	**15.45**	**172**	Pn		**Pn**	**15 28 19.2**	**-2.7**
NB2	**NORSAR Subarra**	**15.45**	**172**	Pn		**Pn**	**15 28 19.2**	**-2.7**
	SNR=50							
NOA	**NORSAR Array B**	**15.45**	**172**	Pn		**Pn**	**15 28 19.5**	**-2.4**
NOA	**NORSAR Array B**	**15.45**	**172**	Pn		**Pn**	**15 28 19.5**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=353,slow=13,SNR=4.5							
NOA				LR		LR	15 33 41.6	
	comp=Z,222nm,18.6s,baz=350,slow=35							
NOA	**NORSAR Array B**	**15.45**	**172**	Pn		**Pn**	**15 28 19.5**	**-2.4**
NAO01	**NORSAR Array S**	**15.63**	**172**	*eP*		**P**	**15 28 27.3**	**-1.1**
	comp=Z,5.1nm,0.8s							
NAO01	**NORSAR Array S**	**15.63**	**172**	*eP*		**P**	**15 28 27.3**	**-1.1**
	comp=Z,5.1nm,0.8s							
KAF	**Kangasniemi**	**15.72**	**145**	*eP*		**Pn**	**15 28 22.4**	**-3.0**
KAF				pmax		pmax		
	comp=Z,27nm,1.1s							
KAF	**Kangasniemi**	**15.72**	**145**	*ep*		**Pn**	**15 28 22.4**	**-3.0**
	comp=Z,27nm,1.1s							
JOF	**Joensuu**	**15.72**	**135**	*eP*		Pn	15 28 19.9	-5.5
JOF				pmax		pmax		
	comp=Z,22nm,1.2s							
JOF	**Joensuu**	**15.72**	**135**	*ep*		Pn	15 28 19.9	-5.5
	comp=Z,22nm,1.2s							
FIA0	**FINESS Array S**	**16.33**	**146**	Pn		**Pn**	**15 28 30.2**	**-3.0**
	slow=14							
FIA0	**FINESS Array S**	**16.33**	**146**	Pn		**Pn**	**15 28 30.2**	**-3.0**
	slow=14							
FIA0	**FINESS Array S**	**16.33**	**146**	Pn		**Pn**	**15 28 30.2**	**-3.0**
	slow=12,SNR=50							
FIA1	**FINESS Array S**	**16.33**	**146**	*eP*		**Pn**	**15 28 29.8**	**-3.4**
FINES	**FINESS Array B**	**16.33**	**146**	Pn		**Pn**	**15 28 30.2**	**-3.0**
FINES	**FINESS Array B**	**16.33**	**146**	Pn		**Pn**	**15 28 30.2**	**-3.0**
	comp=Z,0.5nm,0.3s,baz=355,slow=13,SNR=9.2							
FINES				LR		LR	15 34 47.8	
	comp=Z,429nm,20.5s,baz=348,slow=37							
FINES	**FINESS Array B**	**16.33**	**146**	Pn		**Pn**	**15 28 30.2**	**-3.0**
HFS	**Hagfors**	**16.46**	**168**	Pn		**Pn**	**15 28 34.4**	**-0.5**
	baz=350,slow=12							
HFS	**Hagfors**	**16.46**	**168**	Pn		**Pn**	**15 28 34.4**	**-0.5**
	baz=350,slow=12							
HFS	**Hagfors**	**16.46**	**168**	Pn		**Pn**	**15 28 34.1**	**-0.8**
HFS	**Hagfors**	**16.46**	**168**	Pn		**Pn**	**15 28 34.1**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=8.9,slow=10,SNR=24							
HFS				LR		LR	15 34 14.0	
	comp=Z,307nm,18.2s,baz=326,slow=35							
HFS	**Hagfors**	**16.46**	**168**	Pn		**Pn**	**15 28 34.1**	**-0.8**
KONO	**Kongsberg**	**16.80**	**175**	*eP*		**P**	**15 28 41.1**	**-0.2**
KONO				pmax		pmax		
	comp=Z,92nm,1.5s							
KONO	**Kongsberg**	**16.80**	**175**	*eP*		**P**	**15 28 41.1**	**-0.2**
	comp=Z,92nm,1.5s							
KONO	**Kongsberg**	**16.80**	**175**	*eP*		**P**	**15 28 41.1**	**-0.2**
	comp=Z,92nm,1.5s							
VSU	**Vasula**	**19.31**	**147**⇑	*iP*		**P**	**15 29 07.3**	**-1.6**
VSU				pmax		pmax		
	comp=Z,40nm,1.8s							
VSU	**Vasula**	**19.31**	**147**	*i* P		**P**	**15 29 07.3**	**-1.6**
	comp=Z,40nm,1.8s							
SFJD	**Kangerlussuaq**	**19.35**	**272**	LR		LR	15 35 53.1	
	comp=Z,343nm,20.9s,baz=43,slow=35							
EKA	**Eskdalemuir Ar**	**21.42**	**196**	P		**P**	**15 29 30.7**	**-1.1**
EKA	**Eskdalemuir Ar**	**21.42**	**196**	P		**P**	**15 29 30.7**	**-1.1**
	comp=Z,3.4nm,0.8s,baz=9.9,slow=10,SNR=7.2							
EKA	**Eskdalemuir Ar**	**21.42**	**196**	P		**P**	**15 29 30.7**	**-1.1**
	comp=Z,3.0nm,0.9s							
ESK	**Eskdalemuir**	**21.44**	**196**	*i* P		**P**	**15 29 36.2**	**+4.2**
RES	**Resolute Bay**	**22.54**	**317**	LR		LR	15 38 22.0	
	comp=Z,229nm,19.8s,baz=33,slow=36							
BSEG	**Bad Segeberg**	**22.54**	**175**	*eP*		**P**	**15 29 45.2**	**+1.4**
BSEG	**Bad Segeberg**	**22.54**	**175**	*eP*		**P**	**15 29 45.2**	**+1.4**
NACGM	**Naroch**	**22.79**	**149**	*e*		**P**	**15 29 42.0**	**-4.5**
MOS	**Moscow**	**23.59**	**134**	*eP*		**P**	**15 29 53.7**	**-0.8**
MOS				*e*			15 30 24.6	
MOS				pmax		pmax		
	comp=Z,41nm,0.7s							
MOS	**Moscow**	**23.59**	**134**	*eP*		**P**	**15 29 53.7**	**-0.8**
	comp=Z,41nm,0.7s							
SOKR	**Solikamsk**	**23.94**	**106**	*ic iP*		**P**	**15 30 02.6**	**+4.7**
SOKR				pmax		pmax		
	comp=Z,30nm,1.1s							
SOKR				MLR		MLR		
	comp=Z,400nm,21.0s							
NRDL	**Niedersach Rie**	**23.98**	**175**	*eP*		**P**	**15 29 58.5**	**+0.3**
	comp=Z,63nm,1.3s							
OBN	**Obninsk**	**24.00**	**135**	P		**P**	**15 29 58.0**	**-0.5**
OBN				*i*			15 30 03.4	
OBN				*e*			15 30 24.7	
OBN				pmax		pmax		
	comp=Z,68nm,1.4s							
OBN				MLR		MLR		
	comp=Z,200nm,17.0s							
OBN	**Obninsk**	**24.00**	**135**	P		**P**	**15 29 58.0**	**-0.5**
	comp=Z,68nm,1.4s							
CLZ	**Clausthal**	**24.63**	**175**	*eP*		**P**	**15 30 04.9**	**+0.5**
	comp=Z,24nm,1.2s							
CLZ	**Clausthal**	**24.63**	**175**	*eP*		**P**	**15 30 04.9**	**+0.5**
CLZ				pmax		pmax		
	comp=Z,70nm,1.2s							
BUG	**Bochum--Univer**	**25.00**	**179**	*eP*		**P**	**15 30 08.5**	**+0.9**
	comp=Z,31nm,1.1s							
CLL	**Collm**	**25.25**	**171**	*eP*		**P**	**15 30 09.2**	**-0.7**
	comp=Z,8.0nm,1.1s							
CLL	**Collm**	**25.25**	**171**⇓	*iP*		**P**	**15 30 09.1**	**-0.8**
CLL				*i*			15 30 14.8	
CLL				pmax		pmax		
	comp=Z,16nm,1.5s							
CLL				MLR		MLR		
	comp=Z,200nm,19.0s							
CLL	**Collm**	**25.25**	**171**⇓	*iP*		**P**	**15 30 09.1**	**-0.8**
	comp=Z,16nm,1.5s							
CLL				*i*	sP	**sP**	**15 30 14.8**	**-1.1**
CLL				*i*			15 30 20.4	
CLL				*eS*		S	15 34 44.0	+9.3
CLL				Lm		MLR	15 39 00.0	
	comp=Z,200nm,19.0s							
NEUB	**Neuenburg**	**25.30**	**173**	*eP*		**P**	**15 30 11.3**	**+0.9**
	comp=Z,57nm,1.1s							
FBE	**Freiberg**	**25.65**	**170**	*eP*		**P**	**15 30 13.2**	**-0.3**
	comp=Z,38nm,1.0s							
UBBA	**Unterbreizbach**	**25.65**	**175**	*eP*		**P**	**15 30 13.6**	**+0.2**
	comp=Z,42nm,1.7s							
BRG	**Berggiesshubel**	**25.72**	**169**	*eP*		**P**	**15 30 13.8**	**-0.4**
	comp=Z,21nm,1.2s							
BRG	**Berggiesshubel**	**25.72**	**169**	*eP*		**P**	**15 30 13.7**	**-0.5**
	comp=Z,21nm,1.2s							
BRG	**Berggiesshubel**	**25.72**	**169**	*eP*		**P**	**15 30 13.8**	**-0.4**
BRG				pmax		pmax		
	comp=Z,21nm,1.3s							
MOX	**Moxa**	**25.86**	**173**	*eP*		**P**	**15 30 15.5**	**0.0**
	comp=Z,32nm,1.1s							
MOX	**Moxa**	**25.86**	**173**	*eP*		**P**	**15 30 15.5**	**0.0**
MOX				pmax		pmax		
	comp=Z,117nm,1.1s							
KSP	**Ksiaz**	**25.87**	**166**	*eP*		**P**	**15 30 15.1**	**-0.4**
BCLA	**Clavier**	**26.02**	**182**	P		**P**	**15 30 18.0**	**+1.1**
	comp=Z,13nm,1.8s							
PLN	**Plauen**	**26.04**	**172**	*eP*		**P**	**15 30 17.1**	**0.0**
	comp=Z,213nm,1.4s							
WERD	**Werda**	**26.08**	**172**	*eP*		**P**	**15 30 17.4**	**-0.1**
	comp=Z,37nm,1.6s							
PVCC	**Panska Ves**	**26.09**	**169**	*eP*		**P**	**15 30 17.5**	**-0.1**
PVCC	**Panska Ves**	**26.09**	**169**	*eP*		**P**	**15 30 17.5**	**-0.1**
TANN	**Tannenbergstha**	**26.12**	**172**	*eP*		**P**	**15 30 18.0**	**+0.1**
	comp=Z,47nm,1.7s							
GUNZ	**Gunzen**	**26.17**	**172**	*eP*		**P**	**15 30 18.4**	**+0.1**
	comp=Z,37nm,1.4s							
UPC	**Upice**	**26.19**	**167**	*eP*		**P**	**15 30 17.9**	**-0.5**
UPC	**Upice**	**26.19**	**167**	*eP*		**P**	**15 30 17.9**	**-0.5**
WERN	**Wernitzgruen**	**26.25**	**172**	*eP*		**P**	**15 30 19.2**	**+0.2**
	comp=Z,43nm,1.2s							
FRB	**Frobisher Bay**	**26.26**	**284**	P		**P**	**15 30 18.1**	**-0.9**
FRB	**Frobisher Bay**	**26.26**	**284**	P		**P**	**15 30 18.1**	**-0.9**
	comp=Z,6.6nm,0.9s,baz=16,slow=8.4,SNR=3.8							
FRB				LR		LR	15 40 41.6	
	comp=Z,560nm,20.7s,baz=26,slow=36							
FRB	**Frobisher Bay**	**26.26**	**284**	P		**P**	**15 30 18.0**	**-0.9**
NKC	**Novy Kostel**	**26.30**	**172**	*eP*		**P**	**15 30 19.4**	**-0.1**
NKC	**Novy Kostel**	**26.30**	**172**	*eP*		**P**	**15 30 19.4**	**-0.1**
GIVF	**Givet**	**26.35**	**183**	*eP*		**P**	**15 30 19.9**	**0.0**
GIVF	**Givet**	**26.35**	**183**	*eP*		**P**	**15 30 19.9**	**0.0**
GIVF	**Givet**	**26.35**	**183**	*eP*		**P**	**15 30 19.9**	**0.0**
GIVF	**Givet**	**26.35**	**183**	*eP*		**P**	**15 30 19.9**	**0.0**
DPC	**Dobruska-Polom**	**26.36**	**166**	*eP*		**P**	**15 30 20.1**	**0.0**
DPC	**Dobruska-Polom**	**26.36**	**166**	*eP*		**P**	**15 30 20.1**	**0.0**
BAIF	**Baives**	**26.40**	**184**	*eP*		**P**	**15 30 20.6**	**+0.3**
	comp=Z,115nm,1.6s							
BAIF	**Baives**	**26.40**	**184**	*eP*		**P**	**15 30 20.6**	**+0.3**
BAIF				pmax		pmax		
	comp=Z,115nm,1.6s							
BAIF	**Baives**	**26.40**	**184**	*eP*		**P**	**15 30 20.6**	**+0.3**
	comp=Z,115nm,1.6s							
BAIF	**Baives**	**26.40**	**184**	*eP*		**P**	**15 30 20.6**	**+0.3**
	comp=Z,57nm,1.6s							
PRU	**Pruhonice**	**26.63**	**169**	*eP*		**P**	**15 30 22.8**	**+0.4**
PRU				MLR		MLR		
	comp=Z,200nm,24.0s							
PRU	**Pruhonice**	**26.63**	**169**	*eP*		**P**	**15 30 22.8**	**+0.4**
PRU				AMS		AMS	15 39 40.0	
	comp=Z,200nm,24.0s							
KRLC	**Kraliky**	**26.66**	**166**	*eP*		**P**	**15 30 22.2**	**-0.6**
KRLC	**Kraliky**	**26.66**	**166**	*eP*		**P**	**15 30 22.2**	**-0.6**
ROTZ	**Rotzenmuhle**	**26.76**	**172**	*eP*		**P**	**15 30 24.0**	**+0.4**
	comp=Z,18nm,1.3s							
WLF	**Walferdange**	**26.77**	**181**	P		**P**	**15 30 24.7**	**+1.0**
	comp=Z,13nm,2.2s							
OKC	**Ostrava-Krasne**	**26.99**	**164**	*eP*		**P**	**15 30 25.5**	**-0.1**
OKC	**Ostrava-Krasne**	**26.99**	**164**	*eP*		**P**	**15 30 25.5**	**-0.1**
MORC	**Moravsky Berou**	**27.01**	**165**	*eP*		**P**	**15 30 25.3**	**-0.6**
MORC				pmax		pmax		
	comp=Z,18nm,1.3s							
MORC	**Moravsky Berou**	**27.01**	**165**	*eP*		**P**	**15 30 25.3**	**-0.6**
	comp=Z,18nm,1.3s							
MORC	**Moravsky Berou**	**27.01**	**165**	*eP*		**P**	**15 30 25.3**	**-0.6**
	comp=Z,18nm,1.3s							
AKASG	**Malin Array Be**	**27.21**	**148**	P		**P**	**15 30 26.5**	**-1.1**
AKASG				MLR		MLR		
	comp=Z,274nm,21.5s							
AKASG	**Malin Array Be**	**27.21**	**148**	P		**P**	**15 30 26.5**	**-1.1**
AKASG	**Malin Array Be**	**27.21**	**148**	P		**P**	**15 30 26.5**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=343,slow=9.2,SNR=5.6							
AKASG				LR		LR	15 41 06.7	
	comp=Z,274nm,21.4s,baz=345,slow=36							
AKASG	**Malin Array Be**	**27.21**	**148**	P		**P**	**15 30 26.5**	**-1.1**
ARU	**Arti**	**27.21**	**107**	*ic iP*		**P**	**15 30 27.6**	**0.0**
ARU				PPP		PPP	15 31 19.3	
ARU				S		**S**	**15 35 07.8**	**+2.2**
ARU				pmax		pmax		
	comp=Z,16nm,2.5s							
ARU				MLR		MLR		
	comp=Z,223nm,19.0s							
KIEV	**Kiev**	**27.21**	**148**	*eP*		**P**	**15 30 27.2**	**-0.4**
KIEV				pmax		pmax		
	comp=Z,25nm,1.4s							
KIEV	**Kiev**	**27.21**	**148**	*eP*		**P**	**15 30 27.2**	**-0.4**
	comp=Z,26nm,1.4s							
KIEV	**Kiev**	**27.21**	**148**	*eP*		**P**	**15 30 27.2**	**-0.4**
	comp=Z,26nm,1.4s							
AK01	**Malin Array Si**	**27.22**	**148**	P		**P**	**15 30 25.2**	**-2.5**
AK01	**Malin Array Si**	**27.22**	**148**	P		**P**	**15 30 25.2**	**-2.5**
AK02	**Malin Array Si**	**27.25**	**148**	*eP*		**P**	**15 30 26.1**	**-1.8**
AK02	**Malin Array Si**	**27.25**	**148**	*eP*		**P**	**15 30 26.1**	**-1.8**
SVE	**Sverdlovsk**	**27.32**	**105**	*eP*		**P**	**15 30 26.2**	**-2.4**
SVE				*e*			15 31 25.4	
SVE				*e*			15 36 40.5	
SVE				pmax		pmax		
	comp=Z,26nm,1.8s							
SVE				MLR		MLR		
	comp=Z,416nm,15.0s							
TREC	**Trest**	**27.37**	**168**	AMS		AMS	15 41 00.0	
	comp=Z,200

comp=Z,10.0nm,1.2s
VSR pmax pmax
comp=N,3.0nm,0.4s
VSR pmax pmax
comp=E,2.0nm,0.4s
VSR MLR MLR
comp=N,150nm,17.0s
VSR MLR MLR
comp=Z,260nm,17.0s
VSR MLR MLR
comp=E,30nm,8.0s
TIXI Tiksi 28.20 35 *ce* P **P 15 30 38.3 +2.0**
TIXI pmax pmax
comp=Z,18nm,2.5s
KOLS Kolonicke sedl 28.21 158 *e* P **P 15 30 36.0 -0.6**
KOLS pmax pmax
comp=Z,6.0nm,1.2s
KOLS Kolonicke sedl 28.21 158 *e* P **P 15 30 36.0 -0.6**
VYHS Vyhne 28.37 163 *e* P **P 15 30 38.3 +0.3**
VYHS pmax pmax
comp=Z,13nm,1.9s
VYHS Vyhne 28.37 163 *e* P **P 15 30 38.3 +0.3**
ROSF Rostrenen 28.40 194 *e* P **P 15 30 38.1 -0.1**
comp=Z,48nm,1.4s
ROSF Rostrenen 28.40 194 *e* P **P 15 30 38.1 -0.1**
ROSF pmax pmax
comp=Z,48nm,1.4s
ROSF Rostrenen 28.40 194 *e* P **P 15 30 38.1 -0.1**
comp=Z,48nm,1.4s
ROSF Rostrenen 28.40 194 *e* P **P 15 30 38.1 -0.1**
comp=Z,24nm,1.4s
HAU Haudompre 28.43 181 *e* P **P 15 30 39.1 +0.5**
HAU eR
comp=Z,170nm,20.5s
HAU Haudompre 28.43 181 *e* P **P 15 30 39.1 +0.5**
HAU Haudompre 28.43 181 *e* P **P 15 30 39.1 +0.5**
HAU Haudompre 28.43 181 *e* P **P 15 30 39.1 +0.5**
SGMF Saint Gilles 28.44 193 *e* P **P 15 30 38.0 -0.6**
comp=Z,24nm,1.1s
SGMF Saint Gilles 28.44 193 *e* P **P 15 30 38.0 -0.6**
SGMF pmax pmax
comp=Z,24nm,1.1s
SGMF Saint Gilles 28.44 193 *e* P **P 15 30 38.0 -0.6**
comp=Z,24nm,1.1s
SGMF Saint Gilles 28.44 193 *e* P **P 15 30 38.0 -0.6**
comp=Z,12nm,1.1s
VORD Divnogorie 28.45 134 *e* P **P 15 30 38.5 -0.2**
VORD pmax pmax
comp=N,4.0nm,0.6s
VORD pmax pmax
comp=E,4.0nm,0.6s
VORD pmax pmax
comp=Z,7.0nm,0.6s
VORD MLR MLR
comp=N,480nm,24.0s
VORD MLR MLR
comp=E,190nm,24.0s
VORD MLR MLR
comp=Z,310nm,24.0s
KECS Kecovo 28.50 161 *e* P **P 15 30 38.8 -0.4**
KECS Kecovo 28.50 161 *e* P **P 15 30 38.8 -0.4**
ZST Bratislava 28.55 165 *e* P **P 15 30 39.7 +0.1**
ZST Bratislava 28.55 165 *e* P **P 15 30 39.7 +0.1**
HINF Hinteralfeld 28.62 180 *e* P **P 15 30 40.7 +0.4**
HINF Hinteralfeld 28.62 180 *e* P **P 15 30 40.7 +0.4**
HINF Hinteralfeld 28.62 180 *e* P **P 15 30 40.7 +0.4**
HINF Hinteralfeld 28.62 180 *e* P **P 15 30 40.7 +0.4**
CONA Conrad Observa 28.75 167 ⇓ *i* P **P 15 30 42.0 +0.5**
comp=Z,11nm,0.8s,SNR=8.7
CONA Conrad Observa 28.75 167 P **P 15 30 42.0 +0.5**
comp=Z,11nm,0.8s,SNR=8.7
MOA Molln 28.75 169 ⇓ *e* P **P 15 30 41.7 +0.3**
comp=Z,11nm,1.5s
MOA Molln 28.75 169 P **P 15 30 41.7 +0.3**
comp=Z,11nm,1.5s
QUIF Quistinic 28.81 194 *e* P **P 15 30 41.4 -0.5**
QUIF Quistinic 28.81 194 *e* P **P 15 30 41.4 -0.5**
QUIF Quistinic 28.81 194 *e* P **P 15 30 41.4 -0.5**
QUIF Quistinic 28.81 194 *e* P **P 15 30 41.4 -0.5**
MOTA Moosalm 29.15 174 ⇑ *e* P **P 15 30 45.4 +0.3**
comp=Z,8.8nm,1.2s
MOTA Moosalm 29.15 174 P **P 15 30 45.4 +0.3**
comp=Z,8.8nm,1.2s
LOR Lormes 29.20 184 *e* P **P 15 30 45.2 -0.2**
baz=12
LOR eR
comp=Z,112nm,19.0s
LOR Lormes 29.20 184 *e* P **P 15 30 45.2 -0.2**
LOR Lormes 29.20 184 *e* P **P 15 30 45.2 -0.2**
SSF Saint Saulge 29.41 185 *e* P **P 15 30 47.3 +0.1**
SSF Saint Saulge 29.41 185 *e* P **P 15 30 47.3 +0.1**
SSF Saint Saulge 29.41 185 *e* P **P 15 30 47.3 +0.1**
SSF Saint Saulge 29.41 185 *e* P **P 15 30 47.3 +0.1**
ARSA Arzberg 29.41 168 ⇑ *e* P **P 15 30 48.0 +0.7**
comp=Z,7.5nm,1.2s
ARSA Arzberg 29.41 168 P **P 15 30 48.0 +0.7**
comp=Z,7.5nm,1.2s
AVF Avril sur Loir 29.68 185 *e* P **P 15 30 49.6 -0.1**
comp=Z,29nm,1.4s
AVF Avril sur Loir 29.68 185 *e* P **P 15 30 49.6 -0.1**
AVF pmax pmax
comp=Z,29nm,1.4s
AVF Avril sur Loir 29.68 185 *e* P **P 15 30 49.6 -0.1**
comp=Z,29nm,1.4s
AVF Avril sur Loir 29.68 185 *e* P **P 15 30 49.6 -0.1**
comp=Z,14nm,1.4s
DAVOX Davos/Dischmat 29.69 176 LR LR 15 42 36.3
comp=Z,81nm,19.3s,baz=84,slow=36
CABF La Chapelle 29.83 181 *e* P **P 15 30 51.3 +0.2**
comp=Z,46nm,1.4s
CABF La Chapelle 29.83 181 *e* P **P 15 30 51.3 +0.2**
CABF pmax pmax
comp=Z,46nm,1.4s
CABF La Chapelle 29.83 181 *e* P **P 15 30 51.3 +0.2**
comp=Z,46nm,1.4s
CABF La Chapelle 29.83 181 *e* P **P 15 30 51.3 +0.2**
comp=Z,23nm,1.4s
BGF Bois d'Agland 29.93 185 *e* P **P 15 30 51.9 +0.1**
BGF Bois d'Agland 29.93 185 *e* P **P 15 30 51.9 +0.1**
BGF Bois d'Agland 29.93 185 *e* P **P 15 30 51.9 +0.1**
BGF Bois d'Agland 29.93 185 *e* P **P 15 30 51.9 +0.1**
MFF Saint Martin d 29.98 190 *e* P **P 15 30 52.2 0.0**
MFF Saint Martin d 29.98 190 *e* P **P 15 30 52.2 0.0**
MFF Saint Martin d 29.98 190 *e* P **P 15 30 52.2 0.0**
MFF Saint Martin d 29.98 190 *e* P **P 15 30 52.2 0.0**
TCF Toulx Ste Croi 30.21 186 *e* P **P 15 30 54.3 -0.1**
comp=Z,44nm,1.4s
TCF Toulx Ste Croi 30.21 186 *e* P **P 15 30 54.3 -0.1**
TCF pmax pmax
comp=Z,44nm,1.4s
TCF Toulx Ste Croi 30.21 186 *e* P **P 15 30 54.3 -0.1**
comp=Z,44nm,1.4s
TCF Toulx Ste Croi 30.21 186 *e* P **P 15 30 54.3 -0.1**
comp=Z,22nm,1.4s
LPL La Plagne 30.92 180 *e* P **P 15 31 01.9 +1.0**
comp=Z,69nm,1.7s
LPL La Plagne 30.92 180 *e* P **P 15 31 01.9 +1.0**
LPL pmax pmax
comp=Z,69nm,1.7s
LPL La Plagne 30.92 180 *e* P **P 15 31 01.9 +1.0**
comp=Z,69nm,1.7s
LPL La Plagne 30.92 180 *e* P **P 15 31 01.9 +1.0**
comp=Z,35nm,1.7s
LPG La Plagne 30.94 180 *e* P **P 15 31 02.1 +0.9**
LPG La Plagne 30.94 180 *e* P **P 15 31 02.1 +0.9**
LPG La Plagne 30.94 180 *e* P **P 15 31 02.1 +0.9**
LPG La Plagne 30.94 180 *e* P **P 15 31 02.1 +0.9**
RJF Les Rejaudoux 31.21 187 *e* P **P 15 31 03.2 0.0**
RJF eR
comp=Z,74nm,22.8s
RJF Les Rejaudoux 31.21 187 *e* P **P 15 31 03.2 0.0**
RJF Les Rejaudoux 31.21 187 *e* P **P 15 31 03.2 0.0**
RJF Les Rejaudoux 31.21 187 *e* P **P 15 31 03.2 0.0**
ORIF Oris-en-Rattie 31.52 181 *e* P **P 15 31 06.9 +0.8**
comp=Z,69nm,1.8s
ORIF eR
comp=Z,209nm,22.5s
ORIF Oris-en-Rattie 31.52 181 *e* P **P 15 31 06.9 +0.8**
ORIF pmax pmax
comp=Z,69nm,1.8s
ORIF Oris-en-Rattie 31.52 181 *e* P **P 15 31 06.9 +0.8**
comp=Z,69nm,1.8s
ORIF Oris-en-Rattie 31.52 181 *e* P **P 15 31 06.9 +0.8**
comp=Z,34nm,1.8s
VIVF Saint-Julien-l 31.60 183 *e* P **P 15 31 07.0 +0.4**
VIVF Saint-Julien-l 31.60 183 *e* P **P 15 31 07.0 +0.4**
VIVF Saint-Julien-l 31.60 183 *e* P **P 15 31 07.0 +0.4**
MBDF Montbardon 31.71 180 *e* P **P 15 31 09.1 +1.3**
MBDF Montbardon 31.71 180 *e* P **P 15 31 09.1 +1.3**
MBDF Montbardon 31.71 180 *e* P **P 15 31 09.1 +1.3**
MBDF Montbardon 31.71 180 *e* P **P 15 31 09.1 +1.3**
MLR Muntele Rosu 31.97 154 ⇑ *i* P **P 15 31 08.3 -1.7**
LASF Ste Croix 32.39 184 *e* P **P 15 31 14.9 +1.3**
LASF Ste Croix 32.39 184 *e* P **P 15 31 14.9 +1.3**
LASF Ste Croix 32.39 184 *e* P **P 15 31 14.9 +1.3**
SMRF Simiane la Rot 32.47 182 *e* P **P 15 31 14.6 +0.3**
SMRF Simiane la Rot 32.47 182 *e* P **P 15 31 14.6 +0.3**
SMRF Simiane la Rot 32.47 182 *e* P **P 15 31 14.6 +0.3**
SBF Sospel 32.58 179 *e* P **P 15 31 15.8 +0.5**
comp=Z,132nm,1.5s
SBF Sospel 32.58 179 *e* P **P 15 31 15.8 +0.5**
SBF pmax pmax
comp=Z,132nm,1.5s
SBF Sospel 32.58 179 *e* P **P 15 31 15.8 +0.5**
comp=Z,132nm,1.5s
SBF Sospel 32.58 179 *e* P **P 15 31 15.8 +0.5**
comp=Z,66nm,1.5s
AKTO Aktyubinsk 32.66 112 P **P 15 31 15.5 -0.4**
AKTO pmax pmax
comp=Z,2.0nm,0.9s
AKTO MLR MLR
comp=Z,394nm,18.9s
AKTO Aktyubinsk 32.66 112 P **P 15 31 15.4 -0.4**
AKTO Aktyubinsk 32.66 112 P **P 15 31 15.4 -0.4**
comp=Z,1.9nm,0.9s,baz=325,slow=8.2,SNR=5.3
AKTO LR LR 15 45 11.7
comp=Z,394nm,18.9s,baz=8.3,slow=38
AKTO Aktyubinsk 32.66 112 P **P 15 31 15.4 -0.4**
BRVK Borovoye 33.03 98 ⇓ *i* P **P 15 31 20.2 +1.2**
BRVK pmax pmax
comp=Z,10.0nm,2.0s
BVAR Borovoye Array 33.08 97 P **P 15 31 20.0 +0.5**
BVAR 15 32 33.7
BVAR pmax pmax
comp=Z,2.0nm,0.7s
BVAR pmax pmax
comp=Z,3.0nm,0.8s
BVAR MLR MLR
comp=Z,348nm,18.4s
BVAR Borovoye Array 33.08 97 P **P 15 31 20.0 +0.5**
BVAR PP **PP 15 32 33.7 -0.4**
BVAR Borovoye Array 33.08 97 P **P 15 31 20.0 +0.5**
comp=Z,1.5nm,0.7s,baz=325,slow=7.6,SNR=9.7
BVAR PP **PP 15 32 33.7 -0.4**
comp=Z,2.6nm,0.8s,baz=330,slow=14,SNR=4.6
BVAR LR LR 15 47 23.9
comp=Z,348nm,18.4s,baz=348,slow=41
BVAR Borovoye Array 33.08 97 P **P 15 31 20.0 +0.5**
BVAR Borovoye Array 33.08 97 PP PP 15 32 33.7 -0.4
SIM Simferopol' 33.51 144 *e* P **P 15 31 24.8 +1.5**
SIM pmax pmax
comp=Z,13nm,0.7s
SIM MLR MLR
comp=Z,100nm,18.0s
EPF Esparros 33.52 189 *e* P **P 15 31 23.3 -0.2**
EPF Esparros 33.52 189 *e* P **P 15 31 23.3 -0.2**
EPF Esparros 33.52 189 *e* P **P 15 31 23.3 -0.2**
EPF Esparros 33.52 189 *e* P **P 15 31 23.3 -0.2**
ETSF Etsaut 33.69 190 *e* P **P 15 31 26.1 +1.1**
ETSF Etsaut 33.69 190 *e* P **P 15 31 26.1 +1.1**
ETSF Etsaut 33.69 190 *e* P **P 15 31 26.1 +1.1**
ETSF Etsaut 33.69 190 *e* P **P 15 31 26.1 +1.1**
SCHQ Schefferville 33.79 274 LR LR 15 43 59.8
comp=Z,261nm,21.9s,baz=178,slow=34
ABKAR Akbulak array 34.19 111 *e* P **P 15 31 28.9 -0.3**
comp=Z,2.8nm,0.8s
ABKAR Akbulak array 34.19 111 *e* P **P 15 31 28.9 -0.3**
comp=Z,2.8nm,0.8s
NVS Novosibirsk 34.46 84 *i* P **P 15 31 32.2 +0.7**
NVS pmax pmax
comp=N,12nm,2.0s
NVS pmax pmax
comp=E,8.0nm,2.4s
BILL Bilibino 35.29 13 *ce* P **P 15 31 40.0 +1.5**
BILL *e* 15 31 44.9
BILL *e* 15 33 14.8
BILL pmax pmax
comp=Z,14nm,1.5s
BILL MLR MLR
comp=Z,100nm,20.0s
ZAA0 Zalesovo Array 35.65 83 *e* P **P 15 31 41.8 +0.1**
ZAA0 Zalesovo Array 35.65 83 *e* P **P 15 31 41.8 +0.1**
ZALV Zalesovo Beam 35.65 83 P **P 15 31 41.7 -0.1**
ZALV 15 34 09.3
ZALV pmax pmax
comp=Z,2.0nm,0.8s
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV MLR MLR
comp=Z,211nm,18.8s
ZALV Zalesovo Beam 35.65 83 P **P 15 31 41.7 -0.1**
ZALV PcP **PcP 15 34 09.3 -0.4**
ZALV Zalesovo Beam 35.65 83 P **P 15 31 41.7 -0.1**
comp=Z,2.2nm,0.8s,baz=331,slow=8.8,SNR=11
ZALV PcP **PcP 15 34 09.3 -0.4**
comp=Z,0.6nm,0.3s,baz=318,slow=2.0,SNR=3.9
ZALV LR LR 15 50 11.1
comp=Z,211nm,18.8s,baz=248,slow=43
ZALV Zalesovo Beam 35.65 83 P **P 15 31 41.7 -0.1**
ZALV Zalesovo Beam 35.65 83 PcP **PcP 15 34 09.3 -0.4**
KIV Kislovodsk 35.82 134 *e* P **P 15 31 41.7 -1.7**
KIV *e* S **S 15 37 17.7 -2.4**
KIV pmax pmax
comp=Z,6.0nm,0.7s
KIV MLR MLR
comp=Z,144nm,16.0s
KBZ Khabaz 36.08 133 P **P 15 31 46.6 +1.1**
KBZ pmax pmax
comp=Z,3.0nm,1.1s
KBZ MLR MLR
comp=Z,220nm,18.2s
KBZ Khabaz 36.08 133 P **P 15 31 46.5 +1.1**
KBZ Khabaz 36.08 133 P **P 15 31 46.5 +1.1**
comp=Z,3.3nm,1.1s,baz=349,slow=5.2,SNR=3.5
KBZ LR LR 15 47 11.5
comp=Z,220nm,18.2s,baz=358,slow=38
KBZ Khabaz 36.08 133 P **P 15 31 46.5 +1.1**
YKA Yellowknife Ar 36.60 318 P **P 15 31 50.5 +0.8**
YKA PcP **PcP 15 34 12.6 +0.2**
YKA Yellowknife Ar 36.60 318 P **P 15 31 50.5 +0.8**
comp=Z,1.7nm,1.0s,baz=14,slow=8.6,SNR=8.5
YKA PcP **PcP 15 34 12.6 +0.2**
comp=Z,0.4nm,0.7s,baz=0.0,slow=3.1,SNR=3.9
YKA Yellowknife Ar 36.60 318 P **P 15 31 50.5 +0.8**
ESDC Sonseca Array 37.07 194 P **P 15 31 54.0 0.0**
ESDC Sonseca Array 37.07 194 P **P 15 31 54.0 0.0**
comp=Z,0.3nm,0.3s,baz=359,slow=11,SNR=8.2
ESDC Sonseca Array 37.07 194 P **P 15 31 54.0 0.0**
KURK Kurchatov 37.17 91 *ce* P **P 15 31 55.2 +0.5**
KURK pmax pmax
comp=Z,16nm,1.5s
KURK Kurchatov 37.17 91 *e* P **P 15 31 55.0 +0.3**
comp=Z,17nm,1.3s
KURK PP **PnPn 15 33 23.8 +4.2**
KURK PcP **PcP 15 34 14.5 +0.2**
KURK Kurchatov 37.17 91 *e* P **P 15 31 55.0 +0.3**
comp=Z,17nm,1.3s
KURBB Kurchatov Arra 37.23 91 P **P 15 31 55.5 +0.2**
comp=Z,3.7nm,0.8s,baz=332,slow=7.8,SNR=26
KURBB PP **PnPn 15 33 23.8 +3.4**
comp=Z,3.7nm,1.2s,baz=332,slow=11,SNR=4.3
KURBB PcP **PcP 15 34 14.5 0.0**
comp=Z,1.0nm,0.8s,baz=331,slow=3.5,SNR=5.2
MAK Makhachkala 37.65 128 *e* P **P 15 31 59.2 +0.4**
MAK MLR MLR
comp=Z,280nm,20.0s
EGAK Eagle 37.69 338 *e* P **P 15 32 00.2 +1.2**
comp=Z,31nm,1.8s
EGAK Eagle 37.69 338 *e* P **P 15 32 00.2 +1.2**
comp=Z,31nm,1.8s
ILAR Eielson Array 38.16 342 P **P 15 32 05.5 +2.6**
ILAR Eielson Array 38.16 342 P **P 15 32 05.5 +2.6**
comp=Z,2.3nm,0.8s,baz=1.9,slow=7.1,SNR=30
ILAR LR LR 15 48 23.4
comp=Z,53nm,18.0s,baz=346,slow=37
ILAR Eielson Array 38.16 342 P **P 15 32 05.5 +2.6**
BRTR Keskin Array B 38.57 146 P **P 15 32 07.0 +0.1**
BRTR PP **PnPn 15 33 36.7 -0.2**
BRTR Keskin Array B 38.57 146 P **P 15 32 07.0 +0.1**
comp=Z,1.3nm,0.7s,baz=358,slow=6.9,SNR=10
BRTR PP **PnPn 15 33 36.7 -0.2**
comp=Z,0.9nm,0.9s,baz=340,slow=11,SNR=3.9
BRTR LR LR 15 49 01.4
comp=Z,86nm,20.4s,baz=197,slow=38
BRTR Keskin Array B 38.57 146 P **P 15 32 06.9 +0.1**
DOT Dot Lake 39.05 340 *e* P **P 15 32 11.0 +0.6**
comp=Z,10nm,1.2s
DOT Dot Lake 39.05 340 *e* P **P 15 32 11.0 +0.6**
comp=Z,10nm,1.2s
KEST Kesra 40.72 177 LR LR 15 48 19.1
comp=Z,36nm,19.5s,baz=308,slow=35
MOY Mondy 41.49 70 *e* P **P 15 32 33.2 +2.3**
FFC Flin Flon 41.68 304 *i* P **P 15 32 33.7 +1.5**
MK31 Makanchi Array 41.70 89 *i* P **P 15 32 32.9 +0.3**
MK31 pmax pmax
comp=Z,4.0nm,0.8s
MK31 Makanchi Array 41.70 89 *e* P **P 15 32 32.8 +0.3**
MK31 Makanchi Array 41.70 89 *e* P **P 15 32 32.8 +0.2**
MKAR Makanchi Array 41.70 89 P **P 15 32 32.9 +0.3**
MKAR pmax pmax
comp=Z,2.0nm,0.8s
MKAR MLR MLR
comp=Z,337nm,18.8s
MKAR Makanchi Array 41.70 89 P **P 15 32 32.9 +0.3**
MKAR Makanchi Array 41.70 89 P **P 15 32 32.9 +0.3**
comp=Z,2.4nm,0.8s,baz=344,slow=6.9,SNR=28
MKAR LR LR 15 53 04.9
comp=Z,337nm,18.8s,baz=338,slow=41
MKAR Makanchi Array 41.70 89 P **P 15 32 32.9 +0.3**
TLY Talaya 42.07 67 *e* P **P 15 32 36.9 +1.4**
TLY *e* S **S 15 38 50.6 -3.3**
TLY pmax pmax
comp=Z,4.0nm,0.9s
TLY MLR MLR
comp=Z,96nm,11.0s
KK31 Karatay Array 42.41 103 *i* P **P 15 32 38.9 +0.5**
KK31 pmax pmax
comp=Z,1.0nm,0.2s
ZAK Zakamensk 43.21 68 *e* P P 15 32 57.3 +12
ZAK *e* 15 34 26.7
ZAK pmax pmax
comp=Z,1.0nm,1.4s
EKS2 Erkin-Say 43.59 100 *e* P **P 15 32 49.1 +1.1**
EKS2 pmax pmax
comp=Z,5.0nm,0.9s
EKS2 Erkin-Say 43.59 100 *e* P **P 15 32 49.1 +1.1**
comp=Z,5.3nm,0.9s
EKS2 Erkin-Say 43.59 100 *e* P **P 15 32 49.1 +1.1**
comp=Z,5.3nm,0.9s
TKM2 Tokmak 2 43.77 98 *e* P **P 15 32 51.1 +1.5**
TKM2 pmax pmax
comp=Z,11nm,1.3s
TKM2 Tokmak 2 43.77 98 *e* P **P 15 32 51.1 +1.5**
comp=Z,11nm,1.3s
TKM2 Tokmak 2 43.77 98 *e* P **P 15 32 51.1 +1.5**
comp=Z,11nm,1.3s
AAK Ala-Archa 43.78 99 ⇑ *i* P **P 15 32 50.4 +0.7**
AAK pmax pmax
comp=Z,8.0nm,1.2s
MDT Midelt 43.93 194 P **P 15 32 50.4 -0.5**
MDT Midelt 43.93 194 P **P 15 32 50.4 -0.5**
comp=Z,2.3nm,1.1s,baz=61,slow=7.0,SNR=5.1
MDT Midelt 43.93 194 P **P 15 32 50.4 -0.5**
ULM Lac du Bonnet 44.65 297 LR LR 15 52 18.9
comp=Z,420nm,18.2s,baz=60,slow=37
WMQ Urumqi 45.79 86 *e* P **P 15 33 07.6 +2.1**
WMQ pP **pP 15 33 14.0 +4.1**
WMQ PP **PP 15 34 55.0 +2.5**
WMQ *e* S **S 15 39 50.0 +1.7**
WMQ sS sS 15 40 03.0 +7.4
WMQ ScS **ScS 15 42 59.0 -1.5**
WMQ pmax pmax
comp=Z,7.0nm,0.9s
WMQ pmax pmax
comp=Z,120nm,6.0s
WMQ LR LR
comp=N,740nm,17.5s
WMQ LR LR
comp=E,620nm,14.0s
WMQ LR LR
comp=Z,590nm,18.4s
SONM Songino Array 46.29 67 P **P 15 33 10.1 +0.6**
SONM Songino Array 46.29 67 P **P 15 33 10.1 +0.6**
comp=Z,1.4nm,0.8s,baz=328,slow=9.2,SNR=9.6
SONM LR LR 15 54 37.5
comp=Z,78nm,18.6s,baz=346,slow=39
SONM Songino Array 46.29 67 P **P 15 33 10.1 +0.6**
ULN Ulaanbaatar 46.41 66 *e* P **P 15 33 11.2 +0.7**
comp=Z,5.0nm,0.9s
ULN Ulaanbaatar 46.41 66 *e* P **P 15 33 11.2 +0.7**
comp=Z,4.9nm,0.9s
ASF Jabal al Asfar 46.44 144 P **P 15 33 11.2 +0.4**
ASF Jabal al Asfar 46.44 144 P **P 15 33 11.2 +0.4**
comp=Z,3.0nm,0.9s,baz=247,slow=2.0,SNR=4.0
AGMN Agassiz Nation 46.50 296 *e* P **P 15 33 11.6 +0.6**
comp=Z,6.5nm,1.0s
AGMN Agassiz Nation 46.50 296 *e* P **P 15 33 11.6 +0.6**
comp=Z,6.5nm,1.0s
MDND Maddock 47.72 299 ⇓ P **P 15 33 20.7 +0.3**
baz=48
A23A Redstone 47.72 304 ⇑ P **P 15 33 21.0 +0.5**
baz=48
A22A Carney Farms, 47.89 305 ⇑ P **P 15 33 22.8 +0.9**
baz=48
DGMT Dagmar 48.05 303 ⇓ P **P 15 33 24.2 +1.0**
baz=48
B23A Brockton 48.22 304 ⇑ P **P 15 33 25.2 +0.8**
baz=48
A20A Cobblestone Ra 48.39 307 ⇓ P **P 15 33 26.6 +0.9**
baz=48
A19A Klindworth Far 48.50 307 ⇓ P **P 15 33 27.5 +0.9**
baz=48,SNR=10.0
B22A Reddig Ranch S 48.57 305 ⇑ P **P 15 33 28.0 +0.9**
baz=48
EIL Elat 48.65 147 P **P 15 33 27.8 0.0**
EIL Elat 48.65 147 P **P 15 33 27.8 0.0**
comp=Z,6.6nm,1.1s,baz=319,slow=7.4,SNR=6.9
EIL Elat 48.65 147 P **P 15 33 27.8 0.0**
A18A Metzger Ranch, 48.71 308 ⇑ P **P 15 33 28.4 +0.2**
baz=48
B20A Solberg Farm, 48.83 307 ⇓ P **P 15 33 29.9 +0.8**
baz=49
A17A Triple J Farms 48.85 309 ⇓ P **P 15 33 29.7 +0.5**
baz=49,SNR=5.4
C23A Lambert 48.89 304 ⇑ P **P 15 33 30.9 +1.3**
baz=49
B19A Brinkman Farms 48.99 307 ⇑ P **P 15 33 31.1 +0.8**
baz=49
C24A Savage 49.00 303 ⇓ P **P 15 33 31.2 +0.8**
baz=49
C22A Vida 49.08 304 ⇓ P **P 15 33 31.9 +0.8**
baz=49
A15A Johnson Ranch, 49.19 311 ⇓ P **P 15 33 31.5 -0.4**
baz=49
C21A Desert Coulee 49.24 306 ⇑ P **P 15 33 32.6 +0.3**
baz=49
A14A Double T Ranch 49.31 311 ⇑ P **P 15 33 33.5 +0.6**
baz=49,SNR=6.7
PETK Petropavlovsk- 49.48 23 LR LR 15 54 49.1
comp=Z,31nm,19.6s,baz=259,slow=36
D23A Lindsay 49.50 304 ⇓ P **P 15 33 35.9 +1.6**
baz=49
C20A Veseth Ranch, 49.52 306 ⇓ P **P 15 33 35.3 +0.9**
baz=49,SNR=5.6
A13A Flathead Natio 49.53 312 ⇓ P **P 15 33 34.7 +0.2**
baz=49
B16A M & M Farms, S 49.54 310 ⇑ P **P 15 33 35.0 +0.4**
baz=49
EGMT Eagleton 49.56 308 ⇑ P **P 15 33 34.8 +0.1**
baz=49
C19A Slack Wire Ran 49.70 307 ⇑ P **P 15 33 37.0 +1.2**
baz=50,SNR=8.3
D22A Cohagen 49.71 305 ⇓ P **P 15 33 37.2 +1.4**
baz=50
B15A Bradely Ranch, 49.80 310 ⇓ P **P 15 33 36.9 +0.3**
baz=50
E24A Baker 49.90 303 ⇓ P **P 15 33 38.7 +1.4**
baz=50
D21A La Casta Ranch 49.95 305 ⇓ P **P 15 33 38.9 +1.2**
baz=50
B13A Whitefish 50.08 312 ⇑ P **P 15 33 39.2 +0.6**
baz=50
C17A Wharram Farm, 50.12 309 ⇑ P **P 15 33 38.9 -0.1**
baz=50
C16A Fuhringer Ranc 50.14 309 ⇑ P **P 15 33 39.4 +0.3**
baz=50

D20A	**Manuel Ranch,**	**50.15**	**306**	⇓P		**P**	**15**	**33**	**40.3 +1.1**
	baz=50,SNR=7.2								
E23A	**Ismay**	**50.16**	**304**	⇓P		**P**	**15**	**33**	**40.3 +1.0**
	baz=50								
B12A	**Libby**	**50.18**	**313**	⇑P		**P**	**15**	**33**	**41.1 +1.7**
	baz=50								
D19A	**Cripps Ranch,**	**50.22**	**307**	⇑P		**P**	**15**	**33**	**40.5 +0.7**
	baz=50								
C15A	**Salmond Ranch,**	**50.32**	**310**	⇓P		**P**	**15**	**33**	**41.3 +0.7**
	baz=50								
E22A	**Miles City**	**50.35**	**304**	⇑P		**P**	**15**	**33**	**41.4 +0.7**
	baz=50								
D18A	**Linhart Farms,**	**50.36**	**308**	⇑P		**P**	**15**	**33**	**42.1 +1.2**
	baz=50								
E21A	**Keefer Ranch,**	**50.47**	**305**	⇑P		**P**	**15**	**33**	**42.6 +1.0**
	baz=50								
C14A	**Swan Lake**	**50.53**	**311**	⇑P		**P**	**15**	**33**	**43.1 +0.9**
	baz=50								
F24A	**Ekalaka**	**50.62**	**303**	⇑P		**P**	**15**	**33**	**42.8 0.0**
	baz=50								
BSMT	**Bassoo Peak**	**50.64**	**312**	*e*P		**P**	**15**	**33**	**44.1 +1.0**
	comp=Z,3.6nm,1.0s								
BSMT	**Bassoo Peak**	**50.64**	**312**	*e*P		**P**	**15**	**33**	**44.1 +1.0**
	comp=Z,3.6nm,1.0s								
E20A	**Meyer Farm, Mu**	**50.71**	**306**	⇓P		**P**	**15**	**33**	**44.6 +1.2**
	baz=50								
C13A	**Hot Springs**	**50.77**	**312**	⇑P		**P**	**15**	**33**	**44.5 +0.6**
	baz=51								
BRSD	**Miller**	**50.83**	**297**	⇓P		**P**	**15**	**33**	**44.8 +0.5**
	baz=51								
D16A	**Dana Ranch, Ca**	**50.85**	**309**	⇑P		**P**	**15**	**33**	**45.1 +0.6**
	baz=51								
E19A	**Rath Farm, Rou**	**50.88**	**306**	⇑P		**P**	**15**	**33**	**45.9 +1.1**
	baz=51								
C11A	**Tepee Creek (N**	**50.91**	**313**	⇓P		**P**	**15**	**33**	**45.2 +0.3**
	baz=51								
F23A	**Volborg**	**50.93**	**303**	⇑P		**P**	**15**	**33**	**45.9 +0.8**
	baz=51								
E18A	**Harlowton**	**50.99**	**307**	⇑P		**P**	**15**	**33**	**46.7 +1.1**
	baz=51,SNR=7.8								
ECSD	**EROS Data Cent**	**51.00**	**295**	*e*P		**P**	**15**	**33**	**46.1 +0.5**
	comp=Z,5.8nm,0.8s								
ECSD	**EROS Data Cent**	**51.00**	**295**	*e*P		**P**	**15**	**33**	**46.1 +0.5**
	comp=Z,5.8nm,0.8s								
D15A	**Lincoln**	**51.01**	**310**	⇑P		**P**	**15**	**33**	**46.2 +0.4**
	baz=51								
G24A	**Alzada**	**51.11**	**302**	⇓P		**P**	**15**	**33**	**46.7 +0.2**
	baz=51								
D14A	**Greenough**	**51.15**	**311**	⇓P		**P**	**15**	**33**	**47.3 +0.5**
	baz=51,SNR=5.2								
HABR	**Khabarovsk**	**51.17**	**42**	P		**P**	**15**	**33**	**45.6 -1.1**
HABR				*e**PP		**pP**	**15**	**33**	**48.7 -2.5**
HABR				*e**SP		**sP**	**15**	**33**	**50.1 -2.8**
HABR				*e*			15	35	01.2
HABR							15	35	42.4
HABR				*e*PPP		PPP	15	36	40.3
HABR				*e*S		**S**	**15**	**41**	**03.9 0.0**
HABR				*e**SS		**sS**	**15**	**41**	**09.5 -1.7**
HABR				*e*			15	43	36.4
HABR				*e*SS		**SS**	**15**	**44**	**40.7 +2.3**
HABR				pmax		pmax			
	comp=E,20nm,1.5s								
HABR				pmax		pmax			
	comp=N,15nm,1.5s								
HABR				pmax		pmax			
	comp=Z,19nm,1.6s								
HABR				MLR		MLR			
	comp=Z,55nm,17.0s								
HABR	**Khabarovsk**	**51.17**	**42**	P		**P**	**15**	**33**	**45.6 -1.1**
CHMT	**Chamberlain Mo**	**51.27**	**310**	*e*P		**P**	**15**	**33**	**48.2 +0.4**
	comp=Z,7.9nm,1.4s								
CHMT	**Chamberlain Mo**	**51.27**	**310**	*e*P		**P**	**15**	**33**	**48.2 +0.4**
	comp=Z,7.9nm,1.4s								
D13A	**Huson**	**51.31**	**312**	⇑P		**P**	**15**	**33**	**49.0 +1.1**
	baz=51								
E16A	**East Helena**	**51.35**	**309**	⇓P		**P**	**15**	**33**	**49.3 +0.9**
	baz=51								
MSO	**Missoula**	**51.48**	**311**	*e*P		**P**	**15**	**33**	**50.3 +1.0**
	comp=Z,7.3nm,1.3s								
MSO	**Missoula**	**51.48**	**311**	*e*P		**P**	**15**	**33**	**50.3 +1.0**
	comp=Z,7.3nm,1.3s								
MSO	**Missoula**	**51.48**	**311**	⇓P		**P**	**15**	**33**	**50.4 +1.2**
	baz=51								
F19A	**Roth Farm, Mol**	**51.49**	**306**	⇓P		**P**	**15**	**33**	**50.2 +0.9**
	baz=51,SNR=6.2								
D12A	**Red Ives Fores**	**51.51**	**312**	⇑P		**P**	**15**	**33**	**50.1 +0.6**
	baz=51								
G22A	**Birney**	**51.58**	**304**	⇓P		**P**	**15**	**33**	**51.0 +0.9**
	baz=51								
F18A	**Big Timber**	**51.59**	**307**	⇑P		**P**	**15**	**33**	**51.5 +1.4**
	baz=51								
H24A	**Dirks Ranch, A**	**51.69**	**302**	⇓P		**P**	**15**	**33**	**51.4 +0.6**
	baz=52								
G21A	**Lodge Grass**	**51.76**	**305**	⇓P		**P**	**15**	**33**	**51.8 +0.4**
	baz=52								
F17A	**Fitzpatrick Pl**	**51.76**	**308**	⇓P		**P**	**15**	**33**	**52.1 +0.7**
	baz=52								
G20A	**Bridger**	**51.96**	**306**	⇑P		**P**	**15**	**33**	**53.5 +0.6**
	baz=52								
E12A	**Beaver Dam Sad**	**52.16**	**312**	⇓P		**P**	**15**	**33**	**54.9 +0.5**
	baz=52								
F15A	**Butte**	**52.17**	**309**	⇑P		**P**	**15**	**33**	**55.3 +0.7**
	baz=52,SNR=6.2								
H22A	**Clearmont**	**52.20**	**304**	⇓P		**P**	**15**	**33**	**55.3 +0.6**
	baz=52								
J28A	**Allard Ranch,**	**52.28**	**299**	⇓P		**P**	**15**	**33**	**56.0 +0.8**
	baz=52								
H21A	**Big Horn, Sher**	**52.30**	**304**	⇓P		**P**	**15**	**33**	**55.3 -0.2**
	baz=52								
G17A	**Pierce Place,**	**52.34**	**308**	⇑P		**P**	**15**	**33**	**55.2 -0.6**
	baz=52								
F14A	**Wisdom**	**52.35**	**310**	⇑P		**P**	**15**	**33**	**55.7 -0.2**
	baz=52								
I24A	**Kuemmerle Ranc**	**52.56**	**302**	⇑P		**P**	**15**	**33**	**57.6 +0.3**
	baz=52								
H20A	**Greybull**	**52.62**	**305**	⇑P		**P**	**15**	**33**	**59.2 +1.4**
	baz=52								
H19A	**Powell**	**52.64**	**306**	⇑P		**P**	**15**	**33**	**59.0 +1.1**
	baz=52								
K29A	**Lazy Trails An**	**52.72**	**298**	⇑P		**P**	**15**	**33**	**58.9 +0.4**
	baz=52								
H18A	**Shoshone NF, C**	**52.76**	**307**	⇓P		**P**	**15**	**33**	**59.7 +0.8**
	baz=53								
GTA	**Gaotai**	**52.81**	**76**	*e*P		**P**	**15**	**34**	**00.4 +1.1**
GTA				pP		**pP**	**15**	**34**	**03.8 0.0**
GTA				sP		**sP**	**15**	**34**	**06.6 +1.1**
GTA				PP		**PP**	**15**	**36**	**02.0 +3.7**
GTA				S		**S**	**15**	**41**	**27.4 +0.3**
GTA				sS		**sS**	**15**	**41**	**36.0 +1.6**
GTA				SS		**SS**	**15**	**45**	**08.3 +3.2**
GTA				pmax		pmax			
	comp=Z,3.0nm,1.1s								
GTA				pmax		pmax			
	comp=Z,35nm,4.7s								
GTA				LR		LR			
	comp=N,120nm,16.2s								
GTA				LR		LR			
	comp=E,77nm,16.2s								
GTA				LR		LR			
	comp=Z,140nm,18.0s								
J25A	**Sunshine Ranch**	**52.84**	**301**	⇑P		**P**	**15**	**34**	**00.1 +0.6**
	baz=53,SNR=5.1								
I22A	**9 Mile Ranch,**	**52.90**	**304**	⇓P		**P**	**15**	**34**	**00.4 +0.6**
	baz=53								
J24A	**Dixon Ranch, L**	**53.07**	**302**	⇑P		**P**	**15**	**34**	**01.7 +0.6**
	baz=53								
I21A	**Big Trails, Te**	**53.13**	**304**	⇑P		**P**	**15**	**34**	**02.0 +0.4**
	baz=53,SNR=12								
I20A	**Worland**	**53.16**	**305**	⇓P		**P**	**15**	**34**	**03.1 +1.3**
	baz=53,SNR=5.5								
MCMT	**McKenzie Canyo**	**53.21**	**309**	*e*P		**P**	**15**	**34**	**03.6 +1.3**
	comp=Z,3.7nm,1.2s								
MCMT	**McKenzie Canyo**	**53.21**	**309**	*e*P		**P**	**15**	**34**	**03.6 +1.3**
	comp=Z,3.7nm,1.2s								
I19A	**Meeteetse**	**53.25**	**306**	⇑P		**P**	**15**	**34**	**03.6 +1.1**
	baz=53,SNR=5.2								
J22A	**Midwest**	**53.36**	**303**	⇓P		**P**	**15**	**34**	**03.4 +0.1**
	baz=53,SNR=6.0								
K26A	**Motz Farm, Whi**	**53.37**	**300**	⇑P		**P**	**15**	**34**	**03.6 +0.3**
	baz=53								
TAM	**Tamanrasset**	**53.60**	**181**	*e*P		**P**	**15**	**34**	**06.1 +0.9**
TAM				pmax		pmax			
	comp=Z,9.0nm,1.3s								
TAM	**Tamanrasset**	**53.60**	**181**	*e*P		**P**	**15**	**34**	**06.1 +0.9**
	comp=Z,8.5nm,1.3s								
TAM	**Tamanrasset**	**53.60**	**181**	*e*P		**P**	**15**	**34**	**06.1 +0.9**
	comp=Z,8.5nm,1.3s								
K25A	**Mack Ranch, Ha**	**53.60**	**301**	⇓P		**P**	**15**	**34**	**05.4 +0.3**
	baz=53								
J21A	**Lysite**	**53.61**	**304**	⇑P		**P**	**15**	**34**	**05.7 +0.5**
	baz=53								
I18A	**Diamond G Ranc**	**53.73**	**306**	⇑P		**P**	**15**	**34**	**07.2 +1.0**
	baz=54								
J20A	**Shoshoni**	**53.73**	**305**	⇓P		**P**	**15**	**34**	**07.1 +1.0**
	baz=54,SNR=10								
IMW	**Indian Meadow**	**53.75**	**307**	*e*P		**P**	**15**	**34**	**08.0 +1.6**
	comp=Z,7.7nm,1.0s								
IMW	**Indian Meadow**	**53.75**	**307**	*e*P		**P**	**15**	**34**	**08.0 +1.6**
	comp=Z,7.7nm,1.0s								
L27A	**T5 Ranch, Elis**	**53.79**	**299**	⇓P		**P**	**15**	**34**	**07.1 +0.6**
	baz=54								
K23A	**Bowen Ranch, D**	**53.82**	**302**	⇑P		**P**	**15**	**34**	**06.9 +0.2**
	baz=54								
H12A	**Diamond D Ranc**	**53.84**	**311**	⇓P		**P**	**15**	**34**	**07.5 +0.6**
	baz=54								
MDJ	**Mudanjiang**	**53.99**	**48**	P		**P**	**15**	**34**	**06.9 -0.8**
MDJ				pP		**pP**	**15**	**34**	**10.1 -2.1**
MDJ				PP		**PP**	**15**	**36**	**07.8 -0.9**
MDJ				S		**S**	**15**	**41**	**41.8 -0.9**
MDJ				SS		**SS**	**15**	**45**	**23.8 +0.6**
MDJ				pmax		pmax			
	comp=Z,2.0nm,0.8s								
MDJ				pmax		pmax			
	comp=Z,29nm,3.5s								
MDJ				LR		LR			
	comp=N,85nm,16.3s								
MDJ				LR		LR			
	comp=E,54nm,12.2s								
MDJ				LR		LR			
	comp=Z,120nm,16.3s								
J19A	**Crowheart**	**54.00**	**306**	⇑P		**P**	**15**	**34**	**09.1 +1.1**
	baz=54,SNR=5.8								
CN2	**Changchun**	**54.03**	**52**	*e*P		**P**	**15**	**34**	**08.8 +0.8**
CN2				*es*P		**sP**	**15**	**34**	**15.8 +1.6**
CN2				*e*S		**S**	**15**	**41**	**40.8 -2.4**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
CN2				pmax		pmax			
	comp=Z,200nm,3.0s								
CN2				LR		LR			
	comp=N,200nm,15.0s								
CN2				LR		LR			
	comp=E,200nm,15.0s								
CN2				LR		LR			
	comp=Z,200nm,17.0s								
HHC	**Hu-ho-hao-te**	**54.07**	**65**	*e*P		**P**	**15**	**34**	**07.3 -1.2**
HHC				PP		**PP**	**15**	**36**	**10.4 +0.8**
HHC				PcS		**PcS**	**15**	**39**	**12.0 -0.6**
HHC				S		**S**	**15**	**41**	**42.1 -1.9**
HHC				ScS		**ScS**	**15**	**43**	**54.3 -2.6**
HHC				SS		**SS**	**15**	**45**	**23.5 -1.2**
HHC				pmax		pmax			
	comp=Z,31nm,0.8s								
HHC				pmax		pmax			
	comp=Z,120nm,6.8s								
HHC				LR		LR			
	comp=N,330nm,16.3s								
HHC				LR		LR			
	comp=E,290nm,15.5s								
HHC				LR		LR			
	comp=Z,320nm,17.5s								
K22A	**Casper**	**54.10**	**303**	⇓P		**P**	**15**	**34**	**09.1 +0.3**
	baz=54								
I14A	**Mackay**	**54.19**	**310**	⇑P		**P**	**15**	**34**	**09.0 -0.4**
	baz=54								
K19A	**Absolon Red Bu**	**54.39**	**305**	⇓P		**P**	**15**	**34**	**10.8 -0.1**
	baz=54								
K20A	**Yellowstone Ra**	**54.45**	**305**	⇓P		**P**	**15**	**34**	**11.6 +0.3**
	baz=54,SNR=6.8								
PDAR	**Pinedale Array**	**54.58**	**306**	P		**P**	**15**	**34**	**12.8 +0.4**
PDAR	**Pinedale Array**	**54.58**	**306**	P		**P**	**15**	**34**	**12.8 +0.4**
	comp=Z,3.5nm,1.1s,baz=25,slow=3.9,SNR=16								
PDAR				LR		LR	15	58	03.4
	comp=Z,289nm,18.1s,baz=24,slow=37								
PDAR	**Pinedale Array**	**54.58**	**306**	P		**P**	**15**	**34**	**12.8 +0.4**
L22A	**Ellis Ranch, M**	**54.68**	**303**	⇑P		**P**	**15**	**34**	**13.4 +0.4**
	baz=54,SNR=6.4								
HLID	**Hailey**	**54.72**	**310**	*e*P		**P**	**15**	**34**	**13.9 +0.6**
	comp=Z,5.9nm,1.3s								
HLID	**Hailey**	**54.72**	**310**	*e*P		**P**	**15**	**34**	**13.9 +0.6**
	comp=Z,5.9nm,1.3s								
HLID	**Hailey**	**54.72**	**310**	⇓P		**P**	**15**	**34**	**14.1 +0.9**
	baz=54								
USRK	**Ussuriysk Arra**	**54.82**	**46**	P		**P**	**15**	**34**	**13.9 +0.3**
	comp=Z,1.4nm,0.7s,baz=27,slow=14,SNR=4.4								
OGNE	**Ogallala**	**54.82**	**299**	⇓P		**P**	**15**	**34**	**14.2 +0.3**
	baz=55								
M24A	**Cheyenne**	**54.90**	**301**	⇓P		**P**	**15**	**34**	**14.5 -0.1**
	baz=55								
L21A	**Rawlins**	**54.93**	**304**	⇑P		**P**	**15**	**34**	**15.2 +0.3**
	baz=55,SNR=9.5								
N28A	**Pribbeno Ranch**	**54.97**	**298**	⇑P		**P**	**15**	**34**	**15.8 +0.8**
	baz=55								
N27A	**Anderson Farm,**	**55.06**	**299**	⇓P		**P**	**15**	**34**	**16.4 +0.7**
	baz=55								
L20A	**Wanmutter**	**55.08**	**305**	⇑P		**P**	**15**	**34**	**16.7 +0.8**
	baz=55								
N26A	**Koester Ranch,**	**55.18**	**300**	⇓P		**P**	**15**	**34**	**17.2 +0.7**
	baz=55								
L19A	**Farson**	**55.18**	**306**	⇑P		**P**	**15**	**34**	**16.9 +0.3**
	baz=55								
M21A	**Separation Pea**	**55.27**	**304**	⇓P		**P**	**15**	**34**	**18.0 +0.7**
	baz=55								
O29A	**4D Ranch, Culb**	**55.35**	**297**	⇓P		**P**	**15**	**34**	**18.2 +0.5**
	baz=55								
N24A	**Carr**	**55.52**	**301**	⇓P		**P**	**15**	**34**	**20.1 +1.1**
	baz=55								
M20A	**Sweetwater, Wa**	**55.55**	**304**	⇑P		**P**	**15**	**34**	**19.7 +0.4**
	baz=55								
P31A	**Stockton**	**55.63**	**296**	⇑P		**P**	**15**	**34**	**20.3 +0.6**
	baz=55								
N23A	**Red Feather La**	**55.67**	**302**	⇑P		**P**	**15**	**34**	**21.2 +0.9**
	baz=56,SNR=7.3								
M19A	**Rock Springs**	**55.72**	**305**	⇑P		**P**	**15**	**34**	**20.5 0.0**
	baz=56								
O26A	**Horse Wrangler**	**55.77**	**300**	⇓P		**P**	**15**	**34**	**21.7 +0.9**
	baz=56								
BJI	**Beijing**	**55.82**	**61**	P		**P**	**15**	**34**	**20.1 -0.9**
BJI				SS		**SS**	**15**	**45**	**51.3 -0.8**
BJI				pmax		pmax			
	comp=Z,7.0nm,0.5s								
BJI				pmax		pmax			
	comp=Z,84nm,4.2s								
BJI				LR		LR			
	comp=N,91nm,22.8s								
BJI				LR		LR			
	comp=E,240nm,25.3s								
BJI				LR		LR			
	comp=Z,160nm,26.1s								
N22A	**Wattenberg Ran**	**55.87**	**303**	⇓P		**P**	**15**	**34**	**22.7 +1.1**
	baz=56,SNR=6.8								
P29A	**Atwood**	**55.88**	**297**	⇓P		**P**	**15**	**34**	**22.1 +0.6**
	baz=56								
M17A	**Scullys Gap (B**	**56.04**	**306**	⇑P		**P**	**15**	**34**	**23.8 +1.0**
	baz=56								
Q31A	**Ellis**	**56.13**	**296**	⇓P		**P**	**15**	**34**	**24.0 +0.7**
	baz=56								
N20A	**Spence Gulch,**	**56.19**	**304**	⇓P		**P**	**15**	**34**	**24.3 +0.3**
	baz=56								
O23A	**Lake Granby, G**	**56.33**	**302**	⇑P		**P**	**15**	**34**	**25.7 +0.7**
	baz=56								
Q30A	**Quinter**	**56.33**	**296**	⇑P		**P**	**15**	**34**	**25.4 +0.6**
	baz=56								
P26A	**Davis Ranch, A**	**56.43**	**299**	⇑P		**P**	**15**	**34**	**26.1 +0.6**
	baz=56								
O22A	**Kremmling**	**56.50**	**302**	⇓P		**P**	**15**	**34**	**27.2 +1.0**
	baz=56,SNR=7.4								
ASAJ	**Asahikawa**	**56.56**	**37**	P		**P**	**15**	**34**	**28.7 +2.5**
ASAJ	**Asahikawa**	**56.56**	**37**	P		**P**	**15**	**34**	**28.7 +2.5**
	comp=Z,14nm,0.9s,baz=328,slow=9.6,SNR=3.5								
ASAJ	**Asahikawa**	**56.56**	**37**	P		**P**	**15**	**34**	**28.7 +2.5**
Q29A	**Oakley**	**56.58**	**297**	⇓P		**P**	**15**	**34**	**27.1 +0.6**
	baz=56								
Q28A	**Sharon Springs**	**56.59**	**298**	⇑P		**P**	**15**	**34**	**27.8 +1.1**
	baz=56								
O21A	**Pagoda**	**56.63**	**303**	⇑P		**P**	**15**	**34**	**28.4 +1.3**
	baz=56								
P25A	**Willow Gulch B**	**56.64**	**300**	⇓P		**P**	**15**	**34**	**27.7 +0.5**
	baz=56								
ISCO	**Idaho Springs**	**56.66**	**301**	⇓P		**P**	**15**	**34**	**28.1 +0.7**
	baz=56								
R31A	**Burdett**	**56.84**	**296**	⇓P		**P**	**15**	**34**	**28.5 +0.1**
	baz=57								
O20A	**White River Ci**	**56.86**	**304**	⇓P		**P**	**15**	**34**	**30.1 +1.4**
	baz=57,SNR=6.6								
LZH	**Lanzhou**	**56.92**	**74**	*e*P		**P**	**15**	**34**	**26.0 -3.1**
LZH				pmax		pmax			
	comp=Z,15nm,1.3s								
R30A	**Dighton**	**57.01**	**296**	⇓P		**P**	**15**	**34**	**29.7 +0.1**
	baz=57								
R29A	**Marienthal**	**57.06**	**297**	⇓P		**P**	**15**	**34**	**30.4 +0.5**
	baz=57								
Q26A	**Hugo**	**57.08**	**299**	⇓P		**P**	**15**	**34**	**31.0 +0.8**
	baz=57								
P22A	**Eagle**	**57.09**	**302**	⇓P		**P**	**15**	**34**	**31.5 +1.2**
	baz=57								
YUK	**Yuzh-Kuril'sk**	**57.10**	**34**	*c i*P		**P**	**15**	**34**	**26.9 -3.1**
YUK				*i*			15	36	34.9
YUK				*i* S		**S**	**15**	**42**	**26.6 +2.6**
YUK				*i* SSS		SSS	15	48	23.8
YUK				MLR		MLR			
	comp=Z,111nm,18.0s								
YUK				MLR		MLR			
	comp=N,216nm,18.0s								
YUK				MLR		MLR			
	comp=E,189nm,18.0s								
Q25A	**Bedland, Calha**	**57.23**	**300**	⇑P		**P**	**15**	**34**	**32.0 +0.6**
	baz=57								
R28A	**Tribune**	**57.28**	**298**	⇑P		**P**	**15**	**34**	**32.3 +0.7**
	baz=57								
P21A	**Newcastle**	**57.30**	**303**	⇑P		**P**	**15**	**34**	**32.8 +1.0**
	baz=57								
Q24A	**Divide**	**57.37**	**301**	⇑P		**P**	**15**	**34**	**32.8 +0.3**
	baz=57								
P19A	**Cripple Cowboy**	**57.49**	**304**	⇑P		**P**	**15**	**34**	**34.4 +1.2**
	baz=57,SNR=7.6								
R27A	**Eads**	**57.54**	**298**	⇑P		**P**	**15**	**34**	**33.7 +0.3**
	baz=57								
R26A	**Arlington**	**57.66**	**299**	⇑P		**P**	**15**	**34**	**34.9 +0.6**
	baz=58								
DUG	**Dugway**	**57.69**	**308**	⇑P		**P**	**15**	**34**	**35.4 +1.0**
	baz=58								
Q22A	**Crested Butte,**	**57.83**	**302**	⇓P		**P**	**15**	**34**	**37.2 +1.6**
	baz=58								
S29A	**Ulysses**	**57.83**	**297**	⇓P		**P**	**15**	**34**	**36.7 +1.3**
	baz=58								
R25A	**Fountain Ranch**	**57.98**	**300**	⇑P		**P**	**15**	**34**	**37.2 +0.7**
	baz=58								
Q21A	**Lamborn Mesa,**	**57.99**	**303**	⇑P		**P**	**15**	**34**	**37.8 +1.2**
	baz=58								
Q20A	**Ridgley Place,**	**58.02**	**304**	⇑P		**P**	**15**	**34**	**37.5 +0.7**
	baz=58								
S28A	**Manter**	**58.02**	**297**	⇑P		**P**	**15**	**34**	**37.7 +1.0**
	baz=58								
T31A	**Randall Ranch,**	**58.02**	**295**	⇓P		**P**	**15**	**34**	**37.5 +0.8**
	baz=58								
S27A	**Las Animas**	**58.14**	**298**	⇑P		**P**	**15**	**34**	**38.5 +0.9**
	baz=58								
R23A	**Moffat**	**58.26**	**301**	⇓P		**P**	**15**	**34**	**39.7 +1.1**
	baz=58								
SRU	**San Rafael**	**58.30**	**306**	⇑P		**P**	**15**	**34**	**39.6 +0.8**
	baz=58								
S26A	**Kim**	**58.32**	**299**	⇓P		**P**	**15**	**34**	**40.0 +1.1**
	baz=58								
R22A	**Saguache, Gunn**	**58.41**	**302**	⇓P		**P**	**15**	**34**	**40.6 +0.9**
	baz=58								
R21A	**Cimarron**	**58.43**	**303**	⇓P		**P**	**15**	**34**	**41.1 +1.3**
	baz=58,SNR=5.8								
S25A	**Robets Cordova**	**58.48**	**300**	⇓P		**P**	**15**	**34**	**40.7 +0.6**
	baz=58,SNR=7.5								
Q16A	**Castle Valley**	**58.61**	**306**	⇑P		**P**	**15**	**34**	**42.3 +1.3**
	baz=58								
S24A	**Houchin Ranch,**	**58.66**	**300**	⇓P		**P**	**15**	**34**	**41.8 +0.3**
	baz=58								
T27A	**Campo**	**58.70**	**298**	⇑P		**P**	**15**	**34**	**42.7 +1.1**
	baz=58								
R20A	**Redvale**	**58.77**	**303**	⇓P		**P**	**15**	**34**	**42.8 +0.7**
	baz=59								
T26A	**Comanche Natio**	**58.78**	**299**	⇓P		**P**	**15**	**34**	**43.2 +1.0**
	baz=59								
PV01	**Paradox Valley**	**58.86**	**304**	*e*P		**P**	**15**	**34**	**43.9 +1.1**
	comp=E,665nm,1.0s								
PV01	**Paradox Valley**	**58.86**	**304**	*e*P		**P**	**15**	**34**	**43.9 +1.1**
	comp=E,665nm,1.0s								
S22A	**4UR Ranch, Cre**	**58.89**	**302**	⇑P		**P**	**15**	**34**	**43.9 +0.8**
	baz=59								
T25A	**Trinidad**	**58.98**	**300**	⇓P		**P**	**15**	**34**	**45.3 +1.7**
	baz=59								
S20A	**Disappointment**	**59.11**	**303**	⇑P		**P**	**15**	**34**	**45.4 +0.8**
	baz=59								
S21A	**Coal Bank Pass**	**59.16**	**303**	⇓P		**P**	**15**	**34**	**45.5 +0.5**
	baz=59								
MSU	**Marysvale**	**59.20**	**307**	*e*P		**P**	**15**	**34**	**47.2 +2.1**
MSU				pmax		pmax			
	comp=Z,4.0nm,1.0s								
MSU	**Marysvale**	**59.20**	**307**	*e*P		**P**	**15**	**34**	**47.2 +2.1**
	comp=Z,3.8nm,1.0s								
MSU	**Marysvale**	**59.20**	**307**	*e*P		**P**	**15**	**34**	**47.2 +2.1**
	comp=Z,3.8nm,1.0s								
U28A	**Mallet**	**59.26**	**297**	⇓P		**P**	**15**	**34**	**46.2 +0.8**
	baz=59								
V31A	**Spring Creek L**	**59.33**	**295**	⇑P		**P**	**15**	**34**	**46.7 +0.9**
	baz=59								
U26A	**Atchley Ranch,**	**59.56**	**299**	⇓P		**P**	**15**	**34**	**48.5 +0.9**
	baz=59								
T22A	**Edith**	**59.61**	**302**	⇓P		**P**	**15**	**34**	**48.9 +0.9**
	baz=59								
U25A	**Circle Dot Ran**	**59.69**	**299**	⇑P		**P**	**15**	**34**	**49.5 +1.0**
	baz=60								
T21A	**Navajo Lake**	**59.76**	**302**	⇓P		**P**	**15**	**34**	**50.4 +1.4**
	baz=60								
R11A	**Troy Canyon, C**	**59.99**	**310**	⇑P		**P**	**15**	**34**	**51.5 +1.0**
	baz=60								
WMOK	**Wichita Mounta**	**60.10**	**294**

baz=62
Y25A Mesa, Roswell 62.14 299 ⇓P **P 15 35 06.0 +0.9**
baz=62
Z29A Hungry Hill Ra 62.15 296 ⇑P **P 15 35 05.9 +0.8**
baz=62
Y24A Capitan 62.29 300 ⇑P **P 15 35 07.3 +1.1**
baz=62
ABTX Abilene, Hawle 62.32 294 ⇑P **P 15 35 07.4 +1.2**
baz=62
X20A Quemado 62.32 303 ⇓P **P 15 35 07.0 +0.6**
baz=62
Y23A Lovelace Mesa, 62.42 300 ⇓P **P 15 35 08.0 +1.0**
baz=62
Z27A Tatum 62.42 297 ⇑P **P 15 35 08.1 +1.2**
baz=62
MPMC Manual Prospec 62.56 311 ⇓P **P 15 35 09.3 +1.4**
baz=62
Y22A Socorro 62.60 301 ⇓P **P 15 35 09.3 +1.1**
baz=62
Z26A Caprock 62.62 298 ⇑P **P 15 35 09.8 +1.5**
baz=62
Z25A Roswell 62.77 299 ⇑P **P 15 35 10.4 +1.1**
baz=63
W13A Hualapai Mount 62.83 308 ⇑P **P 15 35 11.0 +1.2**
baz=63
TUQ Turquoise Moun 62.88 309 ⇑P **P 15 35 11.2 +1.1**
baz=63
128A Castleberry Fa 62.93 297 ⇑P **P 15 35 12.1 +1.8**
baz=63
X16A Lo Mia Camp, P 63.02 305 ⇑P **P 15 35 12.4 +1.3**
baz=63
TORD Torodi Ar. Bea 63.24 186 P **P 15 35 11.7 -0.7**
TORD Torodi Ar. Bea 63.24 186 P **P 15 35 11.7 -0.7**
comp=Z,5.8nm,1.0s,baz=360,slow=6.4,SNR=22
TORD LR LR 16 04 47.8
comp=Z,59nm,19.5s,baz=135,slow=38
TORD Torodi Ar. Bea 63.24 186 P **P 15 35 11.7 -0.7**
Z22A Elephant Butte 63.26 301 ⇓P **P 15 35 13.1 +0.5**
baz=63
MJAR Matsushiro Arr 63.31 42 P **P 15 35 12.9 +0.2**
MJAR Matsushiro Arr 63.31 42 P **P 15 35 12.9 +0.2**
comp=Z,1.6nm,0.8s,baz=331,slow=7.0,SNR=5.0
MJAR LR LR 16 04 17.3
comp=Z,59nm,18.1s,baz=140,slow=38
MJAR Matsushiro Arr 63.31 42 P **P 15 35 12.9 +0.2**
125A Gardner Draw, 63.36 299 ⇑P **P 15 35 14.1 +0.9**
baz=63
228A UT Block 9, Go 63.44 296 ⇑P **P 15 35 16.1 +2.4**
baz=63
GMRC Granite Mounta 63.47 309 ⇓P **P 15 35 15.4 +1.5**
baz=63
124A Stringfield Ra 63.48 299 ⇑P **P 15 35 15.3 +1.1**
baz=63
332A Millersview 63.54 294 ⇓P **P 15 35 15.1 +0.8**
baz=63
HEC Hector,Ludlow 63.55 310 ⇑P **P 15 35 15.7 +1.4**
baz=63
PDMCI Parker Dam,Lak 63.65 308 ⇓P **P 15 35 16.0 +1.0**
baz=64
Z20A Nine Sixteen R 63.72 302 ⇑P **P 15 35 15.9 +0.3**
baz=64
331A San Angelo 63.76 294 ⇑P **P 15 35 16.9 +1.2**
baz=64
EDW2 Edwards Air Fo 63.80 311 ⇓P **P 15 35 17.4 +1.5**
baz=64
226B Tecolote Peak, 63.81 298 ⇑P **P 15 35 16.7 +0.5**
baz=64
432A Menard 64.04 294 ⇓P **P 15 35 18.7 +1.1**
baz=64
NJ2 Nanjing 64.08 61 *e*P **P 15 35 17.3 -0.5**
328A Wristen Ranch, 64.20 296 ⇓P **P 15 35 19.2 +0.5**
baz=64
120A U Bar Ranch, L 64.28 302 ⇓P **P 15 35 20.3 +1.0**
baz=64
BFSC Mount Baldy Ra 64.36 311 ⇑P **P 15 35 20.7 +0.9**
baz=64
431A Sonora 64.40 294 ⇓P **P 15 35 21.0 +1.0**
baz=64
JCT Junction City 64.42 293 ⇑P **P 15 35 21.2 +1.1**
baz=64
430A Baggett Ranch, 64.44 295 ⇑P **P 15 35 21.2 +1.0**
baz=64
324A Moseley Ranch, 64.70 299 ⇓P **P 15 35 22.8 +0.8**
baz=64
532A Rocksprings 64.78 293 ⇑P **P 15 35 23.7 +1.2**
baz=65
428A Kincaid Ranch, 64.81 296 ⇑P **P 15 35 23.8 +1.1**
baz=65
427A Hayter Ranch, 64.84 297 ⇓P **P 15 35 23.7 +0.8**
baz=65
MURC Murrieta 64.90 310 ⇓P **P 15 35 23.6 +0.4**
baz=65
TUC Tucson 64.94 304 *e*P **P 15 35 24.9 +1.4**
TUC pmax pmax
comp=Z,3.0nm,1.0s
TUC Tucson 64.94 304 *e*P **P 15 35 24.9 +1.4**
comp=Z,2.8nm,1.0s
TUC Tucson 64.94 304 *e*P **P 15 35 24.9 +1.4**
comp=Z,2.8nm,1.0s
530A J-C Ranch, Com 65.07 295 ⇑P **P 15 35 25.1 +0.8**
baz=65
426A McDonald Obser 65.15 297 ⇑P **P 15 35 25.8 +0.8**
baz=65
425A Indio Mountain 65.23 298 ⇓P **P 15 35 26.1 +0.6**
baz=65
CIS Catalina Islan 65.31 311 ⇓P **P 15 35 26.0 +0.2**
baz=65
528A Cox Ranch, San 65.37 296 ⇑P **P 15 35 26.9 +0.5**
baz=65
527A Woodward Ranch 65.56 297 ⇑P **P 15 35 28.1 +0.4**
baz=65
631A Perdido Creek 65.62 294 ⇓P **P 15 35 27.9 +0.1**
baz=66
526A Mary Lane Ranc 65.75 297 ⇓P **P 15 35 29.6 +0.7**
baz=66
628A Black Gap, Mar 66.05 296 ⇑P **P 15 35 31.0 +0.3**
baz=66
732A Laxson Ranch, 66.15 293 ⇓P **P 15 35 32.0 +0.7**
baz=66
627A Terlingua Ranc 66.19 296 ⇓P **P 15 35 32.2 +0.6**
baz=66
626A Big Bend Ranch 66.25 297 ⇑P **P 15 35 32.6 +0.6**
baz=66
TXAR Lajitas Array 66.36 297 P **P 15 35 33.0 +0.3**
TXAR Lajitas Array 66.36 297 P **P 15 35 33.0 +0.3**
comp=Z,2.7nm,1.1s,baz=36,slow=4.7,SNR=13
TXAR LR LR 16 05 39.6
comp=Z,168nm,18.8s,baz=125,slow=37
TXAR Lajitas Array 66.36 297 P **P 15 35 33.0 +0.3**
GYA Guiyang 66.81 74 *e*P **P 15 35 36.8 +1.1**
GYA pmax pmax
comp=Z,10.0nm,0.8s
KMI Kunming 67.19 78 P **P 15 35 38.8 +0.6**
KMI pmax pmax
comp=Z,4.0nm,1.3s
CMAR Chiang Mai Arr 72.72 83 P **P 15 36 11.8 -0.1**
CMAR Chiang Mai Arr 72.72 83 P **P 15 36 11.8 -0.1**
comp=Z,2.2nm,1.0s,baz=343,slow=6.9,SNR=11
CMAR LR LR 16 13 45.0
comp=Z,78nm,20.6s,baz=340,slow=40
CMAR Chiang Mai Arr 72.72 83 P **P 15 36 11.9 -0.1**
WRA Warramunga Arr 117.76 57 PKP **PKPdf 15 43 29.1 -0.8**
WRA Warramunga Arr 117.76 57 PKP **PKPdf 15 43 29.1 -0.8**
comp=Z,1.3nm,1.2s,baz=356,slow=1.8,SNR=3.0
WRA Warramunga Arr 117.76 57 PKIKP **PKPdf 15 43 29.1 -0.8**
ASAR Alice Springs 121.29 59 PKP **PKPdf 15 43 35.4 -1.3**
ASAR Alice Springs 121.29 59 PKP **PKPdf 15 43 35.4 -1.3**
comp=Z,0.6nm,0.8s,baz=340,slow=2.3,SNR=7.3
ASAR Alice Springs 121.29 59 PKIKP **PKPdf 15 43 35.3 -1.3**
VNA1 Neumayer--Stat 147.06 189 *e*PKP **PKPab 15 44 26.5 -0.1**
MAW Mawson 147.82 143 PKPbc **PKPbc 15 44 27.6 +0.5**
MAW Mawson 147.82 143 PKPbc **PKPbc 15 44 27.6 +0.5**
comp=Z,2.9nm,0.4s,baz=304,slow=7.9,SNR=7.3
MAW Mawson 147.82 143 PKPbc **PKPbc 15 44 27.6 +0.5**
SNAA Sanae 147.92 186 *e*PKP **PKPbc 15 44 27.5 +0.1**
SNAA Sanae 147.92 186 PKPbc **PKPbc 15 44 27.3 0.0**
SNAA Sanae 147.92 186 PKPbc **PKPbc 15 44 27.3 0.0**
comp=Z,1.7nm,0.9s,baz=357,slow=1.5,SNR=12
SNAA Sanae 147.92 186 PKPbc **PKPbc 15 44 27.3 0.0**

NNC 22 15:34:13.2±3.8, 37.45N×71.09E, h133km±65km, mb3.1, mpv3.6, 3C-1D, Error ellipse: s-maj=50.5km s-min=21.7km az=46.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
KK31	**Karatay Array**	**5.66**	**356**	⇓P	Pn		15 35 35.2	0.0
	2.3nm,0.2s,baz=175,slow=12,SNR=94							
KK31				⇑S	Sn		15 36 39.7	+0.5
	2.3nm,0.3s,baz=149,slow=18,SNR=5.2							
TKM2	**Tokmak 2**	**6.46**	**31**	⇑P	Pn		15 35 46.0	-0.1
	1.9nm,0.5s							
AB31	**Akbulak array**	**14.30**	**329**	P	Pn		15 37 28.4	-1.0
	1.4nm,0.6s,baz=140,slow=14,SNR=39							
AKTO	**Aktyubinsk**	**16.00**	**328**	⇑P	P		15 37 51.7	+0.2
	1.5nm,0.3s							

*ISCJB **22** 15:44:01.2±0.5, 7.48S×0.06×128.4E±0.1, h100km, mb4.0/9, Error ellipse: s-maj=16.0km s-min=8.2km az=163.0*
*NEIC **22** 15:44:01.2±1.6, 7.44S×128.38E, h81km±15km, mb4.5/2, Error ellipse: s-maj=12.9km s-min=10.2km az=56.0*
*IDC **22** 15:44:01.5±3.8, 7.45S×128.36E, h82km±35km, mb3.9/8, mb1 4.0/11, mb1mx3.8/22, mbtmp3.9/11, MS3.7/1, Ms1 3.7/1, ms1mx2.0/26, Error ellipse: s-maj=36.1km s-min=15.0km az=72.0*

ISC 22 15:44:02.8±0.7, 7.58S±0.07×128.3E±0.1, h100km, n30, σ1§58/35, mb4.0/9, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.77**	**194**	*e*P	**Pn**		**15 46 35.0**	**+1.0**
	4.3nm,0.3s							
FITZ				S	**Sn**		**15 48 28.8**	**-3.8**
FITZ				*e*S	**Sn**		**15 48 30.4**	**-2.2**
FITZ	**Fitzroy Crossi**	**10.77**	**194**	P	**Pn**		**15 46 35.2**	**+1.2**
	1.6nm,0.3s,baz=29,slow=10,SNR=76							
FITZ				S	**Sn**		**15 48 28.8**	**-3.8**
	3.7nm,0.3s,baz=303,slow=23,SNR=9.7							
WRAB	**Tennant Creek**	**13.62**	**155**	*e*P	**Pn**		**15 47 11.3**	**-0.6**
	13nm,0.6s							
WRAB				*e*S	Sn		15 49 30.5	-11
WRA	**Warramunga Arr**	**13.62**	**155**	P	**Pn**		**15 47 11.2**	**-0.7**
WRA				S	Sn		15 49 32.3	-10
WRA	**Warramunga Arr**	**13.62**	**155**	P	**Pn**		**15 47 11.2**	**-0.7**
	0.9nm,0.3s,baz=335,slow=14,SNR=57							
WRA				S	Sn		15 49 32.3	-10
	4.7nm,0.3s,baz=332,slow=23,SNR=15							
MBWA	**Marble Bar**	**15.82**	**211**	*e*P	**P**		**15 47 41.8**	**+0.1**
COEN	**Coen**	**15.94**	**115**	*e*P	**P**		**15 47 41.0**	**-2.1**
	42nm,0.4s							
AS31	**Alice Springs**	**16.88**	**162**	*e*P	**P**		**15 47 54.3**	**+0.9**
ASAR	**Alice Springs**	**16.88**	**162**	P	**P**		**15 47 53.5**	**+0.1**
ASAR				S	Sn		15 50 52.9	-7.7
ASAR	**Alice Springs**	**16.88**	**162**	P	**P**		**15 47 53.5**	**+0.1**
	1.6nm,0.3s,baz=344,slow=10,SNR=199							
ASAR				S	Sn		15 50 52.9	-7.7
	0.9nm,0.3s,baz=347,slow=27,SNR=6.6							
STKA	**Stephens Creek**	**27.18**	**155**	*e*P	**P**		**15 49 38.4**	**+1.4**
STKA	**Stephens Creek**	**27.18**	**155**	P	**P**		**15 49 38.2**	**+1.3**
	3.4nm,0.4s,baz=335,slow=11,SNR=20							
NWAO	**Narrogin (SRO)**	**27.22**	**201**	P	**P**		**15 49 39.2**	**+1.9**
NWAO	**Narrogin (SRO)**	**27.22**	**201**	P	**P**		**15 49 39.2**	**+1.9**
	5.0nm,0.5s,baz=59,slow=5.9,SNR=7.4							
NWAO				LR	LR		16 01 36.0	
	comp=Z,163nm,18.5s,baz=240,slow=38							
RPZ	**Rata Peaks**	**51.84**	**141**	P	**P**		**15 53 02.3**	**+1.5**
RPZ	**Rata Peaks**	**51.84**	**141**	P	**P**		**15 53 02.3**	**+1.5**
	6.1nm,0.6s,baz=256,slow=12,SNR=4.7							
SONM	**Songino Array**	**58.47**	**343**	P	P		15 53 49.6	+1.2
SONM	**Songino Array**	**58.47**	**343**	P	P		15 53 49.6	+1.2
	0.2nm,0.4s,baz=168,slow=8.8,SNR=2.5							
PETK	**Petropavlovsk-**	**65.42**	**19**	P	**P**		**15 54 33.9**	**-0.8**
PETK	**Petropavlovsk-**	**65.42**	**19**	P	**P**		**15 54 33.9**	**-0.8**
	1.7nm,0.6s,baz=182,slow=8.2,SNR=11							
MK31	**Makanchi Array**	**67.79**	**328**	*e*P	**P**		**15 54 50.4**	**+0.5**
MKAR	**Makanchi Array**	**67.79**	**328**	P	**P**		**15 54 50.2**	**+0.3**
MKAR				pP	**pP**		**15 55 12.5**	**-2.6**
MKAR	**Makanchi Array**	**67.79**	**328**	P	**P**		**15 54 50.2**	**+0.3**
	0.6nm,0.4s,baz=131,slow=8.2,SNR=9.7							
MKAR				pP	**pP**		**15 55 12.5**	**-2.6**
	0.4nm,0.5s,baz=119,slow=6.4,SNR=2.6							
ZALV	**Zalesovo Beam**	**71.36**	**335**	P	**P**		**15 55 11.2**	**-0.5**
ZALV	**Zalesovo Beam**	**71.36**	**335**	P	**P**		**15 55 11.2**	**-0.5**
	0.4nm,0.3s,baz=116,slow=6.6,SNR=3.0							
VNDA	**Vanda**	**72.09**	**173**	P	**P**		**15 55 16.6**	**+0.9**
VNDA	**Vanda**	**72.09**	**173**	P	**P**		**15 55 16.6**	**+0.9**
	0.7nm,0.5s,baz=308,slow=7.3,SNR=4.7							
KURK	**Kurchatov**	**72.13**	**329**	P	**P**		**15 55 15.3**	**-1.1**
	1.3nm,0.5s							
LPAZ	**La Paz**	**151.26**	**146**	PKPbc	**PKPbc**		**16 03 47.0**	**+0.6**
LPAZ				PKPab	**PKPab**		**16 03 55.7**	**+1.2**
LPAZ	**La Paz**	**151.26**	**146**	PKPbc	**PKPbc**		**16 03 47.0**	**+0.6**
	0.9nm,0.4s,baz=52,slow=3.7,SNR=5.4							
LPAZ				PKPab	**PKPab**		**16 03 55.7**	**+1.2**
	1.6nm,0.5s,baz=179,slow=2.4,SNR=8.5							

IDC 22 16:15:18.6±2.1, 6.75S×129.27E, h0km, mb3.2/1, mb1 3.5/4, mb1mx3.3/20, mbtmp3.3/4, ML2.8/3, Error ellipse: s-maj=90.1km s-min=28.2km az=76.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.82**	**197**	Pn	Pn		16 18 08.9	+0.3
	0.1nm,0.3s,baz=15,slow=14,SNR=3.8							
FITZ				Sn	Sn		16 20 09.0	-12
	0.0nm,0.3s,baz=9.1,slow=19,SNR=1.7							
WRA	**Warramunga Arr**	**14.01**	**160**	Pn	Pn		16 18 37.8	-0.7
	0.1nm,0.3s,baz=342,slow=12,SNR=5.6							
WRA				Sn	Sn		16 21 02.6	-12
	0.0nm,0.3s,baz=335,slow=21,SNR=2.6							
ASAR	**Alice Springs**	**17.40**	**166**	Pn	Pn		16 19 23.1	+0.1
	0.0nm,0.3s,baz=338,slow=9.1,SNR=3.0							
MKAR	**Makanchi Array**	**67.62**	**327**	P	P		16 26 17.3	0.0
	0.1nm,0.6s,baz=114,slow=6.6,SNR=2.7							

*ATH **22** 16:18:46.8, 37.62N×26.92E, h5km±1km, MD3.1/5*
*DDA **22** 16:18:48.6, 37.71N×26.93E, h7km, ML3.3*
*ISK **22** 16:18:49.0, 37.48N×26.81E, h4km, ML3.5*
*CSEM **22** 16:18:50.2±0.2, 37.43N×26.77E, h10km, MD3.1, Error ellipse: s-maj=6.2km s-min=3.5km az=57.0*

ISC 22 16:18:47.9±1.0, 37.62N±0.02×26.85E±0.03, h4km±9km, n100, σ1§06/100, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
SMG	**Samos**	**0.09**	**352**	*e*PG	**Pg**		**16 18 49.3**	**-0.6**
SMG				*e*SG	**Sg**		**16 18 50.6**	**-0.6**
GCAM	**G?zelcaml?**	**0.31**	**75**	*i* P	**Pg**		**16 18 54.4**	**+0.4**
GCAM				*i* S	**Sg**		**16 18 59.0**	**+0.9**
BODT	**Bodrum**	**0.67**	**147**	*e*PG	**Pg**		**16 19 01.0**	**+0.3**
BODT				*e*SG	**Sg**		**16 19 09.9**	**+0.6**
BODT	**Bodrum**	**0.67**	**147**	*e*Pg	**Pg**		**16 19 01.0**	**+0.3**
BODT				*e*Sg	**Sg**		**16 19 09.9**	**+0.6**
URLA	**Izmir**	**0.77**	**345**	*i* P	**Pg**		**16 19 02.4**	**-0.3**
URLA				*i* S	**Sg**		**16 19 12.1**	**-0.6**
MLSB	**Milas**	**0.80**	**113**	*e*PG	**Pg**		**16 19 04.7**	**+1.3**
MLSB				*e*SG	**Sb**		**16 19 16.0**	**+0.4**
MLSB	**Milas**	**0.80**	**113**	*e*Pg	**Pg**		**16 19 04.7**	**+1.3**
MLSB				*e*Sg	**Sb**		**16 19 16.0**	**+0.4**
AYDN	**Tasoluk**	**0.82**	**87**	*i* P	**Pg**		**16 19 03.8**	**+0.2**
AYDN				*i* S	**Sg**		**16 19 14.0**	**-0.2**
CHOS	**Chios island**	**0.99**	**321**	*e*PB	**Pg**		**16 19 06.4**	**-0.6**
CHOS				*e*SB	**Sg**		**16 19 20.8**	**+0.9**
DAT	**Datca**	**1.06**	**147**	*e*PG	**Pg**		**16 19 08.3**	**0.0**
DAT				*e*SG	**Sg**		**16 19 22.3**	**+0.3**
DAT	**Datca**	**1.06**	**147**	*e*Pg	**Pg**		**16 19 08.3**	**0.0**
DAT				*e*Sg	**Sg**		**16 19 22.3**	**+0.3**
APE	**Apeiranthos**	**1.19**	**243**	*e*PN	**Pg**		**16 19 10.5**	**-0.2**
APE	**Apeiranthos**	**1.19**	**243**	*e*PB	**Pg**		**16 19 10.6**	**-0.1**
APE	**Apeiranthos**	**1.19**	**243**	*e*Pb	**Pg**		**16 19 10.6**	**-0.1**
YER	**Yerkesik**	**1.24**	**113**	*e*PN	**Pg**		**16 19 12.3**	**+0.7**
YER	**Yerkesik**	**1.24**	**113**	*e*Pn	**Pg**		**16 19 12.3**	**+0.7**
AKHS	**Akhisar**	**1.47**	**31**	*i* P	**Pn**		**16 19 14.8**	**-0.4**
AKHS				*i* S	**Sb**		**16 19 33.4**	**-1.4**
TURN	**Turunc**	**1.58**	**118**	*i* P	**Pn**		**16 19 14.6**	**-2.2**
TURN				*i* S	**Sn**		**16 19 35.0**	**-2.6**
MANT	**Manisa**	**1.60**	**57**	*i* P	**Pn**		**16 19 17.3**	**+0.1**
MANT				*i* S	**Sn**		**16 19 36.8**	**-1.6**
MANT	**Manisa**	**1.60**	**57**	*i* P	**Pn**		**16 19 17.3**	**+0.1**
DALY	**Dalyan (Mu¨la**	**1.65**	**119**	*e*PN	**Pb**		**16 19 19.1**	**+0.3**
DALY	**Dalyan (Mu¨la**	**1.65**	**119**	*e*Pn	**Pb**		**16 19 19.1**	**+0.3**
PRK	**Paraskevi**	**1.69**	**345**	*e*PN	**Pn**		**16 19 18.9**	**+0.7**
AYVA	**Ayvalik**	**1.69**	**356**	*i* P	**Pn**		**16 19 19.1**	**+0.9**
AYVA				*i* S	**Sb**		**16 19 42.3**	**+1.1**
AYVA	**Ayvalik**	**1.69**	**356**	*i* P	**Pn**		**16 19 19.1**	**+0.9**
AYVA				*i* S	**Sb**		**16 19 42.3**	**+1.1**
ARG	**Arkhangelos**	**1.73**	**144**	*e*PN	**Pn**		**16 19 19.1**	**+0.3**
ARG	**Arkhangelos**	**1.73**	**144**	*e*Pn	**Pn**		**16 19 19.1**	**+0.3**
DENT	**Denizli**	**1.74**	**85**	*e*PN	**Pg**		**16 19 21.6**	**+0.4**
DENT	**Denizli**	**1.74**	**85**	*e*Pn	**Pg**		**16 19 21.6**	**+0.4**
DNZL	**Cakiroluk**	**1.74**	**87**	*i* P	**Pn**		**16 19 19.2**	**+0.1**
DNZL				*i* S	**Sb**		**16 19 43.8**	**+0.9**
DNZL	**Cakiroluk**	**1.74**	**87**	*i* P	**Pn**		**16 19 19.2**	**+0.1**
DNZL				*i* S	**Sb**		**16 19 43.8**	**+0.9**
FETY	**Fethiye**	**2.04**	**118**	*e*PN	**Pb**		**16 19 25.2**	**-0.3**
FETY	**Fethiye**	**2.04**	**118**	*e*Pn	**Pb**		**16 19 25.2**	**-0.3**
DEMI	**Demirci**	**2.04**	**45**	*i* P	**Pb**		**16 19 25.5**	**-0.1**
DEMI				*i* S	**Sb**		**16 19 52.3**	**+0.9**
DEMI	**Demirci**	**2.04**	**45**	*i* P	**Pb**		**16 19 25.5**	**-0.1**
DEMI				*i* S	**Sb**		**16 19 52.3**	**+0.9**
GLHS	**Glhisar (BURDU**	**2.16**	**102**	*e*PN	**Pb**		**16 19 27.1**	**-0.5**
GLHS	**Glhisar (BURDU**	**2.16**	**102**	*e*Pn	**Pb**		**16 19 27.1**	**-0.5**
BALB	**Balikesir**	**2.17**	**21**	*e*PN	**Pb**		**16 19 28.9**	**+1.1**
BALB	**Balikesir**	**2.17**	**21**	*e*Pn	**Pb**		**16 19 28.9**	**+1.1**
BALY	**Balya**	**2.20**	**16**	*i* P	**Pn**		**16 19 27.5**	**+2.2**
BALY				*i* S	**Sb**		**16 19 57.0**	**+1.0**
BALY	**Balya**	**2.20**	**16**	*i* P	**Pn**		**16 19 27.5**	**+2.2**
BALY				*i* S	**Sb**		**16 19 57.0**	**+1.0**
KHL	**Karahalli**	**2.23**	**71**	*e*PN	**Pb**		**16 19 29.3**	**+0.6**
KHL	**Karahalli**	**2.23**	**71**	*e*Pn	**Pb**		**16 19 29.3**	**+0.6**
EZN	**Ezine**	**2.24**	**350**	*e*PN	**Pb**		**16 19 29.2**	**+0.3**
EZN	**Ezine**	**2.24**	**350**	*e*Pn	**Pb**		**16 19 29.2**	**+0.3**
DURS	**Dursunbey**	**2.35**	**32**	*i* P	**Pb**		**16 19 31.8**	**+0.9**
DURS				*i* S	**Sb**		**16 20 01.9**	**+1.6**
DURS	**Dursunbey**	**2.35**	**32**	*i* P	**Pb**		**16 19 31.8**	**+0.9**
DURS				*i* S	**Sb**		**16 20 01.9**	**+1.6**
GONE	**Gonen-Balikesi**	**2.51**	**15**	*e*PN	**Pb**		**16 19 33.6**	**0.0**
GONE	**Gonen-Balikesi**	**2.51**	**15**	*e*Pn	**Pb**		**16 19 33.6**	**0.0**
LIA	**Limnos Island**	**2.62**	**331**	*e*PN	**Pn**		**16 19 33.2**	**+2.2**
LIA	**Limnos Island**	**2.62**	**331**	*e*Pn	**Pn**		**16 19 33.2**	**+2.2**
TVSB	**Tavsanli**	**2.74**	**47**	*e*PN	**Pb**		**16 19 36.9**	**-0.7**
TVSB	**Tavsanli**	**2.74**	**47**	*e*Pn	**Pb**		**16 19 36.9**	**-0.7**
LPK	**Lapseki**	**2.75**	**359**	*e*PN	**Pb**		**16 19 37.2**	**-0.5**
LPK	**Lapseki**	**2.75**	**359**	*e*Pn	**Pb**		**16 19 37.2**	**-0.5**
GELI	**Tayfur-Gelibol**	**2.79**	**354**	*e*PN	**Pb**		**16 19 37.8**	**-0.5**
GELI	**Tayfur-Gelibol**	**2.79**	**354**	*e*Pn	**Pb**		**16 19 37.8**	**-0.5**
KRBG	**Karabiga-Canak**	**2.79**	**7**	*e*PN	**Pb**		**16 19 38.0**	**-0.3**
KRBG	**Karabiga-Canak**	**2.79**	**7**	*e*Pn	**Pb**		**16 19 38.0**	**-0.3**
KCTX	**Karacabey (Bur**	**2.89**	**23**	*e*PN	**Pb**		**16 19 39.2**	**-0.9**
KCTX	**Karacabey (Bur**	**2.89**	**23**	*e*Pn	**Pb**		**16 19 39.2**	**-0.9**
ORLT	**Orhaneli**	**2.90**	**33**	*e*PN	**Pb**		**16 19 39.2**	**-1.1**
ORLT	**Orhaneli**	**2.90**	**33**	*e*Pn	**Pb**		**16 19 39.2**	**-1.1**
ALT	**Altintas**	**2.94**	**60**	*e*PN	**Pb**		**16 19 39.3**	**-1.5**
ALT	**Altintas**	**2.94**	**60**	*e*Pn	**Pb**		**16 19 39.3**	**-1.5**
ERIK	**Erikli-Kesan**	**3.06**	**355**	*e*PN	**Pb**		**16 19 41.5**	**-1.4**
ERIK	**Erikli-Kesan**	**3.06**	**355**	*e*Pn	**Pb**		**16 19 41.5**	**-1.4**
SHUT	**Suhut-Afyon**	**3.06**	**71**	*e*PN	**Pb**		**16 19 41.5**	**-1.5**
SHUT	**Suhut-Afyon**	**3.06**	**71**	*e*Pn	**Pb**		**16 19 41.5**	**-1.5**
RKY	**Sarkoy-Tekirda**	**3.08**	**5**	*e*PN	**Pb**		**16 19 41.8**	**-1.4**
RKY	**Sarkoy-Tekirda**	**3.08**	**5**	*e*Pn	**Pb**		**16 19 41.8**	**-1.4**
ENEZ	**Enez**	**3.16**	**350**	*e*PN	**Pb**		**16 19 43.0**	**-1.6**
MFT	**Murefte**	**3.18**	**6**	*e*PN	**Pb**		**16 19 44.0**	**-1.1**
ARMT	**Armutlu**	**3.33**	**27**	*e*PN	**Pb**		**16 19 45.6**	**-2.0**
CAVI	**Cavuskoy**	**3.48**	**41**	*e*PN	**Pb**		**16 19 47.6**	**-2.4**
CAVI	**Cavuskoy**	**3.48**	**41**	*e*Pn	**Pb**		**16 19 47.6**	**-2.4**
YLV	**Yalova**	**3.54**	**33**	*e*PN	Pb		16 19 48.3	-2.8
ADVT	**Abdulvahap**	**3.60**	**38**	*e*PN	Pb		16 19 49.4	-2.7
ESKT	**Eskisehir**	**3.66**	**58**	*e*PN	Pb		16 19 50.2	-3.1
ESKT	**Eskisehir**	**3.66**	**58**	*e*Pn	Pb		16 19 50.2	-3.1
BUY	**Buyukada**	**3.68**	**28**	*e*PN	Pb		16 19 50.2	-3.2
BUY	**Buyukada**	**3.68**	**28**	*e*Pn	Pb		16 19 50.2	-3.2
SLVT	**Silivri**	**3.76**	**16**	*e*PN	Pn		16 19 51.4	+4.8
SLVT	**Silivri**	**3.76**	**16**	*e*Pn	Pn		16 19 51.4	+4.8
CTKS	**Kestanelik-??a**	**3.83**	**19**	*e*PN	Pb		16 19 52.9	-3.2
CTKS	**Kestanelik-??a**	**3.83**	**19**	*e*Pn	Pb		16 19 52.9	-3.2
ISK	**Istanbul-Kandi**	**3.84**	**26**	*e*PN	Pb		16 19 52.9	-3.4
ISK	**Istanbul-Kandi**	**3.84**	**26**	*e*Pn	Pb		16 19 52.9	-3.4
HRT	**Hereke**	**3.88**	**33**	*e*PN	Pb		16 19 53.4	-3.4
HRT	**Hereke**	**3.88**	**33**	*e*Pn	Pb		16 19 53.4	-3.4
KLYT	**Kilyos**	**4.01**	**24**	*e*PN	Pn		16 19 54.9	+4.9
KLYT	**Kilyos**	**4.01**	**24**	*e*Pn	Pn		16 19 54.9	+4.9
CTYL	**Yal??k??y-??at**	**4.01**	**16**	*e*PN	Pn		16 19 55.2	+5.1
CTYL	**Yal??k??y-??at**	**4.01**	**16**	*e*Pn	Pn		16 19 55.2	+5.1
SILT	**Sile**	**4.14**	**31**	*e*PN	Pn		16 19 57.2	+5.4
SILT	**Sile**	**4.14**	**31**	*e*Pn	Pn		16 19 57.2	+5.4
EDRB	**Edirne**	**4.22**	**359**	*e*PN	Pn		16 19 58.1	+5.1
EDRB	**Edirne**	**4.22**	**359**	*e*Pn	Pn		16 19 58.1	+5.1
MDUB	**Mudurnu**	**4.42**	**49**	*e*PN	Pn		16 20 00.8	+5.0
MDUB	**Mudurnu**	**4.42**	**49**	*e*Pn	Pn		16 20 00.9	+5.0

*IDC **22** 16:28:07.8±1.6, 13.82S×167.33E, h182km±13km, mb4.1/23, mb1 4.2/24, mb1mx4.1/27, mbtmp4.1/24, Error ellipse: s-maj=13.8km s-min=9.8km az=88.0*
*ISCJB **22** 16:28:08.3±0.5, 13.79S±0.07×167.30E±0.10, h200km, mb4.2/22, Error ellipse: s-maj=13.1km s-min=9.2km az=168.9*

**IS

7.8nm,0.6s,baz=8.1,slow=1.0,SNR=72
SONM Songino Array 81.79 323 P **P** 16 40 06.6 +0.2
2.4nm,0.7s,baz=144,slow=5.7,SNR=16
MAW Mawson 82.78 202 P **P** 16 40 11.4 +0.4
7.7nm,0.6s,baz=86,slow=6.2,SNR=5.3
ILAR Eielson Array 65.61 18 P **P** 16 40 24.7 -0.5
1.6nm,0.6s,baz=238,slow=5.2,SNR=21
ILAR pP **pP** 16 41 12.1 -2.1
1.0nm,0.8s,baz=234,slow=6.4,SNR=2.9
NVAR Mina Array Bea 86.60 49 P **P** 16 40 31.7 +0.8
0.8nm,0.7s,baz=228,slow=9.1,SNR=5.7
TAPN Taplejung 87.30 299↓*eP* **P** 16 40 34.6 0.0
12nm,0.8s
ODAN Odare 87.43 298↓*eP* **P** 16 40 35.0 -0.1
26nm,0.7s
RAMN Ramite 88.13 298↓*eP* **P** 16 40 38.1 -0.4
11nm,0.6s
GUN Gumba 89.01 299↓*eP* **P** 16 40 42.5 -0.2
20nm,0.8s
PKI Pulchoki 89.32 298↓*eP* **P** 16 40 43.5 -0.6
14nm,0.7s
KKN Kakani 89.49 299↓*eP* **P** 16 40 44.2 -0.6
14nm,0.7s
DMN Daman 89.59 298↓*eP* **P** 16 40 45.1 -0.2
24nm,0.8s
DANN Dangsing 90.93 299↓*eP* **P** 16 40 50.3 -1.3
6.9nm,0.6s
SNAA Sanae 94.49 183 *eP* **P** 16 41 06.2 -0.7
SNAA Sanae 94.49 183 *es*P pP 16 41 57.0 +0.6
MKAR Makanchi Array 96.58 316 P **P** 16 41 16.8 +0.1
4.1nm,0.6s,baz=85,slow=5.6,SNR=61
MKAR PKiKP **PKiKP** 16 45 52.5 -0.4
0.4nm,0.6s,baz=179,slow=0.8,SNR=4.7
YKA Yellowknife Ar 96.68 27 P **P** 16 41 16.3 -0.4
0.5nm,0.7s,baz=264,slow=4.8,SNR=4.8
ZALV Zalesovo Beam 96.68 324 P **P** 16 41 15.9 -1.1
2.6nm,0.7s,baz=114,slow=4.2,SNR=13
ARCES ARCESS Array B 119.36 346 PKP **PKPdf** 16 46 34.3 -0.3
4.1nm,0.5s,baz=68,slow=1.2,SNR=31
BOSA Boshof 124.14 221 PKP **PKPdf** 16 46 45.1 -0.1
2.5nm,0.9s,baz=158,slow=19,SNR=4.5
KBZ Khabaz 124.16 314 PKP **PKPdf** 16 46 44.7 +0.2
2.6nm,0.9s,baz=93,slow=5.4,SNR=4.4
FINES FINESS Array B 124.88 339 PKP **PKPdf** 16 46 45.4 +0.1
4.1nm,0.8s,baz=61,slow=2.4,SNR=14
NB2 NORSAR Subarra129.74 345 PKPdf **PKPdf** 16 46 54.8 0.0
comp=Z,1.0nm,0.7s,baz=31,slow=1.9
NOA NORSAR Array B129.74 345 PKP **PKPdf** 16 46 54.8 0.0
comp=Z,1.6nm,0.6s,baz=32,slow=2.0,SNR=8.7
AKASG Malin Array Be 130.00 326 PKP **PKPdf** 16 46 55.7 +0.2
comp=Z,1.5nm,0.5s,baz=48,slow=2.0,SNR=6.0
BRTR Keskin Array B 131.95 311 PKP **PKPdf** 16 46 59.4 -0.3
comp=Z,0.9nm,0.6s,baz=117,slow=7.1,SNR=5.3
BRTR SKPbc **SKPab** 16 50 08.5 +0.3
comp=Z,0.8nm,0.6s,baz=95,slow=3.7,SNR=4.4
BRG Berggiesshubel 137.19 335 *e*(P) **PKPdf** 16 47 11.0 +2.1
comp=Z,3.0nm,0.8s
CLL Collm 137.23 336 *e*PKPdf **PKPdf** 16 47 09.0 0.0
comp=Z,5.0nm,1.2s
CLL *i* PKiKP **PKiKP** 16 47 11.4 +0.5
comp=Z,4.0nm,0.7s
PRU Pruhonice 137.62 334 *e*PKPdf **PKPdf** 16 47 12.1 +2.3
NKC Novy Kostel 138.29 336 *e*PKPdf PKPdf 16 47 17.1 +6.0
KHC Kasperske Hory 138.68 334 *e*PKPdf **PKPdf** 16 47 12.7 +0.9
GERES GERESS Array B 138.84 334 PKP **PKPdf** 16 47 13.0 +0.8
comp=Z,1.4nm,0.6s,baz=80,slow=1.5,SNR=10
AGO Saint Agoulin 145.19 341 PKP **PKPab** 16 47 24.4 +0.6
SAOF Saorge 145.29 334 PKP **PKPab** 16 47 24.1 -0.2
AUTN L'Aution 145.34 334 PKP **PKPab** 16 47 24.6 -0.1
SSB Saint Sauveur 145.39 338 PKP **PKPbc** 16 47 24.1 -0.1
TOUF Mont Tournerai 145.40 334 PKP **PKPab** 16 47 24.8 -0.1
PYM Petit Puy Mans 145.50 341 PKP **PKPab** 16 47 25.6 +0.6
MVIF Mont Vial 145.53 334 PKP **PKPdf** 16 47 23.9 -0.4
OG26 St.-Nazaire-De 145.71 337 PKP **PKPab** 16 47 26.4 +0.6
LBL Lubilhac 145.88 340 PKP **PKPab** 16 47 27.2 +0.7
KEST Kesra 150.53 322 PKPbc **PKPbc** 16 47 38.9 +0.7
comp=Z,7.5nm,0.6s,baz=272,slow=1.5,SNR=19
ESDC Sonseca Array 153.10 345 PKPbc **PKPbc** 16 47 44.2 +0.4
comp=Z,0.3nm,0.3s,baz=6.6,slow=3.8,SNR=5.8
ESDC PKPab **PKPab** 16 47 55.9 -0.2
comp=Z,0.5nm,0.3s,baz=27,slow=4.1,SNR=5.9
TORD Torodi Ar. Bea 166.03 269 PKP **PKPdf** 16 47 51.3 -0.3
comp=Z,2.5nm,0.7s,baz=66,slow=0.8,SNR=13
TORD PKPab **PKPab** 16 48 52.6 -0.5
comp=Z,2.0nm,0.6s,baz=90,slow=4.7,SNR=11

IDC 22 16:36:57.9±5.6, 23.10N×144.68E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/25, mbtmp3.6/4, Error ellipse: s-maj=213.9km s-min=28.5km az=72.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**43.95**	**194**	P	P	16 45 05.5	-1.3
	0.4nm,0.3s,baz=18,slow=9.1,SNR=12						
ASAR	**Alice Springs**	**47.65**	**193**	P	P	16 45 36.4	+0.3
	0.3nm,0.3s,baz=18,slow=6.9,SNR=19						
STKA	**Stephens Creek**	**54.74**	**183**	P	P	16 46 30.0	+0.8
	1.8nm,0.7s,baz=14,slow=6.3,SNR=5.8						
MKAR	**Makanchi Array**	**54.78**	**312**	P	P	16 46 29.4	-0.2
	0.2nm,0.6s,baz=101,slow=6.0,SNR=2.7						

IDC 22 16:52:51.6±2.0, 2.69N×126.06E, h0km, mb3.2/4, mb1 3.5/4, mb1mx3.2/23, mbtmp3.3/4, Error ellipse: s-maj=134.8km s-min=24.4km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.67**	**181**	P	P	16 57 33.6	+0.4
	1.5nm,1.0s,baz=4.4,slow=13,SNR=4.0						
WRA	**Warramunga Arr**	**23.92**	**160**	P	P	16 58 07.5	0.0
	0.3nm,0.3s,baz=339,slow=9.9,SNR=9.6						
ASAR	**Alice Springs**	**27.29**	**164**	P	P	16 58 37.5	-0.6
	0.7nm,1.1s,baz=336,slow=7.9,SNR=4.3						
MKAR	**Makanchi Array**	**58.03**	**326**	P	P	17 02 46.6	+0.1
	0.2nm,0.3s,baz=119,slow=7.7,SNR=5.8						

*SZGRF **22** 16:58:37.2,21.60S×177.83W,h33km, Fiji Islands region*
*BJI **22** 16:59:48.9,19.84S×178.28W,h677km,mB4.8/21, mb5.0/39*
*ISCJB **22** 16:59:49.8±0.4,20.06S±0.04×179.03W±0.04, h665km±6km, mb4.8/93, Error ellipse: s-maj=6.8km s-min=4.9km az=144.8*
*NEIC **22** 16:59:49.6±0.2, 19.93S×179.00W, mb4.9/46, Error ellipse: s-maj=8.5km s-min=5.4km az=146.0*
*BGS **22** 16:59:50.5±6.4, 19.93S×179.00W, h645km, mb4.9(NEIC)*
*MOS **22** 16:59:50.0±1.3, 19.83S×179.08W, h654km, mb5.0/11, Error ellipse: s-maj=10.7km s-min=10.3km az=19.0*
*IDC **22** 16:59:51.4±0.9, 19.97S×179.03W, h666km±10km, mb4.0/30, mb1 4.2/32, mb1mx4.2/33, mbtmp4.1/32, Error ellipse: s-maj=10.8km s-min=8.6km az=153.0*
ISC 22 16:59:51.0±0.3, 20.06S±0.05×178.98W±0.05, h668km±3km, h669km:pP-P, n467, σ1§20/559, mb4.9/93, 24C-42D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.64**	**309**	P	**P**	**17 01 20.0**	**+0.5**
	4μm,0.5s						
MSVF	**Nonsavu**	**3.64**	**309**	*eP*	**P**	17 01 20.7	+1.2
MSVF	**Nonsavu**	**3.64**	**309**	*eP*	**P**	17 01 20.7	+1.2
RAO	**Raoul Island**	**9.20**	**174**	*eP*	**P**	17 02 02.9	-0.5
RAO				S	**S**	17 03 47.8	-4.1
RAO	**Raoul Island**	**9.20**	**174**	P	**P**	17 02 03.2	-0.2
	205nm,0.3s,baz=309,slow=22,SNR=5.4						
RAO				S	**S**	17 03 47.7	-4.1
	113nm,0.3s,baz=270,slow=20,SNR=2.1						
AFI	**Afiamalu**	**9.21**	**50**	*eP*	**P**	17 02 02.4	-1.4
	284nm,0.6s						
AFI				S	**S**	17 03 48.3	-4.2
AFI	**Afiamalu**	**9.21**	**50**	P	**P**	17 02 02.4	-1.4
	60nm,0.3s,baz=79,slow=3.4,SNR=29						
AFI				S	**S**	17 03 48.3	-4.2
	5.9nm,0.3s,baz=34,slow=18,SNR=3.1						
FUNA	**Funafuti**	**11.60**	**351**	*eP*	**P**	17 02 24.6	-1.5
	296nm,0.9s						
DZM	**Mont Dzumac**	**13.76**	**259**	*eP*	**P**	17 02 47.3	+1.7
	96nm,0.8s						
DZM	**Mont Dzumac**	**13.76**	**259**	*eP*	**P**	17 02 46.7	+1.1
DZM	**Mont Dzumac**	**13.76**	**259**	*eP*	**P**	17 02 47.1	+1.5
	60nm,0.6s						
DZM	**Mont Dzumac**	**13.76**	**259**	P	**P**	17 02 47.4	+1.7
	12nm,0.3s,baz=271,slow=23,SNR=109						
NOUC	**Port Laguerre**	**13.89**	**259**	*eP*	**P**	17 02 49.0	+2.3
OUZ	**Omahuta**	**16.46**	**202**	*eP*	**P**	17 03 14.0	+4.0
	49nm,1.4s						
URZ	**Urewera**	**18.45**	**190**	P	**P**	17 03 27.1	-0.9
URZ				S	**S**	17 06 17.4	-5.7
URZ	**Urewera**	**18.45**	**190**	PN	**P**	17 03 26.2	-1.8
URZ	**Urewera**	**18.45**	**190**	P	**P**	17 03 27.1	-0.9
	2.7nm,0.3s,baz=13,slow=3.7,SNR=20						
URZ				S	**S**	17 06 17.4	-5.7
	1.1nm,0.3s,baz=90,slow=20,SNR=4.5						
BKZ	**Black Stump Fm**	**19.44**	**191**	PN	**P**	17 03 35.5	-1.4
MRZ	**Mangatainoka R**	**21.06**	**192**	PN	**P**	17 03 50.6	-0.7
QRZ	**Quartz Range**	**21.93**	**197**	PN	**P**	17 04 00.8	+1.8
QRZ				SN	**S**	17 07 19.2	+1.2
THZ	**Tophouse**	**22.71**	**196**	PN	**P**	17 04 06.0	+0.1
THZ				SN	**S**	17 07 27.6	-2.6
TARA	**Tarawa**	**22.71**	**339**	*eP*	**P**	17 04 05.7	-0.7
	497nm,1.1s						
DSZ	**Denniston Nort**	**22.99**	**198**	PN	**P**	17 04 09.9	+1.5
KHZ	**Kahutara**	**23.17**	**194**	PN	**P**	17 04 10.2	+0.3
LTZ	**Lake Taylor**	**23.83**	**196**	PN	**P**	17 04 15.6	-0.2
WVZ	**Waitaha Valley**	**24.52**	**198**	PN	**P**	17 04 21.7	-0.1
RPZ	**Rata Peaks**	**25.02**	**197**	*eP*	**P**	17 04 26.0	-0.2
RPZ	**Rata Peaks**	**25.02**	**197**	P	**P**	17 04 25.7	-0.5
	3.8nm,0.4s,baz=147,slow=20,SNR=9.2						
FOZ	**Fox Glacier**	**25.29**	**200**	PN	**P**	17 04 28.3	-0.2
JCZ	**Jackson Bay**	**26.04**	**200**	PN	**P**	17 04 35.9	+0.6
TBI	**Tubuai**	**27.60**	**102**	*eP*	**P**	17 04 50.9	+2.0
	118nm,0.8s						
PAE	**Paea**	**27.91**	**90**	*eP*	**P**	17 04 52.5	+0.8
	28nm,1.1s						
PPT2	**Papeete2**	**27.92**	**90**	*eP*	**P**	17 04 53.2	+1.3
	114nm,1.1s						
PPT	**Papeete**	**27.93**	**90**	P	**P**	17 04 53.3	+1.4
PPT	**Papeete**	**27.93**	**90**	P	**P**	17 04 53.3	+1.4
	79nm,0.5s,baz=33,slow=1.9,SNR=6.5						
EIDS	**Eidsvold**	**28.08**	**254**	*eP*	**P**	17 04 53.6	+0.5
	24nm,0.6s						
TIAR	**Tiarei**	**28.14**	**90**	*eP*	**P**	17 04 54.9	+1.2
	110nm,0.7s						
TVO	**Taravao**	**28.20**	**90**	*eP*	**P**	17 04 55.3	+1.1
	120nm,0.7s						
ARMA	**Armidale**	**28.44**	**243**	*eP*	**P**	17 04 58.1	+1.9
	64nm,0.6s						
MEH	**Mehetia**	**29.30**	**91**	*eP*	**P**	17 05 04.4	+0.8
	134nm,0.8s						
XMAS	**Kiritimati**	**30.48**	**46**	*eP*	**P**	17 05 14.1	+0.4
CAN	**Canberra**	**32.00**	**235**	*eP*	**P**	17 05 27.9	+1.5
CAN				pmax	pmax		
	comp=Z,72nm,1.2s						
CAN	**Canberra**	**32.00**	**235**	*eP*	**P**	17 05 27.9	+1.5
	comp=Z,72nm,1.2s						
CTA	**Charters Tower**	**32.62**	**264**	P	**P**	17 05 32.7	+0.9
CTA				S	**S**	17 10 02.4	-1.3
CTA	**Charters Tower**	**32.62**	**264**	P	**P**	17 05 32.7	+0.9
	comp=Z,66nm,0.3s,baz=94,slow=12						
CTA				S	**S**	17 10 02.4	-1.3
	comp=Z,8.2nm,0.9s,baz=266,slow=17,SNR=7.0						
CTAO	**Charters Tower**	**32.62**	**264**	*eP*	**P**	17 05 32.6	+0.9
CTAO				pmax	pmax		
	comp=Z,83nm,0.6s						
CTAO	**Charters Tower**	**32.62**	**264**	*eP*	**P**	17 05 32.6	+0.9
	comp=Z,83nm,0.6s						
STKA	**Stephens Creek**	**37.16**	**243**	*eP*	**P**	17 06 10.2	+1.4
	comp=Z,19nm,1.1s						
STKA	**Stephens Creek**	**37.16**	**243**	P	**P**	17 06 10.5	+1.6
	comp=Z,32nm,0.5s,baz=88,slow=8.9,SNR=159						
RKT	**Rikitea**	**40.92**	**102**	*eP*	**P**	17 06 40.3	+1.4
	comp=Z,39nm,1.0s						
WAKE	**Wake Island**	**41.56**	**339**	*eP*	**P**	17 06 43.6	-0.2
	comp=Z,113nm,0.6s						
BBOO	**Buckleboo**	**41.92**	**243**	*eP*	**P**	17 06 47.5	+0.9
	comp=Z,1μm,0.9s						
AS31	**Alice Springs**	**43.73**	**256**	*eP*	**P**	17 07 01.2	+0.5
AS31				*ePcP*	**PcP**	17 08 32.2	+0.3
ASAR	**Alice Springs**	**43.73**	**256**	P	**P**	17 07 01.3	+0.6
ASAR				PcP	**PcP**	17 08 32.2	+0.3
ASAR				S	**S**	17 12 43.1	-2.3
ASAR	**Alice Springs**	**43.73**	**256**	P	**P**	17 07 01.3	+0.6
	comp=Z,24nm,0.4s,baz=88,slow=8.6,SNR=639						
ASAR				PcP	**PcP**	17 08 32.2	+0.3
	comp=Z,10nm,0.7s,baz=110,slow=3.8,SNR=13						
ASAR				S	**S**	17 12 43.1	-2.3
	comp=Z,29nm,0.8s,baz=91,slow=14,SNR=27						
WRAB	**Tennant Creek**	**43.74**	**262**	P	**P**	17 07 00.0	-0.8
	comp=Z,86nm,0.4s,SNR=46						
WRAB	**Tennant Creek**	**43.74**	**262**	*eP*	**P**	17 07 00.7	-0.2
WRAB				pmax	pmax		
	comp=Z,9.0nm,0.7s						
WRAB	**Tennant Creek**	**43.74**	**262**	*eP*	**P**	17 07 00.7	-0.2
	comp=Z,9.2nm,0.7s						
WRA	**Warramunga Arr**	**43.75**	**262**	P	**P**	17 07 00.9	0.0
WRA				PcP	**PcP**	17 08 32.5	+0.5
WRA				pP	**pP**	17 08 50.6	-2.8
WRA				S	**S**	17 12 41.1	-4.7
WRA	**Warramunga Arr**	**43.75**	**262**	P	**P**	17 07 00.9	0.0
	comp=Z,7.6nm,0.5s,baz=97,slow=7.9,SNR=219						
WRA				PcP	**PcP**	17 08 32.5	+0.5
	comp=Z,5.0nm,0.7s,baz=88,slow=4.2,SNR=7.2						
WRA				pP	**pP**	17 08 50.6	-2.8
	comp=Z,1.9nm,0.6s,baz=101,slow=7.1,SNR=1.6						
WRA				S	**S**	17 12 41.1	-4.7
	comp=Z,8.6nm,0.9s,baz=95,slow=13,SNR=8.2						
FITZ	**Fitzroy Crossi**	**52.17**	**262**	*eP*	**P**	17 08 03.3	+0.4
	comp=Z,4.7nm,0.4s						
FITZ				pP	**pP**	17 10 00.7	-1.9
FITZ				S	**S**	17 14 39.4	-1.1
FITZ	**Fitzroy Crossi**	**52.17**	**262**	P	**P**	17 08 03.4	+0.4
	comp=Z,6.4nm,0.5s,baz=110,slow=3.8,SNR=87						
FITZ				pP	**pP**	17 10 00.7	-1.9
	comp=Z,3.2nm,0.7s,baz=137,slow=7.7,SNR=3.3						
FITZ				S	**S**	17 14 39.4	-1.1
	comp=Z,2.8nm,0.8s,baz=291,slow=21,SNR=6.1						
VNDA	**Vanda**	**58.27**	**185**	P	**P**	17 08 46.4	+2.5
VNDA	**Vanda**	**58.27**	**185**	P	**P**	17 08 46.4	+2.5
	comp=Z,1.2nm,0.5s,baz=0.2,slow=8.0,SNR=9.5						
KAPI	**Kappang**	**61.33**	**275**	P	**P**	17 09 03.6	-1.5
KAPI	**Kappang**	**61.33**	**275**	P	**P**	17 09 03.6	-1.5
	comp=Z,9.7nm,0.7s,baz=93,slow=10,SNR=5.2						
CTBH	**Cotabato--PC H**	**62.06**	**290**	*i*P	**P**	17 09 10.0	+0.1
JHJ	**Hachijo jima 2**	**65.93**	**323**	P	**P**	17 09 33.8	+0.1
	comp=Z,196nm,0.4s,baz=83,slow=22,SNR=14						
MYLDM	**Lahad Datu**	**66.33**	**285**	P	**P**	17 09 37.1	+0.4
TSM	**Tawau**	**66.54**	**284**	P	**P**	17 09 38.9	+1.0
SDKM	**Sandakan**	**67.70**	**285**	P	**P**	17 09 45.7	+0.6
TGY	**Tagaytay City**	**68.14**	**295**	P	**P**	17 09 47.5	-0.1
TGY	**Tagaytay City**	**68.14**	**295**	P	**P**	17 09 47.5	-0.1
	baz=53,slow=5.1,SNR=1.5						
KKM	**Kota Kinabalu**	**68.76**	**285**	*eP*	**P**	17 09 51.6	+0.2
	comp=Z,96nm,1.4s						
KKM	**Kota Kinabalu**	**68.76**	**285**	P	**P**	17 09 51.6	+0.2
MJAR	**Matsushiro Arr**	**69.31**	**324**	P	**P**	17 09 53.7	-0.5
MJAR	**Matsushiro Arr**	**69.31**	**324**	P	**P**	17 09 53.7	-0.5
	comp=Z,24nm,0.6s,baz=154,slow=6.1,SNR=85						
MAJO	**Matsushiro**	**69.32**	**324**	*eP*	**P**	17 09 53.9	-0.3
MAJO				pmax	pmax		
	comp=Z,21nm,0.6s						
MAJO	**Matsushiro**	**69.32**	**324**	*eP*	**P**	17 09 53.9	-0.3
	comp=Z,20nm,0.6s						
SBUM	**Sibu**	**71.03**	**280**	P	**P**	17 10 05.8	+1.1
JNU	**Nakatsue**	**71.33**	**317**	*eP*	**P**	17 10 05.8	-0.4
	comp=Z,25nm,0.9s						
JNU	**Nakatsue**	**71.33**	**317**	P	**P**	17 10 05.7	-0.4
	comp=Z,44nm,0.8s,baz=118,slow=5.5,SNR=19						
KSM	**Kuching**	**72.44**	**278**	*eP*	**P**	17 10 13.3	+0.5
	comp=Z,34nm,0.6s						
KSM	**Kuching**	**72.44**	**278**	P	**P**	17 10 14.0	+1.2
YULB	**Yu-li**	**72.49**	**304**	*eP*	**P**	17 10 11.7	-1.3
	comp=Z,14nm,0.6s						
NACB	**Ninganchiao**	**72.67**	**305**	*eP*	**P**	17 10 13.2	-0.7
	comp=Z,92nm,1.0s						
ASAJ	**Asahikawa**	**72.91**	**332**	*eP*	**P**	17 10 16.4	+1.6
	comp=Z,24nm,0.8s						
ASAJ	**Asahikawa**	**72.91**	**332**	P	**P**	17 10 16.1	+1.3
	comp=Z,48nm,0.5s,baz=212,slow=6.0,SNR=57						
SSLB	**Suanglung**	**72.97**	**304**	*eP*	**P**	17 10 14.2	-1.5
	comp=Z,35nm,0.4s						
TPUB	**Ta-pu**	**72.97**	**303**	*eP*	**P**	17 10 14.3	-1.4
	comp=Z,99nm,0.8s						
UNV	**Unalaska Valle**	**74.38**	**8**	*eP*	**P**	**17 10 21.8**	**-1.0**
	comp=Z,49nm,0.9s						
AKUT	**Akutan**	**74.76**	**8**	*eP*	**P**	17 10 23.4	-1.5
YSS	**Yuzh-Sakhalins**	**75.09**	**334**	↓*i*P	**P**	17 10 28.6	+1.6
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
PETK	**Petropavlovsk-**	**75.62**	**346**	P	**P**	17 10 29.6	-0.2
PETK	**Petropavlovsk-**	**75.62**	**346**	P	**P**	17 10 29.6	-0.2
PETK	**Petropavlovsk-**	**75.62**	**346**	P	**P**	17 10 29.6	-0.2
	comp=Z,25nm,0.6s,baz=135,slow=8.5,SNR=120						
KSRS	**Korea Array**	**75.95**	**319**	P	**P**	17 10 32.8	+0.9
	comp=Z,14nm,0.7s,baz=127,slow=5.8,SNR=88						
KSAR	**Wonju Array Be**	**75.97**	**319**	P	**P**	17 10 32.8	+0.7
CHGN	**Chignik**	**78.02**	**12**	*eP*	**P**	17 10 42.0	-0.6
USRK	**Ussuriysk Arra**	**78.08**	**326**	P	**P**	17 10 44.6	+1.4
	comp=Z,25nm,0.7s,baz=127,slow=3.1,SNR=72						
MYKOM	**Kota Tinggi**	**78.58**	**276**	P	**P**	17 10 47.3	+0.8
NJ2	**Nanjing**	**78.89**	**310**	*eP*	**P**	17 10 48.6	+0.8
NJ2				pmax	pmax		
	comp=Z,100nm,0.5s						
KGM	**Kluang**	**79.15**	**276**	P	**P**	17 10 49.7	0.0
HABR	**Khabarovsk**	**79.61**	**331**	*ce*P	**P**	17 10 51.5	+0.3
HABR						17 10 55.4	
HABR				*e**PP	**pP**	17 13 08.0	0.0
HABR				*e*		17 14 04.0	
HABR				*e*PPP	PPP	17 15 58.3	
HABR				S	**S**	17 20 00.4	-0.1
HABR				*e*		17 20 19.1	
HABR				*e*SS	**SS**	17 25 28.4	-2.1
HABR				*e*SSS	SSS	17 29 01.0	
HABR				pmax	pmax		
	comp=N,11nm,1.0s						
HABR				pmax	pmax		
	comp=Z,65nm,1.0s						
HABR				pmax	pmax		
	comp=E,10.0nm,0.8s						
HABR				MLR	MLR		
	comp=Z,72nm,24.0s						
MDJ	**Mudanjiang**	**79.63**	**325**	P	**P**	**17 10 52.3**	**+0.9**
MDJ				pmax	pmax		
	comp=Z,40nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,55nm,4.3s						
MDJ	**Mudanjiang**	**79.63**	**325**	*eP*	**P**	17 10 52.3	+0.9
	comp=Z,42nm,1.0s						
KTGM	**Kuala Trenggan**	**80.50**	**279**	P	**P**	17 10 58.1	+1.5
YBH	**Yreka Blue Hor**	**80.53**	**39**	*eP*	**P**	17 10 57.9	+1.6
	comp=Z,5.4nm,1.1s						
YBH	**Yreka Blue Hor**	**80.53**	**39**	P	**P**	17 10 57.8	+1.6
	comp=Z,5.5nm,0.7s,baz=153,slow=3.0,SNR=12						
KDAK	**Kodiak Island**	**80.61**	**14**	P	**P**	17 10 56.2	+0.1
	comp=Z,126nm,0.8s,SNR=5.1						
KDAK	**Kodiak Island**	**80.61**	**14**	*eP*	**P**	17 10 55.6	-0.4
	comp=Z,38nm,1.4s						
KDAK	**Kodiak Island**	**80.61**	**14**	P	**P**	17 10 55.7	-0.4
	comp=Z,8.6nm,0.6s,baz=225,slow=3.0,SNR=3.6						
LBCM	**Butte Creek Ri**	**80.81**	**40**	P	**P**	17 10 59.4	+1.6
NVAR	**Mina Array Bea**	**81.34**	**44**	P	**P**	17 11 01.6	+1.0
NVAR	**Mina Array Bea**	**81.34**	**44**	P	**P**	17 11 01.6	+1.0
	comp=Z,4.1nm,0.8s,baz=226,slow=8.7,SNR=22						
CN2	**Changchun**	**81.39**	**323**	*eP*	**P**	17 11 01.0	+0.5
CN2				*es*P	**sP**	17 14 23.9	-0.9
CN2				*eS*	**S**	17 20 19.1	+0.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
MOD	**Modoc**	**82.07**	**40**	*eP*	**P**	17 11 05.2	+1.1
	comp=Z,3.0nm,0.4s						
IPM	**Ipoh**	**82.16**	**278**	*eP*	**P**	17 11 05.6	+0.5
	comp=Z,36nm,0.6s						
IPM	**Ipoh**	**82.16**	**278**	P	**P**	17 11 05.9	+0.9
KULM	**Kulim**	**82.80**	**278**	P	**P**	17 11 09.5	+1.3
RSO	**Redoubt South**	**83.01**	**13**	*eP*	**P**	17 11 07.2	-1.3
	comp=Z,51nm,0.9s						
WVOR	**Wild Horse Val**	**83.39**	**40**	*eP*	**P**	17 11 11.5	+0.8
WVOR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WVOR	**Wild Horse Val**	**83.39**	**40**	*eP*	**P**	17 11 11.5	+0.8
	comp=Z,3.4nm,0.8s						
VIPM	**Ingram Point**	**83.42**	**38**	P	**P**	17 11 12.0	+1.2
VIPM	**Ingram Point**	**83.42**	**38**	P	**P**	17 11 12.0	+1.2
PSI	**Prapat**	**83.54**	**275**	P	**P**	17 11 11.5	-0.5
PSI	**Prapat**	**83.54**	**275**	P	**P**	17 11 11.5	-0.5
	comp=Z,18nm,0.8s,baz=175,slow=2.0,SNR=12						
TDL	**Tradedollar La**	**83.63**	**36**	P	**P**	17 11 13.3	+1.6
HDW	**Hoodsport**	**83.98**	**34**	P	**P**	17 11 14.8	+1.5
BBB	**Bella Bella**	**84.45**	**29**	P	**P**	17 11 16.2	+0.8
BBB	**Bella Bella**	**84.45**	**29**	P	**P**	17 11 16.2	+0.8
	comp=Z,3.3nm,0.7s,baz=342,slow=16,SNR=4.8						
BJT	**Baijiatuan**	**84.93**	**316**	*eP*	**P**	17 11 17.6	-0.4
	comp=Z,30nm,0.6s						
BJI	**Beijing**	**84.94**	**316**	P	**P**	17 11 17.9	-0.1
BJI				pmax	pmax		
	comp=Z,47nm,0.6s						
ENH	**Enshi**	**85.03**	**305**	*eP*	**P**	17 11 19.4	+0.6
	comp=Z,105nm,1.3s						
DIV	**Divide**	**85.20**	**15**	*eP*	**P**	17 11 18.4	-0.5
	comp=Z,21nm,1.0s

HHC pP **pP** 17 13 57.0 +1.7
HHC sP **sP** 17 15 00.1 -1.0
HHC SKS **SKSac** 17 21 00.4 -0.8
HHC S **S** 17 21 22.8 -2.9
HHC SS **SS** 17 27 38.8 +0.5
HHC pmax pmax
comp=Z,40nm,1.0s
HHC pmax pmax
comp=Z,150nm,7.6s
SNAA Sanae 88.47 179 *e*P **P** **17 11 34.8 +0.6**
BILL Biiibino 88.51 355k *i*P **P** **17 11 33.9 -0.3**
BILL 17 15 16.0
BILL pmax pmax
comp=Z,63nm,0.8s
BSMT Bassoo Peak 88.64 37 P **P** **17 11 36.1 +0.6**
CMAR Chiang Mai Arr 89.10 290 P **P** **17 11 39.6 +1.6**
CMAR Chiang Mai Arr 89.10 290 P **P** **17 11 39.6 +1.6**
comp=Z,17nm,0.9s,baz=120,slow=2.9,SNR=92
CHTO Chiang Mai 89.23 290 *e*P **P** **17 11 39.9 +1.2**
CHTO pmax pmax
comp=Z,21nm,0.6s
CHTO Chiang Mai 89.23 290 *e*P **P** **17 11 39.9 +1.2**
comp=Z,21nm,0.6s
BW06 Boulder Array 89.27 44 *e*P **P** **17 11 39.4 +0.7**
comp=Z,3.5nm,1.0s
PDAR Pinedale Array 89.28 44 P **P** **17 11 39.5 +0.9**
PDAR Pinedale Array 89.28 44 P **P** **17 11 39.5 +0.9**
comp=Z,3.1nm,0.8s,baz=207,slow=3.0,SNR=18
EGAK Eagle 89.42 15 *e*P **P** **17 11 38.7 +0.2**
comp=Z,24nm,1.0s
COLD Coldfoot 89.62 11 *e*P **P** **17 11 39.8 +0.5**
comp=Z,19nm,1.1s
CD2 Chengdu 89.78 303 *e*P **P** **17 11 41.4 +0.4**
CD2 pP **pP** **17 14 04.0 +1.6**
CD2 sP **sP** **17 15 09.0 +1.0**
CD2 PP **PP** **17 15 30.3 +3.5**
CD2 SKS **SKSac** 17 21 08.8 -0.7
CD2 S **S** 17 21 36.9 -1.6
CD2 sS **sS** 17 25 49.4 -1.3
CD2 SS **SS** 17 28 00.8 +2.4
CD2 pmax pmax
comp=Z,20nm,0.9s
CD2 pmax pmax
comp=Z,80nm,6.8s
PLCA Paso Flores 90.24 134 P **P** **17 11 44.6 +1.5**
PLCA Paso Flores 90.24 134 P **P** **17 11 44.6 +1.5**
comp=Z,2.2nm,0.8s,baz=287,slow=0.6,SNR=5.5
YAK Yakutsk 91.36 338 *e*P **P** **17 11 45.9 -1.6**
YAK pmax pmax
comp=Z,32nm,0.9s
YAK pmax pmax
comp=E,6.0nm,0.9s
YAK pmax pmax
comp=N,6.0nm,1.0s
LZH Lanzhou 91.77 308 ⇓P **P** **17 11 51.3 +1.1**
LZH pP **pP** **17 14 13.5 +1.6**
LZH sP **sP** **17 15 17.8 +0.4**
LZH PP **PP** **17 15 46.5 +4.2**
LZH SKS **SKSac** 17 21 21.6 +0.9
LZH S **S** 17 21 55.0 -1.1
LZH sS **sS** 17 26 08.0 -1.9
LZH pmax pmax
comp=Z,34nm,1.2s
LZH pmax pmax
comp=Z,120nm,7.5s
INK Inuvik 94.09 15 P **P** **17 11 58.7 -1.1**
INK Inuvik 94.09 15 P **P** **17 11 58.7 -1.1**
comp=Z,4.2nm,0.9s,baz=202,slow=7.3,SNR=7.2
ULN Ulaanbaatar 94.43 320 *e*P **P** **17 12 01.5 -0.6**
comp=Z,3.9nm,0.6s
SONM Songino Array 94.82 319 P **P** **17 12 02.6 -1.2**
SONM PP PP 17 15 59.8 -5.4
SONM Songino Array 94.82 319 P **P** **17 12 02.6 -1.2**
comp=Z,1.8nm,0.8s,baz=119,slow=2.7,SNR=11
SONM PP PP 17 15 59.8 -5.4
comp=Z,0.7nm,0.8s,baz=134,slow=6.7,SNR=3.7
GTA Gaotai 95.98 310 *e*P **P** **17 12 09.9 +0.7**
GTA pP **pP** **17 14 34.0 +2.6**
GTA sP **sP** **17 15 34.3 -2.4**
GTA pmax pmax
comp=Z,6.0nm,0.8s
YKA Yellowknife Ar 96.50 25 P **P** **17 12 10.5 -0.3**
YKA Yellowknife Ar 96.50 25 P **P** **17 12 10.5 -0.3**
comp=Z,1.0nm,0.6s,baz=244,slow=4.7,SNR=8.7
ZAK Zakamensk 97.71 321 *e*P **P** **17 12 18.8 +2.2**
ZAK pmax pmax
comp=Z,1.0nm,1.1s
TIXI Tiksi 98.09 345*c e*P Pdif 17 12 17.2 -0.4
TIXI pmax pmax
comp=Z,7.0nm,2.7s
TAPN Taplejung 101.78 295 *e*P **PKiKP** **17 16 54.4 +0.1**
comp=Z,2.5nm,0.3s
ODAN Odare 101.91 294 *e*P **PKiKP** **17 16 54.3 -0.2**
comp=Z,14nm,1.0s
RAMN Ramite 102.61 294 *e*P **PKiKP** **17 16 55.2 -0.6**
comp=Z,8.0nm,0.6s
GUN Gumba 103.49 295 *e*P **PKiKP** **17 16 56.5 -1.0**
comp=Z,5.5nm,0.4s
PKI Pulchoki 103.80 295 *e*P **PKiKP** **17 16 57.0 -1.0**
comp=Z,5.2nm,0.3s
KKN Kakani 103.97 295 *e*P **PKiKP** **17 16 57.4 -0.8**
comp=Z,7.7nm,0.6s
DMN Daman 104.07 294 *e*P **PKiKP** **17 16 57.3 -1.1**
comp=Z,2.8nm,0.3s
KOLN Koldanda 105.40 294 *e*P **PKiKP** **17 16 59.5 -1.3**
comp=Z,2.4nm,0.3s
DANN Dangsing 105.41 295 *e*P **PKiKP** **17 16 59.8 -1.1**
comp=Z,8.5nm,0.5s
ZAA0 Zalesovo Array 109.58 321 *e*PKiKP **PKiKP** **17 17 05.7 -1.8**
ZALV Zalesovo Beam 109.58 321 PKiKP **PKiKP** **17 17 06.2 -1.3**
ZALV PP **PP** **17 17 49.4 -3.6**
ZALV Zalesovo Beam 109.58 321 PKiKP **PKiKP** **17 17 06.2 -1.3**
comp=Z,2.9nm,0.6s,baz=156,slow=0.9,SNR=18
ZALV PP **PP** **17 17 49.4 -3.6**
comp=Z,0.9nm,0.6s,baz=107,slow=4.8,SNR=3.8
MK31 Makanchi Array 110.23 314*c i*PKIKP **PKiKP** **17 17 07.9 -1.2**
MK31 pmax pmax
comp=Z,1.0nm,0.2s
MK31 Makanchi Array 110.23 314 *e*Pdif **Pdif** **17 13 12.9 +0.6**
MK31 *e*PKiKP **PKiKP** **17 17 07.9 -1.2**
MKAR Makanchi Array 110.23 314 P **Pdif** **17 13 13.7 +1.4**
MKAR *i* 17 17 07.9
MKAR Makanchi Array 110.23 314 Pdif **Pdif** **17 13 13.7 +1.4**
MKAR PKiKP **PKiKP** **17 17 07.9 -1.1**
MKAR Makanchi Array 110.23 314 Pdiff **Pdif** **17 13 13.7 +1.4**
comp=Z,0.9nm,0.7s,baz=88,slow=6.5,SNR=8.5
MKAR PKiKP **PKiKP** **17 17 07.9 -1.1**
comp=Z,1.7nm,0.4s,baz=122,slow=0.8,SNR=34
NVS Novosibirsk 110.60 322 *e*PKIKP **PKiKP** **17 17 07.5 -1.9**
KURK Kurchatov 113.05 318*c i*PKIKP **PKiKP** **17 17 12.9 -1.3**
KURK pmax pmax
comp=Z,6.0nm,1.7s
KURK Kurchatov 113.05 318 *e*PKiKP **PKiKP** **17 17 13.1 -1.1**
TKM2 Tokmak 2 114.52 309 PKIKP PKPdf 17 17 15.1 -2.5
TKM2 pmax pmax
comp=Z,3.0nm,0.6s
VOSK Vostochnaya 117.81 320 PKIKP **PKPdf** **17 17 22.5 -0.9**
VOSK pmax pmax
comp=Z,1.0nm,0.4s
BVA0 Borovoye Array 118.15 320 *i* PKIKP **PKPdf** **17 17 22.9 -1.1**
BVA0 pmax pmax
comp=Z,6.0nm,0.4s
BRVK Borovoye 118.21 320 *e*PKIKP **PKPdf** **17 17 23.3 -0.8**
BRVK Borovoye 118.21 320 *e*PKPdf **PKPdf** **17 17 23.3 -0.8**
KK31 Karatay Array 118.25 309*c i*PKIKP **PKPdf** **17 17 23.7 -0.8**
KK31 pmax pmax
comp=Z,3.0nm,0.5s
KKAR Karatay Array 118.25 309 *e*PKIKP **PKPdf** **17 17 23.8 -0.8**
KKAR Karatay Array 118.25 309 *e*PKPdf **PKPdf** **17 17 23.8 -0.8**
SCHQ Schefferville 118.89 38 PKP **PKPdf** **17 17 24.1 -1.3**
SCHQ Schefferville 118.89 38 PKP **PKPdf** **17 17 24.1 -1.3**
comp=Z,1.4nm,0.7s,baz=315,slow=10.0,SNR=3.2
ZRNK Zerenda 118.99 320 PKIKP **PKPdf** **17 17 24.0 -1.6**
ZRNK pmax pmax
comp=Z,3.0nm,0.9s
SVE Sverdlovsk 123.11 326 *e*PKIKP **PKPdf** **17 17 33.2 -0.2**
SVE pmax pmax
comp=Z,15nm,0.9s
ARU Arti 124.32 325 *i* PKIKP **PKPdf** **17 17 35.2 -0.5**
ARU 17 19 32.5
AB31 Akbulak array 125.14 317*c i*PKIKP **PKPdf** **17 17 36.5 -1.0**
AB31 pmax pmax
comp=Z,1.0nm,0.2s
ABKAR Akbulak array 125.14 317 *e*PKPdf **PKPdf** **17 17 36.6 -0.9**
AKTO Aktyubinsk 126.13 318 PKIKP **PKPdf** **17 17 38.3 -1.1**

AKTO pmax pmax
comp=Z,8.0nm,0.7s
BOSA Boshof 126.25 207 PKP **PKPdf** **17 17 41.3 +0.8**
BOSA Boshof 126.25 207 PKP **PKPdf** **17 17 41.3 +0.8**
comp=Z,5.2nm,1.0s,baz=315,slow=1.4,SNR=5.7
ARCES ARCESS Array B 128.32 349 PKPpre PKPpre 17 17 29.2
ARCES PKP **PKPdf** **17 17 42.6 -0.5**
ARCES SKP 17 20 16.7
ARCES ARCESS Array B 128.32 349 PKhKP PKPpre 17 17 29.2
comp=Z,4.7nm,1.0s,baz=213,slow=0.9,SNR=6.5
ARCES PKP **PKPdf** **17 17 42.6 -0.5**
comp=Z,9.5nm,0.5s,baz=28,slow=1.1,SNR=58
ARCES SKP 17 20 16.7
comp=Z,4.0nm,0.9s,baz=42,slow=3.8,SNR=4.0
FINES FINESS Array B 135.09 343 PKPpre PKPpre 17 17 39.5
FINES PKP **PKPdf** **17 17 55.8 -0.2**
FINES SKPbc **SKPbc** **17 20 25.7 -0.1**
FINES FINESS Array B 135.09 343 PKhKP PKPpre 17 17 39.5
comp=Z,0.8nm,0.5s,baz=277,slow=1.1,SNR=4.9
FINES PKP **PKPdf** **17 17 55.8 -0.2**
comp=Z,4.4nm,0.5s,baz=63,slow=1.4,SNR=11
FINES SKPbc **SKPbc** **17 20 25.7 -0.1**
comp=Z,4.3nm,0.7s,baz=86,slow=2.5,SNR=5.6
OBN Obninsk 135.93 331 *i* PKIKP **PKPdf** **17 17 57.0 -0.7**
OBN pmax pmax
comp=Z,14nm,1.2s
VSR Storozhevoye 136.89 325 *e*PKIKP **PKPdf** **17 17 58.5 -1.1**
VSR pmax pmax
comp=N,7.0nm,1.0s
VSR pmax pmax
comp=Z,10.0nm,1.0s
VSR pmax pmax
comp=E,4.0nm,0.5s
TSUM Tsumeb 137.74 204 PKP **PKPdf** **17 18 03.2 +0.8**
TSUM Tsumeb 137.74 204 PKP **PKPdf** **17 18 03.2 +0.8**
comp=E,1.5nm,0.5s,baz=171,slow=3.6,SNR=8.4
KBZ Khabaz 137.93 314 PKIKP **PKPdf** **17 18 03.2 +1.5**
KBZ Khabaz 137.93 314 PKP **PKPdf** **17 18 03.2 +1.5**
KBZ Khabaz 137.93 314 PKP **PKPdf** **17 18 03.2 +1.5**
comp=E,2.3nm,0.8s,baz=187,slow=1.3,SNR=4.7
NB2 NORSAR Subarra138.43 353 PKP PKPpre 17 17 52.3
comp=Z,3.0nm,0.5s,baz=15,slow=3.2
NOA NORSAR Array B138.43 353 PKPpre PKPpre 17 17 52.4
NOA PKP **PKPdf** **17 18 03.0 +0.8**
NOA SKPbc **SKPbc** **17 20 36.0 +0.4**
NOA NORSAR Array B138.43 353 PKhKP PKPpre 17 17 52.4
comp=Z,2.1nm,0.7s,baz=17,slow=2.8,SNR=19
NOA PKP **PKPdf** **17 18 03.0 +0.8**
comp=Z,4.1nm,0.6s,baz=14,slow=4.0,SNR=12
NOA SKPbc **SKPbc** **17 20 36.0 +0.4**
comp=Z,1.2nm,0.7s,baz=15,slow=4.4,SNR=3.3
KMBO Kilima Mbogo 138.72 244 PKP **PKPdf** **17 18 06.7 +2.2**
KMBO Kilima Mbogo 138.72 244 PKP **PKPdf** **17 18 06.7 +2.2**
comp=Z,2.4nm,0.2s,baz=46,slow=22,SNR=4.1
SUW Suwalki 142.10 339 *e*PKHKP PKPpre 17 18 06.0
AKASG Malin Array Be 142.18 331 PKHKP PKPpre 17 18 05.2
AKASG Malin Array Be 142.18 331 PKPpre PKPpre 17 18 05.2
AKASG SKPbc **SKPbc** **17 20 45.9 +0.3**
AKASG Malin Array Be 142.18 331 PKhKP PKPpre 17 18 05.2
comp=Z,32nm,0.3s,baz=43,slow=4.3,SNR=312
AKASG SKPbc **SKPbc** **17 20 45.9 +0.3**
comp=Z,2.5nm,0.6s,baz=40,slow=2.5,SNR=11
KIEV Kiev 142.19 331 *e*PKHKP PKPpre 17 18 05.2
KIEV Kiev 142.19 331 *e*PKPpre PKPpre 17 18 05.2
KAC Achnashellach 142.32 6 *e*P **PKPdf** **17 18 06.1 -3.2**
MCD Coleburn Disti 142.39 4 *e*P **PKPdf** **17 18 05.7 -3.6**
KPL Plockton 142.44 6 *e*P **PKPdf** **17 18 06.3 -3.1**
KPL AMB AMB 17 18 07.7
comp=Z,39nm,0.8s
MDO Dochfour 142.46 5 *e*P **PKPdf** **17 18 06.1 -3.4**
KSB Sheil Bridge 142.59 6 *e*P **PKPdf** **17 18 06.9 -2.8**
MALT Malatya 142.93 308 ⇓PKIKP PKPdf 17 18 17.5 +6.4
MALT Malatya 142.93 308 ⇑*i*P PKPdf 17 18 17.9 +6.8
SIM Simferopol' 143.06 320 *e*PKIKP PKPbc 17 18 09.6 +0.1
SIM pmax pmax
comp=Z,89nm,0.7s
DRUM Mains of Drumt 143.11 3 *e*P PKPab 17 18 07.5 -1.5
ELO Logie Almond 143.47 4 *e*P PKPbc 17 18 09.7 -0.7
EAB Aberfoyle 143.70 5 *e*P PKPbc 17 18 10.3 -0.8
ESY Stoneypath 144.09 3 *e*P PKPbc 17 18 11.7 -0.6
EAU Auchinoon 144.11 4 *e*P PKPbc 17 18 12.2 -0.2
GKP Gorka Klasztor 144.57 343⇓*e*PKIKP PKPbc 17 18 13.9 +0.1
ESK Eskdalemuir 144.65 4 *e*P **PKPdf** **17 18 13.0 -0.3**
ESK Eskdalemuir 144.65 4 *i* PKIKP **PKPdf** **17 18 13.7 +0.3**
ESK Eskdalemuir 144.65 4 *e*PKP **PKPdf** **17 18 13.3 -0.1**
BEL Belsk 144.72 339 *e*PKIKP PKPbc 17 18 14.6 +0.3
ECK Cauldkaine Hil 144.79 4 *e*P **PKPdf** **17 18 12.2 -1.4**
KIS Kishinev 144.86 326⇓*i*PKIKP **PKPdf** **17 18 13.5 -0.5**
KIS pmax pmax
comp=Z,200nm,0.9s
GAL1 Galloway 144.98 6 *e*P **PKPdf** **17 18 14.3 +0.4**
GAL1 AMB AMB 17 18 15.0
comp=Z,36nm,1.0s
GCD Castle Douglas 145.05 5 *e*P **PKPdf** **17 18 14.4 +0.4**
LVV L'vov 145.11 334 *i* PKIKP **PKPdf** **17 18 14.3 0.0**
KESW Keswick, Cumbr 145.38 4 *e*P **PKPbc** **17 18 15.6 -0.6**
KESW AMB AMB 17 18 16.6
comp=Z,39nm,1.0s
BSEG Bad Segeberg 145.44 350 *e*PKPbc **PKPbc** **17 18 16.5 +0.2**
BSEG Bad Segeberg 145.44 350 *e*PKIKP **PKPbc** **17 18 16.5 +0.2**
LEOM Leova 145.50 326 ⇑PKIKP **PKPbc** **17 18 16.8 +0.1**
KWP Kalwaria Pacla 145.80 335 ⇓PKIKP **PKPbc** **17 18 17.6 0.0**
KWP Kalwaria Pacla 145.80 335 *e*PKPbc **PKPbc** **17 18 17.5 0.0**
BRTR Keskin Array B 145.86 312 PKP **PKPdf** **17 18 15.5 -0.6**
BRTR PKPbc **PKPbc** **17 18 17.9 -0.3**
BRTR SKPbc **SKPbc** **17 20 54.6 -0.1**
BRTR Keskin Array B 145.86 312 PKP **PKPdf** **17 18 15.5 -0.6**
comp=Z,18nm,0.7s,baz=129,slow=3.1,SNR=87
BRTR PKPbc **PKPbc** **17 18 17.9 -0.3**
comp=Z,17nm,0.7s,baz=114,slow=1.9,SNR=86
BRTR SKPbc **SKPbc** **17 20 54.6 -0.1**
comp=Z,1.4nm,0.8s,baz=166,slow=1.0,SNR=4.2
RUE Ruedersdorf 146.15 346 *e*PKPbc **PKPbc** **17 18 18.5 +0.2**
RUE Ruedersdorf 146.15 346 *e*PKPbc **PKPbc** **17 18 18.5 +0.2**
ANTO Ankara 146.39 313 ⇓PKIKP **PKPbc** **17 18 19.5 0.0**
ANTO Ankara 146.39 313 *e*PKPbc **PKPbc** **17 18 19.4 -0.2**
OJC Ojcow 146.41 338 *i* PKIKP **PKPbc** **17 18 19.0 -0.2**
OJC *e* 17 18 22.3
WME Myndd Eilian 146.47 6 *e*P **PKPbc** **17 18 18.0 -1.2**
KOLS Kolonicke sedl 146.52 334 *e*PKIKP **PKPbc** **17 18 19.8 +0.3**
STHS Stebnicka Huta 146.54 336 *e*PKP2 **PKPbc** **17 18 20.0 +0.4**
WLF1 Llynfaes 146.57 6 *e*P **PKPbc** **17 18 18.9 -0.5**
WLF1 AMB AMB 17 18 19.6
comp=Z,35nm,0.7s
YRC Rhoscolyn 146.59 6 *e*P **PKPbc** **17 18 18.8 -0.7**
WPM1 Penmaenmawr 146.64 5 *e*P **PKPbc** **17 18 19.1 -0.6**
TIRR Tirgusor 146.69 323 ⇑PKIKP **PKPbc** **17 18 19.9 -0.2**
VRI Vrincioaia 146.70 326 ⇓PKIKP **PKPbc** **17 18 19.8 -0.3**
PLOR Plostina 146.75 327 ⇓PKIKP **PKPbc** **17 18 19.7 -0.6**
KBI1 Birley Grange 146.81 3 *e*P **PKPbc** **17 18 19.6 -0.5**
NRDL Niedersach Rie 146.86 350 *e*PKPbc **PKPbc** **17 18 20.3 +0.1**
YRE Yr Eifl 146.87 6 *e*P **PKPbc** **17 18 19.4 -0.9**
CRVS Cervenica-Dubn 146.87 335 *e*PKIKP **PKPdf** **17 18 18.3 +1.0**
CRVS *e* 17 18 22.0
NIE Niedzica 146.89 337 *i* PKP2 **PKPbc** **17 18 21.6 +1.1**
BMR Baia Mare 146.97 332 ⇓PKIKP **PKPbc** **17 18 20.9 +0.2**
KSP Ksiaz 147.00 342⇓*i*PKP2 **PKPbc** **17 18 21.2 +0.5**
FOEL Foel Wylfa 147.07 5 *e*P **PKPbc** **17 18 20.1 -0.8**
FOEL AMB AMB 17 18 21.2
comp=Z,76nm,0.7s
ISR Istrita 147.29 326 ⇑PKP2 **PKPbc** **17 18 22.1 +0.4**
OKC Ostrava-Krasne 147.30 339 *i* PKIKP **PKPbc** **17 18 21.6 +0.1**
OKC *e* 17 18 26.0
OKC Ostrava-Krasne 147.30 339⇓*i*PKPBC **PKPbc** **17 18 21.6 +0.1**
OKC *e*PKPAB **PKPab** **17 18 26.0 +0.2**
UPC Upice 147.38 342 *e*PKP2 **PKPbc** **17 18 22.1 +0.4**
UPC Upice 147.38 342⇓*e*PKPBC **PKPbc** **17 18 22.1 +0.4**
UPC *e*PKPAB **PKPab** **17 18 26.7 +0.6**
CLL Collm 147.42 346 *e*PKPbc **PKPbc** **17 18 22.0 +0.3**
CLL *e*PKPab **PKPab** **17 18 26.1 -0.1**
CLL Collm 147.42 346⇓*e*PKIKP **PKPdf** **17 18 18.0 -0.1**
CLL *i* 17 18 26.1
CLL pmax pmax
comp=Z,80nm,0.9s
CLL pmax pmax
comp=Z,39nm,0.8s
DPC Dobruska-Polom 147.43 342⇓*i*PKP2 **PKPbc** **17 18 22.5 +0.6**
DPC Dobruska-Polom 147.43 342⇓*i*PKPBC **PKPbc** **17 18 22.5 +0.6**
DPC *e*PKPAB **PKPab** **17 18 27.1 +0.7**
DPC *e*SKP 17 20 56.0
CLZ Clausthal 147.45 349 *e*PKPbc **PKPbc** **17 18 22.3 +0.4**
CLZ *e*PKPab **PKPab** **17 18 26.1 -0.3**
CLZ Clausthal 147.45 349 *e*PKP2 **PKPbc** **17 18 22.3 +0.4**

HLM1 Long Mynd 147.46 4 *e*P **PKPbc** **17 18 21.5 -0.3**
HLM1 AMB AMB 17 18 22.1
comp=Z,38nm,0.8s
KRLC Kraliky 147.53 341 *e*PKP2 **PKPbc** **17 18 22.5 +0.3**
KRLC Kraliky 147.53 341⇓*e*PKPBC **PKPbc** **17 18 22.5 +0.3**
KRLC *e*PKPAB **PKPab** **17 18 27.3 +0.5**
MORC Moravsky Berou 147.55 340 ⇑PKIKP **PKPbc** **17 18 22.4 +0.2**
MORC Moravsky Berou 147.55 340 *e*PKPdf **PKPdf** **17 18 18.1 -0.4**
MORC *e*PKPbc **PKPbc** **17 18 21.9 -0.4**
MORC *e*PKPab **PKPab** **17 18 26.9 0.0**
KECS Kecovo 147.59 336 *e*PKP2 **PKPbc** **17 18 22.7 +0.4**
BRG Berggiesshubel 147.60 345 *e*PKPbc **PKPbc** **17 18 22.6 +0.4**
BRG *e*PKPab **PKPab** **17 18 27.2 +0.2**
BRG Berggiesshubel 147.60 345 *e*PKIKP **PKPdf** **17 18 18.5 +0.1**
BRG *i* 17 18 27.0
BRG pmax pmax
comp=Z,5.0nm,1.1s
BRG pmax pmax
comp=Z,25nm,0.9s
FBE Freiberg 147.70 345 *e*PKPbc **PKPbc** **17 18 23.1 +0.6**
FBE *e*PKPab **PKPab** **17 18 27.8 +0.4**
PVCC Panska Ves 147.76 344⇓*i*PKP2 **PKPbc** **17 18 23.2 +0.6**
PVCC Panska Ves 147.76 344⇓*i*PKPBC **PKPbc** **17 18 23.2 +0.6**
NEUB Neuenburg 147.78 347 *e*PKPbc **PKPbc** **17 18 23.0 +0.3**
NEUB *e*PKPab **PKPab** **17 18 27.8 +0.1**
VOIR 147.85 327 ⇑PKIKP **PKPbc** **17 18 22.8 -0.4**
CSS Prodhromos 147.90 304 *e*PKPbc **PKPbc** **17 18 23.4 -0.1**
MCH1 Michaelchurch 147.97 5 *e*P **PKPbc** **17 18 22.7 -0.4**
MCH1 AMB AMB 17 18 23.2
comp=Z,34nm,0.7s
DRGR 147.99 331 ⇑PKHKP **PKiKP** **17 18 23.2 -1.5**
SSW Stow on the Wo 148.08 3 *e*P **PKPbc** **17 18 23.6 +0.2**
VYHS Vyhne 148.20 337 *e*PKHKP **PKiKP** **17 18 24.2 -0.8**
VYHS *e* 17 18 30.0
VYHS Vyhne 148.20 337 *e*PKP **PKiKP** **17 18 24.2 -0.8**
VYHS *e* 17 18 30.0
PRU Pruhonice 148.25 343 *i* PKHKP **PKiKP** **17 18 24.1 -0.9**
PRU *e* 17 18 30.1
PRU Pruhonice 148.25 343⇓*i*PKPBC **PKiKP** **17 18 24.1 -0.9**
PRU *e*PKPAB **PKPab** **17 18 30.1 +0.4**
PRU *e*SKP 17 21 00.8
PSZ Piszkesteto 148.28 336⇓*e*PKHKP **PKiKP** **17 18 24.3 -0.9**
PSZ Piszkesteto 148.28 336 *e*PKPbc **PKPbc** **17 18 24.1 0.0**
PSZ *e*PKPab **PKPab** **17 18 30.1 +0.1**
MOX Moxa 148.35 347 *e*PKPbc **PKPbc** **17 18 24.3 +0.2**
MOX *e*PKPab **PKPab** **17 18 29.9 -0.2**
MOX Moxa 148.35 347 *e*PKP2 **PKPab** **17 18 29.9 -0.2**
SKP1 Kophill 148.37 2 *e*P **PKPbc** **17 18 23.5 -0.6**
TANN Tannenbergstha 148.38 346 *e*PKPbc **PKPbc** **17 18 24.6 +0.3**
TANN *e*PKPab **PKPab** **17 18 30.4 +0.1**
PLN Plauen 148.38 346 *e*PKPbc **PKPbc** **17 18 24.5 +0.3**
PLN *e*PKPab **PKPab** **17 18 30.3 +0.1**
WERD Werda 148.38 346 *e*PKPbc **PKPbc** **17 18 24.6 +0.4**
WERD *e*PKPab **PKPab** **17 18 30.4 +0.1**
GUNZ Gunzen 148.46 346 *e*PKPbc **PKPbc** **17 18 24.9 +0.5**
GUNZ *e*PKPab **PKPab** **17 18 30.8 +0.2**
UBBA Unterbreizbach 148.49 349 *e*PKPbc **PKPbc** **17 18 24.5 +0.2**
WERN Wernitzgruen 148.52 346 *e*PKPbc **PKPbc** **17 18 25.0 +0.4**
WERN *e*PKPab **PKPab** **17 18 31.3 +0.5**
NKC Novy Kostel 148.55 346 *i* PKHKP **PKiKP** **17 18 25.0 -0.6**
NKC Novy Kostel 148.55 346⇓*i*PKPBC **PKiKP** **17 18 25.0 -0.6**
WOL Wolverton 148.76 3 *e*P **PKPbc** **17 18 24.7 -0.4**
HEX Exmoor 148.82 6 *e*P **PKPbc** **17 18 24.8 -0.5**
SZH Strazhica 148.83 324 *i* P **PKPbc** **17 18 25.1 -0.4**
MANZ Manzenberg 148.86 346 *e*PKPbc **PKPbc** **17 18 25.9 +0.5**
BUD Budapest 148.97 336!*e* **PKPbc** **17 18 26.4 +0.7**
ELSH Elham, Standar 148.97 360 *e*P **PKPbc** **17 18 25.9 +0.3**
ELSH AMB AMB 17 18 26.7
comp=Z,106nm,1.2s
ELSH Elham, Standar 148.97 360 P **PKPbc** **17 18 25.9 +0.3**
ELSH AMB AMB 17 18 26.7
comp=Z,106nm,1.2s
ROTZ Rotzenmuhle 149.04 346 *e*PKPbc **PKPbc** **17 18 26.3 +0.5**
ROTZ *e*PKPab **PKPab** **17 18 33.5 +0.5**
ZST Bratislava 149.07 339 *e*PKHKP **PKiKP** **17 18 25.6 -1.1**
ZST Bratislava 149.07 339 *e*PKP **PKiKP** **17 18 25.6 -1.1**
PVL Pavlikeni 149.20 324 *i* P **PKPbc** **17 18 27.0 +0.6**
HMNX Herstmonceux 149.25 1 *e*P **PKPbc** **17 18 25.7 -0.5**
PKS7 Kunszentmiklos 149.28 335!*e* **PKPbc** **17 18 26.7 +0.3**
PKSG 149.29 337!*e* **PKPbc** **17 18 26.5 0.0**
KHC Kasperske Hory 149.29 344⇓*i*PKHKP **PKiKP** **17 18 26.7 -0.6**
KHC *e* 17 18 34.6
KHC Kasperske Hory 149.29 344⇓*i*PKPBC **PKiKP** **17 18 26.7 -0.6**
KHC *e*PKPAB **PKPab** **17 18 34.6 +0.5**
KHC Kasperske Hory 149.29 344 *e*PKPdf **PKPdf** **17 18 20.7 -0.6**
KHC *e*PKPbc **PKiKP** **17 18 26.6 -0.6**
KHC *e*PKPab **PKPab** **17 18 34.2 +0.1**
TNS Taunus Mts 149.33 351 *e*PKPbc **PKPbc** **17 18 26.8 +0.2**
TNS *e*PKPab **PKPab** **17 18 34.1 -0.1**
TNS Taunus Mts 149.33 351 *e*PKP2 **PKPab** **17 18 34.1 -0.1**
GRF Grafenberg Arr 149.33 347 *e*PKPab **PKPab** **17 18 34.8 +0.6**
GRF Grafenberg Arr 149.33 347 *e*PKP2 **PKPab** **17 18 34.8 +0.6**
GRFO Grafenberg 149.33 347 PKHKP **PKiKP** **17 18 26.3 -0.9**
GRFO *e* 17 18 34.2
GRFO Grafenberg 149.33 347 PKPbc **PKiKP** **17 18 26.3 -0.9**
GRFO *e*PKPab **PKPab** **17 18 34.2 0.0**
CSKK Cs˘˙tkako 149.36 337⇓*e* **PKiKP** **17 18 26.5 -0.2**
BZS Buzias 149.37 331 ⇓PKHKP **PKiKP** **17 18 26.5 -0.9**
BZS Buzias 149.37 331 ⇑*i*P **PKiKP** **17 18 26.6 -0.9**
WET Wettzell 149.46 345 *e*PKPbc **PKPbc** **17 18 27.1 +0.2**
WET *e*PKPab **PKPab** **17 18 35.2 +0.4**
WET Wettzell 149.46 345 *e*PKP2 **PKPab** **17 18 35.2 +0.4**
GEC2 GERESS Array S 149.52 343 *e*PKPbc **PKPbc** **17 18 27.2 +0.1**
GEC2 GERESS Array S 149.52 343 *e*PKHKP **PKPbc** **17 18 27.2 +0.1**
GERES GERESS Array B 149.52 343 PKP **PKPdf** **17 18 21.4 -0.3**
GERES PKPbc **PKPbc** **17 18 26.9 -0.2**
GERES SKPbc 17 21 02.3
GERES GERESS Array B 149.52 343 PKP **PKPdf** **17 18 21.4 -0.3**
comp=Z,0.7nm,0.6s,baz=180,slow=1.2,SNR=7.5
GERES PKPbc **PKPbc** **17 18 26.9 -0.2**
comp=Z,9.8nm,0.5s,baz=42,slow=2.2,SNR=86
GERES SKPbc 17 21 02.3
comp=Z,1.1nm,0.8s,baz=74,slow=4.6,SNR=4.3
PKST T˘'s 149.53 337⇓*e* **PKPbc** **17 18 26.7 -0.4**
SOP Sopron 149.69 339!*e* **PKPbc** **17 18 27.4 0.0**
CONA Conrad Observa 149.71 340⇓*i*PKPbc **PKPbc** **17 18 27.7 +0.2**
comp=Z,27nm,0.6s,SNR=20
ABH Alteburg 149.79 352 PKP **PKiKP** **17 18 28.0 +0.4**
TOD Tromm 149.87 350 PKHKP **PKiKP** **17 18 28.0 -0.4**
TOD Tromm 149.87 350 PKP **PKiKP** **17 18 28.0 -0.4**
MPEP Malo Peshtene 149.97 326 *i* P **PKPbc** **17 18 28.2 0.0**
PKS9 Tamasi 150.00 336⇓*e* **PKPbc** **17 18 27.6 -0.6**
RUP Ruppelstein 150.03 352 PKHKP **PKiKP** **17 18 28.9 +0.1**
RUP Ruppelstein 150.03 352 PKP **PKiKP** **17 18 28.9 +0.1**
PKSM Moragy 150.17 335 ⇑PKHKP **PKiKP** **17 18 28.0 -1.1**
PKSM Moragy 150.17 335 ⇑*i*P **PKiKP** **17 18 28.0 -1.1**
PKSM Moragy 150.17 335⇓*e* **PKiKP** **17 18 28.3 -0.3**
WLF Walferdange 150.18 353 *e*PKPbc **PKPbc** **17 18 29.3 +0.8**
WLF Walferdange 150.18 353 *e*PKHKP **PKPbc** **17 18 29.2 +0.8**
WLF Walferdange 150.18 353 *e*PKPbc **PKPbc** **17 18 29.2 +0.7**
KTD Kalmit 150.26 351 PKIKP **PKPbc** **17 18 28.9 +0.1**
KTD Kalmit 150.26 351 PKP **PKPbc** **17 18 28.9 +0.1**
MOA Molln 150.27 342⇓*e*PKPbc **PKPbc** **17 18 28.7 -0.1**
comp=Z,11nm,0.7s
PGB Panagyurishte 150.28 324 *i* P **PKPbc** **17 18 28.5 -0.5**
ARSA Arzberg 150.41 340!*e*PKPbc **PKPbc** **17 18 29.0 -0.2**
comp=Z,6.9nm,0.7s
STU Stuttgart 150.61 349 *e*PKPbc **PKPbc** **17 18 29.8 +0.3**
STU *e*PKPab **PKPab** **17 18 39.4 -0.2**
LANF Langenberg 150.63 351 PKIKP **PKPbc** **17 18 29.3 -0.3**
LANF Langenberg 150.63 351 PKP **PKPbc** **17 18 29.3 -0.3**
FUR Furstenfeldbru 150.76 346 *e*PKPbc **PKPbc** **17 18 30.0 +0.1**
FUR *e*PKPab **PKPab** **17 18 40.7 +0.4**
FUR Furstenfeldbru 150.76 346 *e*PKIKP **PKPbc** **17 18 30.0 +0.1**
**VTS Vitos

FLN	**La Foliniere**	**151.34**	**2**	*e*PKIKP	**PKPdf**	**17 18 24.1**	**-0.2**
FLN	**La Foliniere**	**151.34**	**2**	*e*PKPdf	**PKPdf**	**17 18 24.1**	**-0.2**
ECH	**Echery**	**151.47**	**351**	*e*PKIKP	**PKPbc**	**17 18 30.9**	**-0.6**
ECH				*e*		17 18 42.4	
ECH	**Echery**	**151.47**	**351**	*e*PKPbc	**PKPbc**	**17 18 30.9**	**-0.6**
ECH				*e*PKPab	**PKPab**	**17 18 42.4**	**-0.8**
RETA	**Reutte**	**151.51**	**346**	*i*PKPbc	**PKPbc**	**17 18 31.3**	**-0.4**
	comp=Z,6.9nm,0.6s						
LDF	**La Druitiere**	**151.52**	**2**	*e*PKIKP	**PKPdf**	**17 18 24.2**	**-0.4**
LDF	**La Druitiere**	**151.52**	**2**	*e*PKPdf	**PKPdf**	**17 18 24.2**	**-0.4**
WTTA	**Wattenberg**	**151.52**	**345**	*i*PKPbc	**PKPbc**	**17 18 31.7**	**-0.1**
	comp=Z,21nm,0.4s						
MYKA	**Terra Mystica**	**151.55**	**342**	*e*PKPbc	**PKPbc**	**17 18 30.9**	**-0.9**
	comp=Z,6.6nm,0.5s						
MOTA	**Moosalm**	**151.57**	**346**	*e*PKPbc	**PKPbc**	**17 18 31.4**	**-0.6**
	comp=Z,6.4nm,0.5s						
ROSF	**Rostrenen**	**151.58**	**6**	*e*PKIKP	**PKPdf**	**17 18 24.7**	**0.0**
ROSF	**Rostrenen**	**151.58**	**6**	*e*PKPdf	**PKPdf**	**17 18 24.7**	**0.0**
THEF	**They Montfort**	**151.61**	**353**	PKIKP	**PKPbc**	**17 18 30.8**	**-1.0**
THEF	**They Montfort**	**151.61**	**353**	PKP	**PKPbc**	**17 18 30.8**	**-1.0**
FELD	**Feldberg im Sc**	**151.68**	**350**	PKP	**PKPbc**	**17 18 29.7**	**-2.4**
GRR	**Gorron**	**151.70**	**3**	*e*PKIKP	**PKPdf**	**17 18 25.4**	**+0.5**
GRR	**Gorron**	**151.70**	**3**	*e*PKPdf	**PKPdf**	**17 18 25.4**	**+0.5**
SGMF	**Saint Gilles**	**151.72**	**5**	*e*PKIKP	**PKPdf**	**17 18 24.9**	**0.0**
SGMF	**Saint Gilles**	**151.72**	**5**	*e*PKPdf	**PKPdf**	**17 18 24.9**	**0.0**
ABTA	**Abfaltersbach**	**151.77**	**343**	*i*PKPbc	**PKPbc**	**17 18 31.5**	**-0.8**
	comp=Z,18nm,0.6s,SNR=11						
MOF	**Molkenrain**	**151.84**	**351**	PKIKP	**PKPbc**	**17 18 31.7**	**-0.7**
MOF	**Molkenrain**	**151.84**	**351**	PKP	**PKPbc**	**17 18 31.7**	**-0.7**
DAVA	**Damuels**	**151.90**	**347**	*i*PKPbc	**PKPbc**	**17 18 32.4**	**-0.3**
	comp=Z,16nm,1.1s						
FETA	**Feichten**	**151.96**	**346**	*i*PKPbc	**PKPbc**	**17 18 32.8**	**0.0**
VAY	**Valandovo**	**151.99**	**324**	*i* PKP	**PKPab**	**17 18 45.8**	**+0.1**
SKO	**Skopje**	**152.15**	**326**	*i* PKP	**PKPab**	**17 18 47.6**	**+1.3**
BIA	**Bitola**	**152.88**	**325**	*e*PKP	**PKPab**	**17 18 48.8**	**-0.7**
CABF	**La Chapelle**	**153.19**	**352**	*e*PKIKP	**PKPdf**	**17 18 28.6**	**+1.3**
CABF	**La Chapelle**	**153.19**	**352**	*e*PKPdf	**PKPdf**	**17 18 28.6**	**+1.3**
MFF	**Saint Martin d**	**153.51**	**2**	*e*PKIKP	**PKPdf**	**17 18 27.2**	**-0.4**
MFF	**Saint Martin d**	**153.51**	**2**	*e*PKPdf	**PKPdf**	**17 18 27.2**	**-0.4**
LPG	**La Plagne**	**154.19**	**351**	*e*PKIKP	**PKPdf**	**17 18 30.2**	**+1.3**
LPG	**La Plagne**	**154.19**	**351**	*e*PKPdf	**PKPdf**	**17 18 30.2**	**+1.3**
BNI	**Bardonecchia**	**154.64**	**351**	*e*PKIKP	**PKPdf**	**17 18 30.5**	**+1.1**
BNI				*e*		17 18 57.3	
BNI	**Bardonecchia**	**154.64**	**351**	*e*PKPdf	**PKPdf**	**17 18 30.5**	**+1.1**
BNI				*e*PKPdif	**PKPbc**	**17 18 38.9**	**+0.3**
BNI				*e*PKPab	**PKPab**	**17 18 57.3**	**+0.3**
CAF	**Calviac**	**155.19**	**358**	*e*PKIKP	**PKPdf**	**17 18 30.6**	**+0.6**
CAF	**Calviac**	**155.19**	**358**	*e*PKPdf	**PKPdf**	**17 18 30.6**	**+0.6**
LFF	**La Frestale**	**155.19**	**0**	*e*PKIKP	**PKPdf**	**17 18 30.5**	**+0.6**
LFF	**La Frestale**	**155.19**	**0**	*e*PKPdf	**PKPdf**	**17 18 30.5**	**+0.6**
LASF	**Ste Croix**	**155.94**	**355**	*e*PKPdf	**PKPdf**	**17 18 32.0**	**+1.0**
ESDC	**Sonseca Array**	**159.99**	**11**	PKPab	**PKPab**	**17 19 19.9**	**-0.4**
ESDC	**Sonseca Array**	**159.99**	**11**	PKPab	**PKPab**	**17 19 19.9**	**-0.4**
	comp=Z,0.9nm,0.4s,baz=345,slow=4.6,SNR=17						
KEST	**Kesra**	**162.75**	**337**	PKPab	**PKPab**	**17 19 32.6**	**0.0**
KEST	**Kesra**	**162.75**	**337**	PKPab	**PKPab**	**17 19 32.6**	**0.0**
	comp=Z,2.0nm,0.7s,baz=271,slow=16,SNR=4.6						
TORD	**Torodi Ar. Bea**	**173.10**	**185**	PKP	**PKPdf**	**17 18 45.4**	**-1.0**
TORD				PKPab	**PKPab**	**17 20 19.3**	**+0.7**
TORD	**Torodi Ar. Bea**	**173.10**	**185**	PKP	**PKPdf**	**17 18 45.4**	**-1.0**
	comp=Z,1.8nm,0.9s,baz=355,slow=1.8,SNR=8.5						
TORD				PKPab	**PKPab**	**17 20 19.3**	**+0.7**
	comp=Z,0.2nm,0.7s,baz=160,slow=2.5,SNR=2.6						

*IDC **22** 17:06:20.6±1.9, 32.°18S×178.°66W, h0km, mb4.1/4, mb1 4.3/5, mb1mx3.9/20, mbtmp4.1/5, ML3.9/1, Error ellipse: s-maj=47.1km s-min=31.6km az=56.0*

ISC 22 17:06:26.4±2.4, 32.°6S±0.°1×178.°7W±0.°3, h33km, n17, σ2.920/16, mb4.1/5, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PUZ	**Puketiti**	**6.01**	**203**	*e*PN	Pn	17 07 55.7	+2.7
CNGZ	**Carnagh Statio**	**6.40**	**202**	PN	**Pn**	**17 07 59.5**	**+1.1**
MWZ	**Matawai**	**6.51**	**207**	PN	**Pn**	**17 08 00.7**	**+0.8**
MWZ				SN	**Sn**	**17 09 15.8**	**+2.8**
URZ	**Urewera**	**6.61**	**210**	SN	**Sn**	**17 09 17.8**	**+2.3**
URZ	**Urewera**	**6.61**	**210**	Pn	**Pn**	**17 08 02.9**	**+1.7**
	2.3nm,0.3s,baz=306,slow=2.8,SNR=19						
URZ				Sn	**Sn**	**17 09 18.3**	**+2.9**
	1.7nm,0.3s,baz=273,slow=19,SNR=5.2						
OUZ	**Omahuta**	**6.91**	**246**	PN	Pn	17 08 11.3	+5.9
BKZ	**Black Stump Fm**	**7.63**	**209**	PN	**Pn**	**17 08 14.8**	**-0.6**
MRZ	**Mangatainoka R**	**9.27**	**208**	*e*PN	**Pn**	**17 08 36.5**	**-1.3**
MRZ				SN	**Sn**	**17 10 17.7**	**-3.3**
MRZ				SN	**Sn**	**17 10 17.7**	**-3.3**
THZ	**Tophouse**	**11.34**	**214**	*e*PN	**Pn**	**17 09 03.3**	**-2.8**
OXZ	**Oxford**	**12.96**	**212**	SN	Sn	17 11 40.8	-10
MQZ	**McQueen's Vall**	**13.01**	**209**	SN	Sn	17 11 41.9	-10
CTA	**Charters Tower**	**33.62**	**283**	P	**P**	**17 13 05.8**	**+1.8**
	1.0nm,0.2s,baz=128,slow=12,SNR=2.5						
ASAR	**Alice Springs**	**42.43**	**270**	P	**P**	**17 14 18.1**	**-0.2**
	1.2nm,0.6s,baz=110,slow=8.0,SNR=3.0						
WRA	**Warramunga Arr**	**43.62**	**275**	P	**P**	**17 14 27.1**	**-0.8**
	2.1nm,0.3s,baz=112,slow=8.1,SNR=20						
FITZ	**Fitzroy Crossi**	**51.78**	**272**	P	**P**	**17 15 30.3**	**-1.0**
	2.1nm,0.8s,baz=135,slow=8.6,SNR=3.4						
QSPA	**South Pole Qui**	**57.53**	**180**	P	P	17 16 14.7	+2.3
	0.9nm,0.7s,baz=42,slow=3.0,SNR=2.6						
FINES	**FINESS Array B**	**146.96**	**338**	PKPbc	**PKPdf**	**17 26 02.3**	**-0.5**
	1.7nm,0.7s,baz=32,slow=3.6,SNR=6.7						

MAN 22 17:21:34, 8.°41N×124.°57E, h24km, mb4.4, ML3.2, MS3.1, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CGP	**Cagayan de Oro**	**0.13**	**70**	*i*P	Pn	17 21 40.0	-0.6
CGP				*i* S	Sb	17 21 43.5	+1.4
DCPH	**Dipolog City**	**1.22**	**278**	*e*P	Pn	17 21 55.2	-0.3
DCPH				*e*S	Sn	17 22 11.2	0.0
CTBH	**Cotabato--PC H**	**1.22**	**195**	*i*P	Pb	17 21 56.8	+0.3
TBP	**Tagbilaran**	**1.45**	**331**	*e*P	Pn	17 21 59.1	+0.3

MAN 22 17:26:13, 8.°57N×126.°02E, h34km, mb4.8, ML3.7, MS3.6, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.63**	**172**	*e*P	Pn	17 26 40.4	+1.1
MATI				*e*S	Sn	17 26 51.0	-8.1
CTBH	**Cotabato--PC H**	**2.21**	**233**	*i*P	Pn	17 26 49.1	+1.9
TBP	**Tagbilaran**	**2.41**	**298**	*e*P	Pn	17 26 51.4	+1.5

IDC 22 17:29:22.7±5.2, 7.°26S×129.°03E, h91km±55km, mb3.6/9, mb1 3.8/11, mb1mx3.7/20, mbtmp3.7/11, ML4.4/2, Error ellipse: s-maj=37.0km s-min=19.7km az=54.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.27**	**197**	P	Pn	17 32 00.3	-0.5
	1.8nm,0.3s,baz=30,slow=10,SNR=81						
FITZ				S	Sn	17 33 56.9	-7.9
	4.1nm,0.3s,baz=64,slow=18,SNR=8.7						
WRA	**Warramunga Arr**	**13.62**	**158**	P	Pn	17 32 29.2	-2.9
	3.7nm,0.3s,baz=338,slow=13,SNR=92						
WRA				S	Sn	17 34 48.2	-14
	8.3nm,0.3s,baz=330,slow=23,SNR=16						
ASAR	**Alice Springs**	**16.97**	**165**	P	Pn	17 33 14.3	-0.2
	1.4nm,0.3s,baz=343,slow=9.2,SNR=161						
ASAR				S	Sn	17 36 07.5	-15
	0.7nm,0.3s,baz=351,slow=28,SNR=6.5						
CTA	**Charters Tower**	**21.01**	**129**	P	P	17 33 59.7	+0.6
	1.9nm,0.5s,baz=314,slow=14,SNR=5.1						
STKA	**Stephens Creek**	**27.15**	**156**	P	P	17 34 57.4	-0.1
	5.5nm,0.8s,baz=336,slow=13,SNR=30						
CMAR	**Chiang Mai Arr**	**39.17**	**311**	P	P	17 36 42.2	+0.2
	0.5nm,0.5s,baz=137,slow=6.8,SNR=6.3						
KSRS	**Korea Array**	**44.50**	**359**	P	P	17 37 25.3	+0.2
	0.4nm,0.5s,baz=176,slow=9.0,SNR=2.6						
USRK	**Ussuriysk Arra**	**51.29**	**3**	P	P	17 38 17.0	-0.4
	0.8nm,0.6s,baz=184,slow=6.5,SNR=3.3						
ODAN	**Odare**	**52.71**	**312**	*e*P	P	17 38 29.6	+1.0
	8.6nm,0.5s						
TAPN	**Taplejung**	**52.75**	**312**	*e*P	P	17 38 30.0	+1.0
	18nm,0.4s						
RAMN	**Ramite**	**53.34**	**311**	*e*P	P	17 38 34.4	+1.1
	9.1nm,0.5s						
GUN	**Gumba**	**54.41**	**312**	*e*P	P	17 38 42.0	+0.9
	11nm,0.4s						
PKI	**Pulchoki**	**54.57**	**311**	*e*P	P	17 38 42.7	+0.4
	3.5nm,0.3s						
KKN	**Kakani**	**54.78**	**311**	*e*P	P	17 38 44.4	+0.7
	2.0nm,0.3s						
KOLN	**Koldanda**	**56.03**	**310**	*e*P	P	17 38 53.6	+0.9
	7.7nm,0.5s						
SONM	**Songino Array**	**58.39**	**342**	P	P	17 39 08.7	-0.1
	0.4nm,0.5s,baz=155,slow=6.5,SNR=3.5						
PETK	**Petropavlovsk-**	**64.88**	**19**	P	P	17 39 52.0	-0.2
	0.6nm,0.6s,baz=243,slow=6.3,SNR=3.7						
MKAR	**Makanchi Array**	**67.92**	**327**	P	P	17 40 12.3	+0.6
	1.6nm,0.4s,baz=118,slow=7.9,SNR=58						
MKAR				pP	pP	17 40 31.3	-3.5
	0.3nm,0.5s,baz=116,slow=8.2,SNR=1.7						
ZALV	**Zalesovo Beam**	**71.40**	**334**	P	P	17 40 31.9	-1.0
	1.4nm,0.6s,baz=124,slow=5.6,SNR=6.2						

WEL 22 17:45:44.6±0.2, 40.°94S×172.°83E, h194km±2km, ML3.9/14, 6C-14D, Error ellipse: s-maj=1.9km s-min=1.4km az=90.0, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
QRZ	**Quartz Range**	**0.26**	**296**	PN	Pn	17 46 10.3	0.0
QRZ				SN	Sn	17 46 28.9	-1.2
NNZ	**Nelson**	**0.50**	**124**	PN	Pn	17 46 10.9	0.0
THZ	**Tophouse**	**0.82**	**176**	*i*PN	Pn	17 46 12.7	0.0
THZ				SN	Sn	17 46 33.5	-1.1
DUWZ	**D'Urville Isla**	**0.84**	**81**	PN	Pn	17 46 12.8	+0.1
DUWZ				SN	Sn	17 46 33.3	-1.1
TUWZ	**Tuamarina**	**0.97**	**121**	*i*PN	Pn	17 46 13.7	+0.2
TUWZ				AML	AML	17 46 35.8	
TUWZ				AML	AML	17 46 35.8	
BSWZ	**Blackbirch Sta**	**1.10**	**135**	PN	Pn	17 46 14.6	+0.2
BSWZ				SN	Sn	17 46 36.8	-0.8
BSWZ				AML	AML	17 46 38.1	
DSZ	**Denniston Nort**	**1.12**	**224**	PN	Pn	17 46 14.1	-0.5
TCW	**Tory Channel**	**1.12**	**104**	*i*PN	Pn	17 46 14.8	+0.2
TCW				AML	AML	17 46 37.7	
TCW				AML	AML	17 46 38.3	
CMWZ	**Cape Campbell**	**1.31**	**128**	PN	Pn	17 46 16.4	+0.3
CMWZ				AML	AML	17 46 44.2	
CMWZ				AML	AML	17 46 47.4	
SNZO	**South Karori**	**1.46**	**105**	*i*PN	Pn	17 46 17.1	-0.2
SNZO				AML	AML	17 46 41.3	
SNZO				AML	AML	17 46 41.4	
WEL	**Wellington**	**1.50**	**104**	PN	Pn	17 46 17.6	-0.2
KHZ	**Kahutara**	**1.57**	**160**	*i*PN	Pn	17 46 17.9	-0.3
KIW	**Kapiti Island**	**1.57**	**88**	PN	Pn	17 46 18.3	-0.1
BHW	**Baring Head**	**1.61**	**108**	PN	Pn	17 46 18.4	-0.3
BHW				AML	AML	17 46 42.8	
BHW				AML	AML	17 46 44.4	
CAW	**Cannon Point**	**1.70**	**96**	PN	Pn	17 46 19.4	-0.2
CAW				AML	AML	17 46 45.9	
CAW				AML	AML	17 46 46.9	
OGWZ	**Otaki Gorge**	**1.77**	**87**	*i*PN	Pn	17 46 20.3	-0.1
NWEZ	**Newall Road**	**1.84**	**26**	PN	Pn	17 46 21.1	0.0
MSWZ	**Moikau Station**	**1.88**	**105**	PN	Pn	17 46 21.0	-0.5
MSWZ				AML	AML	17 46 49.2	
MSWZ				AML	AML	17 46 49.4	
DFE	**Dawson Falls**	**1.88**	**32**	PN	Pn	17 46 21.1	-0.5
LTZ	**Lake Taylor**	**1.89**	**193**	PN	Pn	17 46 21.0	-0.5
NEZ	**North Egmont**	**1.93**	**31**	PN	Pn	17 46 21.5	-0.6
PLWZ	**Palliser**	**1.93**	**110**	*i*PN	Pn	17 46 21.4	-0.5
PKE	**Pukeiti**	**1.96**	**27**	*i*PN	Pn	17 46 22.0	-0.3
PAWZ	**Paruwai Farm**	**2.01**	**103**	PN	Pn	17 46 22.3	-0.4
PAWZ				AML	AML	17 46 53.5	
PAWZ				AML	AML	17 46 54.1	
WAZ	**Wanganui**	**2.03**	**55**	*i*PN	Pn	17 46 23.0	0.0
MTW	**Mount Morrison**	**2.03**	**97**	*i*PN	Pn	17 46 22.6	-0.3
MTW				AML	AML	17 46 52.3	
MTW				AML	AML	17 46 52.7	
HOWZ	**Holdsworth Sta**	**2.03**	**90**	*i*PN	Pn	17 46 22.7	-0.3
DREZ	**Durham Road**	**2.04**	**31**	PN	Pn	17 46 22.8	-0.3
RAEZ	**Rainy Point**	**2.04**	**36**	PN	Pn	17 46 22.8	-0.4
MRZ	**Mangatainoka R**	**2.10**	**83**	*i*PN	Pn	17 46 23.2	-0.5
MRZ				AML	AML	17 46 54.5	
MRZ				AML	AML	17 46 54.8	
MHEZ	**Mangahewa**	**2.19**	**32**	PN	Pn	17 46 24.2	-0.4
TRWZ	**Traveller**	**2.20**	**103**	PN	Pn	17 46 24.7	-0.1
POWZ	**Post Office Ro**	**2.30**	**77**	PN	Pn	17 46 25.3	-0.5
TMWZ	**Te Maipa**	**2.32**	**95**	PN	Pn	17 46 25.8	-0.3
TIWZ	**Tintock**	**2.32**	**87**	*i*PN	Pn	17 46 25.8	-0.4
VRZ	**Vera Road**	**2.34**	**40**	*i*PN	Pn	17 46 25.2	-1.2
PKVZ	**Pokaka**	**2.54**	**50**	PN	Pn	17 46 27.7	-0.9
TSZ	**Takapari Road**	**2.54**	**71**	*i*PN	Pn	17 46 28.0	-0.7
TSZ				AML	AML	17 47 02.2	
MTVZ	**Mangateitei**	**2.55**	**53**	PN	Pn	17 46 28.0	-0.8
BFZ	**Birch Farm**	**2.60**	**85**	PN	Pn	17 46 28.8	-0.5
DVHZ	**Dannevirke**	**2.62**	**77**	PN	Pn	17 46 28.7	-0.7
WVZ	**Waitaha Valley**	**2.64**	**216**	*i*PN	Pn	17 46 28.4	-1.2
TRVZ	**Turoa**	**2.65**	**53**	PN	Pn	17 46 29.4	-0.8
WNVZ	**Wahianoa**	**2.66**	**54**	PN	Pn	17 46 29.2	-1.0
FWVZ	**Far West T-bar**	**2.68**	**52**	PN	Pn	17 46 29.5	-1.0
WPVZ	**Whakapapa**	**2.71**	**51**	*i*PN	Pn	17 46 29.5	-1.2
MOVZ	**Moawhango**	**2.71**	**57**	PN	Pn	17 46 29.3	-1.3
TUVZ	**Tukino**	**2.73**	**53**	PN	Pn	17 46 29.9	-1.1
TWVZ	**Taurewa**	**2.74**	**48**	PN	Pn	17 46 29.5	-1.5
NGZ	**Ngauruhoe**	**2.76**	**51**	PN	Pn	17 46 29.9	-1.5
MQZ	**McQueen's Vall**	**2.77**	**183**	PN	Pn	17 46 29.1	-1.9
PNHZ	**Pukenui**	**2.77**	**69**	PN	Pn	17 46 30.4	-0.9
WTVZ	**West Tongariro**	**2.79**	**50**	PN	Pn	17 46 30.3	-1.4
OTVZ	**Oturere**	**2.81**	**52**	PN	Pn	17 46 30.6	-1.2
KRVZ	**Karewarewa**	**2.84**	**50**	PN	Pn	17 46 30.7	-1.5
BHHZ	**Black Hill Sta**	**2.87**	**61**	PN	Pn	17 46 31.1	-1.3
HIZ	**Hauiti**	**2.88**	**33**	*i*PN	Pn	17 46 31.2	-1.4
WPHZ	**Waipukurau**	**2.89**	**74**	PN	Pn	17 46 32.0	-0.6
KATZ	**Kakaramea**	**2.95**	**49**	PN	Pn	17 46 32.2	-1.3
PRHZ	**Porangahau**	**2.97**	**78**	PN	Pn	17 46 33.2	-0.3
RATZ	**Rangitukua**	**3.06**	**48**	PN	Pn	17 46 33.8	-1.0
RPZ	**Rata Peaks**	**3.07**	**205**	PN	Pn	17 46 33.2	-1.5
PXZ	**Pawanui**	**3.20**	**75**	PN	Pn	17 46 35.8	-0.5
PXZ				AML	AML	17 47 17.9	
PXZ				AML	AML	17 47 18.1	
KAHZ	**Kahuranaki**	**3.29**	**71**	PN	Pn	17 46 37.1	-0.4
BKZ	**Black Stump Fm**	**3.32**	**59**	*i*PN	Pn	17 46 36.3	-1.6
BKZ				AML	AML	17 47 20.2	
FOZ	**Fox Glacier**	**3.51**	**221**	PN	Pn	17 46 37.0	-2.9
RAHZ	**Arahi**	**3.84**	**60**	PN	Pn	17 46 42.7	-1.5
LBZ	**Lake Benmore**	**3.96**	**209**	PN	Pn	17 46 43.6	-2.0
KNZ	**Kokohu**	**4.18**	**64**	*e*PN	Pn	17 46 47.0	-1.5
URZ	**Urewera**	**4.25**	**52**	PN	Pn	17 46 46.4	-2.9
MHGZ	**Mahia Peninsul**	**4.28**	**67**	PN	Pn	17 46 48.9	-0.8
JCZ	**Jackson Bay**	**4.34**	**223**	PN	Pn	17 46 48.1	-2.5
ODZ	**Otahua Downs**	**4.40**	**201**	PN	Pn	17 46 49.6	-1.6
MWZ	**Matawai**	**4.46**	**56**	PN	Pn	17 46 49.5	-2.5
WKZ	**Wanaka**	**4.79**	**215**	PN	Pn	17 46 53.4	-2.8
EAZ	**Earnscleugh**	**5.00**	**210**	PN	Pn	17 46 55.9	-2.9
MSZ	**Milford Sound**	**5.19**	**222**	PN	Pn	17 46 58.9	-2.3
MSZ				SN	Sn	17 47 54.5	-7.1
MXZ	**Matakaoa Point**	**5.42**	**53**	PN	Pn	17 47 01.7	-2.6
TUZ	**Tuapeka**	**5.53**	**204**	*i*PN	Pn	17 47 03.5	-2.0
MLZ	**Mavora Lakes**	**5.57**	**216**	PN	Pn	17 47 04.2	-1.9
WHZ	**Wether Hill Ro**	**6.09**	**214**	PN	Pn	17 47 09.7	-3.2
SYZ	**Scrubby Hill**	**6.20**	**204**	PN	Pn	17 47 12.2	-2.0
APZ	**The Paps**	**6.85**	**209**	PN	Pn	17 47 19.7	-3.0

*BJI **22** 18:15:36.0, 76.°20N×6.°80E, h10km, mB5.3/42, mb5.0/54, Ms5.4/58, Ms7 5.3/55*

*NAO **22** 18:15:36.4±1.6, 76.°23N×7.°46E, ML4.6*

*IDC **22** 18:15:38.0±0.3, 76.°27N×7.°04E, h0km, mb4.8/34, mb1 4.9/41, mb1mx4.9/43, mbtmp4.7/41, ML3.7/6, MS4.8/38, Ms1 4.8/38, ms1mx4.7/44, Error ellipse: s-maj=9.7km s-min=7.5km az=51.0*

*BGS **22** 18:15:37.7±1.6, 76.°44N×6.°73E, h10km, mb5.1*

*MOS **22** 18:15:37.8±1.0, 76.°25N×6.°79E, h10km, mb5.5/112, MS4.7/51, Error ellipse: s-maj=18.1km s-min=2.7km az=92.1*

*NEIC **22** 18:15:39.9±0.1, 76.°22N×6.°79E, h10km, mb5.5/190, MW5.3, Error ellipse: s-maj=3.5km s-min=1.9km az=64.0*

*ISCJB **22** 18:15:39.5±0.1, 76.°27N±0.°01×6.°81E±0.°07, h19km, mb5.3/350, MS4.9/84, Error ellipse: s-maj=2.4km s-min=1.7km az=156.0*

*BER **22** 18:15:39.0±3.2, 76.°28N×7.°44E, h10km, ML3.3, MW5.1, ML4.6(NAO)*

*CSEM **22** 18:15:39.3±0.1, 76.°26N×6.°83E, h10km, mb5.4/99, Ms4.6, Mw5.4, Error ellipse: s-maj=2.9km s-min=2.0km az=62.0*

*PDA **22** 18:15:40.0, 76.°24N×6.°80E, h10km, mb5.4*

*TEH **22** 18:15:40.0, 76.°25N×6.°83E, h10km, ML5.4*

*GCMT **22** 18:15:40.4±0.1, 76.°27N×6.°69E, h12km, MW5.4, Moment Tension Solution. s59,c88; s21,c21; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.42±.02; $M_{\theta\theta}$0.08±.02; $M_{\phi\phi}$1.34±.02; $M_{r\theta}$-0.30±.06; $M_{r\phi}$0.45±.02; $M_{\theta\phi}$-0.55±.05; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s193.00000°, δ34.00000°, λ-98.00000°. NP2:ϕ_s22.00000°, δ57.00000°, λ-85.00000°. Principal axes: T 1.6100, Plg11.0000°, Azm109.0000°; N -0.0600, Plg4.0000°, Azm200.0000°; P -1.5500, Plg78.0000°, Azm309.0000°; Data Used: ll IU CN IC G. Surface waves: sta=102, comp=199, per= 50.*

*NEIC **22** 18:15:51.9±0.0, 76.°33N×7.°16E, h10km, Moment Tensor Solution. s142 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.16; $M_{\theta\theta}$0.11; $M_{\phi\phi}$1.05; $M_{r\theta}$-0.17; $M_{r\phi}$0.07; $M_{\theta\phi}$-0.20; Best double couple: $M_0$1.10000×10^{17} NP1:ϕ_s11.00000°, δ51.00000°, λ-81.00000°. NP2:ϕ_s178.00000°, δ40.00000°, λ-99.00000°. Principal axes: T 1.0800, Plg5.0000°, Azm95.0000°; N 0.1200, Plg6.0000°, Azm186.0000°; P -1.2000, Plg81.0000°, Azm324.0000°;*

*DJA **22** 18:16:02.2±6.2, 76.°1E×14.°4±2.°8, h183km±48km, M5.0/14, mB5.5/10, mb4.8/14, Mw(mB)5.0/10*

ISC 22 18:15:40.1±0.2, 76.°33N±0.°02×6.°81E±0.°02, h13km±1km, h12km:pP-P, n1943, σ1.°31/2049, mb5.3/359, MS4.9/84, 365C-229D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSP	**Hornsund**	**2.14**	**67**	*e*P	Pn	18 16 11.1	-4.3
HSP				*e*S	Sn	18 16 34.1	-7.6
SPA0	**Spitsbergen Ar**	**2.81**	**44**	Pn	**Pn**	**18 16 21.8**	**-2.9**
	baz=219,slow=16						
SPA0				Sn	**Sn**	**18 16 53.6**	**-4.8**
	baz=232,slow=22						
SPA0	**Spitsbergen Ar**	**2.81**	**44**	Pn	**Pn**	**18 16 21.8**	**-2.9**
	baz=219,slow=16						
SPA0				*e*P	**Pn**	**18 16 22.3**	**-2.4**
SPA0				Sn	**Sn**	**18 16 53.6**	**-4.8**
	baz=232,slow=22						
SPA0	**Spitsbergen Ar**	**2.81**	**44**	Pn	**Pn**	**18 16 21.8**	**-2.9**
	baz=219,slow=15,SNR=856						
SPA0				Sn	**Sn**	**18 16 53.6**	**-4.8**
	baz=232,slow=21,SNR=6.4						
SPITS	**Spitsbergen Ar**	**2.81**	**44**	Pn	**Pn**	**18 16 22.3**	**-2.4**
SPITS				Sn	**Sn**	**18 16 53.3**	**-5.1**
SPITS	**Spitsbergen Ar**	**2.81**	**44**	Pn	**Pn**	**18 16 22.3**	**-2.4**
	baz=218,slow=16,SNR=1683						
SPITS				Sn	**Sn**	**18 16 53.3**	**-5.1**
	baz=228,slow=26,SNR=8.2						
SPITS				LR	LR	18 17 25.6	
	comp=Z,17μm,19.6s,baz=295,slow=38						
SPITS	**Spitsbergen Ar**	**2.81**	**44**	Pn	**Pn**	**18 16 22.3**	**-2.4**
SPITS				Sn	**Sn**	**18 16 53.3**	**-5.1**
KBS	**Kingsbay**	**2.83**	**20**	Pn	**Pn**	**18 16 22.1**	**

BORG **Borgarnes** 14.68 233 *e*Pn **Pn** 18 19 04.5 -2.6
BORG **Borgarnes** 14.68 233 Pn **Pn** 18 19 05.1 -1.9
comp=Z,0.3nm,0.3s,baz=343,slow=11,SNR=2.3
BORG LR LR 18 23 16.8
comp=Z,6μm,20.1s,baz=24,slow=31
BORG **Borgarnes** 14.68 233 *e*Pn **Pn** 18 19 04.4 -2.6
NB2 **NORSAR Subarra** 15.44 172 Pn **Pn** 18 19 16.3 -0.9
baz=356,slow=11
NB2 **NORSAR Subarra** 15.44 172 P **Pn** 18 19 15.7 -1.6
comp=Z,122nm,1.1s,baz=357,slow=11
NB2 **NORSAR Subarra** 15.44 172 Pn **Pn** 18 19 16.3 -0.9
baz=356,slow=11
NB2 **NORSAR Subarra** 15.44 172 P **Pn** 18 19 15.7 -1.6
baz=357,slow=11
NB2 **NORSAR Subarra** 15.44 172 Pn **Pn** 18 19 16.3 -0.9
baz=356,slow=11,SNR=50
NOA **NORSAR Array B** 15.44 172 Pn **Pn** 18 19 16.4 -0.9
NOA **NORSAR Array B** 15.44 172 Pn **Pn** 18 19 16.4 -0.9
comp=Z,0.3nm,0.3s,baz=352,slow=12,SNR=18
NOA LR LR 18 24 38.3
comp=Z,2μm,18.7s,baz=355,slow=35
NOA **NORSAR Array B** 15.44 172 Pn **Pn** 18 19 16.4 -0.9
NAO01 **NORSAR Array S** 15.62 173 *e*P **Pn** 18 19 18.0 -1.6
comp=Z,57nm,0.8s
KAF **Kangasniemi** 15.71 145 *e*P **Pn** 18 19 17.0 -3.7
KAF pmax pmax
comp=Z,105nm,1.0s
KAF **Kangasniemi** 15.71 145 *e*p **Pn** 18 19 17.0 -3.7
comp=Z,105nm,1.0s
JOF **Joensuu** 15.71 135 *e*P Pn 18 19 14.3 -6.4
JOF pmax pmax
comp=Z,132nm,1.1s
JOF **Joensuu** 15.71 135 *e*p Pn 18 19 14.3 -6.4
comp=Z,132nm,1.1s
FIA1 **FINESS Array S** 16.32 146 *e*P **Pn** 18 19 23.9 -4.6
FIA0 **FINESS Array S** 16.32 146 Pn **Pn** 18 19 24.4 -4.1
baz=352,slow=10
FIA0 **FINESS Array S** 16.32 146 Pn **Pn** 18 19 24.4 -4.1
baz=352,slow=10
FINES **FINESS Array B** 16.32 146 Pn **Pn** 18 19 24.0 -4.5
FINES **FINESS Array B** 16.32 146 Pn **Pn** 18 19 24.0 -4.5
comp=Z,0.3nm,0.3s,baz=354,slow=11,SNR=31
FINES LR LR 18 25 44.3
comp=Z,5μm,20.3s,baz=346,slow=37
HFS **Hagfors** 16.45 168 Pn **Pn** 18 19 28.7 -1.5
slow=10
HFS **Hagfors** 16.45 168 Pn **Pn** 18 19 28.7 -1.5
slow=10
HFS **Hagfors** 16.45 168 Pn **Pn** 18 19 28.6 -1.5
HFS **Hagfors** 16.45 168 Pn **Pn** 18 19 28.6 -1.5
comp=Z,0.4nm,0.3s,baz=16,slow=12,SNR=27
HFS LR LR 18 25 10.6
comp=Z,3μm,18.3s,baz=353,slow=35
KONO **Kongsberg** 16.79 175 *e*P **Pn** 18 19 33.1 -1.4
KONO pmax pmax
comp=Z,349nm,1.1s
KONO **Kongsberg** 16.79 175 *e*P **Pn** 18 19 33.1 -1.4
comp=Z,350nm,1.1s
KONO **Kongsberg** 16.79 175 *e*P **Pn** 18 19 33.1 -1.4
comp=Z,349nm,1.1s
MVH1 **Achvaich** 18.91 198⇑*i*P **P** 18 19 59.5 -0.5
MVH1 **Achvaich** 18.91 198 P **P** 18 19 59.5 -0.5
MVH1 **Achvaich** 18.91 198⇑*i*P **P** 18 19 59.5 -0.5
MCD **Coleburn Disti** 19.18 197⇑*i*P **P** 18 20 02.6 -0.4
MCD **Coleburn Disti** 19.18 197 P **P** 18 20 02.6 -0.4
MCD **Coleburn Disti** 19.18 197⇑*i*P **P** 18 20 02.6 -0.4
VSU **Vasula** 19.30 147*c i*P **P** 18 20 01.6 -2.6
VSU pmax pmax
comp=Z,195nm,1.7s
VSU **Vasula** 19.30 147 *i* P **P** 18 20 01.6 -2.6
comp=Z,195nm,1.7s
SFJD **Kangerlussuaq** 19.36 272 *e*P **Pn** 18 20 06.9 +0.9
comp=Z,417nm,2.0s
SFJD **Kangerlussuaq** 19.36 272 *i* P **P** 18 20 04.9 0.0
SFJD
comp=Z,3μm,15.0s
SFJD **Kangerlussuaq** 19.36 272 P **P** 18 20 05.8 +1.0
comp=Z,0.5nm,0.3s,baz=18,slow=13,SNR=16
SFJD LR LR 18 26 49.1
comp=Z,4μm,21.6s,baz=40,slow=35
SFJD **Kangerlussuaq** 19.36 272 P **P** 18 20 05.8 +1.0
comp=Z,4μm,21.6s
MDO **Dochfour** 19.40 198⇑*e*P **P** 18 20 04.4 -1.0
MDO **Dochfour** 19.40 198 P **P** 18 20 04.4 -1.0
MDO **Dochfour** 19.40 198⇑*e*P **P** 18 20 04.4 -1.0
KAC **Achnashellach** 19.42 200 *e*P **P** 18 20 05.1 -0.5
KAC **Achnashellach** 19.42 200 P **P** 18 20 05.1 -0.5
KAC **Achnashellach** 19.42 200 *e*P **P** 18 20 05.1 -0.5
MME1 **Meikle Cairn** 19.43 196⇑*i*P **P** 18 20 04.7 -1.0
MME1 **Meikle Cairn** 19.43 196 P **P** 18 20 04.7 -1.0
MME1 **Meikle Cairn** 19.43 196⇑*i*P **P** 18 20 04.7 -1.0
SLIT **Slitere, Latvi** 19.60 155 *e*P **P** 18 20 04.6 -2.9
comp=Z,657nm,2.0s,SNR=149
DRUM **Mains of Drumt** 19.80 195⇑*e*P **P** 18 20 08.1 -1.6
DRUM **Mains of Drumt** 19.80 195 P **P** 18 20 08.1 -1.6
DRUM **Mains of Drumt** 19.80 195⇑*e*P **P** 18 20 08.1 -1.6
MUD **Monsted U'grnd** 19.98 176 *i* P **P** 18 20 10.4 -1.3
SNR=39
EAB **Aberfoyle** 20.64 198⇑*e*P **P** 18 20 18.3 -0.6
EAB **Aberfoyle** 20.64 198 P **P** 18 20 18.3 -0.6
EAB **Aberfoyle** 20.64 198⇑*e*P **P** 18 20 18.3 -0.6
COP **Copenhagen** 20.84 171 *i* P **P** 18 20 21.4 +0.4
SNR=39
EAU **Auchinoon** 20.92 196⇑*e*P **P** 18 20 21.2 -0.7
EAU **Auchinoon** 20.92 196 P **P** 18 20 21.2 -0.7
EAU **Auchinoon** 20.92 196⇑*e*P **P** 18 20 21.2 -0.7
EKA **Eskdalemuir Ar** 21.41 196 P **P** 18 20 26.5 -0.7
EKA **Eskdalemuir Ar** 21.41 196 P **P** 18 20 26.5 -0.7
comp=Z,15nm,0.9s,baz=14,slow=10,SNR=20
EKA **Eskdalemuir Ar** 21.41 196 P **P** 18 20 26.5 -0.7
ESK **Eskdalemuir** 21.41 196 P **P** 18 20 26.8 -0.6
comp=Z,204nm,1.3s,SNR=8.3
ESK **Eskdalemuir** 21.43 196⇑*e*P **P** 18 20 26.3 -1.1
ESK AMB AMB 18 20 37.1
comp=Z,105nm,2.5s
ESK **Eskdalemuir** 21.43 196 P **P** 18 20 26.3 -1.1
ESK AMB AMB 18 20 37.1
comp=Z,105nm,2.5s
ESK **Eskdalemuir** 21.43 196 *i* P **P** 18 20 27.5 +0.1
ESK **Eskdalemuir** 21.43 196 *e*P **P** 18 20 26.4 -1.0
comp=Z,453nm,2.2s
ESK **Eskdalemuir** 21.43 196⇑*e*P **P** 18 20 26.3 -1.1
BSD **Bornholm Skovb** 21.52 167 *i* P **P** 18 20 25.9 -2.5
ECK **Cauldkaine Hil** 21.56 196⇑*e*P **P** 18 20 28.1 -0.7
ECK **Cauldkaine Hil** 21.56 196 P **P** 18 20 28.1 -0.7
ECK **Cauldkaine Hil** 21.56 196⇑*e*P **P** 18 20 28.1 -0.7
GCD **Castle Douglas** 21.93 197⇑*i*P **P** 18 20 31.9 -0.9
GCD **Castle Douglas** 21.93 197 P **P** 18 20 31.9 -0.9
GCD **Castle Douglas** 21.93 197⇑*i*P **P** 18 20 31.9 -0.9
GAL1 **Galloway** 21.98 198 *e*P **P** 18 20 32.2 -1.1
GAL1 AMB AMB 18 20 43.1
comp=Z,87nm,2.1s
GAL1 **Galloway** 21.98 198 P **P** 18 20 32.2 -1.1
GAL1 AMB AMB 18 20 43.1
comp=Z,87nm,2.1s
GAL1 **Galloway** 21.98 198 *e*P **P** 18 20 32.2 -1.1
RGN **Rugen** 22.01 170 *e*P **P** 18 20 33.5 -0.1
comp=Z,333nm,1.3s
RGN **Rugen** 22.01 170 *e*P **P** 18 20 32.7 -0.9
comp=Z,314nm,1.1s
RGN **Rugen** 22.01 170 *e*P **P** 18 20 32.7 -0.9
comp=Z,314nm,1.1s
KESW **Keswick, Cumbr** 22.15 195 *e*P **P** 18 20 33.7 -1.4
KESW AMB AMB 18 20 42.1
comp=Z,206nm,1.7s
KESW **Keswick, Cumbr** 22.15 195 P **P** 18 20 33.7 -1.4
KESW AMB AMB 18 20 42.1
comp=Z,206nm,1.7s
KESW **Keswick, Cumbr** 22.15 195 *e*P **P** 18 20 33.7 -1.4
HLG **Helgoland** 22.24 178 *e*P **P** 18 20 36.0 -0.1
comp=Z,595nm,1.5s
BSEG **Bad Segeberg** 22.53 175 *e*P **P** 18 20 39.1 -0.1
BSEG **Bad Segeberg** 22.53 175 *e*P **P** 18 20 39.1 -0.1
BSEG **Bad Segeberg** 22.53 175 *e*P **P** 18 20 39.1 -0.1
RES **Resolute Bay** 22.55 317 P **P** 18 20 40.0 +0.8
RES **Resolute Bay** 22.55 317 P **P** 18 20 40.0 +0.8
comp=Z,29nm,1.0s,baz=24,slow=11,SNR=5.5
RES LR LR 18 29 17.4
comp=Z,3μm,20.1s,baz=37,slow=36
RES **Resolute Bay** 22.55 317 P **P** 18 20 40.0 +0.8
GMM **Mts of Mourne** 22.70 200⇑*i*P **P** 18 20 39.3 -1.7
GMM **Mts of Mourne** 22.70 200 P **P** 18 20 39.3 -1.7
GMM **Mts of Mourne** 22.70 200⇑*i*P **P** 18 20 39.3 -1.7
NACGM **Naroch** 22.78 149 *e*P P 18 20 37.0 -4.8
NACGM **Naroch** 22.78 149 *e*S **S** 18 24 48.0 -2.0

SUW **Suwalki** 23.25 155 *e*P **P** 18 20 44.9 -1.8
SUW *e*S **S** 18 25 02.0 +3.8
SUW **Suwalki** 23.25 155 *e*P **P** 18 20 44.9 -1.8
SUW *e*S **S** 18 25 02.0 +3.8
SUW **Suwalki** 23.25 155 *e*P **P** 18 20 44.9 -1.8
MNK **Minsk** 23.30 148 *e*P **P** 18 20 44.0 -3.2
MNK *e* 18 21 16.0
MNK *e*S **S** 18 24 56.0 -2.9
MNK pmax pmax
comp=Z,240nm,1.2s
MNK pmax pmax
comp=N,460nm,1.5s
MNK smax smax
comp=E,5μm,10.0s
MNK MLR MLR
comp=Z,8μm,20.0s
MNK **Minsk** 23.30 148 *e*P **P** 18 20 44.0 -3.2
comp=Z,460nm,1.5s
MNK *e*S **S** 18 24 56.0 -2.9
comp=Z,8μm,20.0s
MICGM **Minsk** 23.31 148 *e*P **P** 18 20 44.0 -3.2
KBI1 **Birley Grange** 23.39 193⇑*e*P **P** 18 20 47.1 -1.0
KBI1 **Birley Grange** 23.39 193 P **P** 18 20 47.1 -1.0
KBI1 **Birley Grange** 23.39 193⇑*e*P **P** 18 20 47.1 -1.0
WME **Myndd Eilian** 23.42 197⇑*e*P **P** 18 20 47.6 -0.7
WME **Myndd Eilian** 23.42 197 P **P** 18 20 47.6 -0.7
WME **Myndd Eilian** 23.42 197⇑*e*P **P** 18 20 47.6 -0.7
GKP **Gorka Klasztor** 23.50 164 *e*P **P** 18 20 49.0 -0.2
GKP **Gorka Klasztor** 23.50 164 *e*P **P** 18 20 48.9 -0.2
GKP *e*S Sn 18 25 13.3 -8.6
GKP **Gorka Klasztor** 23.50 164 *e*P **P** 18 20 49.0 -0.2
WPM1 **Penmaenmawr** 23.53 196⇑*i*P **P** 18 20 48.7 -0.8
WPM1 **Penmaenmawr** 23.53 196 P **P** 18 20 48.7 -0.8
WPM1 **Penmaenmawr** 23.53 196⇑*i*P **P** 18 20 48.7 -0.8
WLF1 **Llynfaes** 23.53 197 *e*P **P** 18 20 47.6 -1.9
WLF1 AMB AMB 18 20 56.0
comp=Z,82nm,1.9s
WLF1 **Llynfaes** 23.53 197 P **P** 18 20 47.6 -1.9
WLF1 AMB AMB 18 20 56.0
comp=Z,82nm,1.9s
WLF1 **Llynfaes** 23.53 197 *e*P **P** 18 20 47.6 -1.9
MOS **Moscow** 23.57 134 *e*P P 18 20 44.6 -5.2
MOS *e*S **S** 18 24 59.2 -4.1
MOS pmax pmax
comp=Z,189nm,1.8s
MOS pmax pmax
comp=Z,500nm,2.5s
MOS MLR MLR
comp=N,3μm,17.0s
MOS MLR MLR
comp=Z,3μm,18.0s
YRC **Rhoscolyn** 23.58 197⇑*e*P **P** 18 20 49.1 -0.8
YRC **Rhoscolyn** 23.58 197 P **P** 18 20 49.1 -0.8
YRC **Rhoscolyn** 23.58 197⇑*e*P **P** 18 20 49.1 -0.8
YLL **Llanberis** 23.66 197⇑*e*P **P** 18 20 50.0 -0.8
YLL **Llanberis** 23.66 197 P **P** 18 20 50.0 -0.8
YLL **Llanberis** 23.66 197⇑*e*P **P** 18 20 50.0 -0.8
DLF **Lyons Farm** 23.69 200 *e*P **P** 18 20 49.8 -1.2
YRE **Yr Eifl** 23.84 197⇑*e*P **P** 18 20 51.2 -1.2
YRE **Yr Eifl** 23.84 197 P **P** 18 20 51.2 -1.2
YRE **Yr Eifl** 23.84 197⇑*e*P **P** 18 20 51.2 -1.2
FOEL **Foel Wylfa** 23.85 195 *e*P **P** 18 20 51.1 -1.5
FOEL AMB AMB 18 20 58.2
comp=Z,105nm,2.0s
FOEL **Foel Wylfa** 23.85 195 P **P** 18 20 51.1 -1.5
FOEL AMB AMB 18 20 58.2
comp=Z,105nm,2.0s
FOEL **Foel Wylfa** 23.85 195 *e*P **P** 18 20 51.1 -1.5
SOKR **Solikamsk** 23.93 106*c i*P **P** 18 20 51.6 -1.6
SOKR pmax pmax
comp=Z,280nm,1.7s
SOKR MLR MLR
comp=Z,3μm,17.0s
SOKR **Solikamsk** 23.93 106 *i* P **P** 18 20 51.6 -1.6
comp=Z,3μm,17.0s
NRDL **Niedersach Rie** 23.97 175 *e*P **P** 18 20 54.0 +0.4
comp=Z,340nm,1.7s
NRDL *e*pP **pP** 18 21 00.8 +3.3
OBN **Obninsk** 23.99 135*c i*P **P** 18 20 50.1 -3.7
OBN *i* *PP **pP** 18 20 56.2 -1.6
OBN *i* 18 21 21.4
OBN pmax pmax
comp=Z,144nm,1.8s
OBN MLR MLR
comp=Z,2μm,16.0s
RUE **Ruedersdorf** 24.10 170 *e*P **P** 18 20 54.9 +0.1
comp=Z,197nm,1.6s
RUE **Ruedersdorf** 24.10 170 *e*P **P** 18 20 55.0 +0.1
comp=Z,180nm,1.2s
RUE **Ruedersdorf** 24.10 170 *e*P **P** 18 20 55.0 +0.1
comp=Z,180nm,1.2s
IBBN **Ibbenburen** 24.12 179 *e*P **P** 18 20 55.4 +0.3
comp=Z,94nm,1.3s
IBBN *e*pP **pP** 18 21 02.0 +2.9
HLM1 **Long Mynd** 24.20 195⇑*e*P **P** 18 20 55.0 -0.9
HLM1 AMB AMB 18 21 05.9
comp=Z,99nm,1.6s
HLM1 **Long Mynd** 24.20 195 P **P** 18 20 55.0 -0.9
HLM1 AMB AMB 18 21 05.9
comp=Z,99nm,1.6s
HLM1 **Long Mynd** 24.20 195⇑*e*P **P** 18 20 55.0 -0.9
WTSB **Winterswijk** 24.46 180 *e*P **P** 18 20 58.9 +0.7
comp=Z,286nm,1.4s
CLZ **Clausthal** 24.63 175 *e*P **P** 18 21 00.4 +0.6
comp=Z,55nm,1.2s
CLZ *e*pP **pP** 18 21 07.3 +3.5
CLZ **Clausthal** 24.63 175 *e*P **P** 18 21 00.4 +0.6
CLZ *e**PP **pP** 18 21 07.3 +3.5
CLZ pmax pmax
comp=Z,24nm,1.2s
CLZ **Clausthal** 24.63 175 *e*P **P** 18 21 00.4 +0.6
comp=Z,24nm,1.2s
MCH1 **Michaelchurch** 24.73 195 *e*P **P** 18 20 59.7 -0.9
MCH1 AMB AMB 18 21 12.0
comp=Z,98nm,3.9s
MCH1 **Michaelchurch** 24.73 195 P **P** 18 20 59.7 -0.9
MCH1 AMB AMB 18 21 12.0
comp=Z,98nm,3.9s
MCH1 **Michaelchurch** 24.73 195 *e*P **P** 18 20 59.7 -0.9
BUG **Bochum--Univer** 24.99 179 *e*P **P** 18 21 03.3 +0.3
comp=Z,258nm,1.5s
BUG *e*pP **pP** 18 21 10.4 +3.5
BEL **Belsk** 25.19 159 *e*P **P** 18 21 05.2 +0.4
BEL **Belsk** 25.19 159 *e*P **P** 18 21 05.2 +0.4
BEL **Belsk** 25.19 159 *e*P **P** 18 21 05.2 +0.4
CLL **Collm** 25.24 171 *e*P **P** 18 21 05.0 -0.3
comp=Z,61nm,1.2s
CLL **Collm** 25.24 171⇓*i*P **P** 18 21 04.4 -0.9
CLL *i* 18 21 10.3
CLL *i* 18 24 37.2
CLL *e*S **S** 18 25 35.0 +4.9
CLL pmax pmax
comp=Z,61nm,1.3s
CLL pmax pmax
comp=Z,18nm,1.3s
CLL MLR MLR
comp=Z,3μm,19.0s
CLL **Collm** 25.24 171⇓*i*P **P** 18 21 04.4 -0.9
comp=Z,61nm,1.3s
CLL *i* sP **sP** 18 21 10.3 -0.5
CLL *e*PP **PnPn** 18 21 36.0 -3.3
CLL *i* sPP 18 21 42.3
CLL *i* PcP **PcP** 18 24 37.2 -0.8
comp=Z,18nm,1.3s
CLL *e*S **S** 18 25 35.0 +4.9
CLL *e*SS **SnSn** 18 26 18.0 -2.4
CLL *e*SSSS 18 26 48.0
CLL Lm MLR 18 30 00.0
comp=Z,3μm,19.0s
CLL **Collm** 25.24 171 *i* P **P** 18 21 04.4 -0.9
comp=Z,61nm,1.3s
NEUB **Neuenburg** 25.30 173 *e*P **P** 18 21 06.0 +0.2
comp=Z,204nm,1.1s
NEUB *e*pP **pP** 18 21 13.0 +3.3
WOL **Wolverton** 25.32 192⇑*e*P **P** 18 21 05.4 -0.5
WOL AMB AMB 18 21 14.4
comp=Z,204nm,1.1s
WOL **Wolverton** 25.32 192 P **P** 18 21 05.4 -0.5
WOL AMB AMB 18 21 14.4
comp=Z,204nm,1.1s
WOL **Wolverton** 25.32 192⇑*e*P **P** 18 21 05.4 -0.5
VAL **Valentia** 25.37 205 *e*P **P** 18 21 06.3 -0.1
VAL **Valentia** 25.37 205⇓*i*S **S** 18 25 37.4 +5.3
VAL **Valentia** 25.37 205 *e*P **P** 18 21 06.3 -0.1

BEBN **Eben Emael** 25.64 182 P **P** 18 21 08.4 -0.4
comp=Z,27nm,1.8s
FBE **Freiberg** 25.64 170 *e*P **P** 18 21 09.1 +0.2
comp=Z,195nm,1.3s
FBE *e*pP **pP** 18 21 16.0 +3.2
UBBA **Unterbreizbach** 25.64 175 *e*P **P** 18 21 09.1 +0.3
comp=Z,156nm,1.5s
HGN **Heimansgroeve** 25.67 181 *e*P **P** 18 21 08.4 -0.8
comp=Z,175nm,1.5s
HGN *e*S **S** 18 25 35.3 -1.5
HGN *e*L L 18 31 09.1
comp=Z,1μm,20.4s
HGN **Heimansgroeve** 25.67 181 *e*P **P** 18 21 08.4 -0.8
comp=Z,175nm,1.5s
HGN *e*S **S** 18 25 35.3 -1.5
HEX **Exmoor** 25.70 196⇑*i*P **P** 18 21 08.9 -0.6
HEX **Exmoor** 25.70 196 P **P** 18 21 08.9 -0.6
HEX **Exmoor** 25.70 196⇑*i*P **P** 18 21 08.9 -0.6
BRG **Berggiesshubel** 25.71 170⇑*i*P **P** 18 21 09.2 -0.4
comp=Z,73nm,1.3s
BRG S **S** 18 25 43.0 +5.4
BRG SS SnSn 18 26 46.0 +14
BRG
comp=N,2μm,23.8s
BRG
comp=E,788nm,21.3s
BRG
comp=Z,2μm,17.4s
BRG **Berggiesshubel** 25.71 170 *e*P **P** 18 21 09.5 -0.1
comp=Z,116nm,1.5s
BRG *e*pP **pP** 18 21 16.6 +3.1
BRG **Berggiesshubel** 25.71 170⇑*i*P **P** 18 21 09.2 -0.4
BRG S **S** 18 25 43.0 +5.4
BRG pmax pmax
comp=Z,73nm,1.3s
BRG MLR MLR
comp=N,2μm,23.8s
BRG MLR MLR
comp=E,788nm,21.3s
BRG MLR MLR
comp=Z,2μm,17.4s
BRG **Berggiesshubel** 25.71 170 *i* P **P** 18 21 09.2 -0.4
comp=Z,73nm,1.3s
MEM **Membach** 25.82 181 P **P** 18 21 10.5 0.0
comp=Z,52nm,1.4s
MOX **Moxa** 25.86 173 *e*P **P** 18 21 11.3 +0.4
comp=Z,181nm,1.2s
MOX *e*pP **pP** 18 21 18.3 +3.4
MOX **Moxa** 25.86 173 *e*P **P** 18 21 11.3 +0.4
MOX *e**PP **pP** 18 21 18.3 +3.4
MOX pmax pmax
comp=Z,32nm,1.2s
MOX **Moxa** 25.86 173 *e*P **P** 18 21 11.3 +0.4
comp=Z,32nm,1.2s
KSP **Ksiaz** 25.86 166⇓*e*P **P** 18 21 10.3 -0.6
KSP *e*S **S** 18 25 37.9 -2.0
KSP MLR MLR
comp=Z,4μm,17.5s
KSP **Ksiaz** 25.86 166 *e*P **P** 18 21 10.3 -0.6
KSP *e*S S 18 26 09.5 +30
KSP **Ksiaz** 25.86 166⇓*e*P **P** 18 21 10.3 -0.6
KSP *e*S **S** 18 25 37.9 -2.0
BCLA **Clavier** 26.02 182 P **P** 18 21 12.4 0.0
comp=Z,55nm,2.0s
PLN **Plauen** 26.03 172 *e*P **P** 18 21 12.9 +0.4
comp=Z,891nm,1.5s
PLN *e*pP **pP** 18 21 19.9 +3.4
WERD **Werda** 26.07 172 *e*P **P** 18 21 13.2 +0.3
comp=Z,141nm,1.4s
WERD *e*pP **pP** 18 21 20.4 +3.5
PVCC **Panska Ves** 26.09 169 *e*P **P** 18 21 13.2 +0.3
PVCC MLR MLR
comp=Z,2μm,16.3s
PVCC **Panska Ves** 26.09 169 *e*P **P** 18 21 13.2 +0.3
PVCC AMS AMS 18 31 10.0
comp=Z,2μm,16.3s
PVCC **Panska Ves** 26.09 169 P **P** 18 21 13.2 +0.3
TANN **Tannenbergstha** 26.11 172 *e*P **P** 18 21 13.5 +0.2
comp=Z,169nm,1.5s
TANN *e*pP **pP** 18 21 20.9 +3.7
GUNZ **Gunzen** 26.16 172 *e*P **P** 18 21 14.2 +0.5
comp=Z,201nm,1.5s
GUNZ *e*pP **pP** 18 21 20.3 +2.7
UPC **Upice** 26.18 167 *e*P **P** 18 21 13.6 -0.2
UPC *e* 18 21 21.6
UPC **Upice** 26.18 167 *e*P **P** 18 21 13.6 -0.2
UPC *e*pP **pP** 18 21 21.6 +3.8
UPC **Upice** 26.18 167 P **P** 18 21 13.6 -0.2
TNS **Taunus Mts** 26.22 178 *e*P **P** 18 21 14.6 +0.4
comp=Z,51nm,1.2s
TNS **Taunus Mts** 26.22 178 *e*P **P** 18 21 14.6 +0.4
TNS pmax pmax
comp=Z,48nm,1.2s
TNS **Taunus Mts** 26.22 178 *e*P **P** 18 21 14.6 +0.4
comp=Z,48nm,1.2s
WERN **Wernitzgruen** 26.24 172 *e*P **P** 18 21 15.1 +0.7
comp=Z,262nm,1.4s
WERN *e*pP **pP** 18 21 21.3 +3.0
FRB **Frobisher Bay** 26.27 284 P **P** 18 21 13.9 -0.5
FRB **Frobisher Bay** 26.27 284 P **P** 18 21 13.9 -0.5
comp=Z,50nm,1.2s,baz=35,slow=12,SNR=14
FRB LR LR 18 31 37.5
comp=Z,7μm,20.4s,baz=31,slow=36
FRB **Frobisher Bay** 26.27 284 P **P** 18 21 14.0 -0.5
comp=Z,7μm,20.4s
NKC **Novy Kostel** 26.29 172 *e*P **P** 18 21 14.8 -0.1
NKC *e* 18 21 21.2
NKC MLR MLR
comp=Z,2μm,17.6s
NKC **Novy Kostel** 26.29 172 *e*P **P** 18 21 14.8 -0.1
NKC *e*pP **pP** 18 21 21.2 +2.4
NKC AMS AMS 18 31 20.0
comp=Z,2μm,17.6s
NKC **Novy Kostel** 26.29 172 P **P** 18 21 14.8 -0.1
DYA **Yadsworthy** 26.34 196⇑*e*P **P** 18 21 14.3 -1.0
DYA AMB AMB 18 21 24.1
comp=Z,76nm,1.1s
DYA **Yadsworthy** 26.34 196 P **P** 18 21 14.3 -1.0
DYA AMB AMB 18 21 24.1
comp=Z,76nm,1.1s
DYA **Yadsworthy** 26.34 196⇑*e*P **P** 18 21 14.3 -1.0
GIVF **Givet** 26.34 183 *e*P **P** 18 21 13.8 -1.5
comp=Z,259nm,1.4s
GIVF **Givet** 26.34 183 *e*P **P** 18 21 13.8 -1.5
GIVF pmax pmax
comp=Z,259nm,1.4s
GIVF **Givet** 26.34 183 *e*P **P** 18 21 13.8 -1.5
comp=Z,259nm,1.4s
GIVF **Givet** 26.34 183 *e*P **P** 18 21 13.8 -1.5
comp=Z,129nm,1.4s
DOU **Dourbes** 26.35 183 P **P** 18 21 15.2 -0.1
comp=Z,28nm,1.6s
DPC **Dobruska-Polom** 26.35 166 *e*P **P** 18 21 15.4 0.0
DPC *e* 18 21 21.6
DPC *e*S **S** 18 25 54.6 +6.8
DPC **Dobruska-Polom** 26.35 166 *e*P **P** 18 21 15.4 0.0
DPC *e*pP **pP** 18 21 21.6 +2.2
DPC *e*S **S** 18 25 54.6 +6.8
DPC **Dobruska-Polom** 26.35 166 P **P** 18 21 15.4 0.0
BAIF **Baives** 26.39 184 *e*P **P** 18 21 14.6 -1.1
comp=Z,220nm,1.2s
BAIF **Baives** 26.39 184 *e*P **P** 18 21 14.6 -1.1
BAIF pmax pmax
comp=Z,220nm,1.2s
BAIF **Baives** 26.39 184 *e*P **P** 18 21 14.6 -1.1
comp=Z,220nm,1.2s
BAIF **Baives** 26.39 184 *e*P **P** 18 21 14.6 -1.1
comp=Z,110nm,1.2s
MANZ **Manzenberg** 26.53 172 *e*P **P** 18 21 17.2 +0.2
comp=Z,72nm,1.5s
PRA **Prague** 26.54 169 P **P** 18 21 18.0 +1.0
PRA AMS AMS 18 31 30.0
ABH **Alteburg** 26.55 179⇑*e*P **P** 18 21 17.9 +0.7
ABH **Alteburg** 26.55 179⇑*e*P **P** 18 21 17.9 +0.7
PRU **Pruhonice** 26.62 169 *e*P **P** 18 21 17.9 +0.1
PRU *e*S **S** 18 25 56.2 +4.2
PRU MLR MLR
comp=Z,2μm,17.2s
PRU **Pruhonice** 26.62 169 *e*P **P** 18 21 17.9 +0.1
PRU *e*S **S** 18 25 56.2 +4.2
PRU AMS AMS 18 31 20.0
comp=Z,2μm,17.2s
PRU **Pruhonice** 26.62 169 P **P** 18 21 17.9 +0.1
KRLC **Kraliky** 26.65 166 *e*P **P** 18 21 18.2 0.0
KRLC **Kraliky** 26.65 166 *e*P **P** 18 21 18.2 0.0

KRLC Kraliky 26.65 166 P **P** **18 21 18.2 0.0**
OJC Ojcow 26.71 161⇑ *i*P **P** **18 21 18.6 0.0**
OJC MLR MLR
comp=Z,2µm,19.9s
OJC Ojcow 26.71 161 *e*P **P** **18 21 18.6 0.0**
comp=Z,200nm,1.3s
OJC Ojcow 26.71 161 *i* P **P** **18 21 18.6 0.0**
OJC *e*S S 18 26 00.8 +7.4
OJC *i* 18 26 06.2
OJC L L 18 31 17.2
comp=Z,2µm,19.9s
OJC Ojcow 26.71 161 *e*P **P** **18 21 18.6 0.0**
comp=Z,200nm,1.3s
RUP Ruppelstein 26.73 180 *e*P **P** **18 21 19.4 +0.6**
RUP Ruppelstein 26.73 180 *e*P **P** **18 21 19.4 +0.6**
RUP Ruppelstein 26.73 180 *e*P **P** **18 21 19.4 +0.6**
RAC Raciborz 26.73 164 *e*P **P** **18 21 18.3 -0.5**
RAC MLR MLR
comp=Z,2µm,21.1s
RAC Raciborz 26.73 164 *e*P **P** **18 21 18.3 -0.5**
ROTZ Rotzenmuhle 26.75 172 *e*P **P** **18 21 19.7 +0.7**
comp=Z,69nm,1.4s
WLF Walferdange 26.77 181 P **P** **18 21 19.9 +0.8**
comp=Z,66nm,2.2s
WLF Walferdange 26.77 181 *e*P **P** **18 21 19.9 +0.8**
comp=Z,55nm,1.6s
WLF Walferdange 26.77 181 *e*P **P** **18 21 19.6 +0.5**
WLF pmax pmax
comp=Z,109nm,1.5s
WLF Walferdange 26.77 181 *e*P **P** **18 21 19.6 +0.5**
comp=Z,109nm,1.5s
WLF Walferdange 26.77 181 *e*P **P** **18 21 19.6 +0.5**
comp=Z,109nm,1.5s
GRA1 Grafenberg Arr 26.80 174 *e*P **P** **18 21 20.1 +0.7**
comp=Z,74µm,18.6s
GRF Grafenberg Arr 26.80 174 *e*P **P** **18 21 20.1 +0.7**
comp=Z,74nm,1.4s
GRF *e*L L 18 31 56.7
comp=Z,1µm,18.6s
GRF Grafenberg Arr 26.80 174 *e*P **P** **18 21 20.1 +0.7**
GRF pmax pmax
comp=Z,25nm,1.4s
GRF MLR MLR
comp=Z,74µm,18.6s
GRFO Grafenberg 26.80 174 *e*P **P** **18 21 20.0 +0.6**
GRFO pmax pmax
comp=Z,89nm,1.0s
GRFO Grafenberg 26.80 174 *e*P **P** **18 21 20.0 +0.6**
comp=Z,89nm,1.0s
GRFO Grafenberg 26.80 174 *e*P **P** **18 21 20.0 +0.6**
comp=Z,89nm,1.0s
TOD Tromm 26.84 177⇑ *e*P **P** **18 21 20.1 +0.3**
TOD Tromm 26.84 177⇑ *e*P **P** **18 21 20.1 +0.3**
TOD Tromm 26.84 177⇑ *e*P **P** **18 21 20.1 +0.3**
OKC Ostrava-Krasne 26.98 164 *e*P **P** **18 21 20.9 -0.1**
OKC *e* 18 21 26.4
OKC *e*S S 18 26 04.5 +7.0
OKC MLR MLR
comp=Z,1µm,17.9s
OKC Ostrava-Krasne 26.98 164 *e*P **P** **18 21 20.9 -0.1**
OKC *ep*P **pP** **18 21 26.4 +1.4**
OKC *e*S S 18 26 04.5 +7.0
OKC AMS AMS 18 31 50.0
comp=Z,1µm,17.9s
OKC Ostrava-Krasne 26.98 164 P **P** **18 21 20.9 -0.1**
MORC Moravsky Berou 27.00 165⇑ P **P** **18 21 20.1 -1.1**
MORC Moravsky Berou 27.00 165 *e*P **P** **18 21 19.6 -1.6**
comp=Z,241nm,1.8s
MORC Moravsky Berou 27.00 165⇑ *i*P **P** **18 21 20.1 -1.1**
MORC Moravsky Berou 27.00 165 P **P** **18 21 20.1 -1.1**
KTD Kalmit 27.12 178 *e*P **P** **18 21 22.6 +0.3**
KTD Kalmit 27.12 178 *e*P **P** **18 21 22.6 +0.3**
KTD Kalmit 27.12 178 *e*P **P** **18 21 22.6 +0.3**
AKASG Malin Array Be 27.20 148 P **P** **18 21 21.1 -1.9**
AKASG pmax pmax
comp=Z,4.0nm,0.7s
AKASG MLR MLR
comp=Z,3µm,21.6s
AKASG Malin Array Be 27.20 148 P **P** **18 21 21.1 -1.9**
AKASG Malin Array Be 27.20 148 P **P** **18 21 21.1 -1.9**
comp=Z,4.3nm,0.7s,baz=343,slow=9.6,SNR=32
AKASG LR LR 18 32 03.2
comp=Z,3µm,21.6s,baz=340,slow=36
AKASG Malin Array Be 27.20 148 P **P** **18 21 21.1 -1.9**
ARU Arti 27.20 107 *e i*P **P** **18 21 22.8 -0.1**
ARU 18 22 04.0
ARU PPP PPP 18 22 16.0
ARU 18 24 40.2
ARU S **S** **18 26 03.8 +2.8**
ARU SS **SnSn** **18 27 10.7 +2.5**
ARU SSS SSS 18 27 27.1
ARU pmax pmax
comp=Z,39nm,1.7s
ARU MLR MLR
comp=Z,3µm,18.0s
ARU Arti 27.20 107 P **P** **18 21 23.3 +0.4**
comp=Z,211nm,1.4s,SNR=10
ARU Arti 27.20 107 *i* P **P** **18 21 22.8 -0.1**
comp=Z,39nm,1.7s
ARU Arti 27.20 107 PcP **PcP** **18 24 40.2 -2.3**
ARU S **S** **18 26 03.8 +2.8**
KIEV Kiev 27.20 148 *e*P **P** **18 21 20.8 -2.2**
KIEV pmax pmax
comp=Z,470nm,2.2s
KIEV Kiev 27.20 148 *e*P **P** **18 21 20.8 -2.2**
comp=Z,470nm,2.2s
KIEV Kiev 27.20 148 *e*P **P** **18 21 20.8 -2.2**
comp=Z,470nm,2.2s
AK01 Malin Array Si 27.21 148 *e*P **P** **18 21 21.5 -1.5**
AK01 Malin Array Si 27.21 148 *e*P **P** **18 21 21.5 -1.5**
AK02 Malin Array Si 27.24 148 *e*P **P** **18 21 21.4 -1.9**
AK02 Malin Array Si 27.24 148 *e*P **P** **18 21 21.4 -1.9**
SVE Sverdlovsk 27.31 105⇓ *e*P **P** **18 21 23.7 -0.2**
SVE *e*S **S** **18 26 08.6 +5.9**
SVE pmax pmax
comp=Z,138nm,1.8s
SVE MLR MLR
comp=Z,4µm,12.0s
SVE Sverdlovsk 27.31 105 *e*P **P** **18 21 23.7 -0.2**
comp=Z,138nm,1.8s
TREC Trest 27.36 168 AMS AMS 18 32 00.0
comp=Z,2µm,16.6s
WET Wettzell 27.40 171 *e*P **P** **18 21 25.8 +1.0**
comp=Z,124nm,1.6s
WET *ep*P **pP** **18 21 32.6 +3.8**
WET Wettzell 27.40 171 *e*P **P** **18 21 25.8 +1.0**
WET *e**PP **pP** **18 21 32.6 +3.8**
WET pmax pmax
comp=Z,23nm,1.6s
WET Wettzell 27.40 171 *e*P **P** **18 21 25.8 +1.0**
comp=Z,23nm,1.6s
VRAC Vranov 27.41 166 P **P** **18 21 24.8 -0.1**
VRAC Vranov 27.41 166⇑ *i*P **P** **18 21 25.4 +0.5**
VRAC Vranov 27.41 166 P **P** **18 21 24.8 -0.1**
comp=Z,37nm,0.9s,baz=3.7,slow=11,SNR=60
VRAC LR LR 18 31 42.0
comp=Z,1µm,21.4s,baz=355,slow=35
VRAC Vranov 27.41 166 P **P** **18 21 24.8 -0.1**
KHC Kasperske Hory 27.44 170 *e*P **P** **18 21 25.3 +0.1**
KHC *e* 18 21 32.1
KHC *e*S **S** **18 26 07.6 +2.7**
KHC MLR MLR
comp=Z,2µm,19.1s
KHC Kasperske Hory 27.44 170 *e*P **P** **18 21 25.3 +0.1**
KHC *ep*P **pP** **18 21 32.1 +2.9**
KHC *ex* x 18 21 58.5
KHC *e*S **S** **18 26 07.6 +2.7**
KHC AMS AMS 18 31 50.0
comp=Z,2µm,19.1s
KHC Kasperske Hory 27.44 170 *e*P **P** **18 21 25.2 0.0**
comp=Z,171nm,2.0s
KHC Kasperske Hory 27.44 170 *e*P **P** **18 21 25.2 0.0**
comp=Z,171nm,2.0s
LANF Langenberg 27.45 179⇑ *e*P **P** **18 21 25.7 +0.4**
LANF Langenberg 27.45 179⇑ *e*P **P** **18 21 25.7 +0.4**
LANF Langenberg 27.45 179⇑ *e*P **P** **18 21 25.7 +0.4**
LANF Langenberg 27.45 179⇑ *e*P **P** **18 21 25.7 +0.4**
LVV L'vov 27.48 155 *e*P **P** **18 21 23.9 -1.6**
LVV *e* 18 22 28.5
LVV *e*S **S** **18 26 01.9 -3.6**
LVV *e*SS SnSn 18 27 37.5 +22
LVV MLR MLR
comp=N,1µm,10.0s
LVV MLR MLR
comp=E,800nm,10.0s
LVV MLR MLR
comp=Z,1µm,10.0s
LVV L'vov 27.48 155 *e*P **P** **18 21 23.9 -1.6**
KWP Kalwaria Pacla 27.54 157⇑⇑ P **P** **18 21 26.1 0.0**
KWP Kalwaria Pacla 27.54 157 *e*P **P** **18 21 25.9 -0.2**
comp=Z,223nm,1.4s
KWP Kalwaria Pacla 27.54 157⇑ *i*P **P** **18 21 26.1 0.0**
KWP Kalwaria Pacla 27.54 157 *e*P **P** **18 21 26.2 +0.1**
KWP Kalwaria Pacla 27.54 157 *e*P **P** **18 21 25.9 -0.2**
comp=Z,223nm,1.4s
NIE Niedzica 27.55 161⇑ *i*P **P** **18 21 27.2 +1.0**
NIE Niedzica 27.55 161 *i* P **P** **18 21 27.2 +1.0**
NIE Niedzica 27.55 161⇑ *i*P **P** **18 21 27.2 +1.0**
STHS Stebnicka Huta 27.63 159 *e*P **P** **18 21 27.4 +0.5**
STHS pmax pmax
comp=Z,28nm,1.2s
STHS Stebnicka Huta 27.63 159 *e*P **P** **18 21 27.3 +0.4**
STHS Stebnicka Huta 27.63 159 *e*P **P** **18 21 27.4 +0.5**
comp=Z,28nm,1.2s
STU Stuttgart 27.68 177 *e*P **P** **18 21 27.9 +0.6**
comp=Z,113nm,1.6s
STU *ep*P **pP** **18 21 34.8 +3.5**
STU Stuttgart 27.68 177 *e*P **P** **18 21 27.3 0.0**
STU pmax pmax
comp=Z,100nm,1.3s
STU Stuttgart 27.68 177 *e*P **P** **18 21 27.3 0.0**
comp=Z,100nm,1.3s
STU Stuttgart 27.68 177 *e*P **P** **18 21 27.3 0.0**
comp=Z,100nm,1.3s
VOR Voronezh 27.69 134 P **P** **18 21 27.0 -0.3**
VOR pmax pmax
comp=Z,1µm,1.4s
VOR Voronezh 27.69 134 P **P** **18 21 27.0 -0.3**
comp=Z,1µm,1.4s
GEC2 GERESS Array S 27.73 170 *e*P **P** **18 21 28.9 +1.0**
comp=Z,101nm,1.6s
GEC2 *ep*P **pP** **18 21 35.4 +3.6**
GEC2 GERESS Array S 27.73 170 *e*P **P** **18 21 28.9 +1.0**
GEC2 *e**PP **pP** **18 21 35.4 +3.6**
GEC2 pmax pmax
comp=Z,23nm,1.6s
GEC2 GERESS Array S 27.73 170 *e*P **P** **18 21 28.9 +1.0**
comp=Z,23nm,1.6s
GERES GERESS Array B 27.73 170 P **P** **18 21 28.2 +0.4**
GERES GERESS Array B 27.73 170 P **P** **18 21 28.2 +0.4**
comp=Z,11nm,0.9s,baz=12,slow=7.4,SNR=71
GERES LR LR 18 32 26.0
comp=Z,2µm,18.8s,baz=3.2,slow=36
GERES GERESS Array B 27.73 170 P **P** **18 21 28.2 +0.4**
FLN La Foliniere 27.83 190 *e*P **P** **18 21 26.3 -2.3**
comp=Z,114nm,1.5s,baz=14
FLN *e*R
comp=Z,492nm,19.8s
FLN La Foliniere 27.83 190 *e*P **P** **18 21 26.3 -2.3**
FLN pmax pmax
comp=Z,114nm,1.5s
FLN La Foliniere 27.83 190 *e*P **P** **18 21 26.3 -2.3**
comp=Z,114nm,1.5s
FLN La Foliniere 27.83 190 *e*P **P** **18 21 26.3 -2.3**
comp=Z,57nm,1.5s,baz=14
PAGF Fort de Pagny 27.88 182 *e*P **P** **18 21 28.4 -0.7**
comp=Z,104nm,1.7s,baz=18
PAGF Fort de Pagny 27.88 182 *e*P **P** **18 21 28.4 -0.7**
comp=Z,104nm,1.7s
PAGF Fort de Pagny 27.88 182 *e*P **P** **18 21 28.4 -0.7**
comp=Z,52nm,1.7s,baz=18
MEZF Maizieres J'vi 27.94 182 *e*P **P** **18 21 28.8 -0.8**
comp=Z,215nm,1.5s,baz=7.4
MEZF Maizieres J'vi 27.94 182 *e*P **P** **18 21 28.8 -0.8**
comp=Z,215nm,1.5s
MEZF Maizieres J'vi 27.94 182 *e*P **P** **18 21 28.8 -0.8**
comp=Z,107nm,1.5s,baz=7.4
LDF La Druitiere 27.98 190 *e*P **P** **18 21 27.7 -2.3**
comp=Z,186nm,1.4s
LDF La Druitiere 27.98 190 *e*P **P** **18 21 27.7 -2.3**
LDF pmax pmax
comp=Z,186nm,1.4s
LDF La Druitiere 27.98 190 *e*P **P** **18 21 27.7 -2.3**
comp=Z,186nm,1.4s
LDF La Druitiere 27.98 190 *e*P **P** **18 21 27.7 -2.3**
comp=Z,93nm,1.4s
CDF Champ du Feu 28.02 179 *e*P **P** **18 21 29.2 -1.3**
comp=Z,66nm,1.2s
CDF Champ du Feu 28.02 179 *e*P **P** **18 21 29.2 -1.3**
CDF pmax pmax
comp=Z,66nm,1.2s
CDF Champ du Feu 28.02 179 *e*P **P** **18 21 29.2 -1.3**
comp=Z,66nm,1.2s
CDF Champ du Feu 28.02 179 *e*P **P** **18 21 29.2 -1.3**
comp=Z,33nm,1.2s
BFO Black Forest 28.11 178 P **P** **18 21 31.8 +0.6**
comp=Z,232nm,1.4s,SNR=8.0
BFO Black Forest 28.11 178 *e*P **P** **18 21 31.8 +0.6**
comp=Z,35nm,1.5s
BFO Black Forest 28.11 178 *e*P **P** **18 21 31.6 +0.4**
BFO pmax pmax
comp=Z,79nm,1.2s
BFO Black Forest 28.11 178 *e*P **P** **18 21 31.6 +0.4**
comp=Z,79nm,1.2s
BFO Black Forest 28.11 178 *e*P **P** **18 21 31.6 +0.4**
comp=Z,79nm,1.2s
CRVS Cervenica-Dubn 28.16 159 *e*P **P** **18 21 29.4 -2.2**
CRVS pmax pmax
comp=Z,147nm,2.2s
CRVS Cervenica-Dubn 28.16 159 *e*P **P** **18 21 29.4 -2.2**
CRVS Cervenica-Dubn 28.16 159 *e*P **P** **18 21 29.4 -2.2**
comp=Z,147nm,2.2s
VSR Storozhevoye 28.18 135 *e*P **P** **18 21 30.3 -1.4**
VSR *e* 18 22 16.3
VSR *e*S S 18 26 09.5 -6.9
VSR pmax pmax
comp=N,40nm,1.4s
VSR pmax pmax
comp=E,10.0nm,1.4s
VSR pmax pmax
comp=Z,30nm,1.4s
VSR pmax pmax
comp=Z,80nm,1.4s
VSR pmax pmax
comp=N,100nm,1.5s
VSR pmax pmax
comp=E,40nm,0.7s
VSR smax smax
comp=N,110nm,2.8s
VSR smax smax
comp=Z,50nm,2.8s
VSR smax smax
comp=E,70nm,1.4s
VSR MLR MLR
comp=N,870nm,16.0s
VSR MLR MLR
comp=E,330nm,16.0s
VSR MLR MLR
comp=Z,2µm,16.0s
VSR Storozhevoye 28.18 135 *e*P **P** **18 21 30.3 -1.4**
KOLS Kolonicke sedl 28.20 158 *e*P **P** **18 21 32.0 +0.1**
KOLS pmax pmax
comp=Z,34nm,1.4s
KOLS Kolonicke sedl 28.20 158 *e*P **P** **18 21 32.0 +0.1**
KOLS *e* 18 26 40.4
KOLS Kolonicke sedl 28.20 158 *e*P **P** **18 21 32.0 +0.1**
comp=Z,34nm,1.4s
TIXI Tiksi 28.20 35 *ce*P **P** **18 21 33.1 +1.4**
TIXI pmax pmax
comp=Z,44nm,1.7s
TIXI Tiksi 28.20 35 *e*P **P** **18 21 33.1 +1.4**
comp=Z,44nm,1.7s
THEF They Montfort 28.21 181⇑ *e*P **P** **18 21 32.5 +0.4**
THEF They Montfort 28.21 181⇑ *e*P **P** **18 21 32.5 +0.4**
THEF They Montfort 28.21 181⇑ *e*P **P** **18 21 32.5 +0.4**
THEF They Montfort 28.21 181⇑ *e*P **P** **18 21 32.5 +0.4**
ECH Echery 28.22 180 *e*P **P** **18 21 31.6 -0.5**
ECH pmax pmax
comp=Z,55nm,1.4s
ECH Echery 28.22 180 *e*P **P** **18 21 31.6 -0.5**
comp=Z,55nm,1.4s
ECH Echery 28.22 180⇑ *e*P **P** **18 21 32.6 +0.4**
ECH Echery 28.22 180 *e*P **P** **18 21 31.6 -0.5**
comp=Z,55nm,1.4s
GRR Gorron 28.22 191 *e*P **P** **18 21 29.8 -2.3**
comp=Z,168nm,1.5s
GRR Gorron 28.22 191 *e*P **P** **18 21 29.8 -2.3**
GRR pmax pmax
comp=Z,168nm,1.5s
GRR Gorron 28.22 191 *e*P **P** **18 21 29.8 -2.3**
comp=Z,84nm,1.5s
SFTF Sexfontaines 28.24 183 *e*P **P** **18 21 31.3 -1.0**
comp=Z,266nm,1.6s,baz=354
SFTF Sexfontaines 28.24 183 *e*P **P** **18 21 31.3 -1.0**
comp=Z,266nm,1.6s
SFTF Sexfontaines 28.24 183 *e*P **P** **18 21 31.3 -1.0**
comp=Z,133nm,1.6s,baz=354
SMOL Smolenice 28.25 165 *e*P **P** **18 21 33.6 +1.2**
SMOL Smolenice 28.25 165 *e*P **P** **18 21 33.6 +1.2**
SMOL Smolenice 28.25 165 *e*P **P** **18 21 33.6 +1.2**
SPAK Spaichingen-Ko 28.34 177⇑ *e*P **P** **18 21 34.1 +0.8**
SPAK Spaichingen-Ko 28.34 177⇑ *e*P **P** **18 21 34.1 +0.8**
VYHS Vyhne 28.36 163 *e*P **P** **18 21 33.3 -0.1**
VYHS pmax pmax
comp=Z,26nm,1.4s
VYHS Vyhne 28.36 163 *e*P **P** **18 21 33.3 -0.1**
VYHS *e*S S 18 26 26.6 +7.2
VYHS Vyhne 28.36 163 *e*P **P** **18 21 33.3 -0.1**
comp=Z,26nm,1.4s
ROSF Rostrenen 28.39 194 *e*P **P** **18 21 31.4 -2.3**
comp=Z,60nm,1.3s
ROSF Rostrenen 28.39 194 *e*P **P** **18 21 31.4 -2.3**
ROSF pmax pmax
comp=Z,60nm,1.3s
ROSF Rostrenen 28.39 194 *e*P **P** **18 21 31.4 -2.3**
comp=Z,60nm,1.3s
ROSF Rostrenen 28.39 194 *e*P **P** **18 21 31.4 -2.3**
comp=Z,30nm,1.3s
HAU Haudompre 28.43 181 *e*P **P** **18 21 33.1 -0.9**
comp=Z,286nm,1.8s
HAU *e*R
comp=Z,2µm,20.8s
HAU Haudompre 28.43 181 *e*P **P** **18 21 33.1 -0.9**
HAU pmax pmax
comp=Z,286nm,1.8s
HAU Haudompre 28.43 181 *e*P **P** **18 21 33.1 -0.9**
comp=Z,286nm,1.8s
HAU Haudompre 28.43 181 *e*P **P** **18 21 33.1 -0.9**
comp=Z,143nm,1.8s
SGMF Saint Gilles 28.44 193 *e*P **P** **18 21 32.1 -1.9**
comp=Z,122nm,1.4s
SGMF Saint Gilles 28.44 193 *e*P **P** **18 21 32.1 -1.9**
SGMF pmax pmax
comp=Z,122nm,1.4s
SGMF Saint Gilles 28.44 193 *e*P **P** **18 21 32.1 -1.9**
comp=Z,122nm,1.4s
SGMF Saint Gilles 28.44 193 *e*P **P** **18 21 32.1 -1.9**
comp=Z,61nm,1.4s
VORD Divnogorie 28.44 135 *e*P **P** **18 21 32.3 -1.7**
VORD *e*S **S** **18 26 15.8 -4.7**
VORD *i* 18 32 25.2
VORD pmax pmax
comp=N,50nm,1.4s
VORD pmax pmax
comp=E,10.0nm,1.4s
VORD pmax pmax
comp=Z,40nm,1.4s
VORD smax smax
comp=N,510nm,10.0s
VORD smax smax
comp=Z,190nm,10.0s
VORD smax smax
comp=E,40nm,5.0s
VORD MLR MLR
comp=N,1µm,18.0s
VORD MLR MLR
comp=Z,1µm,18.0s
VORD MLR MLR
comp=E,300nm,9.0s
VORD Divnogorie 28.44 135 *e*P **P** **18 21 32.3 -1.7**
KECS Kecovo 28.49 161 *e*P **P** **18 21 34.6 0.0**
KECS pmax pmax
comp=Z,18nm,1.5s
KECS Kecovo 28.49 161 *e*P **P** **18 21 34.5 0.0**
KECS Kecovo 28.49 161 *e*P **P** **18 21 34.6 0.0**
comp=Z,18nm,1.5s
ZST Bratislava 28.55 166 *e*P **P** **18 21 34.9 -0.1**
ZST *e*S **S** **18 26 26.1 +3.8**
ZST Bratislava 28.55 166 *e*P **P** **18 21 34.9 -0.1**
ZST *e*S **S** **18 26 26.1 +3.8**
ZST Bratislava 28.55 166 *e*P **P** **18 21 34.9 -0.1**
FELD Feldberg im Sc 28.56 178⇑ *e*P **P** **18 21 35.8 +0.5**
FELD Feldberg im Sc 28.56 178⇑ *e*P **P** **18 21 35.8 +0.5**
MOF Molkenrain 28.58 180⇑ *e*P **P** **18 21 35.8 +0.3**
MOF Molkenrain 28.58 180⇑ *e*P **P** **18 21 35.8 +0.3**
MOF Molkenrain 28.58 180⇑ *e*P **P** **18 21 35.8 +0.3**
MOF Molkenrain 28.58 180⇑ *e*P **P** **18 21 35.8 +0.3**
HINF Hinteralfeld 28.62 180 *e*P **P** **18 21 34.6 -1.1**
comp=Z,161nm,1.8s
HINF Hinteralfeld 28.62 180 *e*P **P** **18 21 34.6 -1.1**
HINF pmax pmax
comp=Z,161nm,1.8s
HINF Hinteralfeld 28.62 180 *e*P **P** **18 21 34.6 -1.1**
comp=Z,161nm,1.8s
HINF Hinteralfeld 28.62 180 *e*P **P** **18 21 34.6 -1.1**
comp=Z,81nm,1.8s
CONA Conrad Observa 28.74 167⇑ *ep*P **P** **18 21 37.5 +0.6**
comp=Z,94nm,1.2s,SNR=38
CONA Conrad Observa 28.74 167 P **P** **18 21 37.5 +0.6**
comp=Z,94nm,1.2s,SNR=38
MOA Molln 28.75 170⇑ *ep*P **P** **18 21 37.3 +0.5**
comp=Z,68nm,1.6s,SNR=28
MOA Molln 28.75 170 P **P** **18 21 37.3 +0.5**
comp=Z,68nm,1.6s,SNR=28
RJOB Jochberg 28.80 172 *e*P **P** **18 21 38.2 +0.8**
comp=Z,18nm,1.0s
QUIF Quistinic 28.81 194 *e*P **P** **18 21 35.4 -1.9**
comp=Z,84nm,1.4s
QUIF Quistinic 28.81 194 *e*P **P** **18 21 35.4 -1.9**
QUIF pmax pmax
comp=Z,84nm,1.4s
QUIF Quistinic 28.81 194 *e*P **P** **18 21 35.4 -1.9**
comp=Z,84nm,1.4s
QUIF Quistinic 28.81 194 *e*P **P** **18 21 35.4 -1.9**
comp=Z,42nm,1.4s
BBS Basel-Blauen 28.97 179⇑ *e*P **P** **18 21 39.3 +0.4**
BBS Basel-Blauen 28.97 179⇑ *e*P **P** **18 21 39.3 +0.4**
BBS Basel-Blauen 28.97 179⇑ *e*P **P** **18 21 39.3 +0.4**
RETA Reutte 28.99 174⇑ *ep*P **P** **18 21 39.9 +0.8**
comp=Z,40nm,1.4s,SNR=7.5
RETA Reutte 28.99 174 P **P** **18 21 39.9 +0.8**
comp=Z,40nm,1.4s,SNR=7.5
PSZ Piszkesteto 29.01 162⇓ P **P** **18 21 39.2 0.0**
PSZ Piszkesteto 29.01 162 *e*P **P** **18 21 39.8 +0.6**
comp=Z,110nm,1.4s
PSZ Piszkesteto 29.01 162⇓ *i*P **P** **18 21 39.2 0.0**
PSZ Piszkesteto 29.01 162⇑ *e*P **P** **18 21 40.0 +0.8**
PSZ Piszkesteto 29.01 162⇓ *i*P **P** **18 21 39.2 0.0**
TRPA Tarpa 29.02 158⇑ *e*P **P** **18 21 38.6 -0.6**
SOP Sopron 29.03 166⇓ *e*P **P** **18 21 39.5 +0.2**
LOMF Lomont 29.08 180⇑ *e*P **P** **18 21 40.2 +0.3**
LOMF Lomont 29.08 180⇑ *e*P **P** **18 21 40.2 +0.3**
LOMF Lomont 29.08 180⇑ *e*P **P** **18 21 40.2 +0.3**
LOMF Lomont 29.08 180⇑ *e*P **P** **18 21 40.2 +0.3**
MOTA Moosalm 29.14 174⇑ *ep*P **P** **18 21 41.1 +0.5**
SNR=13
MOTA Moosalm 29.14 174 P **P** **18 21 41.1 +0.5**
SNR=13
DAVA Damuels 29.18 176⇑ *ep*P **P** **18 21 41.7 +0.9**
comp=Z,31nm,1.4s,SNR=8.0
DAVA Damuels 29.18 176 P **P** **18 21 41.7 +0.9**
comp=Z,31nm,1.4s,SNR=8.0
LOR Lormes 29.19 184 *e*P **P** **18 21 39.1 -1.7**
comp=Z,126nm,1.5s,baz=9.8
LOR *e*R
comp=Z,1µm,19.0s
LOR Lormes 29.19 184 *e*P **P** **18 21 39.1 -1.7**
comp=Z,126nm,1.5s
LOR Lormes 29.19 184 *e*P **P** **18 21 39.1 -1.7**
comp=Z,63nm,1.5s,baz=9.8
HYF Humbligny 29.22 186 *e*P **P** **18 21 39.5 -1.5**
HYF Humbligny 29.22 186 *e*P **P** **18 21 39.5 -1.5**
HYF Humbligny 29.22 186 *e*P **P** **18 21 39.5 -1.5**
WTTA Wattenberg 29.24 173⇑ *ep*P **P** **18 21 42.3 +0.9**
comp=Z,76nm,1.5s,SNR=14
WTTA Wattenberg 29.24 173 P **P** **18 21 42.3 +0.9**
comp=Z,76nm,1.5s,SNR=14
BUD Budapest 29.38 163⇑ *e*P **P** **18 21 43.3 +0.9**
ARSA Arzberg 29.40 168⇑ *ep*P **P** **18 21 43.5 +0.8**
comp=Z,38nm,1.1s,SNR=13
ARSA Arzberg 29.40 168 P **P** **18 21 43.5 +0.8**
comp=Z,38nm,1.1s,SNR=13
SSF Saint Saulge 29.40 185 *e*P **P** **18 21 41.0 -1.7**
comp=Z,106nm,1.4s

SSF	**Saint Saulge**	**29.40**	**185**	*e*P		**P**	**18 21 41.0**	**-1.7**
SSF					pmax	pmax			
	comp=Z,106nm,1.4s								
SSF	**Saint Saulge**	**29.40**	**185**	*e*P		**P**	**18 21 41.0**	**-1.7**
	comp=Z,106nm,1.4s								
SSF	**Saint Saulge**	**29.40**	**185**	*e*P		**P**	**18 21 41.0**	**-1.7**
	comp=Z,53nm,1.4s								
PKSG		**29.43**	**164**⇑	*e*P		**P**	**18 21 43.6**	**+0.8**
CSKK	**Cs˙‡kako**	**29.45**	**164**⇑	*e*P		**P**	**18 21 43.8**	**+0.8**
FETA	**Feichten**	**29.46**	**175**⇑	*e*pP		**P**	**18 21 44.1**	**+0.8**
	comp=Z,32nm,1.4s								
FETA	**Feichten**	**29.46**	**175**	P		**P**	**18 21 44.1**	**+0.8**
	comp=Z,32nm,1.4s								
KBA	**Koelnbreinsper**	**29.48**	**171**⇑	*e*pP		**P**	**18 21 44.5**	**+0.9**
	comp=Z,50nm,1.4s								
KBA	**Koelnbreinsper**	**29.48**	**171**	P		**P**	**18 21 44.5**	**+0.9**
	comp=Z,50nm,1.4s								
PKST	**T˙s**	**29.54**	**164**⇑	*e*P		**P**	**18 21 44.4**	**+0.5**
AVF	**Avril sur Loir**	**29.68**	**185**	*e*P		**P**	**18 21 43.4**	**-1.7**
	comp=Z,88nm,1.2s								
AVF	**Avril sur Loir**	**29.68**	**185**	*e*P		**P**	**18 21 43.4**	**-1.7**
AVF					pmax	pmax			
	comp=Z,88nm,1.2s								
AVF	**Avril sur Loir**	**29.68**	**185**	*e*P		**P**	**18 21 43.4**	**-1.7**
	comp=Z,88nm,1.2s								
AVF	**Avril sur Loir**	**29.68**	**185**	*e*P		**P**	**18 21 43.4**	**-1.7**
	comp=Z,44nm,1.2s								
DAVOX	**Davos/Dischmat**	**29.68**	**176**	P		**P**	**18 21 44.6**	**-0.7**
DAVOX	**Davos/Dischmat**	**29.68**	**176**	P		**P**	**18 21 44.6**	**-0.7**
	comp=Z,3.1nm,0.8s,baz=290,slow=7.7,SNR=5.2								
DAVOX					LR	LR	18 33 01.0		
	comp=Z,882nm,21.1s,baz=81,slow=35								
DAVOX	**Davos/Dischmat**	**29.68**	**176**	P		**P**	**18 21 44.6**	**-0.7**
BUR08	**Bucovina Ar. S**	**29.75**	**155**	*e*P		**P**	**18 21 45.8**	**-0.1**
BUR08	**Bucovina Ar. S**	**29.75**	**155**	*e*P		**P**	**18 21 45.8**	**-0.1**
BURAR	**Bucovina Array**	**29.78**	**155**⇓	*i*P		**P**	**18 21 46.0**	**-0.1**
BURAR	**Bucovina Array**	**29.78**	**155**⇓	*i*P		**P**	**18 21 46.0**	**-0.1**
SMF	**Signal de Mont**	**29.82**	**184**	*e*P		**P**	**18 21 44.6**	**-1.7**
	comp=Z,138nm,1.7s								
SMF	**Signal de Mont**	**29.82**	**184**	*e*P		**P**	**18 21 44.6**	**-1.7**
SMF					pmax	pmax			
	comp=Z,138nm,1.7s								
SMF	**Signal de Mont**	**29.82**	**184**	*e*P		**P**	**18 21 44.6**	**-1.7**
	comp=Z,138nm,1.7s								
SMF	**Signal de Mont**	**29.82**	**184**	*e*P		**P**	**18 21 44.6**	**-1.7**
	comp=Z,69nm,1.7s								
PKS7	**Kunszentmiklos**	**29.82**	**163**⇑	*e*P		**P**	**18 21 47.2**	**+0.9**
CABF	**La Chapelle**	**29.82**	**181**	*e*P		**P**	**18 21 45.2**	**-1.3**
	comp=Z,82nm,1.0s								
CABF	**La Chapelle**	**29.82**	**181**	*e*P		**P**	**18 21 45.2**	**-1.3**
CABF					pmax	pmax			
	comp=Z,82nm,1.0s								
CABF	**La Chapelle**	**29.82**	**181**	*e*P		**P**	**18 21 45.2**	**-1.3**
	comp=Z,82nm,1.0s								
CABF	**La Chapelle**	**29.82**	**181**	*e*P		**P**	**18 21 45.2**	**-1.3**
	comp=Z,41nm,1.0s								
BGF	**Bois d'Agland**	**29.92**	**185**	*e*P		**P**	**18 21 45.8**	**-1.5**
	comp=Z,235nm,1.3s								
BGF	**Bois d'Agland**	**29.92**	**185**	*e*P		**P**	**18 21 45.8**	**-1.5**
BGF					pmax	pmax			
	comp=Z,235nm,1.3s								
BGF	**Bois d'Agland**	**29.92**	**185**	*e*P		**P**	**18 21 45.8**	**-1.5**
	comp=Z,235nm,1.3s								
BGF	**Bois d'Agland**	**29.92**	**185**	*e*P		**P**	**18 21 45.8**	**-1.5**
	comp=Z,118nm,1.3s								
MYKA	**Terra Mystica**	**29.94**	**171**⇑	*e*pP		**P**	**18 21 48.6**	**+1.1**
	comp=Z,90nm,1.5s								
MYKA	**Terra Mystica**	**29.94**	**171**	P		**P**	**18 21 48.6**	**+1.1**
	comp=Z,90nm,1.5s								
SOKA	**Soboth**	**29.95**	**169**⇑	*e*pP		**P**	**18 21 48.4**	**+0.8**
	comp=Z,47nm,1.6s								
SOKA	**Soboth**	**29.95**	**169**	P		**P**	**18 21 48.4**	**+0.8**
	comp=Z,47nm,1.6s								
MFF	**Saint Martin d**	**29.97**	**190**	*e*P		**P**	**18 21 46.0**	**-1.7**
	comp=Z,187nm,1.6s								
MFF	**Saint Martin d**	**29.97**	**190**	*e*P		**P**	**18 21 46.0**	**-1.7**
MFF					pmax	pmax			
	comp=Z,187nm,1.6s								
MFF	**Saint Martin d**	**29.97**	**190**	*e*P		**P**	**18 21 46.0**	**-1.7**
	comp=Z,187nm,1.6s								
MFF	**Saint Martin d**	**29.97**	**190**	*e*P		**P**	**18 21 46.0**	**-1.7**
	comp=Z,94nm,1.6s								
TUE	**Stuetta**	**29.98**	**176**	*e*P		**P**	**18 21 49.1**	**+1.1**
	comp=Z,79nm,1.5s								
TUE	**Stuetta**	**29.98**	**176**	*e*P		**P**	**18 21 49.1**	**+1.1**
	comp=Z,79nm,1.5s								
PERS	**Pernice**	**30.00**	**169**	*i* P		**P**	**18 21 48.6**	**+0.6**
PERS				*i*			18 21 54.8		
PERS	**Pernice**	**30.00**	**169**	*i* P		**P**	**18 21 48.6**	**+0.6**
SENIN	**Lac Senin/Sane**	**30.07**	**179**	*e*P		**P**	**18 21 49.5**	**+0.7**
	comp=Z,143nm,1.8s								
SENIN	**Lac Senin/Sane**	**30.07**	**179**	*e*P		**P**	**18 21 49.5**	**+0.7**
	comp=Z,143nm,1.8s								
OBKA	**Obir**	**30.10**	**169**⇑	*e*pP		**P**	**18 21 50.0**	**+1.1**
	comp=Z,120nm,1.6s,SNR=11								
OBKA	**Obir**	**30.10**	**169**	P		**P**	**18 21 50.0**	**+1.1**
	comp=Z,120nm,1.6s,SNR=11								
TCF	**Toulx Ste Croi**	**30.21**	**186**	*e*P		**P**	**18 21 48.2**	**-1.6**
	comp=Z,92nm,1.1s								
TCF	**Toulx Ste Croi**	**30.21**	**186**	*e*P		**P**	**18 21 48.2**	**-1.6**
TCF					pmax	pmax			
	comp=Z,92nm,1.1s								
TCF	**Toulx Ste Croi**	**30.21**	**186**	*e*P		**P**	**18 21 48.2**	**-1.6**
	comp=Z,92nm,1.1s								
TCF	**Toulx Ste Croi**	**30.21**	**186**	*e*P		**P**	**18 21 48.2**	**-1.6**
	comp=Z,46nm,1.1s								
PKS9	**Tamasi**	**30.22**	**164**⇑	*e*P		**P**	**18 21 50.9**	**+1.0**
GORS	**Gorjuse**	**30.27**	**170**	*e*P		**P**	**18 21 51.1**	**+0.7**
GORS	**Gorjuse**	**30.27**	**170**	*e*P		**P**	**18 21 51.1**	**+0.7**
PKS6	**Bocsa**	**30.30**	**162**⇑	*e*P		**P**	**18 21 51.6**	**+1.1**
DRGR		**30.36**	**158**	⇑P		**P**	**18 21 51.4**	**+0.2**
DRGR		**30.36**	**158**	⇑*i*P		**P**	**18 21 51.4**	**+0.2**
DRGR		**30.36**	**158**	⇑*i*P		**P**	**18 21 51.4**	**+0.2**
PKS2	**Kecel**	**30.38**	**163**⇑	*e*P		**P**	**18 21 53.4**	**+2.1**
AGO	**Saint Agoulin**	**30.42**	**185**⇑	*e*P		**P**	**18 21 51.8**	**+0.1**
AGO	**Saint Agoulin**	**30.42**	**185**⇑	*e*P		**P**	**18 21 51.8**	**+0.1**
AGO	**Saint Agoulin**	**30.42**	**185**⇑	*e*P		**P**	**18 21 51.8**	**+0.1**
VOY	**Vojsko**	**30.55**	**170**	*e*P		**P**	**18 21 53.1**	**+0.2**
VOY				*e*			18 21 58.5		
VOY	**Vojsko**	**30.55**	**170**	*e*P		**P**	**18 21 52.1**	**-0.8**
PKSM	**Moragy**	**30.62**	**164**	⇓P		P	18 21 47.9	-5.5
PKSM	**Moragy**	**30.62**	**164**⇓	*i*P		P	18 21 47.9	-5.5
PKSM	**Moragy**	**30.62**	**164**⇑	*e*P		**P**	**18 21 51.7**	**-1.7**
JAVS	**Javornik**	**30.69**	**170**	*i* P		**P**	**18 21 54.5**	**+0.4**
JAVS				*i*			18 21 59.9		
JAVS	**Javornik**	**30.69**	**170**	*i* P		**P**	**18 21 54.5**	**+0.4**
PYM	**Petit Puy Mans**	**30.73**	**185**⇑	*e*P		**P**	**18 21 54.8**	**+0.4**
PYM	**Petit Puy Mans**	**30.73**	**185**⇑	*e*P		**P**	**18 21 54.8**	**+0.4**
PYM	**Petit Puy Mans**	**30.73**	**185**⇑	*e*P		**P**	**18 21 54.8**	**+0.4**
PYM	**Petit Puy Mans**	**30.73**	**185**⇑	*e*P		**P**	**18 21 54.8**	**+0.4**
KIS	**Kishinev**	**30.79**	**150**	*e*P		**P**	**18 21 52.0**	**-2.9**
KIS				*e*S		**S**	**18 26 55.0**	**-2.5**
KIS					MLR	MLR			
	comp=Z,3µm,18.0s								
KIS					MLR	MLR			
	comp=Z,2µm,18.0s								
KIS	**Kishinev**	**30.79**	**150**	*e*P		**P**	**18 21 52.0**	**-2.9**
KIS	**Kishinev**	**30.79**	**150**	*e*PcP		PcP	18 24 28.0	-24
KIS				*e*S		**S**	**18 26 55.0**	**-2.5**
KIS				*e*L		L	18 30 26.0		
KIS					LRM1		18 33 12.0		
	comp=Z,2µm,24.0s								
KIS					LRM2		18 34 25.0		
	comp=Z,3µm,18.0s								
KIS	**Kishinev**	**30.79**	**150**	*e*P		**P**	**18 21 52.0**	**-2.9**
KIS				*e*S		**S**	**18 26 55.0**	**-2.5**
	comp=Z,2µm,18.0s								
VISS	**Visnje**	**30.81**	**169**	*i* P		**P**	**18 21 55.5**	**+0.3**
VISS				*i*			18 22 01.3		
VISS	**Visnje**	**30.81**	**169**	*i* P		**P**	**18 21 55.5**	**+0.3**
LPL	**La Plagne**	**30.92**	**180**	*e*P		**P**	**18 21 55.8**	**-0.5**
	comp=Z,218nm,1.6s								
LPL	**La Plagne**	**30.92**	**180**	*e*P		**P**	**18 21 55.8**	**-0.5**
LPL					pmax	pmax			
	comp=Z,218nm,1.6s								
LPL	**La Plagne**	**30.92**	**180**	*e*P		**P**	**18 21 55.8**	**-0.5**
	comp=Z,218nm,1.6s								
LPL	**La Plagne**	**30.92**	**180**	*e*P		**P**	**18 21 55.8**	**-0.5**
	comp=Z,109nm,1.6s								
LPG	**La Plagne**	**30.94**	**180**	*e*P		**P**	**18 21 56.1**	**-0.5**
	comp=Z,198nm,1.4s								
LPG	**La Plagne**	**30.94**	**180**	*e*P		**P**	**18 21 56.1**	**-0.5**
LPG					pmax	pmax			
	comp=Z,198nm,1.4s								
LPG	**La Plagne**	**30.94**	**180**	*e*P		**P**	**18 21 56.1**	**-0.5**
	comp=Z,198nm,1.4s								
LPG	**La Plagne**	**30.94**	**180**	*e*P		**P**	**18 21 56.1**	**-0.5**
	comp=Z,99nm,1.4s								
TESR	**Tescani**	**31.02**	**153**⇑	*i*P		**P**	**18 21 55.8**	**-1.2**
TESR	**Tescani**	**31.02**	**153**⇑	*i*P		**P**	**18 21 55.8**	**-1.2**
BOJS	**Bojanci**	**31.13**	**168**	*i* P		**P**	**18 21 58.0**	**+0.1**
BOJS	**Bojanci**	**31.13**	**168**	*i* P		**P**	**18 21 58.0**	**+0.1**
SSB	**Saint Sauveur**	**31.17**	**183**	*e*P		**P**	**18 21 57.4**	**-0.9**
SSB					pmax	pmax			
	comp=Z,83nm,1.7s								
SSB	**Saint Sauveur**	**31.17**	**183**	*e*P		**P**	**18 21 57.4**	**-0.9**
	comp=Z,83nm,1.7s								
SSB	**Saint Sauveur**	**31.17**	**183**	*e*P		**P**	**18 21 57.4**	**-0.9**
	comp=Z,83nm,1.7s								
RJF	**Les Rejaudoux**	**31.21**	**187**	*e*P		**P**	**18 21 57.1**	**-1.5**
	comp=Z,143nm,1.3s								
RJF				*e*R					
	comp=Z,734nm,22.2s								
RJF	**Les Rejaudoux**	**31.21**	**187**	*e*P		**P**	**18 21 57.1**	**-1.5**
RJF					pmax	pmax			
	comp=Z,143nm,1.3s								
RJF	**Les Rejaudoux**	**31.21**	**187**	*e*P		**P**	**18 21 57.1**	**-1.5**
	comp=Z,143nm,1.3s								
RJF	**Les Rejaudoux**	**31.21**	**187**	*e*P		**P**	**18 21 57.1**	**-1.5**
	comp=Z,72nm,1.3s								
LBL	**Lubilhac**	**31.24**	**185**	*e*P		**P**	**18 21 59.5**	**+0.5**
LBL	**Lubilhac**	**31.24**	**185**	*e*P		**P**	**18 21 59.5**	**+0.5**
LBL	**Lubilhac**	**31.24**	**185**	*e*P		**P**	**18 21 59.5**	**+0.5**
LBL	**Lubilhac**	**31.24**	**185**	*e*P		**P**	**18 21 59.5**	**+0.5**
BNI	**Bardonecchia**	**31.38**	**180**	*e*P		**P**	**18 22 01.0**	**+0.6**
BNI					pmax	pmax			
	comp=Z,183nm,1.7s								
BNI	**Bardonecchia**	**31.38**	**180**	*e*P		**P**	**18 22 00.9**	**+0.6**
	comp=Z,183nm,1.7s								
BNI	**Bardonecchia**	**31.38**	**180**	*e*P		**P**	**18 22 00.9**	**+0.6**
	comp=Z,183nm,1.7s								
BZS	**Buzias**	**31.43**	**160**	⇓P		**P**	**18 22 00.5**	**-0.1**
BZS	**Buzias**	**31.43**	**160**	⇓*i*P		**P**	**18 22 00.5**	**-0.1**
BZS	**Buzias**	**31.43**	**160**	⇓*i*P		**P**	**18 22 00.5**	**-0.1**
ORIF	**Oris-en-Rattie**	**31.52**	**181**	*e*P		**P**	**18 22 00.5**	**-1.0**
	comp=Z,167nm,1.6s								
ORIF				*e*R					
	comp=Z,2µm,22.8s								
ORIF	**Oris-en-Rattie**	**31.52**	**181**	*e*P		**P**	**18 22 00.5**	**-1.0**
ORIF					pmax	pmax			
	comp=Z,167nm,1.6s								
ORIF	**Oris-en-Rattie**	**31.52**	**181**	*e*P		**P**	**18 22 00.5**	**-1.0**
	comp=Z,167nm,1.6s								
ORIF	**Oris-en-Rattie**	**31.52**	**181**	*e*P		**P**	**18 22 00.5**	**-1.0**
	comp=Z,84nm,1.6s								
CAF	**Calviac**	**31.57**	**186**	*e*P		P	18 21 58.8	-3.1
	comp=Z,69nm,1.7s								
CAF	**Calviac**	**31.57**	**186**	*e*P		P	18 21 58.8	-3.1
CAF					pmax	pmax			
	comp=Z,69nm,1.7s								
CAF	**Calviac**	**31.57**	**186**	*e*P		P	18 21 58.8	-3.1
	comp=Z,69nm,1.7s								
CAF	**Calviac**	**31.57**	**186**	*e*P		P	18 21 58.8	-3.1
	comp=Z,69nm,1.7s								
VIVF	**Saint-Julien-l**	**31.59**	**183**	*e*P		**P**	**18 22 00.9**	**-1.1**
	comp=Z,174nm,1.7s								
VIVF	**Saint-Julien-l**	**31.59**	**183**	*e*P		**P**	**18 22 00.9**	**-1.1**
VIVF					pmax	pmax			
	comp=Z,174nm,1.7s								
VIVF	**Saint-Julien-l**	**31.59**	**183**	*e*P		**P**	**18 22 00.9**	**-1.1**
	comp=Z,174nm,1.7s								
VIVF	**Saint-Julien-l**	**31.59**	**183**	*e*P		**P**	**18 22 00.9**	**-1.1**
	comp=Z,87nm,1.7s								
LFF	**La Frestale**	**31.60**	**188**	*e*P		**P**	**18 22 00.9**	**-1.1**
	comp=Z,100nm,1.4s								
LFF	**La Frestale**	**31.60**	**188**	*e*P		**P**	**18 22 00.9**	**-1.1**
LFF					pmax	pmax			
	comp=Z,100nm,1.4s								
LFF	**La Frestale**	**31.60**	**188**	*e*P		**P**	**18 22 00.9**	**-1.1**
	comp=Z,100nm,1.4s								
LFF	**La Frestale**	**31.60**	**188**	*e*P		**P**	**18 22 00.9**	**-1.1**
	comp=Z,50nm,1.4s								
VRI	**Vrincioaia**	**31.67**	**153**	⇑P		**P**	**18 22 02.9**	**+0.2**
VRI	**Vrincioaia**	**31.67**	**153**⇑	*i*P		**P**	**18 22 02.9**	**+0.2**
VRI	**Vrincioaia**	**31.67**	**153**⇑	*i*P		**P**	**18 22 02.9**	**+0.2**
MBDF	**Montbardon**	**31.71**	**180**	*e*P		**P**	**18 22 02.9**	**-0.3**
	comp=Z,276nm,1.8s								
MBDF	**Montbardon**	**31.71**	**180**	*e*P		**P**	**18 22 02.9**	**-0.3**
MBDF					pmax	pmax			
	comp=Z,276nm,1.8s								
MBDF	**Montbardon**	**31.71**	**180**	*e*P		**P**	**18 22 02.9**	**-0.3**
	comp=Z,276nm,1.8s								
MBDF	**Montbardon**	**31.71**	**180**	*e*P		**P**	**18 22 02.9**	**-0.3**
	comp=Z,138nm,1.8s								
VOIR		**31.92**	**155**	⇑P		**P**	**18 22 05.3**	**+0.3**
VOIR		**31.92**	**155**	⇑*i*P		**P**	**18 22 05.3**	**+0.3**
VOIR		**31.92**	**155**	⇑*i*P		**P**	**18 22 05.3**	**+0.3**
MLR	**Muntele Rosu**	**31.96**	**154**	P		**P**	**18 22 05.3**	**0.0**
MLR	**Muntele Rosu**	**31.96**	**154**	⇑*i*P		P	18 22 09.5	+4.1
MLR	**Muntele Rosu**	**31.96**	**154**	P		**P**	**18 22 05.3**	**0.0**
	comp=Z,1.4nm,1.0s,baz=344,slow=8.7,SNR=4.3								
MLR					LR	LR	18 35 56.1		
	comp=Z,451nm,20.0s,baz=176,slow=38								
MLR	**Muntele Rosu**	**31.96**	**154**	P		**P**	**18 22 05.3**	**0.0**
VLC	**Villacollemand**	**32.31**	**175**	*e*P		**P**	**18 22 09.2**	**+0.9**
	comp=Z,115nm,1.3s								
VLC	**Villacollemand**	**32.31**	**175**	*e*P		**P**	**18 22 09.2**	**+0.9**
	comp=Z,115nm,1.3s								
LASF	**Ste Croix**	**32.38**	**184**	*e*P		**P**	**18 22 08.7**	**-0.3**
	comp=Z,270nm,1.6s								
LASF	**Ste Croix**	**32.38**	**184**	*e*P		**P**	**18 22 08.7**	**-0.3**
	comp=Z,270nm,1.6s								
LASF	**Ste Croix**	**32.38**	**184**	*e*P		**P**	**18 22 08.7**	**-0.3**
	comp=Z,135nm,1.6s								
TOUF	**Mont Tournerai**	**32.42**	**179**⇑	*e*P		**P**	**18 22 10.5**	**+1.0**
TOUF	**Mont Tournerai**	**32.42**	**179**⇑	*e*P		**P**	**18 22 10.5**	**+1.0**
TOUF	**Mont Tournerai**	**32.42**	**179**⇑	*e*P		**P**	**18 22 10.5**	**+1.0**
TOUF	**Mont Tournerai**	**32.42**	**179**⇑	*e*P		**P**	**18 22 10.5**	**+1.0**
AUTN	**L'Aution**	**32.44**	**179**	*e*P		**P**	**18 22 11.0**	**+1.3**
AUTN	**L'Aution**	**32.44**	**179**	*e*P		**P**	**18 22 11.0**	**+1.3**
AUTN	**L'Aution**	**32.44**	**179**	*e*P		**P**	**18 22 11.0**	**+1.3**
AUTN	**L'Aution**	**32.44**	**179**	*e*P		**P**	**18 22 11.0**	**+1.3**
SAOF	**Saorge**	**32.45**	**179**⇑	*e*P		**P**	**18 22 10.8**	**+1.2**
SAOF	**Saorge**	**32.45**	**179**⇑	*e*P		**P**	**18 22 10.8**	**+1.2**
SAOF	**Saorge**	**32.45**	**179**⇑	*e*P		**P**	**18 22 10.8**	**+1.2**
SAOF	**Saorge**	**32.45**	**179**⇑	*e*P		**P**	**18 22 10.8**	**+1.2**
SMRF	**Simiane la Rot**	**32.46**	**182**	*e*P		**P**	**18 22 08.6**	**-1.1**
SMRF	**Simiane la Rot**	**32.46**	**182**	*e*P		**P**	**18 22 08.6**	**-1.1**
SMRF	**Simiane la Rot**	**32.46**	**182**	*e*P		**P**	**18 22 08.6**	**-1.1**
SBF	**Sospel**	**32.57**	**179**	*e*P		**P**	**18 22 09.8**	**-0.9**
	comp=Z,434nm,1.5s								
SBF	**Sospel**	**32.57**	**179**	*e*P		**P**	**18 22 09.8**	**-0.9**
SBF					pmax	pmax			
	comp=Z,435nm,1.5s								
SBF	**Sospel**	**32.57**	**179**	*e*P		**P**	**18 22 09.8**	**-0.9**
	comp=Z,434nm,1.5s								
SBF	**Sospel**	**32.57**	**179**	*e*P		**P**	**18 22 09.8**	**-0.9**
	comp=Z,217nm,1.5s								
AKTK	**Aktyubinsk**	**32.65**	**112**	P		**P**	**18 22 10.6**	**-0.6**
	comp=Z,52nm,1.2s								
AKTO	**Aktyubinsk**	**32.65**	**112**	P		**P**	**18 22 10.6**	**-0.6**
AKTO					pmax	pmax			
	comp=Z,52nm,1.2s								
REVF	**Revere**	**32.70**	**179**	*e*P		**P**	**18 22 11.0**	**-0.7**
REVF	**Revere**	**32.70**	**179**	*e*P		**P**	**18 22 11.0**	**-0.7**
REVF	**Revere**	**32.70**	**179**	*e*P		**P**	**18 22 11.0**	**-0.7**
REVF	**Revere**	**32.70**	**179**	*e*P		**P**	**18 22 11.0**	**-0.7**
ZRNK	**Zerenda**	**32.81**	**99**	P		**P**	**18 22 12.3**	**-0.3**
ZRNK					pmax	pmax			
	comp=Z,10.0nm,1.0s								
ZRNK	**Zerenda**	**32.81**	**99**	P		**P**	**18 22 12.3**	**-0.3**
	comp=Z,10.0nm,1.0s								
DIVS	**Divibare**	**32.82**	**162**⇑	*i*P		**P**	**18 22 12.9**	**+0.1**
FRF	**La Foret Royal**	**32.87**	**180**	*e*P		**P**	**18 22 12.0**	**-1.2**
	comp=Z,111nm,1.4s								
FRF	**La Foret Royal**	**32.87**	**180**	*e*P		**P**	**18 22 12.0**	**-1.2**
FRF					pmax	pmax			
	comp=Z,111nm,1.4s								
FRF	**La Foret Royal**	**32.87**	**180**	*e*P		**P**	**18 22 12.0**	**-1.2**
	comp=Z,111nm,1.4s								
FRF	**La Foret Royal**	**32.87**	**180**	*e*P		**P**	**18 22 12.0**	**-1.2**
	comp=Z,56nm,1.4s								
BBLS	**Lazići**	**33.01**	**163**⇑	*i*P		**P**	**18 22 14.9**	**+0.4**
BRVK	**Borovoye**	**33.02**	**98**	P		**P**	**18 22 14.0**	**-0.4**
	comp=Z,146nm,1.1s,SNR=10								
BRVK	**Borovoye**	**33.02**	**98**	P		**P**	**18 22 14.9**	**+0.6**
BRVK					pmax	pmax			
	comp=Z,92nm,1.3s								
BRVK	**Borovoye**	**33.02**	**98**	*e*P		**P**	**18 22 15.0**	**+0.6**
	comp=Z,40nm,1.1s								
BRVK	**Borovoye**	**33.02**	**98**	*e*P		**P**	**18 22 15.0**	**+0.6**
	comp=Z,40nm,1.1s								
BVA0	**Borovoye Array**	**33.07**	**98**	*i* P		**P**	**18 22 15.2**	**+0.3**
BVA0					pmax	pmax			
	comp=Z,54nm,1.3s								
BVA0	**Borovoye Array**	**33.07**	**98**	*i* P		**P**	**18 22 15.2**	**+0.3**
	comp=Z,54nm,1.3s								
BVAR	**Borovoye Array**	**33.07**	**98**	P		**P**	**18 22 15.0**	**+0.1**
BVAR					pmax	pmax			
	comp=Z,13nm,0.8s								
BVAR	**Borovoye Array**	**33.07**	**98**	P		**P**	**18 22 15.0**	**+0.1**
BVAR	**Borovoye Array**	**33.07**	**98**	P		**P**	**18 22 15.0**	**+0.1**
	comp=Z,13nm,0.8s,baz=327,slow=7.4,SNR=43								
BVAR	**Borovoye Array**	**33.07**	**98**	P		**P**	**18 22 15.0**	**+0.1**
GRUS	**Gruza**	**33.08**	**161**⇑	*i*P		**P**	**18 22 15.3**	**+0.3**
LMR	**La Mourre**	**33.10**	**180**	*e*P		**P**	**18 22 14.0**	**-1.2**
	comp=Z,205nm,1.6s								
LMR	**La Mourre**	**33.10**	**180**	*e*P		**P**	**18 22 14.0**	**-1.2**
LMR					pmax	pmax			
	comp=Z,205nm,1.6s								
LMR	**La Mourre**	**33.10**	**180**	*e*P		**P**	**18 22 14.0**	**-1.2**
	comp=Z,205nm,1.6s								
LMR	**La Mourre**	**33.10**	**180**	*e*P		**P**	**18 22 14.0**	**-1.2**
	comp=Z,102nm,1.6s								
MTLF	**Montolieu**	**33.15**	**186**	*e*P		**P**	**18 22 14.8**	**-0.9**
	comp=Z,73nm,1.4s								
MTLF	**Montolieu**	**33.15**	**186**	*e*P		**P**	**18 22 14.8**	**-0.9**
MTLF					pmax	pmax			
	comp=Z,73nm,1.4s								
MTLF	**Montolieu**	**33.15**	**186**	*e*P		**P**	**18 22 14.8**	**-0.9**
	comp=Z,73nm,1.4s								
MTLF	**Montolieu**	**33.15**	**186**	*e*P		**P**	**18 22 14.8**	**-0.9**
	comp=Z,36nm,1.4s								
BOLS	**Boljevac**	**33.24**	**160**	*e*P		**P**	**18 22 14.1**	**-2.3**
TIRR	**Tirgusor**	**33.25**	**151**	⇑P		**P**	**18 22 16.0**	**-0.5**
TIRR	**Tirgusor**	**33.25**	**151**	⇑*i*P		**P**	**18 22 16.0**	**-0.5**
TIRR	**Tirgusor**	**33.25**	**151**	⇑*i*P		**P**	**18 22 16.0**	**-0.5**
VOSK	**Vostochnaya**	**33.49**	**97**	P		**P**	**18 22 17.3**	**-1.2**
VOSK					pmax	pmax			
	comp=Z,62nm,1.4s								
VOSK	**Vostochnaya**	**33.49**	**97**	P		**P**	**18 22 17.3**	**-1.2**
	comp=Z,62nm,1.4s								
SIM	**Simferopol'**	**33.49**	**144**	*de*P		**P**	**18 22 21.1**	**+2.5**
SIM				*e*S		**S**	**18 27 43.0**	**+3.4**
SIM					pmax	pmax			
	comp=Z,130nm,8.7s								
SIM					pmax	pmax			
	comp=Z,17nm,1.4s								
SIM					MLR	MLR			
	comp=Z,1µm,18.0s								
SIM	**Simferopol'**	**33.49**	**144**	*e*P		**P**	**18 22 21.1**	**+2.5**
	comp=Z,17nm,1.4s								
**S

MMB **Musomiste** 35.61 158 *e*P P 18 22 37.0 0.0
MMB **Musomiste** 35.61 158 *e*P P 18 22 37.0 0.0
KRAR **Krasnoyarsk** 35.63 74*c i*P P 18 22 35.8 -1.1
KRAR pmax pmax
comp=Z,45nm,1.5s
KRAR Krasnoyarsk 35.63 74 *i* P P 18 22 35.8 -1.1
comp=Z,45nm,1.5s
POLO Lamas de Olo 35.63 199 *e*P P 18 22 37.8 +0.5
comp=Z,32nm,1.5s
POLO Lamas de Olo 35.63 199 *e*P P 18 22 37.8 +0.5
comp=Z,32nm,1.5s
ZAA0 Zalesovo Array 35.64 83 *e*P P 18 22 36.6 -0.5
ZAA0 Zalesovo Array 35.64 83 *e*P P 18 22 36.6 -0.5
ZALV Zalesovo Beam 35.64 83 P P 18 22 36.7 -0.4
ZALV 18 25 05.1
ZALV pmax pmax
comp=Z,10.0nm,0.8s
ZALV pmax pmax
comp=Z,5.0nm,0.7s
ZALV MLR MLR
comp=Z,2µm,18.6s
ZALV Zalesovo Beam 35.64 83 P P 18 22 36.7 -0.4
ZALV PcP PcP 18 25 05.1 0.0
ZALV Zalesovo Beam 35.64 83 P P 18 22 36.7 -0.4
comp=Z,10nm,0.8s,baz=333,slow=8.9,SNR=49
ZALV PcP PcP 18 25 05.1 0.0
comp=Z,5.0nm,0.7s,baz=310,slow=4.0,SNR=4.7
ZALV LR LR 18 41 07.2
comp=Z,2µm,18.6s,baz=250,slow=43
ZALV Zalesovo Beam 35.64 83 P P 18 22 36.7 -0.4
ZALV Zalesovo Beam 35.64 83 PcP PcP 18 25 05.1 0.0
SOC Sochi 35.67 137 *e*P P 18 22 36.9 -0.6
SOC *e**SP sP 18 22 41.5 -1.6
SOC *e* 18 23 56.5
SOC *e*S S 18 28 13.8 +0.6
SOC *e*SS SnSn 18 30 33.8 -0.5
SOC *e* 18 32 55.8
SOC pmax pmax
comp=Z,17nm,1.2s
SOC MLR MLR
comp=Z,3µm,22.0s
SOC Sochi 35.67 137 *e*P P 18 22 36.9 -0.6
comp=Z,17nm,1.2s
SOC *e*S S 18 28 13.8 +0.6
SOC *e*ScS ScS 18 32 55.8 +0.5
comp=Z,3µm,22.0s
PVRL Vila Real 35.72 199 *e*P P 18 22 40.1 +2.1
comp=Z,85nm,2.0s
PVRL Vila Real 35.72 199 *e*P P 18 22 40.1 +2.1
comp=Z,85nm,2.0s
VAY Valandovo 35.78 160 *e*P P 18 22 37.3 -1.1
MVO Moncorvo 35.78 198 *e*P P 18 22 39.4 +0.9
comp=Z,67nm,1.3s
MVO *e*LR LR 18 32 48.6
comp=Z,444nm,16.0s
MVO Moncorvo 35.78 198 *e*P P 18 22 39.4 +0.9
comp=Z,67nm,1.3s
KIV Kislovodsk 35.81 134 *e*P P 18 22 36.7 -2.0
KIV *e* 18 23 57.3
KIV *e*S S 18 28 13.8 -1.7
KIV pmax pmax
comp=Z,27nm,1.0s
KIV MLR MLR
comp=Z,1µm,16.0s
KIV Kislovodsk 35.81 134 P P 18 22 40.2 +1.5
comp=Z,147nm,1.5s,SNR=9.1
KIV Kislovodsk 35.81 134 *e*P P 18 22 36.7 -2.0
comp=Z,27nm,1.0s
KIV *e*S S 18 28 13.8 -1.7
COLD Coldfoot 35.96 345 *e*P P 18 22 41.5 +1.9
comp=Z,50nm,1.2s
COLD Coldfoot 35.96 345 *e*P P 18 22 41.5 +1.9
comp=Z,50nm,1.2s
BIA Bitola 35.98 161 *e*P P 18 22 38.4 -1.8
KBZ Khabaz 36.06 133 P P 18 22 41.5 +0.7
KBZ pmax pmax
comp=Z,16nm,0.9s
KBZ MLR MLR
comp=Z,3µm,19.0s
KBZ Khabaz 36.06 133 P P 18 22 41.5 +0.7
KBZ Khabaz 36.06 133 P P 18 22 41.5 +0.7
comp=Z,16nm,0.9s,baz=326,slow=6.0,SNR=23
KBZ LR LR 18 37 58.7
comp=Z,3µm,19.0s,baz=335,slow=37
KBZ Khabaz 36.06 133 P P 18 22 41.5 +0.7
GRG Griva 36.12 160 *e*PN P 18 22 41.5 +0.1
FNA Florina 36.22 161 *e*PN P 18 22 41.5 -0.7
PVIS Viseu 36.29 199 *e*P P 18 22 44.0 +1.1
comp=Z,64nm,1.6s
PVIS Viseu 36.29 199 *e*P P 18 22 44.0 +1.1
comp=Z,64nm,1.6s
SOH Sokhos 36.34 159 *e*PN P 18 22 43.4 +0.1
BZK Bozkurt 36.41 145 *e*P P 18 22 44.9 +1.1
ALN Alexandroupoli 36.52 155 *e*PB P 18 22 45.5 +0.8
BGKT Bogazkoy 36.53 152 *e*P P 18 22 48.8 +4.0
MTE Manteigas 36.58 199 *e*P P 18 22 48.6 +3.3
comp=Z,53nm,1.5s
MTE *e*LQ LQ 18 31 21.4
MTE *e*LR LR 18 33 26.1
comp=Z,302nm,20.0s
MTE Manteigas 36.58 199 *e*P P 18 22 44.7 -0.7
comp=Z,40nm,1.3s
MTE Manteigas 36.58 199 *e*P P 18 22 44.7 -0.7
comp=Z,40nm,1.3s
YKA Yellowknife Ar 36.61 318 P P 18 22 45.6 +0.3
YKA PcP PcP 18 25 07.7 -0.1
YKA Yellowknife Ar 36.61 318 P P 18 22 45.6 +0.3
comp=Z,15nm,1.1s,baz=20,slow=9.0,SNR=36
YKA PcP PcP 18 25 07.7 -0.1
comp=Z,4.0nm,1.0s,baz=12,slow=2.9,SNR=9.0
YKA Yellowknife Ar 36.61 318 P P 18 22 45.6 +0.3
CUC Castrocucco 36.66 168 *e*P P 18 22 45.7 -0.3
comp=Z,69nm,1.2s
CUC Castrocucco 36.66 168 *e*P P 18 22 45.7 -0.3
comp=Z,69nm,1.2s
KZN Kozani 36.72 161 *e*PN P 18 22 46.0 -0.5
MFT Murefte 36.75 154 *e*P P 18 22 49.1 +2.2
RKY Sarkoy-Tekirda 36.84 154 *e*P P 18 22 47.9 +0.4
HRT Hereke 36.98 151 *e*P P 18 22 47.9 -0.9
LIT Litokhoron 36.98 160 *e*PN P 18 22 49.5 +0.8
ESDC Sonseca Array 37.07 194 P P 18 22 49.5 0.0
ESDC Sonseca Array 37.07 194 P P 18 22 49.5 0.0
comp=Z,10nm,1.1s,baz=4.0,slow=8.0,SNR=35
ESDC Sonseca Array 37.07 194 P P 18 22 49.5 0.0
ESLA Sonseca Array 37.07 194 *e*P P 18 22 49.4 -0.1
comp=Z,30nm,1.5s
ESLA Sonseca Array 37.07 194 *e*P P 18 22 49.4 -0.1
comp=Z,30nm,1.5s
PCBR Castelo Branco 37.13 198 *e*P P 18 22 53.2 +3.3
comp=Z,61nm,1.5s
ARMT Armutlu 37.14 152 *e*P P 18 22 51.0 +1.0
KRBG Karabiga-Canak 37.14 154 *e*P P 18 22 52.8 +2.8
KURK Kurchatov 37.16 91 P P 18 22 50.9 +0.8
comp=Z,400nm,1.2s,SNR=30
KURK Kurchatov 37.16 91*c i*P P 18 22 50.4 +0.3
KURK pmax pmax
comp=Z,68nm,1.6s
KURK Kurchatov 37.16 91 *e*P P 18 22 50.1 0.0
comp=Z,122nm,1.2s
KURK PcP PcP 18 25 09.6 -0.1
KURK Kurchatov 37.16 91 *i* P P 18 22 50.4 +0.3
comp=Z,68nm,1.6s
KEK Kerkira 37.17 163 *e*PG P 18 22 50.0 -0.2
PAB San Pablo 37.22 194 *e*P P 18 22 50.7 -0.1
PAB pmax pmax
comp=Z,55nm,1.2s
PAB San Pablo 37.22 194 *e*P P 18 22 50.7 -0.1
comp=Z,55nm,1.2s
PAB San Pablo 37.22 194 *e*P P 18 22 50.7 -0.1
comp=Z,55nm,1.2s
KURBB Kurchatov Arra 37.22 91 P P 18 22 50.6 0.0
comp=Z,17nm,0.9s,baz=332,slow=7.8,SNR=133
KURBB PcP PcP 18 25 09.6 -0.3
comp=Z,3.8nm,0.8s,baz=331,slow=3.3,SNR=5.5
PAIG Paliouri 37.26 158 *e*PB P 18 22 43.0 -8.0
ONI Oni 37.26 133 P P 18 22 51.3 +0.2
YAK Yakutsk 37.27 41 *e*P P 18 22 50.5 -0.4
YAK *e* 18 25 09.2
YAK *e*S S 18 28 32.6 -4.7
YAK *e*SSS SSS 18 31 11.1
YAK *e* 18 33 06.9
YAK pmax pmax
comp=Z,12nm,1.1s
YAK pmax pmax
comp=N,11nm,1.6s
YAK pmax pmax
comp=E,5.0nm,1.5s
YAK pmax pmax
comp=Z,88nm,2.4s
YAK pmax pmax
comp=E,33nm,1.9s
YAK pmax pmax
comp=N,75nm,1.9s
YAK smax smax
comp=E,125nm,3.4s
YAK smax smax
comp=N,58nm,3.1s
YAK MLR MLR
comp=Z,619nm,13.0s
YAK MLR MLR
comp=N,481nm,11.0s
YAK MLR MLR
comp=E,241nm,14.0s
YAK Yakutsk 37.27 41 *e*P P 18 22 50.5 -0.4
comp=E,75nm,1.9s
YAK Yakutsk 37.27 41 *e*PcP PcP 18 25 09.2 -0.7
YAK *e*ScS ScS 18 33 06.9 +3.3
comp=E,481nm,11.0s
JAN Janina 37.30 162 *e*PN P 18 22 51.5 +0.1
ADVT Abdulvahap 37.38 151 *e*P P 18 22 52.4 +0.4
KCTX Karacabey (Bur 37.38 152 *e*P P 18 22 54.2 +2.1
PTOM Tomar 37.42 199 *e*P P 18 22 53.8 +1.4
comp=E,114nm,0.8s
PTOM Tomar 37.42 199 *e*P P 18 22 53.8 +1.4
comp=E,114nm,0.8s
GULT Gulveren 37.47 150 *e*P P 18 22 55.4 +2.5
MDUB Mudurnu 37.51 149 *e*P P 18 22 53.7 +0.4
TIP Timpagrande 37.52 167 *e*P P 18 22 53.7 +0.4
comp=E,138nm,1.3s
TIP Timpagrande 37.52 167 *e*P P 18 22 53.7 +0.4
comp=E,138nm,1.3s
PMRV Marv??o 37.53 198 *e*P P 18 22 51.0 -2.4
comp=E,95nm,1.4s
PMRV *i* P PcS 18 28 51.6 -8.0
PMRV *e*LR LR 18 33 54.8
comp=E,245nm,18.0s
PMRV Marv??o 37.53 198 *e*P P 18 22 51.0 -2.4
comp=E,95nm,1.4s
KVT Kavak 37.56 143 *e*P P 18 22 53.7 +0.1
CAVI Cavuskoy 37.62 151 *e*P P 18 22 55.1 +1.0
MAK Makhachkala 37.63 128 *e*P P 18 22 56.2 +2.1
MAK *e* 18 24 19.6
MAK *e*S S 18 28 46.7 +3.6
MAK pmax pmax
comp=Z,301nm,1.3s
MAK MLR MLR
comp=Z,2µm,16.0s
MAK Makhachkala 37.63 128 *e*P P 18 22 56.2 +2.1
comp=Z,301nm,1.3s
CANT Cankiri 37.69 146 *e*P P 18 22 56.5 +1.7
EGAK Eagle 37.70 338 *e*P P 18 22 55.9 +1.4
comp=Z,104nm,1.3s
EGAK Eagle 37.70 338 *e*P P 18 22 55.9 +1.4
comp=Z,104nm,1.3s
BALB Balikesir 37.95 153 *e*P P 18 22 58.3 +1.4
PMTG Montargil 37.96 199 *e*P P 18 22 56.0 -0.9
PMTG Montargil 37.96 199 *e*P P 18 22 56.0 -0.9
AGG Agios Georgios 38.04 160 *e*PG P 18 22 57.0 -0.7
BCA Borcka 38.07 136 *e*P P 18 23 01.0 +3.1
EVR Evrytania 38.10 161 *e*PB P 18 22 58.5 +0.2
PESTR Estremoz 38.11 198 *e*P P 18 22 59.1 +0.9
comp=Z,71nm,1.5s
PESTR Estremoz 38.11 198 *e*P P 18 22 59.1 +0.9
comp=Z,71nm,1.5s
COLA College 38.13 343 *e*P P 18 23 00.9 +2.8
COLA pmax pmax
comp=Z,19nm,1.3s
COLA College 38.13 343 *e*P P 18 23 00.9 +2.8
comp=Z,19nm,1.3s
COLA College 38.13 343 *e*P P 18 23 00.9 +2.8
comp=Z,19nm,1.3s
LKD2 Lefkada island 38.15 162 *e*PN P 18 22 58.0 -0.6
ILAR Eielson Array 38.17 342 P P 18 23 00.1 +1.7
ILAR Eielson Array 38.17 342 P P 18 23 00.1 +1.7
comp=Z,16nm,1.1s,baz=2.1,slow=7.1,SNR=97
ILAR Eielson Array 38.17 342 P P 18 23 00.1 +1.7
CORM Corum 38.25 145 *e*P P 18 23 06.4 +6.8
ANTO Ankara 38.31 147 *e*P P 18 23 00.1 +0.1
ANTO Ankara 38.31 147 *e*P P 18 23 00.2 +0.2
ANTO pmax pmax
comp=Z,59nm,1.8s
ANTO Ankara 38.31 147 P P 18 23 00.7 +0.7
SNR=9.1
ANTO Ankara 38.31 147 *e*P P 18 23 00.2 +0.2
comp=Z,59nm,1.8s
ANTO Ankara 38.31 147 *e*P P 18 23 00.2 +0.2
comp=Z,59nm,1.8s
TVSB Tavsanli 38.31 151 *e*P P 18 23 01.0 +0.9
TBLG Delisi 38.32 132 *e*P P 18 23 00.7 +0.7
TBLG Delisi 38.32 132 P P 18 23 00.8 +0.7
TBLG Delisi 38.32 132 *e*P P 18 23 00.7 +0.7
LIS Lisbon 38.38 200 *e*P P 18 23 00.1 -0.4
LIS AMb AMB 18 23 20.5
comp=Z,134nm,1.2s
LIS *e*S S 18 28 55.3 +0.8
LIS Lisbon 38.38 200 *e*P P 18 23 00.1 -0.4
comp=Z,134nm,1.2s
LIS *e*S S 18 28 55.3 +0.8
LIS Lisbon 38.38 200 *e*P P 18 23 00.1 -0.4
LIS *e*S S 18 28 55.3 +0.8
LIS Lisbon 38.38 200 *e*P P 18 23 00.1 -0.4
comp=Z,134nm,1.2s
LIS *e*S S 18 28 55.3 +0.8
RSDY Resadiye-TOKAT 38.42 141 *e*P P 18 23 01.9 +1.0
AKH Akhalkalaki 38.42 134 P P 18 23 02.2 +1.1
LKR Lokris 38.47 159 *e*PG P 18 23 02.5 +1.3
EVO Evora 38.47 199 *e*P P 18 22 59.2 -2.1
comp=Z,59nm,1.5s
EVO *e*R
comp=Z,1µm,21.5s
EVOP Sao Brissos 38.49 199 *e*P P 18 22 59.2 -2.2
EVOP pmax pmax
comp=Z,59nm,1.5s
EVOP Sao Brissos 38.49 199 *e*P P 18 22 59.2 -2.2
comp=Z,59nm,1.5s
EVOP Sao Brissos 38.49 199 *e*P P 18 22 59.2 -2.2
comp=Z,30nm,1.5s
BR131 Keskin Array S 38.56 146 *e*P P 18 23 02.4 +0.2
comp=Z,10nm,1.0s
BR131 Keskin Array S 38.56 146 *e*P P 18 23 02.4 +0.2
comp=Z,10nm,1.0s
BRTR Keskin Array B 38.56 146 P P 18 23 02.4 +0.2
BRTR Keskin Array B 38.56 146 P P 18 23 02.4 +0.2
comp=Z,7.7nm,0.9s,baz=346,slow=5.6,SNR=36
BRTR LR LR 18 40 19.9
comp=Z,1µm,21.9s,baz=196,slow=38
BRTR Keskin Array B 38.56 146 P P 18 23 02.4 +0.2
SVRH Sivrihisar-ESK 38.56 149 *e*P P 18 23 03.7 +1.5
EFP Efpalio 38.60 161 *e*PG P 18 23 03.0 +0.7
KALE Kalithea 38.65 161 *e*PG P 18 23 02.0 -0.9
TRIZ Trizonia 38.67 161 *e*PG P 18 23 08.5 +5.6
DGRG David-gareji 38.71 131 P P 18 23 03.7 +0.4
PBAR Barrancos 38.76 198 *e*P P 18 23 04.3 +0.6
comp=Z,83nm,1.3s
PBAR Barrancos 38.76 198 *e*P P 18 23 04.3 +0.6
comp=Z,83nm,1.3s
AFSR Afˆar-Bala (A 38.76 147 *e*P P 18 23 02.3 -1.5
LAKA Lakka 38.79 161 *e*PG P 18 23 04.0 0.0
SVSK Karacayir 38.84 142 *e*P P 18 23 07.3 +3.0
KAMT Kaman 38.92 146 *e*P P 18 23 05.9 +0.7
PNCL Nicolau / Gran 38.93 199 *e*P P 18 23 07.6 +2.5
comp=Z,49nm,1.8s
PNCL Nicolau / Gran 38.93 199 *e*P P 18 23 07.6 +2.5
comp=Z,49nm,1.8s
PBEJ Beja 38.96 199 *e*P P 18 23 06.8 +1.4
comp=Z,102nm,1.6s
PBEJ Beja 38.96 199 *e*P P 18 23 06.8 +1.4
comp=Z,102nm,1.6s
KLV Kalavryta, Ach 39.00 161 *e*PG P 18 23 05.0 -0.8
DOT Dot Lake 39.06 340 *e*P P 18 23 08.5 +2.5
comp=Z,76nm,1.2s
DOT Dot Lake 39.06 340 *e*P P 18 23 08.5 +2.5
comp=Z,76nm,1.2s
LTK Loutraki 39.09 160 *e*PG P 18 23 07.0 +0.6
GUR Goura 39.12 160 *e*PG P 18 23 07.5 +0.7
PTL Penteli 39.14 158 *e*PG P 18 23 06.5 -0.4
MESJ Messejana 39.18 199 *e*P P 18 23 07.1 -0.1
MESJ AMb AMB 18 23 16.8
comp=Z,78nm,1.9s
MESJ *e*S S 18 29 07.4 +0.9
MESJ Messejana 39.18 199 *e*P P 18 23 07.1 -0.1
comp=Z,78nm,1.9s
MESJ *e*S S 18 29 07.4 +0.9
MESJ Messejana 39.18 199 *e*P P 18 23 07.1 -0.1
comp=Z,78nm,1.9s
MESJ *e*S S 18 29 07.4 +0.9
SHUT Suhut-Afyon 39.33 150 *e*P P 18 23 09.1 +0.5
MCK McKinley 39.34 343 *e*P P 18 23 10.4 +2.1
MCK pmax pmax
comp=Z,253nm,2.2s
MCK McKinley 39.34 343 *e*P P 18 23 10.4 +2.1
comp=Z,253nm,2.2s
MCK McKinley 39.34 343 *e*P P 18 23 10.4 +2.1
comp=Z,253nm,2.2s
PCVE Castro Verde 39.37 199 *e*P P 18 23 11.3 +2.5
comp=Z,49nm,0.9s
PCVE Castro Verde 39.37 199 *e*P P 18 23 11.3 +2.5
comp=Z,49nm,0.9s
AMT Artemida-Makis 39.47 161 *e*PB P 18 23 10.5 +0.8
PTEO Sao Teotonio 39.51 200 *e*P P 18 23 13.1 +3.2
comp=Z,74nm,1.5s
PVAQ Vaqueiros 39.57 198 *e*P P 18 23 10.9 +0.4
comp=Z,57nm,2.0s
PVAQ *e*LR LR 18 34 47.7
comp=Z,619nm,20.0s
PVAQ Vaqueiros 39.57 198 *e*P P 18 23 10.9 +0.4
comp=Z,57nm,2.0s
DID Didima 39.62 159 *e*PG P 18 23 06.0 -4.9
VLX Vlachokerasia 39.69 160 *e*PG P 18 23 11.5 -0.1
TRF Thorofare Moun 39.71 344 *e*P P 18 23 14.7 +3.1
comp=Z,150nm,2.4s
TRF Thorofare Moun 39.71 344 *e*P P 18 23 14.7 +3.1
comp=Z,150nm,2.4s
MENT Mentasta 39.73 339 *e*P P 18 23 13.6 +2.0
MENT Mentasta 39.73 339 *e*P P 18 23 13.6 +2.0
MORF Marmelete 39.74 199 *e*P P 18 23 14.4 +2.4
comp=Z,46nm,1.9s
MORF Marmelete 39.74 199 *e*P P 18 23 11.8 -0.2
MORF *e*S S 18 29 15.9 +0.8
MORF Marmelete 39.74 199 *e*P P 18 23 11.8 -0.2
MORF *e*S S 18 29 15.9 +0.8
PBDV Barranco-do-Ve 39.75 199 *e*P P 18 23 12.9 +0.9
comp=Z,107nm,1.7s
PBDV Barranco-do-Ve 39.75 199 *e*P P 18 23 12.9 +0.9
comp=Z,107nm,1.7s
ITM Ithomi 39.84 161 *e*PB P 18 23 12.0 -0.7
PAX Paxson 39.84 341 *e*P P 18 23 14.4 +1.8
PAX pmax pmax
comp=Z,35nm,1.1s
PAX Paxson 39.84 341 *e*P P 18 23 14.4 +1.8
comp=Z,35nm,1.1s
PAX Paxson 39.84 341 *e*P P 18 23 14.4 +1.8
comp=Z,35nm,1.1s
GNI Garni 39.86 133 *e*P P 18 23 13.7 +0.6
GNI Garni 39.86 133 ⇑P P 18 23 14.0 +0.9
SNR=16
GNI Garni 39.86 133 *e*P P 18 23 13.7 +0.6
comp=Z,80nm,1.3s
GNI Garni 39.86 133 *e*P P 18 23 13.7 +0.6
comp=Z,80nm,1.3s
LADK Ladik-KONYA 39.90 148 *e*P P 18 23 14.9 +1.6
SULT Sultanhani-AKS 40.05 147 *e*P P 18 23 15.4 +0.9
PYL PYLOS 40.11 161 *e*PN P 18 23 12.0 -2.9
AGRB Hanur-Agry 40.12 135 *e*P P 18 23 15.9 +0.6
KONT Konya--Tatoy 40.15 148 *e*P P 18 23 16.3 +1.0
PTK Pertek 40.20 139 *e*P P 18 23 17.7 +1.7
EBNR Beni Rached 40.21 187 P P 18 23 16.5 +0.7
DARE Darende-Malaty 40.23 142 *e*P P 18 23 18.1 +2.0
EMHD Djebel Mahouad 40.26 185 P P 18 23 14.5 -1.9
VRTB Varto-Mus 40.27 137 *e*P P 18 23 22.2 +5.7
NIG Nigde 40.28 145 *e*P P 18 23 17.7 +1.0
DYR Agios Nikonas 40.29 161 *e*PG P 18 23 16.5 0.0
ECHA Ech Chlef 40.35 187 P P 18 23 17.0 +0.1
VLI Veliai 40.38 160 *e*PG P 18 23 15.5 -1.7
YER Yerkesik 40.47 153 *e*P P 18 23 17.2 -0.8
EANR ʿAin N'Sour 40.56 187 P P 18 23 17.5 -1.3
MALT Malatya 40.62 141 *e*P P 18 23 28.1 +8.8
MALT Malatya 40.62 141 ||P P 18 23 28.1 +8.8
MALT Malatya 40.62 141 ||/P P 18 23 28.1 +8.8
CLDR Caldiran 40.70 134 *e*P P 18 23 21.3 +1.2
KEST Kesra 40.71 177 *e*P P 18 23 20.2 +0.2
KEST Kesra 40.71 177 P P 18 23 20.4 +0.4
comp=Z,8.8nm,1.1s,baz=337,slow=8.3,SNR=7.9
KEST LR LR 18 40 30.4
comp=Z,271nm,19.3s,baz=187,slow=37
KEST Kesra 40.71 177 *e*P P 18 23 20.2 +0.2
DAT Datca 40.80 154 *e*P P 18 23 25.3 +4.5
DALY Dalyan (Muˆla 40.83 153 *e*P P 18 23 21.7 +0.9
FETY Fethiye 41.05 152 *e*P P 18 23 24.4 +1.6
KOZT Kozan 41.06 144 *e*P P 18 23 25.8 +2.9
ETI Tiaret 41.11 187 P P 18 23 20. -0.4
KARA Karaisali 41.17 145 *e*P P 18 23 26.7 +2.9
KMRS Kahramanmaras 41.19 143 *e*P P 18 23 24.9 +0.9
SML Sawmill 41.21 342 *e*P P 18 23 25.6 +1.8
SML pmax pmax
comp=Z,170nm,2.6s
SML Sawmill 41.21 342 *e*P P 18 23 25.6 +1.8
comp=Z,170nm,2.6s
SML Sawmill 41.21 342 *e*P P 18 23 25.6 +1.8
comp=Z,170nm,2.6s
CLNS Chul'man 41.42 47 *e*P P 18 23 25.5 -0.1
CLNS *e**PP pP 18 23 30.9 +1.3
CLNS *e* 18 25 00.8
CLNS *e*PPP PPP 18 25 25.5
CLNS *e*S S 18 29 35.3 -4.4
CLNS *e*SSS SSS 18 32 38.0
CLNS *e* 18 33 27.5
CLNS pmax pmax
comp=Z,56nm,1.4s
CLNS pmax pmax
comp=N,32nm,1.5s
CLNS pmax pmax
comp=E,7.0nm,1.0s
CLNS pmax pmax
comp=Z,31nm,1.8s
CLNS pmax pmax
comp=N,52nm,1.8s
CLNS pmax pmax
comp=E,6.0nm,0.8s
CLNS smax smax
comp=E,199nm,12.1s
CLNS smax smax
comp=N,164nm,8.7s
CLNS MLR MLR
comp=E,392nm,14.0s
CLNS MLR MLR
comp=N,749nm,17.0s
CLNS MLR MLR
comp=Z,910nm,17.0s
CLNS Chul'man 41.42 47 *e*P P 18 23 25.5 -0.1
comp=Z,32nm,1.5s
CLNS Chul'man 41.42 47 *e*PcP PcP 18 25 25.5 +2.3
CLNS *e*ScS ScS 18 33 27.5 -0.7
comp=Z,910nm,17.0s
MOY Mondy 41.48 70 *e*P P 18 23 27.8 +1.5
MOY pmax pmax
comp=Z,218nm,2.1s
MOY Mondy 41.48 70 *e*P P 18 23 27.8 +1.5
comp=Z,218nm,2.1s
MPAL Palemas 41.49 193 *i* P P 18 23 26.0 -0.4
IRK Irkutsk 41.67 66 *e*P P 18 23 27.4 -0.3
IRK *e* 18 25 08.8
IRK pmax pmax
comp=Z,172nm,1.6s
IRK Irkutsk 41.67 66 *e*P P 18 23 27.4 -0.3
comp=Z,172nm,1.6s
FFC Flin Flon 41.69 304 P P 18 23 28.8 +1.0
comp=Z,427nm,1.1s,SNR=18
FFC Flin Flon 41.69 304 *e*P P 18 23 28.0 +0.2
FFC pmax pmax
comp=Z,145nm,1.3s
FFC Flin Flon 41.69 304 *e*P P 18 23 28.0 +0.2
comp=Z,145nm,1.3s
FFC Flin Flon 41.69 304 *e*P P 18 23 28.0 +0.2
comp=Z,145nm,1.3s
MK31 Makanchi Array 41.69 90 *i* P P 18 23 27.6 -0.4
MK31 pmax pmax
comp=Z,85nm,1.2s
MK31 Makanchi Array 41.69 90 *e*P P 18 23 28.1 +0.1
MK31 Makanchi Array 41.69 90 *i* P P 18 23 27.6 -0.4
comp=Z,85nm,1.2s
MKAR Makanchi Array 41.69 90 P P 18 23 28.1 +0.1
MKAR pmax pmax

	comp=Z,11nm,0.8s										
MKAR					MLR		MLR				
	comp=Z,4µm,18.8s										
MKAR	**Makanchi Array**	**41.69**	**90**	*e*P		**P**		**18 23 28.4**	**+0.4**		
MKAR	**Makanchi Array**	**41.69**	**90**	P		**P**		**18 23 28.1**	**+0.1**		
	comp=Z,10nm,0.8s,baz=345,slow=6.9,SNR=94										
MKAR					LR		LR	18 44 01.0			
	comp=Z,4µm,18.8s,baz=335,slow=41										
MKAR	**Makanchi Array**	**41.69**	**90**	*e*P		**P**		**18 23 28.4**	**+0.4**		
TOU	**Touzarine**	**41.75**	**193**	*i* P		**P**		**18 23 26.0**	**-2.6**		
IKL	**Isikli**	**42.00**	**147**	*e*P		**P**		**18 23 29.8**	**-0.6**		
TLY	**Talaya**	**42.06**	**67**	*e*P		**P**		**18 23 31.3**	**+0.4**		
TLY				*e*				18 25 11.0			
TLY				*e*				18 25 23.6			
TLY				*e*S		S		18 29 55.0	+5.7		
TLY					pmax	pmax					
	comp=Z,33nm,1.1s										
TLY					MLR	MLR					
	comp=Z,2µm,21.0s										
TLY	**Talaya**	**42.06**	**67**	P		**P**		**18 23 31.2**	**+0.4**		
	comp=Z,114nm,1.2s,SNR=7.8										
TLY	**Talaya**	**42.06**	**67**	*e*P		**P**		**18 23 31.3**	**+0.4**		
	comp=Z,33nm,1.1s										
TLY	**Talaya**	**42.06**	**67**	*e*PcP		**PcP**		**18 25 23.6**	**-1.8**		
	comp=Z,2µm,21.0s										
SPU	**Mount Spurr**	**42.08**	**345**	*e*P		**P**		**18 23 31.9**	**+0.9**		
SPU	**Mount Spurr**	**42.08**	**345**	*e*P		**P**		**18 23 31.9**	**+0.9**		
GVD	**Gavdhos**	**42.34**	**159**	*e*P		**P**		**18 23 31.6**	**-1.7**		
	comp=Z,74nm,0.8s										
GVD	**Gavdhos**	**42.34**	**159**	*e*P		**P**		**18 23 31.6**	**-1.7**		
	comp=Z,74nm,0.8s										
SVW2	**Sparrevohn**	**42.37**	**347**	*e*P		**P**		**18 23 35.8**	**+2.5**		
	comp=Z,122nm,1.3s										
SVW2	**Sparrevohn**	**42.37**	**347**	*e*P		**P**		**18 23 35.8**	**+2.5**		
	comp=Z,122nm,1.3s										
KKAR	**Karatay Array**	**42.40**	**103**	*e*P		**P**		**18 23 34.4**	**+0.7**		
KKAR				*e*				18 25 20.5			
KKAR	**Karatay Array**	**42.40**	**103**	*e*P		**P**		**18 23 34.4**	**+0.7**		
KKAR				*e*PcP		PcP		18 25 20.5	-6.2		
KKAR	**Karatay Array**	**42.40**	**103**	*e*P		**P**		**18 23 34.4**	**+0.7**		
CUKT	**Cukurca**	**42.49**	**135**	*e*P		**P**		**18 23 35.3**	**+0.6**		
EREN	**Erenkoy**	**42.76**	**146**	*e*P		**P**		**18 23 38.0**	**+1.3**		
RSO	**Redoubt South**	**42.84**	**345**	*e*P		**P**		**18 23 38.0**	**+0.6**		
RSO	**Redoubt South**	**42.84**	**345**	*e*P		**P**		**18 23 38.0**	**+0.6**		
LFK	**Lefkose**	**42.92**	**147**	*e*P		**P**		**18 23 39.8**	**+1.7**		
LEF	**Lefka**	**43.00**	**148**	*e*P		**P**		**18 23 41.6**	**+2.9**		
USP	**Ospenovka**	**43.17**	**99**	P		**P**		**18 23 41.0**	**+1.0**		
	SNR=7.1										
ZAK	**Zakamensk**	**43.20**	**68**	*e*P		**P**		**18 23 40.6**	**+0.4**		
ZAK				*e*				18 25 24.0			
ZAK					pmax	pmax					
	comp=Z,11nm,1.8s										
ZAK	**Zakamensk**	**43.20**	**68**	*e*P		**P**		**18 23 40.6**	**+0.4**		
	comp=Z,11nm,1.8s										
CSS	**Prodhromos**	**43.21**	**148**	*e*P		**P**		**18 23 42.3**	**+1.9**		
MIF	**Mishlifen**	**43.38**	**195**	*i* P		**P**		**18 23 40.0**	**-2.0**		
CHMS	**Chumysh**	**43.48**	**99**	P		**P**		**18 23 44.1**	**+1.5**		
	SNR=13										
EKS2	**Erkin-Say**	**43.58**	**100**	*e*P		**P**		**18 23 44.6**	**+1.2**		
EKS2				*e*				18 25 29.2			
EKS2	**Erkin-Say**	**43.58**	**100**	*e*P		**P**		**18 23 44.5**	**+1.2**		
EKS2				*e*PcP		**PcP**		**18 25 29.2**	**-1.5**		
EKS2	**Erkin-Say**	**43.58**	**100**	P		**P**		**18 23 44.6**	**+1.2**		
	SNR=11										
EKS2	**Erkin-Say**	**43.58**	**100**	*e*P		**P**		**18 23 44.5**	**+1.2**		
TKM2	**Tokmak 2**	**43.76**	**98**	P		**P**		**18 23 45.2**	**+0.2**		
TKM2					pmax	pmax					
	comp=Z,51nm,1.3s										
TKM2	**Tokmak 2**	**43.76**	**98**	*e*P		**P**		**18 23 46.5**	**+1.6**		
TKM2				*e*PcP		**PcP**		**18 25 36.2**	**+4.8**		
TKM2	**Tokmak 2**	**43.76**	**98**	P		**P**		**18 23 46.6**	**+1.6**		
	SNR=11										
TKM2	**Tokmak 2**	**43.76**	**98**	P		**P**		**18 23 45.2**	**+0.2**		
	comp=Z,51nm,1.3s										
AAK	**Ala-Archa**	**43.77**	**99**	P		**P**		**18 23 46.3**	**+1.2**		
	comp=Z,136nm,1.0s,SNR=8.6										
AAK	**Ala-Archa**	**43.77**	**99**	⇑ *i* P		**P**		**18 23 46.5**	**+1.5**		
AAK					pmax	pmax					
	comp=Z,54nm,1.7s										
AAK	**Ala-Archa**	**43.77**	**99**	*e*P		**P**		**18 23 46.2**	**+1.2**		
	comp=Z,63nm,1.4s										
AAK	**Ala-Archa**	**43.77**	**99**	*e*P		**P**		**18 23 46.2**	**+1.2**		
	comp=Z,63nm,1.4s										
CIT	**Chita**	**43.84**	**59**	*e*P		**P**		**18 23 44.1**	**-1.2**		
CIT	**Chita**	**43.84**	**59**	*e*P		**P**		**18 23 44.1**	**-1.2**		
KBK	**Karagaybulak**	**43.85**	**99**	P		**P**		**18 23 47.5**	**+1.8**		
	SNR=9.4										
AML	**Almayashu**	**44.06**	**100**	P		**P**		**18 23 46.6**	**-1.0**		
	SNR=22										
IGZV	**Ghazvin**	**44.51**	**128**	*e*P		P		18 23 54.5	+3.4		
ABKT	**Ailbek**	**44.59**	**118**	P		**P**		**18 23 52.8**	**+1.3**		
	comp=Z,262nm,1.1s,SNR=11										
ULM	**Lac du Bonnet**	**44.67**	**297**	P		**P**		**18 23 52.4**	**+0.5**		
ULM	**Lac du Bonnet**	**44.67**	**297**	P		**P**		**18 23 52.4**	**+0.5**		
	comp=Z,47nm,1.1s,baz=24,slow=9.0,SNR=18										
ULM					LR		LR	18 43 14.8			
	comp=Z,5µm,18.3s,baz=19,slow=37										
ULM	**Lac du Bonnet**	**44.67**	**297**	P		**P**		**18 23 52.4**	**+0.5**		
	comp=Z,5µm,18.3s										
ZFT	**Errachidia**	**44.69**	**194**	*i* P		**P**		**18 23 53.0**	**+0.5**		
FRNY	**Flat Rock**	**44.70**	**274**	*e*P		P		18 23 49.5	-2.8		
	comp=Z,184nm,1.8s										
TZC	**Tazercounte**	**44.71**	**196**	*i* P		**P**		**18 23 51.0**	**-1.7**		
MSNY	**Massena**	**44.85**	**276**	*e*P		**P**		**18 23 54.2**	**+0.8**		
	comp=Z,1µm,1.5s										
MSNY	**Massena**	**44.85**	**276**	*e*P		**P**		**18 23 54.2**	**+0.8**		
	comp=Z,1µm,1.5s										
WRAK	**Wrangell Islan**	**44.96**	**329**	P		**P**		**18 23 56.4**	**+2.3**		
	comp=Z,36nm,0.3s										
WRAK	**Wrangell Islan**	**44.96**	**329**	P		**P**		**18 23 56.4**	**+2.3**		
	comp=Z,36nm,0.3s										
IPRN	**Peran**	**45.06**	**125**	*e*P		**P**		**18 23 56.1**	**+0.8**		
IGLO	**Ghaloghah**	**45.10**	**124**	*e*P		**P**		**18 23 57.8**	**+2.1**		
LONY	**Lake Ozonia**	**45.14**	**275**	*e*P		**P**		**18 23 56.8**	**+1.0**		
	comp=Z,131nm,1.8s										
LONY	**Lake Ozonia**	**45.14**	**275**	*e*P		**P**		**18 23 56.8**	**+1.0**		
	comp=Z,131nm,1.8s										
IKIA	**Kiasar**	**45.35**	**124**	*e*P		**P**		**18 23 59.3**	**+1.5**		
IKIA	**Kiasar**	**45.35**	**124**	*e*P		**P**		**18 23 59.3**	**+1.5**		
MDV	**Middlebury**	**45.40**	**273**	P		**P**		**18 23 58.8**	**+1.0**		
MDV	**Middlebury**	**45.40**	**273**	P		**P**		**18 23 58.8**	**+1.0**		
IRAZ	**Razeghan**	**45.41**	**128**	*e*P		**P**		**18 23 59.4**	**+1.2**		
IRAZ	**Razeghan**	**45.41**	**128**	*e*P		**P**		**18 23 59.4**	**+1.2**		
KDAK	**Kodiak Island**	**45.50**	**345**	P		**P**		**18 23 59.6**	**+1.2**		
	comp=Z,551nm,1.3s,SNR=11										
KDAK	**Kodiak Island**	**45.50**	**345**	*e*P		**P**		**18 23 59.8**	**+1.4**		
	comp=Z,177nm,1.3s										
KDAK	**Kodiak Island**	**45.50**	**345**	P		**P**		**18 23 59.8**	**+1.4**		
	comp=Z,72nm,1.1s,baz=21,slow=7.7,SNR=24										
KDAK	**Kodiak Island**	**45.50**	**345**	*e*P		**P**		**18 23 59.8**	**+1.4**		
	comp=Z,177nm,1.3s										
IR3	**Iran Long-Peri**	**45.55**	**127**	*e*P		**P**		**18 23 58.7**	**-0.5**		
IR3	**Iran Long-Peri**	**45.55**	**127**	*e*P		**P**		**18 23 58.7**	**-0.5**		
IDMV	**Damavand**	**45.64**	**126**	*e*P		**P**		**18 23 59.3**	**-0.9**		
IDMV	**Damavand**	**45.64**	**126**	*e*P		**P**		**18 23 59.3**	**-0.9**		
ISHM	**Shahmirzad**	**45.66**	**124**	*e*P		**P**		**18 24 02.2**	**+1.9**		
ISHM	**Shahmirzad**	**45.66**	**124**	*e*P		**P**		**18 24 02.2**	**+1.9**		
WMQ	**Urumqi**	**45.78**	**86**	P		**P**		**18 24 02.4**	**+1.5**		
WMQ				pP		**pP**		**18 24 06.8**	**+1.8**		
WMQ				sP		**sP**		**18 24 09.5**	**+2.9**		
WMQ				PcP		**PcP**		**18 25 41.0**	**+2.8**		
WMQ				S		**S**		**18 30 46.0**	**+2.3**		
WMQ				sS		sS		18 30 56.0	+5.5		
WMQ				ScS		**ScS**		**18 33 56.0**	**0.0**		
WMQ					pmax	pmax					
	comp=Z,36nm,0.6s										
WMQ					pmax	pmax					
	comp=Z,390nm,3.9s										
WMQ					LR	LR					
	comp=N,4µm,16.8s										
WMQ					LR	LR					
	comp=E,3µm,14.0s										
WMQ					LR	LR					
	comp=Z,3µm,17.7s										
EYMN	**Ely**	**45.90**	**292**	*e*P		**P**		**18 24 02.4**	**+0.7**		
	comp=Z,250nm,1.8s										
EYMN	**Ely**	**45.90**	**292**	*e*P		**P**		**18 24 02.4**	**+0.7**		
	comp=Z,250nm,1.8s										
IAKL	**Akhelmad**	**46.01**	**118**	*e*P		**P**		**18 24 03.7**	**+0.7**		
ACCN	**Adirondack Com**	**46.09**	**274**	*e*P		**P**		**18 24 04.7**	**+1.4**		
	comp=Z,219nm,1.9s										
ACCN	**Adirondack Com**	**46.09**	**274**	*e*P		**P**		**18 24 04.7**	**+1.4**		
	comp=Z,219nm,1.9s										
OHAK	**Old Harbor**	**46.10**	**345**	*e*P		**P**		**18 24 04.5**	**+1.5**		
	comp=Z,334nm,1.6s										
OHAK	**Old Harbor**	**46.10**	**345**	*e*P		**P**		**18 24 04.6**	**+1.5**		
	comp=Z,334nm,1.6s										
IVRN	**Varamin**	**46.15**	**126**	*e*P		**P**		**18 24 03.3**	**-0.6**		
IVRN				*e*P		**pP**		**18 24 05.2**	**-2.8**		
IVRN	**Varamin**	**46.15**	**126**	*e*P		**P**		**18 24 03.3**	**-0.6**		
SONM	**Songino Array**	**46.28**	**67**	P		**P**		**18 24 05.1**	**+0.2**		
SONM	**Songino Array**	**46.28**	**67**	P		**P**		**18 24 05.1**	**+0.2**		
	comp=Z,4.4nm,0.8s,baz=334,slow=6.7,SNR=38										
SONM					LR		LR	18 46 46.5			
	comp=Z,968nm,18.1s,baz=347,slow=40										
SONM	**Songino Array**	**46.28**	**67**	P		**P**		**18 24 05.1**	**+0.2**		
ULN	**Ulaanbaatar**	**46.40**	**66**	P		**P**		**18 24 06.8**	**+1.0**		
	SNR=37										
ULN	**Ulaanbaatar**	**46.40**	**66**	*e*P		**P**		**18 24 06.4**	**+0.6**		
	comp=Z,92nm,1.6s										
ULN	**Ulaanbaatar**	**46.40**	**66**	P		**P**		**18 24 06.9**	**+1.1**		
	comp=Z,35nm,1.8s,comp=Z,811nm										
ULN	**Ulaanbaatar**	**46.40**	**66**	P		**P**		**18 24 06.8**	**+1.0**		
	SNR=37										
BHD	**Baghdad**	**46.51**	**135**	*i* P		P		18 24 01.8	-4.8		
BHD				*i* S		S		18 30 47.8	-6.4		
AGMN	**Agassiz Nation**	**46.51**	**296**	*e*P		**P**		**18 24 06.8**	**+0.3**		
	comp=Z,62nm,1.0s										
AGMN	**Agassiz Nation**	**46.51**	**296**	*e*P		**P**		**18 24 06.8**	**+0.3**		
	comp=Z,62nm,1.0s										
IBDR	**Badra**	**46.93**	**134**	*e*P		**P**		**18 24 08.9**	**-1.0**		
IBDR				*e*S		**S**		**18 31 04.0**	**+3.8**		
KSH	**Kashi**	**47.08**	**99**	P		P		18 24 14.5	+3.3		
KSH				*e*pP		pP		18 24 19.3	+4.0		
KSH				*e*sP		sP		18 24 21.8	+4.9		
KSH				*e*PcP		**PcP**		**18 25 43.5**	**+0.6**		
KSH				*e*PP		PP		18 26 06.5	+4.9		
KSH				*e*S		**S**		**18 31 06.0**	**+3.4**		
KSH				*e*sS		sS		18 31 16.5	+7.2		
KSH					pmax	pmax					
	comp=Z,12nm,0.9s										
KSH					pmax	pmax					
	comp=Z,640nm,2.9s										
KSH					LR	LR					
	comp=N,5µm,15.2s										
KSH					LR	LR					
	comp=E,4µm,15.3s										
KSH					LR	LR					
	comp=Z,6µm,17.7s										
COWI	**Conover**	**47.12**	**289**	*e*P		**P**		**18 24 11.2**	**-0.2**		
	comp=Z,70nm,1.6s										
COWI	**Conover**	**47.12**	**289**	*e*P		**P**		**18 24 11.1**	**-0.2**		
	comp=Z,70nm,1.6s										
CHGN	**Chignik**	**47.29**	**349**	*e*P		**P**		**18 24 12.8**	**+0.4**		
CHGN	**Chignik**	**47.29**	**349**	*e*P		**P**		**18 24 12.8**	**+0.4**		
HIA	**Hailar**	**47.69**	**55**	*e*P		**P**		**18 24 16.5**	**+0.8**		
	comp=Z,71nm,1.4s										
HIA	**Hailar**	**47.69**	**55**	*e*P		**P**		**18 24 16.5**	**+0.8**		
	comp=Z,71nm,1.4s										
MDND	**Maddock**	**47.73**	**299**	⇑P		**P**		**18 24 16.1**	**+0.1**		
	baz=48,SNR=19										
A23A	**Redstone**	**47.74**	**304**	⇓P		**P**		**18 24 16.1**	**+0.1**		
	baz=48										
A22A	**Carney Farms,**	**47.91**	**305**	⇓P		**P**		**18 24 18.1**	**+0.6**		
	baz=48,SNR=24										
DGMT	**Dagmar**	**48.07**	**303**	*e*P		**P**		**18 24 19.7**	**+1.0**		
	comp=Z,134nm,1.3s										
DGMT				*e*PcP		PcP		18 25 54.6	+8.4		
DGMT	**Dagmar**	**48.07**	**303**	*e*P		**P**		**18 24 19.7**	**+1.0**		
	comp=Z,134nm,1.3s										
DGMT	**Dagmar**	**48.07**	**303**	⇑P		**P**		**18 24 19.5**	**+0.8**		
	baz=48,SNR=7.4										
B23A	**Brockton**	**48.23**	**304**	⇑P		**P**		**18 24 20.5**	**+0.5**		
	baz=48,SNR=26										
IPIR	**Pirpir**	**48.23**	**128**	*e*P		**P**		**18 24 21.2**	**+0.7**		
IPIR	**Pirpir**	**48.23**	**128**	*e*P		**P**		**18 24 21.2**	**+0.7**		
IZEF	**Zefreh**	**48.30**	**126**	*e*P		**P**		**18 24 20.6**	**-0.3**		
IZEF	**Zefreh**	**48.30**	**126**	*e*P		**P**		**18 24 20.6**	**-0.3**		
A20A	**Cobblestone Ra**	**48.40**	**307**	⇑P		**P**		**18 24 21.7**	**+0.4**		
	baz=48,SNR=14										
A19A	**Klindworth Far**	**48.51**	**307**	⇑P		**P**		**18 24 22.9**	**+0.7**		
	baz=48,SNR=39										
B22A	**Reddig Ranch S**	**48.58**	**305**	⇓P		**P**		**18 24 23.2**	**+0.5**		
	baz=48,SNR=7.8										
B21A	**Ellsworth Farm**	**48.66**	**306**	⇓P		**P**		**18 24 23.0**	**-0.2**		
	baz=48										
A18A	**Metzger Ranch,**	**48.73**	**308**	⇑P		**P**		**18 24 23.6**	**-0.1**		
	baz=48										
SPMN	**St. Paul**	**48.77**	**292**	⇓P		**P**		**18 24 24.5**	**+0.4**		
	baz=49										
B20A	**Solberg Farm,**	**48.84**	**307**	⇑P		**P**		**18 24 24.8**	**+0.1**		
	baz=49										
A17A	**Triple J Farms**	**48.86**	**309**	⇑P		**P**		**18 24 24.7**	**-0.1**		
	baz=49,SNR=6.7										
C23A	**Lambert**	**48.90**	**304**	⇑P		**P**		**18 24 25.9**	**+0.8**		
	baz=49,SNR=19										
B19A	**Brinkman Farms**	**49.00**	**307**	⇑P		**P**		**18 24 26.3**	**+0.4**		
	baz=49,SNR=6.6										
C24A	**Savage**	**49.01**	**303**	⇑P		**P**		**18 24 26.9**	**+0.9**		
	baz=49,SNR=12										
A16A	**West Butte Ran**	**49.02**	**310**	⇓P		**P**		**18 24 25.5**	**-0.6**		
	baz=49										
C22A	**Vida**	**49.09**	**305**	⇑P		**P**		**18 24 26.9**	**+0.3**		
	baz=49,SNR=18										
A15A	**Johnson Ranch,**	**49.20**	**311**	⇓P		**P**		**18 24 27.5**	**+0.1**		
	baz=49,SNR=15										
B18A	**Beardsley Farm**	**49.22**	**308**	⇓P		**P**		**18 24 27.3**	**-0.3**		
	baz=49										
C21A	**Desert Coulee**	**49.25**	**306**	⇑P		**P**		**18 24 27.6**	**-0.2**		
	baz=49										
ALLY	**Alegheny Colle**	**49.27**	**279**	*e*P		**P**		**18 24 28.5**	**+0.6**		
	comp=Z,175nm,1.5s										
ALLY	**Alegheny Colle**	**49.27**	**279**	*e*P		**P**		**18 24 28.5**	**+0.6**		
	comp=Z,175nm,1.5s										
A14A	**Double T Ranch**	**49.33**	**311**	⇑P		**P**		**18 24 28.6**	**+0.2**		
	baz=49,SNR=38										
WALA	**Waterton Lakes**	**49.33**	**312**	*e*P		**P**		**18 24 27.8**	**-0.7**		
	comp=Z,2.3nm,1.2s										
WALA	**Waterton Lakes**	**49.33**	**312**	*e*P		**P**		**18 24 27.8**	**-0.7**		
	comp=Z,2.3nm,1.2s										
D24A	**Glendive**	**49.39**	**303**	⇓P		**P**		**18 24 29.9**	**+1.0**		
	baz=49,SNR=9.7										
PETK	**Petropavlovsk-**	**49.48**	**23**	P		**P**		**18 24 29.3**	**-0.1**		
PETK					pmax	pmax					
	comp=Z,5.0nm,0.9s										
PETK					MLR	MLR					
	comp=Z,251nm,18.6s										
PETK	**Petropavlovsk-**	**49.48**	**23**	P		**P**		**18 24 29.3**	**-0.1**		
PETK	**Petropavlovsk-**	**49.48**	**23**	P		**P**		**18 24 29.3**	**-0.1**		
	comp=Z,5.3nm,0.9s,baz=302,slow=3.2,SNR=11										
PETK					LR		LR	18 48 29.6			
	comp=Z,251nm,18.6s,baz=348,slow=40										
PETK	**Petropavlovsk-**	**49.48**	**23**	P		**P**		**18 24 29.3**	**-0.1**		
B17A	**L&G Farms, Che**	**49.51**	**309**	⇑P		**P**		**18 24 29.6**	**-0.1**		
	baz=49										
D23A	**Lindsay**	**49.51**	**304**	⇑P		**P**		**18 24 31.1**	**+1.3**		
	baz=49,SNR=12										
ISAD	**Sadrabad**	**49.52**	**125**	*e*P		**P**		**18 24 28.5**	**-1.8**		
ISAD	**Sadrabad**	**49.52**	**125**	*e*P		**P**		**18 24 28.5**	**-1.8**		
C20A	**Veseth Ranch,**	**49.54**	**306**	⇑P		**P**		**18 24 30.4**	**+0.4**		
	baz=49,SNR=9.4										
B16A	**M & M Farms, S**	**49.56**	**310**	⇓P		**P**		**18 24 30.4**	**+0.2**		
	baz=49,SNR=33										
EGMT	**Eagleton**	**49.57**	**308**	*e*P		**P**		**18 24 31.2**	**+1.0**		
	comp=Z,64nm,1.1s										
EGMT	**Eagleton**	**49.57**	**308**	*e*P		**P**		**18 24 31.2**	**+1.0**		
	comp=Z,64nm,1.1s										
EGMT	**Eagleton**	**49.57**	**308**	⇓P		**P**		**18 24 30.0**	**-0.3**		
	baz=49										
PET	**Petropavlovsk**	**49.65**	**22**	*e*P		P		18 24 40.5	+10		
PET				*e*S		S		18 31 57.0	+19		
PET					pmax	pmax					
	comp=Z,100nm,10.7s										
PET					MLR	MLR					
	comp=Z,400nm,17.0s										
C19A	**Slack Wire Ran**	**49.71**	**307**	⇓P		**P**		**18 24 32.0**	**+0.6**		
	baz=50,SNR=33										
D22A	**Cohagen**	**49.72**	**305**	⇓P		**P**		**18 24 31.7**	**+0.3**		
	baz=50										
A12A	**Yaak River Ran**	**49.76**	**313**	⇑P		**P**		**18 24 32.1**	**+0.5**		
	baz=50										
B15A	**Bradely Ranch,**	**49.81**	**310**	⇓P		**P**		**18 24 31.7**	**-0.4**		
	baz=50,SNR=21										
B14A	**Marquette Ranc**	**49.89**	**311**	⇑P		**P**		**18 24 32.5**	**-0.2**		
	baz=50										
KLR	**Kul'dur**	**49.89**	**45**	*e*P		**P**		**18 24 32.8**	**+0.2**		
KLR				*e*				18 31 50.5			
KLR	**Kul'dur**	**49.89**	**45**	*e*P		**P**		**18 24 32.8**	**+0.2**		
E24A	**Baker**	**49.92**	**303**	⇓P		**P**		**18 24 33.7**	**+0.8**		
	baz=50,SNR=6.1										
D21A	**La Casta Ranch**	**49.96**	**305**	⇓P		**P**		**18 24 33.8**	**+0.5**		
	baz=50,SNR=11										
B13A	**Whitefish**	**50.09**	**312**	⇓P		**P**		**18 24 34.4**	**+0.2**		
	baz=50,SNR=19										
C17A	**Wharram Farm,**	**50.13**	**309**	⇓P		**P**		**18 24 34.3**	**-0.3**		
	baz=50										
C16A	**Fuhringer Ranc**	**50.15**	**310**	⇑P		**P**		**18 24 35.0**	**+0.3**		
	baz=50,SNR=10										
D20A	**Manuel Ranch,**	**50.16**	**306**	⇓P		**P**		**18 24 35.7**	**+1.0**		
	baz=50,SNR=34										
E23A	**Ismay**	**50.17**	**304**	⇑P		**P**		**18 24 35.4**	**+0.6**		
	baz=50,SNR=8.1										
B12A	**Libby**	**50.20**	**313**	⇑P		**P**		**18 24 34.3**	**-0.6**		
	baz=50										
IBAF	**Bafgh**	**50.20**	**123**	*e*P		**P**		**18 24 35.3**	**0.0**		
IBAF	**Bafgh**	**50.20**	**123**	*e*P		**P**		**18 24 35.3**	**0.0**		
IMEH	**Mehriz**	**50.20**	**124**	*e*P		**P**		**18 24 35.7**	**+0.2**		
IMEH	**Mehriz**	**50.20**	**124**	*e*P		**P**		**18 24 35.7**	**+0.2**		
D19A	**Cripps Ranch,**	**50.23**	**307**	⇑P		**P**		**18 24 35.8**	**+0.5**		
	baz=50,SNR=22										
KBL	**Kabul**	**50.23**	**108**	*e*P		**P**		**18 24 35.9**	**+0.3**		
KBL					pmax	pmax					
	comp=Z,38nm,1.3s										
KBL	**Kabul**	**50.23**	**108**	*e*P		**P**		**18 24 35.9**	**+0.3**		
	comp=Z,38nm,1.3s										
KBL	**Kabul**	**50.23**	**108**	*e*P		**P**		**18 24 35.9**	**+0.3**		
	comp=Z,38nm,1.3s										
C15A	**Salmond Ranch,**	**50.34**	**310**	⇑P		**P**		**18 24 36.2**	**0.0**		
	baz=50,SNR=12										
E22A	**Miles City**	**50.36**	**304**	⇓P		**P**		**18 24 36.3**	**+0.1**		
	baz=50										
D18A	**Linhart Farms,**	**50.37**	**308**	⇓P		**P**		**18 24 36.6**	**+0.2**		
	baz=50,SNR=8.7										
JFWS	**Jewell Farm**	**50.39**	**289**	*e*P		**P**		**18 24 36.8**	**+0.3**		
JFWS					pmax	pmax					
	comp=Z,44nm,0.9s										
JFWS	**Jewell Farm**	**50.39**	**289**	*e*P		**P**		**18 24 36.8**	**+0.3**		
	comp=Z,44nm,0.9s										
JFWS	**Jewell Farm**	**50.39**	**289**	*e*P		**P**		**18 24 36.8**	**+0.3**		
	comp=Z,44nm,0.9s										
MIB	**Mutribah**	**50.40**	**133**	*e*P		**P**		**18 24 36.4**	**-0.2**		
MIB					AMb	AMB		18 24 49.4			
	comp=Z,199nm,1.6s										
MIB	**Mutribah**	**50.40**	**133**	*e*P		**P**		**18 24 36.4**	**-0.2**		
	com

baz=51,SNR=18
D12A Red Ives Fores 51.52 312 ⇓P P 18 24 45.6 +0.6
baz=51
G22A Birney 51.60 304 ⇓P P 18 24 45.9 +0.2
baz=51,SNR=13
F18A Big Timber 51.60 307 ⇑P P 18 24 46.2 +0.6
baz=51,SNR=18
GCMT Greycliff 51.70 307 *eP* P 18 24 45.6 -0.8
comp=Z,28nm,0.8s
GCMT Greycliff 51.70 307 *eP* P 18 24 45.7 -0.8
comp=Z,28nm,0.8s
H24A Dirks Ranch, A 51.70 302 ⇑P P 18 24 46.4 0.0
baz=52,SNR=7.9
G21A Lodge Grass 51.77 305 ⇓P P 18 24 47.0 +0.1
baz=52,SNR=7.6
F17A Fitzpatrick Pl 51.78 308 ⇓P P 18 24 47.1 0.0
baz=52,SNR=10
ISRV Sarvestan 51.87 127 *eP* P 18 24 47.5 -0.5
ISRV Sarvestan 51.87 127 *eP* P 18 24 47.5 -0.5
G20A Bridger 51.97 306 ⇓P P 18 24 48.4 0.0
baz=52,SNR=17
SCIA State Center 52.02 291 *eP* P 18 24 49.0 +0.4
comp=Z,99nm,1.0s
SCIA State Center 52.02 291 *eP* P 18 24 49.0 +0.4
comp=Z,99nm,1.0s
H23A Clabaugh Cattl 52.05 303 ⇑P P 18 24 48.9 -0.1
baz=52
LCCM Lewis and Clar 52.07 309 P P 18 24 50.1 +0.9
LCCM Lewis and Clar 52.07 309 P P 18 24 50.1 +0.9
F16A Kennard Place, 52.07 309 ⇑P P 18 24 49.1 -0.1
baz=52
SFIN Scholer Farm 52.09 285 ⇑P P 18 24 48.9 -0.3
baz=52
G18A Lazy EL Ranch, 52.14 307 ⇓P P 18 24 49.8 0.0
baz=52
E12A Beaver Dam Sad 52.18 312 ⇑P P 18 24 49.5 -0.5
baz=52,SNR=14
F15A Butte 52.18 309 ⇓P P 18 24 50.2 +0.1
baz=52,SNR=52
LRM Limekiln Ridge 52.19 309 *eP* P 18 24 50.7 +0.5
LRM Limekiln Ridge 52.19 309 *eP* P 18 24 50.7 +0.5
RSSD Black Hills 52.20 302 *eP* P 18 24 50.7 +0.4
RSSD pmax pmax
comp=Z,62nm,1.1s
RSSD Black Hills 52.20 302 *eP* P 18 24 50.7 +0.4
comp=Z,62nm,1.1s
RSSD Black Hills 52.20 302 *eP* P 18 24 50.7 +0.4
comp=Z,62nm,1.1s
BOZ Bozeman (W) 52.21 309 *eP* P 18 24 50.9 +0.7
BOZ pmax pmax
comp=Z,41nm,1.6s
BOZ Bozeman (W) 52.21 309 *eP* P 18 24 50.9 +0.7
comp=Z,41nm,1.6s
BOZ Bozeman (W) 52.21 309 *eP* P 18 24 50.9 +0.7
comp=Z,41nm,1.6s
H22A Clearmont 52.21 304 ⇑P P 18 24 50.4 +0.2
baz=52,SNR=16
HDW Hoodsport 52.23 319 P P 18 24 52.1 +1.9
HDW Hoodsport 52.23 319 P P 18 24 52.1 +1.9
RLMT Red Lodge 52.27 306 *eP* P 18 24 51.6 +0.8
comp=Z,20nm,0.5s
RLMT Red Lodge 52.27 306 *eP* P 18 24 51.6 +0.8
comp=Z,20nm,0.5s
J28A Allard Ranch, 52.29 299 ⇑P P 18 24 51.1 +0.3
baz=52,SNR=10
H21A Big Horn, Sher 52.31 304 ⇑P P 18 24 51.1 +0.1
baz=52,SNR=8.0
G17A Pierce Place, 52.35 308 ⇓P P 18 24 51.9 +0.5
baz=52
F14A Wisdom 52.37 310 ⇓P P 18 24 51.4 0.0
baz=52
HDIL Hopedale 52.42 287 *eP* P 18 24 50.6 -1.1
comp=Z,83nm,1.1s
HDIL Hopedale 52.42 287 *eP* P 18 24 50.6 -1.1
comp=Z,83nm,1.1s
JSRW J. Sargeant Re 52.49 275 P P 18 24 53.0 +0.8
JSRW J. Sargeant Re 52.49 275 P P 18 24 53.0 +0.8
I24A Kuemmerle Ranc 52.57 302 ⇓P P 18 24 52.8 -0.1
baz=52
NLWA Neilton Lookou 52.60 320 *eP* P 18 24 53.1 +0.1
comp=Z,58nm,1.3s
NLWA Neilton Lookou 52.60 320 *eP* P 18 24 53.1 +0.1
comp=Z,58nm,1.3s
I23A Meade Ranch, G 52.64 303 ⇑P P 18 24 53.5 +0.1
baz=52
H19A Powell 52.65 306 ⇓P P 18 24 54.1 +0.6
baz=52,SNR=11
DLMT Dillon 52.66 309 *eP* P 18 24 54.5 +0.9
comp=Z,45nm,1.3s
DLMT Dillon 52.66 309 *eP* P 18 24 54.5 +0.9
comp=Z,45nm,1.3s
K29A Lazy Trails An 52.73 298 ⇓P P 18 24 54.5 +0.5
baz=53,SNR=6.9
H18A Shoshone NF, C 52.77 307 ⇑P P 18 24 54.6 +0.1
baz=53,SNR=11
GTA Gaotai 52.80 76 *eP* P 18 24 55.3 +0.6
GTA pP **pP** 18 24 59.0 +0.2
GTA sP **sP** 18 25 01.3 +0.9
GTA PP **PP** 18 26 56.6 +2.9
GTA S **S** 18 32 24.4 +1.9
GTA sS **sS** 18 32 32.0 +2.7
GTA SS **SS** 18 36 01.0 +0.5
GTA pmax pmax
comp=Z,13nm,1.3s
GTA pmax pmax
comp=Z,250nm,5.2s
GTA LR LR
comp=N,2µm,16.6s
GTA LR LR
comp=E,1µm,14.7s
GTA LR LR
comp=Z,1µm,17.1s
SNIWA Snively Ranch 52.83 316 P P 18 24 56.0 +1.4
SNIWA Snively Ranch 52.83 316 P P 18 24 56.0 +1.4
J25A Sunshine Ranch 52.85 301 ⇑P P 18 24 55.1 +0.1
baz=53,SNR=18
HAWA Hanford 52.88 316 *eP* P 18 24 56.3 +1.3
comp=Z,47nm,1.1s
HAWA Hanford 52.88 316 *eP* P 18 24 56.3 +1.3
comp=Z,47nm,1.1s
LON Longmire 52.90 318 *eP* P 18 24 56.0 +0.8
LON pmax pmax
comp=Z,493nm,2.9s
LON Longmire 52.90 318 *eP* P 18 24 56.0 +0.8
comp=Z,493nm,2.9s
LON Longmire 52.90 318 *eP* P 18 24 56.0 +0.8
comp=Z,493nm,2.9s
I22A 9 Mile Ranch, 52.91 304 ⇓P P 18 24 55.9 +0.5
baz=53,SNR=19
WPW White Pass 52.91 317 P P 18 24 56.6 +1.2
WPW White Pass 52.91 317 P P 18 24 56.6 +1.2
QLMT Earthquake Lak 52.96 308 *eP* P 18 24 57.2 +1.3
QLMT Earthquake Lak 52.96 308 *eP* P 18 24 57.2 +1.3
H16A Russell Place, 53.05 308 ⇓P P 18 24 57.1 +0.6
baz=53
J24A Dixon Ranch, L 53.09 302 ⇑P P 18 24 57.0 +0.3
baz=53,SNR=12
BLO Bloomington 53.11 284 *eP* P 18 24 53.6 -3.2
BLO pmax pmax
comp=Z,97nm,1.3s
BLO Bloomington 53.11 284 *eP* P 18 24 53.6 -3.2
comp=Z,97nm,1.3s
TRW Toppenish Ridg 53.14 316 P P 18 24 58.2 +1.2
TRW Toppenish Ridg 53.14 316 P P 18 24 58.2 +1.2
I21A Big Trails, Te 53.15 304 ⇑P P 18 24 57.6 +0.4
baz=53,SNR=60
I20A Worland 53.18 305 ⇑P P 18 24 57.7 +0.4
baz=53,SNR=28
K27A Fluecklinger Fa 53.19 300 ⇓P P 18 24 57.4 -0.1
baz=53
J23A Dilts Ranch, B 53.19 303 ⇓P P 18 24 57.6 +0.1
baz=53
YFT Old Faithful 53.21 308 P P 18 25 00.1 +2.3
comp=Z,42nm,1.1s
YFT Old Faithful 53.21 308 P P 18 25 00.1 +2.3
comp=Z,42nm,1.1s
H17A Grant Village 53.22 307 ⇑P P 18 24 59.5 +1.7
baz=53,SNR=7.4
MCMT McKenzie Canyo 53.22 309 *eP* P 18 24 58.7 +0.9
comp=Z,43nm,1.3s
MCMT McKenzie Canyo 53.22 309 *eP* P 18 24 58.7 +0.9
comp=Z,43nm,1.3s
I19A Meeteetse 53.26 306 ⇓P P 18 24 58.7 +0.6
baz=53,SNR=23
TDL Tradedollar La 53.36 318 P P 18 24 59.7 +1.0
TDL Tradedollar La 53.36 318 P P 18 24 59.7 +1.0
J22A Midwest 53.37 303 ⇓P P 18 24 58.7 -0.2
baz=53,SNR=19
G12A Big Creek, Yel 53.38 312 ⇑P P 18 24 59.0 +0.1
baz=53
K26A Motz Farm, Whi 53.39 300 ⇑P P 18 24 59.0 +0.1
baz=53,SNR=9.5
L29A Maesberg Ranch 53.44 298 ⇓P P 18 24 59.5 +0.2
baz=53,SNR=6.5
BLA Blacksburg 53.55 278 *eP* P 18 25 00.2 +0.1
BLA pmax pmax
comp=Z,23nm,1.2s
BLA Blacksburg 53.55 278 *eP* P 18 25 00.2 +0.1
comp=Z,23nm,1.2s
BLA Blacksburg 53.55 278 *eP* P 18 25 00.2 +0.1
comp=Z,23nm,1.2s
BGNE Belgrade 53.57 295 ⇑P P 18 24 59.9 -0.3
baz=53
TAM Tamanrasset 53.59 181 *eP* P 18 25 01.8 +1.1
TAM pmax pmax
comp=Z,45nm,1.4s
TAM Tamanrasset 53.59 181 *eP* P 18 25 01.8 +1.1
comp=Z,45nm,1.4s
TAM Tamanrasset 53.59 181 *eP* P 18 25 01.8 +1.1
comp=Z,45nm,1.4s
K25A Mack Ranch, Ha 53.62 301 ⇓P P 18 25 01.0 +0.4
baz=53,SNR=7.5
J21A Lysite 53.62 304 ⇑P P 18 25 00.9 +0.2
baz=53,SNR=14
I17A Pilgrim Ck. 53.68 307 ⇓P P 18 25 02.3 +1.1
baz=54
K24A Anderson Ranch 53.70 302 ⇑P P 18 25 01.2 0.0
baz=54
I18A Diamond G Ranc 53.74 306 ⇓P P 18 25 02.1 +0.4
baz=54,SNR=9.7
J20A Shoshoni 53.74 305 ⇑P P 18 25 02.0 +0.5
baz=54,SNR=31
IMW Indian Meadow 53.77 308 *eP* P 18 25 03.4 +1.5
comp=Z,90nm,0.9s
IMW Indian Meadow 53.77 308 *eP* P 18 25 03.4 +1.5
comp=Z,90nm,0.9s
L27A T5 Ranch, Ells 53.80 299 ⇑P P 18 25 02.1 +0.2
baz=54,SNR=8.3
YSS Yuzh-Sakhalins 53.80 36 *eP* P 18 25 02.7 +1.0
YSS *e**SP **sP** 18 25 10.3 +2.8
YSS *eS* S 18 32 42.0 +6.5
YSS pmax pmax
comp=Z,30nm,1.0s
YSS Yuzh-Sakhalins 53.80 36 *eP* P 18 25 02.7 +1.0
comp=Z,30nm,1.0s
M30A Dale-Ortello V 53.81 297 ⇑P P 18 25 01.5 -0.5
baz=54
K23A Bowen Ranch, D 53.83 303 ⇓P P 18 25 01.6 -0.7
baz=54,SNR=12
H12A Diamond D Ranc 53.86 311 ⇑P P 18 25 02.6 +0.1
baz=54,SNR=20
MOOW Moose Ponds 53.87 307 *eP* P 18 25 03.7 +1.1
comp=Z,66nm,1.2s
MOOW Moose Ponds 53.87 307 *eP* P 18 25 03.7 +1.1
comp=Z,66nm,1.2s
OLIL Olney 53.89 285 *eP* P 18 25 03.3 +0.8
comp=Z,138nm,1.6s
OLIL Olney 53.89 285 *eP* P 18 25 03.3 +0.8
comp=Z,138nm,1.6s
I16A Newdale 53.89 308 ⇓P P 18 25 04.1 +1.4
baz=54,SNR=9.3
WCI Wyandotte Cave 53.95 283 *eP* P 18 25 03.0 0.0
WCI pmax pmax
comp=Z,149nm,1.8s
WCI Wyandotte Cave 53.95 283 *eP* P 18 25 03.0 0.0
comp=Z,149nm,1.8s
WCI Wyandotte Cave 53.95 283 *eP* P 18 25 03.0 0.0
comp=Z,149nm,1.8s
BTO Baotou 53.96 66 *eP* P 18 25 02.3 -0.8
LOHW Long Hollow 53.98 307 *eP* P 18 25 04.8 +1.4
comp=Z,74nm,1.4s
LOHW Long Hollow 53.98 307 *eP* P 18 25 04.8 +1.4
comp=Z,74nm,1.4s
MDJ Mudanjiang 53.99 48 P P 18 25 02.8 -0.4
MDJ pP **pP** 18 25 05.9 -1.4
MDJ sP **sP** 18 25 07.3 -1.6
MDJ PcP **PcP** 18 26 07.9 -0.2
MDJ PP **PP** 18 27 03.5 -0.6
MDJ ScP **ScP** 18 30 05.8 +0.5
MDJ S **S** 18 32 38.0 -0.1
MDJ sS **sS** 18 32 43.8 -1.2
MDJ ScS **ScS** 18 34 50.1 -1.5
MDJ SS **SS** 18 36 19.4 +0.7
MDJ pmax pmax
comp=Z,14nm,1.4s
MDJ pmax pmax
comp=Z,84nm,4.3s
MDJ LR LR
comp=N,920nm,19.4s
MDJ LR LR
comp=E,750nm,19.4s
MDJ LR LR
comp=Z,1µm,19.4s
MDJ Mudanjiang 53.99 48 *eP* P 18 25 03.1 -0.1
comp=Z,26nm,1.4s
MDJ Mudanjiang 53.99 48 *eP* P 18 25 03.1 -0.1
comp=Z,26nm,1.4s
BMO Blue Mountains 53.99 313 *eP* P 18 25 03.6 +0.3
comp=Z,85nm,1.6s
BMO Blue Mountains 53.99 313 *eP* P 18 25 03.6 +0.3
comp=Z,85nm,1.6s
L26A Underwood Farm 54.01 300 ⇑P P 18 25 03.6 +0.2
baz=54
J19A Crowheart 54.02 306 ⇑P P 18 25 04.4 +0.8
baz=54,SNR=29
CN2 Changchun 54.03 52 *eP* P 18 25 03.6 +0.2
CN2 *ep*P **pP** 18 25 08.3 +0.7
CN2 *es*P **sP** 18 25 10.6 +1.4
CN2 PP **PP** 18 27 06.3 +1.9
CN2 *eS* S 18 32 35.9 -2.7
CN2 pmax pmax
comp=Z,20nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,900nm,11.0s
CN2 LR LR
comp=E,500nm,11.0s
CN2 LR LR
comp=Z,900nm,14.0s
HHC Hu-ho-hao-te 54.06 65 *eP* P 18 25 03.3 -0.6
HHC sP **sP** 18 25 12.5 +2.9
HHC PP **PP** 18 27 05.9 +1.0
HHC S **S** 18 32 37.1 -2.3
HHC sS **sS** 18 32 46.6 +0.3
HHC ScS **ScS** 18 34 51.5 -0.9
HHC SS **SS** 18 36 18.3 -1.9
HHC pmax pmax
comp=Z,55nm,1.6s
HHC pmax pmax
comp=Z,520nm,7.6s
HHC LR LR
comp=N,3µm,18.4s
HHC LR LR
comp=E,2µm,15.3s
HHC LR LR
comp=Z,3µm,17.9s
L25A Engebretsen Ra 54.07 301 ⇓P P 18 25 04.0 0.0
baz=54
M29A Burnside Ranch 54.08 298 ⇑P P 18 25 03.7 -0.3
baz=54
DCID1 Drake Creek 54.10 308 *eP* P 18 25 06.4 +2.1
comp=Z,94nm,1.1s
DCID1 Drake Creek 54.10 308 *eP* P 18 25 06.4 +2.1
comp=Z,94nm,1.1s
K22A Casper 54.11 303 ⇓P P 18 25 04.0 -0.3
baz=54,SNR=17
SNOW Snow King Moun 54.15 307 *eP* P 18 25 06.5 +1.9
comp=Z,46nm,1.1s
SNOW Snow King Moun 54.15 307 *eP* P 18 25 06.6 +1.9
comp=Z,46nm,1.1s
TPAW Teton Pass 54.16 307 *eP* P 18 25 06.4 +1.6
comp=Z,46nm,1.0s
TPAW Teton Pass 54.16 307 *eP* P 18 25 06.4 +1.6
comp=Z,46nm,1.0s
I14A Mackay 54.20 310 ⇑P P 18 25 05.5 +0.5
baz=54
M28A Bar X Bar Ranc 54.27 298 ⇓P P 18 25 05.4 +0.1
baz=54
M27A Reverse DX Ran 54.35 299 ⇑P P 18 25 05.4 -0.6
baz=54
RRI2 Red Ridge 54.37 308 *eP* P 18 25 07.1 +0.8
comp=Z,66nm,1.4s
RRI2 Red Ridge 54.37 308 *eP* P 18 25 07.1 +0.8
comp=Z,66nm,1.4s
L24A Wheatland 54.38 302 ⇓P P 18 25 06.1 -0.1
baz=54
K19A Absolon Red Bu 54.40 305 ⇓P P 18 25 05.8 -0.6
baz=54,SNR=10
K20A Yellowstone Ra 54.46 305 ⇓P P 18 25 06.7 -0.2
baz=54,SNR=12
USIN University of 54.52 285 *eP* P 18 25 07.1 0.0
comp=Z,200nm,1.5s
USIN University of 54.52 285 *eP* P 18 25 07.1 0.0
comp=Z,200nm,1.5s
M26A McRoberts Ranc 54.57 300 ⇓P P 18 25 07.7 +0.2
baz=54
N30A Hueftle Ranch, 54.57 297 ⇑P P 18 25 07.4 -0.1
baz=54
BW06 Boulder Array 54.59 306 *eP* P 18 25 07.8 -0.1
comp=Z,90nm,1.4s
BW06 Boulder Array 54.59 306 *eP* P 18 25 07.8 -0.1
comp=Z,90nm,1.4s
PDAR Pinedale Array 54.59 306 P P 18 25 08.2 +0.3
PDAR Pinedale Array 54.59 306 P P 18 25 08.2 +0.3
comp=Z,35nm,1.2s,baz=35,slow=4.9,SNR=54
PDAR LR LR 18 48 59.1
comp=Z,3µm,18.5s,baz=17,slow=37
PDAR Pinedale Array 54.59 306 P P 18 25 08.2 +0.3
I12A Atlanta 54.64 311 ⇑P P 18 25 08.1 0.0
baz=54
N29A Votaw Ranch, W 54.66 297 ⇓P P 18 25 08.0 -0.2
baz=54
L22A Ellis Ranch, M 54.69 303 ⇓P P 18 25 09.0 +0.4
baz=54,SNR=29
HLID Hailey 54.73 310 *eP* P 18 25 09.3 +0.5
comp=Z,42nm,1.2s
HLID Hailey 54.73 310 *eP* P 18 25 09.3 +0.5
comp=Z,42nm,1.2s
HLID Hailey 54.73 310 ⇑P P 18 25 09.1 +0.3
baz=55,SNR=20
M25A Palm-Egli Farm 54.78 301 ⇑P P 18 25 09.3 +0.1
baz=55
USRK Ussuriysk Arra 54.81 46 P P 18 25 08.8 -0.3
comp=Z,4.5nm,0.8s,baz=343,slow=6.1,SNR=13
USRK PcP **PcP** 18 26 10.8 -0.5
comp=Z,2.6nm,0.7s,baz=327,slow=3.2,SNR=2.8
USRK LR LR 18 50 26.6
comp=Z,957nm,19.2s,baz=128,slow=38
OGNE Ogallala 54.84 299 *eP* P 18 25 09.8 +0.3
comp=Z,215nm,1.2s
OGNE Ogallala 54.84 299 *eP* P 18 25 09.8 +0.3
comp=Z,215nm,1.2s
OGNE Ogallala 54.84 299 ⇑P P 18 25 09.3 -0.2
baz=55,SNR=11
M24A Cheyenne 54.91 301 ⇓P P 18 25 10.0 -0.2
baz=55,SNR=9.7
TZTN Tazewell 54.92 280 *eP* P 18 25 11.2 +1.1
comp=Z,108nm,1.4s
TZTN Tazewell 54.92 280 *eP* P 18 25 11.2 +1.1
comp=Z,108nm,1.4s
L21A Rawlins 54.94 304 ⇑P P 18 25 10.2 -0.2
baz=55,SNR=49
N28A Pribbeno Ranch 54.98 298 ⇓P P 18 25 10.5 0.0
baz=55,SNR=8.1
N27A Anderson Farm, 55.08 299 ⇑P P 18 25 11.3 +0.1
baz=55,SNR=12
L20A Wamsutter 55.09 305 ⇓P P 18 25 11.6 +0.1
baz=55,SNR=22
M23A Laramie 55.09 302 ⇑P P 18 25 11.4 -0.1
baz=55
SIUC Southern Illin 55.12 286 *eP* P 18 25 11.2 -0.2
comp=Z,105nm,1.3s
SIUC Southern Illin 55.12 286 *eP* P 18 25 11.2 -0.2
comp=Z,105nm,1.3s
MFID Camas Ranch 55.13 312 *eP* P 18 25 11.7 0.0
comp=Z,36nm,1.5s
MFID Camas Ranch 55.13 312 *eP* P 18 25 11.6 0.0
comp=Z,36nm,1.5s
MFID Camas Ranch 55.13 312 ⇑P P 18 25 11.2 -0.4
baz=55,SNR=7.7
O30A MW Ranch, Wils 55.16 297 ⇑P P 18 25 11.3 -0.5
baz=55
N26A Koester Ranch, 55.20 300 ⇓P P 18 25 12.3 +0.2
baz=55
L19A Farson 55.20 306 ⇑P P 18 25 11.9 -0.4
baz=55
PHWY Pilot Hill 55.20 302 *eP* P 18 25 12.8 +0.5
comp=Z,50nm,1.0s
PHWY Pilot Hill 55.20 302 *eP* P 18 25 12.8 +0.5
comp=Z,50nm,1.0s
M21A Separation Pea 55.28 304 ⇓P P 18 25 12.9 0.0
baz=55,SNR=18
M22A Cedar Creek Ra 55.33 303 ⇑P P 18 25 13.1 -0.1
baz=55
O29A 4D Ranch, Culb 55.36 297 ⇑P P 18 25 13.4 +0.1
baz=55,SNR=10
SMLA Simla 55.38 101 *i* P P 18 25 14.5 +1.2
SMLA *i* x x 18 25 14.5
baz=195,slow=8.6
SMLA Simla 55.38 101 *i* P P 18 25 14.5 +1.2
N25A Grover 55.39 301 ⇑P P 18 25 13.7 +0.1
baz=55
KSU1 Kansas State U 55.45 293 *eP* P 18 25 13.6 -0.2
comp=Z,157nm,1.3s
KSU1 Kansas State U 55.45 293 *eP* P 18 25 13.6 -0.2
comp=Z,157nm,1.3s
L18A Fontenelle, Gr 55.50 306 ⇓P P 18 25 14.4 0.0
baz=55
N24A Carr 55.54 301 ⇑P P 18 25 15.5 +0.9
baz=55,SNR=9.9
M20A Sweetwater, Wa 55.56 304 ⇑P P 18 25 15.2 +0.4
baz=55,SNR=21
O28A Krutsinger Ran 55.57 298 ⇓P P 18 25 14.5 -0.3
baz=55
P31A Stockton 55.64 296 ⇓P P 18 25 15.1 -0.2
baz=56,SNR=13
O27A Beecher Island 55.66 299 ⇓P P 18 25 15.3 -0.2
baz=56
N23A Red Feather La 55.69 302 ⇓P P 18 25 16.2 +0.4
baz=56,SNR=33
M19A Rock Springs 55.73 305 ⇑P P 18 25 16.0 -0.1
baz=56,SNR=8.6
KMSC Kings Mountain 55.74 278 ⇓P P 18 25 15.4 -0.6
baz=56,SNR=8.5
O26A Horse Wrangler 55.78 300 ⇑P P 18 25 15.9 -0.5
baz=56,SNR=7.7
P30A Selden 55.81 297 ⇓P P 18 25 15.9 -0.6
baz=56
BJI Beijing 55.81 61 P P 18 25 16.8 +0.4
BJI PP **PP** 18 27 19.3 -1.2
BJI S **S** 18 33 05.9 +3.2
BJI pmax pmax
comp=Z,18nm,1.4s
BJI pmax pmax
comp=Z,220nm,5.2s
BJI LR LR
comp=N,3µm,19.6s
BJI LR LR
comp=E,1µm,16.0s
BJI LR LR
comp=Z,2µm,22.5s
BANOM Banah 55.84 124 P P 18 25 16.2 -0.6
N22A Wattenberg Ran 55.88 303 ⇑P P 18 25 17.3 +0.1
baz=56,SNR=28
P29A Atwood 55.90 297 ⇓P P 18 25 16.6 -0.5
baz=56
M17A Scullys Gap (B 56.06 307 ⇓P P 18 25 18.6 +0.1
baz=56,SNR=11
O25A Wiggins 56.07 300 ⇑P P 18 25 19.0 +0.5
baz=56,SNR=8.5
HWUT Hardware Ranch 56.10 307 *eP* P 18 25 19.1 +0.5
comp=Z,91nm,1.5s
HWUT Hardware Ranch 56.10 307 *eP* P 18 25 19.1 +0.5
comp=Z,91nm,1.5s
N21A Black Mountain 56.13 304 ⇑P P 18 25 19.0 0.0
baz=56,SNR=10
Q31A Ellis 56.14 296 ⇑P P 18 25 18.8 -0.1
baz=56,SNR=7.8
HVU Hansel Valley 56.16 308 *eP* P 18 25 19.8 +0.7
HVU pmax pmax
comp=Z,47nm,1.4s
HVU Hansel Valley 56.16 308 *eP* P 18 25 19.8 +0.7
comp=Z,47nm,1.4s
HVU Hansel Valley 56.16 308 *eP* P 18 25 19.8 +0.7
comp=Z,47nm,1.4s
CPCT Cooper Cave 56.20 281 *eP* P 18 25 18.9 -0.3
CPCT Cooper Cave 56.20 281 *eP* P 18 25 18.9 -0.3
N20A Spence Gulch, 56.21 304 ⇑P P 18 25 20.2 +0.6
baz=56,SNR=83
RAYN Ar Rayn 56.23 136 P P 18 25 20.5 +0.9
comp=Z,208nm,1.2s,SNR=20

RAYN **Ar Rayn** 56.23 136 *e*P P 18 25 20.1 +0.5
comp=Z,95nm,1.4s
RAYN **Ar Rayn** 56.23 136 *e*P P 18 25 20.1 +0.5
comp=Z,95nm,1.4s
O24A **Longmont** 56.25 301 ⇓P P 18 25 20.2 +0.4
baz=56,SNR=5.9
P27A **Ficken Ranch,** 56.28 299 ⇑P P 18 25 19.9 0.0
baz=56
WVT **Waverly** 56.32 284 *e*P P 18 25 18.6 -1.5
WVT pmax pmax
comp=Z,54nm,1.6s
WVT **Waverly** 56.32 284 *e*P P 18 25 18.6 -1.5
comp=Z,54nm,1.6s
WVT **Waverly** 56.32 284 *e*P P 18 25 18.5 -1.5
comp=Z,54nm,1.6s
O23A **Lake Granby, G** 56.34 302 ⇓P P 18 25 21.4 +0.8
baz=56,SNR=15
Q30A **Quinter** 56.34 296 ⇑P P 18 25 20.0 -0.3
baz=56,SNR=15
P26A **Davis Ranch, A** 56.44 299 ⇓P P 18 25 21.1 0.0
baz=56,SNR=9.3
O22A **Kremmling** 56.51 302 ⇑P P 18 25 22.4 +0.6
baz=56,SNR=40
WVOR **Wild Horse Val** 56.57 314 *e*P P 18 25 22.6 +0.6
WVOR pmax pmax
comp=Z,23nm,1.5s
WVOR **Wild Horse Val** 56.57 314 *e*P P 18 25 22.6 +0.6
comp=Z,23nm,1.5s
WVOR **Wild Horse Val** 56.57 314 *e*P P 18 25 22.6 +0.6
comp=Z,23nm,1.5s
Q29A **Oakley** 56.59 297 ⇓P P 18 25 21.7 -0.3
baz=56,SNR=17
Q28A **Sharon Springs** 56.60 298 ⇓P P 18 25 22.2 0.0
baz=56,SNR=7.7
NAZ **Nazwa, Dubai** 56.63 125 P P 18 25 22.5 +0.1
O21A **Pagoda** 56.65 303 ⇓P P 18 25 23.4 +0.8
baz=56,SNR=16
P25A **Willow Gulch B** 56.66 300 ⇑P P 18 25 23.3 +0.6
baz=56,SNR=19
ISCO **Idaho Springs** 56.67 302 *e*P P 18 25 24.0 +1.1
ISCO pmax pmax
comp=Z,46nm,1.1s
ISCO **Idaho Springs** 56.67 302 *e*P P 18 25 24.0 +1.1
comp=Z,46nm,1.1s
ISCO **Idaho Springs** 56.67 302 *e*P P 18 25 24.0 +1.1
comp=Z,46nm,1.1s
ISCO **Idaho Springs** 56.67 302 ⇑P P 18 25 23.7 +0.7
baz=56,SNR=37
UOSS **Wadi Hilu** 56.78 125 P P 18 25 23.0 -0.4
comp=Z,163nm,1.4s,SNR=5.6
P24A **Kohler Place,** 56.81 301 ⇓P P 18 25 24.1 +0.4
baz=57
KSCO **Kaye Shedlock'** 56.82 299 ⇑P P 18 25 23.8 +0.1
baz=57,SNR=8.1
FAQ **Al Faqa, Dubai** 56.85 125 P P 18 25 23.5 -0.5
R31A **Burdett** 56.86 296 ⇓P P 18 25 23.9 0.0
baz=57,SNR=24
O20A **White River Ci** 56.88 304 ⇑P P 18 25 25.2 +0.9
baz=57,SNR=42
HATD **Hatta, Dubai** 56.88 125 P P 18 25 24.4 +0.2
O19A **Miners Draw (B** 56.89 305 ⇑P P 18 25 24.9 +0.6
baz=57,SNR=9.8
LZH **Lanzhou** 56.91 74 ⇑P P 18 25 24.6 +0.1
LZH sP **sP** 18 25 31.8 +1.6
LZH PP **PP** 18 27 32.5 +2.0
LZH S **S** 18 33 15.3 -2.3
LZH sS **sS** 18 33 22.4 -2.1
LZH SS **SS** 18 37 04.3 -0.9
LZH pmax pmax
comp=Z,58nm,1.2s
LZH pmax pmax
comp=Z,410nm,9.0s
LZH LR LR
comp=N,3μm,14.1s
LZH LR LR
comp=E,2μm,15.0s
LZH LR LR
comp=Z,3μm,16.4s
ASUD **Al Ashush, Dub** 56.92 126 P P 18 25 24.2 -0.2
R30A **Dighton** 57.02 296 ⇓P P 18 25 24.9 -0.2
baz=57,SNR=12
JLU **Jordanelle** 57.05 307 *e*P P 18 25 26.4 +1.0
comp=Z,49nm,1.5s
JLU **Jordanelle** 57.05 307 *e*P P 18 25 26.5 +1.0
comp=Z,49nm,1.5s
R29A **Marienthal** 57.07 297 ⇑P P 18 25 25.4 -0.1
baz=57,SNR=8.2
Q26A **Hugo** 57.09 299 ⇓P P 18 25 25.6 -0.1
baz=57
YUK **Yuzh-Kuril'sk** 57.09 34 *d*P P 18 25 22.4 -3.0
YUK *i* 18 27 40.6
YUK *i* PPP PPP 18 28 51.9
YUK *i* S **S** **18 33 24.8 +5.3**
YUK *i* SSS SSS 18 39 30.4
YUK MLR MLR
comp=E,776nm,20.0s
YUK MLR MLR
comp=N,133nm,20.0s
YUK MLR MLR
comp=Z,465nm,20.0s
P22A **Eagle** 57.10 302 ⇓P P 18 25 26.4 +0.5
baz=57,SNR=9.5
DAU **Daniels Canyon** 57.19 307 *e*P P 18 25 28.0 +1.4
DAU **Daniels Canyon** 57.19 307 *e*P P 18 25 28.0 +1.4
DAU **Daniels Canyon** 57.19 307 *e*P P 18 25 28.0 +1.4
Q25A **Bedland, Calha** 57.25 300 ⇓P P 18 25 26.9 0.0
baz=57,SNR=8.5
R28A **Tribune** 57.29 298 ⇓P P 18 25 26.8 -0.2
baz=57
P21A **Newcastle** 57.31 303 ⇑P P 18 25 27.8 +0.4
baz=57,SNR=28
MOD **Modoc** 57.37 315 *e*P P 18 25 29.5 +1.8
comp=Z,41nm,1.3s
MOD **Modoc** 57.37 315 *e*P P 18 25 29.5 +1.8
comp=Z,41nm,1.3s
Q24A **Divide** 57.38 301 ⇑P P 18 25 28.3 +0.3
baz=57,SNR=21
S31A **Mullinville** 57.49 295 ⇑P P 18 25 28.0 -0.4
baz=57
P19A **Cripple Cowboy** 57.51 304 ⇑P P 18 25 29.5 +0.8
baz=57,SNR=37
P20A **De Beque** 57.52 304 ⇑P P 18 25 29.8 +1.0
baz=57
R27A **Eads** 57.55 299 ⇑P P 18 25 28.9 0.0
baz=57,SNR=10
Q23A **Hartsel** 57.58 301 ⇓P P 18 25 29.4 0.0
baz=57
ELK **Elko** 57.61 310 *e*P P 18 25 30.9 +1.5
comp=Z,32nm,1.1s
ELK **Elko** 57.61 310 *e*P P 18 25 31.0 +1.5
comp=Z,32nm,1.1s
MPU **Maple Canyon** 57.65 307 *e*P P 18 25 31.0 +1.3
comp=Z,78nm,1.5s
MPU **Maple Canyon** 57.65 307 *e*P P 18 25 31.0 +1.3
comp=Z,78nm,1.5s
R26A **Arlington** 57.67 299 ⇓P P 18 25 29.5 -0.3
baz=58
S30A **Montezuma** 57.68 296 ⇑P P 18 25 29.2 -0.5
baz=58
DUG **Dugway** 57.70 308 ⇑P P 18 25 30.4 +0.4
baz=58,SNR=8.0
NDI **New Delhi** 57.73 102 *e*PKP P 18 25 29.0 -1.2
Q22A **Crested Butte,** 57.84 302 ⇑P P 18 25 31.8 +0.6
baz=58,SNR=21
S29A **Ulysses** 57.84 297 ⇓P P 18 25 30.7 -0.2
baz=58,SNR=6.8
GOGA **Godfrey** 57.90 279 *e*P P 18 25 30.7 -0.6
GOGA pmax pmax
comp=Z,69nm,1.3s
GOGA **Godfrey** 57.90 279 *e*P P 18 25 30.7 -0.6
comp=Z,69nm,1.3s
GOGA **Godfrey** 57.90 279 *e*P P 18 25 30.7 -0.6
comp=Z,69nm,1.3s
R25A **Fountain Ranch** 57.99 300 ⇓P P 18 25 31.9 -0.2
baz=58,SNR=9.2
Q21A **Lamborn Mesa,** 58.00 303 ⇓P P 18 25 33.0 +0.9
baz=58,SNR=7.8
DL2 **Dalian** 58.02 57 P P 18 25 33.3 +1.3
DL2 S **S** 18 33 37.3 +5.5
DL2 pmax pmax
comp=Z,26nm,1.3s
DL2 pmax pmax
comp=Z,110nm,4.3s
DL2 LR LR
comp=N,1μm,16.8s
DL2 LR LR
comp=E,690nm,17.4s
DL2 LR LR
comp=Z,2μm,16.2s
Q20A **Ridgley Place,** 58.03 304 ⇓P P 18 25 32.2 -0.1
baz=58,SNR=12
S28A **Manter** 58.03 298 ⇓P P 18 25 32.2 -0.1
baz=58
T31A **Randall Ranch,** 58.03 295 ⇑P P 18 25 32.2 0.0
baz=58,SNR=13
R24A **Sanders Place,** 58.08 301 ⇓P P 18 25 33.0 +0.2
baz=58,SNR=11
S27A **Las Animas** 58.15 298 ⇑P P 18 25 33.3 +0.1
baz=58,SNR=11
T30A **Plains** 58.26 296 ⇓P P 18 25 33.3 -0.5
baz=58
R23A **Moffat** 58.27 301 ⇑P P 18 25 34.3 +0.1
baz=58,SNR=28
SRU **San Rafael** 58.31 306 ⇓P P 18 25 34.3 0.0
baz=58,SNR=19
T29A **Hugoton** 58.32 297 ⇑P P 18 25 33.9 -0.4
baz=58
TUL1 **Tulsa** 58.33 291 ⇓P P 18 25 33.2 -1.0
baz=58
S26A **Kim** 58.33 299 ⇑P P 18 25 34.3 -0.1
baz=58,SNR=10
ARQ **Araqi** 58.40 125 ⇑P P 18 25 34.6 -0.3
SNR=13
ARQ **Araqi** 58.40 125 P P 18 25 34.6 -0.3
SNR=13
R22A **Saguache, Gunn** 58.42 302 ⇓P P 18 25 36.2 +1.0
baz=58,SNR=43
R21A **Cimarron** 58.45 303 ⇑P P 18 25 36.2 +0.8
baz=58,SNR=27
S25A **Robets Cordova** 58.49 300 ⇓P P 18 25 35.9 +0.3
baz=58,SNR=60
Q16A **Castle Valley** 58.62 306 ⇓P P 18 25 37.6 +1.1
baz=58,SNR=14
UALR **University of** 58.65 288 *e*P P 18 25 36.4 -0.1
comp=Z,72nm,1.4s
UALR **University of** 58.65 288 *e*P P 18 25 36.4 -0.1
comp=Z,72nm,1.4s
S24A **Houchin Ranch,** 58.67 301 ⇓P P 18 25 37.4 +0.4
baz=58,SNR=12
PV04 **Paradox Valley** 58.69 304 *e*P P 18 25 38.3 +1.3
PV04 **Paradox Valley** 58.69 304 *e*P P 18 25 38.3 +1.3
T27A **Campo** 58.72 298 ⇑P P 18 25 37.2 +0.1
baz=58,SNR=12
U31A **Nine Bar Ranch** 58.77 295 ⇑P P 18 25 37.4 0.0
baz=59
S23A **Nye Farm, Mont** 58.77 301 ⇓P P 18 25 38.4 +0.7
baz=59
R20A **Redvale** 58.78 304 ⇑P P 18 25 38.4 +0.7
baz=59,SNR=8.9
T26A **Comanche Natio** 58.79 299 ⇓P P 18 25 37.5 -0.2
baz=59,SNR=19
U30A **WK&E Inc. Balk** 58.79 296 ⇑P P 18 25 37.8 +0.2
baz=59,SNR=7.5
PV01 **Paradox Valley** 58.87 304 *e*P P 18 25 39.4 +1.1
comp=Z,7μm,1.2s
PV01 **Paradox Valley** 58.87 304 *e*P P 18 25 39.4 +1.1
comp=Z,7μm,1.2s
S22A **4UR Ranch, Cre** 58.90 302 ⇓P P 18 25 39.4 +0.8
baz=59,SNR=40
SMDO **Samad** 58.98 123 ⇑P P 18 25 38.6 -0.4
SNR=12
SMDO **Samad** 58.98 123 P P 18 25 38.6 -0.4
SNR=12
T25A **Trinidad** 58.99 300 ⇑P P 18 25 39.2 0.0
baz=59,SNR=10
U29A **Oasis Ranch, S** 59.00 297 ⇑P P 18 25 38.8 -0.2
baz=59
WDC **Whiskeytown Da** 59.03 317 P P 18 25 39.5 +0.4
WDC pmax pmax
comp=Z,50nm,1.7s
WDC **Whiskeytown Da** 59.03 317 P P 18 25 39.5 +0.4
comp=Z,50nm,1.7s
WDC **Whiskeytown Da** 59.03 317 P P 18 25 39.5 +0.4
comp=Z,50nm,1.7s
LRAL **Lakeview Retre** 59.09 282 *e*P P 18 25 37.9 -1.6
comp=Z,66nm,1.9s
LRAL **Lakeview Retre** 59.09 282 *e*P P 18 25 37.9 -1.6
comp=Z,66nm,1.9s
BSY **Bisya** 59.11 124 P P 18 25 40.0 +0.1
SNR=8.2
S20A **Disappointment** 59.13 303 ⇑P P 18 25 40.7 +0.6
baz=59,SNR=22
BSYO **Bisya** 59.13 124 P P 18 25 40.0 0.0
SNR=8.2
S21A **Coal Bank Pass** 59.18 303 ⇓P P 18 25 41.1 +0.6
baz=59,SNR=14
MSU **Marysvale** 59.21 307 *e*P P 18 25 42.2 +1.6
MSU **Marysvale** 59.21 307 *e*P P 18 25 42.2 +1.6
MSU **Marysvale** 59.21 307 *e*P P 18 25 42.2 +1.6
U28A **Mallet** 59.27 297 ⇑P P 18 25 40.6 -0.3
baz=59
V31A **Spring Creek L** 59.34 295 ⇑P P 18 25 41.5 +0.1
baz=59
U27A **Thompson Grove** 59.35 298 ⇓P P 18 25 41.4 -0.1
baz=59
BEKR **Beckworth** 59.37 315 *e*P P 18 25 41.7 0.0
comp=Z,26nm,1.5s
BEKR **Beckworth** 59.37 315 *e*P P 18 25 41.7 0.0
comp=Z,26nm,1.5s
T23A **Casas Ranch,** 59.43 301 ⇓P P 18 25 42.5 +0.3
baz=59,SNR=7.9
V30A **Spur Ranch, Mi** 59.54 296 ⇓P P 18 25 43.1 +0.4
baz=59
U26A **Atchley Ranch,** 59.57 299 ⇑P P 18 25 43.3 +0.2
baz=59,SNR=16
DANN **Dangsing** 59.59 95 *e*P P 18 25 43.8 +0.3
comp=Z,407nm,1.6s
V29A **Stinnett** 59.61 297 ⇓P P 18 25 43.5 +0.2
baz=59
T22A **Edith** 59.62 302 ⇓P P 18 25 44.0 +0.5
baz=60,SNR=36
JMDO **Jabal Madar** 59.66 123 P P 18 25 43.7 +0.1
SNR=7.2
JMDO **Jabal Madar** 59.66 123 P P 18 25 43.7 +0.1
SNR=7.2
TIA **Tai'an** 59.70 61 ⇑P P 18 25 43.9 +0.1
TIA S **S** **18 33 56.0 +2.3**
TIA LR LR
comp=N,2μm,19.6s
TIA LR LR
comp=E,990nm,17.6s
TIA LR LR
comp=Z,3μm,18.4s
U25A **Circle Dot Ran** 59.70 299 ⇓P P 18 25 44.2 +0.2
baz=60,SNR=24
T21A **Navajo Lake** 59.77 302 ⇑P P 18 25 45.4 +0.9
baz=60,SNR=12
TIGA **Tifton** 59.82 279 ⇑P P 18 25 43.8 -0.9
baz=60
V28A **Channing** 59.87 297 ⇓P P 18 25 45.1 -0.1
baz=60
U24A **Moreno Valley** 59.88 300 ⇑P P 18 25 45.4 +0.1
baz=60
W31A **Holland Ranch,** 59.93 295 ⇑P P 18 25 45.8 +0.4
baz=60
V27A **Dan Oppiter Fa** 60.00 298 ⇑P P 18 25 45.5 -0.4
baz=60,SNR=8.3
R11A **Troy Canyon, C** 60.00 310 ⇓P P 18 25 46.4 +0.4
baz=60,SNR=42
XAN **Xi'an** 60.02 70 P P 18 25 45.3 -0.7
XAN pP **pP** 18 25 50.3 +0.1
XAN PP **PP** 18 27 59.3 +1.3
XAN S **S** 18 33 55.3 -2.6
XAN SS **SS** 18 37 54.3 +0.5
XAN pmax pmax
comp=Z,56nm,6.6s
XAN LR LR
comp=N,2μm,16.9s
XAN LR LR
comp=E,400nm,14.3s
XAN LR LR
comp=Z,720nm,16.1s
LSA **Lhasa** 60.05 88 P P 18 25 46.4 -0.4
LSA S **S** 18 34 02.1 +2.8
LSA LR LR
comp=N,920nm,20.9s
LSA LR LR
comp=E,960nm,23.0s
LSA LR LR
comp=Z,2μm,17.4s
LSA **Lhasa** 60.05 88 *e*P P 18 25 48.2 +1.4
LSA pmax pmax
comp=Z,151nm,1.7s
LSA **Lhasa** 60.05 88 *e*P P 18 25 48.2 +1.4
comp=Z,152nm,1.7s
LSA **Lhasa** 60.05 88 *e*P P 18 25 48.2 +1.4
comp=Z,152nm,1.7s
W30A **Crocket Farms** 60.07 296 ⇑P P 18 25 46.9 +0.5
baz=60
OHCM **Honcut** 60.07 315 *e*P P 18 25 47.3 +1.0
OHCM **Honcut** 60.07 315 *e*P P 18 25 47.3 +1.0
KOLN **Koldanda** 60.11 96 *e*P P 18 25 46.8 -0.1
comp=Z,155nm,1.5s
WMOK **Wichita Mounta** 60.11 294 *e*P P 18 25 47.0 +0.4
WMOK pmax pmax
comp=Z,96nm,1.4s
WMOK **Wichita Mounta** 60.11 294 *e*P P 18 25 47.0 +0.4
comp=Z,96nm,1.4s
WMOK **Wichita Mounta** 60.11 294 *e*P P 18 25 47.0 +0.4
comp=Z,96nm,1.4s
U23A **El Rito** 60.14 301 ⇑P P 18 25 47.5 +0.4
baz=60,SNR=8.9
ARUT **Antelope Range** 60.15 308 *e*P P 18 25 47.6 +0.6
ARUT pmax pmax
comp=Z,15nm,0.9s
ARUT **Antelope Range** 60.15 308 *e*P P 18 25 47.6 +0.6
comp=Z,15nm,0.9s
ARUT **Antelope Range** 60.15 308 *e*P P 18 25 47.6 +0.6
comp=Z,15nm,0.9s
V26A **Tequesquite Ra** 60.16 299 ⇓P P 18 25 46.7 -0.3
baz=60,SNR=13
U22A **Llaves** 60.23 302 ⇓P P 18 25 48.7 +1.0
baz=60,SNR=19
V25A **Rancho No Teng** 60.29 299 ⇑P P 18 25 48.3 +0.2
baz=60,SNR=28
U21A **Nageezi** 60.34 302 ⇑P P 18 25 48.5 0.0
baz=60,SNR=28
W28A **Vega** 60.35 297 ⇑P P 18 25 48.4 +0.1
baz=60
W29A **Amraillo** 60.36 297 ⇑P P 18 25 48.4 0.0
baz=60
CCUT **Cedar City** 60.37 308 *e*P P 18 25 50.3 +1.7
comp=Z,61nm,1.3s
CCUT **Cedar City** 60.37 308 *e*P P 18 25 50.3 +1.7
comp=Z,61nm,1.3s
NVAR **Mina Array Bea** 60.41 312 P P 18 25 49.4 +0.5
NVAR **Mina Array Bea** 60.41 312 P P 18 25 49.4 +0.5
comp=Z,8.6nm,1.1s,baz=21,slow=5.1,SNR=32
NVAR LR LR 18 51 41.6
comp=Z,659nm,21.6s,baz=347,slow=36
NVAR **Mina Array Bea** 60.41 312 P P 18 25 49.4 +0.5
X31A **McDonald Ranch** 60.47 295 ⇑P P 18 25 49.5 +0.3
baz=60,SNR=8.5
KKN **Kakani** 60.49 94 *e*P P 18 25 49.9 +0.4
comp=Z,242nm,1.4s
GUN **Gumba** 60.52 93 *e*P P 18 25 49.9 0.0
comp=Z,242nm,1.4s
V24A **Rampart Ranch,** 60.53 300 ⇓P P 18 25 50.1 +0.3
baz=60,SNR=12
U20A **Newcomb** 60.56 303 ⇑P P 18 25 50.1 +0.2
baz=60
AMTX **Amarillo** 60.59 296 *e*P P 18 25 50.6 +0.6
comp=Z,38nm,1.4s
AMTX **Amarillo** 60.59 296 *e*P P 18 25 50.6 +0.6
comp=Z,38nm,1.4s
DMN **Daman** 60.62 94 *e*P P 18 25 50.8 +0.3
comp=Z,301nm,1.7s
KSRS **Korea Array** 60.63 51 P P 18 25 49.4 -0.7
comp=Z,4.3nm,0.8s,baz=347,slow=6.1,SNR=21
KSRS LR LR 18 57 11.7
comp=Z,604nm,18.0s,baz=348,slow=41
KSRS **Korea Array** 60.63 51 P P 18 25 49.4 -0.7
comp=Z,604nm,18.0s
KSAR **Wonju Array Be** 60.64 51 P P 18 25 49.4 -0.8
KSAR **Wonju Array Be** 60.64 51 P P 18 25 49.4 -0.8
VBMS **Vicksburg** 60.68 285 *e*P P 18 25 50.6 +0.1
comp=Z,201nm,1.3s
VBMS **Vicksburg** 60.68 285 *e*P P 18 25 50.6 +0.1
comp=Z,201nm,1.3s
V22A **San Miguel Ran** 60.69 302 ⇑P P 18 25 51.5 +0.6
baz=60,SNR=16
V23A **Ortiz Mt. (NFS** 60.70 301 ⇑P P 18 25 51.3 +0.4
baz=60,SNR=7.2
W27A **Bowe Ranch, En** 60.71 298 ⇓P P 18 25 51.3 +0.4
baz=60,SNR=23
PKI **Pulchoki** 60.73 94 *e*P P 18 25 51.6 +0.3
comp=Z,355nm,1.8s
W26A **Owens Ranch, T** 60.84 298 ⇑P P 18 25 51.7 -0.1
baz=61
X30A **Coker Ranch, T** 60.84 296 ⇓P P 18 25 52.4 +0.7
baz=61,SNR=11
W25A **X Bar L Ranch,** 60.86 299 ⇑P P 18 25 51.3 -0.6
baz=61
V21A **Milan** 60.94 302 ⇓P P 18 25 52.6 0.0
baz=61,SNR=6.5
Y32A **R-V Farms, Ver** 60.96 294 ⇓P P 18 25 53.0 +0.6
baz=61,SNR=8.3
X29A **Tulia** 61.02 296 ⇑P P 18 25 52.9 0.0
baz=61
X28A **Dimmitt** 61.06 297 ⇓P P 18 25 53.8 +0.6
baz=61,SNR=12
W24A **Lazy 6 Ranch,** 61.06 300 ⇓P P 18 25 53.7 +0.3
baz=61,SNR=20
V20A **Brimhall** 61.11 303 ⇓P P 18 25 53.7 +0.1
baz=61,SNR=8.2
X27A **F and S Farms,** 61.12 298 ⇓P P 18 25 54.1 +0.4
baz=61
CMB **Columbia Colle** 61.16 314 *e*P P 18 25 54.2 +0.5
CMB pmax pmax
comp=Z,18nm,1.3s
CMB **Columbia Colle** 61.16 314 *e*P P 18 25 54.2 +0.5
comp=Z,18nm,1.3s
CMB **Columbia Colle** 61.16 314 *e*P P 18 25 54.2 +0.5
comp=Z,18nm,1.3s
Y31A **Rekieta Farm,** 61.18 295 ⇑P P 18 25 54.5 +0.6
baz=61
U15A **North Rim** 61.25 307 ⇑P P 18 25 54.9 +0.2
baz=61,SNR=15
W23A **Werner Place,** 61.26 301 ⇑P P 18 25 55.1 +0.4
baz=61
MLAC **Mammoth Lakes** 61.28 313 ⇓P P 18 25 56.4 +1.6
baz=61
X26A **CR and CF Fran** 61.37 298 ⇑P P 18 25 55.5 +0.2
baz=61,SNR=29
Y30A **Stafford Cattl** 61.40 295 ⇑P P 18 25 56.3 +0.8
baz=61
TAPN **Taplejung** 61.49 92 *e*P P 18 25 56.9 +0.5
comp=Z,181nm,1.6s
W22A **Albuquerque** 61.49 301 ⇑P P 18 25 57.1 +0.8
baz=61
MTUM **Tungsten Hills** 61.50 312 *e*P P 18 25 58.5 +2.2
MTUM **Tungsten Hills** 61.50 312 *e*P P 18 25 58.5 +2.2
ANMO **Albuquerque** 61.53 301 *e*P P 18 25 57.1 +0.7
comp=Z,78nm,1.6s
ANMO **Albuquerque** 61.53 301 P P 18 25 56.9 +0.4
comp=Z,17nm,1.3s,baz=21,slow=6.1,SNR=19
ANMO **Albuquerque** 61.53 301 *e*P P 18 25 57.2 +0.7
comp=Z,78nm,1.6s
X25A **Clemmons Ranch** 61.56 299 ⇑P P 18 25 57.2 +0.5
baz=61,SNR=8.3
Y29A **Porterfield Fa** 61.58 296 ⇑P P 18 25 56.9 +0.1
baz=61
W21A **San Fidel** 61.61 302 ⇓P P 18 25 57.7 +0.7
baz=61
RAMN **Ramite** 61.61 93 *e*P P 18 25 57.3 +0.1
comp=Z,188nm,1.6s
Z32A **Haskell** 61.64 294 ⇑P P 18 25 57.4 +0.4
baz=62,SNR=16
Y28A **McKinney Farm,** 61.66 297 ⇑P P 18 25 57.6 +0.4
baz=62
X24A **Lazy VL Ranch,** 61.69 300 ⇑P P 18 25 57.7 +0.1
baz=62
MSTX **Muleshoe** 61.71 297 ⇑P P 18 25 57.6 0.0
baz=62,SNR=8.6
TIN **Tinemaha** 61.73 312 ⇓P P 18 25 59.2 +1.5
baz=62
W20A **Ramah** 61.77 303 ⇓P P 18 25 57.7 -0.5
baz=62,SNR=6.5
Z31A **Sharp Cattle R** 61.77 295 ⇑P P 18 25 57.9 0.0
baz=62,SNR=13
X23A **Hourglass Bar** 61.83 301 ⇑P P 18 25 58.9 +0.3
baz=62
CD2 **Chengdu** 61.85 75 *e*P P 18 25 59.3 +0.8
CD2 pP **pP** 18 26 04.3 +1.6
CD2 sP **sP** 18 26 06.5 +2.2
CD2 PcP **PcP** 18 26 40.8 +1.4
CD2 PP **PP** 18 28 17.6 +3.4
CD2 S **S** 18 34 20.5 -0.9
CD2 sS **sS** 18 34 27.8 -0.5
CD2 ScS **SKKSac** 18 35 47.6 -2.0
CD2 SS **SS** 18 38 23.5 +0.8
CD2 pmax pmax

comp=Z,70nm,1.4s
CD2 pmax pmax
comp=Z,340nm,8.2s
CD2 LR LR
comp=N,2µm,20.2s
CD2 LR LR
comp=E,2µm,17.8s
CD2 LR LR
comp=Z,3µm,19.0s
Y27A Causey 61.87 298 ⇑P **P 18 25 59.1 +0.4**
baz=62,SNR=28
ODAN Odare 61.88 92 *e*P **P 18 25 59.6 +0.6**
comp=Z,306nm,1.5s
WUAZ Wupatki 61.96 305 *e*P **P 18 26 00.2 +0.9**
comp=Z,60nm,1.3s
WUAZ Wupatki 61.96 305 *e*P **P 18 26 00.2 +0.9**
comp=Z,60nm,1.3s
WUAZ Wupatki 61.96 305 ⇑P **P 18 25 59.8 +0.5**
baz=62,SNR=12
Y26A Elida 61.97 298 ⇓P **P 18 26 00.1 +0.7**
baz=62,SNR=15
Z30A Sanderson Ranc 62.02 296 ⇓P **P 18 25 59.3 -0.3**
baz=62,SNR=10.0
W18A Petrified Fore 62.02 304 ⇑P **P 18 25 59.9 +0.1**
baz=62,SNR=9.8
FURC Furnace Creek, 62.06 311 ⇓P **P 18 25 60.0 +0.2**
baz=62
X22A Bernardo 62.07 301 ⇓P **P 18 26 00.1 0.0**
baz=62
Y25A Mesa, Roswell 62.16 299 ⇑P **P 18 26 00.9 +0.2**
baz=62,SNR=27
Z29A Hungry Hill Ra 62.16 296 ⇓P **P 18 26 01.1 +0.4**
baz=62,SNR=22
LPM Los Pinos Moun 62.18 301 *e*P **P 18 26 01.8 +1.0**
LPM Los Pinos Moun 62.18 301 *e*P **P 18 26 01.8 +1.0**
LAZ Ladron 62.20 301 *e*P **P 18 26 01.6 +0.6**
comp=Z,30nm,1.7s
LAZ Ladron 62.20 301 *e*P **P 18 26 01.6 +0.6**
comp=Z,30nm,1.7s
Z28A Tucker Farm, M 62.28 297 ⇑P **P 18 26 02.1 +0.7**
baz=62
X21A Alamocita Cree 62.28 302 ⇑P **P 18 26 02.4 +0.8**
baz=62,SNR=9.1
CWC Cottonwood Cre 62.31 312 ⇑P **P 18 26 02.2 +0.6**
baz=62
Y24A Capitan 62.31 300 ⇑P **P 18 26 02.1 +0.4**
baz=62,SNR=15
ABTX Abilene, Hawle 62.33 294 ⇑P **P 18 26 01.6 -0.1**
baz=62,SNR=9.2
X20A Quemado 62.33 303 ⇓P **P 18 26 02.0 +0.1**
baz=62,SNR=12
BNM Barren Site 62.34 301 *e*P **P 18 26 02.6 +0.6**
comp=Z,61nm,1.8s
BNM Barren Site 62.34 301 *e*P **P 18 26 02.6 +0.6**
comp=Z,61nm,1.8s
Y23A Lovelace Mesa, 62.43 300 ⇓P **P 18 26 02.9 +0.4**
baz=62,SNR=12
Z27A Tatum 62.43 297 ⇓P **P 18 26 02.7 +0.3**
baz=62,SNR=28
131A Roby 62.45 295 ⇓P **P 18 26 02.1 -0.4**
baz=62
WHTX Lake Whitney 62.46 292 ⇑P **P 18 26 01.9 -0.7**
baz=62
Y22D IRIS PASSCAL I 62.47 301 ⇓P **P 18 26 02.8 +0.1**
baz=62
SHOC Shoshone 62.51 310 ⇓P **P 18 26 03.9 +1.0**
baz=62
MPMC Manual Prospec 62.57 311 ⇓P **P 18 26 04.7 +1.2**
baz=62,SNR=25
SAO San Andreas Ge 62.57 315 *e*P **P 18 26 03.9 +0.7**
SAO pmax pmax
comp=Z,16nm,0.9s
SAO San Andreas Ge 62.57 315 *e*P **P 18 26 03.9 +0.7**
comp=Z,16nm,0.9s
SAO San Andreas Ge 62.57 315 *e*P **P 18 26 03.9 +0.7**
comp=Z,16nm,0.9s
Y22A Socorro 62.61 301 ⇑P **P 18 26 04.0 +0.3**
baz=62,SNR=9.5
X18A Snowflake 62.63 304 ⇓P **P 18 26 04.0 +0.1**
baz=62
Z26A Caprock 62.63 298 ⇑P **P 18 26 04.2 +0.4**
baz=62,SNR=12
RCTC Rector, Farmer 62.64 313 ⇑P **P 18 26 04.6 +1.0**
baz=62
130A Snyder 62.65 295 ⇑P **P 18 26 03.7 -0.1**
baz=62
Y21A Point of Rocks 62.68 302 ⇑P **P 18 26 04.9 +0.6**
baz=62,SNR=7.8
Z25A Roswell 62.78 299 ⇓P **P 18 26 05.2 +0.4**
baz=63,SNR=11
129A Stewart Farms, 62.81 296 ⇓P **P 18 26 04.4 -0.5**
baz=63
W13A Hualapai Mount 62.84 308 ⇑P **P 18 26 06.0 +0.7**
baz=63,SNR=8.7
Z24A Sheeppen Canyo 62.87 299 ⇓P **P 18 26 06.1 +0.6**
baz=63,SNR=11
TUQ Turquoise Moun 62.89 309 ⇓P **P 18 26 06.7 +1.1**
baz=63
Y20A Horse Springs, 62.92 302 ⇓P **P 18 26 06.2 +0.3**
baz=63
128A Castleberry Fa 62.95 297 ⇓P **P 18 26 06.3 +0.4**
baz=63,SNR=7.4
X16A Lo Mia Camp, P 63.03 305 ⇑P **P 18 26 07.3 +0.7**
baz=63,SNR=11
232A Coleman 63.04 294 ⇑P **P 18 26 06.4 -0.1**
baz=63,SNR=14
VES Vestal, Richgr 63.07 312 ⇓P **P 18 26 06.7 +0.2**
baz=63
127A Arkansas Junct 63.08 297 ⇑P **P 18 26 07.1 +0.3**
baz=63
Z23A Rita Site, Whi 63.11 300 ⇓P **P 18 26 07.6 +0.6**
baz=63,SNR=9.5
ISA Isabella 63.13 312 *e*P **P 18 26 08.8 +1.7**
ISA pmax pmax
comp=Z,58nm,1.3s
ISA Isabella 63.13 312 *e*P **P 18 26 08.8 +1.7**
comp=Z,58nm,1.3s
ISA Isabella 63.13 312 *e*P **P 18 26 08.8 +1.7**
comp=Z,58nm,1.3s
ISA Isabella 63.13 312 ⇑P **P 18 26 08.0 +1.0**
baz=63,SNR=18
231A Bronte 63.14 294 ⇓P **P 18 26 07.4 +0.3**
baz=63
LRMC Laurel Mountai 63.17 311 ⇓P **P 18 26 08.5 +1.1**
baz=63
GSC Goldstone 63.19 310 *e*P **P 18 26 08.9 +1.5**
GSC pmax pmax
comp=Z,40nm,1.3s
GSC Goldstone 63.19 310 *e*P **P 18 26 08.9 +1.5**
comp=Z,40nm,1.3s
GSC Goldstone 63.19 310 *e*P **P 18 26 08.9 +1.5**
comp=Z,40nm,1.3s
GSC Goldstone 63.19 310 ⇓P **P 18 26 08.5 +1.1**
baz=63,SNR=9.8
TOA0 Torodi Ar. Sit 63.24 186 *e*P **P 18 26 07.2 -0.6**
TOA0 Torodi Ar. Sit 63.24 186 *e*P **P 18 26 07.2 -0.6**
TORD Torodi Ar. Bea 63.24 186 P **P 18 26 07.1 -0.7**
TORD Torodi Ar. Bea 63.24 186 P **P 18 26 07.1 -0.7**
comp=Z,38nm,1.1s,baz=352,slow=5.0,SNR=111
TORD LR LR 18 56 42.9
comp=Z,268nm,18.1s,baz=10.0,slow=39
TORD Torodi Ar. Bea 63.24 186 P **P 18 26 07.1 -0.7**
126A Clayton Basin, 63.25 298 ⇑P **P 18 26 08.1 +0.2**
baz=63,SNR=7.5
Z22A Elephant Butte 63.27 301 ⇑P **P 18 26 08.5 +0.4**
baz=63,SNR=8.8
NEE2 Needles Airpor 63.30 308 ⇑P **P 18 26 08.6 +0.5**
baz=63
MAJO Matsushiro 63.31 43 *e*P **P 18 26 08.8 +0.6**
MAJO pmax pmax
comp=Z,50nm,1.4s
MAJO Matsushiro 63.31 43 *e*P **P 18 26 08.8 +0.6**
comp=Z,50nm,1.4s
MAJO Matsushiro 63.31 43 *e*P **P 18 26 08.8 +0.6**
comp=Z,50nm,1.4s
MAT Matsushiro 63.31 43 P **P 18 26 07.7 -0.4**
MAT S S 18 34 47.0 +7.5
MJAR Matsushiro Arr 63.31 43 P **P 18 26 08.2 0.0**
MJAR Matsushiro Arr 63.31 43 P **P 18 26 08.2 0.0**
comp=Z,13nm,1.1s,baz=339,slow=6.6,SNR=20
MJAR LR LR 18 54 43.5
comp=Z,466nm,20.1s,baz=335,slow=37
MJAR Matsushiro Arr 63.31 43 P **P 18 26 08.2 0.0**
230A Sterling City 63.36 295 ⇓P **P 18 26 08.5 -0.1**
baz=63
Z21A St. Cloud Mine 63.36 302 ⇓P **P 18 26 09.2 +0.4**
baz=63
125A Gardner Draw, 63.37 299 ⇑P **P 18 26 08.9 +0.1**
baz=63,SNR=14
229A Bryant Ranch, 63.43 296 ⇓P **P 18 26 09.0 -0.1**
baz=63
228A UT Block 9, Go 63.46 297 ⇓P **P 18 26 09.1 -0.2**
baz=63
GMRC Granite Mounta 63.48 309 ⇑P **P 18 26 10.2 +0.8**
baz=63,SNR=17
124A Stringfield Ra 63.49 299 ⇑P **P 18 26 10.2 +0.5**
baz=63,SNR=20
332A Millersview 63.55 294 ⇑P **P 18 26 10.3 +0.4**
baz=63,SNR=22
HEC Hector,Ludlow 63.56 310 ⇓P **P 18 26 11.5 +1.6**
baz=63,SNR=7.6
CLNB Carlsbad 63.59 298 *e*P **P 18 26 10.5 +0.3**
comp=Z,0.9nm,0.4s
CLNB Carlsbad 63.59 298 *e*P **P 18 26 10.5 +0.3**
comp=Z,0.9nm,0.4s
RRX Edison Barstow 63.63 310 ⇑P **P 18 26 10.6 +0.3**
baz=64
PDMCI Parker Dam,Lak 63.67 308 ⇑P **P 18 26 11.7 +1.2**
baz=64
227A Bennet, Jal 63.71 297 ⇓P **P 18 26 11.3 +0.3**
baz=64
123A Bell Site, Whi 63.73 300 ⇓P **P 18 26 11.6 +0.5**
baz=64
Z20A Nine Sixteen R 63.74 302 ⇓P **P 18 26 11.6 +0.4**
baz=64,SNR=7.7
SMMC Simmler 63.74 313 ⇓P **P 18 26 10.2 -0.9**
baz=64
GDL2 Guadalupe Moun 63.75 298 *e*P **P 18 26 12.6 +1.3**
GDL2 Guadalupe Moun 63.75 298 *e*P **P 18 26 12.6 +1.3**
ENH Enshi 63.77 70 *e*P **P 18 26 10.9 -0.4**
comp=Z,138nm,1.5s
ENH Enshi 63.77 70 *e*P **P 18 26 10.9 -0.4**
comp=Z,138nm,1.5s
331A San Angelo 63.77 294 ⇓P **P 18 26 11.5 +0.2**
baz=64,SNR=9.8
Y14A Wickenburg 63.80 306 ⇓P **P 18 26 12.2 +0.7**
baz=64
EDW2 Edwards Air Fo 63.81 311 ⇓P **P 18 26 12.4 +0.9**
baz=64,SNR=11
122A Conniff Cattle 63.81 301 ⇑P **P 18 26 12.3 +0.6**
baz=64
226B Tecolote Peak, 63.83 298 ⇑P **P 18 26 11.9 +0.2**
baz=64,SNR=10
330A Mertzon 63.84 295 ⇑P **P 18 26 11.7 -0.1**
baz=64
225A Deer Hill, Car 63.93 299 ⇑P **P 18 26 12.0 -0.5**
baz=64
329A Wagon Wheel Ra 63.93 296 ⇓P **P 18 26 11.8 -0.6**
baz=64
IRM Iron Mountain 63.99 308 ⇓P **P 18 26 13.3 +0.6**
baz=64
432A Menard 64.05 294 ⇓P **P 18 26 12.8 -0.3**
baz=64,SNR=9.0
NJ2 Nanjing 64.08 61 *e*P **P 18 26 13.3 +0.1**
NJ2 pP **pP 18 26 15.3 -2.1**
NJ2 PP **PP 18 28 32.8 -0.9**
NJ2 S **S 18 34 49.0 -0.1**
NJ2 sS **sS 18 34 58.0 +2.0**
NJ2 pmax pmax
comp=Z,290nm,5.1s
NJ2 LR LR
comp=N,3µm,18.5s
NJ2 LR LR
comp=E,2µm,22.5s
NJ2 LR LR
comp=Z,2µm,18.4s
224A Cornudas Mount 64.11 299 ⇓P **P 18 26 13.8 +0.1**
baz=64
PKM Peak Mountain 64.12 313 ⇓P **P 18 26 14.1 +0.4**
baz=64
121A Cookes Peak, D 64.14 301 ⇑P **P 18 26 14.3 +0.4**
baz=64,SNR=8.6
SHL Shillong 64.19 88 *e*PKP **P 18 26 13.5 -0.8**
OSI Osito Adit 64.20 312 ⇓P **P 18 26 14.2 +0.1**
baz=64
328A Wristen Ranch, 64.21 297 ⇓P **P 18 26 14.2 0.0**
baz=64,SNR=17
Y12C Blythe 64.27 308 ⇓P **P 18 26 15.5 +1.0**
baz=64
120A U Bar Ranch, L 64.29 302 ⇑P **P 18 26 15.3 +0.5**
baz=64,SNR=19
BELC Belle Mtn. Jos 64.30 309 ⇓P **P 18 26 15.9 +1.0**
baz=64,SNR=9.8
Z14A Wintersburg 64.35 306 ⇓P **P 18 26 15.7 +0.6**
baz=64
223A Chaparral, Ant 64.37 300 ⇑P **P 18 26 16.0 +0.7**
baz=64
327A Balmorhea Ranc 64.37 297 ⇑P **P 18 26 16.1 +0.9**
baz=64
BFSC Mount Baldy Ra 64.37 311 ⇑P **P 18 26 16.1 +0.8**
baz=64
222A Williams Famil 64.41 301 ⇓P **P 18 26 15.5 -0.1**
baz=64,SNR=8.4
431A Sonora 64.42 294 ⇓P **P 18 26 16.0 +0.4**
baz=64,SNR=32
JCT Junction City 64.44 294 *e*P **P 18 26 16.0 +0.3**
JCT pmax pmax
comp=Z,76nm,1.2s
JCT Junction City 64.44 294 *e*P **P 18 26 16.0 +0.3**
comp=Z,76nm,1.2s
JCT Junction City 64.44 294 *e*P **P 18 26 16.0 +0.3**
comp=Z,76nm,1.2s
JCT Junction City 64.44 294 ⇓P **P 18 26 15.9 +0.2**
baz=64,SNR=11
MNTX Cornudas Mount 64.45 299 *e*P **P 18 26 14.6 -1.1**
comp=Z,8.1nm,1.0s
MNTX Cornudas Mount 64.45 299 *e*P **P 18 26 14.6 -1.1**
comp=Z,8.1nm,1.0s
430A Baggett Ranch, 64.45 295 ⇓P **P 18 26 15.9 +0.2**
baz=64,SNR=10
MWC Mount Wilson 64.46 311 *e*P **P 18 26 17.3 +1.3**
MWC pmax pmax
comp=Z,50nm,1.1s
MWC Mount Wilson 64.46 311 *e*P **P 18 26 17.3 +1.3**
comp=Z,50nm,1.1s
MWC Mount Wilson 64.46 311 *e*P **P 18 26 17.3 +1.3**
comp=Z,50nm,1.1s
DECC Green Verdugo 64.48 311 ⇑P **P 18 26 16.1 +0.2**
baz=64
BC3 Big Chuckawall 64.54 309 ⇓P **P 18 26 17.0 +0.6**
baz=64
SBC Santa Barbara 64.54 313 ⇓P **P 18 26 16.0 -0.3**
baz=64
WHN Wuhan 64.58 66 ⇑P **P 18 26 15.8 -0.7**
WHN S S 18 35 01.3 +6.0
WHN LR LR
comp=N,4µm,20.3s
WHN LR LR
comp=E,3µm,17.1s
WHN LR LR
comp=Z,3µm,19.3s
221A Mesquite Ranch 64.64 301 ⇑P **P 18 26 17.2 +0.1**
baz=64
325A Bean Ranch, Si 64.68 299 ⇑P **P 18 26 16.9 -0.5**
baz=64
324A Moseley Ranch, 64.72 299 ⇓P **P 18 26 17.5 -0.1**
baz=65,SNR=11
429A Davenport Ranc 64.75 295 ⇑P **P 18 26 17.3 -0.5**
baz=65
PFO Pinyon Flat Ob 64.77 310 *e*P **P 18 26 16.7 -1.2**
comp=Z,22nm,1.2s
PFO Pinyon Flat Ob 64.77 310 P **P 18 26 18.8 +0.9**
comp=Z,5.7nm,0.9s,baz=275,slow=1.1,SNR=4.4
PFO Pinyon Flat Ob 64.77 310 P **P 18 26 18.8 +0.9**
comp=Z,6.0nm,0.9s
PFO Pinyon Flat Ob 64.77 310 ⇑P **P 18 26 17.0 -0.9**
baz=65
532A Rocksprings 64.80 293 ⇑P **P 18 26 18.1 +0.1**
baz=65,SNR=11
428A Kincaid Ranch, 64.82 296 ⇓P **P 18 26 18.6 +0.4**
baz=65,SNR=14
427A Hayter Ranch, 64.85 297 ⇓P **P 18 26 18.7 +0.2**
baz=65,SNR=17
220A Playas Peak, P 64.89 302 ⇑P **P 18 26 19.3 +0.5**
baz=65,SNR=9.7
531A Rocksprings 64.90 294 ⇑P **P 18 26 18.8 +0.1**
baz=65,SNR=9.5
TUC Tucson 64.95 304 *e*P **P 18 26 20.0 +0.9**
TUC pmax pmax
comp=Z,272nm,1.3s
TUC Tucson 64.95 304 *e*P **P 18 26 19.9 +0.9**
comp=Z,272nm,1.3s
TUC Tucson 64.95 304 *e*P **P 18 26 20.0 +0.9**
comp=Z,272nm,1.3s
GLA Glamis 65.01 308 *e*P **P 18 26 19.3 -0.1**
GLA pmax pmax
comp=Z,82nm,1.7s
GLA Glamis 65.01 308 *e*P **P 18 26 19.2 -0.1**
comp=Z,82nm,1.7s
GLA Glamis 65.01 308 *e*P **P 18 26 19.3 -0.1**
comp=Z,82nm,1.7s
GLA Glamis 65.01 308 ⇓P **P 18 26 19.5 +0.1**
baz=65
113A Mohawk Valley, 65.08 307 ⇓P **P 18 26 20.2 +0.4**
baz=65
530A J-C Ranch, Com 65.09 295 ⇑P **P 18 26 19.9 -0.1**
baz=65,SNR=32
426A McDonald Obser 65.16 297 ⇓P **P 18 26 20.6 0.0**
baz=65,SNR=17
425A Indio Mountain 65.25 298 ⇑P **P 18 26 21.0 -0.1**
baz=65,SNR=46
529A Stev Forest Ra 65.30 296 ⇓P **P 18 26 21.0 -0.3**
baz=65
CIS Catalina Islan 65.32 311 ⇑P **P 18 26 21.5 +0.1**
baz=65
528A Cox Ranch, San 65.39 296 ⇓P **P 18 26 22.1 +0.1**
baz=65
JNU Nakatsue 65.39 50 *e*P **P 18 26 22.1 +0.3**
comp=Z,28nm,1.4s
JNU Nakatsue 65.39 50 *e*P **P 18 26 22.1 +0.3**
comp=Z,28nm,1.4s
320A Kipp Ranch, An 65.44 302 ⇓P **P 18 26 22.7 +0.4**
baz=65,SNR=6.3
MONP Monument Peak 65.46 309 ⇑P **P 18 26 22.6 +0.1**
baz=65
SSE Sheshan 65.48 59 P **P 18 26 22.3 -0.1**
SSE sP **sP 18 26 26.8 -1.4**
SSE S **S 18 35 06.0 -0.4**
SSE SS **SS 18 39 19.4 +0.3**
SSE pmax pmax
comp=Z,59nm,0.9s
SSE pmax pmax
comp=Z,240nm,5.9s
SSE LR LR
comp=N,710nm,19.1s
SSE LR LR
comp=E,1µm,19.1s
SSE LR LR
comp=Z,3µm,16.1s
319A Douglas 65.56 302 ⇓P **P 18 26 23.6 +0.5**
baz=65
527A Woodward Ranch 65.58 297 ⇓P **P 18 26 23.0 -0.2**
baz=65,SNR=30
DVTC Desert V Tower 65.63 309 ⇓P **P 18 26 23.5 0.0**
baz=66
631A Perdido Creek 65.63 294 ⇑P **P 18 26 23.1 -0.4**
baz=66
214A Organ Pipe Nat 65.69 306 ⇑P **P 18 26 24.2 +0.4**
baz=66
BAR Barrett 65.71 309 *e*P **P 18 26 26.2 +2.3**
BAR Barrett 65.71 309 *e*P **P 18 26 26.2 +2.3**
526A Mary Lane Ranc 65.76 297 ⇓P **P 18 26 24.1 -0.3**
baz=66,SNR=20
628A Black Gap, Mar 66.06 296 ⇑P **P 18 26 26.1 -0.2**
baz=66,SNR=11
732A Laxson Ranch, 66.16 293 ⇑P **P 18 26 26.6 -0.2**
baz=66,SNR=11
627A Terlingua Ranc 66.20 297 ⇓P **P 18 26 27.0 -0.2**
baz=66,SNR=30
626A Big Bend Ranch 66.26 297 ⇓P **P 18 26 27.8 +0.3**
baz=66,SNR=31
TXAR Lajitas Array 66.37 297 P **P 18 26 28.1 -0.2**
TXAR Lajitas Array 66.37 297 P **P 18 26 28.1 -0.2**
comp=Z,16nm,1.1s,baz=35,slow=4.6,SNR=52
TXAR LR LR 18 56 35.2
comp=Z,2µm,19.1s,baz=0.0,slow=37
TXAR Lajitas Array 66.37 297 P **P 18 26 28.1 -0.2**
GYA Guiyang 66.80 74 P **P 18 26 32.8 +1.7**
GYA PP **PP 18 29 01.0 +3.2**
GYA ScP 18 31 04.6
GYA S **S 18 35 22.8 0.0**
GYA SKS **SKSac 18 36 25.5 -1.9**
GYA SS **SS 18 39 41.3 +1.2**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.0s
GYA LR LR
comp=N,890nm,19.9s
GYA LR LR
comp=E,780nm,20.6s
GYA LR LR
comp=Z,990nm,19.5s
KMI Kunming 67.18 78 P **P 18 26 33.0 -0.6**
KMI pP **pP 18 26 38.6 +0.7**
KMI sP **sP 18 26 40.4 +1.0**
KMI PP **PP 18 29 05.8 +4.5**
KMI S **S 18 35 29.4 +1.8**
KMI sS **sS 18 35 38.3 +3.7**
KMI pmax pmax
comp=Z,9.0nm,1.7s
KMI pmax pmax
comp=Z,200nm,3.9s
KMI LR LR
comp=N,810nm,18.1s
KMI LR LR
comp=E,930nm,18.1s
KMI LR LR
comp=Z,1µm,23.5s
MTP Monte Pirata 68.38 257 *e*P **P 18 26 41.3 +0.3**
comp=Z,36nm,1.1s
MTP Monte Pirata 68.38 257 *e*P **P 18 26 41.3 +0.3**
comp=Z,36nm,1.1s
SDDR Presa de Saban 68.87 263 *e*P **P 18 26 44.6 +0.5**
comp=Z,111nm,1.5s
SDDR Presa de Saban 68.87 263 *e*P **P 18 26 44.6 +0.5**
comp=Z,111nm,1.5s
HYB Hyderabad 68.89 104 *i* P **P 18 26 44.0 -0.2**
HYB *e*S **S 18 35 50.0 +2.1**
DBIC Dimbokro 69.92 192 LR LR 19 00 50.0
comp=Z,301nm,18.8s,baz=0.3,slow=39
LIC Lamto 70.37 193 *e*P **P 18 26 51.5 -1.7**
comp=Z,45nm,1.1s
LIC *e*R
comp=Z,330nm,21.2s
LIC Lamto 70.37 193 *e*P **P 18 26 51.5 -1.7**
comp=Z,45nm,1.1s
LIC Lamto 70.37 193 *e*P **P 18 26 51.5 -1.7**
comp=Z,23nm,1.1s
QZH Quanzhou 70.90 63 *e*P P 18 27 04.8 +8.4
QZH S S 18 36 17.3 +6.2
QZH LR LR
comp=N,3µm,17.1s
QZH LR LR
comp=E,2µm,18.6s
QZH LR LR
comp=Z,4µm,20.4s
TEIG Tepich 71.70 280 *e*P **P 18 27 02.0 +0.7**
comp=Z,154nm,2.1s
TEIG Tepich 71.70 280 *e*P **P 18 27 02.0 +0.7**
comp=Z,154nm,2.1s
CHTO Chiang Mai 72.36 83 *e*P **P 18 27 04.0 -1.3**
CHTO pmax pmax
comp=Z,74nm,1.5s
CHTO Chiang Mai 72.36 83 P **P 18 27 04.9 -0.4**
SNR=13
CHTO Chiang Mai 72.36 83 *e*P **P 18 27 04.0 -1.3**
comp=Z,74nm,1.5s
CHTO Chiang Mai 72.36 83 P **P 18 27 04.9 -0.4**
comp=Z,39nm,1.6s,comp=Z,667nm
CHTO Chiang Mai 72.36 83 P **P 18 27 04.9 -0.4**
SNR=13
SSLB Suanglung 72.51 61 *e*P **P 18 27 06.9 +0.7**
comp=Z,265nm,2.1s
SSLB Suanglung 72.51 61 *e*P **P 18 27 06.9 +0.7**
comp=Z,265nm,2.1s
CMAR Chiang Mai Arr 72.71 83 P **P 18 27 07.0 -0.4**
CMAR Chiang Mai Arr 72.71 83 P **P 18 27 07.0 -0.4**
comp=Z,7.5nm,1.0s,baz=331,slow=6.7,SNR=24
CMAR LR LR 19 04 51.4
comp=Z,924nm,19.0s,baz=15,slow=41
CMAR Chiang Mai Arr 72.71 83 P **P 18 27 07.0 -0.4**
QIZ Qiongzhong 74.69 73 P **P 18 27 19.3 +0.3**
QIZ pP **pP 18 27 22.4 -0.9**
QIZ S **S 18 36 54.6 +0.1**
QIZ pmax pmax
comp=Z,19nm,1.6s
QIZ pmax pmax
comp=Z,68nm,3.7s
QIZ LR LR
comp=N,1µm,21.0s
QIZ LR LR
comp=Z,1µm,20.0s

PBKT	**Sadao Pong**	**75.00**	**82**	P		**P**	**18 27 20.5**	**-0.3**
	comp=Z,14nm,1.4s							
UBPT	**Khong Chiam**	**77.30**	**78**	P		**P**	**18 27 32.9**	**-1.0**
	comp=Z,20nm,2.0s,comp=Z,1μm							
TGUH	**Tegucigalpa,Un**	**77.41**	**277**	*e*P		**P**	**18 27 36.0**	**+1.5**
TGUH	**Tegucigalpa,Un**	**77.41**	**277**	*e*P		**P**	**18 27 36.0**	**+1.5**
SDV	**Santo Domingo**	**78.45**	**260**	*e*P		**P**	**18 27 41.0**	**+0.5**
	comp=Z,32nm,1.1s							
SDV	**Santo Domingo**	**78.45**	**260**	*e*P		**P**	**18 27 41.0**	**+0.5**
	comp=Z,32nm,1.1s							
CHBT	**CHBT**	**79.00**	**82**	P		**P**	**18 27 43.3**	**0.0**
	comp=Z,30nm,1.5s							
KMBO	**Kilima Mbogo**	**79.28**	**149**	*e*P		**P**	**18 27 46.0**	**+0.9**
	comp=Z,31nm,1.6s							
KMBO	**Kilima Mbogo**	**79.28**	**149**	P		**P**	**18 27 45.2**	**+0.1**
	comp=Z,6.4nm,1.2s,baz=7.2,slow=8.3,SNR=7.5							
KMBO				LR		LR	19 07 12.9	
	comp=Z,159nm,18.4s,baz=287,slow=39							
KMBO	**Kilima Mbogo**	**79.28**	**149**	P		**P**	**18 27 45.2**	**+0.1**
	comp=Z,159nm,18.4s							
ROSC	**El Rosal**	**83.21**	**263**	*e*P		**P**	**18 28 07.8**	**+1.6**
ROSC	**El Rosal**	**83.21**	**263**	P		**P**	**18 28 06.7**	**+0.5**
	comp=Z,5.1nm,0.7s,baz=31,slow=5.9,SNR=6.1							
ROSC				LR		LR	19 05 45.2	
	comp=Z,195nm,19.1s,baz=358,slow=36							
ROSC	**El Rosal**	**83.21**	**263**	*e*P		**P**	**18 28 07.8**	**+1.6**
IPM	**Ipoh**	**86.68**	**85**	*e*P		**P**	**18 28 20.6**	**-2.6**
	comp=Z,65nm,1.5s							
IPM	**Ipoh**	**86.68**	**85**	P		**P**	**18 28 21.9**	**-1.3**
	comp=Z,28nm,1.5s,comp=Z,570nm							
PSI	**Prapat**	**87.80**	**87**	LR		LR	19 14 45.6	
	comp=Z,576nm,18.3s,baz=274,slow=40							
OTAV	**Otavalo**	**88.64**	**265**	*e*P		**P**	**18 28 34.4**	**+1.2**
	comp=Z,99nm,1.3s							
OTAV	**Otavalo**	**88.64**	**265**	*e*P		**P**	**18 28 34.3**	**+1.2**
	comp=Z,99nm,1.3s							
DAV	**Davao City (W)**	**89.70**	**60**	LR		LR	19 13 59.5	
	comp=Z,117nm,18.8s,baz=338,slow=39							
MYLDM	**Lahad Datu**	**90.03**	**68**	P		**P**	**18 28 39.6**	**+0.5**
	comp=Z,27nm,1.8s							
SBUM	**Sibu**	**91.25**	**74**	P		**P**	**18 28 44.4**	**-0.4**
LSZ	**Lusaka**	**92.33**	**159**	*e*P		**P**	**18 28 47.8**	**-1.9**
	comp=Z,8.6nm,1.2s							
LSZ	**Lusaka**	**92.33**	**159**	*e*P		**P**	**18 28 47.8**	**-1.9**
	comp=Z,8.6nm,1.2s							
SAML	**Samuel**	**94.00**	**249**	*e*P		**P**	**18 28 57.4**	**+0.1**
	comp=Z,27nm,1.6s							
SAML	**Samuel**	**94.00**	**249**	*e*P		**P**	**18 28 57.4**	**+0.1**
	comp=Z,27nm,1.6s							
BDFB	**Brasilia**	**97.37**	**233**	LR		LR	19 05 26.2	
	comp=Z,437nm,20.2s,baz=281,slow=31							
WRA	**Warramunga Arr**	**117.75**	**57**	PKP		**PKPdf**	**18 34 23.6**	**-1.7**
WRA	**Warramunga Arr**	**117.75**	**57**	PKP		**PKPdf**	**18 34 23.6**	**-1.7**
	comp=Z,1.1nm,1.0s,baz=326,slow=2.2,SNR=4.5							
PPT2	**Papeete2**	**119.97**	**334**	*e*LR		LR	19 11 20.5	
	comp=Z,418nm,24.8s							
ASAR	**Alice Springs**	**121.28**	**59**	PKP		**PKPdf**	**18 34 30.8**	**-1.3**
ASAR	**Alice Springs**	**121.28**	**59**	PKP		**PKPdf**	**18 34 30.8**	**-1.3**
	comp=Z,1.7nm,0.8s,baz=2.0,slow=1.8,SNR=17							
ASAR	**Alice Springs**	**121.28**	**59**	PKIKP		**PKPdf**	**18 34 30.8**	**-1.3**
RKT	**Rikitea**	**123.45**	**317**	*e*LR		LR	19 12 54.6	
	comp=Z,412nm,24.8s							
TBI	**Tubuai**	**125.65**	**333**	*e*LR		LR	19 14 06.9	
	comp=Z,489nm,38.2s							
PLCA	**Paso Flores**	**126.29**	**247**	PKP		**PKPdf**	**18 34 41.1**	**-0.1**
PLCA	**Paso Flores**	**126.29**	**247**	PKP		**PKPdf**	**18 34 41.1**	**-0.1**
	comp=Z,4.4nm,1.0s,baz=7.8,slow=3.0,SNR=3.5							
PLCA	**Paso Flores**	**126.29**	**247**	PKIKP		**PKPdf**	**18 34 41.1**	**-0.1**
SYO	**Syowa Base**	**146.51**	**159**	∥*i*PKPdf		**PKPdf**	**18 35 17.8**	**+0.5**
SYO	**Syowa Base**	**146.51**	**159**	∥*i*PKPbc		**PKPab**	**18 35 20.7**	**+0.8**
VNA1	**Neumayer--Stat**	**147.06**	**189**	*e*PKP		**PKPbc**	**18 35 21.1**	**+0.7**
VNA1	**Neumayer--Stat**	**147.06**	**189**	*e*PP		PP	18 38 47.6	+1.1
MAW	**Mawson**	**147.81**	**143**	PKPbc		**PKPbc**	**18 35 22.8**	**+0.3**
MAW	**Mawson**	**147.81**	**143**	PKPbc		**PKPbc**	**18 35 22.8**	**+0.3**
	comp=Z,23nm,0.9s,baz=317,slow=4.9,SNR=28							
MAW	**Mawson**	**147.81**	**143**	PKPbc		**PKPbc**	**18 35 22.8**	**+0.3**
SNAA	**Sanae**	**147.91**	**186**	*e*PKP		**PKPbc**	**18 35 22.8**	**-0.1**
SNAA	**Sanae**	**147.91**	**186**	*e*PKPbc		**PKPbc**	**18 35 22.7**	**-0.1**
SNAA	**Sanae**	**147.91**	**186**	*e*PKPbc		**PKPbc**	**18 35 22.7**	**-0.1**
MIR	**Mirnyy**	**152.11**	**121**	∥*i*PKIKP		**PKPbc**	**18 35 34.0**	**+1.0**
MIR				pmax		pmax		
	comp=Z,42nm,1.0s							

*IDC **22** 18:19:34.7±2.3,23.70°S×179.80°W,h506km±21km,mb3.6/8, mb1 3.8/9,mb1mx3.5/18,mbtmp3.6/9,Error ellipse: s-maj=20.5km s-min=18.8km az=68.0*
*ISCJB **22** 18:19:35.1±0.8,23.84S±0.06×179.9W±0.2,h518km, mb4.0/9,Error ellipse: s-maj=20.6km s-min=8.6km az=179.7*

ISC 22 18:19:36.1±0.6,**23.95S**±0.08×**179.9W**±0.1,**h518km,n25,** σ1**9**43/**36,mb4.1/9,1D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
URZ	**Urewera**	**14.48**	**189**	*e*PN		**P**	**18 22 40.2**	**-0.2**
URZ				SN		**S**	**18 25 11.0**	**-1.5**
URZ	**Urewera**	**14.48**	**189**	P		**P**	**18 22 40.0**	**-0.4**
	5.5nm,0.3s,baz=27,slow=6.8,SNR=26							
URZ				S		**S**	**18 25 11.8**	**-0.7**
	3.5nm,0.3s,baz=95,slow=19,SNR=14							
MWZ	**Matawai**	**14.50**	**188**	PN		**P**	**18 22 40.4**	**-0.2**
MWZ				SN		**S**	**18 25 13.0**	**+0.1**
BKZ	**Black Stump Fm**	**15.47**	**190**	*e*PN		**P**	**18 22 50.3**	**-0.5**
BKZ				SN		**S**	**18 25 27.2**	**-4.0**
TSZ	**Takapari Road**	**16.43**	**191**	PN		**P**	**18 23 01.0**	**+0.4**
QRZ	**Quartz Range**	**17.98**	**199**	PN		**P**	**18 23 15.8**	**+0.6**
THZ	**Tophouse**	**18.74**	**197**	SN		**S**	**18 26 26.2**	**-0.1**
RPZ	**Rata Peaks**	**21.06**	**198**	P		**P**	**18 23 41.8**	**-1.4**
	2.4nm,0.3s,baz=332,slow=15,SNR=5.3							
STKA	**Stephens Creek**	**34.77**	**248**	P		**P**	**18 25 43.9**	**+1.0**
	2.8nm,0.4s,baz=91,slow=9.1,SNR=17							
ASAR	**Alice Springs**	**42.09**	**261**	P		**P**	**18 26 43.2**	**+0.6**
	7.3nm,0.6s,baz=97,slow=7.5,SNR=172							
WRA	**Warramunga Arr**	**42.47**	**266**	P		**P**	**18 26 45.7**	**+0.1**
	5.6nm,0.3s,baz=95,slow=8.3,SNR=455							
WRA				PcP		**PcP**	**18 28 27.2**	**+0.5**
	1.8nm,0.9s,baz=99,slow=3.4,SNR=5.0							
WRA				ScP		**ScP**	**18 31 29.8**	**+1.6**
	0.2nm,0.4s,baz=108,slow=3.1,SNR=5.2							
WRA				S		**S**	**18 32 27.6**	**-2.5**
	1.1nm,0.9s,baz=100,slow=13,SNR=3.9							
VNDA	**Vanda**	**54.33**	**185**	P		**P**	**18 28 15.1**	**+2.1**
	2.1nm,0.6s,baz=18,slow=8.1,SNR=10							
MAW	**Mawson**	**77.72**	**200**	P		**P**	**18 30 40.1**	**+1.4**
	4.8nm,0.6s,baz=158,slow=5.4,SNR=12							
PETK	**Petropavlovsk-**	**79.17**	**346**	P		**P**	**18 30 45.4**	**-1.2**
	2.3nm,0.6s,baz=149,slow=7.8,SNR=4.5							
CMAR	**Chiang Mai Arr**	**89.61**	**290**	P		**P**	**18 31 40.0**	**+1.2**
	0.8nm,0.7s,baz=146,slow=2.8,SNR=4.5							
TXAR	**Lajitas Array**	**90.40**	**58**	P		**P**	**18 31 41.8**	**-0.6**
	0.2nm,0.4s,baz=195,slow=6.5,SNR=4.6							
MKAR	**Makanchi Array**	**112.24**	**313**	PKiKP		**PKiKP**	**18 37 11.1**	**-1.6**
	0.5nm,0.6s,baz=104,slow=1.8,SNR=6.6							
MKAR				PKKP		**PKKPab**	**18 48 13.3**	**-0.7**
	0.1nm,0.4s,baz=275,slow=3.0,SNR=4.7							
ARCES	**ARCESS Array B**	**131.95**	**348**	PKP		**PKPdf**	**18 37 47.9**	**-1.7**
	2.8nm,0.9s,baz=42,slow=1.5,SNR=7.3							
FINES	**FINESS Array B**	**138.52**	**341**	PKhKP		PKPpre	18 37 54.2	
	0.6nm,0.6s,baz=42,slow=4.3,SNR=4.0							
FINES				PKP		**PKPdf**	**18 38 01.1**	**-0.9**
	0.3nm,0.3s,baz=58,slow=3.4,SNR=4.0							
FINES				SKPbc		**SKPbc**	**18 40 48.2**	**+0.4**
	1.5nm,0.7s,baz=48,slow=5.7,SNR=7.3							
AKASG	**Malin Array Be**	**145.05**	**327**	PKP		**PKPdf**	**18 38 13.0**	**-1.0**
	0.9nm,0.4s,baz=43,slow=3.6,SNR=13							
AKASG				SKPbc		**SKPbc**	**18 41 04.2**	**-0.3**
	1.2nm,0.6s,baz=45,slow=2.3,SNR=5.7							
BRTR	**Keskin Array B**	**147.67**	**307**	PKPbc		**PKPdf**	**18 38 21.3**	**+2.4**
	1.1nm,0.7s,baz=145,slow=3.5,SNR=7.3							
EKA	**Eskdalemuir Ar**	**148.57**	**4**	PKPbc		**PKPdf**	**18 38 22.5**	**+2.8**
	0.5nm,0.4s,baz=351,slow=2.4,SNR=8.3							
CLL	**Collm**	**150.93**	**343**	∥*i*PKP		**PKPbc**	**18 38 29.0**	**-0.8**
	comp=Z,7.0nm,0.8s							
BRG	**Berggiesshubel**	**151.06**	**342**	*e*PKP		**PKPbc**	**18 38 28.8**	**-1.3**
	comp=Z,4.6nm,1.0s							
TORD	**Torodi Ar. Bea**	**169.14**	**188**	PKP		**PKPdf**	**18 38 42.8**	**-1.6**
	comp=Z,0.8nm,1.0s,baz=202,slow=2.1,SNR=3.6							
TORD				PKPab		**PKPab**	**18 39 59.4**	**-0.2**
	comp=Z,2.0nm,0.6s,baz=179,slow=3.5,SNR=12							

*ISK **22** 18:37:42.6,41.22N×36.89E,h14km, MD2.9*
*CSEM **22** 18:37:43.1±0.4,41.27N×36.90E,h10km,MD2.8,Error ellipse: s-maj=10.1km s-min=6.3km az=22.0*

*DDA **22** 18:37:47.5,40.82N×36.53E,h45km, MD2.8*

ISC 22 18:37:45.4±1.2,**41.15N**±0.05×**36.73E**±0.03,**h30**km±14km, **n28,**σ1**9**56/**42,Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
ERBA	**Erbaa**	**0.47**	**178**	*i* P		**Pn**	**18 37 55.9**	**-0.2**
ERBA				*i* S		**Sn**	**18 38 02.7**	**-0.7**
ERBA	**Erbaa**	**0.47**	**178**	*i* P		**Pn**	**18 37 55.9**	**-0.2**
ERBA				*i* S		**Sn**	**18 38 02.7**	**-0.7**
KVT	**Kavak**	**0.52**	**262**	*e*PG		**Pn**	**18 37 55.9**	**-0.9**
KVT				*e*SG		**Sn**	**18 38 04.6**	**-0.1**
KVT	**Kavak**	**0.52**	**262**	*e*Pg		**Pn**	**18 37 55.9**	**-0.9**
KVT				*e*Sg		**Sn**	**18 38 04.6**	**-0.1**
HAVZ	**Havza**	**0.77**	**264**	*i* P		**Pn**	**18 38 01.5**	**+1.3**
HAVZ				*i* S		**Sn**	**18 38 12.2**	**+1.4**
HAVZ	**Havza**	**0.77**	**264**	*i* P		**Pn**	**18 38 01.5**	**+1.3**
HAVZ				*i* S		**Sn**	**18 38 12.2**	**+1.4**
TOKT	**Tokat**	**0.84**	**190**	*e*PG		**Pn**	**18 38 01.7**	**+0.4**
TOKT				*e*SG		**Sn**	**18 38 14.5**	**+1.8**
TOKT	**Tokat**	**0.84**	**190**	*e*Pg		**Pn**	**18 38 01.7**	**+0.4**
TOKT				*e*Sg		**Sn**	**18 38 14.5**	**+1.8**
RSDY	**Resadiye-TOKAT**	**0.88**	**149**	*e*PG		**Pb**	**18 38 00.1**	**-2.0**
RSDY				*e*SG		**Sn**	**18 38 13.1**	**-0.4**
RSDY	**Resadiye-TOKAT**	**0.88**	**149**	*e*Pg		**Pb**	**18 38 00.1**	**-2.0**
RSDY				*e*Sg		**Sn**	**18 38 13.1**	**-0.4**
DIKM	**Dikmen**	**1.22**	**295**	*e*PN		**Pb**	**18 38 07.1**	**-0.6**
DIKM	**Dikmen**	**1.22**	**295**	*e*Pn		**Pb**	**18 38 07.1**	**-0.6**
SVSK	**Karacayir**	**1.25**	**171**	*e*PN		**Pb**	**18 38 06.8**	**-1.5**
SVSK	**Karacayir**	**1.25**	**171**	*e*Pn		**Pb**	**18 38 06.8**	**-1.5**
SUSE	**Susehri**	**1.46**	**130**	*i* P		**Pb**	**18 38 12.5**	**+0.5**
SUSE				*i* S		**Sb**	**18 38 31.8**	**+1.5**
SUSE	**Susehri**	**1.46**	**130**	*i* P		**Pb**	**18 38 12.5**	**+0.5**
SUSE				*i* S		**Sb**	**18 38 31.8**	**+1.5**
BYBT	**Boyabat**	**1.52**	**283**	*e*PN		**Pb**	**18 38 12.3**	**-0.4**
BYBT	**Boyabat**	**1.52**	**283**	*e*Pn		**Pb**	**18 38 12.4**	**-0.4**
ESPY	**Espiye-Giresun**	**1.53**	**98**	*e*PN		**Pn**	**18 38 08.4**	**-2.2**
ESPY	**Espiye-Giresun**	**1.53**	**98**	*e*Pn		**Pn**	**18 38 08.4**	**-2.2**
CORM	**Corum**	**1.87**	**239**	*e*PN		**Pb**	**18 38 16.9**	**-2.0**
CORM	**Corum**	**1.87**	**239**	*e*Pn		**Pb**	**18 38 17.0**	**-2.0**
TOS	**Tosya**	**2.05**	**268**	*e*PN		**Pb**	**18 38 19.3**	**-2.7**
TOS	**Tosya**	**2.05**	**268**	*e*Pn		**Pb**	**18 38 19.3**	**-2.7**
KELT	**Kelkit**	**2.17**	**117**	*i* P		**Pb**	**18 38 24.6**	**+0.6**
KELT				*i* S		**Sb**	**18 38 53.3**	**+2.8**
KELT	**Kelkit**	**2.17**	**117**	*i* P		**Pb**	**18 38 24.6**	**+0.6**
KELT				*i* S		**Sb**	**18 38 53.3**	**+2.8**
GUMT	**Gumushane**	**2.20**	**107**	*e*PN		**Pn**	**18 38 17.9**	**-2.0**
GUMT	**Gumushane**	**2.20**	**107**	*e*Pn		**Pn**	**18 38 17.9**	**-2.0**

*ISCJB **22** 18:38:05.9±0.8,37.70N±0.03×26.91E±0.06,h9km±6km, Error ellipse: s-maj=8.6km s-min=4.8km az=166.0*
*DDA **22** 18:38:05.7,37.68N×26.89E,h7km, MD2.8*
*ISK **22** 18:38:05.8,37.71N×26.99E,h7km, MD2.7*
*CSEM **22** 18:38:06.4±0.2,37.71N×26.95E,h12km, MD2.7, Error ellipse: s-maj=4.6km s-min=2.8km az=80.0*

ISC 22 18:38:06.2±1.1,**37.71N**±0.03×**26.94E**±0.04,**h18**km±5km, **n20,**σ0**9**69/**34,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
GCAM	**G?zelcaml?**	**0.23**	**93**	*i* P		**Pb**	**18 38 11.9**	**+0.1**
GCAM				*i* S		**Sg**	**18 38 16.8**	**+1.5**
GCAM	**G?zelcaml?**	**0.23**	**93**	*i* P		**Pb**	**18 38 11.9**	**+0.1**
GCAM				*i* S		**Sg**	**18 38 16.8**	**+1.5**
BLCB	**Balcova**	**0.68**	**7**	*e*PG		**Pb**	**18 38 19.2**	**-0.3**
BLCB				*e*SG		**Sb**	**18 38 29.1**	**+0.6**
BLCB	**Balcova**	**0.68**	**7**	*e*Pg		**Pb**	**18 38 19.2**	**-0.3**
BLCB				*e*Sg		**Sb**	**18 38 29.1**	**+0.6**
BODT	**Bodrum**	**0.71**	**155**	*e*PG		**Pb**	**18 38 19.8**	**-0.3**
BODT				*e*SG		**Sb**	**18 38 30.0**	**+0.4**
BODT	**Bodrum**	**0.71**	**155**	*e*Pg		**Pb**	**18 38 19.8**	**-0.3**
BODT				*e*Sg		**Sb**	**18 38 30.0**	**+0.4**
IZM	**Izmir**	**0.73**	**20**	*e*PG		**Pb**	**18 38 20.2**	**-0.3**
IZM				*e*SG		**Sb**	**18 38 30.6**	**+0.4**
IZM	**Izmir**	**0.73**	**20**	*e*Pg		**Pb**	**18 38 20.2**	**-0.3**
IZM				*e*Sg		**Sb**	**18 38 30.6**	**+0.4**
AYDN	**Tasoluk**	**0.75**	**94**	*i* P		**Pn**	**18 38 21.0**	**-1.0**
AYDN				*i* S		**Sb**	**18 38 31.6**	**+1.0**
AYDN	**Tasoluk**	**0.75**	**94**	*i* P		**Pn**	**18 38 21.0**	**-1.0**
AYDN				*i* S		**Sb**	**18 38 31.6**	**+1.0**
MLSB	**Milas**	**0.78**	**122**	*e*PG		**Pb**	**18 38 21.4**	**0.0**
MLSB				*e*SG		**Sb**	**18 38 31.6**	**-0.1**
MLSB	**Milas**	**0.78**	**122**	*e*Pg		**Pb**	**18 38 21.4**	**0.0**
MLSB				*e*Sg		**Sb**	**18 38 31.6**	**-0.1**
DAT	**Datca**	**1.11**	**152**	*e*PN		**Pg**	**18 38 27.0**	**-0.7**
DAT				*e*SN		**Sn**	**18 38 42.8**	**+1.0**
DAT	**Datca**	**1.11**	**152**	*e*Pn		**Pg**	**18 38 27.0**	**-0.7**
DAT				*e*Sn		**Sn**	**18 38 42.8**	**+1.0**
YER	**Yerkesik**	**1.21**	**118**	*e*PN		**Pg**	**18 38 29.0**	**-0.7**
YER	**Yerkesik**	**1.21**	**118**	*e*Pn		**Pg**	**18 38 29.0**	**-0.7**
APE	**Apeiranthos**	**1.29**	**241**	*e*PN		**Pg**	**18 38 31.2**	**0.0**
APE	**Apeiranthos**	**1.29**	**241**	*e*Pn		**Pg**	**18 38 31.2**	**0.0**
KULA	**Kula-Manisa**	**1.57**	**59**	*e*PN		**Pb**	**18 38 34.6**	**-0.3**
KULA	**Kula-Manisa**	**1.57**	**59**	*e*Pn		**Pb**	**18 38 34.6**	**-0.3**

IDC 22 18:54:23.3±1.7,**4.26N×122.94E,h0km,mb3.6/4, mb1 3.7/4,mb1mx3.4/24,mbtmp3.6/4,Error ellipse: s-maj=211.3km s-min=23.8km az=62.0,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WRA	**Warramunga Arr**	**26.53**	**155**	P		P	19 00 02.8	-0.2
	0.2nm,0.5s,baz=331,slow=11,SNR=4.0							
ASAR	**Alice Springs**	**29.75**	**159**	P		P	19 00 32.8	+1.1
	0.2nm,0.3s,baz=339,slow=7.8,SNR=15							
STKA	**Stephens Creek**	**40.08**	**155**	P		P	19 01 59.5	-1.1
	2.5nm,1.0s,baz=326,slow=11,SNR=2.2							
MKAR	**Makanchi Array**	**55.01**	**327**	P		P	19 03 56.5	-0.1
	0.4nm,0.4s,baz=123,slow=7.8,SNR=8.4							

MAN 22 18:59:35,10.29N×125.19E,h7km,mb4.7,ML3.5,MS3.5, 2C-2D,Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
MSLP	**Maasin**	**0.36**	**245**	*e*P		Pb	18 59 44.4	+0.7
PLP	**Palo**	**0.90**	**347**	∥*i*P		Pg	18 59 51.8	-0.5
PLP				*i* S		Sg	19 00 03.5	-0.5
OCLP	**Ormoc**	**0.95**	**323**	*e*P		Pg	18 59 53.3	0.0
LLP	**Lapu-Lapu**	**1.20**	**272**	∥*i*P		Pg	18 59 57.7	-0.5
LLP				*i* S		Sn	19 00 14.9	0.0
TBP	**Tagbilaran**	**1.43**	**246**	*e*P		Pg	19 00 02.4	-0.2
TBP				*e*S		Sg	19 00 23.0	+1.8
CGP	**Cagayan de Oro**	**1.88**	**195**	*e*P		Pn	19 00 07.3	-0.3
CGP				*i* S		Sn	19 00 31.4	-0.3
CNP	**Catarman**	**2.27**	**347**	*e*P		Pn	19 00 14.4	+1.5
BUKP	**Musuan**	**2.39**	**183**	*e*P		Pb	19 00 16.7	-1.9
DCPH	**Dipolog City**	**2.48**	**227**	∥*e*P		Pn	19 00 16.5	+0.7
DCPH				*e*S		Sn	19 00 47.7	+1.3
GUIM	**Jordan**	**2.58**	**278**	*e*P		Pn	19 00 17.9	+0.7
RCP	**Roxas**	**2.71**	**298**	*e*P		Pn	19 00 21.0	+1.9
PAGZ	**Pagadian**	**3.01**	**217**	*e*P		Pn	19 00 23.3	+0.2
CTBH	**Cotabato--PC H**	**3.18**	**197**	∥*i*P		Pn	19 00 28.4	+2.8
MATI	**Mati**	**3.48**	**162**	*e*P		Pn	19 00 31.6	+1.9
OTRP	**Odiongan**	**3.73**	**304**	*e*P		Pn	19 00 34.8	+1.8
AUQP	**San Andres**	**3.90**	**321**	*e*P		Pb	19 00 39.8	-4.3
SJMP	**San Jose**	**4.54**	**299**	*e*P		Pn	19 00 46.9	+2.7
ENPP	**El Nido**	**5.74**	**280**	*e*P		Pn	19 01 02.5	+1.8

*NAO **22** 19:05:13.8±1.6,76.22N×7.53E,ML4.3*
*BJI **22** 19:05:14.3,76.54N×7.17E,h7km,mB5.2/34,mb5.0/52, Ms5.0/48,Ms7 4.8/48*
*IDC **22** 19:05:15.2±0.4,76.25N×7.22E,h0km,mb4.5/27, mb1 4.6/33,mb1mx4.6/37,mbtmp4.5/33,ML3.7/5,MS4.4/27, Ms1 4.4/27,ms1mx4.2/52,Error ellipse: s-maj=10.0km s-min=8.3km az=62.0*
*CSEM **22** 19:05:15.4±0.1,76.27N×7.03E,h2km,mb5.1/99,Ms4.0, Mw5.1,Error ellipse: s-maj=3.0km s-min=2.1km az=72.0*
*MOS **22** 19:05:15.3±0.9,76.22N×6.91E,h10km,mb5.3/104, MS4.3/43,Error ellipse: s-maj=19.1km s-min=2.9km az=92.1*
*BER **22** 19:05:15.5,76.23N×7.35E,h10km,MD3.3,ML3.2, ML4.3(NAO)*
*ISCJB **22** 19:05:16.8±0.1,76.25N±0.02×7.04E±0.08,h20km, mb5.0/263,MS4.5/62,Error ellipse: s-maj=2.9km s-min=2.1km az=169.0*
*PDA **22** 19:05:17.3,76.20N×6.90E,h10km,mb5.1*
*NEIC **22** 19:05:17.2±0.1,76.23N×7.00E,h10km,mb5.2/128,Error ellipse: s-maj=3.5km s-min=2.1km az=69.0*
*GCMT **22** 19:05:18.0±0.2,76.21N×6.63E,h12km,MW5.1,Moment Tensor Solution. s37,c44; s92,c156; Moment tensor: Scale 10^{16}Nm; Mrr=5.21±.11; Mθθ0.76±.11; Mφφ4.45±.11; Mrθ-0.70±.36; Mrφ2.26±.10; Mθr-1.23±.31; Best double couple: M0 5.60000×10^{16} NP1:φ204.00000°,δ38.00000°, λ-92.00000°. NP2:φ27.00000°,δ52.00000°,λ-89.00000°. Principal axes: T 5.7000, Plg7.0000°, Azm115.0000°; N -0.3100, Plg1.0000°, Azm206.0000°; P -5.4000, Plg83.0000°, Azm305.0000°; Data Used: ll IU IC G CN.*
*SZGRF **22** 19:05:24.8,75.59N×7.96E,h26km,mb5.4,MS4.1, Greenland Sea*
*DJA **22** 19:05:33.3±6.4,76.14N×2.9,h141km±50km,M5.0/12, mB5.6/6,mb4.8/12,Mw(mB)5.1/6*

ISC 22 19:05:17.5±0.3,**76.30N**±0.03×**6.86E**±0.03,**h15**km±1km, **h15**km:**pP-P,n1396,**σ1**9**28/1498,**mb5.1**/272,**MS4.5**/62, **242C-246D,Svalbard region**

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
HSP	**Hornsund**	**2.14**	**66**	*e*P		Pn	19 05 49.0	-3.5
HSP				*e*S		Sn	19 06 11.9	-6.8
SPA0	**Spitsbergen Ar**	**2.83**	**44**	Pn		**Pn**	**19 05 59.2**	**-2.8**
	baz=223,slow=14							
SPA0				Sn		**Sn**	**19 06 31.2**	**-4.6**
	baz=239,slow=28							
SPA0	**Spitsbergen Ar**	**2.83**	**44**	Pn		**Pn**	**19 05 59.2**	**-2.8**
	baz=223,slow=14							
SPA0				Sn		**Sn**	**19 06 31.2**	**-4.6**
	baz=239,slow=28							
SPA0	**Spitsbergen Ar**	**2.83**	**44**	Pn		**Pn**	**19 05 59.2**	**-2.8**
	baz=223,slow=14,SNR=313							
SPA0				Sn		**Sn**	**19 06 31.2**	**-4.6**
	baz=239,slow=23,SNR=9.0							
SPITS	**Spitsbergen Ar**	**2.83**	**44**	Pn		**Pn**	**19 05 59.8**	**-2.2**
SPITS				Sn		**Sn**	**19 06 31.9**	**-3.9**
SPITS	**Spitsbergen Ar**	**2.83**	**44**	Pn		**Pn**	**19 05 59.8**	**-2.2**
	baz=213,slow=15,SNR=1366							
SPITS				Sn		**Sn**	**19 06 31.9**	**-3.9**
	baz=237,slow=25,SNR=13							
SPITS				LR		LR	19 07 12.6	
	comp=Z,5μm,20.0s,baz=245,slow=42							
SPITS	**Spitsbergen Ar**	**2.83**	**44**	P		**Pn**	**19 05 59.8**	**-2.2**
	5μm,20.0s							
SPITS				S		**Sn**	**19 06 31.9**	**-3.9**
KBS	**Kingsbay**	**2.86**	**20**	Pn		**Pn**	**19 05 59.4**	**-3.0**
KBS				Sn		**Sn**	**19 06 31.0**	**-5.4**
KBS	**Kingsbay**	**2.86**	**20**	*e*P		**Pn**	**19 05 59.8**	**-2.6**
KBS				Sn		**Sn**	**19 06 31.0**	**-5.4**
KBS				AML		AML	19 06 33.8	
	comp=Z,134nm,0.5s							
KBS				AMS

JOF pmax pmax
comp=Z,37nm,0.8s
JOF Joensuu 15.68 135 *ep* Pn 19 08 51.8 -5.6
comp=Z,37nm,0.8s
FIA1 FINESS Array S 16.29 146 *eP* **Pn 19 09 00.9 -4.4**
FIA0 FINESS Array S 16.29 146 Pn **Pn 19 09 01.1 -4.1**
baz=351,slow=16
FIA0 FINESS Array S 16.29 146 Pn **Pn 19 09 01.1 -4.1**
baz=351,slow=16
FINES FINESS Array B 16.29 146 Pn **Pn 19 09 01.5 -3.8**
FINES FINESS Array B 16.29 146 Pn **Pn 19 09 01.5 -3.8**
comp=Z,0.7nm,0.3s,baz=354,slow=13,SNR=22
FINES LR LR 19 15 20.7
comp=Z,2µm,20.5s,baz=346,slow=37
HFS Hagfors 16.42 168 Pn **Pn 19 09 06.4 -0.5**
baz=356,slow=10
HFS Hagfors 16.42 168 Pn **Pn 19 09 06.4 -0.5**
baz=356,slow=10
HFS Hagfors 16.42 168 Pn **Pn 19 09 06.2 -0.7**
HFS Hagfors 16.42 168 Pn **Pn 19 09 06.2 -0.7**
comp=Z,0.4nm,0.3s,baz=1.6,slow=10,SNR=36
HFS LR LR 19 14 46.9
comp=Z,2µm,18.0s,baz=358,slow=35
KONO Kongsberg 16.76 175 P **Pn 19 09 09.7 -1.5**
KONO pmax pmax
comp=Z,160nm,1.1s
KONO Kongsberg 16.76 175 P **Pn 19 09 09.7 -1.5**
comp=Z,160nm,1.1s
MEF Metsahovi 17.26 150 *eP* **P 19 09 18.9 -0.1**
comp=Z,124nm,1.6s,SNR=28
VSU Vasula 19.26 147⇓ *iP* **P 19 09 39.2 -1.8**
VSU pmax pmax
comp=Z,120nm,2.0s
VSU Vasula 19.26 147 *i* P **P 19 09 39.2 -1.8**
comp=Z,120nm,2.0s
SFJD Kangerlussuaq 19.37 272 *eP* **P 19 09 41.3 -0.8**
comp=Z,188nm,1.9s
SFJD Kangerlussuaq 19.37 272 P **P 19 09 41.5 -0.6**
comp=Z,0.3nm,0.3s,baz=33,slow=12,SNR=5.8
SFJD LR LR 19 16 26.2
comp=Z,1µm,21.1s,baz=42,slow=34
SFJD Kangerlussuaq 19.37 272 *i* P **P 19 09 41.6 -0.5**
SNR=52
MUD Monsted U'grnd 19.95 176 *i* P **Pn 19 09 50.0 -0.2**
LLD Lille Linde 21.15 172 *eP* **P 19 09 59.4 -2.1**
EKA Eskdalemuir Ar 21.39 196 P **P 19 10 03.5 -0.5**
EKA Eskdalemuir Ar 21.39 196 P **P 19 10 03.5 -0.5**
comp=Z,4.7nm,0.9s,baz=9.9,slow=10,SNR=9.5
EKA Eskdalemuir Ar 21.39 196 P **P 19 10 03.5 -0.5**
comp=Z,5.0nm,0.9s
ESK Eskdalemuir 21.41 196 *i* P **P 19 10 04.6 +0.4**
ESK Eskdalemuir 21.41 196 *eP* **P 19 10 03.1 -1.2**
comp=Z,153nm,1.8s
ESK Eskdalemuir 21.41 196 *i* P **P 19 10 04.6 +0.4**
BSD Bornholm Skovb 21.49 167 *i* P **P 19 10 03.3 -1.8**
RGN Rugen 21.98 170 P **P 19 10 08.2 -2.2**
comp=Z,408nm,1.6s
RGN Rugen 21.98 170 P **P 19 10 08.1 -2.2**
comp=Z,408nm,1.6s
BSEG Bad Segeberg 22.50 175 *eP* **P 19 10 15.6 -0.3**
comp=Z,389nm,1.5s
BSEG *ep*P **pP 19 10 23.7 +3.5**
BSEG Bad Segeberg 22.50 175 *eP* **P 19 10 15.6 -0.3**
BSEG *e**PP **pP 19 10 23.7 +3.5**
BSEG pmax pmax
comp=Z,362nm,1.5s
BSEG Bad Segeberg 22.50 175 *eP* **P 19 10 15.6 -0.3**
comp=Z,362nm,1.5s
RES Resolute Bay 22.58 317 P **P 19 10 17.7 +1.0**
RES Resolute Bay 22.58 317 P **P 19 10 17.7 +1.0**
comp=Z,5.8nm,1.0s,baz=22,slow=11,SNR=4.8
RES LR LR 19 18 54.9
comp=Z,1µm,20.6s,baz=212,slow=36
RES Resolute Bay 22.58 317 P **P 19 10 17.7 +1.0**
comp=Z,1µm,20.6s
NACGM Naroch 22.75 149 *eP* P 19 10 14.0 -4.6
SUW Suwalki 23.22 155 *eP* **P 19 10 22.8 -0.7**
SUW Suwalki 23.22 155 *eP* **P 19 10 22.8 -0.7**
SUW Suwalki 23.22 155 *eP* **P 19 10 22.8 -0.7**
MNK Minsk 23.27 148⇓ *eP* **P 19 10 22.0 -1.9**
MNK pmax pmax
comp=Z,250nm,1.5s
MNK Minsk 23.27 148 *eP* **P 19 10 22.0 -1.9**
comp=Z,250nm,1.5s
MICGM Minsk 23.27 148⇓ *eP* **P 19 10 22.0 -2.0**
GKP Gorka Klasztor 23.47 164 *eP* **P 19 10 26.4 +0.5**
GKP Gorka Klasztor 23.47 164 *eP* **P 19 10 26.3 +0.4**
GKP Gorka Klasztor 23.47 164 *eP* **P 19 10 26.4 +0.5**
MOS Moscow 23.54 134 *eP* P 19 10 22.1 -4.5
MOS *e* 19 10 50.7
MOS *eS* **S 19 14 34.6 -5.1**
MOS pmax pmax
comp=Z,103nm,1.6s
MOS pmax pmax
comp=Z,500nm,2.4s
MOS MLR MLR
comp=Z,2µm,18.0s
MOS MLR MLR
comp=N,1µm,17.0s
DLF Lyons Farm 23.66 200 *eP* **P 19 10 26.0 -1.8**
DLF Lyons Farm 23.66 200 *eP* **P 19 10 26.0 -1.8**
SOKR Solikamsk 23.91 106*c* *iP* **P 19 10 29.2 -0.9**
SOKR pmax pmax
comp=Z,100nm,1.9s
SOKR MLR MLR
comp=Z,1µm,20.0s
SOKR Solikamsk 23.91 106 *i* P **P 19 10 29.2 -0.9**
comp=Z,1µm,20.0s
NRDL Niedersach Rie 23.94 175 *eP* **P 19 10 30.6 +0.2**
comp=Z,736nm,2.1s
OBN Obninsk 23.96 135α *iP* **P 19 10 27.6 -3.0**
OBN *i* *PP **pP 19 10 32.6 -2.6**
OBN *e* 19 10 59.2
OBN *eS* **S 19 14 41.8 -4.5**
OBN SS **SnSn 19 15 33.0 +7.0**
OBN pmax pmax
comp=Z,169nm,2.5s
OBN MLR MLR
comp=Z,1µm,17.0s
RUE Ruedersdorf 24.07 170 *eP* **P 19 10 31.4 -0.3**
comp=Z,244nm,1.7s
RUE *ep*P **pP 19 10 38.0 +1.7**
IBBN Ibbenburen 24.09 179 *eP* **P 19 10 32.4 +0.5**
comp=Z,223nm,1.8s
WTSB Winterswijk 24.43 180 *eP* **P 19 10 35.9 +0.9**
comp=Z,326nm,1.5s
WTSB Winterswijk 24.43 180 *eP* **P 19 10 35.9 +0.9**
comp=Z,326nm,1.5s
CLZ Clausthal 24.59 175 *eP* **P 19 10 36.8 +0.2**
comp=Z,353nm,2.4s
CLZ Clausthal 24.59 175 *eP* **P 19 10 36.8 +0.2**
CLZ pmax pmax
comp=Z,55nm,2.4s
CLZ Clausthal 24.59 175 *eP* **P 19 10 36.8 +0.2**
comp=Z,55nm,2.4s
BUG Bochum-Univer 24.96 179 *eP* **P 19 10 40.0 +0.2**
comp=Z,208nm,1.5s
BUG *ep*P **pP 19 10 47.4 +3.0**
BEL Belsk 25.15 159 *eP* **P 19 10 42.4 +0.8**
BEL Belsk 25.15 159 *eP* **P 19 10 42.3 +0.7**
BEL Belsk 25.15 159 *eP* **P 19 10 42.4 +0.8**
CLL Collm 25.21 171 *eP* **P 19 10 41.6 -0.4**
comp=Z,86nm,1.7s
CLL *ep*P **pP 19 10 48.4 +1.8**
CLL Collm 25.21 171⇓ *iP* **P 19 10 41.6 -0.4**
CLL *i* 19 10 47.1
CLL *e* 19 14 13.0
CLL *eS* **S 19 15 10.0 +3.6**
CLL pmax pmax
comp=Z,87nm,1.7s
CLL MLR MLR
comp=Z,1µm,18.9s
CLL Collm 25.21 171⇓ *iP* **P 19 10 41.6 -0.4**
comp=Z,87nm,1.7s
CLL *i* sP **sP 19 10 47.1 -1.4**
CLL *e* 19 10 58.0
CLL *e* 19 11 09.0
CLL *e*PcP **PcP 19 14 13.0 -2.0**
CLL *eS* **S 19 15 10.0 +3.6**
CLL Lm MLR 19 20 00.0
comp=N,800nm,18.5s
CLL Lm MLR 19 20 00.0
comp=E,200nm,18.7s
CLL Lm MLR 19 20 00.0
comp=Z,1µm,18.9s

CLL Collm 25.21 171 *i* P **P 19 10 41.6 -0.4**
comp=Z,87nm,1.7s
CLL *eS* **S 19 15 10.0 +3.6**
comp=Z,1µm,18.9s
NEUB Neuenburg 25.27 173 *eP* **P 19 10 42.6 0.0**
comp=Z,107nm,1.2s
NEUB *ep*P **pP 19 10 49.4 +2.2**
VAL Valentia 25.35 205 *eP* **P 19 10 41.0 -2.3**
VAL Valentia 25.35 205 *eP* **P 19 10 41.0 -2.3**
FBE Freiberg 25.61 170 *eP* **P 19 10 45.7 0.0**
comp=Z,104nm,1.1s
FBE *ep*P **pP 19 10 52.2 +1.9**
BEBN Eben Emael 25.61 182 P **P 19 10 46.4 +0.7**
comp=Z,19nm,1.7s
UBBA Unterbreizbach 25.61 175 *eP* **P 19 10 46.0 +0.4**
comp=Z,102nm,1.6s
HGN Heimansgroeve 25.64 181 *eP* **P 19 10 45.4 -0.5**
comp=Z,156nm,1.6s
HGN *eS* S 19 15 30.1 +17
HGN *eL* L 19 20 13.3
comp=Z,455nm,21.7s
HGN Heimansgroeve 25.64 181 *eP* **P 19 10 45.4 -0.5**
comp=Z,156nm,1.6s
BRG Berggiesshubel 25.68 170 *eP* **P 19 10 45.9 -0.4**
comp=Z,86nm,1.5s
BRG *e* 19 10 55.6
comp=Z,61nm,1.3s
BRG S **S 19 15 20.0 +6.1**
BRG
comp=N,627nm,24.1s
BRG
comp=E,225nm,13.8s
BRG
comp=Z,859nm,20.8s
BRG Berggiesshubel 25.68 170 *eP* **P 19 10 46.1 -0.2**
comp=Z,86nm,1.5s
BRG *ep*P **pP 19 10 52.5 +1.6**
BRG Berggiesshubel 25.68 170 *eP* **P 19 10 45.9 -0.4**
BRG S **S 19 15 20.0 +6.1**
BRG pmax pmax
comp=Z,86nm,1.5s
BRG pmax pmax
comp=Z,61nm,1.3s
BRG MLR MLR
comp=N,627nm,24.1s
BRG MLR MLR
comp=E,225nm,13.8s
BRG MLR MLR
comp=Z,859nm,20.8s
BRG Berggiesshubel 25.68 170 *eP* **P 19 10 45.9 -0.4**
comp=Z,61nm,1.3s
BRG S **S 19 15 20.0 +6.1**
comp=Z,859nm,20.8s
MEM Membach 25.79 181 P **P 19 10 47.8 +0.4**
comp=Z,26nm,1.8s
MOX Moxa 25.82 173 *eP* **P 19 10 47.9 +0.2**
comp=Z,139nm,1.3s
MOX *ep*P **pP 19 10 54.4 +2.1**
MOX Moxa 25.82 173 *eP* **P 19 10 47.9 +0.2**
MOX *e**PP **pP 19 10 54.4 +2.1**
MOX pmax pmax
comp=Z,181nm,1.3s
MOX Moxa 25.82 173 *eP* **P 19 10 47.9 +0.2**
comp=Z,181nm,1.3s
KSP Ksiaz 25.83 166⇓ *eP* **P 19 10 47.6 -0.1**
KSP *eS* **S 19 15 16.0 -0.3**
KSP MLR MLR
comp=Z,2µm,17.6s
KSP Ksiaz 25.83 166 *eP* **P 19 10 47.5 -0.1**
KSP Ksiaz 25.83 166⇓ *eP* **P 19 10 47.6 -0.1**
BCLA Ciavier 25.99 182 P **P 19 10 49.5 +0.3**
comp=Z,38nm,1.9s
PLN Plauen 26.00 172 *eP* **P 19 10 49.6 +0.3**
comp=Z,789nm,1.6s
PLN *ep*P **pP 19 10 56.2 +2.3**
WERD Werda 26.04 172 *eP* **P 19 10 50.0 +0.3**
comp=Z,118nm,1.4s
WERD *ep*P **pP 19 10 56.4 +2.1**
PVCC Panska Ves 26.05 169 *i* P **P 19 10 49.8 +0.1**
PVCC *e* 19 10 58.2
PVCC MLR MLR
comp=Z,800nm,16.4s
PVCC Panska Ves 26.05 169 *i* P **P 19 10 49.8 +0.1**
PVCC *ep*P **pP 19 10 58.2 +3.9**
PVCC AMS AMS 19 20 40.0
comp=Z,800nm,16.4s
PVCC Panska Ves 26.05 169 P **P 19 10 49.8 +0.1**
TANN Tannenbergstha 26.08 172 *eP* **P 19 10 50.3 +0.2**
comp=Z,157nm,1.6s
TANN *ep*P **pP 19 10 57.0 +2.3**
GUNZ Gunzen 26.13 172 *eP* **P 19 10 50.8 +0.3**
comp=Z,196nm,1.6s
GUNZ *ep*P **pP 19 10 57.5 +2.4**
UPC Upice 26.15 167 *i* P **P 19 10 50.6 0.0**
UPC Upice 26.15 167 *i* P **P 19 10 50.6 0.0**
UPC Upice 26.15 167 P **P 19 10 50.6 0.0**
TNS Taunus Mts 26.19 178 *eP* **P 19 10 51.4 +0.4**
comp=Z,74nm,1.7s
TNS Taunus Mts 26.19 178 *eP* **P 19 10 51.4 +0.4**
TNS pmax pmax
comp=Z,51nm,1.7s
TNS Taunus Mts 26.19 178 *eP* **P 19 10 51.4 +0.4**
comp=Z,51nm,1.7s
WERN Wernitzgruen 26.20 172 *eP* **P 19 10 51.8 +0.6**
comp=Z,315nm,1.7s
WERN *ep*P **pP 19 10 58.2 +2.4**
NKC Novy Kostel 26.26 172 *i* P **P 19 10 52.3 +0.6**
NKC *e* 19 10 58.2
NKC MLR MLR
comp=Z,1µm,17.7s
NKC Novy Kostel 26.26 172 *i* P **P 19 10 52.3 +0.6**
NKC *ep*P **pP 19 10 58.2 +1.9**
NKC AMS AMS 19 21 00.0
comp=Z,1µm,17.7s
NKC Novy Kostel 26.26 172 P **P 19 10 52.3 +0.6**
FRB Frobisher Bay 26.29 284 P **P 19 10 52.0 +0.3**
FRB Frobisher Bay 26.29 284 P **P 19 10 52.0 +0.3**
comp=Z,29nm,1.2s,baz=39,slow=11,SNR=6.7
FRB LR LR 19 21 14.7
comp=Z,2µm,20.5s,baz=34,slow=36
FRB Frobisher Bay 26.29 284 P **P 19 10 52.1 +0.3**
comp=Z,2µm,20.5s
GIVF Givet 26.31 183 *eP* **P 19 10 51.7 -0.4**
comp=Z,182nm,1.6s
GIVF Givet 26.31 183 *eP* **P 19 10 51.7 -0.4**
GIVF pmax pmax
comp=Z,182nm,1.6s
GIVF Givet 26.31 183 *eP* **P 19 10 51.7 -0.4**
comp=Z,182nm,1.6s
GIVF Givet 26.31 183 *eP* **P 19 10 51.7 -0.4**
comp=Z,182nm,1.6s
DOU Dourbes 26.32 183 P **P 19 10 52.4 +0.2**
comp=Z,15nm,1.9s
DPC Dobruska-Polom 26.32 166 *iP* **P 19 10 52.5 +0.3**
DPC *e* 19 10 58.8
DPC Dobruska-Polom 26.32 166 *iP* **P 19 10 52.5 +0.3**
DPC *ep*P **pP 19 10 58.8 +2.0**
DPC Dobruska-Polom 26.32 166 P **P 19 10 52.5 +0.3**
BAIF Baives 26.36 184 *eP* **P 19 10 52.5 0.0**
comp=Z,270nm,1.5s
BAIF Baives 26.36 184 *eP* **P 19 10 52.5 0.0**
BAIF pmax pmax
comp=Z,270nm,1.5s
BAIF Baives 26.36 184 *eP* **P 19 10 52.5 0.0**
comp=Z,270nm,1.5s
BAIF Baives 26.36 184 *eP* **P 19 10 52.5 0.0**
comp=Z,270nm,1.5s
MANZ Manzenberg 26.50 172 *eP* **P 19 10 53.8 0.0**
comp=Z,190nm,2.2s
PRA Prague 26.50 169 P **P 19 10 55.0 +1.2**
PRA AMS AMS 19 21 30.0
ABH Alteburg 26.52 179⇑ *eP* **P 19 10 55.1 +1.1**
ABH Alteburg 26.52 179⇑ *eP* **P 19 10 55.1 +1.1**
PRU Pruhonice 26.59 169 *iP* **P 19 10 55.1 +0.5**
PRU *eS* **S 19 15 33.4 +5.1**
PRU MLR MLR
comp=Z,700nm,15.6s
PRU Pruhonice 26.59 169 *iP* **P 19 10 55.1 +0.5**
PRU *eS* **S 19 15 33.4 +5.1**
PRU AMS AMS 19 21 10.0
comp=Z,700nm,15.6s
PRU Pruhonice 26.59 169 P **P 19 10 55.1 +0.5**
KRLC Kraliky 26.62 166 *iP* **P 19 10 54.9 0.0**
KRLC Kraliky 26.62 166 *iP* **P 19 10 54.9 0.0**
KRLC Kraliky 26.62 166 P **P 19 10 54.9 0.0**

OJC Ojcow 26.68 161⇓ *iP* **P 19 10 55.1 -0.3**
OJC *eS* **S 19 15 32.6 +2.8**
OJC MLR MLR
comp=Z,900nm,20.0s
OJC Ojcow 26.68 161 *i* P **P 19 10 55.1 -0.3**
OJC *eS* **S 19 15 32.6 +2.8**
OJC L L 19 20 53.4
comp=Z,900nm,20.0s
OJC Ojcow 26.68 161⇓ *iP* **P 19 10 55.1 -0.3**
OJC *eS* **S 19 15 32.6 +2.8**
RAC Raciborz 26.70 164 *eP* **P 19 10 55.8 +0.2**
RAC MLR MLR
comp=Z,1µm,23.3s
RAC Raciborz 26.70 164 *eP* **P 19 10 55.8 +0.2**
ROTZ Rotzenmuhle 26.72 172 *eP* **P 19 10 56.4 +0.6**
comp=Z,76nm,1.6s
ROTZ *ep*P **pP 19 11 02.8 +2.4**
WLF Walferdange 26.74 181 P **P 19 10 56.5 +0.6**
comp=Z,37nm,2.3s
WLF Walferdange 26.74 181 *eP* **P 19 10 56.5 +0.6**
comp=Z,126nm,2.1s
WLF Walferdange 26.74 181 *eP* **P 19 10 56.8 +0.9**
WLF pmax pmax
comp=Z,147nm,2.1s
WLF Walferdange 26.74 181 *eP* **P 19 10 56.8 +0.9**
comp=Z,147nm,2.1s
WLF Walferdange 26.74 181 *eP* **P 19 10 56.8 +0.9**
comp=Z,147nm,2.1s
GRA1 Grafenberg Arr 26.77 174 *eP* **P 19 10 56.8 +0.6**
comp=Z,1.0nm,1.4s
GRF Grafenberg Arr 26.77 174 *eP* **P 19 10 56.8 +0.6**
comp=Z,63nm,1.4s
GRF *ep*P **pP 19 11 03.3 +2.5**
GRF *eL* L 19 21 42.2
comp=Z,562nm,18.2s
GRF Grafenberg Arr 26.77 174 *eP* **P 19 10 56.8 +0.6**
GRF *e**PP **pP 19 11 03.3 +2.5**
GRF pmax pmax
comp=Z,1.0nm,1.4s
GRF MLR MLR
comp=Z,63µm,18.2s
GRFO Grafenberg 26.77 174 *eP* **P 19 10 56.9 +0.7**
GRFO pmax pmax
comp=Z,54nm,1.2s
GRFO Grafenberg 26.77 174 *eP* **P 19 10 56.9 +0.7**
comp=Z,54nm,1.2s
GRFO Grafenberg 26.77 174 *eP* **P 19 10 56.9 +0.7**
comp=Z,54nm,1.2s
TOD Tromm 26.81 177⇑ *eP* **P 19 10 57.5 +0.9**
TOD Tromm 26.81 177⇑ *eP* **P 19 10 57.5 +0.9**
TOD Tromm 26.81 177⇑ *eP* **P 19 10 57.5 +0.9**
OKC Ostrava-Krasne 26.94 164 *iP* **P 19 10 57.7 -0.1**
OKC MLR MLR
comp=Z,600nm,18.5s
OKC Ostrava-Krasne 26.94 164 *i* P **P 19 10 57.7 -0.1**
OKC AMS AMS 19 21 10.0
comp=Z,600nm,18.5s
OKC Ostrava-Krasne 26.94 164 P **P 19 10 57.7 -0.1**
MORC Moravsky Berou 26.96 165 *eP* **P 19 10 57.3 -0.7**
MORC pmax pmax
comp=Z,88nm,1.6s
MORC Moravsky Berou 26.96 165 *eP* **P 19 10 57.3 -0.7**
comp=Z,88nm,1.6s
MORC Moravsky Berou 26.96 165⇓ *iP* **P 19 10 57.5 -0.5**
MORC Moravsky Berou 26.96 165 *eP* **P 19 10 57.3 -0.7**
comp=Z,88nm,1.6s
AKASG Malin Array Be 27.17 148 *i* P **P 19 10 58.2 -1.5**
AKASG pmax pmax
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 27.17 148 P **P 19 10 58.0 -1.7**
AKASG PcP **PcP 19 14 19.4 -0.2**
AKASG Malin Array Be 27.17 148 P **P 19 10 58.0 -1.7**
comp=Z,2.6nm,0.7s,baz=342,slow=9.5,SNR=24
AKASG PcP **PcP 19 14 19.4 -0.2**
comp=Z,0.6nm,0.4s,baz=314,slow=2.3,SNR=5.4
AKASG LR LR 19 21 39.3
comp=Z,1µm,21.8s,baz=355,slow=36
AKASG Malin Array Be 27.17 148 *i* P **P 19 10 58.2 -1.5**
comp=Z,3.0nm,0.7s
AKASG Malin Array Be 27.17 148 PcP **PcP 19 14 19.4 -0.2**
KIEV Kiev 27.17 148 *eP* **P 19 10 58.5 -1.3**
KIEV pmax pmax
comp=Z,56nm,1.4s
KIEV Kiev 27.17 148 *eP* **P 19 10 58.5 -1.3**
comp=Z,56nm,1.4s
KIEV Kiev 27.17 148 *eP* **P 19 10 58.5 -1.3**
comp=Z,56nm,1.4s
AK01 Malin Array Si 27.18 148 *eP* **P 19 10 58.4 -1.4**
AK01 Malin Array Si 27.18 148 *eP* **P 19 10 58.4 -1.4**
ARU Arti 27.18 107*d* *iP* **P 19 10 59.7 -0.1**
ARU 19 11 42.0
ARU PPP PPP 19 11 52.2
ARU 19 14 18.3
ARU S **S 19 15 39.5 +2.0**
ARU SSS SSS 19 17 03.4
ARU pmax pmax
comp=Z,84nm,2.5s
ARU MLR MLR
comp=Z,826nm,17.0s
ARU Arti 27.18 107 P **P 19 11 00.6 +0.8**
comp=Z,112nm,1.7s,SNR=13
ARU Arti 27.18 107 *i* P **P 19 10 59.7 -0.1**
comp=Z,84nm,2.5s
ARU Arti 27.18 107 PcP **PcP 19 14 18.3 -1.2**
ARU S **S 19 15 39.5 +2.0**
comp=Z,826nm,17.0s
AK02 Malin Array Si 27.21 148 *eP* **P 19 10 58.8 -1.3**
AK02 Malin Array Si 27.21 148 *eP* **P 19 10 58.8 -1.3**
SVE Sverdlovsk 27.29 105⇓ *iP* **P 19 11 01.2 +0.4**
SVE pmax pmax
comp=Z,84nm,1.8s
SVE MLR MLR
comp=Z,1µm,12.0s
SVE Sverdlovsk 27.29 105 *i* P **P 19 11 01.2 +0.4**
comp=Z,1µm,12.0s
TREC Trest 27.33 168 AMS AMS 19 21 30.0
comp=Z,800nm,16.4s
WET Wettzell 27.37 171 *eP* **P 19 11 02.2 +0.6**
comp=Z,104nm,1.8s
WET Wettzell 27.37 171 *eP* **P 19 11 02.2 +0.6**
WET pmax pmax
comp=Z,124nm,1.8s
WET Wettzell 27.37 171 *eP* **P 19 11 02.2 +0.6**
comp=Z,124nm,1.8s
VRAC Vranov 27.38 166 P **P 19 11 02.3 +0.6**
VRAC Vranov 27.38 166⇓ *iP* **P 19 11 00.4 -1.3**
VRAC Vranov 27.38 166 P **P 19 11 02.3 +0.6**
comp=Z,22nm,0.8s,baz=1.3,slow=10.0,SNR=49
VRAC LR LR 19 21 37.4
comp=Z,556nm,18.4s,baz=353,slow=36
VRAC Vranov 27.38 166 *eP* **P 19 11 01.8 +0.1**
KHC Kasperske Hory 27.41 170 *iP* **P 19 11 02.8 +0.8**
KHC *eS* **S 19 15 44.4 +3.1**
KHC MLR MLR
comp=Z,1µm,20.2s
KHC Kasperske Hory 27.41 170 *i* P **P 19 11 02.8 +0.8**
KHC *ex* x 19 11 20.5
KHC *eS* **S 19 15 44.4 +3.1**
KHC AMS AMS 19 21 20.0
comp=Z,1µm,20.2s
KHC Kasperske Hory 27.41 170 *eP* **P 19 11 02.9 +0.8**
comp=Z,67nm,1.6s
KHC Kasperske Hory 27.41 170 P **P 19 11 02.8 +0.8**
KHC S **S 19 15 44.4 +3.1**
LANF Langenberg 27.42 179⇑ *eP* **P 19 11 02.7 +0.6**
LANF Langenberg 27.42 179⇑ *eP* **P 19 11 02.7 +0.6**
LANF Langenberg 27.42 179⇑ *eP* **P 19 11 02.7 +0.6**
LANF Langenberg 27.42 179⇑ *eP* **P 19 11 02.7 +0.6**
LVV L'vov 27.45 155 *eP* **P 19 11 00.1 -2.2**
LVV *e* 19 12 01.7
LVV *eS* S 19 15 35.1 -6.8
LVV *eSS* SnSn 19 17 12.7 +21
LVV MLR MLR
comp=N,500nm,10.0s
LVV MLR MLR
comp=E,400nm,10.0s
LVV MLR MLR
comp=Z,500nm,10.0s
LVV L'vov 27.45 155 *eP* **P 19 11 00.1 -2.2**
KWP Kalwaria Pacla 27.51 157 *eP* **P 19 11 02.8 -0.1**
KWP Kalwaria Pacla 27.51 157 *eP* **P 19 11 02.1 -0.8**
comp=Z,252nm,1.8s
KWP Kalwaria Pacla 27.51 157⇓ *iP* **P 19 11 02.1 -0.8**
KWP Kalwaria Pacla 27.51 157 *eP* **P 19 11 02.7 -0.1**
KWP Kalwaria Pacla 27.51 157 *eP* **P 19 11 02.8 -0.1**

NIE	Niedzica	27.52 161	⇓	*i*	P		P	19 11 04.0	+1.0
NIE	Niedzica	27.52 161		*i*	P		P	19 11 04.0	+1.0
NIE	Niedzica	27.52 161	⇓	*i*	P		P	19 11 04.0	+1.0
STHS	Stebnicka Huta	27.59 159		*e*	P		P	19 11 04.2	+0.5
STHS	comp=Z,25nm,1.3s				pmax	pmax			
STHS	Stebnicka Huta	27.59 159		*e*	P		P	19 11 04.2	+0.5
STHS	Stebnicka Huta	27.59 159		*e*	P		P	19 11 04.2	+0.5
STU	comp=Z,25nm,1.3s Stuttgart	27.65 177		*e*	P		P	19 11 04.6	+0.5
GEC2	comp=Z,130nm,1.8s GERESS Array S	27.70 170		*e*	P		P	19 11 05.5	+0.8
GEC2	comp=Z,112nm,1.7s GERESS Array S	27.70 170		*e*	P		P	19 11 05.5	+0.8
GEC2	comp=Z,101nm,1.7s				pmax	pmax			
GEC2	GERESS Array S comp=Z,101nm,1.7s	27.70 170		*e*	P		P	19 11 05.5	+0.8
GERES	GERESS Array B	27.70 170		P			P	19 11 05.4	+0.8
GERES	GERESS Array B comp=Z,7.6nm,0.9s,baz=12,slow=7.4,SNR=57	27.70 170		P			P	19 11 05.4	+0.8
GERES	comp=Z,908nm,18.7s,baz=176,slow=36				LR		LR	19 22 02.4	
GERES	GERESS Array B comp=Z,908nm,18.7s	27.70 170		P			P	19 11 05.4	+0.8
FLN	La Foliniere comp=Z,66nm,1.5s	27.80 190		*e*	P		P	19 11 04.4	-1.0
FLN	comp=Z,432nm,23.0s				*e*R				
FLN	La Foliniere comp=Z,66nm,1.5s	27.80 190		*e*	P		P	19 11 04.4	-1.0
FLN	comp=Z,66nm,1.5s				pmax	pmax			
FLN	La Foliniere comp=Z,66nm,1.5s	27.80 190		*e*	P		P	19 11 04.4	-1.0
FLN	La Foliniere comp=Z,66nm,1.5s	27.80 190		*e*	P		P	19 11 04.4	-1.0
PAGF	Fort de Pagny comp=Z,78nm,1.8s	27.85 182		*e*	P		P	19 11 06.3	+0.4
PAGF	Fort de Pagny comp=Z,78nm,1.8s	27.85 182		*e*	P		P	19 11 06.3	+0.4
PAGF	Fort de Pagny comp=Z,39nm,1.8s	27.85 182		*e*	P		P	19 11 06.3	+0.4
MEZF	Maizieres J'vi comp=Z,272nm,1.7s	27.91 183		*e*	P		P	19 11 06.7	+0.3
MEZF	Maizieres J'vi comp=Z,272nm,1.7s	27.91 183		*e*	P		P	19 11 06.7	+0.3
MEZF	Maizieres J'vi comp=Z,136nm,1.7s	27.91 183		*e*	P		P	19 11 06.7	+0.3
LDF	La Druitiere comp=Z,98nm,1.5s	27.95 190		*e*	P		P	19 11 05.5	-1.3
LDF	La Druitiere comp=Z,98nm,1.5s	27.95 190		*e*	P		P	19 11 05.5	-1.3
LDF	comp=Z,98nm,1.5s				pmax	pmax			
LDF	La Druitiere comp=Z,98nm,1.5s	27.95 190		*e*	P		P	19 11 05.5	-1.3
LDF	La Druitiere comp=Z,98nm,1.5s	27.95 190		*e*	P		P	19 11 05.5	-1.3
CDF	Champ du Feu comp=Z,76nm,1.5s	27.99 179		*e*	P		P	19 11 07.2	-0.1
CDF	Champ du Feu comp=Z,76nm,1.5s	27.99 179		*e*	P		P	19 11 07.2	-0.1
CDF	comp=Z,76nm,1.5s				pmax	pmax			
CDF	Champ du Feu comp=Z,76nm,1.5s	27.99 179		*e*	P		P	19 11 07.2	-0.1
CDF	Champ du Feu comp=Z,76nm,1.5s	27.99 179		*e*	P		P	19 11 07.2	-0.1
BFO	Black Forest comp=Z,196nm,1.1s,SNR=7.4	28.08 178		P			P	19 11 08.8	+0.8
BFO	Black Forest comp=Z,52nm,1.7s	28.08 178		*e*	P		P	19 11 08.3	+0.3
BFO	Black Forest comp=Z,57nm,1.3s	28.08 178		*e*	P		P	19 11 08.8	+0.8
BFO	comp=Z,57nm,1.3s				pmax	pmax			
BFO	Black Forest comp=Z,57nm,1.3s	28.08 178		*e*	P		P	19 11 08.8	+0.8
BFO	Black Forest comp=Z,57nm,1.3s	28.08 178		*e*	P		P	19 11 08.8	+0.8
CRVS	Cervenica-Dubn comp=Z,63nm,1.9s	28.12 159		*e*	P		P	19 11 06.0	-2.4
CRVS	comp=Z,63nm,1.9s				pmax	pmax			
CRVS	Cervenica-Dubn	28.12 159		*e*	P		P	19 11 06.0	-2.4
CRVS	Cervenica-Dubn comp=Z,63nm,1.9s	28.12 159		*e*	P		P	19 11 06.0	-2.4
VSR	Storozhevoye	28.15 135		*e*	P		P	19 11 07.1	-1.4
VSR				*i*				19 21 51.6	
VSR	comp=Z,30nm,1.9s				pmax	pmax			
VSR	comp=N,10.0nm,0.9s				pmax	pmax			
VSR	comp=E,5.0nm,0.6s				pmax	pmax			
VSR	comp=N,350nm,16.0s				MLR	MLR			
VSR	comp=E,230nm,16.0s				MLR	MLR			
VSR	comp=Z,660nm,16.0s				MLR	MLR			
VSR	Storozhevoye comp=Z,10.0nm,0.9s	28.15 135		*e*	P		P	19 11 07.1	-1.4
KOLS	Kolonicke sedl comp=Z,85nm,1.9s	28.16 158		*e*	P		P	19 11 08.9	+0.2
KOLS	comp=Z,85nm,1.9s				pmax	pmax			
KOLS	Kolonicke sedl	28.16 158		*e*	P		P	19 11 08.9	+0.2
KOLS	Kolonicke sedl comp=Z,85nm,1.9s	28.16 158		*e*	P		P	19 11 08.9	+0.2
THEF	They Montfort	28.18 181		*e*	P		P	19 11 09.8	+0.9
THEF	They Montfort	28.18 181		*e*	P		P	19 11 09.8	+0.9
THEF	They Montfort	28.18 181		*e*	P		P	19 11 09.8	+0.9
THEF	They Montfort	28.18 181		*e*	P		P	19 11 09.8	+0.9
ECH	Echery	28.19 180		*e*	P		P	19 11 08.1	-0.8
ECH	comp=Z,43nm,1.6s				pmax	pmax			
ECH	Echery comp=Z,43nm,1.6s	28.19 180		*e*	P		P	19 11 08.1	-0.8
ECH	Echery	28.19 180	⇑	*e*	P		P	19 11 09.8	+0.8
ECH	Echery	28.19 180	⇑	*e*	P		P	19 11 09.8	+0.8
GRR	Gorron comp=Z,116nm,1.6s	28.19 191		*e*	P		P	19 11 07.7	-1.2
GRR	Gorron comp=Z,116nm,1.6s	28.19 191		*e*	P		P	19 11 07.7	-1.2
GRR	comp=Z,116nm,1.6s				pmax	pmax			
GRR	Gorron comp=Z,116nm,1.6s	28.19 191		*e*	P		P	19 11 07.7	-1.2
GRR	Gorron comp=Z,116nm,1.6s	28.19 191		*e*	P		P	19 11 07.7	-1.2
SFTF	Sexfontaines comp=Z,242nm,1.6s	28.21 183		*e*	P		P	19 11 09.1	0.0
SFTF	Sexfontaines comp=Z,242nm,1.6s	28.21 183		*e*	P		P	19 11 09.1	0.0
SFTF	Sexfontaines comp=Z,121nm,1.6s	28.21 183		*e*	P		P	19 11 09.1	0.0
SMOL	Smolenice	28.22 165		*e*	P		P	19 11 10.5	+1.3
SMOL	Smolenice	28.22 165		*e*	P		P	19 11 10.5	+1.3
SMOL	Smolenice	28.22 165		*e*	P		P	19 11 10.5	+1.3
TIXI	Tiksi	28.22 35	*c*	*e*	P		P	19 11 10.8	+1.8
TIXI	comp=Z,49nm,1.7s				pmax	pmax			
TIXI	Tiksi comp=Z,49nm,1.7s	28.22 35		*e*	P		P	19 11 10.8	+1.8
FUR	Furstenfeldbru comp=Z,121nm,2.0s	28.29 174		*e*	P		P	19 11 10.5	+0.6
FUR	Furstenfeldbru comp=Z,56nm,2.0s	28.29 174		*e*	P		P	19 11 10.5	+0.6
FUR	comp=Z,56nm,2.0s				pmax	pmax			
FUR	Furstenfeldbru comp=Z,56nm,2.0s	28.29 174		*e*	P		P	19 11 10.5	+0.6
SPAK	Spaichingen-Ko	28.31 177		*e*	P		P	19 11 10.3	+0.2
SPAK	Spaichingen-Ko	28.31 177		*e*	P		P	19 11 10.3	+0.2
VYHS	Vyhne	28.33 163		*e*	P		P	19 11 10.6	+0.4
VYHS	comp=Z,49nm,1.9s				pmax	pmax			
VYHS	Vyhne	28.33 163		*e*	P		P	19 11 10.6	+0.4
VYHS	Vyhne comp=Z,49nm,1.9s	28.33 163		*e*	P		P	19 11 10.6	+0.4
ROSF	Rostrenen comp=Z,52nm,1.4s	28.37 194		*e*	P		P	19 11 09.3	-1.2
ROSF	Rostrenen comp=Z,52nm,1.4s	28.37 194		*e*	P		P	19 11 09.3	-1.2
ROSF	comp=Z,52nm,1.4s				pmax	pmax			
ROSF	Rostrenen comp=Z,52nm,1.4s	28.37 194		*e*	P		P	19 11 09.3	-1.2
ROSF	Rostrenen comp=Z,52nm,1.4s	28.37 194		*e*	P		P	19 11 09.3	-1.2
HAU	Haudompre comp=Z,216nm,1.9s	28.40 181		*e*	P		P	19 11 10.9	+0.1
HAU				*e*	R				
HAU	Haudompre comp=Z,809nm,20.0s	28.40 181		*e*	P		P	19 11 10.9	+0.1
HAU	comp=Z,216nm,1.9s				pmax	pmax			
HAU	Haudompre comp=Z,216nm,1.9s	28.40 181		*e*	P		P	19 11 10.9	+0.1
HAU	Haudompre comp=Z,216nm,1.9s	28.40 181		*e*	P		P	19 11 10.9	+0.1
SGMF	Saint Gilles comp=Z,95nm,1.4s	28.41 193		*e*	P		P	19 11 10.0	-0.9
SGMF	Saint Gilles comp=Z,95nm,1.4s	28.41 193		*e*	P		P	19 11 10.0	-0.9
SGMF	comp=Z,95nm,1.4s				pmax	pmax			
SGMF	Saint Gilles comp=Z,95nm,1.4s	28.41 193		*e*	P		P	19 11 10.0	-0.9
SGMF	Saint Gilles comp=Z,95nm,1.4s	28.41 193		*e*	P		P	19 11 10.0	-0.9
VORD	Divnogorie	28.41 135		*e*	P		P	19 11 09.5	-1.3
VORD				*i*				19 21 50.4	
VORD	comp=N,30nm,1.6s				pmax	pmax			
VORD	comp=Z,20nm,1.6s				pmax	pmax			
VORD	comp=E,10.0nm,0.8s				pmax	pmax			
VORD	comp=N,480nm,16.0s				MLR	MLR			
VORD	comp=Z,460nm,16.0s				MLR	MLR			
VORD	comp=E,80nm,8.0s				MLR	MLR			
VORD	Divnogorie	28.41 135		*e*	P		P	19 11 09.5	-1.3
KECS	Kecovo	28.46 161		*e*	P		P	19 11 11.7	+0.3
KECS	comp=Z,15nm,1.6s				pmax	pmax			
KECS	Kecovo	28.46 161		*e*	P		P	19 11 11.7	+0.3
KECS				*e*				19 34 04.5	
KECS				*e*				19 34 11.2	
KECS	Kecovo comp=Z,15nm,1.6s	28.46 161		*e*	P		P	19 11 11.7	+0.3
ZST	Bratislava	28.51 166		*e*	P		P	19 11 12.0	+0.2
ZST	Bratislava	28.51 166		*e*	P		P	19 11 12.0	+0.2
ZST	Bratislava	28.51 166		*e*	P		P	19 11 12.0	+0.2
FELD	Feldberg im Sc	28.53 178	⇑	*e*	P		P	19 11 13.1	+0.9
FELD	Feldberg im Sc	28.53 178	⇑	*e*	P		P	19 11 13.1	+0.9
MOF	Molkenrain	28.55 180	⇑	*e*	P		P	19 11 13.3	+1.0
MOF	Molkenrain	28.55 180	⇑	*e*	P		P	19 11 13.3	+1.0
MOF	Molkenrain	28.55 180	⇑	*e*	P		P	19 11 13.3	+1.0
MOF	Molkenrain	28.55 180	⇑	*e*	P		P	19 11 13.3	+1.0
HINF	Hinteralfeld comp=Z,169nm,1.9s	28.59 180		*e*	P		P	19 11 12.4	-0.1
HINF	Hinteralfeld comp=Z,169nm,1.9s	28.59 180		*e*	P		P	19 11 12.4	-0.1
HINF	comp=Z,169nm,1.9s				pmax	pmax			
HINF	Hinteralfeld comp=Z,169nm,1.9s	28.59 180		*e*	P		P	19 11 12.4	-0.1
HINF	Hinteralfeld comp=Z,169nm,1.9s	28.59 180		*e*	P		P	19 11 12.4	-0.1
CONA	Conrad Observa comp=Z,51nm,1.2s,SNR=26	28.71 167	⇓	*i*	P		P	19 11 14.3	+0.6
CONA	Conrad Observa comp=Z,51nm,1.2s,SNR=26	28.71 167		P			P	19 11 14.3	+0.6
MOA	Molln	28.71 170	⇓	*i*	P		P	19 11 14.0	+0.4
MOA	Molln	28.71 170		P			P	19 11 14.0	+0.4
RJOB	Jochberg comp=Z,14nm,1.1s	28.77 172		*e*	P		P	19 11 14.9	+0.7
QUIF	Quistinic comp=Z,74nm,1.5s	28.78 194		*e*	P		P	19 11 13.6	-0.6
QUIF	Quistinic comp=Z,74nm,1.5s	28.78 194		*e*	P		P	19 11 13.6	-0.6
QUIF	comp=Z,74nm,1.5s				pmax	pmax			
QUIF	Quistinic comp=Z,74nm,1.5s	28.78 194		*e*	P		P	19 11 13.6	-0.6
QUIF	Quistinic comp=Z,74nm,1.5s	28.78 194		*e*	P		P	19 11 13.6	-0.6
BBS	Basel-Blauen	28.94 179		*e*	P		P	19 11 16.3	+0.6
BBS	Basel-Blauen	28.94 179		*e*	P		P	19 11 16.3	+0.6
BBS	Basel-Blauen	28.94 179		*e*	P		P	19 11 16.3	+0.6
RETA	Reutte comp=Z,23nm,1.7s	28.96 175	⇓	*e*	P		P	19 11 16.3	+0.4
RETA	Reutte comp=Z,23nm,1.7s	28.96 175		P			P	19 11 16.3	+0.4
PSZ	Piszkesteto comp=Z,170nm,1.9s	28.98 162		*e*	P		P	19 11 16.8	+0.7
PSZ	comp=Z,170nm,1.9s				pmax	pmax			
PSZ	Piszkesteto comp=Z,170nm,1.9s	28.98 162		*e*	P		P	19 11 16.8	+0.7
PSZ	Piszkesteto	28.98 162	⇓	*i*	P		P	19 11 16.5	+0.5
PSZ	Piszkesteto	28.98 162	⇓	*e*	P		P	19 11 16.7	+0.7
PSZ	Piszkesteto	28.98 162	⇓	*i*	P		P	19 11 16.5	+0.5
TRPA	Tarpa	28.98 158	⇑	*i*	P		P	19 11 16.6	+0.6
TRPA	Tarpa	28.98 158	⇑	*e*	P		P	19 11 16.7	+0.7
TRPA	Tarpa	28.98 158	⇑	*i*	P		P	19 11 16.6	+0.6
SOP	Sopron	28.99 166	⇑	*e*	P		P	19 11 16.9	+0.8
LOMF	Lomont	29.05 180	⇑	*e*	P		P	19 11 17.6	+0.9
LOMF	Lomont	29.05 180	⇑	*e*	P		P	19 11 17.6	+0.9
LOMF	Lomont	29.05 180	⇑	*e*	P		P	19 11 17.6	+0.9
LOMF	Lomont	29.05 180	⇑	*e*	P		P	19 11 17.6	+0.9
DAVA	Damuels comp=Z,21nm,1.5s,SNR=5.4	29.14 176	⇓	*e*	pP		P	19 11 18.4	+0.8
DAVA	Damuels comp=Z,21nm,1.5s,SNR=5.4	29.14 176		P			P	19 11 18.4	+0.8
LOR	Lormes comp=Z,133nm,1.8s	29.16 184		*e*	P		P	19 11 17.1	-0.5
LOR				*e*	R				
LOR	Lormes comp=Z,602nm,22.5s	29.16 184		*e*	P		P	19 11 17.1	-0.5
LOR	Lormes comp=Z,133nm,1.8s	29.16 184		*e*	P		P	19 11 17.1	-0.5
LOR	Lormes comp=Z,133nm,1.8s	29.16 184		*e*	P		P	19 11 17.1	-0.5
WTTA	Wattenberg comp=Z,49nm,1.4s,SNR=10	29.21 173	⇓	*i*	pP		P	19 11 19.2	+1.0
WTTA	Wattenberg comp=Z,49nm,1.4s,SNR=10	29.21 173		P			P	19 11 19.2	+1.0
BUD	Budapest	29.35 163	⇑	*e*	P		P	19 11 20.3	+1.1
ARSA	Arzberg comp=Z,24nm,1.4s	29.37 168	⇓	*i*	P		P	19 11 20.1	+0.6
ARSA	Arzberg comp=Z,24nm,1.4s	29.37 168		P			P	19 11 20.1	+0.6
SSF	Saint Saulge comp=Z,91nm,1.5s	29.37 185		*e*	P		P	19 11 18.9	-0.6
SSF	Saint Saulge comp=Z,91nm,1.5s	29.37 185		*e*	P		P	19 11 18.9	-0.6
SSF	comp=Z,91nm,1.5s				pmax	pmax			
SSF	Saint Saulge comp=Z,91nm,1.5s	29.37 185		*e*	P		P	19 11 18.9	-0.6
SSF	Saint Saulge comp=Z,91nm,1.5s	29.37 185		*e*	P		P	19 11 18.9	-0.6
PKSG		29.39 164	⇑	*e*	P		P	19 11 20.6	+1.0
CSKK	Cs˘ákako	29.41 164	⇑	*e*	P		P	19 11 20.9	+1.1
FETA	Feichten comp=Z,18nm,1.4s,SNR=8.6	29.43 175	⇓	*e*	pP		P	19 11 20.9	+0.8
FETA	Feichten comp=Z,18nm,1.4s,SNR=8.6	29.43 175		P			P	19 11 20.9	+0.8
KBA	Koelnbreinsper comp=Z,29nm,1.1s	29.45 171	⇓	*e*	pP		P	19 11 21.4	+1.1
KBA	Koelnbreinsper comp=Z,29nm,1.1s	29.45 171		P			P	19 11 21.4	+1.1
PKST	T˘s	29.50 164	⇑	*e*	P		P	19 11 21.5	+0.9
AVF	Avril sur Loir comp=Z,105nm,1.4s	29.65 185		*e*	P		P	19 11 21.4	-0.5
AVF	Avril sur Loir comp=Z,105nm,1.4s	29.65 185		*e*	P		P	19 11 21.4	-0.5
AVF	comp=Z,105nm,1.4s				pmax	pmax			
AVF	Avril sur Loir comp=Z,105nm,1.4s	29.65 185		*e*	P		P	19 11 21.4	-0.5
AVF	Avril sur Loir comp=Z,105nm,1.4s	29.65 185		*e*	P		P	19 11 21.4	-0.5
DAVOX	Davos/Dischmat comp=Z,313nm,18.4s,baz=86,slow=37	29.65 176		LR			LR	19 23 18.2	
BUR08	Bucovina Ar. S	29.72 155		*e*	P		P	19 11 22.5	-0.1
BUR08	Bucovina Ar. S	29.72 155		*e*	P		P	19 11 22.5	-0.1
BURAR	Bucovina Array	29.75 155	⇓	*i*	P		P	19 11 22.5	-0.4
BURAR	Bucovina Array	29.75 155	⇓	*i*	P		P	19 11 22.5	-0.4
SMF	Signal de Mont comp=Z,102nm,1.7s	29.78 184		*e*	P		P	19 11 22.5	-0.6
SMF	Signal de Mont comp=Z,102nm,1.7s	29.78 184		*e*	P		P	19 11 22.5	-0.6
SMF	comp=Z,102nm,1.7s				pmax	pmax			
SMF	Signal de Mont comp=Z,102nm,1.7s	29.78 184		*e*	P		P	19 11 22.5	-0.6
SMF	Signal de Mont comp=Z,102nm,1.7s	29.78 184		*e*	P		P	19 11 22.5	-0.6
PKS7	Kunszentmiklos	29.79 163	⇑	*e*	P		P	19 11 24.4	+1.3
CABF	La Chapelle comp=Z,136nm,1.6s	29.79 181		*e*	P		P	19 11 23.1	-0.2
CABF	La Chapelle comp=Z,136nm,1.6s	29.79 181		*e*	P		P	19 11 23.1	-0.2
CABF	comp=Z,136nm,1.6s				pmax	pmax			
CABF	La Chapelle comp=Z,136nm,1.6s	29.79 181		*e*	P		P	19 11 23.1	-0.2
CABF	La Chapelle comp=Z,136nm,1.6s	29.79 181		*e*	P		P	19 11 23.1	-0.2
BGF	Bois d'Agland comp=Z,238nm,1.5s	29.89 186		*e*	P		P	19 11 23.7	-0.4
BGF	Bois d'Agland comp=Z,238nm,1.5s	29.89 186		*e*	P		P	19 11 23.7	-0.4
BGF	comp=Z,238nm,1.5s				pmax	pmax			
BGF	Bois d'Agland comp=Z,238nm,1.5s	29.89 186		*e*	P		P	19 11 23.7	-0.4
BGF	Bois d'Agland comp=Z,238nm,1.5s	29.89 186		*e*	P		P	19 11 23.7	-0.4
MYKA	Terra Mystica comp=Z,54nm,1.8s	29.91 171	⇓	*e*	pP		P	19 11 25.3	+1.0
MYKA	Terra Mystica comp=Z,54nm,1.8s	29.91 171		P			P	19 11 25.3	+1.0
SOKA	Soboth comp=Z,30nm,1.5s	29.92 169	⇓	*e*	P		P	19 11 24.1	-0.3
SOKA	Soboth comp=Z,30nm,1.5s	29.92 169		P			P	19 11 24.1	-0.3
MFF	Saint Martin d comp=Z,95nm,1.6s	29.94 190		*e*	P		P	19 11 24.0	-0.5
MFF	Saint Martin d comp=Z,95nm,1.6s	29.94 190		*e*	P		P	19 11 24.0	-0.5
MFF	comp=Z,95nm,1.6s				pmax	pmax			
MFF	Saint Martin d comp=Z,95nm,1.6s	29.94 190		*e*	P		P	19 11 24.0	-0.5
MFF	Saint Martin d comp=Z,95nm,1.6s	29.94 190		*e*	P		P	19 11 24.0	-0.5
TUE	Stuetta	29.95 177		*e*	P		P	19 11 21.0	-3.8
PERS	Pernice	29.96 169		*i*	P		P	19 11 25.5	+0.7
PERS	Pernice	29.96 169		P			P	19 11 25.5	+0.7
OBKA	Obir	30.06 169	⇓	*i*	pP		P	19 11 26.7	+1.0
OBKA	comp=Z,40nm,1.2s,SNR=9.5 Obir comp=Z,40nm,1.2s,SNR=9.5	30.06 169		P			P	19 11 26.7	+1.0
TCF	Toulx Ste Croi comp=Z,190nm,1.6s	30.18 186		*e*	P		P	19 11 26.2	-0.4
TCF	Toulx Ste Croi comp=Z,190nm,1.6s	30.18 186		*e*	P		P	19 11 26.2	-0.4
TCF	comp=Z,190nm,1.6s				pmax	pmax			
TCF	Toulx Ste Croi comp=Z,190nm,1.6s	30.18 186		*e*	P		P	19 11 26.2	-0.4
TCF	Toulx Ste Croi comp=Z,190nm,1.6s	30.18 186		*e*	P		P	19 11 26.2	-0.4
PKS9	Tamasi	30.19 164	⇑	*e*	P		P	19 11 27.9	+1.2
PKS6	Bocsa	30.26 162	⇑	*e*	P		P	19 11 28.5	+1.2
DRGR		30.33 158	⇑	*i*	P		P	19 11 27.6	-0.4
DRGR		30.33 158	⇑	*i*	P		P	19 11 27.6	-0.4
PKS2	Kecel	30.35 163	⇑	*e*	P		P	19 11 29.2	+1.2
OG35	Corcelles	30.36 182		*e*	P		P	19 11 28.5	+0.2
AGO	Saint Agoulin	30.39 185	⇑	*e*	P		P	19 11 29.0	+0.5
AGO	Saint Agoulin	30.39 185	⇑	*e*	P		P	19 11 29.0	+0.5
AGO	Saint Agoulin	30.39 185	⇑	*e*	P		P	19 11 29.0	+0.5
DOBS	Dobrina	30.47 168		*e*	P		P	19 11 29.9	+0.7
DOBS	Dobrina	30.47 168		*e*	P		P	19 11 29.9	+0.7
PKSM	Moragy	30.59 164	⇑	*i*	P		P	19 11 29.5	-0.7
PKSM	Moragy	30.59 164	⇓	*e*	P		P	19 11 30.4	+0.2
PKSM	Moragy	30.59 164	⇑	*i*	P		P	19 11 29.5	-0.7
JAVS	Javornik	30.66 170		*i*	P		P	19 11 31.1	+0.1
JAVS				*i*				19 11 36.9	
JAVS	Javornik	30.66 170		*i*	P		P	19 11 31.1	+0.1
PYM	Petit Puy Mans	30.70 185	⇑	*e*	P		P	19 11 32.1	+0.8
PYM	Petit Puy Mans	30.70 185	⇑	*e*	P		P	19 11 32.1	+0.8
PYM	Petit Puy Mans	30.70 185	⇑	*e*	P		P	19 11 32.1	+0.8
PYM	Petit Puy Mans	30.70 185	⇑	*e*	P		P	19 11 32.1	+0.8
KIS	Kishinev	30.76 150		*e*	P		P	19 11 30.0	-1.7
KIS				*e*				19 11 35.0	
KIS				*e*				19 16 36.0	
KIS	comp=Z,1μm,18.0s				MLR	MLR			
KIS	comp=Z,1μm,16.0s				MLR	MLR			
KIS	Kishinev	30.76 150		*e*	P		P	19 11 30.0	-1.7
KIS				*e*	S		S	19 16 29.0	-4.8
KIS	comp=Z,1μm,18.0s				LRM	MLR		19 24 00.0	
KIS	Kishinev comp=Z,1μm,16.0s	30.76 150		*e*	P		P	19 11 30.0	-1.7
KIS				*e*	S		S	19 16 36.0	+2.2
VISS	Visnje	30.78 169		*i*	P		P	19 11 32.2	+0.3
VISS	Visnje	30.78 169		*i*	P		P	19 11 32.2	+0.3
LPL	La Plagne comp=Z,139nm,1.7s	30.89 180		*e*	P		P	19 11 33.7	+0.6
LPL	La Plagne comp=Z,139nm,1.7s	30.89 180		*e*	P		P	19 11 33.7	+0.6
LPL	comp=Z,139nm,1.7s				pmax	pmax			
LPL	La Plagne comp=Z,139nm,1.7s	30.89 180		*e*	P		P	19 11 33.7	+0.6
LPL	La Plagne comp=Z,139nm,1.7s	30.89 180		*e*	P		P	19 11 33.7	+0.6
LPG	La Plagne comp=Z,182nm,1.7s	30.91 180		*e*	P		P	19 11 34.0	+0.6
LPG	La Plagne comp=Z,182nm,1.7s	30.91 180		*e*	P		P	19 11 34.0	+0.6
LPG	comp=Z,182nm,1.7s				pmax	pmax			
LPG	La Plagne comp=Z,182nm,1.7s	30.91 180		*e*	P		P	19 11 34.0	+0.6
LPG	La Plagne comp=Z,182nm,1.7s	30.91 180		*e*	P		P	19 11 34.0	+0.6
TESR	Tescani	30.99 153	⇑	*i*	P		P	19 11 32.8	-1.0
TESR	Tescani	30.99 153	⇑	*i*	P		P	19 11 32.8	-1.0
BOJS	Bojanci	31.10 169		*i*	P		P	19 11 35.7	+1.0
BOJS	Bojanci	31.10 169		*i*	P		P	19 11 35.7	+1.0
SSB	Saint Sauveur	31.14 183		*e*	P		P	19 11 35.5	+0.4
SSB	comp=Z,65nm,1.6s				pmax	pmax			
SSB	Saint Sauveur comp=Z,65nm,1.6s	31.14 183		*e*	P		P	19 11 35.5	+0.4
SSB	Saint Sauveur comp=Z,65nm,1.6s	31.14 183		*e*	P		P	19 11 35.5	+0.4
RJF	Les Rejaudoux comp=Z,175nm,1.6s	31.18 187		*e*	P		P	19 11 35.0	-0.5
RJF				*e*	R				
RJF	Les Rejaudoux comp=Z,343nm,21.2s	31.18 187		*e*	P		P	19 11 35.0	-0.5
RJF	comp=Z,175nm,1.6s				pmax	pmax			
RJF	Les Rejaudoux comp=Z,175nm,1.6s	31.18 187		*e*	P		P	19 11 35.0	-0.5
RJF	Les Rejaudoux comp=Z,175nm,1.6s	31.18 187		*e*	P		P	19 11 35.0	-0.5
BZS	Buzias	31.40 160	⇑	*i*

VRI Vrincioaia 31.64 153 ⇓ *i* P P 19 11 40.1 +0.6
VRI Vrincioaia 31.64 153 ⇓ *i* P P 19 11 40.1 +0.6
MBDF Montbardon 31.68 180 *e* P P 19 11 40.8 +0.8
comp=Z,157nm,1.6s
MBDF Montbardon 31.68 180 *e* P P 19 11 40.8 +0.8
MBDF pmax pmax
comp=Z,157nm,1.6s
MBDF Montbardon 31.68 180 *e* P P 19 11 40.8 +0.8
comp=Z,157nm,1.6s
MBDF Montbardon 31.68 180 *e* P P 19 11 40.8 +0.8
comp=Z,157nm,1.6s
FGSL Fruska Gora 31.72 162 *e* P P 19 11 41.3 +1.1
VOIR 31.89 155 ⇓ *i* P P 19 11 42.6 +0.8
VOIR 31.89 155 ⇓ *i* P P 19 11 42.6 +0.8
MLR Muntele Rosu 31.93 154 ⇓ *i* P P 19 11 43.0 +0.9
MLR Muntele Rosu 31.93 154 LR LR 19 25 42.3
comp=Z,167nm,19.7s,baz=2.5,slow=38
MLR Muntele Rosu 31.93 154 ⇓ *i* P P 19 11 43.0 +0.9
TEKS Tekeris 32.30 163 *e* P P 19 11 46.5 +1.2
LASF Ste Croix 32.35 184 *e* P P 19 11 46.6 +0.8
comp=Z,394nm,1.9s
LASF Ste Croix 32.35 184 *e* P P 19 11 46.6 +0.8
comp=Z,394nm,1.9s
LASF Ste Croix 32.35 184 *e* P P 19 11 46.6 +0.8
comp=Z,197nm,1.9s
TOUF Mont Tournerai 32.39 179 *e* P P 19 11 47.5 +1.2
TOUF Mont Tournerai 32.39 179 *e* P P 19 11 47.5 +1.2
TOUF Mont Tournerai 32.39 179 *e* P P 19 11 47.5 +1.2
TOUF Mont Tournerai 32.39 179 *e* P P 19 11 47.5 +1.2
SAOF Saorge 32.42 179 *e* P P 19 11 47.7 +1.3
SAOF Saorge 32.42 179 *e* P P 19 11 47.7 +1.3
SAOF Saorge 32.42 179 *e* P P 19 11 47.7 +1.3
SAOF Saorge 32.42 179 *e* P P 19 11 47.7 +1.3
SMRF Simiane la Rot 32.43 182 *e* P P 19 11 46.6 +0.1
comp=Z,70nm,1.3s
SMRF Simiane la Rot 32.43 182 *e* P P 19 11 46.6 +0.1
comp=Z,70nm,1.3s
SMRF Simiane la Rot 32.43 182 *e* P P 19 11 46.6 +0.1
comp=Z,35nm,1.3s
SBF Sospel 32.54 179 *e* P P 19 11 47.6 +0.1
comp=Z,233nm,1.4s
SBF Sospel 32.54 179 *e* P P 19 11 47.6 +0.1
SBF pmax pmax
comp=Z,233nm,1.4s
SBF Sospel 32.54 179 *e* P P 19 11 47.6 +0.1
comp=Z,233nm,1.4s
SBF Sospel 32.54 179 *e* P P 19 11 47.6 +0.1
comp=Z,233nm,1.4s
AKTK Aktyubinsk 32.62 112 *i* P P 19 11 47.0 -1.1
comp=Z,19nm,1.2s
AKTO Aktyubinsk 32.62 112 *i* P P 19 11 47.0 -1.1
AKTO pmax pmax
comp=Z,19nm,1.2s
AKTO Aktyubinsk 32.62 112 LR LR 19 25 44.4
comp=Z,2μm,19.3s,baz=23,slow=38
DIVS Divibare 32.78 162 *e* P P 19 11 50.2 +0.6
FRF La Foret Royal 32.84 180 *e* P P 19 11 50.0 0.0
comp=Z,172nm,1.6s
FRF La Foret Royal 32.84 180 *e* P P 19 11 50.0 0.0
FRF pmax pmax
comp=Z,172nm,1.6s
FRF La Foret Royal 32.84 180 *e* P P 19 11 50.0 0.0
comp=Z,172nm,1.6s
FRF La Foret Royal 32.84 180 *e* P P 19 11 50.0 0.0
comp=Z,172nm,1.6s
BBLS Lazići 32.97 163 *e* P P 19 11 51.7 +0.4
BRVK Borovoye 33.00 98 P P 19 11 51.6 +0.3
comp=Z,73nm,1.2s,SNR=8.9
BRVK Borovoye 33.00 98 *e* P P 19 11 51.7 +0.4
BRVK pmax pmax
comp=Z,30nm,1.4s
BRVK Borovoye 33.00 98 *e* P P 19 11 51.7 +0.4
comp=Z,30nm,1.4s
BRVK Borovoye 33.00 98 *e* P P 19 11 51.7 +0.4
comp=Z,30nm,1.4s
GRUS Gruza 33.05 161 *e* P P 19 11 52.6 +0.8
BVA0 Borovoye Array 33.05 98 *i* P P 19 11 52.2 +0.4
BVA0 pmax pmax
comp=Z,17nm,1.1s
BVA0 Borovoye Array 33.05 98 *i* P P 19 11 52.2 +0.4
comp=Z,17nm,1.1s
BVAR Borovoye Array 33.05 98 LR LR 19 26 46.5
comp=Z,1μm,19.0s,baz=331,slow=39
LMR La Mourre 33.07 180 *e* P P 19 11 51.9 -0.1
comp=Z,66nm,1.4s
LMR La Mourre 33.07 180 *e* P P 19 11 51.9 -0.1
LMR pmax pmax
comp=Z,66nm,1.4s
LMR La Mourre 33.07 180 *e* P P 19 11 51.9 -0.1
comp=Z,66nm,1.4s
LMR La Mourre 33.07 180 *e* P P 19 11 51.9 -0.1
comp=Z,66nm,1.4s
MTLF Montolieu 33.12 186 *e* P P 19 11 52.6 +0.1
comp=Z,55nm,1.4s
MTLF Montolieu 33.12 186 *e* P P 19 11 52.6 +0.1
MTLF pmax pmax
comp=Z,55nm,1.4s
MTLF Montolieu 33.12 186 *e* P P 19 11 52.6 +0.1
comp=Z,55nm,1.4s
MTLF Montolieu 33.12 186 *e* P P 19 11 52.6 +0.1
comp=Z,55nm,1.4s
SIM Simferopol' 33.46 144 *de* P P 19 11 54.8 -0.6
SIM *e* S S 19 17 19.0 +3.0
SIM pmax pmax
comp=Z,10.0nm,0.8s
SIM MLR MLR
comp=Z,400nm,17.0s
SIM Simferopol' 33.46 144 *e* P P 19 11 54.8 -0.6
comp=Z,10.0nm,0.8s
SIM *e* S S 19 17 19.0 +3.0
comp=Z,400nm,17.0s
SJPF Ste Jean 33.47 191 *e* P P 19 11 54.8 -0.7
comp=Z,109nm,1.7s
SJPF Ste Jean 33.47 191 *e* P P 19 11 54.8 -0.7
SJPF pmax pmax
comp=Z,109nm,1.7s
SJPF Ste Jean 33.47 191 *e* P P 19 11 54.8 -0.7
comp=Z,109nm,1.7s
SJPF Ste Jean 33.47 191 *e* P P 19 11 54.8 -0.7
comp=Z,109nm,1.7s
VOSK Vostochnaya 33.47 97 P P 19 11 55.4 -0.1
VOSK pmax pmax
comp=Z,15nm,1.1s
VOSK Vostochnaya 33.47 97 P P 19 11 55.4 -0.1
comp=Z,15nm,1.1s
EPF Esparros 33.49 189 *e* P P 19 11 55.3 -0.5
comp=Z,83nm,1.4s
EPF Esparros 33.49 189 *e* P P 19 11 55.3 -0.5
EPF pmax pmax
comp=Z,83nm,1.4s
EPF Esparros 33.49 189 *e* P P 19 11 55.3 -0.5
comp=Z,83nm,1.4s
EPF Esparros 33.49 189 *e* P P 19 11 55.3 -0.5
comp=Z,83nm,1.4s
ETSF Etsaut 33.66 190 *e* P P 19 11 57.9 +0.7
comp=Z,115nm,1.7s
ETSF Etsaut 33.66 190 *e* P P 19 11 57.9 +0.7
ETSF pmax pmax
comp=Z,115nm,1.7s
ETSF Etsaut 33.66 190 *e* P P 19 11 57.9 +0.7
comp=Z,115nm,1.7s
ETSF Etsaut 33.66 190 *e* P P 19 11 57.9 +0.7
comp=Z,115nm,1.7s
SCHQ Schefferville 33.81 274 P P 19 11 58.4 0.0
SCHQ Schefferville 33.81 274 P P 19 11 58.4 0.0
comp=Z,7.2nm,1.0s,baz=356,slow=7.8,SNR=3.9
SCHQ LR LR 19 24 54.4
comp=Z,615nm,20.5s,baz=41,slow=35
SCHQ Schefferville 33.81 274 P P 19 11 58.4 0.0
ANN Anapa 34.10 140 *e* P P 19 11 59.3 -1.6
ANN *e* S S 19 17 24.6 -1.2
ANN pmax pmax
comp=Z,54nm,2.2s
ANN MLR MLR
comp=Z,365nm,17.0s
ANN Anapa 34.10 140 *e* P P 19 11 59.3 -1.6
comp=Z,54nm,2.2s
ANN *e* S S 19 17 24.6 -1.2
comp=Z,365nm,17.0s
AB31 Akbulak array 34.16 111 *ce* P P 19 12 01.2 -0.2
AB31 pmax pmax
comp=Z,15nm,1.0s
AB31 Akbulak array 34.16 111 *e* P P 19 12 01.2 -0.2
comp=Z,15nm,1.0s
ABKAR Akbulak array 34.16 111 *e* P P 19 12 01.4 0.0
comp=Z,9.0nm,1.0s
ABKAR Akbulak array 34.16 111 *e* P P 19 12 01.4 0.0
comp=Z,9.0nm,1.0s
AQU L'Aquila 34.17 171 *e* P P 19 12 02.0 +0.3
comp=Z,92nm,1.3s
AQU L'Aquila 34.17 171 *e* P P 19 12 02.0 +0.3
comp=Z,92nm,1.3s
NVS Novosibirsk 34.44 84 ⇓ *i* P P 19 12 04.5 +0.7
NVS *i* 19 13 18.7
NVS *e* S S 19 17 30.5 -0.5
NVS pmax pmax
comp=Z,62nm,1.6s
NVS pmax pmax
comp=N,43nm,1.9s
NVS pmax pmax
comp=E,16nm,2.5s
NVS pmax pmax
comp=N,37nm,2.0s
NVS pmax pmax
comp=Z,68nm,2.0s
NVS pmax pmax
comp=E,21nm,2.2s
NVS smax smax
comp=N,17nm,1.9s
NVS smax smax
comp=E,11nm,1.9s
NVS Novosibirsk 34.44 84 *i* P P 19 12 04.5 +0.7
comp=E,43nm,1.9s
NVS *e* S S 19 17 30.5 -0.5
VTS Vitosha 34.54 158 ⇑ *i* P P 19 12 03.9 -1.1
VTS Vitosha 34.54 158 ⇑ *i* P P 19 12 03.9 -1.1
SKO Skopje 35.01 161 *e* P P 19 12 09.5 +0.7
PBRG Braganca 35.10 198 *e* P P 19 12 11.1 +1.4
comp=E,59nm,1.9s
PBRG Braganca 35.10 198 *e* P P 19 12 11.1 +1.4
comp=E,59nm,1.9s
BILL Bilibino 35.32 13 κ *i* P P 19 12 12.1 +0.8
BILL *i* 19 12 18.3
BILL *e* 19 13 31.7
BILL 19 14 48.0
BILL pmax pmax
comp=Z,54nm,1.4s
BILL MLR MLR
comp=Z,100nm,17.0s
BILL Bilibino 35.32 13 *i* P P 19 12 12.1 +0.8
comp=Z,54nm,1.4s
POLO Lamas de Olo 35.61 199 *e* P P 19 12 16.1 +2.0
comp=Z,34nm,1.8s
POLO Lamas de Olo 35.61 199 *e* P P 19 12 16.1 +2.0
comp=Z,34nm,1.8s
KRAR Krasnoyarsk 35.62 74 *i* P P 19 12 13.1 -0.9
KRAR Krasnoyarsk 35.62 74 *i* P P 19 12 13.1 -0.9
ZAA0 Zalesovo Array 35.63 83 *e* P P 19 12 14.1 0.0
ZAA0 Zalesovo Array 35.63 83 *e* P P 19 12 14.1 0.0
ZALV Zalesovo Beam 35.63 83 P P 19 12 14.2 +0.1
ZALV 19 14 41.4
ZALV pmax pmax
comp=Z,8.0nm,0.8s
ZALV pmax pmax
comp=Z,3.0nm,0.8s
ZALV MLR MLR
comp=Z,705nm,18.6s
ZALV Zalesovo Beam 35.63 83 P P 19 12 14.2 +0.1
ZALV PcP **PcP** 19 14 41.4 -0.8
ZALV Zalesovo Beam 35.63 83 P P 19 12 14.2 +0.1
comp=Z,7.8nm,0.8s,baz=330,slow=8.6,SNR=38
ZALV PcP **PcP** 19 14 41.4 -0.8
comp=Z,3.3nm,0.8s,baz=318,slow=3.8,SNR=6.9
ZALV LR LR 19 30 43.2
comp=Z,705nm,18.6s,baz=250,slow=43
ZALV Zalesovo Beam 35.63 83 P P 19 12 14.2 +0.1
comp=Z,8.0nm,0.8s
ZALV Zalesovo Beam 35.63 83 PcP **PcP** 19 14 41.3 -0.8
SOC Sochi 35.64 137 *c* *i* P P 19 12 14.4 +0.1
SOC *e** SP **sP** 19 12 18.3 -2.5
SOC *e* 19 13 32.1
SOC *e* S S 19 17 51.5 +1.9
SOC pmax pmax
comp=Z,11nm,1.1s
SOC MLR MLR
comp=Z,1μm,22.0s
SOC Sochi 35.64 137 *i* P P 19 12 14.4 +0.1
comp=Z,11nm,1.1s
SOC *e* S S 19 17 51.5 +1.9
comp=Z,1μm,22.0s
VAY Valandovo 35.74 160 *e* P P 19 12 14.3 -0.9
MVO Moncorvo 35.76 198 *e* P P 19 12 15.8 +0.4
comp=Z,43nm,2.3s
MVO Moncorvo 35.76 198 *e* P P 19 12 15.8 +0.4
comp=Z,43nm,2.3s
KIV Kislovodsk 35.78 134 *e* P P 19 12 16.5 +1.0
KIV *e* S S 19 17 54.3 +2.4
KIV pmax pmax
comp=Z,11nm,1.1s
KIV MLR MLR
comp=Z,621nm,15.0s
KIV Kislovodsk 35.78 134 P P 19 12 16.2 +0.7
comp=Z,67nm,2.2s,SNR=7.3
KIV Kislovodsk 35.78 134 *e* P P 19 12 16.5 +1.0
comp=Z,11nm,1.1s
KIV *e* S S 19 17 54.3 +2.4
comp=Z,621nm,15.0s
COLD Coldfoot 35.99 345 *e* P P 19 12 18.8 +1.8
comp=Z,19nm,1.2s
COLD Coldfoot 35.99 345 *e* P P 19 12 18.8 +1.8
comp=Z,19nm,1.2s
KBZ Khabaz 36.03 134 P P 19 12 17.8 +0.2
KBZ pmax pmax
comp=Z,7.0nm,0.8s
KBZ MLR MLR
comp=Z,966nm,18.9s
KBZ Khabaz 36.03 134 P P 19 12 17.8 +0.2
KBZ Khabaz 36.03 134 P P 19 12 17.8 +0.2
comp=Z,6.6nm,0.8s,baz=350,slow=5.7,SNR=18
KBZ LR LR 19 27 34.9
comp=Z,966nm,18.9s,baz=325,slow=37
KBZ Khabaz 36.03 134 P P 19 12 17.8 +0.2
comp=Z,966nm,18.9s
GRG Griva 36.09 160 *e* P P 19 12 19.0 +0.8
FNA Florina 36.18 161 *e* P P 19 12 18.5 -0.5
SOH Sokhos 36.31 159 *e* P P 19 12 20.5 +0.4
ALN Alexandroupoli 36.48 155 *e* P P 19 12 21.0 -0.5
YKA Yellowknife Ar 36.64 318 P P 19 12 23.4 +0.8
YKA PcP **PcP** 19 14 45.3 +0.3
YKA Yellowknife Ar 36.64 318 P P 19 12 23.4 +0.8
comp=Z,3.8nm,0.9s,baz=17,slow=8.6,SNR=14
YKA PcP **PcP** 19 14 45.3 +0.3
comp=Z,2.1nm,0.9s,baz=8.7,slow=3.0,SNR=8.1
YKA Yellowknife Ar 36.64 318 P P 19 12 23.4 +0.8
comp=Z,4.0nm,1.0s
YKA Yellowknife Ar 36.64 318 PcP **PcP** 19 14 45.3 +0.3
comp=Z,2.0nm,0.9s
PLG Polygyros 36.76 159 *e* P P 19 12 21.5 -2.4
LIT Litokhoron 36.95 160 *e* P P 19 12 26.0 +0.5
ESDC Sonseca Array 37.04 194 P P 19 12 26.5 +0.2
ESDC Sonseca Array 37.04 194 P P 19 12 26.5 +0.2
comp=Z,2.5nm,0.8s,baz=8.7,slow=8.8,SNR=18
ESDC Sonseca Array 37.04 194 P P 19 12 26.5 +0.2
ESLA Sonseca Array 37.04 194 *e* P P 19 12 26.7 +0.4
comp=Z,32nm,1.7s
ESLA Sonseca Array 37.04 194 *e* P P 19 12 26.7 +0.4
comp=Z,32nm,1.7s
KURK Kurchatov 37.15 91 P P 19 12 27.8 +0.8
comp=Z,213nm,1.0s,SNR=24
KURK Kurchatov 37.15 91 *d* *i* P P 19 12 27.3 +0.2
KURK pmax pmax
comp=Z,89nm,2.0s
KURK Kurchatov 37.15 91 *e* P P 19 12 27.2 +0.2
comp=Z,51nm,1.1s
KURK Kurchatov 37.15 91 *e* P P 19 12 27.2 +0.2
comp=Z,51nm,1.1s
PAB San Pablo 37.19 194 *e* P P 19 12 28.0 +0.4
PAB pmax pmax
comp=Z,66nm,1.5s
PAB San Pablo 37.19 194 *e* P P 19 12 28.0 +0.4
comp=Z,66nm,1.5s
PAB San Pablo 37.19 194 *e* P P 19 12 28.0 +0.4
comp=Z,66nm,1.5s
PAIG Paliouri 37.22 158 *e* P P 19 12 28.0 +0.2
ONI Oni 37.23 133 P P 19 12 29.9 +1.9
JAN Janina 37.26 162 *e* P P 19 12 33.5 +5.3
YAK Yakutsk 37.29 41 *e* P P 19 12 27.4 -0.7
YAK pmax pmax
comp=Z,12nm,1.0s
YAK pmax pmax
comp=E,5.0nm,1.8s
YAK pmax pmax
comp=N,10.0nm,1.5s
YAK Yakutsk 37.29 41 *e* P P 19 12 27.4 -0.7
comp=N,10.0nm,1.5s
THL Klokotos Trika 37.44 161 *e* P P 19 12 26.0 -3.6
TIP Timpagrande 37.48 167 *e* P P 19 12 29.6 -0.5
comp=N,147nm,1.4s
TIP Timpagrande 37.48 167 *e* P P 19 12 29.6 -0.5
comp=N,147nm,1.4s
PMRV Marv??o 37.51 198 *e* P P 19 12 30.9 +0.6
comp=N,65nm,1.7s
PMRV Marv??o 37.51 198 *e* P P 19 12 30.9 +0.6
comp=N,65nm,1.7s
MAK Makhachkala 37.60 128 *e* P P 19 12 31.0 0.0
MAK *e* 19 13 54.1
MAK *e* S S 19 18 23.2 +3.7
MAK pmax pmax
comp=Z,313nm,1.8s
MAK MLR MLR
comp=Z,979nm,18.0s
MAK Makhachkala 37.60 128 *e* P P 19 12 31.0 0.0
comp=Z,313nm,1.8s
MAK *e* S S 19 18 23.2 +3.7
comp=Z,979nm,18.0s
EGAK Eagle 37.73 338 *e* P P 19 12 33.2 +1.4
comp=Z,183nm,2.0s
EGAK Eagle 37.73 338 *e* P P 19 12 33.2 +1.4
comp=Z,183nm,2.0s
PMTG Montargil 37.93 199 *e* P P 19 12 34.0 +0.2
comp=Z,37nm,2.0s
PMTG Montargil 37.93 199 *e* P P 19 12 34.0 +0.2
comp=Z,37nm,2.0s
AGG Agios Georgios 38.01 160 *e* P P 19 12 34.5 0.0
EVR Evrytania 38.07 161 *e* P P 19 12 33.0 -2.1
PESTR Estremoz 38.08 198 *e* P P 19 12 35.2 +0.1
comp=Z,47nm,1.5s
PESTR Estremoz 38.08 198 *e* P P 19 12 35.2 +0.1
comp=Z,47nm,1.5s
PRK Paraskevi 38.14 155 *e* P P 19 12 36.0 +0.5
COLA College 38.17 343 *e* P P 19 12 38.5 +3.0
COLA pmax pmax
comp=Z,93nm,1.8s
COLA College 38.17 343 *e* P P 19 12 38.5 +3.0
comp=Z,93nm,1.8s
COLA College 38.17 343 *e* P P 19 12 38.5 +3.0
comp=Z,93nm,1.8s
ILAR Eielson Array 38.20 342 P P 19 12 38.0 +2.2
ILAR PcP **PcP** 19 14 49.3 -0.5
ILAR Eielson Array 38.20 342 P P 19 12 38.0 +2.2
comp=Z,7.5nm,0.9s,baz=2.0,slow=7.2,SNR=71
ILAR PcP **PcP** 19 14 49.3 -0.5
comp=Z,1.6nm,1.0s,baz=348,slow=4.0,SNR=6.3
ILAR Eielson Array 38.20 342 P P 19 12 38.0 +2.2
comp=Z,8.0nm,0.9s
ILAR Eielson Array 38.20 342 PcP **PcP** 19 14 49.3 -0.5
comp=Z,2.0nm,1.0s
ANTO Ankara 38.27 147 P P 19 12 38.3 +1.5
SNR=5.1
TBLG Delisi 38.29 132 *e* P P 19 12 39.8 +3.0
TBLG Delisi 38.29 132 P P 19 12 39.9 +3.0
AKH Akhalkalaki 38.39 134 P P 19 12 39.0 +1.1
LKR Lokris 38.43 160 *e* P P 19 12 41.0 +3.0
EVO Evora 38.45 199 *e* P P 19 12 38.5 +0.4
EVO *e* R 19 12 38.5 +0.4
comp=Z,409nm,21.5s
EVOP Sao Brissos 38.46 199 *e* P P 19 12 38.5 +0.3
EVOP Sao Brissos 38.46 199 *e* P P 19 12 38.5 +0.3
EVOP Sao Brissos 38.46 199 *e* P P 19 12 38.5 +0.3
BRTR Keskin Array B 38.53 146 P P 19 12 39.2 +0.2
BRTR Keskin Array B 38.53 146 P P 19 12 39.2 +0.2
comp=Z,3.2nm,1.0s,baz=357,slow=7.2,SNR=19
BRTR LR LR 19 30 06.5
comp=Z,406nm,20.8s,baz=331,slow=39
BRTR Keskin Array B 38.53 146 P P 19 12 39.2 +0.2
comp=Z,406nm,20.8s
EFP Efpalio 38.56 161 *e* P P 19 12 40.0 +0.9
DGRG David-gareji 38.68 131 P P 19 12 41.4 +1.3
PBAR Barrancos 38.73 198 *e* P P 19 12 40.4 -0.1
comp=Z,64nm,1.8s
PBAR Barrancos 38.73 198 *e* P P 19 12 40.4 -0.1
comp=Z,64nm,1.8s
RLS Riolos of Patr 38.90 162 *e* P P 19 12 40.5 -1.4
PNCL Nicolau / Gran 38.91 199 *e* P P 19 12 43.5 +1.5
comp=Z,35nm,1.3s
PNCL Nicolau / Gran 38.91 199 *e* P P 19 12 43.5 +1.5
comp=Z,35nm,1.3s
PBEJ Beja 38.94 199 *e* P P 19 12 43.6 +1.3
comp=Z,62nm,2.0s
PBEJ Beja 38.94 199 *e* P P 19 12 43.6 +1.3
comp=Z,62nm,2.0s
KLV Kalavryta, Ach 38.97 161 *e* P P 19 12 40.5 -2.1
CHOS Chios island 38.97 156 *e* P P 19 12 43.5 +0.9
DOT Dot Lake 39.09 340 *e* P P 19 12 45.8 +2.4
comp=Z,131nm,1.9s
DOT Dot Lake 39.09 340 *e* P P 19 12 45.8 +2.4
comp=Z,131nm,1.9s
PTL Penteli 39.10 159 *e* P P 19 12 39.0 -4.7
MCK McKinley 39.38 343 *e* P P 19 12 48.0 +2.3
MCK pmax pmax
comp=Z,76nm,1.9s
MCK McKinley 39.38 343 *e* P P 19 12 48.0 +2.3
comp=Z,76nm,1.9s
MCK McKinley 39.38 343 *e* P P 19 12 48.0 +2.3
comp=Z,76nm,1.9s
MENT Mentasta 39.76 339 *e* P P 19 12 51.6 +2.6
MENT Mentasta 39.76 339 *e* P P 19 12 51.6 +2.6
ITM Ithomi 39.81 161 *e* P P 19 12 45.0 -4.5
GNI Garni 39.83 133 P P 19 12 50.9 +1.0
SNR=8.8
GNI Garni 39.83 133 *e* P P 19 12 50.8 +0.8
comp=Z,119nm,0.4s
GNI Garni 39.83 133 *e* P P 19 12 50.2 +0.3
comp=Z,32nm,1.7s
PAX Paxson 39.87 341 *e* P P 19 12 52.1 +2.2
PAX pmax pmax
comp=Z,36nm,1.3s
PAX Paxson 39.87 341 *e* P P 19 12 52.1 +2.2
comp=Z,36nm,1.3s
PAX Paxson 39.87 341 *e* P P 19 12 52.1 +2.2
comp=Z,36nm,1.3s
MALT Malatya 40.59 141 *e* P P 19 13 05.1 +9.0
MALT pmax pmax
comp=Z,77nm,1.8s
MALT Malatya 40.59 141 *e* P P 19 13 05.1 +9.0
comp=Z,77nm,1.8s
MALT Malatya 40.59 141 ⇓ *i* P P 19 13 04.8 +8.6
KEST Kesra 40.68 177 P P 19 12 56.7 -0.1
KEST Kesra 40.68 177 P P 19 12 56.7 -0.1
comp=Z,2.9nm,1.0s,baz=62,slow=5.5,SNR=5.4
KEST LR LR 19 30 16.7
comp=Z,115nm,19.0s,baz=6.0,slow=37
KEST Kesra 40.68 177 P P 19 12 56.7 -0.1
CLNS Chul'man 41.43 47 *e* P P 19 13 02.7 -0.1
CLNS *e** PP **pP** 19 13 09.1 +1.6
CLNS *e* 19 14 37.1
CLNS *e* PPP PPP 19 15 03.0
CLNS *e* S S 19 19 18.3 +1.6
CLNS *e* SSS SSS 19 22 15.1
CLNS pmax pmax
comp=Z,53nm,1.3s
CLNS pmax pmax
comp=N,32nm,1.3s
CLNS pmax pmax
comp=E,7.0nm,1.3s
CLNS pmax pmax
comp=Z,26nm,1.8s
CLNS pmax pmax
comp=N,30nm,2.0s
CLNS pmax pmax
comp=E,7.0nm,1.5s
CLNS smax smax
comp=N,84nm,11.6s
CLNS smax smax
comp=E,63nm,14.2s
CLNS MLR MLR
comp=E,316nm,20.0s
CLNS MLR MLR
comp=N,249nm,18.0s
CLNS MLR MLR
comp=Z,313nm,16.0s
CLNS Chul'man 41.43 47 *e* P P 19 13 02.7 -0.1
comp=Z,32nm,1.3s
CLNS Chul'man 41.43 47 *e* PcP **PcP** 19 15 03.0 +2.7
comp=Z,84nm,11.6s
CLNS *e* S S 19 19 18.3 +1.6
MOY Mondy 41.48 70 *e* P P 19 13 05.0 +1.6
MOY pmax pmax

	comp=Z,155nm,2.1s									
MOY	**Mondy**	**41.48**	**70**	*e*P		**P**		**19 13 05.0**	**+1.6**	
	comp=Z,155nm,2.1s									
IRK	**Irkutsk**	**41.67**	**67**	*e*P		**P**		**19 13 04.4**	**-0.4**	
IRK				*e*				19 14 38.2		
IRK					pmax	pmax				
	comp=Z,93nm,2.1s									
IRK	**Irkutsk**	**41.67**	**67**	*e*P		**P**		**19 13 04.4**	**-0.4**	
	comp=Z,93nm,2.1s									
MK31	**Makanchi Array**	**41.68**	**90**	*ce*P		**P**		**19 13 04.9**	**0.0**	
MK31					pmax	pmax				
	comp=Z,38nm,1.1s									
MK31	**Makanchi Array**	**41.68**	**90**	*e*P		**P**		**19 13 04.8**	**-0.2**	
MK31	**Makanchi Array**	**41.68**	**90**	*e*P		**P**		**19 13 04.9**	**0.0**	
	comp=Z,38nm,1.1s									
MKAR	**Makanchi Array**	**41.68**	**90**	P		**P**		**19 13 04.8**	**-0.1**	
MKAR					pmax	pmax				
	comp=Z,9.0nm,0.9s									
MKAR					MLR	MLR				
	comp=Z,1μm,18.7s									
MKAR	**Makanchi Array**	**41.68**	**90**	P		**P**		**19 13 04.8**	**-0.1**	
MKAR	**Makanchi Array**	**41.68**	**90**	P		**P**		**19 13 04.8**	**-0.1**	
	comp=Z,9.0nm,0.9s,baz=343,slow=7.0,SNR=79									
MKAR					LR	LR		19 33 37.2		
	comp=Z,1μm,18.7s,baz=337,slow=41									
MKAR	**Makanchi Array**	**41.68**	**90**	P		**P**		**19 13 04.8**	**-0.1**	
	comp=Z,1μm,18.7s									
FFC	**Flin Flon**	**41.72**	**304**	P		**P**		**19 13 06.4**	**+1.3**	
	comp=Z,167nm,1.1s,SNR=5.4									
FFC	**Flin Flon**	**41.72**	**304**	*e*P		**P**		**19 13 05.2**	**+0.1**	
FFC					pmax	pmax				
	comp=Z,57nm,1.3s									
FFC	**Flin Flon**	**41.72**	**304**	*e*P		**P**		**19 13 05.2**	**+0.1**	
	comp=Z,57nm,1.3s									
FFC	**Flin Flon**	**41.72**	**304**	*e*P		**P**		**19 13 05.2**	**+0.1**	
	comp=Z,57nm,1.3s									
RC01	**Rabbit Creek A**	**42.05**	**343**	*e*P		**P**		**19 13 09.5**	**+1.7**	
	comp=Z,48nm,1.4s									
RC01	**Rabbit Creek A**	**42.05**	**343**	*e*P		**P**		**19 13 09.5**	**+1.7**	
	comp=Z,48nm,1.4s									
TLY	**Talaya**	**42.06**	**67**	*e*P		**P**		**19 13 08.8**	**+0.8**	
TLY					pmax	pmax				
	comp=Z,28nm,1.7s									
TLY					MLR	MLR				
	comp=Z,528nm,15.0s									
TLY	**Talaya**	**42.06**	**67**	*e*P		**P**		**19 13 08.8**	**+0.8**	
	comp=Z,528nm,15.0s									
KK31	**Karatay Array**	**42.38**	**103**	*ce*P		**P**		**19 13 11.1**	**+0.5**	
KK31					pmax	pmax				
	comp=Z,37nm,1.4s									
KK31	**Karatay Array**	**42.38**	**103**	*e*P		**P**		**19 13 11.1**	**+0.5**	
	comp=Z,37nm,1.4s									
KKAR	**Karatay Array**	**42.38**	**103**	*e*P		**P**		**19 13 11.8**	**+1.2**	
KKAR					pmax	pmax				
	comp=Z,11nm,1.0s									
KKAR	**Karatay Array**	**42.38**	**103**	*e*P		**P**		**19 13 11.8**	**+1.2**	
	comp=Z,11nm,1.0s									
KKAR	**Karatay Array**	**42.38**	**103**	*e*P		**P**		**19 13 11.8**	**+1.2**	
	comp=Z,11nm,1.0s									
RSO	**Redoubt South**	**42.87**	**345**	*e*P		**P**		**19 13 15.8**	**+1.1**	
	comp=Z,37nm,0.8s									
RSO	**Redoubt South**	**42.87**	**345**	*e*P		**P**		**19 13 15.8**	**+1.1**	
	comp=Z,37nm,0.8s									
USP	**Ospenovka**	**43.16**	**99**	*i* P		**P**		**19 13 18.1**	**+1.1**	
USP	**Ospenovka**	**43.16**	**99**	P		**P**		**19 13 18.1**	**+1.1**	
	SNR=13									
USP	**Ospenovka**	**43.16**	**99**	*i* P		**P**		**19 13 18.1**	**+1.1**	
ZAK	**Zakamensk**	**43.20**	**68**	ǁ *e*P		**P**		**19 13 17.4**	**+0.1**	
ZAK				*e*				19 14 57.6		
ZAK					pmax	pmax				
	comp=Z,6.0nm,1.7s									
ZAK	**Zakamensk**	**43.20**	**68**	*e*P		**P**		**19 13 17.4**	**+0.1**	
	comp=Z,6.0nm,1.7s									
CHMS	**Chumysh**	**43.47**	**99**	*i* P		**P**		**19 13 20.9**	**+1.4**	
CHMS	**Chumysh**	**43.47**	**99**	P		**P**		**19 13 20.9**	**+1.4**	
	SNR=15									
CHMS	**Chumysh**	**43.47**	**99**	*i* P		**P**		**19 13 20.9**	**+1.4**	
EKS2	**Erkin-Say**	**43.56**	**100**	*e*P		**P**		**19 13 21.3**	**+0.9**	
EKS2					pmax	pmax				
	comp=Z,17nm,1.1s									
EKS2	**Erkin-Say**	**43.56**	**100**	*e*P		**P**		**19 13 21.3**	**+0.9**	
	comp=Z,17nm,1.1s									
EKS2	**Erkin-Say**	**43.56**	**100**	P		**P**		**19 13 21.5**	**+1.2**	
	SNR=14									
EKS2	**Erkin-Say**	**43.56**	**100**	*e*P		**P**		**19 13 21.3**	**+0.9**	
	comp=Z,17nm,1.1s									
TKM2	**Tokmak 2**	**43.74**	**98**	*e*P		**P**		**19 13 22.7**	**+0.8**	
TKM2					pmax	pmax				
	comp=Z,20nm,1.2s									
TKM2	**Tokmak 2**	**43.74**	**98**	*e*P		**P**		**19 13 22.7**	**+0.8**	
	comp=Z,20nm,1.2s									
TKM2	**Tokmak 2**	**43.74**	**98**	P		**P**		**19 13 23.5**	**+1.6**	
	SNR=12									
TKM2	**Tokmak 2**	**43.74**	**98**	*e*P		**P**		**19 13 22.7**	**+0.8**	
	comp=Z,20nm,1.2s									
AAK	**Ala-Archa**	**43.75**	**99**	P		**P**		**19 13 23.9**	**+1.9**	
	comp=Z,57nm,1.0s,SNR=7.1									
AAK	**Ala-Archa**	**43.75**	**99**	*ce*P		**P**		**19 13 23.4**	**+1.4**	
AAK					pmax	pmax				
	comp=Z,93nm,2.5s									
AAK	**Ala-Archa**	**43.75**	**99**	*e*P		**P**		**19 13 23.8**	**+1.8**	
	comp=Z,23nm,1.4s									
AAK	**Ala-Archa**	**43.75**	**99**	*e*P		**P**		**19 13 23.4**	**+1.4**	
	comp=Z,93nm,2.5s									
KBK	**Karagaybulak**	**43.84**	**99**	*i* P		**P**		**19 13 24.9**	**+2.2**	
KBK	**Karagaybulak**	**43.84**	**99**	P		**P**		**19 13 24.9**	**+2.2**	
	SNR=14									
KBK	**Karagaybulak**	**43.84**	**99**	*i* P		**P**		**19 13 24.9**	**+2.2**	
CIT	**Chita**	**43.84**	**59**	*e*P		**P**		**19 13 23.0**	**+0.6**	
CIT				*e*				19 13 28.5		
CIT				*e*				19 15 07.5		
CIT					pmax	pmax				
	comp=Z,69nm,2.2s									
CIT	**Chita**	**43.84**	**59**	*e*P		**P**		**19 13 23.0**	**+0.6**	
	comp=Z,69nm,2.2s									
AML	**Almayashu**	**44.04**	**100**	*i* P		**P**		**19 13 26.7**	**+2.1**	
AML	**Almayashu**	**44.04**	**100**	P		**P**		**19 13 26.7**	**+2.1**	
	SNR=12									
AML	**Almayashu**	**44.04**	**100**	*i* P		**P**		**19 13 26.7**	**+2.1**	
KZA	**Kyzart**	**44.46**	**99**	*i* P		**P**		**19 13 29.7**	**+1.8**	
KZA	**Kyzart**	**44.46**	**99**	P		**P**		**19 13 29.7**	**+1.8**	
	SNR=7.6									
KZA	**Kyzart**	**44.46**	**99**	*i* P		**P**		**19 13 29.7**	**+1.8**	
ABKT	**Ailbek**	**44.57**	**118**	P		**P**		**19 13 29.8**	**+1.4**	
	comp=Z,142nm,0.9s,SNR=11									
ULM	**Lac du Bonnet**	**44.69**	**297**	P		**P**		**19 13 29.4**	**+0.2**	
ULM	**Lac du Bonnet**	**44.69**	**297**	P		**P**		**19 13 29.4**	**+0.2**	
	comp=Z,12nm,0.9s,baz=26,slow=7.2,SNR=9.5									
ULM	**Lac du Bonnet**	**44.69**	**297**	P		**P**		**19 13 29.4**	**+0.2**	
	comp=Z,12nm,0.9s									
KDAK	**Kodiak Island**	**45.53**	**345**	P		**P**		**19 13 37.0**	**+1.3**	
	comp=Z,363nm,1.3s,SNR=8.4									
KDAK	**Kodiak Island**	**45.53**	**345**	*e*P		**P**		**19 13 36.5**	**+0.8**	
	comp=Z,107nm,1.3s									
KDAK	**Kodiak Island**	**45.53**	**345**	*e*P		**P**		**19 13 36.5**	**+0.8**	
	comp=Z,107nm,1.3s									
WMQ	**Urumqi**	**45.77**	**86**	P		**P**		**19 13 39.5**	**+1.6**	
WMQ				pP		**pP**		**19 13 44.0**	**+1.4**	
WMQ				sP		**sP**		**19 13 47.0**	**+2.5**	
WMQ				PcP		**PcP**		**19 15 17.0**	**+1.8**	
WMQ				PP		**PP**		**19 15 28.5**	**+3.7**	
WMQ				S		**S**		**19 20 23.0**	**+2.5**	
WMQ				sS		**sS**		**19 20 32.0**	**+3.7**	
WMQ				ScS		**ScS**		**19 23 31.0**	**-1.7**	
WMQ				pmax		pmax				
	comp=Z,32nm,1.2s									
WMQ				pmax		pmax				
	comp=Z,210nm,3.5s									
WMQ				LR		LR				
	comp=N,1μm,16.0s									
WMQ				LR		LR				
	comp=E,960nm,12.6s									
WMQ				LR		LR				
	comp=Z,1μm,18.3s									
OHAK	**Old Harbor**	**46.13**	**345**	*e*P		**P**		**19 13 42.4**	**+2.0**	
	comp=Z,204nm,1.6s									
OHAK	**Old Harbor**	**46.13**	**345**	*e*P		**P**		**19 13 42.4**	**+2.0**	
	comp=Z,204nm,1.6s									
SONM	**Songino Array**	**46.28**	**67**	P		**P**		**19 13 42.5**	**+0.5**	
SONM				PcP		**PcP**		**19 15 16.7**	**-0.3**	
SONM	**Songino Array**	**46.28**	**67**	P		**P**		**19 13 42.5**	**+0.5**	
	comp=Z,3.7nm,0.8s,baz=334,slow=7.0,SNR=31									
SONM				PcP		**PcP**		**19 15 16.7**	**-0.3**	
	comp=Z,1.2nm,0.8s,baz=331,slow=2.6,SNR=3.8									
SONM				LR		LR		19 36 42.7		
	comp=Z,281nm,20.3s,baz=88,slow=41									
SONM	**Songino Array**	**46.28**	**67**	P		**P**		**19 13 42.5**	**+0.5**	
	comp=Z,4.0nm,0.8s									
SONM	**Songino Array**	**46.28**	**67**	P	PcP	**PcP**		**19 15 16.7**	**-0.3**	
	comp=Z,281nm,20.3s									
ULN	**Ulaanbaatar**	**46.40**	**66**	P		**P**		**19 13 44.2**	**+1.3**	
	SNR=17									
ULN	**Ulaanbaatar**	**46.40**	**66**	*e*P		**P**		**19 13 43.5**	**+0.6**	
	comp=Z,42nm,1.4s									
ULN	**Ulaanbaatar**	**46.40**	**66**	P		**P**		**19 13 42.8**	**-0.1**	
	comp=Z,26nm,1.6s,comp=Z,472nm									
ULN	**Ulaanbaatar**	**46.40**	**66**	*e*P		**P**		**19 13 43.5**	**+0.6**	
	comp=Z,42nm,1.4s									
BHD	**Baghdad**	**46.48**	**135**	*e*P		P		19 13 39.5	-3.9	
BHD				*e*S		S		19 20 24.0	-6.6	
AGMN	**Agassiz Nation**	**46.54**	**296**	*e*P		**P**		**19 13 44.6**	**+0.8**	
	comp=Z,19nm,1.1s									
AGMN	**Agassiz Nation**	**46.54**	**296**	*e*P		**P**		**19 13 44.6**	**+0.8**	
	comp=Z,19nm,1.1s									
IBDR	**Badra**	**46.90**	**134**	*e*P		**P**		**19 13 44.8**	**-1.9**	
IBDR				*e*S		**S**		**19 20 35.9**	**-0.8**	
KSH	**Kashi**	**47.06**	**99**	P		P		19 13 51.6	+3.5	
KSH				*ep*P		pP		19 13 56.3	+3.4	
KSH				*es*P		sP		19 13 59.3	+4.5	
KSH				*ePcP*		**PcP**		**19 15 21.6**	**+1.7**	
KSH				*e*PP		**PP**		**19 15 41.5**	**+3.0**	
KSH				*e*S		**S**		**19 20 43.1**	**+3.9**	
KSH					pmax	pmax				
	comp=Z,13nm,1.0s									
KSH					pmax	pmax				
	comp=Z,520nm,3.4s									
KSH					LR	LR				
	comp=N,960nm,10.8s									
KSH					LR	LR				
	comp=E,550nm,9.5s									
KSH					LR	LR				
	comp=Z,2μm,13.9s									
HIA	**Hailar**	**47.69**	**55**	*e*P		**P**		**19 13 53.9**	**+1.1**	
	comp=Z,34nm,1.4s									
HIA	**Hailar**	**47.69**	**55**	*e*P		**P**		**19 13 53.9**	**+1.1**	
	comp=Z,34nm,1.4s									
MDND	**Maddock**	**47.75**	**299**	⇑P		**P**		**19 13 53.9**	**+0.6**	
	baz=48									
A23A	**Redstone**	**47.76**	**304**	⇓P		**P**		**19 13 54.1**	**+0.8**	
	baz=48									
A22A	**Carney Farms,**	**47.93**	**305**	⇑P		**P**		**19 13 56.0**	**+1.2**	
	baz=48,SNR=10									
DGMT	**Dagmar**	**48.09**	**303**	⇑P		**P**		**19 13 56.9**	**+1.0**	
	baz=48									
B23A	**Brockton**	**48.26**	**304**	⇓P		**P**		**19 13 58.0**	**+0.7**	
	baz=48									
A20A	**Cobblestone Ra**	**48.43**	**307**	⇓P		**P**		**19 13 59.5**	**+0.9**	
	baz=48									
A19A	**Klindworth Far**	**48.54**	**307**	⇑P		**P**		**19 14 00.6**	**+1.2**	
	baz=48,SNR=7.7									
B22A	**Reddig Ranch S**	**48.61**	**305**	⇑P		**P**		**19 14 00.8**	**+0.8**	
	baz=48									
B21A	**Ellsworth Farm**	**48.69**	**306**	⇑P		**P**		**19 14 01.7**	**+1.1**	
	baz=48									
A18A	**Meeker Ranch,**	**48.76**	**308**	⇑P		**P**		**19 14 01.8**	**+0.7**	
	baz=49									
SPMN	**St. Paul**	**48.79**	**292**	⇑P		**P**		**19 14 01.8**	**+0.5**	
	baz=49									
B20A	**Solberg Farm,**	**48.87**	**307**	⇓P		**P**		**19 14 02.5**	**+0.5**	
	baz=49									
A17A	**Triple J Farms**	**48.89**	**309**	⇓P		**P**		**19 14 02.5**	**+0.3**	
	baz=49									
C23A	**Lambert**	**48.93**	**304**	⇓P		**P**		**19 14 03.7**	**+1.3**	
	baz=49,SNR=8.9									
B19A	**Brinkman Farms**	**49.03**	**307**	⇓P		**P**		**19 14 03.8**	**+0.6**	
	baz=49									
C24A	**Savage**	**49.04**	**303**	⇑P		**P**		**19 14 04.4**	**+1.2**	
	baz=49									
A16A	**West Butte Ran**	**49.05**	**310**	⇓P		**P**		**19 14 03.9**	**+0.5**	
	baz=49									
C22A	**Vida**	**49.12**	**305**	⇑P		**P**		**19 14 04.6**	**+0.8**	
	baz=49,SNR=8.9									
A15A	**Johnson Ranch,**	**49.23**	**311**	⇑P		**P**		**19 14 05.0**	**+0.2**	
	baz=49,SNR=8.0									
B18A	**Beardsley Farm**	**49.25**	**308**	⇓P		**P**		**19 14 05.4**	**+0.6**	
	baz=49									
C21A	**Desert Coulee**	**49.28**	**306**	⇓P		**P**		**19 14 05.7**	**+0.6**	
	baz=49									
A14A	**Double T Ranch**	**49.36**	**311**	⇑P		**P**		**19 14 06.3**	**+0.5**	
	baz=49,SNR=20									
WALA	**Waterton Lakes**	**49.36**	**312**	*e*P		**P**		**19 14 05.9**	**+0.1**	
	comp=Z,0.8nm,1.2s									
WALA	**Waterton Lakes**	**49.36**	**312**	*e*P		**P**		**19 14 05.9**	**+0.1**	
	comp=Z,0.8nm,1.2s									
D24A	**Glendive**	**49.42**	**303**	⇑P		**P**		**19 14 07.4**	**+1.3**	
	baz=49,SNR=6.3									
PETK	**Petropavlovsk-**	**49.51**	**23**	P		**P**		**19 14 06.6**	**-0.1**	
PETK					pmax	pmax				
	comp=Z,4.0nm,0.9s									
PETK	**Petropavlovsk-**	**49.51**	**23**	P		**P**		**19 14 06.6**	**-0.1**	
PETK	**Petropavlovsk-**	**49.51**	**23**	P		**P**		**19 14 06.6**	**-0.1**	
	comp=Z,3.8nm,0.9s,baz=42,slow=7.1,SNR=5.8									
PETK	**Petropavlovsk-**	**49.51**	**23**	P		**P**		**19 14 06.6**	**-0.1**	
	comp=Z,4.0nm,0.9s									
B17A	**L&G Farms, Che**	**49.53**	**309**	⇑P		**P**		**19 14 07.6**	**+0.5**	
	baz=49									
D23A	**Lindsay**	**49.54**	**304**	⇓P		**P**		**19 14 08.1**	**+1.0**	
	baz=49									
C20A	**Veseth Ranch,**	**49.56**	**306**	⇓P		**P**		**19 14 07.9**	**+0.7**	
	baz=49									
A13A	**Flathead Natio**	**49.57**	**312**	⇓P		**P**		**19 14 08.0**	**+0.7**	
	baz=49									
B16A	**M & M Farms, S**	**49.59**	**310**	⇑P		**P**		**19 14 08.1**	**+0.7**	
	baz=49									
EGMT	**Eagleton**	**49.60**	**308**	⇑P		**P**		**19 14 08.2**	**+0.7**	
	baz=49									
C19A	**Slack Wire Ran**	**49.74**	**307**	⇓P		**P**		**19 14 09.8**	**+1.2**	
	baz=50									
D22A	**Cohagen**	**49.75**	**305**	⇓P		**P**		**19 14 10.0**	**+1.3**	
	baz=50,SNR=7.5									
A12A	**Yaak River Ran**	**49.79**	**313**	⇓P		**P**		**19 14 09.8**	**+0.8**	
	baz=50									
B15A	**Bradely Ranch,**	**49.84**	**310**	⇑P		**P**		**19 14 09.8**	**+0.4**	
	baz=50,SNR=9.3									
B14A	**Marquette Ranc**	**49.92**	**311**	⇑P		**P**		**19 14 10.3**	**+0.3**	
	baz=50									
E24A	**Baker**	**49.94**	**303**	⇓P		**P**		**19 14 10.8**	**+0.6**	
	baz=50									
D21A	**La Casta Ranch**	**49.99**	**305**	⇑P		**P**		**19 14 11.5**	**+1.0**	
	baz=50									
B13A	**Whitefish**	**50.12**	**312**	⇑P		**P**		**19 14 12.4**	**+0.9**	
	baz=50									
C17A	**Wharram Farm,**	**50.16**	**309**	⇓P		**P**		**19 14 12.1**	**+0.2**	
	baz=50									
C16A	**Fuhringer Ranc**	**50.18**	**310**	⇑P		**P**		**19 14 12.5**	**+0.5**	
	baz=50									
D20A	**Manuel Ranch,**	**50.19**	**306**	⇑P		**P**		**19 14 13.2**	**+1.2**	
	baz=50,SNR=5.9									
E23A	**Ismay**	**50.20**	**304**	⇓P		**P**		**19 14 13.5**	**+1.4**	
	baz=50,SNR=6.8									
KBL	**Kabul**	**50.21**	**108**	*e*P		**P**		**19 14 13.1**	**+0.6**	
KBL					pmax	pmax				
	comp=Z,23nm,1.4s									
KBL	**Kabul**	**50.21**	**108**	*e*P		**P**		**19 14 13.1**	**+0.6**	
	comp=Z,23nm,1.4s									
KBL	**Kabul**	**50.21**	**108**	*e*P		**P**		**19 14 13.1**	**+0.6**	
	comp=Z,23nm,1.4s									
B12A	**Libby**	**50.23**	**313**	⇓P		**P**		**19 14 13.0**	**+0.7**	
	baz=50									
D19A	**Cripps Ranch,**	**50.26**	**307**	⇓P		**P**		**19 14 13.8**	**+1.2**	
	baz=50,SNR=12									
C15A	**Salmond Ranch,**	**50.36**	**310**	⇓P		**P**		**19 14 13.8**	**+0.4**	
	baz=50,SNR=8.4									
MIB	**Mutribah**	**50.37**	**133**	*e*P		**P**		**19 14 13.4**	**0.0**	
MIB					AMb	AMB		19 14 22.0		
	comp=Z,83nm,1.5s									
MIB	**Mutribah**	**50.37**	**133**	*e*P		**P**		**19 14 13.4**	**0.0**	
	comp=Z,83nm,1.5s									
E22A	**Miles City**	**50.39**	**304**	⇑P		**P**		**19 14 14.3**	**+0.8**	
	baz=50									
D18A	**Linhart Farms,**	**50.40**	**308**	⇑P		**P**		**19 14 14.4**	**+0.7**	
	baz=50									
JFWS	**Jewell Farm**	**50.41**	**289**	*e*P		**P**		**19 14 14.2**	**+0.5**	
JFWS					pmax	pmax				
	comp=Z,36nm,1.2s									
JFWS	**Jewell Farm**	**50.41**	**289**	*e*P		**P**		**19 14 14.2**	**+0.5**	
	comp=Z,36nm,1.2s									
JFWS	**Jewell Farm**	**50.41**	**289**	*e*P		**P**		**19 14 14.2**	**+0.5**	
	comp=Z,36nm,1.2s									
E21A	**Keefer Ranch,**	**50.51**	**305**	⇑P		**P**		**19 14 15.6**	**+1.1**	
	baz=50									
C14A	**Swan Lake**	**50.58**	**311**	⇑P		**P**		**19 14 15.5**	**+0.6**	
	baz=50									
D17A	**Six Diamond Ra**	**50.61**	**308**	⇑P		**P**		**19 14 16.8**	**+1.5**	
	baz=50									
F24A	**Ekalaka**	**50.66**	**303**	⇓P		**P**		**19 14 16.3**	**+0.7**	
	baz=50									
UMR	**Umm Al-Rimmam**	**50.68**	**133**	*e*P		**P**		**19 14 16.0**	**+0.2**	
UMR	**Umm Al-Rimmam**	**50.68**	**133**	*e*P		**P**		**19 14 16.0**	**+0.2**	
BSMT	**Bassoo Peak**	**50.68**	**312**	*e*P		**P**		**19 14 17.1**	**+1.2**	
	comp=Z,21nm,1.2s									
BSMT	**Bassoo Peak**	**50.68**	**312**	*e*P		**P**		**19 14 17.1**	**+1.2**	
	comp=Z,21nm,1.2s									
NEW	**Newport**	**50.69**	**314**	*e*P		**P**		**19 14 17.2**	**+1.5**	
	comp=Z,3.5nm,1.0s									
NEW	**Newport**	**50.69**	**314**	*e*P		**P**		**19 14 17.2**	**+1.5**	
	comp=Z,3.0nm,1.0s									
NEW	**Newport**	**50.69**	**314**	⇑P		**P**		**19 14 16.9**	**+1.2**	
	baz=50									
JTMT	**Jette**	**50.69**	**312**	*e*P		**P**		**19 14 16.9**	**+1.0**	
	comp=Z,8.4nm,1.1s									
JTMT	**Jette**	**50.69**	**312**	*e*P		**P**		**19 14 16.9**	**+1.0**	
	comp=Z,8.4nm,1.1s									
E20A	**Meyer Farm, Mu**	**50.75**	**306**	⇑P		**P**		**19 14 17.2**	**+1.0**	
	baz=51,SNR=7.5									
C13A	**Hot Springs**	**50.81**	**312**	⇑P		**P**		**19 14 17.9**	**+1.2**	
	baz=51,SNR=6.6									
BRSD	**Miller**	**50.86**	**297**	⇓P		**P**		**19 14 17.6**	**+0.6**	
	baz=51									
SWMT	**Swartz Lake**	**50.87**	**311**	*e*P		**P**		**19 14 18.2**	**+1.0**	
	comp=Z,22nm,1.3s									
SWMT	**Swartz Lake**	**50.87**	**311**	*e*P		**P**		**19 14 18.2**	**+1.0**	
	comp=Z,22nm,1.3s									
D16A	**Dana Ranch, Ca**	**50.89**	**309**	⇓P		**P**		**19 14 17.6**	**+0.2**	
	baz=51									
NAY	**Al-Naaiem**	**50.89**	**133**	*e*P		**P**		**19 14 17.1**	**-0.4**	
NAY					AMb	AMB		19 14 19.4		
	comp=Z,37nm,1.6s									
NAY	**Al-Naaiem**	**50.89**	**133**	*e*P		**P**		**19 14 17.1**	**-0.4**	
	comp=Z,37nm,1.6s									
E19A	**Rath Farm, Rou**	**50.92**	**307**	⇑P		**P**		**19 14 18.7**	**+1.1**	
	baz=51,SNR=8.6									
C12B	**Naegeli Ranch,**	**50.94**	**313**	⇓P		**P**		**19 14 18.8**	**+1.1**	
	baz=51									
F23A	**Volborg**	**50.97**	**303**	⇑P		**P**		**19 14 18.8**	**+0.9**	
	baz=51									
E18A	**Harlowton**	**51.03**	**308**	⇓P		**P**		**19 14 19.6**	**+1.1**	
	baz=51,SNR=18									
SLMT	**Seeley Lake**	**51.04**	**311**	*e*P		**P**		**19 14 19.2**	**+0.7**	
	comp=Z,44nm,1.3s									
SLMT	**Seeley Lake**	**51.04**	**311**	*e*P		**P**		**19 14 19.2**	**+0.7**	
	comp=Z,44nm,1.3s									
ECSD	**EROS Data Cent**	**51.04**	**295**	*e*P		**P**		**19 14 18.4**	**0.0**	
	comp=Z,36nm,1.1s									
ECSD	**EROS Data Cent**	**51.04**	**295**	*e*P		**P**		**19 14 18.4**	**0.0**	
	comp=Z,36nm,1.1s									
KBD	**Kabd**	**51.04**	**133**	*e*P		**P**		**19 14 18.6**	**0.0**	
KBD					AMb	AMB		19 14 21.7		
	comp=Z,63nm,1.5s									
KBD	**Kabd**	**51.04**	**133**	*e*P		**P**		**19 14 18.6**	**0.0**	
	comp=Z,63nm,1.5s									
D15A	**Lincoln**	**51.05**	**310**	⇑P		**P**		**19 14 19.1**	**+0.4**	
	baz=51,SNR=7.7									
G24A	**Alzada**	**51.15**	**302**	⇓P		**P**		**19 14 20.0**	**+0.7**	
	baz=51,SNR=6.9									
HABR	**Khabarovsk**	**51.18**	**42**	*de*P		**P**		**19 14 19.2**	**-0.2**	
HABR				*e**PP		**pP**		**19 14 22.1**	**-2.1**	
HABR				*e**SP		**sP**		**19 14 23.4**	**-2.6**	
HABR				*e*				19 15 34.1		
HABR				*e*				19 16 15.8		
HABR					PPP	PPP		19 17 14.2		
HABR				*e*S		**S**		**19 21 38.2**	**+1.7**	
HABR				*e**SS		**sS**		**19 21 43.3**	**-1.1**	

RLMT **Red Lodge** 52.30 307 *e*P P 19 14 29.5 +1.4
comp=Z,30nm,1.3s
J28A **Allard Ranch,** 52.32 299 ⇓P P 19 14 28.4 +0.4
baz=52
H21A **Big Horn, Sher** 52.34 304 ⇑P P 19 14 28.8 +0.5
baz=52
G17A **Pierce Place,** 52.38 308 ⇓P P 19 14 29.4 +0.8
baz=52
F14A **Wisdom** 52.40 310 ⇑P P 19 14 29.3 +0.5
baz=52
HDIL **Hopedale** 52.44 287 *e*P P 19 14 29.7 +0.8
HDIL **Hopedale** 52.44 287 *e*P P 19 14 29.7 +0.8
I24A **Kuemmerle Ranc** 52.60 302 ⇓P P 19 14 30.5 +0.3
baz=52
I23A **Meade Ranch, G** 52.67 303 ⇓P P 19 14 31.5 +0.8
baz=52
H19A **Powell** 52.68 306 ⇓P P 19 14 31.6 +0.8
baz=52
DLMT **Dillon** 52.69 309 *e*P P 19 14 31.5 +0.6
comp=Z,14nm,1.3s
DLMT **Dillon** 52.69 309 *e*P P 19 14 31.5 +0.6
comp=Z,14nm,1.3s
K29A **Lazy Trails An** 52.76 298 ⇑P P 19 14 31.9 +0.6
baz=53
GTA **Gaotai** 52.80 76 *e*P P 19 14 32.6 +0.9
GTA pP **pP** 19 14 36.9 +0.4
GTA sP **sP** 19 14 39.1 +0.7
GTA PP **PP** 19 16 33.1 +2.4
GTA S **S** 19 22 00.3 +1.0
GTA sS **sS** 19 22 07.8 +0.6
GTA SS **SS** 19 25 39.8 +2.5
GTA pmax pmax
comp=Z,19nm,1.7s
GTA pmax pmax
comp=Z,250nm,6.7s
GTA LR LR
comp=N,580nm,16.1s
GTA LR LR
comp=E,330nm,14.7s
GTA LR LR
comp=Z,480nm,15.2s
H18A **Shoshone NF, C** 52.80 307 ⇓P P 19 14 32.6 +0.8
baz=53,SNR=8.9
J25A **Sunshine Ranch** 52.88 301 ⇓P P 19 14 33.0 +0.8
baz=53,SNR=12
HAWA **Hanford** 52.91 316 *e*P P 19 14 33.8 +1.5
comp=Z,6.3nm,0.7s
HAWA **Hanford** 52.91 316 *e*P P 19 14 33.8 +1.5
comp=Z,6.3nm,0.7s
LON **Longmire** 52.93 318 *e*P P 19 14 33.6 +1.1
LON pmax pmax
comp=Z,24nm,1.3s
LON **Longmire** 52.93 318 *e*P P 19 14 33.6 +1.1
comp=Z,24nm,1.3s
LON **Longmire** 52.93 318 *e*P P 19 14 33.6 +1.1
comp=Z,24nm,1.3s
I22A **9 Mile Ranch,** 52.94 304 ⇑P P 19 14 33.7 +1.0
baz=53,SNR=8.6
H16A **Russell Place,** 53.08 308 ⇑P P 19 14 34.8 +1.0
baz=53
J24A **Dixon Ranch, L** 53.11 302 ⇓P P 19 14 34.4 +0.4
baz=53
I21A **Big Trails, Te** 53.17 304 ⇓P P 19 14 35.1 +0.6
baz=53,SNR=20
I20A **Worland** 53.20 305 ⇑P P 19 14 35.9 +1.2
baz=53,SNR=11
K27A **Fluecklinger Fa** 53.22 300 ⇑P P 19 14 35.3 +0.6
baz=53
J23A **Dilts Ranch, B** 53.22 303 ⇑P P 19 14 35.0 +0.2
baz=53
MCMT **McKenzie Canyo** 53.25 310 *e*P P 19 14 36.7 +1.5
comp=Z,16nm,1.3s
MCMT **McKenzie Canyo** 53.25 310 *e*P P 19 14 36.7 +1.5
comp=Z,16nm,1.3s
I19A **Meeteetse** 53.29 306 ⇑P P 19 14 36.5 +1.2
baz=53,SNR=13
J22A **Midwest** 53.40 304 ⇓P P 19 14 36.3 +0.2
baz=53
G12A **Big Creek, Yel** 53.41 312 ⇓P P 19 14 36.7 +0.5
baz=53
K26A **Motz Farm, Whi** 53.41 300 ⇑P P 19 14 36.6 +0.5
baz=53
L29A **Maesberg Ranch** 53.46 298 ⇑P P 19 14 37.2 +0.7
baz=53
TAM **Tamanrasset** 53.56 182 *e*P P 19 14 39.0 +1.5
TAM pmax pmax
comp=Z,44nm,1.5s
TAM **Tamanrasset** 53.56 182 *e*P P 19 14 39.0 +1.5
comp=Z,44nm,1.5s
TAM **Tamanrasset** 53.56 182 *e*P P 19 14 39.0 +1.5
comp=Z,44nm,1.5s
BGNE **Belgrade** 53.59 295 ⇑P P 19 14 38.4 +0.9
baz=53
K25A **Mack Ranch, Ha** 53.64 301 ⇓P P 19 14 38.6 +0.7
baz=54
J21A **Lysite** 53.65 304 ⇑P P 19 14 38.8 +0.8
baz=54
I17A **Pilgrim Ck.** 53.70 307 ⇑P P 19 14 39.2 +0.7
baz=54
K24A **Anderson Ranch** 53.73 302 ⇑P P 19 14 38.8 +0.3
baz=54
I18A **Diamond G Ranc** 53.77 307 ⇓P P 19 14 40.2 +1.2
baz=54
J20A **Shoshoni** 53.77 305 ⇑P P 19 14 40.3 +1.5
baz=54,SNR=16
IMW **Indian Meadow** 53.80 308 *e*P P 19 14 41.2 +2.0
comp=Z,33nm,1.1s
IMW **Indian Meadow** 53.80 308 *e*P P 19 14 41.2 +2.0
comp=Z,33nm,1.1s
YSS **Yuzh-Sakhalins** 53.82 36 *e*P P 19 14 40.0 +1.1
YSS *e* 19 14 47.1
YSS pmax pmax
comp=Z,40nm,1.2s
YSS **Yuzh-Sakhalins** 53.82 36 *e*P P 19 14 40.0 +1.1
comp=Z,40nm,1.2s
L27A **T5 Ranch, Ells** 53.83 299 ⇑P P 19 14 40.0 +0.7
baz=54
M30A **Dale-Ortello V** 53.84 297 ⇓P P 19 14 39.9 +0.6
baz=54
K23A **Bowen Ranch, D** 53.86 303 ⇓P P 19 14 39.8 +0.3
baz=54
H12A **Diamond D Ranc** 53.89 311 ⇓P P 19 14 40.5 +0.8
baz=54,SNR=12
MOOW **Moose Ponds** 53.90 307 *e*P P 19 14 41.3 +1.4
comp=Z,14nm,1.2s
MOOW **Moose Ponds** 53.90 307 *e*P P 19 14 41.3 +1.4
comp=Z,14nm,1.2s
I16A **Newdale** 53.92 308 ⇓P P 19 14 40.9 +1.0
baz=54
MDJ **Mudanjiang** 54.00 48 P P 19 14 39.8 -0.5
MDJ pP **pP** 19 14 43.0 -2.1
MDJ sP **sP** 19 14 44.3 -2.7
MDJ PcP **PcP** 19 15 44.5 -0.7
MDJ PP **PP** 19 16 41.4 +0.1
MDJ PcS **PcS** 19 19 44.6 +0.2
MDJ S **S** 19 22 15.5 +0.3
MDJ SS **SS** 19 25 54.8 -0.9
MDJ pmax pmax
comp=Z,16nm,1.7s
MDJ pmax pmax
comp=Z,95nm,4.1s
MDJ LR LR
comp=N,330nm,18.3s
MDJ LR LR
comp=E,250nm,18.6s
MDJ LR LR
comp=Z,380nm,18.6s
MDJ **Mudanjiang** 54.00 48 *e*P P 19 14 40.3 0.0
comp=Z,14nm,1.2s
MDJ **Mudanjiang** 54.00 48 *e*P P 19 14 40.3 0.0
comp=Z,14nm,1.2s
LOHW **Long Hollow** 54.01 307 *e*P P 19 14 42.1 +1.5
comp=Z,28nm,1.4s
LOHW **Long Hollow** 54.01 307 *e*P P 19 14 42.1 +1.5
comp=Z,28nm,1.4s
BMO **Blue Mountains** 54.02 313 *e*P P 19 14 41.5 +0.9
comp=Z,24nm,1.5s
BMO **Blue Mountains** 54.02 313 *e*P P 19 14 41.5 +0.9
comp=Z,24nm,1.5s
L26A **Underwood Farm** 54.03 300 ⇓P P 19 14 41.3 +0.6
baz=54
CN2 **Changchun** 54.04 52 *e*P P 19 14 41.1 +0.5
CN2 *es*P **sP** 19 14 48.1 +0.9
CN2 *e*S **S** 19 22 14.1 -1.5
CN2 pmax pmax
comp=Z,20nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,400nm,15.0s
CN2 LR LR
comp=E,300nm,15.0s
CN2 LR LR
comp=Z,400nm,15.0s
J19A **Crowheart** 54.04 306 ⇑P P 19 14 42.4 +1.5
baz=54,SNR=11
HHC **Hu-ho-hao-te** 54.06 65 *e*P P 19 14 40.1 -0.9
HHC pP **pP** 19 14 45.9 +0.1
HHC sP **sP** 19 14 48.3 +0.7
HHC S **S** 19 22 14.0 -2.3
HHC sS **sS** 19 22 27.3 +3.0
HHC ScS **ScS** 19 24 31.4 +2.1
HHC SS **SKiKP** 19 25 53.0 +1.3
HHC pmax pmax
comp=Z,31nm,1.1s
HHC pmax pmax
comp=Z,290nm,5.5s
HHC LR LR
comp=N,960nm,16.3s
HHC LR LR
comp=E,660nm,16.7s
HHC LR LR
comp=Z,1μm,17.4s
L25A **Engebretsen Ra** 54.10 301 ⇑P P 19 14 41.7 +0.5
baz=54
M29A **Burnside Ranch** 54.10 298 ⇓P P 19 14 41.7 +0.5
baz=54
K22A **Casper** 54.14 303 ⇓P P 19 14 41.8 +0.2
baz=54,SNR=9.7
TPAW **Teton Pass** 54.19 307 *e*P P 19 14 44.0 +1.9
comp=Z,18nm,1.2s
TPAW **Teton Pass** 54.19 307 *e*P P 19 14 44.0 +1.9
comp=Z,18nm,1.2s
I14A **Mackay** 54.23 310 ⇓P P 19 14 42.9 +0.7
baz=54
M28A **Bar X Bar Ranc** 54.29 298 ⇓P P 19 14 43.0 +0.4
baz=54
REDW **Red Top Meadow** 54.29 307 P P 19 14 44.2 +1.4
REDW **Red Top Meadow** 54.29 307 P P 19 14 44.2 +1.4
M27A **Reverse DX Ran** 54.38 299 ⇓P P 19 14 43.7 +0.5
baz=54
L24A **Wheatland** 54.40 302 ⇑P P 19 14 43.9 +0.4
baz=54
K19A **Absolon Red Bu** 54.43 305 ⇓P P 19 14 43.8 +0.1
baz=54
K20A **Yellowstone Ra** 54.49 305 ⇑P P 19 14 44.4 +0.3
baz=54,SNR=10
M26A **McRoberts Ranc** 54.59 300 ⇓P P 19 14 45.0 +0.2
baz=54
N30A **Hueftle Ranch,** 54.60 297 ⇑P P 19 14 45.0 +0.2
baz=54
BW06 **Boulder Array** 54.62 306 *e*P P 19 14 45.8 +0.6
comp=Z,37nm,1.4s
BW06 **Boulder Array** 54.62 306 *e*P P 19 14 45.8 +0.6
comp=Z,37nm,1.4s
PDAR **Pinedale Array** 54.62 306 P P 19 14 45.6 +0.4
PDAR **Pinedale Array** 54.62 306 P P 19 14 45.6 +0.4
comp=Z,12nm,1.2s,baz=27,slow=6.2,SNR=36
PDAR **Pinedale Array** 54.62 306 P P 19 14 45.6 +0.4
I12A **Atlanta** 54.67 311 ⇑P P 19 14 45.6 +0.2
baz=54
N29A **Votaw Ranch, W** 54.69 297 ⇓P P 19 14 45.6 +0.2
baz=54
L22A **Ellis Ranch, M** 54.72 303 ⇓P P 19 14 46.4 +0.6
baz=55,SNR=15
HLID **Hailey** 54.76 310 *e*P P 19 14 47.1 +1.0
comp=Z,22nm,1.4s
HLID **Hailey** 54.76 310 *e*P P 19 14 47.1 +1.0
comp=Z,22nm,1.4s
HLID **Hailey** 54.76 310 ⇓P P 19 14 46.8 +0.7
baz=55,SNR=10
M25A **Palm-Egli Farm** 54.81 301 ⇑P P 19 14 46.7 +0.3
baz=55
USRK **Usuriysk Arra** 54.82 46 P P 19 14 46.2 -0.1
comp=Z,4.3nm,0.8s,baz=1.3,slow=8.4,SNR=10
OGNE **Ogallala** 54.86 299 *e*P P 19 14 47.1 +0.4
comp=Z,55nm,1.0s
OGNE **Ogallala** 54.86 299 *e*P P 19 14 47.1 +0.4
comp=Z,55nm,1.0s
OGNE **Ogallala** 54.86 299 ⇓P P 19 14 46.9 +0.2
baz=55
M24A **Cheyenne** 54.94 301 ⇓P P 19 14 47.7 +0.3
baz=55
L21A **Rawlins** 54.97 304 ⇑P P 19 14 48.1 +0.5
baz=55,SNR=22
N28A **Pribbeno Ranch** 55.01 298 ⇑P P 19 14 48.1 +0.3
baz=55
N27A **Anderson Farm,** 55.10 299 ⇓P P 19 14 48.9 +0.4
baz=55
L20A **Wamsutter** 55.12 305 ⇑P P 19 14 49.4 +0.7
baz=55,SNR=7.7
M23A **Laramie** 55.12 302 ⇓P P 19 14 49.2 +0.5
baz=55,SNR=9.7
MFID **Camas Ranch** 55.16 312 ⇓P P 19 14 49.9 +1.0
baz=55
O30A **MW Ranch, Wils** 55.18 297 ⇑P P 19 14 49.4 +0.4
baz=55
N26A **Koester Ranch,** 55.22 300 ⇓P P 19 14 49.7 +0.3
baz=55
L19A **Farson** 55.23 306 ⇑P P 19 14 49.9 +0.4
baz=55
M21A **Separation Pea** 55.31 304 ⇑P P 19 14 50.7 +0.5
baz=55,SNR=19
M22A **Cedar Creek Ra** 55.35 303 ⇓P P 19 14 50.7 +0.2
baz=55
O29A **4D Ranch, Culb** 55.39 297 ⇑P P 19 14 50.9 +0.4
baz=55
N25A **Grover** 55.41 301 ⇑P P 19 14 51.3 +0.5
baz=55
L18A **Fontenelle, Gr** 55.53 306 ⇓P P 19 14 52.2 +0.6
baz=55
N24A **Carr** 55.56 301 ⇓P P 19 14 52.3 +0.4
baz=55
M20A **Sweetwater, Wa** 55.59 304 ⇑P P 19 14 52.9 +0.8
baz=55,SNR=11
O28A **Krutsinger Ran** 55.59 298 ⇓P P 19 14 52.2 +0.1
baz=55
P31A **Stockton** 55.67 296 ⇓P P 19 14 52.7 +0.2
baz=56
O27A **Beecher Island** 55.68 299 ⇑P P 19 14 53.0 +0.4
baz=56
N23A **Red Feather La** 55.71 302 ⇓P P 19 14 54.1 +1.0
baz=56,SNR=16
KMSC **Kings Mountain** 55.76 278 ⇑P P 19 14 53.3 +0.1
baz=56
M19A **Rock Springs** 55.76 305 ⇑P P 19 14 53.9 +0.5
baz=56
O26A **Horse Wrangler** 55.80 300 ⇓P P 19 14 53.9 +0.4
baz=56
BJI **Beijing** 55.82 61 P P 19 14 54.1 +0.6
BJI S **S** 19 22 40.4 +0.8
BJI pmax pmax
comp=Z,17nm,1.4s
BJI pmax pmax
comp=Z,190nm,3.6s
BJI LR LR
comp=N,720nm,22.9s
BJI LR LR
comp=E,230nm,15.6s
BJI LR LR
comp=Z,670nm,26.0s
P30A **Selden** 55.83 297 ⇑P P 19 14 53.9 +0.2
baz=56
N22A **Wattenberg Ran** 55.91 303 ⇑P P 19 14 55.6 +1.1
baz=56,SNR=14
M17A **Scullys Gap (B** 56.08 307 ⇑P P 19 14 56.4 +0.7
baz=56,SNR=6.4
O25A **Wiggins** 56.09 300 ⇓P P 19 14 56.1 +0.5
baz=56
HWUT **Hardware Ranch** 56.13 307 *e*P P 19 14 56.9 +1.0
comp=Z,44nm,1.7s
HWUT **Hardware Ranch** 56.13 307 *e*P P 19 14 56.9 +1.0
comp=Z,44nm,1.7s
N21A **Black Mountain** 56.16 304 ⇓P P 19 14 56.8 +0.5
baz=56
Q31A **Ellis** 56.17 296 ⇑P P 19 14 56.1 0.0
baz=56
RAYN **Ar Rayn** 56.20 136 P P 19 14 57.0 +0.5
comp=Z,135nm,1.6s,SNR=7.0
N20A **Spence Gulch,** 56.23 304 ⇓P P 19 14 57.8 +1.0
baz=56,SNR=12
O24A **Longmont** 56.28 301 ⇓P P 19 14 57.7 +0.6
baz=56
P27A **Ficken Ranch,** 56.31 299 ⇑P P 19 14 57.6 +0.4
baz=56
O23A **Lake Granby, G** 56.37 302 ⇑P P 19 14 59.0 +1.2
baz=56,SNR=12
Q30A **Quinter** 56.37 297 ⇓P P 19 14 58.0 +0.5
baz=56,SNR=9.6
P26A **Davis Ranch, A** 56.47 300 ⇑P P 19 14 58.7 +0.4
baz=56
O22A **Kremmling** 56.54 303 ⇓P P 19 14 59.9 +0.8
baz=56,SNR=20
Q29A **Oakley** 56.61 297 ⇓P P 19 14 59.5 +0.2
baz=56
Q28A **Sharon Springs** 56.63 298 ⇑P P 19 14 59.4 0.0
baz=56
O21A **Pagoda** 56.67 303 ⇑P P 19 15 01.1 +1.2
baz=56,SNR=9.5
P25A **Willow Gulch B** 56.68 300 ⇓P P 19 15 00.8 +0.9
baz=56,SNR=12
ISCO **Idaho Springs** 56.70 302 *e*P P 19 15 01.5 +1.3
ISCO pmax pmax
comp=Z,22nm,1.2s
ISCO **Idaho Springs** 56.70 302 *e*P P 19 15 01.4 +1.3
comp=Z,22nm,1.2s
ISCO **Idaho Springs** 56.70 302 *e*P P 19 15 01.5 +1.3
comp=Z,22nm,1.2s
ISCO **Idaho Springs** 56.70 302 ⇓P P 19 15 00.8 +0.6
baz=56,SNR=12
P24A **Kohler Place,** 56.83 301 ⇑P P 19 15 01.4 +0.4
baz=57
KSCO **Kaye Shedlock'** 56.84 299 ⇑P P 19 15 01.2 +0.2
baz=57
R31A **Burdett** 56.88 296 ⇓P P 19 15 01.5 +0.3
baz=57,SNR=10
LZH **Lanzhou** 56.90 74 ⇓P P 19 15 01.8 +0.3
LZH pP **pP** 19 15 05.1 -1.2
LZH sP **sP** 19 15 06.5 -1.7
LZH PP **PP** 19 17 09.0 +1.4
LZH *e*S **S** 19 22 54.3 -0.2
LZH sS **sS** 19 23 06.8 +4.4
LZH *e*SS **SS** 19 26 41.5 -0.5
LZH pmax pmax
comp=Z,33nm,1.5s
LZH pmax pmax
comp=Z,210nm,7.2s
LZH LR LR
comp=N,710nm,14.3s
LZH LR LR
comp=E,740nm,14.5s
LZH LR LR
comp=Z,980nm,18.4s
O20A **White River Ci** 56.90 304 ⇑P P 19 15 03.0 +1.5
baz=57,SNR=22
O19A **Miners Draw (B** 56.92 305 ⇑P P 19 15 02.2 +0.6
baz=57
R30A **Dighton** 57.05 296 ⇓P P 19 15 02.9 +0.6
baz=57,SNR=10
R29A **Marienthal** 57.10 297 ⇑P P 19 15 03.0 +0.2
baz=57
Q26A **Hugo** 57.12 299 ⇓P P 19 15 03.2 +0.2
baz=57
P22A **Eagle** 57.13 303 ⇑P P 19 15 03.8 +0.7
baz=57
Q25A **Bedland, Calha** 57.27 300 ⇓P P 19 15 04.3 +0.2
baz=57
R28A **Tribune** 57.32 298 ⇓P P 19 15 04.6 +0.2
baz=57
P21A **Newcastle** 57.34 303 ⇓P P 19 15 06.1 +1.5
baz=57,SNR=13
MOD **Modoc** 57.40 315 *e*P P 19 15 06.5 +1.5
comp=Z,12nm,1.4s
MOD **Modoc** 57.40 315 *e*P P 19 15 06.4 +1.5
comp=Z,12nm,1.4s
Q24A **Divide** 57.41 301 ⇓P P 19 15 06.0 +0.7
baz=57,SNR=13
S31A **Mullinville** 57.52 295 ⇓P P 19 15 05.7 +0.1
baz=57
P19A **Cripple Cowboy** 57.53 305 ⇓P P 19 15 07.0 +1.0
baz=57,SNR=15
P20A **De Beque** 57.55 304 ⇓P P 19 15 07.0 +1.0
baz=57
SMCO **Snowmass** 57.58 303 *e*P P 19 15 07.9 +1.4
comp=Z,36nm,1.2s
SMCO **Snowmass** 57.58 303 *e*P P 19 15 07.9 +1.4
comp=Z,36nm,1.2s
R27A **Eads** 57.58 299 ⇑P P 19 15 06.8 +0.6
baz=57
Q23A **Hartsel** 57.61 302 ⇓P P 19 15 07.5 +0.8
baz=57
ELK **Elko** 57.64 310 *e*P P 19 15 08.0 +1.3
comp=Z,13nm,1.2s
ELK **Elko** 57.64 310 *e*P P 19 15 08.0 +1.3
comp=Z,13nm,1.2s
R26A **Arlington** 57.70 299 ⇑P P 19 15 07.2 +0.2
baz=58
S30A **Montezuma** 57.71 296 ⇑P P 19 15 07.3 +0.2
baz=58
NDI **New Delhi** 57.72 102 *e*PKP P 19 15 06.0 -1.1
DUG **Dugway** 57.73 308 *e*P P 19 15 08.4 +1.2
DUG pmax pmax
comp=Z,13nm,1.3s
DUG **Dugway** 57.73 308 *e*P P 19 15 08.4 +1.2
comp=Z,13nm,1.3s
DUG **Dugway** 57.73 308 *e*P P 19 15 08.4 +1.2
comp=Z,13nm,1.3s
DUG **Dugway** 57.73 308 ⇑P P 19 15 08.2 +0.9
baz=58
S29A **Ulysses** 57.87 297 ⇓P P 19 15 08.5 +0.3
baz=58
Q22A **Crested Butte,** 57.87 302 ⇓P P 19 15 09.5 +1.0
baz=58,SNR=7.0
R25A **Fountain Ranch** 58.02 300 ⇓P P 19 15 09.4 0.0
baz=58
Q21A **Lamborn Mesa,** 58.03 303 ⇓P P 19 15 10.0 +0.5
baz=58
Q20A **Ridgley Place,** 58.05 304 ⇓P P 19 15 10.4 +0.8
baz=58
S28A **Manter** 58.06 298 ⇑P P 19 15 09.9 +0.3
baz=58
T31A **Randall Ranch,** 58.06 295 ⇓P P 19 15 09.8 +0.3
baz=58
R24A **Sanders Place,** 58.11 301 ⇓P P 19 15 10.5 +0.5
baz=58
S27A **Las Animas** 58.18 299 ⇓P P 19 15 10.8 +0.3
baz=58
T30A **Plains** 58.28 296 ⇑P P 19 15 11.3 +0.2
baz=58
R23A **Moffat** 58.30 301 ⇑P P 19 15 12.5 +1.0
baz=58,SNR=9.0
SRU **San Rafael** 58.34 306 ⇓P P 19 15 12.1 +0.5
baz=58
T29A **Hugoton** 58.35 297 ⇓P P 19 15 11.8 +0.3
baz=58
TUL1 **Tulsa** 58.35 291 ⇑P P 19 15 12.2 +0.8
baz=58
S26A **Kim** 58.36 299 ⇓P P 19 15 12.0 +0.3
baz=58
ARQ **Araqi** 58.38 125 P P 19 15 12.2 +0.3
SNR=7.0
ARQ **Araqi** 58.38 125 P P 19 15 12.1 +0.3
SNR=7.0
R22A **Saguache, Gunn** 58.45 302 ⇓P P 19 15 14.1 +1.6
baz=58,SNR=14
R21A **Cimarron** 58.47 303 ⇓P P 19 15 14.1 +1.4
baz=58,SNR=11
S25A **Robets Cordova** 58.52 300 ⇓P P 19 15 13.6 +0.7
baz=58,SNR=23
Q16A **Castle Valley** 58.65 306 ⇓P P 19 15 15.1 +1.3
baz=58,SNR=8.7
S24A **Houchin Ranch,** 58.70 301 ⇓P P 19 15 15.0 +0.8
baz=58
PV04 **Paradox Valley** 58.72 304 *e*P P 19 15 15.2 +0.9
PV04 **Paradox Valley** 58.72 304 *e*P P 19 15 15.2 +0.9
T27A **Campo** 58.74 298 ⇓P P 19 15 14.8 +0.5
baz=59
U31A **Nine Bar Ranch** 58.80 295 ⇓P P 19 15 15.0 +0.3
baz=59
S23A **Nye Farm, Mont** 58.80 301 ⇓P P 19 15 15.1 +0.2
baz=59
R20A **Redvale** 58.81 304 ⇑P P 19 15 15.6 +0.6
baz=59
U30A **WK&E Inc. Balk** 58.81 296 ⇓P P 19 15 15.3 +0.5
baz=59
T26A **Comanche Natio** 58.81 299 ⇑P P 19 15 15.8 +0.8
baz=59,SNR=12
PV01 **Paradox Valley** 58.90 304 *e*P P 19 15 16.8 +1.2
comp=Z,3μm,1.1s
PV01 **Paradox Valley** 58.90 304 *e*P P 19 15 16.8 +1.2
comp=Z,3μm,1.1s
S22A **4UR Ranch, Cre** 58.93 302 ⇓P P 19 15 17.1 +1.3
baz=59,SNR=14

SMDO	Samad	58.95	123	P		P	19 15 16.2	+0.3
	SNR=8.3							
SMDO	Samad	58.95	123	P		P	19 15 16.2	+0.3
	SNR=8.3							
T25A	Trinidad	59.02	300	⇓P		P	19 15 16.7	+0.3
	baz=59							
U29A	Oasis Ranch, S	59.02	297	⇑P		P	19 15 16.4	+0.2
	baz=59							
S20A	Disappointment	59.15	303	⇑P		P	19 15 18.4	+1.0
	baz=59,SNR=14							
S21A	Coal Bank Pass	59.20	303	⇑P		P	19 15 18.8	+1.0
	baz=59,SNR=9.7							
MSU	Marysvale	59.24	307	eP		P	19 15 20.0	+2.1
MSU				pmax		pmax		
	comp=Z,20nm,1.2s							
MSU	Marysvale	59.24	307	eP		P	19 15 20.0	+2.1
	comp=Z,20nm,1.2s							
MSU	Marysvale	59.24	307	eP		P	19 15 20.0	+2.1
	comp=Z,20nm,1.2s							
U28A	Mallet	59.29	297	⇓P		P	19 15 18.5	+0.4
	baz=59							
V31A	Spring Creek L	59.37	295	⇑P		P	19 15 19.3	+0.7
	baz=59							
U27A	Thompson Grove	59.38	298	⇓P		P	19 15 18.9	+0.1
	baz=59							
T23A	Casias Ranch,	59.45	301	⇓P		P	19 15 19.6	+0.1
	baz=59							
V30A	Spur Ranch, Mi	59.56	296	⇑P		P	19 15 20.5	+0.5
	baz=59							
DANN	Dangsing	59.58	95	eP		P	19 15 20.5	+0.1
	comp=Z,110nm,1.2s							
U26A	Atchley Ranch,	59.60	299	⇑P		P	19 15 21.0	+0.6
	baz=59,SNR=11							
V29A	Stinnett	59.63	297	⇓P		P	19 15 20.9	+0.5
	baz=60							
T22A	Edith	59.65	302	⇑P		P	19 15 21.8	+1.1
	baz=60,SNR=10							
U25A	Circle Dot Ran	59.73	299	⇑P		P	19 15 22.3	+1.0
	baz=60,SNR=12							
T21A	Navajo Lake	59.80	302	⇑P		P	19 15 22.2	+0.5
	baz=60							
TIGA	Tifton	59.84	279	⇓P		P	19 15 22.4	+0.6
	baz=60							
W31A	Holland Ranch,	59.95	295	⇑P		P	19 15 23.0	+0.3
	baz=60							
XAN	Xi'an	60.02	70	P		P	19 15 22.8	-0.3
XAN				pP		pP	19 15 34.3	+6.3
XAN				pmax		pmax		
	comp=Z,38nm,6.6s							
V27A	Dan Oppiter Fa	60.02	298	⇑P		P	19 15 23.7	+0.5
	baz=60							
R11A	Troy Canyon, C	60.03	310	⇑P		P	19 15 24.2	+0.8
	baz=60,SNR=14							
LSA	Lhasa	60.04	88	P		P	19 15 24.3	+0.5
KOLN	Koldanda	60.09	96	eP		P	19 15 23.8	-0.1
	comp=Z,54nm,1.4s							
WMOK	Wichita Mounta	60.13	294	eP		P	19 15 24.8	+0.9
WMOK				pmax		pmax		
	comp=Z,34nm,1.3s							
WMOK	Wichita Mounta	60.13	294	eP		P	19 15 24.8	+0.9
	comp=Z,34nm,1.3s							
WMOK	Wichita Mounta	60.13	294	eP		P	19 15 24.8	+0.9
	comp=Z,34nm,1.3s							
ARUT	Antelope Range	60.18	308	eP		P	19 15 26.1	+1.8
ARUT				pmax		pmax		
	comp=Z,13nm,1.2s							
ARUT	Antelope Range	60.18	308	eP		P	19 15 26.1	+1.8
	comp=Z,13nm,1.2s							
ARUT	Antelope Range	60.18	308	eP		P	19 15 26.1	+1.8
	comp=Z,13nm,1.2s							
V26A	Tequesquite Ra	60.18	299	⇓P		P	19 15 24.7	+0.4
	baz=60,SNR=8.0							
U22A	Llaves	60.26	302	⇓P		P	19 15 25.3	+0.4
	baz=60							
V25A	Rancho No Teng	60.32	300	⇑P		P	19 15 26.1	+0.8
	baz=60,SNR=13							
U21A	Nageezi	60.37	302	⇓P		P	19 15 26.1	+0.4
	baz=60							
W28A	Vega	60.37	297	⇓P		P	19 15 26.0	+0.5
	baz=60							
W29A	Amraillo	60.38	297	⇓P		P	19 15 26.1	+0.5
	baz=60							
CCUT	Cedar City	60.39	308	eP		P	19 15 27.5	+1.6
	comp=Z,19nm,1.3s							
CCUT	Cedar City	60.39	308	eP		P	19 15 27.5	+1.6
	comp=Z,19nm,1.3s							
NVAR	Mina Array Bea	60.44	312	P		P	19 15 27.4	+1.3
NVAR	Mina Array Bea	60.44	312	P		P	19 15 27.4	+1.3
	comp=Z,3.2nm,0.9s,baz=23,slow=5.2,SNR=16							
NVAR	Mina Array Bea	60.44	312	P		P	19 15 27.4	+1.3
KKN	Kakani	60.48	94	eP		P	19 15 26.6	+0.1
	comp=Z,153nm,1.5s							
X31A	McDonald Ranch	60.50	295	⇓P		P	19 15 27.3	+0.9
	baz=60							
GUN	Gumba	60.50	93	eP		P	19 15 27.0	+0.2
	comp=Z,297nm,1.8s							
V24A	Rampart Ranch,	60.56	300	⇓P		P	19 15 27.8	+0.8
	baz=60							
U20A	Newcomb	60.59	303	⇓P		P	19 15 27.9	+0.7
	baz=60							
DMN	Daman	60.61	94	eP		P	19 15 27.6	+0.1
	comp=Z,117nm,1.6s							
KSRS	Korea Array	60.64	51	P		P	19 15 27.1	-0.2
	comp=Z,3.7nm,0.8s,baz=348,slow=5.7,SNR=12							
KSRS	Korea Array	60.64	51	P		P	19 15 27.1	-0.2
	comp=Z,4.0nm,0.8s							
KSAR	Wonju Array Be	60.65	51	P		P	19 15 27.1	-0.3
KSAR	Wonju Array Be	60.65	51	P		P	19 15 27.0	-0.3
V22A	San Miguel Ran	60.71	302	⇓P		P	19 15 28.7	+0.6
	baz=61							
PKI	Pulchoki	60.72	94	eP		P	19 15 28.3	0.0
	comp=Z,206nm,1.9s							
V23A	Ortiz Mt. (NFS	60.73	301	⇑P		P	19 15 28.9	+0.8
	baz=61							
W27A	Bowe Ranch, En	60.74	298	⇓P		P	19 15 28.7	+0.6
	baz=61,SNR=12							
W26A	Owens Ranch, T	60.86	299	⇑P		P	19 15 29.5	+0.5
	baz=61							
X30A	Coker Ranch, T	60.87	296	⇓P		P	19 15 29.9	+1.0
	baz=61							
W25A	X Bar L Ranch,	60.88	299	⇑P		P	19 15 29.2	+0.1
	baz=61							
V21A	Milan	60.97	302	⇓P		P	19 15 29.9	+0.2
	baz=61							
Y32A	R-V Farms, Ver	60.98	294	⇑P		P	19 15 30.0	+0.4
	baz=61							
X29A	Tulia	61.05	296	⇑P		P	19 15 30.9	+0.7
	baz=61							
X28A	Dimmitt	61.08	297	⇓P		P	19 15 31.3	+0.9
	baz=61,SNR=11							
W24A	Lazy 6 Ranch,	61.09	300	⇓P		P	19 15 31.1	+0.5
	baz=61,SNR=9.5							
V20A	Brimhall	61.14	303	⇑P		P	19 15 31.3	+0.4
	baz=61							
X27A	F and S Farms,	61.15	298	⇑P		P	19 15 31.7	+0.8
	baz=61							
Y31A	Rekieta Farm,	61.20	295	⇓P		P	19 15 32.0	+0.8
	baz=61							
U15A	North Rim	61.28	307	⇓P		P	19 15 32.5	+0.6
	baz=61							
W23A	Warner Place,	61.29	301	⇑P		P	19 15 32.6	+0.6
	baz=61							
MLAC	Mammoth Lakes	61.31	313	⇑P		P	19 15 33.4	+1.3
	baz=61							
X26A	CR and CF Fran	61.39	298	⇑P		P	19 15 33.4	+0.8
	baz=61,SNR=16							
TAPN	Taplejung	61.48	92	eP		P	19 15 33.5	+0.1
	comp=Z,151nm,1.7s							
W22A	Albuquerque	61.52	301	⇑P		P	19 15 33.9	+0.4
	baz=61							
ANMO	Albuquerque	61.56	301	eP		P	19 15 34.8	+1.0
	comp=Z,27nm,1.6s							
ANMO	Albuquerque	61.56	301	eP		P	19 15 34.8	+1.0
	comp=Z,27nm,1.6s							
X25A	Clemmons Ranch	61.59	299	⇓P		P	19 15 34.8	+0.8
	baz=61							
RAMN	Ramite	61.59	93	eP		P	19 15 33.6	-0.5
	comp=Z,108nm,1.7s							
Y29A	Porterfield Fa	61.60	296	⇑P		P	19 15 34.5	+0.6
	baz=62							
Z32A	Haskell	61.66	294	⇑P		P	19 15 35.0	+0.7
	baz=62							
X24A	Lazy VL Ranch,	61.72	300	⇑P		P	19 15 35.0	+0.2
	baz=62							
MSTX	Muleshoe	61.73	297	⇑P		P	19 15 35.4	+0.6
	baz=62							
W20A	Ramah	61.80	303	⇑P		P	19 15 36.1	+0.7
	baz=62							
Z31A	Sharp Cattle R	61.80	295	⇓P		P	19 15 35.6	+0.5
	baz=62							
CD2	Chengdu	61.85	75	eP		P	19 15 36.4	+0.8
CD2				pP		pP	19 15 41.1	+0.7
CD2				sP		sP	19 15 43.3	+1.0
CD2				PcP		PcP	19 16 17.3	+0.9
CD2				S		S	19 23 57.5	-0.7
CD2				sS		sS	19 24 04.8	-1.4
CD2				ScS		SKKSac	19 25 24.3	-2.1
CD2				SS		SS	19 27 59.9	+0.4
CD2				pmax		pmax		
	comp=Z,40nm,1.6s							
CD2				pmax		pmax		
	comp=Z,140nm,8.2s							
CD2				LR		LR		
	comp=N,700nm,19.0s							
CD2				LR		LR		
	comp=E,760nm,19.0s							
CD2				LR		LR		
	comp=Z,980nm,19.0s							
ODAN	Odare	61.87	92	eP		P	19 15 36.3	+0.3
	comp=Z,264nm,1.8s							
Y27A	Causey	61.90	298	⇑P		P	19 15 36.9	+0.9
	baz=62,SNR=14							
WUAZ	Wupatki	61.98	305	eP		P	19 15 38.0	+1.4
	comp=Z,14nm,1.1s							
WUAZ	Wupatki	61.98	305	eP		P	19 15 38.0	+1.4
	comp=Z,14nm,1.1s							
WUAZ	Wupatki	61.98	305	⇑P		P	19 15 37.5	+0.9
	baz=62							
Y26A	Elida	62.00	298	⇓P		P	19 15 37.7	+1.0
	baz=62,SNR=12							
Z30A	Sanderson Ranc	62.04	296	⇓P		P	19 15 37.3	+0.5
	baz=62							
W18A	Petrified Fore	62.05	304	⇑P		P	19 15 38.1	+1.0
	baz=62							
X22A	Bernardo	62.09	301	⇑P		P	19 15 37.8	+0.5
	baz=62							
Y25A	Mesa, Roswell	62.18	299	⇓P		P	19 15 38.6	+0.7
	baz=62,SNR=9.8							
Z29A	Hungry Hill Ra	62.19	296	⇓P		P	19 15 38.6	+0.7
	baz=62,SNR=9.9							
Z28A	Tucker Farm, M	62.31	297	⇑P		P	19 15 39.4	+0.7
	baz=62							
X21A	Alamocita Cree	62.31	302	⇑P		P	19 15 39.5	+0.6
	baz=62							
Y24A	Capitan	62.33	300	⇓P		P	19 15 40.2	+1.2
	baz=62,SNR=14							
ABTX	Abilene, Hawle	62.36	294	⇑P		P	19 15 39.7	+0.7
	baz=62							
BNM	Barren Site	62.36	301	eP		P	19 15 40.2	+1.0
	comp=Z,0.9nm,0.8s							
BNM	Barren Site	62.36	301	eP		P	19 15 40.2	+1.0
	comp=Z,0.9nm,0.8s							
X20A	Quemado	62.36	303	⇓P		P	19 15 40.1	+0.9
	baz=62							
Y23A	Lovelace Mesa,	62.45	300	⇑P		P	19 15 40.6	+0.9
	baz=62							
Z27A	Tatum	62.46	298	⇑P		P	19 15 40.6	+0.9
	baz=62,SNR=11							
131A	Roby	62.47	295	⇓P		P	19 15 40.0	+0.3
	baz=62							
MPMC	Manual Prospec	62.60	311	⇓P		P	19 15 42.4	+1.7
	baz=62,SNR=11							
Y22A	Socorro	62.64	301	⇑P		P	19 15 41.7	+0.7
	baz=62							
Z26A	Caprock	62.66	298	⇑P		P	19 15 42.0	+1.0
	baz=62,SNR=10							
130A	Snyder	62.67	295	⇓P		P	19 15 41.8	+0.7
	baz=62							
Y21A	Point of Rocks	62.71	302	⇓P		P	19 15 41.9	+0.4
	baz=63							
Z25A	Roswell	62.81	299	⇑P		P	19 15 42.4	+0.4
	baz=63							
W13A	Hualapai Mount	62.87	308	⇑P		P	19 15 43.5	+0.9
	baz=63							
Z24A	Sheeppen Canyo	62.89	299	⇓P		P	19 15 43.3	+0.6
	baz=63							
TUQ	Turquoise Moun	62.92	310	⇓P		P	19 15 43.6	+0.7
	baz=63							
Y20A	Horse Springs,	62.95	302	⇓P		P	19 15 43.8	+0.6
	baz=63							
128A	Castleberry Fa	62.97	297	⇓P		P	19 15 43.9	+0.8
	baz=63							
X16A	Lo Mia Camp, P	63.06	305	⇑P		P	19 15 44.5	+0.7
	baz=63							
232A	Coleman	63.07	294	⇓P		P	19 15 44.5	+0.8
	baz=63							
127A	Arkansas Junct	63.10	297	⇓P		P	19 15 44.6	+0.6
	baz=63							
Z23A	Rita Site, Whi	63.14	300	⇓P		P	19 15 45.1	+0.8
	baz=63							
ISA	Isabella	63.16	312	eP		P	19 15 45.9	+1.6
ISA				pmax		pmax		
	comp=Z,17nm,1.1s							
ISA	Isabella	63.16	312	eP		P	19 15 45.9	+1.6
	comp=Z,17nm,1.1s							
ISA	Isabella	63.16	312	eP		P	19 15 45.9	+1.6
	comp=Z,17nm,1.1s							
ISA	Isabella	63.16	312	⇑P		P	19 15 45.8	+1.5
	baz=63,SNR=9.6							
231A	Bronte	63.17	294	⇓P		P	19 15 44.9	+0.6
	baz=63							
LRMC	Laal Mountai	63.20	311	⇓P		P	19 15 45.9	+1.3
	baz=63							
TOA0	Torodi Ar. Sit	63.21	186	eP		P	19 15 44.3	-0.4
TOA0	Torodi Ar. Sit	63.21	186	eP		P	19 15 44.3	-0.4
TORD	Torodi Ar. Bea	63.21	186	P		P	19 15 44.4	-0.4
TORD	Torodi Ar. Bea	63.21	186	P		P	19 15 44.4	-0.4
	comp=Z,18nm,1.1s,baz=356,slow=6.7,SNR=62							
TORD				LR		LR	19 45 31.3	
	comp=Z,144nm,18.5s,baz=355,slow=38							
TORD	Torodi Ar. Bea	63.21	186	P		P	19 15 44.3	-0.4
GSC	Goldstone	63.22	310	⇑P		P	19 15 46.2	+1.5
	baz=63							
126A	Clayton Basin,	63.27	298	⇓P		P	19 15 46.1	+0.9
	baz=63							
Z22A	Elephant Butte	63.30	301	⇓P		P	19 15 46.2	+0.9
	baz=63							
MAT	Matsushiro	63.32	43	P		P	19 15 44.3	-1.0
MAT				S		S	19 24 23.2	+6.6
MJAR	Matsushiro Arr	63.33	43	P		P	19 15 45.6	+0.3
MJAR	Matsushiro Arr	63.33	43	P		P	19 15 45.6	+0.3
	comp=Z,10nm,1.1s,baz=338,slow=7.0,SNR=17							
MJAR	Matsushiro Arr	63.33	43	P		P	19 15 45.6	+0.3
	comp=Z,11nm,1.1s							
230A	Sterling City	63.38	295	⇑P		P	19 15 46.3	+0.4
	baz=63							
Z21A	St. Cloud Mine	63.39	302	⇓P		P	19 15 47.0	+1.0
	baz=63							
125A	Gardner Draw,	63.39	299	⇑P		P	19 15 47.0	+1.0
	baz=63,SNR=8.4							
228A	UT Block 9, Go	63.48	297	⇑P		P	19 15 46.8	+0.3
	baz=63							
GMRC	Granite Mounta	63.51	309	⇓P		P	19 15 48.2	+1.5
	baz=63,SNR=7.5							
124A	Stringfield Ra	63.52	299	⇑P		P	19 15 48.1	+1.1
	baz=63,SNR=9.6							
332A	Millersview	63.58	294	⇓P		P	19 15 47.7	+0.7
	baz=63,SNR=9.2							
HEC	Hector,Ludlow	63.59	310	⇓P		P	19 15 48.2	+1.0
	baz=63							
227A	Bennet, Jal	63.73	297	⇑P		P	19 15 49.1	+1.0
	baz=64							
Z20A	Nine Sixteen R	63.76	302	⇑P		P	19 15 49.0	+0.6
	baz=64							
ENH	Enshi	63.77	70	eP		P	19 15 48.0	-0.3
	comp=Z,81nm,1.6s							
ENH	Enshi	63.77	70	eP		P	19 15 48.0	-0.3
	comp=Z,81nm,1.6s							
331A	San Angelo	63.80	294	⇓P		P	19 15 49.3	+0.8
	baz=64							
Y14A	Wickenburg	63.83	307	⇑P		P	19 15 50.2	+1.5
	baz=64							
EDW2	Edwards Air Fo	63.84	311	⇓P		P	19 15 50.4	+1.6
	baz=64							
226B	Tecolote Peak,	63.85	298	⇓P		P	19 15 49.8	+0.9
	baz=64							
330A	Mertzon	63.86	295	⇑P		P	19 15 49.7	+0.7
	baz=64							
225A	Deer Hill, Car	63.96	299	⇑P		P	19 15 50.4	+0.6
	baz=64							
329A	Wagon Wheel Ra	63.96	296	⇑P		P	19 15 50.4	+0.8
	baz=64							
IRM	Iron Mountain	64.02	309	⇓P		P	19 15 51.6	+1.7
	baz=64							
432A	Menard	64.08	294	⇓P		P	19 15 51.2	+0.8
	baz=64							
NJ2	Nanjing	64.08	61	eP		P	19 15 50.6	+0.3
NJ2				S		S	19 24 24.0	-2.0
NJ2				pmax		pmax		
	comp=Z,80nm,1.5s							
NJ2				LR		LR		
	comp=N,1μm,23.7s							
NJ2				LR		LR		
	comp=E,3μm,19.0s							
NJ2				LR		LR		
	comp=Z,600nm,16.2s							
224A	Cornudas Mount	64.14	299	⇓P		P	19 15 51.8	+0.9
	baz=64							
PKM	Peak Mountain	64.15	313	⇓P		P	19 15 52.3	+1.3
	baz=64							
121A	Cookes Peak, D	64.16	301	⇑P		P	19 15 52.1	+1.0
	baz=64							
SHL	Shillong	64.18	88	ePKP		P	19 15 50.5	-0.8
328A	Wristen Ranch,	64.24	297	⇓P		P	19 15 51.9	+0.5
	baz=64,SNR=10.0							
Y12C	Blythe	64.30	308	⇓P		P	19 15 53.2	+1.5
	baz=64							
120A	U Bar Ranch, L	64.32	302	⇑P		P	19 15 53.3	+1.2
	baz=64,SNR=10							
BELC	Belle Mtn. Jos	64.33	309	⇑P		P	19 15 53.4	+1.2
	baz=64							
222A	Williams Famil	64.44	301	⇑P		P	19 15 53.4	+0.6
	baz=64							
431A	Sonora	64.44	294	⇓P		P	19 15 53.5	+0.8
	baz=64,SNR=13							
JCT	Junction City	64.46	294	eP		P	19 15 53.6	+0.7
JCT				pmax		pmax		
	comp=Z,43nm,1.3s							
JCT	Junction City	64.46	294	eP		P	19 15 53.6	+0.7
	comp=Z,43nm,1.3s							
JCT	Junction City	64.46	294	eP		P	19 15 53.6	+0.7
	comp=Z,43nm,1.3s							
JCT	Junction City	64.46	294	⇑P		P	19 15 53.7	+0.7
	baz=64							
430A	Baggett Ranch,	64.47	295	⇓P		P	19 15 53.5	+0.5
	baz=64,SNR=10							
MNTX	Cornudas Mount	64.47	299	eP		P	19 15 52.9	0.0
	comp=Z,2.3nm,0.9s							
MNTX	Cornudas Mount	64.47	299	eP		P	19 15 52.9	0.0
	comp=Z,2.3nm,0.9s							
BC3	Big Chuckawall	64.57	309	⇓P		P	19 15 54.9	+1.3
	baz=64							
WHN	Wuhan	64.58	66	⇓P		P	19 15 53.8	+0.2
WHN				S		S	19 24 30.0	-2.1
WHN				LR		LR		
	comp=Z,940nm,14.9s							
221A	Mesquite Ranch	64.67	301	⇓P		P	19 15 54.9	+0.6
	baz=64							
325A	Bean Ranch, Si	64.70	299	⇑P		P	19 15 55.0	+0.3
	baz=65							
324A	Moseley Ranch,	64.74	299	⇓P		P	19 15 55.4	+0.6
	baz=65							
429A	Davenport Ranc	64.77	296	⇑P		P	19 15 55.4	+0.4
	baz=65							
PFO	Pinyon Flat Ob	64.80	310	⇑P		P	19 15 55.7	+0.6
	baz=65							
532A	Rocksprings	64.82	294	⇑P		P	19 15 55.9	+0.6
	baz=65							
428A	Kincaid Ranch,	64.84	296	⇓P		P	19 15 56.3	+0.9
	baz=65,SNR=8.7							
427A	Hayter Ranch,	64.88	297	⇑P		P	19 15 56.5	+0.8
	baz=65,SNR=9.3							
220A	Playas Peak, P	64.92	302	⇓P		P	19 15 56.5	+0.5
	baz=65							
531A	Rocksprings	64.92	294	⇓P		P	19 15 56.3	+0.3
	baz=65							
TUC	Tucson	64.98	304	eP		P	19 15 57.9	+1.6
TUC				pmax		pmax		
	comp=Z,19nm,1.4s							
TUC	Tucson	64.98	304	eP		P	19 15 57.9	+1.6
	comp=Z,19nm,1.4s							
TUC	Tucson	64.98	304	eP		P	19 15 57.9	+1.6
	comp=Z,19nm,1.4s							
530A	J-C Ranch, Com	65.11	295	⇑P		P	19 15 57.7	+0.6
	baz=65,SNR=12							
113A	Mohawk Valley,	65.11	307	⇓P		P	19 15 57.9	+0.8
	baz=65							
426A	McDonald Obser	65.19	298	⇑P		P	19 15 58.0	+0.1
	baz=65							
425A	Indio Mountain	65.27	298	⇓P		P	19 15 59.0	+0.7
	baz=65,SNR=19							
529A	Stev Forest Ra	65.33	296	⇓P		P	19 15 58.9	+0.4
	baz=65							
528A	Cox Ranch, San	65.41	296	⇓P		P	19 15 60.0	+0.8
	baz=65							
MONP	Monument Peak	65.49	309	⇑P		P	19 16 00.5	+0.7
	baz=65							
319A	Douglas	65.58	303	⇓P		P	19 16 01.1	+0.8
	baz=65							
527A	Woodward Ranch	65.60	297	⇓P		P	19 16 00.9	+0.5
	baz=66,SNR=12							
631A	Perdido Creek	65.66	294	⇑P		P	19 16 01.0	+0.4
	baz=66							
214A	Organ Pipe Nat	65.72	306	⇓P		P	19 16 01.6	+0.6
	baz=66							
526A	Mary Lane Ranc	65.78	297	⇑P		P	19 16 02.3	+0.7
	baz=66,SNR=9.1							
SCI	San Clemente I	65.79	311	⇓P		P	19 16 02.7	+1.2
	baz=66							
628A	Black Gap, Mar	66.08	296	⇑P		P	19 16 04.0	+0.6
	baz=66							
732A	Laxson Ranch,	66.18	293	⇓P		P	19 16 04.4	+0.4
	baz=66,SNR=9.5							
627A	Terlingua Ranc	66.22	297	⇑P		P	19 16 04.6	+0.2
	baz=66							
626A	Big Bend Ranch	66.28	297	⇑P		P	19 16 05.3	+0.5
	baz=66,SNR=12							
TXAR	Lajitas Array	66.40	297	P		P	19 16 05.7	+0.2
TXAR	Lajitas Array	66.40	297	P		P	19 16 05.7	+0.2
	comp=Z,3.9nm,1.0s,baz=36,slow=4.7,SNR=26							
TXAR	Lajitas Array	66.40	297	P		P	19 16 05.7	+0.2
	comp=Z,4.0nm,1.0s							
GYA	Guiyang	66.80	74	P		P	19 16 09.8	+1.7
GYA				PP		PP	19 18 38.4	+3.6
GYA				SKS		SKiKP	19 26 02.0	-6.6
GYA				SS		SS	19 29 18.8	+1.9
GYA				pmax		pmax		
	comp=Z,20nm,1.0s							
GYA				pmax		pmax		
	comp=Z,120nm,5.2s							
GYA				LR		LR		
	comp=N,560nm,19.5s							
GYA				LR		LR		
	comp=E,480nm,20.2s							
GYA				LR		LR		
	comp=Z,530nm,19.8s							
KMI	Kunming	67.17	78	P		P	19 16 10.3	-0.4
KMI				pP		pP	19 16 15.3	-0.3
KMI				sP		sP	19 16 16.5	-0.9
KMI				S		S	19 25 04.3	-0.1
KMI				pmax		pmax		
	comp=Z,15nm,1.6s							
KMI				LR		LR		
	comp=N,400nm,18.3s							
KMI				LR		LR		
	comp=E,390nm,16

comp=Z,111nm,20.9s,baz=103,slow=40
IPM Ipoh 86.67 85 P **P** 19 17 58.9 -1.3
comp=Z,26nm,1.5s
PSI Prapat 87.79 87 P **P** 19 18 04.4 -1.4
PSI Prapat 87.79 87 P **P** 19 18 04.4 -1.4
comp=Z,4.2nm,0.6s,baz=320,slow=9.8,SNR=7.6
OTAV Otavalo 88.65 266 *e*P **P** 19 18 11.7 +1.5
comp=Z,46nm,1.4s
OTAV Otavalo 88.65 266 *e*P **P** 19 18 11.7 +1.5
comp=Z,46nm,1.4s
MYLDM Lahad Datu 90.03 68 P **P** 19 18 16.4 +0.3
comp=Z,20nm,1.5s
SBUM Sibu 91.25 75 P **P** 19 18 21.1 -0.7
WRA Warramunga Arr 117.76 58 PKP **PKPdf** 19 24 01.6 -0.8
WRA Warramunga Arr 117.76 58 PKP **PKPdf** 19 24 01.6 -0.8
comp=Z,0.9nm,0.9s,baz=334,slow=1.9,SNR=3.9
ASAR Alice Springs 121.28 59 PKP **PKPdf** 19 24 08.1 -1.0
ASAR Alice Springs 121.28 59 PKP **PKPdf** 19 24 08.1 -1.0
comp=Z,1.2nm,0.7s,baz=345,slow=2.2,SNR=11
SYO Syowa Base 146.48 159⇑ *e*PKPdf **PKPdf** 19 24 54.6 +0.3
SYO Syowa Base 146.48 159⇓ *e*PKPbc **PKPab** 19 24 57.8 +1.0
SYO Syowa Base 146.48 159⇑ *e*P PKPab 19 25 09.5 +13
VNA1 Neumayer--Stat 147.03 189 *e*PKP **PKPab** 19 24 58.3 -0.6
MAW Mawson 147.78 143 *e*PKPbc **PKPbc** 19 24 59.6 +0.2
MAW Mawson 147.78 143 PKPbc **PKPbc** 19 25 00.2 +0.8
comp=Z,15nm,0.8s,baz=19,slow=3.4,SNR=27
SNAA Sanae 147.88 186 *e*PKP **PKPbc** 19 25 00.2 +0.4
SNAA Sanae 147.88 186 *e*PKPbc **PKPbc** 19 24 59.8 0.0

ISCJB ***22*** *19:11:43.1±0.7, 76°.30N±0°.05×8°.6E±0°.4, h10km, mb3.5/5, Error ellipse: s-maj=14.2km s-min=7.3km az=8.8*
CSEM ***22*** *19:11:43.8±0.8, 76°.44N×7°.91E, h10km, ML3.1, Error ellipse: s-maj=26.6km s-min=8.1km az=85.0*
IDC ***22*** *19:11:43.5±0.9, 76°.27N×8°.07E, h0km, mb3.6/5, mb1 3.8/10, mb1mx3.6/31, mbtmp3.6/10, ML3.0/5, Error ellipse: s-maj=19.5km s-min=11.9km az=101.0*
NAO ***22*** *19:11:45.8±3.3, 76°.38N×8°.87E, ML3.1*
BER ***22*** *19:11:47.0±4.8, 76°.34N×8°.45E, h18km±83km, MD2.8, ML2.0, ML3.1(NAO)*

ISC 22 19:11:44.1±0.8, 76°22N±0°06×8°83E±0°09, h10km, n20, σ1s37/24, mb3.4/5, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SPA0	**Spitsbergen Ar**	**2.59**	**37**	Pn	**Pn**	**19 12 26.0**	**+0.1**
	baz=210,slow=16						
SPA0				Sn	**Sn**	19 12 56.7	-0.6
	baz=210,slow=14						
SPA0	**Spitsbergen Ar**	**2.59**	**37**	Pn	**Pn**	**19 12 26.0**	**+0.1**
	baz=210,slow=16						
SPA0				Sn	**Sn**	19 12 56.7	-0.6
	baz=210,slow=14						
SPA0	**Spitsbergen Ar**	**2.59**	**37**	Pn	**Pn**	**19 12 26.0**	**+0.1**
	baz=210,slow=14,SNR=216						
SPA0				Sn	**Sn**	19 12 56.7	-0.6
	baz=210,slow=12						
SPITS	**Spitsbergen Ar**	**2.59**	**37**	Pn	**Pn**	**19 12 26.2**	**+0.3**
	baz=210,slow=14,SNR=63						
SPITS				Sn	**Sn**	19 12 57.9	+0.6
	baz=228,slow=26,SNR=6.4						
KBS	**Kingsbay**	**2.80**	**12**	Pn	**Pn**	**19 12 26.8**	**-2.1**
KBS				Sn	Sn	19 12 56.3	-6.3
KBS	**Kingsbay**	**2.80**	**12**	Pn	**Pn**	**19 12 26.8**	**-2.1**
KBS				Sn	Sn	19 12 56.3	-6.3
KBS				AML	AML	19 13 01.3	
	comp=Z,16nm,0.2s						
KBS	**Kingsbay**	**2.80**	**12**	Pn	**Pn**	**19 12 26.8**	**-2.1**
KBS				Sn	Sn	19 12 56.3	-6.3
	comp=Z,16nm,0.2s,SNR=55						
ARA0	**ARCESS Array S**	**8.28**	**135**	Pn	Pn	19 13 47.8	+3.8
	baz=329,slow=11						
ARA0				Sn	**Sn**	**19 15 15.4**	**-2.0**
	baz=331,slow=22						
ARA0	**ARCESS Array S**	**8.28**	**135**	Pn	Pn	19 13 47.8	+3.8
	baz=329,slow=11						
ARA0				Sn	**Sn**	**19 15 15.4**	**-2.0**
	baz=331,slow=22						
ARA0	**ARCESS Array S**	**8.28**	**135**	Pn	Pn	19 13 47.8	+3.8
	baz=329,slow=10,SNR=1.3						
ARCES	**ARCESS Array B**	**8.28**	**135**	Pn	**Pn**	**19 13 45.1**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=327,slow=11,SNR=6.1						
ARCES				Sn	**Sn**	**19 15 15.1**	**-2.3**
	comp=Z,0.4nm,0.3s,baz=340,slow=20,SNR=2.9						
NOA	**NORSAR Array B**	**15.28**	**176**	Pn	**P**	**19 15 24.0**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=352,slow=12,SNR=2.9						
FINES	**FINESS Array B**	**15.97**	**149**	Pn	**P**	**19 15 31.2**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=359,slow=14,SNR=3.0						
HFS	**Hagfors**	**16.25**	**171**	Pn	**P**	**19 15 34.1**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=354,slow=12,SNR=3.8						
GERES	**GERESS Array B**	**27.55**	**173**	P	**P**	**19 17 31.5**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=23,slow=7.2,SNR=4.5						
ILAR	**Eielson Array**	**38.42**	**344**	P	**P**	**19 19 04.8**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=15,slow=6.6,SNR=4.7						
MKAR	**Makanchi Array**	**41.21**	**91**	P	**P**	**19 19 30.7**	**+2.2**
	comp=Z,0.3nm,0.6s,baz=351,slow=9.0,SNR=3.5						
TORD	**Torodi Ar. Bea**	**63.18**	**188**	P	**P**	**19 22 11.2**	**-0.8**
	comp=Z,1.4nm,1.0s,baz=358,slow=6.5,SNR=6.0						
TXAR	**Lajitas Array**	**66.85**	**299**	P	**P**	**19 22 37.5**	**+1.6**
	comp=Z,0.1nm,0.3s,baz=36,slow=6.7,SNR=3.5						
MAW	**Mawson**	**147.44**	**145**	PKPbc	**PKPbc**	**19 31 26.1**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=4.6,slow=12,SNR=3.5						

ISCJB ***22*** *19:17:35.4±2.9, 76°.32N±0°.03×7°.5E±0°.2, h3km±18km, mb4.3/56, MS4.9/1, Error ellipse: s-maj=8.5km s-min=5.4km az=16.8*
CSEM ***22*** *19:17:36.4±0.2, 76°.28N×7°.29E, h2km, mb4.4/16, Error ellipse: s-maj=7.5km s-min=5.4km az=94.0*
NAO ***22*** *19:17:36.4±1.8, 76°.23N×7°.99E, ML3.7*
IDC ***22*** *19:17:36.8±0.5, 76°.22N×7°.24E, h0km, mb3.9/20, mb1 4.2/25, mb1mx4.1/36, mbtmp4.0/25, ML3.7/5, MS3.4/4, Ms1 3.4/4, ms1mx2.9/55, Error ellipse: s-maj=13.8km s-min=10.1km az=66.0*
BER ***22*** *19:17:37.2±2.8, 76°.24N×7°.62E, h10km, ML2.5, ML3.7(NAO)*
NEIC ***22*** *19:17:38.2±0.3, 76°.27N×7°.24E, h10km, mb4.5/12, Error ellipse: s-maj=7.4km s-min=5.0km az=87.0*
SZGRF ***22*** *19:17:48.6, 75°.44N×14°.28E, h27km, mb4.6, Svalbard, Norway, region*

ISC 22 19:17:38.2±1.0, 76°29N±0°.04×7°58E±0°.06, h14km±6km, n210, σ1s63/210, mb4.3/54, 1C-1D, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HSP	**Hornsund**	**1.99**	**65**	*e*P	**Pn**	**19 18 10.3**	**-1.1**
HSP				*e*S	**Sn**	**19 18 31.5**	**-4.5**
SPA0	**Spitsbergen Ar**	**2.73**	**42**	Pn	**Pn**	**19 18 20.9**	**-0.6**
	baz=225,slow=16						
SPA0				Sn	**Sn**	**19 18 51.7**	**-2.5**
	baz=219,slow=18						
SPA0	**Spitsbergen Ar**	**2.73**	**42**	Pn	**Pn**	**19 18 20.9**	**-0.6**
	baz=225,slow=16						
SPA0				Sn	**Sn**	**19 18 51.7**	**-2.5**
	baz=219,slow=18						
SPA0	**Spitsbergen Ar**	**2.73**	**42**	Pn	**Pn**	**19 18 20.9**	**-0.6**
	baz=225,slow=14,SNR=208						
SPA0				Sn	**Sn**	**19 18 51.7**	**-2.5**
	SNR=50						
SPITS	**Spitsbergen Ar**	**2.73**	**42**	Pn	**Pn**	**19 18 21.1**	**-0.5**
SPITS	**Spitsbergen Ar**	**2.73**	**42**	Pn	**Pn**	**19 18 21.1**	**-0.5**
	baz=212,slow=14,SNR=148						
SPITS				Sn	**Sn**	**19 18 51.4**	**-2.8**
	baz=230,slow=27,SNR=5.1						
SPITS				LR	LR	19 19 33.3	
	comp=Z,517nm,18.5s,baz=215,slow=41						
SPITS	**Spitsbergen Ar**	**2.73**	**42**	Pn	**Pn**	**19 18 21.0**	**-0.6**
KBS	**Kingsbay**	**2.82**	**17**	Pn	**Pn**	**19 18 20.8**	**-1.9**
KBS				Sn	**Sn**	**19 18 51.0**	**-5.5**
KBS	**Kingsbay**	**2.82**	**17**	Pn	**Pn**	**19 18 20.8**	**-1.9**
KBS				*e*S	**Sn**	**19 18 51.3**	**-5.1**
KBS				AML	AML	19 18 54.4	
	comp=Z,33nm,0.6s						
KBS	**Kingsbay**	**2.82**	**17**	*e*Pn	**Pn**	**19 18 21.1**	**-1.7**
KBS	**Kingsbay**	**2.82**	**17**	Pn	**Pn**	**19 18 20.8**	**-1.9**
	SNR=50						
KBS				*e*S	**Sn**	**19 18 51.3**	**-5.1**
	comp=Z,33nm,0.6s,SNR=50						
BJO	**Bjornoya**	**3.44**	**116**	*e*P	**Pn**	**19 18 29.7**	**-1.6**
BJO				*e*S	**Sn**	**19 19 06.3**	**-5.4**
BJO				AML	AML	19 19 10.4	
	comp=Z,47nm,0.4s						
BJO	**Bjornoya**	**3.44**	**116**	*e*P	**Pn**	**19 18 29.7**	**-1.6**
	SNR=50						
BJO				*e*S	**Sn**	**19 19 06.3**	**-5.4**
	comp=Z,47nm,0.4s,SNR=50						
JMIC	**Jan Mayen**	**6.97**	**228**	Pn	**Pn**	**19 19 17.2**	**-2.5**
JMIC	**Jan Mayen**	**6.97**	**228**	Pn	**Pn**	**19 19 17.2**	**-2.5**
JMIC	**Jan Mayen**	**6.97**	**228**	LR	LR	19 21 13.6	
	comp=Z,193nm,21.7s,baz=263,slow=32						
JMIC	**Jan Mayen**	**6.97**	**228**	Pn	**Pn**	**19 19 17.2**	**-2.5**
ARA0	**ARCESS Array S**	**8.54**	**133**	Pn	**Pn**	**19 19 38.8**	**-2.5**
	baz=340,slow=12						
ARA0				Sn	Sn	19 21 07.8	-9.4
	baz=332,slow=16						
ARA0	**ARCESS Array S**	**8.54**	**133**	Pn	**Pn**	**19 19 38.8**	**-2.5**
	baz=340,slow=12						
ARA0				Sn	Sn	19 21 07.8	-9.4
	baz=332,slow=16						
ARA0	**ARCESS Array S**	**8.54**	**133**	Pn	**Pn**	**19 19 38.8**	**-2.5**
	SNR=50						
ARCES	**ARCESS Array B**	**8.54**	**133**	Pn	**Pn**	**19 19 38.8**	**-2.5**
ARCES	**ARCESS Array B**	**8.54**	**133**	Pn	**Pn**	**19 19 38.8**	**-2.5**
	comp=Z,2.4nm,0.3s,baz=315,slow=10.0,SNR=29						
ARCES				Sn	Sn	19 21 08.7	-8.5
	comp=Z,2.4nm,0.3s,baz=332,slow=19,SNR=6.1						
ARCES				LR	LR	19 23 20.5	
	comp=Z,256nm,19.7s,baz=43,slow=40						
APA0	**Apatity Array**	**11.60**	**125**	Pn	Pn	19 20 18.9	-4.2
APA0	**Apatity Array**	**11.60**	**125**	Pn	Pn	19 20 18.9	-4.2
SUMG	**Summit**	**12.60**	**276**	*e*P	Pn	19 20 33.3	-3.8
	comp=Z,12nm,0.6s						
NB2	**NORSAR Subarra**	**15.37**	**173**	Pn	**Pn**	**19 21 14.9**	**+0.5**
NB2	**NORSAR Subarra**	**15.37**	**173**	P	**Pn**	**19 21 14.3**	**-0.1**
	comp=Z,6.2nm,0.9s,baz=357,slow=11						
NB2	**NORSAR Subarra**	**15.37**	**173**	Pn	**Pn**	**19 21 14.9**	**+0.5**
NB2	**NORSAR Subarra**	**15.37**	**173**	Pn	**Pn**	**19 21 14.9**	**+0.5**
NOA	**NORSAR Array B**	**15.37**	**173**	Pn	**Pn**	**19 21 15.2**	**+0.8**
NOA	**NORSAR Array B**	**15.37**	**173**	Pn	**Pn**	**19 21 15.2**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=331,slow=10.0,SNR=6.7						
NOA	**NORSAR Array B**	**15.37**	**173**	Pn	**Pn**	**19 21 15.2**	**+0.8**
JOF	**Joensuu**	**15.55**	**137**	*e*p	**Pn**	**19 21 13.1**	**-3.6**
	comp=Z,22nm,0.9s						
KAF	**Kangasniemi**	**15.57**	**146**	*e*p	**Pn**	**19 21 15.6**	**-1.3**
	comp=Z,22nm,0.9s						
FIA1	**FINESS Array S**	**16.18**	**147**	*e*P	**Pn**	**19 21 24.3**	**-0.5**
FIA0	**FINESS Array S**	**16.18**	**147**	Pn	**Pn**	**19 21 23.4**	**-1.4**
FIA0	**FINESS Array S**	**16.18**	**147**	Pn	**Pn**	**19 21 23.4**	**-1.4**
FIA0	**FINESS Array S**	**16.18**	**147**	Pn	**Pn**	**19 21 23.4**	**-1.4**
	SNR=50						
FINES	**FINESS Array B**	**16.18**	**147**	Pn	**Pn**	**19 21 24.0**	**-0.8**
FINES	**FINESS Array B**	**16.18**	**147**	Pn	**Pn**	**19 21 24.0**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=354,slow=13,SNR=8.9						
FINES				LR	LR	19 27 39.8	
	comp=Z,262nm,21.9s,baz=358,slow=37						
FINES	**FINESS Array B**	**16.18**	**147**	Pn	**Pn**	**19 21 24.0**	**-0.8**
HFS	**Hagfors**	**16.37**	**169**	Pn	**P**	**19 21 28.0**	**-2.1**
HFS	**Hagfors**	**16.37**	**169**	Pn	**P**	**19 21 28.0**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=359,slow=12,SNR=21						
HFS	**Hagfors**	**16.37**	**169**	Pn	**P**	**19 21 28.0**	**-2.1**
KONO	**Kongsberg**	**16.73**	**176**	*e*P	**P**	**19 21 35.3**	**+1.3**
	comp=Z,21nm,1.0s						
KONO	**Kongsberg**	**16.73**	**176**	*e*P	**P**	**19 21 35.3**	**+1.3**
	comp=Z,21nm,1.0s						
EKA	**Eskdalemuir Ar**	**21.42**	**197**	P	**P**	**19 22 25.1**	**-0.2**
EKA	**Eskdalemuir Ar**	**21.42**	**197**	P	**P**	**19 22 25.1**	**-0.2**
	comp=Z,2.5nm,0.8s,baz=18,slow=9.7,SNR=8.5						
EKA	**Eskdalemuir Ar**	**21.42**	**197**	P	**P**	**19 22 25.1**	**-0.2**
BSEG	**Bad Segeberg**	**22.47**	**176**	*e*P	**P**	**19 22 39.0**	**+2.5**
	comp=Z,74nm,1.0s						
BSEG				*e*pP	pP	19 22 45.5	+5.0
NACGM	**Naroch**	**22.65**	**150**	*e*	**P**	**19 22 35.0**	**-3.4**
MICGM	**Minsk**	**23.17**	**149**	*e*	P	19 22 49.0	+5.1
NRDL	**Niedersach Rie**	**23.91**	**176**	*e*P	**P**	**19 22 52.1**	**+1.1**
	comp=Z,25nm,1.0s						
NRDL				*e*pP	pP	19 22 58.7	+3.5
CLZ	**Clausthal**	**24.57**	**176**	*e*P	**P**	**19 22 58.5**	**+1.2**
	comp=Z,11nm,1.1s						
BUG	**Bochum--Univer**	**24.94**	**180**	*e*P	**P**	**19 23 02.5**	**+1.9**
	comp=Z,23nm,1.0s						
BUG				*e*pP	pP	19 23 09.3	+4.5
CLL	**Collm**	**25.17**	**172**	*e*P	**P**	**19 23 03.3**	**+0.7**
	comp=Z,6.0nm,1.0s						
CLL				*e*pP	pP	19 23 09.9	+3.1
CLL	**Collm**	**25.17**	**172**	*e*P	**P**	**19 23 03.0**	**+0.4**
	comp=Z,6.0nm,1.0s						
CLL				*es*P	**sP**	**19 23 09.0**	**+0.4**
CLL				*e*		19 23 24.0	
CLL				*e*		19 24 24.0	
NEUB	**Neuenburg**	**25.23**	**174**	*e*P	**P**	**19 23 05.2**	**+2.0**
	comp=Z,37nm,0.9s						
NEUB				*e*pP	pP	19 23 11.8	+4.4
FBE	**Freiberg**	**25.57**	**172**	*e*P	**P**	**19 23 07.4**	**+1.2**
	comp=Z,27nm,0.9s						
FBE				*e*pP	pP	19 23 13.8	+3.3
UBBA	**Unterbreizbach**	**25.58**	**176**	*e*P	**P**	**19 23 09.3**	**+3.0**
	comp=Z,12nm,1.6s						
BRG	**Berggiesshubel**	**25.64**	**171**	*e*P	**P**	**19 23 07.7**	**+0.8**
	comp=Z,13nm,1.2s						
BRG				*e*		19 23 13.7	
	comp=Z,6.8nm,1.1s						
BRG				*e*		19 24 23.7	
	comp=Z,7.1nm,1.1s						
BRG	**Berggiesshubel**	**25.64**	**171**	*e*P	**P**	**19 23 07.7**	**+0.8**
	comp=Z,13nm,1.2s						
BRG				*e*pP	pP	19 23 14.4	+3.3
KSP	**Ksiaz**	**25.77**	**167**	*e*P	**P**	**19 23 09.2**	**+1.1**
MOX	**Moxa**	**25.79**	**174**	*e*P	**P**	**19 23 09.6**	**+1.3**
	comp=Z,20nm,1.0s						
MOX				*e*pP	pP	19 23 16.1	+3.6
PLN	**Plauen**	**25.96**	**173**	*e*P	**P**	**19 23 10.9**	**+1.0**
	comp=Z,86nm,1.3s						
PLN				*e*pP	pP	19 23 17.8	+3.7
WERD	**Werda**	**26.00**	**173**	*e*P	**P**	**19 23 11.5**	**+1.2**
	comp=Z,21nm,1.4s						
TANN	**Tannenbergstha**	**26.04**	**173**	*e*P	**P**	**19 23 11.8**	**+1.1**
	comp=Z,13nm,1.3s						
TANN				*e*pP	pP	19 23 18.6	+3.7
GUNZ	**Gunzen**	**26.09**	**173**	*e*P	**P**	**19 23 12.4**	**+1.3**
	comp=Z,20nm,1.2s						
TNS	**Taunus Mts**	**26.16**	**179**	*e*P	**P**	**19 23 15.0**	**+3.2**
	comp=Z,10.0nm,1.0s						
TNS				*e*pP	pP	19 23 21.6	+5.6
WERN	**Wernitzgruen**	**26.17**	**173**	*e*P	**P**	**19 23 13.1**	**+1.3**
	comp=Z,26nm,1.1s						
WERN				*e*pP	pP	19 23 19.8	+3.8
BAIF	**Baives**	**26.36**	**185**	*e*P	**P**	**19 23 13.8**	**+0.4**
	comp=Z,22nm,1.1s						
BAIF	**Baives**	**26.36**	**185**	*e*P	**P**	**19 23 13.8**	**+0.4**
	comp=Z,22nm,1.1s						
BAIF	**Baives**	**26.36**	**185**	*e*P	**P**	**19 23 13.8**	**+0.4**
	comp=Z,11nm,1.1s						
ROTZ	**Rotzenmuhle**	**26.68**	**173**	*e*P	**P**	**19 23 17.9**	**+1.5**
	comp=Z,10.0nm,1.2s						
MORC	**Moravsky Berou**	**26.91**	**166**	*e*P	**P**	**19 23 19.2**	**+0.8**
	comp=Z,4.7nm,0.9s						
MORC	**Moravsky Berou**	**26.91**	**166**	*e*P	**P**	**19 23 19.2**	**+0.8**
	comp=Z,4.7nm,0.9s						
AKASG	**Malin Array Be**	**27.06**	**149**	P	**P**	**19 23 18.6**	**-1.1**
AKASG	**Malin Array Be**	**27.06**	**149**	P	**P**	**19 23 18.6**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=344,slow=9.5,SNR=4.7						
VRAC	**Vranov**	**27.32**	**167**	P	**P**	**19 23 23.3**	**+1.2**
VRAC	**Vranov**	**27.32**	**167**	P	**P**	**19 23 23.3**	**+1.2**
	comp=Z,12nm,0.8s,baz=359,slow=9.8,SNR=14						
VRAC	**Vranov**	**27.32**	**167**	P	**P**	**19 23 23.3**	**+1.2**
WET	**Wettzell**	**27.33**	**172**	*e*P	**P**	**19 23 24.0**	**+1.8**
	comp=Z,7.0nm,1.3s						
STHS	**Stebnicka Huta**	**27.52**	**160**	*e*P	**P**	**19 23 26.3**	**+2.4**
STHS				*e*		19 33 57.6	
STHS				*e*		19 34 04.4	
STHS	**Stebnicka Huta**	**27.52**	**160**	*e*P	**P**	**19 23 26.3**	**+2.4**
	comp=Z,4.1nm,1.0s						
GEC2	**GERESS Array S**	**27.65**	**171**	*e*P	**P**	**19 23 26.6**	**+1.4**
	comp=Z,9.0nm,1.2s						
GERES	**GERESS Array B**	**27.65**	**171**	P	**P**	**19 23 26.7**	**+1.5**
GERES	**GERESS Array B**	**27.65**	**171**	P	**P**	**19 23 26.7**	**+1.5**
	comp=Z,3.3nm,0.8s,baz=8.9,slow=7.0,SNR=15						
GERES	**GERESS Array B**	**27.65**	**171**	P	**P**	**19 23 26.7**	**+1.5**
PAGF	**Fort de Pagny**	**27.84**	**183**	*e*P	**P**	**19 23 27.6**	**+0.8**
PAGF	**Fort de Pagny**	**27.84**	**183**	*e*P	**P**	**19 23 27.6**	**+0.8**
PAGF	**Fort de Pagny**	**27.84**	**183**	*e*P	**P**	**19 23 27.6**	**+0.8**
MEZF	**Maizieres J'vi**	**27.90**	**184**	*e*P	**P**	**19 23 27.9**	**+0.6**
MEZF	**Maizieres J'vi**	**27.90**	**184**	*e*P	**P**	**19 23 27.9**	**+0.6**
MEZF	**Maizieres J'vi**	**27.90**	**184**	*e*P	**P**	**19 23 27.9**	**+0.6**
LDF	**La Druitiere**	**27.97**	**191**	*e*P	**P**	**19 23 26.8**	**-1.1**
LDF	**La Druitiere**	**27.97**	**191**	*e*P	**P**	**19 23 26.8**	**-1.1**
CRVS	**Cervenica-Dubn**	**28.05**	**160**	*e*P	**P**	**19 23 26.8**	**-1.9**
CRVS				*e*		19 34 04.8	
BFO	**Black Forest**	**28.06**	**179**	*e*P	P	19 23 34.3	+5.6
	comp=Z,11nm,1.2s						
BFO				*e*pP	pP	19 23 40.5	+7.5
KOLS	**Kolonicke sedl**	**28.09**	**159**	*e*P	**P**	**19 23 30.0**	**+1.0**
KOLS				*e*		19 34 02.1	
KOLS				*e*		19 34 08.1	
KOLS	**Kolonicke sedl**	**28.09**	**159**	*e*P	**P**	**19 23 30.0**	**+1.0**
	comp=Z,11nm,1.5s						
SFTF	**Sexfontaines**	**28.20**	**184**	*e*P	**P**	**19 23 30.4**	**+0.4**
SFTF	**Sexfontaines**	**28.20**	**184**	*e*P	**P**	**19 23 30.4**	**+0.4**
SFTF	**Sexfontaines**	**28.20**	**184**	*e*P	**P**	**19 23 30.4**	**+0.4**
GRR	**Gorron**	**28.21**	**192**	*e*P	**P**	**19 23 29.0**	**-1.0**
GRR	**Gorron**	**28.21**	**192**	*e*P	**P**	**19 23 29.0**	**-1.0**
VYHS	**Vyhne**	**28.27**	**164**	*e*P	**P**	**19 23 32.0**	**+1.4**
VYHS				*e*		19 34 03.9	
VYHS				*e*		19 34 09.4	
VYHS	**Vyhne**	**28.27**	**164**	*e*P	**P**	**19 23 32.0**	**+1.4**
	comp=Z,2.7nm,1.1s						
HAU	**Haudompre**	**28.39**	**182**	*e*P	**P**	**19 23 32.1**	**+0.4**
HAU	**Haudompre**	**28.39**	**182**	*e*P	**P**	**19 23 32.1**	**+0.4**
HAU	**Haudompre**	**28.39**	**182**	*e*P	**P**	**19 23 32.1**	**+0.4**
ZST	**Bratislava**	**28.46**	**167**	*e*P	**P**	**19 23 33.7**	**+1.5**
ZST	**Bratislava**	**28.46**	**167**	*e*P	**P**	**19 23 33.7**	**+1.5**
CONA	**Conrad Observa**	**28.66**	**168**	*i*pP	pP	19 23 35.8	-2.6
	comp=Z,9.1nm,0.7s						
CONA	**Conrad Observa**	**28.66**	**168**	P	pP	19 23 35.8	-2.6
	comp=Z,9.1nm,0.7s						
LOR	**Lormes**	**29.16**	**185**	*e*P	**P**	**19 23 38.2**	**-0.3**
	comp=Z,28nm,1.3s						
LOR	**Lormes**	**29.16**	**185**	*e*P	**P**	**19 23 38.2**	**-0.3**
	comp=Z,14nm,1.3s						
LOR	**Lormes**	**29.16**	**185**	*e*P	**P**	**19 23 38.2**	**-0.3**
	comp=Z,4.2nm,0.9s						
ARSA	**Arzberg**	**29.32**	**169**	*i*pP	pP	19 23 42.3	-1.9
	comp=Z,4.2nm,0.9s						
ARSA	**Arzberg**	**29.32**	**169**	P	pP	19 23 42.3	-1.9
	comp=Z,4.2nm,0.9s						
SSF	**Saint Saulge**	**29.37**	**186**	*e*P	**P**	**19 23 40.2**	**-0.2**
SSF	**Saint Saulge**	**29.37**	**186**	*e*P	**P**	**19 23 40.2**	**-0.2**
SSF	**Saint Saulge**	**29.37**	**186**	*e*P	**P**	**19 23 40.2**	**-0.2**
AVF	**Avril sur Loir**	**29.65**	**186**	*e*P	**P**	**19 23 42.6**	**-0.2**
	comp=Z,23nm,1.3s						
AVF	**Avril sur Loir**	**29.65**	**186**	*e*P	**P**	**19 23 42.6**	**-0.2**
	comp=Z,23nm,1.3s						
AVF	**Avril sur Loir**	**29.65**	**186**	*e*P	**P**	**19 23 42.6**	**-0.2**
	comp=Z,12nm,1.3s						
SMF	**Signal de Mont**	**29.78**	**185**	*e*P	**P**	**19 23 43.6**	**-0.4**
	comp=Z,11nm,1.0s						
SMF	**Signal de Mont**	**29.78**	**185**	*e*P	**P**	**19 23 43.6**	**-0.4**
	comp=Z,11nm,1.0s						
SMF	**Signal de Mont**	**29.78**	**185**	*e*P	**P**	**19 23 43.6**	**-0.4**
	comp=Z,5.7nm,1.0s						
BGF	**Bois d'Agland**	**29.89**	**187**	*e*P	**P**	**19 23 45.0**	**0.0**
BGF	**Bois d'Agland**	**29.89**	**187**	*e*P	**P**	**19 23 45.0**	**0.0**
TCF	**Toulx Ste Croi**	**30.18**	**187**	*e*P	**P**	**19 23 47.4**	**-0.2**
	comp=Z,17nm,1.1s						
TCF	**Toulx Ste Croi**	**30.18**	**187**	*e*P	**P**	**19 23 47.4**	**-0.2**
	comp=Z,17nm,1.1s						
TCF	**Toulx Ste Croi**	**30.18**	**187**	*e*P	**P**	**19 23 47.4**	**-0.2**
	comp=Z,8.6nm,1.1s						
LPL	**La Plagne**	**30.87**	**181**	*e*P	**P**	**19 23 55.0**	**+1.1**
LPL	**La Plagne**	**30.87**	**181**	*e*P	**P**	**19 23 55.0**	**+1.1**
LPL	**La Plagne**	**30.87**	**181**	*e*P	**P**	**19 23 55.0**	**+1.1**
LPG	**La Plagne**	**30.89**	**181**	*e*P	**P**	**19 23 55.2**	**+1.0**
LPG	**La Plagne**	**30.89**	**181**	*e*P	**P**	**19 23 55.2**	**+1.0**
LPG	**La Plagne**	**30.89**	**181**	*e*P	**P**	**19 23 55.2**	**+1.0**
RJF	**Les Rejaudoux**	**31.19**	**188**	*e*P	**P**	**19 23 56.1**	**-0.4**
RJF	**Les Rejaudoux**	**31.19**	**188**	*e*P	**P**	**19 23 56.1**	**-0.4**
RJF	**Les Rejaudoux**	**31.19**	**188**	*e*P	**P**	**19 23 56.1**	**-0.4**

ASAR	**Alice Springs**	**121.15**	**60**	PKP	**PKPdf**	**19 36 29.1**	**-0.7**
ASAR	**Alice Springs**	**121.15**	**60**	PKP	**PKPdf**	**19 36 29.1**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=8.6,slow=2.2,SNR=5.0						
ASAR	**Alice Springs**	**121.15**	**60**	PKIKP	**PKPdf**	**19 36 29.1**	**-0.7**
MAW	**Mawson**	**147.66**	**144**	PKPbc	**PKPab**	**19 37 21.1**	**-1.4**
	comp=Z,7.7nm,1.0s,baz=323,slow=5.9,SNR=10						

ISCJB ***22*** *19:18:52.8±0.5, 76°.31N±0°.05×7°.6E±0°.3, h10km, mb3.7/14, Error ellipse: s-maj=10.8km s-min=7.0km az=12.9*
IDC ***22*** *19:18:52.8±0.6, 76°.26N×7°.27E, h0km, mb3.8/14, mb1 4.0/18, mb1mx3.9/32, mbtmp3.8/18, ML3.4/4, Error ellipse: s-maj=15.7km s-min=12.3km az=67.0*
BER ***22*** *19:18:55.1±2.1, 76°.17N×7°.53E, h15km±362km, MD2.1, ML2.8*

ISC 22 19:18:54.4±0.6, 76°24N±0°.06×7°96E±0°.08, h10km, n24, σ1§55/28, mb3.7/14, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SPA0	**Spitsbergen Ar**	**2.70**	**40**		*eP*	**Pn**		**19 19 37.9**	**+0.1**
SPA0					*eS*	**Sn**		**19 20 10.2**	**-0.3**
SPITS	**Spitsbergen Ar**	**2.70**	**40**	Pn		**Pn**		**19 19 37.3**	**-0.5**
	baz=216,slow=15,SNR=6.8								
SPITS				Sn		**Sn**		**19 20 07.6**	**-2.9**
	baz=228,slow=26,SNR=2.0								
KBS	**Kingsbay**	**2.84**	**16**		*eP*	**Pn**		**19 19 38.5**	**-1.2**
BJO	**Bjornoya**	**3.33**	**116**		*eP*	**Pn**		**19 19 46.6**	**+0.2**
BJO					*eS*	**Sn**		**19 20 21.6**	**-4.4**
BJO				AML		AML		19 20 22.3	
	comp=Z,61nm,0.4s								
ARCES	**ARCESS Array B**	**8.44**	**134**	Pn		**Pn**		**19 20 55.9**	**-0.6**
	comp=Z,1.4nm,0.3s,baz=330,slow=11,SNR=4.9								
ARCES				Sn		Sn		19 22 23.5	-8.2
	comp=Z,2.7nm,0.3s,baz=334,slow=20,SNR=5.4								
NOA	**NORSAR Array B**	**15.31**	**174**	Pn		**P**		**19 22 32.9**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=352,slow=12,SNR=3.0								
FINES	**FINESS Array B**	**16.09**	**147**	Pn		**Pn**		**19 22 39.9**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=356,slow=12,SNR=2.3								
HFS	**Hagfors**	**16.30**	**170**	Pn		**P**		**19 22 46.3**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=357,slow=10,SNR=4.3								
EKA	**Eskdalemuir Ar**	**21.40**	**198**	P		**P**		**19 23 43.2**	**+1.4**
	comp=Z,1.8nm,0.8s,baz=14,slow=9.5,SNR=3.4								
VRAC	**Vranov**	**27.25**	**168**	P		**P**		**19 24 39.2**	**+0.9**
	comp=Z,1.4nm,0.4s,baz=5.5,slow=13,SNR=4.5								
GERES	**GERESS Array B**	**27.59**	**172**	P		**P**		**19 24 41.6**	**+0.2**
	comp=Z,2.1nm,0.9s,baz=1.0,slow=11,SNR=4.8								
ZALV	**Zalesovo Beam**	**35.38**	**84**	P		**P**		**19 25 51.0**	**+1.4**
	comp=Z,1.7nm,0.8s,baz=330,slow=9.5,SNR=5.1								
ZALV				PcP		**PcP**		**19 28 18.6**	**-0.6**
	comp=Z,1.0nm,0.6s,baz=303,slow=4.4,SNR=4.3								
BRTR	**Keskin Array B**	**38.33**	**147**	P		**P**		**19 26 16.8**	**+1.8**
	comp=Z,0.6nm,0.9s,baz=358,slow=8.7,SNR=2.3								
ILAR	**Eielson Array**	**38.34**	**343**	P		**P**		**19 26 15.6**	**+0.8**
	comp=Z,1.4nm,0.9s,baz=6.5,slow=7.4,SNR=5.4								
MKAR	**Makanchi Array**	**41.42**	**91**	P		**P**		**19 26 42.4**	**+1.9**
	comp=Z,1.6nm,0.8s,baz=335,slow=6.4,SNR=6.2								
SONM	**Songino Array**	**46.07**	**68**	P		**P**		**19 27 19.8**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=331,slow=8.4,SNR=4.8								
PDAR	**Pinedale Array**	**54.87**	**307**	P		**P**		**19 28 23.4**	**-1.3**
	comp=Z,0.3nm,0.3s,baz=33,slow=5.4,SNR=3.5								
KSRS	**Korea Array**	**60.48**	**52**	P		**P**		**19 29 03.9**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=338,slow=6.1,SNR=4.2								
NVAR	**Mina Array Bea**	**60.68**	**313**	P		**P**		**19 29 04.5**	**-1.0**
	comp=Z,0.3nm,0.7s,baz=44,slow=5.3,SNR=2.4								
TORD	**Torodi Ar. Bea**	**63.17**	**187**	P		**P**		**19 29 21.5**	**-0.7**
	comp=Z,3.0nm,0.9s,baz=360,slow=6.1,SNR=9.8								
TXAR	**Lajitas Array**	**66.66**	**298**	P		**P**		**19 29 43.6**	**-1.4**
	comp=Z,0.5nm,0.9s,baz=0.0,slow=5.4,SNR=2.1								
CMAR	**Chiang Mai Arr**	**72.44**	**85**	P		**P**		**19 30 21.8**	**+1.1**
	comp=Z,1.3nm,1.0s,baz=339,slow=7.7,SNR=5.2								
ASAR	**Alice Springs**	**121.09**	**60**	PKP		**PKPdf**		**19 37 45.1**	**-1.4**
	comp=Z,0.5nm,0.7s,baz=2.1,slow=1.9,SNR=6.3								
MAW	**Mawson**	**147.57**	**144**	PKPbc		**PKPbc**		**19 38 36.8**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=346,slow=4.2,SNR=7.4								

MAN 22 19:19:18, 14°.98N×119°.76E, h1km, mb4.5, ML3.4, MS3.3, Luzon

IDC ***22*** *19:23:56.7±1.8, 76°.31N×7°.22E, h0km, mb3.5/4, mb1 3.6/9, mb1mx3.5/31, mbtmp3.5/9, ML3.1/5, Error ellipse: s-maj=34.6km s-min=13.6km az=110.0*
CSEM ***22*** *19:23:56.0±0.9, 76°.28N×7°.33E, h10km, ML3.2, Error ellipse: s-maj=29.8km s-min=9.0km az=77.0*
BER ***22*** *19:23:58.7±2.4, 76°.22N×7°.83E, h10km, MD2.4, ML2.1, ML3.2(NAO)*
NAO ***22*** *19:23:58.4±3.3, 76°.25N×8°.59E, ML3.2*
ISCJB ***22*** *19:23:59.3±1.0, 76°.26N±0°.05×8°.9E±0°.4, h10km, mb3.4/4, Error ellipse: s-maj=12.9km s-min=6.4km az=17.3*

ISC 22 19:23:56.9±1.1, 76°25N±0°.05×8°35E±0°.09, h10km, n25, σ1§90/30, mb3.3/4, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**1.84**	**62**		*eP*		**Pb**	**19 24 30.2**	**-0.4**
HSP					*eS*		**Sb**	**19 24 53.0**	**-0.6**
SPA0	**Spitsbergen Ar**	**2.63**	**39**	Pn			**Pn**	**19 24 41.2**	**+1.8**
	baz=221,slow=16								
SPA0				Sn			**Sn**	**19 25 11.9**	**+0.6**
	baz=231,slow=22								
SPA0	**Spitsbergen Ar**	**2.63**	**39**	Pn			**Pn**	**19 24 41.2**	**+1.8**
	baz=221,slow=16								
SPA0				Sn			**Sn**	**19 25 11.9**	**+0.6**
	baz=231,slow=22								
SPA0	**Spitsbergen Ar**	**2.63**	**39**	Pn			**Pn**	**19 24 41.2**	**+1.8**
	baz=221,slow=14,SNR=367								
SPA0				Sn			**Sn**	**19 25 11.9**	**+0.6**
	baz=231,slow=19,SNR=3.7								
SPITS	**Spitsbergen Ar**	**2.63**	**39**	Pn			**Pn**	**19 24 41.2**	**+1.8**
	baz=216,slow=15,SNR=62								
SPITS				Sn			**Sn**	**19 25 12.5**	**+1.1**
	baz=226,slow=24,SNR=4.2								
KBS	**Kingsbay**	**2.80**	**14**	Pn			**Pn**	**19 24 41.0**	**-0.7**
KBS				Sn			**Sn**	**19 25 11.7**	**-3.7**
KBS	**Kingsbay**	**2.80**	**14**		*eP*		**Pn**	**19 24 41.5**	**-0.2**
KBS				AML			AML	19 25 07.1	
	comp=Z,14nm,0.3s								
KBS	**Kingsbay**	**2.80**	**14**	Pn			**Pn**	**19 24 41.0**	**-0.7**
KBS	**Kingsbay**	**2.80**	**14**		*eP*		**Pn**	**19 24 41.5**	**-0.2**
	SNR=50								
BJO	**Bjornoya**	**3.26**	**117**		*eP*		Pn	19 24 51.4	+3.5
BJO					*eS*		**Sn**	**19 25 25.8**	**-0.8**
BJO				AML			AML	19 25 31.1	
	comp=Z,15nm,0.5s								
BJO	**Bjornoya**	**3.26**	**117**		*eP*		Pn	19 24 51.4	+3.5
	SNR=50								
TRO	**Tromso**	**7.32**	**150**		*e*		Pn	19 25 48.5	+4.8
LOF	**Lofoten**	**8.31**	**166**		*eP*		**Sg**	**19 28 22.1**	**-1.1**
ARA0	**ARCESS Array S**	**8.38**	**135**	Pn			**Pn**	**19 25 59.2**	**+1.0**
	baz=328,slow=9.3								
ARA0				Sn			**Sn**	**19 27 28.0**	**-4.8**
	baz=333,slow=18								
ARA0	**ARCESS Array S**	**8.38**	**135**	Pn			**Pn**	**19 25 59.2**	**+1.0**
	baz=328,slow=9.3								
ARA0				Sn			**Sn**	**19 27 28.0**	**-4.8**
	baz=333,slow=18								
ARA0	**ARCESS Array S**	**8.38**	**135**	Pn			**Pn**	**19 25 59.2**	**+1.0**
	baz=328,slow=9.3,SNR=9.1								
ARCES	**ARCESS Array B**	**8.38**	**135**	Pn			**Pn**	**19 25 59.7**	**+1.5**
	comp=Z,0.6nm,0.3s,baz=330,slow=12,SNR=8.2								
ARCES				Sn			**Sn**	**19 27 31.0**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=333,slow=19,SNR=3.7								
NB2	**NORSAR Subarra**	**15.31**	**175**	P			**P**	**19 27 37.4**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=358,slow=11								
NOA	**NORSAR Array B**	**15.31**	**175**	Pn			**P**	**19 27 37.9**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=351,slow=12,SNR=2.6								
FINES	**FINESS Array B**	**16.05**	**148**	Pn			**P**	**19 27 46.5**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=349,slow=11,SNR=3.0								
HFS	**Hagfors**	**16.30**	**170**	Pn			**P**	**19 27 50.3**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=346,slow=11,SNR=2.8								
GERES	**GERESS Array B**	**27.59**	**172**	P			**P**	**19 29 46.6**	**+2.7**
	comp=Z,0.4nm,0.7s,baz=349,slow=6.1,SNR=3.6								
MKAR	**Makanchi Array**	**41.33**	**91**	P			P	19 31 46.4	+4.2
	comp=Z,0.4nm,0.8s,baz=355,slow=8.2,SNR=4.3								
SONM	**Songino Array**	**45.98**	**68**	P			P	19 32 23.3	+3.5
	comp=Z,0.3nm,0.8s,baz=335,slow=6.4,SNR=2.5								
TORD	**Torodi Ar. Bea**	**63.20**	**187**	P			**P**	**19 34 24.8**	**-0.1**
	comp=Z,1.9nm,1.0s,baz=358,slow=6.2,SNR=6.8								

MOS ***22*** *19:28:01.3±0.8, 62°.04N×150°.94W, h54km, mb5.8/128, MS4.4/23, Error ellipse: s-maj=8.8km s-min=3.3km az=92.6*
IDC ***22*** *19:28:03.6±0.8, 62°.03N×150°.86W, h60km±7km, mb5.1/37, mb1 5.2/42, mb1mx5.2/44, mbtmp5.1/42, MS4.5/27, Ms1 4.5/27, ms1mx4.3/54, Error ellipse: s-maj=7.8km s-min=7.1km az=101.0*
ISCJB ***22*** *19:28:03.1±0.2, 62°.02N±0°.01×150°.75W±0°.03, h69km±1km, mb5.5/414, Error ellipse: s-maj=2.4km s-min=2.1km az=29.8*
BJI ***22*** *19:28:03.6, 62°.49N×151°.43W, h59km, mB5.3/28, mb5.4/55, Ms5.1/45, Ms7 4.8/42*
NEIC ***22*** *19:28:05.2, 61°.94N×150°.70W, h65km, mb5.6/205, MW5.5, MW5.4, ML5.5(AEIC), MW5.3(USGS), Moment Tensor Solution. s8 Moment tensor: Scale 10¹⁷Nm; Mrr=-1.35; Mθθ=0.62; Mφφ=0.73; Mrθ=-0.95; Mrφ=-0.84; Mθφ=0.26; Best double couple: M₀1.70000×10¹⁷ NP1:φs120.00000°, δ63.00000°, λ-108.00000°. NP2:φs334.00000°, δ32.00000°, λ-59.00000°. Principal axes: T 1.7600, Plg15.0000°, Azm222.0000°; N -0.0200, Plg15.0000°, Azm127.0000°; P -1.7300, Plg67.0000°, Azm355.0000°; After AEIC.*
NEIC Felt [V] at Trapper Creek; [IV] at Anchorage, Elmendorf AFB, Chugiak, Eagle River, Girdwood, Palmer, Talkeetna, Wasilla and Willow; [III] at Fort Richardson, Kenai, Soldotna and Sterling; [II] at Denali National Park, Fairbanks, Homer, Seward and Valdez. Also felt at Anchor Point, Cooper Landing, Cordova, Glennallen, Indian, Kasilof, Moose Pass, Ninilchik and North Pole.
BGS ***22*** *19:28:07.5±1.3, 62°.15N×148°.83W, h67km, mb5.4*
GCMT ***22*** *19:28:09.3±0.2, 62°.04N×151°.02W, h86km±1km, MW5.5, Moment Tensor Solution. s88,c147; s9,c9; Moment tensor: Scale 10¹⁷Nm; Mrr=0.78±.03; Mθθ=1.39±.04; Mφφ=2.17±.04; Mrθ=0.95±.03; Mθφ=-0.97±.04; Mrφ=-0.05±.03; Best double couple: M₀2.30000×10¹⁷ NP1:φs26.00000°, δ65.00000°, λ-22.00000°. NP2:φs126.00000°, δ70.00000°, λ-153.00000°. Principal axes: T 2.4300, Plg4.0000°, Azm255.0000°; N -0.1900, Plg57.0000°, Azm159.0000°; P -2.2400, Plg33.0000°, Azm347.0000°; Data Used: lI lU IC G CN. Surface waves: sta= 93, comp=179, per= 50.*
SZGRF ***22*** *19:28:10.8, 62°.68N×150°.74W, h70km, mb6.1, Central Alaska, United States*
NEIC ***22*** *19:28:18.6±0.0, 62°.15N×151°.14W, h51km, Moment Tensor Solution. s118 Moment tensor: Scale 10¹⁷Nm; Mrr=0.81; Mθθ=0.59; Mφφ=1.39; Mrθ=-1.20; Mθφ=-0.82; Mrφ=0.20; Best double couple: M₀1.90000×10¹⁷ NP1:φs16.00000°, δ47.00000°, λ-25.00000°. NP2:φs124.00000°, δ72.00000°, λ-133.00000°. Principal axes: T 1.8500, Plg14.0000°, Azm244.0000°; N 0.1000, Plg41.0000°, Azm140.0000°; P -1.9500, Plg44.0000°, Azm349.0000°;*
DJA ***22*** *19:29:00.0±3.2, 63°.N±24°×15°.3W±2°.7, h553km±29km, M5.1/6, mB5.6/4, mb5.1/6, Mw(mB)5.1/4*

ISC 22 19:28:03.6±0.2, 61°.97N±0°.02×150°.80W±0°.02, h64km±1km, h63km:pP-P, n1680, σ1§14/1832, mb5.7/420, 245C-495D, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.34**	**272**	P			**Pn**	**19 28 15.6**	**+1.2**
SKT				S			**Sn**	**19 28 24.5**	**+2.1**
TRAP	**Trapper Creek**	**0.45**	**35**	P			**Pn**	**19 28 16.2**	**+0.9**
TRAP				S			**Sn**	**19 28 25.7**	**+1.8**
STLK	**Strandline Lak**	**0.68**	**227**	P			**Pn**	**19 28 19.8**	**+1.0**
PMR	**Palmer**	**0.88**	**115**	P			**Pn**	**19 28 19.8**	**-0.4**
PMR				S			**Sn**	**19 28 32.4**	**-0.1**
PMR	**Palmer**	**0.88**	**115**	P			**Pn**	**19 28 19.8**	**-0.4**
PMR				S			**Sn**	**19 28 32.4**	**-0.1**
SPU	**Mount Spurr**	**0.99**	**218**	P			**Pn**	**19 28 22.6**	**+0.9**
RC01	**Rabbit Creek A**	**1.02**	**150**	P			**Pn**	**19 28 21.6**	**-0.4**
RC01				S			**Sn**	**19 28 35.9**	**+0.2**
BGL	**Barrier Glacie**	**1.04**	**228**	P			**Pn**	**19 28 23.4**	**+1.1**
CKL	**Chakachamna La**	**1.07**	**224**	P			**Pn**	**19 28 23.7**	**+1.0**
SML	**Sawmill**	**1.18**	**97**	P			**Pn**	**19 28 24.2**	**+0.1**
SML				S			**Sn**	**19 28 39.4**	**0.0**
SML	**Sawmill**	**1.18**	**97**	P			**Pn**	**19 28 24.2**	**+0.1**
SML				S			**Sn**	**19 28 39.4**	**0.0**
SLKM	**Skilak Lake**	**1.49**	**169**	P			**Pn**	**19 28 28.3**	**0.0**
SLKM	**Skilak Lake**	**1.49**	**169**	P			**Pn**	**19 28 28.3**	**0.0**
TRF	**Thorofare Moun**	**1.51**	**9**	P			**Pn**	**19 28 29.7**	**+1.1**
TRF				S			**Sn**	**19 28 49.3**	**+1.9**
CAST	**Castle Rocks**	**1.57**	**338**	P			**Pn**	**19 28 31.3**	**+2.0**
CAST				S			**Sn**	**19 28 50.8**	**+2.1**
DFR	**Drift River**	**1.66**	**214**	P			**Pn**	**19 28 31.8**	**+1.3**
RDJH	**Redoubt Jeurge**	**1.69**	**216**	P			**Pn**	**19 28 32.3**	**+1.3**
RDJH				S			**Sn**	**19 28 54.1**	**+2.5**
RDWB	**Redoubt West**	**1.78**	**214**	P			**Pn**	**19 28 33.6**	**+1.3**
RDWB				S			**Sn**	**19 28 56.3**	**+2.2**
DHY	**Denali Highway**	**1.94**	**54**	P			**Pn**	**19 28 35.2**	**+0.9**
MCK	**McKinley**	**1.97**	**25**	P			**Pn**	**19 28 36.2**	**+1.6**
MCK				S			**Sn**	**19 29 00.8**	**+2.5**
MCK	**McKinley**	**1.97**	**25**	P			**Pn**	**19 28 36.2**	**+1.6**
MCK				S			**Sn**	**19 29 00.8**	**+2.5**
CHUM	**Lake Minchumin**	**2.04**	**341**	P			**Pn**	**19 28 37.7**	**+2.1**
BRLK	**Bradley Lake**	**2.21**	**181**	P			**Pn**	**19 28 38.1**	**+0.1**
VLZ	**Valdez**	**2.30**	**109**	P			**Pn**	**19 28 38.2**	**-0.9**
SVW2	**Sparrevohn**	**2.45**	**251**	P			**Pn**	**19 28 42.5**	**+1.3**
DIV	**Divide**	**2.55**	**107**	P			**Pn**	**19 28 41.6**	**-1.0**
TT01	**Tatalina**	**2.60**	**293**	P			**Pn**	**19 28 44.5**	**+1.3**
OPT	**Oil Point**	**2.61**	**208**	P			**Pn**	**19 28 44.8**	**+1.4**
PAX	**Paxson**	**2.67**	**66**	P			**Pn**	**19 28 45.3**	**+1.0**
PAX	**Paxson**	**2.67**	**66**	P			**Pn**	**19 28 45.3**	**+1.0**
HARP	**HAARP**	**2.68**	**78**	P			**Pn**	**19 28 45.5**	**+1.1**
NEA	**Nenana**	**2.73**	**16**	P			**Pn**	**19 28 46.0**	**+1.0**
WRH	**Wood River Hil**	**2.80**	**25**	P			**Pn**	**19 28 47.0**	**+1.1**
EYAK	**Cordova Ski Ar**	**2.83**	**118**	P			**Pn**	**19 28 44.9**	**-1.4**
AUNW	**Augustine NWes**	**2.91**	**208**	P			**Pn**	**19 28 49.2**	**+1.7**
AUW	**Augustine West**	**2.92**	**208**	P			**Pn**	**19 28 49.0**	**+1.5**
CCB	**Clear Creek Bu**	**3.01**	**25**	P			**Pn**	**19 28 49.8**	**+1.0**
MLY	**Manley**	**3.07**	**0**	P			**Pn**	**19 28 51.4**	**+1.6**
COLA	**College**	**3.20**	**23**	P			**Pn**	**19 28 52.7**	**+1.3**
COLA	**College**	**3.20**	**23**	P			**Pn**	**19 28 52.6**	**+1.3**
MDM	**Murphy Dome**	**3.22**	**20**	P			**Pn**	**19 28 52.8**	**+1.2**
RIDG	**Independ'e Rid**	**3.26**	**54**	P			**Pn**	**19 28 53.7**	**+1.5**
ILAR	**Eielson Array**	**3.32**	**30**	P			**Pn**	**19 28 53.9**	**+0.9**
ILAR				S			**Sn**	**19 29 30.4**	**-0.8**
ILAR	**Eielson Array**	**3.32**	**30**	P			**Pn**	**19 28 53.9**	**+0.9**
	492nm,0.3s,baz=215,slow=14,SNR=5731								
ILAR				S			**Sn**	**19 29 30.4**	**-0.8**
	486nm,0.3s,baz=224,slow=20,SNR=19								
IL1	**Eielson Array**	**3.32**	**30**	P			**Pn**	**19 28 53.9**	**+0.8**
MID	**Middleton Isla**	**3.36**	**137**	P			**Pn**	**19 28 52.6**	**-1.0**
MID	**Middleton Isla**	**3.36**	**137**	P			**Pn**	**19 28 52.6**	**-1.0**
GLM	**Gilmore Dome**	**3.39**	**25**	P			**Pn**	**19 28 55.3**	**+1.2**
MENT	**Mentasta**	**3.43**	**70**		*eP*		**Pn**	**19 28 54.8**	**+0.2**
DOT	**Dot Lake**	**3.52**	**58**	P			**Pn**	**19 28 56.4**	**+0.6**
VRDI	**Verde Repeater**	**3.59**	**99**	P			**Pn**	**19 28 55.7**	**-1.1**
MCARA	**McCarthy VSAT**	**3.75**	**96**	P			**Pn**	**19 28 58.7**	**-0.2**
BERG	**Berg Lake**	**3.78**	**112**	P			**Pn**	**19 28 58.4**	**-0.9**
GCSA	**Galena City Sc**	**3.91**	**318**	P			**Pn**	**19 29 03.4**	**+2.4**
KHIT	**Khitrov Hills**	**3.96**	**109**	P			**Pn**	**19 29 00.4**	**-1.5**
GRIN	**Grindle Hills**	**4.00**	**112**	P			**Pn**	**19 29 01.4**	**-1.0**
PTPK	**Patty Peak**	**4.06**	**97**	P			**Pn**	**19 29 03.1**	**-0.3**
BALM	**Baldy**	**4.16**	**99**	P			**Pn**	**19 29 03.5**	**-1.1**
BALM	**Baldy**	**4.16**	**99**	P			**Pn**	**19 29 03.5**	**-1.1**
KIAG	**Kiagna River**	**4.19**	**101**	P			**Pn**	**19 29 03.8**	**-1.2**
IM3	**Indian Mountai**	**4.23**	**343**	P			**Pn**	**19 29 07.1**	**+1.6**
KAKN	**Katmai Knife C**	**4.25**	**212**	P			**Pn**	**19 29 06.7**	**+0.8**
KULT	**Kultieth River**	**4.28**	**110**	P			**Pn**	**19 29 05.2**	**-1.1**
KDAK	**Kodiak Island**	**4.29**	**193**	Pn			**Pn**	**19 29 05.0**	**-1.3**
	15μm,0.5s								
KDAK	**Kodiak Island**	**4.29**	**193**	P			**Pn**	**19 29 05.5**	**-0.8**
KDAK				S			**Sn**	**19 29 56.2**	**+1.1**
KDAK	**Kodiak Island**	**4.29**	**193**	P			**Pn**	**19 29 05.5**	**-0.8**
	20nm,0.3s,baz=41,slow=12,SNR=58								
KDAK				S			**Sn**	**19 29 56.2**	**+1.1**
	223nm,0.3s,baz=307,slow=20,SNR=6.3								
BARK	**Barkley Ridge**	**4.32**	**108**	P			**Pn**	**19 29 06.5**	**-0.3**
BCA3	**Beaver Creek A**	**4.32**	**71**	P			**Pn**	**19 29 07.0**	**+0.3**
KABU	**Katmai Buttres**	**4.33**	**213**	P			**Pn**	**19 29 08.0**	**+1.0**
BARN	**Barnard Glacie**	**4.47**	**98**	P			**Pn**	**19 29 08.9**	**-0.1**
GRNC	**Granite Creek**	**4.53**	**102**	P			**Pn**	**19 29 09.3**	**-0.5**
OHAK	**Old Harbor**	**4.93**	**196**	P			**Pn**	**19 29 13.7**	**-1.2**
PLK5	**Peulik 5**	**5.02**	**220**	P			**Pn**	**19 29 18.4**	**+2.2**
PLK1	**Peulik 1**	**5.10**	**218**	P			**Pn**	**19 29 19.0**	**+1.6**
EGAK	**Eagle**	**5.17**	**53**		*eP*		**Pn**	**19 29 18.6**	**+0.3**
	15nm,0.4s								
SAMH	**Samovar Hills**	**5.21**	**106**	P			**Pn**	**19 29 19.2**	**+0.3**
COLD	**Coldfoot**	**5.29**	**3**	P			**Pn**	**19 29 21.1**	**+1.2**
DAWY	**Dawson**	**5.60**	**63**	P			**Pn**	**19 29 24.6**	**+0.4**
PNL	**Peninsula**	**6.04**	**107**	P			**Pn**	**19 29 29.7**	**-0.5**
BM3	**Burnt Mountain**	**6.08**	**23**	P			**Pn**	**19 29 31.7**	**+0.9**
ANNW	**Aniakchak Nort**	**6.28**	**220**	P			**Pn**	**19 29 36.2**	**+2.7**
ANPK	**Aniakchak Peak**	**6.36**	**219**	P			**Pn**	**19 29 35.9**	**+1.3**
HYT	**Haines Junctio**	**6.49**	**94**	P			**Pn**	**19 29 35.8**	**-0.7**
CHGN	**Chignik**	**6.90**	**218**		*eP*		**Pn**	**19 29 43.1**	**+1.2**
SKAG	**Skagway**	**7.99**	**101**		*eP*		**Pn**	**19 29 55.9**	**-0.9**
	736nm,0.8s								
SDPT	**Sand Point**	**8.33**	**222**		*eP*		**Pn**	**19 30 01.9**	**+0.4**
	438nm,0.5s								
TNA	**Tin City**	**8.39**	**303**		*eP*		Pn	19 30 05.2	+3.0
	807nm,0.5s								
INK	**Inuvik**	**9.63**	**41**	P			**Pn**	**19 30 19.1**	**0.0**
INK				S			**Sn**	**19 32 04.8**	**-0.8**
INK	**Inuvik**	**9.63**	**41**	P			**Pn**	**19 30 19.1**	**0.0**
	4.4nm,0.3s,baz=238,slow=15,SNR=87								
INK				S			**Sn**	**19 32 04.8**	**-0.8**
	8.0nm,0.3s,baz=285,slow=19,SNR=4.0								
INK				LR			LR	19 34 02.3	
	comp=Z,6μm,20.2s,baz=348,slow=37								
GAMB	**Gambell**	**9.71**	**290**		*eP*		**Pn**	**19 30 22.8**	**+2.6**
	99nm,0.6s								
DLBC	**Dease Lake**	**10.91**	**100**	P			**Pn**	**19 30 35.9**	**-0.8**
DLBC	**Dease Lake**	**10.91**	**100**	P			**Pn**	**19 30 35.9**	**-0.8**
	8.5nm,0.3s,baz=293,slow=11,SNR=165								
DLBC				LR			LR	19 35 55.1	
	comp=Z,2μm,18.3s,baz=297,slow=43								
WRAK	**Wrangell Islan**	**10.95**	**112**		*eP*		**Pn**	**19 30 36.4**	**-0.9**
	169nm,0.8s								
AKUT	**Akutan**	**11.13**	**232**		*eP*		**Pn**	**19 30 42.1**	**+2.4**
	2μm,1.5s								
CRAG	**Craig**	**11.24**	**117**		*eP*		**Pn**	**19 30 39.6**	**-1.6**
	68nm,0.8s								
UNV	**Unalaska Valle**	**11.63**	**233**		*eP*		**Pn**	**19 30 48.8**	**+2.3**
	1μm,1.3s								
BBB	**Bella Bella**	**15.66**	**118**	P			**Pn**	**19 31 40.0**	**-0.1**
BBB	**Bella Bella**	**15.66**	**118**	P			**Pn**	**19 31 40.0**	**-0.1**
	1.7nm,0.3s,baz=330,slow=14,SNR=23								
BBB				LR			LR	19 37 34.5	
	comp=Z,2μm,18.3s,baz=325,slow=36								
YKA	**Yellowknife Ar**	**16.74**	**72**	P			**Pn**	**19 31 52.4**	**-1.1**
YKA				PcP			**PcP**	**19 36 38.4**	**+0.1**
YKA				ScP			**ScP**	**19 40 07.7**	**+0.6**
YKA	**Yellowknife Ar**	**16.74**	**72**	P			**Pn**	**19 31 52.4**	**-1.1**
	3.9nm,0.3s,baz=282,slow=11,SNR=292								
YKA				PcP			**PcP**	**19 36 38.4**	**+0.1**
	0.8nm,0.3s,baz=288,slow=1.3,SNR=5.7								
YKA				ScP			**ScP**	**19 40 07.7**	**+0.6**
	0.7nm,0.3s,baz=286,slow=2.0,SNR=9.9								
BILL	**Bil

comp=Z,47nm,1.4s
CHMT Chamberlain Mo 26.05 108 eP P 19 33 30.9 +0.1
comp=Z,50nm,1.2s
FFC Flin Flon 26.06 84 P P 19 33 31.9 +1.3
comp=Z,426nm,1.0s,SNR=21
FFC Flin Flon 26.06 84 i P P 19 33 31.4 +0.8
FFC Flin Flon 26.06 84 eP P 19 33 31.2 +0.6
comp=Z,85nm,1.0s
C16A Fuhringer Ranc 26.07 105 ⇓P P 19 33 31.3 +0.4
baz=26,SNR=26
A18A Metzger Ranch, 26.13 101 ⇓P P 19 33 31.7 +0.3
baz=26,SNR=22
B17A L&G Farms, Che 26.14 103 ⇑P P 19 33 32.2 +0.7
baz=26,SNR=60
D15A Lincoln 26.28 107 ⇑P P 19 33 33.2 +0.3
baz=26,SNR=26
YBH Yreka Blue Hor 26.31 127 eP P 19 33 35.4 +2.3
comp=Z,67nm,0.9s
YBH Yreka Blue Hor 26.31 127 P P 19 33 34.6 +1.5
comp=Z,58nm,0.8s,baz=322,slow=6.5,SNR=88
YBH LR LR 19 42 14.5
comp=Z,668nm,21.7s,baz=325,slow=32
G12A Big Creek, Yel 26.51 113 ⇓P P 19 33 35.5 +0.5
baz=26
B18A Beardsley Farm 26.54 102 ⇑P P 19 33 35.7 +0.5
baz=26,SNR=18
A19A Klindworth Far 26.64 100 ⇓P P 19 33 36.8 +0.8
baz=26,SNR=33
C17A Wharram Farm, 26.64 104 ⇓P P 19 33 36.2 +0.2
baz=26,SNR=54
KHMM Horse Mountain 26.68 130 eP P 19 33 39.0 +2.5
comp=Z,60nm,1.1s
D16A Dana Ranch, Ca 26.73 106 ⇓P P 19 33 37.3 +0.3
baz=27
EGMT Eagleton 26.82 102 eP P 19 33 38.1 +0.5
comp=Z,226nm,0.9s
EGMT Eagleton 26.82 102 ⇑P P 19 33 38.2 +0.5
baz=27,SNR=42
F14A Wisdom 26.84 110 ⇑P P 19 33 38.6 +0.6
baz=27,SNR=19
HRY Holter Researc 26.84 107 eP P 19 33 38.6 +0.7
comp=Z,36nm,0.7s
B19A Brinkman Farms 26.88 101 ⇑P P 19 33 39.0 +0.8
baz=27,SNR=15
D17A Six Diamond Ra 27.03 105 ⇑P P 19 33 40.0 +0.3
baz=27,SNR=51
E16A East Helena 27.05 107 ⇓P P 19 33 40.4 +0.6
baz=27
A20A Cobblestone Ra 27.05 99 ⇑P P 19 33 40.7 +1.0
baz=27,SNR=19
MOD Modoc 27.09 124 eP P 19 33 41.7 +1.5
comp=Z,67nm,1.0s
H12A Diamond D Ranc 27.17 113 ⇓P P 19 33 41.5 +0.5
baz=27,SNR=14
F15A Butte 27.20 109 ⇓P P 19 33 41.9 +0.6
baz=27,SNR=29
LRM Limekiln Ridge 27.24 109 eP P 19 33 42.0 +0.4
comp=Z,358nm,1.0s
WVOR Wild Horse Val 27.30 121 eP P 19 33 43.4 +1.3
WVOR pmax pmax
comp=Z,57nm,0.9s
WVOR Wild Horse Val 27.30 121 eP P 19 33 43.4 +1.3
comp=Z,57nm,0.9s
B20A Solberg Farm, 27.32 100 ⇓P P 19 33 42.7 +0.5
baz=27,SNR=12
C19A Slack Wire Ran 27.36 102 ⇑P P 19 33 43.5 +1.0
baz=27,SNR=27
WDC Whiskeytown Da 27.37 128 eP P 19 33 44.3 +1.8
WDC pmax pmax
comp=Z,51nm,0.8s
WDC Whiskeytown Da 27.37 128 eP P 19 33 44.3 +1.8
comp=Z,51nm,0.8s
D18A Linhart Farms, 27.40 104 ⇓P P 19 33 43.7 +0.8
baz=27,SNR=26
E17A Martinsdale 27.47 106 ⇓P P 19 33 44.4 +0.8
baz=27,SNR=35
DLMT Dillon 27.53 109 eP P 19 33 45.1 +1.0
comp=Z,46nm,1.1s
F16A Kennard Place, 27.64 108 ⇓P P 19 33 45.7 +0.6
baz=28
I12A Atlanta 27.66 115 ⇑P P 19 33 46.0 +0.7
baz=28
MFID Camas Ranch 27.66 116 eP P 19 33 46.0 +0.7
comp=Z,126nm,1.4s
MFID Camas Ranch 27.66 116 ⇓P P 19 33 46.0 +0.7
baz=28,SNR=32
BOZ Bozeman (W) 27.74 108 eP P 19 33 46.8 +0.8
BOZ pmax pmax
comp=Z,10.0nm,0.7s
BOZ Bozeman (W) 27.74 108 eP P 19 33 46.8 +0.8
comp=Z,10nm,0.7s
B21A Ellsworth Farm 27.80 99 ⇑P P 19 33 47.2 +0.8
baz=28
E18A Harlowton 27.82 105 ⇑P P 19 33 47.7 +1.0
baz=28,SNR=26
MCMT McKenzie Canyo 27.83 110 eP P 19 33 47.8 +0.9
comp=Z,14nm,0.9s
D19A Cripps Ranch, 27.85 103 ⇓P P 19 33 47.6 +0.7
baz=28,SNR=47
C20A Veseth Ranch, 27.86 101 ⇓P P 19 33 47.6 +0.7
baz=28,SNR=12
PET Petropavlovsk 27.90 275 eP P 19 33 51.3 +4.2
PET eS S 19 38 25.8 -0.1
PET MLR MLR
comp=Z,900nm,22.0s
A22A Carney Farms, 27.91 97 ⇑P P 19 33 48.6 +1.2
baz=28,SNR=33
F17A Fitzpatrick Pl 27.98 106 ⇑P P 19 33 49.3 +1.1
baz=28,SNR=23
HLID Hailey 28.15 114 eP P 19 33 50.5 +0.7
comp=Z,14nm,0.7s
HLID Hailey 28.15 114 ⇓P P 19 33 50.4 +0.7
baz=28,SNR=23
C21A Desert Coulee 28.20 100 ⇓P P 19 33 50.7 +0.8
baz=28,SNR=6.2
D20A Manuel Ranch, 28.25 102 ⇑P P 19 33 51.5 +1.1
baz=28,SNR=24
I14A Mackay 28.28 112 ⇑P P 19 33 51.5 +0.6
baz=28,SNR=25
PETK Petropavlovsk- 28.30 276 P P 19 33 51.1 +0.4
PETK pmax pmax
comp=Z,3.0nm,0.7s
PETK pmax pmax
comp=N,25nm,1.0s
PETK MLR MLR
comp=Z,681nm,21.6s
PETK Petropavlovsk- 28.30 276 P P 19 33 51.1 +0.4
PETK ScP ScP 19 40 36.6 -0.5
PETK Petropavlovsk- 28.30 276 P P 19 33 51.1 +0.4
comp=Z,2.6nm,0.7s,baz=78,slow=11,SNR=3.8
PETK ScP ScP 19 40 36.6 -0.5
comp=Z,24nm,1.0s,baz=57,slow=5.3,SNR=19
PETK LR LR 19 45 02.8
comp=Z,681nm,21.6s,baz=49,slow=36
B22A Reddig Ranch S 28.37 98 ⇑P P 19 33 52.3 +0.8
baz=28,SNR=9.9
G17A Pierce Place, 28.39 107 ⇓P P 19 33 53.3 +1.5
baz=28,SNR=9.8
F18A Big Timber 28.41 105 ⇑P P 19 33 53.1 +1.2
baz=28,SNR=17
E19A Rath Farm, Rou 28.42 104 ⇑P P 19 33 52.8 +0.8
baz=28,SNR=16
A23A Redstone 28.43 96 ⇓P P 19 33 53.2 +1.3
baz=28,SNR=7.4
QLMT Earthquake Lak 28.46 109 eP P 19 33 54.1 +1.6
comp=Z,4.8nm,1.1s
GCMT Greycliff 28.52 105 eP P 19 33 54.8 +1.8
comp=Z,4.7nm,0.8s
H16A Russell Place, 28.64 109 ⇓P P 19 33 55.4 +1.3
baz=28,SNR=7.6
E20A Meyer Farm, Mu 28.69 103 ⇑P P 19 33 55.1 +0.8
baz=28,SNR=8.7
B23A Brockton 28.72 97 ⇑P P 19 33 55.5 +0.9
baz=29,SNR=36
YMR Madison River 28.80 108 eP P 19 33 57.4 +1.9
comp=Z,130nm,1.2s
D21A La Casta Ranch 28.80 101 ⇑P P 19 33 56.3 +1.0
baz=29,SNR=18
F19A Roth Farm, Mol 28.80 105 ⇑P P 19 33 56.5 +1.2
baz=29,SNR=33
BEKR Beckworth 28.81 126 eP P 19 33 57.0 +1.4
comp=Z,35nm,0.8s
C22A Vida 28.82 99 ⇓P P 19 33 56.1 +0.6
baz=29,SNR=10
ALE Alert 28.91 16 P P 19 33 56.0 +0.2
comp=Z,551nm,1.0s,SNR=14
G18A Lazy EL Ranch, 28.93 106 ⇓P P 19 33 57.5 +0.9
baz=29,SNR=44
YFT Old Faithful 29.02 109 eP P 19 34 00.3 +2.8
comp=Z,156nm,0.6s
DGMT Dagmar 29.09 96 eP P 19 33 58.8 +1.0
comp=Z,92nm,1.1s
DGMT Dagmar 29.09 96 ⇓P P 19 33 58.6 +0.8
baz=29,SNR=10
C23A Lambert 29.10 98 ⇑P P 19 33 58.9 +0.9
baz=29,SNR=49
D22A Cohagen 29.11 100 ⇓P P 19 33 59.1 +1.0
baz=29,SNR=7.4
E21A Keefer Ranch, 29.15 102 ⇓P P 19 33 59.5 +1.1
baz=29,SNR=11
H17A Grant Village 29.18 108 ⇑P P 19 34 00.2 +1.2
baz=29
I16A Newdale 29.18 110 ⇓P P 19 34 00.4 +1.5
baz=29,SNR=13
F20A Billings 29.21 104 ⇓P P 19 33 60.0 +1.0
baz=29,SNR=13
RLMT Red Lodge 29.21 106 eP P 19 34 00.2 +1.1
comp=Z,124nm,0.8s
H18A Shoshone NF, C 29.38 107 ⇓P P 19 34 01.9 +1.2
baz=29,SNR=21
IMW Indian Meadow 29.41 109 eP P 19 34 03.0 +2.0
comp=Z,57nm,0.8s
D23A Lindsay 29.55 99 ⇑P P 19 34 03.2 +1.3
baz=29,SNR=19
I17A Pilgrim Ck. 29.55 109 ⇓P P 19 34 04.0 +1.8
baz=29
MOOW Moose Ponds 29.61 109 eP P 19 34 04.5 +1.8
comp=Z,60nm,1.6s
G20A Bridger 29.62 105 ⇑P P 19 34 03.5 +0.9
baz=30,SNR=19
C24A Savage 29.66 98 ⇑P P 19 34 04.3 +1.5
baz=30,SNR=39
F21A Absaloka Mine, 29.66 103 ⇓P P 19 34 03.9 +0.9
baz=30
RRI2 Red Ridge 29.68 110 eP P 19 34 05.0 +1.6
comp=Z,44nm,0.7s
H19A Powell 29.69 106 ⇓P P 19 34 05.0 +1.7
baz=30,SNR=15
TPAW Teton Pass 29.73 110 eP P 19 34 05.7 +1.9
comp=Z,51nm,0.8s
E22A Miles City 29.75 101 ⇑P P 19 34 04.9 +1.3
baz=30,SNR=40
LOHW Long Hollow 29.78 109 eP P 19 34 05.9 +1.7
comp=Z,24nm,1.0s
SNOW Snow King Moun 29.84 110 eP P 19 34 06.8 +2.1
comp=Z,36nm,0.8s
REDW Red Top Meadow 29.87 110 eP P 19 34 07.0 +2.0
comp=Z,0.5nm,1.0s
E23A Ismay 30.00 100 ⇑P P 19 34 07.4 +1.5
baz=30,SNR=28
D24A Glendive 30.00 98 ⇑P P 19 34 07.9 +2.0
baz=30,SNR=101
I18A Diamond G Ranc 30.07 108 ⇑P P 19 34 08.6 +1.9
baz=30,SNR=17
G21A Lodge Grass 30.07 103 ⇓P P 19 34 07.5 +0.8
baz=30,SNR=15
ELK Elko 30.11 118 eP P 19 34 08.8 +1.6
comp=Z,40nm,0.9s
I19A Meeteetse 30.18 107 ⇑P P 19 34 09.3 +1.6
baz=30,SNR=22
HVU Hansel Valley 30.30 114 eP P 19 34 10.4 +1.6
HVU pmax pmax
comp=Z,36nm,0.8s
HVU Hansel Valley 30.30 114 eP P 19 34 10.4 +1.6
comp=Z,36nm,0.8s
CMB Columbia Colle 30.40 128 eP P 19 34 11.0 +1.5
CMB pmax pmax
comp=Z,49nm,1.2s
CMB Columbia Colle 30.40 128 eP P 19 34 11.0 +1.5
comp=Z,49nm,1.2s
E24A Baker 30.42 99 ⇑P P 19 34 11.1 +1.5
baz=30,SNR=18
G22A Birney 30.50 103 ⇓P P 19 34 11.3 +0.9
baz=30,SNR=17
F23A Volborg 30.53 101 ⇓P P 19 34 11.5 +0.9
baz=30,SNR=21
TIXI Tiksi 30.56 322 ⇓i P P 19 34 09.8 -0.7
TIXI pmax pmax
comp=Z,34nm,1.4s
H21A Big Horn, Sher 30.61 104 ⇓P P 19 34 12.5 +1.1
baz=30,SNR=18
I20A Worland 30.63 106 ⇑P P 19 34 12.8 +1.2
baz=30,SNR=12
J19A Crowheart 30.75 108 ⇓P P 19 34 14.1 +1.3
baz=31,SNR=7.5
NVAR Mina Array Bea 30.85 125 P P 19 34 15.5 +1.8
NVAR PcP PcP 19 37 09.9 +0.9
NVAR ScP ScP 19 40 45.6 -0.3
NVAR Mina Array Bea 30.85 125 P P 19 34 15.5 +1.8
comp=Z,70nm,0.8s,baz=307,slow=8.5,SNR=329
NVAR PcP PcP 19 37 09.9 +0.9
comp=Z,7.5nm,0.8s,baz=316,slow=2.5,SNR=5.8
NVAR ScP ScP 19 40 45.6 -0.3
comp=Z,3.5nm,0.8s,baz=289,slow=2.8,SNR=8.1
NVAR LR LR 19 45 29.2
comp=Z,905nm,19.4s,baz=36,slow=34
F24A Ekalaka 30.89 100 ⇑P P 19 34 15.0 +1.3
baz=31,SNR=19
BW06 Boulder Array 30.92 109 eP P 19 34 15.3 +1.0
comp=Z,23nm,0.8s
PDAR Pinedale Array 30.92 109 P P 19 34 15.1 +0.8
PDAR ScP ScP 19 40 44.6 -1.4
PDAR Pinedale Array 30.92 109 P P 19 34 15.1 +0.8
comp=Z,15nm,0.9s,baz=317,slow=6.4,SNR=65
PDAR ScP ScP 19 40 44.6 -1.4
comp=Z,1.8nm,0.8s,baz=336,slow=2.0,SNR=4.8
PDAR LR LR 19 47 17.5
comp=Z,2μm,21.7s,baz=335,slow=37
G23A Biddle 30.93 102 ⇓P P 19 34 15.2 +1.0
baz=31,SNR=13
H22A Clermont 30.95 103 ⇑P P 19 34 15.4 +1.0
baz=31
HWUT Hardware Ranch 30.97 113 eP P 19 34 15.4 +0.8
comp=Z,19nm,0.9s
J20A Shoshoni 31.12 107 ⇑P P 19 34 17.5 +1.5
baz=31,SNR=20
I21A Big Trails, Te 31.12 105 ⇑P P 19 34 16.8 +0.8
baz=31,SNR=64
K19A Absolon Red Bu 31.19 108 ⇑P P 19 34 17.3 +0.7
baz=31,SNR=12
G24A Alzada 31.29 100 ⇓P P 19 34 18.0 +0.7
baz=31,SNR=17
MLAC Mammoth Lakes 31.34 126 ⇓P P 19 34 20.4 +2.4
baz=31,SNR=9.1
L18A Fontenelle, Gr 31.38 111 ⇑P P 19 34 19.1 +0.8
baz=31
H23A Clabaugh Cattl 31.41 102 ⇓P P 19 34 19.5 +1.0
baz=31,SNR=12
J21A Lysite 31.41 106 ⇑P P 19 34 19.8 +1.2
baz=31
I22A 9 Mile Ranch, 31.43 104 ⇑P P 19 34 20.1 +1.5
baz=31,SNR=114
M17A Scullys Gap (B 31.47 112 ⇑P P 19 34 19.5 +0.4
baz=31,SNR=7.2
L19A Farson 31.54 110 ⇓P P 19 34 20.4 +0.7
baz=31,SNR=5.7
K20A Yellowstone Ra 31.55 108 ⇑P P 19 34 20.1 +0.4
baz=31
DUG Dugway 31.59 116 eP P 19 34 20.9 +0.8
DUG pmax pmax
comp=Z,144nm,0.5s
DUG Dugway 31.59 116 eP P 19 34 20.9 +0.8
comp=Z,144nm,0.5s
DUG Dugway 31.59 116 ⇑P P 19 34 21.2 +1.1
baz=31,SNR=34
H24A Dirks Ranch, A 31.66 101 ⇓P P 19 34 21.4 +0.8
baz=32,SNR=25
MDND Medock 31.70 92 ⇓P P 19 34 21.7 +0.9
baz=32
ULM Lac du Bonnet 31.78 86 P P 19 34 22.0 +0.5
ULM PcP PcP 19 37 10.9 -0.1
ULM Lac du Bonnet 31.78 86 P P 19 34 22.0 +0.5
comp=Z,48nm,0.8s,baz=316,slow=8.2,SNR=46
ULM PcP PcP 19 37 10.9 -0.1
comp=Z,27nm,0.9s,baz=342,slow=3.6,SNR=4.7
ULM LR LR 19 48 48.9
comp=Z,478nm,20.7s,baz=316,slow=39
J22A Midwest 31.80 105 ⇑P P 19 34 22.7 +0.7
baz=32,SNR=13
JLU Jordanelle 31.84 114 eP P 19 34 23.6 +1.2
comp=Z,23nm,1.1s
I23A Meade Ranch, G 31.84 103 ⇑P P 19 34 23.5 +1.2
baz=32
R11A Troy Canyon, C 32.00 121 ⇑P P 19 34 25.1 +1.4
baz=32,SNR=65
L20A Wamsutter 32.07 109 ⇑P P 19 34 24.9 +0.5
baz=32,SNR=15
DAU Daniels Canyon 32.08 114 eP P 19 34 25.8 +1.2
DAU pmax pmax
comp=Z,26nm,1.0s
DAU Daniels Canyon 32.08 114 eP P 19 34 25.8 +1.2
comp=Z,26nm,1.0s
TIN Tinemaha 32.08 126 ⇓P P 19 34 26.2 +1.8
baz=32,SNR=10
M19A Rock Springs 32.11 110 ⇑P P 19 34 25.2 +0.5
baz=32
J23A Dilts Ranch, B 32.23 104 ⇑P P 19 34 26.5 +0.8
baz=32
MPU Maple Canyon 32.24 115 eP P 19 34 27.2 +1.4
comp=Z,124nm,1.2s
I24A Kuemmerle Ranc 32.31 102 ⇑P P 19 34 27.3 +0.9
baz=32,SNR=32
RCTC Rector, Farmer 32.35 128 ⇓P P 19 34 28.0 +1.4
baz=32,SNR=14
K22A Casper 32.38 106 ⇓P P 19 34 27.7 +0.7
baz=32,SNR=18
RSSD Black Hills 32.38 102 eP P 19 34 28.1 +1.0
RSSD pmax pmax
comp=Z,66nm,0.8s
RSSD Black Hills 32.38 102 eP P 19 34 28.1 +1.0
comp=Z,66nm,0.8s
L21A Rawlins 32.54 108 ⇓P P 19 34 29.2 +0.8
baz=32,SNR=31
M20A Sweetwater, Wa 32.55 109 ⇓P P 19 34 29.6 +1.0
baz=32,SNR=40
CWC Cottonwood Cre 32.68 126 ⇑P P 19 34 31.2 +1.6
baz=33,SNR=6.0
J24A Dixon Ranch, L 32.70 103 ⇓P P 19 34 30.7 +1.0
baz=32,SNR=26
K23A Bowen Ranch, D 32.71 105 ⇓P P 19 34 30.2 +0.4
baz=32,SNR=12
VES Vestal, Richgr 32.83 128 ⇑P P 19 34 32.2 +1.5
baz=33,SNR=7.8
M21A Separation Pea 32.83 108 ⇑P P 19 34 31.6 +0.5
baz=33,SNR=35
L22A Ellis Ranch, M 32.91 106 ⇓P P 19 34 33.3 +1.6
baz=33,SNR=34
SMMC Simmler 32.96 130 ⇑P P 19 34 34.1 +2.1
baz=33,SNR=21
N20A Spence Gulch, 33.05 110 ⇑P P 19 34 34.6 +1.7
baz=33,SNR=63
J25A Sunshine Ranch 33.05 102 ⇑P P 19 34 33.4 +0.7
baz=33,SNR=28
K24A Anderson Ranch 33.10 104 ⇑P P 19 34 33.4 +0.1
baz=33,SNR=14
O19A Miners Draw (B 33.10 111 ⇑P P 19 34 34.5 +1.1
baz=33,SNR=16
FURC Furnace Creek, 33.12 125 ⇑P P 19 34 35.2 +2.0
baz=33,SNR=23
AGMN Agassiz Nation 33.14 89 eP P 19 34 34.0 +0.5
comp=Z,86nm,0.9s
ISA Isabella 33.21 127 eP P 19 34 35.3 +1.1
ISA pmax pmax
comp=Z,63nm,0.8s
ISA Isabella 33.21 127 eP P 19 34 35.3 +1.1
comp=Z,63nm,0.8s
ISA Isabella 33.21 127 ⇓P P 19 34 35.5 +1.3
baz=33,SNR=54
MPMC Manual Prospec 33.24 126 ⇑P P 19 34 36.4 +1.9
baz=33,SNR=63
MSU Marysvale 33.27 117 eP P 19 34 36.4 +1.5
MSU pmax pmax
comp=Z,68nm,1.1s
MSU Marysvale 33.27 117 eP P 19 34 36.4 +1.5
comp=Z,68nm,1.1s
M22A Cedar Creek Ra 33.34 107 ⇓P P 19 34 36.2 +0.8
baz=33,SNR=7.4
ARUT Antelope Range 33.35 119 eP P 19 34 37.0 +1.4
ARUT pmax pmax
comp=Z,53nm,1.0s
ARUT Antelope Range 33.35 119 eP P 19 34 37.0 +1.4
comp=Z,53nm,1.0s
Q16A Castle Valley 33.36 115 ⇓P P 19 34 37.1 +1.5
baz=33,SNR=13
PKM Peak Mountain 33.40 130 ⇑P P 19 34 38.3 +2.3
baz=33,SNR=39
N21A Black Mountain 33.44 109 ⇑P P 19 34 37.2 +0.8
baz=33,SNR=36
SRU San Rafael 33.47 114 ⇑P P 19 34 38.0 +1.4
baz=33,SNR=59
ARVC Arvin 33.55 128 ⇓P P 19 34 37.9 +0.8
baz=33
L24A Wheatland 33.58 105 ⇑P P 19 34 38.1 +0.6
baz=33
CCUT Cedar City 33.59 119 eP P 19 34 39.5 +1.8
comp=Z,43nm,0.9s
K25A Mack Ranch, Ha 33.62 103 ⇑P P 19 34 38.5 +0.7
baz=34,SNR=13
O20A White River Ci 33.63 111 ⇑P P 19 34 38.9 +0.9
baz=34,SNR=7.0
LRMC Laurel Mountai 33.67 126 ⇓P P 19 34 39.9 +1.6
baz=34,SNR=47
M23A Laramie 33.68 106 ⇑P P 19 34 39.3 +0.9
baz=34,SNR=12
P19A Cripple Cowboy 33.71 112 ⇓P P 19 34 39.6 +0.9
baz=34,SNR=33
SBC Santa Barbara 33.84 130 ⇑P P 19 34 41.8 +2.2
baz=34
SHOC Shoshone 33.84 124 ⇑P P 19 34 41.5 +1.8
baz=34,SNR=16
K26A Motz Farm, Whi 33.87 102 ⇑P P 19 34 40.3 +0.4
baz=34,SNR=17
N22A Wattenberg Ran 33.88 108 ⇓P P 19 34 41.2 +1.0
baz=34,SNR=19
O21A Pagoda 33.90 110 ⇓P P 19 34 41.0 +0.6
baz=34,SNR=8.8
L25A Engebretsen Ra 33.94 104 ⇑P P 19 34 41.3 +0.7
baz=34
N23A Red Feather La 34.04 107 ⇑P P 19 34 42.4 +0.8
baz=34,SNR=12
OSI Osito Adit 34.05 129 ⇑P P 19 34 43.1 +1.6
baz=34
P20A De Beque 34.08 111 ⇓P P 19 34 42.6 +0.8
baz=34
EDW2 Edwards Air Fo 34.09 127 ⇑P P 19 34 42.8 +1.0
baz=34,SNR=14
M24A Cheyenne 34.09 105 ⇓P P 19 34 43.5 +1.5
baz=34,SNR=27
GSC Goldstone 34.17 125 eP P 19 34 44.3 +1.8
GSC pmax pmax
comp=Z,108nm,1.0s
GSC Goldstone 34.17 125 eP P 19 34 44.3 +1.8
comp=Z,108nm,1.0s
GSC Goldstone 34.17 125 ⇓P P 19 34 44.2 +1.7
baz=34,SNR=49
J28A Allard Ranch, 34.21 100 ⇑P P 19 34 43.8 +1.0
baz=34,SNR=21
K27A Flueckinger Fa 34.31 101 ⇑P P 19 34 44.7 +1.0
baz=34,SNR=12
O22A Kremmling 34.36 109 ⇓P P 19 34 45.2 +0.8
baz=34,SNR=12
TUQ Turquoise Moun 34.39 124 ⇓P P 19 34 46.3 +1.8
baz=34,SNR=18
L26A Underwood Farm 34.44 103 ⇑P P 19 34 45.3 +0.5
baz=34
RRX Edison Barstow 34.46 126 ⇑P P 19 34 46.9 +1.9
baz=34,SNR=5.4
M25A Palm-Egli Farm 34.47 105 ⇑P P 19 34 46.1 +0.9
baz=34,SNR=6.0
P21A Newcastle 34.48 110 ⇓P P 19 34 46.5 +1.1
baz=34,SNR=16
BRSD Miller 34.51 96 ⇑P P 19 34 45.9 +0.6
baz=34,SNR=5.5
DECC Green Verdugo 34.52 128 ⇓P P 19 34 47.1 +1.5
baz=34
Q20A Ridgley Place, 34.57 112 ⇑P P 19 34 46.5 +0.4
baz=34,SNR=10
N24A Carr 34.57 106 ⇑P P 19 34 47.4 +1.3
baz=34,SNR=19
O23A Lake Granby, G 34.60 108 ⇓P P 19 34 47.9 +1.4
baz=34,SNR=17
PASC Pasadena Art C 34.65 128 eP P 19 34 48.4 +1.8
comp=Z,26nm,0.7s
MWC Mount Wilson 34.65 128 eP P 19 34 48.8 +2.0
MWC pmax pmax
comp=Z,68nm,1.2s
MWC Mount Wilson 34.65 128 eP P 19 34 48.8 +2.0
comp=Z,68nm,1.2s
P22A Eagle 34.73 109 ⇑P P 19 34 48.3 +0.9
baz=35,SNR=8.8
L27A T5 Ranch, Ells 34.75 102 ⇑P P 19 34 48.4 +0.9
baz=35,SNR=7.0
HEC Hector,Ludlow 34.77 125 ⇓P P 19 34 49.4 +1.7
baz=35,SNR=17

BFSC	**Mount Baldy Ra**	34.78	127	⇑P		P		19 34 49.7	+1.8
	baz=35,SNR=30									
M26A	**McRoberts Ranc**	34.86	104	⇑P		P		19 34 49.1	+0.6
	baz=35									
N25A	**Grover**	34.95	105	⇑P		P		19 34 50.8	+1.5
	baz=35,SNR=12									
SMCO	**Snowmass**	34.97	110	*e*P		P		19 34 50.5	+0.7
	comp=Z,20nm,1.2s									
Q21A	**Lamborn Mesa,**	34.99	111	⇑P		P		19 34 50.6	+0.9
	baz=35,SNR=11									
U15A	**North Rim**	34.99	119	⇓P		P		19 34 51.3	+1.4
	baz=35,SNR=30									
FMP	**Fort Macarthur**	35.02	129	⇓P		P		19 34 51.1	+1.4
	baz=35									
LDFC	**Landfair**	35.02	124	*e*P		P		19 34 51.6	+1.6
	comp=Z,184nm,1.2s									
BBRC	**Big Bear Solar**	35.04	126	⇓P		P		19 34 51.8	+1.5
	baz=35									
O24A	**Longmont**	35.05	107	⇑P		P		19 34 51.3	+1.1
	baz=35									
GMRC	**Granite Mounta**	35.07	124	⇓P		P		19 34 52.0	+1.6
	baz=35,SNR=56									
ISCO	**Idaho Springs**	35.07	108	*e*P		P		19 34 51.8	+1.3
ISCO					pmax	pmax				
	comp=Z,19nm,1.1s									
ISCO	**Idaho Springs**	35.07	108	*e*P		P		19 34 51.8	+1.3
	comp=Z,19nm,1.1s									
ISCO	**Idaho Springs**	35.07	108	⇓P		P		19 34 51.7	+1.1
	baz=35,SNR=10									
PV01	**Paradox Valley**	35.13	113	*e*P		P		19 34 51.8	+0.8
	comp=Z,5μm,0.8s									
YAK	**Yakutsk**	35.13	306	*d i*P		P		19 34 50.2	-0.2
YAK				*e**PP		pP		19 34 59.5	-6.6
YAK				*e*				19 36 05.6	
YAK				*e*				19 37 17.4	
YAK				*e*S		S		19 40 16.4	-1.9
YAK				*e*SS		SnSn		19 42 29.5	-11
YAK				*e*SSS		SSS		19 43 06.2	
YAK				*e*				19 44 59.0	
YAK					pmax	pmax				
	comp=Z,137nm,1.1s									
YAK					pmax	pmax				
	comp=E,76nm,1.2s									
YAK					pmax	pmax				
	comp=N,39nm,1.3s									
YAK					pmax	pmax				
	comp=Z,60nm,1.5s									
YAK					pmax	pmax				
	comp=N,24nm,1.5s									
YAK					pmax	pmax				
	comp=E,38nm,1.9s									
YAK					smax	smax				
	comp=N,150nm,2.0s									
YAK					smax	smax				
	comp=E,210nm,2.3s									
YAK					MLR	MLR				
	comp=Z,928nm,20.0s									
YAK					MLR	MLR				
	comp=E,687nm,18.0s									
YAK					MLR	MLR				
	comp=N,413nm,20.0s									
FRB	**Frobisher Bay**	35.14	50	P		P		19 34 51.1	+0.7
FRB	**Frobisher Bay**	35.14	50	P		P		19 34 51.1	+0.7
	comp=N,64nm,0.8s,baz=308,slow=9.5,SNR=37									
K29A	**Lazy Trails An**	35.15	99	⇑P		P		19 34 51.8	+0.9
	baz=35,SNR=6.1									
M27A	**Reverse DX Ran**	35.16	103	⇓P		P		19 34 51.7	+0.7
	baz=35									
R20A	**Redvale**	35.17	113	⇑P		P		19 34 52.3	+1.0
	baz=35,SNR=22									
CIS	**Catalina Islan**	35.25	129	⇓P		P		19 34 53.1	+1.4
	baz=35									
Q22A	**Crested Butte,**	35.26	110	⇑P		P		19 34 53.1	+0.9
	baz=35,SNR=7.0									
N26A	**Koester Ranch,**	35.33	104	⇓P		P		19 34 53.8	+1.3
	baz=35,SNR=20									
R21A	**Cimarron**	35.38	112	⇓P		P		19 34 54.1	+0.9
	baz=35,SNR=19									
EYMN	**Ely**	35.45	85	*e*P		P		19 34 53.7	+0.3
	comp=N,117nm,0.9s									
S20A	**Disappointment**	35.48	113	⇑P		P		19 34 54.8	+0.8
	baz=35,SNR=14									
NEE2	**Needles Airpor**	35.49	123	⇓P		P		19 34 55.3	+1.5
	baz=35,SNR=7.8									
W13A	**Hualapai Mount**	35.49	122	⇓P		P		19 34 55.8	+1.7
	baz=35									
O25A	**Wiggins**	35.49	106	⇓P		P		19 34 55.1	+1.1
	baz=35,SNR=11									
MURC	**Murrieta**	35.52	127	⇓P		P		19 34 55.2	+1.1
	baz=35									
SCI	**San Clemente I**	35.58	130	⇓P		P		19 34 56.2	+1.6
	baz=36,SNR=7.1									
P24A	**Kohler Place,**	35.62	108	⇓P		P		19 34 56.6	+1.5
	baz=36									
L29A	**Maesberg Ranch**	35.62	100	⇓P		P		19 34 56.0	+1.0
	baz=35,SNR=5.0									
BELC	**Belle Mtn. Jos**	35.62	126	⇓P		P		19 34 56.5	+1.4
	baz=36,SNR=30									
N27A	**Anderson Farm,**	35.66	104	⇓P		P		19 34 56.2	+0.9
	baz=36									
Q23A	**Hartsel**	35.70	109	⇓P		P		19 34 56.7	+0.8
	baz=36									
M28A	**Bar X Bar Ranc**	35.73	102	⇓P		P		19 34 57.0	+1.1
	baz=36,SNR=12									
O26A	**Horse Wrangler**	35.76	105	⇓P		P		19 34 57.2	+1.0
	baz=36,SNR=17									
OGNE	**Ogallala**	35.78	103	*e*P		P		19 34 57.4	+1.1
	comp=N,112nm,1.1s									
OGNE	**Ogallala**	35.78	103	⇑P		P		19 34 57.2	+0.8
	baz=36,SNR=9.7									
PFO	**Pinyon Flat Ob**	35.80	126	P		P		19 34 58.0	+1.4
	comp=N,353nm,0.9s,SNR=18									
PFO	**Pinyon Flat Ob**	35.80	126	*e*P		P		19 34 57.8	+1.2
	comp=N,60nm,0.9s									
PFO					ScP	ScP		19 41 03.8	+0.8
PFO	**Pinyon Flat Ob**	35.80	126	P		P		19 34 57.9	+1.4
	comp=N,46nm,0.8s,baz=346,slow=8.3,SNR=43									
PFO					ScP	ScP		19 41 03.8	+0.8
	comp=N,1.0nm,0.4s,baz=297,slow=4.5,SNR=4.0									
PFO					LR	LR		19 48 16.6		
	comp=N,667nm,19.3s,baz=178,slow=34									
PFO	**Pinyon Flat Ob**	35.80	126	⇑P		P		19 34 57.8	+1.2
	baz=36,SNR=24									
IRM	**Iron Mountain**	35.81	124	⇑P		P		19 34 58.5	+1.9
	baz=36,SNR=31									
R22A	**Saguache, Gunn**	35.85	111	⇑P		P		19 34 58.5	+1.3
	baz=36,SNR=28									
S21A	**Coal Bank Pass**	35.86	112	⇑P		P		19 34 58.7	+1.3
	baz=36,SNR=23									
P25A	**Willow Gulch B**	35.96	107	⇑P		P		19 34 59.4	+1.4
	baz=36,SNR=26									
Q24A	**Divide**	35.96	108	⇑P		P		19 34 59.2	+1.0
	baz=36,SNR=15									
M29A	**Burnside Ranch**	36.01	101	⇓P		P		19 34 59.4	+1.1
	baz=36,SNR=15									
PDMCI	**Parker Dam,Lak**	36.09	123	⇓P		P		19 35 00.3	+1.4
	baz=36,SNR=15									
BC3	**Big Chuckawall**	36.14	125	⇓P		P		19 35 00.8	+1.3
	baz=36,SNR=32									
ECSD	**EROS Data Cent**	36.14	95	*e*P		P		19 34 59.1	-0.2
	comp=N,75nm,1.1s									
WUAZ	**Wupatki**	36.15	119	*e*P		P		19 35 01.1	+1.5
	comp=N,115nm,0.9s									
WUAZ	**Wupatki**	36.15	119	⇑P		P		19 35 01.3	+1.6
	baz=36,SNR=68									
O27A	**Beecher Island**	36.18	104	⇓P		P		19 35 00.8	+1.0
	baz=36,SNR=11									
109C	**Camp Elliot, M**	36.19	128	⇑P		P		19 35 01.4	+1.6
	baz=36									
N28A	**Pribbeno Ranch**	36.21	103	⇓P		P		19 35 01.1	+1.1
	baz=36,SNR=11									
S22A	**4UR Ranch, Cre**	36.22	111	⇑P		P		19 35 01.8	+1.5
	baz=36,SNR=30									
P26A	**Davis Ranch, A**	36.29	106	⇓P		P		19 35 01.9	+1.1
	baz=36,SNR=11									
R23A	**Moffat**	36.29	110	⇓P		P		19 35 02.4	+1.4
	baz=36,SNR=20									
M30A	**Dale-Ortello V**	36.31	100	⇓P		P		19 35 01.8	+0.9
	baz=36									
Q25A	**Bedland, Calha**	36.41	107	⇑P		P		19 35 03.0	+1.1
	baz=36									
Y12C	**Blythe**	36.42	124	⇓P		P		19 35 03.3	+1.6
	baz=36,SNR=25									
MONP	**Monument Peak**	36.45	127	⇑P		P		19 35 03.9	+1.6
	baz=36,SNR=55									
N29A	**Votaw Ranch, W**	36.53	102	⇓P		P		19 35 03.7	+0.9
	baz=36,SNR=6.8									
T21A	**Navajo Lake**	36.54	113	⇓P		P		19 35 04.5	+1.5
	baz=36,SNR=7.7									
BAR	**Barrett**	36.54	127	*e*P		P		19 35 04.4	+1.6
	comp=N,58nm,1.0s									
O28A	**Krutsinger Ran**	36.55	104	⇑P		P		19 35 03.5	+0.5
	baz=36									
R24A	**Sanders Place,**	36.58	109	⇑P		P		19 35 04.8	+1.5
	baz=36,SNR=9.1									
S23A	**Nye Farm, Mont**	36.62	110	⇓P		P		19 35 05.0	+1.3
	baz=36									
U20A	**Newcomb**	36.63	114	⇓P		P		19 35 05.0	+1.3
	baz=36,SNR=7.4									
P27A	**Ficken Ranch,**	36.64	105	⇓P		P		19 35 04.7	+1.0
	baz=36,SNR=6.3									
Q26A	**Hugo**	36.73	107	⇓P		P		19 35 05.7	+1.2
	baz=37									
DVTC	**Desert V Tower**	36.78	127	⇓P		P		19 35 06.6	+1.7
	baz=37,SNR=27									
N30A	**Hueftle Ranch,**	36.79	101	⇑P		P		19 35 05.8	+0.9
	baz=37,SNR=11									
T22A	**Edith**	36.79	112	⇑P		P		19 35 07.1	+1.9
	baz=37,SNR=24									
SPMN	**St. Paul**	36.82	90	⇓P		P		19 35 05.8	+0.7
	baz=37,SNR=19									
Y14A	**Wickenburg**	36.86	122	⇓P		P		19 35 07.3	+1.8
	baz=37,SNR=32									
GLA	**Glamis**	36.92	125	*e*P		P		19 35 07.3	+1.2
GLA					pmax	pmax				
	comp=Z,82nm,0.9s									
GLA	**Glamis**	36.92	125	*e*P		P		19 35 07.3	+1.2
	comp=Z,82nm,0.9s									
GLA	**Glamis**	36.92	125	⇑P		P		19 35 07.6	+1.6
	baz=37,SNR=27									
U21A	**Nageezi**	36.96	113	⇓P		P		19 35 07.9	+1.3
	baz=37,SNR=27									
O29A	**4D Ranch, Culb**	37.00	103	⇑P		P		19 35 07.5	+0.7
	baz=37,SNR=8.5									
R25A	**Fountain Ranch**	37.02	108	⇓P		P		19 35 08.2	+1.3
	baz=37,SNR=29									
S24A	**Houchin Ranch,**	37.02	110	⇓P		P		19 35 08.7	+1.5
	baz=37,SNR=27									
KSCO	**Kaye Shedlock'**	37.06	106	⇓P		P		19 35 08.6	+1.2
	baz=37,SNR=12									
X16A	**Lo Mia Camp, P**	37.07	120	⇑P		P		19 35 09.4	+1.8
	baz=37,SNR=39									
V20A	**Brimhall**	37.14	115	⇓P		P		19 35 09.2	+1.1
	baz=37,SNR=22									
T23A	**Casias Ranch,**	37.16	111	⇓P		P		19 35 09.8	+1.5
	baz=37,SNR=6.5									
W18A	**Petrified Fore**	37.18	117	⇑P		P		19 35 09.9	+1.5
	baz=37									
BGNE	**Belgrade**	37.22	99	⇑P		P		19 35 09.2	+0.6
	baz=37,SNR=6.8									
R26A	**Arlington**	37.27	107	⇓P		P		19 35 10.0	+0.9
	baz=37,SNR=15									
O30A	**MW Ranch, Wils**	37.30	102	⇑P		P		19 35 09.9	+0.6
	baz=37,SNR=7.5									
U22A	**Llaves**	37.35	113	⇓P		P		19 35 11.4	+1.5
	baz=37,SNR=6.1									
S25A	**Robets Cordova**	37.35	109	⇓P		P		19 35 11.1	+1.3
	baz=37,SNR=51									
Q28A	**Sharon Springs**	37.38	105	⇑P		P		19 35 10.9	+0.9
	baz=37,SNR=7.2									
Z14A	**Wintersburg**	37.38	122	⇑P		P		19 35 11.6	+1.7
	baz=37,SNR=19									
V21A	**Milan**	37.49	114	⇑P		P		19 35 12.6	+1.5
	baz=37,SNR=9.4									
R27A	**Eads**	37.57	106	⇑P		P		19 35 12.5	+0.9
	baz=37,SNR=25									
113A	**Mohawk Valley,**	37.58	124	⇑P		P		19 35 13.0	+1.4
	baz=38,SNR=20									
X18A	**Snowflake**	37.60	118	⇑P		P		19 35 13.5	+1.5
	baz=38,SNR=30									
U23A	**El Rito**	37.68	112	⇑P		P		19 35 14.3	+1.6
	baz=38									
W20A	**Ramah**	37.70	116	⇓P		P		19 35 14.1	+1.2
	baz=38,SNR=59									
V22A	**San Miguel Ran**	37.71	113	⇑P		P		19 35 14.3	+1.3
	baz=38,SNR=26									
P30A	**Selden**	37.72	103	⇓P		P		19 35 13.6	+0.8
	baz=38,SNR=9.5									
T25A	**Trinidad**	37.79	109	⇑P		P		19 35 14.8	+1.2
	baz=38,SNR=16									
S26A	**Kim**	37.81	108	⇑P		P		19 35 14.7	+1.0
	baz=38,SNR=23									
COWI	**Conover**	37.90	85	*e*P		P		19 35 14.5	+0.2
	comp=Z,118nm,1.4s									
Q29A	**Oakley**	37.91	104	⇓P		P		19 35 15.3	+0.9
	baz=38,SNR=48									
R28A	**Tribune**	37.98	105	⇑P		P		19 35 16.2	+1.1
	baz=38,SNR=11									
U24A	**Meno Valley**	38.01	111	⇓P		P		19 35 17.6	+2.0
	baz=38									
S27A	**Las Animas**	38.02	107	⇑P		P		19 35 16.3	+0.9
	baz=38,SNR=11									
W21A	**San Fidel**	38.07	115	⇓P		P		19 35 17.0	+1.0
	baz=38									
T26A	**Comanche Natio**	38.13	108	⇑P		P		19 35 17.0	+0.6
	baz=38,SNR=54									
P31A	**Stockton**	38.14	102	⇓P		P		19 35 17.0	+0.7
	baz=38,SNR=25									
SUMG	**Summit**	38.16	27	*e*P		P		19 35 17.3	+0.7
SUMG					pmax	pmax				
	comp=Z,53nm,0.6s									
SUMG	**Summit**	38.16	27	*e*P		P		19 35 17.2	+0.7
	comp=Z,53nm,0.6s									
SUMG	**Summit**	38.16	27	⇓*i*P		P		19 35 17.2	+0.7
	comp=Z,50nm,0.7s									
SUMG				*i*				19 35 43.1		
V23A	**Ortiz Mt. (NFS**	38.17	112	⇓P		P		19 35 18.9	+2.0
	baz=38,SNR=12									
Q30A	**Quinter**	38.19	103	⇓P		P		19 35 17.7	+0.9
	baz=38,SNR=21									
X20A	**Quemado**	38.20	116	⇑P		P		19 35 18.3	+1.2
	baz=38,SNR=12									
R29A	**Marienthal**	38.22	105	⇓P		P		19 35 18.2	+1.2
	baz=38,SNR=29									
DAG	**Danmarks Havn**	38.31	16	⇓*i*P		P		19 35 17.2	-0.1
	comp=Z,147nm,0.7s									
U25A	**Circle Dot Ran**	38.41	110	⇓P		P		19 35 20.4	+1.6
	baz=38,SNR=151									
W22A	**Albuquerque**	38.44	114	⇓P		P		19 35 20.5	+1.4
	baz=38									
Q31A	**Ellis**	38.55	102	⇓P		P		19 35 20.7	+0.9
	baz=38,SNR=16									
S28A	**Manter**	38.55	106	⇑P		P		19 35 21.1	+1.2
	baz=38,SNR=10									
X21A	**Alamocita Cree**	38.58	115	⇓P		P		19 35 21.9	+1.6
	baz=38,SNR=54									
V24A	**Rampart Ranch,**	38.59	111	⇑P		P		19 35 22.0	+1.6
	baz=38,SNR=30									
T27A	**Campo**	38.61	107	⇑P		P		19 35 21.6	+1.1
	baz=38,SNR=34									
214A	**Organ Pipe Nat**	38.67	123	⇑P		P		19 35 22.5	+1.6
	baz=39,SNR=42									
W23A	**Werner Place,**	38.68	113	⇓P		P		19 35 22.7	+1.6
	baz=38,SNR=25									
U26A	**Atchley Ranch,**	38.71	109	⇓P		P		19 35 22.6	+1.3
	baz=39,SNR=54									
R30A	**Dighton**	38.72	104	⇑P		P		19 35 22.5	+1.2
	baz=39,SNR=51									
ANMO	**Albuquerque**	38.73	113	*e*P		P		19 35 22.8	+1.3
	comp=Z,37nm,1.3s									
ANMO					PcP	PcP		19 37 33.4	+1.4
ANMO					ScP	S		19 41 15.0	+1.0
ANMO	**Albuquerque**	38.73	113	P		P		19 35 22.6	+1.2
	comp=Z,16nm,1.1s,baz=334,slow=9.7,SNR=24									
ANMO					PcP	PcP		19 37 33.4	+1.4
	comp=Z,11nm,1.0s,baz=292,slow=1.6,SNR=3.6									
ANMO					ScP	S		19 41 15.0	+1.0
	comp=Z,11nm,1.0s,baz=346,slow=4.2,SNR=12									
V25A	**Rancho No Teng**	38.78	111	⇑P		P		19 35 23.6	+1.6
	baz=39,SNR=63									
Y20A	**Horse Springs,**	38.79	116	⇓P		P		19 35 23.8	+1.7
	baz=39,SNR=26									
X22A	**Bernardo**	38.86	114	⇓P		P		19 35 24.5	+1.9
	baz=39,SNR=7.0									
S29A	**Ulysses**	38.88	105	⇑P		P		19 35 23.9	+1.3
	baz=39,SNR=20									
LAZ	**Ladron**	38.90	115	*e*P		P		19 35 24.3	+1.4
	comp=Z,9.3nm,1.1s									
SFJD	**Kangerlussuaq**	38.95	38	*e*P		P		19 35 23.6	+0.9
	comp=Z,44nm,0.6s									
SFJD	**Kangerlussuaq**	38.95	38	⇓*i*P		P		19 35 23.8	+1.1
	comp=Z,37nm,0.7s									
SFJD	**Kangerlussuaq**	38.95	38	P		P		19 35 23.4	+0.7
	comp=Z,49nm,0.7s,baz=308,slow=9.6,SNR=24									
W24A	**Lazy 6 Ranch,**	38.96	112	⇓P		P		19 35 25.0	+1.6
	baz=39,SNR=23									
KBS	**Kingsbay**	38.97	5	*e*P		P		19 35 23.7	+1.0
KBS	**Kingsbay**	38.97	5	*e*P		P		19 35 23.7	+1.0
Y21A	**Point of Rocks**	39.00	116	⇑P		P		19 35 25.6	+1.7
	baz=39,SNR=30									
R31A	**Burdett**	39.06	103	⇓P		P		19 35 25.0	+0.9
	baz=39,SNR=42									
U27A	**Thompson Grove**	39.10	108	⇓P		P		19 35 25.5	+1.0
	baz=39,SNR=10									
SCIA	**State Center**	39.15	93	*e*P		P		19 35 25.4	+0.8
	comp=Z,73nm,0.9s									
X23A	**Hourglass Bar**	39.16	113	⇑P		P		19 35 26.4	+1.3
	baz=39,SNR=8.9									
S30A	**Montezuma**	39.16	105	⇓P		P		19 35 26.0	+1.1
	baz=39,SNR=15									
TUC	**Tucson**	39.18	120	*e*P		P		19 35 26.7	+1.6
TUC					pmax	pmax				
	comp=Z,47nm,1.1s									
TUC	**Tucson**	39.18	120	*e*P		P		19 35 26.7	+1.6
	comp=Z,47nm,1.1s									
T29A	**Hugoton**	39.18	106	⇑P		P		19 35 26.1	+1.0
	baz=39,SNR=7.5									
V26A	**Tequesquite Ra**	39.19	110	⇑P		P		19 35 26.7	+1.4
	baz=39,SNR=108									
LPM	**Los Pinos Moun**	39.19	114	*e*P		P		19 35 26.5	+1.2
	comp=Z,13nm,1.0s									
Y22D	**IRIS PASSCAL I**	39.27	115	⇓P		P		19 35 27.7	+1.8
	baz=39									
BNM	**Barren Site**	39.33	114	*e*P		P		19 35 27.9	+1.4
	comp=Z,31nm,1.2s									
Y22A	**Socorro**	39.37	115	⇑P		P		19 35 28.4	+1.6
	baz=39,SNR=16									
W25A	**X Bar L Ranch,**	39.37	111	⇑P		P		19 35 28.3	+1.4
	baz=39,SNR=36									
Z20A	**Nine Sixteen R**	39.38	117	⇑P		P		19 35 28.8	+1.8
	baz=39,SNR=31									
U28A	**Mallet**	39.40	108	⇑P		P		19 35 27.8	+0.8
	baz=39,SNR=13									
X24A	**Lazy VL Ranch,**	39.50	113	⇑P		P		19 35 29.5	+1.6
	baz=39									
YSS	**Yuzh-Sakhalins**	39.52	279	*e*P		P		19 35 30.0	+2.3
YSS				*e**PP		pP		19 35 46.1	+2.6
YSS				*e*S		S		19 41 26.0	+0.9
YSS				*e*SS		SS		19 44 08.0	-13
YSS					pmax	pmax				
	comp=Z,40nm,1.2s									
YSS					smax	smax				
	comp=E,1μm,10.0s									
YSS					MLR	MLR				
	comp=Z,500nm,16.0s									
Z21A	**St. Cloud Mine**	39.61	116	⇑P		P		19 35 30.2	+1.4
	baz=40,SNR=11									
T30A	**Plains**	39.62	105	⇑P		P		19 35 29.5	+0.8
	baz=40,SNR=15									
S31A	**Mullinville**	39.63	104	⇓P		P		19 35 29.4	+0.6
	baz=40									
V27A	**Dan Oppiter Fa**	39.64	109	⇑P		P		19 35 30.0	+0.9
	baz=40,SNR=10									
KSU1	**Kansas State U**	39.76	99	*e*P		P		19 35 30.4	+0.6
	comp=Z,226nm,1.0s									
Y23A	**Lovelace Mesa,**	39.77	114	⇓P		P		19 35 31.6	+1.5
	baz=40,SNR=25									
U29A	**Oasis Ranch, S**	39.77	107	⇓P		P		19 35 30.9	+0.9
	baz=40,SNR=6.8									
JFWS	**Jewell Farm**	39.77	90	*e*P		P		19 35 29.8	-0.1
JFWS					pmax	pmax				
	comp=Z,118nm,0.7s									
JFWS	**Jewell Farm**	39.77	90	*e*P		P		19 35 29.8	-0.1
	comp=Z,118nm,0.7s									
W26A	**Owens Ranch, T**	39.79	110	⇑P		P		19 35 31.6	+1.3
	baz=40,SNR=5.8									
120A	**U Bar Ranch, L**	39.86	118	⇓P		P		19 35 32.6	+1.8
	baz=40,SNR=15									
X25A	**Clemmons Ranch**	39.87	112	⇑P		P		19 35 32.4	+1.5
	baz=40,SNR=9.7									
SPA0	**Spitsbergen Ar**	39.87	4	*e*P		P		19 35 29.9	-0.5
SPITS	**Spitsbergen Ar**	39.87	4	P		P		19 35 29.8	-0.5
SPITS					PcP	PcP		19 37 34.4	-0.3
SPITS	**Spitsbergen Ar**	39.87	4	P		P		19 35 29.8	-0.5
	comp=Z,42nm,0.5s,baz=336,slow=7.1,SNR=169									
SPITS					PcP	PcP		19 37 34.3	-0.3
	comp=Z,5.9nm,0.5s,baz=355,slow=4.1,SNR=6.4									
SPITS					LR	LR		19 51 45.6		
	comp=Z,614nm,20.4s,baz=0.0,slow=36									
V28A	**Channing**	39.92	108	⇑P		P		19 35 32.2	+0.9
	baz=40,SNR=16									
Z22A	**Elephant Butte**	39.95	115	⇓P		P		19 35 33.2	+1.6
	baz=40,SNR=44									
T31A	**Randall Ranch,**	39.97	104	⇑P		P		19 35 32.4	+0.8
	baz=40,SNR=39									
U30A	**WK&E Inc. Balk**	39.99	106	⇑P		P		19 35 32.8	+0.9
	baz=40,SNR=19									
Y24A	**Capitan**	40.04	113	⇓P		P		19 35

X29A Tulia 41.25 109 ⇓P P 19 35 43.0 +0.8
baz=41,SNR=25
W31A Holland Ranch, 41.42 106 ⇓P P 19 35 44.1 +0.5
baz=41,SNR=17
Y28A McKinney Farm, 41.45 110 ⇑P P 19 35 44.6 +0.6
baz=41
125A Gardner Draw, 41.46 113 ⇓P P 19 35 45.3 +1.3
baz=41,SNR=26
Z27A Tatum 41.53 111 ⇑P P 19 35 45.4 +0.8
baz=41,SNR=43
224A Cornudas Mount 41.58 115 ⇓P P 19 35 46.2 +1.1
baz=41,SNR=17
SCHQ Schefferville 41.62 60 P P 19 35 45.3 +0.4
SCHQ Schefferville 41.62 60 P P 19 35 45.3 +0.4
comp=Z,53nm,0.6s,baz=317,slow=8.2,SNR=82
SCHQ LR LR 19 53 14.6
comp=Z,1µm,18.3s,baz=316,slow=36
X30A Coker Ranch, T 41.62 108 ⇓P P 19 35 45.9 +0.7
baz=42,SNR=54
ASAJ Asahikawa 41.71 277 P P 19 35 47.2 +1.4
ASAJ Asahikawa 41.71 277 P P 19 35 47.2 +1.4
comp=Z,6.9nm,0.8s,baz=354,slow=9.2,SNR=2.7
ASAJ LR LR 19 52 03.5
comp=Z,812nm,21.6s,baz=48,slow=35
126A Clayton Basin, 41.74 113 ⇑P P 19 35 47.1 +0.8
baz=42
Y29A Porterfield Fa 41.75 109 ⇑P P 19 35 47.2 +0.8
baz=42,SNR=12
225A Deer Hill, Car 41.85 114 ⇓P P 19 35 48.7 +1.3
baz=42,SNR=37
X31A McDonald Ranch 41.87 107 ⇓P P 19 35 48.2 +1.0
baz=42,SNR=32
Z28A Tucker Farm, M 41.92 110 ⇑P P 19 35 47.7 0.0
baz=42
HABR Khabarovsk 41.95 287 *e*P P 19 35 46.0 -1.6
HABR *e**PP **pP** 19 36 01.3 -2.3
HABR *e**SP **sP** 19 36 09.0 -1.9
HABR *e* 19 37 23.8
HABR *e* 19 37 40.6
HABR *e*PPP PPP 19 37 54.8
HABR *e*S **S** 19 42 00.2 -1.0
HABR *e**SS **sS** 19 42 27.1 -1.1
HABR SS **SS** 19 45 09.8 +0.4
HABR *e* 19 45 42.9
HABR pmax pmax
comp=Z,11nm,1.3s
HABR pmax pmax
comp=E,31nm,2.5s
HABR pmax pmax
comp=N,4.0nm,0.8s
HABR MLR MLR
comp=Z,335nm,19.0s
MNTX Cornudas Mount 41.97 115 *e*P P 19 35 49.1 +1.1
comp=Z,25nm,1.3s
127A Arkansas Junct 42.01 112 ⇑P P 19 35 49.0 +0.5
baz=42
HDIL Hopedale 42.05 91 *e*P P 19 35 48.2 -0.4
comp=Z,129nm,0.8s
Y30A Stafford Cattl 42.09 108 ⇓P P 19 35 49.7 +0.7
baz=42,SNR=15
324A Moseley Ranch, 42.15 115 ⇑P P 19 35 50.8 +1.2
baz=42,SNR=21
226B Tecolote Peak, 42.17 113 ⇑P P 19 35 50.8 +1.0
baz=42,SNR=17
Z29A Hungry Hill Ra 42.24 110 ⇓P P 19 35 51.2 +0.9
baz=42,SNR=55
Y31A Rekieta Farm, 42.30 108 ⇓P P 19 35 50.9 +0.2
baz=42
WMOK Wichita Mounta 42.32 105 *e*P P 19 35 51.5 +0.6
WMOK pmax pmax
comp=Z,104nm,0.9s
WMOK Wichita Mounta 42.32 105 *e*P P 19 35 51.5 +0.6
comp=Z,104nm,0.9s
325A Bean Ranch, Si 42.43 115 ⇑P P 19 35 53.2 +1.2
baz=42,SNR=42
128A Castleberry Fa 42.44 111 ⇓P P 19 35 52.6 +0.6
baz=42,SNR=13
Z30A Sanderson Ranc 42.48 109 ⇓P P 19 35 52.5 +0.3
baz=42,SNR=32
227A Bennet, Jal 42.60 112 ⇓P P 19 35 53.9 +0.7
baz=42,SNR=5.9
Y32A R-V Farms, Ver 42.63 107 ⇑P P 19 35 54.1 +0.7
baz=42,SNR=14
129A Stewart Farms, 42.70 110 ⇑P P 19 35 54.4 +0.3
baz=43
TUL1 Tulsa 42.73 101 ⇑P P 19 35 54.2 0.0
baz=43,SNR=18
228A UT Block 9, Go 42.82 111 ⇑P P 19 35 55.6 +0.6
baz=43,SNR=8.5
Z31A Sharp Cattle R 42.89 108 ⇓P P 19 35 55.7 +0.2
baz=43,SNR=20
425A Indio Mountain 42.92 115 ⇓P P 19 35 57.8 +1.8
baz=43,SNR=115
SCO Scoresbysund 43.07 23 *i* P P 19 35 57.0 +0.5
comp=Z,13nm,1.1s
SLM Saint Louis 43.12 94 *e*P P 19 35 57.3 0.0
SLM pmax pmax
comp=Z,118nm,1.1s
SLM Saint Louis 43.12 94 *e*P P 19 35 57.3 0.0
comp=Z,118nm,1.1s
130A Snyder 43.13 109 ⇑P P 19 35 58.1 +0.6
baz=43,SNR=8.3
Z32A Haskell 43.20 107 ⇑P P 19 35 58.0 0.0
baz=43,SNR=20
SFIN Scholer Farm 43.23 89 ⇑P P 19 35 58.3 +0.2
baz=43,SNR=31
229A Bryant Ranch, 43.29 111 ⇑P P 19 35 59.3 +0.5
baz=43,SNR=7.5
131A Roby 43.33 109 ⇓P P 19 35 59.4 +0.3
baz=43,SNR=12
328A Wristen Ranch, 43.35 112 ⇑P P 19 35 59.5 +0.2
baz=43
426A McDonald Obser 43.44 114 ⇓P P 19 36 01.2 +0.9
baz=43,SNR=30
427A Hayter Ranch, 43.55 113 ⇑P P 19 36 01.9 +0.9
baz=43,SNR=22
329A Wagon Wheel Ra 43.63 111 ⇑P P 19 36 02.2 +0.6
baz=44,SNR=32
230A Sterling City 43.67 110 ⇓P P 19 36 02.4 +0.6
baz=44,SNR=23
ABTX Abilene, Hawle 43.70 108 ⇓P P 19 36 02.3 +0.2
baz=44,SNR=14
526A Mary Lane Ranc 43.94 115 ⇑P P 19 36 05.3 +1.2
baz=44,SNR=51
428A Kincaid Ranch, 43.97 113 ⇓P P 19 36 05.5 +1.2
baz=44,SNR=35
231A Bronte 43.98 109 ⇓P P 19 36 04.5 +0.2
baz=44,SNR=5.9
330A Mertzon 44.05 110 ⇓P P 19 36 05.3 +0.3
baz=44,SNR=28
OLIL Olney 44.05 92 *e*P P 19 36 05.1 +0.3
comp=Z,156nm,0.9s
527A Woodward Ranch 44.07 114 ⇓P P 19 36 06.1 +0.9
baz=44,SNR=33
232A Coleman 44.32 109 ⇓P P 19 36 07.5 +0.4
baz=44,SNR=130
SIUC Southern Illin 44.34 94 *e*P P 19 36 07.3 +0.2
comp=Z,136nm,1.0s
626A Big Bend Ranch 44.36 115 ⇑P P 19 36 08.5 +1.1
baz=44,SNR=34
429A Davenport Ranc 44.41 112 ⇑P P 19 36 08.1 +0.4
baz=44,SNR=52
528A Cox Ranch, San 44.41 113 ⇓P P 19 36 09.3 +1.4
baz=44
BLO Bloomington 44.45 90 *e*P P 19 36 08.0 0.0
BLO pmax pmax
comp=Z,71nm,0.8s
BLO Bloomington 44.45 90 *e*P P 19 36 08.0 0.0
comp=Z,71nm,0.8s
331A San Angelo 44.47 110 ⇑P P 19 36 08.3 0.0
baz=44,SNR=5.4
430A Baggett Ranch, 44.55 111 ⇑P P 19 36 09.5 +0.5
baz=44,SNR=34
529A Stev Forest Ra 44.69 113 ⇑P P 19 36 10.9 +0.8
baz=45,SNR=26
332A Millersview 44.71 109 ⇓P P 19 36 10.5 +0.4
baz=45,SNR=15
RFTA Plano 44.72 105 *e*P P 19 36 10.9 +0.8
TXAR Lajitas Array 44.75 115 P P 19 36 11.5 +0.9
TXAR ScP **ScP** 19 41 38.5 +0.4
TXAR Lajitas Array 44.75 115 P P 19 36 11.5 +0.9
comp=Z,23nm,0.9s,baz=334,slow=6.0,SNR=123
TXAR ScP **ScP** 19 41 38.5 +0.4
comp=Z,2.1nm,0.9s,baz=328,slow=3.2,SNR=4.9
627A Terlingua Ranc 44.77 114 ⇓P P 19 36 11.9 +1.2
baz=45,SNR=66
USIN University of 44.87 92 *e*P P 19 36 11.3 0.0
comp=Z,106nm,0.8s
431A Sonora 44.92 110 ⇓P P 19 36 12.6 +0.7
baz=45,SNR=49
628A Black Gap, Mar 44.95 114 ⇑P P 19 36 13.2 +1.1
baz=45,SNR=63
530A J-C Ranch, Com 45.06 112 ⇓P P 19 36 13.7 +0.7
baz=45,SNR=24
432A Menard 45.12 109 ⇓P P 19 36 13.7 +0.3
baz=45,SNR=8.5
ERPA Erie 45.22 82 *e*P P 19 36 14.3 +0.3
comp=Z,42nm,0.7s
WHTX Lake Whitney 45.22 106 ⇑P P 19 36 14.4 +0.2
baz=45,SNR=12
UALR University of 45.26 99 *e*P P 19 36 14.1 -0.4
comp=Z,43nm,1.0s
ACSO Alum Creek Sta 45.28 86 *e*P P 19 36 14.6 0.0
comp=Z,60nm,0.6s
WCI Wyandotte Cave 45.31 91 *e*P P 19 36 14.9 0.0
WCI pmax pmax
comp=Z,58nm,0.8s
WCI Wyandotte Cave 45.31 91 *e*P P 19 36 14.9 0.0
comp=Z,58nm,0.8s
MSNY Massena 45.37 75 *e*P P 19 36 15.1 0.0
comp=Z,907nm,0.8s
531A Rocksprings 45.39 111 ⇓P P 19 36 16.3 +0.7
baz=45,SNR=44
JCT Junction City 45.45 110 *e*P P 19 36 16.9 +0.9
JCT pmax pmax
comp=Z,152nm,1.1s
JCT Junction City 45.45 110 *e*P P 19 36 16.9 +0.9
comp=Z,152nm,1.1s
JCT Junction City 45.45 110 ⇑P P 19 36 16.7 +0.6
baz=45,SNR=33
532A Rocksprings 45.71 110 ⇓P P 19 36 18.8 +0.7
baz=46,SNR=72
LONY Lake Ozonia 45.79 75 *e*P P 19 36 18.1 -0.5
comp=Z,33nm,0.8s
631A Perdido Creek 46.03 111 ⇓P P 19 36 20.7 +0.1
baz=46,SNR=52
FRNY Flat Rock 46.07 74 *e*P P 19 36 20.0 -0.8
comp=Z,111nm,1.1s
WVT Waverly 46.27 94 *e*P P 19 36 22.3 -0.1
WVT pmax pmax
comp=Z,43nm,0.9s
WVT Waverly 46.27 94 *e*P P 19 36 22.3 -0.1
comp=Z,43nm,0.9s
NCB Newcomb 46.45 76 *e*P P 19 36 23.8 +0.1
comp=Z,20nm,0.8s
USRK Ussuriysk Arra 46.56 285 P P 19 36 24.5 -0.1
comp=Z,3.1nm,0.7s,baz=49,slow=7.1,SNR=12
USRK PcP **PcP** 19 37 58.2 +0.5
comp=Z,4.8nm,0.8s,baz=38,slow=4.1,SNR=4.4
USRK ScP **ScP** 19 41 45.4 +0.2
comp=Z,1.6nm,0.7s,baz=64,slow=4.5,SNR=5.6
USRK LR LR 19 58 20.6
comp=Z,558nm,20.5s,baz=230,slow=39
732A Laxson Ranch, 46.88 111 ⇓P P 19 36 27.9 +0.7
baz=47,SNR=29
MDV Middlebury 46.91 75 *e*P P 19 36 27.0 -0.2
BINY Binghamton 47.02 79 *e*P P 19 36 28.2 0.0
comp=Z,64nm,0.8s
ACCN Adirondack Com 47.16 76 *e*P P 19 36 28.8 -0.5
comp=Z,15nm,0.6s
LBNH Lisbon 47.29 74 *e*P P 19 36 30.1 -0.2
LBNH pmax pmax
comp=Z,64nm,0.9s
LBNH Lisbon 47.29 74 *e*P P 19 36 30.1 -0.2
comp=Z,64nm,0.9s
MDJ Mudanjiang 47.33 287 P P 19 36 30.5 0.0
MDJ pP **pP** 19 36 45.9 -0.8
MDJ sP **sP** 19 36 53.1 -0.9
MDJ PcP **PcP** 19 38 00.8 +0.4
MDJ PP **PP** 19 38 21.1 -0.8
MDJ S **S** 19 43 14.3 -4.9
MDJ sS **sS** 19 43 42.0 -4.6
MDJ ScS **ScS** 19 46 15.1 -2.8
MDJ pmax pmax
comp=Z,13nm,1.4s
MDJ pmax pmax
comp=Z,130nm,5.1s
MDJ LR LR
comp=N,610nm,22.5s
MDJ LR LR
comp=E,470nm,15.0s
MDJ LR LR
comp=Z,500nm,23.8s
HNH Hanover 47.54 74 *e*P P 19 36 32.4 +0.2
comp=Z,412nm,1.5s
TRY Troy 47.67 76 *e*P P 19 36 33.5 +0.3
comp=Z,23nm,0.8s
TZTN Tazewell 47.96 90 *e*P P 19 36 36.2 +0.6
comp=Z,89nm,0.9s
FFD Franklin Falls 48.01 74 *e*P P 19 36 36.0 +0.2
comp=Z,16nm,0.5s
HIA Hailar 48.02 298 *e*P P 19 36 36.3 +0.4
comp=Z,92nm,1.2s
BORG Borgarnes 48.14 26 P P 19 36 37.3 +0.8
comp=Z,300nm,0.8s,SNR=5.3
BORG Borgarnes 48.14 26 P P 19 36 37.6 +1.1
BORG Borgarnes 48.14 26 P P 19 36 37.6 +1.1
comp=Z,22nm,0.8s,baz=353,slow=5.3,SNR=7.8
VBMS Vicksburg 48.23 99 *e*P P 19 36 38.5 +0.9
comp=Z,404nm,1.0s
CIT Chita 48.38 305 *e*P P 19 36 38.4 -0.2
CIT *e* 19 36 51.3
CIT *e* 19 46 21.2
CIT pmax pmax
comp=Z,143nm,2.2s
CPCT Cooper Cave 48.39 91 *e*P P 19 36 38.5 -0.3
TRO Tromso 48.48 5 *e*P P 19 36 39.2 +0.1
TRO AMB AMB 19 36 43.2
comp=Z,194nm,1.7s
KEV Kevo 48.55 1 *e*P P 19 36 39.0 -0.6
KEV pmax pmax
comp=Z,64nm,0.8s
KEV Kevo 48.55 1 *e*p P 19 36 39.0 -0.6
comp=Z,64nm,0.8s
KEV Kevo 48.55 1 *e*P P 19 36 38.7 -0.9
comp=Z,192nm,1.4s
ARCES ARCESS Array B 48.76 2 P P 19 36 40.4 -0.9
ARCES PcP **PcP** 19 38 05.1 0.0
ARCES ScP **ScP** 19 41 53.5 -0.6
ARCES ARCESS Array B 48.76 2 P P 19 36 40.4 -0.9
comp=Z,23nm,0.6s,baz=5.7,slow=7.4,SNR=92
ARCES PcP **PcP** 19 38 05.1 0.0
comp=Z,14nm,0.6s,baz=342,slow=5.7,SNR=8.6
ARCES ScP **ScP** 19 41 53.5 -0.6
comp=Z,9.0nm,0.8s,baz=3.8,slow=5.5,SNR=7.0
ARCES LR LR 19 59 08.7
comp=Z,252nm,18.3s,baz=356,slow=38
ARE0 ARCESS Array S 48.76 2 *e*P P 19 36 39.7 -1.6
SDMD Soldier's Deli 48.82 82 *e*P P 19 36 42.0 -0.1
comp=Z,169nm,1.1s
BRNJ Basking Ridge 48.87 79 *e*P P 19 36 43.6 +1.2
comp=Z,13µm,0.9s
BLA Blacksburg 48.90 86 *e*P P 19 36 42.6 -0.2
BLA pmax pmax
comp=Z,42nm,0.8s
BLA Blacksburg 48.90 86 *e*P P 19 36 42.6 -0.2
comp=Z,42nm,0.8s
WES Weston 49.01 75 *e*P P 19 36 44.0 +0.5
WES pmax pmax
comp=Z,406nm,1.2s
WES Weston 49.01 75 *e*P P 19 36 44.0 +0.5
comp=Z,406nm,1.2s
CPNY Central Park 49.06 78 *e*P P 19 36 43.9 0.0
comp=Z,157nm,1.2s
VWCC Virginia Weste 49.08 86 *e*P P 19 36 43.4 -0.7
YLE Yale 49.12 77 *e*P P 19 36 44.2 -0.1
comp=Z,174nm,1.0s
LRAL Lakeview Retre 49.20 95 *e*P P 19 36 44.7 -0.4
comp=Z,35nm,0.9s
KTK1 Kautokeino 49.24 3 *e*P P 19 36 45.2 +0.3
KTK1 AMB AMB 19 36 46.6
comp=Z,823nm,1.2s
CBN Corbin 49.53 83 *e*P P 19 36 48.4 +0.8
comp=Z,99nm,0.8s
JSRW J. Sargeant Re 49.71 84 *e*P P 19 36 49.4 +0.5
MAJO Matsushiro 49.73 274 *e*P P 19 36 50.0 +0.9
MAJO pmax pmax
comp=Z,24nm,0.9s
MAJO Matsushiro 49.73 274 *e*P P 19 36 50.0 +0.9
comp=Z,24nm,0.9s
MAT Matsushiro 49.73 274 P P 19 36 51.1 +2.0
MAT S **S** 19 43 54.8 +1.6
MJAR Matsushiro Arr 49.73 274 P P 19 36 49.1 +0.1
MJAR PcP **PcP** 19 38 09.1 -0.1
MJAR ScP **ScP** 19 41 57.9 -0.9
MJAR Matsushiro Arr 49.73 274 P P 19 36 49.1 +0.1
comp=Z,3.1nm,0.7s,baz=27,slow=8.2,SNR=6.8
MJAR PcP **PcP** 19 38 09.1 -0.1
comp=Z,3.4nm,0.7s,baz=31,slow=5.0,SNR=4.3
MJAR ScP **ScP** 19 41 57.9 -0.9
comp=Z,3.9nm,1.0s,baz=27,slow=2.7,SNR=6.2
CN2 Changchun 49.82 290 *e*P P 19 36 50.1 +0.4
CN2 epP **pP** 19 37 02.8 -3.2
CN2 esP **sP** 19 37 09.1 -4.1
CN2 *e*S **S** 19 43 53.9 -0.4
CN2 pmax pmax
comp=Z,60nm,0.7s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,16.0s
CN2 LR LR
comp=E,400nm,16.0s
CN2 LR LR
comp=Z,400nm,16.0s
STEI Steigen 50.00 7 *e*P P 19 36 50.5 -0.1
STEI AMB AMB 19 36 52.7
comp=Z,139nm,1.7s
KMSC Kings Mountain 50.15 89 ⇑P P 19 36 52.3 +0.1
baz=50,SNR=13
LVZ Lovozero 50.37 357 *c*eP P 19 36 52.5 -1.0
LVZ pmax pmax
comp=Z,162nm,1.7s
LVZ Lovozero 50.37 357 P P 19 36 53.4 -0.1
comp=Z,396nm,0.7s,SNR=5.6
APA Apatity 50.72 358 ⇑*i*P P 19 36 55.8 -0.3
APA *i* *PP pP 19 37 18.0 +5.5
APA pmax pmax
comp=Z,78nm,1.0s
APA MLR MLR
comp=Z,700nm,23.0s
BRAL Brewton 50.85 97 *e*P P 19 36 57.4 -0.2
comp=Z,318nm,1.1s
STOK Stokkvaagen 51.45 8 *e*P P 19 37 01.4 -0.2
STOK AMB AMB 19 37 04.5
comp=N,52nm,2.1s
FLOS Flostrand 51.47 8 *e*P P 19 37 01.2 -0.5
FLOS AMB AMB 19 37 03.9
comp=Z,152nm,1.7s
IRK Irkutsk 51.67 311 *e*P P 19 37 02.5 -0.9
IRK pmax pmax
comp=Z,147nm,1.7s
TIGA Tifton 52.13 93 ⇓P P 19 37 06.6 -0.5
baz=52
KRAR Krasnoyarsk 52.29 320 *d*iP P 19 37 05.2 -2.8
KRAR pmax pmax
comp=Z,324nm,1.4s
TLY Talaya 52.35 311 *d*iP P 19 37 09.5 +0.9
TLY pmax pmax
comp=Z,86nm,1.4s
TLY MLR MLR
comp=Z,241nm,13.0s
TLY Talaya 52.35 311 P P 19 37 09.9 +1.4
comp=Z,258nm,0.7s,SNR=12
NHSC New Hope 52.36 89 *e*P P 19 37 09.6 +0.8
comp=Z,436nm,1.1s
MOY Mondy 53.30 312 *e*P P 19 37 17.4 +1.8
MOY pmax pmax
comp=Z,144nm,1.9s
ZAK Zakamensk 53.55 310 ⇓*i*P P 19 37 18.2 +0.7
ZAK *e* 19 38 24.2
ZAK *e* 19 44 59.4
ZAK pmax pmax
comp=Z,15nm,1.1s
KSRS Korea Array 53.79 283 P P 19 37 20.1 +0.8
comp=Z,13nm,0.7s,baz=35,slow=7.0,SNR=55
KSRS ScP **ScP** 19 42 16.2 -0.1
comp=Z,7.6nm,1.1s,baz=35,slow=3.8,SNR=13
KSAR Wonju Array Be 53.82 283 P P 19 37 20.1 +0.6
KSAR ScP **ScP** 19 42 16.2 -0.2
ULN Ulaanbaatar 54.22 306 ⇓P P 19 37 23.6 +1.1
SNR=13
ULN Ulaanbaatar 54.22 306 *e*P P 19 37 23.3 +0.8
comp=Z,53nm,0.6s
ULN Ulaanbaatar 54.22 306 P P 19 37 23.6 +1.1
TBLU Trondheim 54.28 10 *e*P P 19 37 21.0 -1.5
TBLU AMS AMS 20 32 05.4
comp=Z,2µm,24.0s
SONM Songino Array 54.49 306 P P 19 37 25.7 +1.3
SONM PcP **PcP** 19 38 27.5 +0.4
SONM ScP **ScP** 19 42 18.7 -0.7
SONM Songino Array 54.49 306 P P 19 37 25.7 +1.3
comp=Z,76nm,0.7s,baz=39,slow=7.1,SNR=301
SONM PcP **PcP** 19 38 27.5 +0.4
comp=Z,23nm,0.8s,baz=35,slow=4.5,SNR=4.8
SONM ScP **ScP** 19 42 18.7 -0.7
comp=Z,6.8nm,1.1s,baz=21,slow=3.9,SNR=9.2
SONM LR LR 20 03 53.8
comp=Z,544nm,19.1s,baz=230,slow=40
MOL Molde 54.70 12 *e*P P 19 37 24.4 -1.1
MOL AMB AMB 19 37 27.5
comp=Z,131nm,1.5s
JOF Joensuu 55.42 359 *e*P P 19 37 30.8 +0.1
JOF pmax pmax
comp=Z,81nm,1.2s
JOF Joensuu 55.42 359 *e*p P 19 37 30.8 +0.1
comp=Z,81nm,1.2s
DL2 Dalian 55.47 289 P P 19 37 32.3 +0.9
DL2 S **S** 19 45 12.3 +1.0
DL2 pmax pmax
comp=Z,67nm,1.2s
DL2 LR LR
comp=N,260nm,19.6s
DL2 LR LR
comp=Z,290nm,21.8s
SUE Sulen 55.88 14 *e*P P 19 37 33.5 -0.6
JNU Nakatsue 55.97 277 P P 19 37 36.0 +0.9
JNU Nakatsue 55.97 277 P P 19 37 36.0 +0.9
comp=Z,7.5nm,0.7s,baz=357,slow=6.9,SNR=6.3
LRW Lerwick 56.01 18 ⇓*e*P P 19 37 34.6 -0.3
LRW AMB AMB 19 37 36.6
comp=Z,141nm,1.5s
LRW Lerwick 56.01 18 P P 19 37 34.6 -0.3
LRW AMB AMB 19 37 36.6
comp=Z,141nm,1.5s
NVS Novosibirsk 56.05 326 *i* P P 19 37 34.3 -1.0
NVS *i* 19 38 32.4
NVS *i* S **S** 19 45 14.2 -4.4
NVS *e* 19 45 44.7
NVS *i* 19 47 15.4
NVS pmax pmax
comp=Z,138nm,1.6s
NVS pmax pmax
comp=N,78nm,1.8s
NVS pmax pmax
comp=E,47nm,1.4s
NVS pmax pmax
comp=Z,24nm,1.8s
NVS pmax pmax
comp=N,29nm,2.2s
NVS pmax pmax
comp=E,20nm,1.8s
NVS smax smax
comp=N,34nm,1.7s
NVS smax smax
comp=E,72nm,1.8s
KAF Kangasniemi 56.22 2 *e*P P 19 37 36.3 -0.1
KAF pmax pmax
comp=Z,43nm,1.3s
KAF Kangasniemi 56.22 2 *e*p P 19 37 36.3 -0.1
comp=Z,43nm,1.3s
ZALV Zalesovo Beam 56.41 324 P P 19 37 37.4 -0.5
ZALV 19 38 34.2
ZALV pmax pmax
comp=Z,53nm,0.5s
ZALV pmax pmax
comp=Z,7.0nm,0.5s
ZALV pmax pmax
comp=N,4.0nm,0.8s
ZALV MLR MLR
comp=Z,531nm,21.5s
ZALV Zalesovo Beam 56.41 324 P P 19 37 37.4 -0.5
ZALV PcP **PcP** 19 38 34.2 0.0
ZALV ScP **ScP** 19 42 27.8 +0.2
ZALV Zalesovo Beam 56.41 324 P P 19 37 37.4 -0.5
comp=Z,53nm,0.5s,baz=27,slow=7.0,SNR=200
ZALV PcP **PcP** 19 38 34.2 0.0
comp=Z,7.3nm,0.5s,baz=28,slow=3.9,SNR=4.5
ZALV ScP **ScP** 19 42 27.8 +0.2
comp=Z,4.2nm,0.8s,baz=22,slow=4.7,SNR=5.0

ZALV LR LR 20 05 37.9
comp=Z,531nm,21.5s,baz=249,slow=40
ASK Askoy 56.49 14 *e*P **P 19 37 36.9 -1.4**
ASK AMB AMB 19 37 39.7
comp=Z,196nm,1.5s
NB2 NORSAR Subarra 56.55 10 P **P 19 37 38.3 -0.5**
comp=Z,50nm,0.8s,baz=350,slow=7.4
NB2 NORSAR Subarra 56.55 10 P **P 19 37 38.3 -0.5**
baz=350,slow=7.4
NOA NORSAR Array B 56.55 10 P **P 19 37 38.0 -0.9**
NOA NORSAR Array B 56.55 10 P **P 19 37 38.0 -0.9**
comp=Z,28nm,0.6s,baz=350,slow=7.2,SNR=189
NOA LR LR 20 03 07.1
comp=Z,157nm,20.6s,baz=350,slow=37
RUND Rundenannen 56.58 14 *e*P **P 19 37 37.8 -1.3**
RUND AMB AMB 19 37 40.3
comp=Z,217nm,1.5s
BER Bergen 56.61 14 *e*P **P 19 37 37.9 -1.3**
BER AMB AMB 19 37 40.1
comp=Z,131nm,1.5s
BER AMS AMS 20 30 40.4
comp=Z,744nm,24.7s
EGD Espegrend 56.70 14 *e*P **P 19 37 38.7 -1.2**
EGD AMB AMB 19 37 40.9
comp=Z,170nm,1.5s
FINES FINESS Array B 56.89 2 P **P 19 37 40.2 -0.9**
FINES ScP **ScP 19 42 30.1 +0.6**
FINES FINESS Array B 56.89 2 P **P 19 37 40.2 -0.9**
comp=Z,30nm,0.7s,baz=3.1,slow=7.7,SNR=101
FINES ScP **ScP 19 42 30.1 +0.6**
comp=Z,11nm,0.8s,baz=15,slow=5.8,SNR=10
SOKR Solikamsk 56.91 344*d* i P **P 19 37 41.1 -0.2**
SOKR pmax pmax
comp=Z,220nm,1.3s
BJI Beijing 56.93 294 P **P 19 37 42.3 +0.5**
BJI S **S 19 45 31.3 +0.6**
BJI pmax pmax
comp=Z,51nm,1.2s
BJI LR LR
comp=N,370nm,22.2s
BJI LR LR
comp=E,270nm,21.9s
BJI LR LR
comp=Z,360nm,22.9s
BJT Baijiatuan 56.95 294 *e*P **P 19 37 42.3 +0.4**
comp=Z,58nm,0.9s
ODD1 Odda 57.21 13 *e*P **P 19 37 43.4 -0.2**
ODD1 AMB AMB 19 37 45.7
comp=Z,86nm,1.3s
HFS Hagfors 57.64 9 P **P 19 37 45.3 -1.3**
HFS Hagfors 57.64 9 P **P 19 37 45.3 -1.3**
comp=Z,42nm,0.8s,baz=15,slow=6.0,SNR=152
MVH1 Achvaich 57.66 20 ǁ *i*P **P 19 37 46.5 -0.2**
MVH1 Achvaich 57.66 20 P **P 19 37 46.5 -0.2**
BLS5 Blasjo 57.67 14 *e*P **P 19 37 46.5 -0.3**
BLS5 AMB AMB 19 37 48.9
comp=Z,40nm,0.9s
KONO Kongsberg 57.77 12 *e*P **P 19 37 47.2 -0.2**
KONO AMB AMB 19 37 49.6
comp=Z,108nm,1.4s
KONO Kongsberg 57.77 12 *e*P **P 19 37 47.1 -0.3**
KONO pmax pmax
comp=Z,56nm,0.9s
KONO Kongsberg 57.77 12 *e*P **P 19 37 47.1 -0.3**
comp=Z,56nm,0.9s
KAC Achnashellach 57.88 21 *i* P **P 19 37 48.0 -0.2**
KAC Achnashellach 57.88 21 P **P 19 37 48.0 -0.2**
KPL Plockton 57.97 21 ǁ *e*P **P 19 37 48.8 0.0**
KPL AMB AMB 19 37 50.5
comp=Z,108nm,1.6s
KPL Plockton 57.97 21 P **P 19 37 48.8 0.0**
KPL AMB AMB 19 37 50.5
comp=Z,108nm,1.6s
MDO Dochfour 58.09 21 ǁ *e*P **P 19 37 49.0 -0.8**
MDO Dochfour 58.09 21 P **P 19 37 49.0 -0.8**
KSB Sheil Bridge 58.13 21 ǁ *e*P **P 19 37 49.8 -0.2**
KSB Sheil Bridge 58.13 21 P **P 19 37 49.8 -0.2**
MCD Coleburn Disti 58.14 20 ǁ *i*P **P 19 37 50.1 +0.1**
MCD Coleburn Disti 58.14 20 P **P 19 37 50.1 +0.1**
HHC Hu-ho-hao-te 58.22 298 *i* P **P 19 37 51.3 +0.3**
HHC pP **pP 19 38 07.6 -0.1**
HHC sP **sP 19 38 17.0 +2.2**
HHC S **S 19 45 49.3 +1.5**
HHC sS **sS 19 46 13.8 -2.2**
HHC ScS **ScS 19 47 31.5 -3.1**
HHC pmax pmax
comp=Z,120nm,1.2s
HHC pmax pmax
comp=Z,300nm,5.1s
HHC LR LR
comp=N,1μm,16.5s
HHC LR LR
comp=E,2μm,16.1s
HHC LR LR
comp=Z,950nm,16.7s
MME1 Meikle Cairn 58.44 20 *e*P **P 19 37 51.7 -0.5**
MME1 Meikle Cairn 58.44 20 P **P 19 37 51.7 -0.5**
DRUM Mains of Drumt 58.90 20 ǁ *e*P **P 19 37 55.2 -0.2**
DRUM AMB AMB 19 37 56.8
comp=Z,177nm,1.0s
DRUM Mains of Drumt 58.90 20 P **P 19 37 55.2 -0.2**
DRUM AMB AMB 19 37 56.8
comp=Z,177nm,1.0s
HOMB Homborsund 59.02 13 *e*P **P 19 37 56.1 0.0**
HOMB AMB AMB 19 37 58.4
comp=Z,73nm,1.2s
SVE Sverdlovsk 59.02 340 ǁǁ *i*P **P 19 37 56.5 +0.3**
SVE *e*S **S 19 45 52.8 -4.8**
SVE pmax pmax
comp=Z,249nm,1.4s
SVE MLR MLR
comp=Z,858nm,25.0s
BTO Baotou 59.07 299 *e*P **P 19 37 56.3 -0.6**
EAB Aberfoyle 59.29 21 ǁ *i*P **P 19 37 58.1 +0.1**
EAB Aberfoyle 59.29 21 P **P 19 37 58.1 +0.1**
TEIG Tepich 59.50 105 *e*P **P 19 37 59.2 -0.7**
comp=Z,18nm,0.6s
TEIG Tepich 59.50 105 LR LR 20 07 29.8
comp=Z,713nm,21.3s,baz=120,slow=40
ARU Arti 59.73 342*d* i P **P 19 38 00.8 -0.2**
ARU *e* 19 38 46.3
ARU S **S 19 46 05.7 -0.9**
ARU 19 47 40.1
ARU SS **SS 19 49 59.1 -3.1**
ARU pmax pmax
comp=Z,342nm,1.7s
ARU MLR MLR
comp=Z,791nm,26.0s
ARU Arti 59.73 342 P **P 19 38 00.2 -0.8**
comp=Z,1μm,0.7s,SNR=75
EDI Edinburgh 59.74 20 *e*P **P 19 38 00.8 -0.3**
EDI AMB AMB 19 38 02.4
comp=Z,109nm,1.7s
EDI Edinburgh 59.74 20 P **P 19 38 00.8 -0.3**
EDI AMB AMB 19 38 02.4
comp=Z,109nm,1.7s
EAU Auchinoon 59.77 21 ǁ *i*P **P 19 38 01.6 +0.2**
EAU Auchinoon 59.77 21 P **P 19 38 01.6 +0.2**
ESY Stoneypath 59.84 20 ǁ *i*P **P 19 38 01.5 -0.3**
ESY Stoneypath 59.84 20 P **P 19 38 01.5 -0.3**
VSU Vasula 59.88 1*d* i P **P 19 38 01.9 -0.2**
VSU pmax pmax
comp=Z,379nm,1.5s
EBL Broad Law 59.91 20 ǁ *e*P **P 19 38 02.2 -0.1**
EBL Broad Law 59.91 20 P **P 19 38 02.2 -0.1**
BBSR BB Station 60.21 77 *e*P **P 19 38 03.7 -1.0**
comp=Z,316nm,1.6s
EKA Eskdalemuir Ar 60.31 21 P **P 19 38 05.0 0.0**
EKA Eskdalemuir Ar 60.31 21 P **P 19 38 05.0 0.0**
comp=Z,28nm,0.6s,baz=342,slow=5.5,SNR=110
ESK Eskdalemuir 60.32 21 P **P 19 38 05.0 0.0**
comp=Z,510nm,1.4s,SNR=19
ESK Eskdalemuir 60.32 21 ǁ *e*P **P 19 38 05.1 0.0**
ESK AMB AMB 19 38 06.8
comp=Z,141nm,1.5s
ESK Eskdalemuir 60.32 21 P **P 19 38 05.1 0.0**
ESK AMB AMB 19 38 06.8
comp=Z,141nm,1.5s
ESK Eskdalemuir 60.32 21 *e*P **P 19 38 05.1 0.0**
ESK pmax pmax
comp=Z,272nm,1.5s
ESK Eskdalemuir 60.32 21 *e*P **P 19 38 05.1 0.0**
comp=Z,272nm,1.5s
ECK Cauldkaine Hil 60.46 21 ǁ *i*P **P 19 38 05.9 -0.2**
ECK Cauldkaine Hil 60.46 21 P **P 19 38 05.9 -0.2**

GAL1 Galloway 60.49 22 ǁ *e*P **P 19 38 06.2 -0.1**
GAL1 AMB AMB 19 38 07.8
comp=Z,146nm,1.6s
GAL1 Galloway 60.49 22 P **P 19 38 06.2 -0.1**
GAL1 AMB AMB 19 38 07.8
comp=Z,146nm,1.6s
BRVK Borovoye 60.80 333 P **P 19 38 08.5 +0.1**
comp=Z,507nm,1.1s,SNR=34
BRVK Borovoye 60.80 333*d* i P **P 19 38 07.3 -1.1**
BRVK pmax pmax
comp=Z,265nm,1.4s
BRVK Borovoye 60.80 333 *e*P **P 19 38 07.7 -0.8**
comp=Z,190nm,1.4s
BVA0 Borovoye Array 60.81 333 *i* P **P 19 38 07.1 -1.4**
BVA0 pmax pmax
comp=Z,150nm,1.3s
BVAR Borovoye Array 60.81 333 P **P 19 38 08.1 -0.4**
BVAR pmax pmax
comp=Z,48nm,0.9s
BVAR pmax pmax
comp=N,4.0nm,0.8s
BVAR Borovoye Array 60.81 333 P **P 19 38 08.1 -0.4**
BVAR ScP **ScP 19 42 47.5 +0.4**
BVAR Borovoye Array 60.81 333 P **P 19 38 08.1 -0.4**
comp=N,48nm,0.9s,baz=30,slow=7.1,SNR=80
BVAR ScP **ScP 19 42 47.5 +0.4**
comp=N,4.2nm,0.8s,baz=44,slow=4.4,SNR=4.9
MUD Monsted U'grnd 60.88 13 ǁ *i*P **P 19 38 09.0 +0.2**
comp=N,23nm,0.8s
VOSK Vostochnaya 60.97 332 P **P 19 38 08.0 -1.6**
VOSK pmax pmax
comp=Z,34nm,1.3s
KURK Kurchatov 60.99 326 P **P 19 38 09.3 -0.4**
comp=Z,399nm,1.5s,SNR=46
KURK Kurchatov 60.99 326*d* i P **P 19 38 09.3 -0.4**
KURK pmax pmax
comp=Z,122nm,1.2s
KURK Kurchatov 60.99 326 *e*P **P 19 38 09.1 -0.7**
comp=Z,161nm,1.4s
KESW Keswick, Cumbr 61.03 21 ǁ *e*P **P 19 38 09.8 -0.1**
KESW AMB AMB 19 38 11.5
comp=Z,120nm,1.5s
KESW Keswick, Cumbr 61.03 21 P **P 19 38 09.8 -0.1**
KESW AMB AMB 19 38 11.5
comp=Z,120nm,1.5s
DLF Lyons Farm 61.66 23 ǁ *i*P **P 19 38 14.0 -0.2**
COP Copenhagen 61.95 11 ǁ *i*P **P 19 38 16.1 0.0**
comp=Z,30nm,0.9s
WME Myndd Eilian 61.97 22 ǁ *e*P **P 19 38 15.7 -0.6**
WME Myndd Eilian 61.97 22 P **P 19 38 15.7 -0.6**
WLF1 Llynfaes 62.05 22 ǁ *e*P **P 19 38 16.3 -0.5**
WLF1 AMB AMB 19 38 18.2
comp=Z,66nm,1.6s
WLF1 Llynfaes 62.05 22 P **P 19 38 16.3 -0.5**
WLF1 AMB AMB 19 38 18.2
comp=Z,66nm,1.6s
WPM1 Penmaenmawr 62.17 22 ǁ *e*P **P 19 38 17.0 -0.7**
WPM1 Penmaenmawr 62.17 22 P **P 19 38 17.0 -0.7**
VAL Valentia 62.20 26 ǁǁ *i*P **P 19 38 18.4 +0.6**
LLD Lille Linde 62.28 11 *i* P **P 19 38 18.2 -0.1**
comp=Z,51nm,0.6s
YRE Yr Eifl 62.34 22 ǁ *e*P **P 19 38 18.1 -0.7**
YRE Yr Eifl 62.34 22 P **P 19 38 18.1 -0.7**
NJ2 Nanjing 62.41 287 *e*P **P 19 38 19.3 -0.3**
NJ2 pP **pP 19 38 35.6 -0.8**
NJ2 sP **sP 19 41 41.5 -2.0**
NJ2 PP **PP 19 40 38.5 +1.4**
NJ2 S **S 19 46 47.0 +5.6**
NJ2 sS **sS 19 47 10.0 +0.1**
NJ2 pmax pmax
comp=Z,30nm,0.5s
NJ2 pmax pmax
comp=Z,380nm,4.2s
NJ2 LR LR
comp=N,3μm,17.8s
NJ2 LR LR
comp=E,4μm,20.9s
NJ2 LR LR
comp=Z,3μm,19.6s
MOS Moscow 62.45 355 *e*P P 19 38 13.7 -5.7
MOS *e* 19 38 24.8
MOS *e* 19 38 54.1
MOS *e*S **S 19 46 36.5 -4.6**
MOS pmax pmax
comp=N,111nm,1.1s
MOS pmax pmax
comp=Z,271nm,1.4s
MOS pmax pmax
comp=Z,600nm,1.9s
MOS pmax pmax
comp=N,400nm,1.7s
KBI1 Birley Grange 62.58 20 ǁ *e*P **P 19 38 20.3 -0.1**
KBI1 Birley Grange 62.58 20 P **P 19 38 20.3 -0.1**
FOEL Foel Wylfa 62.65 21 ǁ *e*P **P 19 38 20.7 -0.1**
FOEL AMB AMB 19 38 22.5
comp=Z,132nm,1.5s
FOEL Foel Wylfa 62.65 21 P **P 19 38 20.7 -0.1**
FOEL AMB AMB 19 38 22.5
comp=Z,132nm,1.5s
BSD Bornholm Skovb 62.72 9 ǁ *i*P **P 19 38 21.0 -0.2**
comp=Z,40nm,0.9s
HLM1 Long Mynd 63.06 21 ǁ *e*P **P 19 38 23.6 0.0**
HLM1 AMB AMB 19 38 25.3
comp=Z,92nm,1.6s
HLM1 Long Mynd 63.06 21 P **P 19 38 23.6 0.0**
HLM1 AMB AMB 19 38 25.3
comp=Z,92nm,1.6s
OBN Obninsk 63.11 355ĸ *i*P **P 19 38 21.9 -1.9**
OBN *PP **pP 19 38 39.4 -1.3**
OBN *SP **sP 19 38 46.5 -1.3**
OBN *e* 19 38 59.4
OBN *i* S **S 19 46 50.0 +0.5**
OBN pmax pmax
comp=Z,295nm,1.2s
OBN MLR MLR
comp=Z,400nm,20.0s
RGN Rugen 63.15 10 *e*P **P 19 38 25.1 +1.0**
comp=Z,229nm,1.3s
NACGM Naroch 63.46 2 *e* **P 19 38 23.0 -3.1**
BSEG Bad Segeberg 63.48 12 *e*P **P 19 38 26.9 +0.6**
comp=Z,232nm,1.3s
BSEG Bad Segeberg 63.48 12 *e*P **P 19 38 26.9 +0.6**
BSEG pmax pmax
comp=Z,76nm,1.3s
MCH1 Michaelchurch 63.54 22 ǁ *e*P **P 19 38 26.7 0.0**
MCH1 AMB AMB 19 38 28.4
comp=Z,138nm,1.5s
MCH1 Michaelchurch 63.54 22 P **P 19 38 26.7 0.0**
MCH1 AMB AMB 19 38 28.4
comp=Z,138nm,1.5s
MK31 Makanchi Array 63.55 322*ce*P **P 19 38 25.9 -1.0**
MK31 pmax pmax
comp=Z,12nm,0.5s
MKAR Makanchi Array 63.55 322 P **P 19 38 26.1 -0.8**
MKAR pmax pmax
comp=Z,15nm,0.6s
MKAR Makanchi Array 63.55 322 P **P 19 38 26.1 -0.8**
MKAR Makanchi Array 63.55 322 P **P 19 38 26.1 -0.8**
comp=Z,15nm,0.6s,baz=32,slow=5.7,SNR=109
SSW Stow on the Wo 63.77 21 ǁ *e*P **P 19 38 28.5 +0.3**
SSW Stow on the Wo 63.77 21 P **P 19 38 28.5 +0.3**
MICGM Minsk 63.87 1 ǁ *e*P **P 19 38 27.0 -1.9**
MNK Minsk 63.87 1 ǁ *e*P **P 19 38 27.0 -1.9**
MNK pmax pmax
comp=Z,560nm,1.0s
GTA Gaotai 64.16 306 ǁ P **P 19 38 31.9 +0.7**
GTA pP **pP 19 38 46.3 -1.8**
GTA sP **sP 19 38 51.6 -3.6**
GTA PcP **PcP 19 39 07.8 +2.1**
GTA S **S 19 47 02.9 -0.4**
GTA ScS **SKSac 19 48 18.3 -1.0**
GTA pmax pmax
comp=Z,73nm,0.8s
GTA pmax pmax
comp=Z,260nm,7.6s
GTA LR LR
comp=N,510nm,20.9s
GTA LR LR
comp=E,650nm,24.2s
GTA LR LR
comp=Z,570nm,23.8s
SKP1 Kophill 64.17 20 *e*P **P 19 38 30.7 -0.2**
SKP1 Kophill 64.17 20 P **P 19 38 30.7 -0.2**
SWN1 Swindon 64.21 21 ǁ *e*P **P 19 38 31.4 +0.2**
SWN1 AMB AMB 19 38 33.3
comp=Z,252nm,1.6s
SWN1 Swindon 64.21 21 P **P 19 38 31.4 +0.2**
SWN1 AMB AMB 19 38 33.3
comp=Z,252nm,1.6s
HTL Hartland 64.24 23 ǁ *e*P **P 19 38 31.1 -0.2**
HTL AMB AMB 19 38 33.2
comp=Z,98nm,1.4s
HTL Hartland 64.24 23 P **P 19 38 31.1 -0.2**
HTL AMB AMB 19 38 33.2
comp=Z,98nm,1.4s
SUW Suwalki 64.26 4 ǁ *e*P **P 19 38 30.9 -0.5**
SUW Suwalki 64.26 4 *e*P **P 19 38 30.9 -0.5**
HEX Exmoor 64.29 22 ǁ *i*P **P 19 38 31.7 0.0**
HEX Exmoor 64.29 22 P **P 19 38 31.7 0.0**
WOL Wolverton 64.50 21 ǁ *e*P **P 19 38 33.3 +0.2**
WOL AMB AMB 19 38 35.0
comp=Z,385nm,1.4s
WOL Wolverton 64.50 21 P **P 19 38 33.3 +0.2**
WOL AMB AMB 19 38 35.0
comp=Z,385nm,1.4s
WMQ Urumqi 64.57 317 P **P 19 38 34.9 +1.2**
WMQ pP **pP 19 38 51.0 +0.4**
WMQ sP **sP 19 38 58.0 +0.3**
WMQ PcP **PcP 19 39 08.0 +0.8**
WMQ PP **PP 19 41 00.0 +4.2**
WMQ S **S 19 47 08.0 0.0**
WMQ ScS **SKSac 19 48 21.0 -1.1**
WMQ pmax pmax
comp=Z,23nm,1.1s
WMQ LR LR
comp=N,900nm,26.0s
WMQ LR LR
comp=E,770nm,25.2s
WMQ LR LR
comp=Z,790nm,26.8s
GKP Gorka Klasztor 64.72 8 ǁ *e*P **P 19 38 34.7 +0.3**
GKP Gorka Klasztor 64.72 8 *e*P **P 19 38 34.7 +0.3**
IBBN Ibbenburen 64.81 14 *e*P **P 19 38 35.6 +0.6**
comp=Z,178nm,1.3s
DYA Yadsworthy 64.87 23 ǁ *e*P **P 19 38 35.4 -0.1**
DYA AMB AMB 19 38 37.0
comp=Z,116nm,1.4s
DYA Yadsworthy 64.87 23 P **P 19 38 35.4 -0.1**
DYA AMB AMB 19 38 37.0
comp=Z,116nm,1.4s
NRDL Niedersach Rie 64.88 13 *e*P **P 19 38 35.8 +0.4**
comp=Z,180nm,1.4s
WTSB Winterswijk 65.03 15 *e*P **P 19 38 36.6 +0.2**
comp=Z,151nm,1.1s
XAN Xi'an 65.10 296 P **P 19 38 36.6 -0.7**
XAN pmax pmax
comp=Z,35nm,5.2s
XAN LR LR
comp=N,570nm,17.0s
XAN LR LR
comp=E,110nm,16.2s
XAN LR LR
comp=Z,260nm,16.0s
HMNX Herstmonceux 65.19 20 *e*P **P 19 38 37.6 +0.1**
HMNX Herstmonceux 65.19 20 P **P 19 38 37.6 +0.1**
RUE Ruedersdorf 65.24 10 *e*P **P 19 38 38.5 +0.7**
comp=Z,236nm,1.1s
RUE Ruedersdorf 65.24 10 *e*P **P 19 38 38.5 +0.7**
comp=Z,490nm,1.4s
LZH Lanzhou 65.45 301 SS SS 19 51 04.1 -29
LZH pmax pmax
comp=Z,39nm,1.2s
LZH pmax pmax
comp=Z,200nm,7.3s
LZH LR LR
comp=N,970nm,16.1s
LZH LR LR
comp=E,820nm,15.8s
LZH LR LR
comp=Z,1μm,16.6s
CLZ Clausthal 65.55 13 *e*P **P 19 38 40.7 +0.8**
comp=Z,168nm,1.0s
CLZ *es*P **sP 19 39 06.7 +2.7**
CLZ Clausthal 65.55 13 *e*P **P 19 38 40.7 +0.8**
CLZ *e**SP **sP 19 39 06.7 +2.7**
CLZ pmax pmax
comp=Z,17nm,1.0s
BUG Bochum--Univer 65.60 15 *e*P **P 19 38 40.4 +0.3**
comp=Z,187nm,1.3s
AKTO Aktyubinsk 65.61 340 P **P 19 38 40.3 0.0**
AKTO pmax pmax
comp=Z,44nm,0.5s
AKTO Aktyubinsk 65.61 340 P **P 19 38 40.3 0.0**
AKTO Aktyubinsk 65.61 340 P **P 19 38 40.3 0.0**
comp=Z,44nm,0.5s,baz=28,slow=7.3,SNR=251
WHN Wuhan 65.72 289 ǁ P **P 19 38 41.3 +0.1**
WHN S **S 19 47 17.0 -5.3**
WHN LR LR
comp=N,560nm,5.8s
WHN LR LR
comp=E,2μm,17.4s
WHN LR LR
comp=Z,3μm,19.8s
BEBN Eben Emael 66.03 16 P **P 19 38 43.1 +0.1**
comp=Z,31nm,1.6s
HGN Heimansgroeve 66.09 16 *e*P **P 19 38 43.4 +0.1**
comp=Z,248nm,1.4s
HGN *e*PP PP 19 41 01.9 -6.9
HGN *e*S S 19 47 34.6 +8.3
MEM Membach 66.26 16 P **P 19 38 44.7 +0.3**
comp=Z,84nm,1.6s
NEUB Neuenburg 66.32 12 *e*P **P 19 38 45.3 +0.5**
comp=Z,152nm,1.0s
NEUB *es*P **sP 19 39 11.1 +2.2**
CLL Collm 66.34 11 *e*P **P 19 38 45.0 0.0**
comp=Z,105nm,1.1s
CLL Collm 66.34 11 ǁ *i*P **P 19 38 44.9 0.0**
CLL *e* 19 39 15.0
CLL *e*S S 19 47 38.0 +8.8
CLL pmax pmax
comp=Z,104nm,1.1s
CLL pmax pmax
comp=Z,27nm,1.0s
CLL Collm 66.34 11 ǁ *i*P **P 19 38 44.9 0.0**
comp=Z,104nm,1.1s
CLL *e*PcP **PcP 19 39 15.0 +0.7**
comp=Z,27nm,1.0s
CLL *e*PP **PP 19 41 12.0 +1.1**
CLL *e*S S 19 47 38.0 +8.8
CLL *e* 19 48 51.0
CLL *e*SSS SSS 19 55 18.0
BEL Belsk 66.34 6 ǁ *e*P **P 19 38 45.4 +0.5**
BEL Belsk 66.34 6 *e*P **P 19 38 45.4 +0.5**
BCLA Clavier 66.35 16 P **P 19 38 45.2 +0.2**
comp=Z,59nm,1.8s
VOR Voronezh 66.37 353 P **P 19 38 43.0 -2.1**
VOR pmax pmax
comp=Z,800nm,2.0s
JSA Saint Aubin 66.39 22 ǁ *e*P **P 19 38 45.1 -0.2**
JSA AMB AMB 19 38 46.0
comp=Z,87nm,1.7s
JSA Saint Aubin 66.39 22 P **P 19 38 45.1 -0.2**
JSA AMB AMB 19 38 46.0
comp=Z,87nm,1.7s
AB31 Akbulak array 66.43 339*ce*P **P 19 38 45.2 -0.4**
AB31 pmax pmax
comp=Z,15nm,0.3s
ABKAR Akbulak array 66.43 339 *e*P **P 19 38 45.4 -0.2**
comp=Z,102nm,0.8s
UBBA Unterbreizbach 66.52 13 *e*P **P 19 38 46.5 +0.5**
comp=Z,184nm,1.6s
BAIF Baives 66.55 17 ǁ *i*P **P 19 38 46.5 +0.2**
comp=Z,421nm,1.5s
BAIF Baives 66.55 17 ǁ *i*P **P 19 38 46.5 +0.2**
BAIF pmax pmax
comp=Z,421nm,1.5s
BAIF Baives 66.55 17 ǁ *i*P **P 19 38 46.5 +0.2**
comp=Z,421nm,1.5s
DOU Dourbes 66.57 17 P **P 19 38 46.6 +0.2**
comp=Z,61nm,1.7s
GIVF Givet 66.60 17 ǁ *i*P **P 19 38 46.7 +0.1**
comp=Z,340nm,1.2s
GIVF Givet 66.60 17 ǁ *i*P **P 19 38 46.7 +0.1**
GIVF pmax pmax
comp=Z,340nm,1.3s
GIVF Givet 66.60 17 ǁ *i*P **P 19 38 46.7 +0.1**
comp=Z,340nm,1.3s
FBE Freiberg 66.75 11 *e*P **P 19 38 48.0 +0.4**
comp=Z,141nm,1.1s
FBE *es*P **sP 19 39 14.8 +3.2**
BRG Berggiesshubel 66.85 10 ǁ *i*P **P 19 38 48.4 +0.2**

comp=Z,113nm,1.0s
BRG *i* PCP **PcP** **19 39 14.4 -2.0**
comp=Z,22nm,0.8s
BRG S **S** **19 47 40.0 +4.5**
BRG **Berggiesshubel** **66.85** **10** *eP* **P** **19 38 48.6 +0.4**
comp=Z,113nm,1.0s
BRG *es*P **sP** **19 39 15.3 +3.0**
BRG **Berggiesshubel** **66.85** **10**⇓*i*P **P** **19 38 48.4 +0.2**
BRG *i* 19 39 14.4
BRG S **S** **19 47 40.0 +4.5**
BRG pmax pmax
comp=Z,113nm,1.0s
BRG pmax pmax
comp=Z,22nm,0.9s
MOX **Moxa** **66.86** **12** *eP* **P** **19 38 48.7 +0.4**
comp=Z,142nm,1.0s
MOX **Moxa** **66.86** **12** *eP* **P** **19 38 48.7 +0.4**
MOX pmax pmax
comp=Z,24nm,1.0s
VSR **Storozhevoye** **66.88** **353** *d*⇓*i*P **P** **19 38 48.1 -0.3**
VSR *eS* **S** **19 47 34.2 -1.6**
VSR pmax pmax
comp=N,40nm,0.8s
VSR pmax pmax
comp=Z,120nm,0.8s
VSR pmax pmax
comp=E,3.0nm,0.4s
VSR smax smax
comp=N,70nm,2.5s
VSR smax smax
comp=E,180nm,2.5s
VSR smax smax
comp=Z,20nm,2.5s
TNS **Taunus Mts** **66.94** **14** *eP* **P** **19 38 49.2 +0.4**
comp=Z,117nm,1.1s
TNS **Taunus Mts** **66.94** **14** *eP* **P** **19 38 49.2 +0.4**
TNS pmax pmax
comp=Z,10.0nm,1.1s
ROSF **Rostrenen** **67.01** **23**⇓*i*P **P** **19 38 49.5 +0.3**
comp=Z,130nm,1.0s
ROSF **Rostrenen** **67.01** **23**⇓*i*P **P** **19 38 49.5 +0.3**
ROSF pmax pmax
comp=Z,130nm,1.0s
ROSF **Rostrenen** **67.01** **23**⇓*i*P **P** **19 38 49.5 +0.3**
comp=Z,130nm,1.0s
KSP **Ksiaz** **67.07** **9**⇓*i*P **P** **19 38 50.0 +0.5**
KSP **Ksiaz** **67.07** **9** *eP* **P** **19 38 50.1 +0.5**
PLN **Plauen** **67.07** **12** *eP* **P** **19 38 50.1 +0.5**
comp=Z,515nm,1.0s
PLN *es*P **sP** **19 39 16.1 +2.4**
FLN **La Foliniere** **67.09** **21**⇓*i*P **P** **19 38 49.6 -0.1**
comp=Z,446nm,1.3s
FLN *e*R
comp=Z,607nm,22.2s
FLN **La Foliniere** **67.09** **21**⇓*i*P **P** **19 38 49.6 -0.1**
FLN pmax pmax
comp=Z,446nm,1.3s
FLN **La Foliniere** **67.09** **21**⇓*i*P **P** **19 38 49.6 -0.1**
comp=Z,446nm,1.3s
WERD **Werda** **67.12** **12** *eP* **P** **19 38 50.4 +0.4**
comp=Z,119nm,1.3s
WERD *es*P **sP** **19 39 16.3 +2.2**
ABH **Alteburg** **67.17** **15**⇓*eP* **P** **19 38 50.6 +0.3**
TANN **Tannenbergstha** **67.17** **12** *eP* **P** **19 38 50.8 +0.5**
comp=Z,210nm,1.5s
TANN *es*P **sP** **19 39 17.7 +3.3**
WLF **Walferdange** **67.20** **16** P **P** **19 38 51.1 +0.7**
comp=Z,110nm,1.5s
WLF **Walferdange** **67.20** **16** *eP* **P** **19 38 51.3 +0.9**
comp=Z,150nm,1.1s
WLF *es*P **sP** **19 39 17.3 +2.8**
WLF **Walferdange** **67.20** **16** *eP* **P** **19 38 50.7 +0.3**
WLF pmax pmax
comp=Z,340nm,1.5s
WLF **Walferdange** **67.20** **16** *eP* **P** **19 38 50.7 +0.3**
comp=Z,340nm,1.5s
GUNZ **Gunzen** **67.21** **12** *eP* **P** **19 38 51.1 +0.6**
comp=Z,167nm,1.4s
GUNZ *es*P **sP** **19 39 16.9 +2.3**
SGMF **Saint Gilles** **67.22** **22**⇓*i*P **P** **19 38 50.7 +0.1**
comp=Z,540nm,1.5s
SGMF **Saint Gilles** **67.22** **22**⇓*i*P **P** **19 38 50.7 +0.1**
SGMF pmax pmax
comp=Z,540nm,1.5s
SGMF **Saint Gilles** **67.22** **22**⇓*i*P **P** **19 38 50.7 +0.1**
comp=Z,540nm,1.5s
PVCC **Panska Ves** **67.25** **10** *eP* **P** **19 38 51.2 +0.5**
PVCC **Panska Ves** **67.25** **10**⇓*eP* **P** **19 38 51.2 +0.5**
RUP **Ruppelstein** **67.28** **15** *eP* **P** **19 38 51.2 +0.2**
RUP **Ruppelstein** **67.28** **15** *eP* **P** **19 38 51.2 +0.2**
WERN **Wernitzgruen** **67.29** **12** *eP* **P** **19 38 51.7 +0.7**
comp=Z,242nm,1.5s
LDF **La Druitiere** **67.31** **21**⇓*i*P **P** **19 38 51.0 -0.2**
comp=Z,185nm,0.9s
LDF **La Druitiere** **67.31** **21**⇓*i*P **P** **19 38 51.0 -0.2**
LDF pmax pmax
comp=Z,185nm,0.9s
LDF **La Druitiere** **67.31** **21**⇓*i*P **P** **19 38 51.0 -0.2**
comp=Z,185nm,0.9s
NKC **Novy Kostel** **67.35** **12**⇓*i*P **P** **19 38 52.0 +0.6**
NKC MLR MLR
comp=Z,400nm,13.4s
NKC **Novy Kostel** **67.35** **12**⇓*i*P **P** **19 38 52.0 +0.6**
NKC AMS AMS 20 07 10.0
comp=Z,400nm,13.4s
UPC **Upice** **67.38** **9**⇓*i*P **P** **19 38 52.0 +0.4**
UPC *e* 19 39 02.0
UPC **Upice** **67.38** **9**⇓*i*P **P** **19 38 52.0 +0.4**
UPC *ex* x 19 39 02.0
GRR **Gorron** **67.39** **21**⇓*i*P **P** **19 38 51.8 +0.2**
comp=Z,328nm,1.2s
GRR **Gorron** **67.39** **21**⇓*i*P **P** **19 38 51.8 +0.2**
GRR pmax pmax
comp=Z,328nm,1.2s
GRR **Gorron** **67.39** **21**⇓*i*P **P** **19 38 51.8 +0.2**
comp=Z,328nm,1.2s
QUIF **Quistinic** **67.44** **23**⇓*i*P **P** **19 38 52.1 +0.2**
comp=Z,311nm,1.5s
QUIF **Quistinic** **67.44** **23**⇓*i*P **P** **19 38 52.1 +0.2**
QUIF pmax pmax
comp=Z,311nm,1.5s
QUIF **Quistinic** **67.44** **23**⇓*i*P **P** **19 38 52.1 +0.2**
comp=Z,311nm,1.5s
DPC **Dobruska-Polom** **67.56** **9**⇓*i*P **P** **19 38 53.5 +0.7**
DPC *e* 19 39 10.1
DPC **Dobruska-Polom** **67.56** **9**⇓*i*P **P** **19 38 53.5 +0.7**
DPC *epP* **pP** **19 39 10.1 +0.3**
MANZ **Manzenberg** **67.56** **12** *eP* **P** **19 38 53.0 +0.2**
comp=Z,141nm,1.4s
TOD **Tromm** **67.59** **14**⇓*eP* **P** **19 38 53.4 +0.5**
TOD **Tromm** **67.59** **14**⇓*eP* **P** **19 38 53.4 +0.5**
AKASG **Malin Array Be** **67.68** **360** P **P** **19 38 52.9 -0.5**
AKASG pmax pmax
comp=Z,72nm,0.6s
AKASG MLR MLR
comp=Z,434nm,20.1s
AKASG **Malin Array Be** **67.68** **360** P **P** **19 38 52.9 -0.5**
AKASG **Malin Array Be** **67.68** **360** P **P** **19 38 52.9 -0.5**
comp=Z,72nm,0.6s,baz=357,slow=6.1,SNR=77
AKASG LR LR 20 12 17.3
comp=Z,434nm,20.1s,baz=30,slow=39
KIEV **Kiev** **67.69** **360** *eP* **P** **19 38 53.0 -0.4**
KIEV pmax pmax
comp=Z,96nm,0.7s
KIEV **Kiev** **67.69** **360** *eP* **P** **19 38 53.0 -0.4**
comp=Z,96nm,0.7s
PRA **Prague** **67.69** **10** ⇓P **P** **19 38 55.0 +1.5**
PRA AMS AMS 20 05 30.0
GRF **Grafenberg Arr** **67.77** **13** *eP* **P** **19 38 54.7 +0.7**
comp=Z,126nm,1.0s
GRF **Grafenberg Arr** **67.77** **13** *eP* **P** **19 38 54.7 +0.7**
GRF pmax pmax
comp=Z,8.0nm,1.0s
GRFO **Grafenberg** **67.77** **13** *eP* **P** **19 38 54.4 +0.4**
GRFO pmax pmax
comp=Z,96nm,1.0s
GRFO **Grafenberg** **67.77** **13** *eP* **P** **19 38 54.4 +0.4**
comp=Z,96nm,1.0s
PRU **Pruhonice** **67.78** **10**⇓*i*P **P** **19 38 54.4 +0.3**
PRU *e* 19 39 06.9
PRU MLR MLR
comp=Z,400nm,35.0s
PRU **Pruhonice** **67.78** **10**⇓*i*P **P** **19 38 54.4 +0.3**
PRU *ex* x 19 39 06.9
PRU AMS AMS 20 05 10.0
comp=Z,400nm,35.0s
KTD **Kalmit** **67.78** **15** *eP* **P** **19 38 54.7 +0.5**
KTD **Kalmit** **67.78** **15** *eP* **P** **19 38 54.7 +0.5**
ROTZ **Rotzenmuhle** **67.79** **12** *eP* **P** **19 38 54.9 +0.7**
comp=Z,139nm,1.3s
ROTZ *es*P **sP** **19 39 21.6 +3.3**
KRLC **Kraliky** **67.86** **9**⇓*i*P **P** **19 38 55.4 +0.7**
KRLC **Kraliky** **67.86** **9**⇓*i*P **P** **19 38 55.4 +0.7**
OJC **Ojcow** **67.91** **7**⇓*i*P **P** **19 38 55.0 +0.1**
OJC *i* 19 39 21.2
OJC **Ojcow** **67.91** **7** *i* P **P** **19 38 55.0 +0.1**
OJC *i* PcP **PcP** **19 39 21.2 +0.3**
RAC **Raciborz** **67.95** **8** *eP* **P** **19 38 55.9 +0.8**
LANF **Langenberg** **68.08** **15**⇓*eP* **P** **19 38 56.6 +0.6**
LANF **Langenberg** **68.08** **15**⇓*eP* **P** **19 38 56.6 +0.6**
LANF **Langenberg** **68.08** **15**⇓*eP* **P** **19 38 56.6 +0.6**
ENH **Enshi** **68.09** **293** *eP* **P** **19 38 56.1 -0.3**
comp=Z,51nm,0.8s
MEZF **Maizieres J'vi** **68.19** **17**⇓*i*P **P** **19 38 57.0 +0.3**
comp=Z,224nm,1.2s
MEZF **Maizieres J'vi** **68.19** **17**⇓*i*P **P** **19 38 57.0 +0.3**
comp=Z,224nm,1.2s
OKC **Ostrava-Krasne** **68.19** **8** *eP* **P** **19 38 56.8 +0.1**
OKC **Ostrava-Krasne** **68.19** **8**⇓*eP* **P** **19 38 56.8 +0.1**
MORC **Moravsky Berou** **68.22** **8** *eP* **P** **19 38 56.3 -0.6**
MORC pmax pmax
comp=Z,78nm,0.9s
MORC **Moravsky Berou** **68.22** **8** *eP* **P** **19 38 56.3 -0.6**
comp=Z,78nm,0.9s
MORC **Moravsky Berou** **68.22** **8**⇑*i*P **P** **19 38 56.3 -0.6**
PAGF **Fort de Pagny** **68.23** **17**⇓*i*P **P** **19 38 57.5 +0.5**
comp=Z,65nm,1.0s
PAGF **Fort de Pagny** **68.23** **17**⇓*i*P **P** **19 38 57.5 +0.5**
comp=Z,65nm,1.0s
STU **Stuttgart** **68.45** **14** *eP* **P** **19 38 58.8 +0.5**
comp=Z,123nm,1.3s
STU **Stuttgart** **68.45** **14** *eP* **P** **19 38 58.4 +0.1**
STU pmax pmax
comp=Z,20nm,0.8s
STU **Stuttgart** **68.45** **14** *eP* **P** **19 38 58.4 +0.1**
comp=Z,20nm,0.8s
WET **Wettzell** **68.47** **11** *eP* **P** **19 38 59.3 +0.8**
comp=Z,272nm,1.5s
WET *es*P **sP** **19 39 26.1 +3.5**
WET **Wettzell** **68.47** **11** *eP* **P** **19 38 59.3 +0.8**
WET *e**SP **sP** **19 39 26.1 +3.5**
WET pmax pmax
comp=Z,7.0nm,1.5s
SFTF **Sexfontaines** **68.48** **17**⇓*i*P **P** **19 38 58.6 +0.1**
comp=Z,361nm,1.2s
SFTF **Sexfontaines** **68.48** **17**⇓*i*P **P** **19 38 58.6 +0.1**
comp=Z,361nm,1.2s
LVV **L'vov** **68.48** **4** *i* P **P** **19 38 57.7 -0.8**
SDDR **Presa de Saban** **68.51** **90** *eP* **P** **19 38 58.1 -1.0**
comp=Z,24nm,1.1s
TREC **Trest** **68.55** **10** *eP* **P** **19 38 59.3 +0.4**
TREC **Trest** **68.55** **10**⇓*eP* **P** **19 38 59.3 +0.4**
KHC **Kasperske Hory** **68.55** **11**⇓*i*P **P** **19 38 59.8 +0.8**
KHC *e* 19 39 15.5
KHC *e* 19 39 22.0
KHC MLR MLR
comp=Z,400nm,21.5s
KHC **Kasperske Hory** **68.55** **11**⇓*i*P **P** **19 38 59.8 +0.8**
KHC *epP* **pP** **19 39 15.5 -0.5**
KHC *ex* x 19 39 22.0
KHC AMS AMS 20 07 10.0
comp=Z,400nm,21.5s
KHC **Kasperske Hory** **68.55** **11** *eP* **P** **19 38 59.5 +0.5**
comp=Z,118nm,0.9s
CDF **Champ du Feu** **68.58** **15**⇓*i*P **P** **19 38 59.4 +0.2**
comp=Z,275nm,1.3s
CDF **Champ du Feu** **68.58** **15**⇓*i*P **P** **19 38 59.4 +0.2**
CDF pmax pmax
comp=Z,275nm,1.3s
CDF **Champ du Feu** **68.58** **15**⇓*i*P **P** **19 38 59.4 +0.2**
comp=Z,275nm,1.3s
THEF **They Montfort** **68.59** **16**⇓*eP* **P** **19 38 59.8 +0.6**
THEF **They Montfort** **68.59** **16**⇓*eP* **P** **19 38 59.8 +0.6**
THEF **They Montfort** **68.59** **16**⇓*eP* **P** **19 38 59.8 +0.6**
VRAC **Vranov** **68.61** **9** P **P** **19 38 59.8 +0.4**
VRAC **Vranov** **68.61** **9**⇓*i*P **P** **19 39 00.0 +0.7**
VRAC **Vranov** **68.61** **9** P **P** **19 38 59.8 +0.4**
comp=Z,101nm,1.0s,baz=16,slow=7.4,SNR=107
VRAC LR LR 20 08 01.5
comp=Z,295nm,20.7s,baz=180,slow=35
KWP **Kalwaria Pacla** **68.63** **5**⇓*eP* **P** **19 38 59.9 +0.5**
KWP **Kalwaria Pacla** **68.63** **5** *eP* **P** **19 38 59.5 +0.1**
comp=Z,157nm,1.1s
KWP **Kalwaria Pacla** **68.63** **5**⇑*i*P **P** **19 38 59.9 +0.5**
KWP **Kalwaria Pacla** **68.63** **5** *eP* **P** **19 38 59.9 +0.5**
NIE **Niedzica** **68.73** **6**⇓*i*P **P** **19 39 01.1 +1.0**
NIE **Niedzica** **68.73** **6** *i* P **P** **19 39 01.1 +1.0**
ECH **Echery** **68.75** **16** *eP* **P** **19 38 59.8 -0.4**
ECH pmax pmax
comp=Z,100nm,1.1s
ECH **Echery** **68.75** **16** *eP* **P** **19 38 59.8 -0.4**
comp=Z,100nm,1.1s
ECH **Echery** **68.75** **16**⇓*eP* **P** **19 39 00.7 +0.5**
STHS **Stebnicka Huta** **68.78** **6** *eP* **P** **19 39 01.5 +1.1**
STHS pmax pmax
comp=Z,57nm,0.7s
STHS **Stebnicka Huta** **68.78** **6** *eP* **P** **19 39 01.5 +1.1**
BFO **Black Forest** **68.79** **15** P **P** **19 39 00.8 +0.3**
comp=Z,365nm,1.5s,SNR=26
BFO **Black Forest** **68.79** **15** *eP* **P** **19 39 00.7 +0.3**
comp=Z,157nm,1.5s
BFO **Black Forest** **68.79** **15** *eP* **P** **19 39 00.7 +0.3**
BFO pmax pmax
comp=Z,11nm,1.5s
BFO **Black Forest** **68.79** **15** *eP* **P** **19 39 00.1 -0.3**
comp=Z,128nm,1.3s
GEC2 **GERESS Array S** **68.84** **11** *eP* **P** **19 39 01.4 +0.5**
comp=Z,105nm,1.1s
GEC2 **GERESS Array S** **68.84** **11** *eP* **P** **19 39 01.4 +0.5**
GEC2 pmax pmax
comp=Z,13nm,1.1s
GERES **GERESS Array B** **68.84** **11** P **P** **19 39 01.1 +0.2**
GERES **GERESS Array B** **68.84** **11** P **P** **19 39 01.1 +0.2**
comp=Z,28nm,0.7s,baz=348,slow=4.1,SNR=120
GERES LR LR 20 07 37.6
comp=Z,167nm,19.9s,baz=277,slow=34
HAU **Haudompre** **68.86** **16**⇓*i*P **P** **19 39 01.0 +0.1**
comp=Z,131nm,0.7s
HAU *e*R
comp=Z,390nm,21.2s
HAU **Haudompre** **68.86** **16**⇓*i*P **P** **19 39 01.0 +0.1**
HAU pmax pmax
comp=Z,131nm,0.7s
HAU **Haudompre** **68.86** **16**⇓*i*P **P** **19 39 01.0 +0.1**
comp=Z,131nm,0.7s
LIBD **Limburg** **68.87** **15** *eP* **P** **19 39 01.6 +0.7**
LIBD **Limburg** **68.87** **15** *eP* **P** **19 39 01.6 +0.7**
USP **Ospenovka** **68.95** **326** *i* P **P** **19 39 01.5 -0.1**
USP **Ospenovka** **68.95** **326** P **P** **19 39 01.5 -0.1**
SNR=42
TKM2 **Tokmak 2** **68.98** **325** *i* P **P** **19 39 01.4 -0.6**
TKM2 pmax pmax
comp=Z,105nm,1.4s
TKM2 **Tokmak 2** **68.98** **325** *eP* **P** **19 39 01.0 -1.0**
comp=Z,104nm,1.4s
TKM2 **Tokmak 2** **68.98** **325** P **P** **19 39 02.3 +0.3**
SNR=39
HYF **Humbligny** **69.05** **19**⇓*i*P **P** **19 39 02.4 +0.4**
HYF **Humbligny** **69.05** **19**⇓*i*P **P** **19 39 02.4 +0.4**
SPAK **Spaichingen-Ko** **69.06** **14**⇓*eP* **P** **19 39 02.7 +0.5**
HINF **Hinteralfeld** **69.11** **16**⇓*i*P **P** **19 39 02.5 0.0**
comp=Z,110nm,0.7s
HINF **Hinteralfeld** **69.11** **16**⇓*i*P **P** **19 39 02.5 0.0**
HINF pmax pmax
comp=Z,110nm,0.7s
HINF **Hinteralfeld** **69.11** **16**⇓*i*P **P** **19 39 02.5 0.0**
comp=Z,110nm,0.7s
MOF **Molkenrain** **69.11** **16**⇓*eP* **P** **19 39 02.9 +0.4**
MOF **Molkenrain** **69.11** **16**⇓*eP* **P** **19 39 02.9 +0.4**
MOF **Molkenrain** **69.11** **16**⇓*eP* **P** **19 39 02.9 +0.4**
CHMS **Chumysh** **69.13** **326** *i* P **P** **19 39 02.8 +0.1**
CHMS **Chumysh** **69.13** **326** P **P** **19 39 02.8 +0.1**
SNR=50
FELD **Feldberg im Sc** **69.19** **15**⇓*eP* **P** **19 39 03.1 0.0**
LOR **Lormes** **69.23** **18**⇓*i*P **P** **19 39 03.3 +0.1**
comp=Z,194nm,0.8s
LOR *e*R
comp=Z,325nm,19.8s
LOR **Lormes** **69.23** **18**⇓*i*P **P** **19 39 03.3 +0.1**
comp=Z,194nm,0.8s
MFF **Saint Martin d** **69.24** **21**⇓*i*P **P** **19 39 03.6 +0.4**
comp=Z,207nm,0.9s
MFF **Saint Martin d** **69.24** **21**⇓*i*P **P** **19 39 03.6 +0.4**
MFF pmax pmax
comp=Z,207nm,0.9s
MFF **Saint Martin d** **69.24** **21**⇓*i*P **P** **19 39 03.6 +0.4**
comp=Z,207nm,0.9s
FUR **Furstenfeldbru** **69.28** **13** *eP* **P** **19 39 04.1 +0.6**
comp=Z,178nm,0.8s
FUR *es*P **sP** **19 39 30.9 +3.2**
FUR **Furstenfeldbru** **69.28** **13** *eP* **P** **19 39 04.1 +0.6**
FUR *e**SP **sP** **19 39 30.9 +3.2**
FUR pmax pmax
comp=Z,121nm,0.8s
CRVS **Cervenica-Dubn** **69.31** **5** *eP* **P** **19 39 01.4 -2.2**
CRVS pmax pmax
comp=Z,95nm,1.5s
CRVS **Cervenica-Dubn** **69.31** **5** *eP* **P** **19 39 01.4 -2.2**
KOLS **Kolonicke sedl** **69.31** **5** *eP* **P** **19 39 04.2 +0.6**
KOLS pmax pmax
comp=Z,113nm,1.5s
KOLS **Kolonicke sedl** **69.31** **5** *eP* **P** **19 39 04.2 +0.6**
SSF **Saint Saulge** **69.38** **18**⇓*i*P **P** **19 39 04.3 +0.2**
comp=Z,393nm,1.0s
SSF **Saint Saulge** **69.38** **18**⇓*i*P **P** **19 39 04.3 +0.2**
SSF pmax pmax
comp=Z,393nm,1.0s
SSF **Saint Saulge** **69.38** **18**⇓*i*P **P** **19 39 04.3 +0.2**
comp=Z,393nm,1.0s
KBK **Karagaybulak** **69.40** **326** *i* P **P** **19 39 04.9 +0.4**
KBK **Karagaybulak** **69.40** **326** P **P** **19 39 05.0 +0.4**
SNR=69
ULHL **Ulahol** **69.43** **325** *i* P **P** **19 39 04.9 +0.1**
ULHL **Ulahol** **69.43** **325** P **P** **19 39 04.9 +0.1**
SNR=21
SMOL **Smolenice** **69.46** **8** *eP* **P** **19 39 05.8 +1.2**
SMOL **Smolenice** **69.46** **8** *eP* **P** **19 39 05.8 +1.2**
BBS **Basel-Blauen** **69.54** **16**⇓*eP* **P** **19 39 05.3 +0.2**
BBS **Basel-Blauen** **69.54** **16**⇓*eP* **P** **19 39 05.3 +0.2**
AAK **Ala-Archa** **69.54** **326** P **P** **19 39 05.0 -0.4**
comp=Z,340nm,1.2s,SNR=12
AAK **Ala-Archa** **69.54** **326** *eP* **P** **19 39 05.4 0.0**
AAK pmax pmax
comp=Z,115nm,1.4s
AAK **Ala-Archa** **69.54** **326** *eP* **P** **19 39 05.3 0.0**
comp=Z,115nm,1.4s
AAK **Ala-Archa** **69.54** **326** P **P** **19 39 05.8 +0.4**
SNR=23
LOMF **Lomont** **69.56** **16**⇓*eP* **P** **19 39 05.9 +0.6**
LOMF **Lomont** **69.56** **16**⇓*eP* **P** **19 39 05.9 +0.6**
LOMF **Lomont** **69.56** **16**⇓*eP* **P** **19 39 05.9 +0.6**
VYHS **Vyhne** **69.58** **7** *eP* **P** **19 39 05.8 +0.5**
VYHS pmax pmax
comp=Z,131nm,1.7s
VYHS **Vyhne** **69.58** **7** *eP* **P** **19 39 05.8 +0.5**
AVF **Avril sur Loir** **69.62** **19**⇓*i*P **P** **19 39 05.6 0.0**
comp=Z,215nm,0.8s
AVF **Avril sur Loir** **69.62** **19**⇓*i*P **P** **19 39 05.6 0.0**
AVF pmax pmax
comp=Z,215nm,0.8s
AVF **Avril sur Loir** **69.62** **19**⇓*i*P **P** **19 39 05.6 0.0**
comp=Z,215nm,0.8s
KECS **Kecovo** **69.68** **6** *eP* **P** **19 39 06.4 +0.5**
KECS pmax pmax
comp=Z,39nm,1.0s
KECS **Kecovo** **69.68** **6** *eP* **P** **19 39 06.4 +0.5**
EKS2 **Erkin-Say** **69.70** **326** *eP* **P** **19 39 06.4 +0.1**
EKS2 pmax pmax
comp=Z,158nm,1.3s
EKS2 **Erkin-Say** **69.70** **326** *eP* **P** **19 39 06.4 +0.1**
comp=Z,158nm,1.3s
EKS2 **Erkin-Say** **69.70** **326** P **P** **19 39 06.8 +0.5**
SNR=65
ZST **Bratislava** **69.76** **9** *eP* **P** **19 39 06.7 +0.3**
ZST **Bratislava** **69.76** **9** *eP* **P** **19 39 06.7 +0.3**
BGF **Bois d'Agland** **69.77** **19**⇓*i*P **P** **19 39 06.5 0.0**
comp=Z,186nm,0.9s
BGF **Bois d'Agland** **69.77** **19**⇓*i*P **P** **19 39 06.5 0.0**
BGF pmax pmax
comp=Z,186nm,0.9s
BGF **Bois d'Agland** **69.77** **19**⇓*i*P **P** **19 39 06.5 0.0**
comp=Z,186nm,0.9s
SMF **Signal de Mont** **69.83** **18**⇓*i*P **P** **19 39 06.8 -0.1**
comp=Z,416nm,1.3s
SMF **Signal de Mont** **69.83** **18**⇓*i*P **P** **19 39 06.8 -0.1**
SMF pmax pmax
comp=Z,416nm,1.3s
SMF **Signal de Mont** **69.83** **18**⇓*i*P **P** **19 39 06.8 -0.1**
comp=Z,416nm,1.3s
RJOB **Jochberg** **69.86** **12** *eP* **P** **19 39 07.7 +0.6**
comp=Z,95nm,0.7s
KZA **Kyzart** **69.86** **325** *i* P **P** **19 39 07.8 +0.2**
KZA **Kyzart** **69.86** **325** P **P** **19 39 07.8 +0.2**
SNR=21
MOA **Molln** **69.88** **11**⇓*i*P **P** **19 39 07.5 +0.3**
comp=Z,105nm,1.4s,SNR=13
RETA **Reute** **69.89** **13**⇓*i*P **P** **19 39 07.9 +0.5**
comp=Z,79nm,1.2s,SNR=31
CONA **Conrad Observa** **69.93** **10**⇓*i*P **P** **19 39 08.3 +0.7**
comp=Z,264nm,1.6s,SNR=92
TCF **Toulx Ste Croi** **69.93** **20**⇓*i*P **P** **19 39 07.4 -0.2**
comp=Z,111nm,0.8s
TCF **Toulx Ste Croi** **69.93** **20**⇓*i*P **P** **19 39 07.4 -0.2**
TCF pmax pmax
comp=Z,111nm,0.8s
TCF **Toulx Ste Croi** **69.93** **20**⇓*i*P **P** **19 39 07.4 -0.2**
comp=Z,111nm,0.8s
CD2 **Chengdu** **69.98** **298** *eP* **P** **19 39 08.6 +0.5**
CD2 pP **pP** **19 39 25.0 -0.2**
CD2 PcP **PcP** **19 39 31.3 +1.3**
CD2 PP **PP** **19 41 46.1 +3.1**
CD2 S **S** **19 48 12.5 -0.8**
CD2 sS **sS** **19 48 40.0 -2.2**
CD2 ScS **SKSac** **19 49 02.1 -1.3**
CD2 SS **SS** **19 52 43.3 +0.6**
CD2 pmax pmax
comp=Z,50nm,1.1s
CD2 LR LR
comp=N,960nm,23.8s
CD2 LR LR
comp=E,1µm,19.0s
CD2 LR LR
comp=Z,510nm,20.2s
DAVA **Damuels** **70.00** **14**⇓*i*P **P** **19 39 08.6 +0.5**
comp=Z,52nm,0.9s,SNR=15
MOTA **Moosalm** **70.07** **13**⇓*i*P **P** **19 39 08.9 +0.3**
comp=Z,49nm,0.7s,SNR=42
KK31 **Karatay Array** **70.11** **329** *ce*P **P** **19 39 07.8 -0.9**
KK31 pmax pmax
comp=Z,45nm,0.9s
KKAR **Karatay Array** **70.11** **329** *eP* **P** **19 39 07.9 -0.8**
KKAR pmax pmax
comp=Z,52nm,1.1s
KKAR **Karatay Array** **70.11** **329** *eP* **P** **19 39 07.9 -0.8**
comp=Z,52nm,1.1s
TRPA **Tarpa** **70.12** **5**⇓*i*P **P** **19 39 09.2 +0.6**
TRPA **Tarpa** **70.12** **5**⇓*eP* **P** **19 39 09.4 +0.8**
CABF **La Chapelle** **70.19** **17**⇓*i*P **P** **19 39 09.6 +0.4**
comp=Z,234nm,0.8s
CABF **La Chapelle** **70.19** **17**⇓*i*P **P** **19 39 09.6 +0.4**
CABF pmax pmax
comp=Z,234nm,0.8s
CABF **La Chapelle** **70.19** **17**⇓*i*P **P** **19 39 09.6 +0.4**
comp=Z,234nm,0.8s
WTTA **Wattenberg** **70.21** **13**⇓*i*P **P** **19 39 10.2 +0.8**
comp=Z,159nm,0.7s,SNR=80
PSZ **Piszkesteto** **70.21** **7** ⇓P **P** **19 39 10.1 +0.8**
PSZ **Piszkesteto** **70.21** **7** *eP* **P** **19 39 09.1 -0.2**
comp=Z,111nm,1.0s
PSZ **Piszkesteto** **70.21** **7**⇓*i*P **P** **19 39 10.1 +0.8**
PSZ **Piszkesteto** **70.21** **7**⇓*eP* **P** **19 39 10.3 +1.0**
AML **Almayashu** **70.22** **326** *i* P **P** **19 39 10.6 +0.8**
AML **Almayashu** **70.22** **326** P **P** **19 39 10.6 +0.8**
SNR=53
SOP **Sopron** **70.23** **9**⇓*eP* **P** **19 39 10.1 +0.8**
AGO **Saint Agoulin** **70.31** **19**⇓*eP* **P** **19 39 10.4 +0.6**
AGO **Saint Agoulin** **70.31** **19**⇓*eP* **P** **19 39 10.4 +0.6**
FETA **Feichten** **70.35** **13**⇓*i*P **P** **19 39 11.0 +0.7**
comp=Z,109nm,1.1s,SNR=37
DAVOX **Davos/Dischmat** **70.50** **14** P **P** **19 39 11.8 +0.7**
DAVOX **Davos/Dischmat** **70.50** **14** P **P** **19 39 11.8 +0.7**
comp=Z,44nm,0.6s,baz=345,slow=9.1,SNR=104
KBA **Koelnbreinsper** **70.56** **11**⇓*i*P **P** **19 39 12.6 +1.1**
comp=Z,228nm,0.7s,SNR=64
ARSA **Arzberg** **70.58** **10**⇑*i*P **P** **19 39 12.2 +0.7**
comp=Z,83nm,1.1s,SNR=27

PYM **Petit Puy Mans** 70.58 19⇓*e*P P 19 39 12.1 +0.5
PYM **Petit Puy Mans** 70.58 19⇓*e*P P 19 39 12.1 +0.5
PYM **Petit Puy Mans** 70.58 19⇓*e*P P 19 39 12.1 +0.5
BUD **Budapest** 70.59 7⇓*e*P P 19 39 12.4 +0.9
BMR **Baia Mare** 70.61 4⇑*i*P P 19 39 12.6 +1.0
BMR **Baia Mare** 70.61 4⇑*i*P P 19 39 12.6 +1.0
PKSG 70.64 8⇓*e*P P 19 39 12.7 +0.9
CSKK **Cs˙‡kako** 70.67 8⇓*e*P P 19 39 12.8 +0.8
BUR08 **Bucovina Ar. S** 70.69 3 *e*P P 19 39 12.2 0.0
BURAR **Bucovina Array** 70.72 3⇓*i*P P 19 39 12.8 +0.4
TUE **Stuetta** 70.74 14 *e*P P 19 39 13.0 +0.4
comp=Z,79nm,0.5s
PKST **T˙s** 70.75 8⇓*e*P P 19 39 13.1 +0.6
RJF **Les Rejaudoux** 70.78 20⇓*i*P P 19 39 12.5 -0.2
RJF *e*R
comp=Z,605nm,21.5s
RJF **Les Rejaudoux** 70.78 20⇓*i*P P 19 39 12.5 -0.2
RJF **Les Rejaudoux** 70.78 20⇓*i*P P 19 39 12.5 -0.2
ABTA **Abfaltersbach** 70.81 12⇓*i*P P 19 39 13.2 +0.3
comp=Z,59nm,1.3s,SNR=21
LFF **La Frestale** 71.00 21⇓*i*P P 19 39 14.4 +0.4
comp=Z,333nm,0.9s
LFF **La Frestale** 71.00 21⇓*i*P P 19 39 14.4 +0.4
LFF pmax pmax
comp=Z,333nm,0.9s
LFF **La Frestale** 71.00 21⇓*i*P P 19 39 14.4 +0.4
comp=Z,333nm,0.9s
MYKA **Terra Mystica** 71.03 11⇓*i*P P 19 39 14.5 +0.3
comp=Z,71nm,0.8s
PKS7 **Kunszentmiklos** 71.04 7⇓*e*P P 19 39 15.1 +0.9
SOKA **Soboth** 71.11 10⇓*i*P P 19 39 15.2 +0.4
comp=Z,74nm,0.8s
LBL **Lubilhac** 71.12 19 *e*P P 19 39 15.5 +0.6
LBL **Lubilhac** 71.12 19 *e*P P 19 39 15.5 +0.6
LBL **Lubilhac** 71.12 19 *e*P P 19 39 15.5 +0.6
LRS **Lares** 71.20 86 *e*P P 19 39 14.8 -0.8
PKSN **Nyarlorinc** 71.23 7⇓*e*P P 19 39 16.8 +1.5
OBKA **Obir** 71.23 11⇓*i*P P 19 39 16.1 +0.5
comp=Z,306nm,0.8s,SNR=158
CAF **Calviac** 71.24 20⇓*i*P P 19 39 15.6 +0.1
comp=Z,172nm,1.0s
CAF **Calviac** 71.24 20⇓*i*P P 19 39 15.6 +0.1
CAF pmax pmax
comp=Z,172nm,1.0s
CAF **Calviac** 71.24 20⇓*i*P P 19 39 15.6 +0.1
comp=Z,172nm,1.0s
SSB **Saint Sauveur** 71.27 18 *e*P P 19 39 15.7 -0.1
SSB pmax pmax
comp=Z,171nm,1.4s
SSB **Saint Sauveur** 71.27 18 *e*P P 19 39 15.7 -0.1
comp=Z,171nm,1.4s
LPL **La Plagne** 71.35 16⇓*i*P P 19 39 17.5 +1.1
comp=Z,81nm,0.8s
LPL **La Plagne** 71.35 16⇓*i*P P 19 39 17.5 +1.1
LPL pmax pmax
comp=Z,81nm,0.8s
LPL **La Plagne** 71.35 16⇓*i*P P 19 39 17.5 +1.1
comp=Z,81nm,0.8s
LPG **La Plagne** 71.37 16⇓*i*P P 19 39 17.8 +1.2
comp=Z,489nm,1.4s
LPG **La Plagne** 71.37 16⇓*i*P P 19 39 17.8 +1.2
LPG pmax pmax
comp=Z,489nm,1.4s
LPG **La Plagne** 71.37 16⇓*i*P P 19 39 17.8 +1.2
comp=Z,489nm,1.4s
GORS **Gorjuse** 71.38 11 *i*P P 19 39 16.2 -0.2
KIS **Kishinev** 71.38 0⇓*i*P P 19 39 15.5 -0.8
KIS *e**PP **pP** 19 39 33.0 -0.5
KIS pmax pmax
comp=Z,550nm,2.0s
KIS pmax pmax
comp=N,204nm,0.6s
KIS pmax pmax
comp=Z,580nm,2.0s
KIS **Kishinev** 71.38 0⇓*i*P P 19 39 15.5 -0.8
comp=Z,600nm,2.0s
KIS *e*pP **pP** 19 39 33.0 -0.5
KIS **Kishinev** 71.38 0 *e*PP PP 19 42 37.0 +42
KIS LRM MLR 20 13 48.0
comp=Z,300nm,15.0s
KIS **Kishinev** 71.38 0⇑*i*P P 19 39 16.5 +0.2
PKS9 **Tamasi** 71.44 8⇑*e*P P 19 39 17.5 +0.9
DRGR 71.47 5 ⇓P P 19 39 17.0 +0.1
DRGR 71.47 5⇓*i*P P 19 39 17.0 +0.1
PKS6 **Bocsa** 71.51 7⇓*e*P P 19 39 17.9 +0.9
PKS2 **Kecel** 71.59 7⇓*e*P P 19 39 18.6 +1.1
VOY **Vojsko** 71.65 11 *e*P P 19 39 17.5 -0.5
VOY *e* 19 39 45.2
VOY *e* 19 39 50.8
VIVF **Saint-Julien-l** 71.71 18⇓*i*P P 19 39 18.7 +0.4
comp=Z,91nm,0.5s
VIVF **Saint-Julien-l** 71.71 18⇓*i*P P 19 39 18.7 +0.4
VIVF pmax pmax
comp=Z,91nm,0.5s
VIVF **Saint-Julien-l** 71.71 18⇓*i*P P 19 39 18.7 +0.4
comp=Z,91nm,0.5s
BNI **Bardonecchia** 71.80 17 *e*P P 19 39 20.4 +1.4
BNI pmax pmax
comp=Z,165nm,1.1s
BNI **Bardonecchia** 71.80 17 *e*P P 19 39 20.4 +1.4
comp=Z,165nm,1.1s
ORIF **Oris-en-Rattie** 71.82 17⇓*i*P P 19 39 19.6 +0.5
comp=Z,123nm,0.9s
ORIF *e*R
comp=Z,363nm,21.5s
ORIF **Oris-en-Rattie** 71.82 17⇓*i*P P 19 39 19.6 +0.5
ORIF pmax pmax
comp=Z,123nm,0.9s
ORIF **Oris-en-Rattie** 71.82 17⇓*i*P P 19 39 19.6 +0.5
comp=Z,123nm,0.9s
PKSM **Moragy** 71.84 8 ⇓P P 19 39 19.0 0.0
PKSM **Moragy** 71.84 8⇓*i*P P 19 39 19.0 0.0
PKSM **Moragy** 71.84 8⇓*e*P P 19 39 19.2 +0.2
LEOM **Leova** 71.91 1 ⇓P P 19 39 19.3 -0.1
LEOM **Leova** 71.91 1⇓*i*P P 19 39 19.3 -0.1
KSH **Kashi** 72.04 324 P P 19 39 23.3 +2.7
KSH *e*pP **PcP** 19 39 39.5 +0.8
KSH *e*sP **sP** 19 39 46.3 +1.5
KSH *e*PP **PP** 19 42 04.9 +4.3
KSH *e*S **S** 19 48 35.8 -1.3
KSH *e*sS **sS** 19 49 05.3 -0.9
KSH *e*SKS **SKSac** 19 49 17.0 -1.9
KSH pmax pmax
comp=Z,260nm,1.5s
KSH LR LR
comp=N,190nm,4.7s
KSH LR LR
comp=E,120nm,4.3s
KSH LR LR
comp=Z,420nm,11.0s
PGAV **Gavieira, Arco** 72.09 28 *e*P P 19 39 21.2 +0.4
comp=Z,175nm,1.3s
MBDF **Montbardon** 72.13 17⇓*i*P P 19 39 22.2 +1.2
comp=Z,136nm,0.6s
MBDF **Montbardon** 72.13 17⇓*i*P P 19 39 22.2 +1.2
MBDF pmax pmax
comp=Z,137nm,0.6s
MBDF **Montbardon** 72.13 17⇓*i*P P 19 39 22.2 +1.2
comp=Z,136nm,0.6s
OSSF **Osses** 72.28 23 *e*P P 19 39 21.6 -0.2
OSSF **Osses** 72.28 23 *e*P P 19 39 21.6 -0.2
LASF **Ste Croix** 72.35 19⇓*i*P P 19 39 22.8 +0.6
comp=Z,351nm,1.4s
LASF **Ste Croix** 72.35 19⇓*i*P P 19 39 22.8 +0.6
comp=Z,351nm,1.4s
DEV **Deva** 72.38 5 ⇓P P 19 39 20.8 -1.5
DEV **Deva** 72.38 5⇓*i*P P 19 39 20.8 -1.5
ORDF **Ordiarp** 72.38 23 *e*P P 19 39 22.0 -0.4
PCAB **Cabril** 72.39 28 *e*P P 19 39 23.9 +1.4
comp=Z,164nm,1.5s
SJPF **Ste Jean** 72.43 23⇓*i*P P 19 39 22.6 -0.1
comp=Z,34nm,0.7s
SJPF **Ste Jean** 72.43 23⇓*i*P P 19 39 22.6 -0.1
SJPF pmax pmax
comp=Z,34nm,0.7s
SJPF **Ste Jean** 72.43 23⇓*i*P P 19 39 22.6 -0.1
comp=Z,34nm,0.7s
VRI **Vrincioaia** 72.50 2⇑*i*P P 19 39 23.2 +0.2
VRI **Vrincioaia** 72.50 2⇑*i*P P 19 39 23.2 +0.2
PLOR **Plostina** 72.51 2 ⇓P P 19 39 23.5 +0.4
PLOR **Plostina** 72.51 2⇓*i*P P 19 39 23.5 +0.4
LARF **Larrau** 72.54 23 *e*P P 19 39 24.4 +1.0
PBRG **Braganca** 72.58 27 *e*P P 19 39 23.9 +0.3
comp=Z,159nm,1.6s
BZS **Buzias** 72.59 6 ⇓P P 19 39 23.4 -0.2
BZS **Buzias** 72.59 6⇓*i*P P 19 39 23.4 -0.2
REYF **Montagne du Re** 72.62 22 *e*P P 19 39 23.4 -0.5
GYA **Guiyang** 72.62 294 P P 19 39 27.9 +3.7
GYA pP pP 19 39 42.8 +1.4
GYA sP sP 19 39 48.6 +0.2
GYA PP **PP** 19 42 11.0 +5.1
GYA S **S** 19 48 45.9 +1.8
GYA sS sS 19 49 11.8 -1.4
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.6s
GYA LR LR
comp=N,690nm,19.8s
GYA LR LR
comp=E,580nm,20.4s
GYA LR LR
comp=Z,790nm,19.6s
SMRF **Simiane la Rot** 72.70 18⇓*i*P P 19 39 25.4 +1.1
comp=Z,245nm,0.9s
SMRF **Simiane la Rot** 72.70 18⇓*i*P P 19 39 25.4 +1.1
comp=Z,245nm,0.9s
LABF **Labassere** 72.72 22 *e*P P 19 39 23.9 -0.6
LABF **Labassere** 72.72 22 *e*P P 19 39 23.9 -0.6
ETSF **Etsaut** 72.76 22⇓*i*P P 19 39 25.5 +0.8
comp=Z,189nm,1.0s
ETSF **Etsaut** 72.76 22⇓*i*P P 19 39 25.5 +0.8
ETSF pmax pmax
comp=Z,189nm,1.0s
ETSF **Etsaut** 72.76 22⇓*i*P P 19 39 25.5 +0.8
comp=Z,189nm,1.0s
POLO **Lamas de Olo** 72.76 28 *e*P P 19 39 25.6 +0.8
comp=Z,66nm,1.4s
EPF **Esparros** 72.79 22⇓*i*P P 19 39 24.5 -0.3
comp=Z,54nm,0.7s
EPF **Esparros** 72.79 22⇓*i*P P 19 39 24.5 -0.3
EPF pmax pmax
comp=Z,54nm,0.7s
EPF **Esparros** 72.79 22⇓*i*P P 19 39 24.5 -0.3
comp=Z,54nm,0.7s
MTLF **Montolieu** 72.81 20⇓*i*P P 19 39 25.2 +0.3
comp=Z,147nm,0.8s
MTLF **Montolieu** 72.81 20⇓*i*P P 19 39 25.2 +0.3
MTLF pmax pmax
comp=Z,147nm,0.8s
MTLF **Montolieu** 72.81 20⇓*i*P P 19 39 25.2 +0.3
comp=Z,147nm,0.8s
MLR **Muntele Rosu** 72.86 2 P P 19 39 25.7 +0.4
MLR **Muntele Rosu** 72.86 2⇑*i*P P 19 39 25.6 +0.3
MLR **Muntele Rosu** 72.86 2 P P 19 39 25.7 +0.4
comp=Z,5.1nm,0.6s,baz=333,slow=5.9,SNR=32
PVRL **Vila Real** 72.87 28 *e*P P 19 39 26.5 +1.2
comp=Z,180nm,1.9s
VIEF **Viey** 72.88 22 *e*P P 19 39 26.5 +1.1
VIEF **Viey** 72.88 22 *e*P P 19 39 26.5 +1.1
TOUF **Mont Tournerai** 72.89 16⇓*e*P P 19 39 26.6 +1.0
TOUF **Mont Tournerai** 72.89 16⇓*e*P P 19 39 26.6 +1.0
TOUF **Mont Tournerai** 72.89 16⇓*e*P P 19 39 26.6 +1.0
VOIR 72.89 3 ⇓P P 19 39 26.0 +0.5
VOIR 72.89 3⇓*i*P P 19 39 26.0 +0.5
AUTN **L'Aution** 72.94 16 *e*P P 19 39 26.6 +0.7
AUTN **L'Aution** 72.94 16 *e*P P 19 39 26.6 +0.7
AUTN **L'Aution** 72.94 16 *e*P P 19 39 26.6 +0.7
SAOF **Saorge** 72.96 16⇓*e*P P 19 39 26.4 +0.6
SAOF **Saorge** 72.96 16⇓*e*P P 19 39 26.4 +0.6
SAOF **Saorge** 72.96 16⇓*e*P P 19 39 26.4 +0.6
MLS **Moulis** 72.99 21 *e*P P 19 39 26.4 +0.4
MLS **Moulis** 72.99 21 *e*P P 19 39 26.4 +0.4
MVIF **Mont Vial** 73.00 16⇓*e*P P 19 39 26.7 +0.5
MVIF **Mont Vial** 73.00 16⇓*e*P P 19 39 26.7 +0.5
MVIF **Mont Vial** 73.00 16⇓*e*P P 19 39 26.7 +0.5
RESF **Ens** 73.00 22 *e*P P 19 39 27.3 +1.1
RESF **Ens** 73.00 22 *e*P P 19 39 27.3 +1.1
SBF **Sospel** 73.07 16⇓*i*P P 19 39 26.8 +0.3
comp=Z,185nm,0.6s
SBF **Sospel** 73.07 16⇓*i*P P 19 39 26.8 +0.3
SBF pmax pmax
comp=Z,185nm,0.6s
SBF **Sospel** 73.07 16⇓*i*P P 19 39 26.8 +0.3
comp=Z,185nm,0.6s
CALN **Calern** 73.10 17 *e*P P 19 39 27.2 +0.4
CALN **Calern** 73.10 17 *e*P P 19 39 27.2 +0.4
CALN **Calern** 73.10 17 *e*P P 19 39 27.2 +0.4
MVO **Moncorvo** 73.13 28 *e*P P 19 39 27.9 +1.0
comp=Z,154nm,1.7s
VLC **Villacollemand** 73.14 14 *e*P P 19 39 26.8 0.0
comp=Z,77nm,0.6s
REVF **Revere** 73.18 16⇓*e*P P 19 39 27.7 +0.6
REVF **Revere** 73.18 16⇓*e*P P 19 39 27.7 +0.6
REVF **Revere** 73.18 16⇓*e*P P 19 39 27.7 +0.6
ISR **Istrita** 73.24 2 ⇓P P 19 39 27.5 0.0
ISR **Istrita** 73.24 2⇓*i*P P 19 39 27.5 0.0
LRDF **Laroque-de-Fa** 73.25 20 *e*P P 19 39 27.3 -0.2
LRDF **Laroque-de-Fa** 73.25 20 *e*P P 19 39 27.3 -0.2
FRF **La Foret Royal** 73.26 17⇓*i*P P 19 39 27.8 +0.3
comp=Z,146nm,0.9s
FRF **La Foret Royal** 73.26 17⇓*i*P P 19 39 27.8 +0.3
FRF pmax pmax
comp=Z,146nm,0.9s
FRF **La Foret Royal** 73.26 17⇓*i*P P 19 39 27.8 +0.3
comp=Z,146nm,0.9s
SECR 73.32 2⇑*i*P P 19 39 28.1 +0.2
SIM **Simferopol'** 73.36 356 *d*e*P P 19 39 28.3 +0.2
SIM pmax pmax
comp=Z,40nm,0.9s
PVIS **Viseu** 73.36 29 *e*P P 19 39 29.3 +1.0
comp=Z,140nm,1.5s
ANN **Anapa** 73.38 354 *e*P P 19 39 26.3 -1.9
ANN *e**PP **PcP** 19 39 42.2 -1.9
ANN *e*S **S** 19 48 48.9 -2.9
ANN pmax pmax
comp=Z,111nm,1.5s
CARF **Carcanieres** 73.39 21 *e*P P 19 39 28.8 +0.3
LMR **La Mourre** 73.46 17⇓*i*P P 19 39 29.2 +0.5
comp=Z,250nm,1.1s
LMR **La Mourre** 73.46 17⇓*i*P P 19 39 29.2 +0.5
LMR pmax pmax
comp=Z,251nm,1.1s
LMR **La Mourre** 73.46 17⇓*i*P P 19 39 29.2 +0.5
comp=Z,250nm,1.1s
FILF **Fillols** 73.62 20 *e*P P 19 39 30.6 +0.8
FILF **Fillols** 73.62 20 *e*P P 19 39 30.6 +0.8
VALF **Valcebollere** 73.69 21 *e*P P 19 39 30.9 +0.6
VALF **Valcebollere** 73.69 21 *e*P P 19 39 30.9 +0.6
HARR **Harsova** 73.69 1 ⇑P P 19 39 30.1 0.0
HARR **Harsova** 73.69 1⇑*i*P P 19 39 30.0 0.0
MTE **Manteigas** 73.75 28 *e*P P 19 39 31.7 +1.2
comp=Z,223nm,1.6s
MTE **Manteigas** 73.75 28 *e*P P 19 39 30.5 0.0
comp=Z,220nm,1.5s
SJAF **Saint Jean de** 73.75 20 *e*P P 19 39 30.8 +0.3
KIV **Kislovodsk** 73.87 350 *d*P P 19 39 31.4 +0.2
KIV *e* 19 39 47.9
KIV *e* 19 42 18.8
KIV *e*S **S** 19 48 57.0 -0.6
KIV pmax pmax
comp=Z,112nm,0.9s
KIV pmax pmax
comp=Z,28nm,2.2s
KIV MLR MLR
comp=Z,231nm,18.0s
KIV **Kislovodsk** 73.87 350 P P 19 39 31.3 +0.1
comp=Z,736nm,0.7s,SNR=31
TIRR **Tirgusor** 73.92 1 ⇑P P 19 39 31.2 -0.2
TIRR **Tirgusor** 73.92 1⇑*i*P P 19 39 31.2 -0.2
DIVS **Divibare** 74.02 7 P P 19 39 33.5 +1.4
KBZ **Khabaz** 74.08 350 P P 19 39 32.8 +0.5
KBZ pmax pmax
comp=Z,35nm,0.9s
KBZ MLR MLR
comp=Z,327nm,20.8s
KBZ **Khabaz** 74.08 350 P P 19 39 32.8 +0.5
KBZ **Khabaz** 74.08 350 P P 19 39 32.8 +0.5
comp=Z,35nm,0.9s,baz=342,slow=4.2,SNR=41
KBZ LR LR 20 14 08.8
comp=Z,327nm,20.8s,baz=308,slow=37
PTOM **Tomar** 74.29 29 *e*P P 19 39 34.5 +0.9
comp=Z,152nm,1.9s
PCBR **Castelo Branco** 74.29 29 *e*P P 19 39 34.5 +0.9
comp=Z,202nm,1.5s
SOC **Sochi** 74.46 352 *d*P P 19 39 34.1 -0.4
SOC *e* 19 42 24.3
SOC *e*S **S** 19 49 01.4 -2.6
SOC *e*SS SS 19 53 56.9 +6.8
SOC pmax pmax
comp=Z,77nm,0.8s
SOC MLR MLR
comp=Z,340nm,17.0s
PMRV **Marv??o** 74.71 29 *e*P P 19 39 36.4 +0.3
comp=Z,158nm,1.5s
PMAFR **Mafra** 74.72 30 *e*P P 19 39 36.8 +0.7
comp=Z,322nm,1.9s
UPM **Unac-Piva** 74.85 8⇑*i*P P 19 39 36.5 -0.6
MPEP **Malo Peshtene** 74.93 4 *i*P P 19 39 36.8 -0.5
LIS **Lisbon** 74.98 30 *e*P P 19 39 38.5 +0.9
LIS AMb AMB 19 39 42.7
comp=Z,246nm,2.3s
LIS **Lisbon** 74.98 30 *e*P P 19 39 38.5 +0.9
comp=Z,246nm,2.3s
LIS **Lisbon** 74.98 30 *e*P P 19 39 38.4 +0.9
SZH **Strazhica** 75.08 2 *i*P P 19 39 37.6 -0.6
PVL **Pavlikeni** 75.12 3 *i*P P 19 39 38.6 +0.3
BRY **Bratogost** 75.13 8⇑*i*P P 19 39 37.6 -1.0
ONI **Oni** 75.16 349 P P 19 39 39.7 +1.0
PRD **Provadia** 75.17 1 *i*P P 19 39 40.0 +1.4
PESTR **Estremoz** 75.20 29 *e*P P 19 39 38.9 0.0
comp=Z,170nm,1.2s
ESDC **Sonseca Array** 75.21 26 P P 19 39 39.7 +0.6
ESDC **Sonseca Array** 75.21 26 P P 19 39 39.7 +0.6
comp=Z,41nm,0.8s,baz=340,slow=5.8,SNR=140
ESDC LR LR 20 13 54.8
comp=Z,170nm,18.8s,baz=345,slow=37
IVA **Berane** 75.24 7 *e*P P 19 39 39.0 -0.2
AQU **L'Aquila** 75.25 12 *e*P P 19 39 39.8 +0.6
comp=Z,188nm,1.4s
AQU **L'Aquila** 75.25 12⇑*i*P P 19 39 38.7 -0.5
PAB **San Pablo** 75.26 26 *e*P P 19 39 40.0 +0.7
PAB pmax pmax
comp=Z,218nm,1.5s
PAB **San Pablo** 75.26 26 *e*P P 19 39 40.0 +0.7
comp=Z,218nm,1.5s
EVOP **Sao Brissos** 75.40 29⇓*i*P P 19 39 40.5 +0.5
EVOP pmax pmax
comp=Z,497nm,1.7s
EVOP **Sao Brissos** 75.40 29⇓*i*P P 19 39 40.5 +0.5
comp=Z,497nm,1.7s
EVO **Evora** 75.42 29⇓*i*P P 19 39 40.5 +0.3
comp=Z,497nm,1.7s
EVO *e*R
comp=Z,640nm,20.5s
EVO **Evora** 75.42 29 *e*P P 19 39 41.0 +0.8
comp=Z,198nm,1.3s
KMI **Kunming** 75.47 296 P P 19 39 40.5 -0.5
KMI pP **pP** 19 39 56.9 -1.4
KMI sP **sP** 19 40 03.8 -1.5
KMI PP **PP** 19 42 34.3 +4.1
KMI S **S** 19 49 13.8 -2.5
KMI pmax pmax
comp=Z,17nm,1.4s
KMI pmax pmax
comp=Z,130nm,4.4s
KMI LR LR
comp=N,370nm,16.5s
KMI LR LR
comp=E,490nm,18.5s
KMI LR LR
comp=Z,460nm,27.2s
PVY **Plav** 75.52 7⇑*i*P P 19 39 40.4 -0.4
TTG **Podgorica** 75.64 8⇑*i*P P 19 39 41.2 -0.1
VTS **Vitosha** 75.68 5 P P 19 39 41.9 +0.1
VTS **Vitosha** 75.68 5 ⇓P P 19 39 40.4 -1.4
VTS **Vitosha** 75.68 5 *i*P P 19 39 40.4 -1.4
VTS **Vitosha** 75.68 5⇓*i*P P 19 39 40.4 -1.4
PNCL **Nicolau / Gran** 75.70 30 *e*P P 19 39 42.9 +1.1
comp=Z,252nm,1.7s
PGB **Panagyurishte** 75.75 4 *i*P P 19 39 41.4 -0.7
TBLG **Delisi** 75.89 348 *e*P P 19 39 43.3 +0.5
TBLG **Delisi** 75.89 348 P P 19 39 43.3 +0.5
JMB **Yambol** 75.89 2 P P 19 39 44.5 +1.7
JMB **Yambol** 75.89 2 *i*P P 19 39 43.0 +0.2
PBEJ **Beja** 75.94 29 *e*P P 19 39 44.0 +0.9
comp=Z,88nm,2.0s
PBAR **Barrancos** 75.98 29 *e*P P 19 39 44.4 +1.0
comp=Z,297nm,1.3s
MESJ **Messejana** 76.03 30 *e*P P 19 39 44.4 +0.7
MESJ AMb AMB 19 39 46.1
comp=Z,100nm,2.4s
MESJ **Messejana** 76.03 30 *e*P P 19 39 44.4 +0.7
comp=Z,100nm,2.4s
MESJ **Messejana** 76.03 30 *e*P P 19 39 44.4 +0.7
LSA **Lhasa** 76.04 308 P P 19 39 45.4 +1.0
LSA LR LR
comp=N,340nm,21.2s
LSA LR LR
comp=Z,600nm,17.4s
LSA **Lhasa** 76.04 308 *e*P P 19 39 45.7 +1.3
LSA pmax pmax
comp=Z,30nm,0.7s
LSA **Lhasa** 76.04 308 *e*P P 19 39 45.7 +1.3
comp=Z,30nm,0.7s
DGRG **David-gareji** 76.10 348 P P 19 39 45.1 +1.0
PTEO **Sao Teotonio** 76.19 30 *e*P P 19 39 45.4 +0.8
comp=Z,197nm,1.5s
PLD **Plovdiv** 76.21 3 P P 19 39 46.0 +1.4
PLD **Plovdiv** 76.21 3 *i*P P 19 39 44.0 -0.6
SKO **Skopje** 76.22 6 *i*P P 19 39 45.4 +0.7
PCVE **Castro Verde** 76.27 30 *e*P P 19 39 46.1 +1.1
comp=Z,75nm,1.5s
DIM **Dimitrovgrad** 76.29 3 *i*P P 19 39 46.0 +1.0
AKH **Akhalkalaki** 76.32 349 P P 19 39 45.9 +0.4
KKB **Krupnik** 76.40 5 *i*P P 19 39 45.4 -0.3
MORF **Marmelete** 76.44 30 *e*P P 19 39 47.1 +1.0
comp=Z,175nm,1.7s
MORF **Marmelete** 76.44 30 *e*P P 19 39 46.7 +0.6
EDRB **Edirne** 76.52 2 *e*P P 19 39 46.6 +0.3
PFVI **Vila Bisbo** 76.56 30 *e*P P 19 39 47.9 +1.2
comp=Z,184nm,1.6s
PVAQ **Vaqueiros** 76.57 29 *e*P P 19 39 47.9 +1.2
comp=Z,196nm,1.2s
RZN **Rozhen** 76.63 3 *i*P P 19 39 47.2 0.0
PBDV **Barranco-do-Ve** 76.67 30 *e*P P 19 39 49.0 +1.7
comp=Z,264nm,1.9s
KDZ **Kurdzhali** 76.69 3 *i*P P 19 39 46.7 -0.6
MMB **Musomiste** 76.70 4 *i*P P 19 39 47.2 -0.2
CTVL **Val??k??y-??at** 76.90 1 *e*P P 19 39 49.1 +0.6
VAY **Valandovo** 76.92 5 *i*P P 19 39 48.3 -0.3
NVR **Nevrokopi** 76.94 4 P P 19 39 49.0 +0.2
NVR **Nevrokopi** 76.94 4 *e*P P 19 39 49.0 +0.2
SAFT **Safranbolu** 77.10 357 *e*P P 19 39 50.0 +0.3
KLYT **Kilyos** 77.13 0 *e*P P 19 39 50.3 +0.5
CTKS **Kestanelik-??a** 77.14 1 *e*P P 19 39 50.1 +0.3
SLVT **Silivri** 77.15 1 *e*P P 19 39 50.5 +0.6
KVT **Kavak** 77.15 355 *e*P P 19 39 51.0 +1.0
BIA **Bitola** 77.16 6 *i*P P 19 39 49.2 -0.9
SRS **Serrai** 77.16 4 P P 19 39 50.9 +0.9
RDO **Rodhopi** 77.19 3 P P 19 39 50.1 0.0
RDO **Rodhopi** 77.19 3 *e*P P 19 39 51.0 +0.9
BGKT **Bogazkoy** 77.20 0 *e*P P 19 39 50.7 +0.5
SILT **Sile** 77.23 360 *e*P P 19 39 50.8 +0.4
ISK **Istanbul-Kandi** 77.32 0 *e*P P 19 39 51.1 +0.3
ISK **Istanbul-Kandi** 77.32 0 P P 19 39 52.4 +1.6
FNA **Florina** 77.40 6 P P 19 39 51.8 +0.4
FNA **Florina** 77.40 6 *e*P P 19 39 51.5 +0.1
AFI **Afiamalu** 77.42 201 LR LR 20 06 24.8
comp=Z,711nm,21.7s,baz=91,slow=30
SOH **Sokhos** 77.45 5 P P 19 39 52.1 +0.4
SOH **Sokhos** 77.45 5 *e*P P 19 39 52.5 +0.8
ALN **Alexandroupoli** 77.45 2 P P 19 39 53.2 +1.6
ALN **Alexandroupoli** 77.45 2 *e*P P 19 39 52.0 +0.4
GNI **Garni** 77.45 348 *e*P P 19 39 53.2 +1.3
GNI **Garni** 77.45 348 P P 19 39 53.2 +1.3
SNR=27
GNI **Garni** 77.45 348 *e*P P 19 39 52.9 +1.0
comp=Z,186nm,1.4s
HRT **Hereke** 77.56 360 *e*P P 19 39 52.9 +0.6
MFT **Murefte** 77.58 1 *e*P P 19 39 53.2 +0.7
ENEZ **Enez** 77.61 2 *e*P P 19 39 53.1 +0.6
RKY **Sarkoy-Tekirda** 77.68 2 *e*P P 19 39 53.7 +0.7
ERIK **Erikli-Kesan** 77.69 2 *e*P P 19 39 53.4 +0.5
QIZ **Qiongzhong** 77.70 287 P P 19 39 56.5 +3.2
QIZ sP sP 19 40 16.3 -1.4
QIZ S **S** 19 49 39.8 -0.5
QIZ pmax pmax
comp=Z,9.0nm,1.3s
QIZ pmax pmax
comp=Z,73nm,4.0s
QIZ LR LR
comp=N,370nm,20.6s

QIZ				LR	LR		
	comp=Z,430nm,18.9s						
CANT	Cankiri	77.71	357	eP	P	19 39 54.6	+1.4
ABKT	Ailbek	77.73	337	P	P	19 39 53.4	+0.1
	comp=Z,360nm,1.2s,SNR=32						
NEST	Nestorio	77.75	6	P	P	19 39 54.5	+1.1
RSDY	Resadiye-TOKAT	77.77	354	eP	P	19 39 54.8	+1.3
CUC	Castrocucco	77.81	10	eP	P	19 39 53.1	-0.6
	comp=Z,88nm,1.3s						
ARMT	Armutlu	77.81	0	eP	P	19 39 53.7	+0.1
SMTH	Samothraki Isl	77.87	3	eP	P	19 39 55.0	+1.1
KZN	Kozani	77.90	6	P	P	19 39 53.4	-0.8
KZN	Kozani	77.90	6	eP	P	19 39 54.0	-0.2
MDUB	Mudurnu	77.90	358	eP	P	19 39 55.2	+0.9
PLG	Polygyros	77.90	4	P	P	19 39 53.9	-0.2
PLG	Polygyros	77.90	4	eP	P	19 39 54.0	-0.2
GULT	Gulveren	77.94	359	eP	P	19 39 55.1	+0.6
ADVT	Abdulvahap	77.95	360	eP	P	19 39 54.8	+0.5
GELI	Tayfur-Gelibol	77.96	2	eP	P	19 39 54.5	0.0
KRBG	Karabiga-Canak	77.98	1	eP	P	19 39 55.1	+0.6
LPK	Lapseki	77.99	2	eP	P	19 39 55.4	+0.8
CORM	Corum	78.11	356	eP	P	19 39 56.8	+1.3
KCTX	Karacabey (Bur	78.11	1	eP	P	19 39 55.7	+0.4
LIT	Litokhoron	78.13	5	P	P	19 39 56.2	+0.7
LIT	Litokhoron	78.13	5	eP	P	19 39 55.5	0.0
CAVI	Cavuskoy	78.18	359	eP	P	19 39 56.4	+0.7
AGRB	Hanur-Agry	78.19	349	eP	P	19 39 57.3	+1.3
SRN	Sarande	78.23	7	P	P	19 39 57.2	+1.3
SVSK	Karacayir	78.27	354	eP	P	19 39 57.6	+1.5
GONE	Gonen-Balikesi	78.33	1	eP	P	19 39 57.1	+0.6
PAIG	Paliouri	78.35	4	eP	P	19 39 56.0	-0.6
KEK	Kerkira	78.38	7	P	P	19 39 56.7	-0.1
KEK	Kerkira	78.38	7	eP	P	19 39 57.0	+0.2
PMPST	Porto Santo, M	78.41	38	eP	P	19 39 57.3	+0.3
	comp=Z,111nm,1.5s						
LIA	Limnos Island	78.43	3	P	P	19 39 56.0	-1.0
LIA	Limnos Island	78.43	3	eP	P	19 39 57.5	+0.5
ANTO	Ankara	78.47	357	eP	P	19 39 58.3	+1.0
ANTO	Ankara	78.47	357	⇑P	P	19 39 57.9	+0.5
ANTO	Ankara	78.47	357	P	P	19 39 58.5	+1.2
	SNR=38						
ANTO	Ankara	78.47	357	eP	P	19 39 58.1	+0.7
	comp=Z,122nm,0.9s						
ANTO	Ankara	78.47	357	⇑iP	P	19 39 57.9	+0.5
JAN	Janina	78.50	7	eP	P	19 39 58.0	+0.5
CLDR	Caldiran	78.53	348	eP	P	19 39 59.3	+1.3
PMAR	Madeira	78.57	38	eP	P	19 39 59.8	+1.6
	comp=Z,148nm,1.4s						
BR131	Keskin Array S	78.59	357	eP	P	19 39 58.0	-0.1
	comp=Z,27nm,0.8s						
BRTR	Keskin Array B	78.59	357	P	P	19 39 58.1	0.0
BRTR				PKKPbc	PKKPbc	19 58 48.3	-1.6
BRTR	Keskin Array B	78.59	357	P	P	19 39 58.1	0.0
	comp=Z,29nm,0.8s,baz=348,slow=4.0,SNR=101						
BRTR				PKKPbc	PKKPbc	19 58 48.3	-1.6
	comp=Z,0.5nm,0.7s,baz=154,slow=4.6,SNR=3.8						
IGT	Igoumenitsa	78.59	7	P	P	19 39 59.5	+1.5
THL	Klokotos Trika	78.65	6	P	P	19 39 57.8	-0.4
THL	Klokotos Trika	78.65	6	eP	P	19 39 58.0	-0.2
TIP	Timpagrande	78.70	10	P	P	19 39 58.5	-0.1
TIP	Timpagrande	78.70	10	eP	P	19 39 58.4	-0.3
	comp=Z,262nm,1.6s						
BALB	Balikesir	78.73	1	eP	P	19 39 59.0	+0.3
AFSR	Af¯ar-Bala (A	78.88	357	eP	P	19 40 00.4	+0.7
XOR	Xorichti	78.90	5	P	P	19 40 01.0	+1.3
SVRH	Sivrihisar-ESK	78.92	358	eP	P	19 40 00.3	+0.4
TVSB	Tavsanli	78.93	360	eP	P	19 40 00.4	+0.4
NEO	Neokhori	78.96	5	P	P	19 39 56.9	-3.1
NEO	Neokhori	78.96	5	eP	P	19 39 59.5	-0.5
BNGB	Bingˆ¶l	78.96	351	eP	P	19 40 01.3	+1.2
PRK	Paraskevi	79.11	2	eP	P	19 40 00.5	-0.2
AOS	Alonnisos	79.12	4	eP	P	19 40 00.5	-0.3
AGG	Agios Georgios	79.20	5	P	P	19 40 02.5	+1.1
AGG	Agios Georgios	79.20	5	eP	P	19 40 01.0	-0.4
MAKR	Makrakomi, Fth	79.20	6	P	P	19 40 02.3	+0.9
EVR	Evrytania	79.28	6	P	P	19 40 02.2	+0.3
EVR	Evrytania	79.28	6	eP	P	19 40 02.5	+0.6
ALT	Altintas	79.32	359	eP	P	19 40 02.4	+0.4
LKD2	Lefkada island	79.35	7	eP	P	19 40 02.0	-0.2
BNN	Bunyan	79.38	355	eP	P	19 40 03.4	+0.9
TAPN	Taplejung	79.44	310	eP	P	19 40 03.6	+0.5
	comp=Z,85nm,0.5s						
KIZT	Kizilcal	79.47	358	eP	P	19 40 03.1	+0.2
SHL	Shillong	79.48	305	⇓iP	P	19 40 02.5	-0.8
	comp=Z,4.0nm,0.8s						
SHL				iS	S	19 49 56.0	-3.6
EBNR	Beni Rached	79.55	22	P	P	19 40 04.0	+0.7
ATAL	Atalanti	79.56	5	P	P	19 40 02.5	-0.8
DARE	Darende-Malaty	79.58	353	eP	P	19 40 05.0	+1.5
GUN	Gumba	79.59	311	eP	P	19 40 04.5	+0.5
	comp=Z,110nm,1.0s						
LKR	Lokris	79.60	5	eP	P	19 40 02.5	-1.0
ECHA	Ech Chlef	79.66	23	P	P	19 40 04.5	+0.7
MALT	Malatya	79.78	353	⇓P	P	19 40 13.2	+8.6
MALT	Malatya	79.78	353	⇓iP	P	19 40 13.2	+8.6
EANR	'Ain N'Sour	79.80	23	P	P	19 40 05.5	+0.8
SHUT	Suhut-Afyon	79.82	359	eP	P	19 40 05.4	+0.6
KULA	Kula-Manisa	79.86	0	eP	P	19 40 05.3	+0.2
EMHD	Djebel Mahouad	79.89	21	P	P	19 40 06.0	+0.8
KKN	Kakani	79.91	312	eP	P	19 40 06.0	+0.4
	comp=Z,51nm,0.6s						
DANN	Dangsing	79.93	313	eP	P	19 40 06.4	+0.6
CAEH	'Ain El Ouahch	79.94	18	P	P	19 40 05.0	-0.4
VLS	Valsamata	79.96	7	eP	P	19 40 05.5	+0.1
CHOS	Chios island	79.96	3	eP	P	19 39 59.5	-6.0
ODAN	Odare	80.00	310	eP	P	19 40 06.5	+0.4
	comp=Z,194nm,1.3s						
DFRA	Djebel Bou Aff	80.03	19	P	P	19 40 06.0	0.0
PKI	Pulchoki	80.06	311	eP	P	19 40 06.7	+0.1
SULT	Sultanhani-AKS	80.12	357	eP	P	19 40 06.9	+0.5
DMN	Daman	80.14	312	eP	P	19 40 07.4	+0.5
	comp=Z,50nm,0.6s						
LADK	Ladik-KONYA	80.14	357	eP	P	19 40 06.8	+0.2
NIG	Nigde	80.17	356	eP	P	19 40 07.7	+0.8
RAMN	Ramite	80.20	310	eP	P	19 40 07.4	+0.2
LTK	Loutraki	80.23	5	eP	P	19 40 06.0	-0.9
PTL	Penteli	80.23	4	eP	P	19 40 06.5	-0.5
CKFL	Kef-Lekhel	80.30	18	P	P	19 40 07.0	-0.4
ATH	Athens Observa	80.31	4	P	P	19 40 07.0	-0.3
ATH	Athens Observa	80.31	4	eP	P	19 40 05.5	-1.8
ETRT	Tiaret	80.38	23	P	P	19 40 08.0	+0.1
CASM	Ain Smara	80.40	18	P	P	19 40 06.5	-1.4
KONT	Konya--Tatoy	80.40	357	eP	P	19 40 08.3	+0.5
CUKT	Cukurca	80.44	348	eP	P	19 40 08.5	+0.3
KOLN	Koldanda	80.51	313	eP	P	19 40 09.0	+0.2
	comp=Z,44nm,0.6s						
ABSA	Djebel Ababsia	80.53	18	P	P	19 40 08.0	-0.7
KMRS	Kahramanmaras	80.67	354	eP	P	19 40 10.2	+0.9
KOZT	Kozan	80.75	355	eP	P	19 40 11.5	+1.8
DID	Didima	80.75	5	P	P	19 40 09.8	+0.1
DID	Didima	80.75	5	eP	P	19 40 08.5	-1.2
DIDY	Didyma	80.78	5	P	P	19 40 09.7	-0.3
VLX	Vlachokerasia	80.85	5	eP	P	19 40 10.5	+0.1
BCK	Bucak	80.91	359	eP	P	19 40 10.3	-0.4
KARA	Karaisali	81.00	355	eP	P	19 40 11.4	+0.4
ITM	Ithomi	81.02	6	P	P	19 40 09.0	-2.2
ITM	Ithomi	81.02	6	eP	P	19 40 11.0	-0.2
MLSB	Milas	81.07	1	eP	P	19 40 11.3	-0.2
GLHS	Glhisar (BURDU	81.22	360	eP	P	19 40 12.8	+0.5
CEYT	Ceyhan	81.22	355	eP	P	19 40 13.3	+1.1
YER	Yerkesik	81.24	1	eP	P	19 40 12.7	+0.3
APE	Apeiranthos	81.26	3	⇓P	P	19 40 09.3	-3.2
APE	Apeiranthos	81.26	3	⇓iP	P	19 40 09.3	-3.2
KEST	Kesra	81.32	16	eP	P	19 40 13.4	+0.5
KEST	Kesra	81.32	16	P	P	19 40 13.5	+0.7
	comp=Z,32nm,0.7s,baz=323,slow=0.3,SNR=176						
VLI	Veliai	81.53	5	eP	P	19 40 13.0	-0.8
OTAV	Otavalo	81.56	106	eP	P	19 40 15.0	+0.2
	comp=Z,23nm,1.1s						
DALY	Dalyan (Mu˜la	81.56	0	eP	P	19 40 14.2	+0.2
ELL	Elmali	81.62	359	eP	P	19 40 14.5	0.0
DAT	Datca	81.64	1	eP	P	19 40 13.5	-1.1
NIS1	Nisyros Isl.	81.76	2	eP	P	19 40 14.0	-1.1
IKL	Isikli	82.07	356	eP	P	19 40 16.2	-0.4
ARG	Arkhangelos	82.15	1	P	P	19 40 16.2	-0.9
CHTO	Chiang Mai	82.67	296	eP	P	19 40 18.9	-1.1
CHTO				pmax	pmax		
	comp=Z,55nm,1.6s						
CHTO	Chiang Mai	82.67	296	P	P	19 40 20.3	+0.2
	SNR=5.7						
CHTO	Chiang Mai	82.67	296	eP	P	19 40 18.9	-1.1
	comp=Z,55nm,1.6s						
CHTO	Chiang Mai	82.67	296	P	P	19 40 19.6	-0.4
	comp=Z,23nm,1.6s						
KARP	Karpathos	82.81	2	P	P	19 40 18.1	-2.5
VAM	Vamos	82.88	4	P	P	19 40 21.1	+0.2
UBPT	Khong Chiam	82.96	289	P	P	19 40 21.5	0.0
	comp=Z,31nm,1.3s,comp=Z,813nm						
CMAR	Chiang Mai Arr	82.99	296	P	P	19 40 21.4	-0.3
CMAR	Chiang Mai Arr	82.99	296	P	P	19 40 21.4	-0.3
	comp=Z,28nm,1.1s,baz=6.7,slow=5.8,SNR=44						
IDI	Anoyia	83.02	4	P	P	19 40 23.9	+2.2
IDI	Anoyia	83.02	4	eP	P	19 40 19.8	-1.9
	comp=Z,39nm,0.7s						
NPS	Neapolis	83.07	3	P	P	19 40 19.2	-2.7
LAST	Lasithi	83.16	3	P	P	19 40 22.4	-0.1
RAR	Rarotonga	83.20	188	LR	LR	20 17 58.7	
	comp=Z,284nm,18.1s,baz=79,slow=36						
LEF	Lefka	83.21	357	eP	P	19 40 22.5	-0.1
ZKR	Zakros	83.23	2	P	P	19 40 22.4	-0.3
SIVA	Sivas	83.29	4	P	P	19 40 23.9	+0.9
CSS	Prodhromos	83.35	357	eP	P	19 40 22.7	-0.7
CSS	Prodhromos	83.35	357	P	P	19 40 24.6	+1.2
CSS	Prodhromos	83.35	357	eP	P	19 40 22.3	-1.0
	comp=Z,143nm,1.4s						
GVD	Gavdhos	83.44	4	P	P	19 40 24.7	+0.9
PBKT	Sadao Pong	83.80	294	P	P	19 40 25.6	-0.2
IBDR	Badra	84.29	346	eP	P	19 40 22.9	-5.2
IBDR				iSKS	S	19 50 39.1	-9.3
IBDR				iS	SKSac	19 50 45.4	-0.6
IBDR				iPS	PnS	19 51 38.7	-10
SDKM	Sandakan	86.01	274	P	pP	19 40 56.1	+1.4
KKM	Kota Kinabalu	86.12	275	P	P	19 40 39.8	+2.2
TSM	Tawau	86.87	273	P	P	19 40 44.5	+3.4
MIB	Mutribah	87.38	344	eP	P	19 40 43.4	-0.1
MIB				AMb	AMB	19 40 45.2	
	comp=Z,271nm,0.8s						
UMR	Umm Al-Rimmam	87.58	344	eP	P	19 40 44.3	-0.1
UMR				AMb	AMB	19 40 46.2	
	comp=Z,250nm,0.9s						
NAY	Al-Naaiem	87.94	344	eP	P	19 40 45.9	-0.3
NAY				AMb	AMB	19 40 47.7	
	comp=Z,53nm,1.1s						
KBD	Kabd	87.96	344	eP	P	19 40 46.0	-0.3
KBD				AMb	AMB	19 40 48.0	
	comp=Z,96nm,1.0s						
RDF	Al-Radifah	88.22	344	eP	P	19 40 47.3	-0.2
DZM	Mont Dzumac	90.43	219	LR	LR	20 18 59.8	
	comp=Z,497nm,19.1s,baz=180,slow=34						
SBUM	Sibu	91.14	277	P	P	19 41 01.8	+0.5
	comp=Z,18nm,0.8s,comp=Z,350nm						
ARQ	Araqi	92.21	335	P	P	19 41 05.9	-0.3
	SNR=9.6						
BSY	Bisya	92.65	334	P	P	19 41 08.2	0.0
	SNR=7.8						
KSM	Kuching	92.89	279	eP	P	19 41 09.3	-0.1
	comp=Z,20nm,1.0s						
KSM	Kuching	92.89	279	P	P	19 41 09.3	-0.1
TAM	Tamanrasset	93.43	22	eP	P	19 41 11.6	-0.4
TAM				pmax	pmax		
	comp=Z,43nm,1.5s						
TAM	Tamanrasset	93.43	22	eP	P	19 41 11.6	-0.4
	comp=Z,42nm,1.5s						
RAYN	Ar Rayn	93.81	345	P	P	19 41 13.5	-0.1
	comp=Z,310nm,1.1s,SNR=31						
CTA	Charters Tower	95.68	237	P	P	19 41 21.2	-0.7
CTA	Charters Tower	95.68	237	P	P	19 41 21.2	-0.7
	comp=Z,3.3nm,0.7s,baz=16,slow=7.4,SNR=6.6						
SAML	Samuel	96.71	96	eP	P	19 41 24.8	-2.0
	comp=Z,4.8nm,0.7s						
WRA	Warramunga Arr	100.53	247	P	Pdif	19 41 42.4	-1.4
WRA	Warramunga Arr	100.53	247	P	Pdif	19 41 42.4	-1.4
	comp=Z,0.9nm,0.9s,baz=36,slow=5.6,SNR=4.6						
TORD	Torodi Ar. Bea	102.06	27	P	Pdif	19 41 49.3	-1.5
TORD				PKKPbc	PKKPbc	19 57 51.2	+0.1
TORD	Torodi Ar. Bea	102.06	27	P	Pdif	19 41 49.3	-1.5
	comp=Z,1.4nm,0.6s,baz=331,slow=4.4,SNR=12						
TORD				PKKPbc	PKKPbc	19 57 51.2	+0.1
	comp=Z,1.4nm,0.8s,baz=168,slow=2.3,SNR=15						
ASAR	Alice Springs	104.00	246	PKKPbc	PKKPbc	19 57 46.0	0.0
ASAR	Alice Springs	104.00	246	PKKPbc	PKKPbc	19 57 46.0	0.0
	comp=Z,0.3nm,0.6s,baz=208,slow=2.7,SNR=5.3						
KMBO	Kilima Mbogo	119.00	351	eP	PKPdf	19 46 45.1	-0.1
KMBO	Kilima Mbogo	119.00	351	PKP	PKPdf	19 46 45.9	+0.7
KMBO	Kilima Mbogo	119.00	351	PKP	PKPdf	19 46 45.9	+0.7
	comp=Z,3.4nm,0.5s,baz=346,slow=1.6,SNR=16						
PLCA	Paso Flores	120.81	119	PKP	PKPdf	19 46 47.5	0.0
PLCA	Paso Flores	120.81	119	PKP	PKPdf	19 46 47.5	0.0
	comp=Z,4.7nm,0.9s,baz=257,slow=3.2,SNR=4.7						
DRV	Dumont d'Urvil	137.87	214	Pdif	Pdif	19 44 33.0	+4.5
DRV	Dumont d'Urvil	137.87	214	PP	PP	19 50 09.0	+0.8
VNDA	Vanda	142.25	195	PKPpre	PKPpre	19 47 22.7	
VNDA	Vanda	142.25	195	PKhKP	PKPpre	19 47 22.7	
	comp=Z,2.3nm,0.7s,baz=339,slow=1.1,SNR=8.8						
LBTB	Lobatse	142.98	5	eP	PKPdf	19 47 25.9	-3.7
LBTB				AMS	AMS	21 30 47.9	
	comp=Z,849nm,23.8s						
SLR	Silverton	143.77	1	eP	PKPab	19 47 28.3	+0.2
SLR				AMS	AMS	21 26 19.9	
	comp=Z,917nm,23.2s						
KLOF	Kloof	144.37	2	eP	PKPab	19 47 30.2	-0.2
ERPM	east rand prop	144.38	1	eP	PKPab	19 47 29.9	-0.5
PRYS	Parys	144.94	3	eP	PKPab	19 47 32.1	-0.3
SWZ	Schweizer	145.12	6	eP	PKPbc	19 47 32.4	-0.6
POGA	Pongola	145.37	356	eP	PKPbc	19 47 33.5	-0.1
SEK	Senekal	146.34	3	eP	PKPbc	19 47 36.6	-0.2
BOSA	Boshof	146.54	6	eP	PKPdf	19 47 35.8	+0.1
BOSA				AMS	AMS	21 33 28.3	
	comp=Z,928nm,22.8s						
BOSA	Boshof	146.54	6	PKPbc	PKPbc	19 47 37.2	-0.1
BOSA	Boshof	146.54	6	PKPbc	PKPbc	19 47 37.2	-0.1
	comp=Z,71nm,0.8s,baz=343,slow=4.3,SNR=86						
HVD	Gariep Dam	148.53	6	eP	PKPbc	19 47 42.0	-0.6
KSD	Kokstad	148.56	360	eP	PKPbc	19 47 43.0	+0.2
SUR	Sutherland	149.91	14	eP	PKPbc	19 47 45.2	-0.9
SUR				AMS	AMS	21 29 48.7	
	comp=Z,645nm,23.0s						
SOE	Somerset East	150.63	6	eP	PKPbc	19 47 47.7	0.0
GRM	Grahamstown	151.28	5	eP	PKPbc	19 47 48.7	-0.4
ELIM	Elim	151.96	17	eP	PKPbc	19 47 50.4	-0.2
BUFB	Buffelsbos	152.02	8	eP	PKPbc	19 47 50.7	0.0
VNA1	Neumayer--Stat	162.93	136	ePKPdf	PKPdf	19 47 57.8	+1.3
VNA1	Neumayer--Stat	162.93	136	ePKPab	PKPab	19 48 46.6	+0.1
VNA1	Neumayer--Stat	162.93	136	epPKPab	pPKPab	19 49 04.7	+0.3
SNAA	Sanae	164.32	142	ePKPab	PKPab	19 48 51.9	-0.8
SNAA	Sanae	164.32	142	epPKPab	pPKPab	19 49 11.0	+0.4
SNAA	Sanae	164.32	142	PKPab	PKPab	19 48 51.3	-1.4
SNAA	Sanae	164.32	142	PKPab	PKPab	19 48 51.3	-1.4
	comp=Z,3.6nm,1.0s,baz=260,slow=4.6,SNR=7.2						
MAW	Mawson	164.74	234	PKPab	PKPab	19 48 53.9	-0.6
MAW	Mawson	164.74	234	PKPab	PKPab	19 48 53.9	-0.6
	comp=Z,2.1nm,0.7s,baz=86,slow=5.0,SNR=4.1						

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*CSEM **22** 19:28:06.0±0.5, 76.29N×7.30E, h2km, ML2.6, Error ellipse: s-maj=16.3km s-min=8.7km az=98.0*

*NAO **22** 19:28:07.2±1.7, 76.21N×7.67E, ML3.7*

*ISCJB **22** 19:28:10.0±0.5, 76.15N±0.05×8.7E±0.2, h10km, mb4.4/48, MS3.6/6, Error ellipse: s-maj=8.9km s-min=4.6km az=40.9*

*IDC **22** 19:28:09.7±0.9, 76.18N×7.98E, h0km, mb3.9/14, mb1 4.1/20, mb1mx4.1/36, mbtmp4.0/20, ML3.6/6, MS3.7/13, Ms1 3.7/13, ms1mx3.4/56, Error ellipse: s-maj=16.7km s-min=10.0km az=112.0*

*SZGRF **22** 19:28:10.8, 76.36N×5.61E, h25km, mb4.7, Svalbard, Norway, region*

*BER **22** 19:28:11.8±2.9, 76.23N×8.21E, h15km±32km, MD2.8, ML2.6, ML3.7(NAO)*

*VIE **22** 19:28:13.6, 76.17N×8.27E, h13km, mb3.9, ML3.6 1382 km NNW of Oulu*

ISC 22 19:28:12.2±0.6**, 76.16N**±0.05×**8.80E**±0.08**, h10km, h9km:pP-P, n118,** σ1.**83**/135**, mb4.5**/48**, MS3.6**/6**, 4C-1D, Svalbard region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	Hornsund	1.79	58	eP	Pn	19 28 42.2	-0.9
HSP				eS	Sn	19 29 04.2	-1.6
SPA0	Spitsbergen Ar	2.64	36	Pn	Pn	19 28 52.8	-1.9
	baz=225,slow=14						
SPA0				Sn	Sn	19 29 23.8	-2.9
	baz=213,slow=18						
SPA0	Spitsbergen Ar	2.64	36	Pn	Pn	19 28 52.8	-1.9
	baz=225,slow=14						
SPA0				eP	Pn	19 28 52.9	-1.9
SPA0				Sn	Sn	19 29 23.8	-2.9
	baz=213,slow=18						
SPA0	Spitsbergen Ar	2.64	36	Pn	Pn	19 28 52.8	-1.9
	SNR=48						
SPA0				Sn	Sn	19 29 23.8	-2.9
SPITS	Spitsbergen Ar	2.64	36	Pn	Pn	19 28 52.9	-1.9
	baz=216,slow=15,SNR=112						
SPITS				Sn	Sn	19 29 24.5	-2.2
	baz=225,slow=22,SNR=7.4						
SPITS				LR	LR	19 30 04.6	
	comp=Z,1μm,18.4s,baz=210,slow=42						
KBS	Kingsbay	2.87	12	Pn	Pn	19 28 52.4	-5.4
KBS				Sn	Sn	19 29 23.3	-9.0
KBS	Kingsbay	2.87	12	eP	Pn	19 28 52.6	-5.2
KBS				ePg	Pn	19 28 59.8	+2.0
KBS				AML	AML	19 29 11.5	
	comp=Z,68nm,0.5s						
KBS	Kingsbay	2.87	12	eP	Pn	19 28 52.6	-5.2
	SNR=55						
KBS	Kingsbay	2.87	12	ePg	Pn	19 28 59.8	+2.0
	SNR=91						
KBS				Sn	Sn	19 29 23.3	-9.0
BJO	Bjornoya	3.12	117	eP	Pn	19 29 01.6	+0.3
BJO				eS	Sn	19 29 35.6	-2.9
BJO				AML	AML	19 29 41.7	
	comp=Z,42nm,0.4s						
BJO	Bjornoya	3.12	117	eP	Pn	19 29 01.6	+0.3
	SNR=55						
BJO				eS	Sn	19 29 35.6	-2.9
	comp=Z,42nm,0.4s,SNR=55						
JMIC	Jan Mayen	7.11	232	Pn	Pn	19 29 48.0	-8.1
JMIC	Jan Mayen	7.11	232	Pn	Pn	19 29 53.5	-2.5
	comp=Z,9.8nm,0.3s,baz=38,slow=8.3,SNR=5.6						
JMIC				LR	LR	19 31 45.7	
	comp=Z,459nm,19.2s,baz=66,slow=31						
JMIC	Jan Mayen	7.11	232	Pn	Pn	19 29 48.0	-8.1
ARA0	ARCESS Array S	8.24	135	Pn	Pn	19 30 10.4	-1.1
	baz=333,slow=12						
ARA0				Sn	Sn	19 31 39.8	-4.7
	baz=333,slow=18						
ARA0	ARCESS Array S	8.24	135	Pn	Pn	19 30 10.4	-1.1
	baz=333,slow=12						
ARA0				Sn	Sn	19 31 39.8	-4.7
	baz=333,slow=18						
ARA0	ARCESS Array S	8.24	135	Pn	Pn	19 30 10.4	-1.1
	SNR=154						
ARCES	ARCESS Array B	8.24	135	Pn	Pn	19 30 10.5	-1.1
	comp=Z,1.0nm,0.3s,baz=326,slow=12,SNR=24						
ARCES				Sn	Sn	19 31 40.9	-3.7
	comp=Z,1.3nm,0.3s,baz=335,slow=18,SNR=3.2						
ARCES				LR	LR	19 33 33.1	
	comp=Z,428nm,20.2s,baz=338,slow=38						
KEV	Kevo	8.31	131	ep	Pn	19 30 12.1	-0.4
KTK1	Kautokeino	8.35	142	ePn	Pn	19 30 13.5	+0.5
KTK1	Kautokeino	8.35	142	ePn	Pn	19 30 13.5	+0.5
	SNR=55						
KONS	Konsvik	9.80	170	ePn	Pn	19 30 32.9	0.0
APA0	Apatity Array	11.29	127	Pn	Pn	19 30 53.1	-0.1
	baz=308,slow=11						
APA0	Apatity Array	11.29	127	Pn	Pn	19 30 53.1	-0.1
	SNR=7.5						
BORG	Borgarnes	14.97	236	LR	LR	19 35 46.7	
	comp=Z,330nm,18.5s,baz=130,slow=31						
NB2	NORSAR Subarra	15.21	176	Pn	Pn	19 31 46.0	-0.7
NB2	NORSAR Subarra	15.21	176	P	Pn	19 31 47.0	+0.2
	comp=Z,7.7nm,0.8s,baz=357,slow=11						
NB2	NORSAR Subarra	15.21	176	Pn	Pn	19 31 46.0	-0.7
NOA	NORSAR Array B	15.21	176	Pn	Pn	19 31 46.6	-0.2
	comp=Z,0.1nm,0.3s,baz=352,slow=12,SNR=4.2						
NOA				LR	LR	19 37 17.1	
	comp=Z,124nm,18.2s,baz=355,slow=36						
JOF	Joensuu	15.26	138	ep	Pn	19 31 44.7	-2.5
KAF	Kangasniemi	15.30	148	ep	Pn	19 31 47.4	-0.4
	comp=Z,14nm,0.5s						
FIA0	FINESS Array S	15.92	149	Pn	Pn	19 31 54.4	-1.4
	baz=348,slow=14						
FIA0	FINESS Array S	15.92	149	Pn	Pn	19 31 54.4	-1.4
FINES	FINESS Array B	15.92	149	Pn	Pn	19 31 54.8	-1.1
	comp=Z,0.3nm,0.3s,baz=355,slow=13,SNR=8.9						
FINES				LR	LR	19 37 50.7	
	comp=Z,316nm,21.1s,baz=341,slow=36						
HFS	Hagfors	16.19	171	Pn	Pn	19 31 55.9	-3.5
	baz=342,slow=6.2						
HFS	Hagfors	16.19	171	Pn	Pn	19 32 01.0	+1.6
	comp=Z,0.2nm,0.3s,baz=359,slow=10,SNR=14						
HFS				LR	LR	19 37 29.8	
	comp=Z,264nm,18.7s,baz=14,slow=34						
HFS	Hagfors	16.19	171	Pn	Pn	19 31 55.9	-3.5
EKA	Eskdalemuir Ar	21.39	199	P	P	19 32 56.4	-3.1
	comp=Z,2.9nm,0.8s,baz=16,slow=10,SNR=8.3						
BSEG	Bad Segeberg	22.32	178	eP	P	19 33 09.8	+0.3
	comp=Z,76nm,1.0s						
BSEG				epP	pP	19 33 16.8	+4.5
NACGM	Naroch	22.39	152	e	P	19 33 08.0	-2.2
MICGM	Minsk	22.91	151	e	P	19 33 16.0	+0.3
NRDL	Niedersach Rie	23.77	178	eP	P	19 33 23.8	-0.4
	comp=Z,34nm,1.2s						
NRDL				epP	pP	19 33 30.7	+3.5
CLZ	Clausthal	24.42	178	eP	P	19 33 30.1	-0.4
	comp=Z,17nm,1.2s						
BUG	Bochum--Univer	24.82	182	eP	P	19 33 32.5	-1.5
	comp=Z,42nm,1.5s						
CLL	Collm	25.00	174	eP	P	19 33 35.3	-0.4
	comp=Z,9.0nm,1.1s						
CLL				epP	pP	19 33 41.6	+2.9
CLL	Collm	25.00	174	iP	P	19 33 34.9	-0.8
	comp=Z,9.0nm,1.1s						
CLL				isP	sP	19 33 40.0	0.0
CLL				e		19 34 04.0	
CLL				e		19 35 21.0	
NEUB	Neuenburg	25.08	176	eP	P	19 33 36.4	+0.1
	comp=Z,34nm,1.0s						
NEUB				epP	pP	19 33 42.7	+3.4
FBE	Freiberg	25.40	173	eP	P	19 33 39.4	+0.1
	comp=Z,30nm,1.0s						
FBE				epP	pP	19 33 45.6	+3.3
UBBA	Unterbreizbach	25.44	178	eP	P	19 33 39.7	+0.2
	comp=Z,16nm,1.5s						
BRG	Berggiesshubel	25.47	172	eP	P	19 33 39.1	-0.7
	comp=Z,14nm,1.3s						
BRG				e		19 33 45.2	
	comp=Z,12nm,1.1s						
BRG	Berggiesshubel	25.47	172	eP	P	19 33 39.8	-0.1
	comp=Z,14nm,1.3s						
BRG				epP	pP	19 33 45.9	+3.0
MOX	Moxa	25.64	176	eP	P	19 33 41.7	+0.2
	comp=Z,24nm,1.1s						
MOX				epP	pP	19 33 47.8	+3.3
PLN	Plauen	25.81	175	eP	P	19 33 43.2	+0.2
	comp=Z,88nm,1.2s						
PLN				epP	pP	19 33 49.3	+3.3
PVCC	Panska Ves	25.83	172	eP	P	19 33 43.6	+0.4
PVCC				ex	x	19 33 48.6	
WERD	Werda	25.85	175	eP	P	19 33 43.6	+0.2
	comp=Z,22nm,1.5s						
WERD				epP	pP	19 33 49.9	+3.5
TANN	Tannenbergstha	25.89	175	eP	P	19 33 44.1	+0.3
	comp=Z,18nm,1.4s						
TANN				epP	pP	19 33 50.3	+3.5
UPC	Upice	25.91	169	eP	P	19 33 44.6	+0.7
UPC				ex	x	19 33 50.4	
GUNZ	Gunzen	25.93	175	eP	P	19 33 44.5	+0.3
	comp=Z,26nm,1.4s						
GUNZ				epP	pP	19 33 50.6	+3.4
WERN	Wernitzgruen	26.01	175	eP	P	19 33 45.4	+0.5
	comp=Z,31nm,1.2s						
WERN				epP	pP	19 33 51.6	+3.7
NKC	Novy Kostel	26.07	175	eP	P	19 33 45.2	-0.2
NKC				ex	x	19 33 51.7	
DPC	Dobruska-Polom	26.08	169	eP	P	19 33 45.5	0.0
DPC				ex	x	19 33 51.7	
GIVF	Givet	26.20	186	eP	P	19 33 45.5	-1.1
BAIF	Baives	26.26	187	eP	P	19 33 46.4	-0.7
	comp=Z,24nm,1.1s						
MANZ	Manzenberg	26.31	175	eP	P	19 33 47.7	+0.2
	comp=Z,23nm,1.9s						
PRU	Pruhonice	26.37	172	eP	P	19 33 47.2	-0.9
PRU				ex	x	19 33 54.6	
KRLC	Kraliky	26.38	168	eP	P	19 33 48.1	-0.1
OJC	Ojcow	26.41	164	eP	P	19 33 48.4	0.0
ROTZ	Rotzenmuhle	26.53	175	eP	P	19 33 50.0	+0.5
	comp=Z,10.0nm,1.2s						
ROTZ				epP	pP	19 33 56.1	+3.6
GRF	Grafenberg Arr	26.59	176	eP	P	19 33 50.4	+0.4
	comp=Z,8.0nm,0.9s						
GRF				epP	pP	19 33 56.5	+3.4

OKC	**Ostrava-Krasne**	**26.69**	**166**	*e*P		P	19 33 45.3	-5.6
OKC				*ex*		x	19 33 50.8	
AKASG	**Malin Array Be**	**26.81**	**151**	P		**P**	**19 33 51.2**	**-0.8**
comp=Z,0.3nm,0.3s,baz=344,slow=9.6,SNR=3.5								
VRAC	**Vranov**	**27.14**	**169**	P		**P**	**19 33 55.3**	**+0.3**
comp=Z,8.7nm,0.8s,baz=7.2,slow=10,SNR=13								
VRAC				LR		LR	19 44 09.5	
comp=Z,131nm,20.1s,baz=179,slow=35								
WET	**Wettzell**	**27.17**	**174**	*e*P		**P**	**19 33 55.0**	**-0.3**
comp=Z,7.0nm,1.3s								
KHC	**Kasperske Hory**	**27.20**	**173**	*e*P		**P**	**19 33 55.7**	**+0.1**
KHC				*ex*		x	19 34 02.3	
GEC2	**GERESS Array S**	**27.49**	**173**	*e*P		**P**	**19 33 59.1**	**+0.8**
comp=Z,13nm,1.3s								
GEC2				*e*pP		**pP**	**19 34 05.4**	**+4.1**
GERES	**GERESS Array B**	**27.49**	**173**	P		**P**	**19 33 58.7**	**+0.4**
comp=Z,3.2nm,0.9s,baz=359,slow=9.8,SNR=16								
GERES				LR		LR	19 44 56.4	
comp=Z,175nm,19.0s,baz=266,slow=37								
FLN	**La Foliniere**	**27.75**	**193**	*e*P		**P**	**19 33 58.1**	**-2.4**
comp=Z,42nm,1.4s								
MEZF	**Maizieres J'vi**	**27.80**	**185**	*e*P		**P**	**19 34 00.5**	**-0.4**
CDF	**Champ du Feu**	**27.86**	**182**	*e*P		**P**	**19 34 01.1**	**-0.4**
comp=Z,17nm,1.2s								
SFTF	**Sexfontaines**	**28.10**	**185**	*e*P		**P**	**19 34 03.1**	**-0.5**
GRR	**Gorron**	**28.15**	**194**	*e*P		**P**	**19 34 01.8**	**-2.2**
comp=Z,36nm,1.3s								
HAU	**Haudompre**	**28.27**	**183**	*e*P		**P**	**19 34 04.7**	**-0.5**
ROSF	**Rostrenen**	**28.36**	**197**	*e*P		**P**	**19 34 03.4**	**-2.5**
HINF	**Hinteralfeld**	**28.45**	**183**	*e*P		**P**	**19 34 06.7**	**-0.1**
CONA	**Conrad Observa**	**28.48**	**170**	⇓ *i*P		**P**	**19 34 07.3**	**+0.2**
comp=Z,8.5nm,0.8s								
CONA				⇑ *i*pP		**pP**	**19 34 13.6**	**+3.5**
comp=Z,11nm,0.7s								
MOA	**Molln**	**28.50**	**172**	⇑ *e*pP		pP	19 34 12.9	+2.6
comp=Z,4.9nm,0.8s								
QUIF	**Quistinic**	**28.77**	**197**	*e*P		**P**	**19 34 07.3**	**-2.2**
LOR	**Lormes**	**29.07**	**187**	*e*P		**P**	**19 34 10.8**	**-1.4**
SSF	**Saint Saulge**	**29.28**	**187**	*e*P		**P**	**19 34 12.9**	**-1.2**
DAVOX	**Davos/Dischmat**	**29.48**	**178**	LR		LR	19 45 52.0	
comp=Z,89nm,18.5s,baz=87,slow=36								
AVF	**Avril sur Loir**	**29.56**	**188**	*e*P		**P**	**19 34 15.2**	**-1.3**
comp=Z,11nm,1.0s								
CABF	**La Chapelle**	**29.67**	**184**	*e*P		**P**	**19 34 17.0**	**-0.7**
comp=Z,38nm,1.2s								
SMF	**Signal de Mont**	**29.69**	**187**	*e*P		**P**	**19 34 16.0**	**-1.7**
BGF	**Bois d'Agland**	**29.81**	**188**	*e*P		**P**	**19 34 17.6**	**-1.2**
comp=Z,26nm,0.9s								
TCF	**Toulx Ste Croi**	**30.10**	**189**	*e*P		**P**	**19 34 20.0**	**-1.4**
comp=Z,22nm,1.2s								
LPL	**La Plagne**	**30.76**	**183**	*e*P		**P**	**19 34 27.5**	**+0.1**
comp=Z,16nm,1.1s								
LPG	**La Plagne**	**30.78**	**183**	*e*P		**P**	**19 34 27.9**	**+0.2**
comp=Z,35nm,1.4s								
RJF	**Les Rejaudoux**	**31.11**	**190**	*e*P		**P**	**19 34 28.9**	**-1.4**
comp=Z,19nm,1.2s								
AKTO	**Aktyubinsk**	**32.14**	**114**	P		**P**	**19 34 40.5**	**+1.2**
comp=Z,1.5nm,0.7s,baz=349,slow=9.3,SNR=5.0								
AKTO				LR		LR	19 47 54.3	
comp=Z,185nm,21.9s,baz=3.6,slow=37								
LASF	**Ste Croix**	**32.26**	**187**	*e*P		**P**	**19 34 40.4**	**0.0**
SBF	**Sospel**	**32.40**	**182**	*e*P		**P**	**19 34 41.6**	**-0.1**
comp=Z,152nm,1.5s								
BVAR	**Borovoye Array**	**32.57**	**99**	P		**P**	**19 34 45.1**	**+2.0**
comp=Z,1.0nm,0.6s,baz=342,slow=9.1,SNR=5.9								
MTLF	**Montolieu**	**33.04**	**189**	*e*P		**P**	**19 34 46.6**	**-0.7**
comp=Z,52nm,1.6s								
EPF	**Esparros**	**33.43**	**191**	*e*P		**P**	**19 34 49.1**	**-1.6**
comp=Z,19nm,1.2s								
ZALV	**Zalesovo Beam**	**35.19**	**84**	P		**P**	**19 35 06.9**	**+1.2**
comp=Z,1.6nm,0.8s,baz=332,slow=8.8,SNR=7.9								
KBZ	**Khabaz**	**35.60**	**136**	P		**P**	**19 35 11.5**	**+2.2**
comp=Z,2.8nm,0.7s,baz=330,slow=7.9,SNR=3.7								
KBZ				LR		LR	19 50 07.5	
comp=Z,246nm,19.6s,baz=34,slow=37								
ESDC	**Sonseca Array**	**37.02**	**196**	P		**P**	**19 35 19.9**	**-1.8**
comp=Z,0.5nm,0.5s,baz=12,slow=7.3,SNR=5.7								
BRTR	**Keskin Array B**	**38.16**	**148**	P		**P**	**19 35 32.1**	**+0.8**
comp=Z,1.1nm,0.9s,baz=352,slow=8.7,SNR=6.0								
KEST	**Kesra**	**40.52**	**179**	LR		LR	19 53 01.8	
comp=Z,57nm,18.1s,baz=176,slow=37								
MKAR	**Makanchi Array**	**41.22**	**91**	P		**P**	**19 35 58.2**	**+1.6**
comp=Z,1.1nm,0.7s,baz=350,slow=7.3,SNR=17								
SONM	**Songino Array**	**45.91**	**68**	P		**P**	**19 36 35.8**	**+1.3**
comp=Z,0.9nm,0.8s,baz=323,slow=7.0,SNR=8.8								
MIB	**Mutribah**	**49.94**	**135**	*e*P		**P**	**19 37 06.4**	**+0.7**
MIB				AML		AML	19 37 14.9	
comp=Z,32nm,1.2s								
TORD	**Torodi Ar. Bea**	**63.12**	**188**	P		**P**	**19 38 37.6**	**-2.0**
comp=Z,6.6nm,1.0s,baz=360,slow=7.2,SNR=23								
CMAR	**Chiang Mai Arr**	**72.25**	**85**	P		**P**	**19 39 37.4**	**+0.2**
comp=Z,1.1nm,0.9s,baz=329,slow=7.5,SNR=5.8								
SYO	**Syowa Base**	**146.19**	**161**	⇑ *e*P		**PKPdf**	**19 47 47.6**	**-1.8**
SYO	**Syowa Base**	**146.19**	**161**	⇑ *e*P		**PKPab**	**19 47 54.5**	**+3.3**
MAW	**Mawson**	**147.39**	**145**	PKPbc		**PKPdf**	**19 47 52.8**	**+1.4**
comp=Z,5.3nm,0.8s,baz=281,slow=5.2,SNR=9.3								
SNAA	**Sanae**	**147.79**	**187**	PKPbc		**PKPdf**	**19 47 52.6**	**+0.5**
comp=Z,2.7nm,1.2s,baz=322,slow=4.4,SNR=8.0								

NEIC 22 19:29:59.0, 61°.93N×150°.71W, *h*61km, ML3.8(AEIC), **After AEIC., Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.39**	**278**	P	Pn	19 30 09.3	-0.8
SKT				S	Sn	19 30 17.8	-0.2
TRAP	**Trapper Creek**	**0.47**	**28**	P	Pn	19 30 10.0	-0.7
TRAP				S	Sn	19 30 19.2	+0.1
PMR	**Palmer**	**0.82**	**113**	P	Pn	19 30 13.9	-0.8
PMR				S	Sn	19 30 26.0	-0.3
CGLM	**Capps Glacier**	**0.88**	**226**	P	Pn	19 30 14.8	-0.8
SML	**Sawmill**	**1.13**	**95**	P	Pn	19 30 18.4	-0.5

BUC 22 19:37:26.9±1.6, 45°.15N×25°.87E, *h*1km±16km, MD2.1/2, 4C-2D, Error ellipse: s-maj=12.4km s-min=4.3km az=343.0, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.34**	**9**	⇓ *i*P	Pg	19 37 34.0	+0.2
MLR				S	Sg	19 37 39.3	+0.9
MLR	**Muntele Rosu**	**0.34**	**9**	⇓ *i*P	Pg	19 37 34.0	+0.2
MLR				*i* S	Sg	19 37 39.3	+0.9
VOIR		**0.65**	**297**	⇑ *i*P	Pg	19 37 39.8	+0.3
VOIR		**0.65**	**297**	⇑ *i*P	Pg	19 37 39.8	+0.3
VOIR				*i* S	Sb	19 37 50.1	-0.7
PLOR	**Plostina**	**0.89**	**38**	S	Sb	19 37 57.8	+0.1
PLOR	**Plostina**	**0.89**	**38**	*i* S	Sb	19 37 57.8	+0.1
VRI	**Vrincioaia**	**0.94**	**40**	⇑ *i*P	Pb	19 37 46.0	0.0
VRI	**Vrincioaia**	**0.94**	**40**	⇑ *i*P	Pb	19 37 46.0	0.0
VRI				*i* S	Sb	19 37 59.7	+0.7
CFR	**Carcaliu**	**1.60**	**88**	S	Pn	19 37 52.9	-3.4
TIRR	**Tirgusor**	**1.94**	**110**	S	Sb	19 38 27.9	+0.3
TIRR	**Tirgusor**	**1.94**	**110**	*i* S	Sb	19 38 27.9	+0.3

IDC 22 19:40:04.5±6.5, 6°.67S×155°.22E, *h*59km±51km, mb3.8/7, mb1 4.0/9, mb1mx3.8/20, mbtmpg3.9/9, ML3.7/2, MS3.0/1, Ms1 3.0/1, ms1mx1.9/33, Error ellipse: s-maj=42.4km s-min=24.8km az=93.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**8.43**	**251**	P	Pn	19 42 04.3	+0.2
4.2nm,0.3s,baz=48,slow=4.3,SNR=14							
PMG				S	Sn	19 43 39.5	+1.7
1.2nm,0.3s,baz=82,slow=18,SNR=2.9							
PMG				LR	LR	19 44 54.5	
comp=Z,106nm,21.7s,baz=86,slow=34							
CTA	**Charters Tower**	**15.93**	**212**	P	Pn	19 43 43.9	-1.2
0.2nm,0.3s,baz=33,slow=12,SNR=3.5							
WRA	**Warramunga Arr**	**24.18**	**235**	P	P	19 45 15.3	-0.3
1.5nm,0.4s,baz=58,slow=9.2,SNR=18							
WRA				PcP	PcP	19 48 55.6	+0.3
0.4nm,0.5s,baz=64,slow=2.7,SNR=5.7							
ASAR	**Alice Springs**	**26.55**	**228**	P	P	19 45 36.3	-0.8
2.0nm,0.6s,baz=60,slow=9.3,SNR=28							
STKA	**Stephens Creek**	**28.12**	**205**	P	P	19 45 52.6	+1.6
3.9nm,1.1s,baz=12,slow=9.3,SNR=6.6							
FITZ	**Fitzroy Crossi**	**30.99**	**246**	P	P	19 46 15.7	-0.8
2.7nm,0.7s,baz=61,slow=9.4,SNR=9.2							
CMAR	**Chiang Mai Arr**	**60.84**	**295**	P	P	19 50 12.3	+1.1
1.7nm,0.7s,baz=111,slow=5.1,SNR=13							

SONM	**Songino Array**	**69.18**	**327**	P		P	19 51 05.5	+0.5
0.4nm,0.6s,baz=130,slow=4.5,SNR=3.4									
MKAR	**Makanchi Array**	**83.30**	**319**	P		P	19 52 23.5	-1.6
0.1nm,0.5s,baz=86,slow=6.3,SNR=2.7									
YKA	**Yellowknife Ar**	**95.94**	**28**	P		P	19 53 24.7	0.0
0.3nm,0.7s,baz=278,slow=4.3,SNR=3.6									
TORD	**Torodi Ar. Bea**	**153.15**	**286**	PKPbc		PKPbc	19 59 56.0	-0.7
0.5nm,0.8s,baz=97,slow=2.2,SNR=7.0									

*BJI **22** 19:55:21.6, 51°.68N×178°.15W, h30km, mB5.6/43, mb5.5/64, Ms5.4/62, Ms7 5.2/58*

*BGS **22** 19:55:22.5±1.4, 51°.07N×176°.95W, h33km, mb5.2, MS5.1*

*MOS **22** 19:55:22.3±0.8, 51°.29N×178°.14W, h33km, mb5.8/146, MS5.2/47, Error ellipse: s-maj=7.0km s-min=3.8km az=97.0*

*SZGRF **22** 19:55:23.5, 51°.29N×179°.54W, h33km, mb5.7, Andreanof Islands, Aleutian Islands, United States*

*NEIC **22** 19:55:24.3±0.1, 51°.28N×178°.20W, h35km, mb5.6/202, MW5.6, MW5.5, ML5.6(AEIC), Error ellipse: s-maj=3.8km s-min=2.0km az=180.0, Moment Tensor Solution. s35 Moment tensor: Scale 10^17^Nm; Mrr 0.73; Mθθ -0.81; Mφφ 0.07; Mrθ 1.74; Mrφ 0.00; Mθφ 0.37; Best double couple: M0 1.90000×10^17^ NP1:φs 79.00000°, δ 78.00000°, λ 85.00000°. NP2:φs 283.00000°, δ 13.00000°, λ 113.00000°. Principal axes: T 1.9200, Plg56.0000°, Azm342.0000°; N 0.0400, Plg4.0000°, Azm80.0000°; P -1.9600, Plg33.0000°, Azm173.0000°;*

*ISCJB **22** 19:55:24.2±0.4, 51°.29N±0°.03×178°.15W±0°.02, h48km±3km, mb5.5/405, MS5.2/98 Error ellipse: s-maj=5.0km s-min=2.2km az=0.5*

*IDC **22** 19:55:24.8±1.1, 51°.36N×178°.18W, h40km±8km, mb5.0/53, mb1 5.1/53, mb1mx5.1/55, mbtmp5.0/53, MS5.1/43, Ms1 5.1/43, ms1mx4.9/54, Error ellipse: s-maj=10.5km s-min=7.1km az=156.0*

*DJA **22** 19:55:25.7±3.5, 51°.N±8°×17°.8W±1°.1, h51km±31km, M5.4/23, mB5.8/13, mb5.4/23, Mw(mB)5.3/13*

*GCMT **22** 19:55:26.0±0.1, 51°.27N×178°.13W, h17km, MW5.7, Moment Tensor Solution. s83,c147; s24,c24; Moment tensor: Scale 10^17^Nm; Mrr 1.47±.04; Mθθ -1.54±.03; Mφφ 0.07±.03; Mrθ 4.32±.24; Mrφ 0.16±.02; Mθφ 1.02±.10; Best double couple: M0 4.70000×10^17^ NP1:φs 291.00000°, δ 11.00000°, λ 123.00000°. NP2:φs 78.00000°, δ 81.00000°, λ 84.00000°. Principal axes: T 4.7200, Plg54.0000°, Azm341.0000°; N -0.0600, Plg6.0000°, Azm79.0000°; P -4.6600, Plg36.0000°, Azm173.0000°; Data Used: II IU IC G CN. Surface waves: sta=105, comp=205, per= 50.*

*NEIC **22** 19:55:36.1±0.0, 50°.88N×177°.73W, h22km, Moment Tensor Solution. s124 Moment tensor: Scale 10^17^Nm; Mrr 1.01; Mθθ -1.05; Mφφ 0.04; Mrθ 2.47; Mrφ 0.25; Mθφ 0.52; Best double couple: M0 2.70000×10^17^ NP1:φs 80.00000°, δ 79.00000°, λ 81.00000°. NP2:φs 301.00000°, δ 14.00000°, λ 130.00000°. Principal axes: T 2.7700, Plg54.0000°, Azm339.0000°; N -0.0700, Plg8.0000°, Azm81.0000°; P -2.7000, Plg33.0000°, Azm177.0000°;*

ISC 22 19:55:25.2±0.2, 51°.30N±0°.04×178°.23W±0°.02, *h*45km, *h*44km:pP-P, n1583, σ1s 00/1742, mb5.5/414, MS5.2/98, 410C-247D, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERAA	**Semis' Rag'd T**	**1.44**	**296**	P	**Pn**	**19 55 49.8**	**+1.0**
CESW	**Semis' Southwe**	**1.50**	**294**	P	**Pn**	**19 55 50.5**	**+0.9**
CEAP	**Semis' Anvil P**	**1.54**	**298**	P	**Pn**	**19 55 51.9**	**+1.8**
AMKA	**Amchitka**	**1.55**	**274**	P	**Pn**	**19 55 49.5**	**-0.8**
AMKA				S	**Sn**	**19 56 10.5**	**+1.3**
CETU	**Semis' Tuman**	**1.57**	**296**	P	**Pn**	**19 55 52.3**	**+1.7**
LSSE	**Little Sitkin**	**2.10**	**289**	P	**Pn**	**19 55 59.3**	**+1.5**
LSSA	**Little Sitkin**	**2.13**	**289**	P	**Pn**	**19 55 59.7**	**+1.4**
LSNW	**Little Sitkin**	**2.14**	**289**	P	**Pn**	**19 55 59.6**	**+1.3**
KOKL	**Mount Kliuchef**	**2.70**	**66**	P	**Pn**	**19 56 06.5**	**+0.4**
KOFP	**Korovin Flat P**	**2.74**	**68**	P	**Pn**	**19 56 06.5**	**-0.2**
SMY	**Shemya**	**4.95**	**290**	P	**Pn**	**19 56 39.0**	**+2.1**
SMY				S	**Sn**	**19 57 36.1**	**+3.3**
SMY	**Shemya**	**4.95**	**290**	P	**Pn**	**19 56 39.0**	**+2.1**
SMY				S	**Sn**	**19 57 36.1**	**+3.3**
FX1	**Attu Island--F**	**5.54**	**290**	P	**Pn**	**19 56 47.1**	**+2.1**
FX1				S	**Sn**	**19 57 50.3**	**+3.0**
NIKH	**Nikolski High**	**6.01**	**70**	P	**Pn**	**19 56 51.2**	**-0.2**
OKSP	**Okmok Steeple**	**6.40**	**68**	P	**Pn**	**19 56 57.6**	**+0.7**
OKCE	**Okmok Cone E**	**6.52**	**67**	P	**Pn**	**19 56 58.6**	**+0.2**
OKFG	**Magazine Ridge**	**6.66**	**68**	P	**Pn**	**19 57 01.5**	**+1.1**
OKFG				S	**Sn**	**19 58 17.1**	**+2.3**
UNV	**Unalaska Valle**	**7.58**	**66**	*e*P	**Pn**	**19 57 12.8**	**-0.2**
620nm,0.7s							
FALS	**False Pass**	**9.60**	**62**	*e*P	**Pn**	**19 57 41.2**	**+0.7**
432nm,0.5s							
CHGN	**Chignik**	**12.72**	**59**	*e*P	**Pn**	**19 58 21.2**	**-1.9**
GAMB	**Gambell**	**12.98**	**13**	*e*P	**Pn**	**19 58 28.8**	**+2.2**
219nm,1.0s							
PET	**Petropavlovsk**	**14.28**	**286**	*c* P	**Pn**	**19 58 44.1**	**-0.3**
PET				*i* S	**Sn**	**20 01 24.4**	**+3.1**
PET				pmax	pmax		
comp=Z,1μm,4.2s							
PET				pmax	pmax		
comp=Z,1μm,17.0s							
PET				pmax	pmax		
comp=Z,74nm,0.9s							
PET				MLR	MLR		
comp=Z,14μm,21.0s							
PET				MLR	MLR		
comp=Z,10μm,19.0s							
PETK	**Petropavlovsk-**	**14.86**	**286**	P	**P**	**19 58 55.2**	**-1.8**
PETK				pmax	pmax		
comp=Z,1.0nm,0.3s							
PETK	**Petropavlovsk-**	**14.86**	**286**	Pn	**P**	**19 58 55.2**	**-1.8**
PETK				ScP	**ScP**	**20 07 29.7**	**0.0**
PETK	**Petropavlovsk-**	**14.86**	**286**	Pn	**P**	**19 58 55.2**	**-1.8**
comp=Z,1.3nm,0.3s,baz=96,slow=14,SNR=52							
PETK				ScP	**ScP**	**20 07 29.7**	**0.0**
baz=101,slow=6.2,SNR=3.7							
SKR	**Severo-Kuril's**	**16.14**	**278**	*e*P	Pn	19 59 03.0	-5.7
SKR				pmax	pmax		
comp=N,160nm,0.9s							
SKR				pmax	pmax		
comp=E,160nm,0.9s							
SKR				pmax	pmax		
comp=Z,360nm,0.9s							
SKR				pmax	pmax		
comp=N,900nm,10.0s							
SKR				pmax	pmax		
comp=E,1μm,10.0s							
SKR				pmax	pmax		
comp=Z,2μm,10.0s							
SKR				MLR	MLR		
comp=Z,2μm,16.0s							
SKR				MLR	MLR		
comp=N,2μm,18.0s							
SKR				MLR	MLR		
comp=E,2μm,20.0s							
KDAK	**Kodiak Island**	**16.16**	**56**	LR	LR	20 05 48.2	
comp=E,12μm,19.9s,baz=249,slow=39							
BILL	**Bilibino**	**18.42**	**341**	*c* P	**Pn**	**19 59 38.4**	**+1.7**
BILL				pmax	pmax		
comp=Z,448nm,1.3s							
BILL				MLR	MLR		
comp=Z,2μm,16.0s							
ILAR	**Eielson Array**	**21.08**	**38**	P	**P**	**20 00 06.1**	**+0.9**
ILAR				ScP	**ScP**	**20 07 42.4**	**-0.3**
ILAR	**Eielson Array**	**21.08**	**38**	P	**P**	**20 00 06.1**	**+0.9**
comp=Z,19nm,0.7s,baz=243,slow=9.9,SNR=2.5							
ILAR				ScP	**ScP**	**20 07 42.4**	**-0.3**
comp=Z,6.5nm,0.7s,baz=269,slow=2.9,SNR=17							
ILAR				LR	LR	20 08 54.2	
comp=Z,7μm,19.1s,baz=244,slow=38							
MIDW	**Midway**	**23.07**	**178**	*e*P	**P**	**20 00 24.8**	**-1.9**
comp=Z,489nm,1.1s							
KUR	**Kuril'sk**	**23.23**	**268**	*e*P	**P**	**20 00 27.6**	**-0.5**
KUR				*i* S	**S**	**20 04 39.8**	**+3.2**
KUR				pmax	pmax		
comp=Z,393nm,1.5s							
KUR				pmax	pmax		
comp=N,127nm,1.5s							
KUR				pmax	pmax		
comp=E,199nm,1.3s							
KUR				pmax	pmax		
comp=Z,3μm,3.5s							
KUR				MLR	MLR		
comp=N,1μm,19.0s							
KUR				MLR	MLR		
comp=Z,2μm,19.0s							
PNL	**Peninsula**	**23.23**	**54**	*e*P	**P**	**20 00 29.7**	**+1.6**
comp=Z,161nm,0.8s							
YUK	**Yuzh-Kuril'sk**	**25.06**	**267**	*i* P	P	20 00 58.8	+14
YUK				*i* PPP	PPP	20 01 26.4	
YUK				*i* SSS	SSS	20 06 12.3	
YUK				pmax	pmax		
comp=N,756nm,1.0s							
YUK				pmax	pmax		
comp=E,224nm,1.0s							
YUK				pmax	pmax		
comp=Z,942nm,1.0s							
YUK				MLR	MLR		
comp=Z,1μm,21.0s							
YUK				MLR	MLR		
comp=E,2μm,21.0s							
YUK				MLR	MLR		
comp=N,410nm,21.0s							
YSS	**Yuzh-Sakhalins**	**25.68**	**276**	*e*eP	**P**	**20 00 53.0**	**+2.3**
YSS				*e**SP	**sP**	**20 01 10.0**	**+2.1**
YSS				*e*S	**S**	**20 05 16.0**	**0.0**
YSS				pmax	pmax		
comp=N,410nm,1.8s							
YSS				pmax	pmax		
comp=E,810nm,1.8s							
YSS				pmax	pmax		
comp=Z,920nm,1.8s							
YSS				pmax	pmax		
comp=Z,1μm,8.0s							
YSS				smax	smax		
comp=N,2μm,10.0s							
YSS				MLR	MLR		
comp=Z,2μm,18.0s							
YSS				MLR	MLR		
comp=N,2μm,20.0s							
ASAJ	**Asahikawa**	**27.07**	**270**	P	**P**	**20 01 04.7**	**+1.5**
ASAJ	**Asahikawa**	**27.07**	**270**	P	**P**	**20 01 04.7**	**+1.5**
comp=N,81nm,1.0s,baz=8.1,slow=7.1,SNR=18							
ASAJ				LR	LR	20 11 08.6	
comp=N,2μm,18.5s,baz=74,slow=35							
INK	**Inuvik**	**27.32**	**35**	P	**P**	**20 01 04.9**	**-0.3**
INK				ScP	**ScP**	**20 07 59.5**	**-0.2**
INK	**Inuvik**	**27.32**	**35**	P	**P**	**20 01 04.9**	**-0.3**
comp=N,24nm,0.7s,baz=261,slow=10,SNR=11							
INK				ScP	**ScP**	**20 07 59.5**	**-0.2**
comp=N,27nm,1.1s,baz=234,slow=2.3,SNR=10							
INK				LR	LR	20 13 00.4	
comp=N,7μm,18.6s,baz=231,slow=39							
DLBC	**Dease Lake**	**28.10**	**56**	P	**P**	**20 01 12.1**	**-0.3**
DLBC	**Dease Lake**	**28.10**	**56**	P	**P**	**20 01 12.1**	**-0.3**
comp=N,2.7nm,0.5s,baz=239,slow=5.9,SNR=3.6							
YAK	**Yakutsk**	**29.74**	**311**	*e*P	**P**	**20 01 25.1**	**-1.6**
YAK				*e**PP	**pP**	**20 01 34.8**	**-3.9**
YAK				*e*PPP	PPP	20 02 24.7	
YAK				*e*		20 04 34.9	
YAK				*e*S	**S**	**20 06 14.3**	**-5.1**
YAK				*e*SSS	SSS	20 07 51.9	
YAK				*e*		20 08 12.6	
YAK				*e*		20 11 59.9	
YAK				pmax	pmax		
comp=Z,41nm,1.4s							
YAK				pmax	pmax		
comp=N,5.0nm,1.0s							
YAK				pmax	pmax		
comp=E,16nm,1.4s							
YAK				pmax	pmax		
comp=Z,32nm,1.0s							
YAK				pmax	pmax		
comp=E,36nm,1.0s							
YAK				pmax	pmax		
comp=N,15nm,0.9s							
YAK				smax	smax		
comp=N,237nm,2.1s							
YAK				smax	smax		
comp=E,112nm,2.0s							
YAK				MLR	MLR		
comp=Z,7μm,18.0s							
YAK				MLR	MLR		
comp=E,5μm,18.0s							
YAK				MLR	MLR		
comp=N,3μm,21.0s							
HABR	**Khabarovsk**	**29.84**	**283**	*c* P	**P**	**20 01 28.5**	**+0.7**
HABR				*e**SP	**sP**	**20 01 40.3**	**-4.8**
HABR						20 02 23.2	
HABR						20 04 28.8	
HABR				*e*S	**S**	**20 06 23.8**	**+2.5**
HABR				*e**SS	**sS**	**20 06 38.7**	**-2.7**
HABR				*e*SS	**SnSn**	**20 07 55.6**	**+1.0**
HABR				*e*		20 12 03.3	
HABR				pmax	pmax		
comp=Z,229nm,1.6s							
HABR				pmax	pmax		
comp=E,178nm,1.9s							
HABR				pmax	pmax		
comp=N,192nm,3.8s							
HABR				pmax	pmax		
comp=Z,656nm,2.5s							
HABR				MLR	MLR		
comp=Z,2μm,21.0s							
BBB	**Bella Bella**	**30.54**	**68**	P	**P**	**20 01 33.6**	**-0.3**
BBB	**Bella Bella**	**30.54**	**68**	P	**P**	**20 01 33.6**	**-0.3**
comp=Z,38nm,0.9s,baz=278,slow=9.9,SNR=7.6							
BBB				LR	LR	20 12 32.2	
comp=Z,2μm,20.6s,baz=288,slow=34							
TIXI	**Tiksi**	**30.88**	**331**	⇑ *i*P	**P**	**20 01 36.4**	**-0.3**
TIXI				pmax	pmax		
comp=Z,51nm,1.7s							
CLNS	**Chul'man**	**32.98**	**302**	*e*P	**P**	**20 01 53.4**	**-2.0**
CLNS				*e**PP	pP	20 02 01.6	-5.8
CLNS				*e*		20 03 01.5	
CLNS				*e*		20 04 34.8	
CLNS				*e*S	S	20 07 17.0	+6.6
CLNS				pmax	pmax		
comp=Z,12nm,0.6s							
CLNS				pmax	pmax		
comp=E,11nm,1.2s							
CLNS				pmax	pmax		
comp=N,7.0nm,1.1s							
CLNS				pmax	pmax		
comp=N,26nm,1.2s							
CLNS				pmax	pmax		
comp=E,10.0nm,0.9s							
CLNS				pmax	pmax		
comp=Z,19nm,1.2s							
CLNS				smax	smax		
comp=E,592nm,18.4s							
CLNS				smax	smax		
comp=

MAT	**Matsushiro**	**34.13**	**262**		P		**P**	**20 02 06.9**	**+1.3**
MAT					S		**S**	**20 07 30.3**	**+1.9**
VLA	**Vladivostok**	**34.28**	**276**	*c*	*i*P		**P**	**20 02 08.1**	**+1.3**
VLA					pmax		pmax		
	comp=Z,202nm,1.7s								
PGC	**Sidney**	**34.64**	**72**		*e*P		**P**	**20 02 11.4**	**+1.6**
	comp=Z,0.7nm,0.6s								
MDJ	**Mudanjiang**	**34.94**	**280**		P		**P**	**20 02 11.9**	**-0.6**
MDJ					pP		**pP**	**20 02 20.8**	**-3.7**
MDJ					sP		sP	20 02 24.6	-5.3
MDJ					PP		**PP**	**20 03 30.8**	**-1.3**
MDJ					PcP		**PcP**	**20 04 44.5**	**+0.4**
MDJ					S		**S**	**20 07 41.1**	**+0.4**
MDJ					sS		**sS**	**20 07 56.3**	**-4.6**
MDJ					PcS		**PcS**	**20 08 31.5**	**+0.8**
MDJ					pmax		pmax		
	comp=Z,48nm,0.9s								
MDJ					pmax		pmax		
	comp=Z,300nm,7.2s								
MDJ					LR		LR		
	comp=N,2μm,20.9s								
MDJ					LR		LR		
	comp=E,2μm,21.9s								
MDJ					LR		LR		
	comp=Z,3μm,21.6s								
MDJ	**Mudanjiang**	**34.94**	**280**		*e*P		**P**	**20 02 12.3**	**-0.1**
	comp=Z,50nm,0.9s								
NLWA	**Neilton Lookou**	**34.95**	**75**		*e*P		**P**	**20 02 14.1**	**+1.6**
	comp=Z,128nm,1.2s								
YKW3	**Yellowknife Ar**	**35.00**	**46**		*e*P		**P**	**20 02 12.1**	**-0.7**
	comp=Z,1.1nm,0.7s								
YKA	**Yellowknife Ar**	**35.02**	**46**		P		**P**	**20 02 12.2**	**-0.7**
YKA					PcP		**PcP**	**20 04 45.0**	**+1.1**
YKA					ScP		**ScP**	**20 08 24.1**	**-1.5**
YKA					ScS		**ScS**	**20 12 30.6**	**+1.6**
YKA	**Yellowknife Ar**	**35.02**	**46**		P		**P**	**20 02 12.2**	**-0.7**
	comp=Z,35nm,0.7s,baz=284,slow=8.4,SNR=36								
YKA					PcP		**PcP**	**20 04 45.0**	**+1.1**
	comp=Z,8.8nm,0.8s,baz=283,slow=2.8,SNR=7.2								
YKA					ScP		**ScP**	**20 08 24.1**	**-1.5**
	comp=Z,11nm,0.9s,baz=279,slow=3.1,SNR=11								
YKA					ScS		**ScS**	**20 12 30.6**	**+1.6**
	comp=Z,0.9nm,0.8s,baz=321,slow=5.4,SNR=4.8								
CMW	**Cultus Mountai**	**35.53**	**72**		P		**P**	**20 02 19.2**	**+1.6**
TDL	**Tradedollar La**	**36.44**	**75**		P		**P**	**20 02 26.6**	**+1.2**
LON	**Longmire**	**36.49**	**74**		*e*P		**P**	**20 02 26.5**	**+0.7**
LON					pmax		pmax		
	comp=Z,34nm,0.6s								
LON	**Longmire**	**36.49**	**74**		*e*P		**P**	**20 02 26.5**	**+0.7**
	comp=Z,34nm,0.6s								
F04A	**Amboy**	**36.52**	**76**		P		**P**	**20 02 26.9**	**+1.0**
COR	**Corvallis**	**36.65**	**78**		*e*P		P	20 02 30.8	+3.7
COR					pmax		pmax		
	comp=Z,64nm,0.8s								
COR	**Corvallis**	**36.65**	**78**		*e*P		P	20 02 30.8	+3.7
	comp=Z,64nm,0.8s								
KEBM	**Edson Butte**	**36.90**	**82**		*e*P		**P**	**20 02 30.7**	**+1.3**
	comp=Z,143nm,1.2s								
VLL	**Laurance Lake**	**37.20**	**76**		P		**P**	**20 02 33.1**	**+1.3**
H04A	**Detroit Lake**	**37.28**	**78**		P		**P**	**20 02 33.4**	**+0.9**
KBO	**Bosley Butte**	**37.33**	**82**		*e*P		**P**	**20 02 33.9**	**+0.9**
	comp=Z,179nm,1.4s								
BROR	**Big Rock Looko**	**37.33**	**78**		P		**P**	**20 02 34.1**	**+1.2**
VFP	**Flag Point**	**37.40**	**76**		P		**P**	**20 02 34.6**	**+0.9**
FRIS	**Frissel Point**	**37.58**	**78**		P		**P**	**20 02 36.2**	**+1.0**
HUMO	**Hull Mountain**	**37.90**	**81**		*e*P		**P**	**20 02 38.7**	**+0.9**
	comp=Z,79nm,1.4s								
CN2	**Changchun**	**37.92**	**281**		⇑P		**P**	**20 02 38.1**	**+0.3**
CN2					*es*P		**sP**	**20 02 51.8**	**-3.5**
CN2					PP		**PnPn**	**20 04 07.9**	**+1.4**
CN2					*e*S		**S**	**20 08 26.1**	**0.0**
CN2					SS		**SnSn**	**20 11 03.3**	**-7.0**
CN2					pmax		pmax		
	comp=Z,50nm,0.9s								
CN2					pmax		pmax		
	comp=Z,200nm,4.0s								
CN2					LR		LR		
	comp=N,2μm,16.0s								
CN2					LR		LR		
	comp=E,2μm,16.0s								
CN2					LR		LR		
	comp=Z,2μm,17.0s								
HAWA	**Hanford**	**38.04**	**74**		*e*P		**P**	**20 02 39.6**	**+0.7**
	comp=Z,130nm,1.0s								
OD2	**Odessa Site #2**	**38.05**	**72**		P		**P**	**20 02 39.4**	**+0.5**
KHMM	**Horse Mountain**	**38.38**	**84**		*e*P		**P**	**20 02 43.3**	**+1.3**
	comp=Z,98nm,1.2s								
YBH	**Yreka Blue Hor**	**38.53**	**82**		*e*P		**P**	**20 02 44.5**	**+1.3**
	comp=Z,44nm,1.0s								
YBH	**Yreka Blue Hor**	**38.53**	**82**		P		**P**	**20 02 44.5**	**+1.3**
	comp=Z,33nm,0.9s,baz=337,slow=4.8,SNR=38								
YBH					LR		LR	20 15 43.3	
	comp=Z,2μm,19.3s,baz=301,slow=32								
NEW	**Newport**	**38.57**	**70**		*e*P		**P**	**20 02 43.4**	**0.0**
	comp=Z,68nm,0.8s								
NEW	**Newport**	**38.57**	**70**		P		**P**	**20 02 43.6**	**+0.2**
	comp=Z,70nm,0.8s,baz=295,slow=9.4,SNR=62								
NEW					LR		LR	20 17 10.5	
	comp=Z,2μm,20.9s,baz=302,slow=34								
NEW	**Newport**	**38.57**	**70**		⇓P		**P**	**20 02 43.9**	**+0.5**
	baz=38,SNR=51								
HIA	**Hailar**	**38.65**	**292**		*e*P		**P**	**20 02 44.1**	**+0.1**
	comp=Z,173nm,0.9s								
A12A	**Yaak River Ran**	**39.12**	**68**		⇓P		**P**	**20 02 48.8**	**+0.8**
	baz=39,SNR=7.5								
KIPM	**Iron Peak**	**39.15**	**85**		*e*P		**P**	**20 02 49.4**	**+1.0**
	comp=Z,45nm,1.1s								
I07A	**Izee**	**39.24**	**77**		P		**P**	**20 02 49.8**	**+0.7**
WDC	**Whiskeytown Da**	**39.29**	**83**		*e*P		**P**	**20 02 50.2**	**+0.8**
WDC					pmax		pmax		
	comp=Z,61nm,1.2s								
WDC	**Whiskeytown Da**	**39.29**	**83**		*e*P		**P**	**20 02 50.2**	**+0.8**
	comp=Z,61nm,1.2s								
B12A	**Libby**	**39.37**	**69**		⇑P		**P**	**20 02 51.0**	**+0.9**
	baz=39								
RES	**Resolute Bay**	**39.66**	**24**		P		**P**	**20 02 52.6**	**+0.6**
RES					PcP		**PcP**	**20 04 58.2**	**+0.3**
RES					ScP		**ScP**	**20 08 43.5**	**+0.8**
RES	**Resolute Bay**	**39.66**	**24**		P		**P**	**20 02 52.6**	**+0.6**
	comp=Z,13nm,1.1s,baz=270,slow=8.1,SNR=3.8								
RES					PcP		**PcP**	**20 04 58.2**	**+0.3**
	comp=Z,9.1nm,0.6s,baz=261,slow=3.5,SNR=5.8								
RES					ScP		**ScP**	**20 08 43.5**	**+0.8**
	comp=Z,19nm,1.0s,baz=16,slow=1.4,SNR=14								
RES					LR		LR	20 21 02.7	
	comp=Z,4μm,21.6s,baz=270,slow=39								
C12B	**Naegeli Ranch,**	**39.81**	**70**		⇓P		**P**	**20 02 54.3**	**+0.6**
	baz=40,SNR=24								
MOD	**Modoc**	**39.93**	**80**		*e*P		**P**	**20 02 55.0**	**+0.1**
	comp=Z,51nm,0.8s								
KSRS	**Korea Array**	**40.00**	**271**		P		**P**	**20 02 57.1**	**+1.8**
	comp=Z,28nm,0.8s,baz=55,slow=8.1,SNR=109								
KSRS					LR		LR	20 18 35.6	
	comp=Z,882nm,19.8s,baz=59,slow=35								
KSAR	**Wonju Array Be**	**40.03**	**271**		P		**P**	**20 02 57.1**	**+1.6**
WALA	**Waterton Lakes**	**40.07**	**67**		*e*P		**P**	**20 02 56.0**	**0.0**
	comp=Z,6.3nm,1.4s								
B13A	**Whitefish**	**40.08**	**68**		⇑P		**P**	**20 02 56.4**	**+0.5**
	baz=40,SNR=16								
BSMT	**Bassoo Peak**	**40.14**	**69**		*e*P		**P**	**20 02 56.7**	**+0.1**
	comp=Z,64nm,0.7s								
BMO	**Blue Mountains**	**40.17**	**75**		*e*P		**P**	**20 02 56.8**	**0.0**
	comp=Z,61nm,1.9s								
D12A	**Red Ives Fores**	**40.21**	**71**		⇓P		**P**	**20 02 57.3**	**+0.3**
	baz=40								
BLMT	**Blacktail Moun**	**40.31**	**69**		*e*P		**P**	**20 02 58.4**	**+0.3**
	comp=Z,111nm,1.0s								
C13A	**Hot Springs**	**40.35**	**69**		⇑P		**P**	**20 02 58.9**	**+0.6**
	baz=40,SNR=34								
A14A	**Double T Ranch**	**40.39**	**67**		⇑P		**P**	**20 02 59.0**	**+0.3**
	baz=40,SNR=76								
E12A	**Beaver Dam Sad**	**40.40**	**71**		⇑P		**P**	**20 02 59.1**	**+0.3**
	baz=40,SNR=55								
JTMT	**Jette**	**40.49**	**69**		*e*P		**P**	**20 02 59.7**	**+0.2**
	comp=Z,86nm,1.4s								
YBMT	**Yellow Bay**	**40.59**	**69**		*e*P		**P**	**20 03 00.6**	**+0.3**
	comp=Z,94nm,1.5s								
WVOR	**Wild Horse Val**	**40.66**	**78**		*e*P		**P**	**20 03 01.3**	**+0.4**
WVOR					pmax		pmax		
	comp=Z,116nm,1.0s								
WVOR	**Wild Horse Val**	**40.66**	**78**		*e*P		**P**	**20 03 01.3**	**+0.4**
	comp=Z,116nm,1.0s								
D13A	**Huson**	**40.71**	**70**		⇑P		**P**	**20 03 01.4**	**+0.2**
	baz=40,SNR=25								
B14A	**Marquette Ranc**	**40.78**	**68**		⇓P		**P**	**20 03 02.2**	**+0.4**
	baz=41,SNR=33								
A15A	**Johnson Ranch,**	**40.79**	**67**		⇓P		**P**	**20 03 01.5**	**-0.4**
	baz=41,SNR=42								
INCN	**Inchon**	**40.79**	**272**		P		**P**	**20 03 03.3**	**+1.4**
	SNR=6.0								
INCN	**Inchon**	**40.79**	**272**		*e*P		**P**	**20 03 02.8**	**+0.9**
	comp=Z,86nm,0.9s								
C14A	**Swan Lake**	**40.79**	**69**		⇑P		**P**	**20 03 02.4**	**+0.5**
	baz=41								
CIT	**Chita**	**40.89**	**299**		*e*P		**P**	**20 03 02.8**	**+0.2**
CIT					*e*			20 03 20.9	
CIT					pmax		pmax		
	comp=Z,188nm,2.1s								
JNU	**Nakatsue**	**40.92**	**264**		*e*P		**P**	**20 03 04.8**	**+1.8**
	comp=Z,29nm,0.8s								
JNU	**Nakatsue**	**40.92**	**264**		P		**P**	**20 03 04.9**	**+1.8**
	comp=Z,81nm,1.0s,baz=41,slow=7.8,SNR=19								
BEKR	**Beckworth**	**41.06**	**83**		*e*P		**P**	**20 03 04.1**	**-0.2**
	comp=Z,25nm,1.1s								
MSO	**Missoula**	**41.15**	**70**		*e*P		**P**	**20 03 04.9**	**0.0**
	comp=Z,105nm,1.4s								
MSO	**Missoula**	**41.15**	**70**		⇑P		**P**	**20 03 05.3**	**+0.4**
	baz=41,SNR=37								
SLMT	**Seeley Lake**	**41.21**	**69**		*e*P		**P**	**20 03 05.4**	**0.0**
	comp=Z,143nm,1.3s								
B15A	**Bradely Ranch,**	**41.21**	**67**		⇓P		**P**	**20 03 05.3**	**0.0**
	baz=41,SNR=55								
G12A	**Big Creek, Yel**	**41.22**	**73**		⇓P		**P**	**20 03 05.7**	**+0.2**
	baz=41								
D14A	**Greenough**	**41.28**	**69**		⇑P		**P**	**20 03 06.1**	**+0.1**
	baz=41,SNR=69								
C15A	**Salmond Ranch,**	**41.46**	**68**		⇓P		**P**	**20 03 08.2**	**+0.7**
	baz=41,SNR=72								
CHMT	**Chamberlain Mo**	**41.52**	**70**		*e*P		**P**	**20 03 07.5**	**-0.5**
	comp=Z,19nm,0.9s								
B16A	**M & M Farms, S**	**41.66**	**67**		⇑P		**P**	**20 03 08.4**	**-0.5**
	baz=42,SNR=14								
H12A	**Diamond D Ranc**	**41.81**	**73**		⇓P		**P**	**20 03 10.7**	**+0.4**
	baz=42,SNR=33								
MFID	**Camas Ranch**	**41.84**	**75**		*e*P		**P**	**20 03 10.9**	**+0.4**
	comp=Z,75nm,1.2s								
MFID	**Camas Ranch**	**41.84**	**75**		⇓P		**P**	**20 03 10.7**	**+0.2**
	baz=42,SNR=28								
D15A	**Lincoln**	**41.88**	**69**		⇓P		**P**	**20 03 11.1**	**+0.2**
	baz=42,SNR=25								
C16A	**Fuhringer Ranc**	**41.94**	**68**		⇓P		**P**	**20 03 11.2**	**-0.1**
	baz=42,SNR=10.0								
A17A	**Triple J Farms**	**41.97**	**66**		⇓P		**P**	**20 03 11.1**	**-0.4**
	baz=42,SNR=22								
F14A	**Wisdom**	**42.02**	**71**		⇓P		**P**	**20 03 12.3**	**+0.2**
	baz=42,SNR=22								
CMB	**Columbia Colle**	**42.14**	**85**		*e*P		**P**	**20 03 13.5**	**+0.5**
CMB					pmax		pmax		
	comp=Z,62nm,1.3s								
CMB	**Columbia Colle**	**42.14**	**85**		*e*P		**P**	**20 03 13.5**	**+0.5**
	comp=Z,62nm,1.3s								
B17A	**L&G Farms, Che**	**42.24**	**67**		⇓P		**P**	**20 03 13.6**	**-0.1**
	baz=42,SNR=19								
D16A	**Dana Ranch, Ca**	**42.45**	**69**		⇓P		**P**	**20 03 15.6**	**0.0**
	baz=42,SNR=18								
HRY	**Holter Researc**	**42.46**	**69**		*e*P		**P**	**20 03 15.5**	**0.0**
	comp=Z,51nm,0.7s								
A18A	**Metzger Ranch,**	**42.47**	**65**		⇓P		**P**	**20 03 14.9**	**-0.6**
	baz=42,SNR=9.5								
F15A	**Butte**	**42.53**	**71**		⇓P		**P**	**20 03 15.9**	**-0.3**
	baz=42,SNR=18								
LRM	**Limekiln Ridge**	**42.56**	**71**		*e*P		**P**	**20 03 15.5**	**-1.1**
	comp=Z,560nm,1.6s								
C17A	**Wharram Farm,**	**42.60**	**67**		⇑P		**P**	**20 03 16.4**	**-0.2**
	baz=42,SNR=24								
HLID	**Hailey**	**42.61**	**74**		*e*P		**P**	**20 03 17.0**	**0.0**
	comp=Z,100nm,1.1s								
HLID	**Hailey**	**42.61**	**74**		⇓P		**P**	**20 03 17.2**	**+0.2**
	baz=42,SNR=104								
ALE	**Alert**	**42.63**	**10**		P		**P**	**20 03 16.8**	**+0.4**
	comp=Z,91nm,0.6s,SNR=6.3								
E16A	**East Helena**	**42.64**	**69**		⇓P		**P**	**20 03 16.8**	**-0.2**
	baz=42,SNR=12								
DLMT	**Dillon**	**42.72**	**71**		*e*P		**P**	**20 03 17.5**	**-0.2**
	comp=Z,42nm,1.2s								
B18A	**Beardsley Farm**	**42.78**	**66**		⇓P		**P**	**20 03 17.5**	**-0.6**
	baz=43,SNR=16								
MCMT	**McKenzie Canyo**	**42.86**	**72**		*e*P		**P**	**20 03 18.4**	**-0.6**
	comp=Z,25nm,0.8s								
D17A	**Six Diamond Ra**	**42.89**	**68**		⇑P		**P**	**20 03 19.3**	**+0.1**
	baz=43,SNR=33								
EGMT	**Eagleton**	**42.98**	**66**		*e*P		**P**	**20 03 19.3**	**-0.5**
	comp=Z,58nm,0.8s								
EGMT	**Eagleton**	**42.98**	**66**		⇓P		**P**	**20 03 19.6**	**-0.1**
	baz=43,SNR=11								
I14A	**Mackay**	**42.99**	**73**		⇑P		**P**	**20 03 20.3**	**+0.3**
	baz=43,SNR=45								
DL2	**Dalian**	**43.05**	**278**		P		**P**	**20 03 21.8**	**+1.5**
DL2					S		**S**	**20 09 44.4**	**+1.6**
DL2					pmax		pmax		
	comp=Z,48nm,1.8s								
DL2					pmax		pmax		
	comp=Z,280nm,7.6s								
DL2					LR		LR		
	comp=N,730nm,15.3s								
DL2					LR		LR		
	comp=Z,890nm,18.1s								
F16A	**Kennard Place,**	**43.07**	**70**		⇑P		**P**	**20 03 20.6**	**+0.1**
	baz=43,SNR=13								
A19A	**Klindworth Far**	**43.09**	**65**		⇓P		**P**	**20 03 20.3**	**-0.3**
	baz=43,SNR=19								
E17A	**Martinsdale**	**43.16**	**69**		⇓P		**P**	**20 03 21.9**	**+0.6**
	baz=43,SNR=36								
NVAR	**Mina Array Bea**	**43.20**	**83**		P		**P**	**20 03 22.2**	**+0.4**
NVAR	**Mina Array Bea**	**43.20**	**83**		P		**P**	**20 03 22.2**	**+0.4**
	comp=Z,23nm,0.8s,baz=295,slow=8.6,SNR=106								
B19A	**Brinkman Farms**	**43.22**	**65**		⇓P		**P**	**20 03 21.4**	**-0.2**
	baz=43,SNR=12								
MLAC	**Mammoth Lakes**	**43.36**	**84**		⇑P		**P**	**20 03 24.0**	**+0.9**
	baz=43								
D18A	**Linhart Farms,**	**43.38**	**67**		⇓P		**P**	**20 03 23.7**	**+0.7**
	baz=43,SNR=22								
C19A	**Slack Wire Ran**	**43.54**	**66**		⇑P		**P**	**20 03 24.9**	**+0.7**
	baz=43,SNR=78								
F17A	**Fitzpatrick Pl**	**43.57**	**69**		⇑P		**P**	**20 03 25.1**	**+0.5**
	baz=43,SNR=34								
A20A	**Cobblestone Ra**	**43.58**	**64**		⇓P		**P**	**20 03 24.2**	**-0.4**
	baz=43,SNR=20								
E18A	**Harlowton**	**43.65**	**68**		⇓P		**P**	**20 03 26.2**	**+1.0**
	baz=44,SNR=38								
QLMT	**Earthquake Lak**	**43.70**	**71**		*e*P		**P**	**20 03 25.8**	**0.0**
	comp=Z,19nm,1.4s								
ELK	**Elko**	**43.72**	**78**		*e*P		**P**	**20 03 26.1**	**+0.2**
	comp=Z,55nm,0.9s								
B20A	**Solberg Farm,**	**43.76**	**65**		⇓P		**P**	**20 03 25.7**	**-0.3**
	baz=44,SNR=13								
G17A	**Pipe Place,**	**43.84**	**70**		⇑P		**P**	**20 03 27.6**	**+0.8**
	baz=44,SNR=11								
H16A	**Russell Place,**	**43.88**	**71**		⇓P		**P**	**20 03 27.8**	**+0.6**
	baz=44,SNR=19								
FFC	**Flin Flon**	**43.89**	**54**		*e*P		**P**	**20 03 27.4**	**+0.5**
FFC					pmax		pmax		
	comp=Z,7.0nm,0.8s								
FFC	**Flin Flon**	**43.89**	**54**		*e*P		**P**	**20 03 27.4**	**+0.5**
	comp=Z,6.7nm,0.8s								
RCTC	**Rector, Farmer**	**43.93**	**86**		⇑P		**P**	**20 03 27.2**	**-0.2**
	baz=44								
D19A	**Cripps Ranch,**	**43.94**	**67**		⇓P		**P**	**20 03 27.8**	**+0.4**
	baz=44,SNR=39								
YMR	**Madison River**	**44.07**	**71**		*e*P		**P**	**20 03 29.1**	**+0.4**
	comp=Z,305nm,1.4s								
SMMC	**Simmler**	**44.09**	**88**		⇓P		**P**	**20 03 29.0**	**+0.2**
	baz=44								
TIN	**Tinemaha**	**44.10**	**85**		⇑P		**P**	**20 03 30.3**	**+1.4**
	baz=44,SNR=12								
F18A	**Big Timber**	**44.13**	**69**		⇓P		**P**	**20 03 29.5**	**+0.5**
	baz=44,SNR=13								
C20A	**Veseth Ranch,**	**44.15**	**66**		⇑P		**P**	**20 03 29.8**	**+0.7**
	baz=44,SNR=19								
I16A	**Newdale**	**44.20**	**72**		⇑P		**P**	**20 03 30.7**	**+1.0**
	baz=44,SNR=18								
GCMT	**Greycliff**	**44.22**	**69**		*e*P		**P**	**20 03 31.0**	**+1.3**
	comp=Z,108nm,1.6s								
YFT	**Old Faithful**	**44.27**	**71**		*e*P		**P**	**20 03 32.6**	**+2.3**
	comp=Z,33nm,0.7s								
VES	**Vestal, Richgr**	**44.32**	**87**		⇓P		**P**	**20 03 30.9**	**+0.4**
	baz=44,SNR=9.3								
B21A	**Ellsworth Farm**	**44.33**	**64**		⇑P		**P**	**20 03 30.4**	**-0.1**
	baz=44,SNR=6.2								
E19A	**Rath Farm, Rou**	**44.37**	**68**		⇓P		**P**	**20 03 31.5**	**+0.6**
	baz=44,SNR=26								
D20A	**Manuel Ranch,**	**44.40**	**67**		⇓P		**P**	**20 03 31.9**	**+0.7**
	baz=44,SNR=44								
H17A	**Grant Village**	**44.45**	**71**		⇑P		**P**	**20 03 33.8**	**+2.0**
	baz=44,SNR=17								
LKWY	**Lake**	**44.46**	**71**		*e*P		**P**	**20 03 29.6**	**-2.3**
LKWY	**Lake**	**44.46**	**71**		*e*P		**P**	**20 03 29.6**	**-2.3**
PKM	**Peak Mountain**	**44.47**	**88**		⇓P		**P**	**20 03 32.4**	**+0.4**
	baz=44,SNR=5.6								
IMW	**Indian Meadow**	**44.52**	**72**		*e*P		**P**	**20 03 33.1**	**+0.8**
	comp=Z,75nm,1.2s								
DCID1	**Drake Creek**	**44.54**	**73**		*e*P		**P**	**20 03 33.6**	**+1.1**
	comp=Z,51nm,1.1s								
G18A	**Lazy EL Ranch,**	**44.54**	**70**		⇓P		**P**	**20 03 32.6**	**+0.2**
	baz=44,SNR=9.3								
CWC	**Cottonwood Cre**	**44.57**	**85**		⇓P		**P**	**20 03 32.9**	**+0.2**
	baz=44								
RRI2	**Red Ridge**	**44.60**	**73**		*e*P		**P**	**20 03 33.3**	**+0.3**
	comp=Z,169nm,1.3s								
C21A	**Desert Coulee**	**44.61**	**65**		⇑P		**P**	**20 03 32.8**	**+0.1**
	baz=44,SNR=8.6								
F19A	**Roth Farm, Mol**	**44.61**	**69**		⇓P		**P**	**20 03 33.3**	**+0.5**
	baz=44,SNR=18								
HVU	**Hansel Valley**	**44.62**	**76**		*e*P		**P**	**20 03 33.3**	**+0.2**
HVU					pmax		pmax		
	comp=Z,76nm,0.9s								
HVU	**Hansel Valley**	**44.62**	**76**		*e*P		**P**	**20 03 33.3**	**+0.2**
	comp=Z,76nm,0.9s								
A22A	**Carney Farms,**	**44.66**	**63**		⇑P		**P**	**20 03 32.8**	**-0.4**
	baz=44,SNR=13								
MOOW	**Moose Ponds**	**44.72**	**72**		*e*P		**P**	**20 03 34.4**	**+0.5**
	comp=Z,44nm,1.3s								
I17A	**Pilgrim Ck.**	**44.72**	**72**		⇓P		**P**	**20 03 34.4**	**+0.5**
	baz=44								
E20A	**Meyer Farm, Mu**	**44.72**	**67**		⇓P		**P**	**20 03 34.1**	**+0.4**
	baz=44,SNR=17								
TPAW	**Teton Pass**	**44.74**	**72**		*e*P		**P**	**20 03 34.8**	**+0.7**
	comp=Z,120nm,1.4s								
ISA	**Isabella**	**44.82**	**86**		*e*P		**P**	**20 03 33.9**	**-0.7**
ISA					pmax		pmax		
	comp=Z,45nm,1.1s								
ISA	**Isabella**	**44.82**	**86**		*e*P		**P**	**20 03 33.9**	**-0.7**
	comp=Z,45nm,1.1s								
ISA	**Isabella**	**44.82**	**86**		⇑P		**P**	**20 03 34.0**	**-0.7**
	baz=45,SNR=27								
SBC	**Santa Barbara**	**44.83**	**89**		⇓P		**P**	**20 03 34.7**	**+0.1**
	baz=45								
H18A	**Shoshone NF, C**	**44.84**	**70**		⇓P		**P**	**20 03 35.3**	**+0.4**
	baz=45,SNR=15								
REDW	**Red Top Meadow**	**44.87**	**73**		*e*P		**P**	**20 03 36.0**	**+0.9**
	comp=Z,1.7nm,1.4s								
SNOW	**Snow King Moun**	**44.87**	**72**		*e*P		**P**	**20 03 35.9**	**+0.8**
	comp=Z,42nm,1.0s								
LOHW	**Long Hollow**	**44.88**	**72**		*e*P		**P**	**20 03 35.6**	**+0.5**
	comp=Z,60nm,1.4s								
ARVC	**Arvin**	**44.94**	**87**		⇑P		**P**	**20 03 35.3**	**-0.2**
	baz=45								
R11A	**Troy Canyon, C**	**44.94**	**81**		⇑P		**P**	**20 03 35.3**	**-0.4**
	baz=45,SNR=68								
B22A	**Reddig Ranch S**	**44.98**	**64**		⇑P		**P**	**20 03 35.3**	**-0.4**
	baz=45,SNR=8.4								
D21A	**La Casta Ranch**	**45.07**	**66**		⇓P		**P**	**20 03 36.4**	**-0.1**
	baz=45,SNR=12								
F20A	**Billings**	**45.10**	**68**		⇑P		**P**	**20 03 37.3**	**+0.5**
	baz=45,SNR=36								
MPMC	**Manual Prospec**	**45.18**	**85**		⇓P		**P**	**20 03 37.8**	**+0.2**
	baz=45,SNR=34								
H19A	**Powell**	**45.24**	**70**		⇓P		**P**	**20 03 38.3**	**+0.3**
	baz=45,SNR=36								
A23A	**Redstone**	**45.25**	**63**		⇑P		**P**	**20 03 38.0**	**+0.2**
	baz=45								
I18A	**Diamond G Ranc**	**45.30**	**72**		⇑P		**P**	**20 03 39.0**	**+0.5**
	baz=45,SNR=15								
E21A	**Keefer Ranch,**	**45.31**	**67**		⇑P		**P**	**20 03 38.8**	**+0.4**
	baz=45,SNR=7.3								
FURC	**Furnace Creek,**	**45.32**	**84**	

BFSC	Mount Baldy Ra	46.25	87	⇑P		P		20 03 45.8	-0.3		
	baz=46,SNR=20										
C24A	Savage	46.28	64	⇑P		P		20 03 46.1	+0.1		
	baz=46,SNR=6.1										
DAU	Daniels Canyon	46.35	76	*e*P		P		20 03 47.6	+0.6		
DAU					pmax	pmax					
	comp=Z,135nm,1.0s										
DAU	Daniels Canyon	46.35	76	*e*P		P		20 03 47.6	+0.6		
	comp=Z,135nm,1.0s										
E23A	Ismay	46.35	66	⇓P		P		20 03 47.1	+0.5		
	baz=46,SNR=27										
MPU	Maple Canyon	46.36	77	*e*P		P		20 03 47.3	+0.3		
	comp=Z,56nm,0.9s										
K19A	Absolon Red Bu	46.38	72	⇓P		P		20 03 46.5	-0.6		
	baz=46,SNR=50										
H21A	Big Horn, Sher	46.41	69	⇓P		P		20 03 47.2	+0.1		
	baz=46,SNR=11										
TLY	Talaya	46.41	303	*e*P		P		20 03 46.8	-0.1		
TLY				*e*				20 05 22.4			
TLY				*e*				20 05 39.8			
TLY				*e*S		S		20 10 31.4	+0.2		
TLY				*e*				20 13 39.7			
TLY					pmax	pmax					
	comp=Z,15nm,0.8s										
TLY					MLR	MLR					
	comp=Z,2µm,18.0s										
TLY	Talaya	46.41	303	P		P		20 03 47.5	+0.6		
	comp=Z,99nm,0.9s,SNR=7.5										
L19A	Farson	46.50	73	⇓P		P		20 03 48.4	+0.4		
	baz=46,SNR=14										
G22A	Birney	46.51	68	⇑P		P		20 03 47.6	-0.2		
	baz=46,SNR=23										
SCI	San Clemente I	46.52	89	⇓P		P		20 03 48.1	+0.1		
	baz=46										
J20A	Shoshoni	46.53	71	⇓P		P		20 03 48.7	+0.6		
	baz=46,SNR=30										
TUQ	Turquoise Moun	46.56	85	⇑P		P		20 03 48.5	0.0		
	baz=46,SNR=6.5										
D24A	Glendive	46.57	65	⇓P		P		20 03 48.8	+0.6		
	baz=46,SNR=18										
ULN	Ulaanbaatar	46.62	297	P		P		20 03 50.4	+1.6		
	SNR=56										
ULN	Ulaanbaatar	46.62	297	*e*P		P		20 03 49.9	+1.1		
	comp=Z,88nm,0.9s										
ULN	Ulaanbaatar	46.62	297	P		P		20 03 49.8	+1.1		
	comp=Z,92nm,1.0s,comp=Z,1µm										
ARUT	Antelope Range	46.62	80	*e*P		P		20 03 49.0	+0.1		
ARUT					pmax	pmax					
	comp=Z,21nm,0.7s										
ARUT	Antelope Range	46.62	80	*e*P		P		20 03 49.0	+0.1		
	comp=Z,21nm,0.7s										
BBRC	Big Bear Solar	46.70	87	⇓P		P		20 03 49.4	-0.2		
	baz=47										
HEC	Hector,Ludlow	46.70	86	⇑P		P		20 03 49.3	-0.1		
	baz=46										
I21A	Big Trails, Te	46.73	70	⇑P		P		20 03 49.3	-0.3		
	baz=46,SNR=58										
F23A	Volborg	46.73	67	⇑P		P		20 03 49.7	+0.1		
	baz=46,SNR=36										
K20A	Yellowstone Ra	46.78	72	⇓P		P		20 03 49.7	-0.4		
	baz=47,SNR=7.5										
CCUT	Cedar City	46.82	81	*e*P		P		20 03 50.8	+0.2		
	comp=Z,81nm,1.4s										
H22A	Clearmont	46.83	69	⇓P		P		20 03 50.4	0.0		
	baz=47,SNR=22										
E24A	Baker	46.89	65	⇑P		P		20 03 51.2	+0.4		
	baz=47,SNR=17										
J21A	Lysite	46.91	71	⇑P		P		20 03 51.2	+0.1		
	baz=47,SNR=20										
MSU	Marysvale	46.95	79	*e*P		P		20 03 52.1	+0.5		
MSU					pmax	pmax					
	comp=Z,57nm,1.1s										
MSU	Marysvale	46.95	79	*e*P		P		20 03 52.1	+0.5		
	comp=Z,58nm,1.1s										
MURC	Murrieta	46.95	88	⇑P		P		20 03 51.2	-0.2		
	baz=47,SNR=5.1										
M19A	Rock Springs	46.97	74	⇓P		P		20 03 51.0	-0.7		
	baz=47,SNR=8.9										
SONM	Songino Array	47.00	297	P		P		20 03 53.2	+1.5		
SONM					ScP	ScP		20 09 13.4	+0.2		
SONM					ScS	ScS		20 13 42.4	+0.5		
SONM	Songino Array	47.00	297	P		P		20 03 53.2	+1.5		
	comp=Z,40nm,0.8s,baz=58,slow=8.7,SNR=255										
SONM					ScP	ScP		20 09 13.4	+0.2		
	comp=Z,23nm,1.0s,baz=43,slow=2.5,SNR=23										
SONM					ScS	ScS		20 13 42.4	+0.5		
	comp=Z,0.9nm,1.0s,baz=113,slow=3.4,SNR=4.0										
SONM					LR	LR		20 24 35.9			
	comp=Z,9µm,20.0s,baz=59,slow=37										
G23A	Biddle	47.04	67	⇓P		P		20 03 51.7	-0.3		
	baz=47,SNR=14										
GMRC	Granite Mounta	47.15	85	⇓P		P		20 03 53.0	-0.1		
	baz=47,SNR=39										
I22A	9 Mile Ranch,	47.16	69	⇓P		P		20 03 53.4	+0.4		
	baz=47,SNR=41										
L20A	Wamsutter	47.16	73	⇓P		P		20 03 52.9	-0.3		
	baz=47,SNR=16										
F24A	Ekalaka	47.22	66	⇓P		P		20 03 53.5	+0.1		
	baz=47,SNR=6.3										
LDFC	Landfair	47.30	84	*e*P		P		20 03 53.9	-0.3		
	comp=Z,82nm,0.8s										
ZAK	Zakamensk	47.30	301	*e*P		P		20 03 53.6	-0.4		
ZAK					pmax	pmax					
	comp=Z,39nm,1.3s										
Q16A	Castle Valley	47.32	78	⇑P		P		20 03 54.7	+0.3		
	baz=47,SNR=50										
H23A	Clabaugh Cattl	47.40	68	⇑P		P		20 03 54.3	-0.6		
	baz=47										
PFO	Pinyon Flat Ob	47.42	87	P		P		20 03 55.3	+0.2		
	comp=Z,112nm,1.1s,SNR=5.6										
PFO	Pinyon Flat Ob	47.42	87	*e*P		P		20 03 54.6	-0.5		
	comp=Z,24nm,1.1s										
PFO	Pinyon Flat Ob	47.42	87	P		P		20 03 54.9	-0.2		
	comp=Z,9.4nm,0.9s,baz=329,slow=7.1,SNR=14										
PFO					LR	LR		20 20 18.1			
	comp=Z,974nm,20.1s,baz=299,slow=32										
PFO	Pinyon Flat Ob	47.42	87	⇑P		P		20 03 54.7	-0.5		
	baz=47,SNR=6.9										
J22A	Midwest	47.44	70	⇑P		P		20 03 55.5	+0.2		
	baz=47,SNR=41										
BELC	Belle Mtn. Jos	47.45	86	⇓P		P		20 03 54.8	-0.5		
	baz=47,SNR=9.7										
109C	Camp Elliot, M	47.48	88	⇑P		P		20 03 55.2	-0.3		
	baz=47										
G24A	Alzada	47.53	67	⇓P		P		20 03 55.5	-0.4		
	baz=47,SNR=11										
M20A	Sweetwater, Wa	47.56	73	⇓P		P		20 03 56.3	0.0		
	baz=47,SNR=45										
SRU	San Rafael	47.59	77	⇓P		P		20 03 56.8	+0.2		
	baz=47,SNR=65										
I23A	Meade Ranch, G	47.72	69	⇑P		P		20 03 56.8	-0.6		
	baz=48										
O19A	Miners Draw (B	47.72	75	⇓P		P		20 03 57.6	+0.1		
	baz=48,SNR=70										
L21A	Rawlins	47.77	72	⇑P		P		20 03 57.4	-0.5		
	baz=48,SNR=98										
H24A	Dirks Ranch, A	47.79	67	⇑P		P		20 03 57.3	-0.6		
	baz=48,SNR=22										
MOY	Mondy	47.81	304	*e*P		P		20 03 58.4	+0.5		
MOY					pmax	pmax					
	comp=Z,58nm,2.0s										
NEE2	Needles Airpor	47.81	84	⇓P		P		20 03 57.4	-0.6		
	baz=48										
K22A	Casper	47.87	71	⇓P		P		20 03 57.9	-0.6		
	baz=48,SNR=18										
IRM	Iron Mountain	47.87	85	⇑P		P		20 03 58.3	-0.3		
	baz=48,SNR=16										
BAR	Barrett	47.90	88	*e*P		P		20 03 59.0	+0.3		
	comp=Z,29nm,1.0s										
MONP	Monument Peak	47.91	88	⇑P		P		20 03 58.9	-0.2		
	baz=48,SNR=11										
N20A	Spence Gulch,	47.92	74	⇑P		P		20 03 59.2	+0.2		
	baz=48,SNR=15										
M21A	Separation Pea	47.99	72	⇑P		P		20 03 59.0	-0.6		
	baz=48,SNR=32										
J23A	Dilts Ranch, B	47.99	69	⇓P		P		20 03 59.7	+0.2		
	baz=48,SNR=9.8										
BC3	Big Chuckawall	48.01	86	⇑P		P		20 03 59.2	-0.6		
	baz=48,SNR=9.5										
W13A	Hualapai Mount	48.05	84	⇓P		P		20 03 59.7	-0.4		
	baz=48,SNR=26										
HHC	Hu-ho-hao-te	48.06	286	⇑*i*P		P		20 04 01.8	+1.8		
HHC					pP	pP		20 04 13.8	+1.4		
HHC					PP	PP		20 05 52.3	+0.2		
HHC					S	S		20 10 56.0	+1.0		
HHC					sS	sS		20 11 14.4	-1.4		
HHC					ScS	ScS		20 13 47.9	-1.1		
HHC					SS	SS		20 14 15.3	-8.6		
HHC					pmax	pmax					
	comp=Z,240nm,1.6s										
HHC					pmax	pmax					
	comp=Z,2µm,5.8s										
HHC					LR	LR					
	comp=N,3µm,16.2s										
HHC					LR	LR					
	comp=E,6µm,16.7s										
HHC					LR	LR					
	comp=Z,7µm,18.1s										
U15A	North Rim	48.19	81	⇑P		P		20 04 01.6	+0.3		
	baz=48,SNR=71										
P19A	Cripple Cowboy	48.21	76	⇓P		P		20 04 01.1	-0.3		
	baz=48,SNR=69										
I24A	Kuemmerle Ranc	48.27	68	⇑P		P		20 04 00.7	-0.9		
	baz=48,SNR=5.9										
DVTC	Desert V Tower	48.27	88	⇑P		P		20 04 01.4	-0.3		
	baz=48,SNR=7.0										
L22A	Ellis Ranch, M	48.29	71	⇓P		P		20 04 02.5	+0.6		
	baz=48,SNR=14										
K23A	Bowen Ranch, D	48.34	70	⇑P		P		20 04 01.8	-0.4		
	baz=48,SNR=15										
O20A	White River Ci	48.35	75	⇓P		P		20 04 02.3	-0.1		
	baz=48,SNR=54										
SSE	Sheshan	48.36	270	P		P		20 04 01.3	-0.9		
SSE					PP	PP		20 05 54.0	-0.9		
SSE					S	S		20 10 58.8	-0.4		
SSE					sS	sS		20 11 18.3	-1.7		
SSE					ScS	ScS		20 13 50.6	-0.4		
SSE					SS	SS		20 14 29.9	+1.0		
SSE					pmax	pmax					
	comp=Z,67nm,1.0s										
SSE					pmax	pmax					
	comp=Z,260nm,4.7s										
SSE					LR	LR					
	comp=N,600nm,19.4s										
SSE					LR	LR					
	comp=E,520nm,19.4s										
SSE					LR	LR					
	comp=Z,640nm,20.8s										
N21A	Black Mountain	48.41	73	⇓P		P		20 04 02.6	-0.2		
	baz=48,SNR=42										
PDMCI	Parker Dam,Lak	48.41	85	⇑P		P		20 04 02.4	-0.3		
	baz=48,SNR=10.0										
RSSD	Black Hills	48.45	68	*e*P		P		20 04 02.6	-0.6		
RSSD					pmax	pmax					
	comp=Z,21nm,0.6s										
RSSD	Black Hills	48.45	68	*e*P		P		20 04 02.6	-0.6		
	comp=Z,21nm,0.6s										
Y12C	Blythe	48.53	85	⇑P		P		20 04 03.3	-0.3		
	baz=48,SNR=14										
J24A	Dixon Ranch, L	48.56	69	⇑P		P		20 04 03.8	-0.1		
	baz=48,SNR=12										
M22A	Cedar Creek Ra	48.57	72	⇓P		P		20 04 04.1	0.0		
	baz=48,SNR=20										
P20A	De Beque	48.66	75	⇑P		P		20 04 04.5	-0.2		
	baz=48										
O21A	Pagoda	48.77	74	⇓P		P		20 04 05.3	-0.4		
	baz=49,SNR=35										
MDND	Maddock	48.80	61	⇓P		P		20 04 05.2	-0.2		
	baz=49,SNR=7.7										
GLA	Glamis	48.80	86	*e*P		P		20 04 05.6	-0.2		
GLA					pmax	pmax					
	comp=Z,52nm,0.9s										
GLA	Glamis	48.80	86	*e*P		P		20 04 05.5	-0.2		
	comp=Z,52nm,0.9s										
GLA	Glamis	48.80	86	⇑P		P		20 04 05.5	-0.2		
	baz=49,SNR=9.9										
K24A	Anderson Ranch	48.83	70	⇓P		P		20 04 05.3	-0.7		
	baz=49,SNR=11										
N22A	Wattenberg Ran	49.02	73	⇑P		P		20 04 07.5	-0.1		
	baz=49,SNR=44										
J25A	Sunshine Ranch	49.02	68	⇓P		P		20 04 06.6	-0.8		
	baz=49,SNR=17										
PV04	Paradox Valley	49.03	77	*e*P		P		20 04 07.5	-0.1		
M23A	Laramie	49.05	72	⇑P		P		20 04 07.3	-0.5		
	baz=49,SNR=39										
Q20A	Ridgley Place,	49.05	76	⇓P		P		20 04 07.1	-0.7		
	baz=49,SNR=33										
BTO	Baotou	49.13	287	*e*P		P		20 04 10.3	+2.1		
BTO					pmax	pmax					
	comp=Z,71nm,1.4s										
L24A	Wheatland	49.17	71	⇓P		P		20 04 08.2	-0.4		
	baz=49										
NJ2	Nanjing	49.17	272	*e*P		P		20 04 09.3	+0.8		
NJ2					pP	pP		20 04 18.6	-2.4		
NJ2					sP	sP		20 04 23.4	-2.8		
NJ2					PP	PP		20 06 00.5	-1.8		
NJ2					S	S		20 11 10.0	-0.7		
NJ2					sS	sS		20 11 28.0	-3.5		
NJ2					pmax	pmax					
	comp=Z,70nm,1.2s										
NJ2					pmax	pmax					
	comp=Z,390nm,8.9s										
NJ2					LR	LR					
	comp=N,2µm,22.5s										
NJ2					LR	LR					
	comp=E,1µm,22.2s										
NJ2					LR	LR					
	comp=Z,3µm,24.7s										
P21A	Newcastle	49.21	75	⇓P		P		20 04 08.6	-0.4		
	baz=49,SNR=48										
N23A	Red Feather La	49.27	72	⇑P		P		20 04 09.4	-0.1		
	baz=49,SNR=46										
PHWY	Pilot Hill	49.31	72	*e*P		P		20 04 09.8	0.0		
	comp=Z,10nm,0.6s										
WUAZ	Wupatki	49.34	81	*e*P		P		20 04 09.4	-0.6		
	comp=Z,86nm,1.1s										
WUAZ	Wupatki	49.34	81	⇓P		P		20 04 10.1	+0.1		
	baz=49,SNR=29										
Y14A	Wickenburg	49.36	84	⇓P		P		20 04 09.7	-0.3		
	baz=49,SNR=11										
O22A	Kremmling	49.36	73	⇑P		P		20 04 10.0	-0.2		
	baz=49,SNR=50										
PV01	Paradox Valley	49.40	77	*e*P		P		20 04 10.0	-0.5		
	comp=Z,9µm,0.8s										
ULM	Lac du Bonnet	49.42	57	P		P		20 04 10.0	-0.2		
ULM	Lac du Bonnet	49.42	57	P		P		20 04 10.0	-0.2		
	comp=Z,8.5nm,0.6s,baz=299,slow=7.6,SNR=9.1										
ULM					LR	LR		20 24 42.1			
	comp=Z,2µm,21.6s,baz=64,slow=36										
K25A	Mack Ranch, Ha	49.45	69	⇓P		P		20 04 10.6	-0.1		
	baz=49,SNR=8.3										
R20A	Redvale	49.48	77	⇑P		P		20 04 10.7	-0.4		
	baz=49,SNR=42										
Q21A	Lamborn Mesa,	49.57	75	⇓P		P		20 04 11.6	-0.1		
	baz=49,SNR=24										
P22A	Eagle	49.59	74	⇓P		P		20 04 12.1	+0.3		
	baz=49,SNR=14										
M24A	Cheyenne	49.59	71	⇓P		P		20 04 12.0	+0.2		
	baz=49,SNR=12										
113A	Mohawk Valley,	49.66	86	⇓P		P		20 04 11.7	-0.5		
	baz=50,SNR=6.8										
L25A	Engebretsen Ra	49.68	70	⇑P		P		20 04 12.7	+0.3		
	baz=50,SNR=9.7										
O23A	Lake Granby, G	49.71	73	⇑P		P		20 04 13.2	+0.4		
	baz=50,SNR=49										
SMCO	Snowmass	49.72	75	*e*P		P		20 04 12.8	-0.2		
	comp=Z,38nm,1.0s										
S20A	Disappointment	49.72	77	⇓P		P		20 04 12.3	-0.6		
	baz=50,SNR=98										
Z14A	Wintersburg	49.78	85	⇑P		P		20 04 12.3	-0.8		
	baz=50										
K26A	Motz Farm, Whi	49.80	69	⇓P		P		20 04 12.9	-0.4		
	baz=50,SNR=9.1										
R21A	Cimarron	49.87	76	⇑P		P		20 04 14.1	0.0		
	baz=50,SNR=19										
KBS	Kingsbay	49.89	357	*e*P		P		20 04 13.6	+0.2		
KBS					AMB	AMB		20 04 15.8			
	comp=Z,68nm,1.9s										
KBS				*e*S		S		20 11 22.7	+3.1		
KBS	Kingsbay	49.89	357	*c*eP		P		20 04 13.7	+0.3		
KBS					pmax	pmax					
	comp=Z,53nm,1.2s										
KBS	Kingsbay	49.89	357	*e*P		P		20 04 14.3	+0.9		
N24A	Carr	49.95	72	⇑P		P		20 04 14.8	+0.3		
	baz=50,SNR=5.5										
Q22A	Crested Butte,	49.95	75	⇑P		P		20 04 14.4	-0.3		
	baz=50,SNR=24										
X16A	Lo Mia Camp, P	50.02	83	⇓P		P		20 04 15.4	+0.3		
	baz=50,SNR=15										
M25A	Palm-Egli Farm	50.06	71	⇑P		P		20 04 15.8	+0.4		
	baz=50,SNR=10										
ISCO	Idaho Springs	50.15	73	*e*P		P		20 04 16.5	+0.3		
ISCO					pmax	pmax					
	comp=Z,65nm,1.2s										
ISCO	Idaho Springs	50.15	73	⇑P		P		20 04 16.4	+0.1		
	baz=50,SNR=45										
S21A	Coal Bank Pass	50.17	77	⇑P		P		20 04 16.3	-0.1		
	baz=50,SNR=85										
L26A	Underwood Farm	50.27	69	⇑P		P		20 04 16.9	0.0		
	baz=50										
O24A	Longmont	50.27	73	⇑P		P		20 04 17.4	+0.4		
	baz=50										
TARA	Tarawa	50.33	192	*e*P		P		20 04 17.1	-0.2		
	comp=Z,365nm,1.2s										
K27A	Flueckinger Fa	50.35	68	⇓P		P		20 04 17.2	-0.3		
	baz=50,SNR=5.7										
N25A	Grover	50.43	71	⇑P		P		20 04 18.7	+0.5		
	baz=50										
R22A	Saguache, Gunn	50.45	76	⇓P		P		20 04 19.2	+0.7		
	baz=50,SNR=32										
SPITS	Spitsbergen Ar	50.48	356	P		P		20 04 17.4	-0.4		
SPITS					ScP	ScP		20 09 26.9	-0.4		
SPITS	Spitsbergen Ar	50.48	356	P		P		20 04 17.4	-0.4		
	comp=Z,15nm,0.4s,baz=20,slow=6.2,SNR=9.0										
SPITS					ScP	ScP		20 09 26.9	-0.4		
	comp=Z,4.2nm,0.7s,baz=30,slow=4.7,SNR=6.6										
J28A	Allard Ranch,	50.49	67	⇑P		P		20 04 18.8	+0.3		
	baz=50,SNR=27										
U20A	Newcomb	50.55	79	⇓P		P		20 04 18.9	-0.3		
	baz=50,SNR=5.2										
AGMN	Agassiz Nation	50.57	59	*e*P		P		20 04 18.1	-0.8		
	comp=Z,99nm,1.5s										
Q23A	Hartsel	50.58	74	⇓P		P		20 04 19.4	-0.1		
	baz=50,SNR=6.5										
M26A	McRoberts Ranc	50.58	70	⇓P		P		20 04 19.5	+0.2		
	baz=50										
W18A	Petrified Fore	50.62	81	⇓P		P		20 04 19.6	-0.1		
	baz=50,SNR=18										
L27A	T5 Ranch, Ells	50.69	69	⇓P		P		20 04 20.1	0.0		
	baz=50,SNR=6.0										
S22A	4UR Ranch, Cre	50.71	76	⇓P		P		20 04 21.0	+0.5		
	baz=50,SNR=60										
P24A	Kohler Place,	50.75	73	⇑P		P		20 04 21.1	+0.4		
	baz=51										
T21A	Navajo Lake	50.76	77	⇑P		P		20 04 20.7	-0.1		
	baz=51,SNR=15										
214A	Organ Pipe Nat	50.80	86	⇑P		P		20 04 20.5	-0.4		
	baz=51,SNR=29										
O25A	Wiggins	50.85	72	⇑P		P		20 04 21.5	+0.2		
	baz=51,SNR=9.3										
X18A	Snowflake	50.87	81	⇑P		P		20 04 21.7	+0.1		
	baz=51,SNR=15										
N26A	Koester Ranch,	50.93	71	⇓P		P		20 04 22.1	+0.2		
	baz=51,SNR=13										
Q24A	Divide	50.95	74	⇓P		P		20 04 22.2	-0.2		
	baz=51										
V20A	Brimhall	50.96	79	⇑P		P		20 04 21.8	-0.5		
	baz=51,SNR=15										
M27A	Reverse DX Ran	50.99	70	⇑P		P		20 04 22.1	-0.2		
	baz=51,SNR=10										
R23A	Moffat	51.03	75	⇓P		P		20 04 23.1	+0.2		
	baz=51,SNR=13										
U21A	Nageezi	51.05	78	⇑P		P		20 04 22.8	-0.2		
	baz=51,SNR=96										
T22A	Edith	51.13	77	⇑P		P		20 04 23.7	+0.1		
	baz=51,SNR=68										
BRSD	Miller	51.18	65	⇑P		P		20 04 23.0	-0.6		
	baz=51,SNR=9.2										
P25A	Willow Gulch B	51.20	73	⇑P		P		20 04 24.2	+0.2		
	baz=51,SNR=47										
S23A	Nye Farm, Mont	51.24	76	⇓P		P		20 04 24.7	+0.3		
	baz=51,SNR=7.1										
O26A	Horse Wrangler	51.25	71	⇓P		P		20 04 24.2	0.0		
	baz=51										
N27A	Anderson Farm,	51.35	70	⇓P		P		20 04 25.9	+0.8		
	baz=51										
W20A	Ramah	51.38	80	⇓P		P		20 04 25.0	-0.5		
	baz=51,SNR=11										
K29A	Lazy Trails An	51.43	67	⇑P		P		20 04 25.7	+0.2		
	baz=51,SNR=7.8										
R24A	Sanders Place,	51.44	75	⇓P		P		20 04 26.0	+0.2		
	baz=51,SNR=23										
V21A	Milan	51.47	79	⇓P		P		20 04 25.8	-0.3		
	baz=51,SNR=11										
Q25A	Bedland, Calha	51.53	73	⇑P		P		20 04 26.6	+0.1		
	baz=51,SNR=19										
DAG	Danmarks Havn	51.54	6	⇑*i*P		P		20 04 24.9	-0.9		
DAG											
	comp=Z,4µm,21.0s										
OGNE	Ogallala	51.56	70	*e*P		P		20 04 27.2	+0.6		
	comp=Z,439nm,1.5s										
OGNE	Ogallala	51.56	70	⇓P		P		20 04 27.1	+0.5		
	baz=51,SNR=13										
U22A	Llaves	51.57	77	⇑P		P		20 04 26.9	0.0		
	baz=51,SNR=20										
T23A	Casias Ranch,	51.65	76	⇓P		P		20 04 27.7	+0.2

R27A **Eads** 52.80 73 ⇑P P 20 04 35.9 +0.1
baz=53,SNR=31
W23A **Werner Place,** 52.80 78 ⇑P P 20 04 36.1 0.0
baz=53,SNR=23
O29A **4D Ranch, Culb** 52.81 70 ⇓P P 20 04 36.2 +0.4
baz=53,SNR=21
S26A **Kim** 52.83 74 ⇓P P 20 04 35.5 -0.5
baz=53,SNR=56
Q28A **Sharon Springs** 52.88 72 ⇑P P 20 04 36.7 +0.3
baz=53,SNR=9.4
FRB **Frobisher Bay** 52.90 32 P P 20 04 35.2 -0.8
FRB **Frobisher Bay** 52.90 32 P P 20 04 35.2 -0.8
comp=Z,15nm,0.4s,baz=312,slow=8.1,SNR=17
FRB LR LR 20 30 14.5
comp=Z,5µm,18.1s,baz=303,slow=40
ECSD **EROS Data Cent** 52.94 64 eP P 20 04 35.5 -1.2
comp=Z,11nm,0.6s
V24A **Rampart Ranch,** 52.97 77 ⇑P P 20 04 37.6 +0.3
baz=53,SNR=32
120A **U Bar Ranch, L** 53.01 82 ⇑P P 20 04 37.4 -0.1
baz=53,SNR=28
WHN **Wuhan** 53.02 274 ⇓P P 20 04 38.3 +0.9
WHN S S 20 12 06.4 +2.6
WHN LR LR
comp=E,3µm,21.0s
WHN LR LR
comp=Z,3µm,19.8s
T26A **Comanche Natio** 53.04 75 ⇓P P 20 04 37.3 -0.4
baz=53,SNR=28
Y22D **IRIS PASSCAL I** 53.05 80 ⇑P P 20 04 38.2 +0.4
baz=53
U25A **Circle Dot Ran** 53.05 76 ⇑P P 20 04 37.5 -0.4
baz=53,SNR=49
LPM **Los Pinos Moun** 53.07 79 eP P 20 04 38.2 +0.2
comp=Z,42nm,1.1s
Z21A **St. Cloud Mine** 53.10 81 ⇑P P 20 04 38.4 +0.2
baz=53,SNR=19
EYMN **Ely** 53.11 57 eP P 20 04 37.9 +0.1
comp=Z,110nm,1.5s
Y22A **Socorro** 53.11 80 ⇑P P 20 04 38.5 +0.2
baz=53,SNR=37
S27A **Las Animas** 53.13 74 ⇑P P 20 04 37.5 -0.8
baz=53
X23A **Hourglass Bar** 53.16 79 ⇓P P 20 04 38.9 +0.2
baz=53,SNR=30
BNM **Barren Site** 53.18 79 eP P 20 04 39.2 +0.3
comp=Z,50nm,1.2s
O30A **MW Ranch, Wils** 53.21 69 ⇑P P 20 04 39.2 +0.4
baz=53,SNR=16
W24A **Lazy 6 Ranch,** 53.23 78 ⇓P P 20 04 39.2 +0.1
baz=53,SNR=55
SUMG **Summit** 53.28 14 eP P 20 04 39.3 0.0
SUMG pmax pmax
comp=Z,40nm,1.0s
SUMG **Summit** 53.28 14 eP P 20 04 39.3 0.0
comp=Z,40nm,1.0s
SUMG **Summit** 53.28 14 ⇑*i*P P 20 04 39.0 -0.2
SUMG
comp=Z,22nm,0.8s
comp=Z,2µm,21.0s
V25A **Rancho No Teng** 53.30 76 ⇑P P 20 04 39.6 0.0
baz=53,SNR=75
R28A **Tribune** 53.36 72 ⇑P P 20 04 40.1 +0.1
baz=53,SNR=6.9
319A **Douglas** 53.40 84 ⇑P P 20 04 40.0 -0.4
baz=53,SNR=15
U26A **Atchley Ranch,** 53.46 75 ⇓P P 20 04 40.6 -0.2
baz=53,SNR=53
Q29A **Oakley** 53.50 71 ⇑P P 20 04 41.2 +0.3
baz=53,SNR=9.3
P30A **Selden** 53.51 70 ⇑P P 20 04 41.1 +0.1
baz=53,SNR=7.8
220A **Playas Peak, P** 53.51 83 ⇓P P 20 04 40.9 -0.3
baz=53,SNR=51
BGNE **Belgrade** 53.54 67 ⇑P P 20 04 40.5 -0.6
baz=53
121A **Cookes Peak, D** 53.55 82 ⇑P P 20 04 41.5 0.0
baz=53,SNR=22
Z22A **Elephant Butte** 53.57 80 ⇓P P 20 04 41.7 +0.1
baz=53,SNR=29
X24A **Lazy VL Ranch,** 53.64 78 ⇑P P 20 04 42.1 -0.1
baz=54,SNR=12
T27A **Campo** 53.64 74 ⇓P P 20 04 41.8 -0.2
baz=54,SNR=16
SSLB **Suanglung** 53.66 263 eP P 20 04 42.1 -0.1
comp=Z,80nm,1.0s
Y23A **Lovelace Mesa,** 53.68 79 ⇑P P 20 04 42.5 0.0
baz=54,SNR=69
R29A **Marienthal** 53.70 72 ⇑P P 20 04 42.4 0.0
baz=54,SNR=14
YULB **Yu-li** 53.73 263 eP P 20 04 42.8 0.0
comp=Z,22nm,0.7s
S28A **Manter** 53.79 73 ⇑P P 20 04 43.0 -0.1
baz=54,SNR=17
W25A **X Bar L Ranch,** 53.80 77 ⇑P P 20 04 43.2 0.0
baz=54,SNR=37
V26A **Tequesquite Ra** 53.83 76 ⇑P P 20 04 43.2 -0.3
baz=54,SNR=43
Q30A **Quinter** 53.89 71 ⇑P P 20 04 43.6 -0.1
baz=54,SNR=6.7
320A **Kipp Ranch, An** 53.90 83 ⇑P P 20 04 44.0 0.0
baz=54,SNR=9.2
221A **Mesquite Ranch** 53.91 82 ⇓P P 20 04 43.7 -0.3
baz=54,SNR=9.5
122A **Conniff Cattle** 53.92 81 ⇑P P 20 04 44.6 +0.4
baz=54
U27A **Thompson Grove** 54.00 75 ⇓P P 20 04 44.3 -0.4
baz=54,SNR=7.8
Z23A **Rita Site, Whi** 54.02 80 ⇓P P 20 04 44.9 0.0
baz=54,SNR=16
XAN **Xi'an** 54.03 281 P P 20 04 45.3 +0.5
XAN pP **pP** 20 04 54.5 -2.9
XAN PP **PP** 20 06 47.0 +0.7
XAN S **S** 20 12 18.0 +0.4
XAN SS **SS** 20 15 59.0 0.0
XAN pmax pmax
comp=Z,12nm,1.5s
XAN pmax pmax
comp=Z,61nm,7.4s
P31A **Stockton** 54.03 70 ⇓P P 20 04 44.6 -0.2
baz=54,SNR=20
Y24A **Capitan** 54.06 79 ⇓P P 20 04 45.2 -0.1
baz=54,SNR=76
SPMN **St. Paul** 54.12 60 ⇑P P 20 04 44.6 -0.6
baz=54
X25A **Clemmons Ranch** 54.14 78 ⇓P P 20 04 45.8 +0.1
baz=54,SNR=52
TPUB **Ta-pu** 54.22 263 eP P 20 04 46.7 +0.4
comp=Z,64nm,0.9s
S29A **Ulysses** 54.24 73 ⇓P P 20 04 46.3 -0.1
baz=54,SNR=6.3
222A **Williams Famil** 54.26 82 ⇓P P 20 04 46.6 0.0
baz=54,SNR=18
QZH **Quanzhou** 54.30 266 P P 20 04 49.8 +3.0
QZH S **S** 20 12 26.3 +5.0
QZH sS sS 20 12 42.0 -0.3
QZH LR LR
comp=Z,1µm,19.4s
R30A **Dighton** 54.31 71 ⇑P P 20 04 46.5 -0.3
baz=54,SNR=31
W26A **Owens Ranch, T** 54.31 77 ⇓P P 20 04 46.8 -0.1
baz=54,SNR=9.9
ZALV **Zalesovo Beam** 54.34 314 P P 20 04 45.7 -1.0
ZALV 20 05 51.1
ZALV 20 14 32.2
ZALV pmax pmax
comp=Z,4.0nm,0.3s
ZALV pmax pmax
comp=Z,21nm,0.7s
ZALV pmax pmax
comp=N,15nm,1.0s
ZALV pmax pmax
comp=N,3.0nm,1.0s
ZALV MLR MLR
comp=Z,2µm,18.1s
ZALV **Zalesovo Beam** 54.34 314 P P 20 04 45.7 -1.0
ZALV PcP **PcP** 20 05 51.0 +0.9
ZALV ScP **ScP** 20 09 43.6 -0.8
ZALV ScS **ScS** 20 14 32.2 +0.5
ZALV **Zalesovo Beam** 54.34 314 P P 20 04 45.7 -1.0
comp=Z,4.0nm,0.3s,baz=50,slow=7.2,SNR=24
ZALV PcP **PcP** 20 05 51.0 +0.9
comp=Z,21nm,0.7s,baz=42,slow=4.2,SNR=16
ZALV ScP **ScP** 20 09 43.6 -0.8
comp=Z,15nm,1.0s,baz=40,slow=2.5,SNR=13
ZALV ScS **ScS** 20 14 32.2 +0.5
comp=Z,3.2nm,1.0s,baz=58,slow=3.9,SNR=5.8
ZALV LR LR 20 30 05.4
comp=Z,2µm,18.1s,baz=68,slow=38
Q31A **Ellis** 54.36 70 ⇑P P 20 04 47.2 0.0
baz=54,SNR=8.2
U28A **Mallet** 54.39 74 ⇑P P 20 04 47.0 -0.5
baz=54,SNR=23
123A **Bell Site, Whi** 54.42 81 ⇓P P 20 04 47.8 0.0
baz=54
V27A **Dan Oppiter Fa** 54.43 75 ⇑P P 20 04 47.2 -0.6
baz=54,SNR=12
T29A **Hugoton** 54.44 73 ⇓P P 20 04 47.4 -0.4
baz=54,SNR=6.2
NVS **Novosibirsk** 54.48 315 ⇑*i*P P 20 04 44.3 -3.4
NVS *i* 20 05 48.2
NVS pmax pmax
comp=Z,62nm,1.9s
NVS pmax pmax
comp=N,18nm,2.2s
NVS pmax pmax
comp=E,47nm,2.2s
Z24A **Sheeppen Canyo** 54.51 79 ⇑P P 20 04 48.3 -0.2
baz=54,SNR=34
Y25A **Mesa, Roswell** 54.52 78 ⇓P P 20 04 48.0 -0.6
baz=54,SNR=55
S30A **Montezuma** 54.62 72 ⇓P P 20 04 48.5 -0.6
baz=54,SNR=16
X26A **CR and CF Fran** 54.64 77 ⇓P P 20 04 48.8 -0.6
baz=54,SNR=36
223A **Chaparral, Ant** 54.75 81 ⇓P P 20 04 49.9 -0.2
baz=55
R31A **Burdett** 54.75 71 ⇓P P 20 04 49.7 -0.3
baz=55,SNR=12
W27A **Bowe Ranch, En** 54.76 76 ⇓P P 20 04 49.6 -0.6
baz=55,SNR=17
V28A **Channing** 54.81 75 ⇓P P 20 04 49.9 -0.6
baz=55
124A **Stringfield Ra** 54.88 80 ⇑P P 20 04 50.9 -0.4
baz=55,SNR=34
U29A **Oasis Ranch, S** 54.92 74 ⇓P P 20 04 51.0 -0.3
baz=55,SNR=11
Z25A **Roswell** 54.94 79 ⇓P P 20 04 51.3 -0.3
baz=55,SNR=15
T30A **Plains** 54.97 73 ⇓P P 20 04 51.2 -0.4
baz=55,SNR=10
X27A **F and S Farms,** 55.02 77 ⇑P P 20 04 51.6 -0.5
baz=55
Y26A **Elida** 55.06 78 ⇑P P 20 04 52.1 -0.2
baz=55,SNR=17
W28A **Vega** 55.15 75 ⇑P P 20 04 52.5 -0.5
baz=55
V29A **Stinnett** 55.15 74 ⇑P P 20 04 52.3 -0.7
baz=55
S31A **Mullinville** 55.22 71 ⇓P P 20 04 52.5 -0.9
baz=55
U30A **W&E Inc. Balk** 55.24 73 ⇓P P 20 04 53.0 -0.6
baz=55,SNR=12
224A **Cornudas Mount** 55.26 81 ⇓P P 20 04 53.5 -0.4
baz=55,SNR=49
125A **Gardner Draw,** 55.40 79 ⇓P P 20 04 54.3 -0.6
baz=55,SNR=49
Z26A **Caprock** 55.40 78 ⇓P P 20 04 54.7 -0.2
baz=55,SNR=29
T31A **Randall Ranch,** 55.45 72 ⇑P P 20 04 54.1 -0.9
baz=55,SNR=20
Y27A **Causey** 55.49 77 ⇓P P 20 04 55.1 -0.4
baz=55,SNR=51
COWI **Conover** 55.53 58 eP P 20 04 54.8 -0.7
comp=E,22nm,0.7s
W29A **Amraillo** 55.58 75 ⇑P P 20 04 55.5 -0.6
baz=55
SFJD **Kangerlussuaq** 55.58 22 P P 20 04 55.2 -0.3
SFJD ScP **ScP** 20 09 50.5 +0.9
SFJD **Kangerlussuaq** 55.58 22 ⇑*i*P P 20 04 54.7 -0.8
SFJD
comp=E,4.7nm,0.7s
comp=Z,2µm,24.0s
SFJD **Kangerlussuaq** 55.58 22 P P 20 04 55.2 -0.3
comp=Z,6.3nm,0.5s,baz=317,slow=6.8,SNR=10
SFJD ScP **ScP** 20 09 50.5 +0.9
comp=Z,8.1nm,0.7s,baz=302,slow=5.9,SNR=5.0
X28A **Dimmitt** 55.65 76 ⇑P P 20 04 56.1 -0.5
baz=56,SNR=9.7
MSTX **Muleshoe** 55.67 77 ⇓P P 20 04 56.2 -0.6
baz=56,SNR=44
225A **Deer Hill, Car** 55.67 80 ⇓P P 20 04 56.6 -0.3
baz=56,SNR=38
324A **Moseley Ranch,** 55.72 81 ⇑P P 20 04 56.5 -0.7
baz=56,SNR=23
V30A **Spur Ranch, Mi** 55.73 74 ⇓P P 20 04 56.5 -0.6
baz=56
LZH **Lanzhou** 55.75 287 ⇑P P 20 04 59.1 +1.7
LZH pP **pP** 20 05 11.3 +1.2
LZH sP **sP** 20 05 16.8 +1.6
LZH PP **PP** 20 07 05.1 +3.3
LZH S **S** 20 12 40.3 -0.6
LZH sS **sS** 20 13 00.8 -1.2
LZH SS **SS** 20 16 25.0 -1.2
LZH pmax pmax
comp=Z,94nm,1.5s
LZH pmax pmax
comp=Z,630nm,6.8s
LZH LR LR
comp=N,2µm,14.5s
LZH LR LR
comp=E,2µm,14.8s
LZH LR LR
comp=Z,4µm,16.7s
126A **Clayton Basin,** 55.80 79 ⇓P P 20 04 57.0 -0.7
baz=56,SNR=15
U31A **Nine Bar Ranch** 55.83 73 ⇓P P 20 04 57.2 -0.6
baz=56
Z27A **Tatum** 55.84 78 ⇓P P 20 04 57.3 -0.7
baz=56,SNR=27
GDL2 **Guadalupe Moun** 55.89 80 eP P 20 04 59.0 +0.7
comp=Z,7.2nm,0.4s
GTA **Gaotai** 55.93 292 ⇑P P 20 04 59.8 +1.2
GTA PcP **PcP** 20 05 58.8 +2.1
GTA ScP **ScP** 20 09 54.3 +2.4
GTA PcS **PcS** 20 09 59.1 +1.9
GTA S **S** 20 12 39.9 -3.2
GTA ScS **ScS** 20 14 42.6 -1.2
GTA pmax pmax
comp=Z,250nm,0.9s
GTA pmax pmax
comp=Z,1µm,4.3s
GTA LR LR
comp=N,3µm,18.1s
GTA LR LR
comp=E,3µm,19.0s
GTA LR LR
comp=Z,4µm,19.5s
KSU1 **Kansas State U** 55.93 68 eP P 20 04 58.2 -0.2
comp=Z,59nm,0.8s
X29A **Tulia** 56.00 76 ⇓P P 20 04 58.1 -1.0
baz=56,SNR=5.8
SCIA **State Center** 56.03 64 eP P 20 04 58.5 -0.6
comp=Z,91nm,1.1s
Y28A **McKinney Farm,** 56.03 77 ⇓P P 20 04 58.6 -0.8
baz=56
325A **Bean Ranch, Si** 56.09 81 ⇓P P 20 04 59.3 -0.5
baz=56,SNR=56
226B **Tecolote Peak,** 56.10 80 ⇓P P 20 04 59.3 -0.5
baz=56,SNR=38
W30A **Crocket Farms** 56.19 74 ⇓P P 20 04 59.7 -0.7
baz=56
127A **Arkansas Junct** 56.19 78 ⇑P P 20 04 59.3 -1.2
baz=56
V31A **Spring Creek L** 56.23 73 ⇓P P 20 05 00.4 -0.3
baz=56,SNR=8.8
ENH **Enshi** 56.24 278 eP P 20 05 00.5 -0.3
comp=Z,34nm,0.7s
Z28A **Tucker Farm, M** 56.37 77 ⇓P P 20 05 00.7 -1.0
baz=56,SNR=6.3
Y29A **Porterfield Fa** 56.42 76 ⇑P P 20 05 01.7 -0.4
baz=56,SNR=11
425A **Indio Mountain** 56.48 81 ⇑P P 20 05 02.2 -0.4
baz=56,SNR=46
X30A **Coker Ranch, T** 56.50 75 ⇓P P 20 05 02.2 -0.5
baz=56
W31A **Holland Ranch,** 56.57 74 ⇓P P 20 05 02.6 -0.4
baz=56,SNR=5.7
227A **Bennet, Jal** 56.68 79 ⇓P P 20 05 03.2 -0.8
baz=56,SNR=7.0
128A **Castleberry Fa** 56.76 78 ⇓P P 20 05 03.7 -0.8
baz=57,SNR=42
Z29A **Hungry Hill Ra** 56.80 77 ⇓P P 20 05 04.2 -0.6
baz=57,SNR=15
Y30A **Stafford Cattl** 56.88 76 ⇑P P 20 05 04.8 -0.5
baz=57,SNR=14
X31A **McDonald Ranch** 56.92 74 ⇓P P 20 05 05.1 -0.5
baz=57,SNR=14
327A **Balmorhea Ranc** 57.00 80 ⇓P P 20 05 05.6 -0.7
baz=57
JFWS **Jewell Farm** 57.02 61 eP P 20 05 04.6 -1.5
JFWS pmax pmax
comp=Z,29nm,0.6s
JFWS **Jewell Farm** 57.02 61 eP P 20 05 04.6 -1.5
comp=Z,29nm,0.6s
228A **UT Block 9, Go** 57.04 78 ⇑P P 20 05 05.6 -0.9
baz=57,SNR=13
129A **Stewart Farms,** 57.13 77 ⇓P P 20 05 06.4 -0.8
baz=57
Z30A **Sanderson Ranc** 57.14 76 ⇓P P 20 05 06.5 -0.7
baz=57,SNR=31
426A **McDonald Obser** 57.15 81 ⇓P P 20 05 06.7 -0.8
baz=57,SNR=25
Y31A **Rekieta Farm,** 57.20 75 ⇑P P 20 05 07.0 -0.6
baz=57
SCO **Scoresbysund** 57.32 9 *i*P P 20 05 12.2 +4.4
comp=Z,6.6nm,0.9s
SCO
comp=Z,2µm,22.0s
328A **Wristen Ranch,** 57.41 79 ⇓P P 20 05 08.0 -1.1
baz=57,SNR=47
427A **Hayter Ranch,** 57.42 80 ⇓P P 20 05 08.4 -0.8
baz=57,SNR=26
526A **Mary Lane Ranc** 57.54 81 ⇓P P 20 05 09.5 -0.6
baz=57,SNR=39
WMOK **Wichita Mounta** 57.57 74 eP P 20 05 09.6 -0.6
WMOK pmax pmax
comp=Z,57nm,1.0s
WMOK **Wichita Mounta** 57.57 74 eP P 20 05 09.6 -0.6
comp=Z,57nm,1.0s
229A **Bryant Ranch,** 57.62 78 ⇓P P 20 05 09.5 -1.1
baz=58,SNR=6.1
Y32A **R-V Farms, Ver** 57.67 75 ⇑P P 20 05 10.3 -0.6
baz=58,SNR=15
130A **Snyder** 57.71 77 ⇑P P 20 05 10.2 -1.0
baz=58,SNR=7.4
Z31A **Sharp Cattle R** 57.72 76 ⇓P P 20 05 10.4 -0.8
baz=58,SNR=16
527A **Woodward Ranch** 57.78 81 ⇑P P 20 05 10.9 -0.9
baz=58,SNR=22
JMIC **Jan Mayen** 57.79 4 eP P 20 05 13.5 +2.3
JMIC eS S 20 12 57.0 -10
329A **Wagon Wheel Ra** 57.85 79 ⇑P P 20 05 11.3 -0.9
baz=58,SNR=16
KEV **Kevo** 57.85 350 eP P 20 05 12.9 +1.4
KEV **Kevo** 57.85 350 ep P 20 05 12.2 +0.7
KEV **Kevo** 57.85 350 eP P 20 05 12.9 +1.4
626A **Big Bend Ranch** 57.87 82 ⇑P P 20 05 11.7 -0.6
baz=58,SNR=39
428A **Kincaid Ranch,** 57.95 80 ⇓P P 20 05 12.4 -0.6
baz=58,SNR=39
131A **Roby** 58.01 76 ⇑P P 20 05 12.5 -0.8
baz=58,SNR=12
230A **Sterling City** 58.11 78 ⇓P P 20 05 13.0 -1.0
baz=58,SNR=39
Z32A **Haskell** 58.13 75 ⇑P P 20 05 13.3 -0.8
baz=58,SNR=23
ARCES **ARCESS Array B** 58.23 350 P P 20 05 13.3 -0.9
ARCES ScP **ScP** 20 10 01.6 +0.3
ARCES **ARCESS Array B** 58.23 350 P P 20 05 13.3 -0.9
comp=Z,8.8nm,0.4s,baz=27,slow=8.3,SNR=47
ARCES ScP **ScP** 20 10 01.7 +0.3
comp=Z,4.8nm,0.8s,baz=21,slow=5.2,SNR=3.9
ARCES LR LR 20 33 03.7
comp=Z,1µm,19.5s,baz=7.1,slow=39
ARE0 **ARCESS Array S** 58.23 350 eP P 20 05 14.4 +0.2
ARE0 eS S 20 13 06.3 -5.9
528A **Cox Ranch, San** 58.27 80 ⇑P P 20 05 14.4 -0.9
baz=58
TXAR **Lajitas Array** 58.31 82 P P 20 05 14.8 -0.6
TXAR ScP **ScP** 20 10 03.7 +1.2
TXAR **Lajitas Array** 58.31 82 P P 20 05 14.9 -0.6
comp=Z,24nm,1.0s,baz=305,slow=4.4,SNR=97
TXAR ScP **ScP** 20 10 03.7 +1.2
comp=Z,1.4nm,1.0s,baz=325,slow=2.5,SNR=2.9
627A **Terlingua Ranc** 58.40 81 ⇓P P 20 05 15.5 -0.6
baz=58,SNR=39
330A **Mertzon** 58.40 78 ⇓P P 20 05 14.9 -1.1
baz=58,SNR=12
ABTX **Abilene, Hawle** 58.50 76 ⇑P P 20 05 16.1 -0.6
baz=58,SNR=18
429A **Davenport Ranc** 58.50 79 ⇑P P 20 05 15.6 -1.2
baz=58,SNR=21
TUL1 **Tulsa** 58.56 71 ⇓P P 20 05 16.1 -0.8
baz=58,SNR=10
231A **Bronte** 58.56 77 ⇓P P 20 05 15.8 -1.3
baz=58
LVZ **Lovozero** 58.60 346 ⇓*i*P P 20 05 15.8 -1.1
LVZ pmax pmax
comp=Z,70nm,1.7s
529A **Stev Forest Ra** 58.65 80 ⇓P P 20 05 16.8 -1.0
baz=58,SNR=9.5
628A **Black Gap, Mar** 58.69 81 ⇓P P 20 05 17.1 -0.9
baz=58,SNR=33
TRO **Tromso** 58.73 353 eP P 20 05 17.4 -0.2
TRO eS S 20 13 14.1 -4.6
430A **Baggett Ranch,** 58.80 79 ⇑P P 20 05 18.0 -0.8
baz=59,SNR=33
331A **San Angelo** 58.93 78 ⇑P P 20 05 18.6 -1.1
baz=59,SNR=15
KTK1 **Kautokeino** 58.96 351 eP P 20 05 18.6 -0.7
232A **Coleman** 59.01 77 ⇑P P 20 05 19.4 -0.9
baz=59,SNR=24
APA **Apatity** 59.09 346 ⇑*i*P P 20 05 20.6 +0.4
APA *i* 20 06 09.0
APA pmax pmax
comp=Z,16nm,1.0s
APA MLR MLR
comp=Z,3µm,22.0s
HDIL **Hopedale** 59.13 63 eP P 20 05 20.6 -0.3
comp=Z,175nm,1.1s
530A **J-C Ranch, Com** 59.18 79 ⇑P P 20 05 20.5 -1.0
baz=59,SNR=64
431A **Sonora** 59.26 78 ⇑P P 20 05 20.8 -1.2
baz=59,SNR=44
332A **Millersview** 59.30 77 ⇑P P 20 05 21.4 -0.8
baz=59,SNR=33
KURK **Kurchatov** 59.33 314 P P 20 05 21.5 -0.6
comp=Z,160nm,0.7s,SNR=52
KURK **Kurchatov** 59.33 314 *c i*P P 20 05 21.6 -0.6
KURK pmax pmax
comp=Z,29nm,1.0s
KURK **Kurchatov** 59.33 314 eP P 20 05 21.0 -1.1
comp=Z,57nm,1.1s
KURK ScP **ScP** 20 10 07.9 +1.4
KURK ScS **ScS** 20 15 10.8 +2.7
CD2 **Chengdu** 59.34 282 P P 20 05 23.8 +1.2
CD2 pP **pP** 20 05 35.4 +0.1
CD2 sP **sP** 20 05 40.1 -0.4
CD2 PcP **PcP** 20 06 11.8 +1.6
CD2 PP **PP** 20 07 36.5 +2.8
CD2 S **S** 20 13 26.8 -1.0
CD2 sS **sS** 20 13 46.4 -2.8
CD2 ScS **ScS** 20 15 06.6 -2.3
CD2 SS **SS** 20 17 22.8 +0.2
CD2 pmax pmax
comp=Z,40nm,1.2s
CD2 pmax pmax
comp=Z,100nm,4.8s
CD2 LR LR
comp=N,2µm,16.6s
CD2 LR LR
comp=E,1µm,15.5s
CD2 LR LR
comp=Z,3µm,16.7s
KURBB **Kurchatov Arra** 59.44 314 P P 20 05 22.1 -0.8
comp=Z,11nm,0.5s,baz=42,slow=6.9,SNR=168
KURBB ScP **ScP** 20 10 07.9 +0.9
comp=Z,17nm,1.1s,baz=39,slow=4.1,SNR=10
KURBB ScS **ScS** 20 15 10.8 +1.9
comp=Z,2.7nm,1.2s,baz=34,slow=7.3,SNR=6.1
432A **Menard** 59.62 78 ⇑P P 20 05 23.5 -1.0
baz=60,SNR=19
531A **Rocksprings** 59.66 79 ⇑P P 20 05 23.5 -1.3
baz=60,SNR=22
WMQ **Urumqi** 59.68 303 P P 20 05 25.3 +0.5
WMQ pP **pP** 20 05 38.0 +0.4
WMQ PcP **PcP** 20 06 12.0 +0.6
WMQ PP **PP** 20 07 39.0 +2.6
WMQ S **S** 20 13 31.0 -1.0

WMQ sS **sS** **20 13 53.0 -0.3**
WMQ ScS **ScS** **20 15 08.0 -3.1**
WMQ pmax pmax
comp=Z,46nm,0.7s
WMQ pmax pmax
comp=Z,520nm,6.0s
WMQ LR LR
comp=N,2μm,19.6s
WMQ LR LR
comp=E,3μm,19.4s
WMQ LR LR
comp=Z,4μm,22.4s
SCHQ Schefferville **59.84 39** *e*P **P** **20 05 24.0 -1.6**
comp=Z,26nm,1.1s
SCHQ Schefferville **59.84 39** P **P** **20 05 24.4 -1.2**
comp=Z,5.6nm,0.7s,baz=333,slow=9.1,SNR=7.1
SCHQ LR LR 20 32 38.1
comp=Z,3μm,18.0s,baz=315,slow=37
JCT Junction City **59.89 78** *e*P **P** **20 05 25.3 -1.0**
JCT pmax pmax
comp=Z,21nm,0.6s
JCT Junction City **59.89 78** *e*P **P** **20 05 25.3 -1.0**
comp=Z,21nm,0.6s
JCT Junction City **59.89 78** ⇑P **P** **20 05 24.9 -1.5**
baz=60,SNR=11
SLM Saint Louis **59.92 65** *e*P **P** **20 05 25.7 -0.6**
SLM pmax pmax
comp=Z,241nm,1.4s
SLM Saint Louis **59.92 65** *e*P **P** **20 05 25.7 -0.6**
comp=Z,242nm,1.4s
RFTA Plano **60.02 74** *e*P **P** **20 05 27.5 +0.4**
532A Rocksprings **60.08 78** ⇓P **P** **20 05 26.0 -1.6**
baz=60,SNR=14
631A Perdido Creek **60.17 79** ⇓P **P** **20 05 26.8 -1.4**
baz=60,SNR=22
WHTX Lake Whitney **60.27 75** ⇓P **P** **20 05 28.3 -0.5**
baz=60,SNR=16
MK31 Makanchi Array **60.36 309** *i* P **P** **20 05 28.0 -1.3**
MK31 pmax pmax
comp=Z,4.0nm,0.2s
MK31 Makanchi Array **60.36 309** *e*P **P** **20 05 28.2 -1.2**
MKAR Makanchi Array **60.36 309** P **P** **20 05 28.2 -1.1**
MKAR 20 15 16.8
MKAR pmax pmax
comp=Z,8.0nm,0.3s
MKAR pmax pmax
comp=N,3.0nm,1.0s
MKAR pmax pmax
comp=N,1.0nm,1.0s
MKAR MLR MLR
comp=Z,2μm,21.9s
MKAR Makanchi Array **60.36 309** P **P** **20 05 28.2 -1.1**
MKAR ScP **ScP** **20 10 12.1 +0.9**
MKAR ScS **ScS** **20 15 16.8 +0.8**
MKAR Makanchi Array **60.36 309** P **P** **20 05 28.2 -1.1**
comp=Z,7.5nm,0.3s,baz=51,slow=7.3,SNR=105
MKAR ScP **ScP** **20 10 12.1 +0.9**
comp=Z,2.9nm,1.0s,baz=46,slow=4.2,SNR=4.0
MKAR ScS **ScS** **20 15 16.8 +0.8**
comp=Z,1.1nm,1.0s,baz=51,slow=9.6,SNR=3.5
MKAR LR LR 20 31 29.9
comp=Z,2μm,21.9s,baz=37,slow=36
SFIN Scholer Farm **60.47 61** ⇓P **P** **20 05 29.0 -1.1**
baz=60,SNR=29
STEI Steigen **60.66 354** *e*P **P** **20 05 30.9 0.0**
GYA Guiyang **60.69 277** P **P** **20 05 33.8 +1.9**
GYA pP **pP** **20 05 42.6 -2.1**
GYA sP **sP** **20 05 48.6 -1.3**
GYA PP **PP** **20 07 48.3 +2.5**
GYA ScP **ScP** **20 10 13.9 +0.8**
GYA S **S** **20 13 44.4 -1.0**
GYA sS **sS** **20 14 02.3 -4.4**
GYA SS **SS** **20 17 44.0 -0.1**
GYA pmax pmax
comp=Z,30nm,1.0s
GYA pmax pmax
comp=Z,140nm,5.8s
GYA LR LR
comp=N,890nm,19.5s
GYA LR LR
comp=E,780nm,20.2s
GYA LR LR
comp=Z,830nm,19.6s
SOKR Solikamsk **60.85 331***c* *i*P **P** **20 05 32.5 +0.2**
SOKR pmax pmax
comp=Z,90nm,1.9s
SOKR MLR MLR
comp=Z,3μm,21.0s
TGY Tagaytay City **60.97 256** P **P** **20 05 34.2 +0.4**
TGY Tagaytay City **60.97 256** P **P** **20 05 34.2 +0.4**
comp=Z,115nm,0.5s,baz=231,slow=11,SNR=10
732A Laxson Ranch, **61.02 79** ⇓P **P** **20 05 33.4 -0.6**
baz=61,SNR=19
OLIL Olney **61.05 63** *e*P **P** **20 05 33.7 -0.4**
comp=Z,362nm,1.4s
SIUC Southern Illin **61.13 65** *e*P **P** **20 05 34.3 -0.3**
comp=Z,47nm,0.7s
BRVK Borovoye **61.20 320** P **P** **20 05 34.8 0.0**
comp=Z,351nm,0.4s,SNR=27
BRVK Borovoye **61.20 320***c* *i*P **P** **20 05 34.6 -0.2**
BRVK pmax pmax
comp=Z,83nm,2.5s
BRVK Borovoye **61.20 320** *e*P **P** **20 05 34.4 -0.5**
comp=Z,26nm,0.4s
UALR University of **61.38 69** *e*P **P** **20 05 36.0 -0.4**
comp=Z,25nm,0.7s
PARMO Parma **61.56 66** *e*P **P** **20 05 38.0 +0.5**
SADO Sadowa **61.59 53** P **P** **20 05 37.8 +0.1**
SADO Sadowa **61.59 53** P **P** **20 05 37.8 +0.1**
comp=Z,13nm,0.7s,baz=290,slow=5.5,SNR=9.3
BLO Bloomington **61.63 62** *e*P **P** **20 05 37.7 -0.3**
BLO pmax pmax
comp=Z,129nm,1.0s
BLO Bloomington **61.63 62** *e*P **P** **20 05 37.7 -0.3**
comp=Z,129nm,1.0s
USIN University of **61.84 64** *e*P **P** **20 05 39.4 +0.1**
comp=Z,279nm,1.1s
SVE Sverdlovsk **61.85 328***de*P **P** **20 05 39.7 +0.5**
SVE *e* 20 06 20.3
SVE *e*S **S** **20 14 02.7 +3.7**
SVE *e*SSS SSS 20 20 46.7
SVE pmax pmax
comp=Z,105nm,1.7s
SVE MLR MLR
comp=Z,6μm,21.0s
HALT Halls **62.33 66** *e*P **P** **20 05 43.4 +0.7**
WCI Wyandotte Cave **62.42 63** *e*P **P** **20 05 43.0 -0.3**
WCI pmax pmax
comp=Z,212nm,1.4s
WCI Wyandotte Cave **62.42 63** *e*P **P** **20 05 43.0 -0.3**
comp=Z,212nm,1.4s
ACSO Alum Creek Sta **62.81 59** *e*P **P** **20 05 45.8 -0.1**
comp=Z,210nm,1.6s
ARU Arti **62.86 329***c* *i*P **P** **20 05 45.8 -0.2**
ARU 20 06 22.9
ARU PPP PPP 20 09 33.9
ARU S **S** **20 14 14.8 +3.1**
ARU 20 15 29.3
ARU SS **SS** **20 18 19.0 +2.7**
ARU SSS SSS 20 21 05.4
ARU pmax pmax
comp=Z,143nm,1.7s
ARU MLR MLR
comp=Z,3μm,18.0s
ARU Arti **62.86 329** P **P** **20 05 45.7 -0.2**
comp=Z,403nm,0.8s,SNR=25
WVT Waverly **63.03 65** *e*P **P** **20 05 47.2 -0.2**
WVT pmax pmax
comp=Z,136nm,1.4s
WVT Waverly **63.03 65** *e*P **P** **20 05 47.2 -0.2**
comp=Z,136nm,1.4s
ERPA Erie **63.05 56** *e*P **P** **20 05 47.7 +0.3**
comp=Z,22nm,0.6s
ALLY Alegheny Colle **63.31 56** *e*P **P** **20 05 50.1 +0.9**
comp=Z,116nm,0.9s
HNR Honiara **63.37 204** P **P** **20 05 49.8 +0.1**
HNR Honiara **63.37 204** P **P** **20 05 49.8 +0.1**
comp=Z,75nm,0.8s,baz=63,slow=9.0,SNR=3.7
HNR LR LR 20 27 40.5
comp=Z,2μm,21.8s,baz=32,slow=30
JOF Joensuu **63.76 345** *e*P **P** **20 05 52.0 +0.2**
JOF Joensuu **63.76 345** *ep* **P** **20 05 52.0 +0.2**
DAV Davao City (W) **63.78 247** LR LR 20 29 41.1
comp=Z,1μm,20.8s,baz=267,slow=32
LONY Lake Ozonia **63.95 51** P **P** **20 05 52.4 -1.0**
KMI Kunming **64.09 278** P **P** **20 05 55.5 +0.7**

KMI pP **pP** **20 06 04.6 -3.1**
KMI sP **sP** **20 06 10.4 -2.5**
KMI PP **PP** **20 08 19.3 +3.4**
KMI S **S** **20 14 29.6 +1.2**
KMI sS **sS** **20 14 47.8 -2.1**
KMI SKS **ScS** **20 15 45.8 +0.6**
KMI SS **SS** **20 18 42.8 +5.3**
KMI pmax pmax
comp=Z,32nm,1.1s
KMI pmax pmax
comp=Z,380nm,5.7s
KMI LR LR
comp=N,1μm,19.6s
KMI LR LR
comp=E,910nm,18.2s
KMI LR LR
comp=Z,1μm,16.7s
QIZ Qiongzhong **64.12 268** P **P** **20 05 54.3 -0.5**
QIZ sP **sP** **20 06 10.8 -2.0**
QIZ S **S** **20 14 27.9 -0.5**
QIZ pmax pmax
comp=Z,18nm,1.3s
QIZ pmax pmax
comp=Z,170nm,6.1s
QIZ LR LR
comp=N,560nm,15.4s
QIZ LR LR
comp=E,240nm,17.4s
QIZ LR LR
comp=Z,1μm,18.9s
KAF Kangasniemi **65.26 348** *e*P **P** **20 06 01.2 -0.4**
KAF Kangasniemi **65.26 348** *ep* **P** **20 06 01.2 -0.4**
AAA Alma-Ata **65.52 309** *e*P **P** **20 06 01.4 -2.3**
AAA *e*S **S** **20 14 40.2 -5.0**
AAA pmax pmax
comp=Z,400nm,4.8s
AAA smax smax
comp=N,400nm,16.8s
AAA MLR MLR
comp=Z,2μm,20.0s
TKL Tuckaleechee C **65.66 63** P **P** **20 06 04.3 -0.3**
TKL Tuckaleechee C **65.66 63** P **P** **20 06 04.3 -0.3**
comp=Z,99nm,1.1s,baz=309,slow=4.2,SNR=45
FINES FINESS Array B **65.94 347** P **P** **20 06 04.9 -1.1**
FINES FINESS Array B **65.94 347** P **P** **20 06 04.9 -1.1**
comp=Z,19nm,0.6s,baz=17,slow=5.7,SNR=53
FINES LR LR 20 39 30.4
comp=Z,1μm,19.4s,baz=24,slow=40
BLA Blacksburg **66.38 60** *e*P **P** **20 06 09.8 +0.5**
BLA pmax pmax
comp=Z,125nm,1.3s
BLA Blacksburg **66.38 60** *e*P **P** **20 06 09.8 +0.5**
comp=Z,125nm,1.3s
MOL Molde **66.38 357** *e*P **P** **20 06 09.6 +0.8**
TKM2 Tokmak 2 **66.44 310** *i* P **P** **20 06 09.9 +0.1**
TKM2 pmax pmax
comp=Z,14nm,0.7s
TKM2 Tokmak 2 **66.44 310** *e*P **P** **20 06 09.3 -0.4**
comp=Z,19nm,0.9s
TKM2 Tokmak 2 **66.44 310** P **P** **20 06 11.2 +1.4**
SNR=15
ULHL Ulahol **66.64 309** *i* P **P** **20 06 11.7 +0.7**
ULHL Ulahol **66.64 309** P **P** **20 06 11.7 +0.7**
SNR=16
SDMD Soldier's Deli **66.66 56** *e*P **P** **20 06 11.1 +0.1**
comp=Z,17nm,0.9s
USP Ospenovka **66.71 311** *i* P **P** **20 06 11.3 +0.1**
USP Ospenovka **66.71 311** P **P** **20 06 11.3 +0.1**
SNR=40
CHMS Chumysh **66.79 310** *i* P **P** **20 06 12.5 +0.7**
CHMS Chumysh **66.79 310** P **P** **20 06 12.5 +0.7**
SNR=13
KBK Karagaybulak **66.95 310** *i* P **P** **20 06 13.6 +0.6**
KBK Karagaybulak **66.95 310** P **P** **20 06 13.6 +0.6**
SNR=25
AAK Ala-Archa **67.19 310** P **P** **20 06 14.0 -0.5**
comp=Z,173nm,0.7s,SNR=7.7
AAK Ala-Archa **67.19 310** *e*P **P** **20 06 14.9 +0.4**
AAK pmax pmax
comp=Z,19nm,0.7s
AAK Ala-Archa **67.19 310** *e*P **P** **20 06 14.9 +0.4**
comp=Z,19nm,0.7s
AAK Ala-Archa **67.19 310** P **P** **20 06 15.2 +0.7**
SNR=13
KZA Kyzart **67.25 309** *i* P **P** **20 06 16.9 +1.7**
KZA Kyzart **67.25 309** P **P** **20 06 16.9 +1.7**
SNR=7.1
JSRW J. Sargeant Re **67.39 58** *e*P **P** **20 06 15.7 +0.2**
KMSC Kings Mountain **67.40 62** ⇑P **P** **20 06 15.3 -0.4**
baz=67,SNR=44
PMG Port Moresby **67.46 217** *e*P **P** **20 06 15.8 -0.4**
comp=Z,99nm,1.3s
PMG Port Moresby **67.46 217** P **P** **20 06 14.9 -1.3**
comp=Z,64nm,1.3s,comp=Z,1μm
PMG Port Moresby **67.46 217** P **P** **20 06 16.1 -0.1**
comp=Z,65nm,1.1s,baz=21,slow=5.8,SNR=9.6
PMG LR LR 20 34 01.1
comp=Z,2μm,19.2s,baz=59,slow=34
EKS2 Erkin-Say **67.51 311** *e*P **P** **20 06 16.6 +0.1**
EKS2 pmax pmax
comp=Z,17nm,0.5s
EKS2 Erkin-Say **67.51 311** *e*P **P** **20 06 16.6 +0.1**
comp=Z,17nm,0.5s
EKS2 Erkin-Say **67.51 311** P **P** **20 06 16.6 +0.1**
SNR=37
NB2 NORSAR Subarra **67.75 355** P **P** **20 06 17.0 -0.6**
comp=Z,35nm,1.2s,baz=6.5,slow=6.5
NB2 NORSAR Subarra **67.75 355** P **P** **20 06 17.0 -0.6**
baz=6.5,slow=6.5
NOA NORSAR Array B **67.75 355** P **P** **20 06 16.9 -0.6**
NOA NORSAR Array B **67.75 355** P **P** **20 06 16.9 -0.6**
comp=Z,7.9nm,0.6s,baz=6.0,slow=6.4,SNR=51
NOA LR LR 20 34 31.3
comp=Z,1μm,21.9s,baz=5.0,slow=35
LSA Lhasa **67.81 290** P **P** **20 06 21.0 +2.0**
LSA pP **pP** **20 06 31.4 -0.5**
LSA PcP PcP 20 06 50.3 +4.9
LSA S **S** **20 15 15.3 +1.3**
LSA pmax pmax
comp=Z,370nm,1.0s
LSA pmax pmax
comp=Z,510nm,4.0s
LSA LR LR
comp=N,820nm,17.5s
LSA LR LR
comp=E,2μm,19.3s
LSA LR LR
comp=Z,3μm,18.4s
LSA Lhasa **67.81 290** *e*P **P** **20 06 20.9 +2.0**
LSA pmax pmax
comp=Z,287nm,0.8s
LSA Lhasa **67.81 290** *e*P **P** **20 06 20.9 +2.0**
comp=Z,287nm,0.8s
HYA Hoyanger **67.83 358** *e*P **P** **20 06 17.5 -0.4**
AKTO Aktyubinsk **67.95 325** *i* P **P** **20 06 19.0 0.0**
AKTO pmax pmax
comp=Z,94nm,0.9s
AML Almayashu **67.95 310** *i* P **P** **20 06 20.1 +0.5**
AML Almayashu **67.95 310** P **P** **20 06 20.1 +0.5**
SNR=28
NC602 NORSAR Array S **68.04 355** *e*P **P** **20 06 19.7 +0.4**
AB31 Akbulak array **68.22 323** *i* P **P** **20 06 20.8 +0.2**
AB31 pmax pmax
comp=Z,6.0nm,0.3s
ABKAR Akbulak array **68.22 323** *e*P **P** **20 06 20.5 -0.1**
comp=Z,10nm,0.5s
HFS Hagfors **68.50 354** P **P** **20 06 21.6 -0.7**
HFS Hagfors **68.50 354** P **P** **20 06 21.6 -0.7**
comp=Z,8.0nm,0.4s,baz=34,slow=5.4,SNR=55
KK31 Karatay Array **68.70 313** *i* P **P** **20 06 23.7 -0.1**
KK31 pmax pmax
comp=Z,17nm,0.4s
KKAR Karatay Array **68.70 313** *e*P **P** **20 06 23.5 -0.3**
KKAR pmax pmax
comp=Z,18nm,0.5s
KKAR Karatay Array **68.70 313** *e*P **P** **20 06 23.5 -0.3**
comp=Z,18nm,0.5s
VSU Vasula **68.71 346***d* *i*P **P** **20 06 24.4 +0.9**
VSU pmax pmax
comp=Z,94nm,0.8s
MSVF Nonsavu **68.81 184** *e*P **P** **20 06 25.5 +0.8**
MSVF pmax pmax
comp=Z,28nm,1.0s
MSVF Nonsavu **68.81 184** *e*P **P** **20 06 25.4 +0.8**
comp=Z,28nm,1.0s
KSH Kashi **68.83 307** P P 20 06 28.4 +3.6

KSH *e*pP pP 20 06 38.5 +0.7
KSH *e*sP sP 20 06 42.5 -0.4
KSH *e*PcP **PcP** **20 06 52.3 +3.2**
KSH *e*PP PP 20 09 03.3 +6.6
KSH *e*S **S** **20 15 28.3 +3.0**
KSH *e*sS sS 20 15 46.1 -0.9
KSH pmax pmax
comp=Z,80nm,0.5s
KSH LR LR
comp=N,2μm,14.8s
KSH LR LR
comp=E,3μm,15.3s
KSH LR LR
comp=Z,4μm,16.6s
TIGA Tifton **68.86 66** ⇑P **P** **20 06 24.2 -0.7**
baz=69,SNR=6.0
ODD1 Odda **69.07 357** *e*P **P** **20 06 27.2 +1.4**
KONO Kongsberg **69.22 356** *e*P **P** **20 06 26.8 +0.1**
KONO AMB AMB 20 06 29.2
comp=Z,45nm,1.8s
KONO *e*S S 20 15 22.3 -6.6
KONO Kongsberg **69.22 356** *e*P **P** **20 06 26.5 -0.2**
KONO pmax pmax
comp=Z,20nm,0.8s
KONO Kongsberg **69.22 356** *e*P **P** **20 06 26.5 -0.2**
comp=Z,20nm,0.8s
MOS Moscow **69.26 339** *e*P P 20 06 21.0 -5.9
MOS *e* 20 06 45.1
MOS *e*S **S** **20 15 25.8 -3.6**
MOS *e* 20 16 16.4
MOS pmax pmax
comp=N,106nm,1.1s
MOS pmax pmax
comp=Z,228nm,1.7s
MOS pmax pmax
comp=Z,500nm,2.1s
MOS pmax pmax
comp=N,200nm,1.0s
MOS MLR MLR
comp=N,3μm,24.0s
MOS MLR MLR
comp=Z,4μm,25.0s
MYLDM Lahad Datu **69.45 252** P P 20 06 31.4 +2.7
MYLDM Lahad Datu **69.45 252** P **P** **20 06 30.5 +1.8**
comp=Z,51nm,1.1s,comp=Z,1μm
UBPT Khong Chiam **69.68 269** P **P** **20 06 31.2 +1.1**
comp=Z,32nm,1.5s,comp=Z,1μm
OBN Obninsk **70.07 340**α *i*P **P** **20 06 29.7 -2.2**
OBN *e* 20 06 44.4
OBN *e* 20 06 51.9
OBN S **S** **20 15 38.0 -0.9**
OBN *e* 20 16 32.8
OBN pmax pmax
comp=Z,225nm,1.6s
OBN MLR MLR
comp=Z,1μm,16.0s
KKM Kota Kinabalu **70.14 254** *e*P **P** **20 06 33.9 +0.8**
comp=Z,16nm,0.8s
KKM Kota Kinabalu **70.14 254** P **P** **20 06 33.8 +0.7**
comp=Z,28nm,0.9s,comp=Z,448nm
SHL Shillong **70.42 287** *i* PCN 20 06 35.0
comp=Z,30nm,1.3s
SHL *i* S **S** **20 15 45.0 +0.6**
MVH1 Achvaich **71.02** 3⇑ *e*P **P** **20 06 37.4 -0.4**
MVH1 Achvaich **71.02 3** P **P** **20 06 37.4 -0.4**
CHTO Chiang Mai **71.11 277** *e*P **P** **20 06 39.6 +0.7**
CHTO pmax pmax
comp=Z,22nm,1.1s
CHTO Chiang Mai **71.11 277** P **P** **20 06 40.2 +1.3**
SNR=6.8
CHTO Chiang Mai **71.11 277** *e*P **P** **20 06 39.6 +0.7**
comp=Z,22nm,1.1s
CHTO Chiang Mai **71.11 277** P **P** **20 06 38.7 -0.2**
comp=Z,22nm,1.5s,comp=Z,407nm
CMAR Chiang Mai Arr **71.38 276** P **P** **20 06 41.1 +0.6**
CMAR Chiang Mai Arr **71.38 276** P **P** **20 06 41.1 +0.6**
comp=Z,12nm,0.8s,baz=26,slow=6.6,SNR=48
CMAR LR LR 20 41 56.2
comp=Z,932nm,19.5s,baz=35,slow=39
MCD Coleburn Disti **71.40** 3⇑ *e*P **P** **20 06 39.8 -0.2**
MCD Coleburn Disti **71.40 3** P **P** **20 06 39.8 -0.2**
MDO Dochfour **71.50** 3⇑ *e*P **P** **20 06 40.2 -0.5**
MDO Dochfour **71.50 3** P **P** **20 06 40.2 -0.5**
PBKT Sadao Pong **71.53 274** P **P** **20 06 42.7 +1.3**
comp=Z,14nm,0.7s
KPL Plockton **71.55 4** AMS AMS 20 38 38.9
comp=Z,1μm,18.4s
TAPN Taplejung **71.57 291** *e*P **P** **20 06 43.4 +1.5**
comp=Z,1μm,1.1s
KSB Sheil Bridge **71.69** 4⇑ *e*P **P** **20 06 40.7 -1.0**
KSB Sheil Bridge **71.69 4** P **P** **20 06 40.7 -1.0**
DRUM Mains of Drumt **72.09 2** *e*P **P** **20 06 43.8 -0.3**
DRUM AMB AMB 20 06 45.3
comp=Z,48nm,1.9s
DRUM Mains of Drumt **72.09 2** P **P** **20 06 43.8 -0.3**
DRUM AMB AMB 20 06 45.3
comp=Z,48nm,1.9s
ODAN Odare **72.12 291** *e*P **P** **20 06 46.4 +1.2**
comp=Z,1μm,1.6s
NACGM Naroch **72.13 345** *e* P 20 06 40.0 -4.5
GUN Gumba **72.22 292** *e*P **P** **20 06 47.3 +1.4**
comp=Z,1μm,0.7s
MICGM Minsk **72.33 344**⇓ *e*P **P** **20 06 44.0 -1.7**
MNK Minsk **72.34 344**⇓ *e*P **P** **20 06 44.0 -1.7**
MNK pmax pmax
comp=Z,150nm,1.5s
MUD Monsted U'grnd **72.43 356**⇑ *i*P **P** **20 06 46.4 +0.2**
comp=Z,9.8nm,0.8s
MUD
comp=Z,1μm,20.0s
RAMN Ramite **72.52 291** *e*P **P** **20 06 48.6 +1.0**
comp=Z,1μm,0.9s
VOR Voronezh **72.57 337** P **P** **20 06 45.0 -2.1**
VOR pmax pmax
comp=Z,1μm,1.7s
KKN Kakani **72.66 293** *e*P **P** **20 06 49.6 +1.3**
comp=Z,409nm,0.8s
PKI Pulchoki **72.75 293** *e*P **P** **20 06 50.0 +1.0**
comp=Z,1μm,1.2s
EAB Aberfoyle **72.75** 4⇑ *e*P **P** **20 06 48.2 0.0**
EAB Aberfoyle **72.75 4** P **P** **20 06 48.2 0.0**
DMN Daman **72.89 293** *e*P **P** **20 06 51.0 +1.2**
comp=Z,756nm,1.1s
COP Copenhagen **73.01 354**⇑ *i*P **P** **20 06 49.8 +0.2**
comp=Z,9.5nm,0.8s
COP
comp=Z,480nm,22.0s
PPT Papeete **73.02 151** LR LR 20 31 29.7
comp=Z,2μm,21.0s,baz=329,slow=30
PPT2 Papeete2 **73.04 151** *e*S **S** **20 16 14.0 -0.1**
comp=Z,3μm,28.0s
PPT2 *e*LR LR 20 29 13.2
comp=Z,5μm,28.0s,baz=343
VSR Storozhevoye **73.05 336** *e*P **P** **20 06 49.8 -0.2**
VSR *e*S **S** **20 16 13.3 -0.2**
VSR pmax pmax
comp=N,110nm,1.5s
VSR pmax pmax
comp=E,50nm,1.5s
VSR pmax pmax
comp=Z,140nm,1.5s
VSR smax smax
comp=N,260nm,3.3s
VSR smax smax
comp=E,250nm,3.3s
VSR smax smax
comp=Z,90nm,3.3s
VSR MLR MLR
comp=N,2μm,23.0s
VSR MLR MLR
comp=E,2μm,23.0s
VSR MLR MLR
comp=Z,5μm,23.0s
EDI Edinburgh **73.06 3** AMS AMS 20 41 08.3
comp=Z,815nm,21.4s
ESY Stoneypath **73.08** 3⇑ *e*P **P** **20 06 49.5 -0.6**
ESY Stoneypath **73.08 3** P **P** **20 06 49.5 -0.6**
DANN Dangsing **73.11 294** *e*P **P** **20 06 52.3 +1.2**
comp=Z,789nm,1.0s
PGBU Glenifferbraes **73.13 4** *e*P **P** **20 06 50.3 0.0**
PGBU AMB AMB 20 06 51.3
comp=Z,85nm,1.5s
PGBU AMS AMS 20 37 46.7
comp=Z,941nm,23.0s
PGBU Glenifferbraes **73.13 4** P **P** **20 06 50.3 0.0**
PGBU AMB AMB 20 06 51.3

PGBU AMS AMS 20 37 46.7
comp=Z,941nm,23.0s
EAU Auchinoon 73.13 3 *e*P **P 20 06 50.2 -0.2**
EAU Auchinoon 73.13 3 P **P 20 06 50.2 -0.2**
COEN Coen 73.16 219 *e*P **P 20 06 51.0 0.0**
comp=Z,666nm,1.1s
VORD Divnogorie 73.25 336 *e*P **P 20 06 51.0 -0.2**
VORD *e*S **S 20 16 15.3 -0.5**
VORD pmax pmax
comp=N,90nm,1.3s
VORD pmax pmax
comp=E,50nm,1.3s
VORD pmax pmax
comp=Z,110nm,1.3s
VORD smax smax
comp=N,230nm,3.3s
VORD smax smax
comp=Z,50nm,3.3s
VORD smax smax
comp=E,60nm,1.1s
VORD MLR MLR
comp=N,3μm,26.0s
VORD MLR MLR
comp=E,2μm,26.0s
VORD MLR MLR
comp=Z,5μm,26.0s
LLD Lille Linde 73.38 354 *i* P **P 20 06 52.0 +0.2**
comp=Z,25nm,0.8s
BSD Bornholm Skovb 73.39 352⇑*i*P **P 20 06 51.5 -0.4**
comp=Z,17nm,0.7s
BSD
comp=Z,1μm,22.0s
SUW Suwalki 73.53 347 *e*P **P 20 06 51.9 -0.9**
SUW Suwalki 73.53 347 *e*P **P 20 06 51.8 -1.0**
KOLN Koldanda 73.64 294 *e*P **P 20 06 55.0 +0.9**
comp=Z,298nm,1.0s
EKA Eskdalemuir Ar 73.65 3 P **P 20 06 53.2 -0.2**
EKA Eskdalemuir Ar 73.65 3 P **P 20 06 53.2 -0.2**
comp=Z,1.6nm,0.3s,baz=359,slow=5.0,SNR=4.2
ESK Eskdalemuir 73.67 3 P **P 20 06 53.0 -0.6**
comp=Z,152nm,1.0s,SNR=6.7
ESK Eskdalemuir 73.67 3⇑*e*P **P 20 06 52.9 -0.7**
ESK AMB AMB 20 06 54.4
comp=Z,41nm,1.4s
ESK Eskdalemuir 73.67 3 P **P 20 06 52.9 -0.7**
ESK AMB AMB 20 06 54.4
comp=Z,41nm,1.4s
ESK Eskdalemuir 73.67 3 *i* P **P 20 06 54.2 +0.6**
ESK Eskdalemuir 73.67 3 *e*P **P 20 06 53.4 -0.1**
comp=Z,104nm,1.6s
ECK Cauldkaine Hil 73.81 3⇑*e*P **P 20 06 53.9 -0.4**
ECK Cauldkaine Hil 73.81 3 P **P 20 06 53.9 -0.4**
GAL1 Galloway 74.06 4⇑*e*P **P 20 06 55.1 -0.7**
GAL1 AMB AMB 20 06 56.6
comp=Z,48nm,1.4s
GAL1 AMS AMS 20 38 25.2
comp=Z,1μm,20.5s
GAL1 Galloway 74.06 4 P **P 20 06 55.1 -0.7**
GAL1 AMB AMB 20 06 56.6
comp=Z,48nm,1.4s
GAL1 AMS AMS 20 38 25.2
comp=Z,1μm,20.5s
GCD Castle Douglas 74.09 3⇑*e*P **P 20 06 55.6 -0.5**
GCD Castle Douglas 74.09 3 P **P 20 06 55.6 -0.5**
DZM Mont Dzumac 74.29 195 *e*P **P 20 06 58.2 +0.6**
comp=Z,300nm,1.2s
DZM *e*S **S 20 16 27.8 -0.3**
comp=Z,3μm,28.1s
DZM *e*LR LR 20 29 49.9
comp=Z,5μm,24.0s
DZM Mont Dzumac 74.29 195 P **P 20 06 58.3 +0.8**
DZM Mont Dzumac 74.29 195 P **P 20 06 58.3 +0.8**
comp=Z,94nm,1.1s,baz=82,slow=18,SNR=14
KESW Keswick, Cumbr 74.40 3⇑*e*P **P 20 06 57.5 -0.4**
KESW AMB AMB 20 06 59.5
comp=Z,63nm,2.1s
KESW AMS AMS 20 34 54.5
comp=Z,802nm,23.1s
KESW Keswick, Cumbr 74.40 3 P **P 20 06 57.5 -0.4**
KESW AMB AMB 20 06 59.5
comp=Z,63nm,2.1s
KESW AMS AMS 20 34 54.5
comp=Z,802nm,23.1s
TEIG Tepich 74.45 77 *e*P **P 20 06 58.7 +0.1**
comp=Z,84nm,1.5s
TEIG Tepich 74.45 77 P **P 20 06 58.8 +0.1**
comp=Z,11nm,0.7s,baz=340,slow=5.2,SNR=6.0
GMM Mts of Mourne 74.63 5⇑*e*P **P 20 06 58.9 -0.2**
GMM Mts of Mourne 74.63 5 P **P 20 06 58.9 -0.2**
SMLA Simla 74.65 301 *i* P **P 20 07 04.1 +0.4**
SMLA *i* x x 20 16 34.6
BSEG Bad Segeberg 74.89 355 *e*P **P 20 07 01.3 +0.7**
comp=Z,325nm,1.9s
BSEG Bad Segeberg 74.89 355 *e*P **P 20 07 01.3 +0.7**
BSEG pmax pmax
comp=Z,232nm,1.9s
SBUM Sibu 75.40 255 P **P 20 07 05.8 +1.6**
SBUM Sibu 75.40 255 P **P 20 07 04.9 +0.8**
comp=Z,24nm,0.9s
DLF Lyons Farm 75.54 5⇑*i*P **P 20 07 04.3 -0.1**
WME Myndd Eilian 75.55 4⇑*e*P **P 20 07 04.0 -0.5**
WME Myndd Eilian 75.55 4 P **P 20 07 04.0 -0.5**
WLF1 Llynfaes 75.65 4⇑*e*P **P 20 07 04.1 -0.6**
WLF1 AMB AMB 20 07 05.5
comp=Z,34nm,1.7s
WLF1 AMS AMS 20 39 10.9
comp=Z,964nm,23.0s
WLF1 Llynfaes 75.65 4 P **P 20 07 04.4 -0.6**
WLF1 AMB AMB 20 07 05.5
comp=Z,34nm,1.7s
WLF1 AMS AMS 20 39 10.9
comp=Z,964nm,23.0s
AKASG Malin Array Be 75.73 342 P **P 20 07 05.1 -0.5**
AKASG pmax pmax
comp=Z,8.0nm,0.3s
AKASG MLR MLR
comp=Z,2μm,21.4s
AKASG Malin Array Be 75.73 342 P **P 20 07 05.0 -0.5**
AKASG Malin Array Be 75.73 342 P **P 20 07 05.0 -0.5**
comp=Z,7.6nm,0.3s,baz=16,slow=5.5,SNR=110
AKASG LR LR 20 43 26.7
comp=Z,2μm,21.4s,baz=20,slow=38
KIEV Kiev 75.74 342 *e*P **P 20 07 04.9 -0.7**
KIEV pmax pmax
comp=Z,182nm,1.4s
KIEV Kiev 75.74 342 *e*P **P 20 07 04.9 -0.7**
comp=Z,182nm,1.4s
AK01 Malin Array Si 75.74 342 *e*P **P 20 07 05.4 -0.2**
KKR Kurukshetra 75.75 300 *e*PKP **P 20 07 06.8 +0.8**
KKR AMB AMB 20 07 08.6
comp=Z,99nm,0.8s
AK02 Malin Array Si 75.78 342 *e*P **P 20 07 05.7 -0.2**
KBI1 Birley Grange 75.78 2 *e*P **P 20 07 05.4 -0.4**
KBI1 Birley Grange 75.78 2 P **P 20 07 05.4 -0.4**
YRE Yr Eifl 75.96 4⇑*e*P **P 20 07 05.7 -1.1**
YRE Yr Eifl 75.96 4 P **P 20 07 05.7 -1.1**
BEL Belsk 75.98 348 *e*P **P 20 07 07.2 +0.2**
BEL Belsk 75.98 348 *e*P **P 20 07 07.1 +0.1**
FOEL Foel Wylfa 76.10 3 *e*P **P 20 07 07.7 0.0**
FOEL AMB AMB 20 07 09.3
comp=Z,67nm,2.0s
FOEL AMS AMS 20 39 16.2
comp=Z,1μm,20.6s
FOEL Foel Wylfa 76.10 3 P **P 20 07 07.7 0.0**
FOEL AMB AMB 20 07 09.3
comp=Z,67nm,2.0s
FOEL AMS AMS 20 39 16.2
comp=Z,1μm,20.6s
RUE Ruedersdorf 76.10 352 *e*P **P 20 07 07.8 +0.2**
comp=Z,71nm,1.1s
RUE Ruedersdorf 76.10 352 *e*P **P 20 07 08.0 +0.4**
comp=Z,23nm,0.9s
NRDL Niedersach Rie 76.34 355 *e*P **P 20 07 09.1 +0.2**
comp=Z,128nm,1.9s
HLM1 Long Mynd 76.48 3 *e*P **P 20 07 09.6 -0.2**
HLM1 AMB AMB 20 07 10.7
comp=Z,39nm,1.9s
HLM1 Long Mynd 76.48 3 P **P 20 07 09.6 -0.2**
HLM1 AMB AMB 20 07 10.7
comp=Z,39nm,1.9s
NDI New Delhi 76.52 299 *e*PKP **P 20 07 08.5 -2.0**
VAL Valentia 76.63 8 *e*P **P 20 07 10.2 -0.4**
IBBN Ibbenburen 76.64 356 *e*P **P 20 07 11.4 +0.7**
comp=Z,188nm,1.3s
RTK Rohtak 76.69 300 *e*PKP **P 20 07 11.7 +0.4**
RTK AMB AMB 20 07 13.7
comp=Z,84nm,0.4s
AYAN Aya Nagar 76.73 299 *e*PKP **P 20 07 11.2 -0.3**
AYAN AMB AMB 20 07 12.2
comp=Z,31nm,1.1s
KAPI Kappang 76.95 245 *e*P **P 20 07 12.8 -0.1**
comp=Z,39nm,1.2s
KAPI Kappang 76.95 245 P **P 20 07 12.9 -0.1**
comp=Z,31nm,1.4s,comp=Z,722nm
KAPI Kappang 76.95 245 P **P 20 07 12.6 -0.3**
comp=Z,16nm,0.9s,baz=81,slow=4.0,SNR=7.2
CLZ Clausthal 76.97 355 *e*P **P 20 07 13.2 +0.5**
comp=Z,229nm,1.8s
CLZ Clausthal 76.97 355 *e*P **P 20 07 13.2 +0.5**
CLZ pmax pmax
comp=Z,168nm,1.8s
MCH1 Michaelchurch 77.00 3 *e*P **P 20 07 12.4 -0.3**
MCH1 AMB AMB 20 07 13.5
comp=Z,40nm,1.3s
MCH1 AMS AMS 20 39 43.3
comp=Z,1μm,22.9s
MCH1 Michaelchurch 77.00 3 P **P 20 07 12.4 -0.3**
MCH1 AMB AMB 20 07 13.5
comp=Z,40nm,1.3s
MCH1 AMS AMS 20 39 43.3
comp=Z,1μm,22.9s
WTSB Winterswijk 77.02 357 *e*P **P 20 07 13.0 +0.2**
comp=Z,133nm,1.6s
AGRA Agra 77.25 298 *e*PKP **P 20 07 14.7 +0.2**
AGRA AMB AMB 20 07 16.6
comp=Z,70nm,0.3s
CLL Collm 77.32 353 *e*P **P 20 07 14.2 -0.3**
comp=Z,85nm,1.7s
CLL Collm 77.32 353⇑*i*P **P 20 07 14.3 -0.3**
CLL *i* *PP **PcP 20 07 24.0 -1.0**
CLL *e*S S 20 16 53.0 -7.9
CLL pmax pmax
comp=Z,87nm,1.7s
CLL Collm 77.32 353⇑*i*P **P 20 07 14.3 -0.3**
comp=Z,87nm,1.7s
CLL *i* pP **PcP 20 07 24.0 -1.0**
CLL *e*S **S 20 17 00.0 -0.9**
CLL *e*PS **PnS 20 17 44.0 -0.3**
CLL *e*SS SS 20 22 12.0 +14
CLL *e*SSS SSS 20 25 30.0
CLL *e* 20 27 06.0
KSM Kuching 77.33 256 *e*P **P 20 07 16.1 +1.0**
comp=Z,79nm,1.6s
KSM Kuching 77.33 256 P **P 20 07 16.5 +1.4**
KSM Kuching 77.33 256 P **P 20 07 15.9 +0.8**
comp=Z,30nm,1.3s,comp=Z,525nm
KUDL Kundal 77.34 299 *e*PKP **P 20 07 14.9 -0.2**
KUDL AMB AMB 20 07 16.1
comp=Z,78nm,0.8s
LVV L'vov 77.48 345 *i* P **P 20 07 14.8 -0.7**
LVV *e* 20 10 19.3
LVV *e*S **S 20 17 02.7 0.0**
LVV *e*PS PnS 20 17 58.5 +12
LVV MLR MLR
comp=N,800nm,19.0s
LVV MLR MLR
comp=E,1μm,19.0s
LVV MLR MLR
comp=Z,1μm,19.0s
KSP Ksiaz 77.49 351⇑*e*P **P 20 07 15.2 -0.3**
KSP *e*S **S 20 17 02.0 -0.7**
KSP *e**SS **SKSac 20 17 18.5 -6.2**
KSP MLR MLR
comp=Z,4μm,21.3s
KSP Ksiaz 77.49 351 *e*P **P 20 07 15.2 -0.3**
KSP *e*S S 20 17 18.8 +16
NEUB Neuenburg 77.51 354 *e*P **P 20 07 15.7 +0.1**
comp=Z,213nm,1.7s
SWN1 Swindon 77.52 2 *e*P **P 20 07 15.1 -0.5**
SWN1 AMB AMB 20 07 17.6
comp=Z,129nm,1.9s
SWN1 AMS AMS 20 40 01.9
comp=Z,799nm,19.6s
SWN1 Swindon 77.52 2 P **P 20 07 15.1 -0.5**
SWN1 AMB AMB 20 07 17.6
comp=Z,129nm,1.9s
SWN1 AMS AMS 20 40 01.9
comp=Z,799nm,19.6s
BUG Bochum--Univer 77.53 356 *e*P **P 20 07 15.8 +0.1**
comp=Z,144nm,1.7s
CTA Charters Tower 77.62 214 P **P 20 07 16.6 +0.2**
CTA Charters Tower 77.62 214 P **P 20 07 16.6 +0.2**
comp=Z,68nm,1.0s,baz=22,slow=7.2,SNR=53
CTAO Charters Tower 77.62 214 *e*P **P 20 07 15.9 -0.6**
CTAO pmax pmax
comp=Z,101nm,1.0s
CTAO Charters Tower 77.62 214 *e*P **P 20 07 15.9 -0.6**
comp=Z,101nm,1.0s
BRG Berggiesshubel 77.68 352 *e*P **P 20 07 16.1 -0.5**
comp=Z,55nm,1.4s
BRG S **S 20 17 05.0 +0.2**
BRG SS SS 20 22 22.0 +18
BRG
comp=N,790nm,20.9s
BRG
comp=E,1μm,23.8s
BRG
comp=Z,1μm,24.5s
BRG Berggiesshubel 77.68 352 *e*P **P 20 07 16.3 -0.3**
comp=Z,55nm,1.4s
BRG Berggiesshubel 77.68 352 *e*P **P 20 07 16.1 -0.5**
BRG S **S 20 17 05.0 +0.2**
BRG pmax pmax
comp=Z,55nm,1.4s
BRG MLR MLR
comp=N,790nm,20.9s
BRG MLR MLR
comp=E,1μm,23.8s
BRG MLR MLR
comp=Z,1μm,24.5s
FBE Freiberg 77.68 353 *e*P **P 20 07 16.8 +0.3**
comp=Z,140nm,1.6s
OJC Ojcow 77.70 348⇑*i*P **P 20 07 16.0 -0.7**
OJC *e*S **S 20 17 03.4 -1.6**
OJC MLR MLR
comp=Z,2μm,21.9s
OJC Ojcow 77.70 348 *i* P **P 20 07 16.0 -0.7**
OJC *e* 20 07 54.8
OJC *e*S **S 20 17 03.4 -1.6**
OJC L L 20 43 10.7
comp=Z,2μm,21.9s
WOL Wolverton 77.73 2⇑*e*P **P 20 07 16.3 -0.5**
WOL AMB AMB 20 07 17.6
comp=Z,85nm,1.4s
WOL Wolverton 77.73 2 P **P 20 07 16.3 -0.5**
WOL AMB AMB 20 07 17.6
comp=Z,85nm,1.4s
UPC Upice 77.85 351 *e*P **P 20 07 17.8 +0.3**
UPC *e* 20 07 22.1
UPC *e* 20 17 21.3
UPC Upice 77.85 351 *e*P **P 20 07 17.8 +0.3**
UPC *e*x x 20 07 22.1
UPC *e*x x 20 17 21.3
KWP Kalwaria Pacla 77.87 346⇓P **P 20 07 18.0 +0.3**
KWP Kalwaria Pacla 77.87 346 *e*P **P 20 07 17.7 0.0**
comp=Z,113nm,0.8s
KWP Kalwaria Pacla 77.87 346⇓*i*P **P 20 07 18.0 +0.3**
KWP Kalwaria Pacla 77.87 346 *e*P **P 20 07 18.2 +0.5**
KWP *e*S **S 20 17 06.0 -0.9**
HEX Exmoor 77.90 4 *e*P **P 20 07 17.4 -0.4**
HEX Exmoor 77.90 4 P **P 20 07 17.4 -0.4**
PVCC Panska Ves 77.96 352 *e*P **P 20 07 18.6 +0.4**
PVCC MLR MLR
comp=Z,2μm,21.2s
PVCC Panska Ves 77.96 352 *e*P **P 20 07 18.6 +0.4**
PVCC AMS AMS 20 44 10.0
comp=Z,2μm,21.2s
DPC Dobruska-Polom 77.97 351 *e*P **P 20 07 18.4 +0.1**
DPC *e* 20 07 23.3
DPC *e* 20 17 07.5
DPC *e* 20 17 21.8
DPC Dobruska-Polom 77.97 351 *e*P **P 20 07 18.4 +0.1**
DPC *e*x x 20 07 23.3
DPC *e*S **S 20 17 07.5 -0.6**
DPC *e*x x 20 17 21.8
UBBA Unterbreizbach 78.02 355 *e*P **P 20 07 18.6 +0.3**
comp=Z,90nm,1.7s
RAC Raciborz 78.03 349 *e*P **P 20 07 18.7 +0.2**
RAC MLR MLR
comp=Z,2μm,19.0s
MAK Makhachkala 78.06 328 *e*P **P 20 07 17.0 -1.8**
MAK *e*S **S 20 17 09.6 +0.5**
MAK *e*SSS SSS 20 25 36.1
MAK pmax pmax
comp=Z,404nm,1.7s
MOX Moxa 78.08 354 *e*P **P 20 07 19.1 +0.2**
comp=Z,100nm,1.7s
MOX Moxa 78.08 354 *e*P **P 20 07 19.1 +0.2**
MOX pmax pmax
comp=Z,142nm,1.7s
KRLC Kraliky 78.19 350 *e*P **P 20 07 19.0 -0.5**
KRLC *e* 20 17 24.6
KRLC Kraliky 78.19 350 *e*P **P 20 07 19.0 -0.5**
KRLC *e*x x 20 17 24.6
PLN Plauen 78.20 353 *e*P **P 20 07 19.6 +0.1**
comp=Z,331nm,1.7s
BEBN Eben Emael 78.22 357 P **P 20 07 19.8 +0.3**
WERD Werda 78.23 353 *e*P **P 20 07 19.5 -0.2**
comp=Z,81nm,1.6s
HGN Heimansgroeve 78.25 357 *e*P **P 20 07 19.8 +0.1**
comp=Z,87nm,1.2s
HGN *e*L L 20 07 27.9
comp=Z,315nm,21.8s
HGN *e*S **S 20 17 16.0 +5.2**
HGN *e*SS SS 20 22 40.2 +28
TANN Tannenbergstha 78.25 353 *e*P **P 20 07 20.1 +0.3**
comp=Z,92nm,1.7s
OKC Ostrava-Krasne 78.27 349 *e*P **P 20 07 19.9 0.0**
OKC *e* 20 07 24.9
OKC MLR MLR
comp=Z,2μm,18.7s
OKC Ostrava-Krasne 78.27 349 *e*P **P 20 07 19.9 0.0**
OKC *e*x x 20 07 24.9
OKC *e*x x 20 17 45.3
OKC AMS AMS 20 45 20.0
comp=Z,2μm,18.7s
STHS Stebnicka Huta 78.29 347 *e*P **P 20 07 21.6 +1.6**
STHS pmax pmax
comp=Z,58nm,1.5s
STHS Stebnicka Huta 78.29 347 *e*P **P 20 07 21.6 +1.6**
GUNZ Gunzen 78.31 353 *e*P **P 20 07 20.3 +0.1**
comp=Z,110nm,1.6s
ABKT Ailbek 78.38 318 P **P 20 07 21.9 +1.1**
comp=Z,239nm,1.0s,SNR=19
WERN Wernitzgruen 78.39 353 *e*P **P 20 07 20.7 +0.1**
comp=Z,88nm,1.5s
MEM Membach 78.40 357 P **P 20 07 20.7 +0.2**
comp=Z,39nm,1.7s
MORC Moravsky Berou 78.40 350⇑P **P 20 07 20.3 -0.4**
MORC Moravsky Berou 78.40 350⇑*i*P **P 20 07 20.3 -0.4**
NIE Niedzica 78.42 348 *e*P **P 20 07 21.8 +1.1**
NIE Niedzica 78.42 348 *e*P **P 20 07 21.8 +1.1**
PRA Prague 78.43 352 P **P 20 07 21.0 +0.3**
PRA AMS AMS 20 44 30.0
NKC Novy Kostel 78.43 353 *e*P **P 20 07 21.1 +0.3**
NKC MLR MLR
comp=Z,1μm,22.6s
NKC Novy Kostel 78.43 353 *e*P **P 20 07 21.1 +0.3**
NKC AMS AMS 20 45 40.0
comp=Z,1μm,22.6s
PRU Pruhonice 78.50 352 *e*P **P 20 07 21.1 0.0**
PRU *e* 20 07 25.9
PRU *e*S **S 20 17 11.6 -2.1**
PRU MLR MLR
comp=Z,2μm,22.4s
PRU Pruhonice 78.50 352 *e*P **P 20 07 21.1 0.0**
PRU *e*x x 20 07 25.9
PRU *e*S **S 20 17 11.6 -2.1**
PRU AMS AMS 20 44 20.0
comp=Z,2μm,22.4s
TBI Tubuai 78.52 153 *e*S **S 20 17 14.2 0.0**
comp=Z,574nm,31.0s
TBI *e*LR LR 20 31 35.2
comp=Z,4μm,30.0s,baz=339
TBI Tubuai 78.52 153 *e*LR LR 20 07 23.8
comp=Z,900nm,31.8s
DYA Yadsworthy 78.52 4 *e*P **P 20 07 20.6 -0.7**
DYA AMB AMB 20 07 21.9
comp=Z,66nm,1.4s
DYA Yadsworthy 78.52 4 P **P 20 07 20.6 -0.7**
DYA AMB AMB 20 07 21.9
comp=Z,66nm,1.4s
BCLA Clavier 78.61 358 P **P 20 07 22.3 +0.6**
comp=Z,35nm,1.7s
KOLS Kolonicke sedl 78.61 346 *e*P **P 20 07 22.4 +0.6**
KOLS pmax pmax
comp=Z,40nm,1.3s
KOLS Kolonicke sedl 78.61 346 *e*P **P 20 07 22.4 +0.6**
TNS Taunus Mts 78.69 356 *e*P **P 20 07 22.6 +0.3**
comp=Z,136nm,1.8s
TNS Taunus Mts 78.69 356 *e*P **P 20 07 22.6 +0.3**
TNS pmax pmax
comp=Z,117nm,1.8s
MANZ Manzenberg 78.70 353 *e*P **P 20 07 22.3 0.0**
comp=Z,63nm,1.7s
KIV Kislovodsk 78.71 331*c i*P **P 20 07 23.2 +0.7**
KIV *e*S **S 20 17 18.4 +2.1**
KIV pmax pmax
comp=Z,94nm,0.9s
KIV pmax pmax
comp=Z,76nm,3.0s
KIV MLR MLR
comp=Z,2μm,19.0s
KIV Kislovodsk 78.71 331 P **P 20 07 23.5 +1.0**
comp=Z,669nm,0.7s,SNR=36
CRVS Cervenica-Dubn 78.76 347 *e*P **P 20 07 20.5 -2.1**
CRVS pmax pmax
comp=Z,56nm,1.6s
CRVS Cervenica-Dubn 78.76 347 *e*P **P 20 07 20.5 -2.1**
KBZ Khabaz 78.85 331 P **P 20 07 24.0 +0.9**
KBZ pmax pmax
comp=Z,53nm,0.8s
KBZ MLR MLR
comp=Z,3μm,20.0s
KBZ Khabaz 78.85 331 P **P 20 07 24.0 +0.9**
KBZ Khabaz 78.85 331 P **P 20 07 24.0 +0.9**
comp=Z,53nm,0.8s,baz=39,slow=4.9,SNR=123
KBZ LR LR 20 47 18.0
comp=Z,3μm,20.0s,baz=21,slow=40
ROTZ Rotzenmuhle 78.92 353 *e*P **P 20 07 23.5 +0.1**
comp=Z,69nm,1.5s
GIVF Givet 78.94 358⇑*i*P **P 20 07 23.6 +0.1**
GIVF Givet 78.94 358⇑*i*P **P 20 07 23.6 +0.1**
GIVF Givet 78.94 358⇑*i*P **P 20 07 23.6 +0.1**
DOU Dourbes 78.95 358 P **P 20 07 23.8 +0.2**
comp=Z,43nm,1.8s
VRAC Vranov 78.97 350 P **P 20 07 23.8 0.0**
VRAC Vranov 78.97 350⇓*i*P **P 20 07 22.9 -0.9**
VRAC Vranov 78.97 350 P **P 20 07 23.8 0.0**
comp=Z,21nm,0.8s,baz=4.6,slow=6.5,SNR=26
VRAC LR LR 20 49 36.2
comp=Z,1μm,18.5s,baz=11,slow=41
BAIF Baives 78.99 358⇑*i*P **P 20 07 24.1 +0.3**
comp=Z,138nm,1.1s
BAIF Baives 78.99 358⇑*i*P **P 20 07 24.1 +0.3**
BAIF pmax pmax
comp=Z,138nm,1.1s
BAIF Baives 78.99 358⇑*i*P **P 20 07 24.1 +0.3**
comp=Z,138nm,1.1s
GRF Grafenberg Arr 79.06 354 *e*P **P 20 07 24.8 +0.6**
comp=Z,191nm,1.6s
GRF Grafenberg Arr 79.06 354 *e*P **P 20 07 24.8 +0.6**
GRF pmax pmax
comp=Z,126nm,1.6s
GRFO Grafenberg 79.06 354 *e*P **P 20 07 24.5 +0.2**
GRFO pmax pmax
comp=Z,183nm,1.7s
GRFO Grafenberg 79.06 354 *e*P **P 20 07 24.5 +0.2**
comp=Z,183nm,1.7s
ABH Alteburg 79.07 356 *e*P **P 20 07 24.5 +0.2**
TREC Trest 79.10 351 *e*P **P 20 07 24.4 -0.1**
TREC MLR MLR
comp=Z,2μm,21.8s
TREC Trest 79.10 351 *e*P **P 20 07 24.4 -0.1**
TREC AMS AMS 20 42 20.0
comp=Z,2μm,21.8s
RUP Ruppelstein 79.27 357 *e*P **P 20 07 25.6 +0.2**
RUP Ruppelstein 79.27 357 *e*P **P 20 07 25.6 +0.2**
TOD Tromm 79.29 355 *e*P **P 20 07 25.8 +0.3**
TOD Tromm 79.29 355 *e*P **P 20 07 25.8 +0.3**
WLF Walferdange 79.34 357 P **P 20 07 26.8 +1.1**
comp=Z,46nm,1.9s
WLF Walferdange 79.34 357 *e*P **P 20 07 26.2 +0.5**
comp=Z,207nm,2.0s
WLF Walferdange 79.34 357 *e*P **P 20 07 26.6 +0.8**

WLF pmax pmax
comp=Z,121nm,1.6s
WLF Walferdange 79.34 357 *e*P **P 20 07 26.6 +0.8**
comp=Z,122nm,1.6s
KIS Kishinev 79.35 342⇑*i*P **P 20 07 25.0 -0.8**
KIS *e* 20 07 32.0
KIS *e* 20 10 32.0
KIS *e*S **S 20 17 23.0 +0.2**
KIS *e* 20 17 35.0
KIS *e*PS **PnS 20 18 06.0 -4.1**
KIS *e* 20 18 13.0
KIS pmax pmax
comp=Z,650nm,1.8s
KIS pmax pmax
comp=Z,700nm,1.8s
KIS Kishinev 79.35 342⇑*i*P **P 20 07 25.0 -0.8**
comp=Z,700nm,1.8s
KIS Kishinev 79.35 342 *e*PP PP 20 10 32.0 +6.7
KIS *e*S **S 20 17 23.0 +0.2**
KIS *e*ScS **SKSac 20 17 35.0 -3.1**
KIS Kishinev 79.35 342 *e*PS 20 18 06.0
KIS LRM MLR 20 47 35.0
comp=Z,2µm,18.0s
KIS Kishinev 79.35 342‖*i*P **P 20 07 26.8 +1.0**
TRPA Tarpa 79.36 346⇑*i*P **P 20 07 26.5 +0.6**
TRPA Tarpa 79.36 346‖*e*PKPPKPb2 **P 20 07 26.4 +0.6**
IAS Iasi 79.41 342 ‖P **P 20 07 26.5 +0.4**
IAS Iasi 79.41 342‖*i*P **P 20 07 26.5 +0.4**
BURAR Bucovina Array 79.42 344⇑*i*P **P 20 07 26.7 +0.3**
ANN Anapa 79.43 335 *e*P **P 20 07 24.9 -1.4**
ANN *e**PP **PcP 20 07 35.7 +1.5**
ANN *e*S **S 20 17 22.9 -0.7**
ANN pmax pmax
comp=Z,127nm,2.2s
KHC Kasperske Hory 79.44 352 *e*P **P 20 07 26.5 +0.2**
KHC *e* 20 07 30.8
KHC *e* 20 17 24.1
KHC *e* 20 17 38.4
KHC MLR MLR
comp=Z,1µm,19.5s
KHC Kasperske Hory 79.44 352 *e*P **P 20 07 26.5 +0.2**
KHC *ex* x 20 07 30.8
KHC *e*S **S 20 17 24.1 +0.3**
KHC *e*SKS **SKSac 20 17 38.4 -0.4**
KHC AMS AMS 20 46 40.0
comp=Z,1µm,19.5s
KHC Kasperske Hory 79.44 352 *e*P **P 20 07 26.2 -0.1**
comp=Z,98nm,1.6s
WET Wettzell 79.48 353 *e*P **P 20 07 26.7 +0.1**
comp=Z,103nm,1.9s
WET Wettzell 79.48 353 *e*P **P 20 07 26.7 +0.1**
WET pmax pmax
comp=Z,272nm,1.9s
VYHS Vyhne 79.51 349 *e*P **P 20 07 26.8 +0.1**
VYHS pmax pmax
comp=Z,31nm,1.5s
VYHS Vyhne 79.51 349 *e*P **P 20 07 26.8 +0.1**
KTD Kalmit 79.61 356 *e*P **P 20 07 27.5 +0.2**
KTD Kalmit 79.61 356 *e*P **P 20 07 27.5 +0.2**
BMR Baia Mare 79.65 345 ‖P **P 20 07 28.0 +0.5**
BMR Baia Mare 79.65 345‖*i*P **P 20 07 28.0 +0.5**
AJM Ajmer 79.66 299 *i*P **P 20 07 28.0 +0.1**
GEC2 GERESS Array S 79.71 352 *e*P **P 20 07 27.7 -0.2**
comp=Z,115nm,1.9s
GEC2 GERESS Array S 79.71 352 *e*P **P 20 07 27.7 -0.2**
GEC2 pmax pmax
comp=Z,105nm,1.9s
GERES GERESS Array B 79.71 352 P **P 20 07 27.8 -0.1**
GERES GERESS Array B 79.71 352 P **P 20 07 27.8 -0.1**
comp=Z,7.0nm,0.7s,baz=29,slow=4.6,SNR=17
GERES LR LR 20 47 34.0
comp=Z,1µm,20.9s,baz=5.0,slow=39
ONI Oni 79.71 330 P **P 20 07 28.7 +0.7**
TGUH Tegucigalpa,Un 79.76 80 *e*P **P 20 07 29.8 +1.3**
comp=Z,63nm,0.8s
DUS Dusheti 79.76 329 P **P 20 07 29.8 +1.5**
JQE Queens East 79.82 3 *e*P **P 20 07 27.8 -0.5**
JQE Queens East 79.82 3 P **P 20 07 27.8 -0.5**
JSA Saint Aubin 79.83 3⇑*e*P **P 20 07 28.0 -0.4**
JSA AMB AMB 20 07 29.8
comp=Z,95nm,2.0s
JSA Saint Aubin 79.83 3 P **P 20 07 28.0 -0.4**
JSA AMB AMB 20 07 29.8
comp=Z,95nm,2.0s
SOC Sochi 79.92 333*c i*P **P 20 07 28.7 -0.3**
SOC *e**SP **sP 20 07 42.4 -4.9**
SOC *e*PPP PPP 20 12 25.0
SOC *e*S **S 20 17 29.8 +0.9**
SOC pmax pmax
comp=Z,72nm,1.0s
SOC MLR MLR
comp=Z,5µm,22.0s
PSZ Piszkesteto 79.94 348⇑P **P 20 07 29.3 +0.2**
PSZ Piszkesteto 79.94 348⇑*i*P **P 20 07 29.3 +0.2**
PSZ Piszkesteto 79.94 348⇑*e* **P 20 07 29.7 +0.6**
LANF Langenberg 79.96 356 *e*P **P 20 07 29.5 +0.3**
LANF Langenberg 79.96 356 *e*P **P 20 07 29.5 +0.3**
LANF Langenberg 79.96 356 *e*P **P 20 07 29.5 +0.3**
LEOM Leova 79.97 342 ‖P **P 20 07 29.6 +0.4**
LEOM Leova 79.97 342‖*i*P **P 20 07 29.6 +0.4**
ZST Bratislava 80.01 350 *e*P **P 20 07 29.4 0.0**
ZST Bratislava 80.01 350 *e*P **P 20 07 29.4 0.0**
TBLG Delisi 80.08 329 *e*P **P 20 07 30.8 +0.9**
TBLG Delisi 80.08 329 P **P 20 07 30.8 +0.9**
STU Stuttgart 80.10 355 *e*P **P 20 07 30.0 +0.1**
comp=Z,116nm,1.8s
STU Stuttgart 80.10 355 *e*P **P 20 07 30.4 +0.5**
STU pmax pmax
comp=Z,15nm,0.6s
STU Stuttgart 80.10 355 *e*P **P 20 07 30.4 +0.5**
comp=Z,15nm,0.6s
DGRG David-gareji 80.12 328 P **P 20 07 30.9 +0.8**
SIM Simferopol' 80.13 337*ce*P **P 20 07 30.6 +0.5**
SIM *e*S **S 20 17 34.0 +2.9**
SIM pmax pmax
comp=Z,40nm,1.0s
FLN La Foliniere 80.30 2⇑*i*P **P 20 07 30.7 -0.2**
comp=Z,108nm,1.0s
FLN *e*R
comp=Z,1µm,20.8s
FLN La Foliniere 80.30 2⇑*i*P **P 20 07 30.7 -0.2**
FLN pmax pmax
comp=Z,108nm,1.0s
FLN La Foliniere 80.30 2⇑*i*P **P 20 07 30.7 -0.2**
comp=Z,108nm,1.0s
CONA Conrad Observa 80.41 350⇑*i*P **P 20 07 32.4 +0.7**
comp=Z,49nm,1.2s,SNR=18
PAGF Fort de Pagny 80.46 357⇑*i*P **P 20 07 32.3 +0.5**
comp=Z,46nm,0.9s
PAGF Fort de Pagny 80.46 357⇑*i*P **P 20 07 32.3 +0.5**
comp=Z,46nm,0.9s
LDF La Druitiere 80.47 1⇑*i*P **P 20 07 31.5 -0.4**
comp=Z,59nm,0.6s
LDF La Druitiere 80.47 1⇑*i*P **P 20 07 31.5 -0.4**
LDF pmax pmax
comp=Z,59nm,0.6s
LDF La Druitiere 80.47 1⇑*i*P **P 20 07 31.5 -0.4**
comp=Z,59nm,0.6s
BUD Budapest 80.48 348⇑*e* **P 20 07 32.6 +0.7**
KZR Kazreti 80.50 329 P **P 20 07 32.9 +0.6**
MEZF Maizieres J'vi 80.53 358⇑*i*P **P 20 07 32.5 +0.3**
MEZF Maizieres J'vi 80.53 358⇑*i*P **P 20 07 32.5 +0.3**
CDF Champ du Feu 80.55 356⇑*i*P **P 20 07 32.4 0.0**
comp=Z,57nm,1.2s
CDF Champ du Feu 80.55 356⇑*i*P **P 20 07 32.4 0.0**
CDF pmax pmax
comp=Z,57nm,1.2s
CDF Champ du Feu 80.55 356⇑*i*P **P 20 07 32.4 0.0**
comp=Z,57nm,1.2s
FUR Furstenfeldbru 80.58 354 *e*P **P 20 07 32.8 +0.3**
comp=Z,230nm,2.0s
FUR Furstenfeldbru 80.58 354 *e*P **P 20 07 32.8 +0.3**
FUR pmax pmax
comp=Z,178nm,2.0s
SOP Sopron 80.58 350‖*e* **P 20 07 33.1 +0.6**
BFO Black Forest 80.59 356 P **P 20 07 32.9 +0.4**
comp=Z,145nm,1.7s,SNR=6.8
BFO Black Forest 80.59 356 *e*P **P 20 07 32.4 -0.1**
comp=Z,70nm,1.5s
BFO Black Forest 80.59 356 *e*P **P 20 07 32.4 -0.1**
BFO pmax pmax
comp=Z,157nm,1.5s
BFO Black Forest 80.59 356 *e*P **P 20 07 32.0 -0.6**
comp=Z,73nm,1.6s

DRGR 80.64 346‖P **P 20 07 32.9 0.0**
DRGR 80.64 346‖*i*P **P 20 07 32.9 0.0**
ROSF Rostrenen 80.64 3⇑*i*P **P 20 07 32.9 +0.1**
comp=Z,60nm,0.9s
ROSF Rostrenen 80.64 3⇑*i*P **P 20 07 32.9 +0.1**
ROSF pmax pmax
comp=Z,60nm,0.9s
ROSF Rostrenen 80.64 3⇑*i*P **P 20 07 32.9 +0.1**
comp=Z,60nm,0.9s
MOA Molln 80.65 352⇑*e*P **P 20 07 32.9 0.0**
comp=Z,28nm,1.6s
PKSG 80.65 349‖*e* **P 20 07 34.1 +1.2**
GRR Gorron 80.66 2⇑*i*P **P 20 07 32.8 -0.1**
comp=Z,111nm,0.8s
GRR Gorron 80.66 2⇑*i*P **P 20 07 32.8 -0.1**
GRR pmax pmax
comp=Z,111nm,0.8s
GRR Gorron 80.66 2⇑*i*P **P 20 07 32.8 -0.1**
comp=Z,111nm,0.8s
CSKK Cs‡kako 80.70 349‖*e* **P 20 07 34.3 +1.2**
IPM Ipoh 80.73 266 *e*P **P 20 07 34.0 +0.2**
comp=Z,22nm,1.0s
IPM Ipoh 80.73 266 P **P 20 07 33.2 -0.6**
comp=Z,19nm,1.5s
SGMF Saint Gilles 80.75 3⇑*i*P **P 20 07 33.5 +0.1**
comp=Z,103nm,0.8s
SGMF Saint Gilles 80.75 3⇑*i*P **P 20 07 33.5 +0.1**
SGMF pmax pmax
comp=Z,103nm,0.8s
SGMF Saint Gilles 80.75 3⇑*i*P **P 20 07 33.5 +0.1**
comp=Z,103nm,0.8s
ECH Echery 80.75 356 *e*P **P 20 07 32.9 -0.5**
ECH pmax pmax
comp=Z,110nm,1.8s
ECH Echery 80.75 356 *e*P **P 20 07 32.9 -0.5**
comp=Z,110nm,1.8s
ECH Echery 80.75 356 *e*P **P 20 07 33.6 +0.2**
AKH Akhalkalaki 80.77 330 P **P 20 07 34.9 +1.0**
THEF They Montfort 80.78 357 *e*P **P 20 07 34.0 +0.4**
THEF They Montfort 80.78 357 *e*P **P 20 07 34.0 +0.4**
THEF They Montfort 80.78 357 *e*P **P 20 07 34.0 +0.4**
SPAK Spaichingen-Ko 80.79 355 *e*P **P 20 07 34.0 +0.3**
PKST T's 80.83 349‖*e* **P 20 07 34.9 +1.1**
SFTF Sexfontaines 80.83 358⇑*i*P **P 20 07 33.9 +0.1**
comp=Z,163nm,0.9s
SFTF Sexfontaines 80.83 358⇑*i*P **P 20 07 33.9 +0.1**
comp=Z,163nm,0.9s
VRI Vrincioaia 80.84 343⇑P **P 20 07 34.6 +0.7**
VRI Vrincioaia 80.84 343⇑*i*P **P 20 07 34.6 +0.7**
PLOR Plostina 80.87 343⇑P **P 20 07 34.9 +0.8**
PLOR Plostina 80.87 343⇑*i*P **P 20 07 34.9 +0.8**
PETR Petresti 80.88 342⇑*i*P **P 20 07 35.5 +1.4**
RJOB Jochberg 80.89 352 *e*P **P 20 07 34.4 +0.2**
comp=Z,24nm,1.2s
PKS7 Kunszentmiklos 80.89 348‖*e* **P 20 07 35.4 +1.3**
PKSN Nyarlorinc 80.95 348‖*e* **P 20 07 36.0 +1.6**
EIDS Eidsvold 80.99 208 *e*P **P 20 07 35.0 +0.2**
comp=Z,42nm,1.0s
HAU Haudompre 80.99 357⇑*i*P **P 20 07 34.7 0.0**
comp=Z,49nm,0.9s
HAU *e*R
comp=Z,1µm,20.8s
HAU Haudompre 80.99 357⇑*i*P **P 20 07 34.7 0.0**
HAU pmax pmax
comp=Z,49nm,0.9s
HAU Haudompre 80.99 357⇑*i*P **P 20 07 34.7 0.0**
comp=Z,49nm,0.9s
MDB Medias 81.00 344⇑P **P 20 07 37.2 +2.5**
MDB Medias 81.00 344⇑*i*P **P 20 07 37.2 +2.5**
FELD Feldberg im Sc 81.06 356 *e*P **P 20 07 35.1 -0.1**
MYKOM Kota Tinggi 81.06 262 P **P 20 07 36.1 +0.6**
comp=Z,18nm,1.5s
QUIF Quistinic 81.07 3⇑*i*P **P 20 07 35.0 -0.1**
comp=Z,77nm,1.0s
QUIF Quistinic 81.07 3⇑*i*P **P 20 07 35.0 -0.1**
QUIF pmax pmax
comp=Z,77nm,1.0s
QUIF Quistinic 81.07 3⇑*i*P **P 20 07 35.0 -0.1**
comp=Z,77nm,1.0s
ARSA Arzberg 81.12 351⇑*i*P **P 20 07 36.0 +0.6**
comp=Z,48nm,1.5s,SNR=13
MOF Molkenrain 81.12 356 *e*P **P 20 07 35.6 +0.1**
MOF Molkenrain 81.12 356 *e*P **P 20 07 35.6 +0.1**
MOF Molkenrain 81.12 356 *e*P **P 20 07 35.6 +0.1**
HINF Hinteralfeld 81.16 357⇑*i*P **P 20 07 35.3 -0.4**
comp=Z,48nm,1.1s
HINF Hinteralfeld 81.16 357⇑*i*P **P 20 07 35.3 -0.4**
HINF pmax pmax
comp=Z,48nm,1.1s
HINF Hinteralfeld 81.16 357⇑*i*P **P 20 07 35.3 -0.4**
comp=Z,48nm,1.1s
PKS6 Bocsa 81.28 348⇑*e* **P 20 07 37.7 +1.5**
RETA Reutte 81.29 354⇑*i*P **P 20 07 36.6 +0.2**
comp=Z,38nm,1.8s
MLR Muntele Rosu 81.35 343⇑*i*P **P 20 07 37.2 +0.4**
MLR Muntele Rosu 81.35 343 LR LR 20 47 27.3
comp=Z,587nm,20.6s,baz=212,slow=38
MOTA Moosalm 81.41 354⇑*e*P **P 20 07 37.1 0.0**
comp=Z,91nm,1.4s,SNR=12
PKS2 Kecel 81.43 348‖*e* P 20 07 29.5 -7.5
WTTA Wattenberg 81.45 353⇑*i*P P **20 07 37.7 +0.4**
comp=Z,63nm,1.2s,SNR=8.9
PKS9 Tamasi 81.46 349‖*e* **P 20 07 37.7 +0.5**
BBS Basel-Blauen 81.49 356 *e*P **P 20 07 37.5 +0.1**
BBS Basel-Blauen 81.49 356 *e*P **P 20 07 37.5 +0.1**
KBA Koelnbreinsper 81.49 352⇑*i*P **P 20 07 38.3 +0.7**
comp=Z,126nm,1.1s,SNR=21
GNI Garni 81.50 328 *e*P **P 20 07 39.5 +1.8**
GNI Garni 81.50 328 P **P 20 07 39.5 +1.8**
SNR=30
GNI Garni 81.50 328 *e*P **P 20 07 38.8 +1.1**
comp=Z,248nm,1.5s
GNI Garni 81.50 328 LR LR 20 48 06.4
comp=Z,2µm,20.9s,baz=353,slow=39
DAVA Damuels 81.54 354⇑*i*P **P 20 07 37.8 0.0**
comp=Z,48nm,1.7s
VOIR 81.56 344⇑P **P 20 07 38.9 +1.0**
VOIR 81.56 344⇑*i*P **P 20 07 38.9 +1.0**
ISR Istrita 81.60 343⇑P **P 20 07 38.7 +0.7**
ISR Istrita 81.60 343⇑*i*P **P 20 07 38.7 +0.7**
KARS Kars 81.61 329 *e*P **P 20 07 39.9 +1.7**
LOMF Lomont 81.63 357 *e*P **P 20 07 38.6 +0.4**
LOMF Lomont 81.63 357 *e*P **P 20 07 38.6 +0.4**
LOMF Lomont 81.63 357 *e*P **P 20 07 38.6 +0.4**
SOKA Soboth 81.73 351⇑*i*P **P 20 07 39.0 +0.3**
comp=Z,144nm,1.3s
FETA Feichten 81.75 354⇑*i*P **P 20 07 39.2 +0.2**
comp=Z,39nm,1.1s,SNR=12
PERS Pernice 81.77 351 *i* P **P 20 07 39.0 +0.2**
SECR 81.77 343‖*i*P **P 20 07 39.9 +1.1**
PKSM Moragy 81.78 348⇑P **P 20 07 38.5 -0.3**
PKSM Moragy 81.78 348⇑*i*P **P 20 07 38.5 -0.3**
PKSM Moragy 81.78 348‖*e* **P 20 07 38.6 -0.3**
LOR Lormes 81.79 359⇑*i*P **P 20 07 38.9 -0.1**
comp=Z,105nm,1.0s
LOR *e*R
comp=Z,1µm,22.0s
LOR Lormes 81.79 359⇑*i*P **P 20 07 38.9 -0.1**
comp=Z,105nm,1.0s
HYF Humbligny 81.81 359 *e*P **P 20 07 39.3 +0.3**
HYF Humbligny 81.81 359 *e*P **P 20 07 39.3 +0.3**
TIRR Tirgusor 81.87 341⇑P **P 20 07 39.3 0.0**
TIRR Tirgusor 81.87 341⇑*i*P **P 20 07 39.3 0.0**
ABTA Asfaltersbach 81.89 353⇑*i*P **P 20 07 39.7 +0.1**
comp=Z,57nm,1.3s,SNR=17
GROS Grobnik 81.90 350 *e*P **P 20 07 39.7 +0.1**
MYKA Terra Mystica 81.91 352⇑*i*P **P 20 07 39.6 -0.1**
comp=Z,62nm,1.7s
OBKA Obir 81.95 351⇑*e*P **P 20 07 40.1 +0.2**
comp=Z,51nm,0.9s,SNR=15
BZS Buzias 81.95 346⇑P **P 20 07 39.7 -0.1**
BZS Buzias 81.95 346⇑*i*P **P 20 07 39.7 -0.1**
SSF Saint Saulge 82.00 359⇑*i*P **P 20 07 40.1 +0.1**
comp=Z,69nm,1.0s
SSF Saint Saulge 82.00 359⇑*i*P **P 20 07 40.1 +0.1**
SSF pmax pmax
comp=Z,69nm,1.0s
SSF Saint Saulge 82.00 359⇑*i*P **P 20 07 40.1 +0.1**
comp=Z,69nm,1.0s
EFOR EFORIE 82.18 341⇑*i*P **P 20 07 41.0 0.0**
WRAB Tennant Creek 82.20 224 P **P 20 07 40.5 -0.8**
comp=Z,398nm,1.1s,SNR=30
WRAB Tennant Creek 82.20 224 *e*P **P 20 07 40.2 -1.0**
WRAB pmax pmax
comp=Z,77nm,1.0s

WRAB Tennant Creek 82.20 224 *e*P **P 20 07 40.2 -1.0**
comp=Z,77nm,1.0s
WRA Warramunga Arr 82.21 224 P **P 20 07 40.5 -0.8**
WRA Warramunga Arr 82.21 224 P **P 20 07 40.5 -0.8**
comp=Z,40nm,0.8s,baz=37,slow=6.1,SNR=153
WRA LR LR 20 41 40.6
comp=Z,1µm,22.0s,baz=30,slow=34
AVF Avril sur Loir 82.28 359⇑*i*P **P 20 07 41.5 0.0**
comp=Z,149nm,1.3s
AVF Avril sur Loir 82.28 359⇑*i*P **P 20 07 41.5 0.0**
AVF pmax pmax
comp=Z,149nm,1.3s
AVF Avril sur Loir 82.28 359⇑*i*P **P 20 07 41.5 0.0**
comp=Z,149nm,1.3s
TUE Stuetta 82.39 355 *e*P **P 20 07 42.6 +0.3**
comp=Z,18nm,0.6s
CABF La Chapelle 82.39 357⇑*i*P **P 20 07 42.6 +0.4**
comp=Z,103nm,1.2s
CABF La Chapelle 82.39 357⇑*i*P **P 20 07 42.6 +0.4**
CABF pmax pmax
comp=Z,103nm,1.2s
CABF La Chapelle 82.39 357⇑*i*P **P 20 07 42.6 +0.4**
comp=Z,103nm,1.2s
LJU Ljubljana 82.41 351 *i* P **P 20 07 42.6 +0.4**
SMF Signal de Mont 82.42 359⇑*i*P **P 20 07 42.2 0.0**
comp=Z,235nm,1.3s
SMF Signal de Mont 82.42 359⇑*i*P **P 20 07 42.2 0.0**
SMF pmax pmax
comp=Z,235nm,1.3s
SMF Signal de Mont 82.42 359⇑*i*P **P 20 07 42.2 0.0**
comp=Z,235nm,1.3s
MANR Mangalia 82.44 341⇑*i*P **P 20 07 42.0 -0.4**
MFF Saint Martin d 82.46 1⇑*i*P **P 20 07 42.6 +0.2**
comp=Z,111nm,0.9s
MFF Saint Martin d 82.46 1⇑*i*P **P 20 07 42.6 +0.2**
MFF pmax pmax
comp=Z,111nm,0.9s
MFF Saint Martin d 82.46 1⇑*i*P **P 20 07 42.6 +0.2**
comp=Z,111nm,0.9s
BGF Bois d'Agland 82.52 359⇑*i*P **P 20 07 42.8 +0.1**
comp=Z,70nm,1.0s
BGF Bois d'Agland 82.52 359⇑*i*P **P 20 07 42.8 +0.1**
BGF pmax pmax
comp=Z,70nm,1.0s
BGF Bois d'Agland 82.52 359⇑*i*P **P 20 07 42.8 +0.1**
comp=Z,70nm,1.0s
AGRB Hanur-Agry 82.59 329 *e*P **P 20 07 45.0 +1.5**
JAVS Javornik 82.60 351 *i* P **P 20 07 43.3 0.0**
ESPY Espiye-Giresun 82.66 333 *e*P **P 20 07 43.6 0.0**
CLDR Caldiran 82.68 328 *e*P **P 20 07 44.9 +0.9**
TCF Toulx Ste Croi 82.79 360⇑*i*P **P 20 07 44.2 0.0**
comp=Z,29nm,0.7s
TCF Toulx Ste Croi 82.79 360⇑*i*P **P 20 07 44.2 0.0**
TCF pmax pmax
comp=Z,29nm,0.7s
TCF Toulx Ste Croi 82.79 360⇑*i*P **P 20 07 44.2 0.0**
comp=Z,29nm,0.7s
EZM Erzurum 82.81 330 *e*P **P 20 07 46.4 +1.7**
GUMT Gumushane 82.86 332 *e*P **P 20 07 45.9 +1.1**
BOJS Bojanci 82.87 350 *i* P **P 20 07 44.5 -0.1**
DIKM Dikmen 82.94 335 *e*P **P 20 07 47.0 +2.0**
OG3S Orcelles 82.98 357 *e*P **P 20 07 45.5 +0.4**
AGO Saint Agoulin 83.02 359 *e*P **P 20 07 46.2 +0.8**
AGO Saint Agoulin 83.02 359 *e*P **P 20 07 46.2 +0.8**
KVT Kavak 83.26 335 *e*P **P 20 07 47.9 +1.2**
PRD Provadia 83.28 341 *i* P **P 20 07 47.2 +0.5**
RKT Rikitea 83.28 141 *e*LR LR 20 33 57.4
comp=Z,4µm,22.8s,baz=331
RSL Roselend 83.30 357 *e*P **P 20 07 47.4 +0.4**
RSL Roselend 83.30 357 *e*P **P 20 07 47.4 +0.4**
RSL Roselend 83.30 357 *e*P **P 20 07 47.4 +0.4**
PYM Petit Puy Mans 83.32 359 *e*P **P 20 07 47.8 +0.8**
PYM Petit Puy Mans 83.32 359 *e*P **P 20 07 47.8 +0.8**
PYM Petit Puy Mans 83.32 359 *e*P **P 20 07 47.8 +0.8**
LPL La Plagne 83.47 356⇑*i*P **P 20 07 48.9 +1.0**
comp=Z,33nm,0.9s
LPL La Plagne 83.47 356⇑*i*P **P 20 07 48.9 +1.0**
LPL pmax pmax
comp=Z,33nm,0.9s
LPL La Plagne 83.47 356⇑*i*P **P 20 07 48.9 +1.0**
comp=Z,33nm,0.9s
LPG La Plagne 83.48 356⇑*i*P **P 20 07 49.1 +1.0**
LPG La Plagne 83.48 356⇑*i*P **P 20 07 49.1 +1.0**
LPG La Plagne 83.48 356⇑*i*P **P 20 07 49.1 +1.0**
SZH Strazhica 83.50 342 *i* P **P 20 07 48.0 +0.1**
RSDY Resadiye-TOKAT 83.54 333 *e*P **P 20 07 49.5 +1.3**
PVL Pavlikeni 83.66 343 *i* P **P 20 07 49.0 +0.3**
DIVS Divibare 83.67 347 P **P 20 07 50.0 +1.1**
SSB Saint Sauveur 83.77 358 *e*P **P 20 07 49.2 -0.1**
SSB pmax pmax
comp=Z,96nm,1.6s
SSB Saint Sauveur 83.77 358 *e*P **P 20 07 49.2 -0.1**
comp=Z,96nm,1.6s
SSB Saint Sauveur 83.77 358 *e*P **P 20 07 49.9 +0.6**
RJF Les Rejaudoux 83.77 0⇑*i*P **P 20 07 49.1 -0.1**
comp=Z,61nm,0.7s
RJF *e*R
comp=Z,2µm,20.0s
RJF Les Rejaudoux 83.77 0⇑*i*P **P 20 07 49.1 -0.1**
RJF pmax pmax
comp=Z,61nm,0.7s
RJF Les Rejaudoux 83.77 0⇑*i*P **P 20 07 49.1 -0.1**
comp=Z,61nm,0.7s
UDBI Udbina 83.78 350 P **P 20 07 49.1 -0.3**
MPEP Malo Peshtene 83.81 344 *i* P **P 20 07 48.8 -0.7**
TOS Tosya 83.83 336 *e*P **P 20 07 51.3 +1.5**
LBL Lubilhac 83.84 359 *e*P **P 20 07 50.8 +1.1**
LBL Lubilhac 83.84 359 *e*P **P 20 07 50.8 +1.1**
LBL Lubilhac 83.84 359 *e*P **P 20 07 50.8 +1.1**
NVLJ Novalja 83.84 351 P **P 20 07 50.5 +0.9**
BNGB Bing ¶‖ 83.85 331 *e*P **P 20 07 51.2 +1.3**
BNI Bardonecchia 83.93 357 *e*P **P 20 07 51.5 +1.3**
BNI pmax pmax
comp=Z,335nm,1.8s
BNI Bardonecchia 83.93 357 *e*P **P 20 07 51.5 +1.3**
comp=Z,335nm,1.8s
SAFT Safranbolu 83.97 337 *e*P **P 20 07 51.8 +1.4**
SVSK Karacayir 84.08 334 *e*P **P 20 07 52.2 +1.3**
ORIF Oris-en-Rattie 84.09 357⇑*i*P **P 20 07 51.8 +0.8**
comp=Z,67nm,1.0s
ORIF *e*R
comp=Z,1µm,20.8s
ORIF Oris-en-Rattie 84.09 357⇑*i*P **P 20 07 51.8 +0.8**
ORIF pmax pmax
comp=Z,67nm,1.0s
ORIF Oris-en-Rattie 84.09 357⇑*i*P **P 20 07 51.8 +0.8**
comp=Z,67nm,1.0s
LFF La Frestale 84.13 1⇑*i*P **P 20 07 51.4 +0.3**
comp=Z,196nm,0.9s
LFF La Frestale 84.13 1⇑*i*P **P 20 07 51.4 +0.3**
LFF pmax pmax
comp=Z,196nm,0.9s
LFF La Frestale 84.13 1⇑*i*P **P 20 07 51.4 +0.3**
comp=Z,196nm,0.9s
JMB Yambol 84.15 342 P P 20 07 53.8 +2.6
JMB Yambol 84.15 342 *i* P **P 20 07 51.0 -0.2**
CAF Calviac 84.15 360⇑*i*P **P 20 07 51.6 +0.4**
comp=Z,101nm,1.0s
CAF Calviac 84.15 360⇑*i*P **P 20 07 51.6 +0.4**
CAF pmax pmax
comp=Z,101nm,1.0s
CAF Calviac 84.15 360⇑*i*P **P 20 07 51.6 +0.4**
comp=Z,101nm,1.0s
VIVF Saint-Julien-l 84.19 358⇑*i*P **P 20 07 51.8 +0.4**
comp=Z,139nm,1.3s
VIVF Saint-Julien-l 84.19 358⇑*i*P **P 20 07 51.8 +0.4**
VIVF pmax pmax
comp=Z,139nm,1.3s
VIVF Saint-Julien-l 84.19 358⇑*i*P **P 20 07 51.8 +0.4**
comp=Z,139nm,1.3s
MBDF Montbardon 84.25 356⇑*i*P **P 20 07 52.6 +0.7**
comp=Z,38nm,0.6s
MBDF Montbardon 84.25 356⇑*i*P **P 20 07 52.6 +0.7**
MBDF pmax pmax
comp=Z,38nm,0.6s
MBDF Montbardon 84.25 356⇑*i*P **P 20 07 52.6 +0.7**
comp=Z,38nm,0.6s
PTK Pertek 84.34 331 *e*P **P 20 07 53.9 +1.5**
CANT Cankiri 84.34 336 *e*P **P 20 07 53.7 +1.5**
OCF Saint Nazaire 84.45 357 *e*P **P 20 07 53.7 +0.9**
OG26 St.-Nazaire-De 84.45 357 *e*P **P 20 07 53.7 +0.9**
CORM Corum 84.48 335 *e*P **P 20 07 54.5 +1.4**
CUKT Cukurca 84.50 328 *e*P **P 20 07 54.0 +0.8**
PGB Panagyurishte 84.52 344 *i* P **P 20 07 53.2 +0.1**
HYB Hyderabad 84.58 291 *i* P **P 20 07 53.5 -0.3**

HYB *e*PcP **PcP** 20 07 58.5 +1.2
HYB *e*S **S** 20 18 20.0 +2.5
VTS Vitosha 84.64 344 P **P** 20 07 54.7 +0.8
VTS Vitosha 84.64 344 *i* P **P** 20 07 53.5 -0.4
VTS Vitosha 84.64 344 ⇑ *i* P **P** 20 07 53.8 -0.1
FITZ Fitzroy Crossi 84.70 232 P **P** 20 07 54.7 +0.6
FITZ Fitzroy Crossi 84.70 232 P **P** 20 07 54.7 +0.6
comp=Z,66nm,0.8s,baz=29,slow=5.2,SNR=148
FITZ LR LR 20 42 41.2
comp=Z,1μm,21.0s,baz=33,slow=34
UPM Unac-Piva 84.70 348 ⇑ *i* P **P** 20 07 54.1 -0.1
EDRB Edirne 84.71 342 *e*P **P** 20 07 54.7 +0.6
SILT Sile 84.77 339 *e*P **P** 20 07 54.6 +0.2
PLD Plovdiv 84.85 343 P **P** 20 07 56.7 +2.0
PLD Plovdiv 84.85 343 *i* P **P** 20 07 54.8 +0.1
IVA Berane 84.89 347 *e*P **P** 20 07 55.3 +0.2
BGKT Bogazkoy 84.93 340 *e*P **P** 20 07 55.3 +0.2
CTKS Kestanelik-??a 84.93 340 *e*P **P** 20 07 55.5 +0.4
TOUF Mont Tournerai 84.94 356 *e*P **P** 20 07 55.9 +0.5
TOUF Mont Tournerai 84.94 356 *e*P **P** 20 07 55.9 +0.5
TOUF Mont Tournerai 84.94 356 *e*P **P** 20 07 55.9 +0.5
AUTN L'Aution 84.95 356 *e*P **P** 20 07 55.9 +0.4
AUTN L'Aution 84.95 356 *e*P **P** 20 07 55.9 +0.4
AUTN L'Aution 84.95 356 *e*P **P** 20 07 55.9 +0.4
SAOF Saorge 84.96 356 *e*P **P** 20 07 55.3 0.0
SAOF Saorge 84.96 356 *e*P **P** 20 07 55.3 0.0
SAOF Saorge 84.96 356 *e*P **P** 20 07 55.3 0.0
LASF Ste Croix 84.98 358 ⇑ *i* P **P** 20 07 55.9 +0.5
comp=Z,117nm,1.3s
LASF Ste Croix 84.98 358 ⇑ *i* P **P** 20 07 55.9 +0.5
comp=Z,117nm,1.3s
SMRF Simiane la Rot 85.04 357 ⇑ *i* P **P** 20 07 56.8 +1.1
comp=Z,113nm,0.9s
SMRF Simiane la Rot 85.04 357 ⇑ *i* P **P** 20 07 56.8 +1.1
comp=Z,113nm,0.9s
BRY Bratogost 85.05 348 ⇑ *i* P **P** 20 07 56.3 +0.4
MDUB Mudurnu 85.06 338 *e*P **P** 20 07 56.7 +0.8
MVIF Mont Vial 85.07 356 *e*P **P** 20 07 56.2 +0.2
MVIF Mont Vial 85.07 356 *e*P **P** 20 07 56.2 +0.2
MVIF Mont Vial 85.07 356 *e*P **P** 20 07 56.2 +0.2
NKY Niksic 85.07 347 ⇑ *i* P **P** 20 07 56.4 +0.4
HRT Hereke 85.08 339 *e*P **P** 20 07 56.6 +0.6
SBF Sospel 85.09 356 ⇑ *i* P **P** 20 07 55.9 -0.1
comp=Z,206nm,0.9s
SBF Sospel 85.09 356 ⇑ *i* P **P** 20 07 55.9 -0.1
SBF pmax pmax
comp=Z,206nm,0.9s
SBF Sospel 85.09 356 ⇑ *i* P **P** 20 07 55.9 -0.1
comp=Z,206nm,0.9s
PVY Plav 85.15 347 ⇑ *i* P **P** 20 07 56.7 +0.3
MALT Malatya 85.16 332 *e*P P 20 08 05.0 +8.5
MALT Malatya 85.16 332 ⇑ *i* P P 20 08 05.1 +8.5
BRTR Keskin Array B 85.16 336 P **P** 20 07 56.9 +0.3
BRTR Keskin Array B 85.16 336 P **P** 20 07 56.9 +0.3
comp=Z,62nm,0.8s,baz=50,slow=2.8,SNR=286
BRTR LR LR 20 51 22.1
comp=Z,726nm,19.3s,baz=40,slow=39
STON Ston 85.19 348 P **P** 20 07 55.7 -0.7
DARE Darende-Malaty 85.19 333 *e*P **P** 20 07 58.1 +1.4
REVF Revere 85.21 356 *e*P **P** 20 07 56.7 +0.1
REVF Revere 85.21 356 *e*P **P** 20 07 56.7 +0.1
REVF Revere 85.21 356 *e*P **P** 20 07 56.7 +0.1
CALN Calern 85.22 356 *e*P **P** 20 07 56.9 +0.1
CALN Calern 85.22 356 *e*P **P** 20 07 56.9 +0.1
CALN Calern 85.22 356 *e*P **P** 20 07 56.9 +0.1
LOD Lodumlu 85.23 337 *e*P **P** 20 07 57.8 +1.0
ANTO Ankara 85.24 337 *e*P **P** 20 07 57.7 +0.8
ANTO Ankara 85.24 337 *e*P **P** 20 07 57.5 +0.7
ANTO pmax pmax
comp=Z,77nm,1.0s
ANTO Ankara 85.24 337 P **P** 20 07 57.7 +0.8
SNR=28
ANTO Ankara 85.24 337 *e*P **P** 20 07 57.5 +0.7
comp=Z,77nm,1.0s
ANTO Ankara 85.24 337 ⇓ *i* P **P** 20 07 57.5 +0.7
RZN Rozhen 85.25 343 *i* P P 20 07 48.8 -8.2
RZN *i* P P 20 07 48.8 -8.2
GULT Gulveren 85.25 338 *e*P **P** 20 07 57.6 +0.7
KKB Krupnik 85.37 344 *i* P **P** 20 07 57.6 +0.2
YLV Yalova 85.39 339 *e*P **P** 20 07 57.7 +0.2
BNN Bunyan 85.39 334 *e*P **P** 20 07 58.4 +0.7
TTG Podgorica 85.41 347 ⇑ *i* P **P** 20 07 57.7 +0.2
FRF La Foret Royal 85.42 356 ⇑ *i* P **P** 20 07 57.6 0.0
comp=Z,97nm,0.9s
FRF La Foret Royal 85.42 356 ⇑ *i* P **P** 20 07 57.6 0.0
FRF pmax pmax
comp=Z,97nm,0.9s
FRF La Foret Royal 85.42 356 ⇑ *i* P **P** 20 07 57.6 0.0
comp=Z,97nm,0.9s
ADVT Abdulvahap 85.43 339 *e*P **P** 20 07 57.3 -0.3
KAMT Kaman 85.48 336 *e*P **P** 20 07 58.0 -0.1
SDDR Presa de Saban 85.49 65 *e*P **P** 20 07 59.2 +0.8
comp=Z,16nm,0.8s
ARMT Armutlu 85.50 340 *e*P **P** 20 07 58.3 +0.2
MMB Musomiste 85.53 344 *i* P **P** 20 07 58.0 -0.2
SKO Skopje 85.54 345 *e*P **P** 20 07 59.4 +1.2
AFSR Af˙ar-Bala (A 85.57 336 *e*P **P** 20 07 58.8 +0.3
BUM Brajici-Budva 85.59 347 ⇑ *i* P **P** 20 07 58.4 -0.1
MFT Murefte 85.62 341 *e*P **P** 20 07 59.2 +0.5
RDO Rodhopi 85.62 342 P **P** 20 07 57.3 -1.3
RDO Rodhopi 85.62 342 *e*P **P** 20 07 59.5 +0.9
LMR La Mourre 85.65 357 ⇑ *i* P **P** 20 07 58.9 +0.2
comp=Z,80nm,0.9s
LMR La Mourre 85.65 357 ⇑ *i* P **P** 20 07 58.9 +0.2
LMR pmax pmax
comp=Z,81nm,0.9s
LMR La Mourre 85.65 357 ⇑ *i* P **P** 20 07 58.9 +0.2
comp=Z,80nm,0.9s
ASAR Alice Springs 85.68 223 P **P** 20 07 59.0 +0.1
ASAR Alice Springs 85.68 223 P **P** 20 07 59.0 +0.1
comp=Z,46nm,0.9s,baz=24,slow=5.6,SNR=253
ASAR LR LR 20 43 22.7
comp=Z,1μm,21.0s,baz=28,slow=34
MTLF Montolieu 85.73 360 ⇑ *i* P **P** 20 07 59.5 +0.3
comp=Z,74nm,0.9s
MTLF Montolieu 85.73 360 ⇑ *i* P **P** 20 07 59.5 +0.3
MTLF pmax pmax
comp=Z,74nm,0.9s
MTLF Montolieu 85.73 360 ⇑ *i* P **P** 20 07 59.5 +0.3
comp=Z,74nm,0.9s
NVR Nevrokopi 85.73 344 P **P** 20 07 58.9 -0.3
NVR Nevrokopi 85.73 344 *e*P **P** 20 08 00.1 +0.9
ALN Alexandroupoli 85.77 342 *e*P **P** 20 08 00.5 +1.2
ERIK Erikli-Kesan 85.89 341 *e*P **P** 20 07 59.8 -0.1
KCTX Karacabey (Bur 85.90 340 *e*P **P** 20 07 60.0 -0.1
SJPF Ste Jean 85.93 2 *e*P **P** 20 08 00.3 +0.2
comp=Z,40nm,0.7s
SJPF Ste Jean 85.93 2 *e*P **P** 20 08 00.3 +0.2
SJPF pmax pmax
comp=Z,40nm,0.7s
SJPF Ste Jean 85.93 2 *e*P **P** 20 08 00.3 +0.2
comp=Z,40nm,0.7s
PHP Peshkopia 85.97 346 P **P** 20 08 01.9 +1.5
VAY Valandovo 85.99 344 *e*P **P** 20 08 00.2 -0.2
KRBG Karabiga-Canak 86.00 341 *e*P **P** 20 07 58.8 -1.7
EPF Esparros 86.04 1 ⇑ *i* P **P** 20 08 00.2 -0.5
comp=Z,33nm,0.7s
EPF Esparros 86.04 1 ⇑ *i* P **P** 20 08 00.2 -0.5
EPF pmax pmax
comp=Z,33nm,0.7s
EPF Esparros 86.04 1 ⇑ *i* P **P** 20 08 00.2 -0.5
comp=Z,33nm,0.7s
MLS Moulis 86.12 0 *e*P **P** 20 08 01.3 +0.2
MLS Moulis 86.12 0 *e*P **P** 20 08 01.3 +0.2
ETSF Etsaut 86.16 2 *e*P **P** 20 08 01.9 +0.6
comp=Z,164nm,1.3s
ETSF Etsaut 86.16 2 *e*P **P** 20 08 01.9 +0.6
ETSF pmax pmax
comp=Z,164nm,1.3s
ETSF Etsaut 86.16 2 *e*P **P** 20 08 01.9 +0.6
comp=Z,164nm,1.3s
GELI Tayfur-Gelibol 86.16 341 *e*P **P** 20 08 00.9 -0.4
AQU L'Aquila 86.17 351 *e*P **P** 20 08 01.8 +0.4
comp=Z,120nm,0.8s
AQU L'Aquila 86.17 351 ⇑ *i* P **P** 20 08 01.1 -0.3
VIEF Viey 86.18 1 *e*P **P** 20 08 02.0 +0.5
VIEF Viey 86.18 1 *e*P **P** 20 08 02.0 +0.5
RESF Ens 86.26 1 *e*P **P** 20 08 02.6 +0.7
RESF Ens 86.26 1 *e*P **P** 20 08 02.6 +0.7
SOH Sokhos 86.34 344 *e*P **P** 20 08 02.0 -0.2
PGRA Graciosa 86.35 23 *e*LR LR 20 36 45.3
comp=Z,63nm,20.5s

KMRS Kahramanmaras 86.35 333 *e*P **P** 20 08 03.2 +0.9
GRG Griva 86.37 344 *e*P **P** 20 08 03.0 +0.6
TIR Tirane 86.39 346 *e*P **P** 20 08 02.6 +0.2
TIR pmax pmax
comp=Z,20nm,0.6s
TIR Tirane 86.39 346 *e*P **P** 20 08 02.6 +0.2
comp=Z,20nm,0.6s
KIZT Kizilcal 86.40 337 *e*P **P** 20 08 02.8 +0.1
POO Poona 86.41 295 ⇑ *i* P **P** 20 08 04.0 +1.1
comp=Z,190nm,1.0s
NIG Nigde 86.43 335 *e*P **P** 20 08 04.1 +1.1
BIA Bitola 86.48 345 *e*P **P** 20 08 02.4 -0.6
ROSA Rosais 86.58 23 *e*LR LR 20 37 09.3
comp=Z,87nm,19.7s
SULT Sultanhani-AKS 86.63 335 *e*P **P** 20 08 04.1 +0.3
ALT Altintas 86.66 338 *e*P **P** 20 08 04.2 +0.3
KOZT Kozan 86.68 334 *e*P **P** 20 08 04.7 +0.8
PGAV Gavieira, Arco 86.70 7 *e*P **P** 20 08 04.2 +0.1
comp=Z,55nm,1.7s
PGAV *e*SKS **S** 20 18 35.5 -2.3
PGAV *e*LQ LQ 20 31 34.5
PGAV *e*LR LR 20 36 51.2
comp=Z,800nm,18.0s
FNA Florina 86.71 345 P **P** 20 08 04.7 +0.6
FNA Florina 86.71 345 *e*P **P** 20 08 04.0 -0.1
PLG Polygyros 86.76 344 P **P** 20 08 03.5 -0.8
PLG Polygyros 86.76 344 *e*P **P** 20 08 04.0 -0.3
LIA Limnos Island 86.90 342 *e*P **P** 20 08 05.0 +0.1
LADK Ladik-KONYA 86.93 336 *e*P **P** 20 08 05.4 +0.2
PCAB Cabril 86.97 7 *e*P **P** 20 08 06.0 +0.7
comp=Z,34nm,1.4s
PBRG Braganca 86.97 6 *e*P **P** 20 08 05.4 +0.1
comp=Z,39nm,2.0s
SHUT Suhut-Afyon 87.03 338 *e*P **P** 20 08 06.1 +0.3
KARA Karaisali 87.10 334 *e*P **P** 20 08 06.5 +0.5
KZN Kozani 87.11 345 P **P** 20 08 05.8 -0.2
KZN Kozani 87.11 345 *e*P **P** 20 08 06.0 0.0
CEYT Ceyhan 87.14 333 *e*P **P** 20 08 06.9 +0.8
PAIG Paliouri 87.15 343 *e*P **P** 20 08 05.5 -0.6
KONT Konya--Tatoy 87.17 336 *e*P **P** 20 08 06.3 -0.1
LIT Litokhoron 87.19 344 *e*P **P** 20 08 05.5 -0.9
POLO Lamas de Olo 87.33 7 *e*P **P** 20 08 06.9 -0.2
comp=Z,15nm,1.4s
PVRL Vila Real 87.43 7 *e*P **P** 20 08 08.0 +0.5
comp=Z,47nm,1.4s
KULA Kula-Manisa 87.51 339 *e*P **P** 20 08 07.6 -0.4
MVO Moncorvo 87.59 7 *e*P **P** 20 08 08.2 -0.1
comp=Z,45nm,2.1s
MVO *e*SKS **S** 20 18 44.4 -1.9
MVO *e*LR LR 20 37 32.1
comp=Z,826nm,22.0s
THL Klokotos Trika 87.79 344 P **P** 20 08 08.1 -1.1
THL Klokotos Trika 87.79 344 *e*P **P** 20 08 08.5 -0.7
BHD Baghdad 87.83 325 *e*P **P** 20 08 07.7 -1.8
BHD *e*PP PP 20 11 28.7 -6.2
BHD *i* SKS **SKSac** 20 18 33.8 -0.1
BHD *i* S **S** 20 18 49.8 +1.2
NEO Neokhori 87.83 344 *e*P **P** 20 08 08.5 -1.0
JAN Janina 87.89 345 P **P** 20 08 10.3 +0.5
JAN Janina 87.89 345 *e*P **P** 20 08 10.5 +0.7
PVIS Viseu 87.97 7 *e*P **P** 20 08 10.3 +0.2
comp=Z,38nm,1.5s
KEK Kerkira 88.00 346 P **P** 20 08 10.3 +0.1
KEK Kerkira 88.00 346 *e*P **P** 20 08 10.0 -0.2
IGT Igoumenitsa 88.09 346 P **P** 20 08 11.3 +0.6
CMLA Cha da Macela 88.13 21 *e*LR LR 20 37 36.1
comp=Z,76nm,22.0s
CUC Castrocucco 88.25 349 *e*P **P** 20 08 09.4 -2.1
comp=Z,33nm,0.8s
AGG Agios Georgios 88.27 344 *e*P **P** 20 08 10.5 -1.0
MTE Manteigas 88.31 7 *e*P **P** 20 08 11.7 -0.1
comp=Z,38nm,1.1s
MTE *e*SKS S 20 18 45.1 -8.1
MTE *e*LR LR 20 37 49.0
comp=Z,651nm,18.0s
MTE Manteigas 88.31 7 *e*P **P** 20 08 11.1 -0.7
comp=Z,26nm,0.8s
IKL Isikli 88.43 335 *e*P **P** 20 08 11.5 -0.8
EVR Evrytania 88.46 344 P **P** 20 08 12.4 -0.1
EVR Evrytania 88.46 344 *e*P **P** 20 08 12.5 -0.1
LKR Lokris 88.51 344 *e*P **P** 20 08 11.5 -1.2
LRS Lares 88.55 62 *e*P **P** 20 08 13.6 +0.4
LKD2 Lefkada island 88.77 345 P **P** 20 08 13.3 -0.6
LKD2 Lefkada island 88.77 345 *e*P **P** 20 08 13.5 -0.4
CELP Cerrillos 88.87 62 *e*P **P** 20 08 15.4 +0.8
PCBR Castelo Branco 88.87 7 *e*P **P** 20 08 14.3 0.0
comp=Z,21nm,2.0s
OBIP Obispado Ponce 88.88 62 *e*P **P** 20 08 13.5 -1.1
comp=Z,61nm,1.2s
YER Yerkesik 88.91 339 *e*P **P** 20 08 13.5 -1.2
KALE Kalithea 88.91 344 *e*P **P** 20 08 14.0 -0.6
EFP Efpalio 88.92 344 *e*P **P** 20 08 15.0 +0.4
PTL Penteli 88.94 343 *e*P **P** 20 08 14.0 -0.7
TIP Timpagrande 88.94 348 P **P** 20 08 14.8 0.0
TIP Timpagrande 88.94 348 *e*P **P** 20 08 14.4 -0.4
comp=Z,77nm,1.0s
TRIZ Trizonia 88.95 344 *e*P **P** 20 08 14.0 -0.7
PSMN Pico do Norte, Graciosa 88.96 21 *e*LR LR 20 38 04.7
comp=Z,85nm,30.0s
PTOM Tomar 89.02 8 *e*P **P** 20 08 15.2 +0.2
comp=Z,52nm,1.3s
ATH Athens Observa 89.04 343 *e*P **P** 20 08 14.0 -1.1
LAKA Lakka 89.09 344 *e*P **P** 20 08 15.5 +0.1
LTK Loutraki 89.13 343 *e*P **P** 20 08 14.0 -1.6
DALY Dalyan (Mu˙la 89.13 339 *e*P **P** 20 08 14.5 -1.1
KLV Kalavryta, Ach 89.25 344 *e*P **P** 20 08 16.0 -0.2
ESDC Sonseca Array 89.26 4 P **P** 20 08 15.6 -0.6
ESDC Sonseca Array 89.26 4 P **P** 20 08 15.6 -0.6
comp=Z,11nm,0.7s,baz=350,slow=4.2,SNR=61
ESDC LR LR 20 50 02.4
comp=Z,633nm,19.8s,baz=5.0,slow=37
ESLA Sonseca Array 89.26 4 *e*P **P** 20 08 15.5 -0.8
comp=Z,18nm,1.5s
PMRV Marv??o 89.29 7 *e*P **P** 20 08 15.9 -0.4
comp=Z,40nm,1.5s
PMRV *e*SKS **SKSac** 20 18 47.8 +5.2
GUR Goura 89.32 344 *e*P **P** 20 08 16.0 -0.6
RLS Riolos of Patr 89.35 345 *e*P **P** 20 08 16.5 -0.1
PAB San Pablo 89.37 5 *e*P **P** 20 08 15.8 -1.0
PAB pmax pmax
comp=Z,9.0nm,0.8s
PAB San Pablo 89.37 5 *e*P **P** 20 08 15.8 -1.0
comp=Z,8.5nm,0.8s
VLS Valsamata 89.38 345 P **P** 20 08 15.7 -1.1
VLS Valsamata 89.38 345 *e*P **P** 20 08 17.0 +0.2
MTP Monte Pirata 89.42 61 *e*P **P** 20 08 17.8 +0.6
comp=Z,166nm,1.3s
STVI Saint Thomas 89.54 61 *e*P **P** 20 08 17.9 +0.2
comp=Z,29nm,0.6s
PMTG Montargil 89.58 8 *e*P **P** 20 08 16.9 -0.8
comp=Z,21nm,1.0s
DID Didima 89.58 343 *e*P P 20 08 14.0 -3.7
PMAFR Mafra 89.60 9 *e*P **P** 20 08 17.4 -0.4
comp=Z,80nm,1.3s
NIS1 Nisyros Isl. 89.67 340 *e*P **P** 20 08 17.0 -1.1
CSS Prodhromos 89.73 335 *e*P **P** 20 08 18.3 -0.2
CSS Prodhromos 89.73 335 P P 20 08 21.4 +2.9
CSS Prodhromos 89.73 335 *e*P **P** 20 08 18.0 -0.5
comp=Z,34nm,0.8s
ARG Arkhangelos 89.83 339 P **P** 20 08 17.0 -1.9
ARG Arkhangelos 89.83 339 *e*P **P** 20 08 17.5 -1.4
PESTR Estremoz 89.83 7 *e*P **P** 20 08 18.3 -0.6
comp=Z,45nm,1.7s
MIB Mutribah 89.83 322 *e*P **P** 20 08 18.3 -0.7
MIB AMb AMB 20 08 19.9
comp=Z,142nm,1.0s
VLX Vlachokerasia 89.87 344 *e*P **P** 20 08 18.5 -0.7
UMR Umm Al-Rimmam 89.91 321 *e*P **P** 20 08 18.4 -1.0
CEL Celeste 89.96 349 *e*P **P** 20 08 17.6 -2.0
comp=Z,79nm,0.9s
STKA Stephens Creek 90.06 213 P **P** 20 08 20.4 +0.7
STKA Stephens Creek 90.06 213 P **P** 20 08 20.4 +0.7
comp=Z,105nm,0.9s,baz=10,slow=6.4,SNR=76
STKA LR LR 20 45 45.9
comp=Z,2μm,20.1s,baz=19,slow=34
EVOP Sao Brissos 90.12 8 *e*P **P** 20 08 18.5 -1.7
EVOP pmax pmax
comp=Z,36nm,1.2s
EVOP Sao Brissos 90.12 8 *e*P **P** 20 08 18.5 -1.7
comp=Z,36nm,1.2s
EVO Evora 90.13 8 *e*P **P** 20 08 18.5 -1.7
comp=Z,36nm,1.2s
EVO *e*R
comp=Z,2μm,22.2s

ITM Ithomi 90.13 344 *e*P **P** 20 08 19.5 -0.8
KBD Kabd 90.25 321 *e*P **P** 20 08 20.4 -0.5
KBD AMb AMB 20 08 21.8
comp=Z,46nm,1.2s
NAY Al-Naaiem 90.36 321 *e*P **P** 20 08 20.4 -1.1
NAY AMb AMB 20 08 22.2
comp=Z,40nm,1.0s
VLI Velíai 90.40 343 *e*P **P** 20 08 19.5 -2.0
PNCL Nicolau / Gran 90.50 8 *e*P **P** 20 08 21.5 -0.5
comp=Z,26nm,1.7s
RDF Al-Radifah 90.53 321 *e*P **P** 20 08 21.6 -0.6
RDF AMb AMB 20 08 23.1
comp=Z,97nm,1.0s
PBAR Barrancos 90.56 7 *e*P **P** 20 08 22.0 -0.3
comp=Z,70nm,1.7s
PBEJ Beja 90.64 8 *e*P **P** 20 08 23.1 +0.4
comp=Z,32nm,1.5s
KARP Karpathos 90.69 340 *e*P **P** 20 08 21.5 -1.4
MESJ Messejana 90.80 8 *e*P **P** 20 08 23.4 0.0
MESJ AMb AMB 20 08 53.0
comp=Z,29nm,2.1s
MESJ *e*S **SKSac** 20 18 52.7 +1.4
MESJ Messejana 90.80 8 *e*P **P** 20 08 23.4 0.0
comp=Z,29nm,2.1s
MESJ *e*S **SKSac** 20 18 52.7 +1.4
MESJ Messejana 90.80 8 *e*P **P** 20 08 23.3 0.0
MESJ *e*S **SKSac** 20 18 52.7 +1.4
MMAI Mount Meron Ar 90.98 332 LR LR 20 57 59.8
comp=Z,964nm,18.4s,baz=60,slow=41
PCVE Castro Verde 91.02 8 *e*P **P** 20 08 24.6 +0.2
comp=Z,22nm,2.1s
ANKY Antikythira Is 91.16 343 *e*P **P** 20 08 25.0 -0.1
PVAQ Vaqueiros 91.27 8 *e*P **P** 20 08 25.4 -0.2
comp=Z,48nm,1.6s
PVAQ *e*LR LR 20 39 32.1
comp=Z,854nm,20.0s
MORF Marmelete 91.29 8 *e*P **P** 20 08 26.0 +0.3
MORF *e*S **SKSac** 20 18 55.6 +1.3
NPS Neapolis 91.29 341 *e*P **P** 20 08 23.5 -2.2
ZKR Zakros 91.31 340 *e*P **P** 20 08 25.0 -0.8
ASF Jabal al Asfar 91.31 331 LR LR 20 56 16.1
comp=Z,1μm,19.7s,baz=264,slow=40
IDI Anoyia 91.41 341 *e*P **P** 20 08 24.0 -2.4
LAST Lasithi 91.42 341 P **P** 20 08 26.5 +0.1
LAST Lasithi 91.42 341 *e*P **P** 20 08 25.5 -0.9
VAM Vamos 91.44 342 *e*P **P** 20 08 25.5 -0.9
ARQ Araqi 91.51 311 P **P** 20 08 27.0 0.0
SNR=9.2
SIVA Sivas 91.69 341 *e*P **P** 20 08 26.5 -1.0
BSY Bisya 91.70 310 P **P** 20 08 28.1 +0.2
SNR=6.3
KEST Kesra 93.08 354 *e*P **P** 20 08 33.3 -0.8
KEST Kesra 93.08 354 P **P** 20 08 33.8 -0.2
comp=Z,6.7nm,1.0s,baz=323,slow=4.9,SNR=9.1
EIL Elat 94.24 331 LR LR 20 59 38.8
comp=Z,1μm,18.1s,baz=207,slow=41
MDT Midelt 96.05 5 LR LR 20 52 51.3
comp=Z,652nm,20.9s,baz=0.8,slow=36
RAYN Ar Rayn 96.17 320 P **P** 20 08 48.5 +0.1
comp=Z,183nm,0.8s,SNR=15
TORD Torodi Ar. Bea 115.82 0 PKP **PKPdf** 20 14 02.7 -0.2
TORD SKP 20 17 35.0
TORD PKKPbc **PKKPbc** 20 24 33.2 +0.8
TORD Torodi Ar. Bea 115.82 0 PKP **PKPdf** 20 14 02.7 -0.2
comp=Z,2.6nm,0.5s,baz=354,slow=2.1,SNR=44
TORD SKP 20 17 35.0
comp=Z,1.8nm,0.9s,baz=346,slow=2.3,SNR=5.0
TORD PKKPbc **PKKPbc** 20 24 33.2 +0.8
comp=Z,6.0nm,0.9s,baz=168,slow=3.4,SNR=18
KMBO Kilima Mbogo 121.76 317 PKP **PKPdf** 20 14 14.9 +0.3
KMBO Kilima Mbogo 121.76 317 PKP **PKPdf** 20 14 14.9 +0.3
comp=Z,2.2nm,0.8s,baz=43,slow=21,SNR=5.6
DRV Dumont d'Urvil 121.83 198 L L 20 25 00.0
DRV SP SP 20 25 39.0 +4.1
DRV R 20 32 00.0
DRV SS **SS** 20 32 22.0 +0.8
DBIC Dimbokro 121.98 8 PKP **PKPdf** 20 14 14.5 -0.3
DBIC Dimbokro 121.98 8 PKP **PKPdf** 20 14 14.5 -0.3
comp=Z,11nm,0.4s,baz=340,slow=2.6,SNR=44
LIC Lamto 122.40 8 *e*PKIKP **PKPdf** 20 14 15.2 -0.4
comp=Z,18nm,0.5s
LIC *e*R
comp=Z,1μm,21.2s
LIC Lamto 122.40 8 *e*PKPdf **PKPdf** 20 14 15.2 -0.4
BDFB Brasilia 126.80 67 PKP **PKPdf** 20 14 23.7 -0.2
BDFB Brasilia 126.80 67 PKP **PKPdf** 20 14 23.7 -0.2
comp=Z,2.7nm,0.7s,baz=180,slow=2.0,SNR=3.6
VNDA Vanda 129.15 185 PKP **PKPdf** 20 14 26.7 +0.2
VNDA Vanda 129.15 185 PKP **PKPdf** 20 14 26.7 +0.2
comp=Z,3.3nm,1.0s,baz=45,slow=1.4,SNR=7.3
PLCA Paso Flores 130.60 108 PKP **PKPdf** 20 14 30.7 +0.2
PLCA Paso Flores 130.60 108 PKP **PKPdf** 20 14 30.7 +0.2
comp=Z,20nm,1.0s,baz=295,slow=2.7,SNR=12
PMSA Palmer Station 144.44 138 *e*PKPdf PKPbc 20 14 53.4 -0.2
PMSA Palmer Station 144.44 138 PKP PKPbc 20 14 53.5 -0.1
comp=Z,61nm,0.9s,baz=311,slow=0.4
TSUM Tsumeb 145.62 333 *e*PKPdf **PKPab** 20 14 59.0 -0.2
MAW Mawson 146.64 218 PKPbc **PKPab** 20 15 00.4 -1.2
MAW Mawson 146.64 218 PKPbc **PKPab** 20 15 00.4 -1.2
comp=Z,91nm,1.0s,baz=79,slow=2.8,SNR=77
LBTB Lobatse 148.03 316 *e*PKPbc **PKPab** 20 15 06.5 -1.9
BOSA Boshof 151.29 313 *e*PKPbc **PKPbc** 20 15 14.2 +0.6
BOSA Boshof 151.29 313 PKPbc **PKPbc** 20 15 14.4 +0.8
comp=Z,37nm,0.5s,baz=42,slow=2.8,SNR=108
SYO Syowa Base 154.80 211 ⇓ *e*PKPdf **PKPdf** 20 15 09.6 -1.6
SYO Syowa Base 154.80 211 ⇓ *e*PKPbc **PKPbc** 20 15 18.6 -1.2
SYO Syowa Base 154.80 211 ⇓ *i*pPKPbc pPKPbc 20 15 33.6 -0.1
SNAA Sanae 159.45 176 *e*PKPdf **PKPdf** 20 15 16.0 -1.1
SNAA Sanae 159.45 176 *e*PKPab **PKPab** 20 15 52.7 -2.7
SNAA Sanae 159.45 176 *ep*PKPab pPKPab 20 16 08.0 -0.9
SNAA Sanae 159.45 176 *e*PKPdf **PKPdf** 20 15 15.4 -1.7
SNAA PKP PKP 20 15 16.0
SNAA PKPab **PKPab** 20 15 53.7 -1.7
SNAA Sanae 159.45 176 PKP **PKPdf** 20 15 16.0 -1.1
comp=Z,3.4nm,1.0s,baz=183,slow=2.9,SNR=13
SNAA PKPab **PKPab** 20 15 53.7 -1.7
comp=Z,6.9nm,0.9s,baz=202,slow=6.5,SNR=19
VNA1 Neumayer--Stat 160.04 170 *e*PKPdf **PKPdf** 20 15 17.7 0.0
VNA1 Neumayer--Stat 160.04 170 *e*PKPab **PKPab** 20 15 57.4 -0.4

NEIC 22 19:56:45.3, 61.93N×150.69W, h61km, ML4.0(AEIC),
After AEIC., Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.40**	**278**	P	Pn	19 56 55.6	-0.8
TRAP	**Trapper Creek**	**0.46**	**27**	P	Pn	19 56 56.1	-0.7
TRAP				S	Sn	19 57 05.5	+0.2
STLK	**Strandline Lak**	**0.69**	**232**	P	Pn	19 56 58.9	-0.7
PMR	**Palmer**	**0.81**	**114**	P	Pn	19 56 59.9	-1.0
PMR				S	Sn	19 57 11.8	-0.7
CGLM	**Capps Glacier**	**0.88**	**226**	P	Pn	19 57 01.2	-0.8
CGLM				S	Sn	19 57 13.7	-0.5
RC01	**Rabbit Creek A**	**0.96**	**151**	P	Pn	19 57 01.8	-1.0
RC01				S	Sn	19 57 15.3	-0.4
SPU	**Mount Spurr**	**0.99**	**222**	P	Pn	19 57 02.5	-0.8
BGL	**Barrier Glacie**	**1.05**	**231**	P	Pn	19 57 03.5	-0.6
CKL	**Chakachamna La**	**1.08**	**228**	P	Pn	19 57 03.7	-0.8
SML	**Sawmill**	**1.12**	**95**	P	Pn	19 57 04.1	-0.9
SML				S	Sn	19 57 19.9	+0.2
PPLA	**Purkeypile**	**1.20**	**325**	P	Pn	19 57 05.3	-0.8
PPLA				S	Sn	19 57 20.9	-0.7
SLKM	**Skilak Lake**	**1.44**	**171**	P	Pn	19 57 08.1	-1.1
TRF	**Thorofare Moun**	**1.54**	**7**	P	Pn	19 57 09.6	-1.1
TRF				S	Sn	19 57 29.1	-0.9
CAST	**Castle Rocks**	**1.63**	**337**	P	Pn	19 57 11.1	-0.6
CAST				S	Sn	19 57 31.1	-0.6
DFR	**Drift River**	**1.65**	**217**	P	Pn	19 57 11.7	-0.4
RDJH	**Redoubt Jeurge**	**1.69**	**218**	P	Pn	19 57 12.2	-0.4
RSO	**Redoubt South**	**1.78**	**215**	*e*Pn	Pn	19 57 13.4	-0.6
RDWB	**Redoubt West**	**1.78**	**217**	P	Pn	19 57 13.7	-0.2
DHY	**Denali Highway**	**1.93**	**52**	P	Pn	19 57 15.2	-0.8
DHY				S	Sn	19 57 40.0	+0.8
MCK	**McKinley**	**1.98**	**23**	P	Pn	19 57 16.1	-0.4
MCK				S	Sn	19 57 40.5	+0.2
CHUM	**Lake Minchumin**	**2.10**	**340**	P	Pn	19 57 17.4	-0.6
ILIM	**Iliamna**	**2.16**	**212**	P	Pn	19 57 19.1	+0.1
BRLK	**Bradley Lake**	**2.17**	**183**	P	Pn	19 57 19.6	+0.5
VLZ	**Valdez**	**2.24**	**109**	P	Pn	19 57 18.3	-1.6
SVW2	**Sparrevohn**	**2.49**	**253**	P	Pn	19 57 22.4	-1.0
DIV	**Divide**	**2.49**	**107**	P	Pn	19 57 21.9	-1.6
OPT	**Oil Point**	**2.60**	**210**	P	Pn	19 57

HARP	HAARP	2.64	77	P	Pn	19 57 25.4	-0.1
PAX	Paxson	2.64	64	*e*Pn	Pn	19 57 25.5	-0.1
TT01	Tatalina	2.67	294	P	Pn	19 57 24.7	-1.1
NEA	Nenana	2.76	15	P	Pn	19 57 25.8	-1.2
EYAK	Cordova Ski Ar	2.76	118	P	Pn	19 57 24.9	-2.1
WRH	Wood River Hil	2.81	24	P	Pn	19 57 26.9	-0.8
AUNW	Augustine NWes	2.90	209	P	Pn	19 57 29.0	+0.1
AUW	Augustine West	2.91	209	P	Pn	19 57 29.4	+0.3
CCB	Clear Creek Bu	3.03	24	P	Pn	19 57 29.7	-1.0
MLY	Manley	3.12	360	P	Pn	19 57 31.1	-0.9
COLA	College	3.22	22	P	Pn	19 57 32.5	-0.9
MDM	Murphy Dome	3.24	19	P	Pn	19 57 32.7	-0.9
RIDG	Independ'e Rid	3.24	53	P	Pn	19 57 34.1	+0.4
IL1	Eielson Array	3.33	29	P	Pn	19 57 33.8	-1.1
GLM	Gilmore Dome	3.41	24	P	Pn	19 57 35.4	-0.6
DOT	Dot Lake	3.50	58	P	Pn	19 57 36.7	-0.5
VRDI	Verde Repeater	3.53	98	P	Pn	19 57 36.7	-1.1
MCARA	McCarthy VSAT	3.70	95	P	Pn	19 57 39.3	-0.6
PTPK	Patty Peak	4.01	97	P	Pn	19 57 43.2	-1.1
BALM	Baldy	4.10	99	P	Pn	19 57 44.4	-1.2
KIAG	Kiagna River	4.13	100	P	Pn	19 57 44.6	-1.4
KAKN	Katmai Knife C	4.25	213	P	Pn	19 57 48.0	+0.5
KDAK	Kodiak Island	4.27	194	P	Pn	19 57 47.1	-0.5
BCA3	Beaver Creek A	4.29	71	P	Pn	19 57 47.0	-1.0
IM3	Indian Mountai	4.29	343	P	Pn	19 57 47.1	-0.8
KABU	Katmai Buttres	4.33	214	P	Pn	19 57 48.1	-0.5
BARN	Barnard Glacie	4.42	97	P	Pn	19 57 48.9	-1.1
GRNC	Granite Creek	4.47	102	P	Pn	19 57 49.1	-1.6
OHAK	Old Harbor	4.90	197	P	Pn	19 57 55.4	-0.8
EGAK	Eagle 85nm,0.6s	5.16	52	*e*P	Pn	19 57 58.8	-1.0
COLD	Coldfoot	5.33	2	P	Pn	19 58 01.5	-0.6
DAWY	Dawson	5.58	62	P	Pn	19 58 04.9	-0.7
BM3	Burnt Mountain	6.10	23	P	Pn	19 58 11.9	-0.8

*ISCJB **22** 20:01:01.6±0.7, 76°.23N±0°.05×7°.4E±0°.3, h10km, mb4.1/6, Error ellipse: s-maj=12.4km s-min=5.7km az=25.6*
*BER **22** 20:01:04.5±3.2, 75°.98N×8°.48E, h15km, 999km, MD2.3*
*IDC **22** 20:01:04.8±1.8, 76°.23N×7°.67E, h0km, mb3.7/2, mb1 3.7/5, mb1mx3.5/29, mbtmp3.6/5, ML2.8/3, MS2.9/1, Ms1 2.9/1, ms1mx2.6/50, Error ellipse: s-maj=35.0km s-min=17.8km az=104.0*

ISC 22 20:01:03.4±0.8, 76°.23N±0°.06×7°.40E±0°.07, h10km, n17, σ1§82/21, mb4.4/6, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	Hornsund	2.05	64	*e*P	Pn	20 01 38.0	+0.1
HSP				*e*S	Sn	20 02 00.8	-2.6
SPA0	Spitsbergen Ar	2.80	41	*e*P	Pn	20 01 49.0	+0.9
SPA0				*e*S	Sn	20 02 20.8	-1.1
SPITS	Spitsbergen Ar baz=214,slow=17,SNR=187	2.80	41	Pn	Pn	20 01 48.9	+0.8
SPITS				LR	LR	20 02 53.8	
	comp=Z,199nm,19.3s,baz=355,slow=40						
KBS	Kingsbay	2.88	18	*e*P	Pn	20 01 49.8	+0.5
KBS				*e*S	Sn	20 02 22.8	-1.1
BJO	Bjornoya	3.45	114	*e*Pg	Pn	20 01 57.8	+0.7
BJO				*e*Sg	Sn	20 02 34.3	-3.7
DAG	Danmarks Havn	6.09	288	*i* P	Pn	20 02 31.2	-2.1
DAG				*i* S	Sn	20 03 33.7	-9.2
ARCES	ARCESS Array B 0.2nm,0.3s,baz=334,slow=14,SNR=4.6	8.53	133	Pn	Pn	20 03 06.7	-0.1
NB2	NORSAR Subarra comp=Z,1.9nm,0.8s,baz=351,slow=7.4	15.32	173	P	P	20 04 43.2	-0.9
NOA	NORSAR Array B comp=Z,0.1nm,0.3s,baz=353,slow=12,SNR=3.9	15.32	173	Pn	P	20 04 46.9	+2.7
FINES	FINESS Array B comp=Z,0.1nm,0.3s,baz=338,slow=14,SNR=3.5	16.16	146	Pn	P	20 04 52.3	-1.1
HFS	Hagfors comp=Z,0.1nm,0.3s,baz=338,slow=13,SNR=2.3	16.32	169	Pn	Pn	20 04 51.7	-0.5
GERES	GERESS Array B comp=Z,0.3nm,0.4s,baz=45,slow=11,SNR=5.1	27.60	171	P	P	20 06 54.3	+3.8
SGMF	Saint Gilles comp=Z,38nm,1.5s	28.37	194	*e*P	P	20 06 56.9	-0.3
AVF	Avril sur Loir comp=Z,12nm,1.0s	29.59	186	*e*P	P	20 07 07.9	-0.1
SMF	Signal de Mont comp=Z,31nm,1.4s	29.72	185	*e*P	P	20 07 08.9	-0.3
TCF	Toulx Ste Croi comp=Z,14nm,1.2s	30.12	187	*e*P	P	20 07 12.7	-0.1
TORD	Torodi Ar. Bea comp=Z,1.0nm,0.9s,baz=359,slow=6.6,SNR=2.6	63.15	186	P	P	20 11 33.4	+2.4

IDC 22 20:19:12.2±1.4, 3°.43N×126°.09E, h0km, mb3.8/5, mb1 4.0/5, mb1mx3.5/23, mbtmp3.8/5, Error ellipse: s-maj=103.8km s-min=21.1km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi 4.5nm,0.4s,baz=13,slow=8.4,SNR=47	21.40	181	P	P	20 24 01.3	-0.4
WRA	Warramunga Arr 2.7nm,0.6s,baz=340,slow=10,SNR=15	24.60	161	P	P	20 24 35.0	+0.6
ASAR	Alice Springs 0.4nm,0.6s,baz=340,slow=7.4,SNR=12	27.99	165	P	P	20 25 05.2	+0.2
STKA	Stephens Creek 2.0nm,1.0s,baz=329,slow=12,SNR=4.8	38.08	158	P	P	20 26 32.2	-0.6
MKAR	Makanchi Array 0.2nm,0.3s,baz=119,slow=8.0,SNR=6.3	57.44	326	P	P	20 29 03.4	+0.5
MKAR				PcP	PcP	20 29 55.3	-1.4
	0.5nm,0.8s,baz=134,slow=4.1,SNR=4.5						

*ISCJB **22** 20:24:14.2±1.2, 50°.9N±0°.2×178°.18W±0°.08, h34km, mb3.4/4, Error ellipse: s-maj=22.8km s-min=5.8km az=11.3*
*NEIC **22** 20:24:15.5, 50°.92N×178°.24W, h23km, ML3.3(AEIC), After AEIC.*
*IDC **22** 20:24:19.1±2.3, 51°.22N×176°.67W, h0km, mb3.4/4, mb1 3.9/5, mb1mx3.5/29, mbtmp3.6/5, Error ellipse: s-maj=64.1km s-min=31.3km az=2.0*

ISC 22 20:24:15.7±1.4, 51°.1N±0°.2×178°.21W±0°.05, h34km, n13, σ1§29/16, mb3.6/4, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AMKA	Amchitka	1.60	282	P	Pn	20 24 41.3	-0.3
AMKA				S	Sn	20 25 00.4	-0.6
CERB	Semis' Cerberu	1.61	304	P	Pn	20 24 42.6	+0.9
CERB				S	Sn	20 25 01.9	+0.7
CESW	Semis' Southwe	1.63	302	P	Pn	20 24 42.2	+0.3
CESW				S	Sn	20 25 03.1	+1.4
CETU	Semis' Tuman	1.70	303	P	Pn	20 24 43.5	+0.6
CETU				S	Sb	20 25 06.5	-0.8
LSPA	Little Sitkin	2.20	295	P	Pn	20 24 50.4	+0.6
LSNW	Little Sitkin	2.24	295	P	Pn	20 24 50.4	+0.1
KOWE	Korovin West	2.79	61	P	Pn	20 24 58.6	+0.7
KOFP	Korovin Flat P	2.83	63	P	Pn	20 24 58.9	+0.3
KDAK	Kodiak Island 1.1nm,0.3s,baz=281,slow=5.2,SNR=6.6	16.29	56	Pn	Pn	20 27 58.3	-3.3
ILAR	Eielson Array 0.2nm,0.4s,baz=241,slow=10,SNR=4.8	21.26	38	P	P	20 28 58.8	+0.1
PDAR	Pinedale Array 0.8nm,0.6s,baz=323,slow=6.8,SNR=4.1	46.05	72	P	P	20 32 35.6	-0.6
TXAR	Lajitas Array 0.3nm,0.7s,baz=312,slow=5.9,SNR=2.3	58.33	81	P	P	20 34 09.6	+2.2
MKAR	Makanchi Array 0.5nm,0.9s,baz=54,slow=9.7,SNR=3.6	60.52	309	P	P	20 34 35.1	+13

JMA 22 20:55:53.1±0.2, 43°.71N×146°.29E, h106km±2km, M3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.53	229	P	Pn	20 56 09.8	+0.1
NEM2				*e*S	Sn	20 56 22.3	+0.2
JRA	Rausu	0.88	285	P	Pn	20 56 12.7	+0.1
JRA				*e*S	Sn	20 56 28.4	+1.0
JNK	Nakash	1.15	264	P	Pn	20 56 15.5	0.0
JAK	Akkeshi	1.36	239	P	Pn	20 56 18.0	0.0
JAK				*e*S	Sn	20 56 37.2	+0.3
JTKR	Abashiri--Toko	1.74	279	P	Pn	20 56 22.4	-0.2
JTKR				*e*S	Sn	20 56 45.1	0.0
JAR	Ashorobuto	1.88	258	P	Pn	20 56 24.9	+0.5
JOB	Onbets	1.96	247	P	Pn	20 56 25.8	+0.4
JOB				*e*S	Sn	20 56 50.4	+0.3
JMP	Maruseppu	2.14	279	P	Pn	20 56 27.6	-0.1
JCH	Churui	2.41	244	P	Pn	20 56 31.1	0.0
JCH				*e*S	Sn	20 56 59.8	-0.5
JKK2	Kamakawa 2	2.57	275	P	Pn	20 56 33.3	0.0
ASAJ	Asahikawa	2.70	280	P	Pn	20 56 35.3	+0.3

*STR **22** 20:58:29.0±3.5, 41°.89N×14°.53E, h10km, Ml4.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*ISCJB **22** 20:58:39.7±0.2, 42°.50N±0°.01×13°.36E±0°.01, h10km±1km, mb4.5/53, MS4.5/10, Error ellipse: s-maj=1.9km s-min=1.4km az=34.0*
*PRU **22** 20:58:39.5, 42°.53N×13°.21E, h0km, M4.7*
*LDG **22** 20:58:39.5±0.1, 42°.46N×13°.31E, h10km, Ml4.3/13, Error ellipse: s-maj=2.7km s-min=1.9km az=19.0*
*IDC **22** 20:58:39.7±0.5, 42°.55N×13°.26E, h0km, mb4.3/23, mb1 4.4/34, mb1mx4.3/41, mbtmp4.3/34, ML4.1/10, MS3.7/8, Ms1 3.7/8, ms1mx3.4/47, Error ellipse: s-maj=11.0km s-min=9.2km az=102.0*
*MOS **22** 20:58:40.0±1.0, 42°.57N×13°.36E, h10km, mb5.0/19, Error ellipse: s-maj=4.1km s-min=2.7km az=97.3*
*PDG **22** 20:58:40.5±0.6, 42°.48N×13°.35E, h10km, ML4.5/7, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*SZGRF **22** 20:58:40.0, 42°.30N×13°.53E, h10km, mb4.8, Central Italy*
*BJI **22** 20:58:40.3, 43°.01N×13°.11E, h15km, mB4.9/14, mb4.8/32, Ms5.0/8, Ms7 4.7/8*
*NEIC **22** 20:58:40.0, 42°.45N×13°.36E, h14km, mb4.7/14, ML4.7(STR), ML4.6(PDG), ML4.3(LDG), MW4.7(ROM), After ROM.*
NEIC Felt [VI] at Fano Adriano, Scoppito and Tornimparte; [V] at L'Aquila and Pizzoli; [IV] at Ascoli Piceno, Avezzano, Bellante, Campli, Celano, Colleferro, Isola del Gran Sasso d'Italia, Magliano de' Marsi, Montorio al Vomano, Penne, Rieti, Roseto degli Abruzzi and Teramo; [III] at Chieti, Ciampino, Frosinone, Guidonia Montecelio, Latina, Macerata, Monterotondo, Montesilvano, Pescara, Rome, Sulmona, Terni, Tivoli and Velletri. Felt throughout Abruzzo, Lazio, Marche and Umbria and in parts of Campania and Molise.
*CSEM **22** 20:58:40.4±0.1, 42°.48N×13°.36E, h2km, mb4.8/20, ML4.7/19, Mw4.7, Error ellipse: s-maj=1.9km s-min=1.6km az=28.0*
*ROM **22** 20:58:40.2±0.0, 42°.45N×13°.35E, h14km, Ml4.6/36, Error ellipse: s-maj=0.7km s-min=0.5km az=74.0*
*PDA **22** 20:58:41.2, 42°.54N×13°.40E, h5km, mb4.7*

ISC 22 20:58:41.7±0.4, 42°.45N±0°.01×13°.35E±0°.01, h15km±2km, n884, σ1§49/1011, mb4.7/53, MS4.6/10, 81C-33D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	Campotosto	0.10	27	*i*Pg	Pg	20 58 43.7	-1.5
CAMP				Sg	Sg	20 58 45.9	-1.5
	180µm,0.8s						
CAMP	Campotosto	0.10	27	P	Pg	20 58 43.7	-1.5
CAMP				S	Sg	20 58 46.0	-1.5
CAMP	Campotosto	0.10	27	*i*Pg	Pg	20 58 43.7	-1.5
CAMP				S	Sg	20 58 46.0	-1.5
AQU	L'Aquila	0.10	157	*i*Pg	Pg	20 58 43.8	-1.3
AQU				Sg	Sg	20 58 46.2	-1.2
AQU	L'Aquila	0.10	157	*e*Pg	Pg	20 58 43.2	-2.0
AQU	L'Aquila	0.10	157	*e*P	Pg	20 58 43.2	-2.0
AQU	L'Aquila	0.10	157	*i*Pg	Pg	20 58 43.8	-1.3
AQU				Sg	Sg	20 58 46.2	-1.2
FIAM	Fiamignano	0.25	224	*i*Pg	Pg	20 58 46.1	-1.2
FIAM				Sg	Sg	20 58 50.3	-0.7
	244µm,0.8s						
FIAM	Fiamignano	0.25	224	P	Pg	20 58 46.1	-1.2
FIAM				S	Sg	20 58 50.3	-0.7
FIAM	Fiamignano	0.25	224	*i*Pg	Pg	20 58 46.1	-1.2
FIAM				Sg	Sg	20 58 50.3	-0.7
	244µm,0.8s						
TERO	Teramo	0.26	47	Pg	Pg	20 58 45.9	-1.5
TERO				Sg	Sg	20 58 50.0	-1.2
	62µm,0.5s						
TERO	Teramo	0.26	47	P	Pg	20 58 43.8	-3.6
TERO				S	Sg	20 58 50.0	-1.2
TERO	Teramo	0.26	47	P	Pg	20 58 43.8	-3.6
TERO	Teramo	0.26	47	Pg	Pg	20 58 45.9	-1.5
TERO				Sg	Sg	20 58 50.0	-1.2
	62µm,0.5s						
LNSS	Leonessa	0.28	304	*i*Pg	Pg	20 58 46.4	-1.2
LNSS				Sg	Sg	20 58 51.2	-0.6
	87µm,0.6s						
LNSS	Leonessa	0.28	304	P	Pg	20 58 46.5	-1.2
LNSS				S	Sg	20 58 51.2	-0.6
LNSS	Leonessa	0.28	304	*i*P	Pg	20 58 46.5	-1.2
GAVE	Gavelli	0.41	306	*e*Pg	Pg	20 58 48.8	-1.3
GAVE	Gavelli	0.41	306	*e*Pg	Pg	20 58 48.8	-1.3
NRCA	Norcia	0.42	336	Pg	Pg	20 58 48.7	-1.6
NRCA				Sg	Sg	20 58 55.3	-0.8
	29µm,0.1s						
NRCA	Norcia	0.42	336	P	Pg	20 58 48.7	-1.6
NRCA				S	Sg	20 58 55.3	-0.8
NRCA	Norcia	0.42	336	Pg	Pg	20 58 48.7	-1.6
PTQR	Pietraquaria	0.43	175	*i*Pg	Pg	20 58 49.0	-1.4
PTQR	Pietraquaria	0.43	175	P	Pg	20 58 49.0	-1.4
PTQR	Pietraquaria	0.43	175	*i*Pg	Pg	20 58 49.0	-1.4
MNS	Montasola	0.50	263	P	Pg	20 58 50.0	-1.6
MNS				S	Sg	20 58 57.5	-0.8
MNS	Montasola	0.50	263	*e*Pg	Pg	20 58 50.0	-1.6
MNS				Sg	Sg	20 58 57.5	-0.8
	33µm,0.6s						
MNS	Montasola	0.50	263	P	Pg	20 58 50.0	-1.6
MNS				S	Sg	20 58 57.5	-0.8
MNS	Montasola	0.50	263	*e*Pg	Pg	20 58 50.0	-1.6
MNS				Sg	Sg	20 58 57.5	-0.8
	33µm,0.6s						
OFFI	Offida	0.55	27	*i*Pg	Pg	20 58 51.7	-0.8
	119µm,1.1s						
OFFI	Offida	0.55	27	*i*Pg	Pg	20 58 51.7	-0.8
	119µm,1.1s						
TRTR	Tortoreto Alta	0.55	49	Pg	Pg	20 58 51.9	-0.7
TRTR	Tortoreto Alta	0.55	49	P	Pg	20 58 52.0	-0.7
TRTR	Tortoreto Alta	0.55	49	Pg	Pg	20 58 51.9	-0.7
CERT	Cerreto	0.57	209	Pg	Pg	20 58 51.3	-1.7
CERT				Sg	Sg	20 58 59.9	-0.6
	279µm,0.8s						
CERT	Cerreto	0.57	209	P	Pg	20 58 51.3	-1.7
CERT	Cerreto	0.57	209	Pg	Pg	20 58 51.3	-1.7
CERT				Sg	Sg	20 58 59.9	-0.6
	279µm,0.8s						
CESX	Cesi	0.59	286	Pg	Pg	20 58 51.5	-1.9
CESX				Sg	Sg	20 59 00.0	-1.2
	27µm,0.5s						
CESX	Cesi	0.59	286	Pg	Pg	20 58 51.5	-1.9
CESX				Sg	Sg	20 59 00.0	-1.2
	27µm,0.5s						
INTR	Introdacqua 42µm,0.6s	0.60	136	Pg	Pg	20 58 51.8	-1.8
INTR	Introdacqua	0.60	136	P	Pg	20 58 51.9	-1.7
INTR	Introdacqua	0.60	136	P	Pg	20 58 51.9	-1.7
VVLD	Villa Vallelon 26µm,0.7s	0.61	160	Pg	Pg	20 58 51.9	-1.9
VVLD	Villa Vallelon 26µm,0.7s	0.61	160	Pg	Pg	20 58 51.9	-1.9
FDMO	Fiordimonte	0.62	342	*i*Pg	Pg	20 58 52.0	-1.9
FDMO				Sg	Sg	20 59 01.7	-0.4
	11µm,0.6s						
FDMO	Fiordimonte	0.62	342	*i*Pg	Pg	20 58 52.0	-1.9
MTCE	Montecelio	0.62	227	Pg	Pg	20 58 52.2	-1.7
	25µm,0.6s						
MTCE	Montecelio	0.62	227	P	Pg	20 58 52.2	-1.7
MTCE	Montecelio 25µm,0.6s	0.62	227	Pg	Pg	20 58 52.2	-1.7
CESI	CESI - Serrava 6µm,0.6s	0.65	330	*i*Pg	Pg	20 58 52.6	-1.8
CESI	CESI - Serrava 6µm,0.6s	0.65	330	*i*Pg	Pg	20 58 52.6	-1.8
GUAR	Guarcino	0.65	182	Pg	Pg	20 58 52.8	-1.8
GUAR	Guarcino	0.65	182	Pg	Pg	20 58 52.8	-1.8
LPEL	Lama dei Pelig	0.74	123	*e*Pg	Pg	20 58 53.7	-2.4
LPEL				Sg	Sg	20 59 04.9	-1.0
	23µm,0.7s						
LPEL	Lama dei Pelig	0.74	123	*e*Pg	Pg	20 58 53.7	-2.4
LPEL				Sg	Sg	20 59 04.9	-1.0
	23µm,0.7s						
GUMA	Gualdo di Mace 73µm,0.8s	0.75	35	*i*Pg	Pg	20 58 52.3	-4.1
GUMA	Gualdo di Mace	0.75	35	*i*Pg	Pg	20 58 52.3	-4.1
	73µm,0.8s						
CAFR	Castel Frentan	0.77	106	*e*Pg	Pg	20 58 55.0	-1.8
CAFR	Castel Frentan	0.77	106	*e*Pg	Pg	20 58 55.0	-1.8
POFI	Posta Fibreno 17µm,0.6s	0.78	160	*e*Pg	Pg	20 58 54.7	-2.2
POFI	Posta Fibreno 17µm,0.6s	0.78	160	*e*Pg	Pg	20 58 54.7	-2.2
ASSB	Assisi San Ben 13µm,0.7s	0.78	320	Pg	Pg	20 58 55.0	-2.0
ASSB	Assisi San Ben 13µm,0.7s	0.78	320	Pg	Pg	20 58 55.0	-2.0
RMP	Rome, Mte Porz 44µm,0.6s	0.80	217	*i*Pg	Pg	20 58 55.3	-1.9
RMP	Rome, Mte Porz 44µm,0.6s	0.80	217	*i*Pg	Pg	20 58 55.3	-1.9
SDI	San Donato	0.81	155	*e*Pg	Pg	20 58 55.4	-2.2
SDI	San Donato	0.81	155	*e*Pg	Pg	20 58 55.4	-2.2
RDP	Rocca di Papa 132µm,0.8s	0.83	214	Pg	Pg	20 58 56.1	-1.9
RDP	Rocca di Papa 132µm,0.8s	0.83	214	Pg	Pg	20 58 56.1	-1.9
MA9	Marino 57µm,0.6s	0.85	217	Pg	Pg	20 58 56.1	-2.1
MA9	Marino 57µm,0.6s	0.85	217	Pg	Pg	20 58 56.1	-2.1
SNTG	Esanatoglia	0.86	340	Pg	Pg	20 58 56.2	-2.2
SNTG	Esanatoglia	0.86	340	Pg	Pg	20 58 56.2	-2.2
SAMA	S.Maria delle 58µm,0.9s	0.87	220	Pg	Pg	20 58 56.5	-2.2
SAMA	S.Maria delle 58µm,0.9s	0.87	220	Pg	Pg	20 58 56.5	-2.2
GIUL	Giuliano Di Ro 29µm,0.7s	0.89	185	Pg	Pb	20 58 56.8	-2.1
GIUL	Giuliano Di Ro 29µm,0.7s	0.89	185	Pg	Pb	20 58 56.8	-2.1
LAV9	Lanuvio	0.91	212	Pg	Pb	20 58 57.5	-1.7
LAV9	Lanuvio	0.91	212	Pg	Pb	20 58 57.5	-1.7
CING	Cingoli	0.93	353	Pg	Pb	20 58 57.5	-2.1
CING	Cingoli	0.93	353	Pg	Pb	20 58 57.5	-2.1
RNI2	Rionero Sannit 26µm,1.0s	0.96	141	Pg	Pb	20 58 57.6	-2.4
RNI2	Rionero Sannit 26µm,1.0s	0.96	141	Pg	Pb	20 58 57.6	-2.4
CERA	Filignano 24µm,0.8s	0.99	149	Pg	Pb	20 58 58.1	-2.4
MURB	Monte Urbino 24µm,0.8s	1.01	324	Pg	Pb	20 58 59.1	-1.9
MURB	Monte Urbino 24µm,0.8s	1.01	324	Pg	Pb	20 58 59.1	-1.9
MGAB	Montegabbione	1.02	297	Pg	Pb	20 58 59.4	-1.7
MGAB	Montegabbione	1.02	297	Pg	Pb	20 58 59.4	-1.7
MIDA	Miranda 12µm,0.9s	1.05	140	Pg	Pb	20 58 59.2	-2.4
AOI	Ancona 10µm,1.1s	1.12	10	Pg	Pb	20 59 00.9	-1.8
AOI	Ancona 10µm,1.1s	1.12	10	Pg	Pb	20 59 00.9	-1.8
SACS	San Casciano d 11µm,1.0s	1.13	291	Pg	Pb	20 59 01.7	-1.4
VAGA	Valle Agricola 9µm,0.9s	1.23	147	Pg	Pn	20 59 02.8	-1.6
VAGA	Valle Agricola 9µm,0.9s	1.23	147	Pg	Pn	20 59 02.8	-1.6
PIEI	Pieia 4µm,0.7s	1.24	332	Pg	Pn	20 59 02.7	-1.8
PIEI	Pieia 4µm,0.7s	1.24	332	Pg	Pn	20 59 02.7	-1.8
BSSO	Busso 21µm,1.5s	1.29	134	Pg	Pn	20 59 04.2	-1.1
BSSO	Busso 21µm,1.5s	1.29	134	Pg	Pn	20 59 04.2	-1.1
FSSB	Fossombrone 13µm,0.5s	1.31	342	Pg	Pn	20 59 04.4	-1.1
FSSB	Fossombrone 13µm,0.5s	1.31	342	Pg	Pn	20 59 04.4	-1.1
BADI	Badiali 10µm,1.0s	1.33	323	Pg	Pn	20 59 04.9	-0.9
BADI	Badiali 10µm,1.0s	1.33	323	Pg	Pn	20 59 04.9	-0.9
CAFI	Castiglion Fio	1.34	311	Pg	Pn	20 59 05.1	-0.9
CAFI	Castiglion Fio	1.34	311	Pg	Pn	20 59 05.1	-0.9
ARCI	Arcidosso 3µm,0.9s	1.44	287	Pg	Pn	20 59 07.1	-0.2
ARCI	Arcidosso 3µm,0.9s	1.44	287	Pg	Pn	20 59 07.1	-0.2
PARC	Parchiule 12µm,1.1s	1.45	326	Pg	Pn	20 59 06.8	-0.6
PARC	Parchiule 12µm,1.1s	1.45	326	Pg	Pn	20 59 06.8	-0.6
NVLJ	Novalja	2.39	27	*i*Pn	Pn	20 59 20.0	-0.3
NVLJ				Sn	Sn	20 59 50.1	+0.9
NVLJ	Novalja	2.39	27	*i*Pn	Pn	20 59 19.9	-0.3
NVLJ				Sn	Sn	20 59 50.0	+0.9
MAIM	Mastiano	2.55	306	P	Pn	20 59 22.9	+0.4
MAIM				S	Sn	20 59 54.2	+0.9
UDBI	Udbina	2.72	39	*i*Pn	Pn	20 59 25.7	+0.7
UDBI				Sn	Sn	20 59 59.4	+1.7
UDBI	Udbina	2.72	39	*i*Pn	Pn	20 59 25.6	+0.7
UDBI				Sn	Sn	20 59 59.3	+1.7
VLC	Villacollemand	2.76	309	*e*Pn	Pn	20 59 25.1	-0.3
VLC				*e*Sn	Sn	20 59 57.0	-1.4
VLC	Villacollemand	2.76	309	*e*Pn	Pn	20 59 25.0	-0.3
VLC				*e*Sn	Sn	20 59 57.0	-1.4
SARO	Sassorosso	2.76	310	P	Pn	20 59 26.6	+1.1
SARO				S	Sn	20 59 58.4	-0.3
VINC	Vinca	2.88	307	P	Pn	20 59 27.5	+0.4
VALM	Valbona	2.95	311	P	Pn	20 59 28.6	+0.5
BAI	Bari	2.96	116	*e*Pn	Pn	20 59 28.8	+0.7
BACM	Baccana	3.01	309	P	Pn	20 59 29.6	+0.8
CUC	Castrocucco	3.08	142	*e*Pn	Pn	20 59 32.6	+2.8
CUC				*e*Sn	Sb	21 00 10.4	-3.2
CUC	Castrocucco	3.08	142	*e*Pn	Pn	20 59 32.6	+2.8
CUC				*e*Sn	Sb	21 00 10.4	-3.2
SKDS	Skadanscina	3.13	9	*i*Pn	Pn	20 59 29.7	-0.9
SKDS				*e*Sn	Sn	21 00 07.1	-0.6
SKDS	comp=Z,543nm,0.7s						
SKDS	Skadanscina	3.13	9	Pn	Pn	20 59 29.7	-0.9
SKDS				*e*Sn	Sn	21 00 07.1	-0.6
	comp=Z,543nm,0.7s						
GRAM	Graiana	3.14	312	P	Pn	20 59 31.6	+0.9
OSPF	L'Ospedale	3.19	257	P	Pn	20 59 31.1	-0.3
OSPF	L'Ospedale	3.19	257	P	Pn	20 59 31.1	-0.3
OSPF	L'Ospedale	3.19	257	P	Pn	20 59 31.1	-0.3
CODM	Codolo	3.20	308	P	Pn	20 59 32.2	+0.7

BRY Bratogost 3.85 82 ⇓i Pn Pn 20 59 41.2 +0.6
BRY eSn Sn 21 00 27.4 +1.8
BRY Bratogost 3.85 82 ⇓i Pn Pn 20 59 41.2 +0.6
BRY eSn Sn 21 00 27.4 +1.8
PCP Piancastagn 4.07 303 P Pn 20 59 44.3 +0.8
BUM Brajici-Budva 4.11 90 ⇓i Pn Pn 20 59 45.3 +1.3
BUM eSn Sn 21 00 33.9 +2.0
BUM Brajici-Budva 4.11 90 ⇓i Pn Pn 20 59 45.3 +1.3
BUM eSn Sn 21 00 33.9 +2.0
OBKA Obir 4.15 12 ePn Pn 20 59 44.2 -0.4
OBKA Obir 4.15 12 ⇑i Pn Pn 20 59 44.2 -0.4
comp=Z,69nm,0.5s,SNR=35
OBKA Obir 4.15 12 Pn Pn 20 59 44.2 -0.4
comp=Z,69nm,0.5s,SNR=35
UPM Unac-Piva 4.16 78 ⇑i Pn Pn 20 59 45.9 +1.1
UPM eSn Sn 21 00 34.5 +1.4
UPM Unac-Piva 4.16 78 ⇑i Pn Pn 20 59 45.9 +1.1
UPM eSn Sn 21 00 34.5 +1.4
TIP Timpagrande 4.17 140 ePn Pn 20 59 48.6 +3.8
TIP Timpagrande 4.17 140 ePn Pn 20 59 48.6 +3.8
NKY Niksic 4.18 83 ⇑i Pn Pn 20 59 45.9 +0.9
NKY eSn Sn 21 00 35.5 +1.9
NKY Niksic 4.18 83 ⇑i Pn Pn 20 59 45.9 +0.9
NKY eSn Sn 21 00 35.5 +1.9
MYKA Terra Mystica 4.19 3 ⇑i Pn Pn 20 59 44.8 -0.2
comp=Z,87nm,0.5s
MYKA ⇑e Sn Sn 21 00 33.0 -0.7
comp=Z,142nm,0.6s
MYKA Terra Mystica 4.19 3 Pn Pn 20 59 44.8 -0.2
comp=Z,87nm,0.5s
MYKA Sn Sn 21 00 33.0 -0.7
comp=Z,142nm,0.6s
RORO Rocca Rossa 4.20 295 P Pn 20 59 45.5 +0.3
ABTA Abfaltersbach 4.34 352 ⇑e Pn Pn 20 59 47.3 +0.1
comp=Z,117nm,0.4s,SNR=115
ABTA ⇑e Sn Sn 21 00 36.7 -0.8
comp=Z,767nm,0.7s
ABTA Abfaltersbach 4.34 352 Pn Pn 20 59 47.3 +0.1
comp=Z,117nm,0.4s,SNR=115
ABTA Sn Sn 21 00 36.7 -0.8
comp=Z,767nm,0.7s
ROTM Rocchetta Tana 4.35 305 P Pn 20 59 50.2 +3.0
NEGI Seborga 4.36 291 P Pn 20 59 48.2 +0.8
PDG Podgorica 4.37 88 ⇑i Pn Pn 20 59 48.3 +0.8
PDG eSn Sn 21 00 40.0 +1.9
TTG Podgorica 4.37 88 ⇑i Pn Pn 20 59 48.3 +0.8
TTG eSn Sn 21 00 40.0 +1.9
SOKA Soboth 4.40 15 ⇑i Pn Pn 20 59 47.8 -0.1
comp=Z,29nm,0.3s
SOKA ⇓i Sn Sn 21 00 36.9 -2.0
comp=Z,78nm,0.5s
SOKA Soboth 4.40 15 Pn Pn 20 59 47.8 -0.1
comp=Z,29nm,0.3s
SOKA Sn Sn 21 00 36.9 -2.0
comp=Z,78nm,0.5s
ULC Ulcinj 4.41 94 ⇓i Pn Pn 20 59 48.9 +0.9
ULC eSn Sn 21 00 41.2 +2.1
ULC Ulcinj 4.41 94 ⇓i Pn Pn 20 59 48.9 +0.9
ULC eSn Sn 21 00 41.2 +2.1
SAOF Saorge 4.50 292 P Pn 20 59 49.7 +0.3
SAOF Saorge 4.50 292 P Pn 20 59 49.7 +0.3
SAOF Saorge 4.50 292 P Pn 20 59 49.7 +0.3
SAOF Saorge 4.50 292 P Pn 20 59 49.7 +0.3
KOGS Kog 4.51 26 i Pn Pn 20 59 48.6 -0.7
KOGS
comp=Z,2µm,1.9s
KOGS Kog 4.51 26 i Pn Pn 20 59 48.6 -0.7
comp=Z,2µm,1.9s
SBF Sospel 4.55 290 eP Pn 20 59 50.1 0.0
SBF eSn Sn 21 00 36.6 -6.1
comp=Z,212nm,0.6s
SBF Sospel 4.55 290 eP Pn 20 59 50.1 0.0
SBF e 21 00 36.6
SBF Sospel 4.55 290 eP Pn 20 59 50.1 0.0
SBF eSn Sn 21 00 36.6 -6.1
SBF Sospel 4.55 290 eP Pn 20 59 50.1 0.0
REVF Revere 4.57 288 P Pn 20 59 51.4 +1.1
REVF Revere 4.57 288 P Pn 20 59 51.4 +1.1
REVF Revere 4.57 288 P Pn 20 59 51.4 +1.1
REVF Revere 4.57 288 P Pn 20 59 51.4 +1.1
AUTN L'Aution 4.59 292 P Pn 20 59 52.7 +1.9
AUTN L'Aution 4.59 292 P Pn 20 59 52.7 +1.9
AUTN L'Aution 4.59 292 P Pn 20 59 52.7 +1.9
AUTN L'Aution 4.59 292 P Pn 20 59 52.7 +1.9
CEL Celeste 4.61 154 ePn Pn 20 59 52.1 +1.2
CEL eSn Sn 21 00 49.6 +5.4
CEL Celeste 4.61 154 ePn Pn 20 59 52.1 +1.2
CEL eSn Sn 21 00 49.6 +5.4
KBA Koelnbreinsper 4.63 360 ePn Pn 20 59 51.2 0.0
KBA eSn Sn 21 00 43.9 -0.9
KBA Koelnbreinsper 4.63 360 i Pn Pn 20 59 51.2 0.0
comp=Z,90nm,0.5s,SNR=30
KBA ⇑e Sn Sn 21 00 43.9 -0.9
comp=Z,261nm,0.5s
KBA Koelnbreinsper 4.63 360 Pn Pn 20 59 51.2 0.0
comp=Z,90nm,0.5s,SNR=30
KBA Sn Sn 21 00 43.9 -0.9
comp=Z,261nm,0.5s
ENR Entracque 4.67 294 P Pn 20 59 52.8 +1.0
TOUF Mont Tournerai 4.72 291 P Pn 20 59 53.5 +0.9
TOUF Mont Tournerai 4.72 291 P Pn 20 59 53.5 +0.9
TOUF Mont Tournerai 4.72 291 P Pn 20 59 53.5 +0.9
TOUF Mont Tournerai 4.72 291 P Pn 20 59 53.5 +0.9
MVIF Mont Vial 4.76 290 P Pn 20 59 55.3 +2.3
MVIF Mont Vial 4.76 290 P Pn 20 59 55.3 +2.3
MVIF Mont Vial 4.76 290 P Pn 20 59 55.3 +2.3
MVIF Mont Vial 4.76 290 P Pn 20 59 55.3 +2.3
BEY Berane 4.84 83 ePn Pn 20 59 55.6 +1.5
BEY eSn Sn 21 00 51.4 +1.4
IVA Berane 4.84 83 ePn Pn 20 59 55.6 +1.5
IVA eSn Sn 21 00 51.4 +1.4
PUK Puka 4.88 93 ePn Pn 20 59 56.6 +2.1
PUK i SN Sn 21 00 52.2 +1.5
PUK Puka 4.88 93 ePn Pn 20 59 56.6 +2.1
PUK i Sn Sn 21 00 52.2 +1.5
PVY Plav 4.89 86 ⇑i Pn Pn 20 59 55.9 +1.1
PVY eSn Sn 21 00 51.7 +0.6
PVY Plav 4.89 86 ⇑i Pn Pn 20 59 55.9 +1.1
PVY eSn Sn 21 00 51.7 +0.6
CALN Calern 4.91 288 P Pn 20 59 55.7 +0.7
CALN Calern 4.91 288 P Pn 20 59 55.7 +0.7
CALN Calern 4.91 288 P Pn 20 59 55.7 +0.7
CALN Calern 4.91 288 P Pn 20 59 55.7 +0.7
TUE Stuetta 4.94 326 ePn Pn 20 59 57.0 +1.5
TUE eSn Sn 21 00 50.7 -1.7
TUE Stuetta 4.94 326 ePn Pn 20 59 57.0 +1.5
TUE eSn Sn 21 00 50.7 -1.7
FETA Feichten 4.94 339 ⇑i Pn Pn 20 59 56.6 +1.1
comp=Z,68nm,0.4s,SNR=133
FETA ⇑e Sn Sn 21 00 54.3 +1.9
comp=Z,118nm,0.6s
FETA Feichten 4.94 339 Pn Pn 20 59 56.6 +1.1
comp=Z,68nm,0.4s,SNR=133
FETA Sn Sn 21 00 54.3 +1.9
comp=Z,118nm,0.6s
TEKS Tekeris 4.96 63 ePn Pn 20 59 56.5 +0.8
WTTA Wattenberg 4.97 346 ePn Pn 20 59 56.1 +0.2
WTTA Wattenberg 4.97 346 ⇑i Pn Pn 20 59 57.2 +1.3
comp=Z,81nm,0.6s,SNR=43
WTTA ⇓i Sn Sn 21 00 54.4 +1.3
comp=Z,338nm,0.7s
WTTA Wattenberg 4.97 346 Pn Pn 20 59 57.2 +1.3
comp=Z,81nm,0.6s,SNR=43
WTTA Sn Sn 21 00 54.4 +1.3
comp=Z,338nm,0.7s
BCI Bajram Curri 4.98 89 ePN Pn 20 59 57.2 +1.3
BCI i SN Sn 21 00 46.6 -6.5
BCI Bajram Curri 4.98 89 ePn Pn 20 59 57.2 +1.3
PZZ Stroppo 4.98 297 P Pn 20 59 57.2 +1.2
TIR Tirane 4.99 101 ePN Pn 20 59 56.1 +0.1
TIR i SN Sn 21 00 51.9 -1.4
TIR Tirane 4.99 101 eP Pn 20 59 56.7 +0.7
TIR e 21 00 49.3
TIR Tirane 4.99 101 ePn Pn 20 59 56.7 +0.7
TIR eSn Sn 21 00 49.3 -4.0
TIR Tirane 4.99 101 eP Pn 20 59 56.7 +0.7
TIR i Sn Sn 21 00 51.9 -1.4
DAVOX Davos/Dischmat 4.99 331 Pn Pn 20 59 57.3 +1.1
DAVOX Sn Sn 21 00 52.2 -1.5
DAVOX Davos/Dischmat 4.99 331 Pn Pn 20 59 57.3 +1.1
comp=Z,11nm,0.3s,baz=153,slow=16,SNR=88
DAVOX Sn Sn 21 00 52.2 -1.5
comp=Z,2.0nm,0.3s,baz=345,slow=20,SNR=1.8
DAVOX LR LR 21 02 02.9
comp=Z,448nm,21.2s,baz=25,slow=42
DAVOX Davos/Dischmat 4.99 331 P Pn 20 59 57.3 +1.1
DAVOX Sn Sn 21 00 52.2 -1.5
VLO Vlora 5.02 111 ePN Pn 20 59 54.7 -1.8
VLO i SN Sn 21 00 52.0 -2.2
VLO Vlora 5.02 111 ePn Pn 20 59 54.7 -1.8
VLO i Sn Sn 21 00 52.0 -2.2
FRF La Foret Royal 5.04 285 eP Pn 20 59 56.4 -0.3
FRF eSn Sn 21 00 48.7 -5.9
comp=Z,96nm,0.8s
FRF La Foret Royal 5.04 285 eP Pn 20 59 56.4 -0.3
FRF e 21 00 48.7
FRF La Foret Royal 5.04 285 eP Pn 20 59 56.4 -0.3
FRF eSn Sn 21 00 48.7 -5.9
FRF La Foret Royal 5.04 285 eP Pn 20 59 56.4 -0.3
ARSA Arzberg 5.04 17 ePn Pn 20 59 56.0 -0.7
ARSA Arzberg 5.04 17 ⇑i Pn Pn 20 59 56.1 -0.7
comp=Z,26nm,0.5s,SNR=41
ARSA Arzberg 5.04 17 Pn Pn 20 59 56.1 -0.7
comp=Z,26nm,0.5s,SNR=41
TRAV Traversella 5.07 309 P Pn 20 59 56.9 -0.3
LMR La Mourre 5.10 282 eP Pn 20 59 57.0 -0.6
LMR La Mourre 5.10 282 eP Pn 20 59 57.0 -0.6
LMR La Mourre 5.10 282 eP Pn 20 59 57.0 -0.6
LMR La Mourre 5.10 282 eP Pn 20 59 57.0 -0.6
DIVS Divibare 5.12 69 ePn Pn 20 59 58.1 +0.2
MOTA Moosalm 5.15 343 ⇑i Pn Pn 21 00 00.5 +2.1
comp=Z,49nm,0.5s,SNR=65
MOTA ⇑i Sn Sn 21 00 58.5 +0.9
comp=Z,98nm,0.5s
MOTA Moosalm 5.15 343 Pn Pn 21 00 00.5 +2.1
comp=Z,49nm,0.5s,SNR=65
MOTA Sn Sn 21 00 58.5 +0.9
comp=Z,98nm,0.5s
SURF Saint Ours 5.17 295 P Pn 21 00 01.9 +3.2
SURF Saint Ours 5.17 295 P Pn 21 00 01.9 +3.2
SURF Saint Ours 5.17 295 P Pn 21 00 01.9 +3.2
MBDF Montbardon 5.29 298 eSn Sn 21 00 54.3 -6.8
comp=Z,103nm,0.7s
MBDF Montbardon 5.29 298 eSn Sn 21 00 54.3 -6.8
RJOB Jochberg 5.30 356 ePn Pn 21 00 00.7 +0.3
PHP Peshkopia 5.33 96 ePn Pn 21 01 01.7 +0.9
PHP i SN Sn 21 01 02.3 +0.3
PHP Peshkopia 5.33 96 ePn Pn 21 00 01.7 +0.9
PHP i Sn Sn 21 01 02.3 +0.3
PKSM Moragy 5.34 43 ⇓i P Pn 20 59 59.6 -1.3
PKSM Moragy 5.34 43 ⇓i ePn Pn 21 00 00.1 -0.8
PKSM Moragy 5.34 43 ⇓i P Pn 20 59 59.6 -1.3
RETA Reutte 5.36 341 ⇑i Pn Pn 21 00 02.8 +1.6
comp=Z,73nm,0.7s,SNR=48
RETA ⇑e Sn Sn 21 01 02.3 -0.4
comp=Z,80nm,0.5s
RETA Reutte 5.36 341 Pn Pn 21 00 02.8 +1.6
comp=Z,73nm,0.7s,SNR=48
RETA Sn Sn 21 01 02.3 -0.4
comp=Z,80nm,0.5s
FGSL Fruska Gora 5.40 58 ePn Pn 21 00 02.0 +0.3
DAVA Damuels 5.43 334 ePn Pn 21 00 03.6 +1.4
DAVA Damuels 5.43 334 ⇓i ePn Pn 21 00 03.9 +1.7
comp=Z,80nm,0.5s,SNR=50
DAVA ⇓e Sn Sn 21 01 05.4 +0.9
comp=Z,239nm,0.6s
DAVA Damuels 5.43 334 Pn Pn 21 00 03.9 +1.7
comp=Z,80nm,0.5s,SNR=50
DAVA Sn Sn 21 01 05.4 +0.9
comp=Z,239nm,0.6s
PKS9 Tamasi 5.43 39 ⇑i ePn Pn 21 00 01.8 -0.3
MOA Molln 5.44 7 ePn Pn 21 00 02.4 +0.2
MOA eSn Sn 21 01 04.5 0.0
MOA Molln 5.44 7 ⇑i Pn Pn 21 00 02.8 +0.6
comp=Z,111nm,0.6s,SNR=48
MOA ⇓i Sn Sn 21 01 02.7 -1.8
comp=Z,169nm,0.8s
MOA Molln 5.44 7 Pn Pn 21 00 02.8 +0.6
comp=Z,111nm,0.6s,SNR=48
MOA Sn Sn 21 01 02.7 -1.8
comp=Z,169nm,0.8s
BNI Bardonecchia 5.49 301 eP Pn 21 00 04.1 +1.1
BNI Bardonecchia 5.49 301 ePn Pn 21 00 04.1 +1.1
BNI Bardonecchia 5.49 301 eP Pn 21 00 04.1 +1.1
KEK Kerkira 5.59 117 eP Pn 21 00 05.2 +0.9
SRN Sarande 5.64 115 ePN Pn 21 00 05.5 +0.6
SRN i SN Sn 21 01 15.0 +5.6
LPG La Plagne 5.65 305 eSn Sn 21 01 02.6 -7.5
comp=Z,62nm,0.6s
LPG La Plagne 5.65 305 eSn Sn 21 01 02.6 -7.5
SOP Sopron 5.71 22 ⇑e Pn Pn 21 00 05.0 -0.9
CONA Conrad Observa 5.76 17 ⇓i Pn Pn 21 00 06.2 -0.5
comp=Z,36nm,0.5s,SNR=56
CONA ⇓i Sn Sn 21 01 11.8 -0.7
comp=Z,71nm,0.5s
CONA Conrad Observa 5.76 17 Pn Pn 21 00 06.2 -0.5
comp=Z,36nm,0.5s,SNR=56
CONA Sn Sn 21 01 11.8 -0.7
comp=Z,71nm,0.5s
PKS2 Kecel 5.83 44 ⇓e Pn Pn 21 00 08.1 +0.6
RSL Roselend 5.83 306 P Pn 21 00 10.2 +2.5
RSL Roselend 5.83 306 P Pn 21 00 10.2 +2.5
RSL Roselend 5.83 306 P Pn 21 00 10.2 +2.5
SENIN Lac Senin/Sane 5.84 314 ePn Pn 21 00 10.0 +2.1
SENIN eSn Sn 21 01 15.2 +0.6
SENIN Lac Senin/Sane 5.84 314 ePn Pn 21 00 10.0 +2.1
SENIN eSn Sn 21 01 15.2 +0.6
PKST T˜'s 5.85 33 ⇑e Pn Pn 21 00 05.9 -1.9
KBN Korca 5.87 106 ePN Pn 21 00 08.7 +0.5
KBN i SN Sn 21 01 16.4 +1.1
FUR Furstenfeldbru 5.90 346 ePn Pn 21 00 09.0 +0.4
FUR Furstenfeldbru 5.90 346 eP Pn 21 00 09.0 +0.4
FUR Furstenfeldbru 5.90 346 eP Pn 21 00 09.0 +0.4
GDM Grand'Maison 5.91 300 P Pn 21 00 12.6 +3.8
GDM Grand'Maison 5.91 300 P Pn 21 00 12.6 +3.8
CSKK Cs˜‡kako 6.03 34 ⇑ep Pn Pn 21 00 11.5 +1.3
SKO Skopje 6.03 92 ePn Pn 21 00 07.5 -2.8
SKO eSg Sn 21 01 19.4 +0.4
PKS6 Bocsa 6.08 45 ⇓e Pn Pn 21 00 09.3 -1.7
PKSG 6.10 34 ⇑ep Pn Pn 21 00 12.6 +1.3
BIA Bitola 6.13 101 ePn Pn 21 00 11.9 +0.1
BIA eSg Sn 21 01 21.7 0.0
OG01 Vacheresse 6.15 311 P Pn 21 00 14.7 +2.6
OG01 Vacheresse 6.15 311 P Pn 21 00 14.7 +2.6
GRN Grenoble 6.17 300 P Pn 21 00 15.0 +2.7
GRN Grenoble 6.17 300 P Pn 21 00 15.0 +2.7
GRN Grenoble 6.17 300 P Pn 21 00 15.0 +2.7
PKS7 Kunszentmiklos 6.18 40 ⇓e Pn Pn 21 00 13.0 +0.6
OCF Saint Nazaire 6.23 293 P Pn 21 00 15.4 +2.3
OCF Saint Nazaire 6.23 293 P Pn 21 00 15.4 +2.3
OG26 St.-Nazaire-De 6.23 293 P Pn 21 00 15.4 +2.3
OG26 St.-Nazaire-De 6.23 293 P Pn 21 00 15.4 +2.3
JAN Janina 6.32 114 eP Pn 21 00 16.0 +1.7
ZST Bratislava 6.33 23 eP Pn 21 00 12.5 -1.9
ZST MLR MLR
comp=Z,300nm,2.3s
ZST Bratislava 6.33 23 ePN Pn 21 00 12.5 -1.9
ZST Bratislava 6.33 23 eP Pn 21 00 12.5 -1.9
comp=Z,300nm,2.3s
GEC2 GERESS Array S 6.40 2 ePn Pn 21 00 14.3 -1.2
GEC2 eSn Sn 21 01 26.5 -1.8
GEC2 GERESS Array S 6.40 2 eP Pn 21 00 14.4 -1.1
GEC2 e 21 01 26.1
GEC2 GERESS Array S 6.40 2 ePn Pn 21 00 14.4 -1.1
GEC2 eSn Sn 21 01 26.1 -2.2
GEC2 GERESS Array S 6.40 2 eP Pn 21 00 14.4 -1.1
GEC2 eS Sn 21 01 26.1 -2.2
GERES GERESS Array B 6.40 2 Pn Pn 21 00 14.1 -1.4
GERES Sn Sn 21 01 26.1 -2.2
GERES GERESS Array B 6.40 2 Pn Pn 21 00 14.1 -1.4
comp=Z,5.2nm,0.3s,baz=173,slow=12,SNR=64
GERES Sn Sn 21 01 26.1 -2.2
comp=Z,8.9nm,0.3s,baz=191,slow=20,SNR=12
GERES LR LR 21 02 55.0
comp=Z,320nm,20.8s,baz=150,slow=40
GERES GERESS Array B 6.40 2 P Pn 21 00 14.1 -1.4
GERES S Sn 21 01 26.1 -2.2
BUD Budapest 6.45 37 ePn Pn 21 00 13.4 -2.6
BBS Basel-Blauen 6.50 322 P Pn 21 00 18.1 +1.3
BBS Basel-Blauen 6.50 322 P Pn 21 00 18.1 +1.3
BBS Basel-Blauen 6.50 322 P Pn 21 00 18.1 +1.3
SPAK Spaichingen-Ko 6.50 332 P Pn 21 00 16.6 -0.3
SPAK Spaichingen-Ko 6.50 332 P Pn 21 00 16.6 -0.3
FELD Feldberg im Sc 6.61 327 P Pn 21 00 18.3 -0.1
FELD Feldberg im Sc 6.61 327 P Pn 21 00 18.3 -0.1
OG35 Corcelles 6.64 305 P Pn 21 00 20.5 +1.7
CABF La Chapelle 6.65 311 eP Pn 21 00 18.8 -0.1
CABF eSn Sn 21 01 27.1 -7.3
comp=Z,161nm,1.0s
CABF La Chapelle 6.65 311 eP Pn 21 00 18.8 -0.1
CABF e 21 01 27.1
CABF La Chapelle 6.65 311 eP Pn 21 00 18.8 -0.1
CABF eSn Sn 21 01 27.1 -7.3
CABF La Chapelle 6.65 311 eP Pn 21 00 18.8 -0.1
KHC Kasperske Hory 6.69 1 eP Pn 21 00 18.2 -1.1
KHC e 21 01 31.4
KHC MLR MLR
comp=Z,2µm,11.2s
KHC Kasperske Hory 6.69 1 ePN Pn 21 00 18.2 -1.1
KHC ex x 21 00 29.0
KHC ex x 21 00 36.0
KHC eSN Sn 21 01 31.4 -3.8
KHC ex x 21 02 00.0
KHC eSG Sg 21 02 22.5 +6.4
KHC AMS AMS 21 03 10.0
comp=Z,2µm,11.2s
KHC Kasperske Hory 6.69 1 ePn Pn 21 00 19.0 -0.3
KHC eSn Sn 21 01 32.2 -3.0
KHC Kasperske Hory 6.69 1 ePn Pn 21 00 19.0 -0.3
KZN Kozani 6.69 106 eP Pn 21 00 21.8 +2.4
WET Wettzell 6.70 357 ePn Pn 21 00 18.0 -1.6
WET eSn Sn 21 01 32.4 -3.3
WET Wettzell 6.70 357 eP Pn 21 00 18.0 -1.6
WET e 21 01 32.4
WET Wettzell 6.70 357 eP Pn 21 00 18.0 -1.6
SMOL Smolenice 6.71 24 eP Pn 21 00 20.4 +0.8
SMOL Smolenice 6.71 24 ePN Pn 21 00 20.4 +0.8
SMOL Smolenice 6.71 24 eP Pn 21 00 20.4 +0.8
VIVF Saint-Julien-l 6.74 294 eP Pn 21 00 20.7 +0.6
VIVF Saint-Julien-l 6.74 294 eP Pn 21 00 20.7 +0.6
VIVF Saint-Julien-l 6.74 294 eP Pn 21 00 20.7 +0.6
VIVF Saint-Julien-l 6.74 294 eP Pn 21 00 20.7 +0.6
LOMF Lomont 6.74 319 P Pn 21 00 20.9 +0.8
LOMF Lomont 6.74 319 P Pn 21 00 20.9 +0.8
LOMF Lomont 6.74 319 P Pn 21 00 20.9 +0.8
LOMF Lomont 6.74 319 P Pn 21 00 20.9 +0.8
BZS Buzias 6.75 59 ⇑i P Pn 21 00 20.2 0.0
BFO Black Forest 6.86 331 ePn Pn 21 00 20.9 -0.8
BFO Black Forest 6.86 331 eP Pn 21 00 20.7 -1.0
BFO e 21 01 39.5
BFO Black Forest 6.86 331 ePn Pn 21 00 20.6 -1.0
BFO eSn Sn 21 01 39.5 0.0
BFO Black Forest 6.86 331 eP Pn 21 00 20.7 -1.0
BFO eS Sn 21 01 39.5 0.0
STU Stuttgart 6.96 337 eP Pn 21 00 25.0 +1.9
STU Stuttgart 6.96 337 ePn Pn 21 00 25.0 +1.9
STU Stuttgart 6.96 337 eP Pn 21 00 25.0 +1.9
MOF Molkenrain 6.96 323 P Pn 21 00 23.3 +0.1
MOF Molkenrain 6.96 323 P Pn 21 00 23.3 +0.1
MOF Molkenrain 6.96 323 P Pn 21 00 23.3 +0.1
MOF Molkenrain 6.96 323 P Pn 21 00 23.3 +0.1
SSB Saint Sauveur 6.96 297 eP Pn 21 00 25.5 +2.2
SSB pmax pmax
comp=Z,32nm,1.0s
SSB Saint Sauveur 6.96 297 eP Pn 21 00 25.5 +2.2
comp=Z,32nm,1.0s
SSB Saint Sauveur 6.96 297 P Pn 21 00 25.4 +2.2
SSB Saint Sauveur 6.96 297 P Pn 21 00 25.4 +2.2
VAY Valandovo 6.97 96 i Pn Pn 21 00 22.2 -1.0
VAY eSg Sn 21 01 36.8 -5.4
VLS Valsamata 6.99 125 eP Pn 21 00 24.6 +1.1
LIBD Limburg 6.99 327 P Pn 21 00 25.7 +2.2
LIBD Limburg 6.99 327 P Pn 21 00 25.7 +2.2
TREC Trest 7.01 12 eP Pn 21 00 22.9 -0.8
TREC e 21 01 40.0
TREC MLR MLR
comp=Z,2µm,12.5s
TREC Trest 7.01 12 ePN Pn 21 00 22.9 -0.8
TREC eSN Sn 21 01 40.0 -3.1
TREC AMS AMS 21 03 20.0
comp=Z,2µm,12.5s
TREC Trest 7.01 12 Pn Pn 21 00 22.9 -0.8
HINF Hinteralfeld 7.06 322 eP Pn 21 00 23.7 -0.8
HINF eSn Sn 21 01 37.0 -7.5
comp=Z,246nm,0.9s
HINF Hinteralfeld 7.06 322 eP Pn 21 00 23.7 -0.8
HINF e 21 01 37.0
HINF Hinteralfeld 7.06 322 eP Pn 21 00 23.7 -0.8
HINF eSn Sn 21 01 37.0 -7.5
HINF Hinteralfeld 7.06 322 eP Pn 21 00 23.7 -0.8
LASF Ste Croix 7.12 286 eP Pn 21 00 24.9 -0.4
LASF Ste Croix 7.12 286 eP Pn 21 00 24.9 -0.4
LASF Ste Croix 7.12 286 eP Pn 21 00 24.9 -0.4
THL Klokotos Trika 7.16 111 eP Pn 21 00 27.3 +1.5
PSZ Piszkesteto 7.16 38 eP Pn 21 00 25.3 -0.6
PSZ Piszkesteto 7.16 38 ePn Pn 21 00 25.3 -0.6
PSZ Piszkesteto 7.16 38 ⇑i P Pn 21 00 25.7 -0.2
PSZ Piszkesteto 7.16 38 ⇑ep Pn Pn 21 00 27.6 +1.7
PSZ Piszkesteto 7.16 38 eP Pn 21 00 25.3 -0.6
VYHS Vyhne 7.17 31 eP Pn 21 00 25.4 -0.6
VYHS e 21 01 45.8
VYHS MLR MLR
comp=Z,100nm,1.8s
VYHS Vyhne 7.17 31 ePN Pn 21 00 25.4 -0.6
VYHS eSN Sn 21 01 45.8 -1.3
VYHS Vyhne 7.17 31 eP Pn 21 00 25.4 -0.6
comp=Z,100nm,1.8s
VYHS eS Sn 21 01 45.8 -1.3
VRAC Vranov 7.22 17 Pn Pn 21 00 25.6 -1.1
VRAC Vranov 7.22 17 ⇓i P Pn 21 00 25.6 -1.1
VRAC Vranov 7.22 17 Pn Pn 21 00 25.6 -1.1
comp=Z,1.7nm,0.3s,baz=208,slow=11,SNR=22
VRAC LR LR 21 02 44.3
comp=Z,390nm,21.2s,baz=257,slow=34
VRAC Vranov 7.22 17 P Pn 21 00 25.6 -1.1
ECH Echery 7.23 325 eP Pn 21 00 24.8 -2.0
ECH eS Sn 21 01 41.8 -6.8
ECH pmax pmax
comp=Z,47nm,0.6s
ECH Echery 7.23 325 eP Pn 21 00 24.8 -2.0
comp=Z,47nm,0.6s
ECH P Pn 21 00 26.5 -0.3
ECH eS Sn 21 01 41.8 -6.8
ECH Echery 7.23 325 P Pn 21 00 26.5 -0.3
ECH Echery 7.23 325 P Pn 21 00 26.5 -0.3
KKB Krupnik 7.26 91 i P Pn 21 00 29.1 +1.9
VTS Vitosha 7.29 86 i P Pn 21 00 27.3 -0.4
VTS Vitosha 7.29 86 ⇑i P Pn 21 00 28.4 +0.7
VTS Vitosha 7.29 86 ⇑i P Pn 21 00 28.4 +0.7
CDF Champ du Feu 7.33 326 eSn Sn 21 01 43.1 -8.1
comp=Z,156nm,0.8s
CDF Champ du Feu 7.33 326 eSn Sn 21 01 43.1 -8.1
ROTZ Rotzenmuhle 7.36 354 ePn Pn 21 00 27.5 -1.1
ROTZ eSn Sn 21 01 46.8 -5.0
GRFO Grafenberg 7.39 349 eP Pn 21 00 28.6 -0.4
GRFO Grafenberg 7.39 349 ePn Pn 21 00 28.6 -0.4
GRFO Grafenberg 7.39 349 eP Pn 21 00 28.6 -0.4
KEST Kesra 7.39 206 Pn Pn 21 00 32.9 +3.8
KEST ePn Pn 21 00 33.3 +4.1
KEST Kesra 7.39 206 Pn Pn 21 00 32.9 +3.8
comp=Z,8.1nm,0.3s,baz=330,slow=2.6,SNR=206
KEST LR LR 21 03 31.3
comp=Z,1µm,18.8s,baz=207,slow=39
HAU Haudompre 7.43 321 eSn Sn 21 01 44.9 -8.7
comp=Z,244nm,0.9s
HAU Haudompre 7.43 321 eSn Sn 21 01 44.9 -8.7
PRU Pruhonice 7.59 6 eP Pn 21 00 29.9 -1.8
PRU e 21 01 52.7
PRU MLR MLR
comp=Z,1µm,12.8s
PRU Pruhonice 7.59 6 ePN Pn 21 00 29.9 -1.8
PRU eSN Sn 21 01 52.7 -4.6
PRU AMS AMS 21 03 40.0
comp=Z,1µm,12.8s
PRU Pruhonice 7.59 6 Pn Pn 21 00 29.9 -1.8
MANZ Manzenberg 7.59 354 ePn Pn 21 00 31.2 -0.5
MANZ eSn Sn 21 01 52.5 -4.9
LANF Langenberg 7.59 331 P Pn 21 00 31.7 -0.1
LANF Langenberg 7.59 331 P Pn 21 00 31.7 -0.1
LANF Langenberg 7.59 331 P Pn 21 00 31.7 -0.1
LANF Langenberg 7.59 331 P Pn 21 00 31.7 -0.1
RLS Riolos of Patr 7.60 123 eP Pn 21 00 35.5 +3.6
EFP Efpalio 7.66 119 eP Pn 21 00 35.1 +2.4
DEV Deva 7.68 60 ⇑i P Pn 21 00 33.5 +0.6
THEF They Montfort 7.76 321 P Pn 21 00 33.7 -0.4
THEF They Montfort 7.76 321 P Pn 21 00 33.7 -0.4

THEF	**They Montfort**	**7.76**	**321**	P		**Pn**	**21 00 33.7**	**-0.4**
THEF	**They Montfort**	**7.76**	**321**	P		**Pn**	**21 00 33.7**	**-0.4**
MMB	**Musomiste**	**7.78**	**93**	*i* P		**Pn**	**21 00 34.6**	**+0.3**
TRIZ	**Trizonia**	**7.80**	**119**	*e*P		**Pn**	**21 00 37.8**	**+3.1**
NKC	**Novy Kostel**	**7.81**	**356**	*e*P		**Pn**	**21 00 33.1**	**-1.7**
NKC				*e*			21 01 58.3	
NKC				MLR	MLR			
	comp=Z,1µm,12.3s							
NKC	**Novy Kostel**	**7.81**	**356**	*e*PN		**Pn**	**21 00 33.1**	**-1.7**
NKC				*e*SN		**Sn**	**21 01 58.3**	**-4.6**
NKC				AMS	AMS		21 03 50.0	
	comp=Z,1µm,12.3s							
NKC	**Novy Kostel**	**7.81**	**356**	Pn		**Pn**	**21 00 33.1**	**-1.7**
LBL	**Lubilhac**	**7.81**	**294**	P		**Pn**	**21 00 36.7**	**+1.8**
LBL	**Lubilhac**	**7.81**	**294**	P		**Pn**	**21 00 36.7**	**+1.8**
LBL	**Lubilhac**	**7.81**	**294**	P		**Pn**	**21 00 36.7**	**+1.8**
LBL	**Lubilhac**	**7.81**	**294**	P		**Pn**	**21 00 36.7**	**+1.8**
LAKA	**Lakka**	**7.82**	**120**	*e*P		**Pn**	**21 00 37.9**	**+3.0**
TOD	**Tromm**	**7.82**	**338**	P		**Pn**	**21 00 35.0**	**+0.1**
TOD	**Tromm**	**7.82**	**338**	P		**Pn**	**21 00 35.0**	**+0.1**
TOD	**Tromm**	**7.82**	**338**	P		**Pn**	**21 00 35.0**	**+0.1**
KALE	**Kalithea**	**7.83**	**118**	*e*P		Pn	21 00 38.7	+3.5
KECS	**Kecovo**	**7.84**	**37**	*e*P		**Pn**	**21 00 36.1**	**+0.9**
KECS				*e*			21 02 01.6	
KECS	**Kecovo**	**7.84**	**37**	*e*PN		**Pn**	**21 00 36.1**	**+0.9**
KECS				*e*SN		**Sn**	**21 02 01.6**	**-2.1**
KECS	**Kecovo**	**7.84**	**37**	*e*P		**Pn**	**21 00 36.1**	**+0.9**
KECS				*e*S		**Sn**	**21 02 01.6**	**-2.1**
PLG	**Polygyros**	**7.87**	**102**	*e*P		**Pn**	**21 00 36.4**	**+0.8**
WERN	**Wernitzgruen**	**7.87**	**355**	*e*Pn		**Pn**	**21 00 35.1**	**-0.5**
MORC	**Moravsky Berou**	**7.89**	**20**	*e*P		**Pn**	**21 00 35.1**	**-0.7**
MORC	**Moravsky Berou**	**7.89**	**20**	*e*Pn		**Pn**	**21 00 35.1**	**-0.7**
MORC	**Moravsky Berou**	**7.89**	**20**	⇓ *i*P		**Pn**	**21 00 35.0**	**-0.7**
MORC	**Moravsky Berou**	**7.89**	**20**	*e*P		**Pn**	**21 00 35.1**	**-0.7**
GUNZ	**Gunzen**	**7.95**	**355**	*e*Pn		**Pn**	**21 00 37.1**	**+0.4**
DRGR		**7.96**	**54**	⇑ *i*P		**Pn**	**21 00 35.4**	**-1.5**
SMF	**Signal de Mont**	**7.98**	**305**	*e*P		**Pn**	**21 00 37.6**	**+0.5**
SMF				*e*Sn		Sn	21 01 57.8	-9.2
	comp=Z,72nm,0.8s							
SMF	**Signal de Mont**	**7.98**	**305**	*e*P		**Pn**	**21 00 37.6**	**+0.5**
SMF	**Signal de Mont**	**7.98**	**305**	*e*P		**Pn**	**21 00 37.6**	**+0.5**
SMF				*e*Sn		Sn	21 01 57.8	-9.2
SMF	**Signal de Mont**	**7.98**	**305**	*e*P		**Pn**	**21 00 37.6**	**+0.5**
KRLC	**Kraliky**	**7.99**	**16**	*e*P		**Pn**	**21 00 36.4**	**-0.8**
KRLC	**Kraliky**	**7.99**	**16**	*e*PN		**Pn**	**21 00 36.4**	**-0.8**
KRLC	**Kraliky**	**7.99**	**16**	Pn		**Pn**	**21 00 36.4**	**-0.8**
TANN	**Tannenbergstha**	**7.99**	**356**	*e*Pn		**Pn**	**21 00 37.0**	**-0.3**
PGB	**Panagyurishte**	**8.00**	**86**	*i* P		**Pn**	**21 00 38.5**	**+1.1**
WERD	**Werda**	**8.03**	**355**	*e*Pn		**Pn**	**21 00 37.6**	**-0.2**
KLV	**Kalavryta, Ach**	**8.04**	**120**	*e*P		Pn	21 00 41.5	+3.5
PLN	**Plauen**	**8.08**	**355**	*e*Pn		**Pn**	**21 00 38.4**	**0.0**
OKC	**Ostrava-Krasne**	**8.11**	**23**	*e*P		**Pn**	**21 00 38.2**	**-0.6**
OKC				*e*			21 02 06.3	
OKC				MLR	MLR			
	comp=Z,2µm,10.9s							
OKC	**Ostrava-Krasne**	**8.11**	**23**	*e*PN		**Pn**	**21 00 38.2**	**-0.6**
OKC				*e*SN		**Sn**	**21 02 06.3**	**-3.7**
OKC				AMS	AMS		21 04 50.0	
	comp=Z,2µm,10.9s							
OKC	**Ostrava-Krasne**	**8.11**	**23**	Pn		**Pn**	**21 00 38.2**	**-0.6**
PAGF	**Fort de Pagny**	**8.12**	**321**	*e*Pn		**Pn**	**21 00 36.9**	**-2.1**
	baz=139							
PAGF				*e*Sn		Sn	21 02 01.4	-9.0
	comp=Z,19nm,0.7s							
PAGF	**Fort de Pagny**	**8.12**	**321**	*e*Pn		**Pn**	**21 00 36.9**	**-2.1**
PAGF				*e*Sn		Sn	21 02 01.4	-9.0
PAGF	**Fort de Pagny**	**8.12**	**321**	*e*Pn		**Pn**	**21 00 36.9**	**-2.1**
	baz=139							
PVCC	**Panska Ves**	**8.13**	**6**	*e*P		**Pn**	**21 00 37.7**	**-1.3**
PVCC				*e*			21 02 06.1	
PVCC				MLR	MLR			
	comp=Z,1µm,16.1s							
PVCC	**Panska Ves**	**8.13**	**6**	*e*PN		**Pn**	**21 00 37.7**	**-1.3**
PVCC				*e*SN		**Sn**	**21 02 06.1**	**-4.5**
PVCC				AMS	AMS		21 04 00.0	
	comp=Z,1µm,16.1s							
PVCC	**Panska Ves**	**8.13**	**6**	Pn		**Pn**	**21 00 37.7**	**-1.3**
PYM	**Petit Puy Mans**	**8.14**	**297**	P		**Pn**	**21 00 41.1**	**+1.8**
PYM	**Petit Puy Mans**	**8.14**	**297**	P		**Pn**	**21 00 41.1**	**+1.8**
PYM	**Petit Puy Mans**	**8.14**	**297**	P		**Pn**	**21 00 41.1**	**+1.8**
PYM	**Petit Puy Mans**	**8.14**	**297**	P		**Pn**	**21 00 41.1**	**+1.8**
DPC	**Dobruska-Polom**	**8.17**	**14**	*e*P		**Pn**	**21 00 38.0**	**-1.6**
DPC				*e*			21 02 07.2	
DPC	**Dobruska-Polom**	**8.17**	**14**	*e*PN		**Pn**	**21 00 38.0**	**-1.6**
DPC				*e*SN		**Sn**	**21 02 07.2**	**-4.4**
DPC	**Dobruska-Polom**	**8.17**	**14**	Pn		**Pn**	**21 00 38.0**	**-1.6**
AGO	**Saint Agoulin**	**8.17**	**300**	P		**Pn**	**21 00 41.3**	**+1.6**
AGO	**Saint Agoulin**	**8.17**	**300**	P		**Pn**	**21 00 41.3**	**+1.6**
AGO	**Saint Agoulin**	**8.17**	**300**	P		**Pn**	**21 00 41.3**	**+1.6**
SFTF	**Sexfontaines**	**8.21**	**317**	*e*P		**Pn**	**21 00 40.4**	**+0.2**
	baz=132							
SFTF				*e*Sn		Sn	21 02 03.3	-9.3
	comp=Z,146nm,1.1s							
SFTF	**Sexfontaines**	**8.21**	**317**	*e*P		**Pn**	**21 00 40.4**	**+0.2**
SFTF				*e*Sn		Sn	21 02 03.3	-9.3
SFTF	**Sexfontaines**	**8.21**	**317**	*e*P		**Pn**	**21 00 40.4**	**+0.2**
	baz=132							
MTLF	**Montolieu**	**8.22**	**280**	*e*Pn		Pn	21 00 36.4	-4.0
MTLF	**Montolieu**	**8.22**	**280**	*e*P		Pn	21 00 36.4	-4.0
MTLF	**Montolieu**	**8.22**	**280**	*e*Pn		Pn	21 00 36.4	-4.0
GUR	**Goura**	**8.23**	**120**	*e*P		Pn	21 00 44.9	+4.3
LKR	**Lokris**	**8.27**	**114**	*e*P		**Pn**	**21 00 43.2**	**+2.2**
LOR	**Lormes**	**8.28**	**309**	*e*P		**Pn**	**21 00 41.6**	**+0.3**
	baz=126							
LOR				*e*Sn		Sn	21 02 04.1	-10
	comp=Z,46nm,0.8s							
LOR	**Lormes**	**8.28**	**309**	*e*P		**Pn**	**21 00 41.6**	**+0.3**
LOR				*e*Sn		Sn	21 02 04.1	-10
LOR	**Lormes**	**8.28**	**309**	*e*P		**Pn**	**21 00 41.6**	**+0.3**
	baz=126							
MOX	**Moxa**	**8.29**	**352**	*e*Pn		**Pn**	**21 00 39.8**	**-1.4**
MOX	**Moxa**	**8.29**	**352**	*e*P		**Pn**	**21 00 39.8**	**-1.4**
MOX	**Moxa**	**8.29**	**352**	*e*P		**Pn**	**21 00 39.8**	**-1.4**
AVF	**Avril sur Loir**	**8.35**	**305**	*e*P		**Pn**	**21 00 42.0**	**-0.1**
AVF	**Avril sur Loir**	**8.35**	**305**	*e*P		**Pn**	**21 00 42.0**	**-0.1**
AVF	**Avril sur Loir**	**8.35**	**305**	*e*P		**Pn**	**21 00 42.0**	**-0.1**
AVF	**Avril sur Loir**	**8.35**	**305**	*e*P		**Pn**	**21 00 42.0**	**-0.1**
SSF	**Saint Saulge**	**8.38**	**307**	*e*P		**Pn**	**21 00 43.7**	**+1.1**
SSF				*e*Sn		Sn	21 02 05.6	-11
	comp=Z,27nm,0.8s							
SSF	**Saint Saulge**	**8.38**	**307**	*e*P		**Pn**	**21 00 43.7**	**+1.1**
SSF	**Saint Saulge**	**8.38**	**307**	*e*P		**Pn**	**21 00 43.7**	**+1.1**
SSF				*e*Sn		Sn	21 02 05.6	-11
SSF	**Saint Saulge**	**8.38**	**307**	*e*P		**Pn**	**21 00 43.7**	**+1.1**
VALF	**Valcebollere**	**8.38**	**273**	P		**Pn**	**21 00 42.1**	**-0.7**
VALF	**Valcebollere**	**8.38**	**273**	P		**Pn**	**21 00 42.1**	**-0.7**
VALF	**Valcebollere**	**8.38**	**273**	P		**Pn**	**21 00 42.1**	**-0.7**
MEZF	**Maizieres J'vi**	**8.40**	**319**	*e*P		**Pn**	**21 00 43.6**	**+0.8**
	baz=135							
MEZF	**Maizieres J'vi**	**8.40**	**319**	*e*P		**Pn**	**21 00 43.6**	**+0.8**
MEZF	**Maizieres J'vi**	**8.40**	**319**	*e*P		**Pn**	**21 00 43.6**	**+0.8**
	baz=135							
BRG	**Berggiesshubel**	**8.44**	**3**	PN		**Pn**	**21 00 41.5**	**-1.8**
BRG				*i*			21 00 52.8	
BRG	**Berggiesshubel**	**8.44**	**3**	SN		Sn	21 02 12.2	-6.0
BRG				SG			21 03 18.8	
	comp=Z,215nm,1.9s							
BRG								
	comp=N,206nm,25.0s							
BRG								
	comp=E,170nm,20.3s							
BRG								
	comp=Z,349nm,37.9s							
BRG	**Berggiesshubel**	**8.44**	**3**	P		**Pn**	**21 00 41.5**	**-1.8**
BRG							21 02 12.2	
BRG				smax		smax		
	comp=N,215nm,1.9s							
BRG				MLR		MLR		
	comp=N,206nm,25.0s							
BRG				MLR		MLR		
	comp=E,170nm,20.3s							
BRG				MLR		MLR		
	comp=Z,349nm,37.9s							
BRG	**Berggiesshubel**	**8.44**	**3**	P		**Pn**	**21 00 41.5**	**-1.8**
ABH	**Alteburg**	**8.45**	**334**	P		**Pn**	**21 00 45.6**	**+2.0**
ABH	**Alteburg**	**8.45**	**334**	P		**Pn**	**21 00 45.6**	**+2.0**
FBE	**Freiberg**	**8.48**	**0**	*e*Pn		**Pn**	**21 00 42.7**	**-1.1**
FBE				*e*Sn		Sn	21 02 10.3	-8.8
TNS	**Taunus Mts**	**8.48**	**338**	*e*Pn		**Pn**	**21 00 45.0**	**+1.0**
TNS	**Taunus Mts**	**8.48**	**338**	*e*P		**Pn**	**21 00 45.0**	**+1.0**
TNS	**Taunus Mts**	**8.48**	**338**	*e*P		**Pn**	**21 00 45.0**	**+1.0**
PYL	**PYLOS**	**8.52**	**128**	*e*P		**Pn**	**21 00 46.7**	**+2.2**

CAF	**Calviac**	**8.54**	**291**	*e*P		**Pn**	**21 00 45.6**	**+0.8**
CAF	**Calviac**	**8.54**	**291**	*e*P		**Pn**	**21 00 45.6**	**+0.8**
CAF	**Calviac**	**8.54**	**291**	*e*P		**Pn**	**21 00 45.6**	**+0.8**
CAF	**Calviac**	**8.54**	**291**	*e*P		**Pn**	**21 00 45.6**	**+0.8**
BGF	**Bois d'Agland**	**8.55**	**302**	*e*P		**Pn**	**21 00 46.3**	**+1.3**
BGF	**Bois d'Agland**	**8.55**	**302**	*e*P		**Pn**	**21 00 46.3**	**+1.3**
BGF	**Bois d'Agland**	**8.55**	**302**	*e*P		**Pn**	**21 00 46.3**	**+1.3**
BGF	**Bois d'Agland**	**8.55**	**302**	*e*P		**Pn**	**21 00 46.3**	**+1.3**
LTK	**Loutraki**	**8.58**	**118**	*e*P		Pn	21 00 48.8	+3.5
CRVS	**Cervenica-Dubn**	**8.59**	**39**	*e*P		**Pn**	**21 00 44.0**	**-1.5**
CRVS				*e*			21 02 14.5	
CRVS				MLR	MLR			
	comp=Z,200nm,3.0s							
CRVS	**Cervenica-Dubn**	**8.59**	**39**	*e*PN		**Pn**	**21 00 44.0**	**-1.5**
CRVS				*e*PG			21 01 28.2	
CRVS				*e*SN		Sn	21 02 14.5	-7.6
CRVS	**Cervenica-Dubn**	**8.59**	**39**	*e*P		**Pn**	**21 00 44.0**	**-1.5**
VLX	**Vlachokerasia**	**8.59**	**123**	*e*P		Pn	21 00 53.0	+7.4
TRPA	**Tarpa**	**8.61**	**46**	⇑ *i*P		**Pn**	**21 00 44.6**	**-1.1**
KSP	**Ksiaz**	**8.64**	**13**	*e*P		**Pn**	**21 00 45.7**	**-0.4**
KSP				*e*			21 02 20.6	
KSP	**Ksiaz**	**8.64**	**13**	*e*P		**Pn**	**21 00 45.4**	**-0.7**
KSP	**Ksiaz**	**8.64**	**13**	*e*P		**Pn**	**21 00 45.7**	**-0.4**
KSP				*e*S		**Sn**	**21 02 20.6**	**-2.5**
UBBA	**Unterbreizbach**	**8.68**	**346**	*e*Pn		**Pn**	**21 00 46.1**	**-0.5**
WLF	**Walferdange**	**8.78**	**328**	*e*Pn		**Pn**	**21 00 49.4**	**+1.4**
WLF	**Walferdange**	**8.78**	**328**	*e*P		**Pn**	**21 00 48.8**	**+0.8**
WLF				pmax	pmax			
	comp=Z,48nm,0.9s							
WLF	**Walferdange**	**8.78**	**328**	*e*P		**Pn**	**21 00 48.8**	**+0.8**
	comp=Z,48nm,0.9s							
WLF	**Walferdange**	**8.78**	**328**	*e*P		**Pn**	**21 00 48.8**	**+0.8**
	comp=Z,48nm,0.9s							
WLF	**Walferdange**	**8.78**	**328**	PN		**Pn**	**21 00 48.7**	**+0.8**
WLF				SN		**Sn**	**21 02 23.4**	**-3.2**
	comp=N,23nm,0.0s							
PVL	**Pavlikeni**	**8.84**	**81**	*i* P		**Pn**	**21 00 47.4**	**-1.5**
TCF	**Toulx Ste Croi**	**8.85**	**299**	*e*P		**Pn**	**21 00 50.8**	**+1.7**
TCF	**Toulx Ste Croi**	**8.85**	**299**	*e*P		**Pn**	**21 00 50.8**	**+1.7**
TCF	**Toulx Ste Croi**	**8.85**	**299**	*e*P		**Pn**	**21 00 50.8**	**+1.7**
TCF	**Toulx Ste Croi**	**8.85**	**299**	*e*P		**Pn**	**21 00 50.8**	**+1.7**
CLL	**Collm**	**8.87**	**359**	*e*P		**Pn**	**21 00 49.0**	**-0.2**
CLL				*i*			21 02 22.9	
CLL	**Collm**	**8.87**	**359**	*e*Pn		**Pn**	**21 00 49.0**	**-0.2**
CLL				*i* Sn		**Sn**	**21 02 22.9**	**-5.8**
CLL				*e*Sg			21 03 29.0	
CLL				Lm	MLR		21 04 12.0	
	comp=N,800nm,18.4s							
CLL				Lm	MLR		21 04 12.0	
	comp=E,200nm,19.5s							
CLL				Lmax			21 05 00.0	
CLL	**Collm**	**8.87**	**359**	*e*P		**Pn**	**21 00 49.0**	**-0.2**
STHS	**Stebnicka Huta**	**8.87**	**36**	*e*P		**Pn**	**21 00 51.3**	**+2.0**
STHS	**Stebnicka Huta**	**8.87**	**36**	*e*PN		**Pn**	**21 00 51.3**	**+2.0**
STHS	**Stebnicka Huta**	**8.87**	**36**	*e*P		**Pn**	**21 00 51.3**	**+2.0**
MTUR	**Matau**	**8.91**	**68**	⇑ *i*P		**Pn**	**21 00 52.3**	**+2.4**
VOIR		**8.96**	**67**	⇓ *i*P		**Pn**	**21 00 52.2**	**+1.7**
OJC	**Ojcow**	**8.96**	**28**	*e*P		**Pn**	**21 00 52.9**	**+2.4**
OJC	**Ojcow**	**8.96**	**28**	*e*Pn		**Pn**	**21 00 52.9**	**+2.4**
OJC	**Ojcow**	**8.96**	**28**	*e*P		Pn	21 00 53.8	+3.3
KOLS	**Kolonicke sedl**	**9.00**	**41**	*e*P		**Pn**	**21 00 52.5**	**+1.5**
KOLS				MLR	MLR			
	comp=Z,100nm,2.2s							
KOLS	**Kolonicke sedl**	**9.00**	**41**	*e*PN		**Pn**	**21 00 52.5**	**+1.5**
KOLS	**Kolonicke sedl**	**9.00**	**41**	*e*P		**Pn**	**21 00 52.5**	**+1.5**
	comp=Z,100nm,2.2s							
RJF	**Les Rejaudoux**	**9.01**	**292**	*e*P		**Pn**	**21 00 52.6**	**+1.4**
RJF	**Les Rejaudoux**	**9.01**	**292**	*e*P		**Pn**	**21 00 52.6**	**+1.4**
RJF	**Les Rejaudoux**	**9.01**	**292**	*e*P		**Pn**	**21 00 52.6**	**+1.4**
RJF	**Les Rejaudoux**	**9.01**	**292**	*e*P		**Pn**	**21 00 52.6**	**+1.4**
KDZ	**Kurdzhali**	**9.02**	**91**	*i* P		**Pn**	**21 00 50.3**	**-1.0**
MLS	**Moulis**	**9.04**	**277**	P		**Pn**	**21 00 51.4**	**-0.2**
MLS	**Moulis**	**9.04**	**277**	P		**Pn**	**21 00 51.4**	**-0.2**
MLS	**Moulis**	**9.04**	**277**	P		**Pn**	**21 00 51.4**	**-0.2**
DID	**Didima**	**9.05**	**120**	*e*P		Pn	21 00 55.6	+3.8
SZH	**Strazhica**	**9.28**	**81**	*i* P		**Pn**	**21 00 54.2**	**-0.7**
LFF	**La Frestale**	**9.47**	**290**	*e*Pn		Pn	21 00 53.1	-4.3
LFF	**La Frestale**	**9.47**	**290**	*e*P		**Pn**	**21 00 58.6**	**+1.2**
LFF	**La Frestale**	**9.47**	**290**	*e*P		Pn	21 00 53.1	-4.3
LFF	**La Frestale**	**9.47**	**290**	*e*Pn		Pn	21 00 53.1	-4.3
LFF				*e*P		**Pn**	**21 00 58.6**	**+1.2**
MLR	**Muntele Rosu**	**9.58**	**67**	Pn		**Pn**	**21 01 00.7**	**+1.6**
MLR	**Muntele Rosu**	**9.58**	**67**	⇑ *i*P		**Pn**	**21 01 01.1**	**+2.0**
MLR	**Muntele Rosu**	**9.58**	**67**	Pn		**Pn**	**21 01 00.7**	**+1.6**
	comp=Z,0.4nm,0.3s,baz=251,slow=6.2,SNR=40							
MLR	**Muntele Rosu**	**9.58**	**67**	P		**Pn**	**21 01 00.7**	**+1.6**
MEM	**Membach**	**9.60**	**331**	PN		Pn	21 01 02.5	+3.3
MEM				SN		**Sn**	**21 02 48.2**	**+1.5**
	comp=E,12nm,0.0s							
GIVF	**Givet**	**9.66**	**325**	*e*P		**Pn**	**21 01 01.7**	**+1.6**
GIVF	**Givet**	**9.66**	**325**	*e*P		**Pn**	**21 01 01.7**	**+1.6**
GIVF	**Givet**	**9.66**	**325**	*e*P		**Pn**	**21 01 01.7**	**+1.6**
GIVF	**Givet**	**9.66**	**325**	*e*P		**Pn**	**21 01 01.7**	**+1.6**
KWP	**Kalwaria Pacla**	**9.69**	**39**	*e*P		Pn	21 01 05.1	+4.6
KWP	**Kalwaria Pacla**	**9.69**	**39**	*e*P		Pn	21 01 05.1	+4.6
BCLA	**Clavier**	**9.71**	**328**	PN		**Pn**	**21 01 02.2**	**+1.4**
BCLA				SN		**Sn**	**21 02 48.7**	**-0.8**
	comp=N,9.5nm,0.0s							
DOU	**Dourbes**	**9.75**	**325**	PN		**Pn**	**21 01 02.9**	**+1.6**
DOU				SN		**Sn**	**21 02 46.7**	**-3.8**
	comp=E,12nm,0.0s							
BURAR	**Bucovina Array**	**9.86**	**54**	⇑ *i*P		**Pn**	**21 01 02.5**	**-0.4**
BUR08	**Bucovina Ar. S**	**9.86**	**54**	*e*P		**Pn**	**21 01 05.2**	**+2.2**
BUR08	**Bucovina Ar. S**	**9.86**	**54**	*e*P		**Pn**	**21 01 05.2**	**+2.2**
BAIF	**Baives**	**9.89**	**323**	*e*P		**Pn**	**21 01 04.9**	**+1.6**
BAIF	**Baives**	**9.89**	**323**	*e*P		**Pn**	**21 01 04.9**	**+1.6**
BAIF	**Baives**	**9.89**	**323**	*e*P		**Pn**	**21 01 04.9**	**+1.6**
BAIF	**Baives**	**9.89**	**323**	*e*P		**Pn**	**21 01 04.9**	**+1.6**
ISR	**Istrita**	**9.91**	**70**	⇑ *i*P		**Pn**	**21 01 05.6**	**+2.0**
PLOR	**Plostina**	**10.15**	**66**	⇓ *i*P		**Pn**	**21 01 07.3**	**+0.5**
VRI	**Vrincioaia**	**10.20**	**66**	⇓ *i*P		**Pn**	**21 01 08.9**	**+1.4**
ETSF	**Etsaut**	**10.26**	**277**	*e*P		**Pn**	**21 01 10.1**	**+1.8**
ETSF	**Etsaut**	**10.26**	**277**	*e*P		**Pn**	**21 01 10.1**	**+1.8**
ETSF	**Etsaut**	**10.26**	**277**	*e*P		**Pn**	**21 01 10.1**	**+1.8**
ETSF	**Etsaut**	**10.26**	**277**	*e*P		**Pn**	**21 01 10.1**	**+1.8**
LVV	**L'vov**	**10.45**	**41**	*e*P		**Pn**	**21 01 12.7**	**+1.9**
LVV				MLR	MLR			
	comp=N,700nm,10.0s							
LVV				MLR	MLR			
	comp=E,600nm,10.0s							
LVV				MLR	MLR			
	comp=Z,900nm,10.0s							
LVV	**L'vov**	**10.45**	**41**	*e*P		**Pn**	**21 01 12.7**	**+1.9**
TIRR	**Tirgusor**	**11.14**	**75**	⇓ *i*P		**Pn**	**21 01 19.6**	**-0.7**
LDF	**La Druitiere**	**11.27**	**308**	*e*P		**Pn**	**21 01 23.8**	**+1.8**
LDF	**La Druitiere**	**11.27**	**308**	*e*P		**Pn**	**21 01 23.8**	**+1.8**
LDF	**La Druitiere**	**11.27**	**308**	*e*P		**Pn**	**21 01 23.8**	**+1.8**
LDF	**La Druitiere**	**11.27**	**308**	*e*P		**Pn**	**21 01 23.8**	**+1.8**
LEOM	**Leova**	**11.38**	**64**	⇑ *i*P		Pn	21 01 16.6	-7.0
FLN	**La Foliniere**	**11.55**	**308**	*e*P		**Pn**	**21 01 27.7**	**+1.7**
	baz=131							
FLN	**La Foliniere**	**11.55**	**308**	*e*P		**Pn**	**21 01 27.7**	**+1.7**
FLN	**La Foliniere**	**11.55**	**308**	*e*P		**Pn**	**21 01 27.7**	**+1.7**
FLN	**La Foliniere**	**11.55**	**308**	*e*P		**Pn**	**21 01 27.7**	**+1.7**
	baz=131							
KIS	**Kishinev**	**11.90**	**62**	*e*P		**Pn**	**21 01 31.5**	**+0.7**
KIS				pmax	pmax			
	comp=Z,210nm,2.5s							
KIS				MLR	MLR			
	comp=Z,3µm,15.0s							
KIS				MLR	MLR			
	comp=E,3µm,14.0s							
KIS				MLR	MLR			
	comp=Z,3µm,14.0s							
KIS				MLR	MLR			
	comp=N,600nm,11.0s							
KIS	**Kishinev**	**11.90**	**62**	*e*P		**Pn**	**21 01 31.5**	**+0.7**
	comp=N,200nm,2.5s							
KIS	**Kishinev**	**11.90**	**62**	*e*PP		Pn	21 01 41.0	+10
KIS				LRM	MLR		21 06 58.0	
	comp=N,3µm,15.0s							
KIS	**Kishinev**	**11.90**	**62**	*e*P		**Pn**	**21 01 31.5**	**+0.7**
	comp=N,600nm,11.0s							
ESDC	**Sonseca Array**	**13.36**	**264**	Pn		**Pn**	**21 01 49.8**	**-0.9**
ESDC	**Sonseca Array**	**13.36**	**264**	Pn		**Pn**	**21 01 49.8**	**-0.9**
	comp=N,0.4nm,0.3s,baz=66,slow=14,SNR=30							
ESDC	**Sonseca Array**	**13.36**	**264**	Pn		**Pn**	**21 01 49.8**	**-0.9**
AK02	**Malin Array Si**	**13.63**	**48**	*e*P		**Pn**	**21 01 54.1**	**-0.3**
AK02	**Malin Array Si**	**13.63**	**48**	*e*P		**Pn**	**21 01 54.1**	**-0.3**
KIEV	**Kiev**	**13.65**	**47**	*e*P		**Pn**	**21 01 55.1**	**+0.4**
KIEV	**Kiev**	**13.65**	**47**	*e*Pn		**Pn**	**21 01 55.1**	**+0.4**
KIEV	**Kiev**	**13.65**	**47**	*e*P		**Pn**	**21 01 55.1**	**+0.4**

AK01	**Malin Array Si**	**13.66**	**47**	*e*P		**Pn**	**21 01 53.5**	**-1.2**
AK01	**Malin Array Si**	**13.66**	**47**	*e*P		**Pn**	**21 01 53.5**	**-1.2**
AKASG	**Malin Array Be**	**13.67**	**47**	P		**Pn**	**21 01 54.2**	**-0.6**
AKASG	**Malin Array Be**	**13.67**	**47**	Pn		**Pn**	**21 01 54.2**	**-0.6**
AKASG	**Malin Array Be**	**13.67**	**47**	Pn		**Pn**	**21 01 54.2**	**-0.6**
	comp=N,0.3nm,0.3s,baz=238,slow=12,SNR=9.6								
AKASG	**Malin Array Be**	**13.67**	**47**	P		**Pn**	**21 01 54.2**	**-0.6**
SIM	**Simferopol'**	**15.22**	**73**	*e*P		**P**	**21 02 22.0**	**+1.1**
SIM				pmax	pmax				
	comp=Z,10.0nm,0.8s								
SIM				MLR	MLR				
	comp=Z,300nm,9.9s								
SIM	**Simferopol'**	**15.22**	**73**	*e*P		**P**	**21 02 22.0**	**+1.1**
	comp=Z,300nm,9.9s								
MVO	**Moncorvo**	**15.25**	**272**	*e*P		**P**	**21 02 19.5**	**-1.8**
	comp=Z,26nm,1.6s								
MVO	**Moncorvo**	**15.25**	**272**	*e*P		**P**	**21 02 19.5**	**-1.8**
	comp=Z,26nm,1.6s								
BRTR	**Keskin Array B**	**15.54**	**93**	Pn		**Pn**	**21 02 21.4**	**+1.2**
BRTR	**Keskin Array B**	**15.54**	**93**	Pn		**Pn**	**21 02 21.4**	**+1.2**
	comp=Z,0.1nm,0.3s,baz=287,slow=12,SNR=8.5								
BRTR	**Keskin Array B**	**15.54**	**93**	Pn		**Pn**	**21 02 21.5**	**+1.2**
POLO	**Lamas de Olo**	**15.78**	**273**	*e*P		**P**	**21 02 28.6**	**+1.4**
	comp=Z,20nm,1.5s								
POLO	**Lamas de Olo**	**15.78**	**273**	*e*P		**P**	**21 02 28.6**	**+1.4**
	comp=Z,20nm,1.5s								
MTE	**Manteigas**	**15.80**	**270**	*e*P		**P**	**21 02 28.9**	**+1.4**

MOS pmax pmax
comp=Z,100nm,1.2s
MOS MLR MLR
comp=Z,700nm,10.0s
MOS MLR MLR
comp=E,500nm,10.0s
TAM Tamanrasset 20.66 201 *e*P Pn 21 03 23.2 -0.2
TAM pmax pmax
comp=Z,48nm,1.3s
TAM Tamanrasset 20.66 201 *e*P Pn 21 03 23.1 -0.3
comp=Z,48nm,1.3s
TAM Tamanrasset 20.66 201 *e*P Pn 21 03 23.1 -0.3
comp=Z,48nm,1.3s
KAF Kangasniemi 21.15 17 *e*P **P 21 03 25.5 -0.4**
KAF pmax pmax
comp=Z,33nm,0.9s
KAF Kangasniemi 21.15 17 *e*p **P 21 03 25.5 -0.4**
comp=Z,33nm,0.9s
KAF Kangasniemi 21.15 17 *e*P **P 21 03 25.5 -0.4**
comp=Z,33nm,0.9s
ASF Jabal al Asfar 21.29 111 P **P 21 03 28.6 +0.8**
ASF Jabal al Asfar 21.29 111 P **P 21 03 28.6 +0.8**
comp=Z,0.7nm,0.3s,baz=315,slow=4.3,SNR=2.4
KIV Kislovodsk 21.39 76 *e*P **P 21 03 29.7 +0.9**
KIV *e*S **S 21 07 27.6 +1.9**
KIV pmax pmax
comp=Z,54nm,1.1s
KIV MLR MLR
comp=Z,225nm,14.0s
KIV Kislovodsk 21.39 76 *e*P **P 21 03 29.7 +0.9**
comp=Z,54nm,1.1s
KIV *e*S **S 21 07 27.6 +1.9**
comp=Z,225nm,14.0s
EIL Elat 21.55 119 P **P 21 03 30.2 -0.2**
EIL Elat 21.55 119 P **P 21 03 30.2 -0.2**
comp=Z,13nm,1.2s,baz=335,slow=8.9,SNR=6.0
EIL Elat 21.55 119 P **P 21 03 30.2 -0.2**
KBZ Khabaz 21.57 77 P **P 21 03 32.3 +1.7**
KBZ Khabaz 21.57 77 P **P 21 03 32.2 +1.7**
KBZ Khabaz 21.57 77 P **P 21 03 32.2 +1.7**
comp=Z,17nm,0.9s,baz=296,slow=6.9,SNR=28
KBZ Khabaz 21.57 77 P **P 21 03 32.2 +1.7**
ONI Oni 22.14 79 P **P 21 03 39.0 +2.2**
AKH Akhalkalaki 22.40 82 P **P 21 03 41.7 +2.0**
JOF Joensuu 23.05 21 *e*P **P 21 03 46.7 +0.5**
JOF Joensuu 23.05 21 *e*p **P 21 03 46.7 +0.5**
JOF Joensuu 23.05 21 *e*P **P 21 03 46.7 +0.5**
TBLG Delisi 23.24 81 *e*P **P 21 03 50.2 +1.9**
TBLG Delisi 23.24 81 P **P 21 03 50.2 +1.9**
TBLG Delisi 23.24 81 P **P 21 03 50.2 +1.9**
GNI Garni 23.63 85 *e*P **P 21 03 53.5 +1.2**
comp=Z,22nm,1.0s
GNI P **P 21 03 53.7 +1.3**
GNI Garni 23.63 85 P **P 21 03 53.7 +1.3**
comp=Z,7.7nm,0.8s,baz=206,slow=1.2,SNR=5.0
GNI Garni 23.63 85 *e*P **P 21 03 53.5 +1.2**
comp=Z,22nm,1.0s
DGRG David-gareji 23.77 82 P **P 21 03 54.1 +0.6**
BHD Baghdad 26.04 100 *e*P **P 21 04 10.0 -4.3**
BHD *e*S **S 21 08 39.0 -5.6**
APA Apatity 27.40 17⇓ *i*P P 21 04 34.0 +7.8
APA pmax pmax
comp=Z,16nm,1.0s
APA MLR MLR
comp=Z,900nm,11.0s
ARCES ARCESS Array B 27.88 9 P **P 21 04 28.3 -2.2**
ARCES ARCESS Array B 27.88 9 P **P 21 04 28.3 -2.2**
comp=Z,2.2nm,0.8s,baz=180,slow=6.8,SNR=8.1
TOA0 Torodi Ar. Sit 30.89 203 *e*P **P 21 04 57.4 -0.3**
TOA0 Torodi Ar. Sit 30.89 203 *e*P **P 21 04 57.4 -0.3**
TORD Torodi Ar. Bea 30.89 203 P **P 21 04 58.0 +0.3**
TORD Torodi Ar. Bea 30.89 203 P **P 21 04 58.0 +0.3**
comp=Z,4.6nm,0.5s,baz=16,slow=9.0,SNR=94
TORD Torodi Ar. Bea 30.89 203 P **P 21 04 58.0 +0.3**
AKTK Aktyubinsk 31.39 60 P **P 21 05 01.4 -0.4**
AKTO Aktyubinsk 31.39 60 P **P 21 05 01.4 -0.5**
AKTO Aktyubinsk 31.39 60 P **P 21 05 01.4 -0.5**
AKTO Aktyubinsk 31.39 60 P **P 21 05 01.4 -0.5**
comp=Z,3.5nm,0.9s,baz=268,slow=8.7,SNR=10
AKTO LR LR 21 19 41.2
comp=Z,257nm,19.0s,baz=43,slow=40
AKTO Aktyubinsk 31.39 60 P **P 21 05 01.4 -0.5**
ARU Arti 31.92 48*c* *i*P **P 21 05 06.0 -0.3**
ARU PPP PPP 21 06 18.4
ARU 21 07 55.8
ARU S **S 21 10 18.4 +1.8**
ARU pmax pmax
comp=Z,75nm,1.2s
ARU MLR MLR
comp=Z,744nm,15.0s
ARU Arti 31.92 48 *i*P **P 21 05 06.0 -0.3**
comp=Z,75nm,1.2s
ARU Arti 31.92 48 PcP **PcP 21 07 55.8 -0.5**
ARU S **S 21 10 18.4 +1.8**
comp=Z,744nm,15.0s
ABKAR Akbulak array 32.73 62 *e*P **P 21 05 13.4 -0.1**
ABKAR Akbulak array 32.73 62 *e*P **P 21 05 13.4 -0.1**
SVE Sverdlovsk 33.10 48⇑ *i*P **P 21 05 17.5 +0.8**
SVE pmax pmax
comp=Z,56nm,1.1s
SVE MLR MLR
comp=Z,1μm,16.0s
SVE Sverdlovsk 33.10 48 *i*P **P 21 05 17.5 +0.8**
comp=Z,1μm,16.0s
SPITS Spitsbergen Ar 35.86 1 P **P 21 05 41.0 +0.7**
SPITS Spitsbergen Ar 35.86 1 P **P 21 05 41.0 +0.7**
comp=Z,4.5nm,0.8s,baz=151,slow=12,SNR=6.2
SPITS Spitsbergen Ar 35.86 1 P **P 21 05 41.1 +0.7**
KBS Kingsbay 36.60 360*ce*P **P 21 05 48.4 +1.8**
KBS pmax pmax
comp=Z,14nm,1.7s
KBS Kingsbay 36.60 360 *e*P **P 21 05 48.4 +1.8**
comp=Z,14nm,1.7s
BRVK Borovoye 38.75 54*c* *i*P **P 21 06 06.0 +0.9**
BRVK pmax pmax
comp=Z,43nm,1.7s
BRVK Borovoye 38.75 54 *i*P **P 21 06 06.0 +0.9**
comp=Z,43nm,1.7s
BVAR Borovoye Array 38.82 54 P **P 21 06 06.4 +0.7**
BVAR Borovoye Array 38.82 54 P **P 21 06 06.4 +0.7**
BVAR Borovoye Array 38.82 54 P **P 21 06 06.4 +0.7**
comp=Z,7.8nm,0.9s,baz=269,slow=7.1,SNR=30
BVAR Borovoye Array 38.82 54 P **P 21 06 06.4 +0.7**
DBIC Dimbokro 39.11 209 P **P 21 06 08.1 -0.3**
DBIC Dimbokro 39.11 209 P **P 21 06 08.1 -0.3**
comp=Z,14nm,1.1s,baz=36,slow=3.1,SNR=3.9
DBIC Dimbokro 39.11 209 P **P 21 06 08.1 -0.3**
KKAR Karatay Array 41.25 69 *e*P **P 21 06 27.1 +1.0**
KKAR Karatay Array 41.25 69 *e*P **P 21 06 27.1 +1.0**
KKAR Karatay Array 41.25 69 *e*P **P 21 06 27.1 +1.0**
EKS2 Erkin-Say 43.66 68 *e*P **P 21 06 47.4 +1.6**
EKS2 pmax pmax
comp=Z,34nm,1.1s
EKS2 Erkin-Say 43.66 68 *e*P **P 21 06 47.4 +1.6**
comp=Z,34nm,1.1s
EKS2 Erkin-Say 43.66 68 P **P 21 06 47.4 +1.6**
SNR=29
EKS2 Erkin-Say 43.66 68 *e*P **P 21 06 47.4 +1.6**
comp=Z,34nm,1.1s
AML Almayashu 43.79 69 *i*P **P 21 06 48.6 +1.4**
AML Almayashu 43.79 69 P **P 21 06 48.6 +1.4**
SNR=5.9
AML Almayashu 43.79 69 *i*P **P 21 06 48.6 +1.4**
USP Ospenovka 43.94 67 *i*P **P 21 06 49.5 +1.6**
USP Ospenovka 43.94 67 P **P 21 06 49.5 +1.6**
SNR=6.1
USP Ospenovka 43.94 67 *i*P **P 21 06 49.5 +1.6**
AAK Ala-Archa 44.16 68 *e*P **P 21 06 51.7 +1.8**
AAK pmax pmax
comp=Z,19nm,1.2s
AAK Ala-Archa 44.16 68 *e*P **P 21 06 51.6 +1.8**
comp=Z,19nm,1.2s
AAK Ala-Archa 44.16 68 P **P 21 06 51.8 +1.8**
SNR=5.3
AAK Ala-Archa 44.16 68 *e*P **P 21 06 51.7 +1.8**
comp=Z,19nm,1.2s
KURK Kurchatov 44.28 56*c* *i*P **P 21 06 50.5 0.0**
KURK pmax pmax
comp=Z,16nm,1.5s
KURK Kurchatov 44.28 56 *e*P **P 21 06 50.4 0.0**
comp=Z,11nm,1.1s
KURK Kurchatov 44.28 56 *i*P **P 21 06 50.5 0.0**
comp=Z,16nm,1.5s
KZA Kyzart 44.89 69 *i*P **P 21 06 58.0 +2.0**
KZA Kyzart 44.89 69 P **P 21 06 58.0 +2.0**
SNR=22
KZA Kyzart 44.89 69 *i*P **P 21 06 58.0 +2.0**
NVS Novosibirsk 45.91 49⇑ *i*P **P 21 07 04.3 +0.9**
NVS *e* 21 08 50.2
NVS pmax pmax
comp=N,4.0nm,1.5s
NVS pmax pmax
comp=E,12nm,1.5s
NVS pmax pmax
comp=Z,35nm,1.5s
NVS Novosibirsk 45.91 49 *i*P **P 21 07 04.3 +0.9**
KSH Kashi 46.41 71 P **P 21 07 08.3 +0.6**
KSH *e*pP **pP 21 07 12.5 0.0**
KSH *e*sP **sP 21 07 15.3 +0.9**
KSH *e*PcP **PcP 21 08 43.0 +0.6**
KSH *e*PP **PP 21 08 57.1 +0.5**
KSH *e*S **S 21 13 53.6 -1.4**
KSH *e*sS **sS 21 14 02.1 -0.7**
KSH pmax pmax
comp=Z,31nm,1.1s
KSH pmax pmax
comp=Z,310nm,5.1s
KSH LR LR
comp=N,500nm,5.1s
KSH LR LR
comp=E,350nm,4.9s
KSH LR LR
comp=Z,560nm,13.6s
ZAA0 Zalesovo Array 47.04 50 *e*P **P 21 07 12.6 +0.3**
ZAA0 Zalesovo Array 47.04 50 *e*P **P 21 07 12.6 +0.3**
ZALV Zalesovo Beam 47.04 50 *i*P **P 21 07 12.8 +0.5**
ZALV pmax pmax
comp=Z,8.0nm,1.0s
ZALV Zalesovo Beam 47.04 50 P **P 21 07 12.3 0.0**
ZALV PP **PP 21 08 59.3 -3.4**
ZALV Zalesovo Beam 47.04 50 P **P 21 07 12.3 0.0**
comp=Z,7.7nm,1.0s,baz=289,slow=9.2,SNR=18
ZALV PP **PP 21 08 59.3 -3.4**
comp=Z,2.2nm,0.8s,baz=297,slow=9.8,SNR=4.3
ZALV Zalesovo Beam 47.04 50 *i*P **P 21 07 12.8 +0.5**
comp=Z,8.0nm,1.0s
MK31 Makanchi Array 47.83 60 *e*P **P 21 07 18.6 0.0**
MK31 Makanchi Array 47.83 60 *e*P **P 21 07 18.6 0.0**
MK31 Makanchi Array 47.83 60 *e*P **P 21 07 18.6 0.0**
MKAR Makanchi Array 47.83 60 P **P 21 07 18.8 +0.2**
MKAR 21 09 08.5
MKAR pmax pmax
comp=Z,8.0nm,1.0s
MKAR pmax pmax
comp=Z,1.0nm,1.0s
MKAR Makanchi Array 47.83 60 *e*P **P 21 07 18.9 +0.2**
MKAR PP **PP 21 09 08.5 -1.7**
MKAR Makanchi Array 47.83 60 P **P 21 07 18.8 +0.2**
comp=Z,8.2nm,1.0s,baz=288,slow=6.1,SNR=66
MKAR PP **PP 21 09 08.5 -1.7**
comp=Z,1.2nm,1.0s,baz=289,slow=9.0,SNR=2.9
MKAR Makanchi Array 47.83 60 *e*P **P 21 07 18.9 +0.3**
SCHQ Schefferville 51.57 313 P **P 21 07 46.1 -0.8**
SCHQ Schefferville 51.57 313 P **P 21 07 46.1 -0.8**
comp=Z,4.7nm,0.8s,baz=75,slow=8.5,SNR=7.5
SCHQ Schefferville 51.57 313 P **P 21 07 46.1 -0.8**
WMQ Urumqi 52.52 61 *e*P **P 21 07 55.3 +1.1**
WMQ pP **pP 21 08 03.0 +4.0**
WMQ pmax pmax
comp=Z,11nm,0.8s
WMQ pmax pmax
comp=Z,110nm,6.4s
TIXI Tiksi 57.53 20⇓ *i*P **P 21 08 30.6 +0.7**
TIXI pmax pmax
comp=Z,15nm,1.6s
TIXI Tiksi 57.53 20 *i* P **P 21 08 30.6 +0.7**
comp=Z,15nm,1.6s
DANN Dangsing 57.56 80 *e*P **P 21 08 31.1 0.0**
comp=Z,56nm,1.2s
KOLN Koldanda 57.77 80 *e*P **P 21 08 32.1 -0.4**
comp=Z,24nm,1.2s
ZAK Zakamensk 58.86 48 *e*P **P 21 08 40.7 +1.0**
ZAK pmax pmax
comp=Z,3.0nm,1.4s
ZAK Zakamensk 58.86 48 *e*P **P 21 08 40.7 +1.0**
comp=Z,3.0nm,1.4s
DMN Daman 58.96 80 *e*P **P 21 08 40.8 -0.1**
comp=Z,40nm,1.1s
KKN Kakani 58.99 79 *e*P **P 21 08 40.5 -0.5**
PKI Pulchoki 59.20 79 *e*P **P 21 08 42.1 -0.6**
comp=Z,38nm,1.1s
GUN Gumba 59.35 79 *e*P **P 21 08 43.5 -0.2**
comp=Z,61nm,1.0s
RAMN Ramite 60.43 79 *e*P **P 21 08 50.4 -0.6**
comp=Z,35nm,1.0s
TAPN Taplejung 61.00 78 *e*P **P 21 08 54.7 -0.3**
comp=Z,36nm,1.1s
ODAN Odare 61.05 79 *e*P **P 21 08 54.7 -0.5**
comp=Z,28nm,1.1s
SONM Songino Array 61.94 50 P **P 21 09 01.6 +0.8**
SONM Songino Array 61.94 50 P **P 21 09 01.6 +0.8**
comp=Z,8.4nm,1.0s,baz=292,slow=8.1,SNR=46
SONM Songino Array 61.94 50 P **P 21 09 01.6 +0.8**
LSA Lhasa 62.12 74 P **P 21 09 02.9 +0.2**
LSA Lhasa 62.12 74 *e*P **P 21 09 03.2 +0.5**
LSA pmax pmax
comp=Z,19nm,1.1s
LSA Lhasa 62.12 74 *e*P **P 21 09 03.2 +0.5**
comp=Z,19nm,1.1s
LSA Lhasa 62.12 74 *e*P **P 21 09 03.2 +0.5**
comp=Z,19nm,1.1s
ULN Ulaanbaatar 62.29 49 *e*P **P 21 09 04.2 +1.0**
comp=Z,7.9nm,1.2s
ULN Ulaanbaatar 62.29 49 *e*P **P 21 09 04.2 +1.0**
comp=Z,7.9nm,1.2s
LZH Lanzhou 67.10 62 *e*P **P 21 09 35.3 +0.6**
LZH pP **pP 21 09 38.5 -1.2**
LZH sP **sP 21 09 40.1 -1.4**
LZH *e*PP **PP 21 12 04.5 +2.3**
LZH pmax pmax
comp=Z,20nm,1.3s
LZH pmax pmax
comp=Z,68nm,7.8s
LZH LR LR
comp=N,290nm,16.2s
LZH LR LR
comp=E,280nm,16.0s
LZH LR LR
comp=Z,360nm,19.8s
YKA Yellowknife Ar 67.40 337 P **P 21 09 36.0 0.0**
YKA Yellowknife Ar 67.40 337 P **P 21 09 35.9 0.0**
comp=Z,1.6nm,0.7s,baz=43,slow=6.0,SNR=12
YKA Yellowknife Ar 67.40 337 P **P 21 09 36.0 0.0**
HHC Hu-ho-hao-te 69.03 54 *e*P **P 21 09 45.8 -0.9**
HHC pP **pP 21 09 52.4 +0.7**
HHC PcS 21 14 14.1
HHC S **S 21 18 48.0 -3.1**
HHC ScS **SKSac 21 19 42.3 -3.7**
HHC SS **SS 21 23 15.3 -0.9**
HHC pmax pmax
comp=Z,32nm,0.8s
HHC pmax pmax
comp=Z,320nm,5.3s
HHC LR LR
comp=N,330nm,18.2s
HHC LR LR
comp=E,290nm,15.9s
HHC LR LR
comp=Z,540nm,18.1s
CD2 Chengdu 70.17 66 *e*P **P 21 09 55.1 +1.2**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,50nm,6.2s
BOSA Boshof 71.56 169 P **P 21 10 03.5 +1.4**
BOSA Boshof 71.56 169 P **P 21 10 03.5 +1.4**
comp=Z,3.1nm,0.7s,baz=336,slow=10.0,SNR=6.0
BOSA Boshof 71.56 169 P **P 21 10 03.5 +1.4**
XAN Xi'an 71.64 61 P **P 21 10 03.5 +0.8**
XAN sP sP 21 10 16.3 +6.8
XAN pmax pmax
comp=Z,3.0nm,1.2s
XAN pmax pmax
comp=Z,27nm,12.7s
ILAR Eielson Array 72.00 351 P **P 21 10 05.0 +0.8**
ILAR Eielson Array 72.00 351 P **P 21 10 05.0 +0.8**
comp=Z,1.3nm,0.8s,baz=7,6,slow=5.7,SNR=13
ILAR Eielson Array 72.00 351 P **P 21 10 05.1 +0.8**
KMI Kunming 73.08 71 P **P 21 10 11.8 +0.1**
KMI pmax pmax
comp=Z,4.0nm,1.3s
KLR Kul'dur 73.92 37 *e*P **P 21 10 13.0 -2.9**
ENH Enshi 74.41 63 *e*P **P 21 10 19.3 +0.2**
comp=Z,8.2nm,0.9s
ENH Enshi 74.41 63 *e*P **P 21 10 19.3 +0.2**
comp=Z,8.2nm,0.9s
CMAR Chiang Mai Arr 74.60 79 P **P 21 10 20.1 -0.3**
CMAR Chiang Mai Arr 74.60 79 P **P 21 10 20.1 -0.3**
comp=Z,3.0nm,0.9s,baz=305,slow=7.4,SNR=12
CMAR Chiang Mai Arr 74.60 79 P **P 21 10 20.1 -0.3**
CN2 Changchun 74.80 44 *e*P **P 21 10 22.1 +1.0**
CN2 *e*S **S 21 19 55.3 -1.9**
CN2 pmax pmax
comp=Z,10.0nm,0.9s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,200nm,16.0s
CN2 LR LR
comp=E,200nm,16.0s
CN2 LR LR
comp=Z,300nm,17.0s
GYA Guiyang 74.95 68 *e*P **P 21 10 22.8 +0.3**
GYA PP **PP 21 13 12.5 +2.6**
GYA S **S 21 19 58.8 -0.8**
GYA SKS **SKSac 21 20 27.0 -4.1**
GYA pmax pmax
comp=Z,10.0nm,1.0s
GYA pmax pmax
comp=Z,90nm,5.6s
EGMT Eagleton 76.88 325 P **P 21 10 33.0 -0.1**
comp=Z,11nm,1.0s
EGMT Eagleton 76.88 325 P **P 21 10 33.0 -0.1**
comp=Z,11nm,1.0s
USRK Ussuriysk Arra 77.76 40 P **P 21 10 39.3 +1.3**
comp=Z,4.1nm,0.9s,baz=293,slow=5.9,SNR=12
NJ2 Nanjing 79.22 56 *e*P **P 21 10 47.1 +0.9**
NJ2 pmax pmax
comp=Z,10.0nm,0.7s
BOZ Bozoman (W) 79.53 324 *e*P **P 21 10 50.2 +2.3**
BOZ pmax pmax
comp=Z,3.0nm,1.1s
BOZ Bozoman (W) 79.53 324 *e*P **P 21 10 50.2 +2.3**
comp=Z,2.8nm,1.1s
BOZ Bozoman (W) 79.53 324 *e*P **P 21 10 50.2 +2.3**
comp=Z,2.8nm,1.1s
YSS Yuzh-Sakhalins 80.33 32 *e*P P 21 10 57.0 +5.1
YSS pmax pmax
comp=Z,40nm,1.0s
KSAR Wonju Array Be 80.65 47 P **P 21 10 54.4 +0.5**
KSAR Wonju Array Be 80.65 47 P **P 21 10 54.4 +0.5**
KSRS Korea Array 80.66 47 P **P 21 10 54.4 +0.5**
comp=Z,3.8nm,0.9s,baz=331,slow=4.6,SNR=12
KSRS Korea Array 80.66 47 P **P 21 10 54.4 +0.5**
comp=Z,4.0nm,0.9s
BDFB Brasilia 80.70 239 P **P 21 10 54.5 0.0**
BDFB Brasilia 80.70 239 P **P 21 10 54.5 0.0**
comp=Z,1.6nm,0.5s,baz=121,slow=5.9,SNR=2.2
BDFB Brasilia 80.70 239 P **P 21 10 54.5 0.0**
PDAR Pinedale Array 80.86 321 P **P 21 10 58.1 +2.9**
PDAR Pinedale Array 80.86 321 P **P 21 10 58.1 +2.9**
comp=Z,0.3nm,0.5s,baz=108,slow=2.9,SNR=3.1
PDAR Pinedale Array 80.86 321 P **P 21 10 58.1 +2.9**
BMO Blue Mountains 82.55 327 *e*P **P 21 11 02.8 -1.1**
comp=Z,4.3nm,0.9s
BMO Blue Mountains 82.55 327 *e*P **P 21 11 02.8 -1.1**
comp=Z,4.3nm,0.9s
TXAR Lajitas Array 88.04 309 P **P 21 11 33.3 +1.7**
TXAR Lajitas Array 88.04 309 P **P 21 11 33.3 +1.7**
comp=Z,0.3nm,0.6s,baz=120,slow=4.5,SNR=4.2
TXAR Lajitas Array 88.04 309 P **P 21 11 33.3 +1.7**

BJI ***22*** *21:05:29.3,51.˚50N×177.˚95W,h23km,mB5.5/38, mb5.6/64,Ms5.2/60,Ms7 5.0/59*
ISCJB ***22*** *21:05:33.9±0.4,51.˚36N±0.˚03×178.˚16W±0.˚02,h40km±3km, mb5.5/376,MS4.9/112,Error ellipse: s-maj=5.3km s-min=2.1km az=176.9*
IDC ***22*** *21:05:33.3±1.4,51.˚40N×178.˚16W,h25km±7km,mb5.0/43, mb1 5.1/45,mb1mx5.1/48,mbtmp5.0/45,ML4.8/2,MS4.7/31, Ms1 4.7/31,ms1mx4.7/38,Error ellipse: s-maj=13.2km s-min=7.8km az=157.0*
MOS ***22*** *21:05:33.1±0.9,51.˚45N×178.˚17W,h33km,mb5.9/140, MS4.9/51,Error ellipse: s-maj=6.4km s-min=4.1km az=94.5*
NEIC ***22*** *21:05:33.9±0.1,51.˚35N×178.˚25W,h29km,mb5.5/208, MS5.0/41,MW5.4,Error ellipse: s-maj=4.7km s-min=2.0km az=179.0,Moment Tensor Solution. s18 Moment tensor: Scale 10^17^Nm; Mrr1.31; Mθθ-1.20; Mϕϕ-0.11; Mrθ0.67; Mϕϕ-0.40; Mrϕ0.18; Best double couple: M0 1.50000×10^17^ NP1:ϕ73.00000°,δ59.00000°,λ91.00000°. NP2: ϕ251.00000°,δ31.00000°,λ88.00000°. Principal axes: T 1.4800, Plg75.0000°, Azm347.0000°; N 0.0200, Plg1.0000°, Azm252.0000°; P -1.5000, Plg13.0000°, Azm162.0000°;*
GCMT ***22*** *21:05:35.7±0.1,51.˚15N×178.˚01W,h33km,MW5.4, Moment Tensor Solution. s91,c172; s15,c15; Moment tensor: Scale 10^17^Nm; Mrr1.33±.03; Mθθ-1.31±.02; Mϕϕ-0.02±.02; Mrθ0.88±.03; Mθϕ-0.56±.02; Mrϕ0.70±.03; Best double couple: M0 1.80000×10^17^ NP1:ϕ263.00000°, δ28.00000°,λ112.00000°. NP2:ϕ58.00000°,δ64.00000°, λ79.00000°. Principal axes: T 1.7600, Plg68.0000°, Azm306.0000°; N 0.1300, Plg10.0000°, Azm63.0000°; P -1.8800, Plg19.0000°, Azm156.0000°; Data Used: lI lU CN IC G. Surface waves: sta= 99, comp=194, per= 50.*
SZGRF ***22*** *21:05:44.2,52.˚70N×179.˚92W,h33km,mb5.6,Andreanof Islands, Aleutian Islands, United States*
DJA ***22*** *21:05:56.2±5.2,51.˚N±10.˚×17.˚8W±2.˚1,h245km±46km, M4.9/19,mB5.5/13,mb5.0/19,Mw(mB)4.9/13*

ISC 22 21:05:33.1±0.3,51.29N±0.04×178.19W±0.02,h26km±1km, h25km:pP-P,n1528,σ1§11/1745,mb5.5/386,MS4.9/113, 463C-224D,Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERAA	**Semis' Rag'd T**	**1.46**	**296**	P	**Pb**	**21 06 00.0**	**+0.4**
CESW	**Semis' Southwe**	**1.53**	**295**	P	**Pb**	**21 06 00.7**	**-0.1**
CEAP	**Semis' Anvil P**	**1.56**	**298**	P	**Pb**	**21 06 01.6**	**+0.2**
AMKA	**Amchitka**	**1.58**	**274**	P	**Pn**	**21 05 59.5**	**+0.2**
AMKA				S	**Sb**	**21 06 20.8**	**-0.2**
CETU	**Semis' Tuman**	**1.60**	**296**	P	**Pb**	**21 06 02.0**	**+0.1**
LSSE	**Little Sitkin**	**2.12**	**289**	P	**Pb**	**21 06 09.3**	**-1.6**
LSSA	**Little Sitkin**	**2.16**	**289**	P	**Pn**	**21 06 09.5**	**+2.0**
LSNW	**Little Sitkin**	**2.16**	**290**	P	**Pn**	**21 06 09.4**	**+1.9**
KOKL	**Mount Kliuchef**	**2.69**	**66**	P	**Pn**	**21 06 17.1**	**+2.4**
KOFP	**Korovin Flat P**	**2.73**	**67**	P	**Pn**	**21 06 16.8**	**+1.5**
SMY	**Shemya**	**4.98**	**290**	P	**Pn**	**21 06 48.4**	**+2.3**
SMY				S	**Sn**	**21 07 47.6**	**+4.8**
SMY	**Shemya**	**4.98**	**290**	P	**Pn**	**21 06 48.4**	**+2.3**
SMY				S	**Sn**	**21 07 47.6**	**+4.8**
FX1	**Attu Island--F**	**5.57**	**290**	P	**Pn**	**21 06 55.4**	**+1.2**
FX1				S	**Sn**	**21 07 59.8**	**+2.6**
NIKH	**Nikolski High**	**5.99**	**70**	P	**Pn**	**21 07 01.6**	**+1.5**
NIKH				S	Sn	21 08 14.2	+6.4
OKSO	**Okmok South**	**6.49**	**67**	P	Pn	21 07 10.1	+3.2
OKTU	**Okmok Mt. Tuli**	**6.57**	**67**	P	**Pn**	**21 07 10.9**	**+3.0**
OKFG	**Magazine Ridge**	**6.65**	**67**	P	Pn	21 07 13.2	+4.1
MTBL	**Makushin Table**	**7.50**	**65**	P	Pn	21 07 24.4	+3.6
SPIA	**Saint Paul Isl**	**7.51**	**35**	*e*Pn	Pn	21 07 25.7	+4.8
UNV	**Unalaska Valle**	**7.57**	**66**	P	**Pn**	**21 07 24.8**	**+3.1**
AKUT	**Akutan**	**8.06**	**64**	*e*Pn	**Pn**	**21 07 31.0**	**+2.5**
AKUT				*e*Sn	Sn	21 09 06.5	+7.9
FALS	**False Pass**	**9.58**	**62**	*e*Pn	Pn	21 07 52.9	+3.6
FALS				*e*Sn	**Sn**	**21 09 36.1**	**+0.2**
SDPT	**Sand Point**	**11.34**	**62**	*e*Pn	**Pn**	**21 08 14.8**	**+1.6**
SDPT				*e*Sn	**Sn**	**21 10 19.3**	**+0.3**
CHGN	**Chignik**	**12.71**	**59**	*e*Pn	**Pn**	**21 08 32.0**	**+0.1**
CHGN				*e*Sn	**Sn**	**21 10 52.9**	**+0.6**
GAMB	**Gambell** 95nm,0.7s	**12.99**	**13**	*e*Pn	**Pn**	**21 08 35.1**	**-0.6**
PET	**Petropavlovsk**	**14.31**	**286***c*	*i*P	**Pn**	**21 08 54.5**	**+0.7**
PET				*i* S	**Sn**	**21 11 34.1**	**+2.6**
PET				pmax	pmax		
	comp=Z,500nm,5.4s						
PET				pmax	pmax		
	comp=Z,800nm,16.6s						
PET				pmax	pmax		
	comp=Z,60nm,1.1s						
PET				MLR	MLR		

comp=Z,8μm,21.0s
PET MLR MLR
comp=Z,6μm,21.0s
PEA0B Petropavlovsk- 14.88 286 *e*Pn **Pn 21 09 01.6 0.0**
PEA0B *e*Sn **Sn 21 11 42.0 -3.4**
PETK Petropavlovsk- 14.88 286 P **Pn 21 09 02.7 +1.1**
PETK 21 11 47.0
PETK pmax pmax
comp=Z,1.0nm,0.3s
PETK smax smax
comp=N,1.0nm,0.3s
PETK Petropavlovsk- 14.88 286 Pn **Pn 21 09 02.7 +1.1**
PETK Sn **Sn 21 11 47.0 +1.5**
PETK ScP **ScP 21 17 45.0 +2.6**
PETK Petropavlovsk- 14.88 286 Pn **Pn 21 09 02.7 +1.1**
comp=N,1.4nm,0.3s,baz=90,slow=16,SNR=32
PETK Sn **Sn 21 11 47.0 +1.5**
comp=N,0.5nm,0.3s,baz=34,slow=21,SNR=2.6
PETK ScP **ScP 21 17 45.0 +2.6**
comp=N,0.3nm,0.3s,baz=121,slow=7.1,SNR=5.6
OHAK Old Harbor 15.66 58 *e*Pn **Pn 21 09 09.7 -2.2**
comp=N,380nm,1.1s
SVW2 Sparrevohn 15.88 43 *e*P **P 21 09 17.1 -1.0**
comp=N,210nm,0.9s
KDAK Kodiak Island 16.16 56 Pn **Pn 21 09 15.0 -3.1**
comp=N,1μm,0.4s,SNR=36
KDAK Kodiak Island 16.16 56 *e*Pn **Pn 21 09 14.4 -3.8**
comp=N,116nm,0.4s
KDAK *e*Sn **Sn 21 12 17.3 +1.0**
KDAK Kodiak Island 16.16 56 Pn **Pn 21 09 15.5 -2.7**
comp=N,9.2nm,0.3s,baz=258,slow=7.8,SNR=40
KDAK Sn **Sn 21 12 15.9 -0.4**
comp=N,1.2nm,0.3s,baz=270,slow=20,SNR=3.8
SKR Severo-Kuril's 16.17 278 *e*P **Pn 21 09 14.0 -4.3**
SKR *e*S **Sn 21 12 13.5 -3.2**
SKR pmax pmax
comp=E,1μm,12.0s
SKR pmax pmax
comp=Z,1μm,12.0s
SKR pmax pmax
comp=N,130nm,1.0s
SKR pmax pmax
comp=Z,290nm,1.0s
SKR smax smax
comp=N,80nm,0.5s
SKR smax smax
comp=E,80nm,0.5s
SKR smax smax
comp=N,1μm,8.0s
SKR smax smax
comp=E,2μm,8.0s
SKR MLR MLR
comp=N,2μm,18.0s
SKR MLR MLR
comp=E,1μm,18.0s
SKR MLR MLR
comp=Z,1μm,18.0s
RSO Redoubt South 16.87 47 *e*P **P 21 09 30.3 +1.0**
SPU Mount Spurr 17.46 45 *e*P **P 21 09 37.4 +1.8**
BILL Bilibino 18.44 341α *i*P **Pn 21 09 48.7 +2.2**
BILL *e**PP **pP 21 09 52.5 -0.8**
BILL *i* 21 09 54.1
BILL *i* 21 10 01.4
BILL Bilibino 18.44 341α *i*P **Pn 21 09 48.7 +2.2**
BILL MLR MLR
comp=Z,800nm,15.0s
RC01 Rabbit Creek A 18.48 47 *e*P **Pn 21 09 47.4 +0.4**
comp=Z,91nm,0.9s
RC01 *e*S **Sn 21 13 14.1 +1.7**
PMR Palmer 18.92 46 *e*P **P 21 09 51.2 -0.4**
PMR *e*S **S 21 13 25.0 +0.3**
PMR pmax pmax
comp=Z,93nm,1.0s
PMR Palmer 18.92 46 *e*P **P 21 09 51.2 -0.4**
comp=Z,93nm,1.0s
PMR *e*S **S 21 13 25.0 +0.3**
TRF Thorofare Moun 19.16 40 *e*P **P 21 09 54.4 -0.1**
comp=Z,538nm,0.9s
TRF *e*S **Sn 21 13 29.2 0.0**
SML Sawmill 19.35 46 *e*P **P 21 09 55.6 -0.8**
SML *e*S **S 21 13 33.4 -0.1**
SML pmax pmax
comp=Z,42nm,0.9s
SML Sawmill 19.35 46 *e*P **P 21 09 55.6 -0.8**
comp=Z,42nm,0.9s
SML *e*S **S 21 13 33.4 -0.1**
MID Middleton Isla 19.69 53 *e*P **P 21 10 00.3 +0.3**
MID Middleton Isla 19.69 53 *e*P **P 21 10 00.3 +0.3**
MCK McKinley 19.83 40 *e*P **P 21 10 01.3 -0.3**
comp=Z,135nm,0.8s
MCK *e*S **S 21 13 42.7 -0.6**
DIV Divide 20.33 48 *e*P **P 21 10 06.7 -0.4**
comp=Z,94nm,0.7s
DIV *e*S Sn 21 13 55.8 -1.5
COLA College 20.75 37 *e*P **P 21 10 11.3 -0.2**
comp=Z,228nm,0.8s
COLA *e*S **S 21 13 59.4 -2.2**
COLA LR LR
comp=Z,1μm,19.0s
PAX Paxson 20.99 44 *e*P **P 21 10 14.0 -0.3**
comp=Z,268nm,1.2s
PAX *e*S **S 21 14 05.1 -1.5**
PAX Paxson 20.99 44 *e*P **P 21 10 14.0 -0.3**
comp=Z,268nm,1.2s
ILAR Eielson Array 21.08 38 P **P 21 10 13.7 -1.4**
ILAR S **S 21 14 08.8 +0.7**
ILAR PcP **PcP 21 14 20.5 0.0**
ILAR ScP **ScP 21 17 53.5 -1.7**
ILAR Eielson Array 21.08 38 P **P 21 10 13.7 -1.4**
comp=Z,11nm,0.6s,baz=243,slow=9.0,SNR=56
ILAR S **S 21 14 08.8 +0.7**
comp=Z,4.0nm,1.0s,baz=220,slow=17,SNR=5.8
ILAR PcP **PcP 21 14 20.5 0.0**
comp=Z,3.4nm,0.8s,baz=273,slow=3.3,SNR=4.3
ILAR ScP **ScP 21 17 53.5 -1.7**
comp=Z,7.4nm,0.9s,baz=287,slow=3.3,SNR=9.3
ILAR LR LR 21 19 36.1
comp=Z,3μm,19.2s,baz=247,slow=40
COLD Coldfoot 21.14 30 *e*P **P 21 10 15.6 -0.1**
comp=Z,173nm,1.0s
COLD *e*S **S 21 14 07.8 -1.5**
DOT Dot Lake 21.81 42 *e*P **P 21 10 22.5 -0.5**
comp=Z,164nm,0.7s
DOT *e*S **S 21 14 17.4 -5.2**
DOT *e*ScP **ScP 21 17 59.9 +2.7**
PNL Peninsula 23.23 54 *e*P **P 21 10 37.0 -0.9**
comp=Z,106nm,0.8s
KUR Kuril'sk 23.25 268 *e*P **P 21 10 39.6 +1.4**
KUR pmax pmax
comp=E,365nm,1.6s
KUR pmax pmax
comp=Z,790nm,1.6s
KUR pmax pmax
comp=N,265nm,1.6s
KUR pmax pmax
comp=Z,2μm,2.6s
KUR MLR MLR
comp=N,951nm,19.0s
KUR MLR MLR
comp=E,1μm,19.0s
KUR MLR MLR
comp=Z,1μm,19.0s
EGAK Eagle 23.37 41 *e*P **P 21 10 38.7 -0.5**
comp=Z,140nm,1.1s
YUK Yuzh-Kuril'sk 25.08 267 *i*P **P 21 10 51.6 -3.7**
YUK *i* PPP PPP 21 11 38.4
YUK *i* 21 14 30.1
YUK *i* S **S 21 15 15.6 -2.4**
YUK *i* SS **SnSn 21 16 11.9 +3.9**
YUK pmax pmax
comp=E,1μm,1.4s
YUK pmax pmax
comp=N,915nm,1.4s
YUK pmax pmax
comp=Z,1μm,1.4s
YUK pmax pmax
comp=Z,2μm,1.4s
YUK MLR MLR
comp=Z,1μm,22.0s
YUK MLR MLR
comp=E,3μm,22.0s
YUK MLR MLR
comp=N,693nm,22.0s
SKAG Skagway 25.29 54 *e*P **P 21 10 55.9 -1.1**
comp=N,32nm,0.8s
YSS Yuzh-Sakhalins 25.71 276α*e*P **P 21 11 03.0 +2.0**
YSS *e*S **S 21 15 26.0 -2.0**
YSS pmax pmax
comp=N,160nm,1.0s
YSS pmax pmax
comp=E,280nm,1.0s
YSS pmax pmax
comp=Z,340nm,1.0s
YSS MLR MLR
comp=Z,1μm,16.0s
YSS MLR MLR
comp=E,1μm,18.0s
ASAJ Asahikawa 27.09 270 *e*P **P 21 11 13.7 +0.2**
comp=E,140nm,1.4s
ASAJ Asahikawa 27.09 270 P **P 21 11 14.9 +1.4**
comp=E,226nm,1.2s,baz=56,slow=7.3,SNR=22
ASAJ LR LR 21 20 38.2
comp=E,1μm,20.3s,baz=79,slow=33
INK Inuvik 27.32 35 P **P 21 11 14.8 -0.5**
INK PcP **PcP 21 14 34.5 +0.6**
INK ScP **ScP 21 18 10.9 -1.4**
INK Inuvik 27.32 35 P **P 21 11 14.8 -0.5**
comp=E,17nm,0.5s,baz=240,slow=7.5,SNR=20
INK PcP **PcP 21 14 34.5 +0.6**
comp=E,10.0nm,0.6s,baz=317,slow=4.9,SNR=11
INK ScP **ScP 21 18 10.9 -1.4**
comp=E,27nm,1.2s,baz=211,slow=1.5,SNR=7.5
INK LR LR 21 23 35.5
comp=E,2μm,19.4s,baz=239,slow=40
DLBC Dease Lake 28.09 56 P **P 21 11 23.4 +1.0**
DLBC Dease Lake 28.09 56 P **P 21 11 23.4 +1.0**
comp=E,1.7nm,0.3s,baz=264,slow=6.9,SNR=2.8
DLBC LR LR 21 22 42.0
comp=E,965nm,21.6s,baz=276,slow=37
YAK Yakutsk 29.77 311 *e*P **P 21 11 35.1 -2.0**
YAK *e**PP **pP 21 11 45.2 +0.4**
YAK *e*PPP PPP 21 12 38.0
YAK *e* 21 14 39.2
YAK *e*S **S 21 16 28.2 -3.4**
YAK *e* 21 18 20.8
YAK *e* 21 22 11.3
YAK pmax pmax
comp=Z,31nm,1.1s
YAK pmax pmax
comp=E,7.0nm,1.0s
YAK pmax pmax
comp=N,3.0nm,1.2s
YAK pmax pmax
comp=Z,49nm,1.3s
YAK pmax pmax
comp=N,24nm,1.4s
YAK smax smax
comp=N,86nm,2.2s
YAK smax smax
comp=E,21nm,1.1s
YAK MLR MLR
comp=Z,4μm,19.0s
YAK MLR MLR
comp=E,2μm,17.0s
YAK MLR MLR
comp=N,932nm,17.0s
HABR Khabarovsk 29.87 283*c i*P **P 21 11 38.9 +0.7**
HABR *e**PP **pP 21 11 46.5 +0.7**
HABR *e**SP **sP 21 11 51.0 +2.0**
HABR 21 12 33.8
HABR 21 14 39.5
HABR *e* **21 16 34.3 +0.9**
HABR *e**SS **sS 21 16 48.8 +2.8**
HABR *e*SS **SnSn 21 18 05.5 +0.7**
HABR *e* 21 18 23.0
HABR *e* 21 22 13.8
HABR pmax pmax
comp=Z,192nm,1.2s
HABR pmax pmax
comp=Z,539nm,2.2s
HABR MLR MLR
comp=Z,2μm,21.0s
TIXI Tiksi 30.91 331*c i*P **P 21 11 46.6 -0.5**
TIXI pmax pmax
comp=Z,31nm,1.0s
KLR Kul'dur 31.57 286 *i*P **P 21 11 50.6 -2.6**
KLR *e*S **S 21 16 58.5 -1.7**
KLR pmax pmax
comp=N,57nm,1.4s
KLR pmax pmax
comp=E,200nm,1.4s
KLR pmax pmax
comp=Z,500nm,1.4s
CLNS Chul'man 33.01 302 *e*P **P 21 12 04.5 -1.3**
CLNS pmax pmax
comp=Z,11nm,1.2s
CLNS pmax pmax
comp=N,6.0nm,1.2s
CLNS pmax pmax
comp=E,6.0nm,1.2s
CLNS MLR MLR
comp=E,573nm,18.0s
CLNS MLR MLR
comp=N,811nm,20.0s
CLNS MLR MLR
comp=Z,892nm,17.0s
USRK Ussuriysk Arra 33.69 278 P **P 21 12 12.0 +0.3**
comp=Z,44nm,0.6s,baz=59,slow=9.4,SNR=193
USRK PcP **PcP 21 14 51.3 +0.3**
comp=Z,12nm,1.0s,baz=356,slow=1.9,SNR=6.5
USRK ScP **ScP 21 18 36.9 +3.2**
comp=Z,2.2nm,0.9s,baz=49,slow=4.2,SNR=4.6
USRK LR LR 21 24 45.1
comp=Z,1μm,21.3s,baz=213,slow=34
MAJO Matsushiro 34.15 262 *e*P **P 21 12 15.7 -0.2**
MAJO *e* 21 14 52.6
MAJO pmax pmax
comp=Z,184nm,1.1s
MAJO MLR MLR
comp=Z,2μm,22.0s
MAJO Matsushiro 34.15 262 *e*P **P 21 12 15.7 -0.2**
comp=Z,184nm,1.1s
MAJO *e*PcP **PcP 21 14 52.6 +0.1**
MAJO LR LR
comp=Z,2μm,22.0s
MAT Matsushiro 34.15 262 P **P 21 12 16.9 +1.0**
MAT S **S 21 17 43.0 +2.6**
MJAR Matsushiro Arr 34.15 262 P **P 21 12 17.1 +1.2**
MJAR PcP **PcP 21 14 52.8 +0.3**
MJAR ScP **ScP 21 18 36.0 +0.5**
MJAR Matsushiro Arr 34.15 262 P **P 21 12 17.1 +1.2**
comp=Z,31nm,0.9s,baz=51,slow=7.8,SNR=69
MJAR PcP **PcP 21 14 52.8 +0.3**
comp=Z,16nm,0.9s,baz=82,slow=1.4,SNR=14
MJAR ScP **ScP 21 18 36.0 +0.5**
comp=Z,3.6nm,1.0s,baz=271,slow=1.5,SNR=6.1
MJAR LR LR 21 24 04.6
comp=Z,2μm,21.8s,baz=70,slow=32
VLA Vladivostok 34.30 276*c i*P **P 21 12 17.7 +0.6**
VLA pmax pmax
comp=Z,161nm,1.5s
OBC Olympics--Boni 34.52 74 P **P 21 12 21.7 +2.7**
PGC Sidney 34.62 72 *e*P **P 21 12 19.5 -0.3**
OSD Olympics--Snow 34.84 74 P **P 21 12 24.1 +2.2**
NLWA Neilton Lookou 34.93 75 *e*P **P 21 12 23.1 +0.6**
comp=Z,74nm,1.1s
MDJ Mudanjiang 34.97 280 P **P 21 12 22.8 0.0**
MDJ pP **pP 21 12 28.6 -1.9**
MDJ sP **sP 21 12 31.6 -2.1**
MDJ PP **PP 21 13 41.8 -0.4**
MDJ PcP **PcP 21 14 54.3 -0.4**
MDJ S **S 21 17 51.0 -1.8**
MDJ sS **sS 21 18 03.3 -2.2**
MDJ PcS **PcS 21 18 42.6 +1.3**
MDJ ScS **ScS 21 22 42.0 +0.2**
MDJ pmax pmax
comp=Z,68nm,1.0s
MDJ pmax pmax
comp=Z,300nm,9.3s
MDJ LR LR
comp=N,960nm,21.3s
MDJ LR LR
comp=E,1μm,22.2s
MDJ LR LR
comp=Z,2μm,21.5s
MDJ Mudanjiang 34.97 280 *e*P **P 21 12 21.5 -1.3**
comp=Z,62nm,0.9s
MDJ LR LR
comp=Z,2μm,22.0s
YKW3 Yellowknife Ar 35.00 46 *e*P **P 21 12 22.0 -0.9**
comp=Z,1.0nm,0.8s
YKW3 *e*PcP **PcP 21 14 53.8 -0.6**
YKA Yellowknife Ar 35.02 46 P **P 21 12 22.6 -0.4**
YKA PcP **PcP 21 14 55.1 +0.6**
YKA ScP **ScP 21 18 36.2 -1.9**
YKA Yellowknife Ar 35.02 46 P **P 21 12 22.6 -0.4**
comp=Z,33nm,0.7s,baz=280,slow=8.6,SNR=76
YKA PcP **PcP 21 14 55.1 +0.6**
comp=Z,14nm,1.0s,baz=289,slow=2.4,SNR=11
YKA ScP **ScP 21 18 36.2 -1.9**
comp=Z,4.9nm,1.0s,baz=287,slow=3.1,SNR=9.8
CMW Cultus Mountai 35.52 72 P **P 21 12 30.0 +2.3**
LMW Ladd Mountain 36.22 75 P **P 21 12 36.2 +2.5**
LON Longmire 36.47 74 *e*P **P 21 12 36.2 +0.4**
LON pmax pmax
comp=Z,100nm,1.7s
LON Longmire 36.47 74 *e*P **P 21 12 36.2 +0.4**
comp=Z,100nm,1.7s
COR Corvallis 36.63 78 *e*P **P 21 12 36.7 -0.4**
COR Corvallis 36.63 78 *e*P **P 21 12 36.7 -0.4**
WPW White Pass 36.66 74 P **P 21 12 39.3 +1.8**
GLK Glacier Lake 36.68 75 P **P 21 12 39.4 +1.7**
KEBM Edson Butte 36.88 82 *e*P **P 21 12 40.3 +1.0**
ASR Mount Adams--S 36.89 75 P **P 21 12 41.3 +1.8**
SSOR Sweet Springs 37.01 78 P **P 21 12 42.8 +2.3**
SSOR Sweet Springs 37.01 78 P **P 21 12 42.8 +2.3**
VLL Laurance Lake 37.18 76 P **P 21 12 43.8 +1.8**
KBO Bosley Butte 37.31 82 *e*P **P 21 12 44.1 +1.1**
VFP Flag Point 37.38 76 P **P 21 12 44.7 +1.0**
E07A Sunnyside 37.75 74 P **P 21 12 47.6 +1.0**
HUMO Hull Mountain 37.88 81 *e*P **P 21 12 50.0 +2.2**
comp=Z,21nm,0.8s
CN2 Changchun 37.94 281 *e*P **P 21 12 48.1 -0.1**
CN2 *e*pP **pP 21 12 55.5 -0.5**
CN2 PP **PnPn 21 14 17.9 +1.6**
CN2 *e*S **S 21 18 36.9 -1.4**
CN2 pmax pmax
comp=Z,50nm,0.9s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,1μm,17.0s
CN2 LR LR
comp=E,900nm,17.0s
CN2 LR LR
comp=Z,1μm,17.0s
HAWA Hanford 38.02 74 *e*P **P 21 12 50.1 +1.2**
comp=Z,74nm,0.8s
KHMM Horse Mountain 38.36 84 *e*P P 21 12 58.4 +6.5
comp=Z,31nm,0.7s
YBH Yreka Blue Hor 38.51 82 *e*P **P 21 12 54.0 +0.8**
comp=Z,43nm,1.0s
YBH Yreka Blue Hor 38.51 82 LR LR 21 25 30.0
comp=Z,1μm,20.9s,baz=302,slow=31
NEW Newport 38.56 70 *e*P **P 21 12 54.2 +0.8**
comp=Z,62nm,0.7s
NEW *e*ScP **ScP 21 18 57.6 +6.1**
NEW Newport 38.56 70 ⇑P **P 21 12 54.3 +0.8**
baz=38,SNR=40
NEW ⇑S **S 21 18 46.9 -0.7**
baz=38
HIA Hailar 38.67 292 *e*P **P 21 12 54.2 -0.2**
comp=Z,170nm,1.0s
HIA *e*PcP **PcP 21 15 05.2 -0.7**
HIA LR LR
comp=Z,3μm,19.0s
A12A Yaak River Ran 39.10 68 ⇓P **P 21 12 58.7 +0.7**
baz=39,SNR=8.0
KCPM Cahto Peak 39.14 85 *e*P **P 21 12 59.5 +1.0**
WDC Whiskeytown Da 39.27 83 *e*P **P 21 13 00.3 +0.9**
WDC pmax pmax
comp=Z,25nm,0.9s
WDC Whiskeytown Da 39.27 83 *e*P **P 21 13 00.3 +0.9**
comp=Z,25nm,0.9s
B12A Libby 39.36 69 ⇓P **P 21 13 00.8 +0.7**
baz=39,SNR=6.7
C12B Naegeli Ranch, 39.79 70 ⇓P **P 21 13 04.3 +0.5**
baz=40,SNR=12
MOD Modoc 39.91 80 *e*P **P 21 13 06.2 +1.2**
comp=Z,41nm,0.8s
KSRS Korea Array 40.02 271 P **P 21 13 07.2 +1.5**
comp=Z,25nm,0.7s,baz=54,slow=8.2,SNR=129
KSRS PcP **PcP 21 15 11.2 +1.0**
comp=Z,8.7nm,1.0s,baz=48,slow=5.2,SNR=6.3
KSRS ScP **ScP 21 19 00.2 +2.9**
comp=Z,1.7nm,0.8s,baz=55,slow=4.5,SNR=3.8
KSRS LR LR 21 28 46.0
comp=Z,715nm,19.9s,baz=60,slow=35
KSAR Wonju Array Be 40.05 271 P **P 21 13 07.2 +1.2**
KSAR PcP **PcP 21 15 11.2 +0.9**
KSAR ScP **ScP 21 19 00.2 +2.8**
WALA Waterton Lakes 40.05 67 *e*P **P 21 13 06.0 0.0**
comp=Z,3.6nm,1.1s
WALA *e*S **S 21 19 07.4 -2.9**
B13A Whitefish 40.06 68 ⇑P **P 21 13 06.4 +0.4**
baz=40,SNR=12
BSMT Bassoo Peak 40.13 69 *e*P **P 21 13 07.2 +0.5**
BSMT *e*ScP **ScP 21 19 02.3 +4.5**
BMO Blue Mountains 40.15 75 *e*P **P 21 13 06.8 0.0**
comp=Z,37nm,1.0s
BMO *e* **pP 21 13 16.1 +1.5**
BMO *e*ScP **ScP 21 18 58.3 +0.4**
SNY Shenyang 40.17 280 ⇑P **P 21 13 07.8 +1.0**
SNY S **S 21 19 15.1 +3.3**
SNY pmax pmax
comp=Z,140nm,1.3s
SNY pmax pmax
comp=Z,200nm,5.6s
SNY LR LR
comp=N,1μm,21.8s
SNY LR LR
comp=E,790nm,21.1s
SNY LR LR
comp=Z,2μm,23.6s
BLMT Blacktail Moun 40.30 69 *e*P **P 21 13 09.2 +1.0**
C13A Hot Springs 40.34 69 ⇑P **P 21 13 08.9 +0.6**
baz=40,SNR=33
A14A Double T Ranch 40.38 67 ⇑P **P 21 13 08.9 +0.2**
baz=40,SNR=80
E12A Beaver Dam Sad 40.38 71 ⇓P **P 21 13 08.9 +0.1**
baz=40,SNR=19
JTMT Jette 40.48 69 *e*P **P 21 13 10.6 +1.0**
JTMT *e*ScP ScP 21 19 07.2 +8.0
YBMT Yellow Bay 40.58 69 *e*P **P 21 13 10.4 0.0**
comp=Z,39nm,1.0s
WVOR Wild Horse Val 40.65 78 *e*P **P 21 13 12.0 +1.0**
WVOR pmax pmax
comp=Z,134nm,1.4s
WVOR Wild Horse Val 40.65 78 *e*P **P 21 13 12.0 +1.0**
comp=Z,134nm,1.4s
OHCM Honcut 40.66 84 *e*P **P 21 13 12.0 +1.1**
D13A Huson 40.70 70 ⇓P **P 21 13 11.2 -0.1**
baz=41,SNR=33
SWMT Swartz Lake 40.76 69 *e*P **P 21 13 12.6 +0.7**
SWMT *e*ScP **ScP 21 19 06.8 +6.5**
B14A Marquette Ranc 40.76 68 ⇓P **P 21 13 12.2 +0.3**
baz=41,SNR=26
A15A Johnson Ranch, 40.77 67 ⇑P **P 21 13 11.4 -0.5**
baz=41,SNR=43
C14A Swan Lake 40.78 69 ⇑P **P 21 13 12.4 +0.5**
baz=41
INCN Inchon 40.81 272 P **P 21 13 14.0 +1.7**
SNR=7.7
INCN Inchon 40.81 272 *e*P **P 21 13 13.0 +0.8**
comp=Z,106nm,1.1s
JNU Nakatsue 40.94 264 *e*P **P 21 13 14.9 +1.5**
comp=Z,66nm,1.0s
BEKR Beckworth 41.04 83 *e*P **P 21 13 14.7 +0.3**
comp=Z,10nm,0.8s
BEKR *e*PcP **PcP 21 15 13.8 -0.1**
MSO Missoula 41.14 70 *e*P **P 21 13 15.7 +0.7**
comp=Z,74nm,1.3s
MSO *e*ScP **ScP 21 19 02.0 +0.3**
MSO Missoula 41.14 70 ⇓P **P 21 13 15.0 0.0**
baz=41,SNR=40
SLMT Seeley Lake 41.19 69 *e*P **P 21 13 15.7 +0.2**
SLMT *e*ScP **ScP 21 19 07.9 +5.9**
G12A Big Creek, Yel 41.20 73 ⇓P **P 21 13 15.3 -0.2**
baz=41
B15A Bradely Ranch, 41.20 67 ⇑P **P 21 13 15.1 -0.3**
baz=41,SNR=60
D14A Greenough 41.27 69 ⇑P **P 21 13 15.9 -0.2**
baz=41,SNR=65
C15A Salmond Ranch, 41.44 68 ⇑P **P 21 13 17.9 +0.4**
baz=41,SNR=105
CHMT Chamberlain Mo 41.50 70 *e*P **P 21 13 18.0 -0.1**
CHMT *e*ScP **ScP 21 19 07.6 +4.3**
B16A M & M Farms, S 41.64 67 ⇑P **P 21 13 18.6 -0.5**

baz=42,SNR=11
H12A Diamond D Ranc 41.79 73 ⇑P P 21 13 20.5 +0.1
baz=42,SNR=19
MFID Camas Ranch 41.82 75 eP P 21 13 21.1 +0.5
comp=Z,43nm,1.3s
MFID Camas Ranch 41.82 75 ⇓P P 21 13 21.0 +0.4
baz=42,SNR=18
D15A Lincoln 41.87 69 ⇑P P 21 13 20.9 -0.1
baz=42,SNR=14
C16A Fuhringer Ranc 41.93 68 ⇓P P 21 13 21.2 -0.2
baz=42,SNR=11
A17A Triple J Farms 41.96 66 ⇓P P 21 13 21.2 -0.4
baz=42,SNR=73
F14A Wisdom 42.01 71 ⇓P P 21 13 22.4 +0.2
baz=42,SNR=15
CMB Columbia Colle 42.12 85 eP P 21 13 25.1 +2.0
CMB pmax pmax
comp=Z,30nm,1.1s
CMB Columbia Colle 42.12 85 eP P 21 13 25.1 +2.0
comp=Z,30nm,1.1s
B17A L&G Farms, Che 42.23 67 ⇑P P 21 13 23.7 -0.1
baz=42,SNR=29
D16A Dana Ranch, Ca 42.44 69 ⇓P P 21 13 25.5 -0.1
baz=42,SNR=21
HRY Holter Researc 42.44 69 eP P 21 13 25.7 +0.1
comp=Z,33nm,0.6s
A18A Metzger Ranch, 42.46 65 ⇓P P 21 13 24.9 -0.7
baz=42,SNR=12
F15A Butte 42.51 71 ⇑P P 21 13 26.2 -0.1
baz=42,SNR=18
LRM Limekiln Ridge 42.55 71 eP P 21 13 26.5 -0.1
LRM eScP ScP 21 19 13.2 +5.6
C17A Wharram Farm, 42.59 67 ⇑P P 21 13 26.6 -0.2
baz=42,SNR=7.8
HLID Hailey 42.60 74 eP P 21 13 27.6 +0.6
comp=Z,50nm,0.9s
HLID Hailey 42.60 74 ⇓P P 21 13 27.6 +0.6
baz=42,SNR=57
E16A East Helena 42.62 69 ⇓P P 21 13 27.5 +0.4
baz=42,SNR=8.7
ALE Alert 42.65 10 P P 21 13 26.6 -0.1
comp=Z,88nm,0.5s,SNR=6.7
DLMT Dillon 42.70 71 eP P 21 13 28.4 +0.6
comp=Z,24nm,1.0s
DLMT eScP ScP 21 19 09.9 +1.8
B18A Beardsley Farm 42.76 66 ⇓P P 21 13 27.8 -0.4
baz=43,SNR=18
MCMT McKenzie Canyo 42.84 72 eP P 21 13 29.3 +0.2
comp=Z,25nm,0.7s
D17A Six Diamond Ra 42.88 68 ⇓P P 21 13 29.1 -0.1
baz=43,SNR=21
EGMT Eagleton 42.97 66 eP P 21 13 30.0 +0.2
comp=Z,71nm,1.0s
EGMT eScP ScP 21 19 14.4 +5.4
EGMT Eagleton 42.97 66 ⇑P P 21 13 29.5 -0.3
baz=43,SNR=24
I14A Mackay 42.98 73 ⇑P P 21 13 30.6 +0.5
baz=43,SNR=28
F16A Kennard Place, 43.05 70 ⇓P P 21 13 30.9 +0.2
baz=43,SNR=6.3
DL2 Dalian 43.08 278 P P 21 13 31.9 +1.2
DL2 S S 21 19 55.8 +0.9
DL2 pmax pmax
comp=Z,72nm,1.3s
DL2 pmax pmax
comp=Z,250nm,4.7s
DL2 LR LR
comp=N,490nm,16.8s
DL2 LR LR
comp=E,390nm,17.3s
DL2 LR LR
comp=Z,580nm,19.4s
A19A Klindworth Far 43.08 65 ⇓P P 21 13 30.5 -0.2
baz=43,SNR=25
BOZ Bozeman (W) 43.12 70 eP P 21 13 30.9 -0.3
BOZ pmax pmax
comp=Z,36nm,0.8s
BOZ Bozeman (W) 43.12 70 eP P 21 13 30.9 -0.3
comp=Z,36nm,0.8s
BOZ eScP ScP 21 19 09.1 -0.7
E17A Martinsdale 43.14 69 ⇑P P 21 13 31.7 +0.3
baz=43,SNR=36
NVAR Mina Array Bea 43.18 83 P P 21 13 33.1 +1.2
NVAR ScP ScP 21 19 12.3 +2.1
NVAR Mina Array Bea 43.18 83 P P 21 13 33.1 +1.2
comp=Z,7.3nm,0.8s,baz=292,slow=7.9,SNR=28
NVAR ScP ScP 21 19 12.3 +2.1
comp=Z,1.6nm,0.9s,baz=312,slow=4.2,SNR=4.5
NVAR LR LR 21 28 37.6
comp=Z,496nm,18.4s,baz=64,slow=32
B19A Brinkman Farms 43.21 65 ⇑P P 21 13 31.8 +0.1
baz=43,SNR=20
MLAC Mammoth Lakes 43.34 84 ⇑P P 21 13 34.3 +1.2
baz=43
D18A Linhart Farms, 43.37 67 ⇓P P 21 13 33.7 +0.5
baz=43,SNR=28
C19A Slack Wire Ran 43.52 66 ⇑P P 21 13 34.8 +0.5
baz=43,SNR=96
F17A Fitzpatrick Pl 43.56 69 ⇓P P 21 13 35.1 +0.4
baz=43,SNR=31
A20A Cobblestone Ra 43.57 64 ⇓P P 21 13 34.3 -0.3
baz=43,SNR=9.3
E18A Harlowton 43.64 68 ⇓P P 21 13 36.1 +0.8
baz=44,SNR=35
MTUM Tungsten Hills 43.68 85 eP P 21 13 37.6 +1.8
QLMT Earthquake Lak 43.69 71 eP P 21 13 36.8 +0.9
ELK Elko 43.70 78 eP P 21 13 37.1 +1.1
comp=Z,24nm,0.9s
ELK eScP ScP 21 19 10.8 -1.5
B20A Solberg Farm, 43.74 65 ⇓P P 21 13 35.7 -0.4
baz=44,SNR=16
G17A Pierce Place, 43.83 70 ⇑P P 21 13 37.1 +0.2
baz=44,SNR=9.4
H16A Russell Place, 43.87 71 ⇑P P 21 13 37.4 +0.1
baz=44,SNR=11
FFC Flin Flon 43.89 54 *i* P P 21 13 37.5 +0.5
FFC Flin Flon 43.89 54 eP P 21 13 36.3 -0.7
comp=Z,10nm,1.1s
FFC eScP ScP 21 19 16.0 +3.6
RCTC Rector, Farmer 43.91 86 ⇓P P 21 13 37.9 +0.5
baz=44
D19A Cripps Ranch, 43.92 67 ⇓P P 21 13 37.8 +0.3
baz=44,SNR=40
YMR Madison River 44.05 71 eP P 21 13 38.3 -0.5
comp=Z,108nm,1.1s
SMMC Simmler 44.07 88 ⇑P P 21 13 39.9 +1.1
baz=44
TIN Tinemaha 44.08 85 ⇓P P 21 13 39.6 +0.7
baz=44
F18A Big Timber 44.11 69 ⇑P P 21 13 39.3 +0.2
baz=44,SNR=11
C20A Veseth Ranch, 44.13 66 ⇑P P 21 13 39.4 +0.2
baz=44,SNR=27
I16A Newdale 44.18 72 ⇓P P 21 13 40.4 +0.6
baz=44,SNR=6.9
YFT Old Faithful 44.25 71 eP P 21 13 40.5 +0.1
comp=Z,88nm,1.0s
VES Vestal, Richgr 44.30 87 ⇓P P 21 13 40.8 +0.2
baz=44
B21A Ellsworth Farm 44.32 64 ⇑P P 21 13 40.3 -0.4
baz=44,SNR=13
E19A Rath Farm, Rou 44.35 68 ⇑P P 21 13 41.3 +0.3
baz=44,SNR=16
D20A Manuel Ranch, 44.39 67 ⇑P P 21 13 41.5 +0.3
baz=44,SNR=14
H17A Grant Village 44.44 71 ⇑P P 21 13 43.3 +1.4
baz=44,SNR=7.7
PKM Peak Mountain 44.45 88 ⇑P P 21 13 42.5 +0.5
baz=44
IMW Indian Meadow 44.50 72 eP P 21 13 43.7 +1.3
comp=Z,34nm,0.8s
G18A Lazy EL Ranch, 44.52 70 ⇓P P 21 13 42.6 +0.1
baz=44
CWC Cottonwood Cre 44.55 85 ⇑P P 21 13 43.7 +0.8
baz=44
RRI2 Red Ridge 44.58 73 eP P 21 13 45.3 +2.2
comp=Z,56nm,0.8s
F19A Roth Farm, Mol 44.59 69 ⇑P P 21 13 43.2 +0.3
baz=44,SNR=10.0
C21A Desert Coulee 44.59 65 ⇓P P 21 13 42.6 -0.2
baz=44
HVU Hansel Valley 44.60 76 eP P 21 13 44.2 +1.1
HVU pmax pmax
comp=Z,35nm,0.8s
HVU Hansel Valley 44.60 76 eP P 21 13 44.2 +1.1
comp=Z,35nm,0.8s
HVU eScP ScP 21 19 15.9 +0.1

A22A Carney Farms, 44.64 63 ⇓P P 21 13 43.0 -0.3
baz=44,SNR=13
MOOW Moose Ponds 44.70 72 eP P 21 13 45.0 +1.0
comp=Z,26nm,1.3s
I17A Pilgrim Ck. 44.70 72 ⇑P P 21 13 45.0 +1.0
baz=45
E20A Meyer Farm, Mu 44.71 67 ⇑P P 21 13 44.2 +0.4
baz=44,SNR=7.1
TPAW Teton Pass 44.72 73 eP P 21 13 44.9 +0.6
comp=Z,48nm,1.3s
ISA Isabella 44.80 86 eP P 21 13 45.3 +0.6
ISA pmax pmax
comp=Z,29nm,1.2s
ISA Isabella 44.80 86 eP P 21 13 45.2 +0.6
comp=Z,29nm,1.2s
ISA Isabella 44.80 86 ⇓P P 21 13 44.5 -0.1
baz=45
RLMT Red Lodge 44.81 70 eP P 21 13 45.2 +0.5
comp=Z,156nm,1.2s
H18A Shoshone NF, C 44.82 70 ⇓P P 21 13 45.2 +0.2
baz=45
SNOW Snow King Moun 44.85 72 eP P 21 13 47.6 +2.3
comp=Z,25nm,0.8s
LOHW Long Hollow 44.86 72 eP P 21 13 46.4 +1.1
comp=Z,19nm,0.9s
R11A Troy Canyon, C 44.92 81 ⇓P P 21 13 46.1 +0.3
baz=45,SNR=33
B22A Reddig Ranch S 44.96 64 ⇓P P 21 13 45.7 -0.2
baz=45,SNR=9.7
D21A La Casta Ranch 45.06 66 ⇑P P 21 13 46.7 0.0
baz=45,SNR=14
F20A Billings 45.09 68 ⇓P P 21 13 47.0 +0.1
baz=45,SNR=18
MPMC Manual Prospec 45.16 85 ⇑P P 21 13 48.0 +0.2
baz=45,SNR=6.2
H19A Powell 45.22 70 ⇑P P 21 13 49.0 +0.9
baz=45,SNR=16
A23A Redstone 45.24 63 ⇑P P 21 13 47.6 -0.4
baz=45
I18A Diamond G Ranc 45.28 72 ⇓P P 21 13 49.1 +0.4
baz=45
FURC Furnace Creek, 45.30 84 ⇑P P 21 13 49.4 +0.9
baz=45
E21A Keefer Ranch, 45.30 67 ⇓P P 21 13 49.0 +0.5
baz=45,SNR=6.9
OSI Osito Adit 45.32 88 ⇑P P 21 13 49.3 +0.5
baz=45
C22A Vida 45.33 65 ⇑P P 21 13 48.4 -0.3
baz=45,SNR=11
G20A Bridger 45.37 69 ⇓P P 21 13 49.4 +0.2
baz=45,SNR=16
LRMC Laurel Mountai 45.41 86 ⇑P P 21 13 49.8 +0.2
baz=45
HWUT Hardware Ranch 45.44 75 eP P 21 13 50.4 +0.6
comp=Z,27nm,0.9s
HWUT eScP ScP 21 19 20.8 +1.5
B23A Brockton 45.44 63 ⇓P P 21 13 49.2 -0.4
baz=45,SNR=6.7
D22A Cohagen 45.48 66 ⇑P P 21 13 50.6 +0.6
baz=45,SNR=30
DUG Dugway 45.52 77 eP P 21 13 51.1 +0.7
DUG pmax pmax
comp=Z,83nm,1.0s
DUG Dugway 45.52 77 eP P 21 13 51.1 +0.7
comp=Z,83nm,1.0s
DUG Dugway 45.52 77 ⇓P P 21 13 50.9 +0.5
baz=45,SNR=46
I19A Meeteetse 45.58 71 ⇓P P 21 13 51.2 +0.3
baz=45,SNR=6.0
EDW2 Edwards Air Fo 45.60 87 ⇓P P 21 13 50.8 -0.2
baz=46
F21A Absaloka Mine, 45.67 68 ⇑P P 21 13 51.5 0.0
baz=46,SNR=5.2
C23A Lambert 45.69 64 ⇓P P 21 13 51.7 +0.1
baz=46,SNR=24
BJI Beijing 45.77 283 P P 21 13 53.3 +1.1
BJI PP PP 21 15 39.9 +0.5
BJI S S 21 20 34.1 +0.1
BJI pmax pmax
comp=Z,100nm,0.9s
BJI pmax pmax
comp=Z,660nm,8.3s
BJI LR LR
comp=N,800nm,23.5s
BJI LR LR
comp=E,860nm,24.8s
BJI LR LR
comp=Z,1μm,24.8s
BJT Baijiatuau 45.78 283 eP P 21 13 53.4 +1.1
comp=Z,57nm,0.7s
BJT LR LR
comp=Z,896nm,20.0s
DECC Green Verdugo 45.80 88 ⇑P P 21 13 52.6 0.0
baz=46
IRK Irkutsk 45.81 303 eP P 21 13 51.9 -0.5
IRK pmax pmax
comp=Z,33nm,1.4s
CTU Camp Tracy 45.87 76 eP P 21 13 54.4 +1.2
comp=Z,104nm,1.4s
CTU epP pP 21 14 01.7 +0.6
DGMT Dagmar 45.88 63 eP P 21 13 53.5 +0.4
comp=Z,58nm,1.0s
DGMT Dagmar 45.88 63 ⇓P P 21 13 52.6 -0.5
baz=46,SNR=6.5
G21A Lodge Grass 45.96 68 ⇓P P 21 13 53.5 -0.3
baz=46,SNR=8.9
PDAR Pinedale Array 45.97 73 P P 21 13 54.0 -0.1
PDAR ScP ScP 21 19 25.1 +3.4
PDAR S S 21 20 35.6 -1.8
PDAR Pinedale Array 45.97 73 P P 21 13 54.0 -0.1
comp=Z,32nm,0.6s,baz=301,slow=4.8,SNR=81
PDAR ScP ScP 21 19 25.1 +3.4
comp=Z,2.8nm,0.9s,baz=132,slow=1.3,SNR=6.6
PDAR S S 21 20 35.6 -1.8
comp=Z,0.7nm,0.9s,baz=68,slow=30,SNR=3.7
PDAR LR LR 21 30 28.0
comp=Z,1μm,21.3s,baz=311,slow=32
J19A Crowheart 45.98 72 ⇓P P 21 13 54.5 +0.4
baz=46
MWC Mount Wilson 45.99 88 eP P 21 13 55.7 +1.4
MWC pmax pmax
comp=Z,43nm,0.9s
MWC Mount Wilson 45.99 88 eP P 21 13 55.7 +1.4
comp=Z,43nm,0.9s
E22A Mis City 46.01 66 ⇑P P 21 13 54.5 +0.4
baz=46,SNR=16
SHOC Shoshone 46.02 84 ⇑P P 21 13 54.7 +0.4
baz=46
D23A Lindsay 46.02 65 ⇑P P 21 13 54.4 +0.1
baz=46,SNR=14
M17A Scullys Gap (B 46.06 75 ⇓P P 21 13 54.7 -0.1
baz=46,SNR=15
GSC Goldstone 46.08 86 eP P 21 13 55.4 +0.6
GSC pmax pmax
comp=Z,48nm,0.6s
GSC Goldstone 46.08 86 eP P 21 13 55.4 +0.6
comp=Z,48nm,0.6s
GSC eScP ScP 21 19 20.3 -1.6
JLU Jordanelle 46.11 76 eP P 21 13 56.1 +0.9
comp=Z,40nm,1.0s
I20A Worland 46.14 70 ⇓P P 21 13 55.6 +0.3
baz=46,SNR=11
FMP Fort Macarthur 46.17 88 ⇓P P 21 13 57.1 +1.7
baz=46
L18A Fontenelle, Gr 46.18 74 ⇓P P 21 13 56.2 +0.6
baz=46
RRX Edison Barstow 46.23 86 ⇓P P 21 13 56.4 +0.5
baz=46
BFSC Mount Baldy Ra 46.23 87 ⇓P P 21 13 56.3 +0.2
baz=46
C24A Savage 46.27 64 ⇑P P 21 13 56.2 0.0
baz=46,SNR=6.0
DAU Daniels Canyon 46.34 76 eP P 21 13 58.0 +0.9
DAU Daniels Canyon 46.34 76 eP P 21 13 58.0 +0.9
E23A Ismay 46.34 66 ⇑P P 21 13 57.0 +0.3
baz=46,SNR=18
MPU Maple Canyon 46.35 77 eP P 21 13 57.9 +0.9
comp=Z,26nm,0.9s
K19A Absolon Red Bu 46.36 72 ⇓P P 21 13 56.8 -0.3
baz=46,SNR=16
H21A Big Horn, Sher 46.39 69 ⇓P P 21 13 56.8 -0.5
baz=46,SNR=6.4
TLY Talaya 46.44 303 eP P 21 13 57.0 -0.4
TLY *e* 21 15 32.3
TLY *e* 21 15 43.5
TLY eS S 21 20 48.0 +4.6
TLY pmax pmax

comp=Z,10.0nm,0.7s
L19A Farson 46.48 73 ⇑P P 21 13 58.3 +0.2
baz=46,SNR=5.7
G22A Birney 46.49 68 ⇓P P 21 13 58.1 +0.1
baz=46,SNR=6.3
J20A Shoshoni 46.51 71 ⇑P P 21 13 58.9 +0.7
baz=46,SNR=13
TUQ Turquoise Moun 46.54 85 ⇑P P 21 13 59.0 +0.5
baz=46
D24A Glendive 46.55 65 ⇓P P 21 13 58.8 +0.4
baz=46,SNR=20
ARUT Antelope Range 46.60 80 eP P 21 13 59.8 +0.8
ARUT pmax pmax
comp=Z,33nm,1.1s
ARUT Antelope Range 46.60 80 eP P 21 13 59.8 +0.8
comp=Z,33nm,1.1s
ULN Ulaanbaatar 46.64 297 P P 21 14 00.6 +1.4
SNR=40
ULN Ulaanbaatar 46.64 297 eP P 21 13 59.3 +0.1
comp=Z,75nm,0.9s
ULN eScP ScP 21 19 25.0 +0.8
ULN LR LR
comp=Z,4μm,20.0s
ULN Ulaanbaatar 46.64 297 P P 21 13 59.9 +0.7
comp=Z,91nm,1.4s,comp=Z,1μm
BBRC Big Bear Solar 46.67 87 ⇑P P 21 14 00.3 +0.6
baz=47
HEC Hector,Ludlow 46.68 86 ⇑P P 21 13 59.8 +0.3
baz=47
I21A Big Trails, Te 46.71 70 ⇑P P 21 13 59.4 -0.4
baz=47,SNR=13
F23A Volborg 46.72 67 ⇑P P 21 13 59.8 +0.1
baz=46,SNR=19
K20A Yellowstone Ra 46.76 72 ⇑P P 21 13 59.6 -0.6
baz=47
CCUT Cedar City 46.80 81 eP P 21 14 02.0 +1.4
comp=Z,76nm,1.7s
H22A Clearmont 46.81 69 ⇑P P 21 14 00.3 -0.2
baz=47,SNR=5.4
E24A Baker 46.88 65 ⇑P P 21 14 01.2 +0.2
baz=47,SNR=20
J21A Lysite 46.89 71 ⇓P P 21 14 01.3 +0.1
baz=47
JOW Kunigami 46.93 260 eP P 21 14 02.5 +1.1
comp=Z,32nm,1.0s
MSU Marysvale 46.93 79 eP P 21 14 02.5 +0.8
MSU Marysvale 46.93 79 eP P 21 14 02.5 +0.8
MSU eScP ScP 21 19 24.5 -1.2
MURC Murrieta 46.93 88 ⇑P P 21 14 01.7 +0.2
baz=47
M19A Rock Springs 46.96 74 ⇑P P 21 14 01.7 -0.1
baz=47
G23A Biddle 47.03 67 ⇓P P 21 14 02.0 -0.1
baz=47
SONM Songino Array 47.03 297 P P 21 14 02.7 +0.5
SONM PcP PcP 21 15 34.9 +0.9
SONM ScP ScP 21 19 26.4 +0.6
SONM Songino Array 47.03 297 P P 21 14 02.7 +0.5
comp=Z,68nm,1.1s,baz=56,slow=7.5,SNR=222
SONM PcP PcP 21 15 34.9 +0.9
comp=Z,12nm,0.9s,baz=111,slow=1.2,SNR=6.5
SONM ScP ScP 21 19 26.4 +0.6
comp=Z,6.6nm,0.9s,baz=44,slow=3.3,SNR=9.2
SONM LR LR 21 34 43.9
comp=Z,4μm,20.0s,baz=63,slow=37
GMRC Granite Mounta 47.13 85 ⇑P P 21 14 03.3 +0.2
baz=47,SNR=16
I22A 9 Mile Ranch, 47.14 69 ⇑P P 21 14 03.4 +0.3
baz=47
L20A Wamsutter 47.15 73 ⇑P P 21 14 03.0 -0.2
baz=47
F24A Ekalaka 47.20 66 ⇓P P 21 14 03.4 -0.2
baz=47,SNR=14
Q16A Castle Valley 47.30 78 ⇑P P 21 14 05.2 +0.7
baz=47,SNR=20
ZAK Zakamensk 47.33 301 *i*/P P 21 14 04.6 +0.1
ZAK *e* 21 15 35.6
ZAK pmax pmax
comp=Z,27nm,1.2s
H23A Clabaugh Cattl 47.39 68 ⇑P P 21 14 04.2 -0.8
baz=47
PFO Pinyon Flat Ob 47.40 87 eP P 21 14 05.5 +0.3
comp=Z,221nm,3.0s
PFO Pinyon Flat Ob 47.40 87 LR LR 21 29 32.9
comp=Z,542nm,19.3s,baz=60,slow=30
PFO Pinyon Flat Ob 47.40 87 ⇓P P 21 14 05.5 +0.3
baz=47
BELC Belle Mtn. Jos 47.42 86 ⇑P P 21 14 05.2 -0.2
baz=47
J22A Midwest 47.43 70 ⇑P P 21 14 05.3 -0.1
baz=47
109C Camp Elliot, M 47.46 88 ⇑P P 21 14 05.7 +0.2
baz=47
G24A Alzada 47.52 67 ⇑P P 21 14 05.4 -0.6
baz=47,SNR=16
M20A Sweetwater, Wa 47.55 73 ⇓P P 21 14 06.3 -0.2
baz=47,SNR=10
SRU San Rafael 47.58 77 ⇓P P 21 14 07.0 +0.3
baz=47,SNR=30
I23A Meade Ranch, G 47.70 69 ⇑P P 21 14 06.8 -0.7
baz=48
O19A Miners Draw (B 47.70 75 ⇓P P 21 14 07.6 0.0
baz=48,SNR=66
L21A Rawlins 47.76 72 ⇓P P 21 14 07.8 -0.2
baz=48,SNR=12
H24A Dirks Ranch, A 47.77 67 ⇑P P 21 14 07.2 -0.8
baz=48,SNR=13
NEE2 Needles Airpor 47.79 84 ⇓P P 21 14 08.0 -0.1
baz=48
MOY Mondy 47.83 304 eP P 21 14 09.3 +0.9
MOY pmax pmax
comp=Z,45nm,1.7s
K22A Casper 47.85 71 ⇓P P 21 14 08.3 -0.4
baz=48
IRM Iron Mountain 47.85 85 ⇑P P 21 14 08.7 +0.1
baz=48
BAR Barrett 47.87 88 eP P 21 14 13.8 +5.0
comp=Z,20nm,0.8s
MONP Monument Peak 47.89 88 ⇓P P 21 14 09.5 +0.3
baz=48
N20A Spence Gulch, 47.90 74 ⇑P P 21 14 09.6 +0.4
baz=48,SNR=13
GUMO Guam 47.95 232 PFAKE 21 14 20.0 +11
GUMO LR LR
comp=Z,533nm,19.0s
M21A Separation Pea 47.97 72 ⇑P P 21 14 09.4 -0.3
baz=48,SNR=6.8
J23A Dilts Ranch, B 47.98 69 ⇓P P 21 14 09.7 +0.1
baz=48,SNR=6.1
BC3 Big Chuckawall 47.99 86 ⇓P P 21 14 09.8 0.0
baz=48
W13A Hualapai Mount 48.03 84 ⇑P P 21 14 10.0 -0.2
baz=48,SNR=6.5
HHC Hu-ho-hao-te 48.08 286 *i* P P 21 14 11.4 +1.0
HHC pP pP 21 14 18.6 +0.3
HHC sP sP 21 14 21.8 +0.4
HHC PP PP 21 16 04.3 +1.9
HHC S S 21 21 08.1 +0.8
HHC sS sS 21 21 17.1 -3.1
HHC ScS ScS 21 24 01.3 -0.3
HHC SS SS 21 24 28.5 -7.5
HHC pmax pmax
comp=Z,290nm,1.3s
HHC pmax pmax
comp=Z,1μm,5.9s
HHC LR LR
comp=N,2μm,17.3s
HHC LR LR
comp=E,3μm,18.0s
HHC LR LR
comp=Z,4μm,18.8s
U15A North Rim 48.17 81 ⇓P P 21 14 11.7 +0.3
baz=48,SNR=28
P19A Cripple Cowboy 48.20 76 ⇓P P 21 14 11.4 0.0
baz=48,SNR=46
DVTC Desert V Tower 48.25 88 ⇑P P 21 14 12.4 +0.7
baz=48
SWSC Sam W. Stewart 48.25 87 ⇓P P 21 14 11.8 +0.1
baz=48
I24A Kuemmerle Ranc 48.25 68 ⇑P P 21 14 11.4 -0.3
baz=48
L22A Ellis Ranch, M 48.27 71 ⇓P P 21 14 12.0 0.0
baz=48
K23A Bowen Ranch, D 48.32 70 ⇑P P 21 14 11.6 -0.7
baz=48
O20A White River Ci 48.34 75 ⇓P P 21 14 12.6 +0.1
baz=48,SNR=19

SSE	**Sheshan**	48.38	270		P	**P**	21 14 11.8	-0.8
SSE					PP	**PP**	21 16 04.0	-1.1
SSE					S	**S**	21 21 10.1	-1.3
SSE					sS	**sS**	21 21 20.8	-3.6
SSE					pmax	pmax		
	comp=Z,86nm,1.0s							
SSE					pmax	pmax		
	comp=Z,360nm,8.9s							
SSE					LR	LR		
	comp=N,450nm,29.4s							
SSE					LR	LR		
	comp=E,380nm,29.4s							
SSE					LR	LR		
	comp=Z,630nm,20.8s							
N21A	**Black Mountain**	48.39	73	⇓	P	**P**	21 14 12.6	-0.3
	baz=48,SNR=15							
PDMCI	**Parker Dam,Lak**	48.39	85	⇑	P	**P**	21 14 13.0	+0.3
	baz=48							
RSSD	**Black Hills**	48.44	68	*e*	P	**P**	21 14 12.8	-0.5
RSSD					pmax	pmax		
	comp=Z,56nm,1.2s							
RSSD	**Black Hills**	48.44	68	*e*	P	**P**	21 14 12.8	-0.5
	comp=Z,56nm,1.2s							
Y12C	**Blythe**	48.51	85	⇓	P	**P**	21 14 13.8	+0.1
	baz=48							
J24A	**Dixon Ranch, L**	48.54	69	⇓	P	**P**	21 14 13.9	-0.1
	baz=48							
M22A	**Cedar Creek Ra**	48.55	72	⇓	P	**P**	21 14 14.1	-0.1
	baz=48							
P20A	**De Beque**	48.64	75	⇓	P	**P**	21 14 14.8	0.0
	baz=48,SNR=10							
O21A	**Pagoda**	48.76	74	⇑	P	**P**	21 14 15.5	-0.3
	baz=49,SNR=20							
GLA	**Glamis**	48.78	86	*e*	P	**P**	21 14 16.7	+0.8
GLA					pmax	pmax		
	comp=Z,26nm,0.6s							
GLA	**Glamis**	48.78	86	*e*	P	**P**	21 14 16.7	+0.8
	comp=Z,26nm,0.6s							
GLA	**Glamis**	48.78	86	⇑	P	**P**	21 14 16.3	+0.5
	baz=49							
MDND	**Maddock**	48.78	61	⇓	P	**P**	21 14 15.3	-0.3
	baz=49,SNR=9.0							
K24A	**Anderson Ranch**	48.82	70	⇓	P	**P**	21 14 15.5	-0.6
	baz=49							
N22A	**Wattenberg Ran**	49.01	73	⇓	P	**P**	21 14 17.9	+0.2
	baz=49,SNR=10							
J25A	**Sunshine Ranch**	49.01	68	⇓	P	**P**	21 14 16.9	-0.7
	baz=49,SNR=5.4							
PV04	**Paradox Valley**	49.01	77	*e*	P	**P**	21 14 18.1	+0.4
Q20A	**Ridgley Place,**	49.03	76	⇑	P	**P**	21 14 17.4	-0.4
	baz=49,SNR=19							
M23A	**Laramie**	49.04	72	⇓	P	**P**	21 14 17.4	-0.5
	baz=49,SNR=5.9							
L24A	**Wheatland**	49.16	71	⇑	P	**P**	21 14 18.7	-0.1
	baz=49							
BTO	**Baotou**	49.16	287	*e*	P	**P**	21 14 20.5	+1.8
BTO					pmax	pmax		
	comp=Z,72nm,1.3s							
P21A	**Newcastle**	49.19	75	⇓	P	**P**	21 14 19.2	+0.1
	baz=49,SNR=20							
NJ2	**Nanjing**	49.20	272	*e*	P	**P**	21 14 19.3	+0.4
NJ2					pP	**pP**	21 14 24.6	-2.2
NJ2					sP	**sP**	21 14 27.6	-2.3
NJ2					PP	**PP**	21 16 13.0	+0.4
NJ2					S	**S**	21 21 24.0	+1.1
NJ2					sS	**sS**	21 21 39.0	+3.1
NJ2					pmax	pmax		
	comp=Z,70nm,1.0s							
NJ2					pmax	pmax		
	comp=Z,420nm,7.2s							
NJ2					LR	LR		
	comp=N,1μm,29.6s							
NJ2					LR	LR		
	comp=E,800nm,22.3s							
NJ2					LR	LR		
	comp=Z,4μm,19.0s							
N23A	**Red Feather La**	49.26	72	⇑	P	**P**	21 14 20.0	+0.3
	baz=49,SNR=5.3							
PHWY	**Pilot Hill**	49.30	72	*e*	P	**P**	21 14 19.6	-0.4
	comp=Z,14nm,0.7s							
WUAZ	**Wupatki**	49.32	81	*e*	P	**P**	21 14 19.9	-0.2
	comp=Z,72nm,1.2s							
WUAZ				*e*		**pP**	21 14 30.1	+2.1
WUAZ				*e*	ScP	**ScP**	21 19 36.3	+0.5
WUAZ	**Wupatki**	49.32	81	⇑	P	**P**	21 14 20.5	+0.4
	baz=49,SNR=10							
Y14A	**Wickenburg**	49.34	84	⇓	P	**P**	21 14 20.0	-0.1
	baz=49,SNR=6.3							
O22A	**Kremmling**	49.34	73	⇑	P	**P**	21 14 20.4	0.0
	baz=49,SNR=11							
PV01	**Paradox Valley**	49.38	77	*e*	P	**P**	21 14 20.3	-0.3
	comp=Z,6μm,0.8s							
ULM	**Lac du Bonnet**	49.41	57		P	**P**	21 14 20.1	-0.3
ULM					ScP	**ScP**	21 19 34.6	-1.1
ULM	**Lac du Bonnet**	49.41	57		P	**P**	21 14 20.1	-0.3
	comp=Z,6.5nm,0.5s,baz=296,slow=7.5,SNR=7.2							
ULM					ScP	**ScP**	21 19 34.6	-1.1
	comp=Z,2.6nm,0.5s,baz=350,slow=3.5,SNR=2.1							
ULM					LR	LR	21 37 21.7	
	comp=Z,806nm,18.1s,baz=306,slow=39							
K25A	**Mack Ranch, Ha**	49.44	69	⇑	P	**P**	21 14 20.7	-0.2
	baz=49							
R20A	**Redvale**	49.46	77	⇓	P	**P**	21 14 21.3	+0.1
	baz=49,SNR=13							
Q21A	**Lamborn Mesa,**	49.55	76	⇓	P	**P**	21 14 21.9	+0.1
	baz=49,SNR=17							
P22A	**Eagle**	49.57	74	⇑	P	**P**	21 14 21.9	-0.1
	baz=49,SNR=8.6							
M24A	**Cheyenne**	49.57	71	⇓	P	**P**	21 14 22.3	+0.4
	baz=49							
113A	**Mohawk Valley,**	49.64	86	⇓	P	**P**	21 14 22.3	0.0
	baz=50							
L25A	**Engebretsen Ra**	49.66	70	⇑	P	**P**	21 14 22.7	+0.1
	baz=50,SNR=5.4							
O23A	**Lake Granby, G**	49.69	73	⇑	P	**P**	21 14 23.4	+0.4
	baz=50,SNR=13							
SMCO	**Snowmass**	49.70	75	*e*	P	**P**	21 14 23.0	-0.2
	comp=Z,14nm,0.6s							
SMCO				*e*	ScP	**ScP**	21 19 38.7	+1.1
S20A	**Disappointment**	49.70	77	⇑	P	**P**	21 14 23.0	0.0
	baz=50,SNR=43							
Z14A	**Wintersburg**	49.76	85	⇓	P	**P**	21 14 23.3	+0.1
	baz=50							
K26A	**Motz Farm, Whi**	49.79	69	⇑	P	**P**	21 14 22.9	-0.5
	baz=50							
R21A	**Cimarron**	49.86	76	⇓	P	**P**	21 14 24.2	-0.1
	baz=50,SNR=11							
KBS	**Kingsbay**	49.91	357	*c i*	P	**P**	21 14 23.8	0.0
KBS					pmax	pmax		
	comp=Z,61nm,1.2s							
KBS	**Kingsbay**	49.91	357	*e*	P	**P**	21 14 24.5	+0.7
	comp=Z,33nm,0.7s							
N24A	**Carr**	49.93	72	⇑	P	**P**	21 14 24.9	+0.2
	baz=50							
Q22A	**Crested Butte,**	49.94	75	⇓	P	**P**	21 14 24.7	-0.2
	baz=50,SNR=8.8							
X16A	**Lo Mia Camp, P**	50.00	83	⇓	P	**P**	21 14 25.8	+0.5
	baz=50							
MVCO	**Mesa Verde**	50.01	78	*e*	P	**P**	21 14 25.7	+0.3
	comp=Z,26nm,0.6s							
MVCO	**Mesa Verde**	50.01	78		P	**P**	21 14 25.4	0.0
	baz=50							
M25A	**Palm-Egli Farm**	50.05	71	⇑	P	**P**	21 14 26.0	+0.5
	baz=50							
ISCO	**Idaho Springs**	50.13	73	*e*	P	**P**	21 14 27.4	+1.0
ISCO					pmax	pmax		
	comp=Z,40nm,1.0s							
ISCO	**Idaho Springs**	50.13	73	*e*	P	**P**	21 14 27.4	+1.0
	comp=Z,40nm,1.0s							
ISCO	**Idaho Springs**	50.13	73	⇑	P	**P**	21 14 26.6	+0.2
	baz=50,SNR=12							
S21A	**Coal Bank Pass**	50.16	77	⇑	P	**P**	21 14 27.0	+0.4
	baz=50,SNR=35							
L26A	**Underwood Farm**	50.25	69	⇑	P	**P**	21 14 26.8	-0.3
	baz=50							
O24A	**Longmont**	50.25	73	⇑	P	**P**	21 14 27.7	+0.6
	baz=50							
K27A	**Flueckinger Fa**	50.34	68	⇓	P	**P**	21 14 27.3	-0.4
	baz=50							
N25A	**Grover**	50.41	71	⇓	P	**P**	21 14 28.7	+0.4
	baz=50							
R22A	**Saguache, Gunn**	50.43	76	⇓	P	**P**	21 14 29.1	+0.5
	baz=50,SNR=29							
J28A	**Allard Ranch,**	50.48	67	⇓	P	**P**	21 14 28.7	0.0
	baz=50,SNR=28							
SPITS	**Spitsbergen Ar**	50.49	356		P	**P**	21 14 27.2	-1.0
SPITS					PcP	**PcP**	21 15 46.0	+0.2
SPITS	**Spitsbergen Ar**	50.49	356		P	**P**	21 14 27.2	-1.0
	comp=Z,69nm,0.8s,baz=49,slow=6.7,SNR=131							
SPITS					PcP	**PcP**	21 15 46.0	+0.2
	comp=Z,20nm,0.8s,baz=40,slow=6.6,SNR=1.9							
U20A	**Newcomb**	50.53	79	⇓	P	**P**	21 14 29.4	+0.1
	baz=50,SNR=8.4							
AGMN	**Agassiz Nation**	50.56	59	*e*	P	**P**	21 14 27.5	-1.6
	comp=Z,59nm,1.3s							
Q23A	**Hartsel**	50.56	74	⇓	P	**P**	21 14 30.3	+0.6
	baz=50							
M26A	**McRoberts Ranc**	50.57	70	⇑	P	**P**	21 14 29.9	+0.5
	baz=50							
W18A	**Petrified Fore**	50.60	81	⇓	P	**P**	21 14 30.0	+0.2
	baz=50,SNR=6.1							
L27A	**T5 Ranch, Ells**	50.67	69	⇓	P	**P**	21 14 30.1	-0.1
	baz=50							
S22A	**4UR Ranch, Cre**	50.69	76	⇑	P	**P**	21 14 31.2	+0.6
	baz=50,SNR=34							
P24A	**Kohler Place,**	50.73	73	⇑	P	**P**	21 14 31.6	+0.8
	baz=51							
T21A	**Navajo Lake**	50.74	77	⇑	P	**P**	21 14 31.2	+0.3
	baz=51,SNR=8.4							
214A	**Organ Pipe Nat**	50.78	86	⇓	P	**P**	21 14 31.2	+0.2
	baz=51,SNR=9.4							
O25A	**Wiggins**	50.83	72	⇓	P	**P**	21 14 32.2	+0.8
	baz=51							
X18A	**Snowflake**	50.85	81	⇑	P	**P**	21 14 32.0	+0.3
	baz=51,SNR=6.0							
N26A	**Koester Ranch,**	50.92	71	⇑	P	**P**	21 14 32.5	+0.4
	baz=51,SNR=6.6							
Q24A	**Divide**	50.94	74	⇓	P	**P**	21 14 32.7	+0.2
	baz=51							
V20A	**Brimhall**	50.94	79	⇓	P	**P**	21 14 32.7	+0.3
	baz=51,SNR=14							
M27A	**Reverse DX Ran**	50.98	70	⇓	P	**P**	21 14 32.5	0.0
	baz=51,SNR=8.1							
R23A	**Moffat**	51.02	75	⇑	P	**P**	21 14 33.5	+0.4
	baz=51,SNR=11							
U21A	**Nageezi**	51.03	78	⇓	P	**P**	21 14 33.3	+0.2
	baz=51,SNR=40							
T22A	**Edith**	51.12	77	⇓	P	**P**	21 14 34.2	+0.5
	baz=51,SNR=28							
BRSD	**Miller**	51.17	65	⇑	P	**P**	21 14 33.1	-0.6
	baz=51							
P25A	**Willow Gulch B**	51.18	73	⇑	P	**P**	21 14 34.8	+0.7
	baz=51,SNR=20							
S23A	**Nye Farm, Mont**	51.22	76	⇓	P	**P**	21 14 35.1	+0.6
	baz=51							
O26A	**Horse Wrangler**	51.23	71	⇓	P	**P**	21 14 34.9	+0.5
	baz=51							
N27A	**Anderson Farm,**	51.34	70	⇓	P	**P**	21 14 35.4	+0.2
	baz=51							
W20A	**Ramah**	51.36	80	⇑	P	**P**	21 14 35.5	-0.1
	baz=51							
K29A	**Lazy Trails An**	51.42	67	⇑	P	**P**	21 14 35.8	+0.1
	baz=51,SNR=9.3							
R24A	**Sanders Place,**	51.43	75	⇓	P	**P**	21 14 36.2	+0.2
	baz=51,SNR=16							
V21A	**Milan**	51.45	79	⇑	P	**P**	21 14 36.5	+0.3
	baz=51							
Q25A	**Bedland, Calha**	51.51	73	⇑	P	**P**	21 14 36.8	+0.2
	baz=51,SNR=16							
OGNE	**Ogallala**	51.55	70	*e*	P	**P**	21 14 37.0	+0.3
	comp=Z,281nm,1.6s							
OGNE				*e*	PcP	**PcP**	21 15 50.4	-0.1
OGNE	**Ogallala**	51.55	70	⇓	P	**P**	21 14 37.0	+0.3
	baz=51,SNR=7.8							
DAG	**Danmarks Havn**	51.55	6	⇑ *i*	P	**P**	21 14 35.1	-1.0
	comp=Z,5.8nm,1.0s							
U22A	**Llaves**	51.56	77	⇑	P	**P**	21 14 37.2	+0.1
	baz=51,SNR=7.1							
T23A	**Casias Ranch,**	51.63	76	⇓	P	**P**	21 14 38.0	+0.4
	baz=52,SNR=6.4							
P26A	**Davis Ranch, A**	51.64	72	⇑	P	**P**	21 14 38.1	+0.6
	baz=52,SNR=13							
M28A	**Bar X Bar Ranc**	51.66	69	⇓	P	**P**	21 14 37.8	+0.2
	baz=52							
S24A	**Houchin Ranch,**	51.74	75	⇑	P	**P**	21 14 39.1	+0.6
	baz=52,SNR=26							
X20A	**Quemado**	51.74	80	⇑	P	**P**	21 14 39.1	+0.6
	baz=52,SNR=17							
L29A	**Maesberg Ranch**	51.76	68	⇓	P	**P**	21 14 38.3	0.0
	baz=52							
O27A	**Beecher Island**	51.76	71	⇑	P	**P**	21 14 38.7	+0.4
	baz=52							
TUC	**Tucson**	51.81	84	*e*	P	**P**	21 14 39.2	+0.4
TUC					pmax	pmax		
	comp=Z,91nm,0.9s							
TUC	**Tucson**	51.81	84	*e*	P	**P**	21 14 39.1	+0.4
	comp=Z,92nm,0.9s							
V22A	**San Miguel Ran**	51.82	78	⇑	P	**P**	21 14 39.1	0.0
	baz=52,SNR=9.7							
W21A	**San Fidel**	51.89	79	⇓	P	**P**	21 14 39.6	0.0
	baz=52							
Q26A	**Hugo**	51.94	73	⇓	P	**P**	21 14 40.1	+0.3
	baz=52,SNR=7.2							
R25A	**Fountain Ranch**	51.98	74	⇑	P	**P**	21 14 40.7	+0.6
	baz=52,SNR=29							
U23A	**El Rito**	51.99	77	⇓	P	**P**	21 14 40.5	+0.2
	baz=52							
M29A	**Buffalo Ranch**	52.02	69	⇓	P	**P**	21 14 40.2	-0.1
	baz=52,SNR=6.3							
P27A	**Ficken Ranch,**	52.10	72	⇑	P	**P**	21 14 41.0	+0.1
	baz=52							
S25A	**Robets Cordova**	52.20	75	⇑	P	**P**	21 14 41.9	+0.1
	baz=52,SNR=32							
O28A	**Krutsinger Ran**	52.22	71	⇑	P	**P**	21 14 41.6	-0.2
	baz=52							
Y20A	**Horse Springs,**	52.24	81	⇑	P	**P**	21 14 42.7	+0.6
	baz=52,SNR=20							
X21A	**Alamocita Cree**	52.25	80	⇑	P	**P**	21 14 42.7	+0.5
	baz=52,SNR=29							
V23A	**Ortiz Mt. (NFS**	52.38	78	⇓	P	**P**	21 14 43.3	+0.2
	baz=52,SNR=12							
R26A	**Arlington**	52.38	73	⇑	P	**P**	21 14 43.0	0.0
	baz=52,SNR=15							
W22A	**Albuquerque**	52.40	79	⇑	P	**P**	21 14 43.8	+0.5
	baz=52							
KSCO	**Kaye Shedlock'**	52.42	72	⇓	P	**P**	21 14 43.6	+0.3
	baz=52,SNR=14							
M30A	**Dale-Ortello V**	52.44	68	⇑	P	**P**	21 14 42.9	-0.4
	baz=52							
N29A	**Votaw Ranch, W**	52.45	69	⇓	P	**P**	21 14 43.3	-0.2
	baz=52							
U24A	**Moreno Valley**	52.50	76	⇑	P	**P**	21 14 44.6	+0.5
	baz=52							
T25A	**Trinidad**	52.55	75	⇓	P	**P**	21 14 45.0	+0.6
	baz=52,SNR=31							
Y21A	**Point of Rocks**	52.61	80	⇓	P	**P**	21 14 45.6	+0.7
	baz=52,SNR=17							
Z20A	**Nine Sixteen R**	52.64	82	⇑	P	**P**	21 14 45.2	+0.1
	baz=52,SNR=20							
LAZ	**Ladron**	52.68	80	*e*	P	**P**	21 14 45.8	+0.4
	comp=Z,20nm,1.1s							
LAZ				*e*	PcP	**PcP**	21 15 55.7	+0.8
X22A	**Bernardo**	52.69	79	⇑	P	**P**	21 14 46.3	+0.9
	baz=53,SNR=8.1							
ANMO	**Albuquerque**	52.74	79	*e*	P	**P**	21 14 46.5	+0.8
	comp=Z,27nm,1.1s							
N30A	**Hueftle Ranch,**	52.78	69	⇑	P	**P**	21 14 45.8	0.0
	baz=53							
R27A	**Eads**	52.78	73	⇑	P	**P**	21 14 46.4	+0.4
	baz=53,SNR=22							
W23A	**Werner Place,**	52.78	78	⇓	P	**P**	21 14 46.4	+0.3
	baz=53							
O29A	**4D Ranch, Culb**	52.80	70	⇓	P	**P**	21 14 46.1	+0.1
	baz=53,SNR=15							
S26A	**Kim**	52.81	74	⇑	P	**P**	21 14 46.0	-0.2
	baz=53,SNR=24							
Q28A	**Sharon Springs**	52.86	72	⇓	P	**P**	21 14 47.0	+0.4
	baz=53							
ECSD	**EROS Data Cent**	52.93	64	*e*	P	**P**	21 14 45.7	-1.2
	comp=Z,51nm,1.2s							
V24A	**Rampart Ranch,**	52.95	77	⇑	P	**P**	21 14 47.8	+0.4
	baz=53,SNR=25							
120A	**U Bar Ranch, L**	52.99	82	⇓	P	**P**	21 14 47.7	+0.1
	baz=53,SNR=14							
NACB	**Ninganchiao**	53.00	263	*e*	P	**P**	21 14 47.7	+0.1
T26A	**Comanche Natio**	53.02	75	⇓	P	**P**	21 14 47.8	0.0
	baz=53,SNR=14							
Y22D	**IRIS PASSCAL I**	53.03	80	⇑	P	**P**	21 14 48.5	+0.6
	baz=53							
U25A	**Circle Dot Ran**	53.04	76	⇓	P	**P**	21 14 48.0	0.0
	baz=53,SNR=25							
LPM	**Los Pinos Moun**	53.05	79	*e*	P	**P**	21 14 49.3	+1.2
Z21A	**St. Cloud Mine**	53.08	81	⇓	P	**P**	21 14 48.7	+0.3
	baz=53,SNR=6.9							
Y22A	**Socorro**	53.09	80	⇑	P	**P**	21 14 49.0	+0.6
	baz=53,SNR=16							
EYMN	**Ely**	53.10	57	*e*	P	**P**	21 14 47.5	-0.5
S27A	**Las Animas**	53.11	74	⇓	P	**P**	21 14 48.5	0.0
	baz=53							
X23A	**Hourglass Bar**	53.15	79	⇓	P	**P**	21 14 49.0	+0.2
	baz=53,SNR=8.5							
BNM	**Barren Site**	53.16	79	*e*	P	**P**	21 14 49.4	+0.4
	comp=Z,21nm,1.0s							
BNM				*e*	ScP	**ScP**	21 19 57.6	+5.1
O30A	**MW Ranch, Wils**	53.20	69	⇓	P	**P**	21 14 49.2	+0.3
	baz=53,SNR=7.0							
W24A	**Lazy 6 Ranch,**	53.21	78	⇑	P	**P**	21 14 49.6	+0.4
	baz=53,SNR=32							
V25A	**Rancho No Teng**	53.28	76	⇓	P	**P**	21 14 50.0	+0.2
	baz=53,SNR=33							
SUMG	**Summit**	53.30	14	*e*	P	**P**	21 14 49.1	-0.5
SUMG					pmax	pmax		
	comp=Z,55nm,1.3s							
SUMG	**Summit**	53.30	14	*e*	P	**P**	21 14 49.1	-0.5
	comp=Z,55nm,1.3s							
SUMG				*e*	ScP	**ScP**	21 19 52.7	+0.1
SUMG	**Summit**	53.30	14	⇑ *i*	P	**P**	21 14 49.3	-0.3
	comp=Z,17nm,0.8s							
R28A	**Tribune**	53.34	72	⇑	P	**P**	21 14 50.3	+0.3
	baz=53,SNR=5.6							
319A	**Douglas**	53.38	84	⇓	P	**P**	21 14 50.5	0.0
	baz=53							
U26A	**Atchley Ranch,**	53.44	75	⇓	P	**P**	21 14 51.2	+0.2
	baz=53,SNR=19							
Q29A	**Oakley**	53.48	71	⇑	P	**P**	21 14 51.1	+0.1
	baz=53,SNR=8.1							
220A	**Playas Peak, P**	53.49	83	⇓	P	**P**	21 14 51.3	0.0
	baz=53,SNR=20							
P30A	**Selden**	53.49	70	⇓	P	**P**	21 14 51.4	+0.2
	baz=53							
BGNE	**Belgrade**	53.52	67	⇓	P	**P**	21 14 50.7	-0.6
	baz=53,SNR=5.5							
121A	**Cookes Peak, D**	53.53	82	⇓	P	**P**	21 14 52.0	+0.4
	baz=53,SNR=8.4							
Z22A	**Elephant Butte**	53.55	80	⇓	P	**P**	21 14 51.9	+0.2
	baz=53,SNR=15							
X24A	**Lazy VL Ranch,**	53.62	78	⇑	P	**P**	21 14 52.6	+0.3
	baz=54,SNR=5.4							
T27A	**Campo**	53.63	74	⇑	P	**P**	21 14 52.3	+0.1
	baz=54,SNR=8.9							
Y23A	**Lovelace Mesa,**	53.66	79	⇓	P	**P**	21 14 53.0	+0.5
	baz=54,SNR=43							
SSLB	**Suanglung**	53.68	263	*e*	P	**P**	21 14 52.5	-0.1
	comp=Z,99nm,1.0s							
R29A	**Marienthal**	53.69	72	⇓	P	**P**	21 14 52.6	0.0
	baz=54,SNR=8.8							
YULB	**Yu-li**	53.76	263	*e*	P	**P**	21 14 52.9	-0.3
	comp=Z,51nm,0.9s							
S28A	**Manter**	53.78	73	⇓	P	**P**	21 14 53.7	+0.4
	baz=54,SNR=12							
W25A	**X Bar L Ranch,**	53.78	77	⇑	P	**P**	21 14 53.9	+0.5
	baz=54,SNR=37							
V26A	**Tequesquite Ra**	53.81	76	⇑	P	**P**	21 14 53.5	-0.1
	baz=54,SNR=26							
Q30A	**Quinter**	53.88	71	⇑	P	**P**	21 14 54.2	+0.2
	baz=54,SNR=11							
320A	**Kipp Ranch, An**	53.88	83	⇑	P	**P**	21 14 54.3	+0.1
	baz=54,SNR=7.9							
221A	**Mesquite Ranch**	53.89	82	⇑	P	**P**	21 14 54.4	+0.2
	baz=54							
122A	**Conniff Cattle**	53.90	81	⇑	P	**P**	21 14 54.9	+0.6
	baz=54,SNR=6.0							
U27A	**Thompson Grove**	53.98	75	⇓	P	**P**	21 14 54.8	0.0
	baz=54,SNR=22							
Z23A	**Rita Site, Whi**	54.00	80	⇓	P	**P**	21 14 55.3	+0.3
	baz=54							
P31A	**Stockton**	54.02	70	⇓	P	**P**	21 14 54.8	-0.1
	baz=54,SNR=12							
Y24A	**Capitan**	54.05	79	⇑	P	**P**	21 14 55.5	+0.1
	baz=54,SNR=55							
XAN	**Xi'an**	54.05	281		P	**P**	21 14 55.5	+0.2
XAN					sP	**sP**	21 15 04.9	-1.5
XAN					PP	**PP**	21 16 57.8	+1.2
XAN					S	**S**	21 22 24.3	-5.5
XAN					pmax	pmax		
	comp=Z,17nm,1.4s							
XAN					pmax	pmax		
	comp=Z,83nm,9.3s							
XAN					LR	LR		
	comp=N,480nm,23.7s							
XAN					LR	LR		
	comp=E,240nm,22.1s							
XAN					LR	LR		
	comp=Z,240nm,16.9s							
SPMN	**St. Paul**	54.11	60	⇓	P	**P**	21 14 54.5	-0.9
	baz=54							
X25A	**Clemmons Ranch**	54.12	78	⇑	P	**P**	21 14 56.1

U29A	**Oasis Ranch, S**	**54.90**	**74**	⇑P		**P**	**21 15 01.5**	**0.0**
	baz=55,SNR=5.1							
Z25A	**Roswell**	**54.92**	**79**	⇑P		**P**	**21 15 02.0**	**+0.3**
	baz=55,SNR=12							
T30A	**Plains**	**54.95**	**73**	⇑P		**P**	**21 15 01.8**	**+0.1**
	baz=55,SNR=6.3							
X27A	**F and S Farms,**	**55.00**	**77**	⇓P		**P**	**21 15 02.3**	**0.0**
	baz=55							
Y26A	**Elida**	**55.04**	**78**	⇑P		**P**	**21 15 02.4**	**-0.1**
	baz=55							
W28A	**Vega**	**55.13**	**75**	⇓P		**P**	**21 15 02.8**	**-0.4**
	baz=55							
V29A	**Stinnett**	**55.14**	**74**	⇑P		**P**	**21 15 02.7**	**-0.5**
	baz=55							
S31A	**Mullinville**	**55.20**	**71**	⇓P		**P**	**21 15 03.0**	**-0.5**
	baz=55							
U30A	**WK&E Inc. Balk**	**55.22**	**73**	⇓P		**P**	**21 15 03.3**	**-0.5**
	baz=55,SNR=7.3							
224A	**Cornudas Mount**	**55.24**	**81**	⇑P		**P**	**21 15 03.8**	**-0.3**
	baz=55,SNR=16							
125A	**Gardner Draw,**	**55.38**	**79**	⇑P		**P**	**21 15 05.1**	**+0.1**
	baz=55,SNR=19							
Z26A	**Caprock**	**55.38**	**78**	⇓P		**P**	**21 15 05.2**	**+0.2**
	baz=55,SNR=21							
T31A	**Randall Ranch,**	**55.43**	**72**	⇓P		**P**	**21 15 05.1**	**-0.1**
	baz=55,SNR=20							
Y27A	**Causey**	**55.47**	**77**	⇓P		**P**	**21 15 05.7**	**+0.1**
	baz=55,SNR=17							
COWI	**Conover**	**55.52**	**58**	*e*P		**P**	**21 15 04.4**	**-1.3**
	comp=E,16nm,0.6s							
COWI				*e*PcP		**PcP**	**21 16 05.4**	**0.0**
W29A	**Amarillo**	**55.56**	**75**	⇓P		**P**	**21 15 06.4**	**+0.1**
	baz=55							
MNTX	**Cornudas Mount**	**55.59**	**81**	*e*P		**P**	**21 15 06.6**	**+0.2**
	comp=E,36nm,1.1s							
SFJD	**Kangerlussuaq**	**55.59**	**22**	*e*P		**P**	**21 15 04.3**	**-1.5**
	comp=E,8.5nm,0.5s							
SFJD				PcP		**PcP**	**21 16 04.3**	**-1.0**
SFJD				*e*PcP		**PcP**	**21 16 04.7**	**-0.5**
SFJD	**Kangerlussuaq**	**55.59**	**22**	*i* P		**P**	**21 15 05.6**	**-0.2**
	comp=E,7.9nm,0.9s							
SFJD	**Kangerlussuaq**	**55.59**	**22**	P		**P**	**21 15 04.9**	**-0.9**
	comp=E,7.4nm,0.4s,baz=307,slow=7.0,SNR=13							
SFJD				PcP		**PcP**	**21 16 04.3**	**-1.0**
	comp=E,18nm,0.9s,baz=346,slow=4.9,SNR=5.8							
SFJD				LR		LR	21 40 15.4	
	comp=E,715nm,21.2s,baz=316,slow=38							
X28A	**Dimmitt**	**55.63**	**76**	⇑P		**P**	**21 15 06.6**	**-0.2**
	baz=56,SNR=5.2							
MSTX	**Muleshoe**	**55.65**	**77**	⇑P		**P**	**21 15 06.8**	**-0.1**
	baz=56,SNR=16							
225A	**Deer Hill, Car**	**55.65**	**80**	⇑P		**P**	**21 15 07.1**	**0.0**
	baz=56,SNR=16							
324A	**Moseley Ranch,**	**55.70**	**81**	⇑P		**P**	**21 15 07.1**	**-0.2**
	baz=56,SNR=11							
AMTX	**Amarillo**	**55.70**	**75**	*e*P		**P**	**21 15 07.4**	**+0.1**
	comp=E,30nm,0.8s							
AMTX				*e*PcP		**PcP**	**21 16 06.2**	**-0.1**
V30A	**Spur Ranch, Mi**	**55.71**	**74**	⇑P		**P**	**21 15 06.7**	**-0.6**
	baz=56							
LZH	**Lanzhou**	**55.78**	**287**	⇑P		**P**	**21 15 09.3**	**+1.4**
LZH				pP		**pP**	**21 15 16.8**	**+0.9**
LZH				sP		**sP**	**21 15 20.3**	**+1.3**
LZH				PP		**PP**	**21 17 16.5**	**+4.4**
LZH				S		**S**	**21 22 52.1**	**-1.1**
LZH				sS		**sS**	**21 23 10.0**	**+3.7**
LZH				pmax		pmax		
	comp=Z,80nm,1.3s							
LZH				pmax		pmax		
	comp=Z,500nm,8.4s							
LZH				LR		LR		
	comp=N,1μm,15.7s							
LZH				LR		LR		
	comp=E,2μm,18.0s							
LZH				LR		LR		
	comp=Z,3μm,18.5s							
126A	**Clayton Basin,**	**55.78**	**79**	⇓P		**P**	**21 15 07.5**	**-0.4**
	baz=56,SNR=8.5							
U31A	**Nine Bar Ranch**	**55.81**	**73**	⇓P		**P**	**21 15 07.7**	**-0.3**
	baz=56							
Z27A	**Tatum**	**55.82**	**78**	⇓P		**P**	**21 15 07.8**	**-0.3**
	baz=56,SNR=10							
KSU1	**Kansas State U**	**55.92**	**68**	*e*P		**P**	**21 15 08.5**	**-0.2**
	comp=Z,22nm,0.4s							
GTA	**Gaotai**	**55.96**	**292**	⇑P		**P**	**21 15 10.1**	**+1.0**
GTA				PcP		**PcP**	**21 16 07.3**	**-0.1**
GTA				PP		**PP**	**21 17 18.0**	**+4.4**
GTA				S		**S**	**21 22 55.8**	**+0.4**
GTA				ScS		**ScS**	**21 24 54.8**	**-1.6**
GTA				SS		**SS**	**21 26 41.3**	**+0.4**
GTA				pmax		pmax		
	comp=Z,310nm,0.9s							
GTA				pmax		pmax		
	comp=Z,360nm,4.7s							
GTA				LR		LR		
	comp=N,1μm,19.0s							
GTA				LR		LR		
	comp=E,1μm,17.1s							
GTA				LR		LR		
	comp=Z,2μm,19.5s							
X29A	**Tulia**	**55.98**	**76**	⇓P		**P**	**21 15 09.1**	**-0.2**
	baz=56							
Y28A	**McKinney Farm,**	**56.01**	**77**	⇑P		**P**	**21 15 09.1**	**-0.4**
	baz=56							
SCIA	**State Center**	**56.02**	**64**	*e*P		**P**	**21 15 09.4**	**+0.1**
	comp=Z,88nm,1.0s							
325A	**Bean Ranch, Si**	**56.07**	**81**	⇑P		**P**	**21 15 09.8**	**-0.2**
	baz=56,SNR=22							
226B	**Tecolote Peak,**	**56.08**	**80**	⇑P		**P**	**21 15 10.0**	**0.0**
	baz=56,SNR=16							
127A	**Arkansas Junct**	**56.17**	**78**	⇓P		**P**	**21 15 10.4**	**-0.3**
	baz=56							
W30A	**Crocket Farms**	**56.17**	**74**	⇓P		**P**	**21 15 10.5**	**-0.1**
	baz=56							
V31A	**Spring Creek L**	**56.22**	**73**	⇑P		**P**	**21 15 10.7**	**-0.2**
	baz=56,SNR=9.2							
ENH	**Enshi**	**56.27**	**278**	*e*P		**P**	**21 15 10.2**	**-1.1**
	comp=Z,45nm,0.8s							
ENH				LR		LR		
	comp=Z,736nm,22.0s							
Z28A	**Tucker Farm, M**	**56.35**	**77**	⇓P		**P**	**21 15 11.2**	**-0.7**
	baz=56							
Y29A	**Porterfield Fa**	**56.40**	**76**	⇑P		**P**	**21 15 11.9**	**-0.4**
	baz=56,SNR=12							
425A	**Indio Mountain**	**56.46**	**81**	⇑P		**P**	**21 15 12.8**	**0.0**
	baz=56,SNR=15							
X30A	**Coker Ranch, T**	**56.49**	**75**	⇑P		**P**	**21 15 12.5**	**-0.3**
	baz=56							
W31A	**Holland Ranch,**	**56.55**	**74**	⇓P		**P**	**21 15 13.3**	**+0.1**
	baz=56,SNR=7.0							
227A	**Bennet, Jal**	**56.66**	**79**	⇑P		**P**	**21 15 13.5**	**-0.6**
	baz=56							
128A	**Castleberry Fa**	**56.74**	**78**	⇓P		**P**	**21 15 14.4**	**-0.3**
	baz=57,SNR=24							
Z29A	**Hungry Hill Ra**	**56.78**	**77**	⇑P		**P**	**21 15 15.0**	**0.0**
	baz=57,SNR=17							
Y30A	**Stafford Cattl**	**56.86**	**76**	⇓P		**P**	**21 15 15.5**	**0.0**
	baz=57,SNR=14							
X31A	**McDonald Ranch**	**56.90**	**74**	⇓P		**P**	**21 15 15.5**	**-0.3**
	baz=57,SNR=8.3							
327A	**Balmorhea Ranc**	**56.98**	**80**	⇓P		**P**	**21 15 16.0**	**-0.4**
	baz=57							
JFWS	**Jewell Farm**	**57.01**	**61**	*e*P		**P**	**21 15 15.7**	**-0.6**
JFWS				pmax		pmax		
	comp=Z,36nm,0.9s							
JFWS	**Jewell Farm**	**57.01**	**61**	*e*P		**P**	**21 15 15.7**	**-0.6**
	comp=Z,36nm,0.9s							
228A	**UT Block 9, Go**	**57.02**	**78**	⇓P		**P**	**21 15 16.3**	**-0.4**
	baz=57,SNR=6.6							
129A	**Stewart Farms,**	**57.12**	**78**	⇑P		**P**	**21 15 16.6**	**-0.8**
	baz=57							
Z30A	**Sanderson Ranc**	**57.12**	**76**	⇓P		**P**	**21 15 16.9**	**-0.4**
	baz=57,SNR=22							
426A	**McDonald Obser**	**57.13**	**81**	⇓P		**P**	**21 15 17.4**	**-0.3**
	baz=57,SNR=13							
Y31A	**Rekieta Farm,**	**57.19**	**75**	⇓P		**P**	**21 15 17.5**	**-0.2**
	baz=57							
SCO	**Scoresbysund**	**57.33**	**9**	*i* P		**P**	**21 15 18.6**	**+0.4**
	comp=Z,6.5nm,0.9s							
328A	**Wristen Ranch,**	**57.40**	**79**	⇓P		**P**	**21 15 18.7**	**-0.7**
	baz=57,SNR=20							
427A	**Hayter Ranch,**	**57.40**	**80**	⇓P		**P**	**21 15 19.3**	**-0.1**
	baz=57,SNR=8.1							
526A	**Mary Lane Ranc**	**57.52**	**81**	⇑P		**P**	**21 15 20.3**	**0.0**
	baz=57,SNR=13							
WMOK	**Wichita Mounta**	**57.55**	**74**	*e*P		**P**	**21 15 20.1**	**-0.2**
WMOK				pmax		pmax		
	comp=Z,25nm,0.9s							
WMOK	**Wichita Mounta**	**57.55**	**74**	*e*P		**P**	**21 15 20.1**	**-0.2**
	comp=Z,25nm,0.9s							
229A	**Bryant Ranch,**	**57.61**	**78**	⇑P		**P**	**21 15 20.5**	**-0.3**
	baz=58							
Y32A	**R-V Farms, Ver**	**57.66**	**75**	⇑P		**P**	**21 15 20.9**	**-0.2**
	baz=58,SNR=16							
130A	**Snyder**	**57.69**	**77**	⇓P		**P**	**21 15 21.0**	**-0.4**
	baz=58							
Z31A	**Sharp Cattle R**	**57.70**	**76**	⇑P		**P**	**21 15 21.2**	**-0.2**
	baz=58,SNR=18							
527A	**Woodward Ranch**	**57.76**	**81**	⇑P		**P**	**21 15 21.6**	**-0.4**
	baz=58,SNR=8.7							
329A	**Wagon Wheel Ra**	**57.83**	**79**	⇑P		**P**	**21 15 22.0**	**-0.4**
	baz=58							
626A	**Big Bend Ranch**	**57.84**	**82**	⇑P		**P**	**21 15 22.1**	**-0.5**
	baz=58,SNR=18							
KEV	**Kevo**	**57.88**	**350**	*e*P		**P**	**21 15 21.4**	**-0.6**
KEV	**Kevo**	**57.88**	**350**	*e*p		**P**	**21 15 21.4**	**-0.6**
428A	**Kincaid Ranch,**	**57.93**	**80**	⇓P		**P**	**21 15 23.2**	**+0.1**
	baz=58,SNR=21							
131A	**Roby**	**57.99**	**76**	⇓P		**P**	**21 15 23.0**	**-0.5**
	baz=58,SNR=9.3							
230A	**Sterling City**	**58.09**	**78**	⇓P		**P**	**21 15 23.6**	**-0.6**
	baz=58,SNR=9.6							
Z32A	**Haskell**	**58.11**	**75**	⇓P		**P**	**21 15 24.0**	**-0.2**
	baz=58,SNR=15							
ARCES	**ARCESS Array B**	**58.25**	**350**	P		**P**	**21 15 23.7**	**-1.0**
ARCES				PcP		**PcP**	**21 16 15.7**	**0.0**
ARCES	**ARCESS Array B**	**58.25**	**350**	P		**P**	**21 15 23.7**	**-1.0**
	comp=Z,25nm,0.8s,baz=27,slow=8.4,SNR=74							
ARCES				PcP		**PcP**	**21 16 15.7**	**0.0**
	comp=Z,30nm,0.8s,baz=15,slow=5.3,SNR=14							
ARCES				LR		LR	21 43 11.7	
	comp=Z,522nm,19.8s,baz=20,slow=39							
ARE0	**ARCESS Array S**	**58.25**	**350**	*e*P		**P**	**21 15 23.6**	**-1.0**
528A	**Cox Ranch, San**	**58.26**	**80**	⇑P		**P**	**21 15 25.5**	**0.0**
	baz=58							
TXAR	**Lajitas Array**	**58.29**	**82**	P		**P**	**21 15 25.6**	**0.0**
TXAR	**Lajitas Array**	**58.29**	**82**	P		**P**	**21 15 25.6**	**0.0**
	comp=Z,4.8nm,0.8s,baz=299,slow=5.2,SNR=42							
TXAR				LR		LR	21 41 16.8	
	comp=Z,396nm,18.4s,baz=0.0,slow=37							
627A	**Terlingua Ranc**	**58.38**	**81**	⇓P		**P**	**21 15 26.1**	**-0.2**
	baz=58,SNR=14							
330A	**Mertzon**	**58.38**	**78**	⇑P		**P**	**21 15 25.6**	**-0.7**
	baz=58							
ABTX	**Abilene, Hawle**	**58.48**	**76**	⇑P		**P**	**21 15 26.7**	**-0.2**
	baz=58,SNR=20							
429A	**Davenport Ranc**	**58.49**	**79**	⇓P		**P**	**21 15 26.3**	**-0.7**
	baz=58							
TUL1	**Tulsa**	**58.54**	**71**	⇓P		**P**	**21 15 26.7**	**-0.5**
	baz=58,SNR=8.7							
231A	**Bronte**	**58.55**	**77**	⇓P		**P**	**21 15 26.2**	**-1.2**
	baz=58							
LVZ	**Lovozero**	**58.62**	**346**	*e*P		**P**	**21 15 26.5**	**-0.8**
LVZ				pmax		pmax		
	comp=Z,86nm,1.0s							
529A	**Stev Forest Ra**	**58.63**	**80**	⇑P		**P**	**21 15 27.6**	**-0.4**
	baz=58							
628A	**Black Gap, Mar**	**58.67**	**81**	⇑P		**P**	**21 15 27.7**	**-0.6**
	baz=58,SNR=15							
GLMI	**Grayling**	**58.74**	**56**	*e*P		**P**	**21 15 28.2**	**-0.3**
	comp=Z,114nm,0.9s							
430A	**Baggett Ranch,**	**58.78**	**79**	⇓P		**P**	**21 15 28.3**	**-0.7**
	baz=59,SNR=13							
331A	**San Angelo**	**58.91**	**78**	⇑P		**P**	**21 15 29.1**	**-0.8**
	baz=59,SNR=7.4							
232A	**Coleman**	**58.99**	**77**	⇓P		**P**	**21 15 30.1**	**-0.4**
	baz=59,SNR=12							
APA	**Apatity**	**59.11**	**346**	⇑*i*P		**P**	**21 15 29.6**	**-1.1**
APA				pmax		pmax		
	comp=Z,47nm,1.3s							
APA				MLR		MLR		
	comp=Z,1μm,17.0s							
HDIL	**Hopedale**	**59.12**	**63**	*e*P		**P**	**21 15 31.2**	**+0.1**
	comp=Z,201nm,1.2s							
530A	**J-C Ranch, Com**	**59.16**	**79**	⇓P		**P**	**21 15 30.9**	**-0.7**
	baz=59,SNR=26							
431A	**Sonora**	**59.24**	**78**	⇓P		**P**	**21 15 31.1**	**-1.0**
	baz=59,SNR=17							
332A	**Millersview**	**59.28**	**77**	⇓P		**P**	**21 15 31.9**	**-0.5**
	baz=59,SNR=10							
KURK	**Kurchatov**	**59.36**	**314**	P		**P**	**21 15 31.4**	**-1.3**
	comp=Z,250nm,1.4s,SNR=24							
KURK	**Kurchatov**	**59.36**	**314**	*c* *i*P		**P**	**21 15 31.6**	**-1.0**
KURK				pmax		pmax		
	comp=Z,47nm,1.0s							
KURK	**Kurchatov**	**59.36**	**314**	*e*P		**P**	**21 15 31.3**	**-1.3**
	comp=Z,46nm,0.9s							
KURK				PcP		**PcP**	**21 16 21.1**	**+0.7**
KURK				ScP		**ScP**	**21 20 19.1**	**0.0**
KURK				LR		LR		
	comp=Z,2μm,20.0s							
CD2	**Chengdu**	**59.37**	**282**	P		**P**	**21 15 33.5**	**+0.4**
CD2				pP		**pP**	**21 15 40.8**	**-0.3**
CD2				sP		**sP**	**21 15 44.0**	**-0.2**
CD2				PcP		**PcP**	**21 16 21.8**	**+1.0**
CD2				PP		**PP**	**21 17 45.8**	**+1.8**
CD2				S		**S**	**21 23 37.1**	**-3.1**
CD2				sS		**sS**	**21 23 49.8**	**-3.6**
CD2				ScS		**ScS**	**21 25 18.0**	**-3.5**
CD2				SS		**SS**	**21 27 33.3**	**-1.4**
CD2				pmax		pmax		
	comp=Z,70nm,1.1s							
CD2				pmax		pmax		
	comp=Z,460nm,8.4s							
CD2				LR		LR		
	comp=N,840nm,15.5s							
CD2				LR		LR		
	comp=E,820nm,16.7s							
CD2				LR		LR		
	comp=Z,1μm,16.6s							
KURBB	**Kurchatov Arra**	**59.47**	**314**	P		**P**	**21 15 32.2**	**-1.2**
	comp=Z,23nm,0.8s,baz=42,slow=6.7,SNR=120							
KURBB				PcP		**PcP**	**21 16 21.1**	**+0.3**
	comp=Z,25nm,0.9s,baz=44,slow=3.6,SNR=22							
KURBB				ScP		**ScP**	**21 20 19.1**	**-0.5**
	comp=Z,3.6nm,0.9s,baz=49,slow=4.7,SNR=5.5							
432A	**Menard**	**59.60**	**78**	⇑P		**P**	**21 15 33.8**	**-0.9**
	baz=60,SNR=12							
531A	**Rocksprings**	**59.64**	**79**	⇓P		**P**	**21 15 34.1**	**-0.8**
	baz=60,SNR=8.6							
WMQ	**Urumqi**	**59.71**	**303**	P		**P**	**21 15 35.8**	**+0.5**
WMQ				pP		**pP**	**21 15 43.5**	**+0.1**
WMQ				sP		**sP**	**21 15 47.0**	**+0.6**
WMQ				PcP		**PcP**	**21 16 23.0**	**+1.0**
WMQ				PP		**PP**	**21 17 49.0**	**+2.2**
WMQ				S		**S**	**21 23 42.0**	**-2.3**
WMQ				ScS		**ScS**	**21 25 20.0**	**-3.7**
WMQ				pmax		pmax		
	comp=Z,56nm,0.8s							
WMQ				pmax		pmax		
	comp=Z,280nm,4.1s							
WMQ				LR		LR		
	comp=N,1μm,21.4s							
WMQ				LR		LR		
	comp=E,1μm,20.5s							
WMQ				LR		LR		
	comp=Z,2μm,22.4s							
SCHQ	**Schefferville**	**59.84**	**39**	*e*P		**P**	**21 15 35.0**	**-0.9**
	comp=Z,22nm,1.0s							
SCHQ				*e*PcP		**PcP**	**21 16 21.5**	**-0.7**
SCHQ				PcP		**PcP**	**21 16 22.0**	**-0.2**
SCHQ	**Schefferville**	**59.84**	**39**	P		**P**	**21 15 35.2**	**-0.7**
	comp=Z,19nm,1.1s,baz=338,slow=8.0,SNR=11							
SCHQ				PcP		**PcP**	**21 16 22.0**	**-0.2**
	comp=Z,9.9nm,0.8s,baz=325,slow=6.9,SNR=4.4							
SCHQ				LR		LR	21 43 22.3	
	comp=Z,2μm,18.6s,baz=322,slow=38							
JCT	**Junction City**	**59.87**	**78**	*e*P		**P**	**21 15 36.6**	**0.0**
JCT				pmax		pmax		
	comp=Z,66nm,1.4s							
JCT	**Junction City**	**59.87**	**78**	*e*P		**P**	**21 15 36.6**	**0.0**
	comp=Z,66nm,1.4s							
JCT	**Junction City**	**59.87**	**78**	⇑P		**P**	**21 15 35.5**	**-1.0**
	baz=60,SNR=6.5							
SLM	**Saint Louis**	**59.90**	**65**	*e*P		**P**	**21 15 36.0**	**-0.6**
SLM				pmax		pmax		
	comp=Z,157nm,1.3s							
SLM	**Saint Louis**	**59.90**	**65**	*e*P		**P**	**21 15 36.0**	**-0.6**
	comp=Z,156nm,1.3s							
RFTA	**Plano**	**60.00**	**74**	*e*P		**P**	**21 15 38.9**	**+1.6**
RFTA				*e*pP		**pP**	**21 15 47.1**	**+1.7**
532A	**Rocksprings**	**60.06**	**78**	⇑P		**P**	**21 15 36.7**	**-1.1**
	baz=60							
631A	**Perdido Creek**	**60.15**	**79**	⇓P		**P**	**21 15 37.3**	**-1.1**
	baz=60,SNR=8.2							
WHTX	**Lake Whitney**	**60.25**	**75**	⇓P		**P**	**21 15 39.2**	**+0.1**
	baz=60,SNR=12							
MK31	**Makanchi Array**	**60.39**	**309**	*i* P		**P**	**21 15 38.3**	**-1.5**
MK31				pmax		pmax		
	comp=Z,14nm,0.5s							
MK31	**Makanchi Array**	**60.39**	**309**	*e*P		**P**	**21 15 38.4**	**-1.4**
MKAR	**Makanchi Array**	**60.39**	**309**	P		**P**	**21 15 38.2**	**-1.7**
MKAR							21 16 24.8	
MKAR				pmax		pmax		
	comp=Z,14nm,0.5s							
MKAR				pmax		pmax		
	comp=Z,8.0nm,0.7s							
MKAR				MLR		MLR		
	comp=Z,737nm,22.0s							
MKAR	**Makanchi Array**	**60.39**	**309**	*e*P		**P**	**21 15 38.1**	**-1.7**
MKAR				PcP		**PcP**	**21 16 24.8**	**+0.2**
MKAR				⇑*e*			21 45 09.8	
MKAR	**Makanchi Array**	**60.39**	**309**	P		**P**	**21 15 38.2**	**-1.7**
	comp=Z,14nm,0.5s,baz=43,slow=6.6,SNR=89							
MKAR				PcP		**PcP**	**21 16 24.8**	**+0.2**
	comp=Z,7.9nm,0.7s,baz=43,slow=4.1,SNR=5.4							
MKAR				LR		LR	21 41 27.3	
	comp=Z,737nm,22.0s,baz=39,slow=36							
MKAR				PKP2bc			21 45 09.8	
	comp=Z,0.6nm,1.1s,baz=246,slow=7.8,SNR=4.5							
SFIN	**Scholer Farm**	**60.46**	**61**	⇑P		**P**	**21 15 40.0**	**-0.3**
	baz=60,SNR=51							
GYA	**Guiyang**	**60.71**	**277**	P		**P**	**21 15 44.0**	**+1.6**
GYA				pP		**pP**	**21 15 51.5**	**+1.0**
GYA				PP		**PP**	**21 17 59.0**	**+2.9**
GYA				ScP		**ScP**	**21 20 25.6**	**-0.1**
GYA				S		**S**	**21 23 55.4**	**-2.3**
GYA				SS		**SS**	**21 27 55.0**	**-1.1**
GYA				pmax		pmax		
	comp=Z,30nm,1.0s							
GYA				pmax		pmax		
	comp=Z,140nm,5.9s							
GYA				LR		LR		
	comp=N,820nm,19.8s							
GYA				LR		LR		
	comp=E,750nm,20.0s							
GYA				LR		LR		
	comp=Z,880nm,19.7s							
SOKR	**Solikamsk**	**60.87**	**332**	*c* *i*P		**P**	**21 15 42.8**	**0.0**
SOKR				pmax		pmax		
	comp=Z,40nm,1.3s							
SOKR				MLR		MLR		
	comp=Z,1μm,20.0s							
732A	**Laxson Ranch,**	**61.00**	**79**	⇓P		**P**	**21 15 43.9**	**-0.3**
	baz=61,SNR=17							
OLIL	**Olney**	**61.04**	**63**	*e*P		**P**	**21 15 44.6**	**+0.2**
SIUC	**Southern Illin**	**61.12**	**65**	*e*P		**P**	**21 15 45.3**	**+0.4**
	comp=Z,86nm,1.1s							
BVAR	**Borovoye Array**	**61.21**	**320**	P		**P**	**21 15 44.8**	**-0.5**
BVAR							21 16 28.0	
BVAR				pmax		pmax		
	comp=Z,21nm,0.4s							
BVAR				pmax		pmax		
	comp=Z,19nm,0.7s							
BVAR	**Borovoye Array**	**61.21**	**320**	P		**P**	**21 15 44.8**	**-0.5**
BVAR				PcP		**PcP**	**21 16 28.0**	**+0.3**
BVAR	**Borovoye Array**	**61.21**	**320**	P		**P**	**21 15 44.8**	**-0.5**
	comp=Z,20nm,0.4s,baz=54,slow=6.6,SNR=121							
BVAR				PcP		**PcP**	**21 16 28.0**	**+0.3**
	comp=Z,19nm,0.7s,baz=56,slow=4.5,SNR=11							
BRVK	**Borovoye**	**61.22**	**320**	P		**P**	**21 15 46.4**	**+1.0**
	comp=Z,215nm,0.5s,SNR=11							
BRVK	**Borovoye**	**61.22**	**320**	*c* *i*P		**P**	**21 15 44.5**	**-0.9**
BRVK				pmax		pmax		
	comp=Z,13nm,0.5s							
BRVK	**Borovoye**	**61.22**	**320**	*e*P		**P**	**21 15 44.2**	**-1.2**
	comp=Z,209nm,2.3s							
BRVK				LR		LR		
	comp=Z,3μm,19.0s							
UALR	**University of**	**61.36**	**69**	*e*P		**P**	**21 15 46.6**	**+0.1**
	comp=Z,454nm,2.8s							
PARMO	**Parma**	**61.55**	**66**	*e*P		**P**	**21 15 47.0**	**-0.8**
PARMO				*e*		**pP**	**21 15 57.3**	**+1.4**
BLO	**Bloomington**	**61.62**	**62**	*e*P		**P**	**21 15 48.3**	**0.0**
BLO				pmax		pmax		
	comp=Z,213nm,1.2s							
BLO	**Bloomington**	**61.62**	**62**	*e*P		**P**	**21 15 48.2**	**0.0**
	comp=Z,213nm,1.2s							
USIN	**University of**	**61.82**	**64**	*e*P		**P**	**21 15 49.9**	**+0.3**
	comp=Z,373nm,1.2s							
SVE	**Sverdlovsk**	**61.88**	**328**	⇓*e*P		**P**	**21 15 50.2**	**+0.5**
SVE				*e*			21 16 30.5	
SVE				*e*S		**S**	**21 24 13.3**	**+1.9**
SVE				*e*			21 25 39.0	
SVE				pmax		pmax		
	comp=Z,76nm,1.1s							
SVE				MLR		MLR		
	comp=Z,3μm,20.0s							
WCI	**Wyandotte Cave**	**62.41**	**63**	*e*P		**P**	**21 15 52.7**	**-0.9**
WCI				pmax		pmax		
	comp=Z,122nm,1.0s							
WCI	**Wyandotte Cave**	**62.41**	**63**	*e*P		**P**	**21 15 52.7**	**-0.9**
	comp=Z,122nm,1.0s							
ACSO	**Alum Creek Sta**	**62.80**	**59**	*e*P		**P**	**21 15 56.3**	**+0.1**
	comp=Z,80nm,1.0s							
ARU	**Arti**	**62.88**	**329**	*c* *i*P		**P**	**21 15 56.1**	**-0.3**
ARU							21 16 33.8	
ARU							21 18 10.3	
ARU				S		**S**	**21 24 25.0**	**+0.9**
ARU				SS		**SS**	**21 28 23.9**	**-4.5**
ARU				SSS		SSS	21 31 06.8	
ARU				pmax		pmax		
	comp=Z,134nm,1.7s							
ARU				MLR		MLR		
	comp=Z,1μm,19.0s

TZTN	**Tazewell**	**65.14**	**62**	*e*P		**P**	**21 16 12.5**	**+0.9**
	comp=Z,218nm,1.3s								
AFI	**Afiamalu**	**65.16**	**173**	LR		LR	21 39 55.8		
	comp=Z,535nm,18.9s,baz=7.4,slow=32								
KAF	**Kangasniemi**	**65.28**	**348**	*e*P		**P**	**21 16 11.5**	**-0.6**
KAF	**Kangasniemi**	**65.28**	**348**	*e*p		**P**	**21 16 11.5**	**-0.6**
ACCN	**Adirondack Com**	**65.30**	**51**	*e*P		**P**	**21 16 11.9**	**-0.6**
	comp=Z,28nm,1.0s								
CPCT	**Cooper Cave**	**65.38**	**64**	*e*P		**P**	**21 16 10.5**	**-2.7**
LRAL	**Lakeview Retre**	**65.72**	**67**	*e*P		**P**	**21 16 14.4**	**-0.9**
	comp=Z,30nm,0.8s								
FIA1	**FINESS Array S**	**65.96**	**348**	*e*P		**P**	**21 16 15.4**	**-1.0**
FIA1				*e*PcP		**PcP**	**21 16 46.6**	**-0.4**
FINES	**FINESS Array B**	**65.96**	**348**	P		**P**	**21 16 15.4**	**-1.1**
FINES				PcP		**PcP**	**21 16 46.8**	**-0.2**
FINES			⇑*e*				21 45 01.2		
FINES	**FINESS Array B**	**65.96**	**348**	P		**P**	**21 16 15.4**	**-1.1**
	comp=Z,41nm,0.9s,baz=35,slow=7.0,SNR=71								
FINES				PcP		**PcP**	**21 16 46.8**	**-0.2**
	comp=Z,18nm,0.8s,baz=46,slow=5.5,SNR=7.4								
FINES				PKP2bc			21 45 01.2		
	comp=Z,1.5nm,0.8s,baz=29,slow=4.4,SNR=4.7								
FINES				LR		LR	21 50 59.2		
	comp=Z,588nm,18.2s,baz=23,slow=41								
BLA	**Blacksburg**	**66.37**	**60**	*e*P		**P**	**21 16 19.5**	**-0.1**
BLA				pmax		pmax			
	comp=Z,144nm,1.3s								
BLA	**Blacksburg**	**66.37**	**60**	*e*P		**P**	**21 16 19.5**	**-0.1**
	comp=Z,144nm,1.3s								
MOL	**Molde**	**66.40**	**357**	*e*P		**P**	**21 16 19.8**	**+0.5**
MVL	**Millersville**	**66.47**	**55**	*e*P		**P**	**21 16 19.9**	**-0.2**
	comp=Z,53nm,1.5s								
TKM2	**Tokmak 2**	**66.47**	**310**	*e*P		**P**	**21 16 20.0**	**-0.3**
TKM2				pmax		pmax			
	comp=Z,48nm,1.1s								
TKM2				MLR		MLR			
	comp=Z,710nm,22.0s								
TKM2	**Tokmak 2**	**66.47**	**310**	*e*P		**P**	**21 16 20.0**	**-0.3**
	comp=Z,48nm,1.1s								
TKM2				LR		LR			
	comp=Z,710nm,22.0s								
TKM2	**Tokmak 2**	**66.47**	**310**	P		**P**	**21 16 21.1**	**+0.7**
	SNR=26								
SDMD	**Soldier's Deli**	**66.65**	**56**	*e*P		**P**	**21 16 21.2**	**0.0**
	comp=Z,55nm,1.2s								
ULHL	**Ulahol**	**66.66**	**309**	*i* P		**P**	**21 16 22.8**	**+1.2**
ULHL	**Ulahol**	**66.66**	**309**	P		**P**	**21 16 22.8**	**+1.2**
	SNR=16								
USP	**Ospenovka**	**66.73**	**311**	*i* P		**P**	**21 16 21.5**	**-0.3**
USP	**Ospenovka**	**66.73**	**311**	P		**P**	**21 16 21.5**	**-0.3**
	SNR=47								
CHMS	**Chumysh**	**66.82**	**310**	*i* P		**P**	**21 16 21.7**	**-0.6**
CHMS	**Chumysh**	**66.82**	**310**	P		**P**	**21 16 21.7**	**-0.6**
	SNR=18								
KBK	**Karagaybulak**	**66.98**	**310**	*i* P		**P**	**21 16 24.4**	**+0.9**
KBK	**Karagaybulak**	**66.98**	**310**	P		**P**	**21 16 24.4**	**+0.9**
	SNR=18								
BRAL	**Brewton**	**67.15**	**69**	*e*P		**P**	**21 16 25.1**	**+0.6**
	comp=Z,210nm,1.1s								
AAK	**Ala-Archa**	**67.22**	**310**	P		**P**	**21 16 25.2**	**+0.2**
	comp=Z,202nm,0.8s,SNR=7.9								
AAK	**Ala-Archa**	**67.22**	**310**	*e*P		**P**	**21 16 25.1**	**0.0**
AAK				pmax		pmax			
	comp=Z,27nm,0.8s								
AAK				MLR		MLR			
	comp=Z,1μm,19.0s								
AAK	**Ala-Archa**	**67.22**	**310**	*e*P		**P**	**21 16 25.1**	**0.0**
	comp=Z,27nm,0.8s								
AAK				LR		LR			
	comp=Z,1μm,19.0s								
AAK	**Ala-Archa**	**67.22**	**310**	P		**P**	**21 16 26.0**	**+0.9**
	SNR=14								
KZA	**Kyzart**	**67.27**	**309**	*i* P		**P**	**21 16 25.9**	**+0.2**
KZA	**Kyzart**	**67.27**	**309**	P		**P**	**21 16 25.9**	**+0.2**
	SNR=26								
KMSC	**Kings Mountain**	**67.39**	**62**	⇓P		**P**	**21 16 25.9**	**-0.1**
	baz=67								
PMG	**Port Moresby**	**67.46**	**217**	PFAKE			21 16 40.0	+13	
PMG				LR		LR			
	comp=Z,694nm,20.0s								
GOGA	**Godfrey**	**67.46**	**64**	*e*P		**P**	**21 16 24.7**	**-1.8**
GOGA				pmax		pmax			
	comp=Z,143nm,1.3s								
GOGA	**Godfrey**	**67.46**	**64**	*e*P		**P**	**21 16 24.7**	**-1.8**
	comp=Z,142nm,1.3s								
EKS2	**Erkin-Say**	**67.54**	**311**	*e*P		**P**	**21 16 26.9**	**-0.1**
EKS2				pmax		pmax			
	comp=Z,28nm,0.8s								
EKS2				MLR		MLR			
	comp=Z,1μm,19.0s								
EKS2	**Erkin-Say**	**67.54**	**311**	*e*P		**P**	**21 16 26.9**	**-0.1**
	comp=Z,28nm,0.8s								
EKS2				LR		LR			
	comp=Z,1μm,19.0s								
EKS2	**Erkin-Say**	**67.54**	**311**	P		**P**	**21 16 27.1**	**0.0**
	SNR=44								
NB2	**NORSAR Subarra**	**67.77**	**355**	P		**P**	**21 16 27.2**	**-0.9**
	comp=Z,17nm,0.9s,baz=7.2,slow=6.5								
NB2	**NORSAR Subarra**	**67.77**	**355**	P		**P**	**21 16 27.2**	**-0.9**
	baz=7.2,slow=6.5								
NOA	**NORSAR Array B**	**67.77**	**355**	P		**P**	**21 16 27.4**	**-0.7**
NOA				PcP		**PcP**	**21 16 54.5**	**-0.1**
NOA	**NORSAR Array B**	**67.77**	**355**	P		**P**	**21 16 27.4**	**-0.7**
	comp=Z,13nm,0.8s,baz=6.2,slow=6.4,SNR=53								
NOA				PcP		**PcP**	**21 16 54.5**	**-0.1**
	comp=Z,12nm,0.9s,baz=4.2,slow=3.0,SNR=11								
NOA				LR		LR	21 43 54.0		
	comp=Z,430nm,21.9s,baz=0.0,slow=34								
LSA	**Lhasa**	**67.83**	**290**	P		**P**	**21 16 31.1**	**+1.6**
LSA				pP		**pP**	**21 16 35.6**	**-2.0**
LSA				sP		**sP**	**21 16 44.3**	**+3.6**
LSA				PcP		**PcP**	**21 16 53.0**	**-3.0**
LSA				S		**S**	**21 25 22.1**	**-4.3**
LSA				pmax		pmax			
	comp=Z,370nm,1.0s								
LSA				pmax		pmax			
	comp=Z,390nm,3.6s								
LSA				LR		LR			
	comp=N,390nm,18.7s								
LSA				LR		LR			
	comp=E,880nm,21.2s								
LSA				LR		LR			
	comp=Z,1μm,18.7s								
LSA	**Lhasa**	**67.83**	**290**	⇑*i*P		**P**	**21 16 31.3**	**+1.8**
LSA				pmax		pmax			
	comp=Z,428nm,1.0s								
LSA				MLR		MLR			
	comp=Z,1μm,19.0s								
LSA	**Lhasa**	**67.83**	**290**	⇑*i*P		**P**	**21 16 31.3**	**+1.8**
	comp=Z,428nm,1.0s								
LSA				LR		LR			
	comp=Z,1μm,19.0s								
AKTO	**Aktyubinsk**	**67.98**	**325**	P		**P**	**21 16 29.3**	**-0.2**
AKTO				pmax		pmax			
	comp=Z,67nm,0.8s								
AKTO	**Aktyubinsk**	**67.98**	**325**	P		**P**	**21 16 29.3**	**-0.2**
AKTO	**Aktyubinsk**	**67.98**	**325**	P		**P**	**21 16 29.3**	**-0.2**
	comp=Z,67nm,0.8s,baz=51,slow=7.1,SNR=163								
AML	**Almayashu**	**67.98**	**310**	*i* P		**P**	**21 16 30.4**	**+0.2**
AML	**Almayashu**	**67.98**	**310**	P		**P**	**21 16 30.4**	**+0.2**
	SNR=28								
NC602	**NORSAR Array S**	**68.06**	**355**	*e*P		**P**	**21 16 29.4**	**-0.5**
AB31	**Akbulak array**	**68.24**	**323**	*i* P		**P**	**21 16 30.5**	**-0.7**
AB31				pmax		pmax			
	comp=Z,18nm,0.6s								
ABKAR	**Akbulak array**	**68.24**	**323**	*e*P		**P**	**21 16 30.9**	**-0.2**
HFS	**Hagfors**	**68.52**	**354**	P		**P**	**21 16 31.5**	**-1.2**
HFS				PcP		**PcP**	**21 16 57.4**	**-0.3**
HFS	**Hagfors**	**68.52**	**354**	P		**P**	**21 16 31.5**	**-1.2**
	comp=Z,9.8nm,0.5s,baz=0.0,slow=1.9,SNR=69								
HFS				PcP		**PcP**	**21 16 57.4**	**-0.3**
	comp=Z,9.2nm,0.5s,baz=62,slow=3.8,SNR=4.0								
KK31	**Karatay Array**	**68.73**	**313**	*i* P		**P**	**21 16 33.5**	**-0.8**
KK31				pmax		pmax			
	comp=Z,9.0nm,0.4s								
KKAR	**Karatay Array**	**68.73**	**313**	*e*P		**P**	**21 16 34.0**	**-0.4**
KKAR	**Karatay Array**	**68.73**	**313**	*e*P		**P**	**21 16 34.0**	**-0.4**
VSU	**Vasula**	**68.73**	**346***c*	*i*P		**P**	**21 16 33.4**	**-0.6**
VSU				pmax		pmax			
	comp=Z,65nm,0.8s								
EGD	**Espegrend**	**68.76**	**358**	*e*P		**P**	**21 16 33.1**	**-1.0**
TIGA	**Tifton**	**68.85**	**66**	⇓P		**P**	**21 16 34.9**	**-0.3**
	baz=69								
KSH	**Kashi**	**68.86**	**307**	P		P	21 16 38.6	+3.2	
KSH				*e*pP		pP	21 16 46.1	+2.6	
KSH				*e*sP		sP	21 16 49.5	+2.9	
KSH				*e*PP		PP	21 19 12.6	+5.6	
KSH				*e*S		**S**	**21 25 38.6**	**+0.9**
KSH				pmax		pmax			
	comp=Z,72nm,0.7s								
KSH				LR		LR			
	comp=N,2μm,18.0s								
KSH				LR		LR			
	comp=E,2μm,16.6s								
KSH				LR		LR			
	comp=Z,4μm,20.3s								
ODD1	**Odda**	**69.09**	**357**	*e*P		**P**	**21 16 37.0**	**+0.7**
KDM	**Kudat**	**69.10**	**254**	P		**P**	**21 16 37.4**	**+0.5**
KONO	**Kongsberg**	**69.24**	**356**	*e*P		**P**	**21 16 37.2**	**0.0**
KONO	**Kongsberg**	**69.24**	**356**	*e*P		**P**	**21 16 34.7**	**-2.5**
KONO				pmax		pmax			
	comp=Z,15nm,0.8s								
KONO	**Kongsberg**	**69.24**	**356**	*e*P		**P**	**21 16 34.7**	**-2.5**
	comp=Z,15nm,0.8s								
MOS	**Moscow**	**69.28**	**339**	*e*P		P	21 16 33.1	-4.4	
MOS				*e*			21 16 58.4		
MOS				*e*PPP		PPP	21 20 50.6		
MOS				pmax		pmax			
	comp=Z,82nm,1.1s								
MOS				pmax		pmax			
	comp=Z,400nm,1.8s								
MYLDM	**Lahad Datu**	**69.47**	**252**	P		**P**	**21 16 40.2**	**+0.9**
MYLDM	**Lahad Datu**	**69.47**	**252**	P		**P**	**21 16 40.5**	**+1.3**
	comp=Z,84nm,1.3s,comp=Z,1μm								
NHSC	**New Hope**	**69.54**	**63**	*e*P		**P**	**21 16 39.6**	**+0.2**
	comp=Z,503nm,1.1s								
BLS5	**Blasjo**	**69.58**	**357**	*e*P		**P**	**21 16 39.2**	**-0.1**
BLS5				AMB		AMB	21 16 41.6		
	comp=Z,12nm,0.9s								
UBPT	**Khong Chiam**	**69.70**	**269**	P		**P**	**21 16 40.2**	**-0.5**
	comp=Z,46nm,1.4s,comp=Z,972nm								
SDKM	**Sandakan**	**69.88**	**253**	P		**P**	**21 16 42.7**	**+0.8**
OBN	**Obninsk**	**70.09**	**340**α	*i*P		**P**	**21 16 40.2**	**-2.3**
OBN				*e**PP		**pP**	**21 16 47.7**	**-3.0**
OBN				*e**SP		**sP**	**21 16 54.3**	**+0.6**
OBN				*e*			21 17 02.3		
OBN							21 19 22.0		
OBN				*e*			21 26 39.3		
OBN				pmax		pmax			
	comp=Z,185nm,1.7s								
OBN				MLR		MLR			
	comp=Z,700nm,16.0s								
KKM	**Kota Kinabalu**	**70.16**	**254**	*e*P		**P**	**21 16 44.1**	**+0.5**
	comp=Z,92nm,1.6s								
KKM				LR		LR			
	comp=Z,418nm,22.0s								
KKM	**Kota Kinabalu**	**70.16**	**254**	P		**P**	**21 16 44.7**	**+1.1**
KKM	**Kota Kinabalu**	**70.16**	**254**	P		**P**	**21 16 44.1**	**+0.5**
	comp=Z,38nm,1.7s,comp=Z,788nm								
SHL	**Shillong**	**70.44**	**287**	*i* PCW			21 16 45.5		
	comp=Z,18nm,1.0s								
SHL				*i* S		**S**	**21 25 56.5**	**-0.3**
TSM	**Tawau**	**70.55**	**252**	P		**P**	**21 16 47.1**	**+1.3**
CHTO	**Chiang Mai**	**71.14**	**277**	*e*P		**P**	**21 16 48.9**	**-0.5**
CHTO				pmax		pmax			
	comp=Z,34nm,1.1s								
CHTO				MLR		MLR			
	comp=Z,389nm,19.0s								
CHTO	**Chiang Mai**	**71.14**	**277**	P		**P**	**21 16 49.8**	**+0.4**
	SNR=8.6								
CHTO	**Chiang Mai**	**71.14**	**277**	*e*P		**P**	**21 16 48.9**	**-0.5**
	comp=Z,34nm,1.1s								
CHTO				LR		LR			
	comp=Z,389nm,19.0s								
CHTO	**Chiang Mai**	**71.14**	**277**	P		**P**	**21 16 49.4**	**0.0**
	comp=Z,37nm,1.3s,comp=Z,664nm								
CMAR	**Chiang Mai Arr**	**71.40**	**276**	P		**P**	**21 16 51.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**71.40**	**276**	P		**P**	**21 16 51.3**	**+0.2**
	comp=Z,18nm,0.8s,baz=26,slow=6.9,SNR=121								
PBKT	**Sadao Pong**	**71.55**	**274**	P		**P**	**21 16 52.0**	**+0.1**
	comp=Z,31nm,0.9s								
TAPN	**Taplejung**	**71.60**	**291**	*e*P		**P**	**21 16 53.7**	**+1.2**
	comp=Z,2μm,1.1s								
ODAN	**Odare**	**72.15**	**291**	*e*P		**P**	**21 16 56.7**	**+0.9**
	comp=Z,1μm,1.5s								
NACGM	**Naroch**	**72.15**	**345**	*e*		P	21 16 51.0	-4.0	
GUN	**Gumba**	**72.25**	**292**	*e*P		**P**	**21 16 57.7**	**+1.3**
	comp=Z,1μm,0.8s								
MICGM	**Minsk**	**72.36**	**344**	*e*P		**P**	**21 16 54.0**	**-2.2**
MNK	**Minsk**	**72.36**	**344**	*e*P		**P**	**21 16 54.0**	**-2.3**
MNK				pmax		pmax			
	comp=Z,140nm,1.0s								
MUD	**Monsted U'grnd**	**72.45**	**356**⇑	*i*P		**P**	**21 16 56.8**	**+0.1**
	comp=Z,11nm,0.9s								
RAMN	**Ramite**	**72.55**	**291**	*e*P		**P**	**21 16 59.1**	**+1.0**
	comp=Z,2μm,1.0s								
KKN	**Kakani**	**72.68**	**293**	*e*P		**P**	**21 17 00.1**	**+1.2**
	comp=Z,632nm,0.9s								
PKI	**Pulchoki**	**72.77**	**293**	*e*P		**P**	**21 17 00.5**	**+0.9**
	comp=Z,980nm,1.1s								
DMN	**Daman**	**72.92**	**293**	*e*P		**P**	**21 17 01.4**	**+1.0**
	comp=Z,797nm,1.1s								
PPT	**Papeete**	**73.00**	**151**	LR		LR	21 43 05.7		
	comp=Z,663nm,19.5s,baz=3.9,slow=31								
PPT2	**Papeete2**	**73.02**	**151**	*e*S		**S**	**21 26 22.3**	**-3.6**
	comp=Z,2μm,29.0s								
PPT2				*e*LR		LR	21 39 12.4		
	comp=Z,2μm,28.5s,baz=342								
COP	**Copenhagen**	**73.03**	**354**	*i* P		**P**	**21 16 59.8**	**-0.4**
	comp=Z,9.7nm,0.9s								
DANN	**Dangsing**	**73.14**	**294**	*e*P		**P**	**21 17 02.6**	**+0.9**
	comp=Z,1μm,1.0s								
COEN	**Coen**	**73.16**	**219**	*e*P		**P**	**21 17 01.5**	**+0.1**
	comp=Z,509nm,1.5s								
BSD	**Bornholm Skovb**	**73.41**	**352**	*i* P		**P**	**21 17 02.4**	**0.0**
	comp=Z,12nm,0.8s								
SUW	**Suwalki**	**73.56**	**347**	*e*P		**P**	**21 17 02.0**	**-1.3**
SUW	**Suwalki**	**73.56**	**347**	*e*P		**P**	**21 17 02.0**	**-1.3**
KOLN	**Koldanda**	**73.67**	**294**	*e*P		**P**	**21 17 05.1**	**+0.4**
	comp=Z,404nm,1.0s								
EKA	**Eskdalemuir Ar**	**73.67**	**3**	P		**P**	**21 17 03.8**	**-0.2**
EKA	**Eskdalemuir Ar**	**73.67**	**3**	P		**P**	**21 17 03.8**	**-0.2**
	comp=Z,4.2nm,0.4s,baz=0.3,slow=5.3,SNR=71								
ESK	**Eskdalemuir**	**73.68**	**3**	P		**P**	**21 17 03.4**	**-0.7**
	comp=Z,166nm,1.2s,SNR=7.9								
ESK	**Eskdalemuir**	**73.68**	**3**	*e*P		**P**	**21 17 03.8**	**-0.2**
ESK				pmax		pmax			
	comp=Z,37nm,1.1s								
ESK				MLR		MLR			
	comp=Z,422nm,22.0s								
ESK	**Eskdalemuir**	**73.68**	**3**	*e*P		**P**	**21 17 03.8**	**-0.2**
	comp=Z,37nm,1.1s								
ESK				LR		LR			
	comp=Z,422nm,22.0s								
RAR	**Rarotonga**	**73.98**	**162**	LR		LR	21 42 05.0		
	comp=Z,1μm,21.4s,baz=290,slow=30								
DHRM	**DHARAMSHALA**	**74.28**	**302**	*e*PKP		**P**	**21 17 07.6**	**-0.6**
DHRM				AMB		AMB	21 17 10.2		
	comp=Z,70nm,0.6s								
TEIG	**Tepich**	**74.43**	**77**	*e*P		**P**	**21 17 09.6**	**+0.6**
SMLA	**Simla**	**74.68**	**301**	*e*PKP		**P**	**21 17 10.1**	**-0.2**
SMLA				AMB		AMB	21 17 12.8		
	comp=Z,107nm,1.8s								
DDI	**Dehra Dun**	**74.82**	**300**	*e*PKP		**P**	**21 17 11.4**	**+0.3**
BSEG	**Bad Segeberg**	**74.91**	**355**	*e*P		**P**	**21 17 11.2**	**0.0**
	comp=Z,178nm,1.5s								
BSEG	**Bad Segeberg**	**74.91**	**355**	*e*P		**P**	**21 17 11.2**	**0.0**
BSEG				pmax		pmax			
	comp=Z,325nm,1.5s								
GKP	**Gorka Klasztor**	**75.01**	**350**	*e*P		**P**	**21 17 11.0**	**-0.8**
GKP	**Gorka Klasztor**	**75.01**	**350**	*e*P		**P**	**21 17 11.0**	**-0.8**
BOK	**Bokaro**	**75.35**	**290**	*e*PKP		**P**	**21 17 14.8**	**+0.5**
BOK				AMB		AMB	21 17 16.1		
	comp=Z,206nm,1.8s								
SBUM	**Sibu**	**75.41**	**255**	P		**P**	**21 17 16.0**	**+1.3**
SBUM	**Sibu**	**75.41**	**255**	P		**P**	**21 17 15.2**	**+0.5**
	comp=Z,21nm,2.1s,comp=Z,509nm								
DLF	**Lyons Farm**	**75.56**	**5**	*e*P		**P**	**21 17 14.9**	**0.0**
AKASG	**Malin Array Be**	**75.75**	**342**	P		**P**	**21 17 15.5**	**-0.6**
AKASG				pmax		pmax			
	comp=Z,10.0nm,0.3s								
AKASG				MLR		MLR			
	comp=Z,778nm,20.8s								
AKASG	**Malin Array Be**	**75.75**	**342**	P		**P**	**21 17 15.4**	**-0.6**
AKASG	**Malin Array Be**	**75.75**	**342**	P		**P**	**21 17 15.4**	**-0.6**
	comp=Z,10nm,0.3s,baz=18,slow=5.7,SNR=135								
AKASG				LR		LR	21 53 45.2		
	comp=Z,778nm,20.8s,baz=20,slow=38								
KIEV	**Kiev**	**75.76**	**342**	*e*P		**P**	**21 17 15.7**	**-0.5**
KIEV				pmax		pmax			
	comp=Z,72nm,0.9s								
KIEV	**Kiev**	**75.76**	**342**	*e*P		**P**	**21 17 15.7**	**-0.5**
	comp=Z,72nm,0.9s								
AK01	**Malin Array Si**	**75.77**	**342**	*e*P		**P**	**21 17 15.0**	**-1.1**
BEL	**Belsk**	**76.00**	**348**	*e*P		**P**	**21 17 17.5**	**0.0**
BEL	**Belsk**	**76.00**	**348**	*e*P		**P**	**21 17 17.5**	**0.0**
RUE	**Ruedersdorf**	**76.12**	**352**	*e*P		**P**	**21 17 18.0**	**-0.1**
	comp=Z,83nm,1.2s								
KBL	**Kabul**	**76.19**	**308**⇑	*i*P		**P**	**21 17 17.8**	**-1.4**
KBL				pmax		pmax			
	comp=Z,71nm,0.9s								
KBL	**Kabul**	**76.19**	**308**⇑	*i*P		**P**	**21 17 17.8**	**-1.4**
	comp=Z,71nm,0.9s								
NRDL	**Niedersach Rie**	**76.36**	**355**	*e*P		**P**	**21 17 19.3**	**-0.1**
	comp=Z,49nm,1.3s								
NDI	**New Delhi**	**76.55**	**299**	*e*PKP		**P**	**21 17 20.0**	**-1.0**
VAL	**Valentia**	**76.64**	**8**	*e*P		**P**	**21 17 21.0**	**-0.1**
IBBN	**Ibbenburen**	**76.66**	**356**	*e*P		**P**	**21 17 21.2**	**0.0**
	comp=Z,196nm,1.5s								
KAPI	**Kappang**	**76.96**	**245**	*e*P		**P**	**21 17 21.7**	**-1.7**
KAPI				*e*		**PcP**	**21 17 33.2**	**-1.1**
KAPI				LR		LR			
	comp=Z,272nm,22.0s								
KAPI	**Kappang**	**76.96**	**245**	P		P	21 17 20.2	-3.2	
	comp=Z,36nm,1.2s,comp=Z,717nm								
CLZ	**Clausthal**	**76.99**	**355**	*e*P		**P**	**21 17 23.3**	**+0.1**
	comp=Z,105nm,1.3s								
CLZ	**Clausthal**	**76.99**	**355**	*e*P		**P**	**21 17 23.3**	**+0.1**
CLZ				pmax		pmax			
	comp=Z,229nm,1.3s								
WTSB	**Winterswijk**	**77.04**	**357**	*e*P		**P**	**21 17 22.7**	**-0.6**
	comp=Z,124nm,1.6s								
CLL	**Collm**	**77.34**	**353**	*e*P		**P**	**21 17 24.1**	**-1.0**
	comp=Z,48nm,1.2s								
CLL	**Collm**	**77.34**	**353**⇑	*i*P		**P**	**21 17 24.1**	**-1.0**
CLL				*i*			21 17 33.8		
CLL				*e*S		**S**	**21 27 16.0**	**+2.7**
CLL				pmax		pmax			
	comp=Z,48nm,1.2s								
CLL				MLR		MLR			
	comp=Z,600nm,19.2s								
CLL	**Collm**	**77.34**	**353**⇑	*i*P		**P**	**21 17 24.1**	**-1.0**
	comp=Z,48nm,1.2s								
CLL				*i* pP		**pP**	**21 17 33.8**	**+0.4**
CLL				*e*(PP)			21 20 06.0		
CLL				*e*S		**S**	**21 27 16.0**	**+2.7**
CLL				*e*PS		**PnS**	**21 27 56.0**	**+2.1**
CLL				*e*SS		**SS**	**21 32 12.0**	**+1.7**
CLL				*e*SSS		SSS	21 35 54.0		
CLL				*e*SSSS			21 37 48.0		
CLL				LmH			21 55 00.0		
	comp=N,600nm,21.1s								
CLL				LmH			21 55 00.0		
	comp=E,400nm,18.2s								
CLL				LmV			21 59 00.0		
	comp=Z,600nm,19.2s								
KSM	**Kuching**	**77.35**	**256**	*e*P		**P**	**21 17 25.9**	**+0.3**
	comp=Z,96nm,1.5s								
KSM				LR		LR			
	comp=Z,418nm,22.0s								
KSM	**Kuching**	**77.35**	**256**	P		**P**	**21 17 26.6**	**+0.9**
KSM	**Kuching**	**77.35**	**256**	P		**P**	**21 17 24.7**	**-0.9**
	comp=Z,45nm,1.5s,comp=Z,760nm								
KSP	**Ksiaz**	**77.51**	**351**⇑	*e*P		**P**	**21 17 25.5**	**-0.5**
KSP				*e**PP		**pP**	**21 17 31.3**	**-3.0**
KSP				*e*			21 17 36.2		
KSP				MLR		MLR			
	comp=Z,1μm,23.4s								
KSP	**Ksiaz**	**77.51**	**351**	*e*P		**P**	**21 17 25.6**	**-0.5**
LVV	**L'vov**	**77.51**	**345**	*e*P		**P**	**21 17 25.2**	**-0.9**
LVV				MLR		MLR			
	comp=N,400nm,20.0s								
LVV				MLR		MLR			
	comp=E,500nm,20.0s								
LVV				MLR		MLR			
	comp=Z,700nm,20.0s								
NEUB	**Neuenburg**	**77.53**	**354**	*e*P		**P**	**21 17 25.9**	**-0.3**
	comp=Z,118nm,1.3s								
BUG	**Bochum--Univer**	**77.55**	**357**	*e*P		**P**	**21 17 26.1**	**-0.1**
	comp=Z,77nm,1.3s								
CTAO	**Charters Tower**	**77.61**	**214**	*e*P		**P**	**21 17 26.9**	**0.0**
CTAO				MLR		MLR			
	comp=Z,526nm,20.0s								
CTAO	**Charters Tower**	**77.61**	**214**	*e*P		**P**	**21 17 26.9**	**0.0**
CTAO				LR		LR			
	comp=Z,526nm,20.0s								
GOF	**Gofitskoye**	**77.63**	**331**⇑	*i*P		**P**	**21 17 27.0**	**+0.2**
GOF				*e*S		**S**	**21 27 17.0**	**+0.4**
GOF				pmax		pmax			
	comp=Z,550nm,1.0s								
BRG	**Berggiesshubel**	**77.70**	**352**	*e*P		**P**	**21 17 26.4**	**-0.7**
	comp=Z,44nm,1.1s								
BRG				SS		SS	21 32 35.0	+19	
BRG									
	comp=N,393nm,19.6s								
BRG									
	comp=E,360nm,22.5s								
BRG									
	comp=Z,658nm,19.6s								
BRG	**Berggiesshubel**	**77.70**	**352**	*e*P		**P**	**21 17 26.4**	**-0.7**
	comp=Z,44nm,1.1s								
BRG	**Berggiesshubel**	**77.70**	**352**	*e*P		**P**	**21 17 26.4**	**-0.7**
BRG				pmax		pmax			
	comp=Z,44nm,1.1s								
BRG				MLR		MLR			
	comp=N,393nm,19.6s								
BRG				MLR		MLR			
	comp=E,360nm,22.5s								
BR

TANN	Tannenbergstha		78.27	353	*e*P		P	21 17 30.2	-0.2
	comp=Z,47nm,1.4s								
OKC	Ostrava-Krasne		78.30	349	*e*P		P	21 17 29.4	-1.0
OKC					MLR		MLR		
	comp=Z,700nm,20.6s								
OKC	Ostrava-Krasne		78.30	349⇑	*e*P		P	21 17 29.4	-1.0
OKC					AMS		AMS	21 55 20.0	
	comp=Z,700nm,20.6s								
STHS	Stebnicka Huta		78.31	347	*e*P		P	21 17 31.4	+0.8
STHS					pmax		pmax		
	comp=Z,51nm,1.2s								
STHS	Stebnicka Huta		78.31	347	*e*P		P	21 17 31.3	+0.7
GUNZ	Gunzen		78.33	353	*e*P		P	21 17 30.4	-0.3
	comp=Z,63nm,1.4s								
WERN	Wernitzgruen		78.41	353	*e*P		P	21 17 31.1	0.0
	comp=Z,73nm,1.2s								
ABKT	Ailbek		78.41	318	P		P	21 17 31.0	-0.4
	comp=Z,257nm,1.0s,SNR=27								
MEM	Membach		78.42	357	P		P	21 17 30.9	-0.2
	comp=Z,44nm,1.4s								
MORC	Moravsky Berou		78.42	350	*e*P		P	21 17 29.8	-1.4
MORC					pmax		pmax		
	comp=Z,24nm,1.1s								
MORC	Moravsky Berou		78.42	350	*e*P		P	21 17 29.8	-1.4
	comp=Z,24nm,1.1s								
MORC	Moravsky Berou		78.42	350⇓	*i*P		P	21 17 30.7	-0.5
NIE	Niedzica		78.44	348⇑	*i*P		P	21 17 31.8	+0.5
NIE	Niedzica		78.44	348	*i* P		P	21 17 31.8	+0.5
PRA	Prague		78.45	352	⇑P		P	21 17 31.0	-0.3
PRA					AMS		AMS	21 55 00.0	
NKC	Novy Kostel		78.45	353⇑	*i*P		P	21 17 31.1	-0.2
NKC					*e*			21 17 37.2	
NKC	Novy Kostel		78.45	353⇑	*i*P		P	21 17 31.1	-0.2
NKC					*ep*P		pP	21 17 37.2	-2.4
TBI	Tubuai		78.50	153	*e*S		S	21 27 22.7	-3.4
	comp=Z,909nm,33.0s								
TBI					*e*LR		LR	21 41 47.8	
	comp=Z,1μm,23.0s,baz=340								
PRU	Pruhonice		78.52	352⇑	*i*P		P	21 17 31.1	-0.6
PRU					*e*			21 17 36.9	
PRU					MLR		MLR		
	comp=Z,700nm,20.1s								
PRU	Pruhonice		78.52	352⇑	*i*P		P	21 17 31.1	-0.6
PRU					*ex*		x	21 17 36.9	
PRU					AMS		AMS	21 54 30.0	
	comp=Z,700nm,20.1s								
BCLA	Clavier		78.63	358	P		P	21 17 32.0	-0.2
	comp=Z,36nm,1.6s								
KOLS	Kolonicke sedl		78.64	346	*e*P		P	21 17 32.5	+0.1
KOLS					pmax		pmax		
	comp=Z,41nm,1.1s								
KOLS	Kolonicke sedl		78.64	346	*e*P		P	21 17 32.5	+0.1
TNS	Taunus Mts		78.71	356	*e*P		P	21 17 32.8	0.0
	comp=Z,59nm,1.2s								
TNS	Taunus Mts		78.71	356	*e*P		P	21 17 32.8	0.0
TNS					pmax		pmax		
	comp=Z,136nm,1.2s								
MANZ	Manzenberg		78.72	353	*e*P		P	21 17 32.5	-0.4
	comp=Z,37nm,1.2s								
KIV	Kislovodsk		78.73	331	*c i*P		P	21 17 33.2	+0.1
KIV					*e*S		S	21 27 28.0	-0.8
KIV					*e*SS		SS	21 32 30.0	-1.9
KIV					pmax		pmax		
	comp=Z,113nm,0.9s								
KIV					pmax		pmax		
	comp=Z,29nm,2.5s								
KIV					MLR		MLR		
	comp=Z,1μm,19.0s								
KIV	Kislovodsk		78.73	331	P		P	21 17 33.8	+0.7
	comp=Z,694nm,0.9s,SNR=45								
KTGM	Kuala Trenggan		78.78	264	P		P	21 17 34.4	+0.8
CRVS	Cervenica-Dubn		78.78	347	*e*P		P	21 17 30.8	-2.4
CRVS					pmax		pmax		
	comp=Z,36nm,1.2s								
CRVS	Cervenica-Dubn		78.78	347	*e*P		P	21 17 30.8	-2.4
KBZ	Khabaz		78.88	331	LR		LR	21 57 35.4	
	comp=Z,2μm,20.0s,baz=35,slow=40								
ROTZ	Rotzenmuhle		78.94	353	*e*P		P	21 17 34.1	+0.1
	comp=Z,47nm,1.2s								
GIVF	Givet		78.96	358⇑	*i*P		P	21 17 33.9	-0.2
	comp=Z,159nm,1.2s								
GIVF	Givet		78.96	358⇑	*i*P		P	21 17 33.9	-0.2
GIVF					pmax		pmax		
	comp=Z,159nm,1.2s								
GIVF	Givet		78.96	358⇑	*i*P		P	21 17 33.9	-0.2
	comp=Z,159nm,1.2s								
DOU	Dourbes		78.97	358	P		P	21 17 33.8	-0.4
	comp=Z,36nm,1.5s								
VRAC	Vranov		78.99	350	P		P	21 17 34.3	0.0
VRAC	Vranov		78.99	350⇑	*i*P		P	21 17 34.1	-0.2
VRAC	Vranov		78.99	350	P		P	21 17 34.3	0.0
	comp=Z,24nm,0.8s,baz=14,slow=5.6,SNR=36								
BAIF	Baives		79.01	358⇑	*i*P		P	21 17 34.5	+0.1
	comp=Z,241nm,1.3s								
BAIF	Baives		79.01	358⇑	*i*P		P	21 17 34.5	+0.1
BAIF					pmax		pmax		
	comp=Z,241nm,1.3s								
BAIF	Baives		79.01	358⇑	*i*P		P	21 17 34.5	+0.1
	comp=Z,241nm,1.3s								
GRF	Grafenberg Arr		79.08	354	*e*P		P	21 17 35.1	+0.3
	comp=Z,133nm,1.3s								
GRF	Grafenberg Arr		79.08	354	*e*P		P	21 17 35.1	+0.3
GRF					pmax		pmax		
	comp=Z,191nm,1.3s								
GRFO	Grafenberg		79.08	354	*e*P		P	21 17 35.1	+0.3
GRFO					pmax		pmax		
	comp=Z,101nm,1.2s								
GRFO	Grafenberg		79.08	354	*e*P		P	21 17 35.1	+0.3
	comp=Z,101nm,1.2s								
ABH	Alteburg		79.09	356⇑	*e*P		P	21 17 35.0	+0.1
TREC	Trest		79.12	351	*e*P		P	21 17 34.2	-0.8
TREC					*e*			21 17 39.2	
TREC					MLR		MLR		
	comp=Z,700nm,21.4s								
TREC	Trest		79.12	351⇑	*e*P		P	21 17 34.2	-0.8
TREC					*ex*		x	21 17 39.2	
TREC					AMS		AMS	21 52 30.0	
	comp=Z,700nm,21.4s								
DGPR	DIGLIPUR		79.15	277	*e*PKP		P	21 17 36.1	+0.5
DGPR					AMB		AMB	21 17 57.1	
	comp=Z,194nm,1.4s								
RUP	Ruppelstein		79.29	357	*e*P		P	21 17 35.8	-0.2
RUP	Ruppelstein		79.29	357	*e*P		P	21 17 35.8	-0.2
TOD	Tromm		79.31	355⇑	*e*P		P	21 17 36.1	0.0
TOD	Tromm		79.31	355⇑	*e*P		P	21 17 36.1	0.0
KECS	Kecovo		79.33	347	*e*P		P	21 17 36.8	+0.6
KECS					pmax		pmax		
	comp=Z,26nm,1.0s								
KECS	Kecovo		79.33	347	*e*P		P	21 17 36.8	+0.6
WLF	Walferdange		79.36	357	P		P	21 17 36.6	+0.3
	comp=Z,38nm,1.7s								
WLF	Walferdange		79.36	357	*e*P		P	21 17 36.6	+0.3
	comp=Z,59nm,1.2s								
WLF	Walferdange		79.36	357	*e*P		P	21 17 36.2	-0.1
WLF					pmax		pmax		
	comp=Z,42nm,1.1s								
WLF					MLR		MLR		
	comp=Z,705nm,21.0s								
WLF	Walferdange		79.36	357	*e*P		P	21 17 36.2	-0.1
	comp=Z,42nm,1.1s								
WLF					LR		LR		
	comp=Z,705nm,21.0s								
KIS	Kishinev		79.37	342⇑	*i*P		P	21 17 35.0	-1.4
KIS					*e*			21 17 42.0	
KIS					*e*S		S	21 27 30.0	-5.2
KIS					*e*			21 27 50.0	
KIS					pmax		pmax		
	comp=Z,580nm,1.3s								
KIS					MLR		MLR		
	comp=Z,1μm,18.0s								
KIS					MLR		MLR		
	comp=N,1μm,18.0s								
KIS					MLR		MLR		
	comp=Z,1μm,18.0s								
KIS	Kishinev		79.37	342⇑	*i*P		P	21 17 35.0	-1.4
	comp=Z,600nm,1.3s								
KIS					*e*S		S	21 27 30.0	-5.2
KIS					LRM		MLR	21 57 24.0	
	comp=Z,1μm,18.0s								
KIS	Kishinev		79.37	342⇑	*i*P		P	21 17 36.3	-0.1
TRPA	Tarpa		79.38	346⇑	*i*P		P	21 17 36.6	+0.2
TRPA	Tarpa		79.38	346⇑	*e*P		P	21 17 36.7	+0.3
BUR08	Bucovina Ar. S		79.42	344⇑	*i*P		P	21 17 36.8	0.0
BUR08					*e*PP		PP	21 20 36.5	+0.3
IAS	Iasi		79.43	342⇓	*i*P		P	21 17 36.8	+0.1
BURAR	Bucovina Array		79.45	344⇓	*i*P		P	21 17 36.9	0.0
ANN	Anapa		79.45	335	*e*P		P	21 17 35.1	-1.7
ANN					*e*S		S	21 27 34.1	-2.0
ANN					pmax		pmax		
	comp=Z,63nm,1.1s								
KHC	Kasperske Hory		79.46	352⇑	*i*P		P	21 17 36.9	0.0
KHC					*e*			21 17 41.3	
KHC					*e*			21 17 50.5	
KHC					MLR		MLR		
	comp=Z,600nm,20.2s								
KHC	Kasperske Hory		79.46	352⇑	*i*P		P	21 17 36.9	0.0
KHC					*ex*		x	21 17 41.3	
KHC					*ep*P		pP	21 17 50.5	+5.3
KHC					AMS		AMS	21 56 40.0	
	comp=Z,600nm,20.2s								
KHC	Kasperske Hory		79.46	352	*e*P		P	21 17 36.9	0.0
	comp=Z,40nm,1.0s								
WET	Wettzell		79.50	353	*e*P		P	21 17 37.2	+0.1
	comp=Z,35nm,1.2s								
WET	Wettzell		79.50	353	*e*P		P	21 17 37.2	+0.1
WET					pmax		pmax		
	comp=Z,103nm,1.2s								
VYHS	Vyhne		79.53	349	*e*P		P	21 17 37.1	-0.2
VYHS					pmax		pmax		
	comp=Z,28nm,1.2s								
VYHS	Vyhne		79.53	349	*e*P		P	21 17 37.1	-0.2
KTD	Kalmit		79.63	356	*e*P		P	21 17 37.8	0.0
KTD	Kalmit		79.63	356	*e*P		P	21 17 37.8	0.0
BMR	Baia Mare		79.67	345⇑	*i*P		P	21 17 38.3	+0.3
SMOL	Smolenice		79.68	350	*e*P		P	21 17 39.6	+1.5
SMOL	Smolenice		79.68	350	*e*P		P	21 17 39.6	+1.5
GEC2	GERESS Array S		79.73	352	*e*P		P	21 17 38.1	-0.3
	comp=Z,34nm,1.1s								
GEC2	GERESS Array S		79.73	352	*e*P		P	21 17 38.1	-0.3
GEC2					pmax		pmax		
	comp=Z,115nm,1.1s								
GERES	GERESS Array B		79.73	352	P		P	21 17 38.4	0.0
GERES	GERESS Array B		79.73	352	P		P	21 17 38.4	0.0
	comp=Z,10nm,0.8s,baz=20,slow=4.3,SNR=31								
GERES					LR		LR	21 57 31.0	
	comp=Z,582nm,20.8s,baz=178,slow=39								
ONI	Oni		79.74	330	P		P	21 17 39.3	+0.7
TGUH	Tegucigalpa,Un		79.74	80	*e*P		P	21 17 41.1	+2.3
	comp=Z,65nm,1.0s								
DUS	Dusheti		79.79	329	P		P	21 17 43.0	+4.1
SOC	Sochi		79.95	333	*c i*P		P	21 17 39.3	-0.3
SOC					*e*			21 17 45.1	
SOC					*e*			21 20 36.0	
SOC					*e*S		S	21 27 40.8	-0.6
SOC					*e*SSS		SSS	21 36 13.3	
SOC					pmax		pmax		
	comp=Z,96nm,1.1s								
SOC					MLR		MLR		
	comp=Z,2μm,22.0s								
PSZ	Piszkesteto		79.96	348	*e*P		P	21 17 40.2	+0.5
PSZ					pmax		pmax		
	comp=Z,77nm,1.2s								
PSZ					MLR		MLR		
	comp=Z,573nm,19.0s								
PSZ	Piszkesteto		79.96	348	*e*P		P	21 17 40.2	+0.5
	comp=Z,78nm,1.2s								
PSZ					LR		LR		
	comp=Z,573nm,19.0s								
PSZ	Piszkesteto		79.96	348⇑	*i*P		P	21 17 40.0	+0.4
PSZ	Piszkesteto		79.96	348⇑	*i*P		P	21 17 40.1	+0.4
LANF	Langenberg		79.98	356⇑	*e*P		P	21 17 39.7	0.0
LANF	Langenberg		79.98	356⇑	*e*P		P	21 17 39.7	0.0
LANF	Langenberg		79.98	356⇑	*e*P		P	21 17 39.7	0.0
LEOM	Leova		79.99	342⇑	*i*P		P	21 17 39.9	+0.2
ZST	Bratislava		80.03	350	*e*P		P	21 17 40.1	+0.1
ZST	Bratislava		80.03	350	*e*P		P	21 17 40.1	+0.1
GOR	Gori		80.08	329	P		P	21 17 42.1	+1.7
TBLG	Delisi		80.10	329	*e*P		P	21 17 41.3	+0.8
TBLG	Delisi		80.10	329	P		P	21 17 41.3	+0.8
STU	Stuttgart		80.12	355	*e*P		P	21 17 40.3	-0.1
	comp=Z,60nm,1.2s								
STU	Stuttgart		80.12	355	*e*P		P	21 17 40.7	+0.2
STU					pmax		pmax		
	comp=Z,64nm,1.3s								
STU	Stuttgart		80.12	355	*e*P		P	21 17 40.6	+0.2
	comp=Z,64nm,1.3s								
DGRG	David-gareji		80.15	328	P		P	21 17 41.6	+0.8
SIM	Simferopol'		80.15	337	*ce*P		P	21 17 40.3	-0.4
SIM					pmax		pmax		
	comp=Z,46nm,1.0s								
SIM					MLR		MLR		
	comp=Z,600nm,18.0s								
FLN	La Foliniere		80.31	2⇑	*i*P		P	21 17 41.0	-0.4
	comp=Z,216nm,1.2s								
FLN					*e*R				
	comp=Z,626nm,21.0s								
FLN	La Foliniere		80.31	2⇑	*i*P		P	21 17 41.0	-0.4
FLN					pmax		pmax		
	comp=Z,216nm,1.2s								
FLN	La Foliniere		80.31	2⇑	*i*P		P	21 17 41.0	-0.4
	comp=Z,216nm,1.2s								
KULM	Kulim		80.36	266	*e*P		P	21 17 41.9	-0.4
KULM	Kulim		80.36	266	P		P	21 17 43.0	+0.8
KULM	Kulim		80.36	266	P		P	21 17 41.4	-0.8
	comp=Z,41nm,1.5s,comp=Z,973nm								
CONA	Conrad Observa		80.43	350⇑	*i*P		P	21 17 42.5	+0.2
	comp=Z,54nm,1.2s,SNR=25								
PAGF	Fort de Pagny		80.48	357⇑	*i*P		P	21 17 42.6	+0.2
	comp=Z,72nm,1.1s								
PAGF	Fort de Pagny		80.48	357⇑	*i*P		P	21 17 42.6	+0.2
	comp=Z,72nm,1.1s								
LDF	La Druitiere		80.49	1⇑	*i*P		P	21 17 41.8	-0.6
	comp=Z,210nm,1.1s								
LDF	La Druitiere		80.49	1⇑	*i*P		P	21 17 41.8	-0.6
LDF					pmax		pmax		
	comp=Z,211nm,1.1s								
LDF	La Druitiere		80.49	1⇑	*i*P		P	21 17 41.8	-0.6
	comp=Z,210nm,1.1s								
BUD	Budapest		80.50	348⇑	*e*P		P	21 17 43.0	+0.5
KZR	Kazreti		80.52	329	P		P	21 17 43.5	+0.7
MEZF	Maizieres J'vi		80.55	358⇑	*i*P		P	21 17 42.8	+0.1
	comp=Z,210nm,1.2s								
MEZF	Maizieres J'vi		80.55	358⇑	*i*P		P	21 17 42.8	+0.1
	comp=Z,210nm,1.2s								
CDF	Champ du Feu		80.57	356⇑	*i*P		P	21 17 42.6	-0.4
	comp=Z,80nm,1.3s								
CDF	Champ du Feu		80.57	356⇑	*i*P		P	21 17 42.6	-0.4
CDF					pmax		pmax		
	comp=Z,80nm,1.3s								
CDF	Champ du Feu		80.57	356⇑	*i*P		P	21 17 42.6	-0.4
	comp=Z,80nm,1.3s								
FUR	Furstenfeldbru		80.60	354	*e*P		P	21 17 43.0	0.0
	comp=Z,70nm,1.2s								
FUR	Furstenfeldbru		80.60	354	*e*P		P	21 17 43.0	0.0
FUR					pmax		pmax		
	comp=Z,230nm,1.2s								
SOP	Sopron		80.60	350⇑	*e*P		P	21 17 43.5	+0.5
BFO	Black Forest		80.61	356	P		P	21 17 42.4	-0.7
	comp=Z,145nm,1.3s,SNR=12								
BFO	Black Forest		80.61	356	*e*P		P	21 17 42.7	-0.4
	comp=Z,53nm,1.3s								
BFO	Black Forest		80.61	356	*e*P		P	21 17 42.7	-0.4
BFO					pmax		pmax		
	comp=Z,70nm,1.3s								
BFO	Black Forest		80.61	356	*e*P		P	21 17 42.8	-0.4
DRGR			80.66	346	⇓*i*P		P	21 17 43.2	-0.3
ROSF	Rostrenen		80.66	3	⇑*i*P		P	21 17 43.1	-0.2
	comp=Z,188nm,1.3s								
ROSF	Rostrenen		80.66	3	⇑*i*P		P	21 17 43.1	-0.2
ROSF					pmax		pmax		
	comp=Z,189nm,1.3s								
ROSF	Rostrenen		80.66	3	⇑*i*P		P	21 17 43.1	-0.2
	comp=Z,188nm,1.3s								
PKSG			80.67	349⇓	*e*P		P	21 17 44.3	+0.9
GRR	Gorron		80.68	2	⇑*i*P		P	21 17 43.1	-0.3
	comp=Z,166nm,1.0s								
GRR	Gorron		80.68	2	⇑*i*P		P	21 17 43.1	-0.3
GRR					pmax		pmax		
	comp=Z,166nm,1.0s								
GRR	Gorron		80.68	2	⇑*i*P		P	21 17 43.1	-0.3
	comp=Z,166nm,1.0s								
BHPL	Bhopal		80.69	295	*e*PKP		P	21 17 43.6	-0.3
CSKK	Cs˙žkako		80.72	349⇓	*e*P		P	21 17 44.6	+0.9
IPM	Ipoh		80.76	266	*e*P		P	21 17 44.2	-0.2
	comp=Z,37nm,1.1s								
IPM	Ipoh		80.76	266	P		P	21 17 45.1	+0.8
IPM	Ipoh		80.76	266	P		P	21 17 42.3	-2.1
	comp=Z,45nm,1.5s,comp=Z,726nm								
SGMF	Saint Gilles		80.77	3	⇑*i*P		P	21 17 43.7	-0.2
	comp=Z,184nm,1.0s								
SGMF	Saint Gilles		80.77	3	⇑*i*P		P	21 17 43.7	-0.2
SGMF					pmax		pmax		
	comp=Z,184nm,1.0s								
SGMF	Saint Gilles		80.77	3	⇑*i*P		P	21 17 43.7	-0.2
	comp=Z,184nm,1.0s								
ECH	Echery		80.77	356⇑	*e*P		P	21 17 44.6	+0.6
ECH					pmax		pmax		
	comp=Z,49nm,1.1s								
ECH	Echery		80.77	356⇑	*e*P		P	21 17 44.6	+0.6
	comp=Z,50nm,1.1s								
ECH	Echery		80.77	356⇑	*e*P		P	21 17 43.6	-0.4
AKH	Akhalkalaki		80.79	330	P		P	21 17 45.3	+0.9
THEF	They Montfort		80.80	357⇑	*e*P		P	21 17 44.1	0.0
THEF	They Montfort		80.80	357⇑	*e*P		P	21 17 44.1	0.0
THEF	They Montfort		80.80	357⇑	*e*P		P	21 17 44.1	0.0
SPAK	Spaichingen-Ko		80.81	355	*e*P		P	21 17 44.1	-0.2
PKST	T˙'s		80.85	349⇓	*e*P		P	21 17 44.9	+0.5
SFTF	Sexfontaines		80.85	358⇑	*i*P		P	21 17 44.2	-0.2
	comp=Z,307nm,1.1s								
SFTF	Sexfontaines		80.85	358⇑	*i*P		P	21 17 44.2	-0.2
	comp=Z,307nm,1.1s								
VRI	Vrincioaia		80.86	343⇓	*i*P		P	21 17 44.8	+0.3
PLOR	Plostina		80.89	343⇑	*i*P		P	21 17 45.1	+0.4
RJOB	Jochberg		80.91	353	*e*P		P	21 17 44.6	-0.2
	comp=Z,22nm,1.0s								
PETR	Petresti		80.91	342⇑	*i*P		P	21 17 45.8	+1.1
PKS7	Kunszentmiklos		80.92	348⇓	*e*P		P	21 17 45.6	+0.9
PKSN	Nyarlorinc		80.97	348⇓	*e*P		P	21 17 46.4	+1.4
HAU	Haudompre		81.01	357⇑	*i*P		P	21 17 45.0	-0.3
	comp=Z,97nm,1.1s								
HAU					*e*R				
	comp=Z,691nm,22.5s								
HAU	Haudompre		81.01	357⇑	*i*P		P	21 17 45.0	-0.3
HAU					pmax		pmax		
	comp=Z,97nm,1.1s								
HAU	Haudompre		81.01	357⇑	*i*P		P	21 17 45.0	-0.3
	comp=Z,97nm,1.1s								
FELD	Feldberg im Sc		81.07	356⇑	*e*P		P	21 17 45.4	-0.3
MYKOM	Kota Tinggi		81.08	262	P		P	21 17 47.2	+1.2
MYKOM	Kota Tinggi		81.08	262	P		P	21 17 45.0	-1.0
	comp=Z,33nm,1.2s								
QUIF	Quistinic		81.08	3⇑	*i*P		P	21 17 45.3	-0.3
	comp=Z,155nm,1.2s								
QUIF	Quistinic		81.08	3⇑	*i*P		P	21 17 45.3	-0.3
QUIF					pmax		pmax		
	comp=Z,155nm,1.2s								
QUIF	Quistinic		81.08	3⇑	*i*P		P	21 17 45.3	-0.3
	comp=Z,155nm,1.2s								
MOF	Molkenrain		81.14	356⇑	*e*P		P	21 17 45.6	-0.4
MOF	Molkenrain		81.14	356⇑	*e*P		P	21 17 45.6	-0.4
MOF	Molkenrain		81.14	356⇑	*e*P		P	21 17 45.6	-0.4
ARSA	Arzberg		81.14	351⇑	*i*P		P	21 17 46.2	+0.3
	comp=Z,50nm,1.2s,SNR=20								
HINF	Hinteralfeld		81.18	357⇑	*i*P		P	21 17 45.7	-0.5
	comp=Z,54nm,1.1s								
HINF	Hinteralfeld		81.18	357⇑	*i*P		P	21 17 45.7	-0.5
HINF					pmax		pmax		
	comp=Z,55nm,1.1s								
HINF	Hinteralfeld		81.18	357⇑	*i*P		P	21 17 45.7	-0.5
	comp=Z,54nm,1.1s								
KGM	Kluang		81.23	262	P		P	21 17 47.4	+0.5
PKS6	Bocsa		81.30	348⇓	*e*P		P	21 17 47.7	+0.9
RETA	Reutte		81.31	354⇑	*i*P		P	21 17 46.7	-0.2
	comp=Z,29nm,1.2s,SNR=12								
FRIM	Kepong		81.34	264	P		P	21 17 48.2	+0.8
MLR	Muntele Rosu		81.37	343	P		P	21 17 47.7	+0.4
MLR	Muntele Rosu		81.37	343⇑	*i*P		P	21 17 47.7	+0.4
MLR	Muntele Rosu		81.37	343	P		P	21 17 47.7	+0.4
	comp=Z,23nm,0.9s,baz=338,slow=8.4,SNR=119								
DBOC	Borcka		81.42	331	*i* P		P	21 17 46.2	-1.3
MOTA	Moosalm		81.42	354⇑	*i*P		P	21 17 47.4	-0.2
	comp=Z,81nm,1.3s,SNR=21								
WTTA	Wattenberg		81.47	353⇑	*i*P		P	21 17 48.0	+0.1
	comp=Z,74nm,1.0s,SNR=28								
PKS9	Tamasi		81.48	349⇓	*e*P		P	21 17 47.9	+0.2
BBS	Basel-Blauen		81.51	356	*e*P		P	21 17 47.7	-0.2
BBS	Basel-Blauen		81.51	356	*e*P		P	21 17 47.7	-0.2
KBA	Koelnbreinsper		81.51	352⇑	*i*P		P	21 17 48.6	+0.5
	comp=Z,189nm,1.1s,SNR=53								
GNI	Garni		81.53	328	*e*P		P	21 17 49.1	+0.8
GNI	Garni		81.53	328	P		P	21 17 49.7	+1.4
	SNR=24								
GNI	Garni		81.53	328	*e*P		P	21 17 48.9	+0.6
	comp=Z,91nm,1.1s								
GNI					LR		LR		
	comp=Z,1μm,21.0s								
GNI	Garni		81.53	328	P		P	21 17 49.4	+1.1
	comp=Z,34nm,0.8s,baz=292,slow=2.0,SNR=52								
VIS	Vishakhapatnam		81.54	288	*e*PKP		P	21 17 49.3	+0.8
VIS					AMB		AMB	21 17 51.4	
	comp=Z,105nm,1.8s								
DAVA	Damuels		81.56	354⇑	*i*P		P	21 17 48.1	-0.3
	comp=Z,32nm,1.2s,SNR=9.4								
VOIR			81.58	344⇑	*i*P		P	21 17 49.1	+0.7
KARS	Kars		81.63	330	*e*P		P	21 17 50.1	+1.3
LOMF	Lomont

comp=Z,151nm,1.1s
SMF Signal de Mont 82.43 359⇑ iP P 21 17 52.5 -0.3
comp=Z,189nm,1.0s
SMF Signal de Mont 82.43 359⇑ iP P 21 17 52.5 -0.3
SMF pmax pmax
comp=Z,189nm,1.0s
SMF Signal de Mont 82.43 359⇑ iP P 21 17 52.5 -0.3
comp=Z,189nm,1.0s
LEGS Legarje 82.45 351 eP P 21 17 52.3 -0.6
MFF Saint Martin d 82.48 1⇑ iP P 21 17 52.9 -0.1
comp=Z,168nm,1.0s
MFF Saint Martin d 82.48 1⇑ iP P 21 17 52.9 -0.1
MFF pmax pmax
comp=Z,168nm,1.0s
MFF Saint Martin d 82.48 1⇑ iP P 21 17 52.9 -0.1
comp=Z,168nm,1.0s
BGF Bois d'Agland 82.53 359⇑ iP P 21 17 53.1 -0.2
comp=Z,110nm,1.1s
BGF Bois d'Agland 82.53 359⇑ iP P 21 17 53.1 -0.2
BGF pmax pmax
comp=Z,110nm,1.1s
BGF Bois d'Agland 82.53 359⇑ iP P 21 17 53.1 -0.2
comp=Z,110nm,1.1s
AGRB Hanur-Agry 82.62 329 eP P 21 17 55.2 +1.1
SENIN Lac Senin/Sane 82.62 356 eP P 21 17 54.4 +0.4
comp=Z,12nm,0.8s
JAVS Javornik 82.62 351 i P P 21 17 53.5 -0.4
VISS Visnje 82.64 351 i P P 21 17 54.0 +0.2
CLDR Caldiran 82.71 328 eP P 21 17 55.8 +1.2
TCF Toulx Ste Croi 82.81 360⇑ iP P 21 17 54.4 -0.3
comp=Z,54nm,0.8s
TCF Toulx Ste Croi 82.81 360⇑ iP P 21 17 54.4 -0.3
TCF pmax pmax
comp=Z,55nm,0.8s
TCF Toulx Ste Croi 82.81 360⇑ iP P 21 17 54.4 -0.3
comp=Z,54nm,0.8s
GRSN GIRESUNGRSN 82.81 333 i P P 21 17 54.4 -0.5
ERZM Erzurum 82.83 330 i P P 21 17 56.0 +0.7
EZM Erzurum 82.83 330 eP P 21 17 56.1 +0.8
GUMT Gumushane 82.89 332 eP P 21 17 56.3 +0.9
BOJS Bojanci 82.89 351 i P P 21 17 55.2 0.0
OG35 Corcelles 83.00 357⇑ eP P 21 17 55.9 +0.1
AGO Saint Agoulin 83.03 359⇑ eP P 21 17 57.4 +1.5
AGO Saint Agoulin 83.03 359⇑ eP P 21 17 57.4 +1.5
KELT Kelkit 83.24 332 i P P 21 17 57.9 +0.6
RKT Rikitea 83.25 141 eLR LR 21 44 00.5
comp=Z,2µm,24.5s,baz=329
KVT Kavak 83.28 335 eP P 21 17 58.2 +0.9
RSL Roselend 83.32 357⇑ eP P 21 17 58.0 +0.4
RSL Roselend 83.32 357⇑ eP P 21 17 58.0 +0.4
RSL Roselend 83.32 357⇑ eP P 21 17 58.0 +0.4
PYM Petit Puy Mans 83.34 359⇑ eP P 21 17 58.8 +1.2
PYM Petit Puy Mans 83.34 359⇑ eP P 21 17 58.8 +1.2
PYM Petit Puy Mans 83.34 359⇑ eP P 21 17 58.8 +1.2
HAVZ Havza 83.38 335 i P P 21 17 56.0 -1.8
ERBA Erbaa 83.46 334 i P P 21 17 59.0 +0.7
VRTB Varto-Mus 83.48 330 eP P 21 17 59.7 +1.2
LPL La Plagne 83.48 357⇑ iP P 21 17 59.2 +0.7
comp=Z,75nm,1.5s
LPL La Plagne 83.48 357⇑ iP P 21 17 59.2 +0.7
LPL pmax pmax
comp=Z,75nm,1.5s
LPL La Plagne 83.48 357⇑ iP P 21 17 59.2 +0.7
comp=Z,75nm,1.5s
LPG La Plagne 83.50 357⇑ iP P 21 17 59.4 +0.7
comp=Z,80nm,1.2s
LPG La Plagne 83.50 357⇑ iP P 21 17 59.4 +0.7
LPG pmax pmax
comp=Z,80nm,1.2s
LPG La Plagne 83.50 357⇑ iP P 21 17 59.4 +0.7
comp=Z,80nm,1.2s
BALT Daday 83.55 337 i P P 21 17 59.1 +0.2
RSDY Resadiye-TOKAT 83.57 333 eP P 21 17 59.6 +0.9
DIVS Divibare 83.69 347 P P 21 18 00.2 +0.8
GEVA Gevas 83.74 329 i P P 21 17 59.7 -0.2
BNGL BINGOL 83.77 330 i P P 21 18 00.7 +0.6
SSB Saint Sauveur 83.79 358⇓ eP P 21 17 59.4 -0.4
SSB pmax pmax
comp=Z,55nm,1.2s
SSB Saint Sauveur 83.79 358⇓ eP P 21 17 59.4 -0.4
comp=Z,56nm,1.2s
SSB Saint Sauveur 83.79 358 eP P 21 18 00.1 +0.3
RJF Les Rejaudoux 83.79 0⇑ iP P 21 17 59.6 -0.2
comp=Z,189nm,1.2s
RJF eR
comp=Z,889nm,23.0s
RJF Les Rejaudoux 83.79 0⇑ iP P 21 17 59.6 -0.2
RJF pmax pmax
comp=Z,189nm,1.2s
RJF Les Rejaudoux 83.79 0⇑ iP P 21 17 59.6 -0.2
comp=Z,189nm,1.2s
GRN Grenoble 83.79 357 eP P 21 18 00.6 +0.7
GRN Grenoble 83.79 357 eP P 21 18 00.6 +0.7
GRN Grenoble 83.79 357 eP P 21 18 00.6 +0.7
GDM Grand'Maison 83.82 357 eP P 21 18 00.8 +0.7
GDM Grand'Maison 83.82 357 eP P 21 18 00.8 +0.7
LBL Lubilhac 83.85 359⇑ eP P 21 18 02.2 +2.0
LBL Lubilhac 83.85 359⇑ eP P 21 18 02.2 +2.0
LBL Lubilhac 83.85 359⇑ eP P 21 18 02.2 +2.0
TOS Tosya 83.86 336 eP P 21 18 01.5 +1.2
TOKT Tokat 83.86 334 eP P 21 18 01.8 +1.5
NVLJ Novalja 83.86 351 P P 21 17 59.5 -0.7
BNGB Bing ¶‖ 83.88 331 eP P 21 18 01.4 +0.9
BNI Bardonecchia 83.95 357 eP P 21 18 01.8 +1.0
BNI pmax pmax
comp=Z,111nm,1.3s
BNI MLR MLR
comp=Z,491nm,20.0s
BNI Bardonecchia 83.95 357 eP P 21 18 01.8 +1.0
comp=Z,111nm,1.3s
BNI LR LR
comp=Z,491nm,20.0s
SAFT Safranbolu 84.00 337 eP P 21 18 02.0 +1.1
CTKT Corum 84.05 335 i P P 21 18 01.8 +0.4
SVSK Karacayir 84.11 334 eP P 21 18 02.4 +1.0
ORIF Oris-en-Rattie 84.11 357⇑ iP P 21 18 02.1 +0.5
comp=Z,165nm,1.2s
ORIF eR
comp=Z,503nm,20.5s
ORIF Oris-en-Rattie 84.11 357⇑ iP P 21 18 02.1 +0.5
ORIF pmax pmax
comp=Z,165nm,1.2s
ORIF Oris-en-Rattie 84.11 357⇑ iP P 21 18 02.1 +0.5
comp=Z,165nm,1.2s
LFF La Frestale 84.15 1⇑ iP P 21 18 01.6 0.0
comp=Z,449nm,1.2s
LFF La Frestale 84.15 1⇑ iP P 21 18 01.6 0.0
LFF pmax pmax
comp=Z,449nm,1.2s
LFF La Frestale 84.15 1⇑ iP P 21 18 01.6 0.0
comp=Z,449nm,1.2s
CAF Calviac 84.17 360⇑ iP P 21 18 01.9 +0.1
comp=Z,251nm,1.3s
CAF Calviac 84.17 360⇑ iP P 21 18 01.9 +0.1
CAF pmax pmax
comp=Z,251nm,1.3s
CAF Calviac 84.17 360⇑ iP P 21 18 01.9 +0.1
comp=Z,251nm,1.3s
JMB Yambol 84.17 342 P P 21 18 03.8 +2.0
VIVF Saint-Julien-l 84.21 358⇑ iP P 21 18 02.2 +0.2
comp=Z,133nm,1.2s
VIVF Saint-Julien-l 84.21 358⇑ iP P 21 18 02.2 +0.2
VIVF pmax pmax
comp=Z,133nm,1.2s
VIVF Saint-Julien-l 84.21 358⇑ iP P 21 18 02.2 +0.2
comp=Z,133nm,1.2s
HAKT HAKKARI 84.21 328 i P P 21 18 01.1 -1.3
MBDF Montbardon 84.27 356⇑ iP P 21 18 03.0 +0.6
comp=Z,95nm,1.0s
MBDF Montbardon 84.27 356⇑ iP P 21 18 03.0 +0.6
MBDF pmax pmax
comp=Z,95nm,1.0s
MBDF Montbardon 84.27 356⇑ iP P 21 18 03.0 +0.6
comp=Z,95nm,1.0s
KEMA Kemaliye 84.28 332 i P P 21 18 02.5 0.0
PTK Pertek 84.36 331 eP P 21 18 04.2 +1.2
CANT Cankiri 84.36 336 eP P 21 18 04.0 +1.1
OCF Saint Nazaire 84.47 357 eP P 21 18 04.1 +0.8
OG26 St.-Nazaire-De 84.47 357 eP P 21 18 04.1 +0.8
CORM Corum 84.50 335 eP P 21 18 04.7 +1.0
SURF Saint Ours 84.52 356 eP P 21 18 04.8 +1.1
SURF Saint Ours 84.52 356 eP P 21 18 04.8 +1.1
CUKT Cukurca 84.52 328 eP P 21 18 04.2 +0.3
HYB Hyderabad 84.61 291⇑ iP P 21 18 03.0 -1.4
comp=Z,180nm,1.0s
HYB Hyderabad 84.61 291 ePKP P 21 18 02.8 -1.6
HYB AMB AMB 21 18 05.0
comp=Z,124nm,0.9s
VLC Villacollemand 84.64 354 eP P 21 18 04.4 +0.2
VLC LR LR
comp=Z,685nm,22.0s
VTS Vitosha 84.67 344 P P 21 18 04.8 +0.3
VTS Vitosha 84.67 344⇑ iP P 21 18 03.9 -0.6
VTS Vitosha 84.67 344⇑ iP P 21 18 03.9 -0.6
BEST Besiri 84.70 330 i P P 21 18 05.8 +1.1
UPM Unac-Piva 84.72 348⇑ iP P 21 18 03.8 -1.0
EDRB Edirne 84.73 342 eP P 21 18 04.7 +0.1
CTYL Yal??k??y-??at 84.78 340 eP P 21 18 04.5 -0.4
PLD Plovdiv 84.87 343 P P 21 18 06.9 +1.6
IVA Berane 84.91 347 eP P 21 18 05.1 -0.5
BGKT Bogazkoy 84.95 340 eP P 21 18 04.7 -1.1
CTKS Kestanelik-??a 84.96 340 eP P 21 18 05.7 0.0
TOUF Mont Tournerai 84.96 356⇑ eP P 21 18 06.0 0.0
TOUF Mont Tournerai 84.96 356⇑ eP P 21 18 06.0 0.0
TOUF Mont Tournerai 84.96 356⇑ eP P 21 18 06.0 0.0
AUTN L'Aution 84.97 356 eP P 21 18 06.0 -0.1
AUTN L'Aution 84.97 356 eP P 21 18 06.0 -0.1
AUTN L'Aution 84.97 356 eP P 21 18 06.0 -0.1
SAOF Saorge 84.98 356⇑ eP P 21 18 05.6 -0.3
SAOF Saorge 84.98 356⇑ eP P 21 18 05.6 -0.3
SAOF Saorge 84.98 356⇑ eP P 21 18 05.6 -0.3
LASF Ste Croix 85.00 359⇑ iP P 21 18 06.1 +0.1
comp=Z,78nm,1.0s
LASF Ste Croix 85.00 359⇑ iP P 21 18 06.1 +0.1
comp=Z,78nm,1.0s
DIYA Diyarbakir 85.03 331 i P P 21 18 06.6 +0.3
SMRF Simiane la Rot 85.06 357⇑ iP P 21 18 07.0 +0.7
comp=Z,228nm,1.1s
SMRF Simiane la Rot 85.06 357⇑ iP P 21 18 07.0 +0.7
comp=Z,228nm,1.1s
BRY Bratogost 85.07 348⇑ iP P 21 18 05.7 -0.8
MDUB Muurnu 85.08 338 eP P 21 18 06.9 +0.3
MVIF Mont Vial 85.08 356 eP P 21 18 06.6 0.0
MVIF Mont Vial 85.08 356 eP P 21 18 06.6 0.0
MVIF Mont Vial 85.08 356 eP P 21 18 06.6 0.0
NKY Niksic 85.10 347⇑ iP P 21 18 06.1 -0.5
HRT Hereke 85.10 339 eP P 21 18 06.8 +0.2
SBF Sospel 85.11 356⇑ iP P 21 18 06.1 -0.5
comp=Z,231nm,0.9s
SBF Sospel 85.11 356⇑ iP P 21 18 06.1 -0.5
SBF pmax pmax
comp=Z,231nm,0.9s
SBF Sospel 85.11 356⇑ iP P 21 18 06.1 -0.5
comp=Z,231nm,0.9s
PVY Plav 85.17 347⇑ iP P 21 18 06.6 -0.4
MALT Malatya 85.18 332⇑ iP P 21 18 14.7 +7.6
MALT MLR MLR
comp=Z,938nm,22.0s
MALT Malatya 85.18 332⇑ iP P 21 18 14.7 +7.6
MALT LR LR
comp=Z,938nm,22.0s
MALT Malatya 85.18 332⇑ iP P 21 18 15.3 +8.2
BR131 Keskin Array S 85.19 336⇑ eP P 21 18 06.7 -0.5
comp=Z,63nm,0.8s
BRTR Keskin Array B 85.19 336 P P 21 18 07.0 -0.2
BRTR PP **PP 21 21 26.9 +3.1**
BRTR Keskin Array B 85.19 336 P P 21 18 07.0 -0.2
comp=Z,72nm,0.8s,baz=50,slow=2.6,SNR=359
BRTR PP **PP 21 21 26.9 +3.1**
comp=Z,1.6nm,0.8s,baz=19,slow=5.2,SNR=3.8
BRTR LR LR 22 01 29.6
comp=Z,332nm,19.2s,baz=39,slow=39
STON Ston 85.21 348 P P 21 18 06.2 -0.7
REVF Revere 85.23 356⇓ eP P 21 18 07.9 +0.7
REVF Revere 85.23 356⇓ eP P 21 18 07.9 +0.7
REVF Revere 85.23 356⇓ eP P 21 18 07.9 +0.7
CALN Calern 85.24 356⇓ eP P 21 18 07.4 +0.1
CALN Calern 85.24 356⇓ eP P 21 18 07.4 +0.1
CALN Calern 85.24 356⇓ eP P 21 18 07.4 +0.1
ANTO Ankara 85.27 337 eP P 21 18 07.9 +0.5
ANTO Ankara 85.27 337⇑ iP P 21 18 07.6 +0.2
ANTO Ankara 85.27 337 P P 21 18 08.1 +0.7
SNR=34
ANTO Ankara 85.27 337 eP P 21 18 07.3 -0.1
comp=Z,94nm,1.0s
ANTO LR LR
comp=Z,750nm,22.0s
ANTO Ankara 85.27 337⇑ iP P 21 18 07.6 +0.2
GULT Gulveren 85.28 338 eP P 21 18 07.9 +0.4
AKCD Akcadag 85.35 332 i P P 21 18 06.8 -1.1
YLV Yalova 85.41 339 eP P 21 18 08.1 0.0
BNN Bunyan 85.42 334 eP P 21 18 08.7 +0.4
PINB Pinarbasi 85.43 334 i P 21 18 04.9 -3.6
TTG Podgorica 85.44 347⇑ iP P 21 18 07.8 -0.3
FRF La Foret Royal 85.44 356⇑ iP P 21 18 07.8 -0.3
comp=Z,197nm,1.1s
FRF La Foret Royal 85.44 356⇑ iP P 21 18 07.8 -0.3
FRF pmax pmax
comp=Z,197nm,1.1s
FRF La Foret Royal 85.44 356⇑ iP P 21 18 07.8 -0.3
comp=Z,197nm,1.1s
ADVT Abdulvahap 85.45 339 eP P 21 18 07.9 -0.4
SDDR Presa de Saban 85.48 65 eP P 21 18 09.3 +0.5
comp=Z,30nm,1.1s
BBAL Bala 85.49 336 i P P 21 18 07.7 -0.9
SKO Skopje 85.56 345 eP P 21 18 09.6 +0.8
ARMA Armidale 85.59 206 eP P 21 18 10.7 +1.8
comp=Z,116nm,1.5s
AFSR Af'ar-Bala (A 85.59 336 eP P 21 18 09.1 0.0
BUM Brajici-Budva 85.61 347⇑ iP P 21 18 08.6 -0.5
CAVI Cavuskoy 85.65 339 eP P 21 18 08.8 -0.5
LMR La Mourre 85.67 357⇑ iP P 21 18 09.2 -0.1
comp=Z,267nm,1.2s
LMR La Mourre 85.67 357⇑ iP P 21 18 09.2 -0.1
LMR pmax pmax
comp=Z,267nm,1.2s
LMR La Mourre 85.67 357⇑ iP P 21 18 09.2 -0.1
comp=Z,267nm,1.2s
AS31 Alice Springs 85.68 223 eP P 21 18 09.0 -0.4
ASAR Alice Springs 85.68 223 P P 21 18 09.3 -0.1
ASAR Alice Springs 85.68 223 P P 21 18 09.3 -0.1
comp=Z,12nm,0.7s,baz=24,slow=5.7,SNR=122
MTLF Montolieu 85.75 360⇑ iP P 21 18 09.7 0.0
comp=Z,177nm,1.2s
MTLF Montolieu 85.75 360⇑ iP P 21 18 09.7 0.0
MTLF pmax pmax
comp=Z,177nm,1.2s
MTLF Montolieu 85.75 360⇑ iP P 21 18 09.7 0.0
comp=Z,177nm,1.2s
AVNT Avonos 85.76 335 i P P 21 18 09.6 -0.4
NVR Nevrokopi 85.76 344 P P 21 18 10.1 +0.3
BORA Eskisehir 85.82 338 i P P 21 18 08.8 -1.4
KCTX Karacabey (Bur 85.92 340 eP P 21 18 09.9 -0.7
SJPF Ste Jean 85.94 2 eP P 21 18 10.0 -0.7
comp=Z,19nm,0.7s
SJPF Ste Jean 85.94 2 eP P 21 18 10.0 -0.7
SJPF pmax pmax
comp=Z,19nm,0.7s
SJPF Ste Jean 85.94 2 eP P 21 18 10.0 -0.7
comp=Z,19nm,0.7s
SVRH Sivrihisar-ESK 85.98 337 eP P 21 18 10.7 -0.3
PHP Peshkopia 85.99 346 P P 21 18 11.8 +0.8
VAY Valandovo 86.01 344 eP P 21 18 10.4 -0.5
EPF Esparros 86.05 1⇑ iP P 21 18 10.4 -0.9
comp=Z,60nm,1.1s
EPF Esparros 86.05 1⇑ iP P 21 18 10.4 -0.9
EPF pmax pmax
comp=Z,60nm,1.1s
EPF Esparros 86.05 1⇑ iP P 21 18 10.4 -0.9
comp=Z,60nm,1.1s
SEYT Eskypehyr 86.07 338 i P P 21 18 11.0 -0.5
MLS Moulis 86.13 1 eP P 21 18 11.5 -0.1
MLS Moulis 86.13 1 eP P 21 18 11.5 -0.1
LRDF Laroque-de-Fa 86.15 359 eP P 21 18 12.1 +0.4
LRDF Laroque-de-Fa 86.15 359 eP P 21 18 12.1 +0.4
ETSF Etsaut 86.17 2 eP P 21 18 12.1 +0.2
comp=Z,54nm,0.8s
ETSF Etsaut 86.17 2 eP P 21 18 12.1 +0.2
ETSF pmax pmax
comp=Z,54nm,0.8s
ETSF Etsaut 86.17 2 eP P 21 18 12.1 +0.2
comp=Z,54nm,0.8s
AQU L'Aquila 86.19 351 eP P 21 18 12.6 +0.7
comp=Z,162nm,0.9s
AQU LR LR
comp=Z,780nm,22.0s
AQU L'Aquila 86.19 351⇑ iP P 21 18 12.0 0.0
VIEF Viey 86.20 1 eP P 21 18 12.3 +0.3
VIEF Viey 86.20 1 eP P 21 18 12.3 +0.3
RESF Ens 86.28 1 eP P 21 18 13.0 +0.5
RESF Ens 86.28 1 eP P 21 18 13.0 +0.5
GZT Gaziantep 86.33 332 i P P 21 18 13.4 +0.6
SOH Sokhos 86.36 344 P P 21 18 12.4 -0.4
KMRS Kahramanmaras 86.38 333 eP P 21 18 13.4 +0.5
GRG Griva 86.39 345 P P 21 18 14.6 +1.6
TIR Tirane 86.41 346 eP P 21 18 13.2 +0.2
TIR Tirane 86.41 346 eP P 21 18 13.2 +0.2
POO Poona 86.44 295⇑ iP P 21 18 10.0 -3.5
comp=Z,140nm,1.0s
NIG Nigde 86.45 335 eP P 21 18 14.3 +0.7
ANDN Andirin 86.47 333 i P P 21 18 11.8 -1.7
AYKD Aykdinkavak 86.49 333 i P P 21 18 13.3 -0.2
BIA Bitola 86.51 345 eP P 21 18 12.1 -1.4
FILF Fillols 86.53 359 eP P 21 18 13.4 -0.3
FILF Fillols 86.53 359 eP P 21 18 13.4 -0.3
SULT Sultanhani-AKS 86.66 335 eP P 21 18 14.4 0.0
ALT Altintas 86.69 338 eP P 21 18 14.3 -0.2
KOZT Kozan 86.71 334 eP P 21 18 14.9 +0.4
KDHN Kadinhani 86.71 337 i P P 21 18 13.7 -0.9
FNA Florina 86.73 345 P P 21 18 14.8 +0.2
PLG Polygyros 86.78 344 P P 21 18 13.8 -1.1
LADK Ladik-KONYA 86.95 336 eP P 21 18 15.7 -0.2
PCAB Cabril 86.99 7 eP P 21 18 15.7 -0.1
comp=Z,45nm,1.5s
PBRG Braganca 86.99 6 eP P 21 18 15.6 -0.3
comp=Z,32nm,2.1s
KUZU Kuzuini 87.01 332 i P P 21 18 16.2 +0.2
KARA Karaisali 87.13 334 eP P 21 18 16.5 -0.1
KZN Kozani 87.13 345 P P 21 18 15.8 -0.8
NEST Nestorio 87.14 345 P P 21 18 22.5 +5.8
CEYT Ceyhan 87.17 333 eP P 21 18 17.4 +0.6
GULE Gulek 87.18 334 i P P 21 18 13.3 -3.8
KONT Konya--Tatoy 87.19 336 eP P 21 18 17.0 0.0
OSPF L'Ospedale 87.21 354 eP P 21 18 16.8 -0.2
OSPF L'Ospedale 87.21 354 eP P 21 18 16.8 -0.2
POLO Lamas de Olo 87.34 7 eP P 21 18 17.3 -0.3
comp=Z,14nm,1.1s
YURE YUREGIR 87.37 333 i P P 21 18 17.5 -0.3
PVRL Vila Real 87.44 7 eP P 21 18 17.9 -0.2
comp=Z,17nm,1.1s
COBT Iskenderun 87.48 333 i P P 21 18 18.6 0.0
MVO Moncorvo 87.61 7 eP P 21 18 18.6 -0.3
comp=Z,53nm,1.0s
MVO eLQ LQ 21 43 11.6
MVO eLR LR 21 47 15.5
comp=Z,350nm,20.0s
THL Klokotos Trika 87.81 345 P P 21 18 18.4 -1.4
SRN Sarande 87.83 346 P P 21 18 21.0 +1.2
BHD Baghdad 87.85 325 eP P 21 18 17.0 -3.1
BHD eSKS **SKSac 21 28 41.0 -5.5**
BHD eS **S 21 28 59.0 -2.1**
NEO Neokhori 87.86 344 P P 21 18 18.6 -1.5
JAN Janina 87.91 345 P P 21 18 20.4 +0.1
PVIS Viseu 87.98 7 eP P 21 18 20.4 -0.3
comp=Z,64nm,1.5s
KEK Kerkira 88.02 346 P P 21 18 20.5 -0.3
IGT Igoumenitsa 88.12 346 P P 21 18 21.5 +0.2
CUC Castrocucco 88.28 349 eP P 21 18 20.0 -2.1
comp=Z,38nm,0.9s
ERMK Ermenek 88.28 335 i P P 21 18 21.2 -1.2
MTE Manteigas 88.33 7 eP P 21 18 22.1 -0.2
comp=Z,56nm,1.2s
MTE eLQ LQ 21 41 20.8
MTE eLQ LQ 21 48 02.9
MTE A A 21 53 37.1
comp=Z,263nm,22.8s
MTE Manteigas 88.33 7 eP P 21 18 21.7 -0.6
comp=Z,39nm,0.9s
EVR Evrytania 88.48 345 P P 21 18 22.3 -0.8
ATAL Atalanti 88.49 344 P P 21 18 21.4 -1.6
AYDN Tasoluk 88.52 340 i P P 21 18 17.5 -5.8
LRS Lares 88.53 62 eP P 21 18 24.2 +0.7
LKD2 Lefkada island 88.79 345 P P 21 18 23.4 -1.1
CELP Cerrillos 88.86 62 eP P 21 18 25.7 +0.7
OBIP Obispado Ponce 88.87 62 eP P 21 18 26.1 +1.0
comp=Z,48nm,1.0s
GOA Goa 88.88 293 ePKP P 21 18 23.3 -1.9
GOA AMB AMB 21 18 26.5
comp=Z,52nm,1.4s
PCBR Castelo Branco 88.89 7 eP P 21 18 24.4 -0.5
comp=Z,35nm,1.1s
YER Yerkesik 88.94 339 eP P 21 18 24.8 -0.5
TIP Timpagrande 88.97 348 P P 21 18 25.4 0.0
TIP Timpagrande 88.97 348 eP P 21 18 25.5 +0.2
TIP LR LR
comp=Z,809nm,22.0s
PTOM Tomar 89.03 8 eP P 21 18 25.0 -0.6
comp=Z,69nm,1.0s
HUMP Col San Antoni 89.20 62 eP P 21 18 27.4 +0.7
comp=Z,301nm,2.3s
ESDC Sonseca Array 89.28 4 P P 21 18 25.9 -0.9
ESDC Sonseca Array 89.28 4 P P 21 18 25.9 -0.9
comp=Z,29nm,1.0s,baz=354,slow=4.4,SNR=86
ESDC LR LR 22 02 16.3
comp=Z,280nm,19.5s,baz=355,slow=38
ESLA Sonseca Array 89.28 4 eP P 21 18 25.6 -1.2
comp=Z,13nm,1.2s
PMRV Marv??o 89.30 7 eP P 21 18 26.2 -0.7
comp=Z,32nm,1.0s
VSL Villasalto 89.35 354 PFAKE 21 18 40.0 +13
VSL LR LR
comp=Z,628nm,20.0s
RLS Riolos of Patr 89.38 345 P P 21 18 27.0 -0.2
PAB San Pablo 89.38 5 eP P 21 18 26.5 -0.9
PAB San Pablo 89.38 5 eP P 21 18 26.5 -0.9
VLS Valsamata 89.40 345 P P 21 18 26.6 -0.8
PMTG Montargil 89.59 8 eP P 21 18 27.2 -1.0
comp=Z,15nm,1.7s
PMAFR Mafra 89.61 9 eP P 21 18 27.8 -0.5
comp=Z,81nm,1.9s
CSS Prodhromos 89.76 335 eP P 21 18 28.4 -0.7
CSS Prodhromos 89.76 335 P P 21 18 30.2 +1.1
CSS Prodhromos 89.76 335 eP P 21 18 28.6 -0.5
PESTR Estremoz 89.85 7 eP P 21 18 28.4 -1.0
comp=Z,44nm,1.0s
ARG Arkhangelos 89.85 339 P P 21 18 28.2 -1.3
CEL Celeste 89.98 349 eP P 21 18 28.1 -2.0
comp=Z,119nm,1.0s
STKA Stephens Creek 90.06 213 eP P 21 18 30.2 +0.1
comp=Z,17nm,1.4s
STKA Stephens Creek 90.06 213 P P 21 18 30.6 +0.5
comp=Z,15nm,0.7s,baz=339,slow=5.7,SNR=32
CDVI St. Croix 90.12 61 eP P 21 18 30.7 -0.3
CDVI e pP **21 18 40.0 +0.7**
EVOP Sao Brissos 90.14 8 eP P 21 18 29.2 -1.5
EVOP pmax pmax
comp=Z,38nm,1.2s
EVOP Sao Brissos 90.14 8 eP P 21 18 29.2 -1.5
comp=Z,38nm,1.2s
EVO Evora 90.14 8 eP P 21 18 29.2 -1.6
comp=Z,38nm,1.2s
EVO eR
comp=Z,597nm,21.8s
ITM Ithomi 90.15 344 P P 21 18 29.2 -1.7
MBWA Marble Bar 90.28 236 eP P 21 18 31.5 +0.1
MBWA epP **pP 21 18 40.0 +0.2**
SANT Santorini 90.28 341 PFAKE 21 18 40.0 +8.5
SANT LR LR
comp=Z,674nm,22.0s
PNCL Nicolau / Gran 90.52 8 eP P 21 18 32.0 -0.5
comp=Z,30nm,1.7s
PBAR Barrancos 90.58 7 eP P 21 18 32.3 -0.5
comp=Z,52nm,1.9s
PBEJ Beja 90.66 8 eP P 21 18 33.1 -0.1
comp=Z,30nm,1.2s
KARP Karpathos 90.71 340 P P 21 18 31.2 -2.3
MMAI Mount Meron Ar 91.00 332 P P 21 18 34.5 -0.5
MMAI Mount Meron Ar 91.00 332 P P 21 18 34.5 -0.5
comp=Z,26nm,0.9s,baz=24,slow=6.4,SNR=40
PCVE Castro Verde 91.03 8 eP P 21 18 34.4 -0.6
comp=Z,39nm,1.9s
PVAQ Vaqueiros 91.29 8 eP P 21 18 35.8 -0.3
comp=Z,40nm,1.7s
PVAQ eLQ LQ 21 45 44.3
PVAQ eLQ LQ 21 49 27.6
PVAQ A A 22 07 32.8
comp=Z,363nm,20.0s
NPS Neapolis 91.31 341 P P 21 18 33.7 -2.6
ASF Jabal al Asfar 91.34 331 P P 21 18 36.1 -0.5
ASF Jabal al Asfar 91.34 331 P P 21 18 36.1 -0.5
comp=Z,22nm,0.9s,baz=260,slow=2.8,SNR=42
LAST Lasithi 91.44 341 P P 21 18 36.7 -0.3

VAM	Vamos	91.46	342	P		P		21 18 36.3	-0.7
ARQ	Araqi	91.54	311	P		P		21 18 37.2	-0.4
	SNR=11								
JMDO	Jabal Madar	91.61	310	P		P		21 18 37.8	-0.1
	SNR=5.3								
KEST	Kesra	93.10	354	*e*P		P		21 18 43.6	-1.1
KEST	Kesra	93.10	354	P		P		21 18 44.1	-0.6
	comp=Z,8.9nm,1.0s,baz=263,slow=1.3,SNR=10								
KEST				LR		LR		22 05 26.0	
	comp=Z,84nm,20.7s,baz=338,slow=39								
SDV	Santo Domingo	93.89	71	*e*P		P		21 18 49.2	+0.5
	comp=Z,11nm,0.9s								
EIL	Elat	94.27	332	P		P		21 18 49.0	-1.0
EIL	Elat	94.27	332	P		P		21 18 49.0	-1.0
	comp=Z,8.9nm,1.1s,baz=24,slow=5.8,SNR=7.0								
ROSC	El Rosal	94.84	76	*e*P		P		21 18 50.1	-3.3
ROSC	El Rosal	94.84	76	LR		LR		22 08 45.2	
	comp=Z,186nm,18.2s,baz=98,slow=40								
MDT	Midelt	96.07	5	P		P		21 18 57.5	-0.8
MDT	Midelt	96.07	5	P		P		21 18 57.5	-0.8
	comp=Z,12nm,1.0s,baz=14,slow=5.3,SNR=13								
RAYN	Ar Rayn	96.20	320	P		P		21 18 58.7	-0.3
	comp=Z,214nm,0.9s,SNR=23								
RAYN	Ar Rayn	96.20	320	*e*P		P		21 18 58.4	-0.6
TOA0	Torodi Ar. Sit	115.84	0	*e*PKPdf		PKPdf		21 24 12.7	-0.8
TORD	Torodi Ar. Bea	115.84	0	Pdif		Pdif		21 20 30.7	+4.2
TORD				PKP		PKiKP		21 24 12.8	-0.7
TORD				SKP				21 27 47.4	
TORD				PKKPbc		PKKPbc		21 34 43.1	+0.2
TORD	Torodi Ar. Bea	115.84	0	Pdiff		Pdif		21 20 30.7	+4.2
	comp=Z,0.4nm,0.8s,baz=356,slow=5.1,SNR=4.5								
TORD				PKP		PKiKP		21 24 12.8	-0.7
	comp=Z,2.6nm,0.5s,baz=345,slow=2.3,SNR=76								
TORD				SKP				21 27 47.4	
	comp=Z,0.7nm,0.7s,baz=0.7,slow=3.8,SNR=4.6								
TORD				PKKPbc		PKKPbc		21 34 43.1	+0.2
	comp=Z,0.3nm,0.6s,baz=144,slow=1.0,SNR=4.9								
KMBO	Kilima Mbogo	121.78	317	*e*PKPdf		PKPdf		21 24 25.1	-0.2
KMBO				PKP		PKPdf		21 24 26.3	+1.0
KMBO				LR		LR			
	comp=Z,597nm,20.0s								
KMBO	Kilima Mbogo	121.78	317	PKP		PKPdf		21 24 26.3	+1.0
	comp=Z,4.7nm,0.9s,baz=12,slow=4.8,SNR=10								
DBIC	Dimbokro	121.99	8	*e*PKPdf		PKPdf		21 24 24.9	-0.5
DBIC	Dimbokro	121.99	8	PKP		PKPdf		21 24 24.9	-0.5
	comp=Z,12nm,0.4s,baz=339,slow=3.4,SNR=87								
LIC	Lamto	122.42	8	*e*PKIKP		PKPdf		21 24 25.2	-1.0
	comp=Z,16nm,0.4s								
LIC				*e*R					
	comp=Z,543nm,19.0s								
LIC	Lamto	122.42	8	*e*PKPdf		PKPdf		21 24 25.2	-1.0
CASY	Casey	129.06	210	PFAKE				21 24 50.0	+13
CASY				LR		LR			
	comp=Z,662nm,20.0s								
VNDA	Vanda	129.14	185	PKP		PKPdf		21 24 37.9	+0.8
VNDA				SKPbc		SKPab		21 27 55.4	+0.1
VNDA	Vanda	129.14	185	PKP		PKPdf		21 24 37.9	+0.8
	comp=Z,1.6nm,1.1s,baz=328,slow=7.9,SNR=4.0								
VNDA				SKPbc		SKPab		21 27 55.4	+0.1
	comp=Z,1.4nm,0.9s,baz=12,slow=4.2,SNR=4.9								
SBA	Scott Base	129.21	184	PFAKE				21 24 50.0	+13
SBA				LR		LR			
	comp=Z,516nm,19.0s								
PLCA	Paso Flores	130.58	108	PKP		PKPdf		21 24 41.6	+0.7
PLCA				SKP				21 28 14.8	
PLCA	Paso Flores	130.58	108	PKP		PKPdf		21 24 41.6	+0.7
	comp=Z,9.4nm,1.1s,baz=265,slow=2.6,SNR=5.5								
PLCA				SKP				21 28 14.8	
	comp=Z,7.6nm,1.0s,baz=289,slow=4.7,SNR=5.9								
LSZ	Lusaka	138.31	320	*e*PKPpre		PKPpre		21 24 49.3	
LSZ				*e*PKPdf		PKPdf		21 24 56.0	-0.2
LSZ				*e*SKPbc		SKPbc		21 28 28.5	-0.2
LSZ				LR		LR			
	comp=Z,554nm,20.0s								
QSPA	South Pole Qui	141.04	180	PKPpre		PKPpre		21 24 53.8	
QSPA				PKP		PKPdf		21 24 59.6	+0.1
QSPA				SKP				21 28 32.6	
QSPA	South Pole Qui	141.04	180	PKhKP		PKPpre		21 24 53.8	
	comp=Z,4.7nm,0.7s,baz=323,slow=1.0,SNR=16								
QSPA				PKP		PKPdf		21 24 59.6	+0.1
	comp=Z,4.7nm,0.7s,baz=87,slow=0.2,SNR=17								
QSPA				SKP				21 28 32.6	
	comp=Z,14nm,1.0s,baz=21,slow=2.8,SNR=5.5								
MAW	Mawson	146.64	218	PKPbc		PKPdf		21 25 09.9	+0.7
MAW	Mawson	146.64	218	PKPbc		PKPdf		21 25 09.9	+0.7
	comp=Z,20nm,0.9s,baz=77,slow=5.0,SNR=31								
LBTB	Lobatse	148.06	316	*e*PKPdf		PKPdf		21 25 11.9	-1.2
LBTB				*e*PKPbc		PKPbc		21 25 16.6	+0.3
BOSA	Boshof	151.32	313	*e*PKPbc		PKPbc		21 25 24.3	+0.1
BOSA	Boshof	151.32	313	PKPbc		PKPbc		21 25 24.6	+0.3
	comp=Z,28nm,0.5s,baz=39,slow=1.9,SNR=138								
SYO	Syowa Base	154.79	211⇑	*e*PKPbc		PKPbc		21 25 32.0	+1.6
SYO	Syowa Base	154.79	211⇓	*e*pPKPbc		pPKPbc		21 25 42.2	+3.2
SNAA	Sanae	159.44	176	*e*PKPdf		PKPdf		21 25 25.6	-2.1
SNAA	Sanae	159.44	176	*e*pPKPab		pPKPab		21 26 14.4	+0.2
SNAA	Sanae	159.44	176	PKP		PKPdf		21 25 25.5	-2.1
SNAA				*e*PKPdf		PKPdf		21 25 25.7	-2.1
SNAA	Sanae	159.44	176	PKP		PKPdf		21 25 25.5	-2.1
	comp=Z,2.6nm,1.1s,baz=15,slow=1.3,SNR=11								

IDC 22 21:19:16.3±2.9,52°09S×139°16E,h0km,mb3.8/4, mb1 4.1/4,mb1mx3.9/14,mbtmp3.9/4,MS3.8/1,Ms1 3.7/1, ms1mx3.3/17,Error ellipse: s-maj=113.9km s-min=43.4km az=98.0,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	20.27	6	P		P 21 23 53.3	+0.1
	2.9nm,0.8s,baz=166,slow=12,SNR=3.2						
STKA				LR	LR	21 30 13.4	
	comp=Z,259nm,20.9s,baz=50,slow=32						
ASAR	Alice Springs	28.66	350	P		P 21 25 13.9	-0.8
	1.1nm,0.8s,baz=167,slow=10.0,SNR=14						
ASAR				PcP	PcP	21 28 26.9	+1.5
	0.4nm,0.9s,baz=160,slow=2.0,SNR=4.2						
WRA	Warramunga Arr	32.30	351	P		P 21 25 45.8	-1.0
	2.0nm,0.8s,baz=174,slow=7.5,SNR=11						
FITZ	Fitzroy Crossi	35.55	338	P		P 21 26 16.4	+1.5
	2.0nm,1.0s,baz=182,slow=11,SNR=3.3						
GERES	GERESS Array B	145.81	287	PKPbc	PKPdf	21 38 54.4	-1.6
	0.4nm,0.5s,baz=114,slow=11,SNR=4.2						

IDC 22 21:25:23.3±0.5,4°.23S×102°.17E,h0km,mb4.6/21, mb1 4.7/22,mb1mx4.5/28,mbtmp4.6/22,ML4.3/1,MS4.5/1, Ms1 4.5/1,ms1mx3.0/35,Error ellipse: s-maj=21.3km s-min=11.3km az=58.0

MOS 22 21:25:26.4±1.1,4°.22S×102°.28E,h33km,mb4.8/22,Error ellipse: s-maj=13.1km s-min=6.5km az=109.8

BJI 22 21:25:28.2,4°.30S×102°.20E,h50km,mB5.1/4,mb4.7/19, Ms4.8/4,Ms7 4.4/4

NEIC 22 21:25:30.4±0.6,4°.26S×102°.20E,h52km±5km,mb4.6/14, Error ellipse: s-maj=6.3km s-min=3.9km az=57.0

NEIC Felt [II] at Bengkulu.

ISCJB 22 21:25:30.5±0.7,4°.25S±0°.04×102°.24E±0°.05,h68km±5km, mb4.5/52,Error ellipse: s-maj=9.9km s-min=5.0km az=145.0

DJA 22 21:25:35.0±0.7,4°S±5°×10°3E±°,h33km±5km,M4.7/10, mb4.8/6,mB5.2/5,MLv4.7/10,Mw(mB)4.5/5

ISC 22 21:25:30.6±0.5,4°.24S±0°.05×102°.19E±0°.06,h52km±3km, h52km:pP-P,n272,σ1§04/272,mb4.7/59,MS4.5/3,63C-52D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MNAI	Manna	0.78	99	P	Pn	21 25 45.2	-0.3
MNAI				S	Sn	21 25 55.9	-0.4
LWLI	Liwa	2.02	113	S	Sn	21 26 25.5	-1.0
KASI	Kota Agung	2.63	119	P	Pn	21 26 10.1	-0.5
PMBI	Palembang	2.89	63	P	Pn	21 26 13.7	-0.5
PPBI	Pangkal Pinang	4.45	62	P	Pn	21 26 36.5	+0.9
BKNI	Bangkinang	4.68	346	P	Pn	21 26 42.2	+3.5
DBJI	Dramaga	5.09	117	P	Pn	21 26 47.5	+3.1
SKJI	Sukabumi	5.14	122	P	Pn	21 26 48.2	+3.1
TPRI	Tanjung Pinang	5.63	25	P	Pn	21 26 49.0	-2.8
	1µm,0.9s,49µm						
BTDF	Bukit Timah Da	5.79	16	P	Pn	21 26 55.8	+1.9
	74nm,0.8s,786nm0.3nm						
MYKOM	Kota Tinggi	6.22	16	P	Pn	21 27 02.5	+2.7
MYKOM	Kota Tinggi	6.22	16	P	Pn	21 27 01.7	+1.9
	75nm,0.6s,820nm0.3nm						
KGM	Kluang	6.32	10	P	Pn	21 27 04.3	+3.1

CISI	Cisompet, Garu	6.50	121	P		Pn		21 27 06.3	+2.6
	112nm,0.6s,4µm0.6nm								
FRIM	Kepong	7.45	356	P		Pn		21 27 20.7	+4.0
PSI	Prapat	7.72	335	Pn		Pn		21 27 20.0	-0.5
PSI	Prapat	7.72	335	Pn		Pn		21 27 20.0	-0.5
	1.8nm,0.3s,baz=198,slow=3.2,SNR=3.3								
TSI	Tuntungan	8.50	335	P		Pn		21 27 45.1	+14
IPM	Ipoh	8.74	352	*e*Pn		Pn		21 27 35.4	+0.9
IPM	Ipoh	8.74	352	P		Pn		21 27 38.8	+4.4
IPM	Ipoh	8.74	352	P		Pn		21 27 40.1	+5.7
	22nm,0.8s,509nm								
UGM	Wanagama	9.06	114	*e*Pn		Pn		21 27 41.0	+2.2
COCO	West Island	9.51	213	*e*P		Pn		21 27 44.3	-0.6
COCO	West Island	9.51	213	*e*Pn		Pn		21 27 44.3	-0.6
COCO				S		Sn		21 29 18.9	-12
KULM	Kulim	9.59	351	*e*Pn		Pn		21 27 47.2	+1.1
KULM	Kulim	9.59	351	P		Pn		21 27 48.2	+2.1
KSM	Kuching	9.90	55	*e*Pn		Pn		21 27 49.9	-0.5
	7.7nm,0.6s								
KKM	Kota Kinabalu	17.34	54	*e*Pn		Pn		21 29 29.6	+0.4
KAPI	Kappang	17.53	93	*e*Pn		Pn		21 29 30.9	-0.5
	12nm,0.7s								
KAPI	Kappang	17.53	93	P		Pn		21 29 31.0	-0.5
	0.9nm,0.3s,baz=272,slow=15,SNR=7.8								
KDM	Kudat	18.35	53	P		Pn		21 29 42.9	+1.4
MYLDM	Lahad Datu	18.79	60	P		Pn		21 29 50.4	+3.5
CMAR	Chiang Mai Arr	22.78	352	P		P		21 30 28.3	-0.6
CMAR				PcP		PcP		21 34 20.2	+1.0
CMAR	Chiang Mai Arr	22.78	352	P		P		21 30 28.3	-0.6
	11nm,0.9s,baz=184,slow=8.5,SNR=53								
CMAR				PcP		PcP		21 34 20.2	+1.0
	1.5nm,0.7s,baz=211,slow=3.4,SNR=6.3								
CHTO	Chiang Mai	23.13	352	*e*P		P		21 30 32.5	0.0
CHTO				*e*				21 34 20.2	
CHTO				pmax		pmax			
	comp=Z,9.0nm,1.1s								
CHTO	Chiang Mai	23.13	352	*e*P		P		21 30 32.5	0.0
	comp=Z,8.6nm,1.1s								
CHTO				*e*PcP		PcP		21 34 20.2	+0.3
MBWA	Marble Bar	23.95	136	*e*P		P		21 30 40.0	-0.1
	comp=Z,9.1nm,0.9s								
QIZ	Qiongzhong	24.32	18	P		P		21 30 44.9	+1.4
QIZ				S		S		21 35 02.1	+2.8
QIZ				pmax		pmax			
	comp=Z,21nm,1.0s								
QIZ				LR		LR			
	comp=N,460nm,22.3s								
QIZ				LR		LR			
	comp=Z,490nm,22.9s								
QIZ	Qiongzhong	24.32	18	*e*P		P		21 30 44.9	+1.4
	comp=Z,12nm,0.8s								
FITZ	Fitzroy Crossi	26.77	123	P		P		21 31 05.4	-0.4
FITZ	Fitzroy Crossi	26.77	123	P		P		21 31 05.4	-0.4
	comp=Z,8.3nm,0.5s,baz=294,slow=5.4,SNR=31								
KMI	Kunming	29.19	1	P		P		21 31 28.5	+0.9
KMI				pmax		pmax			
	comp=Z,9.0nm,1.1s								
ODAN	Odare	34.07	336	*e*P		P		21 32 11.4	+1.0
	comp=Z,43nm,0.6s								
TAPN	Taplejung	34.38	337	*e*P		P		21 32 14.2	+1.1
RAMN	Ramite	34.47	335	*e*P		P		21 32 15.5	+1.6
	comp=Z,27nm,0.4s								
WRA	Warramunga Arr	34.99	119	P		P		21 32 17.3	-1.0
WRA				PcP		PcP		21 34 50.0	+0.2
WRA	Warramunga Arr	34.99	119	P		P		21 32 17.3	-1.0
	comp=Z,3.2nm,0.4s,baz=301,slow=9.1,SNR=23								
WRA				PcP		PcP		21 34 50.0	+0.2
	comp=Z,1.9nm,0.7s,baz=299,slow=2.9,SNR=6.2								
WRAB	Tennant Creek	35.00	119	*e*P		P		21 32 17.0	-1.4
WRAB				pmax		pmax			
	comp=Z,4.0nm,0.4s								
WRAB	Tennant Creek	35.00	119	*e*P		P		21 32 17.0	-1.4
	comp=Z,4.4nm,0.4s								
LSA	Lhasa	35.37	343	*e*P		P		21 32 21.8	-0.1
LSA				pmax		pmax			
	comp=Z,8.0nm,0.9s								
LSA	Lhasa	35.37	343	*e*P		P		21 32 21.8	-0.1
	comp=Z,8.3nm,0.9s								
PKI	Pulchoki	35.53	334	*e*P		P		21 32 23.6	+0.5
	comp=Z,13nm,0.5s								
GUN	Gumba	35.62	335	*e*P		P		21 32 25.0	+1.1
	comp=Z,103nm,0.4s								
KKN	Kakani	35.77	334	*e*P		P		21 32 25.8	+0.7
	comp=Z,34nm,0.5s								
ASAR	Alice Springs	36.18	125	P		P		21 32 28.2	-0.3
ASAR				PcP		PcP		21 34 53.6	+0.4
ASAR	Alice Springs	36.18	125	P		P		21 32 28.2	-0.3
	comp=Z,3.6nm,0.7s,baz=295,slow=7.2,SNR=30								
ASAR				PcP		PcP		21 34 53.6	+0.4
	comp=Z,1.6nm,0.7s,baz=302,slow=2.8,SNR=8.7								
AS31	Alice Springs	36.18	125	*e*P		P		21 32 27.7	-0.8
KOLN	Koldanda	36.52	332	*e*P		P		21 32 32.6	+1.1
	comp=Z,33nm,0.7s								
DANN	Dangsing	36.94	332	*e*P		P		21 32 36.1	+1.0
	comp=Z,73nm,0.5s								
LZH	Lanzhou	40.15	2	*e*P		P		21 33 01.3	-0.5
LZH				pmax		pmax			
	comp=Z,16nm,1.4s								
GTA	Gaotai	43.49	357	*e*P		P		21 33 29.4	+0.4
GTA				pP		pP		21 33 43.8	+1.0
GTA				sP		sP		21 33 49.1	+0.2
GTA				pmax		pmax			
	comp=Z,3.0nm,0.6s								
CTAO	Charters Tower	45.69	114	*e*P		P		21 33 45.9	-0.8
CTAO				pmax		pmax			
	comp=Z,13nm,0.9s								
CTAO	Charters Tower	45.69	114	*e*P		P		21 33 45.9	-0.8
	comp=Z,13nm,0.9s								
STKA	Stephens Creek	46.04	131	*e*P		P		21 33 49.4	+0.1
	comp=Z,1.4nm,0.5s								
STKA				PcP		PcP		21 35 26.1	+0.9
STKA	Stephens Creek	46.04	131	P		P		21 33 49.6	+0.2
	comp=Z,8.3nm,0.6s,baz=299,slow=8.5,SNR=28								
STKA				PcP		PcP		21 35 26.1	+0.9
	comp=Z,2.9nm,0.6s,baz=324,slow=8.7,SNR=2.8								
STKA				LR		LR		21 54 46.5	
	comp=Z,617nm,20.3s,baz=14,slow=38								
KSAR	Wonju Array Be	47.87	28	P		P		21 34 04.0	+0.6
KSRS	Korea Array	47.90	28	P		P		21 34 04.0	+0.4
	comp=Z,6.0nm,0.9s,baz=218,slow=7.9,SNR=18								
WMQ	Urumqi	49.59	346	P		P		21 34 17.6	+1.0
WMQ				pP		pP		21 34 30.0	-0.7
WMQ				sP		sP		21 34 36.0	-0.7
WMQ				PcP		PcP		21 35 43.0	+5.4
WMQ				*e*S		S		21 41 21.0	-0.1
WMQ				pmax		pmax			
	comp=Z,20nm,0.8s								
WMQ				pmax		pmax			
	comp=Z,200nm,5.6s								
WMQ				LR		LR			
	comp=N,310nm,17.6s								
WMQ				LR		LR			
	comp=E,310nm,13.5s								
WMQ				LR		LR			
	comp=Z,330nm,18.0s								
KBL	Kabul	49.62	324	*e*P		P		21 34 16.7	-0.5
KBL	Kabul	49.62	324	*e*P		P		21 34 16.7	-0.5
SONM	Songino Array	51.99	4	P		P		21 34 35.3	+0.6
SONM	Songino Array	51.99	4	P		P		21 34 35.3	+0.6
	comp=Z,9.2nm,0.7s,baz=185,slow=9.1,SNR=79								
ULN	Ulaanbaatar	52.06	4	*e*P		P		21 34 36.0	+0.7
	comp=Z,4.2nm,0.8s								
KZA	Kyzart	52.20	335	P		P		21 34 37.4	+0.6
	SNR=8.4								
CN2	Changchun	52.21	21	*e*P		P		21 34 35.1	-1.1
CN2				pmax		pmax			
	comp=Z,10.0nm,0.7s								
MJAR	Matsushiro Arr	52.70	37	P		P		21 34 38.4	-1.7
MJAR	Matsushiro Arr	52.70	37	P		P		21 34 38.4	-1.7
	comp=Z,4.4nm,0.7s,baz=220,slow=7.8,SNR=13								
TKM2	Tokmak 2	52.75	336	*e*P		P		21 34 40.4	-0.1
TKM2				pmax		pmax			
	comp=Z,7.0nm,0.4s								
TKM2	Tokmak 2	52.75	336	*e*P		P		21 34 40.4	-0.1
	comp=Z,7.4nm,0.4s								
TKM2	Tokmak 2	52.75	336	P		P		21 34 40.7	+0.1
	SNR=13								
KBK	Karagaybulak	52.80	335	P		P		21 34 42.1	+1.2
	SNR=11								
AML	Almayashu	52.92	334	P		P		21 34 42.6	+0.6
	SNR=8.3								
AAK	Ala-Archa	52.98	335	*e*P		P		21 34 42.8	+0.6
AAK				pmax		pmax			
	comp=Z,6.0nm,0.8s								
EKS2	Erkin-Say	53.31	334	*e*P		P		21 34 45.1	+0.5
EKS2				pmax		pmax			
	comp=Z,10.0nm,0.8s								
EKS2	Erkin-Say	53.31	334	*e*P		P		21 34 45.1	+0.5
	comp=Z,10nm,0.8s								
EKS2	Erkin-Say	53.31	334	P		P		21 34 45.4	+0.8
	SNR=14								
ARMA	Armidale	53.34	125	*e*P		P		21 34 45.0	0.0
USP	Ospenovka	53.49	335	P		P		21 34 45.9	+0.1
	SNR=6.5								
MK31	Makanchi Array	53.77	343	*c*e*P		P		21 34 47.4	-0.4
MK31				pmax		pmax			
	comp=Z,6.0nm,0.4s								
MK31	Makanchi Array	53.77	343	*e*P		P		21 34 47.6	-0.1
MKAR	Makanchi Array	53.77	343	P		P		21 34 47.6	-0.1
MKAR	Makanchi Array	53.77	343	P		P		21 34 47.6	-0.1
MKAR	Makanchi Array	53.77	343	P		P		21 34 47.6	-0.1
	comp=Z,7.8nm,0.4s,baz=152,slow=8.8,SNR=224								
ZAK	Zakamensk	54.41	1	*e*P		P		21 34 52.0	-0.4
ZAK				*e*				21 35 10.0	
ZAK				pmax		pmax			
	comp=Z,2.0nm,0.9s								
KK31	Karatay Array	55.14	332	*c*e*P		P		21 34 56.6	-1.1
KK31				pmax		pmax			
	comp=Z,2.0nm,0.2s								
USRK	Ussuriysk Arra	55.15	26	P		P		21 34 57.6	-0.2
	comp=Z,8.2nm,0.5s,baz=211,slow=5.3,SNR=54								
KURBB	Kurchatov Arra	58.31	343	P		P		21 35 19.7	-0.3
	comp=Z,7.2nm,0.7s,baz=159,slow=6.6,SNR=77								
KURK	Kurchatov	58.37	343	*e*P		P		21 35 20.0	-0.4
KURK	Kurchatov	58.37	343	*e*P		P		21 35 20.0	-0.4
KLR	Kul'dur	59.12	22	*e*P		P		21 35 21.6	-4.1
ZAA0	Zalesovo Array	59.77	348	*e*P		P		21 35 29.6	-0.5
ZAA0				*e*PcP		PcP		21 36 17.8	+1.5
ZALV	Zalesovo Beam	59.77	348	P		P		21 35 29.6	-0.5
ZALV	Zalesovo Beam	59.77	348	P		P		21 35 29.6	-0.5
ZALV	Zalesovo Beam	59.77	348	P		P		21 35 29.6	-0.5
	comp=Z,14nm,0.4s,baz=167,slow=5.2,SNR=82								
NVS	Novosibirsk	60.94	348	*e*P		P		21 35 36.8	-1.2
UMR	Umm Al-Rimmam	62.03	307	*e*P		P		21 35 47.0	+1.1
YSS	Yuzh-Sakhalins	62.26	30	*e*P		P		21 35 47.2	+0.1
NAY	Al-Naaiem	62.30	306	*e*P		P		21 35 48.5	+0.8
NAY				AMb		AMB		21 35 49.7	
	comp=Z,13nm,0.9s								
MIB	Mutribah	62.43	307	*e*P		P		21 35 49.4	+0.8
MIB				AMb		AMB		21 35 50.5	
	comp=Z,25nm,0.8s								
BVAR	Borovoye Array	63.03	339	P		P		21 35 51.5	-0.7
BVAR	Borovoye Array	63.03	339	P		P		21 35 51.5	-0.7
BVAR	Borovoye Array	63.03	339	P		P		21 35 51.5	-0.7
	comp=Z,6.1nm,0.5s,baz=144,slow=8.5,SNR=36								
BRVK	Borovoye	63.10	339	*d*iP		P		21 35 51.8	-0.8
BRVK				pmax		pmax			
	comp=Z,4.0nm,0.7s								
BRVK	Borovoye	63.10	339	*e*P		P		21 35 51.7	-0.9
	comp=Z,8.9nm,0.9s								
ZRNK	Zerenda	63.48	338	*i*P		P		21 35 53.6	-1.5
ZRNK				pmax		pmax			
	comp=Z,2.0nm,0.6s								
AB31	Akbulak array	64.64	331	*c*e*P		P		21 36 02.2	-0.6
AB31				pmax		pmax			
	comp=Z,10.0nm,0.5s								
ABKAR	Akbulak array	64.64	331	*e*P		P		21 36 02.5	-0.3
	comp=Z,12nm,0.6s								
AKTO	Aktyubinsk	66.36	331	*i*P		P		21 36 12.7	-1.2
AKTO				pmax		pmax			
	comp=Z,3.0nm,0.6s								
GNI	Garni	68.64	316	P		P		21 36 28.7	-0.1
SVE	Sverdlovsk	69.58	337	*e*P		P		21 36 34.2	+0.3
SVE				pmax		pmax			
	comp=Z,13nm,1.0s								
ARU	Arti	70.12	336	*c*iP		P		21 36 36.9	-0.4
ARU								21 39 08.2	
ARU				S		S		21 45 46.4	+2.0
ARU				SS		SS		21 50 09.2	-6.0
ARU				pmax		pmax			
	comp=Z,10.0nm,1.0s								
KBZ	Khabaz	71.42	319	P		P		21 36 45.7	+0.3
KBZ	Khabaz	71.42	319	P		P		21 36 45.7	+0.3
KBZ	Khabaz	71.42	319	P		P		21 36 45.7	+0.3
	comp=Z,3.5nm,0.8s,baz=127,slow=2.4,SNR=7.2								
RPZ	Rata Peaks	71.86	135	P		P		21 36 48.0	-0.3
RPZ	Rata Peaks	71.86	135	P		P		21 36 48.0	-0.3
	comp=Z,8.9nm,0.8s,baz=301,slow=5.2,SNR=4.0

D16A	Dana Ranch, Ca	128.38	29	⇓P		PKPdf	21 44 31.5	-0.3
	baz=128							
MFID	Camas Ranch	128.53	35	⇓P		PKPdf	21 44 32.4	+0.2
	baz=128							
I12A	Atlanta	128.68	34	⇑P		PKPdf	21 44 33.2	+0.6
	baz=129							
B21A	Ellsworth Farm	129.39	25	⇓P		PKPdf	21 44 33.9	+0.3
	baz=129							
F17A	Fitzpatrick Pl	129.62	29	⇑P		PKPdf	21 44 34.2	-0.1
	baz=130							
NVAR	Mina Array Bea	129.88	42	PKP		PKPdf	21 44 36.1	+1.1
NVAR	Mina Array Bea	129.88	42	PKP		PKPdf	21 44 36.1	+1.1
	comp=Z,0.8nm,0.6s,baz=310,slow=1.1,SNR=6.7							
BSC	Santa Cruz Isl	131.18	47	⇑P		PKPdf	21 44 37.5	+0.1
	baz=131							
MPMC	Manual Prospec	131.68	44	⇑P		PKPdf	21 44 38.3	-0.3
	baz=132							
R11A	Troy Canyon, C	131.70	40	⇓P		PKPdf	21 44 38.6	+0.1
	baz=132							
EDW2	Edwards Air Fo	131.94	45	⇑P		PKPdf	21 44 38.6	-0.3
	baz=132							
H20A	Greybull	131.94	29	⇑P		PKPdf	21 44 38.8	+0.2
	baz=132							
E24A	Baker	131.99	24	⇓P		PKPdf	21 44 38.6	0.0
	baz=132							
I20A	Worland	132.27	30	⇑P		PKPdf	21 44 39.3	0.0
	baz=132							
PDAR	Pinedale Array	132.40	32	PKP		PKPdf	21 44 40.1	+0.3
PDAR	Pinedale Array	132.40	32	PKP		PKPdf	21 44 40.1	+0.3
	comp=Z,0.5nm,0.3s,baz=129,slow=1.3,SNR=3.9							
K19A	Absolon Red Bu	132.72	31	⇑P		PKPdf	21 44 39.8	-0.5
	baz=133							
GMRC	Granite Mounta	133.63	44	⇑P		PKPdf	21 44 42.3	+0.2
	baz=134							
PFO	Pinyon Flat Ob	133.67	46	⇑P		PKPdf	21 44 42.3	0.0
	baz=134							
M20A	Sweetwater, Wa	134.02	32	⇓P		PKPdf	21 44 43.3	+0.5
	baz=134							
N21A	Black Mountain	134.89	32	⇓P		PKPdf	21 44 44.8	+0.3
	baz=135							
U15A	North Rim	134.95	40	⇓P		PKPdf	21 44 45.8	+1.0
	baz=135							
Q20A	Ridgley Place,	135.74	35	⇓P		PKPdf	21 44 46.8	+0.8
	baz=136							
J28A	Allard Ranch,	135.81	25	⇓P		PKPdf	21 44 47.0	+1.2
	baz=136							
S21A	Coal Bank Pass	136.91	35	⇓P		PKPdf	21 44 49.6	+1.1
	baz=137							
OGNE	Ogallala	137.47	27	⇑P		PKPdf	21 44 49.8	+0.7
	baz=137							
R23A	Moffat	137.65	33	⇓P		PKPdf	21 44 50.6	+0.8
	baz=138							
Y20A	Horse Springs,	139.02	40	⇓P		PKPdf	21 44 53.1	+0.8
	baz=139							
X21A	Alamocita Cree	139.06	39	⇓P		PKPdf	21 44 53.6	+1.2
	baz=139							
S26A	Kim	139.33	32	⇑P		PKPdf	21 44 53.2	+0.5
	baz=139							
Z20A	Nine Sixteen R	139.38	41	⇑P		PKPdf	21 44 53.9	+1.0
	baz=139							
X22A	Bernardo	139.50	38	⇓P		PKPdf	21 44 54.1	+1.0
	baz=139							
W23A	Werner Place,	139.58	37	⇑P		PKPdf	21 44 54.9	+1.6
	baz=140							
Q29A	Oakley	139.59	28	⇑P		PKPdf	21 44 54.6	+1.5
	baz=140							
120A	U Bar Ranch, L	139.70	42	⇓P		PKPdf	21 44 54.4	+0.8
	baz=140							
U25A	Circle Dot Ran	139.72	34	⇑P		PKPdf	21 44 54.5	+1.0
	baz=140							
W24A	Lazy 6 Ranch,	139.99	36	⇑P		PKPdf	21 44 55.0	+1.0
	baz=140							
V25A	Rancho No Teng	140.00	35	⇓P		PKPdf	21 44 55.2	+1.1
	baz=140							
T27A	Campo	140.14	32	⇑P		PKPdf	21 44 56.0	+1.9
	baz=140							
Z22A	Elephant Butte	140.35	40	⇑P		PKPdf	21 44 55.5	+0.8
	baz=140							
U27A	Thompson Grove	140.57	32	⇓P		PKPdf	21 44 56.5	+1.5
	baz=140							
Y25A	Mesa, Roswell	141.31	37	⇑P		PKPdf	21 44 58.1	+1.8
	baz=141							
W27A	Bowe Ranch, En	141.44	34	⇑P		PKPdf	21 44 55.3	-1.2
	baz=141							
Z25A	Roswell	141.73	38	⇑P		PKPdf	21 44 58.7	+1.6
	baz=142							
Z27A	Tatum	142.61	36	⇓P		PKPdf	21 44 56.1	-2.6
	baz=142							
325A	Bean Ranch, Si	142.85	40	⇓P		PKPdf	21 44 56.9	-2.3
	baz=143							
226B	Tecolote Peak,	142.89	39	⇓P		PKPdf	21 44 56.9	-2.3
	baz=143							
425A	Indio Mountain	143.22	41	⇑P		PKPbc	21 44 57.6	+0.7
	baz=143							
X31A	McDonald Ranch	143.43	31	⇓P		PKPbc	21 44 57.2	0.0
	baz=143							
326A	Caldwell Ranch	143.52	39	⇑P		PKPbc	21 44 58.1	+0.5
	baz=143							
Z29A	Hungry Hill Ra	143.52	35	⇓P		PKPbc	21 44 57.3	-0.2
	baz=143							
Y31A	Rekieta Farm,	143.80	32	⇑P		PKPbc	21 44 58.6	+0.3
	baz=144							
228A	UT Block 9, Go	143.83	37	⇓P		PKPbc	21 44 58.9	+0.4
	baz=144							
Z30A	Sanderson Ranc	143.83	34	⇑P		PKPbc	21 44 58.1	-0.3
	baz=144,SNR=5.8							
426A	McDonald Obser	143.92	40	⇓P		PKPbc	21 44 59.7	+0.7
	baz=144							
WMOK	Wichita Mounta	143.96	30	ePKIKP		PKPab	21 44 57.2	-1.0
WMOK	Wichita Mounta	143.96	30	ePKPdf		PKPab	21 44 57.2	-1.0
427A	Hayter Ranch,	144.20	39	⇓P		PKPab	21 44 59.3	0.0
	baz=144							
328A	Wristen Ranch,	144.21	38	⇑P		PKPab	21 44 59.2	0.0
	baz=144,SNR=7.8							
526A	Mary Lane Ranc	144.28	41	⇑P		PKPbc	21 44 59.8	-0.3
	baz=144							
Z31A	Sharp Cattle R	144.35	33	⇑P		PKPab	21 44 59.3	-0.4
	baz=144,SNR=10							
TUL1	Tulsa	144.39	25	⇓P		PKPab	21 44 59.5	-0.2
	baz=144							
229A	Bryant Ranch,	144.40	36	⇑P		PKPab	21 44 59.8	-0.1
	baz=144							
130A	Snyder	144.43	35	⇑P		PKPbc	21 45 00.1	-0.2
	baz=144							
BDFB	Brasilia	144.50	236	PKP		PKPdf	21 45 02.5	+0.1
BDFB	Brasilia	144.50	236	PKP		PKPdf	21 45 02.5	+0.1
	comp=Z,4.8nm,0.4s,baz=145,slow=2.3,SNR=10							
527A	Woodward Ranch	144.54	41	⇑P		PKPbc	21 45 00.9	0.0
	baz=144,SNR=9.1							
626A	Big Bend Ranch	144.58	42	⇓P		PKPbc	21 45 00.8	-0.2
	baz=144,SNR=7.3							
329A	Wagon Wheel Ra	144.64	37	⇓P		PKPab	21 45 00.8	-0.1
	baz=144,SNR=7.6							
131A	Roby	144.70	34	⇑P		PKPab	21 45 00.8	-0.2
	baz=145,SNR=9.2							
Z32A	Haskell	144.72	32	⇑P		PKPab	21 44 59.9	-1.1
	baz=145							
428A	Kincaid Ranch,	144.74	39	⇑P		PKPdf	21 45 01.8	-0.6
	baz=145,SNR=34							
230A	Sterling City	144.87	36	⇑P		PKPab	21 45 01.3	-0.3
	baz=145,SNR=10							
TXAR	Lajitas Array	145.03	42	PKPbc		PKPdf	21 45 02.6	-0.4
TXAR	Lajitas Array	145.03	42	PKPbc		PKPdf	21 45 02.6	-0.4
	comp=Z,6.4nm,0.5s,baz=260,slow=0.8,SNR=125							
528A	Cox Ranch, San	145.06	40	⇑P		PKPdf	21 45 02.7	-0.3
	baz=145							
627A	Terlingua Ranc	145.14	41	⇑P		PKPdf	21 45 02.9	-0.3
	baz=145,SNR=13							
ABTX	Abilene, Hawle	145.15	33	⇓P		PKPdf	21 45 02.7	-0.3
	baz=145							
330A	Mertzon	145.18	36	⇑P		PKPbc	21 45 02.3	-0.4
	baz=145,SNR=7.7							
231A	Bronte	145.29	35	⇓P		PKPbc	21 45 02.6	-0.5
	baz=145,SNR=5.6							
429A	Davenport Ranc	145.30	38	⇑P		PKPbc	21 45 02.8	-0.4
	baz=145							
529A	Stev Forest Ra	145.44	39	⇑P		PKPab	21 45 03.7	-0.1
	baz=145,SNR=8.0							
628A	Black Gap, Mar	145.44	41	⇓P		PKPab	21 45 03.8	-0.1
	baz=145,SNR=21							
430A	Baggett Ranch,	145.58	37	⇑P		PKPbc	21 45 03.9	-0.2
	baz=146							
331A	San Angelo	145.69	36	⇓P		PKPbc	21 45 04.0	-0.3
	baz=146							
232A	Coleman	145.70	34	⇑P		PKPbc	21 45 04.2	-0.2
	baz=146,SNR=9.5							
530A	J-C Ranch, Com	145.97	38	⇓P		PKPab	21 45 05.6	-0.2
	baz=146,SNR=22							
332A	Millersview	146.03	35	⇑P		PKPbc	21 45 05.4	0.0
	baz=146,SNR=27							
431A	Sonora	146.03	37	⇓P		PKPbc	21 45 04.9	-0.6
	baz=146							
432A	Menard	146.37	36	⇑P		PKPbc	21 45 05.9	-0.5
	baz=146							
531A	Rocksprings	146.44	37	⇑P		PKPbc	21 45 06.4	-0.3
	baz=146							
JCT	Junction City	146.66	36	ePKP2		PKPbc	21 45 07.1	-0.2
JCT	Junction City	146.66	36	ePKPdf		PKPbc	21 45 07.1	-0.2
JCT	Junction City	146.66	36	⇑P		PKPbc	21 45 07.0	-0.2
	baz=147,SNR=8.7							
532A	Rocksprings	146.85	37	⇑P		PKPbc	21 45 07.4	-0.5
	baz=147							
631A	Perdido Creek	146.96	38	⇓P		PKPbc	21 45 07.7	-0.5
	baz=147							
632A	Uvalde	147.37	37	⇑P		PKPbc	21 45 09.4	+0.1
	baz=147							
732A	Laxson Ranch,	147.81	38	⇓P		PKPbc	21 45 10.7	+0.2
	baz=148							
KMSC	Kings Mountain	149.08	6	⇓P		PKPbc	21 45 12.8	-0.8
	baz=149							

IDC 22 21:27:09.0±7.0, 1°98N×96°73E, h47km±53km, mb4.0/6, mb1 4.1/8, mb1mx3.7/28, mbtmp4.0/8, ML3.7/2, Error ellipse: s-maj=80.6km s-min=19.9km az=61.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	2.34	69	P	Pn	21 27 44.8	-0.4
	4.5nm,0.3s,baz=297,slow=9.8,SNR=11						
CMAR	Chiang Mai Arr	16.52	7	P	Pn	21 30 57.5	-0.1
	0.3nm,0.3s,baz=197,slow=11,SNR=14						
FITZ	Fitzroy Crossi	34.76	126	P	P	21 33 54.2	-1.0
	1.4nm,0.8s,baz=292,slow=11,SNR=2.8						
WRA	Warramunga Arr	42.84	122	P	P	21 35 03.9	+0.9
	2.2nm,0.7s,baz=300,slow=9.1,SNR=5.2						
KSRS	Korea Array	45.48	35	P	P	21 35 23.1	-0.7
	2.2nm,0.8s,baz=226,slow=9.1,SNR=5.9						
MKAR	Makanchi Array	46.38	346	P	P	21 35 30.7	-0.1
	6.6nm,0.8s,baz=161,slow=7.7,SNR=7.2						
SONM	Songino Array	46.44	9	P	P	21 35 31.5	+0.2
	2.9nm,0.8s,baz=190,slow=9.5,SNR=3.1						
ZALV	Zalesovo Beam	52.72	351	P	P	21 36 18.5	-0.4
	6.2nm,0.6s,baz=177,slow=7.2,SNR=5.5						

IDC 22 21:40:36.8±1.6, 26°24S×71°76E, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/24, mbtmp3.8/5, Error ellipse: s-maj=62.0km s-min=28.3km az=29.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	55.92	102	P	P	21 50 16.2	-0.8
	0.5nm,0.8s,baz=243,slow=6.1,SNR=3.9						
WRA	Warramunga Arr	57.44	98	P	P	21 50 28.4	+0.6
	0.7nm,0.8s,baz=254,slow=6.8,SNR=4.2						
MKAR	Makanchi Array	73.31	8	P	P	21 52 10.2	+0.2
	1.5nm,1.0s,baz=200,slow=6.5,SNR=11						
TORD	Torodi Ar. Bea	78.53	291	P	P	21 52 40.6	+0.1
	0.2nm,0.6s,baz=128,slow=4.5,SNR=4.7						
ZALV	Zalesovo Beam	80.65	8	P	P	21 52 50.9	-0.2
	1.3nm,0.8s,baz=194,slow=5.5,SNR=4.6						

ISK 22 21:50:52.6, 35°07N×26°85E, h18km, MD3.6
ATH 22 21:50:53.1, 35°14N×27°00E, h13km±1km, MD3.0/6
CSEM 22 21:50:53.5±0.4, 35°18N×26°93E, h2km, MD3.0, Error ellipse: s-maj=11.3km s-min=3.7km az=153.0
ISC 22 21:50:53.7±1.4, 35°21N±0°07×26°92E±0°04, h8km±11km, n31, σ0°89/43, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.39	30	ePB	Pg	21 51 01.2	-0.2
KARP				eSB	Sg	21 51 07.6	+1.0
KARP	Karpathos	0.39	30	ePb	Pg	21 51 01.2	-0.2
KARP				eSb	Sg	21 51 07.6	+1.0
ZKR	Zakros	0.58	261	ePB	Pb	21 51 05.4	-0.7
ZKR	Zakros	0.58	261	ePb	Pb	21 51 05.4	-0.7
LAST	Lasithi	1.18	268	ePB	Pn	21 51 16.5	-0.1
LAST	Lasithi	1.18	268	ePb	Pn	21 51 16.5	-0.1
ARG	Arkhangelos	1.41	44	ePB	Pn	21 51 19.8	+0.2
ARG				eSB	Sg	21 51 39.1	+0.2
ARG	Arkhangelos	1.41	44	ePb	Pn	21 51 19.8	+0.2
ARG				eSb	Sg	21 51 39.1	+0.2
DAT	Datca	1.61	19	ePN	Pn	21 51 22.9	+0.4
DAT				eSN	Sg	21 51 45.5	0.0
DAT	Datca	1.61	19	ePn	Pn	21 51 22.9	+0.4
DAT				eSn	Sg	21 51 45.5	0.0
IDI	Anoyia	1.66	273	ePG	Pg	21 51 25.2	-0.4
IDI				eSN	Sg	21 51 48.2	+1.1
IDI	Anoyia	1.66	273	ePg	Pg	21 51 25.2	-0.4
IDI				eSn	Sg	21 51 48.2	+1.1
BODT	Bodrum	1.88	10	ePN	Pn	21 51 26.8	+0.7
BODT				eSN	Sb	21 51 51.9	0.0
BODT	Bodrum	1.88	10	ePn	Pn	21 51 26.8	+0.7
BODT				eSn	Sb	21 51 51.9	0.0
DALY	Dalyan (Mu˘la	2.13	41	ePN	Pn	21 51 30.3	+0.7
DALY	Dalyan (Mu˘la	2.13	41	ePn	Pn	21 51 30.3	+0.7
APE	Apeiranthos	2.17	329	ePN	Pn	21 51 30.7	+0.6
APE				eSN	Sn	21 51 57.4	+0.1
APE	Apeiranthos	2.17	329	ePN	Pn	21 51 32.0	+1.8
APE	Apeiranthos	2.17	329	ePn	Pn	21 51 30.7	+0.6
APE				eSn	Sn	21 51 57.4	+0.1
MLSB	Milas	2.19	18	ePN	Pn	21 51 31.3	+0.8
MLSB	Milas	2.19	18	ePn	Pn	21 51 31.3	+0.8
YER	Yerkesik	2.22	29	ePN	Pn	21 51 32.0	+1.2
YER	Yerkesik	2.22	29	ePn	Pn	21 51 32.0	+1.2
FETY	Fethiye	2.26	50	ePN	Pn	21 51 32.7	+1.3
FETY	Fethiye	2.26	50	ePn	Pn	21 51 32.7	+1.3
SMG	Samos	2.50	359	ePN	Pb	21 51 37.0	-1.8
SMG	Samos	2.50	359	ePn	Pb	21 51 37.0	-1.8
GLHS	Glhisar (BURDU	2.85	46	ePN	Pn	21 51 40.1	+0.5
GLHS	Glhisar (BURDU	2.85	46	ePn	Pn	21 51 40.1	+0.5
KULA	Kula-Manisa	3.58	22	ePN	Pn	21 51 51.1	+1.5
KULA	Kula-Manisa	3.58	22	ePn	Pn	21 51 51.1	+1.5

IDC 22 21:51:31.3±1.2, 51°35N×178°28W, h0km, mb3.9/9, mb1 4.0/10, mb1mx3.8/27, mbtmp3.9/10, ML3.9/1, Error ellipse: s-maj=36.7km s-min=21.1km az=165.0
NEIC 22 21:51:37.9±1.0, 51°27N×178°24W, h47km±6km, mb4.1/3, Error ellipse: s-maj=21.0km s-min=5.3km az=174.0
ISC 22 21:51:37.6±1.8, 51°1N±0°2×178°21W±0°04, h49km±13km, n42, σ1°48/50, mb3.8/12, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CERAA	Semis' Rag'd T	1.55	303	P	Pn	21 52 01.6	-1.1
CERAA				S	Sn	21 52 23.9	+2.3
AMKA	Amchitka	1.59	281	P	Pn	21 52 01.1	-2.1
AMKA				S	Sn	21 52 23.3	+0.7
CERB	Semis' Cerberu	1.59	303	P	Pn	21 52 02.5	-0.8
CERB				S	Sn	21 52 25.4	+2.8
CESW	Semis' Southwe	1.61	301	P	Pn	21 52 02.2	-1.3
CEAP	Semis' Anvil P	1.65	304	P	Pn	21 52 03.1	-1.0
CETU	Semis' Tuman	1.68	302	P	Pn	21 52 03.6	-0.9
LSSE	Little Sitkin	2.18	294	P	Pn	21 52 10.6	-0.8
LSPA	Little Sitkin	2.19	295	P	Pn	21 52 10.7	-0.7
LSPA				S	Sn	21 52 41.3	+4.0
LSSA	Little Sitkin	2.22	294	P	Pn	21 52 10.7	-1.2
LSNW	Little Sitkin	2.23	295	P	Pn	21 52 11.0	-0.9
LSNW				S	Sn	21 52 41.5	+3.3
KOWE	Korovin West	2.77	61	P	Pn	21 52 19.4	-0.1
KOWE				S	Sn	21 52 54.3	+2.6
KOKL	Mount Kliuchef	2.78	62	P	Pn	21 52 19.8	+0.2
KOFP	Korovin Flat P	2.82	64	P	Pn	21 52 20.1	0.0
KOFP				S	Sn	21 52 54.6	+1.6
FX1	Attu Island--F	5.62	292	P	Pn	21 52 58.7	+0.3
KDAK	Kodiak Island	16.28	56	Pn	Pn	21 55 19.1	-3.3
KDAK	Kodiak Island	16.28	56	Pn	Pn	21 55 19.1	-3.3
	0.4nm,0.3s,baz=215,slow=1.6,SNR=2.3						
TRF	Thorofare Moun	19.32	40	eP	Pn	21 55 57.4	-2.4
	7.9nm,0.8s						
ILAR	Eielson Array	21.24	38	P	P	21 56 19.8	+0.7
ILAR	Eielson Array	21.24	38	P	P	21 56 19.8	+0.7
	0.9nm,0.9s,baz=255,slow=12,SNR=6.4						
USRK	Ussuriysk Arra	33.69	278	P	P	21 58 13.6	0.0
	0.9nm,0.5s,baz=56,slow=10,SNR=6.6						
PDAR	Pinedale Array	46.04	72	P	P	21 59 56.6	+0.2
	1.5nm,0.8s,baz=301,slow=3.1,SNR=8.3						
ULN	Ulaanbaatar	46.72	297	eP	P	22 00 02.2	+0.7
	3.1nm,1.5s						
SONM	Songino Array	47.11	297	P	P	22 00 04.9	+0.4
SONM	Songino Array	47.11	297	P	P	22 00 04.9	+0.4
	0.6nm,0.7s,baz=57,slow=11,SNR=4.6						
ZALV	Zalesovo Beam	54.50	314	PcP	PcP	22 02 03.2	+0.6
ZALV	Zalesovo Beam	54.50	314	PcP	PcP	22 02 03.2	+0.6
	0.7nm,0.6s,baz=56,slow=5.6,SNR=4.1						
ARCES	ARCESS Array B	58.44	350	P	P	22 01 25.9	-1.6
ARCES	ARCESS Array B	58.44	350	P	P	22 01 26.0	-1.6
	3.8nm,0.8s,baz=25,slow=7.5,SNR=4.6						
MKAR	Makanchi Array	60.50	309	P	P	22 01 40.8	-1.4
MKAR				PcP	PcP	22 02 26.6	+0.2
MKAR	Makanchi Array	60.50	309	P	P	22 01 40.8	-1.4
	0.2nm,0.4s,baz=64,slow=5.9,SNR=6.4						
MKAR				PcP	PcP	22 02 26.6	+0.2
	0.2nm,0.5s,baz=44,slow=5.6,SNR=2.3						
FINES	FINESS Array B	66.14	348	P	P	22 02 17.4	-1.7
FINES	FINESS Array B	66.14	348	P	P	22 02 17.4	-1.7
	0.3nm,0.5s,baz=335,slow=9.4,SNR=3.3						
LSA	Lhasa	67.89	290	eP	P	22 02 33.1	+1.7
	1.4nm,0.6s						
CMAR	Chiang Mai Arr	71.41	276	P	P	22 02 53.4	+0.8
CMAR	Chiang Mai Arr	71.41	276	P	P	22 02 53.4	+0.8
	0.2nm,0.4s,baz=39,slow=7.4,SNR=4.0						
BRTR	Keskin Array B	85.36	336	P	P	22 04 09.1	-0.3
BRTR	Keskin Array B	85.36	336	P	P	22 04 09.1	-0.3
	1.2nm,0.8s,baz=27,slow=2.4,SNR=4.1						
ASAR	Alice Springs	85.53	223	P	P	22 04 10.8	+0.8
ASAR	Alice Springs	85.53	223	P	P	22 04 10.8	+0.8
	0.4nm,0.8s,baz=28,slow=5.5,SNR=5.4						
BOSA	Boshof	151.44	313	PKPbc	PKPbc	22 11 26.5	+0.7
BOSA	Boshof	151.44	313	PKPbc	PKPbc	22 11 26.5	+0.7
	1.9nm,0.6s,baz=70,slow=2.5,SNR=4.8						

DDA 22 22:00:42.7, 41°16N×36°80E, h23km, ML3.4
ISK 22 22:00:42.3, 41°19N×36°78E, h5km, MD3.5
CSEM 22 22:00:42.7±0.2, 41°21N×36°78E, h2km, ML3.4, Error ellipse: s-maj=4.6km s-min=2.5km az=3.0
ISC 22 22:00:41.8±1.3, 41°22N±0°04×36°80E±0°02, h3km±12km, n68, σ1°16/90, 1C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ERBA	Erbaa	0.54	183	*i* P	Pb	22 00 53.0	-0.9
ERBA				*i* S	Sb	22 00 59.9	-2.1
ERBA	Erbaa	0.54	183	*i* P	Pb	22 00 53.0	-0.9
ERBA				*i* S	Sb	22 00 59.9	-2.1
KVT	Kavak	0.58	257	*e*PG	Pb	22 00 54.0	-0.7
KVT				*e*SG	Sb	22 01 01.7	-1.7
KVT	Kavak	0.58	257	*e*Pg	Pb	22 00 54.0	-0.7
KVT				*e*Sg	Sb	22 01 01.7	-1.7
HAVZ	Havza	0.83	260	*i* P	Pb	22 00 58.3	-0.6
HAVZ				*i* S	Sb	22 01 09.5	-0.9
HAVZ	Havza	0.83	260	*i* P	Pb	22 00 58.3	-0.6
HAVZ				*i* S	Sb	22 01 09.5	-0.9
RSDY	Resadiye-TOKAT	0.91	154	*e*PG	Pg	22 00 59.4	+0.1
RSDY				*e*SG	Sb	22 01 12.4	-0.5
RSDY	Resadiye-TOKAT	0.91	154	*e*Pg	Pg	22 00 59.4	+0.1
RSDY				*e*Sg	Sb	22 01 12.4	-0.5
TOKT	Tokat	0.92	192	*e*PG	Pb	22 00 59.8	-0.6
TOKT	Tokat	0.92	192	*e*Pg	Pb	22 00 59.8	-0.6
TOKA	Tokat	0.93	195	*i* P	Pb	22 00 59.9	-0.6
TOKA				*i* S	Sb	22 01 12.0	-1.3
TOKA	Tokat	0.93	195	*i* P	Pb	22 00 59.9	-0.6
TOKA				*i* S	Sb	22 01 12.0	-1.3
GRSN	GIRESUNGRSN	1.15	104	*i* P	Pg	22 01 04.2	+0.4
GRSN				*i* S	Sg	22 01 16.9	-1.8
GRSN	GIRESUNGRSN	1.15	104	*i* P	Pg	22 01 04.2	+0.4
DIKM	Dikmen	1.23	291	*e*PN	Pn	22 01 06.0	0.0
DIKM	Dikmen	1.23	291	*e*Pn	Pn	22 01 06.0	0.0
SVSK	Karacayir	1.31	173	*e*PN	Pb	22 01 06.6	-0.4
SVSK	Karacayir	1.31	173	*e*Pn	Pb	22 01 06.6	-0.4
SUSE	Susehri	1.47	133	*i* P	Pb	22 01 09.7	-0.2
SUSE				*i* S	Sb	22 01 28.8	-0.2
SUSE	Susehri	1.47	133	*i* P	Pb	22 01 09.7	-0.2
SUSE				*i* S	Sb	22 01 28.8	-0.2
ESPY	Espiye-Giresun	1.49	101	*e*PN	Pn	22 01 09.5	-0.1
ESPY	Espiye-Giresun	1.49	101	*e*Pn	Pn	22 01 09.5	-0.1
BYBT	Boyabat	1.55	280	*e*PN	Pb	22 01 11.0	-0.1
BYBT	Boyabat	1.55	280	*e*Pn	Pb	22 01 11.0	-0.1
CTKT	Corum	1.63	249	*i* P	Pb	22 01 12.2	-0.5
CTKT				*i* S	Sg	22 01 34.7	+0.5
CTKT	Corum	1.63	249	*i* P	Pb	22 01 12.2	-0.5
CTKT				*i* S	Sg	22 01 34.7	+0.5
Y

comp=Z,3.0nm,0.1s
GCIS Gornji Cirnik 0.10 110 *i* Pg Pg 22 00 53.1 +0.1
GCIS *i* Sg Sg 22 00 54.8 +0.3
comp=Z,3.0nm,0.1s
LEGS Legarje 0.13 291 *i* Pg Pg 22 00 53.6 +0.1
LEGS *i* Sg Sg 22 00 55.7 +0.4
LEGS Legarje 0.13 291 *i* Pg Pg 22 00 53.6 +0.1
LEGS *i* Sg Sg 22 00 55.7 +0.5

BJI **22** *22:05:05.0, 4.˝05S×147.˝40E, h35km, mB5.1/33, mb5.0/48, Ms4.9/43, Ms7 4.8/43*
ISCJB **22** *22:05:09.0±1.3, 3.˝40S±0.˝04×146.˝52E±0.˝05, h11km±8km, mb5.0/85, MS4.7/43, Error ellipse: s-maj=7.9km s-min=5.9km az=168.3*
IDC **22** *22:05:09.0±0.6, 3.˝23S×146.˝27E, h0km, mb4.6/18, mb1 4.8/20, mb1mx4.7/22, mbtmp4.6/20, ML4.3/1, MS4.6/25, Ms1 4.6/25, ms1mx4.4/39, Error ellipse: s-maj=18.7km s-min=9.3km az=108.0*
MOS **22** *22:05:12.0±1.2, 3.˝35S×146.˝43E, h33km, mb5.4/26, MS4.9/5, Error ellipse: s-maj=12.6km s-min=7.2km az=102.2*
GCMT **22** *22:05:14.3±0.1, 3.˝31S×146.˝57E, h15km, MW5.2, Moment Tensor Solution. s61,c80; s96,c167; Moment tensor: Scale 10^{16}Nm; M_{rr}0.24±.14; M_{tt}0.13±.12; $M_{\phi\phi}$-0.36±.14; $M_{r\theta}$-0.24±.39; $M_{r\phi}$7.63±.09; $M_{\theta\phi}$-2.24±.39; Best double couple: $M_0$8.00000×10^{16} NP1:ϕ_s271.00000°, δ74.00000°, λ2.00000°. NP2:ϕ_s181.00000°, δ88.00000°, λ164.00000°. Principal axes: T 7.9100, Plg13.0000°, Azm135.0000°; N 0.1000, Plg73.0000°, Azm354.0000°; P -8.0100, Plg10.0000°, Azm227.0000°; Data Used: II IU IC G CN.*
NEIC **22** *22:05:15.6±1.6, 3.˝45S×146.˝48E, h47km±16km, mb5.2/32 Error ellipse: s-maj=10.1km s-min=8.8km az=142.0*
DJA **22** *22:05:17.2±2.3, 3.˝S±7.˝×14.˝6E±.˝, h16km±16km, M5.0/24, mB5.5/12, mb4.9/24, MLv5.0/1, Mw(mB)4.9/12*
ISC 22 22:05:14.0±0.5, 3.˝41S±0.˝04×146.˝55E±0.˝06, h30km±3km, h30km:pP-P, n203, σ1.9/97/219, mb5.0/85, MS4.7/45, 3C-5D, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**5.90**	**279**	P	**Pn**	**22 06 37.5**	**-2.0**
	136nm,0.6s,22μm1.4nm						
PMG	**Port Moresby**	**5.99**	**174**	*e*Pn	**Pn**	**22 06 39.1**	**-1.5**
PMG				*e*Sn	**Sn**	**22 07 47.2**	**-1.0**
PMG	**Port Moresby**	**5.99**	**174**	P	**Pn**	**22 06 38.9**	**-1.7**
PMG	**Port Moresby**	**5.99**	**174**	Pn	**Pn**	**22 06 38.9**	**-1.7**
	6.8nm,0.3s,baz=18,slow=4.9,SNR=12						
PMG				Sn	**Sn**	**22 07 51.3**	**+3.1**
	baz=7.5,slow=17,SNR=2.5						
COEN	**Coen**	**10.99**	**197**	*e*Pn	**Pn**	**22 07 49.6**	**+0.2**
HNR	**Honiara**	**14.59**	**115**	Pn	**Pn**	**22 08 41.0**	**+2.4**
HNR	**Honiara**	**14.59**	**115**	Pn	**Pn**	**22 08 41.0**	**+2.4**
	baz=225,slow=17,SNR=4.1						
HNR				LR	LR	22 13 38.8	
	comp=Z,838nm,19.6s,baz=119,slow=34						
CTA	**Charters Tower**	**16.58**	**181**	Pn	**P**	**22 09 06.0**	**-0.7**
CTA	**Charters Tower**	**16.58**	**181**	Pn	**P**	**22 09 06.0**	**-0.7**
	0.6nm,0.3s,baz=349,slow=14,SNR=10.0						
CTAO	**Charters Tower**	**16.58**	**181**	*e*P	**P**	**22 09 05.8**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,141nm,1.5s						
CTAO	**Charters Tower**	**16.58**	**181**	*e*Pn	**P**	**22 09 05.8**	**-0.9**
	comp=Z,141nm,1.5s						
LBMI	**Labuha**	**19.23**	**278**	P	Pn	22 09 44.0	+6.9
GAMI	**Galela, Maluku**	**19.46**	**285**	P	**Pn**	**22 09 42.0**	**+2.1**
TNTI	**Ternate**	**19.62**	**282**	P	**Pn**	**22 09 42.8**	**+1.1**
WRAB	**Tennant Creek**	**20.28**	**215**	P	**P**	**22 09 46.0**	**-1.4**
	comp=Z,746nm,0.8s,SNR=54						
WRAB	**Tennant Creek**	**20.28**	**215**	*e*P	**P**	**22 09 46.7**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,106nm,0.9s						
WRAB	**Tennant Creek**	**20.28**	**215**	*e*P	**P**	**22 09 46.6**	**-0.7**
	comp=Z,106nm,0.9s						
WRA	**Warramunga Arr**	**20.29**	**215**	P	**P**	**22 09 46.2**	**-1.3**
WRA				S	Sn	22 13 36.5	-1.1
WRA	**Warramunga Arr**	**20.29**	**215**	P	**P**	**22 09 46.2**	**-1.3**
	comp=Z,43nm,0.9s,baz=41,slow=11,SNR=136						
WRA				S	Sn	22 13 36.5	-1.1
	comp=Z,0.9nm,0.8s,baz=34,slow=20,SNR=2.5						
WRA				LR	LR	22 18 44.0	
	comp=Z,2μm,18.4s,baz=40,slow=40						
EIDS	**Eidsvold**	**22.26**	**169**	*e*P	**P**	**22 10 08.7**	**0.0**
	comp=Z,595nm,2.5s						
KMSI	**Cibinong**	**22.90**	**280**	P	**P**	**22 10 19.3**	**+3.7**
DAV	**Davao City (W)**	**23.38**	**296**	LR	LR	22 19 21.8	
	comp=Z,833nm,18.3s,baz=106,slow=37						
ASAR	**Alice Springs**	**23.55**	**210**	P	**P**	**22 10 20.7**	**-1.4**
ASAR				S	**S**	**22 14 38.0**	**+3.6**
ASAR	**Alice Springs**	**23.55**	**210**	P	**P**	**22 10 20.7**	**-1.4**
	comp=Z,20nm,0.8s,baz=42,slow=7.7,SNR=98						
ASAR				S	**S**	**22 14 38.0**	**+3.6**
	comp=Z,2.4nm,1.1s,baz=24,slow=18,SNR=4.3						
ASAR				LR	LR	22 20 31.1	
	comp=Z,3μm,18.7s,baz=36,slow=39						
LUWI	**Luwuk**	**23.87**	**275**	P	**P**	**22 10 24.2**	**-1.0**
	comp=Z,271nm,1.3s,comp=Z,3μm						
BBSI	**Bau Bau**	**23.99**	**264**	P	**P**	**22 10 22.5**	**-3.8**
	comp=Z,58nm,1.5s,comp=Z,1μm						
MRSI	**Marisa**	**24.89**	**278**	P	**P**	**22 10 33.9**	**-0.6**
	comp=Z,76nm,1.1s,comp=Z,665nm						
FITZ	**Fitzroy Crossi**	**25.15**	**233**	P	**P**	**22 10 34.9**	**-1.9**
FITZ	**Fitzroy Crossi**	**25.15**	**233**	P	**P**	**22 10 34.9**	**-1.9**
	comp=Z,38nm,1.0s,baz=56,slow=8.0,SNR=34						
FITZ				LR	LR	22 21 21.2	
	comp=Z,3μm,18.1s,baz=52,slow=39						
BSSI	**Bau Bau, Buton**	**26.10**	**263**	P	**P**	**22 10 45.8**	**+0.3**
	comp=Z,66nm,1.2s,comp=Z,731nm						
BKSI	**Bulukumba**	**26.41**	**265**	P	**P**	**22 10 50.3**	**+2.0**
	comp=Z,20nm,1.2s						
TTSI	**Tana Toraja**	**26.69**	**270**	P	**P**	**22 10 53.1**	**+2.3**
	comp=Z,29nm,1.5s,comp=Z,2μm						
KAPI	**Kappang**	**26.77**	**266**	*e*P	**P**	**22 10 53.5**	**+1.9**
KAPI	**Kappang**	**26.77**	**266**	P	**P**	**22 10 48.5**	**-3.0**
	comp=Z,26nm,1.4s,comp=Z,409nm						
KAPI	**Kappang**	**26.77**	**266**	P	**P**	**22 10 49.2**	**-2.3**
	comp=Z,5.5nm,0.4s,baz=101,slow=6.3,SNR=4.8						
DZM	**Mont Dzumac**	**26.77**	**136**	*e*P	**P**	**22 10 55.1**	**+3.5**
	comp=Z,210nm,1.5s						
DZM				*e*LR	LR	22 17 54.2	
	comp=Z,4μm,23.1s						
DZM	**Mont Dzumac**	**26.77**	**136**	P	**P**	**22 10 55.5**	**+3.9**
DZM	**Mont Dzumac**	**26.77**	**136**	P	**P**	**22 10 55.5**	**+3.9**
	comp=Z,49nm,1.1s,baz=270,slow=20,SNR=10						
DZM				LR	LR	22 19 58.7	
	comp=Z,3μm,20.3s,baz=180,slow=33						
ARMA	**Armidale**	**27.29**	**170**	*e*P	**P**	**22 10 55.4**	**-0.7**
	comp=Z,76nm,1.4s						
STKA	**Stephens Creek**	**28.70**	**189**	*e*P	**P**	**22 11 07.3**	**-1.3**
	comp=Z,25nm,2.0s						
STKA	**Stephens Creek**	**28.70**	**189**	P	**P**	**22 11 09.2**	**+0.7**
	comp=Z,12nm,0.9s,baz=5.8,slow=7.4,SNR=7.6						
STKA				LR	LR	22 23 19.6	
	comp=Z,1μm,19.7s,baz=7.5,slow=38						
MYLDM	**Lahad Datu**	**29.29**	**287**	P	**P**	**22 11 16.0**	**+2.0**
	comp=Z,46nm,1.4s						
BBOO	**Buckleboo**	**30.85**	**197**	*e*P	**P**	**22 11 27.2**	**-0.5**
	comp=Z,3μm,1.9s						
MBWA	**Marble Bar**	**31.48**	**234**	*e*P	**P**	**22 11 31.3**	**-2.1**
	comp=Z,40nm,1.4s						
KKM	**Kota Kinabalu**	**31.71**	**287**	*e*P	P	22 11 39.3	+3.7
	comp=Z,36nm,1.1s						
KKM	**Kota Kinabalu**	**31.71**	**287**	P	P	22 11 31.1	-4.5
FORT	**Forrest**	**32.34**	**211**	*e*P	**P**	**22 11 39.0**	**-1.7**
	comp=Z,48nm,0.9s						
SBUM	**Sibu**	**34.80**	**279**	P	**P**	**22 12 01.2**	**-1.2**
	comp=Z,18nm,1.6s,comp=Z,351nm						
KSM	**Kuching**	**36.55**	**277**	*e*P	**P**	**22 12 18.4**	**+1.0**
	comp=Z,40nm,1.5s						
KSM	**Kuching**	**36.55**	**277**	P	P	22 12 13.5	-3.9
JNU	**Nakatsue**	**39.25**	**339**	LR	LR	22 25 49.2	
	comp=Z,609nm,21.2s,baz=310,slow=32						
MJAR	**Matsushiro Arr**	**40.50**	**350**	P	**P**	**22 12 47.7**	**-2.6**
MJAR				PcP	**PcP**	**22 14 50.8**	**-1.9**
MJAR	**Matsushiro Arr**	**40.50**	**350**	P	**P**	**22 12 47.7**	**-2.6**
	comp=Z,2.6nm,0.8s,baz=169,slow=7.9,SNR=6.6						
MJAR				PcP	**PcP**	**22 14 50.8**	**-1.9**
	comp=Z,3.8nm,1.0s,baz=169,slow=3.2,SNR=3.0						
MAJO	**Matsushiro**	**40.50**	**350**	*e*P	**P**	**22 12 53.5**	**+3.2**
MAJO				pmax	pmax		
	comp=Z,210nm,2.3s						
MAJO	**Matsushiro**	**40.50**	**350**	*e*P	**P**	**22 12 53.5**	**+3.2**
	comp=Z,210nm,2.3s						
MAT	**Matsushiro**	**40.50**	**350**	P	**P**	**22 12 48.9**	**-1.4**
MAT				S	**S**	**22 18 57.0**	**-0.5**
SSE	**Sheshan**	**41.98**	**327**	P	**P**	**22 13 04.6**	**+2.1**
SSE				sP	sP	22 13 20.9	+5.8
SSE				S	**S**	**22 19 23.3**	**+3.9**
SSE				sS	sS	22 19 42.0	+7.8
SSE				pmax	pmax		
	comp=Z,45nm,0.9s						
SSE				pmax	pmax		
	comp=Z,130nm,4.7s						
SSE				LR	LR		
	comp=N,760nm,18.9s						
SSE				LR	LR		
	comp=E,660nm,18.9s						
SSE				LR	LR		
	comp=Z,1μm,19.2s						
TPRI	**Tanjung Pinang**	**42.22**	**275**	P	P	22 13 10.0	+5.2
AFI	**Afiamalu**	**42.43**	**107**	LR	LR	22 27 05.9	
	comp=Z,514nm,21.7s,baz=106,slow=31						
QIZ	**Qiongzhong**	**42.44**	**303**	P	**P**	**22 13 06.9**	**+0.4**
QIZ				pP	**pP**	**22 13 16.8**	**+1.3**
QIZ				S	**S**	**22 19 27.5**	**+0.8**
QIZ				pmax	pmax		
	comp=Z,14nm,1.2s						
QIZ				LR	LR		
	comp=N,470nm,20.7s						
QIZ				LR	LR		
	comp=Z,750nm,26.1s						
NJ2	**Nanjing**	**44.00**	**325**	*e*P	**P**	**22 13 20.8**	**+1.9**
NJ2				pP	**pP**	**22 13 29.6**	**+1.7**
NJ2				sP	sP	22 13 33.5	+2.0
NJ2				PP	**PcP**	**22 15 04.0**	**-0.3**
NJ2				S	**S**	**22 19 53.0**	**+3.9**
NJ2				sS	sS	22 20 07.0	+3.0
NJ2				pmax	pmax		
	comp=Z,20nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,190nm,9.8s						
NJ2				LR	LR		
	comp=N,800nm,15.9s						
NJ2				LR	LR		
	comp=E,520nm,16.0s						
NJ2				LR	LR		
	comp=Z,910nm,23.8s						
KSRS	**Korea Array**	**44.19**	**339**	P	**P**	**22 13 18.3**	**-2.0**
	comp=Z,7.2nm,1.1s,baz=154,slow=9.3,SNR=18						
KSRS				PcP	**PP**	**22 15 04.1**	**+0.3**
	comp=Z,0.8nm,0.5s,baz=152,slow=5.5,SNR=3.6						
KSRS				LR	LR	22 28 50.4	
	comp=Z,626nm,19.6s,baz=153,slow=32						
KSAR	**Wonju Array Be**	**44.20**	**339**	P	**P**	**22 13 18.3**	**-2.0**
KSAR				PcP	**PP**	**22 15 04.1**	**+0.3**
URZ	**Urewera**	**44.51**	**145**	LR	LR	22 29 34.7	
	comp=Z,788nm,18.9s,baz=309,slow=33						
UBPT	**Khong Chiam**	**44.70**	**296**	P	**P**	**22 13 23.7**	**-1.1**
	comp=Z,19nm,1.8s						
RPZ	**Rata Peaks**	**45.63**	**155**	LR	LR	22 28 47.7	
	comp=Z,891nm,21.6s,baz=321,slow=31						
IPM	**Ipoh**	**46.15**	**279**	*e*P	**P**	**22 13 37.2**	**+0.8**
	comp=Z,16nm,1.1s						
KULM	**Kulim**	**46.65**	**280**	*e*P	**P**	**22 13 40.9**	**+0.6**
	comp=Z,24nm,1.1s						
CHBT	**CHBT**	**46.76**	**291**	P	**P**	**22 13 42.3**	**+1.3**
	comp=Z,25nm,1.6s,comp=Z,898nm						
DL2	**Dalian**	**47.98**	**334**	P	P	22 13 59.3	+9.2
DL2				S	S	22 21 05.8	+20
DL2				pmax	pmax		
	comp=Z,31nm,1.3s						
DL2				pmax	pmax		
	comp=Z,68nm,7.3s						
DL2				LR	LR		
	comp=N,260nm,18.6s						
DL2				LR	LR		
	comp=E,330nm,19.5s						
DL2				LR	LR		
	comp=Z,470nm,17.3s						
GYA	**Guiyang**	**48.66**	**310**	P	**P**	**22 13 57.8**	**+2.0**
GYA				pP	pP	22 14 08.6	+3.7
GYA				PP	**PP**	**22 15 51.0**	**+1.9**
GYA				ScP	**ScP**	**22 19 12.8**	**-1.1**
GYA				S	**S**	**22 20 56.3**	**-0.2**
GYA				sS	sS	22 21 15.4	+3.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,650nm,18.8s						
GYA				LR	LR		
	comp=E,520nm,29.0s						
GYA				LR	LR		
	comp=Z,560nm,18.7s						
ENH	**Enshi**	**48.74**	**316**	*e*P	**P**	**22 13 57.1**	**+0.9**
	comp=Z,9.8nm,1.0s						
USRK	**Ussuriysk Arra**	**49.16**	**346**	P	**P**	**22 13 57.1**	**-2.0**
	comp=Z,4.6nm,0.9s,baz=135,slow=6.7,SNR=10						
USRK				LR	LR	22 32 33.4	
	comp=Z,264nm,20.3s,baz=314,slow=34						
MDJ	**Mudanjiang**	**50.17**	**344**	P	**P**	**22 14 09.1**	**+2.3**
MDJ				PP	**PP**	**22 16 01.6**	**-0.7**
MDJ				S	**S**	**22 21 20.4**	**+3.7**
MDJ				sS	sS	22 21 42.3	+11
MDJ				SS	**SS**	**22 24 53.8**	**+3.3**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,26nm,3.4s						
MDJ				LR	LR		
	comp=N,340nm,30.1s						
MDJ				LR	LR		
	comp=E,430nm,22.6s						
MDJ				LR	LR		
	comp=Z,370nm,22.9s						
CN2	**Changchun**	**50.69**	**340**	*e*P	P	22 14 14.6	+3.8
CN2				*e*S	**S**	**22 21 27.4**	**+3.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,400nm,15.0s						
CN2				LR	LR		
	comp=E,600nm,15.0s						
CN2				LR	LR		
	comp=Z,700nm,17.0s						
KMI	**Kunming**	**51.09**	**306**	P	**P**	**22 14 14.6**	**+0.2**
KMI				pmax	pmax		
	comp=Z,25nm,1.2s						
XAN	**Xi'an**	**51.42**	**320**	P	**P**	**22 14 14.3**	**-2.2**
XAN				pP	**pP**	**22 14 22.3**	**-3.4**
BJI	**Beijing**	**51.44**	**330**	P	**P**	**22 14 15.9**	**-0.6**
BJI				S	**S**	**22 21 39.3**	**+4.8**
BJI				pmax	pmax		
	comp=Z,14nm,1.2s						
BJI				pmax	pmax		
	comp=Z,77nm,3.2s						
BJI				LR	LR		
	comp=N,520nm,21.5s						
BJI				LR	LR		
	comp=E,570nm,20.6s						
BJI				LR	LR		
	comp=Z,440nm,21.8s						
CMAR	**Chiang Mai Arr**	**51.66**	**297**	P	**P**	**22 14 18.4**	**-0.2**
CMAR	**Chiang Mai Arr**	**51.66**	**297**	P	**P**	**22 14 18.4**	**-0.2**
	comp=Z,6.3nm,0.8s,baz=119,slow=5.7,SNR=23						
CMAR				LR	LR	22 37 27.3	
	comp=Z,188nm,18.6s,baz=100,slow=38						
CHTO	**Chiang Mai**	**51.78**	**297**	*e*P	**P**	**22 14 19.0**	**-0.5**
CHTO				pmax	pmax		
	comp=Z,44nm,1.3s						
CHTO	**Chiang Mai**	**51.78**	**297**	*e*P	**P**	**22 14 19.0**	**-0.5**
	comp=Z,44nm,1.3s						
CHTO	**Chiang Mai**	**51.78**	**297**	P	**P**	**22 14 18.9**	**-0.5**
	comp=Z,30nm,1.4s,comp=Z,385nm						
CD2	**Chengdu**	**53.17**	**313**	*e*P	**P**	**22 14 31.3**	**+1.7**
CD2				PcP	**PcP**	**22 15 39.0**	**+1.5**
CD2				PP	**PP**	**22 16 33.3**	**+3.4**
CD2				S	**S**	**22 21 58.4**	**-0.3**
CD2				sS	sS	22 22 22.8	+9.0
CD2				ScS	**ScS**	**22 24 14.3**	**-3.2**
CD2				pmax	pmax		
	comp=Z,40nm,1.2s						
CD2				pmax	pmax		
	comp=Z,150nm,7.2s						
CD2				LR	LR		
	comp=N,630nm,22.6s						
CD2				LR	LR		
	comp=E,410nm,17.8s						
CD2				LR	LR		
	comp=Z,580nm,21.4s						
KLR	**Kul'dur**	**53.98**	**348**	*e*P	P	22 14 30.8	-4.3
HHC	**Hu-ho-hao-te**	**54.41**	**328**	*e*P	**P**	**22 14 38.4**	**-0.2**
HHC				pP	**pP**	**22 14 48.6**	**+0.8**
HHC				sP	sP	22 14 53.0	+1.6
HHC				PP	**PP**	**22 16 42.4**	**+1.4**
HHC				S	**S**	**22 22 13.5**	**-1.8**
HHC				pmax	pmax		
	comp=Z,46nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,7.4s						
HHC				LR	LR		
	comp=N,720nm,16.7s						
HHC				LR	LR		
	comp=E,1μm,16.2s						
HHC				LR	LR		
	comp=Z,1μm,18.2s						
RAR	**Rarotonga**	**55.04**	**113**	LR	LR	22 33 08.3	
	comp=Z,608nm,21.6s,baz=34,slow=30						
BTO	**Baotou**	**55.08**	**326**	*e*P	**P**	**22 14 41.1**	**-2.3**
LZH	**Lanzhou**	**55.98**	**318**	*e*P	**P**	**22 14 50.6**	**+0.6**
LZH				pP	pP	22 15 02.1	+2.8
LZH				sP	sP	22 15 06.8	+4.0
LZH				PP	**PP**	**22 16 57.3**	**+2.2**
LZH				*e*S	**S**	**22 22 34.5**	**-2.0**
LZH				sS	sS	22 22 53.5	+1.8
LZH				pmax	pmax		
	comp=Z,51nm,1.5s						
LZH				pmax	pmax		
	comp=Z,630nm,6.8s						
LZH				LR	LR		
	comp=N,630nm,16.2s						
LZH				LR	LR		
	comp=E,520nm,16.0s						
LZH				LR	LR		
	comp=Z,990nm,18.7s						
PEA0B	**Petropavlovsk-**	**57.09**	**8**	*e*P	P	22 14 53.9	-3.6
PETK	**Petropavlovsk-**	**57.09**	**8**	P	**P**	**22 14 55.5**	**-1.9**
PETK	**Petropavlovsk-**	**57.09**	**8**	P	**P**	**22 14 55.5**	**-1.9**
PETK	**Petropavlovsk-**	**57.09**	**8**	P	**P**	**22 14 55.5**	**-1.9**
	comp=Z,9.0nm,1.0s,baz=170,slow=9.0,SNR=7.9						
GTA	**Gaotai**	**60.48**	**320**	*e*P	**P**	**22 15 20.3**	**-1.2**
GTA				pP	**pP**	**22 15 32.6**	**+1.8**
GTA				sP	sP	22 15 37.8	+3.5
GTA				S	S	22 23 28.5	-6.7
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,100nm,4.3s						
GTA				LR	LR		
	comp=N,290nm,18.5s						
GTA				LR	LR		
	comp=E,270nm,19.5s						
GTA				LR	LR		
	comp=Z,410nm,19.0s						
SONM	**Songino Array**	**61.94**	**331**	P	**P**	**22 15 29.8**	**-1.4**
SONM	**Songino Array**	**61.94**	**331**	P	**P**	**22 15 29.8**	**-1.4**
	comp=Z,2.9nm,0.9s,baz=144,slow=6.0,SNR=14						
SONM				LR	LR	22 41 46.6	
	comp=Z,783nm,18.6s,baz=108,slow=36						
LSA	**Lhasa**	**62.35**	**306**	P	**P**	**22 15 35.3**	**+0.6**
LSA	**Lhasa**	**62.35**	**306**	*e*P	**P**	**22 15 34.4**	**-0.3**
LSA				pmax	pmax		
	comp=Z,23nm,1.4s						
LSA	**Lhasa**	**62.35**	**306**	*e*P	**P**	**22 15 34.4**	**-0.3**
	comp=Z,23nm,1.4s						
PPT	**Papeete**	**64.09**	**108**	LR	LR	22 36 41.9	
	comp=Z,404nm,20.5s,baz=220,slow=29						
PPT2	**Papeete2**	**64.09**	**108**	*e*LR	LR	22 35 07.1	
	comp=Z,1μm,27.0s						
ODAN	**Odare**	**64.49**	**302**	*e*P	**P**	**22 15 47.6**	**-1.0**
	comp=Z,159nm,1.9s						
TBI	**Tubuai**	**64.81**	**114**	*e*S	**S**	**22 24 29.8**	**0.0**
	comp=Z,360nm,28.0s						
TBI				*e*LQ	LQ	22 32 44.8	
	comp=Z,824nm,34.2s						
TBI				*e*LR	LR	22 35 29.8	
	comp=Z,796nm,35.0s						
ZAK	**Zakamensk**	**65.17**	**331**	*i*P	**P**	**22 15 50.5**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,15nm,1.2s						
RAMN	**Ramite**	**65.19**	**302**	*e*P	**P**	**22 15 52.8**	**-0.4**
	comp=Z,56nm,1.4s						
TLY	**Talaya**	**65.86**	**332**	*e*P	**P**	**22 15 56.3**	**-0.4**
TLY				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,312nm,17.0s						
GUN	**Gumba**	**66.09**	**302**	*e*P	**P**	**22 15 58.0**	**-1.1**
	comp=Z,138nm,1.3s						
PKI	**Pulchoki**	**66.39**	**302**	*e*P	**P**	**22 16 00.4**	**-0.6**
	comp=Z,106nm,1.4s						
KKN	**Kakani**	**66.56**	**302**	*e*P	**P**	**22 16 00.7**	**-1.3**
	comp=Z,63nm,1.2s						
DMN	**Daman**	**66.66**	**302**	*e*P	**P**	**22 16 01.5**	**-1.1**
	comp=Z,158nm,1.2s						
MOY	**Mondy**	**67.10**	**331**	*e*P	**P**	**22 16 05.8**	**+1.0**
MOY				pmax	pmax		
	comp=Z,29nm,1.8s						
KOLN	**Koldanda**	**67.98**	**302**	*e*P	**P**	**22 16 09.5**	**-1.5**
	comp=Z,43nm,1.2s						
DANN	**Dangsing**	**68.01**	**302**	*e*P	**P**	**22 16 09.6**	**-1.6**
	comp=Z,88nm,1.4s						
HVS	**Khovu-Aksy**	**70.49**	**328**	*d i*P	**P**	**22 16 24.6**	**-1.3**
HVS				pmax	pmax		
	comp=Z,165nm,1.3s						
WMQ	**Urumqi**	**70.55**	**319**	P	**P**	**22 16 25.8**	**-0.6**
WMQ				pP	**pP**	**22 16 37.0**	**+1.1**
WMQ				sP	sP	22 16 41.0	+1.6
WMQ				PP	**PP**	**22 19 04.0**	**+1.0**
WMQ				S	**S**	**22 25 36.0**	**-2.1**
WMQ				ScS	**SKSac**	**22 26 23.0**	**-3.4**
WMQ				pmax	pmax		
	comp=Z,40nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.8s						
WMQ				LR	LR		
	comp=N,560nm,15.1s						
WMQ				LR	LR		
	comp=E,380nm,13.7s						
WMQ				LR	LR		
	comp=Z,430nm,26.7s						
BILL	**Bilibino**	**72.62**	**8**	*de*P	**P**	**22 16 38.1**	**-0.2**
BILL				*i* *PP	**pP**	**22 16 44.4**	**-3.4**
BILL				*e**SP	**sP**	**22 16 50.9**	**-0.4**
BILL				pmax	pmax		
	comp=Z,13nm,1.1s						
BILL	**Bilibino**	**72.62**	**8**	*e*P	**P**	**22 16 38.2**	**-0.1**
	comp=Z,23nm,1.2s						
VNDA	**Vanda**	**74.50**	**177**	P	**P**	**22 16 49.5**	**+0.3**
VNDA	**Vanda**	**74.50**	**177**	P	**P**	**22 16 49.5**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=333,slow=6.9,SNR=3.8						
VNDA				LR	LR	22 46 56.6	
	comp=Z,287nm,18.2s,baz=347,slow=34						
MK31	**Makanchi Array**	**75.23**	**320**	*i* P	**P**	**22 16 52.5**	**-1.5**
MK31				pmax	pmax		
	comp=Z,45nm,1.1s						
MKAR	**Makanchi Array**	**75.23**	**320**	P	**P**	**22 16 52.5**	**-1.6**
MKAR	**Makanchi Array**	**75.23**	**320**	P	**P**	**22 16 52.5**	**-1.6**
MKAR	**Makanch

KSH LR LR
comp=N,180nm,4.5s
KSH LR LR
comp=E,230nm,5.2s
KSH LR LR
comp=Z,260nm,5.5s
NVS Novosibirsk 77.81 328 *i* P **P 22 17 05.6 -2.8**
NVS pmax pmax
comp=Z,37nm,1.8s
NVS pmax pmax
comp=N,9.0nm,1.6s
NVS pmax pmax
comp=E,12nm,1.4s
KDAK Kodiak Island 77.85 29 LR LR 22 44 31.3
comp=E,305nm,21.2s,baz=268,slow=30
RKT Rikitea 78.08 113 *e*LR LR 22 41 38.7
comp=E,731nm,31.2s
SVW2 Sparrevohn 78.10 25 *e*P **P 22 17 10.1 +0.2**
TKM2 Tokmak 2 78.51 315 *e*P **P 22 17 13.8 +1.0**
TKM2 pmax pmax
comp=Z,19nm,1.1s
TKM2 Tokmak 2 78.51 315 *e*P **P 22 17 13.8 +1.0**
comp=Z,19nm,1.1s
KURK Kurchatov 78.88 323 P **P 22 17 12.1 -2.3**
comp=Z,146nm,1.0s,SNR=14
KURK Kurchatov 78.88 323 *ce*P **P 22 17 12.3 -2.1**
KURK pmax pmax
comp=Z,35nm,1.3s
KURK Kurchatov 78.88 323 *e*P **P 22 17 12.5 -1.9**
comp=Z,32nm,1.1s
AAK Ala-Archa 79.22 314 *e*P **P 22 17 16.3 -0.4**
AAK pmax pmax
comp=Z,31nm,1.3s
AAK Ala-Archa 79.22 314 *e*P **P 22 17 17.8 +1.1**
comp=Z,14nm,1.1s
EKS2 Erkin-Say 79.73 314 *e*P **P 22 17 18.8 -0.6**
EKS2 pmax pmax
comp=Z,18nm,1.0s
EKS2 Erkin-Say 79.73 314 *e*P **P 22 17 18.8 -0.6**
comp=Z,18nm,1.0s
RC01 Rabbit Creek A 80.61 26 *e*P **P 22 17 22.6 -1.0**
comp=Z,38nm,1.3s
PMR Palmer 81.09 26 *e*P **P 22 17 28.2 +2.2**
PMR pmax pmax
comp=Z,46nm,1.4s
PMR Palmer 81.09 26 *e*P **P 22 17 28.2 +2.2**
comp=Z,46nm,1.4s
TRF Thorofare Moun 81.39 24 *e*P **P 22 17 28.9 +1.0**
comp=Z,13nm,1.0s
SML Sawmill 81.52 26 *e*P **P 22 17 28.4 -0.1**
SML pmax pmax
comp=Z,11nm,1.0s
SML Sawmill 81.52 26 *e*P **P 22 17 28.4 -0.1**
comp=Z,11nm,1.0s
MCK McKinley 82.06 24 *e*P **P 22 17 30.2 -1.0**
MCK pmax pmax
comp=Z,67nm,1.4s
MCK McKinley 82.06 24 *e*P **P 22 17 30.2 -1.0**
comp=Z,67nm,1.4s
KK31 Karatay Array 82.17 314 *i* P **P 22 17 30.0 -2.3**
KK31 pmax pmax
comp=Z,35nm,1.4s
KKAR Karatay Array 82.17 314 *e*P **P 22 17 31.5 -0.8**
KKAR Karatay Array 82.17 314 *e*P **P 22 17 31.5 -0.8**
DIV Divide 82.40 27 *e*P **P 22 17 33.9 +0.8**
comp=Z,42nm,1.2s
COLD Coldfoot 83.08 20 *e*P **P 22 17 37.5 +1.0**
comp=Z,41nm,1.6s
PAX Paxson 83.20 25 *e*P **P 22 17 37.1 -0.2**
PAX Paxson 83.20 25 *e*P **P 22 17 37.1 -0.2**
ILAR Eielson Array 83.30 23 P P 22 17 34.2 -3.4
ILAR Eielson Array 83.30 23 P P 22 17 34.2 -3.4
comp=Z,14nm,1.0s,baz=256,slow=5.0,SNR=30
ILAR LR LR 22 54 29.8
comp=Z,242nm,18.3s,baz=130,slow=36
MAW Mawson 84.45 202 LR LR 22 55 07.9
comp=Z,336nm,19.6s,baz=17,slow=36
BRVK Borovoye 84.50 324 P **P 22 17 42.4 -1.6**
comp=Z,137nm,1.2s,SNR=8.7
BRVK Borovoye 84.50 324 *c i*P **P 22 17 41.7 -2.3**
BRVK pmax pmax
comp=Z,32nm,1.2s
BRVK Borovoye 84.50 324 *e*P **P 22 17 42.0 -2.0**
comp=Z,31nm,1.1s
EGAK Eagle 85.60 24 *e*P **P 22 17 49.8 +0.5**
comp=Z,37nm,1.3s
SKAG Skagway 86.90 30 *e*P **P 22 17 57.4 +1.6**
comp=Z,55nm,1.4s
INK Inuvik 89.43 21 P **P 22 18 05.6 -2.0**
INK Inuvik 89.43 21 P **P 22 18 05.6 -2.0**
comp=Z,3.4nm,1.0s,baz=180,slow=13,SNR=2.4
DLBC Dease Lake 89.44 32 P **P 22 18 09.2 +1.2**
DLBC Dease Lake 89.44 32 P **P 22 18 09.2 +1.2**
comp=Z,8.4nm,1.1s,baz=210,slow=27,SNR=5.9
AB31 Akbulak array 90.34 319 *i* P P 22 18 09.3 -3.0
AB31 pmax pmax
comp=Z,7.0nm,0.7s
ABKAR Akbulak array 90.34 319 *e*P **P 22 18 09.3 -3.0**
SVE Sverdlovsk 90.59 327‖ *e*P **P 22 18 12.3 -1.0**
SVE pmax pmax
comp=Z,10.0nm,1.2s
SVE MLR MLR
comp=Z,929nm,22.0s
AKTO Aktyubinsk 91.67 320 LR LR 22 58 32.8
comp=Z,374nm,21.5s,baz=11,slow=35
ARU Arti 91.70 326 *d i*P **P 22 18 16.0 -2.4**
ARU 22 21 55.4
ARU S **SKSac 22 28 45.9 -3.1**
ARU pmax pmax
comp=Z,10.0nm,1.2s
HAWA Hanford 95.16 44 *e*P **P 22 18 34.0 -0.6**
comp=Z,38nm,0.6s
NVAR Mina Array Bea 96.14 52 P **P 22 18 39.5 -0.1**
NVAR Mina Array Bea 96.14 52 P **P 22 18 39.5 -0.1**
comp=Z,0.1nm,0.3s,baz=256,slow=3.6,SNR=4.4
NVAR LR LR 22 54 51.3
comp=Z,345nm,18.9s,baz=110,slow=31
BMO Blue Mountains 96.75 45 *e*P **P 22 18 41.6 -0.5**
BMO pmax pmax
comp=Z,14nm,1.3s
BMO Blue Mountains 96.75 45 *e*P **P 22 18 41.6 -0.5**
comp=Z,14nm,1.3s
YKA Yellowknife Ar 97.10 28 P **P 22 18 41.0 -2.1**
YKA Yellowknife Ar 97.10 28 P **P 22 18 41.0 -2.1**
comp=Z,1.5nm,0.8s,baz=275,slow=4.6,SNR=7.6
APA Apatity 101.84 339‖ *e*P **Pdif 22 19 03.0 -1.1**
APA MLR MLR
comp=Z,500nm,17.0s
PDAR Pinedale Array 102.50 47 P **Pdif 22 19 09.2 +1.2**
PDAR Pinedale Array 102.50 47 P **Pdif 22 19 09.2 +1.2**
comp=Z,1.1nm,0.9s,baz=241,slow=3.0,SNR=4.7
KOLS Kolonicke sedl 114.53 323 *e*PP PP 22 24 51.6 +3.6
OKC Ostrava-Krasne 116.52 325 AMS AMS 23 12 20.0
comp=Z,300nm,21.8s
DPC Dobruska-Polom 117.28 327 *e*PKIKP **PKPdf 22 23 58.5 +1.9**
DPC Dobruska-Polom 117.28 327 *e*PKPdf **PKPdf 22 23 58.5 +1.9**
BRG Berggiesshubel 118.29 328 *e*PKP **PKPdf 22 24 02.1 +3.7**
comp=Z,2.6nm,0.3s
BRG Berggiesshubel 118.29 328 *e*PKIKP **PKPdf 22 24 02.2 +3.7**
BRG pmax pmax
comp=Z,3.0nm,0.3s
TREC Trest 118.29 326 AMS AMS 23 14 30.0
comp=Z,400nm,21.7s
PRU Pruhonice 118.45 327 AMS AMS 23 17 00.0
comp=Z,300nm,17.5s
CLL Collm 118.53 329 *e*PKIKP **PKPdf 22 24 02.0 +3.1**
CLL *e* 22 25 12.0
CLL pmax pmax
comp=Z,3.0nm,0.9s
CLL MLR MLR
comp=Z,500nm,20.7s
CLL Collm 118.53 329 *e*(PKiKP) **PKPdf 22 24 02.0 +3.1**
comp=Z,3.0nm,0.9s
CLL *e*PP **PP 22 25 12.0 -3.8**
CLL LmV 23 16 00.0
comp=Z,500nm,20.7s
KHC Kasperske Hory 119.44 327 *e*PKIKP **PKPdf 22 24 05.2 +4.4**
KHC MLR MLR
comp=Z,300nm,20.3s
KHC Kasperske Hory 119.44 327 *e*PKPdf **PKPdf 22 24 05.2 +4.4**
KHC AMS AMS 23 16 30.0
comp=Z,300nm,20.3s
LPAZ La Paz 140.53 121 PKP **PKPdf 22 24 41.0 -1.3**
LPAZ La Paz 140.53 121 PKP **PKPdf 22 24 41.0 -1.3**
comp=Z,0.6nm,0.5s,baz=274,slow=1.9,SNR=3.1

TORD Torodi Ar. Bea 143.95 288 PKPpre PKPpre 22 24 43.5
TORD Torodi Ar. Bea 143.95 288 PKhKP PKPpre 22 24 43.5
comp=Z,6.3nm,0.9s,baz=61,slow=2.8,SNR=13
SAML Samuel 147.92 113 *e*PKPdf **PKPdf 22 24 53.8 -0.7**
DBIC Dimbokro 151.34 278 PKPbc **PKPbc 22 25 08.6 +2.7**
DBIC Dimbokro 151.34 278 PKPbc **PKPbc 22 25 08.6 +2.7**
comp=Z,12nm,1.0s,baz=18,slow=5.5,SNR=3.7

BJI **22** *22:24:09.3, 23°.90S×179°.90E, h514km, mB5.0/17, mb5.0/44*
DJA **22** *22:24:09.3±0.8, 24°S±9°×18°0E±°, h520km±12km, M5.2/36, mB5.6/18, mb5.4/36, Mw(mB)5.1/18*
ISCJB **22** *22:24:10.8±0.4, 23°.96S±0°.02×179°.93E±0°.03, h535km±5km, mb5.1/119, Error ellipse: s-maj=4.9km s-min=3.5km az=23.4*
MOS **22** *22:24:11.2±1.2, 23°.80S×179°.92E, h532km, mb5.0/19, Error ellipse: s-maj=10.0km s-min=8.8km az=48.8*
IDC **22** *22:24:11.8±0.5, 23°.85S×179°.92E, h532km±4km, mb4.5/28, mb1 4.6/30, mb1mx4.6/31, mbtmp4.5/30, Error ellipse: s-maj=7.8km s-min=6.9km az=161.0*
NEIC **22** *22:24:12.3±0.5, 23°.90S×179°.94E, h542km±6km, mb5.1/63, Error ellipse: s-maj=6.1km s-min=4.3km az=155.0*
SZGRF **22** *22:24:13.6, 23°.87S×179°.12W, h561km, South of Fiji Islands*
BGS **22** *22:24:16.1±3.7, 23°.90S×179°.94E, h542km, mb5.1(NEIC)*
ISC 22 22:24:11.0±0.3, 23°.88S±0°.04×179°.97E±0°.04, h528km±2km, h529km:pP-P,n881,σ1♀22/1058, mb5.0/119, 195C-165D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time h m s	Res ISC
RAO	**Raoul Island**	**5.67**	**161**	*e*P	**P**		**22 25 46.6**	**+1.2**
RAO				S	**S**		**22 27 02.8**	**0.0**
RAO	**Raoul Island**	**5.67**	**161**	P	**P**		**22 25 46.8**	**+1.4**
	219nm,0.3s,baz=90,slow=22,SNR=13							
RAO				S	**S**		**22 27 02.8**	**0.0**
	365nm,0.3s,baz=104,slow=22,SNR=11							
MSVF	**Nonsavu**	**6.37**	**343**	P	**P**		**22 25 53.0**	**+0.6**
	530nm,1.0s,SNR=21							
MSVF	**Nonsavu**	**6.37**	**343**	*e*P	**P**		**22 25 53.4**	**+1.0**
MSVF				*e*S	**S**		**22 27 16.7**	**+1.6**
MSVF				pmax	pmax			
	comp=Z,87nm,0.7s							
MSVF	**Nonsavu**	**6.37**	**343**	*e*P	**P**		**22 25 53.4**	**+1.0**
	comp=Z,87nm,0.7s							
MSVF				*e*S	**S**		**22 27 16.7**	**+1.6**
OUZ	**Omahuta**	**12.58**	**205**	*e*P	P		22 26 58.9	+3.4
DZM	**Mont Dzumac**	**12.59**	**276**	*e*P	**P**		**22 26 58.2**	**+2.3**
	comp=Z,489nm,1.1s							
DZM	**Mont Dzumac**	**12.59**	**276**	*e*P	**P**		**22 26 57.7**	**+1.8**
DZM	**Mont Dzumac**	**12.59**	**276**	*e*P	**P**		**22 26 58.1**	**+2.2**
DZM	**Mont Dzumac**	**12.59**	**276**	P	**P**		**22 26 57.7**	**+1.8**
	comp=Z,14nm,0.3s,baz=79,slow=16,SNR=59							
AFI	**Afiamalu**	**12.62**	**40**	*e*P	P		22 26 51.5	-4.7
	comp=Z,491nm,0.9s							
AFI				*e*S	S		22 29 03.7	-8.5
AFI	**Afiamalu**	**12.62**	**40**	P	P		22 26 52.1	-4.2
	comp=Z,39nm,0.3s,baz=28,slow=4.9,SNR=24							
AFI				S	S		22 29 01.0	-11
	comp=Z,19nm,0.3s,baz=170,slow=20,SNR=6.3							
NOUC	**Port Laguerre**	**12.71**	**275**	*e*P	**P**		**22 26 59.3**	**+2.3**
MXZ	**Matakaoa Point**	**13.71**	**186**	PN	**P**		**22 27 06.2**	**-1.0**
MKAZ	**Moumakai**	**13.82**	**196**	PN	**P**		**22 27 10.1**	**+1.8**
TOZ	**Tahuroa Road**	**14.33**	**194**	PN	**P**		**22 27 15.1**	**+1.5**
URZ	**Urewera**	**14.54**	**189**	*e*P	**P**		**22 27 13.8**	**-2.1**
URZ				S	**S**		**22 29 45.7**	**-2.6**
URZ				*e*S	S		22 29 48.2	-0.1
URZ	**Urewera**	**14.54**	**189**	PN	**P**		**22 27 13.1**	**-2.8**
URZ				SN	**S**		**22 29 46.8**	**-1.5**
URZ	**Urewera**	**14.54**	**189**	P	**P**		**22 27 14.3**	**-1.5**
	comp=Z,11nm,0.3s,baz=39,slow=2.1,SNR=51							
URZ				S	**S**		**22 29 45.7**	**-2.6**
	comp=Z,23nm,0.3s,baz=63,slow=2.1,SNR=13							
MWZ	**Matawai**	**14.56**	**188**	PN	**P**		**22 27 14.3**	**-1.9**
MWZ				SN	**S**		**22 29 47.2**	**-1.5**
RAHZ	**Arahi**	**15.19**	**189**	PN	**P**		**22 27 20.9**	**-1.7**
RAHZ				SN	**S**		**22 29 57.8**	**-2.8**
KNZ	**Kokohu**	**15.22**	**187**	PN	**P**		**22 27 21.7**	**-1.2**
KNZ				SN	**S**		**22 30 01.6**	**+0.7**
HIZ	**Hauiti**	**15.23**	**195**	PN	**P**		**22 27 24.1**	**+1.1**
FUNA	**Funafuti**	**15.29**	**357**	*e*P	**P**		**22 27 20.9**	**-3.1**
	comp=Z,193nm,0.8s							
RATZ	**Rangitukua**	**15.36**	**192**	PN	**P**		**22 27 23.0**	**-1.4**
NMHZ	**Naumai**	**15.41**	**189**	PN	**P**		**22 27 23.9**	**-1.1**
BKZ	**Black Stump Fm**	**15.52**	**190**	PN	**P**		**22 27 23.2**	**-3.0**
TWVZ	**Taurewa**	**15.63**	**193**	*e*PN	**P**		**22 27 27.0**	**-0.2**
OTVZ	**Oturere**	**15.67**	**192**	PN	**P**		**22 27 25.5**	**-2.3**
NGZ	**Ngauruhoe**	**15.69**	**193**	PN	**P**		**22 27 26.4**	**-1.6**
WHVZ	**Whangaehu Hut**	**15.80**	**193**	PN	**P**		**22 27 26.5**	**-2.7**
VRZ	**Vera Road**	**15.83**	**195**	PN	**P**		**22 27 28.9**	**-0.3**
WNVZ	**Wahianoa**	**15.84**	**193**	PN	**P**		**22 27 27.3**	**-2.3**
MOVZ	**Moawhango**	**15.89**	**192**	PN	**P**		**22 27 26.4**	**-3.5**
BHHZ	**Black Hill Sta**	**15.91**	**191**	PN	**P**		**22 27 26.1**	**-4.0**
RAEZ	**Rainy Point**	**16.07**	**196**	PN	**P**		**22 27 33.1**	**+1.4**
NWEZ	**Newall Road**	**16.20**	**197**	*e*PN	**P**		**22 27 36.0**	**+3.1**
PXZ	**Pawanui**	**16.32**	**189**	PN	**P**		**22 27 31.1**	**-2.9**
NMEZ	**Namu Road**	**16.32**	**197**	PN	**P**		**22 27 36.3**	**+2.2**
BFZ	**Birch Farm**	**17.04**	**190**	PN	**P**		**22 27 38.0**	**-3.0**
BFZ				SN	**S**		**22 30 27.6**	**-4.9**
MRZ	**Mangatainoka R**	**17.14**	**191**	PN	**P**		**22 27 38.6**	**-3.3**
MRZ				SN	**S**		**22 30 28.0**	**-6.0**
OGWZ	**Otaki Gorge**	**17.36**	**192**	PN	**P**		**22 27 40.6**	**-3.4**
KIW	**Kapiti Island**	**17.46**	**193**	PN	**P**		**22 27 42.0**	**-2.9**
DUWZ	**D'Urville Isla**	**17.62**	**195**	PN	**P**		**22 27 44.5**	**-1.8**
MTW	**Mount Morrison**	**17.63**	**191**	PN	**P**		**22 27 43.6**	**-2.8**
CAW	**Cannon Point**	**17.66**	**192**	PN	**P**		**22 27 45.1**	**-1.6**
TCW	**Tory Channel**	**17.93**	**194**	PN	**P**		**22 27 47.7**	**-1.5**
SNZO	**South Karori**	**17.93**	**193**	*e*P	**P**		**22 27 48.3**	**-0.8**
	comp=Z,206nm,0.6s							
SNZO				*e*S	**S**		**22 30 44.5**	**-2.4**
QRZ	**Quartz Range**	**18.02**	**199**	PN	**P**		**22 27 50.3**	**+0.4**
PLWZ	**Palliser**	**18.08**	**191**	PN	**P**		**22 27 48.4**	**-2.1**
NNZ	**Nelson**	**18.15**	**196**	PN	**P**		**22 27 49.9**	**-1.2**
NNZ				SN	**S**		**22 30 45.7**	**-4.7**
TUWZ	**Tuamarina**	**18.21**	**195**	PN	**P**		**22 27 50.8**	**-0.9**
BSWZ	**Blackbirch Sta**	**18.50**	**195**	*e*PN	**P**		**22 27 53.8**	**-0.5**
THZ	**Tophouse**	**18.78**	**197**	*e*PN	**P**		**22 27 55.9**	**-1.1**
THZ				SN	**S**		**22 30 56.8**	**-4.0**
DSZ	**Denniston Nort**	**19.07**	**199**	PN	**P**		**22 27 59.8**	**+0.2**
KHZ	**Kahutara**	**19.24**	**195**	*e*P	**P**		**22 28 00.5**	**-0.6**
	comp=Z,214nm,0.7s							
KHZ				*e*S	**S**		**22 31 05.3**	**-2.8**
KHZ	**Kahutara**	**19.24**	**195**	PN	**P**		**22 28 00.3**	**-0.8**
LTZ	**Lake Taylor**	**19.90**	**197**	PN	**P**		**22 28 05.9**	**-1.2**
OXZ	**Oxford**	**20.47**	**197**	PN	**P**		**22 28 10.8**	**-1.4**
WVZ	**Waitaha Valley**	**20.61**	**200**	PN	**P**		**22 28 12.4**	**-1.1**
MQZ	**McQueen's Vall**	**20.67**	**195**	PN	**P**		**22 28 13.2**	**-0.9**
RPZ	**Rata Peaks**	**21.10**	**198**	*e*P	**P**		**22 28 17.7**	**-0.2**
RPZ				S	**S**		**22 31 36.2**	**-1.6**
RPZ				ScP	**ScP**		**22 34 48.0**	**-0.4**
RPZ	**Rata Peaks**	**21.10**	**198**	PN	**P**		**22 28 16.6**	**-1.4**
RPZ	**Rata Peaks**	**21.10**	**198**	P	**P**		**22 28 17.1**	**-0.8**
	comp=Z,141nm,0.5s,baz=4.7,slow=1.8,SNR=48							
RPZ				S	**S**		**22 31 36.2**	**-1.6**
	comp=Z,22nm,0.8s,baz=100,slow=11,SNR=3.7							
RPZ				ScP	**ScP**		**22 34 48.0**	**-0.4**
	comp=Z,7.9nm,0.8s,baz=351,slow=13,SNR=4.2							
FOZ	**Fox Glacier**	**21.38**	**201**	PN	**P**		**22 28 18.8**	**-1.7**
LBZ	**Lake Benmore**	**21.97**	**199**	PN	**P**		**22 28 24.1**	**-1.7**
JCZ	**Jackson Bay**	**22.14**	**202**	PN	**P**		**22 28 26.6**	**-0.8**
ODZ	**Otahua Downs**	**22.44**	**198**	*e*P	**P**		**22 28 29.4**	**-0.5**
	comp=Z,39nm,0.7s							
WKZ	**Wanaka**	**22.73**	**200**	PN	**P**		**22 28 31.7**	**-0.9**
MLZ	**Mavora Lakes**	**23.46**	**201**	PN	**P**		**22 28 39.5**	**+0.4**
HNR	**Honiara**	**23.92**	**304**	*e*P	**P**		**22 28 43.6**	**+0.1**
HNR	**Honiara**	**23.92**	**304**	P	**P**		**22 28 42.9**	**-0.7**
	comp=Z,430nm,0.7s,baz=185,slow=2.9,SNR=23							
DCZ	**Deep Cove**	**23.93**	**203**	PN	**P**		**22 28 43.5**	**+0.4**
WHZ	**Wether Hill Ro**	**24.02**	**201**	*e*P	**P**		**22 28 44.0**	**-0.1**
	comp=Z,251nm,0.6s							
WHZ	**Wether Hill Ro**	**24.02**	**201**	PN	**P**		**22 28 44.0**	**-0.1**
ARMA	**Armidale**	**26.00**	**249**	*e*P	**P**		**22 29 04.6**	**+2.7**
	comp=Z,90nm,0.8s							
EIDS	**Eidsvold**	**26.28**	**261**	*e*P	**P**		**22 29 06.0**	**+1.6**
	comp=Z,180nm,0.6s							
PAE	**Paea**	**29.10**	**84**	*e*P	**P**		**22 29 28.9**	**-0.1**
	comp=Z,24nm,1.1s							
PPT2	**Papeete2**	**29.12**	**83**	*e*P	**P**		**22 29 29.6**	**+0.2**
	comp=Z,121nm,1.2s							
PPT	**Papeete**	**29.13**	**83**	P	**P**		**22 29 29.6**	**+0.2**

PPT	**Papeete**	**29.13**	**83**	P	**P**		**22 29 29.6**	**+0.2**
	comp=Z,54nm,0.5s,baz=286,slow=23,SNR=4.8							
TIAR	**Tiarei**	**29.34**	**83**	*e*P	**P**		**22 29 31.4**	**+0.2**
	comp=Z,204nm,1.1s							
TVO	**Taravao**	**29.36**	**84**	*e*P	**P**		**22 29 31.3**	**-0.1**
	comp=Z,79nm,0.8s							
MEH	**Mehetia**	**30.41**	**85**	*e*P	**P**		**22 29 40.4**	**-0.1**
	comp=Z,116nm,1.0s							
CTA	**Charters Tower**	**31.45**	**270**	P	**P**		**22 29 50.9**	**+1.6**
CTA				S	**S**		**22 34 20.2**	**+0.1**
CTA				ScP	**ScP**		**22 35 21.1**	**+1.4**
CTA	**Charters Tower**	**31.45**	**270**	P	**P**		**22 29 50.9**	**+1.6**
	comp=Z,361nm,0.3s,baz=95,slow=11,SNR=514							
CTA				S	**S**		**22 34 20.2**	**+0.1**
	comp=Z,5.3nm,0.8s,baz=180,slow=20,SNR=4.7							
CTA				ScP	**ScP**		**22 35 21.1**	**+1.4**
	comp=Z,14nm,1.0s,baz=114,slow=4.3,SNR=5.0							
CTAO	**Charters Tower**	**31.45**	**270**	*e*P	**P**		**22 29 50.3**	**+1.0**
CTAO				pmax	pmax			
	comp=Z,418nm,0.7s							
CTAO	**Charters Tower**	**31.45**	**270**	*e*P	**P**		**22 29 50.3**	**+1.0**
	comp=Z,418nm,0.7s							
CTAO				*e*ScP	**ScP**		**22 35 19.8**	**+0.1**
PMOR	**Pomariorio Ree**	**31.50**	**80**	*e*P	**P**		**22 29 49.7**	**-0.1**
	comp=Z,146nm,1.1s							
TAU	**Tasmania Unive**	**32.93**	**227**	*e*P	**P**		**22 30 01.7**	**+0.1**
TAU				pmax	pmax			
	comp=Z,202nm,2.2s							
TAU	**Tasmania Unive**	**32.93**	**227**	*e*P	**P**		**22 30 01.7**	**+0.1**
	comp=Z,202nm,2.2s							
XMAS	**Kiritimati**	**33.86**	**44**	*e*P	**P**		**22 30 09.9**	**+0.1**
	comp=Z,274nm,0.8s							
PMG	**Port Moresby**	**34.46**	**289**‖	*i*P	**P**		**22 30 15.1**	**+0.3**
	comp=Z,502nm,0.9s							
PMG				ScP	**ScP**		**22 35 32.0**	**+1.6**
PMG	**Port Moresby**	**34.46**	**289**	P	**P**		**22 30 15.2**	**+0.3**
	comp=Z,579nm,1.0s,comp=Z,5μm							
PMG	**Port Moresby**	**34.46**	**289**	P	**P**		**22 30 15.4**	**+0.5**
	comp=Z,463nm,0.8s,baz=103,slow=4.9,SNR=102							
PMG				ScP	**ScP**		**22 35 32.0**	**+1.6**
	comp=Z,17nm,0.9s,baz=246,slow=10.0,SNR=3.7							
STKA	**Stephens Creek**	**34.70**	**248**	*e*P	**P**		**22 30 18.4**	**+1.7**
STKA				S	**S**		**22 35 09.1**	**-0.2**
STKA				ScP	**ScP**		**22 35 30.9**	**-0.1**
STKA	**Stephens Creek**	**34.70**	**248**	P	**P**		**22 30 17.9**	**+1.2**
	comp=Z,56nm,0.8s,baz=91,slow=9.5,SNR=75							
STKA				S	**S**		**22 35 09.1**	**-0.2**
	comp=Z,13nm,1.1s,baz=220,slow=21,SNR=3.6							
STKA				ScP	**ScP**		**22 35 30.9**	**-0.1**
	comp=Z,8.0nm,0.9s,baz=90,slow=4.0,SNR=2.9							
COEN	**Coen**	**36.08**	**279**‖	*e*P	**P**		**22 30 29.2**	**+0.8**
	comp=Z,796nm,0.9s							
BBOO	**Buckleboo**	**39.43**	**247**	*e*P	**P**		**22 30 56.0**	**+0.6**
	comp=Z,1μm,0.8s							
ASAR	**Alice Springs**	**42.01**	**261**	P	**P**		**22 31 16.7**	**+0.5**
ASAR				pP	**pP**		**22 32 52.6**	**+1.3**
ASAR				ScP	**ScP**		**22 35 59.8**	**+0.4**
ASAR				S	**S**		**22 36 55.6**	**-1.5**
ASAR	**Alice Springs**	**42.01**	**261**	P	**P**		**22 31 16.7**	**+0.5**
	comp=Z,196nm,0.8s,baz=100,slow=7.0,SNR=887							
ASAR				pP	**pP**		**22 32 52.6**	**+1.3**
	comp=Z,8.9nm,0.8s,baz=94,slow=8.4,SNR=2.5							
ASAR				ScP	**ScP**		**22 35 59.8**	**+0.4**
	comp=Z,21nm,0.8s,baz=110,slow=4.0,SNR=23							
ASAR				S	**S**		**22 36 55.6**	**-1.5**
	comp=Z,8.6nm,0.9s,baz=106,slow=14,SNR=6.0							
WRAB	**Tennant Creek**	**42.37**	**266**	P	**P**		**22 31 19.0**	**-0.1**
	comp=Z,3μm,0.9s							
WRAB	**Tennant Creek**	**42.37**	**266**‖	*i*P	**P**		**22 31 19.3**	**+0.2**
WRAB				*e*S	**S**		**22 36 58.6**	**-3.7**
WRAB				pmax	pmax			
	comp=Z,316nm,0.8s							
WRAB	**Tennant Creek**	**42.37**	**266**‖	*i*P	**P**		**22 31 19.3**	**+0.2**
	comp=Z,316nm,0.8s							
WRAB				*e*ScP	**ScP**		**22 36 03.3**	**+2.5**
WRAB				*e*S	**S**		**22 36 58.6**	**-3.7**
WRA	**Warramunga Arr**	**42.38**	**266**	P	**P**		**22 31 18.9**	**-0.2**
WRA				PcP	**PcP**		**22 33 00.9**	**+0.5**
WRA				ScP	**ScP**		**22 36 02.5**	**+1.7**
WRA				S	**S**		**22 36 58.6**	**-3.8**
WRA	**Warramunga Arr**	**42.38**	**266**	P	**P**		**22 31 18.9**	**-0.2**
	comp=Z,218nm,0.5s,baz=96,slow=8.5,SNR=1410							
WRA				PcP	**PcP**		**22 33 00.9**	**+0.5**
	comp=Z,3.9nm,0.5s,baz=104,slow=3.2,SNR=4.9							
WRA				ScP	**ScP**		**22 36 02.5**	**+1.7**
	comp=Z,21nm,0.9s,baz=99,slow=4.3,SNR=21							
WRA				S	**S**		**22 36 58.6**	**-3.8**
	comp=Z,7.9nm,0.7s,baz=99,slow=14,SNR=9.4							
FORT	**Forrest**	**46.29**	**250**‖	*e*P	**P**		**22 31 49.0**	**-0.1**
	comp=Z,470nm,0.7s							
SRPI	**Serui, Papua**	**47.61**	**291**	P	**P**		**22 31 59.2**	**-0.2**
POHA	**Pohakuloa**	**49.51**	**31**	*e*P	**P**		**22 32 13.7**	**+0.1**
KIP	**Kipapa**	**49.87**	**27**	*e*P	**P**		**22 32 17.1**	**+1.2**
KIP				pmax	pmax			
	comp=Z,131nm,1.2s							
FAKI	**Fak Fak**	**50.55**	**287**	P	**P**		**22 32 20.6**	**-0.5**
	comp=Z,187nm,1.3s,comp=Z,2μm							
GUMO	**Guam**	**50.64**	**314**	*e*P	**P**		**22 32 21.9**	**+0.2**
	comp=Z,336nm,1.0s							
FITZ	**Fitzroy Crossi**	**50.80**	**266**	P	**P**		**22 32 23.3**	**+0.4**
FITZ				ScP	**ScP**		**22 36 37.1**	**+0.9**
FITZ				S	**S**		**22 39 00.3**	**+0.7**
FITZ	**Fitzroy Crossi**	**50.80**	**266**	P	**P**		**22 32 23.3**	**+0.4**
	comp=Z,113nm,0.6s,baz=110,slow=4.9,SNR=204							
FITZ				ScP	**ScP**		**22 36 37.1**	**+0.9**
	comp=Z,8.8nm,0.9s,baz=120,slow=7.0,SNR=3.4							
FITZ				S	**S**		**22 39 00.3**	**+0.7**
	comp=Z,3.0nm,0.8s,baz=24,slow=12,SNR=6.2							
BNDI	**Bandanaira**	**51.88**	**284**	P	**P**		**22 32 29.8**	**-0.9**
	comp=Z,532nm,0.9s,comp=Z,5μm							
MSAI	**Masohi**	**53.28**	**284**	P	**P**		**22 32 40.2**	**-0.6**
	comp=Z,47nm,0.6s							
SBA	**Scott Base**	**54.40**	**183**	*e*P	P		22 32 51.4	+3.7
SBA				pmax	pmax			
	comp=Z,13nm,0.9s							
SBA	**Scott Base**	**54.40**	**183**	*e*P	P		22 32 51.4	+3.7
	comp=Z,13nm,0.9s						

MJAR Matsushiro Arr 71.87 326 P **P** 22 34 40.2 -0.2
MJAR PKKPbc PKKPdf 22 54 18.2 +8.7
MJAR Matsushiro Arr 71.87 326 P **P** 22 34 40.2 -0.2
comp=Z,20nm,0.8s,baz=166,slow=6.1,SNR=53
MJAR PKKPbc PKKPdf 22 54 18.2 +8.7
comp=Z,1.4nm,0.5s,baz=261,slow=3.7,SNR=5.0
MAJO Matsushiro 71.87 326 *e*P **P** 22 34 40.3 -0.2
MAJO pmax pmax
comp=Z,38nm,0.9s
MAJO Matsushiro 71.87 326 *e*P **P** 22 34 40.3 -0.2
comp=Z,38nm,0.9s
MAT Matsushiro 71.87 326 P **P** 22 34 40.4 -0.1
KSM Kuching 72.08 280 ⇓*i*P **P** 22 34 42.0 -0.2
comp=Z,145nm,0.7s
KSM Kuching 72.08 280 P **P** 22 34 42.4 +0.2
KSM Kuching 72.08 280 P **P** 22 34 42.1 -0.1
comp=Z,205nm,1.1s,comp=Z,2µm
JNU Nakatsue 73.49 319 *e*P **P** 22 34 50.2 +0.3
JNU Nakatsue 73.49 319 P **P** 22 34 50.1 +0.1
comp=Z,33nm,0.9s,baz=99,slow=4.9,SNR=11
TWG Pinlang 73.68 305 *e*P **P** 22 34 49.3 -1.9
comp=Z,123nm,0.6s
YULB Yu-li 73.84 305 *e*P **P** 22 34 50.1 -2.0
comp=Z,12nm,0.8s
YULB *e*PcP **PcP** 22 35 04.1 -0.3
YULB *e*pP **pP** 22 36 41.6 -1.5
NACB Ninganchiao 74.07 306 *e*P **P** 22 34 53.1 -0.3
comp=Z,97nm,0.8s
TPUB Ta-pu 74.29 305 *e*P **P** 22 34 52.1 -2.5
SSLB Suanglung 74.32 305 *e*P **P** 22 34 53.6 -1.2
TATO Taipei 74.62 307 *e*P **P** 22 34 56.4 0.0
comp=Z,178nm,0.9s
ASAJ Asahikawa 75.84 333 P **P** 22 35 04.2 +1.4
ASAJ Asahikawa 75.84 333 P **P** 22 35 04.2 +1.4
comp=Z,22nm,0.8s,baz=204,slow=8.8,SNR=9.3
QZH Quanzhou 76.75 305 ⇓*i*P **P** 22 35 09.8 +1.6
QZH pmax pmax
comp=Z,140nm,0.8s
MAW Mawson 77.76 200 P **P** 22 35 14.3 +1.3
MAW Mawson 77.76 200 P **P** 22 35 14.3 +1.3
comp=Z,16nm,0.9s,baz=111,slow=6.1,SNR=20
MYKOM Kota Tinggi 78.05 277 P **P** 22 35 16.0 +0.4
MYKOM Kota Tinggi 78.05 277 P **P** 22 35 15.2 -0.4
comp=Z,88nm,1.1s,comp=Z,918nm
KSRS Korea Array 78.21 320 P **P** 22 35 17.1 +1.2
comp=Z,17nm,0.7s,baz=135,slow=5.7,SNR=75
KSRS pP **pP** 22 37 11.1 +2.4
comp=Z,1.7nm,0.8s,baz=132,slow=6.3,SNR=3.0
KSAR Wonju Array Be 78.23 320 P **P** 22 35 17.1 +1.1
KSAR pP **pP** 22 37 11.1 +2.3
UNV Unalaska Valle 78.28 8 *e*P **P** 22 35 14.8 -1.0
KGM Kluang 78.63 277 P **P** 22 35 19.3 +0.6
PETK Petropavlovsk- 79.08 347 P **P** 22 35 20.1 0.0
PETK Petropavlovsk- 79.08 347 P **P** 22 35 20.1 0.0
PETK Petropavlovsk- 79.08 347 P **P** 22 35 20.1 0.0
comp=Z,14nm,0.8s,baz=128,slow=8.2,SNR=14
KTGM Kuala Trenggan 80.19 280 P **P** 22 35 27.9 +1.0
QIZ Qiongzhong 80.57 296 P P 22 35 32.9 +4.1
QIZ pP pP 22 37 20.4 -2.0
QIZ sP sP 22 38 12.8 -3.7
QIZ S **SKSac** 22 44 54.9 -1.9
QIZ pmax pmax
comp=Z,9.0nm,0.9s
NJ2 Nanjing 80.63 311 *e*P **P** 22 35 29.6 +0.8
NJ2 pmax pmax
comp=Z,60nm,0.8s
USRK Ussuriysk Arra 80.73 327 P **P** 22 35 30.0 +1.0
comp=Z,24nm,0.8s,baz=133,slow=3.6,SNR=40
SCI San Clemente I 81.42 48 ⇑P **P** 22 35 32.9 +0.1
baz=82
SBC Santa Barbara 81.49 47 ⇑P **P** 22 35 33.9 +0.7
baz=82
PKM Peak Mountain 81.69 46 ⇑P **P** 22 35 35.2 +0.7
baz=82,SNR=5.4
IPM Ipoh 81.73 279 *e*P **P** 22 35 35.5 +0.5
comp=Z,73nm,0.7s
IPM *e*pP **pP** 22 37 29.1 +0.2
IPM Ipoh 81.73 279 P **P** 22 35 36.2 +1.2
IPM Ipoh 81.73 279 P **P** 22 35 34.4 -0.6
comp=Z,119nm,1.0s,comp=Z,986nm
CIS Catalina Islan 81.76 48 ⇑P **P** 22 35 35.0 +0.3
baz=82
SAO San Andreas Ge 81.76 44 *e*P **P** 22 35 35.8 +1.2
SAO San Andreas Ge 81.76 44 *e*P **P** 22 35 35.8 +1.2
SMMC Simmler 81.82 46 ⇑P **P** 22 35 36.0 +1.1
baz=82
PTRM Twisselman Ran 81.89 45 *e*P P 22 35 40.5 +5.2
CHGN Chignik 81.94 12 *e*P **P** 22 35 34.6 -0.3
FMP Fort Macarthur 82.02 48 ⇓P **P** 22 35 36.5 +0.6
baz=82
MDJ Mudanjiang 82.23 326 P **P** 22 35 38.0 +1.3
MDJ pP **pP** 22 37 34.3 +3.3
MDJ PP **PP** 22 38 56.3 +1.1
MDJ S **S** 22 45 07.3 -1.0
MDJ SS **SS** 22 50 44.1 -0.3
MDJ pmax pmax
comp=Z,46nm,1.0s
MDJ pmax pmax
comp=Z,79nm,6.4s
MDJ Mudanjiang 82.23 326 *e*P **P** 22 35 37.1 +0.4
comp=Z,30nm,0.8s
OSI Osito Adit 82.25 47 ⇑P **P** 22 35 38.0 +0.8
baz=82
DECC Green Verdugo 82.30 47 ⇑P **P** 22 35 37.6 +0.2
baz=82
109C Camp Elliot, M 82.36 49 ⇑P **P** 22 35 38.1 +0.4
baz=83
KULM Kulim 82.41 279 *e*P **P** 22 35 38.6 +0.2
comp=Z,34nm,0.6s
KULM Kulim 82.41 279 P **P** 22 35 39.2 +0.8
KULM Kulim 82.41 279 P **P** 22 35 38.0 -0.4
comp=Z,74nm,1.0s,comp=Z,630nm
MWC Mount Wilson 82.47 48 *e*P **P** 22 35 39.2 +0.8
MWC pmax pmax
comp=Z,51nm,1.4s
MWC Mount Wilson 82.47 48 *e*P **P** 22 35 39.2 +0.8
comp=Z,51nm,1.4s
ARVC Arvin 82.48 46 ⇑P **P** 22 35 38.7 +0.5
baz=83
HABR Khabarovsk 82.48 332 P **P** 22 35 37.3 -0.6
HABR *e*S S 22 45 03.7 -6.8
UBPT Khong Chiam 82.49 290 P **P** 22 35 38.7 0.0
comp=Z,41nm,1.4s
BAR Barrett 82.54 49 *e*P **P** 22 35 39.2 +0.5
comp=Z,44nm,1.5s
MURC Murrieta 82.70 48 ⇑P **P** 22 35 40.0 +0.6
baz=83,SNR=5.8
VES Vestal, Richgr 82.73 46 ⇑P **P** 22 35 39.8 +0.4
baz=83
BFSC Mount Baldy Ra 82.75 48 ⇓P **P** 22 35 39.9 +0.2
baz=83,SNR=9.4
MONP Monument Peak 82.83 49 ⇓P **P** 22 35 41.0 +0.7
baz=83,SNR=20
EDW2 Edwards Air Fo 82.89 47 ⇑P **P** 22 35 41.0 +0.6
baz=83,SNR=14
RCTC Rector, Farmer 82.91 45 ⇑P **P** 22 35 40.5 +0.2
baz=83
DVTC Desert V Tower 82.93 50 ⇓P **P** 22 35 41.5 +0.9
baz=83,SNR=14
DL2 Dalian 82.93 318 P **P** 22 35 41.3 +0.9
DL2 pmax pmax
comp=Z,29nm,0.7s
PSI Prapat 82.95 276 P **P** 22 35 40.2 -1.0
PSI PP **PP** 22 38 57.3 -4.2
PSI Prapat 82.95 276 P **P** 22 35 40.2 -1.0
comp=Z,40nm,0.9s,baz=129,slow=3.2,SNR=25
PSI PP **PP** 22 38 57.3 -4.2
comp=Z,8.9nm,1.1s,baz=235,slow=6.5,SNR=4.6
KHMM Horse Mountain 82.95 39 *e*P **P** 22 35 41.0 +0.4
comp=Z,43nm,0.9s
WHN Wuhan 82.97 308 ⇓P **P** 22 35 41.3 +0.5
SYO Syowa Base 83.02 193 ⇓*i*P **P** 22 35 39.2 -1.2
SYO Syowa Base 83.02 193 ⇓*e*PcP **P** 22 35 42.0 +1.6
ISA Isabella 83.03 46 *e*P **P** 22 35 41.9 +0.8
ISA *e**PP **pP** 22 37 34.7 -0.9
ISA pmax pmax
comp=Z,51nm,0.9s
ISA Isabella 83.03 46 *e*P **P** 22 35 41.9 +0.8
comp=Z,51nm,0.9s
ISA *e*pP **pP** 22 37 34.7 -0.9
ISA Isabella 83.03 46 ⇓P **P** 22 35 41.8 +0.7
baz=83,SNR=30
CMB Columbia Colle 83.21 43 *e*P **P** 22 35 42.3 +0.4
CMB *e**PP **pP** 22 37 38.3 +1.8
CMB pmax pmax
comp=Z,54nm,0.9s
CMB Columbia Colle 83.21 43 *e*P **P** 22 35 42.3 +0.4
comp=Z,54nm,0.9s
CMB *e*pP **pP** 22 37 38.3 +1.8
PFO Pinyon Flat Ob 83.21 49 P **P** 22 35 42.8 +0.7
comp=Z,106nm,1.4s,SNR=7.8
PFO Pinyon Flat Ob 83.21 49 P **P** 22 35 42.9 +0.8
PFO Pinyon Flat Ob 83.21 49 P **P** 22 35 42.9 +0.8
comp=Z,9.6nm,0.8s,baz=262,slow=3.2,SNR=12
PFO Pinyon Flat Ob 83.21 49 ⇓P **P** 22 35 42.7 +0.6
baz=83,SNR=12
BBRC Big Bear Solar 83.26 48 ⇓P **P** 22 35 43.2 +0.7
baz=84
SWSC Sam W. Stewart 83.30 50 ⇓P **P** 22 35 43.2 +0.8
baz=84,SNR=14
OHCM Honcut 83.32 42 *e*P **P** 22 35 43.0 +0.6
LRMC Laurel Mountai 83.44 47 ⇑P **P** 22 35 43.6 +0.4
baz=84,SNR=12
WDC Whiskeytown Da 83.46 40 *e*P **P** 22 35 43.1 +0.1
WDC pmax pmax
comp=Z,52nm,1.1s
WDC Whiskeytown Da 83.46 40 *e*P **P** 22 35 43.1 +0.1
comp=Z,52nm,1.1s
RRX Edison Barstow 83.56 48 ⇓P **P** 22 35 44.2 +0.5
baz=84
CWC Cottonwood Cre 83.74 46 ⇓P **P** 22 35 45.1 +0.4
baz=84
BELC Belle Mtn. Jos 83.75 49 ⇑P **P** 22 35 45.5 +0.7
baz=84,SNR=25
CN2 Changchun 83.86 324 *e*P **P** 22 35 45.5 +0.6
CN2 *es*P **sP** 22 38 28.6 -4.8
CN2 *e*S **S** 22 45 26.9 +2.6
CN2 pmax pmax
comp=Z,60nm,1.0s
CN2 pmax pmax
comp=Z,200nm,4.0s
OHAK Old Harbor 83.86 14 *e*P **P** 22 35 44.6 +0.1
KEBM Edson Butte 83.89 38 *e*P **P** 22 35 47.0 +1.8
comp=Z,90nm,1.2s
MPMC Manual Prospec 83.91 46 ⇑P **P** 22 35 46.0 +0.4
baz=84,SNR=29
BC3 Big Chuckawall 83.93 49 ⇑P **P** 22 35 46.7 +1.0
baz=84,SNR=17
GSC Goldstone 83.93 47 *e*P **P** 22 35 45.8 +0.2
GSC pmax pmax
comp=Z,37nm,0.9s
GSC Goldstone 83.93 47 *e*P **P** 22 35 45.8 +0.2
comp=Z,37nm,0.9s
GSC Goldstone 83.93 47 ⇓P **P** 22 35 46.1 +0.5
baz=84,SNR=16
MLAC Mammoth Lakes 83.95 44 ⇓P **P** 22 35 46.6 +0.8
baz=84
MTUM Tungsten Hills 83.96 45 *e*P **P** 22 35 46.6 +0.7
HEC Hector,Ludlow 83.99 48 ⇓P **P** 22 35 46.4 +0.6
baz=84,SNR=56
TIN Tinemaha 84.00 45 ⇑P **P** 22 35 46.6 +0.7
baz=84,SNR=6.1
GLA Glamis 84.04 50 *e*P **P** 22 35 47.9 +1.8
GLA Glamis 84.04 50 *e*P **P** 22 35 47.9 +1.8
GLA Glamis 84.04 50 ⇓P **P** 22 35 47.3 +1.2
baz=84,SNR=19
YBH Yreka Blue Hor 84.09 39 *e*P **P** 22 35 46.4 +0.2
comp=Z,19nm,0.9s
YBH *e*pP **pP** 22 37 41.5 +0.4
CHBT CHBT 84.09 287 P **P** 22 35 46.3 -0.4
BEKR Beckworth 84.33 42 *e*P **P** 22 35 47.5 0.0
comp=Z,28nm,1.5s
BEKR *e*pP **pP** 22 37 45.7 +3.2
GMRC Granite Mounta 84.41 48 ⇑P **P** 22 35 48.8 +0.7
baz=85,SNR=20
IRM Iron Mountain 84.42 49 ⇓P **P** 22 35 48.9 +1.0
baz=85,SNR=28
HUMO Hull Mountain 84.50 39 *e*P **P** 22 35 48.6 +0.4
HUMO *e*pP **pP** 22 37 44.5 +1.3
KLR Kul'dur 84.50 331 *e*P **P** 22 35 45.0 -2.9
KLR pmax pmax
comp=Z,38nm,1.4s
GRAC Grapevine Rang 84.53 46 ⇑P **P** 22 35 49.2 +0.7
baz=85,SNR=11
KDAK Kodiak Island 84.53 14 P **P** 22 35 47.7 -0.1
KDAK Kodiak Island 84.53 14 P **P** 22 35 47.7 -0.1
comp=Z,11nm,0.8s,baz=300,slow=2.1,SNR=6.6
FURC Furnace Creek, 84.56 46 ⇓P **P** 22 35 49.1 +0.6
baz=85
TUQ Turquoise Mou 84.60 48 ⇑P **P** 22 35 49.4 +0.5
baz=85
SHOC Shoshone 84.62 47 ⇑P **P** 22 35 49.3 +0.4
baz=85,SNR=11
113A Mohawk Valley, 84.63 51 ⇓P **P** 22 35 49.7 +0.7
baz=85,SNR=9.9
Y12C Blythe 84.63 50 ⇑P **P** 22 35 49.9 +0.9
baz=85,SNR=11
SNAA Sanae 84.69 179 *e*P **P** 22 35 48.7 0.0
NVAR Mina Array Bea 84.76 44 P **P** 22 35 50.1 +0.4
NVAR pP **pP** 22 37 44.2 -0.7
NVAR PP **PP** 22 39 18.6 +2.7
NVAR Mina Array Bea 84.76 44 P **P** 22 35 50.1 +0.4
comp=Z,11nm,0.7s,baz=222,slow=8.2,SNR=72
NVAR pP **pP** 22 37 44.2 -0.7
comp=Z,1.0nm,0.9s,baz=233,slow=3.9,SNR=2.1
NVAR PP **PP** 22 39 18.6 +2.7
comp=Z,2.5nm,0.9s,baz=230,slow=11,SNR=4.2
214A Organ Pipe Nat 84.88 52 ⇓P **P** 22 35 51.3 +1.0
baz=85
LDFC Landfair 84.96 48 *e*P **P** 22 35 52.3 +1.7
comp=Z,92nm,0.9s
NEE2 Needles Airpor 85.12 49 ⇑P **P** 22 35 52.0 +0.7
baz=85
PDMCI Parker Dam,Lak 85.20 49 ⇑P **P** 22 35 52.6 +0.9
baz=85,SNR=12
Z14A Wintersburg 85.53 51 ⇑P **P** 22 35 54.5 +1.1
baz=86,SNR=12
MOD Modoc 85.61 40 *e*P **P** 22 35 54.2 +0.5
Y14A Wickenburg 85.80 50 ⇑P **P** 22 35 55.4 +0.7
baz=86,SNR=13
W13A Hualapai Mount 85.81 49 ⇑P **P** 22 35 55.6 +0.7
baz=86,SNR=26
FRIS Frissel Point 86.00 38 P **P** 22 35 56.1 +0.5
ENH Enshi 86.41 305 *e*P **P** 22 35 57.7 +0.1
comp=Z,72nm,0.9s
ENH *e*pP **pP** 22 37 52.7 -0.6
R11A Troy Canyon, C 86.46 45 ⇑P **P** 22 35 58.2 +0.3
baz=87,SNR=13
TUC Tucson 86.53 52 *e*P **P** 22 35 58.9 +0.7
TUC *e**PP **pP** 22 37 56.9 +2.9
TUC Tucson 86.53 52 *e*P **P** 22 35 58.9 +0.7
TUC *e*pP **pP** 22 37 56.9 +2.9
GYA Guiyang 86.71 301 P **P** 22 36 01.3 +2.0
GYA pP **pP** 22 37 54.3 -0.8
GYA sP **sP** 22 38 45.0 -3.6
GYA PP **PP** 22 39 33.5 +1.9
GYA SKS **SKSac** 22 45 37.8 +1.8
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,140nm,6.2s
WVOR Wild Horse Val 86.91 41 *e*P **P** 22 36 00.1 +0.2
WVOR *e**PP **pP** 22 37 56.8 +1.1
WVOR pmax pmax
comp=Z,61nm,1.4s
WVOR Wild Horse Val 86.91 41 *e*P **P** 22 36 00.1 +0.2
comp=Z,60nm,1.4s
WVOR *e*pP **pP** 22 37 56.8 +1.1
RSO Redoubt South 86.93 13 *e*P **P** 22 35 59.1 -0.5
BJT Baijiatuau 86.99 316 *e*P **P** 22 36 01.1 +1.0
comp=Z,14nm,0.6s
BJI Beijing 87.00 316 P **P** 22 36 00.8 +0.7
BJI S **S** 22 45 58.3 +3.8
BJI pmax pmax
comp=Z,26nm,0.9s
BJI pmax pmax
comp=Z,140nm,4.7s
VIPM Ingram Point 87.02 38 P **P** 22 36 01.0 +0.7
VIPM Ingram Point 87.02 38 P **P** 22 36 01.0 +0.7
NLWA Neilton Lookou 87.08 34 *e*P **P** 22 36 01.8 +1.4
comp=Z,28nm,1.2s
X16A Lo Mia Camp, P 87.15 50 ⇓P **P** 22 36 02.1 +0.9
baz=87,SNR=19
319A Douglas 87.16 54 ⇑P **P** 22 36 02.8 +1.5
baz=87
TDL Tradedollar La 87.28 36 P **P** 22 36 02.4 +0.9
CCUT Cedar City 87.49 47 *e*P **P** 22 36 03.8 +1.0
CCUT *e*pP **pP** 22 37 59.7 +0.8
ARUT Antelope Range 87.56 47 *e*P **P** 22 36 02.4 -0.7
ARUT pmax pmax
comp=Z,11nm,1.0s
ARUT Antelope Range 87.56 47 *e*P **P** 22 36 02.4 -0.7
comp=Z,11nm,1.0s
U15A North Rim 87.61 48 ⇑P **P** 22 36 04.4 +1.0
baz=88,SNR=48
HDW Hoodsport 87.67 35 P **P** 22 36 04.2 +1.0
320A Kipp Ranch, An 87.70 54 ⇓P **P** 22 36 05.4 +1.6
baz=88
SPU Mount Spurr 87.73 13 *e*P **P** 22 36 02.0 -1.1
LON Longmire 87.75 36 *e*P **P** 22 36 04.0 +0.4
LON pmax pmax
comp=Z,14nm,0.8s
LON Longmire 87.75 36 *e*P **P** 22 36 04.0 +0.4
comp=Z,14nm,0.8s
WUAZ Wupatki 87.77 50 *e*P **P** 22 36 05.2 +1.1
comp=Z,36nm,1.4s
WUAZ Wupatki 87.77 50 ⇑P **P** 22 36 04.7 +0.7
baz=88,SNR=7.4
WPW White Pass 87.86 36 P **P** 22 36 05.0 +0.8
220A Playas Peak, P 87.98 54 ⇓P **P** 22 36 06.4 +1.2
baz=88,SNR=24
ELK Elko 88.02 43 *e*P **P** 22 36 05.6 +0.3
comp=Z,26nm,1.3s
TRW Toppenish Ridg 88.15 37 P **P** 22 36 06.3 +0.9
120A U Bar Ranch, L 88.22 53 ⇑P **P** 22 36 07.6 +1.3
baz=88,SNR=18
X18A Snowflake 88.26 51 ⇓P **P** 22 36 07.3 +0.9
baz=88,SNR=6.2
Z20A Nine Sixteen R 88.53 53 ⇓P **P** 22 36 09.0 +1.4
baz=89,SNR=25
221A Mesquite Ranch 88.58 54 ⇑P **P** 22 36 09.4 +1.4
baz=89,SNR=6.2
XAN Xi'an 88.71 308 P **P** 22 36 09.6 +1.3
XAN pP **pP** 22 38 01.4 -3.4
XAN sP **sP** 22 38 53.1 -5.0
XAN pmax pmax
comp=Z,15nm,0.8s
W18A Petrified Fore 88.71 51 ⇓P **P** 22 36 09.1 +0.6
baz=89
PMR Palmer 88.73 14 *e*P **P** 22 36 07.6 -0.1
PMR Palmer 88.73 14 *e*P **P** 22 36 07.6 -0.1
HAWA Hanford 88.77 37 *e*P **P** 22 36 09.2 +0.9
comp=Z,40nm,0.9s
MSU Marysvale 88.79 47 *e*P **P** 22 36 10.0 +1.1
MSU Marysvale 88.79 47 *e*P **P** 22 36 10.0 +1.1
121A Cookes Peak, D 88.83 54 ⇓P **P** 22 36 10.3 +1.1
baz=89,SNR=10
Y20A Horse Springs, 89.08 52 ⇑P **P** 22 36 11.5 +1.2
baz=89,SNR=38
BMO Blue Mountains 89.12 39 *e*P **P** 22 36 09.8 -0.3
BMO pmax pmax
comp=Z,25nm,1.4s
BMO Blue Mountains 89.12 39 *e*P **P** 22 36 09.8 -0.3
comp=Z,25nm,1.4s
222A Williams Famil 89.13 54 ⇓P **P** 22 36 11.6 +1.1
baz=89,SNR=17
MFID Camas Ranch 89.16 41 *e*P **P** 22 36 10.7 +0.3
MFID Camas Ranch 89.16 41 ⇑P **P** 22 36 10.9 +0.5
baz=89,SNR=29
KMI Kunming 89.23 298 P **P** 22 36 12.6 +1.4
KMI pmax pmax
comp=Z,34nm,1.2s
DUG Dugway 89.27 45 *e*P **P** 22 36 11.3 +0.3
DUG *e**PP **pP** 22 38 07.5 0.0
DUG pmax pmax
comp=Z,17nm,1.3s
DUG Dugway 89.27 45 *e*P **P** 22 36 11.2 +0.3
comp=Z,17nm,1.3s
DUG *e*pP **pP** 22 38 07.5 0.0
DUG Dugway 89.27 45 ⇓P **P** 22 36 11.2 +0.3
baz=90,SNR=9.4
Z21A St. Cloud Mine 89.30 53 ⇓P **P** 22 36 12.7 +1.4
baz=90,SNR=35
X20A Quemado 89.30 52 ⇑P **P** 22 36 12.3 +1.0
baz=90,SNR=22
122A Conniff Cattle 89.49 54 ⇓P **P** 22 36 13.5 +1.4
baz=90,SNR=5.3
CMAR Chiang Mai Arr 89.49 290 P **P** 22 36 14.1 +1.8
CMAR PP **PP** 22 39 52.2 -1.3
CMAR Chiang Mai Arr 89.49 290 P **P** 22 36 14.1 +1.8
comp=Z,29nm,0.9s,baz=137,slow=3.2,SNR=116
CMAR PP **PP** 22 39 52.2 -1.3
comp=Z,7.0nm,1.0s,baz=127,slow=5.7,SNR=10
223A Chaparral, Ant 89.59 55 ⇑P **P** 22 36 13.5 +1.0
baz=90
W20A Ramah 89.59 51 ⇓P **P** 22 36 13.5 +0.8
baz=90,SNR=16
Y21A Point of Rocks 89.64 52 ⇓P **P** 22 36 14.1 +1.2
baz=90,SNR=52
CHTO Chiang Mai 89.64 291 *e*P **P** 22 36 14.4 +1.4
CHTO *e* 22 39 54.3
CHTO pmax pmax
comp=Z,52nm,1.0s
CHTO Chiang Mai 89.64 291 *e*P **P** 22 36 14.4 +1.4
comp=Z,52nm,1.0s
CHTO *e**PP **PP** 22 39 54.2 -0.4
CHTO Chiang Mai 89.64 291 P **P** 22 36 13.1 +0.1
comp=Z,61nm,1.2s,comp=Z,609nm
Q16A Castle Valley 89.67 47 ⇑P **P** 22 36 13.8 +0.9
baz=90,SNR=16
X21A Alamocita Cree 89.77 52 ⇑P **P** 22 36 14.4 +0.9
baz=90,SNR=30
Z22A Elephant Butte 89.79 53 ⇑P **P** 22 36 14.4 +0.9
baz=90,SNR=32
MPU Maple Canyon 89.94 46 *e*P **P** 22 36 15.3 +1.1
V20A Brimhall 89.95 50 ⇑P **P** 22 36 14.5 +0.3
baz=90,SNR=6.1
324A Moseley Ranch, 90.03 55 ⇑P **P** 22 36 15.2 +0.5
baz=90,SNR=17
425A Indio Mountain 90.10 56 ⇓P **P** 22 36 15.8 +0.8
baz=90,SNR=22
HLID Hailey 90.10 41 *e*P **P** 22 36 15.5 +0.7
comp=Z,24nm,1.1s
HLID Hailey 90.10 41 ⇑P **P** 22 36 15.4 +0.7
baz=90,SNR=22
Y22A Socorro 90.12 53 ⇑P **P** 22 36 15.7 +0.6
baz=90,SNR=16
TRF Thorofare Moun 90.14 13 *e*P **P** 22 36 13.1 -1.3
HVU Hansel Valley 90.14 44 *e*P **P** 22 36 15.6 +0.6
HVU Hansel Valley 90.14 44 *e*P **P** 22 36 15.6 +0.6
626A Big Bend Ranch 90.18 58 ⇑P **P** 22 36 16.2 +0.8
baz=90,SNR=18
U20A Newcomb 90.20 50 ⇓P **P** 22 36 15.8 +0.4
baz=90,SNR=5.3
SRU San Rafael 90.20 47 ⇓P **P** 22 36 15.8 +0.4
baz=90,SNR=44
LAZ Ladron 90.21 52 *e*P **P** 22 36 16.2 +0.7
comp=Z,11nm,1.1s
LAZ *e*pP **pP** 22 38 11.9 -0.3
MNTX Cornudas Mount 90.22 55 *e*P **P** 22 36 15.5 +0.1
comp=Z,14nm,0.9s
MNTX *e*pP **pP** 22 38 13.2 +1.1
224A Cornudas Mount 90.30 55 ⇑P **P** 22 36 16.7 +0.8
baz=90,SNR=16
Z23A Rita Site, Whi 90.33 54 ⇓P **P** 22 36 16.5 +0.5
baz=90
X22A Bernardo 90.36 52 ⇓P **P** 22 36 17.1 +1.0
baz=91,SNR=7.3
JLU Jordanelle 90.37 45 *e*P **P** 22 36 16.9 +0.8
comp=Z,16nm,0.9s
H12A Diamond D Ranc 90.38 40 ⇑P **P** 22 36 16.3 +0.3
baz=91,SNR=19
325A Bean Ranch, Si 90.38 56 ⇑P **P** 22 36 16.7 +0.4
baz=91,SNR=17
HHC Hu-ho-hao-te 90.39 315 *e*P **P** 22 36 16.6 +0.6
HHC pP **pP** 22 38 12.8 0.0
HHC sP **sP** 22 39 02.8 -3.2
HHC SKS **SKSac** 22 45 57.9 +1.1
HHC S **S** 22 46 26.3 +0.5
HHC sS sS 22 49 46.8 -7.6
HHC pmax pmax
comp=Z,63nm,1.0s
HHC pmax pmax
comp=Z,1µm,7.9s
DAU Daniels Canyon 90.40 45 *e*P **P** 22 36 17.4 +1.1
DAU Daniels Canyon 90.40 45 *e*P **P** 22 36 17.4 +1.1
G12A Big Creek, Yel 90.43 40 ⇑P **P** 22 36 16.5 +0.3
baz=91,SNR=11
TXAR Lajitas Array 90.44 58 P **P** 22 36 17.4 +0.8
TXAR pP **pP** 22 38 14.5 +1.2
TXAR PP **PP** 22 40 00.1 -0.8
TXAR PKKPbc **PKKPbc** 22 53 41.8 +0.1
TXAR Lajitas Array 90.44 58 P **P** 22 36 17.4 +0.8
comp=Z,13nm,0.7s,baz=214,slow=6.4,SNR=152
TXAR pP **pP** 22 38 14.5 +1.2
comp=Z,2.3nm,0.9s,baz=205,slow=5.5,SNR=6.6
TXAR PP **PP** 22 40 00.1 -0.8

comp=Z,1.9nm,1.2s,baz=214,slow=10,SNR=4.5
TXAR PKKPbc **PKKPbc** **22 53 41.8 +0.1**
comp=Z,0.5nm,0.7s,baz=78,slow=3.6,SNR=7.2
526A Mary Lane Ranc 90.45 57 ⇓P P 22 36 17.3 +0.6
baz=91,SNR=16
BNM Barren Site 90.46 53 *e*P P 22 36 16.6 -0.1
comp=Z,16nm,1.3s
BNM *e*pP **pP** **22 38 14.3 +0.8**
LPM Los Pinos Moun 90.54 52 *e*P P 22 36 17.9 +0.9
MVCO Mesa Verde 90.62 49 ⇑P P 22 36 17.6 +0.1
baz=91
124A Stringfield Ra 90.64 54 ⇑P P 22 36 18.3 +0.8
baz=91,SNR=16
627A Terlingua Ranc 90.72 58 ⇑P P 22 36 18.6 +0.8
baz=91,SNR=25
W22A Albuquerque 90.73 52 ⇓P P 22 36 18.4 +0.5
baz=91
426A McDonald Obser 90.78 57 ⇓P P 22 36 18.7 +0.5
baz=91,SNR=11
Y23A Lovelace Mesa, 90.78 53 ⇓P P 22 36 18.5 +0.3
baz=91,SNR=11
HWUT Hardware Ranch 90.82 44 *e*P P 22 36 17.9 -0.2
comp=Z,11nm,0.6s
U21A Nageezi 90.83 50 ⇑P P 22 36 18.9 +0.5
baz=91,SNR=51
225A Deer Hill, Car 90.84 55 ⇓P P 22 36 19.0 +0.5
baz=91,SNR=5.8
527A Woodward Ranch 90.86 57 ⇑P P 22 36 18.9 +0.3
baz=91,SNR=16
I14A Mackay 90.88 42 ⇑P P 22 36 19.0 +0.7
baz=91,SNR=18
ANMO Albuquerque 90.97 52 *e*P P **22 36 18.9 0.0**
ANMO pP **pP** **22 38 17.6 +1.9**
ANMO Albuquerque 90.97 52 P P **22 36 18.8 -0.2**
comp=Z,9.6nm,1.0s,baz=220,slow=5.2,SNR=23
ANMO pP **pP** **22 38 17.6 +1.9**
comp=Z,1.1nm,0.6s,baz=277,slow=8.1,SNR=2.8
X23A Hourglass Bar 90.99 52 ⇑P P 22 36 19.3 +0.2
baz=91
Z24A Sheeppen Canyo 91.00 54 ⇓P P 22 36 19.5 +0.3
baz=91,SNR=7.6
E12A Beaver Dam Sad 91.01 39 ⇑P P 22 36 20.0 +1.2
baz=91
S20A Disappointment 91.03 49 ⇓P P 22 36 19.5 +0.3
baz=91,SNR=6.7
CD2 Chengdu 91.05 303 *e*P P **22 36 20.6 +1.4**
CD2 pP **pP** **22 38 15.5 -0.5**
CD2 sP **sP** **22 39 06.3 -2.9**
CD2 PP **PP** **22 40 09.3 +3.8**
CD2 SKS **SKSac** **22 46 03.6 +2.8**
CD2 S **ScS** **22 46 33.8 0.0**
CD2 sS **sS** **22 49 56.6 -4.4**
CD2 SS **SS** **22 52 57.3 +4.9**
CD2 pmax pmax
comp=Z,70nm,1.1s
CD2 pmax pmax
comp=Z,210nm,6.8s
V22A San Miguel Ran 91.11 51 ⇓P P 22 36 19.8 +0.2
baz=91
628A Black Gap, Mar 91.12 58 ⇑P P 22 36 20.2 +0.6
baz=91,SNR=19
MENT Mentasta 91.18 16 *e*P P 22 36 17.9 -1.2
T21A Navajo Lake 91.19 50 ⇓P P 22 36 20.5 +0.5
baz=91
R20A Redvale 91.19 48 ⇑P P 22 36 19.9 0.0
baz=91
NEW Newport 91.20 37 *e*P P 22 36 19.6 +0.1
NEW Newport 91.20 37 P P 22 36 18.8 -0.7
comp=Z,3.5nm,0.8s,baz=274,slow=15,SNR=5.8
NEW Newport 91.20 37 ⇓P P 22 36 19.5 -0.1
baz=92
125A Gardner Draw, 91.22 55 ⇑P P 22 36 20.5 +0.4
baz=91,SNR=8.5
Y24A Capitan 91.23 53 ⇑P P 22 36 20.7 +0.5
baz=91,SNR=21
W23A Werner Place, 91.29 52 ⇑P P 22 36 21.4 +0.9
baz=92
226B Tecolote Peak, 91.32 55 ⇓P P 22 36 20.9 +0.4
baz=92,SNR=8.2
M17A Scullys Gap (B 91.33 45 ⇑P P 22 36 20.5 0.0
baz=92,SNR=8.1
S21A Coal Bank Pass 91.34 49 ⇓P P 22 36 21.1 +0.4
baz=92,SNR=14
427A Hayter Ranch, 91.34 57 ⇓P P 22 36 21.4 +0.8
baz=92,SNR=23
U22A Llaves 91.37 51 ⇑P P 22 36 21.3 +0.5
baz=92
Z25A Roswell 91.46 54 ⇑P P 22 36 21.7 +0.5
baz=92,SNR=7.1
528A Cox Ranch, San 91.50 58 ⇑P P 22 36 22.0 +0.5
baz=92
P19A Cripple Cowboy 91.50 47 ⇓P P 22 36 21.3 -0.1
baz=92,SNR=7.9
X24A Lazy VL Ranch, 91.53 53 ⇑P P 22 36 21.6 0.0
baz=92
V23A Ortiz Mt. (NFS 91.55 51 ⇑P P 22 36 22.1 +0.5
baz=92,SNR=5.2
Q20A Ridgley Place, 91.62 48 ⇑P P 22 36 21.8 -0.1
baz=92,SNR=7.1
T22A Edith 91.64 50 ⇑P P 22 36 22.1 -0.1
baz=92,SNR=5.3
126A Clayton Basin, 91.69 55 ⇓P P 22 36 22.2 0.0
baz=92
MCMT McKenzie Canyo 91.73 41 *e*P P 22 36 22.1 -0.3
comp=Z,7.2nm,1.2s
MCMT *e*PP **PP** **22 40 08.2 -2.6**
O19A Miners Draw (B 91.74 46 ⇓P P 22 36 22.4 0.0
baz=92
Y25A Mesa, Roswell 91.77 54 ⇑P P 22 36 22.8 +0.2
baz=92,SNR=6.9
C12B Naegeli Ranch, 91.79 38 ⇓P P 22 36 22.2 -0.1
baz=92,SNR=5.7
U23A El Rito 91.82 51 ⇑P P 22 36 23.3 +0.4
baz=92
P20A De Beque 91.83 47 ⇓P P 22 36 23.0 +0.2
baz=92
428A Kincaid Ranch, 91.83 57 ⇓P P 22 36 23.4 +0.4
baz=92
R21A Cimarron 91.85 49 ⇑P P 22 36 23.5 +0.4
baz=92,SNR=17
W24A Lazy 6 Ranch, 91.85 52 ⇓P P 22 36 23.0 -0.1
baz=92,SNR=11
RRI2 Red Ridge 91.88 43 *e*P P 22 36 23.0 -0.2
comp=Z,6.7nm,0.8s
529A Stev Forest Ra 91.92 58 ⇑P P 22 36 23.4 0.0
baz=92,SNR=10
F14A Wisdom 91.95 40 ⇓P P 22 36 23.2 0.0
baz=92
Z26A Caprock 92.00 54 ⇓P P 22 36 23.6 -0.1
baz=92,SNR=9.8
ILAR Eielson Array 92.02 14 P P 22 36 21.6 -1.2
ILAR PP **PP** **22 40 08.2 -4.1**
ILAR Eielson Array 92.02 14 P P 22 36 21.6 -1.2
comp=Z,2.2nm,0.8s,baz=229,slow=5.7,SNR=16
ILAR PP **PP** **22 40 08.2 -4.1**
comp=Z,3.8nm,1.0s,baz=221,slow=7.2,SNR=6.8
D13A Huson 92.02 38 ⇓P P 22 36 23.9 +0.5
baz=92
328A Wristen Ranch, 92.03 57 ⇓P P 22 36 23.8 0.0
baz=92
S22A 4UR Ranch, Cre 92.05 49 ⇓P P 22 36 24.4 +0.4
baz=92,SNR=25
I16A Newdale 92.06 42 ⇓P P 22 36 24.4 +0.6
baz=92,SNR=6.1
Q21A Lamborn Mesa, 92.06 48 ⇓P P 22 36 23.9 0.0
baz=92
X25A Clemmons Ranch 92.08 53 ⇓P P 22 36 23.8 -0.2
baz=92
B12A Libby 92.16 37 ⇓P P 22 36 24.3 +0.4
baz=92
MSO Missoula 92.17 39 ⇓P P 22 36 24.2 +0.1
baz=92
TPAW Teton Pass 92.19 43 *e*P P 22 36 24.1 -0.4
comp=Z,7.8nm,1.0s
V24A Rampart Ranch, 92.19 52 ⇓P P 22 36 24.9 +0.2
baz=92,SNR=9.1
127A Arkansas Junct 92.20 55 ⇓P P 22 36 24.6 0.0
baz=92
BILL Bilibino 92.20 355 ⇑*i*P P 22 36 23.6 0.0
BILL pmax pmax
comp=Z,32nm,0.9s
O20A White River Ci 92.24 47 ⇑P P 22 36 24.9 +0.1
baz=92
T23A Casias Ranch, 92.26 50 ⇑P P 22 36 25.1 +0.1
baz=92
M19A Rock Springs 92.32 45 ⇑P P 22 36 25.0 -0.1
baz=92
A12A Yaak River Ran 92.38 37 ⇑P P 22 36 25.3 +0.3
baz=93
429A Davenport Ranc 92.40 58 ⇑P P 22 36 25.4 -0.1
baz=93,SNR=33
IMW Indian Meadow 92.41 43 *e*P P 22 36 26.3 +0.8
Y26A Elida 92.42 54 ⇓P P 22 36 25.4 -0.2
baz=93
LOHW Long Hollow 92.47 43 *e*P P 22 36 26.0 +0.3
P21A Newcastle 92.48 48 ⇓P P 22 36 25.9 0.0
baz=93
F15A Butte 92.48 40 ⇑P P 22 36 25.7 -0.1
baz=93,SNR=5.1
L19A Farson 92.49 45 ⇑P P 22 36 25.9 +0.1
baz=93
228A UT Block 9, Go 92.53 56 ⇓P P 22 36 25.9 -0.2
baz=93
Q22A Crested Butte, 92.53 48 ⇑P P 22 36 26.3 0.0
baz=93,SNR=7.0
W25A X Bar L Ranch, 92.54 53 ⇑P P 22 36 26.0 -0.2
baz=93,SNR=14
D14A Greenough 92.56 39 ⇓P P 22 36 25.0 -1.0
baz=93,SNR=5.1
N20A Spence Gulch, 92.57 46 ⇑P P 22 36 26.5 +0.2
baz=93,SNR=17
Z27A Tatum 92.59 55 ⇓P P 22 36 26.1 -0.3
baz=93
CHMT Chamberlain Mo 92.62 39 *e*P P 22 36 26.2 -0.1
530A J-C Ranch, Com 92.62 58 ⇓P P 22 36 26.4 -0.1
baz=93,SNR=9.4
SMCO Snowmass 92.63 48 *e*P P 22 36 26.7 -0.1
comp=Z,10nm,0.8s
H16A Russell Place, 92.64 42 ⇓P P 22 36 27.0 +0.6
baz=93
BW06 Boulder Array 92.70 44 *e*P P 22 36 26.8 0.0
comp=Z,16nm,1.2s
PDAR Pinedale Array 92.70 44 P P 22 36 26.8 -0.1
PDAR pP **pP** **22 38 24.9 +1.2**
PDAR PP **PP** **22 40 15.4 -2.8**
PDAR PKKPbc **PKKPdf** **22 53 35.4 +0.6**
PDAR Pinedale Array 92.70 44 P P 22 36 26.8 -0.1
comp=Z,7.4nm,0.8s,baz=215,slow=3.6,SNR=40
PDAR pP **pP** **22 38 24.9 +1.2**
comp=Z,0.8nm,0.6s,baz=217,slow=2.3,SNR=2.4
PDAR PP **PP** **22 40 15.4 -2.8**
comp=Z,2.0nm,0.9s,baz=227,slow=5.9,SNR=6.7
PDAR PKKPbc **PKKPdf** **22 53 35.4 +0.6**
comp=Z,0.5nm,0.6s,baz=29,slow=7.5,SNR=2.5
329A Wagon Wheel Ra 92.71 57 ⇑P P 22 36 27.0 +0.1
baz=93,SNR=7.5
X26A CR and CF Fran 92.71 53 ⇑P P 22 36 26.4 -0.5
baz=93
V25A Rancho No Teng 92.71 52 ⇑P P 22 36 27.0 0.0
baz=93,SNR=11
B13A Whitefish 92.72 37 ⇓P P 22 36 26.0 -0.6
baz=93
C14A Swan Lake 92.80 38 ⇑P P 22 36 27.7 +0.7
baz=93
O21A Pagoda 92.80 47 ⇑P P 22 36 26.6 -0.7
baz=93
128A Castleberry Fa 92.83 56 ⇓P P 22 36 27.3 -0.2
baz=93
H17A Grant Village 92.89 42 ⇓P P 22 36 28.4 +0.7
baz=93
Y27A Causey 92.89 54 ⇓P P 22 36 27.3 -0.4
baz=93
631A Perdido Creek 92.89 59 ⇑P P 22 36 28.0 +0.2
baz=93,SNR=12
M20A Sweetwater, Wa 92.95 46 ⇓P P 22 36 28.1 +0.1
baz=93,SNR=6.8
R23A Moffat 92.95 49 ⇑P P 22 36 28.4 +0.3
baz=93,SNR=5.1
F16A Kennard Place, 92.97 41 ⇑P P 22 36 28.0 +0.2
baz=93
430A Baggett Ranch, 92.98 58 ⇓P P 22 36 27.7 -0.5
baz=93
P22A Eagle 92.98 48 ⇓P P 22 36 28.1 0.0
baz=93
W26A Owens Ranch, T 92.99 53 ⇓P P 22 36 27.9 -0.3
baz=93
I18A Diamond G Ranc 93.00 43 ⇑P P 22 36 28.2 0.0
baz=93
N21A Black Mountain 93.03 47 ⇑P P 22 36 28.5 +0.1
baz=93,SNR=11
732A Laxson Ranch, 93.08 60 ⇓P P 22 36 28.5 0.0
baz=93,SNR=5.9
L20A Wamsutter 93.10 45 ⇓P P 22 36 29.0 +0.3
baz=93,SNR=11
D15A Lincoln 93.11 39 ⇑P P 22 36 28.4 -0.1
baz=93
U25A Circle Dot Ran 93.12 52 ⇓P P 22 36 28.7 -0.2
baz=93,SNR=9.0
S24A Houchin Ranch, 93.12 50 ⇑P P 22 36 29.2 +0.3
baz=93,SNR=8.7
K19A Absolon Red Bu 93.18 44 ⇓P P 22 36 28.9 -0.1
baz=93
MSTX Muleshoe 93.22 54 ⇑P P 22 36 29.4 +0.2
baz=93
G17A Pierce Place, 93.26 41 ⇑P P 22 36 30.6 +1.3
baz=94
J19A Crowheart 93.27 44 ⇑P P 22 36 30.4 +1.1
baz=94
330A Mertzon 93.29 57 ⇑P P 22 36 29.4 -0.2
baz=94
V26A Tequesquite Ra 93.30 52 ⇑P P 22 36 29.6 0.0
baz=94
LZH Lanzhou 93.34 308 ⇓P P **22 36 30.5 +0.7**
LZH pP **pP** **22 38 25.0 -1.8**
LZH sP sP 22 39 14.1 -5.8
LZH PP **PP** **22 40 26.8 +3.5**
LZH SKS **SKSac** **22 46 15.3 +1.9**
LZH S **ScS** **22 46 52.8 -0.2**
LZH sS sS 22 50 15.3 -7.0
LZH pmax pmax
comp=Z,29nm,1.1s
LZH pmax pmax
comp=Z,160nm,8.5s
EGAK Eagle 93.35 16 *e*P P 22 36 28.8 -0.2
B14A Marquette Ranc 93.39 38 ⇓P P 22 36 29.1 -0.6
baz=94,SNR=9.7
O22A Kremmling 93.39 47 ⇑P P 22 36 30.0 -0.1
baz=94,SNR=7.6
431A Sonora 93.42 58 ⇓P P 22 36 29.8 -0.3
baz=94
K20A Yellowstone Ra 93.42 45 ⇓P P 22 36 29.8 -0.2
baz=94
C15A Salmond Ranch, 93.45 39 ⇑P P 22 36 29.6 -0.4
baz=94
T25A Trinidad 93.46 51 ⇓P P 22 36 30.2 -0.2
baz=94,SNR=5.6
R24A Sanders Place, 93.47 50 ⇑P P 22 36 30.5 +0.1
baz=94,SNR=7.8
W27A Bowe Ranch, En 93.49 53 ⇓P P 22 36 30.0 -0.5
baz=94
M21A Separation Pea 93.54 46 ⇓P P 22 36 30.7 0.0
baz=94
230A Sterling City 93.55 57 ⇑P P 22 36 30.5 -0.3
baz=94
H18A Shoshone NF, C 93.59 42 ⇓P P 22 36 30.3 -0.5
baz=94
U26A Atchley Ranch, 93.60 52 ⇑P P 22 36 30.8 -0.3
baz=94
F17A Fitzpatrick Pl 93.61 41 ⇑P P 22 36 30.6 -0.2
baz=94
A14A Double T Ranch 93.63 37 ⇓P P 22 36 30.5 -0.3
baz=94,SNR=6.9
D16A Dana Ranch, Ca 93.67 40 ⇑P P 22 36 31.3 +0.3
baz=94
S25A Robets Cordova 93.68 50 ⇑P P 22 36 31.2 -0.1
baz=94,SNR=11
I19A Meeteetse 93.69 43 ⇓P P 22 36 31.3 0.0
baz=94,SNR=9.1
L21A Rawlins 93.71 46 ⇑P P 22 36 31.6 +0.2
baz=94
532A Rocksprings 93.73 59 ⇓P P 22 36 31.4 -0.2
baz=94,SNR=23
N22A Wattenberg Ran 93.76 47 ⇑P P 22 36 32.1 +0.4
baz=94
B15A Bradely Ranch, 93.76 38 ⇑P P 22 36 30.8 -0.6
baz=94
E17A Martinsdale 93.78 40 ⇓P P 22 36 31.5 -0.1
baz=94
Q24A Divide 93.78 49 ⇓P P 22 36 30.7 -1.3
baz=94
331A San Angelo 93.83 58 ⇓P P 22 36 31.2 -0.8
baz=94
O23A Lake Granby, G 93.84 48 ⇑P P 22 36 32.4 +0.2
baz=94
ISCO Idaho Springs 93.85 48 *e*P P 22 36 32.6 +0.3
ISCO Idaho Springs 93.85 48 ⇑P P 22 36 32.3 +0.1
baz=94
J20A Shoshoni 93.92 44 ⇓P P 22 36 32.5 +0.2
baz=94
M22A Cedar Creek Ra 93.95 46 ⇑P P 22 36 32.8 +0.2
baz=94
JCT Junction City 93.96 59 *e*P P 22 36 32.7 +0.1
JCT Junction City 93.96 59 *e*P P 22 36 32.7 +0.1
JCT Junction City 93.96 59 ⇓P P 22 36 32.4 -0.2
baz=94
G18A Lazy EL Ranch, 93.98 42 ⇑P P 22 36 32.8 +0.3
baz=94
H19A Powell 94.01 43 ⇓P P 22 36 33.0 +0.4
baz=94
R25A Fountain Ranch 94.01 50 ⇓P P 22 36 32.8 0.0
baz=94
T26A Comanche Natio 94.06 51 ⇓P P 22 36 32.8 -0.3
baz=94
432A Menard 94.13 58 ⇑P P 22 36 32.8 -0.6
baz=94,SNR=8.5
N23A Red Feather La 94.14 47 ⇓P P 22 36 33.3 -0.2
baz=94
Z30A Sanderson Ranc 94.15 55 ⇓P P 22 36 32.9 -0.5
baz=94
231A Bronte 94.18 57 ⇑P P 22 36 33.7 +0.1
baz=94
I20A Worland 94.19 44 ⇓P P 22 36 33.7 +0.2
baz=94
D17A Six Diamond Ra 94.23 40 ⇑P P 22 36 33.5 -0.1
baz=94,SNR=8.4
U27A Thompson Grove 94.27 52 ⇑P P 22 36 33.9 -0.1
baz=94
B16A M & M Farms, S 94.30 38 ⇓P P 22 36 33.5 -0.2
baz=94
J21A Lysite 94.33 44 ⇑P P 22 36 34.2 0.0
baz=95
S26A Kim 94.34 51 ⇓P P 22 36 33.7 -0.7
baz=95,SNR=7.2
L22A Ellis Ranch, M 94.36 46 ⇓P P 22 36 35.2 +0.8
baz=95
Q25A Bedland, Calha 94.39 49 ⇑P P 22 36 34.3 -0.2
baz=95
332A Millersview 94.39 58 ⇑P P 22 36 33.9 -0.7
baz=95,SNR=10
E18A Harlowton 94.39 41 ⇑P P 22 36 34.7 +0.4
baz=95
C17A Wharram Farm, 94.44 39 ⇓P P 22 36 34.1 -0.3
baz=95,SNR=5.4
131A Roby 94.44 56 ⇑P P 22 36 35.0 +0.2
baz=95
W29A Amraillo 94.56 54 ⇓P P 22 36 34.2 -1.1
baz=95
K22A Casper 94.59 45 ⇓P P 22 36 35.4 +0.1
baz=95
F19A Roth Farm, Mol 94.62 42 ⇑P P 22 36 35.3 -0.1
baz=95
T27A Campo 94.63 52 ⇓P P 22 36 35.5 -0.1
baz=95
I21A Big Trails, Te 94.65 44 ⇑P P 22 36 35.0 -0.6
baz=95,SNR=6.8
R26A Arlington 94.67 50 ⇓P P 22 36 35.3 -0.4
baz=95,SNR=8.7
232A Coleman 94.68 57 ⇑P P 22 36 35.4 -0.5
baz=95,SNR=6.3
U28A Mallet 94.69 52 ⇓P P 22 36 35.8 -0.1
baz=95
P25A Willow Gulch B 94.71 49 ⇓P P 22 36 36.4 +0.4
baz=95
B17A L&G Farms, Che 94.75 39 ⇓P P 22 36 36.5 +0.7
baz=95
Q26A Hugo 94.89 50 ⇑P P 22 36 37.2 +0.4
baz=95
Z31A Sharp Cattle R 94.91 56 ⇓P P 22 36 36.8 0.0
baz=95
ABTX Abilene, Hawle 94.99 57 ⇑P P 22 36 37.2 -0.1
baz=95
E19A Rath Farm, Rou 95.02 41 ⇓P P 22 36 37.8 +0.7
baz=95
R27A Eads 95.12 50 ⇑P P 22 36 37.8 +0.1
baz=95
A17A Triple J Farms 95.14 38 ⇑P P 22 36 37.5 -0.1
baz=95
I22A 9 Mile Ranch, 95.20 44 ⇓P P 22 36 38.4 +0.4
baz=95
EGMT Eagleton 95.22 39 ⇑P P 22 36 37.0 -1.0
baz=96
K23A Bowen Ranch, D 95.22 45 ⇑P P 22 36 38.3 +0.1
baz=95
D19A Cripps Ranch, 95.31 40 ⇑P P 22 36 38.8 +0.4
baz=96
B18A Beardsley Farm 95.39 39 ⇓P P 22 36 38.4 -0.3
baz=96
Z32A Haskell 95.40 56 ⇓P P 22 36 39.0 -0.1
baz=96
U29A Oasis Ranch, S 95.41 53 ⇑P P 22 36 39.0 -0.1
baz=96
E20A Meyer Farm, Mu 95.43 41 ⇓P P 22 36 39.4 +0.4
baz=96
C19A Slack Wire Ran 95.49 40 ⇓P P 22 36 40.0 +0.8
baz=96
KSCO Kaye Shedlock' 95.56 50 ⇑P P 22 36 40.3 +0.5
baz=96
A18A Metzger Ranch, 95.62 39 ⇓P P 22 36 38.6 -1.1
baz=96
H22A Clearmont 95.62 44 ⇓P P 22 36 40.4 +0.5
baz=96
O26A Horse Wrangler 95.63 48 ⇓P P 22 36 40.5 +0.4
baz=96
D20A Manuel Ranch, 95.71 41 ⇑P P 22 36 40.5 +0.3
baz=96
Y32A R-V Farms, Ver 95.72 55 ⇓P P 22 36 40.5 0.0
baz=96
R28A Tribune 95.84 51 ⇓P P 22 36 41.2 +0.1
baz=96
W31A Holland Ranch, 95.85 54 ⇑P P 22 36 41.0 0.0
baz=96
B19A Brinkman Farms 95.91 39 ⇑P P 22 36 41.6 +0.6
baz=96
N26A Koester Ranch, 95.95 48 ⇓P P 22 36 41.6 +0.1
baz=96
C20A Veseth Ranch, 96.09 40 ⇑P P 22 36 42.7 +0.8
baz=96
Q28A Sharon Springs 96.14 50 ⇑P P 22 36 42.6 +0.3
baz=96
O27A Beecher Island 96.18 49 ⇑P P 22 36 42.7 +0.2
baz=96
R29A Marienthal 96.35 51 ⇓Pdiff P 22 36 43.6 +0.3
baz=97
D21A La Casta Ranch 96.39 41 ⇑Pdiff P 22 36 43.5 +0.2
baz=97
G23A Biddle 96.50 43 ⇑Pdiff P 22 36 44.6 +0.8
baz=97
L26A Underwood Farm 96.58 47 ⇑Pdiff P 22 36 44.6 +0.3
baz=97
O28A Krutsinger Ran 96.64 49 ⇑Pdiff P 22 36 45.1 +0.5
baz=97
Q29A Oakley 96.66 50 ⇓Pdiff P 22 36 45.1 +0.4
baz=97
C21A Desert Coulee 96.69 40 ⇑Pdiff P 22 36 45.9 +1.4
baz=97
ULN Ulaanbaatar 96.69 320 *e*P P 22 36 43.1 -1.6
comp=Z,3.1nm,0.9s
ULN Ulaanbaatar 96.69 320 P P 22 36 43.3 -1.4
J25A Sunshine Ranch 96.70 45 ⇓Pdiff P 22 36 45.3 +0.5
baz=97
K26A Motz Farm, Whi 96.81 46 ⇑Pdiff P 22 36 46.0 +0.8
baz=97
H24A Dirks Ranch, A 96.83 44 ⇓Pdiff P 22 36 45.4 +0.1
baz=97
T31A Randall Ranch, 96.84 53 ⇑Pdiff P 22 36 45.3 -0.1
baz=97
R30A Dighton 96.91 51 ⇑Pdiff P 22 36 46.3 +0.5
baz=97
D22A Cohagen 96.92 41 ⇑Pdiff P 22 36 46.1 +0.5
baz=97
SONM Songino Array 97.07 319 P P 22 36 46.2 -0.1
SONM sP sP 22 39 29.2 -7.5
SONM PP PP 22 40 45.8 -5.6
SONM Songino Array 97.07 319 P P 22 36 46.2 -0.1
comp=Z,1.5nm,0.8s,baz=133,slow=3.2,SNR=12
SONM sP sP 22 39 29.2 -7.5
comp=Z,1.6nm,1.1s,baz=113,slow=3.7,SNR=2.9
SONM PP PP 22 40 45.8 -5.6
comp=Z,3.5nm,1.1s,baz=128,slow=7.9,SNR=6.6
Q30A Quinter 97.24 51 ⇓Pdiff P 22 36 48.0 +0.7
baz=97
O29A 4D Ranch, Culb 97.31 49 ⇓Pdiff P 22 36 48.1 +0.5

baz=98
K27A Flueckinger Fa 97.43 47 ⇓Pdiff P 22 36 48.5 +0.5
baz=98
P30A Selden 97.45 50 ⇑Pdiff P 22 36 48.5 +0.3
baz=98
GTA Gaotai 97.66 310 *e*P P 22 36 50.0 +0.8
GTA pP **pP** 22 38 42.6 -4.0
GTA sP sP 22 39 32.5 -7.1
GTA PP **PP** 22 40 54.1 -2.0
GTA pmax pmax
comp=Z,4.0nm,0.8s
D24A Glendive 98.03 42 ⇑Pdiff P 22 36 51.5 +0.9
baz=98
C24A Savage 98.15 42 ⇑Pdiff P 22 36 52.0 +0.9
baz=98
ZAK Zakamensk 100.04 321 *e*P Pdif 22 36 59.8 +0.3
ZAK pmax pmax
comp=Z,2.0nm,1.1s
YKA Yellowknife Ar 100.36 25 PP PP 22 41 12.2 -3.3
YKA Yellowknife Ar 100.36 25 PP PP 22 41 12.2 -3.3
comp=Z,2.7nm,0.9s,baz=241,slow=7.2,SNR=9.2
ULM Lac du Bonnet 104.41 41 PP PP 22 41 42.9 -2.9
ULM Lac du Bonnet 104.41 41 PP PP 22 41 42.9 -2.9
comp=Z,1.5nm,0.4s,baz=258,slow=4.5,SNR=4.1
ZALV Zalesovo Beam 111.92 321 PKiKP **PKiKP** 22 41 44.5 -1.2
ZALV Zalesovo Beam 111.92 321 PKiKP **PKiKP** 22 41 44.5 -1.2
ZALV PP PP 22 42 32.5 -7.0
ZALV Zalesovo Beam 111.92 321 PKiKP **PKiKP** 22 41 44.5 -1.2
comp=Z,1.0nm,0.5s,baz=78,slow=0.5,SNR=6.1
ZALV PP PP 22 42 32.5 -7.0
comp=Z,0.7nm,0.6s,baz=123,slow=5.5,SNR=3.6
MKAR Makanchi Array 112.12 313 P **Pdif** 22 37 54.2 +1.0
MKAR *i* 22 41 45.2
MKAR 22 42 40.7
MKAR Makanchi Array 112.12 313 Pdif **Pdif** 22 37 54.2 +1.0
MKAR PKiKP **PKiKP** 22 41 45.2 -1.1
MKAR PP **PP** 22 42 40.7 -0.5
MKAR Makanchi Array 112.12 313 Pdiff **Pdif** 22 37 54.2 +1.0
comp=Z,0.7nm,0.7s,baz=88,slow=5.4,SNR=7.0
MKAR PKiKP **PKiKP** 22 41 45.2 -1.1
comp=Z,1.7nm,0.7s,baz=66,slow=1.1,SNR=14
MKAR PP **PP** 22 42 40.7 -0.5
comp=Z,3.6nm,1.0s,baz=106,slow=7.7,SNR=7.8
KURK Kurchatov 115.17 316*c* *i*PKIKP **PKPdf** 22 41 51.2 -0.8
KURK pmax pmax
comp=Z,6.0nm,1.0s
KURK Kurchatov 115.17 316 *e*PKPdf **PKPdf** 22 41 50.8 -1.2
KURK PKP **PKiKP** 22 41 51.1 -0.9
KURK PP **PP** 22 42 59.5 -2.7
KURK *e*PP PP 22 43 03.2 +0.9
KURBB Kurchatov Arra 115.21 316 PKP **PKPdf** 22 41 51.1 -1.0
comp=Z,3.2nm,0.7s,baz=99,slow=1.9,SNR=34
KURBB PP **PP** 22 42 59.6 -3.1
comp=Z,2.6nm,0.9s,baz=93,slow=7.0,SNR=7.8
AAK Ala-Archa 116.87 307 ⇑*i*PKIKP **PKPdf** 22 41 55.5 -0.3
AAK pmax pmax
comp=Z,4.0nm,1.2s
AAK Ala-Archa 116.87 307 PKP **PKPdf** 22 41 55.1 -0.6
AAK Ala-Archa 116.87 307 PKP **PKPdf** 22 41 55.1 -0.6
comp=Z,1.5nm,0.3s,baz=78,slow=20,SNR=3.6
EKS2 Erkin-Say 117.39 307 *e*PKIKP **PKPdf** 22 41 56.1 -0.6
EKS2 *e* 22 43 17.1
EKS2 Erkin-Say 117.39 307 *e*PKPdf **PKPdf** 22 41 56.1 -0.6
EKS2 *e*PP **PP** 22 43 17.1 -1.0
BDFB Brasilia 118.84 125 PKKPbc PKKPbc 22 52 18.4 +1.5
BDFB Brasilia 118.84 125 PKKPbc PKKPbc 22 52 18.4 +1.5
comp=Z,2.1nm,0.5s,baz=155,slow=10.0,SNR=4.3
KKAR Karatay Array 119.83 307 *e*PKIKP **PKPdf** 22 42 00.1 -1.2
KKAR *e* 22 43 32.9
KKAR Karatay Array 119.83 307 *e*PKPdf **PKPdf** 22 42 00.1 -1.2
KKAR *e*PP **PP** 22 43 32.9 -1.6
BRVK Borovoye 120.47 319*c* *i*PKIKP **PKPdf** 22 42 01.6 -0.5
BRVK pmax pmax
comp=Z,5.0nm,1.0s
BRVK Borovoye 120.47 319 *e*PKPdf **PKPdf** 22 42 01.5 -0.6
BOSA Boshof 122.41 206 PKP **PKPdf** 22 42 07.2 +0.3
BOSA PKKPbc **PKKPbc** 22 52 03.0 -1.6
BOSA Boshof 122.41 206 PKP **PKPdf** 22 42 07.2 +0.3
comp=Z,3.6nm,0.6s,baz=156,slow=8.6,SNR=8.2
BOSA PKKPbc **PKKPbc** 22 52 03.0 -1.6
comp=Z,9.6nm,1.3s,baz=233,slow=8.0,SNR=3.8
SVE Sverdlovsk 125.65 324 *e*PKIKP **PKPdf** 22 42 10.8 -1.1
SVE pmax pmax
comp=Z,10.0nm,0.8s
ARU Arti 126.85 324 *i* PKIKP **PKPdf** 22 42 13.7 -0.5
ARU 22 44 18.2
ABKAR Akbulak array 127.17 315 *e*PKPdf **PKPdf** 22 42 14.1 -1.0
ARCES ARCESS Array B 131.86 348 PKPpre PKPpre 22 42 17.3
ARCES PKP **PKPdf** 22 42 23.4 0.0
ARCES SKPbc **SKPbc** 22 44 59.8 -0.2
ARCES ARCESS Array B 131.86 348 PKhKP PKPpre 22 42 17.3
comp=Z,2.5nm,0.9s,baz=25,slow=2.4,SNR=4.4
ARCES PKP **PKPdf** 22 42 23.4 0.0
comp=Z,4.6nm,0.8s,baz=13,slow=1.6,SNR=12
ARCES SKPbc **SKPbc** 22 44 59.8 -0.2
comp=Z,9.8nm,0.9s,baz=45,slow=3.9,SNR=11
KMBO Kilima Mbogo 136.08 241 PKP **PKPdf** 22 42 32.5 -0.9
KMBO SKPbc **SKPbc** 22 45 16.7 +1.0
KMBO Kilima Mbogo 136.08 241 PKP **PKPdf** 22 42 32.5 -0.9
comp=Z,3.6nm,1.0s,baz=60,slow=20,SNR=3.5
KMBO SKPbc **SKPbc** 22 45 16.7 +1.0
comp=Z,1.5nm,0.9s,baz=48,slow=2.9,SNR=5.6
FINES FINESS Array B 138.42 341 PKPpre PKPpre 22 42 25.4
FINES PKP **PKPdf** 22 42 35.6 -0.2
FINES SKPbc **SKPbc** 22 45 20.1 -0.4
FINES FINESS Array B 138.42 341 PKhKP PKPpre 22 42 25.4
comp=Z,0.5nm,0.3s,baz=41,slow=5.8,SNR=12
FINES PKP **PKPdf** 22 42 35.6 -0.2
comp=Z,3.0nm,0.6s,baz=100,slow=3.6,SNR=16
FINES SKPbc **SKPbc** 22 45 20.1 -0.4
comp=Z,12nm,0.8s,baz=64,slow=4.4,SNR=26
KBZ Khabaz 139.75 310 PKHKP PKPpre 22 42 30.8
KBZ 22 45 37.5
KBZ Khabaz 139.75 310 PKPpre PKPpre 22 42 30.8
KBZ SKPbc **SKPbc** 22 45 25.6 +0.9
KBZ SKPab **SKPab** 22 45 37.5 +0.4
KBZ Khabaz 139.75 310 PKhKP PKPpre 22 42 30.8
comp=Z,1.2nm,0.5s,baz=135,slow=7.4,SNR=3.8
KBZ SKPbc **SKPbc** 22 45 25.6 +0.9
comp=Z,1.1nm,0.7s,baz=46,slow=5.6,SNR=3.6
KBZ SKPab **SKPab** 22 45 37.5 +0.4
comp=Z,1.8nm,0.7s,baz=95,slow=6.4,SNR=4.6
KIV Kislovodsk 139.83 311 *e*PKIKP **PKPdf** 22 42 38.9 -0.2
KIV pmax pmax
comp=Z,5.0nm,1.0s
CUKT Cukurca 140.47 300 *e*P PKPdf 22 42 34.4 -6.1
EZM Erzurum 141.76 305 *e*P **PKPdf** 22 42 40.2 -2.7
NB2 NORSAR Subarra 142.06 351 PKP **SKPdf** 22 42 37.6 -4.8
comp=Z,5.0nm,1.0s,baz=22,slow=3.7
NB2 NORSAR Subarra 142.06 351 PKP **SKPbc** 22 45 29.2 -1.0
comp=Z,7.2nm,1.2s,baz=17,slow=2.6
NOA NORSAR Array B 142.06 351 PKPpre PKPpre 22 42 38.1
NOA SKPbc **SKPbc** 22 45 29.9 -0.3
NOA NORSAR Array B 142.06 351 PKhKP PKPpre 22 42 38.1
comp=Z,2.4nm,0.8s,baz=21,slow=3.9,SNR=8.8
NOA SKPbc **SKPbc** 22 45 29.9 -0.3
comp=Z,4.1nm,0.8s,baz=15,slow=4.3,SNR=8.7
MICGM Minsk 143.02 333 *e* PKPab 22 42 40.0 -1.7
MNK Minsk 143.04 333 *e*PKHKP PKPab 22 42 40.0 -1.8
ANN Anapa 143.13 314 *i* PKHKP PKPab 22 42 41.8 -0.6
ANN pmax pmax
comp=Z,170nm,1.3s
NACGM Naroch 143.18 334 *e* PKPab 22 42 39.0 -3.3
PTK Pertek 143.47 304 *e*P **PKPdf** 22 42 45.3 -0.6
ESPY Espiye-Giresun 143.48 307 *e*P PKPab 22 42 43.6 -0.4
KONO Kongsberg 143.62 352 *e*PKIKP PKPab 22 42 42.9 -0.9
KONO Kongsberg 143.62 352 *e*PKPbc PKPab 22 42 42.9 -1.0
MALT Malatya 144.33 303 *e*P PKPab 22 42 55.6 +8.3
MALT Malatya 144.33 303 ⇑PKIKP PKPab 22 42 55.7 +8.3
MALT Malatya 144.33 303 ⇑*i*P PKPab 22 42 55.7 +8.3
RSDY Resadiye-TOKAT 144.64 307 *e*P **PKPab** 22 42 48.8 +0.3
AKASG Malin Array Be 144.94 327 PKIKP **PKPdf** 22 42 47.3 -0.4
AKASG Malin Array Be 144.94 327 PKP **PKPdf** 22 42 47.2 -0.4
AKASG pPKP **pPKPdf** 22 44 55.9 +3.6
AKASG SKPbc **SKPbc** 22 45 37.1 -0.1
AKASG Malin Array Be 144.94 327 PKP **PKPdf** 22 42 47.2 -0.4
comp=Z,6.9nm,0.3s,baz=40,slow=3.4,SNR=54
AKASG pPKP **pPKPdf** 22 44 55.9 +3.6
comp=Z,0.5nm,0.4s,baz=38,slow=3.8,SNR=1.5
AKASG SKPbc **SKPbc** 22 45 37.1 -0.1
comp=Z,14nm,0.8s,baz=46,slow=2.9,SNR=13
KIEV Kiev 144.95 327 *e*PKIKP **PKPdf** 22 42 46.7 -1.0
KIEV Kiev 144.95 327 *e*PKPdf **PKPdf** 22 42 46.7 -1.0
DARE Darende-Malaty 145.00 304 *e*P **PKPab** 22 42 49.8 -0.1
SVSK Karacayir 145.02 306 *e*P **PKPab** 22 42 50.0 +0.2
SIM Simferopol' 145.23 316 *e*PKIKP **PKPbc** 22 42 49.3 -0.1
SIM pmax pmax
comp=Z,49nm,1.1s
SUW Suwalki 145.24 336 *e*PKIKP **PKPdf** 22 42 48.5 +0.4
SUW Suwalki 145.24 336 *e*PKPdf **PKPdf** 22 42 47.6 -0.4
SUW Suwalki 145.24 336 *e*PKP **PKPdf** 22 42 48.5 +0.4
KMRS Kahramanmaras 145.69 302 *e*P **PKPbc** 22 42 51.5 +0.5
BNN Bunyan 146.17 305 *e*P **PKPbc** 22 42 52.8 +0.3
KAC Achnashellach 146.20 5 *e*P **PKPbc** 22 42 51.0 -0.8
KAC Achnashellach 146.20 5 P **PKPbc** 22 42 51.0 -0.8
MCD Coleburn Disti 146.25 3 *e*P **PKPbc** 22 42 50.6 +0.9
MCD Coleburn Disti 146.25 3 P **PKPdf** 22 42 50.6 +0.9
KPL Plockton 146.33 5 *e*P **PKPbc** 22 42 51.4 -0.7
KPL Plockton 146.33 5 P **PKPbc** 22 42 51.4 -0.7
KOZT Kozan 146.53 302 *e*P **PKPab** 22 42 54.7 -1.2
HTY Hatay 146.57 300 *e*P **PKPbc** 22 42 54.4 +1.0
CORM Corum 146.68 308 *e*P **PKPbc** 22 42 54.6 +0.8
CEYT Ceyhan 146.69 302 *e*P **PKPbc** 22 42 54.6 +0.8
DRUM Mains of Drumt 146.95 2 *e*P **PKPbc** 22 42 52.3 -1.5
DRUM Mains of Drumt 146.95 2 P **PKPbc** 22 42 52.3 -1.5
KARA Karaisali 147.18 302 *e*P **PKPbc** 22 42 55.2 +0.1
CANT Cankiri 147.26 309 *e*P **PKPbc** 22 42 55.8 +0.5
BRTR Keskin Array B 147.54 307 PKP **PKPdf** 22 42 51.7 -1.0
BRTR PKPbc **PKPbc** 22 42 56.0 -0.1
BRTR PKPab **PKPab** 22 43 00.5 +0.3
BRTR Keskin Array B 147.54 307 PKP **PKPdf** 22 42 51.7 -1.0
comp=Z,7.0nm,0.8s,baz=135,slow=0.4,SNR=17
BRTR PKPbc **PKPbc** 22 42 56.0 -0.1
comp=Z,6.7nm,0.6s,baz=116,slow=3.4,SNR=46
BRTR PKPab **PKPab** 22 43 00.5 +0.3
comp=Z,24nm,0.8s,baz=92,slow=3.7,SNR=50
EAB Aberfoyle 147.57 4 *e*P **PKPbc** 22 42 54.7 -0.8
EAB Aberfoyle 147.57 4 P **PKPbc** 22 42 54.7 -0.8
BEL Belsk 147.84 336 *e*PKP2 **PKPbc** 22 42 56.4 +0.1
BEL Belsk 147.84 336 *e*PKP **PKPbc** 22 42 56.4 +0.1
PGBU Glenifferbraes 147.94 5 *e*P **PKPbc** 22 42 55.7 -0.7
PGBU Glenifferbraes 147.94 5 P **PKPbc** 22 42 55.7 -0.7
ESY Stoneypath 147.94 3 *e*P **PKPbc** 22 42 55.4 -1.1
ESY Stoneypath 147.94 3 P **PKPbc** 22 42 55.4 -1.1
EAU Auchinoon 147.97 4 *e*P **PKPbc** 22 42 56.2 -0.3
EAU Auchinoon 147.97 4 P **PKPbc** 22 42 56.2 -0.3
LEOM Leova 148.01 322 ⇓*i*P **PKPbc** 22 42 56.4 -0.5
AFSR Af'ar-Bala (A 148.05 307 *e*P **PKPbc** 22 42 57.7 +0.3
ANTO Ankara 148.11 308 *e*P **PKPbc** 22 42 57.9 +0.4
ANTO Ankara 148.11 308 ⇑PKP2 **PKPbc** 22 42 57.3 -0.2
ANTO Ankara 148.11 308 *e*PKPbc **PKPbc** 22 42 57.7 +0.2
ANTO *e*PKPab **PKPab** 22 43 02.7 +0.4
ANTO Ankara 148.11 308 ⇑*i*P **PKPbc** 22 42 57.3 -0.2
LOD Lodumlu 148.12 308 *e*P **PKPbc** 22 42 57.7 +0.2
PHNC Paralimni 148.47 298 P **PKPbc** 22 42 59.2 +0.8
comp=Z,0.9nm,0.8s
IKL Isikli 148.49 301 *e*P **PKPbc** 22 42 57.8 -0.6
ESK Eskdalemuir 148.51 3 *e*P **PKPbc** 22 42 56.8 -1.1
ESK Eskdalemuir 148.51 3 P **PKPbc** 22 42 56.8 -1.1
ESK Eskdalemuir 148.51 3 *e*PKPdf **PKPdf** 22 42 53.4 -0.1
ECK Cauldkaine Hil 148.65 3 *e*P **PKPbc** 22 42 56.9 -1.3
ECK Cauldkaine Hil 148.65 3 P **PKPbc** 22 42 56.9 -1.3
KWP Kalwaria Pacla 148.74 331 *e*PKP **PKPbc** 22 42 58.6 0.0
LFK Lefkose 148.82 299 *e*P **PKPbc** 22 42 59.3 0.0
GAL1 Galloway 148.86 5 *e*P **PKPbc** 22 42 58.0 -0.7
GAL1 Galloway 148.86 5 P **PKPbc** 22 42 58.0 -0.7
TESR Tescani 148.87 323 ⇓*i*P **PKPbc** 22 42 58.7 -0.4
BURAR Bucovina Array 148.94 326 ⇑*i*P **PKPbc** 22 43 00.1 +0.8
LADK Ladik-KONYA 148.97 305 *e*P **PKPbc** 22 42 59.2 -0.5
BSEG Bad Segeberg 148.99 348 *e*PKPbc **PKPbc** 22 42 59.0 0.0
BSEG *e*PKPab **PKPab** 22 43 05.4 +0.1
BSEG Bad Segeberg 148.99 348 *e*PKP2 **PKPab** 22 43 05.4 +0.1
TIRR Tirgusor 149.02 318 ⇑*i*P **PKPbc** 22 42 58.4 -1.0
MDUB Mudurnu 149.03 310 *e*P **PKPbc** 22 42 58.9 -0.9
CSS Prodhromos 149.05 299 P **PKPbc** 22 42 59.7 -0.2
comp=Z,0.7nm,0.6s
CSS Prodhromos 149.05 299 *e*P **PKPbc** 22 42 59.4 -0.4
CSS Prodhromos 149.05 299 *e*PKPbc **PKPbc** 22 42 59.5 -0.4
CSS *e*PKPab **PKPab** 22 43 06.8 +0.5
MAMC Mammari 149.09 299 P **PKPbc** 22 43 00.3 +0.3
SVRH Sivrihisar-ESK 149.18 308 *e*P **PKPbc** 22 42 59.9 -0.2
HARR Harsova 149.19 319 ⇓*i*P **PKPbc** 22 43 00.3 +0.5
VRI Vrincioaia 149.22 322 ⇑*i*P **PKPbc** 22 42 59.9 0.0
KESW Keswick, Cumbr 149.25 4 *e*P **PKPbc** 22 42 58.2 -1.4
KESW Keswick, Cumbr 149.25 4 P **PKPbc** 22 42 58.2 -1.4
PLOR Plostina 149.27 322 ⇓*i*P **PKPbc** 22 42 59.5 -0.6
LEF Lefka 149.37 299 *e*P **PKPbc** 22 43 00.6 0.0
KOLS Kolonicke sedl 149.44 331 *e*PKP **PKPdf** 22 42 55.3 +0.1
KOLS *e* 22 43 00.9
KOLS *e* 22 43 07.3
OJC Ojcow 149.51 335 *i* PKP **PKPbc** 22 43 00.2 -0.3
GULT Gulveren 149.52 310 *e*P **PKPbc** 22 43 00.7 -0.2
STHS Stebnicka Huta 149.53 332 *e*PKP **PKPbc** 22 43 01.1 +0.5
STHS *e* 22 45 14.2
RUE Ruedersdorf 149.56 343 *e*PKPbc **PKPbc** 22 43 00.5 +0.1
ALFC Alevga 149.59 299 P **PKPbc** 22 43 00.9 -0.3
comp=Z,1.0nm,0.7s
CRVS Cervenica-Dubn 149.83 331 *e*PKP **PKPbc** 22 42 59.1 -2.2
CRVS *e* 22 43 07.1
CRVS *e* 22 45 05.7
AKMC Akamas 149.84 299 P **PKPbc** 22 43 01.1 -0.7
PPCY Paphos 149.86 299 P **PKPbc** 22 43 01.2 -0.5
MLR Muntele Rosu 149.88 322 ⇓*i*P **PKPbc** 22 42 59.9 -1.8
TRPA Tarpa 149.90 329 ⇑*i*P **PKPbc** 22 43 00.8 -0.6
NIE Niedzica 149.93 333 *i* PKP **PKPbc** 22 43 02.3 +0.8
ADVT Abdulvahap 150.06 311 *e*P **PKPbc** 22 43 01.5 -0.6
SHUT Suhut-Afyon 150.20 307 *e*P **PKPbc** 22 43 02.7 0.0
DLF Lyons Farm 150.22 8 *e*P **PKPab** 22 43 09.0 -1.4
KSP Ksiaz 150.26 339 *e*PKIKP **PKPbc** 22 43 02.4 +0.2
KSP Ksiaz 150.26 339 *e*PKP **PKPbc** 22 43 02.3 +0.1
KSP *e* 22 43 11.2
WME Myndd Eilian 150.35 5 *e*P **PKPbc** 22 43 01.5 -0.8
WME Myndd Eilian 150.35 5 P **PKPbc** 22 43 01.5 -0.8
NRDL Niedersach Rie 150.40 347 *e*PKPbc **PKPbc** 22 43 01.9 -0.4
VOIR 150.41 323 ⇓PKIKP **PKPbc** 22 43 02.2 -0.6
VOIR 150.41 323 ⇓*i*P **PKPbc** 22 43 02.2 -0.6
OKC Ostrava-Krasne 150.45 336 *e*PKIKP **PKPbc** 22 43 02.2 -0.5
OKC *e* 22 43 11.6
OKC Ostrava-Krasne 150.45 336 ⇑*e*PKP **PKPbc** 22 43 02.2 -0.5
OKC *e*PKPab **PKPab** 22 43 11.6 +0.1
WLF1 Llynfaes 150.45 5 *e*P **PKPbc** 22 43 01.2 -1.3
WLF1 Llynfaes 150.45 5 P **PKPbc** 22 43 01.2 -1.3
WPM1 Penmaenmawr 150.52 5 *e*P **PKPbc** 22 43 01.0 -1.7
WPM1 Penmaenmawr 150.52 5 P **PKPbc** 22 43 01.0 -1.7
YLL Llanberis 150.62 5 *e*P **PKPbc** 22 43 02.1 -0.8
YLL Llanberis 150.62 5 P **PKPbc** 22 43 02.1 -0.8
UPC Upice 150.64 339 ⇑*i*PKIKP **PKPbc** 22 43 03.1 0.0
UPC *e* 22 43 12.9
UPC Upice 150.64 339 ⇑*i*PKPBC **PKPbc** 22 43 03.1 0.0
UPC *e*PKPAB **PKPab** 22 43 12.9 +0.6
DPC Dobruska-Polom 150.67 338 *e*PKIKP **PKPdf** 22 42 57.6 +0.5
DPC *e* 22 43 13.2
DPC Dobruska-Polom 150.67 338 *e*PKPDF **PKPdf** 22 42 57.6 +0.5
DPC ⇑*e*PKP **PKPbc** 22 43 03.4 +0.2
DPC *e*PKPAB **PKPab** 22 43 13.2 +0.7
MORC Moravsky Berou 150.72 336 ⇓PKIKP **PKPbc** 22 43 03.1 -0.3
MORC Moravsky Berou 150.72 336 *e*PKPdf **PKPdf** 22 42 56.9 -0.3
MORC *e*PKPbc **PKPbc** 22 43 02.8 -0.6
MORC *e*PKPab **PKPab** 22 43 12.2 -0.5
MORC Moravsky Berou 150.72 336 ⇓*i*P **PKPbc** 22 43 03.1 -0.3
KRLC Kraliky 150.75 338 *e*PKIKP **PKPbc** 22 43 03.4 0.0
KRLC *e* 22 43 13.1
KRLC Kraliky 150.75 338 ⇑*e*PKP **PKPbc** 22 43 03.4 0.0
KRLC *e*PKPAB **PKPab** 22 43 13.1 +0.2
DRGR 150.76 327 ⇑PKIKP **PKPbc** 22 43 03.0 -0.6
DRGR 150.76 327 ⇑*i*P **PKPbc** 22 43 03.0 -0.6
CLL Collm 150.83 343 *e*PKPbc **PKPbc** 22 43 03.0 -0.4
CLL *e*pPKPbc **pPKPbc** 22 45 12.8 +5.8
CLL Collm 150.83 343 ⇓*e*PKIKP **PKPdf** 22 42 57.0 -0.3
CLL *i* 22 43 12.9
comp=Z,29nm,0.8s
CLL pmax pmax
comp=Z,13nm,1.0s
CLL Collm 150.83 343 *e*PKPdf **PKPdf** 22 42 57.0 -0.3
CLL ⇓*i*PKPbc **PKPbc** 22 43 03.1 -0.4
comp=Z,29nm,0.8s
CLL *i* PKPab **PKPab** 22 43 12.9 -0.2
comp=Z,13nm,1.0s
CLL *e*pPKPab **pPKPab** 22 45 13.0 +1.2
FOEL Foel Wylfa 150.93 4 *e*P **PKPbc** 22 43 02.6 -1.1
FOEL Foel Wylfa 150.93 4 P **PKPbc** 22 43 02.6 -1.1
BRG Berggiesshubel 150.96 342 *e*PKP **PKPdf** 22 42 57.3 -0.2
comp=Z,3.4nm,1.0s
BRG *i* 22 43 03.9
BRG comp=Z,25nm,1.1s
BRG *e* 22 43 10.6
BRG comp=Z,11nm,0.9s
BRG *e*pPKP pPKPdf 22 45 11.3 +9.1
comp=Z,8.6nm,1.1s
BRG Berggiesshubel 150.96 342 *e*PKPbc **PKPbc** 22 43 03.7 -0.1
BRG *e*PKPab **PKPab** 22 43 13.8 +0.2
BRG Berggiesshubel 150.96 342 *e*PKIKP **PKPdf** 22 42 57.3 -0.2
BRG *e* 22 43 10.6
BRG pmax pmax
comp=Z,3.0nm,1.0s
BRG pmax pmax
comp=Z,25nm,1.1s
BRG pmax pmax
comp=Z,11nm,0.9s
BRG pmax pmax
comp=Z,9.0nm,1.2s
CLZ Clausthal 150.96 347 *e*PKPbc **PKPbc** 22 43 03.8 0.0
CLZ *e*PKPab **PKPab** 22 43 13.7 0.0
CLZ Clausthal 150.96 347 *e*PKIKP **PKPbc** 22 43 03.8 0.0
PVCC Panska Ves 151.08 341 *e*PKIKP **PKPbc** 22 43 04.7 +0.6
PVCC *e* 22 43 14.7
PVCC Panska Ves 151.08 341 ⇑*e*PKP **PKPbc** 22 43 04.7 +0.6
PVCC *e*PKPAB **PKPab** 22 43 14.7 +0.5
FBE Freiberg 151.08 342 *e*PKPbc **PKPbc** 22 43 04.3 +0.2
FBE *e*PKPab **PKPab** 22 43 14.6 +0.5
FBE *e*pPKPbc **pPKPbc** 22 45 13.8 +6.2
NEUB Neuenburg 151.23 344 *e*PKPab **PKPab** 22 43 14.8 0.0
PSZ Piszkesteto 151.25 332 ⇑PKIKP **PKPbc** 22 43 03.6 -1.1
PSZ Piszkesteto 151.25 332 *e*PKPbc **PKPbc** 22 43 02.9 -1.8
PSZ *e*PKPab **PKPab** 22 43 14.8 -0.3
PSZ Piszkesteto 151.25 332 ⇑*i*P **PKPbc** 22 43 03.6 -1.1
VYHS Vyhne 151.26 333 *e*PKIKP **PKPbc** 22 43 04.8 +0.2
VYHS *e* 22 43 15.6
VYHS Vyhne 151.26 333 *e*PKP **PKPbc** 22 43 04.8 +0.2
VYHS *e* 22 43 15.5
VRAC Vranov 151.46 337 ⇓*i*P **PKPab** 22 43 16.6 +0.8
PRA Prague 151.52 340 ⇑PKPBC **PKPbc** 22 43 05.0 -0.1
PRA PKPAB **PKPab** 22 43 17.0 +1.0
PRU Pruhonice 151.56 340 *e*PKIKP **PKPbc** 22 43 05.0 -0.2
PRU *e* 22 43 16.6
PRU Pruhonice 151.56 340 ⇑*e*PKP **PKPbc** 22 43 05.0 -0.2
PRU *ex* x 22 43 11.9
PRU *e*PKPAB **PKPab** 22 43 16.6 +0.4
TANN Tannenbergstha 151.78 343 *e*PKPbc **PKPbc** 22 43 05.4 -0.4
TANN *e*PKPab **PKPab** 22 43 17.4 +0.2
TANN *e*pPKPbc **pPKPbc** 22 45 15.0 +5.6
MOX Moxa 151.79 344 *e*PKPab **PKPab** 22 43 17.1 -0.1
WERD Werda 151.79 343 *e*PKPab **PKPab** 22 43 17.5 +0.3
PLN Plauen 151.80 343 *e*PKPbc **PKPbc** 22 43 05.5 -0.2
PLN *e*PKPab **PKPab** 22 43 17.4 +0.2
PLN *e*pPKPbc **pPKPbc** 22 45 15.1 +5.7
MCH1 Michaelchurch 151.84 4 *e*P **PKPbc** 22 43 04.7 -1.0
MCH1 Michaelchurch 151.84 4 P **PKPbc** 22 43 04.7 -1.0
GUNZ Gunzen 151.87 343 *e*PKPbc **PKPbc** 22 43 05.6 -0.3
GUNZ *e*PKPab **PKPab** 22 43 17.8 +0.3
WERN Wernitzgruen 151.92 343 *e*PKPab **PKPab** 22 43 18.1 +0.3
NKC Novy Kostel 151.95 343 *e*PKIKP **PKPbc** 22 43 05.8 -0.3
NKC *e* 22 43 18.2
NKC Novy Kostel 151.95 343 ⇑*e*PKP **PKPbc** 22 43 05.8 -0.3
NKC *e*PKPAB **PKPab** 22 43 18.2 +0.3
BZS Buzias 152.12 326 ⇑PKIKP **PKPbc** 22 43 05.8 -0.8
BZS Buzias 152.12 326 ⇑*i*P **PKPbc** 22 43 05.8 -0.8
ZST Bratislava 152.19 335 *e*PKIKP **PKPbc** 22 43 05.5 -1.1
ZST *e* 22 43 18.9
ZST Bratislava 152.19 335 *e*PKP **PKPbc** 22 43 05.5 -1.1
ZST *e* 22 43 18.9
MANZ Manzenberg 152.27 343 *e*PKPbc **PKPbc** 22 43 06.7 -0.1
MANZ *e*PKPab **PKPab** 22 43 19.2 -0.1
ROTZ Rotzenmuhle 152.44 343 *e*PKPbc **PKPbc** 22 43 06.8 -0.4
ROTZ *e*PKPab **PKPab** 22 43 20.4 +0.4
ROTZ *e*pPKPbc pPKPbc 22 45 18.4 +7.5
KHC Kasperske Hory 152.62 340 *e*PKIKP **PKPdf** 22 43 00.3 +0.2
KHC *e* 22 43 07.2
KHC *e* 22 43 20.7
KHC Kasperske Hory 152.62 340 *e*PKPDF **PKPdf** 22 43 00.3 +0.2
KHC ⇑*e*PKP **PKPbc** 22 43 07.2 -0.4
KHC *e*PKPAB **PKPab** 22 43 20.7 -0.1
GRF Grafenberg Arr 152.77 344 *e*PKPab **PKPab** 22 43 21.8 +0.4
GRF Grafenberg Arr 152.77 344 *e*PKP2 **PKPab** 22 43 21.8 +0.4
WET Wettzell 152.81 341 *e*PKPab **PKPab** 22 43 22.1 +0.5
WET Wettzell 152.81 341 *e*PKP2 **PKPab** 22 43 22.1 +0.5
GEC2 GERESS Array S 152.83 340 *e*PKPbc **PKPbc** 22 43 07.6 -0.6
GEC2 *e*PKPab **PKPab** 22 43 21.9 +0.1
GEC2 GERESS Array S 152.83 340 *e*PKP2 **PKPab** 22 43 21.9 +0.1
GERES GERESS Array B 152.83 340 PKPbc **PKPbc** 22 43 07.8 -0.4
GERES PKPab **PKPab** 22 43 22.1 +0.3
GERES GERESS Array B 152.83 340 PKPbc **PKPbc** 22 43 07.8 -0.4
comp=Z,1.9nm,0.8s,baz=27,slow=1.1,SNR=7.2
GERES PKPab **PKPab** 22 43 22.1 +0.3
comp=Z,1.3nm,0.7s,baz=42,slow=4.2,SNR=4.3
CONA Conrad Observa 152.88 336 ⇑*i*PKIKP **PKiKP** 22 43 08.3 0.0
comp=Z,11nm,1.3s
CONA ⇑*i*PKPab **PKPab** 22 43 22.7 +0.7
comp=Z,20nm,0.8s
TNS Taunus Mts 152.89 348 *e*PKPab **PKPab** 22 43 21.5 -0.4
TNS Taunus Mts 152.89 348 *e*PKP2 **PKPab** 22 43 21.5 -0.4
PKSM Moragy 153.11 331 ⇓PKIKP **PKPdf** 22 42 58.8 -2.0
PKSM Moragy 153.11 331 ⇓*i*P **PKPdf** 22 42 58.8 -2.0
VTS Vitosha 153.20 320 ⇑PKIKP **PKPbc** 22 43 09.1 -0.1
VTS Vitosha 153.20 320 ⇑*i*P **PKPbc** 22 43 09.1 -0.1
ARSA Arzberg 153.57 336 ⇑*e*PKPab **PKPab** 22 43 25.3 +0.4
comp=Z,8.7nm,1.0s
RJOB Jochberg 154.09 340 *e*PKPab **PKPab** 22 43 27.9 +0.8
FUR Furstenfeldbru 154.15 342 *e*PKPab **PKPab** 22 43 27.5 +0.2
FUR Furstenfeldbru 154.15 342 *e*PKP2 **PKPab** 22 43 27.5 +0.2
SOKA Soboth 154.23 336 ⇑*e*PKPab **PKPab** 22 43 27.8 0.0
comp=Z,16nm,1.3s
PERS Pernice 154.24 336 *i* PKPbc **PKPab** 22 43 27.6 -0.2
VAY Valandovo 154.33 318 *i* PKP **PKPab** 22 43 28.2 -0.1
GOLS Golise 154.56 334 *i* PKPbc **PKPab** 22 43 29.0 -0.1
SKO Skopje 154.62 320 *i* PKP **PKPab** 22 43 31.4 +1.8
BFO Black Forest 154.71 347 *e*PKPab **PKPab** 22 43 29.4 -0.3
BFO Black Forest 154.71 347 *e*PKP2 **PKPab** 22 43 29.4 -0.3
MYKA Terra Mystica 154.78 338 ⇑*i*PKPab **PKPab** 22 43 29.8 -0.3
comp=Z,5.1nm,0.5s
WTTA Wattenberg 154.87 341 ⇑*i*PKPab **PKPab** 22 43 30.7 +0.1
comp=Z,16nm,1.2s
RETA Reutte 154.91 343 ⇑*e*PKPab **PKPab** 22 43 30.7 0.0
comp=Z,7.6nm,0.9s
MOTA Moosalm 154.95 342 ⇑*i*PKPab **PKPab** 22 43 31.0 +0.1
comp=Z,11nm

s-min=5.2km az=31.5
*BJI **22** 22:44:19.1, 11.86N×94.67E, h40km, mB4.6/3, mb3.9/11, Ms4.3/1, Ms7 4.1/1*
*NEIC **22** 22:44:24.4±1.3, 12.15N×95.13E, h45km±12km, mb4.5/7, Error ellipse: s-maj=11.3km s-min=7.0km az=64.0*

ISC 22 22:44:21.7±0.5, **12.14N**±0.06×**94.95E**±0.06, **h21**km, **n96, σ1s38/92, mb4.1/34, MS3.7/3, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PBA	**Port Blair**	**2.21**	**258**	*e*PKP	Pb	22 44 59.8	-1.2
PBA				eS	Sb	22 45 27.7	-0.3
DGPR	**DIGLIPUR**	**2.22**	**298**	*e*PKP	**Pn**	**22 44 58.5**	**+1.1**
DGPR				eS	**Sn**	**22 45 21.8**	**-2.5**
CMAR	**Chiang Mai Arr**	**7.37**	**31**	Pn	**Pn**	**22 46 06.7**	**-1.4**
CMAR	**Chiang Mai Arr**	**7.37**	**31**	Pn	**Pn**	**22 46 06.7**	**-1.4**
	0.6nm,0.3s,baz=218,slow=15,SNR=31						
KULM	**Kulim**	**8.84**	**140**	*e*Pn	Pn	22 46 25.7	-2.6
PSI	**Prapat**	**10.08**	**157**	Pn	**Pn**	**22 46 47.4**	**+1.9**
PSI	**Prapat**	**10.08**	**157**	Pn	**Pn**	**22 46 47.4**	**+1.9**
	0.8nm,0.3s,baz=336,slow=20,SNR=3.1						
PSI				LR	LR	22 50 49.5	
	comp=Z,237nm,18.5s,baz=328,slow=39						
VIS	**Vishakhapatnam**	**12.52**	**298**	*e*PKP	**Pn**	**22 47 18.1**	**-0.7**
SHL	**Shillong**	**13.66**	**348**	*e*PKP	**Pn**	**22 47 35.3**	**+0.8**
BOK	**Bokaro**	**14.44**	**325**	*e*PKP	**Pn**	**22 47 46.7**	**+1.8**
BOK				AMB	AMB	22 49 43.0	
	comp=Z,14nm,2.0s						
KMI	**Kunming**	**14.87**	**29**	P	**P**	**22 47 57.8**	**+1.2**
KMI				pP	Pn	22 48 06.9	+16
KMI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
QIZ	**Qiongzhong**	**15.89**	**63**	*e*Pn	**Pn**	**22 48 03.8**	**-0.4**
	comp=Z,62nm,1.4s						
ODAN	**Odare**	**16.27**	**335**	*e*P	**P**	**22 48 11.4**	**-0.9**
	comp=Z,15nm,0.5s						
TAPN	**Taplejung**	**16.59**	**337**	*e*P	**P**	**22 48 14.5**	**-1.3**
	comp=Z,207nm,1.7s						
RAMN	**Ramite**	**16.69**	**333**	*e*P	**P**	**22 48 16.5**	**-0.4**
	comp=Z,252nm,1.4s						
NGP	**Nagpur**	**17.66**	**303**	*e*PKP	**P**	**22 48 26.6**	**-0.8**
PKI	**Pulchoki**	**17.77**	**331**	*e*P	**P**	**22 48 29.4**	**+0.5**
	comp=Z,95nm,1.2s						
LSA	**Lhasa**	**17.83**	**349**	P	**Pn**	**22 48 27.6**	**-1.4**
LSA	**Lhasa**	**17.83**	**349**	*e*Pn	**P**	**22 48 29.2**	**-0.4**
	comp=Z,97nm,1.8s						
LSA				Sn	Sn	22 51 37.6	-10
GUN	**Gumba**	**17.84**	**333**	*e*P	**P**	**22 48 30.1**	**+0.4**
	comp=Z,177nm,1.6s						
DMN	**Daman**	**17.94**	**330**	*e*P	**P**	**22 48 30.8**	**+0.1**
	comp=Z,53nm,1.1s						
KKN	**Kakani**	**18.01**	**331**	*e*P	**P**	**22 48 31.7**	**+0.2**
KSM	**Kuching**	**18.55**	**124**	*e*P	**P**	**22 48 37.2**	**0.0**
KOLN	**Koldanda**	**18.84**	**327**	*e*P	**Pn**	**22 48 42.3**	**+1.2**
	comp=Z,17nm,0.6s						
DANN	**Dangsing**	**19.22**	**329**	*e*P	**Pn**	**22 48 45.6**	**-0.2**
	comp=Z,75nm,1.1s						
BHPL	**Bhopal**	**19.99**	**306**	*e*PKP	**P**	**22 48 51.7**	**-1.3**
BHPL				AMB	AMB	22 49 06.7	
	comp=Z,26nm,2.9s						
KKM	**Kota Kinabalu**	**21.84**	**104**	*e*P	**P**	**22 49 15.7**	**+2.5**
ENH	**Enshi**	**22.52**	**35**	*e*P	**P**	**22 49 18.8**	**-1.4**
	comp=Z,14nm,0.9s						
DDI	**Dehra Dun**	**23.93**	**322**	*e*PKP	**P**	**22 49 34.0**	**-0.4**
DDI				AMB	AMB	22 49 43.6	
	comp=Z,97nm,0.6s						
COCO	**West Island**	**24.25**	**176**	*e*P	P	22 49 44.5	+7.1
SMLA	**Simla**	**25.04**	**322**	*e*PKP	**P**	**22 49 45.0**	**+0.6**
SMLA				AMB	AMB	22 49 55.3	
	comp=Z,37nm,1.0s						
LZH	**Lanzhou**	**25.16**	**17**	*e*P	**P**	**22 49 47.0**	**+1.3**
LZH				pP	**pP**	**22 49 54.1**	**+2.0**
LZH				sP	**sP**	**22 49 57.5**	**+2.8**
LZH				PP	**PnPn**	**22 50 25.5**	**+5.5**
LZH				*e*S	**S**	**22 54 08.8**	**-1.0**
LZH				pmax	pmax		
	comp=Z,27nm,1.5s						
LZH				pmax	pmax		
	comp=Z,93nm,5.2s						
LZH				LR	LR		
	comp=N,230nm,10.5s						
LZH				LR	LR		
	comp=E,280nm,12.0s						
LZH				LR	LR		
	comp=Z,350nm,14.0s						
DHRM	**DHARAMSHALA**	**26.35**	**322**	*e*PKP	**P**	**22 49 54.7**	**-2.0**
DHRM				AMB	AMB	22 50 17.0	
	comp=Z,18nm,1.5s						
GTA	**Gaotai**	**27.50**	**8**	*e*P	**P**	**22 50 07.8**	**+1.0**
GTA				pP	pP	22 50 22.3	+9.1
GTA				sP	sP	22 50 27.6	+12
GTA				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KAPI	**Kappang**	**29.98**	**123**	*e*P	P	22 50 32.7	+3.7
KAPI	**Kappang**	**29.98**	**123**	LR	LR	23 02 14.9	
	comp=Z,104nm,19.3s,baz=270,slow=36						
DAV	**Davao City (W)**	**30.60**	**97**	P	**P**	**22 50 36.6**	**+2.0**
TKM2	**Tokmak 2**	**34.96**	**335**	*e*P	**P**	**22 51 13.6**	**+1.0**
	comp=Z,10nm,1.4s						
AAK	**Ala-Archa**	**35.20**	**333**	*e*P	**P**	**22 51 16.2**	**+1.6**
AAK	**Ala-Archa**	**35.20**	**333**	P	**P**	**22 51 15.5**	**+0.9**
	comp=Z,1.8nm,0.3s,baz=210,slow=10,SNR=5.2						
EKS2	**Erkin-Say**	**35.54**	**333**	*e*P	**P**	**22 51 19.0**	**+1.5**
	comp=Z,3.3nm,0.8s						
EKS2				*e*		22 51 25.9	
MK31	**Makanchi Array**	**36.16**	**345**	*e*P	**P**	**22 51 22.6**	**0.0**
MK31				*e*		22 51 33.0	
MKAR	**Makanchi Array**	**36.16**	**345**	*e*P	**P**	**22 51 23.1**	**+0.6**
MKAR	**Makanchi Array**	**36.16**	**345**	P	**P**	**22 51 22.8**	**+0.2**
	comp=Z,2.4nm,0.9s,baz=155,slow=9.0,SNR=16						
SONM	**Songino Array**	**36.85**	**13**	P	**P**	**22 51 28.7**	**+0.1**
SONM	**Songino Array**	**36.85**	**13**	P	**P**	**22 51 28.7**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=198,slow=8.5,SNR=13						
ULN	**Ulaanbaatar**	**37.03**	**14**	*e*P	**P**	**22 51 29.5**	**-0.6**
	comp=Z,7.0nm,1.4s						
KKAR	**Karatay Array**	**37.41**	**330**	*e*P	**P**	**22 51 34.8**	**+1.5**
KSAR	**Wonju Array Be**	**38.76**	**44**	P	**P**	**22 51 43.6**	**-1.1**
KSRS	**Korea Array**	**38.79**	**44**	P	**P**	**22 51 43.6**	**-1.3**
	comp=Z,2.7nm,0.9s,baz=237,slow=9.3,SNR=11						
KURBB	**Kurchatov Arra**	**40.66**	**344**	P	**P**	**22 52 00.6**	**+0.2**
	comp=Z,2.8nm,0.9s,baz=164,slow=7.5,SNR=18						
KURK	**Kurchatov**	**40.72**	**344**	*e*P	**P**	**22 52 01.3**	**+0.5**
CN2	**Changchun**	**41.04**	**34**	*e*P	**P**	**22 52 03.4**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZALV	**Zalesovo Beam**	**42.47**	**351**	P	**P**	**22 52 14.8**	**-0.3**
ZALV	**Zalesovo Beam**	**42.47**	**351**	P	**P**	**22 52 14.8**	**-0.3**
	comp=Z,1.2nm,0.7s,baz=167,slow=7.4,SNR=7.8						
FITZ	**Fitzroy Crossi**	**42.67**	**134**	P	P	22 52 20.8	+3.7
FITZ	**Fitzroy Crossi**	**42.67**	**134**	P	P	22 52 20.8	+3.7
	comp=Z,1.8nm,0.8s,baz=301,slow=12,SNR=3.7						
BRVK	**Borovoye**	**45.33**	**339**	*e*P	**P**	**22 52 39.3**	**+1.2**
	comp=Z,0.4nm,0.8s						
MAJO	**Matsushiro**	**45.78**	**50**	*e*P	**P**	**22 52 41.0**	**-0.9**
ABKAR	**Akbulak array**	**46.95**	**329**	*e*P	**P**	**22 52 51.1**	**+0.1**
AKTO	**Aktyubinsk**	**48.66**	**329**	P	**P**	**22 53 04.0**	**-0.2**
AKTO	**Aktyubinsk**	**48.66**	**329**	P	**P**	**22 53 04.0**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=135,slow=13,SNR=2.8						
AKTO				LR	LR	23 14 22.9	
	comp=Z,81nm,19.8s,baz=148,slow=37						
NWAO	**Narrogin (SRO)**	**49.61**	**155**	P	P	22 53 17.2	+5.6
WRA	**Warramunga Arr**	**50.20**	**129**	P	**P**	**22 53 15.2**	**-1.2**
WRA	**Warramunga Arr**	**50.20**	**129**	P	**P**	**22 53 15.2**	**-1.2**
	comp=Z,4.1nm,0.9s,baz=309,slow=8.3,SNR=20						
WRAB	**Tennant Creek**	**50.20**	**129**	*e*P	**P**	**22 53 14.7**	**-1.7**
	comp=Z,8.9nm,0.9s						
GNI	**Garni**	**52.13**	**312**	*e*P	**P**	**22 53 31.9**	**+1.1**
GNI	**Garni**	**52.13**	**312**	P	**P**	**22 53 31.6**	**+0.7**
	comp=Z,0.7nm,0.3s,baz=146,slow=23,SNR=5.0						
ASAR	**Alice Springs**	**52.13**	**133**	P	**P**	**22 53 29.4**	**-1.5**
ASAR	**Alice Springs**	**52.13**	**133**	P	**P**	**22 53 29.4**	**-1.5**
	comp=Z,2.1nm,0.9s,baz=314,slow=7.0,SNR=12						
MALT	**Malatya**	**56.40**	**308**	*e*P	**P**	**22 54 04.7**	**+2.8**
BRTR	**Keskin Array B**	**60.33**	**309**	P	**P**	**22 54 28.2**	**-1.1**
BRTR	**Keskin Array B**	**60.33**	**309**	P	**P**	**22 54 28.2**	**-1.1**
	comp=Z,1.1nm,0.8s,baz=124,slow=6.1,SNR=6.2						
STKA	**Stephens Creek**	**62.53**	**136**	P	**P**	**22 54 42.4**	**-1.7**
STKA	**Stephens Creek**	**62.53**	**136**	P	**P**	**22 54 42.4**	**-1.7**
	comp=Z,6.1nm,1.0s,baz=338,slow=16,SNR=4.1						
AKASG	**Malin Array Be**	**65.36**	**320**	P	**P**	**22 54 60.0**	**-2.5**
AKASG	**Malin Array Be**	**65.36**	**320**	P	**P**	**22 54 60.0**	**-2.5**
	comp=Z,0.3nm,0.3s,baz=86,slow=5.9,SNR=5.1						
FINES	**FINESS Array B**	**69.35**	**331**	P	**P**	**22 55 26.9**	**-0.7**
FINES	**FINESS Array B**	**69.35**	**331**	P	**P**	**22 55 26.9**	**-0.7**
	comp=Z,0.7nm,0.7s,baz=31,slow=6.5,SNR=3.7						
HFS	**Hagfors**	**75.21**	**329**	P	**P**	**22 56 02.9**	**+0.3**
HFS	**Hagfors**	**75.21**	**329**	P	**P**	**22 56 02.9**	**+0.3**
	comp=Z,1.0nm,0.8s,baz=124,slow=7.2,SNR=2.7						
GERES	**GERESS Array B**	**75.22**	**318**	P	**P**	**22 56 02.7**	**-0.3**
GERES	**GERESS Array B**	**75.22**	**318**	P	**P**	**22 56 02.7**	**-0.3**
	comp=Z,1.9nm,0.8s,baz=72,slow=4.3,SNR=5.9						
NB2	**NORSAR Subarra**	**76.44**	**330**	P	P	22 56 17.7	+8.0
	comp=Z,0.8nm,0.7s,baz=88,slow=5.9						
NOA	**NORSAR Array B**	**76.44**	**330**	P	**P**	**22 56 09.5**	**-0.2**
NOA	**NORSAR Array B**	**76.44**	**330**	P	**P**	**22 56 09.5**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=89,slow=6.1,SNR=2.6						
BOSA	**Boshof**	**78.53**	**237**	P	**P**	**22 56 22.8**	**+0.7**
BOSA	**Boshof**	**78.53**	**237**	P	**P**	**22 56 22.8**	**+0.7**
	comp=Z,5.6nm,1.0s,baz=167,slow=16,SNR=3.4						
EKA	**Eskdalemuir Ar**	**84.68**	**325**	P	**P**	**22 56 54.3**	**+0.3**
EKA	**Eskdalemuir Ar**	**84.68**	**325**	P	**P**	**22 56 54.3**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=90,slow=6.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	**90.39**	**283**	P	**P**	**22 57 21.8**	**-0.5**
TORD	**Torodi Ar. Bea**	**90.39**	**283**	P	**P**	**22 57 21.8**	**-0.5**
	comp=Z,0.4nm,0.8s,baz=130,slow=2.3,SNR=3.6						
ILAR	**Eielson Array**	**90.52**	**22**	P	**P**	**22 57 20.7**	**-1.2**
ILAR	**Eielson Array**	**90.52**	**22**	P	**P**	**22 57 20.7**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=281,slow=5.7,SNR=5.9						
NVAR	**Mina Array Bea**	**120.86**	**30**	PKP	**PKPdf**	**23 03 10.9**	**-2.3**
NVAR	**Mina Array Bea**	**120.86**	**30**	PKP	**PKPdf**	**23 03 10.9**	**-2.3**
	comp=Z,0.4nm,0.6s,baz=249,slow=0.8,SNR=4.1						

*ROM **22** 22:49:20.2±0.1, 42.44N×13.33E, h14km±1km, MI3.1/14, Error ellipse: s-maj=0.9km s-min=0.6km az=77.0*
*CSEM **22** 22:49:20.3±0.1, 42.44N×13.31E, h10km, ML3.6/7, Error ellipse: s-maj=2.5km s-min=1.8km az=77.0*

ISC 22 22:49:20.7±0.8, **42.44N**±0.02×**13.33E**±0.02, **h15**km±4km, **n74, σ0s90/96, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.10**	**151**	Pg	**Pg**	**22 49 23.8**	**-0.3**
AQU				Sg	**Sg**	**22 49 26.2**	**-0.1**
	9μm,0.3s						
AQU	**L'Aquila**	**0.10**	**151**	Pg	**Pg**	**22 49 23.8**	**-0.3**
AQU				Sg	**Sg**	**22 49 26.2**	**-0.1**
	9μm,0.3s						
CAMP	**Campotosto**	**0.11**	**31**	Pg	**Pg**	**22 49 23.9**	**-0.4**
CAMP				Sg	**Sg**	**22 49 26.2**	**-0.4**
	4μm,0.5s						
CAMP	**Campotosto**	**0.11**	**31**	Pg	**Pg**	**22 49 23.9**	**-0.4**
CAMP				Sg	**Sg**	**22 49 26.2**	**-0.4**
	4μm,0.5s						
FIAM	**Fiamignano**	**0.24**	**222**	Pg	**Pg**	**22 49 25.8**	**-0.3**
FIAM				Sg	**Sg**	**22 49 30.0**	**+0.3**
	2μm,0.4s						
FIAM	**Fiamignano**	**0.24**	**222**	Pg	**Pg**	**22 49 25.8**	**-0.3**
FIAM				Sg	**Sg**	**22 49 30.0**	**+0.3**
	2μm,0.4s						
TERO	**Teramo**	**0.27**	**48**	Pg	**Pg**	**22 49 26.1**	**-0.5**
TERO				Sg	**Sg**	**22 49 30.4**	**-0.1**
	3μm,0.4s						
TERO	**Teramo**	**0.27**	**48**	Pg	**Pg**	**22 49 26.1**	**-0.5**
TERO				Sg	**Sg**	**22 49 30.4**	**-0.1**
	3μm,0.4s						
LNSS	**Leonessa**	**0.27**	**306**	Pg	**Pg**	**22 49 26.3**	**-0.3**
LNSS				Sg	**Sg**	**22 49 30.9**	**+0.3**
	3μm,0.2s						
LNSS	**Leonessa**	**0.27**	**306**	Pg	**Pg**	**22 49 26.3**	**-0.3**
LNSS				Sg	**Sg**	**22 49 30.9**	**+0.3**
	3μm,0.2s						
GAVE	**Gavelli**	**0.41**	**308**	Pg	**Pg**	**22 49 28.8**	**-0.2**
GAVE	**Gavelli**	**0.41**	**308**	Pg	**Pg**	**22 49 28.8**	**-0.2**
NRCA	**Norcia**	**0.42**	**338**	Pg	**Pg**	**22 49 28.7**	**-0.6**
NRCA				Sg	**Sg**	**22 49 35.3**	**+0.2**
	2μm,0.1s						
NRCA	**Norcia**	**0.42**	**338**	Pg	**Pg**	**22 49 28.7**	**-0.6**
NRCA				Sg	**Sg**	**22 49 35.3**	**+0.2**
	2μm,0.1s						
PTQR	**Pietraquaria**	**0.42**	**173**	Pg	**Pg**	**22 49 28.9**	**-0.4**
PTQR				Sg	**Sg**	**22 49 35.4**	**+0.3**
PTQR	**Pietraquaria**	**0.42**	**173**	Pg	**Pg**	**22 49 28.9**	**-0.4**
PTQR				Sg	**Sg**	**22 49 35.4**	**+0.3**
MNS	**Montasola**	**0.49**	**263**	Pg	**Pg**	**22 49 29.7**	**-0.7**
	563nm,0.7s						
MNS	**Montasola**	**0.49**	**263**	Pg	**Pg**	**22 49 29.7**	**-0.7**
	563nm,0.7s						
OFFI	**Offida**	**0.56**	**28**	Pg	**Pb**	**22 49 32.0**	**-0.2**
	2μm,0.7s						
OFFI	**Offida**	**0.56**	**28**	Pg	**Pb**	**22 49 32.0**	**-0.2**
	2μm,0.7s						
CERT	**Cerreto**	**0.56**	**208**	Pg	**Pg**	**22 49 31.1**	**-0.7**
	2μm,0.6s						
CERT	**Cerreto**	**0.56**	**208**	Pg	**Pg**	**22 49 31.1**	**-0.7**
	2μm,0.6s						
TRTR	**Tortoreto Alta**	**0.56**	**49**	Pg	**Pb**	**22 49 32.2**	**-0.1**
TRTR	**Tortoreto Alta**	**0.56**	**49**	Pg	**Pb**	**22 49 32.2**	**-0.1**
CESX	**Cesi**	**0.58**	**287**	Pg	**Pg**	**22 49 31.2**	**-1.0**
	462nm,0.4s						
CESX	**Cesi**	**0.58**	**287**	Pg	**Pg**	**22 49 31.2**	**-1.0**
	462nm,0.4s						
INTR	**Introdacqua**	**0.60**	**135**	Pg	**Pg**	**22 49 32.0**	**-0.7**
INTR	**Introdacqua**	**0.60**	**135**	Pg	**Pg**	**22 49 32.0**	**-0.7**
MTCE	**Montecelio**	**0.61**	**226**	Pg	**Pg**	**22 49 31.9**	**-0.8**
	296nm,0.6s						
MTCE	**Montecelio**	**0.61**	**226**	Pg	**Pg**	**22 49 31.9**	**-0.8**
	296nm,0.6s						
VVLD	**Villa Vallelon**	**0.61**	**159**	Pg	**Pg**	**22 49 32.0**	**-0.8**
	376nm,0.5s						
VVLD	**Villa Vallelon**	**0.61**	**159**	Pg	**Pg**	**22 49 32.0**	**-0.8**
	376nm,0.5s						
FDMO	**Fiordimonte**	**0.62**	**343**	Pg	**Pg**	**22 49 32.1**	**-0.8**
FDMO				Sg	**Sb**	**22 49 41.6**	**-0.3**
	417nm,0.2s						
FDMO	**Fiordimonte**	**0.62**	**343**	Pg	**Pg**	**22 49 32.1**	**-0.8**
FDMO				Sg	**Sb**	**22 49 41.6**	**-0.3**
	417nm,0.2s						
CESI	**CESI - Serrava**	**0.64**	**331**	Pg	**Pg**	**22 49 32.6**	**-0.8**
CESI	**CESI - Serrava**	**0.64**	**331**	Pg	**Pg**	**22 49 32.6**	**-0.8**
GUAR	**Guarcino**	**0.65**	**181**	Pg	**Pg**	**22 49 32.7**	**-0.8**
GUAR	**Guarcino**	**0.65**	**181**	Pg	**Pg**	**22 49 32.7**	**-0.8**
LPEL	**Lama dei Pelig**	**0.74**	**122**	Pg	**Pg**	**22 49 33.9**	**-1.4**
LPEL	**Lama dei Pelig**	**0.74**	**122**	Pg	**Pg**	**22 49 33.9**	**-1.4**
GUMA	**Gualdo di Mace**	**0.76**	**35**	Pg	**Pg**	**22 49 32.5**	**-3.1**
	2μm,0.3s						
ASSB	**Assisi San Ben**	**0.78**	**321**	Pg	**Pg**	**22 49 34.9**	**-1.0**
ASSB	**Assisi San Ben**	**0.78**	**321**	Pg	**Pg**	**22 49 34.9**	**-1.0**
POFI	**Posta Fibreno**	**0.78**	**159**	Pg	**Pg**	**22 49 35.0**	**-0.9**
POFI	**Posta Fibreno**	**0.78**	**159**	Pg	**Pg**	**22 49 35.0**	**-0.9**
RMP	**Rome, Mte Porz**	**0.79**	**217**	Pg	**Pg**	**22 49 35.5**	**-0.6**
RMP	**Rome, Mte Porz**	**0.79**	**217**	Pg	**Pg**	**22 49 35.5**	**-0.6**
SDI	**San Donato**	**0.81**	**154**	Pg	**Pb**	**22 49 35.5**	**-1.1**
SDI	**San Donato**	**0.81**	**154**	Pg	**Pb**	**22 49 35.5**	**-1.1**
RDP	**Rocca di Papa**	**0.82**	**214**	Pg	**Pb**	**22 49 36.4**	**-0.4**
RDP	**Rocca di Papa**	**0.82**	**214**	Pg	**Pb**	**22 49 36.4**	**-0.4**
SNTG	**Esanatoglia**	**0.86**	**341**	Pg	**Pb**	**22 49 36.4**	**-1.0**
SNTG	**Esanatoglia**	**0.86**	**341**	Pg	**Pb**	**22 49 36.4**	**-1.0**
GIUL	**Giuliano Di Ro**	**0.89**	**184**	Pg	**Pb**	**22 49 36.9**	**-1.0**
GIUL	**Giuliano Di Ro**	**0.89**	**184**	Pg	**Pb**	**22 49 36.9**	**-1.0**
CING	**Cingoli**	**0.94**	**354**	Pg	**Pb**	**22 49 37.7**	**-1.0**
CING	**Cingoli**	**0.94**	**354**	Pg	**Pb**	**22 49 37.7**	**-1.0**
CERA	**Filignano**	**0.99**	**149**	Pg	**Pb**	**22 49 38.7**	**-0.9**
CERA	**Filignano**	**0.99**	**149**	Pg	**Pb**	**22 49 38.7**	**-0.9**
MURB	**Monte Urbino**	**1.01**	**324**	Pg	**Pb**	**22 49 39.3**	**-0.7**
MURB	**Monte Urbino**	**1.01**	**324**	Pg	**Pb**	**22 49 39.3**	**-0.7**
MIDA	**Miranda**	**1.05**	**139**	Pg	**Pb**	**22 49 39.6**	**-1.1**
MIDA	**Miranda**	**1.05**	**139**	Pg	**Pb**	**22 49 39.6**	**-1.1**
AOI	**Ancona**	**1.12**	**10**	Pg	**Pb**	**22 49 41.5**	**-0.4**
AOI	**Ancona**	**1.12**	**10**	Pg	**Pb**	**22 49 41.5**	**-0.4**
SACS	**San Casciano d**	**1.13**	**292**	Pg	**Pb**	**22 49 41.4**	**-0.6**
PIEI	**Pieia**	**1.24**	**332**	Pg	**Pn**	**22 49 43.0**	**-0.6**
PIEI	**Pieia**	**1.24**	**332**	Pg	**Pn**	**22 49 43.0**	**-0.6**
NVLJ	**Novalja**	**2.40**	**27**	*e*Pn	**Pn**	**22 49 60.0**	**+0.5**
NVLJ				Sn	**Sn**	**22 50 28.8**	**+0.3**
NVLJ	**Novalja**	**2.40**	**27**	*e*Pn	**Pn**	**22 49 59.9**	**+0.5**
NVLJ				Sn	**Sn**	**22 50 28.8**	**+0.3**
UDBI	**Udbina**	**2.73**	**40**	*e*Pn	**Pn**	**22 50 06.1**	**+2.0**
UDBI				Sn	**Sn**	**22 50 39.6**	**+2.6**
UDBI	**Udbina**	**2.73**	**40**	*e*Pn	**Pn**	**22 50 06.1**	**+2.0**
UDBI				Sn	**Sn**	**22 50 39.5**	**+2.6**
STON	**Ston**	**3.25**	**81**	*e*Pn	**Pn**	**22 50 11.7**	**+0.6**
STON				Sn	**Sn**	**22 50 51.0**	**+1.5**
STON	**Ston**	**3.25**	**81**	*e*Pn	**Pn**	**22 50 11.7**	**+0.6**
STON				Sn	**Sn**	**22 50 51.0**	**+1.5**

*ISCJB **22** 22:49:29.5±0.5, 50.32N±0.04×18.77E±0.03, h0km, Error ellipse: s-maj=5.8km s-min=2.3km az=12.2*
*IPEC **22** 22:49:30.8±0.5, 50.33N×18.82E, h2km±1km, ML1.9/3, Error ellipse: s-maj=2.5km s-min=2.4km az=65.0*
*CSEM **22** 22:49:30.7±0.3, 50.32N×18.78E, h2km, ML2.6/6, Error ellipse: s-maj=7.3km s-min=2.8km az=10.0*
*PRU **22** 22:49:31.4, 50.31N×18.76E, h0km*
*WAR **22** 22:49:31.6, 50.28N×18.83E*

ISC 22 22:49:31.1±0.8, **50.27N**±0.04×**18.80E**±0.02, **h0**km, **n31, σ0s87/62, Poland**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.60**	**225**	*e*PG	**Pg**	**22 49 43.2**	**+0.6**
OKC				*e*SG	**Sg**	**22 49 51.0**	**+0.6**
	comp=Z,14nm,0.3s						
OKC	**Ostrava-Krasne**	**0.60**	**225**	Pg	**Pg**	**22 49 43.2**	**+0.6**
OKC				Sg	**Sg**	**22 49 51.0**	**+0.6**
	14nm,0.3s						
OJC	**Ojcow**	**0.64**	**94**	*i* Pg	**Pg**	**22 49 43.5**	**+0.1**
OJC				*e*Sg	**Sg**	**22 49 51.3**	**-0.4**
OJC				*e*		22 49 53.1	
OJC	**Ojcow**	**0.64**	**94**	*e*Pg	**Pg**	**22 49 43.5**	**+0.1**
OJC				*e*Sg	**Sg**	**22 49 51.3**	**-0.4**
MORC	**Moravsky Berou**	**0.95**	**239**	*e*Pg	**Pg**	**22 49 49.5**	**+0.2**
MORC				*e*Sg	**Sg**	**22 50 01.9**	**+0.3**
	13nm,0.2s,baz=56						
NIE	**Niedzica**	**1.30**	**130**	*e*Pg	**Pn**	**22 49 56.5**	**0.0**
NIE				*e*Sg	**Sn**	**22 50 13.9**	**-0.7**
NIE	**Niedzica**	**1.30**	**130**	*e*Pg	**Pn**	**22 49 56.5**	**0.0**
NIE				*e*Sg	**Sn**	**22 50 13.9**	**-0.7**
KRLC	**Kraliky**	**1.31**	**262**	*e*PG	**Pg**	**22 49 55.2**	**-1.1**
KRLC				*e*SG	**Sg**	**22 50 12.9**	**-0.4**
KRLC	**Kraliky**	**1.31**	**262**	Pg	**Pg**	**22 49 55.2**	**-1.1**
KRLC				Sg	**Sg**	**22 50 12.9**	**-0.4**
DPC	**Dobruska-Polom**	**1.59**	**274**	*e*PG	**Pn**	**22 50 00.1**	**-0.5**
DPC				*e*SG	**Sn**	**22 50 21.5**	**-0.4**
DPC	**Dobruska-Polom**	**1.59**	**274**	Pg	**Pn**	**22 50 00.1**	**-0.5**
DPC				Sg	**Sn**	**22 50 21.5**	**-0.4**
KSP	**Ksiaz**	**1.70**	**291**	*e*PG	**Pb**	**22 50 03.2**	**0.0**
KSP				*e*SG	**Sb**	**22 50 25.6**	**+0.4**
KSP	**Ksiaz**	**1.70**	**291**	*e*Pg	**Pb**	**22 50 03.2**	**0.0**
KSP				*e*Sg	**Sb**	**22 50 25.6**	**+0.4**
VRAC	**Vranov**	**1.72**	**237**	*e*Pn	**Pn**	**22 50 02.6**	**+0.2**
	baz=54						
VRAC				*e*Sg	**Sb**	**22 50 26.1**	**+0.3**
	10nm,0.3s,baz=54						
VYHS	**Vyhne**	**1.77**	**179**	*e*PN	**Pn**	**22 50 02.5**	**-0.6**
VYHS				*e*SN	**Sn**	**22 50 24.9**	**-1.4**
VYHS	**Vyhne**	**1.77**	**179**	*e*Pn	**Pn**	**22 50 02.5**	**-0.6**
VYHS				*e*Sn	**Sn**	**22 50 24.9**	**-1.4**
STHS	**Stebnicka Huta**	**1.80**	**117**	*e*PN	**Pg**	**22 50 05.0**	**-0.5**
STHS				*e*SN	**Sn**	**22 50 26.5**	**-0.4**
STHS	**Stebnicka Huta**	**1.80**	**117**

CMAR	**Chiang Mai Arr**	**51.93**	**297**	P		**P**	**23 05 58.8**	**+1.5**
	1.7nm,0.6s,baz=113,slow=6.4,SNR=9.6							
CHTO	**Chiang Mai**	**52.05**	**297**	*eP*		**P**	**23 05 58.1**	**-0.1**
	19nm,1.8s							
PETK	**Petropavlovsk-**	**57.10**	**8**	P		**P**	**23 06 33.9**	**-0.3**
PETK	**Petropavlovsk-**	**57.10**	**8**	P		**P**	**23 06 33.9**	**-0.3**
	1.2nm,0.5s,baz=189,slow=8.6,SNR=2.9							
ULN	**Ulaanbaatar**	**61.81**	**331**	*eP*		**P**	**23 07 07.1**	**0.0**
	5.7nm,1.1s							
SONM	**Songino Array**	**62.11**	**330**	P		**P**	**23 07 10.0**	**+0.9**
SONM	**Songino Array**	**62.11**	**330**	P		**P**	**23 07 10.0**	**+0.9**
	2.1nm,1.1s,baz=141,slow=5.0,SNR=7.8							
MK31	**Makanchi Array**	**75.44**	**320**	*eP*		**P**	**23 08 31.8**	**-0.2**
MKAR	**Makanchi Array**	**75.44**	**320**	P		**P**	**23 08 32.3**	**+0.3**
MKAR	**Makanchi Array**	**75.44**	**320**	P		**P**	**23 08 32.3**	**+0.3**
	6.9nm,1.1s,baz=112,slow=5.5,SNR=15							
ZALV	**Zalesovo Beam**	**76.78**	**328**	P		**P**	**23 08 38.4**	**-1.0**
ZALV	**Zalesovo Beam**	**76.78**	**328**	P		**P**	**23 08 38.4**	**-1.0**
	1.2nm,0.3s,baz=129,slow=4.0,SNR=3.6							
TKM2	**Tokmak 2**	**78.73**	**315**	*eP*		**P**	**23 08 51.3**	**+0.4**
	1.6nm,0.8s							
KURK	**Kurchatov**	**79.08**	**323**	*eP*		**P**	**23 08 52.0**	**-0.3**
	8.4nm,1.1s							
KURBB	**Kurchatov Arra**	**79.10**	**323**	P		**P**	**23 08 52.7**	**+0.3**
	3.1nm,1.0s,baz=103,slow=5.4,SNR=8.6							
EKS2	**Erkin-Say**	**79.96**	**314**	*eP*		**P**	**23 08 57.6**	**+0.2**
	4.8nm,1.2s							
KKAR	**Karatay Array**	**82.40**	**314**	*eP*		**P**	**23 09 09.7**	**-0.6**
ILAR	**Eielson Array**	**83.23**	**23**	P		**P**	**23 09 13.8**	**-0.3**
ILAR	**Eielson Array**	**83.23**	**23**	P		**P**	**23 09 13.8**	**-0.3**
	1.3nm,0.8s,baz=254,slow=5.0,SNR=11							
BRVK	**Borovoye**	**84.69**	**324**	*eP*		**P**	**23 09 20.6**	**-1.1**
	5.3nm,0.9s							
ABKAR	**Akbulak array**	**90.55**	**319**	*eP*		**P**	**23 09 49.2**	**-0.9**
	2.4nm,1.0s							
TORD	**Torodi Ar. Bea**	**144.22**	**288**	PKP		PKPbc	23 16 23.3	+0.1
TORD	**Torodi Ar. Bea**	**144.22**	**288**	PKP		PKPbc	23 16 23.3	+0.2
	1.3nm,1.0s,baz=74,slow=5.2,SNR=3.6							
SIV	**San Ignacio**	**146.32**	**126**	PKPbc		**PKPab**	**23 16 30.1**	**-0.4**
SIV	**San Ignacio**	**146.32**	**126**	PKPbc		**PKPab**	**23 16 30.1**	**-0.4**
	1.2nm,0.8s,baz=275,slow=5.6,SNR=4.1							

IDC ***22*** *23:00:59.6±0.9, 8.96N×126.33E, h0km, mb3.8/8, mb1 3.9/9, mb1mx3.7/27, mbtmp3.8/9, ML4.1/1, MS4.1/1, Ms1 4.1/1, ms1mx2.7/33, Error ellipse: s-maj=42.6km s-min=14.6km az=82.0*

ISCJB ***22*** *23:01:02.7±2.0, 8.65N±0.05×126.17E±0.09, h16km±14km, mb3.7/8, MS4.2/1, Error ellipse: s-maj=14.8km s-min=6.6km az=163.0*

MAN ***22*** *23:01:04, 8.68N×126.03E, h8km, mb4.7, ML3.5, MS3.5*

ISC 22 23:01:03.3±1.6, 8.82N±0.04×126.17E±0.08, h23km±12km, n19,σ1°s44/25, mb3.8/8, 1C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**0.56**	**285**	*eP*			**Pb**	**23 01 14.4**	**-0.1**
BUTP				*eS*			**Sb**	**23 01 21.2**	**-1.0**
BUKP	**Musuan**	**1.44**	**230**	*eP*			**Pn**	**23 01 28.0**	**-0.1**
BUKP				*eS*			**Sn**	**23 01 44.0**	**-2.3**
CGP	**Cagayan de Oro**	**1.51**	**256**	*eP*			**Pn**	**23 01 28.6**	**-0.3**
CGP				*eS*			**Sn**	**23 01 47.5**	**-0.3**
DAV	**Davao City (W)**	**1.84**	**199**	Pn			**Pb**	**23 01 36.0**	**-0.2**
	64nm,0.3s,baz=242,slow=11,SNR=13								
DAV				Sn			**Sb**	**23 02 01.7**	**+2.9**
	80nm,0.3s,baz=206,slow=22,SNR=4.6								
MATI	**Mati**	**1.86**	**177**	*eP*			**Pn**	**23 01 32.8**	**-1.0**
TBP	**Tagbilaran**	**2.44**	**291**	*eP*			**Pn**	**23 01 43.7**	**+2.0**
CTBH	**Cotabato--PC H**	**2.48**	**230**	*iP*			**Pn**	**23 01 43.5**	**+1.2**
PLP	**Palo**	**2.61**	**333**	*eP*			**Pb**	**23 01 49.0**	**-0.4**
PLP				*eS*			**Sb**	**23 02 21.5**	**+0.5**
LLP	**Lapu-Lapu**	**2.64**	**305**	*eP*			**Pn**	**23 01 46.7**	**+2.3**
LLP				*eS*			**Sb**	**23 02 19.8**	**-2.0**
OCLP	**Ormoc**	**2.70**	**325**	*eP*			**Pb**	**23 01 50.0**	**-0.9**
GUIM	**Jordan**	**3.96**	**297**	*eP*			**Pn**	**23 02 05.2**	**+2.5**
FITZ	**Fitzroy Crossi**	**26.76**	**181**	P			**P**	**23 06 42.7**	**+1.3**
	1.8nm,0.7s,baz=28,slow=7.3,SNR=6.2								
WRA	**Warramunga Arr**	**29.69**	**164**	P			**P**	**23 07 07.8**	**+0.1**
	0.1nm,0.3s,baz=344,slow=9.0,SNR=5.3								
ASAR	**Alice Springs**	**33.16**	**167**	P			**P**	**23 07 38.5**	**+0.3**
	0.3nm,0.5s,baz=356,slow=7.1,SNR=3.4								
USRK	**Ussuriysk Arra**	**35.61**	**7**	P			**P**	**23 07 58.0**	**-1.0**
	3.9nm,0.7s,baz=192,slow=11,SNR=8.6								
STKA	**Stephens Creek**	**43.07**	**161**	P			**P**	**23 09 02.2**	**+0.6**
	2.1nm,0.8s,baz=339,slow=8.6,SNR=4.7								
MKAR	**Makanchi Array**	**53.12**	**323**	P			**P**	**23 10 18.9**	**-0.3**
	0.3nm,0.7s,baz=117,slow=8.1,SNR=3.5								
MKAR				LR		LR		23 36 23.2	
	comp=Z,218nm,21.7s,baz=163,slow=40								
KURBB	**Kurchatov Arra**	**57.21**	**326**	P			**P**	**23 10 47.3**	**-1.2**
	0.3nm,0.4s,baz=122,slow=7.1,SNR=3.1								
FINES	**FINESS Array B**	**87.11**	**332**	P			**P**	**23 13 47.3**	**+0.2**
	0.5nm,0.4s,baz=86,slow=3.8,SNR=11								

CSEM ***22*** *23:04:28.7±0.2, 41.14N×36.80E, h8km, MD2.8, Error ellipse: s-maj=5.8km s-min=3.9km az=30.0*

ISK ***22*** *23:04:28.3, 41.09N×36.78E, h10km, MD2.9*

DDA ***22*** *23:04:29.5, 41.13N×36.80E, h26km, MD2.8*

ISC 22 23:04:28.6±1.2, 41.13N±0.04×36.81E±0.03, h13km±11km, n30,σ0°s82/42, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ERBA	**Erbaa**	**0.45**	**185**	*iP*			**Pb**	**23 04 38.7**	**+0.4**
ERBA				*iS*			**Sb**	**23 04 45.6**	**+0.7**
ERBA	**Erbaa**	**0.45**	**185**	*iP*			**Pb**	**23 04 38.7**	**+0.4**
ERBA				*iS*			**Sb**	**23 04 45.6**	**+0.7**
HAVZ	**Havza**	**0.83**	**267**	*iP*			**Pb**	**23 04 44.7**	**-0.1**
HAVZ				*iS*			**Sb**	**23 04 55.3**	**-0.6**
HAVZ	**Havza**	**0.83**	**267**	*iP*			**Pb**	**23 04 44.7**	**-0.1**
HAVZ				*iS*			**Sb**	**23 04 55.3**	**-0.6**
RSDY	**Resadiye-TOKAT**	**0.83**	**151**	*ePG*			**Pb**	**23 04 44.4**	**-0.4**
RSDY				*eSG*			**Sb**	**23 04 56.0**	**+0.2**
RSDY	**Resadiye-TOKAT**	**0.83**	**151**	*ePg*			**Pb**	**23 04 44.4**	**-0.4**
RSDY				*eSg*			**Sb**	**23 04 56.1**	**+0.2**
TOKT	**Tokat**	**0.83**	**194**	*ePG*			**Pb**	**23 04 43.8**	**-1.1**
TOKT				*eSG*			**Sb**	**23 04 55.5**	**-0.4**
TOKT	**Tokat**	**0.83**	**194**	*ePg*			**Pb**	**23 04 43.8**	**-1.1**
TOKT				*eSg*			**Sb**	**23 04 55.5**	**-0.4**
TOKA	**Tokat**	**0.84**	**198**	*iP*			**Pn**	**23 04 45.1**	**-1.0**
TOKA				*iS*			**Sn**	**23 04 58.2**	**-0.2**
TOKA	**Tokat**	**0.84**	**198**	*iP*			**Pn**	**23 04 45.1**	**-1.0**
TOKA				*iS*			**Sn**	**23 04 58.2**	**-0.2**
SVSK	**Karacayir**	**1.22**	**173**	*ePN*			**Pg**	**23 04 51.4**	**-0.6**
SVSK	**Karacayir**	**1.22**	**173**	*ePn*			**Pg**	**23 04 51.4**	**-0.6**
DIKM	**Dikmen**	**1.28**	**295**	*ePN*			**Pg**	**23 04 52.6**	**-0.6**
DIKM	**Dikmen**	**1.28**	**295**	*ePn*			**Pg**	**23 04 52.6**	**-0.6**
SUSE	**Susehri**	**1.40**	**130**	*iP*			**Pg**	**23 04 55.4**	**-0.1**
SUSE				*iS*			**Sg**	**23 05 14.9**	**+1.2**
SUSE	**Susehri**	**1.40**	**130**	*iP*			**Pg**	**23 04 55.4**	**-0.1**
SUSE				*iS*			**Sg**	**23 05 14.9**	**+1.2**
ESPY	**Espiye-Giresun**	**1.47**	**98**	*ePN*			**Pn**	**23 04 55.0**	**+0.3**
ESPY	**Espiye-Giresun**	**1.47**	**98**	*ePn*			**Pn**	**23 04 55.0**	**+0.3**
BYBT	**Boyabat**	**1.58**	**283**	*ePN*			**Pb**	**23 04 56.8**	**-0.8**
BYBT	**Boyabat**	**1.58**	**283**	*ePn*			**Pb**	**23 04 56.8**	**-0.8**
CORM	**Corum**	**1.91**	**241**	*ePN*			**Pn**	**23 05 01.1**	**+0.2**
CORM	**Corum**	**1.91**	**241**	*ePn*			**Pn**	**23 05 01.1**	**+0.2**
GUMT	**Gumushane**	**2.13**	**107**	*ePN*			**Pb**	**23 05 05.7**	**-1.4**
GUMT	**Gumushane**	**2.13**	**107**	*ePn*			**Pb**	**23 05 05.7**	**-1.4**
ILIC	**ilic-Erzincan**	**2.15**	**141**	*ePN*			**Pn**	**23 05 04.8**	**+0.7**
ILIC	**ilic-Erzincan**	**2.15**	**141**	*ePn*			**Pn**	**23 05 04.8**	**+0.7**
BZK	**Bozkurt**	**2.27**	**292**	*ePN*			**Pn**	**23 05 07.0**	**+1.4**
BZK	**Bozkurt**	**2.27**	**292**	*ePn*			**Pn**	**23 05 07.0**	**+1.4**
AFSR	**Af ar-Bala (A**	**3.32**	**241**	*ePN*			**Pn**	**23 05 21.6**	**+1.4**
AFSR	**Af ar-Bala (A**	**3.32**	**241**	*ePn*			**Pn**	**23 05 21.6**	**+1.4**

ISCJB ***22*** *23:10:01.9±0.8, 12.12N±0.03×95.01E±0.02, h16km±5km, mb4.8/161, MS4.7/41, Error ellipse: s-maj=4.4km s-min=3.4km az=13.7*

BJI ***22*** *23:10:01.5, 11.94N×94.93E, h28km, mB5.1/40, mb4.9/55, Ms5.1/60, Ms7 4.8/51*

IDC ***22*** *23:10:01.1±0.4, 12.20N×95.02E, h0km, mb4.5/33, mb1 4.6/35, mb1mx4.5/39, mbtmp4.5/35, ML4.2/2, MS4.4/18, Ms1 4.4/18, ms1mx4.2/42, Error ellipse: s-maj=14.0km s-min=11.2km az=48.0*

SZGRF ***22*** *23:10:03.2, 11.32N×94.57E, h30km, mb4.9, MS4.5, Andaman Islands, India, region*

DJA ***22*** *23:10:03.8±2.7, 12°N±3°×97°E±°, h10km, M4.8/18,*

mB5.2/14, mb4.7/18, MLv5.2/4, Mw(mB)4.6/14

MOS ***22*** *23:10:04.1±0.8, 12.16N×95.06E, h33km, mb5.2/51, MS4.5/7, Error ellipse: s-maj=8.1km s-min=4.1km az=117.7*

NEIC ***22*** *23:10:04.9±1.1, 12.14N×95.00E, h27km±7km, mb5.1/61, Error ellipse: s-maj=3.9km s-min=2.8km az=55.0*

TEH ***22*** *23:10:05.0, 12.17N×94.99E, h26km, ML5.0*

GCMT ***22*** *23:10:06.2±0.2, 12.11N×95.12E, h12km, MW5.2, Moment Tensor Solution. s52,c83; s78,c145; Moment tensor: Scale 10¹⁶Nm; Mrr-6.22±.15; Mθθ3.59±.15; Mϕϕ2.63±.16; Mrθ2.12±.44; Mθϕ4.50±.12; Mϕr1.57±.43; Best double couple: M07.40000×10¹⁶ NP1:ϕs45.00000°,δ35.00000°, λ-95.00000°. NP2:ϕs231.00000°,δ55.00000°, λ-87.00000°. Principal axes: T 8.1200, Plg10.0000°, Azm318.0000°; N -1.4000, Plg3.0000°, Azm49.0000°; P -6.7100, Plg79.0000°, Azm152.0000°; Data Used: II IU IC G CN.*

ISC 22 23:10:04.6±0.3, 12.09N±0.03×94.95E±0.03, h24km±1km, h23km:pP-P, n517,σ1s35/596, mb5.0/161, MS4.6/42, 35C-16D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**2.20**	**259**	*ePKP*			Pn	23 10 41.0	+1.3
PBA				*eS*			Sb	23 11 09.1	-1.5
DGPR	**DIGLIPUR**	**2.24**	**299**	*ePKP*			**Pn**	**23 10 40.8**	**+0.4**
DGPR				*eS*			**Sn**	**23 11 08.4**	**+1.1**
PHET	**Kaeng Krachan**	**4.65**	**79**	P			Pn	23 11 10.1	-3.3
PBKT	**Sadao Pong**	**7.34**	**52**	P			**Pn**	**23 11 48.4**	**-2.0**
	79nm,0.6s,0.3nm								
CMAR	**Chiang Mai Arr**	**7.41**	**31**	Pn			**Pn**	**23 11 50.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**7.41**	**31**	Pn			**Pn**	**23 11 50.4**	**-1.1**
	1.7nm,0.3s,baz=219,slow=14,SNR=80								
CHTO	**Chiang Mai**	**7.71**	**29**	*eP*			**Pn**	**23 11 53.7**	**-1.9**
CHTO	**Chiang Mai**	**7.71**	**29**	*ePn*			**Pn**	**23 11 53.6**	**-1.9**
CHTO	**Chiang Mai**	**7.71**	**29**	P			**Pn**	**23 11 54.2**	**-1.4**
	21nm,0.8s,487nm0.6nm								
KULM	**Kulim**	**8.80**	**140**	*ePn*			**Pn**	**23 12 08.1**	**-2.4**
KULM	**Kulim**	**8.80**	**140**	P			**Pn**	**23 12 08.6**	**-1.9**
KULM	**Kulim**	**8.80**	**140**	P			**Pn**	**23 12 08.2**	**-2.4**
	26nm,1.1s,632nm								
IPM	**Ipoh**	**9.66**	**141**	*ePn*			**Pn**	**23 12 21.2**	**-1.1**
IPM	**Ipoh**	**9.66**	**141**	P			Pn	23 12 29.3	+6.9
	19nm,0.8s								
PSI	**Prapat**	**10.04**	**157**	Pn			Pn	23 12 31.1	+3.5
PSI	**Prapat**	**10.04**	**157**	Pn			Pn	23 12 31.1	+3.5
	1.0nm,0.3s,baz=327,slow=12,SNR=8.3								
PSI				LR		LR		23 16 22.4	
	comp=Z,2μm,20.1s,baz=318,slow=37								
UBPT	**Khong Chiam**	**10.71**	**72**	P			**Pn**	**23 12 35.6**	**-1.0**
	25nm,1.4s,860nm								
VIS	**Vishakhapatnam**	**12.54**	**298**	*ePKP*			**Pn**	**23 13 01.4**	**-0.3**
VIS				*eS*			AMB	23 13 08.3	
	comp=Z,68nm,1.3s								
BKNI	**Bangkinang**	**13.16**	**152**	P			**Pn**	**23 13 12.5**	**+2.3**
	comp=Z,86nm,0.9s,comp=Z,1μm								
MYKOM	**Kota Tinggi**	**13.52**	**139**	P			**P**	**23 13 25.7**	**+1.7**
SHL	**Shillong**	**13.71**	**348**	*ePKP*	9		x	23 13 07.0	
SHL				*eS*			Sn	23 15 40.0	-10
BTDF	**Bukit Timah Da**	**13.80**	**140**	P			**Pn**	**23 13 19.4**	**+0.5**
	comp=Z,21nm,1.3s,comp=Z,434nm								
BOK	**Bokaro**	**14.47**	**325**	*ePKP*			**Pn**	**23 13 27.9**	**-0.3**
BOK						AMB	AMB	23 13 47.2	
	comp=Z,50nm,0.5s								
TPRI	**Tanjung Pinang**	**14.61**	**139**	P			**P**	**23 13 37.2**	**+0.9**
PALK	**Pallekele**	**14.83**	**252**	*ePn*			**Pn**	**23 13 35.1**	**+2.0**
PALK				*eSn*			**Sn**	**23 16 12.4**	**-4.4**
KMI	**Kunming**	**14.91**	**29**	P			**Pn**	**23 13 36.0**	**+1.7**
KMI				pP			**P**	**23 13 41.9**	**+2.1**
KMI				sP				23 13 45.4	
KMI				PP			**PnPn**	**23 13 47.8**	**+5.3**
KMI				S			Sn	23 16 25.4	+6.5
KMI				sS			**S**	**23 16 35.1**	**-1.5**
KMI				pmax		pmax			
	comp=Z,470nm,5.2s								
KMI				LR		LR			
	comp=N,4μm,11.0s								
KMI				LR		LR			
	comp=E,4μm,11.0s								
KMI				LR		LR			
	comp=Z,3μm,10.2s								
QIZ	**Qiongzhong**	**15.92**	**62**	P			**Pn**	**23 13 47.9**	**+0.6**
QIZ				S			**Sn**	**23 16 43.5**	**+0.3**
QIZ				pmax		pmax			
	comp=Z,65nm,1.3s								
QIZ				pmax		pmax			
	comp=Z,190nm,5.0s								
QIZ				LR		LR			
	comp=N,4μm,17.2s								
QIZ				LR		LR			
	comp=Z,4μm,13.1s								
QIZ	**Qiongzhong**	**15.92**	**62**	*ePn*			**Pn**	**23 13 46.6**	**-0.6**
	comp=Z,172nm,1.6s								
QIZ				*eSn*			**Sn**	**23 16 44.7**	**+1.5**
ODAN	**Odare**	**16.32**	**335**	*eP*			**Pn**	**23 13 53.5**	**+0.9**
	comp=Z,82nm,0.7s								
TAPN	**Taplejung**	**16.63**	**337**	*eP*			**Pn**	**23 13 57.5**	**+0.9**
	comp=Z,140nm,0.8s								
HYB	**Hyderabad**	**16.71**	**290**	*iP*			**P**	**23 14 01.0**	**+1.4**
HYB				*eS*			**S**	**23 17 14.0**	**+0.9**
HYB	**Hyderabad**	**16.71**	**290**	*ex*			x	23 13 43.3	
RAMN	**Ramite**	**16.73**	**333**	*eP*			**Pn**	**23 13 58.3**	**+0.5**
	comp=Z,401nm,1.1s								
NGP	**Nagpur**	**17.68**	**303**	*ePKP*			**P**	**23 14 10.2**	**-0.1**
NGP				*ex*			x	23 14 13.6	
	comp=Z,86nm,1.3s								
NGP				*ex*			x	23 17 16.5	
PKI	**Pulchoki**	**17.81**	**331**	*eP*			**Pn**	**23 14 11.5**	**+0.2**
	comp=Z,371nm,1.5s								
LSA	**Lhasa**	**17.87**	**349**	P			**Pn**	**23 14 10.4**	**-1.9**
LSA				sP			sP	23 14 28.8	+6.4
LSA				S			**Sn**	**23 17 26.4**	**-4.7**
LSA				LR		LR			
	comp=N,730nm,26.5s								
LSA				LR		LR			
	comp=E,2μm,26.9s								
LSA				LR		LR			
	comp=Z,2μm,24.9s								
LSA	**Lhasa**	**17.87**	**349**	*eP*			**Pn**	**23 14 11.2**	**-1.1**
LSA				*e*				23 17 31.6	
LSA				pmax		pmax			
	comp=Z,65nm,1.0s								
LSA	**Lhasa**	**17.87**	**349**	*ePn*			**Pn**	**23 14 11.2**	**-1.1**
	comp=Z,65nm,1.0s								
LSA				*eSn*			**Sn**	**23 17 31.6**	**+0.5**
GUN	**Gumba**	**17.88**	**333**	*eP*			**P**	**23 14 13.2**	**+0.4**
	comp=Z,437nm,1.5s								
DMN	**Daman**	**17.98**	**331**	*eP*			**Pn**	**23 14 13.3**	**-0.1**
	comp=Z,135nm,1.0s								
JBP	**Jabalpur**	**18.00**	**310**	*iP*			**P**	**23 14 14.0**	**+0.3**
JBP				*ix*			x	23 14 18.7	
	comp=Z,101nm,1.8s								
JBP				*ex*			x	23 17 28.9	
PPBI	**Pangkal Pinang**	**18.01**	**141**	P			P	23 14 24.2	+10
TRD	**Trivandrum**	**18.05**	**260**	*ePKP*			P	23 14 26.4	+12
TRD				*eS*			S	23 17 48.4	+8.0
KKN	**Kakani**	**18.05**	**331**	*eP*			**P**	**23 14 14.8**	**+0.3**
	comp=Z,88nm,1.0s								
GYA	**Guiyang**	**18.05**	**36**	P			**P**	**23 14 14.8**	**+0.3**
GYA				pP			**pP**	**23 14 20.5**	**-0.5**
GYA				PP			**PnPn**	**23 14 29.9**	**+4.4**
GYA				S			**Sn**	**23 17 32.0**	**-3.0**
GYA				sS			**S**	**23 17 42.3**	**+1.8**
GYA				SS			**SnSn**	**23 17 56.0**	**+7.0**
GYA				pmax		pmax			
	comp=Z,20nm,0.8s								
GYA				pmax		pmax			
	comp=Z,120nm,4.8s								
GYA				LR		LR			
	comp=N,640nm,15.8s								
GYA				LR		LR			
	comp=E,580nm,16.0s								
GYA				LR		LR			
	comp=Z,590nm,15.7s								
KSM	**Kuching**	**18.53**	**124**	*eP*			**P**	**23 14 19.4**	**-0.3**
	comp=Z,24nm,1.0s								
KSM	**Kuching**	**18.53**	**124**	P			**Pn**	**23 14 20.6**	**+0.6**
	comp=Z,34nm,1.1s,comp=Z,1μm								
LATR	**Latur**	**18.81**	**292**	*ePKP*			**Pn**	**23 14 23.1**	**-0.3**
KOLN	**Koldanda**	**18.87**	**327**	*eP*			**Pn**	**23 14 24.2**	**0.0**
	comp=Z,101nm,0.7s								
DANN	**Dangsing**	**19.26**	**329**	*eP*			**P**	**23 14 28.3**	**+0.4**
	comp=Z,118nm,0.8s								
SBUM	**Sibu**	**19.61**	**118**	P			**Pn**	**23 14 32.7**	**-0.3**
	comp=Z,34nm,2.4s,comp=Z,1μm								
BHPL	**Bhopal**	**20.02**	**306**	*ePKP*			Pn	23 14 37.0	-0.7
BHPL						AMB	AMB	23 14 49.6	
	comp=Z,85nm,2.0s								
CD2	**Chengdu**	**20.42**	**22**	*eP*			**P**	**23 14 40.5**	**+0.2**
CD2				pP			**pP**	**23 14 47.5**	**+0.6**
CD2				sP			**sP**	**23 14 51.9**	**+2.0**
CD2				PP			**PnPn**	**23 15 01.8**	**+3.9**
CD2				S			**S**	**23 18 23.3**	**-4.8**
CD2				sS			Sn	23 18 33.5	+1.3
CD2				SS			**SnSn**	**23 18 53.3**	**+6.1**
CD2				pmax		pmax			
	comp=Z,100nm,1.3s								
CD2				pmax		pmax			
	comp=Z,530nm,8.8s								
CD2				LR		LR			
	comp=N,2μm,12.0s								
CD2				LR		LR			
	comp=E,3μm,12.0s								
CD2				LR		LR			
	comp=Z,3μm,13.2s								
GZH	**Guangzhou**	**20.64**	**56**	P			Pn	23 14 51.3	+6.3
GZH				S			Sn	23 18 47.6	+10
GZH				LR		LR			
	comp=N,1μm,10.1s								
GZH				LR		LR			
	comp=E,1μm,9.8s								
POO	**Poona**	**21.32**	**290**	*ePKP*			**P**	**23 14 50.2**	**+0.1**
POO						AMB	AMB	23 14 57.9	
	comp=Z,99nm,1.0s								
KKM	**Kota Kinabalu**	**21.84**	**104**	*eP*			**P**	**23 14 55.4**	**-0.3**
	comp=Z,40nm,0.9s								
KKM	**Kota Kinabalu**	**21.84**	**104**	P			**P**	**23 14 56.6**	**+0.9**
	comp=Z,67nm,1.1s,comp=Z,950nm								
LGTI	**Lohaghat**	**22.03**	**324**	*ex*			P	23 15 02.7	+5.2
LGTI				*ex*			x	23 16 34.6	
ENH	**Enshi**	**22.56**	**34**	*eP*			**P**	**23 15 01.6**	**-1.8**
	comp=Z,43nm,0.9s								
NDI	**New Delhi**	**23.37**	**318**	*ex*			P	23 15 20.0	+8.4
NDI				*ex*			x	23 19 20.0	
AJM	**Ajmer**	**23.86**	**310**	*ePKP*			**P**	**23 15 18.0**	**+1.5**
DDI	**Dehra Dun**	**23.96**	**322**	*ePKP*			**P**	**23 15 16.7**	**-0.7**
DDI						AMB	AMB	23 15 19.5	
	comp=Z,262nm,2.6s								
MYLDM	**Lahad Datu**	**24.27**	**104**	P			**P**	**23 15 23.3**	**+3.0**
MYLDM	**Lahad Datu**	**24.27**	**104**	P			**P**	**23 15 21.1**	**+0.8**
	comp=Z,70nm,1.7s,comp=Z,2μm								
SMRI	**Semarang**	**24.48**	**140**	P			P	23 15 34.1	+12
SMLA	**Simla**	**25.07**	**322**	*iP*			**P**	**23 15 27.8**	**+0.4**
SMLA						AMB	AMB	23 15 39.1	
	comp=Z,139nm,2.4s								
BBKI	**Banjar Baru**	**25.10**	**127**	P			**P**	**23 15 30.4**	**+2.6**
	comp=Z,93nm,0.8s,comp=Z,3μm								
LZH	**Lanzhou**	**25.20**	**17**	*iP*			**P**	**23 15 29.1**	**+0.3**
LZH				pP			**pP**	**23 15 36.3**	**+0.5**
LZH				sP			**sP**	**23 15 39.8**	**+1.1**
LZH				PP			**PnPn**	**23 16 07.6**	**+4.2**
LZH				S			**S**	**23 19 50.3**	**-2.7**
LZH				sS			**sS**	**23 20 02.5**	**-2.1**
LZH				SS			**SnSn**	**23 20 51.3**	**+7.0**
LZH				pmax		pmax			
	comp=Z,170nm,1.5s								
LZH				pmax		pmax			
	comp=Z,710nm,7.4s								
LZH				LR		LR			
	comp=N,2μm,11.5s								
LZH				LR		LR			
	comp=E,2μm,13.0s								
LZH				LR		LR			
	comp=Z,3μm,14.3s								
XAN	**Xi'an**	**25.29**	**28**	P			**P**	**23 15 27.8**	**-1.7**
XAN				pP			**pP**	**23 15 34.6**	**-1.9**
XAN				PP			**PnPn**	**23 16 06.4**	**+1.9**
XAN				S			**S**	**23 19 53.9**	**-0.3**
XAN				SS			SnSn	23 20 58.4	+12
XAN				pmax		pmax			
	comp=Z,8.0nm,0.8s								
XAN				pmax		pmax	

KSH pmax pmax
comp=Z,160nm,4.4s
KSH LR LR
comp=N,2μm,13.8s
KSH LR LR
comp=E,530nm,9.6s
KSH LR LR
comp=Z,2μm,17.9s
HHC Hu-ho-hao-te 32.16 24 *e*P **P** **23 16 30.4 -0.2**
HHC pP **pP** **23 16 36.4 -1.3**
HHC S **S** **23 21 40.5 -1.6**
HHC PcS **PcS** **23 23 02.6 -1.6**
HHC SS **SnSn** **23 23 34.8 +1.3**
HHC pmax pmax
comp=Z,41nm,1.1s
HHC pmax pmax
comp=Z,320nm,5.2s
HHC LR LR
comp=N,4μm,12.3s
HHC LR LR
comp=E,3μm,11.2s
HHC LR LR
comp=Z,4μm,12.1s
WMQ Urumqi 32.23 350 P **P** **23 16 32.6 +1.4**
WMQ pP **pP** **23 16 40.0 +1.7**
WMQ sP **sP** **23 16 43.0 +1.8**
WMQ PP **PnPn** **23 17 40.0 +2.3**
WMQ S **S** **23 21 44.0 +0.9**
WMQ sS **sS** **23 21 55.0 +0.2**
WMQ SS **SnSn** **23 23 38.0 +2.8**
WMQ pmax pmax
comp=Z,12nm,0.9s
WMQ pmax pmax
comp=Z,160nm,4.7s
WMQ LR LR
comp=N,1μm,16.4s
WMQ LR LR
comp=E,950nm,14.4s
WMQ LR LR
comp=Z,1μm,23.2s
KBL Kabul 32.46 318 *e*P **P** **23 16 34.0 +0.5**
KBL *e**PP **pP** **23 16 42.8 +2.2**
KBL pmax pmax
comp=Z,73nm,2.1s
KBL Kabul 32.46 318 *e*P **P** **23 16 34.0 +0.5**
comp=Z,73nm,2.1s
KBL *e*pP **pP** **23 16 42.8 +2.2**
BJI Beijing 33.56 30 P **P** **23 16 42.8 0.0**
BJI S **S** **23 22 08.3 +4.6**
BJI pmax pmax
comp=Z,16nm,1.6s
BJI LR LR
comp=N,980nm,17.6s
BJI LR LR
comp=E,2μm,17.2s
BJI LR LR
comp=Z,730nm,18.9s
KZA Kyzart 34.46 334 *i*P **P** **23 16 52.3 +1.2**
KZA Kyzart 34.46 334 P **P** **23 16 52.3 +1.2**
SNR=6.8
TKM2 Tokmak 2 35.00 335 *i*P **P** **23 16 56.0 +0.5**
TKM2 pmax pmax
comp=Z,11nm,0.7s
TKM2 Tokmak 2 35.00 335 *e*P **P** **23 16 56.5 +0.9**
comp=Z,49nm,1.8s
TKM2 Tokmak 2 35.00 335 P **P** **23 16 56.3 +0.8**
SNR=6.8
KBK Karagaybulak 35.06 334 *i*P **P** **23 16 57.7 +1.7**
KBK Karagaybulak 35.06 334 P **P** **23 16 57.7 +1.7**
SNR=9.5
AML Almayashu 35.20 332 *i*P **P** **23 16 58.2 +0.8**
AML Almayashu 35.20 332 P **P** **23 16 58.2 +0.8**
SNR=9.2
AAK Ala-Archa 35.24 333*d*i*P* **P** **23 16 58.2 +0.7**
AAK pmax pmax
comp=Z,38nm,1.2s
AAK Ala-Archa 35.24 333 *e*P **P** **23 16 57.4 -0.1**
comp=Z,21nm,1.3s
AAK Ala-Archa 35.24 333 LR LR 23 33 06.4
comp=Z,2μm,21.7s,baz=126,slow=39
CHMS Chumysh 35.42 334 *i*P **P** **23 16 59.9 +1.0**
CHMS Chumysh 35.42 334 P **P** **23 16 59.9 +1.0**
SNR=11
EKS2 Erkin-Say 35.58 333 *e*P **P** **23 17 00.4 0.0**
EKS2 pmax pmax
comp=Z,8.0nm,0.9s
EKS2 Erkin-Say 35.58 333 *e*P **P** **23 17 00.3 0.0**
comp=Z,8.3nm,0.9s
EKS2 Erkin-Say 35.58 333 P **P** **23 17 02.0 +1.6**
SNR=7.4
USP Ospenovka 35.75 334 *i*P **P** **23 17 02.2 +0.5**
USP Ospenovka 35.75 334 P **P** **23 17 02.2 +0.5**
SNR=15
MK31 Makanchi Array 36.20 345*ce*P **P** **23 17 04.6 -1.0**
MK31 pmax pmax
comp=Z,33nm,1.0s
MK31 Makanchi Array 36.20 345 *e*P **P** **23 17 05.3 -0.3**
MK31 *e* 23 17 16.2
MKAR Makanchi Array 36.20 345 P **P** **23 17 05.9 +0.3**
MKAR Makanchi Array 36.20 345 P **P** **23 17 05.8 +0.3**
MKAR Makanchi Array 36.20 345 P **P** **23 17 05.8 +0.3**
comp=Z,5.3nm,0.8s,baz=153,slow=9.1,SNR=45
SONM Songino Array 36.90 13 P **P** **23 17 11.2 -0.4**
SONM Songino Array 36.90 13 P **P** **23 17 11.2 -0.4**
comp=Z,7.3nm,1.0s,baz=196,slow=7.9,SNR=43
ULN Ulaanbaatar 37.08 14 *e*P **P** **23 17 12.5 -0.6**
comp=Z,54nm,1.9s
ULN Ulaanbaatar 37.08 14 P **P** **23 17 12.2 -0.9**
comp=Z,12nm,1.8s,comp=Z,312nm
KK31 Karatay Array 37.45 330*ce*P **P** **23 17 15.5 -0.7**
KK31 pmax pmax
comp=Z,10.0nm,1.2s
KKAR Karatay Array 37.45 330 *e*P **P** **23 17 16.8 +0.6**
KKAR Karatay Array 37.45 330 *e*P **P** **23 17 16.8 +0.6**
SNY Shenyang 38.75 35 ⇓P **P** **23 17 26.3 -0.8**
SNY pmax pmax
comp=Z,31nm,1.4s
SNY pmax pmax
comp=Z,370nm,6.1s
SNY LR LR
comp=N,690nm,16.3s
SNY LR LR
comp=E,970nm,14.9s
SNY LR LR
comp=Z,1μm,13.7s
ZAK Zakamensk 38.79 9⇓*i*P **P** **23 17 27.5 0.0**
ZAK pmax pmax
comp=Z,11nm,1.6s
KSAR Wonju Array Be 38.80 44 P **P** **23 17 26.6 -1.0**
KSRS Korea Array 38.83 44 P **P** **23 17 26.6 -1.2**
comp=Z,7.1nm,0.8s,baz=241,slow=9.1,SNR=16
JNU Nakatsue 38.94 52 *e*P **P** **23 17 29.1 +0.2**
JNU Nakatsue 38.94 52 P **P** **23 17 28.2 -0.7**
comp=Z,19nm,1.0s,baz=199,slow=1.1,SNR=5.4
HVS Khovu-Aksy 38.95 359*c*i*P* **P** **23 17 29.5 +0.7**
HVS pmax pmax
comp=Z,52nm,1.6s
IMYA Miami 39.56 314 *e*P **P** **23 17 33.7 -0.6**
IMOG Moghan 40.00 313 *e*P **P** **23 17 38.0 0.0**
TLY Talaya 40.11 8 *e*P **P** **23 17 39.5 +1.1**
TLY pmax pmax
comp=Z,26nm,1.5s
TLY MLR MLR
comp=Z,734nm,17.0s
TLY Talaya 40.11 8 P **P** **23 17 39.7 +1.3**
comp=Z,53nm,1.1s,SNR=5.3
IPAY Payeh 40.40 313 *e*P **P** **23 17 39.9 -1.4**
IAKL Akhelmad 40.64 313 *e*P **P** **23 17 44.0 +0.6**
KURK Kurchatov 40.77 344*d*i*P* **P** **23 17 43.5 -0.3**
KURK pmax pmax
comp=Z,31nm,1.7s
KURK Kurchatov 40.77 344 *e*P **P** **23 17 42.9 -0.9**
comp=Z,44nm,1.2s
IKRD Kardeh 40.89 313 *e*P P 23 17 40.2 -5.2
MBWA Marble Bar 41.05 143 *e*P **P** **23 17 46.4 -0.1**
comp=Z,23nm,1.2s
CN2 Changchun 41.08 34 *e*P **P** **23 17 46.3 -0.2**
CN2 *e*pP **pP** **23 17 53.8 0.0**
CN2 *e*sP **sP** **23 17 57.1 +0.4**
CN2 PP **PnPn** **23 19 24.6 -1.4**
CN2 PcP **PcP** **23 19 45.3 -0.7**
CN2 *e*S **S** **23 23 57.9 -0.1**
CN2 pmax pmax
comp=Z,50nm,1.1s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,800nm,12.0s
CN2 LR LR
comp=E,800nm,12.0s
CN2 LR LR
comp=Z,1μm,13.0s
IBAF Bafgh 41.09 305 *e*P **P** **23 17 47.8 +0.8**
ABKT Ailbek 41.71 315 P **P** **23 17 53.9 +2.0**
comp=Z,334nm,0.7s,SNR=16
IMEH Mehriz 41.80 304 *e*P **P** **23 17 53.8 +0.9**
ISHV Shirvan 41.82 314 *e*P **P** **23 17 54.7 +1.8**
ICHK Chekchek 42.23 305 *e*P **P** **23 17 56.6 +0.2**
HIA Hailar 42.36 24 *e*P **P** **23 17 56.5 -0.4**
comp=Z,22nm,0.7s
ZALV Zalesovo Beam 42.52 351 P **P** **23 17 58.0 -0.1**
ZALV Zalesovo Beam 42.52 351 P **P** **23 17 58.0 -0.1**
ZALV Zalesovo Beam 42.52 351 P **P** **23 17 58.0 -0.1**
comp=Z,5.5nm,0.7s,baz=177,slow=8.4,SNR=26
FITZ Fitzroy Crossi 42.64 134 P **P** **23 17 59.6 +0.1**
FITZ Fitzroy Crossi 42.64 134 P **P** **23 17 59.6 +0.1**
comp=Z,2.3nm,0.8s,baz=214,slow=2.8,SNR=3.6
FITZ LR LR 23 36 21.7
comp=Z,470nm,19.2s,baz=304,slow=37
ISAD Sadrabad 42.71 304 *e*P **P** **23 18 00.4 0.0**
NVS Novosibirsk 43.63 350⇑*i*P **P** **23 18 06.5 -0.6**
NVS *e*S **S** **23 24 33.5 -1.7**
NVS pmax pmax
comp=N,12nm,1.5s
NVS pmax pmax
comp=Z,16nm,1.5s
NVS pmax pmax
comp=E,7.0nm,1.7s
MDJ Mudanjiang 43.92 36 P **P** **23 18 08.8 -0.8**
MDJ pP **pP** **23 18 15.0 -1.8**
MDJ sP **sP** **23 18 17.6 -2.1**
MDJ PP **PP** **23 19 50.1 -1.9**
MDJ S **S** **23 24 38.6 -1.1**
MDJ sS **sS** **23 24 49.0 -2.7**
MDJ pmax pmax
comp=Z,4.0nm,0.6s
MDJ pmax pmax
comp=Z,150nm,6.9s
MDJ LR LR
comp=N,560nm,12.8s
MDJ LR LR
comp=E,680nm,12.8s
MDJ LR LR
comp=Z,750nm,14.5s
IZEF Zefreh 44.10 305 *e*P **P** **23 18 11.2 -0.4**
IGAR Gharneh 44.19 304 *e*P **P** **23 18 12.6 +0.4**
IKIA Kiasar 44.19 310 *e*P **P** **23 18 13.7 +1.5**
IGLO Ghaloghah 44.19 311 *e*P **P** **23 18 14.9 +2.7**
IALA Alasht 44.80 310 *e*P **P** **23 18 18.5 +1.3**
USRK Assuriysk Arra 45.09 38 P **P** **23 18 17.8 -1.1**
comp=Z,4.6nm,0.7s,baz=239,slow=7.8,SNR=9.4
USRK PcP **PcP** **23 19 58.0 -1.4**
comp=Z,2.6nm,0.8s,baz=93,slow=3.7,SNR=4.6
IPIR Pirpir 45.20 304 *e*P **P** **23 18 20.5 +0.1**
IVRN Varamin 45.25 308 *e*P **P** **23 18 20.2 -0.3**
BRVK Borovoye 45.38 339*d*i*P* **P** **23 18 20.6 -0.5**
BRVK pmax pmax
comp=Z,26nm,2.5s
BRVK Borovoye 45.38 339 *e*P **P** **23 18 21.1 0.0**
comp=Z,13nm,1.0s
MAJO Matsushiro 45.81 50 *e*P **P** **23 18 24.1 -0.8**
MAJO pmax pmax
comp=Z,9.0nm,0.7s
MAJO Matsushiro 45.81 50 *e*P **P** **23 18 24.1 -0.8**
comp=Z,9.3nm,0.7s
MAT Matsushiro 45.81 50 P **P** **23 18 23.9 -1.0**
MAT S **S** **23 25 08.0 +0.5**
MJAR Matsushiro Arr 45.81 50 P **P** **23 18 23.2 -1.7**
MJAR PcP **PcP** **23 20 02.0 -0.2**
MJAR Matsushiro Arr 45.81 50 P **P** **23 18 23.2 -1.7**
comp=Z,3.6nm,0.8s,baz=253,slow=11,SNR=12
MJAR PcP **PcP** **23 20 02.0 -0.2**
comp=Z,5.8nm,0.8s,baz=234,slow=2.7,SNR=13
IR3 Iran Long-Peri 45.95 308 *e*P **P** **23 18 26.7 +0.7**
IRAZ Razeghan 46.77 308 *e*P **P** **23 18 33.2 +0.5**
AB31 Akbulak array 46.98 329*ce*P **P** **23 18 34.0 +0.2**
AB31 pmax pmax
comp=Z,9.0nm,0.7s
ABKAR Akbulak array 46.98 329 *e*P **P** **23 18 34.2 +0.3**
RDF Al-Radifah 47.11 298 *e*P **P** **23 18 35.5 +0.3**
RDF AMb AMB 23 18 44.5
comp=Z,35nm,1.3s
NAY Al-Naaiem 47.44 299 *e*P **P** **23 18 37.1 -0.6**
NAY AMb AMB 23 18 46.1
comp=Z,12nm,1.1s
RAYN Ar Rayn 48.21 291 *e*P **P** **23 18 43.8 -0.1**
comp=Z,8.5nm,1.1s
AKTO Aktyubinsk 48.70 329 P **P** **23 18 47.0 -0.1**
AKTO Aktyubinsk 48.70 329 P **P** **23 18 47.0 -0.1**
AKTO Aktyubinsk 48.70 329 P **P** **23 18 47.0 -0.1**
comp=Z,2.6nm,0.6s,baz=124,slow=6.9,SNR=11
HABR Khabarovsk 49.22 34 *e*P P 23 18 57.4 +6.3
HABR *e* 23 20 10.8
HABR *e**SS S 23 26 07.6 +12
HABR *e* 23 29 36.7
HABR *e*SS **SS** **23 29 23.2 -3.8**
HABR *e*SSS SSS 23 30 40.4
HABR pmax pmax
comp=N,71nm,0.8s
HABR pmax pmax
comp=E,226nm,0.8s
HABR pmax pmax
comp=Z,193nm,0.8s
HABR MLR MLR
comp=Z,367nm,20.0s
WRA Warramunga Arr 50.17 129 P **P** **23 18 58.7 -0.1**
WRA Warramunga Arr 50.17 129 P **P** **23 18 58.7 -0.1**
comp=Z,7.9nm,0.9s,baz=308,slow=8.3,SNR=46
WRA LR LR 23 44 02.3
comp=Z,317nm,20.1s,baz=325,slow=41
WRAB Tennant Creek 50.17 129 *e*P **P** **23 18 58.2 -0.5**
WRAB pmax pmax
comp=Z,8.0nm,0.6s
WRAB Tennant Creek 50.17 129 *e*P **P** **23 18 58.2 -0.5**
comp=Z,7.8nm,0.6s
ATD Arta Tunnel 50.93 275 LR LR 23 37 34.2
comp=Z,148nm,18.6s,baz=24,slow=32
ISHB Shabestar 50.94 310 *e*P **P** **23 19 04.8 +0.1**
SVE Sverdlovsk 51.83 337*ce*P **P** **23 19 10.8 +0.1**
SVE pmax pmax
comp=Z,52nm,1.4s
ASAR Alice Springs 52.10 133 P **P** **23 19 13.3 +0.1**
ASAR Alice Springs 52.10 133 P **P** **23 19 13.3 +0.1**
comp=Z,4.3nm,0.9s,baz=312,slow=7.3,SNR=31
ASAR LR LR 23 41 45.7
comp=Z,370nm,19.3s,baz=296,slow=36
DGRG David-gareji 52.12 314 P **P** **23 19 14.8 +1.7**
GNI Garni 52.15 312 *e*P **P** **23 19 15.0 +1.4**
GNI Garni 52.15 312 *e*P **P** **23 19 14.3 +0.7**
comp=Z,56nm,1.2s
CUKT Cukurca 52.19 308 *e*P **P** **23 19 12.1 -1.8**
ARU Arti 52.37 335*d*i*P* **P** **23 19 14.0 -0.7**
ARU 23 20 24.9
ARU 23 21 11.4
ARU PPP PPP 23 22 14.1
ARU S **S** **23 26 38.2 -0.8**
ARU SS SS 23 30 06.1 -11
ARU pmax pmax
comp=Z,31nm,1.7s
ARU MLR MLR
comp=Z,562nm,22.0s
ARU Arti 52.37 335 P **P** **23 19 14.3 -0.4**
comp=Z,58nm,0.9s,SNR=5.7
CLDR Caldiran 52.47 310 *e*P **P** **23 19 16.6 +0.6**
TBLG Delisi 52.66 314 P P 23 19 30.7 +14
DUS Dusheti 52.80 314 P P 23 19 26.6 +8.4
KGRB Hanur-Agry 53.27 311 *e*P **P** **23 19 22.1 +0.1**
AKH Akhalkalaki 53.44 313 P **P** **23 19 24.6 +1.5**
ONI Oni 53.84 314 P **P** **23 19 27.0 +1.1**
VRTB Varto-Mus 54.31 310 *e*P **P** **23 19 29.3 -0.2**
COEN Coen 54.36 117 *e*P **P** **23 19 29.6 -0.4**
KBZ Khabaz 54.59 315 P **P** **23 19 31.8 +0.6**
KBZ Khabaz 54.59 315 P **P** **23 19 31.8 +0.6**
KBZ Khabaz 54.59 315 P **P** **23 19 31.8 +0.6**
comp=Z,1.9nm,0.7s,baz=150,slow=5.2,SNR=5.2
KIV Kislovodsk 54.81 316 *e*P **P** **23 19 33.3 +0.4**
KIV *e*S **S** **23 27 13.3 +0.6**
KIV pmax pmax
comp=Z,15nm,1.1s
KIV MLR MLR
comp=Z,285nm,17.0s
GOF Gofitskoye 54.94 317 *e*P P 23 19 41.1 +7.4
FURI Furi 55.34 273 *e*P **P** **23 19 36.4 -1.2**
comp=Z,13nm,0.9s
ERZN Erzincan 55.72 310 *e*P **P** **23 19 39.8 +0.2**
YAK Yakutsk 55.77 19 *e*P **P** **23 19 37.4 -2.0**
YAK pmax pmax
comp=Z,9.0nm,0.9s
YAK pmax pmax
comp=N,7.0nm,1.0s
YAK pmax pmax
comp=E,8.0nm,1.4s
YAK MLR MLR
comp=E,385nm,12.0s
YAK MLR MLR
comp=N,427nm,12.0s
YAK MLR MLR
comp=Z,656nm,11.0s
PTK Pertek 55.81 309 *e*P **P** **23 19 38.4 -2.0**
OPO Ambohidratompo 56.09 238 LR LR 23 38 48.1
comp=Z,104nm,20.7s,baz=33,slow=31
GUMT Gumushane 56.11 311 *e*P **P** **23 19 43.5 +1.1**
MALT Malatya 56.43 308 *e*P P 23 19 52.4 +7.7
MALT Malatya 56.43 308 *e*P **P** **23 19 45.3 +0.6**
MALT pmax pmax
comp=Z,14nm,1.2s
MALT Malatya 56.43 308 *e*P **P** **23 19 45.3 +0.6**
comp=Z,14nm,1.2s
ESPY Espiye-Giresun 56.77 311 *e*P **P** **23 19 46.9 -0.1**
KMRS Kahramanmaras 57.46 307 *e*P P 23 19 55.5 +3.6
RSDY Resadiye-TOKAT 57.70 310 *e*P **P** **23 19 53.5 -0.1**
KOZT Kozan 58.30 307 *e*P **P** **23 19 57.4 -0.4**
BNN Bunyan 58.52 308 *e*P P 23 20 06.7 +7.2
KMBO Kilima Mbogo 58.76 261 *e*P **P** **23 20 00.8 -0.9**
comp=Z,1.8nm,0.8s
KMBO Kilima Mbogo 58.76 261 P **P** **23 20 02.7 +1.0**
comp=Z,1.7nm,0.9s,baz=38,slow=12,SNR=5.6
KMBO LR LR 23 45 44.7
comp=Z,247nm,18.3s,baz=71,slow=36
KARA Karaisali 58.87 306 *e*P **P** **23 20 00.9 -0.9**
CORM Corum 59.68 310 *e*P **P** **23 20 05.6 -1.9**
CTAO Charters Tower 59.76 122 *e*P **P** **23 20 08.0 -0.2**
CTAO Charters Tower 59.76 122 *e*P **P** **23 20 08.0 -0.2**
BRTR Keskin Array B 60.35 309 P **P** **23 20 11.3 -0.8**
BRTR Keskin Array B 60.35 309 P **P** **23 20 11.3 -0.8**
comp=Z,4.7nm,0.7s,baz=121,slow=7.6,SNR=43
BRTR LR LR 23 49 46.0
comp=Z,243nm,21.0s,baz=103,slow=40
OBN Obninsk 62.29 326α*i*P **P** **23 20 22.8 -1.9**
OBN *SP **sP** **23 20 32.0 -3.0**
OBN pmax pmax
comp=Z,38nm,1.6s
OBN MLR MLR
comp=Z,300nm,19.0s
STKA Stephens Creek 62.49 136 *e*P **P** **23 20 26.2 -0.2**
comp=Z,3.8nm,1.0s
STKA Stephens Creek 62.49 136 P **P** **23 20 26.6 +0.1**
comp=Z,10nm,0.8s,baz=314,slow=7.0,SNR=10
STKA LR LR 23 49 50.5
comp=Z,264nm,19.9s,baz=322,slow=38
TIXI Tiksi 62.97 11*d*i*P* **P** **23 20 27.4 -1.6**
TIXI pmax pmax
comp=Z,46nm,1.2s
TIRR Tirgusor 64.90 313 ⇓P **P** **23 20 40.5 -1.7**
TIRR Tirgusor 64.90 313⇓*i*P **P** **23 20 40.5 -1.7**
AKASG Malin Array Be 65.39 320 P **P** **23 20 44.5 -0.8**
AKASG Malin Array Be 65.39 320 P **P** **23 20 44.5 -0.8**
AKASG Malin Array Be 65.39 320 P **P** **23 20 44.5 -0.8**
comp=Z,1.0nm,0.5s,baz=82,slow=5.7,SNR=10
AKASG LR LR 23 53 04.9
comp=Z,306nm,21.1s,baz=95,slow=40
VRI Vrincioaia 66.26 315 ⇑P **P** **23 20 51.5 +0.5**
VRI Vrincioaia 66.26 315⇑*i*P **P** **23 20 51.5 +0.5**
PLOR Plostina 66.32 315 ⇓P **P** **23 20 51.9 +0.5**
PLOR Plostina 66.32 315⇓*i*P **P** **23 20 51.9 +0.5**
TESR Tescani 66.40 316⇑*i*P **P** **23 20 51.7 -0.2**
MLR Muntele Rosu 66.77 314⇑*i*P **P** **23 20 53.2 -1.2**
VOIR 67.39 314 ⇑P P 23 21 03.1 +4.8
VOIR 67.39 314⇑*i*P P 23 21 03.1 +4.8
JOF Joensuu 67.43 334 *e*P **P** **23 20 58.4 +0.3**
JOF Joensuu 67.43 334 *ep* **P** **23 20 58.4 +0.3**
BURAR Bucovina Array 67.51 317⇓*i*P **P** **23 20 57.8 -1.2**
VTS Vitosha 68.49 311 ⇑P **P** **23 21 03.4 -2.0**
VTS Vitosha 68.49 311⇑*i*P **P** **23 21 03.4 -2.0**
LVV L'vov 68.55 319 *e*P **P** **23 21 04.3 -1.1**
ARMA Armidale 68.95 129 P **P** **23 21 08.1 -0.2**
DRGR 69.13 316 ⇑P **P** **23 21 09.6 +0.4**
DRGR 69.13 316⇑*i*P **P** **23 21 09.6 +0.4**
FINES FINESS Array B 69.39 331 P **P** **23 21 10.2 -0.2**
FINES FINESS Array B 69.39 331 P **P** **23 21 10.2 -0.2**
comp=Z,2.8nm,0.7s,baz=103,slow=8.2,SNR=15
FINES LR LR 23 57 33.1
comp=Z,544nm,21.6s,baz=101,slow=41
KAF Kangasniemi 69.44 332 *e*P **P** **23 21 11.2 +0.5**
KAF Kangasniemi 69.44 332 *ep* **P** **23 21 11.2 +0.5**
CAN Canberra 69.53 135 *e*P **P** **23 21 11.4 -0.3**
CAN Canberra 69.53 135 *e*P **P** **23 21 11.4 -0.3**
SUW Suwalki 69.59 323 *e*P **P** **23 21 11.0 -0.8**
SUW pmax pmax
comp=Z,41nm,1.0s
SUW Suwalki 69.59 323 *e*P **P** **23 21 11.0 -0.8**
comp=Z,41nm,1.0s
SUW Suwalki 69.59 323 *e*P **P** **23 21 11.2 -0.6**
KOLS Kolonicke sedl 69.60 318 *e*P **P** **23 21 12.1 +0.1**
KOLS pmax pmax
comp=Z,4.0nm,1.6s
KOLS Kolonicke sedl 69.60 318 *e*P **P** **23 21 12.1 +0.1**
CRVS Cervenica-Dubn 70.13 318 *e*P **P** **23 21 13.0 -2.2**
CRVS pmax pmax
comp=Z,17nm,1.4s
CRVS Cervenica-Dubn 70.13 318 *e*P **P** **23 21 13.0 -2.2**
STHS Stebnicka Huta 70.31 318 *e*P **P** **23 21 16.5 +0.2**
STHS pmax pmax
comp=Z,2.0nm,0.8s
STHS Stebnicka Huta 70.31 318 *e*P **P** **23 21 16.5 +0.2**
KECS Kecovo 70.75 317 *e*P **P** **23 21 18.8 -0.2**
KECS pmax pmax
comp=Z,2.0nm,1.1s
KECS Kecovo 70.75 317 *e*P **P** **23 21 18.8 -0.2**
NIE Niedzica 70.92 318 *e*P **P** **23 21 21.1 +1.0**
NIE Niedzica 70.92 318 *e*P **P** **23 21 21.1 +1.0**
KEV Kevo 71.16 340 *e*P **P** **23 21 20.9 -0.1**
KEV Kevo 71.16 340 *ep* **P** **23 21 20.9 -0.1**
OJC Ojcow 71.30 319 *e*P **P** **23 21 22.2 -0.1**
OJC Ojcow 71.30 319 *e*P **P** **23 21 22.2 -0.1**
LSZ Lusaka 71.46 249 *e*P **P** **23 21 24.7 +0.7**
comp=Z,91nm,2.8s
ARCES ARCESS Array B 71.60 340 P **P** **23 21 24.6 +0.8**
ARCES ARCESS Array B 71.60 340 P **P** **23 21 24.6 +0.8**
comp=Z,1.7nm,0.7s,baz=91,slow=5.3,SNR=7.4
ARCES LR LR 23 56 46.7
comp=Z,483nm,19.6s,baz=109,slow=39
VYHS Vyhne 71.84 317 *e*P **P** **23 21 25.1 -0.5**
VYHS pmax pmax
comp=Z,4.0nm,1.3s
VYHS Vyhne 71.84 317 *e*P **P** **23 21 25.1 -0.5**
BILL Bilibino 71.90 22*d*i*P* **P** **23 21 24.0 -1.6**
BILL *e**SP **sP** **23 21 33.5 -2.5**
BILL 23 21 44.0
BILL pmax pmax
comp=Z,38nm,1.5s
BILL MLR MLR
comp=Z,200nm,16.0s
OKC Ostrava-Krasne 72.35 319⇑*i*P **P** **23 21 29.1 +0.5**
OKC Ostrava-Krasne 72.35 319⇑*i*P **P** **23 21 29.1 +0.5**
MORC Moravsky Berou 72.74 319 ⇑P **P** **23 21 30.7 -0.3**
MORC Moravsky Berou 72.74 319 *e*P **P** **23 21 31.0 0.0**
comp=Z,8.5nm,0.9s
MORC Moravsky Berou 72.74 319⇑*i*P **P** **23 21 30.7 -0.3**
ZST Bratislava 72.99 317 *e*P **P** **23 21 32.2 -0.3**
ZST Bratislava 72.99 317 *e*P **P** **23 21 32.2 -0.3**
KRLC Kraliky 73.23 319 *e*P **P** **23 21 34.4 +0.5**
KRLC *e* 23 21 41.0
KRLC Kraliky 73.23 319⇑*e*P **P** **23 21 34.4 +0.5**
KRLC *ep*P **pP** **23 21 41.0 -0.6**
VRAC Vranov 73.34 318 P **P** **23 21 34.9 +0.3**
VRAC Vranov 73.34 318 P **P** **23 21 34.9 +0.3**
comp=Z,1.0nm,0.4s,baz=96,slow=8.3,SNR=3.1
DPC Dobruska-Polom 73.53 319⇑*i*P **P** **23 21 36.4 +0.7**
DPC *e* 23 21 42.9
DPC Dobruska-Polom 73.53 319⇑*i*P **P** **23 21 36.4 +0.7**
DPC *ep*P **pP** **23 21 42.9 -0.4**
KSP Ksiaz 73.56 320 *e*P **P** **23 21 36.1 +0.3**

KSP	Ksiaz	73.56	320	eP	P	23 21 36.1	+0.3
UPC	Upice	73.73	319	⇑iP	P	23 21 37.3	+0.5
UPC				e		23 21 45.3	
UPC	Upice	73.73	319	⇑iP	P	23 21 37.3	+0.5
UPC				epP	pP	23 21 45.3	+0.9
BOJS	Bojanci	74.27	314	iP	P	23 21 37.4	-2.6
PERS	Pernice	74.34	315	eP	P	23 21 40.1	-0.5
VISS	Visnje	74.56	314	iP	P	23 21 42.0	+0.3
PRU	Pruhonice	74.68	319	eP	P	23 21 42.1	-0.2
PRU				e		23 21 50.0	
PRU	Pruhonice	74.68	319⇑	eP	P	23 21 42.1	-0.2
PRU				epP	pP	23 21 50.0	0.0
PRA	Prague	74.75	319	⇑P	P	23 21 42.0	-0.7
BRG	Berggiesshubel	75.05	320	eP	P	23 21 44.7	+0.3
	comp=Z,8.7nm,0.9s						
BRG	Berggiesshubel	75.05	320	eP	P	23 21 45.1	+0.6
	comp=Z,8.0nm,0.8s						
BRG	Berggiesshubel	75.05	320	eP	P	23 21 44.7	+0.3
BRG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
RUE	Ruedersdorf	75.13	321	eP	P	23 21 45.5	+0.7
	comp=Z,29nm,0.7s						
HFS	Hagfors	75.25	329	P	P	23 21 45.8	+0.4
HFS	Hagfors	75.25	329	P	P	23 21 45.8	+0.4
	comp=Z,3.6nm,0.7s,baz=122,slow=5.6,SNR=12						
GEC2	GERESS Array S	75.25	318	eP	P	23 21 46.2	+0.4
	comp=Z,9.0nm,0.8s						
GEC2	GERESS Array S	75.25	318	eP	P	23 21 46.2	+0.4
GEC2				pmax	pmax		
	comp=Z,34nm,0.8s						
GERES	GERESS Array B	75.25	318	P	P	23 21 46.1	+0.3
GERES	GERESS Array B	75.25	318	P	P	23 21 46.1	+0.3
	comp=Z,6.6nm,0.7s,baz=91,slow=5.6,SNR=31						
KHC	Kasperske Hory	75.32	318	⇑iP	P	23 21 46.2	+0.1
KHC				e		23 21 53.4	
KHC	Kasperske Hory	75.32	318	⇑iP	P	23 21 46.2	+0.1
KHC				epP	pP	23 21 53.4	-0.4
KHC	Kasperske Hory	75.32	318	eP	P	23 21 46.3	+0.2
	comp=Z,3.5nm,0.8s						
FBE	Freiberg	75.42	320	eP	P	23 21 47.5	+0.9
	comp=Z,18nm,0.9s						
FBE				epP	pP	23 21 56.4	+2.2
CLL	Collm	75.64	320	eP	P	23 21 47.0	-0.8
CLL				i		23 21 54.8	
CLL				eS	S	23 31 25.0	-2.6
CLL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CLL				MLR	MLR		
	comp=Z,300nm,21.0s						
CLL	Collm	75.64	320	eP	P	23 21 47.0	-0.8
	comp=Z,7.0nm,1.1s						
CLL				i		23 21 51.2	
CLL				iP	pP	23 21 54.8	-0.6
	comp=Z,18nm,1.5s						
CLL				eS	S	23 31 25.0	-2.6
CLL				eSSS	SSS	23 39 24.0	
CLL				e		23 40 36.0	
CLL				Lm	MLR	23 59 00.0	
	comp=Z,300nm,21.0s						
WET	Wettzell	75.78	318	eP	P	23 21 49.2	+0.5
	comp=Z,7.0nm,1.0s						
WET	Wettzell	75.78	318	eP	P	23 21 49.2	+0.5
WET				pmax	pmax		
	comp=Z,35nm,1.0s						
RJOB	Jochberg	75.89	316	eP	P	23 21 49.2	-0.2
	comp=Z,8.0nm,1.3s						
SPITS	Spitsbergen Ar	75.90	348	P	P	23 21 48.5	-0.4
SPITS	Spitsbergen Ar	75.90	348	P	P	23 21 48.5	-0.4
	comp=Z,3.8nm,0.5s,baz=112,slow=11,SNR=16						
TANN	Tannenbergstha	76.00	319	eP	P	23 21 50.3	+0.3
	comp=Z,13nm,1.5s						
NKC	Novy Kostel	76.02	319	eP	P	23 21 50.5	+0.4
NKC				e		23 21 57.8	
NKC	Novy Kostel	76.02	319⇑	eP	P	23 21 50.5	+0.4
NKC				epP	pP	23 21 57.8	+0.1
WERN	Wernitzgruen	76.06	319	eP	P	23 21 50.8	+0.5
	comp=Z,6.0nm,1.2s						
GUNZ	Gunzen	76.09	319	eP	P	23 21 51.0	+0.5
	comp=Z,9.0nm,1.4s						
GUNZ				epP	pP	23 21 59.0	+0.9
WERD	Werda	76.10	319	eP	P	23 21 50.9	+0.4
	comp=Z,6.0nm,0.9s						
ROTZ	Rotzenmuhle	76.19	319	eP	P	23 21 52.0	+1.0
	comp=Z,19nm,1.6s						
MANZ	Manzenberg	76.25	319	eP	P	23 21 52.2	+0.8
	comp=Z,7.0nm,1.0s						
NEUB	Neuenburg	76.41	320	eP	P	23 21 52.6	+0.4
	comp=Z,19nm,1.3s						
NEUB				epP	pP	23 22 01.6	+1.7
NB2	NORSAR Subarra	76.48	330	P	P	23 21 51.7	-0.8
	comp=Z,20nm,1.4s,baz=89,slow=5.9						
NOA	NORSAR Array B	76.48	330	P	P	23 21 52.3	-0.2
NOA	NORSAR Array B	76.48	330	P	P	23 21 52.3	-0.2
	comp=Z,1.5nm,0.9s,baz=91,slow=5.5,SNR=6.3						
NOA				LR	LR	00 02 27.0	
	comp=Z,172nm,19.8s,baz=100,slow=41						
MOX	Moxa	76.53	319	eP	P	23 21 53.4	+0.4
	comp=Z,6.0nm,0.8s						
MOX				epP	pP	23 22 02.3	+1.7
MOX	Moxa	76.53	319	eP	P	23 21 53.4	+0.4
MOX				e*PP	pP	23 22 02.3	+1.7
MOX				pmax	pmax		
	comp=Z,60nm,0.8s						
GRF	Grafenberg Arr	76.84	318	eP	P	23 21 55.5	+0.8
	comp=Z,8.0nm,0.8s						
GRF	Grafenberg Arr	76.84	318	eL	L	00 00 02.6	
	comp=Z,236nm,21.6s						
GRF	Grafenberg Arr	76.84	318	eP	P	23 21 55.6	+0.8
GRF				pmax	pmax		
	comp=Z,133nm,0.8s						
GRF				MLR	MLR		
	comp=Z,8µm,21.6s						
LBTB	Lobatse	76.97	241	eP	P	23 21 56.9	+1.0
	comp=Z,8.6nm,0.8s						
BSEG	Bad Segeberg	77.17	323	eP	P	23 21 57.3	+0.9
	comp=Z,31nm,1.0s						
BSEG				epP	pP	23 22 05.3	+1.2
BSEG	Bad Segeberg	77.17	323	eP	P	23 21 57.3	+0.9
BSEG				e*PP	pP	23 22 05.3	+1.2
BSEG				pmax	pmax		
	comp=Z,178nm,1.0s						
CLZ	Clausthal	77.25	321	eP	P	23 21 57.6	+0.6
	comp=Z,13nm,0.8s						
CLZ				epP	pP	23 22 05.4	+0.7
CLZ	Clausthal	77.25	321	eP	P	23 21 57.6	+0.6
CLZ				e*PP	pP	23 22 05.4	+0.7
CLZ				pmax	pmax		
	comp=Z,105nm,0.8s						
NRDL	Niedersach Rie	77.38	321	eP	P	23 21 58.5	+1.0
	comp=Z,56nm,1.8s						
MUD	Monsted U'grnd	77.69	325	iP	P	23 21 59.8	+0.5
	comp=Z,9.1nm,0.9s						
DZM	Mont Dzumac	77.87	116	P	P	23 22 02.1	+1.1
DZM	Mont Dzumac	77.87	116	P	P	23 22 02.1	+1.1
	comp=Z,14nm,0.9s,baz=62,slow=21,SNR=3.7						
DAVOX	Davos/Dischmat	77.94	316	P	P	23 22 00.8	-0.4
DAVOX	Davos/Dischmat	77.94	316	P	P	23 22 00.8	-0.4
	comp=Z,4.7nm,0.7s,baz=117,slow=11,SNR=7.4						
BOSA	Boshof	78.50	237	eP	P	23 22 04.8	+0.3
	comp=Z,11nm,0.7s						
BOSA	Boshof	78.50	237	P	P	23 22 05.6	+1.1
	comp=Z,14nm,0.9s,baz=116,slow=5.7,SNR=14						
BOSA				LR	LR	23 55 40.3	
	comp=Z,269nm,18.6s,baz=31,slow=35						
TNS	Taunus Mts	78.58	319	eP	P	23 22 04.9	+0.4
	comp=Z,4.0nm,0.8s						
TNS	Taunus Mts	78.58	319	eP	P	23 22 04.9	+0.4
TNS				pmax	pmax		
	comp=Z,59nm,0.8s						
IBBN	Ibbenburen	78.83	321	eP	P	23 22 06.4	+0.7
	comp=Z,21nm,1.0s						
BFO	Black Forest	78.84	317	eP	P	23 22 05.7	-0.2
	comp=Z,6.0nm,1.4s						
BFO				epP	PcP	23 22 14.6	0.0
BFO	Black Forest	78.84	317	eP	P	23 22 05.7	-0.2
BFO				e*PP	PcP	23 22 14.6	0.0
BFO				pmax	pmax		
	comp=Z,53nm,1.4s						
CASY	Casey	79.00	174	eP	P	23 22 06.1	-0.1
BUG	Bochum--Univer	79.21	320	eP	P	23 22 08.4	+0.6
	comp=Z,14nm,0.9s						
BUG				epP	PcP	23 22 17.3	+1.2
KEST	Kesra	79.51	304	P	P	23 22 10.0	+0.1
KEST	Kesra	79.51	304	P	P	23 22 10.0	+0.1
	comp=Z,2.4nm,0.9s,baz=152,slow=18,SNR=4.0						
CDF	Champ du Feu	79.53	317	eP	P	23 22 08.8	-0.9
CDF	Champ du Feu	79.53	317	eP	P	23 22 08.8	-0.9
CDF	Champ du Feu	79.53	317	eP	P	23 22 08.8	-0.9
SENIN	Lac Senin/Sane	79.75	315	eP	P	23 22 11.2	+0.1
	comp=Z,55nm,2.0s						
HINF	Hinteralfeld	79.88	317	eP	P	23 22 10.6	-1.0
	comp=Z,7.3nm,0.8s						
HINF	Hinteralfeld	79.88	317	eP	P	23 22 10.6	-1.0
HINF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HINF	Hinteralfeld	79.88	317	eP	P	23 22 10.6	-1.0
	comp=Z,7.3nm,0.8s						
SBF	Sospel	79.95	313	eP	P	23 22 11.4	-0.7
	comp=Z,81nm,1.2s						
SBF	Sospel	79.95	313	eP	P	23 22 11.4	-0.7
SBF				pmax	pmax		
	comp=Z,81nm,1.2s						
SBF	Sospel	79.95	313	eP	P	23 22 11.4	-0.7
	comp=Z,81nm,1.2s						
MEM	Membach	80.10	320	P	P	23 22 12.9	+0.2
WLF	Walferdange	80.12	319	P	P	23 22 13.6	+0.8
	comp=Z,12nm,2.4s						
WLF	Walferdange	80.12	319	eP	P	23 22 13.3	+0.5
	comp=Z,49nm,2.0s						
HAU	Haudompre	80.19	317	eP	P	23 22 12.4	-0.9
	comp=Z,14nm,0.8s						
HAU	Haudompre	80.19	317	eP	P	23 22 12.4	-0.9
HAU				pmax	pmax		
	comp=Z,14nm,0.8s						
HAU	Haudompre	80.19	317	eP	P	23 22 12.4	-0.9
	comp=Z,14nm,0.8s						
LPG	La Plagne	80.23	314	eP	P	23 22 13.4	-0.5
	comp=Z,26nm,0.8s						
LPG	La Plagne	80.23	314	eP	P	23 22 13.4	-0.5
LPG				pmax	pmax		
	comp=Z,27nm,0.8s						
LPG	La Plagne	80.23	314	eP	P	23 22 13.4	-0.5
	comp=Z,26nm,0.8s						
LPL	La Plagne	80.24	315	eP	P	23 22 13.5	-0.3
	comp=Z,26nm,0.8s						
LPL	La Plagne	80.24	315	eP	P	23 22 13.5	-0.3
LPL				pmax	pmax		
	comp=Z,26nm,0.8s						
LPL	La Plagne	80.24	315	eP	P	23 22 13.5	-0.3
	comp=Z,26nm,0.8s						
MBDF	Montbardon	80.32	314	eP	P	23 22 13.1	-1.1
MBDF	Montbardon	80.32	314	eP	P	23 22 13.1	-1.1
MBDF	Montbardon	80.32	314	eP	P	23 22 13.1	-1.1
PAGF	Fort de Pagny	80.54	318	eP	P	23 22 14.5	-0.6
PAGF	Fort de Pagny	80.54	318	eP	P	23 22 14.5	-0.6
CABF	La Chapelle	80.55	316	eP	P	23 22 14.8	-0.5
	comp=Z,9.4nm,0.7s						
CABF	La Chapelle	80.55	316	eP	P	23 22 14.8	-0.5
CABF				pmax	pmax		
	comp=Z,9.0nm,0.7s						
CABF	La Chapelle	80.55	316	eP	P	23 22 14.8	-0.5
	comp=Z,9.4nm,0.7s						
FRF	La Foret Royal	80.56	313	eP	P	23 22 14.8	-0.5
	comp=Z,18nm,0.7s						
FRF	La Foret Royal	80.56	313	eP	P	23 22 14.8	-0.5
FRF				pmax	pmax		
	comp=Z,18nm,0.7s						
FRF	La Foret Royal	80.56	313	eP	P	23 22 14.8	-0.5
	comp=Z,18nm,0.7s						
BCLA	Clavier	80.57	320	P	P	23 22 15.3	+0.2
	comp=Z,8.5nm,1.6s						
LMR	La Mourre	80.69	312	eP	P	23 22 15.4	-0.6
LMR	La Mourre	80.69	312	eP	P	23 22 15.4	-0.6
LMR	La Mourre	80.69	312	eP	P	23 22 15.4	-0.6
GIVF	Givet	80.92	319	eP	P	23 22 16.6	-0.4
	comp=Z,10nm,0.7s						
GIVF	Givet	80.92	319	eP	P	23 22 16.6	-0.4
GIVF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GIVF	Givet	80.92	319	eP	P	23 22 16.6	-0.4
	comp=Z,10nm,0.7s						
ORIF	Oris-en-Rattie	80.92	314	eP	P	23 22 17.7	+0.4
	comp=Z,12nm,0.8s						
ORIF	Oris-en-Rattie	80.92	314	eP	P	23 22 17.7	+0.4
ORIF				pmax	pmax		
	comp=Z,12nm,0.8s						
ORIF	Oris-en-Rattie	80.92	314	eP	P	23 22 17.7	+0.4
	comp=Z,12nm,0.8s						
SFTF	Sexfontaines	81.04	317	eP	P	23 22 17.1	-0.7
	comp=Z,35nm,1.1s						
SFTF	Sexfontaines	81.04	317	eP	P	23 22 17.1	-0.7
	comp=Z,35nm,1.1s						
SMRF	Simiane la Rot	81.27	313	eP	P	23 22 18.9	-0.2
SMRF	Simiane la Rot	81.27	313	eP	P	23 22 18.9	-0.2
BAIF	Baives	81.31	319	eP	P	23 22 19.0	-0.2
	comp=Z,19nm,0.8s						
BAIF	Baives	81.31	319	eP	P	23 22 19.0	-0.2
BAIF				pmax	pmax		
	comp=Z,19nm,0.8s						
BAIF	Baives	81.31	319	eP	P	23 22 19.0	-0.2
	comp=Z,19nm,0.8s						
VIVF	Saint-Julien-l	81.78	314	eP	P	23 22 21.1	-0.7
VIVF	Saint-Julien-l	81.78	314	eP	P	23 22 21.1	-0.7
VIVF	Saint-Julien-l	81.78	314	eP	P	23 22 21.1	-0.7
LOR	Lormes	81.96	317	eP	P	23 22 21.9	-0.8
	comp=Z,24nm,1.1s						
LOR	Lormes	81.96	317	eP	P	23 22 21.9	-0.8
	comp=Z,24nm,1.1s						
SMF	Signal de Mont	82.08	316	eP	P	23 22 22.4	-0.9
	comp=Z,13nm,0.7s						
SMF	Signal de Mont	82.08	316	eP	P	23 22 22.4	-0.9
SMF				pmax	pmax		
	comp=Z,13nm,0.7s						
SMF	Signal de Mont	82.08	316	eP	P	23 22 22.4	-0.9
	comp=Z,13nm,0.7s						
SSF	Saint Saulge	82.23	316	eP	P	23 22 23.4	-0.7
SSF	Saint Saulge	82.23	316	eP	P	23 22 23.4	-0.7
SSF	Saint Saulge	82.23	316	eP	P	23 22 23.4	-0.7
AVF	Avril sur Loir	82.38	316	eP	P	23 22 24.1	-0.8
	comp=Z,18nm,1.0s						
AVF	Avril sur Loir	82.38	316	eP	P	23 22 24.1	-0.8
AVF				pmax	pmax		
	comp=Z,18nm,1.0s						
AVF	Avril sur Loir	82.38	316	eP	P	23 22 24.1	-0.8
	comp=Z,18nm,1.0s						
LASF	Ste Croix	82.48	313	eP	P	23 22 25.2	-0.3
LASF	Ste Croix	82.48	313	eP	P	23 22 25.2	-0.3
BGF	Bois d'Agland	82.77	316	eP	P	23 22 26.2	-0.7
BGF	Bois d'Agland	82.77	316	eP	P	23 22 26.2	-0.7
BGF	Bois d'Agland	82.77	316	eP	P	23 22 26.2	-0.7
TCF	Toulx Ste Croi	83.25	316	eP	P	23 22 29.0	-0.4
	comp=Z,15nm,1.1s						
TCF	Toulx Ste Croi	83.25	316	eP	P	23 22 29.0	-0.4
TCF				pmax	pmax		
	comp=Z,15nm,1.1s						
TCF	Toulx Ste Croi	83.25	316	eP	P	23 22 29.0	-0.4
	comp=Z,15nm,1.1s						
SUR	Sutherland	83.38	235	eP	P	23 22 30.1	-0.4
SUR	Sutherland	83.38	235	P	P	23 22 32.8	+2.3
	comp=Z,12nm,0.7s,baz=88,slow=5.2,SNR=5.5						
CAF	Calviac	83.59	314	eP	P	23 22 31.0	-0.3
	comp=Z,9.7nm,0.8s						
CAF	Calviac	83.59	314	eP	P	23 22 31.0	-0.3
CAF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CAF	Calviac	83.59	314	eP	P	23 22 31.0	-0.3
	comp=Z,9.7nm,0.8s						
MTLF	Montolieu	83.78	313	eP	P	23 22 31.8	-0.4
	comp=Z,12nm,0.9s						
MTLF	Montolieu	83.78	313	eP	P	23 22 31.8	-0.4
MTLF				pmax	pmax		
	comp=Z,12nm,0.9s						
MTLF	Montolieu	83.78	313	eP	P	23 22 31.8	-0.4
	comp=Z,12nm,0.9s						
RJF	Les Rejaudoux	83.90	315	eP	P	23 22 32.6	-0.2
	comp=Z,29nm,1.2s						
RJF	Les Rejaudoux	83.90	315	eP	P	23 22 32.6	-0.2
RJF	Les Rejaudoux	83.90	315	eP	P	23 22 32.6	-0.2
	comp=Z,29nm,1.2s						
LDF	La Druitiere	84.36	318	eP	P	23 22 34.5	-0.5
	comp=Z,32nm,1.3s						
LDF	La Druitiere	84.36	318	eP	P	23 22 34.5	-0.5
LDF	La Druitiere	84.36	318	eP	P	23 22 34.5	-0.5
	comp=Z,32nm,1.3s						
LFF	La Frestale	84.51	315	eP	P	23 22 35.0	-0.9
	comp=Z,16nm,0.9s						
LFF	La Frestale	84.51	315	eP	P	23 22 35.0	-0.9
LFF	La Frestale	84.51	315	eP	P	23 22 35.0	-0.9
	comp=Z,16nm,0.9s						
FLN	La Foliniere	84.56	319	eP	P	23 22 35.5	-0.5
	comp=Z,32nm,1.1s						
FLN	La Foliniere	84.56	319	eP	P	23 22 35.5	-0.5
	comp=Z,32nm,1.1s						
EKA	Eskdalemuir Ar	84.72	325	P	P	23 22 37.1	+0.5
EKA	Eskdalemuir Ar	84.72	325	P	P	23 22 37.1	+0.5
	comp=Z,1.2nm,0.7s,baz=80,slow=6.9,SNR=7.4						
ESK	Eskdalemuir	84.75	325	eP	P	23 22 36.8	0.0
MFF	Saint Martin d	84.78	316	eP	P	23 22 36.7	-0.5
	comp=Z,82nm,1.6s						
MFF	Saint Martin d	84.78	316	eP	P	23 22 36.7	-0.5
	comp=Z,82nm,1.6s						
TAM	Tamanrasset	84.88	292	eP	P	23 22 37.9	-0.5
	comp=Z,7.2nm,1.4s						
GRR	Gorron	84.88	318	eP	P	23 22 37.0	-0.6
GRR	Gorron	84.88	318	eP	P	23 22 37.0	-0.6
DRV	Dumont d'Urvil	85.17	164	S	S	23 32 44.0	-23
DRV				SS	SS	23 38 28.0	-13
ETSF	Etsaut	85.86	313	eP	P	23 22 42.6	-0.2
	comp=Z,28nm,1.2s						
ETSF	Etsaut	85.86	313	eP	P	23 22 42.6	-0.2
	comp=Z,28nm,1.2s						
SGMF	Saint Gilles	86.02	318	eP	P	23 22 43.0	-0.3
	comp=Z,44nm,1.4s						
SGMF	Saint Gilles	86.02	318	eP	P	23 22 43.0	-0.3
	comp=Z,44nm,1.4s						
SJPF	Ste Jean	86.29	313	eP	P	23 22 44.5	-0.3
	comp=Z,32nm,1.2s						
SJPF	Ste Jean	86.29	313	eP	P	23 22 44.5	-0.3
	comp=Z,32nm,1.2s						
ROSF	Rostrenen	86.46	319	eP	P	23 22 45.2	-0.3
ROSF	Rostrenen	86.46	319	eP	P	23 22 45.2	-0.3
QUIF	Quistinic	86.49	318	eP	P	23 22 45.0	-0.6
QUIF	Quistinic	86.49	318	eP	P	23 22 45.0	-0.6
COLD	Coldfoot	88.18	21	eP	P	23 22 53.9	+0.5
	comp=Z,28nm,1.5s						
ESDC	Sonseca Array	89.11	310	P	P	23 22 58.5	0.0
ESDC	Sonseca Array	89.11	310	P	P	23 22 58.5	0.0
	comp=Z,0.7nm,0.5s,baz=59,slow=4.5,SNR=7.7						
SYO	Syowa Base	89.64	197⇑	eP	P	23 23 01.4	+1.3
TRF	Thorofare Moun	89.90	24	eP	P	23 23 01.8	0.0
	comp=Z,174nm,2.4s						
SPU	Mount Spurr	90.18	26	eP	P	23 23 02.8	-0.2
SUMG	Summit	90.23	347	iP	P	23 23 03.2	-0.2
	comp=Z,3.7nm,0.9s						
MCK	McKinley	90.30	24	eP	P	23 23 03.5	0.0
MCK	McKinley	90.30	24	eP	P	23 23 03.5	0.0
	comp=Z,65nm,1.4s						
TOA0	Torodi Ar. Sit	90.40	283	eP	P	23 23 05.1	+0.2
TORD	Torodi Ar. Bea	90.40	283	P	P	23 23 05.5	+0.6
TORD				PP	PP	23 26 41.2	+1.8
TORD	Torodi Ar. Bea	90.40	283	P	P	23 23 05.5	+0.6
	comp=Z,2.5nm,0.8s,baz=83,slow=4.5,SNR=16						
TORD				PP	PP	23 26 41.2	+1.8
	comp=Z,0.6nm,1.0s,baz=48,slow=2.2,SNR=4.2						
TORD				LR	LR	00 01 04.0	
	comp=Z,180nm,21.7s,baz=100,slow=34						
ILAR	Eielson Array	90.56	22	P	P	23 23 03.5	-1.2
ILAR	Eielson Array	90.56	22	P	P	23 23 03.5	-1.2
	comp=Z,1.9nm,0.6s,baz=304,slow=4.4,SNR=23						
MVO	Moncorvo	90.96	312	eP	P	23 23 08.4	+1.3
	comp=Z,25nm,1.4s						
MVO				iP	pP	23 23 16.0	+1.1
PMR	Palmer	91.24	25	eP	P	23 23 08.0	+0.2
PMR	Palmer	91.24	25	eP	P	23 23 08.0	+0.2
	comp=Z,29nm,1.2s						
MDT	Midelt	91.40	304	P	P	23 23 09.8	+0.4
MDT	Midelt	91.40	304	P	P	23 23 09.8	+0.4
	comp=Z,1.5nm,0.8s,baz=123,slow=7.7,SNR=3.7						
POLO	Lamas de Olo	91.45	313	eP	P	23 23 10.8	+1.4
	comp=Z,14nm,1.4s						
POLO				iP	pP	23 23 19.5	+2.3
SML	Sawmill	91.47	25	eP	P	23 23 09.0	0.0
SML	Sawmill	91.47	25	eP	P	23 23 08.9	0.0
	comp=Z,9.6nm,1.2s						
MTE	Manteigas	91.56	312	eP	P	23 23 12.5	+2.6
	comp=Z,24nm,1.8s						
MTE				iP	pP	23 23 20.6	+2.9
PCBR	Castelo Branco	91.67	311	eP	P	23 23 11.3	+1.0
	comp=Z,18nm,1.4s						
PCBR				iP	pP	23 23 18.7	+0.6
PMRV	Marv??o	91.73	311	iP	pP	23 23 20.8	+2.4
PBAR	Barrancos	91.83	310	eP	P	23 23 12.2	+1.1
	comp=Z,21nm,1.3s						
PBAR				iP	pP	23 23 20.4	+1.5
PTOM	Tomar	92.42	311	eP	P	23 23 15.3	+1.5
	comp=Z,26nm,1.4s						
PTOM				iP	pP	23 23 21.5	-0.1
MENT	Mentasta	92.73	23	eP	P	23 23 14.4	-0.4
VNDA	Vanda	96.88	168	P	P	23 23 33.0	-0.2
SBA	Scott Base	97.98	168	eP	P	23 23 38.0	-0.2
SBA	Scott Base	97.98	168	P	P	23 23 38.0	-0.2
DBIC	Dimbokro	98.13	279	LR	LR	00 10 25.9	
	comp=Z,207nm,19.5s,baz=51,slow=37						
NVAR	Mina Array Bea	120.90	30	PKP	PKPdf	23 28 56.5	+0.7
NVAR	Mina Array Bea	120.90	30	PKP	PKPdf	23 28 56.5	+0.7
	comp=Z,1.8nm,0.7s,baz=311,slow=1.6,SNR=14						
PDAR	Pinedale Array	120.97	21	PKP	PKPdf	23 28 55.7	-0.1
PDAR	Pinedale Array	120.97	21	PKP	PKPdf	23 28 55.7	-0.1
	comp=Z,8.6nm,0.6s,baz=152,slow=4.4,SNR=5.5						
WUAZ	Wupatki	126.50	27	ePKPdf	PKPdf	23 29 06.0	-0.6
ANMO	Albuquerque	129.01	23	ePKPdf	PKPdf	23 29 10.9	-0.5
TXAR	Lajitas Array	135.07	23	PKPpre	PKPpre	23 29 10.3	
TXAR				PKP	PKPdf	23 29 22.6	-0.3
TXAR				PP	PP	23 31 54.9	-1.6
TXAR	Lajitas Array	135.07	23	PKhKP	PKPpre	23 29 10.3	
	comp=Z,0.1nm,0.6s,baz=328,slow=3.2,SNR=2.9						
TXAR				PKP	PKPdf	23 29 22.6	-0.3
	comp=Z,0.5nm,0.7s,baz=41,slow=2.3,SNR=5.1						
TXAR				PP	PP	23 31 54.9	-1.6
	comp=Z,0.1nm,0.5s,baz=333,slow=1.4,SNR=5.0						
BDFB	Brasilia	143.90	260	PKP	PKPbc	23 29 37.9	+0.9
BDFB	Brasilia	143.90	260	PKP	PKPbc	23 29 37.9	+0.9
	comp=Z,3.8nm,0.7s,baz=172,sl

baz=335,slow=16
ARA0 ARCESS Array S 8.41 134 Sn **Sn** **23 13 48.5 -3.8**
baz=335,slow=15,SNR=50
ARCES ARCESS Array B 8.41 134 Pn **Pn** **23 12 20.0 +2.5**
comp=Z,0.3nm,0.3s,baz=323,slow=9.2,SNR=9.6
ARCES Sn **Sn** **23 13 49.5 -2.8**
comp=Z,0.2nm,0.3s,baz=328,slow=18,SNR=4.1
HFS Hagfors 16.30 170 Pn **Pn** **23 14 04.9 +0.5**
baz=359,slow=12,SNR=1.8
BRTR Keskin Array B 38.31 148 P P 23 17 45.9 +10
comp=Z,0.4nm,0.8s,baz=331,slow=1.5,SNR=3.5
ILAR Eielson Array 38.35 343 P **P** **23 17 36.1 -0.1**
comp=Z,0.1nm,0.6s,baz=2.5,slow=8.1,SNR=3.3
TORD Torodi Ar. Bea 63.18 187 P **P** **23 20 45.7 +2.0**
comp=Z,0.4nm,0.9s,baz=356,slow=5.9,SNR=2.9

IDC 22 23:16:13.5±6.5, 11.51N×94.00E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/27, mbtmp3.6/4, Error ellipse: s-maj=380.1km s-min=23.0km az=59.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**36.54**	**346**	P			P	23 23 20.8	-0.1
	0.7nm,0.8s,baz=154,slow=9.4,SNR=4.9								
KURBB	**Kurchatov Arra**	**41.02**	**345**	P			P	23 23 58.2	-0.1
	0.7nm,0.8s,baz=160,slow=8.2,SNR=6.0								
WRA	**Warramunga Arr**	**50.53**	**128**	P			P	23 25 13.6	-0.4
	0.7nm,0.9s,baz=307,slow=8.4,SNR=6.4								
ASAR	**Alice Springs**	**52.39**	**132**	P			P	23 25 28.1	+0.2
	0.4nm,0.6s,baz=316,slow=7.2,SNR=4.0								

*IDC **22** 23:16:26.4±0.5, 12.23N×94.98E, h0km, mb4.2/29, mb1 4.3/31, mb1mx4.2/36, mbtmp4.2/31, ML4.0/2, MS3.9/1, Ms1 4.1/1, ms1mx2.5/40, Error ellipse: s-maj=17.8km s-min=11.4km az=60.0*
*ISCJB **22** 23:16:28.4±0.2, 11.95N±0.03×94.76E±0.03, h24km, mb4.8/155, MS4.6/11, Error ellipse: s-maj=5.5km s-min=3.8km az=33.9*
*NEIC **22** 23:16:28.5±2.4, 12.03N×94.83E, h15km±14km, mb5.0/48, Error ellipse: s-maj=6.4km s-min=4.7km az=65.0*
*TEH **22** 23:16:29.0, 11.67N×94.57E, h27km, ML4.9*
*SZGRF **22** 23:16:29.6, 11.66N×94.70E, h26km, mb4.8, Andaman Islands, India, region*
*MOS **22** 23:16:29.5±0.9, 12.10N×95.00E, h33km, mb5.1/36, Error ellipse: s-maj=11.1km s-min=5.0km az=117.4*
*BJI **22** 23:16:30.6, 11.70N×94.59E, h32km, mB5.0/24, mb4.7/37, Ms5.0/24, Ms7 4.7/24*
*GCMT **22** 23:16:33.2±0.3, 12.19N×95.16E, h12km, MW5.1, Moment Tensor Solution. s28,c43; s60,c107; Moment tensor: Scale 10^{16}Nm; M_{rr}-3.48±.20; $M_{\theta\theta}$ 1.20±.17; $M_{\phi\phi}$2.28±.18; $M_{r\theta}$3.22±.59; $M_{\theta\phi}$3.42±.14; $M_{\phi r}$-2.30±.53; Best double couple: M_o5.90000×10^{16} NP1:ϕ_s9.00000°, δ54.00000°, λ-140.00000°. NP2:ϕ_s253.00000°, δ59.00000°, λ-43.00000°. Principal axes: T 5.2200, Plg3.0000°, Azm312.0000°; N 1.4300, Plg39.0000°, Azm45.0000°; P -6.6500, Plg51.0000°, Azm218.0000°; Data Used: IU II G CN IC.*
*DJA **22** 23:16:39.2±1.0, 12.16N±6.9×6.6E±.7, h51km±11km, M4.8/7, mb4.9/7, MLv4.7/1*

ISC 22 23:16:29.8±0.4, 11.79N±0.04×94.66E±0.04, h23km±2km, h23km:pP-P, n434, σ1s37/409, mb4.9/155, MS4.6/11, 35C-3D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.88**	**266**	*e*PKP			Pb	23 17 06.5	+3.0
PBA				*e*S			Sb	23 17 29.6	+3.1
DGPR	**DIGLIPUR**	**2.17**	**309**	*e*PKP			**Pn**	**23 17 04.6**	**0.0**
DGPR				*e*S			**Sn**	**23 17 31.1**	**+0.3**
PBKT	**Sadao Pong**	**7.75**	**51**	P			**Pn**	**23 18 20.5**	**-0.7**
	67nm,0.8s,0.2nm								
CMAR	**Chiang Mai Arr**	**7.81**	**31**	Pn			Pn	23 18 15.8	-6.3
CMAR	**Chiang Mai Arr**	**7.81**	**31**	Pn			Pn	23 18 15.8	-6.3
	0.9nm,0.3s,baz=219,slow=15,SNR=10.0								
CMAR				LR			LR	23 21 06.0	
	comp=Z,824nm,20.3s,baz=210,slow=38								
CHTO	**Chiang Mai**	**8.11**	**30**	*e*P			Pn	23 18 22.4	-3.9
CHTO	**Chiang Mai**	**8.11**	**30**	*e*Pn			Pn	23 18 22.4	-3.9
KULM	**Kulim**	**8.77**	**137**	*e*Pn			**Pn**	**23 18 34.6**	**-0.7**
KULM				*e*Sn			**Sn**	**23 20 12.7**	**-0.8**
IPM	**Ipoh**	**9.62**	**139**	*e*Pn			**Pn**	**23 18 45.7**	**-1.3**
PSI	**Prapat**	**9.89**	**154**	Pn			Pn	23 18 55.2	+4.5
PSI	**Prapat**	**9.89**	**154**	Pn			Pn	23 18 55.2	+4.5
	0.8nm,0.3s,baz=331,slow=12,SNR=7.8								
VIS	**Vishakhapatnam**	**12.44**	**300**	*e*PKP			**Pn**	**23 19 24.8**	**-0.7**
VIS				AMB			AMB	23 19 36.7	
	comp=Z,94nm,4.2s								
SHL	**Shillong**	**13.95**	**350**	*e*PKP			Pn	23 19 42.3	-4.0
SHL				*ex*			x	23 22 20.5	
PALK	**Pallekele**	**14.47**	**253**	*e*Pn			Pn	23 19 56.8	+3.4
PALK				*e*Sn			**Sn**	**23 22 38.0**	**+4.7**
PALK	**Pallekele**	**14.47**	**253**	P			P	23 20 10.7	+11
	comp=Z,54nm,1.1s								
BOK	**Bokaro**	**14.56**	**326**	*e*PKP			**Pn**	**23 19 52.8**	**-1.7**
KMI	**Kunming**	**15.31**	**29**	P			**P**	**23 20 07.9**	**-1.5**
KMI				pP			**pP**	**23 20 14.6**	**-1.2**
KMI				sP			**sP**	**23 20 18.4**	**-0.4**
KMI				S			S	23 23 01.3	-8.7
KMI				pmax			pmax		
	comp=Z,9.0nm,1.5s								
KMI				LR			LR		
	comp=N,3μm,12.4s								
KMI				LR			LR		
	comp=E,2μm,12.4s								
KMI				LR			LR		
	comp=Z,3μm,13.8s								
QIZ	**Qiongzhong**	**16.31**	**62**	*e*P			**Pn**	**23 20 14.4**	**-3.1**
	comp=Z,50nm,1.1s								
ODAN	**Odare**	**16.47**	**337**	*e*P			**Pn**	**23 20 18.9**	**-0.8**
	comp=Z,59nm,0.6s								
HYB	**Hyderabad**	**16.55**	**292**	*i* P			**P**	**23 20 25.0**	**+2.0**
HYB	**Hyderabad**	**16.55**	**292**	*e*PKP			**Pn**	**23 20 20.2**	**-0.4**
HYB				AMB			AMB	23 20 37.1	
	comp=Z,44nm,1.1s								
RAMN	**Ramite**	**16.87**	**334**	*e*P			**Pn**	**23 20 24.1**	**-0.7**
	comp=Z,558nm,1.0s								
PKI	**Pulchoki**	**17.93**	**332**	*e*P			**Pn**	**23 20 37.4**	**-0.7**
	comp=Z,312nm,1.1s								
PPBI	**Pangkal Pinang**	**17.96**	**140**	P			**P**	**23 20 40.5**	**+1.9**
JBP	**Jabalpur**	**17.97**	**311**	⇑*ix*			x	23 20 46.6	
JBP				*i* x			x	23 20 49.0	
	comp=Z,48nm,1.2s								
JBP				⇓*ex*			x	23 23 52.4	
GUN	**Gumba**	**18.02**	**334**	*e*P			**Pn**	**23 20 38.2**	**-1.0**
	comp=Z,127nm,0.8s								
DMN	**Daman**	**18.10**	**332**	*e*P			**Pn**	**23 20 40.1**	**0.0**
	comp=Z,210nm,1.0s								
LSA	**Lhasa**	**18.11**	**350**	P			**Pn**	**23 20 36.1**	**-4.3**
LSA	**Lhasa**	**18.11**	**350**	*e*P			**Pn**	**23 20 37.5**	**-2.9**
LSA				pmax			pmax		
	comp=Z,111nm,1.3s								
LSA	**Lhasa**	**18.11**	**350**	*e*Pn			**Pn**	**23 20 37.5**	**-2.9**
	comp=Z,111nm,1.3s								
KKN	**Kakani**	**18.18**	**332**	*e*P			**P**	**23 20 41.4**	**+0.2**
	comp=Z,120nm,1.0s								
GYA	**Guiyang**	**18.46**	**36**	P			**Pn**	**23 20 45.8**	**+1.5**
GYA				pP			**pP**	**23 20 53.3**	**+2.7**
GYA				PP			PnPn	23 21 02.8	+6.5
GYA				S			**S**	**23 24 11.0**	**-2.7**
GYA				sS			**sS**	**23 24 20.6**	**-3.7**
GYA				SS			SnSn	23 24 35.5	+11
GYA				pmax			pmax		
	comp=Z,20nm,0.8s								
GYA				pmax			pmax		
	comp=Z,110nm,4.8s								
GYA				LR			LR		
	comp=N,580nm,15.5s								
GYA				LR			LR		
	comp=E,490nm,16.2s								
GYA				LR			LR		
	comp=Z,570nm,15.6s								
KSM	**Kuching**	**18.61**	**122**	*e*Pn			**P**	**23 20 45.0**	**-0.7**
	comp=Z,47nm,1.3s								
KSM	**Kuching**	**18.61**	**122**	P			**P**	**23 20 44.8**	**-0.9**
KOLN	**Koldanda**	**18.97**	**328**	*e*P			**Pn**	**23 20 50.8**	**+0.1**
	comp=Z,83nm,0.7s								
DANN	**Dangsing**	**19.37**	**330**	*e*P			**P**	**23 20 54.3**	**0.0**
	comp=Z,202nm,0.8s								
SBUM	**Sibu**	**19.73**	**117**	P			**Pn**	**23 20 59.5**	**-0.1**
SBUM	**Sibu**	**19.73**	**117**	P			**Pn**	**23 20 59.6**	**-0.1**
BHPL	**Bhopal**	**19.96**	**307**	*e*PKP			**P**	**23 21 01.5**	**+0.9**
BTM	**Bintulu**	**20.15**	**114**	P			**P**	**23 20 59.4**	**-3.3**
CD2	**Chengdu**	**20.81**	**23**	*e*P			Pn	23 21 10.4	-1.8
CD2				pP			pP	23 21 18.4	+2.2
CD2				sP			sP	23 21 22.1	+2.9
CD2				PP			**PnPn**	**23 21 34.1**	**+5.8**
CD2				S			**S**	**23 24 59.5**	**-1.4**
CD2				sS			sS	23 25 10.5	-0.8
CD2				SS			SnSn	23 25 32.1	+10
CD2				pmax			pmax		
	comp=Z,100nm,1.2s								
CD2				pmax			pmax		
	comp=Z,420nm,8.3s								
CD2				LR			LR		
	comp=N,2μm,10.6s								
CD2				LR			LR		
	comp=E,2μm,10.6s								
CD2				LR			LR		
	comp=Z,2μm,10.8s								
POO	**Poona**	**21.16**	**291**	*e*PKP			**P**	**23 21 15.3**	**+1.8**
POO				AMB			AMB	23 21 35.5	
	comp=Z,58nm,1.6s								
KKM	**Kota Kinabalu**	**22.04**	**103**	*e*P			**P**	**23 21 21.5**	**-1.7**
KKM	**Kota Kinabalu**	**22.04**	**103**	P			**P**	**23 21 25.0**	**+1.8**
KKM	**Kota Kinabalu**	**22.04**	**103**	P			**P**	**23 21 26.4**	**+3.2**
	comp=Z,67nm,1.1s								
KDM	**Kudat**	**22.41**	**101**	P			**P**	**23 21 29.4**	**+2.4**
ENH	**Enshi**	**22.97**	**35**	*e*P			**P**	**23 21 30.2**	**-2.6**
NDI	**New Delhi**	**23.40**	**318**	*ex*			pP	23 21 42.5	-1.4
DDI	**Dehra Dun**	**24.02**	**323**	*e*PKP			**P**	**23 21 42.8**	**-0.4**
DDI				AMB			AMB	23 21 51.5	
	comp=Z,411nm,0.5s								
SMRI	**Semarang**	**24.43**	**139**	P			**P**	**23 21 44.9**	**-2.1**
MYLDM	**Lahad Datu**	**24.47**	**104**	P			**P**	**23 21 48.8**	**+1.5**
MYLDM	**Lahad Datu**	**24.47**	**104**	P			**P**	**23 21 51.1**	**+3.8**
	comp=Z,87nm,1.9s								
SMLA	**Simla**	**25.13**	**323**	*e*PKP			**P**	**23 21 54.1**	**+1.0**
SMLA				AMB			AMB	23 22 04.5	
	comp=Z,138nm,4.0s								
LZH	**Lanzhou**	**25.57**	**17**	*e*P			P	23 22 01.6	+4.3
LZH				pP			pP	23 22 08.8	+4.5
LZH				sP			sP	23 22 12.3	+5.1
LZH				PP			**PnPn**	**23 22 39.8**	**+6.2**
LZH				*e*S			**S**	**23 26 27.1**	**+3.1**
LZH				sS			sS	23 26 39.0	+3.4
LZH				SS			SnSn	23 27 32.5	+14
LZH				pmax			pmax		
	comp=Z,63nm,1.5s								
LZH				pmax			pmax		
	comp=Z,210nm,5.2s								
LZH				LR			LR		
	comp=N,1μm,13.0s								
LZH				LR			LR		
	comp=E,820nm,12.5s								
LZH				LR			LR		
	comp=Z,2μm,15.3s								
XAN	**Xi'an**	**25.69**	**28**	P			P	23 22 02.5	+4.2
XAN				pP			pP	23 22 07.8	+2.6
XAN				pmax			pmax		
	comp=Z,7.0nm,0.9s								
XAN				pmax			pmax		
	comp=Z,67nm,11.5s								
WHN	**Wuhan**	**26.10**	**41**	⇓P			**P**	**23 22 03.6**	**+1.6**
DHRM	**DHARAMSHALA**	**26.45**	**323**	*e*PKP			**P**	**23 22 04.7**	**-0.7**
DHRM				AMB			AMB	23 22 05.0	
	comp=Z,30nm,3.7s								
GTA	**Gaotai**	**27.88**	**9**	*e*P			P	23 22 22.6	+4.5
GTA				pP			pP	23 22 30.6	+5.5
GTA				sP			sP	23 22 33.9	+5.9
GTA				S			S	23 27 08.3	+7.9
GTA				sS			sS	23 27 21.1	+9.1
GTA				pmax			pmax		
	comp=Z,12nm,1.3s								
GTA				pmax			pmax		
	comp=Z,320nm,8.1s								
GTA				LR			LR		
	comp=N,580nm,10.5s								
GTA				LR			LR		
	comp=E,700nm,10.9s								
GTA				LR			LR		
	comp=Z,840nm,12.4s								
MRSI	**Marisa**	**29.32**	**111**	P			P	23 22 22.5	-8.5
NJ2	**Nanjing**	**30.04**	**44**	*e*P			**P**	**23 22 38.1**	**+0.9**
NJ2				pmax			pmax		
	comp=Z,20nm,1.0s								
KSH	**Kashi**	**32.20**	**332**	*e*P			**P**	**23 22 53.6**	**-2.7**
KSH				*e*PcP			**PcP**	**23 25 43.8**	**-1.0**
KSH				*e*ScS			ScS	23 33 21.5	-4.6
KSH				pmax			pmax		
	comp=Z,9.0nm,1.0s								
KSH				pmax			pmax		
	comp=Z,220nm,4.0s								
KSH				LR			LR		
	comp=N,510nm,8.2s								
KSH				LR			LR		
	comp=E,550nm,8.8s								
KSH				LR			LR		
	comp=Z,530nm,11.0s								
WMQ	**Urumqi**	**32.47**	**351**	*e*P			P	23 23 02.8	+4.2
WMQ				pP			pP	23 23 10.0	+4.4
WMQ				sP			sP	23 23 13.5	+5.0
WMQ				PP			**PP**	**23 24 12.0**	**-0.2**
WMQ				S			**S**	**23 28 16.0**	**+3.9**
WMQ				sS			sS	23 28 28.0	+4.2
WMQ				SS			**SnSn**	**23 30 13.0**	**+6.7**
WMQ				pmax			pmax		
	comp=Z,18nm,0.8s								
WMQ				pmax			pmax		
	comp=Z,130nm,3.5s								
WMQ				LR			LR		
	comp=N,1μm,12.4s								
WMQ				LR			LR		
	comp=E,860nm,16.7s								
WMQ				LR			LR		
	comp=Z,910nm,23.6s								
KBL	**Kabul**	**32.49**	**318**	*e*P			**P**	**23 22 58.3**	**-0.7**
KBL				pmax			pmax		
	comp=Z,14nm,1.0s								
KBL	**Kabul**	**32.49**	**318**	*e*P			**P**	**23 22 58.3**	**-0.7**
	comp=Z,14nm,1.0s								
HHC	**Hu-ho-hao-te**	**32.54**	**24**	*e*P			**P**	**23 23 00.8**	**+1.5**
HHC				pP			**pP**	**23 23 08.3**	**+2.0**
HHC				sP			**sP**	**23 23 11.4**	**+2.2**
HHC				PP			**PP**	**23 24 10.3**	**-2.7**
HHC				S			**S**	**23 28 15.1**	**+1.7**
HHC				sS			**sS**	**23 28 27.3**	**+2.3**
HHC				SS			**SnSn**	**23 30 14.4**	**+6.3**
HHC				pmax			pmax		
	comp=Z,42nm,0.9s								
HHC				pmax			pmax		
	comp=Z,290nm,5.8s								
HHC				LR			LR		
	comp=N,2μm,12.7s								
HHC				LR			LR		
	comp=E,1μm,11.8s								
HHC				LR			LR		
	comp=Z,2μm,12.0s								
BJT	**Baijiatuan**	**33.94**	**30**	*e*P			**P**	**23 23 09.6**	**-1.7**
BJI	**Beijing**	**33.96**	**30**	P			**P**	**23 23 13.3**	**+1.8**
BJI				pmax			pmax		
	comp=Z,7.0nm,0.7s								
TKM2	**Tokmak 2**	**35.15**	**335**	*e*P			**P**	**23 23 21.3**	**-0.7**
TKM2				pmax			pmax		
	comp=Z,9.0nm,0.8s								
TKM2	**Tokmak 2**	**35.15**	**335**	*e*P			**P**	**23 23 21.3**	**-0.7**
	comp=Z,9.4nm,0.8s								
AAK	**Ala-Archa**	**35.38**	**334**	*ce*P			**P**	**23 23 24.4**	**+0.5**
AAK				pmax			pmax		
	comp=Z,22nm,2.5s								
AAK	**Ala-Archa**	**35.38**	**334**	P			**P**	**23 23 23.7**	**-0.3**
	comp=Z,1.8nm,1.1s								
AAK	**Ala-Archa**	**35.38**	**334**	P			**P**	**23 23 23.7**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=177,slow=15,SNR=3.9								
MK31	**Makanchi Array**	**36.42**	**346**	*ce*P			**P**	**23 23 30.7**	**-2.0**
MK31				pmax			pmax		
	comp=Z,15nm,0.7s								
MK31	**Makanchi Array**	**36.42**	**346**	*e*P			**P**	**23 23 30.6**	**-2.0**
MKAR	**Makanchi Array**	**36.42**	**346**	*e*P			**P**	**23 23 32.6**	**-0.1**
MKAR	**Makanchi Array**	**36.42**	**346**	*e*P			**P**	**23 23 32.5**	**-0.1**
MKAR	**Makanchi Array**	**36.42**	**346**	P			**P**	**23 23 30.4**	**-2.2**
	comp=Z,3.2nm,0.9s,baz=167,slow=8.0,SNR=11								
SONM	**Songino Array**	**37.25**	**13**	P			P	23 23 35.7	-4.1
SONM	**Songino Array**	**37.25**	**13**	P			P	23 23 35.7	-4.1
	comp=Z,1.2nm,0.8s,baz=195,slow=11,SNR=6.5								
ULN	**Ulaanbaatar**	**37.43**	**14**	*e*P			**P**	**23 23 40.5**	**-0.8**
	comp=Z,6.0nm,0.9s								
ULN	**Ulaanbaatar**	**37.43**	**14**	P			P	23 23 44.7	+3.3
KK31	**Karatay Array**	**37.56**	**331**	*ce*P			**P**	**23 23 40.4**	**-2.0**
KK31				pmax			pmax		
	comp=Z,3.0nm,0.7s								
KKAR	**Karatay Array**	**37.56**	**331**	*e*P			**P**	**23 23 41.5**	**-0.9**
KKAR	**Karatay Array**	**37.56**	**331**	*e*P			**P**	**23 23 41.5**	**-0.9**
ZAK	**Zakamensk**	**39.12**	**9**	*e*P			P	23 23 59.5	+4.0
ZAK				pmax			pmax		
	comp=Z,5.0nm,1.1s								
HVS	**Khovu-Aksy**	**39.24**	**359**	⇑*i*P			**P**	**23 23 55.5**	**-1.0**
HVS				pmax			pmax		
	comp=Z,112nm,2.1s								
JNU	**Nakatsue**	**39.35**	**51**	*e*P			**P**	**23 23 56.1**	**-1.5**
	comp=Z,21nm,1.4s								
IMYA	**Miami**	**39.56**	**314**	*e*P			**P**	**23 23 58.8**	**-0.7**
IMOG	**Moghan**	**39.99**	**313**	*e*P			**P**	**23 24 02.0**	**-1.2**
IPAY	**Payeh**	**40.40**	**314**	*e*P			**P**	**23 24 05.0**	**-1.5**
IAKL	**Akhelmad**	**40.64**	**314**	*e*P			**P**	**23 24 09.0**	**+0.4**
IKRD	**Kardeh**	**40.89**	**314**	*e*P			P	23 24 04.7	-5.9
KURBB	**Kurchatov Arra**	**40.91**	**344**	P			**P**	**23 24 08.4**	**-1.8**
	comp=Z,3.6nm,0.9s,baz=162,slow=7.6,SNR=10								
KURK	**Kurchatov**	**40.97**	**344**	*ce*P			**P**	**23 24 09.6**	**-1.1**
KURK				pmax			pmax		
	comp=Z,11nm,1.7s								
KURK	**Kurchatov**	**40.97**	**344**	*e*P			**P**	**23 24 09.4**	**-1.3**
	comp=Z,38nm,1.2s								
MBWA	**Marble Bar**	**40.98**	**143**	*e*P			**P**	**23 24 12.8**	**+1.7**
IBAF	**Bafgh**	**41.02**	**305**	*e*P			**P**	**23 24 12.8**	**+1.1**
CN2	**Changchun**	**41.49**	**34**	*e*P			**P**	**23 24 16.3**	**+1.2**
CN2				*e*pP			**pP**	**23 24 23.6**	**+1.4**
CN2				*e*S			**S**	**23 30 31.3**	**+2.0**
CN2				pmax			pmax		
	comp=Z,10.0nm,0.5s								
CN2				pmax			pmax		
	comp=Z,200nm,4.0s								
CN2				LR			LR		
	comp=N,600nm,12.0s								
CN2				LR			LR		
	comp=E,600nm,12.0s								
CN2				LR			LR		
	comp=Z,600nm,13.0s								
ABKT	**Ailbek**	**41.72**	**315**	P			**P**	**23 24 18.1**	**+1.0**
	comp=Z,322nm,0.6s,SNR=9.4								
IMEH	**Mehriz**	**41.73**	**304**	*e*P			**P**	**23 24 17.5**	**0.0**
FITZ	**Fitzroy Crossi**	**42.63**	**134**	*e*P			**P**	**23 24 23.9**	**-0.8**
	comp=Z,111nm,2.6s								
FITZ	**Fitzroy Crossi**	**42.63**	**134**	P			**P**	**23 24 26.6**	**+1.9**
	comp=Z,2.3nm,0.8s,baz=328,slow=4.9,SNR=4.4								
ISAD	**Sadrabad**	**42.64**	**305**	*e*P			**P**	**23 24 25.1**	**0.0**
HIA	**Hailar**	**42.75**	**24**	*e*P			**P**	**23 24 25.7**	**+0.3**
	comp=Z,23nm,1.4s								
ZAA0	**Zalesovo Array**	**42.77**	**351**	*e*P			**P**	**23 24 22.9**	**-2.5**
ZALV	**Zalesovo Beam**	**42.77**	**351**	P			**P**	**23 24 22.5**	**-2.9**
ZALV	**Zalesovo Beam**	**42.77**	**351**	P			**P**	**23 24 22.5**	**-2.9**
ZALV	**Zalesovo Beam**	**42.77**	**351**	P			**P**	**23 24 22.5**	**-2.9**
	comp=Z,1.6nm,0.7s,baz=170,slow=9.0,SNR=5.8								
IZEF	**Zefreh**	**44.04**	**305**	*e*P			**P**	**23 24 36.7**	**+0.4**
IGAR	**Gharneh**	**44.12**	**305**	*e*P			**P**	**23 24 38.2**	**+1.3**
IKIA	**Kiasar**	**44.16**	**310**	*e*P			**P**	**23 24 38.8**	**+1.6**
IGLO	**Ghaloghah**	**44.17**	**311**	*e*P			P	23 24 34.3	-2.9
IPIR	**Pirpir**	**45.13**	**305**	*e*P			**P**	**23 24 46.9**	**+1.8**
IPRN	**Peran**	**45.18**	**310**	*e*P			**P**	**23 24 47.3**	**+2.1**
BVAR	**Borovoye Array**	**45.49**	**340**	P			**P**	**23 24 44.6**	**-2.6**
BVAR	**Borovoye Array**	**45.49**	**340**	P			**P**	**23 24 44.6**	**-2.6**
BVAR	**Borovoye Array**	**45.49**	**340**	P			**P**	**23 24 44.6**	**-2.6**
	comp=Z,1.1nm,0.8s,baz=136,slow=9.5,SNR=5.1								
BRVK	**Borovoye**	**45.55**	**340**	*e*P			**P**	**23 24 47.5**	**-0.2**
BRVK				pmax			pmax		
	comp=Z,9.0nm,0.9s								
BRVK	**Borovoye**	**45.55**	**340**	*e*P			**P**	**23 24 47.5**	**-0.2**
	comp=Z,9.1nm,0.9s								
IR3	**Iran Long-Peri**	**45.91**	**308**	*e*P			P	23 24 45.7	-5.3
MJAR	**Matsushiro Arr**	**46.22**	**50**	P			P	23 24 48.7	-4.6
MJAR				PcP			**PcP**	**23 26 27.1**	**-1.7**
MJAR	**Matsushiro Arr**	**46.22**	**50**	P			P	23 24 48.7	-4.6
	comp=Z,1.1nm,0.4s,baz=229,slow=7.4,SNR=3.7								
MJAR				PcP			**PcP**	**23 26 27.1**	**-1.7**
	comp=Z,2.6nm,0.7s,baz=245,slow=2.9,SNR=6.0								
IRAZ	**Razeghan**	**46.73**	**308**	*e*P			**P**	**23 24 58.0**	**+0.5**
RDF	**Al-Radifah**	**47.00**	**299**	*e*P			**P**	**23 25 00.9**	**+1.4**
RDF				AMb			AMB	23 25 10.2	
	comp=Z,34nm,1.0s								
AB31	**Akbulak array**	**47.09**	**329**	*ce*P			**P**	**23 24 59.1**	**-0.8**
AB31				pmax			pmax		
	comp=Z,11nm,0.7s								
ABKAR	**Akbulak array**	**47.09**	**329**	*e*P			**P**	**23 24 59.0**	**-0.9**
NAY	**Al-Naaiem**	**47.33**	**299**	*e*P			**P**	**23 25 02.5**	**+0.4**
NAY				AMb			AMB	23 25 12.2	
	comp=Z,21nm,0.8s								
RAYN	**Ar Rayn**	**48.05**	**291**	*e*P			**P**	**23 25 05.3**	**-2.5**
	comp=Z,12nm,1.0s								
IGHG	**Ghaleghazi**	**49.06**	**305**	*e*P			**P**	**23 25 15.2**	**-0.4**
WRA	**Warramunga Arr**	**50.20**	**129**	P			**P**	**23 25 23.9**	**-0.4**
WRA	**Warramunga Arr**	**50.20**	**129**	P			**P**	**23 25 23.9**	**-0.4**
	comp=Z,3.0nm,0.6s,baz=307,slow=8.4,SNR=11								
WRAB	**Tennant Creek**	**50.21**	**129**	*e*P			**P**	**23 25 24.2**	**-0.1**
WRAB				pmax			pmax		
	comp=Z,10.0nm,0.8s								
WRAB	**Tennant Creek**	**50.21**	**129**	*e*P			**P**	**23 25 24.2**	**-0.1**
	comp=Z,10nm,0.8s								
ISHB	**Shabestar**	**50.92**	**310**	*e*P			**P**	**23 25 29.9**	**

DRGR 69.14 316 ⇑P P 23 27 34.6 +0.1
DRGR 69.14 316⇑*i*P P 23 27 34.6 +0.1
FIA1 FINESS Array S 69.52 331 *e*P P 23 27 34.1 -2.2
FINES FINESS Array B 69.52 331 P P 23 27 35.0 -1.4
FINES FINESS Array B 69.52 331 P P 23 27 35.0 -1.4
comp=Z,3.9nm,0.6s,baz=100,slow=6.8,SNR=8.7
KAF Kangasniemi 69.57 332 *e*P P 23 27 37.0 +0.3
KAF Kangasniemi 69.57 332 *e*p P 23 27 37.0 +0.3
KOLS Kolonicke sedl 69.63 318 *e*P P 23 27 37.1 -0.3
KOLS *e* 23 27 45.4
KOLS Kolonicke sedl 69.63 318 *e*P P 23 27 37.1 -0.3
KOLS *e*pP pP 23 27 45.4 +0.5
SUW Suwalki 69.66 323 *e*P P 23 27 36.2 -1.2
SUW pmax pmax
comp=Z,35nm,1.2s
SUW Suwalki 69.66 323 *e*P P 23 27 36.2 -1.2
comp=Z,34nm,1.2s
CRVS Cervenica-Dubn 70.16 318 *e*P P 23 27 38.4 -2.2
CRVS pmax pmax
comp=Z,10.0nm,1.3s
CRVS Cervenica-Dubn 70.16 318 *e*P P 23 27 38.4 -2.2
CRVS *e*pP pP 23 27 46.0 -2.2
STHS Stebnicka Huta 70.34 318 *e*P P 23 27 41.7 -0.1
STHS pmax pmax
comp=Z,2.0nm,1.0s
STHS Stebnicka Huta 70.34 318 *e*P P 23 27 41.7 -0.1
KECS Kecovo 70.77 317 *e*P P 23 27 44.0 -0.4
KECS pmax pmax
comp=Z,3.0nm,1.0s
KECS Kecovo 70.77 317 *e*P P 23 27 44.0 -0.4
KECS *e*pP pP 23 27 51.4 -0.5
NIE Niedzica 70.95 318 *e*P P 23 27 46.1 +0.6
NIE Niedzica 70.95 318 *e*P P 23 27 46.1 +0.6
LSZ Lusaka 71.09 249 *e*P P 23 27 47.1 +0.2
comp=Z,24nm,1.8s
KEV Kevo 71.34 340 *e*p P 23 27 55.3 +8.0
ARCES ARCESS Array B 71.78 340 P P 23 27 50.2 +0.1
ARCES ARCESS Array B 71.78 340 P P 23 27 50.2 +0.1
comp=Z,3.1nm,1.0s,baz=95,slow=4.5,SNR=3.6
VYHS Vyhne 71.87 317 *e*P P 23 27 49.8 -1.2
VYHS pmax pmax
comp=Z,6.0nm,1.8s
VYHS Vyhne 71.87 317 *e*P P 23 27 49.8 -1.2
VYHS *e*pP pP 23 27 58.1 -0.5
BILL Bilibino 72.28 22⇑*e*P P 23 27 49.9 -3.2
BILL *e**PP pP 23 27 57.9 -2.7
BILL *e* 23 28 04.3
BILL 23 28 07.0
BILL pmax pmax
comp=Z,43nm,1.2s
BILL MLR MLR
comp=Z,100nm,16.0s
OKC Ostrava-Krasne 72.38 319 *e*P P 23 27 54.2 +0.2
OKC *e* 23 28 01.6
OKC Ostrava-Krasne 72.38 319⇑*e*P P 23 27 54.2 +0.2
OKC *e*pP pP 23 28 01.6 0.0
MORC Moravsky Berou 72.77 319 ⇑P P 23 27 56.5 +0.1
MORC Moravsky Berou 72.77 319 *e*P P 23 27 55.8 -0.7
comp=Z,10nm,1.0s
MORC Moravsky Berou 72.77 319⇑*i*P P 23 27 56.5 +0.1
ZST Bratislava 73.01 317 *e*P P 23 27 58.9 +1.1
ZST *e*pP pP 23 28 06.0 +0.6
DPC Dobruska-Polom 73.57 319⇑*i*P P 23 28 01.7 +0.6
DPC *e* 23 28 09.0
DPC Dobruska-Polom 73.57 319⇑*i*P P 23 28 01.7 +0.6
DPC *e*pP pP 23 28 09.0 +0.3
KSP Ksiaz 73.60 320 *e*P P 23 28 01.4 +0.1
KSP *e**PP pP 23 28 08.1 -0.7
UPC Upice 73.77 319⇑*i*P P 23 28 02.6 +0.3
UPC *e* 23 28 09.6
UPC Upice 73.77 319⇑*i*P P 23 28 02.6 +0.3
UPC *e*pP pP 23 28 09.6 -0.2
PRU Pruhonice 74.71 319⇑*i*P P 23 28 08.0 +0.3
PRU *e* 23 28 15.3
PRU Pruhonice 74.71 319⇑*i*P P 23 28 08.0 +0.3
PRU *e*pP pP 23 28 15.3 0.0
BRG Berggiesshubel 75.09 320 *e*P P 23 28 09.9 0.0
comp=Z,11nm,1.2s
BRG *e* 23 28 17.4
comp=Z,13nm,1.0s
BRG
comp=N,164nm,20.3s
BRG
comp=E,265nm,23.5s
BRG
comp=Z,292nm,21.3s
BRG Berggiesshubel 75.09 320 *e*P P 23 28 10.2 +0.3
comp=Z,11nm,1.2s
BRG *e*pP pP 23 28 17.7 +0.2
BRG Berggiesshubel 75.09 320 *e*P P 23 28 09.9 0.0
BRG *e* 23 28 17.4
BRG pmax pmax
comp=Z,11nm,1.2s
BRG pmax pmax
comp=Z,13nm,1.0s
BRG MLR MLR
comp=N,164nm,20.3s
BRG MLR MLR
comp=E,265nm,23.5s
BRG MLR MLR
comp=Z,292nm,21.3s
GEC2 GERESS Array S 75.28 318 *e*P P 23 28 11.3 +0.1
comp=Z,7.0nm,0.9s
GEC2 *e*pP pP 23 28 18.8 +0.1
GEC2 GERESS Array S 75.28 318 *e*P P 23 28 11.3 +0.1
GEC2 *e**PP pP 23 28 18.8 +0.1
GEC2 pmax pmax
comp=Z,9.0nm,0.9s
GEC2 GERESS Array S 75.28 318 *e*P P 23 28 11.3 +0.1
GERES GERESS Array B 75.28 318 P P 23 28 10.4 -0.7
GERES GERESS Array B 75.28 318 P P 23 28 10.4 -0.7
comp=Z,4.1nm,0.8s,baz=101,slow=5.6,SNR=13
KHC Kasperske Hory 75.35 318 *e*P P 23 28 11.2 -0.3
KHC *e* 23 28 18.7
KHC Kasperske Hory 75.35 318⇑*e*P P 23 28 11.2 -0.3
KHC *e*pP pP 23 28 18.7 -0.4
KHC Kasperske Hory 75.35 318 *e*P P 23 28 10.5 -1.0
comp=Z,4.9nm,1.0s
HFS Hagfors 75.36 329 P P 23 28 11.0 -0.3
HFS Hagfors 75.36 329 P P 23 28 11.0 -0.3
comp=Z,1.6nm,0.6s,baz=179,slow=5.9,SNR=4.2
FBE Freiberg 75.47 320 *e*P P 23 28 12.6 +0.6
comp=Z,13nm,1.0s
FBE *e*pP pP 23 28 20.1 +0.5
CLL Collm 75.68 320 *e*P P 23 28 13.2 -0.1
comp=Z,10.0nm,1.5s
CLL *e*pP pP 23 28 20.6 -0.3
CLL Collm 75.68 320 *e*P P 23 28 11.0 -2.3
CLL *i* 23 28 20.3
CLL pmax pmax
comp=Z,10.0nm,1.4s
CLL MLR MLR
comp=Z,200nm,19.8s
CLL Collm 75.68 320 *e*P P 23 28 12.0 -1.3
comp=Z,10.0nm,1.4s
CLL *i* sP sP 23 28 20.3 -3.3
CLL *e*(PcP) PcP 23 28 24.0 -2.0
CLL *e* 23 38 08.0
CLL Lm MLR 00 06 00.0
comp=Z,200nm,19.8s
WET Wettzell 75.81 318 *e*P P 23 28 14.3 +0.2
comp=Z,7.0nm,1.2s
WET *e*pP pP 23 28 21.9 +0.2
WET Wettzell 75.81 318 *e*P P 23 28 14.3 +0.2
WET *e**PP pP 23 28 21.9 +0.2
WET pmax pmax
comp=Z,7.0nm,1.2s
TANN Tannenbergstha 76.04 319 *e*P P 23 28 15.6 +0.1
comp=Z,6.0nm,1.3s
TANN *e*pP pP 23 28 23.1 0.0
NKC Novy Kostel 76.06 319 *e*P P 23 28 15.9 +0.4
NKC *e* 23 28 23.2
NKC Novy Kostel 76.06 319⇑*e*P P 23 28 15.9 +0.4
NKC *e*pP pP 23 28 23.2 +0.1
WERN Wernitzgruen 76.10 319 *e*P P 23 28 16.2 +0.4
WERN *e*pP pP 23 28 23.5 +0.1
GUNZ Gunzen 76.13 319 *e*P P 23 28 16.2 +0.3
comp=Z,7.0nm,1.1s
GUNZ *e*pP pP 23 28 23.6 +0.1
SPITS Spitsbergen Ar 76.13 348 P P 23 28 13.1 -2.3
SPITS Spitsbergen Ar 76.13 348 P P 23 28 13.1 -2.3
comp=Z,4.2nm,0.9s,baz=103,slow=4.2,SNR=3.7
WERD Werda 76.14 319 *e*P P 23 28 16.1 +0.1
comp=Z,4.0nm,1.0s
WERD *e*pP pP 23 28 23.5 -0.1
ROTZ Rotzenmuhle 76.23 319 *e*P P 23 28 17.2 +0.7
comp=Z,9.0nm,1.3s
ROTZ *e*pP pP 23 28 24.7 +0.7
PLN Plauen 76.24 319 *e*P P 23 28 16.7 +0.2
comp=Z,24nm,1.0s
PLN *e*pP pP 23 28 24.1 0.0
MANZ Manzenberg 76.28 319 *e*P P 23 28 17.4 +0.6
comp=Z,14nm,1.5s
MANZ *e*pP pP 23 28 24.9 +0.5
NEUB Neuenburg 76.45 320 *e*P P 23 28 17.7 0.0
comp=Z,8.0nm,0.9s
NEUB *e*pP pP 23 28 25.1 -0.2
MOX Moxa 76.58 319 *e*P P 23 28 18.5 +0.1
MOX *e*pP pP 23 28 26.1 +0.1
MOX Moxa 76.58 319 *e*P P 23 28 18.5 +0.1
MOX *e**PP pP 23 28 26.1 +0.1
LBTB Lobatse 76.58 241 *e*P P 23 28 19.8 +0.8
NB2 NORSAR Subarra 76.59 330 P P 23 28 23.6 +5.3
comp=Z,5.0nm,0.8s,baz=89,slow=5.9
NOA NORSAR Array B 76.59 330 P P 23 28 16.9 -1.4
NOA NORSAR Array B 76.59 330 P P 23 28 16.9 -1.4
comp=Z,0.9nm,0.8s,baz=90,slow=5.8,SNR=3.4
BSEG Bad Segeberg 77.24 323 *e*P P 23 28 22.5 +0.5
comp=Z,27nm,1.1s
BSEG *e*pP pP 23 28 30.1 +0.5
BSEG Bad Segeberg 77.24 323 *e*P P 23 28 22.5 +0.5
BSEG *e**PP pP 23 28 30.1 +0.5
BSEG pmax pmax
comp=Z,31nm,1.1s
RETA Reutte 77.30 316⇑*i*P P 23 28 22.1 -0.5
comp=Z,10nm,0.8s
CLZ Clausthal 77.30 321 *e*P P 23 28 22.8 +0.3
comp=Z,10.0nm,1.0s
CLZ *e*pP pP 23 28 30.3 +0.2
CLZ Clausthal 77.30 321 *e*P P 23 28 22.8 +0.3
CLZ *e**PP pP 23 28 30.3 +0.2
CLZ pmax pmax
comp=Z,13nm,1.0s
FETA Feichten 77.35 316⇑*e*P P 23 28 22.5 -0.6
comp=Z,12nm,1.2s
NRDL Niedersach Rie 77.43 321 *e*P P 23 28 23.6 +0.5
comp=Z,21nm,1.4s
NRDL *e*pP pP 23 28 31.2 +0.5
MUD Monsted U'grnd 77.78 326 *i*P P 23 28 32.8 +7.8
comp=Z,13nm,0.9s
DAVA Damuels 77.91 316⇑*i*P P 23 28 25.7 -0.5
comp=Z,14nm,1.0s
DAVOX Davos/Dischmat 77.95 316 P P 23 28 25.8 -0.6
DAVOX Davos/Dischmat 77.95 316 P P 23 28 25.8 -0.6
comp=Z,3.3nm,0.8s,baz=344,slow=18,SNR=5.2
BOSA Boshof 78.10 237 P P 23 28 30.8 +3.3
BOSA Boshof 78.10 237 P P 23 28 30.8 +3.3
comp=Z,5.9nm,0.7s,baz=93,slow=6.0,SNR=13
IBBN Ibbenburen 78.88 321 *e*P P 23 28 31.7 +0.5
comp=Z,16nm,1.1s
IBBN *e*pP pP 23 28 39.1 +0.3
BUG Bochum--Univer 79.26 320 *e*P P 23 28 33.6 +0.3
comp=Z,20nm,1.3s
BUG *e*pP pP 23 28 40.9 0.0
KEST Kesra 79.44 304 *e*P P 23 28 35.1 +0.3
KEST Kesra 79.44 304 P P 23 28 35.2 +0.5
comp=Z,2.6nm,1.0s,baz=32,slow=7.7,SNR=3.6
CDF Champ du Feu 79.56 317 *e*P P 23 28 41.3 +6.2
comp=Z,19nm,1.1s
CDF Champ du Feu 79.56 317 *e*P P 23 28 41.3 +6.2
comp=Z,19nm,1.1s
SENIN Lac Senin/Sane 79.76 315 *e*P P 23 28 34.4 -2.1
comp=Z,38nm,2.0s
HINF Hinteralfeld 79.90 317 *e*P P 23 28 42.9 +6.0
comp=Z,12nm,1.2s
HINF Hinteralfeld 79.90 317 *e*P P 23 28 42.9 +6.0
comp=Z,12nm,1.2s
SBF Sospel 79.94 313 *e*P P 23 28 43.9 +6.6
comp=Z,68nm,1.1s
SBF Sospel 79.94 313 *e*P P 23 28 43.9 +6.6
comp=Z,68nm,1.1s
MEM Membach 80.14 320 P P 23 28 38.0 -0.1
comp=Z,7.8nm,1.4s
MEM AP PcP 23 28 45.5 +0.2
WLF Walferdange 80.15 319 P P 23 28 38.7 +0.6
comp=Z,10nm,1.3s
WLF AP PcP 23 28 45.3 -0.1
WLF Walferdange 80.15 319 *e*P P 23 28 38.8 +0.6
comp=Z,12nm,1.3s
WLF *e*pP pP 23 28 46.2 +0.4
WLF Walferdange 80.15 319 *e*P P 23 28 37.9 -0.3
WLF pmax pmax
comp=Z,16nm,1.1s
WLF Walferdange 80.15 319 *e*P P 23 28 37.9 -0.3
comp=Z,16nm,1.1s
HAU Haudompre 80.22 317 *e*P P 23 28 44.8 +6.2
comp=Z,31nm,1.0s
HAU Haudompre 80.22 317 *e*P P 23 28 44.8 +6.2
comp=Z,31nm,1.0s
LPG La Plagne 80.24 315 *e*P P 23 28 39.1 0.0
comp=Z,13nm,0.8s
LPG La Plagne 80.24 315 *e*P P 23 28 45.8 +6.7
comp=Z,25nm,0.9s
LPG La Plagne 80.24 315 *e*P P 23 28 39.1 0.0
LPG pmax pmax
comp=Z,13nm,0.8s
LPG La Plagne 80.24 315 *e*P P 23 28 39.1 0.0
comp=Z,13nm,0.8s
LPL La Plagne 80.25 315 *e*P P 23 28 39.1 0.0
comp=Z,18nm,0.9s
LPL La Plagne 80.25 315 *e*P P 23 28 45.8 +6.7
comp=Z,44nm,1.0s
LPL La Plagne 80.25 315 *e*P P 23 28 39.1 0.0
LPL pmax pmax
comp=Z,18nm,0.9s
LPL La Plagne 80.25 315 *e*P P 23 28 39.1 0.0
comp=Z,18nm,0.9s
MBDF Montbardon 80.32 314 *e*P P 23 28 40.2 +0.8
MBDF Montbardon 80.32 314 *e*P P 23 28 46.3 +6.9
comp=Z,23nm,1.0s
MBDF Montbardon 80.32 314 *e*P P 23 28 40.2 +0.8
BNI Bardonecchia 80.34 314 *e*P P 23 28 38.1 -1.4
BNI pmax pmax
comp=Z,13nm,1.0s
BNI Bardonecchia 80.34 314 *e*P P 23 28 38.1 -1.4
comp=Z,13nm,1.0s
FRF La Foret Royal 80.55 313 *e*P P 23 28 40.7 +0.2
FRF La Foret Royal 80.55 313 *e*P P 23 28 47.1 +6.6
comp=Z,66nm,1.3s
FRF La Foret Royal 80.55 313 *e*P P 23 28 40.7 +0.2
FRF La Foret Royal 80.55 313 *e*P P 23 28 40.7 +0.2
CABF La Chapelle 80.56 316 *e*P P 23 28 40.5 -0.1
CABF La Chapelle 80.56 316 *e*P P 23 28 47.2 +6.6
comp=Z,36nm,1.0s
CABF La Chapelle 80.56 316 *e*P P 23 28 40.5 -0.1
CABF La Chapelle 80.56 316 *e*P P 23 28 40.5 -0.1
PAGF Fort de Pagny 80.56 318 *e*P P 23 28 42.0 +1.6
comp=Z,5.4nm,1.1s
PAGF Fort de Pagny 80.56 318 *e*P P 23 28 46.9 +6.5
comp=Z,4.9nm,0.9s
PAGF Fort de Pagny 80.56 318 *e*P P 23 28 42.0 +1.6
comp=Z,5.4nm,1.1s
BCLA Clavier 80.61 320 P P 23 28 40.4 -0.2
comp=Z,9.9nm,1.3s
BCLA AP PcP 23 28 47.4 0.0
LMR La Mourre 80.68 312 *e*P P 23 28 47.9 +6.8
comp=Z,58nm,1.2s
LMR La Mourre 80.68 312 *e*P P 23 28 47.9 +6.8
comp=Z,58nm,1.2s
GIVF Givet 80.95 319 *e*P P 23 28 42.4 -0.1
GIVF Givet 80.95 319 *e*P P 23 28 49.0 +6.5
comp=Z,26nm,1.0s
GIVF Givet 80.95 319 *e*P P 23 28 42.4 -0.1
GIVF Givet 80.95 319 *e*P P 23 28 42.4 -0.1
MEZF Maizieres J'vi 81.02 318 *e*P P 23 28 49.4 +6.6
MEZF Maizieres J'vi 81.02 318 *e*P P 23 28 49.4 +6.6
SFTF Sexfontaines 81.06 317 *e*P P 23 28 42.9 -0.2
comp=Z,19nm,1.0s
SFTF Sexfontaines 81.06 317 *e*P P 23 28 49.5 +6.4
comp=Z,35nm,1.0s
SFTF Sexfontaines 81.06 317 *e*P P 23 28 42.9 -0.2
comp=Z,19nm,1.0s
DOU Dourbes 81.10 319 P P 23 28 43.3 0.0
comp=Z,6.1nm,1.1s
DOU AP pP 23 28 50.6 -0.2
BAIF Baives 81.35 319 *e*P P 23 28 44.6 0.0
comp=Z,21nm,1.0s
BAIF Baives 81.35 319 *e*P P 23 28 51.4 +6.8
comp=Z,48nm,0.9s
BAIF Baives 81.35 319 *e*P P 23 28 44.6 0.0
BAIF pmax pmax
comp=Z,21nm,1.0s
BAIF Baives 81.35 319 *e*P P 23 28 44.6 0.0
comp=Z,21nm,1.0s
VIVF Saint-Julien-l 81.78 314 *e*P P 23 28 47.0 0.0
VIVF Saint-Julien-l 81.78 314 *e*P P 23 28 53.7 +6.7
comp=Z,40nm,1.1s
VIVF Saint-Julien-l 81.78 314 *e*P P 23 28 47.0 0.0
VIVF Saint-Julien-l 81.78 314 *e*P P 23 28 47.0 0.0
SSB Saint Sauveur 81.81 314 *e*P P 23 28 47.1 -0.1
SSB pmax pmax
comp=Z,11nm,0.9s
SSB Saint Sauveur 81.81 314 *e*P P 23 28 47.1 -0.1
comp=Z,10nm,0.9s
TSUM Tsumeb 81.92 248 *e*P P 23 28 48.6 +0.4
LOR Lormes 81.98 317 *e*P P 23 28 47.6 -0.4
comp=Z,33nm,1.4s
LOR Lormes 81.98 317 *e*P P 23 28 54.4 +6.4
comp=Z,36nm,1.1s
LOR Lormes 81.98 317 *e*P P 23 28 47.6 -0.4
comp=Z,33nm,1.4s
SMF Signal de Mont 82.09 316 *e*P P 23 28 48.1 -0.5
comp=Z,21nm,1.1s
SMF Signal de Mont 82.09 316 *e*P P 23 28 54.8 +6.2
comp=Z,40nm,1.1s
SMF Signal de Mont 82.09 316 *e*P P 23 28 48.1 -0.5
SMF pmax pmax
comp=Z,21nm,1.1s
SMF Signal de Mont 82.09 316 *e*P P 23 28 48.1 -0.5
comp=Z,21nm,1.1s
SSF Saint Saulge 82.25 316 *e*P P 23 28 49.4 0.0
SSF Saint Saulge 82.25 316 *e*P P 23 28 55.8 +6.4
comp=Z,18nm,1.3s
SSF Saint Saulge 82.25 316 *e*P P 23 28 49.4 0.0
SSF Saint Saulge 82.25 316 *e*P P 23 28 49.4 0.0
AVF Avril sur Loir 82.40 316 *e*P P 23 28 49.8 -0.4
AVF Avril sur Loir 82.40 316 *e*P P 23 28 56.5 +6.3
comp=Z,24nm,1.1s
AVF Avril sur Loir 82.40 316 *e*P P 23 28 49.8 -0.4
AVF Avril sur Loir 82.40 316 *e*P P 23 28 49.8 -0.4
MAW Mawson 82.45 192 P P 23 28 53.4 +3.6
MAW Mawson 82.45 192 P P 23 28 53.4 +3.6
comp=Z,1.6nm,0.6s,baz=22,slow=6.2,SNR=3.4
BGF Bois d'Agland 82.78 316 *e*P P 23 28 58.9 +6.7
comp=Z,31nm,1.0s
BGF Bois d'Agland 82.78 316 *e*P P 23 28 58.9 +6.7
comp=Z,31nm,1.0s
SUR Sutherland 82.97 235 *e*P P 23 28 54.2 +0.5
TCF Toulx Ste Croi 83.26 316 *e*P P 23 28 54.8 +0.1
comp=Z,14nm,1.0s
TCF Toulx Ste Croi 83.26 316 *e*P P 23 29 01.6 +6.9
comp=Z,14nm,1.0s
TCF Toulx Ste Croi 83.26 316 *e*P P 23 28 54.8 +0.1
TCF pmax pmax
comp=Z,14nm,1.0s
TCF Toulx Ste Croi 83.26 316 *e*P P 23 28 54.8 +0.1
comp=Z,14nm,1.0s
CAF Calviac 83.60 314 *e*P P 23 28 56.8 +0.3
CAF Calviac 83.60 314 *e*P P 23 29 03.4 +6.9
comp=Z,34nm,1.1s
CAF Calviac 83.60 314 *e*P P 23 28 56.8 +0.3
CAF Calviac 83.60 314 *e*P P 23 28 56.8 +0.3
MTLF Montlieu 83.77 313 *e*P P 23 28 57.6 +0.2
MTLF Montlieu 83.77 313 *e*P P 23 29 04.2 +6.8
comp=Z,30nm,1.1s
MTLF Montlieu 83.77 313 *e*P P 23 28 57.6 +0.2
MTLF Montlieu 83.77 313 *e*P P 23 28 57.6 +0.2
RJF Les Rejaudoux 83.91 315 *e*P P 23 28 58.4 +0.3
RJF Les Rejaudoux 83.91 315 *e*P P 23 29 05.1 +7.0
comp=Z,38nm,1.1s
RJF Les Rejaudoux 83.91 315 *e*P P 23 28 58.4 +0.3
RJF Les Rejaudoux 83.91 315 *e*P P 23 28 58.4 +0.3
LDF La Druitiere 84.39 318 *e*P P 23 29 00.3 -0.1
comp=Z,12nm,0.9s
LDF La Druitiere 84.39 318 *e*P P 23 29 07.0 +6.6
comp=Z,35nm,1.0s
LDF La Druitiere 84.39 318 *e*P P 23 29 00.3 -0.1
LDF pmax pmax
comp=Z,12nm,0.9s
LDF La Druitiere 84.39 318 *e*P P 23 29 00.3 -0.1
comp=Z,12nm,0.9s
LFF La Frestale 84.52 315 *e*P P 23 29 07.2 +6.1
comp=Z,32nm,1.2s
LFF La Frestale 84.52 315 *e*P P 23 29 07.2 +6.1
comp=Z,32nm,1.2s
FLN La Foliniere 84.59 319 *e*P P 23 29 01.1 -0.3
comp=Z,13nm,0.9s
FLN La Foliniere 84.59 319 *e*P P 23 29 07.9 +6.5
comp=Z,37nm,1.0s
FLN La Foliniere 84.59 319 *e*P P 23 29 01.1 -0.3
comp=Z,13nm,0.9s
TAM Tamanrasset 84.73 292 *e*P P 23 29 03.3 +0.5
comp=Z,0.6nm,0.8s
EKA Eskdalemuir Ar 84.80 325 P P 23 29 02.4 +0.1
EKA Eskdalemuir Ar 84.80 325 P P 23 29 02.4 +0.1
comp=Z,1.3nm,0.7s,baz=97,slow=6.0,SNR=7.7
MFF Saint Martin d 84.80 316 *e*P P 23 29 02.5 0.0
MFF Saint Martin d 84.80 316 *e*P P 23 29 09.0 +6.5
comp=Z,50nm,1.1s
MFF Saint Martin d 84.80 316 *e*P P 23 29 02.5 0.0
MFF Saint Martin d 84.80 316 *e*P P 23 29 02.5 0.0
ESK Eskdalemuir 84.83 325 *e*P P 23 29 02.3 -0.2
ESK pmax pmax
comp=Z,14nm,0.9s
ESK Eskdalemuir 84.83 325 *e*P P 23 29 02.3 -0.2
comp=Z,14nm,0.9s
GRR Gorron 84.91 318 *e*P P 23 29 09.7 +6.7
comp=Z,22nm,1.0s
GRR Gorron 84.91 318 *e*P P 23 29 09.7 +6.7
comp=Z,22nm,1.0s
ETSF Etsaut 85.85 313 *e*P P 23 29 15.0 +7.0
comp=Z,35nm,0.9s
ETSF Etsaut 85.85 313 *e*P P 23 29 15.0 +7.0
comp=Z,35nm,0.9s
SGMF Saint Gilles 86.05 318 *e*P P 23 29 08.9 +0.2
SGMF Saint Gilles 86.05 318 *e*P P 23 29 15.5 +6.8
comp=Z,47nm,1.1s
SGMF Saint Gilles 86.05 318 *e*P P 23 29 08.9 +0.2
SGMF Saint Gilles 86.05 318 *e*P P 23 29 08.9 +0.2
SJPF Ste Jean 86.28 313 *e*P P 23 29 15.7 +5.7
comp=Z,33nm,1.1s
SJPF Ste Jean 86.28 313 *e*P P 23 29 15.7 +5.7
comp=Z,33nm,1.1s
ROSF Rostrenen 86.49 319 *e*P P 23 29 11.0 +0.1
ROSF Rostrenen 86.49 319 *e*P P 23 29 17.7 +6.8
comp=Z,46nm,1.0s
ROSF Rostrenen 86.49 319 *e*P P 23 29 11.0 +0.1
ROSF Rostrenen 86.49 319 *e*P P 23 29 11.0 +0.1
QUIF Quistinic 86.52 318 *e*P P 23 29 17.5 +6.5
comp=Z,26nm,0.9s
QUIF Quistinic 86.52 318 *e*P P 23 29 17.5 +6.5
comp=Z,26nm,0.9s
ESDC Sonseca Array 89.09 310 P P 23 29 23.4 -0.2
ESDC Sonseca Array 89.09 310 P P 23 29 23.4 -0.2
comp=Z,0.1nm,0.3s,baz=46,slow=4.7,SNR=3.7
TOA0 Torodi Ar. Sit 90.19 283 *e*P P 23 29 29.2 0.0
TORD Torodi Ar. Bea 90.19 283 P P 23 29 30.2 +1.1
TORD Torodi Ar. Bea 90.19 283 P P 23 29 30.2 +1.1
comp=Z,1.8nm,0.9s,baz=73,slow=2.2,SNR=7.7
TRF Thorofare Moun 90.28 24 *e*P P 23 29 28.6 -0.2
comp=Z,15nm,1.1s
SUMG Summit 90.45 347 *i*P P 23 29 37.7 +8.0
comp=Z,4.9nm,0.9s
PBRG Braganca 90.56 313 *e*P P 23 29 39.5 +9.1
comp=Z,25nm,2.0s
MCK McKinley 90.68 23 *e*P P 23 29 29.2 -1.3
MCK pmax pmax
comp=Z,47nm,1.4s
MCK McKinley 90.68 23 *e*P P 23 29 29.2 -1.3
comp=Z,47nm,1.4s
ILAR Eielson Array 90.94 22 P P 23 29 28.7 -3.0
ILAR Eielson Array 90.94 22 P P 23 29 28.7 -3.0
comp=Z,0.9nm,0.8s,baz=295,slow=4.7,SNR=7.5
MVO Moncorvo 90.95 312 *e*P P 23 29 33.1 +0.8
comp=Z,37nm,1.4s
MVO *i*P pP 23 29 41.0 +1.0
PVRL Vila Real 91.41 313 *e*P P 23 29 42.6 +8.2
comp=Z,22nm,1.5s
POLO Lamas de Olo 91.44 313 *e*P P 23 29 43.0 +8.4
comp=Z,9.5nm,1.1s
PCAB Cabril 91.51 313 *e*P P 23 29 41.5 +6.7
comp=Z,59nm,1.6s
MTE Manteigas 91.54 312 *e*P P 23 29 42.3 +7.3
comp=Z,26nm,1.2s
MTE Manteigas 91.54 312 *e*P P 23 29 34.8 -0.3
comp=Z,23nm,1.0s

PCBR	**Castelo Branco**	**91.65**	**311**	*e*P		P		23 29 43.8	+8.3
	comp=Z,28nm,1.3s								
PVIS	**Viseu**	**91.70**	**312**	*e*P		P		23 29 43.7	+7.9
	comp=Z,21nm,1.4s								
PMRV	**Marv??o**	**91.71**	**311**	*e*P		**P**		**23 29 37.1**	**+1.3**
	comp=Z,25nm,1.7s								
PMRV				*i* P		**pP**		**23 29 43.3**	**-0.2**
PBAR	**Barrancos**	**91.80**	**309**	*e*P		P		23 29 44.8	+8.6
	comp=Z,20nm,1.5s								
SML	**Sawmill**	**91.86**	**25**	*e*P		**P**		**23 29 34.6**	**-1.4**
SML				pmax		pmax			
	comp=Z,8.0nm,1.0s								
SML	**Sawmill**	**91.86**	**25**	*e*P		**P**		**23 29 34.5**	**-1.4**
	comp=Z,7.6nm,1.0s								
PTOM	**Tomar**	**92.41**	**311**	*e*P		P		23 29 47.6	+8.6
	comp=Z,34nm,1.3s								
EVO	**Evora**	**92.43**	**310**	*e*P		P		23 29 47.6	+8.5
PMTG	**Montargil**	**92.43**	**311**	*e*P		**P**		**23 29 38.9**	**-0.2**
	comp=Z,17nm,1.6s								
PMTG				*i* P		**pP**		**23 29 47.5**	**+0.7**
PBEJ	**Beja**	**92.47**	**309**	*e*P		**P**		**23 29 39.6**	**+0.3**
	comp=Z,22nm,1.4s								
PBEJ				*i* P		**pP**		**23 29 48.2**	**+1.2**
PNCL	**Nicolau / Gran**	**92.94**	**310**	*e*P		**P**		**23 29 42.3**	**+0.9**
	comp=Z,16nm,1.7s								
PNCL				*i* P		**pP**		**23 29 50.3**	**+1.1**
PFVI	**Vila Bisbo**	**93.46**	**309**	*i* P		P		23 29 53.5	+10
NVAR	**Mina Array Bea**	**121.30**	**30**	PKP		**PKPdf**		**23 35 21.2**	**-0.6**
NVAR	**Mina Array Bea**	**121.30**	**30**	PKP		**PKPdf**		**23 35 21.2**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=241,slow=3.1,SNR=4.6								
TXAR	**Lajitas Array**	**135.45**	**23**	PKP		**PKPdf**		**23 35 49.0**	**+0.2**
TXAR	**Lajitas Array**	**135.45**	**23**	PKP		**PKPdf**		**23 35 49.0**	**+0.2**
	comp=Z,0.4nm,0.8s,baz=318,slow=1.7,SNR=3.8								
CELP	**Cerrillos**	**145.01**	**328**	*e*PKPab		**PKPab**		**23 36 04.6**	**-0.9**
SDDR	**Presa de Saban**	**146.43**	**335**	*e*PKPdf		**PKPdf**		**23 36 07.3**	**-1.3**
PLCA	**Paso Flores**	**148.37**	**202**	PKPbc		**PKPbc**		**23 36 16.6**	**+1.8**
PLCA	**Paso Flores**	**148.37**	**202**	PKPbc		**PKPbc**		**23 36 16.6**	**+1.8**
	comp=Z,2.8nm,0.8s,baz=240,slow=20,SNR=4.7								
LPAZ	**La Paz**	**162.72**	**253**	PKPab		**PKPab**		**23 37 21.8**	**+1.4**
LPAZ	**La Paz**	**162.72**	**253**	PKPab		**PKPab**		**23 37 21.8**	**+1.4**
	comp=Z,2.5nm,0.9s,baz=75,slow=5.7,SNR=7.8								

ROM 22 23:24:52.2±0.3,**42°.45N**×**13°.36E,h12**km±7km,**Md1.6**/3,
Ml1.5/3,**Error ellipse: s-maj=3.5km s-min=2.0km az=165.0,Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.28**	**303**	Pg	Pg	23 24 58.4	+0.2
LNSS				Sg	Sg	23 25 03.1	+0.8
	33nm,0.7s						
NRCA	**Norcia**	**0.42**	**334**	Pg	Pg	23 25 00.8	0.0
NRCA				Sg	Sg	23 25 07.3	+0.7
	59nm,1.1s						

GUC 22 23:29:07.5±0.5,**23°.98S**×**67°.47W,h205**km±12km,**ML3.7,
3C-2D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.90**	**315**⇑	*i*P	Pn	23 29 46.8	+1.0
LVC				*i* S	S	23 30 17.1	+2.1
PB04	**Plate Boundary**	**2.52**	**312**⇑	*i*P	Pn	23 29 58.7	+6.7
PB04				*i* S	S	23 30 37.8	+12
PB04				AML	AML	23 30 41.3	
	comp=E,116nm,0.4s						
CEN1	**Los Morros**	**2.57**	**283**	*e*P	Pn	23 29 55.2	+2.6
CEN1				*i* S	S	23 30 31.0	+3.7
CEN1				AML	AML	23 30 33.5	
	comp=N,70nm,0.5s						
ANCH	**Antofagasta**	**2.71**	**276**⇑	*i*P	Pn	23 29 55.5	+1.4
ANCH				*i* S	S	23 30 32.1	+2.3
PB09	**Plate Boundary**	**2.72**	**323**⇓	*i*P	Pn	23 29 56.3	+1.8
PB09				*i* S	S	23 30 33.4	+2.8
PB09				AML	AML	23 30 35.5	
	comp=N,300nm,0.5s						
PB01	**Plate Boundary**	**3.47**	**327**⇓	*i*P	Pn	23 30 03.9	+0.8
PB01				*i* S	S	23 30 47.6	+1.4
PB01				AML	AML	23 30 48.5	
	comp=E,79nm,0.1s						
HMBC	**Humberstone**	**4.31**	**328**	*e*P	Pn	23 30 13.9	+0.3
HMBC				*i* S	S	23 31 06.0	+0.9
PSGC	**Pisagua**	**5.01**	**330**	*e*P	Pn	23 30 22.3	-0.1
PSGC				*e*S	S	23 31 20.9	-0.1
MNMC	**Minimini**	**5.22**	**337**	*e*P	Pn	23 30 25.6	+0.4
MNMC				*e*S	S	23 31 26.8	+0.6

*IDC **22** 23:36:44.3±0.9,16°.00N×147°.65E,h0km,mb3.9/12,
mb1 4.1/12,mb1mx4.0/26,mbtmp3.9/12,MS4.1/1,
Ms1 4.1/1,ms1mx2.6/38,Error ellipse: s-maj=28.4km
s-min=19.2km az=98.0*
*ISCJB **22** 23:36:47.7±0.8,15°.95N±0°.09×147°.7E±0°.2,h38km,
mb4.0/16,MS4.1/1,Error ellipse: s-maj=23.4km
s-min=12.1km az=5.1*
*NEIC **22** 23:36:49.4±0.5,15°.97N×147°.62E,h35km,mb4.2/4,Error
ellipse: s-maj=14.6km s-min=8.6km az=93.0*
ISC 22 23:36:49.8±0.8,**16°.0N**±0°.1×**147°.6E**±0°.2,**h38**km,**n36,**
σ0**54**/34,**mb4.0**/16,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**22.13**	**340**	P	**P**	**23 41 42.9**	**+0.8**
MJAR	**Matsushiro Arr**	**22.13**	**340**	P	**P**	**23 41 42.9**	**+0.8**
	2.3nm,0.8s,baz=163,slow=9.3,SNR=5.3						
WRAB	**Tennant Creek**	**37.99**	**201**	*e*P	**P**	**23 44 03.8**	**-0.6**
	1.7nm,0.6s						
WRA	**Warramunga Arr**	**38.01**	**201**	P	**P**	**23 44 04.5**	**0.0**
WRA	**Warramunga Arr**	**38.01**	**201**	P	**P**	**23 44 04.5**	**0.0**
	1.2nm,0.6s,baz=24,slow=9.3,SNR=8.4						
FITZ	**Fitzroy Crossi**	**40.19**	**213**	LR	LR	23 59 32.1	
	comp=Z,250nm,18.1s,baz=36,slow=34						
ASAR	**Alice Springs**	**41.62**	**199**	P	**P**	**23 44 34.4**	**-0.1**
ASAR	**Alice Springs**	**41.62**	**199**	P	**P**	**23 44 34.4**	**-0.1**
	0.5nm,0.6s,baz=24,slow=8.5,SNR=4.8						
SONM	**Songino Array**	**46.41**	**322**	P	**P**	**23 45 12.5**	**-0.3**
SONM	**Songino Array**	**46.41**	**322**	P	**P**	**23 45 12.5**	**-0.3**
	0.9nm,0.6s,baz=135,slow=8.4,SNR=9.7						
CHTO	**Chiang Mai**	**46.43**	**281**	*e*P	**P**	**23 45 13.0**	**-0.3**
	4.7nm,1.1s						
CMAR	**Chiang Mai Arr**	**46.45**	**280**	P	**P**	**23 45 13.9**	**+0.5**
CMAR	**Chiang Mai Arr**	**46.45**	**280**	P	**P**	**23 45 13.9**	**+0.5**
	1.5nm,0.7s,baz=85,slow=6.6,SNR=7.9						
PSI	**Prapat**	**49.65**	**260**	P	**P**	**23 45 39.1**	**+0.7**
PSI	**Prapat**	**49.65**	**260**	P	**P**	**23 45 39.1**	**+0.7**
	2.6nm,0.4s,baz=158,slow=12,SNR=3.7						
NWAO	**Narrogin (SRO)**	**56.64**	**211**	P	**P**	**23 46 28.9**	**-0.3**
ZALV	**Zalesovo Beam**	**61.28**	**323**	P	**P**	**23 47 01.1**	**-0.1**
ZALV	**Zalesovo Beam**	**61.28**	**323**	P	**P**	**23 47 01.1**	**-0.1**
	0.4nm,0.4s,baz=116,slow=6.8,SNR=3.6						
MK31	**Makanchi Array**	**61.67**	**315**	*e*P	**P**	**23 47 03.9**	**-0.1**
MKAR	**Makanchi Array**	**61.67**	**315**	P	**P**	**23 47 04.4**	**+0.3**
MKAR	**Makanchi Array**	**61.67**	**315**	P	**P**	**23 47 04.4**	**+0.3**
	0.7nm,0.6s,baz=90,slow=8.4,SNR=11						
KURK	**Kurchatov**	**64.52**	**319**	*e*P	**P**	**23 47 22.5**	**-0.3**
	2.1nm,0.8s						
ILAR	**Eielson Array**	**65.28**	**25**	P	**P**	**23 47 27.4**	**-0.2**
ILAR	**Eielson Array**	**65.28**	**25**	P	**P**	**23 47 27.4**	**-0.2**
	0.6nm,0.9s,baz=227,slow=5.5,SNR=4.7						
ABKAR	**Akbulak array**	**76.58**	**318**	*e*P	**P**	**23 48 35.9**	**-0.5**
	0.7nm,0.7s						
YKA	**Yellowknife Ar**	**79.52**	**28**	P	**P**	**23 48 52.4**	**0.0**
YKA	**Yellowknife Ar**	**79.52**	**28**	P	**P**	**23 48 52.4**	**0.0**
	0.7nm,0.8s,baz=284,slow=5.4,SNR=4.9						
DRV	**Dumont d'Urvil**	**82.59**	**183**	R		23 49 00.0	
ARCES	**ARCESS Array B**	**85.63**	**343**	P	**P**	**23 49 23.9**	**-0.2**
ARCES	**ARCESS Array B**	**85.63**	**343**	P	**P**	**23 49 23.9**	**-0.2**
	2.0nm,0.9s,baz=64,slow=8.6,SNR=6.4						
FINES	**FINESS Array B**	**90.11**	**336**	P	**P**	**23 49 44.7**	**-1.0**
FINES	**FINESS Array B**	**90.11**	**336**	P	**P**	**23 49 44.7**	**-1.0**
	1.3nm,0.6s,baz=72,slow=6.2,SNR=11						
DBIC	**Dimbokro**	**144.66**	**307**	PKP	**PKPab**	**23 56 22.0**	**-0.2**
DBIC	**Dimbokro**	**144.66**	**307**	PKP	**PKPab**	**23 56 22.0**	**-0.2**
	9.8nm,1.0s,baz=182,slow=6.5,SNR=4.5						
LPAZ	**La Paz**	**145.68**	**96**	PKPbc	**PKPab**	**23 56 27.8**	**+1.1**
LPAZ	**La Paz**	**145.68**	**96**	PKPbc	**PKPab**	**23 56 27.8**	**+1.1**
	0.8nm,0.5s,baz=292,slow=4.2,SNR=4.0						

*IDC **22** 23:42:07.2±1.3,19°.23S×167°.95E,h0km,mb4.1/8,
mb1 4.3/9,mb1mx4.1/20,mbtmp4.1/9,ML3.8/1,Error
ellipse: s-maj=48.3km s-min=20.8km az=149.0*
*ISCJB **22** 23:42:10.0±0.8,19°.25S±0°.06×167°.8E±0°.1,h26km,
mb4.0/7,Error ellipse: s-maj=20.6km s-min=7.1km
az=17.9*
*NOU **22** 23:42:11.3±0.8,19°.005S×167°.57E,h30km,MD2.9,ML4.0*
ISC 22 23:42:11.3±1.1,**19°.3S**±0°.1×**167°.9E**±0°.2,**h26**km,**n12,**
σ0**87**/14,**mb4.0**/7,**Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.02**	**198**	*e*S	**Sn**	**23 43 33.7**	**+1.0**
DZM	**Mont Dzumac**	**3.10**	**206**	*e*P	**Pn**	**23 42 58.7**	**+0.1**
DZM				*e*S	**Sn**	**23 43 33.8**	**-1.0**
DZM				AMP		23 43 40.5	
	comp=Z,1μm,1.6s						
DZM	**Mont Dzumac**	**3.10**	**206**	Pn	**Pn**	**23 42 59.0**	**+0.4**
	comp=Z,11nm,0.3s,baz=40,slow=16,SNR=106						
DZM				Sn	**Sn**	**23 43 34.2**	**-0.7**
	comp=Z,23nm,0.3s,baz=315,slow=23,SNR=16						
NOUC	**Port Laguerre**	**3.19**	**208**	*e*P	**Pn**	**23 43 00.3**	**+0.6**
NOUC				AMP		23 43 35.8	
	comp=Z,41nm,8.5s						
NOUC				*e*S	**Sn**	**23 43 36.3**	**-0.6**
CTA	**Charters Tower**	**20.41**	**264**	P	Pn	23 46 47.3	-1.5
	comp=Z,3.0nm,0.4s,baz=91,slow=15,SNR=5.9						
WRA	**Warramunga Arr**	**31.61**	**263**	P	**P**	**23 48 31.2**	**-1.1**
	comp=Z,0.4nm,0.4s,baz=82,slow=6.1,SNR=19						
ASAR	**Alice Springs**	**31.90**	**256**	P	**P**	**23 48 34.6**	**-0.2**
	comp=Z,3.0nm,0.4s,baz=84,slow=8.4,SNR=53						
FITZ	**Fitzroy Crossi**	**39.99**	**265**	P	**P**	**23 49 44.4**	**+0.2**
	comp=Z,4.8nm,0.6s,baz=128,slow=7.4,SNR=19						
SONM	**Songino Array**	**86.51**	**324**	P	**P**	**23 54 52.9**	**+0.9**
	comp=Z,0.2nm,0.4s,baz=146,slow=8.3,SNR=2.4						
NVAR	**Mina Array Bea**	**89.77**	**49**	P	**P**	**23 55 08.5**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=232,slow=7.3,SNR=3.9						
ILAR	**Eielson Array**	**90.65**	**18**	P	**P**	**23 55 10.8**	**-0.3**
	comp=Z,0.6nm,0.8s,baz=229,slow=4.8,SNR=6.6						
PDAR	**Pinedale Array**	**97.56**	**47**	P	**P**	**23 55 42.0**	**-1.6**
	comp=Z,0.4nm,0.5s,baz=251,slow=2.8,SNR=3.5						

*BJI **22** 23:48:33.2,4°.80S×134°.10E,h15km,mb4.9/4*
*IDC **22** 23:48:33.2±0.6,4°.88S×134°.01E,h0km,mb4.3/9,
mb1 4.6/13,mb1mx4.5/19,mbtmp4.5/13,ML4.4/4,MS3.8/6,
Ms1 3.7/6,ms1mx3.1/32,Error ellipse: s-maj=30.7km
s-min=14.4km az=69.0*
*ISCJB **22** 23:48:34.2±0.4,4°.97S±0°.04×134°.03E±0°.04,h28km,
mb4.3/15,MS3.9/3,Error ellipse: s-maj=6.4km
s-min=4.3km az=140.1*
*DJA **22** 23:48:34.5±0.4,5°.S±3°×13°4E±°,h10km,M5.0/16,
mB5.4/12,mb5.1/16,MLv5.3/6,Mw(mB)4.8/12*
*NEIC **22** 23:48:37.9±0.5,5°.07S×133°.99E,h35km,mb4.4/10,Error
ellipse: s-maj=12.9km s-min=9.1km az=54.0*
ISC 22 23:48:36.5±0.4,**4°.99S**±0°.05×**134°.03E**±0°.05,**h28**km,**n68,**
σ1**95**/76,**mb4.2**/15,**MS3.9**/3,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.72**	**319**	P	**Pn**	**23 49 15.8**	**-2.6**
FAKI				S	**Sn**	**23 49 46.5**	**-4.0**
RKPI	**Ransiki, Papua**	**3.46**	**2**	P	**Pn**	**23 49 25.7**	**-2.9**
RKPI				S	**Sn**	**23 50 04.3**	**-4.4**
BNDI	**Bandanaira**	**4.14**	**276**	P	**Pn**	**23 49 37.7**	**-0.3**
BNDI				S	**Sn**	**23 50 26.4**	**+0.9**
MSAI	**Masohi**	**5.35**	**288**	P	**Pn**	**23 49 53.6**	**-1.0**
	81nm,0.8s,3μm						
MSAI				S	**Sn**	**23 50 52.2**	**-3.1**
	81nm,0.8s,3μm						
NLAI	**Namlea**	**7.13**	**284**	P	**Pn**	**23 50 18.3**	**-0.8**
	197nm,0.4s,5μm1.1nm						
NLAI				S	**Sn**	**23 51 40.3**	**+1.0**
	197nm,0.4s,5μm1.1nm						
LBMI	**Labuha**	**7.83**	**303**	P	**Pn**	**23 50 27.8**	**-0.8**
	236nm,1.1s,3μm0.8nm						
LBMI				S	**Sn**	**23 51 53.9**	**-2.5**
	236nm,1.1s,3μm0.8nm						
TNTI	**Ternate**	**8.78**	**310**	P	**Pn**	**23 50 42.3**	**+0.5**
	128nm,0.8s						
BBSI	**Bau Bau**	**11.43**	**267**	P	**Pn**	**23 51 18.1**	**+0.1**
	122nm,1.1s,2μm						
KMSI	**Cibinong**	**11.46**	**299**	P	**Pn**	**23 51 17.4**	**-1.1**
	296nm,1.1s						
LUWI	**Luwuk**	**11.91**	**289**	P	**Pn**	**23 51 24.2**	**-0.4**
	180nm,1.2s,2μm						
COEN	**Coen**	**12.67**	**135**	*e*Pn	**Pn**	**23 51 33.2**	**-1.9**
	185nm,0.6s						
COEN				*e*Sn	Sn	23 53 46.2	-9.0
MRSI	**Marisa**	**13.24**	**294**	P	**Pn**	**23 51 41.4**	**-1.5**
	41nm,1.0s,668nm						
BSSI	**Bau Bau, Buton**	**13.53**	**265**	P	**Pn**	**23 51 47.6**	**+0.8**
	104nm,1.3s,1μm						
PMG	**Port Moresby**	**13.74**	**109**	*e*Pn	**Pn**	**23 51 49.5**	**-0.1**
	32nm,0.8s						
PMG				Sn	Sn	23 54 09.4	-12
PMG	**Port Moresby**	**13.74**	**109**	P	**Pn**	**23 51 49.2**	**-0.4**
	42nm,0.9s,895nm						
PMG	**Port Moresby**	**13.74**	**109**	Pn	**Pn**	**23 51 48.6**	**-1.0**
	2.3nm,0.3s,baz=299,slow=11,SNR=8.9						
PMG				Sn	Sn	23 54 09.4	-12
	1.7nm,0.3s,baz=196,slow=22,SNR=4.2						
PMG				LR	LR	23 58 11.0	
	comp=Z,210nm,19.4s,baz=268,slow=42						
BKSI	**Bulukumba**	**13.86**	**268**	P	**Pn**	**23 51 52.3**	**+1.0**
	76nm,1.0s,781nm						
KAPI	**Kappang**	**14.23**	**269**	Pn	**Pn**	**23 51 56.0**	**-0.4**
KAPI	**Kappang**	**14.23**	**269**	P	P	23 52 00.0	-3.4
KAPI	**Kappang**	**14.23**	**269**	Pn	**Pn**	**23 51 56.0**	**-0.4**
	1.1nm,0.3s,baz=177,slow=9.6,SNR=6.8						
KAPI				LR	LR	23 57 17.8	
	comp=Z,248nm,19.8s,baz=110,slow=37						
SPSI	**Sidrap Palu**	**14.26**	**274**	P	**Pn**	**23 51 58.1**	**+1.4**
	47nm,1.0s,554nm						
TTSI	**Tana Toraja**	**14.31**	**277**	P	**P**	**23 52 04.0**	**-0.3**
WRAB	**Tennant Creek**	**14.86**	**179**	*e*Pn	**Pn**	**23 52 02.4**	**-2.5**
	7.1nm,1.4s						
WRAB				*e*		23 52 12.7	
WRA	**Warramunga Arr**	**14.87**	**179**	Pn	Pn	23 52 01.3	-3.6
WRA				Sn	Sn	23 54 38.4	-10
WRA	**Warramunga Arr**	**14.87**	**179**	Pn	Pn	23 52 01.3	-3.6
	0.6nm,0.3s,baz=0.0,slow=13,SNR=34						
WRA				Sn	Sn	23 54 38.4	-10
	2.3nm,0.3s,baz=3.0,slow=22,SNR=5.8						
WRA				LR	LR	23 58 24.0	
	comp=Z,476nm,18.9s,baz=295,slow=40						
FITZ	**Fitzroy Crossi**	**15.40**	**212**	*e*Pn	**Pn**	**23 52 09.2**	**-2.8**
	1.9nm,0.6s						
FITZ				*e*S	Sn	23 54 49.7	-12
FITZ	**Fitzroy Crossi**	**15.40**	**212**	Pn	**Pn**	**23 52 09.6**	**-2.4**
	3.0nm,0.3s,baz=37,slow=12,SNR=56						
FITZ				Sn	Sn	23 54 48.6	-13
	2.5nm,0.3s,baz=148,slow=14,SNR=4.2						
MYLDM	**Lahad Datu**	**18.51**	**303**	P	**Pn**	**23 52 53.7**	**+2.5**
AS31	**Alice Springs**	**18.57**	**180**	*e*P	**P**	**23 52 50.9**	**-0.6**
AS31				*e*S	**Sn**	**23 56 17.5**	**-1.1**
ASAR	**Alice Springs**	**18.57**	**180**	P	**Pn**	**23 52 52.0**	**+0.2**
ASAR				S	**Sn**	**23 56 11.9**	**-6.8**
ASAR	**Alice Springs**	**18.57**	**180**	P	**Pn**	**23 52 52.0**	**+0.2**
	3.3nm,0.3s,baz=7.3,slow=12,SNR=100						
ASAR				S	**Sn**	**23 56 11.9**	**-6.8**
	0.7nm,0.3s,baz=358,slow=27,SNR=4.8						
CTA	**Charters Tower**	**19.15**	**143**	P	**Pn**	**23 53 00.2**	**+1.4**
CTA	**Charters Tower**	**19.15**	**143**	P	**Pn**	**23 53 00.2**	**+1.4**
	2.0nm,0.3s,baz=318,slow=12,SNR=49						
CTAO	**Charters Tower**	**19.15**	**143**	*e*P	**Pn**	**23 53 00.2**	**+1.4**
	47nm,0.8s						
BBKI	**Banjar Baru**	**19.20**	**274**	P	**Pn**	**23 53 00.6**	**+1.1**
	113nm,1.3s,4μm						
MBWA	**Marble Bar**	**21.24**	**220**	*e*P	**P**	**23 53 21.6**	**+1.1**
	36nm,1.0s						
MBWA				*e*S	**S**	**23 57 10.9**	**-4.4**
SBUM	**Sibu**	**23.01**	**288**	P	**P**	**23 53 42.6**	**+3.1**
KSM	**Kuching**	**24.56**	**285**	*e*P	**P**	**23 53 54.1**	**-0.2**
	26nm,1.0s						
KSM	**Kuching**	**24.56**	**285**	P	**P**	**23 53 56.4**	**+2.1**
FORT	**Forrest**	**26.26**	**192**	*e*P	**P**	**23 54 10.2**	**+0.7**
	51nm,0.8s						
STKA	**Stephens Creek**	**27.67**	**166**	*e*P	**P**	**23 54 23.0**	**+0.8**
	8.8nm,1.6s						
STKA	**Stephens Creek**	**27.67**	**166**	P	**P**	**23 54 24.8**	**+2.5**
	4.4nm,0.9s,baz=113,slow=17,SNR=4.0						
STKA				LR	LR	00 06 23.2	
	comp=Z,304nm,19.9s,baz=172,slow=38						
CMAR	**Chiang Mai Arr**	**41.71**	**305**	P	**P**	**23 56 23.4**	**+0.1**
CMAR	**Chiang Mai Arr**	**41.71**	**305**	P	**P**	**23 56 23.4**	**+0.1**
	2.0nm,0.7s,baz=131,slow=7.7,SNR=9.5						
KSAR	**Wonju Array Be**	**42.60**	**353**	P	**P**	**23 56 30.8**	**+0.5**
KSRS	**Korea Array**	**42.61**	**353**	P	**P**	**23 56 30.8**	**+0.5**
	2.9nm,0.6s,baz=173,slow=10.0,SNR=13						
USRK	**Ussuriysk Arra**	**49.00**	**358**	P	**P**	**23 57 20.8**	**+0.1**
	1.9nm,0.7s,baz=199,slow=7.6,SNR=4.1						
GTA	**Gaotai**	**54.30**	**328**	*e*P	**P**	**23 58 01.4**	**+0.8**
GTA				pP	**pP**	**23 58 08.5**	**-0.7**
GTA				sP	**sP**	**23 58 12.3**	**-0.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
ULN	**Ulaanbaatar**	**57.73**	**339**	*e*P	**P**	**23 58 25.7**	**+0.7**
	comp=Z,2.5nm,0.9s						
SONM	**Songino Array**	**57.94**	**338**	P	**P**	**23 58 27.0**	**+0.5**
SONM	**Songino Array**	**57.94**	**338**	P	**P**	**23 58 27.0**	**+0.5**
	comp=Z,1.3nm,0.9s,baz=148,slow=6.4,SNR=8.2						
MKAR	**Makanchi Array**	**68.84**	**325**	P	**P**	**23 59 39.0**	**+0.5**
MKAR	**Makanchi Array**	**68.84**	**325**	P	**P**	**23 59 39.0**	**+0.5**
	comp=Z,1.7nm,0.5s,baz=112,slow=7.5,SNR=34						
ZALV	**Zalesovo Beam**	**71.64**	**332**	P	**P**	**23 59 54.3**	**-1.1**
ZALV	**Zalesovo Beam**	**71.64**	**332**	P	**P**	**23 59 54.3**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=103,slow=6.4,SNR=5.6						
AAK	**Ala-Archa**	**71.68**	**318**	*e*P	**P**	**23 59 56.4**	**+0.2**
AAK	**Ala-Archa**	**71.68**	**318**	LR	LR	00 36 45.4	
	comp=Z,35nm,19.0s,baz=205,slow=40						
VNDA	**Vanda**	**73.98**	**174**	*e*P	**P**	**00 00 10.0**	**+1.0**
	comp=Z,1.5nm,0.6s						
VNDA	**Vanda**	**73.98**	**174**	P	**P**	**00 00 09.3**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=329,slow=5.9,SNR=7.3						
MAW	**Mawson**	**78.28**	**202**	*e*P	**P**	**00 00 34.4**	**+0.8**
	comp=Z,3.6nm,1.2s						
MAW	**Mawson**	**78.28**	**202**	P	**P**	**00 00 36.2**	**+2.6**
	comp=Z,13nm,1.1s,baz=63,slow=5.7,SNR=14						
MAW				LR	LR	00 28 36.4	
	comp=Z,90nm,21.8s,baz=195,slow=31						
ABKAR	**Akbulak array**	**83.47**	**321**	*e*P	**P**	**00 01 01.8**	**+0.1**
	comp=Z,1.5nm,0.8s						
TORD	**Torodi Ar. Bea**	**132.31**	**283**	PKP	**PKPdf**	**00 07 49.5**	**+0.4**
TORD	**Torodi Ar. Bea**	**132.31**	**283**	PKP	**PKPdf**	**00 07 49.5**	**+0.4**
	comp=Z,0.7nm,0.8s,baz=50,slow=1.7,SNR=5.0						
LPAZ	**La Paz**	**149.54**	**134**	PKPbc	**PKPbc**	**00 08 27.0**	**+1.9**
LPAZ	**La Paz**	**149.54**	**134**	PKPbc	**PKPbc**	**00 08 27.0**	**+1.9**
	comp=Z,4.0nm,0.8s,baz=31,slow=1.2,SNR=12						
ROSC	**El Rosal**	**151.74**	**89**	*e*PKPbc	**PKPbc**	**00 08 31.1**	**+0.9**
ROSC	**El Rosal**	**151.74**	**89**	PKPbc	**PKPbc**	**00 08 31.3**	**+1.1**
	comp=Z,7.9nm,0.6s,baz=280,slow=19,SNR=8.8						

MEX 22 23:58:07.0±0.4,**15°.32N**×**92°.92W,h91**km±7km,**MD3.9,
Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.48**	**323**	*i* P	Pn	23 58 20.6	-1.0
PCIG				*i* S	Sn	23 58 30.5	-2.1
THIG		**0.75**	**123**	*i* P	Pn	23 58 22.6	-1.4
THIG				*i* S	Sn	23 58 35.3	-1.5
CCIG	**Comitan**	**1.22**	**38**	*i* P	Pn	23 58 28.1	-1.5
CCIG				*i* S	Sn	23 58 45.3	-1.3
TGIG		**1.47**	**352**	*i* P	Pn	23 58 31.1	-1.4
TGIG				*i* S	Sn	23 58 50.1	-1.6

IDC 23 00:27:12.8±15.0,**7°.36S**×**129°.00E,h131**km±166km,
mb3.2/1,**mb1 3.2**/3,**mb1mx3.0**/19,**mbtmp3.0**/3,**ML3.4**/2,
**Error ellipse: s-maj=106.8km s-min=63.8km az=82.0,
Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**11.17**	**197**	S	Sn	00 32 02.2	+10
	0.2nm,0.3s,baz=233,slow=20,SNR=5.1						
WRA	**Warramunga Arr**	**13.54**	**158**	P	Pn	00 30 20.7	+0.9
	0.2nm,0.3s,baz=341,slow=13,SNR=14						
WRA				S	Sn	00 32 45.8	-3.5
	0.4nm,0.3s,baz=337,slow=24,SNR=8.6

TKM2				⇑S		Sn		00 35 25.7	-10
	1.9nm,0.5s								
TKM2	**Tokmak 2**	**7.18**	**28**	P		**Pn**		**00 34 14.9**	**+0.9**
	SNR=31								
MK31	**Makanchi Array**	**13.16**	**36**	⇑P		**Pn**		**00 35 30.5**	**-0.2**
	0.8nm,0.4s,baz=217,slow=16,SNR=20								
MKAR	**Makanchi Array**	**13.16**	**36**	P		**Pn**		**00 35 29.5**	**-1.1**
	0.3nm,0.3s,baz=212,slow=5.1,SNR=18								
KOLN	**Koldanda**	**13.87**	**126**	*eP*		P		00 35 44.7	+2.8
AB31	**Akbulak array**	**14.94**	**331**	⇑P		**P**		**00 35 52.3**	**-1.0**
	1.0nm,0.4s,baz=157,slow=11,SNR=48								
KURBB	**Kurchatov Arra**	**14.97**	**19**	P		**P**		**00 35 52.6**	**-1.0**
	0.1nm,0.3s,baz=207,slow=11,SNR=6.1								
DMN	**Daman**	**14.97**	**123**	*eP*		P		00 35 56.0	+1.8
KKN	**Kakani**	**14.97**	**122**	*eP*		P		00 35 56.1	+2.0
	15nm,0.5s								
PKI	**Pulchoki**	**15.20**	**123**	*eP*		**P**		**00 35 58.4**	**+1.6**
	8.1nm,0.4s								
GUN	**Gumba**	**15.31**	**121**	*eP*		**P**		**00 35 59.9**	**+1.9**
	11nm,0.4s								
VOSK	**Vostochnaya**	**16.06**	**360**	⇑P		**Pn**		**00 36 06.7**	**+0.7**
	1.3nm,0.7s								
ZRNK	**Zerenda**	**16.34**	**356**	⇑P		**Pn**		**00 36 09.5**	**0.0**
	1.4nm,0.5s								
BVA0	**Borovoye Array**	**16.36**	**359**	P		**Pn**		**00 36 11.1**	**+1.4**
	1.4nm,0.5s,baz=178,slow=13,SNR=9.3								
BVAR	**Borovoye Array**	**16.36**	**359**	P		**Pn**		**00 36 10.5**	**+0.7**
	0.6nm,0.3s,baz=168,slow=12,SNR=10								
RAMN	**Ramite**	**16.41**	**122**	*eP*		**Pn**		**00 36 09.9**	**-0.9**
	7.4nm,0.4s								
AKTO	**Aktyubinsk**	**16.63**	**330**	⇑P		**Pn**		**00 36 13.5**	**+0.5**
	4.0nm,0.5s								
AKTO	**Aktyubinsk**	**16.63**	**330**	P		**Pn**		**00 36 13.8**	**+0.8**
	1.0nm,0.3s,baz=138,slow=12,SNR=21								
TAPN	**Taplejung**	**16.93**	**119**	*eP*		**Pn**		**00 36 16.5**	**-0.6**
ODAN	**Odare**	**17.01**	**120**	*eP*		**Pn**		**00 36 16.6**	**-1.4**
ZALV	**Zalesovo Beam**	**19.77**	**25**	P		**P**		**00 36 45.8**	**-0.1**
	2.5nm,0.6s,baz=220,slow=11,SNR=10								
SONM	**Songino Array**	**28.25**	**56**	P		**P**		**00 38 06.5**	**+0.7**
	0.4nm,0.4s,baz=267,slow=9.8,SNR=3.7								
JOF	**Joensuu**	**35.72**	**330**	*ep*		P		00 39 11.8	+1.4
	3.7nm,0.3s								
FINES	**FINESS Array B**	**37.34**	**326**	P		**P**		**00 39 24.9**	**+0.8**
	1.4nm,0.4s,baz=122,slow=9.9,SNR=28								
KAF	**Kangasniemi**	**37.48**	**327**	*ep*		**P**		**00 39 26.2**	**+0.9**
	0.5nm,0.2s								
KEV	**Kevo**	**40.65**	**338**	*ep*		**P**		**00 39 52.2**	**+0.8**
	0.5nm,0.2s								
ARCES	**ARCESS Array B**	**40.99**	**338**	P		**P**		**00 39 55.1**	**+0.9**
	2.1nm,0.6s,baz=115,slow=8.1,SNR=22								
HFS	**Hagfors**	**42.93**	**322**	P		**P**		**00 40 10.3**	**+0.3**
	4.4nm,0.5s,baz=107,slow=9.7								
NB2	**NORSAR Subarra**	**44.24**	**323**	P		**P**		**00 40 20.2**	**-0.3**
	comp=Z,2.0nm,0.5s,baz=97,slow=7.9								
NOA	**NORSAR Array B**	**44.24**	**323**	P		**P**		**00 40 20.8**	**+0.2**
	comp=Z,2.1nm,0.5s,baz=96,slow=7.8,SNR=15								
TORD	**Torodi Ar. Bea**	**65.72**	**269**	P		**P**		**00 42 53.3**	**-1.5**
	comp=Z,1.3nm,0.6s,baz=50,slow=6.2,SNR=23								
YKA	**Yellowknife Ar**	**81.08**	**3**	P		**P**		**00 44 23.5**	**-0.2**
	comp=Z,0.2nm,0.5s,baz=354,slow=4.7,SNR=3.6								

IDC 23 00:34:53.0±13.0, **7°.91S**×**128°.09E, h162**km±147km, **mb3.3**/2, **mb1 3.3**/5, **mb1mx3.1**/21, **mbtmp3.2**/5, **ML3.7**/3, **Error ellipse: s-maj=100.2km s-min=53.8km az=27.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**10.41**	**193**	P			Pn	00 37 19.0	+0.8
	1.6nm,0.3s,baz=25,slow=11,SNR=49								
FITZ				S			Sn	00 39 12.9	-0.8
	1.3nm,0.3s,baz=84,slow=19,SNR=5.2								
WRA	**Warramunga Arr**	**13.41**	**154**	P			Pn	00 37 55.3	-1.7
	0.2nm,0.3s,baz=327,slow=12,SNR=7.0								
WRA				S			Sn	00 40 17.9	-7.9
	1.6nm,0.3s,baz=332,slow=23,SNR=10								
ASAR	**Alice Springs**	**16.63**	**161**	P			Pn	00 38 37.8	+0.9
	0.1nm,0.3s,baz=338,slow=11,SNR=4.8								
ASAR				S			S	00 41 37.4	-3.8
	0.3nm,0.3s,baz=344,slow=25,SNR=6.6								
MKAR	**Makanchi Array**	**67.97**	**328**	P			P	00 45 34.3	-0.1
	0.3nm,0.4s,baz=116,slow=7.8,SNR=8.9								
KURBB	**Kurchatov Arra**	**72.31**	**329**	P			P	00 46 00.8	+0.1
	0.5nm,0.5s,baz=131,slow=5.1,SNR=7.2								

*IDC **23** 00:41:56.0±1.2, 42°.57N×13°.13E, h0km, mb3.8/7, mb1 3.9/14, mb1mx3.7/33, mbtmp3.7/14, ML3.7/6, MS2.9/2, Ms1 3.0/2, ms1mx2.3/44, Error ellipse: s-maj=19.5km s-min=12.3km az=86.0*

*SZGRF **23** 00:41:55.4, 42°.28N×13°.73E, h10km, Central Italy*

*LDG **23** 00:41:55.4±0.1, 42°.47N×13°.30E, h2km, Ml3.6/11, Error ellipse: s-maj=2.9km s-min=1.9km az=34.0*

*CSEM **23** 00:41:56.6±0.1, 42°.48N×13°.34E, h2km, mb3.9/12, ML4.4/8, Error ellipse: s-maj=1.8km s-min=1.4km az=28.0*

*NEIC **23** 00:41:56.0, 42°.44N×13°.31E, h5km, mb4.0/3, ML3.8(ROM), After ROM.*

NEIC Felt [IV] at Campli, Castellalto, L'Aquila and Valle Castellana; [III] at Ascoli Piceno, Atri, Avezzano, Bellante, Canzano, Isola del Gran Sasso d'Italia, Montorio al Vomano and Teramo; [II] at Castelraimondo, Chieti, Fara in Sabina, Folignano, Foligno, Frosinone, Giulianova, Guidonia, Introdacqua, Macerata, Monterotondo, Palestrina, Palombara Sabina, Petriolo, Pineto, Pratola Peligna, Rieti, Rome, Sambuceto, San Benedetto del Tronto, Scurcola Marsicana, Sora, Spoleto, Sulmona, Terni, Tolentino, Tortoreto and Villa Adriana.

*ROM **23** 00:41:56.1±0.1, 42°.44N×13°.37E, h15km±1km, Ml4.0/33, Error ellipse: s-maj=0.8km s-min=0.6km az=76.0*

*PRU **23** 00:41:56.9, 42°.51N×13°.49E, h0km, M4.0*

*PDG **23** 00:41:56.5±0.4, 42°.51N×13°.34E, h12km±1km, ML3.9/7, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*

*ISCJB **23** 00:41:56.2±0.2, 42°.47N±0°.01×13°.33E±0°.01, h13km±1km, mb4.0/17, MS2.8/1, Error ellipse: s-maj=2.0km s-min=1.5km az=34.5*

*MOS **23** 00:41:58.6±0.9, 42°.53N×13°.32E, h33km, mb4.1/14, Error ellipse: s-maj=4.6km s-min=3.2km az=109.8*

*THE **23** 00:42:05.5, 42°.37N×13°.99E, h21km±2.9km, ML4.3/2, Error ellipse: s-maj=35.2km s-min=3.5km az=280.0*

*STR **23** 00:42:07.9±0.4, 43°.10N×12°.82E, h10km, Ml3.6, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 23 00:41:57.4±0.6, **42°.46N**±0°.01×**13°.35E**±0°.02, **h15**km±4km, **n712**, σ1§**52**/795, **mb4.0**/17, **49C-29D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**31**	P			**Pg**	**00 41 59.6**	**-1.2**
CAMP	**Campotosto**	**0.09**	**31**	P			**Pg**	**00 41 59.6**	**-1.2**
AQU	**L'Aquila**	**0.11**	**158**	*i* Pg			**Pg**	**00 41 59.7**	**-1.3**
AQU				Sg			**Sg**	**00 42 02.0**	**-1.2**
	102µm,0.3s								
AQU	**L'Aquila**	**0.11**	**158**	*eP*			**Pg**	**00 41 59.6**	**-1.3**
AQU				*eS*			**Sg**	**00 42 02.0**	**-1.2**
AQU	**L'Aquila**	**0.11**	**158**	*eP*			**Pg**	**00 41 59.6**	**-1.3**
AQU				Sg			**Sg**	**00 42 02.0**	**-1.2**
	102µm,0.3s								
FIAM	**Fiamignano**	**0.25**	**222**	⇑*i* Pg			**Pg**	**00 42 02.1**	**-0.9**
FIAM				Sg			**Sg**	**00 42 07.0**	**+0.2**
	25µm,0.6s								
FIAM	**Fiamignano**	**0.25**	**222**	P			**Pg**	**00 42 02.0**	**-0.9**
FIAM	**Fiamignano**	**0.25**	**222**	⇑*i* Pg			**Pg**	**00 42 02.1**	**-0.9**
FIAM				Sg			**Sg**	**00 42 07.0**	**+0.2**
	25µm,0.6s								
TERO	**Teramo**	**0.25**	**49**	Pg			**Pg**	**00 42 01.8**	**-1.2**
TERO				Sg			**Sg**	**00 42 05.8**	**-1.0**
	25µm,0.4s								
TERO	**Teramo**	**0.25**	**49**	P			**Pg**	**00 42 01.8**	**-1.2**
TERO	**Teramo**	**0.25**	**49**	Pg			**Pg**	**00 42 01.8**	**-1.2**
TERO				Sg			**Sg**	**00 42 05.8**	**-1.0**
	25µm,0.4s								
LNSS	**Leonessa**	**0.27**	**303**	⇑*i* Pg			**Pg**	**00 42 02.5**	**-0.8**
LNSS				Sg			**Sg**	**00 42 07.3**	**0.0**
	21µm,0.5s								
LNSS	**Leonessa**	**0.27**	**303**	P			**Pg**	**00 42 02.5**	**-0.8**
LNSS	**Leonessa**	**0.27**	**303**	⇑*i* Pg			**Pg**	**00 42 02.5**	**-0.8**
GAVE	**Gavelli**	**0.41**	**305**	Pg			**Pg**	**00 42 04.9**	**-0.8**
GAVE				Sg			**Sg**	**00 42 11.6**	**+0.2**
GAVE	**Gavelli**	**0.41**	**305**	Pg			**Pg**	**00 42 04.9**	**-0.8**
GAVE				Sg			**Sg**	**00 42 11.6**	**+0.2**
NRCA	**Norcia**	**0.41**	**336**	⇑*i* Pg			**Pg**	**00 42 04.8**	**-1.0**
NRCA				Sg			**Sg**	**00 42 11.4**	**-0.1**
NRCA	**Norcia**	**0.41**	**336**	P			Pg	00 42 01.3	-4.5
NRCA	**Norcia**	**0.41**	**336**	⇑*i* Pg			**Pg**	**00 42 04.8**	**-1.0**
NRCA				Sg			**Sg**	**00 42 11.4**	**-0.1**
PTQR	**Pietraquaria**	**0.44**	**175**	⇑*i* Pg			**Pg**	**00 42 04.9**	**-1.3**
PTQR	**Pietraquaria**	**0.44**	**175**	P			**Pg**	**00 42 04.8**	**-1.4**
PTQR	**Pietraquaria**	**0.44**	**175**	⇑*i* Pg			**Pg**	**00 42 04.9**	**-1.3**
MNS	**Montasola**	**0.50**	**262**	P			**Pg**	**00 42 06.0**	**-1.3**
MNS	**Montasola**	**0.50**	**262**	⇑*i* Pg			**Pg**	**00 42 06.1**	**-1.3**
MNS				Sg			**Sg**	**00 42 13.5**	**-0.5**
	4µm,0.4s								
MNS	**Montasola**	**0.50**	**262**	P			**Pg**	**00 42 06.0**	**-1.3**
MNS	**Montasola**	**0.50**	**262**	⇑*i* Pg			**Pg**	**00 42 06.1**	**-1.3**
MNS				Sg			**Sg**	**00 42 13.5**	**-0.5**
	4µm,0.4s								
OFFI	**Offida**	**0.54**	**28**	⇑*i* Pg			**Pg**	**00 42 07.7**	**-0.4**
	26µm,0.7s								
OFFI	**Offida**	**0.54**	**28**	P			**Pg**	**00 42 07.7**	**-0.4**
OFFI	**Offida**	**0.54**	**28**	⇑*i* Pg			**Pg**	**00 42 07.7**	**-0.4**
	26µm,0.7s								
TRTR	**Tortoreto Alta**	**0.55**	**50**	Pg			**Pg**	**00 42 07.8**	**-0.4**
TRTR	**Tortoreto Alta**	**0.55**	**50**	P			**Pg**	**00 42 07.8**	**-0.4**
TRTR	**Tortoreto Alta**	**0.55**	**50**	Pg			**Pg**	**00 42 07.8**	**-0.4**
CERT	**Cerreto**	**0.57**	**208**	⇑*i* Pg			**Pg**	**00 42 07.3**	**-1.5**
CERT				Sg			**Sg**	**00 42 16.2**	**-0.2**
	23µm,0.4s								
CERT	**Cerreto**	**0.57**	**208**	P			**Pg**	**00 42 07.3**	**-1.5**
CERT	**Cerreto**	**0.57**	**208**	⇑*i* Pg			**Pg**	**00 42 07.3**	**-1.5**
CERT				Sg			**Sg**	**00 42 16.2**	**-0.2**
	23µm,0.4s								
CESX	**Cesi**	**0.59**	**285**	Pg			**Pg**	**00 42 07.6**	**-1.4**
	4µm,0.3s								
CESX	**Cesi**	**0.59**	**285**	P			**Pg**	**00 42 07.5**	**-1.4**
CESX	**Cesi**	**0.59**	**285**	Pg			**Pg**	**00 42 07.6**	**-1.4**
	4µm,0.3s								
INTR	**Introdacqua**	**0.61**	**137**	Pg			**Pg**	**00 42 07.5**	**-1.9**
	9µm,0.5s								
INTR	**Introdacqua**	**0.61**	**137**	P			**Pg**	**00 42 07.5**	**-1.9**
INTR	**Introdacqua**	**0.61**	**137**	Pg			**Pg**	**00 42 07.5**	**-1.9**
	9µm,0.5s								
FDMO	**Fiordimonte**	**0.61**	**342**	Pg			**Pg**	**00 42 08.0**	**-1.4**
FDMO				Sg			**Sb**	**00 42 18.1**	**-0.1**
	3µm,0.6s								
FDMO	**Fiordimonte**	**0.61**	**342**	P			**Pg**	**00 42 07.7**	**-1.7**
FDMO	**Fiordimonte**	**0.61**	**342**	P			**Pg**	**00 42 07.7**	**-1.7**
FDMO	**Fiordimonte**	**0.61**	**342**	Pg			**Pg**	**00 42 08.0**	**-1.4**
VVLD	**Villa Vallelon**	**0.62**	**161**	Pg			**Pg**	**00 42 07.8**	**-1.8**
	4µm,0.4s								
VVLD	**Villa Vallelon**	**0.62**	**161**	P			**Pg**	**00 42 07.8**	**-1.8**
VVLD	**Villa Vallelon**	**0.62**	**161**	Pg			**Pg**	**00 42 07.8**	**-1.8**
	4µm,0.4s								
MTCE	**Montecelio**	**0.62**	**226**	Pg			**Pg**	**00 42 08.1**	**-1.6**
	4µm,0.4s								
MTCE	**Montecelio**	**0.62**	**226**	P			**Pg**	**00 42 08.1**	**-1.6**
MTCE	**Montecelio**	**0.62**	**226**	Pg			**Pg**	**00 42 08.1**	**-1.6**
	4µm,0.4s								
CESI	**CESI - Serrava**	**0.64**	**330**	Pg			**Pg**	**00 42 08.7**	**-1.3**
	1µm,0.3s								
CESI	**CESI - Serrava**	**0.64**	**330**	P			**Pg**	**00 42 08.6**	**-1.4**
CESI	**CESI - Serrava**	**0.64**	**330**	P			**Pg**	**00 42 08.6**	**-1.4**
GUAR	**Guarcino**	**0.66**	**182**	Pg			**Pg**	**00 42 08.7**	**-1.7**
	5µm,0.5s								
GUAR	**Guarcino**	**0.66**	**182**	P			**Pg**	**00 42 08.6**	**-1.8**
GUAR	**Guarcino**	**0.66**	**182**	Pg			**Pg**	**00 42 08.7**	**-1.7**
	5µm,0.5s								
LPEL	**Lama dei Pelig**	**0.74**	**123**	Pg			**Pg**	**00 42 09.6**	**-2.3**
	7µm,0.6s								
LPEL	**Lama dei Pelig**	**0.74**	**123**	P			**Pg**	**00 42 09.6**	**-2.3**
LPEL	**Lama dei Pelig**	**0.74**	**123**	Pg			**Pg**	**00 42 09.6**	**-2.3**
	7µm,0.6s								
GUMA	**Gualdo di Mace**	**0.75**	**35**	⇑*i* Pg			Pg	00 42 08.3	-3.7
	12µm,0.4s								
GUMA	**Gualdo di Mace**	**0.75**	**35**	⇑*i* Pg			Pg	00 42 08.3	-3.7
	12µm,0.4s								
ASSB	**Assisi San Ben**	**0.77**	**319**	Pg			**Pg**	**00 42 11.0**	**-1.5**
	3µm,0.4s								
ASSB	**Assisi San Ben**	**0.77**	**319**	P			**Pg**	**00 42 11.0**	**-1.5**
ASSB	**Assisi San Ben**	**0.77**	**319**	Pg			**Pg**	**00 42 11.0**	**-1.5**
	3µm,0.4s								
CAFR	**Castel Frentan**	**0.78**	**107**	Pg			**Pg**	**00 42 10.9**	**-1.6**
CAFR	**Castel Frentan**	**0.78**	**107**	Pg			**Pg**	**00 42 10.9**	**-1.6**
POFI	**Posta Fibreno**	**0.79**	**160**	Pg			**Pb**	**00 42 10.6**	**-2.2**
POFI	**Posta Fibreno**	**0.79**	**160**	P			**Pb**	**00 42 10.7**	**-2.1**
POFI	**Posta Fibreno**	**0.79**	**160**	P			**Pb**	**00 42 10.7**	**-2.1**
RMP	**Rome, Mte Porz**	**0.80**	**217**	Pg			**Pb**	**00 42 11.3**	**-1.8**
	7µm,0.7s								
RMP	**Rome, Mte Porz**	**0.80**	**217**	Pg			**Pb**	**00 42 11.3**	**-1.8**
	7µm,0.7s								
SDI	**San Donato**	**0.82**	**155**	P			**Pb**	**00 42 11.2**	**-2.2**
SDI	**San Donato**	**0.82**	**155**	Pg			**Pb**	**00 42 11.2**	**-2.2**
SDI	**San Donato**	**0.82**	**155**	P			**Pb**	**00 42 11.2**	**-2.2**
SDI	**San Donato**	**0.82**	**155**	Pg			**Pb**	**00 42 11.2**	**-2.2**
RDP	**Rocca di Papa**	**0.84**	**214**	P			**Pb**	**00 42 12.0**	**-1.7**
RDP	**Rocca di Papa**	**0.84**	**214**	Pg			**Pb**	**00 42 11.9**	**-1.7**
	14µm,0.5s								
RDP	**Rocca di Papa**	**0.84**	**214**	P			**Pb**	**00 42 12.0**	**-1.7**
RDP	**Rocca di Papa**	**0.84**	**214**	P			**Pb**	**00 42 12.0**	**-1.7**
SNTG	**Esanatoglia**	**0.85**	**340**	Pg			**Pb**	**00 42 12.3**	**-1.6**
SNTG	**Esanatoglia**	**0.85**	**340**	P			**Pb**	**00 42 12.3**	**-1.6**
SNTG	**Esanatoglia**	**0.85**	**340**	Pg			**Pb**	**00 42 12.3**	**-1.6**
MA9	**Marino**	**0.85**	**217**	Pg			**Pb**	**00 42 12.4**	**-1.5**
	7µm,0.5s								
MA9	**Marino**	**0.85**	**217**	P			**Pb**	**00 42 12.6**	**-1.3**
MA9	**Marino**	**0.85**	**217**	P			**Pb**	**00 42 12.6**	**-1.3**
SAMA	**S.Maria delle**	**0.88**	**220**	Pg			**Pb**	**00 42 12.5**	**-1.8**
	7µm,0.8s								
SAMA	**S.Maria delle**	**0.88**	**220**	Pg			**Pb**	**00 42 12.5**	**-1.8**
	7µm,0.8s								
GIUL	**Giuliano Di Ro**	**0.90**	**184**	Pg			**Pb**	**00 42 12.7**	**-2.0**
	3µm,0.5s								
GIUL	**Giuliano Di Ro**	**0.90**	**184**	P			**Pb**	**00 42 12.6**	**-2.1**
GIUL	**Giuliano Di Ro**	**0.90**	**184**	Pg			**Pb**	**00 42 12.7**	**-2.0**
	3µm,0.5s								
LAV9	**Lanuvio**	**0.92**	**212**	P			**Pb**	**00 42 13.6**	**-1.4**
LAV9	**Lanuvio**	**0.92**	**212**	P			**Pb**	**00 42 13.6**	**-1.4**
CING	**Cingoli**	**0.93**	**353**	Pg			**Pb**	**00 42 13.5**	**-1.6**
	5µm,0.4s								
CING	**Cingoli**	**0.93**	**353**	P			**Pb**	**00 42 13.6**	**-1.6**
CING	**Cingoli**	**0.93**	**353**	P			**Pb**	**00 42 13.6**	**-1.6**
RNI2	**Rionero Sannit**	**0.96**	**141**	P			**Pb**	**00 42 14.6**	**-1.2**
RNI2	**Rionero Sannit**	**0.96**	**141**	P			**Pb**	**00 42 14.6**	**-1.2**
CERA	**Filignano**	**0.99**	**149**	Pg			**Pb**	**00 42 13.9**	**-2.4**
	3µm,0.5s								
CERA	**Filignano**	**0.99**	**149**	Pg			**Pb**	**00 42 13.9**	**-2.4**
	3µm,0.5s								
MURB	**Monte Urbino**	**1.01**	**323**	Pg			**Pb**	**00 42 15.2**	**-1.3**
	5µm,0.5s								
MURB	**Monte Urbino**	**1.01**	**323**	P			**Pb**	**00 42 15.3**	**-1.3**
MURB	**Monte Urbino**	**1.01**	**323**	P			**Pb**	**00 42 15.3**	**-1.3**
MGAB	**Montegabbione**	**1.02**	**297**	Pg			**Pb**	**00 42 15.4**	**-1.3**
MGAB	**Montegabbione**	**1.02**	**297**	P			**Pb**	**00 42 15.5**	**-1.3**
MGAB	**Montegabbione**	**1.02**	**297**	P			**Pb**	**00 42 15.5**	**-1.3**
MIDA	**Miranda**	**1.06**	**140**	Pg			**Pb**	**00 42 14.9**	**-2.5**
	2µm,0.6s								
MIDA	**Miranda**	**1.06**	**140**	P			**Pb**	**00 42 15.0**	**-2.5**
MIDA	**Miranda**	**1.06**	**140**	P			**Pb**	**00 42 15.0**	**-2.5**
AOI	**Ancona**	**1.11**	**10**	Pg			**Pb**	**00 42 16.8**	**-1.5**
	1µm,0.7s								
AOI	**Ancona**	**1.11**	**10**	P			**Pb**	**00 42 17.2**	**-1.1**
AOI	**Ancona**	**1.11**	**10**	Pg			**Pb**	**00 42 16.8**	**-1.5**
	1µm,0.7s								
AOI	**Ancona**	**1.11**	**10**	P			**Pb**	**00 42 17.2**	**-1.1**
SACS	**San Casciano d**	**1.13**	**291**	Pg			**Pb**	**00 42 17.3**	**-1.4**
	2µm,1.2s								
PIEI	**Pieia**	**1.23**	**331**	Pg			**Pn**	**00 42 18.8**	**-1.3**
	871nm,0.4s								
PIEI	**Pieia**	**1.23**	**331**	P			**Pn**	**00 42 18.9**	**-1.2**
PIEI	**Pieia**	**1.23**	**331**	P			**Pn**	**00 42 18.9**	**-1.2**
CDCA	**Citt' di Caste**	**1.29**	**321**	P			**Pn**	**00 42 20.7**	**-0.2**
CDCA	**Citt' di Caste**	**1.29**	**321**	P			**Pn**	**00 42 20.7**	**-0.2**
FSSB	**Fossombrone**	**1.30**	**342**	Pg			**Pn**	**00 42 20.4**	**-0.7**
	3µm,0.4s								
FSSB	**Fossombrone**	**1.30**	**342**	P			**Pn**	**00 42 19.6**	**-1.5**
FSSB	**Fossombrone**	**1.30**	**342**	P			**Pn**	**00 42 19.6**	**-1.5**
FSSB	**Fossombrone**	**1.30**	**342**	Pg			**Pn**	**00 42 20.4**	**-0.7**
	3µm,0.4s								
BADI	**Badiali**	**1.33**	**323**	Pg			**Pn**	**00 42 20.9**	**-0.5**
	1µm,0.6s								
BADI	**Badiali**	**1.33**	**323**	P			**Pn**	**00 42 20.9**	**-0.5**
BADI	**Badiali**	**1.33**	**323**	Pg			**Pn**	**00 42 20.9**	**-0.5**
	1µm,0.6s								
CAFI	**Castiglion Fio**	**1.34**	**311**	Pg			**Pn**	**00 42 21.1**	**-0.5**
	950nm,0.5s								
CAFI	**Castiglion Fio**	**1.34**	**311**	Pg			**Pn**	**00 42 21.1**	**-0.5**
	950nm,0.5s								
CIGN	**Sant'Elia a Pi**	**1.41**	**124**	P			**Pg**	**00 42 25.4**	**+0.8**
CIGN	**Sant'Elia a Pi**	**1.41**	**124**	P			**Pg**	**00 42 25.4**	**+0.8**
PARC	**Parchiule**	**1.44**	**326**	P			**Pn**	**00 42 23.1**	**+0.1**
PARC	**Parchiule**	**1.44**	**326**	P			**Pn**	**00 42 23.1**	**+0.1**
FG2	**Serracapriola**	**1.50**	**115**	P			**Pb**	**00 42 24.5**	**-0.4**
FG2	**Serracapriola**	**1.50**	**115**	P			**Pb**	**00 42 24.5**	**-0.4**
PESA	**Pesaro**	**1.53**	**346**	P			**Pb**	**00 42 25.4**	**0.0**
PESA	**Pesaro**	**1.53**	**346**	P			**Pb**	**00 42 25.4**	**0.0**
CRE	**Caprese Michel**	**1.55**	**319**	P			**Pn**	**00 42 24.4**	**-0.1**
CRE	**Caprese Michel**	**1.55**	**319**	P			**Pn**	**00 42 24.4**	**-0.1**
CRE	**Caprese Michel**	**1.55**	**319**	P			**Pn**	**00 42 24.4**	**-0.1**
RSM	**Repubblica di**	**1.61**	**336**	P			**Pn**	**00 42 26.1**	**+0.8**
RSM	**Repubblica di**	**1.61**	**336**	P			**Pn**	**00 42 26.1**	**+0.8**
RSM	**Repubblica di**	**1.61**	**336**	P			**Pn**	**00 42 26.1**	**+0.8**
MAON	**Monte Argentar**	**1.64**	**270**	P			**Pn**	**00 42 25.6**	**-0.1**
MAON	**Monte Argentar**	**1.64**	**270**	P			**Pn**	**00 42 25.6**	**-0.1**
PSB1	**Pescosannita**	**1.65**	**138**	P			**Pb**	**00 42 27.9**	**+0.4**
PSB1	**Pescosannita**	**1.65**	**138**	P			**Pb**	**00 42 27.9**	**+0.4**
VENT	**Ventotene**	**1.66**	**178**	P			**Pb**	**00 42 27.1**	**-0.6**
VENT	**Ventotene**	**1.66**	**178**	P			**Pb**	**00 42 27.1**	**-0.6**
MRB1	**Monte Rocchett**	**1.80**	**137**	P			**Pb**	**00 42 30.9**	**+0.8**
MRB1	**Monte Rocchett**	**1.80**	**137**	P			**Pb**	**00 42 30.9**	**+0.8**
SFI	**Santa Sofia**	**1.82**	**323**	P			**Pn**	**00 42 28.8**	**+0.7**
SFI	**Santa Sofia**	**1.82**	**323**	P			**Pn**	**00 42 28.8**	**+0.7**
SFI	**Santa Sofia**	**1.82**	**323**	P			**Pn**	**00 42 28.8**	**+0.7**
CSNT	**Castellina Chi**	**1.82**	**305**	P			**Pn**	**00 42 28.8**	**+0.6**
CSNT	**Castellina Chi**	**1.82**	**305**	P			**Pn**	**00 42 28.8**	**+0.6**
FG5	**Orsara di Pugl**	**1.85**	**129**	P			**Pb**	**00 42 30.7**	**-0.3**
FG5	**Orsara di Pugl**	**1.85**	**129**	P			**Pb**	**00 42 30.7**	**-0.3**
FG5	**Orsara di Pugl**	**1.85**	**129**	P			**Pb**	**00 42 30.7**	**-0.3**
GRFL	**Gerfalco**	**1.88**	**292**	P			**Pn**	**00 42 29.2**	**+0.2**
GRFL	**Gerfalco**	**1.88**	**292**	P			**Pn**	**00 42 29.2**	**+0.2**
SGRT	**San Giovanni R**	**1.92**	**111**	P			**Pb**	**00 42 31.2**	**-0.9**
SGRT	**San Giovanni R**	**1.92**	**111**	P			**Pb**	**00 42 31.2**	**-0.9**
VMG	**Vicchio**	**2.00**	**319**	P			**Pn

UPM Unac-Piva 4.16 78 P Pn 00 43 02.4 +1.9
UPM eSn Sn 00 43 50.7 +1.8
UPM S Sn 00 43 53.5 +4.6
MYKA Terra Mystica 4.18 3⇓ePn Pn 00 43 01.1 +0.5
13nm,0.3s
MYKA Terra Mystica 4.18 3 Pn Pn 00 43 01.1 +0.5
13nm,0.3s
NKY Niksic 4.18 83⇓iPn Pn 00 43 01.5 +0.8
NKY eSn Sn 00 43 51.2 +1.8
NKY Niksic 4.18 83⇓iPn Pn 00 43 01.5 +0.8
NKY eSn Sn 00 43 51.2 +1.8
RORO Rocca Rossa 4.19 295 P Pn 00 43 02.2 +1.4
GRI Girifalco 4.32 146 P Pn 00 43 07.5 +5.0
GRI Girifalco 4.32 146 P Pn 00 43 07.5 +5.0
GRI Girifalco 4.32 146 P Pn 00 43 07.5 +5.0
ABTA Abfaltersbach 4.33 352⇓iPn Pn 00 43 03.3 +0.5
45nm,0.5s,SNR=34
ABTA ⇑iSn Sn 00 43 52.2 -0.8
215nm,0.9s
ABTA Abfaltersbach 4.33 352 Pn Pn 00 43 03.3 +0.5
45nm,0.5s,SNR=34
ABTA Sn Sn 00 43 52.2 -0.8
215nm,0.9s
ROTM Rocchetta Tana 4.34 305 P Pn 00 43 05.1 +2.3
NEGI Seborga 4.36 291 P Pn 00 43 03.7 +0.7
PDG Podgorica 4.37 88 P Pn 00 43 04.6 +1.4
PDG S Sn 00 43 50.7 -3.2
PDG Podgorica 4.37 88 P Pn 00 43 04.6 +1.4
PDG Podgorica 4.37 88⇑iPn Pn 00 43 04.9 +1.7
PDG eSn Sn 00 43 55.6 +1.7
TTG Podgorica 4.37 88⇑iPn Pn 00 43 04.9 +1.7
TTG eSn Sn 00 43 55.6 +1.7
SOKA Soboth 4.39 15⇑ePn Pn 00 43 03.7 +0.1
7.7nm,0.3s
SOKA Soboth 4.39 15 Pn Pn 00 43 03.7 +0.1
7.7nm,0.3s
ULC Ulcinj 4.41 94⇓iPn Pn 00 43 05.0 +1.2
ULC eSn Sn 00 43 56.2 +1.4
ULC Ulcinj 4.41 94 P Pn 00 43 05.7 +1.9
ULC Ulcinj 4.41 94 P Pn 00 43 05.7 +1.9
ULC Ulcinj 4.41 94⇓iPn Pn 00 43 05.0 +1.2
ULC Ulcinj 4.41 94 P Pn 00 43 05.7 +1.9
ULC eSn Sn 00 43 56.2 +1.4
SAOF Saorge 4.50 292 P Pn 00 43 06.5 +1.5
SAOF Saorge 4.50 292 P Pn 00 43 06.5 +1.5
SAOF Saorge 4.50 292 P Pn 00 43 06.5 +1.5
SBF Sospel 4.55 290 eP Pn 00 43 06.4 +0.7
SBF eSn Sn 00 43 53.5 -4.8
26nm,0.6s
SBF Sospel 4.55 290 P Pn 00 43 05.8 +0.1
SBF Sospel 4.55 290 Pn Pn 00 43 05.8 +0.1
SBF Sospel 4.55 290 Pn Pn 00 43 05.8 +0.1
SBF Sospel 4.55 290 eP Pn 00 43 06.4 +0.7
BRMO Bormio 4.55 333 P Pn 00 43 07.3 +1.5
BRMO Bormio 4.55 333 P Pn 00 43 07.3 +1.5
KBA Koelnbreinsper 4.62 360⇓ePn Pn 00 43 07.5 +0.7
9.0nm,0.3s
KBA ⇓iSn Sn 00 43 58.2 -2.1
52nm,0.5s
KBA Koelnbreinsper 4.62 360 Pn Pn 00 43 07.5 +0.7
9.0nm,0.3s
KBA Sn Sn 00 43 58.2 -2.1
52nm,0.5s
BEHE Becsehely 4.70 30 esPb Pg 00 43 25.6 -1.9
TOUF Mont Tournerai 4.72 291 P Pn 00 43 09.5 +1.3
TOUF Mont Tournerai 4.72 291 P Pn 00 43 09.5 +1.3
TOUF Mont Tournerai 4.72 291 P Pn 00 43 09.5 +1.3
BEY Berane 4.85 83 ePn Pn 00 43 10.9 +1.1
BEY eSn Sn 00 44 06.9 +1.2
IVA Berane 4.85 83 ePn Pn 00 43 10.9 +1.1
IVA eSn Sn 00 44 06.9 +1.2
PUK Puka 4.88 93 ePG Pn 00 43 12.5 +2.2
PUK i SG Pb 00 43 14.9 -7.7
PUK Puka 4.88 93 ePg Pn 00 43 12.5 +2.2
PUK i Sg Pb 00 43 14.9 -7.7
DOI San Damiano 4.89 297 P Pn 00 43 12.8 +2.4
DOI San Damiano 4.89 297 P Pn 00 43 12.8 +2.4
DOI San Damiano 4.89 297 P Pn 00 43 12.8 +2.4
PVY Plav 4.89 86⇑iPn Pn 00 43 12.2 +1.7
PVY eSn Sn 00 44 07.8 +1.0
FETA Feichten 4.93 339⇑ePn Pn 00 43 12.5 +1.5
12nm,0.4s,SNR=14
FETA Feichten 4.93 339 Pn Pn 00 43 12.5 +1.5
12nm,0.4s,SNR=14
TUE Stuetta 4.93 326 ePn Pn 00 43 11.7 +0.6
TUE eSn Sn 00 44 08.3 +0.4
TUE Stuetta 4.93 326 ePn Pn 00 43 11.7 +0.6
TUE eSn Sn 00 44 08.3 +0.4
WTTA Wattenberg 4.96 346 i Pn Pn 00 43 13.5 +2.1
20nm,0.5s,SNR=14
WTTA Wattenberg 4.96 346 Pn Pn 00 43 13.5 +2.1
20nm,0.5s,SNR=14
TEKS Tekeris 4.96 63 ePn Pn 00 43 13.5 +2.2
BCI Bajram Curri 4.98 89 ePG Pn 00 43 13.6 +2.0
BCI i SG Pb 00 43 21.7 -2.5
BCI Bajram Curri 4.98 89 ePg Pn 00 43 13.6 +2.0
BCI i Sg Pb 00 43 21.7 -2.5
DAVOX Davos/Dischmat 4.98 331 Pn Pn 00 43 13.9 +2.1
DAVOX Sn Sn 00 44 12.8 +3.7
DAVOX Davos/Dischmat 4.98 331 Pn Pn 00 43 13.9 +2.1
3.7nm,0.3s,baz=157,slow=18,SNR=33
DAVOX Sn Sn 00 44 12.8 +3.7
3.4nm,0.3s,baz=128,slow=19,SNR=4.3
DAVOX Davos/Dischmat 4.98 331 P Pn 00 43 13.9 +2.1
4.0nm,0.3s
DAVOX S Sn 00 44 12.8 +3.7
3.0nm,0.3s
TIR Tirane 4.99 101 ePG Pn 00 43 12.3 +0.6
TIR Tirane 4.99 101 P Pn 00 43 12.7 +1.0
TIR Tirane 4.99 101 eP Pn 00 43 12.3 +0.6
TIR e 00 44 08.1
TIR pmax pmax
comp=Z,81nm,0.4s
TIR Tirane 4.99 101 ePn Pn 00 43 12.3 +0.6
comp=Z,82nm,0.4s
TIR eSn Sn 00 44 08.1 -1.0
TIR Tirane 4.99 101 P Pn 00 43 12.7 +1.0
TIR eS Sn 00 44 08.1 -1.0
TIR Tirane 4.99 101 ePg Pn 00 43 12.3 +0.6
ORO Oropa 5.00 311 P Pn 00 43 13.8 +1.9
ORO Oropa 5.00 311 P Pn 00 43 13.8 +1.9
ORO Oropa 5.00 311 P Pn 00 43 13.8 +1.9
FRF La Foret Royal 5.03 285 eP Pn 00 43 12.6 +0.3
FRF La Foret Royal 5.03 285 P Pn 00 43 12.8 +0.5
FRF La Foret Royal 5.03 285 Pn Pn 00 43 12.8 +0.5
FRF La Foret Royal 5.03 285 P Pn 00 43 12.8 +0.5
ARSA Arzberg 5.04 17⇓iPn Pn 00 43 12.1 -0.3
comp=Z,4.8nm,0.4s
ARSA ⇓eSn Sn 00 44 07.9 -2.4
comp=Z,12nm,0.4s
ARSA Arzberg 5.04 17 Pn Pn 00 43 12.1 -0.3
comp=Z,4.8nm,0.4s
ARSA Sn Sn 00 44 07.9 -2.4
comp=Z,12nm,0.4s
TRAV Traversella 5.06 309 P Pn 00 43 13.7 +0.9
LMR La Mourre 5.10 282 eP Pn 00 43 13.4 +0.2
LMR La Mourre 5.10 282 P Pn 00 43 13.4 +0.2
LMR La Mourre 5.10 282 Pn Pn 00 43 13.4 +0.2
LMR La Mourre 5.10 282 eP Pn 00 43 13.4 +0.2
DIVS Divibare 5.12 69 P Pn 00 43 14.5 +0.8
DIVS Divibare 5.12 69 ePn Pn 00 43 14.4 +0.8
MOTA Moosalm 5.14 343⇓iPn Pn 00 43 16.2 +2.3
comp=Z,10nm,0.3s,SNR=25
MOTA Moosalm 5.14 343 Pn Pn 00 43 16.2 +2.3
comp=Z,10nm,0.3s,SNR=25
MBDF Montbardon 5.29 298 eP Pn 00 43 17.5 +1.6
MBDF eSn Sn 00 44 11.8 -4.8
comp=Z,21nm,0.7s
MBDF Montbardon 5.29 298 eP Pn 00 43 17.5 +1.6
RJOB Jochberg 5.29 356 ePn Pn 00 43 17.1 +1.1
RJOB eSn Sn 00 44 17.7 +1.0
PHP Peshkopia 5.34 96 ePG Pn 00 43 17.6 +1.0
PHP i SG Pb 00 43 25.8 -5.2
PHP Peshkopia 5.34 96 P Pn 00 43 18.3 +1.7
PHP Peshkopia 5.34 96 P Pn 00 43 18.3 +1.7
PHP Peshkopia 5.34 96 P Pn 00 43 18.3 +1.7
PHP Peshkopia 5.34 96 P Pn 00 43 18.3 +1.7
PHP Peshkopia 5.34 96 ePg Pn 00 43 17.6 +1.0
PHP i Sg Pb 00 43 25.2 -5.2
PKSM Moragy 5.34 44⇓P Pn 00 43 15.3 -1.2
PKSM Moragy 5.34 44⇓iP Pn 00 43 15.3 -1.2
PKSM Moragy 5.34 44⇓ePn Pn 00 43 18.3 +1.8
PKSM Moragy 5.34 44 P Pn 00 43 15.3 -1.2
RETA Reutte 5.35 341⇑ePn Pn 00 43 18.9 +2.1
comp=Z,8.5nm,0.3s,SNR=7.8
RETA ⇑eSn Sn 00 44 19.7 +1.5
comp=Z,35nm,0.5s
RETA Reutte 5.35 341 Pn Pn 00 43 18.9 +2.1
comp=Z,8.5nm,0.3s,SNR=7.8
RETA Sn Sn 00 44 19.7 +1.5
comp=Z,35nm,0.5s
DAVA Damuels 5.42 334⇓ePn Pn 00 43 19.9 +2.1
comp=Z,22nm,0.5s,SNR=11
DAVA ⇑iSn Sn 00 44 23.2 +3.3
comp=Z,34nm,0.5s
DAVA Damuels 5.42 334 Pn Pn 00 43 19.9 +2.1
comp=Z,22nm,0.5s,SNR=11
DAVA Sn Sn 00 44 23.2 +3.3
comp=Z,34nm,0.5s
MOA Molln 5.43 7⇑iPn Pn 00 43 19.4 +1.6
comp=Z,12nm,0.4s
MOA ⇑iSn Sn 00 44 18.2 -1.8
comp=Z,20nm,0.3s
MOA Molln 5.43 7 Pn Pn 00 43 19.4 +1.6
comp=Z,12nm,0.4s
BNI Bardonecchia 5.48 301 eP Pn 00 43 18.4 -0.2
BNI e 00 44 21.5
BNI pmax pmax
comp=Z,9.0nm,0.7s
BNI Bardonecchia 5.48 301 ePn Pn 00 43 18.4 -0.2
comp=Z,9.4nm,0.7s
BNI eSn Sn 00 44 21.5 +0.1
BNI Bardonecchia 5.48 301 eP Pn 00 43 18.4 -0.2
comp=Z,9.0nm,0.7s
BNI eS Sn 00 44 21.5 +0.1
GRUS Gruza 5.58 73 ePn Pn 00 43 20.3 +0.5
KEK Kerkira 5.59 117 eP Pn 00 43 21.1 +1.1
LPG La Plagne 5.64 305 eP Pn 00 43 23.3 +2.3
LPG eSn Sn 00 44 20.2 -5.5
comp=Z,15nm,0.6s
LPG La Plagne 5.64 305 P Pn 00 43 23.4 +2.4
LPG La Plagne 5.64 305 Pn Pn 00 43 23.4 +2.4
LPG La Plagne 5.64 305 eP Pn 00 43 23.3 +2.3
LPL La Plagne 5.67 305 eP Pn 00 43 23.2 +2.0
LPL eSn Sn 00 44 19.9 -6.2
comp=Z,9.4nm,0.5s
LPL La Plagne 5.67 305 P Pn 00 43 21.9 +0.7
LPL La Plagne 5.67 305 Pn Pn 00 43 21.9 +0.7
LPL La Plagne 5.67 305 P Pn 00 43 21.9 +0.7
SOP Sopron 5.70 22⇓ePn Pn 00 43 15.9 -5.6
CONA Conrad Observa 5.75 17⇑iPn Pn 00 43 22.2 -0.1
comp=Z,4.5nm,0.3s,SNR=18
CONA Conrad Observa 5.75 17 Pn Pn 00 43 22.2 -0.1
comp=Z,4.5nm,0.3s,SNR=18
SELS Selova 5.77 80 ePn Pn 00 43 23.6 +1.2
PKST T˜s 5.84 33⇑ePn Pn 00 43 23.7 +0.2
KBN Korca 5.88 106 ePG Pn 00 43 25.7 +1.8
KBN i SG Pb 00 43 40.6 +1.0
KBN Korca 5.88 106 P Pn 00 43 25.8 +1.8
KBN Korca 5.88 106 P Pn 00 43 25.8 +1.8
KBN Korca 5.88 106 P Pn 00 43 25.8 +1.8
KBN Korca 5.88 106 P Pn 00 43 25.8 +1.8
KBN Korca 5.88 106 ePg Pn 00 43 25.7 +1.8
KBN i Sg Pb 00 43 40.6 +1.0
SMRF Simiane la Rot 5.88 288 eP Pn 00 43 25.8 +1.9
SMRF Simiane la Rot 5.88 288 Pn Pn 00 43 24.9 +0.9
SMRF Simiane la Rot 5.88 288 Pn Pn 00 43 24.9 +0.9
SMRF Simiane la Rot 5.88 288 eP Pn 00 43 25.8 +1.9
FUR Furstenfeldbru 5.89 346 ePn Pn 00 43 25.7 +1.6
FUR eSn Sn 00 44 32.2 +0.8
FUR Furstenfeldbru 5.89 346 eP Pn 00 43 25.7 +1.6
FUR e 00 44 32.2
FUR Furstenfeldbru 5.89 346 eP Pn 00 43 25.7 +1.6
FUR eS Sn 00 44 32.2 +0.8
ORIF Oris-en-Rattie 5.95 297 eP Pn 00 43 26.4 +1.5
ORIF Oris-en-Rattie 5.95 297 eP Pn 00 43 26.4 +1.5
CSKK Cs˙zkako 6.02 34 ePn Pn 00 43 26.4 +0.5
SKO Skopje 6.03 92 ePn Pn 00 43 27.0 +1.0
SKO eSg Sn 00 44 33.3 -1.5
IGT Igoumenitsa 6.04 117 P Pn 00 43 27.8 +1.6
IGT Igoumenitsa 6.04 117 P Pn 00 43 27.8 +1.6
IGT Igoumenitsa 6.04 117 P Pn 00 43 27.8 +1.6
IGT Igoumenitsa 6.04 117 P Pn 00 43 27.8 +1.6
PKSG 6.10 34⇑ePn Pn 00 43 28.0 +1.1
BIA Bitola 6.14 101 P Pn 00 43 28.8 +1.2
BIA Bitola 6.14 101 P Pn 00 43 28.8 +1.2
BIA Bitola 6.14 101 ePn Pn 00 43 28.2 +0.7
BIA eSg Sn 00 44 35.4 -2.1
BIA Bitola 6.14 101 P Pn 00 43 28.8 +1.2
NEST Nestorio 6.14 107 P Pn 00 43 29.9 +2.3
NEST Nestorio 6.14 107 P Pn 00 43 29.9 +2.3
FNA Florina 6.25 103 P Pn 00 43 30.2 +1.2
FNA S Sn 00 44 36.6 -3.6
FNA Florina 6.25 103 P Pn 00 43 30.2 +1.2
FNA Florina 6.25 103 P Pn 00 43 30.2 +1.2
FNA Florina 6.25 103 P Pn 00 43 30.2 +1.2
BARS Barje 6.26 84 ePn Pn 00 43 30.3 +1.1
ZST Bratislava 6.32 23 eSN Sn 00 44 35.7 -6.1
JAN Janina 6.33 114 eP Pn 00 43 31.9 +1.8
GEC2 GERESS Array S 6.39 2 ePn Pn 00 43 30.8 -0.3
GEC2 eSn Sn 00 44 41.3 -2.5
GEC2 GERESS Array S 6.39 2 eP Pn 00 43 30.8 -0.3
GEC2 e 00 44 41.3
GEC2 GERESS Array S 6.39 2 eP Pn 00 43 30.8 -0.3
GERES GERESS Array B 6.39 2 Pn Pn 00 43 30.8 -0.3
GERES Sn Sn 00 44 41.5 -2.3
GERES GERESS Array B 6.39 2 Pn Pn 00 43 30.8 -0.3
comp=Z,1.7nm,0.3s,baz=170,slow=13,SNR=13
GERES Sn Sn 00 44 41.5 -2.3
comp=Z,4.8nm,0.3s,baz=180,slow=24,SNR=11
GERES GERESS Array B 6.39 2 P Pn 00 43 30.8 -0.3
comp=Z,2.0nm,0.3s
BOLS Boljevac 6.45 75 ePn Pn 00 43 31.0 -0.7
BBS Basel-Blauen 6.50 322 P Pn 00 43 33.5 +1.1
FELD Feldberg im Sc 6.60 327 P Pn 00 43 33.9 -0.1
FELD Feldberg im Sc 6.60 327 P Pn 00 43 33.9 -0.1
CABF La Chapelle 6.64 311 eP Pn 00 43 34.9 +0.4
SNR=1.0
CABF La Chapelle 6.64 311 P Pn 00 43 34.9 +0.4
CABF La Chapelle 6.64 311 Pn Pn 00 43 34.9 +0.4
CABF La Chapelle 6.64 311 eP Pn 00 43 34.9 +0.4
SNR=1.0
LKD2 Lefkada island 6.66 121 P Pn 00 43 37.0 +2.3
LKD2 S Sn 00 44 47.0 -3.3
LKD2 Lefkada island 6.66 121 P Pn 00 43 37.0 +2.3
LKD2 Lefkada island 6.66 121 P Pn 00 43 37.0 +2.3
KHC Kasperske Hory 6.68 1 eP Pn 00 43 34.4 -0.5
KHC e 00 44 51.0
KHC Kasperske Hory 6.68 1 ePN Pn 00 43 34.4 -0.5
KHC ex x 00 43 51.5
KHC eSN Sn 00 44 48.3 -2.4
KHC ex x 00 44 51.0
KHC ex x 00 45 02.5
KHC Kasperske Hory 6.68 1 ePn Pn 00 43 34.0 -0.9
comp=Z,6.6nm,0.4s
KHC eSn Sn 00 44 50.5 -0.2
KHC Kasperske Hory 6.68 1 Pn Pn 00 43 34.4 -0.5
KHC eSn Sn 00 44 50.5 -0.2
KHC eS Sn 00 44 51.0 +0.3
KZN Kozani 6.69 106 eP Pn 00 43 38.1 +2.9
WET Wettzell 6.70 357 ePn Pn 00 43 35.1 -0.1
WET eSn Sn 00 44 47.7 -3.5
WET Wettzell 6.70 357 eP Pn 00 43 35.1 -0.1
WET e 00 44 47.7
WET Wettzell 6.70 357 eP Pn 00 43 35.1 -0.1
VIVF Saint-Julien-l 6.73 294 eP Pn 00 43 37.0 +1.3
VIVF Saint-Julien-l 6.73 294 P Pn 00 43 36.9 +1.3
VIVF Saint-Julien-l 6.73 294 Pn Pn 00 43 36.9 +1.3
VIVF Saint-Julien-l 6.73 294 P Pn 00 43 36.9 +1.3
LOMF Lomont 6.73 319 P Pn 00 43 36.3 +0.6
LOMF Lomont 6.73 319 P Pn 00 43 36.3 +0.6
LOMF Lomont 6.73 319 P Pn 00 43 36.3 +0.6
LOMF S Sn 00 44 50.5 -1.7
LOMF Lomont 6.73 319 P Pn 00 43 36.3 +0.6
BZS Buzias 6.75 59⇓P Pn 00 43 36.8 +1.0
BZS Buzias 6.75 59⇓iP Pn 00 43 36.8 +1.0
BZS Buzias 6.75 59 P Pn 00 43 36.8 +1.0
BFO Black Forest 6.85 331 ePn Pn 00 43 37.8 +0.5
BFO eSn Sn 00 44 54.3 -0.7
BFO Black Forest 6.85 331 eP Pn 00 43 37.4 +0.1
BFO e 00 44 54.6
BFO pmax pmax
comp=Z,5.0nm,0.6s
BFO Black Forest 6.85 331 ePn Pn 00 43 37.4 +0.1
comp=Z,5.2nm,0.6s
BFO eSn Sn 00 44 54.6 -0.4
BFO Black Forest 6.85 331 eP Pn 00 43 37.4 +0.1
comp=Z,5.0nm,0.6s
BFO eS Sn 00 44 54.6 -0.4
ZAPS Zavoj 6.87 80 ePn Pn 00 43 39.5 +1.9
MOF Molkenrain 6.95 323 P Pn 00 43 39.3 +0.5
MOF Molkenrain 6.95 323 P Pn 00 43 39.3 +0.5
MOF Molkenrain 6.95 323 P Pn 00 43 39.3 +0.5
MOF S Sn 00 44 55.2 -2.4
MOF Molkenrain 6.95 323 P Pn 00 43 39.3 +0.5
VAY Valandovo 6.98 96 ePn Pn 00 43 37.8 -1.2
VAY eSg Sn 00 44 58.5 +0.4
VLS Valsamata 6.99 125 eP Pn 00 43 39.6 +0.4
HINF Hinteralfeld 7.05 322 eP Pn 00 43 40.7 +0.6
SNR=1.0
HINF eSn Sn 00 44 51.7 -8.3
comp=Z,8.8nm,0.3s,SNR=1.0
HINF Hinteralfeld 7.05 322 P Pn 00 43 40.9 +0.8
HINF Hinteralfeld 7.05 322 Pn Pn 00 43 40.9 +0.8
HINF Hinteralfeld 7.05 322 eP Pn 00 43 40.7 +0.6
SNR=1.0
KFL Anninata 7.16 125 P Pn 00 43 43.6 +2.1
KFL Anninata 7.16 125 P Pn 00 43 43.6 +2.1
PSZ Piszkesteto 7.16 38⇓P Pn 00 43 44.7 +3.2
PSZ Piszkesteto 7.16 38⇓iP Pn 00 43 44.7 +3.2
PSZ Piszkesteto 7.16 38⇑epPn Pn 00 43 45.3 +3.8
THL Klokotos Trika 7.16 111 eP Pn 00 43 43.3 +1.7
VYHS Vyhne 7.16 31 eP Pn 00 43 42.1 +0.5
VYHS e 00 44 59.4
VYHS Vyhne 7.16 31 ePN Pn 00 43 42.1 +0.5
VYHS eSN Sn 00 44 59.4 -3.2
VYHS Vyhne 7.16 31 eP Pn 00 43 42.1 +0.5
VRAC Vranov 7.22 17 Pn Pn 00 43 42.5 +0.2
VRAC Sn Sn 00 45 04.0 0.0
VRAC Vranov 7.22 17 Pn Pn 00 43 42.5 +0.2
comp=Z,0.7nm,0.3s,baz=209,slow=15,SNR=3.1
VRAC Sn Sn 00 45 04.0 0.0
comp=Z,3.8nm,0.3s,baz=211,slow=13,SNR=4.7
VRAC Vranov 7.22 17 P Pn 00 43 42.5 +0.2
comp=Z,1.0nm,0.3s
VRAC S Sn 00 45 04.0 0.0
comp=Z,4.0nm,0.3s
ECH Echery 7.22 325 eP Pn 00 43 42.6 +0.2
ECH e 00 45 02.5
ECH pmax pmax
comp=Z,11nm,0.6s
ECH Echery 7.22 325 ePn Pn 00 43 42.6 +0.2
comp=Z,11nm,0.6s
ECH eSn Sn 00 45 02.5 -1.5
ECH Echery 7.22 325 P Pn 00 43 43.2 +0.8
ECH Echery 7.22 325 eP Pn 00 43 42.6 +0.2
comp=Z,11nm,0.6s
VTS Vitosha 7.29 86 P Pn 00 43 44.8 +1.4
VTS Vitosha 7.29 86 ⇑P Pn 00 43 44.2 +0.8
VTS Vitosha 7.29 86 P Pn 00 43 44.8 +1.4
VTS Vitosha 7.29 86⇑iP Pn 00 43 44.2 +0.8
VTS Vitosha 7.29 86 P Pn 00 43 44.2 +0.8
CDF Champ du Feu 7.33 326 eP Pn 00 43 43.5 -0.4
CDF eSn Sn 00 45 00.3 -6.4
comp=Z,15nm,0.5s
CDF Champ du Feu 7.33 326 eP Pn 00 43 43.5 -0.4
ROTZ Rotzenmuhle 7.36 354 eSn Sn 00 45 02.5 -4.8
KEST Kesra 7.40 206 ePn Pn 00 43 49.3 +4.4
KEST Kesra 7.40 206 Pn Pn 00 43 48.8 +3.9
comp=Z,1.5nm,0.3s,baz=303,slow=4.8,SNR=52
KEST LR LR 00 46 47.1
comp=Z,101nm,19.1s,baz=87,slow=39
GZR Gura Zlata 7.42 63⇑iP Pn 00 43 47.1 +2.0
GZR Gura Zlata 7.42 63⇑iP Pn 00 43 47.1 +2.0
HAU Haudompre 7.43 321 eP Pn 00 43 46.1 +0.9
SNR=1.0
HAU eSn Sn 00 45 00.7 -8.4
comp=Z,23nm,0.5s,SNR=1.0
HAU Haudompre 7.43 321 P Pn 00 43 45.5 +0.3
HAU Haudompre 7.43 321 Pn Pn 00 43 45.5 +0.3
HAU Haudompre 7.43 321 P Pn 00 43 45.5 +0.3
PRU Pruhonice 7.58 6 eP Pn 00 43 46.7 -0.5
PRU e 00 45 07.9
PRU MLR MLR
comp=Z,200nm,9.4s
PRU Pruhonice 7.58 6 ePN Pn 00 43 46.7 -0.5
PRU eSN Sn 00 45 07.9 -4.9
PRU AMS AMS 00 46 50.0
comp=Z,200nm,9.4s
PRU Pruhonice 7.58 6 Pn Pn 00 43 46.7 -0.5
MANZ Manzenberg 7.58 354 eSn Sn 00 45 07.3 -5.6
LANF Langenberg 7.59 331 P Pn 00 43 48.0 +0.6
LANF Langenberg 7.59 331 P Pn 00 43 48.0 +0.6
LANF Langenberg 7.59 331 P Pn 00 43 48.0 +0.6
LANF Langenberg 7.59 331 P Pn 00 43 48.0 +0.6
RLS Riolos of Patr 7.61 123 eP Pn 00 43 50.1 +2.5
EJON La Jonquera 7.73 273 P Pn 00 43 49.1 -0.3
EJON La Jonquera 7.73 273 P Pn 00 43 49.1 -0.3
THEF They Montfort 7.75 321 P Pn 00 43 50.6 +0.9
THEF They Montfort 7.75 321 P Pn 00 43 50.6 +0.9
THEF They Montfort 7.75 321 P Pn 00 43 50.6 +0.9
THEF They Montfort 7.75 321 P Pn 00 43 50.6 +0.9
NKC Novy Kostel 7.80 356 eSN Sn 00 45 14.7 -3.7
KECS Kecovo 7.84 37 eP Pn 00 43 53.3 +2.5
KECS e 00 45 14.3
KECS Kecovo 7.84 37 ePN Pn 00 43 53.3 +2.5
KECS eSN Sn 00 45 14.3 -4.9
KECS Kecovo 7.84 37 eP Pn 00 43 53.3 +2.5
MORC Moravsky Berou 7.88 20 eP Pn 00 43 52.5 +1.1
MORC pmax pmax
comp=Z,5.0nm,0.8s
MORC Moravsky Berou 7.88 20 ePn Pn 00 43 52.5 +1.1
comp=Z,4.7nm,0.8s
MORC Moravsky Berou 7.88 20 eP Pn 00 43 52.5 +1.1
comp=Z,5.0nm,0.8s
GUNZ Gunzen 7.94 355 ePn Pn 00 43 52.7 +0.5
DRGR 7.96 54 ⇑P Pn 00 43 54.8 +2.2
DRGR 7.96 54⇑iP Pn 00 43 54.8 +2.2
DRGR 7.96 54 P Pn 00 43 54.8 +2.2
SMF Signal de Mont 7.97 305 eP Pn 00 43 54.6 +1.9
SNR=1.0
SMF eSn Sn 00 45 15.4 -7.2
comp=Z,8.6nm,0.6s
SMF Signal de Mont 7.97 305 P Pn 00 43 54.0 +1.3
SMF Signal de Mont 7.97 305 Pn Pn 00 43 54.0 +1.3
SMF Signal de Mont 7.97 305 P Pn 00 43 54.0 +1.3
TANN Tannenbergstha 7.98 356 ePn Pn 00 43 52.2 -0.7
LOT Lotru 8.09 65⇓iP Pn 00 43 58.1 +3.7
PAGF Fort de Pagny 8.11 321 eP Pn 00 43 56.3 +1.8
baz=136
PAGF Fort de Pagny 8.11 321 eP Pn 00 43 56.3 +1.8
baz=136
CFON Fontmartina 8.14 269 P Pn 00 43 55.2 +0.1
CFON S Sn 00 45 27.2 +0.4
CFON Fontmartina 8.14 269 P Pn 00 43 55.2 +0.1
CFON S Sn 00 45 27.2 +0.4
DPC Dobruska-Polom 8.16 14 eP Pn 00 43 54.4 -0.8
DPC Dobruska-Polom 8.16 14 ePN Pn 00 43 54.4 -0.8
DPC Dobruska-Polom 8.16 14 Pn Pn 00 43 54.4 -0.8
SFTF Sexfontaines 8.20 317 eP Pn 00 43 57.2 +1.4
baz=132
SFTF Sexfontaines 8.20 317 eP Pn 00 43 57.2 +1.4
baz=132
LOR Lormes 8.28 309 eP Pn 00 43 58.0 +1.2
baz=123,SNR=1.0
LOR eSn Sn 00 45 19.3 -11
comp=Z,3.7nm,0.4s,SNR=1.0
LOR Lormes 8.28 309 Pn Pn 00 43 58.5 +1.7
LOR Lormes 8.28 309 eP Pn 00 43 58.0 +1.2
baz=123,SNR=1.0
LOR Lormes 8.28 309 Pn Pn 00 43 58.5 +1.7
MOX Moxa 8.28 352 ePn Pn 00 43 57.3 +0.5
MOX Moxa 8.28 352 eP Pn 00 43 57.3 +0.5
MOX Moxa 8.28 352 eP Pn 00 43 57.3 +0.5
AVF Avril sur Loir 8.34 305 eP Pn 00 43 58.0 +0.3
SNR=1.0
AVF Avril sur Loir 8.34 305 P Pn 00 43 59.0 +1.3
AVF Avril sur Loir 8.34 305 Pn Pn 00 43 59.0 +1.3
AVF Avril sur Loir 8.34 305 eP Pn 00 43 58.0 +0.3
SNR=1.0
AVF Avril sur Loir 8.34 305 Pn Pn 00 43 59.0 +1.3
SSF Saint Saulge 8.38 307 ePn Pn 00 43 55.3 -2.9
SNR=1.0
SSF Saint Saulge 8.38 307 eP Pn 00 44 00.4 +2.2
SSF Saint Saulge 8.38 307 P Pn 00 44 00.5 +2.2
SSF Saint Saulge 8.38 307 Pn Pn 00 44 00.5 +2.2
SSF Saint Saulge 8.38 307 eP Pn 00 44 00.4 +2.2

ETOS	**Mallorca**	**8.39**	**255**	P		**Pn**	**00 44 00.3**	**+1.9**
ETOS	**Mallorca**	**8.39**	**255**	P		**Pn**	**00 44 00.3**	**+1.9**
MEZF	**Maizieres J'vi**	**8.39**	**319**	*e*P		**Pn**	**00 44 00.0**	**+1.6**
	baz=147,SNR=1.0							
MEZF	**Maizieres J'vi**	**8.39**	**319**	Pn		**Pn**	**00 44 00.0**	**+1.6**
MEZF	**Maizieres J'vi**	**8.39**	**319**	*e*P		**Pn**	**00 44 00.0**	**+1.6**
	baz=147,SNR=1.0							
CLLI	**Llivia**	**8.41**	**274**	P		**Pn**	**00 43 59.1**	**+0.3**
CLLI				S		**Sn**	**00 45 32.7**	**-0.7**
CLLI	**Llivia**	**8.41**	**274**	P		**Pn**	**00 43 59.1**	**+0.3**
CLLI				S		**Sn**	**00 45 32.7**	**-0.7**
BRG	**Berggiesshubel**	**8.43**	**3**	PN		**Pn**	**00 43 59.4**	**+0.5**
BRG				*e*			00 45 31.0	
BRG				*e*			00 46 40.0	
	comp=Z,7.7nm,0.9s							
BRG	**Berggiesshubel**	**8.43**	**3**	P		**Pn**	**00 43 59.4**	**+0.5**
BRG				*e*			00 45 31.0	
BRG				pmax	pmax			
	comp=Z,8.0nm,0.9s							
BRG	**Berggiesshubel**	**8.43**	**3**	P		**Pn**	**00 43 59.4**	**+0.5**
FBE	**Freiberg**	**8.47**	**0**	*e*Sn		**Sn**	**00 45 30.0**	**-4.6**
CAF	**Calviac**	**8.54**	**291**	*e*Pn		**Pn**	**00 43 57.5**	**-3.0**
	SNR=1.0							
CAF	**Calviac**	**8.54**	**291**	*e*P		**Pn**	**00 44 02.6**	**+2.1**
CAF	**Calviac**	**8.54**	**291**	P		**Pn**	**00 44 02.0**	**+1.5**
CAF	**Calviac**	**8.54**	**291**	Pn		**Pn**	**00 44 02.0**	**+1.5**
CAF	**Calviac**	**8.54**	**291**	P		**Pn**	**00 44 02.0**	**+1.5**
BGF	**Bois d'Agland**	**8.55**	**302**	*e*Pn		**Pn**	**00 43 57.4**	**-3.2**
	SNR=1.0							
BGF	**Bois d'Agland**	**8.55**	**302**	*e*P		**Pn**	**00 44 02.3**	**+1.7**
BGF				*e*Sn		Sn	00 45 29.8	-6.9
	comp=Z,8.1nm,0.5s							
BGF	**Bois d'Agland**	**8.55**	**302**	P		**Pn**	**00 44 01.5**	**+0.9**
BGF	**Bois d'Agland**	**8.55**	**302**	Pn		**Pn**	**00 44 01.5**	**+0.9**
BGF	**Bois d'Agland**	**8.55**	**302**	P		**Pn**	**00 44 01.5**	**+0.9**
WLF	**Walferdange**	**8.77**	**328**	*e*P		**Pn**	**00 44 03.5**	**-0.1**
WLF				pmax	pmax			
	comp=Z,7.0nm,0.8s							
WLF	**Walferdange**	**8.77**	**328**	*e*Pn		**Pn**	**00 44 03.5**	**-0.1**
	comp=Z,6.6nm,0.8s							
WLF	**Walferdange**	**8.77**	**328**	*e*P		**Pn**	**00 44 03.5**	**-0.1**
	comp=Z,7.0nm,0.8s							
CLL	**Collm**	**8.86**	**359**	*e*P		**Pn**	**00 44 05.0**	**+0.2**
CLL				*e*			00 45 39.0	
CLL	**Collm**	**8.86**	**359**	*e*Pn		**Pn**	**00 44 05.0**	**+0.2**
CLL				*e*Sn		**Sn**	**00 45 39.0**	**-5.2**
CLL				*e*Sg			00 46 47.0	
CLL	**Collm**	**8.86**	**359**	*e*P		**Pn**	**00 44 05.0**	**+0.2**
VOIR		**8.95**	**67**	⇑P		**Pn**	**00 44 08.6**	**+2.4**
VOIR		**8.95**	**67**	⇑*i*P		**Pn**	**00 44 08.6**	**+2.4**
VOIR		**8.95**	**67**	P		**Pn**	**00 44 08.6**	**+2.4**
KOLS	**Kolonicke sedl**	**8.99**	**41**	*e*P		Pn	00 44 13.0	+6.3
KOLS	**Kolonicke sedl**	**8.99**	**41**	*e*PN		Pn	00 44 13.0	+6.3
RJF	**Les Rejaudoux**	**9.01**	**292**	*e*Pn		**Pn**	**00 44 03.7**	**-3.1**
	SNR=1.0							
RJF	**Les Rejaudoux**	**9.01**	**292**	*e*P		**Pn**	**00 44 09.0**	**+2.2**
RJF	**Les Rejaudoux**	**9.01**	**292**	P		**Pn**	**00 44 08.0**	**+1.2**
RJF	**Les Rejaudoux**	**9.01**	**292**	Pn		**Pn**	**00 44 08.0**	**+1.2**
RJF	**Les Rejaudoux**	**9.01**	**292**	P		**Pn**	**00 44 08.0**	**+1.2**
CSOR	**Sort**	**9.04**	**274**	P		**Pn**	**00 44 08.8**	**+1.5**
CSOR				S		**Sn**	**00 45 49.2**	**+0.4**
CSOR	**Sort**	**9.04**	**274**	P		**Pn**	**00 44 08.8**	**+1.5**
CSOR				S		**Sn**	**00 45 49.2**	**+0.4**
EPOB	**Poblet**	**9.21**	**267**	P		**Pn**	**00 44 11.8**	**+2.0**
EPOB	**Poblet**	**9.21**	**267**	Pn		**Pn**	**00 44 11.8**	**+2.0**
MLR	**Muntele Rosu**	**9.58**	**67**	⇑P		Pn	00 44 18.1	+3.3
MLR	**Muntele Rosu**	**9.58**	**67**	⇑*i*P		**Pn**	**00 44 17.7**	**+2.9**
MLR	**Muntele Rosu**	**9.58**	**67**	Pn		Pn	00 44 18.1	+3.3
	comp=Z,0.1nm,0.3s,baz=263,slow=7.1,SNR=12							
MLR	**Muntele Rosu**	**9.58**	**67**	P		**Pn**	**00 44 17.7**	**+2.9**
MLR	**Muntele Rosu**	**9.58**	**67**	Pn		Pn	00 44 18.1	+3.3
ERTA	**Horta de San J**	**9.85**	**266**	P		**Pn**	**00 44 19.3**	**+0.9**
ERTA				S		**Sn**	**00 46 07.3**	**-1.3**
ERTA	**Horta de San J**	**9.85**	**266**	P		**Pn**	**00 44 19.3**	**+0.9**
BURAR	**Bucovina Array**	**9.86**	**54**	⇓*i*P		**Pn**	**00 44 20.8**	**+2.2**
BURAR	**Bucovina Array**	**9.86**	**54**	⇓*i*P		**Pn**	**00 44 20.8**	**+2.2**
BUR08	**Bucovina Ar. S**	**9.86**	**54**	*e*Pn		**Pn**	**00 44 21.0**	**+2.4**
BUR08	**Bucovina Ar. S**	**9.86**	**54**	*e*Pn		**Pn**	**00 44 21.0**	**+2.4**
PLOR	**Plostina**	**10.15**	**66**	⇓P		**Pn**	**00 44 24.1**	**+1.9**
PLOR	**Plostina**	**10.15**	**66**	⇓*i*P		**Pn**	**00 44 24.4**	**+1.9**
PLOR	**Plostina**	**10.15**	**66**	P		**Pn**	**00 44 24.4**	**+1.9**
VRI	**Vrincioaia**	**10.20**	**66**	⇑P		**Pn**	**00 44 24.7**	**+1.5**
VRI	**Vrincioaia**	**10.20**	**66**	⇑*i*P		**Pn**	**00 44 24.7**	**+1.5**
VRI	**Vrincioaia**	**10.20**	**66**	P		**Pn**	**00 44 24.7**	**+1.5**
MFF	**Saint Martin d**	**10.48**	**298**	*e*Sn		Sn	00 46 12.4	-12
	comp=Z,2.9nm,0.7s,SNR=1.0							
EBEN	**Beniarda**	**10.98**	**255**	P		**Pn**	**00 44 36.9**	**+3.0**
EBEN	**Beniarda**	**10.98**	**255**	P		**Pn**	**00 44 36.9**	**+3.0**
CFR	**Carcaliu**	**11.03**	**71**	⇑P		**Pn**	**00 44 36.0**	**+1.5**
CFR	**Carcaliu**	**11.03**	**71**	⇑*i*P		**Pn**	**00 44 36.0**	**+1.5**
CFR	**Carcaliu**	**11.03**	**71**	P		**Pn**	**00 44 36.0**	**+1.5**
ETOB	**Tobarra**	**11.95**	**256**	P		**Pn**	**00 44 50.0**	**+2.8**
ETOB	**Tobarra**	**11.95**	**256**	P		**Pn**	**00 44 50.0**	**+2.8**
EMUR	**La Murta**	**12.07**	**252**	P		Pn	00 44 53.1	+4.2
ESDC	**Sonseca Array**	**13.35**	**264**	LR		LR	00 50 01.2	
	comp=Z,52nm,20.1s,baz=150,slow=37							
BRTR	**Keskin Array B**	**15.54**	**93**	Pn		**P**	**00 45 38.4**	**-1.9**
BRTR	**Keskin Array B**	**15.54**	**93**	Pn		**P**	**00 45 38.4**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=260,slow=8.2,SNR=3.0							
BRTR	**Keskin Array B**	**15.54**	**93**	Pn		**P**	**00 45 38.4**	**-1.9**
EKA	**Eskdalemuir Ar**	**16.79**	**326**	Pn		**Pn**	**00 45 51.5**	**-0.2**
EKA	**Eskdalemuir Ar**	**16.79**	**326**	Pn		**Pn**	**00 45 51.5**	**-0.2**
	baz=142,slow=12,SNR=2.8							
EKA	**Eskdalemuir Ar**	**16.79**	**326**	Pn		**Pn**	**00 45 51.5**	**-0.2**
ANN	**Anapa**	**17.58**	**74**	*e*P		**Pn**	**00 45 58.4**	**-3.3**
ANN				*e*S		**Sn**	**00 49 10.9**	**-6.2**
ANN				pmax	pmax			
	comp=Z,36nm,2.1s							
HFS	**Hagfors**	**17.70**	**1**	P		**P**	**00 46 03.8**	**-0.2**
HFS	**Hagfors**	**17.70**	**1**	P		**P**	**00 46 03.8**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=184,slow=12,SNR=3.5							
HFS	**Hagfors**	**17.70**	**1**	P		**P**	**00 46 03.8**	**-0.2**
VSU	**Vasula**	**18.09**	**23**	P		**Pn**	**00 46 08.0**	**+0.1**
VSU	**Vasula**	**18.09**	**23**	P		**Pn**	**00 46 08.0**	**+0.1**
VSU	**Vasula**	**18.09**	**23**	P		**Pn**	**00 46 08.0**	**+0.1**
NB2	**NORSAR Subarra**	**18.66**	**357**	P		**Pn**	**00 46 15.6**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=178,slow=9.3							
NB2	**NORSAR Subarra**	**18.66**	**357**	P		**Pn**	**00 46 15.6**	**+0.7**
	comp=Z,1.3nm,0.6s,baz=178,slow=8.8,SNR=7.1							
NOA	**NORSAR Array B**	**18.66**	**357**	P		**Pn**	**00 46 15.6**	**+0.7**
NOA	**NORSAR Array B**	**18.66**	**357**	P		**Pn**	**00 46 15.6**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=176,slow=11,SNR=5.0							
NOA	**NORSAR Array B**	**18.66**	**357**	P		**Pn**	**00 46 15.6**	**+0.7**
OBN	**Obninsk**	**19.75**	**42**	*e*P		**P**	**00 46 24.6**	**-1.8**
OBN				pmax	pmax			
	comp=Z,4.0nm,1.3s							
OBN				MLR	MLR			
	comp=Z,100nm,19.0s							
OBN	**Obninsk**	**19.75**	**42**	P		**P**	**00 46 26.5**	**+0.1**
OBN	**Obninsk**	**19.75**	**42**	P		**P**	**00 46 26.5**	**+0.1**
FINES	**FINESS Array B**	**20.50**	**18**	P		**P**	**00 46 34.7**	**+0.2**
FINES	**FINESS Array B**	**20.50**	**18**	P		**P**	**00 46 34.7**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=198,slow=8.7,SNR=9.5							
FINES	**FINESS Array B**	**20.50**	**18**	P		**P**	**00 46 34.7**	**+0.2**
	comp=Z,6.0nm,0.9s							
TAM	**Tamanrasset**	**20.67**	**201**	*e*P		Pn	00 46 38.8	-0.4
TAM				pmax	pmax			
	comp=Z,4.0nm,1.2s							
TAM	**Tamanrasset**	**20.67**	**201**	*e*Pn		Pn	00 46 38.8	-0.5
	comp=Z,3.5nm,1.2s							
TAM	**Tamanrasset**	**20.67**	**201**	*e*P		Pn	00 46 38.8	-0.4
	comp=Z,4.0nm,1.2s							
KAF	**Kangasniemi**	**21.14**	**17**	*e*P		**P**	**00 46 41.4**	**-0.1**
KAF				pmax	pmax			
	comp=Z,3.0nm,0.6s							
KAF	**Kangasniemi**	**21.14**	**17**	*e*p		**P**	**00 46 41.4**	**-0.1**
	comp=Z,2.5nm,0.6s							
KAF	**Kangasniemi**	**21.14**	**17**	*e*P		**P**	**00 46 41.4**	**-0.1**
	comp=Z,3.0nm,0.6s							
KIV	**Kislovodsk**	**21.39**	**76**	*e*P		**P**	**00 46 45.7**	**+1.3**
KIV				pmax	pmax			
	comp=Z,12nm,1.1s							
KIV				MLR	MLR			
	comp=Z,26nm,15.0s							
KIV	**Kislovodsk**	**21.39**	**76**	P		**P**	**00 46 45.8**	**+1.3**
KIV	**Kislovodsk**	**21.39**	**76**	*e*P		**P**	**00 46 45.7**	**+1.3**
	comp=Z,26nm,15.0s							
GOF	**Gofitskoye**	**21.55**	**73**	*e*P		P	00 46 52.9	+6.9
KBZ	**Khabaz**	**21.57**	**77**	P		**P**	**00 46 48.5**	**+2.2**
KBZ				pmax	pmax			
	comp=Z,4.0nm,1.0s							
KBZ	**Khabaz**	**21.57**	**77**	P		**P**	**00 46 48.5**	**+2.2**
KBZ	**Khabaz**	**21.57**	**77**	P		**P**	**00 46 48.5**	**+2.2**
	comp=Z,3.8nm,1.0s,baz=275,slow=12,SNR=7.4							
KBZ	**Khabaz**	**21.57**	**77**	P		**P**	**00 46 48.5**	**+2.2**
	comp=Z,4.0nm,1.0s							
JOF	**Joensuu**	**23.05**	**21**	*e*P		**P**	**00 47 01.1**	**-0.7**
JOF				pmax	pmax			
	comp=Z,2.0nm,0.6s							
JOF	**Joensuu**	**23.05**	**21**	*e*p		**P**	**00 47 01.1**	**-0.7**
	comp=Z,1.5nm,0.6s							
JOF	**Joensuu**	**23.05**	**21**	*e*P		**P**	**00 47 01.1**	**-0.7**
	comp=Z,2.0nm,0.6s							
GNI	**Garni**	**23.63**	**85**	P		**P**	**00 47 09.6**	**+1.5**
GNI	**Garni**	**23.63**	**85**	*e*P		**P**	**00 47 09.5**	**+1.5**
	comp=Z,9.0nm,2.5s							
BHD	**Baghdad**	**26.04**	**100**	*e*P		P	00 47 20.5	-9.5
BHD				*e*S		S	00 51 49.5	-11
IBDR	**Badra**	**27.25**	**99**	*e*P		**P**	**00 47 37.1**	**-3.8**
IBDR				*e*S		S	00 52 36.1	+17
TORD	**Torodi Ar. Bea**	**30.90**	**203**	P		**P**	**00 48 14.4**	**+1.0**
TORD	**Torodi Ar. Bea**	**30.90**	**203**	P		**P**	**00 48 14.4**	**+1.0**
	comp=Z,1.3nm,0.5s,baz=18,slow=8.7,SNR=23							
TORD	**Torodi Ar. Bea**	**30.90**	**203**	P		**P**	**00 48 14.4**	**+1.0**
ARU	**Arti**	**31.92**	**48**	*d*iP		**P**	**00 48 22.3**	**+0.3**
ARU							00 49 24.8	
ARU				S		**S**	**00 53 30.0**	**-2.2**
ARU				pmax	pmax			
	comp=Z,9.0nm,1.0s							
ARU	**Arti**	**31.92**	**48**	P		**P**	**00 48 22.3**	**+0.3**
ARU	**Arti**	**31.92**	**48**	*i* P		**P**	**00 48 22.3**	**+0.3**
	comp=Z,9.0nm,1.0s							
BRVK	**Borovoye**	**38.75**	**54**	*e*P		**P**	**00 49 21.6**	**+0.8**
BRVK				pmax	pmax			
	comp=Z,8.0nm,2.5s							
BRVK	**Borovoye**	**38.75**	**54**	P		**P**	**00 49 21.7**	**+0.9**
BRVK	**Borovoye**	**38.75**	**54**	P		**P**	**00 49 21.7**	**+0.9**
BVAR	**Borovoye Array**	**38.81**	**54**	P		**P**	**00 49 22.9**	**+1.5**
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.9s							
BVAR	**Borovoye Array**	**38.81**	**54**	P		**P**	**00 49 22.9**	**+1.5**
BVAR	**Borovoye Array**	**38.81**	**54**	P		**P**	**00 49 22.9**	**+1.5**
	comp=Z,1.3nm,0.9s,baz=262,slow=7.3,SNR=6.2							
BVAR	**Borovoye Array**	**38.81**	**54**	P		**P**	**00 49 22.9**	**+1.5**
	comp=Z,1.0nm,0.9s							
KKAR	**Karatay Array**	**41.25**	**69**	*e*P		**P**	**00 49 42.6**	**+0.8**
KKAR				pmax	pmax			
	comp=Z,3.0nm,0.9s							
KKAR	**Karatay Array**	**41.25**	**69**	*e*P		**P**	**00 49 42.5**	**+0.8**
	comp=Z,2.7nm,0.9s							
KKAR	**Karatay Array**	**41.25**	**69**	*e*P		**P**	**00 49 42.6**	**+0.8**
	comp=Z,3.0nm,0.9s							
EKS2	**Erkin-Say**	**43.66**	**68**	*e*P		**P**	**00 50 02.8**	**+1.3**
EKS2				pmax	pmax			
	comp=Z,3.0nm,0.8s							
EKS2	**Erkin-Say**	**43.66**	**68**	*e*P		**P**	**00 50 02.8**	**+1.3**
	comp=Z,3.2nm,0.8s							
EKS2	**Erkin-Say**	**43.66**	**68**	*e*P		**P**	**00 50 02.8**	**+1.3**
	comp=Z,3.2nm,0.8s							
AAK	**Ala-Archa**	**44.16**	**68**	*e*P		**P**	**00 50 06.6**	**+1.0**
AAK				pmax	pmax			
	comp=Z,7.0nm,1.2s							
AAK	**Ala-Archa**	**44.16**	**68**	P		**P**	**00 50 06.7**	**+1.1**
AAK	**Ala-Archa**	**44.16**	**68**	P		**P**	**00 50 06.7**	**+1.1**
ZALV	**Zalesovo Beam**	**47.04**	**50**	P		**P**	**00 50 29.0**	**+1.0**
ZALV				pmax	pmax			
	comp=Z,1.0nm,0.6s							
ZALV	**Zalesovo Beam**	**47.04**	**50**	P		**P**	**00 50 29.0**	**+1.0**
ZALV	**Zalesovo Beam**	**47.04**	**50**	P		**P**	**00 50 29.0**	**+1.0**
	comp=Z,0.7nm,0.6s,baz=283,slow=7.4,SNR=3.6							
ZALV	**Zalesovo Beam**	**47.04**	**50**	P		**P**	**00 50 29.0**	**+1.0**
	comp=Z,1.0nm,0.6s							
MK31	**Makanchi Array**	**47.83**	**60**	*e*P		**P**	**00 50 34.5**	**+0.2**
MK31	**Makanchi Array**	**47.83**	**60**	*e*P		**P**	**00 50 34.5**	**+0.2**
MK31	**Makanchi Array**	**47.83**	**60**	*e*P		**P**	**00 50 34.5**	**+0.2**
MKAR	**Makanchi Array**	**47.83**	**60**	P		**P**	**00 50 35.0**	**+0.8**
MKAR				pmax	pmax			
	comp=Z,1.0nm,0.7s							
MKAR	**Makanchi Array**	**47.83**	**60**	P		**P**	**00 50 35.0**	**+0.8**
MKAR	**Makanchi Array**	**47.83**	**60**	P		**P**	**00 50 35.0**	**+0.8**
	comp=Z,0.7nm,0.7s,baz=285,slow=7.0,SNR=10							
MKAR	**Makanchi Array**	**47.83**	**60**	P		**P**	**00 50 35.0**	**+0.8**
	comp=Z,1.0nm,0.7s							
SONM	**Songino Array**	**61.94**	**50**	P		**P**	**00 52 17.9**	**+1.5**
SONM	**Songino Array**	**61.94**	**50**	P		**P**	**00 52 17.9**	**+1.5**
	comp=Z,0.8nm,0.8s,baz=261,slow=5.9,SNR=5.8							
SONM	**Songino Array**	**61.94**	**50**	P		**P**	**00 52 17.9**	**+1.5**
	comp=Z,1.0nm,0.8s							
BILL	**Bilibino**	**67.96**	**11**	*e*P		**P**	**00 52 57.2**	**+2.1**
BILL				*e*			00 53 21.0	
BILL				pmax	pmax			
	comp=Z,14nm,1.2s							
BILL	**Bilibino**	**67.96**	**11**	*e*P		**P**	**00 52 57.2**	**+2.1**
	comp=Z,14nm,1.2s							
BILL	**Bilibino**	**67.96**	**11**	*e*PcP		**PcP**	**00 53 21.0**	**-0.4**
QIZ	**Qiongzhong**	**82.03**	**72**	P		**P**	**00 54 16.3**	**-0.8**
QIZ	**Qiongzhong**	**82.03**	**72**	S		**S**	**01 04 26.8**	**-4.3**
QIZ				pmax	pmax			
	comp=Z,9.0nm,1.2s							

*ISCJB **23** 00:43:12.7±0.6, 38.72N±0.03×43.38E±0.06, h9km±7km, Error ellipse: s-maj=8.3km s-min=4.9km az=21.7*
*DDA **23** 00:43:12.6, 38.70N×43.35E, h7km, MD2.8*
*ISK **23** 00:43:12.0, 38.70N×43.38E, h6km, MD2.9*
*CSEM **23** 00:43:12.4±0.2, 38.69N×43.36E, h5km, MD2.8, Error ellipse: s-maj=4.7km s-min=3.6km az=113.0*
ISC 23 00:43:12.7±1.1, 38.71N±0.03×43.33E±0.04, h7km±13km, n18, σ0s40/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
TVAN	**Van**	**0.19**	**161**	*i* P		**Pg**	**00 43 16.8**	**+0.2**
TVAN	**Van**	**0.19**	**161**	*i* P		**Pg**	**00 43 16.8**	**+0.2**
GEVA	**Gevas**	**0.45**	**208**	*i* P		**Pg**	**00 43 21.6**	**+0.2**
GEVA				*i* S		**Sb**	**00 43 30.5**	**+0.5**
GEVA	**Gevas**	**0.45**	**208**	*i* P		**Pg**	**00 43 21.6**	**+0.2**
CLDR	**Caldiran**	**0.63**	**47**	*e*PG		**Pg**	**00 43 24.2**	**-0.7**
CLDR				*e*SG		**Sg**	**00 43 33.1**	**-0.1**
CLDR	**Caldiran**	**0.63**	**47**	*e*Pg		**Pg**	**00 43 24.2**	**-0.7**
CLDR				*e*Sg		**Sg**	**00 43 33.1**	**-0.1**
TUTA	**Tutak**	**0.80**	**330**	*i* P		**Pg**	**00 43 28.2**	**+0.2**
TUTA				*i* S		**Sb**	**00 43 40.1**	**0.0**
TUTA	**Tutak**	**0.80**	**330**	*i* P		**Pg**	**00 43 28.2**	**+0.2**
TUTA				*i* S		**Sb**	**00 43 40.1**	**0.0**
TATV	**Tatvan**	**0.85**	**257**	*i* P		**Pg**	**00 43 28.5**	**-0.6**
TATV				*i* S		**Sb**	**00 43 41.7**	**0.0**
TATV	**Tatvan**	**0.85**	**257**	*i* P		**Pg**	**00 43 28.5**	**-0.6**
TATV				*i* S		**Sb**	**00 43 41.7**	**0.0**
AGRB	**Hanur-Agry**	**0.90**	**343**	*e*PG		**Pg**	**00 43 30.3**	**+0.2**
AGRB				*e*SG		**Sb**	**00 43 43.4**	**+0.3**
AGRB	**Hanur-Agry**	**0.90**	**343**	*e*Pg		**Pg**	**00 43 30.3**	**+0.2**
AGRB				*e*Sg		**Sb**	**00 43 43.4**	**+0.3**
CUKT	**Cukurca**	**1.48**	**171**	*e*PN		**Pn**	**00 43 39.4**	**-0.4**
CUKT	**Cukurca**	**1.48**	**171**	*e*Pn		**Pn**	**00 43 39.4**	**-0.4**
VRTB	**Varto-Mus**	**1.53**	**288**	*e*PN		**Pb**	**00 43 41.2**	**-0.2**
VRTB	**Varto-Mus**	**1.53**	**288**	*e*Pn		**Pb**	**00 43 41.2**	**-0.2**
GNI	**Garni**	**1.81**	**37**	*e*PN		**Pn**	**00 43 45.1**	**+0.7**
GNI	**Garni**	**1.81**	**37**	*e*Pn		**Pn**	**00 43 45.1**	**+0.7**

*IDC **23** 00:44:37.6±0.7, 3.32S×146.54E, h0km, mb4.2/15, mb1 4.4/17, mb1mx4.3/20, mbtmp4.2/17, ML3.7/2, MS4.1/19, Ms1 4.1/19, ms1mx3.9/28, Error ellipse: s-maj=24.4km s-min=12.8km az=90.0*
*ISCJB **23** 00:44:38.8±0.4, 3.38S±0.04×146.45E±0.09, h20km, mb4.1/18, MS4.1/18, Error ellipse: s-maj=12.4km s-min=6.0km az=172.8*
*NEIC **23** 00:44:41.3±3.9, 3.41S×146.43E, h24km±28km, mb4.5/8, Error ellipse: s-maj=11.9km s-min=10.5km az=124.0*
*GCMT **23** 00:44:44.5±0.2, 3.35S×146.56E, h13km±1km, MW5.0, Moment Tensor Solution. s30,c36; s83,c120; Moment tensor: Scale 10^16Nm; Mrr0.07±.11; Mθθ-0.37±.10; Mφφ0.30±.11; Mrθ-0.85±.29; Mθφ3.53±.09; Mφr-0.02±.24; Best double couple: M0 3.70000×10^16 NP1:φs177.00000°, δ76.00000°, λ180.00000°. NP2:φs267.00000°, δ90.00000°, λ14.00000°. Principal axes: T 3.6100, Plg10.0000°, Azm133.0000°; N 0.0700, Plg76.0000°, Azm268.0000°; P -3.6800, Plg9.0000°, Azm42.0000°; Data Used: II IU IC G CN.*
ISC 23 00:44:40.7±0.5, 3.35S±0.06×146.5E±0.1, h20km, n56, σ0s94/49, mb4.1/17, MS4.2/18, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
PMG	**Port Moresby**	**6.05**	**174**	*e*Pn		**Pn**	**00 46 07.8**	**-1.3**
	92nm,0.8s							
PMG				*e*Sn		**Sn**	**00 47 18.0**	**+0.2**
PMG	**Port Moresby**	**6.05**	**174**	Pn		**Pn**	**00 46 08.0**	**-1.1**
	4.9nm,0.3s,baz=2.9,slow=7.7,SNR=16							
PMG				Sn		**Sn**	**00 47 19.9**	**+2.1**
	baz=0.0,slow=20,SNR=3.4							
COEN	**Coen**	**11.04**	**197**	*e*Pn		**Pn**	**00 47 17.7**	**+0.1**
	482nm,1.3s							
HNR	**Honiara**	**14.65**	**115**	*e*Pn		**Pn**	**00 48 07.2**	**+0.3**
HNR	**Honiara**	**14.65**	**115**	LR		LR	00 53 07.2	
	comp=Z,497nm,19.3s,baz=157,slow=35							
CTA	**Charters Tower**	**16.64**	**181**	Pn		**Pn**	**00 48 33.7**	**+0.8**
CTA	**Charters Tower**	**16.64**	**181**	Pn		**Pn**	**00 48 33.7**	**+0.8**
	0.5nm,0.3s,baz=356,slow=14,SNR=6.3							
CTAO	**Charters Tower**	**16.64**	**181**	*e*Pn		**Pn**	**00 48 32.7**	**-0.2**
	12nm,0.9s							
WRAB	**Tennant Creek**	**20.31**	**215**	*e*Pn		**P**	**00 49 14.5**	**-1.1**
	41nm,0.9s							
WRA	**Warramunga Arr**	**20.33**	**215**	P		**P**	**00 49 14.6**	**-1.2**
WRA	**Warramunga Arr**	**20.33**	**215**	P		**P**	**00 49 14.6**	**-1.2**
	22nm,0.9s,baz=39,slow=11,SNR=48							
WRA				LR		LR	00 58 12.3	
	comp=Z,1μm,18.3s,baz=40,slow=40							
EIDS	**Eidsvold**	**22.33**	**169**	*e*P		**P**	**00 49 36.8**	**-0.5**
DAV	**Davao City (W)**	**23.32**	**296**	LR		LR	00 57 48.7	
	comp=Z,215nm,20.2s,baz=159,slow=34							
AS31	**Alice Springs**	**23.59**	**210**	*e*P		**P**	**00 49 48.9**	**-1.4**
ASAR	**Alice Springs**	**23.59**	**210**	P		**P**	**00 49 49.9**	**-0.5**
ASAR	**Alice Springs**	**23.59**	**210**	P		**P**	**00 49 49.9**	**-0.5**
	11nm,1.0s,baz=38,slow=8.4,SNR=44							
ASAR				LR		LR	00 59 29.4	
	comp=Z,1μm,19.0s,baz=37,slow=38							
FITZ	**Fitzroy Crossi**	**25.16**	**233**	*e*P		**P**	**00 50 03.7**	**-1.2**
	28nm,1.1s							
FITZ	**Fitzroy Crossi**	**25.16**	**233**	P		**P**	**00 50 05.4**	**+0.5**
	9.5nm,0.8s,baz=56,slow=13,SNR=14							
FITZ				LR		LR	01 00 40.6	
	comp=Z,972nm,20.2s,baz=53,slow=38							
DZM	**Mont Dzumac**	**26.84**	**136**	*e*P		**P**	**00 50 20.7**	**+0.5**
	47nm,1.2s							
DZM	**Mont Dzumac**	**26.84**	**136**	P		**P**	**00 50 21.2**	**+1.0**
	29nm,1.1s,baz=302,slow=19,SNR=4.1							
DZM				LR		LR	00 59 27.0	
	comp=Z,1μm,19.9s,baz=338,slow=33							
STKA	**Stephens Creek**	**28.75**	**189**	*e*P		**P**	**00 50 36.9**	**-0.2**
	4.4nm,1.3s							
STKA	**Stephens Creek**	**28.75**	**189**	P		**P**	**00 50 37.6**	**+0.6**
	4.9nm,1.1s,baz=3

	comp=Z,8.0nm,0.5s						
OKC	**Ostrava-Krasne**	**2.09 140**	*e*SG	**Sb**	**00 50 05.3 +0.7**		
OKC	**Ostrava-Krasne**	**2.09 140**	Sg	**Sb**	**00 50 05.3 +0.7**		
NKC	**Novy Kostel**	**2.62 243**	*e*PN	**Pn**	**00 49 43.9 +1.0**		
NKC			*e*SG	**Sg**	**00 50 23.1 -0.3**		
	comp=Z,10nm,0.4s						
NKC	**Novy Kostel**	**2.62 243**	Pn	**Pn**	**00 49 43.9 +1.0**		
NKC			Sg	**Sg**	**00 50 23.1 -0.3**		
	comp=Z,10nm,0.4s						
OJC	**Ojcow**	**2.66 117**	*e*Pg	**Pg**	**00 49 51.1 +0.8**		
OJC			*e*Sg	**Sg**	**00 50 25.7 +1.0**		
KHC	**Kasperske Hory**	**2.84 216**	*e*PN	**Pn**	**00 49 45.9 -0.1**		
KHC			*e*PG	**Pb**	**00 49 51.9 +1.0**		
KHC			*e*SN	**Sn**	**00 50 18.0 -2.8**		
KHC			*e*SG	**Sg**	**00 50 28.5 -2.0**		
	comp=Z,2.8nm,0.4s						
KHC	**Kasperske Hory**	**2.84 216**	Pn	**Pn**	**00 49 45.9 -0.1**		
BSD	**Bornholm Skovb**	**3.72 350**	*i* P	**Pn**	**00 49 56.9 -1.1**		
BSD			*i* S	Sn	00 50 36.9 -5.7		
BSD	**Bornholm Skovb**	**3.72 350**	*i* P	**Pn**	**00 49 57.0 -1.1**		
	SNR=49						

IGQ 23 00:51:58.0, 0.48S×78.65W, h20km±173km, Mb4.0, Ms3.8, 2C-17D, Error ellipse: s-maj=1.6km s-min=0.8km az=3.4, Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAST	**Pastocalle**	**0.21**	**177**	P	Pb	00 52 03.6	-0.1
PITA	**Cotopaxi Volc**	**0.23**	**109**	⇓P	Pb	00 52 04.2	+0.1
BNAS	**Cotopaxi Volca**	**0.26**	**138**	⇓P	Pg	00 52 04.8	+0.2
JUA2	**San Juan 2**	**0.27**	**10**	⇓P	Pb	00 52 04.3	-0.5
BREF	**Cotopaxi Volca**	**0.28**	**132**	⇓P	Pg	00 52 05.3	+0.1
VC1	**Cotopaxi 1**	**0.30**	**123**	⇓P	Pb	00 52 05.4	+0.1
TERV	**Terraza Guagua**	**0.31**	**9**	⇓P	Pg	00 52 05.1	-0.4
GGP	**Refugio Guagua**	**0.31**	**11**	⇓P	Pg	00 52 05.0	-0.6
MOV1	**Cotopaxi Vol s**	**0.31**	**137**	⇓P	Pg	00 52 05.6	-0.1
BMOR	**Cotopaxi Volca**	**0.32**	**142**	⇓P	Pg	00 52 05.5	-0.1
BTAM	**Cotopaxi Volca**	**0.32**	**127**	⇓S	Sg	00 52 11.6	+0.6
BTAM	**Cotopaxi Volca**	**0.32**	**127**	⇓P	Pb	00 52 05.9	+0.1
PINO	**Pino**	**0.32**	**8**	⇓P	Pg	00 52 05.3	-0.6
TAMB	**Tambo**	**0.35**	**127**	⇓P	Pb	00 52 06.4	+0.1
COV1	**Cotopaxi Volc**	**0.36**	**120**	⇓P	Pg	00 52 05.4	-1.0
YANA	**Yana**	**0.37**	**13**	P	Pg	00 52 05.8	-0.6
ANTI	**Antisana**	**0.49**	**86**	⇓P	Pb	00 52 08.2	-0.5
PISA	**Pisayambo**	**0.63**	**155**	P	Pg	00 52 11.2	-0.1
CAYR	**Refugio Cayamb**	**0.81**	**53**	P	Pb	00 52 14.3	0.0
GOLV	**Golondrinas**	**0.84**	**325**	P	Pb	00 52 14.2	+0.2
CAYA	**Cayambe**	**0.86**	**50**	P	Pb	00 52 15.0	0.0
COTA	**Cotacachi**	**0.87**	**21**	P	Pb	00 52 15.1	0.0
ULBA	**Ulba**	**0.99**	**166**	⇓P	Pb	00 52 15.1	-1.9
IGUA	**Igualata**	**1.00**	**179**	P	Pn	00 52 17.8	+0.1
BMAS	**Trigal station**	**1.03**	**170**	⇓P	Pg	00 52 18.2	-0.3
ARRY	**Arrayan**	**1.04**	**169**	P	Pb	00 52 17.7	-0.1
ARRY	**Arrayan**	**1.04**	**169**	S	Sb	00 52 31.0	-0.3
PAT1	**Patacocha**	**1.04**	**168**	P	Pn	00 52 18.4	+0.3
CHAR	**Charly**	**1.06**	**68**	P	Pg	00 52 18.9	-0.3
CONE	**Cono NE Rev Vo**	**1.09**	**68**	P	Pg	00 52 19.6	0.0
LAV4	**Lava4-Reventad**	**1.09**	**69**	P	Pb	00 52 18.8	+0.2
MAG1	**Magdalena**	**1.19**	**290**	P	Pg	00 52 20.8	-0.4
LITE	**Lita**	**1.31**	**13**	⇑S	Sb	00 52 38.8	+0.1
LITE	**Lita**	**1.31**	**13**	⇑P	Pb	00 52 22.4	+0.2

IDC 23 01:02:04.6±2.6, 31.75N×100.13E, h0km, mb3.4/1, mb1 4.0/2, mb1mx3.2/27, mbtmp3.7/2, ML4.5/1, Error ellipse: s-maj=101.2km s-min=58.2km az=77.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**13.28**	**185**	Pn	Pn	01 05 14.6	+0.1
	0.8nm,0.3s,baz=360,slow=18,SNR=4.7						
WRA	**Warramunga Arr**	**60.97**	**143**	P	P	01 12 19.7	0.0
	0.3nm,0.7s,baz=309,slow=8.0,SNR=5.2						
LPAZ	**La Paz**	**161.26**	**323**	PKP	PKPdf	01 22 07.8	-0.7
	1.0nm,0.5s,baz=34,slow=2.1,SNR=8.6						

*NIED **23** 01:06:00, 37.30N×142.10E, h17km, Mw4.1 Best double couple: Mo1.40000×10¹⁵ NP1:φ=200.00000°, δ72.00000°, λ=-123.00000°. NP2:φ=85.00000°, δ37.00000°, λ=-30.00000°.*
*ISCJB **23** 01:06:35.8±1.4, 37.23N±0.04×142.24E±0.07, h15km±8km, mb4.2/24, MS4.1/6, Error ellipse: s-maj=9.4km s-min=6.0km az=29.0*
*JMA **23** 01:06:37.9±0.2, 37.19N×142.15E, h37km, M4.1*
JMA Felt I J1.
*NEIC **23** 01:06:37.6±3.8, 37.21N×142.29E, h13km±23km, mb4.4/3, Error ellipse: s-maj=12.8km s-min=8.6km az=126.0*
NEIC Recorded [1 JMA] in Fukushima and Miyagi.
*MOS **23** 01:06:38.0±1.0, 37.23N×142.28E, h33km±50km, mb3.9/12, mb1 4.0/17, mb1mx3.9/31, mbtmp3.9/17, ML3.6/4, MS3.9/8, Ms1 3.9/8, ms1mx3.3/47, Error ellipse: s-maj=25.6km s-min=16.5km az=77.0*

ISC 23 01:06:35.9±2.1, 37.21N±0.06×142.18E±0.06, h3km±12km, n85, σ1°32/89, mb4.2/24, MS4.2/6, 9C, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**1.05**	**279**	⇑P	**Pg**	**01 06 56.2**	**+0.1**
JFK				*e*S	**Sg**	**01 07 08.8**	**-0.9**
ONAJ	**Iwakimizuishiy**	**1.11**	**265**	P	**Pg**	**01 06 56.9**	**-0.2**
JMM	**Marumori**	**1.28**	**301**	⇑P	**Pn**	**01 06 59.7**	**-1.0**
JMM				*e*S	**Sg**	**01 07 15.3**	**-1.8**
JIO	**Ouri**	**1.41**	**332**	⇑P	**Pn**	**01 07 01.5**	**-0.9**
JFT	**Otama**	**1.50**	**282**	⇑P	**Pn**	**01 07 03.6**	**-0.1**
JFT				*e*S	**Sn**	**01 07 21.8**	**-2.0**
JOU	**Okura**	**1.67**	**314**	⇑P	**Pn**	**01 07 06.0**	**0.0**
JMK	**Ichinoseki**	**1.90**	**337**	P	**Pn**	**01 07 09.3**	**+0.2**
JMK				*e*S	**Sn**	**01 07 32.0**	**-1.5**
JYS	**Shirataka**	**1.96**	**302**	P	**Pn**	**01 07 10.7**	**+0.7**
JYK	**Kaneyama**	**2.23**	**320**	P	**Pn**	**01 07 13.9**	**+0.2**
JAG	**Ashikaga**	**2.32**	**251**	P	**Pn**	**01 07 14.2**	**-0.8**
MJAR	**Matsushiro Arr**	**3.25**	**259**	Pn	**Pn**	**01 07 29.2**	**+1.4**
MJAR				Sn	**Sb**	**01 08 12.0**	**-2.2**
MJAR	**Matsushiro Arr**	**3.25**	**259**	Pn	**Pn**	**01 07 29.2**	**+1.4**
	9.1nm,0.3s,baz=88,slow=14,SNR=44						
MJAR				Sn	**Sb**	**01 08 12.0**	**-2.2**
	9.7nm,0.3s,baz=71,slow=41,SNR=4.9						
MJAR				LR	LR	01 08 58.8	
	comp=Z,864nm,19.4s,baz=105,slow=43						
MAJO	**Matsushiro**	**3.25**	**259**	*e*P	**Pn**	**01 07 29.0**	**+1.2**
MAJO	**Matsushiro**	**3.25**	**259**	*e*Pn	**Pn**	**01 07 29.0**	**+1.2**
MAT	**Matsushiro**	**3.25**	**259**	P	**Pn**	**01 07 29.3**	**+1.5**
MAT				*e*S	**Sn**	**01 08 06.8**	**-0.3**
JHJ	**Hachijo jima 2**	**4.53**	**206**	Pn	**Pn**	**01 07 46.2**	**+0.8**
	48nm,0.3s,baz=58,slow=19,SNR=6.1						
JHJ				Sn	**Sn**	**01 08 34.7**	**-3.8**
	72nm,0.3s,baz=45,slow=20,SNR=7.9						
JHJ				LR	LR	01 09 40.4	
	comp=Z,803nm,21.5s,baz=88,slow=40						
ERM	**Erimo**	**4.86**	**9**	*e*P	**Pn**	**01 07 49.5**	**-0.3**
ERM				*e*S	**Sn**	**01 08 46.3**	**-0.2**
ERM	**Erimo**	**4.86**	**9**	*e*Pn	**Pn**	**01 07 49.5**	**-0.3**
ERM				*e*S	**Sn**	**01 08 46.3**	**-0.2**
YUK	**Yuzh-Kuril'sk**	**7.37**	**21**	*c i*P	**Pn**	**01 08 25.5**	**+1.2**
YUK				*i* S	**Sn**	**01 09 43.8**	**-4.6**
YUK				pmax	pmax		
	comp=N,90nm,0.7s						
YUK				pmax	pmax		
	comp=E,61nm,0.7s						
YUK				pmax	pmax		
	comp=Z,93nm,0.7s						
YUK				smax	smax		
	comp=N,99nm,1.0s						
YUK				smax	smax		
	comp=E,154nm,1.0s						
YUK				smax	smax		
	comp=N,584nm,2.2s						
YUK				smax	smax		
	comp=E,2μm,2.2s						
YUK				MLR	MLR		
	comp=N,196nm,13.0s						
YUK				MLR	MLR		
	comp=E,322nm,13.0s						
YUK				MLR	MLR		
	comp=Z,413nm,13.0s						

JNU	**Nakatsue**	**10.11 250**		Pn	**Pn**	**01 09 04.5 +2.5**	
JNU	**Nakatsue**	**10.11 250**		Pn	**Pn**	**01 09 04.5 +2.5**	
	comp=Z,0.3nm,0.3s,baz=54,slow=8.7,SNR=2.7						
USRK	**Ussuriysk Arra**	**10.41 315**		Pn	**Pn**	**01 09 07.5 +1.5**	
	comp=Z,0.2nm,0.3s,baz=119,slow=14,SNR=4.6						
KSRS	**Korea Array**	**11.36 276**		Pn	**Pn**	**01 09 22.0 +3.0**	
	comp=Z,0.2nm,0.3s,baz=90,slow=14,SNR=16						
KSAR	**Wonju Array Be**	**11.39 275**		Pn	**Pn**	**01 09 22.0 +2.6**	
HABR	**Khabarovsk**	**12.41 337**		P	Pn	01 09 41.6 +8.4	
HABR				pmax	pmax		
	comp=E,115nm,2.4s						
HABR				pmax	pmax		
	comp=Z,78nm,2.4s						
HABR				pmax	pmax		
	comp=N,52nm,2.4s						
HABR				MLR	MLR		
	comp=Z,166nm,17.0s						
ULN	**Ulaanbaatar**	**27.77 304**	*e*P	**P**		**01 12 26.5 +0.6**	
	comp=Z,3.0nm,0.8s						
ENH	**Enshi**	**27.96 265**	*e*P	**P**		**01 12 27.3 -0.4**	
	comp=Z,8.2nm,0.6s						
SONM	**Songino Array**	**28.20 304**		P	**P**	**01 12 30.5 +0.7**	
SONM	**Songino Array**	**28.20 304**		P	**P**	**01 12 30.5 +0.7**	
	comp=Z,4.6nm,0.8s,baz=101,slow=9.3,SNR=28						
ZAK	**Zakamensk**	**30.64 308**	*e*P		**P**	**01 12 51.6 +0.2**	
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
BILL	**Bilibino**	**33.69 16**	*e*P		**P**	**01 13 15.9 -1.8**	
BILL			*e*			01 15 56.5	
BILL				pmax	pmax		
	comp=Z,11nm,1.0s						
TIXI	**Tiksi**	**35.19 353**	*e*P		**P**	**01 13 30.4 -0.3**	
TIXI				pmax	pmax		
	comp=Z,6.0nm,2.5s						
HVS	**Khovu-Aksy**	**36.77 308**	*e*P		**P**	**01 13 43.4 -1.2**	
HVS				pmax	pmax		
	comp=Z,18nm,1.4s						
ZALV	**Zalesovo Beam**	**42.25 312**	P		**P**	**01 14 30.7 +0.6**	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ZALV	**Zalesovo Beam**	**42.25 312**	P		**P**	**01 14 30.7 +0.6**	
ZALV	**Zalesovo Beam**	**42.25 312**	P		**P**	**01 14 30.7 +0.6**	
	comp=Z,1.8nm,0.4s,baz=93,slow=7.4,SNR=9.0						
MK31	**Makanchi Array**	**44.55 302**	*i* P		**P**	**01 14 48.9 +0.1**	
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK31	**Makanchi Array**	**44.55 302**	*e*P		**P**	**01 14 49.1 +0.3**	
MKAR	**Makanchi Array**	**44.55 302**	*ce*P		**P**	**01 14 49.2 +0.4**	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**44.55 302**	P		**P**	**01 14 49.2 +0.4**	
MKAR	**Makanchi Array**	**44.55 302**	P		**P**	**01 14 49.2 +0.4**	
	comp=Z,3.4nm,0.6s,baz=82,slow=8.9,SNR=44						
KURK	**Kurchatov**	**46.31 308**	*c i*P		**P**	**01 15 02.2 -0.5**	
KURK				pmax	pmax		
	comp=Z,12nm,0.6s						
KURK	**Kurchatov**	**46.31 308**	*e*P		**P**	**01 15 03.0 +0.3**	
	comp=Z,17nm,0.5s						
KURBB	**Kurchatov Arra**	**46.38 308**	P		**P**	**01 15 04.0 +0.8**	
	comp=Z,11nm,0.5s,baz=79,slow=7.6,SNR=103						
TAPN	**Taplejung**	**46.54 274**	*e*P		**P**	**01 15 07.2 +2.0**	
	comp=Z,6.2nm,0.4s						
RAMN	**Ramite**	**47.60 274**	*e*P		**P**	**01 15 13.3 -0.1**	
	comp=Z,13nm,0.7s						
GUN	**Gumba**	**47.75 276**	*e*P		**P**	**01 15 16.2 +1.5**	
	comp=Z,5.5nm,0.3s						
PKI	**Pulchoki**	**48.27 276**	*e*P		**P**	**01 15 18.8 +0.1**	
	comp=Z,4.0nm,0.3s						
KKN	**Kakani**	**48.28 276**	*e*P		**P**	**01 15 19.6 +1.0**	
	comp=Z,18nm,0.8s						
DMN	**Daman**	**48.49 276**	*e*P		**P**	**01 15 20.2 -0.1**	
	comp=Z,5.5nm,0.3s						
ILAR	**Eielson Array**	**49.02 32**	P		**P**	**01 15 23.4 -0.2**	
ILAR	**Eielson Array**	**49.02 32**	P		**P**	**01 15 23.4 -0.2**	
	comp=Z,2.1nm,0.7s,baz=266,slow=6.2,SNR=26						
DANN	**Dangsing**	**49.23 278**	*e*P		**P**	**01 15 26.8 +0.7**	
	comp=Z,26nm,0.7s						
KOLN	**Koldanda**	**49.62 277**	*e*P		**P**	**01 15 27.8 -1.1**	
	comp=Z,6.0nm,0.7s						
TKM2	**Tokmak 2**	**50.09 298**	P		**P**	**01 15 34.0 +1.7**	
TKM2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
TKM2	**Tokmak 2**	**50.09 298**	*e*P		**P**	**01 15 35.1 +2.8**	
	comp=Z,3.5nm,0.7s						
VOSK	**Vostochnaya**	**50.62 312**	P		**P**	**01 15 34.0 -1.9**	
VOSK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BVAR	**Borovoye Array**	**50.91 312**	P		**P**	**01 15 38.9 +0.8**	
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**50.91 312**	P		**P**	**01 15 38.9 +0.8**	
BVAR	**Borovoye Array**	**50.91 312**	P		**P**	**01 15 38.9 +0.8**	
	comp=Z,1.3nm,0.5s,baz=75,slow=7.0,SNR=8.8						
BRVK	**Borovoye**	**50.96 312**	*e*P		**P**	**01 15 38.2 -0.3**	
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KK31	**Karatay Array**	**53.57 300**	*i* P		**P**	**01 16 00.7 +2.7**	
KKAR	**Karatay Array**	**53.57 300**	*e*P		P	01 16 02.0 +4.0	
KKAR	**Karatay Array**	**53.57 300**	*e*P		P	01 16 02.0 +4.0	
WRA	**Warramunga Arr**	**57.32 189**	P		**P**	**01 16 24.5 -0.6**	
WRA	**Warramunga Arr**	**57.32 189**	P		**P**	**01 16 24.5 -0.6**	
	comp=Z,0.3nm,0.4s,baz=7.0,slow=7.2,SNR=11						
AB31	**Akbulak array**	**58.29 310**	*i* P		**P**	**01 16 31.5 -0.2**	
AB31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ABKAR	**Akbulak array**	**58.29 310**	*e*P		**P**	**01 16 31.8 0.0**	
ASAR	**Alice Springs**	**61.05 189**	P		**P**	**01 16 51.2 +0.3**	
ASAR	**Alice Springs**	**61.05 189**	P		**P**	**01 16 51.2 +0.3**	
	comp=Z,0.2nm,0.4s,baz=16,slow=17,SNR=3.2						
YKA	**Yellowknife Ar**	**63.35 30**	P		**P**	**01 17 06.7 +0.8**	
YKA	**Yellowknife Ar**	**63.35 30**	P		**P**	**01 17 06.7 +0.8**	
	comp=Z,0.3nm,0.6s,baz=301,slow=7.0,SNR=4.5						
FINES	**FINESS Array B**	**68.94 332**	P		**P**	**01 17 42.4 +0.6**	
FINES	**FINESS Array B**	**68.94 332**	P		**P**	**01 17 42.4 +0.6**	
	comp=Z,1.1nm,0.7s,baz=99,slow=6.0,SNR=5.2						
FINES				LR	LR	01 50 08.4	
	comp=Z,126nm,19.4s,baz=58,slow=38						
NOA	**NORSAR Array B**	**74.26 338**	P		**P**	**01 18 14.3 +0.3**	
NOA	**NORSAR Array B**	**74.26 338**	P		**P**	**01 18 14.3 +0.3**	
	comp=Z,0.4nm,0.5s,baz=40,slow=5.9,SNR=3.3						
NOA				LR	LR	01 53 35.3	
	comp=Z,93nm,19.9s,baz=25,slow=38						
AKASG	**Malin Array Be**	**74.53 323**	*ce*P		**P**	**01 18 14.8 -0.9**	
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**74.53 323**	P		**P**	**01 18 15.6 -0.1**	
AKASG	**Malin Array Be**	**74.53 323**	P		**P**	**01 18 15.6 -0.1**	
	comp=Z,0.7nm,0.4s,baz=44,slow=5.3,SNR=5.5						
MLR	**Muntele Rosu**	**79.64 320**	LR		LR	01 54 45.1	
	comp=Z,23nm,19.6s,baz=52,slow=36						
VRAC	**Vranov**	**81.31 327**	LR		LR	01 55 18.2	
	comp=Z,110nm,21.1s,baz=88,slow=36						
DAVOX	**Davos/Dischmat**	**86.09 329**	LR		LR	01 56 38.4	
	comp=Z,160nm,21.6s,baz=77,slow=35						
ESDC	**Sonseca Array**	**97.40 334**	LR		LR	02 07 56.5	
	comp=Z,66nm,19.1s,baz=305,slow=38						
LPAZ	**La Paz**	**146.07 60**	PKPbc		**PKPab**	**01 26 18.8 -0.2**	
LPAZ	**La Paz**	**146.07 60**	PKPbc		**PKPab**	**01 26 18.8 -0.2**	
	comp=Z,1.4nm,1.0s,baz=317,slow=3.2,SNR=3.9						

*IDC **23** 01:13:00.8±32.0, 30.90N×137.04E, h631km±402km, mb2.7/6, mb1 2.8/6, mb1mx2.5/27, mbtmp2.7/6, Error ellipse: s-maj=298.5km s-min=14.0km az=70.0*

JMA 23 01:12:36.9±0.3, 31.37N×139.17E, h387km, M3.3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	**Boso 3**	**3.60**	**18**	*e*S	S	01 14 38.1	-0.2
BSO1	**Boso 1**	**3.61**	**24**	P	Pn	01 13 45.6	+2.0
BSO1				*e*S	S	01 14 39.7	+1.9
BSO4	**Boso 4**	**3.74**	**15**	*e*S	S	01 14 41.3	+0.3
JOD2	**Odawara 2**	**3.88**	**359**	*e*S	S	01 14 42.9	-0.9
JRY	**Ryogami san**	**4.64**	**357**	P	Pn	01 13 55.3	+0.8
JRY				*e*S	S	01 14 56.8	-0.7
CBIJ	**Chichi jima**	**5.01**	**148**	P	Pn	01 13 58.0	-0.5
CBIJ				*e*S	S	01 15 03.5	-1.1
JAG	**Ashikaga**	**5.05**	**3**	P	Pn	01 13 57.8	-0.9
JAG				*e*S	S	01 14 59.7	-5.4
JHO	**Hitachi**	**5.36**	**12**	P	Pn	01 14 02.0	+0.1
JHO				*e*S	S	01 15 06.9	-4.2
JFK	**Kawauchi**	**6.14**	**13**	*e*S	S	01 15 23.7	-3.2
JMM	**Marumori**	**6.62**	**11**	P	P	01 14 16.4	-0.2
JMM				*e*S	S	01 15 33.1	-3.3

MKAR	**Makanchi Array**	**45.77 307**		P	P	01 20 19.5	-2.0
	0.5nm,0.7s,baz=91,slow=10,SNR=5.7						
KURBB	**Kurchatov Arra**	**48.20 312**		P	P	01 20 37.7	-2.2
	1.1nm,0.3s,baz=89,slow=7.2,SNR=19						
WRA	**Warramunga Arr**	**51.23 186**		P	P	01 21 03.3	+0.5
	0.4nm,0.5s,baz=0.7,slow=7.6,SNR=9.9						
BVAR	**Borovoye Array**	**53.14 315**		P	P	01 21 15.2	-1.1
	0.9nm,0.5s,baz=104,slow=9.0,SNR=5.8						
ASAR	**Alice Springs**	**54.96 186**		P	P	01 21 31.0	+1.5
	0.2nm,0.4s,baz=22,slow=10,SNR=4.3						
FINES	**FINESS Array B**	**72.96 332**		P	P	01 23 25.1	+0.2
	0.5nm,0.4s,baz=67,slow=6.4,SNR=8.6						

IDC 23 01:17:53.5±7.2, 18.84N×145.51E, h170km±69km, mb3.1/9, mb1 3.5/10, mb1mx3.3/28, mbtmp3.3/10, Error ellipse: s-maj=30.2km s-min=15.0km az=96.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**15.12**	**341**	P	Pn	01 21 18.7	+0.2
	16nm,0.3s,baz=70,slow=21,SNR=3.2						
WRA	**Warramunga Arr**	**40.07**	**196**	P	P	01 25 11.9	-0.6
	0.4nm,0.3s,baz=13,slow=8.4,SNR=7.4						
FITZ	**Fitzroy Crossi**	**41.58**	**209**	P	P	01 25 24.3	-0.5
	1.2nm,0.7s,baz=23,slow=9.6,SNR=7.0						
ASAR	**Alice Springs**	**43.74**	**195**	P	P	01 25 42.7	+0.5
	0.2nm,0.4s,baz=8.2,slow=8.4,SNR=3.0						
MKAR	**Makanchi Array**	**58.24**	**314**	P	P	01 27 30.5	+0.4
	0.2nm,0.6s,baz=97,slow=9.0,SNR=3.5						
KURBB	**Kurchatov Arra**	**61.10**	**318**	P	P	01 27 49.2	-0.3
	0.6nm,0.5s,baz=92,slow=6.1,SNR=7.0						
ILAR	**Eielson Array**	**63.60**	**26**	P	P	01 28 05.5	-0.4
	0.5nm,0.8s,baz=253,slow=4.6,SNR=5.2						
BVAR	**Borovoye Array**	**66.26**	**320**	P	P	01 28 23.2	0.0
	0.6nm,0.5s,baz=103,slow=7.3,SNR=4.6						
YKA	**Yellowknife Ar**	**77.95**	**28**	P	P	01 29 32.8	+0.3
	0.4nm,0.5s,baz=291,slow=5.5,SNR=4.0						
NVAR	**Mina Array Bea**	**83.19**	**52**	P	P	01 30 01.2	0.0
	0.2nm,0.3s,baz=270,slow=5.9,SNR=3.5						

*DDA **23** 01:22:24.5, 38.66N×31.88E, h12km, MD3.0*
*ISK **23** 01:22:25.0, 38.52N×31.94E, h5km, MD3.4*
*CSEM **23** 01:22:26.3±0.2, 38.54N×31.90E, h2km, MD3.0, Error ellipse: s-maj=6.2km s-min=4.6km az=29.0*

ISC 23 01:22:24.9±1.1, 38.55N±0.02×31.80E±0.02, h2km±11km, n75, σ0°97/91, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDHN	**Kadinhani**	**0.25**	**97**	*i* P	**Pg**	**01 22 29.4**	**-0.3**
KDHN				*i* S	**Sg**	**01 22 33.7**	**+0.8**
KDHN	**Kadinhani**	**0.25**	**97**	*i* P	**Pg**	**01 22 29.4**	**-0.3**
KDHN				*i* S	**Sg**	**01 22 33.7**	**+0.8**
KIZT	**Kizilcal**	**0.33**	**11**	*e*PG	**Pb**	**01 22 32.6**	**-1.0**
LADK	**Ladik-KONYA**	**0.57**	**128**	*e*PG	**Pg**	**01 22 35.1**	**-0.6**
LADK				*e*SG	**Sg**	**01 22 42.3**	**-0.8**
LADK	**Ladik-KONYA**	**0.57**	**128**	*e*Pg	**Pg**	**01 22 35.1**	**-0.6**
LADK				*e*Sg	**Sg**	**01 22 42.3**	**-0.8**
BOLV	**Bolvadin**	**0.69**	**284**	*i* P	**Pg**	**01 22 38.8**	**+0.8**
BOLV				*i* S	**Sb**	**01 22 49.1**	**-0.5**
BOLV	**Bolvadin**	**0.69**	**284**	*i* P	**Pg**	**01 22 38.8**	**+0.8**
BOLV				*i* S	**Sb**	**01 22 49.1**	**-0.5**
KONT	**Konya--Tatoy**	**0.75**	**144**	*e*PG	**Pg**	**01 22 38.9**	**-0.3**
KONT				*e*SG	**Sg**	**01 22 49.1**	**+0.1**
KONT	**Konya--Tatoy**	**0.75**	**144**	*e*Pg	**Pg**	**01 22 38.9**	**-0.3**
KONT				*e*Sg	**Sg**	**01 22 49.1**	**+0.1**
SVRH	**Sivrihisar-ESK**	**0.92**	**346**	*e*PG	**Pn**	**01 22 44.3**	**-0.6**
SVRH	**Sivrihisar-ESK**	**0.92**	**346**	*e*Pg	**Pn**	**01 22 44.3**	**-0.6**
SEYT	**Eskypehyr**	**1.22**	**323**	*i* P	**Pg**	**01 22 48.4**	**+0.2**
SEYT				*i* S	**Sn**	**01 23 06.0**	**-0.1**
SEYT	**Eskypehyr**	**1.22**	**323**	*i* P	**Pg**	**01 22 48.4**	**+0.2**
SEYT				*i* S	**Sn**	**01 23 06.0**	**-0.1**
AFSR	**Af˘ar-Bala (A**	**1.33**	**48**	*e*PN	**Pb**	**01 22 50.8**	**+0.2**
AFSR	**Af˘ar-Bala (A**	**1.33**	**48**	*e*Pn	**Pb**	**01 22 50.8**	**+0.2**
SULT	**Sultanhani-AKS**	**1.39**	**104**	*e*PN	**Pn**	**01 22 50.8**	**-0.6**
SULT	**Sultanhani-AKS**	**1.39**	**104**	*e*Pn	**Pn**	**01 22 50.8**	**-0.6**
BCK	**Bucak**	**1.45**	**222**	*e*PN	**Pg**	**01 22 53.4**	**

	2.7nm,0.8s,baz=49,slow=7.8,SNR=3.6							
STKA				LR	LR	01 48 20.2		
	comp=Z,73nm,18.4s,baz=25,slow=33							
WRA	**Warramunga Arr**	**30.04**	**249**	P	P	01 38 06.4	-0.4	
	0.8nm,0.5s,baz=76,slow=9.0,SNR=8.0							
ASAR	**Alice Springs**	**31.46**	**242**	P	P	01 38 18.8	-0.6	
	0.6nm,0.6s,baz=64,slow=11,SNR=6.2							
FITZ	**Fitzroy Crossi**	**37.87**	**250**	P	P	01 39 13.8	-0.9	
	3.0nm,0.7s,baz=104,slow=9.5,SNR=8.0							
SONM	**Songino Array**	**77.49**	**324**	P	P	01 43 54.7	+1.3	
	0.5nm,0.8s,baz=141,slow=7.4,SNR=3.0							
ILAR	**Eielson Array**	**83.79**	**19**	P	P	01 44 25.8	-0.8	
	0.8nm,0.8s,baz=228,slow=5.6,SNR=7.2							
MKAR	**Makanchi Array**	**92.21**	**317**	P	P	01 45 07.3	-0.3	
	0.2nm,0.6s,baz=103,slow=6.5,SNR=3.2							

IDC ***23*** *02:03:12.8±8.0, 36.°07N×70.°52E, h90km±75km, mb3.2/3, mb1 3.2/6, mb1mx3.0/30, mbtmp3.1/6, ML3.2/3, Error ellipse: s-maj=56.0km s-min=33.0km az=179.0*
ISCJB ***23*** *02:03:13.1±0.6, 36.°21N±0.°04×70.°4E±0.°1, h110km, mb3.3/2, Error ellipse: s-maj=13.1km s-min=5.2km az=169.8*
NNC ***23*** *02:03:22.5±9.9, 36.°77N×70.°77E, h198km±140km, mb2.4, mpv3.5, Error ellipse: s-maj=92.6km s-min=55.3km az=18.0*

ISC 23 02:03:13.6±0.9, 36°22N±0.°06×70°5E±0.°1, h110km, n12, σ1°75/13, 4C-1D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
CEP	**Cherat**	**2.67**	**153**	P		Pn	02 03 56.3	+0.9
CEP				S		**Sn**	**02 04 27.0**	**-0.5**
THW	**Thamme Wali**	**3.58**	**163**	P		Pn	02 04 08.0	+0.6
SARP	**Sargodha**	**4.66**	**156**	P		**Pn**	**02 04 21.1**	**-0.8**
KK31	**Karatay Array**	**6.87**	**0**	⇑P		**Pn**	**02 04 53.7**	**+1.9**
	0.9nm,0.2s,baz=181,slow=13,SNR=34							
KK31				⇑S		**Sn**	**02 06 08.4**	**0.0**
	1.8nm,0.5s,baz=182,slow=24,SNR=4.3							
AAK	**Ala-Archa**	**7.12**	**25**	P		**Pn**	**02 04 57.0**	**+1.8**
	1.3nm,0.3s,baz=194,slow=8.3,SNR=4.2							
AAK				S		**Sn**	**02 06 14.8**	**+0.2**
	1.1nm,0.3s,baz=143,slow=22,SNR=4.4							
TKM2	**Tokmak 2**	**7.77**	**29**	⇑P		**Pn**	**02 05 05.5**	**+1.4**
	1.2nm,0.3s							
TKM2				⇓S		Sn	02 06 25.3	-5.2
	1.2nm,0.5s							
MKAR	**Makanchi Array**	**13.77**	**36**	P		**P**	**02 06 26.6**	**-2.3**
	0.0nm,0.3s,baz=239,slow=17,SNR=2.7							
AB31	**Akbulak array**	**15.12**	**333**	⇑P		**P**	**02 06 42.8**	**-1.0**
	0.2nm,0.3s,baz=164,slow=12,SNR=16							
AB31				S		**Sn**	**02 09 24.9**	**-3.4**
	1.4nm,0.8s,baz=151,slow=24,SNR=3.7							
KURBB	**Kurchatov Arra**	**15.52**	**19**	P		**P**	**02 06 49.0**	**+0.8**
	0.0nm,0.3s,baz=208,slow=10,SNR=4.8							
ZALV	**Zalesovo Beam**	**20.34**	**25**	P		Pn	02 07 43.8	-0.2
	0.9nm,0.3s,baz=223,slow=11,SNR=7.5							
TORD	**Torodi Ar. Bea**	**65.28**	**268**	P		**P**	**02 13 45.4**	**+1.4**
	0.8nm,1.2s,baz=56,slow=5.6,SNR=6.3							
WRA	**Warramunga Arr**	**82.21**	**122**	P		**P**	**02 15 23.3**	**+0.6**
	0.3nm,0.9s,baz=314,slow=5.7,SNR=3.3							

IDC 23 02:51:58.3±1.8, 15°41S×66°39E, h0km, mb3.8/6, mb1 4.0/6, mb1mx3.7/25, mbtmp3.8/6, MS3.9/16, Ms1 3.8/16, ms1mx3.6/31, Error ellipse: s-maj=59.4km s-min=25.8km az=47.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
OPO	**Ambohidratompo**	**18.64**	**258**	LR		LR	03 02 10.9	
	comp=Z,609nm,18.7s,baz=359,slow=33							
KMBO	**Kilima Mbogo**	**32.07**	**294**	LR		LR	03 08 31.1	
	comp=Z,132nm,21.4s,baz=279,slow=31							
BOSA	**Boshof**	**40.14**	**244**	LR		LR	03 12 53.0	
	comp=Z,199nm,19.7s,baz=164,slow=31							
CMAR	**Chiang Mai Arr**	**46.48**	**45**	P		P	03 00 27.4	-0.1
	1.3nm,0.3s,baz=246,slow=8.5,SNR=3.7							
CMAR				LR		LR	03 17 22.2	
	comp=Z,142nm,19.6s,baz=230,slow=33							
MAW	**Mawson**	**52.21**	**182**	LR		LR	03 17 40.0	
	comp=Z,207nm,20.9s,baz=194,slow=30							
KBZ	**Khabaz**	**62.65**	**341**	LR		LR	03 29 10.4	
	comp=Z,37nm,20.3s,baz=192,slow=36							
BRTR	**Keskin Array B**	**62.77**	**332**	P		P	03 02 26.8	+1.1
	0.3nm,0.8s,baz=117,slow=1.6,SNR=2.7							
MKAR	**Makanchi Array**	**63.54**	**12**	P		P	03 02 30.1	-0.5
	0.6nm,0.8s,baz=187,slow=5.7,SNR=4.8							
MKAR				LR		LR	03 28 58.9	
	comp=Z,60nm,20.3s,baz=172,slow=35							
ASAR	**Alice Springs**	**63.66**	**109**	P		P	03 02 32.0	+0.1
	1.0nm,1.1s,baz=265,slow=5.6,SNR=6.7							
ASAR				LR		LR	03 27 45.9	
	comp=Z,157nm,18.0s,baz=177,slow=34							
WRA	**Warramunga Arr**	**64.52**	**105**	P		P	03 02 38.0	+0.4
	1.9nm,0.9s,baz=271,slow=6.0,SNR=10							
TORD	**Torodi Ar. Bea**	**70.01**	**290**	LR		LR	03 33 31.6	
	comp=Z,57nm,18.6s,baz=15,slow=36							
ZALV	**Zalesovo Beam**	**70.86**	**11**	P		P	03 03 16.7	-0.1
	0.4nm,0.4s,baz=232,slow=7.1,SNR=2.5							
ZALV				LR		LR	03 34 50.6	
	comp=Z,52nm,18.1s,baz=248,slow=36							
SONM	**Songino Array**	**72.38**	**27**	LR		LR	03 33 48.4	
	comp=Z,102nm,21.1s,baz=60,slow=35							
DBIC	**Dimbokro**	**73.89**	**282**	LR		LR	03 36 42.3	
	comp=Z,58nm,18.6s,baz=289,slow=36							
KSRS	**Korea Array**	**78.11**	**46**	LR		LR	03 40 08.0	
	comp=Z,72nm,18.2s,baz=230,slow=37							
JNU	**Nakatsue**	**78.17**	**51**	LR		LR	03 38 37.0	
	comp=Z,47nm,18.1s,baz=59,slow=36							
MJAR	**Matsushiro Arr**	**85.07**	**50**	LR		LR	03 42 09.8	
	comp=Z,72nm,19.8s,baz=210,slow=35							
ARCES	**ARCESS Array B**	**89.47**	**347**	LR		LR	03 44 13.6	
	comp=Z,26nm,21.6s,baz=25,slow=35							
PDAR	**Pinedale Array**	**152.51**	**354**	PKPbc		PKPbc	03 11 55.4	-1.9
	0.5nm,0.7s,baz=67,slow=1.9,SNR=4.7							

IDC 23 03:25:59.0±1.0, 8°84S×159°77E, h103km±11km, mb3.5/7, mb1 3.7/7, mb1mx3.5/19, mbtmp3.5/7, Error ellipse: s-maj=37.5km s-min=21.9km az=118.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
HNR	**Honiara**	**0.62**	**163**	P		Pn	03 26 17.4	+1.4
	83nm,0.3s,baz=260,slow=1.7,SNR=16							
HNR				S		Sn	03 26 29.9	+1.2
	238nm,0.3s,baz=307,slow=20,SNR=18							
WRA	**Warramunga Arr**	**26.95**	**243**	P		P	03 31 31.1	0.0
	1.2nm,0.7s,baz=70,slow=9.3,SNR=20							
STKA	**Stephens Creek**	**28.47**	**214**	P		P	03 31 44.8	+0.3
	1.3nm,0.5s,baz=47,slow=14,SNR=3.8							
ASAR	**Alice Springs**	**28.89**	**235**	P		P	03 31 47.1	-0.5
	0.3nm,0.5s,baz=61,slow=9.3,SNR=5.5							
VNDA	**Vanda**	**68.67**	**180**	P		P	03 36 51.1	+0.3
	0.9nm,0.7s,baz=339,slow=7.4,SNR=5.1							
SONM	**Songino Array**	**73.47**	**326**	P		P	03 37 21.5	+1.0
	1.1nm,0.7s,baz=132,slow=5.5,SNR=4.2							
ILAR	**Eielson Array**	**83.40**	**20**	P		P	03 38 14.1	-0.4
	0.2nm,0.5s,baz=237,slow=4.2,SNR=4.2							
MKAR	**Makanchi Array**	**87.92**	**318**	P		P	03 38 36.1	-1.2
	0.3nm,0.6s,baz=90,slow=6.1,SNR=4.8							

NEIC ***23*** *03:41:36.8±1.1, 43.°13N×126.°94W, h10km, ML2.7, Error ellipse: s-maj=13.4km s-min=6.1km az=49.0*
ISCJB ***23*** *03:41:37.5±2.0, 43.°20N±0.°06×126.°91W±0.°10, h27km±22km, mb2.8/1, Error ellipse: s-maj=14.3km s-min=7.7km az=140.5*
IDC ***23*** *03:41:37.6±2.9, 43.°38N×126.°55W, h0km, mb3.0/2, mb1 3.5/5, mb1mx3.3/29, mbtmp3.3/5, ML3.5/3, MS2.6/2, Ms1 2.6/2, ms1mx2.3/12, Error ellipse: s-maj=57.7km s-min=14.4km az=47.0*

ISC 23 03:41:37.7±2.4, 43°17N±0.°07×126°89W±0.°09, h17km±15km, n34, σ1°31/39, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
KEBM	**Edson Butte**	**1.90**	**98**	*e*Pn		**Pn**	**03 42 08.4**	**-1.0**
KEBM				*e*S		**Sn**	**03 42 32.1**	**-0.8**
KBO	**Bosley Butte**	**2.18**	**115**	*e*Pn		**Pn**	**03 42 13.2**	**-0.1**
KBO				*e*S		**Sn**	**03 42 35.4**	**-4.7**
RNO	**Roman Nose**	**2.41**	**71**	P		**Pn**	**03 42 15.8**	**-0.6**
DBO	**Dodson Butte**	**2.67**	**90**	P		**Pn**	**03 42 19.6**	**-0.4**
HUMO	**Hull Mountain**	**2.94**	**100**	*e*Pn		**Pn**	**03 42 23.4**	**-0.3**
HUMO				*e*S		**Sn**	**03 42 58.2**	**-0.6**
COR	**Corvallis**	**2.95**	**60**	*e*Pn		**Pn**	**03 42 25.6**	**+1.7**
COR				*e*S		**Sn**	**03 43 00.1**	**+1.2**
BBOR	**Butler Butte**	**3.10**	**94**	P		**Pn**	**03 42 26.5**	**+0.5**
TCBU	**Trout Butte**	**3.25**	**69**	P		**Pg**	**03 42 39.2**	**-0.7**
BROR	**Big Rock Looko**	**3.40**	**70**	P		**Pn**	**03 42 30.2**	**+0.3**
YBH	**Yreka Blue Hor**	**3.41**	**113**	*e*Pn		**Pg**	**03 42 31.3**	**+1.1**
YBH	**Yreka Blue Hor**	**3.41**	**113**	Pn		**Pn**	**03 42 31.0**	**+0.8**
	0.7nm,0.3s,baz=277,slow=7.3,SNR=13							
YBH				Sn		**Sn**	**03 43 11.5**	**+1.2**
	0.3nm,0.3s,baz=135,slow=20,SNR=3.4							
IRO	**Indian Ridge**	**3.47**	**74**	P		**Pn**	**03 42 31.3**	**+0.2**
SSOR	**Sweet Springs**	**3.61**	**61**	P		**Pn**	**03 42 34.0**	**+0.9**
FRIS	**Frissel Point**	**3.63**	**72**	P		**Pn**	**03 42 33.7**	**+0.5**
H04A	**Detroit Lake**	**3.72**	**64**	P		**Pn**	**03 42 35.0**	**+0.5**
HUOR	**Husband**	**3.78**	**74**	P		**Pn**	**03 42 36.2**	**+0.8**
WIFE	**Three Sisters-**	**3.79**	**75**	P		**Pn**	**03 42 36.3**	**+0.7**
BKCOR	**Black Crater**	**3.93**	**72**	P		**Pn**	**03 42 38.1**	**+0.7**
TDH	**Tom, Dick, Har**	**4.23**	**58**	P		**Pn**	**03 42 42.7**	**+1.1**
LVP	**Lakeview Peak**	**4.32**	**46**	P		**Pn**	**03 42 43.4**	**+0.7**
NLWA	**Neilton Lookou**	**4.73**	**26**	*e*Pn		**Pn**	**03 42 47.6**	**-0.7**
NLWA				*e*S		**Sn**	**03 43 38.9**	**-3.9**
LON	**Longmire**	**5.08**	**43**	*e*Pn		**Pn**	**03 42 53.2**	**+0.1**
	8.6nm,0.7s							
LON				*e*S		**Sn**	**03 43 51.2**	**-0.2**
WVOR	**Wild Horse Val**	**6.12**	**94**	Pn		**Pn**	**03 43 07.5**	**+0.1**
BMO	**Blue Mountains**	**7.11**	**73**	*e*Pn		**Pn**	**03 43 21.6**	**+0.5**
	1.8nm,0.6s							
NEW	**Newport**	**8.52**	**50**	LR		LR	03 46 48.6	
	comp=Z,39nm,21.8s,baz=258,slow=38							
BBB	**Bella Bella**	**9.06**	**355**	Pn		**Pn**	**03 43 48.1**	**+0.5**
BBB	**Bella Bella**	**9.06**	**355**	Pn		**Pn**	**03 43 48.1**	**+0.5**
	0.2nm,0.3s,baz=198,slow=6.4,SNR=3.2							
PFO	**Pinyon Flat Ob**	**12.56**	**136**	LR		LR	03 49 31.6	
	comp=Z,37nm,19.9s,baz=142,slow=38							
PDAR	**Pinedale Array**	**12.71**	**86**	Pn		**Pn**	**03 44 39.4**	**+1.6**
PDAR	**Pinedale Array**	**12.71**	**86**	Pn		**Pn**	**03 44 39.4**	**+1.6**
	0.1nm,0.3s,baz=277,slow=13,SNR=4.2							
YKA	**Yellowknife Ar**	**20.66**	**16**	P		**P**	**03 46 16.9**	**+0.6**
YKA	**Yellowknife Ar**	**20.66**	**16**	P		**P**	**03 46 16.9**	**+0.6**
	0.7nm,0.7s,baz=200,slow=10,SNR=6.5							
ILAR	**Eielson Array**	**24.41**	**339**	P		**P**	**03 46 55.4**	**+0.3**
ILAR	**Eielson Array**	**24.41**	**339**	P		**P**	**03 46 55.4**	**+0.3**
	0.3nm,0.8s,baz=152,slow=9.9,SNR=4.8							

ATH ***23*** *03:52:36.6, 41.°32N×22.°71E, h15km±4km, MD2.7/6*
ISCJB ***23*** *03:52:36.4±0.4, 41.°34N±0.°02×22.°71E±0.°03, h11km±4km, Error ellipse: s-maj=4.5km s-min=3.2km az=18.9*
CSEM ***23*** *03:52:36.9±0.2, 41.°30N×22.°74E, h8km, ML2.2, Error ellipse: s-maj=4.0km s-min=3.2km az=64.0*
THE ***23*** *03:52:37.4, 41.°30N×22.°75E, h2km±1km, ML2.4/6, Error ellipse: s-maj=1.1km s-min=0.4km az=214.0*
SKO ***23*** *03:52:37.1, 41.°30N×22.°75E, h3km, M2.0, ML2.3*
SOF ***23*** *03:52:37.0, 41.°32N×22.°75E, h5km, MD2.5*
BEO ***23*** *03:52:39.4±0.4, 41.°35N×22.°65E, h0km, ML2.2/6*

ISC 23 03:52:37.4±0.9, 41°30N±0.°02×22°73E±0.°02, h8km±6km, n52, σ0°72/83, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
VAY	**Valandovo**	**0.12**	**280**	P		**Pg**	**03 52 39.8**	**-0.3**
VAY				S		**Sg**	**03 52 42.1**	**+0.2**
VAY	**Valandovo**	**0.12**	**280**	*e*Pg		**Pg**	**03 52 39.9**	**-0.2**
VAY				*e*Sg		**Sg**	**03 52 42.2**	**+0.2**
VAY	**Valandovo**	**0.12**	**280**	*i* Pg		**Pg**	**03 52 39.8**	**-0.2**
VAY				*i* Sg		**Sg**	**03 52 42.1**	**+0.2**
VAY				*e*Lg		Lg	03 52 42.2	
	comp=E,732nm,0.2s							
VAY				*e*Lg		Lg	03 52 42.2	
	comp=N,3µm,0.3s							
VAY	**Valandovo**	**0.12**	**280**	*e*Pg		**Pg**	**03 52 39.9**	**-0.2**
VAY				*e*Sg		**Sg**	**03 52 42.2**	**+0.2**
GRG	**Griva**	**0.42**	**216**	P		**Pg**	**03 52 45.7**	**+0.2**
GRG				S		**Sg**	**03 52 51.6**	**+0.4**
GRG	**Griva**	**0.42**	**216**	*e*PB		**Pg**	**03 52 45.8**	**+0.2**
GRG				*e*SB		**Sg**	**03 52 51.5**	**+0.4**
GRG	**Griva**	**0.42**	**216**	P		**Pg**	**03 52 45.7**	**+0.2**
GRG				*e*Sb		**Sg**	**03 52 51.5**	**+0.4**
KKB	**Krupnik**	**0.63**	**25**	P		**Pg**	**03 52 49.2**	**-0.3**
KKB	**Krupnik**	**0.63**	**25**	P		**Pg**	**03 52 49.2**	**-0.3**
SOH	**Sokhos**	**0.67**	**135**	P		**Pg**	**03 52 50.0**	**-0.3**
SOH				S		**Sg**	**03 52 59.5**	**+0.4**
SOH	**Sokhos**	**0.67**	**135**	*e*PN		**Pg**	**03 52 50.1**	**-0.3**
SOH	**Sokhos**	**0.67**	**135**	P		**Pg**	**03 52 50.0**	**-0.3**
SOH				S		**Sg**	**03 52 59.5**	**+0.4**
SRS	**Serrai**	**0.68**	**105**	P		**Pg**	**03 52 50.0**	**-0.4**
SRS				S		**Sg**	**03 52 59.3**	**+0.1**
SRS	**Serrai**	**0.68**	**105**	P		**Pg**	**03 52 50.0**	**-0.4**
SRS				S		**Sg**	**03 52 59.3**	**+0.1**
THE	**Thessaloniki**	**0.69**	**165**	P		**Pg**	**03 52 50.4**	**-0.2**
THE				S		**Sg**	**03 53 00.7**	**+1.1**
THE	**Thessaloniki**	**0.69**	**165**	P		**Pg**	**03 52 50.4**	**-0.2**
THE				S		**Sg**	**03 53 00.7**	**+1.1**
HORT	**Hortiatis**	**0.76**	**158**	P		**Pg**	**03 52 51.5**	**-0.4**
HORT	**Hortiatis**	**0.76**	**158**	P		**Pg**	**03 52 51.5**	**-0.4**
MMB	**Musomiste**	**0.81**	**69**	P		**Pg**	**03 52 52.5**	**-0.3**
MMB	**Musomiste**	**0.81**	**69**	P		**Pg**	**03 52 52.5**	**-0.3**
NVR	**Nevrokopi**	**0.85**	**86**	*e*PN		**Pg**	**03 52 53.2**	**-0.6**
NVR				*e*SN		**Sg**	**03 53 04.9**	**0.0**
NVR	**Nevrokopi**	**0.85**	**86**	*e*Pn		**Pg**	**03 52 53.2**	**-0.6**
NVR				*e*Sn		**Sg**	**03 53 04.9**	**0.0**
PLG	**Polygyros**	**1.07**	**149**	*e*PN		**Pg**	**03 52 56.7**	**-1.2**
PLG				*e*SN		**Sg**	**03 53 12.4**	**+0.5**
PLG	**Polygyros**	**1.07**	**149**	*e*Pn		**Pg**	**03 52 56.7**	**-1.2**
PLG				*e*Sn		**Sg**	**03 53 12.4**	**+0.5**
FNA	**Florina**	**1.15**	**244**	P		**Pb**	**03 52 58.7**	**-0.7**
FNA				S		**Sn**	**03 53 15.7**	**+0.1**
FNA	**Florina**	**1.15**	**244**	P		**Pb**	**03 52 58.7**	**-0.7**
FNA				S		**Sn**	**03 53 15.7**	**+0.1**
LIT	**Litokhoron**	**1.21**	**189**	P		**Pb**	**03 52 59.7**	**-0.8**
LIT	**Litokhoron**	**1.21**	**189**	*e*PN		**Pb**	**03 52 59.4**	**-1.1**
LIT	**Litokhoron**	**1.21**	**189**	*e*Pn		**Pb**	**03 52 59.4**	**-1.1**
LIT	**Litokhoron**	**1.21**	**189**	P		**Pb**	**03 52 59.7**	**-0.8**
VTS	**Vitosha**	**1.34**	**15**	P		**Pn**	**03 53 02.5**	**0.0**
VTS	**Vitosha**	**1.34**	**15**	P		**Pn**	**03 53 02.5**	**0.0**
VTS	**Vitosha**	**1.34**	**15**	*e*Pg		**Pn**	**03 53 02.6**	**0.0**
VTS				*e*Sg		**Sb**	**03 53 20.2**	**0.0**
VTS	**Vitosha**	**1.34**	**15**	*e*Pg		**Pn**	**03 53 02.6**	**0.0**
VTS				*e*Sg		**Sb**	**03 53 20.2**	**0.0**
OUR	**Ouranopolis**	**1.35**	**135**	P		**Pn**	**03 53 02.1**	**-0.4**
OUR				S		**Sg**	**03 53 21.8**	**+0.9**
OUR	**Ouranopolis**	**1.35**	**135**	P		**Pn**	**03 53 02.1**	**-0.4**
OUR				S		**Sg**	**03 53 21.8**	**+0.9**
KAVA	**Kavala**	**1.38**	**102**	P		**Pn**	**03 53 02.3**	**-0.6**
KAVA				S		**Sg**	**03 53 22.4**	**+0.6**
KAVA	**Kavala**	**1.38**	**102**	P		**Pn**	**03 53 02.3**	**-0.6**
KAVA				S		**Sg**	**03 53 22.4**	**+0.6**
RZN	**Rozhen**	**1.54**	**75**	*e*P		**Pn**	**03 53 05.7**	**+0.4**
RZN	**Rozhen**	**1.54**	**75**	*e*P		**Pn**	**03 53 05.7**	**+0.4**
PAIG	**Paliouri**	**1.55**	**152**	P		**Pn**	**03 53 05.3**	**+0.1**
PAIG	**Paliouri**	**1.55**	**152**	P		**Pn**	**03 53 05.3**	**+0.1**
BARS	**Barje**	**1.66**	**336**	*e*Pn		**Pb**	**03 53 07.7**	**-0.5**
BARS				*e*Sg		**Sb**	**03 53 29.8**	**+0.5**
BARS	**Barje**	**1.66**	**336**	*e*Pn		**Pb**	**03 53 07.7**	**-0.5**
BARS				*e*Sg		**Sb**	**03 53 29.8**	**+0.5**
PLD	**Plovdiv**	**1.68**	**61**	*e*Pn		**Pg**	**03 53 10.3**	**+0.7**
PLD				*e*Sg		**Sg**	**03 53 33.8**	**+2.3**
ZAPS	**Zavoj**	**1.97**	**358**	*e*Sg		**Sg**	**03 53 40.4**	**-0.4**
MPEP	**Malo Peshtene**	**2.19**	**20**	Pg		**Pg**	**03 53 18.5**	**-0.8**
SELS	**Selova**	**2.26**	**329**	*e*Pg		**Pb**	**03 53 18.6**	**+0.2**
SELS				*e*Sg		**Sg**	**03 53 48.8**	**-1.2**
ALN	**Alexandroupoli**	**2.54**	**98**	*e*PB		**Pn**	**03 53 20.1**	**+1.3**
ALN	**Alexandroupoli**	**2.54**	**98**	*e*Pb		**Pn**	**03 53 20.1**	**+1.3**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn		**Pn**	**03 53 26.9**	**+1.9**
GRUS				*e*Sg		**Sg**	**03 54 12.0**	**-1.2**
GRUS	**Gruza**	**2.98**	**331**	*e*Pn		**Pn**	**03 53 26.9**	**+1.9**
GRUS				*e*Sg		**Sg**	**03 54 12.0**	**-1.2**

ISCJB ***23*** *04:00:03.5±0.5, 18.°76S±0.°04×69.°65W±0.°08, h93km±5km, mb4.0/6, Error ellipse: s-maj=12.5km s-min=6.2km az=171.9*
GUC ***23*** *04:00:04.4±0.7, 18.°82S×69.°89W, h93km±3km, ML4.7*
NEIC ***23*** *04:00:04.5±0.5, 18.°74S×69.°62W, h87km±6km, mb4.1/3, Error ellipse: s-maj=12.0km s-min=7.7km az=95.0*
NEIC Felt [II] at Arica, Camina, Huara and Putre.
IDC ***23*** *04:00:05.1±0.7, 18.°80S×69.°52W, h93km±6km, mb4.0/5, mb1 4.1/7, mb1mx3.8/19, mbtmp4.0/7, Error ellipse: s-maj=20.9km s-min=12.4km az=82.0*

ISC 23 04:00:04.3±0.6, 18°76S±0.°05×69°79W±0.°08, h95km±4km, n43, σ1°14/61, mb4.1/7, 8C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op		ISC	h m s	ISC
MNMC	**Minimini**	**0.41**	**154**	*e*P		**Pn**	**04 00 19.7**	**+0.4**
MNMC				*i* S		**Sn**	**04 00 30.8**	**+0.3**
MNMC	**Minimini**	**0.41**	**154**	*e*P		**Pn**	**04 00 19.7**	**+0.4**
MNMC				*i* S		**Sn**	**04 00 30.8**	**+0.3**
MNMC				AML		AML	04 00 32.4	
	comp=E,48µm,0.6s							
ARCH	**Arica**	**0.55**	**299**	*e*P		**Pn**	**04 00 19.7**	**-0.2**
ARCH				*i* S		**Sn**	**04 00 30.9**	**-0.7**
ARCH	**Arica**	**0.55**	**299**	*e*P		**Pn**	**04 00 19.7**	**-0.2**
ARCH				*i* S		**Sn**	**04 00 30.9**	**-0.7**
ARCH				AML		AML	04 00 31.8	
	comp=E,68µm,0.6s							
PSGC	**Pisagua**	**0.89**	**201**	⇑*i*P		**Pn**	**04 00 22.9**	**-0.4**
PSGC				*i* S		**Sn**	**04 00 36.6**	**-1.0**
PSGC	**Pisagua**	**0.89**	**201**	⇑*i*P		**Pn**	**04 00 22.9**	**-0.4**
PSGC				*i* S		**Sn**	**04 00 36.6**	**-1.0**
PSGC				AML		AML	04 00 37.2	
	comp=N,27µm,0.4s							
HMBC	**Humberstone**	**1.52**	**184**	⇑*i*P		**Pn**	**04 00 30.4**	**-0.2**
HMBC				*e*S		**Sn**	**04 00 49.9**	**-0.7**
HMBC	**Humberstone**	**1.52**	**184**	⇑*i*P		**Pn**	**04 00 30.4**	**-0.2**
HMBC				*e*S		**Sn**	**04 00 49.9**	**-0.7**
HMBC				AML		AML	04 00 53.3	
	comp=N,6µm,0.5s							
PB01	**Plate Boundary**	**2.29**	**173**	⇓*e*P		**Pn**	**04 00 40.8**	**+0.2**
PB01				S		**Sn**	**04 01 06.8**	**-1.6**
PB01	**Plate Boundary**	**2.29**	**173**	⇓*e*P		**Pn**	**04 00 40.8**	**+0.2**
PB01				*e*S		**Sn**	**04 01 06.8**	**-1.6**
LPAZ	**La Paz**	**2.92**	**33**	⇑*i*P		**Pn**	04 00 52.8	+3.4
LPAZ	**La Paz**	**2.92**	**33**	P		Pn	04 00 52.9	+3.4
	comp=N,17nm,0.3s,baz=221,slow=6.7,SNR=521							
PB09	**Plate Boundary**	**3.06**	**170**	*e*P		**Pn**	**04 00 51.8**	**+0.8**
PB09				S		**Sn**	**04 01 26.6**	**-0.4**
PB09	**Plate Boundary**	**3.06**	**170**	*e*P		**Pn**	**04 00 51.8**	**+0.8**
PB09				*e*S		**Sn**	**04 01 26.6**	**-0.4**
PB09				AML		AML	04 01 52.0	
	comp=E,4µm,0.7s							
PB04	**Plate Boundary**	**3.50**	**175**	P		**Pn**	**04 00 57.5**	**+0.8**
PB04				S		**Sn**	**04 01 34.2**	**-2.9**
PB04	**Plate Boundary**	**3.50**	**175**	⇑*i*P		**Pn**	**04 00 57.5**	**+0.8**
PB04				*e*S		**Sn**	**04 01 34.2**	**-2.9**
PB04				AML		AML	04 02 00.6	
	comp=E,863nm,0.7s							
LVC	**Limon Verde**	**3.92**	**168**	⇑*e*P		**Pn**	**04 01 03.9**	**+1.3**
LVC	**Limon Verde**	**3.92**	**168**	⇑*e*P		**Pn**	**04 01 03.9**	**+1.3**
LVC	**Limon Verde**	**3.92**	**168**	P		**Pn**	**04 01 04.0**	**+1.4**
	comp=E,7.7nm,0.3s,baz=337,slow=7.0,SNR=61							
LVC				S		**Sn**	**04 01 46.4**	**-1.3**
	comp=E,29nm,0.3s,baz=348,slow=11,SNR=3.7							
CEN1	**Los Morros**	**4.62**	**185**	P		**Pn**	**04 01 13.8**	**+1.9**
**CEN1

ARMT	**Armutlu**	**1.25**	**44**	*e*Pn	**Pg**	**04 08 02.7**	**-0.3**
TVSB	**Tavsanli**	**1.37**	**99**	*e*PN	**Pn**	**04 08 04.5**	**+0.2**
TVSB	**Tavsanli**	**1.37**	**99**	*e*Pn	**Pn**	**04 08 04.5**	**+0.2**
KULA	**Kula-Manisa**	**1.38**	**147**	*e*PN	**Pn**	**04 08 04.5**	**+0.1**
KULA	**Kula-Manisa**	**1.38**	**147**	*e*Pn	**Pn**	**04 08 04.5**	**+0.1**
BLCB	**Balcova**	**1.39**	**202**	*e*PN	**Pb**	**04 08 05.1**	**0.0**
BLCB	**Balcova**	**1.39**	**202**	*e*Pn	**Pb**	**04 08 05.1**	**0.0**
CTKS	**Kestanelik-??a**	**1.67**	**21**	*e*PN	**Pn**	**04 08 08.7**	**+0.4**
CTKS	**Kestanelik-??a**	**1.67**	**21**	*e*Pn	**Pn**	**04 08 08.7**	**+0.4**

ISCJB ***23*** *04:12:30.4±0.4, 39°.67N±0°.02×27°.71E±0°.03, h4km±4km, Error ellipse: s-maj=4.2km s-min=3.7km az=146.6*
CSEM ***23*** *04:12:30.7±0.1, 39°.68N×27°.72E, h5km, MD2.9, Error ellipse: s-maj=2.7km s-min=2.3km az=81.0*
DDA ***23*** *04:12:30.1, 39°.69N×27°.69E, h11km, MD3.3*
ISK ***23*** *04:12:30.2, 39°.68N×27°.73E, h5km, MD2.9*

ISC 23 04:12:30.6±0.9, 39°.69N±0°.02×27°.72E±0°.02, h9km±6km, n53, σ0°.9±43°/68, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.10**	**304**	*i* Pg		**Pg**	**04 12 32.9**	**-0.2**
BALY				*i* Sg		**Sg**	**04 12 34.7**	**-0.2**
BALB	**Balikesir**	**0.13**	**111**	*e*PG		**Pg**	**04 12 33.6**	**+0.1**
BALB				*e*SG		**Sg**	**04 12 35.9**	**+0.3**
BALB	**Balikesir**	**0.13**	**111**	*e*Pg		**Pg**	**04 12 33.6**	**+0.1**
BALB				*e*Sg		**Sg**	**04 12 35.9**	**+0.3**
GONE	**Gonen-Balikesi**	**0.36**	**355**	*e*PG		**Pg**	**04 12 37.9**	**+0.2**
GONE				*e*SG		**Sb**	**04 12 43.9**	**-1.1**
GONE	**Gonen-Balikesi**	**0.36**	**355**	*e*Pg		**Pg**	**04 12 37.9**	**+0.2**
GONE				*e*Sg		**Sb**	**04 12 43.9**	**-1.1**
DURS	**Dursunbey**	**0.59**	**98**	*e*P		**Pg**	**04 12 42.2**	**+0.2**
DURS				*e*S		**Sg**	**04 12 50.4**	**+0.7**
DURS	**Dursunbey**	**0.59**	**98**	*e*P		**Pg**	**04 12 42.2**	**+0.2**
DURS				*e*S		**Sg**	**04 12 50.4**	**+0.7**
BNT	**Bandirma**	**0.69**	**13**	*e*PG		**Pg**	**04 12 43.9**	**+0.1**
BNT	**Bandirma**	**0.69**	**13**	*e*Pg		**Pg**	**04 12 43.9**	**+0.1**
KCTX	**Karacabey (Bur**	**0.76**	**40**	*e*PG		**Pg**	**04 12 45.2**	**0.0**
KCTX				*e*SG		**Sb**	**04 12 56.0**	**-0.3**
KCTX	**Karacabey (Bur**	**0.76**	**40**	*e*Pg		**Pg**	**04 12 45.2**	**0.0**
KCTX				*e*Sg		**Sb**	**04 12 56.0**	**-0.3**
KRBG	**Karabiga-Canak**	**0.78**	**335**	*e*PG		**Pg**	**04 12 45.5**	**-0.1**
KRBG	**Karabiga-Canak**	**0.78**	**335**	*e*Pg		**Pg**	**04 12 45.5**	**-0.1**
AKHS	**Akhisar**	**0.81**	**175**	*e*P		**Pg**	**04 12 45.6**	**-0.6**
AKHS				*e*S		**Sg**	**04 12 56.6**	**-0.1**
AKHS	**Akhisar**	**0.81**	**175**	*e*P		**Pg**	**04 12 45.6**	**-0.6**
AKHS				*e*S		**Sg**	**04 12 56.6**	**-0.1**
AYVA	**Ayvalik**	**0.88**	**245**	*e*P		**Pg**	**04 12 47.4**	**-0.2**
AYVA				*e*S		**Sg**	**04 12 59.0**	**-0.1**
AYVA	**Ayvalik**	**0.88**	**245**	*e*P		**Pg**	**04 12 47.4**	**-0.2**
AYVA				*e*S		**Sg**	**04 12 59.0**	**-0.1**
ORLT	**Orhaneli**	**0.97**	**68**	*e*PG		**Pg**	**04 12 49.0**	**-0.3**
ORLT	**Orhaneli**	**0.97**	**68**	*e*Pg		**Pg**	**04 12 49.0**	**-0.3**
DEMI	**Demirci**	**1.00**	**130**	*e*P		**Pg**	**04 12 50.1**	**+0.2**
DEMI				*e*S		**Sb**	**04 13 03.7**	**+0.2**
DEMI	**Demirci**	**1.00**	**130**	*e*P		**Pg**	**04 12 50.1**	**+0.2**
DEMI				*e*S		**Sb**	**04 13 03.7**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.08**	**337**	*e*PN		**Pn**	**04 12 52.5**	**+0.5**
RKY	**Sarkoy-Tekirda**	**1.08**	**337**	*e*Pn		**Pn**	**04 12 52.5**	**+0.5**
MDNY	**Mudanya-Bursa**	**1.12**	**52**	*e*PN		**Pb**	**04 12 51.9**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.12**	**52**	*e*Pn		**Pb**	**04 12 51.9**	**-0.2**
MFT	**Murefte**	**1.15**	**343**	*e*PN		**Pg**	**04 12 52.8**	**+0.1**
MFT	**Murefte**	**1.15**	**343**	*e*Pn		**Pg**	**04 12 52.8**	**+0.1**
GELI	**Tayfur-Gelibol**	**1.19**	**307**	*e*PN		**Pg**	**04 12 54.7**	**+1.2**
GELI	**Tayfur-Gelibol**	**1.19**	**307**	*e*Pn		**Pg**	**04 12 54.7**	**+1.2**
ARMT	**Armutlu**	**1.24**	**44**	*e*PN		**Pn**	**04 12 54.1**	**0.0**
ARMT	**Armutlu**	**1.24**	**44**	*e*Pn		**Pn**	**04 12 54.1**	**0.0**
IZM	**Izmir**	**1.34**	**196**	*e*PN		**Pb**	**04 12 55.8**	**0.0**
IZM	**Izmir**	**1.34**	**196**	*e*Pn		**Pb**	**04 12 55.8**	**0.0**
TVSB	**Tavsanli**	**1.36**	**99**	*e*PN		**Pg**	**04 12 56.8**	**0.0**
TVSB	**Tavsanli**	**1.36**	**99**	*e*Pn		**Pg**	**04 12 56.8**	**0.0**
KULA	**Kula-Manisa**	**1.38**	**148**	*e*PN		**Pb**	**04 12 56.7**	**+0.1**
KULA	**Kula-Manisa**	**1.38**	**148**	*e*Pn		**Pb**	**04 12 56.7**	**+0.1**
BLCB	**Balcova**	**1.40**	**202**	*e*PN		**Pb**	**04 12 57.0**	**+0.1**
BLCB	**Balcova**	**1.40**	**202**	*e*Pn		**Pb**	**04 12 57.1**	**+0.1**
YLV	**Yalova**	**1.54**	**55**	*e*PN		**Pb**	**04 12 59.0**	**-0.3**
YLV	**Yalova**	**1.54**	**55**	*e*Pn		**Pb**	**04 12 59.0**	**-0.3**
BUY	**Buyukada**	**1.58**	**42**	*e*PN		**Pb**	**04 12 59.7**	**-0.2**
BUY	**Buyukada**	**1.58**	**42**	*e*Pn		**Pb**	**04 12 59.7**	**-0.2**
SLVT	**Silivri**	**1.58**	**13**	*e*PN		**Pb**	**04 13 00.2**	**+0.1**
SLVT	**Silivri**	**1.58**	**13**	*e*Pn		**Pb**	**04 13 00.2**	**+0.1**
CTKS	**Kestanelik-??a**	**1.66**	**21**	*e*PN		**Pb**	**04 13 01.8**	**+0.5**
CTKS	**Kestanelik-??a**	**1.66**	**21**	*e*Pn		**Pb**	**04 13 01.8**	**+0.5**
ISK	**Istanbul-Kandi**	**1.71**	**36**	*e*PN		**Pb**	**04 13 01.5**	**-0.8**
ISK	**Istanbul-Kandi**	**1.71**	**36**	*e*Pn		**Pb**	**04 13 01.5**	**-0.8**
KLYT	**Kilyos**	**1.85**	**32**	*e*PN		**Pb**	**04 13 04.0**	**-0.7**
KLYT	**Kilyos**	**1.86**	**32**	*e*Pn		**Pb**	**04 13 04.0**	**-0.7**
ALT	**Altintas**	**1.96**	**108**	*e*PN		**Pn**	**04 13 04.2**	**+0.2**
ALT	**Altintas**	**1.96**	**108**	*e*Pn		**Pn**	**04 13 04.2**	**+0.2**

ROM 23 04:22:10.4±0.3, 42°.47N×13°.38E, h14km±4km, Md1.5/3, Ml1.1/2, Error ellipse: s-maj=8.7km s-min=2.3km az=13.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.07**	**17**	Pg		Pg	04 22 13.8	+0.3
CAMP				Sg		Sg	04 22 15.8	+0.2
LNSS	**Leonessa**	**0.28**	**299**	Pg		Pg	04 22 16.8	+0.2
LNSS				Sg		Sg	04 22 21.5	+0.7
	18nm,0.2s							
NRCA	**Norcia**	**0.42**	**332**	Pg		Pg	04 22 18.9	0.0
NRCA				Sg		Sb	04 22 25.4	-0.5
	126nm,2.5s							

IDC 23 04:22:48.5±3.7, 5°.33N×94°.74E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/26, mbtmp3.7/4, Error ellipse: s-maj=300.9km s-min=24.1km az=49.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**46.33**	**124**	P		P	04 31 16.7	+0.1
	0.1nm,0.2s,baz=301,slow=9.8,SNR=8.5							
ASAR	**Alice Springs**	**47.86**	**129**	P		P	04 31 28.3	-0.3
	0.3nm,0.6s,baz=301,slow=7.8,SNR=3.8							
FINES	**FINESS Array B**	**75.22**	**332**	P		P	04 34 33.0	+0.2
	1.1nm,0.4s,baz=98,slow=7.4,SNR=7.9							
ARCES	**ARCESS Array B**	**77.84**	**340**	P		P	04 34 47.4	-0.2
	2.4nm,1.1s,baz=98,slow=6.7,SNR=8.7							

KRSC 23 04:24:08.0±1.1, 50°.12N×157°.03E, h5km±5km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.81**	**314**	P		Pb	04 24 24.7	+0.1
SKR				S		Sb	04 24 36.5	+0.7
ASAK	**Asacha**	**2.33**	**13**	P		Pn	04 24 48.2	+1.1
MTVR	**Mutnovka**	**2.48**	**17**	S		Sn	04 25 21.6	+1.7
RUS	**Russkaya**	**2.50**	**21**	P		Pn	04 24 50.4	+1.2
RUS				S		Sn	04 25 21.8	+1.8
SPN	**Mys Shipunski**	**3.52**	**31**	S		Sn	04 25 48.4	+3.2
MKZ	**Mys Kozlova**	**5.29**	**31**	P		Pn	04 25 28.9	+1.3

NNC ***23*** *04:29:07.1±3.9, 37°.89N×70°.73E, h0km, mb4.4, mpv4.0, Error ellipse: s-maj=32.6km s-min=26.4km az=131.0*

ISC 23 04:28:53.2±1.0, 37°.12N±0°.07×71°.2E±0°.1, h10km, n17, σ2°.8±97°/16, 4C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.34**	**170**	P		Pg	04 30 00.2	+3.1
CEP				S		**Sg**	**04 30 43.0**	**+2.7**
THN	**Thein Dam**	**5.96**	**140**	*e*PKP		Pn	04 30 28.0	+6.6
THN				*ex*		**Sn**	**04 31 32.5**	**+2.7**
KK31	**Karatay Array**	**6.00**	**355**	⇓P		Pn	04 30 26.7	+4.7
	7.1nm,0.3s,baz=178,slow=13,SNR=188							
KK31				⇓S		**Sn**	**04 31 28.5**	**-2.3**
	17nm,0.5s,baz=177,slow=21,SNR=16							
TKM2	**Tokmak 2**	**6.70**	**29**	⇓Pg		**Pb**	**04 30 52.4**	**+2.6**
	1.2nm,0.5s							
TKM2				⇑Lg		Lg	04 30 57.0	
	1.5nm,0.5s							
SMLA	**Simla**	**7.75**	**139**	*i* S		**Sn**	**04 32 10.5**	**-3.2**
AYAN	**Aya Nagar**	**9.94**	**148**	*e*S		Sn	04 33 00.4	-7.3
KUDL	**Kundal**	**9.99**	**152**	*e*S		**Sn**	**04 33 05.0**	**-3.8**
KUDL					AML	AML	04 33 47.9	
	comp=N,3.2nm,0.5s							
KUDL					AML	AML	04 33 48.8	
	comp=E,3.2nm,0.4s							
AGRA	**Agra**	**11.38**	**148**	*ex*		x	04 32 17.3	
AGRA					AML	AML	04 33 38.0	
	comp=E,81nm,0.2s							
AGRA					AML	AML	04 33 39.6	
	comp=N,92nm,0.6s							
DANN	**Dangsing**	**13.69**	**126**	*e*P		**Pn**	**04 32 07.1**	**-0.6**
	comp=N,11nm,0.4s							
KOLN	**Koldanda**	**13.99**	**128**	*e*P		**Pn**	**04 32 10.6**	**-1.1**
	comp=N,10nm,0.4s							
AB31	**Akbulak array**	**14.63**	**330**	⇑P		**Pn**	**04 32 21.7**	**+1.5**
	comp=N,1.5nm,0.4s,baz=143,slow=12,SNR=38							
PKI	**Pulchoki**	**15.29**	**124**	*e*P		**Pn**	**04 32 26.9**	**-2.6**
	comp=N,3.2nm,0.2s							
GUN	**Gumba**	**15.39**	**122**	*e*P		**Pn**	**04 32 29.8**	**-0.9**
	comp=N,17nm,0.7s							
AKTO	**Aktyubinsk**	**16.34**	**329**	⇑P		**P**	**04 32 48.0**	**+2.5**
	comp=N,7.6nm,0.5s							
AKTO				⇑S		**Sn**	**04 35 38.2**	**-5.5**
	comp=N,1.7nm,0.8s							
RAMN	**Ramite**	**16.50**	**124**	*e*P		**Pn**	**04 32 42.1**	**-2.8**
	comp=N,5.3nm,0.3s							
TAPN	**Taplejung**	**16.99**	**120**	*e*P		**Pn**	**04 32 49.3**	**-2.0**
	comp=N,4.2nm,0.3s							
ODAN	**Odare**	**17.09**	**122**	*e*P		**Pn**	**04 32 50.8**	**-1.6**
	comp=N,8.1nm,0.5s							

IDC 23 04:38:05.8±1.1, 14°.93S×166°.89E, h0km, mb3.8/7, mb1 4.0/8, mb1mx3.8/22, mbtmp3.8/8, ML3.7/1, MS3.2/2, Ms1 3.2/2, ms1mx2.9/24, Error ellipse: s-maj=36.1km s-min=24.6km az=131.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.12**	**183**	Pn		Pn	04 39 51.5	+0.1
	1.2nm,0.3s,baz=21,slow=23,SNR=20							
DZM				Sn		Sn	04 41 07.7	-5.5
	0.1nm,0.3s,baz=288,slow=20,SNR=2.3							
DZM				LR		LR	04 42 07.2	
	comp=Z,152nm,21.4s,baz=289,slow=34							
WRA	**Warramunga Arr**	**31.42**	**256**	P		P	04 44 28.6	-0.5
	0.2nm,0.4s,baz=83,slow=7.8,SNR=5.6							
ASAR	**Alice Springs**	**32.26**	**249**	P		P	04 44 35.5	-1.0
	0.3nm,0.5s,baz=77,slow=9.3,SNR=3.6							
ASAR					LR	LR	04 56 11.8	
	comp=Z,71nm,20.9s,baz=157,slow=34							
FITZ	**Fitzroy Crossi**	**39.62**	**260**	P		P	04 45 39.8	+0.3
	1.8nm,0.9s,baz=60,slow=7.2,SNR=4.8							
QSPA	**South Pole Qui**	**75.10**	**180**	P		P	04 49 50.0	+0.3
	0.7nm,0.9s,baz=342,slow=3.2,SNR=3.2							
ILAR	**Eielson Array**	**86.83**	**18**	P		P	04 50 51.6	-0.2
	0.6nm,0.6s,baz=236,slow=4.9,SNR=14							
MKAR	**Makanchi Array**	**97.10**	**316**	P		Pdif	04 51 41.1	+1.0
	0.1nm,0.3s,baz=119,slow=5.1,SNR=6.3							
YKA	**Yellowknife Ar**	**97.89**	**27**	P		P	04 51 41.1	-2.0
	0.2nm,0.6s,baz=259,slow=5.0,SNR=4.3							
ARCES	**ARCESS Array B**	**120.35**	**345**	PKP		PKPdf	04 56 59.5	+0.9
	1.3nm,0.8s,baz=35,slow=4.4,SNR=3.7							

MOS ***23*** *04:49:17.6±1.2, 35°.49N×30°.03E, h33km, mb4.6/20, Error ellipse: s-maj=7.9km s-min=4.7km az=95.3*
DDA ***23*** *04:49:18.6, 35°.78N×30°.05E, h18km, ML4.5*
CSEM ***23*** *04:49:21.9±0.1, 35°.97N×30°.06E, h15km, MD4.0, Mw4.2, Error ellipse: s-maj=4.0km s-min=2.2km az=32.0*
ATH ***23*** *04:49:21.3, 36°.06N×29°.91E, h18km±1km, MD4.0/21*
NEIC ***23*** *04:49:21.0, 35°.97N×30°.05E, h12km, mb4.5/12, ML4.2(ISK), After ISK.*
NSSC ***23*** *04:49:21.5±3.1, 35°.96N×30°.24E, h0km±251km, ML3.4*
HLW ***23*** *04:49:21.3, 36°.25N×30°.08E, h33km±12km, Md4.1, Ml4.3*
IDC ***23*** *04:49:23.9±1.4, 36°.01N×30°.16E, h46km±15km, mb3.8/17, mb1 3.9/24, mb1mx3.9/33, mbtmp3.9/24, ML4.1/7, MS3.1/9, Ms1 3.1/9, ms1mx2.8/46, Error ellipse: s-maj=12.1km s-min=11.0km az=75.0*
NIC ***23*** *04:49:24.1±0.3, 36°.01N×30°.20E, h15km, mb4.4, ML4.1, MW4.0*
THE ***23*** *04:49:24.8, 36°.01N×30°.02E, h36km±10km, ML4.3/3, Error ellipse: s-maj=10.4km s-min=1.6km az=169.0*

ISC 23 04:49:22.4±0.9, 35°.95N±0°.03×30°.08E±0°.02, h31km±6km, n366, σ1°.9±47°/383, mb4.3/35, MS3.3/3, 18C-10D, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.47**	**306**	*i* P		**Pb**	**04 49 30.9**	**-1.7**
AKAS				*i* S		**Sb**	**04 49 38.3**	**-1.3**
AKAS	**Kas**	**0.47**	**306**	*i* P		**Pb**	**04 49 30.9**	**-1.7**
AKAS				*i* S		**Sb**	**04 49 38.3**	**-1.3**
KORT	**Korkueli**	**1.07**	**12**	*i* Pn		**Pn**	**04 49 41.2**	**-0.2**
KORT				*i* Sn		**Sb**	**04 49 59.7**	**+3.6**
GOLH	**Golhisar**	**1.35**	**342**	*i* P		**Pb**	**04 49 47.0**	**-0.1**
GOLH				*i* S		**Sb**	**04 50 07.7**	**+3.7**
GOLH	**Golhisar**	**1.35**	**342**	*i* P		**Pb**	**04 49 47.0**	**-0.1**
GOLH				*i* S		**Sb**	**04 50 07.7**	**+3.7**
TURN	**Turunc**	**1.50**	**308**	*i* Pn		**Pb**	**04 49 50.4**	**+0.7**
TURN				*i* Sn		**Sb**	**04 50 11.1**	**+2.7**
ARG	**Arkhangelos**	**1.60**	**280**	*e*PN		**Pn**	**04 49 49.1**	**+0.6**
ARG				*e*SN		**Sn**	**04 50 09.4**	**+1.2**
ARG	**Arkhangelos**	**1.60**	**280**	*e*Pn		**Pn**	**04 49 49.1**	**+0.6**
ARG				*e*Sn		**Sn**	**04 50 09.4**	**+1.2**
GAZI	**Gazipasa**	**1.83**	**81**	*i* Pn		**Pn**	**04 49 52.9**	**+1.1**
GAZI				*i* Sn		**Sn**	**04 50 14.1**	**+0.2**
DNZL	**Cakiroluk**	**1.92**	**335**	*i* Pn		**Pb**	**04 49 56.0**	**-0.9**
DNZL				*i* Sn		**Sb**	**04 50 21.8**	**+1.3**
AKMC	**Akamas**	**2.06**	**116**	⇓P		**Pn**	**04 49 56.7**	**+1.9**
AKMC	**Akamas**	**2.06**	**116**	⇓P		**Pn**	**04 49 56.7**	**+1.9**
PPCY	**Paphos**	**2.14**	**119**	⇑P		**Pn**	**04 49 58.1**	**+2.2**
PPCY	**Paphos**	**2.14**	**119**	⇑P		**Pn**	**04 49 58.1**	**+2.2**
ALFC	**Alevga**	**2.20**	**110**	⇑P		**Pn**	**04 49 58.1**	**+1.2**
	24nm,0.2s							
ALFC				S		**Sn**	**04 50 25.2**	**+2.1**
ALFC	**Alevga**	**2.20**	**110**	⇑*e*P		**Pn**	**04 49 58.1**	**+1.2**
	24nm,0.2s							
ALFC				S		**Sn**	**04 50 25.2**	**+2.1**
ERMK	**Ermenek**	**2.39**	**72**	*i* Pn		**Pn**	**04 50 02.1**	**+2.5**
ERMK				*i* Sn		**Sb**	**04 50 33.0**	**-1.0**
KARP	**Karpathos**	**2.41**	**261**	*e*PN		**Pn**	**04 50 01.0**	**+1.3**
KARP				*e*SN		**Sn**	**04 50 28.7**	**+0.6**
KARP	**Karpathos**	**2.41**	**261**	*e*Pn		**Pn**	**04 50 01.0**	**+1.3**
KARP				*e*Sn		**Sn**	**04 50 28.7**	**+0.6**
NIS1	**Nisyros Isl.**	**2.43**	**286**	P		**Pn**	**04 50 00.9**	**+0.9**
NIS1				S		**Sn**	**04 50 28.3**	**-0.4**
NIS1	**Nisyros Isl.**	**2.43**	**286**	P		**Pn**	**04 50 00.9**	**+0.9**
NIS1				S		**Sn**	**04 50 28.3**	**-0.4**
AYDN	**Tasoluk**	**2.45**	**315**	*i* Pn		**Pn**	**04 50 01.7**	**+1.4**
AYDN				*i* Sn		**Sn**	**04 50 31.2**	**+1.9**
SZAC	**Souni-Zanaja**	**2.58**	**117**	P		**Pn**	**04 50 04.1**	**+2.0**
SZAC	**Souni-Zanaja**	**2.58**	**117**	P		**Pn**	**04 50 04.1**	**+2.0**
MAMC	**Mammari**	**2.68**	**106**	P		**Pb**	**04 50 08.6**	**-1.0**
MAMC	**Mammari**	**2.68**	**106**	P		**Pb**	**04 50 08.6**	**-1.0**
KULA	**Kula-Manisa**	**2.80**	**337**	P		**Pn**	**04 50 05.1**	**0.0**
KULA	**Kula-Manisa**	**2.80**	**337**	P		**Pn**	**04 50 05.1**	**0.0**
CSS	**Prodhromos**	**2.83**	**109**	P		**Pn**	**04 50 07.9**	**+2.4**
	6.3nm,0.5s							
CSS				S		**Sn**	**04 50 41.3**	**+2.7**
CSS	**Prodhromos**	**2.83**	**109**	P		**Pn**	**04 50 07.2**	**+1.7**
CSS	**Prodhromos**	**2.83**	**109**	*e*Pn		Pn	04 50 09.3	+3.8
CSS	**Prodhromos**	**2.83**	**109**	P		**Pn**	**04 50 07.2**	**+1.7**
CSS	**Prodhromos**	**2.83**	**109**	Pn		**Pn**	**04 50 07.8**	**+2.3**
CSS				S		**Sn**	**04 50 41.3**	**+2.7**
ALT	**Altintas**	**3.10**	**0**	P		**Pn**	**04 50 09.9**	**+0.7**
ALT	**Altintas**	**3.10**	**0**	P		**Pn**	**04 50 09.9**	**+0.7**
ZKR	**Zakros**	**3.26**	**256**	*e*PN		**Pn**	**04 50 13.1**	**+1.8**
ZKR				*e*SN		**Sn**	**04 50 49.4**	**+0.4**
ZKR	**Zakros**	**3.26**	**256**	*e*Pn		**Pn**	**04 50 13.1**	**+1.8**
ZKR				*e*Sn		**Sn**	**04 50 49.4**	**+0.4**
PHNC	**Paralimni**	**3.36**	**105**	⇓P		Pb	04 50 17.8	-3.5
	14nm,0.6s							
PHNC				S		**Sb**	**04 50 58.9**	**-2.8**
PHNC	**Paralimni**	**3.36**	**105**	⇓P		Pb	04 50 17.8	-3.5
	14nm,0.6s							
NPS	**Neapolis**	**3.70**	**261**	*e*PN		**Pn**	**04 50 18.9**	**+1.4**
NPS				*e*SN		**Sn**	**04 51 00.5**	**+0.5**
NPS	**Neapolis**	**3.70**	**261**	*e*Pn		**Pn**	**04 50 18.9**	**+1.4**
NPS				*e*Sn		**Sn**	**04 51 00.5**	**+0.5**
SANT	**Santorini**	**3.76**	**278**	P		**Pn**	**04 50 19.1**	**+0.8**
SANT	**Santorini**	**3.76**	**278**	*e*PN		**Pn**	**04 50 19.1**	**+0.8**
SANT				*e*SN		**Sn**	**04 51 01.5**	**0.0**
THR1	**Thera Island**	**3.76**	**278**	P		**Pn**	**04 50 19.1**	**+0.8**
THR1	**Thera Island**	**3.76**	**278**	P		**Pn**	**04 50 19.1**	**+0.8**
THR2	**Thira island,**	**3.79**	**279**	P		**Pn**	**04 50 18.6**	**0.0**
THR2	**Thira island,**	**3.79**	**279**	P		**Pn**	**04 50 18.6**	**0.0**
THR3	**Thira Island,**	**3.81**	**278**	P		**Pn**	**04 50 19.2**	**+0.3**
THR3	**Thira Island,**	**3.81**	**278**	P		**Pn**	**04 50 19.2**	**+0.3**
APE	**Apeiranthos**	**3.83**	**288**	⇑P		**Pn**	**04 50 20.1**	**+0.9**
APE	**Apeiranthos**	**3.83**	**288**	*e*PN		**Pn**	**04 50 19.5**	**+0.3**
APE	**Apeiranthos**	**3.83**	**288**	⇑*i*P		**Pn**	**04 50 20.1**	**+0.9**
APE	**Apeiranthos**	**3.83**	**288**	*e*Pn		**Pn**	**04 50 19.5**	**+0.3**
APE	**Apeiranthos**	**3.83**	**288**	P		**Pn**	**04 50 20.1**	**+0.9**
LAST	**Lasithi**	**3.83**	**259**	P		**Pn**	**04 50 20.2**	**+1.0**
LAST	**Lasithi**	**3.83**	**259**	*e*PN		**Pn**	**04 50 20.3**	**+1.0**
LAST				*e*SN		**Sn**	**04 51 04.6**	**+1.3**
LAST	**Lasithi**	**3.83**	**259**	*e*Pn		**Pn**	**04 50 20.3**	**+1.0**
LAST				*e*Sn		**Sn**	**04 51 04.6**	**+1.3**
CHOS	**Chios island**	**4.03**	**308**	P		**Pn**	**04 50 22.5**	**+0.5**
CHOS				S		**Sn**	**04 51 06.8**	**-1.3**
CHOS	**Chios island**	**4.03**	**308**	*e*PN		**Pn**	**04 50 22.5**	**+0.5**
CHOS	**Chios island**	**4.03**	**308**	P		**Pn**	**04 50 22.5**	**+0.5**
CHOS				S		**Sn**	**04 51 06.8**	**-1.3**
IDI	**Anoyia**	**4.28**	**263**	P		**Pn**	**04 50 26.2**	**+0.8**
IDI	**Anoyia**	**4.28**	**263**	*e*PN		**Pn**	**04 50 26.5**	**+1.1**
IDI	**Anoyia**	**4.28**	**263**	*e*Pn		**Pn**	**04 50 26.7**	**+1.3**
IDI				*e*S		**Sn**	**04 51 15.5**	**+1.2**
IDI	**Anoyia**	**4.28**	**263**	P		**Pn**	**04 50 26.2**	**+0.8**
IDI	**Anoyia**	**4.28**	**263**	*e*Pn		**Pn**	**04 50 26.5**	**+1.1**
IDI				*e*S		**Sn**	**04 51 15.5**	**+1.2**
SIVA	**Sivas**	**4.40**	**259**	P		**Pn**	**04 50 28.9**	**+1.9**
SIVA	**Sivas**	**4.40**	**259**	*e*PN		**Pn**	**04 50 29.1**	**+2.1**
SIVA	**Sivas**	**4.40**	**259**	*e*Pn		**Pn**	**04 50 29.1**	**+2.1**
ANTO	**Ankara**	**4.46**	**28**	*e*P		**Pn**	**04 50 29.7**	**+1.8**
ANTO	**Ankara**	**4.46**	**28**	*e*Pn		**Pn**	**04 50 29.7**	**+1.8**
ANTO	**Ankara**	**4.46**	**28**	⇑*i*P		**Pn**	**04 50 29.5**	**+1.6**
ANTO	**Ankara**	**4.46**	**28**	*e*P		**Pn**	**04 50 29.7**	**+1.8**
SIGR	**SIGRI**	**4.67**	**315**	P		**Pn**	**04 50 31.4**	**+0.7**
SIGR				S		**Sn**	**04 51 22.8**	**-1.1**
SIGR	**SIGRI**	**4.67**	**315**	P		**Pn**	**04 50 31.4**	**+0.7**
SIGR				S		**Sn**	**04 51 22.8**	**-1.1**
BR131	**Keskin Array S**	**4.70**	**36**	*e*Pn		**Pn**	**04 50 32.7**	**+1.4**
BR131				*e*S		Sn	04 51 32.2	+7.3
BR131	**Keskin Array S**	**4.70**	**36**	*e*Pn		**Pn**	**04 50 32.7**	**+1.4**
BRTR	**Keskin Array B**	**4.70**	**36**	P		**Pn**	**04 50 32.7**	**+1.4**
BRTR				S		**Sn**	**04 51 25.8**	**+0.9**
BRTR	**Keskin Array B**	**4.70**	**36**	P

AYT	Al 'Ayyat	6.30	171	P		Pn	04 50 54.8	+1.7
DYR	Agios Nikonas	6.30	280	*e*PN		Pn	04 50 56.1	+2.9
DYR	Agios Nikonas	6.30	280	*e*Pn		Pn	04 50 56.1	+2.9
HNAT	Natroun	6.32	176	P		Pn	04 50 54.8	+1.4
	baz=175							
HNAT	Natroun	6.32	176	P		Pn	04 50 54.8	+1.4
VLX	Vlachokerasia	6.35	285	*e*PN		Pn	04 50 56.3	+2.4
VLX	Vlachokerasia	6.35	285	*e*Pn		Pn	04 50 56.3	+2.4
LTBQ	Tobruq	6.42	235	*i* P		Pn	04 50 55.7	+0.9
	SNR=36							
EDRB	Edirne	6.43	337	P		Pn	04 50 55.1	+0.2
EDRB	Edirne	6.43	337	P		Pn	04 50 55.1	+0.2
HSAF	As Saff	6.44	168	P		Pn	04 50 56.5	+1.4
	baz=168							
HSAF	As Saff	6.44	168	P		Pn	04 50 56.5	+1.4
GLL	Jalalah	6.50	167	P		Pn	04 50 57.5	+1.5
	baz=167							
GLL	Jalalah	6.50	167	P		Pn	04 50 57.5	+1.5
GUR	Goura	6.50	290	*e*PN		Pn	04 50 59.4	+3.4
GUR	Goura	6.50	290	*e*Pn		Pn	04 50 59.4	+3.4
RMNI	Mount Ramon	6.63	142	Pn		Pn	04 50 58.9	+1.2
ITM	Ithomi	6.67	283	*e*PN		Pn	04 51 00.7	+2.4
ITM	Ithomi	6.67	283	*e*Pn		Pn	04 51 00.7	+2.4
PYL	PYLOS	6.79	280	*e*PN		Pn	04 51 01.3	+1.5
PYL	PYLOS	6.79	280	*e*Pn		Pn	04 51 01.3	+1.5
KALE	Kalithea	6.79	293	*e*PN		Pn	04 51 02.9	+3.0
KALE	Kalithea	6.79	293	*e*Pn		Pn	04 51 02.9	+3.0
ASF	Jabal al Asfar	6.80	122	P		Pn	04 51 01.6	+1.5
ASF	Jabal al Asfar	6.80	122	P		Pn	04 51 01.6	+1.5
	comp=E,2.3nm,0.3s,baz=207,slow=4.9,SNR=16							
ASF				LR		LR	04 54 48.7	
	comp=E,109nm,18.5s,baz=302,slow=48							
TRIZ	Trizonia	6.83	293	*e*PN		Pn	04 51 01.9	+1.5
TRIZ	Trizonia	6.83	293	*e*Pn		Pn	04 51 01.9	+1.5
HNKL	Nakhl	6.84	150	P		Pn	04 51 01.4	+0.7
	baz=151							
HNKL	Nakhl	6.84	150	P		Pn	04 51 01.3	+0.7
LAKA	Lakka	6.86	292	*e*PN		Pn	04 51 04.3	+3.4
LAKA	Lakka	6.86	292	*e*Pn		Pn	04 51 04.3	+3.4
ZFRI	Zfri	6.87	140	Pn		Pn	04 51 01.7	+0.7
AGG	Agios Georgios	6.88	299	*e*PN		Pn	04 51 04.1	+3.0
AGG	Agios Georgios	6.88	299	*e*Pn		Pn	04 51 04.1	+3.0
PRNI	Paran	6.95	142	Pn		Pn	04 51 02.7	+0.7
EFP	Efpalio	6.97	293	*e*PN		Pn	04 51 06.1	+3.7
EFP	Efpalio	6.97	293	*e*Pn		Pn	04 51 06.1	+3.7
MALT	Malatya	7.07	68	⇓P		Pn	04 51 11.3	+7.5
MALT	Malatya	7.07	68	*e*Pn		Pn	04 51 12.5	+8.6
MALT				*e*S		Sb	04 53 02.6	+14
MALT	Malatya	7.07	68	⇓ *i* P		Pn	04 51 11.3	+7.5
HRFI	Mount Harif	7.22	143	Pn		Pn	04 51 06.6	+0.8
MBRI	Mt Berech	7.37	145	Pn		Pn	04 51 09.1	+1.3
EIL	Elat	7.49	145	P		Pn	04 51 10.6	+1.2
EIL				S		Sn	04 52 31.4	-1.9
EIL	Elat	7.49	145	P		Pn	04 51 10.6	+1.2
	comp=E,9.4nm,0.3s,baz=287,slow=2.9,SNR=52							
EIL				S		Sn	04 52 31.4	-1.9
	comp=E,6.4nm,0.3s,baz=115,slow=14,SNR=3.9							
EIL	Elat	7.49	145	Pn		Pn	04 51 10.2	+0.8
EIL	Elat	7.49	145	P		Pn	04 51 10.6	+1.2
GRG	Griva	7.82	312	*e*PN		Pn	04 51 17.1	+3.1
GRG	Griva	7.82	312	*e*Pn		Pn	04 51 17.1	+3.1
LKD2	Lefkada island	8.02	293	*e*PN		Pn	04 51 19.2	+2.5
LKD2	Lefkada island	8.02	293	*e*Pn		Pn	04 51 19.2	+2.5
VTS	Vitosha	8.50	323	⇑P		Pn	04 51 27.2	+3.7
VTS	Vitosha	8.50	323	⇑ *i* P		Pn	04 51 27.2	+3.7
TIRR	Tirgusor	8.59	352	⇑P		Pn	04 51 29.4	+4.9
TIRR	Tirgusor	8.59	352	⇑ *i* P		Pn	04 51 29.4	+4.9
TLCR		9.27	354	⇑P		Pn	04 51 38.7	+4.8
TLCR		9.27	354	⇑ *i* P		Pn	04 51 38.7	+4.8
LJBD	Adjabya	9.66	241	*i* P		Pn	04 51 37.9	-1.4
	SNR=34							
MLR	Muntele Rosu	10.03	343	P		Pn	04 51 47.9	+3.5
MLR	Muntele Rosu	10.03	343	P		Pn	04 51 47.9	+3.5
	comp=E,0.2nm,0.3s,baz=259,slow=3.3,SNR=17							
MLR				LR		LR	04 56 06.9	
	comp=E,24nm,18.6s,baz=174,slow=40							
MLR	Muntele Rosu	10.03	343	P		Pn	04 51 47.9	+3.5
VOIR		10.21	340	⇑P		Pn	04 51 52.5	+5.7
VOIR		10.21	340	⇑ *i* P		Pn	04 51 52.5	+5.7
VRI	Vrincioaia	10.22	347	⇓P		Pn	04 51 52.8	+5.9
VRI	Vrincioaia	10.22	347	⇓ *i* P		Pn	04 51 52.8	+5.9
ANN	Anapa	10.46	30	*e*P		Pn	04 51 52.1	+2.0
ANN				*e*S		Sn	04 53 53.5	+7.3
ANN				pmax		pmax		
	comp=Z,13nm,0.4s							
ANN	Anapa	10.46	30	*e*P		Pn	04 51 52.1	+2.0
	comp=Z,13nm,0.4s							
TIP	Timpagrande	11.05	291	*e*Pn		Pn	04 51 57.4	-0.9
TIP				*e*S		Sn	04 53 58.7	-2.1
TIP	Timpagrande	11.05	291	*e*Pn		Pn	04 51 57.4	-0.9
TIP				*e*S		Sn	04 53 58.7	-2.1
CUC	Castrocucco	11.96	294	*e*Pn		Pn	04 52 10.3	-0.3
CUC	Castrocucco	11.96	294	*e*Pn		Pn	04 52 10.3	-0.3
BHD	Baghdad	12.08	99	*e*P		Pn	04 52 04.8	-7.6
BHD				*e*S		Sn	04 54 07.0	-19
BURAR	Bucovina Array	12.20	344	⇑P		Pn	04 52 20.1	+6.1
BUR08	Bucovina Ar. S	12.23	344	*e*Pn		Pn	04 52 19.8	+5.4
KBZ	Khabaz	12.53	48	LR		LR	04 57 45.8	
	comp=Z,56nm,19.9s,baz=114,slow=40							
KIV	Kislovodsk	12.54	47	*e*P		Pn	04 52 20.3	+1.7
KIV				pmax		pmax		
	comp=Z,7.0nm,0.7s							
KIV				MLR		MLR		
	comp=Z,14nm,11.0s							
KIV	Kislovodsk	12.54	47	*e*P		Pn	04 52 20.3	+1.7
	comp=Z,14nm,11.0s							
IBDR	Badra	13.38	98	*e*P		P	04 52 48.3	+9.2
IBDR				*e*S		S	04 55 28.8	+7.9
CRVS	Cervenica-Dubn	14.41	337	*e*P		P	04 52 49.9	-0.7
CRVS	Cervenica-Dubn	14.41	337	*e*PN		P	04 52 49.9	-0.7
CRVS	Cervenica-Dubn	14.41	337	*e*P		P	04 52 49.9	-0.7
AK02	Malin Array Si	14.71	358	*e*Pn		Pn	04 52 50.9	+2.8
AK02				*e*S		S	04 55 45.8	-2.3
AK02	Malin Array Si	14.71	358	*e*Pn		Pn	04 52 50.9	+2.8
AK01	Malin Array Si	14.75	358	*e*Pn		P	04 52 53.7	-0.6
AK01				*e*S		S	04 55 50.4	+1.7
KIEV	Kiev	14.75	358	*e*P		Pn	04 52 51.6	+3.0
KIEV				*e*S		S	04 55 44.3	-4.5
KIEV	Kiev	14.75	358	*e*Pn		Pn	04 52 51.6	+3.0
KIEV				*e*S		S	04 55 44.3	-4.5
KIEV	Kiev	14.75	358	*e*P		Pn	04 52 51.6	+3.0
AKASG	Malin Array Be	14.76	358	*e*P		P	04 52 54.5	+0.1
AKASG				pmax		pmax		
	comp=Z,2.0nm,0.6s							
AKASG	Malin Array Be	14.76	358	P		Pn	04 52 48.0	-0.7
AKASG	Malin Array Be	14.76	358	P		Pn	04 52 48.0	-0.7
	comp=Z,0.5nm,0.3s,baz=176,slow=12,SNR=3.9							
AKASG	Malin Array Be	14.76	358	*e*P		P	04 52 54.5	+0.1
	comp=Z,2.0nm,0.6s							
VORD	Divnogorie	16.41	21	*e*P		P	04 53 12.9	+0.2
VORD				pmax		pmax		
	comp=Z,10.0nm,1.5s							
VORD				pmax		pmax		
	comp=N,9.0nm,0.6s							
VORD				pmax		pmax		
	comp=E,6.0nm,0.5s							
VORD				pmax		pmax		
	comp=Z,10.0nm,0.9s							
VORD				pmax		pmax		
	comp=N,40nm,1.1s							
VORD				pmax		pmax		
	comp=E,20nm,0.8s							
VORD	Divnogorie	16.41	21	*e*P		P	04 53 12.9	+0.2
	comp=E,40nm,1.1s							
VSR	Storozhevoye	16.60	20	*e*P		P	04 53 14.3	-0.5
VSR				pmax		pmax		
	comp=N,6.0nm,0.6s							
VSR				pmax		pmax		
	comp=Z,5.0nm,0.6s							
VSR				pmax		pmax		
	comp=E,10.0nm,1.0s							
VSR				pmax		pmax		
	comp=Z,6.0nm,1.0s							
VSR				pmax		pmax		
	comp=N,10.0nm,0.7s							
VSR				pmax		pmax		
	comp=E,8.0nm,0.7s							
VSR	Storozhevoye	16.60	20	*e*P		P	04 53 14.3	-0.5
	comp=E,6.0nm,1.0s							
KEST	Kesra	16.82	275	*e*Pn		P	04 53 18.6	+1.2
KEST	Kesra	16.82	275	P		P	04 53 17.6	+0.2
	comp=E,0.1nm,0.3s,baz=56,slow=1.1,SNR=6.2							
GERES	GERESS Array B	17.62	322	P		Pn	04 53 25.8	+0.3
	comp=E,0.3nm,0.3s,baz=134,slow=9.6,SNR=6.5							
GERES				LR		LR	05 01 02.0	
	comp=E,55nm,19.4s,baz=96,slow=40							
GERES	GERESS Array B	17.62	322	P		Pn	04 53 25.8	+0.3
	comp=E,55nm,19.4s							
KHC	Kasperske Hory	17.87	323	*e*P		P	04 53 30.2	+1.2
KHC				MLR		MLR		
	comp=Z,100nm,11.2s							
KHC	Kasperske Hory	17.87	323	*e*P		P	04 53 30.2	+1.2
KHC				AMS		AMS	05 01 20.0	
	comp=Z,100nm,11.2s							
KHC	Kasperske Hory	17.87	323	*e*P		P	04 53 30.2	+1.2
	comp=Z,100nm,11.2s							
PRU	Pruhonice	18.00	326	AMS		AMS	05 01 30.0	
	comp=Z,100nm,11.1s							
DAVOX	Davos/Dischmat	18.57	312	LR		LR	05 02 17.8	
	comp=Z,108nm,18.6s,baz=109,slow=42							
CLL	Collm	19.63	327	*e*P		Pn	04 54 05.0	+15
CLL	Collm	19.63	327	*e*PP		Pn	04 54 05.0	+15
CLL				*e*PPP		PPP	04 54 13.0	
CLL				*e*(SS)			04 57 42.0	
OBN	Obninsk	19.68	11	⇓ *i* P		Pn	04 53 51.6	+1.4
OBN				*e*			04 54 01.0	
OBN				*e*			04 58 02.7	
OBN				pmax		pmax		
	comp=Z,8.0nm,0.8s							
OBN				MLR		MLR		
	comp=Z,100nm,15.0s							
MBDF	Montbardon	19.76	303	*e*P		P	04 53 49.2	-0.6
MBDF	Montbardon	19.76	303	*e*P		P	04 53 49.2	-0.6
MBDF	Montbardon	19.76	303	*e*P		P	04 53 49.2	-0.6
MBDF	Montbardon	19.76	303	*e*P		P	04 53 49.2	-0.6
SENIN	Lac Senin/Sane	19.99	308	*e*Pn		Pn	04 53 55.4	+1.1
	comp=Z,6.3nm,0.9s							
SENIN	Lac Senin/Sane	19.99	308	*e*Pn		Pn	04 53 55.4	+1.1
	comp=Z,6.3nm,0.9s							
LPG	La Plagne	20.03	306	*e*P		P	04 53 52.1	-0.8
LPG	La Plagne	20.03	306	*e*P		P	04 53 52.1	-0.8
LPG	La Plagne	20.03	306	*e*P		P	04 53 52.1	-0.8
LPG	La Plagne	20.03	306	*e*P		P	04 53 52.1	-0.8
LPL	La Plagne	20.05	306	*e*P		P	04 53 52.1	-0.9
LPL	La Plagne	20.05	306	*e*P		P	04 53 52.1	-0.9
LPL	La Plagne	20.05	306	*e*P		P	04 53 52.1	-0.9
LPL	La Plagne	20.05	306	*e*P		P	04 53 52.1	-0.9
ORIF	Oris-en-Rattie	20.42	303	*e*P		P	04 53 55.3	-1.7
	comp=Z,18nm,1.2s							
ORIF				*e*R				
	comp=Z,50nm,22.2s							
ORIF	Oris-en-Rattie	20.42	303	*e*P		P	04 53 55.3	-1.7
ORIF				pmax		pmax		
	comp=Z,18nm,1.2s							
ORIF	Oris-en-Rattie	20.42	303	*e*P		P	04 53 55.3	-1.7
	comp=Z,18nm,1.2s							
ORIF	Oris-en-Rattie	20.42	303	*e*P		P	04 53 55.3	-1.7
	comp=Z,9.1nm,1.2s							
CABF	La Chapelle	20.86	308	*e*P		P	04 54 01.0	-0.7
	comp=Z,61nm,1.5s							
CABF	La Chapelle	20.86	308	*e*P		P	04 54 01.0	-0.7
CABF				pmax		pmax		
	comp=Z,61nm,1.5s							
CABF	La Chapelle	20.86	308	*e*P		P	04 54 01.0	-0.7
	comp=Z,61nm,1.5s							
CABF	La Chapelle	20.86	308	*e*P		P	04 54 01.0	-0.7
	comp=Z,31nm,1.5s							
VIVF	Saint-Julien-l	21.22	303	*e*P		P	04 54 04.7	-0.9
	comp=Z,12nm,0.9s							
VIVF	Saint-Julien-l	21.22	303	*e*P		P	04 54 04.7	-0.9
VIVF				pmax		pmax		
	comp=Z,12nm,0.9s							
VIVF	Saint-Julien-l	21.22	303	*e*P		P	04 54 04.7	-0.9
	comp=Z,12nm,0.9s							
VIVF	Saint-Julien-l	21.22	303	*e*P		P	04 54 04.7	-0.9
	comp=Z,5.8nm,0.9s							
PAGF	Fort de Pagny	21.88	313	*e*P		P	04 54 11.6	-0.9
PAGF	Fort de Pagny	21.88	313	*e*P		P	04 54 11.6	-0.9
PAGF	Fort de Pagny	21.88	313	*e*P		P	04 54 11.6	-0.9
SFTF	Sexfontaines	22.14	311	*e*P		P	04 54 13.5	-1.9
	comp=Z,7.2nm,0.4s							
SFTF	Sexfontaines	22.14	311	*e*P		P	04 54 13.5	-1.9
	comp=Z,7.2nm,0.4s							
SMF	Signal de Mont	22.32	307	*e*P		P	04 54 15.5	-1.8
	comp=Z,9.9nm,0.8s							
SMF	Signal de Mont	22.32	307	*e*P		P	04 54 15.5	-1.8
SMF				pmax		pmax		
	comp=Z,10.0nm,0.8s							
SMF	Signal de Mont	22.32	307	*e*P		P	04 54 15.5	-1.8
	comp=Z,9.9nm,0.8s							
SMF	Signal de Mont	22.32	307	*e*P		P	04 54 15.5	-1.8
	comp=Z,4.9nm,0.8s							
VSU	Vasula	22.63	355	*e*P		P	04 54 23.9	+3.5
VSU				pmax		pmax		
	comp=Z,7.0nm,0.9s							
AVF	Avril sur Loir	22.68	307	*e*P		P	04 54 19.2	-2.0
AVF	Avril sur Loir	22.68	307	*e*P		P	04 54 19.2	-2.0
AVF	Avril sur Loir	22.68	307	*e*P		P	04 54 19.2	-2.0
AVF	Avril sur Loir	22.68	307	*e*P		P	04 54 19.2	-2.0
AKTO	Aktyubinsk	24.80	46	P		P	04 54 40.4	-1.0
AKTO				pmax		pmax		
	comp=Z,16nm,0.7s							
AKTO	Aktyubinsk	24.80	46	P		P	04 54 40.4	-1.0
AKTO	Aktyubinsk	24.80	46	P		P	04 54 40.4	-1.0
	comp=Z,16nm,0.7s,baz=245,slow=8.8,SNR=44							
SJPF	Ste Jean	25.08	296	*e*P		P	04 54 43.0	-1.0
	comp=Z,17nm,1.0s							
SJPF	Ste Jean	25.08	296	*e*P		P	04 54 43.0	-1.0
SJPF				pmax		pmax		
	comp=Z,17nm,1.0s							
SJPF	Ste Jean	25.08	296	*e*P		P	04 54 43.0	-1.0
	comp=Z,17nm,1.0s							
SJPF	Ste Jean	25.08	296	*e*P		P	04 54 43.0	-1.0
	comp=Z,8.3nm,1.0s							
LDF	La Druitiere	25.49	309	*e*P		P	04 54 45.6	-2.1
LDF	La Druitiere	25.49	309	*e*P		P	04 54 45.6	-2.1
LDF	La Druitiere	25.49	309	*e*P		P	04 54 45.6	-2.1
AB31	Akbulak array	25.50	49	*e*P		P	04 54 47.2	-0.5
AB31				pmax		pmax		
	comp=Z,9.0nm,0.4s							
ABKAR	Akbulak array	25.50	49	*e*P		P	04 54 47.1	-0.7
FINES	FINESS Array B	25.64	356	P		P	04 54 47.1	-1.8
FINES				PcP		PcP	04 58 18.6	-0.2
FINES	FINESS Array B	25.64	356	P		P	04 54 47.1	-1.8
	comp=Z,2.4nm,0.5s,baz=158,slow=11,SNR=17							
FINES				PcP		PcP	04 58 18.6	-0.2
	comp=Z,1.1nm,0.7s,baz=197,slow=2.0,SNR=3.9							
FLN	La Foliniere	25.77	309	*e*P		P	04 54 49.2	-1.0
FLN				*e*R				
	comp=Z,87nm,17.8s							
FLN	La Foliniere	25.77	309	*e*P		P	04 54 49.2	-1.0
FLN	La Foliniere	25.77	309	*e*P		P	04 54 49.2	-1.0
FLN	La Foliniere	25.77	309	*e*P		P	04 54 49.2	-1.0
KAF	Kangasniemi	26.29	356	*e*P		P	04 54 58.3	+3.5
KAF	Kangasniemi	26.29	356	*e*p		P	04 54 58.3	+3.5
HFS	Hagfors	26.41	341	P		P	04 54 55.2	-0.7
HFS	Hagfors	26.41	341	P		P	04 54 55.2	-0.7
	comp=Z,1.2nm,0.8s,baz=128,slow=12,SNR=4.6							
HFS				LR		LR	05 06 38.6	
	comp=Z,71nm,20.8s,baz=140,slow=39							
SGMF	Saint Gilles	26.94	307	*e*P		P	04 54 59.8	-1.0
	comp=Z,66nm,1.4s							
SGMF	Saint Gilles	26.94	307	*e*P		P	04 54 59.8	-1.0
SGMF				pmax		pmax		
	comp=Z,66nm,1.4s							
SGMF	Saint Gilles	26.94	307	*e*P		P	04 54 59.8	-1.0
	comp=Z,66nm,1.4s							
SGMF	Saint Gilles	26.94	307	*e*P		P	04 54 59.8	-1.0
	comp=Z,33nm,1.4s							
JOF	Joensuu	27.00	1	*e*P		P	04 55 03.7	+2.5
JOF	Joensuu	27.00	1	*e*p		P	04 55 03.7	+2.5
ESDC	Sonseca Array	27.05	288	P		P	04 55 03.0	+1.0
ESDC	Sonseca Array	27.05	288	P		P	04 55 03.0	+1.0
	comp=Z,0.1nm,0.3s,baz=88,slow=9.1,SNR=3.8							
ROSF	Rostrenen	27.43	307	*e*P		P	04 55 04.0	-1.2
	comp=Z,52nm,1.3s							
ROSF	Rostrenen	27.43	307	*e*P		P	04 55 04.0	-1.2
ROSF				pmax		pmax		
	comp=Z,52nm,1.3s							
ROSF	Rostrenen	27.43	307	*e*P		P	04 55 04.0	-1.2
	comp=Z,52nm,1.3s							
NB2	NORSAR Subarra	27.83	340	P		P	04 55 06.6	-2.1
	comp=Z,1.4nm,0.9s,baz=146,slow=9.3							
NOA	NORSAR Array B	27.83	340	P		P	04 55 06.9	-1.8
NOA	NORSAR Array B	27.83	340	P		P	04 55 06.9	-1.8
	comp=Z,1.1nm,0.8s,baz=117,slow=8.8,SNR=4.0							
NOA				LR		LR	05 07 41.8	
	comp=Z,66nm,18.1s,baz=155,slow=40							
ARU	Arti	28.09	34	*d i* P		P	04 55 10.2	-0.8
ARU				S		S	04 59 58.5	+4.8
ARU				pmax		pmax		
	comp=Z,5.0nm,0.8s							
EKA	Eskdalemuir Ar	29.83	321	P		P	04 55 25.2	-1.3
EKA	Eskdalemuir Ar	29.83	321	P		P	04 55 25.2	-1.3
	comp=Z,0.2nm,0.4s,baz=116,slow=9.6,SNR=4.0							
KKAR	Karatay Array	31.75	64	*e*P		P	04 55 43.4	-0.3
KKAR				pmax		pmax		
	comp=Z,1.0nm,0.5s							
KKAR	Karatay Array	31.75	64	*e*P		P	04 55 43.4	-0.3
	comp=Z,0.9nm,0.5s							
BRVK	Borovoye	32.85	46	*e*P		P	04 55 52.8	-0.3
BRVK				pmax		pmax		
	comp=Z,3.0nm,0.6s							
BRVK	Borovoye	32.85	46	*e*P		P	04 55 52.8	-0.3
	comp=Z,3.0nm,0.6s							
ARCES	ARCESS Array B	33.73	357	P		P	04 55 59.6	-1.0
ARCES				PcP		PcP	04 58 39.2	-0.2
ARCES	ARCESS Array B	33.73	357	P		P	04 55 59.6	-1.0
	comp=Z,0.5nm,0.4s,baz=170,slow=8.8,SNR=12							
ARCES				PcP		PcP	04 58 39.2	-0.2
	comp=Z,2.3nm,0.9s,baz=186,slow=4.4,SNR=4.7							
ARCES				LR		LR	05 10 53.5	
	comp=Z,69nm,18.9s,baz=0.9,slow=38							
KEV	Kevo	33.90	358	*e*P		P	04 56 03.0	+1.0
KEV	Kevo	33.90	358	*e*p		P	04 56 03.0	+1.0
KEV	Kevo	33.90	358	*e*P		P	04 56 03.0	+1.0
TOA0	Torodi Ar. Sit	34.16	236	P		P	04 56 07.0	+2.2
TORD	Torodi Ar. Bea	34.16	236	P		P	04 56 06.5	+1.7
TORD	Torodi Ar. Bea	34.16	236	P		P	04 56 06.5	+1.7
	comp=Z,2.8nm,0.8s,baz=30,slow=9.4,SNR=32							
AAK	Ala-Archa	34.70	65	*e*P		P	04 56 07.0	-2.5
AAK				pmax		pmax		
	comp=Z,3.0nm,0.7s							
KURK	Kurchatov	37.56	51	*c i* P		P	04 56 33.1	-0.5
KURK				pmax		pmax		
	comp=Z,12nm,0.7s							
KURK	Kurchatov	37.56	51	*e*P		P	04 56 33.2	-0.4
	comp=Z,9.0nm,0.4s							
MK31	Makanchi Array	39.98	58	*e*P		P	04 56 53.5	-0.5
MK31	Makanchi Array	39.98	58	*e*P		P	04 56 53.5	-0.5
MKAR	Makanchi Array	39.98	58	P		P	04 56 53.6	-0.4
MKAR				pmax		pmax		
	comp=Z,4.0nm,0.6s							
MKAR	Makanchi Array	39.98	58	P		P	04 56 53.6	-0.4
MKAR	Makanchi Array	39.98	58	P		P	04 56 53.6	-0.4
	comp=Z,4.2nm,0.6s,baz=279,slow=6.9,SNR=58							
NVS	Novosibirsk	40.69	45	*e*P		P	04 56 59.6	-0.1
NVS				pmax		pmax		
	comp=Z,10.0nm,0.8s							
NVS				pmax		pmax		
	comp=N,2.0nm,0.7s							
NVS				pmax		pmax		
	comp=E,6.0nm,0.8s							
ZAA0	Zalesovo Array	41.55	47	*e*P		P	04 57 05.6	-1.2
ZALV	Zalesovo Beam	41.55	47	P		P	04 57 05.7	-1.1
ZALV				pmax		pmax		
	comp=Z,10.0nm,0.4s							
ZALV	Zalesovo Beam	41.55	47	P		P	04 57 05.7	-1.1
ZALV	Zalesovo Beam	41.55	47	P		P	04 57 05.7	-1.1
	comp=Z,9.5nm,0.4s,baz=262,slow=9.0,SNR=44							
DBIC	Dimbokro	43.27	236	P		P	04 57 22.1	+0.9
DBIC	Dimbokro	43.27	236	P		P	04 57 22.1	+0.9
	comp=Z,1.8nm,0.6s,baz=101,slow=22,SNR=4.5							
HVS	Khovu-Aksy	47.08	50	*e*P		P	04 57 50.6	-0.6
HVS				pmax		pmax		
	comp=Z,22nm,0.9s							
ZAK	Zakamensk	53.19	50	*e*P		P	04 58 37.4	-0.1
ZAK				*e*			04 58 45.5	
ZAK				pmax		pmax		
	comp=Z,2.0nm,1.1s							
GTA	Gaotai	54.03	64	*e*P		P	04 58 43.9	0.0
GTA				pP		pP	04 58 48.1	-5.3
GTA				sP		sP	04 58 50.1	-7.0
GTA				pmax		pmax		
	comp=Z,5.0nm,1.3s							
SONM	Songino Array	55.86	52	P		P	04 58 56.6	-0.4
SONM	Songino Array	55.86	52	P		P	04 58 56.6	-0.4
	comp=Z,0.5nm,0.4s,baz=296,slow=7.0,SNR=3.1							
CMAR	Chiang Mai Arr	62.51	86	P		P	04 59 43.2	0.0
CMAR	Chiang Mai Arr	62.51	86	P		P	04 59 43.2	0.0
	comp=Z,4.1nm,0.7s,baz=296,slow=8.1

IBAF	**Bafgh**	**3.34**	**351**⇑	*e*Pn		**Pn**	**05 03 36.1**	**+2.4**
IMEH	**Mehriz**	**3.38**	**337**	*e*Pn		**Pn**	**05 03 36.7**	**+2.4**
IMEH				*e*			05 04 39.6	
	comp=Z,8μm,0.5s							
IMEH	**Mehriz**	**3.38**	**337**	*e*Pn		**Pn**	**05 03 36.7**	**+2.4**
HATD	**Hatta, Dubai**	**3.44**	**180**	P		**Pb**	**05 03 40.4**	**-2.1**
SHI	**Shiraz**	**3.46**	**294**	*e*Sg		**Sg**	**05 04 36.2**	**+3.1**
SHI	**Shiraz**	**3.46**	**294**	*e*Sg		**Sg**	**05 04 36.2**	**+3.1**
FAQ	**Al Faqa, Dubai**	**3.55**	**188**	P		**Pb**	**05 03 41.9**	**-2.6**
ASUD	**Al Ashush, Dub**	**3.71**	**192**	P		Pb	05 03 43.7	-3.4
ISAD	**Sadrabad**	**4.21**	**330**	*e*Pn		**Pn**	**05 03 48.3**	**+2.5**
ISAD				*e*			05 05 06.3	
	comp=Z,6μm,0.4s							
ISAD	**Sadrabad**	**4.21**	**330**	*e*Pn		**Pn**	**05 03 48.3**	**+2.5**
ICHK	**Chekchek**	**4.23**	**340**	*e*Pn		**Pn**	**05 03 48.6**	**+2.5**
ICHK				*e*			05 05 04.6	
	comp=Z,5μm,0.5s							
ICHK	**Chekchek**	**4.23**	**340**	*e*Pn		**Pn**	**05 03 48.6**	**+2.5**
ITEG	**Tejag**	**5.12**	**25**	*e*Pn		**Pn**	**05 04 00.9**	**+2.6**
ITEG				*e*			05 05 44.8	
	comp=Z,756nm,0.2s							
ITEG	**Tejag**	**5.12**	**25**	*e*Pn		**Pn**	**05 04 00.9**	**+2.6**
NASN	**Na'in**	**5.35**	**328**	*e*Pn		**Pn**	**05 04 03.3**	**+1.8**
NASN	**Na'in**	**5.35**	**328**	*e*Pn		**Pn**	**05 04 03.3**	**+1.5**
NASN	**Na'in**	**5.35**	**328**	*e*Pn		**Pn**	**05 04 03.3**	**+1.8**
IGAR	**Gharneh**	**5.43**	**320**	*e*			05 04 09.9	
	comp=Z,2μm,0.2s							
IGAR				*e*Pn		**Pn**	**05 04 04.7**	**+2.1**
IDAH	**Dahanechah**	**5.48**	**35**	*e*Pn		Pn	05 04 06.8	+3.5
IDAH				*e*			05 05 51.2	
	comp=Z,2μm,0.5s							
IDAH	**Dahanechah**	**5.48**	**35**	*e*Pn		Pn	05 04 06.8	+3.5
IZEF	**Zefreh**	**5.66**	**325**	*e*			05 04 11.2	
	comp=Z,569nm,0.2s							
IZEF				⇓*e*Pn		**Pn**	**05 04 07.8**	**+2.1**
IPIR	**Pirpir**	**6.31**	**315**	*e*Pn		**Pn**	**05 04 17.1**	**+2.3**
IPIR				*e*			05 04 21.1	
	comp=Z,1μm,0.4s							
IPIR	**Pirpir**	**6.31**	**315**	*e*Pn		**Pn**	**05 04 17.1**	**+2.3**
IKLH	**Kolahrood**	**6.38**	**323**	*e*Pn		**Pn**	**05 04 18.0**	**+2.4**
IKLH				*e*			05 04 43.8	
	comp=Z,701nm,0.2s							
IKLH	**Kolahrood**	**6.38**	**323**	*e*Pn		**Pn**	**05 04 18.0**	**+2.4**
SHGR	**Shooshtar-Gavs**	**7.42**	**303**	*e*Pn		**Pn**	**05 04 31.0**	**+1.4**
SHGR	**Shooshtar-Gavs**	**7.42**	**303**	*e*Pn		**Pn**	**05 04 31.0**	**+1.4**
KBD	**Kabd**	**7.48**	**279**	*e*P		**Pn**	**05 04 30.3**	**-0.2**
KBD					AML	AML	05 05 54.4	
	comp=Z,23nm,0.4s							
KBD	**Kabd**	**7.48**	**279**	*e*P		**Pn**	**05 04 30.3**	**-0.2**
UMR	**Umm Al-Rimmam**	**7.50**	**282**	*e*P		**Pn**	**05 04 31.3**	**+0.5**
UMR					AML	AML	05 05 55.4	
	comp=Z,57nm,0.5s							
UMR	**Umm Al-Rimmam**	**7.50**	**282**	*e*P		**Pn**	**05 04 31.3**	**+0.5**
RDF	**Al-Radifah**	**7.59**	**277**	*e*P		**Pn**	**05 04 32.2**	**+0.2**
RDF					AML	AML	05 06 04.8	
	comp=Z,77nm,0.5s							
RDF	**Al-Radifah**	**7.59**	**277**	*e*P		**Pn**	**05 04 32.2**	**+0.2**
KHMZ	**Khomeyn**	**7.60**	**317**	*e*Pn		**Pn**	**05 04 34.2**	**+1.8**
KHMZ	**Khomeyn**	**7.60**	**317**	*e*Pn		**Pn**	**05 04 34.2**	**+1.8**
NAY	**Al-Naaiem**	**7.88**	**279**	*e*P		**Pn**	**05 04 36.3**	**+0.4**
NAY					AML	AML	05 06 05.2	
	comp=Z,30nm,0.6s							
NAY	**Al-Naaiem**	**7.88**	**279**	*e*P		**Pn**	**05 04 36.3**	**+0.4**
DAMV	**Damavand**	**8.14**	**335**	*e*Pn		**Pn**	**05 04 42.0**	**+2.2**
DAMV	**Damavand**	**8.14**	**335**	*e*Pn		**Pn**	**05 04 42.0**	**+2.2**
ASAO	**Ashtian**	**8.15**	**322**	*e*Pn		**Pn**	**05 04 42.0**	**+2.1**
ASAO					AML	AML	05 06 21.2	
	comp=N,36nm,0.8s							
ASAO	**Ashtian**	**8.15**	**322**	*e*Pn		**Pn**	**05 04 41.0**	**+1.1**
ASAO				Sn		**Sn**	**05 06 08.0**	**-4.0**
ASAO	**Ashtian**	**8.15**	**322**	*e*Pn		**Pn**	**05 04 42.0**	**+2.1**
THKV	**Tehran--Karaj**	**8.83**	**331**	*e*Pn		**Pn**	**05 04 50.0**	**+0.8**
THKV	**Tehran--Karaj**	**8.83**	**331**	*e*Pn		**Pn**	**05 04 50.0**	**+0.8**
MRVT	**Maraveh tapeh**	**9.36**	**360**	*e*Pn		**Pn**	**05 04 54.3**	**-2.0**
MRVT	**Maraveh tapeh**	**9.36**	**360**	*e*Pn		**Pn**	**05 04 56.0**	**-0.3**
MRVT	**Maraveh tapeh**	**9.36**	**360**	*e*Pn		**Pn**	**05 04 54.3**	**-2.0**
ZNJK	**Zanjan**	**10.47**	**325**	*e*Pn		**Pn**	**05 05 13.2**	**+1.5**
ZNJK	**Zanjan**	**10.47**	**325**	*e*Pn		**Pn**	**05 05 13.0**	**+1.3**
ZNJK	**Zanjan**	**10.47**	**325**	*e*Pn		**Pn**	**05 05 13.2**	**+1.5**
RAYN	**Ar Rayn**	**10.69**	**246**	*e*Pn		**Pn**	**05 05 12.3**	**-2.3**
BHD	**Baghdad**	**11.28**	**299**	*e*P		**Pn**	**05 05 23.3**	**+0.8**
BHD				*e*S		**Sn**	**05 07 30.7**	**+2.4**
BHD	**Baghdad**	**11.28**	**299**	*e*P		**Pn**	**05 05 23.3**	**+0.8**
LKRN	**Lenkeran, Azer**	**12.08**	**331**	P		**Pn**	**05 05 36.0**	**+2.6**
	SNR=5.8							
LKRN	**Lenkeran, Azer**	**12.08**	**331**	Pn		**Pn**	**05 05 36.0**	**+2.6**
	SNR=5.8							
GLBA	**Clilabad**	**12.69**	**332**	P		**Pn**	**05 05 44.3**	**+2.5**
	SNR=9.6							
GLBA	**Clilabad**	**12.69**	**332**	Pn		**Pn**	**05 05 44.3**	**+2.5**
	SNR=9.6							
PQL	**Pirkuli**	**13.94**	**336**	P		Pn	05 06 02.5	+3.5
	SNR=8.3							
PQL	**Pirkuli**	**13.94**	**336**	Pn		Pn	05 06 02.5	+3.5
	SNR=8.3							
NAX	**Nakhchivan**	**14.01**	**324**	P		**P**	**05 06 06.5**	**-1.4**
	SNR=5.8							
NAX	**Nakhchivan**	**14.01**	**324**	Pn		**P**	**05 06 06.5**	**-1.4**
	SNR=5.8							
SIZA	**Siyzn**	**14.08**	**337**	P		**Pn**	**05 06 03.5**	**+2.6**
	SNR=6.8							
SIZA	**Siyzn**	**14.08**	**337**	Pn		**Pn**	**05 06 03.5**	**+2.6**
	SNR=6.8							
IML	**Ismayilli**	**14.10**	**334**	P		P	05 06 05.2	-3.6
	SNR=5.6							
IML	**Ismayilli**	**14.10**	**334**	Pn		P	05 06 05.2	-3.6
	SNR=5.6							
GANJ	**Ganja**	**14.75**	**329**	P		**P**	**05 06 13.4**	**-2.6**
	SNR=14							
GANJ	**Ganja**	**14.75**	**329**	Pn		**P**	**05 06 13.4**	**-2.6**
	SNR=14							
SEKA	**Sheki**	**14.84**	**333**	P		**P**	**05 06 14.7**	**-2.3**
	SNR=4.9							
SEKA	**Sheki**	**14.84**	**333**	Pn		**P**	**05 06 14.7**	**-2.3**
	SNR=4.9							
GNI	**Garni**	**15.12**	**324**	*e*Pn		**Pn**	**05 06 15.3**	**+0.1**
	comp=N,38nm,0.8s							
GNI	**Garni**	**15.12**	**324**	Pn		**P**	**05 06 18.0**	**-2.4**
	comp=N,0.7nm,0.3s,baz=128,slow=17,SNR=1.9							
GNI					LR	LR	05 12 38.2	
	comp=N,158nm,18.6s,baz=315,slow=40							
GNI	**Garni**	**15.12**	**324**	*e*Pn		**Pn**	**05 06 15.3**	**+0.1**
	comp=N,38nm,0.8s							
GNI	**Garni**	**15.12**	**324**	*i* P		**Pn**	**05 06 17.1**	**+1.9**
	comp=N,97nm,1.7s							
DGRG	**David-gareji**	**15.82**	**329**	P		**P**	**05 06 27.5**	**-0.4**
TBLG	**Delisi**	**16.33**	**328**	*e*P		**P**	**05 06 35.7**	**+2.1**
TBLG	**Delisi**	**16.33**	**328**	P		**P**	**05 06 35.7**	**+2.1**
TBLG	**Delisi**	**16.33**	**328**	P		**P**	**05 06 35.7**	**+2.1**
DUS	**Dusheti**	**16.63**	**329**	P		P	05 06 43.1	+6.1
AKH	**Akhalkalaki**	**16.69**	**325**	P		**P**	**05 06 40.1**	**+2.3**
ASF	**Jabal al Asfar**	**17.08**	**288**	P		**Pn**	**05 06 39.8**	**-0.5**
ASF	**Jabal al Asfar**	**17.08**	**288**	P		**Pn**	**05 06 39.8**	**-0.5**
	comp=N,1.0nm,0.3s,baz=160,slow=4.0,SNR=9.0							
ASF					LR	LR	05 14 25.0	
	comp=N,61nm,18.4s,baz=155,slow=41							
ONI	**Oni**	**17.60**	**328**	P		**P**	**05 06 50.4**	**+2.7**
MMAI	**Mount Meron Ar**	**18.46**	**290**	P		**P**	**05 06 57.2**	**0.0**
MMAI	**Mount Meron Ar**	**18.46**	**290**	P		**P**	**05 06 57.2**	**0.0**
	comp=N,1.8nm,0.3s,baz=96,slow=16,SNR=5.9							
MMAI	**Mount Meron Ar**	**18.46**	**290**	P		**P**	**05 06 57.2**	**0.0**
EIL	**Elat**	**18.60**	**279**	P		**P**	**05 06 58.6**	**-0.1**
EIL	**Elat**	**18.60**	**279**	P		**P**	**05 06 58.6**	**-0.1**
	comp=N,0.8nm,0.3s,baz=129,slow=3.9,SNR=6.0							
EIL	**Elat**	**18.60**	**279**	P		**P**	**05 06 58.6**	**-0.1**
KBZ	**Khabaz**	**18.74**	**329**	P		**Pn**	**05 07 00.8**	**+0.3**
KBZ	**Khabaz**	**18.74**	**329**	P		**Pn**	**05 07 00.8**	**+0.3**
KBZ	**Khabaz**	**18.74**	**329**	P		**Pn**	**05 07 00.8**	**+0.3**
	comp=N,0.1nm,0.3s,baz=155,slow=11,SNR=13							
KBZ	**Khabaz**	**18.74**	**329**	P		**Pn**	**05 07 00.8**	**+0.3**
KK31	**Karatay Array**	**18.80**	**34**	*i* P		**Pn**	**05 07 02.0**	**+0.7**
KK31					pmax	pmax		
	comp=Z,20nm,1.3s							
KK31	**Karatay Array**	**18.80**	**34**	*i* P		**Pn**	**05 07 02.0**	**+0.7**
	comp=Z,20nm,1.3s							
KKAR	**Karatay Array**	**18.80**	**34**	*e*P		**Pn**	**05 07 01.6**	**+0.3**
KKAR	**Karatay Array**	**18.80**	**34**	*e*P		**Pn**	**05 07 01.6**	**+0.3**
KKAR	**Karatay Array**	**18.80**	**34**	*e*P		**Pn**	**05 07 01.6**	**+0.3**
KIV	**Kislovodsk**	**19.01**	**329**	*e*P		**Pn**	**05 07 06.4**	**+2.4**
KIV					pmax	pmax		
	comp=Z,33nm,1.0s							
KIV					MLR	MLR		
	comp=Z,36nm,13.0s							
KIV	**Kislovodsk**	**19.01**	**329**	*e*P		**Pn**	**05 07 06.4**	**+2.4**
	comp=Z,36nm,13.0s							
GOF	**Gofitskoye**	**19.73**	**332**	*e*P		**Pn**	**05 07 14.4**	**+1.9**
GOF					pmax	pmax		
	comp=Z,30nm,0.8s							
GOF	**Gofitskoye**	**19.73**	**332**	*e*P		**Pn**	**05 07 14.4**	**+1.9**
	comp=Z,30nm,0.8s							
AML	**Almayashu**	**19.86**	**41**	P		**Pn**	**05 07 15.1**	**+0.6**
	SNR=10							
KSH	**Kashi**	**19.87**	**51**	P		**P**	**05 07 11.8**	**-0.9**
KSH				*e*pP		**pP**	**05 07 15.6**	**-1.0**
KSH				*e*sP		**sP**	**05 07 18.8**	**+0.4**
KSH				*e*PP		**PnPn**	**05 07 29.5**	**+1.2**
KSH				*e*S		S	05 10 45.8	-10
KSH				*e*sS		**Sn**	**05 10 52.1**	**-5.3**
KSH				*e*PcP		**PcP**	**05 11 29.3**	**-0.5**
KSH					pmax	pmax		
	comp=Z,12nm,0.8s							
KSH					pmax	pmax		
	comp=Z,150nm,3.2s							
KSH					LR	LR		
	comp=N,280nm,9.3s							
KSH					LR	LR		
	comp=E,420nm,7.3s							
KSH					LR	LR		
	comp=Z,270nm,7.4s							
SOC	**Sochi**	**20.20**	**323**	*e*P		**P**	**05 07 16.7**	**+0.6**
SOC				*e**SP		**sP**	**05 07 19.5**	**-2.3**
SOC				*e*PPP		PPP	05 07 43.4	
SOC				*e*S		Sn	05 11 05.4	+0.3
SOC				*e*SS		**PcP**	**05 11 29.6**	**-0.6**
SOC					pmax	pmax		
	comp=Z,30nm,0.9s							
SOC					MLR	MLR		
	comp=Z,91nm,14.0s							
SOC	**Sochi**	**20.20**	**323**	*e*P		**P**	**05 07 16.7**	**+0.6**
	comp=Z,30nm,0.9s							
SOC				*e*S		Sn	05 11 05.4	+0.3
	comp=Z,91nm,14.0s							
SOC	**Sochi**	**20.20**	**323**	*e*PcP		**PcP**	**05 11 29.6**	**-0.6**
EKS2	**Erkin-Say**	**20.24**	**40**	*e*P		Pn	05 07 18.2	-0.5
EKS2					pmax	pmax		
	comp=Z,38nm,1.4s							
EKS2	**Erkin-Say**	**20.24**	**40**	*e*P		Pn	05 07 18.2	-0.6
	comp=Z,38nm,1.4s							
EKS2	**Erkin-Say**	**20.24**	**40**	*e*P		Pn	05 07 18.2	-0.5
	comp=Z,38nm,1.4s							
AAK	**Ala-Archa**	**20.64**	**41**	P		Pn	05 07 22.5	-0.9
AAK					pmax	pmax		
	comp=Z,7.0nm,0.9s							
AAK					MLR	MLR		
	comp=Z,96nm,19.4s							
AAK	**Ala-Archa**	**20.64**	**41**	*e*P		Pn	05 07 22.7	-0.7
	comp=Z,119nm,2.3s							
AAK	**Ala-Archa**	**20.64**	**41**	P		Pn	05 07 22.5	-1.0
	comp=Z,6.5nm,0.9s,baz=201,slow=12,SNR=11							
AAK					LR	LR	05 16 07.8	
	comp=Z,96nm,19.4s,baz=360,slow=39							
AAK	**Ala-Archa**	**20.64**	**41**	P		Pn	05 07 22.5	-0.9
	comp=Z,96nm,19.4s							
ATD	**Arta Tunnel**	**20.80**	**219**	P		**P**	**05 07 23.5**	**+0.6**
ATD	**Arta Tunnel**	**20.80**	**219**	P		**P**	**05 07 23.5**	**+0.6**
	comp=Z,3.8nm,0.4s,baz=252,slow=19,SNR=3.1							
ATD	**Arta Tunnel**	**20.80**	**219**	P		**P**	**05 07 23.5**	**+0.6**
AB31	**Akbulak array**	**21.15**	**7**	*i* P		**P**	**05 07 26.9**	**+0.6**
AB31					pmax	pmax		
	comp=Z,16nm,0.9s							
AB31	**Akbulak array**	**21.15**	**7**	*i* P		**P**	**05 07 26.9**	**+0.6**
	comp=Z,16nm,0.9s							
ABKAR	**Akbulak array**	**21.15**	**7**	*e*P		**P**	**05 07 27.2**	**+0.9**
	comp=Z,12nm,0.7s							
ABKAR	**Akbulak array**	**21.15**	**7**	*e*P		**P**	**05 07 27.2**	**+0.9**
	comp=Z,12nm,0.7s							
TKM2	**Tokmak 2**	**21.46**	**42**	*e*P		**P**	**05 07 29.8**	**-0.1**
TKM2					pmax	pmax		
	comp=Z,44nm,1.9s							
TKM2	**Tokmak 2**	**21.46**	**42**	*e*P		**P**	**05 07 29.8**	**-0.1**
	comp=Z,44nm,1.9s							
TKM2	**Tokmak 2**	**21.46**	**42**	*e*P		**P**	**05 07 29.8**	**-0.1**
	comp=Z,44nm,1.9s							
BR131	**Keskin Array S**	**21.82**	**307**	*e*P		**P**	**05 07 34.2**	**+0.5**
	comp=Z,22nm,0.8s							
BR131	**Keskin Array S**	**21.82**	**307**	*e*P		**P**	**05 07 34.2**	**+0.5**
	comp=Z,22nm,0.8s							
BRTR	**Keskin Array B**	**21.82**	**307**	P		**P**	**05 07 33.4**	**-0.3**
BRTR	**Keskin Array B**	**21.82**	**307**	P		**P**	**05 07 33.4**	**-0.3**
	comp=Z,26nm,1.1s,baz=128,slow=13,SNR=34							
BRTR	**Keskin Array B**	**21.82**	**307**	P		**P**	**05 07 33.4**	**-0.3**
AKTK	**Aktyubinsk**	**22.17**	**3**	P		**P**	**05 07 37.9**	**+0.6**
AKTO	**Aktyubinsk**	**22.17**	**3**	P		**P**	**05 07 37.9**	**+0.6**
AKTO	**Aktyubinsk**	**22.17**	**3**	P		**P**	**05 07 37.9**	**+0.6**
AKTO	**Aktyubinsk**	**22.17**	**3**	P		**P**	**05 07 37.9**	**+0.6**
	comp=Z,12nm,0.9s,baz=192,slow=12,SNR=23							
AKTO					LR	LR	05 17 46.6	
	comp=Z,179nm,19.2s,baz=186,slow=41							
AKTO	**Aktyubinsk**	**22.17**	**3**	P		**P**	**05 07 37.9**	**+0.6**
ANN	**Anapa**	**22.23**	**323**	*e*P		**P**	**05 07 38.0**	**+0.1**
ANN				*e**PP		**pP**	**05 07 41.0**	**-0.9**
ANN				*e*			05 08 01.0	
ANN				*e*S		**S**	**05 11 46.7**	**+4.5**
ANN					pmax	pmax		
	comp=Z,35nm,1.4s							
ANN	**Anapa**	**22.23**	**323**	*e*P		**P**	**05 07 38.0**	**+0.1**
	comp=Z,35nm,1.4s							
ANN				*e*S		**S**	**05 11 46.7**	**+4.5**
ANTO	**Ankara**	**22.47**	**307**	*e*P		**P**	**05 07 39.3**	**-1.4**
ANTO					pmax	pmax		
	comp=Z,21nm,0.9s							
ANTO	**Ankara**	**22.47**	**307**	*e*P		**P**	**05 07 39.3**	**-1.4**
	comp=Z,21nm,0.9s							
ANTO	**Ankara**	**22.47**	**307**	*e*P		**P**	**05 07 39.3**	**-1.4**
	comp=Z,21nm,0.9s							
SIM	**Simferopol'**	**24.16**	**319**	*e*P		**P**	**05 07 58.1**	**+0.6**
SIM					pmax	pmax		
	comp=Z,27nm,0.9s							
SIM					MLR	MLR		
	comp=Z,20nm,19.3s							
SIM	**Simferopol'**	**24.16**	**319**	*e*P		**P**	**05 07 58.1**	**+0.6**
	comp=Z,20nm,19.3s							
VORD	**Divnogorie**	**25.99**	**335**	*e*P		**P**	**05 08 13.8**	**-0.2**
VORD					pmax	pmax		
	comp=Z,3.0nm,0.4s							
VORD					pmax	pmax		
	comp=N,10.0nm,1.0s							
VORD					pmax	pmax		
	comp=E,8.0nm,0.6s							
VORD	**Divnogorie**	**25.99**	**335**	*e*P		**P**	**05 08 13.8**	**-0.2**
	comp=E,10.0nm,1.0s							
VSR	**Storozhevoye**	**26.24**	**335**	*e*P		**P**	**05 08 16.1**	**-0.2**
VSR					pmax	pmax		
	comp=Z,5.0nm,0.5s							
VSR					pmax	pmax		
	comp=N,8.0nm,1.0s							
VSR					pmax	pmax		
	comp=E,7.0nm,0.5s							
VSR	**Storozhevoye**	**26.24**	**335**	*e*P		**P**	**05 08 16.1**	**-0.2**
	comp=E,8.0nm,1.0s							
BRVK	**Borovoye**	**26.88**	**19**	*e*P		**P**	**05 08 22.8**	**+0.8**
BRVK					pmax	pmax		
	comp=Z,13nm,1.3s							
BRVK	**Borovoye**	**26.88**	**19**	*e*P		**P**	**05 08 22.8**	**+0.8**
	comp=Z,13nm,1.3s							
BRVK	**Borovoye**	**26.88**	**19**	*e*P		**P**	**05 08 22.8**	**+0.8**
	comp=Z,13nm,1.3s							
BVAR	**Borovoye Array**	**26.88**	**19**	P		**P**	**05 08 22.4**	**+0.4**
BVAR							05 11 44.3	
BVAR	**Borovoye Array**	**26.88**	**19**	P		**P**	**05 08 22.4**	**+0.4**
BVAR					PcP	**PcP**	**05 11 44.3**	**+0.2**
BVAR	**Borovoye Array**	**26.88**	**19**	P		**P**	**05 08 22.4**	**+0.4**
	comp=Z,8.7nm,1.0s,baz=198,slow=9.0,SNR=19							
BVAR					PcP	**PcP**	**05 11 44.3**	**+0.2**
	comp=Z,0.7nm,0.4s,baz=233,slow=4.5,SNR=4.1							
BVAR					LR	LR	05 20 29.8	
	comp=Z,106nm,18.8s,baz=64,slow=40							
BVAR	**Borovoye Array**	**26.88**	**19**	P		**P**	**05 08 22.4**	**+0.4**
BVAR	**Borovoye Array**	**26.88**	**19**	PcP		**PcP**	**05 11 44.3**	**+0.2**
MK31	**Makanchi Array**	**27.57**	**41**	*e*P		**P**	**05 08 28.4**	**0.0**
MK31					pmax	pmax		
	comp=Z,2.0nm,0.6s							
MK31	**Makanchi Array**	**27.57**	**41**	*e*P		**P**	**05 08 28.4**	**0.0**
MK31	**Makanchi Array**	**27.57**	**41**	*e*P		**P**	**05 08 28.4**	**0.0**
	comp=Z,2.0nm,0.6s							
MKAR	**Makanchi Array**	**27.57**	**41**	P		**P**	**05 08 28.3**	**-0.1**
MKAR							05 11 44.9	
MKAR					pmax	pmax		
	comp=Z,3.0nm,0.9s							
MKAR	**Makanchi Array**	**27.57**	**41**	*e*P		**P**	**05 08 28.8**	**+0.4**
MKAR					PcP	**PcP**	**05 11 44.9**	**-1.0**
MKAR	**Makanchi Array**	**27.57**	**41**	P		**P**	**05 08 28.2**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=229,slow=9.3,SNR=16							
MKAR					PcP	**PcP**	**05 11 44.9**	**-1.0**
	comp=Z,0.4nm,0.3s,baz=256,slow=4.3,SNR=6.3							
MKAR	**Makanchi Array**	**27.57**	**41**	P		**P**	**05 08 28.3**	**-0.1**
	comp=Z,3.0nm,0.9s							
KURBB	**Kurchatov Arra**	**28.02**	**31**	P		**P**	**05 08 31.9**	**-0.3**
	comp=Z,2.4nm,1.0s,baz=231,slow=8.6,SNR=12							
KURBB					PcP	**PcP**	**05 11 46.3**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=230,slow=3.0,SNR=5.2							
KURBB					ScP	**ScP**	**05 15 30.8**	**+3.4**
	comp=Z,0.9nm,0.9s,baz=234,slow=3.5,SNR=6.8							
KURK	**Kurchatov**	**28.13**	**31**	*e*P		**P**	**05 08 34.1**	**+0.9**
KURK							05 11 46.3	
KURK	**Kurchatov**	**28.13**	**31**	*e*P		**P**	**05 08 34.1**	**+0.9**
KURK					PcP	**PcP**	**05 11 46.3**	**-0.8**
KURK					ScP	**ScP**	**05 15 30.8**	**+3.1**
KURK	**Kurchatov**	**28.13**	**31**	*e*P		**P**	**05 08 34.1**	**+0.9**
MLR	**Muntele Rosu**	**29.41**	**314**	P		**P**	**05 08 44.9**	**+0.1**
MLR	**Muntele Rosu**	**29.41**	**314**	P		**P**	**05 08 44.9**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=205,slow=15,SNR=9.0							
MLR	**Muntele Rosu**	**29.41**	**314**	P		**P**	**05 08 44.9**	**+0.1**
WMQ	**Urumqi**	**29.63**	**50**	*e*P		P	05 08 50.3	+3.5
WMQ					pP	pP	05 08 57.0	+6.0
WMQ					PP	**PnPn**	**05 09 46.0**	**+4.4**
WMQ				*e*S		**S**	**05 13 44.0**	**+2.2**
WMQ					SS	**SnSn**	**05 15 17.0**	**+6.6**
WMQ					pmax	pmax		
	comp=Z,7.0nm,0.6s							
WMQ					pmax	pmax		
	comp=Z,120nm,3.5s							
WMQ					LR	LR		
	comp=N,370nm,10.0s							
WMQ					LR	LR		
	comp=E,290nm,13.4s							
WMQ					LR	LR		
	comp=Z,330nm,14.3s							
AK02	**Malin Array Si**	**30.24**	**325**	*e*P		**P**	**05 08 51.5**	**-0.5**
AK02	**Malin Array Si**	**30.24**	**325**	*e*P		**P**	**05 08 51.5**	**-0.5**
AK01	**Malin Array Si**	**30.25**	**325**	*e*P		**P**	**05 08 51.4**	**-0.7**
AK01	**Malin Array Si**	**30.25**	**325**	*e*P		**P**	**05 08 51.4**	**-0.7**
AKASG	**Malin Array Be**	**30.25**	**325**	P		**P**	**05 08 51.6**	**-0.5**
AKASG							05 15 35.2	
AKASG	**Malin Array Be**	**30.25**	**325**	P		**P**	**05 08 51.6**	**-0.5**
AKASG					ScP	**ScP**	**05 15 35.2**	**+0.7**
AKASG	**Malin Array Be**	**30.25**	**325**	P		**P**	**05 08 51.6**	**-0.5**
	comp=Z,5.5nm,0.8s,baz=125,slow=8.0,SNR=12							
AKASG					ScP	**ScP**	**05 15 35.2**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=93,slow=1.9,SNR=4.6							
AKASG	**Malin Array Be**	**30.25**	**325**	P		**P**	**05 08 51.6**	**-0.5**
KIEV	**Kiev**	**30.26**	**325**	*e*P		**P**	**05 08 50.7**	**-1.4**
KIEV					pmax	pmax		
	comp=Z,11nm,0.9s							
KIEV	**Kiev**	**30.26**	**325**	*e*P		**P**	**05 08 50.7**	**-1.4**
	comp=Z,11nm,0.9s							
KIEV	**Kiev**	**30.26**	**325**	*e*P		**P**	**05 08 50.7**	**-1.4**
	comp=Z,11nm,0.9s							
OBN	**Obninsk**	**30.33**	**338**⇑	*e*P		**P**	**05 08 52.9**	**+0.2**
OBN				*e*			05 11 51.0	
OBN					pmax	pmax		
	comp=Z,22nm,1.0s							
OBN	**Obninsk**	**30.33**	**338**	*e*P		**P**	**05 08 52.9**	**+0.2**
	comp=Z,22nm,1.0s							
BUR08	**Bucovina Ar. S**	**30.83**	**317**	*e*P		**P**	**05 08 57.1**	**-0.3**
BUR08	**Bucovina Ar. S**	**30.83**	**317**	*e*P

GEC2 GERESS Array S 38.40 314 *e*P P 05 10 02.9 +0.2
GEC2 *ep*P **pP** **05 10 05.3 -1.7**
GEC2 GERESS Array S 38.40 314 *e*P P 05 10 02.9 +0.2
GEC2 *e**PP **pP** **05 10 05.3 -1.7**
GEC2 GERESS Array S 38.40 314 *e*P P 05 10 02.4 -0.3
GEC2 GERESS Array S 38.40 314 *e*P P 05 10 02.9 +0.2
GERES GERESS Array B 38.40 314 P P 05 10 01.9 -0.8
GERES PcP **PcP** **05 12 17.6 +1.6**
GERES GERESS Array B 38.40 314 P P 05 10 01.9 -0.8
comp=E,5.7nm,0.8s,baz=116,slow=8.1,SNR=24
GERES PcP **PcP** **05 12 17.6 +1.6**
comp=E,1.7nm,0.9s,baz=108,slow=4.3,SNR=4.6
GERES LR LR 05 28 18.6
comp=E,41nm,20.1s,baz=35,slow=40
GERES GERESS Array B 38.40 314 P P 05 10 02.0 -0.8
KHC Kasperske Hory 38.55 315 *e*P P 05 10 03.1 -0.9
KHC *e* 05 10 06.3
KHC Kasperske Hory 38.55 315 *e*P P 05 10 03.1 -0.9
KHC *ep*P **pP** **05 10 06.3 -2.0**
KHC *ex* x 05 10 12.5
KHC Kasperske Hory 38.55 315 *e*P P 05 10 03.2 -0.8
comp=E,20nm,0.9s
KHC Kasperske Hory 38.55 315 *e*P P 05 10 03.1 -0.9
ABTA Abfaltersbach 38.64 311⇑ *e*pP P 05 10 04.9 +0.1
comp=E,15nm,0.8s
ABTA Abfaltersbach 38.64 311 P P 05 10 04.9 +0.1
comp=E,15nm,0.8s
FINES FINESS Array B 38.73 337 P P 05 10 05.0 -0.3
FINES FINESS Array B 38.73 337 P P 05 10 05.0 -0.3
comp=E,3.2nm,0.6s,baz=130,slow=7.7,SNR=14
FINES LR LR 05 28 30.0
comp=E,28nm,18.6s,baz=203,slow=40
FINES FINESS Array B 38.73 337 P P 05 10 05.0 -0.3
BRG Berggiesshubel 38.87 317 *e*P P 05 10 08.4 +1.8
comp=E,5.9nm,0.9s
BRG Berggiesshubel 38.87 317 *e*P P 05 10 06.8 +0.2
comp=E,8.0nm,1.4s
BRG *ep*P **pP** **05 10 09.2 -1.7**
BRG Berggiesshubel 38.87 317 *e*P P 05 10 08.4 +1.8
BRG pmax pmax
comp=E,6.0nm,0.9s
BRG Berggiesshubel 38.87 317 *e*P P 05 10 08.4 +1.8
comp=E,6.0nm,0.9s
WET Wettzell 39.00 314 *e*P P 05 10 07.5 -0.2
comp=E,5.0nm,1.0s
WET *ep*P **pP** **05 10 10.0 -2.0**
WET Wettzell 39.00 314 *e*P P 05 10 07.5 -0.2
WET *e**PP **pP** **05 10 10.0 -2.0**
WET pmax pmax
comp=E,7.0nm,1.0s
WET Wettzell 39.00 314 *e*P P 05 10 07.5 -0.2
comp=E,7.0nm,1.0s
KAF Kangasniemi 39.14 338 *e*P P 05 10 11.7 +3.1
KAF Kangasniemi 39.14 338 *ep* P 05 10 11.7 +3.1
KAF Kangasniemi 39.14 338 *e*P P 05 10 11.7 +3.1
WTTA Wattenberg 39.34 311⇑ *e*P P 05 10 09.6 -1.2
comp=E,33nm,1.1s
WTTA Wattenberg 39.34 311 P P 05 10 09.6 -1.2
comp=E,33nm,1.1s
CLL Collm 39.57 318 *e*P P 05 10 13.0 +0.6
comp=E,4.0nm,0.9s
CLL *ep*P **pP** **05 10 15.4 -1.3**
CLL Collm 39.57 318⇓ *i*P P 05 10 12.5 +0.1
CLL *i* 05 10 14.9
CLL pmax pmax
comp=E,5.0nm,0.9s
CLL Collm 39.57 318⇓ *i*P P 05 10 12.5 +0.1
comp=E,5.0nm,0.9s
CLL *i* pP **pP** **05 10 14.9 -1.8**
comp=E,14nm,1.0s
CLL *e*PP **PnPn** **05 11 47.0 +0.8**
CLL Collm 39.57 318 *i* P P 05 10 12.5 +0.1
comp=E,5.0nm,0.9s
ROTZ Rotzenmuhle 39.59 315 *e*P P 05 10 13.2 +0.6
comp=E,5.0nm,0.9s
ROTZ *ep*P **pP** **05 10 15.7 -1.3**
WERN Wernitzgruen 39.64 316 *e*P P 05 10 13.8 +0.8
comp=E,3.0nm,0.8s
WERN *ep*P **pP** **05 10 15.8 -1.6**
MOTA Moosalm 39.71 311⇑ *e*P P 05 10 13.0 -0.8
comp=E,30nm,1.0s
MOTA Moosalm 39.71 311 P P 05 10 13.0 -0.8
comp=E,30nm,1.0s
MANZ Manzenberg 39.72 315 *e*P P 05 10 14.3 +0.6
comp=E,2.0nm,0.9s
MANZ *ep*P **pP** **05 10 16.5 -1.5**
FETA Feichten 39.89 311⇑ *e*P P 05 10 15.1 -0.2
comp=E,25nm,0.7s
FETA Feichten 39.89 311 P P 05 10 15.1 -0.2
comp=E,25nm,0.7s
BSD Bornholm Skovb 39.93 324 *i* P P 05 10 13.3 -2.0
BSD pmax pmax
comp=E,37nm,0.8s
BSD Bornholm Skovb 39.93 324 *i* P P 05 10 13.3 -2.0
comp=E,37nm,0.8s
RETA Reutte 39.96 311⇑ *i* P P 05 10 15.1 -0.8
RETA Reutte 39.96 311 P P 05 10 15.1 -0.8
KEST Kesra 40.07 293 P P 05 10 16.7 -0.2
KEST Kesra 40.07 293 P P 05 10 16.7 -0.2
comp=E,5.2nm,1.2s,baz=150,slow=9.2,SNR=3.7
KEST Kesra 40.07 293 P P 05 10 16.7 -0.2
GRA1 Grafenberg Arr 40.19 315 *e*P P 05 10 18.2 +0.6
GRF Grafenberg Arr 40.19 315 *e*P P 05 10 18.2 +0.6
comp=E,17nm,0.9s
GRF *ep*P **pP** **05 10 20.6 -1.3**
GRF Grafenberg Arr 40.19 315 *e*P P 05 10 18.2 +0.6
GRF *e**PP **pP** **05 10 20.6 -1.3**
MOX Moxa 40.21 316 *e*P P 05 10 18.5 +0.8
comp=E,3.0nm,0.9s
MOX *ep*P **pP** **05 10 20.6 -1.5**
MOX Moxa 40.21 316 *e*P P 05 10 18.5 +0.8
MOX *e**PP **pP** **05 10 20.6 -1.5**
MOX pmax pmax
comp=E,6.0nm,0.9s
MOX Moxa 40.21 316 *e*P P 05 10 18.5 +0.8
comp=E,6.0nm,0.9s
DAVOX Davos/Dischmat 40.41 310 P P 05 10 19.1 -0.6
DAVOX Davos/Dischmat 40.41 310 P P 05 10 19.1 -0.6
comp=E,12nm,0.8s,baz=121,slow=7.2,SNR=12
DAVOX Davos/Dischmat 40.41 310 P P 05 10 19.1 -0.6
DAVA Damuels 40.51 311⇑ *e*P P 05 10 19.1 -1.4
comp=Z,40nm,0.9s
LZH Lanzhou 40.78 67 *e*P P 05 10 21.3 -1.6
LZH pP **pP** **05 10 24.5 -2.7**
LZH PP **PP** **05 11 58.8 +2.0**
LZH pmax pmax
comp=Z,19nm,1.3s
LZH pmax pmax
comp=Z,73nm,6.0s
LZH LR LR
comp=N,380nm,13.2s
LZH LR LR
comp=E,350nm,14.0s
LZH LR LR
comp=Z,410nm,17.5s
CD2 Chengdu 41.24 74 *e*P P 05 10 26.9 +0.3
CD2 pP **pP** **05 10 31.4 +0.5**
CD2 sP **sP** **05 10 33.9 +1.3**
CD2 PP **PnPn** **05 12 05.5 -0.8**
CD2 S **S** **05 16 40.8 +0.6**
CD2 sS **sS** **05 16 47.6 +0.3**
CD2 SS **SS** **05 19 38.8 -4.5**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,40nm,4.8s
CD2 LR LR
comp=N,130nm,14.2s
CLZ Clausthal 41.30 318 *e*P P 05 10 27.9 +1.1
comp=Z,11nm,1.3s
CLZ *ep*P **pP** **05 10 30.4 -0.7**
CLZ Clausthal 41.30 318 *e*P P 05 10 27.9 +1.1
CLZ *e**PP **pP** **05 10 30.4 -0.7**
CLZ pmax pmax
comp=Z,10.0nm,1.3s
CLZ Clausthal 41.30 318 *e*P P 05 10 27.9 +1.1
comp=Z,10.0nm,1.3s
KMI Kunming 41.55 83 P P 05 10 30.8 +1.4
KMI pmax pmax
comp=Z,7.0nm,0.5s
APA Apatity 41.64 347⇓ *e*P P 05 10 20.7 -8.5
APA pmax pmax
comp=Z,1.0nm,1.0s
APA MLR MLR
comp=Z,300nm,17.0s

NRDL Niedersach Rie 41.65 319 *e*P P 05 10 30.8 +1.4
comp=Z,10.0nm,1.2s
NRDL *ep*P **pP** **05 10 33.3 -0.5**
SBF Sospel 41.72 305 *e*P P 05 10 28.2 -2.2
comp=Z,65nm,1.2s
SBF Sospel 41.72 305 *e*P P 05 10 28.2 -2.2
SBF pmax pmax
comp=Z,65nm,1.2s
SBF Sospel 41.72 305 *e*P P 05 10 28.2 -2.2
comp=Z,65nm,1.2s
SBF Sospel 41.72 305 *e*P P 05 10 28.2 -2.2
comp=Z,32nm,1.2s
BSEG Bad Segeberg 41.97 321 *e*P P 05 10 33.1 +0.9
comp=Z,13nm,1.1s
BSEG *ep*P **pP** **05 10 35.4 -1.1**
BSEG Bad Segeberg 41.97 321 *e*P P 05 10 33.1 +0.9
BSEG *e**PP **pP** **05 10 35.4 -1.1**
BSEG pmax pmax
comp=Z,27nm,1.1s
BSEG Bad Segeberg 41.97 321 *e*P P 05 10 33.1 +0.9
comp=Z,27nm,1.1s
TNS Taunus Mts 42.06 315 *e*P P 05 10 33.8 +0.8
comp=Z,10.0nm,1.2s
TNS *ep*P **pP** **05 10 36.3 -1.1**
TNS Taunus Mts 42.06 315 *e*P P 05 10 33.8 +0.8
TNS *e**PP **pP** **05 10 36.3 -1.1**
TNS pmax pmax
comp=Z,4.0nm,1.2s
TNS Taunus Mts 42.06 315 *e*P P 05 10 33.8 +0.8
comp=Z,4.0nm,1.2s
SENIN Lac Senin/Sane 42.10 309 *e*P P 05 10 36.3 +2.7
comp=Z,5.4nm,0.8s
MBDF Montbardon 42.28 306 *e*P P 05 10 32.7 -2.3
MBDF Montbardon 42.28 306 *e*P P 05 10 32.7 -2.3
MBDF Montbardon 42.28 306 *e*P P 05 10 32.7 -2.3
MBDF Montbardon 42.28 306 *e*P P 05 10 32.7 -2.3
LPG La Plagne 42.38 308 *e*P P 05 10 33.6 -2.4
comp=Z,22nm,1.0s
LPG La Plagne 42.38 308 *e*P P 05 10 33.6 -2.4
LPG pmax pmax
comp=Z,22nm,1.0s
LPG La Plagne 42.38 308 *e*P P 05 10 33.6 -2.4
comp=Z,22nm,1.0s
LPG La Plagne 42.38 308 *e*P P 05 10 33.6 -2.4
comp=Z,11nm,1.0s
LPL La Plagne 42.39 308 *e*P P 05 10 33.9 -2.1
LPL La Plagne 42.39 308 *e*P P 05 10 33.9 -2.1
LPL La Plagne 42.39 308 *e*P P 05 10 33.9 -2.1
CDF Champ du Feu 42.44 312 *e*P P 05 10 34.2 -2.0
CDF Champ du Feu 42.44 312 *e*P P 05 10 34.2 -2.0
CDF Champ du Feu 42.44 312 *e*P P 05 10 34.2 -2.0
CDF Champ du Feu 42.44 312 *e*P P 05 10 34.2 -2.0
ECH Echery 42.49 312 *e*P P 05 10 34.9 -1.6
ECH pmax pmax
comp=Z,11nm,0.9s
ECH Echery 42.49 312 *e*P P 05 10 34.9 -1.6
comp=Z,11nm,0.9s
ECH Echery 42.49 312 *e*P P 05 10 34.9 -1.6
comp=Z,11nm,0.9s
HINF Hinteralfeld 42.62 311 *e*P P 05 10 35.2 -2.4
HINF Hinteralfeld 42.62 311 *e*P P 05 10 35.2 -2.4
HINF Hinteralfeld 42.62 311 *e*P P 05 10 35.2 -2.4
HINF Hinteralfeld 42.62 311 *e*P P 05 10 35.2 -2.4
HFS Hagfors 42.80 330 P P 05 10 38.7 -0.1
HFS Hagfors 42.80 330 P P 05 10 38.7 -0.1
comp=Z,3.2nm,0.4s,baz=128,slow=9.6,SNR=15
HFS Hagfors 42.80 330 P P 05 10 38.7 -0.1
CABF La Chapelle 42.97 309 *e*P P 05 10 38.8 -1.7
comp=Z,39nm,0.9s
CABF La Chapelle 42.97 309 *e*P P 05 10 38.8 -1.7
CABF pmax pmax
comp=Z,39nm,0.9s
CABF La Chapelle 42.97 309 *e*P P 05 10 38.8 -1.7
comp=Z,39nm,0.9s
CABF La Chapelle 42.97 309 *e*P P 05 10 38.8 -1.7
comp=Z,19nm,0.9s
IBBN Ibbenburen 42.98 318 *e*P P 05 10 41.7 +1.3
comp=Z,8.0nm,0.6s
IBBN *ep*P **pP** **05 10 44.1 -0.6**
HAU Haudompre 42.99 311 *e*P P 05 10 38.0 -2.6
comp=Z,15nm,0.8s
HAU *e*R
comp=Z,34nm,19.0s
HAU Haudompre 42.99 311 *e*P P 05 10 38.0 -2.6
HAU pmax pmax
comp=Z,15nm,0.8s
HAU Haudompre 42.99 311 *e*P P 05 10 38.0 -2.6
comp=Z,15nm,0.8s
HAU Haudompre 42.99 311 *e*P P 05 10 38.0 -2.6
comp=Z,7.5nm,0.8s
SONM Songino Array 43.26 49 P P 05 10 43.7 +0.8
SONM Songino Array 43.26 49 P P 05 10 43.7 +0.8
comp=Z,1.1nm,0.5s,baz=264,slow=8.8,SNR=6.6
SONM Songino Array 43.26 49 P P 05 10 43.7 +0.8
WLF Walferdange 43.39 314 P P 05 10 46.1 +2.3
comp=Z,4.3nm,1.0s
SFTF Sexfontaines 43.88 311 *e*P P 05 10 46.0 -1.8
SFTF Sexfontaines 43.88 311 *e*P P 05 10 46.0 -1.8
SFTF Sexfontaines 43.88 311 *e*P P 05 10 46.0 -1.8
MEZF Maizieres J'vi 43.92 312 *e*P P 05 10 46.5 -1.5
MEZF Maizieres J'vi 43.92 312 *e*P P 05 10 46.5 -1.5
BCLA Clavier 44.07 315 P P 05 10 49.3 +0.1
comp=Z,7.8nm,1.8s
NB2 NORSAR Subarra 44.31 331 P P 05 10 50.1 -0.9
comp=Z,1.1nm,0.7s,baz=115,slow=8.6
NB2 NORSAR Subarra 44.31 331 P P 05 10 50.1 -0.9
comp=Z,1.1nm,0.7s,baz=115,slow=8.1,SNR=7.3
NOA NORSAR Array B 44.31 331 P P 05 10 49.8 -1.2
NOA PcP **PcP** **05 12 35.0 -0.1**
NOA NORSAR Array B 44.31 331 P P 05 10 49.8 -1.2
comp=Z,2.3nm,0.8s,baz=116,slow=8.0,SNR=6.7
NOA PcP **PcP** **05 12 35.0 -0.1**
comp=Z,1.1nm,0.8s,baz=91,slow=8.4,SNR=3.5
NOA LR LR 05 32 04.2
comp=Z,20nm,20.5s,baz=130,slow=40
GIVF Givet 44.32 314 *e*P P 05 10 50.4 -0.8
comp=Z,46nm,1.2s
GIVF Givet 44.32 314 *e*P P 05 10 50.4 -0.8
GIVF pmax pmax
comp=Z,46nm,1.2s
GIVF Givet 44.32 314 *e*P P 05 10 50.4 -0.8
comp=Z,46nm,1.2s
GIVF Givet 44.32 314 *e*P P 05 10 50.4 -0.8
comp=Z,23nm,1.2s
SMF Signal de Mont 44.51 309 *e*P P 05 10 50.9 -1.9
comp=Z,40nm,1.0s
SMF Signal de Mont 44.51 309 *e*P P 05 10 50.9 -1.9
SMF pmax pmax
comp=Z,41nm,1.0s
SMF Signal de Mont 44.51 309 *e*P P 05 10 50.9 -1.9
comp=Z,40nm,1.0s
LOR Lormes 44.56 310 *e*P P 05 10 51.1 -2.1
comp=Z,21nm,1.0s
LOR *e*R
comp=Z,71nm,19.0s
LOR Lormes 44.56 310 *e*P P 05 10 51.1 -2.1
comp=Z,21nm,1.0s
GYA Guiyang 44.63 80 *e*P P 05 10 54.8 +0.6
GYA PP **PP** **05 12 40.3 +1.9**
GYA ScP **ScP** **05 16 28.0 -0.9**
GYA S **S** **05 17 31.3 +1.0**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.9s
GYA LR LR
comp=N,480nm,17.5s
GYA LR LR
comp=E,390nm,18.2s
GYA LR LR
comp=Z,470nm,17.6s
BAIF Baives 44.70 314 *e*P P 05 10 53.6 -0.7
comp=Z,55nm,1.1s
BAIF Baives 44.70 314 *e*P P 05 10 53.6 -0.7
BAIF pmax pmax
comp=Z,55nm,1.1s
BAIF Baives 44.70 314 *e*P P 05 10 53.6 -0.7
comp=Z,55nm,1.1s
KEV Kevo 44.77 346 *e*P P 05 10 56.1 +1.6
KEV Kevo 44.77 346 *ep* P 05 10 56.1 +1.6
KEV Kevo 44.77 346 *e*P P 05 10 56.1 +1.6
SSF Saint Saulge 44.78 310 *e*P P 05 10 53.1 -1.9
comp=Z,37nm,1.0s
SSF Saint Saulge 44.78 310 *e*P P 05 10 53.1 -1.9
SSF pmax pmax
comp=Z,37nm,1.0s

SSF Saint Saulge 44.78 310 *e*P P 05 10 53.1 -1.9
comp=Z,37nm,1.0s
SSF Saint Saulge 44.78 310 *e*P P 05 10 53.1 -1.9
comp=Z,19nm,1.0s
AVF Avril sur Loir 44.86 309 *e*P P 05 10 53.6 -2.0
comp=Z,26nm,1.2s
AVF Avril sur Loir 44.86 309 *e*P P 05 10 53.6 -2.0
AVF pmax pmax
comp=Z,26nm,1.2s
AVF Avril sur Loir 44.86 309 *e*P P 05 10 53.6 -2.0
comp=Z,26nm,1.2s
AVF Avril sur Loir 44.86 309 *e*P P 05 10 53.6 -2.0
comp=Z,13nm,1.2s
ARCES ARCESS Array B 44.92 345 P P 05 10 56.0 +0.2
ARCES ARCESS Array B 44.92 345 P P 05 10 56.0 +0.2
comp=Z,2.4nm,0.8s,baz=141,slow=7.8,SNR=9.9
ARCES LR LR 05 32 49.4
comp=Z,24nm,18.5s,baz=357,slow=40
ARCES ARCESS Array B 44.92 345 P P 05 10 56.0 +0.2
BGF Bois d'Agland 45.19 309 *e*P P 05 10 56.4 -1.8
comp=Z,26nm,1.0s
BGF Bois d'Agland 45.19 309 *e*P P 05 10 56.4 -1.8
BGF pmax pmax
comp=Z,26nm,1.0s
BGF Bois d'Agland 45.19 309 *e*P P 05 10 56.4 -1.8
comp=Z,26nm,1.0s
BGF Bois d'Agland 45.19 309 *e*P P 05 10 56.4 -1.8
comp=Z,13nm,1.0s
TCF Toulx Ste Croi 45.60 308 *e*P P 05 10 59.0 -2.6
comp=Z,12nm,0.9s
TCF Toulx Ste Croi 45.60 308 *e*P P 05 10 59.0 -2.6
TCF pmax pmax
comp=Z,12nm,0.9s
TCF Toulx Ste Croi 45.60 308 *e*P P 05 10 59.0 -2.6
comp=Z,12nm,0.9s
TCF Toulx Ste Croi 45.60 308 *e*P P 05 10 59.0 -2.6
comp=Z,6.1nm,0.9s
TAM Tamanrasset 45.74 275 *e*P P 05 11 03.2 +0.1
TAM pmax pmax
comp=Z,8.0nm,1.0s
TAM Tamanrasset 45.74 275 *e*P P 05 11 03.2 +0.1
comp=Z,8.1nm,1.0s
TAM Tamanrasset 45.74 275 *e*P P 05 11 03.2 +0.1
comp=Z,8.1nm,1.0s
RJF Les Rejaudoux 46.04 307 *e*P P 05 11 03.8 -1.2
RJF *e*R
comp=Z,51nm,21.8s
RJF Les Rejaudoux 46.04 307 *e*P P 05 11 03.8 -1.2
RJF Les Rejaudoux 46.04 307 *e*P P 05 11 03.8 -1.2
RJF Les Rejaudoux 46.04 307 *e*P P 05 11 03.8 -1.2
HHC Hu-ho-hao-te 46.62 59 *e*P P 05 11 08.5 -1.2
HHC pP **pP** **05 11 14.3 +0.2**
HHC sP **sP** **05 11 17.9 +2.1**
HHC PcP **PcP** **05 12 45.4 +1.8**
HHC PP **PP** **05 12 59.8 +0.5**
HHC ScP **ScP** **05 16 36.8 0.0**
HHC S **S** **05 17 57.1 -1.4**
HHC sS **sS** **05 18 05.5 -0.2**
HHC ScS **ScS** **05 21 01.8 -2.8**
HHC SS SS 05 21 16.1 -8.4
HHC pmax pmax
comp=Z,28nm,1.0s
HHC pmax pmax
comp=Z,200nm,6.0s
HHC LR LR
comp=N,290nm,16.8s
HHC LR LR
comp=E,420nm,16.9s
HHC LR LR
comp=Z,140nm,16.8s
LDF La Druitiere 47.34 311 *e*P P 05 11 12.8 -2.4
comp=Z,17nm,0.9s
LDF La Druitiere 47.34 311 *e*P P 05 11 12.8 -2.4
LDF pmax pmax
comp=Z,17nm,0.9s
LDF La Druitiere 47.34 311 *e*P P 05 11 12.8 -2.4
comp=Z,17nm,0.9s
FLN La Foliniere 47.59 312 *e*P P 05 11 14.9 -2.2
comp=Z,37nm,1.1s
FLN *e*R
comp=Z,42nm,18.0s
FLN La Foliniere 47.59 312 *e*P P 05 11 14.9 -2.2
FLN pmax pmax
comp=Z,37nm,1.1s
FLN La Foliniere 47.59 312 *e*P P 05 11 14.9 -2.2
comp=Z,37nm,1.1s
GRR Gorron 47.82 311 *e*P P 05 11 16.7 -2.1
comp=Z,25nm,1.0s
GRR Gorron 47.82 311 *e*P P 05 11 16.7 -2.1
GRR pmax pmax
comp=Z,25nm,1.0s
GRR Gorron 47.82 311 *e*P P 05 11 16.7 -2.1
comp=Z,25nm,1.0s
KULM Kulim 47.97 110 *e*P P 05 11 21.0 +0.6
comp=Z,108nm,0.8s
KULM Kulim 47.97 110 *e*P P 05 11 21.0 +0.6
comp=Z,108nm,0.8s
ROSF Rostrenen 49.43 311 *e*P P 05 11 29.3 -1.9
comp=Z,33nm,1.0s
ROSF Rostrenen 49.43 311 *e*P P 05 11 29.3 -1.9
ROSF pmax pmax
comp=Z,33nm,1.0s
ROSF Rostrenen 49.43 311 *e*P P 05 11 29.3 -1.9
comp=Z,33nm,1.0s
ROSF Rostrenen 49.43 311 *e*P P 05 11 29.3 -1.9
comp=Z,16nm,1.0s
EKA Eskdalemuir Ar 49.91 320 P P 05 11 33.5 -1.2
EKA Eskdalemuir Ar 49.91 320 P P 05 11 33.5 -1.2
comp=Z,4.8nm,0.8s,baz=104,slow=7.6,SNR=20
BJI Beijing 50.19 60 P P 05 11 34.0 -3.1
BJI pmax pmax
comp=Z,11nm,0.7s
ESDC Sonseca Array 50.29 300 P P 05 11 37.2 -0.8
ESDC Sonseca Array 50.29 300 P P 05 11 37.2 -0.8
comp=Z,0.2nm,0.3s,baz=79,slow=6.8,SNR=4.4
ESDC Sonseca Array 50.29 300 P P 05 11 37.2 -0.8
TOA0 Torodi Ar. Sit 52.70 265 *e*P P 05 11 55.5 -0.8
TOA0 Torodi Ar. Sit 52.70 265 *e*P P 05 11 55.5 -0.8
TORD Torodi Ar. Bea 52.70 265 P P 05 11 55.4 -0.9
TORD Torodi Ar. Bea 52.70 265 P P 05 11 55.4 -0.9
comp=Z,23nm,0.9s,baz=62,slow=7.0,SNR=68
TORD Torodi Ar. Bea 52.70 265 P P 05 11 55.4 -0.9
CN2 Changchun 56.58 54 *e*P P 05 12 25.6 +1.6
TIXI Tiksi 57.99 21⇓ *e*P P 05 12 34.0 +0.4
TIXI pmax pmax
comp=Z,11nm,1.6s
TIXI Tiksi 57.99 21 *e*P P 05 12 34.0 +0.4
comp=Z,11nm,1.6s
KSAR Wonju Array Be 59.65 61 P P 05 12 44.2 -1.4
KSAR Wonju Array Be 59.65 61 P P 05 12 44.3 -1.4
SCO Scoresbysund 59.67 338 *i* P P 05 12 49.5 +4.3
SCO pmax pmax
comp=Z,4.0nm,0.8s
SCO Scoresbysund 59.67 338 *i* P P 05 12 49.5 +4.3
comp=Z,3.9nm,0.8s
KSRS Korea Array 59.67 61 P P 05 12 44.2 -1.6
comp=Z,1.2nm,0.4s,baz=272,slow=7.8,SNR=5.8
KSRS Korea Array 59.67 61 P P 05 12 44.2 -1.6
comp=Z,1.0nm,0.4s
DBIC Dimbokro 61.38 262 P P 05 12 56.6 -1.2
DBIC Dimbokro 61.38 262 P P 05 12 56.6 -1.2
comp=Z,8.5nm,0.9s,baz=103,slow=4.5,SNR=4.7
BOSA Boshof 63.84 210 P P 05 13 14.2 +0.2
BOSA Boshof 63.84 210 P P 05 13 14.2 +0.2
comp=Z,1.8nm,0.4s,baz=179,slow=5.8,SNR=5.2
BOSA LR LR 05 43 16.6
comp=Z,51nm,19.4s,baz=353,slow=38
BOSA Boshof 63.84 210 P P 05 13 14.2 +0.2
SUMG Summit 64.66 341 *i* P P 05 13 20.0 +0.9
SUMG pmax pmax
comp=Z,17nm,1.0s
SUMG Summit 64.66 341 *e*P P 05 13 18.7 -0.5
comp=Z,23nm,1.0s
SUMG Summit 64.66 341 *i* P P 05 13 20.0 +0.9
comp=Z,17nm,1.0s
SUMG Summit 64.66 341 *i* P P 05 13 20.0 +0.9
comp=Z,17nm,1.0s
SFJD Kangerlussuaq 70.53 336 *i* P P 05 13 46.8 -9.0
comp=Z,6.3nm,0.8s
BILL Bilibino 71.18 22 *e*P P 05 13 59.1 -0.7
BILL *e* 05 14 16.8
BILL *e*SS SS 05 27 59.9 +11
BILL pmax pmax
comp=Z,27nm,1.2s
COLD Coldfoot 82.74 10 *e*P P 05 15 04.0 -0.8
comp=Z,8.7nm,1.0s

SCHQ	Schefferville	83.88	331	P		P	05 15 10.7	-0.3
SCHQ	Schefferville	83.88	331	P		P	05 15 10.7	-0.3
	comp=Z,8.2nm,0.8s,baz=53,slow=3.4,SNR=10							
ILAR	Eielson Array	85.53	10	P		P	05 15 17.6	-1.5
ILAR	Eielson Array	85.53	10	P		P	05 15 17.6	-1.5
	comp=Z,1.3nm,0.8s,baz=314,slow=3.6,SNR=11							
ILAR	Eielson Array	85.53	10	P		P	05 15 17.7	-1.5
MCK	McKinley	86.18	11	*eP*		P	05 15 22.3	-0.1
MCK				pmax		pmax		
	comp=Z,11nm,1.0s							
MCK	McKinley	86.18	11	*eP*		P	05 15 22.3	-0.1
	comp=Z,11nm,1.0s							
EGAK	Eagle	86.27	7	*eP*		P	05 15 23.1	+0.3
	comp=Z,11nm,1.0s							
EGAK	Eagle	86.27	7	*eP*		P	05 15 23.1	+0.3
	comp=Z,11nm,1.0s							
DOT	Dot Lake	87.00	9	*eP*		P	05 15 27.5	+1.1
	comp=Z,66nm,1.1s							
DOT	Dot Lake	87.00	9	*eP*		P	05 15 27.5	+1.1
	comp=Z,66nm,1.1s							
YKA	Yellowknife Ar	89.24	356	P		P	05 15 37.2	+0.2
YKA	Yellowknife Ar	89.24	356	P		P	05 15 37.2	+0.2
	comp=Z,3.0nm,0.8s,baz=2.8,slow=4.6,SNR=15							
YKA	Yellowknife Ar	89.24	356	P		P	05 15 37.2	+0.2
WRA	Warramunga Arr	89.43	113	P		P	05 15 39.2	+0.6
WRA	Warramunga Arr	89.43	113	P		P	05 15 39.2	+0.6
	comp=Z,1.5nm,0.7s,baz=317,slow=3.9,SNR=13							
WRA	Warramunga Arr	89.43	113	P		P	05 15 39.2	+0.6
ASAR	Alice Springs	90.95	116	P		P	05 15 46.4	+0.6
ASAR	Alice Springs	90.95	116	P		P	05 15 46.4	+0.6
	comp=Z,0.7nm,0.6s,baz=302,slow=4.7,SNR=8.0							
ASAR	Alice Springs	90.95	116	P		P	05 15 46.3	+0.6
TXAR	Lajitas Array	119.55	340	PKP		PKPdf	05 21 31.4	-0.3
TXAR	Lajitas Array	119.55	340	PKP		PKPdf	05 21 31.4	-0.3
	comp=Z,0.2nm,0.7s,baz=158,slow=3.2,SNR=3.6							
TXAR	Lajitas Array	119.55	340	PKIKP		PKPdf	05 21 31.4	-0.3

ISCJB ***23*** *05:09:09.0±0.5, 37.28N±0.04×28.28E±0.04, h10km±7km, Error ellipse: s-maj=7.2km s-min=4.2km az=23.3*
ISK ***23*** *05:09:08.0, 37.29N×28.26E, h5km, MD2.6*
DDA ***23*** *05:09:09.0, 37.23N×28.16E, h7km, MD2.9*
CSEM ***23*** *05:09:09.3±0.2, 37.28N×28.26E, h10km, MD2.6, Error ellipse: s-maj=4.0km s-min=3.2km az=26.0*

ISC 23 05:09:09.0±0.9, **37.28N**±0.03×**28.26E**±0.03, **h7**km±9km, **n22**, σ0⁉**52**/37, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.15**	**173**	*e*PG		**Pg**		**05 09 11.9**	**-0.1**
YER				*e*SG		**Sg**		**05 09 14.4**	**+0.2**
YER	**Yerkesik**	**0.15**	**173**	*e*Pg		**Pg**		**05 09 12.0**	**-0.1**
YER				*e*Sg		**Sg**		**05 09 14.4**	**+0.2**
MLSB	**Milas**	**0.39**	**272**	*e*PG		**Pg**		**05 09 16.1**	**-0.4**
MLSB				*e*SG		**Sb**		**05 09 23.4**	**-0.9**
MLSB	**Milas**	**0.39**	**272**	*e*Pg		**Pg**		**05 09 16.1**	**-0.4**
MLSB				*e*Sg		**Sb**		**05 09 23.4**	**-0.9**
AYDN	**Tasoluk**	**0.48**	**322**	*e*P		**Pb**		**05 09 19.5**	**-0.4**
AYDN				*e*S		**Sg**		**05 09 25.8**	**+1.0**
AYDN	**Tasoluk**	**0.48**	**322**	*e*P		**Pb**		**05 09 19.5**	**-0.4**
AYDN				*e*S		**Sg**		**05 09 25.8**	**+1.0**
TURN	**Turunc**	**0.49**	**146**	*e*P		**Pg**		**05 09 18.3**	**-0.2**
TURN				*e*S		**Sg**		**05 09 24.9**	**0.0**
TURN	**Turunc**	**0.49**	**146**	*e*P		**Pg**		**05 09 18.3**	**-0.2**
DALY	**Dalyan (Mu˘la**	**0.56**	**146**	*e*PG		**Pb**		**05 09 20.5**	**-0.6**
DALY	**Dalyan (Mu˘la**	**0.56**	**146**	*e*Pg		**Pb**		**05 09 20.5**	**-0.6**
DNZL	**Cakiroluk**	**0.75**	**57**	*e*P		**Pb**		**05 09 24.8**	**+0.4**
DNZL				*e*S		**Sg**		**05 09 33.0**	**-0.2**
DNZL	**Cakiroluk**	**0.75**	**57**	*e*P		**Pb**		**05 09 24.8**	**+0.4**
DNZL				*e*S		**Sg**		**05 09 33.0**	**-0.2**
DAT	**Datca**	**0.78**	**225**	*e*PG		**Pb**		**05 09 24.6**	**-0.2**
DAT				*e*SG		**Sb**		**05 09 36.6**	**+1.0**
DAT	**Datca**	**0.78**	**225**	*e*Pg		**Pb**		**05 09 24.6**	**-0.2**
DAT				*e*Sg		**Sb**		**05 09 36.6**	**+1.0**
BODT	**Bodrum**	**0.79**	**254**	*e*PG		**Pg**		**05 09 24.6**	**+0.5**
BODT				*e*SG		**Sb**		**05 09 36.4**	**+0.5**
BODT	**Bodrum**	**0.79**	**254**	*e*Pg		**Pg**		**05 09 24.6**	**+0.5**
BODT				*e*Sg		**Sb**		**05 09 36.4**	**+0.5**
GCAM	**G?zelcaml?**	**0.92**	**297**	*e*P		**Pg**		**05 09 26.3**	**-0.3**
GCAM				*e*S		**Sg**		**05 09 38.3**	**-0.2**
GCAM	**G?zelcaml?**	**0.92**	**297**	*e*P		**Pg**		**05 09 26.3**	**-0.3**
GCAM				*e*S		**Sg**		**05 09 38.3**	**-0.2**
FETY	**Fethiye**	**0.92**	**134**	*e*PG		**Pb**		**05 09 27.2**	**-0.1**
FETY	**Fethiye**	**0.92**	**134**	*e*Pg		**Pb**		**05 09 27.2**	**-0.1**
KULA	**Kula-Manisa**	**1.27**	**14**	*e*PN		**Pn**		**05 09 33.2**	**0.0**
KULA	**Kula-Manisa**	**1.27**	**14**	*e*Pn		**Pn**		**05 09 33.2**	**0.0**

IDC 23 05:15:04.9±2.0, **17.81S**×**167.36E**, **h0**km, **mb3.9**/6, **mb1 4.1**/7, **mb1mx3.9**/21, **mbtmp4.0**/7, **ML3.8**/1, **MS3.1**/2, **Ms1 3.1**/2, **ms1mx2.7**/22, **Error ellipse: s-maj=47.9km s-min=31.6km az=131.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.33**	**191**	*e*P		Pn		05 16 10.4	-1.7
DZM				*e*S		Sn		05 16 58.6	-4.9
DZM	**Mont Dzumac**	**4.33**	**191**	Pn		Pn		05 16 11.7	-0.4
	5.1nm,0.3s,baz=64,slow=19,SNR=31								
DZM				Sn		Sn		05 16 59.3	-4.2
	2.7nm,0.3s,baz=324,slow=23,SNR=6.4								
CTA	**Charters Tower**	**20.09**	**260**	P		Pn		05 19 42.1	+0.1
	1.5nm,0.5s,baz=78,slow=13,SNR=4.1								
AFI	**Afiamalu**	**20.44**	**82**	LR		LR		05 25 48.1	
	comp=Z,19nm,21.7s,baz=289,slow=32								
STKA	**Stephens Creek**	**27.17**	**234**	P		P		05 20 50.6	+0.5
	7.2nm,0.9s,baz=84,slow=10,SNR=6.3								
WRA	**Warramunga Arr**	**31.29**	**261**	P		P		05 21 25.9	-1.0
	0.7nm,0.9s,baz=90,slow=9.8,SNR=4.5								
ASAR	**Alice Springs**	**31.78**	**254**	P		P		05 21 30.9	-0.3
	1.2nm,0.7s,baz=80,slow=8.5,SNR=12								
FITZ	**Fitzroy Crossi**	**39.63**	**263**	P		P		05 22 38.3	-0.4
	2.6nm,0.9s,baz=76,slow=12,SNR=3.9								
FITZ				LR		LR		05 37 55.2	
	comp=Z,68nm,19.6s,baz=99,slow=35								
ILAR	**Eielson Array**	**89.41**	**18**	P		P		05 28 03.2	+0.1
	0.4nm,0.7s,baz=233,slow=4.9,SNR=4.9								

ISCJB ***23*** *05:20:34.7±0.8, 6.7S±0.1×108.52E±0.06, h200km, mb3.5/3, Error ellipse: s-maj=20.5km s-min=7.2km az=13.1.*
DJA ***23*** *05:20:35.9±1.0, 7.5S×40.1×10.8E×1.2, h207km±17km, M3.8/5, mb4.2/3, mB5.3/1, MLv3.6/5, Mw(mB)4.8/1*
IDC ***23*** *05:20:54.7±20.0, 10.87S×111.46E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.5/3, Error ellipse: s-maj=353.2km s-min=172.3km az=151.0*

ISC 23 05:20:34.6±1.6, **6.38S**±0.3×**108.49E**±0.08, **h200**km, **n13**, σ1⁉**11**/15, **mb3.4**/3, **Jawa**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CISI	**Cisompet, Garu**	**1.03**	**220**	P		**Pn**		**05 21 05.3**	**+0.6**
CISI				S		**Sn**		**05 21 29.4**	**+1.3**
CLJI	**Cilicap**	**1.08**	**151**	P		**Pn**		**05 21 05.3**	**+1.3**
CNJI	**Cibinong**	**1.46**	**248**	P		**Pn**		**05 21 08.4**	**+0.4**
UGM	**Wanagama**	**2.32**	**120**	P		**Pn**		**05 21 17.8**	**+1.2**
PCJI	**Pacitan**	**3.02**	**118**	P		**Pn**		**05 21 25.0**	**+0.5**
PCJI				S		**Sn**		**05 22 03.9**	**+0.4**
PWJI	**Pagerwojo**	**3.52**	**111**	P		**Pn**		**05 21 31.5**	**+1.0**
KASI	**Kota Agung**	**4.16**	**287**	P		**Pn**		**05 21 39.3**	**+0.9**
JAGI	**Jajag, Banyuwa**	**5.86**	**107**	P		**Pn**		**05 22 01.2**	**+1.0**
	23nm,1.3s								
MNAI	**Manna**	**6.00**	**293**	P		**Pn**		**05 22 02.9**	**+0.9**
	250nm,1.2s,6μm								
SRBI	**Singaraja**	**6.79**	**102**	P		**Pn**		**05 22 13.5**	**+1.2**
WRA	**Warramunga Arr**	**28.30**	**120**	P		**P**		**05 26 08.4**	**-1.4**
	0.2nm,0.4s,baz=280,slow=9.2,SNR=5.3								
ASAR	**Alice Springs**	**29.64**	**127**	P		**P**		**05 26 20.8**	**-0.9**
	0.5nm,0.6s,baz=298,slow=8.1,SNR=5.8								
STKA	**Stephens Creek**	**39.71**	**133**	P		**P**		**05 27 46.8**	**-1.0**
	3.9nm,0.6s,baz=302,slow=11,SNR=6.8								

DDA ***23*** *05:25:30.9, 39.71N×27.73E, h7km, MD2.9*
ISCJB ***23*** *05:25:31.6±0.5, 39.68N±0.03×27.73E±0.03, h5km±5km, Error ellipse: s-maj=5.2km s-min=4.3km az=22.7*
CSEM ***23*** *05:25:31.9±0.1, 39.68N×27.74E, h5km, MD2.6, Error ellipse: s-maj=2.7km s-min=2.5km az=8.0*
ISK ***23*** *05:25:32.1, 39.70N×27.79E, h7km, MD2.6*

ISC 23 05:25:32.0±0.9, **39.68N**±0.02×**27.73E**±0.02, **h7**km±8km, **n35**, σ0⁉**49**/46, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BALY	**Balya**	**0.11**	**306**	*i* Pg		**Pg**		**05 25 33.9**	**-0.4**
BALY				*i* Sg		**Sg**		**05 25 35.8**	**-0.2**
BALB	**Balikesir**	**0.12**	**108**	*e*PG		**Pg**		**05 25 34.5**	**-0.1**
BALB				*e*SG		**Sg**		**05 25 36.8**	**+0.5**
BALB	**Balikesir**	**0.12**	**108**	*e*Pg		**Pg**		**05 25 34.5**	**-0.1**
BALB				*e*Sg		**Sg**		**05 25 36.8**	**+0.5**
GONE	**Gonen-Balikesi**	**0.37**	**355**	*e*PG		**Pg**		**05 25 38.8**	**-0.4**
GONE	**Gonen-Balikesi**	**0.37**	**355**	*e*Pg		**Pg**		**05 25 38.8**	**-0.4**
DURS	**Dursunbey**	**0.58**	**97**	*e*P		**Pg**		**05 25 43.3**	**+0.2**
DURS				*e*S		**Sg**		**05 25 51.3**	**+0.6**
DURS	**Dursunbey**	**0.58**	**97**	*e*P		**Pg**		**05 25 43.3**	**+0.2**
DURS				*e*S		**Sg**		**05 25 51.3**	**+0.6**
KCTX	**Karacabey (Bur**	**0.76**	**39**	*e*PG		**Pg**		**05 25 46.1**	**-0.5**
KCTX				*e*SG		**Sg**		**05 25 56.5**	**0.0**
KCTX	**Karacabey (Bur**	**0.76**	**39**	*e*Pg		**Pg**		**05 25 46.1**	**-0.5**
KCTX				*e*Sg		**Sg**		**05 25 56.5**	**0.0**
KRBG	**Karabiga-Canak**	**0.79**	**335**	*e*PG		**Pg**		**05 25 47.6**	**+0.5**
KRBG	**Karabiga-Canak**	**0.79**	**335**	*e*Pg		**Pg**		**05 25 47.7**	**+0.5**
AKHS	**Akhisar**	**0.80**	**175**	*e*P		**Pg**		**05 25 46.9**	**-0.5**
AKHS				*e*S		**Sg**		**05 25 58.0**	**+0.2**
AKHS	**Akhisar**	**0.80**	**175**	*e*P		**Pg**		**05 25 46.9**	**-0.5**
AKHS				*e*S		**Sg**		**05 25 58.0**	**+0.2**
AYVA	**Ayvalik**	**0.89**	**246**	*e*P		**Pg**		**05 25 48.3**	**-0.7**
AYVA				*e*S		**Sg**		**05 26 00.1**	**-0.4**
AYVA	**Ayvalik**	**0.89**	**246**	*e*P		**Pg**		**05 25 48.3**	**-0.7**
AYVA				*e*S		**Sg**		**05 26 00.1**	**-0.4**
ORLT	**Orhaneli**	**0.97**	**67**	*e*PG		**Pg**		**05 25 50.0**	**-0.6**
ORLT	**Orhaneli**	**0.97**	**67**	*e*Pg		**Pg**		**05 25 50.0**	**-0.6**
EZN	**Ezine**	**1.09**	**278**	*e*PN		**Pn**		**05 25 54.6**	**+0.8**
EZN	**Ezine**	**1.09**	**278**	*e*Pn		**Pn**		**05 25 54.6**	**+0.8**
RKY	**Sarkoy-Tekirda**	**1.09**	**337**	*e*PN		**Pb**		**05 25 53.4**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.09**	**337**	*e*Pn		**Pb**		**05 25 53.4**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.12**	**52**	*e*PG		**Pg**		**05 25 53.2**	**-0.3**
MDNY	**Mudanya-Bursa**	**1.12**	**52**	*e*Pg		**Pg**		**05 25 53.2**	**-0.3**
MFT	**Murefte**	**1.16**	**343**	*e*PN		**Pn**		**05 25 54.8**	**0.0**
MFT	**Murefte**	**1.16**	**343**	*e*Pn		**Pn**		**05 25 54.8**	**0.0**
GELI	**Tayfur-Gelibol**	**1.20**	**307**	*e*PN		**Pn**		**05 25 56.3**	**+1.0**
GELI	**Tayfur-Gelibol**	**1.20**	**307**	*e*Pn		**Pn**		**05 25 56.3**	**+1.0**
ARMT	**Armutlu**	**1.24**	**44**	*e*PN		**Pb**		**05 25 55.2**	**-0.6**
ARMT	**Armutlu**	**1.24**	**44**	*e*Pn		**Pb**		**05 25 55.2**	**-0.6**
TVSB	**Tavsanli**	**1.36**	**99**	*e*PN		**Pn**		**05 25 57.7**	**+0.2**
TVSB	**Tavsanli**	**1.36**	**99**	*e*Pn		**Pn**		**05 25 57.7**	**+0.2**
KULA	**Kula-Manisa**	**1.37**	**148**	*e*PN		**Pn**		**05 25 58.0**	**+0.4**
KULA	**Kula-Manisa**	**1.37**	**148**	*e*Pn		**Pn**		**05 25 58.0**	**+0.4**
YLV	**Yalova**	**1.54**	**54**	*e*PN		**Pn**		**05 25 59.8**	**-0.2**
YLV	**Yalova**	**1.54**	**54**	*e*Pn		**Pn**		**05 25 59.8**	**-0.2**

GRAL ***23*** *05:34:02.5±0.3, 33.23N×35.14E, h17km±3km, MD2.9*

CSEM 23 05:34:01.0±0.2, **33.23N**×**35.09E**, **h12**km, **MD2.2**/9, **Error ellipse: s-maj=5.3km s-min=2.6km az=108.0, Jordan - Syria region**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
NAQL	**Naqoura**	**0.12**	**160**	*e*P		Pb		05 34 05.7	+0.5
NAQL				*e*S		Sg		05 34 08.3	+2.0
HNTI	**Hanita**	**0.16**	**155**	Pg		Pb		05 34 06.0	0.0
HNTI				Sg		Sg		05 34 08.8	+1.5
MMC7	**Mount Meron ar**	**0.33**	**129**	Pg		Pg		05 34 07.8	+0.1
MATL	**Matarih**	**0.33**	**37**	*e*P		Pb		05 34 08.5	-0.3
MATL	**Matarih**	**0.33**	**37**	*e*P		Pb		05 34 08.5	-0.3
MMA0	**Mount Meron ar**	**0.34**	**129**	Pg		Pg		05 34 08.0	+0.1
MMA0				Sg		Sg		05 34 12.4	-0.1
KSDI	**Kefar Szold**	**0.48**	**94**	Pg		Pg		05 34 10.5	+0.1
KSDI				Sg		Sg		05 34 16.9	+0.2
BLGI	**Bet Lehem HaGe**	**0.50**	**170**	Pg		Pg		05 34 11.1	+0.3
OFRI	**'Ofer**	**0.61**	**189**	Pg		Pg		05 34 12.9	-0.1
KSHT	**Keshet**	**0.65**	**112**	Pg		Pg		05 34 13.6	-0.2
RCY	**Rachaya**	**0.68**	**66**	*e*P		Pg		05 34 14.0	-0.4
RCY				*e*S		Sg		05 34 22.6	-0.8
BHL	**Bhannes**	**0.82**	**35**	*e*P		Pg		05 34 16.6	-0.4
BHL				*e*S		Sg		05 34 27.0	-0.9
BHL	**Bhannes**	**0.82**	**35**	*e*P		Pg		05 34 16.6	-0.5
BHL				*e*S		Sg		05 34 27.0	-0.9
MMLI	**Mount Malkishu**	**0.83**	**161**	Pg		Pg		05 34 16.5	-0.7
MMLI				Sg		Sg		05 34 27.6	-0.6
SLTI	**Sal'it**	**0.99**	**183**	Pg		Pb		05 34 19.6	-0.4
SLTI				Sg		Sg		05 34 32.9	0.0
HMDT	**Nahal Hemdat**	**1.04**	**159**	Pg		Pb		05 34 19.9	-1.0
HMDT				Sg		Sb		05 34 33.9	-0.6
HWQ	**Hawqa**	**1.27**	**34**	*e*P		Pn		05 34 24.1	-0.6
HWQ	**Hawqa**	**1.27**	**34**	*e*P		Pn		05 34 24.1	-0.6
DSI	**Dead Sea**	**1.67**	**172**	Pn		Pn		05 34 29.7	-0.4
MZDA	**Masada**	**1.93**	**173**	Pn		Pn		05 34 33.6	+0.1
PRNI	**Paran**	**2.87**	**182**	Pn		Pn		05 34 46.3	-0.3

ISCJB ***23*** *05:34:17.0±0.4, 42.46N±0.02×13.36E±0.03, h14km±4km, Error ellipse: s-maj=4.3km s-min=3.1km az=161.8*
ROM ***23*** *05:34:17.2±0.1, 42.46N×13.36E, h11km, MD4.2/5, Ml2.4/18, Error ellipse: s-maj=1.2km s-min=0.8km az=88.0*
CSEM ***23*** *05:34:17.4±0.1, 42.46N×13.34E, h10km, ML2.8/11, Error ellipse: s-maj=2.8km s-min=2.0km az=70.0*

ISC 23 05:34:17.8±0.8, **42.46N**±0.02×**13.36E**±0.02, **h13**km±4km, **n49**, σ0⁉**81**/73, **4C-4D, Central Italy**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**24**	Pg		**Pg**		**05 34 20.3**	**-0.4**
CAMP				Sg		**Sg**		**05 34 22.2**	**-0.5**
	2μm,0.5s								
CAMP	**Campotosto**	**0.08**	**24**	Pg		**Pg**		**05 34 20.3**	**-0.4**
CAMP				Sg		**Sg**		**05 34 22.2**	**-0.5**
	2μm,0.5s								
AQU	**L'Aquila**	**0.11**	**166**	⇓*i*Pg		**Pg**		**05 34 20.6**	**-0.3**
AQU				Sg		**Sg**		**05 34 23.0**	**-0.2**
	2μm,0.2s								
AQU	**L'Aquila**	**0.11**	**166**	⇓*i*Pg		**Pg**		**05 34 20.6**	**-0.3**
AQU				Sg		**Sg**		**05 34 23.0**	**-0.2**
	2μm,0.2s								
TERO	**Teramo**	**0.24**	**48**	⇑*i*Pg		**Pg**		**05 34 22.4**	**-0.5**
TERO				Sg		**Sg**		**05 34 26.3**	**-0.1**
	753nm,0.6s								
TERO	**Teramo**	**0.24**	**48**	⇑*i*Pg		**Pg**		**05 34 22.4**	**-0.5**
TERO				Sg		**Sg**		**05 34 26.3**	**-0.1**
	753nm,0.6s								
FIAM	**Fiamignano**	**0.27**	**223**	⇑*i*Pg		**Pg**		**05 34 23.0**	**-0.4**
FIAM				Sg		**Sg**		**05 34 27.3**	**+0.1**
	290nm,0.5s								
FIAM	**Fiamignano**	**0.27**	**223**	⇑*i*Pg		**Pg**		**05 34 23.0**	**-0.4**
FIAM				Sg		**Sg**		**05 34 27.3**	**+0.1**
	290nm,0.5s								
LNSS	**Leonessa**	**0.28**	**300**	⇓*i*Pg		**Pg**		**05 34 23.2**	**-0.4**
LNSS				Sg		**Sg**		**05 34 27.8**	**+0.3**
	624nm,0.3s								
LNSS	**Leonessa**	**0.28**	**300**	⇓*i*Pg		**Pg**		**05 34 23.2**	**-0.4**
LNSS				Sg		**Sg**		**05 34 27.8**	**+0.3**
	624nm,0.3s								
NRCA	**Norcia**	**0.41**	**334**	Pg		**Pg**		**05 34 25.5**	**-0.5**
NRCA				Sg		**Sg**		**05 34 31.8**	**+0.2**
	485nm,0.1s								
NRCA	**Norcia**	**0.41**	**334**	Pg		**Pg**		**05 34 25.5**	**-0.5**
NRCA				Sg		**Sg**		**05 34 31.8**	**+0.2**
	485nm,0.1s								
PTQR	**Pietraquaria**	**0.44**	**176**	Pg		**Pg**		**05 34 26.1**	**-0.4**
PTQR				Sg		**Sb**		**05 34 33.1**	**-0.9**
	35nm,0.3s								
PTQR	**Pietraquaria**	**0.44**	**176**	Pg		**Pg**		**05 34 26.1**	**-0.4**
PTQR				Sg		**Sb**		**05 34 33.1**	**-0.9**
	35nm,0.3s								
MNS	**Montasola**	**0.51**	**261**	Pg		**Pg**		**05 34 27.0**	**-0.8**
MNS				Sg		**Sg**		**05 34 34.5**	**-0.1**
	171nm,0.6s								
MNS	**Montasola**	**0.51**	**261**	Pg		**Pg**		**05 34 27.0**	**-0.8**
MNS				Sg		**Sg**		**05 34 34.5**	**-0.1**
	171nm,0.6s								
OFFI	**Offida**	**0.53**	**27**	Pg		**Pg**		**05 34 28.2**	**+0.1**
OFFI	**Offida**	**0.53**	**27**	Pg		**Pg**		**05 34 28.2**	**+0.1**
CERT	**Cerreto**	**0.59**	**209**	Pg		**Pg**		**05 34 28.3**	**-0.9**
	264nm,0.5s								
CERT	**Cerreto**	**0.59**	**209**	Pg		**Pg**		**05 34 28.3**	**-0.9**
	264nm,0.5s								
CESX	**Cesi**	**0.60**	**285**	Pg		**Pg**		**05 34 28.4**	**-1.0**
	86nm,0.4s								
CESX	**Cesi**	**0.60**	**285**	Pg		**Pg**		**05 34 28.4**	**-1.0**
	86nm,0.4s								
INTR	**Introdacqua**	**0.60**	**138**	Pg		**Pg**		**05 34 28.6**	**-1.0**
INTR				Sg		**Sg**		**05 34 37.8**	**+0.3**
	190nm,0.5s								
INTR	**Introdacqua**	**0.60**	**138**	Pg		**Pg**		**05 34 28.6**	**-1.0**
INTR				Sg		**Sg**		**05 34 37.8**	**+0.3**
	190nm,0.5s								
FDMO	**Fiordimonte**	**0.61**	**341**	Pg		**Pg**		**05 34 29.0**	**-0.7**
FDMO				Sg		**Sb**		**05 34 38.5**	**-0.3**
	127nm,0.2s								
FDMO	**Fiordimonte**	**0.61**	**341**	Pg		**Pg**		**05 34 29.0**	**-0.7**
FDMO				Sg		**Sb**		**05 34 38.5**	**-0.3**
	127nm,0.2s								
VVLD	**Villa Vallelon**	**0.62**	**162**	Pg		**Pg**		**05 34 29.2**	**-0.7**
	65nm,0.6s								
VVLD	**Villa Vallelon**	**0.62**	**162**	Pg		**Pg**		**05 34 29.2**	**-0.7**
	65nm,0.6s								
CESI	**CESI - Serrava**	**0.64**	**328**	Pg		**Pg**		**05 34 29.4**	**-0.8**
CESI				Sg		**Sb**		**05 34 39.1**	**-0.6**
	37nm,0.4s								
CESI	**CESI - Serrava**	**0.64**	**328**	Pg		**Pg**		**05 34 29.4**	**-0.8**
CESI				Sg		**Sb**		**05 34 39.1**	**-0.6**
	37nm,0.4s								
GUAR	**Guarcino**	**0.67**	**183**	Pg		**Pb**		**05 34 31.0**	**-0.3**
	83nm,0.4s								
GUAR	**Guarcino**	**0.67**	**183**	Pg		**Pb**		**05 34 31.0**	**-0.3**
	83nm,0.4s								
GUMA	**Gualdo di Mace**	**0.73**	**35**	Pg		**Pg**		**05 34 29.1**	**-2.9**
	391nm,0.4s								
LPEL	**Lama dei Pelig**	**0.74**	**124**	Pg		**Pg**		**05 34 30.7**	**-1.4**
	120nm,0.3s								
LPEL	**Lama dei Pelig**	**0.74**	**124**	Pg		**Pg**		**05 34 30.7**	**-1.4**
	120nm,0.3s								
ASSB	**Assisi San Ben**	**0.78**	**318**	Pg		**Pg**		**05 34 31.9**	**-1.0**
	90nm,0.3s								
ASSB	**Assisi San Ben**	**0.78**	**318**	Pg		**Pg**		**05 34 31.9**	**-1.0**
	90nm,0.3s								
POFI	**Posta Fibreno**	**0.79**	**161**	Pg		**Pg**		**05 34 32.6**	**-0.4**
POFI	**Posta Fibreno**	**0.79**	**161**	Pg		**Pg**		**05 34 32.6**	**-0.4**
SDI	**San Donato**	**0.82**	**156**	Pg		**Pg**		**05 34 32.7**	**-1.0**
	34nm,0.4s								
SDI	**San Donato**	**0.82**	**156**	Pg		**Pg**		**05 34 32.7**	**-1.0**
	34nm,0.4s								
GIUL	**Giuliano Di Ro**	**0.91**	**185**	Pg		**Pb**		**05 34 35.4**	**0.0**
	67nm,0.7s								
GIUL	**Giuliano Di Ro**	**0.91**	**185**	Pg		**Pb**		**05 34 35.4**	**0.0**
	67nm,0.7s								
MGAB	**Montegabbione**	**1.03**	**296**	Pg		**Pg**		**05 34 36.8**	**-0.8**
MGAB	**Montegabbione**	**1.03**	**296**	Pg		**Pg**		**05 34 36.8**	**-0.8**
NVLJ	**Novalja**	**2.37**	**27**	*e*Pn		**Pn**		**05 34 57.1**	**+0.8**
NVLJ				Sn		**Sn**		**05 35 25.6**	**+0.3**
NVLJ	**Novalja**	**2.37**	**27**	*e*Pn		**Pn**		**05 34 57.1**	**+0.8**
NVLJ				Sn		**Sn**		**05 35 25.5**	**+0.3**
STON	**Ston**	**3.22**	**81**	*e*Pn		**P

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**3.57**	**360**	P	**P**	**05 56 32.2**	**+2.1**
NLAI				S	**S**	**05 57 27.0**	**+1.3**
BNDI	**Bandanaira**	**3.60**	**51**	P	**P**	**05 56 32.3**	**+2.0**
BBSI	**Bau Bau**	**4.71**	**286**	P	P	05 56 56.4	+16
MMRI	**Maumere**	**5.16**	**249**	P	**P**	**05 56 46.1**	**+0.7**
	229nm,0.5s,5μm1.1nm						
LBMI	**Labuha**	**6.16**	**4**	P	**P**	**05 56 57.1**	**+1.1**
	66nm,0.9s,0.3nm						
FAKI	**Fak Fak**	**6.42**	**53**	P	**P**	**05 56 59.2**	**+0.4**
	153nm,0.6s,5μm147μm1.4nm						
FAKI				S	**S**	**05 58 14.4**	**-4.2**
	153nm,0.6s,5μm147μm1.4nm						
BSSI	**Bau Bau, Buton**	**6.62**	**276**	P	**P**	**05 57 03.0**	**+1.2**
	83nm,0.8s,954nm0.3nm						
BKSI	**Bulukumba**	**7.12**	**282**	P	**P**	**05 57 07.5**	**+0.3**
	18nm,0.6s,0.1nm						
KAPI	**Kappang**	**7.55**	**283**	P	**P**	**05 57 10.4**	**-1.6**
KAPI	**Kappang**	**7.55**	**283**	P	**P**	**05 57 10.4**	**-1.6**
	4.6nm,0.3s,baz=185,slow=13,SNR=5.6						
SPSI	**Sidrap Palu**	**7.85**	**291**	P	P	05 57 26.3	+11
TTSI	**Tana Toraja**	**8.19**	**297**	P	**P**	**05 57 21.3**	**+2.3**
	31nm,0.9s,808nm						
MRSI	**Marisa**	**8.91**	**324**	P	**P**	**05 57 26.9**	**-0.1**
	23nm,0.7s,482nm						
FITZ	**Fitzroy Crossi**	**11.30**	**187**	P	**P**	**05 57 54.8**	**+1.4**
FITZ	**Fitzroy Crossi**	**11.30**	**187**	P	**P**	**05 57 54.8**	**+1.4**
	0.5nm,0.3s,baz=35,slow=8.9,SNR=20						
BBKI	**Banjar Baru**	**12.68**	**285**	P	**P**	**05 58 11.2**	**+2.6**
	331nm,0.9s						
JAGI	**Jajag, Banyuwa**	**12.96**	**262**	P	**P**	**05 58 09.0**	**-2.7**
WRAB	**Tennant Creek**	**14.80**	**152**	*e*P	**P**	**05 58 32.3**	**+0.6**
	6.5nm,0.6s						
WRA	**Warramunga Arr**	**14.80**	**152**	P	**P**	**05 58 32.5**	**+0.7**
WRA				S	**S**	**06 01 06.5**	**-2.6**
WRA	**Warramunga Arr**	**14.80**	**152**	P	**P**	**05 58 32.5**	**+0.7**
	1.8nm,0.3s,baz=334,slow=10,SNR=113						
WRA				S	**S**	**06 01 06.5**	**-2.6**
	baz=322,slow=20,SNR=5.2						
MBWA	**Marble Bar**	**15.94**	**206**	*e*P	**P**	**05 58 43.9**	**-0.1**
	12nm,0.4s						
COEN	**Coen**	**17.30**	**115**	*e*P	**P**	**05 58 58.5**	**-0.1**
	95nm,0.4s						
AS31	**Alice Springs**	**17.96**	**159**	*e*P	**P**	**05 59 06.3**	**+0.7**
ASAR	**Alice Springs**	**17.96**	**159**	P	**P**	**05 59 06.6**	**+1.1**
ASAR				S	**S**	**06 02 09.7**	**-1.0**
ASAR	**Alice Springs**	**17.96**	**159**	P	**P**	**05 59 06.6**	**+1.1**
	2.1nm,0.3s,baz=349,slow=13,SNR=82						
ASAR				S	**S**	**06 02 09.7**	**-1.0**
	0.3nm,0.3s,baz=345,slow=23,SNR=6.5						
KSM	**Kuching**	**18.70**	**296**	*e*P	**P**	**05 59 12.3**	**-1.0**
	48nm,0.6s						
PMG	**Port Moresby**	**20.00**	**99**	P	**P**	**05 59 27.0**	**+1.2**
PMG	**Port Moresby**	**20.00**	**99**	P	**P**	**05 59 27.0**	**+1.2**
	24nm,0.8s,baz=209,slow=2.4,SNR=4.4						
STKA	**Stephens Creek**	**28.35**	**153**	P	**P**	**06 00 41.6**	**+1.3**
STKA	**Stephens Creek**	**28.35**	**153**	P	**P**	**06 00 41.6**	**+1.3**
	1.3nm,0.4s,baz=353,slow=20,SNR=8.2						
PSI	**Prapat**	**29.73**	**288**	P	**P**	**06 00 52.3**	**-0.5**
PSI	**Prapat**	**29.73**	**288**	P	**P**	**06 00 52.3**	**-0.5**
	34nm,0.8s,baz=116,slow=6.0,SNR=36						
CMAR	**Chiang Mai Arr**	**37.47**	**313**	P	**P**	**06 01 56.9**	**-1.7**
CMAR	**Chiang Mai Arr**	**37.47**	**313**	P	**P**	**06 01 56.9**	**-1.7**
	1.3nm,0.6s,baz=139,slow=7.3,SNR=6.1						
DZM	**Mont Dzumac**	**40.83**	**116**	P	**P**	**06 02 26.8**	**+0.7**
DZM	**Mont Dzumac**	**40.83**	**116**	P	**P**	**06 02 26.8**	**+0.7**
	7.3nm,0.9s,baz=279,slow=16,SNR=4.8						
KSAR	**Wonju Array Be**	**44.05**	**1**	P	**P**	**06 02 51.7**	**+0.5**
KSRS	**Korea Array**	**44.06**	**1**	P	**P**	**06 02 51.7**	**+0.4**
	5.5nm,0.7s,baz=178,slow=10.0,SNR=21						
MJAR	**Matsushiro Arr**	**44.38**	**13**	P	**P**	**06 02 53.2**	**-0.7**
MJAR	**Matsushiro Arr**	**44.38**	**13**	P	**P**	**06 02 53.2**	**-0.7**
	19nm,0.7s,baz=191,slow=9.3,SNR=36						
MAJO	**Matsushiro**	**44.38**	**13**	*e*P	**P**	**06 02 52.9**	**-1.0**
	11nm,0.6s						
MAT	**Matsushiro**	**44.38**	**13**	P	**P**	**06 02 52.9**	**-1.0**
USRK	**Ussuriysk Arra**	**50.98**	**5**	P	**P**	**06 03 43.9**	**+0.2**
	8.6nm,0.6s,baz=189,slow=7.1,SNR=26						
TAPN	**Taplejung**	**51.07**	**313**	*e*P	**P**	**06 03 45.1**	**+0.1**
	7.4nm,0.4s						
RAMN	**Ramite**	**51.64**	**312**	*e*P	**P**	**06 03 49.0**	**-0.2**
	13nm,0.5s						
GUN	**Gumba**	**52.71**	**313**	*e*P	**P**	**06 03 57.4**	**+0.3**
	13nm,0.5s						
PKI	**Pulchoki**	**52.87**	**312**	*e*P	**P**	**06 03 58.1**	**-0.1**
	4.5nm,0.2s						
PKIN	**Phulchoki**	**52.88**	**312**	*e*P	**P**	**06 03 57.5**	**-0.7**
	7.3nm,0.4s						
KOLN	**Koldanda**	**54.32**	**311**	*e*P	**P**	**06 04 07.9**	**-0.5**
	7.6nm,0.4s						
SONM	**Songino Array**	**57.42**	**344**	P	**P**	**06 04 30.1**	**+0.4**
SONM	**Songino Array**	**57.42**	**344**	P	**P**	**06 04 30.1**	**+0.4**
	1.3nm,0.5s,baz=165,slow=6.2,SNR=5.5						
PETK	**Petropavlovsk-**	**65.09**	**20**	P	**P**	**06 05 21.1**	**+1.0**
PETK	**Petropavlovsk-**	**65.09**	**20**	P	**P**	**06 05 21.1**	**+1.0**
	12nm,0.5s,baz=189,slow=5.3,SNR=25						
MK31	**Makanchi Array**	**66.55**	**328**	*e*P	**P**	**06 05 28.8**	**-0.7**
MKAR	**Makanchi Array**	**66.55**	**328**	P	**P**	**06 05 29.1**	**-0.3**
MKAR	**Makanchi Array**	**66.55**	**328**	P	**P**	**06 05 29.1**	**-0.3**
	1.0nm,0.5s,baz=125,slow=7.6,SNR=14						
ZAA0	**Zalesovo Array**	**70.19**	**335**	*e*P	**P**	**06 05 50.2**	**-1.4**
ZALV	**Zalesovo Beam**	**70.19**	**335**	P	**P**	**06 05 50.8**	**-0.8**
ZALV	**Zalesovo Beam**	**70.19**	**335**	P	**P**	**06 05 50.8**	**-0.8**
	3.4nm,0.5s,baz=136,slow=5.6,SNR=12						
FX1	**Attu Island--F**	**71.11**	**27**	*e*P	**P**	**06 05 57.8**	**+0.7**
BVAR	**Borovoye Array**	**76.42**	**329**	P	**P**	**06 06 27.0**	**-0.5**
BVAR	**Borovoye Array**	**76.42**	**329**	P	**P**	**06 06 27.0**	**-0.5**
	0.8nm,0.4s,baz=122,slow=5.4,SNR=4.9						
ILAR	**Eielson Array**	**94.42**	**25**	P	**P**	**06 07 54.6**	**-1.5**
ILAR	**Eielson Array**	**94.42**	**25**	P	**P**	**06 07 54.6**	**-1.5**
	0.4nm,0.6s,baz=240,slow=5.7,SNR=7.1						
YKA	**Yellowknife Ar**	**108.85**	**26**	PKiKP	**PKiKP**	**06 13 02.2**	**-0.7**
YKA	**Yellowknife Ar**	**108.85**	**26**	PKiKP	**PKiKP**	**06 13 02.2**	**-0.7**
	0.3nm,0.6s,baz=297,slow=1.6,SNR=5.1						
PDAR	**Pinedale Array**	**118.79**	**45**	PKP	**PKPdf**	**06 13 22.9**	**0.0**
PDAR	**Pinedale Array**	**118.79**	**45**	PKP	**PKPdf**	**06 13 22.9**	**0.0**
	0.5nm,0.8s,baz=202,slow=1.6,SNR=3.7						
TXAR	**Lajitas Array**	**127.28**	**58**	PKP	**PKPdf**	**06 13 40.2**	**+0.8**
TXAR	**Lajitas Array**	**127.28**	**58**	PKP	**PKPdf**	**06 13 40.2**	**+0.8**
	0.3nm,0.4s,baz=221,slow=3.4,SNR=7.4						
SCHQ	**Schefferville**	**130.84**	**11**	PKP	**PKPdf**	**06 13 45.9**	**+0.6**
SCHQ	**Schefferville**	**130.84**	**11**	PKP	**PKPdf**	**06 13 45.9**	**+0.6**
	1.7nm,0.7s,baz=0.6,slow=5.1,SNR=5.1						
LPAZ	**La Paz**	**152.51**	**147**	PKPbc	**PKPbc**	**06 14 32.4**	**+0.1**
LPAZ	**La Paz**	**152.51**	**147**	PKPbc	**PKPbc**	**06 14 32.4**	**+0.1**
	0.6nm,0.4s,baz=36,slow=3.4,SNR=6.1						

BJI ***23*** *06:30:11.8, 16˚.00S×174˚.20W, h114km, mB5.2/8, mb4.8/13*

ISCJB ***23*** *06:30:11.9±1.0, 16˚.03S±0˚.06×174˚.15W±0˚.05, h109km±8km, mb4.9/99, Error ellipse: s-maj=12.0km s-min=6.0km az=144.4*

MOS ***23*** *06:30:14.4±1.1, 15˚.99S×174˚.06W, h126km, mb4.8/22, Error ellipse: s-maj=13.9km s-min=8.5km az=135.2*

IDC ***23*** *06:30:15.0±2.1, 16˚.10S×174˚.01W, h121km±19km, mb4.5/17, mb1 4.7/20, mb1mx4.6/25, mbtmp4.5/20, MS3.8/12, Ms1 3.8/12, ms1mx3.6/27, Error ellipse: s-maj=17.4km s-min=10.7km az=134.0*

NEIC ***23*** *06:30:16.0±1.5, 16˚.08S×174˚.07W, h133km±13km, mb4.8/73, Error ellipse: s-maj=8.3km s-min=4.0km az=148.0*

GCMT ***23*** *06:30:22.1±0.3, 16˚.15S×173˚.51W, h162km±3km, MW5.1, Moment Tensor Solution. s33,c41; s63,c87; Moment tensor: Scale 10^16 Nm; Mrr=0.19±.23; Mθθ=1.45±.27; Mφφ=1.64±.25; Mrθ=-2.20±.19; Mrφ=0.11±.27; Mθφ=4.27±.14; Best double couple: Mo=5.00000×10^16 NP1:φ=51.00000°, δ=16.00000°, λ=-10.00000°. NP2:φ=150.00000°, δ=87.00000°, λ=-106.00000°. Principal axes: T 5.3500, Plg=40.0000°, Azm=255.0000°; N -0.6800, Plg=16.0000°, Azm=151.0000°; P -4.6800, Plg=45.0000°, Azm=44.0000°; Data Used: II IC G IU CN.*

ISC 23 06:30:13.6±0.4, 16˚.01S±0˚.06×174˚.10W±0˚.05, h112km±3km, h112km; pP-P, n612, σ=9˚.77/633, mb4.8/99, 182C-185D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.07**	**47**	*e*Pn	**Pn**	**06 31 02.0**	**+1.3**
AFI				S	**Sn**	**06 31 35.2**	**-1.7**
AFI				*e*Sn		06 31 35.5	
AFI	**Afiamalu**	**3.07**	**47**	P	**Pn**	**06 31 02.3**	**+1.6**
	288nm,0.3s,baz=55,slow=0.8,SNR=225						
AFI				S	**Sn**	**06 31 35.2**	**-1.7**
	437nm,0.3s,baz=76,slow=20,SNR=14						
AFI				LR	LR	06 31 55.0	
	comp=Z,771nm,18.1s,baz=184,slow=33						
MSVF	**Nonsavu**	**7.71**	**256**	*e*P	Pn	06 32 13.2	+10
MSVF	**Nonsavu**	**7.71**	**256**	*e*Pn	Pn	06 32 13.2	+10
RAR	**Rarotonga**	**14.53**	**113**	P	**Pn**	**06 33 34.9**	**+1.1**
RAR	**Rarotonga**	**14.53**	**113**	P	**Pn**	**06 33 34.9**	**+1.1**
	2.7nm,0.3s,baz=248,slow=4.6,SNR=4.3						
RAR				LR	LR	06 37 54.5	
	comp=Z,394nm,20.3s,baz=284,slow=32						
DZM	**Mont Dzumac**	**19.35**	**249**	*e*P	**Pn**	**06 34 33.8**	**+1.0**
	462nm,1.2s						
DZM	**Mont Dzumac**	**19.35**	**249**	*e*P	**Pn**	**06 34 32.3**	**-0.5**
DZM	**Mont Dzumac**	**19.35**	**249**	P	**Pn**	**06 34 32.8**	**0.0**
DZM	**Mont Dzumac**	**19.35**	**249**	P	**Pn**	**06 34 32.8**	**0.0**
	1.4nm,0.3s,baz=77,slow=18,SNR=8.1						
NOUC	**Port Laguerre**	**19.48**	**249**	*e*P	**P**	**06 34 31.4**	**-0.5**
URZ	**Urewera**	**23.48**	**198**	*e*P	**P**	**06 35 11.8**	**-1.3**
URZ	**Urewera**	**23.48**	**198**	P	**P**	**06 35 11.8**	**-1.3**
	22nm,0.7s,baz=25,slow=4.5,SNR=20						
PPT	**Papeete**	**23.52**	**97**	LR	LR	06 41 26.0	
	comp=Z,278nm,19.5s,baz=311,slow=29						
TIAR	**Tiarei**	**23.74**	**97**	*e*P	**P**	**06 35 16.0**	**+0.2**
	73nm,0.8s						
XMAS	**Kiritimati**	**24.35**	**44**	*e*P	**P**	**06 35 20.9**	**-0.4**
	71nm,0.8s						
HNR	**Honiara**	**26.13**	**281**	LR	LR	06 43 03.4	
	comp=Z,152nm,19.4s,baz=113,slow=29						
RPZ	**Rata Peaks**	**30.37**	**202**	P	**P**	**06 36 14.8**	**-0.1**
RPZ	**Rata Peaks**	**30.37**	**202**	P	**P**	**06 36 14.8**	**-0.1**
	9.2nm,0.8s,baz=13,slow=4.6,SNR=5.5						
RPZ				LR	LR	06 46 32.9	
	comp=Z,620nm,21.9s,baz=185,slow=32						
EIDS	**Eidsvold**	**33.79**	**248**	*e*P	**P**	**06 36 43.6**	**-1.5**
	25nm,1.0s						
PMG	**Port Moresby**	**38.31**	**275**	P	**P**	**06 37 26.2**	**+2.5**
PMG	**Port Moresby**	**38.31**	**275**	P	**P**	**06 37 26.2**	**+2.5**
	31nm,0.8s,baz=130,slow=5.7,SNR=5.8						
PMG				LR	LR	06 51 51.1	
	comp=Z,84nm,18.1s,baz=7.9,slow=34						
COEN	**Coen**	**41.27**	**267**	*e*P	**P**	**06 37 46.3**	**-1.9**
	118nm,0.7s						
STKA	**Stephens Creek**	**43.15**	**240**	*e*P	**P**	**06 38 03.7**	**+0.4**
	12nm,1.0s						
STKA	**Stephens Creek**	**43.15**	**240**	P	**P**	**06 38 03.9**	**+0.6**
	41nm,1.0s,baz=86,slow=9.2,SNR=28						
STKA				LR	LR	06 54 30.2	
	comp=Z,920nm,20.3s,baz=27,slow=34						
WRAB	**Tennant Creek**	**49.04**	**257**	*e*P	**P**	**06 38 49.1**	**-0.6**
WRAB				pmax	pmax		
	comp=Z,42nm,1.0s						
WRAB	**Tennant Creek**	**49.04**	**257**	*e*P	**P**	**06 38 49.0**	**-0.6**
	comp=Z,42nm,1.0s						
WRA	**Warramunga Arr**	**49.05**	**257**	P	**P**	**06 38 49.0**	**-0.7**
WRA	**Warramunga Arr**	**49.05**	**257**	P	**P**	**06 38 49.0**	**-0.7**
	comp=Z,28nm,0.9s,baz=91,slow=6.9,SNR=170						
AS31	**Alice Springs**	**49.28**	**252**	*e*P	**P**	**06 38 51.2**	**-0.3**
ASAR	**Alice Springs**	**49.28**	**252**	P	**P**	**06 38 51.2**	**-0.3**
ASAR	**Alice Springs**	**49.28**	**252**	P	**P**	**06 38 51.2**	**-0.3**
	comp=Z,63nm,0.8s,baz=87,slow=8.2,SNR=277						
ASAR				LR	LR	06 57 48.3	
	comp=Z,112nm,21.5s,baz=87,slow=34						
FORT	**Forrest**	**54.54**	**243**	*e*P	**P**	**06 39 29.4**	**-0.9**
	comp=Z,50nm,0.7s						
MBWA	**Marble Bar**	**62.55**	**254**	*e*P	**P**	**06 40 26.1**	**+0.1**
	comp=Z,42nm,0.7s						
VNDA	**Vanda**	**62.70**	**186**	P	**P**	**06 40 27.1**	**+1.0**
VNDA	**Vanda**	**62.70**	**186**	P	**P**	**06 40 27.1**	**+1.0**
	comp=Z,3.2nm,0.8s,baz=8.3,slow=7.1,SNR=13						
PKM	**Peak Mountain**	**72.22**	**44**	⇓P	**P**	**06 41 27.7**	**+0.8**
	baz=72						
SMMC	**Simmler**	**72.33**	**44**	⇓P	**P**	**06 41 28.5**	**+1.1**
	baz=72						
109C	**Camp Elliot, M**	**72.98**	**48**	⇑P	**P**	**06 41 31.6**	**+0.4**
	baz=73						
PETK	**Petropavlovsk-**	**73.01**	**343**	P	**P**	**06 41 31.7**	**+0.8**
PETK	**Petropavlovsk-**	**73.01**	**343**	P	**P**	**06 41 31.7**	**+0.8**
PETK	**Petropavlovsk-**	**73.01**	**343**	P	**P**	**06 41 31.7**	**+0.8**
	comp=Z,4.2nm,0.8s,baz=142,slow=8.2,SNR=5.5						
ARVC	**Arvin**	**73.02**	**45**	⇓P	**P**	**06 41 31.7**	**+0.3**
	baz=73						
MWC	**Mount Wilson**	**73.04**	**46**	*e*P	**P**	**06 41 32.0**	**+0.2**
MWC				pmax	pmax		
	comp=Z,16nm,0.8s						
MWC	**Mount Wilson**	**73.04**	**46**	*e*P	**P**	**06 41 31.9**	**+0.2**
	comp=Z,16nm,0.8s						
VES	**Vestal, Richgr**	**73.25**	**44**	⇑P	**P**	**06 41 32.8**	**+0.1**
	baz=74,SNR=5.1						
MURC	**Murrieta**	**73.30**	**47**	⇑P	**P**	**06 41 33.4**	**+0.2**
	baz=74						
BFSC	**Mount Baldy Ra**	**73.33**	**46**	⇑P	**P**	**06 41 33.2**	**-0.2**
	baz=74,SNR=6.5						
RCTC	**Rector, Farmer**	**73.41**	**44**	⇓P	**P**	**06 41 33.7**	**0.0**
	baz=74						
EDW2	**Edwards Air Fo**	**73.45**	**45**	⇑P	**P**	**06 41 34.2**	**+0.2**
	baz=74,SNR=19						
MONP	**Mount Peak**	**73.47**	**48**	⇓P	**P**	**06 41 34.4**	**0.0**
	baz=74,SNR=8.1						
ISA	**Isabella**	**73.56**	**44**	*e*P	**P**	**06 41 35.4**	**+0.8**
ISA				pmax	pmax		
	comp=Z,11nm,1.0s						
ISA	**Isabella**	**73.56**	**44**	*e*P	**P**	**06 41 35.4**	**+0.8**
	comp=Z,11nm,1.0s						
ISA	**Isabella**	**73.56**	**44**	⇑P	**P**	**06 41 35.1**	**+0.5**
	baz=74,SNR=7.5						
DVTC	**Desert V Tower**	**73.58**	**48**	⇑P	**P**	**06 41 35.1**	**+0.3**
	baz=74						
CMB	**Columbia Colle**	**73.67**	**42**	*e*P	**P**	**06 41 35.1**	**-0.1**
CMB				pmax	pmax		
	comp=Z,18nm,1.0s						
CMB	**Columbia Colle**	**73.67**	**42**	*e*P	**P**	**06 41 35.1**	**-0.1**
	comp=Z,18nm,1.0s						
OHCM	**Honcut**	**73.75**	**40**	*e*P	**P**	**06 41 36.2**	**+0.6**
PFO	**Pinyon Flat Ob**	**73.83**	**47**	LR	LR	07 08 56.2	
	comp=Z,82nm,18.1s,baz=258,slow=31						
PFO	**Pinyon Flat Ob**	**73.83**	**47**	⇓P	**P**	**06 41 36.4**	**+0.1**
	baz=74						
BBRC	**Big Bear Solar**	**73.85**	**46**	⇑P	**P**	**06 41 36.6**	**0.0**
	baz=74						
SWSC	**Sam W. Stewart**	**73.94**	**48**	⇓P	**P**	**06 41 37.0**	**+0.2**
	baz=74						
LRMC	**Laurel Mountai**	**73.99**	**45**	⇓P	**P**	**06 41 37.5**	**+0.3**
	baz=74,SNR=9.7						
QSPA	**South Pole Qui**	**74.03**	**180**	*e*P	**P**	**06 41 37.8**	**+0.7**
	comp=Z,9.0nm,0.8s						
BELC	**Belle Mtn. Jos**	**74.36**	**47**	⇑P	**P**	**06 41 39.5**	**+0.1**
	baz=74,SNR=7.6						
MLAC	**Mammoth Lakes**	**74.43**	**43**	⇑P	**P**	**06 41 40.4**	**+0.6**
	baz=75						
MPMC	**Manual Prospec**	**74.44**	**45**	P	**P**	**06 41 40.3**	**+0.3**
	baz=75,SNR=20						
MTUM	**Tungsten Hills**	**74.45**	**43**	*e*P	**P**	**06 41 40.9**	**+0.9**
YBH	**Yreka Blue Hor**	**74.49**	**37**	*e*P	**P**	**06 41 40.6**	**+0.6**
	comp=Z,55nm,1.3s						
YBH	**Yreka Blue Hor**	**74.49**	**37**	LR	LR	07 08 20.9	
	comp=Z,39nm,18.3s,baz=222,slow=31						
GSC	**Goldstone**	**74.49**	**46**	*e*P	**P**	**06 41 40.3**	**+0.1**
GSC				pmax	pmax		
	comp=Z,14nm,1.0s						
GSC	**Goldstone**	**74.49**	**46**	*e*P	**P**	**06 41 40.3**	**+0.1**
	comp=Z,14nm,1.0s						
GSC	**Goldstone**	**74.49**	**46**	⇓P	**P**	**06 41 40.2**	**+0.1**
	baz=75,SNR=10						
TIN	**Tinemaha**	**74.50**	**43**	⇑P	**P**	**06 41 40.6**	**+0.4**
	baz=75						
BC3	**Big Chuckawall**	**74.56**	**48**	⇓P	**P**	**06 41 40.8**	**+0.2**
	baz=75,SNR=8.0						
HEC	**Hector,Ludlow**	**74.57**	**46**	⇑P	**P**	**06 41 40.4**	**-0.1**
	baz=75,SNR=10						
GLA	**Glamis**	**74.70**	**48**	⇓P	**P**	**06 41 41.7**	**+0.4**
	baz=75						
BEKR	**Beckworth**	**74.77**	**40**	*e*P	**P**	**06 41 41.9**	**+0.2**
	comp=Z,8.6nm,1.0s						
HUMO	**Hull Mountain**	**74.90**	**37**	*e*P	**P**	**06 41 43.5**	**+1.3**
	comp=Z,33nm,1.4s						
GMRC	**Granite Mounta**	**75.01**	**47**	P	**P**	**06 41 43.2**	**+0.1**
	baz=75,SNR=10						
IRM	**Iron Mountain**	**75.04**	**47**	P	**P**	**06 41 43.6**	**+0.4**
	baz=75,SNR=14						
GRAC	**Grapevine Rang**	**75.04**	**44**	⇑P	**P**	**06 41 43.8**	**+0.6**
	baz=75,SNR=12						
FURC	**Furnace Creek,**	**75.09**	**45**	⇑P	**P**	**06 41 43.5**	**+0.1**
	baz=75,SNR=9.0						
TUQ	**Turquoise Moun**	**75.17**	**46**	⇑P	**P**	**06 41 44.2**	**+0.1**
	baz=75,SNR=13						
SHOC	**Shoshone**	**75.18**	**45**	⇓P	**P**	**06 41 44.1**	**+0.1**
	baz=75,SNR=5.2						
NVAR	**Mina Array Bea**	**75.23**	**42**	P	**P**	**06 41 45.1**	**+0.7**
NVAR	**Mina Array Bea**	**75.23**	**42**	P	**P**	**06 41 45.1**	**+0.7**
	comp=Z,14nm,0.8s,baz=227,slow=9.8,SNR=86						
Y12C	**Blythe**	**75.28**	**48**	⇓P	**P**	**06 41 44.9**	**+0.4**
	baz=76,SNR=5.6						
113A	**Mohawk Valley,**	**75.32**	**49**	⇑P	**P**	**06 41 44.9**	**+0.1**
	baz=76,SNR=15						
NV11	**Mina Array Sit**	**75.33**	**42**	*e*P	**P**	**06 41 45.0**	**+0.1**
LDFC	**Landfair**	**75.55**	**47**	*e*P	**P**	**06 41 46.4**	**+0.1**
	comp=Z,51nm,1.3s						
214A	**Organ Pipe Nat**	**75.62**	**50**	⇓P	**P**	**06 41 46.6**	**0.0**
	baz=76,SNR=11						
PDMCI	**Parker Dam,Lak**	**75.83**	**48**	⇓P	**P**	**06 41 47.7**	**0.0**
	baz=76,SNR=11						
MOD	**Modoc**	**76.02**	**38**	*e*P	**P**	**06 41 49.2**	**+0.5**
	comp=Z,18nm,0.8s						
KSRS	**Korea Array**	**76.13**	**316**	P	**P**	**06 41 51.1**	**+1.8**
	comp=Z,0.5nm,0.5s,baz=127,slow=4.9,SNR=3.3						
KSAR	**Wonju Array Be**	**76.15**	**316**	P	**P**	**06 41 51.1**	**+1.7**
Z14A	**Wintersburg**	**76.22**	**49**	⇑P	**P**	**06 41 50.2**	**+0.3**
	baz=76,SNR=6.4						
W13A	**Hualapai Mount**	**76.42**	**47**	⇑P	**P**	**06 41 51.5**	**+0.2**
	baz=77,SNR=12						
Y14A	**Wickenburg**	**76.46**	**48**	⇓P	**P**	**06 41 51.5**	**+0.1**
	baz=77,SNR=11						
R11A	**Troy Canyon, C**	**76.96**	**43**	⇑P	**P**	**06 41 54.2**	**-0.1**
	baz=77,SNR=15						
BMN	**Battle Mountai**	**77.05**	**41**	*e*P	**P**	**06 41 55.4**	**+0.7**
BMN				pmax	pmax		
	comp=Z,14nm,0.8s						
BMN	**Battle Mountai**	**77.05**	**41**	*e*P	**P**	**06 41 55.4**	**+0.7**
	comp=Z,14nm,0.8s						
TUC	**Tucson**	**77.30**	**51**	*e*P	**P**	**06 41 56.5**	**+0.4**
TUC				pmax	pmax		
	comp=Z,277nm,1.8s						
TUC	**Tucson**	**77.30**	**51**	*e*P	**P**	**06 41 56.5**	**+0.4**
	comp=Z,277nm,1.8s						
WVOR	**Wild Horse Val**	**77.33**	**39**	*e*P	**P**	**06 41 55.8**	**-0.3**
WVOR				pmax	pmax		
	comp=Z,16nm,0.9s						
WVOR	**Wild Horse Val**	**77.33**	**39**	*e*P	**P**	**06 41 55.8**	**-0.3**
	comp=Z,16nm,0.9s						
VIPM	**Ingram Point**	**77.41**	**36**	P	**P**	**06 41 56.9**	**+0.3**
VIPM	**Ingram Point**	**77.41**	**36**	P	**P**	**06 41 56.9**	**+0.3**
VFP	**Flag Point**	**77.44**	**35**	P	**P**	**06 41 57.1**	**+0.4**
NLWA	**Neilton Lookou**	**77.48**	**32**	*e*P	**P**	**06 41 57.7**	**+1.0**
	comp=Z,18nm,1.1s						
TDL	**Tradedollar La**	**77.67**	**34**	P	**P**	**06 41 58.9**	**+1.0**
GULW	**Guler Mountain**	**77.74**	**35**	P	**P**	**06 41 59.0**	**+0.6**
X16A	**Lo Mia Camp, P**	**77.82**	**49**	⇑P	**P**	**06 41 59.6**	**+0.5**
	baz=78,SNR=18						
VTHM	**Trough**	**77.85**	**36**	P	**P**	**06 41 59.3**	**+0.5**
319A	**Douglas**	**78.00**	**52**	⇓P	**P**	**06 42 00.4**	**+0.3**
	baz=78,SNR=14						
CCUT	**Cedar City**	**78.04**	**45**	*e*P	**P**	**06 42 00.9**	**+0.6**
	comp=Z,12nm,0.9s						
ARUT	**Antelope Range**	**78.11**	**45**	*e*P	**P**	**06 42 00.7**	**+0.1**
ARUT				pmax	pmax		
	comp=Z,21nm,1.1s						
ARUT	**Antelope Range**	**78.11**	**45**	*e*P	**P**	**06 42 00.7**	**+0.1**
	comp=Z,21nm,1.1s						
RSO	**Redoubt South**	**78.13**	**11**	*e*P	**P**	**06 41 58.5**	**-1.8**
LON	**Longmire**	**78.14**	**34**	*e*P	**P**	**06 42 00.7**	**+0.2**
LON				pmax	pmax		

X21A	Alamocita Cree	80.50	50	⇓P		P	06 42 14.4	+0.6	
	baz=81,SNR=12								
HLID	Hailey	80.53	40	eP		P	06 42 14.2	+0.5	
	comp=Z,14nm,0.8s								
HLID	Hailey	80.53	40	⇑P		P	06 42 13.8	+0.2	
	baz=81,SNR=24								
Z22A	Elephant Butte	80.59	51	⇓P		P	06 42 14.8	+0.6	
	baz=81,SNR=21								
HVU	Hansel Valley	80.61	42	eP		P	06 42 14.1	0.0	
HVU				pmax		pmax			
	comp=Z,10.0nm,0.7s								
HVU	Hansel Valley	80.61	42	eP		P	06 42 14.1	0.0	
	comp=Z,9.9nm,0.7s								
V20A	Brimhall	80.62	49	⇑P		P	06 42 14.4	+0.1	
	baz=81,SNR=5.7								
SRU	San Rafael	80.75	45	⇓P		P	06 42 15.1	+0.1	
	baz=81								
H12A	Diamond D Ranc	80.79	38	⇓P		P	06 42 14.7	-0.3	
	baz=81,SNR=8.9								
G12A	Big Creek, Yel	80.83	38	⇓P		P	06 42 15.3	+0.1	
	baz=81								
U20A	Newcomb	80.85	48	⇓P		P	06 42 16.0	+0.4	
	baz=81,SNR=9.6								
123A	Bell Site, Whi	80.85	52	⇓P		P	06 42 16.0	+0.4	
	baz=81,SNR=6.4								
JLU	Jordanelle	80.87	43	eP		P	06 42 16.1	+0.4	
	comp=Z,13nm,1.1s								
Y22A	Socorro	80.89	51	⇑P		P	06 42 16.1	+0.4	
	baz=81,SNR=17								
DAU	Daniels Canyon	80.90	43	eP		P	06 42 16.4	+0.5	
DAU	Daniels Canyon	80.90	43	eP		P	06 42 16.4	+0.5	
W21A	San Fidel	80.91	50	⇑P		P	06 42 16.6	+0.6	
	baz=81,SNR=10								
324A	Moseley Ranch,	80.94	54	⇓P		P	06 42 16.0	-0.1	
	baz=81,SNR=20								
LAZ	Ladron	80.96	50	eP		P	06 42 16.8	+0.6	
	comp=Z,8.5nm,1.4s								
Y22D	IRIS PASSCAL I	80.98	51	⇑P		P	06 42 17.0	+0.7	
	baz=81								
425A	Indio Mountain	81.06	54	⇑P		P	06 42 17.0	+0.3	
	baz=81,SNR=55								
X22A	Bernardo	81.11	50	⇑P		P	06 42 18.0	+1.1	
	baz=81,SNR=7.2								
MNTX	Cornudas Mount	81.13	54	eP		P	06 42 17.1	+0.2	
	comp=Z,20nm,1.1s								
Z23A	Rita Site, Whi	81.14	52	⇑P		P	06 42 17.4	+0.3	
	baz=81,SNR=6.1								
224A	Cornudas Mount	81.18	53	⇑P		P	06 42 17.7	+0.3	
	baz=81,SNR=28								
626A	Big Bend Ranch	81.22	56	⇑P		P	06 42 17.8	+0.3	
	baz=81,SNR=19								
BNM	Barren Site	81.23	51	eP		P	06 42 17.8	+0.1	
	comp=Z,11nm,1.0s								
MVCO	Mesa Verde	81.25	47	eP		P	06 42 17.6	-0.1	
	comp=Z,12nm,1.3s								
MVCO	Mesa Verde	81.25	47	⇓P		P	06 42 17.8	+0.1	
	baz=81								
HWUT	Hardware Ranch	81.30	42	eP		P	06 42 17.3	-0.5	
	comp=Z,12nm,1.3s								
LPM	Los Pinos Moun	81.30	51	eP		P	06 42 18.8	+0.8	
325A	Bean Ranch, Si	81.31	54	⇓P		P	06 42 17.9	-0.1	
	baz=82,SNR=35								
I14A	Mackay	81.31	40	⇑P		P	06 42 18.1	+0.3	
	baz=82,SNR=6.0								
TRF	Throfare Moun	81.35	11	eP		P	06 42 17.0	-0.5	
	comp=Z,292nm,2.7s								
E12A	Beaver Dam Sad	81.41	37	⇑P		P	06 42 17.4	-0.8	
	baz=82,SNR=7.5								
W22A	Albuquerque	81.46	50	⇑P		P	06 42 19.6	+0.7	
	baz=82,SNR=5.7								
526A	Mary Lane Ranc	81.47	55	⇓P		P	06 42 19.1	+0.3	
	baz=82,SNR=28								
U21A	Nageezi	81.49	48	⇓P		P	06 42 19.6	+0.6	
	baz=82,SNR=62								
124A	Stringfield Ra	81.50	53	⇑P		P	06 42 19.6	+0.5	
	baz=82,SNR=16								
TXAR	Lajitas Array	81.51	56	P		P	06 42 19.3	+0.2	
TXAR	Lajitas Array	81.51	56	P		P	06 42 19.3	+0.2	
	comp=Z,11nm,1.0s,baz=218,slow=5.9,SNR=82								
TXAR				LR		LR	07 12 30.2		
	comp=Z,43nm,19.7s,baz=5.0,slow=31								
PV04	Paradox Valley	81.52	46	eP		P	06 42 19.8	+0.7	
Y23A	Lovelace Mesa,	81.57	51	⇓P		P	06 42 19.5	+0.1	
	baz=82,SNR=12								
NEW	Newport	81.59	34	eP		P	06 42 18.3	-0.7	
	comp=Z,3.8nm,0.8s								
NEW	Newport	81.59	34	⇑P		P	06 42 18.2	-0.7	
	baz=82,SNR=5.9								
PV01	Paradox Valley	81.63	47	eP		P	06 42 19.8	+0.1	
	comp=Z,3μm,1.2s								
S20A	Disappointment	81.64	47	⇑P		P	06 42 19.9	+0.1	
	baz=82,SNR=21								
ANMO	Albuquerque	81.71	50	eP		P	06 42 20.4	+0.3	
	comp=Z,47nm,1.5s								
225A	Deer Hill, Car	81.73	53	⇓P		P	06 42 20.7	+0.4	
	baz=82,SNR=19								
X23A	Hourglass Bar	81.75	51	⇓P		P	06 42 20.5	+0.2	
	baz=82,SNR=5.7								
426A	McDonald Obser	81.76	55	⇑P		P	06 42 20.5	0.0	
	baz=82,SNR=44								
627A	Terlingua Ranc	81.78	56	⇓P		P	06 42 20.9	+0.4	
	baz=82,SNR=27								
R20A	Redvale	81.79	47	⇑P		P	06 42 20.4	-0.1	
	baz=82,SNR=11								
V22A	San Miguel Ran	81.80	49	⇓P		P	06 42 20.7	+0.1	
	baz=82,SNR=12								
M17A	Scullys Gap (B	81.81	43	⇓P		P	06 42 19.9	-0.6	
	baz=82,SNR=5.6								
C11A	Tepee Creek (N	81.82	35	⇓P		P	06 42 20.1	-0.1	
	baz=82								
Z24A	Sheeppen Canyo	81.83	52	⇑P		P	06 42 20.9	+0.1	
	baz=82,SNR=7.8								
T21A	Navajo Lake	81.84	48	⇑P		P	06 42 20.9	+0.1	
	baz=82,SNR=7.4								
MCK	McKinley	81.85	11	eP		P	06 42 20.1	+0.2	
MCK				pmax		pmax			
	comp=Z,36nm,0.9s								
MCK	McKinley	81.85	11	eP		P	06 42 20.1	+0.2	
	comp=Z,36nm,0.9s								
527A	Woodward Ranch	81.88	56	⇓P		P	06 42 20.9	-0.2	
	baz=82,SNR=23								
D12A	Red Ives Fores	81.89	36	⇑P		P	06 42 20.0	-0.6	
	baz=82								
S21A	Coal Bank Pass	81.96	47	⇑P		P	06 42 21.8	+0.3	
	baz=82,SNR=43								
W23A	Werner Place,	82.03	50	⇑P		P	06 42 21.9	+0.1	
	baz=82,SNR=28								
Y24A	Capitan	82.03	51	⇑P		P	06 42 21.8	0.0	
	baz=82,SNR=24								
U22A	Llaves	82.05	49	⇓P		P	06 42 22.1	+0.2	
	baz=82,SNR=16								
P19A	Cripple Cowboy	82.05	45	⇓P		P	06 42 21.6	-0.2	
	baz=82,SNR=8.8								
326A	Caldwell Ranch	82.06	54	⇑P		P	06 42 21.9	0.0	
	baz=82,SNR=6.8								
125A	Gardner Draw,	82.09	53	⇑P		P	06 42 22.4	+0.3	
	baz=82,SNR=6.9								
GDL2	Guadalupe Moun	82.12	53	eP		P	06 42 23.2	+0.9	
MCMT	McKenzie Canyo	82.15	39	eP		P	06 42 22.3	+0.1	
	comp=Z,10.0nm,1.1s								
C12B	Naegeli Ranch,	82.18	36	⇑P		P	06 42 21.7	-0.4	
	baz=82,SNR=6.0								
628A	Black Gap, Mar	82.19	56	⇑P		P	06 42 22.7	+0.1	
	baz=82,SNR=16								
Q20A	Ridgley Place,	82.20	46	⇑P		P	06 42 22.6	0.0	
	baz=82,SNR=14								
226B	Tecolote Peak,	82.23	54	⇓P		P	06 42 22.7	0.0	
	baz=82,SNR=36								
V23A	Ortiz Mt. (NFS	82.26	50	⇑P		P	06 42 23.9	+0.9	
	baz=82,SNR=31								
O19A	Miners Draw (B	82.27	44	⇓P		P	06 42 22.8	-0.1	
	baz=82,SNR=8.6								
T22A	Edith	82.30	48	⇑P		P	06 42 23.3	+0.1	
	baz=82,SNR=17								
Z25A	Roswell	82.30	52	⇓P		P	06 42 23.4	+0.2	
	baz=82,SNR=17								
X24A	Lazy VL Ranch,	82.30	51	⇑P		P	06 42 22.9	-0.3	
	baz=82,SNR=14								
427A	Hayter Ranch,	82.33	55	⇑P		P	06 42 23.7	+0.4	
	baz=82,SNR=26								
RRI2	Red Ridge	82.33	41	eP		P	06 42 23.3	0.0	
	comp=Z,13nm,0.7s								
F14A	Wisdom	82.36	38	⇑P		P	06 42 22.8	-0.5	
	baz=83,SNR=8.5								
P20A	De Beque	82.39	45	⇑P		P	06 42 23.5	0.0	
	baz=83,SNR=27								
D13A	Huson	82.42	36	⇓P		P	06 42 22.5	-0.9	
	baz=83,SNR=18								
R21A	Cimarron	82.45	47	⇓P		P	06 42 24.5	+0.5	
	baz=83,SNR=33								
327A	Balmorhea Ranc	82.46	54	⇑P		P	06 42 24.1	+0.1	
	baz=83								
I16A	Newdale	82.50	40	⇑P		P	06 42 24.7	+0.7	
	baz=83,SNR=17								
U23A	El Rito	82.51	49	⇑P		P	06 42 24.6	+0.3	
	baz=83,SNR=57								
528A	Cox Ranch, San	82.54	56	⇓P		P	06 42 24.6	+0.2	
	baz=83,SNR=19								
B12A	Libby	82.55	35	⇓P		P	06 42 24.0	0.0	
	baz=83								
126A	Clayton Basin,	82.57	53	⇓P		P	06 42 24.2	-0.3	
	baz=83,SNR=11								
MSO	Missoula	82.57	37	eP		P	06 42 23.9	-0.4	
	comp=Z,10nm,1.2s								
MSO	Missoula	82.57	37	⇑P		P	06 42 23.1	-1.1	
	baz=83,SNR=13								
DLMT	Dillon	82.58	39	eP		P	06 42 24.6	+0.2	
	comp=Z,12nm,0.8s								
Y25A	Mesa, Roswell	82.59	52	⇑P		P	06 42 24.5	-0.2	
	baz=83,SNR=24								
W24A	Lazy 6 Ranch,	82.60	50	⇓P		P	06 42 24.5	-0.2	
	baz=83,SNR=47								
TPAW	Teton Pass	82.64	41	eP		P	06 42 25.2	+0.4	
	comp=Z,16nm,0.7s								
Q21A	Lamborn Mesa,	82.65	46	⇑P		P	06 42 25.2	+0.3	
	baz=83,SNR=33								
BSMT	Bassoo Peak	82.65	36	eP		P	06 42 23.8	-0.9	
C13A	Hot Springs	82.67	36	⇓P		P	06 42 23.8	-0.9	
	baz=83,SNR=9.3								
S22A	4UR Ranch, Cre	82.68	47	⇑P		P	06 42 25.5	+0.3	
	baz=83,SNR=58								
SNOW	Snow King Moun	82.75	41	eP		P	06 42 25.5	+0.1	
	comp=Z,24nm,0.9s								
DOT	Dot Lake	82.75	13	eP		P	06 42 25.3	+0.7	
	comp=Z,26nm,1.2s								
A12A	Yaak River Ran	82.77	35	⇓P		P	06 42 24.9	-0.3	
	baz=83								
O20A	White River Ci	82.79	45	⇑P		P	06 42 25.3	-0.3	
	baz=83,SNR=9.2								
M19A	Rock Springs	82.82	43	⇑P		P	06 42 25.5	-0.3	
	baz=83,SNR=18								
428A	Kincaid Ranch,	82.84	55	⇑P		P	06 42 26.3	+0.3	
	baz=83,SNR=9.1								
IMW	Indian Meadow	82.85	41	eP		P	06 42 26.1	+0.1	
	comp=Z,20nm,0.7s								
Z26A	Caprock	82.86	53	⇑P		P	06 42 25.8	-0.2	
	baz=83,SNR=36								
X25A	Clemmons Ranch	82.86	51	⇓P		P	06 42 25.7	-0.4	
	baz=83,SNR=5.6								
JTMT	Jette	82.88	36	eP		P	06 42 25.4	-0.4	
227A	Bennet, Jal	82.88	54	⇑P		P	06 42 25.8	-0.3	
	baz=83								
WHN	Wuhan	82.88	304	⇓P		P	06 42 16.5	-10	
WHN				pP		PcP	06 42 33.1	+2.5	
F15A	Butte	82.90	38	⇑P		P	06 42 25.7	-0.4	
	baz=83,SNR=11								
MOOW	Moose Ponds	82.90	41	eP		P	06 42 26.2	0.0	
	comp=Z,9.3nm,1.1s								
SWMT	Swartz Lake	82.91	36	eP		P	06 42 26.6	+0.6	
LRM	Limekiln Ridge	82.91	38	eP		P	06 42 26.4	+0.2	
V24A	Rampart Ranch,	82.92	50	⇓P		P	06 42 26.6	+0.2	
	baz=83,SNR=20								
T23A	Casias Ranch,	82.93	48	⇓P		P	06 42 26.7	+0.2	
	baz=83								
R22A	Saguache, Gunn	82.94	47	⇓P		P	06 42 27.2	+0.6	
	baz=83,SNR=33								
D14A	Greenough	82.96	37	⇓P		P	06 42 25.2	-1.1	
	baz=83,SNR=16								
529A	Stev Forest Ra	82.98	56	⇑P		P	06 42 26.4	-0.3	
	baz=83,SNR=16								
L19A	Farson	82.98	43	⇓P		P	06 42 26.3	-0.3	
	baz=83,SNR=22								
328A	Wristen Ranch,	83.00	55	⇑P		P	06 42 26.4	-0.3	
	baz=83,SNR=10								
CHMT	Chamberlain Mo	83.02	37	eP		P	06 42 26.0	-0.7	
QLMT	Earthquake Lak	83.02	40	eP		P	06 42 27.9	+1.2	
P21A	Newcastle	83.05	46	⇓P		P	06 42 27.2	+0.2	
	baz=83,SNR=13								
SLMT	Seeley Lake	83.05	37	eP		P	06 42 26.0	-0.8	
H16A	Russell Place,	83.06	40	⇓P		P	06 42 27.6	+0.6	
	baz=83,SNR=51								
COLA	College	83.09	11	eP		P	06 42 26.8	+0.5	
COLA				pmax		pmax			
	comp=Z,43nm,1.0s								
COLA	College	83.09	11	eP		P	06 42 26.8	+0.5	
	comp=Z,44nm,1.0s								
I17A	Pilgrim Ck.	83.09	41	⇑P		P	06 42 27.6	+0.5	
	baz=83								
127A	Arkansas Junct	83.09	53	⇓P		P	06 42 26.8	-0.5	
	baz=83,SNR=12								
N20A	Spence Gulch,	83.10	44	⇑P		P	06 42 27.2	-0.1	
	baz=83,SNR=24								
B13A	Whitefish	83.11	35	⇑P		P	06 42 26.3	-0.6	
	baz=83,SNR=8.0								
Q22A	Crested Butte,	83.12	46	⇑P		P	06 42 27.7	+0.2	
	baz=83,SNR=27								
BW06	Boulder Array	83.17	42	eP		P	06 42 27.0	-0.6	
	comp=Z,20nm,0.9s								
PDAR	Pinedale Array	83.17	42	P		P	06 42 26.9	-0.6	
PDAR	Pinedale Array	83.17	42	P		P	06 42 26.9	-0.6	
	comp=Z,19nm,0.8s,baz=210,slow=3.1,SNR=113								
PDAR				LR		LR	07 13 48.4		
	comp=Z,58nm,18.5s,baz=99,slow=31								
ILAR	Eielson Array	83.17	11	P		P	06 42 26.8	0.0	
ILAR	Eielson Array	83.17	11	P		P	06 42 26.8	0.0	
	comp=Z,8.7nm,1.1s,baz=208,slow=5.6,SNR=37								
C14A	Swan Lake	83.19	36	⇓P		P	06 42 26.4	-1.0	
	baz=83								
U24A	Moreno Valley	83.21	49	⇓P		P	06 42 28.4	+0.4	
	baz=83,SNR=8.6								
SMCO	Snowmass	83.22	46	eP		P	06 42 28.2	+0.1	
	comp=Z,19nm,0.8s								
YMR	Madison River	83.22	40	eP		P	06 42 28.5	+0.7	
	comp=Z,22nm,0.6s								
Y26A	Elida	83.24	52	⇓P		P	06 42 27.9	-0.2	
	baz=83,SNR=6.4								
S23A	Nye Farm, Mont	83.25	48	⇑P		P	06 42 28.4	+0.3	
	baz=83								
LCCM	Lewis and Clar	83.26	39	P		P	06 42 28.2	+0.3	
W25A	X Bar L Ranch,	83.30	51	⇑P		P	06 42 27.9	-0.5	
	baz=84,SNR=26								
BOZ	Bozeman (W)	83.31	39	eP		P	06 42 28.0	-0.2	
BOZ				pmax		pmax			
	comp=Z,14nm,1.1s								
BOZ	Bozeman (W)	83.31	39	eP		P	06 42 28.0	-0.2	
	comp=Z,14nm,1.1s								
H17A	Grant Village	83.32	40	⇓P		P	06 42 29.4	+1.1	
	baz=84,SNR=11								
O21A	Pagoda	83.35	45	⇑P		P	06 42 28.1	-0.5	
	baz=84,SNR=5.1								
F16A	Kennard Place,	83.39	39	⇓P		P	06 42 28.5	+0.1	
	baz=84,SNR=14								
429A	Davenport Ranc	83.43	56	⇑P		P	06 42 28.7	-0.2	
	baz=84,SNR=23								
V25A	Rancho No Teng	83.45	50	⇓P		P	06 42 29.0	-0.1	
	baz=84,SNR=31								
A13A	Flathead Natio	83.45	35	⇓P		P	06 42 28.3	-0.4	
	baz=84								
I18A	Diamond G Ranc	83.46	41	⇑P		P	06 42 28.8	-0.2	
	baz=84,SNR=8.6								
M20A	Sweetwater, Wa	83.46	44	⇓P		P	06 42 28.9	-0.2	
	baz=84,SNR=15								
Z27A	Tatum	83.46	53	⇑P		P	06 42 28.6	-0.6	
	baz=84,SNR=18								
228A	UT Block 9, Go	83.47	54	⇑P		P	06 42 28.7	-0.5	
	baz=84,SNR=7.0								
D15A	Lincoln	83.51	37	⇓P		P	06 42 28.8	-0.3	
	baz=84,SNR=17								
X26A	CR and CF Fran	83.51	51	⇑P		P	06 42 28.9	-0.5	
	baz=84,SNR=12								
P22A	Eagle	83.55	46	⇓P		P	06 42 29.5	-0.1	
	baz=84,SNR=15								
N21A	Black Mountain	83.56	45	⇑P		P	06 42 29.8	+0.1	
	baz=84,SNR=28								
R23A	Moffat	83.58	47	⇑P		P	06 42 29.8	0.0	
	baz=84,SNR=10								
L20A	Wamsutter	83.60	43	⇓P		P	06 42 29.7	-0.1	
	baz=84,SNR=20								
K19A	Absolon Red Bu	83.65	42	⇓P		P	06 42 29.2	-0.9	
	baz=84,SNR=15								
G17A	Pierce Place,	83.69	39	⇓P		P	06 42 30.1	0.0	
	baz=84,SNR=8.0								
530A	J-C Ranch, Com	83.69	56	⇑P		P	06 42 30.0	-0.3	
	baz=84,SNR=7.4								
329A	Wagon Wheel Ra	83.70	55	⇓P		P	06 42 30.1	-0.3	
	baz=84,SNR=13								
Y27A	Causey	83.73	52	⇑P		P	06 42 30.0	-0.5	
	baz=84,SNR=31								
J19A	Crowheart	83.73	42	⇓P		P	06 42 29.9	-0.4	
	baz=84,SNR=12								
E16A	East Helena	83.74	38	⇓P		P	06 42 30.0	-0.3	
	baz=84,SNR=15								
HRY	Holter Researc	83.74	38	eP		P	06 42 30.0	-0.3	
128A	Castleberry Fa	83.75	54	⇓P		P	06 42 30.1	-0.5	
	baz=84,SNR=24								
W26A	Owens Ranch, T	83.77	51	⇑P		P	06 42 30.0	-0.7	
	baz=84								
B14A	Marquette Ranc	83.78	36	⇓P		P	06 42 29.1	-1.3	
	baz=84,SNR=6.9								
S24A	Houchin Ranch,	83.78	48	⇑P		P	06 42 31.0	+0.1	
	baz=84,SNR=16								
U25A	Circle Dot Ran	83.84	50	⇓P		P	06 42 30.7	-0.4	
	baz=84,SNR=16								
C15A	Salmond Ranch,	83.84	37	⇑P		P	06 42 30.0	-0.8	
	baz=84,SNR=5.7								
Q23A	Hartsel	83.89	47	⇓P		P	06 42 31.5	0.0	
	baz=84								
K20A	Yellowstone Ra	83.90	43	⇑P		P	06 42 30.3	-1.0	
	baz=84,SNR=13								
O22A	Kremmling	83.95	45	⇑P		P	06 42 31.5	-0.2	
	baz=84,SNR=22								
430A	Baggett Ranch,	84.02	56	⇓P		P	06 42 31.6	-0.4	
	baz=84								
229A	Bryant Ranch,	84.02	54	⇑P		P	06 42 31.8	-0.2	
	baz=84,SNR=6.1								
A14A	Double T Ranch	84.02	35	⇑P		P	06 42 30.9	-0.7	
	baz=84,SNR=15								
631A	Perdido Creek	84.03	57	⇑P		P	06 42 31.5	-0.5	
	baz=84,SNR=21								
F17A	Fitzpatrick Pl	84.03	39	⇓P		P	06 42 32.1	+0.3	
	baz=84,SNR=14								
H18A	Shoshone NF, C	84.03	40	⇓P		P	06 42 31.8	-0.1	
	baz=84,SNR=7.7								
V26A	Tequesquite Ra	84.04	50	⇑P		P	06 42 31.0	-1.1	
	baz=84,SNR=17								
M21A	Separation Pea	84.06	44	⇓P		P	06 42 31.6	-0.6	
	baz=84,SNR=31								
MSTX	Muleshoe	84.06	52	⇓P		P	06 42 31.7	-0.5	
	baz=84,SNR=30								
D16A	Dana Ranch, Ca	84.07	38	⇓P		P	06 42 31.8	-0.1	
	baz=84								
Z28A	Tucker Farm, M	84.09	53	⇓P		P	06 42 31.8	-0.5	
	baz=84,SNR=14								
X27A	F and S Farms,	84.09	52	⇓P		P	06 42 32.2	-0.2	
	baz=84,SNR=10								
R24A	Sanders Place,	84.11	48	⇑P		P	06 42 32.2	-0.3	
	baz=84,SNR=7.9								
I19A	Meeteetse	84.14	41	⇓P		P	06 42 32.3	-0.2	
	baz=84,SNR=11								
T25A	Trinidad	84.15	49	⇑P		P	06 42 32.6	-0.1	
	baz=84								
B15A	Bradely Ranch,	84.15	36	⇓P		P	06 42 31.2	-1.1	
	baz=84,SNR=11								
E17A	Martinsdale	84.19	38	⇓P		P	06 42 32.5	-0.2	
	baz=84,SNR=5.9								
L21A	Rawlins	84.22	44	⇓P		P	06 42 32.3	-0.7	
	baz=84,SNR=13								
129A	Stewart Farms,	84.23	54	⇑P		P	06 42 32.8	-0.3	
	baz=84,SNR=13								
732A	Laxson Ranch,	84.27	58	⇑P		P	06 42 32.8	-0.4	
	baz=84,SNR=6.2								
W27A	Bowe Ranch, En	84.28	51	⇓P		P	06 42 32.7	-0.6	
	baz=84,SNR=18								
330A	Mertzon	84.30	55	⇓P		P	06 42 32.6	-0.8	
	baz=84,SNR=7.2								
N22A	Wattenberg Ran	84.30	45	⇓P		P	06 42 33.3	-0.2	
	baz=84,SNR=24								
U26A	Atchley Ranch,	84.32	50	⇓P		P	06 42 33.0	-0.6	
	baz=84,SNR=14								
531A	Rocksprings	84.33	57	⇓P		P	06 42 33.2	-0.3	
	baz=84,SNR=18								
S25A	Robets Cordova	84.35	48	⇓P		P	06 42 33.3	-0.4	
	baz=84,SNR=12								
C16A	Fuhringer Ranc	84.35	37	⇓P		P	06 42 32.4	-1.0	
	baz=85,SNR=16								
EGAK	Eagle	84.37	14	eP		P	06 42 33.5	+0.6	
	comp=Z,19nm,1.3s								
J20A	Shoshoni	84.40	42	⇓P		P	06 42 33.6	-0.1	
	baz=85,SNR=24								
Q24A	Divide	84.40	47	⇓P		P	06 42 33.8	-0.2	
	baz=85,SNR=6.8								
G18A	Lazy EL Ranch,	84.41	40	⇓P		P	06 42 33.9	+0.1	
	baz=85,SNR=8.1								
O23A	Lake Granby, G	84.41	46	⇓P		P	06 42 33.9	-0.1	
	baz=85,SNR=7.1								
ISCO	Idaho Springs	84.44	46	eP		P	06 42 34.5	+0.3	
ISCO				pmax		pmax			
	comp=Z,20nm,1.7s								
ISCO	Idaho Springs	84.44	46	eP		P	06 42 34.5	+0.3	
	comp=Z,20nm,1.7s								
ISCO	Idaho Springs	84.44	46

	comp=Z,12nm,1.1s								
JCT	**Junction City**	**85.05**	**57**	⇓P		**P**	**06 42 36.3**	**-0.8**
	baz=85								
F19A	**Roth Farm, Mol**	**85.05**	**40**	⇑P		**P**	**06 42 36.7**	**-0.2**
	baz=85,SNR=13								
Z30A	**Sanderson Ranc**	**85.06**	**54**	⇑P		**P**	**06 42 36.3**	**-0.8**
	baz=85,SNR=21								
X29A	**Tulia**	**85.07**	**52**	⇑P		**P**	**06 42 36.6**	**-0.6**
	baz=85,SNR=8.8								
K22A	**Casper**	**85.09**	**43**	⇓P		**P**	**06 42 36.6**	**-0.6**
	baz=85								
M23A	**Laramie**	**85.10**	**45**	⇓P		**P**	**06 42 36.9**	**-0.5**
	baz=85								
I21A	**Big Trails, Te**	**85.12**	**42**	⇑P		**P**	**06 42 36.5**	**-0.8**
	baz=85,SNR=19								
B17A	**L&G Farms, Che**	**85.15**	**37**	⇑P		**P**	**06 42 36.8**	**-0.5**
	baz=85,SNR=7.8								
231A	**Bronte**	**85.18**	**55**	⇓P		**P**	**06 42 36.9**	**-0.8**
	baz=85,SNR=36								
D18A	**Linhart Farms,**	**85.19**	**38**	⇓P		**P**	**06 42 37.4**	**-0.1**
	baz=85								
V28A	**Channing**	**85.19**	**51**	⇓P		**P**	**06 42 37.4**	**-0.5**
	baz=85								
G20A	**Bridger**	**85.19**	**40**	⇑P		**P**	**06 42 37.2**	**-0.5**
	baz=85								
432A	**Menard**	**85.20**	**56**	⇓P		**P**	**06 42 36.6**	**-1.3**
	baz=85,SNR=8.1								
AMTX	**Amarillo**	**85.25**	**52**	*e*P		**P**	**06 42 37.6**	**-0.6**
	comp=Z,21nm,0.9s								
P25A	**Willow Gulch B**	**85.32**	**47**	⇑P		**P**	**06 42 38.2**	**-0.2**
	baz=86,SNR=5.2								
R26A	**Arlington**	**85.33**	**48**	⇓P		**P**	**06 42 37.5**	**-1.0**
	baz=86								
T27A	**Campo**	**85.34**	**50**	⇓P		**P**	**06 42 37.6**	**-1.0**
	baz=86								
W29A	**Amraillo**	**85.37**	**52**	⇑P		**P**	**06 42 37.9**	**-0.9**
	baz=86,SNR=7.5								
N24A	**Carr**	**85.39**	**45**	⇓P		**P**	**06 42 38.5**	**-0.2**
	baz=86								
131A	**Roby**	**85.40**	**54**	⇓P		**P**	**06 42 38.1**	**-0.8**
	baz=86,SNR=12								
BJI	**Beijing**	**85.41**	**314**	P		**P**	**06 42 38.5**	**-0.1**
BJI				S		**S**	**06 53 02.8**	**+2.4**
BJI				pmax	pmax				
	comp=Z,5.0nm,0.9s								
332A	**Millersview**	**85.43**	**56**	⇓P		**P**	**06 42 38.4**	**-0.6**
	baz=86,SNR=26								
E19A	**Rath Farm, Rou**	**85.44**	**39**	⇓P		**P**	**06 42 38.7**	**-0.1**
	baz=86,SNR=6.4								
Y30A	**Stafford Cattl**	**85.46**	**53**	⇓P		**P**	**06 42 38.7**	**-0.5**
	baz=86								
J22A	**Midwest**	**85.46**	**43**	⇓P		**P**	**06 42 38.2**	**-0.9**
	baz=86,SNR=9.9								
F20A	**Billings**	**85.51**	**40**	⇓P		**P**	**06 42 38.8**	**-0.3**
	baz=86								
Q26A	**Hugo**	**85.53**	**48**	⇑P		**P**	**06 42 39.0**	**-0.5**
	baz=86								
A17A	**Triple J Farms**	**85.54**	**36**	⇓P		**P**	**06 42 39.0**	**-0.2**
	baz=86,SNR=12								
EGMT	**Eagleton**	**85.62**	**37**	*e*P		**P**	**06 42 39.7**	**+0.1**
	comp=Z,9.6nm,1.0s								
EGMT	**Eagleton**	**85.62**	**37**	⇑P		**P**	**06 42 38.9**	**-0.7**
	baz=86,SNR=5.2								
H21A	**Big Horn, Sher**	**85.65**	**41**	⇓P		**P**	**06 42 39.2**	**-0.7**
	baz=86								
I22A	**9 Mile Ranch,**	**85.68**	**42**	⇑P		**P**	**06 42 39.5**	**-0.6**
	baz=86								
232A	**Coleman**	**85.69**	**55**	⇓P		**P**	**06 42 39.6**	**-0.6**
	baz=86,SNR=11								
X30A	**Coker Ranch, T**	**85.70**	**53**	⇑P		**P**	**06 42 39.3**	**-1.0**
	baz=86								
M24A	**Cheyenne**	**85.70**	**45**	⇑P		**P**	**06 42 40.1**	**-0.2**
	baz=86								
D19A	**Cripps Ranch,**	**85.72**	**38**	⇑P		**P**	**06 42 40.0**	**-0.1**
	baz=86,SNR=7.5								
K23A	**Bowen Ranch, D**	**85.73**	**43**	⇓P		**P**	**06 42 39.7**	**-0.7**
	baz=86								
V29A	**Stinnett**	**85.76**	**51**	⇑P		**P**	**06 42 40.0**	**-0.6**
	baz=86								
R27A	**Eads**	**85.78**	**48**	⇓P		**P**	**06 42 39.9**	**-0.8**
	baz=86								
B18A	**Beardsley Farm**	**85.79**	**37**	⇓P		**P**	**06 42 40.0**	**-0.4**
	baz=86,SNR=10.0								
G21A	**Lodge Grass**	**85.83**	**41**	⇓P		**P**	**06 42 40.4**	**-0.4**
	baz=86								
Z31A	**Sharp Cattle R**	**85.83**	**54**	⇓P		**P**	**06 42 40.2**	**-0.8**
	baz=86,SNR=14								
E20A	**Meyer Farm, Mu**	**85.85**	**39**	⇑P		**P**	**06 42 40.6**	**-0.2**
	baz=86								
L24A	**Wheatland**	**85.88**	**44**	⇑P		**P**	**06 42 40.9**	**-0.2**
	baz=86								
C19A	**Slack Wire Ran**	**85.89**	**38**	⇑P		**P**	**06 42 40.9**	**0.0**
	baz=86,SNR=16								
P26A	**Davis Ranch, A**	**85.92**	**47**	⇑P		**P**	**06 42 40.7**	**-0.7**
	baz=86								
N25A	**Grover**	**85.93**	**46**	⇓P		**P**	**06 42 40.8**	**-0.6**
	baz=86								
ABTX	**Abilene, Hawle**	**85.96**	**55**	⇓P		**P**	**06 42 41.2**	**-0.4**
	baz=86,SNR=24								
Y31A	**Rekieta Farm,**	**85.98**	**53**	⇑P		**P**	**06 42 41.2**	**-0.5**
	baz=86,SNR=6.1								
A18A	**Metzger Ranch,**	**86.01**	**37**	⇓P		**P**	**06 42 41.3**	**-0.2**
	baz=86								
H22A	**Clearmont**	**86.08**	**42**	⇑P		**P**	**06 42 41.5**	**-0.5**
	baz=86								
D20A	**Manuel Ranch,**	**86.13**	**39**	⇓P		**P**	**06 42 42.2**	**+0.1**
	baz=86,SNR=10								
S28A	**Manter**	**86.16**	**49**	⇑P		**P**	**06 42 41.7**	**-0.8**
	baz=86								
B19A	**Brinkman Farms**	**86.31**	**37**	⇑P		**P**	**06 42 42.7**	**-0.2**
	baz=86,SNR=12								
Z32A	**Haskell**	**86.34**	**54**	⇓P		**P**	**06 42 43.2**	**-0.3**
	baz=86,SNR=26								
T29A	**Hugoton**	**86.43**	**50**	⇑P		**P**	**06 42 44.0**	**+0.1**
	baz=87								
C20A	**Veseth Ranch,**	**86.50**	**38**	⇑P		**P**	**06 42 44.1**	**+0.1**
	baz=87,SNR=15								
E21A	**Keefer Ranch,**	**86.52**	**40**	⇓P		**P**	**06 42 44.2**	**+0.1**
	baz=87								
R28A	**Tribune**	**86.52**	**49**	⇑P		**P**	**06 42 43.5**	**-0.8**
	baz=87,SNR=12								
Y32A	**R-V Farms, Ver**	**86.63**	**53**	⇓P		**P**	**06 42 44.3**	**-0.5**
	baz=87,SNR=5.9								
A19A	**Klindworth Far**	**86.65**	**37**	⇓P		**P**	**06 42 44.4**	**-0.3**
	baz=87,SNR=9.9								
W31A	**Holland Ranch,**	**86.69**	**52**	⇑P		**P**	**06 42 44.9**	**-0.3**
	baz=87								
S29A	**Ulysses**	**86.74**	**50**	⇑P		**P**	**06 42 45.0**	**-0.4**
	baz=87								
O27A	**Beecher Island**	**86.78**	**47**	⇓P		**P**	**06 42 45.5**	**-0.1**
	baz=87								
Q28A	**Sharon Springs**	**86.79**	**48**	⇓P		**P**	**06 42 45.2**	**-0.4**
	baz=87								
D21A	**La Casta Ranch**	**86.81**	**39**	⇑P		**P**	**06 42 45.5**	**0.0**
	baz=87,SNR=6.1								
B20A	**Solberg Farm,**	**86.84**	**38**	⇑P		**P**	**06 42 45.3**	**-0.2**
	baz=87,SNR=8.4								
G23A	**Biddle**	**86.96**	**41**	⇑P		**P**	**06 42 45.8**	**-0.5**
	baz=87								
V31A	**Spring Creek L**	**86.98**	**52**	⇓P		**P**	**06 42 46.7**	**+0.1**
	baz=87								
MAW	**Mawson**	**87.00**	**199**	P		**P**	**06 42 46.5**	**+0.5**
MAW	**Mawson**	**87.00**	**199**	P		**P**	**06 42 46.5**	**+0.5**
	comp=Z,8.4nm,0.8s,baz=133,slow=7.4,SNR=19								
P28A	**Saint Francis**	**87.05**	**48**	⇓P		**P**	**06 42 46.7**	**-0.1**
	baz=87								
C21A	**Desert Coulee**	**87.10**	**38**	⇑P		**P**	**06 42 46.7**	**-0.1**
	baz=87								
A20A	**Cobblestone Ra**	**87.10**	**37**	⇓P		**P**	**06 42 46.5**	**-0.3**
	baz=87,SNR=17								
E22A	**Miles City**	**87.16**	**40**	⇓P		**P**	**06 42 47.2**	**0.0**
	baz=87								
F23A	**Volborg**	**87.18**	**41**	⇓P		**P**	**06 42 47.3**	**0.0**
	baz=87								
U31A	**Nine Bar Ranch**	**87.20**	**51**	⇑P		**P**	**06 42 47.2**	**-0.4**
	baz=87								
J25A	**Sunshine Ranch**	**87.21**	**43**	⇓P		**P**	**06 42 47.1**	**-0.5**
	baz=87								
H24A	**Dirks Ranch, A**	**87.30**	**42**	⇓P		**P**	**06 42 46.8**	**-1.2**
	baz=88,SNR=7.3								
Q29A	**Oakley**	**87.33**	**48**	⇓P		**P**	**06 42 47.6**	**-0.6**
	baz=88								
K26A	**Motz Farm, Whi**	**87.33**	**44**	⇑P		**P**	**06 42 48.1**	**-0.1**
	baz=88								
D22A	**Cohagen**	**87.34**	**39**	⇓P		**P**	**06 42 48.2**	**+0.1**
	baz=88,SNR=5.2								
RSSD	**Black Hills**	**87.36**	**43**	*e*P		**P**	**06 42 47.7**	**-0.7**
RSSD	**Black Hills**	**87.36**	**43**	*e*P		**P**	**06 42 47.7**	**-0.7**
WHTX	**Lake Whitney**	**87.46**	**56**	⇑P		**P**	**06 42 48.7**	**-0.2**
	baz=88								
T31A	**Randall Ranch,**	**87.60**	**50**	⇓P		**P**	**06 42 49.2**	**-0.2**
	baz=88								
R30A	**Dighton**	**87.61**	**49**	⇓P		**P**	**06 42 49.3**	**-0.2**
	baz=88								
P29A	**Atwood**	**87.64**	**48**	⇑P		**P**	**06 42 49.5**	**-0.2**
	baz=88								
GYA	**Guiyang**	**87.74**	**298**	*e*P		**P**	**06 42 50.3**	**-0.2**
GYA				pP		**pP**	**06 43 21.0**	**+1.4**
GYA				sP		**sP**	**06 43 32.5**	**+1.0**
GYA				PP		**PP**	**06 46 19.8**	**+2.0**
GYA				SKS		**SKSac**	**06 53 04.3**	**-4.5**
GYA				S		**SKKSac**	**06 53 20.9**	**+2.1**
GYA				sS		**sS**	**06 54 13.4**	**-0.7**
GYA				pmax	pmax			
	comp=Z,10.0nm,1.0s								
GYA				pmax	pmax				
	comp=Z,110nm,5.4s								
C22A	**Vida**	**87.79**	**39**	⇑P		**P**	**06 42 50.3**	**+0.2**
	baz=88								
F24A	**Ekalaka**	**87.84**	**41**	⇓P		**P**	**06 42 50.4**	**-0.1**
	baz=88								
Q30A	**Quinter**	**87.91**	**49**	⇓P		**P**	**06 42 50.1**	**-0.9**
	baz=88,SNR=5.6								
O29A	**4D Ranch, Culb**	**87.94**	**47**	⇑P		**P**	**06 42 50.9**	**-0.1**
	baz=88								
D23A	**Lindsay**	**87.94**	**40**	⇑P		**P**	**06 42 51.5**	**+0.6**
	baz=88								
B22A	**Reddig Ranch S**	**87.97**	**38**	⇑P		**P**	**06 42 50.7**	**-0.2**
	baz=88,SNR=11								
P30A	**Selden**	**88.11**	**48**	⇑P		**P**	**06 42 51.7**	**-0.1**
	baz=88								
R31A	**Burdett**	**88.16**	**49**	⇓P		**P**	**06 42 51.8**	**-0.3**
	baz=88								
C23A	**Lambert**	**88.24**	**39**	⇑P		**P**	**06 42 52.7**	**+0.5**
	baz=88								
A22A	**Carney Farms,**	**88.33**	**38**	⇓P		**P**	**06 42 52.8**	**+0.1**
	baz=88								
D24A	**Glendive**	**88.46**	**40**	⇑P		**P**	**06 42 53.9**	**+0.6**
	baz=89								
K28A	**Ten Mile Ranch**	**88.56**	**45**	⇓P		**P**	**06 42 54.0**	**+0.1**
	baz=89								
C24A	**Savage**	**88.58**	**39**	⇓P		**P**	**06 42 54.0**	**+0.2**
	baz=89								
B23A	**Brockton**	**88.64**	**38**	⇓P		**P**	**06 42 54.1**	**-0.1**
	baz=89,SNR=8.0								
P31A	**Stockton**	**88.72**	**48**	⇑P		**P**	**06 42 54.3**	**-0.4**
	baz=89								
J28A	**Allard Ranch,**	**88.93**	**44**	⇑P		**P**	**06 42 55.6**	**-0.1**
	baz=89								
HHC	**Hu-ho-hao-te**	**88.95**	**313**	*e*P		**P**	**06 42 56.4**	**+0.5**
HHC				pP		**pP**	**06 43 26.8**	**+1.7**
HHC				sP		**sP**	**06 43 36.3**	**-0.7**
HHC				PP		**PP**	**06 46 30.3**	**+3.1**
HHC				SKS		**SKSac**	**06 53 14.1**	**-1.3**
HHC				S		**S**	**06 53 33.3**	**-1.4**
HHC				sS		**sS**	**06 54 23.8**	**-1.2**
HHC				SS		**SS**	**06 59 31.8**	**+1.3**
HHC				pmax	pmax			
	comp=Z,46nm,1.0s								
HHC				pmax	pmax				
	comp=Z,190nm,7.2s								
DGMT	**Dagmar**	**89.12**	**39**	*e*P		**P**	**06 42 56.4**	**0.0**
	comp=Z,35nm,1.0s								
DGMT	**Dagmar**	**89.12**	**39**	⇑P		**P**	**06 42 56.3**	**0.0**
	baz=89,SNR=8.0								
K29A	**Lazy Trails An**	**89.29**	**45**	⇑P		**P**	**06 42 57.4**	**+0.1**
	baz=90								
E26A	**Carlson Angus**	**89.35**	**41**	⇑P		**P**	**06 42 57.1**	**-0.4**
	baz=90								
A24A	**Westby**	**89.43**	**38**	⇑P		**P**	**06 42 57.4**	**-0.4**
	baz=90								
PLCA	**Paso Flores**	**89.60**	**132**	P		**P**	**06 42 58.9**	**-0.1**
PLCA	**Paso Flores**	**89.60**	**132**	P		**P**	**06 42 58.9**	**-0.1**
	comp=Z,1.1nm,0.6s,baz=52,slow=12,SNR=3.3								
YKA	**Yellowknife Ar**	**90.92**	**24**	P		**P**	**06 43 04.6**	**+0.2**
YKA				PP		**PP**	**06 46 40.5**	**-1.7**
YKA	**Yellowknife Ar**	**90.92**	**24**	P		**P**	**06 43 04.6**	**+0.2**
	comp=Z,2.0nm,0.9s,baz=238,slow=4.4,SNR=20								
YKA				PP		**PP**	**06 46 40.5**	**-1.7**
	comp=Z,0.1nm,0.5s,baz=241,slow=8.3,SNR=4.5								
CD2	**Chengdu**	**91.56**	**302**	*e*P		**P**	**06 43 07.6**	**-0.6**
CD2				pP		**pP**	**06 43 37.6**	**+0.2**
CD2				sP		**sP**	**06 43 50.0**	**+0.7**
CD2				PP		**PP**	**06 46 49.3**	**+1.3**
CD2				SKS		**SKSac**	**06 53 27.6**	**-3.1**
CD2				S		**S**	**06 53 55.0**	**-4.0**
CD2				sS		**sS**	**06 54 47.3**	**-2.3**
CD2				SS		**SS**	**07 00 07.1**	**-1.4**
CD2				pmax	pmax			
	comp=Z,10.0nm,1.0s								
CD2				pmax	pmax				
	comp=Z,100nm,5.8s								
MDND	**Maddock**	**91.69**	**40**	⇑P		**P**	**06 43 07.7**	**-0.6**
	baz=92								
SYO	**Syowa Base**	**91.87**	**192**	⇓*e*P		**P**	**06 43 06.6**	**-2.2**
SYO	**Syowa Base**	**91.87**	**192**	⇓*e*PcP		**PcP**	**06 43 09.6**	**0.0**
ECSD	**EROS Data Cent**	**92.17**	**45**	*e*P		**P**	**06 43 09.5**	**-1.2**
	comp=Z,9.1nm,1.4s								
CMAR	**Chiang Mai Arr**	**92.17**	**288**	P		**P**	**06 43 12.9**	**+1.7**
CMAR	**Chiang Mai Arr**	**92.17**	**288**	P		**P**	**06 43 12.9**	**+1.7**
	comp=Z,1.2nm,0.4s,baz=113,slow=1.9,SNR=8.2								
LZH	**Lanzhou**	**93.05**	**307**	*e*P		P	06 43 05.3	-10
LZH				pP		pP	06 43 35.0	-9.3
LZH				sP		sP	06 43 46.5	-10
LZH				PP		PP	06 46 52.3	-7.5
LZH				pmax	pmax			
	comp=Z,19nm,1.3s								
LZH				pmax	pmax				
	comp=Z,76nm,8.7s								
LZH				LR	LR				
	comp=N,240nm,16.5s								
LZH				LR	LR				
	comp=E,200nm,17.0s								
LZH				LR	LR				
	comp=Z,270nm,19.8s								
AGMN	**Agassiz Nation**	**94.19**	**41**	*e*P		**P**	**06 43 18.6**	**-1.3**
	comp=Z,11nm,1.1s								
SPMN	**St. Paul**	**95.23**	**45**	⇓P		**P**	**06 43 24.0**	**-0.6**
	baz=95								
JFWS	**Jewell Farm**	**96.33**	**47**	*e*P		**P**	**06 43 28.8**	**-0.9**
JFWS				pmax	pmax				
	comp=Z,12nm,0.8s								
JFWS	**Jewell Farm**	**96.33**	**47**	*e*P		**P**	**06 43 28.8**	**-0.9**
	comp=Z,12nm,0.8s								
COWI	**Conover**	**97.94**	**44**	*e*P		**P**	**06 43 36.2**	**-0.7**
	comp=Z,16nm,1.0s								
ARCES	**ARCESS Array B**	**125.12**	**352**	PKP		**PKPdf**	**06 49 00.2**	**0.0**
ARCES	**ARCESS Array B**	**125.12**	**352**	PKP		**PKPdf**	**06 49 00.2**	**0.0**
	comp=Z,2.8nm,0.6s,baz=16,slow=1.9,SNR=22								
FINES	**FINESS Array B**	**132.39**	**347**	PKP		**PKPdf**	**06 49 14.5**	**+0.3**
FINES	**FINESS Array B**	**132.39**	**347**	PKP		**PKPdf**	**06 49 14.5**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=70,slow=2.2,SNR=7.1								
OBN	**Obninsk**	**134.40**	**336**	*e*PKIKP		**PKPdf**	**06 49 13.2**	**-5.0**
OBN				e			06 50 00.4	
OBN				*e*PS		**PS**	**07 02 12.3**	**-1.0**
OBN				pmax	pmax			
	comp=Z,4.0nm,0.9s								
OBN				MLR	MLR				
	comp=Z,100nm,18.0s								
AKASG	**Malin Array Be**	**140.64**	**337**	PKIKP		**PKPdf**	**06 49 31.0**	**+1.1**
AKASG	**Malin Array Be**	**140.64**	**337**	PKP		**PKPdf**	**06 49 31.0**	**+1.1**
AKASG	**Malin Array Be**	**140.64**	**337**	PKP		**PKPdf**	**06 49 31.0**	**+1.1**
	comp=Z,0.6nm,0.3s,baz=321,slow=1.5,SNR=5.7								
CLL	**Collm**	**144.34**	**352**	*e*PKIKP		PKPbc	06 49 35.0	0.0
CLL				pmax	pmax				
	comp=Z,5.0nm,0.7s								
CLL	**Collm**	**144.34**	**352**	*e*PKPdf		PKPbc	06 49 35.0	0.0
	comp=Z,5.0nm,0.7s								
STHS	**Stebnicka Huta**	**144.42**	**343**	*e*PKIKP		**PKPdf**	**06 49 36.0**	**-0.7**
STHS	**Stebnicka Huta**	**144.42**	**343**	*e*PKP		**PKPdf**	**06 49 36.0**	**-0.7**
KOLS	**Kolonicke sedl**	**144.54**	**341**	*e*PKIKP		**PKPdf**	**06 49 36.3**	**-0.6**
KOLS	**Kolonicke sedl**	**144.54**	**341**	*e*PKP		**PKPdf**	**06 49 36.3**	**-0.6**
BRG	**Berggiesshubel**	**144.63**	**351**	*e*PKP		**PKPdf**	**06 49 39.9**	**+2.9**
	comp=Z,3.1nm,0.7s								
BRG	**Berggiesshubel**	**144.63**	**351**	*e*PKIKP		**PKPdf**	**06 49 39.9**	**+2.9**
BRG				pmax	pmax				
	comp=Z,3.0nm,0.7s								
UPC	**Upice**	**144.64**	**349**	*e*PKIKP		**PKPdf**	**06 49 36.8**	**-0.2**
UPC	**Upice**	**144.64**	**349**	⇑*e*PKP		**PKPdf**	**06 49 36.8**	**-0.2**
UPC				*ex*		x	06 49 41.3	
BUR08	**Bucovina Ar. S**	**144.66**	**337**	*e*PKPdf		**PKPdf**	**06 49 36.8**	**-0.5**
KMBO	**Kilima Mbogo**	**144.66**	**244**	PKP		**PKPdf**	**06 49 38.4**	**0.0**
KMBO	**Kilima Mbogo**	**144.66**	**244**	PKP		**PKPdf**	**06 49 38.4**	**0.0**
	comp=Z,12nm,0.9s,baz=68,slow=5.3,SNR=19								
CRVS	**Cervenica-Dubn**	**144.82**	**342**	*e*PKIKP		**PKPab**	**06 49 34.7**	**-1.9**
CRVS	**Cervenica-Dubn**	**144.82**	**342**	*e*PKP		**PKPab**	**06 49 34.7**	**-1.9**
OKC	**Ostrava-Krasne**	**144.83**	**346**	*e*PKIKP		PKPbc	06 49 36.6	0.0
OKC	**Ostrava-Krasne**	**144.83**	**346**	⇑*e*PKP		PKPbc	06 49 36.6	0.0
OKC				*ex*		x	06 49 40.1	
PVCC	**Panska Ves**	**144.87**	**350**	*e*PKIKP		**PKPdf**	**06 49 39.2**	**+1.8**
PVCC	**Panska Ves**	**144.87**	**350**	⇑*e*PKP		**PKPdf**	**06 49 39.2**	**+1.8**
PVCC				*ex*		x	06 49 41.3	
MORC	**Moravsky Berou**	**145.02**	**347**	*e*PKIKP		**PKPbc**	**06 49 37.2**	**-0.1**
MORC	**Moravsky Berou**	**145.02**	**347**	*e*PKPdf		**PKPbc**	**06 49 37.2**	**-0.1**
MOX	**Moxa**	**145.15**	**354**	*e*PKPbc		**PKPdf**	**06 49 38.1**	**+0.2**
MOX	**Moxa**	**145.15**	**354**	*e*PKIKP		**PKPdf**	**06 49 38.1**	**+0.2**
TANN	**Tannenbergstha**	**145.28**	**353**	*e*PKPbc		**PKPab**	**06 49 38.7**	**+0.4**
GUNZ	**Gunzen**	**145.35**	**353**	*e*PKPbc		**PKPab**	**06 49 39.1**	**+0.6**
PRU	**Pruhonice**	**145.40**	**350**	*e*PKP2		**PKPab**	**06 49 38.8**	**+0.1**
PRU	**Pruhonice**	**145.40**	**350**	⇑*e*PKP		**PKPab**	**06 49 38.8**	**+0.1**
PRU				*ex*		x	06 49 42.6	
WERN	**Wernitzgruen**	**145.41**	**353**	*e*PKPbc		**PKPab**	**06 49 39.4**	**+0.6**
NKC	**Novy Kostel**	**145.46**	**353**	*e*PKP2		**PKPab**	**06 49 39.2**	**+0.3**
NKC	**Novy Kostel**	**145.46**	**353**	⇑*e*PKP		**PKPab**	**06 49 39.2**	**+0.3**
NKC				*ex*		x	06 49 43.3	
KECS	**Kecovo**	**145.48**	**343**	*e*PKP2		**PKPab**	**06 49 39.2**	**+0.2**
KECS	**Kecovo**	**145.48**	**343**	*e*PKP		**PKPab**	**06 49 39.2**	**+0.2**
MANZ	**Manzenberg**	**145.74**	**353**	*e*PKPbc		**PKPab**	**06 49 40.3**	**+0.3**
TNS	**Taunus Mts**	**145.82**	**357**	*e*PKPbc		**PKPab**	**06 49 40.6**	**+0.3**
TNS	**Taunus Mts**	**145.82**	**357**	*e*PKP2		**PKPab**	**06 49 40.6**	**+0.3**
VYHS	**Vyhne**	**145.91**	**345**	*e*PKP2		**PKPab**	**06 49 40.8**	**+0.1**
VYHS	**Vyhne**	**145.91**	**345**	*e*PKP		**PKPab**	**06 49 40.8**	**+0.1**
ROTZ	**Rotzenmuhle**	**145.95**	**353**	*e*PKPbc		**PKPab**	**06 49 41.3**	**+0.5**
GRF	**Grafenberg Arr**	**146.13**	**354**	*e*PKPbc		**PKPab**	**06 49 41.9**	**+0.4**
GRF	**Grafenberg Arr**	**146.13**	**354**	*e*PKP2		**PKPab**	**06 49 41.9**	**+0.4**
BR131	**Keskin Array S**	**146.20**	**320**	*e*PKPdf		**PKPbc**	**06 49 41.1**	**-0.3**
BRTR	**Keskin Array B**	**146.20**	**320**	PKPbc		**PKPab**	**06 49 41.9**	**-0.4**
BRTR	**Keskin Array B**	**146.20**	**320**	PKPbc		**PKPab**	**06 49 41.9**	**-0.4**
	comp=Z,5.6nm,0.8s,baz=116,slow=2.0,SNR=31								
KHC	**Kasperske Hory**	**146.38**	**351**	⇑*i*PKP2		**PKPab**	**06 49 42.2**	**-0.3**
KHC	**Kasperske Hory**	**146.38**	**351**	⇑*i*PKP		**PKPdf**	**06 49 40.0**	**-0.1**
KHC				*ex*		x	06 49 42.2	
KHC				*ex*		x	06 49 44.2	
WLF	**Walferdange**	**146.44**	**360**	PKP		**PKPbc**	**06 49 41.4**	**-0.2**
WLF	**Walferdange**	**146.44**	**360**	*e*PKPbc		**PKPab**	**06 49 42.8**	**+0.2**
GEC2	**GERESS Array S**	**146.64**	**351**	*e*PKPbc		**PKPbc**	**06 49 42.9**	**+0.6**
GEC2	**GERESS Array S**	**146.64**	**351**	*e*PKP2		**PKPbc**	**06 49 42.9**	**+0.6**
GERES	**GERESS Array B**	**146.64**	**351**	PKPbc		**PKPbc**	**06 49 42.6**	**+0.3**
GERES	**GERESS Array B**	**146.64**	**351**	PKPbc		**PKPbc**	**06 49 42.6**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=30,slow=3.5,SNR=11								
BFO	**Black Forest**	**147.71**	**357**	*e*PKPbc		**PKPbc**	**06 49 45.9**	**+0.7**
BFO	**Black Forest**	**147.71**	**357**	*e*PKP2		**PKPbc**	**06 49 45.9**	**+0.7**
ESDC	**Sonseca Array**	**154.90**	**18**	PKPab		**PKPab**	**06 50 18.8**	**+0.9**
ESDC	**Sonseca Array**	**154.90**	**18**	PKPab		**PKPab**	**06 50 18.8**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=332,slow=4.0,SNR=10								
TORD	**Torodi Ar. Bea**	**175.03**	**124**	PKP		**PKPdf**	**06 50 09.0**	**-2.2**
TORD				PKPab		**PKPab**	**06 51 45.5**	**-1.5**
TORD	**Torodi Ar. Bea**	**175.03**	**124**	PKP		**PKPdf**	**06 50 09.

ERM	**Erimo**	**2.85**	**355**	⇑*e*P	**Pn**	**07 24 54.3**	**-2.3**
ERM				pmax	pmax			
	comp=Z,263nm,1.0s							
ERM	**Erimo**	**2.85**	**355**	*e*Pn	**Pn**	**07 24 54.1**	**-2.5**
JYS	**Shirataka**	**2.86**	**252**	P	**Pn**	**07 24 56.9**	**+0.2**
JOT	**Ohata**	**2.90**	**320**	P	**Pn**	**07 24 56.8**	**-0.5**
ONAJ	**Iwakimizuishiy**	**2.98**	**227**	⇑P	**Pn**	**07 24 56.8**	**-1.5**
JFT	**Otama**	**3.00**	**238**	P	**Pn**	**07 24 58.4**	**-0.2**
JNBK	**Urakawa-nobuka**	**3.16**	**350**	P	**Pn**	**07 24 59.0**	**-1.8**
JNBK				*e*S	**Sn**	**07 25 35.8**	**-1.8**
JKB	**Kayabe**	**3.31**	**326**	P	**Pn**	**07 25 01.8**	**-1.0**
JAW	**Awa shima**	**3.41**	**259**	P	**Pn**	**07 25 05.5**	**+1.3**
JCH	**Churui**	**3.44**	**358**	P	**Pn**	**07 25 01.7**	**-3.0**
JCH				*e*S	**Sn**	**07 25 40.9**	**-3.6**
JHO	**Hitachi**	**3.46**	**223**	P	**Pn**	**07 25 02.8**	**-2.1**
JHO				S	**Sn**	**07 25 43.3**	**-1.7**
JFY	**Yanaizu**	**3.48**	**241**	P	**Pn**	**07 25 05.5**	**+0.3**
JNS	**Sasagawa**	**3.56**	**249**	P	**Pn**	**07 25 06.6**	**+0.3**
JSB	**Shiboa**	**3.59**	**233**	S	**Sn**	**07 25 50.0**	**+1.7**
JHK	**Hiroka**	**4.03**	**243**	P	**Pn**	**07 25 13.7**	**+0.9**
JHK				S	**Sn**	**07 26 04.4**	**+5.3**
JIZZ	**Izumozaki**	**4.12**	**248**	P	**Pn**	**07 25 16.1**	**+2.1**
JKT	**Katashina**	**4.14**	**236**	P	**Pn**	**07 25 15.8**	**+1.4**
JAG	**Ashikaga**	**4.23**	**231**	P	**Pn**	**07 25 15.2**	**-0.3**
JSD	**Sado**	**4.27**	**256**	P	**Pn**	**07 25 15.9**	**-0.2**
TOK	**Tokyo**	**4.59**	**222**	S	**Sn**	**07 26 11.5**	**-1.3**
JGK	**Kuni**	**4.66**	**237**	P	**Pn**	**07 25 23.0**	**+1.6**
JJN	**Nakama**	**4.70**	**246**	P	**Pn**	**07 25 23.5**	**+1.6**
JRY	**Ryogami san**	**4.83**	**231**	P	**Pn**	**07 25 23.4**	**-0.4**
BSO4	**Boso 4**	**4.89**	**212**	P	**Pn**	**07 25 25.1**	**+0.7**
BSO2	**Boso 2**	**4.94**	**207**	S	**Sn**	**07 26 20.7**	**-0.3**
BSO1	**Boso 1**	**4.95**	**205**	P	**Pn**	**07 25 22.8**	**-2.1**
MJAR	**Matsushiro Arr**	**4.95**	**240**	Pn	**Pn**	**07 25 26.8**	**+1.3**
MJAR	**Matsushiro Arr**	**4.95**	**240**	Pn	**Pn**	**07 25 26.8**	**+1.3**
	comp=Z,34nm,0.3s,baz=60,slow=13,SNR=547							
MAJO	**Matsushiro**	**4.95**	**240**	*e*P	**Pn**	**07 25 26.9**	**+1.4**
MAJO	**Matsushiro**	**4.95**	**240**	*e*Pn	**Pn**	**07 25 26.9**	**+1.4**
MAT	**Matsushiro**	**4.95**	**240**	P	**Pn**	**07 25 26.9**	**+1.4**
MAT				S	**Sn**	**07 26 26.8**	**+4.9**
MAT	**Matsushiro**	**4.95**	**240**	P	**Pn**	**07 25 27.5**	**+2.0**
BSO3	**Boso 3**	**4.98**	**210**	P	**Pn**	**07 25 23.9**	**-1.7**
ASAJ	**Asahikawa**	**4.99**	**352**	*e*Pn	**Pn**	**07 25 24.5**	**-1.4**
ASAJ				Sn	**Sn**	**07 26 24.7**	**+2.0**
ASAJ	**Asahikawa**	**4.99**	**352**	Pn	**Pn**	**07 25 24.8**	**-1.1**
	comp=Z,8.8nm,0.3s,baz=214,slow=14,SNR=24							
ASAJ				Sn	**Sn**	**07 26 24.7**	**+2.0**
	comp=Z,14nm,0.3s,baz=208,slow=20,SNR=4.0							
ASAJ				LR	LR	07 28 12.6		
	comp=Z,2μm,18.2s,baz=164,slow=48							
JNG	**Nsakai**	**5.10**	**239**	P	**Pn**	**07 25 28.7**	**+1.1**
YUK	**Yuzh-Kuril'sk**	**5.17**	**19**	*i* P	Pn	07 25 24.9	-3.4
YUK				*i* S	Sn	07 26 20.5	-6.6
YUK				pmax	pmax			
	comp=E,62nm,0.4s							
YUK				pmax	pmax			
	comp=N,73nm,0.4s							
YUK				pmax	pmax			
	comp=Z,375nm,0.4s							
YUK				smax	smax			
	comp=E,2μm,0.7s							
YUK				smax	smax			
	comp=N,693nm,0.7s							
YUK				MLR	MLR			
	comp=N,1μm,15.0s							
YUK				MLR	MLR			
	comp=E,3μm,15.0s							
YUK				MLR	MLR			
	comp=Z,2μm,15.0s							
JOD2	**Odawara 2**	**5.26**	**224**	P	**Pn**	**07 25 29.4**	**-0.3**
JOD2				S	**Sn**	**07 26 26.9**	**-2.6**
JHG	**Hegura jima**	**5.34**	**258**	P	**Pn**	**07 25 31.9**	**+1.2**
JNT	**Takato**	**5.39**	**234**	P	**Pn**	**07 25 34.0**	**+2.4**
JNT				S	**Sn**	**07 26 36.8**	**+3.9**
JYN	**Shimob**	**5.40**	**229**	P	**Pn**	**07 25 32.1**	**+0.5**
AJI	**Ajiro2**	**5.43**	**222**	P	**Pn**	**07 25 31.1**	**-0.9**
AJI				S	**Sn**	**07 26 29.9**	**-3.6**
JIM2	**Oshima 3**	**5.52**	**218**	S	**Sn**	**07 26 33.2**	**-2.7**
JTT	**Ttatey**	**5.52**	**244**	P	**Pn**	**07 25 35.9**	**+2.6**
JGN	**Niukaw**	**5.73**	**241**	P	**Pn**	**07 25 37.8**	**+1.6**
JJH	**Hakui**	**5.77**	**249**	P	**Pn**	**07 25 36.7**	**+0.1**
JIZS	**Izushimoda**	**5.79**	**221**	P	**Pn**	**07 25 37.3**	**+0.3**
SHZ3	**Shizuoka 3**	**5.90**	**228**	P	**Pn**	**07 25 38.8**	**+0.3**
JNY	**Yasuok**	**5.90**	**232**	P	**Pn**	**07 25 39.2**	**+0.7**
JGF	**Kuroka**	**6.06**	**236**	P	**Pn**	**07 25 41.9**	**+1.2**
JYZW	**Yoshizawa**	**6.22**	**230**	P	**Pn**	**07 25 42.8**	**-0.1**
HMMJ	**Hamamatsu 2**	**6.33**	**229**	P	**Pn**	**07 25 45.1**	**+0.8**
JAO	**Obara**	**6.33**	**234**	P	**Pn**	**07 25 45.3**	**+0.8**
JKG	**Kaga**	**6.38**	**245**	P	**Pn**	**07 25 47.2**	**+2.1**
JGM	**Miyama**	**6.42**	**239**	P	**Pn**	**07 25 47.3**	**+1.6**
JHJ2	**Mitsune**	**6.75**	**207**	P	**Pn**	**07 25 48.7**	**-1.4**
JHJ2				S	**Sn**	**07 27 00.8**	**-5.2**
JHJ	**Hachijo jima 2**	**6.75**	**208**	Pn	**Pn**	**07 25 47.8**	**-2.4**
	comp=Z,55nm,0.3s,baz=99,slow=14,SNR=14							
JHJ				Sn	**Sn**	**07 27 02.4**	**-3.8**
	comp=Z,138nm,0.3s,baz=244,slow=23,SNR=8.1							
JAA	**Atsumi**	**6.83**	**230**	P	**Pn**	**07 25 50.2**	**-1.0**
KUR	**Kuril'sk**	**6.86**	**27**	⇑*i*P	**Pn**	**07 25 48.6**	**-3.0**
KUR				*i* S	Sn	07 26 59.9	-8.9
KUR				pmax	pmax			
	comp=E,40nm,0.5s							
KUR				pmax	pmax			
	comp=Z,65nm,0.5s							
KUR				pmax	pmax			
	comp=N,24nm,0.1s							
KUR				smax	smax			
	comp=E,108nm,0.3s							
KUR				smax	smax			
	comp=N,302nm,0.6s							
KUR				MLR	MLR			
	comp=N,3μm,16.0s							
KUR				MLR	MLR			
	comp=E,4μm,16.0s							
KUR				MLR	MLR			
	comp=Z,3μm,16.0s							
JFM	**Mihama**	**7.01**	**241**	P	**Pn**	**07 25 55.6**	**+1.8**
TSUJ	**Tsu 2**	**7.22**	**234**	P	**Pn**	**07 25 58.4**	**+1.8**
JIE	**Ise**	**7.25**	**231**	P	**Pn**	**07 25 57.9**	**+0.9**
JKN2	**Miekihoku**	**7.62**	**232**	P	**Pn**	**07 26 02.9**	**+0.8**
YSS	**Yuzh-Sakhalins**	**7.80**	**356**	*e*P	**Pn**	**07 26 04.8**	**+0.3**
YSS				*e*S	**Sn**	**07 27 34.0**	**+2.2**
YSS				pmax	pmax			
	comp=Z,90nm,1.0s							
YSS				MLR	MLR			
	comp=Z,8μm,16.0s							
YSS				MLR	MLR			
	comp=N,11μm,14.0s							
VLA	**Vladivostok**	**9.62**	**298**	*i* P	**Pn**	**07 26 31.2**	**+1.8**
VLA				pmax	pmax			
	comp=Z,85nm,1.3s							
USRK	**Ussuriysk Arra**	**9.97**	**304**	Pn	**Pn**	**07 26 36.0**	**+1.6**
	comp=Z,2.2nm,0.3s,baz=113,slow=13,SNR=56							
USRK				LR	LR	07 30 10.2		
	comp=Z,986nm,18.2s,baz=256,slow=36							
HABR	**Khabarovsk**	**11.12**	**329**	*ce*P	**Pn**	**07 26 47.4**	**-2.5**
HABR				*e*		07 28 50.0		
HABR				pmax	pmax			
	comp=Z,126nm,1.4s							
HABR				pmax	pmax			
	comp=N,41nm,1.1s							
HABR				pmax	pmax			
	comp=E,100nm,1.9s							
HABR				MLR	MLR			
	comp=Z,4μm,17.0s							
MDJ	**Mudanjiang**	**11.71**	**302**	P	**Pn**	**07 26 57.5**	**-0.6**
MDJ				S	**Sn**	**07 29 06.8**	**-1.1**
MDJ				PcP	**PcP**	**07 32 50.3**	**+3.9**
MDJ				ScP	**ScP**	**07 36 21.6**	**+4.3**
MDJ				PcS	**PcS**	**07 36 24.3**	**+4.1**
MDJ				pmax	pmax			
	comp=Z,66nm,1.0s							
MDJ				pmax	pmax			
	comp=Z,800nm,7.5s							
MDJ				LR	LR			
	comp=N,2μm,14.7s							
MDJ				LR	LR			
	comp=E,5μm,13.7s							
MDJ				LR	LR			
	comp=Z,7μm,13.4s							
MDJ	**Mudanjiang**	**11.71**	**302**	*e*Pn	**Pn**	**07 26 59.5**	**+1.4**
	comp=Z,70nm,1.0s							
JNU	**Nakatsue**	**11.86**	**243**	*e*Pn	**Pn**	**07 27 00.7**	**+0.5**
JNU	**Nakatsue**	**11.86**	**243**	Pn	**Pn**	**07 27 00.6**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=54,slow=6.6,SNR=30							
KSRS	**Korea Array**	**12.37**	**267**	Pn	**Pn**	**07 27 08.9**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=80,slow=13,SNR=36							
KSRS				LR	LR	07 31 44.5		
	comp=Z,2μm,18.2s,baz=82,slow=36							
KSAR	**Wonju Array Be**	**12.40**	**267**	Pn	**Pn**	**07 27 08.9**	**+1.4**
JHHJ	**Haha-jima-NKT**	**12.56**	**186**	P	Pn	07 27 04.5	-5.2
JHHJ				S	Sn	07 29 15.4	-13
KLR	**Kul'dur**	**13.11**	**324**	*e*P	Pn	07 27 12.0	-5.2
KLR				MLR	MLR			
	comp=Z,15μm,12.0s							
INCN	**Inchon**	**13.37**	**268**	*e*Pn	**Pn**	**07 27 22.0**	**+1.2**
CN2	**Changchun**	**14.31**	**295**	*e*P	**Pn**	**07 27 32.4**	**-1.1**
CN2				*es*P		07 27 39.8		
CN2				*e*PP	**PnPn**	**07 27 44.6**	**+3.2**
CN2				*e*S	**Sn**	**07 30 08.8**	**-2.4**
CN2				*e*SS	**SnSn**	**07 30 24.9**	**+1.3**
CN2				pmax	pmax			
	comp=Z,10.0nm,0.8s							
CN2				pmax	pmax			
	comp=Z,200nm,8.0s							
CN2				LR	LR			
	comp=N,3μm,16.0s							
CN2				LR	LR			
	comp=E,3μm,16.0s							
CN2				LR	LR			
	comp=Z,3μm,16.0s							
SNY	**Shenyang**	**15.40**	**286**	⇑P	**Pn**	**07 27 47.5**	**-0.6**
SNY				S	**Sn**	**07 30 39.9**	**+2.1**
SNY				pmax	pmax			
	comp=Z,31nm,1.4s							
SNY				pmax	pmax			
	comp=Z,790nm,12.0s							
SNY				LR	LR			
	comp=N,2μm,12.3s							
SNY				LR	LR			
	comp=E,3μm,14.4s							
SNY				LR	LR			
	comp=Z,3μm,14.5s							
DL2	**Dalian**	**17.01**	**276**	P	**Pn**	**07 28 07.3**	**-1.4**
DL2				S	**Sn**	**07 31 12.3**	**-4.6**
DL2				pmax	pmax			
	comp=Z,180nm,1.5s							
DL2				pmax	pmax			
	comp=Z,1μm,5.4s							
DL2				LR	LR			
	comp=N,1μm,15.6s							
DL2				LR	LR			
	comp=E,1μm,16.3s							
DL2				LR	LR			
	comp=Z,2μm,13.7s							
PEA0B	**Petropavlovsk-**	**17.01**	**30**	*e*P	**P**	**07 28 11.1**	**+0.8**
PETK	**Petropavlovsk-**	**17.01**	**30**	P	**Pn**	**07 28 06.1**	**-2.5**
PETK				MLR	MLR			
	comp=Z,438nm,19.5s							
PETK	**Petropavlovsk-**	**17.01**	**30**	P	**Pn**	**07 28 06.1**	**-2.5**
PETK	**Petropavlovsk-**	**17.01**	**30**	P	**Pn**	**07 28 06.1**	**-2.5**
	baz=188,slow=9.0,SNR=3.6							
PETK				LR	LR	07 34 09.0		
	comp=Z,438nm,19.5s,baz=52,slow=35							
PET	**Petropavlovsk**	**17.33**	**32**	*e*P	**Pn**	**07 28 12.5**	**-0.1**
PET				*e*S	**S**	**07 31 29.0**	**-3.7**
PET				pmax	pmax			
	comp=Z,48nm,1.1s							
PET				MLR	MLR			
	comp=Z,2μm,16.0s							
HIA	**Hailar**	**19.73**	**309**	*e*P	**P**	**07 28 38.2**	**-2.0**
	comp=Z,71nm,0.9s							
SSE	**Sheshan**	**19.93**	**253**	P	**P**	**07 28 42.5**	**0.0**
SSE				S	**S**	**07 32 25.3**	**-0.1**
SSE				pmax	pmax			
	comp=Z,64nm,1.0s							
SSE				pmax	pmax			
	comp=Z,360nm,6.1s							
SSE				LR	LR			
	comp=N,2μm,12.1s							
SSE				LR	LR			
	comp=E,1μm,12.1s							
SSE				LR	LR			
	comp=Z,3μm,13.7s							
BJI	**Beijing**	**21.06**	**281**	P	**P**	**07 28 52.1**	**-2.6**
BJI				S	**S**	**07 32 49.4**	**+1.7**
BJI				pmax	pmax			
	comp=Z,120nm,1.0s							
BJI				LR	LR			
	comp=N,1μm,12.4s							
BJI				LR	LR			
	comp=E,3μm,16.1s							
BJI				LR	LR			
	comp=Z,1μm,15.5s							
BJT	**Baijiatuau**	**21.07**	**281**	*e*P	**P**	**07 28 52.6**	**-2.2**
	comp=Z,104nm,0.8s							
TIA	**Tai'an**	**21.07**	**270**	⇑P	**P**	**07 28 52.4**	**-2.5**
TIA				LR	LR			
	comp=N,5μm,13.9s							
TIA				LR	LR			
	comp=E,4μm,12.7s							
TIA				LR	LR			
	comp=Z,2μm,14.8s							
NJ2	**Nanjing**	**21.23**	**258**	*e*P	**P**	**07 28 55.4**	**-1.3**
NJ2				pP	**pP**	**07 29 01.3**	**-2.6**
NJ2				sP	**sP**	**07 29 05.8**	**-1.5**
NJ2				S	**S**	**07 32 50.0**	**-1.3**
NJ2				sS	Sn	07 33 00.0	+1.0
NJ2				PcP	**PcP**	**07 33 03.0**	**+1.9**
NJ2				pmax	pmax			
	comp=Z,40nm,0.8s							
NJ2				pmax	pmax			
	comp=Z,400nm,10.2s							
NJ2				LR	LR			
	comp=N,2μm,13.2s							
NJ2				LR	LR			
	comp=E,3μm,14.1s							
NJ2				LR	LR			
	comp=Z,3μm,13.4s							
CLNS	**Chul'man**	**21.50**	**331**	*e*P	**P**	**07 28 59.0**	**-0.4**
CLNS				*e*		07 29 11.8		
CLNS				*e*S	**S**	**07 32 55.2**	**-1.1**
CLNS				*e*		07 33 01.7		
CLNS				pmax	pmax			
	comp=Z,38nm,1.4s							
CLNS				pmax	pmax			
	comp=N,39nm,1.4s							
CLNS				pmax	pmax			
	comp=E,17nm,1.3s							
CLNS				pmax	pmax			
	comp=Z,31nm,0.9s							
CLNS				pmax	pmax			
	comp=E,29nm,0.9s							
CLNS				pmax	pmax			
	comp=N,61nm,0.9s							
CLNS				smax	smax			
	comp=N,3μm,14.4s							
CLNS				smax	smax			
	comp=E,369nm,12.4s							
CLNS				MLR	MLR			
	comp=Z,3μm,15.0s							
CLNS				MLR	MLR			
	comp=E,3μm,15.0s							
CLNS				MLR	MLR			
	comp=N,3μm,16.0s							
TATO	**Taipei**	**23.34**	**239**	*e*P	**P**	**07 29 18.9**	**-0.1**
	comp=N,1μm,2.1s							
YHNB	**Yeheng**	**23.63**	**239**	*e*P	**P**	**07 29 19.7**	**-2.2**
	comp=N,63nm,0.9s							
CIT	**Chita**	**24.39**	**312**	*e*P	**P**	**07 29 26.8**	**-2.0**
CIT				*e*		07 29 38.0		
CIT				*e*		07 29 40.8		
CIT				*e*		07 29 58.0		
CIT				pmax	pmax			
	comp=Z,326nm,1.1s							
YAK	**Yakutsk**	**24.41**	**344**	*e*P	**P**	**07 29 26.4**	**-2.3**
YAK				*e**PP	pP	07 29 30.9	-5.6
YAK				*e*PPP	PPP	07 30 06.3	
YAK				*e*S	**S**	**07 33 43.7**	**-2.9**
YAK				*e*SS	**SnSn**	**07 34 32.6**	**+1.4**
YAK				pmax	pmax			
	comp=E,22nm,1.1s							
YAK				pmax	pmax			
	comp=Z,152nm,1.0s							
YAK				pmax	pmax			
	comp=N,43nm,1.0s							
YAK				pmax	pmax			
	comp=Z,100nm,1.0s							
YAK				pmax	pmax			
	comp=E,85nm,1.3s							
YAK				pmax	pmax			
	comp=N,109nm,1.4s							
YAK				smax	smax			
	comp=N,759nm,3.8s							
YAK				smax	smax			
	comp=E,624nm,3.9s							
YAK				MLR	MLR			
	comp=N,886nm,11.0s							
YAK				MLR	MLR			
	comp=Z,2μm,13.0s							
YAK				MLR	MLR			
	comp=E,1μm,16.0s							
HHC	**Hu-ho-hao-te**	**24.46**	**284**	*e*P	**P**	**07 29 27.6**	**-2.0**
HHC				pP	**pP**	**07 29 36.3**	**-1.1**
HHC				sP	**sP**	**07 29 42.3**	**+1.6**
HHC				PP	**PnPn**	**07 30 02.8**	**+2.1**
HHC				PcP	**PcP**	**07 33 08.5**	**+0.7**
HHC				S	**S**	**07 33 43.4**	**-4.8**
HHC				sS	**sS**	**07 33 56.4**	**-4.6**
HHC				SS	**SnSn**	**07 34 34.8**	**+1.7**
HHC				ScP	**ScP**	**07 36 43.1**	**-1.5**
HHC				pmax	pmax			
	comp=Z,67nm,1.0s							
HHC				pmax	pmax			
	comp=Z,750nm,6.0s							
HHC				LR	LR			
	comp=N,2μm,14.4s							
HHC				LR	LR			
	comp=E,5μm,15.1s							
HHC				LR	LR			
	comp=Z,7μm,15.6s							
SSLB	**Suanglung**	**24.51**	**238**	*e*P	**P**	**07 29 27.9**	**-2.2**
	comp=Z,47nm,0.9s							
FX1	**Attu Island--F**	**24.52**	**46**	*e*P	**P**	**07 29 29.1**	**-0.7**
YULB	**Yu-li**	**24.56**	**237**	*e*P	**P**	**07 29 30.1**	**-0.4**
	comp=Z,23nm,0.8s							
TPUB	**Ta-pu**	**25.06**	**238**	*e*P	**P**	**07 29 33.7**	**-1.3**
	comp=Z,76nm,1.1s							
TWG	**Pinlang**	**25.11**	**236**	*e*P	**P**	**07 29 36.1**	**+0.6**
	comp=Z,295nm,0.9s							
QZH	**Quanzhou**	**25.34**	**243**	P	**P**	**07 29 36.1**	**-1.4**
QZH				S	**S**	**07 33 56.3**	**-5.9**
QZH				pmax	pmax			
	comp=Z,620nm,2.2s							
QZH				LR	LR			
	comp=N,5μm,15.4s							
QZH				LR	LR			
	comp=E,2μm,14.5s							
QZH				LR	LR			
	comp=Z,5μm,14.2s							
WHN	**Wuhan**	**25.35**	**259**	⇑P	**P**	**07 29 37.5**	**-0.1**
WHN				pP	**pP**	**07 29 47.0**	**+1.7**
WHN				S	**S**	**07 34 01.3**	**-1.0**
WHN				LR	LR			
	comp=N,3μm,11.8s							
WHN				LR	LR			
	comp=E,2μm,13.0s							
WHN				LR	LR			
	comp=Z,6μm,14.5s							
BTO	**Baotou**	**25.66**	**284**	*e*P	**P**	**07 29 38.8**	**-1.6**
ULN	**Ulaanbaatar**	**27.62**	**300**	*e*P	**P**	**07 29 58.4**	**+0.3**
	comp=Z,81nm,1.4s							
SONM	**Songino Array**	**28.06**	**300**	P	**P**	**07 30 02.7**	**+0.7**
SONM	**Songino Array**	**28.06**	**300**	P	**P**	**07 30 02.7**	**+0.7**
	comp=Z,10nm,0.6s,baz=92,slow=9.0,SNR=26							
XAN	**Xi'an**	**28.13**	**270**	P	**P**	**07 30 02.5**	**-0.2**
XAN				sP	**sP**	**07 30 12.0**	**-1.7**
XAN				PP	**PnPn**	**07 30 51.9**	**+1.1**
XAN				S	**S**	**07 34 44.3**	**-2.0**
XAN				SS	**SnSn**	**07 36 08.9**	**+6.2**
XAN				pmax	pmax			
	comp=Z,17nm,0.7s							
XAN				pmax	pmax			
	comp=Z,100nm,9.0s							
XAN				LR	LR			
	comp=N,730nm,17.3s							
XAN				LR	LR			
	comp=E,290nm,20.1s							
XAN				LR	LR			
	comp=Z,630nm,12.9s							
ENH	**Enshi**	**29.21**	**263**	*e*P	**P**	**07 30 12.4**	**+0.1**
	comp=Z,277nm,1.5s							
IRK	**Irkutsk**	**29.97**	**309**	*e*P	**P**	**07 30 19.0**	**+0.2**
IRK				pmax	pmax			
	comp=Z,70nm,2.0s							
TLY	**Talaya**	**30.26**	**308**	P	**P**	**07 30 22.4**	**+1.0**
	comp=Z,135nm,1.1s,SNR=9.5							
ZAK	**Zakamensk**	**30.32**	**305**	⇑*i*P	**P**	**07 30 21.8**	**-0.2**
ZAK				pmax	pmax			
	comp=Z,25nm,1.2s							
LZH	**Lanzhou**	**31.40**	**277**	⇑P	**P**	**07 30 31.8**	**+0.1**
LZH				pP	**pP**	**07 30 39.0**	**-0.6**
LZH				sP	**sP**	**07 30 42.3**	**-0.5**
LZH				PP	**PnPn**	**07 31 35.3**	**+0.6**
LZH				S	**S**	**07 35 35.6**	**-2.2**
LZH				sS	**sS**	**07 35 48.5**	**-2.2**
LZH				SS	**SnSn**	**07 37 22.6**	**+0.1**
LZH				pmax	pmax			
	comp=Z,93nm,1.4s							
LZH				pmax	pmax			
	comp=Z,250nm,4.2s							
LZH				LR	LR			
	comp=N,2μm,12.5s							
LZH				LR	LR			
	comp=E,4μm,14.0s							
LZH				LR	LR			
	comp=Z,4μm,14.6s							
BILL	**Bilibino**	**31.51**	**16**	*d* iP	**P**	**07 30 31.2**	**-1.0**
BILL				*e**PP	**pP**	**07 30 40.4**	**+0.4**
BILL				*e**SP	**sP**	**07 30 46.0**	**+2.7**
BILL				*e*		07 31 33.8		
BILL				*e*		07 33 25.3		
BILL				pmax	pmax			
	comp=Z,13nm,1.0s							
BILL				MLR	MLR			
	comp=Z,800nm,16.0s							
MOY	**Mondy**	**31.90**	**307**	*e*P	**P**	**07 30 35.7**	**-0.2**
MOY				pmax	pmax			
	comp=Z,42nm,1.8s							
GYA	**Guiyang**	**33.24**	**259**	⇑*i*P	**P**	**07 30 47.3**	**-0.6**
GYA				pP	**pP**	**07 30 55.4**	**-0.4**
GYA				PP	**PP**	**07 32 01.3**	**-1.9**
GYA				PcP	**PcP**	**07 33 31.6**	**+1.6**
GYA				S	**S**	**07 36 06.0**	**-0.5**
GYA				sS	**sS**	**07 36 17.9**	**-1.6**
GYA				ScP	**ScP**	**07 37 13.0**	**+0.5**
GYA				SS	**SnSn**	**07 38 06.8**	**-0.6**
GYA				pmax	pmax			
	comp=Z,50nm,0.8s							
GYA				pmax	pmax			
	comp=Z,130nm,4.8s							
GYA				LR	LR			
	comp=N,930nm,14.8s							
GYA				LR	LR			
	comp=E,930nm,14.6s							
GYA				LR	LR			
	comp=Z,450nm,16.8s							
CD2	**Chengdu**	**33.37**	**268**	*e*P	**P**	**07 30 49.3**	**+0.4**
CD2				pP	**pP**	**07 30 56.6**	**-0.2**
CD2				sP	**sP**	**07 31 00.1**	**+0.1**
CD2				PP	**PnPn**	**07 32 00.8**	**+0.9**
CD2				PcP	**PcP**	**07 33 31.6**	**+1.4**
CD2				S	**S**	**07 36 06.8**	**-1.5**
CD2				sS	**sS**	**07 36 18.9**	**-2.3**
CD2				SS	**SnSn**	**07 38 08.9**	**-1.3**
CD2				ScS	**ScS**	**07 41 12.3**	**-1.5**
CD2				pmax	pmax			
	comp=Z,60nm,0.6s							
CD2				pmax	pmax			
	comp=Z,300nm,7.0s							
CD2				LR	LR			
	comp=E,650nm,12.0s							
CD2				LR	LR			
	comp=Z,460nm,17.8s							
TIXI	**Tiksi**	**33.39**	**352**	⇓*e*P	**P**	**07 30 47.7**	**-0.9**
TIXI				pmax	pmax			
	comp=Z,7.0nm,1.0s							
TIXI				MLR	MLR			
	comp=Z,1μm,18.0s							
GTA	**Gaotai**	**33.58**	**285**	⇑P	**P**	**07 30 51.3**	**+0.6**
GTA				pP	**pP**	**07 30 58.8**	**+0.2**
GTA				sP	**sP**	**07 31 01.8**	**-0.1**
GTA				PP	**PP**	**07 32 05.1**	**-1.7**

comp=Z,79nm,1.4s
GTA pmax pmax
comp=Z,470nm,5.5s
GTA LR LR
comp=N,780nm,15.2s
GTA LR LR
comp=E,3µm,15.4s
GTA LR LR
comp=Z,3µm,16.4s
QIZ Qiongzhong 35.33 245 P **P** **07 31 06.3 +0.4**
QIZ pP **pP** **07 31 11.8 -2.0**
QIZ sP **sP** **07 31 15.6 -1.4**
QIZ S **S** **07 36 39.3 +0.7**
QIZ pmax pmax
comp=Z,17nm,1.4s
QIZ pmax pmax
comp=Z,170nm,4.9s
QIZ LR LR
comp=N,970nm,14.7s
QIZ LR LR
comp=E,460nm,18.0s
QIZ LR LR
comp=Z,2µm,16.9s
HVS Khovu-Aksy 36.43 306*c i*P **P** **07 31 15.4 +0.2**
HVS pmax pmax
comp=Z,173nm,1.4s
HVS MLR MLR
comp=Z,10µm,15.0s
KMI Kunming 36.94 260 P **P** **07 31 20.0 0.0**
KMI pP **pP** **07 31 29.8 +1.9**
KMI sP **sP** **07 31 34.4 +3.3**
KMI PP **PP** **07 32 42.4 -1.9**
KMI S **S** **07 36 58.4 -5.3**
KMI pmax pmax
comp=Z,44nm,1.0s
KMI pmax pmax
comp=Z,270nm,3.4s
KMI LR LR
comp=N,1µm,13.4s
KMI LR LR
comp=E,1µm,12.8s
KMI LR LR
comp=Z,2µm,13.4s
KRAR Krasnoyarsk 37.12 314 *i* P **P** **07 31 19.4 -1.4**
KRAR pmax pmax
comp=Z,20nm,0.3s
KRAR MLR MLR
comp=Z,826nm,18.0s
MYLDM Lahad Datu 40.71 220 P **P** **07 31 52.6 +1.3**
comp=Z,57nm,1.2s
UBPT Khong Chiam 40.93 245 P **P** **07 31 54.6 +1.5**
comp=Z,25nm,1.4s
KKM Kota Kinabalu 41.17 224 *e*P **P** **07 31 56.5 +1.3**
comp=Z,22nm,1.0s
KKM Kota Kinabalu 41.17 224 P **P** **07 31 57.7 +2.5**
comp=Z,24nm,0.9s,comp=Z,562nm
WMQ Urumqi 41.40 295 P **P** **07 31 57.3 +0.5**
WMQ pP **pP** **07 32 05.0 +0.2**
WMQ sP **sP** **07 32 08.5 +0.5**
WMQ PP **PnPn** **07 33 36.0 -1.2**
WMQ S **S** **07 38 11.0 +1.0**
WMQ sS **sS** **07 38 23.0 -0.2**
WMQ SS **SS** **07 41 12.0 -2.2**
WMQ pmax pmax
comp=Z,73nm,1.0s
WMQ pmax pmax
comp=Z,190nm,4.9s
WMQ LR LR
comp=N,920nm,13.6s
WMQ LR LR
comp=E,1µm,13.7s
WMQ LR LR
comp=Z,980nm,15.6s
ZAA0 Zalesovo Array 41.74 311 *e*P **P** **07 31 59.4 0.0**
ZALV Zalesovo Beam 41.74 311 P **P** **07 31 59.6 +0.2**
ZALV pmax pmax
comp=Z,31nm,0.9s
ZALV Zalesovo Beam 41.74 311 P **P** **07 31 59.5 +0.2**
ZALV Zalesovo Beam 41.74 311 P **P** **07 31 59.5 +0.2**
comp=Z,31nm,0.9s,baz=88,slow=7.9,SNR=40
NVS Novosibirsk 42.60 312⇑ *i*P **P** **07 32 06.2 -0.2**
NVS *i* 07 33 46.4
NVS *e*S **S** **07 38 27.2 -0.1**
NVS pmax pmax
comp=Z,67nm,1.8s
NVS pmax pmax
comp=N,17nm,1.9s
NVS pmax pmax
comp=E,51nm,1.9s
NVS pmax pmax
comp=Z,40nm,2.0s
NVS pmax pmax
comp=N,16nm,2.2s
NVS pmax pmax
comp=E,23nm,1.8s
NVS smax smax
comp=N,20nm,2.6s
NVS smax smax
comp=E,39nm,2.6s
SVW2 Sparrevohn 42.82 39 *e*P **P** **07 32 08.9 +0.8**
comp=E,11nm,1.0s
PBKT Sadao Pong 43.32 251 P **P** **07 32 13.4 +0.8**
comp=E,14nm,1.0s
CHTO Chiang Mai 43.43 255 *e*P **P** **07 32 14.6 +1.0**
CHTO pmax pmax
comp=Z,20nm,0.8s
CHTO Chiang Mai 43.43 255 *e*P **P** **07 32 14.6 +1.0**
comp=Z,20nm,0.8s
CHTO Chiang Mai 43.43 255 P **P** **07 32 15.3 +1.8**
comp=Z,37nm,0.9s
CMAR Chiang Mai Arr 43.65 255 P **P** **07 32 16.4 +1.1**
CMAR Chiang Mai Arr 43.65 255 P **P** **07 32 16.4 +1.1**
comp=Z,5.1nm,0.7s,baz=45,slow=7.2,SNR=14
LSA Lhasa 43.69 274 P **P** **07 32 16.8 +0.7**
LSA sP **sP** **07 32 29.0 +1.7**
LSA S **S** **07 38 41.6 -3.2**
LSA LR LR
comp=E,1µm,16.4s
LSA LR LR
comp=Z,2µm,15.0s
LSA Lhasa 43.69 274 *e*P **P** **07 32 17.8 +1.7**
LSA pmax pmax
comp=Z,21nm,0.7s
LSA Lhasa 43.69 274 *e*P **P** **07 32 17.8 +1.7**
comp=Z,21nm,0.7s
RSO Redoubt South 44.20 40 *e*P **P** **07 32 20.7 +1.3**
KDAK Kodiak Island 44.41 43 P **P** **07 32 19.8 -1.0**
KDAK Kodiak Island 44.41 43 P **P** **07 32 19.8 -1.0**
comp=Z,9.3nm,0.6s,baz=233,slow=4.9,SNR=9.2
MK31 Makanchi Array 44.42 301 *i* P **P** **07 32 21.3 +0.1**
MK31 pmax pmax
comp=Z,66nm,1.2s
MKAR Makanchi Array 44.42 301 P **P** **07 32 21.6 +0.4**
MKAR pmax pmax
comp=Z,19nm,0.8s
MKAR Makanchi Array 44.42 301 P **P** **07 32 21.6 +0.4**
MKAR Makanchi Array 44.42 301 P **P** **07 32 21.6 +0.4**
comp=Z,18nm,0.8s,baz=82,slow=9.9,SNR=28
SPU Mount Spurr 44.53 39 *e*P **P** **07 32 23.4 +1.5**
TRF Thorofare Moun 45.33 35 *e*P **P** **07 32 28.8 +0.4**
comp=Z,194nm,2.6s
COLD Coldfoot 45.48 30 *e*P **P** **07 32 30.2 +1.0**
comp=Z,9.2nm,1.0s
PMR Palmer 45.92 38 *e*P **P** **07 32 32.4 -0.4**
PMR pmax pmax
comp=Z,18nm,1.0s
PMR Palmer 45.92 38 *e*P **P** **07 32 32.4 -0.4**
comp=Z,18nm,1.0s
MCK McKinley 45.94 35 *e*P **P** **07 32 32.9 -0.1**
MCK pmax pmax
comp=Z,144nm,2.2s
MCK McKinley 45.94 35 *e*P **P** **07 32 32.9 -0.1**
comp=Z,144nm,2.2s
KURK Kurchatov 45.95 307 P **P** **07 32 33.3 +0.1**
comp=Z,475nm,0.9s,SNR=37
KURK Kurchatov 45.95 307 P **P** **07 32 34.1 +0.9**
KURK pmax pmax
comp=Z,46nm,0.9s
KURK Kurchatov 45.95 307 *e*P **P** **07 32 32.8 -0.4**
comp=Z,65nm,0.8s
KURBB Kurchatov Arra 46.03 307 P **P** **07 32 34.1 +0.3**
comp=Z,46nm,0.9s,baz=81,slow=8.3,SNR=89
SML Sawmill 46.29 38 *e*P **P** **07 32 36.0 +0.2**
SML pmax pmax
comp=Z,6.0nm,1.0s
SML Sawmill 46.29 38 *e*P **P** **07 32 36.0 +0.2**
comp=Z,5.8nm,1.0s
COLA College 46.39 33 *e*P **P** **07 32 36.8 +0.4**
COLA pmax pmax
comp=Z,20nm,0.8s
COLA College 46.39 33 *e*P **P** **07 32 36.8 +0.4**
comp=Z,20nm,0.8s
ILAR Eielson Array 46.80 33 P **P** **07 32 39.2 -0.5**
ILAR Eielson Array 46.80 33 P **P** **07 32 39.2 -0.5**
comp=Z,10.0nm,0.7s,baz=262,slow=6.6,SNR=104
TAPN Taplejung 47.46 273 *e*P **P** **07 32 46.6 +0.8**
comp=Z,86nm,1.1s
PAX Paxson 47.53 36 *e*P **P** **07 32 46.0 +0.4**
PAX pmax pmax
comp=Z,55nm,2.0s
PAX Paxson 47.53 36 *e*P **P** **07 32 46.0 +0.4**
comp=Z,55nm,2.0s
DIV Divide 47.57 38 *e*P **P** **07 32 47.5 +1.7**
comp=Z,291nm,2.1s
ODAN Odare 47.95 273 *e*P **P** **07 32 50.0 +0.5**
comp=Z,86nm,0.8s
DOT Dot Lake 48.11 35 *e*P **P** **07 32 49.2 -0.7**
comp=Z,7.0nm,0.7s
KSM Kuching 48.22 227 *e*P **P** **07 32 52.9 +1.5**
comp=Z,23nm,1.0s
KSM Kuching 48.22 227 P P 07 32 55.8 +4.5
comp=Z,25nm,1.1s
RAMN Ramite 48.52 273 *e*P **P** **07 32 54.4 +0.5**
comp=Z,178nm,1.0s
GUN Gumba 48.61 275 *e*P **P** **07 32 55.4 +0.7**
comp=Z,182nm,0.9s
KKN Kakani 49.13 275 *e*P **P** **07 32 59.1 +0.6**
comp=Z,147nm,0.9s
PKI Pulchoki 49.14 275 *e*P **P** **07 32 59.0 +0.3**
comp=Z,57nm,1.0s
PKIN Phulchoki 49.15 275 *e*P **P** **07 32 58.8 +0.1**
comp=Z,123nm,1.3s
KAPI Kappang 49.15 212 *e*P **P** **07 32 59.2 +0.9**
comp=Z,71nm,1.4s
KAPI Kappang 49.15 212 P **P** **07 33 01.4 +3.0**
comp=Z,39nm,1.3s
KAPI Kappang 49.15 212 P **P** **07 32 58.0 -0.4**
comp=Z,6.3nm,0.5s,baz=188,slow=8.9,SNR=6.3
EGAK Eagle 49.25 33 *e*P **P** **07 32 59.6 +1.0**
comp=Z,52nm,1.6s
DMN Daman 49.36 275 *e*P **P** **07 33 00.7 +0.4**
comp=Z,341nm,1.9s
ULHL Ulahol 49.88 296 *i* P **P** **07 33 04.9 +0.8**
ULHL Ulahol 49.88 296 P **P** **07 33 04.9 +0.8**
SNR=8.0
DANN Dangsing 50.04 277 *e*P **P** **07 33 06.4 +0.9**
comp=Z,338nm,0.8s
TKM2 Tokmak 2 50.09 297 *e*P **P** **07 33 06.2 +0.5**
TKM2 pmax pmax
comp=Z,49nm,0.9s
TKM2 Tokmak 2 50.09 297 *e*P **P** **07 33 06.2 +0.5**
comp=Z,49nm,0.9s
TKM2 Tokmak 2 50.09 297 P **P** **07 33 06.2 +0.5**
SNR=38
BRVK Borovoye 50.44 311 P **P** **07 33 08.5 +0.7**
comp=Z,180nm,1.0s,SNR=12
BRVK Borovoye 50.44 311 *e*P **P** **07 33 07.9 +0.1**
BRVK pmax pmax
comp=Z,34nm,1.0s
BRVK Borovoye 50.44 311 *e*P **P** **07 33 07.9 +0.1**
comp=Z,34nm,1.0s
KOLN Koldanda 50.44 276 *e*P **P** **07 33 08.8 +0.3**
comp=Z,80nm,1.0s
KZA Kyzart 50.63 297 *i* P **P** **07 33 11.7 +1.7**
KZA Kyzart 50.63 297 P **P** **07 33 11.7 +1.7**
SNR=9.7
KBK Karagaybulak 50.63 297 *i* P **P** **07 33 10.7 +1.0**
KBK Karagaybulak 50.63 297 P **P** **07 33 10.7 +1.0**
SNR=17
USP Ospenovka 50.73 298 *i* P **P** **07 33 10.9 +0.6**
USP Ospenovka 50.73 298 P **P** **07 33 10.9 +0.6**
SNR=9.8
PYUN Piuthan 50.75 277 *e*P **P** **07 33 11.3 +0.5**
comp=Z,320nm,1.2s
AAK Ala-Archa 50.96 297 *e*P **P** **07 33 12.7 +0.5**
AAK pmax pmax
comp=Z,15nm,1.1s
AAK Ala-Archa 50.96 297 *e*P **P** **07 33 12.7 +0.5**
comp=Z,15nm,1.1s
KSH Kashi 51.07 293 P P 07 33 17.5 +4.5
KSH *e*pP pP 07 33 24.5 +3.4
KSH *e*sP sP 07 33 28.5 +4.2
KSH *e*PcP **PcP** **07 34 30.0 +1.4**
KSH *e*PP PP 07 35 15.3 +5.8
KSH *e*S **S** **07 40 33.6 +4.6**
KSH *es*S sS 07 40 47.6 +5.2
KSH pmax pmax
comp=Z,64nm,1.0s
KSH pmax pmax
comp=Z,330nm,3.0s
KSH LR LR
comp=N,2µm,12.1s
KSH LR LR
comp=E,3µm,16.4s
KSH LR LR
comp=Z,3µm,15.5s
KULM Kulim 51.32 240 *e*P **P** **07 33 16.0 +1.1**
comp=Z,49nm,1.6s
KULM Kulim 51.32 240 P **P** **07 33 16.4 +1.5**
comp=Z,31nm,1.5s
EKS2 Erkin-Say 51.44 298 *e*P **P** **07 33 15.9 +0.2**
EKS2 pmax pmax
comp=Z,13nm,0.9s
EKS2 Erkin-Say 51.44 298 *e*P **P** **07 33 15.9 +0.2**
comp=Z,13nm,0.9s
EKS2 Erkin-Say 51.44 298 P **P** **07 33 16.4 +0.7**
SNR=8.6
IPM Ipoh 51.66 239 *e*P **P** **07 33 17.6 0.0**
comp=Z,30nm,1.1s
AML Almayashu 51.69 297 *i* P **P** **07 33 19.1 +1.2**
AML Almayashu 51.69 297 P **P** **07 33 19.1 +1.2**
SNR=12
INK Inuvik 51.73 28 P **P** **07 33 16.3 -1.0**
INK Inuvik 51.73 28 P **P** **07 33 16.3 -1.0**
comp=Z,10nm,0.6s,baz=298,slow=7.3,SNR=20
KK31 Karatay Array 53.51 299 *i* P **P** **07 33 30.2 -0.7**
KK31 pmax pmax
comp=Z,13nm,0.8s
KKAR Karatay Array 53.51 299 *e*P **P** **07 33 31.0 +0.1**
KKAR Karatay Array 53.51 299 *e*P **P** **07 33 31.0 +0.1**
SMLA Simla 53.77 283 *i* P **P** **07 33 33.6 +0.7**
PSI Prapat 54.31 240 P **P** **07 33 37.0 -0.2**
PSI Prapat 54.31 240 P **P** **07 33 37.0 -0.2**
comp=Z,13nm,0.7s,baz=14,slow=4.5,SNR=12
SVE Sverdlovsk 54.66 318⇑ *i*P **P** **07 33 39.8 +0.8**
SVE *e*S **S** **07 41 18.6 +1.5**
SVE *e*SS **SS** **07 45 02.6 +3.1**
SVE pmax pmax
comp=Z,69nm,0.9s
SVE MLR MLR
comp=Z,4µm,16.0s
SOKR Solikamsk 55.65 322*c i*P **P** **07 33 46.1 0.0**
SOKR S S 07 41 41.8 +12
SOKR pmax pmax
comp=Z,40nm,1.5s
SOKR MLR MLR
comp=Z,860nm,14.0s
ARU Arti 55.87 318*c i*P **P** **07 33 47.4 -0.4**
ARU 07 34 44.8
ARU 07 35 49.6
ARU S **S** **07 41 32.7 -0.6**
ARU SS **SS** **07 45 15.2 -3.4**
ARU pmax pmax
comp=Z,142nm,1.7s
ARU MLR MLR
comp=Z,2µm,15.0s
ARU Arti 55.87 318 P **P** **07 33 48.1 +0.3**
comp=Z,393nm,1.1s,SNR=6.3
AB31 Akbulak array 57.84 310 *i* P **P** **07 34 01.2 -0.7**
AB31 pmax pmax
comp=Z,41nm,1.0s
ABKAR Akbulak array 57.84 310 *e*P **P** **07 34 01.6 -0.2**
comp=Z,19nm,0.7s
KBL Kabul 58.21 291 *e*P **P** **07 34 04.9 0.0**
KBL pmax pmax
comp=Z,72nm,1.0s
KBL Kabul 58.21 291 *e*P **P** **07 34 04.9 0.0**
comp=Z,72nm,1.0s
KBS Kingsbay 58.84 350 *e*P **P** **07 34 08.8 +0.4**
KBS Kingsbay 58.84 350*c i*P **P** **07 34 08.1 -0.3**
KBS pmax pmax
comp=Z,10.0nm,0.7s
KBS MLR MLR
comp=Z,512nm,18.0s
KBS Kingsbay 58.84 350 *e*P **P** **07 34 09.1 +0.7**
comp=Z,9.9nm,0.8s
FITZ Fitzroy Crossi 59.38 200 *e*P **P** **07 34 11.8 -1.0**
comp=Z,14nm,1.2s
FITZ Fitzroy Crossi 59.38 200 P **P** **07 34 12.7 0.0**
comp=Z,2.8nm,0.6s,baz=8.8,slow=13,SNR=5.8
WRAB Tennant Creek 59.42 190 *e*P **P** **07 34 11.5 -1.6**
WRAB pmax pmax
comp=Z,8.0nm,0.9s
WRAB Tennant Creek 59.42 190 *e*P **P** **07 34 11.5 -1.6**
comp=Z,7.8nm,0.9s
WRA Warramunga Arr 59.43 190 P **P** **07 34 11.3 -1.8**
WRA Warramunga Arr 59.43 190 P **P** **07 34 11.3 -1.8**
comp=Z,4.3nm,0.6s,baz=8.8,slow=6.9,SNR=46
HYB Hyderabad 59.92 268 *i* P **P** **07 34 16.5 -0.3**
RES Resolute Bay 60.11 15 P **P** **07 34 17.1 -0.1**
RES Resolute Bay 60.11 15 P **P** **07 34 17.1 -0.1**
comp=Z,14nm,0.8s,baz=310,slow=8.5,SNR=5.3
YKW3 Yellowknife Ar 61.09 31 *e*P **P** **07 34 23.8 -0.3**
comp=Z,0.3nm,1.1s
YKA Yellowknife Ar 61.13 31 P **P** **07 34 24.1 -0.2**
YKA Yellowknife Ar 61.13 31 P **P** **07 34 24.1 -0.2**
comp=Z,2.8nm,0.6s,baz=302,slow=6.6,SNR=33
APA Apatity 61.42 336⇑ *i*P **P** **07 34 27.0 +0.8**
APA pmax pmax
comp=Z,21nm,1.0s
APA MLR MLR
comp=Z,900nm,15.0s
KEV Kevo 62.03 339 *e*P **P** **07 34 30.3 0.0**
KEV pmax pmax
comp=Z,7.0nm,0.7s
KEV Kevo 62.03 339 *e*p **P** **07 34 30.3 0.0**
comp=Z,6.9nm,0.7s
KEV Kevo 62.03 339 *e*P **P** **07 34 30.6 +0.3**
comp=Z,17nm,1.0s
ARCES ARCESS Array B 62.58 340 P **P** **07 34 34.2 +0.2**
ARCES ARCESS Array B 62.58 340 P **P** **07 34 34.2 +0.2**
comp=Z,6.8nm,0.9s,baz=41,slow=7.1,SNR=13
ASAR Alice Springs 63.15 190 P **P** **07 34 37.5 -0.8**
ASAR Alice Springs 63.15 190 P **P** **07 34 37.5 -0.8**
comp=Z,1.6nm,0.6s,baz=12,slow=5.9,SNR=19
KTK1 Kautokeino 63.53 340 *e*P **P** **07 34 40.1 -0.2**
DAG Danmarks Havn 63.78 355 *i* P **P** **07 34 42.1 +0.3**
DAG pmax pmax
comp=Z,14nm,0.9s
DAG Danmarks Havn 63.78 355 *i* P **P** **07 34 42.1 +0.3**
comp=Z,17nm,0.9s
TRO Tromso 64.23 341 *e*P **P** **07 34 43.0 -1.8**
JOF Joensuu 64.86 332 *e*P **P** **07 34 49.0 -0.1**
JOF pmax pmax
comp=Z,16nm,0.8s
JOF Joensuu 64.86 332 *e*p **P** **07 34 49.0 -0.1**
comp=Z,16nm,0.8s
MOS Moscow 66.52 324 *e*P P 07 34 55.8 -4.1
MOS *e* 07 35 27.5
MOS *e* 07 37 24.0
MOS pmax pmax
comp=Z,56nm,0.9s
MOS MLR MLR
comp=Z,2µm,17.0s
MOS MLR MLR
comp=N,2µm,18.0s
HAWA Hanford 67.11 48 *e*P P 07 35 07.4 +3.5
comp=N,6.4nm,1.0s
KAF Kangasniemi 67.16 333 *e*P **P** **07 35 03.9 0.0**
KAF pmax pmax
comp=Z,11nm,0.7s
KAF Kangasniemi 67.16 333 *e*p **P** **07 35 03.9 0.0**
comp=Z,11nm,0.7s
OBN Obninsk 67.37 323⇓ *e*P **P** **07 35 05.4 +0.1**
OBN *e*S **S** **07 43 57.2 -1.8**
OBN pmax pmax
comp=Z,98nm,2.5s
OBN MLR MLR
comp=Z,1µm,14.0s
NEW Newport 67.45 46 *e*P **P** **07 35 06.0 -0.1**
comp=Z,18nm,1.1s
NEW Newport 67.45 46 ⇓P **P** **07 35 05.5 -0.5**
baz=67
FIA1 FINESS Array S 67.69 333 *e*P **P** **07 35 07.2 -0.1**
FINES FINESS Array B 67.69 333 P **P** **07 35 07.2 0.0**
FINES FINESS Array B 67.69 333 P **P** **07 35 07.2 0.0**
comp=Z,18nm,0.8s,baz=46,slow=8.2,SNR=54
C11A Tepee Creek (N 68.17 46⇑P **P** **07 35 10.1 -0.5**
baz=68
VSR Storozhevoye 68.41 319 *e*P **P** **07 35 11.5 -0.4**
VSR pmax pmax
comp=Z,30nm,0.8s
VSR pmax pmax
comp=N,30nm,1.0s
VSR pmax pmax
comp=E,30nm,1.1s
VORD Divnogorie 68.49 319 *e*P **P** **07 35 11.3 -1.2**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=N,40nm,0.5s
VORD pmax pmax
comp=E,40nm,0.4s
SUMG Summit 68.54 1⇑ *i*P **P** **07 35 12.8 -0.1**
SUMG pmax pmax
comp=Z,17nm,0.9s
SUMG Summit 68.54 1 *e*P **P** **07 35 13.7 +0.8**
comp=Z,18nm,0.8s
SUMG Summit 68.54 1⇑ *i*P **P** **07 35 12.8 -0.1**
comp=Z,17nm,0.9s
A13A Flathead Natio 68.55 44⇑P **P** **07 35 12.4 -0.6**
baz=68
B13A Whitefish 68.84 44⇑P **P** **07 35 14.9 +0.1**
baz=69,SNR=10
BSMT Bassoo Peak 68.97 45 *e*P **P** **07 35 16.7 +0.9**
A14A Double T Ranch 69.06 43⇑P **P** **07 35 15.7 -0.5**
baz=69
D12A Red Ives Fores 69.12 46⇑P **P** **07 35 16.1 -0.4**
baz=69
C13A Hot Springs 69.19 45⇓P **P** **07 35 16.5 -0.4**
baz=69
BMO Blue Mountains 69.27 49 *e*P **P** **07 35 18.3 +0.8**
BMO pmax pmax
comp=Z,10.0nm,1.2s
BMO Blue Mountains 69.27 49 *e*P **P** **07 35 18.3 +0.8**
comp=Z,9.6nm,1.2s
JTMT Jette 69.31 45 *e*P **P** **07 35 18.3 +0.5**
E12A Beaver Dam Sad 69.36 47⇓P **P** **07 35 17.6 -0.6**
baz=69,SNR=11
VSU Vasula 69.45 330*c i*P **P** **07 35 18.2 0.0**
VSU pmax pmax
comp=Z,53nm,1.0s
C14A Swan Lake 69.59 45⇓P **P** **07 35 19.3 -0.2**
baz=69
D13A Huson 69.59 45⇓P **P** **07 35 18.6 -0.9**
baz=69,SNR=7.1
SWMT Swartz Lake 69.60 45 *e*P **P** **07 35 19.8 +0.2**
WVOR Wild Horse Val 69.86 51 *e*P P 07 35 24.6 +3.3
WVOR pmax pmax
comp=Z,14nm,1.4s
WVOR Wild Horse Val 69.86 51 *e*P P 07 35 24.6 +3.3
comp=Z,14nm,1.4s
GOF Gofitskoye 69.90 312 *e*P **P** **07 35 22.3 +1.0**
GOF pmax pmax
comp=Z,180nm,1.3s
B15A Bradely Ranch, 69.91 44⇑P **P** **07 35 20.7 -0.7**
baz=70,SNR=12
MSO Missoula 70.03 45 *e*P **P** **07 35 22.7 +0.4**
comp=Z,6.4nm,1.0s
MSO Missoula 70.03 45⇓P **P** **07 35 21.4 -0.8**
baz=70
SLMT Seeley Lake 70.04 45 *e*P **P** **07 35 22.2 -0.2**
A16A West Butte Ran 70.04 43⇑P **P** **07 35 21.6 -0.6**
baz=70
D14A Greenough 70.12 45⇑P **P** **07 35 22.0 -0.9**
baz=70,SNR=6.6
SCO Scoresbysund 70.15 355 *e*P **P** **07 35 23.0 +0.7**
SCO pmax pmax
comp=Z,3.0nm,1.0s
SCO Scoresbysund 70.15 355 *i* P **P** **07 35 23.0 +0.7**
comp=Z,3.4nm,1.0s
C15A Salmond Ranch, 70.20 44⇑P **P** **07 35 23.0 -0.3**
baz=70,SNR=7.1
G12A Big Creek, Yel 70.25 48⇓P **P** **07 35 22.9 -0.8**
baz=70
BEKR Beckworth 70.26 54 *e*P **P** **07 35 24.1 +0.3**
comp=Z,4.4nm,1.1s
B16A M & M Farms, S 70.30 43⇓P **P** **07 35 23.0 -0.8**
baz=70

A17A	**Triple J Farms**	70.51	42	⇑P		P		07 35 24.6	-0.5
	baz=70									
DGRG	**David-gareji**	70.60	308	P		P		07 35 26.8	+1.0
DUS	**Dusheti**	70.64	309	P		P		07 35 28.1	+2.0
C16A	**Fuhringer Ranc**	70.65	44	⇑P		P		07 35 25.8	-0.2
	baz=70,SNR=12									
D15A	**Lincoln**	70.69	45	⇓P		P		07 35 25.8	-0.5
	baz=70									
KIV	**Kislovodsk**	70.75	311	*c i* P		P		07 35 27.2	+0.5
KIV				*e*				07 35 48.4		
KIV				*e*S		S		07 44 39.5	-0.1
KIV				pmax		pmax				
	comp=Z,136nm,1.1s									
KIV				pmax		pmax				
	comp=Z,68nm,4.9s									
KIV	**Kislovodsk**	70.75	311	P		P		07 35 27.2	+0.5
	comp=Z,642nm,0.9s,SNR=12									
KBZ	**Khabaz**	70.76	311	P		P		07 35 27.8	+1.2
KBZ				pmax		pmax				
	comp=Z,39nm,0.9s									
KBZ	**Khabaz**	70.76	311	P		P		07 35 27.8	+1.2
KBZ	**Khabaz**	70.76	311	P		P		07 35 27.8	+1.2
	comp=Z,39nm,0.9s,baz=56,slow=4.2,SNR=64									
TBLG	**Delisi**	70.83	308	*e*P		P		07 35 27.8	+0.7
TBLG	**Delisi**	70.83	308	P		P		07 35 27.8	+0.7
B17A	**L&G Farms, Che**	70.86	43	⇓P		P		07 35 27.0	-0.2
	baz=71									
H12A	**Diamond D Ranc**	70.87	48	⇑P		P		07 35 26.8	-0.7
	baz=71									
MFID	**Camas Ranch**	70.97	49	*e*P		P		07 35 31.8	+3.8
	comp=Z,21nm,1.6s									
MFID	**Camas Ranch**	70.97	49	⇓P		P		07 35 27.2	-0.8
	baz=71									
FFC	**Flin Flon**	71.01	34	*e*P		P		07 35 27.7	-0.2
FFC				pmax		pmax				
	comp=Z,9.0nm,0.9s									
FFC	**Flin Flon**	71.01	34	*e*P		P		07 35 27.7	-0.2
	comp=Z,9.1nm,0.9s									
ONI	**Oni**	71.10	310	P		P		07 35 30.2	+1.4
I12A	**Atlanta**	71.15	49	⇓P		P		07 35 28.8	-0.4
	baz=71									
D16A	**Dana Ranch, Ca**	71.23	44	⇓P		P		07 35 28.8	-0.8
	baz=71									
KZR	**Kazreti**	71.23	308	P		P		07 35 30.5	+0.9
C17A	**Wharram Farm,**	71.28	43	⇑P		P		07 35 29.2	-0.6
	baz=71									
CMB	**Columbia Colle**	71.29	56	*e*P		P		07 35 31.7	+1.7
CMB				pmax		pmax				
	comp=Z,20nm,1.6s									
CMB	**Columbia Colle**	71.29	56	*e*P		P		07 35 31.7	+1.7
	comp=Z,20nm,1.6s									
B18A	**Beardsley Farm**	71.33	42	⇓P		P		07 35 29.4	-0.7
	baz=71									
F15A	**Butte**	71.43	46	⇓P		P		07 35 30.4	-0.5
	baz=71,SNR=11									
E16A	**East Helena**	71.46	45	⇑P		P		07 35 29.6	-1.4
	baz=71									
LRM	**Limekiln Ridge**	71.47	46	*e*P		P		07 35 31.2	+0.1
A19A	**Klindworth Far**	71.54	41	⇑P		P		07 35 30.7	-0.6
	baz=71,SNR=6.9									
EGMT	**Eagleton**	71.58	43	*e*P		P		07 35 31.5	-0.1
	comp=Z,17nm,0.9s									
EGMT	**Eagleton**	71.58	43	⇓P		P		07 35 30.8	-0.7
	baz=71									
D17A	**Six Diamond Ra**	71.62	44	⇓P		P		07 35 30.4	-1.5
	baz=71									
MICGM	**Minsk**	71.65	326	*e*		P		07 35 31.0	-0.8
DLMT	**Dillon**	71.66	46	*e*P		P		07 35 32.8	+0.6
	comp=Z,12nm,0.9s									
MNK	**Minsk**	71.67	326	*e*P		P		07 35 31.0	-0.9
HLID	**Hailey**	71.71	48	*e*P		P		07 35 33.3	+0.7
	comp=Z,6.7nm,1.1s									
HLID	**Hailey**	71.71	48	⇓P		P		07 35 31.8	-0.8
	baz=72									
B19A	**Brinkman Farms**	71.73	42	⇓P		P		07 35 32.0	-0.4
	baz=72,SNR=6.7									
GNI	**Garni**	71.75	307	*e*P		P		07 35 33.7	+0.9
	comp=Z,64nm,1.5s									
AKH	**Akhalkalaki**	71.77	309	P		P		07 35 34.7	+1.7
F16A	**Kennard Place,**	71.94	45	⇑P		P		07 35 33.4	-0.5
	baz=72,SNR=6.7									
E17A	**Martinsdale**	71.95	44	⇑P		P		07 35 33.5	-0.5
	baz=72,SNR=6.3									
A20A	**Cobblestone Ra**	71.99	41	⇓P		P		07 35 33.3	-0.7
	baz=72									
BOZ	**Bozeman (W)**	72.03	45	*e*P		P		07 35 34.2	-0.2
BOZ				pmax		pmax				
	comp=Z,6.0nm,0.8s									
BOZ	**Bozeman (W)**	72.03	45	*e*P		P		07 35 34.2	-0.2
	comp=Z,5.8nm,0.8s									
I14A	**Mackay**	72.05	48	⇓P		P		07 35 34.3	-0.3
	baz=72,SNR=7.1									
D18A	**Linhart Farms,**	72.06	43	⇓P		P		07 35 34.1	-0.5
	baz=72									
C19A	**Slack Wire Ran**	72.13	43	⇑P		P		07 35 34.8	-0.1
	baz=72,SNR=16									
B20A	**Solberg Farm,**	72.22	42	⇓P		P		07 35 34.8	-0.6
	baz=72									
NVAR	**Mina Array Bea**	72.39	55	P		P		07 35 37.0	+0.1
NVAR	**Mina Array Bea**	72.39	55	P		P		07 35 37.0	+0.1
	comp=Z,1.5nm,0.8s,baz=288,slow=6.3,SNR=8.7									
E18A	**Harlowton**	72.40	44	⇑P		P		07 35 36.1	-0.5
	baz=72									
F17A	**Fitzpatrick Pl**	72.40	45	⇓P		P		07 35 36.1	-0.5
	baz=72									
NV11	**Mina Array Sit**	72.48	55	*e*P		P		07 35 39.5	+2.3
D19A	**Cripps Ranch,**	72.57	43	⇑P		P		07 35 37.5	-0.1
	baz=72,SNR=6.0									
QLMT	**Earthquake Lak**	72.64	46	*e*P		P		07 35 39.9	+1.7
C20A	**Veseth Ranch,**	72.69	42	⇑P		P		07 35 37.7	-0.4
	baz=72									
SOC	**Sochi**	72.70	312	*c i* P		P		07 35 38.1	-0.1
SOC				*e**PP		pP		07 35 47.8	+1.1
SOC				*e*				07 35 53.6		
SOC				*e*PPP		PPP		07 40 02.2		
SOC				*e*S		S		07 44 57.7	-4.1
SOC				*e*				07 45 33.6		
SOC				*e*SS		SS		07 49 42.9	+2.3
SOC				*e*SSS		SSS		07 52 50.7		
SOC				pmax		pmax				
	comp=Z,34nm,0.9s									
SOC				MLR		MLR				
	comp=Z,367nm,16.0s									
G17A	**Pierce Place,**	72.72	45	⇓P		P		07 35 37.9	-0.7
	baz=72									
UOSS	**Wadi Hilu**	72.72	288	P		P		07 35 38.8	+0.1
	comp=Z,168nm,1.1s,SNR=5.2									
B21A	**Ellsworth Farm**	72.74	41	⇑P		P		07 35 38.0	-0.4
	baz=72									
H16A	**Russell Place,**	72.82	46	⇑P		P		07 35 38.8	-0.5
	baz=73									
NB2	**NORSAR Subarra**	72.85	338	P		P		07 35 38.6	-0.3
	comp=Z,21nm,0.8s,baz=39,slow=6.2									
NB2	**NORSAR Subarra**	72.85	338	P		P		07 35 38.6	-0.3
	baz=39,slow=6.2									
NOA	**NORSAR Array B**	72.85	338	P		P		07 35 38.9	+0.1
NOA	**NORSAR Array B**	72.85	338	P		P		07 35 38.9	+0.1
	comp=Z,16nm,0.8s,baz=38,slow=5.9,SNR=56									
F18A	**Big Timber**	72.92	44	⇓P		P		07 35 39.3	-0.4
	baz=73,SNR=9.3									
A22A	**Carney Farms,**	72.93	40	⇑P		P		07 35 39.0	-0.6
	baz=73,SNR=7.6									
NC602	**NORSAR Array S**	72.99	338	*e*P		P		07 35 38.5	-1.2
D20A	**Manuel Ranch,**	73.01	43	⇓P		P		07 35 40.1	-0.1
	baz=73,SNR=5.5									
E19A	**Rath Farm, Rou**	73.07	44	⇑P		P		07 35 40.4	-0.1
	baz=73,SNR=9.5									
C21A	**Desert Coulee**	73.09	42	⇓P		P		07 35 40.1	-0.5
	baz=73									
NAO01	**NORSAR Array S**	73.10	338	*e*P		P		07 35 40.2	-0.1
	comp=Z,9.5nm,0.9s									
I16A	**Newdale**	73.20	47	⇑P		P		07 35 41.5	+0.1
	baz=73									
ANN	**Anapa**	73.23	314	*e*P		P		07 35 39.8	-1.6
ANN				*e*				07 38 20.6		
ANN				*e*S		S		07 45 06.6	-1.2
ANN				pmax		pmax				
	comp=Z,58nm,1.4s									
F19A	**Roth Farm, Mol**	73.37	44	⇓P		P		07 35 42.1	-0.3
	baz=73									
H17A	**Grant Village**	73.39	46	⇓P		P		07 35 42.5	-0.2
	baz=73									
E20A	**Meyer Farm, Mu**	73.39	43	⇓P		P		07 35 42.6	+0.2
	baz=73									
IMW	**Indian Meadow**	73.50	47	*e*P		P		07 35 44.2	+0.8
	comp=Z,51nm,2.0s									
SFJD	**Kangerlussuaq**	73.61	6	*i* P		P		07 35 41.9	-1.3
	comp=Z,7.9nm,0.8s									
AKASG	**Malin Array Be**	73.61	323	P		P		07 35 43.6	+0.1
AKASG								07 38 28.4		
AKASG				pmax		pmax				
	comp=Z,8.0nm,0.5s									
AKASG				pmax		pmax				
	comp=Z,1.0nm,0.4s									
AKASG	**Malin Array Be**	73.61	323	P		P		07 35 43.6	+0.1
AKASG				PP		PP		07 38 28.4	+1.2
AKASG	**Malin Array Be**	73.61	323	P		P		07 35 43.6	+0.1
	comp=Z,8.4nm,0.5s,baz=43,slow=5.9,SNR=47									
AKASG				PP		PP		07 38 28.4	+1.2
	comp=Z,0.9nm,0.3s,baz=40,slow=9.5,SNR=4.0									
AK01	**Malin Array Si**	73.62	323	*e*P		P		07 35 43.5	0.0
KIEV	**Kiev**	73.62	323	*e*P		P		07 35 43.0	-0.6
KIEV				pmax		pmax				
	comp=Z,23nm,0.9s									
KIEV	**Kiev**	73.62	323	*e*P		P		07 35 43.0	-0.6
	comp=Z,23nm,0.9s									
D21A	**La Casta Ranch**	73.63	42	⇓P		P		07 35 43.7	-0.1
	baz=73									
AK02	**Malin Array Si**	73.65	323	*e*P		P		07 35 43.8	+0.1
MOOW	**Moose Ponds**	73.70	47	*e*P		P		07 35 45.4	+1.0
	comp=Z,21nm,1.5s									
B23A	**Brockton**	73.74	40	⇑P		P		07 35 43.9	-0.5
	baz=74,SNR=6.9									
TPAW	**Teton Pass**	73.74	47	*e*P		P		07 35 47.5	+2.7
	comp=Z,21nm,1.4s									
GRAC	**Grapevine Rang**	73.83	55	⇑P		P		07 35 45.5	+0.4
	baz=74									
A24A	**Westby**	73.93	39	⇓P		P		07 35 45.6	+0.2
	baz=74									
D22A	**Cohagen**	74.00	42	⇓P		P		07 35 45.7	-0.2
	baz=74									
C23A	**Lambert**	74.08	41	⇓P		P		07 35 46.2	-0.2
	baz=74									
H19A	**Powell**	74.10	45	⇓P		P		07 35 46.8	+0.1
	baz=74									
DGMT	**Dagmar**	74.14	40	⇓P		P		07 35 46.7	0.0
	baz=74									
HYA	**Hoyanger**	74.15	340	*e*P		P		07 35 46.9	+0.4
R11A	**Troy Canyon, C**	74.15	53	⇓P		P		07 35 47.2	0.0
	baz=74									
MPMC	**Manual Prospec**	74.32	56	⇑P		P		07 35 48.5	+0.3
	baz=74									
D23A	**Lindsay**	74.48	41	⇑P		P		07 35 48.4	-0.4
	baz=74,SNR=5.1									
I19A	**Meeteetse**	74.50	46	⇓P		P		07 35 49.0	-0.1
	baz=74									
HWUT	**Hardware Ranch**	74.57	49	*e*P		P		07 35 51.0	+1.5
	comp=Z,16nm,1.3s									
C24A	**Savage**	74.65	41	⇑P		P		07 35 49.7	0.0
	baz=74									
EDW2	**Edwards Air Fo**	74.71	57	⇓P		P		07 35 50.5	+0.3
	baz=74									
DUG	**Dugway**	74.71	50	*e*P		P		07 35 53.1	+2.8
DUG				pmax		pmax				
	comp=Z,10.0nm,1.0s									
DUG	**Dugway**	74.71	50	*e*P		P		07 35 53.1	+2.8
	comp=Z,9.8nm,1.0s									
DUG	**Dugway**	74.71	50	⇑P		P		07 35 50.5	+0.2
	baz=74									
H20A	**Greybull**	74.76	45	⇓P		P		07 35 49.6	-0.9
	baz=74									
E23A	**Ismay**	74.88	42	⇓P		P		07 35 50.2	-0.8
	baz=75									
SIM	**Simferopol'**	74.95	316	*e*P		P		07 35 52.1	+0.7
SIM				S		S		07 45 33.5	+6.3
SIM				pmax		pmax				
	comp=Z,28nm,0.9s									
SIM				MLR		MLR				
	comp=Z,350nm,12.2s									
J19A	**Crowheart**	74.96	46	⇑P		P		07 35 51.8	+0.1
	baz=75									
D24A	**Glendive**	74.97	41	⇑P		P		07 35 51.2	-0.3
	baz=75,SNR=7.5									
BW06	**Boulder Array**	74.99	47	*e*P		P		07 35 51.5	-0.5
	comp=Z,10nm,1.3s									
PDAR	**Pinedale Array**	74.99	47	P		P		07 35 51.5	-0.5
PDAR	**Pinedale Array**	74.99	47	P		P		07 35 51.5	-0.5
	comp=Z,1.7nm,0.6s,baz=272,slow=1.5,SNR=13									
I20A	**Worland**	75.03	45	⇓P		P		07 35 51.8	-0.3
	baz=75									
BER	**Bergen**	75.03	340	*e*P		P		07 35 50.2	-1.4
M17A	**Scullys Gap (B**	75.18	48	⇓P		P		07 35 52.8	-0.3
	baz=75									
H21A	**Big Horn, Sher**	75.19	44	⇓P		P		07 35 52.4	-0.5
	baz=75									
GSC	**Goldstone**	75.22	56	⇑P		P		07 35 53.4	+0.1
	baz=75									
JLU	**Jordanelle**	75.27	49	*e*P		P		07 35 56.5	+2.9
	comp=Z,17nm,1.6s									
BFSC	**Mount Baldy Ra**	75.31	58	⇓P		P		07 35 53.4	-0.4
	baz=75									
F23A	**Volborg**	75.34	43	⇑P		P		07 35 53.4	-0.3
	baz=75,SNR=6.6									
E24A	**Baker**	75.35	41	⇓P		P		07 35 53.4	-0.4
	baz=75									
J20A	**Shoshoni**	75.44	46	⇓P		P		07 35 54.0	-0.5
	baz=75									
DAU	**Daniels Canyon**	75.50	50	*e*P		P		07 35 56.1	+1.0
DAU	**Daniels Canyon**	75.50	50	*e*P		P		07 35 56.1	+1.0
L19A	**Farson**	75.53	47	⇓P		P		07 35 53.9	-1.2
	baz=75									
I21A	**Big Trails, Te**	75.58	45	⇓P		P		07 35 54.0	-1.3
	baz=75									
TUQ	**Turquoise Moun**	75.71	56	⇓P		P		07 35 55.6	-0.6
	baz=76									
K20A	**Yellowstone Ra**	75.75	46	⇑P		P		07 35 55.7	-0.6
	baz=76									
F24A	**Ekalaka**	75.76	42	⇑P		P		07 35 54.9	-1.3
	baz=76									
J21A	**Lysite**	75.80	45	⇑P		P		07 35 56.4	-0.2
	baz=76									
E25A	**Miller Ranch,**	75.86	41	⇓P		P		07 35 56.0	-0.7
	baz=76									
I22A	**9 Mile Ranch,**	75.97	44	⇓P		P		07 35 56.8	-0.7
	baz=76									
CCUT	**Cedar City**	76.02	53	*e*P		P		07 35 58.8	+0.8
	comp=Z,6.9nm,1.1s									
MVU	**Marysvale**	76.13	52	*e*P		P		07 35 59.2	+0.6
	comp=Z,4.6nm,0.9s									
MSU	**Marysvale**	76.15	52	*e*P		P		07 36 00.0	+1.3
MSU	**Marysvale**	76.15	52	*e*P		P		07 36 00.0	+1.3
MIB	**Mutribah**	76.21	297	*e*P		P		07 35 57.9	-0.9
MIB				AMb		AMB		07 35 59.5		
	comp=Z,76nm,1.1s									
J22A	**Midwest**	76.29	45	⇓P		P		07 35 58.9	-0.4
	baz=76									
KIS	**Kishinev**	76.33	320	*e*P		P		07 35 58.0	-1.3
KIS				*e*				07 36 07.0		
KIS				MLR		MLR				
	comp=N,600nm,15.0s									
KIS				MLR		MLR				
	comp=Z,1μm,15.0s									
KIS				MLR		MLR				
	comp=E,1μm,16.0s									
KIS				MLR		MLR				
	comp=Z,1μm,16.0s									
KIS	**Kishinev**	76.33	320	*e*P		P		07 35 58.0	-1.3
KIS				*e*L		L		08 07 14.0		
KIS				LRM		MLR		08 13 00.0		
	comp=Z,1μm,16.0s									
BSD	**Bornholm Skovb**	76.33	332	⇑*i* P		P		07 35 58.8	-0.3
BSD				pmax		pmax				
	comp=Z,26nm,1.0s									
BSD	**Bornholm Skovb**	76.33	332	⇑*i* P		P		07 35 58.8	-0.3
	comp=Z,26nm,1.0s									
KBD	**Kabd**	76.34	296	*e*P		P		07 35 59.1	-0.5
KBD				AMb		AMB		07 36 00.6		
	comp=Z,45nm,1.2s									
E26A	**Carlson Angus**	76.35	41	⇓P		P		07 35 59.3	-0.2
	baz=76									
H24A	**Dirks Ranch, A**	76.44	43	⇓P		P		07 35 59.3	-0.8
	baz=76									
BEL	**Belsk**	76.55	328	*e*P		P		07 36 01.2	+0.8
BEL	**Belsk**	76.55	328	*e*P		P		07 36 01.2	+0.8
M20A	**Sweetwater, Wa**	76.59	47	⇓P		P		07 36 00.9	-0.2
	baz=76									
NAY	**Al-Naaiem**	76.61	297	*e*P		P		07 36 00.4	-0.7
NAY				AMb		AMB		07 36 01.8		
	comp=Z,43nm,1.2s									
LVV	**L'vov**	76.62	325	*e*P		P		07 36 00.8	0.0
LVV				MLR		MLR				
	comp=N,900nm,13.0s									
LVV				MLR		MLR				
	comp=E,1μm,13.0s									
LVV				MLR		MLR				
	comp=Z,1μm,13.0s									
L21A	**Rawlins**	76.75	46	⇓P		P		07 36 01.8	-0.2
	baz=76									
MALT	**Malatya**	76.75	309	⇑P		P		07 36 09.1	+7.2
MALT	**Malatya**	76.75	309	⇑*i* P		P		07 36 09.1	+7.2
COP	**Copenhagen**	76.75	334	*e*P		P		07 36 03.1	+1.7
COP				pmax		pmax				
	comp=Z,26nm,0.8s									
COP	**Copenhagen**	76.75	334	*i* P		P		07 36 03.1	+1.7
	comp=Z,26nm,0.8s									
K22A	**Casper**	76.77	45	⇑P		P		07 36 02.1	+0.1
	baz=76									
MDND	**Maddock**	76.81	38	⇓P		P		07 36 01.9	-0.1
	baz=76									
ULM	**Lac du Bonnet**	76.81	35	P		P		07 36 02.9	+0.9
ULM	**Lac du Bonnet**	76.81	35	P		P		07 36 02.9	+0.9
	comp=Z,2.7nm,0.6s,baz=325,slow=7.4,SNR=3.3									
O19A	**Miners Draw (B**	76.83	49	⇓P		P		07 36 02.4	0.0
	baz=77									
N20A	**Spence Gulch,**	76.98	48	⇓P		P		07 36 03.5	+0.1
	baz=77									
M21A	**Separation Pea**	76.98	47	⇓P		P		07 36 03.3	-0.1
	baz=77									
LLD	**Lille Linde**	77.11	334	*i* P		P		07 35 55.8	-7.6
LLD				pmax		pmax				
	comp=Z,43nm,0.8s									
RSSD	**Black Hills**	77.13	43	*e*P		P		07 36 03.6	-0.6
RSSD				pmax		pmax				
	comp=Z,7.0nm,0.9s									
RSSD	**Black Hills**	77.13	43	*e*P		P		07 36 03.6	-0.6
	comp=Z,6.7nm,0.9s									
MUD	**Monsted U'grnd**	77.20	336	*i* P		P		07 36 04.8	+0.9
MUD				pmax		pmax				
	comp=Z,11nm,0.9s									
MUD	**Monsted U'grnd**	77.20	336	*i* P		P		07 36 04.8	+0.9
	comp=Z,11nm,0.9s									
L22A	**Ellis Ranch, M**	77.23	46	⇑P		P		07 36 05.3	+0.6
	baz=77									
P19A	**Cripple Cowboy**	77.34	49	⇓P		P		07 36 05.2	-0.2
	baz=77									
KWP	**Kalwaria Pacla**	77.34	325	*e*P		P		07 36 05.9	+1.0
KWP	**Kalwaria Pacla**	77.34	325	*e*P		P		07 36 05.9	+1.0
KWP	**Kalwaria Pacla**	77.34	325	*e*P		P		07 36 06.1	+1.1
U15A	**North Rim**	77.39	53	⇑P		P		07 36 05.9	0.0
	baz=77									
CTKT	**Corum**	77.41	312	*i* P		P		07 36 06.9	+1.2
O20A	**White River Ci**	77.45	48	⇑P		P		07 36 06.0	+0.1
	baz=77									
N21A	**Black Mountain**	77.45	47	⇑P		P		07 36 06.2	+0.1
	baz=77									
BALT	**Daday**	77.60	314	*i* P		P		07 36 07.8	+1.0
BUR08	**Bucovina Ar. S**	77.64	322	*e*P		P		07 36 07.3	+0.5
BURAR	**Bucovina Array**	77.65	322	⇑*i* P		P		07 36 08.0	+1.2
ILGA	**Ilgaz**	77.73	313	*i* P		P		07 36 09.4	+1.8
KOLS	**Kolonicke sedl**	78.05	325	*e*P		P		07 36 09.4	+0.5
KOLS				pmax		pmax				
	comp=Z,14nm,1.0s									
KOLS	**Kolonicke sedl**	78.05	325	*e*P		P		07 36 09.4	+0.5
PV10	**Paradox Valley**	78.12	50	*e*P		P		07 36 09.8	0.0
	comp=Z,308nm,0.8s									
STHS	**Stebnicka Huta**	78.15	326	*e*P		P		07 36 10.8	+1.3
STHS				pmax		pmax				
	comp=Z,14nm,1.0s									
STHS	**Stebnicka Huta**	78.15	326	*e*P		P		07 36 10.8	+1.3
OJC	**Ojcow**	78.17	327	⇑*i* P		P		07 36 09.7	+0.1
OJC	**Ojcow**	78.17	327	*i* P		P		07 36 09.7	+0.1
Q20A	**Ridgley Place,**	78.19	49	⇓P		P		07 36 10.4	+0.3
	baz=78									
PV04	**Paradox Valley**	78.19	50	*e*P		P		07 36 10.4	+0.3
N23A	**Red Feather La**	78.26	46	⇑P		P		07 36 09.9	-0.7
	baz=78									
CDAG	**Cicekdag**	78.30	312	*i* P		P		07 36 11.5	+0.9
P21A	**Newcastle**	78.31	48	⇓P		P		07 36 10.3	-0.5
	baz=78									
O22A	**Kremmling**	78.40	47	⇓P		P		07 36 11.0	-0.5
	baz=78									
CRVS	**Cervenica-Dubn**	78.44	325	*e*P		P		07 36 09.1	-1.9
CRVS				pmax		pmax				
	comp=Z,13nm,1.1s									
CRVS	**Cervenica-Dubn**	78.44	325	*e*P		P		07 36 09.1	-1.9
Y14A	**Wickenburg**	78.52	56	⇓P		P		07 36 12.0	+0.1
	baz=78									
WUAZ	**Wupatki**	78.55	53	*e*P		P		07 36 13.1	+1.0
	comp=Z,7.6nm,1.1s									
WUAZ	**Wupatki**	78.55	53	⇓P		P		07 36 12.4	+0.3
	baz=78									
NIE	**Niedzica**	78.55	326	⇑*i* P		P		07 36 12.8	+1.1
NIE	**Niedzica**	78.55	326	*i* P		P		07 36 12.8	+1.1
PV01	**Paradox Valley**	78.56	50	*e*P		P		07 36 12.8	+0.5
	comp=Z,496nm,1.0s									
AVNT	**Avonos**	78.58	311	*i* P		P		07 36 13.2	+1.0
R20A	**Redvale**	78.

UPC e 07 36 27.0
UPC Upice 79.52 329⇓ *e*P **P 07 36 17.9 +1.0**
UPC epP **pP 07 36 27.0 +1.6**
BRSD Miller 79.53 40 ⇓P **P 07 36 17.2 0.0**
baz=79
R22A Saguache, Gunn 79.57 49 ⇓P **P 07 36 18.0 +0.2**
baz=79
O25A Wiggins 79.81 46 ⇑P **P 07 36 19.2 +0.3**
baz=80
S22A 4UR Ranch, Cre 79.85 49 ⇓P **P 07 36 19.2 -0.2**
baz=80
PSZ Piszkesteto 79.86 325 ⇓P **P 07 36 19.5 +0.5**
PSZ Piszkesteto 79.86 325 *e*P **P 07 36 18.7 -0.3**
comp=Z,31nm,1.0s
PSZ Piszkesteto 79.86 325⇓ *i*P **P 07 36 19.5 +0.5**
VYHS Vyhne 79.89 326 *e*P **P 07 36 19.5 +0.5**
VYHS pmax pmax
comp=Z,11nm,1.1s
VYHS Vyhne 79.89 326 *e*P **P 07 36 19.5 +0.5**
214A Organ Pipe Nat 79.91 57 ⇓P **P 07 36 19.0 -0.5**
baz=80
K29A Lazy Trails An 80.03 42 ⇓P **P 07 36 20.3 +0.4**
baz=80
BRG Berggiesshubel 80.04 330 *e*P **P 07 36 20.0 +0.2**
comp=Z,15nm,1.1s
BRG *e*PCP **pP 07 36 29.1 +0.8**
comp=Z,12nm,1.0s
BRG *e*PP **PP 07 39 21.1 0.0**
comp=Z,2.9nm,1.4s
BRG S **S 07 46 25.0 +2.9**
BRG Berggiesshubel 80.04 330 *e*P **P 07 36 20.3 +0.6**
comp=Z,18nm,1.2s
BRG *e*pP **pP 07 36 29.5 +1.2**
BRG Berggiesshubel 80.04 330 *e*P **P 07 36 20.0 +0.2**
BRG *e* 07 36 29.1
BRG *e* 07 39 21.1
BRG S **S 07 46 25.0 +2.9**
BRG pmax pmax
comp=Z,15nm,1.1s
BRG pmax pmax
comp=Z,12nm,1.0s
BRG pmax pmax
comp=Z,3.0nm,1.4s
CLL Collm 80.05 331 *e*P **P 07 36 20.1 +0.2**
comp=Z,26nm,0.9s
CLL *e*pP **pP 07 36 29.5 +1.2**
CLL Collm 80.05 331 *i*/P **P 07 36 20.0 +0.2**
CLL *i* *PP **pP 07 36 29.1 +0.8**
CLL *e*S S 07 46 30.0 +7.9
CLL pmax pmax
comp=Z,26nm,0.9s
CLL MLR MLR
comp=Z,800nm,19.7s
CLL Collm 80.05 331 ⇓*i*P **P 07 36 20.0 +0.2**
comp=Z,26nm,0.9s
CLL *i* pP **pP 07 36 29.1 +0.8**
comp=Z,22nm,0.9s
CLL *e*S S 07 46 30.0 +7.9
CLL LmH 08 10 00.0
comp=N,800nm,22.0s
CLL LmH 08 10 00.0
comp=E,1μm,20.5s
CLL LmV 08 15 00.0
comp=Z,800nm,19.7s
PVCC Panska Ves 80.07 330 *e*P **P 07 36 20.9 +1.0**
PVCC *e* 07 36 28.8
PVCC MLR MLR
comp=Z,800nm,17.2s
PVCC Panska Ves 80.07 330⇓ *e*P **P 07 36 20.9 +1.0**
PVCC epP **pP 07 36 28.8 +0.4**
PVCC AMS AMS 08 15 00.0
comp=Z,800nm,17.2s
X18A Snowflake 80.08 53 ⇓P **P 07 36 20.2 -0.3**
baz=80
R23A Moffat 80.14 48 ⇑P **P 07 36 20.5 -0.4**
baz=80
NRDL Niedersach Rie 80.14 333 *e*P **P 07 36 20.5 +0.3**
comp=Z,14nm,1.3s
NRDL epP **pP 07 36 29.8 +1.1**
V20A Brimhall 80.16 52 ⇓P **P 07 36 20.4 -0.5**
baz=80
O26A Horse Wrangler 80.17 46 ⇓P **P 07 36 20.2 -0.7**
baz=80
P25A Willow Gulch B 80.19 47 ⇓P **P 07 36 20.6 -0.5**
baz=80
N27A Anderson Farm, 80.21 45 ⇑P **P 07 36 20.8 -0.3**
baz=80
FBE Freiberg 80.23 331 *e*P **P 07 36 21.6 +0.9**
comp=Z,36nm,1.1s
FBE epP **pP 07 36 30.9 +1.6**
T22A Edith 80.30 50 ⇑P **P 07 36 21.0 -0.7**
baz=80
SZH Strazhica 80.40 319 *e*P **P 07 36 21.5 -0.4**
PRA Prague 80.49 330 ⇓P **P 07 36 22.0 -0.2**
PRA AMS AMS 08 15 30.0
PRU Pruhonice 80.51 329 *e*P **P 07 36 22.1 -0.2**
PRU *e* 07 36 32.5
PRU *e*S **S 07 46 28.6 +1.6**
PRU MLR MLR
comp=Z,800nm,18.4s
PRU Pruhonice 80.51 329⇓ *e*P **P 07 36 22.1 -0.2**
PRU epP **pP 07 36 32.5 +1.7**
PRU *e*S **S 07 46 28.6 +1.6**
PRU AMS AMS 08 15 00.0
comp=Z,800nm,18.4s
R24A Sanders Place, 80.53 48 ⇑P **P 07 36 22.4 -0.5**
baz=80
CLZ Clausthal 80.58 333 *e*P **P 07 36 23.5 +0.8**
comp=Z,32nm,1.1s
CLZ Clausthal 80.58 333 *e*P **P 07 36 23.5 +0.8**
CLZ pmax pmax
comp=Z,11nm,1.1s
W20A Ramah 80.58 52 ⇓P **P 07 36 22.5 -0.8**
baz=80
NEUB Neuenburg 80.59 332 *e*P **P 07 36 23.2 +0.5**
comp=Z,32nm,0.9s
NEUB epP **pP 07 36 32.3 +1.1**
TREC Trest 80.67 328 *e*P **P 07 36 24.2 +1.0**
TREC *e* 07 36 33.4
TREC MLR MLR
comp=Z,800nm,15.6s
TREC Trest 80.67 328⇓ *e*P **P 07 36 24.2 +1.0**
TREC epP **pP 07 36 33.4 +1.6**
TREC AMS AMS 08 16 40.0
comp=Z,800nm,15.6s
T23A Casias Ranch, 80.79 49 ⇑P **P 07 36 24.1 -0.3**
baz=81
ZST Bratislava 80.86 327 *e*P **P 07 36 24.5 +0.3**
ZST Bratislava 80.86 327 *e*P **P 07 36 24.5 +0.3**
S24A Houchin Ranch, 80.87 49 ⇓P **P 07 36 24.0 -0.8**
baz=81
Q26A Hugo 80.96 47 ⇑P **P 07 36 24.4 -0.8**
baz=81
X20A Quemado 80.97 53 ⇑P **P 07 36 24.3 -1.0**
baz=81
TANN Tannenbergstha 80.97 331 *e*P **P 07 36 25.3 +0.4**
comp=Z,6.0nm,1.0s
TANN epP **pP 07 36 34.6 +1.2**
WERD Werda 81.01 331 *e*P **P 07 36 25.6 +0.6**
comp=Z,13nm,1.1s
WERD epP **pP 07 36 34.7 +1.2**
V22A San Miguel Ran 81.03 51 ⇑P **P 07 36 24.8 -0.8**
baz=81
PLN Plauen 81.03 331 *e*P **P 07 36 25.6 +0.5**
comp=Z,66nm,1.1s
PLN epP **pP 07 36 35.1 +1.5**
GUNZ Gunzen 81.06 331 *e*P **P 07 36 26.0 +0.7**
comp=Z,14nm,1.0s
GUNZ epP **pP 07 36 35.4 +1.6**
IBBN Ibbenburen 81.11 334 *e*P **P 07 36 25.8 +0.4**
comp=Z,30nm,1.1s
IBBN epP **pP 07 36 35.2 +1.3**
MOX Moxa 81.11 331 *e*P **P 07 36 26.0 +0.5**
comp=Z,18nm,1.1s
MOX epP **pP 07 36 35.5 +1.5**
MOX Moxa 81.11 331 *e*P **P 07 36 26.0 +0.5**
MOX *e*PP **pP 07 36 35.5 +1.5**
MOX pmax pmax
comp=Z,3.0nm,1.1s
WERN Wernitzgruen 81.11 331 *e*P **P 07 36 26.2 +0.7**
comp=Z,20nm,1.1s
WERN epP **pP 07 36 35.7 +1.6**
NKC Novy Kostel 81.12 331⇓ *i*/P **P 07 36 26.3 +0.7**
NKC *e* 07 36 35.1
NKC MLR MLR
comp=Z,800nm,15.9s
NKC Novy Kostel 81.12 331⇓ *i*P **P 07 36 26.3 +0.7**
NKC epP **pP 07 36 35.1 +0.9**
NKC AMS AMS 08 18 00.0
comp=Z,800nm,15.9s
M30A Dale-Ortello V 81.13 43 ⇓P **P 07 36 25.5 -0.4**
baz=81
U23A El Rito 81.18 50 ⇓P **P 07 36 26.2 -0.2**
baz=81
ECSD EROS Data Cent 81.21 39 *e*P **P 07 36 25.5 -0.8**
comp=Z,9.8nm,1.0s
S25A Robets Cordova 81.31 48 ⇑P **P 07 36 26.6 -0.5**
baz=81
RAYN Ar Rayn 81.36 293 P **P 07 36 27.0 -0.4**
comp=Z,113nm,0.8s,SNR=8.4
RAYN Ar Rayn 81.36 293 *e*P **P 07 36 27.7 +0.4**
comp=Z,20nm,0.9s
R26A Arlington 81.43 47 ⇓P **P 07 36 27.1 -0.5**
baz=81
MPEP Malo Peshtene 81.44 320 *e*P **P 07 36 26.8 -0.6**
MANZ Manzenberg 81.45 331 *e*P **P 07 36 28.0 +0.6**
comp=Z,14nm,1.0s
MANZ epP **pP 07 36 37.5 +1.6**
Y20A Horse Springs, 81.47 53 ⇑P **P 07 36 27.7 -0.3**
baz=81
X21A Alamocita Cree 81.47 52 ⇓P **P 07 36 28.0 -0.1**
baz=81
P28A Saint Francis 81.50 45 ⇓P **P 07 36 27.4 -0.5**
baz=81
UBBA Unterbreizbach 81.56 332 *e*P **P 07 36 28.1 +0.4**
comp=Z,6.0nm,1.2s
UBBA epP **pP 07 36 37.5 +1.2**
KHC Kasperske Hory 81.57 329⇓ *i*/P **P 07 36 28.8 +0.8**
KHC *e* 07 36 37.4
KHC *e*S **S 07 46 40.1 +1.9**
KHC MLR MLR
comp=Z,900nm,18.1s
KHC Kasperske Hory 81.57 329⇓ *i*/P **P 07 36 28.8 +0.8**
KHC *e*PCP **PcP 07 36 32.7 -1.2**
KHC epP **pP 07 36 37.4 +0.8**
KHC *e*S **S 07 46 40.1 +1.9**
KHC AMS AMS 08 16 00.0
comp=Z,900nm,18.1s
KHC Kasperske Hory 81.57 329 *e*P **P 07 36 28.3 +0.3**
comp=Z,18nm,0.9s
CONA Conrad Observa 81.59 327 *i*/P **P 07 36 28.8 +0.6**
comp=Z,26nm,1.1s,SNR=13
ROTZ Rotzenmuhle 81.59 331 *e*P **P 07 36 29.1 +1.0**
comp=Z,20nm,1.1s
ROTZ epP **pP 07 36 38.5 +1.9**
O29A 4D Ranch, Culb 81.63 44 ⇑P **P 07 36 28.2 -0.3**
baz=81
ESK Eskdalemuir 81.68 342 *e*P **P 07 36 29.0 +0.6**
ESK pmax pmax
comp=Z,8.0nm,1.0s
ESK Eskdalemuir 81.68 342 *e*P **P 07 36 29.0 +0.6**
comp=Z,7.8nm,1.0s
GEC2 GERESS Array S 81.75 329 *e*P **P 07 36 29.4 +0.3**
comp=Z,9.0nm,1.0s
GEC2 epP **pP 07 36 38.7 +1.1**
GEC2 GERESS Array S 81.75 329 *e*P **P 07 36 29.4 +0.3**
GEC2 *e**PP **pP 07 36 38.7 +1.1**
GEC2 pmax pmax
comp=Z,7.0nm,1.0s
GERES GERESS Array B 81.75 329 P **P 07 36 29.4 +0.3**
GERES GERESS Array B 81.75 329 P **P 07 36 29.4 +0.3**
comp=Z,5.1nm,0.7s,baz=32,slow=5.2,SNR=24
R27A Eads 81.81 47 ⇓P **P 07 36 28.7 -0.9**
baz=82
WET Wettzell 81.84 330 *e*P **P 07 36 30.3 +0.9**
comp=Z,18nm,1.1s
WET epP **pP 07 36 39.6 +1.6**
WET Wettzell 81.84 330 *e*P **P 07 36 30.3 +0.9**
WET *e**PP **pP 07 36 39.6 +1.6**
WET pmax pmax
comp=Z,5.0nm,1.1s
Z20A Nine Sixteen R 81.86 54 ⇓P **P 07 36 30.6 +0.6**
baz=82
S26A Kim 81.89 48 ⇑P **P 07 36 29.3 -0.8**
baz=82
X22A Bernardo 81.91 52 ⇑P **P 07 36 30.3 0.0**
baz=82
ANMO Albuquerque 81.95 51 *e*P **P 07 36 32.3 +1.8**
comp=Z,5.0nm,1.1s
W23A Werner Place, 81.99 51 ⇓P **P 07 36 31.0 +0.3**
baz=82
BUG Bochum--Univer 82.00 334 *e*P **P 07 36 30.5 +0.4**
comp=Z,15nm,0.8s
GRF Grafenberg Arr 82.03 331 *e*P **P 07 36 31.4 +1.0**
comp=Z,47nm,1.2s
GRF Grafenberg Arr 82.03 331 *e*P **P 07 36 31.4 +1.0**
GRF pmax pmax
comp=Z,17nm,1.2s
GRFO Grafenberg 82.03 331 *e*P **P 07 36 31.6 +1.2**
GRFO pmax pmax
comp=Z,25nm,0.9s
GRFO Grafenberg 82.03 331 *e*P **P 07 36 31.6 +1.2**
comp=Z,25nm,0.9s
RZN Rozhen 82.16 319 *e*P **P 07 36 30.5 -1.0**
U25A Circle Dot Ran 82.18 49 ⇑P **P 07 36 31.5 -0.2**
baz=82
ARSA Arzberg 82.27 327⇑ *i*P **P 07 36 32.0 +0.3**
comp=Z,13nm,1.0s,SNR=5.3
VTS Vitosha 82.27 320 ⇑P **P 07 36 33.2 +1.2**
VTS Vitosha 82.27 320 *e*P **P 07 36 31.7 -0.3**
VTS Vitosha 82.27 320⇑ *i*P **P 07 36 33.2 +1.2**
Z21A St. Cloud Mine 82.30 53 ⇑P **P 07 36 32.4 0.0**
baz=82
Y22A Socorro 82.32 52 ⇑P **P 07 36 32.6 +0.1**
baz=82
R28A Tribune 82.33 46 ⇑P **P 07 36 32.6 +0.3**
baz=82
P30A Selden 82.34 44 ⇓P **P 07 36 32.5 +0.2**
baz=82
BNM Barren Site 82.38 52 *e*P **P 07 36 34.5 +1.7**
W24A Lazy 6 Ranch, 82.40 50 ⇑P **P 07 36 32.7 -0.2**
baz=82
V25A Rancho No Teng 82.45 50 ⇑P **P 07 36 33.0 -0.1**
baz=82
U26A Atchley Ranch, 82.58 49 ⇑P **P 07 36 33.5 -0.2**
baz=82
KOGS Kog 82.59 326 *e*P **P 07 36 32.7 -0.6**
TNS Taunus Mts 82.61 333 *e*P **P 07 36 34.0 +0.5**
comp=Z,8.0nm,0.9s
TNS epP **pP 07 36 43.2 +1.2**
TNS Taunus Mts 82.61 333 *e*P **P 07 36 34.0 +0.5**
TNS *e**PP **pP 07 36 43.2 +1.2**
TNS pmax pmax
comp=Z,10.0nm,0.9s
220A Playas Peak, P 82.70 55 ⇓P **P 07 36 33.5 -0.9**
baz=82
MMB Musomiste 82.74 319 *e*P **P 07 36 33.7 -0.6**
121A Cookes Peak, D 82.75 54 ⇓P **P 07 36 34.2 -0.5**
baz=82
Q30A Quinter 82.76 45 ⇓P **P 07 36 34.2 -0.3**
baz=82
S28A Manter 82.81 47 ⇓P **P 07 36 34.2 -0.6**
baz=83
SCHQ Schefferville 82.82 17 *e*P **P 07 36 34.1 -0.3**
comp=Z,4.4nm,0.8s
SCHQ Schefferville 82.82 17 P **P 07 36 34.3 -0.1**
comp=Z,4.4nm,0.8s,baz=271,slow=4.9,SNR=6.9
P31A Stockton 82.83 44 ⇑P **P 07 36 34.7 -0.1**
baz=83
NVR Nevrokopi 82.85 319 *e*P **P 07 36 34.9 0.0**
KKB Krupnik 82.86 320 *e*P **P 07 36 35.3 +0.4**
Y23A Lovelace Mesa, 82.88 52 ⇑P **P 07 36 35.6 +0.2**
baz=83
PERS Pernice 82.92 327 *e*P **P 07 36 34.8 -0.3**
PERS epP **pP 07 36 44.5 +0.7**
SOKA Soboth 82.92 327⇑ *e*P **P 07 36 35.2 -0.1**
comp=Z,46nm,1.0s
V26A Tequesquite Ra 82.96 49 ⇑P **P 07 36 36.0 +0.3**
baz=83
W25A X Bar L Ranch, 82.96 50 ⇓P **P 07 36 36.1 +0.4**
baz=83
TOD Tromm 82.99 332 *e*P **P 07 36 35.4 0.0**
TOD Tromm 82.99 332 *e*P **P 07 36 35.4 0.0**
RJOB Jochberg 83.00 329 *e*P **P 07 36 36.6 +1.0**
comp=Z,26nm,1.0s
RJOB epP **pP 07 36 46.0 +1.9**
MEM Membach 83.13 334 P **P 07 36 35.5 -0.6**
FUR Furstenfeldbru 83.25 330 *e*P **P 07 36 37.6 +0.8**
comp=Z,31nm,0.8s
FUR Furstenfeldbru 83.25 330 *e*P **P 07 36 37.6 +0.8**
FUR pmax pmax
comp=Z,70nm,0.8s
OBKA Obir 83.26 327⇑ *i*P **P 07 36 36.4 -0.5**
comp=Z,13nm,0.8s
X25A Clemmons Ranch 83.32 51 ⇑P **P 07 36 37.9 +0.4**
baz=83
CRES Cresnjev 83.42 326 *e*P **P 07 36 37.1 -0.6**
CRES epP **pP 07 36 46.4 +0.2**
STU Stuttgart 83.54 332 *e*pP pP 07 36 48.2 +1.4
Y25A Mesa, Roswell 83.71 51 ⇑P **P 07 36 40.0 +0.4**
baz=84
BOJS Bojanci 83.76 326 *e*P **P 07 36 38.7 -0.7**
BOJS epP **pP 07 36 48.4 +0.4**
PLG Polygyros 83.78 318 *e*P **P 07 36 39.1 -0.6**
X26A CR and CF Fran 83.81 50 ⇑P **P 07 36 40.2 +0.1**
baz=84
WLF Walferdange 83.88 334 *e*P **P 07 36 40.5 +0.5**
W27A Bowe Ranch, En 83.90 49 ⇑P **P 07 36 40.8 +0.3**
baz=84
GIVF Givet 83.96 335 *e*P **P 07 36 40.1 -0.2**
GIVF Givet 83.96 335 *e*P **P 07 36 40.1 -0.2**
GIVF Givet 83.96 335 *e*P **P 07 36 40.1 -0.2**
PAIG Paliouri 83.99 318 *e*P **P 07 36 40.3 -0.4**
MOTA Moosalm 83.99 330⇓ *i*P **P 07 36 41.1 +0.3**
comp=Z,26nm,0.9s,SNR=8.2
RETA Reutte 84.01 330⇑ *i*P **P 07 36 40.8 +0.1**
comp=Z,37nm,1.0s,SNR=12
124A Stringfield Ra 84.08 52 ⇓P **P 07 36 41.4 -0.2**
baz=84
Z25A Roswell 84.14 51 ⇓P **P 07 36 41.2 -0.6**
baz=84
BAIF Baives 84.20 335 *e*P **P 07 36 41.3 -0.2**
BAIF Baives 84.20 335 *e*P **P 07 36 41.3 -0.2**
BAIF Baives 84.20 335 *e*P **P 07 36 41.3 -0.2**
BFO Black Forest 84.23 332 *e*P **P 07 36 42.4 +0.6**
comp=Z,36nm,1.4s
BFO epP **pP 07 36 51.6 +1.2**
BFO Black Forest 84.23 332 *e*P **P 07 36 42.4 +0.6**
BFO *e**PP **pP 07 36 51.6 +1.2**
BFO pmax pmax
comp=Z,6.0nm,1.4s
BFO Black Forest 84.23 332 *e*P **P 07 36 42.0 +0.2**
comp=Z,33nm,1.4s
SPAK Spaichingen-Ko 84.25 331 *e*P **P 07 36 41.7 -0.3**
W28A Vega 84.26 49 ⇓P **P 07 36 42.1 -0.2**
baz=84
FETA Feichten 84.40 330⇑ *e*P **P 07 36 42.6 -0.3**
comp=Z,23nm,1.0s,SNR=13
224A Cornudas Mount 84.47 53 ⇑P **P 07 36 43.3 -0.2**
baz=84
LIT Litokhoron 84.47 319 *e*P **P 07 36 42.8 -0.4**
DAVA Damuels 84.51 330⇑ *i*P **P 07 36 43.2 -0.2**
comp=Z,41nm,0.9s
CDF Champ du Feu 84.54 332 *e*P **P 07 36 43.3 -0.2**
comp=Z,61nm,1.3s
CDF Champ du Feu 84.54 332 *e*P **P 07 36 43.3 -0.2**
CDF pmax pmax
comp=Z,61nm,1.3s
CDF Champ du Feu 84.54 332 *e*P **P 07 36 43.3 -0.2**
comp=Z,61nm,1.3s
Z26A Caprock 84.59 51 ⇑P **P 07 36 43.8 -0.2**
baz=84
125A Gardner Draw, 84.60 52 ⇓P **P 07 36 44.2 +0.1**
baz=84
Y27A Causey 84.66 50 ⇑P **P 07 36 44.4 0.0**
baz=84
FELD Feldberg im Sc 84.73 332 *e*P **P 07 36 44.1 -0.4**
ECH Echery 84.75 332 *e*P **P 07 36 44.2 -0.2**
ECH pmax pmax
comp=Z,16nm,1.0s
ECH Echery 84.75 332 *e*P **P 07 36 44.2 -0.2**
comp=Z,16nm,1.0s
ECH Echery 84.75 332 *e*P **P 07 36 44.3 -0.2**
MSTX Muleshoe 84.83 50 ⇑P **P 07 36 45.3 0.0**
baz=85
PAGF Fort de Pagny 84.97 333 *e*P **P 07 36 45.7 +0.2**
comp=Z,24nm,1.1s
PAGF Fort de Pagny 84.97 333 *e*P **P 07 36 45.7 +0.2**
comp=Z,24nm,1.1s
Z27A Tatum 85.02 51 ⇑P **P 07 36 46.6 +0.4**
baz=85
MOF Molkenrain 85.07 332 *e*P **P 07 36 45.6 -0.5**
MOF Molkenrain 85.07 332 *e*P **P 07 36 45.6 -0.5**
MOF Molkenrain 85.07 332 *e*P **P 07 36 45.6 -0.5**
X29A Tulia 85.13 49 ⇑P **P 07 36 47.2 +0.5**
baz=85
HINF Hinteralfeld 85.20 332 *e*P **P 07 36 46.2 -0.5**
HINF Hinteralfeld 85.20 332 *e*P **P 07 36 46.2 -0.5**
HINF Hinteralfeld 85.20 332 *e*P **P 07 36 46.2 -0.5**
HAU Haudompre 85.22 333 *e*P **P 07 36 46.4 -0.4**
comp=Z,20nm,0.8s
HAU *e*R
comp=Z,850nm,18.0s
HAU Haudompre 85.22 333 *e*P **P 07 36 46.4 -0.4**
HAU pmax pmax
comp=Z,20nm,0.8s
HAU Haudompre 85.22 333 *e*P **P 07 36 46.4 -0.4**
comp=Z,20nm,0.8s
MEZF Maizieres J'vi 85.25 334 *e*P **P 07 36 47.0 +0.1**
MEZF Maizieres J'vi 85.25 334 *e*P **P 07 36 47.0 +0.1**
BBS Basel-Blauen 85.26 332 *e*P **P 07 36 46.6 -0.4**
BBS Basel-Blauen 85.26 332 *e*P **P 07 36 46.6 -0.4**
226B Tecolote Peak, 85.30 52 ⇑P **P 07 36 47.5 -0.1**
baz=85
SFTF Sexfontaines 85.51 334 *e*P **P 07 36 48.1 -0.1**
comp=Z,95nm,1.1s
SFTF Sexfontaines 85.51 334 *e*P **P 07 36 48.1 -0.1**
comp=Z,95nm,1.1s
LOMF Lomont 85.60 332 *e*P **P 07 36 48.4 -0.4**
LOMF Lomont 85.60 332 *e*P **P 07 36 48.4 -0.4**
LOMF Lomont 85.60 332 *e*P **P 07 36 48.4 -0.4**
W31A Holland Ranch, 85.62 47 ⇓P **P 07 36 49.3 +0.2**
baz=85
425A Indio Mountain 85.69 53 ⇑P **P 07 36 49.9 +0.3**
baz=86
Z29A Hungry Hill Ra 85.96 50 ⇓P **P 07 36 51.5 +0.7**
baz=86
SENIN Lac Senin/Sane 86.26 331 *e*P **P 07 36 52.5 +0.2**
CABF La Chapelle 86.50 332 *e*P **P 07 36 53.0 -0.2**
comp=Z,41nm,1.3s
CABF La Chapelle 86.50 332 *e*P **P 07 36 53.0 -0.2**
CABF pmax pmax
comp=Z,41nm,1.3s
CABF La Chapelle 86.50 332 *e*P **P 07 36 53.0 -0.2**
comp=Z,41nm,1.3s
LOR Lormes 86.72 334 *e*P **P 07 36 54.0 -0.2**
comp=Z,74nm,1.1s
LOR *e*R
comp=Z,557nm,20.8s
LOR Lormes 86.72 334 *e*P **P 07 36 54.0 -0.2**
comp=Z,74nm,1.1s
FLN La Foliniere 86.81 337 *e*P **P 07 36 54.3 -0.3**
comp=Z,39nm,1.1s
FLN *e*R
comp=Z,676nm,21.0s
FLN La Foliniere 86.81 337 *e*P **P 07 36 54.3 -0.3**
FLN pmax pmax
comp=Z,39nm,1.1s
FLN La Foliniere 86.81 337 *e*P **P 07 36 54.3 -0.3**
comp=Z,39nm,1.1s
LDF La Druitiere 86.85 337 *e*P **P 07 36 54.5 -0.3**
comp=Z,67nm,1.4s
LDF La Druitiere 86.85 337 *e*P **P 07 36 54.5 -0.3**
LDF pmax pmax
comp=Z,67nm,1.4s
LDF La Druitiere 86.85 337 *e*P **P 07 36 54.5 -0.3**
comp=Z,67nm,1.4s
SSF Saint Saulge 87.02 334 *e*P **P 07 36 55.6 -0.1**
comp=Z,26nm,0.9s
SSF Saint Saulge 87.02 334 *e*P **P 07 36 55.6 -0.1**
SSF pmax pmax
comp=Z,26nm,0.9s
SSF Saint Saulge 87.02 334 *e*P **P 07 36 55.6 -0.1**
comp=Z,26nm,0.9s
LPL La Plagne 87.19 331 *e*P **P 07 36 56.7 -0.1**
comp=Z,28nm,0.9s
LPL La Plagne 87.19 331 *e*P **P 07 36 56.7 -0.1**
LPL pmax pmax
comp=Z,28nm,0.9s
LPL La Plagne 87.19 331 *e*P **P 07 36 56.7 -0.1**
comp=Z,28nm,0.9s
LPG La Plagne 87.20 331 *e*P **P 07 36 56.9 0.0**
comp=Z,40nm,1.1s
LPG La Plagne 87.20 331 *e*P **P 07 36 56.9 0.0**
LPG pmax pmax
comp=Z,40nm,1.0s
LPG La Plagne 87.20 331 *e*P **P 07 36 56.9 0.0**

comp=Z,40nm,1.0s
Z32A Haskell 87.23 48 ⇑P **P** 07 36 58.0 +1.0
baz=87
GRR Gorron 87.26 337 *e*P **P** 07 36 56.8 0.0
comp=Z,86nm,1.2s
GRR Gorron 87.26 337 *e*P **P** 07 36 56.8 0.0
GRR pmax pmax
comp=Z,86nm,1.2s
GRR Gorron 87.26 337 *e*P **P** 07 36 56.8 0.0
comp=Z,86nm,1.2s
SMF Signal de Mont 87.27 333 *e*P **P** 07 36 56.8 -0.1
comp=Z,139nm,1.6s
SMF Signal de Mont 87.27 333 *e*P **P** 07 36 56.8 -0.1
SMF pmax pmax
comp=Z,139nm,1.6s
SMF Signal de Mont 87.27 333 *e*P **P** 07 36 56.8 -0.1
comp=Z,139nm,1.6s
AVF Avril sur Loir 87.31 334 *e*P **P** 07 36 57.0 -0.1
comp=Z,75nm,1.0s
AVF Avril sur Loir 87.31 334 *e*P **P** 07 36 57.0 -0.1
AVF pmax pmax
comp=Z,75nm,1.0s
AVF Avril sur Loir 87.31 334 *e*P **P** 07 36 57.0 -0.1
comp=Z,75nm,1.0s
TXAR Lajitas Array 87.51 54 P **P** 07 36 58.1 -0.4
TXAR Lajitas Array 87.51 54 P **P** 07 36 58.1 -0.4
comp=Z,0.7nm,0.6s,baz=301,slow=4.5,SNR=14
MBDF Montbardon 87.84 331 *e*P **P** 07 36 59.2 -0.7
comp=Z,17nm,1.0s
MBDF Montbardon 87.84 331 *e*P **P** 07 36 59.2 -0.7
MBDF pmax pmax
comp=Z,17nm,1.0s
MBDF Montbardon 87.84 331 *e*P **P** 07 36 59.2 -0.7
comp=Z,17nm,1.0s
SGMF Saint Gilles 87.88 338 *e*P **P** 07 36 59.8 0.0
SGMF Saint Gilles 87.88 338 *e*P **P** 07 36 59.8 0.0
SGMF Saint Gilles 87.88 338 *e*P **P** 07 36 59.8 0.0
ORIF Oris-en-Rattie 88.02 331 *e*P **P** 07 37 00.2 -0.4
ORIF Oris-en-Rattie 88.02 331 *e*P **P** 07 37 00.2 -0.4
ORIF Oris-en-Rattie 88.02 331 *e*P **P** 07 37 00.2 -0.4
VIVF Saint-Julien-l 88.51 332 *e*P **P** 07 37 02.7 -0.2
VIVF Saint-Julien-l 88.51 332 *e*P **P** 07 37 02.7 -0.2
VIVF Saint-Julien-l 88.51 332 *e*P **P** 07 37 02.7 -0.2
MFF Saint Martin d 88.63 336 *e*P **P** 07 37 03.4 0.0
comp=Z,49nm,1.2s
MFF Saint Martin d 88.63 336 *e*P **P** 07 37 03.4 0.0
MFF pmax pmax
comp=Z,49nm,1.2s
MFF Saint Martin d 88.63 336 *e*P **P** 07 37 03.4 0.0
comp=Z,49nm,1.2s
FRF La Foret Royal 88.88 330 *e*P **P** 07 37 04.4 -0.2
FRF La Foret Royal 88.88 330 *e*P **P** 07 37 04.4 -0.2
FRF La Foret Royal 88.88 330 *e*P **P** 07 37 04.4 -0.2
SMRF Simiane la Rot 88.93 331 *e*P **P** 07 37 05.8 +0.9
comp=Z,97nm,1.5s
SMRF Simiane la Rot 88.93 331 *e*P **P** 07 37 05.8 +0.9
comp=Z,97nm,1.5s
LMR La Mourre 89.12 330 *e*P **P** 07 37 05.7 0.0
LMR La Mourre 89.12 330 *e*P **P** 07 37 05.7 0.0
LMR La Mourre 89.12 330 *e*P **P** 07 37 05.7 0.0
RJF Les Rejaudoux 89.23 334 *e*P **P** 07 37 06.5 +0.3
comp=Z,54nm,1.2s
RJF *e*R
comp=Z,679nm,19.0s
RJF Les Rejaudoux 89.23 334 *e*P **P** 07 37 06.5 +0.3
RJF pmax pmax
comp=Z,54nm,1.2s
RJF Les Rejaudoux 89.23 334 *e*P **P** 07 37 06.5 +0.3
comp=Z,54nm,1.2s
CAF Calviac 89.38 334 *e*P **P** 07 37 07.5 +0.5
comp=Z,38nm,1.1s
CAF Calviac 89.38 334 *e*P **P** 07 37 07.5 +0.5
CAF pmax pmax
comp=Z,39nm,1.1s
CAF Calviac 89.38 334 *e*P **P** 07 37 07.5 +0.5
comp=Z,38nm,1.1s
SIUC Southern Illin 89.43 39 *e*P **P** 07 37 08.5 +1.3
comp=Z,14nm,1.2s
LASF Ste Croix 89.48 332 *e*P **P** 07 37 07.8 +0.4
LASF Ste Croix 89.48 332 *e*P **P** 07 37 07.8 +0.4
LFF La Frestale 89.81 335 *e*P **P** 07 37 09.4 +0.5
LFF La Frestale 89.81 335 *e*P **P** 07 37 09.4 +0.5
LFF La Frestale 89.81 335 *e*P **P** 07 37 09.4 +0.5
MTLF Montolieu 90.71 333 *e*P **P** 07 37 13.3 +0.1
MTLF Montolieu 90.71 333 *e*P **P** 07 37 13.3 +0.1
MTLF Montolieu 90.71 333 *e*P **P** 07 37 13.3 +0.1
ETSF Etsaut 92.06 334 *e*P **P** 07 37 19.9 +0.4
comp=Z,16nm,1.1s
ETSF Etsaut 92.06 334 *e*P **P** 07 37 19.9 +0.4
ETSF pmax pmax
comp=Z,16nm,1.1s
ETSF Etsaut 92.06 334 *e*P **P** 07 37 19.9 +0.4
comp=Z,16nm,1.1s
TORD Torodi Ar. Bea 116.94 318 PP PP 07 43 56.3 -7.6
TORD Torodi Ar. Bea 116.94 318 PP PP 07 43 56.3 -7.6
comp=Z,2.0nm,1.0s,baz=26,slow=8.5,SNR=6.6
QSPA South Pole Qui 128.91 180 *e*PKPdf **PKPdf** **07 43 18.2 +1.3**
SNAA Sanae 143.28 197 *e*P PKPab 07 43 39.6 +0.3
SNAA Sanae 143.28 197 *e*PKPdf PKPab 07 43 39.4 +0.1
LPAZ La Paz 144.18 59 PKP **PKPab** **07 43 45.1 +0.1**
LPAZ *e*PKPdf **PKPdf** **07 43 46.6 -0.8**
LPAZ La Paz 144.18 59 PKP **PKPab** **07 43 45.1 +0.1**
comp=Z,1.5nm,0.8s,baz=6.3,slow=6.6,SNR=6.7

NIED ***23*** *07:37:00,38.˚90N×142.˚50E,h44km,Mw5.6 Best double couple: M₀2.49000×10¹⁷ NP1:φs85.00000°,δ48.00000°, λ113.00000°. NP2:φs232.00000°,δ47.00000°,λ66.00000°.*
MOS ***23*** *07:37:15.9±0.8,38.˚94N×142.˚45E,h33km,mb5.8/143, MS5.1/69,Error ellipse: s-maj=5.7km s-min=3.5km az=106.0*
BJI ***23*** *07:37:15.7,38.˚92N×142.˚44E,h39km,mB5.4/26,mb5.3/62, Ms5.2/65,Ms7 5.0/63*
ISCJB ***23*** *07:37:17.9±0.2,38.˚89N±0.˚02×142.˚42E±0.˚02,h51km±2km, mb5.6/377,MS5.1/213,Error ellipse: s-maj=3.0km s-min=2.3km az=142.9*
JMA ***23*** *07:37:17.2±0.1,38.˚90N×142.˚53E,h39km±2km,M5.6 Broadband fault plane solution: P waves. NP1: φs95.00000°,δ57.00000°,λ123.00000°. NP2: φs225.00000°,δ46.00000°,λ50.00000°. Principal axes: T Plg62.0000°, Azm60.0000°; N Plg27.0000°, Azm255.0000°; P Plg6.0000°, Azm162.0000°;*
JMA Felt IV J1.
NEIC ***23*** *07:37:17.6±0.1,38.˚85N×142.˚39E,h37km,mb5.7/215, ME5.0,MS5.0/129,MW5.6,MW5.5(NIED) Error ellipse: s-maj=3.1km s-min=2.0km az=156.0,Moment Tensor Solution. s77 Moment tensor: Scale 10¹⁷Nm; Mrr2.76; Mθθ-2.07; Mφφ-0.69; Mrθ-0.01; Mφφ-0.96; Mφr-0.74; Best double couple: M₀2.80000×10¹⁷ NP1:φs231.00000°, δ50.00000°,λ75.00000°. NP2:φs74.00000°,δ42.00000°, λ107.00000°. Principal axes: T 2.9200, Plg77.0000°, Azm79.0000°; N -0.3300, Plg11.0000°, Azm240.0000°; P -2.5900, Plg3.0000°, Azm331.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from CMT mechanism.*
NEIC Felt [IV] at Shiwa and [III] at Sendai. Also felt at Misawa, Soma and Utsunomiya. Recorded [4 JMA] in Iwate and Miyagi; [2 JMA] in Akita, Aomori, Fukushima and Yamagata; [1 JMA] in Ibaraki and Tochigi. Also recorded [1 JMA] in eastern Hokkaido.
IDC ***23*** *07:37:18.7±0.4,38.˚84N×142.˚45E,h49km±3km,mb5.0/34, mb1 5.1/39,mb1mx5.1/40,mbtmp5.0/39,MS5.0/31, Ms1 5.0/31,ms1mx4.9/41 Error ellipse: s-maj=9.2km s-min=7.3km az=113.0*
TEH ***23*** *07:37:19.0,38.˚89N×142.˚40E,h47km,ML5.7*
BGS ***23*** *07:37:19.5±1.4,38.˚98N×140.˚93E,h33km,mb5.4,MS5.2*
GCMT ***23*** *07:37:20.1±0.1,38.˚88N×142.˚51E,h36km,MW5.6, Moment Tensor Solution. s97,c182; s42,c45; Moment tensor: Scale 10¹⁷Nm; Mrr2.53±.04; Mθθ-2.56±.03; Mφφ0.03±.03; Mrθ0.43±.04; Mφφ-1.10±.02; Mφr-0.78±.04; Best double couple: M₀2.90000×10¹⁷ NP1:φs231.00000°, δ47.00000°,λ62.00000°. NP2:φs89.00000°,δ50.00000°, λ117.00000°. Principal axes: T 2.8500, Plg70.0000°, Azm66.0000°; N 0.1200, Plg20.0000°, Azm251.0000°; P -2.9700, Plg1.0000°, Azm160.0000°; Data Used: II IU CN IC G. Surface waves: sta=112, comp=214, per= 50.*
SZGRF ***23*** *07:37:24.4,39.˚95N×143.˚27E,h50km,mb5.6,Off east coast of Honshu, Japan*
DJA ***23*** *07:38:04.7±3.4,38.˚8N±13.˚14×14.˚1E±1.˚7,h447km±52km, M4.6/13,mB5.2/10,mb4.8/13,Mw(mB)4.6/10*
ISC 23 07:37:18.6±0.3,**38.˚88N**±0.˚03×**142.˚46E**±0.˚03,**h48**km±1km, **h47**km**:pP-P,n1646,**σ1s**02**/1828,**mb5.6**/387,**MS5.1**/213, **462C-2050,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.65**	**288**	⇓P			**Pn**	**07 37 30.8**	**-0.7**
MIYJ	**Miyakonagasawa**	**0.85**	**325**	⇓P			**Pn**	**07 37 33.2**	**-1.1**
MIYJ				S			**Sn**	**07 37 44.4**	**-1.3**
JIO	**Ouri**	**0.97**	**244**	⇑P			**Pn**	**07 37 35.1**	**-0.7**
JIO				S			**Sn**	**07 37 47.9**	**-0.5**
JMK	**Ichinoseki**	**0.97**	**275**	⇓P			**Pn**	**07 37 35.5**	**-0.3**
JMK				S			**Sn**	**07 37 48.7**	**+0.3**
JOM	**Ohasama**	**1.08**	**303**	⇓P			**Pn**	**07 37 37.0**	**-0.3**
JOM				S			**Sn**	**07 37 51.6**	**+0.4**
JTH	**Tanohata**	**1.15**	**337**	⇓P			**Pn**	**07 37 37.1**	**-1.2**
JTH				S			**Sn**	**07 37 52.1**	**-0.8**
JKZ	**Kuzumaki**	**1.41**	**322**	⇓P			**Pn**	**07 37 41.6**	**-0.2**
JOU	**Okura**	**1.50**	**250**	⇑P			**Pn**	**07 37 43.0**	**0.0**
JRG	**Rokugo**	**1.51**	**290**	⇓P			**Pn**	**07 37 43.3**	**+0.1**
JYK	**Kaneyama**	**1.64**	**272**	⇓P			**Pn**	**07 37 45.2**	**+0.3**
JMM	**Marumori**	**1.66**	**233**	⇓P			**Pn**	**07 37 44.6**	**-0.6**
JMM				S			**Sn**	**07 38 05.6**	**+0.4**
JANG	**Nango**	**1.66**	**334**	⇓P			**Pn**	**07 37 44.3**	**-0.9**
JYW	**Yuwa**	**1.87**	**291**	⇓P			**Pn**	**07 37 48.7**	**+0.7**
JAH	**Hinai**	**1.92**	**313**	⇓P			**Pn**	**07 37 48.9**	**+0.1**
JFK	**Kawauchi**	**1.96**	**220**	⇓P			**Pn**	**07 37 48.6**	**-0.8**
JYS	**Shirataka**	**1.99**	**251**	⇑P			**Pn**	**07 37 50.2**	**+0.5**
JFT	**Otama**	**2.15**	**231**	⇓P			**Pn**	**07 37 52.3**	**+0.3**
JTM	**Tenmabayashi**	**2.18**	**331**	⇓P			**Pn**	**07 37 51.7**	**-0.7**
ONAJ	**Iwakimizuishiy**	**2.21**	**217**	⇓P			**Pn**	**07 37 51.9**	**-0.9**
JAW	**Awa shima**	**2.55**	**261**	P			**Pn**	**07 37 58.4**	**+1.0**
JIW	**Iwasaki**	**2.55**	**313**	⇓P			**Pn**	**07 37 57.8**	**+0.4**
JSI2	**Shiura 2**	**2.68**	**325**	⇓P			**Pn**	**07 37 59.4**	**+0.2**
JNS	**Sasagawa**	**2.69**	**248**	P			**Pn**	**07 38 00.2**	**+0.9**
JHO	**Hitachi**	**2.72**	**214**	⇓P			**Pn**	**07 37 58.5**	**-1.2**
JHK	**Hiroka**	**3.17**	**240**	P			**Pn**	**07 38 08.6**	**+2.7**
ERM	**Erimo**	**3.17**	**9**	Pn			**Pn**	**07 38 04.8**	**-1.2**
	12μm,0.5s								
ERM	**Erimo**	**3.17**	**9**	*c* P			**Pn**	**07 38 04.3**	**-1.7**
ERM				pmax	pmax				
	comp=Z,1μm,1.0s								
ERM	**Erimo**	**3.17**	**9**	*e*Pn			**Pn**	**07 38 04.4**	**-1.5**
ERM				*e*Sn			**Sn**	**07 38 45.0**	**+2.4**
JIZZ	**Izumozaki**	**3.25**	**247**	P			**Pn**	**07 38 09.8**	**+2.8**
JKT	**Katashina**	**3.30**	**231**	P			**Pn**	**07 38 09.9**	**+2.0**
JSD	**Sado**	**3.40**	**257**	P			**Pn**	**07 38 10.4**	**+1.3**
JAG	**Ashikaga**	**3.42**	**225**	⇓P			**Pn**	**07 38 09.8**	**+0.4**
JGK	**Kuni**	**3.81**	**234**	P			**Pn**	**07 38 17.8**	**+3.0**
JJN	**Nakama**	**3.83**	**244**	P			**Pn**	**07 38 16.9**	**+1.9**
TOK	**Tokyo**	**3.85**	**215**	P			**Pn**	**07 38 16.0**	**+0.8**
TOK				S			**Sn**	**07 38 59.3**	**+0.2**
JRY	**Ryogami san**	**4.02**	**226**	P			**Pn**	**07 38 18.1**	**+0.4**
MJAR	**Matsushiro Arr**	**4.10**	**237**	P			**Pn**	**07 38 18.8**	**+0.1**
MJAR				S			**Sn**	**07 39 06.5**	**+1.0**
MJAR	**Matsushiro Arr**	**4.10**	**237**	P			**Pn**	**07 38 18.8**	**+0.1**
	comp=Z,125nm,0.3s,baz=33,slow=14,SNR=223								
MJAR				S			**Sn**	**07 39 06.4**	**+1.0**
	comp=Z,29nm,0.3s,baz=46,slow=11,SNR=5.0								
MJAR				LR		LR		07 40 11.7	
	comp=Z,23μm,20.1s,baz=65,slow=43								
MAJO	**Matsushiro**	**4.10**	**237**	*e*P			**Pn**	**07 38 20.7**	**+2.0**
MAJO	**Matsushiro**	**4.10**	**237**	*e*Pn			**Pn**	**07 38 20.7**	**+2.0**
MAT	**Matsushiro**	**4.10**	**237**	P			**Pn**	**07 38 20.6**	**+1.9**
MAT				S			Sn	07 39 11.9	+6.5
MAT	**Matsushiro**	**4.10**	**237**	P			**Pn**	**07 38 20.6**	**+1.9**
BSO4	**Boso 4**	**4.24**	**204**	P			**Pn**	**07 38 20.2**	**-0.3**
JNG	**Nsakai**	**4.25**	**236**	P			**Pn**	**07 38 22.9**	**+2.0**
JSZ	**Suzu**	**4.26**	**252**	P			**Pn**	**07 38 21.8**	**+0.9**
BSO3	**Boso 3**	**4.36**	**202**	P			**Pn**	**07 38 21.0**	**-1.1**
BSO1	**Boso 1**	**4.38**	**196**	P			**Pn**	**07 38 20.8**	**-1.3**
JHG	**Hegura jima**	**4.47**	**258**	P			**Pn**	**07 38 25.7**	**+1.9**
JOD2	**Odawara 2**	**4.51**	**218**	P			**Pn**	**07 38 24.3**	**0.0**
JAR	**Ashorobuto**	**4.52**	**12**	⇓P			**Pn**	**07 38 22.0**	**-2.5**
JNT	**Takato**	**4.56**	**230**	P			**Pn**	**07 38 27.1**	**+1.9**
JYN	**Shimob**	**4.60**	**224**	P			**Pn**	**07 38 26.7**	**+1.0**
JTT	**Ttatey**	**4.65**	**242**	P			Pn	07 38 30.0	+3.7
AJI	**Ajiro2**	**4.68**	**216**	P			**Pn**	**07 38 26.3**	**-0.4**
JIM2	**Oshima 3**	**4.81**	**211**	P			**Pn**	**07 38 28.3**	**-0.2**
JGN	**Niukaw**	**4.87**	**239**	P			**Pn**	**07 38 31.8**	**+2.4**
JJH	**Hakui**	**4.89**	**248**	P			**Pn**	**07 38 31.9**	**+2.3**
JNK	**Nakash**	**5.00**	**19**	⇓P			**Pn**	**07 38 28.0**	**-3.0**
JIZS	**Izushimoda**	**5.05**	**216**	P			**Pn**	**07 38 31.0**	**-0.8**
JNY	**Yasuok**	**5.08**	**228**	P			**Pn**	**07 38 33.7**	**+1.4**
SHZ3	**Shizuoka 3**	**5.11**	**223**	P			**Pn**	**07 38 33.5**	**+0.9**
JMP	**Maruseppu**	**5.17**	**7**	⇓P			**Pn**	**07 38 31.4**	**-1.9**
JTKR	**Abashiri--Toko**	**5.20**	**12**	⇓P			**Pn**	**07 38 31.5**	**-2.2**
ASAJ	**Asahikawa**	**5.23**	**1**	*e*Pn			**Pn**	**07 38 33.2**	**-1.0**
ASAJ				S			**Sn**	**07 39 30.4**	**-2.8**
ASAJ	**Asahikawa**	**5.23**	**1**	P			**Pn**	**07 38 33.1**	**-1.1**
	comp=Z,49nm,0.3s,baz=218,slow=16,SNR=112								
ASAJ				S			**Sn**	**07 39 30.4**	**-2.8**
	comp=Z,66nm,0.3s,baz=233,slow=32,SNR=5.6								
ASAJ				LR		LR		07 41 15.0	
	comp=Z,34μm,21.1s,baz=181,slow=45								
JYZW	**Yoshizawa**	**5.42**	**226**	P			**Pn**	**07 38 37.4**	**+0.6**
JSG	**Sagara**	**5.42**	**221**	P			**Pn**	**07 38 38.0**	**+1.2**
JRA	**Rausu**	**5.43**	**21**	P			**Pn**	**07 38 34.4**	**-2.6**
JAO	**Obara**	**5.50**	**231**	P			**Pn**	**07 38 39.7**	**+1.7**
JKG	**Kaga**	**5.52**	**244**	P			**Pn**	**07 38 40.9**	**+2.8**
HMMJ	**Hamamatsu 2**	**5.53**	**225**	P			**Pn**	**07 38 39.3**	**+1.0**
JGM	**Miyama**	**5.57**	**237**	P			**Pn**	**07 38 41.4**	**+2.5**
YUK	**Yuzh-Kuril'sk**	**5.75**	**25**	*c* P			**Pn**	**07 38 38.7**	**-2.6**
YUK				*i* S			Sn	07 39 38.4	-7.5
YUK				pmax	pmax				
	comp=Z,1μm,0.4s								
YUK				pmax	pmax				
	comp=N,459nm,0.2s								
YUK				pmax	pmax				
	comp=E,334nm,0.4s								
YUK				smax	smax				
	comp=N,5μm,0.6s								
YUK				smax	smax				
	comp=E,5μm,0.6s								
YUK				smax	smax				
	comp=N,14μm,2.3s								
YUK				smax	smax				
	comp=E,20μm,2.3s								
YUK				MLR	MLR				
	comp=N,5μm,14.0s								
YUK				MLR	MLR				
	comp=E,3μm,14.0s								
YUK				MLR	MLR				
	comp=Z,8μm,14.0s								
JHJ2	**Mitsune**	**6.14**	**201**	P			**Pn**	**07 38 44.7**	**-2.0**
JHJ2				S			**Sn**	**07 39 50.3**	**-5.4**
JHJ	**Hachijo jima 2**	**6.14**	**201**	P			**Pn**	**07 38 44.8**	**-2.0**
	comp=Z,214nm,0.3s,baz=60,slow=23,SNR=35								
JHJ				S			**Sn**	**07 39 52.9**	**-2.9**
	comp=Z,310nm,0.3s,baz=72,slow=22,SNR=5.0								
JHJ				LR		LR		07 40 27.8	
	comp=Z,3μm,21.1s,baz=258,slow=31								
JFM	**Mihama**	**6.16**	**239**	P			**Pn**	**07 38 49.8**	**+2.9**
KUR	**Kuril'sk**	**7.51**	**31**	*c* P			**Pn**	**07 39 03.7**	**-1.8**
KUR				*i* S			Sn	07 40 21.6	-7.6
KUR				pmax	pmax				
	comp=Z,405nm,1.0s								
KUR				pmax	pmax				
	comp=N,162nm,1.0s								
KUR				pmax	pmax				
	comp=E,164nm,0.3s								
KUR				smax	smax				
	comp=N,1μm,1.0s								
KUR				smax	smax				
	comp=E,1μm,1.0s								
KUR				MLR	MLR				
	comp=N,5μm,22.0s								
KUR				MLR	MLR				
	comp=E,5μm,22.0s								
KUR				MLR	MLR				
	comp=Z,4μm,22.0s								
YSS	**Yuzh-Sakhalins**	**8.07**	**1**	*e*P			**Pn**	**07 39 13.0**	**-0.1**
YSS				*e*S			**Sn**	**07 40 40.0**	**-2.9**
YSS				pmax	pmax				
	comp=Z,1μm,1.1s								
YSS				pmax	pmax				
	comp=N,900nm,1.0s								
YSS				pmax	pmax				
	comp=Z,2μm,2.0s								
YSS				smax	smax				
	comp=N,4.0nm,4.0s								
YSS				smax	smax				
	comp=E,4.0nm,4.0s								
YSS				MLR	MLR				
	comp=Z,8μm,16.0s								
YSS				MLR	MLR				
	comp=N,11μm,15.0s								
YSS				MLR	MLR				
	comp=E,4μm,15.0s								
VLA	**Vladivostok**	**9.04**	**301**	*de*P			**Pn**	**07 39 27.8**	**+1.4**
VLA				pmax	pmax				
	comp=Z,723nm,1.6s								
USRK	**Ussuriysk Arra**	**9.47**	**307**	P			**Pn**	**07 39 33.3**	**+1.0**
	comp=Z,14nm,0.3s,baz=115,slow=14,SNR=69								
USRK				LR		LR		07 43 00.4	
	comp=Z,13μm,20.9s,baz=117,slow=36								
UGL	**Uglegorsk**	**10.20**	**359**	*e*P			**Pn**	**07 39 39.5**	**-2.7**
UGL				pmax	pmax				
	comp=Z,547nm,1.4s								
UGL				MLR	MLR				
	comp=N,14μm,20.0s								
UGL				MLR	MLR				
	comp=E,14μm,20.0s								
HABR	**Khabarovsk**	**10.98**	**333**	*de*P			**Pn**	**07 39 50.8**	**-2.1**
HABR				*e*S			**Sn**	**07 41 52.4**	**-1.7**
HABR				pmax	pmax				
	comp=Z,198nm,1.4s								
HABR				pmax	pmax				
	comp=N,145nm,1.7s								
HABR				pmax	pmax				
	comp=E,175nm,1.7s								
HABR				MLR	MLR				
	comp=Z,11μm,20.0s								
JNU	**Nakatsue**	**11.00**	**242**	*e*Pn			**Pn**	**07 39 55.3**	**+2.1**
JNU	**Nakatsue**	**11.00**	**242**	P			**Pn**	**07 39 53.3**	**0.0**
	comp=Z,3.1nm,0.3s,baz=57,slow=5.7,SNR=46								
MDJ	**Mudanjiang**	**11.18**	**305**	P			**Pn**	**07 39 55.1**	**-0.6**
MDJ				S			**Sn**	**07 41 57.8**	**-1.4**
MDJ				PcP			**PcP**	**07 45 48.8**	**+0.1**
MDJ				ScP			**ScP**	**07 49 16.3**	**-1.0**
MDJ				PcS			**PcS**	**07 49 22.5**	**+0.1**
MDJ				ScS			**ScS**	**07 52 52.3**	**-0.2**
MDJ				pmax	pmax				
	comp=Z,35nm,1.4s								
MDJ				pmax	pmax				
	comp=Z,1μm,6.1s								
MDJ				LR	LR				
	comp=N,3μm,25.0s								
MDJ				LR	LR				
	comp=E,4μm,24.1s								
MDJ				LR	LR				
	comp=Z,9μm,19.8s								
MDJ	**Mudanjiang**	**11.18**	**305**	*e*Pn			**Pn**	**07 39 57.2**	**+1.5**
	comp=Z,160nm,0.8s								
MDJ	**Mudanjiang**	**11.18**	**305**	ScS			**Pn**	**07 39 56.9**	**+1.2**
KSRS	**Korea Array**	**11.53**	**267**	P			**Pn**	**07 40 03.5**	**+3.1**
	comp=Z,1.6nm,0.3s,baz=83,slow=13,SNR=47								
KSRS				LR		LR		07 44 10.0	
	comp=Z,6μm,19.6s,baz=74,slow=36								
KSRS				PcP			**PcP**	**07 45 49.6**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=178,slow=0.6,SNR=5.1								
KSAR	**Wonju Array Be**	**11.56**	**267**	P			**Pn**	**07 40 03.5**	**+2.6**
KSAR				PcP			**PcP**	**07 45 49.6**	**+0.3**
CBIJ	**Chichi jima**	**11.76**	**181**	P			Pn	07 39 58.8	-4.8
JHHJ	**Haha-jima-NKT**	**12.22**	**181**	P			Pn	07 40 05.5	-4.5
INCN	**Inchon**	**12.53**	**269**	*e*Pn			Pn	07 40 17.9	+3.7
KLR	**Kul'dur**	**12.88**	**327**	*e*P			Pn	07 40 13.8	-5.0
KLR				*e*				07 42 44.5	
KLR				pmax	pmax				
	comp=N,52nm,1.4s								
KLR				pmax	pmax				
	comp=E,120nm,1.4s								
KLR				pmax	pmax				
	comp=Z,200nm,1.4s								
KLR				MLR	MLR				
	comp=E,3μm,12.0s								
KLR				MLR	MLR				
	comp=Z,13μm,12.0s								
CN2	**Changchun**	**13.69**	**296**	*e*P			**Pn**	**07 40 28.6**	**-1.3**
CN2				*e*PP			**PnPn**	**07 40 40.4**	**+2.6**
CN2				*e*S			**Sn**	**07 42 59.1**	**-1.2**
CN2				*e*SS			**SnSn**	**07 43 15.6**	**+2.8**
CN2				pmax	pmax				
	comp=Z,20nm,0.8s								
CN2				pmax	pmax				
	comp=Z,200nm,8.0s								
CN2				LR	LR				
	comp=N,4μm,15.0s								
CN2				LR	LR				
	comp=E,4μm,15.0s								
CN2				LR	LR				
	comp=Z,5μm,16.0s								
SNY	**Shenyang**	**14.69**	**288**	⇑P			**Pn**	**07 40 45.0**	**+1.6**
SNY				pmax	pmax				
	comp=Z,23nm,1.7s								
DL2	**Dalian**	**16.22**	**277**	P			**Pn**	**07 41 04.3**	**+1.2**
DL2				S			**Sn**	**07 44 00.0**	**-1.9**
DL2				pmax	pmax				
	comp=Z,150nm,0.9s								
DL2				pmax	pmax				
	comp=Z,2μm,10.2s								
DL2				LR	LR				
	comp=N,2μm,14.9s								
DL2				LR	LR				
	comp=E,2μm,15.5s								
DL2				LR	LR				
	comp=Z,3μm,15.4s								
PEA0B	**Petropavlovsk-**	**17.68**	**31**	*e*Pn			**Pn**	**07 41 16.8**	**-4.4**
PETK	**Petropavlovsk-**	**17.68**	**31**	P			**Pn**	**07 41 16.6**	**-4.6**
PETK				pmax	pmax				
	comp=Z,1.0nm,0.3s								
PETK				MLR	MLR				
	comp=Z,2μm,18.4s								
PETK	**Petropavlovsk-**	**17.68**	**31**	P			**Pn**	**07 41 16.6**	**-4.6**
PETK	**Petropavlovsk-**	**17.68**	**31**	P			**Pn**	**07 41 16.6**	**-4.6**
	comp=Z,1.1nm,0.3s,baz=199,slow=12,SNR=32								
PETK				LR		LR		07 48 32.7	
	comp=Z,2μm,18.4s,baz=223,slow=38								
PET	**Petropavlovsk**	**18.02**	**33**	*e*P			**P**	**07 41 26.7**	**+1.5**
PET				*e*S			**S**	**07 44 49.0**	**-0.2**
PET				pmax	pmax				
	comp=Z,116nm,1.5s								
PET				MLR	MLR				
	comp=Z,5μm,17.0s								
SSE	**Sheshan**	**19.05**	**252**	P			**P**	**07 41 37.3**	**+0.5**
SSE				S			**S**	**07 45 07.1**	**-3.4**
SSE				pmax	pmax				
	comp=Z,140nm,0.9s								
SSE				pmax	pmax				
	comp=Z,990nm,8.0s								
SSE				LR	LR				
	comp=N,2μm,21.8s								
SSE				LR	LR				
	comp=E,2μm,21.8s								
SSE				LR	LR				
	com

comp=E,4µm,16.0s
NJ2 LR LR
comp=Z,8µm,20.4s
CLNS Chul'man 21.37 333 *e*P **P** **07 42 00.8 -1.0**
CLNS *e* 07 42 17.8
CLNS *e*S **S** **07 45 56.9 +0.6**
CLNS *e* 07 46 03.6
CLNS *e*SS **SnSn** **07 46 30.0 +8.5**
CLNS pmax pmax
comp=Z,221nm,1.5s
CLNS pmax pmax
comp=N,258nm,1.6s
CLNS pmax pmax
comp=E,87nm,1.6s
CLNS pmax pmax
comp=E,67nm,1.2s
CLNS pmax pmax
comp=Z,73nm,1.2s
CLNS pmax pmax
comp=N,63nm,1.2s
CLNS smax smax
comp=E,244nm,9.7s
CLNS smax smax
comp=N,1µm,9.2s
CLNS MLR MLR
comp=Z,3µm,19.0s
CLNS MLR MLR
comp=N,5µm,21.0s
CLNS MLR MLR
comp=E,2µm,19.0s
TATO Taipei 22.49 238 *e*P **P** **07 42 15.7 +1.7**
comp=E,1µm,2.3s
TATO LR LR
comp=Z,4µm,21.0s
YHNB Yeheng 22.77 238 *e*P **P** **07 42 14.8 -2.3**
comp=Z,65nm,0.7s
YHNB LR LR
comp=Z,5µm,22.0s
NACB Ninganchiao 22.97 236 *e*P **P** **07 42 16.1 -3.0**
comp=Z,50nm,0.6s
SSLB Suanglung 23.66 237 *e*P **P** **07 42 24.0 -1.7**
comp=Z,58nm,0.7s
YULB Yu-li 23.72 236 *e*P **P** **07 42 23.4 -2.8**
comp=Z,56nm,0.6s
HHC Hu-ho-hao-te 23.74 285 *e*P **P** **07 42 25.3 -1.1**
HHC pP **pP** **07 42 37.8 -0.7**
HHC sP **sP** **07 42 42.6 -1.7**
HHC PP **PnPn** **07 42 59.4 +3.8**
HHC PcP **PcP** **07 46 09.8 +0.6**
HHC S **S** **07 46 35.0 -3.4**
HHC sS **sS** **07 46 54.1 -4.9**
HHC SS **SnSn** **07 47 24.0 +4.4**
HHC ScP **ScP** **07 49 44.3 +0.9**
HHC pmax pmax
comp=Z,74nm,1.1s
HHC pmax pmax
comp=Z,2µm,6.3s
HHC LR LR
comp=N,9µm,15.3s
HHC LR LR
comp=E,9µm,15.3s
HHC LR LR
comp=Z,11µm,15.5s
CIT Chita 23.97 313 *e*P **P** **07 42 28.4 0.0**
CIT *e* 07 42 40.1
CIT *e* 07 43 09.0
CIT *e* 07 43 12.9
CIT *e*S **S** **07 46 39.8 -2.0**
CIT pmax pmax
comp=Z,574nm,1.8s
TPUB Ta-pu 24.21 236 *e*P **P** **07 42 29.1 -1.7**
comp=Z,134nm,1.1s
TWG Pinlang 24.27 235 *e*P **P** **07 42 31.4 0.0**
comp=Z,352nm,0.6s
YAK Yakutsk 24.47 345*c e*P **P** **07 42 32.4 -0.4**
YAK *e**PP **pP** **07 42 45.5 +0.3**
YAK *e*S **S** **07 46 46.5 -2.9**
YAK *e*SS SnSn 07 47 03.2 -34
YAK *e*SSS SSS 07 47 45.8
YAK pmax pmax
comp=Z,234nm,1.0s
YAK smax smax
comp=N,4µm,2.5s
YAK smax smax
comp=E,2µm,2.2s
YAK MLR MLR
comp=E,3µm,18.0s
YAK MLR MLR
comp=Z,4µm,16.0s
YAK MLR MLR
comp=N,3µm,18.0s
QZH Quanzhou 24.48 242⇑*i*P **P** **07 42 34.8 +1.6**
QZH pP **pP** **07 42 45.0 -0.5**
QZH S **S** **07 46 52.0 +1.8**
QZH LR LR
comp=N,4µm,14.8s
QZH LR LR
comp=E,2µm,11.6s
QZH LR LR
comp=Z,5µm,14.8s
WHN Wuhan 24.48 259 ⇑P **P** **07 42 32.8 -0.4**
WHN S **S** **07 46 51.1 +0.8**
WHN LR LR
comp=N,3µm,10.9s
WHN LR LR
comp=E,5µm,15.6s
WHN LR LR
comp=Z,9µm,20.5s
BTO Baotou 24.93 284 *e*P **P** **07 42 36.3 -1.0**
GUMO Guam 25.28 175 PFAKE 07 42 50.0 +9.5
GUMO LR LR
comp=Z,4µm,22.0s
FX1 Attu Island--F 25.32 46 *e*P **P** **07 42 42.0 +1.5**
ULN Ulaanbaatar 27.06 301 P **P** **07 42 57.0 +0.5**
SNR=16
ULN Ulaanbaatar 27.06 301 *e*P **P** **07 42 57.1 +0.5**
comp=Z,22nm,0.7s
ULN LR LR
comp=Z,3µm,19.0s
XAN Xi'an 27.31 270 P **P** **07 42 58.9 +0.1**
XAN sP **sP** **07 43 16.0 -0.8**
XAN PP **PnPn** **07 43 44.5 +0.1**
XAN S **S** **07 47 30.6 -4.5**
XAN SS **SnSn** **07 48 49.5 +2.6**
XAN pmax pmax
comp=Z,14nm,0.8s
XAN pmax pmax
comp=Z,360nm,12.9s
XAN LR LR
comp=N,2µm,17.9s
XAN LR LR
comp=E,690nm,19.3s
XAN LR LR
comp=Z,770nm,20.1s
SONM Songino Array 27.49 301 P **P** **07 42 59.9 -0.6**
SONM Songino Array 27.49 301 P **P** **07 42 59.9 -0.6**
comp=Z,29nm,0.8s,baz=89,slow=7.8,SNR=24
SONM LR LR 07 54 18.1
comp=Z,3µm,19.3s,baz=91,slow=37
ENH Enshi 28.35 262 *e*P **P** **07 43 08.2 0.0**
comp=Z,157nm,0.9s
ENH LR LR
comp=Z,3µm,22.0s
IRK Irkutsk 29.52 310 *e*P **P** **07 43 18.3 +0.1**
IRK pmax pmax
comp=Z,130nm,2.0s
TLY Talaya 29.79 308 P **P** **07 43 21.6 +0.9**
comp=Z,254nm,0.9s,SNR=18
ZAK Zakamensk 29.82 306⇓*i*P **P** **07 43 21.0 0.0**
ZAK *e* 07 46 22.6
ZAK pmax pmax
comp=Z,42nm,1.4s
LZH Lanzhou 30.62 277 ⇑P **P** **07 43 26.5 -1.8**
LZH pP **pP** **07 43 38.6 -2.2**
LZH sP **sP** **07 43 44.1 -2.3**
LZH PP **PnPn** **07 44 27.3 -1.6**
LZH S **S** **07 48 23.5 -3.8**
LZH sS **sS** **07 48 43.8 -4.4**
LZH SS **ScP** **07 50 05.6 +1.3**
LZH pmax pmax
comp=Z,83nm,1.0s
LZH pmax pmax
comp=Z,330nm,5.2s
LZH LR LR
comp=N,4µm,12.5s
LZH LR LR
comp=E,3µm,11.2s
LZH LR LR
comp=Z,5µm,13.6s
MOY Mondy 31.42 308 *e*P **P** **07 43 35.0 -0.2**
MOY pmax pmax
comp=Z,100nm,1.9s
BILL Bilibino 32.02 17*c i*P **P** **07 43 39.8 -0.3**
BILL *e**PP **pP** **07 43 53.8 +1.2**
BILL *e* 07 44 44.4
BILL *e* 07 46 29.1
BILL pmax pmax
comp=Z,136nm,1.5s
BILL MLR MLR
comp=Z,1µm,15.0s
GYA Guiyang 32.37 258⇑*i*P **P** **07 43 43.0 -0.8**
GYA pP **pP** **07 43 57.8 +1.5**
GYA sP **sP** **07 44 04.0 +2.1**
GYA PP **PnPn** **07 44 53.1 +1.4**
GYA PcP **PcP** **07 46 31.5 +0.9**
GYA S **S** **07 48 52.3 -2.5**
GYA sS **sS** **07 49 16.0 +0.2**
GYA ScP **ScP** **07 50 09.6 -0.7**
GYA PcS **PcS** **07 50 17.3 +1.4**
GYA SS **SnSn** **07 50 49.5 -1.0**
GYA pmax pmax
comp=Z,90nm,0.8s
GYA pmax pmax
comp=Z,280nm,5.0s
GYA LR LR
comp=N,2µm,16.2s
GYA LR LR
comp=E,2µm,19.2s
GYA LR LR
comp=Z,3µm,21.4s
CD2 Chengdu 32.53 268 *e*P **P** **07 43 45.0 -0.1**
CD2 pP **pP** **07 43 58.0 +0.4**
CD2 sP **sP** **07 44 02.9 -0.3**
CD2 PP **PnPn** **07 44 54.3 +0.7**
CD2 PcP **PcP** **07 46 31.8 +0.9**
CD2 S **S** **07 48 55.3 -1.8**
CD2 SS **SnSn** **07 50 52.8 -1.3**
CD2 ScS **ScS** **07 54 07.9 -2.5**
CD2 pmax pmax
comp=Z,130nm,0.7s
CD2 pmax pmax
comp=Z,610nm,8.2s
CD2 LR LR
comp=N,4µm,11.2s
CD2 LR LR
comp=E,3µm,17.8s
CD2 LR LR
comp=Z,4µm,15.5s
GTA Gaotai 32.85 285 ⇑P **P** **07 43 48.8 +0.9**
GTA pP **pP** **07 44 00.8 +0.4**
GTA sP **sP** **07 44 06.1 +0.1**
GTA PcP **PcP** **07 46 33.0 +1.3**
GTA S **S** **07 49 01.6 -0.5**
GTA sS **sS** **07 49 22.3 -0.8**
GTA ScP **ScP** **07 50 12.9 +1.1**
GTA PcS **PcS** **07 50 17.6 +0.4**
GTA SS **SnSn** **07 51 02.5 +0.7**
GTA ScS **ScS** **07 54 11.8 -0.1**
GTA pmax pmax
comp=Z,37nm,1.1s
GTA pmax pmax
comp=Z,550nm,6.9s
GTA LR LR
comp=N,4µm,19.7s
GTA LR LR
comp=E,5µm,19.0s
GTA LR LR
comp=Z,6µm,18.3s
TIXI Tiksi 33.56 352⇑*e*P **P** **07 43 53.2 -0.3**
TIXI pmax pmax
comp=Z,21nm,1.0s
TIXI MLR MLR
comp=Z,6µm,22.0s
QIZ Qiongzhong 34.46 244 P **P** **07 44 04.3 +2.5**
QIZ sP **sP** **07 44 20.6 +0.6**
QIZ S **S** **07 49 26.8 -0.1**
QIZ pmax pmax
comp=Z,8.0nm,1.4s
QIZ LR LR
comp=N,1µm,24.3s
QIZ LR LR
comp=E,660nm,24.0s
QIZ LR LR
comp=Z,3µm,16.1s
QIZ Qiongzhong 34.46 244 PFAKE 07 44 10.0 +8.2
QIZ LR LR
comp=Z,975nm,19.0s
MIDW Midway 34.88 95 *e*P **P** **07 44 06.4 +1.0**
comp=Z,100nm,1.1s
DAV Davao City (W) 35.14 210 PFAKE 07 44 20.0 +12
DAV LR LR
comp=Z,2µm,21.0s
HVS Khovu-Aksy 35.94 306*c i*P **P** **07 44 15.2 +0.8**
HVS pmax pmax
comp=Z,810nm,1.9s
HVS MLR MLR
comp=Z,16µm,17.0s
KMI Kunming 36.08 260 P **P** **07 44 16.5 +0.5**
KMI pP **pP** **07 44 27.3 -1.3**
KMI S **S** **07 49 50.6 -1.7**
KMI pmax pmax
comp=Z,120nm,1.0s
KMI LR LR
comp=N,2µm,17.1s
KMI LR LR
comp=E,2µm,20.0s
KMI LR LR
comp=Z,3µm,21.9s
GAMB Gambell 36.71 32 *e*P **P** **07 44 22.3 +1.7**
comp=Z,85nm,1.2s
KRAR Krasnoyarsk 36.73 314 *i* P **P** **07 44 20.6 -0.3**
KRAR pmax pmax
comp=Z,158nm,1.4s
KRAR MLR MLR
comp=Z,2µm,20.0s
KDM Kudat 39.33 223 P **P** **07 44 46.2 +2.9**
MYLDM Lahad Datu 39.96 219 P **P** **07 44 51.0 +2.5**
MYLDM Lahad Datu 39.96 219 P **P** **07 44 50.9 +2.4**
comp=Z,93nm,1.2s
SDKM Sandakan 40.23 221 P **P** **07 44 51.8 +1.1**
KKM Kota Kinabalu 40.40 223 P **P** **07 44 53.9 +1.7**
KKM Kota Kinabalu 40.40 223 P **P** **07 44 50.7 -1.5**
comp=Z,21nm,1.2s,comp=Z,833nm
WMQ Urumqi 40.77 295 P **P** **07 44 56.3 +1.2**
WMQ pP **pP** **07 45 10.0 +2.2**
WMQ sP **sP** **07 45 14.5 +1.1**
WMQ PP **PnPn** **07 46 34.0 +0.1**
WMQ S **S** **07 51 03.0 +0.6**
WMQ sS **sS** **07 51 24.0 +0.2**
WMQ SS **SS** **07 54 02.0 -2.3**
WMQ pmax pmax
comp=Z,130nm,1.0s
WMQ pmax pmax
comp=Z,280nm,5.8s
WMQ LR LR
comp=N,1µm,14.7s
WMQ LR LR
comp=E,1µm,12.0s
WMQ LR LR
comp=Z,1µm,21.8s
TSM Tawau 41.04 219 P **P** **07 44 59.2 +1.8**
ZAA0 Zalesovo Array 41.31 311 *e*P **P** **07 44 59.2 0.0**
ZALV Zalesovo Beam 41.31 311 P **P** **07 44 59.4 +0.2**
ZALV pmax pmax
comp=Z,41nm,0.8s
ZALV MLR MLR
comp=Z,4µm,18.1s
ZALV Zalesovo Beam 41.31 311 P **P** **07 44 59.4 +0.2**
ZALV Zalesovo Beam 41.31 311 P **P** **07 44 59.4 +0.2**
comp=Z,41nm,0.8s,baz=85,slow=8.0,SNR=129
ZALV LR LR 08 02 50.5
comp=Z,4µm,18.1s,baz=69,slow=37
NVS Novosibirsk 42.19 312⇓*i*P **P** **07 45 06.2 -0.2**
NVS *i* 07 46 57.9
NVS *i*S **S** **07 51 20.9 -1.9**
NVS pmax pmax
comp=N,21nm,1.7s
NVS pmax pmax
comp=E,92nm,1.7s
NVS pmax pmax
comp=Z,104nm,1.7s
NVS pmax pmax
comp=Z,59nm,1.6s
NVS pmax pmax
comp=N,19nm,1.7s
NVS pmax pmax
comp=E,23nm,1.7s
NVS smax smax
comp=N,54nm,2.5s
NVS smax smax
comp=E,135nm,2.5s
PBKT Sadao Pong 42.45 250 P **P** **07 45 09.2 +0.3**
comp=E,32nm,0.9s,comp=E,1µm
CHTO Chiang Mai 42.56 255 *e*P **P** **07 45 10.4 +0.5**
CHTO pmax pmax
comp=Z,65nm,1.4s
CHTO Chiang Mai 42.56 255 P **P** **07 45 10.0 +0.2**
SNR=6.7
CHTO Chiang Mai 42.56 255 *e*P **P** **07 45 10.4 +0.5**
comp=Z,65nm,1.4s
CHTO Chiang Mai 42.56 255 P **P** **07 45 08.1 -1.8**
comp=Z,40nm,1.2s,comp=Z,724nm
CMAR Chiang Mai Arr 42.78 254 P **P** **07 45 12.3 +0.7**
CMAR PcP **PcP** **07 47 01.9 -0.4**
CMAR Chiang Mai Arr 42.78 254 P **P** **07 45 12.3 +0.7**
comp=Z,9.3nm,0.8s,baz=43,slow=7.9,SNR=23
CMAR PcP **PcP** **07 47 01.9 -0.4**
comp=Z,7.7nm,0.8s,baz=20,slow=3.0,SNR=5.9
CMAR LR LR 08 05 10.8
comp=Z,948nm,18.7s,baz=55,slow=39
LSA Lhasa 42.89 274 P **P** **07 45 13.6 +0.6**
LSA Lhasa 42.89 274 *e*P **P** **07 45 14.4 +1.4**
LSA pmax pmax
comp=Z,97nm,1.3s
LSA MLR MLR
comp=Z,3µm,21.0s
LSA Lhasa 42.89 274 *e*P **P** **07 45 14.4 +1.4**
comp=Z,97nm,1.3s
LSA LR LR
comp=Z,3µm,21.0s
SVW2 Sparrevohn 43.56 38 *e*P **P** **07 45 19.0 +1.6**
comp=Z,208nm,1.0s
MK31 Makanchi Array 43.86 301 *i* P **P** **07 45 19.9 -0.2**
MK31 pmax pmax
comp=Z,54nm,0.7s
MK31 Makanchi Array 43.86 301 *e*P **P** **07 45 20.1 0.0**
MKAR Makanchi Array 43.86 301 P **P** **07 45 20.2 +0.1**
MKAR pmax pmax
comp=Z,37nm,0.9s
MKAR MLR MLR
comp=Z,2µm,19.1s
MKAR Makanchi Array 43.86 301 *e*P **P** **07 45 20.3 +0.2**
MKAR Makanchi Array 43.86 301 P **P** **07 45 20.2 +0.1**
comp=Z,36nm,0.9s,baz=84,slow=8.8,SNR=220
MKAR LR LR 08 04 16.8
comp=Z,2µm,19.1s,baz=76,slow=37
SHL Shillong 44.27 268 *e*PKP **P** **07 45 24.0 +0.2**
SHL *e*S **S** **07 51 55.0 +0.5**
OHAK Old Harbor 44.85 44 *e*P **P** **07 45 27.5 -0.2**
comp=Z,102nm,1.0s
RSO Redoubt South 44.95 39 *e*P **P** **07 45 29.5 +0.8**
KDAK Kodiak Island 45.18 43 P **P** **07 45 30.0 -0.4**
comp=Z,1µm,1.0s,SNR=20
KDAK Kodiak Island 45.18 43 *e*P **P** **07 45 29.9 -0.4**
comp=Z,190nm,1.0s
KDAK LR LR
comp=Z,2µm,22.0s
KDAK Kodiak Island 45.18 43 P **P** **07 45 29.8 -0.5**
comp=Z,148nm,0.9s,baz=288,slow=3.5,SNR=55
SPU Mount Spurr 45.27 38 *e*P **P** **07 45 32.2 +1.1**
KURK Kurchatov 45.46 307 P **P** **07 45 32.6 -0.1**
comp=Z,885nm,0.8s
KURK Kurchatov 45.46 307 P **P** **07 45 33.2 +0.5**
KURK S **S** **07 52 11.0 +0.2**
KURK pmax pmax
comp=Z,51nm,0.5s
KURK smax smax
comp=N,2.0nm,1.1s
KURK Kurchatov 45.46 307 *e*P **P** **07 45 32.6 -0.1**
comp=N,120nm,0.9s
KURK S **S** **07 52 10.9 +0.2**
KURK LR LR
comp=Z,2µm,20.0s
KURBB Kurchatov Arra 45.54 307 P **P** **07 45 33.2 -0.1**
comp=Z,51nm,0.5s,baz=82,slow=8.0,SNR=441
KURBB S **S** **07 52 10.9 -0.9**
comp=Z,1.5nm,1.1s,baz=77,slow=13,SNR=6.0
SBUM Sibu 45.55 225 P **P** **07 45 34.6 +0.8**
SBUM Sibu 45.55 225 P **P** **07 45 35.1 +1.3**
comp=Z,14nm,1.3s
TRF Thorofare Moun 46.05 35 *e*P **P** **07 45 37.3 0.0**
comp=Z,92nm,0.9s
COLD Coldfoot 46.14 30 *e*P **P** **07 45 39.0 +1.1**
comp=Z,46nm,1.0s
MCK McKinley 46.64 35 *e*P **P** **07 45 42.4 +0.5**
MCK pmax pmax
comp=Z,165nm,1.0s
MCK McKinley 46.64 35 *e*P **P** **07 45 42.4 +0.5**
comp=Z,165nm,1.0s
TAPN Taplejung 46.66 273 *e*P **P** **07 45 43.4 +0.6**
comp=Z,151nm,1.1s
PMR Palmer 46.66 38 *e*P **P** **07 45 42.1 +0.2**
PMR pmax pmax
comp=Z,171nm,1.0s
PMR Palmer 46.66 38 *e*P **P** **07 45 42.1 +0.2**
comp=Z,171nm,1.0s
SML Sawmill 47.02 37 *e*P **P** **07 45 45.5 +0.6**
SML pmax pmax
comp=Z,44nm,1.0s
SML Sawmill 47.02 37 *e*P **P** **07 45 45.5 +0.6**
comp=Z,44nm,1.0s
COLA College 47.08 33 *e*P **P** **07 45 46.2 +1.0**
COLA pmax pmax
comp=Z,766nm,2.2s
COLA College 47.08 33 *e*P **P** **07 45 46.2 +1.0**
comp=Z,766nm,2.2s
ODAN Odare 47.14 272 *e*P **P** **07 45 46.7 +0.2**
comp=Z,103nm,0.9s
KSM Kuching 47.42 226 *e*P **P** **07 45 50.0 +1.5**
comp=Z,32nm,0.8s
KSM Kuching 47.42 226 P **P** **07 45 50.0 +1.5**
KSM Kuching 47.42 226 P **P** **07 45 48.3 -0.2**
comp=Z,46nm,1.0s,comp=Z,707nm
ILAR Eielson Array 47.50 33 P **P** **07 45 48.5 0.0**
ILAR Eielson Array 47.50 33 P **P** **07 45 48.5 0.0**
comp=Z,95nm,0.8s,baz=268,slow=6.0,SNR=644
ILAR LR LR 08 06 59.7
comp=Z,1µm,20.9s,baz=280,slow=38
RAMN Ramite 47.71 273 *e*P **P** **07 45 51.3 +0.3**
comp=Z,303nm,1.0s
GUN Gumba 47.81 275 *e*P **P** **07 45 52.4 +0.5**
comp=Z,150nm,0.6s
PAX Paxson 48.25 36 *e*P **P** **07 45 54.7 +0.2**
PAX pmax pmax
comp=Z,85nm,1.2s
PAX Paxson 48.25 36 *e*P **P** **07 45 54.7 +0.2**
comp=Z,85nm,1.2s
DIV Divide 48.31 38 *e*P **P** **07 45 56.0 +1.1**
comp=Z,304nm,1.1s
KKN Kakani 48.34 275 *e*P **P** **07 45 56.3 +0.5**
comp=Z,169nm,0.8s
PKI Pulchoki 48.34 274 *e*P **P** **07 45 56.0 +0.1**
comp=Z,96nm,1.0s
PKIN Phulchoki 48.35 274 *e*P **P** **07 45 55.9 0.0**
comp=Z,26nm,0.5s
KAPI Kappang 48.47 211 P **P** **07 45 56.8 +0.2**
comp=Z,260nm,1.4s,SNR=8.2
KAPI Kappang 48.47 211 *e*P **P** **07 45 56.7 +0.2**
comp=Z,185nm,1.6s
KAPI LR LR
comp=Z,571nm,20.0s
KAPI Kappang 48.47 211 P **P** **07 45 56.3 -0.2**
comp=Z,68nm,1.7s,comp=Z,1µm
DMN Daman 48.56 275 *e*P **P** **07 45 58.1 +0.6**
comp=Z,134nm,1.0s
KTGM Kuala Trenggan 48.79 237 P **P** **07 46 00.5 +1.5**
DOT Dot Lake 48.81 35 *e*P **P** **07 45 58.9 +0.2**
comp=Z,82nm,1.0s
MENT Mentasta 49.05 36 *e*P **P** **07 46 01.7 +1.2**
DANN Dangsing 49.25 276 *e*P **P** **07 46 03.6 +0.7**
TKM2 Tokmak 2 49.50 297 *e*P **P** **07 46 05.5 +1.0**
TKM2 pmax pmax
comp=Z,54nm,0.8s
TKM2 MLR MLR
comp=Z,2µm,19.0s
TKM2 Tokmak 2 49.50 297 *e*P **P** **07 46 05.5 +1.0**
comp=Z,54nm,0.8s
TKM2 LR LR

comp=Z,2µm,19.0s
TKM2 Tokmak 2 49.50 297 P P 07 46 05.5 +1.0
SNR=75
KOLN Koldanda 49.65 276 *e*P **P 07 46 06.3 +0.5**
comp=Z,204nm,1.2s
VOSK Vostochnaya 49.68 311 P P 07 46 05.4 -0.1
VOSK pmax pmax
comp=Z,62nm,1.1s
EGAK Eagle 49.94 33 *e*P **P 07 46 07.3 +0.1**
comp=Z,88nm,1.0s
EGAK LR LR
comp=Z,923nm,19.0s
BVA0 Borovoye Array 49.96 311 *i* P **P 07 46 07.7 +0.2**
BVA0 pmax pmax
comp=Z,32nm,0.7s
BVAR Borovoye Array 49.96 311 P P 07 46 07.8 +0.3
BVAR S **S 07 53 16.9 +2.5**
BVAR pmax pmax
comp=Z,20nm,0.5s
BVAR smax smax
comp=N,4.0nm,1.0s
BVAR Borovoye Array 49.96 311 P P 07 46 07.8 +0.3
BVAR S **S 07 53 16.9 +2.5**
BVAR Borovoye Array 49.96 311 P P 07 46 07.8 +0.3
comp=N,20nm,0.5s,baz=74,slow=7.3,SNR=56
BVAR S **S 07 53 16.9 +2.5**
comp=N,3.8nm,1.0s,baz=81,slow=12,SNR=4.5
PYUN Piuthan 49.97 276 *e*P **P 07 46 08.8 +0.6**
comp=N,513nm,1.1s
BRVK Borovoye 50.01 311 P P 07 46 08.4 +0.5
comp=N,238nm,0.7s,SNR=20
BRVK Borovoye 50.01 311 *e*P **P 07 46 08.1 +0.2**
BRVK pmax pmax
comp=Z,54nm,1.0s
BRVK MLR MLR
comp=Z,3µm,19.0s
BRVK Borovoye 50.01 311 *e*P **P 07 46 08.1 +0.2**
comp=Z,54nm,1.0s
BRVK LR LR
comp=Z,3µm,19.0s
KZA Kyzart 50.02 296 *i* P **P 07 46 10.1 +1.4**
KZA Kyzart 50.02 296 P P 07 46 10.1 +1.4
SNR=20
KBK Karagaybulak 50.03 297 *i* P **P 07 46 08.8 +0.3**
KBK Karagaybulak 50.03 297 P P 07 46 08.8 +0.3
SNR=38
CHMS Chumysh 50.06 298 *i* P **P 07 46 09.2 +0.7**
CHMS Chumysh 50.06 298 P P 07 46 09.2 +0.7
SNR=8.1
USP Ospenovka 50.14 298 *i* P **P 07 46 09.6 +0.4**
USP Ospenovka 50.14 298 P P 07 46 09.6 +0.4
SNR=26
AAK Ala-Archa 50.36 297 *e*P **P 07 46 11.4 +0.5**
AAK pmax pmax
comp=Z,94nm,1.8s
AAK MLR MLR
comp=Z,1µm,19.0s
AAK Ala-Archa 50.36 297 *e*P **P 07 46 11.3 +0.5**
comp=Z,94nm,1.8s
AAK LR LR
comp=Z,1µm,19.0s
AAK Ala-Archa 50.36 297 P P 07 46 11.4 +0.5
SNR=6.7
AAK Ala-Archa 50.36 297 P P 07 46 10.5 -0.4
comp=Z,7.2nm,0.3s,baz=115,slow=5.5,SNR=16
KSH Kashi 50.42 293 P P 07 46 15.8 +4.4
KSH *e*pP pP 07 46 27.8 +3.3
KSH *e*sP sP 07 46 33.8 +3.8
KSH *e*PcP **PcP 07 47 33.5 +4.3**
KSH *e*PP PP 07 48 12.6 +5.4
KSH *e*S **S 07 53 24.8 +3.2**
KSH *e*sS sS 07 53 46.6 +3.2
KSH pmax pmax
comp=Z,18nm,0.9s
KSH pmax pmax
comp=Z,340nm,3.6s
KSH LR LR
comp=N,1µm,12.1s
KSH LR LR
comp=E,970nm,8.1s
KSH LR LR
comp=Z,1µm,10.4s
KULM Kulim 50.46 239 *e*P **P 07 46 11.7 -0.1**
comp=Z,109nm,1.4s
KULM LR LR
comp=Z,974nm,22.0s
KULM Kulim 50.46 239 P P 07 46 13.0 +1.2
KULM Kulim 50.46 239 P P 07 46 12.1 +0.3
comp=Z,54nm,1.2s,comp=Z,729nm
HNR Honiara 50.75 157 LR LR 08 06 06.3
comp=Z,3µm,21.5s,baz=325,slow=34
ZRNK Zerenda 50.78 312 P P 07 46 13.9 +0.1
ZRNK pmax pmax
comp=Z,80nm,1.4s
IPM Ipoh 50.81 238 *e*P **P 07 46 14.6 +0.2**
comp=Z,128nm,1.4s
IPM Ipoh 50.81 238 P P 07 46 15.0 +0.6
IPM Ipoh 50.81 238 P P 07 46 14.3 -0.1
comp=Z,70nm,1.2s,comp=Z,774nm
EKS2 Erkin-Say 50.84 298 *e*P **P 07 46 14.9 +0.4**
EKS2 pmax pmax
comp=Z,19nm,0.7s
EKS2 MLR MLR
comp=Z,1µm,19.0s
EKS2 Erkin-Say 50.84 298 *e*P **P 07 46 14.9 +0.4**
comp=Z,19nm,0.7s
EKS2 LR LR
comp=Z,1µm,19.0s
EKS2 Erkin-Say 50.84 298 P P 07 46 14.9 +0.4
SNR=19
MYKOM Kota Tinggi 51.02 233 P P 07 46 17.1 +1.1
MYKOM Kota Tinggi 51.02 233 P P 07 46 16.6 +0.6
AML Almayashu 51.09 297 *i* P **P 07 46 17.6 +0.9**
AML Almayashu 51.09 297 P P 07 46 17.6 +0.9
SNR=35
KGM Kluang 51.18 234 P P 07 46 18.9 +1.7
FRIM Kepong 51.34 237 P P 07 46 19.8 +1.4
INK Inuvik 52.37 28 P P 07 46 26.3 +0.9
INK Inuvik 52.37 28 P P 07 46 26.3 +0.9
comp=Z,69nm,0.9s,baz=278,slow=7.5,SNR=59
COEN Coen 52.57 179 *e*P **P 07 46 28.2 +0.8**
comp=Z,369nm,0.8s
KK31 Karatay Array 52.93 299 *i* P **P 07 46 29.6 -0.3**
KK31 pmax pmax
comp=Z,22nm,0.7s
KKAR Karatay Array 52.93 299 *e*P **P 07 46 30.1 +0.2**
KKAR pmax pmax
comp=Z,28nm,0.8s
KKAR Karatay Array 52.93 299 *e*P **P 07 46 30.1 +0.2**
comp=Z,28nm,0.8s
SMLA Simla 53.03 283 *i* P **P 07 46 31.3 +0.5**
SMLA AMb AMB 07 46 35.0
comp=Z,50nm,0.5s
SMLA *i* x x 07 53 55.8
KIP Kipapa 53.43 91⇑ *e*P **P 07 46 35.7 +1.9**
KIP pmax pmax
comp=Z,167nm,2.5s
PSI Prapat 53.45 239 P P 07 46 34.2 0.0
PSI pP **pP 07 46 46.9 -0.4**
PSI Prapat 53.45 239 P P 07 46 34.2 0.0
comp=Z,18nm,0.8s,baz=9.8,slow=3.9,SNR=16
PSI pP **pP 07 46 46.9 -0.4**
comp=Z,26nm,0.7s,baz=9.3,slow=4.6,SNR=7.4
SKAG Skagway 53.74 39 *e*P **P 07 46 37.6 +2.0**
comp=Z,92nm,1.2s
KKR Kurukshetra 53.84 282 *e*PKP **P 07 46 36.1 -0.7**
AGRA Agra 54.30 278 *e*PKP **P 07 46 39.9 -0.2**
AGRA AMB AMB 07 46 41.1
comp=Z,42nm,0.5s
AYAN Aya Nagar 54.31 280 *e*PKP **P 07 46 40.0 -0.2**
SVE Sverdlovsk 54.32 318*c i*P **P 07 46 40.9 +1.1**
SVE *e*S **S 07 54 14.0 0.0**
SVE pmax pmax
comp=Z,97nm,0.8s
SVE MLR MLR
comp=Z,6µm,20.0s
BHGR Bahadurgarh 54.36 280 *e*PKP **P 07 46 40.8 +0.2**
BHGR AMB AMB 07 46 42.0
comp=Z,90nm,1.1s
RTK Rohtak 54.59 281 *e*PKP **P 07 46 41.7 -0.5**
KUDL Kundal 54.97 280 *e*PKP **P 07 46 44.2 -0.7**
SOKR Solikamsk 55.37 322*d i*P **P 07 46 48.0 +0.7**
SOKR S **S 07 54 31.7 +3.7**
SOKR pmax pmax
comp=Z,40nm,1.2s
SOKR MLR MLR

comp=Z,2µm,17.0s
ARU Arti 55.53 318*c i*P **P 07 46 48.9 +0.3**
ARU 07 48 48.9
ARU S **S 07 54 29.6 -0.7**
ARU SS **SS 07 58 13.6 -1.5**
ARU pmax pmax
comp=Z,122nm,1.2s
ARU MLR MLR
comp=Z,6µm,20.0s
ARU Arti 55.53 318 P **P 07 46 49.8 +1.2**
comp=Z,504nm,0.9s,SNR=10.0
WRAK Wrangell Islan 56.22 42 *e*P **P 07 46 55.1 +1.7**
comp=Z,108nm,1.7s
WRAK LR LR
comp=Z,673nm,20.0s
AJM Ajmer 57.22 279 *i* P **P 07 47 00.0 -1.1**
AB31 Akbulak array 57.39 310 *i* P **P 07 47 01.7 -0.2**
AB31 pmax pmax
comp=Z,22nm,0.4s
ABKAR Akbulak array 57.39 310 *e*P **P 07 47 02.0 0.0**
comp=Z,37nm,0.6s
KBL Kabul 57.54 290 *e*P **P 07 47 03.5 0.0**
KBL pmax pmax
comp=Z,68nm,1.1s
KBL Kabul 57.54 290 *e*P **P 07 47 03.5 0.0**
comp=Z,68nm,1.1s
AKTO Aktyubinsk 58.06 311 P **P 07 47 06.6 -0.1**
AKTO pmax pmax
comp=Z,16nm,0.9s
AKTO Aktyubinsk 58.06 311 P **P 07 47 06.6 -0.1**
AKTO Aktyubinsk 58.06 311 P **P 07 47 06.6 -0.1**
comp=Z,16nm,0.8s,baz=59,slow=11,SNR=35
ALE Alert 58.22 4 P **P 07 47 08.0 +0.7**
comp=Z,573nm,1.1s,SNR=7.6
CTA Charters Tower 58.77 176 P **P 07 47 11.2 -0.6**
CTA Charters Tower 58.77 176 P **P 07 47 11.2 -0.6**
comp=Z,3.4nm,0.5s,baz=334,slow=5.7,SNR=5.4
CTAO Charters Tower 58.77 176 *e*P **P 07 47 11.6 -0.2**
CTAO pmax pmax
comp=Z,52nm,1.6s
CTAO MLR MLR
comp=Z,550nm,22.0s
CTAO Charters Tower 58.77 176 *e*P **P 07 47 11.6 -0.2**
comp=Z,52nm,1.6s
CTAO LR LR
comp=Z,550nm,22.0s
SPA0 Spitsbergen Ar 58.87 349 *e*P **P 07 47 12.6 +0.7**
SPA0 *e*S **S 07 55 14.7 +1.0**
KBS Kingsbay 58.98 350 *e*P **P 07 47 13.1 +0.5**
KBS *e*pP **pP 07 47 27.1 +1.2**
KBS *e*S **S 07 55 16.4 +1.3**
KBS AMS AMS 08 14 40.4
comp=Z,1µm,18.5s
KBS Kingsbay 58.98 350*c i*P **P 07 47 12.9 +0.3**
KBS pmax pmax
comp=Z,59nm,1.0s
KBS MLR MLR
comp=Z,1µm,19.0s
KBS Kingsbay 58.98 350 *e*P **P 07 47 13.3 +0.7**
comp=Z,58nm,1.0s
KBS LR LR
comp=Z,221nm,21.0s
WRAB Tennant Creek 59.00 189 P **P 07 47 12.0 -1.4**
comp=Z,341nm,1.2s,SNR=71
WRAB Tennant Creek 59.00 189 *e*P **P 07 47 12.4 -1.0**
WRAB pmax pmax
comp=Z,166nm,1.4s
WRAB MLR MLR
comp=Z,1µm,22.0s
WRAB Tennant Creek 59.00 189 *e*P **P 07 47 12.4 -1.0**
comp=Z,166nm,1.4s
WRAB LR LR
comp=Z,1µm,22.0s
WRA Warramunga Arr 59.01 189 P **P 07 47 12.6 -0.9**
WRA S **S 07 55 14.2 -2.4**
WRA ⇑*e* 08 16 55.8
WRA Warramunga Arr 59.01 189 P **P 07 47 12.6 -0.9**
comp=Z,49nm,0.8s,baz=6.9,slow=7.0,SNR=734
WRA S **S 07 55 14.2 -2.4**
comp=Z,4.5nm,1.2s,baz=5.3,slow=12,SNR=10.0
WRA PKP2bc 08 16 55.8
comp=Z,4.5nm,1.1s,baz=211,slow=2.8,SNR=7.6
HYB Hyderabad 59.09 268 *i* P **P 07 47 13.0 -1.3**
HSP Hornsund 59.81 348 *e*P **P 07 47 19.4 +1.1**
LATR Latur 60.07 270 *ex* x 07 47 07.0
RES Resolute Bay 60.61 15 P **P 07 47 23.9 +0.1**
RES pP **pP 07 47 39.2 +2.0**
RES Resolute Bay 60.61 15 P **P 07 47 23.9 +0.1**
comp=Z,88nm,1.0s,baz=310,slow=5.9,SNR=22
RES pP **pP 07 47 39.2 +2.0**
comp=Z,54nm,0.8s,baz=318,slow=6.0,SNR=8.7
LVZ Lovozero 60.77 336⇑ *e*P **P 07 47 25.2 +0.1**
LVZ pmax pmax
comp=Z,36nm,1.7s
APA Apatity 61.35 336⇑ *i*P **P 07 47 28.7 -0.2**
APA *i* 07 47 43.7
APA *i* S **S 07 55 45.0 -0.6**
APA pmax pmax
comp=Z,21nm,1.0s
APA MLR MLR
comp=Z,2µm,20.0s
YKW3 Yellowknife Ar 61.76 31 *e*P **P 07 47 31.6 -0.1**
comp=Z,1.7nm,1.3s
YKA Yellowknife Ar 61.80 31 P **P 07 47 32.1 +0.1**
YKA ⇑*e* 08 16 45.5
YKA Yellowknife Ar 61.80 31 P **P 07 47 32.1 +0.1**
comp=Z,32nm,0.9s,baz=297,slow=6.7,SNR=209
YKA PKP2bc 08 16 45.5
comp=Z,0.8nm,0.9s,baz=99,slow=1.7,SNR=7.9
KEV Kevo 62.01 339 *e*P **P 07 47 33.7 +0.3**
KEV pmax pmax
comp=Z,38nm,1.0s
KEV MLR MLR
comp=Z,2µm,20.0s
KEV Kevo 62.01 339 *ep* **P 07 47 33.5 +0.2**
comp=Z,12nm,0.7s
KEV Kevo 62.01 339 *e*P **P 07 47 33.7 +0.3**
comp=Z,38nm,1.0s
KEV LR LR
comp=Z,2µm,20.0s
ARCES ARCESS Array B 62.56 339 P **P 07 47 37.4 +0.3**
ARCES pP **pP 07 47 51.6 +1.1**
ARCES ARCESS Array B 62.56 339 P **P 07 47 37.4 +0.3**
comp=Z,6.4nm,0.7s,baz=55,slow=7.6,SNR=28
ARCES pP **pP 07 47 51.6 +1.1**
comp=Z,19nm,1.0s,baz=50,slow=8.1,SNR=8.5
ARCES LR LR 08 19 32.0
comp=Z,2µm,19.9s,baz=36,slow=40
ARE0 ARCESS Array S 62.56 339 *e*P **P 07 47 36.9 -0.2**
ARE0 *e*S **S 07 56 00.3 -0.6**
ARE0 ARCESS Array S 62.56 339 *e*P **P 07 47 37.2 +0.1**
AS31 Alice Springs 62.73 189 *e*P **P 07 47 38.4 -0.4**
ASAR Alice Springs 62.73 189 P **P 07 47 38.4 -0.4**
ASAR pP **pP 07 47 52.0 -0.1**
ASAR ⇑*e* 08 16 46.5
ASAR Alice Springs 62.73 189 P **P 07 47 38.4 -0.4**
comp=Z,15nm,0.7s,baz=5.3,slow=5.5,SNR=104
ASAR pP **pP 07 47 52.0 -0.1**
comp=Z,26nm,0.8s,baz=7.5,slow=5.7,SNR=12
ASAR LR LR 08 12 36.0
comp=Z,1µm,21.9s,baz=2.1,slow=34
ASAR PKP2bc 08 16 46.5
comp=Z,3.3nm,1.0s,baz=161,slow=3.2,SNR=9.9
IMYA Miami 63.08 296 *e*P **P 07 47 40.9 -0.4**
MBWA Marble Bar 63.41 204 *e*P **P 07 47 43.3 +0.1**
comp=Z,66nm,1.3s
KTK1 Kautokeino 63.52 339 *e*P **P 07 47 43.6 +0.2**
KTK1 *e*pP **pP 07 47 58.6 +1.8**
KTK1 *e*S **S 07 56 14.5 +1.6**
ISRO Mashad 63.54 296 *e*P **P 07 47 44.3 0.0**
PALK Pallekele 63.57 257 *e*P **P 07 47 44.2 -0.4**
comp=Z,34nm,1.0s
ABKT Ailbek 63.67 299 P **P 07 47 45.4 -0.4**
comp=Z,314nm,0.9s,SNR=12
IMOG Moghan 63.73 296 *e*P **P 07 47 45.4 -0.4**
IAKL Akhelmad 63.89 297 *e*P **P 07 47 46.8 0.0**
IKRD Kardeh 63.97 297 *e*P P 07 47 43.5 -3.8
DAG Danmarks Havn 64.00 355⇑ *i*P **P 07 47 46.3 -0.2**
DAG 07 48 00.4
DAG pmax pmax
comp=Z,30nm,0.9s
DAG Danmarks Havn 64.00 355⇑ *i*P **P 07 47 46.3 -0.2**
comp=Z,36nm,0.9s
DAG *i* 07 48 00.4
ISHV Shirvan 64.15 298 *e*P **P 07 47 48.9 +0.5**

ISFR Sfrayin 64.19 298 *e*P **P 07 47 48.3 -0.4**
TRO Tromso 64.24 341 *e*P **P 07 47 48.0 -0.1**
TRO *e*pP **pP 07 48 02.7 +1.2**
TRO *e*S **S 07 56 22.9 +1.2**
TRO AMS AMS 08 21 32.1
comp=Z,2µm,16.0s
EIDS Eidsvold 64.42 171 *e*P **P 07 47 50.0 +0.2**
comp=Z,27nm,1.0s
PGC Sidney 64.47 47 *e*P **P 07 47 50.6 +0.7**
comp=Z,5.6nm,1.1s
DZM Mont Dzumac 64.67 155 *e*P **P 07 47 53.7 +2.1**
comp=Z,137nm,1.2s
DZM *e*LR LR 08 07 24.5
comp=Z,5µm,22.9s
DZM Mont Dzumac 64.67 155 P **P 07 47 52.8 +1.3**
DZM Mont Dzumac 64.67 155 P **P 07 47 52.8 +1.3**
comp=Z,47nm,1.1s,baz=39,slow=11,SNR=7.5
JOF Joensuu 64.72 332 *e*P **P 07 47 51.3 -0.1**
JOF pmax pmax
comp=Z,25nm,0.7s
JOF Joensuu 64.72 332 *ep* **P 07 47 51.3 -0.1**
comp=Z,25nm,0.7s
NLWA Neilton Lookou 64.87 48 *e*P **P 07 47 54.1 +1.4**
comp=Z,221nm,1.1s
NLWA LR LR
comp=Z,863nm,22.0s
VDB Vedder Mountai 65.04 46 P **P 07 47 53.9 +0.2**
CMW Cultus Mountai 65.35 47 P **P 07 47 56.9 +1.0**
MSVF Nonsavu 65.44 142 PFAKE 07 48 10.0 +13
MSVF LR LR
comp=Z,2µm,19.0s
JCW Jim Creek 65.57 47 P **P 07 47 58.2 +0.9**
XMAS Kiritimati 65.73 108 PFAKE 07 48 10.0 +11
XMAS LR LR
comp=Z,3µm,20.0s
D05A Enumclaw 66.07 48 P **P 07 48 01.9 +1.5**
MOS Moscow 66.26 323 *e*P P 07 47 57.7 -3.7
MOS *e* 07 48 10.3
MOS *e* 07 48 28.3
MOS *e*S **S 07 56 42.1 -4.8**
MOS pmax pmax
comp=Z,110nm,1.1s
MOS pmax pmax
comp=Z,200nm,1.3s
MOS MLR MLR
comp=Z,3µm,17.0s
TDL Tradedollar La 66.38 49 P **P 07 48 03.8 +1.2**
STEI Steigen 66.40 341 *e*P **P 07 48 02.4 +0.4**
STEI *e*pP **pP 07 48 17.2 +1.6**
LON Longmire 66.40 48 *e*P **P 07 48 03.3 +0.7**
LON pmax pmax
comp=Z,38nm,1.1s
LON Longmire 66.40 48 *e*P **P 07 48 03.3 +0.7**
comp=Z,38nm,1.1s
LVP Lakeview Peak 66.41 49 P **P 07 48 03.8 +1.1**
WPW White Pass 66.58 48 P **P 07 48 04.7 +0.9**
COR Corvallis 66.66 51 *e*P P 07 48 08.0 +3.8
COR pmax pmax
comp=Z,214nm,1.1s
COR Corvallis 66.66 51 *e*P P 07 48 08.0 +3.8
comp=Z,214nm,1.1s
TWW Teanaway 66.74 48 P **P 07 48 06.2 +1.3**
LTY Liberty 66.79 47 P **P 07 48 05.6 +0.5**
G04A Mulino 66.83 50 P **P 07 48 06.4 +1.1**
TBM Table Mountain 66.88 47 P **P 07 48 06.5 +0.8**
KEBM Edson Butte 66.94 53 *e*P **P 07 48 07.5 +1.4**
comp=Z,256nm,1.1s
B08A Colville Reser 66.95 46 P **P 07 48 06.6 +0.5**
EBG Ellensburg 67.04 48 P **P 07 48 07.8 +1.2**
KAF Kangasniemi 67.05 333 *e*P **P 07 48 06.5 +0.2**
KAF pmax pmax
comp=Z,34nm,0.7s
KAF Kangasniemi 67.05 333 *ep* **P 07 48 06.5 +0.2**
comp=Z,34nm,0.7s
OBN Obninsk 67.11 323*c i*P **P 07 48 06.4 -0.4**
OBN *e**PP **pP 07 48 18.5 -1.9**
OBN *e* 07 48 32.8
OBN *i* S **S 07 56 55.3 -1.9**
OBN *e*SS **SS 08 01 20.4 +4.4**
OBN pmax pmax
comp=Z,170nm,1.7s
OBN MLR MLR
comp=Z,3µm,15.0s
VLL Laurance Lake 67.17 49 P **P 07 48 08.8 +1.2**
BROR Big Rock Looko 67.35 51 P **P 07 48 09.7 +1.2**
KBO Bosley Butte 67.36 53 *e*P **P 07 48 09.1 +0.3**
comp=Z,137nm,1.1s
VFP Flag Point 67.37 49 P **P 07 48 09.9 +0.9**
FINES FINESS Array B 67.56 332 P **P 07 48 09.2 -0.4**
FINES pP **pP 07 48 24.9 +1.7**
FINES FINESS Array B 67.56 332 P **P 07 48 09.2 -0.4**
comp=Z,45nm,1.0s,baz=52,slow=7.5,SNR=66
FINES pP **pP 07 48 24.9 +1.7**
comp=Z,36nm,0.7s,baz=49,slow=8.6,SNR=12
FINES LR LR 08 19 52.4
comp=Z,3µm,21.0s,baz=38,slow=38
IANJ Anjilo 67.83 298 *e*P **P 07 48 12.2 +0.1**
OD2 Odessa Site #2 67.83 46 P **P 07 48 11.9 +0.2**
HAWA Hanford 67.92 48 *e*P **P 07 48 12.9 +0.8**
comp=Z,93nm,1.2s
HAWA LR LR
comp=Z,579nm,22.0s
MOR8 Moi Rana 67.92 340 *e*P **P 07 48 10.5 -1.3**
MOR8 AMB AMB 07 48 12.2
comp=Z,71nm,1.3s
MOR8 *e*pP **pP 07 48 25.1 -0.3**
KRMB Red Mountain 67.93 54 *e*P **P 07 48 13.4 +1.0**
comp=Z,45nm,1.1s
HUMO Hull Mountain 67.94 53 *e*P **P 07 48 13.7 +1.3**
comp=Z,99nm,1.6s
MAK Makhachkala 67.97 308 *e*P **P 07 48 13.5 +1.0**
MAK *e* 07 50 48.5
MAK *e*PPP PPP 07 52 29.4
MAK *e*S **S 07 57 04.8 -3.1**
MAK pmax pmax
comp=Z,56nm,0.4s
MAK MLR MLR
comp=Z,1µm,18.0s
ISHM Shahmirzad 68.08 299 *e*P **P 07 48 14.5 +0.8**
VSR Storozhevoye 68.09 319 *e*P **P 07 48 13.3 +0.2**
VSR *e*S **S 07 57 08.2 -0.9**
VSR pmax pmax
comp=Z,70nm,1.2s
VSR pmax pmax
comp=N,50nm,1.1s
VSR pmax pmax
comp=E,60nm,1.3s
VSR smax smax
comp=Z,170nm,9.4s
VSR smax smax
comp=N,160nm,8.9s
VSR smax smax
comp=E,350nm,9.5s
VSR MLR MLR
comp=N,1µm,17.0s
VSR MLR MLR
comp=Z,4µm,17.0s
VSR MLR MLR
comp=E,2µm,18.0s
VORD Divnogorie 68.17 318 *e*P **P 07 48 13.7 +0.1**
VORD *e*S **S 07 57 09.4 -0.6**
VORD pmax pmax
comp=Z,40nm,0.9s
VORD pmax pmax
comp=N,40nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VORD smax smax
comp=Z,60nm,6.8s
VORD smax smax
comp=N,30nm,5.9s
VORD smax smax
comp=E,190nm,8.8s
VORD MLR MLR
comp=N,970nm,16.0s
VORD MLR MLR
comp=Z,3µm,16.0s
VORD MLR MLR
comp=E,2µm,17.0s
NEW Newport 68.23 45 *e*P **P 07 48 14.8 +0.5**
comp=E,124nm,1.1s
NEW LR LR
comp=Z,744nm,21.0s
NEW Newport 68.23 45 ⇑P **P 07 48 14.7 +0.5**
baz=68,SNR=79

VIPM	Ingram Point	68.32	50	P		P	07 48 15.7	+0.8	
VIPM	Ingram Point	68.32	50	P		P	07 48 15.7	+0.8	
KHMM	Horse Mountain	68.40	54	*e*P		P	07 48 17.1	+1.7	
	comp=Z,134nm,1.1s								
ILAS	Lasjerd	68.53	299	*e*P		P	07 48 17.6	+1.1	
YBH	Yreka Blue Hor	68.57	53	*e*P		P	07 48 17.5	+1.1	
	comp=Z,79nm,1.1s								
YBH	Yreka Blue Hor	68.57	53	LR		LR	08 17 10.3		
	comp=Z,451nm,19.7s,baz=323,slow=35								
A12A	Yaak River Ran	68.66	44	⇓P		P	07 48 17.7	+0.9	
	baz=68,SNR=8.4								
IBAF	Bafgh	68.78	294	*e*P		P	07 48 18.0	0.0	
SUMG	Summit	68.84	0	⇑*i*P		P	07 48 18.6	+0.6	
SUMG				*i*			07 48 34.2		
SUMG				pmax	pmax				
	comp=Z,66nm,1.0s								
SUMG	Summit	68.84	0	*e*P		P	07 48 18.5	+0.6	
	comp=Z,151nm,1.2s								
SUMG	Summit	68.84	0	⇑*i*P		P	07 48 18.6	+0.6	
	comp=Z,66nm,1.0s								
SUMG				*i*			07 48 34.2		
C11A	Tepee Creek (N	68.95	45	⇑P		P	07 48 19.5	+0.8	
	baz=69								
B12A	Libby	68.96	44	⇑P		P	07 48 19.6	+0.9	
	baz=69,SNR=9.6								
IDMV	Damavand	69.06	299	*e*P		P	07 48 19.9	+0.1	
VSU	Vasula	69.28	330	*c i*P		P	07 48 20.1	-0.3	
VSU				pmax	pmax				
	comp=Z,134nm,1.5s								
WDC	Whiskeytown Da	69.31	54	*e*P		P	07 48 21.5	+0.6	
WDC				pmax	pmax				
	comp=Z,91nm,1.1s								
WDC	Whiskeytown Da	69.31	54	*e*P		P	07 48 21.5	+0.6	
	comp=Z,91nm,1.1s								
A13A	Flathead Natio	69.33	43	⇓P		P	07 48 21.6	+0.5	
	baz=69,SNR=20								
C12B	Naegeli Ranch,	69.46	45	⇑P		P	07 48 22.3	+0.5	
	baz=69,SNR=5.1								
ARMA	Armidale	69.47	172	*e*P		P	07 48 22.3	+0.3	
	comp=Z,46nm,1.2s								
GOF	Gofitskoye	69.48	312	*i*P		P	07 48 22.1	+0.2	
GOF				*e*S		S	07 57 26.9	+1.1	
GOF				pmax	pmax				
	comp=Z,180nm,1.3s								
WALA	Waterton Lakes	69.52	43	*e*P		P	07 48 22.7	+0.4	
	comp=Z,4.4nm,1.4s								
IMEH	Mehriz	69.56	294	*e*P		P	07 48 22.6	-0.4	
IVRN	Varamin	69.59	299	*e*P		P	07 48 22.4	-0.4	
B13A	Whitefish	69.62	44	⇑P		P	07 48 23.8	+1.0	
	baz=69,SNR=128								
BSMT	Bassoo Peak	69.75	44	*e*P		P	07 48 24.6	+0.8	
IR3	Iran Long-Peri	69.80	300	*e*P		P	07 48 24.2	0.0	
A14A	Double T Ranch	69.83	43	⇑P		P	07 48 24.5	+0.3	
	baz=70,SNR=57								
IGZV	Ghazvin	69.84	301	*e*P		P	07 48 24.1	-0.5	
BLMT	Blacktail Moun	69.89	44	*e*P		P	07 48 25.6	+0.9	
D12A	Red Ives Fores	69.91	45	⇑P		P	07 48 24.9	+0.2	
	baz=70								
LBCM	Butte Creek Ri	69.92	53	P		P	07 48 25.6	+0.8	
MOD	Modoc	69.97	52	*e*P		P	07 48 26.0	+0.8	
	comp=Z,75nm,1.1s								
C13A	Hot Springs	69.97	44	⇑P		P	07 48 25.7	+0.8	
	baz=70,SNR=44								
BMO	Blue Mountains	70.08	48	*e*P		P	07 48 26.3	+0.6	
	comp=Z,81nm,1.3s								
BMO				LR		LR			
	comp=Z,657nm,22.0s								
JTMT	Jette	70.09	44	*e*P		P	07 48 26.6	+0.8	
DGRG	David-gareji	70.13	308	P		P	07 48 26.0	0.0	
E12A	Beaver Dam Sad	70.16	46	⇑P		P	07 48 26.9	+0.7	
	baz=70,SNR=64								
YBMT	Yellow Bay	70.17	44	*e*P		P	07 48 26.9	+0.7	
	comp=Z,56nm,1.2s								
DUS	Dusheti	70.18	308	P		P	07 48 28.3	+2.0	
B14A	Marquette Ranc	70.27	43	⇑P		P	07 48 27.7	+0.8	
	baz=70,SNR=44								
KIV	Kislovodsk	70.32	311	*e*P		P	07 48 27.5	+0.3	
KIV				*e*S		S	07 57 37.2	+1.3	
KIV				*e*SS		SS	08 02 06.9	+0.7	
KIV				pmax	pmax				
	comp=Z,190nm,1.1s								
KIV				pmax	pmax				
	comp=Z,46nm,3.5s								
KIV				MLR	MLR				
	comp=Z,2μm,19.0s								
KIV	Kislovodsk	70.32	311	P		P	07 48 28.4	+1.2	
	comp=Z,871nm,1.3s,SNR=16								
KBZ	Khabaz	70.33	311	P		P	07 48 27.7	+0.6	
KBZ				pmax	pmax				
	comp=Z,45nm,1.0s								
KBZ	Khabaz	70.33	311	P		P	07 48 27.6	+0.6	
KBZ	Khabaz	70.33	311	P		P	07 48 27.6	+0.6	
	comp=Z,45nm,1.0s,baz=57,slow=5.7,SNR=60								
IZEF	Zefreh	70.34	297	*e*P		P	07 48 27.6	-0.1	
SCO	Scoresbysund	70.36	354	⇑*i*P		P	07 48 27.2	+0.4	
SCO				pmax	pmax				
	comp=Z,14nm,1.0s								
SCO	Scoresbysund	70.36	354	⇑*i*P		P	07 48 27.2	+0.4	
	comp=Z,14nm,1.0s								
TBLG	Delisi	70.36	308	*e*P		P	07 48 27.6	+0.2	
TBLG	Delisi	70.36	308	P		P	07 48 27.6	+0.2	
C14A	Swan Lake	70.37	44	⇓P		P	07 48 28.2	+0.7	
	baz=70								
D13A	Huson	70.38	45	⇑P		P	07 48 27.7	+0.2	
	baz=70,SNR=48								
SWMT	Swartz Lake	70.39	44	*e*P		P	07 48 28.2	+0.6	
STKA	Stephens Creek	70.40	181	*e*P		P	07 48 27.8	+0.3	
	comp=Z,2.9nm,0.9s								
STKA	Stephens Creek	70.40	181	P		P	07 48 27.8	+0.3	
	comp=Z,11nm,1.0s,baz=348,slow=9.9,SNR=8.0								
IRAZ	Razeghan	70.58	300	*e*P		P	07 48 29.5	+0.4	
FORT	Forrest	70.59	193	*e*P		P	07 48 28.5	-0.2	
	comp=Z,96nm,0.9s								
ONI	Oni	70.65	309	P		P	07 48 30.1	+0.9	
WVOR	Wild Horse Val	70.68	51	*e*P		P	07 48 29.9	+0.4	
WVOR				pmax	pmax				
	comp=Z,101nm,1.3s								
WVOR				MLR	MLR				
	comp=Z,385nm,20.0s								
WVOR	Wild Horse Val	70.68	51	*e*P		P	07 48 29.9	+0.4	
	comp=Z,101nm,1.3s								
WVOR				LR	LR				
	comp=Z,385nm,20.0s								
B15A	Bradely Ranch,	70.68	43	⇑P		P	07 48 29.8	+0.5	
	baz=70,SNR=152								
B15A				⇓S		S	07 57 41.2	+1.2	
	baz=70								
OHCM	Honcut	70.68	55	*e*P		P	07 48 29.6	+0.3	
ISRB	Sarab	70.72	303	*e*P		P	07 48 29.9	0.0	
A16A	West Butte Ran	70.81	42	⇑P		P	07 48 30.2	+0.1	
	baz=71								
IGAR	Gharneh	70.81	296	*e*P		P	07 48 30.1	-0.5	
SLMT	Seeley Lake	70.82	44	*e*P		P	07 48 30.6	+0.3	
MSO	Missoula	70.82	45	*e*P		P	07 48 30.6	+0.3	
	comp=Z,53nm,1.3s								
MSO				LR		LR			
	comp=Z,265nm,19.0s								
MSO	Missoula	70.82	45	⇓P		P	07 48 30.4	+0.2	
	baz=71,SNR=41								
IHRS	Heris	70.85	304	*e*P		P	07 48 30.0	-0.7	
D14A	Greenough	70.91	45	⇑P		P	07 48 30.9	+0.1	
	baz=71,SNR=51								
C15A	Salmond Ranch,	70.98	44	⇓P		P	07 48 32.1	+0.9	
	baz=71,SNR=61								
G12A	Big Creek, Yel	71.06	47	⇑P		P	07 48 31.8	0.0	
	baz=71								
B16A	M & M Farms, S	71.08	43	⇓P		P	07 48 32.0	+0.3	
	baz=71,SNR=41								
BEKR	Beckworth	71.09	54	*e*P		P	07 48 32.4	+0.3	
	comp=Z,64nm,1.1s								
CHMT	Chamberlain Mo	71.15	45	*e*P		P	07 48 32.3	-0.1	
GNI	Garni	71.27	307	P		P	07 48 34.9	+1.8	
	SNR=11								
GNI	Garni	71.27	307	*e*P		P	07 48 34.0	+0.9	
	comp=Z,72nm,1.1s								
GNI				LR		LR			
	comp=Z,1μm,19.0s								
A17A	Triple J Farms	71.28	42	⇑P		P	07 48 33.0	+0.1	
	baz=71,SNR=49								
WBK	Wadi Bani Khal	71.29	284	P		P	07 48 34.8	+1.5	
	SNR=7.5								
AKH	Akhalkalaki	71.31	308	P		P	07 48 34.2	+0.8	
C16A	Fuhringer Ranc	71.43	43	⇑P		P	07 48 34.3	+0.4	
	baz=71,SNR=66								
MICGM	Minsk	71.43	326	⇑*e*P		P	07 48 32.0	-1.6	
MNK	Minsk	71.45	326	⇑*e*P		P	07 48 32.0	-1.7	
MNK				pmax	pmax				
	comp=Z,460nm,2.0s								
MNK				MLR	MLR				
	comp=N,7μm,16.0s								
MNK				MLR	MLR				
	comp=Z,9μm,18.0s								
IPIR	Pirpir	71.46	297	*e*P		P	07 48 35.7	+1.1	
D15A	Lincoln	71.47	44	⇑P		P	07 48 34.4	+0.1	
	baz=71,SNR=17								
ITBZ	Tabriz	71.47	304	*e*P		P	07 48 34.2	-0.2	
IMRD	Marand	71.48	305	*e*P		P	07 48 34.1	-0.4	
IPAR	Pars	71.55	294	*e*P		P	07 48 35.7	+0.6	
B17A	L&G Farms, Che	71.63	42	⇑P		P	07 48 35.5	+0.4	
	baz=71,SNR=30								
NACGM	Naroch	71.64	327	*e*P		P	07 48 32.0	-2.8	
H12A	Diamond D Ranc	71.67	47	⇓P		P	07 48 35.6	+0.1	
	baz=72,SNR=23								
FFC	Flin Flon	71.71	33	P		P	07 48 35.2	-0.1	
	comp=Z,595nm,1.1s,SNR=50								
FFC	Flin Flon	71.71	33	*e*P		P	07 48 35.4	+0.1	
FFC				pmax	pmax				
	comp=Z,139nm,1.1s								
FFC				MLR	MLR				
	comp=Z,709nm,20.0s								
FFC	Flin Flon	71.71	33	*e*P		P	07 48 35.4	+0.1	
	comp=Z,139nm,1.1s								
FFC				LR	LR				
	comp=Z,709nm,20.0s								
SMDO	Samad	71.73	285	P		P	07 48 37.0	+0.9	
	SNR=8.1								
A18A	Metzger Ranch,	71.74	41	⇑P		P	07 48 35.8	+0.2	
	baz=72,SNR=35								
F14A	Wisdom	71.75	46	⇓P		P	07 48 36.1	+0.1	
	baz=72,SNR=11								
ISRV	Sarvestan	71.76	293	*e*P		P	07 48 36.2	-0.3	
MFID	Camas Ranch	71.78	49	*e*P		P	07 48 36.8	+0.7	
	comp=Z,141nm,1.4s								
MFID	Camas Ranch	71.78	49	⇑P		P	07 48 36.7	+0.7	
	baz=72,SNR=72								
ISHB	Shabestar	71.79	305	*e*P		P	07 48 36.7	+0.3	
IAZR	Azarshahr	71.90	304	*e*P		P	07 48 37.3	+0.2	
I12A	Atlanta	71.96	48	⇑P		P	07 48 37.8	+0.6	
	baz=72								
DIGO	Kars	71.96	308	*i*P		P	07 48 37.7	+0.3	
HOQ	Hoqain	71.98	286	P		P	07 48 38.1	+0.6	
	SNR=7.8								
D16A	Dana Ranch, Ca	72.01	44	⇓P		P	07 48 37.8	+0.4	
	baz=72,SNR=8.6								
UOSS	Wadi Hilu	72.03	288	P		P	07 48 37.0	-0.7	
	comp=Z,288nm,1.2s,SNR=12								
HRY	Holter Researc	72.05	44	*e*P		P	07 48 38.4	+0.7	
C17A	Wharram Farm,	72.06	43	⇓P		P	07 48 37.6	0.0	
	baz=72,SNR=32								
JMDO	Jabal Madar	72.08	285	P		P	07 48 38.9	+0.8	
	SNR=7.1								
B18A	Beardsley Farm	72.10	42	⇑P		P	07 48 38.3	+0.5	
	baz=72,SNR=75								
CMB	Columbia Colle	72.13	55	*e*P		P	07 48 38.8	+0.6	
CMB				pmax	pmax				
	comp=Z,110nm,1.1s								
CMB	Columbia Colle	72.13	55	*e*P		P	07 48 38.8	+0.6	
	comp=Z,110nm,1.1s								
F15A	Butte	72.22	45	⇑P		P	07 48 39.2	+0.5	
	baz=72,SNR=110								
E16A	East Helena	72.24	44	⇓P		P	07 48 39.4	+0.5	
	baz=72,SNR=47								
LRM	Limekiln Ridge	72.25	45	*e*P		P	07 48 39.5	+0.5	
SOC	Sochi	72.28	312	*c i*P		P	07 48 38.6	-0.3	
SOC				*e**PP		pP	07 48 51.1	-1.5	
SOC				*e*			07 48 54.6		
SOC				*e*S		S	07 57 57.8	-0.5	
SOC				*e*			07 58 40.9		
SOC				pmax	pmax				
	comp=Z,71nm,1.1s								
A19A	Klindworth Far	72.30	41	⇓P		P	07 48 39.5	+0.5	
	baz=72,SNR=60								
EGMT	Eagleton	72.34	42	*e*P		P	07 48 39.8	+0.4	
	comp=Z,133nm,1.2s								
EGMT				LR	LR				
	comp=Z,675nm,21.0s								
EGMT	Eagleton	72.34	42	⇑P		P	07 48 39.6	+0.3	
	baz=72,SNR=39								
D17A	Six Diamond Ra	72.39	43	⇑P		P	07 48 40.0	+0.3	
	baz=72,SNR=40								
DLMT	Dillon	72.45	46	*e*P		P	07 48 40.4	+0.3	
	comp=Z,105nm,1.1s								
B19A	Brinkman Farms	72.49	41	⇑P		P	07 48 40.6	+0.4	
	baz=72,SNR=78								
HLID	Hailey	72.52	48	*e*P		P	07 48 41.3	+0.8	
	comp=Z,58nm,1.2s								
HLID				LR	LR				
	comp=Z,542nm,21.0s								
HLID	Hailey	72.52	48	⇓P		P	07 48 41.4	+0.8	
	baz=72,SNR=50								
BSY	Bisya	72.55	285	P		P	07 48 41.7	+0.8	
	SNR=6.3								
MOL	Molde	72.61	340	*e*P		P	07 48 38.5	-2.0	
DBAD	Bademkaya	72.64	309	*i*P		P	07 48 41.1	-0.2	
MCMT	McKenzie Canyo	72.64	46	*e*P		P	07 48 41.4	0.0	
	comp=Z,4.4nm,1.0s								
DDEM	Demirkent	72.68	309	*i*P		P	07 48 41.6	+0.1	
BMN	Battle Mountai	72.72	52	*e*P		P	07 48 42.8	+1.0	
BMN				pmax	pmax				
	comp=Z,70nm,1.0s								
BMN				MLR	MLR				
	comp=Z,475nm,21.0s								
BMN	Battle Mountai	72.72	52	*e*P		P	07 48 42.8	+1.0	
	comp=Z,70nm,1.0s								
BMN				LR	LR				
	comp=Z,475nm,21.0s								
ARQ	Araqi	72.72	286	P		P	07 48 42.6	+0.8	
	SNR=10								
E17A	Martinsdale	72.73	44	⇑P		P	07 48 42.6	+0.8	
	baz=72,SNR=51								
F16A	Kennard Place,	72.73	45	⇓P		P	07 48 42.3	+0.5	
	baz=72,SNR=40								
A20A	Cobblestone Ra	72.75	41	⇑P		P	07 48 42.0	+0.3	
	baz=72,SNR=28								
NB2	NORSAR Subarra	72.80	337	P		P	07 48 41.6	-0.2	
	comp=Z,99nm,1.4s,baz=36,slow=6.2								
NB2	NORSAR Subarra	72.80	337	P		P	07 48 41.6	-0.2	
	baz=36,slow=6.2								
NOA	NORSAR Array B	72.80	337	P		P	07 48 41.5	-0.2	
NOA				pP		pP	07 48 54.9	-0.5	
NOA	NORSAR Array B	72.80	337	P		P	07 48 41.5	-0.2	
	comp=Z,17nm,0.8s,baz=38,slow=5.9,SNR=60								
NOA				pP		pP	07 48 54.9	-0.5	
	comp=Z,32nm,0.9s,baz=38,slow=6.1,SNR=14								
NOA				LR		LR	08 23 35.1		
	comp=Z,2μm,19.9s,baz=30,slow=38								
BOZ	Bozeman (W)	72.82	45	*e*P		P	07 48 43.0	+0.7	
BOZ				pmax	pmax				
	comp=Z,72nm,1.2s								
BOZ				MLR	MLR				
	comp=Z,332nm,20.0s								
BOZ	Bozeman (W)	72.82	45	*e*P		P	07 48 43.0	+0.7	
	comp=Z,72nm,1.2s								
BOZ				LR	LR				
	comp=Z,332nm,20.0s								
D18A	Linhart Farms,	72.84	43	⇓P		P	07 48 43.0	+0.7	
	baz=73,SNR=47								
ANN	Anapa	72.84	314	*e*P		P	07 48 40.6	-1.6	
ANN				*e**PP		pP	07 48 55.9	0.0	
ANN				*e*			07 48 56.6		
ANN				*i*S		S	07 58 03.7	-0.9	
ANN				pmax	pmax				
	comp=Z,101nm,1.4s								
ANN				MLR	MLR				
	comp=N,706nm,16.0s								
ANN				MLR	MLR				
	comp=E,1μm,16.0s								
ANN				MLR	MLR				
	comp=Z,782nm,16.0s								
I14A	Mackay	72.85	47	⇓P		P	07 48 43.5	+0.9	
	baz=73,SNR=95								
C19A	Slack Wire Ran	72.90	42	⇓P		P	07 48 43.4	+0.8	
	baz=73,SNR=114								
TUTA	Tutak	72.91	307	*i*P		P	07 48 43.4	+0.4	
NC602	NORSAR Array S	72.94	337	*e*P		P	07 48 41.3	-1.3	
NC602				*e*pP		pP	07 48 56.0	-0.2	
B20A	Solberg Farm,	72.98	41	⇓P		P	07 48 43.3	+0.3	
	baz=73								
NAO01	NORSAR Array S	73.05	337	*e*P		P	07 48 43.1	-0.1	
	comp=Z,28nm,0.9s								
IVIS	Veis	73.16	301	*e*P		P	07 48 43.8	-0.6	
E18A	Harlowton	73.17	43	⇑P		P	07 48 45.2	+0.8	
	baz=73,SNR=31								
F17A	Fitzpatrick Pl	73.19	44	⇓P		P	07 48 45.1	+0.6	
	baz=73,SNR=40								
NVAR	Mina Array Bea	73.23	54	P		P	07 48 45.7	+0.8	
NVAR	Mina Array Bea	73.23	54	P		P	07 48 45.7	+0.8	
	comp=Z,60nm,0.9s,baz=286,slow=6.0,SNR=252								
NVAR				LR		LR	08 18 34.8		
	comp=Z,503nm,19.2s,baz=52,slow=34								
NV11	Mina Array Sit	73.32	54	*e*P		P	07 48 45.9	+0.5	
AKASG	Malin Array Be	73.34	322	P		P	07 48 44.7	-0.3	
AKASG				*PP		pP	07 48 58.5	-0.2	
AKASG				pmax	pmax				
	comp=Z,24nm,0.4s								
AKASG				pmax	pmax				
	comp=Z,16nm,0.4s								
AKASG				pmax	pmax				
	comp=Z,1.0nm,0.3s								
AKASG				MLR	MLR				
	comp=Z,3μm,19.1s								
AKASG	Malin Array Be	73.34	322	P		P	07 48 44.7	-0.3	
AKASG				pP		pP	07 48 58.5	-0.2	
AKASG				PKKP		PKKPdf	08 08 02.0	-2.2	
AKASG	Malin Array Be	73.34	322	P		P	07 48 44.7	-0.3	
	comp=Z,24nm,0.4s,baz=44,slow=6.5,SNR=177								
AKASG				pP		pP	07 48 58.5	-0.2	
	comp=Z,16nm,0.4s,baz=44,slow=6.5,SNR=9.5								
AKASG				PKKP		PKKPdf	08 08 02.0	-2.2	
	comp=Z,0.6nm,0.3s,baz=289,slow=2.6,SNR=4.7								
AKASG				LR		LR	08 23 59.4		
	comp=Z,3μm,19.1s,baz=50,slow=38								
D19A	Cripps Ranch,	73.35	42	⇑P		P	07 48 45.8	+0.5	
	baz=73,SNR=64								
AK01	Malin Array Si	73.35	322	*e*P		P	07 48 44.9	-0.2	
KIEV	Kiev	73.35	322	*e*P		P	07 48 44.7	-0.4	
KIEV				pmax	pmax				
	comp=Z,105nm,1.2s								
KIEV				MLR	MLR				
	comp=Z,3μm,19.0s								
KIEV	Kiev	73.35	322	*e*P		P	07 48 44.7	-0.4	
	comp=Z,105nm,1.2s								
KIEV				LR	LR				
	comp=Z,3μm,19.0s								
MLAC	Mammoth Lakes	73.36	55	⇓P		P	07 48 46.9	+1.2	
	baz=73,SNR=6.7								
IDHR	Dehrash	73.36	301	*e*P		P	07 48 44.8	-1.0	
AK02	Malin Array Si	73.38	322	*e*P		P	07 48 45.0	-0.3	
QLMT	Earthquake Lak	73.43	45	*e*P		P	07 48 46.7	+0.7	
HAKT	HAKKARI	73.44	305	*i*P		P	07 48 46.0	-0.2	
C20A	Veseth Ranch,	73.45	42	⇑P		P	07 48 46.5	+0.7	
	baz=73,SNR=51								
IGHG	Ghaleghazi	73.46	301	*e*P		P	07 48 45.4	-1.0	
B21A	Ellsworth Farm	73.50	41	⇓P		P	07 48 46.5	+0.4	
	baz=73,SNR=73								
ERZM	Erzurum	73.50	308	*i*P		P	07 48 48.0	+1.4	
G17A	Pierce Place,	73.51	45	⇓P		P	07 48 47.4	+1.1	
	baz=73,SNR=17								
H16A	Russell Place,	73.61	46	⇑P		P	07 48 47.9	+0.8	
	baz=73,SNR=36								
PTRM	Twissleman Ran	73.64	57	*e*P		P	07 48 48.1	+0.9	
A22A	Carney Farms,	73.69	40	⇓P		P	07 48 47.3	+0.1	
	baz=74,SNR=51								
F18A	Big Timber	73.70	44	⇓P		P	07 48 48.2	+0.7	
	baz=74,SNR=52								
MTUM	Tungsten Hills	73.70	55	*e*P		P	07 48 48.5	+0.8	
ELK	Elko	73.73	51	*e*P		P	07 48 48.9	+1.0	
	comp=Z,288nm,2.4s								
SUW	Suwalki	73.78	328	*e*P		P	07 48 47.2	-0.3	
SUW				pmax	pmax				
	comp=Z,100nm,1.7s								
SUW				MLR	MLR				
	comp=Z,2μm,21.3s								
SUW	Suwalki	73.78	328	*e*P		P	07 48 47.1	-0.4	
SUW				LMZ		LR	08 23 12.8		
D20A	Manuel Ranch,	73.78	42	⇓P		P	07 48 48.6	+0.7	
	baz=74,SNR=80								
YMR	Madison River	73.79	45	*e*P		P	07 48 48.8	+0.7	
	comp=Z,158nm,1.6s								
GCMT	Greycliff	73.80	44	*e*P		P	07 48 48.9	+0.8	
	comp=Z,8.8nm,0.7s								
E19A	Rath Farm, Rou	73.84	43	⇓P		P	07 48 49.0	+0.8	
	baz=74,SNR=54								
C21A	Desert Coulee	73.85	41	⇓P		P	07 48 48.5	+0.4	
	baz=74,SNR=26								
RCTC	Rector, Farmer	73.89	56	⇓P		P	07 48 48.6	+0.1	
	baz=74,SNR=9.0								
KOPT	Kop Dagi	73.97	309	*i*P		P	07 48 50.6	+1.3	
SFJD	Kangerlussuaq	73.97	5	*e*P		P	07 48 48.6	+0.1	
	comp=Z,64nm,1.1s								
SFJD				LR		LR			
	comp=Z,1μm,21.0s								
SFJD	Kangerlussuaq	73.97	5	⇑*i*P		P	07 48 48.5	+0.1	
	comp=Z,31nm,1.0s								
SMMC	Simmer	73.98	58	⇓P		P	07 48 50.1	+0.9	
	baz=74,SNR=6.4								
I16A	Newdale	74.00	46	⇑P		P	07 48 50.8	+1.5	
	baz=74,SNR=61								
YFT	Old Faithful	74.00	46	*e*P		P	07 48 51.4	+2.0	
	comp=Z,153nm,1.6s								
CAN	Canberra	74.08	174	*e*P		P	07 48 49.4	-0.1	
CAN				pmax	pmax				
	comp=Z,16nm,1.1s								
CAN				MLR	MLR				
	comp=Z,816nm,20.0s								
CAN	Canberra	74.08	174	*e*P		P	07 48 49.4	-0.1	
	comp=Z,16nm,1.1s								
CAN				LR	LR				
	comp=Z,816nm,20.0s								
TIN	Tinemaha	74.09	55	⇑P		P	07 48 50.7	+0.8	
	baz=74,SNR=7.1								
B22A	Reddig Ranch S	74.10	40	⇓P		P	07 48 49.7	0.0	
	baz=74,SNR=20		

C22A	**Vida**	74.52	41	⇑P		P	07 48 52.0	-0.1	
	baz=74,SNR=13								
TPAW	**Teton Pass**	74.54	46	*e*P		P	07 48 54.0	+1.4	
	comp=Z,145nm,1.4s								
CWC	**Cottonwood Cre**	74.56	56	⇓P		P	07 48 52.9	+0.3	
	baz=74								
HVU	**Hansel Valley**	74.56	49	*e*P		P	07 48 53.7	+1.1	
HVU				pmax		pmax			
	comp=Z,64nm,1.0s								
HVU	**Hansel Valley**	74.56	49	*e*P		P	07 48 53.7	+1.1	
	comp=Z,64nm,1.0s								
SIM	**Simferopol'**	74.59	316	*d* iP		P	07 48 53.0	+0.5	
SIM				*e*			07 49 06.0		
SIM				*i* S		S	07 58 23.6	-0.8	
SIM				pmax		pmax			
	comp=Z,35nm,1.0s								
SIM				MLR		MLR			
	comp=Z,460nm,16.4s								
F20A	**Billings**	74.61	43	⇓P		P	07 48 53.1	+0.3	
	baz=74								
IBDR	**Badra**	74.61	300	*e*P		P	07 48 50.3	-2.5	
IBDR				*e*S		SKiKP	07 58 17.8	+3.5	
KELT	**Kelkit**	74.64	309	*i* P		P	07 48 53.1	-0.1	
LOHW	**Long Hollow**	74.66	46	*e*P		P	07 48 54.2	+1.0	
	comp=Z,74nm,1.4s								
SNOW	**Snow King Moun**	74.67	46	*e*P		P	07 48 54.5	+1.2	
	comp=Z,66nm,1.1s								
A24A	**Westby**	74.67	39	⇑P		P	07 48 53.0	+0.1	
	baz=74								
GRAC	**Grapevine Rang**	74.68	55	⇑P		P	07 48 54.2	+1.0	
	baz=74,SNR=38								
REDW	**Red Top Meadow**	74.68	46	*e*P		P	07 48 54.9	+1.6	
	comp=Z,1.9nm,1.5s								
SBC	**Santa Barbara**	74.69	58	⇑P		P	07 48 54.1	+0.9	
	baz=74								
E21A	**Keefer Ranch,**	74.69	42	⇑P		P	07 48 53.7	+0.6	
	baz=74,SNR=9.3								
GRSN	**GIRESUNGRSN**	74.75	310	*i* P		P	07 48 52.7	-0.9	
D22A	**Cohagen**	74.76	41	⇓P		P	07 48 53.9	+0.4	
	baz=75,SNR=58								
ISA	**Isabella**	74.77	56	*e*P		P	07 48 53.5	-0.3	
ISA				pmax		pmax			
	comp=Z,47nm,1.1s								
ISA	**Isabella**	74.77	56	*e*P		P	07 48 53.5	-0.3	
	comp=Z,47nm,1.1s								
ISA	**Isabella**	74.77	56	⇑P		P	07 48 53.6	-0.3	
	baz=75								
C23A	**Lambert**	74.84	40	⇓P		P	07 48 54.3	+0.4	
	baz=75,SNR=28								
ARVC	**Arvin**	74.86	57	⇑P		P	07 48 54.5	+0.3	
	baz=75,SNR=17								
DGMT	**Dagmar**	74.88	39	*e*P		P	07 48 54.3	+0.1	
	comp=Z,237nm,1.5s								
DGMT				LR		LR			
	comp=Z,735nm,22.0s								
DGMT	**Dagmar**	74.88	39	⇑P		P	07 48 54.3	+0.1	
	baz=75,SNR=18								
H19A	**Powell**	74.88	44	⇑P		P	07 48 55.3	+0.9	
	baz=75,SNR=17								
G20A	**Bridger**	74.95	44	⇓P		P	07 48 54.7	0.0	
	baz=75,SNR=10								
R11A	**Troy Canyon, C**	74.98	53	⇑P		P	07 48 55.8	+0.7	
	baz=75,SNR=146								
I18A	**Diamond G Ranc**	75.05	46	⇓P		P	07 48 56.5	+1.0	
	baz=75,SNR=13								
ODD1	**Odda**	75.05	339	*e*P		P	07 48 56.1	+1.1	
ODD1				*e*pP		pP	07 49 10.5	+1.8	
F21A	**Absaloka Mine,**	75.14	43	⇓P		P	07 48 56.1	+0.3	
	baz=75,SNR=5.5								
MPMC	**Manual Prospec**	75.17	56	⇑P		P	07 48 56.7	+0.5	
	baz=75,SNR=60								
OSI	**Osito Adit**	75.24	57	*e*P		P	07 48 57.2	+0.7	
	comp=Z,57nm,0.9s								
OSI	**Osito Adit**	75.24	57	⇓P		P	07 48 57.1	+0.7	
	baz=75,SNR=7.5								
D23A	**Lindsay**	75.24	41	⇑P		P	07 48 57.0	+0.7	
	baz=75,SNR=70								
I19A	**Meeteetse**	75.29	45	⇓P		P	07 48 57.7	+0.9	
	baz=75,SNR=28								
FURC	**Furnace Creek,**	75.32	55	⇓P		P	07 48 57.7	+0.8	
	baz=75,SNR=52								
E22A	**Miles City**	75.35	42	⇓P		P	07 48 57.3	+0.4	
	baz=75,SNR=10								
HWUT	**Hardware Ranch**	75.38	48	*e*P		P	07 48 58.0	+0.7	
	comp=Z,137nm,1.3s								
HWUT				LR		LR			
	comp=Z,440nm,19.0s								
LRMC	**Laurel Mountai**	75.39	56	⇑P		P	07 48 57.8	+0.3	
	baz=75,SNR=36								
C24A	**Savage**	75.40	40	⇓P		P	07 48 57.5	+0.4	
	baz=75,SNR=30								
MARD	**Mardin**	75.44	306	*i* P		P	07 48 57.6	-0.1	
G21A	**Lodge Grass**	75.48	43	⇑P		P	07 48 57.9	+0.1	
	baz=75,SNR=11								
DUG	**Dugway**	75.53	50	*e*P		P	07 48 58.9	+0.7	
DUG				pmax		pmax			
	comp=Z,93nm,1.0s								
DUG				MLR		MLR			
	comp=Z,367nm,21.0s								
DUG	**Dugway**	75.53	50	*e*P		P	07 48 58.9	+0.7	
	comp=Z,93nm,1.0s								
DUG				LR		LR			
	comp=Z,367nm,21.0s								
DUG	**Dugway**	75.53	50	⇑P		P	07 48 59.0	+0.8	
	baz=75,SNR=90								
H20A	**Greybull**	75.54	44	⇑P		P	07 48 58.4	+0.3	
	baz=75								
BHD	**Baghdad**	75.55	301	*e*P		P	07 48 57.0	-1.2	
BHD				*e*S		S	07 58 30.7	-4.7	
EDW2	**Edwards Air Fo**	75.56	57	⇑P		P	07 48 58.9	+0.6	
	baz=75,SNR=42								
E23A	**Ismay**	75.64	41	⇓P		P	07 48 59.5	+0.9	
	baz=75								
KEMA	**Kemaliye**	75.65	309	*i* P		P	07 48 59.0	+0.2	
DECC	**Green Verdugo**	75.72	58	⇑P		P	07 48 59.3	+0.1	
	baz=76,SNR=9.4								
D24A	**Glendive**	75.73	40	⇑P		P	07 48 59.6	+0.6	
	baz=76,SNR=74								
KBD	**Kabd**	75.73	296	*e*P		P	07 48 58.5	-0.8	
J19A	**Crowheart**	75.75	46	⇑P		P	07 49 00.4	+1.0	
	baz=76,SNR=46								
BW06	**Boulder Array**	75.79	46	*e*P		P	07 48 59.8	0.0	
	comp=Z,60nm,1.2s								
BW06				LR		LR			
	comp=Z,664nm,22.0s								
PDAR	**Pinedale Array**	75.79	46	P		P	07 48 59.9	+0.1	
PDAR	**Pinedale Array**	75.79	46	P		P	07 48 59.9	+0.1	
	comp=Z,20nm,0.9s,baz=282,slow=2.9,SNR=129								
PDAR				LR		LR	08 24 35.2		
	comp=Z,419nm,19.5s,baz=340,slow=37								
ERBA	**Erbaa**	75.80	311	*i* P		P	07 49 00.0	+0.5	
I20A	**Worland**	75.82	45	⇓P		P	07 49 00.7	+0.9	
	baz=76,SNR=75								
ELZG	**Elazig**	75.83	308	*i* P		P	07 49 00.9	+1.0	
CTU	**Camp Tracy**	75.85	49	*e*P		P	07 49 00.4	+0.4	
	comp=Z,84nm,1.3s								
PASC	**Pasadena Art C**	75.86	58	*e*P		P	07 48 59.7	-0.3	
	comp=Z,63nm,1.3s								
MWC	**Mount Wilson**	75.91	57	*e*P		P	07 49 00.7	+0.2	
MWC				pmax		pmax			
	comp=Z,104nm,1.2s								
MWC	**Mount Wilson**	75.91	57	*e*P		P	07 49 00.7	+0.2	
	comp=Z,104nm,1.2s								
BORG	**Borgarnes**	75.92	353	*e*P		P	07 49 01.3	+1.6	
	comp=Z,90nm,1.2s								
BORG				LR		LR			
	comp=Z,489nm,19.0s								
H21A	**Big Horn, Sher**	75.97	44	⇓P		P	07 49 01.1	+0.5	
	baz=76,SNR=34								
G22A	**Birney**	75.98	43	⇑P		P	07 49 00.8	+0.2	
	baz=76,SNR=21								
RDF	**Al-Radifah**	75.98	296	*e*P		P	07 49 00.4	-0.3	
M17A	**Scullys Gap (B**	75.98	48	⇑P		P	07 49 01.2	+0.3	
	baz=76,SNR=28								
NAY	**Al-Naaiem**	76.00	296	*e*P		P	07 48 59.9	-1.0	
KIS	**Kishinev**	76.02	320	*e*P		P	07 49 02.0	+1.4	
KIS				*e*			07 49 13.0		
KIS				*e*			07 51 49.0		
KIS				*e*S		S	07 58 38.0	-2.2	
KIS				*e*PS		PnS	07 59 02.0	-20	
KIS				MLR		MLR			
	comp=N,2μm,18.0s								
KIS				MLR		MLR			
	comp=E,1μm,18.0s								
KIS				MLR		MLR			
	comp=Z,3μm,18.0s								
KIS				MLR		MLR			
	comp=Z,3μm,18.0s								
KIS	**Kishinev**	76.02	320	*e*P		P	07 49 02.0	+1.4	
KIS	**Kishinev**	76.02	320	*e*PP		PP	07 51 49.0	-2.1	
KIS				*e*S		S	07 58 38.0	-2.2	
SHOC	**Shoshone**	76.04	55	⇑P		P	07 49 01.4	+0.4	
	baz=76,SNR=32								
L18A	**Fontenelle, Gr**	76.06	47	⇓P		P	07 49 01.8	+0.6	
	baz=76,SNR=8.2								
FMP	**Fort Macarthur**	76.07	58	⇑P		P	07 49 01.5	+0.3	
	baz=76								
GSC	**Goldstone**	76.07	56	*e*P		P	07 49 01.7	+0.4	
GSC				pmax		pmax			
	comp=Z,67nm,1.1s								
GSC	**Goldstone**	76.07	56	*e*P		P	07 49 01.7	+0.4	
	comp=Z,67nm,1.1s								
GSC	**Goldstone**	76.07	56	⇓P		P	07 49 01.7	+0.4	
	baz=76,SNR=40								
JLU	**Jordanelle**	76.08	49	*e*P		P	07 49 02.3	+0.8	
	comp=Z,111nm,1.3s								
F23A	**Volbog**	76.11	42	⇑P		P	07 49 01.6	+0.3	
	baz=76,SNR=84								
E24A	**Baker**	76.11	41	⇑P		P	07 49 01.6	+0.4	
	baz=76,SNR=17								
K19A	**Absolon Red Bu**	76.15	46	⇑P		P	07 49 01.4	-0.3	
	baz=76,SNR=37								
HAVZ	**Havza**	76.16	312	*i* P		P	07 49 02.4	+0.8	
BFSC	**Mount Baldy Ra**	76.16	57	⇓P		P	07 49 02.0	+0.1	
	baz=76,SNR=32								
CIS	**Catalina Islan**	76.18	58	⇓P		P	07 49 02.0	+0.1	
	baz=76,SNR=7.4								
RRX	**Edison Barstow**	76.20	56	⇓P		P	07 49 02.7	+0.8	
	baz=76								
BSD	**Bornholm Skovb**	76.20	332	⇑*i* P		P	07 49 01.4	-0.1	
BSD				pmax		pmax			
	comp=Z,46nm,1.0s								
BSD	**Bornholm Skovb**	76.20	332	⇑*i* P		P	07 49 01.4	-0.1	
	comp=Z,46nm,1.0s								
J20A	**Shoshoni**	76.23	45	⇓P		P	07 49 02.7	+0.6	
	baz=76,SNR=48								
MALT	**Malatya**	76.28	308	PFAKE			07 49 10.0	+7.5	
MALT				LR		LR			
	comp=Z,1μm,20.0s								
MALT	**Malatya**	76.28	308	⇑*i* P		P	07 49 11.2	+8.8	
DAU	**Daniels Canyon**	76.31	49	*e*P		P	07 49 03.8	+0.9	
DAU	**Daniels Canyon**	76.31	49	*e*P		P	07 49 03.8	+0.9	
L19A	**Farson**	76.33	47	⇑P		P	07 49 03.2	+0.4	
	baz=76,SNR=26								
SCI	**San Clemente I**	76.34	59	⇑P		P	07 49 03.2	+0.4	
	baz=76								
MPU	**Maple Canyon**	76.34	49	*e*P		P	07 49 03.8	+0.9	
	comp=Z,130nm,1.0s								
BEL	**Belsk**	76.35	327	*e*P		P	07 49 03.3	+0.9	
BEL				*e*S		S	07 58 45.2	+1.7	
BEL				pmax		pmax			
	comp=Z,200nm,0.9s								
BEL				MLR		MLR			
	comp=Z,2μm,21.9s								
BEL	**Belsk**	76.35	327	*e*P		P	07 49 03.3	+0.9	
BEL				*e*S		S	07 58 45.2	+1.7	
BEL				LMZ		LR	08 23 59.9		
H22A	**Clearmont**	76.36	43	⇑P		P	07 49 03.1	+0.3	
	baz=76,SNR=22								
I21A	**Big Trails, Te**	76.37	44	⇑P		P	07 49 03.2	+0.3	
	baz=76,SNR=105								
LVV	**L'vov**	76.37	324	*e*P		P	07 49 02.8	+0.2	
LVV				*e*			07 49 18.0		
LVV				*e*S		S	07 58 44.2	+0.3	
LVV				MLR		MLR			
	comp=N,1μm,15.0s								
LVV				MLR		MLR			
	comp=E,2μm,15.0s								
LVV				MLR		MLR			
	comp=Z,2μm,15.0s								
G23A	**Biddle**	76.46	42	⇓P		P	07 49 03.4	+0.1	
	baz=76,SNR=30								
F24A	**Ekalaka**	76.52	41	⇓P		P	07 49 03.9	+0.3	
	baz=76,SNR=69								
K20A	**Yellowstone Ra**	76.54	46	⇓P		P	07 49 03.7	-0.2	
	baz=76,SNR=25								
TUQ	**Turquoise Moun**	76.56	55	⇑P		P	07 49 04.9	+0.8	
	baz=76,SNR=37								
J21A	**Lysite**	76.59	45	⇓P		P	07 49 04.4	+0.2	
	baz=76,SNR=33								
AKCD	**Akcadag**	76.60	308	*i* P		P	07 49 05.1	+0.8	
E25A	**Miller Ranch,**	76.61	40	⇓P		P	07 49 04.3	+0.2	
	baz=76,SNR=14								
BBRC	**Big Bear Solar**	76.63	57	⇓P		P	07 49 04.9	+0.2	
	baz=76,SNR=12								
ARUT	**Antelope Range**	76.66	52	*e*P		P	07 49 05.4	+0.7	
ARUT				pmax		pmax			
	comp=Z,99nm,1.3s								
ARUT	**Antelope Range**	76.66	52	*e*P		P	07 49 05.4	+0.7	
	comp=Z,99nm,1.3s								
HEC	**Hector,Ludlow**	76.67	56	⇑P		P	07 49 05.1	+0.5	
	baz=76,SNR=38								
GKP	**Gorka Klasztor**	76.73	330	*e*P		P	07 49 04.7	+0.2	
GKP				*e*S		S	07 58 49.2	+1.5	
GKP				MLR		MLR			
	comp=Z,3μm,19.6s								
GKP	**Gorka Klasztor**	76.73	330	*e*P		P	07 49 04.7	+0.2	
GKP				*e*S		S	07 58 49.1	+1.4	
GKP				LMZ		LR	08 25 35.5		
I22A	**9 Mile Ranch,**	76.75	44	⇓P		P	07 49 05.5	+0.5	
	baz=76,SNR=42								
M19A	**Rock Springs**	76.83	47	⇓P		P	07 49 05.7	+0.1	
	baz=77,SNR=9.6								
CCUT	**Cedar City**	76.85	52	*e*P		P	07 49 06.8	+0.9	
	comp=Z,98nm,1.1s								
MURC	**Murrieta**	76.86	57	⇓P		P	07 49 05.8	+0.1	
	baz=77,SNR=18								
H23A	**Clabaugh Cattl**	76.89	43	⇑P		P	07 49 05.7	0.0	
	baz=77								
G24A	**Alzada**	76.89	42	⇑P		P	07 49 05.5	-0.2	
	baz=77,SNR=18								
ATAB	**Bozova**	76.89	308	*i* P		P	07 49 06.9	+1.1	
MVU	**Marysvale**	76.96	51	*e*P		P	07 49 07.6	+1.2	
	comp=Z,83nm,1.1s								
MVU				LR		LR			
	comp=Z,452nm,19.0s								
L20A	**Wamsutter**	76.97	46	⇑P		P	07 49 06.9	+0.5	
	baz=77,SNR=23								
MSU	**Maryvale**	76.97	51	*e*P		P	07 49 07.7	+1.2	
MSU	**Marysvale**	76.97	51	*e*P		P	07 49 07.7	+1.2	
CTKT	**Corum**	76.99	312	*i* P		P	07 49 06.8	+0.4	
LLD	**Lille Linde**	77.00	333	*e*P		P	07 49 09.2	+3.2	
LLD				pmax		pmax			
	comp=Z,49nm,0.8s								
J22A	**Midwest**	77.07	44	⇑P		P	07 49 07.1	+0.2	
	baz=77,SNR=186								
E26A	**Carlson Angus**	77.11	40	⇑P		P	07 49 07.0	+0.1	
	baz=77,SNR=33								
KWP	**Kalwaria Pacla**	77.11	325	*e*P		P	07 49 07.6	+0.8	
KWP				*e*S		S	07 58 53.8	+1.8	
KWP				pmax		pmax			
	comp=Z,100nm,1.2s								
KWP				MLR		MLR			
	comp=Z,4μm,16.4s								
KWP	**Kalwaria Pacla**	77.11	325	PFAKE			07 49 20.0	+13	
KWP				LR		LR			
	comp=Z,1μm,21.0s								
KWP	**Kalwaria Pacla**	77.11	325	*e*P		P	07 49 07.6	+0.8	
KWP				*e*S		S	07 58 53.8	+1.8	
KWP				LMZ		LR	08 26 09.3		
MUD	**Monsted U'grnd**	77.12	336	⇑*i*P		P	07 49 06.9	+0.3	
MUD				pmax		pmax			
	comp=Z,18nm,1.0s								
MUD	**Monsted U'grnd**	77.12	336	⇑*i*P		P	07 49 06.9	+0.3	
	comp=Z,18nm,1.0s								
GMRC	**Granite Mounta**	77.13	56	⇑P		P	07 49 07.8	+0.4	
	baz=77,SNR=38								
BALT	**Daday**	77.20	313	*i* P		P	07 49 08.5	+0.8	
RAO	**Raoul Island**	77.21	145	PFAKE			07 49 20.0	+13	
RAO				LR		LR			
	comp=Z,2μm,21.0s								
H24A	**Dirks Ranch, A**	77.21	42	⇑P		P	07 49 07.2	-0.3	
	baz=77,SNR=50								
I23A	**Meade Ranch, G**	77.26	43	⇑P		P	07 49 07.8	-0.1	
	baz=77								
PINB	**Pinarbasi**	77.28	310	*i* P		P	07 49 08.6	+0.3	
LDFC	**Landfair**	77.30	55	*e*P		P	07 49 08.6	+0.4	
	comp=Z,175nm,1.3s								
Q16A	**Castle Valley**	77.32	50	⇑P		P	07 49 09.2	+0.8	
	baz=77,SNR=53								
ILGA	**Ilgaz**	77.33	313	*i* P		P	07 49 09.7	+1.3	
PFO	**Pinyon Flat Ob**	77.34	57	P		P	07 49 08.0	-0.5	
	comp=Z,254nm,1.1s,SNR=24								
PFO	**Pinyon Flat Ob**	77.34	57	*e*P		P	07 49 08.7	+0.2	
	comp=Z,72nm,1.2s								
PFO	**Pinyon Flat Ob**	77.34	57	LR		LR	08 15 24.0		
	comp=Z,711nm,21.7s,baz=293,slow=30								
PFO	**Pinyon Flat Ob**	77.34	57	⇑P		P	07 49 08.7	+0.2	
	baz=77,SNR=32								
109C	**Camp Elliot, M**	77.36	58	⇓P		P	07 49 08.7	+0.3	
	baz=77,SNR=12								
BUR08	**Bucovina Ar. S**	77.36	322	*e*P		P	07 49 08.7	+0.3	
BURAR	**Bucovina Array**	77.37	322	⇑*i*P		P	07 49 09.7	+1.3	
M20A	**Sweetwater, Wa**	77.39	47	⇓P		P	07 49 09.7	+0.9	
	baz=77,SNR=34								
BELC	**Belle Mtn. Jos**	77.40	57	⇓P		P	07 49 08.8	-0.1	
	baz=77,SNR=24								
GZT	**Gaziantep**	77.42	308	*i* P		P	07 49 10.3	+1.4	
ULM	**Lac du Bonnet**	77.51	34	*e*P		P	07 49 08.6	-0.4	
ULM	**Lac du Bonnet**	77.51	34	P		P	07 49 08.4	-0.5	
	comp=Z,24nm,0.9s,baz=319,slow=6.3,SNR=22								
ULM				LR		LR	08 25 58.5		
	comp=Z,714nm,20.2s,baz=130,slow=38								
MDND	**Maddock**	77.54	38	⇑P		P	07 49 09.6	+0.4	
	baz=77,SNR=37								
L21A	**Rawlins**	77.54	46	⇑P		P	07 49 09.9	+0.3	
	baz=77,SNR=89								
K22A	**Casper**	77.56	45	⇓P		P	07 49 09.9	+0.3	
	baz=77,SNR=40								
J23A	**Dilts Ranch, B**	77.58	44	⇓P		P	07 49 09.5	-0.2	
	baz=77,SNR=6.2								
O19A	**Miners Draw (B**	77.64	48	⇑P		P	07 49 10.3	+0.2	
	baz=77,SNR=58								
I24A	**Kuemmerle Ranc**	77.77	43	⇑P		P	07 49 10.4	-0.3	
	baz=78,SNR=14								
N20A	**Spence Gulch,**	77.78	47	⇓P		P	07 49 11.9	+0.9	
	baz=78,SNR=91								
M21A	**Separation Pea**	77.78	46	⇓P		P	07 49 11.2	+0.2	
	baz=78,SNR=17								
KOLS	**Kolonicke sedl**	77.81	324	*e*P		P	07 49 11.3	+0.6	
KOLS				pmax		pmax			
	comp=Z,31nm,1.1s								
KOLS	**Kolonicke sedl**	77.81	324	*e*P		P	07 49 11.3	+0.6	
KOLS				*e*S		S	07 59 07.8	+8.2	
KOLS				*e*SS		SS	08 04 13.0	+13	
MONP	**Monument Peak**	77.81	58	⇓P		P	07 49 11.5	+0.2	
	baz=78,SNR=24								
IRM	**Iron Mountain**	77.85	56	⇑P		P	07 49 11.8	+0.6	
	baz=78,SNR=49								
VRI	**Vrincioaia**	77.85	320	⇓P		P	07 49 13.1	+2.1	
VRI	**Vrincioaia**	77.85	320	⇓*i*P		P	07 49 13.1	+2.1	
CDAG	**Cicekdag**	77.88	311	*i* P		P	07 49 11.4	+0.1	
PLOR	**Plostina**	77.90	320	⇓P		P	07 49 13.0	+1.7	
PLOR	**Plostina**	77.90	320	⇓*i*P		P	07 49 13.0	+1.7	
RSSD	**Black Hills**	77.91	42	*e*P		P	07 49 11.7	+0.1	
RSSD				pmax		pmax			
	comp=Z,79nm,1.2s								
RSSD	**Black Hills**	77.91	42	*e*P		P	07 49 11.7	+0.1	
	comp=Z,79nm,1.2s								
STHS	**Stebnicka Huta**	77.92	325	*e*P		P	07 49 12.5	+1.2	
STHS				pmax		pmax			
	comp=Z,33nm,1.0s								
STHS	**Stebnicka Huta**	77.92	325	*e*P		P	07 49 12.5	+1.2	
TIRR	**Tirgusor**	77.96	318	⇑P		P	07 49 12.4	+0.8	
TIRR	**Tirgusor**	77.96	318	⇑*i*P		P	07 49 12.4	+0.8	
OJC	**Ojcow**	77.96	326	⇑*i*P		P	07 49 12.0	+0.5	
OJC				*e**PP		pP	07 49 25.8	+0.5	
OJC				*i* S		S	07 59 02.3	+1.1	
OJC				*e*			07 59 21.6		
OJC				MLR		MLR			
	comp=Z,3μm,18.7s								
OJC	**Ojcow**	77.96	326	*i* P		P	07 49 12.0	+0.5	
OJC				*e*pP		pP	07 49 25.8	+0.5	
OJC				*i* S		S	07 59 02.3	+1.1	
OJC				*e*SKSac		SKSac	07 59 21.6	+0.1	
OJC				L		L	08 26 56.4		
	comp=Z,3μm,18.7s								
BC3	**Big Chuckawall**	77.97	57	⇑P		P	07 49 12.2	+0.2	
	baz=78,SNR=42								
K23A	**Bowen Ranch, D**	77.98	44	⇓P		P	07 49 11.5	-0.5	
	baz=78,SNR=14								
L22A	**Ellis Ranch, M**	78.02	45	⇓P		P	07 49 12.8	+0.6	
	baz=78,SNR=49								
ANDN	**Andirin**	78.02	309	*i* P		P	07 49 13.1	+0.9	
W13A	**Hualapai Mount**	78.07	55	⇓P		P	07 49 13.2	+0.5	
	baz=78,SNR=52								
J24A	**Dixon Ranch, L**	78.11	43	⇑P		P	07 49 12.3	-0.3	
	baz=78,SNR=9.0								
AVNT	**Avonos**	78.14	310	*i* P		P	07 49 12.8	-0.1	
P19A	**Cripple Cowboy**	78.15	48	⇓P		P	07 49 13.5	+0.5	
	baz=78,SNR=109								
DVTC	**Desert V Tower**	78.16	58	⇑P		P	07 49 13.2	+0.2	
	baz=78,SNR=16								
SWSC	**Sam W. Stewart**	78.19	57	⇓P		P	07 49 13.2	+0.1	
	baz=78,SNR=19								
CRVS	**Cervenica-Dubn**	78.20	325	*e*P		P	07 49 10.9	-2.0	
CRVS				pmax		pmax			
	comp=Z,34nm,1.3s								
CRVS	**Cervenica-Dubn**	78.20	325	*e*P		P	07 49 10.9	-2.0	
CRVS				*e*S		S	07 59 02.8	-1.0	
U15A	**North Rim**	78.23	53	⇑P		P	07 49 14.7	+1

KECS pmax pmax
comp=Z,9.0nm,1.0s
KECS Kecovo 78.94 325 *e*P **P 07 49 17.3 +0.3**
AGMN Agassiz Nation 78.95 35 *e*P **P 07 49 15.8 -1.2**
comp=Z,298nm,2.3s
AGMN LR LR
comp=Z,592nm,20.0s
OKC Ostrava-Krasne 78.96 327 *e*P **P 07 49 17.3 +0.3**
OKC *e* 07 49 31.8
OKC *e*S **S 07 59 08.1 -3.7**
OKC MLR MLR
comp=Z,2µm,15.7s
OKC Ostrava-Krasne 78.96 327⇑ *e*P **P 07 49 17.3 +0.3**
OKC *e*pP **pP 07 49 31.8 +1.0**
OKC *e*S **S 07 59 08.1 -3.7**
OKC AMS AMS 08 26 40.0
comp=Z,2µm,15.7s
KSP Ksiaz 78.96 329⇑ *i*P **P 07 49 17.5 +0.5**
KSP *e**PP **pP 07 49 31.1 +0.3**
KSP *e*S **S 07 59 13.0 +1.1**
KSP MLR MLR
comp=Z,5µm,21.0s
KSP Ksiaz 78.96 329 *e*P **P 07 49 17.6 +0.5**
KSP *e*S **S 07 59 14.0 +2.1**
KSP LMZ LR 08 26 35.5
VOIR 78.99 320⇓ P **P 07 49 19.3 +1.9**
VOIR 78.99 320⇓ *i*P **P 07 49 19.3 +1.9**
Q20A Ridgley Place, 79.00 49⇓ P **P 07 49 18.0 +0.3**
baz=79,SNR=74
PV04 Paradox Valley 79.01 49 *e*P **P 07 49 18.6 +0.9**
K25A Mack Ranch, Ha 79.03 44⇑ P **P 07 49 17.5 -0.2**
baz=79,SNR=6.2
PHWY Pilot Hill 79.05 45 *e*P **P 07 49 18.4 +0.3**
comp=Z,122nm,1.5s
N23A Red Feather La 79.05 46⇑ P **P 07 49 19.0 +0.9**
baz=79,SNR=56
P21A Newcastle 79.11 48⇑ P **P 07 49 19.0 +0.6**
baz=79,SNR=59
YAYL Yayladag 79.16 308 *i* P **P 07 49 18.4 -0.1**
GULE Gulek 79.16 309 *i* P **P 07 49 18.1 -0.5**
O22A Kremmling 79.20 47⇓ P **P 07 49 19.3 +0.3**
baz=79,SNR=56
MORC Moravsky Berou 79.26 327⇑ P **P 07 49 20.1 +1.4**
MORC Moravsky Berou 79.26 327 *e*P **P 07 49 18.8 +0.1**
comp=Z,70nm,1.1s
MORC Moravsky Berou 79.26 327⇑ *i*P **P 07 49 20.1 +1.4**
L25A Engebretsen Ra 79.29 44⇓ P **P 07 49 19.6 +0.5**
baz=79
M24A Cheyenne 79.29 45⇑ P **P 07 49 20.2 +1.0**
baz=79,SNR=32
K26A Motz Farm, Whi 79.33 43⇓ P **P 07 49 19.3 0.0**
baz=79,SNR=14
UPC Upice 79.33 328 *e*P **P 07 49 19.5 +0.4**
UPC *e* 07 49 34.4
UPC Upice 79.33 328⇑ *e*P **P 07 49 19.5 +0.4**
UPC *e*pP **pP 07 49 34.4 +1.5**
KRLC Kraliky 79.35 328 *e*P **P 07 49 19.7 +0.5**
KRLC Kraliky 79.35 328⇑ *e*P **P 07 49 19.7 +0.5**
PRD Provadia 79.36 318 P **P 07 49 19.6 +0.3**
Y14A Wickenburg 79.37 55⇑ P **P 07 49 20.1 +0.5**
baz=79,SNR=107
PV01 Paradox Valley 79.38 49 *e*P **P 07 49 20.4 +0.6**
comp=Z,12µm,1.4s
WUAZ Wupatki 79.38 53 *e*P **P 07 49 20.7 +0.9**
comp=Z,152nm,1.3s
WUAZ LR LR
comp=Z,515nm,21.0s
WUAZ Wupatki 79.38 53⇓ P **P 07 49 20.7 +0.9**
baz=79,SNR=79
R20A Redvale 79.45 49⇑ P **P 07 49 20.9 +0.6**
baz=79,SNR=71
P22A Eagle 79.46 47⇓ P **P 07 49 21.1 +0.8**
baz=79,SNR=73
Q21A Lamborn Mesa, 79.50 48⇓ P **P 07 49 21.2 +0.8**
baz=79,SNR=45
O23A Lake Granby, G 79.53 46⇑ P **P 07 49 21.7 +1.0**
baz=79,SNR=71
MVH1 Achvaich 79.58 343⇑ *e*P **P 07 49 20.2 0.0**
MVH1 Achvaich 79.58 343 P **P 07 49 20.2 0.0**
SMCO Snowmass 79.62 48 *e*P **P 07 49 21.9 +0.5**
comp=Z,100nm,1.4s
113A Mohawk Valley, 79.62 56⇑ P **P 07 49 21.2 +0.3**
baz=80,SNR=80
PSZ Piszkesteto 79.63 325⇓ P **P 07 49 21.8 +1.0**
PSZ Piszkesteto 79.63 325 *e*P **P 07 49 21.5 +0.7**
comp=Z,102nm,1.2s
PSZ LR LR
comp=Z,1µm,20.0s
PSZ Piszkesteto 79.63 325⇓ *i*P **P 07 49 21.8 +1.0**
PSZ Piszkesteto 79.63 325⇑ *e*P **P 07 49 21.5 +0.7**
MCD Coleburn Disti 79.67 342⇑ *e*P **P 07 49 20.3 -0.4**
MCD Coleburn Disti 79.67 342 P **P 07 49 20.3 -0.4**
VYHS Vyhne 79.67 326 *e*P **P 07 49 21.7 +0.8**
VYHS pmax pmax
comp=Z,29nm,1.2s
VYHS Vyhne 79.67 326 *e*P **P 07 49 21.6 +0.7**
VYHS *e*S **S 07 59 18.5 -1.0**
VYHS *e*SS **SS 08 04 27.2 -0.2**
N24A Carr 79.69 45⇓ P **P 07 49 22.2 +0.8**
baz=80,SNR=12
S20A Disappointment 79.70 49⇓ P **P 07 49 22.1 +0.5**
baz=80,SNR=55
M25A Palm-Egli Farm 79.73 44⇓ P **P 07 49 22.4 +0.8**
baz=80,SNR=11
Z14A Wintersburg 79.77 55⇑ P **P 07 49 22.2 +0.5**
baz=80,SNR=16
R21A Cimarron 79.82 49⇑ P **P 07 49 23.3 +1.0**
baz=80,SNR=71
K27A Flueckinger Fa 79.83 43⇓ P **P 07 49 22.0 -0.1**
baz=80,SNR=16
MME1 Meikle Cairn 79.84 342⇑ *e*P **P 07 49 21.2 -0.4**
MME1 Meikle Cairn 79.84 342 P **P 07 49 21.2 -0.4**
L26A Underwood Farm 79.85 44⇑ P **P 07 49 22.4 +0.2**
baz=80
J28A Allard Ranch, 79.85 42⇓ P **P 07 49 22.4 +0.4**
baz=80,SNR=76
Q22A Crested Butte, 79.87 48⇑ P **P 07 49 23.4 +0.8**
baz=80,SNR=71
BRG Berggiesshubel 79.88 330 *e*P **P 07 49 22.2 +0.2**
comp=Z,57nm,1.2s
BRG *e* 07 49 38.1
comp=Z,32nm,1.2s
BRG *e*PP **PP 07 52 23.2 +0.1**
comp=Z,7.9nm,1.2s
BRG S S 07 59 15.0 -6.6
BRG SS SS 08 04 41.0 +11
BRG
comp=N,707nm,14.5s
BRG
comp=E,574nm,15.0s
BRG
comp=Z,976nm,14.1s
BRG Berggiesshubel 79.88 330 *e*P **P 07 49 22.2 +0.2**
comp=Z,57nm,1.2s
BRG *e*pP **pP 07 49 36.5 +0.7**
BRG Berggiesshubel 79.88 330 *e*P **P 07 49 22.2 +0.2**
BRG *e* 07 49 38.1
BRG *e* 07 52 23.2
BRG S S 07 59 15.0 -6.6
BRG SS SS 08 04 41.0 +11
BRG pmax pmax
comp=Z,57nm,1.3s
BRG pmax pmax
comp=Z,32nm,1.2s
BRG pmax pmax
comp=Z,8.0nm,1.2s
BRG MLR MLR
comp=N,707nm,14.5s
BRG MLR MLR
comp=E,574nm,15.0s
BRG MLR MLR
comp=Z,976nm,14.1s
CLL Collm 79.90 331 *e*P **P 07 49 22.1 0.0**
comp=Z,94nm,1.2s
CLL *e*pP **pP 07 49 36.4 +0.5**
CLL Collm 79.90 331⇑ *i*P **P 07 49 21.9 -0.2**
CLL *i* *PP **pP 07 49 36.2 +0.3**
CLL *e*S **S 07 59 23.0 +1.2**
CLL pmax pmax
comp=Z,94nm,1.2s
CLL MLR MLR
comp=Z,2µm,19.7s
CLL Collm 79.90 331⇑ *i*P **P 07 49 21.9 -0.2**
comp=Z,94nm,1.2s
CLL *i* pP **pP 07 49 36.2 +0.3**
CLL *e*PP PP 07 52 36.0 +13
CLL *e*S **S 07 59 23.0 +1.2**
CLL *e*SS SS 08 05 00.0 +29
CLL Lm MLR 08 27 00.0
comp=Z,2µm,19.7s
PVCC Panska Ves 79.90 329 *e*P **P 07 49 22.7 +0.6**
PVCC *e* 07 49 27.0
PVCC *e* 07 49 36.6
PVCC MLR MLR
comp=Z,3µm,21.6s
PVCC Panska Ves 79.90 329⇑ *e*P **P 07 49 22.7 +0.6**
PVCC *e*PCP **PcP 07 49 27.0 -2.6**
PVCC *e*pP **pP 07 49 36.6 +0.6**
PVCC AMS AMS 08 27 00.0
comp=Z,3µm,21.6s
BORA Eskisehir 79.97 314 *i* P **P 07 49 23.0 +0.2**
ISCO Idaho Springs 79.98 47 *e*P **P 07 49 23.7 +0.5**
ISCO pmax pmax
comp=Z,115nm,1.6s
ISCO MLR MLR
comp=Z,486nm,20.0s
ISCO Idaho Springs 79.98 47 *e*P **P 07 49 23.7 +0.5**
comp=Z,115nm,1.6s
ISCO LR LR
comp=Z,486nm,20.0s
ISCO Idaho Springs 79.98 47⇑ P **P 07 49 23.9 +0.7**
baz=80,SNR=41
SEYT Eskypehyr 79.98 313 *i* P **P 07 49 22.3 -0.6**
VRAC Vranov 80.02 327⇓ *i*P **P 07 49 24.4 +1.6**
NRDL Niedersach Rie 80.02 333 *e*P **P 07 49 22.8 +0.2**
comp=Z,48nm,1.3s
NRDL *e*pP **pP 07 49 37.2 +0.7**
X16A Lo Mia Camp, P 80.05 54⇑ P **P 07 49 24.5 +1.0**
baz=80,SNR=112
MDO Dochfour 80.06 343⇑ *e*P **P 07 49 22.8 0.0**
MDO Dochfour 80.06 343 P **P 07 49 22.8 0.0**
O24A Longmont 80.06 46⇓ P **P 07 49 24.4 +1.0**
baz=80,SNR=43
FBE Freiberg 80.07 330 *e*P **P 07 49 23.5 +0.5**
comp=Z,120nm,1.3s
FBE *e*pP **pP 07 49 37.7 +0.8**
KIZK Mersin 80.07 309 *i* P **P 07 49 22.7 -0.6**
SZH Strazhica 80.08 318 P **P 07 49 23.3 +0.1**
N25A Grover 80.14 45⇑ P **P 07 49 24.4 +0.6**
baz=80
S21A Coal Bank Pass 80.15 49⇑ P **P 07 49 25.1 +1.0**
baz=80,SNR=64
M26A McRoberts Ranc 80.21 44⇑ P **P 07 49 25.0 +0.9**
baz=80,SNR=12
KAC Achnashellach 80.22 343⇑ *e*P **P 07 49 24.0 +0.3**
KAC Achnashellach 80.22 343 P **P 07 49 24.0 +0.3**
L27A T5 Ranch, Ells 80.22 43⇓ P **P 07 49 24.4 +0.2**
baz=80,SNR=11
K28A Ten Mile Ranch 80.28 42⇑ P **P 07 49 24.8 +0.4**
baz=80,SNR=41
BRSD Miller 80.29 40⇑ P **P 07 49 24.3 -0.1**
baz=80,SNR=31
JMB Yambol 80.30 318 P **P 07 49 25.3 +0.9**
PRA Prague 80.31 329⇑ P **P 07 49 25.0 +0.7**
PRA AMS AMS 08 27 30.0
PRU Pruhonice 80.33 329 *e*P **P 07 49 24.8 +0.3**
PRU *e* 07 49 39.3
PRU *e*S **S 07 59 25.3 -1.1**
PRU MLR MLR
comp=Z,3µm,21.6s
PRU Pruhonice 80.33 329⇑ *e*P **P 07 49 24.8 +0.3**
PRU *e*pP **pP 07 49 39.3 +1.0**
PRU *e*S **S 07 59 25.3 -1.1**
PRU AMS AMS 08 27 00.0
comp=Z,3µm,21.6s
BUD Budapest 80.34 325⇑ *e*P **P 07 49 25.2 +0.6**
R22A Saguache, Gunn 80.38 48⇑ P **P 07 49 26.7 +1.3**
baz=80,SNR=80
PKSN Nyarlorinc 80.40 324⇓ *e*P **P 07 49 26.4 +1.5**
KPL Plockton 80.45 343⇑ *e*P **P 07 49 25.3 +0.4**
KPL AMB AMB 07 49 26.8
comp=Z,131nm,1.3s
KPL Plockton 80.45 343 P **P 07 49 25.3 +0.4**
KPL AMB AMB 07 49 26.8
comp=Z,131nm,1.3s
NEUB Neuenburg 80.45 331 *e*P **P 07 49 25.3 +0.3**
comp=Z,125nm,1.2s
NEUB *e*pP **pP 07 49 39.5 +0.6**
CLZ Clausthal 80.46 332 *e*P **P 07 49 25.7 +0.5**
comp=Z,111nm,1.2s
CLZ *e*pP **pP 07 49 40.1 +1.1**
CLZ Clausthal 80.46 332 *e*P **P 07 49 25.7 +0.5**
CLZ *e**PP **pP 07 49 40.1 +1.1**
CLZ pmax pmax
comp=Z,32nm,1.2s
Q23A Hartsel 80.46 47⇓ P **P 07 49 26.1 +0.3**
baz=80
TREC Trest 80.49 328 *e*P **P 07 49 25.9 +0.6**
TREC *e* 07 49 40.1
TREC MLR MLR
comp=Z,2µm,19.8s
TREC Trest 80.49 328⇑ *e*P **P 07 49 25.9 +0.6**
TREC *e*pP **pP 07 49 40.1 +0.9**
TREC AMS AMS 08 27 20.0
comp=Z,2µm,19.8s
KSB Sheil Bridge 80.51 343⇑ *e*P **P 07 49 25.4 +0.2**
KSB Sheil Bridge 80.51 343 P **P 07 49 25.4 +0.2**
ULDT Uludag 80.53 314 *i* P **P 07 49 26.2 +0.3**
BZS Buzias 80.53 322⇑ P **P 07 49 26.3 +0.7**
BZS Buzias 80.53 322⇑ *i*P **P 07 49 26.3 +0.7**
U20A Newcomb 80.57 51⇓ P **P 07 49 26.9 +0.7**
baz=80,SNR=19
P24A Kohler Place, 80.57 46⇓ P **P 07 49 27.0 +0.8**
baz=80,SNR=12
M27A Reverse DX Ran 80.57 44⇑ P **P 07 49 26.4 +0.3**
baz=80,SNR=5.8
RAR Rarotonga 80.59 127 LR LR 08 19 17.9
comp=Z,270nm,19.5s,baz=296,slow=31
O25A Wiggins 80.60 46⇓ P **P 07 49 26.8 +0.5**
baz=80,SNR=16
N26A Koester Ranch, 80.61 44⇑ P **P 07 49 26.6 +0.3**
baz=80
PKS7 Kunszentmiklos 80.61 325⇓ *e*P **P 07 49 27.2 +1.2**
ZST Bratislava 80.65 326 *e*P **P 07 49 27.0 +0.8**
ZST *e*S S 07 59 38.6 +8.8
ZST Bratislava 80.65 326 *e*P **P 07 49 27.0 +0.8**
W18A Petrified Fore 80.66 52⇓ P **P 07 49 27.5 +0.8**
baz=80,SNR=10
S22A 4UR Ranch, Cre 80.66 49⇑ P **P 07 49 27.9 +1.1**
baz=80,SNR=83
PKSG 80.70 325⇓ *e*P **P 07 49 27.4 +1.0**
RAYN Ar Rayn 80.71 293 P **P 07 49 26.5 -0.5**
comp=Z,166nm,1.2s,SNR=14
RAYN Ar Rayn 80.71 293 *e*P **P 07 49 26.8 -0.3**
comp=Z,56nm,1.3s
T21A Navajo Lake 80.75 50⇓ P **P 07 49 28.0 +0.8**
baz=81,SNR=20
214A Organ Pipe Nat 80.76 56⇑ P **P 07 49 27.7 +0.5**
baz=81,SNR=51
CSKK Cs˘ˇkako 80.78 325⇓ *e*P **P 07 49 27.8 +0.9**
K29A Lazy Trails An 80.80 42⇑ P **P 07 49 27.4 +0.3**
baz=81,SNR=36
Q24A Divide 80.81 47⇓ P **P 07 49 28.1 +0.4**
baz=81,SNR=10
TANN Tannenbergstha 80.82 330 *e*P **P 07 49 27.3 +0.2**
comp=Z,40nm,1.4s
TANN *e*pP **pP 07 49 41.7 +0.7**
WERD Werda 80.85 330 *e*P **P 07 49 27.6 +0.3**
comp=Z,48nm,1.3s
WERD *e*pP **pP 07 49 41.9 +0.7**
PLN Plauen 80.88 330 *e*P **P 07 49 27.8 +0.4**
comp=Z,203nm,1.3s
PLN *e*pP **pP 07 49 42.3 +1.0**
X18A Snowflake 80.91 53⇑ P **P 07 49 28.9 +0.8**
baz=81,SNR=55
GUNZ Gunzen 80.91 330 *e*P **P 07 49 28.1 +0.5**
comp=Z,63nm,1.2s
GUNZ *e*pP **pP 07 49 42.1 +0.6**
R23A Moffat 80.95 48⇑ P **P 07 49 29.4 +1.0**
baz=81,SNR=42
WERN Wernitzgruen 80.95 330 *e*P **P 07 49 28.4 +0.6**
comp=Z,64nm,1.2s
WERN *e*pP **pP 07 49 42.6 +0.9**
PKST T˜'s 80.96 325⇑ *e*P **P 07 49 28.0 +0.1**
MOX Moxa 80.96 331 *e*P **P 07 49 28.0 +0.2**
comp=Z,65nm,1.3s
MOX *e*pP **pP 07 49 42.5 +0.8**
MOX Moxa 80.96 331 *e*P **P 07 49 28.0 +0.2**
MOX *e**PP **pP 07 49 42.5 +0.8**
MOX pmax pmax
comp=Z,18nm,1.3s
O26A Horse Wrangler 80.96 45⇑ P **P 07 49 28.1 -0.1**
baz=81,SNR=25
NKC Novy Kostel 80.97 330 *e*P **P 07 49 28.3 +0.4**
NKC *e* 07 49 42.3
NKC MLR MLR
comp=Z,2µm,19.6s
NKC Novy Kostel 80.97 330⇑ *e*P **P 07 49 28.3 +0.4**
NKC *e*PCP **PcP 07 49 32.6 -1.7**
NKC *e*pP **pP 07 49 42.3 +0.5**
NKC AMS AMS 08 28 00.0
comp=Z,2µm,19.6s
V20A Brimhall 80.98 51⇑ P **P 07 49 29.2 +0.7**
baz=81,SNR=37
P25A Willow Gulch B 80.99 46⇓ P **P 07 49 29.0 +0.6**
baz=81,SNR=35
N27A Anderson Farm, 80.99 44⇑ P **P 07 49 28.6 +0.2**
baz=81,SNR=24
ESY Stoneypath 81.00 341⇑ *e*P **P 07 49 27.9 0.0**
ESY Stoneypath 81.00 341 P **P 07 49 27.9 0.0**
IBBN Ibbenburen 81.00 334 *e*P **P 07 49 28.3 +0.3**
comp=Z,116nm,1.2s
IBBN *e*pP **pP 07 49 42.4 +0.6**
U21A Nageezi 81.05 50⇑ P **P 07 49 29.5 +0.7**
baz=81,SNR=50
GDZ Gediz 81.06 314 *i* P **P 07 49 28.5 -0.2**
T22A Edith 81.11 49⇑ P **P 07 49 30.2 +1.0**
baz=81,SNR=82
MPEP Malo Peshtene 81.13 320 P **P 07 49 28.9 0.0**
EYMN Ely 81.14 33 *e*P **P 07 49 28.4 -0.4**
comp=Z,331nm,2.0s
EYMN LR LR
comp=Z,627nm,21.0s
OGNE Ogallala 81.17 44 *e*P **P 07 49 29.0 -0.1**
comp=Z,389nm,1.5s
OGNE LR LR
comp=Z,572nm,19.0s
OGNE Ogallala 81.17 44⇑ P **P 07 49 29.1 -0.1**
baz=81,SNR=25
S23A Nye Farm, Mont 81.17 48⇑ P **P 07 49 30.4 +0.9**
baz=81,SNR=14
EAB Aberfoyle 81.19 342⇑ *e*P **P 07 49 29.0 +0.2**
EAB Aberfoyle 81.19 342 P **P 07 49 29.0 +0.2**
L29A Maesberg Ranch 81.21 42⇑ P **P 07 49 29.2 -0.2**
baz=81
M28A Bar X Bar Ranc 81.21 43⇓ P **P 07 49 29.5 0.0**
baz=81
DURS Dursunbey 81.27 314 *i* P **P 07 49 29.1 -0.7**
EAU Auchinoon 81.27 341 *e*P **P 07 49 29.6 +0.2**
EAU Auchinoon 81.27 341 P **P 07 49 29.6 +0.2**
SOP Sopron 81.28 326⇑ *e*P **P 07 49 30.7 +1.2**
MANZ Manzenberg 81.30 330 *e*P **P 07 49 30.0 +0.3**
comp=Z,50nm,1.2s
MANZ *e*pP **pP 07 49 44.2 +0.7**
ISP Isparta 81.32 312 PFAKE 07 49 40.0 +10
ISP LR LR
comp=Z,743nm,21.0s
R24A Sanders Place, 81.33 47⇓ P **P 07 49 31.0 +0.7**
baz=81,SNR=44
GAZI Gazipasa 81.34 310 *i* P **P 07 49 28.1 -2.0**
Q25A Bedland, Calha 81.36 46⇓ P **P 07 49 30.6 +0.2**
baz=81,SNR=57
PKS9 Tamasi 81.36 325⇓ *e* P **P 07 49 30.3 +0.3**
CONA Conrad Observa 81.39 327⇑ *i*P **P 07 49 31.1 +0.9**
comp=Z,81nm,1.3s,SNR=34
KHC Kasperske Hory 81.40 329⇑ *i*P **P 07 49 30.5 +0.3**
KHC *e* 07 49 44.9
KHC *e*S **S 07 59 35.6 -2.0**
KHC MLR MLR
comp=Z,3µm,20.4s
KHC Kasperske Hory 81.40 329⇑ *i*P **P 07 49 30.5 +0.3**
KHC *e*pP **pP 07 49 44.9 +0.8**
KHC *e*S **S 07 59 35.6 -2.0**
KHC AMS AMS 08 28 00.0
comp=Z,3µm,20.4s
KHC Kasperske Hory 81.40 329 *e*P **P 07 49 30.2 0.0**
comp=Z,60nm,1.1s
W20A Ramah 81.41 52⇓ P **P 07 49 31.2 +0.4**
baz=81,SNR=36
P26A Davis Ranch, A 81.42 45⇓ P **P 07 49 30.7 0.0**
baz=81,SNR=19
UBBA Unterbreizbach 81.42 332 *e*P **P 07 49 30.4 +0.3**
comp=Z,59nm,1.7s
UBBA *e*pP **pP 07 49 44.7 +0.7**
ROTZ Rotzenmuhle 81.44 330 *e*P **P 07 49 31.1 +0.7**
comp=Z,96nm,1.4s
ROTZ *e*pP **pP 07 49 45.5 +1.3**
O27A Beecher Island 81.46 45⇓ P **P 07 49 30.6 -0.2**
baz=81,SNR=12
PKSM Moragy 81.48 324⇑ P **P 07 49 31.3 +0.7**
PKSM Moragy 81.48 324⇑ *i*P **P 07 49 31.3 +0.7**
DEMI Demirci 81.52 314 *i* P **P 07 49 30.0 -1.1**
M29A Burnside Ranch 81.54 43⇑ P **P 07 49 31.0 -0.1**
baz=81
PLD Plovdiv 81.54 318 P P 07 49 27.7 -3.3
KHAL Karahalli 81.54 313 *i* P **P 07 49 30.9 -0.4**
PGBU Glenifferbraes 81.56 342⇑ *e*P **P 07 49 31.2 +0.3**
PGBU AMB AMB 07 49 32.8
comp=Z,114nm,1.2s
PGBU AMS AMS 08 30 11.6
comp=Z,701nm,17.7s
PGBU Glenifferbraes 81.56 342 P **P 07 49 31.2 +0.3**
PGBU AMB AMB 07 49 32.8
comp=Z,114nm,1.2s
PGBU AMS AMS 08 30 11.6
comp=Z,701nm,17.7s
U22A Llaves 81.57 50⇓ P **P 07 49 32.6 +1.0**
baz=81,SNR=72
CSS Prodhromos 81.57 308 P P 07 49 27.7 -3.7
CSS Prodhromos 81.57 308 *e*P **P 07 49 32.5 +1.1**
comp=Z,23nm,0.9s
CSS LR LR
comp=Z,811nm,21.0s
GEC2 GERESS Array S 81.57 329 *e*P **P 07 49 31.3 +0.1**
comp=Z,47nm,1.4s
GEC2 *e*pP **pP 07 49 45.6 +0.5**
GEC2 GERESS Array S 81.57 329 *e*P **P 07 49 31.3 +0.1**
GEC2 *e**PP **pP 07 49 45.6 +0.5**
GEC2 pmax pmax
comp=Z,9.0nm,1.4s
GERES GERESS Array B 81.57 329 P **P 07 49 30.5 -0.7**
GERES GERESS Array B 81.57 329 P **P 07 49 30.5 -0.7**
comp=Z,6.1nm,0.5s,baz=46,slow=5.8,SNR=42
GERES LR LR 08 28 52.6
comp=Z,3µm,19.3s,baz=23,slow=38
T23A Casias Ranch, 81.61 49⇓ P **P 07 49 32.9 +1.1**
baz=81
WTSB Winterswijk 81.62 334 *e*P **P 07 49 30.9 -0.3**
comp=Z,40nm,0.9s
WET Wettzell 81.67 329 *e*P **P 07 49 32.1 +0.5**
comp=Z,72nm,1.3s
WET *e*pP **pP 07 49 46.5 +1.0**
WET Wettzell 81.67 329 *e*P **P 07 49 32.1 +0.5**
WET *e**PP **pP 07 49 46.5 +1.0**
WET pmax pmax
comp=Z,18nm,1.3s
S24A Houchin Ranch, 81.68 48⇑ P **P 07 49 33.1 +0.9**
baz=82,SNR=43
ESK Eskdalemuir 81.69 341 P **P 07 49 31.3 -0.2**
comp=Z,150nm,1.0s,SNR=11
ESK Eskdalemuir 81.69 341⇑ *e*P **P 07 49 31.3 -0.2**
ESK AMB AMB 07 49 32.5
comp=Z,31nm,1.4s
ESK Eskdalemuir 81.69 341 P **P 07 49 31.3 -0.2**
ESK AMB AMB 07 49 32.5
comp=Z,31nm,1.4s
ESK Eskdalemuir 81.69 341 *e*P **P 07 49 30.8 -0.8**
ESK pmax pmax
comp=Z,50nm,1.3s
ESK MLR MLR
comp=Z,790nm,19.0s
ESK Eskdalemuir 81.69 341 *e*P **P 07 49 30.8 -0.8**
comp=Z,50nm,1.3s
ESK LR LR
comp=Z,790nm,19.0s
ALN Alexandroupoli 81.69 317 P P 07 49 27.7 -4.1
ALN Alexandroupoli 81.69 317 *e*P **P 07 49 32.1 +0.3**
ALN Alexandroupoli 81.69 317 *e*P P 07 49 44.2 +12
Q26A Hugo 81.76 46⇑ P **P 07 49 32.7 +0.2**
baz=82,SNR=34
ECK Cauldkaine Hil 81.79 341⇑ *e*P **P 07 49 31.8 -0.3**
ECK Cauldkaine Hil 81.79 341 P P **P 07 49 31.8 -0.3**
X20A Quemado 81.80 52⇑ P **P 07 49 34.1 +1.2**
baz=82,SNR=120
RZN Rozhen 81.83 318 P **P 07 49 33.0 +0.2**

TUC Tucson 81.84 55 eP P 07 49 33.1 +0.2
TUC pmax pmax
comp=Z,300nm,1.2s
TUC MLR MLR
comp=Z,590nm,21.0s
TUC Tucson 81.84 55 eP P 07 49 33.1 +0.2
comp=Z,300nm,1.2s
TUC LR LR
comp=Z,590nm,21.0s
P27A Ficken Ranch, 81.84 45 ⇓P P 07 49 32.6 -0.2
baz=82,SNR=16
V22A San Miguel Ran 81.85 50 ⇑P P 07 49 33.7 +0.6
baz=82,SNR=46
R25A Fountain Ranch 81.86 47 ⇑P P 07 49 33.0 -0.1
baz=82,SNR=22
GRF Grafenberg Arr 81.88 330 eP P 07 49 33.5 +0.8
comp=Z,156nm,1.2s
GRF epP pP 07 49 47.9 +1.3
GRF Grafenberg Arr 81.88 330 eP P 07 49 33.5 +0.8
GRF e*PP pP 07 49 47.9 +1.3
GRF pmax pmax
comp=Z,47nm,1.2s
GRFO Grafenberg 81.88 330 eP P 07 49 33.8 +1.1
GRFO pmax pmax
comp=Z,130nm,1.2s
GRFO Grafenberg 81.88 330 eP P 07 49 33.8 +1.1
comp=Z,130nm,1.2s
O28A Krutsinger Ran 81.89 44 ⇓P P 07 49 32.8 -0.3
baz=82,SNR=13
BUG Bochum-Univer 81.89 334 eP P 07 49 32.5 -0.2
comp=Z,66nm,1.2s
BUG epP pP 07 49 46.7 +0.1
M30A Dale-Ortello V 81.90 42 ⇓P P 07 49 32.8 -0.2
baz=82
W21A San Fidel 81.94 51 ⇑P P 07 49 34.3 +0.7
baz=82,SNR=33
VTS Vitosha 81.96 319 ⇑P P 07 49 34.8 +1.4
VTS Vitosha 81.96 319 P P 07 49 33.7 +0.3
VTS Vitosha 81.96 319 ⇑iP P 07 49 34.8 +1.4
ECSD EROS Data Cent 81.96 39 eP P 07 49 33.0 -0.3
comp=Z,94nm,1.1s
ECSD LR LR
comp=Z,880nm,21.0s
U23A El Rito 81.99 49 ⇓P P 07 49 35.0 +1.1
baz=82,SNR=232
N29A Votaw Ranch, W 82.01 43 ⇓P P 07 49 33.5 -0.2
baz=82
ARSA Arzberg 82.06 327 ⇑iP P 07 49 34.1 +0.3
comp=Z,46nm,1.3s,SNR=11
S25A Robets Cordova 82.11 47 ⇓P P 07 49 34.3 -0.1
baz=82,SNR=20
MOA Molln 82.12 328 ⇑iP P 07 49 34.3 +0.3
comp=Z,53nm,1.2s,SNR=7.7
AKHS Akhisar 82.14 314 iP P 07 49 33.5 -0.7
KSCO Kaye Shedlock' 82.20 45 ⇓P P 07 49 34.8 +0.1
baz=82,SNR=15
R26A Arlington 82.23 46 ⇑P P 07 49 35.0 +0.1
baz=82,SNR=93
DNZL Cakiroluk 82.27 313 iP P 07 49 34.3 -0.9
SMTH Samothraki Isl 82.27 317 eP P 07 49 34.4 -0.5
GOLH Golhisar 82.28 312 iP P 07 49 33.9 -1.2
P28A Saint Francis 82.28 45 ⇑P P 07 49 34.9 -0.2
baz=82,SNR=28
Y20A Horse Springs, 82.30 52 ⇓P P 07 49 36.9 +1.4
baz=82,SNR=94
X21A Alamocita Cree 82.30 52 ⇓P P 07 49 36.7 +1.2
baz=82,SNR=122
N30A Hueftle Ranch, 82.31 43 ⇓P P 07 49 34.8 -0.4
baz=82,SNR=8.6
KESW Keswick, Cumbr 82.32 341 ⇑eP P 07 49 35.3 +0.5
KESW AMB AMB 07 49 36.8
comp=Z,86nm,1.1s
KESW AMS AMS 08 34 12.2
comp=Z,938nm,15.5s
KESW Keswick, Cumbr 82.32 341 P P 07 49 35.3 +0.5
KESW AMB AMB 07 49 36.8
comp=Z,86nm,1.1s
KESW AMS AMS 08 34 12.2
comp=Z,938nm,15.5s
KOGS Kog 82.36 326 iP P 07 49 35.1 -0.2
KOGS iP P 07 49 49.9 +0.7
KOGS eS S 07 59 47.5 -0.1
V23A Ortiz Mt. (NFS 82.39 50 ⇓P P 07 49 37.6 +1.6
baz=82,SNR=54
MMB Musomiste 82.42 318 P P 07 49 36.0 +0.3
O29A 4D Ranch, Culb 82.42 44 ⇑P P 07 49 35.7 -0.1
baz=82,SNR=21
W22A Albuquerque 82.44 51 ⇑P P 07 49 37.3 +1.2
baz=82,SNR=18
GAL1 Galloway 82.47 342 ⇑eP P 07 49 35.8 +0.2
GAL1 AMB AMB 07 49 36.6
comp=Z,47nm,1.1s
GAL1 AMS AMS 08 30 47.6
comp=Z,685nm,18.3s
GAL1 Galloway 82.47 342 P P 07 49 35.8 +0.2
GAL1 AMB AMB 07 49 36.6
comp=Z,47nm,1.1s
GAL1 AMS AMS 08 30 47.6
comp=Z,685nm,18.3s
U24A Moreno Valley 82.48 49 ⇑P P 07 49 37.8 +1.3
baz=82,SNR=35
T25A Trinidad 82.48 48 ⇑P P 07 49 36.9 +0.5
baz=82,SNR=21
TNS Taunus Mts 82.48 332 eP P 07 49 36.0 +0.1
comp=Z,54nm,1.3s
TNS epP pP 07 49 50.6 +0.8
TNS Taunus Mts 82.48 332 eP P 07 49 36.0 +0.1
TNS e*PP pP 07 49 50.6 +0.8
TNS pmax pmax
comp=Z,8.0nm,1.3s
NVR Nevrokopi 82.52 318 eP P 07 49 36.0 -0.2
NVR Nevrokopi 82.52 318 eP P 07 49 36.7 +0.5
KKB Krupnik 82.55 319 P P 07 49 36.8 +0.5
Q28A Sharon Springs 82.60 45 ⇓P P 07 49 36.7 -0.2
baz=82,SNR=25
R27A Eads 82.61 46 ⇑P P 07 49 36.8 -0.1
baz=82,SNR=30
SPMN St. Paul 82.65 36 ⇑P P 07 49 36.2 -0.6
baz=82,SNR=13
Y21A Point of Rocks 82.66 52 ⇑P P 07 49 38.8 +1.4
baz=82,SNR=79
S26A Kim 82.69 47 ⇓P P 07 49 37.1 -0.2
baz=82,SNR=25
Z20A Nine Sixteen R 82.69 53 ⇓P P 07 49 38.5 +1.0
baz=82,SNR=135
PERS Pernice 82.71 326 iP P 07 49 37.3 +0.1
PERS iP pP 07 49 51.7 +0.6
PERS eS S 07 59 50.9 -0.4
P29A Atwood 82.71 44 ⇓P P 07 49 37.0 -0.3
baz=82
SOKA Soboth 82.72 327 ⇑eP P 07 49 37.4 +0.2
comp=Z,135nm,1.3s
LAZ Ladron 82.73 51 eP P 07 49 38.3 +0.7
comp=Z,55nm,1.3s
X22A Bernardo 82.73 51 ⇓P P 07 49 39.1 +1.4
baz=83,SNR=21
ANMO Albuquerque 82.77 51 eP P 07 49 38.7 +0.8
comp=Z,107nm,1.3s
ANMO LR LR
comp=Z,420nm,22.0s
O30A MW Ranch, Wils 82.77 43 ⇑P P 07 49 37.1 -0.5
baz=83,SNR=19
W23A Werner Place, 82.81 50 ⇓P P 07 49 39.1 +1.0
baz=83,SNR=43
RJOB Jochberg 82.82 328 eP P 07 49 38.4 +0.7
comp=Z,93nm,1.1s
RJOB epP pP 07 49 52.8 +1.2
TOD Tromm 82.86 332 ⇑eP P 07 49 38.0 +0.2
TOD Tromm 82.86 332 ⇑eP P 07 49 38.0 +0.2
BGNE Belgrade 82.89 41 ⇑P P 07 49 37.6 -0.5
baz=83,SNR=15
T26A Comanche Natio 82.93 47 ⇑P P 07 49 38.6 -0.1
baz=83,SNR=28
AKAS Kas 82.94 311 iP P 07 49 36.8 -1.9
V24A Rampart Ranch, 82.95 49 ⇓P P 07 49 40.2 +1.4
baz=83,SNR=89
AYDN Tasoluk 82.95 313 iP P 07 49 39.2 +0.6
S27A Las Animas 82.97 47 ⇑P P 07 49 38.9 +0.1
baz=83
BEBN Eben Emael 82.98 334 P P 07 49 38.0 -0.3
comp=Z,17nm,1.1s
U25A Circle Dot Ran 82.99 48 ⇓P P 07 49 39.6 +0.5
baz=83,SNR=49
MEM Membach 83.03 334 P P 07 49 38.2 -0.4
comp=Z,28nm,1.3s
120A U Bar Ranch, L 83.05 54 ⇓P P 07 49 40.0 +0.7
baz=83,SNR=69
OBKA Obir 83.06 327 ⇑iP P 07 49 38.8 -0.2
comp=Z,21nm,0.8s,SNR=10
Y22D IRIS PASSCAL I 83.08 51 ⇓P P 07 49 40.7 +1.3
baz=83,SNR=5.2
KBI1 Birley Grange 83.08 339 ⇑eP P 07 49 38.8 -0.1
KBI1 Birley Grange 83.08 339 P P 07 49 38.8 -0.1
TURN Turunc 83.08 312 iP P 07 49 40.1 +1.0
FUR Furstenfeldbru 83.09 329 eP P 07 49 39.6 +0.6
comp=Z,157nm,1.5s
FUR epP pP 07 49 54.1 +1.1
FUR Furstenfeldbru 83.09 329 eP P 07 49 39.6 +0.6
FUR e*PP pP 07 49 54.1 +1.1
FUR pmax pmax
comp=Z,31nm,1.5s
ABH Alteburg 83.09 333 ⇑eP P 07 49 39.1 +0.1
LPM Los Pinos Moun 83.10 51 eP P 07 49 40.3 +0.7
URZ Urewera 83.11 153 eP P 07 49 38.0 -1.0
comp=Z,47nm,1.1s
URZ Urewera 83.11 153 P P 07 49 37.5 -1.5
comp=Z,21nm,1.0s,baz=62,slow=1.4,SNR=5.9
KBA Koelnbreinsper 83.12 328 ⇑iP P 07 49 39.4 0.0
comp=Z,81nm,1.1s,SNR=18
R28A Tribune 83.12 46 ⇑P P 07 49 39.2 -0.4
baz=83,SNR=12
P30A Selden 83.13 44 ⇓P P 07 49 39.1 -0.3
baz=83
Z21A St. Cloud Mine 83.14 52 ⇑P P 07 49 40.9 +1.0
baz=83,SNR=125
Y22A Socorro 83.15 52 ⇑P P 07 49 40.6 +0.8
baz=83,SNR=47
SOH Sokhos 83.17 318 eP P 07 49 39.1 -0.5
SOH Sokhos 83.17 318 eP P 07 49 39.5 -0.1
X23A Hourglass Bar 83.18 51 ⇓P P 07 49 40.8 +0.7
baz=83,SNR=19
Q29A Oakley 83.19 45 ⇓P P 07 49 39.5 -0.4
baz=83,SNR=26
VAY Valandovo 83.21 319 iP P 07 49 38.8 -1.0
BNM Barren Site 83.21 51 eP P 07 49 40.9 +0.7
comp=Z,53nm,1.2s
W24A Lazy 6 Ranch, 83.22 50 ⇑P P 07 49 41.5 +1.3
baz=83,SNR=128
V25A Rancho No Teng 83.26 49 ⇓P P 07 49 41.3 +0.9
baz=83,SNR=103
GCAM G?zelcaml? 83.29 314 iP P 07 49 39.6 -0.6
SKO Skopje 83.30 320 iP P 07 49 40.4 +0.1
SCHQ Schefferville 83.33 17 eP P 07 49 39.6 -0.5
comp=Z,58nm,1.0s
SCHQ Schefferville 83.33 17 P P 07 49 40.1 0.0
comp=Z,41nm,0.9s,baz=352,slow=5.1,SNR=43
SCHQ LR LR 08 28 49.6
comp=Z,801nm,20.4s,baz=160,slow=37
GMM Mts of Mourne 83.34 342 ⇑eP P 07 49 40.0 -0.2
GMM Mts of Mourne 83.34 342 P P 07 49 40.0 -0.2
MYKA Terra Mystica 83.35 327 ⇑eP P 07 49 40.0 -0.5
comp=Z,30nm,0.7s
U26A Atchley Ranch, 83.39 48 ⇑P P 07 49 41.4 +0.4
baz=83,SNR=46
IVA Berane 83.40 321 ⇑iP P 07 49 41.2 +0.4
STU Stuttgart 83.40 331 eP P 07 49 40.9 +0.3
comp=Z,102nm,1.3s
STU Stuttgart 83.40 331 eP P 07 49 41.3 +0.7
STU pmax pmax
comp=Z,119nm,1.4s
STU Stuttgart 83.40 331 eP P 07 49 41.3 +0.7
comp=Z,119nm,1.4s
319A Douglas 83.41 55 ⇑P P 07 49 41.9 +0.7
baz=83,SNR=104
RUP Ruppelstein 83.42 333 eP P 07 49 41.0 +0.3
RUP Ruppelstein 83.42 333 eP P 07 49 41.0 +0.3
BCLA Clavier 83.43 334 P P 07 49 40.4 -0.3
comp=Z,23nm,1.3s
LJU Ljubljana 83.43 326 iP P 07 49 40.5 -0.3
LJU epP pP 07 49 54.9 +0.2
R29A Marienthal 83.44 45 ⇑P P 07 49 40.8 -0.3
baz=83,SNR=6.7
PLG Polygyros 83.44 318 eP P 07 49 40.6 -0.4
CHOS Chios island 83.46 315 eP P 07 49 41.7 +0.5
CHOS Chios island 83.46 315 eP P 07 49 41.3 +0.1
SMG Samos 83.51 314 eP P 07 49 40.9 -0.5
T27A Campo 83.51 47 ⇑P P 07 49 41.6 0.0
baz=83,SNR=18
BOJS Bojanci 83.54 326 iP P 07 49 41.3 -0.1
220A Playas Peak, P 83.54 54 ⇑P P 07 49 42.5 +0.6
baz=83,SNR=124
Q30A Quinter 83.55 44 ⇑P P 07 49 41.2 -0.5
baz=83,SNR=38
GRG Griva 83.56 319 eP P 07 49 41.3 -0.3
PVY Plav 83.57 321 ⇑iP P 07 49 41.8 0.0
121A Cookes Peak, D 83.58 53 ⇑P P 07 49 42.9 +0.8
baz=83,SNR=88
COWI Conover 83.59 33 eP P 07 49 41.0 -0.7
comp=Z,54nm,1.4s
COWI LR LR
comp=Z,807nm,22.0s
S28A Manter 83.60 46 ⇑P P 07 49 42.1 +0.1
baz=83,SNR=30
Z22A Elephant Butte 83.61 52 ⇓P P 07 49 42.9 +0.7
baz=83,SNR=13
P31A Stockton 83.61 43 ⇑P P 07 49 41.5 -0.4
baz=83,SNR=49
CADS Cadrg 83.62 327 iP P 07 49 40.8 -1.0
UPM Unac-Piva 83.63 322 ⇑iP P 07 49 41.9 -0.2
PAIG Paliouri 83.64 317 eP P 07 49 41.8 -0.3
PAIG Paliouri 83.64 317 eP P 07 49 41.7 -0.3
X24A Lazy VL Ranch, 83.65 50 ⇑P P 07 49 43.5 +1.1
baz=84,SNR=85
WTTA Wattenberg 83.67 329 ⇑iP P 07 49 42.2 -0.1
comp=Z,57nm,1.3s,SNR=12
WME Myndd Eilian 83.70 341 ⇑eP P 07 49 42.2 +0.2
WME Myndd Eilian 83.70 341 P P 07 49 42.2 +0.2
Y23A Lovelace Mesa, 83.70 51 ⇑P P 07 49 43.4 +0.7
baz=84,SNR=154
VOY Vojsko 83.71 327 eP P 07 49 41.8 -0.6
VOY e 07 50 01.2
WPM1 Penmaenmawr 83.72 340 ⇑eP P 07 49 42.6 +0.5
WPM1 Penmaenmawr 83.72 340 P P 07 49 42.6 +0.5
ABTA Abtersbach 83.72 328 ⇑iP P 07 49 41.6 -0.9
comp=Z,48nm,1.2s,SNR=12
LANF Langenberg 83.75 332 ⇑eP P 07 49 42.5 +0.1
LANF Langenberg 83.75 332 ⇑eP P 07 49 42.5 +0.1
LANF Langenberg 83.75 332 ⇑eP P 07 49 42.5 +0.1
WLF Walferdange 83.77 333 P P 07 49 43.2 +0.7
comp=Z,39nm,1.9s
WLF Walferdange 83.77 333 eP P 07 49 42.8 +0.4
comp=Z,162nm,2.0s
WLF Walferdange 83.77 333 eP P 07 49 42.9 +0.4
WLF pmax pmax
comp=Z,103nm,1.7s
WLF MLR MLR
comp=Z,2µm,21.0s
WLF Walferdange 83.77 333 eP P 07 49 42.9 +0.4
comp=Z,103nm,1.7s
WLF LR LR
comp=Z,2µm,21.0s
V26A Tequesquite Ra 83.78 48 ⇓P P 07 49 43.4 +0.4
baz=84,SNR=57
W25A X Bar L Ranch, 83.78 49 ⇓P P 07 49 43.9 +0.9
baz=84,SNR=175
ARG Arkhangelos 83.82 312 eP P 07 49 42.7 -0.3
MOTA Moosalm 83.82 329 ⇑eP P 07 49 43.0 +0.1
comp=Z,587nm,2.8s,SNR=20
WLF1 Llynfaes 83.82 341 ⇑eP P 07 49 42.7 +0.1
WLF1 AMB AMB 07 49 44.4
comp=Z,74nm,1.4s
WLF1 AMS AMS 08 30 47.9
comp=Z,846nm,19.6s
WLF1 Llynfaes 83.82 341 P P 07 49 42.7 +0.1
WLF1 AMB AMB 07 49 44.4
comp=Z,74nm,1.4s
WLF1 AMS AMS 08 30 47.9
comp=Z,846nm,19.6s
RETA Reutte 83.84 329 ⇑iP P 07 49 43.2 +0.3
comp=Z,127nm,1.2s,SNR=48
GIVF Givet 83.86 334 ⇑iP P 07 49 42.7 -0.2
comp=Z,81nm,1.3s
GIVF Givet 83.86 334 ⇑iP P 07 49 42.7 -0.2
GIVF pmax pmax
comp=Z,81nm,1.3s
GIVF Givet 83.86 334 ⇑iP P 07 49 42.7 -0.2
comp=Z,81nm,1.3s
FOEL Foel Wylfa 83.87 340 ⇑eP P 07 49 42.8 -0.1
FOEL AMB AMB 07 49 44.2
comp=Z,83nm,1.1s
FOEL AMS AMS 08 31 07.1
comp=Z,1µm,18.3s
U27A Thompson Grove 83.90 47 ⇓P P 07 49 43.8 +0.2
baz=84,SNR=15
YLL Llanberis 83.90 341 ⇑eP P 07 49 43.3 +0.3
YLL Llanberis 83.90 341 P P 07 49 43.3 +0.3
YRC Rhoscolyn 83.90 341 ⇑eP P 07 49 42.9 -0.1
YRC Rhoscolyn 83.90 341 P P 07 49 42.9 -0.1
320A Kipp Ranch, An 83.92 54 ⇓P P 07 49 44.4 +0.6
baz=84,SNR=53
221A Mesquite Ranch 83.94 54 ⇑P P 07 49 44.5 +0.7
baz=84,SNR=6.7
DOU Dourbes 83.94 334 P P 07 49 43.0 -0.3
comp=Z,18nm,1.7s
122A Conniff Cattle 83.96 53 ⇑P P 07 49 44.8 +0.8
baz=84,SNR=23
Q31A Ellis 83.97 44 ⇓P P 07 49 43.1 -0.7
baz=84,SNR=7.5
R30A Dighton 84.01 45 ⇑P P 07 49 43.7 -0.3
baz=84
S29A Ulysses 84.02 46 ⇑P P 07 49 43.9 -0.2
baz=84,SNR=8.1
TRI Trieste 84.02 327 eP P 07 49 43.1 -0.7
TRI pmax pmax
comp=Z,18nm,0.8s
TRI Trieste 84.02 327 eP P 07 49 43.1 -0.7
comp=Z,18nm,0.8s
BRY Bratogost 84.03 322 ⇑iP P 07 49 43.6 -0.5
TTG Podgorica 84.04 321 ⇑iP P 07 49 44.0 0.0
Z23A Rita Site, Whi 84.05 52 ⇓P P 07 49 45.0 +0.6
baz=84,SNR=30
BIA Bitola 84.07 319 eP P 07 49 43.3 -0.9
Y24A Capitan 84.08 51 ⇓P P 07 49 45.1 +0.4
baz=84,SNR=69
AOS Alonnisos 84.08 317 eP P 07 49 44.2 -0.1
BFO Black Forest 84.09 331 P P 07 49 44.3 +0.1
comp=Z,489nm,1.3s,SNR=22
BFO Black Forest 84.09 331 eP P 07 49 44.4 +0.2
comp=Z,118nm,1.2s
BFO epP pP 07 49 58.9 +0.8
BFO Black Forest 84.09 331 eP P 07 49 44.4 +0.2
BFO e*PP pP 07 49 58.9 +0.8
BFO pmax pmax
comp=Z,36nm,1.2s
BFO Black Forest 84.09 331 eP P 07 49 44.7 +0.5
comp=Z,147nm,1.3s
BFO LR LR
comp=Z,1µm,20.0s
BAIF Baives 84.11 334 ⇑iP P 07 49 44.0 -0.2
comp=Z,76nm,1.2s
BAIF Baives 84.11 334 ⇑iP P 07 49 44.0 -0.2
BAIF pmax pmax
comp=Z,76nm,1.2s
BAIF Baives 84.11 334 ⇑iP P 07 49 44.0 -0.2
comp=Z,76nm,1.2s
SPAK Spaichingen-Ko 84.11 331 ⇑eP P 07 49 44.5 +0.2
YRE Yr Eifl 84.11 341 ⇑eP P 07 49 44.6 +0.4
YRE Yr Eifl 84.11 341 P P 07 49 44.6 +0.4
HLM1 Long Mynd 84.11 340 ⇑eP P 07 49 44.3 +0.1
HLM1 AMB AMB 07 49 45.2
comp=Z,33nm,1.6s
HLM1 Long Mynd 84.11 340 P P 07 49 44.3 +0.1
HLM1 AMB AMB 07 49 45.2
comp=Z,33nm,1.6s
X25A Clemmons Ranch 84.14 50 ⇑P P 07 49 45.7 +0.8
baz=84,SNR=71
LIT Litokhoron 84.14 318 eP P 07 49 43.9 -0.7
FNA Florina 84.21 319 eP P 07 49 44.2 -0.8
FETA Feichten 84.23 329 ⇑iP P 07 49 45.2 +0.1
comp=Z,71nm,1.2s,SNR=28
T29A Hugoton 84.25 46 ⇑P P 07 49 45.1 -0.2
baz=84
U28A Mallet 84.27 47 ⇓P P 07 49 45.4 0.0
baz=84
W26A Owens Ranch, T 84.28 49 ⇑P P 07 49 46.5 +1.0
baz=84,SNR=27
222A Williams Famil 84.30 53 ⇑P P 07 49 46.1 +0.4
baz=84,SNR=49
NEO Neokhori 84.34 317 eP P 07 49 44.6 -1.0
DLF Lyons Farm 84.35 342 ⇑iP P 07 49 45.8 +0.5
DAVA Damuels 84.35 330 ⇓iP P 07 49 45.8 +0.1
comp=Z,130nm,1.1s,SNR=31
V27A Dan Oppiter Fa 84.36 48 ⇓P P 07 49 46.0 +0.1
baz=84
S30A Montezuma 84.37 45 ⇑P P 07 49 45.7 -0.2
baz=84,SNR=14
CDF Champ du Feu 84.41 332 ⇑iP P 07 49 45.9 0.0
comp=Z,224nm,1.3s
CDF Champ du Feu 84.41 332 ⇑iP P 07 49 45.9 0.0
CDF pmax pmax
comp=Z,224nm,1.3s
CDF Champ du Feu 84.41 332 ⇑iP P 07 49 45.9 0.0
comp=Z,224nm,1.3s
R31A Burdett 84.42 44 ⇑P P 07 49 45.3 -0.8
baz=84,SNR=23
123A Bell Site, Whi 84.46 52 ⇓P P 07 49 47.2 +0.7
baz=84
LIBD Limburg 84.51 332 eP P 07 49 46.7 +0.4
LIBD Limburg 84.51 332 eP P 07 49 46.7 +0.4
Y25A Mesa, Roswell 84.53 50 ⇓P P 07 49 47.0 +0.1
baz=84,SNR=45
Z24A Sheeppen Canyo 84.53 51 ⇑P P 07 49 47.4 +0.5
baz=84,SNR=39
TIR Tirane 84.56 320 eP P 07 49 47.1 +0.5
TIR pmax pmax
comp=Z,103nm,1.1s
TIR MLR MLR
comp=Z,3µm,19.0s
TIR Tirane 84.56 320 eP P 07 49 47.1 +0.5
comp=Z,103nm,1.1s
TIR LR LR
comp=Z,3µm,19.0s
FELD Feldberg im Sc 84.59 331 ⇑eP P 07 49 46.9 0.0
MCH1 Michaelchurch 84.61 339 ⇑eP P 07 49 46.2 -0.5
MCH1 AMB AMB 07 49 47.7
comp=Z,83nm,1.4s
MCH1 AMS AMS 08 31 18.8
comp=Z,1µm,21.0s
MCH1 Michaelchurch 84.61 339 P P 07 49 46.2 -0.5
MCH1 AMB AMB 07 49 47.7
comp=Z,83nm,1.4s
MCH1 AMS AMS 08 31 18.8
comp=Z,1µm,21.0s
ECH Echery 84.62 332 eP P 07 49 46.6 -0.3
ECH pmax pmax
comp=Z,73nm,1.2s
ECH MLR MLR
comp=Z,1µm,20.0s
ECH Echery 84.62 332 eP P 07 49 46.5 -0.3
comp=Z,73nm,1.2s
ECH LR LR
comp=Z,1µm,20.0s
ECH Echery 84.62 332 ⇑eP P 07 49 46.9 0.0
X26A CR and CF Fran 84.63 49 ⇑P P 07 49 47.9 +0.6
baz=84,SNR=69
APE Apeiranthos 84.69 314 ⇓P P 07 49 47.2 -0.3
APE Apeiranthos 84.69 314 ⇓iP P 07 49 47.2 -0.3
W27A Bowe Ranch, En 84.71 49 ⇓P P 07 49 48.5 +0.8
baz=84,SNR=129
SWN1 Swindon 84.71 338 ⇑eP P 07 49 47.4 +0.2
SWN1 AMB AMB 07 49 49.1
comp=Z,159nm,1.3s
SWN1 AMS AMS 08 30 58.9
comp=Z,1µm,19.5s
SWN1 Swindon 84.71 338 P P 07 49 47.4 +0.2
SWN1 AMB AMB 07 49 49.1
comp=Z,159nm,1.3s
SWN1 AMS AMS 08 30 58.9
comp=Z,1µm,19.5s
V28A Channing 84.71 48 ⇑P P 07 49 47.9 +0.2
baz=84,SNR=16
WOL Wolverton 84.72 338 ⇑eP P 07 49 47.0 -0.2
WOL AMB AMB 07 49 48.6
comp=Z,76nm,1.3s
WOL AMS AMS 08 31 08.6
comp=Z,1µm,20.1s
WOL Wolverton 84.72 338 P P 07 49 47.0 -0.2
WOL AMB AMB 07 49 48.6
comp=Z,76nm,1.3s
WOL AMS AMS 08 31 08.6
comp=Z,1µm,20.1s
PPT Papeete 84.73 117 LR LR 08 20 15.2
comp=Z,1µm,20.1s,baz=303,slow=30

PPT2 Papeete2 84.75 117 *e*LR LR 08 16 39.0
comp=Z,2µm,23.2s,baz=312
T30A Plains 84.75 46 ⇑P P 07 49 47.5 -0.3
baz=84
U29A Oasis Ranch, S 84.76 47 ⇑P P 07 49 48.1 +0.2
baz=85
223A Chaparral, Ant 84.79 53 ⇓P P 07 49 48.6 +0.4
baz=85,SNR=8.8
KARP Karpathos 84.84 312 *e*P P 07 49 47.5 -0.7
PAGF Fort de Pagny 84.86 333⇑*i*P P 07 49 48.4 +0.4
comp=Z,92nm,1.2s
PAGF Fort de Pagny 84.86 333⇑*i*P P 07 49 48.4 +0.4
comp=Z,92nm,1.2s
124A Stringfield Ra 84.91 52 ⇑P P 07 49 49.2 +0.3
baz=85,SNR=72
S31A Mullinville 84.92 45 ⇑P P 07 49 48.1 -0.5
baz=85
LKR Lokris 84.93 317 *e*P P 07 49 47.0 -1.6
MOF Molkenrain 84.94 332⇑*e*P P 07 49 48.4 -0.1
MOF Molkenrain 84.94 332⇑*e*P P 07 49 48.4 -0.1
MOF Molkenrain 84.94 332⇑*e*P P 07 49 48.4 -0.1
Z25A Roswell 84.96 51 ⇓P P 07 49 49.5 +0.5
baz=85,SNR=90
X27A F and S Farms, 84.98 49 ⇑P P 07 49 49.9 +0.8
baz=85,SNR=61
SCIA State Center 84.98 38 *e*P P 07 49 49.1 +0.3
comp=Z,149nm,1.1s
SCIA LR LR
comp=Z,611nm,21.0s
V29A Stinnett 85.03 47 ⇓P P 07 49 49.3 0.0
baz=85,SNR=9.4
THEF They Montfort 85.04 332⇑*e*P P 07 49 49.0 0.0
THEF They Montfort 85.04 332⇑*e*P P 07 49 49.0 0.0
THEF They Montfort 85.04 332⇑*e*P P 07 49 49.0 0.0
Y26A Elida 85.05 50 ⇑P P 07 49 49.8 +0.3
baz=85,SNR=14
U30A WK&E Inc. Balk 85.06 46 ⇓P P 07 49 49.1 -0.2
baz=85,SNR=24
SNZO South Karori 85.06 156 PFAKE 07 50 00.0 +11
SNZO LR LR
comp=Z,788nm,22.0s
HINF Hinteralfeld 85.07 332⇑*i*P P 07 49 48.8 -0.4
comp=Z,103nm,1.3s
HINF Hinteralfeld 85.07 332⇑*i*P P 07 49 48.8 -0.4
HINF pmax pmax
comp=Z,103nm,1.3s
HINF Hinteralfeld 85.07 332⇑*i*P P 07 49 48.8 -0.4
comp=Z,103nm,1.3s
W28A Vega 85.07 48 ⇑P P 07 49 50.0 +0.5
baz=85,SNR=14
HAU Haudompre 85.09 332⇑*i*P P 07 49 49.0 -0.3
comp=Z,90nm,1.1s
HAU *e*R
comp=Z,2µm,20.8s
HAU Haudompre 85.09 332⇑*i*P P 07 49 49.0 -0.3
HAU pmax pmax
comp=Z,90nm,1.1s
HAU Haudompre 85.09 332⇑*i*P P 07 49 49.0 -0.3
comp=Z,90nm,1.1s
BBS Basel-Blauen 85.12 331⇑*e*P P 07 49 49.5 +0.1
BBS Basel-Blauen 85.12 331⇑*e*P P 07 49 49.5 +0.1
MEZF Maizieres J'vi 85.14 333⇑*i*P P 07 49 49.8 +0.4
comp=Z,290nm,1.3s
MEZF Maizieres J'vi 85.14 333⇑*i*P P 07 49 49.8 +0.4
comp=Z,290nm,1.3s
T31A Randall Ranch, 85.19 45 ⇓P P 07 49 49.9 0.0
baz=85,SNR=25
TUE Stuetta 85.23 330 *e*P P 07 49 50.7 +0.5
comp=Z,26nm,0.7s
TUE LR LR
comp=Z,2µm,19.0s
SANT Santorini 85.23 314 PFAKE 07 50 00.0 +10
SANT LR LR
comp=Z,921nm,19.0s
224A Cornudas Mount 85.30 52 ⇓P P 07 49 51.2 +0.5
baz=85,SNR=98
KSU1 Kansas State U 85.38 42 *e*P P 07 49 50.9 +0.1
comp=Z,110nm,1.2s
KSU1 LR LR
comp=Z,621nm,20.0s
SFTF Sexfontaines 85.40 333⇑*i*P P 07 49 50.8 +0.1
comp=Z,333nm,1.2s
SFTF Sexfontaines 85.40 333⇑*i*P P 07 49 50.8 +0.1
comp=Z,333nm,1.2s
Z26A Caprock 85.41 50 ⇓P P 07 49 51.5 +0.3
baz=85,SNR=93
125A Gardner Draw, 85.43 51 ⇑P P 07 49 51.8 +0.5
baz=85,SNR=73
LOMF Lomont 85.47 332⇑*e*P P 07 49 51.0 -0.2
LOMF Lomont 85.47 332⇑*e*P P 07 49 51.0 -0.2
LOMF Lomont 85.47 332⇑*e*P P 07 49 51.0 -0.2
Y27A Causey 85.47 49 ⇑P P 07 49 51.8 +0.2
baz=85,SNR=50
W29A Amraillo 85.49 48 ⇑P P 07 49 51.9 +0.3
baz=85,SNR=8.1
V30A Spur Ranch, Mi 85.58 47 ⇓P P 07 49 52.1 +0.1
baz=85
X28A Dimmitt 85.60 48 ⇓P P 07 49 52.5 +0.4
baz=85,SNR=32
JFWS Jewell Farm 85.60 36 *e*P P 07 49 50.8 -1.1
JFWS pmax pmax
comp=Z,49nm,1.1s
JFWS MLR MLR
comp=Z,744nm,20.0s
JFWS Jewell Farm 85.60 36 *e*P P 07 49 50.8 -1.1
comp=Z,49nm,1.1s
JFWS LR LR
comp=Z,744nm,20.0s
U31A Nine Bar Ranch 85.62 46 ⇓P P 07 49 52.8 +0.6
baz=85,SNR=14
AMTX Amarillo 85.64 48 *e*P P 07 49 53.0 +0.7
comp=Z,105nm,1.1s
AMTX LR LR
comp=Z,510nm,21.0s
MNTX Cornudas Mount 85.64 52 *e*P P 07 49 52.4 +0.1
comp=Z,34nm,1.2s
MNTX LR LR
comp=Z,268nm,20.0s
MSTX Muleshoe 85.64 49 ⇑P P 07 49 52.3 0.0
baz=86,SNR=34
HEX Exmoor 85.67 339⇑*e*P P 07 49 51.8 -0.3
HEX Exmoor 85.67 339 P P 07 49 51.8 -0.3
225A Deer Hill, Car 85.70 52 ⇑P P 07 49 53.0 +0.2
baz=86,SNR=19
324A Moseley Ranch, 85.76 53 ⇓P P 07 49 52.9 -0.2
baz=86,SNR=33
126A Clayton Basin, 85.82 51 ⇓P P 07 49 53.2 -0.1
baz=86,SNR=18
KLV Kalavryta, Ach 85.83 317 *e*P P 07 49 53.2 0.0
Z27A Tatum 85.84 50 ⇓P P 07 49 53.4 0.0
baz=86,SNR=92
HTL Hartland 85.92 340⇑*e*P P 07 49 52.9 -0.3
HTL AMB AMB 07 49 54.3
comp=Z,74nm,1.4s
HTL AMS AMS 08 32 30.1
comp=Z,1µm,21.2s
HTL Hartland 85.92 340 P P 07 49 52.9 -0.3
HTL AMB AMB 07 49 54.3
comp=Z,74nm,1.4s
HTL AMS AMS 08 32 30.1
comp=Z,1µm,21.2s
GDL2 Guadalupe Moun 85.92 51 *e*P P 07 49 54.2 +0.4
NPS Neapolis 85.94 313 *e*P P 07 49 52.2 -1.5
X29A Tulia 85.94 48 ⇑P P 07 49 54.5 +0.7
baz=86,SNR=39
Y28A McKinney Farm, 86.00 49 ⇓P P 07 49 54.3 +0.1
baz=86,SNR=42
V31A Spring Creek L 86.05 46 ⇑P P 07 49 55.0 +0.7
baz=86,SNR=30
W30A Crocket Farms 86.06 47 ⇑P P 07 49 54.9 +0.5
baz=86
SENIN Lac Senin/Sane 86.11 331 *e*P P 07 49 54.8 +0.2
325A Bean Ranch, Si 86.12 52 ⇓P P 07 49 55.0 +0.1
baz=86,SNR=55
226B Tecolote Peak, 86.13 51 ⇑P P 07 49 55.0 +0.2
baz=86,SNR=53
CLNB Carlsbad 86.17 51 *e*P P 07 49 54.8 -0.2
comp=Z,11nm,1.3s
RLS Riolos of Patr 86.19 317 *e*P P 07 49 54.3 -0.5
RPZ Rata Peaks 86.19 160 LR LR 08 25 27.4
comp=Z,888nm,20.3s,baz=326,slow=34
127A Arkansas Junct 86.20 50 ⇓P P 07 49 55.0 -0.2
baz=86
DYA Yadsworthy 86.28 339⇑*e*P P 07 49 54.6 -0.5
DYA AMB AMB 07 49 55.7
comp=Z,71nm,1.4s
DYA Yadsworthy 86.28 339 P P 07 49 54.6 -0.5
comp=Z,71nm,1.4s
IDI Anoyia 86.33 313 *e*P P 07 49 55.1 -0.6
IDI Anoyia 86.33 313 *e*P P 07 49 54.8 -0.8
comp=Z,158nm,1.8s
Z28A Tucker Farm, M 86.35 49 ⇓P P 07 49 56.0 +0.1
baz=86,SNR=33
CABF La Chapelle 86.36 332⇑*i*P P 07 49 55.5 -0.2
comp=Z,77nm,1.3s
CABF La Chapelle 86.36 332⇑*i*P P 07 49 55.5 -0.2
CABF pmax pmax
comp=Z,77nm,1.3s
CABF La Chapelle 86.36 332⇑*i*P P 07 49 55.5 -0.2
comp=Z,77nm,1.3s
Y29A Porterfield Fa 86.37 49 ⇓P P 07 49 56.3 +0.3
baz=86,SNR=26
X30A Coker Ranch, T 86.42 48 ⇑P P 07 49 56.1 0.0
baz=86,SNR=15
W31A Holland Ranch, 86.42 47 ⇓P P 07 49 56.5 +0.4
baz=86,SNR=29
VAL Valentia 86.47 343 *e*P P 07 49 55.2 -0.7
GLMI Grayling 86.51 31 PFAKE 07 50 10.0 +14
GLMI LR LR
comp=Z,539nm,19.0s
425A Indio Mountain 86.52 53 ⇑P P 07 49 56.9 +0.1
baz=86,SNR=71
SIVA Sivas 86.57 313 *e*P P 07 49 57.5 +0.8
ITM Ithomi 86.59 316 *e*P P 07 49 56.0 -0.9
LOR Lormes 86.61 333⇑*i*P P 07 49 56.7 -0.1
comp=Z,249nm,1.2s
LOR *e*R
comp=Z,2µm,21.0s
LOR Lormes 86.61 333⇑*i*P P 07 49 56.7 -0.1
comp=Z,249nm,1.2s
VLC Villacollemand 86.70 328 PFAKE 07 50 10.0 +13
VLC LR LR
comp=Z,3µm,22.0s
227A Bennet, Jal 86.71 51 ⇓P P 07 49 57.5 -0.1
baz=86,SNR=6.5
FLN La Foliniere 86.75 336⇑*i*P P 07 49 57.3 -0.1
comp=Z,139nm,1.2s
FLN *e*R
comp=Z,2µm,22.5s
FLN La Foliniere 86.75 336⇑*i*P P 07 49 57.3 -0.1
FLN pmax pmax
comp=Z,139nm,1.2s
FLN La Foliniere 86.75 336⇑*i*P P 07 49 57.3 -0.1
comp=Z,139nm,1.2s
128A Castleberry Fa 86.76 50 ⇓P P 07 49 58.0 +0.1
baz=87,SNR=20
326A Caldwell Ranch 86.77 52 ⇓P P 07 49 58.0 0.0
baz=87,SNR=11
Z29A Hungry Hill Ra 86.78 49 ⇓P P 07 49 58.3 +0.4
baz=87,SNR=94
LDF La Druitiere 86.79 336⇑*i*P P 07 49 57.4 -0.2
comp=Z,178nm,1.2s
LDF La Druitiere 86.79 336⇑*i*P P 07 49 57.4 -0.2
LDF pmax pmax
comp=Z,178nm,1.2s
LDF La Druitiere 86.79 336⇑*i*P P 07 49 57.4 -0.2
comp=Z,178nm,1.2s
X31A McDonald Ranch 86.80 47 ⇓P P 07 49 58.1 +0.2
baz=87,SNR=26
Y30A Stafford Cattl 86.81 48 ⇓P P 07 49 58.3 +0.2
baz=87,SNR=15
AQU L'Aquila 86.84 325 *e*P P 07 49 58.8 +0.7
comp=Z,54nm,1.1s
AQU LR LR
comp=Z,3µm,20.0s
JSA Saint Aubin 86.89 338⇑*e*P P 07 49 58.0 0.0
JSA AMB AMB 07 49 58.9
comp=Z,87nm,1.1s
JSA Saint Aubin 86.89 338 P P 07 49 58.0 0.0
JSA AMB AMB 07 49 58.9
comp=Z,87nm,1.1s
SSF Saint Saulge 86.91 333⇑*i*P P 07 49 58.2 0.0
comp=Z,129nm,1.1s
SSF Saint Saulge 86.91 333⇑*i*P P 07 49 58.2 0.0
SSF pmax pmax
comp=Z,129nm,1.1s
SSF Saint Saulge 86.91 333⇑*i*P P 07 49 58.2 0.0
comp=Z,129nm,1.1s
RSL Roselend 86.94 331 *e*P P 07 49 58.2 -0.4
RSL Roselend 86.94 331 *e*P P 07 49 58.2 -0.4
RSL Roselend 86.94 331 *e*P P 07 49 58.2 -0.4
327A Balmorhea Ranc 87.03 51 ⇑P P 07 49 59.6 +0.4
baz=87,SNR=6.3
OG35 Corcelles 87.03 332⇑*e*P P 07 49 58.8 -0.1
LPL La Plagne 87.04 331⇑*i*P P 07 49 59.1 -0.1
comp=Z,68nm,1.0s
LPL La Plagne 87.04 331⇑*i*P P 07 49 59.1 -0.1
LPL pmax pmax
comp=Z,68nm,1.0s
LPL La Plagne 87.04 331⇑*i*P P 07 49 59.1 -0.1
comp=Z,68nm,1.0s
LPG La Plagne 87.05 331⇑*i*P P 07 49 59.3 0.0
comp=Z,74nm,0.9s
LPG La Plagne 87.05 331⇑*i*P P 07 49 59.3 0.0
LPG pmax pmax
comp=Z,74nm,0.9s
LPG La Plagne 87.05 331⇑*i*P P 07 49 59.3 0.0
comp=Z,74nm,0.9s
228A UT Block 9, Go 87.05 50 ⇑P P 07 49 59.4 0.0
baz=87,SNR=6.8
Z30A Sanderson Ranc 87.10 49 ⇑P P 07 49 59.6 +0.1
baz=87,SNR=50
Y31A Rekieta Farm, 87.12 48 ⇓P P 07 49 59.5 0.0
baz=87,SNR=23
129A Stewart Farms, 87.13 50 ⇑P P 07 49 59.4 -0.3
baz=87,SNR=8.6
SMF Signal de Mont 87.15 333⇑*i*P P 07 49 59.4 0.0
comp=Z,226nm,1.3s
SMF Signal de Mont 87.15 333⇑*i*P P 07 49 59.4 0.0
SMF pmax pmax
comp=Z,226nm,1.3s
SMF Signal de Mont 87.15 333⇑*i*P P 07 49 59.4 0.0
comp=Z,226nm,1.3s
426A McDonald Obser 87.19 52 ⇑P P 07 50 00.1 -0.1
baz=87,SNR=33
AVF Avril sur Loir 87.20 333⇑*i*P P 07 49 59.7 +0.1
comp=Z,271nm,1.1s
AVF Avril sur Loir 87.20 333⇑*i*P P 07 49 59.7 +0.1
AVF pmax pmax
comp=Z,271nm,1.1s
AVF Avril sur Loir 87.20 333⇑*i*P P 07 49 59.7 +0.1
comp=Z,271nm,1.1s
GRR Gorron 87.20 337⇑*i*P P 07 49 59.7 +0.1
comp=Z,276nm,1.2s
GRR Gorron 87.20 337⇑*i*P P 07 49 59.7 +0.1
GRR pmax pmax
comp=Z,276nm,1.2s
GRR Gorron 87.20 337⇑*i*P P 07 49 59.7 +0.1
comp=Z,276nm,1.2s
WMOK Wichita Mounta 87.40 46 *e*P P 07 50 00.7 -0.2
WMOK pmax pmax
comp=Z,57nm,1.2s
WMOK MLR MLR
comp=Z,567nm,19.0s
WMOK Wichita Mounta 87.40 46 *e*P P 07 50 00.7 -0.2
comp=Z,57nm,1.2s
WMOK LR LR
comp=Z,567nm,19.0s
328A Wristen Ranch, 87.44 51 ⇑P P 07 50 01.2 +0.1
baz=87,SNR=19
BNI Bardonecchia 87.45 330 *e*P P 07 50 01.1 +0.1
BNI pmax pmax
comp=Z,5.0nm,0.7s
BNI MLR MLR
comp=Z,2µm,21.0s
BNI Bardonecchia 87.45 330 *e*P P 07 50 01.1 +0.1
comp=Z,5.1nm,0.7s
BNI LR LR
comp=Z,2µm,21.0s
427A Hayter Ranch, 87.45 52 ⇑P P 07 50 01.3 0.0
baz=87,SNR=32
Y32A R-V Farms, Ver 87.56 47 ⇑P P 07 50 01.7 0.0
baz=87,SNR=17
CUC Castrocucco 87.57 322 PFAKE 07 50 10.0 +8.4
CUC LR LR
comp=Z,1µm,21.0s
526A Mary Lane Ranc 87.58 53 ⇑P P 07 50 02.3 +0.4
baz=87,SNR=42
BGF Bois d'Agland 87.58 333⇑*i*P P 07 50 01.5 0.0
comp=Z,56nm,1.0s
BGF Bois d'Agland 87.58 333⇑*i*P P 07 50 01.5 0.0
BGF pmax pmax
comp=Z,56nm,1.0s
BGF Bois d'Agland 87.58 333⇑*i*P P 07 50 01.5 0.0
comp=Z,56nm,1.0s
229A Bryant Ranch, 87.63 50 ⇑P P 07 50 02.1 0.0
baz=87,SNR=6.1
Z31A Sharp Cattle R 87.65 48 ⇑P P 07 50 02.0 -0.1
baz=88,SNR=33
130A Snyder 87.68 49 ⇓P P 07 50 02.2 -0.1
baz=88,SNR=15
TIP Timpagrande 87.75 321 *e*P P 07 50 02.7 +0.3
comp=Z,39nm,1.2s
TIP LR LR
comp=Z,2µm,19.0s
527A Woodward Ranch 87.81 52 ⇓P P 07 50 03.0 -0.1
baz=88,SNR=14
SGMF Saint Gilles 87.84 337⇑*i*P P 07 50 02.9 +0.3
comp=Z,179nm,1.3s
SGMF Saint Gilles 87.84 337⇑*i*P P 07 50 02.9 +0.3
SGMF pmax pmax
comp=Z,179nm,1.3s
SGMF Saint Gilles 87.84 337⇑*i*P P 07 50 02.9 +0.3
comp=Z,179nm,1.3s
329A Wagon Wheel Ra 87.87 50 ⇓P P 07 50 03.3 +0.1
baz=88,SNR=22
ORIF Oris-en-Rattie 87.87 331⇑*i*P P 07 50 03.0 0.0
comp=Z,21nm,0.8s
ORIF *e*R
comp=Z,1µm,19.8s
ORIF Oris-en-Rattie 87.87 331⇑*i*P P 07 50 03.0 0.0
ORIF pmax pmax
comp=Z,21nm,0.8s
ORIF Oris-en-Rattie 87.87 331⇑*i*P P 07 50 03.0 0.0
comp=Z,21nm,0.8s
626A Big Bend Ranch 87.90 53 ⇓P P 07 50 03.4 0.0
baz=88,SNR=26
AGO Saint Agoulin 87.91 333⇑*e*P P 07 50 04.4 +1.3
AGO Saint Agoulin 87.91 333 *e*P P 07 50 03.7 +0.6
131A Roby 87.97 49 ⇑P P 07 50 03.7 0.0
baz=88,SNR=14
428A Kincaid Ranch, 87.98 51 ⇓P P 07 50 04.2 +0.5
baz=88
ROSF Rostrenen 87.98 338⇑*i*P P 07 50 03.6 +0.3
comp=Z,197nm,1.3s
ROSF Rostrenen 87.98 338⇑*i*P P 07 50 03.6 +0.3
ROSF pmax pmax
comp=Z,197nm,1.3s
ROSF Rostrenen 87.98 338⇑*i*P P 07 50 03.6 +0.3
comp=Z,197nm,1.3s
TCF Toulx Ste Croi 88.03 334⇑*i*P P 07 50 03.9 +0.2
comp=Z,78nm,1.2s
TCF Toulx Ste Croi 88.03 334⇑*i*P P 07 50 03.9 +0.2
TCF pmax pmax
comp=Z,78nm,1.2s
TCF Toulx Ste Croi 88.03 334⇑*i*P P 07 50 03.9 +0.2
comp=Z,78nm,1.2s
Z32A Haskell 88.04 48 ⇑P P 07 50 04.1 +0.1
baz=88,SNR=90
SSB Saint Sauveur 88.07 332 PFAKE 07 50 20.0 +16
SSB LR LR
comp=Z,1µm,20.0s
230A Sterling City 88.10 50 ⇓P P 07 50 04.3 0.0
baz=88,SNR=14
TUL1 Tulsa 88.19 44 ⇑P P 07 50 04.6 +0.1
baz=88,SNR=17
PYM Petit Puy Mans 88.22 333 *e*P P 07 50 06.0 +1.4
PYM Petit Puy Mans 88.22 333 *e*P P 07 50 06.0 +1.4
PYM Petit Puy Mans 88.22 333 *e*P P 07 50 06.0 +1.4
528A Cox Ranch, San 88.31 52 ⇑P P 07 50 05.6 +0.2
baz=88,SNR=42
TXAR Lajitas Array 88.35 53 P P 07 50 05.6 +0.1
TXAR pP **pP** 07 50 20.7 +1.1
TXAR PP **PP** 07 53 33.5 +0.5
TXAR PKKPbc **PKKPbc** 08 07 50.1 +3.3
TXAR Lajitas Array 88.35 53 P P 07 50 05.6 +0.1
comp=Z,21nm,1.0s,baz=292,slow=3.7,SNR=158
TXAR pP **pP** 07 50 20.7 +1.1
comp=Z,7.1nm,0.7s,baz=282,slow=2.4,SNR=5.8
TXAR PP **PP** 07 53 33.5 +0.5
comp=Z,4.9nm,1.2s,baz=308,slow=4.6,SNR=3.5
TXAR PKKPbc **PKKPbc** 08 07 50.1 +3.3
comp=Z,0.3nm,0.6s,baz=142,slow=5.4,SNR=5.8
TXAR LR LR 08 24 45.9
comp=Z,528nm,21.1s,baz=15,slow=32
VIVF Saint-Julien-l 88.38 331⇑*i*P P 07 50 05.4 +0.1
comp=Z,65nm,1.1s
VIVF Saint-Julien-l 88.38 331⇑*i*P P 07 50 05.4 +0.1
VIVF pmax pmax
comp=Z,65nm,1.1s
VIVF Saint-Julien-l 88.38 331⇑*i*P P 07 50 05.4 +0.1
comp=Z,65nm,1.1s
330A Mertzon 88.41 50 ⇑P P 07 50 05.5 -0.3
baz=88,SNR=24
627A Terlingua Ranc 88.44 53 ⇑P P 07 50 06.2 +0.2
baz=88,SNR=22
ABTX Abilene, Hawle 88.44 48 ⇓P P 07 50 06.0 +0.1
baz=88,SNR=22
429A Davenport Ranc 88.53 51 ⇓P P 07 50 06.0 -0.4
baz=88,SNR=8.4
231A Bronte 88.54 49 ⇑P P 07 50 06.1 -0.3
baz=88,SNR=17
MFF Saint Martin d 88.55 335⇑*i*P P 07 50 06.5 +0.4
comp=Z,226nm,1.2s
MFF Saint Martin d 88.55 335⇑*i*P P 07 50 06.5 +0.4
MFF pmax pmax
comp=Z,226nm,1.2s
MFF Saint Martin d 88.55 335⇑*i*P P 07 50 06.5 +0.4
comp=Z,226nm,1.2s
LBL Lubilhac 88.58 332 *e*P P 07 50 07.9 +1.6
LBL Lubilhac 88.58 332 *e*P P 07 50 07.9 +1.6
LBL Lubilhac 88.58 332 *e*P P 07 50 07.6 +1.3
529A Stev Forest Ra 88.68 52 ⇑P P 07 50 07.0 -0.1
baz=88,SNR=21
628A Black Gap, Mar 88.72 52 ⇑P P 07 50 07.1 -0.1
baz=89,SNR=11
TBI Tubuai 88.77 121 *e*LR LR 08 18 20.1
comp=Z,2µm,22.5s,baz=308
430A Baggett Ranch, 88.81 50 ⇓P P 07 50 07.2 -0.5
baz=89,SNR=13
CEL Celeste 88.88 321 *e*P P 07 50 08.2 +0.3
comp=Z,70nm,1.2s
CEL LR LR
comp=Z,2µm,22.0s
331A San Angelo 88.92 50 ⇓P P 07 50 07.8 -0.4
baz=89,SNR=16
SLM Saint Louis 88.95 39 *e*P P 07 50 07.9 -0.2
SLM pmax pmax
comp=Z,112nm,1.0s
SLM Saint Louis 88.95 39 *e*P P 07 50 07.9 -0.2
comp=Z,112nm,1.0s
232A Coleman 88.97 49 ⇓P P 07 50 08.4 0.0
baz=89,SNR=43
SFIN Scholer Farm 89.05 36 ⇑P P 07 50 08.5 0.0
baz=89,SNR=23
RJF Les Rejaudoux 89.13 334⇑*i*P P 07 50 09.2 +0.4
comp=Z,87nm,1.2s
RJF *e*R
comp=Z,2µm,22.8s
RJF Les Rejaudoux 89.13 334⇑*i*P P 07 50 09.2 +0.4
RJF pmax pmax
comp=Z,87nm,1.2s
RJF Les Rejaudoux 89.13 334⇑*i*P P 07 50 09.2 +0.4
comp=Z,87nm,1.2s
530A J-C Ranch, Com 89.20 51 ⇓P P 07 50 09.7 +0.2
baz=89,SNR=32
431A Sonora 89.26 50 ⇑P P 07 50 09.5 -0.3
baz=89,SNR=13
CAF Calviac 89.27 333⇑*i*P P 07 50 10.1 +0.6
comp=Z,42nm,0.8s
CAF Calviac 89.27 333⇑*i*P P 07 50 10.1 +0.6
CAF pmax pmax
comp=Z,42nm,0.8s
CAF Calviac 89.27 333⇑*i*P P 07 50 10.1 +0.6
comp=Z,42nm,0.8s
332A Millersview 89.28 49 ⇑P P 07 50 10.1 +0.3
baz=89,SNR=82
LASF Ste Croix 89.35 332⇑*i*P P 07 50 10.1 +0.2
comp=Z,46nm,1.1s
LASF Ste Croix 89.35 332⇑*i*P P 07 50 10.1 +0.2
comp=Z,46nm,1.1s
432A Menard 89.61 50 ⇑P P 07 50 11.1 -0.3
baz=89,SNR=16
531A Rocksprings 89.67 51 ⇓P P 07 50 11.6 -0.1
baz=90,SNR=30
LFF La Frestale 89.72 334⇑*i*P P 07 50 12.2 +0.7
comp=Z,104nm,1.1s
LFF La Frestale 89.72 334⇑*i*P P 07 50 12.2 +0.7
LFF pmax pmax
comp=Z,104nm,1.1s

LFF	La Frestale	89.72	334	⇑	*i*P		P		07 50 12.2	+0.7
	comp=Z,104nm,1.1s									
RFTA	Plano	89.85	46		*e*P		P		07 50 12.6	+0.2
JCT	Junction City	89.89	50		*e*P		P		07 50 12.6	-0.1
JCT						pmax	pmax			
	comp=Z,374nm,2.4s									
JCT						MLR	MLR			
	comp=Z,551nm,22.0s									
JCT	Junction City	89.89	50		*e*P		P		07 50 12.6	-0.1
	comp=Z,374nm,2.4s									
JCT						LR	LR			
	comp=Z,551nm,22.0s									
JCT	Junction City	89.89	50	⇑	P		P		07 50 12.7	-0.1
	baz=90,SNR=27									
OLIL	Olney	89.90	37		*e*P		P		07 50 12.6	+0.1
MSNY	Massena	89.99	25		*e*P		P		07 50 12.7	-0.1
	comp=Z,339nm,0.9s									
532A	Rocksprings	90.08	50	⇑	P		P		07 50 13.5	-0.1
	baz=90,SNR=37									
WHTX	Lake Whitney	90.16	47	⇓	P		P		07 50 14.1	+0.2
	baz=90,SNR=26									
SIUC	Southern Illin	90.17	38		*e*P		P		07 50 14.1	+0.3
	comp=Z,209nm,1.2s									
631A	Perdido Creek	90.19	51	⇓	P		P		07 50 13.9	-0.2
	baz=90,SNR=42									
BLO	Bloomington	90.28	36		*e*P		P		07 50 14.1	-0.2
BLO						pmax	pmax			
	comp=Z,104nm,1.5s									
BLO	Bloomington	90.28	36		*e*P		P		07 50 14.1	-0.2
	comp=Z,104nm,1.5s									
LONY	Lake Ozonia	90.42	25		*e*P		P		07 50 14.8	0.0
	comp=Z,40nm,1.1s									
LONY						LR	LR			
	comp=Z,749nm,20.0s									
MSEY	Mahe Island	90.55	264			PFAKE			07 50 30.0	+14
MSEY						LR	LR			
	comp=Z,400nm,20.0s									
FRNY	Flat Rock	90.56	25		*e*P		P		07 50 15.1	-0.3
	comp=Z,22nm,1.0s									
MTLF	Montolieu	90.58	332	⇑	*i*P		P		07 50 15.9	+0.3
	comp=Z,61nm,1.2s									
MTLF	Montolieu	90.58	332	⇑	*i*P		P		07 50 15.9	+0.3
MTLF						pmax	pmax			
	comp=Z,61nm,1.2s									
MTLF	Montolieu	90.58	332	⇑	*i*P		P		07 50 15.9	+0.3
	comp=Z,61nm,1.2s									
632A	Uvalde	90.60	50	⇓	P		P		07 50 16.2	+0.1
	baz=90,SNR=19									
ERPA	Erie	90.62	30		*e*P		P		07 50 16.1	+0.2
	comp=Z,173nm,1.3s									
ERPA						LR	LR			
	comp=Z,793nm,20.0s									
USIN	University of	90.72	37		*e*P		P		07 50 16.9	+0.6
	comp=Z,63nm,1.1s									
PARMO	Parma	90.74	39		*e*P		P		07 50 17.1	+0.7
UALR	University of	90.88	42		*e*P		P		07 50 17.2	+0.1
	comp=Z,34nm,1.1s									
VSL	Villasalto	90.94	326			PFAKE			07 50 30.0	+13
VSL						LR	LR			
	comp=Z,2µm,20.0s									
ALLY	Alegheny Colle	90.95	30		*e*P		P		07 50 18.2	+0.8
	comp=Z,187nm,1.3s									
ACSO	Alum Creek Sta	90.98	33		*e*P		P		07 50 17.8	+0.3
	comp=Z,99nm,1.1s									
ACSO						LR	LR			
	comp=Z,648nm,20.0s									
732A	Laxson Ranch,	91.05	51	⇑	P		P		07 50 18.2	+0.1
	baz=91,SNR=24									
NCB	Newcomb	91.11	26		*e*P		P		07 50 17.9	-0.2
	comp=Z,63nm,1.2s									
NCB						LR	LR			
	comp=Z,1µm,21.0s									
WCI	Wyandotte Cave	91.15	36		*e*P		P		07 50 18.1	-0.3
WCI						pmax	pmax			
	comp=Z,106nm,1.4s									
WCI	Wyandotte Cave	91.15	36		*e*P		P		07 50 18.1	-0.3
	comp=Z,106nm,1.4s									
HBAR	Harrisburg	91.15	41		*e*P		P		07 50 19.2	+0.8
GNAR	Gosnell	91.15	40		*e*P		P		07 50 19.3	+0.9
	comp=Z,1µm,1.3s									
GLAT	Glass	91.28	39		*e*P		P		07 50 19.9	+0.9
MLS	Moulis	91.32	333		*e*P		P		07 50 19.1	0.0
MLS	Moulis	91.32	333		*e*P		P		07 50 19.1	0.0
UTMT	University of	91.43	39		*e*P		P		07 50 20.0	+0.3
MDV	Middlebury	91.43	25		*e*P		P		07 50 19.7	+0.1
	comp=Z,14µm,0.3s									
WDD	Wield Dalam	91.44	320			PFAKE			07 50 30.0	+10
WDD						LR	LR			
	comp=Z,998nm,21.0s									
EPF	Esparros	91.53	333	⇑	*i*P		P		07 50 19.8	-0.3
	comp=Z,47nm,1.3s									
EPF	Esparros	91.53	333	⇑	*i*P		P		07 50 19.8	-0.3
EPF						pmax	pmax			
	comp=Z,47nm,1.3s									
EPF	Esparros	91.53	333	⇑	*i*P		P		07 50 19.8	-0.3
	comp=Z,47nm,1.3s									
LBNH	Lisbon	91.62	24			PFAKE			07 50 30.0	+10
LBNH						LR	LR			
	comp=Z,1µm,20.0s									
ACCN	Adirondack Com	91.82	25		*e*P		P		07 50 21.4	0.0
	comp=Z,63nm,1.1s									
BINY	Binghamton	92.05	28		*e*P		P		07 50 22.6	+0.1
	comp=Z,68nm,1.3s									
BINY						LR	LR			
	comp=Z,869nm,20.0s									
WVT	Waverly	92.11	39		*e*P		P		07 50 22.6	-0.2
WVT						pmax	pmax			
	comp=Z,35nm,1.1s									
WVT	Waverly	92.11	39		*e*P		P		07 50 22.6	-0.2
	comp=Z,36nm,1.1s									
FFD	Franklin Falls	92.40	24		*e*P		P		07 50 25.2	+1.2
	comp=Z,18nm,0.7s									
KVTX	Kingsville	93.17	51			PFAKE			07 50 40.0	+12
KVTX						LR	LR			
	comp=Z,702nm,19.0s									
TZTN	Tazewell	93.78	35		*e*P		P		07 50 30.4	-0.2
	comp=Z,58nm,1.3s									
VBMS	Vicksburg	93.82	43		*e*P		P		07 50 31.5	+0.7
	comp=Z,17nm,0.3s									
VBMS						LR	LR			
	comp=Z,580nm,20.0s									
KEST	Kesra	94.04	323		P		P		07 50 31.1	-0.7
KEST	Kesra	94.04	323		P		P		07 50 31.1	-0.7
	comp=Z,2.9nm,1.0s,baz=117,slow=9.0,SNR=3.5									
KEST						LR	LR		08 37 58.5	
	comp=Z,1µm,18.2s,baz=179,slow=39									
CPCT	Cooper Cave	94.23	37		*e*P		P		07 50 32.3	-0.4
TKL	Tuckaleechee C	94.41	36		*e*P		P		07 50 32.8	-0.7
BLA	Blacksburg	94.60	33		*e*P		P		07 50 33.9	-0.4
BLA						pmax	pmax			
	comp=Z,48nm,1.1s									
BLA						MLR	MLR			
	comp=Z,673nm,20.0s									
BLA	Blacksburg	94.60	33		*e*P		P		07 50 33.9	-0.4
	comp=Z,48nm,1.1s									
BLA						LR	LR			
	comp=Z,673nm,20.0s									
PBRG	Braganca	94.94	337		*e*P		P		07 50 35.3	-0.5
LRAL	Lakeview Retre	94.99	40		*e*P		P		07 50 35.7	-0.5
	comp=Z,7.3nm,1.1s									
LRAL						LR	LR			
	comp=Z,652nm,22.0s									
CBN	Corbin	95.00	30			PFAKE			07 50 50.0	+14
CBN						LR	LR			
	comp=Z,571nm,20.0s									
PGAV	Gavieira, Arco	95.24	339		*e*P		P		07 50 32.5	-4.7
MVO	Moncorvo	95.61	337		*e*P		P		07 50 38.7	-0.2
POLO	Lamas de Olo	95.64	338		*e*P		P		07 50 39.1	0.0
KMSC	Kings Mountain	95.94	35	⇓	P		P		07 50 40.0	-0.4
	baz=96									
ESDC	Sonseca Array	95.99	335		P		P		07 50 40.4	-0.2
ESDC	Sonseca Array	95.99	335		P		P		07 50 40.4	-0.2
	comp=Z,4.2nm,0.8s,baz=22,slow=4.0,SNR=16									
ESDC						LR	LR		08 39 29.2	
	comp=Z,904nm,18.4s,baz=15,slow=39									
PAB	San Pablo	96.23	335			PFAKE			07 50 50.0	+8.2
PAB						LR	LR			
	comp=Z,2µm,22.0s									
MTE	Manteigas	96.47	337			PFAKE			07 50 50.0	+7.2
MTE						LR	LR			
	comp=Z,1µm,22.0s									
BRAL	Brewton	96.58	41			PFAKE			07 51 00.0	+17
BRAL						LR	LR			
	comp=Z,595nm,21.0s									
CNNC	Cliffs of the	97.34	32			PFAKE			07 51 00.0	+13
CNNC						LR	LR			
	comp=Z,749nm,20.0s									
TIGA	Tifton	97.96	38	⇑	P		Pdif		07 50 49.7	0.0
	baz=98									
NHSC	New Hope	98.17	35			PFAKE			07 51 00.0	+9.5
NHSC						LR	LR			
	comp=Z,711nm,20.0s									
PBAR	Barrancos	98.35	336		*e*P		P		07 50 39.7	-12
RKT	Rikitea	98.69	113		*e*LR		LR		08 22 58.0	
	comp=Z,2µm,24.2s,baz=309									
RTC	Rabat Centre	102.11	334			PFAKE			07 51 20.0	+12
RTC						LR	LR			
	comp=Z,968nm,20.0s									
KMBO	Kilima Mbogo	102.53	279		P		Pdif		07 51 10.0	-0.6
KMBO						LR	LR			
	comp=Z,490nm,21.0s									
KMBO	Kilima Mbogo	102.53	279		P		Pdif		07 51 10.0	-0.6
	comp=Z,2.5nm,0.8s,baz=38,slow=19,SNR=4.9									
TEIG	Tepich	104.42	49			PFAKE			07 51 30.0	+11
TEIG						LR	LR			
	comp=Z,476nm,19.0s									
BBSR	BB Station	104.75	24			PFAKE			07 51 30.0	+10
BBSR						LR	LR			
	comp=Z,534nm,21.0s									
ABPO	Ambohimpanom	105.65	258			PFAKE			07 55 50.0	
ABPO						LR	LR			
	comp=Z,375nm,21.0s									
TAM	Tamanrasset	106.58	319			PFAKE			07 55 50.0	
TAM						LR	LR			
	comp=Z,651nm,19.0s									
MBAR	Mbarara	107.18	284			PFAKE			07 55 50.0	
MBAR						LR	LR			
	comp=Z,703nm,22.0s									
TGUH	Tegucigalpa,Un	109.80	52			PFAKE			07 56 00.0	
TGUH						LR	LR			
	comp=Z,521nm,19.0s									
SDDR	Presa de Saban	114.33	35			PFAKE			07 56 10.0	+17
SDDR						LR	LR			
	comp=Z,949nm,19.0s									
TORD	Torodi Ar. Bea	116.59	316			PKP	PKPdf		07 55 56.7	-1.1
TORD						PP	PP		07 57 10.2	+5.5
TORD						PKKPbc	PKKPbc		08 06 25.5	+1.5
TORD	Torodi Ar. Bea	116.59	316			PKP	PKPdf		07 55 56.7	-1.1
	comp=Z,3.0nm,0.9s,baz=22,slow=2.0,SNR=16									
TORD						PP	PP		07 57 10.2	+5.5
	comp=Z,4.3nm,1.0s,baz=30,slow=7.5,SNR=3.8									
TORD						PKKPbc	PKKPbc		08 06 25.5	+1.5
	comp=Z,1.4nm,1.0s,baz=230,slow=4.5,SNR=3.8									
VNDA	Vanda	116.75	175			PKP	PKPdf		07 55 55.5	-0.7
VNDA						PKKPbc	PKKPbc		08 06 25.0	+0.4
VNDA	Vanda	116.75	175			PKP	PKPdf		07 55 55.5	-0.7
	comp=Z,1.4nm,0.8s,baz=307,slow=5.6,SNR=5.5									
VNDA						PKKPbc	PKKPbc		08 06 25.0	+0.4
	comp=Z,1.6nm,1.0s,baz=273,slow=3.9,SNR=3.9									
SBA	Scott Base	117.41	174			PFAKE			07 56 10.0	+13
SBA						LR	LR			
	comp=Z,354nm,20.0s									
BCIP	Isla Barro Col	118.11	49			PFAKE			07 56 10.0	+9.2
BCIP						LR	LR			
	comp=Z,374nm,20.0s									
LSZ	Lusaka	118.25	273		*e*	PKPdf	PKPdf		07 56 01.0	-0.1
LSZ						LR	LR			
	comp=Z,366nm,19.0s									
ANWB	Willy Bob	119.33	27			PFAKE			07 56 10.0	+7.0
ANWB						LR	LR			
	comp=Z,342nm,20.0s									
MAW	Mawson	121.56	206			PKP	PKPdf		07 56 04.8	-0.9
MAW	Mawson	121.56	206			PKP	PKPdf		07 56 04.8	-0.9
	comp=Z,8.0nm,0.9s,baz=347,slow=4.0,SNR=8.1									
SDV	Santo Domingo	123.38	40		*e*	PKPdf	PKPdf		07 56 10.4	-0.8
SDV						LR	LR			
	comp=Z,95nm,20.0s									
BBGH	Gun Hill	124.31	26			PFAKE			07 56 20.0	+7.3
BBGH						LR	LR			
	comp=Z,2µm,19.0s									
GRGR	Grenville	124.48	29			PFAKE			07 56 20.0	+7.0
GRGR						LR	LR			
	comp=Z,424nm,20.0s									
ROSC	El Rosal	124.77	47			PKP	PKPdf		07 56 13.8	-0.3
ROSC					*e*	PKPdf	PKiKP		07 56 14.4	0.0
ROSC	El Rosal	124.77	47			PKP	PKPdf		07 56 13.8	-0.3
	comp=Z,20nm,1.2s,baz=86,slow=20,SNR=13									
DBIC	Dimbokro	125.48	319			PKP	PKPdf		07 56 14.2	-0.7
DBIC	Dimbokro	125.48	319			PKP	PKPdf		07 56 14.2	-0.7
	comp=Z,5.2nm,0.8s,baz=338,slow=4.2,SNR=4.0									
LBTB	Lobatse	125.65	265		*e*	PKPdf	PKPdf		07 56 15.3	+0.3
OTAV	Otavalo	125.97	54		*e*	PKPdf	PKPdf		07 56 16.4	-0.1
OTAV						LR	LR			
	comp=Z,355nm,20.0s									
BOSA	Boshof	127.70	261			PKP	PKPdf		07 56 18.4	-0.5
BOSA	Boshof	127.70	261			PKP	PKPdf		07 56 18.4	-0.5
	comp=Z,7.3nm,0.8s,baz=161,slow=2.8,SNR=5.9									
QSPA	South Pole Qui	128.62	180		*e*	PKPdf	PKPdf		07 56 18.6	-0.8
QSPA						LR	LR			
	comp=Z,308nm,19.0s									
TSUM	Tsumeb	128.76	276			PFAKE			07 56 30.0	+8.8
TSUM						LR	LR			
	comp=Z,389nm,20.0s									
SYO	Syowa Base	130.22	207	⇓	*i*	PKPdf	PKPdf		07 56 21.5	-0.7
SYO	Syowa Base	130.22	207	⇓	*e*	PKiKP	PKiKP		07 56 24.4	+1.4
ATAH	Atahualpa	131.53	60			PKP	PKPdf		07 56 27.6	+0.7
ATAH	Atahualpa	131.53	60			PKP	PKPdf		07 56 27.6	+0.7
	comp=Z,18nm,1.0s,baz=317,slow=1.9,SNR=6.7									
NNA	Nana	136.05	63			PFAKE			07 56 50.0	+15
NNA						LR	LR			
	comp=Z,593nm,21.0s									
SAML	Samuel	142.35	44		*e*	PKPdf	PKPdf		07 56 41.2	-5.2
SAML						LR	LR			
	comp=Z,462nm,20.0s									
SNAA	Sanae	142.75	197		*e*	P	PKPdf		07 56 40.7	-4.8
SNAA	Sanae	142.75	197		*e*	PKPdf	PKPdf		07 56 40.6	-4.9
VNA1	Neumayer--Stat	144.72	196		*e*	P	PKPbc		07 56 48.1	+0.3
LPAZ	La Paz	145.04	59		*e*	PKPdf	PKPbc		07 56 50.6	-0.5
LPAZ	La Paz	145.04	59			PKPbc	PKPbc		07 56 50.7	-0.5
	comp=Z,26nm,0.8s,baz=351,slow=4.3,SNR=50									
RCBR	Riachuelo	147.06	357			PFAKE			07 57 10.0	+12
RCBR						LR	LR			
	comp=Z,495nm,22.0s									
LVC	Limon Verde	148.74	68		*e*	PKPdf	PKPdf		07 56 58.0	+0.6
LVC					*e*	PKPbc	PKiKP		07 57 02.5	-0.1
LVC						LR	LR			
	comp=Z,520nm,20.0s									
LCO	Las Campanas	150.92	80		*e*	PKPbc	PKPbc		07 57 06.5	+0.1
TLL	Tololo Astrono	151.38	83		*e*	P	PKPbc		07 57 07.3	-0.1
CLCH	Cerro Calan	152.89	89	⇑	*i*	P	PKPbc		07 57 10.6	+0.1
PLCA	Paso Flores	154.66	105			PKP	PKPdf		07 57 06.2	+0.6
PLCA					*e*	PKPbc	PKiKP		07 57 14.7	+0.6
PLCA						PKPbc	PKiKP		07 57 14.9	+0.8
PLCA						PKPab	PKPab		07 57 29.0	-0.1
PLCA	Paso Flores	154.66	105			PKP	PKPdf		07 57 06.2	+0.6
	comp=Z,10nm,1.1s,baz=298,slow=22,SNR=3.3									
PLCA						PKPbc	PKiKP		07 57 14.9	+0.8
	comp=Z,15nm,1.0s,baz=307,slow=3.6,SNR=12									
PLCA						PKPab	PKPab		07 57 29.0	-0.1
	comp=Z,6.9nm,0.8s,baz=247,slow=3.4,SNR=8.5									
BDFB	Brasilia	155.09	25			PKP	PKPdf		07 57 07.6	+0.7
BDFB						PKPbc	PKPab		07 57 16.3	-15
BDFB						PKPab	PKPab		07 57 31.6	+0.2
BDFB	Brasilia	155.09	25			PKP	PKPdf		07 57 07.6	+0.7
	comp=Z,2.5nm,0.9s,baz=352,slow=6.2,SNR=4.1									
BDFB						PKPbc	PKPab		07 57 16.3	-15
	comp=Z,12nm,1.0s,baz=15,slow=2.5,SNR=12									
BDFB						PKPab	PKPab		07 57 31.6	+0.2
	comp=Z,13nm,1.0s,baz=319,slow=5.9,SNR=7.3									
TRQA	Tornquist	160.86	95			PFAKE			07 57 20.0	+6.8
TRQA						LR	LR			
	comp=Z,1µm,21.0s									
SPB	Sao Paulo	162.59	32			PFAKE			07 57 30.0	+15
SPB						LR	LR			
	comp=Z,518nm,20.0s									
CAM4	Nova Friburgo	162.98	16	⇑	*i*	P	PKPab		07 58 02.7	-2.9
CAM4					*i*				07 58 03.8	
CAM4					*i*				07 58 05.9	
CAM4					*i*				07 58 08.1	
CAM4					*i*				07 58 20.0	
CAM4					*i*				07 58 26.0	
CAM4					*i*				07 58 41.5	
CAM4					*i*				07 58 48.2	
CAM4					*i*				07 59 06.5	

IDC 23 07:47:53.7±27.0, 20°98S×173°88W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.8/21, mbtmp4.1/4, Error ellipse: s-maj=501.0km s-min=157.3km az=76.0, Tonga Islands

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

CTA	Charters Tower	37.28	264		P		P		07 55 08.4	+0.7
	3.8nm,0.6s,baz=106,slow=12,SNR=7.0									
STKA	Stephens Creek	41.07	245		P		P		07 55 38.5	-0.8
	6.9nm,1.2s,baz=110,slow=12,SNR=3.8									
ASAR	Alice Springs	48.16	257		P		P		07 56 35.6	-0.5
	2.0nm,0.8s,baz=91,slow=8.3,SNR=15									
WRA	Warramunga Arr	48.35	262		P		P		07 56 37.5	0.0
	0.7nm,0.7s,baz=96,slow=8.3,SNR=17									

IDC 23 07:48:06.5±3.4, 5°31N×127°30E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.3/23, mbtmp3.4/3, MS3.2/1, Ms1 3.2/1, ms1mx3.2/15, Error ellipse: s-maj=293.0km s-min=26.2km az=66.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	2.45	316		LR	07 50 02.5	
	comp=Z,484nm,19.0s,baz=219,slow=47						
WRA	Warramunga Arr	26.03	165		P	07 53 41.0	-0.5
	0.4nm,0.5s,baz=344,slow=10,SNR=6.7						
ASAR	Alice Springs	29.51	168		P	07 54 13.3	+0.5
	0.2nm,0.5s,baz=352,slow=6.0,SNR=2.7						
MKAR	Makanchi Array	56.60	324		P	07 57 51.1	-0.1
	0.3nm,0.4s,baz=120,slow=7.7,SNR=6.4						

*CSEM **23** 08:34:15.6, 42°.47N×13°.37E, h13km, MD1.8/6, After ROM*
ROM 23 08:34:15.6±0.1, 42°.47N×13°.37E, h13km, Md1.8/6, MI1.9/6, Error ellipse: s-maj=0.7km s-min=0.4km az=90.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	Campotosto	0.07	23	Pg	Pg	08 34 18.9	+0.4
CAMP				Sg	Sg	08 34 20.8	+0.2
	116nm,0.5s						
CAMP	Campotosto	0.07	23	Pg	Pg	08 34 18.9	+0.4
CAMP				Sg	Sg	08 34 20.8	+0.2
	116nm,0.5s						
AQU	L'Aquila	0.12	168	Pg	Pb	08 34 19.5	-0.3
AQU				Sg	Sg	08 34 21.7	+0.5
	222nm,0.3s						
AQU	L'Aquila	0.12	168	Pg	Pb	08 34 19.5	-0.3
AQU				Sg	Sg	08 34 21.7	+0.5
	222nm,0.3s						
TERO	Teramo	0.23	48	Pg	Pg	08 34 21.1	+0.4
TERO				Sg	Sg	08 34 25.0	+0.8
	114nm,0.2s						
TERO	Teramo	0.23	48	Pg	Pg	08 34 21.1	+0.4
TERO				Sg	Sg	08 34 25.0	+0.8
	114nm,0.2s						
FIAM	Fiamignano	0.27	223	Pg	Pg	08 34 21.9	+0.4
FIAM				Sg	Sg	08 34 26.1	+0.7
	41nm,0.3s						
FIAM	Fiamignano	0.27	223	Pg	Pg	08 34 21.9	+0.4
FIAM				Sg	Sg	08 34 26.1	+0.7
	41nm,0.3s						
LNSS	Leonessa	0.28	299	Pg	Pg	08 34 21.8	+0.2
LNSS				Sg	Sg	08 34 26.4	+0.8
	109nm,0.3s						
LNSS	Leonessa	0.28	299	Pg	Pg	08 34 21.8	+0.2
LNSS				Sg	Sg	08 34 26.4	+0.8
	109nm,0.3s						
NRCA	Norcia	0.41	333	Pg	Pg	08 34 24.1	+0.1
NRCA				Sg	Sb	08 34 30.4	-0.8
	120nm,0.1s						
NRCA	Norcia	0.41	333	Pg	Pg	08 34 24.1	+0.1
NRCA				Sg	Sb	08 34 30.4	-0.8
	120nm,0.1s						

*IDC **23** 08:35:08.0±1.3, 42°.56N×13°.36E, h0km, mb3.4/3, mb1 3.5/6, mb1mx3.4/28, mbtmp3.4/6, ML3.3/3, Error ellipse: s-maj=35.8km s-min=14.1km az=96.0*
*ROM **23** 08:35:08.5±0.1, 42°.47N×13°.35E, h11km, MI3.6/32, Error ellipse: s-maj=1.1km s-min=0.9km az=97.0*
*LDG **23** 08:35:08.2±0.1, 42°.45N×13°.31E, h2km, MI3.3/5, Error ellipse: s-maj=4.0km s-min=2.7km az=49.0*
*CSEM **23** 08:35:08.5±0.1, 42°.47N×13°.31E, h2km, ML4.0/13, Ms3.2, Error ellipse: s-maj=2.4km s-min=2.1km az=48.0*
*ISCJB **23** 08:35:08.0±0.2, 42°.47N±0°.02×13°.31E±0°.02, h13km±2km, mb3.5/2, Error ellipse: s-maj=2.9km s-min=2.2km az=39.1*
*PRU **23** 08:35:08.1, 42°.43N×13°.66E, h0km*
*PDG **23** 08:35:09.1±0.5, 42°.48N×13°.34E, h10km, ML3.7/6, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*VIE **23** 08:35:09.2±0.4, 42°.48N×13°.41E, h10km, mb3.2/7, ML3.5/6, Ms3.2/1, Error ellipse: s-maj=16.2km s-min=2.3km az=82.0*
100 km NE of Rome
*BEO **23** 08:35:34.7, 42°.89N×15°.81E, h0km*
ISC 23 08:35:09.1±0.7, 42°48N±0°02×13°34E±0°02, h12km±4km, n146, σ1?57/196, 22C-7D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	Campotosto	0.08	44	Pg	**Pg**	**08 35 11.5**	**-0.3**
CAMP				Sg	**Sg**	**08 35 13.5**	**-0.3**
	30µm,0.3s						
CAMP	Campotosto	0.08	44	Pg	**Pg**	**08 35 11.5**	**-0.3**
CAMP				Sg	**Sg**	**08 35 13.5**	**-0.3**
	30µm,0.3s						
AQU	L'Aquila	0.14	158	⇑ *i*	Pg	**Pg**	**08 35 11.9**	**-0.5**
AQU					Sg	**Sg**	**08 35 14.3**	**-0.5**
	23µm,0.4s						
AQU	L'Aquila	0.14	158	⇑ *i*	Pg	**Pg**	**08 35 11.9**	**-0.5**
AQU

	3µm,0.6s								
INTR	**Introdacqua**	**0.63**	**138**		Pg	**Pg**	**08 35 19.8**	**-1.5**
INTR					Sg	**Sg**	**08 35 30.2**	**+0.5**
	3µm,0.6s								
MTCE	**Montecelio**	**0.63**	**224**		Pg	**Pg**	**08 35 20.5**	**-0.9**
	1µm,0.4s								
MTCE	**Montecelio**	**0.63**	**224**		Pg	**Pg**	**08 35 20.5**	**-0.9**
	1µm,0.4s								
VVLD	**Villa Vallelon**	**0.65**	**161**		Pg	**Pg**	**08 35 20.6**	**-1.0**
	1µm,0.5s								
VVLD	**Villa Vallelon**	**0.65**	**161**		Pg	**Pg**	**08 35 20.6**	**-1.0**
	1µm,0.5s								
GUAR	**Guarcino**	**0.69**	**181**		Pg	**Pg**	**08 35 20.8**	**-1.6**
	2µm,0.5s								
GUAR	**Guarcino**	**0.69**	**181**		Pg	**Pg**	**08 35 20.8**	**-1.6**
	2µm,0.5s								
GUMA	**Gualdo di Mace**	**0.73**	**37**	⇑	*i*Pg	**Pg**	08 35 20.2	-3.1
GUMA					Sg	**Sg**	**08 35 28.7**	**-4.2**
	6µm,0.4s								
ASSB	**Assisi San Ben**	**0.75**	**319**		Pg	**Pg**	**08 35 23.0**	**-0.6**
	2µm,0.5s								
ASSB	**Assisi San Ben**	**0.75**	**319**		Pg	**Pg**	**08 35 23.0**	**-0.6**
	2µm,0.5s								
LPEL	**Lama dei Pelig**	**0.76**	**124**		Pg	**Pg**	**08 35 21.7**	**-2.2**
LPEL					Sg	**Sg**	**08 35 33.5**	**-0.4**
	2µm,0.3s								
LPEL	**Lama dei Pelig**	**0.76**	**124**		Pg	**Pg**	**08 35 21.7**	**-2.2**
LPEL					Sg	**Sg**	**08 35 33.5**	**-0.4**
	2µm,0.3s								
CAFR	**Castel Frentan**	**0.79**	**108**		Pg	**Pg**	**08 35 23.6**	**-0.8**
	3µm,0.4s								
CAFR	**Castel Frentan**	**0.79**	**108**		Pg	**Pg**	**08 35 23.6**	**-0.8**
	3µm,0.4s								
POFI	**Posta Fibreno**	**0.81**	**160**		Pg	**Pg**	**08 35 22.7**	**-2.1**
POFI	**Posta Fibreno**	**0.81**	**160**		Pg	**Pg**	**08 35 22.7**	**-2.1**
RMP	**Rome, Mte Porz**	**0.82**	**215**		Pg	**Pg**	**08 35 24.3**	**-0.5**
	1µm,0.4s								
RMP	**Rome, Mte Porz**	**0.82**	**215**		Pg	**Pg**	**08 35 24.3**	**-0.5**
	1µm,0.4s								
SNTG	**Esanatoglia**	**0.83**	**340**		Pg	**Pg**	**08 35 24.1**	**-1.0**
SNTG	**Esanatoglia**	**0.83**	**340**		Pg	**Pg**	**08 35 24.1**	**-1.0**
SDI	**San Donato**	**0.85**	**155**		Pg	**Pg**	**08 35 23.8**	**-1.6**
SDI	**San Donato**	**0.85**	**155**		Pg	**Pg**	**08 35 23.8**	**-1.6**
RDP	**Rocca di Papa**	**0.85**	**213**		Pg	**Pg**	**08 35 25.1**	**-0.5**
	3µm,0.6s								
RDP	**Rocca di Papa**	**0.85**	**213**		Pg	**Pg**	**08 35 25.1**	**-0.5**
	3µm,0.6s								
MA9	**Marino**	**0.87**	**216**		Pg	**Pg**	**08 35 25.7**	**-0.1**
	2µm,0.6s								
MA9	**Marino**	**0.87**	**216**		Pg	**Pg**	**08 35 25.7**	**-0.1**
	2µm,0.6s								
SAMA	**S.Maria delle**	**0.89**	**219**		Pg	**Pb**	**08 35 26.4**	**0.0**
	1µm,0.6s								
SAMA	**S.Maria delle**	**0.89**	**219**		Pg	**Pb**	**08 35 26.4**	**0.0**
	1µm,0.6s								
CING	**Cingoli**	**0.90**	**354**		Pg	**Pg**	**08 35 25.4**	**-1.1**
	1µm,0.4s								
CING	**Cingoli**	**0.90**	**354**		Pg	**Pg**	**08 35 25.4**	**-1.1**
	1µm,0.4s								
GIUL	**Giuliano Di Ro**	**0.92**	**184**		Pg	**Pg**	**08 35 25.9**	**-1.0**
	1µm,0.6s								
GIUL	**Giuliano Di Ro**	**0.92**	**184**		Pg	**Pg**	**08 35 25.9**	**-1.0**
	1µm,0.6s								
MURB	**Monte Urbino**	**0.98**	**323**		Pg	**Pg**	**08 35 27.4**	**-0.6**
	3µm,0.4s								
MURB	**Monte Urbino**	**0.98**	**323**		Pg	**Pg**	**08 35 27.4**	**-0.6**
	3µm,0.4s								
RNI2	**Rionero Sannit**	**0.99**	**142**		Pg	**Pg**	**08 35 27.1**	**-1.0**
	1µm,0.6s								
RNI2	**Rionero Sannit**	**0.99**	**142**		Pg	**Pg**	**08 35 27.1**	**-1.0**
	1µm,0.6s								
MGAB	**Montegabbione**	**1.00**	**296**		Pg	**Pb**	**08 35 27.6**	**-0.8**
MGAB	**Montegabbione**	**1.00**	**296**		Pg	**Pb**	**08 35 27.6**	**-0.8**
CERA	**Filignano**	**1.02**	**150**		Pg	**Pb**	**08 35 27.7**	**-1.0**
	1µm,0.6s								
CERA	**Filignano**	**1.02**	**150**		Pg	**Pb**	**08 35 27.7**	**-1.0**
	1µm,0.6s								
TOLF	**Tolfa**	**1.07**	**248**		Pg	**Pb**	**08 35 28.4**	**-1.2**
TOLF	**Tolfa**	**1.07**	**248**		Pg	**Pb**	**08 35 28.4**	**-1.2**
MIDA	**Miranda**	**1.08**	**140**		Pg	**Pb**	**08 35 27.9**	**-1.9**
	568nm,0.3s								
MIDA	**Miranda**	**1.08**	**140**		Pg	**Pb**	**08 35 27.9**	**-1.9**
	568nm,0.3s								
AOI	**Ancona**	**1.09**	**10**		Pg	**Pb**	**08 35 29.1**	**-0.8**
	959nm,0.8s								
AOI	**Ancona**	**1.09**	**10**		Pg	**Pb**	**08 35 29.1**	**-0.8**
	959nm,0.8s								
SACS	**San Casciano d**	**1.11**	**290**		Pg	**Pb**	**08 35 29.7**	**-0.6**
	728nm,0.9s								
PIEI	**Pieia**	**1.21**	**331**		Pg	**Pn**	**08 35 30.9**	**-1.0**
	397nm,0.3s								
PIEI	**Pieia**	**1.21**	**331**		Pg	**Pn**	**08 35 30.9**	**-1.0**
	397nm,0.3s								
FSSB	**Fossombrone**	**1.28**	**342**		Pg	**Pn**	**08 35 32.4**	**-0.4**
	2µm,0.4s								
FSSB	**Fossombrone**	**1.28**	**342**		Pg	**Pn**	**08 35 32.4**	**-0.4**
	2µm,0.4s								
NVLJ	**Novalja**	**2.36**	**28**		*e*Pn	**Pn**	**08 35 47.5**	**-0.2**
NVLJ					Sn	**Sn**	**08 36 17.0**	**+0.4**
NVLJ	**Novalja**	**2.36**	**28**		*e*Pn	**Pn**	**08 35 47.4**	**-0.2**
NVLJ					Sn	**Sn**	**08 36 16.9**	**+0.4**
MAIM	**Mastiano**	**2.52**	**306**		P	**Pn**	**08 35 51.9**	**+2.0**
UDBI	**Udbina**	**2.71**	**40**		*i*Pn	**Pn**	**08 35 53.7**	**+1.2**
UDBI	**Udbina**	**2.71**	**40**		*i*Pn	**Pn**	**08 35 53.6**	**+1.2**
STON	**Ston**	**3.24**	**82**		*e*Pn	**Pn**	**08 35 60.0**	**+0.2**
STON					Sn	**Sn**	**08 36 36.7**	**-1.6**
STON	**Ston**	**3.24**	**82**		*e*Pn	**Pn**	**08 35 59.9**	**+0.2**
STON					Sn	**Sn**	**08 36 36.6**	**-1.6**
VOY	**Vojsko**	**3.57**	**6**		*e*Pn	**Pn**	**08 36 04.3**	**-0.1**
VOY					*e*Sn	**Sn**	**08 36 47.0**	**+0.4**
VOY	**Vojsko**	**3.57**	**6**		Pn	**Pn**	**08 36 03.3**	**-1.1**
VOY					*e*Sn	**Sn**	**08 36 46.0**	**-0.6**
BRY	**Bratogost**	**3.86**	**82**		*e*Pn	**Pn**	**08 36 10.1**	**+1.7**
BRY					*e*Sn	**Sn**	**08 36 56.1**	**+2.4**
BRY	**Bratogost**	**3.86**	**82**		*e*Pn	**Pn**	**08 36 10.1**	**+1.7**
BRY					*e*Sn	**Sn**	**08 36 56.1**	**+2.4**
BUM	**Brajici-Budva**	**4.12**	**91**	⇑	*i*Pn	**Pn**	**08 36 13.4**	**+1.5**
BUM					*e*Sn	**Sn**	**08 37 02.6**	**+2.5**
BUM	**Brajici-Budva**	**4.12**	**91**	⇑	*i*Pn	**Pn**	**08 36 13.4**	**+1.5**
BUM					*e*Sn	**Sn**	**08 37 02.6**	**+2.5**
UPM	**Unac-Piva**	**4.16**	**78**	⇑	*i*Pn	**Pn**	**08 36 14.0**	**+1.5**
UPM					*e*Sn	**Sn**	**08 37 03.9**	**+2.7**
UPM	**Unac-Piva**	**4.16**	**78**	⇑	*i*Pn	**Pn**	**08 36 14.0**	**+1.5**
UPM					*e*Sn	**Sn**	**08 37 03.9**	**+2.7**
ABTA	**Abfaltersbach**	**4.31**	**352**	⇓	*i*Pn	**Pn**	**08 36 15.5**	**+1.0**
	9.4nm,0.4s,SNR=8.6								
ABTA				⇑	*i*Sn	**Sn**	**08 37 06.4**	**+1.7**
	59nm,0.7s								
ABTA	**Abfaltersbach**	**4.31**	**352**		Pn	**Pn**	**08 36 15.5**	**+1.0**
	9.4nm,0.4s,SNR=8.6								
ABTA					Sn	**Sn**	**08 37 06.4**	**+1.7**
	59nm,0.7s								
PDG	**Podgorica**	**4.38**	**89**	⇑	*i*Pn	**Pn**	**08 36 16.9**	**+1.5**
PDG					*e*Sn	**Sn**	**08 37 09.1**	**+2.8**
TTG	**Podgorica**	**4.38**	**89**	⇑	*i*Pn	**Pn**	**08 36 16.9**	**+1.5**
TTG					*e*Sn	**Sn**	**08 37 09.1**	**+2.8**
ULC	**Ulcinj**	**4.42**	**95**	⇓	*i*Pn	**Pn**	**08 36 17.5**	**+1.5**
ULC					*e*Sn	**Sn**	**08 37 09.8**	**+2.4**
ULC	**Ulcinj**	**4.42**	**95**	⇓	*i*Pn	**Pn**	**08 36 17.5**	**+1.5**
ULC					*e*Sn	**Sn**	**08 37 09.8**	**+2.4**
SBF	**Sospel**	**4.53**	**290**		*e*Pn	**Pn**	**08 36 15.8**	**-1.7**
SBF					*e*Sn	**Sn**	**08 37 06.3**	**-3.9**
	9.9nm,0.4s								
SBF	**Sospel**	**4.53**	**290**		*e*Pn	**Pn**	**08 36 15.8**	**-1.7**
SBF					*e*Sn	**Sn**	**08 37 06.3**	**-3.9**
	4.9nm,0.4s								
KBA	**Koelnbreinsper**	**4.60**	**0**		*i*Sn	**Sn**	**08 37 13.7**	**+1.7**
	21nm,0.4s								
KBA	**Koelnbreinsper**	**4.60**	**0**		Sn	**Sn**	**08 37 13.7**	**+1.7**
	21nm,0.4s								
BEY	**Berane**	**4.85**	**83**		*e*Pn	**Pn**	**08 36 23.8**	**+1.8**
BEY					*e*Sn	**Sn**	**08 37 20.6**	**+2.5**
IVA	**Berane**	**4.85**	**83**		*e*Pn	**Pn**	**08 36 23.8**	**+1.8**
IVA					*e*Sn	**Sn**	**08 37 20.6**	**+2.5**
PVY	**Plav**	**4.90**	**86**	⇓	*i*Pn	**Pn**	**08 36 24.9**	**+2.3**
PVY					*e*Sn	**Sn**	**08 37 22.3**	**+3.0**
WTTA	**Wattenberg**	**4.93**	**346**	⇓	*i*Sn	**Sn**	**08 37 22.3**	**+2.1**
	23nm,0.5s								
WTTA	**Wattenberg**	**4.93**	**346**		Sn	**Sn**	**08 37 22.3**	**+2.1**
	23nm,0.5s								
DAVOX	**Davos/Dischmat**	**4.96**	**331**		Pn	**Pn**	**08 36 23.5**	**0.0**
	1.7nm,0.3s,baz=148,slow=16,SNR=6.3								
DAVOX					Sn	**Sn**	**08 37 22.6**	**+1.8**
	1.4nm,0.3s,baz=163,slow=19,SNR=4.4								
PZZ	**Stroppo**	**4.96**	**296**		P	**Pn**	**08 36 24.4**	**+0.9**
TEKS	**Tekeris**	**4.96**	**63**		*e*Pn	**Pn**	**08 36 25.6**	**+2.3**
TEKS	**Tekeris**	**4.96**	**63**		*e*Pn	**Pn**	**08 36 25.6**	**+2.3**
FRF	**La Foret Royal**	**5.02**	**285**		*e*Pn	**Pn**	**08 36 23.1**	**-1.1**
FRF	**La Foret Royal**	**5.02**	**285**		*e*Pn	**Pn**	**08 36 23.1**	**-1.1**
LMR	**La Mourre**	**5.09**	**282**		*e*Pn	**Pn**	**08 36 23.7**	**-1.4**
LMR	**La Mourre**	**5.09**	**282**		*e*Pn	**Pn**	**08 36 23.7**	**-1.4**
DIVS	**Divibare**	**5.12**	**69**		*e*Pn	**Pn**	**08 36 27.7**	**+2.0**
DIVS	**Divibare**	**5.12**	**69**		*e*Pn	**Pn**	**08 36 27.7**	**+2.0**
MBDF	**Montbardon**	**5.27**	**297**		*e*P	**Pn**	**08 36 29.9**	**+2.2**
MBDF					*e*Sn	**Sn**	**08 37 23.8**	**-4.7**
	3.4nm,0.4s								
MBDF	**Montbardon**	**5.27**	**297**		*e*P	**Pn**	**08 36 29.9**	**+2.2**
GRUS	**Gruza**	**5.58**	**73**		*e*Pn	**Pn**	**08 36 32.2**	**+0.4**
GRUS	**Gruza**	**5.58**	**73**		*e*Pn	**Pn**	**08 36 32.2**	**+0.4**
CONA	**Conrad Observa**	**5.73**	**17**	⇑	*e*Pn	**Pn**	**08 36 34.4**	**+0.4**
	1.6nm,0.2s								
CONA	**Conrad Observa**	**5.73**	**17**		Pn	**Pn**	**08 36 34.4**	**+0.4**
	1.6nm,0.2s								
SELS	**Selova**	**5.77**	**80**		*e*Pn	**Pn**	**08 36 35.3**	**+0.8**
SELS	**Selova**	**5.77**	**80**		*e*Pn	**Pn**	**08 36 35.3**	**+0.8**
BARS	**Barje**	**6.26**	**84**		*e*Pn	**Pn**	**08 36 42.4**	**+1.1**
BARS	**Barje**	**6.26**	**84**		*e*Pn	**Pn**	**08 36 42.4**	**+1.1**
GERES	**GERESS Array B**	**6.37**	**2**		Pn	**Pn**	**08 36 42.4**	**-0.4**
	0.6nm,0.3s,baz=174,slow=13,SNR=4.6								
GERES					Sn	**Sn**	**08 37 54.0**	**-1.5**
	1.9nm,0.3s,baz=180,slow=21,SNR=8.9								
KHC	**Kasperske Hory**	**6.66**	**1**		*e*Pn	**Pn**	**08 36 46.8**	**+0.1**
KHC					*ex*	x	08 36 55.5		
KHC					*e*Sn	**Sn**	**08 38 01.3**	**-1.1**
KHC	**Kasperske Hory**	**6.66**	**1**		Pn	**Pn**	**08 36 46.8**	**+0.1**
ZAPS	**Zavoj**	**6.88**	**80**		*e*Pn	**Pn**	**08 36 51.6**	**+1.9**
ZAPS	**Zavoj**	**6.88**	**80**		*e*Pn	**Pn**	**08 36 51.6**	**+1.9**
HINF	**Hinteralfeld**	**7.03**	**322**		*e*Pn	**Pn**	**08 36 50.5**	**-1.4**
HINF					*e*Sn	**Sn**	**08 38 06.1**	**-5.6**
	6.8nm,0.4s								
HINF	**Hinteralfeld**	**7.03**	**322**		*e*Pn	**Pn**	**08 36 50.5**	**-1.4**
VYHS	**Vyhne**	**7.15**	**31**		*e*PN	Pn	08 36 58.7	+5.3
CDF	**Champ du Feu**	**7.30**	**326**		*e*Pn	**Pn**	**08 36 55.7**	**+0.1**
CDF					*e*Sn	**Sn**	**08 38 13.0**	**-5.4**
	7.2nm,0.4s								
CDF	**Champ du Feu**	**7.30**	**326**		*e*Pn	**Pn**	**08 36 55.7**	**+0.1**
HAU	**Haudompre**	**7.40**	**321**		*e*Pn	**Pn**	**08 36 57.0**	**+0.1**
HAU					*e*Sn	**Sn**	**08 38 14.9**	**-5.9**
	9.5nm,0.4s								
HAU	**Haudompre**	**7.40**	**321**		*e*Pn	**Pn**	**08 36 57.0**	**+0.1**
KEST	**Kesra**	**7.42**	**206**		Pn	**Pn**	**08 36 59.2**	**+2.0**
	0.1nm,0.3s,baz=288,slow=19,SNR=2.3								
FINES	**FINESS Array B**	**20.48**	**18**		P	**P**	**08 39 46.0**	**-0.5**
	1.0nm,0.7s,baz=224,slow=9.7,SNR=3.5								
TORD	**Torodi Ar. Bea**	**30.92**	**202**		P	**P**	**08 41 26.8**	**+1.1**
	0.3nm,0.6s,baz=19,slow=9.3,SNR=3.8								
MKAR	**Makanchi Array**	**47.82**	**60**		P	**P**	**08 43 46.9**	**+0.5**
	0.4nm,0.6s,baz=276,slow=7.1,SNR=5.6								

*NEIC **23** 08:38:21.6, 19.01N×64.24W, h61km, MD3.5(RSPR), After RSPR.*

RSPR 23 08:38:21.6, 19.01N×64.24W, h61km±2km, 6C-2D, Virgin Islands

Code	Station Name	Δ°	AZ°		Phase	ID Op	ISC	Time h m s	Res ISC
TBVI	**Tortola**	**0.69**	**211**	⇑	*e*P		Pn	08 38 35.2	-0.5
TBVI	**Tortola**	**0.69**	**211**	⇑	*e*P		Pn	08 38 35.2	-0.5
STVI	**Saint Thomas**	**0.94**	**226**	⇓	*e*P		Pn	08 38 38.0	-0.9
STVI	**Saint Thomas**	**0.94**	**226**		*e*S		Sn	08 38 50.9	-0.7
STVI	**Saint Thomas**	**0.94**	**226**	⇓	*e*P		Pn	08 38 38.0	-0.9
STVI					*e*S		Sn	08 38 50.9	-0.7
CDVI	**St. Croix**	**1.35**	**202**	⇓	*e*P		Pn	08 38 43.4	-0.8
CDVI	**St. Croix**	**1.35**	**202**	⇓	*e*P		Pn	08 38 43.4	-0.8
MTP	**Monte Pirata**	**1.54**	**234**	⇓	*e*P		Pn	08 38 46.1	-0.8
MTP	**Monte Pirata**	**1.54**	**234**		*e*S		Sn	08 39 05.3	-0.6
MTP	**Monte Pirata**	**1.54**	**234**	⇓	*e*P		Pn	08 38 46.1	-0.8
MTP					*e*S		Sn	08 39 05.3	-0.6
CPD	**Cerro la Pandu**	**1.86**	**239**		*e*S		Sn	08 39 12.8	-0.8

*ISCJB **23** 08:45:34.9±0.5, 39.93N±0.02×25.64E±0.02, h7km±3km, Error ellipse: s-maj=3.0km s-min=2.4km az=32.9*
*SOF **23** 08:45:34.0, 39.75N×25.37E, h8km, MD2.8*
*ATH **23** 08:45:34.9, 39.94N×25.65E, h25km±1km, MD3.4/13*
*THE **23** 08:45:35.6, 39.94N×25.67E, h8km, ML3.4/8, Error ellipse: s-maj=0.9km s-min=0.4km az=82.0*
*CSEM **23** 08:45:35.5±0.1, 39.93N×25.64E, h8km, MD3.4, Error ellipse: s-maj=2.3km s-min=2.0km az=20.0*
*ISK **23** 08:45:35.8, 39.89N×25.80E, h6km, MD3.5*
*DDA **23** 08:45:36.5, 39.94N×25.65E, h16km, MD3.6*

ISC 23 08:45:35.0±1.1, 39.94N±0.02×25.63E±0.02, h6km±9km, n170, o0%66/211, Aegean Sea

Code	Station Name	Δ°	AZ°		Phase	ID Op	ISC	Time h m s	Res ISC
BOZC	**Bozcaada**	**0.34**	**106**		*i*P		**Pb**	**08 45 42.8**	**-0.6**
BOZC					*i*S		**Sb**	**08 45 47.8**	**-1.2**
LIA	**Limnos Island**	**0.35**	**264**		*e*P		**Pb**	**08 45 43.0**	**-0.6**
LIA					S		**Sb**	**08 45 48.8**	**-0.5**
LIA	**Limnos Island**	**0.35**	**264**		*e*PB		**Pb**	**08 45 43.0**	**-0.6**
LIA					*e*SB		**Sb**	**08 45 48.8**	**-0.5**
LIA	**Limnos Island**	**0.35**	**264**		P		**Pb**	**08 45 43.0**	**-0.6**
LIA					S		**Sb**	**08 45 48.8**	**-0.5**
SMTH	**Samothraki Isl**	**0.54**	**352**		P		**Pg**	**08 45 46.0**	**+0.6**
SMTH					S		**Sg**	**08 45 53.7**	**+1.2**
SMTH	**Samothraki Isl**	**0.54**	**352**		*e*PN		**Pg**	**08 45 46.1**	**+0.6**
SMTH					*e*SN		**Sb**	**08 45 53.9**	**-1.1**
SMTH	**Samothraki Isl**	**0.54**	**352**		*e*Pn		**Pg**	**08 45 46.1**	**+0.6**
SMTH					S		**Sg**	**08 45 53.7**	**+1.2**
EZN	**Ezine**	**0.54**	**101**		*e*PG		**Pg**	**08 45 44.6**	**-0.9**
EZN	**Ezine**	**0.54**	**101**		*e*Pg		**Pg**	**08 45 44.6**	**-0.9**
SIGR	**SIGRI**	**0.74**	**167**		P		**Pg**	**08 45 49.6**	**+0.3**
SIGR					S		**Sb**	**08 46 00.3**	**-0.4**
SIGR	**SIGRI**	**0.74**	**167**		P		**Pg**	**08 45 49.6**	**+0.3**
SIGR					S		**Sb**	**08 46 00.3**	**-0.4**
GELI	**Tayfur-Gelibol**	**0.79**	**54**		*e*PG		**Pg**	**08 45 50.1**	**-0.2**
GELI					*e*SG		**Sg**	**08 46 00.7**	**+0.1**
GELI	**Tayfur-Gelibol**	**0.79**	**54**		*e*Pg		**Pg**	**08 45 50.1**	**-0.2**
GELI					*e*Sg		**Sg**	**08 46 00.7**	**+0.1**
PRK	**Paraskevi**	**0.85**	**144**		P		**Pg**	**08 45 51.5**	**+0.3**
PRK					S		**Sb**	**08 46 03.7**	**0.0**
PRK	**Paraskevi**	**0.85**	**144**		*e*PN		**Pg**	**08 45 51.6**	**+0.3**
PRK					*e*SN		**Sb**	**08 46 03.7**	**-0.6**
PRK	**Paraskevi**	**0.85**	**144**		P		**Pg**	**08 45 51.5**	**+0.3**
PRK					S		**Sb**	**08 46 03.7**	**0.0**
ENEZ	**Enez**	**0.89**	**26**		*e*PG		**Pg**	**08 45 52.3**	**+0.1**
ENEZ	**Enez**	**0.89**	**26**		*e*Pg		**Pg**	**08 45 52.3**	**+0.1**
LPK	**Lapseki**	**0.97**	**63**		*e*PG		**Pg**	**08 45 53.0**	**-0.6**
LPK	**Lapseki**	**0.97**	**63**		*e*Pg		**Pg**	**08 45 53.0**	**-0.6**
ALN	**Alexandroupoli**	**1.01**	**18**		P		**Pg**	**08 45 54.3**	**-0.1**
ALN					S		**Sb**	**08 46 08.5**	**0.0**
ALN	**Alexandroupoli**	**1.01**	**18**		*e*PN		**Pg**	**08 45 54.3**	**-0.1**
ALN					*e*SN		**Sg**	**08 46 08.0**	**+0.4**
ALN	**Alexandroupoli**	**1.01**	**18**		P		**Pg**	**08 45 54.3**	**-0.1**
ALN					*e*Sn		**Sg**	**08 46 08.0**	**+0.4**
AYVA	**Ayvalik**	**1.03**	**127**		*i*P		**Pg**	**08 45 54.6**	**-0.2**
AYVA					*i*S		**Sn**	**08 46 10.6**	**0.0**
AYVA	**Ayvalik**	**1.03**	**127**		*i*P		**Pg**	**08 45 54.6**	**-0.2**
AYVA					*i*S		**Sn**	**08 46 10.6**	**0.0**
OUR	**Ouranopolis**	**1.33**	**288**		P		**Pn**	**08 45 59.6**	**-0.4**
OUR					S		**Sn**	**08 46 19.1**	**+1.1**
OUR	**Ouranopolis**	**1.33**	**288**		P		**Pn**	**08 45 59.6**	**-0.4**
OUR					S		**Sn**	**08 46 19.1**	**+1.1**
KRBG	**Karabiga-Canak**	**1.36**	**70**		*e*PN		**Pn**	**08 46 00.1**	**-0.4**
KRBG	**Karabiga-Canak**	**1.36**	**70**		*e*Pn		**Pn**	**08 46 00.0**	**-0.4**
KAVA	**Kavala**	**1.36**	**322**		P		**Pn**	**08 46 00.1**	**-0.4**
KAVA					S		**Sn**	**08 46 19.3**	**+0.4**
KAVA	**Kavala**	**1.36**	**322**		P		**Pn**	**08 46 00.1**	**-0.4**
KAVA					S		**Sn**	**08 46 19.3**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.40**	**57**		*e*PN		**Pn**	**08 46 00.6**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.40**	**57**		*e*Pn		**Pn**	**08 46 00.6**	**-0.5**
SART	**Tekirdag**	**1.40**	**57**		*i*P		**Pn**	**08 46 00.9**	**-0.3**
SART					*i*S		**Sb**	**08 46 19.5**	**-0.3**
SART	**Tekirdag**	**1.40**	**57**		*i*P		**Pn**	**08 46 00.9**	**-0.3**
SART					*i*S		**Sb**	**08 46 19.5**	**-0.3**
PAIG	**Paliouri**	**1.50**	**270**		P		**Pn**	**08 46 02.0**	**-0.4**
PAIG					S		**Sg**	**08 46 23.1**	**-0.2**
PAIG	**Paliouri**	**1.50**	**270**		*e*PN		**Pn**	**08 46 02.1**	**-0.4**
PAIG	**Paliouri**	**1.50**	**270**		*e*Pn		**Pn**	**08 46 02.1**	**-0.4**
PAIG					S		**Sg**	**08 46 23.1**	**-0.2**
MFT	**Murefte**	**1.52**	**55**		*e*PN		**Pn**	**08 46 02.9**	**+0.1**
MFT	**Murefte**	**1.52**	**55**		*e*Pn		**Pn**	**08 46 02.9**	**+0.1**
BALY	**Balya**	**1.54**	**97**		*i*P		**Pn**	**08 46 03.1**	**0.0**
BALY					*i*S		**Sg**	**08 46 24.6**	**0.0**
BALY	**Balya**	**1.54**	**97**		*i*P		**Pn**	**08 46 03.1**	**0.0**
BALY					*i*S		**Sg**	**08 46 24.6**	**0.0**
AOS	**Alonnisos**	**1.56**	**241**		P		**Pn**	**08 46 03.0**	**-0.2**
AOS	**Alonnisos**	**1.56**	**241**		*e*PN		**Pn**	**08 46 03.0**	**-0.2**
AOS	**Alonnisos**	**1.56**	**241**		P		**Pn**	**08 46 03.0**	**-0.2**
CHOS	**Chios island**	**1.58**	**168**		P		**Pn**	**08 46 03.2**	**-0.4**
CHOS					S		**Sb**	**08 46 24.9**	**0.0**
CHOS	**Chios island**	**1.58**	**168**		*e*PN		**Pn**	**08 46 03.2**	**-0.4**
CHOS	**Chios island**	**1.58**	**168**		P		**Pn**	**08 46 03.2**	**-0.4**
CHOS					S		**Sb**	**08 46 24.9**	**0.0**
GONE	**Gonen-Balikesi**	**1.58**	**85**		*e*PN		**Pn**	**08 46 03.4**	**-0.2**
GONE	**Gonen-Balikesi**	**1.58**	**85**		*e*Pn		**Pn**	**08 46 03.4**	**-0.2**
KDZ	**Kurdzhali**	**1.72**	**355**		*e*P		**Pb**	**08 46 06.5**	**-0.5**
KDZ	**Kurdzhali**	**1.72**	**355**		*e*P		**Pb**	**08 46 06.5**	**-0.5**
PLG	**Polygyros**	**1.73**	**285**		P		**Pn**	**08 46 05.6**	**-0.1**
PLG	**Polygyros**	**1.73**	**285**		*e*PN		**Pn**	**08 46 05.7**	**0.0**
PLG	**Polygyros**	**1.73**	**285**		P		**Pn**	**08 46 05.6**	**-0.1**
URLA	**Izmir**	**1.74**	**154**		*i*P		**Pn**	**08 46 05.3**	**-0.5**
URLA					*i*S		**Sn**	**08 46 27.2**	**-1.1**
URLA	**Izmir**	**1.74**	**154**		*i*P		**Pn**	**08 46 05.3**	**-0.5**
URLA					*i*S		**Sn**	**08 46 27.2**	**-1.1**
BALB	**Balikesir**	**1.76**	**99**		*e*PN		**Pn**	**08 46 05.8**	**-0.2**
BALB	**Balikesir**	**1.76**	**99**		*e*Pn		**Pn**	**08 46 05.8**	**-0.2**
TKR	**Tekirdag**	**1.79**	**53**		*e*PN		**Pn**	**08 46 07.2**	**+0.7**
TKR	**Tekirdag**	**1.79**	**53**		*e*Pn		**Pn**	**08 46 07.2**	**+0.7**
BNT	**Bandirma**	**1.80**	**76**		*e*PN		**Pn**	**08 46 06.7**	**+0.1**
BNT	**Bandirma**	**1.80**	**76**		*e*Pn		**Pn**	**08 46 06.7**	**+0.1**
SKIA	**Skiathos**	**1.84**	**246**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VISS	**Visnje**	**0.16**	**238**	⇓*i* P	Pg	08 58 49.2	-0.1
VISS				*i* Sg	Sg	08 58 52.3	+0.3
VISS	comp=Z,5.0nm,0.1s						
PDKS	**Podkum**	**0.18**	**353**	*i* Pg	Pg	08 58 49.6	0.0
PDKS				*i* Sg	Sg	08 58 52.8	+0.2
LEGS	**Legarje**	**0.21**	**73**	*i* Pg	Pg	08 58 50.1	0.0

IDC ***23*** *08:58:45.1±1.0,31°.03S×176°.86W,h0km,mb4.1/7, mb1 4.3/7,mb1mx4.0/20,mbtmp4.1/7,MS3.6/4,Ms1 3.6/4, ms1mx3.0/31,Error ellipse: s-maj=27.0km s-min=21.8km az=49.0*

ISCJB ***23*** *08:58:46.7±1.2,31°.66S±0°.08×176°.6W±0°.2,h33km, mb4.1/8,MS3.5/3,Error ellipse: s-maj=25.1km s-min=8.3km az=19.7*

NEIC ***23*** *08:58:50.3±0.6,31°.05S×176°.80W,h35km,mb4.5/4,Error ellipse: s-maj=19.4km s-min=13.1km az=171.0*

ISC 23 08:58:49.8±1.0,31°.5S±0°.1×176°.8W±0°.2,h35km,n41, σ1§49/35,mb4.3/8,MS3.6/3,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.47**	**336**	Pn	Pn	08 59 18.9	-8.7
RAO				Sn	Sn	08 59 46.9	-9.5
RAO	**Raoul Island**	**2.47**	**336**	Pn	Pn	08 59 18.9	-8.7
RAO	83nm,0.3s,baz=273,slow=19,SNR=2.0			Sn	Sn	08 59 46.9	-9.5
RAO	166nm,0.3s,baz=99,slow=23,SNR=4.5			LR	LR	08 59 49.1	
MWZ	comp=Z,606nm,20.7s,baz=149,slow=32 **Matawai**	**8.25**	**213**	PN	**Pn**	**09 00 46.4**	**-0.6**
MWZ				SN	**Sn**	**09 02 22.0**	**+2.9**
URZ	**Urewera**	**8.39**	**215**	*e*Pn	**Pn**	**09 00 49.3**	**+0.4**
URZ				*e*Sn	Sn	09 02 29.5	+7.1
URZ	**Urewera**	**8.39**	**215**	PN	**Pn**	**09 00 47.0**	**-1.9**
URZ				SN	**Sn**	**09 02 23.0**	**+0.6**
URZ	**Urewera**	**8.39**	**215**	Pn	**Pn**	**09 00 47.1**	**-1.9**
URZ	0.9nm,0.3s,baz=27,slow=6.8,SNR=12			Sn	**Sn**	**09 02 24.8**	**+2.4**
OUZ	1.8nm,0.3s,baz=165,slow=18,SNR=8.4 **Omahuta**	**8.86**	**243**	*e*Pn	Pn	09 00 59.5	+4.2
BKZ	**Black Stump Fm**	**9.40**	**214**	**Pn**	**Pn**	**09 01 00.6**	**-2.2**
BKZ				SN	**Sn**	**09 02 40.8**	**+1.5**
MRZ	**Mangatainoka R**	**11.02**	**212**	PN	**Pn**	**09 01 22.7**	**-2.2**
MRZ				SN	**Sn**	**09 03 24.3**	**-2.5**
THZ	**Tophouse**	**13.15**	**216**	PN	**Pn**	**09 01 51.5**	**-2.5**
LTZ	**Lake Taylor**	**14.22**	**215**	PN	**Pn**	**09 02 07.7**	**-1.0**
RPZ	**Rata Peaks**	**15.51**	**215**	Pn	**Pn**	**09 02 23.7**	**-2.2**
RPZ				Sn	Sn	09 05 07.8	-8.7
RPZ	**Rata Peaks**	**15.51**	**215**	Pn	**Pn**	**09 02 23.7**	**-2.2**
RPZ	1.8nm,0.3s,baz=43,slow=5.1,SNR=9.9			Sn	Sn	09 05 07.8	-8.7
DZM	0.3nm,0.3s,baz=63,slow=18,SNR=2.7 **Mont Dzumac**	**17.67**	**298**	*e*LR	LR	09 06 46.3	
DZM	440nm,25.5s **Mont Dzumac**	**17.67**	**298**	LR	LR	09 08 06.8	
TBI	comp=Z,302nm,21.2s,baz=71,slow=32 **Tubuai**	**25.52**	**78**	*e*LR	LR	09 10 20.8	
PPT2	205nm,29.0s **Papeete2**	**28.27**	**67**	*e*LR	LR	09 11 30.6	
PPT	178nm,25.2s **Papeete**	**28.28**	**67**	LR	LR	09 13 56.1	
CTA	comp=Z,61nm,19.3s,baz=231,slow=32 **Charters Tower**	**35.02**	**280**	P	**P**	**09 05 40.0**	**+0.8**
CTA	**Charters Tower**	**35.02**	**280**	P	**P**	**09 05 40.0**	**+0.8**
CTAO	2.5nm,0.5s,baz=106,slow=10.0,SNR=5.8 **Charters Tower**	**35.02**	**280**	*e*P	**P**	**09 05 39.2**	**-0.1**
STKA	5.1nm,0.7s **Stephens Creek**	**35.27**	**258**	*e*P	**P**	**09 05 42.7**	**+1.5**
STKA	2.1nm,1.0s **Stephens Creek**	**35.27**	**258**	P	**P**	**09 05 41.5**	**+0.2**
PMG	8.4nm,1.0s,baz=85,slow=8.2,SNR=5.6 **Port Moresby**	**40.03**	**295**	LR	LR	09 19 10.5	
ASAR	comp=Z,77nm,18.8s,baz=108,slow=31 **Alice Springs**	**44.10**	**268**	P	**P**	**09 06 54.7**	**-0.3**
ASAR	**Alice Springs**	**44.10**	**268**	P	**P**	**09 06 54.7**	**-0.3**
WRAB	2.2nm,0.9s,baz=103,slow=7.6,SNR=14 **Tennant Creek**	**45.19**	**273**	*e*P	**P**	**09 07 03.1**	**-0.5**
WRA	5.3nm,0.8s **Warramunga Arr**	**45.19**	**273**	P	**P**	**09 07 02.9**	**-0.7**
WRA	**Warramunga Arr**	**45.19**	**273**	P	**P**	**09 07 02.9**	**-0.7**
FITZ	3.5nm,0.8s,baz=110,slow=8.2,SNR=22 **Fitzroy Crossi**	**53.41**	**270**	P	**P**	**09 08 06.5**	**+0.1**
FITZ	**Fitzroy Crossi**	**53.41**	**270**	P	**P**	**09 08 06.5**	**+0.1**
FITZ	0.7nm,0.6s,baz=135,slow=8.6,SNR=4.4			LR	LR	09 30 12.8	
QSPA	comp=Z,65nm,18.2s,baz=120,slow=35 **South Pole Qui**	**58.59**	**180**	*e*P	P	09 08 46.8	+3.8
QSPA	6.4nm,1.2s **South Pole Qui**	**58.59**	**180**	P	P	09 08 47.0	+4.0
TXAR	3.3nm,1.0s,baz=19,slow=7.2,SNR=7.0 **Lajitas Array**	**92.11**	**57**	P	**P**	**09 11 55.9**	**+0.2**
TXAR	**Lajitas Array**	**92.11**	**57**	P	**P**	**09 11 55.9**	**+0.2**
FINES	0.2nm,0.8s,baz=216,slow=4.5,SNR=3.1 **FINESS Array B**	**146.55**	**340**	PKPbc	**PKPbc**	**09 18 26.2**	**-0.5**
FINES	**FINESS Array B**	**146.55**	**340**	PKPbc	**PKPbc**	**09 18 26.2**	**-0.5**
AKASG	2.6nm,0.7s,baz=54,slow=4.9,SNR=9.9 **Malin Array Be**	**152.82**	**322**	PKPbc	**PKPbc**	**09 18 42.0**	**-0.6**
AKASG	**Malin Array Be**	**152.82**	**322**	PKPbc	**PKPbc**	**09 18 42.0**	**-0.6**
TORD	0.2nm,0.2s,baz=40,slow=1.6,SNR=3.1 **Torodi Ar. Bea**	**161.66**	**175**	PKPab	**PKPab**	**09 19 34.5**	**+1.9**
TORD	**Torodi Ar. Bea**	**161.66**	**175**	PKPab	**PKPab**	**09 19 34.5**	**+1.9**
	0.5nm,0.8s,baz=180,slow=4.1,SNR=3.7						

ISCJB ***23*** *09:00:00.9±0.8,39°.04N±0°.04×27°.43E±0°.06,h0km,Error ellipse: s-maj=7.5km s-min=3.6km az=144.7*

CSEM ***23*** *09:00:01.3±0.5,39°.05N×27°.44E,h1km,MD2.6,Error ellipse: s-maj=11.3km s-min=4.9km az=51.0*

ISK ***23*** *09:00:02.4,39°.08N×27°.58E,h15km,MD2.9*

DDA ***23*** *09:00:03.7,39°.11N×27°.58E,h4km,MD2.6*

ISC 23 09:00:02.5±1.1,39°.10N±0°.03×27°.58E±0°.05,h0km,n38, σ0§81/52,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.28**	**141**	*i* P	**Pg**	**09 00 09.1**	**+1.1**
AKHS				*i* S	**Sb**	**09 00 15.1**	**-0.8**
AKHS	**Akhisar**	**0.28**	**141**	*i* P	**Pg**	**09 00 09.1**	**+1.1**
AKHS				*i* S	**Sb**	**09 00 15.1**	**-0.8**
BALB	**Balikesir**	**0.58**	**23**	*e*Pg	**Pg**	**09 00 14.6**	**+0.8**
BALB				*e*SG	**Sb**	**09 00 24.6**	**0.0**
BALB	**Balikesir**	**0.58**	**23**	*e*Pg	**Pg**	**09 00 14.6**	**+0.8**
BALB				*e*Sg	**Sb**	**09 00 24.6**	**0.0**
BALY	**Balya**	**0.64**	**2**	*i* P	**Pg**	**09 00 16.0**	**+1.2**
BALY				*i* S	**Sb**	**09 00 26.5**	**+0.4**
BALY	**Balya**	**0.64**	**2**	*i* P	**Pg**	**09 00 16.0**	**+1.2**
BALY				*i* S	**Sb**	**09 00 26.5**	**+0.4**
DEMI	**Demirci**	**0.88**	**93**	*i* P	**Pb**	**09 00 21.8**	**+1.0**
DEMI				*i* S	**Sb**	**09 00 34.2**	**+1.0**
DEMI	**Demirci**	**0.88**	**93**	*i* P	**Pb**	**09 00 21.8**	**+1.0**
DEMI				*i* S	**Sb**	**09 00 34.2**	**+1.0**
GONE	**Gonen-Balikesi**	**0.95**	**5**	*e*PG	**Pg**	**09 00 21.3**	**+0.6**
GONE				*e*SG	**Sb**	**09 00 35.3**	**+0.3**
GONE	**Gonen-Balikesi**	**0.95**	**5**	*e*Pg	**Pg**	**09 00 21.3**	**+0.6**
GONE				*e*Sg	**Sb**	**09 00 35.3**	**+0.3**
MANT	**Manisa**	**0.97**	**128**	*i* P	**Pg**	**09 00 20.6**	**-0.6**
MANT				*i* S	**Sb**	**09 00 36.1**	**+0.2**
MANT	**Manisa**	**0.97**	**128**	*i* P	**Pg**	**09 00 20.6**	**-0.6**
MANT				*i* S	**Sb**	**09 00 36.1**	**+0.2**
KULA	**Kula-Manisa**	**1.02**	**125**	*e*PG	**Pg**	**09 00 22.3**	**+0.1**
KULA				*e*SG	**Sb**	**09 00 37.3**	**0.0**
KULA	**Kula-Manisa**	**1.02**	**125**	*e*Pg	**Pg**	**09 00 22.3**	**+0.1**
KULA				*e*Sg	**Sb**	**09 00 37.3**	**0.0**
BNT	**Bandirma**	**1.28**	**12**	*e*PN	**Pg**	**09 00 26.5**	**-0.6**
BNT	**Bandirma**	**1.28**	**12**	*e*Pn	**Pg**	**09 00 26.5**	**-0.6**
KCTX	**Karacabey (Bur**	**1.31**	**27**	*e*PN	**Pg**	**09 00 26.7**	**-0.9**
KCTX	**Karacabey (Bur**	**1.31**	**27**	*e*Pn	**Pg**	**09 00 26.7**	**-0.9**
KRBG	**Karabiga-Canak**	**1.31**	**350**	*e*PN	**Pg**	**09 00 27.0**	**-0.6**
KRBG	**Karabiga-Canak**	**1.31**	**350**	*e*Pn	**Pg**	**09 00 27.0**	**-0.6**
LPK	**Lapseki**	**1.42**	**334**	*e*PN	**Pn**	**09 00 28.6**	**-1.0**
LPK	**Lapseki**	**1.42**	**334**	*e*Pn	**Pn**	**09 00 28.6**	**-1.0**
TVSB	**Tavsanli**	**1.50**	**76**	*e*PN	**Pn**	**09 00 29.6**	**-1.2**
TVSB	**Tavsanli**	**1.50**	**76**	*e*Pn	**Pn**	**09 00 29.6**	**-1.2**
GELI	**Tayfur-Gelibol**	**1.55**	**327**	*e*PN	**Pn**	**09 00 30.9**	**-0.5**
GELI	**Tayfur-Gelibol**	**1.55**	**327**	*e*Pn	**Pn**	**09 00 30.9**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.61**	**349**	*e*PN	**Pn**	**09 00 31.3**	**-1.1**
RKY	**Sarkoy-Tekirda**	**1.61**	**349**	*e*Pn	**Pn**	**09 00 31.3**	**-1.1**
MFT	**Murefte**	**1.70**	**352**	*e*PN	**Pn**	**09 00 33.2**	**-0.4**
MFT	**Murefte**	**1.70**	**352**	*e*Pn	**Pn**	**09 00 33.2**	**-0.4**
ARMT	**Armutlu**	**1.76**	**34**	*e*PN	**Pn**	**09 00 33.3**	**-1.0**
ARMT	**Armutlu**	**1.76**	**34**	*e*Pn	**Pn**	**09 00 33.3**	**-1.0**
ENEZ	**Enez**	**1.97**	**326**	*e*PN	**Pn**	**09 00 36.3**	**-0.8**
ENEZ	**Enez**	**1.97**	**326**	*e*Pn	**Pn**	**09 00 36.3**	**-0.8**
YLV	**Yalova**	**2.01**	**43**	*e*PN	**Pn**	**09 00 37.3**	**-0.5**
YLV	**Yalova**	**2.01**	**43**	*e*Pn	**Pn**	**09 00 37.3**	**-0.5**
CAVI	**Cavuskoy**	**2.06**	**57**	*e*PN	**Pn**	**09 00 37.2**	**-1.3**
CAVI	**Cavuskoy**	**2.06**	**57**	*e*Pn	**Pn**	**09 00 37.2**	**-1.3**

BUC 23 09:00:11.0±0.7,43°.23N×28°.21E,h0km,MD3.1/1,6C-2D, Error ellipse: s-maj=9.5km s-min=3.7km az=112.0, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIRR	**Tirgusor**	**1.24**	**7**	⇑*i* P	Pb	09 00 35.4	+0.2
TIRR				S	Sn	09 00 53.3	+0.3
TIRR	**Tirgusor**	**1.24**	**7**	⇑*i* P	Pb	09 00 35.4	+0.2
TIRR				*i* S	Sn	09 00 53.3	+0.3
MLR	**Muntele Rosu**	**2.78**	**325**	⇓*i* P	Pn	09 00 57.4	+0.4
MLR	**Muntele Rosu**	**2.78**	**325**	⇓*i* P	Pn	09 00 57.4	+0.4
VRI	**Vrincioaia**	**2.84**	**339**	⇑*i* P	Pn	09 00 58.9	+1.2
VRI	**Vrincioaia**	**2.84**	**339**	⇑*i* P	Pn	09 00 58.9	+1.2
VOIR		**3.16**	**315**	⇑*i* P	Pn	09 01 03.2	+1.0
VOIR				S	Sn	09 01 40.7	0.0
VOIR		**3.16**	**315**	⇑*i* P	Pn	09 01 03.2	+1.0
VOIR				*i* S	Sn	09 01 40.7	0.0

MOS ***23*** *09:11:19.0±1.1,48°.80N×153°.31E,h134km,mb3.4/4,Error ellipse: s-maj=36.0km s-min=11.3km az=66.3*

IDC ***23*** *09:11:20.0±3.8,48°.74N×153°.49E,h126km±34km,mb3.2/9, mb1 3.4/9,mb1mx3.2/25,mbtmp3.2/9,MS3.5/1,Ms1 3.5/1, ms1mx2.6/15,Error ellipse: s-maj=24.9km s-min=21.5km az=119.0*

KRSC ***23*** *09:11:22.4±1.7,48°.45N×154°.93E,h183km±93km,ML4.3*

ISC 23 09:11:24.6±1.5,49°.3N±0°.2×153°.3E±0°.1,h140km,n28, σ1§90/28,mb3.5/10,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.28**	**52**	PN	**Pn**	**09 12 01.2**	**-1.2**
SKR				*e*S	**Sn**	**09 12 30.6**	**-0.8**
SKR				smax	smax		
SKR	comp=N,200nm,0.3s			smax	smax		
SKR	comp=E,190nm,0.3s **Severo-Kuril's**	**2.28**	**52**	P	**Pn**	**09 12 05.2**	**+2.8**
SKR				S	**Sn**	**09 12 36.5**	**+5.1**
MIPR	**Malaya Ipel'ka**	**3.69**	**35**	P	Pn	09 12 24.8	+4.4
ASAK	**Asacha**	**4.23**	**42**	P	Pn	09 12 31.8	+4.2
MTVR	**Mutnovka**	**4.43**	**42**	S	**Sn**	**09 13 22.8**	**+1.5**
RUS	**Russkaya**	**4.54**	**45**	PN	**Pn**	**09 12 33.2**	**+1.6**
RUS				S	**Sn**	**09 13 24.0**	**+0.2**
RUS	**Russkaya**	**4.54**	**45**	P	**Pn**	**09 12 33.2**	**+1.6**
RUS				S	**Sn**	**09 13 24.0**	**+0.2**
PETK	**Petropavlovsk-**	**4.70**	**34**	PN	**Pn**	**09 12 34.3**	**+0.6**
PETK	**Petropavlovsk-**	**4.70**	**34**	P	**Pn**	**09 12 34.3**	**+0.6**
KOK	comp=E,0.1nm,0.3s,baz=167,slow=7.1,SNR=2.5 **Koryaka**	**5.20**	**38**	P	**Pn**	**09 12 43.4**	**+2.9**
UGLR	**Uglovaya**	**5.22**	**40**	P	**Pn**	**09 12 43.4**	**+2.7**
GNL	**Ganaly**	**5.25**	**32**	P	Pn	09 12 46.4	+5.2
SPN	**Mys Shipunski**	**5.67**	**46**	PN	**Pn**	**09 12 47.6**	**+0.9**
SPN				S	**Sn**	**09 13 49.0**	**-1.8**
SPN	**Mys Shipunski**	**5.67**	**46**	P	**Pn**	**09 12 47.6**	**+0.9**
SPN				S	**Sn**	**09 13 49.0**	**-1.8**
MKZ	**Mys Kozlova**	**7.39**	**42**	PN	**Pn**	**09 13 10.1**	**+0.4**
MKZ	**Mys Kozlova**	**7.39**	**42**	P	**Pn**	**09 13 10.1**	**+0.4**
MKZ				S	**Sn**	**09 14 27.9**	**-4.1**
KDAK	**Kodiak Island**	**32.44**	**54**	LR	LR	09 32 00.3	
ILAR	comp=E,86nm,19.2s,baz=328,slow=38 **Eielson Array**	**34.49**	**41**	P	**P**	**09 17 58.8**	**0.0**
MKAR	comp=E,0.2nm,0.4s,baz=264,slow=6.3,SNR=4.2 **Makanchi Array**	**45.91**	**295**	*e*P	**P**	**09 19 33.2**	**+0.3**
MKAR				pmax	pmax		
MKAR	comp=Z,1.0nm,0.6s **Makanchi Array**	**45.91**	**295**	P	**P**	**09 19 33.0**	**+0.1**
YKA	comp=Z,1.2nm,0.6s,baz=67,slow=7.8,SNR=15 **Yellowknife Ar**	**48.81**	**38**	P	**P**	**09 19 55.1**	**+0.1**
FINES	comp=Z,0.4nm,0.7s,baz=296,slow=6.6,SNR=3.3 **FINESS Array B**	**61.77**	**334**	P	**P**	**09 21 27.7**	**0.0**
OBN	comp=Z,0.4nm,0.3s,baz=23,slow=7.2,SNR=4.9 **Obninsk**	**63.27**	**325**	*e*P	P	09 21 32.3	-5.5
OBN				pmax	pmax		
NOA	comp=Z,4.0nm,0.6s **NORSAR Array B**	**65.84**	**341**	P	**P**	**09 21 54.7**	**+0.3**
WRA	comp=Z,0.4nm,0.6s,baz=39,slow=5.1,SNR=2.8 **Warramunga Arr**	**70.98**	**199**	P	P	09 22 19.0	-7.9
ASAR	comp=Z,0.4nm,0.8s,baz=18,slow=6.7,SNR=3.9 **Alice Springs**	**74.69**	**198**	P	P	09 22 44.0	-4.7
TXAR	comp=Z,0.4nm,0.6s,baz=9.6,slow=5.3,SNR=6.4 **Lajitas Array**	**76.13**	**61**	P	**P**	**09 22 55.0**	**-2.2**
BRTR	comp=Z,0.1nm,0.7s,baz=332,slow=3.1,SNR=2.7 **Keskin Array B**	**76.61**	**316**	P	**P**	**09 22 59.8**	**+0.1**
	comp=Z,0.5nm,0.5s,baz=65,slow=2.2,SNR=3.1						

IDC 23 09:19:30.6±3.0,31°.43S×176°.94W,h0km,mb3.8/3, mb1 4.1/5,mb1mx3.8/19,mbtmp4.0/5,ML3.7/2,MS2.8/1, Ms1 2.8/1,ms1mx2.5/25,Error ellipse: s-maj=69.5km s-min=33.6km az=116.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**8.38**	**214**	Pn	Pn	09 21 34.1	+0.8
URZ	0.3nm,0.3s,baz=63,slow=15,SNR=6.5			Sn	Sn	09 23 08.0	-0.6
URZ	0.6nm,0.3s,baz=317,slow=19,SNR=3.0			LR	LR	09 24 34.7	
RPZ	comp=Z,68nm,19.2s,baz=267,slow=36 **Rata Peaks**	**15.50**	**214**	Pn	Pn	09 23 08.5	-2.0
STKA	0.8nm,0.3s,baz=186,slow=19,SNR=5.0 **Stephens Creek**	**35.14**	**258**	P	P	09 26 25.8	-0.3
ASAR	2.4nm,0.9s,baz=80,slow=6.1,SNR=2.3 **Alice Springs**	**43.97**	**268**	P	P	09 27 40.1	+0.3
WRA	0.7nm,0.7s,baz=108,slow=7.7,SNR=6.2 **Warramunga Arr**	**45.05**	**273**	P	P	09 27 48.4	0.0
FINES	1.1nm,0.8s,baz=112,slow=7.8,SNR=10 **FINESS Array B**	**146.42**	**340**	PKPbc	PKPdf	09 39 11.8	+0.3
	1.7nm,0.7s,baz=48,slow=4.5,SNR=7.0						

IDC 23 09:19:33.3±6.0,4°.68S×152°.37E,h54km±50km,mb3.3/5, mb1 3.6/6,mb1mx3.4/20,mbtmp3.4/6,ML2.5/1,Error ellipse: s-maj=71.9km s-min=30.9km az=126.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**6.99**	**227**	P	Pn	09 21 14.9	+1.7
PMG	0.6nm,0.3s,baz=40,slow=17,SNR=2.7			S	Sn	09 22 32.9	+1.5
WRA	2.3nm,0.3s,baz=97,slow=10,SNR=4.6 **Warramunga Arr**	**23.21**	**228**	P	P	09 24 35.2	-0.7
ASAR	0.9nm,0.8s,baz=54,slow=9.8,SNR=9.7 **Alice Springs**	**25.96**	**222**	P	P	09 25 00.2	-0.8
FITZ	0.4nm,0.4s,baz=56,slow=11,SNR=7.8 **Fitzroy Crossi**	**29.35**	**241**	P	P	09 25 31.3	0.0
MKAR	1.0nm,0.4s,baz=104,slow=8.3,SNR=2.7 **Makanchi Array**	**79.95**	**319**	P	P	09 31 35.6	-1.2
ILAR	0.2nm,0.6s,baz=120,slow=5.7,SNR=3.0 **Eielson Array**	**82.20**	**22**	P	P	09 31 48.5	+0.1
TORD	0.3nm,0.8s,baz=241,slow=5.3,SNR=5.3 **Torodi Ar. Bea**	**149.86**	**288**	PKPbc	PKPbc	09 39 19.9	+1.3
	0.5nm,0.3s,baz=64,slow=2.7,SNR=14						

IDC 23 09:28:07.5±9.0,48°.00N×152°.91E,h0km,mb3.4/3, mb1 3.7/4,mb1mx3.4/26,mbtmp3.3/4,Error ellipse: s-maj=285.2km s-min=69.4km az=98.0,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PETK	**Petropavlovsk-**	**5.95**	**29**	Pn	Pn	09 29 37.1	+0.2
ILAR	baz=219,slow=13,SNR=2.5 **Eielson Array**	**35.66**	**40**	P	P	09 35 06.6	-0.3
YKA	0.4nm,0.8s,baz=264,slow=8.1,SNR=6.2 **Yellowknife Ar**	**50.01**	**37**	P	P	09 37 03.1	0.0
TXAR	0.6nm,0.9s,baz=298,slow=7.3,SNR=5.2 **Lajitas Array**	**77.00**	**61**	P	P	09 40 02.4	+0.1
	0.1nm,0.5s,baz=316,slow=6.3,SNR=3.3						

NNC ***23*** *09:33:45.9±0.8,44°.33N×74°.99E,h0km,mb3.3,mpv2.9, Error ellipse: s-maj=8.3km s-min=6.0km az=88.0*

ISCJB ***23*** *09:33:46.8±0.4,44°.43N±0°.03×74°.98E±0°.07,h10km,Error ellipse: s-maj=7.4km s-min=4.0km az=13.8*

ISC 23 09:33:48.4±0.9,44°.29N±0°.05×75°.02E±0°.06,h10km,n18, σ2§13/26,11C-12D,Eastern Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
USP	**Ospenovka**	**1.09**	**200**	P	**Pb**	**09 34 07.7**	**-1.7**
CHMS	SNR=52 **Chumysh**	**1.31**	**189**	P	**Pn**	**09 34 11.9**	**-0.8**
TKM2	SNR=44 **Tokmak 2**	**1.43**	**163**	⇑P	**Pn**	**09 34 13.7**	**-0.9**
TKM2	17nm,0.3s			⇑S	**Sn**	**09 34 32.9**	**-0.7**
TKM2	32nm,0.6s **Tokmak 2**	**1.43**	**163**	P	**Pn**	**09 34 14.3**	**-0.3**
KBK	SNR=47 **Karagaybulak**	**1.64**	**182**	P	**Pn**	**09 34 17.7**	**+0.3**
AAK	SNR=6.1 **Ala-Archa**	**1.70**	**193**	P	**Pn**	**09 34 19.2**	**+0.9**
EKS2	SNR=13 **Erkin-Say**	**1.86**	**210**	P	**Pn**	**09 34 21.5**	**+1.1**
UCH	SNR=18 **Uchtor**	**2.10**	**190**	P	**Pn**	**09 34 26.2**	**+2.3**
KZA	SNR=8.3 **Kyzart**	**2.22**	**176**	P	**Pn**	**09 34 28.1**	**+2.5**
ULHL	SNR=48 **Ulahol**	**2.23**	**156**	P	**Pn**	**09 34 28.1**	**+2.6**
AML	SNR=63 **Almayashu**	**2.37**	**205**	P	**Pn**	**09 34 29.3**	**+1.7**
KK31	SNR=8.2 **Karatay Array**	**3.48**	**252**	Pn	Pn	09 34 42.3	-0.3
KK31	0.3nm,0.3s,baz=70,slow=10,SNR=7.7			⇓Pg	**Pb**	**09 34 51.8**	**+1.7**
KK31	1.3nm,0.3s,baz=65,slow=16,SNR=5.3			⇑Sn	**Sn**	**09 35 21.5**	**-2.3**
KK31	0.9nm,0.2s,baz=68,slow=23,SNR=3.8			⇓Lg	Lg	09 35 38.1	
MK31	6.5nm,0.3s,baz=67,slow=29,SNR=6.2 **Makanchi Array**	**5.69**	**61**	⇑Pn	**Pn**	**09 35 14.0**	**+1.1**
MK31	0.5nm,0.3s,baz=238,slow=13,SNR=5.0			⇓Sn	**Sn**	**09 36 18.4**	**+0.2**
MK31	0.7nm,0.3s,baz=246,slow=24,SNR=9.5			⇓Lg	Lg	09 36 43.7	
KUR14	2.7nm,0.6s,baz=241,slow=25,SNR=4.4 **Kurchatov Arra**	**6.77**	**20**	⇓Pn	**Pn**	**09 35 26.4**	**-1.4**
KUR14	0.1nm,0.2s			⇑Sn	**Sn**	**09 36 42.4**	**-2.4**
KUR14	0.3nm,0.4s			⇓Lg	Lg	09 37 21.5	
KURK	2.2nm,0.7s **Kurchatov**	**6.87**	**19**	⇓Pn	Pn	09 35 24.3	-4.8
KURK	0.6nm,0.7s			⇑Sn	**Sn**	**09 36 45.4**	**-2.0**
KURK	0.5nm,0.4s			⇑Lg	Lg	09 37 21.4	
VOSK	6.5nm,0.7s **Vostochnaya**	**8.85**	**344**	⇑Pn	**Pn**	**09 35 57.5**	**+1.2**
VOSK	0.4nm,0.4s			⇓Sn	**Sn**	**09 37 39.8**	**+3.8**
VOSK	0.3nm,0.5s			⇓Lg	Lg	09 38 27.0	
BVA0	3.2nm,0.7s **Borovoye Array**	**9.26**	**342**	⇓Pn	**Pn**	**09 36 01.8**	**0.0**
BVA0	1.3nm,0.6s,baz=154,slow=13,SNR=6.8			⇓Sn	**Sn**	**09 37 48.6**	**+2.6**
BVA0	1.2nm,0.6s			⇓Lg	Lg	09 38 43.9	
ZRNK	3.4nm,0.7s,baz=150,slow=27,SNR=5.1 **Zerenda**	**9.53**	**337**	⇑Pn	**Pn**	**09 36 03.4**	**-2.2**
ZRNK	0.6nm,0.3s			⇑Sn	**Sn**	**09 37 47.5**	**-5.2**
ZRNK	0.4nm,0.4s			⇑Lg	Lg	09 38 45.3	
	2.4nm,0.6s						

CSEM ***23*** *09:58:06.7±0.2,38°.89N×22°.24E,h22km±1km,ML2.0/3, Error ellipse: s-maj=4.5km s-min=3.1km az=83.0*

ISCJB ***23*** *09:58:07.1±0.5,38°.89N±0°.03×22°.24E±0°.05,h25km±4km, Error ellipse: s-maj=7.1km s-min=4.6km az=176.8*

ATH ***23*** *09:58:07.1,38°.84N×22°.19E,h27km±2km,MD2.7/4*

THE ***23*** *09:58:07.6,38°.87N×22°.23E,h17km±2km,ML2.0/3,Error ellipse: s-maj=2.0km s-min=0.4km az=8.0*

ISC 23 09:58:07.3±1.1,38°.87N±0°.03×22°.23E±0°.03,h19km±2km, n21,σ0§56/42,Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAKR	**Makrakomi, Fth**	**0.17**	**333**	P	**Pg**	**09 58 11.9**	**0.0**
MAKR				S	**Sg**	**09 58 15.0**	**0.0**
MAKR	**Makrakomi, Fth**	**0.17**	**333**	P	**Pg**	**09 58 11.9**	**0.0**
MAKR				S	**Sg**	**09 58 15.0**	**0.0**
AGG	**Agios Georgios**	**0.18**	**27**	P	**Pg**	**09 58 12.1**	**+0.1**
AGG				S	**Sg**	**09 58 15.5**	**+0.3**
AGG	**Agios Georgios**	**0.18**	**27**	P	**Pg**	**09 58 12.1**	**+0.1**
AGG				S	**Sg**	**09 58 15.5**	**+0.3**
EVR	**Evrytania**	**0.33**	**279**	P	**Pg**	**09 58 14.8**	**+0.3**
EVR				S	**Sb**	**09 58 19.8**	**+0.2**
EVR	**Evrytania**	**0.33**	**279**	*e*PB	**Pg**	**09 58 14.8**	**+0.3**
EV

AB31 Akbulak array 13.16 332 ||P **Pn 10 04 56.1 +0.8**
0.8nm,0.5s,baz=147,slow=12,SNR=2.8
AKTO Aktyubinsk 14.85 331 ⇑P **P 10 05 21.9 -1.9**
2.0nm,0.5s
AKTO Aktyubinsk 14.85 331 Pn **Pn 10 05 17.4 -0.9**
0.1nm,0.3s,baz=144,slow=16,SNR=2.7
ZALV Zalesovo Beam 19.18 29 P **P 10 06 08.5 -3.2**
0.0nm,0.3s,baz=224,slow=8.3,SNR=4.1
AKASG Malin Array Be 31.00 307 P **P 10 08 05.8 +0.5**
0.6nm,0.5s,baz=80,slow=7.3,SNR=4.1
FINES FINESS Array B 35.52 325 P **P 10 08 44.3 -0.2**
0.7nm,0.6s,baz=105,slow=11,SNR=3.9
NOA NORSAR Array B 42.41 322 P **P 10 09 41.7 -0.5**
0.3nm,0.5s,baz=114,slow=8.5,SNR=3.0
TORD Torodi Ar. Bea 64.46 267 P **P 10 12 26.0 +1.3**
0.6nm,0.6s,baz=51,slow=6.7,SNR=8.0
YKA Yellowknife Ar 79.82 2 P **P 10 13 55.5 -0.3**
0.2nm,0.6s,baz=352,slow=5.9,SNR=4.0
WRA Warramunga Arr 83.88 121 P **P 10 14 18.7 +1.0**
0.4nm,0.8s,baz=326,slow=5.1,SNR=3.6

IDC 23 10:06:32.2±8.1, 5.77S×149.47E, h117km±49km, mb3.3/4, mb1 3.4/5, mb1mx3.1/19, mbtmp3.2/5, Error ellipse: s-maj=63.6km s-min=56.0km az=57.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.28**	**212**	P		Pn	Pn	10 07 35.7	+0.2
	1.1nm,0.3s,baz=37,slow=10,SNR=4.1								
PMG				S		Sn	Sn	10 08 25.0	+0.5
	7.5nm,0.3s,baz=353,slow=23,SNR=11								
WRA	**Warramunga Arr**	**20.37**	**225**	P		P	P	10 10 59.9	+0.2
	0.3nm,0.3s,baz=50,slow=10,SNR=12								
WRA				pP		pP	pP	10 11 19.7	-1.7
	0.8nm,0.6s,baz=47,slow=11,SNR=5.5								
ASAR	**Alice Springs**	**23.26**	**219**	P		P	P	10 11 29.9	+0.4
	0.4nm,0.4s,baz=54,slow=9.0,SNR=16								
ASAR				pP		pP	pP	10 11 51.3	-1.4
	0.5nm,0.5s,baz=50,slow=9.6,SNR=6.9								
FITZ	**Fitzroy Crossi**	**26.30**	**240**	P		P	P	10 11 56.9	-0.2
	1.3nm,0.3s,baz=58,slow=8.8,SNR=13								
STKA	**Stephens Creek**	**27.00**	**195**	P		P	P	10 12 02.8	-0.4
	0.6nm,0.5s,baz=41,slow=11,SNR=4.1								

IDC 23 10:10:10.7±2.8, 3.37N×96.44E, h0km, mb3.4/2, mb1 3.8/4, mb1mx3.4/27, mbtmp3.5/4, ML3.8/2, Error ellipse: s-maj=54.8km s-min=36.3km az=27.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.54**	**103**	Pn		Pn	Pn	10 10 54.0	+0.6
	5.6nm,0.3s,baz=299,slow=16,SNR=13								
PSI				Pg		Pb	10 10 57.6		+0.2
	12nm,0.3s,baz=307,slow=15,SNR=25								
PSI				Sn		Sn	10 11 26.8		+1.5
	16nm,0.3s,baz=195,slow=15,SNR=9.3								
CMAR	**Chiang Mai Arr**	**15.19**	**9**	Pn		Pn	10 13 46.8		+0.1
	0.3nm,0.3s,baz=198,slow=11,SNR=6.5								
WRA	**Warramunga Arr**	**43.84**	**123**	P		P	10 18 18.7		-0.3
	0.8nm,0.6s,baz=302,slow=9.2,SNR=8.0								
ASAR	**Alice Springs**	**45.31**	**128**	P		P	10 18 30.8		-0.1
	0.2nm,0.6s,baz=302,slow=7.7,SNR=2.9								

IDC 23 10:45:41.5±1.9, 12.54N×95.96E, h0km, mb3.5/4, mb1 3.6/5, mb1mx3.3/27, mbtmp3.4/5, Error ellipse: s-maj=73.4km s-min=21.4km az=64.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**6.55**	**26**	Pn		Pn	Pn	10 47 19.9	+0.7
	baz=215,slow=15,SNR=4.4								
MKAR	**Makanchi Array**	**36.04**	**344**	P		P	10 52 44.2		-0.5
	0.4nm,0.8s,baz=155,slow=9.5,SNR=3.2								
ZALV	**Zalesovo Beam**	**42.24**	**350**	P		P	10 53 36.3		-0.1
	0.5nm,0.4s,baz=155,slow=9.4,SNR=2.3								
WRA	**Warramunga Arr**	**49.69**	**130**	P		P	10 54 36.1		+0.5
	0.5nm,0.8s,baz=308,slow=8.3,SNR=8.7								
ASAR	**Alice Springs**	**51.69**	**134**	P		P	10 54 50.1		-0.6
	0.3nm,0.6s,baz=313,slow=6.7,SNR=6.5								

*ISCJB **23** 11:08:39.6±1.0, 18.34S±0.06×167.8E±0.2, h29km, mb3.8/7, Error ellipse: s-maj=28.1km s-min=6.8km az=9.5*
*NOU **23** 11:08:39.0±1.3, 17.83S×166.47E, h30km, MD3.3, ML4.0*
*IDC **23** 11:08:47.0±5.1, 18.77S×168.17E, h100km±51km, mb3.5/7, mb1 3.7/8, mb1mx3.6/18, mbtmp3.5/8, Error ellipse: s-maj=53.0km s-min=29.4km az=156.0*
ISC 23 11:08:40.3±1.2, 18.36S±0.10×168.0E±0.2, h29km, n13, σ1°40/17, mb4.0/7, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.98**	**202**	*e*P		**Pn**	**Pn**	**11 09 39.5**	**-0.1**
DZM				*e*S		**Sn**	**Sn**	**11 10 24.5**	**-0.8**
DZM				AMP				11 10 34.2	
	comp=Z,606nm,4.7s								
DZM	**Mont Dzumac**	**3.98**	**202**	P		**Pn**		**11 09 40.1**	**+0.5**
	comp=Z,4.2nm,0.3s,baz=28,slow=18,SNR=34								
DZM				S		**Sn**		**11 10 25.0**	**-0.3**
	comp=Z,14nm,0.3s,baz=148,slow=23,SNR=12								
NOUC	**Port Laguerre**	**4.06**	**203**	*e*S		**Sn**		**11 10 25.5**	**-1.6**
LASL	**Noumea**	**4.10**	**200**	*e*P		**Pn**		**11 09 42.3**	**+1.3**
LASL				*e*S		**Sn**		**11 10 29.7**	**+1.6**
NORM	**Noumea**	**4.12**	**200**	*e*P		**Pn**		**11 09 42.8**	**+1.6**
NORM				*e*S		**Sn**		**11 10 29.0**	**+0.6**
STKA	**Stephens Creek**	**27.37**	**235**	P		**P**		**11 14 21.3**	**-1.9**
	comp=Z,3.6nm,1.0s,baz=77,slow=7.5,SNR=2.9								
WRA	**Warramunga Arr**	**31.84**	**262**	P		**P**		**11 15 02.5**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=87,slow=8.5,SNR=6.2								
ASAR	**Alice Springs**	**32.24**	**255**	P		**P**		**11 15 06.7**	**+0.2**
	comp=Z,0.9nm,0.4s,baz=84,slow=8.3,SNR=41								
USRK	**Ussuriysk Arra**	**70.43**	**333**	P		**P**		**11 19 53.8**	**+2.1**
	comp=Z,1.1nm,0.7s,baz=116,slow=7.6,SNR=3.4								
CMAR	**Chiang Mai Arr**	**77.10**	**295**	P		**P**		**11 20 32.4**	**+0.9**
	comp=Z,0.9nm,0.7s,baz=125,slow=4.3,SNR=4.7								
SONM	**Songino Array**	**85.83**	**324**	P		**P**		**11 21 16.7**	**-0.5**
	comp=Z,0.4nm,0.6s,baz=108,slow=3.2,SNR=2.6								
NVAR	**Mina Array Bea**	**89.08**	**49**	P		**P**		**11 21 32.9**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=227,slow=9.3,SNR=5.1								
ARCES	**ARCESS Array B**	**123.93**	**345**	PKP		**PKPdf**		**11 27 32.3**	**-2.7**
	comp=Z,2.3nm,1.0s,baz=70,slow=1.4,SNR=5.9								

IDC 23 11:10:30.1±1.9, 12.04N×143.77E, h128km±18km, mb3.7/16, mb1 3.9/16, mb1mx3.8/27, mbtmp3.7/16, MS3.3/5, Ms1 3.3/5, ms1mx2.9/37, Error ellipse: s-maj=22.9km s-min=12.9km az=94.0, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.88**	**35**	P		Pn		11 11 02.4	0.0
	baz=227,slow=15								
PMG	**Port Moresby**	**21.57**	**171**	LR		LR		11 23 30.3	
	comp=Z,74nm,18.7s,baz=21,slow=36								
JNU	**Nakatsue**	**24.07**	**333**	P		P		11 15 34.5	+0.7
	4.1nm,0.7s,baz=78,slow=7.9,SNR=4.5								
MJAR	**Matsushiro Arr**	**24.90**	**349**	P		P		11 15 40.9	-0.3
	0.7nm,0.5s,baz=164,slow=8.4,SNR=4.3								
MJAR				LR		LR		11 24 53.5	
	comp=Z,88nm,19.2s,baz=185,slow=35								
KSRS	**Korea Array**	**29.02**	**333**	P		P		11 16 18.9	+0.9
	1.7nm,0.8s,baz=135,slow=9.8,SNR=5.0								
ASAJ	**Asahikawa**	**31.98**	**358**	P		P		11 16 43.8	-0.2
	22nm,1.1s,baz=184,slow=14,SNR=2.9								
ASAJ				LR		LR		11 29 31.0	
	comp=Z,35nm,21.6s,baz=345,slow=36								
WRA	**Warramunga Arr**	**33.11**	**196**	P		P		11 16 53.4	-0.8
	1.4nm,0.7s,baz=20,slow=9.7,SNR=14								
ASAR	**Alice Springs**	**36.78**	**195**	P		P		11 17 26.8	+1.2
	0.7nm,0.9s,baz=18,slow=12,SNR=8.4								
PETK	**Petropavlovsk-**	**42.45**	**12**	LR		LR		11 35 13.2	
	comp=Z,34nm,18.1s,baz=38,slow=35								
CMAR	**Chiang Mai Arr**	**43.63**	**284**	P		P		11 18 22.1	-0.1
	0.4nm,0.4s,baz=95,slow=6.4,SNR=3.0								
STKA	**Stephens Creek**	**43.72**	**183**	P		P		11 18 21.2	-1.5
	3.1nm,1.1s,baz=3.4,slow=8.8,SNR=3.1								
SONM	**Songino Array**	**47.39**	**326**	P		P		11 18 50.8	-0.8
	0.5nm,0.5s,baz=134,slow=8.3,SNR=3.9								
SONM				LR		LR		11 38 12.5	
	comp=Z,50nm,18.6s,baz=235,slow=35								
MKAR	**Makanchi Array**	**61.86**	**317**	P		P		11 20 35.9	0.0
	0.5nm,0.5s,baz=84,slow=11,SNR=6.9								
ZALV	**Zalesovo Beam**	**62.26**	**325**	P		P		11 20 37.8	-0.5
	0.6nm,0.6s,baz=130,slow=5.0,SNR=3.6								
ILAR	**Eielson Array**	**70.42**	**25**	P		P		11 21 28.6	-1.5
	1.0nm,0.4s,baz=250,slow=5.7,SNR=14								
YKA	**Yellowknife Ar**	**84.72**	**27**	P		P		11 22 50.3	+0.7
	1.1nm,0.4s,baz=285,slow=5.1,SNR=23								
KEV	**Kevo**	**87.65**	**342**	*ep*		P		11 23 03.7	-0.1
	1.7nm,0.4s								
ARCES	**ARCESS Array B**	**88.21**	**342**	P		P		11 23 07.0	+0.5
	1.3nm,0.4s,baz=72,slow=7.5,SNR=31								
NVAR	**Mina Array Bea**	**88.72**	**51**	P		P		11 23 11.3	+1.5
	1.3nm,0.7s,baz=262,slow=4.9,SNR=10								
JOF	**Joensuu**	**89.24**	**335**	*ep*		P		11 23 10.6	-0.8
	2.1nm,0.5s								
KAF	**Kangasniemi**	**91.67**	**335**	*ep*		P		11 23 22.1	-0.6
	2.1nm,0.6s								
FINES	**FINESS Array B**	**92.10**	**335**	P		P		11 23 24.1	-0.6
	2.3nm,0.4s,baz=58,slow=4.7,SNR=15								

IDC 23 11:18:56.5±7.2, 3.96S×154.38E, h483km±96km, mb2.9/7, mb1 3.1/8, mb1mx3.0/19, mbtmp3.0/8, Error ellipse: s-maj=51.8km s-min=26.8km az=102.0, North of Solomon Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**17.88**	**206**	P		P	P	11 22 37.9	+1.2
	0.6nm,0.3s,baz=27,slow=11,SNR=9.7								
WRA	**Warramunga Arr**	**25.18**	**229**	P		P	P	11 23 42.7	-0.1
	0.5nm,0.5s,baz=53,slow=9.4,SNR=11								
ASAR	**Alice Springs**	**27.83**	**223**	P		P	P	11 24 05.6	-0.5
	0.9nm,0.5s,baz=53,slow=8.6,SNR=18								
STKA	**Stephens Creek**	**30.26**	**202**	P		P	P	11 24 26.4	-0.7
	2.3nm,0.8s,baz=36,slow=8.7,SNR=3.0								
MJAR	**Matsushiro Arr**	**43.03**	**341**	P		P	P	11 26 11.2	-1.4
	0.8nm,0.5s,baz=167,slow=6.5,SNR=3.5								
PETK	**Petropavlovsk-**	**56.92**	**2**	P		P	P	11 27 54.6	0.0
	0.9nm,0.5s,baz=141,slow=9.3,SNR=5.2								
SONM	**Songino Array**	**66.47**	**327**	P		P	P	11 28 58.8	+1.4
	0.4nm,0.5s,baz=134,slow=4.2,SNR=3.3								
ILAR	**Eielson Array**	**80.80**	**22**	P		P	P	11 30 18.6	-0.1
	0.2nm,0.6s,baz=251,slow=5.3,SNR=5.5								

*ISCJB **23** 11:26:57.5±0.6, 5.29N±0.08×126.0E±0.2, h66km, mb3.8/11, Error ellipse: s-maj=35.7km s-min=9.2km az=170.2*
*MAN **23** 11:27:07, 6.20N×126.30E, h70km, mb4.3, ML3.1, MS2.9*
*IDC **23** 11:27:10.7±4.2, 5.36N×126.33E, h176km±42km, mb3.4/11, mb1 3.5/11, mb1mx3.3/26, mbtmp3.4/11, Error ellipse: s-maj=60.3km s-min=11.0km az=76.0*
ISC 23 11:26:59.0±0.7, 5.30N±0.09×126.2E±0.3, h66km, n14, σ2°05/14, mb4.0/11, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**1.63**	**2**	*e*P		**Pn**		**11 27 24.8**	**-0.8**
MATI				*e*S		Sn		11 27 34.2	-11
CTBH	**Cotabato--PC H**	**2.72**	**315**	||*i*P	Pn		11 27 44.6	+4.3
BUKP	**Musuan**	**2.79**	**336**	*e*P		**Pn**		**11 27 41.5**	**+0.1**
BUKP				*e*S		Sn		11 27 55.0	-19
FITZ	**Fitzroy Crossi**	**23.26**	**181**	P		**P**		**11 32 04.8**	**+3.8**
	0.7nm,0.5s,baz=7.0,slow=10,SNR=6.7								
FITZ				S		**S**		**11 36 03.2**	**-5.0**
	0.9nm,0.6s,baz=41,slow=15,SNR=4.9								
WRA	**Warramunga Arr**	**26.34**	**163**	P		**P**		**11 32 30.9**	**+2.0**
	0.6nm,0.4s,baz=341,slow=10,SNR=10								
ASAR	**Alice Springs**	**29.76**	**166**	P		**P**		**11 32 59.8**	**+0.3**
	0.2nm,0.5s,baz=345,slow=6.7,SNR=5.2								
KSRS	**Korea Array**	**32.04**	**3**	P		**P**		**11 33 20.1**	**+0.7**
	0.5nm,0.6s,baz=191,slow=9.7,SNR=3.0								
STKA	**Stephens Creek**	**39.78**	**159**	P		**P**		**11 34 25.8**	**+0.1**
	3.8nm,1.1s,baz=330,slow=8.1,SNR=3.7								
MKAR	**Makanchi Array**	**55.97**	**325**	P		**P**		**11 36 30.8**	**+0.2**
	0.5nm,0.5s,baz=113,slow=8.4,SNR=7.2								
ZALV	**Zalesovo Beam**	**58.95**	**333**	P		**P**		**11 36 50.5**	**-0.9**
	0.4nm,0.3s,baz=120,slow=8.5,SNR=2.6								
KURBB	**Kurchatov Arra**	**60.13**	**327**	P		**P**		**11 36 59.4**	**-0.2**
	0.8nm,0.7s,baz=126,slow=5.3,SNR=6.7								
MAW	**Mawson**	**85.04**	**200**	P		**P**		**11 39 26.3**	**-0.7**
	2.3nm,0.9s,baz=62,slow=9.0,SNR=3.5								
ARCES	**ARCESS Array B**	**88.80**	**340**	P		**P**		**11 39 45.2**	**-0.1**
	1.3nm,0.7s,baz=69,slow=6.6,SNR=8.1								
SPITS	**Spitsbergen Ar**	**88.84**	**349**	P		**P**		**11 39 45.2**	**-0.2**
	1.6nm,0.8s,baz=106,slow=4.2,SNR=3.3								

IDC 23 11:32:29.1±2.2, 3.65S×128.29E, h0km, mb3.9/2, mb1 4.2/3, mb1mx3.6/22, mbtmp4.0/3, ML3.8/1, Error ellipse: s-maj=167.7km s-min=27.6km az=67.0, Seram

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.23**	**160**	P		Pn		11 36 31.6	+0.1
	0.3nm,0.3s,baz=343,slow=13,SNR=16								
ASAR	**Alice Springs**	**20.62**	**165**	P		P		11 37 10.2	-0.1
	8.7nm,0.7s,baz=346,slow=11,SNR=56								
MKAR	**Makanchi Array**	**64.51**	**327**	P		P		11 43 07.9	0.0
	0.4nm,0.6s,baz=131,slow=6.5,SNR=6.1								

IDC 23 11:39:55.4±32.0, 5.66N×126.29E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.4/24, mbtmp3.6/4, 1D, Error ellipse: s-maj=547.0km s-min=106.1km az=155.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**2.56**	**308**	||*i*P	Pg		11 40 49.6	+5.0
FITZ	**Fitzroy Crossi**	**23.61**	**182**	P		P		11 45 09.0	+0.7
	1.3nm,0.9s,baz=0.0,slow=14,SNR=4.2								
WRA	**Warramunga Arr**	**26.64**	**163**	P		P		11 45 35.8	-0.2
	0.8nm,0.4s,baz=342,slow=10,SNR=15								
ASAR	**Alice Springs**	**30.07**	**166**	P		P		11 46 06.4	-0.3
	0.2nm,0.6s,baz=343,slow=7.0,SNR=5.7								
STKA	**Stephens Creek**	**40.07**	**160**	P		P		11 47 32.6	-0.1
	0.9nm,0.6s,baz=344,slow=12,SNR=3.6								

*ISCJB **23** 11:41:05.9±0.9, 42.92N±0.07×145.30E±0.07, h79km±5km, mb3.4/4, Error ellipse: s-maj=12.1km s-min=7.7km az=158.2*
*JMA **23** 11:41:06.9±0.1, 42.94N×145.28E, h74km±1km, M3.4*
*IDC **23** 11:41:10.4±6.5, 43.00N×145.02E, h101km±37km, mb3.2/4, mb1 3.3/5, mb1mx3.1/25, mbtmp3.2/5, Error ellipse: s-maj=80.3km s-min=30.5km az=174.0*
ISC 23 11:41:06.7±1.2, 42.91N±0.08×145.30E±0.06, h73km±8km, n14, σ0°64/24, mb3.4/4, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
JAK	**Akkeshi**	**0.45**	**281**	P		**Pn**		**11 41 19.5**	**+0.3**
JAK				*e*S		**Sn**		**11 41 28.9**	**+0.4**
NEM2	**Nemuro 2**	**0.56**	**36**	P		**Pn**		**11 41 20.5**	**+0.2**
NEM2				*e*S		**Sn**		**11 41 30.3**	**0.0**
JNK	**Nakash**	**0.79**	**328**	P		**Pn**		**11 41 22.6**	**-0.2**
JNK				*e*S		**Sn**		**11 41 34.0**	**-0.8**
JRA	**Rausu**	**1.03**	**353**	P		**Pn**		**11 41 25.8**	**+0.1**
JRA				*e*S		**Sn**		**11 41 39.7**	**-0.1**
JOB	**Onbets**	**1.07**	**270**	P		**Pn**		**11 41 26.4**	**+0.2**
JOB				*e*S		**Sn**		**11 41 40.9**	**+0.1**
JAR	**Ashorobuto**	**1.18**	**289**	P		**Pn**		**11 41 27.8**	**+0.2**
JAR				*e*S		**Sn**		**11 41 43.4**	**+0.1**
JCH	**Churui**	**1.46**	**259**	P		**Pn**		**11 41 31.2**	**+0.1**
JCH				*e*S		**Sn**		**11 41 49.4**	**-0.2**
JTKR	**Abashiri--Toko**	**1.46**	**317**	P		**Pn**		**11 41 31.6**	**+0.4**
JTKR				*e*S		**Sn**		**11 41 49.7**	**0.0**
JMP	**Maruseppu**	**1.79**	**308**	P		**Pn**		**11 41 35.9**	**+0.4**
JMP				*e*S		**Sn**		**11 41 57.2**	**-0.2**
ASAJ	**Asahikawa**	**2.30**	**302**	P		**Pn**		**11 41 43.8**	**+1.3**
	2.7nm,0.3s,baz=128,slow=9.4,SNR=33								
ASAJ				S		**Sn**		**11 42 10.6**	**+0.8**
	3.1nm,0.3s,baz=288,slow=20,SNR=12								
SONM	**Songino Array**	**27.56**	**294**	P		**P**		**11 46 46.2**	**-0.6**
	0.3nm,0.3s,baz=85,slow=9.1,SNR=3.6								
ILAR	**Eielson Array**	**42.96**	**36**	P		**P**		**11 48 59.6**	**+1.5**
	0.5nm,0.8s,baz=249,slow=6.2,SNR=5.4								
MKAR	**Makanchi Array**	**43.78**	**298**	P		**P**		**11 49 04.2**	**-0.7**
	0.3nm,0.5s,baz=80,slow=8.6,SNR=3.1								
FINES	**FINESS Array B**	**65.00**	**332**	P		**P**		**11 51 37.4**	**-1.1**
	0.7nm,0.4s,baz=46,slow=11,SNR=4.3								

*ISCJB **23** 11:43:37.0±0.6, 76.27N±0.06×7.7E±0.3, h10km, mb3.5/8, MS3.0/5, Error ellipse: s-maj=10.6km s-min=6.8km az=36.6*
*IDC **23** 11:43:37.4±0.8, 76.21N×7.47E, h0km, mb3.4/8, mb1 3.7/13, mb1mx3.6/32, mbtmp3.5/13, ML3.1/5, MS2.9/10, Ms1 2.9/10, ms1mx2.7/37, Error ellipse: s-maj=15.4km s-min=11.4km az=70.0*
ISC 23 11:43:38.6±0.7, 76.19N±0.07×8.01E±0.09, h10km, n21, σ1°59/19, mb3.4/8, MS3.1/5, Svalbard region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**1.94**	**61**	*e*P		**Pn**		**11 44 11.0**	**-0.6**
HSP				*e*S		**Sn**		**11 44 34.6**	**-1.4**
SPITS	**Spitsbergen Ar**	**2.73**	**39**	Pn		**Pn**		**11 44 22.2**	**-0.3**
	baz=213,slow=15,SNR=148								
SPITS				Sn		**Sn**		**11 44 54.8**	**-0.7**
	baz=203,slow=19,SNR=3.8								
JMIC	**Jan Mayen**	**6.98**	**230**	LR		LR		11 47 12.6	
	comp=Z,52nm,21.8s,baz=280,slow=31								
ARCES	**ARCESS Array B**	**8.39**	**134**	Pn		**Pn**		**11 45 40.2**	**+0.1**
	0.3nm,0.3s,baz=348,slow=11,SNR=6.9								
ARCES				Sn		**Sn**		**11 47 11.2**	**-3.6**
	0.3nm,0.3s,baz=337,slow=19,SNR=3.7								
ARCES				LR		LR		11 49 01.1	
	comp=Z,53nm,19.8s,baz=287,slow=38								
NOA	**NORSAR Array B**	**15.26**	**174**	Pn		**P**		**11 47 17.2**	**-1.5**
	0.1nm,0.3s,baz=352,slow=12,SNR=4.6								
NOA				LR		LR		11 52 35.7	
	comp=Z,16nm,18.4s,baz=5.0,slow=35								
JOF	**Joensuu**	**15.41**	**137**	*ep*		**P**		**11 47 22.0**	**+1.7**
	0.4nm,0.3s								
KAF	**Kangasniemi**	**15.43**	**146**	*ep*		**P**		**11 47 22.3**	**+1.8**
	1.4nm,0.5s								
FINES	**FINESS Array B**	**16.04**	**147**	Pn		**P**		**11 47 25.6**	**-1.7**
	0.1nm,0.3s,baz=354,slow=13,SNR=3.2								
FINES				LR		LR		11 53 42.2	
	comp=Z,34nm,20.3s,baz=359,slow=38								
HFS	**Hagfors**	**16.25**	**170**	Pn		**Pn**		**11 47 27.7**	**+1.2**
	0.1nm,0.3s,baz=3.8,slow=8.9,SNR=9.5								
HFS				LR		LR		11 52 60.0	
	comp=Z,32nm,21.0s,baz=294,slow=34								
EKA	**Eskdalemuir Ar**	**21.36**	**198**	P		**P**		**11 48 26.1**	**+0.6**
	0.8nm,0.6s,baz=23,slow=6.6,SNR=5.4								
VRAC	**Vranov**	**27.20**	**168**	LR		LR		12 00 28.4	
	comp=Z,15nm,21.9s,baz=293,slow=37								
SCHQ	**Schefferville**	**34.10**	**275**	LR		LR		12 02 40.4	
	comp=Z,35nm,21.1s,baz=32,slow=34								
ZALV	**Zalesovo Beam**	**35.38**	**84**	LR		LR		12 09 06.8	
	comp=Z,26nm,19.1s,baz=53,slow=43								
ILAR	**Eielson Array**	**38.39**	**343**	P		**P**		**11 51 00.1**	**+0.7**
	0.5nm,0.8s,baz=7.1,slow=6.5,SNR=7.7								
ILAR				LR		LR		12 07 46.5	
	comp=Z,26nm,19.3s,baz=169,slow=38								
MKAR	**Makanchi Array**	**41.41**	**91**	P		**P**		**11 51 26.8**	**+2.2**
	0.6nm,0.9s,baz=342,slow=6.9,SNR=3.6								
ULM	**Lac du Bonnet**	**44.99**	**298**	LR		LR		12 10 55.1	
	comp=Z,51nm,18.6s,baz=314,slow=36								
PDAR	**Pinedale Array**	**54.91**	**307**	P		**P**		**11 53 08.4**	**-0.8**
	0.5nm,0.8s,baz=24,slow=6.9,SNR=4.0								
NVAR	**Mina Array Bea**	**60.72**	**313**	P		**P**		**11 53 48.9**	**-1.1**
	0.1nm,0.4s,baz=57,slow=6.6,SNR=2.6								
TORD	**Torodi Ar. Bea**	**63.12**	**187**	P		**P**		**11 54 06.4**	**+0.3**
	0.6nm,0.7s,baz=348,slow=4.8,SNR=4.7								
MJAR	**Matsushiro Arr**	**63.22**	**44**	P		**P**		**11 54 07.7**	**+1.1**
	0.5nm,0.4s,baz=275,slow=17,SNR=2.8								
TXAR	**Lajitas Array**	**66.69**	**298**	P		**P**		**11 54 27.5**	**-1.9**
	0.3nm,0.8s,baz=34,slow=6.9,SNR=3.6								

*ISCJB **23** 11:52:07.4±0.5, 38.31N±0.02×22.06E±0.04, h10km±3km, Error ellipse: s-maj=5.5km s-min=4.1km az=172.5*
*THE **23** 11:52:07.9, 38.30N×22.07E, h8km±1km, ML2.1/4, Error ellipse: s-maj=1.3km s-min=0.4km az=289.0*
*ATH **23** 11:52:07.9, 38.33N×22.03E, h8km±1km, MD2.5/6*
*CSEM **23** 11:52:07.6±0.1, 38.31N×22.07E, h5km, MD2.5, Error ellipse: s-maj=2.8km s-min=2.0km az=78.0*
ISC 23 11:52:07.5±1.0, 38.31N±0.02×22.07E±0.03, h11km±4km, n25, σ0°41/50, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.06**	**360**	P		**Pg**		**11 52 09.6**	**-0.1**

ellipse: s-maj=10.3km s-min=9.0km az=141.0
*DDA **23** 12:05:34.6,38˚.12N×39˚.36E,h28km,MD3.3*
ISC 23 12:05:33.7±1.1,38˚.19N±0˚.03×39˚.34E±0˚.02,h12km±10km, **n23,σ0§93**/37**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PTK	**Pertek**	**0.70**	**3**	*e*PG	**Pg**	**12 05 46.6**	**-0.8**
PTK				*e*SG	**Sg**	**12 05 56.5**	**-0.1**
PTK	**Pertek**	**0.70**	**3**	*e*Pg	**Pg**	**12 05 46.6**	**-0.8**
PTK				*e*Sg	**Sg**	**12 05 56.5**	**-0.1**
MYA	**Malataya**	**0.73**	**281**	*e*PG	**Pg**	**12 05 47.9**	**0.0**
MYA				*e*SG	**Sb**	**12 05 58.8**	**+0.4**
MYA	**Malataya**	**0.73**	**281**	*e*Pg	**Pg**	**12 05 47.9**	**0.0**
MYA				*e*Sg	**Sb**	**12 05 58.8**	**+0.4**
DIY	**Diyarbakir**	**0.76**	**113**	*e*PG	**Pg**	**12 05 47.7**	**-0.8**
DIY	**Diyarbakir**	**0.76**	**113**	*e*Pg	**Pg**	**12 05 47.7**	**-0.8**
ATAB	**Bozova**	**1.10**	**229**	*e*P	**Pb**	**12 05 53.9**	**-0.7**
ATAB				*i* S	**Sn**	**12 06 10.4**	**+0.4**
ATAB	**Bozova**	**1.10**	**229**	*e*P	**Pb**	**12 05 53.9**	**-0.7**
ATAB				*i* S	**Sn**	**12 06 10.4**	**+0.4**
BINT	**Bingol**	**1.13**	**53**	*e*Pn	**Pg**	**12 05 57.4**	**+1.9**
KEMA	**Kemaliye**	**1.26**	**329**	*i* P	**Pg**	**12 05 58.3**	**+0.3**
KEMA				*i* S	**Sg**	**12 06 14.8**	**+0.4**
KEMA	**Kemaliye**	**1.26**	**329**	*i* P	**Pg**	**12 05 58.3**	**+0.3**
KEMA				*i* S	**Sg**	**12 06 14.8**	**+0.4**
BNGB	**Bing˜¶l**	**1.32**	**52**	*e*PN	**Pn**	**12 05 57.4**	**-0.6**
BNGB				*e*SN	**Sb**	**12 06 15.2**	**-0.2**
ILIC	**ilic-Erzincan**	**1.39**	**335**	*e*PN	**Pn**	**12 05 59.1**	**0.0**
ILIC	**ilic-Erzincan**	**1.39**	**335**	*e*Pn	**Pn**	**12 05 59.1**	**0.0**
ERZN	**Erzincan**	**1.42**	**12**	*e*PN	**Pn**	**12 05 58.9**	**-0.6**
MARD	**Mardin**	**1.44**	**127**	*i* P	**Pn**	**12 05 59.1**	**-0.7**
MARD				*i* S	**Sn**	**12 06 18.0**	**-0.7**
BEST	**Besiri**	**1.56**	**101**	*i* P	**Pn**	**12 06 01.4**	**+0.1**
BEST				*i* S	**Sb**	**12 06 22.6**	**+0.5**
EZC	**Erzincan**	**1.56**	**0**	*e*Pn	**Pn**	**12 05 58.9**	**-2.5**
BNGL	**BINGOL**	**1.61**	**61**	*e*P	**Pb**	**12 06 03.6**	**+0.1**
BNGL				*e*S	**Sg**	**12 06 28.5**	**+2.9**
GZT	**Gaziantep**	**1.64**	**240**	*i* P	**Pn**	**12 06 02.7**	**+0.2**
GZT				*e*S	**Sb**	**12 06 24.9**	**+0.4**
KMRS	**Kahramanmaras**	**2.05**	**251**	*e*PN	**Pn**	**12 06 08.7**	**+0.7**
KMRS	**Kahramanmaras**	**2.05**	**251**	*e*Pn	**Pn**	**12 06 08.7**	**+0.7**
KUZU	**Kuzuini**	**2.29**	**232**	*e*P	**Pg**	**12 06 18.5**	**+0.9**
KUZU				*e*S	**Sg**	**12 06 45.8**	**-1.5**

*IDC **23** 12:06:18.5±0.5, 15˚.26S×173˚.45W,h0km,mb4.4/19,*
mb1 4.6/19,mb1mx4.5/24,mbtmp4.4/19,MS3.9/20,
Ms1 4.0/20,ms1mx3.9/25,Error ellipse: s-maj=22.6km
s-min=13.6km az=135.0
*ISCJB **23** 12:06:22.7±0.3, 15˚.22S±0˚.07×173˚.62W±0˚.07,h33km,*
mb4.7/58,MS4.0/18,Error ellipse: s-maj=12.7km
s-min=6.5km az=139.1
*BJI **23** 12:06:24.6, 15˚.10S×173˚.70W,h35km,mB5.1/7,mb4.9/10,*
Ms4.8/3,Ms7 4.5/3
*NEIC **23** 12:06:24.3±0.2, 15˚.23S×173˚.57W,h35km,mb4.7/36,*
Error ellipse: s-maj=11.0km s-min=5.0km az=140.0
NEIC Felt at Salamumu, Samoa.
ISC 23 12:06:23.9±0.6, 15˚23S±0˚.08×173˚55W±0˚.09,h32km±3km, **h33**km**:pP-P,n425,σ0§80**/423**,mb4.7**/58**,MS4.0**/18**, 135C-132D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.16**	**53**	*e*Pn	Pn	12 06 50.9	-6.9
AFI				Sn	Sn	12 07 10.8	-13
AFI	**Afiamalu**	**2.16**	**53**	Pn	Pn	12 06 51.3	-6.5
	524nm,0.3s,baz=236,slow=11,SNR=179						
AFI				Sn	Sn	12 07 10.8	-13
	861nm,0.3s,baz=241,slow=19,SNR=14						
AFI				LR	LR	12 07 39.0	
	comp=Z,946nm,21.9s,baz=12,slow=38						
MSVF	**Nonsavu**	**8.44**	**252**	*e*Pn	Pn	12 08 35.1	+11
RAR	**Rarotonga**	**14.38**	**116**	Pn	Pn	12 09 39.5	-5.7
RAR	**Rarotonga**	**14.38**	**116**	Pn	Pn	12 09 39.5	-5.7
	3.0nm,0.3s,baz=250,slow=12,SNR=2.6						
RAR				LR	LR	12 13 36.8	
	comp=Z,726nm,21.0s,baz=276,slow=31						
RAO	**Raoul Island**	**14.53**	**195**	LR	LR	12 14 23.2	
	comp=Z,605nm,20.7s,baz=176,slow=33						
DZM	**Mont Dzumac**	**20.13**	**247**	*e*LR	LR	12 15 56.1	
	556nm,24.1s						
DZM	**Mont Dzumac**	**20.13**	**247**	*e*P	**P**	**12 10 55.8**	**+0.3**
	17nm,0.8s						
DZM	**Mont Dzumac**	**20.13**	**247**	P	**P**	**12 10 55.9**	**+0.4**
	6.9nm,0.5s,baz=84,slow=19,SNR=5.9						
PPT	**Papeete**	**23.11**	**99**	LR	LR	12 17 41.7	
	comp=Z,248nm,20.4s,baz=357,slow=30						
PPT2	**Papeete2**	**23.11**	**99**	*e*LR	LR	12 16 52.8	
	587nm,24.5s						
TBI	**Tubuai**	**24.10**	**113**	*e*LR	LR	12 17 13.2	
	847nm,27.2s						
URZ	**Urewera**	**24.38**	**198**	*e*P	**P**	**12 11 39.8**	**+0.5**
	11nm,0.6s						
URZ	**Urewera**	**24.38**	**198**	P	**P**	**12 11 38.7**	**-0.6**
	4.2nm,0.3s,baz=352,slow=2.1,SNR=8.5						
URZ				LR	LR	12 20 27.0	
	comp=Z,497nm,18.1s,baz=35,slow=35						
HNR	**Honiara**	**26.51**	**279**	LR	LR	12 20 41.5	
	comp=Z,168nm,20.0s,baz=108,slow=32						
RPZ	**Rata Peaks**	**31.29**	**202**	P	**P**	**12 12 40.8**	**-0.3**
RPZ	**Rata Peaks**	**31.29**	**202**	P	**P**	**12 12 40.8**	**-0.3**
	4.7nm,0.6s,baz=51,slow=13,SNR=3.6						
RKT	**Rikitea**	**37.19**	**108**	*e*LR	LR	12 23 21.8	
	451nm,25.2s						
PMG	**Port Moresby**	**38.78**	**274**	LR	LR	12 26 24.8	
	comp=Z,101nm,19.6s,baz=277,slow=31						
STKA	**Stephens Creek**	**44.00**	**240**	*e*P	**P**	**12 14 28.7**	**+0.1**
	13nm,1.8s						
STKA	**Stephens Creek**	**44.00**	**240**	P	**P**	**12 14 28.6**	**0.0**
	9.2nm,0.6s,baz=91,slow=9.3,SNR=13						
WRAB	**Tennant Creek**	**49.73**	**257**	*e*P	**P**	**12 15 13.1**	**-0.6**
	3.3nm,0.6s						
WRA	**Warramunga Arr**	**49.74**	**257**	P	**P**	**12 15 12.7**	**-1.1**
WRA	**Warramunga Arr**	**49.74**	**257**	P	**P**	**12 15 12.7**	**-1.1**
	3.7nm,0.5s,baz=90,slow=7.1,SNR=36						
AS31	**Alice Springs**	**50.03**	**252**	*e*P	**P**	**12 15 15.2**	**-0.6**
ASAR	**Alice Springs**	**50.03**	**252**	P	**P**	**12 15 15.2**	**-0.7**
ASAR	**Alice Springs**	**50.03**	**252**	P	**P**	**12 15 15.2**	**-0.7**
	21nm,0.6s,baz=88,slow=8.4,SNR=143						
ASAR				LR	LR	12 34 37.2	
	comp=Z,250nm,20.9s,baz=94,slow=34						
FORT	**Forrest**	**55.37**	**243**	*e*P	**P**	**12 15 54.6**	**-0.6**
	29nm,0.8s						
FITZ	**Fitzroy Crossi**	**58.10**	**258**	P	**P**	**12 16 15.0**	**+0.1**
	1.5nm,0.6s						
FITZ	**Fitzroy Crossi**	**58.10**	**258**	P	**P**	**12 16 14.7**	**-0.1**
	0.9nm,0.7s,baz=149,slow=9.1,SNR=4.1						
SBA	**Scott Base**	**63.41**	**185**	*e*P	**P**	**12 16 52.4**	**+2.5**
	160nm,2.5s						
VNDA	**Vanda**	**63.53**	**186**	*e*P	**P**	**12 16 51.7**	**+1.0**
	6.1nm,0.8s						
VNDA				*e*PcP	**PcP**	**12 17 28.4**	**+1.3**
VNDA	**Vanda**	**63.53**	**186**	P	**P**	**12 16 52.7**	**+1.9**
	5.7nm,0.9s,baz=360,slow=5.6,SNR=14						
VNDA				LR	LR	12 37 53.4	
	comp=Z,93nm,20.0s,baz=249,slow=30						
NWAO	**Narrogin (SRO)**	**64.58**	**241**	P	**P**	**12 16 58.3**	**-0.1**
NWAO	**Narrogin (SRO)**	**64.58**	**241**	P	**P**	**12 16 58.3**	**-0.1**
	7.0nm,0.8s,baz=94,slow=8.6,SNR=3.8						
MJAR	**Matsushiro Arr**	**68.71**	**320**	P	**P**	**12 17 24.4**	**-0.2**
MJAR	**Matsushiro Arr**	**68.71**	**320**	P	**P**	**12 17 24.4**	**-0.2**
	0.6nm,0.6s,baz=138,slow=6.3,SNR=3.3						
MJAR				LR	LR	12 40 50.7	
	comp=Z,148nm,21.8s,baz=105,slow=30						
VES	**Vestal, Richgr**	**72.32**	**44**	⇑P	**P**	**12 17 48.5**	**+1.8**
	baz=72						
MURC	**Murrieta**	**72.38**	**47**	⇓P	**P**	**12 17 48.8**	**+1.7**
	baz=73						
PETK	**Petropavlovsk-**	**72.42**	**342**	P	**P**	**12 17 47.2**	**+0.3**
PETK	**Petropavlovsk-**	**72.42**	**342**	P	**P**	**12 17 47.2**	**+0.3**
	5.7nm,0.7s,baz=135,slow=9.8,SNR=13						
PETK				LR	LR	12 42 19.8	
	comp=Z,36nm,21.6s,baz=345,slow=30						
EDW2	**Edwards Air Fo**	**72.53**	**45**	⇑P	**P**	**12 17 50.3**	**+2.3**
	baz=73						
MONP	**Monument Peak**	**72.56**	**48**	⇓P	**P**	**12 17 50.7**	**+2.3**
	baz=73						
ISA	**Isabella**	**72.63**	**44**	⇑P	**P**	**12 17 51.3**	**+2.7**
	baz=73						
BBRC	**Big Bear Solar**	**72.93**	**46**	⇓P	**P**	**12 17 51.0**	**+0.3**
	baz=73						
SWSC	**Sam W. Stewart**	**73.03**	**48**	⇑P	**P**	**12 17 52.9**	**+2.0**
	baz=73						
LRMC	**Laurel Mountai**	**73.06**	**45**	⇑P	**P**	**12 17 53.1**	**+1.9**
	baz=73						
BELC	**Belle Mtn. Jos**	**73.44**	**47**	⇑P	**P**	**12 17 54.2**	**+0.7**
	baz=74						
MPMC	**Manual Prospec**	**73.52**	**45**	⇓P	**P**	**12 17 54.9**	**+0.9**
	baz=74						
YBH	**Yreka Blue Hor**	**73.55**	**37**	*e*P	**P**	**12 17 54.4**	**+0.5**
	6.1nm,1.1s						
GSC	**Goldstone**	**73.57**	**45**	P	**P**	**12 17 54.7**	**+0.5**
	81nm,2.8s						
GSC	**Goldstone**	**73.57**	**45**	⇑P	**P**	**12 17 54.9**	**+0.6**
	baz=74						
BC3	**Big Chuckawall**	**73.65**	**48**	⇑P	**P**	**12 17 54.8**	**+0.1**
	baz=74						
HEC	**Hector,Ludlow**	**73.65**	**46**	⇑P	**P**	**12 17 55.2**	**+0.5**
	baz=74						
GLA	**Glamis**	**73.78**	**48**	⇓P	**P**	**12 17 55.6**	**+0.1**
	baz=74						
HUMO	**Hull Mountain**	**73.96**	**36**	*e*P	**P**	**12 17 57.7**	**+1.5**
	58nm,2.3s						
GMRC	**Granite Mounta**	**74.09**	**46**	⇑P	**P**	**12 17 57.5**	**+0.2**
	baz=74						
GRAC	**Grapevine Rang**	**74.11**	**44**	⇓P	**P**	**12 17 57.8**	**+0.5**
	baz=74						
IRM	**Iron Mountain**	**74.12**	**47**	⇓P	**P**	**12 17 58.2**	**+0.8**
	baz=74						
FURC	**Furnace Creek,**	**74.17**	**44**	⇑P	**P**	**12 17 57.7**	**+0.2**
	baz=74						
TUQ	**Turquoise Moun**	**74.25**	**46**	⇓P	**P**	**12 17 58.4**	**+0.2**
	baz=74						
NVAR	**Mina Array Bea**	**74.30**	**42**	P	**P**	**12 17 58.2**	**-0.3**
NVAR	**Mina Array Bea**	**74.30**	**42**	P	**P**	**12 17 58.2**	**-0.3**
	2.0nm,0.7s,baz=228,slow=9.2,SNR=16						
NVAR				LR	LR	12 45 02.8	
	comp=Z,82nm,19.8s,baz=212,slow=31						
113A	**Mohawk Valley,**	**74.41**	**49**	⇑P	**P**	**12 17 58.8**	**-0.3**
	baz=75						
LDFC	**Landfair**	**74.63**	**46**	*e*P	**P**	**12 18 00.6**	**+0.2**
	9.1nm,1.0s						
214A	**Organ Pipe Nat**	**74.72**	**50**	⇑P	**P**	**12 18 00.5**	**-0.4**
	baz=75						
PDMCI	**Parker Dam,Lak**	**74.91**	**48**	⇑P	**P**	**12 18 01.9**	**0.0**
	baz=75						
Z14A	**Wintersburg**	**75.30**	**49**	⇑P	**P**	**12 18 04.4**	**+0.2**
	baz=76						
W13A	**Hualapai Mount**	**75.50**	**47**	⇑P	**P**	**12 18 05.3**	**-0.3**
	baz=76						
Y14A	**Wickenburg**	**75.55**	**48**	⇓P	**P**	**12 18 05.7**	**0.0**
	baz=76						
KSRS	**Korea Array**	**75.93**	**316**	P	**P**	**12 18 08.3**	**+0.6**
	1.4nm,1.0s,baz=134,slow=5.4,SNR=4.4						
KSRS				LR	LR	12 49 46.5	
	comp=Z,46nm,18.8s,baz=293,slow=34						
KSAR	**Wonju Array Be**	**75.95**	**316**	P	**P**	**12 18 08.2**	**+0.4**
R11A	**Troy Canyon, C**	**76.03**	**43**	⇓P	**P**	**12 18 08.2**	**-0.3**
	baz=76						
WVOR	**Wild Horse Val**	**76.39**	**39**	*e*P	**P**	**12 18 10.6**	**+0.2**
	8.2nm,1.1s						
TUC	**Tucson**	**76.39**	**51**	*e*P	**P**	**12 18 10.7**	**+0.1**
	16nm,0.7s						
X16A	**Lo Mia Camp, P**	**76.91**	**49**	⇓P	**P**	**12 18 13.8**	**+0.2**
	baz=77						
319A	**Douglas**	**77.10**	**52**	⇓P	**P**	**12 18 14.9**	**+0.3**
	baz=77,SNR=7.6						
CCUT	**Cedar City**	**77.11**	**45**	*e*P	**P**	**12 18 15.6**	**+0.9**
	46nm,2.6s						
USRK	**Ussuriysk Arra**	**77.16**	**323**	LR	LR	12 46 43.8	
	comp=Z,124nm,21.0s,baz=354,slow=31						
U15A	**North Rim**	**77.29**	**46**	⇑P	**P**	**12 18 16.1**	**+0.3**
	baz=78						
WUAZ	**Wupatki**	**77.49**	**48**	⇓P	**P**	**12 18 16.9**	**+0.1**
	baz=78						
ELK	**Elko**	**77.55**	**41**	*e*P	**P**	**12 18 17.2**	**+0.1**
	2.3nm,0.7s						
320A	**Kipp Ranch, An**	**77.66**	**53**	⇓P	**P**	**12 18 18.1**	**+0.3**
	baz=78,SNR=7.6						
220A	**Playas Peak, P**	**77.91**	**52**	⇑P	**P**	**12 18 19.6**	**+0.4**
	baz=78,SNR=8.5						
X18A	**Snowflake**	**78.05**	**49**	⇓P	**P**	**12 18 20.1**	**+0.1**
	baz=78						
120A	**U Bar Ranch, L**	**78.12**	**51**	⇑P	**P**	**12 18 20.6**	**+0.3**
	baz=78						
Z20A	**Nine Sixteen R**	**78.40**	**51**	⇓P	**P**	**12 18 22.2**	**+0.3**
	baz=79,SNR=10						
MSU	**Marysvale**	**78.41**	**45**	*e*P	**P**	**12 18 22.0**	**+0.1**
221A	**Mesquite Ranch**	**78.53**	**52**	⇓P	**P**	**12 18 22.9**	**+0.3**
	baz=79						
BMO	**Blue Mountains**	**78.58**	**37**	*e*P	**P**	**12 18 22.2**	**-0.3**
	3.1nm,0.8s						
MFID	**Camas Ranch**	**78.64**	**39**	*e*P	**P**	**12 18 22.9**	**0.0**
	4.8nm,1.0s						
MFID	**Camas Ranch**	**78.64**	**39**	⇓P	**P**	**12 18 23.0**	**0.0**
	baz=79,SNR=5.6						
121A	**Cookes Peak, D**	**78.75**	**52**	⇓P	**P**	**12 18 24.1**	**+0.2**
	baz=79,SNR=9.0						
DUG	**Dugway**	**78.83**	**43**	⇑P	**P**	**12 18 24.3**	**+0.2**
	baz=79						
Y20A	**Horse Springs,**	**78.92**	**50**	⇑P	**P**	**12 18 25.3**	**+0.4**
	baz=79,SNR=9.5						
222A	**Williams Famil**	**79.09**	**52**	⇓P	**P**	**12 18 25.8**	**+0.1**
	baz=79						
X20A	**Quemado**	**79.12**	**50**	⇑P	**P**	**12 18 26.2**	**+0.3**
	baz=79,SNR=5.7						
Z21A	**St. Cloud Mine**	**79.18**	**51**	⇑P	**P**	**12 18 26.8**	**+0.5**
	baz=79,SNR=8.9						
Q16A	**Castle Valley**	**79.29**	**45**	⇓P	**P**	**12 18 27.4**	**+0.7**
	baz=80						
W20A	**Ramah**	**79.38**	**49**	⇑P	**P**	**12 18 27.6**	**+0.3**
	baz=80,SNR=10						
Y21A	**Point of Rocks**	**79.49**	**50**	⇓P	**P**	**12 18 28.3**	**+0.4**
	baz=80						
HLID	**Hailey**	**79.59**	**39**	*e*P	**P**	**12 18 28.4**	**+0.3**
	7.0nm,0.8s						
HLID	**Hailey**	**79.59**	**39**	⇓P	**P**	**12 18 28.5**	**+0.3**
	baz=80,SNR=18						
X21A	**Alamocita Cree**	**79.60**	**50**	⇑P	**P**	**12 18 28.6**	**0.0**
	baz=80						
HVU	**Hansel Valley**	**79.67**	**42**	*e*P	**P**	**12 18 29.5**	**+0.8**
	6.7nm,0.8s						
Z22A	**Elephant Butte**	**79.69**	**51**	⇑P	**P**	**12 18 29.2**	**+0.2**
	baz=80,SNR=7.2						
V20A	**Brimhall**	**79.71**	**49**	⇑P	**P**	**12 18 28.8**	**-0.3**
	baz=80						
H12A	**Diamond D Ranc**	**79.85**	**38**	⇓P	**P**	**12 18 29.5**	**-0.1**
	baz=80						
G12A	**Big Creek, Yel**	**79.89**	**38**	⇑P	**P**	**12 18 29.6**	**-0.2**
	baz=80,SNR=15						
NJ2	**Nanjing**	**79.94**	**307**	*e*P	**P**	**12 18 31.3**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,20nm,1.2s						
Y22A	**Socorro**	**79.99**	**51**	⇓P	**P**	**12 18 30.2**	**-0.4**
	baz=80						
324A	**Moseley Ranch,**	**80.06**	**54**	⇓P	**P**	**12 18 30.4**	**-0.6**
	baz=80,SNR=5.1						
425A	**Indio Mountain**	**80.17**	**54**	⇓P	**P**	**12 18 31.4**	**-0.2**
	baz=80,SNR=8.4						
MNTX	**Cornudas Mount**	**80.24**	**53**	*e*P	**P**	**12 18 31.7**	**0.0**
	comp=Z,11nm,1.6s						
Z23A	**Rita Site, Whi**	**80.25**	**52**	⇓P	**P**	**12 18 31.7**	**-0.2**
	baz=80						
224A	**Cornudas Mount**	**80.29**	**53**	⇓P	**P**	**12 18 32.3**	**+0.1**
	baz=80,SNR=7.9						
BNM	**Barren Site**	**80.33**	**51**	*e*P	**P**	**12 18 32.7**	**+0.2**
	comp=Z,2.8nm,0.9s						
626A	**Big Bend Ranch**	**80.35**	**56**	⇓P	**P**	**12 18 32.6**	**+0.1**
	baz=80,SNR=5.1						
I14A	**Mackay**	**80.37**	**39**	⇓P	**P**	**12 18 32.3**	**-0.1**
	baz=81						
325A	**Bean Ranch, Si**	**80.42**	**54**	⇓P	**P**	**12 18 33.0**	**0.0**
	baz=81,SNR=8.4						
E12A	**Beaver Dam Sad**	**80.46**	**36**	⇑P	**P**	**12 18 32.8**	**0.0**
	baz=81						
TRF	**Thorofare Moun**	**80.48**	**10**	*e*P	**P**	**12 18 31.1**	**-1.4**
	comp=Z,9.0nm,0.7s						
U21A	**Nageezi**	**80.58**	**48**	⇑P	**P**	**12 18 33.8**	**0.0**
	baz=81,SNR=12						
526A	**Mary Lane Ranc**	**80.59**	**55**	⇓P	**P**	**12 18 34.1**	**+0.3**
	baz=81,SNR=6.0						
PV04	**Paradox Valley**	**80.59**	**46**	*e*P	**P**	**12 18 34.9**	**+1.1**
124A	**Stringfield Ra**	**80.60**	**52**	⇓P	**P**	**12 18 34.3**	**+0.3**
	baz=81						
TXAR	**Lajitas Array**	**80.64**	**56**	P	**P**	**12 18 33.3**	**-0.7**
TXAR	**Lajitas Array**	**80.64**	**56**	P	**P**	**12 18 33.3**	**-0.7**
	comp=Z,3.9nm,1.0s,baz=219,slow=5.8,SNR=23						
NEW	**Newport**	**80.65**	**34**	⇓P	**P**	**12 18 33.4**	**-0.2**
	baz=81						
Y23A	**Lovelace Mesa,**	**80.67**	**51**	⇑P	**P**	**12 18 33.8**	**-0.5**
	baz=81						
PV01	**Paradox Valley**	**80.71**	**46**	*e*P	**P**	**12 18 34.4**	**0.0**
	comp=Z,243nm,0.7s						
S20A	**Disappointment**	**80.72**	**47**	⇑P	**P**	**12 18 34.3**	**-0.2**
	baz=81						
ANMO	**Albuquerque**	**80.80**	**50**	*e*P	**P**	**12 18 35.1**	**+0.1**
	comp=Z,2.6nm,0.7s						
225A	**Deer Hill, Car**	**80.84**	**53**	⇓P	**P**	**12 18 35.2**	**0.0**
	baz=81,SNR=7.7						
CN2	**Changchun**	**80.86**	**320**	*e*P	**P**	**12 18 36.8**	**+2.0**
426A	**McDonald Obser**	**80.88**	**55**	⇓P	**P**	**12 18 35.4**	**-0.1**
	baz=81,SNR=10						
C11A	**Tepee Creek (N**	**80.88**	**35**	⇓P	**P**	**12 18 35.3**	**+0.3**
	baz=81						
M17A	**Scullys Gap (B**	**80.88**	**43**	⇓P	**P**	**12 18 34.7**	**-0.6**
	baz=81						
627A	**Terlingua Ranc**	**80.91**	**56**	⇓P	**P**	**12 18 35.6**	**0.0**
	baz=81,SNR=7.6						
T21A	**Navajo Lake**	**80.92**	**48**	⇓P	**P**	**12 18 35.6**	**+0.1**
	baz=81						
Z24A	**Sheeppen Canyo**	**80.93**	**52**	⇓P	**P**	**12 18 35.7**	**0.0**
	baz=81						
D12A	**Red Ives Fores**	**80.94**	**36**	⇓P	**P**	**12 18 35.2**	**-0.1**
	baz=81						
MCK	**McKinley**	**80.98**	**11**	*e*P	**P**	**12 18 35.2**	**+0.2**
	comp=Z,14nm,0.8s						
527A	**Woodward Ranch**	**81.00**	**55**	⇓P	**P**	**12 18 35.8**	**-0.2**
	baz=81,SNR=5.8						
S21A	**Coal Bank Pass**	**81.04**	**47**	⇓P	**P**	**12 18 36.4**	**+0.1**
	baz=81,SNR=7.9						
W23A	**Werner Place,**	**81.12**	**50**	⇑P	**P**	**12 18 36.8**	**+0.1**
	baz=81						
P19A	**Cripple Cowboy**	**81.12**	**45**	⇑P	**P**	**12 18 36.6**	**0.0**
	baz=81						
Y24A	**Capitan**	**81.13**	**51**	⇑P	**P**	**12 18 36.9**	**+0.1**
	baz=81,SNR=10						
U22A	**Llaves**	**81.14**	**49**	⇑P	**P**	**12 18 36.9**	**+0.2**
	baz=81						
326A	**Caldwell Ranch**	**81.18**	**54**	⇓P	**P**	**12 18 36.8**	**-0.1**
	baz=81						
125A	**Gardner Draw,**	**81.19**	**53**	⇓P	**P**	**12 18 36.4**	**-0.6**
	baz=81						
MCMT	**McKenzie Canyo**	**81.21**	**39**	*e*P	**P**	**12 18 37.5**	**+0.5**
	comp=Z,1.8nm,0.7s						
GDL2	**Guadalupe Moun**	**81.23**	**53**	*e*P	**P**	**12 18 37.7**	**+0.5**
Q20A	**Ridgley Place,**	**81.28**	**46**	⇓P	**P**	**12 18 36.9**	**-0.5**
	baz=82						
628A	**Black Gap, Mar**	**81.32**	**56**	⇑P	**P**	**12 18 37.8**	**+0.1**
	baz=82						
226B	**Tecolote Peak,**	**81.34**	**53**	⇓P	**P**	**12 18 37.7**	**0.0**
	baz=82,SNR=9.8						
O19A	**Miners Draw (B**	**81.34**	**44**	⇓P	**P**	**12 18 37.1**	**-0.6**
	baz=82						
V23A	**Ortiz Mt. (NFS**	**81.35**	**49**	⇓P	**P**	**12 18 38.4**	**+0.5**
	baz=82,SNR=6.3						
T22A	**Edith**	**81.38**	**48**	⇑P	**P**	**12 18 38.0**	**-0.1**
	baz=82						
X24A	**Lazy VL Ranch,**	**81.40**	**51**	⇓P	**P**	**12 18 37.9**	**-0.2**
	baz=82,SNR=5.7						
Z25A	**Roswell**	**81.41**	**52**	⇑P	**P**	**12 18 38.0**	**-0.1**
	baz=82						
F14A	**Wisdom**	**81.42**	**38**	⇑P	**P**	**12 18 38.2**	**+0.3**
	baz=82						
427A	**Hayter Ranch,**	**81.44**	**55**	⇑P	**P**	**12 18 38.2**	**-0.2**
	baz=82,SNR=9.7						
P20A	**De Beque**	**81.46**	**45**	⇑P	**P**	**12 18 38.4**	**0.0**
	baz=82						
D13A	**Huson**	**81.48**	**36**	⇓P	**P**	**12 18 37.5**	**-0.6**
	baz=82,SNR=7.5						
R21A	**Cimarron**	**81.53**	**47**	⇓P	**P**	**12 18 38.2**	**-0.6**
	baz=82						
I16A	**Newdale**	**81.56**	**40**	⇓P	**P**	**12 18 39.1**	**+0.4**
	baz=82,SNR=5.4						
U23A	**El Rito**	**81.60**	**49**	⇑P	**P**	**12 18 38.2**	**-1.0**
	baz=82						
MSO	**Missoula**	**81.63**	**37**	⇓P	**P**	**12 18 38.4**	**-0.6**
	baz=82						
DLMT	**Dillon**	**81.64**	**39**	*e*P	**P**	**12 18 39.1**	**-0.1**
	comp=Z,5.8nm,1.0s						
528A	**Cox Ranch, San**	**81.66**	**56**	⇑P	**P**	**12 18 39.3**	**-0.2**
	baz=82,SNR=7.5						
126A	**Clayton Basin,**	**81.68**	**53**	⇓P	**P**	**12 18 39.0**	**-0.5**
	baz=82						
Y25A	**Mesa, Roswell**	**81.69**	**52**	⇑P	**P**	**12 18 39.1**	**-0.5**
	baz=

R23A	Moffat baz=83	82.67	47	⇓P	P	12 18 44.8	-0.1
L20A	Wamsutter baz=83,SNR=9.9	82.67	43	⇓P	P	12 18 44.6	0.0
K19A	Absolon Red Bu baz=83	82.72	42	⇓P	P	12 18 44.2	-0.7
J19A	Crowheart baz=83	82.80	42	⇑P	P	12 18 44.7	-0.6
E16A	East Helena baz=83,SNR=7.6	82.80	38	⇑P	P	12 18 45.2	+0.1
HRY	Holter Researc	82.80	38	*e*P	P	12 18 45.5	+0.4
329A	Wagon Wheel Ra baz=83	82.81	55	⇓P	P	12 18 45.1	-0.4
530A	J-C Ranch, Com baz=83	82.82	56	⇓P	P	12 18 45.1	-0.4
B14A	Marquette Ranc baz=83	82.83	36	⇑P	P	12 18 45.0	-0.3
Y27A	Causey baz=83	82.83	52	⇑P	P	12 18 45.0	-0.6
128A	Castleberry Fa baz=83,SNR=5.1	82.86	54	⇓P	P	12 18 45.3	-0.4
W26A	Owens Ranch, T baz=83	82.87	51	⇓P	P	12 18 45.1	-0.7
S24A	Houchin Ranch, baz=83,SNR=6.8	82.87	48	⇑P	P	12 18 46.1	+0.2
WHN	Wuhan	82.88	304	P	P	12 18 50.3	+4.6
C15A	Salmond Ranch, baz=83,SNR=6.5	82.90	36	⇑P	P	12 18 45.2	-0.4
U25A	Circle Dot Ran baz=83,SNR=6.8	82.93	49	⇑P	P	12 18 46.0	-0.1
K20A	Yellowstone Ra baz=83,SNR=6.6	82.97	42	⇑P	P	12 18 45.5	-0.7
O22A	Kremmling baz=83,SNR=8.7	83.03	45	⇑P	P	12 18 46.7	-0.1
A14A	Double T Ranch baz=83	83.08	35	⇑P	P	12 18 46.6	+0.1
F17A	Fitzpatrick Pl baz=83	83.09	39	⇓P	P	12 18 47.1	+0.4
H18A	Shoshone NF, C baz=83	83.09	40	⇑P	P	12 18 46.8	0.0
M21A	Separation Pea baz=83	83.13	44	⇑P	P	12 18 46.8	-0.3
D16A	Dana Ranch, Ca baz=83	83.13	37	⇓P	P	12 18 46.9	0.0
229A	Bryant Ranch, baz=83	83.13	54	⇓P	P	12 18 46.8	-0.3
430A	Baggett Ranch, baz=83	83.14	56	⇓P	P	12 18 46.5	-0.7
V26A	Tequesquite Ra baz=83	83.14	50	⇑P	P	12 18 46.4	-0.8
631A	Perdido Creek baz=83	83.16	57	⇓P	P	12 18 46.7	-0.5
MSTX	Muleshoe baz=83,SNR=5.2	83.17	52	⇓P	P	12 18 47.3	-0.1
R24A	Sanders Place, baz=83	83.19	48	⇑P	P	12 18 47.0	-0.5
Z28A	Tucker Farm, M baz=83	83.19	53	⇓P	P	12 18 46.8	-0.7
I19A	Meeteetse baz=83	83.20	41	⇑P	P	12 18 47.2	-0.2
B15A	Bradely Ranch, baz=83,SNR=5.4	83.21	36	⇑P	P	12 18 46.3	-0.9
T25A	Trinidad baz=83	83.23	49	⇓P	P	12 18 47.3	-0.4
E17A	Martinsdale baz=83	83.25	38	⇓P	P	12 18 47.0	-0.5
L21A	Rawlins baz=84	83.29	43	⇓P	P	12 18 47.2	-0.7
N22A	Wattenberg Ran baz=84,SNR=7.8	83.38	45	⇑P	P	12 18 48.6	+0.1
W27A	Bowe Ranch, En baz=84,SNR=8.2	83.38	51	⇓P	P	12 18 47.9	-0.5
C16A	Fuhringer Ranc baz=84,SNR=7.7	83.41	37	⇓P	P	12 18 47.7	-0.5
U26A	Atchley Ranch, baz=84,SNR=6.3	83.42	50	⇑P	P	12 18 48.1	-0.5
330A	Mertzon baz=84	83.42	55	⇑P	P	12 18 47.9	-0.7
S25A	Robets Cordova baz=84,SNR=9.0	83.44	48	⇓P	P	12 18 48.5	-0.2
531A	Rocksprings baz=84	83.46	56	⇑P	P	12 18 48.8	-0.1
J20A	Shoshoni baz=84,SNR=8.9	83.46	42	⇑P	P	12 18 48.7	+0.1
G18A	Lazy EL Ranch, baz=84,SNR=5.2	83.47	40	⇓P	P	12 18 48.9	+0.2
Q24A	Divide baz=84	83.48	47	⇑P	P	12 18 48.8	-0.2
O23A	Lake Granby, G baz=84	83.48	45	⇑P	P	12 18 48.9	-0.2
H19A	Powell baz=84	83.51	40	⇑P	P	12 18 49.2	+0.4
ISCO	Idaho Springs comp=Z,15nm,1.7s	83.51	46	P	P	12 18 49.5	+0.3
ISCO	Idaho Springs baz=84	83.51	46	⇑P	P	12 18 49.3	0.0
Y28A	McKinney Farm, baz=84	83.54	52	⇑P	P	12 18 48.9	-0.3
RLMT	Red Lodge comp=Z,2.3nm,0.6s	83.56	40	*e*P	P	12 18 49.3	+0.1
431A	Sonora baz=84	83.60	56	⇓P	P	12 18 49.0	-0.6
F18A	Big Timber baz=84,SNR=5.8	83.66	39	⇓P	P	12 18 50.1	+0.5
D17A	Six Diamond Ra baz=84,SNR=9.6	83.70	38	⇑P	P	12 18 49.9	+0.1
Z29A	Hungry Hill Ra baz=84	83.71	53	⇓P	P	12 18 49.7	-0.4
I20A	Worland baz=84,SNR=11	83.71	41	⇓P	P	12 18 50.0	+0.1
R25A	Fountain Ranch baz=84	83.75	48	⇓P	P	12 18 50.1	-0.2
B16A	M & M Farms, S baz=84	83.75	36	⇑P	P	12 18 49.5	-0.4
N23A	Red Feather La baz=84	83.77	45	⇑P	P	12 18 50.2	-0.3
X28A	Dimmitt baz=84	83.82	52	⇓P	P	12 18 50.3	-0.3
632A	Uvalde baz=84	83.83	57	⇑P	P	12 18 50.5	-0.2
T26A	Comanche Natio baz=84	83.84	49	⇓P	P	12 18 50.1	-0.7
E18A	Harlowton baz=84,SNR=5.8	83.87	38	⇑P	P	12 18 50.9	+0.3
J21A	Lysite baz=84,SNR=12	83.87	42	⇑P	P	12 18 50.7	-0.1
C17A	Wharram Farm, baz=84,SNR=9.3	83.90	37	⇑P	P	12 18 50.8	+0.1
L22A	Ellis Ranch, M baz=84,SNR=5.8	83.94	44	⇑P	P	12 18 51.3	+0.1
532A	Rocksprings baz=84	83.96	57	⇓P	P	12 18 51.1	-0.3
130A	Snyder baz=84	84.03	54	⇓P	P	12 18 51.3	-0.4
H20A	Greybull baz=84	84.05	41	⇑P	P	12 18 50.9	-0.6
U27A	Thompson Grove baz=84	84.10	50	⇑P	P	12 18 51.6	-0.4
F19A	Roth Farm, Mol baz=84,SNR=8.2	84.11	39	⇑P	P	12 18 51.7	-0.1
S26A	Kim baz=84	84.12	49	⇓P	P	12 18 51.8	-0.3
K22A	Casper baz=84	84.16	43	⇑P	P	12 18 51.9	-0.4
Z30A	Sanderson Ranc baz=84,SNR=6.8	84.17	53	⇑P	P	12 18 52.0	-0.4
M23A	Laramie baz=84,SNR=6.3	84.17	44	⇑P	P	12 18 52.4	0.0
X29A	Tulia baz=84	84.17	52	⇑P	P	12 18 52.2	-0.2
JCT	Junction City baz=84	84.17	56	⇓P	P	12 18 51.5	-0.9
I21A	Big Trails, Te baz=84,SNR=9.3	84.19	42	⇑P	P	12 18 52.0	-0.3
B17A	L&G Farms, Che baz=84	84.21	37	⇓P	P	12 18 52.0	-0.3
PHWY	Pilot Hill comp=Z,2.0nm,0.8s	84.27	45	*e*P	P	12 18 52.1	-0.9
231A	Bronte baz=84	84.30	55	⇑P	P	12 18 52.3	-0.8
432A	Menard baz=84	84.32	56	⇑P	P	12 18 52.5	-0.7
AMTX	Amarillo comp=Z,62nm,0.1s	84.36	52	*e*P	P	12 18 53.3	-0.1
P25A	Willow Gulch B baz=85	84.40	47	⇓P	P	12 18 53.1	-0.5
R26A	Arlington baz=85,SNR=6.1	84.41	48	⇓P	P	12 18 53.3	-0.3
T27A	Campo baz=85	84.44	49	⇓P	P	12 18 53.3	-0.4
N24A	Carr baz=85	84.46	45	⇑P	P	12 18 53.2	-0.7
W29A	Amraillo baz=85,SNR=5.7	84.47	52	⇓P	P	12 18 53.6	-0.3
E19A	Rath Farm, Rou baz=85	84.50	39	⇓P	P	12 18 53.2	-0.6
131A	Roby baz=85	84.51	54	⇓P	P	12 18 53.5	-0.7
J22A	Midwest baz=85,SNR=5.3	84.53	42	⇓P	P	12 18 53.9	-0.2
332A	Millersview baz=85	84.55	56	⇑P	P	12 18 53.5	-0.8
Y30A	Stafford Cattl baz=85	84.57	53	⇑P	P	12 18 54.1	-0.3
A17A	Triple J Farms baz=85	84.60	36	⇓P	P	12 18 54.3	+0.1
EGMT	Eagleton baz=85	84.68	37	⇑P	P	12 18 54.1	-0.6
I22A	9 Mile Ranch, baz=85	84.74	42	⇓P	P	12 18 54.3	-0.8
M24A	Cheyenne baz=85	84.78	45	⇓P	P	12 18 54.8	-0.7
D19A	Cripps Ranch, baz=85	84.78	38	⇓P	P	12 18 54.6	-0.6
K23A	Bowen Ranch, D baz=85	84.80	43	⇑P	P	12 18 54.7	-0.8
X30A	Coker Ranch, T baz=85	84.80	52	⇑P	P	12 18 54.5	-1.0
232A	Coleman baz=85	84.81	55	⇑P	P	12 18 55.1	-0.6
B18A	Beardsley Farm baz=85	84.85	37	⇓P	P	12 18 54.7	-0.8
R27A	Eads baz=85	84.87	48	⇓P	P	12 18 55.1	-0.8
E20A	Meyer Farm, Mu baz=85	84.92	39	⇑P	P	12 18 55.9	0.0
Z31A	Sharp Cattle R baz=85	84.94	54	⇑P	P	12 18 55.7	-0.5
C19A	Slack Wire Ran baz=85	84.95	38	⇓P	P	12 18 56.1	+0.1
A18A	Metzger Ranch, baz=85	85.07	36	⇑P	P	12 18 56.3	-0.3
ABTX	Abilene, Hawle baz=85	85.08	54	⇓P	P	12 18 56.7	-0.3
Y31A	Rekieta Farm, baz=85	85.09	53	⇓P	P	12 18 56.5	-0.5
D20A	Manuel Ranch, baz=85	85.19	39	⇑P	P	12 18 57.3	+0.1
B19A	Brinkman Farms baz=86	85.36	37	⇑P	P	12 18 58.1	+0.1
Z32A	Haskell baz=86	85.46	54	⇑P	P	12 18 58.4	-0.4
X31A	McDonald Ranch baz=86	85.56	52	⇓P	P	12 18 58.9	-0.4
C20A	Veseth Ranch, baz=86	85.56	38	⇓P	P	12 18 58.7	-0.3
R28A	Tribune baz=86	85.61	48	⇓P	P	12 18 59.1	-0.4
A19A	Klindworth Far baz=86	85.71	37	⇓P	P	12 18 60.0	+0.2
Y32A	R-V Farms, Ver baz=86	85.74	53	⇓P	P	12 18 59.8	-0.4
W31A	Holland Ranch, baz=86	85.79	52	⇑P	P	12 18 59.8	-0.7
Q28A	Sharon Springs baz=86	85.88	48	⇓P	P	12 19 02.1	+1.2
B20A	Solberg Farm, baz=86	85.90	37	⇓P	P	12 19 01.6	+0.9
V31A	Spring Creek L baz=86	86.08	51	⇓P	P	12 19 02.6	+0.7
A20A	Cobblestone Ra baz=86	86.16	37	⇑P	P	12 19 03.0	+1.1
H24A	Dirks Ranch, A baz=86	86.36	42	⇑P	P	12 19 03.3	+0.2
B21A	Ellsworth Farm baz=87	86.48	38	⇓P	P	12 19 04.0	+0.4
O29A	4D Ranch, Culb baz=87	87.02	47	⇑P	P	12 19 07.4	+1.0
C23A	Lambert baz=88	87.30	39	⇓P	P	12 19 08.4	+0.9
GYA	Guiyang	87.83	298	*e*P	P	12 19 11.0	+0.3
GYA				pP	pP	12 19 21.8	+0.9
GYA				PP	PP	12 22 38.9	+1.8
GYA				SKS	S	12 29 33.5	-18
GYA				S	SKKSac	12 29 49.0	+1.9
GYA	comp=Z,10.0nm,1.0s			pmax	pmax		
MAW	Mawson	87.91	199	P	P	12 19 10.1	0.0
MAW	Mawson comp=Z,11nm,0.8s,baz=122,slow=7.4,SNR=30	87.91	199	P	P	12 19 10.1	0.0
MAW				LR	LR	12 53 39.2	
HHC	comp=Z,212nm,21.0s,baz=308,slow=32 Hu-ho-hao-te	88.80	313	*e*P	P	12 19 15.0	0.0
HHC				pP	pP	12 19 25.0	-0.1
HHC				sP	sP	12 19 29.8	+1.0
HHC				SKS	SKSac	12 29 38.3	-4.1
HHC				S	SKKSac	12 29 57.4	+3.7
HHC				sS	sS	12 30 14.1	-3.1
HHC				SS	SS	12 35 48.3	-4.9
HHC	comp=Z,28nm,1.2s			pmax	pmax		
HHC	comp=Z,160nm,6.0s			pmax	pmax		
HHC	comp=N,170nm,17.8s			LR	LR		
HHC	comp=E,160nm,16.8s			LR	LR		
HHC	comp=Z,160nm,18.0s			LR	LR		
PLCA	Paso Flores comp=Z,156nm,21.3s,baz=77,slow=29	89.73	132	LR	LR	12 49 20.2	
YKA	Yellowknife Ar	90.00	23	P	P	12 19 19.3	-0.6
YKA	Yellowknife Ar comp=Z,1.1nm,0.7s,baz=241,slow=4.8,SNR=9.0	90.00	23	P	P	12 19 19.3	-0.6
CD2	Chengdu	91.60	301	*e*P	P	12 19 27.8	-0.4
CD2				sP	sP	12 19 43.0	+1.0
CD2				PP	PP	12 23 07.8	+0.9
CD2	comp=Z,10.0nm,0.8s			pmax	pmax		
CD2	comp=Z,30nm,8.2s			pmax	pmax		
CMAR	Chiang Mai Arr	92.42	288	P	P	12 19 34.1	+1.9
CMAR	Chiang Mai Arr comp=Z,0.7nm,0.7s,baz=97,slow=2.8,SNR=4.1	92.42	288	P	P	12 19 34.1	+1.9
CMAR				LR	LR	12 55 04.6	
SYO	comp=Z,42nm,21.3s,baz=105,slow=32 Syowa Base	92.74	191⇑	*e*P	P	12 19 30.8	-1.8
SYO	Syowa Base	92.74	191⇑	*e*X	PP	12 23 11.0	-3.1
SNAA	Sanae	93.08	177	*e*P	P	12 19 34.8	+0.5
SNAA	Sanae comp=Z,9.0nm,1.3s	93.08	177	*e*P	P	12 19 34.4	0.0
VNA1	Neumayer--Stat	93.73	175	*e*P	P	12 19 38.4	+1.2
SONM	Songino Array	94.62	318	P	P	12 19 42.4	+0.5
SONM	Songino Array comp=Z,0.1nm,0.3s,baz=126,slow=4.5,SNR=2.6	94.62	318	P	P	12 19 42.4	+0.5
SONM				LR	LR	12 55 30.2	
LPAZ	comp=Z,88nm,20.6s,baz=65,slow=31 La Paz comp=Z,73nm,21.4s,baz=153,slow=29	100.00	110	LR	LR	12 54 09.8	
MKAR	Makanchi Array	110.60	315	PKiKP	PKiKP	12 24 52.9	-0.5
MKAR	Makanchi Array comp=Z,0.3nm,0.7s,baz=70,slow=1.7,SNR=3.6	110.60	315	PKiKP	PKiKP	12 24 52.9	-0.5
ARCES	ARCESS Array B	124.42	352	PKP	PKPdf	12 25 18.3	-1.0
ARCES	ARCESS Array B comp=Z,1.2nm,0.8s,baz=29,slow=2.8,SNR=9.8	124.42	352	PKP	PKPdf	12 25 18.3	-1.0
FINES	FINESS Array B	131.74	348	PKP	PKPdf	12 25 34.1	+0.8
FINES	FINESS Array B comp=Z,0.3nm,0.4s,baz=260,slow=5.6,SNR=3.8	131.74	348	PKP	PKPdf	12 25 34.1	+0.8
AKASG	Malin Array Be	140.12	337	PKP	PKPdf	12 25 48.7	-0.6
AKASG	Malin Array Be comp=Z,0.2nm,0.3s,baz=35,slow=3.4,SNR=4.1	140.12	337	PKP	PKPdf	12 25 48.7	-0.6
MALT	Malatya	143.64	315	⇓*i*P	PKPdf	12 26 05.6	+9.5
KOLS	Kolonicke sedl	143.97	342	*e*PKP	PKPdf	12 25 55.7	-0.5
UPC	Upice	143.97	350	*e*PKP	PKPdf	12 25 56.2	0.0
DPC	Dobruska-Polom	144.06	349	*e*PKP	PKPdf	12 25 55.9	-0.5
DPC				*ep*PKP	pPKPdf	12 26 07.3	+0.5
BUR08	Bucovina Ar. S	144.14	338	PKPdf	PKPdf	12 25 56.4	-0.3
MOX	Moxa	144.43	354	*e*PKPbc	PKPdf	12 25 56.8	-0.2
TESR	Tescani	144.53	336	⇑*i*P	PKPdf	12 25 58.2	+0.9
WERD	Werda	144.55	354	*e*PKPbc	PKPdf	12 25 56.8	-0.4
GUNZ	Gunzen	144.63	353	*e*PKPbc	PKPdf	12 25 57.8	+0.4
WERN	Wernitzgruen	144.70	353	*e*PKPbc	PKPdf	12 25 58.1	+0.6
MEM	Membach	144.71	0	PKP	PKPab	12 25 56.2	0.0
PRU	Pruhonice	144.71	351	*e*PKP	PKPdf	12 25 58.0	+0.5
BCLA	Clavier	144.89	1	PKP	PKPdf	12 25 57.4	-0.4
VRI	Vrincioaia	145.03	335	⇑*i*P	PKPdf	12 25 59.4	+1.2
TNS	Taunus Mts	145.06	358	*e*PKPbc	PKPab	12 25 57.8	+0.2
DOU	Dourbes	145.19	2	PKP	PKPbc	12 25 56.8	-1.1
TREC	Trest	145.23	350	*e*PKP	PKPdf	12 25 59.5	+1.1
ROTZ	Rotzenmuhle	145.23	353	*e*PKPbc	PKPdf	12 25 58.7	+0.3
GRF	Grafenberg Arr	145.41	355	*e*PKPbc	PKPab	12 25 59.4	+0.6
KMBO	Kilima Mbogo	145.48	245	PKPbc	PKPbc	12 26 00.1	-0.1
KMBO	Kilima Mbogo comp=Z,1.4nm,0.6s,baz=52,slow=23,SNR=3.4	145.48	245	PKPbc	PKPbc	12 26 00.1	-0.1
MLR	Muntele Rosu	145.65	335	⇓*i*P	PKPab	12 26 00.7	+0.7
WLF	Walferdange	145.65	0	PKP	PKPab	12 26 00.4	+0.7
WLF	Walferdange	145.65	0	*e*PKPbc	PKPab	12 26 00.0	+0.3
WLF	Walferdange	145.65	0	*e*PKPbc	PKPab	12 26 00.4	+0.7
KHC	Kasperske Hory	145.69	352	*e*PKP	PKPab	12 26 00.3	+0.4
KHC				*ex*	x	12 26 01.5	
KHC				*ep*PKP	pPKPdf	12 26 08.8	-0.9
KHC				*ex*	x	12 26 12.2	
KHC	Kasperske Hory	145.69	352	*e*PKPbc	PKPab	12 26 00.3	+0.4
ISR	Istrita	145.71	334	⇓*i*P	PKPab	12 26 01.1	+1.0
WET	Wettzell	145.77	352	*e*PKPbc	PKPab	12 26 00.4	+0.2
BR131	Keskin Array S	145.93	321	*e*PKPdf	PKPdf	12 26 00.4	+0.3
BRTR	Keskin Array B	145.93	321	PKPbc	PKPdf	12 26 00.1	0.0
BRTR	Keskin Array B comp=Z,4.9nm,0.7s,baz=139,slow=2.1,SNR=22	145.93	321	PKPbc	PKPdf	12 26 00.1	0.0
GEC2	GERESS Array S	145.95	351	*e*PKPbc	PKPab	12 26 00.9	-0.1
GERES	GERESS Array B	145.95	351	PKPbc	PKPdf	12 25 58.5	-1.3
GERES	GERESS Array B comp=Z,4.4nm,0.8s,baz=28,slow=3.2,SNR=20	145.95	351	PKPbc	PKPdf	12 25 58.5	-1.3
VOIR		146.05	336	⇑*i*P	PKPab	12 26 01.9	+0.5
CONA	Conrad Observa comp=Z,12nm,0.9s	146.47	349	⇑*i*PKPab	PKPab	12 26 02.9	-0.1
BFO	Black Forest	146.95	358	*e*PKPbc	PKPbc	12 26 03.6	+0.3
BFO	Black Forest	146.95	358	*e*PKPbc	PKPbc	12 26 03.9	+0.5
BZS	Buzias	147.12	340	⇓*i*P	PKPbc	12 26 04.3	+0.4
RJOB	Jochberg	147.16	352	*e*PKPbc	PKPbc	12 26 04.4	+0.4
ARSA	Arzberg comp=Z,7.8nm,1.1s	147.19	349	⇑*i*PKPab	PKPbc	12 26 04.4	+0.3
RETA	Reutte comp=Z,8.3nm,1.0s	147.63	355	⇑*i*PKPab	PKPbc	12 26 05.7	+0.4
KBA	Koelnbreinsper comp=Z,7.9nm,0.8s	147.73	351	⇑*i*PKPbc	PKPbc	12 26 05.4	-0.3
SOKA	Soboth comp=Z,8.9nm,1.0s	147.83	349	⇑*i*PKPbc	PKPbc	12 26 05.8	-0.1
DAVA	Damuels comp=Z,10nm,0.8s	147.91	356	⇑*i*PKiKP	PKPbc	12 26 06.7	+0.5
FETA	Feichten comp=Z,7.8nm,1.2s	148.10	354	⇑*i*PKPab	PKPab	12 26 08.2	-1.3
CRNS	Crni Vrh	148.55	350	*e*PKPbc	PKPbc	12 26 07.6	-0.2
CEY	Cerknica	148.85	349	*e*PKPbc	PKPbc	12 26 08.6	+0.1
BOJS	Bojanci	148.92	348	*e*PKPbc	PKPbc	12 26 09.2	+0.6
BNI	Bardonecchia	150.27	360	*e*PKPbc	PKPbc	12 26 13.8	+1.6
PAB	San Pablo	153.99	19	*e*PKPab	PKPab	12 26 31.4	-2.6
DBIC	Dimbokro	166.02	126	PKPab	PKPab	12 27 25.8	-1.1
DBIC	Dimbokro comp=Z,5.7nm,0.9s,baz=165,slow=7.9,SNR=3.7	166.02	126	PKPab	PKPab	12 27 25.8	-1.1
TORD	Torodi Ar. Bea	174.95	114	PKP	PKPdf	12 26 28.6	-3.0
TORD				PKPab	PKPab	12 28 05.3	-1.3
TORD	Torodi Ar. Bea comp=Z,1.5nm,1.0s,baz=232,slow=1.6,SNR=5.6	174.95	114	PKP	PKPdf	12 26 28.6	-3.0
TORD	comp=Z,1.3nm,0.7s,baz=260,slow=4.2,SNR=6.6			PKPab	PKPab	12 28 05.3	-1.3

KRSC 23 12:08:28.4±0.1, 50°21N×155°57E, h230km±20km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.59	36	P	Pn	12 08 59.4	+0.2
SKR				*i* S	S	12 09 22.9	-0.5
MIPR	Malaya Ipel'ka	2.20	19	P	Pn	12 09 11.4	+0.3
MIPR				*i* S	S	12 09 42.5	-2.1
ASAK	Asacha	2.62	33	P	Pn	12 09 18.1	+2.6
MTVR	Mutnovka	2.80	35	P	Pn	12 09 19.5	+1.9
MTVR				*i* S	S	12 09 57.4	+1.2
RUS	Russkaya	2.89	39	P	Pn	12 09 20.7	+2.4
RUS				*i* S	S	12 09 58.3	+0.7
APC	Apacha	2.89	19	P	Pn	12 09 18.5	+0.2
PET	Petropavlovsk	3.41	33	P	Pn	12 09 26.6	+2.4
PET				*i* S	S	12 10 08.9	+0.7
UGLR	Uglovaya	3.62	33	P	Pn	12 09 30.1	+3.3
KOK	Koryaka	3.63	31	P	Pn	12 09 29.9	+3.0
KOK				*i* S	S	12 10 14.2	+1.2
AVH	Avacha	3.64	32	P	Pn	12 09 29.4	+2.4
SMAR	Somma	3.66	32	P	Pn	12 09 30.2	+2.8
KRER	Koryakskii	3.67	31	P	Pn	12 09 30.7	+3.1
SDLR	Sedlovina	3.70	33	P	Pn	12 09 29.9	+2.1
SDLR				*i* S	S	12 10 15.8	+1.2
NLC	Nalytchevo	3.78	37	P	Pn	12 09 30.0	+1.4
NLC				*i* S	S	12 10 14.8	-1.2
GNL	Ganaly	3.79	22	P	Pn	12 09 28.5	-0.3
SPN	Mys Shipunski	4.01	42	P	Pn	12 09 33.7	+2.4
SPN				*i* S	S	12 10 19.4	-1.5
MKZ	Mys Kozlova	5.76	39	P	Pn	12 09 54.4	+1.5
MKZ				*i* S	S	12 10 56.9	-3.2
TUMR	Tumrok	5.79	27	P	Pn	12 09 56.3	+2.8
BZMR	Bezymyannaya	6.45	25	P	Pn	12 10 04.0	+2.1
BZGR	Bezymyannyi-Gr	6.52	26	P	Pn	12 10 05.3	+2.6
KBG	Krutoberegovo	7.41	32	P	Pn	12 10 16.2	+2.3
BKI	Bering	8.05	48	P	Pn	12 10 25.1	+3.0
BKI				*i* S	S	12 11 50.2	-3.2

*CSEM **23** 12:36:49.1±0.7, 76°25N×7°54E, h10km, ML3.3, Error ellipse: s-maj=21.9km s-min=6.5km az=85.0*
*ISCJB **23** 12:36:50.2±0.7, 76°23N±0°05×8°5E±0°3, h10km, mb3.5/8, MS3.4/12, Error ellipse: s-maj=9.0km s-min=6.5km az=12.6*
*IDC **23** 12:36:50.7±0.9, 76°25N×7°73E, h0km, mb3.5/7, mb1 3.6/12, mb1mx3.5/30, mbtmp3.5/12, ML3.3/5, MS3.3/18, Ms1 3.3/18, ms1mx3.2/33, Error ellipse: s-maj=18.9km s-min=12.1km az=94.0*
*BER **23** 12:36:51.6±2.3, 76°25N×8°00E, h10km, MD2.4, ML2.4, ML3.3(NAO)*
*NAO **23** 12:36:53.7±2.1, 76°27N×9°53E, ML3.3*

ISC 23 12:36:50.9±0.8, 76°28N±0°05×8°27E±0°09, h10km, n41, σ18°81/38, mb3.5/8, MS3.5/12, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	Hornsund	1.84	63	*e*P	Pn	12 37 23.2	+0.7
HSP				*e*S	Sn	12 37 45.7	-0.1
SPA0	Spitsbergen Ar baz=223,slow=14	2.62	39	Pn	Pn	12 37 34.5	+1.2
SPA0	baz=227,slow=16			Sn	Sn	12 38 04.8	-0.2
SPA0	Spitsbergen Ar baz=223,slow=14	2.62	39	Pn	Pn	12 37 34.5	+1.2
SPA0	baz=227,slow=16			Sn	Sn	12 38 04.8	-0.2
SPA0	Spitsbergen Ar baz=223,slow=14,SNR=640	2.62	39	Pn	Pn	12 37 34.5	+1.2
SPA0	baz=227,slow=16			Sn	Sn	12 38 04.8	-0.2
SPITS	Spitsbergen Ar baz=216,slow=16,SNR=411	2.62	39	Pn	Pn	12 37 34.4	+1.2
SPITS	baz=237,slow=23,SNR=19			Sn	Sn	12 38 06.0	+1.0
KBS	Kingsbay	2.77	15	Pn	Pn	12 37 34.2	-1.1
KBS				Sn

ARA0	**ARCESS Array S**	**8.42**	**135**	Pn	**Pn**	**12**	**38**	**52.0**	**-0.7**
	baz=333,slow=12								
ARA0				Sn	Sn	12	40	20.5	-7.2
	baz=335,slow=18								
ARA0	**ARCESS Array S**	**8.42**	**135**	Pn	**Pn**	**12**	**38**	**52.0**	**-0.7**
	baz=333,slow=12,SNR=7.6								
ARCES	**ARCESS Array B**	**8.42**	**135**	Pn	**Pn**	**12**	**38**	**52.5**	**-0.2**
	comp=Z,1.3nm,0.3s,baz=324,slow=9.9,SNR=26								
ARCES				Sn	**Sn**	**12**	**40**	**23.6**	**-4.1**
	comp=Z,0.8nm,0.3s,baz=337,slow=18,SNR=6.7								
ARCES				LR	LR	12	42	14.3	
	comp=Z,154nm,19.9s,baz=299,slow=38								
NOA	**NORSAR Array B**	**15.35**	**175**	Pn	**P**	**12**	**40**	**29.9**	**-2.1**
	comp=Z,0.1nm,0.3s,baz=353,slow=11,SNR=2.5								
NOA				LR	LR	12	45	50.4	
	comp=Z,45nm,18.8s,baz=355,slow=35								
FIA0	**FINESS Array S**	**16.09**	**148**	Pn	**Pn**	**12**	**40**	**36.1**	**-0.6**
	baz=349,slow=16								
FIA0	**FINESS Array S**	**16.09**	**148**	Pn	**Pn**	**12**	**40**	**36.1**	**-0.6**
	baz=349,slow=16								
FIA0	**FINESS Array S**	**16.09**	**148**	Pn	**Pn**	**12**	**40**	**36.2**	**-0.6**
	baz=349,slow=14								
FINES	**FINESS Array B**	**16.09**	**148**	Pn	**Pn**	**12**	**40**	**36.4**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=349,slow=14,SNR=4.0								
FINES				LR	LR	12	46	55.3	
	comp=Z,100nm,20.5s,baz=154,slow=38								
HFS	**Hagfors**	**16.34**	**170**	Pn	**P**	**12**	**40**	**44.1**	**+1.2**
HFS	**Hagfors**	**16.34**	**170**	Pn	**P**	**12**	**40**	**44.1**	**+1.2**
HFS	**Hagfors**	**16.34**	**170**	Pn	**P**	**12**	**40**	**43.1**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=6.7,slow=14,SNR=2.6								
HFS				LR	LR	12	46	13.3	
	comp=Z,76nm,19.5s,baz=37,slow=34								
SFJD	**Kangerlussuaq**	**19.71**	**274**	LR	LR	12	49	26.9	
	comp=Z,50nm,18.9s,baz=57,slow=39								
FRB	**Frobisher Bay**	**26.62**	**285**	LR	LR	12	52	40.0	
	comp=Z,157nm,21.6s,baz=29,slow=36								
AKASG	**Malin Array Be**	**26.98**	**150**	P	**P**	**12**	**42**	**33.1**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=334,slow=11,SNR=4.3								
VRAC	**Vranov**	**27.28**	**168**	LR	LR	12	53	48.7	
	comp=Z,39nm,18.0s,baz=52,slow=37								
GERES	**GERESS Array B**	**27.63**	**172**	P	**P**	**12**	**42**	**40.9**	**+2.7**
	comp=Z,0.3nm,0.2s,baz=10,slow=6.0,SNR=2.4								
GERES				LR	LR	12	53	27.7	
	comp=Z,47nm,18.5s,baz=79,slow=36								
DAVOX	**Davos/Dischmat**	**29.61**	**178**	LR	LR	12	54	50.4	
	comp=Z,12nm,18.8s,baz=266,slow=36								
SCHQ	**Schefferville**	**34.15**	**275**	LR	LR	12	56	19.8	
	comp=Z,61nm,19.6s,baz=279,slow=34								
ZALV	**Zalesovo Beam**	**35.30**	**84**	P	P	12	43	52.1	+6.6
	comp=Z,0.6nm,0.5s,baz=343,slow=4.5,SNR=3.2								
KBZ	**Khabaz**	**35.78**	**135**	LR	LR	12	59	09.2	
	comp=Z,73nm,19.7s,baz=33,slow=37								
ILAR	**Eielson Array**	**38.32**	**343**	P	**P**	**12**	**44**	**12.2**	**+1.2**
	comp=Z,0.7nm,0.9s,baz=360,slow=7.7,SNR=10								
MKAR	**Makanchi Array**	**41.34**	**91**	P	P	12	44	40.0	+3.6
	comp=Z,0.5nm,0.6s,baz=350,slow=6.5,SNR=3.1								
MKAR				LR	LR	13	05	51.7	
	comp=Z,91nm,19.8s,baz=1.5,slow=42								
ULM	**Lac du Bonnet**	**45.00**	**298**	LR	LR	13	04	27.1	
	comp=Z,130nm,18.5s,baz=302,slow=37								
SONM	**Songino Array**	**45.98**	**68**	P	P	12	45	17.2	+3.3
	comp=Z,0.2nm,0.4s,baz=342,slow=9.1,SNR=2.4								
PDAR	**Pinedale Array**	**54.90**	**307**	LR	LR	13	10	01.1	
	comp=Z,99nm,18.2s,baz=195,slow=36								
KSRS	**Korea Array**	**66.39**	**53**	LR	LR	13	15	10.0	
	comp=Z,18nm,18.3s,baz=55,slow=38								
MJAR	**Matsushiro Arr**	**63.11**	**44**	LR	LR	13	20	18.1	
	comp=Z,59nm,18.0s,baz=200,slow=41								
TORD	**Torodi Ar. Bea**	**63.23**	**187**	P	**P**	**12**	**47**	**19.5**	**+0.4**
	comp=Z,0.7nm,0.9s,baz=6.0,slow=6.7,SNR=4.4								
TXAR	**Lajitas Array**	**66.70**	**298**	P	**P**	**12**	**47**	**41.8**	**0.0**
	comp=Z,0.2nm,0.8s,baz=23,slow=5.9,SNR=2.5								
TXAR				LR	LR	13	17	28.2	
	comp=Z,45nm,19.8s,baz=185,slow=37								

*ISCJB **23** 13:09:06.0±0.6, 76°.19N±0°.05×8°.4E±0°.3, h10km, mb3.5/9, MS3.0/2, Error ellipse: s-maj=10.5km s-min=6.4km az=29.4*
*IDC **23** 13:09:06.6±0.7, 76°.19N×8°.16E, h0km, mb3.6/9, mb1 3.8/13, mb1mx3.6/32, mbtmp3.6/13, ML2.9/5, MS3.0/3, Ms1 3.0/3, ms1mx2.6/35, Error ellipse: s-maj=15.8km s-min=11.2km az=92.0*
ISC 23 13:09:07.6±0.7, 76°.21N±0°.08×8°.56E±0°.10, h10km, n17, σ1§00/17, mb3.8/9, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HSP	**Hornsund**	**1.81**	**60**	*e*P	**Pn**	**13 09 39.0**	**+0.2**
HSP				*e*S	**Sn**	**13 10 02.3**	**+0.5**
SPITS	**Spitsbergen Ar**	**2.63**	**38**	Pn	**Pn**	**13 09 50.0**	**-0.1**
	baz=209,slow=15,SNR=13						
SPITS				Sn	**Sn**	**13 10 22.2**	**+0.2**
	baz=224,slow=24,SNR=3.3						
JMIC	**Jan Mayen**	**7.10**	**231**	LR	LR	13 12 48.8	
	comp=Z,84nm,18.2s,baz=74,slow=32						
ARCES	**ARCESS Array B**	**8.32**	**135**	Pn	**Pn**	**13 11 08.1**	**0.0**
	0.2nm,0.3s,baz=316,slow=12,SNR=5.3						
NOA	**NORSAR Array B**	**15.27**	**175**	Pn	**Pn**	**13 12 45.0**	**+2.1**
	0.1nm,0.3s,baz=352,slow=12,SNR=4.6						
FINES	**FINESS Array B**	**15.99**	**148**	Pn	**Pn**	**13 12 51.8**	**-0.4**
	0.1nm,0.3s,baz=358,slow=14,SNR=3.1						
HFS	**Hagfors**	**16.25**	**171**	Pn	**Pn**	**13 12 55.7**	**+0.1**
	0.1nm,0.3s,baz=356,slow=20,SNR=7.4						
EKA	**Eskdalemuir Ar**	**21.42**	**199**	P	**P**	**13 13 54.3**	**-1.0**
	0.2nm,0.5s,baz=20,slow=8.6,SNR=3.6						
VRAC	**Vranov**	**27.20**	**168**	P	**P**	**13 14 52.4**	**+1.4**
	1.4nm,0.4s,baz=0.0,slow=6.1,SNR=3.6						
GERES	**GERESS Array B**	**27.55**	**173**	P	**P**	**13 14 54.6**	**+0.4**
	0.4nm,0.2s,baz=13,slow=6.0,SNR=3.6						
ZALV	**Zalesovo Beam**	**35.24**	**84**	LR	LR	13 35 37.2	
	comp=Z,15nm,19.1s,baz=248,slow=45						
ILAR	**Eielson Array**	**38.41**	**343**	P	**P**	**13 16 27.8**	**-0.7**
	0.5nm,0.8s,baz=3.8,slow=5.8,SNR=7.7						
MKAR	**Makanchi Array**	**41.27**	**91**	P	**P**	**13 16 52.1**	**-0.5**
	0.4nm,0.8s,baz=340,slow=6.7,SNR=2.9						
MKAR				LR	LR	13 37 36.8	
	comp=Z,28nm,18.2s,baz=93,slow=41						
PDAR	**Pinedale Array**	**55.00**	**308**	P	**P**	**13 18 40.5**	**+1.6**
	2.2nm,1.1s,baz=20,slow=5.8,SNR=6.6						
NVAR	**Mina Array Bea**	**60.80**	**314**	P	**P**	**13 19 19.9**	**+0.3**
	0.5nm,0.8s,baz=32,slow=5.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**63.17**	**188**	P	**P**	**13 19 33.8**	**-1.6**
	0.6nm,0.7s,baz=348,slow=6.1,SNR=3.6						
TXAR	**Lajitas Array**	**66.80**	**298**	P	**P**	**13 19 59.1**	**+0.1**
	0.7nm,0.9s,baz=39,slow=5.8,SNR=5.5						

*ISCJB **23** 13:20:48.4±0.7, 51°.49N±0°.03×16°.11E±0°.03, h0km, Error ellipse: s-maj=5.0km s-min=2.7km az=17.9*
*IPEC **23** 13:20:48.4±0.4, 51°.59N×16°.14E, h1km±2km, ML2.4/3, Error ellipse: s-maj=4.3km s-min=2.5km az=77.0*
*CSEM **23** 13:20:49.1±0.3, 51°.53N×16°.11E, h2km, ML3.5/11, Error ellipse: s-maj=4.6km s-min=3.7km az=19.0*
*WAR **23** 13:20:50.3, 51°.53N×16°.10E*
*PRU **23** 13:20:50.4, 51°.50N×16°.12E, h0km*
*VIE **23** 13:20:53.1±1.3, 51°.31N×16°.16E, h0km, mb2.3/3, ML2.9/3, Error ellipse: s-maj=9.8km s-min=7.7km az=51.0 64 km WNW of Wroclaw Suspected Mining induced.*
ISC 23 13:20:50.0±1.1, 51°.52N±0°.05×16°.10E±0°.02, h0km, n39, σ0§96/73, 1C-2D, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**170**	*e*Pg	**Pg**	**13 21 03.3**	**+0.1**
KSP				*e*Sg	**Sg**	**13 21 12.1**	**-0.1**
KSP	**Ksiaz**	**0.69**	**170**	↓*i*Pg	**Pg**	**13 21 03.4**	**+0.2**
KSP				*e*Sg	**Sg**	**13 21 12.8**	**+0.6**
UPC	**Upice**	**1.02**	**183**	*e*PG	**Pg**	**13 21 09.3**	**-0.2**
UPC				*e*SG	**Sg**	**13 21 22.5**	**-0.1**
	comp=Z,47nm,0.2s						
UPC	**Upice**	**1.02**	**183**	Pg	**Pg**	**13 21 09.3**	**-0.2**
UPC				Sg	**Sg**	**13 21 22.5**	**-0.1**
	47nm,0.2s						
DPC	**Dobruska-Polom**	**1.18**	**173**	*e*PG	**Pg**	**13 21 12.1**	**-0.5**
DPC				*e*SG	**Sg**	**13 21 28.0**	**+0.1**
DPC	**Dobruska-Polom**	**1.18**	**173**	Pg	**Pg**	**13 21 12.1**	**-0.5**
DPC				Sg	**Sg**	**13 21 28.0**	**+0.1**
PVCC	**Panska Ves**	**1.39**	**225**	*e*PG	**Pn**	**13 21 16.0**	**-0.6**
PVCC				*e*SG	**Sb**	**13 21 35.5**	**+0.5**
	comp=Z,188nm,0.3s						
PVCC	**Panska Ves**	**1.39**	**225**	Pg	**Pn**	**13 21 16.0**	**-0.6**
PVCC				Sg	**Sb**	**13 21 35.5**	**+0.5**
	188nm,0.3s						
BRG	**Berggiesshubel**	**1.50**	**245**	PN	**Pn**	**13 21 17.3**	**-0.9**
BRG				PG	**Pb**	**13 21 18.4**	**-0.3**
BRG				SG	**Sn**	**13 21 39.1**	**+0.6**
	93nm,0.4s						
KRLC	**Kraliky**	**1.51**	**163**	*e*PG	**Pn**	**13 21 17.5**	**-0.9**
KRLC				*e*SG	**Sn**	**13 21 37.9**	**-0.9**
KRLC	**Kraliky**	**1.51**	**163**	Pg	**Pn**	**13 21 17.5**	**-0.9**
KRLC				Sg	**Sn**	**13 21 37.9**	**-0.9**
PRU	**Pruhonice**	**1.83**	**213**	*e*PN	**Pn**	**13 21 22.6**	**0.0**
PRU				*e*PG	**Pb**	**13 21 23.7**	**-0.5**
PRU				*e*SG	**Sb**	**13 21 48.5**	**+0.9**
	comp=Z,25nm,0.2s						
PRU	**Pruhonice**	**1.83**	**213**	Pn	**Pn**	**13 21 22.6**	**0.0**
CLL	**Collm**	**1.95**	**265**	*i* Pn	**Pn**	**13 21 23.0**	**-1.3**
CLL				*i* Pg	**Pb**	**13 21 26.2**	**-0.1**
CLL				*i*		13 21 29.9	
CLL				*i* Sg	**Sg**	**13 21 52.5**	**-0.1**
	comp=Z,27nm,0.4s						
MORC	**Moravsky Berou**	**1.98**	**152**	*e*Pn	**Pn**	**13 21 23.3**	**-1.4**
	baz=334						
MORC				*e*Sg	**Sb**	**13 21 51.8**	**-0.2**
	comp=Z,28nm,0.3s,baz=334						
OKC	**Ostrava-Krasne**	**2.13**	**141**	*e*PG	**Pb**	**13 21 29.4**	**-0.1**
OKC				*e*SG	**Sb**	**13 21 56.8**	**+0.4**
	comp=Z,31nm,0.4s						
OKC	**Ostrava-Krasne**	**2.13**	**141**	Pg	**Pb**	**13 21 29.4**	**-0.1**
OKC				Sg	**Sb**	**13 21 56.8**	**+0.4**
	comp=Z,31nm,0.4s						
VRAC	**Vranov**	**2.24**	**172**	*e*Pn	**Pn**	**13 21 27.4**	**-0.9**
VRAC				*e*Sg	**Sb**	**13 22 00.2**	**+0.6**
	comp=Z,16nm,0.2s,baz=353						
TREC	**Trest**	**2.27**	**190**	*e*PN	**Pn**	**13 21 28.7**	**0.0**
TREC				*e*PG	**Pb**	**13 21 31.3**	**-0.4**
TREC				*e*SG	**Sb**	**13 22 01.8**	**+1.5**
	comp=Z,18nm,0.2s						
TREC	**Trest**	**2.27**	**190**	Pn	**Pn**	**13 21 28.7**	**0.0**
TREC	**Trest**	**2.27**	**190**	Pg	**Pb**	**13 21 31.3**	**-0.4**
TREC				Sg	**Sb**	**13 22 01.8**	**+1.5**
	comp=Z,18nm,0.2s						
KRUC	**Moravsky**	**2.47**	**175**	*e*Pn	**Pn**	**13 21 30.9**	**-0.6**
	baz=356						
KRUC				*e*Sg	**Sb**	**13 22 07.6**	**+1.4**
	comp=Z,12nm,0.4s,baz=356						
NKC	**Novy Kostel**	**2.65**	**242**	*e*PN	**Pn**	**13 21 34.1**	**+0.2**
NKC				*e*PG	**Pb**	**13 21 39.3**	**+1.0**
NKC				*e*SG	**Sg**	**13 22 15.2**	**+0.2**
	comp=Z,60nm,0.4s						
NKC	**Novy Kostel**	**2.65**	**242**	Pn	**Pn**	**13 21 34.1**	**+0.2**
NKC	**Novy Kostel**	**2.65**	**242**	Pg	**Pb**	**13 21 39.3**	**+1.0**
NKC				Sg	**Sg**	**13 22 15.2**	**+0.2**
	comp=Z,60nm,0.4s						
OJC	**Ojcow**	**2.68**	**118**	*e*Pg	**Pg**	**13 21 40.9**	**-0.5**
OJC				*e*Sg	**Sg**	**13 22 15.9**	**-0.2**
OJC	**Ojcow**	**2.68**	**118**	*e*Pg	**Pg**	**13 21 40.9**	**-0.5**
OJC				*e*Sg	**Sg**	**13 22 15.9**	**-0.2**
KHC	**Kasperske Hory**	**2.89**	**215**	*e*PN	**Pn**	**13 21 36.8**	**-0.4**
KHC				*e*PG	**Pb**	**13 21 43.0**	**+0.6**
KHC				*e*SN	**Sn**	**13 22 12.6**	**-0.1**
KHC				*e*SG	**Sg**	**13 22 21.8**	**-0.9**
	comp=Z,12nm,0.3s						
KHC	**Kasperske Hory**	**2.89**	**215**	Pn	**Pn**	**13 21 36.8**	**-0.4**
VYHS	**Vyhne**	**3.51**	**149**	*e*	**Pg**	**13 21 57.8**	**+0.6**
VYHS	**Vyhne**	**3.51**	**149**	*e*SG	**Sg**	**13 22 45.1**	**+2.4**
VYHS	**Vyhne**	**3.51**	**149**	*e*Sg	**Sg**	**13 22 45.1**	**+2.4**
CONA	**Conrad Observa**	**3.60**	**183**	↑*i*Pn	**Pn**	**13 21 47.3**	**+0.2**
CONA				⇓Sg	**Sg**	**13 22 43.6**	**-2.0**
	comp=Z,17nm,0.5s						
CONA	**Conrad Observa**	**3.60**	**183**	Pn	**Pn**	**13 21 47.3**	**+0.2**
CONA				Sg	**Sg**	**13 22 43.6**	**-2.0**
	comp=Z,17nm,0.5s						
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*	**Pg**	**13 22 03.8**	**-1.0**
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*SG	**Sg**	**13 22 58.2**	**+2.8**
STHS	**Stebnicka Huta**	**3.91**	**121**	*e*Sg	**Sg**	**13 22 58.2**	**+2.8**
KECS	**Kecovo**	**4.16**	**135**	*e*SG	**Sg**	**13 23 02.5**	**-0.9**
KECS	**Kecovo**	**4.16**	**135**	*e*Sg	**Sg**	**13 23 02.5**	**-0.9**

*ISCJB **23** 13:20:59.8±0.4, 36°.81N±0°.02×27°.92E±0°.02, h7km±4km, Error ellipse: s-maj=4.0km s-min=3.2km az=4.1*
*ISK **23** 13:20:59.4, 36°.83N×27°.91E, h10km, MD3.0*
*THE **23** 13:20:59.9, 36°.79N×27°.95E, h7km±2km, ML3.3/3, Error ellipse: s-maj=2.4km s-min=0.9km az=198.0*
*DDA **23** 13:20:59.3, 36°.83N×27°.90E, h7km, MD3.2*
*CSEM **23** 13:20:59.9±0.1, 36°.80N×27°.90E, h10km, MD3.0, Error ellipse: s-maj=3.2km s-min=2.8km az=6.0*
ISC 23 13:20:60.0±0.9, 36°.81N±0°.02×27°.89E±0°.02, h13km±7km, n57, σ0§72/85, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.26**	**252**	*e*PG	**Pg**	**13 21 05.3**	**-0.3**
DAT				*e*SG	**Sg**	**13 21 10.1**	**+0.6**
DAT	**Datca**	**0.26**	**252**	*e*Pg	**Pg**	**13 21 05.3**	**-0.3**
DAT				*e*Sg	**Sg**	**13 21 10.1**	**+0.6**
YER	**Yerkesik**	**0.45**	**44**	*e*PG	**Pg**	**13 21 08.3**	**-0.6**
YER				*e*SG	**Sg**	**13 21 14.9**	**-0.1**
YER	**Yerkesik**	**0.45**	**44**	*e*Pg	**Pg**	**13 21 08.3**	**-0.6**
YER				*e*Sg	**Sg**	**13 21 14.9**	**-0.1**
MLSB	**Milas**	**0.49**	**349**	*e*PG	**Pg**	**13 21 09.2**	**-0.5**
MLSB	**Milas**	**0.49**	**349**	*e*Pg	**Pg**	**13 21 09.2**	**-0.5**
BODT	**Bodrum**	**0.53**	**299**	*e*PG	**Pg**	**13 21 10.1**	**-0.3**
BODT				*e*SG	**Sb**	**13 21 18.2**	**-0.5**
BODT	**Bodrum**	**0.53**	**299**	*e*Pg	**Pg**	**13 21 10.1**	**-0.3**
BODT				*e*Sg	**Sb**	**13 21 18.2**	**-0.5**
TURN	**Turunc**	**0.57**	**84**	*i* P	Pg	13 21 04.8	-6.5
TURN				*i* S	Sg	13 21 08.9	-10
NIS1	**Nisyros Isl.**	**0.61**	**250**	P	**Pb**	**13 21 12.2**	**-0.3**
NIS1				S	**Sb**	**13 21 22.7**	**+1.7**
NIS1	**Nisyros Isl.**	**0.61**	**250**	P	**Pb**	**13 21 12.2**	**-0.3**
NIS1				S	**Sb**	**13 21 22.7**	**+1.7**
DALY	**Dalyan (Mu¨la**	**0.61**	**89**	*e*PG	**Pg**	**13 21 11.4**	**-0.5**
DALY				*e*SG	**Sb**	**13 21 20.3**	**-0.7**
DALY	**Dalyan (Mu¨la**	**0.61**	**89**	*e*Pg	**Pg**	**13 21 11.5**	**-0.5**
DALY				*e*Sg	**Sb**	**13 21 20.3**	**-0.7**
ARG	**Arkhangelos**	**0.62**	**162**	P	**Pg**	**13 21 11.1**	**-1.0**
ARG				S	**Sb**	**13 21 21.3**	**0.0**
ARG	**Arkhangelos**	**0.62**	**162**	P	**Pg**	**13 21 11.1**	**-1.0**
ARG				S	**Sb**	**13 21 21.3**	**0.0**
AYDN	**Tasoluk**	**0.85**	**359**	*i* P	**Pb**	**13 21 16.2**	**-0.4**
AYDN				*i* S	**Sb**	**13 21 27.9**	**0.0**
AYDN	**Tasoluk**	**0.85**	**359**	*i* P	**Pb**	**13 21 16.2**	**-0.4**
AYDN				*i* S	**Sb**	**13 21 27.9**	**0.0**
FETY	**Fethiye**	**0.97**	**100**	*e*PG	**Pg**	**13 21 18.1**	**-0.6**
FETY	**Fethiye**	**0.97**	**100**	*e*Pg	**Pg**	**13 21 18.2**	**-0.6**
GCAM	**G?zelcaml?**	**1.03**	**330**	*i* P	**Pn**	**13 21 19.9**	**-0.2**
GCAM				*i* S	**Sn**	**13 21 34.5**	**+0.1**
GCAM	**G?zelcaml?**	**1.03**	**330**	*i* P	**Pn**	**13 21 19.9**	**-0.2**
GCAM				*i* S	**Sn**	**13 21 34.5**	**+0.1**
SMG	**Samos**	**1.23**	**317**	P	**Pn**	**13 21 22.4**	**-0.5**
SMG				S	**Sn**	**13 21 40.4**	**+1.1**
SMG	**Samos**	**1.23**	**317**	P	**Pn**	**13 21 22.4**	**-0.5**
SMG				S	**Sn**	**13 21 40.4**	**+1.1**
DNZL	**Cakiroluk**	**1.27**	**46**	*i* P	**Pb**	**13 21 23.8**	**-0.2**
DNZL				*i* S	**Sn**	**13 21 40.7**	**+0.1**
DNZL	**Cakiroluk**	**1.27**	**46**	*i* P	**Pb**	**13 21 23.7**	**-0.2**
DNZL				*i* S	**Sn**	**13 21 40.7**	**+0.1**
DENT	**Denizli**	**1.31**	**44**	*e*PN	**Pb**	**13 21 24.2**	**-0.2**
DENT	**Denizli**	**1.31**	**44**	*e*Pn	**Pb**	**13 21 24.2**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.33**	**74**	*e*PN	**Pb**	**13 21 24.7**	**-0.2**
GLHS	**Glhisar (BURDU**	**1.33**	**74**	*e*Pn	**Pb**	**13 21 24.7**	**-0.2**
KARP	**Karpathos**	**1.39**	**205**	P	**Pn**	**13 21 24.4**	**-0.7**
KARP				S	**Sn**	**13 21 42.8**	**-0.5**
KARP	**Karpathos**	**1.39**	**205**	P	**Pn**	**13 21 24.4**	**-0.7**
KARP				S	**Sn**	**13 21 42.8**	**-0.5**
GOLH	**Golhisar**	**1.40**	**72**	*i* P	**Pg**	**13 21 26.5**	**-0.5**
GOLH				*i* S	**Sg**	**13 21 47.4**	**+2.2**
GOLH	**Golhisar**	**1.40**	**72**	*i* P	**Pg**	**13 21 26.5**	**-0.5**
GOLH				*i* S	**Sg**	**13 21 47.4**	**+2.2**
AKAS	**Kas**	**1.50**	**112**	*i* P	**Pg**	**13 21 27.6**	**-0.1**
AKAS				*i* S	**Sg**	**13 21 48.3**	**+0.1**
AKAS	**Kas**	**1.50**	**112**	*i* P	**Pb**	**13 21 27.6**	**-0.1**
IZM	**Izmir**	**1.66**	**343**	*e*PN	**Pn**	**13 21 28.4**	**-0.4**
IZM	**Izmir**	**1.66**	**343**	*e*Pn	**Pn**	**13 21 28.4**	**-0.4**
BLCB	**Balcova**	**1.71**	**337**	*e*PN	**Pn**	**13 21 29.6**	**+0.2**
BLCB	**Balcova**	**1.71**	**337**	*e*Pn	**Pn**	**13 21 29.6**	**+0.2**
MANT	**Manisa**	**1.76**	**17**	*e*P	**Pn**	**13 21 30.5**	**+0.2**
MANT				*e*S	**Sn**	**13 21 51.7**	**-1.0**
MANT	**Manisa**	**1.76**	**17**	*e*P	**Pn**	**13 21 30.5**	**+0.2**
MANT				*e*S	**Sn**	**13 21 51.7**	**-1.0**
KULA	**Kula-Manisa**	**1.81**	**20**	*e*PN	**Pn**	**13 21 31.0**	**+0.1**
KULA	**Kula-Manisa**	**1.81**	**20**	*e*Pn	**Pn**	**13 21 31.0**	**+0.1**
URLA	**Izmir**	**1.86**	**327**	*e*P	**Pb**	**13 21 34.2**	**+0.4**
URLA				*e*S	**Sg**	**13 21 58.6**	**-1.2**
URLA	**Izmir**	**1.86**	**327**	*e*P	**Pb**	**13 21 34.2**	**+0.4**
URLA				*e*S	**Sg**	**13 21 58.6**	**-1.2**
APE	**Apeiranthos**	**1.91**	**278**	*e*PN	**Pn**	**13 21 33.1**	**+0.9**
APE	**Apeiranthos**	**1.91**	**278**	*e*Pn	**Pn**	**13 21 33.1**	**+0.9**
KHL	**Karahalli**	**1.99**	**40**	*e*PN	**Pn**	**13 21 33.8**	**+0.4**
KHL	**Karahalli**	**1.99**	**40**	*e*Pn	**Pn**	**13 21 33.8**	**+0.4**
ANTB	**Antalya**	**2.22**	**87**	*e*PN	**Pn**	**13 21 37.2**	**+0.8**
ANTB	**Antalya**	**2.22**	**87**	*e*Pn	**Pn**	**13 21 37.2**	**+0.8**
BCK	**Bucak**	**2.25**	**72**	*e*PN	**Pn**	**13 21 37.5**	**+0.5**
BCK	**Bucak**	**2.25**	**72**	*e*Pn	**Pn**	**13 21 37.5**	**+0.5**
SHUT	**Suhut-Afyon**	**2.73**	**50**	*e*PN	**Pn**	**13 21 44.6**	**+1.0**
SHUT	**Suhut-Afyon**	**2.73**	**50**	*e*Pn	**Pn**	**13 21 44.6**	**+1.0**
TVSB	**Tavsanli**	**2.91**	**25**	*e*PN	**Pn**	**13 21 47.2**	**+1.1**
TVSB	**Tavsanli**	**2.91**	**25**	*e*Pn	**Pn**	**13 21 47.2**	**+1.1**

*ISCJB **23** 13:30:09.1±0.6, 38°.72N±0°.02×20°.48E±0°.03, h4km±4km, Error ellipse: s-maj=5.0km s-min=2.9km az=149.4*
*TIR **23** 13:30:09.1, 38°.79N×20°.83E, h7km, ML3.8*
*ATH **23** 13:30:10.3, 38°.70N×20°.63E, h5km±3km, MD3.1/12*
*CSEM **23** 13:30:10.4±0.2, 38°.71N×20°.64E, h2km, ML3.5/6, Error ellipse: s-maj=6.1km s-min=3.2km az=56.0*
*THE **23** 13:30:11.0, 38°.71N×20°.59E, h0km±2km, ML3.5/6, Error ellipse: s-maj=2.8km s-min=0.8km az=265.0*
ISC 23 13:30:10.4±0.9, 38°.71N±0°.02×20°.59E±0°.02, h9km±6km, n87, σ1§24/126, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LKD2	**Lefkada island**	**0.10**	**33**	P	**Pg**	**13 30 13.0**	**+0.2**
LKD2				S	**Sg**	**13 30 14.4**	**-0.2**
LKD2	**Lefkada island**	**0.10**	**33**	P	**Pg**	**13 30 13.0**	**+0.2**
LKD2				S	**Sg**	**13 30 14.4**	**-0.2**
VLS	**Valsamata**	**0.53**	**180**	P	**Pg**	**13 30 20.9**	**+0.3**
VLS				S	**Sb**	**13 30 29.3**	**-0.3**
VLS	**Valsamata**	**0.53**	**180**	*e*PB	**Pg**	**13 30 20.9**	**+0.3**
VLS				*e*SB	**Sb**	**13 30 29.1**	**-0.5**
VLS	**Valsamata**	**0.53**	**180**	P	**Pg**	**13 30 20.9**	**+0.3**
VLS				*e*Sb	**Sb**	**13 30 29.1**	**-0.5**
KFL	**Anninata**	**0.62**	**165**	P	**Pg**	**13 30 22.5**	**+0.2**
KFL				S	**Sb**	**13 30 32.7**	**+0.6**
KFL	**Anninata**	**0.62**	**165**	P	**Pg**	**13 30 22.5**	**+0.2**
AXS	**Araxos**	**0.80**	**129**	P	**Pg**	**13 30 25.6**	**-0.2**
AXS				S	**Sn**	**13 30 39.0**	**-0.9**
AXS	**Araxos**	**0.80**	**129**	P	**Pg**	**13 30 25.6**	**-0.2**
IGT	**Igoumenitsa**	**0.85**	**346**	P	**Pg**	**13 30 26.6**	**-0.1**
IGT				S	**Sb**	**13 30 39.8**	**+1.0**
IGT	**Igoumenitsa**	**0.85**	**346**	P	**Pg**	**13 30 26.6**	**-0.1**
IGT				S	**Sb**	**13 30 39.8**	**+1.0**

ISCJB ***23*** *13:54:14.2±0.7,52.89N±0.04×160.15E±0.06, h40km±10km, Error ellipse: s-maj=8.0km s-min=3.9km az=143.2*

MOS ***23*** *13:54:14.7±2.0,53.01N×160.10E, h36km, mb4.2/1, Error ellipse: s-maj=28.0km s-min=15.1km az=69.4*

KRSC ***23*** *13:54:14.1±0.3,52.91N×160.10E, h43km±22km, ML4.0*

ISC 23 13:54:13.8±1.6, 52°86N±0.05×160°22E±0.04, h33km±3km, n37, σ1°03/49, 2D, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.27**	**334**	PN		**Pn**		**13 54 21.9**	**+0.8**
SPN				S		**Sb**		**13 54 27.4**	**+1.2**
SPN	**Mys Shipunski**	**0.27**	**334**	P		**Pn**		**13 54 21.9**	**+0.8**
SPN				S		**Sb**		**13 54 27.4**	**+1.2**
NLC	**Nalytchevo**	**0.61**	**301**	PN		**Pn**		**13 54 25.2**	**-0.8**
NLC				S		**Sn**		**13 54 33.1**	**-1.6**
NLC	**Nalytchevo**	**0.61**	**301**	P		**Pn**		**13 54 25.2**	**-0.8**
NLC				S		**Sn**		**13 54 33.1**	**-1.6**
SDLR	**Sedlovina**	**0.91**	**298**	P		**Pn**		**13 54 29.6**	**-0.7**
SDLR				S		**Sn**		**13 54 41.3**	**-1.0**
UGLR	**Uglovaya**	**0.91**	**293**	P		**Pn**		**13 54 29.8**	**-0.5**
UGLR				S		**Sn**		**13 54 42.0**	**-0.3**
SMAR	**Somma**	**0.95**	**296**	P		**Pn**		**13 54 30.0**	**-0.9**
SMAR				S		**Sn**		**13 54 42.5**	**-0.8**
PET	**Petropavlovsk**	**0.96**	**281**	PN	*i*	**Pn**		**13 54 30.1**	**-0.8**
PET				*eS*		**Sn**		**13 54 41.1**	**-2.3**
PET	comp=Z,399nm,0.3s			pmax		pmax			
PET	comp=E,897nm,0.5s			smax		smax			
PET	comp=N,895nm,0.5s			smax		smax			
PET	**Petropavlovsk**	**0.96**	**281**	P		**Pn**		**13 54 30.2**	**-0.7**
PET				S		**Sn**		**13 54 41.9**	**-1.5**
AVH	**Avacha**	**0.98**	**295**	P		**Pn**		**13 54 30.8**	**-0.5**
AVH				S		**Sn**		**13 54 42.9**	**-1.1**
KRER	**Koryakskii**	**0.99**	**297**	P		**Pn**		**13 54 31.1**	**-0.4**
KRER				S		**Sn**		**13 54 43.8**	**-0.7**
KOK	**Koryaka**	**1.05**	**295**	P		**Pn**		**13 54 31.7**	**-0.5**
KOK				S		**Sn**		**13 54 45.3**	**-0.4**
RUS	**Russkaya**	**1.12**	**248**	PN		**Pn**		**13 54 32.7**	**-0.4**
RUS				S		**Sn**		**13 54 46.7**	**-0.6**
RUS	**Russkaya**	**1.12**	**248**	P		**Pn**		**13 54 32.7**	**-0.4**
RUS				S		**Sn**		**13 54 46.7**	**-0.6**
KII	**Karymskiy**	**1.27**	**339**	P		**Pn**		**13 54 34.9**	**-0.3**
KII				S		**Sn**		**13 54 50.2**	**-0.9**
MTVR	**Mutnovka**	**1.29**	**254**	P		**Pn**		**13 54 35.7**	**+0.1**
MTVR				S		**Sn**		**13 54 51.7**	**-0.1**
GRL	**Gorelyy**	**1.34**	**258**	P		**Pn**		**13 54 36.7**	**+0.5**
GRL				S		**Sn**		**13 54 53.0**	**+0.1**
ASAK	**Asacha**	**1.49**	**252**	P		**Pn**		**13 54 38.9**	**+0.7**
ASAK				S		**Sn**		**13 54 57.6**	**+1.0**
GNL	**Ganaly**	**1.60**	**302**	P		**Pn**		**13 54 40.0**	**+0.2**
GNL				S		**Sn**		**13 54 59.6**	**+0.2**
APC	**Apacha**	**1.85**	**273**	P		**Pn**		**13 54 43.5**	**+0.3**
APC				S		**Sn**		**13 55 05.6**	**+0.2**
MKZ	**Mys Kozlova**	**1.93**	**27**	PN		**Pn**		**13 54 44.6**	**+0.5**
MKZ				S		**Sn**		**13 55 06.4**	**-0.7**
MKZ	**Mys Kozlova**	**1.93**	**27**	P		**Pn**		**13 54 44.6**	**+0.5**
MKZ				S		**Sn**		**13 55 06.4**	**-0.7**
MIPR	**Malaya Ipel'ka**	**2.19**	**256**	P		**Pn**		**13 54 49.2**	**+1.4**
TUMR	**Tumrok**	**2.43**	**359**	P		Pn		13 54 52.3	+1.1
KMNR	**Kamenistaya**	**2.91**	**0**	P		Pn		13 54 59.9	+2.2
BZMR	**Bezymyannaya**	**3.09**	**3**	P		Pn		13 55 02.2	+1.9
BZGR	**Bezymyannyi-Gr**	**3.10**	**5**	P		Pn		13 55 02.4	+2.0
KIRR	**Kirishev**	**3.10**	**1**	P		Pn		13 55 01.8	+1.3
KPT	**Kopyto**	**3.12**	**0**	P		Pn		13 55 03.1	+2.5
BZWR	**Bezymyannyi-We**	**3.12**	**3**	P		Pn		13 55 03.2	+2.5
SKR	**Severo-Kuril's**	**3.35**	**231**	*e*PN		Pb		13 55 09.9	-2.5
KLY	**Klyuchi**	**3.47**	**4**	PN		Pn		13 55 07.8	+2.4
KLY				S		Sn		13 55 47.7	+2.4
KLY	**Klyuchi**	**3.47**	**4**	P		Pn		13 55 07.8	+2.4
KLY				S		Sn		13 55 47.7	+2.4
SRDR	**Sredinnyy**	**3.48**	**355**	P		Pn		13 55 06.8	+1.3
KBG	**Krutoberegovo**	**3.70**	**22**	S		**Sn**		**13 55 51.7**	**+0.8**
BKI	**Bering**	**4.13**	**53**	PN		**Pn**		**13 55 14.9**	**+0.5**
BKI	**Bering**	**4.13**	**53**	P		**Pn**		**13 55 14.9**	**+0.5**
BKI				S		**Sn**		**13 55 57.7**	**-3.7**

IDC 23 14:08:07.5±8.7, 9°93S×111°99E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/21, mbtmp3.3/3, Error ellipse: s-maj=146.3km s-min=121.7km az=166.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.75**	**117**	P		P		14 13 22.9	+1.1
	0.4nm,0.8s,baz=292,slow=11,SNR=4.4								
ASAR	**Alice Springs**	**24.98**	**126**	P		P		14 13 33.4	+0.3
	0.2nm,0.7s,baz=304,slow=8.8,SNR=3.9								
STKA	**Stephens Creek**	**35.03**	**133**	P		P		14 15 00.9	-1.3
	1.7nm,0.7s,baz=313,slow=12,SNR=4.1								

ISCJB ***23*** *14:19:13.5±0.7,5.18S±0.03×153.73E±0.02, h37km±6km, mb5.8/182, MS6.2/94, Error ellipse: s-maj=4.8km s-min=4.0km az=12.4*

BJI ***23*** *14:19:13.6,5.01S×154.58E, h63km, mB6.7/49, mb5.9/65, Ms6.3/72, Ms7 6.2/66*

NEIC ***23*** *14:19:17.8±0.1,5.20S×153.70E, h65km, mb5.5/68, Error ellipse: s-maj=4.9km s-min=4.4km az=112.0*

BGS ***23*** *14:19:17.5±2.1,5.16S×153.78E, h67km, MS6.2*

MOS ***23*** *14:19:20.2±1.0,5.12S×153.74E, h52km, mb6.6/45, MS6.1/21, Error ellipse: s-maj=8.1km s-min=6.6km az=72.0*

TEH ***23*** *14:19:21.9,5.32S×153.44E, h80km, ML6.8*

IDC ***23*** *14:19:22.0±0.4,5.21S×153.72E, h96km±3km, mb5.2/33, mb1 5.3/34, mb1mx5.3/34, mbtmp5.2/34, MS6.2/28, Ms1 6.2/28, ms1mx6.2/29, Error ellipse: s-maj=11.8km s-min=8.4km az=77.0*

DJA ***23*** *14:19:23.0±0.8,5°S±4°×15°4E±°, h96km±7km, M6.8/53, mb6.2/53, mB7.0/52, MLv7.8/1, Mw(mB)6.9/52, Mwp6.5/41*

GCMT ***23*** *14:19:29.6±0.1,5.22S×153.74E, h70km, MW6.7, Moment Tensor Solution. s122,c307; s99,c254; Moment tensor: Scale 10^19Nm; Mrr1.34±.01; Mθθ-0.49±.01; Mϕϕ-0.85±.01; Mrθ-0.31±.01; Mrϕ 0.75±.01; Mθϕ 0.50±.01; Best double couple: M0 1.50000×10^19 NP1:ϕs139.00000°, δ34.00000°, λ85.00000°. NP2:ϕs325.00000°, δ56.00000°, λ93.00000°. Principal axes: T 1.4600, Plg78.0000°, Azm246.0000°; N 0.1000, Plg3.0000°, Azm143.0000°; P -1.5600, Plg11.0000°, Azm52.0000°; Data Used: II IU CN IC G. LP body wave period 50 sec. Mantle waves from 116 sta. Surface waves: sta=120, comp=290, per= 50.*

NEIC ***23*** *14:19:42.7±0.0,5.10S×153.55E, h63km, Moment Tensor Solution. s128 Moment tensor: Scale 10^19Nm; Mrr1.39; Mθθ -0.54; Mϕϕ -0.35; Mrθ 0.62; Mrϕ 0.56; Best double couple: M0 1.50000×10^19 NP1:ϕs325.00000°, δ58.00000°, λ93.00000°. NP2:ϕs140.00000°, δ32.00000°, λ86.00000°. Principal axes: T 1.5400, Plg76.0000°, Azm243.0000°; N -0.0600, Plg2.0000°, Azm143.0000°; P -1.4900, Plg12.0000°, Azm52.0000°;*

ISC 23 14:19:18.2±0.2, 5°22S±0.03×153°71E±0.03, h64km±1km, h64km: pP-P, n1258, σ2s06/1392, mb5.9/183, 57C-28D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.47**	**124**	*eP*		**Pn**		**14 21 01.9**	**-2.7**
HNR	**Honiara**	**7.47**	**124**	S		**Sn**		**14 22 32.3**	**+4.4**
	baz=273,slow=21,SNR=1.8								
HNR	**Honiara**	**7.47**	**124**	S		**Sn**		**14 22 32.3**	**+4.4**
PMG	**Port Moresby**	**7.71**	**237**	*eP*		**Pn**		**14 21 07.1**	**-0.8**
PMG				S		Sn		14 22 47.2	+13
PMG	**Port Moresby**	**7.71**	**237**	P		**Pn**		**14 21 07.8**	**-0.1**
	25μm,0.9s,328μm719μm210nm								
PMG	**Port Moresby**	**7.71**	**237**	P		**Pn**		**14 21 08.2**	**+0.3**
	8.8nm,0.3s,baz=42,slow=8.8,SNR=40								
PMG				S		Sn		14 22 47.2	+13
	486nm,0.3s,baz=69,slow=10,SNR=4.7								
JAY	**Jayapura**	**13.25**	**281**	P		**Pn**		**14 22 24.8**	**+1.3**
	924nm,2.8s,38μm580μm								
COEN	**Coen**	**13.53**	**229**	*eP*		**Pn**		**14 22 27.3**	**0.0**
CTA	**Charters Tower**	**16.46**	**205**	P		**P**		**14 23 06.5**	**-0.4**
CTA				S		**S**		**14 26 22.0**	**+6.0**
CTA	**Charters Tower**	**16.46**	**205**	P		**P**		**14 23 06.5**	**-0.4**
	0.4nm,0.3s,baz=29,slow=14,SNR=53								
CTA				S		**S**		**14 26 22.0**	**+6.0**
	1.0nm,0.3s,baz=217,slow=20,SNR=1.5								
CTAO	**Charters Tower**	**16.46**	**205**	*eP*		**P**		**14 23 06.1**	**-0.8**
CTAO				pmax		pmax			
	comp=Z,994nm,2.0s								
CTAO	**Charters Tower**	**16.46**	**205**	*eP*		**P**		**14 23 06.1**	**-0.8**
	comp=Z,994nm,2.0s								
KWAJ	**Kwajalein Atol**	**19.65**	**45**	*eP*		**Pn**		**14 23 44.4**	**+0.5**
KWAJ				pmax		pmax			
	comp=Z,314nm,0.8s								
KWAJ	**Kwajalein Atol**	**19.65**	**45**	*eP*		**Pn**		**14 23 44.4**	**+0.5**
	comp=Z,314nm,0.8s								
RKPI	**Ransiki, Papua**	**19.84**	**280**	P		**Pn**		**14 23 44.2**	**-1.9**
	comp=Z,6μm,1.3s,comp=Z,87μm								
EIDS	**Eidsvold**	**20.20**	**187**	*eP*		Pn		14 23 48.0	-2.3
TARA	**Tarawa**	**20.27**	**72**	*eP*		Pn		14 23 49.1	-2.2
	comp=Z,1μm,1.4s								
GUMO	**Guam**	**20.64**	**335**	*eP*		Pn		14 23 52.8	-2.7
	comp=Z,183nm,0.8s								
NOUC	**Port Laguerre**	**20.74**	**145**	*eP*		**P**		**14 23 53.3**	**-0.4**
DZM	**Mont Dzumac**	**20.80**	**145**	*eP*		**P**		**14 23 54.9**	**+0.4**
	comp=Z,9μm,1.3s								
DZM				*e*	LR	LR		14 28 45.6	
	comp=Z,236μm,31.1s								
DZM	**Mont Dzumac**	**20.80**	**145**	P		**P**		**14 23 54.3**	**-0.1**
DZM				S		**S**		**14 27 45.5**	**+2.3**
DZM	**Mont Dzumac**	**20.80**	**145**	P		**P**		**14 23 54.3**	**-0.1**
	comp=Z,262nm,0.7s,baz=93,slow=22,SNR=290								
DZM				S		**S**		**14 27 45.5**	**+2.3**
	comp=Z,49nm,1.0s,baz=63,slow=16,SNR=2.0								
BAYA	**Yate Dam**	**21.12**	**144**	*eP*		**P**		**14 23 60.0**	**+2.2**
FAKI	**Fak Fak**	**21.52**	**275**	P		**P**		**14 24 01.8**	**-0.4**
	comp=Z,907nm,1.0s,comp=Z,37μmcomp=Z,424μm								
BNDI	**Bandanaira**	**23.73**	**271**	P		**P**		**14 24 25.1**	**+0.4**
	comp=Z,927nm,1.1s,comp=Z,39μmcomp=Z,372μm								
WRAB	**Tennant Creek**	**23.85**	**230**	P		**P**		**14 24 26.0**	**+0.2**
	comp=Z,3μm,0.5s,SNR=66								
WRAB	**Tennant Creek**	**23.85**	**230**	*eP*		**P**		**14 24 25.0**	**-0.8**
WRAB	**Tennant Creek**	**23.85**	**230**	*eP*		**P**		**14 24 25.0**	**-0.8**
WRA	**Warramunga Arr**	**23.86**	**230**	P		**P**		**14 24 25.7**	**-0.2**
WRA				PcP		**PcP**		**14 28 06.4**	**-1.2**
WRA				pPcP				14 28 33.5	
WRA				S		S		14 28 47.0	+9.4
WRA				ScP		**ScP**		**14 31 37.7**	**-3.0**
WRA				PKiKP		**PKiKP**		**14 35 49.5**	**-1.4**
WRA				*e*				14 57 44.4	
WRA	**Warramunga Arr**	**23.86**	**230**	P		**P**		**14 24 25.7**	**-0.2**
	comp=Z,28nm,0.7s,baz=54,slow=10.0,SNR=234								
WRA				PcP		**PcP**		**14 28 06.4**	**-1.2**
	comp=Z,49nm,0.8s,baz=57,slow=2.4,SNR=3.2								
WRA				pPcP				14 28 33.5	
	comp=Z,222nm,0.9s,baz=53,slow=2.4,SNR=7.2								
WRA				S		S		14 28 47.0	+9.4
	comp=Z,19nm,1.0s,baz=49,slow=18,SNR=2.3								
WRA				ScP		**ScP**		**14 31 37.7**	**-3.0**
	comp=Z,22nm,1.1s,baz=46,slow=3.2,SNR=3.4								
WRA				LR		LR		14 33 45.9	
	comp=Z,78μm,21.9s,baz=55,slow=36								
WRA				PKiKP		**PKiKP**		**14 35 49.5**	**-1.4**
	comp=Z,3.9nm,1.1s,baz=331,slow=0.8,SNR=3.1								
WRA				P3KPbc				14 57 44.4	
	comp=Z,0.9nm,1.1s,baz=236,slow=2.7,SNR=3.8								
MSAI	**Masohi**	**24.78**	**273**	P		**P**		**14 24 34.7**	**+0.4**
	comp=Z,65nm,1.2s,comp=Z,3μm								
ARMA	**Armidale**	**25.14**	**184**	*eP*		**P**		**14 24 38.3**	**+0.8**
	comp=Z,199nm,0.7s								
FUNA	**Funafuti**	**25.51**	**99**	P		**P**		**14 24 43.0**	**+2.1**
	comp=Z,151nm,1.0s								
AS31	**Alice Springs**	**26.46**	**224**	*eP*		**P**		**14 24 49.4**	**-0.1**
ASAR	**Alice Springs**	**26.47**	**224**	P		**P**		**14 24 49.6**	**+0.1**
ASAR				PcP		**PcP**		**14 28 13.2**	**-0.2**
ASAR				pPcP				14 28 39.3	
	comp=Z,166nm,0.9s,baz=55,slow=2.6,SNR=8.1								
ASAR				S		**S**		**14 29 24.4**	**+5.3**
	comp=Z,15nm,0.9s,baz=60,slow=13,SNR=2.2								
ASAR				ScP		**ScP**		**14 31 44.6**	**-3.4**
	comp=Z,47nm,0.7s,baz=42,slow=2.9,SNR=3.2								
ASAR				LR		LR		14 35 36.8	
	comp=Z,62μm,20.7s,baz=117,slow=37								
ASAR				P3KPbc				14 57 33.1	
	comp=Z,0.7nm,0.5s,baz=224,slow=3.3,SNR=5.1								
LBMI	**Labuha**	**26.56**	**79**	P		**P**		**14 24 51.2**	**+0.8**
	comp=Z,1μm,1.9s,comp=Z,44μmcomp=Z,128μm								
MSVF	**Nonsavu**	**26.86**	**120**	*eP*		**P**		**14 24 50.8**	**-2.3**
MSVF				pmax		pmax			
	comp=Z,57nm,1.5s								
MSVF	**Nonsavu**	**26.86**	**120**	*eP*		**P**		**14 24 50.8**	**-2.3**
	comp=Z,57nm,1.5s								
TNTI	**Ternate**	**26.97**	**282**	P		**P**		**14 24 54.3**	**+0.1**
	comp=Z,596nm,2.1s,comp=Z,23μmcomp=Z,176μm								
WAKE	**Wake Island**	**27.48**	**27**	P		**P**		**14 25 00.1**	**+1.5**
	comp=Z,37nm,0.9s								
STKA	**Stephens Creek**	**28.85**	**202**	*eP*		**P**		**14 25 10.1**	**-0.6**
	comp=Z,3.4nm,0.7s								
STKA				pPcP				14 28 45.4	
STKA				S		**S**		**14 29 57.2**	**+0.9**
STKA				ScP		**ScP**		**14 31 54.0**	**-1.1**
STKA	**Stephens Creek**	**28.85**	**202**	P		**P**		**14 25 10.7**	**0.0**
	comp=Z,18nm,0.7s,baz=33,slow=14,SNR=39								
STKA				pPcP				14 28 45.4	
	comp=Z,167nm,1.0s,baz=19,slow=3.1,SNR=4.4								
STKA				S		**S**		**14 29 57.2**	**+0.9**
	comp=Z,19nm,0.9s,baz=106,slow=19,SNR=1.3								
STKA				ScP		**ScP**		**14 31 54.0**	**-1.1**
	comp=Z,38nm,1.0s,baz=0.0,slow=4.0,SNR=2.7								
STKA				LR		LR		14 36 48.0	
	comp=Z,56μm,19.8s,baz=7.0,slow=36								
MATI	**Mati**	**29.94**	**294**	*eP*		**P**		**14 25 19.7**	**-0.9**
KMSI	**Cibinong**	**30.24**	**280**	P		P		14 25 25.5	+2.3
	comp=Z,2μm,1.0s,comp=Z,32μmcomp=Z,104μm								
FITZ	**Fitzroy Crossi**	**30.26**	**243**	*eP*		**P**		**14 25 22.9**	**-0.4**
	comp=Z,64nm,0.5s								
CAN	**Canberra**	**30.27**	**188**	*eP*		**P**		**14 25 23.4**	**+0.1**
CAN				pmax		pmax			
	comp=Z,92nm,1.1s								
CAN	**Canberra**	**30.27**	**188**	*eP*		**P**		**14 25 23.4**	**+0.1**
	comp=Z,92nm,1.1s								
DAV	**Davao City (W)**	**30.61**	**293**	⇑*eP*		P		14 25 30.5	+4.0
BBSI	**Bau Bau**	**31.00**	**268**	P		**P**		**14 25 30.3**	**+0.3**
	comp=Z,736nm,1.2s,comp=Z,26μmcomp=Z,114μm								
LUWI	**Luwuk**	**31.16**	**277**	P		**P**		**14 25 31.2**	**-0.1**
	comp=Z,715nm,1.5s,comp=Z,18μmcomp=Z,159μm								
BUKP	**Musuan**	**31.40**	**294**	*eP*		P		14 25 39.8	+6.3
MMRI	**Maumere**	**31.42**	**262**	P		**P**		**14 25 33.1**	**-0.5**
	comp=Z,782nm,2.4s,comp=Z,44μmcomp=Z,165μm								
CTBH	**Cotabato--PC H**	**31.89**	**293**	‖*iP*		**P**		**14 25 38.0**	**+0.2**
CGP	**Cagayan de Oro**	**31.96**	**295**	*eP*		P		14 25 42.3	+3.9
BBOO	**Buckleboo**	**32.01**	**209**	*eP*		**P**		**14 25 37.6**	**-1.0**
	comp=Z,516nm,1.0s								
MRSI	**Marisa**	**32.23**	**279**	P		**P**		**14 25 38.7**	**-2.0**
	comp=Z,192nm,1.0s,comp=Z,8μmcomp=Z,90μm								
MSLP	**Maasin**	**32.53**	**298**	*eP*		P		14 25 49.7	+6.4
PLP	**Palo**	**32.90**	**300**	‖*eP*		**P**		**14 25 44.7**	**-1.9**
PAGZ	**Pagadian**	**32.92**	**293**	*eP*		P		14 25 54.5	+7.7
BSSI	**Bau Bau, Buton**	**33.06**	**267**	P		**P**		**14 25 48.7**	**+0.6**
	comp=Z,696nm,1.3s,comp=Z,27μmcomp=Z,101μm								
OCLP	**Ormoc**	**33.17**	**299**	*eP*		P		14 25 54.9	+5.9
LLP	**Lapu-Lapu**	**33.40**	**298**	*eP*		P		14 25 55.3	+4.3
BKSI	**Bulukumba**	**33.44**	**268**	P		**P**		**14 25 50.6**	**-0.7**
	comp=Z,210nm,1.1s,comp=Z,9μmcomp=Z,92μm								
SNPH	**Sibulan**	**33.64**	**295**	*eP*		**P**		**14 25 51.9**	**-1.2**
KAPI	**Kappang**	**33.82**	**269**	P		**P**		**14 25 53.6**	**-1.0**
	comp=Z,1μm,1.0s,SNR=16								
KAPI	**Kappang**	**33.82**	**269**	*eP*		**P**		**14 25 51.7**	**-2.9**
	comp=Z,47nm,0.7s								
KAPI	**Kappang**	**33.82**	**269**	P		**P**		**14 25 52.9**	**-1.7**
	comp=Z,281nm,1.4s,comp=Z,11μmcomp=Z,100μm								
SPSI	**Sidrap Palu**	**33.85**	**271**	P		**P**		**14 25 54.2**	**-0.7**
	comp=Z,236nm,1.1s,comp=Z,8μmcomp=Z,91μm								
TTSI	**Tana Toraja**	**33.87**	**272**	P		**P**		**14 25 55.5**	**+0.5**
	comp=Z,225nm,1.6s,comp=Z,12μmcomp=Z,107μm								
GUIM	**Jordan**	**34.75**	**297**	*eP*		P		14 26 09.0	+6.3
RCP	**Roxas**	**35.02**	**299**	‖*eP*		P		14 26 11.4	+6.3
FORT	**Forrest**	**35.05**	**220**	*eP*		**P**		**14 26 04.5**	**-0.6**
	comp=Z,108nm,0.6s								
OUZ	**Omahuta**	**35.05**	**151**	*eP*		**P**		**14 26 05.0**	**0.0**
	comp=Z,107nm,0.7s								
AFI	**Afiamalu**	**35.07**	**107**	P		**P**		**14 26 06.3**	**+0.8**
	comp=Z,54nm,0.8s								
AFI	**Afiamalu**	**35.07**	**107**	P		**P**		**14 26 04.7**	**-0.8**
	comp=Z,61nm,0.9s,baz=52,slow=19,SNR=2.9								
OTRP	**Odiongan**	**36.02**	**299**	*eP*		P		14 26 18.6	+5.1
GQP	**Guinayangan**	**36.38**	**302**	‖*eP*		P		14 26 16.3	-0.3
MBWA	**Marble Bar**	**36.55**	**241**	*eP*		**P**		**14 26 16.8**	**-1.3**
	comp=Z,62nm,1.0s								
MYLDM	**Lahad Datu**	**36.65**	**286**	P		**P**		**14 26 20.5**	**+1.6**
MYLDM	**Lahad Datu**	**36.65**	**286**	P		**P**		**14 26 20.5**	**+1.6**
	comp=Z,532nm,1.2s,comp=Z,31μmcomp=Z,155μm								
SJMP	**San Jose**	**36.85**	**299**	*eP*		P		14 26 28.1	+7.5
TSM	**Tawau**	**37.02**	**284**	P		**P**		**14 26 22.3**	**+0.2**
LQP	**Lukban**	**37.25**	**301**	‖*eP*		pP		14 26 35.5	-4.6
TGY	**Tagaytay City**	**37.76**	**301**	P		**P**		**14 26 28.9**	**+0.5**
TGY	**Tagaytay City**	**37.76**	**301**	P		**P**		**14 26 28.9**	**+0.5**
	comp=Z,654nm,0.9s,baz=140,slow=4.9,SNR=8.6								
TGY					LR	LR		14 39 51.7	
	comp=Z,133nm,19.6s,baz=309,slow=33								
ENPP	**El Nido**	**37.82**	**296**	*eP*		P		14 26 31.0	+2.2
PPR	**Puerto Princes**	**37.90**	**293**	‖*iP*		P		14 26 36.9	+7.4
TAU	**Tasmania Unive**	**37.96**	**188**	P		**P**		**14 26 31.0**	**+1.4**
	comp=Z,3μm,1.1s,SNR=12								
TAU	**Tasmania Unive**	**37.96**	**188**	*eP*		**P**		**14 26 30.8**	**+1.2**
TAU				pmax		pmax			
	comp=Z,109nm,0.8s								
TAU	**Tasmania Unive**	**37.96**	**188**	*eP*		**P**		**14 26 30.8**	**+1.2**
	comp=Z,109nm,0.8s								
SDKM	**Sandakan**	**38.02**	**286**	P		**P**		**14 26 30.0**	**-0.6**
BALP	**Baler**	**38.02**	**304**	*eP*		**P**		**14 26 30.8**	**+0.3**
PALP	**Palanan**	**38.02**	**306**	*eP*		P		14 26 35.7	+5.3
BATP	**Bataraza**	**38.41**	**291**	*eP*		P		14 26 35.8	+1.9
IGBI	**Denpasar**	**38.43**	**262**	P		**P**		**14 26 31.6**	**-2.4**
	comp=Z,223nm,1.6s,comp=Z,36μm								
CAUP	**Cauayan**	**38.44**	**306**	*eP*		P		14 26 40.3	+6.3
KDM	**Kudat**	**38.73**	**288**	P		P		14 26 42.1	+5.6
SGCP	**Mt. Cagua**	**38.97**	**308**	*eP*		P		14 26 44.0	+5.6
KKM	**Kota Kinabalu**	**39.07**	**286**	*eP*		**P**		**14 26 38.7**	**-0.8**
	comp=Z,87nm,1.0s								
KKM	**Kota Kinabalu**	**39.07**	**286**	P		**P**		**14 26 39.7**	**+0.2**
BCPH	**Baguio City Da**	**39.17**	**304**	⇑*iP*		P		14 26 45.2	+4.9
URZ	**Urewera**	**39.17**	**150**	*eP*		**P**		**14 26 39.6**	**-0.3**
	comp=Z,62nm,0.7s								
JAGI	**Jajag Banyuwa**	**39.39**	**263**	P		**P**		**14 26 40.1**	**-2.0**
	comp=Z,1μm,1.0s,comp=Z,28μmcomp=Z,116μm								
APYP	**Conner**	**39.40**	**306**	*eP*		**P**		**14 26 42.0**	**0.0**
SCZP	**Santa Cruz**	**39.43**	**303**	*eP*		**P**		**14 26 40.0**	**-2.3**
ABRA	**Dolores**	**39.72**	**306**	*eP*		**P**		**14 26 44.1**	**-0.6**
BOLP	**Bolinao**	**39.72**	**303**	*eP*		**P**		**14 26 43.9**	**-0.8**
BLJI	**Banyuglugur**	**39.92**	**264**	P		**P**		**14 26 44.8**	**-1.7**
	comp=Z,433nm,0.9s,comp=Z,11μm								
GMJI	**Gumukmas**	**40.09**	**263**	P		**P**		**14 26 46.3**	**-1.5**
	comp=Z,324nm,2.0s,comp=Z,10μmcomp=Z,77μm								
PIP	**Pasuquin**	**40.15**	**306**	‖*eP*		P		14 26 53.9	+5.6
JOW	**Kunigami**	**40.26**	**324**	*eP*		**P**		**14 26 49.5**	**+0.4**
	comp=Z,36nm,0.8s								
JHJ	**Hachijo jima 2**	**40.35**	**342**	P		**P**		**14 26 48.5**	**-1.2**
	comp=Z,774nm,0.8s,baz=170,slow=10,SNR=16								
JHJ				S		**S**		**14 32 54.0**	**+0.9**
	comp=Z,326nm,1.1s,baz=87,slow=18,SNR=3.5								
JHJ				LR		LR		14 41 33.2	
	comp=Z,10μm,19.2s,baz=268,slow=33								
SNZO	**South Karori**	**40.55**	**155**	*eP*		**P**		**14 26 50.7**	**-0.6**
	comp=Z,185nm,0.7s								
KHZ	**Kahutara**	**41.02**	**157**	*eP*		**P**		**14 26 54.2**	**-0.9**
	comp=Z,201nm,0.8s

ERM	**Erimo**	**47.98**	**349**	*e*P		**P**	**14 27 51.3**	**+0.7**
ERM				pmax		pmax			
	comp=Z,28nm,1.1s								
ERM	**Erimo**	**47.98**	**349**	*e*P		**P**	**14 27 49.5**	**-1.0**
	comp=Z,141nm,1.3s								
GZH	**Guangzhou**	**48.43**	**307**	P		P	14 27 57.3	+2.9
GZH				S		S	14 34 57.6	+6.9
GZH				LR		LR			
	comp=N,15μm,30.5s								
GZH				LR		LR			
	comp=E,18μm,25.6s								
GZH				LR		LR			
	comp=Z,34μm,24.5s								
KSRS	**Korea Array**	**48.78**	**333**	P		**P**	**14 27 56.5**	**-0.3**
	comp=Z,43nm,0.9s,baz=149,slow=8.8,SNR=143								
KSRS				S		**S**	**14 34 58.6**	**+3.4**
	comp=Z,2.6nm,1.0s,baz=138,slow=15,SNR=4.7								
KSRS				ScS		ScS	14 37 51.1	+7.7	
	comp=Z,2.8nm,1.1s,baz=150,slow=5.6,SNR=4.4								
KSRS				LR		LR	14 47 42.4		
	comp=Z,6μm,18.1s,baz=142,slow=35								
KSAR	**Wonju Array Be**	**48.79**	**333**	P		**P**	**14 27 56.5**	**-0.4**
KSAR				S		**S**	**14 34 58.6**	**+3.3**
KSAR				ScS		ScS	14 37 51.1	+7.6
MCQ	**Macquarie Isla**	**49.32**	**176**	*e*P		**P**	**14 28 00.6**	**-0.1**
MCQ	**Macquarie Isla**	**49.32**	**176**	*e*P		**P**	**14 28 00.6**	**-0.1**
	comp=Z,36μm,1.1s								
XMAS	**Kiritimati**	**49.33**	**83**	*e*P		**P**	**14 28 01.7**	**+0.3**
	comp=Z,24nm,0.7s								
INCN	**Inchon**	**49.41**	**332**	P		**P**	**14 28 02.2**	**+0.5**
	SNR=76								
INCN	**Inchon**	**49.41**	**332**	*e*P		**P**	**14 28 01.6**	**-0.1**
	comp=Z,246nm,1.0s								
QIZ	**Qiongzhong**	**49.46**	**300**	*e*P		**P**	**14 28 02.9**	**+0.6**
	comp=Z,49nm,1.1s								
YUK	**Yuzh-Kuril'sk**	**49.53**	**353**	*c i*P		**P**	**14 28 00.5**	**-1.9**
YUK				*i* *PP		**pP**	**14 28 20.7**	**+1.8**
YUK				*i*			14 29 26.8		
YUK				*i*			14 30 00.3		
YUK				*i* PPP		PPP	14 30 59.9		
YUK				*i* S		**S**	**14 35 03.5**	**-2.0**
YUK				*i* SS		**ScS**	**14 37 49.7**	**+1.5**
YUK				pmax		pmax			
	comp=Z,9μm,8.5s								
YUK				pmax		pmax			
	comp=Z,699nm,1.5s								
YUK				pmax		pmax			
	comp=E,493nm,1.5s								
YUK				pmax		pmax			
	comp=N,395nm,0.8s								
NJ2	**Nanjing**	**49.74**	**321**	*e*P		**P**	**14 28 04.6**	**+0.4**
NJ2				pP		**pP**	**14 28 22.3**	**+1.6**
NJ2				sP		**sP**	**14 28 29.1**	**+1.1**
NJ2				PP		**PP**	**14 30 00.9**	**+1.5**
NJ2				S		**S**	**14 35 11.0**	**+2.2**
NJ2				sS		**sS**	**14 35 38.5**	**+1.8**
NJ2				pmax		pmax			
	comp=Z,220nm,1.0s								
NJ2				pmax		pmax			
	comp=Z,8μm,6.5s								
NJ2				LR		LR			
	comp=N,31μm,21.8s								
NJ2				LR		LR			
	comp=E,30μm,22.3s								
NJ2				LR		LR			
	comp=Z,11μm,24.0s								
ASAJ	**Asahikawa**	**50.12**	**350**	*e*P		**P**	**14 28 07.2**	**+0.3**
	comp=Z,16nm,0.8s								
ASAJ	**Asahikawa**	**50.12**	**350**	P		**P**	**14 28 06.4**	**-0.5**
	comp=Z,299nm,0.7s,baz=228,slow=10,SNR=23								
ASAJ				LR		LR	14 46 58.8		
	comp=Z,29μm,21.9s,baz=167,slow=33								
MYKOM	**Kota Tinggi**	**50.29**	**277**	P		**P**	**14 28 09.0**	**+0.3**
KUR	**Kuril'sk**	**50.50**	**355**	*e*P		**P**	**14 28 08.1**	**-1.6**
KUR				pmax		pmax			
	comp=Z,10μm,4.4s								
KUR				pmax		pmax			
	comp=Z,854nm,1.5s								
KGM	**Kluang**	**50.84**	**277**	P		**P**	**14 28 13.3**	**+0.4**
KTGM	**Kuala Trenggan**	**51.58**	**281**	P		**P**	**14 28 19.0**	**+0.5**
WHN	**Wuhan**	**51.78**	**316**	⇓P		**P**	**14 28 21.1**	**+1.5**
WHN				S		S	14 35 43.5	+6.3
WHN				LR		LR			
	comp=N,34μm,21.1s								
WHN				LR		LR			
	comp=E,25μm,20.6s								
WHN				LR		LR			
	comp=Z,95μm,33.6s								
VLA	**Vladivostok**	**52.01**	**340**	*c i*P		**P**	**14 28 20.7**	**-0.4**
VLA				pmax		pmax			
	comp=Z,66nm,1.5s								
FRIM	**Kepong**	**52.70**	**278**	P		**P**	**14 28 27.0**	**+0.2**
YSS	**Yuzh-Sakhalins**	**52.84**	**351**	*i* P		P	14 28 29.6	+2.4
USRK	**Ussuriysk Arra**	**52.93**	**341**	P		**P**	**14 28 27.8**	**-0.1**
	comp=Z,22nm,0.7s,baz=173,slow=7.7,SNR=44								
USRK				S		**S**	**14 35 54.9**	**+2.5**
	comp=Z,1.9nm,0.8s,baz=148,slow=41,SNR=2.4								
USRK				ScS		**ScS**	**14 38 11.2**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=163,slow=14,SNR=1.9								
USRK				LR		LR	14 47 29.3		
	comp=Z,10μm,21.0s,baz=147,slow=32								
DL2	**Dalian**	**52.99**	**329**	⇑*i*P		**P**	**14 28 28.4**	**-0.1**
DL2				S		**S**	**14 35 54.0**	**+0.5**
DL2				pmax		pmax			
	comp=Z,470nm,1.0s								
DL2				pmax		pmax			
	comp=Z,1μm,5.4s								
DL2				LR		LR			
	comp=N,5μm,22.9s								
DL2				LR		LR			
	comp=Z,11μm,29.4s								
IPM	**Ipoh**	**53.49**	**279**	*e*P		**P**	**14 28 31.6**	**-1.0**
	comp=Z,44nm,0.9s								
IPM	**Ipoh**	**53.49**	**279**	P		**P**	**14 28 32.7**	**+0.1**
TIA	**Tai'an**	**53.59**	**323**	⇑P		**P**	**14 28 32.8**	**-0.1**
TIA				S		**S**	**14 36 02.9**	**+1.2**
TIA				pmax		pmax			
	comp=Z,490nm,1.0s								
TIA				LR		LR			
	comp=N,21μm,26.1s								
TIA				LR		LR			
	comp=E,26μm,28.5s								
TIA				LR		LR			
	comp=Z,27μm,28.5s								
KULM	**Kulim**	**54.00**	**280**	*e*P		**P**	**14 28 35.3**	**-1.0**
	comp=Z,50nm,0.7s								
KULM	**Kulim**	**54.00**	**280**	P		**P**	**14 28 36.5**	**+0.2**
MDJ	**Mudanjiang**	**54.13**	**339**	P		**P**	**14 28 36.3**	**-0.4**
MDJ				pP		**pP**	**14 28 52.0**	**-1.4**
MDJ				sP		**sP**	**14 28 59.1**	**-1.5**
MDJ				PcP		**PcP**	**14 29 40.3**	**-0.4**
MDJ				PP		**PP**	**14 30 38.0**	**-1.0**
MDJ				ScP		**ScP**	**14 33 33.3**	**-0.1**
MDJ				PcS		**PcS**	**14 33 39.8**	**-0.2**
MDJ				S		**S**	**14 36 10.4**	**+1.7**
MDJ				ScS		**ScS**	**14 38 19.4**	**-0.8**
MDJ				SS		**SS**	**14 39 51.3**	**-0.1**
MDJ				pmax		pmax			
	comp=Z,23nm,1.4s								
MDJ				pmax		pmax			
	comp=Z,6μm,10.9s								
MDJ				LR		LR			
	comp=N,16μm,39.1s								
MDJ				LR		LR			
	comp=Z,15μm,28.2s								
MDJ	**Mudanjiang**	**54.13**	**339**	*e*P		**P**	**14 28 34.6**	**-2.1**
	comp=Z,3.6nm,0.4s								
KIP	**Kipapa**	**54.22**	**59**	*e*P		**P**	**14 28 39.3**	**+1.6**
KIP				pmax		pmax			
	comp=Z,10μm,3.9s								
KIP	**Kipapa**	**54.22**	**59**	*e*P		**P**	**14 28 39.3**	**+1.6**
	comp=Z,18μm,3.9s								
SNY	**Shenyang**	**54.29**	**332**	⇑P		**P**	**14 28 37.4**	**-0.4**
SNY				S		**S**	**14 36 08.9**	**-1.9**
SNY				pmax		pmax			
	comp=Z,76nm,1.0s								
SNY				pmax		pmax			
	comp=Z,7μm,10.3s								
SNY				LR		LR			
	comp=N,10μm,28.8s								
SNY				LR		LR			
	comp=E,14μm,24.0s								
SNY				LR		LR			
	comp=Z,32μm,38.7s								
CN2	**Changchun**	**55.05**	**335**	*e*P		**P**	**14 28 42.5**	**-0.9**
CN2				*e*pP		**pP**	**14 28 58.4**	**-1.7**
CN2				*e*PP		**PP**	**14 30 48.0**	**+0.7**
CN2				*e*S		**S**	**14 36 19.5**	**-1.6**
CN2				*e*SS		**SS**	**14 40 04.1**	**-1.8**
CN2				pmax		pmax			
	comp=Z,40nm,1.1s								
CN2				LR		LR			
	comp=Z,15μm,30.0s								
ENH	**Enshi**	**55.10**	**313**	*e*P		**P**	**14 28 44.1**	**0.0**
PSI	**Prapat**	**55.30**	**277**	S		**S**	**14 36 23.5**	**-2.2**
	comp=Z,1.5nm,0.3s,baz=137,slow=18,SNR=2.0								
GYA	**Guiyang**	**55.37**	**307**	⇑*i*P		**P**	**14 28 46.0**	**-0.1**
GYA				pP		**pP**	**14 29 04.3**	**+1.4**
GYA				sP		**sP**	**14 29 12.0**	**+1.9**
GYA				PcP		**PcP**	**14 29 47.4**	**+1.4**
GYA				PP		**PP**	**14 30 53.3**	**+2.7**
GYA				ScP		**ScP**	**14 33 39.0**	**-0.5**
GYA				S		**S**	**14 36 21.8**	**-4.3**
GYA				sS		**sS**	**14 36 55.4**	**+0.9**
GYA				SS		**SS**	**14 40 12.3**	**+0.6**
GYA				pmax		pmax			
	comp=Z,40nm,1.0s								
SKR	**Severo-Kuril's**	**55.72**	**2**	⇑*i*P		**P**	**14 28 46.0**	**-2.0**
SKR				*PP		**pP**	**14 29 08.0**	**+3.3**
SKR				*e*			14 30 56.0		
SKR				*i* S		**S**	**14 36 28.0**	**-1.6**
SKR				*SS		**sS**	**14 36 59.6**	**+1.6**
SKR				*e*SS		**SS**	**14 40 16.0**	**-0.1**
SKR				pmax		pmax			
	comp=E,160nm,0.9s								
SKR				pmax		pmax			
	comp=Z,330nm,0.9s								
SKR				pmax		pmax			
	comp=N,80nm,0.6s								
SKR				pmax		pmax			
	comp=N,3μm,12.0s								
SKR				pmax		pmax			
	comp=Z,5μm,12.0s								
SKR				pmax		pmax			
	comp=N,2μm,6.0s								
SKR				pmax		pmax			
	comp=Z,3μm,6.0s								
SKR				smax		smax			
	comp=N,19μm,20.0s								
SKR				MLR		MLR			
	comp=N,12μm,18.0s								
SKR				MLR		MLR			
	comp=Z,16μm,18.0s								
HABR	**Khabarovsk**	**55.91**	**345**	*ce*P		**P**	**14 28 48.8**	**-0.6**
HABR				*e*PP		**pP**	**14 29 03.0**	**-3.2**
HABR				*e*SP		**sP**	**14 29 10.0**	**-3.4**
HABR							14 29 45.7		
HABR							14 30 51.6		
HABR				*e*PPP		PPP	14 32 05.8		
HABR				*e*S		**S**	**14 36 31.4**	**-0.9**
HABR				*e*SS		**sS**	**14 36 56.9**	**-3.8**
HABR				*e*			14 38 30.6		
HABR				*e*SS		**SS**	**14 40 17.2**	**-2.0**
HABR				pmax		pmax			
	comp=Z,275nm,0.9s								
HABR				pmax		pmax			
	comp=Z,1μm,2.4s								
HABR				MLR		MLR			
	comp=Z,3μm,16.0s								
COCO	**West Island**	**56.56**	**259**	*e*P		**P**	**14 28 54.9**	**+0.2**
COCO				pmax		pmax			
	comp=Z,381nm,1.5s								
COCO	**West Island**	**56.56**	**259**	*e*P		**P**	**14 28 54.9**	**+0.2**
	comp=Z,381nm,1.5s								
BJT	**Baijiatuan**	**56.73**	**326**	*e*P		**P**	**14 28 54.8**	**-0.7**
PPT	**Papeete**	**56.74**	**108**	P		**P**	**14 28 57.2**	**+1.2**
PPT	**Papeete**	**56.74**	**108**	P		**P**	**14 28 57.2**	**+1.2**
	comp=Z,123nm,0.8s,baz=246,slow=19,SNR=3.0								
PPT				LR		LR	14 49 00.9		
	comp=Z,10μm,21.7s,baz=274,slow=31								
BJI	**Beijing**	**56.74**	**326**	P		**P**	**14 28 55.0**	**-0.5**
BJI				pmax		pmax			
	comp=Z,65nm,0.8s								
BJI				pmax		pmax			
	comp=Z,1μm,6.2s								
TIAR	**Tiarei**	**56.96**	**107**	*e*P		P	14 29 03.7	+6.2
	comp=Z,1μm,0.8s								
TVO	**Taravao**	**57.07**	**108**	*e*P		P	14 29 04.7	+6.4
	comp=Z,451nm,0.7s								
TIY	**Taiyuan**	**57.41**	**322**	*e*P		P	14 29 04.4	+4.0
TIY				S		**S**	**14 36 56.9**	**+4.1**
TIY				LR		LR			
	comp=N,9μm,16.9s								
TIY				LR		LR			
	comp=E,8μm,16.0s								
TIY				LR		LR			
	comp=Z,30μm,24.6s								
KLR	**Kul'dur**	**57.50**	**343**	*e*P		P	14 28 56.9	-3.8
KLR				*e*SSS		SSS	14 43 05.5		
KLR				pmax		pmax			
	comp=N,300nm,2.2s								
KLR				pmax		pmax			
	comp=E,300nm,2.2s								
KLR				pmax		pmax			
	comp=Z,1μm,2.2s								
KLR				pmax		pmax			
	comp=N,4μm,11.0s								
KLR				pmax		pmax			
	comp=Z,11μm,11.0s								
XAN	**Xi'an**	**57.55**	**316**	P		**P**	**14 29 01.6**	**+0.2**
XAN				pP		**pP**	**14 29 17.3**	**-1.0**
XAN				sP		**sP**	**14 29 22.8**	**-2.7**
XAN				PP		**PP**	**14 31 10.4**	**+0.6**
XAN				S		**S**	**14 36 50.5**	**-4.1**
XAN				SS		**SS**	**14 40 43.8**	**-1.9**
XAN				pmax		pmax			
	comp=Z,58nm,0.9s								
XAN				pmax		pmax			
	comp=Z,3μm,13.5s								
XAN				LR		LR			
	comp=N,16μm,35.0s								
XAN				LR		LR			
	comp=E,4μm,37.6s								
XAN				LR		LR			
	comp=Z,8μm,37.2s								
TBI	**Tubuai**	**57.56**	**114**	*e*P		P	14 29 08.2	+6.5
	comp=Z,203nm,0.8s								
TBI				*e*S		S	14 37 00.7	+5.6	
	comp=Z,24μm,33.2s								
TBI				*e*LQ		LQ	14 43 30.4		
	comp=Z,41μm,30.8s								
TBI				*e*LR		LR	14 45 52.3		
	comp=Z,92μm,36.8s								
KMI	**Kunming**	**57.97**	**304**	P		**P**	**14 29 06.3**	**+1.5**
KMI				pP		**pP**	**14 29 24.8**	**+3.2**
KMI				sP		**sP**	**14 29 32.8**	**+3.9**
KMI				PP		**PP**	**14 31 16.1**	**+2.2**
KMI				S		**S**	**14 37 01.3**	**+0.5**
KMI				sS		**sS**	**14 37 32.9**	**+3.6**
KMI				SS		**SS**	**14 40 53.8**	**+0.9**
KMI				pmax		pmax			
	comp=Z,290nm,2.0s								
KMI				pmax		pmax			
	comp=Z,10μm,7.9s								
KMI				LR		LR			
	comp=N,6μm,23.0s								
KMI				LR		LR			
	comp=E,21μm,22.5s								
KMI				LR		LR			
	comp=Z,39μm,29.0s								
PET	**Petropavlovsk**	**58.17**	**4**	*ce*P		**P**	**14 29 04.8**	**-0.5**
PET				*e*			14 29 55.4		
PET				*e*			14 38 48.6		
PET				pmax		pmax			
	comp=Z,429nm,0.6s								
PET				pmax		pmax			
	comp=Z,5μm,8.5s								
PET				pmax		pmax			
	comp=Z,6μm,15.0s								
MEH	**Mehetia**	**58.20**	**108**	*e*P		P	14 29 12.3	+6.1
	comp=Z,863nm,0.8s								
PEA0B	**Petropavlovsk-**	**58.20**	**3**	*e*P		**P**	**14 29 05.6**	**0.0**
PETK	**Petropavlovsk-**	**58.20**	**3**	P		**P**	**14 29 05.7**	**+0.1**
PETK				S		S	14 37 07.8	+5.4
PETK							14 38 53.9		
PETK				pmax		pmax			
	comp=Z,48nm,0.7s								
PETK				smax		smax			
	comp=N,3.0nm,0.9s								
PETK				pmax		pmax			
	comp=N,15nm,1.2s								
PETK	**Petropavlovsk-**	**58.20**	**3**	P		**P**	**14 29 05.7**	**+0.1**
PETK				S		S	14 37 07.8	+5.4
PETK				ScS		**ScS**	**14 38 53.9**	**+4.5**
PETK				P'P'			14 58 47.0		
PETK	**Petropavlovsk-**	**58.20**	**3**	P		**P**	**14 29 05.7**	**+0.1**
	comp=N,48nm,0.7s,baz=170,slow=7.6,SNR=60								
PETK				S		S	14 37 07.8	+5.4	
	comp=N,3.3nm,0.9s,baz=154,slow=11,SNR=3.0								
PETK				ScS		**ScS**	**14 38 53.9**	**+4.5**	
	comp=N,15nm,1.2s,baz=161,slow=9.2,SNR=5.7								
PETK				LR		LR	14 50 09.8		
	comp=N,22μm,21.4s,baz=172,slow=32								
PETK				PKPPKP		**P'P'df**	**14 58 47.0**	**+2.7**	
	comp=N,1.6nm,0.8s,baz=69,slow=8.0,SNR=2.6								
CMAR	**Chiang Mai Arr**	**58.87**	**295**	P		**P**	**14 29 12.2**	**+1.4**
CMAR				pP		pP	14 29 35.7	+7.9	
CMAR				P'P'			14 58 47.8		
CMAR				*e*			15 06 27.1		
CMAR	**Chiang Mai Arr**	**58.87**	**295**	P		**P**	**14 29 12.2**	**+1.4**
	comp=N,92nm,0.8s,baz=116,slow=5.2,SNR=396								
CMAR				pP		pP	14 29 35.7	+7.9	
	comp=N,203nm,0.9s,baz=122,slow=4.7,SNR=5.9								
CMAR				LR		LR	14 52 43.0		
	comp=N,7μm,19.2s,baz=105,slow=34								
CMAR				PKPPKP		**P'P'df**	**14 58 47.8**	**+0.9**	
	comp=N,5.5nm,0.9s,baz=282,slow=4.2,SNR=9.8								
CMAR				P4KPbc			15 06 27.1		
	comp=N,3.5nm,0.9s,baz=94,slow=2.5,SNR=15								
CHTO	**Chiang Mai**	**58.98**	**295**	*e*P		**P**	**14 29 12.6**	**+0.9**
CHTO				pmax		pmax			
	comp=Z,147nm,1.3s								
CHTO	**Chiang Mai**	**58.98**	**295**	P		**P**	**14 29 13.0**	**+1.4**
	SNR=79								
CHTO	**Chiang Mai**	**58.98**	**295**	*e*P		**P**	**14 29 12.6**	**+0.9**
	comp=Z,147nm,1.3s								
CD2	**Chengdu**	**59.69**	**310**	P		**P**	**14 29 17.3**	**+0.9**
CD2				PcP		**PcP**	**14 30 04.5**	**+1.6**
CD2				PP		**PP**	**14 31 31.3**	**+2.4**
CD2				S		**S**	**14 37 23.6**	**+1.0**
CD2				ScS		**ScS**	**14 39 01.4**	**0.0**
CD2				SS		**SS**	**14 41 20.8**	**+1.2**
CD2				pmax		pmax			
	comp=Z,270nm,0.8s								
CD2				pmax		pmax			
	comp=Z,16μm,8.4s								
CD2				LR		LR			
	comp=N,27μm,24.0s								
CD2				LR		LR			
	comp=E,30μm,23.8s								
CD2				LR		LR			
	comp=Z,20μm,25.0s								
HHC	**Hu-ho-hao-te**	**59.91**	**324**	⇑P		**P**	**14 29 18.0**	**+0.2**
HHC				pP		**pP**	**14 29 34.3**	**-0.5**
HHC				sP		**sP**	**14 29 41.1**	**-0.9**
HHC				PP		**PP**	**14 31 32.4**	**+1.7**
HHC				S		**S**	**14 37 25.5**	**+0.3**
HHC				sS		**sS**	**14 37 50.0**	**-3.9**
HHC				SS		**SS**	**14 41 22.8**	**0.0**
HHC				pmax		pmax			
	comp=Z,120nm,1.1s								
HHC				pmax		pmax			
	comp=Z,19μm,5.6s								
HHC				LR		LR			
	comp=N,9μm,16.9s								
HHC				LR		LR			
	comp=E,6μm,16.9s								
HHC				LR		LR			
	comp=Z,8μm,17.7s								
FX1	**Attu Island--F**	**60.18**	**13**	*e*P		**P**	**14 29 19.0**	**-0.2**
AMKA	**Amchitka**	**60.49**	**18**	P		**P**	**14 29 21.9**	**+0.6**
BTO	**Baotou**	**60.68**	**323**	*e*P		**P**	**14 29 23.4**	**+0.4**
BTO				pmax		pmax			
	comp=Z,35nm,0.9s								
HIA	**Hailar**	**61.78**	**335**	*e*P		**P**	**14 29 29.1**	**-1.1**
	comp=Z,44nm,0.8s								
DRV	**Dumont d'Urvil**	**62.08**	**186**	P		P	14 28 58.0	-34
DRV	**Dumont d'Urvil**	**62.08**	**186**	PP		PP	14 31 35.0	-14
DRV				S		S	14 37 31.0	-21
DRV				SS		SS	14 41 47.0	-8.3
DRV				L		L	14 45 00.0		
DRV				R			14 47 00.0		
DRV	**Dumont d'Urvil**	**62.08**	**186**	P		P	14 28 58.0	-34
DRV	**Dumont d'Urvil**	**62.08**	**186**	PP		PP	14 31 35.0	-14
DRV				S		S	14 37 31.0	-21
DRV				SS		SS	14 41 47.0	-8.3
DRV				L		L	14 45 00.0		
DRV				R			14 47 00.0		
LZH	**Lanzhou**	**62.16**	**316**	⇑P		**P**	**14 29 34.8**	**+1.6**
LZH				pP		**pP**	**14 29 51.3**	**+1.1**
LZH				sP		**sP**	**14 29 58.1**	**+0.7**
LZH				PP		PP	14 31 54.5	+3.8
LZH				S		**S**	**14 37 55.8**	**+1.7**
LZH				sS		**sS**	**14 38 22.0**	**-0.9**
LZH				SS		**SS**	**14 42 00.3**	**+2.0**
LZH				pmax		pmax			
	comp=Z,270nm,1.5s								
LZH				pmax		pmax			
	comp=Z,1μm,5.3s								
LZH				LR		LR			
	comp=N,4μm,17.5s								
LZH				LR		LR			
	comp=E,4μm,18.0s								
LZH				LR		LR			
	comp=Z,5μm,19.6s								
PBA	**Port Blair**	**62.91**	**286**	*ex*		**P**	**14 29 39.6**	**+1.2**
PBA				AMB		AMB	14 30 08.2		
	comp=Z,526nm,0.7s								
DGPR	**DIGLIPUR**	**63.06**	**288**	*ex*		**P**	**14 29 39.4**	**+0.1**
DGPR				AMB		AMB	14 29 46.0		
	comp=Z,583nm,0.4s								
IMP	**Imphal**	**65.29**	**300**	*i* P		P	14 29 57.0	+3.1
IMP				*ex*		x	14 32 39.0		
CLNS	**Chul'man**	**66.16**	**343**	*e*P		P	14 30 03.4	+4.6
CLNS				*e*			14 30 30.3		
CLNS				*e*			14 32 33.3		
CLNS				*e*PPP		PPP	14 34 03.7		
CLNS				*e*S		S	14 38 47.1	+4.5	
CLNS				*e*SS		**SS**	**14 43 02.0**	**+2.3**	
CLNS				pmax		pmax			
	comp=Z,290nm,1.0s								
CLNS				pmax		pmax			
	comp=N,113nm,0.9s								
CLNS				pmax		pmax			
	comp=E,68nm,0.9s								
CLNS				pmax		pmax			
	comp=N,50nm,1.2s								
CLNS				pmax		pmax			
	comp=E,34nm,1.1s								
CLNS				pmax		pmax			
	comp=Z,29nm,1.1s								
CLNS				smax		smax			
	comp=N,1μm,11.0s								
CLNS				smax		smax			
	comp=E,5μm,12.8s								
CIT	**Chita**	**66.46**	**334**	*e*P		**P**	**14 30 00.2**	**-0.7**
CIT				*e*			14 30 41.7		
CIT				*e*			14 32 29.9		
CIT				*e*			14 38 49.4		
CIT				pmax		pmax			
	comp=Z,665nm,2.7s								
GTA	**Gaotai**	**66.58**	**317**	⇑P		**P**	**14 30 03.3**	**+1.3**
GTA				S		**S**	**14 38 51.1**	**+2.6**
GTA				SS		SS	14 43 14.5	+7.6
GTA				pmax		pmax			
	comp=Z,190nm,1.0s								
GTA				pmax		pmax			
	comp=Z,11μm,10.0s								
GTA				LR		LR			
	comp=N,9μm,24.7s								
GTA				LR		LR			
	comp=E,12μm,24.2s								
GTA				LR		LR			
	comp=Z,21μm,25.7s								
ULN	**Ulaanbaatar**	**66.83**	**328**	P		**P**	**14 30 04.4**	**+1.0**
	SNR=151								
ULN	**Ulaanbaatar**	**66.83**	**328**	*e*P		**P**	**14 30 03.9**	**+0.5**
	comp=Z,74nm,1.0s								
SONM	**Songino Array**	**67.16**	**327**	P		**P**	**14 30 06.0**	**+0.5**
SONM				pP		**PcP**	**14 30 30.8**	**-2.3**
SONM				*e*			14 39 57.2		
SONM				P'P'			14 58 31.6		
SONM	**Songino Array**	**67.16**	**327**	P		**P**	**14 30 06.0**	**+0.5**
	comp=Z,43nm,0.7s,baz=136,slow=5.0,SNR=149								
SONM			

SONM SKiKP **SKiKP** **14 39 57.2 -2.6**
comp=Z,7.3nm,1.2s,baz=134,slow=4.2,SNR=2.7
SONM PKPPKP **P'P'df** **14 58 31.6 +0.4**
comp=Z,3.8nm,0.8s,baz=282,slow=3.4,SNR=9.4
SONM LR LR 15 00 51.5
comp=Z,14μm,19.1s,baz=132,slow=37
SHL Shillong 67.30 300 *ex* **P** **14 30 07.6 +0.7**
SHL *e*PP PP 14 32 40.0 +4.0
SHL *e*S S 14 39 04.0 +6.3
UNV Unalaska Valle 67.62 24 *e*P **P** **14 30 07.1 -1.0**
CASY Casey 67.89 197 *e*P **P** **14 30 09.4 -0.2**
LSA Lhasa 69.22 304 P **P** **14 30 20.3 +1.1**
LSA PP PP 14 32 57.4 +4.5
LSA S **S** **14 39 17.1 -4.0**
LSA pmax pmax
comp=Z,10μm,13.6s
LSA LR LR
comp=E,22μm,24.4s
LSA LR LR
comp=Z,31μm,24.4s
LSA Lhasa 69.22 304 *e*P **P** **14 30 20.2 +1.1**
LSA pmax pmax
comp=Z,34nm,0.8s
LSA Lhasa 69.22 304 *e*P **P** **14 30 20.2 +1.0**
comp=Z,34nm,0.8s
YAK Yakutsk 69.56 348 *i* P **P** **14 30 19.5 -0.5**
YAK Yakutsk 69.56 348 *e*P **P** **14 30 20.3 +0.3**
YAK *e* 14 30 39.3
YAK *e**PP **PcP** **14 30 46.0 +3.3**
YAK *i* S **S** **14 39 24.8 +1.9**
YAK *e* 14 40 06.3
YAK pmax pmax
comp=Z,340nm,0.9s
YAK pmax pmax
comp=E,30nm,0.8s
YAK pmax pmax
comp=N,63nm,0.8s
YAK smax smax
comp=E,10μm,6.4s
YAK smax smax
comp=N,4μm,5.3s
FALS False Pass 69.62 25 *e*P **P** **14 30 17.9 -2.6**
comp=N,31nm,0.8s
ZAK Zakamensk 70.32 328 *e*P **P** **14 30 25.2 +0.1**
RKT Rikitea 70.80 113 *e*P P 14 30 31.7 +3.3
comp=N,114nm,0.8s
RKT *e*S **S** **14 39 41.4 +2.6**
comp=N,11μm,30.2s
RKT *e*LR LR 14 52 00.9
comp=N,62μm,29.8s
TLY Talaya 70.89 330 P **P** **14 30 28.8 +0.4**
comp=N,701nm,1.0s,SNR=38
IRK Irkutsk 70.91 330 *e*P **P** **14 30 28.1 -0.4**
IRK pmax pmax
comp=Z,72nm,1.2s
SDPT Sand Point 71.20 26 *e*P **P** **14 30 28.4 -1.7**
comp=Z,35nm,0.6s
TAPN Taplejung 71.39 301 *e*P **P** **14 30 33.2 +0.9**
comp=Z,3μm,1.0s
ODAN Odare 71.53 300 *e*P **P** **14 30 34.0 +0.9**
comp=Z,2μm,0.8s
BOK Bokaro 72.05 297 *ex* **P** **14 30 37.5 +1.6**
BOK AMB AMB 14 30 44.5
comp=Z,577nm,2.0s
RAMN Ramite 72.24 300 *e*P **P** **14 30 38.1 +0.8**
comp=Z,835nm,0.9s
MOY Mondy 72.24 329 *e*P **P** **14 30 36.9 +0.3**
MOY pmax pmax
comp=Z,324nm,1.8s
VNDA Vanda 72.38 178 *e*P **P** **14 30 37.6 +0.7**
comp=Z,76nm,0.7s
VNDA pP pP 14 31 03.0 +8.7
VNDA Vanda 72.38 178 P **P** **14 30 37.9 +0.9**
comp=Z,174nm,1.1s,baz=331,slow=6.5,SNR=302
VNDA pP pP 14 31 03.0 +8.7
comp=Z,378nm,1.2s,baz=341,slow=6.8,SNR=6.7
VNDA LR LR 15 00 41.3
comp=Z,8μm,19.9s,baz=5.7,slow=34
CHGN Chignik 72.70 26 *e*P **P** **14 30 37.9 -1.2**
SBA Scott Base 72.92 177 *e*P **P** **14 30 41.8 +1.7**
SBA Scott Base 72.92 177 *e*P **P** **14 30 41.8 +1.7**
VIS Vishakhapatnam 73.06 290 *ex* x 14 30 42.8
VIS *e*PKP P 14 30 47.9 +5.9
GUN Gumba 73.11 301 *e*P **P** **14 30 43.5 +0.9**
comp=Z,2μm,0.9s
PKI Pulchoki 73.42 301 *e*P **P** **14 30 44.9 +0.5**
comp=Z,2μm,1.2s
PKIN Phulchoki 73.44 301 *e*P **P** **14 30 44.8 +0.4**
comp=Z,1μm,1.2s
GAMB Gambell 73.54 15 *e*P **P** **14 30 44.0 +0.1**
comp=Z,38nm,0.9s
KKN Kakani 73.59 301 *e*P **P** **14 30 46.0 +0.7**
comp=Z,1μm,0.9s
BILL Bilibino 73.62 5 *i* P **P** **14 30 44.1 -0.3**
BILL Bilibino 73.62 5⇑ *i* P **P** **14 30 44.0 -0.3**
BILL *e* 14 30 54.9
BILL *i* 14 31 10.9
BILL *e* 14 33 31.4
BILL *e*S **S** **14 40 12.1 +2.6**
BILL *e*SS **SS** **14 44 56.4 +2.4**
BILL pmax pmax
comp=Z,400nm,0.7s
BILL pmax pmax
comp=Z,482nm,0.8s
BILL MLR MLR
comp=Z,2μm,16.0s
DMN Daman 73.69 301 *e*P **P** **14 30 46.8 +0.9**
comp=Z,3μm,1.0s
MIR Mirnyy 73.87 201⇑ *i* P **P** **14 30 47.5 +1.7**
MIR *e* 14 31 14.0
MIR *e* 14 33 36.0
MIR *e*S S 14 40 18.0 +5.7
MIR *e*PS **PnS** **14 40 54.0 +0.7**
MIR pmax pmax
comp=Z,5μm,3.0s
MIR pmax pmax
comp=Z,11μm,8.0s
PALK Pallekele 73.89 279 P **P** **14 30 47.0 -0.1**
comp=Z,623nm,1.7s,SNR=9.6
PALK Pallekele 73.89 279 *e*P **P** **14 30 47.2 +0.1**
comp=Z,57nm,0.8s
KOLN Koldanda 75.03 300 *e*P **P** **14 30 54.0 +0.4**
comp=Z,1μm,0.9s
DANN Dangsing 75.03 301 *e*P **P** **14 30 54.0 +0.3**
comp=Z,2μm,1.0s
PYUN Piuthan 75.63 301 *e*P **P** **14 30 57.3 +0.2**
comp=Z,2μm,0.8s
KDAK Kodiak Island 76.14 26 P **P** **14 31 00.6 +1.6**
KDAK Kodiak Island 76.14 26 P **P** **14 31 00.6 +1.6**
comp=Z,124nm,0.6s,baz=323,slow=10,SNR=1.4
KDAK LR LR 14 59 04.8
comp=Z,35μm,20.9s,baz=240,slow=31
JBP Jabalpur 77.20 295 *i* x **P** **14 31 06.8 +1.1**
comp=Z,747nm,1.8s
JBP *ex* x 14 34 01.5
JBP Jabalpur 77.20 295⇑ *i* P P 14 31 09.3 +3.6
HYB Hyderabad 77.48 289⇑ *i* P **P** **14 31 06.0 -1.5**
comp=Z,340nm,1.0s
HYB *e*PcP **PcP** **14 31 15.0 -2.7**
HYB *es*P **sP** **14 31 31.0 -1.2**
HYB *e*S **S** **14 40 52.0 -2.1**
HYB LR LR 14 58 00.0
comp=Z,20nm,30.0s
HYB Hyderabad 77.48 289 *ex* **P** **14 31 07.0 -0.5**
NGP Nagpur 77.67 293 *e*PKP P 14 31 10.8 +2.4
NGP *ex* x 14 40 57.4
TRD Trivandrum 77.73 280 *ex* x 14 31 09.7
TRD *e*PKP PcP 14 31 13.4 -5.4
LGTI Lohaghat 78.28 301 *e*PKP P 14 31 15.6 +3.9
LGTI *ex* x 14 34 26.2
PTH Pithoragarh 78.33 301 *ex* P 14 31 05.8 -6.4
PTH *ex* x 14 41 02.8
TIXI Tiksi 78.43 352*c* *i*P **P** **14 31 09.8 -1.8**
TIXI pmax pmax
comp=Z,75nm,1.9s
LATR Latur 79.52 290 *ex* **P** **14 31 18.0 -0.6**
BHPL Bhopal 79.53 295 *ex* **P** **14 31 18.4 -0.3**
BHPL *e*PKP **PcP** **14 31 23.2 -3.3**
BHPL AMB AMB 14 31 25.6
comp=Z,475nm,2.4s
DDI Dehra Dun 80.33 302 *ex* **P** **14 31 24.0 +1.1**
DDI *e*PKP **PcP** **14 31 28.3 -1.6**
DDI AMB AMB 14 31 28.6
comp=Z,2μm,2.1s
DGAR Diego Garcia 80.69 263 *e*P **P** **14 31 24.9 -0.2**
DGAR pmax pmax
comp=Z,58nm,0.7s
DGAR Diego Garcia 80.69 263 *e*P **P** **14 31 24.9 -0.2**
comp=Z,58nm,0.7s
NDI New Delhi 80.72 300 *e*PKP9 14 31 22.5
NDI *e*S **S** **14 41 26.5 -1.6**
MCK McKinley 80.90 22 *e*P **P** **14 31 23.0 -2.2**
MCK McKinley 80.90 22 *e*P **P** **14 31 23.0 -2.2**
MK31 Makanchi Array 81.23 319 *e*P **P** **14 31 27.4 +0.1**
MK31 Makanchi Array 81.23 319 *e*P **P** **14 31 27.4 +0.1**
MKAR Makanchi Array 81.23 319 P **P** **14 31 27.8 +0.5**
MKAR *PP pP 14 31 53.0 +7.9
MKAR S **S** **14 41 35.3 +2.5**
MKAR pmax pmax
comp=Z,62nm,0.7s
MKAR smax smax
comp=N,4.0nm,1.0s
MKAR MLR MLR
comp=Z,8μm,20.5s
MKAR Makanchi Array 81.23 319 P **P** **14 31 27.8 +0.5**
MKAR pP pP 14 31 53.0 +7.9
MKAR S **S** **14 41 35.3 +2.5**
MKAR PKKPbc **PKKPbc** **14 50 06.0 +1.3**
MKAR P'P' 14 58 12.0
MKAR Makanchi Array 81.23 319 P **P** **14 31 27.8 +0.5**
comp=Z,62nm,0.7s,baz=105,slow=5.5,SNR=512
MKAR pP pP 14 31 53.0 +7.9
comp=Z,243nm,1.1s,baz=100,slow=5.0,SNR=3.1
MKAR S **S** **14 41 35.3 +2.5**
comp=Z,3.6nm,1.0s,baz=90,slow=4.3,SNR=3.4
MKAR PKKPbc **PKKPbc** **14 50 06.0 +1.3**
comp=Z,2.3nm,0.6s,baz=311,slow=1.6,SNR=11
MKAR PKPPKP P'P'df 14 58 12.0 +5.0
comp=Z,1.1nm,0.8s,baz=289,slow=3.7,SNR=5.4
MKAR LR LR 15 08 56.9
comp=Z,8μm,20.5s,baz=109,slow=37
SMLA Simla 81.24 302 *ex* **P** **14 31 28.1 +0.4**
SMLA AMB AMB 14 31 37.2
comp=Z,894nm,1.1s
GOA Goa 81.68 286 *ex* **P** **14 31 27.8 -2.5**
PAF Port-aux-Franc 81.83 221 *e*P **P** **14 31 30.5 +0.1**
PAF Port-aux-Franc 81.83 221 *e*P **P** **14 31 30.5 +0.1**
comp=Z,1μm,1.6s
COLA College 81.90 22 *i* P P 14 31 33.3 +2.9
COLA College 81.90 22 *i* P P 14 31 34.3 +3.9
ZAA0 Zalesovo Array 82.00 326 *e*P **P** **14 31 30.1 -1.0**
ZALV Zalesovo Beam 82.00 326 *i* P **P** **14 31 30.3 -0.8**
ZALV pmax pmax
comp=Z,43nm,0.5s
ZALV Zalesovo Beam 82.00 326 P **P** **14 31 30.4 -0.8**
ZALV S **S** **14 41 42.2 +1.9**
ZALV pmax pmax
comp=Z,43nm,0.5s
ZALV smax smax
comp=N,12nm,1.1s
ZALV Zalesovo Beam 82.00 326 P **P** **14 31 30.4 -0.8**
ZALV S **S** **14 41 42.1 +1.9**
ZALV PKKPbc **PKKPbc** **14 50 03.6 +0.4**
ZALV P'P' 14 58 12.3
ZALV Zalesovo Beam 82.00 326 P **P** **14 31 30.4 -0.8**
comp=N,43nm,0.5s,baz=111,slow=5.9,SNR=131
ZALV S **S** **14 41 42.2 +1.9**
comp=N,12nm,1.1s,baz=131,slow=4.4,SNR=4.4
ZALV PKKPbc **PKKPbc** **14 50 03.6 +0.4**
comp=N,1.9nm,0.5s,baz=219,slow=0.7,SNR=5.5
ZALV PKPPKP P'P'df 14 58 12.3 +7.4
comp=N,2.6nm,0.8s,baz=300,slow=2.8,SNR=5.0
ZALV LR LR 15 06 45.4
comp=N,5μm,20.5s,baz=110,slow=35
POO Poona 82.08 289 *ex* **P** **14 31 32.3 -0.1**
POO AMB AMB 14 31 39.0
comp=Z,453nm,0.6s
POO *e*PP **PP** **14 34 42.5 +1.3**
POO *e*SKS S 14 41 48.5 +6.0
POO *e*SCS **ScS** **14 42 01.5 +3.1**
DHRM DHARAMSHALA 82.18 303 *ex* **P** **14 31 33.1 +0.2**
DHRM DHARAMSHALA 82.18 303 *e*PKP P 14 31 37.6 +4.6
ILAR Eielson Array 82.21 22 P **P** **14 31 30.2 -1.8**
ILAR S **S** **14 41 42.3 +0.3**
ILAR PKKP **PKKPdf** **14 49 53.7 +0.3**
ILAR P'P' 14 58 00.9
ILAR Eielson Array 82.21 22 P **P** **14 31 30.2 -1.8**
comp=Z,31nm,0.9s,baz=242,slow=4.2,SNR=2.2
ILAR S **S** **14 41 42.3 +0.3**
comp=Z,5.5nm,1.1s,baz=270,slow=9.9,SNR=7.9
ILAR PKKP **PKKPdf** **14 49 53.7 +0.3**
comp=Z,1.1nm,0.9s,baz=251,slow=2.8,SNR=3.0
ILAR PKPPKP **P'P'df** **14 58 00.9 -3.0**
comp=Z,0.5nm,0.7s,baz=158,slow=0.5,SNR=4.1
ILAR LR LR 15 04 18.3
comp=Z,33μm,21.3s,baz=233,slow=33
DLH Dalhousie 82.52 304 *ex* **P** **14 31 34.0 -0.7**
THN Thein Dam 82.70 304 *i* x **P** **14 31 32.5 -2.8**
THN *ex* x 14 42 00.0
NVS Novosibirsk 83.17 327⇑ *i*P **P** **14 31 36.8 -0.4**
NVS *i* S **S** **14 41 54.0 +1.8**
NVS pmax pmax
comp=Z,2μm,2.5s
NVS pmax pmax
comp=N,210nm,1.5s
NVS pmax pmax
comp=E,372nm,1.5s
NVS smax smax
comp=N,138nm,1.2s
NVS smax smax
comp=E,176nm,1.2s
KSH Kashi 83.89 311 *e*SKS **S** **14 42 03.1 +2.7**
KSH Kashi 83.89 311 *es*S sS 14 42 37.8 +7.2
KSH pmax pmax
comp=Z,1μm,0.9s
KSH pmax pmax
comp=Z,27μm,6.7s
KSH LR LR
comp=N,11μm,16.7s
KSH LR LR
comp=E,10μm,18.4s
KSH LR LR
comp=Z,24μm,25.2s
KSH Kashi 83.89 311⇑ *i*P P 14 31 44.1 +2.6
KSH *e*pP pP 14 32 01.0 +1.7
KSH *es*P sP 14 32 07.8 +1.5
KSH *e*PP PP 14 35 00.8 +5.0
KSH *e*SKS **S** **14 41 58.9 -1.5**
KSH *e*S **SKKSac** **14 42 00.4 -4.0**
KSH *es*S sS 14 42 31.6 +1.0
KSH pmax pmax
comp=Z,360nm,0.9s
KSH pmax pmax
comp=Z,27μm,6.7s
KSH LR LR
comp=N,5μm,13.2s
KSH LR LR
comp=E,6μm,14.8s
KSH LR LR
comp=Z,12μm,20.7s
AAA Alma-Ata 83.98 314 *i* P **P** **14 31 43.0 +1.3**
ULHL Ulahol 84.26 313 *i* P **P** **14 31 44.7 +1.3**
ULHL Ulahol 84.26 313 P **P** **14 31 44.7 +1.3**
SNR=15
KURK Kurchatov 84.65 322 P **P** **14 31 44.0 -0.9**
comp=Z,3μm,0.9s
KURK Kurchatov 84.65 322 *e*P **P** **14 31 44.3 -0.6**
KURK S **S** **14 42 09.6 +2.4**
KURK pmax pmax
comp=Z,164nm,1.0s
KURK Kurchatov 84.65 322 P **P** **14 31 44.7 -0.2**
KURK S **S** **14 42 09.6 +2.4**
KURK pmax pmax
comp=Z,83nm,0.9s
KURK smax smax
comp=N,20nm,1.3s
KURK Kurchatov 84.65 322 *e*P **P** **14 31 44.3 -0.6**
comp=N,164nm,1.0s
KURK pP pP 14 32 10.9 +8.2
KURK S **S** **14 42 09.6 +2.4**
KURK PKKPbc **PKKPbc** **14 49 58.0 +1.1**
KURBB Kurchatov Arra 84.68 322 P **P** **14 31 44.7 -0.3**
comp=N,83nm,0.9s,baz=109,slow=4.0,SNR=477
KURBB pP pP 14 32 10.9 +8.0
comp=N,139nm,0.9s,baz=108,slow=3.7,SNR=3.9
KURBB S **S** **14 42 09.6 +2.1**
comp=N,20nm,1.3s,baz=103,slow=8.3,SNR=10
KURBB PKKPbc **PKKPbc** **14 49 58.0 +1.2**
comp=N,3.2nm,0.5s,baz=293,slow=2.9,SNR=24
QSPA South Pole Qui 84.75 180 PKKP **PKKPdf** **14 49 47.1 -1.8**
comp=N,3.0nm,0.9s,baz=247,slow=1.7,SNR=2.8
QSPA PKKPbc **PKKPbc** **14 49 57.1 -0.5**
comp=N,5.1nm,0.5s,baz=202,slow=2.8,SNR=12
TKM2 Tokmak 2 84.87 314 *e*P **P** **14 31 47.1 +0.6**
TKM2 Tokmak 2 84.87 314 *e*P **P** **14 31 47.1 +0.6**
TKM2 Tokmak 2 84.87 314 P **P** **14 31 47.2 +0.8**
SNR=112
KZA Kyzart 84.95 313 *i* P **P** **14 31 48.7 +1.5**
KZA Kyzart 84.95 313 P **P** **14 31 48.7 +1.5**
SNR=233
KBK Karagaybulak 85.28 313 *i* P **P** **14 31 49.3 +0.8**
KBK Karagaybulak 85.28 313 P **P** **14 31 49.4 +0.8**
SNR=88
CHMS Chumysh 85.49 314 *i* P **P** **14 31 49.9 +0.5**
CHMS Chumysh 85.49 314 P **P** **14 31 49.9 +0.5**
SNR=85
UCH Uchtor 85.52 313 *i* P **P** **14 31 51.4 +1.4**
UCH Uchtor 85.52 313 P **P** **14 31 51.5 +1.4**
SNR=22
WRAK Wrangell Islan 85.53 32 *e*P **P** **14 31 48.1 -1.0**
MAW Mawson 85.53 203 P **P** **14 31 49.4 +0.4**
MAW PKKP **PKKPdf** **14 49 46.4 -0.5**
MAW PKKPbc **PKKPbc** **14 49 55.1 +0.1**
MAW P'P' 14 57 59.0
MAW Mawson 85.53 203 P **P** **14 31 49.4 +0.4**
comp=N,151nm,0.9s,baz=92,slow=6.1,SNR=220
MAW PKKP **PKKPdf** **14 49 46.4 -0.5**
comp=N,3.6nm,0.9s,baz=288,slow=8.9,SNR=3.8
MAW PKKPbc **PKKPbc** **14 49 55.1 +0.1**
comp=N,5.6nm,0.8s,baz=294,slow=6.1,SNR=7.7
MAW PKPPKP **P'P'df** **14 57 58.9 -0.2**
comp=N,2.6nm,0.9s,baz=315,slow=15,SNR=3.2
MAW LR LR 15 06 34.6
comp=N,8μm,21.4s,baz=76,slow=33
AAK Ala-Archa 85.61 313 P **P** **14 31 51.0 +0.9**
comp=N,2μm,1.0s,SNR=68
AAK Ala-Archa 85.61 313 *e*P **P** **14 31 50.8 +0.7**
AAK S **S** **14 42 21.0 +3.6**
AAK pmax pmax
comp=Z,86nm,0.8s
AAK Ala-Archa 85.61 313 *e*P **P** **14 31 50.8 +0.7**
comp=Z,86nm,0.8s
AAK S **S** **14 42 21.0 +3.6**
AAK Ala-Archa 85.61 313 P **P** **14 31 50.9 +0.9**
SNR=48
AAK Ala-Archa 85.61 313 P **P** **14 31 51.0 +0.9**
comp=Z,79nm,0.8s,baz=115,slow=4.6,SNR=113
AAK S **S** **14 42 21.0 +3.6**
comp=Z,2.6nm,0.8s,baz=202,slow=19,SNR=2.9
USP Ospenovka 85.73 314 *i* P **P** **14 31 51.2 +0.7**
USP Ospenovka 85.73 314 P **P** **14 31 51.2 +0.7**
SNR=96
AML Almayashu 86.09 313 *i* P **P** **14 31 53.8 +1.0**
AML Almayashu 86.09 313 P **P** **14 31 53.8 +1.0**
SNR=137
EKS2 Erkin-Say 86.13 313 *e*P **P** **14 31 53.1 +0.5**
EKS2 Erkin-Say 86.13 313 *e*P **P** **14 31 53.1 +0.5**
EKS2 Erkin-Say 86.13 313 P **P** **14 31 53.6 +1.0**
SNR=57
BHJ Bhuj 86.59 294 *ex* **P** **14 31 55.5 +0.4**
BHJ *e*PKP **PcP** **14 32 00.4 +2.9**
BHJ AMB AMB 14 32 01.8
comp=Z,846nm,0.0s
BBB Bella Bella 86.88 37 P **P** **14 31 56.2 +0.4**
BBB Bella Bella 86.88 37 P **P** **14 31 56.2 +0.4**
comp=Z,23nm,0.5s,baz=292,slow=5.4,SNR=24
BBB LR LR 15 04 39.0
comp=Z,23μm,21.4s,baz=243,slow=31
DLBC Dease Lake 87.28 31 P **P** **14 31 57.7 -0.1**
DLBC Dease Lake 87.28 31 P **P** **14 31 57.7 -0.1**
comp=Z,9.5nm,0.8s,baz=240,slow=7.7,SNR=4.0
DLBC LR LR 15 03 52.8
comp=Z,32μm,21.6s,baz=258,slow=31
INK Inuvik 88.52 21 P **P** **14 32 04.2 +0.9**
INK S S 14 42 30.5 -13
INK PKKP **PKKPdf** **14 49 43.1 +0.6**
INK Inuvik 88.52 21 P **P** **14 32 04.2 +0.9**
comp=Z,14nm,0.8s,baz=200,slow=18,SNR=5.3
INK S S 14 42 30.5 -13
comp=Z,8.1nm,1.1s,baz=42,slow=32,SNR=15
INK PKKP **PKKPdf** **14 49 43.2 +0.6**
comp=Z,3.4nm,0.8s,baz=119,slow=2.0,SNR=3.1
INK LR LR 15 07 46.8
comp=Z,30μm,21.7s,baz=238,slow=33
KBL Kabul 88.54 305 *e*P **P** **14 32 03.2 -1.3**
KBL pmax pmax
comp=Z,29nm,0.7s
KBL Kabul 88.54 305 *e*P **P** **14 32 03.2 -1.3**
comp=Z,29nm,0.7s
KK31 Karatay Array 88.57 313 *i* P **P** **14 32 04.0 -0.2**
KK31 pmax pmax
comp=Z,123nm,0.9s
KKAR Karatay Array 88.57 313 *e*P **P** **14 32 03.8 -0.4**
KKAR Karatay Array 88.57 313 *e*P **P** **14 32 03.8 -0.4**
WDC Whiskeytown Da 88.62 49 P P 14 32 06.7 +2.2
WDC pmax pmax
comp=Z,2.0nm,0.6s
WDC Whiskeytown Da 88.62 49 P P 14 32 06.7 +2.2
comp=Z,1.9nm,0.6s
YBH Yreka Blue Hor 88.66 48 P **P** **14 32 05.8 +1.0**
YBH Yreka Blue Hor 88.66 48 P **P** **14 32 05.8 +1.0**
comp=Z,29nm,0.8s,baz=269,slow=2.2,SNR=31
YBH LR LR 15 04 19.1
comp=Z,64μm,21.9s,baz=335,slow=30
NLWA Neilton Lookou 88.69 42 *e*P **P** **14 32 03.2 -1.5**
comp=Z,194nm,1.3s
PGC Sidney 89.16 41 P **P** **14 32 05.8 -0.9**
comp=Z,0.2nm,0.7s
FL2 Flat Top 2 89.54 44 P P 14 32 10.8 +1.9
VOSK Vostochnaya 89.72 323 P **P** **14 32 07.8 -1.5**
VOSK pmax pmax
comp=Z,204nm,1.0s
CMB Columbia Colle 89.96 52 *e*P P 14 32 14.2 +3.3
CMB pmax pmax
comp=Z,306nm,1.8s
CMB Columbia Colle 89.96 52 *e*P P 14 32 14.2 +3.3
comp=Z,306nm,1.8s
LON Longmire 89.98 43 *e*P P 14 32 13.2 +2.4
LON pmax pmax
comp=Z,52nm,1.2s
LON Longmire 89.98 43 *e*P P 14 32 13.2 +2.4
comp=Z,52nm,1.2s
BVA0 Borovoye Array 90.11 323 *i* P **P** **14 32 10.0 -1.2**
BVAR Borovoye Array 90.11 323 P **P** **14 32 10.4 -0.8**
BVAR S S 14 42 37.7 -22
BVAR pmax pmax
comp=Z,98nm,0.8s
BVAR pmax pmax
comp=Z,162nm,0.8s
BVAR smax smax
comp=N,2.0nm,0.9s
BVAR pmax pmax
comp=Z,3.0nm,0.5s
BVAR Borovoye Array 90.11 323 P **P** **14 32 10.4 -0.8**
BVAR pP pP 14 32 36.7 +7.5
BVAR S **SKSac** **14 42 37.7 +1.1**
BVAR PKKPbc **PKKPbc** **14 49 45.2 +1.5**
BVAR Borovoye Array 90.11 323 P **P** **14 32 10.4 -0.8**
comp=Z,98nm,0.8s,baz=104,slow=6.3,SNR=327
BVAR pP pP 14 32 36.7 +7.5
comp=Z,162nm,0.8s,baz=102,slow=6.2,SNR=3.6
BVAR S S 14 42 37.7 -22
comp=Z,2.1nm,0.8s,baz=126,slow=3.7,SNR=2.4
BVAR PKKPbc **PKKPbc** **14 49 45.2 +1.5**
comp=Z,2.6nm,0.5s,baz=298,slow=3.1,SNR=7.9
BVAR LR LR 15 11 54.9
comp=Z,9μm,21.1s,baz=345,slow=35
BRVK Borovoye 90.18 323 P **P** **14 32 10.6 -0.9**
comp=Z,2μm,0.8s,SNR=71
BRVK Borovoye 90.18 323 *e*P **P** **14 32 10.2 -1.3**
BRVK pmax pmax
comp=Z,93nm,0.9s
BRVK Borovoye 90.18 323*c* *i*P **P** **14 32 10.6 -0.9**
BRVK pmax pmax
comp=Z,113nm,1.1s
BRVK Borovoye 90.18 323 *e*P **P** **14 32 10.2 -1.3**
comp=Z,93nm,0.9s
BEKR Beckworth 90.19 50 *e*P **P** **14 32 11.0 -1.1**
MOD Modoc 90.47 48 *e*P **P** **14 32 12.9 -0.4**
ZRNK Zerenda 90.93 323 P **P** **14 32 13.4 -1.6**
ZRNK pmax pmax
comp=Z,349nm,1.1s
MWC Mount Wilson 91.44 56 *e*P **P** **14 32 17.9 -0.2**
MWC pmax pmax
comp=Z,7.0nm,0.8s
MWC Mount Wilson 91.44 56 *e*P **P** **14 32 17.9 -0.2**

comp=Z,6.9nm,0.8s
HAWA Hanford 91.50 44 P **P** **14 32 16.9 -0.9**
NVAR Mina Array Bea 91.63 52 P **P** **14 32 18.5 -0.4**
NVAR pP pP 14 32 45.0 +8.2
NVAR PKKPbc **PKKPbc** **14 49 39.5 0.0**
NVAR P'P' 14 57 49.4
NVAR Mina Array Bea 91.63 52 P **P** **14 32 18.5 -0.4**
comp=Z,37nm,0.7s,baz=254,slow=6.4,SNR=34
NVAR pP pP 14 32 45.0 +8.2
comp=Z,55nm,1.0s,baz=253,slow=6.1,SNR=5.2
NVAR PKKPbc **PKKPbc** **14 49 39.5 0.0**
comp=Z,3.7nm,0.8s,baz=99,slow=1.2,SNR=5.4
NVAR PKPPKP **P'P'df** **14 57 49.4 +0.7**
comp=Z,0.9nm,0.6s,baz=169,slow=5.8,SNR=3.6
NVAR LR LR 15 06 08.8
comp=Z,28µm,21.8s,baz=103,slow=31
NV11 Mina Array Sit 91.75 52 eP **P** **14 32 18.8 -0.5**
G08A Pilot Rock 91.79 45 P **P** **14 32 21.1 +1.7**
BMN Battle Mountai 92.64 50 eP **P** **14 32 24.4 +1.0**
BMN Battle Mountai 92.64 50 eP **P** **14 32 24.4 +1.0**
comp=Z,2.2nm,0.7s
PFO Pinyon Flat Ob 92.72 57 eP **P** **14 32 21.7 -2.2**
PFO Pinyon Flat Ob 92.72 57 P **P** **14 32 24.1 +0.2**
comp=Z,23nm,0.7s,baz=276,slow=4.9,SNR=14
PFO LR LR 15 06 32.2
comp=Z,19µm,21.7s,baz=266,slow=30
BMO Blue Mountains 92.92 45 eP **P** **14 32 22.9 -1.7**
BMO pmax pmax
comp=Z,2.0nm,0.6s
BMO Blue Mountains 92.92 45 eP **P** **14 32 22.9 -1.7**
comp=Z,1.9nm,0.6s
NEW Newport 93.30 42 eP **P** **14 32 24.2 -2.0**
comp=Z,4.5nm,1.0s
NEW Newport 93.30 42 P **P** **14 32 25.6 -0.5**
comp=Z,22nm,0.6s,baz=230,slow=3.0,SNR=17
NEW LR LR 15 07 30.6
comp=Z,28µm,21.2s,baz=299,slow=31
SYO Syowa Base 93.58 199 ⇓*i* P **P** **14 32 25.2 -1.7**
SYO Syowa Base 93.58 199 ⇓*i* PcP **PcP** **14 32 27.4 0.0**
SYO Syowa Base 93.58 199 eSH **S** **14 43 34.0 +3.9**
MFD Camas Ranch 93.89 47 eP **P** **14 32 28.8 -0.2**
ELK Elko 94.17 50 P P **14 32 27.3 -3.3**
BSMT Bassoo Peak 94.84 43 eP **P** **14 32 32.4 -1.1**
comp=Z,8.4nm,1.1s
HLID Hailey 94.92 47 eP **P** **14 32 33.6 -0.3**
comp=Z,2.4nm,0.7s
JTMT Jette 95.18 43 P **P** **14 32 35.5 +0.7**
SWMT Swartz Lake 95.36 43 eP **P** **14 32 37.0 +1.3**
YKW3 Yellowknife Ar 95.37 28 eP **P** **14 32 32.8 -2.4**
comp=Z,0.2nm,0.8s
YKA Yellowknife Ar 95.37 28 P **P** **14 32 34.6 -0.6**
YKA PP PP 14 36 17.5 -8.8
YKA PKiKP **PKiKP** **14 37 16.1 +0.6**
YKA PKKPbc **PKKPdf** **14 49 25.3 -5.0**
YKA Yellowknife Ar 95.37 28 P **P** **14 32 34.6 -0.6**
comp=Z,22nm,0.8s,baz=272,slow=4.8,SNR=26
YKA PP PP 14 36 17.5 -8.8
comp=Z,3.2nm,0.7s,baz=266,slow=7.9,SNR=3.4
YKA PKiKP **PKiKP** **14 37 16.1 +0.6**
comp=Z,3.4nm,0.7s,baz=273,slow=1.6,SNR=6.8
YKA PKKPbc **PKKPdf** **14 49 25.3 -5.0**
comp=Z,2.7nm,0.7s,baz=74,slow=2.8,SNR=12
WALA Waterton Lakes 95.47 41 eP **P** **14 32 35.8 -0.4**
comp=Z,0.3nm,0.8s
CCUT Cedar City 95.47 53 eP **P** **14 32 35.2 -1.4**
SLMT Seeley Lake 95.70 43 P P 14 32 39.5 +2.2
CHMT Chamberlain Mo 95.85 43 eP **P** **14 32 35.2 -2.9**
DUG Dugway 95.99 50 eP P 14 32 41.7 +2.9
DUG pmax pmax
comp=Z,423nm,2.2s
DUG Dugway 95.99 50 eP P 14 32 41.7 +2.9
comp=Z,423nm,2.2s
SVE Sverdlovsk 96.02 326⇑ eP **P** **14 32 37.1 -1.2**
SVE e 14 36 31.4
SVE ePPP PPP 14 38 43.0
SVE eS **SKSac** **14 43 09.7 +0.7**
SVE e 14 45 14.8
SVE eSS **SS** **14 50 23.9 +0.2**
SVE eSSS SSS 14 54 06.3
SVE pmax pmax
comp=Z,204nm,2.2s
SVE MLR MLR
comp=E,9µm,23.0s
SVE MLR MLR
comp=E,10µm,23.0s
IDAH Dahanechah 96.02 302 eP **P** **14 32 38.7 -0.5**
HVU Hansel Valley 96.06 49 eP P 14 32 42.2 +3.1
HVU pmax pmax
comp=Z,168nm,1.3s
HVU Hansel Valley 96.06 49 eP P 14 32 42.2 +3.1
comp=Z,168nm,1.3s
MCMT McKenzie Canyo 96.09 46 eP P 14 32 41.5 +2.2
WBK Wadi Bani Khal 96.35 292 P P 14 32 45.1 +4.5
SNR=18
AB31 Akbulak array 96.38 319 *i* P **P** **14 32 38.1 -2.0**
AB31 pmax pmax
comp=Z,66nm,0.9s
ABKAR Akbulak array 96.38 319 eP **P** **14 32 37.7 -2.4**
comp=Z,17nm,0.9s
LRM Limekiln Ridge 96.39 45 eP **P** **14 32 41.6 +1.0**
MVU Marysvale 96.41 52 eP **P** **14 32 39.6 -1.3**
MSU Marysvale 96.44 52 eP **P** **14 32 40.4 -0.6**
MSU Marysvale 96.44 52 eP **P** **14 32 40.4 -0.6**
BOZ Bozeman (W) 96.96 45 eP **P** **14 32 42.2 -0.9**
BOZ pmax pmax
comp=Z,3.0nm,0.7s
BOZ Bozeman (W) 96.96 45 eP **P** **14 32 42.2 -0.9**
comp=Z,3.2nm,0.7s
HWUT Hardware Ranch 96.97 49 eP **P** **14 32 42.9 -0.3**
JMDO Jabal Madar 97.14 292 P Pdif 14 32 48.7 +4.4
SNR=8.7
ARU Arti 97.17 326*c* *i* P **P** **14 32 41.4 -2.1**
ARU 14 36 37.0
ARU PPP PPP 14 38 43.4
ARU S **SKSac** **14 43 12.7 -2.3**
ARU PS PS 14 45 20.4 -11
ARU pmax pmax
comp=Z,34nm,1.7s
ARU Arti 97.17 326 P **P** **14 32 41.7 -1.8**
comp=Z,508nm,0.7s,SNR=12
DAU Daniels Canyon 97.19 50 P Pdif 14 32 46.0 +1.5
DAU Daniels Canyon 97.19 50 P Pdif 14 32 46.0 +1.5
SMDO Samad 97.22 292 P Pdif 14 32 49.3 +4.6
SNR=18
TUC Tucson 97.41 58 eP Pdif 14 32 49.7 +4.3
TUC pmax pmax
comp=Z,34nm,1.4s
TUC Tucson 97.41 58 eP Pdif 14 32 49.6 +4.3
comp=Z,34nm,1.4s
ABKT Ailbek 97.58 307 P Pdif 14 32 45.0 -1.0
comp=Z,316nm,0.8s,SNR=11
AKTO Aktyubinsk 97.62 320 P **P** **14 32 43.8 -1.9**
AKTO pmax pmax
comp=Z,32nm,0.8s
AKTO pmax pmax
comp=Z,2.0nm,0.7s
AKTO Aktyubinsk 97.62 320 P **P** **14 32 43.7 -1.9**
AKTO pmax pmax
comp=Z,45nm,0.8s
AKTO Aktyubinsk 97.62 320 P **P** **14 32 43.8 -1.9**
AKTO PKKP **PKKPdf** **14 49 25.9 0.0**
AKTO Aktyubinsk 97.62 320 P **P** **14 32 43.8 -1.9**
comp=Z,32nm,0.8s,baz=95,slow=5.6,SNR=30
AKTO PKKP **PKKPdf** **14 49 25.9 0.0**
comp=Z,2.2nm,0.7s,baz=258,slow=3.3,SNR=3.7
HOQ Hoqain 97.92 293 P Pdif 14 32 47.4 -0.3
SNR=24
SOKR Solikamsk 97.98 329*c* *i* P Pdif 14 32 49.4 +2.3
SOKR 14 36 50.5
SOKR S **SKSac** **14 43 19.1 +0.1**
SOKR SS SS 14 51 02.6 +11
SOKR pmax pmax
comp=Z,30nm,1.1s
BSY Bisya 97.99 292 P Pdif 14 32 52.4 +4.3
SNR=13
EGMT Eagleton 98.23 42 P Pdif 14 32 49.4 +0.7
BW06 Boulder Array 98.46 48 eP **P** **14 32 47.1 -2.8**
PDAR Pinedale Array 98.46 48 P **P** **14 32 48.6 -1.4**
PDAR PP **PP** **14 36 48.0 -3.0**
PDAR PKiKP **PKiKP** **14 37 22.2 +0.3**
PDAR PKKPbc **PKKPbc** **14 49 17.6 -3.9**
PDAR PKKP **PKKPdf** **14 49 24.4 -0.1**
PDAR Pinedale Array 98.46 48 P **P** **14 32 48.6 -1.4**
comp=Z,2.6nm,0.7s,baz=216,slow=1.3,SNR=12
PDAR PP **PP** **14 36 48.0 -3.0**
comp=Z,6.0nm,0.9s,baz=260,slow=3.5,SNR=3.7
PDAR PKiKP **PKiKP** **14 37 22.2 +0.3**
comp=Z,34nm,1.2s,baz=273,slow=3.5,SNR=7.4
PDAR PKKPbc **PKKPbc** **14 49 17.6 -3.9**
comp=Z,2.4nm,0.9s,baz=98,slow=3.7,SNR=3.6
PDAR PKKP **PKKPdf** **14 49 24.4 -0.1**
comp=Z,3.1nm,0.6s,baz=115,slow=4.1,SNR=7.5
PDAR LR LR 15 14 15.2
comp=Z,33µm,19.1s,baz=275,slow=34
ARQ Araqi 98.63 293 Pdiff Pdif 14 32 50.6 -0.3
SNR=29
IBND Bandar-abas 98.73 297 eP Pdif 14 32 51.8 +0.6
BANOM Banah 98.91 295 P Pdif 14 32 57.1 +5.0
SNR=17
IBAF Bafgh 99.64 301 eP **Pdif** **14 32 56.7 +1.3**
IMEH Mehriz 100.45 301 eP **Pdif** **14 32 55.4 -3.7**
ICHK Chekchek 100.62 302 eP **Pdif** **14 32 58.4 -1.5**
ANMO Albuquerque 101.03 56 P **Pdif** **14 33 02.1 +0.6**
ANMO PP **PP** **14 37 12.9 +2.2**
ANMO Albuquerque 101.03 56 P **Pdif** **14 33 02.1 +0.6**
comp=Z,0.4nm,0.3s,baz=340,slow=12,SNR=2.4
ANMO PP **PP** **14 37 12.9 +2.2**
comp=Z,7.3nm,1.0s,baz=256,slow=7.5,SNR=4.2
ISAD Sadrabad 101.24 301 eP **Pdif** **14 33 01.2 -1.5**
ISCO Idaho Springs 101.52 51 eP **Pdif** **14 33 06.7 +2.9**
ISCO pmax pmax
comp=Z,46nm,1.5s
ISCO Idaho Springs 101.52 51 ePdif **Pdif** **14 33 06.7 +2.9**
comp=Z,46nm,1.5s
SNAA Sanae 101.73 187 ePdiff **Pdif** **14 33 03.3 -0.5**
SNAA Sanae 101.73 187 ePKKPdf PKKPdf 14 49 13.2 -5.1
SNAA Sanae 101.73 187 ePdif **Pdif** **14 33 01.5 -2.2**
SNAA PKKPbc **PKKPbc** **14 49 13.0 +0.3**
SNAA Sanae 101.73 187 PKKPbc PKKPbc 14 49 13.0 +0.3
comp=Z,2.6nm,1.0s,baz=297,slow=4.2,SNR=10
IZEF Zefreh 102.36 302 eP **Pdif** **14 33 06.2 -1.4**
RSSD Black Hills 102.41 46 eP **Pdif** **14 33 10.8 +3.3**
RSSD pmax pmax
comp=Z,152nm,1.7s
RSSD Black Hills 102.41 46 ePdif **Pdif** **14 33 10.8 +3.3**
comp=Z,152nm,1.7s
FFC Flin Flon 102.50 35 eP **Pdif** **14 33 11.5 +4.1**
FFC pmax pmax
comp=Z,6.0nm,0.6s
FFC Flin Flon 102.50 35 ePdif **Pdif** **14 33 11.5 +4.1**
comp=Z,5.8nm,0.6s
IDMV Damavand 102.51 305 eP **Pdif** **14 33 10.8 +2.5**
IGAR Gharneh 102.62 302 eP **Pdif** **14 33 06.8 -1.9**
IVRN Varamin 102.78 305 eP **Pdif** **14 33 07.8 -1.4**
IKLH Kolahrood 102.98 303 eP **Pdif** **14 33 08.7 -1.7**
IR3 Iran Long-Peri 103.34 305 eP **Pdif** **14 33 10.2 -1.5**
TXAR Lajitas Array 103.54 61 Pdif **Pdif** **14 33 18.1 +5.4**
TXAR Lajitas Array 103.54 61 PP PP 14 37 31.6 +2.0
comp=Z,6.3nm,0.9s,baz=265,slow=5.1,SNR=4.8
TXAR PKKPbc **PKKPbc** **14 49 06.4 +0.3**
comp=Z,12nm,0.8s,baz=105,slow=3.2,SNR=22
TXAR PKPPKP **P'P'df** **14 57 28.7 +1.9**
comp=Z,0.6nm,0.8s,baz=163,slow=1.3,SNR=4.5
TXAR Lajitas Array 103.54 61 Pdiff **Pdif** **14 33 18.1 +5.4**
comp=Z,0.6nm,0.6s,baz=242,slow=1.9,SNR=5.3
IPIR Pirpir 103.58 302 eP **Pdif** **14 33 11.3 -1.8**
SPITS Spitsbergen Ar 103.85 352 PKKPbc PKKPbc 14 49 02.4 -4.2
SPITS Spitsbergen Ar 103.85 352 PKKPbc PKKPbc 14 49 02.4 -4.2
comp=Z,0.8nm,0.5s,baz=197,slow=6.1,SNR=3.5
KBS Kingsbay 103.88 353 ePP PP 14 37 31.8 +1.4
KBS eSKS 14 43 50.4
KBS eSS SS 14 52 20.7 +8.6
KBS AMS AMS 15 15 01.2
comp=Z,14µm,24.8s
OPO Ambohidratompo 103.89 250 Pdif **Pdif** **14 33 13.6 -1.0**
OPO PKiKP **PP** **14 37 33.3 +0.9**
OPO PKKPbc **PKKPbc** **14 49 05.0 +0.1**
OPO Ambohidratompo 103.89 250 Pdiff **Pdif** **14 33 13.6 -1.0**
comp=Z,2.5nm,0.9s,baz=42,slow=15,SNR=2.5
OPO PKiKP **PP** **14 37 33.3 +0.9**
comp=Z,5.2nm,0.5s,baz=99,slow=3.1,SNR=4.2
OPO PKKPbc **PKKPbc** **14 49 05.0 +0.1**
comp=Z,4.1nm,0.8s,baz=243,slow=6.8,SNR=2.7
IRAZ Razeghan 104.23 305 eP **Pdif** **14 33 15.5 -0.3**
MAK Makhachkala 105.39 313 eP **Pdif** **14 33 22.6 +2.1**
MAK e 14 44 37.8
MAK ePS **PS** **14 46 58.3 -1.2**
MAK eSSS SSS 14 56 35.0
MAK pmax pmax
comp=Z,32nm,0.2s
MAK MLR MLR
comp=Z,13µm,23.0s
LVZ Lovozero 105.47 340 *i* P **Pdif** **14 33 22.9 +2.6**
BJO Bjornoya 105.94 349 ePP PP 14 37 48.2 +2.4
BJO AMS AMS 15 15 24.6
comp=Z,10µm,23.2s
APA Apatity 106.04 340⇑ eP **Pdif** **14 33 24.0 +1.2**
APA e 14 43 56.0
APA e 14 44 42.0
APA eS **Sdif** **14 45 11.0 -4.5**
APA pmax pmax
comp=Z,12nm,0.8s
APA Apatity 106.04 340⇑ *i* P **Pdif** **14 33 27.8 +5.0**
APA e 14 44 47.0
APA eS **Sdif** **14 45 15.0 -0.5**
APA e 14 47 10.0
APA eSS SS 14 53 00.0 +18
APA pmax pmax
comp=Z,21nm,0.7s
APA MLR MLR
comp=Z,18µm,25.0s
KBD Kabd 106.50 299 eP **Pdif** **14 33 23.4 -2.4**
KBD AMb AMB 14 33 33.6
comp=Z,31nm,1.8s
RDF Al-Radifah 106.64 299 eP **Pdif** **14 33 24.6 -1.8**
RDF AMb AMB 14 33 32.1
comp=Z,55nm,1.2s
NAY Al-Naaiem 106.89 299 eP **Pdif** **14 33 25.4 -2.1**
NAY AMb AMB 14 33 32.2
comp=Z,55nm,1.0s
KEV Kevo 106.97 343 eP **Pdif** **14 33 30.5 +3.6**
KEV pmax pmax
comp=Z,9.0nm,0.6s
KEV Kevo 106.97 343 ep **Pdif** **14 33 30.5 +3.6**
comp=Z,9.3nm,0.6s
ULM Lac du Bonnet 107.00 39 Pdif **Pdif** **14 33 28.1 +0.6**
ULM PKiKP **PKiKP** **14 37 37.4 +0.6**
ULM PKKPbc **PKKPbc** **14 48 55.2 -1.0**
ULM Lac du Bonnet 107.00 39 Pdiff **Pdif** **14 33 28.1 +0.6**
comp=Z,3.3nm,0.5s,baz=349,slow=5.2,SNR=1.8
ULM PKiKP **PKiKP** **14 37 37.4 +0.6**
comp=Z,13nm,0.6s,baz=301,slow=3.0,SNR=8.9
ULM PKKPbc **PKKPbc** **14 48 55.2 -1.0**
comp=Z,5.7nm,0.6s,baz=89,slow=2.1,SNR=4.5
IGHG Ghaleghazi 107.07 304 eP **Pdif** **14 33 26.1 -2.4**
DGRG David-gareji 107.16 312 P **Pdif** **14 33 29.5 +1.0**
DGRG S PP 14 38 00.6 +4.7
IDHR Dehrash 107.19 305 eP **Pdif** **14 33 26.9 -2.1**
WMOK Wichita Mounta 107.34 55 eP **Pdif** **14 33 33.1 +3.7**
WMOK pmax pmax
comp=Z,2.0nm,0.7s
WMOK Wichita Mounta 107.34 55 ePdif **Pdif** **14 33 33.1 +3.7**
comp=Z,2.3nm,0.7s
WMOK ePKiKP **PKiKP** **14 37 41.0 +3.0**
ARCES ARCESS Array B 107.53 343 Pdif **Pdif** **14 33 31.1 +1.7**
ARCES PKiKP **PKiKP** **14 37 37.7 +0.4**
ARCES PP **PP** **14 37 58.1 +0.6**
ARCES PKKPbc PKKPbc 14 48 48.4 -6.7
ARCES ARCESS Array B 107.53 343 Pdiff **Pdif** **14 33 31.1 +1.7**
comp=Z,2.5nm,0.7s,baz=60,slow=5.3,SNR=7.3
ARCES PKiKP **PKiKP** **14 37 37.7 +0.4**
comp=Z,9.0nm,0.7s,baz=74,slow=4.2,SNR=8.7
ARCES PP **PP** **14 37 58.2 +0.6**
comp=Z,4.3nm,0.7s,baz=100,slow=0.7,SNR=4.7
ARCES PKKPbc PKKPbc 14 48 48.4 -6.7
comp=Z,3.2nm,0.8s,baz=204,slow=2.0,SNR=4.6
DUS Dusheti 107.56 312 P **Pdif** **14 33 35.3 +5.0**
TBLG Delisi 107.59 312 eP **Pdif** **14 33 31.8 +1.4**
TBLG eS PP 14 38 05.8 +6.8
TBLG Delisi 107.59 312 P **Pdif** **14 33 31.8 +1.4**
TBLG S PP 14 38 05.8 +6.8
IBDR Badra 107.72 303 *i* P(diff) **Pdif** **14 33 33.0 +1.9**
IBDR *i* PKP PKiKP 14 37 22.0 -17
IBDR *i* PP **PP** **14 38 00.7 +0.5**
IBDR *i* PPP PPP 14 40 06.7
IBDR *i* SKS 14 43 39.1
IBDR *i* SKKS SKSac 14 44 14.7 +8.8
IBDR *i* S(diff) 14 44 39.7
GNI Garni 107.83 310 Pdiff **Pdif** **14 33 35.8 +4.2**
comp=Z,1.9nm,0.3s,baz=39,slow=22,SNR=3.7
KZR Kazreti 107.88 312 P **Pdif** **14 33 38.2 +6.5**
KZR S **PP** **14 38 04.0 +2.8**
DAG Danmarks Havn 108.38 358⇓*i* P **Pdif** **14 33 32.8 -0.2**
DAG Danmarks Havn 108.38 358 *i* P **PKKPdf** **14 49 05.8 -0.6**
comp=Z,6.5nm,0.8s
DAG *i* 14 49 27.3
ONI Oni 108.39 313 P **Pdif** **14 33 37.6 +3.6**
ONI S PP 14 38 13.1 +8.2
KTK1 Kautokeino 108.49 343 *i* **Pdif** **14 33 35.0 +1.3**
KTK1 ePP **PP** **14 38 04.8 +0.3**
AKH Akhalkalaki 108.56 312 P **Pdif** **14 33 34.4 -0.5**
AKH S PP 14 38 10.5 +4.2
KBZ Khabaz 108.58 314 P **Pdif** **14 33 34.2 -0.5**
KBZ 14 38 10.2
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KBZ pmax pmax
comp=Z,13nm,0.9s
KBZ pmax pmax
comp=Z,15nm,0.9s
KBZ pmax pmax
comp=Z,2.0nm,0.9s
KBZ Khabaz 108.58 314 Pdif **Pdif** **14 33 34.2 -0.5**
KBZ PKiKP **PKiKP** **14 37 39.7 -0.3**
KBZ PP PP 14 38 10.2 +4.1
KBZ PKKPbc **PKKPbc** **14 48 49.4 -1.5**
KBZ Khabaz 108.58 314 Pdiff **Pdif** **14 33 34.2 -0.5**
comp=Z,5.7nm,0.9s,baz=192,slow=1.3,SNR=4.0
KBZ PKiKP **PKiKP** **14 37 39.7 -0.3**
comp=Z,13nm,0.9s,baz=65,slow=5.8,SNR=3.6
KBZ PP PP 14 38 10.2 +4.1
comp=Z,15nm,0.9s,baz=83,slow=8.1,SNR=5.7
KBZ PKKPbc **PKKPbc** **14 48 49.4 -1.5**
comp=Z,2.2nm,0.9s,baz=310,slow=7.9,SNR=2.0
KIV Kislovodsk 108.69 315 eP **Pdif** **14 33 36.2 +0.9**
KIV e 14 38 07.8
KIV ePS **PS** **14 47 29.3 -4.4**
KIV eSS SS 14 53 20.7 +1.0
KIV pmax pmax
comp=Z,21nm,1.1s
KIV MLR MLR
comp=Z,6µm,20.0s
MOS Moscow 108.79 328 eP **Pdif** **14 33 29.8 -5.5**
MOS pmax pmax
comp=Z,50nm,0.6s
MOS MLR MLR
comp=Z,7µm,22.0s
JOF Joensuu 108.94 336 eP **Pdif** **14 33 37.7 +1.9**
JOF pmax pmax
comp=Z,29nm,0.6s
JOF Joensuu 108.94 336 ep **Pdif** **14 33 37.7 +1.9**
comp=Z,28nm,0.6s
BHD Baghdad 108.99 303 *i* P(diff) **Pdif** **14 33 38.7 +2.0**
BHD *i* PKP PKiKP 14 37 24.0 -17
BHD *i* PP PP 14 38 01.0 -8.4
BHD *i* PPP PPP 14 40 21.5
BHD *i* SKS **SKSac** **14 44 06.0 -5.3**
BHD *i* SKKS **SKSdf** **14 44 41.0 -6.8**
BHD *i* S(diff) 14 45 29.0
TRO Tromso 109.28 345 ePP PP 14 38 09.3 -0.9
TRO eSKS **SKSac** **14 44 14.9 +4.0**
TRO eSS **SS** **14 53 28.7 +3.1**
TRO AMS AMS 15 21 40.6
comp=Z,11µm,23.7s
VORD Divnogorie 109.29 322 eP **Pdif** **14 33 43.7 +6.1**
VORD ePS **PS** **14 47 29.5 -10**
VORD eSS SS 14 53 34.7 +7.8
VORD pmax pmax
comp=N,20nm,0.4s
VORD pmax pmax
comp=Z,10.0nm,0.4s
VORD pmax pmax
comp=E,40nm,0.9s
VSR Storozhevoye 109.29 323 eP **Pdif** **14 33 39.7 +2.1**
VSR ePS PS 14 47 28.6 -11
VSR pmax pmax
comp=Z,9.0nm,0.9s
VSR pmax pmax
comp=N,4.0nm,0.4s
VSR pmax pmax
comp=E,4.0nm,0.5s
OBN Obninsk 109.57 327⇑ *i* P **Pdif** **14 33 40.1 +1.4**
OBN pmax pmax
comp=Z,28nm,1.0s
OBN Obninsk 109.57 327⇑ *i* P **Pdif** **14 33 42.0 +3.3**
OBN *e* 14 38 14.1
OBN *e* 14 44 20.9
OBN ePS **PS** **14 47 41.3 -0.3**
OBN pmax pmax
comp=Z,38nm,1.4s
OBN pmax pmax
comp=Z,400nm,3.8s
OBN MLR MLR
comp=Z,8µm,20.0s
USHA Ushuaia 110.71 155 PKKPbc PKKPbc 14 48 41.7 -2.9
USHA Ushuaia 110.71 155 PKKPbc PKKPbc 14 48 41.7 -2.9
comp=Z,6.9nm,0.9s,baz=180,slow=5.1,SNR=3.5
SOC Sochi 110.87 315 *i* PKIKP 14 37 39.1
SOC *i* PS **PS** **14 47 54.5 0.0**
SOC *i* SS SS 14 53 51.5 +2.8
SOC eSSS SSS 14 58 03.7
SOC MLR MLR
comp=Z,8µm,21.0s
KAF Kangasniemi 111.36 336 ep **Pdif** **14 33 49.4 +2.8**
comp=Z,5.2nm,0.6s
FINES FINESS Array B 111.80 336 Pdif **Pdif** **14 33 45.2 -3.4**
FINES PKiKP **PKiKP** **14 37 47.2 +1.7**
FINES PP **PP** **14 38 25.6 -3.0**
FINES *e* 14 41 21.2
FINES PKKPbc **PKKPbc** **14 48 38.6 -2.5**
FINES FINESS Array B 111.80 336 Pdiff **Pdif** **14 33 45.2 -3.4**
comp=Z,4.5nm,0.6s,baz=90,slow=5.7,SNR=14
FINES PKiKP **PKiKP** **14 37 47.2 +1.7**
comp=Z,13nm,0.8s,baz=83,slow=4.3,SNR=11
FINES PP **PP** **14 38 25.6 -3.0**
comp=Z,11nm,0.8s,baz=66,slow=1.7,SNR=4.8
FINES SKiKP **SKiKP** **14 41 21.2 +5.6**
comp=Z,5.3nm,0.7s,baz=90,slow=4.2,SNR=3.5
FINES PKKPbc **PKKPbc** **14 48 38.6 -2.5**
comp=Z,1.0nm,0.4s,baz=222,slow=1.9,SNR=5.0
ANN Anapa 112.17 316 *i* P **Pdif** **14 33 50.7 +0.1**
ANN Anapa 112.17 316 eP **Pdif** **14 33 53.4 +2.8**
ANN *e* 14 38 34.7
ANN ePS **PS** **14 48 07.5 +1.2**
ANN eSS SS 14 54 11.8 +6.0
ANN pmax pmax
comp=Z,454nm,7.4s
ANN pmax pmax
comp=Z,28nm,1.1s
SUMG Summit 112.30 4 ePKIKP PKiKP 14 37 50.7 +4.0
SUMG *i* 14 38 34.3
SUMG MLR MLR
comp=Z,11µm,21.0s
SUMG Summit 112.30 4 *i* P PKiKP 14 37 50.7 +4.0
SUMG *i* 14 38 34.3
SUMG
comp=Z,11µm,21.0s
SUMG Summit 112.30 4 *i* P **PKKPab** **14 48 49.4 +3.0**
comp=Z,24nm,0.9s
SUMG *i* 14 49 12.1
COWI Conover 112.41 42 PKPdf **PKiKP** **14 37 45.4 -1.8**
JFWS Jewell Farm 112.49 46 ePKIKP **PKiKP** **14 37 49.4 +2.0**
JFWS Jewell Farm 112.49 46 ePKIKP **PKiKP** **14 37 49.4 +2.0**
MALT Malatya 112.97 309⇓ PKIKP PKiKP 14 38 00.5 +12
MALT Malatya 112.97 309⇓ *i* P PKiKP 14 38 00.5 +12
VSU Vasula 113.06 333 *i* PKIKP **PKiKP** **14 37 50.8 +2.8**
JMIC Jan Mayen 113.34 354 *e* **Pdif** **14 33 59.3 +4.1**
JMIC ePP **PP** **14 38 39.4 +0.3**
JMIC AMS AMS 15 15 58.2
comp=Z,8µm,29.7s
SIM Simferopol' 114.38 317 eP **Pdif** **14 34 06.1 +5.7**
SIM *i* 14 48 26.0
SIM ePPS PPS 14 49 46.0
SIM eSS SS 14 54 38.0 +2.9
SIM pmax pmax
comp=Z,2µm,9.5s
MICGM Minsk 114.42 329 ePKP PP 14 38 40.0 -7.4
SCO Scoresbysund 114.76 358⇓*i* P **Pdif** **14 34 01.6 +0.1**
SCO Scoresbysund 114.76 358 ePKIKP PKPdf 14 37 54.4 +3.5
SCO *i* S **SP** **14 48 22.8 +2.7**
SCO MLR MLR
comp=Z,11µm,24.0s

SCO	**Scoresbysund**	**114.76**	**358**	*i* P	PKPdf	14 37 54.4	+3.5	
SCO				*i*		14 38 47.4		
SCO								
	comp=Z,11µm,24.0s							
SCO	**Scoresbysund**	**114.76**	**358**	*i* P	**PKKPab**	**14 48 35.9**	**+0.9**	
	comp=Z,4.0nm,1.0s							
NACGM	**Naroch**	**114.79**	**329**	*e*P	**Pdif**	**14 34 02.0**	**0.0**	
NSS	**Namsos**	**114.81**	**343**	*e*PP	PP	14 38 51.5	+1.9	
NSS				AMS	AMS	15 22 54.0		
	comp=Z,2µm,25.3s							
AKASG	**Malin Array Be**	**115.36**	**325**	P	**Pdif**	**14 34 05.9**	**+1.2**	
AKASG						14 37 51.4		
AKASG						14 38 54.8		
AKASG						14 48 24.1		
AKASG				pmax	pmax			
	comp=Z,3.0nm,0.5s							
AKASG				pmax	pmax			
	comp=Z,22nm,0.7s							
AKASG				pmax	pmax			
	comp=Z,12nm,0.8s							
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.4s							
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.3s							
AKASG	**Malin Array Be**	**115.36**	**325**	Pdif	**Pdif**	**14 34 05.8**	**+1.2**	
AKASG				PKP	**PKPdf**	**14 37 51.4**	**-1.3**	
AKASG				PP	**PP**	**14 38 54.8**	**+0.7**	
AKASG				PKKPbc	**PKKPbc**	**14 48 24.1**	**-4.7**	
AKASG				PKKP	**PKKPdf**	**14 48 50.4**	**-2.5**	
AKASG	**Malin Array Be**	**115.36**	**325**	Pdiff	**Pdif**	**14 34 05.8**	**+1.2**	
	comp=Z,3.0nm,0.5s,baz=53,slow=5.0,SNR=7.7							
AKASG				PKP	**PKPdf**	**14 37 51.4**	**-1.3**	
	comp=Z,22nm,0.7s,baz=51,slow=3.0,SNR=15							
AKASG				PP	**PP**	**14 38 54.8**	**+0.7**	
	comp=Z,12nm,0.8s,baz=56,slow=6.7,SNR=7.1							
AKASG				PKKPbc	**PKKPbc**	**14 48 24.1**	**-4.7**	
	comp=Z,0.5nm,0.4s,baz=254,slow=4.1,SNR=3.7							
AKASG				PKKP	**PKKPdf**	**14 48 50.4**	**-2.5**	
	comp=Z,0.5nm,0.3s,baz=260,slow=4.0,SNR=4.1							
AK01	**Malin Array Si**	**115.37**	**325**	*e*PKPdf	**PKPdf**	**14 37 52.0**	**-0.7**	
KIEV	**Kiev**	**115.37**	**325**	PKIKP	**PKPdf**	**14 37 50.8**	**-1.8**	
KIEV	**Kiev**	**115.37**	**325**	PKPdf	**PKPdf**	**14 37 50.8**	**-1.8**	
AK02	**Malin Array Si**	**115.39**	**325**	*e*PKPdf	**PKPdf**	**14 37 51.6**	**-1.1**	
ASF	**Jabal al Asfar**	**115.39**	**303**	PKP	**PKPdf**	**14 37 53.6**	**+0.2**	
ASF				PP	PP	14 39 01.9	+6.6	
ASF	**Jabal al Asfar**	**115.39**	**303**	PKP	**PKPdf**	**14 37 53.6**	**+0.2**	
	comp=Z,6.8nm,0.7s,baz=334,slow=2.5,SNR=8.2							
ASF				PP	PP	14 39 01.9	+6.6	
	comp=Z,13nm,0.9s,baz=320,slow=1.2,SNR=8.9							
HWQ	**Hawqa**	**115.77**	**306**	*e*P	**Pdif**	**14 34 14.6**	**+7.6**	
WVT	**Waverly**	**115.93**	**52**	*e*PKIKP	**PKPdf**	**14 37 56.4**	**+2.2**	
WVT	**Waverly**	**115.93**	**52**	*e*PKPdf	**PKPdf**	**14 37 56.4**	**+2.2**	
BHL	**Bhannes**	**116.08**	**305**	*e*P	**Pdif**	**14 34 16.0**	**+7.6**	
SFJD	**Kangerlussuaq**	**116.09**	**10**	PKKPbc	PKKPbc	14 48 28.3	+1.7	
SFJD				PKKP	**PKKPdf**	**14 48 50.4**	**-1.2**	
SFJD	**Kangerlussuaq**	**116.09**	**10**	*i* P	PKPdf	14 37 58.9	+5.3	
SFJD				*i*		14 39 00.2		
SFJD								
	comp=Z,16µm,23.0s							
SFJD	**Kangerlussuaq**	**116.09**	**10**	*i* P	**PKKPbc**	**14 48 28.6**	**+1.9**	
	comp=Z,8.7nm,0.8s							
SFJD				*i*		14 48 49.3		
SFJD	**Kangerlussuaq**	**116.09**	**10**	PKKPbc	PKKPbc	14 48 28.3	+1.7	
	comp=Z,11nm,0.7s,baz=122,slow=2.0,SNR=4.1							
SFJD				PKKP	**PKKPdf**	**14 48 50.4**	**-1.2**	
	comp=Z,34nm,1.0s,baz=142,slow=5.4,SNR=8.0							
BLO	**Bloomington**	**116.18**	**49**	PKIKP	**PKPdf**	**14 37 53.6**	**-1.0**	
BLO	**Bloomington**	**116.18**	**49**	PKPdf	**PKPdf**	**14 37 53.6**	**-1.0**	
KMBO	**Kilima Mbogo**	**116.22**	**266**	*e*PKPdf	**PKPdf**	**14 37 55.9**	**+0.1**	
KMBO				PKP	**PKPdf**	**14 37 56.4**	**+0.7**	
KMBO	**Kilima Mbogo**	**116.22**	**266**	PKP	**PKPdf**	**14 37 56.4**	**+0.7**	
	comp=Z,6.9nm,0.7s,baz=315,slow=4.3,SNR=3.6							
BR131	**Keskin Array S**	**116.25**	**312**	*e*PKPdf	**PKPdf**	**14 37 54.0**	**-0.9**	
BRTR	**Keskin Array B**	**116.25**	**312**	PKP	**PKPdf**	**14 37 54.5**	**-0.5**	
BRTR				PP	**PP**	**14 39 03.5**	**+2.4**	
BRTR				PKKPbc	**PKKPab**	**14 48 28.4**	**-0.7**	
BRTR	**Keskin Array B**	**116.25**	**312**	PKP	**PKPdf**	**14 37 54.5**	**-0.5**	
	comp=Z,11nm,0.6s,baz=134,slow=4.7,SNR=19							
BRTR				PP	**PP**	**14 39 03.5**	**+2.4**	
	comp=Z,18nm,0.8s,baz=98,slow=6.3,SNR=7.7							
BRTR				PKKPbc	**PKKPab**	**14 48 28.4**	**-0.7**	
	comp=Z,2.9nm,0.8s,baz=222,slow=2.9,SNR=5.5							
TBLU	**Trondheim**	**116.27**	**343**	*e*PP	PP	14 38 57.4	-2.5	
TBLU				AMS	AMS	15 23 31.6		
	comp=Z,12µm,28.0s							
MMAI	**Mount Meron Ar**	**116.47**	**304**	PKP	**PKPdf**	**14 37 54.5**	**-0.9**	
MMAI	**Mount Meron Ar**	**116.47**	**304**	PKP	**PKPdf**	**14 37 54.5**	**-0.9**	
	comp=Z,0.4nm,0.3s,baz=315,slow=55,SNR=3.4							
WCI	**Wyandotte Cave**	**116.60**	**50**	*e*PKIKP	**PKPdf**	**14 37 57.3**	**+1.8**	
WCI	**Wyandotte Cave**	**116.60**	**50**	*e*PKPdf	**PKPdf**	**14 37 57.3**	**+1.8**	
SUW	**Suwalki**	**117.06**	**330**	*e*Pdiff	**Pdif**	**14 34 14.4**	**+2.3**	
SUW				*e*PP	PP	14 39 10.7	+4.9	
SUW				*e*PS	PS	14 49 03.9	+13	
SUW				LMZ	LR	15 22 38.7		
KIS	**Kishinev**	**117.11**	**321**	*e*P	**Pdif**	**14 34 14.0**	**+1.5**	
KIS				*e*		14 38 00.0		
KIS				*e*		14 38 15.0		
KIS				*e*		14 38 22.0		
KIS				*i*		14 39 12.0		
KIS				*e*		14 41 42.0		
KIS				*e*		14 44 46.0		
KIS				*e*PS	**PS**	**14 48 50.0**	**-1.4**	
KIS				*e*PPS	PPS	14 50 10.0		
KIS				MLR	MLR			
	comp=N,5µm,25.0s							
KIS				MLR	MLR			
	comp=Z,9µm,25.0s							
KIS				MLR	MLR			
	comp=E,6µm,23.0s							
KIS	**Kishinev**	**117.11**	**321**	*e*P	**Pdif**	**14 34 14.0**	**+1.5**	
KIS	**Kishinev**	**117.11**	**321**	*e*PKP	**PKPdf**	**14 38 00.0**	**+3.9**	
KIS	**Kishinev**	**117.11**	**321**	*i* PP	PP	14 39 12.0	+5.4	
	comp=E,500nm,2.3s							
KIS	**Kishinev**	**117.11**	**321**	*e*PPS	PPS	14 50 10.0		
KIS				*e*SS	SS	14 54 44.0	-27	
KIS				*e*SSS	SSS	14 57 26.0		
KIS				*e*LR	LR	15 15 08.0		
	comp=E,10µm,26.0s							
HFS	**Hagfors**	**117.39**	**339**	Pdif	**Pdif**	**14 34 15.4**	**+1.9**	
HFS				PKP	**PKiKP**	**14 37 55.7**	**-0.6**	
HFS				PKKPbc	**PKKPab**	**14 48 23.1**	**-0.4**	
HFS				PKKP	**PKKPdf**	**14 48 45.1**	**-4.0**	
HFS	**Hagfors**	**117.39**	**339**	Pdiff	**Pdif**	**14 34 15.4**	**+1.9**	
	comp=E,3.9nm,0.7s,baz=67,slow=3.7,SNR=9.4							
HFS				PKP	**PKiKP**	**14 37 55.7**	**-0.6**	
	comp=E,7.1nm,0.7s,baz=71,slow=6.2,SNR=8.2							
HFS				PKKPbc	**PKKPab**	**14 48 23.1**	**-0.4**	
	comp=E,4.6nm,0.8s,baz=160,slow=4.7,SNR=5.5							
HFS				PKKP	**PKKPdf**	**14 48 45.1**	**-4.0**	
	comp=E,3.1nm,0.8s,baz=152,slow=6.4,SNR=2.8							
EIL	**Elat**	**117.48**	**301**	PKP	**PKPdf**	**14 37 57.1**	**-0.3**	
EIL	**Elat**	**117.48**	**301**	PKP	**PKPdf**	**14 37 57.1**	**-0.3**	
	comp=E,14nm,0.7s,baz=28,slow=4.8,SNR=5.3							
MOL	**Molde**	**117.59**	**343**	*e*PP	PP	14 39 12.3	+3.2	
MOL				AMS	AMS	15 23 45.2		
	comp=Z,11µm,28.7s							
NB2	**NORSAR Subarra**	**117.61**	**340**	PKPdf	**PKPdf**	**14 37 56.2**	**-0.6**	
	comp=Z,2.6nm,0.6s,baz=44,slow=1.9							
NB2	**NORSAR Subarra**	**117.61**	**340**	PKPdf	**PKPdf**	**14 37 56.2**	**-0.6**	
	baz=44,slow=1.9							
NOA	**NORSAR Array B**	**117.61**	**340**	PKP	**PKPdf**	**14 37 55.7**	**-1.0**	
NOA				PKKPbc	**PKKPab**	**14 48 23.0**	**+0.4**	
NOA				PKKP	**PKKPdf**	**14 48 45.6**	**-3.2**	
NOA	**NORSAR Array B**	**117.61**	**340**	Pdif	**Pdif**	**14 34 17.8**	**+3.3**	
NOA	**NORSAR Array B**	**117.61**	**340**	PKP	**PKPdf**	**14 37 55.7**	**-1.0**	
	comp=Z,6.1nm,0.6s,baz=46,slow=1.9,SNR=12							
NOA				PKKPbc	**PKKPab**	**14 48 23.0**	**+0.4**	
	comp=Z,2.6nm,0.8s,baz=43,slow=3.6,SNR=9.3							
NOA				PKKP	**PKKPdf**	**14 48 45.6**	**-3.2**	
	comp=Z,2.4nm,0.9s,baz=43,slow=3.6,SNR=4.1							
NOA	**NORSAR Array B**	**117.61**	**340**	Pdiff	**Pdif**	**14 34 17.8**	**+3.3**	
	comp=Z,1.8nm,0.6s,baz=45,slow=4.4,SNR=14							
TLCR		**117.82**	**319**	⇑PKIKP	PKPdf	14 38 01.5	+4.0	
TLCR		**117.82**	**319**	⇑*i*P	PKPdf	14 38 01.5	+4.0	
NAO01	**NORSAR Array S**	**117.86**	**340**	*e*PKPdf	**PKPdf**	**14 37 56.8**	**-0.4**	
TEIG	**Tepich**	**118.06**	**70**	PKKP	**PKKPdf**	**14 48 46.7**	**-0.6**	
	comp=Z,14nm,1.1s,baz=158,slow=1.0,SNR=4.0							
ACSO	**Alum Creek Sta**	**118.48**	**47**	*e*PKPdf	**PKPdf**	**14 37 56.6**	**-2.4**	
MANR	**Mangalia**	**118.49**	**318**	⇑*i*P	PKPdf	14 38 03.3	+4.4	
HARR	**Harsova**	**118.59**	**319**	⇑PKIKP	PKPdf	14 38 03.3	+4.2	
HARR	**Harsova**	**118.59**	**319**	⇑*i*P	PKPdf	14 38 03.3	+4.2	
TESR	**Tescani**	**118.67**	**321**	⇓*i*P	**PKPdf**	**14 38 02.2**	**+3.0**	
LVV	**L'vov**	**118.73**	**325**	*e*PKIKP	PKPdf	14 38 03.8	+4.6	
LVV				*e*		14 39 25.4		
LVV					MLR	MLR		
	comp=N,4µm,20.0s							
LVV					MLR	MLR		
	comp=Z,8µm,20.0s							
LVV					MLR	MLR		
	comp=E,5µm,21.0s							
LVV	**L'vov**	**118.73**	**325**	*i* PKIKP	PKPdf	14 38 04.0	+4.8	
LVV				*e*		14 39 25.0		
LVV				*e*PS	**PS**	**14 49 10.0**	**+4.2**	
LVV				*e*SS	SS	14 55 41.0	+10	
LVV				MLR	MLR			
	comp=Z,7µm,21.0s							
VRI	**Vrincioaia**	**118.90**	**320**	⇓PKIKP	**PKPdf**	**14 37 56.6**	**-3.1**	
VRI	**Vrincioaia**	**118.90**	**320**	⇓*i*P	**PKPdf**	**14 37 56.6**	**-3.1**	
PLCA	**Paso Flores**	**118.90**	**143**	PKP	**PKPdf**	**14 37 59.0**	**-1.0**	
PLCA				PKKPbc	**PKKPab**	**14 48 17.6**	**-0.8**	
PLCA				PKKP	**PKKPdf**	**14 48 41.7**	**-4.1**	
PLCA	**Paso Flores**	**118.90**	**143**	PKP	**PKPdf**	**14 37 59.0**	**-1.0**	
	comp=Z,6.5nm,0.7s,baz=215,slow=2.3,SNR=13							
PLCA				PKKPbc	**PKKPab**	**14 48 17.6**	**-0.8**	
	comp=Z,12nm,0.8s,baz=86,slow=2.8,SNR=11							
PLCA				PKKP	**PKKPdf**	**14 48 41.7**	**-4.1**	
	comp=Z,9.5nm,0.9s,baz=57,slow=3.1,SNR=4.5							
PLOR	**Plostina**	**118.95**	**320**	⇓PKIKP	PKPdf	14 38 10.5	+11	
PLOR	**Plostina**	**118.95**	**320**	⇓*i*P	PKPdf	14 38 10.4	+11	
BUR08	**Bucovina Ar. S**	**119.07**	**323**	PKPdf	**PKPdf**	**14 37 58.0**	**-2.1**	
BURAR	**Bucovina Array**	**119.07**	**323**	⇑*i*P	PKPdf	14 38 04.9	+4.9	
HYA	**Hoyanger**	**119.10**	**343**	*e*PKPdf	**PKPdf**	**14 38 02.9**	**+3.4**	
TZTN	**Tazewell**	**119.17**	**51**	*e*PKPdf	**PKPdf**	**14 37 59.0**	**-1.4**	
KONO	**Kongsberg**	**119.18**	**340**	*e*PP	PP	14 39 21.0	+0.8	
KONO				*e*SS	SS	14 55 38.5	+2.5	
TKL	**Tuckaleechee C**	**119.24**	**52**	PKP	**PKPdf**	**14 37 59.3**	**-1.3**	
TKL	**Tuckaleechee C**	**119.24**	**52**	PKP	**PKPdf**	**14 37 59.3**	**-1.3**	
	comp=Z,33nm,0.8s,baz=167,slow=5.9,SNR=28							
BEL	**Belsk**	**119.45**	**329**	*e*P	**Pdif**	**14 34 29.0**	**+6.2**	
BEL				*e*		14 39 30.5		
BEL	**Belsk**	**119.45**	**329**	*e*Pdiff	**Pdif**	**14 34 29.0**	**+6.2**	
BEL				*e*PP	PP	14 39 30.5	+8.1	
BEL				LMZ	LR	15 29 43.1		
PRD	**Provadia**	**119.53**	**317**	*e*P	**PKPdf**	**14 38 04.6**	**+3.7**	
MLR	**Muntele Rosu**	**119.55**	**320**	PKP	**PKPdf**	**14 38 01.0**	**-0.1**	
MLR				PKKPbc	**PKKPbc**	**14 48 12.2**	**-1.6**	
MLR				PKKP	**PKKPdf**	**14 48 40.7**	**-4.3**	
MLR	**Muntele Rosu**	**119.55**	**320**	⇓*i*P	**PKPdf**	**14 38 04.2**	**+3.1**	
MLR	**Muntele Rosu**	**119.55**	**320**	PKP	**PKPdf**	**14 38 01.0**	**-0.1**	
	comp=Z,3.5nm,0.5s,baz=170,slow=5.5,SNR=15							
MLR				PKKPbc	**PKKPbc**	**14 48 12.3**	**-1.6**	
	comp=Z,0.6nm,0.6s,baz=218,slow=12,SNR=2.9							
MLR				PKKP	**PKKPdf**	**14 48 40.7**	**-4.3**	
	comp=Z,1.6nm,0.9s,baz=134,slow=7.9,SNR=3.6							
KWP	**Kalwaria Pacla**	**119.57**	**326**	*e*P	**Pdif**	**14 34 26.8**	**+3.4**	
KWP	**Kalwaria Pacla**	**119.57**	**326**	*e*PKIKP	**PKPdf**	**14 38 01.0**	**+0.2**	
KWP	**Kalwaria Pacla**	**119.57**	**326**	⇑*i*P	**PKPdf**	**14 38 00.4**	**-0.4**	
KWP	**Kalwaria Pacla**	**119.57**	**326**	*e*Pdiff	**Pdif**	**14 34 26.8**	**+3.4**	
KWP				*e*PP	PP	14 39 30.7	+7.3	
KWP				LMZ	LR	15 21 24.9		
KWP	**Kalwaria Pacla**	**119.57**	**326**	*e*PKPdf	**PKPdf**	**14 38 01.0**	**+0.2**	
SUE	**Sulen**	**119.60**	**343**	*e*PKPdf	**PKPdf**	**14 38 04.0**	**+3.5**	
SUE				AMB	AMB	14 38 06.3		
	comp=Z,36nm,2.0s							
SECR		**119.67**	**320**	⇓*i*P	PKPdf	14 38 05.1	+4.0	
RUND	**Rundenannen**	**119.94**	**343**	*e*PKPdf	**PKPdf**	**14 38 05.0**	**+3.8**	
RUND				AMB	AMB	14 38 07.7		
	comp=Z,37nm,1.4s							
ODD1	**Odda**	**119.95**	**342**	*e*PKPdf	**PKPdf**	**14 38 04.8**	**+3.5**	
ODD1				*e*PP	**PP**	**14 39 20.5**	**-5.0**	
BER	**Bergen**	**119.97**	**343**	*e*PP	PP	14 39 26.6	+1.1	
BER				AMS	AMS	15 23 57.9		
	comp=Z,9µm,25.5s							
BMR	**Baia Mare**	**120.07**	**323**	⇓PKIKP	PKPdf	14 38 06.3	+4.5	
BMR	**Baia Mare**	**120.07**	**323**	⇓*i*P	PKPdf	14 38 06.3	+4.5	
BOSA	**Boshof**	**120.10**	**233**	*e*PKPdf	**PKPdf**	**14 38 02.2**	**-0.4**	
BOSA				PKP	**PKPdf**	**14 38 02.9**	**+0.2**	
BOSA				pPKP	pPKPdf	14 38 28.3	+7.0	
BOSA	**Boshof**	**120.10**	**233**	PKP	**PKPdf**	**14 38 02.9**	**+0.2**	
	comp=Z,17nm,0.7s,baz=97,slow=2.0,SNR=17							
BOSA				pPKP	pPKPdf	14 38 28.3	+7.0	
	comp=Z,97nm,0.8s,baz=109,slow=2.3,SNR=17							
EGD	**Espegrend**	**120.10**	**342**	*e*P	**PKPdf**	**14 38 04.6**	**+3.1**	
VOIR		**120.14**	**321**	⇑PKIKP	**PKPdf**	**14 38 05.8**	**+3.6**	
VOIR		**120.14**	**321**	⇑*i*P	**PKPdf**	**14 38 05.8**	**+3.6**	
KOLS	**Kolonicke sedl**	**120.17**	**325**	*e*PKIKP	PKPdf	14 38 06.8	+4.8	
KOLS				*e*SS	SS	14 56 03.6	+14	
KOLS	**Kolonicke sedl**	**120.17**	**325**	*e*PKP	PKPdf	14 38 06.8	+4.8	
KOLS				*e*		14 38 29.3		
KOLS				SDIF		14 47 07.0		
KOLS				*e*SS	SKKSdf	14 56 03.6	+13	
BSD	**Bornholm Skovb**	**120.29**	**334**	⇓*i*P	**Pdif**	**14 34 30.2**	**+3.7**	
BSD	**Bornholm Skovb**	**120.29**	**334**	*e*PKIKP	PKPdf	14 38 07.7	+5.7	
BSD				*i*		14 39 33.1		
BSD				MLR	MLR			
	comp=Z,7µm,24.0s							
BSD	**Bornholm Skovb**	**120.29**	**334**	*i* P	PKPdf	14 38 07.7	+5.7	
BSD				*i*		14 39 33.1		
BSD								
	comp=Z,7µm,24.0s							
BLS5	**Blasjo**	**120.39**	**341**	*e*P	**PKPdf**	**14 38 03.6**	**+1.5**	
BLS5				AMB	AMB	14 38 10.5		
	comp=Z,14nm,0.5s							
GKP	**Gorka Klasztor**	**120.39**	**331**	*e*PKIKP	PKPdf	14 38 08.5	+6.2	
GKP				*e*		14 39 28.4		
GKP				*e*		14 44 49.1		
GKP	**Gorka Klasztor**	**120.39**	**331**	*e*PKPdf	PKPdf	14 38 08.4	+6.2	
GKP				*e*PP	**PP**	**14 39 28.3**	**-0.5**	
GKP				*e*SKSac	**SKSac**	**14 44 49.1**	**-5.1**	
GKP				LMZ	LR	15 29 20.9		
BORG	**Borgarnes**	**120.48**	**358**	PKP	**PKPdf**	**14 38 03.3**	**+1.2**	
BORG				PKKPbc	**PKKPbc**	**14 48 09.8**	**-0.9**	
BORG	**Borgarnes**	**120.48**	**358**	PKP	**PKPdf**	**14 38 03.3**	**+1.2**	
	comp=Z,6.3nm,0.6s,baz=66,slow=1.9							
BORG				PKKPbc	**PKKPbc**	**14 48 09.9**	**-0.9**	
	comp=Z,7.7nm,0.9s,baz=108,slow=3.2,SNR=2.7							
SZH	**Strazhica**	**120.48**	**318**	*e*P	**PKPdf**	**14 38 05.5**	**+2.7**	
EDRB	**Edirne**	**120.50**	**316**	P	**PKPdf**	**14 38 03.0**	**+0.2**	
STHS	**Stebnicka Huta**	**120.50**	**326**	*e*PKIKP	**PKPdf**	**14 38 03.9**	**+1.3**	
STHS	**Stebnicka Huta**	**120.50**	**326**	*e*PKP	**PKPdf**	**14 38 03.9**	**+1.3**	
HOMB	**Homborsund**	**120.59**	**339**	*e*	**Pdif**	**14 34 30.1**	**+1.4**	
CRVS	**Cervenica-Dubn**	**120.64**	**325**	*e*P	**Pdif**	**14 34 30.3**	**+2.1**	
CRVS				*e*		14 38 03.9		
CRVS				*e*		14 39 34.1		
CRVS	**Cervenica-Dubn**	**120.64**	**325**	PDIF	**Pdif**	**14 34 30.3**	**+2.1**	
CRVS				sPDIF		14 34 52.2		
CRVS	**Cervenica-Dubn**	**120.64**	**325**	*e*PKP	**PKPdf**	**14 38 03.9**	**+1.0**	
CRVS				*e*		14 38 28.2		
CRVS				*e*PP	**PP**	**14 39 34.1**	**+3.3**	
CRVS				SDIF		14 47 19.2		
SCHQ	**Schefferville**	**120.77**	**26**	PKP	**PKPdf**	**14 38 01.1**	**-1.9**	
SCHQ				PKKPbc	**PKKPbc**	**14 48 09.8**	**+0.3**	
SCHQ	**Schefferville**	**120.77**	**26**	PKP	**PKPdf**	**14 38 01.1**	**-1.9**	
	comp=Z,7.3nm,0.7s,baz=281,slow=6.3,SNR=3.3							
SCHQ				PKKPbc	**PKKPbc**	**14 48 09.8**	**+0.3**	
	comp=Z,16nm,0.8s,baz=145,slow=8.8,SNR=12							
OJC	**Ojcow**	**120.86**	**327**	*e*PKIKP	**PKPdf**	**14 38 06.7**	**+3.4**	
OJC				*e*		14 39 39.6		
OJC				*e*SP	SP	14 49 18.0	+1.7	
OJC				*e*SS	**SS**	**14 56 01.2**	**+2.8**	
OJC				MLR	MLR			
	comp=Z,14µm,22.3s							
OJC	**Ojcow**	**120.86**	**327**	*e*Pdiff	**Pdif**	**14 34 32.3**	**+3.2**	
OJC				*e*PKPdf	**PKPdf**	**14 38 06.7**	**+3.4**	
OJC				*e*PP	PP	14 39 39.6	+7.5	
OJC				*e*Sdiff		14 47 21.9		
OJC				*e*SP	**SP**	**14 49 18.0**	**+1.7**	
OJC				*e*SS	**SS**	**14 56 01.2**	**+2.8**	
OJC				L	L	15 27 13.8		
	comp=Z,14µm,22.3s							
COP	**Copenhagen**	**120.96**	**336**	⇓*i*P	**Pdif**	**14 34 35.3**	**+5.9**	
COP	**Copenhagen**	**120.96**	**336**	*e*PKIKP	**PKPdf**	**14 38 06.5**	**+3.3**	
COP				MLR	MLR			
	comp=Z,2µm,20.0s							
COP	**Copenhagen**	**120.96**	**336**	*i* P	**PKPdf**	**14 38 06.5**	**+3.3**	
COP				*i*		14 58 53.7		
COP								
	comp=Z,2µm,20.0s							
DRGR		**120.97**	**323**	⇓PKIKP	**PKPdf**	**14 38 07.2**	**+3.5**	
DRGR		**120.97**	**323**	⇓*i*P	**PKPdf**	**14 38 07.2**	**+3.5**	
NIE	**Niedzica**	**121.01**	**326**	*e*P	**Pdif**	**14 34 36.5**	**+6.6**	
NIE	**Niedzica**	**121.01**	**326**	*e*PKIKP	PKPdf	14 38 08.1	+4.5	
NIE				*e*		14 39 42.4		
NIE				*e*SS	SS	14 56 04.5	+4.0	
NIE	**Niedzica**	**121.01**	**326**	*e*Pdiff	**Pdif**	**14 34 36.5**	**+6.6**	
NIE				*e*PKPdf	PKPdf	14 38 08.1	+4.5	
NIE				*e*PP	PP	14 39 42.4	+9.1	
NIE				*e*Sdiff		14 47 27.1		
NIE				*e*SS	**SS**	**14 56 04.5**	**+4.0**	
LBTB	**Lobatse**	**121.31**	**237**	PKP	**PKPdf**	**14 38 05.2**	**+0.2**	
LBTB				pPKP	pPKPdf	14 38 30.3	+6.6	
LBTB				PKKPbc	**PKKPab**	**14 48 10.2**	**+2.3**	
LBTB	**Lobatse**	**121.31**	**237**	PKP	**PKPdf**	**14 38 05.2**	**+0.2**	
	comp=Z,14nm,0.7s,baz=135,slow=3.9,SNR=9.5							
LBTB				pPKP	pPKPdf	14 38 30.3	+6.6	
	comp=Z,92nm,1.0s,baz=151,slow=3.6,SNR=16							
LBTB				PKKPbc	**PKKPab**	**14 48 10.2**	**+2.3**	
	comp=Z,2.7nm,0.5s,baz=327,slow=12,SNR=4.7							
ALN	**Alexandroupoli**	**121.34**	**315**	P	**PKPdf**	**14 38 03.8**	**-0.7**	
BLA	**Blacksburg**	**121.35**	**49**	*e*PKIKP	**PKPdf**	**14 38 02.4**	**-2.3**	
BLA	**Blacksburg**	**121.35**	**49**	*e*PKPdf	**PKPdf**	**14 38 02.4**	**-2.3**	
RGN	**Rugen**	**121.36**	**334**	*e*Pdiff	**Pdif**	**14 34 35.1**	**+3.9**	
RGN				*e*PP	PP	14 39 41.6	+6.3	
KECS	**Kecovo**	**121.41**	**325**	*e*PKIKP	PKPdf	14 38 08.3	+3.9	
KECS	**Kecovo**	**121.41**	**325**	*e*PKP	PKPdf	14 38 08.3	+3.9	
KDZ	**Kurdzhali**	**121.49**	**316**	*e*P	**PKPdf**	**14 38 07.8**	**+3.0**	
MUD	**Monsted U'grnd**	**121.70**	**338**	⇓*i*P	**Pdif**	**14 34 36.3**	**+3.6**	
PRK	**Paraskevi**	**121.80**	**313**	P	**PKPdf**	**14 38 08.6**	**+3.2**	
PRK	**Paraskevi**	**121.80**	**313**	*e*P	**PKPdf**	**14 38 09.1**	**+3.7**	
SMTH	**Samothraki Isl**	**121.87**	**315**	P	**PKPdf**	**14 38 08.4**	**+2.9**	
SMTH	**Samothraki Isl**	**121.87**	**315**	*e*P	**PKPdf**	**14 38 08.4**	**+2.9**	
MPEP	**Malo Peshtene**	**121.90**	**319**	*e*P	**Pdif**	**14 34 42.5**	**+8.6**	
MPEP	**Malo Peshtene**	**121.90**	**319**	*e*P	**PKPdf**	**14 38 06.0**	**+0.5**	
SMG	**Samos**	**121.94**	**312**	P	**PKPdf**	**14 38 08.8**	**+3.1**	
RZN	**Rozhen**	**121.95**	**317**	*e*P	**PKPdf**	**14 38 08.3**	**+2.4**	
OKC	**Ostrava-Krasne**	**121.95**	**328**	*e*PKIKP	**PKPdf**	**14 38 06.4**	**+1.0**	
OKC				*e*		14 39 47.2		
OKC				*e*SP	SP	14 49 35.3	+9.3	
OKC				*e*SS	**SS**	**14 56 13.7**	**+1.3**	
OKC				MLR	MLR			
	comp=Z,8µm,21.3s							
OKC	**Ostrava

ZST	**Bratislava**	**123.46 327**	*e*PKIKP	PKPdf	14 38 14.1	+5.8	
ZST			*e*		14 39 50.9		
ZST			*e*		14 49 43.8		
ZST	**Bratislava**	**123.46 327**	*e*PKP	PKPdf	14 38 14.1	+5.8	
ZST			*e*PP	**PP**	**14 39 50.9**	**+1.1**	
ZST			*e*		14 49 43.8		
ZST			*e*SS	SS	14 56 17.3	-14	
THR3	**Thira Island,**	**123.46 311**	P	**PKPdf**	**14 38 12.2**	**+3.5**	
PKST	**T``s**	**123.46 325**‖	*e*	**PKPdf**	**14 38 11.9**	**+3.5**	
BRG	**Berggiesshubel**	**123.48 331**	*e*PKP	**PKPdf**	**14 38 07.6**	**-0.7**	
	comp=Z,14nm,0.9s						
BRG			PP	**PP**	**14 39 45.0**	**-4.8**	
BRG			SDIF		14 47 41.0		
BRG			*e*		14 47 59.0		
	comp=Z,9.7nm,1.5s						
BRG			SS	**SS**	**14 56 34.0**	**+2.5**	
BRG							
	comp=N,14µm,28.9s						
BRG							
	comp=E,12µm,27.7s						
BRG							
	comp=Z,12µm,26.7s						
BRG	**Berggiesshubel**	**123.48 331**	*e*Pdiff	**Pdif**	**14 34 44.5**	**+3.7**	
BRG			*e*PKPdf	PKiKP	14 38 12.4	+3.9	
BRG			*e*PP	PP	14 39 57.6	+7.8	
BRG	**Berggiesshubel**	**123.48 331**	*e*PKIKP	**PKPdf**	**14 38 07.6**	**-0.7**	
BRG			SS	SS	14 56 34.0	+2.5	
BRG			smax	smax			
	comp=N,3.0nm,0.9s						
HORT	**Hortiatis**	**123.51 316**	P	**PKPdf**	**14 38 10.5**	**+1.7**	
VAY	**Valandovo**	**123.57 317**	P	**PKPdf**	**14 38 10.7**	**+2.0**	
VAY	**Valandovo**	**123.57 317**	*e*PKP	**PKPdf**	**14 38 10.2**	**+1.5**	
MRMA	**Marmari**	**123.62 313**	P	**PKPdf**	**14 38 12.5**	**+3.5**	
MDV	**Middlebury**	**123.62 39**	*e*PKPdf	**PKPdf**	**14 38 06.8**	**-1.9**	
CLL	**Collm**	**123.65 331**	*e*Pdif	**Pdif**	**14 34 44.6**	**+3.1**	
CLL			*e*PKPdf	**PKiKP**	**14 38 12.6**	**+3.8**	
CLL			*e*PP	PP	14 39 58.0	+7.1	
CLL	**Collm**	**123.65 331**	*e*P	**Pdif**	**14 34 42.0**	**+0.5**	
CLL	**Collm**	**123.65 331**	*i* PKIKP	**PKPdf**	**14 38 12.3**	**+3.7**	
CLL			*e*		14 38 30.0		
CLL			*e*		14 39 58.0		
CLL			MLR	MLR			
	comp=Z,11µm,21.8s						
CLL	**Collm**	**123.65 331**	*e*Pdif	**Pdif**	**14 34 42.0**	**+0.5**	
CLL			*e*PKPdf	**PKiKP**	**14 38 08.0**	**-0.8**	
	comp=Z,15nm,0.8s						
CLL			*e*		14 38 29.0		
CLL			*es*PKPdf	**sPKPdf**	**14 38 33.0**	**-1.0**	
CLL	**Collm**	**123.65 331**	*i* PKPdf	**PKPdf**	**14 38 12.3**	**+3.7**	
	comp=Z,46nm,0.7s						
CLL			*i* PKPdf(2)		14 38 15.3		
	comp=Z,56nm,0.6s						
CLL			*ep*PKPdf	**pPKPdf**	**14 38 30.0**	**+2.8**	
CLL			*es*PKPdf	**sPKPdf**	**14 38 39.0**	**+5.0**	
CLL			*es*PKPdf2		14 38 42.0		
CLL			*e*PP	PP	14 39 58.0	+7.1	
CLL			*e*PPIp		14 39 59.0		
	comp=Z,3µm,32.0s						
CLL			*e*		14 41 24.0		
CLL			*e*PPP	PPP	14 42 35.0		
CLL			*e*Sdif	**Sdif**	**14 47 48.0**	**+4.9**	
CLL			*es*PKKPbc		14 48 24.0		
CLL			*e*PS	**PS**	**14 49 48.0**	**-1.4**	
CLL			*e*PPS	PPS	14 51 19.0		
CLL			*e*PKKSbc	PKKSbc	14 51 45.0	-5.2	
CLL			*e*PPPrev		14 55 36.0		
CLL			*e*SS	SS	14 56 41.0	+7.4	
CLL			*e*SSS	SSS	15 01 15.0		
CLL			LmV		15 35 00.0		
	comp=Z,11µm,21.8s						
TREC	**Trest**	**123.68 328**	*e*PKIKP	**PKPdf**	**14 38 09.8**	**+1.1**	
TREC			*e*		14 39 59.8		
TREC			*e*SP	SP	14 49 50.7	+9.5	
TREC			*e*SS	SS	14 56 42.6	+8.4	
TREC	**Trest**	**123.68 328**	*e*PKPdf	**PKPdf**	**14 38 09.8**	**+1.1**	
TREC			*ex*	x	14 38 12.9		
TREC			*es*PKP		14 38 35.4		
TREC			*e*PP	PP	14 39 59.8	+8.6	
TREC			*e*PS	**PS**	**14 49 50.7**	**+0.9**	
TREC			*e*SS	SS	14 56 42.6	+8.4	
TREC			AMS	AMS	15 30 50.0		
	comp=Z,15µm,24.9s						
PKSM	**Moragy**	**123.68 324**	⇑PKIKP	**PKPdf**	**14 38 07.4**	**-1.4**	
PKSM	**Moragy**	**123.68 324**‖	*i*P	**PKPdf**	**14 38 07.4**	**-1.4**	
PKSM	**Moragy**	**123.68 324**	*e*PKPdf	**PKPdf**	**14 38 09.2**	**+0.4**	
PKS9	**Tamasi**	**123.69 324**	*e*PKPdf	**PKPdf**	**14 38 10.7**	**+1.9**	
NPS	**Neapolis**	**123.69 309**	P	PKPdf	14 38 13.5	+4.3	
NPS	**Neapolis**	**123.69 309**	*e*P	**PKPdf**	**14 38 10.2**	**+1.0**	
FBE	**Freiberg**	**123.73 331**	*e*PKPdf	PKPdf	14 38 13.2	+4.5	
PRU	**Pruhonice**	**123.74 330**	*e*PKIKP	**PKPdf**	**14 38 09.0**	**+0.2**	
PRU			*e*		14 39 58.5		
PRU			*e*SP	SP	14 49 50.4	+8.7	
PRU	**Pruhonice**	**123.74 330**	*e*PKPdf	**PKPdf**	**14 38 09.0**	**+0.2**	
PRU			*ex*	x	14 38 12.5		
PRU			*ex*	x	14 38 15.2		
PRU			*es*PKP		14 38 35.4		
PRU			*e*PP	PP	14 39 58.5	+7.0	
PRU			*e*PS	**PS**	**14 49 50.4**	**+0.1**	
PRU			*e*SS	SS	14 56 45.2	+10	
PRU			AMS	AMS	15 31 20.0		
	comp=Z,15µm,23.9s						
PRA	**Prague**	**123.74 330**	PKPdf	**PKPdf**	**14 38 09.0**	**+0.2**	
PRA			PP	PP	14 39 59.0	+7.4	
PRA			AMS	AMS	15 31 30.0		
GRG	**Griva**	**123.84 317**	P	**PKPdf**	**14 38 10.4**	**+1.1**	
SKIA	**Skiathos**	**123.85 314**	P	**PKPdf**	**14 38 11.3**	**+1.9**	
HLG	**Helgoland**	**123.87 337**	*e*Pdiff	**Pdif**	**14 34 45.6**	**+3.2**	
HLG			*e*PP	PP	14 39 59.2	+7.0	
TRY	**Troy**	**123.92 41**	*e*PKPdf	**PKPdf**	**14 38 05.9**	**-3.4**	
MRKA	**Markates**	**123.94 314**	P	PKPdf	14 38 13.5	+3.9	
DIVS	**Divibare**	**123.95 321**	P	**PKPdf**	**14 38 09.7**	**+0.2**	
XOR	**Xorichti**	**123.96 315**	P	**PKPdf**	**14 38 07.4**	**-2.2**	
NEO	**Neokhori**	**123.96 315**	P	**PKPdf**	**14 38 12.2**	**+2.6**	
NEO	**Neokhori**	**123.96 315**	*e*P	**PKPdf**	**14 38 12.6**	**+3.0**	
PTL	**Penteli**	**124.00 313**	*e*P	**PKPdf**	**14 38 12.8**	**+3.1**	
SKO	**Skopje**	**124.03 318**	*e*PKP	PKPdf	14 38 14.2	+4.5	
SOP	**Sopron**	**124.05 326**	*e*	**PKPdf**	**14 38 11.9**	**+2.4**	
SMIA	**Simia**	**124.14 314**	P	**PKPdf**	**14 38 13.3**	**+3.3**	
LIT	**Litokhoron**	**124.15 316**	P	**PKPdf**	**14 38 12.3**	**+2.4**	
NRDL	**Niedersach Rie**	**124.17 334**	*e*Pdiff	**Pdif**	**14 34 47.6**	**+3.9**	
NRDL			*e*PKPdf	PKiKP	14 38 13.8	+4.1	
NRDL			*e*PP	PP	14 40 01.3	+7.1	
IDI	**Anoyia**	**124.24 310**	P	**PKPdf**	**14 38 10.3**	**0.0**	
IDI	**Anoyia**	**124.24 310**	*e*PKPdf	**PKPdf**	**14 38 06.7**	**-3.6**	
LBNH	**Lisbon**	**124.29 38**	*e*PKIKP	**PKPdf**	**14 38 09.1**	**-1.0**	
LBNH	**Lisbon**	**124.29 38**	*e*PKPdf	**PKPdf**	**14 38 09.1**	**-1.0**	
CONA	**Conrad Observa**	**124.29 327**‖	*e*PKiKP	**PKiKP**	**14 38 09.8**	**-0.5**	
	comp=Z,33nm,0.6s,SNR=15						
NEUB	**Neuenburg**	**124.29 332**	*e*Pdiff	**Pdif**	**14 34 47.9**	**+3.5**	
NEUB			*e*PKPdf	PKiKP	14 38 14.0	+3.9	
NEUB			*e*PP	PP	14 40 03.6	+8.4	
HNH	**Hanover**	**124.33 39**	*e*PKPdf	**PKPdf**	**14 38 08.5**	**-1.7**	
ATAL	**Atalanti**	**124.36 314**	P	**PKPdf**	**14 38 09.8**	**-0.5**	
NAIG	**Nisos Aigina**	**124.39 313**	*e*P	**PKPdf**	**14 38 12.3**	**+1.9**	
LKR	**Lokris**	**124.39 314**	*e*P	**PKPdf**	**14 38 07.7**	**-2.7**	
TANN	**Tannenbergstha**	**124.49 331**	*e*Pdiff	**Pdif**	**14 34 49.2**	**+3.8**	
TANN			*e*PKPdf	**PKiKP**	**14 38 14.3**	**+3.7**	
TANN			*e*PP	PP	14 40 05.6	+8.9	
CLZ	**Clausthal**	**124.50 333**	*e*Pdiff	**Pdif**	**14 34 49.5**	**+4.1**	
CLZ			*e*PKPdf	PKPdf	14 38 14.8	+4.5	
CLZ			*e*PP	PP	14 40 05.4	+8.8	
CLZ	**Clausthal**	**124.50 333**	*e*P	**Pdif**	**14 34 49.5**	**+4.1**	
CLZ	**Clausthal**	**124.50 333**	*e*PKIKP	PKPdf	14 38 14.8	+4.5	
CLZ			*e*		14 40 05.4		
BIA	**Bitola**	**124.54 317**	*e*PKP	**PKPdf**	**14 38 12.3**	**+1.6**	
WERD	**Werda**	**124.55 331**	*e*PKPdf	PKPdf	14 38 14.5	+4.1	
KZN	**Kozani**	**124.56 316**	P	**PKPdf**	**14 38 13.8**	**+3.0**	
KZN	**Kozani**	**124.56 316**	*e*P	**PKPdf**	**14 38 13.8**	**+3.0**	
AXAR	**Agios Charalam**	**124.58 314**	P	**PKPdf**	**14 38 11.2**	**+0.4**	
GUNZ	**Gunzen**	**124.59 331**	*e*PKPdf	PKPdf	14 38 14.7	+4.2	
PLN	**Plauen**	**124.59 331**	*e*PKPdf	PKPdf	14 38 14.6	+4.2	
FNA	**Florina**	**124.61 317**	P	**PKPdf**	**14 38 09.3**	**-1.6**	
NKC	**Novy Kostel**	**124.62 331**	*e*PKIKP	**PKPdf**	**14 38 11.6**	**+1.1**	
NKC			*e*		14 40 04.4		
NKC			*e*SP	SP	14 49 59.3	+10	
NKC	**Novy Kostel**	**124.62 331**	*e*PKPdf	**PKPdf**	**14 38 11.6**	**+1.1**	
NKC			*ex*	x	14 38 14.2		
NKC			*ex*	x	14 38 17.3		
NKC			*es*PKP		14 38 37.3		
NKC			*e*PP	PP	14 40 04.4	+6.9	
NKC			*e*PS	**PS**	**14 49 59.3**	**+1.2**	
NKC			*e*SS	SS	14 56 56.4	+10	
NKC			AMS	AMS	15 28 20.0		
	comp=Z,15µm,25.0s						
WERN	**Wernitzgruen**	**124.62 331**	*e*PKPdf	PKPdf	14 38 14.9	+4.4	
MVH1	**Achvaich**	**124.66 346**	*e*P	**PKPdf**	**14 38 09.0**	**-1.3**	
MVH1	**Achvaich**	**124.66 346**	P	**PKPdf**	**14 38 09.0**	**-1.3**	
DID	**Didima**	**124.67 313**	P	**PKPdf**	**14 38 09.2**	**-1.8**	
THL	**Klokotos Trika**	**124.71 315**	P	**PKPdf**	**14 38 09.5**	**-1.5**	
THL	**Klokotos Trika**	**124.71 315**	*e*P	**PKPdf**	**14 38 11.2**	**+0.2**	
AGG	**Agios Georgios**	**124.71 315**	P	**PKPdf**	**14 38 10.4**	**-0.7**	
VAM	**Vamos**	**124.73 310**	P	**PKPdf**	**14 38 11.3**	**+0.2**	
MCD	**Coleburn Disti**	**124.73 345**	*e*P	**PKPdf**	**14 38 09.3**	**-1.2**	
MCD	**Coleburn Disti**	**124.73 345**	P	**PKPdf**	**14 38 09.3**	**-1.2**	
MOX	**Moxa**	**124.75 332**	*e*Pdiff	**Pdif**	**14 34 50.0**	**+3.6**	
MOX			*e*PKPdf	PKPdf	14 38 14.7	+4.0	
MOX			*e*PP	PP	14 40 06.6	+8.3	
MOX	**Moxa**	**124.75 332**	*e*P	**Pdif**	**14 34 50.0**	**+3.6**	
MOX	**Moxa**	**124.75 332**	*e*PKIKP	PKPdf	14 38 14.7	+4.0	
MOX			*e*		14 40 06.6		
BCI	**Bajram Curri**	**124.75 319**	*e*PN	**PKPdf**	**14 38 10.2**	**-0.8**	
KHC	**Kasperske Hory**	**124.76 329**	*e*PKIKP	**PKPdf**	**14 38 09.8**	**-1.1**	
KHC			*e*		14 40 05.2		
KHC			*e*SP	SP	14 50 00.5	+10	
KHC			*e*SS	SS	14 56 54.8	+6.9	
KHC			MLR	MLR			
	comp=Z,13µm,25.5s						
KHC	**Kasperske Hory**	**124.76 329**	*e*PKPdf	**PKPdf**	**14 38 09.8**	**-1.1**	
KHC			*ex*	x	14 38 17.4		
KHC			*es*PKP		14 38 37.1		
KHC			*e*PP	PP	14 40 05.2	+6.7	
KHC			*e*PS	**PS**	**14 50 00.5**	**+1.1**	
KHC			*e*SS	SS	14 56 54.8	+6.9	
KHC			AMS	AMS	15 32 10.0		
	comp=Z,13µm,25.5s						
KHC	**Kasperske Hory**	**124.76 329**	*e*PKPdf	**PKPdf**	**14 38 09.8**	**-1.1**	
DSF	**Desfina**	**124.82 314**	P	**PKPdf**	**14 38 11.3**	**0.0**	
PHP	**Peshkopia**	**124.83 318**	*e*PN	**PKPdf**	**14 38 09.3**	**-1.9**	
PHP	**Peshkopia**	**124.83 318**	P	**PKPdf**	**14 38 09.9**	**-1.3**	
MAKR	**Makrakomi, Fth**	**124.86 315**	P	**PKPdf**	**14 38 10.7**	**-0.6**	
GEC2	**GERESS Array S**	**124.88 329**	*e*Pdiff	**Pdif**	**14 34 50.7**	**+3.5**	
GEC2			*e*PKPdf	PKPdf	14 38 15.2	+4.0	
GEC2			*e*PP	PP	14 40 08.0	+8.6	
GEC2	**GERESS Array S**	**124.88 329**	*e*P	**Pdif**	**14 34 50.7**	**+3.5**	
GEC2	**GERESS Array S**	**124.88 329**	*e*PKIKP	PKPdf	14 38 15.2	+4.0	
GEC2			*e*		14 40 08.0		
GERES	**GERESS Array B**	**124.88 329**	PKP	**PKPdf**	**14 38 10.0**	**-1.1**	
GERES			pPKP	pPKPdf	14 38 37.7	+7.9	
GERES			PKKPbc	**PKKPbc**	**14 47 53.5**	**+0.1**	
GERES	**GERESS Array B**	**124.88 329**	Pdif	**Pdif**	**14 34 49.8**	**+2.6**	
GERES	**GERESS Array B**	**124.88 329**	PKP	**PKPdf**	**14 38 10.0**	**-1.1**	
	comp=Z,27nm,0.6s,baz=90,slow=1.4,SNR=25						
GERES			pPKP	pPKPdf	14 38 37.7	+7.9	
	comp=Z,15nm,0.6s,baz=70,slow=1.6,SNR=3.8						
GERES			PKKPbc	**PKKPbc**	**14 47 53.5**	**+0.1**	
	comp=Z,1.1nm,0.6s,baz=168,slow=5.0,SNR=3.7						
GERES	**GERESS Array B**	**124.88 329**	Pdif	**Pdif**	**14 34 49.8**	**+2.6**	
	comp=Z,1.2nm,0.7s,baz=40,slow=7.8,SNR=5.7						
MME1	**Meikle Cairn**	**124.89 345**	*e*P	**PKPdf**	**14 38 09.4**	**-1.5**	
MME1	**Meikle Cairn**	**124.89 345**	P	**PKPdf**	**14 38 09.4**	**-1.5**	
KOGS	**Kog**	**124.93 325**	*e*Pdiff	**Pdif**	**14 34 51.8**	**+4.5**	
KOGS			*e*PS	**PS**	**14 50 01.5**	**+0.5**	
MANZ	**Manzenberg**	**124.94 331**	*e*Pdiff	**Pdif**	**14 34 51.0**	**+3.6**	
MANZ			*e*PKPdf	PKiKP	14 38 15.4	+3.9	
MANZ			*e*PP	PP	14 40 08.0	+8.3	
NEST	**Nestorio**	**125.00 317**	P	**PKPdf**	**14 38 12.3**	**+0.6**	
GVD	**Gavdhos**	**125.01 309**	P	**PKPdf**	**14 38 12.1**	**+0.4**	
GVD	**Gavdhos**	**125.01 309**	*e*PKPdf	**PKPdf**	**14 38 11.0**	**-0.7**	
PUK	**Puka**	**125.02 319**	*e*PN	**PKPdf**	**14 38 09.4**	**-2.2**	
ROTZ	**Rotzenmuhle**	**125.04 330**	*e*Pdif	**Pdif**	**14 34 51.9**	**+4.1**	
ROTZ			*e*PKPdf	**PKiKP**	**14 38 15.5**	**+3.8**	
ROTZ			*e*PP	PP	14 40 09.0	+8.7	
KBN	**Korca**	**125.09 317**	*e*PN	**PKPdf**	**14 38 14.8**	**+3.0**	
KALE	**Kalithea**	**125.11 314**	P	**PKPdf**	**14 38 15.3**	**+3.4**	
WET	**Wettzell**	**125.11 330**	*e*Pdif	**Pdif**	**14 34 52.1**	**+4.0**	
WET			*e*PKPdf	PKPdf	14 38 15.7	+4.2	
WET			*e*PP	PP	14 40 09.7	+8.9	
WET	**Wettzell**	**125.11 330**	*e*P	**Pdif**	**14 34 52.1**	**+4.0**	
WET	**Wettzell**	**125.11 330**	*e*PKIKP	PKPdf	14 38 15.7	+4.2	
WET			*e*		14 40 09.7		
EVR	**Evrytania**	**125.12 315**	P	**PKPdf**	**14 38 13.8**	**+1.9**	
EVR	**Evrytania**	**125.12 315**	*e*P	**PKPdf**	**14 38 13.9**	**+2.0**	
MDO	**Dochfour**	**125.14 346**	*e*P	**PKPdf**	**14 38 09.9**	**-1.3**	
MDO	**Dochfour**	**125.14 346**	P	**PKPdf**	**14 38 09.9**	**-1.3**	
GUR	**Goura**	**125.15 313**	P	**PKPdf**	**14 38 11.4**	**-0.6**	
TRIZ	**Trizonia**	**125.17 314**	P	**PKPdf**	**14 38 14.6**	**+2.7**	
VLI	**Veliai**	**125.19 312**	P	**PKPdf**	**14 38 14.8**	**+2.8**	
VLI	**Veliai**	**125.19 312**	*e*P	**PKPdf**	**14 38 14.0**	**+2.0**	
KLV	**Kalavryta, Ach**	**125.24 314**	P	**PKPdf**	**14 38 12.2**	**+0.1**	
KLV	**Kalavryta, Ach**	**125.24 314**	*e*P	**PKPdf**	**14 38 12.2**	**+0.1**	
EFP	**Efpalio**	**125.26 314**	P	PKPdf	14 38 16.7	+4.6	
PQI	**Presque Isle**	**125.27 34**	*e*PKPdf	**PKPdf**	**14 38 09.5**	**-2.3**	
LAKA	**Lakka**	**125.29 314**	P	**PKPdf**	**14 38 12.4**	**+0.2**	
IBBN	**Ibbenburen**	**125.31 335**	*e*Pdif	**Pdif**	**14 34 52.8**	**+4.0**	
IBBN			*e*PKPdf	PKiKP	14 38 16.0	+3.9	
IBBN			*e*PP	PP	14 40 09.9	+8.1	
KAC	**Achnashellach**	**125.31 346**	*e*P	**PKPdf**	**14 38 09.3**	**-2.3**	
KAC	**Achnashellach**	**125.31 346**	P	**PKPdf**	**14 38 09.3**	**-2.3**	
VLX	**Vlachokerasia**	**125.35 313**	P	PKPdf	14 38 16.7	+4.3	
UBBA	**Unterbreizbach**	**125.38 333**	*e*Pdiff	**Pdif**	**14 34 52.9**	**+3.8**	
UBBA			*e*PKPdf	**PKiKP**	**14 38 16.0**	**+3.8**	
UBBA			*e*PP	PP	14 40 10.8	+8.5	
HRV	**Adam Dziewonsk**	**125.39 40**	*e*PKIKP	**PKPdf**	**14 38 15.2**	**+3.0**	
HRV	**Adam Dziewonsk**	**125.39 40**	*e*PKPdf	**PKPdf**	**14 38 15.2**	**+3.0**	
PERS	**Pernice**	**125.46 326**	*e*Pdiff	**Pdif**	**14 34 54.4**	**+4.6**	
JAN	**Janina**	**125.47 316**	P	**PKPdf**	**14 38 13.2**	**+0.7**	
JAN	**Janina**	**125.47 316**	*e*P	**PKPdf**	**14 38 13.6**	**+1.1**	
KPL	**Plockton**	**125.54 346**	*e*P	**PKPdf**	**14 38 09.7**	**-2.3**	
KPL			AMS	AMS	15 28 12.2		
	comp=Z,7µm,25.2s						
KPL	**Plockton**	**125.54 346**	P	**PKPdf**	**14 38 09.7**	**-2.3**	
KPL			AMS	AMS	15 28 12.2		
	comp=Z,7µm,25.2s						
GRF	**Grafenberg Arr**	**125.57 331**	*e*Pdiff	**Pdif**	**14 34 54.1**	**+4.0**	
GRF			*e*PP	PP	14 40 12.3	+8.5	
GRF	**Grafenberg Arr**	**125.57 331**	*e*P	**Pdif**	**14 34 54.1**	**+4.0**	
GRF			*e*		14 40 12.3		
WES	**Weston**	**125.60 40**	*e*PKIKP	**PKPdf**	**14 38 10.7**	**-1.9**	
WES	**Weston**	**125.60 40**	*e*PKPdf	**PKPdf**	**14 38 10.7**	**-1.9**	
TRQA	**Tornquist**	**125.67 145**	*e*PKPdf	**PKPdf**	**14 38 11.3**	**-1.6**	
RLS	**Riolos of Patr**	**125.73 314**	P	**PKPdf**	**14 38 12.7**	**-0.3**	
RLS	**Riolos of Patr**	**125.73 314**	*e*P	**PKPdf**	**14 38 16.7**	**+3.7**	
ITM	**Ithomi**	**125.76 313**	P	**PKPdf**	**14 38 13.1**	**0.0**	
ITM	**Ithomi**	**125.76 313**	*e*P	**PKPdf**	**14 38 16.6**	**+3.5**	
CFAA	**Coronel Fontan**	**125.80 135**	PKP	**PKPdf**	**14 38 11.9**	**-1.5**	
CFAA	**Coronel Fontan**	**125.80 135**	PKP	**PKPdf**	**14 38 11.9**	**-1.5**	
	comp=Z,6.4nm,0.7s,baz=248,slow=3.0,SNR=30						
IGT	**Igoumenitsa**	**125.89 316**	P	**PKPdf**	**14 38 12.7**	**-0.6**	
WTSB	**Winterswijk**	**125.96 335**	*e*PKP	**PKPdf**	**14 38 14.1**	**+1.1**	
	comp=Z,42nm,1.0s						
WTSB			*e*PP	PKiKP	14 38 40.5	+27	
	comp=Z,71nm,0.9s						
SRN	**Sarande**	**125.96 317**	*e*PN	**PKPdf**	**14 38 08.3**	**-5.0**	
SRN	**Sarande**	**125.96 317**	P	**PKPdf**	**14 38 16.4**	**+3.1**	
LKD2	**Lefkada island**	**125.99 315**	P	PKPdf	14 38 19.4	+5.9	
PYL	**PYLOS**	**126.01 313**	P	**PKPdf**	**14 38 12.2**	**-1.4**	
BOJS	**Bojanci**	**126.04 325**	*e*Pdiff	**Pdif**	**14 34 56.7**	**+4.4**	
BOJS			*e*PKPdf	**PKiKP**	**14 38 12.7**	**-1.0**	
BOJS			*e*PP	PP	14 40 14.3	+7.2	
BOJS			*e*Sdiff		14 48 04.3		
BOJS			*e*PS	**PS**	**14 50 12.7**	**+1.9**	
BOJS			*e*SS	**SS**	**14 57 08.8**	**+4.6**	
RJOB	**Jochberg**	**126.05 328**	*e*Pdiff	**Pdif**	**14 34 55.8**	**+3.4**	
RJOB			*e*PKPdf	**PKiKP**	**14 38 17.1**	**+3.3**	
RJOB			*e*PP	PP	14 40 15.5	+8.4	
LJU	**Ljubljana**	**126.14 326**	*e*Pdiff	**Pdif**	**14 34 58.1**	**+5.4**	
LJU			*e*PKPdf	**PKiKP**	**14 38 14.2**	**+0.2**	
LJU			*e*PP	PP	14 40 15.2	+7.5	
LJU			*e*		14 41 24.3		
LJU			*e*Sdiff		14 48 06.4		
LJU			*e*PS	**PS**	**14 50 13.4**	**+1.8**	
LJU			*e*SS	**SS**	**14 57 09.3**	**+3.9**	
BUG	**Bochum--Univer**	**126.15 335**	*e*Pdif	**Pdif**	**14 34 56.3**	**+3.7**	
BUG			*e*PKPdf	**PKiKP**	**14 38 17.5**	**+3.7**	
BUG			*e*PP	PP	14 40 15.5	+8.1	
KEK	**Kerkira**	**126.17 316**	*e*P	**PKPdf**	**14 38 17.2**	**+3.4**	
EDI	**Edinburgh**	**126.18 344**	AMS	AMS	15 27 07.5		
	comp=Z,5µm,24.1s						
MYKA	**Terra Mystica**	**126.28 327**‖	*e*PKiKP	**PKiKP**	**14 38 14.0**	**-0.3**	
	comp=Z,18nm,0.6s						
VLS	**Valsamata**	**126.31 314**	P	**PKPdf**	**14 38 17.9**	**+3.8**	
VLS	**Valsamata**	**126.31 314**	*e*P	**PKPdf**	**14 38 17.9**	**+3.8**	
CADS	**Cadrg**	**126.47 326**	*e*Pdiff	**Pdif**	**14 34 59.7**	**+5.4**	
CADS			*e*PKPdf	**PKiKP**	**14 38 15.1**	**+0.4**	
CADS			*e*PP	PP	14 40 16.9	+6.9	
CADS			*e*		14 51 49.9		
VOY	**Vojsko**	**126.50 326**	*e*	**PKPdf**	**14 38 12.3**	**-2.1**	
VOY			*e*PKPdf	**PKiKP**	**14 38 14.7**	**-0.1**	
VOY			*e*		14 38 18.0		
VOY			*e*		14 38 27.0		
VOY			*e*		14 38 40.5		
TNS	**Taunus Mts**	**126.51 333**	*e*Pdiff	**Pdif**	**14 34 58.3**	**+4.0**	
TNS			*e*PKPdf	PKPdf	14 38 18.4	+4.2	
TNS			*e*PP	PP	14 40 17.7	+7.7	
TNS	**Taunus Mts**	**126.51 333**	*e*P	**Pdif**	**14 34 58.3**	**+4.0**	
TNS	**Taunus Mts**	**126.51 333**	*e*PKIKP	PKPdf	14 38 18.4	+4.2	
TNS			*e*		14 40 17.7		
FUR	**Furstenfeldbru**	**126.55 329**	*e*Pdiff	**Pdif**	**14 34 58.1**	**+3.5**	
FUR			*e*PKPdf	PKPdf	14 38 18.4	+4.1	
FUR			*e*PP	PP	14 40 18.4	+8.0	
FUR	**Furstenfeldbru**	**126.55 329**	*e*P	**Pdif**	**14 34 58.1**	**+3.5**	
FUR	**Furstenfeldbru**	**126.55 329**	*e*PKIKP	PKPdf	14 38 18.4	+4.1	
FUR			*e*		14 40 18.4		
ATAH	**Atahualpa**	**126.58 103**	PKP	**PKPdf**	**14 38 16.1**	**+0.3**	
ATAH	**Atahualpa**	**126.58 103**	PKP	**PKPdf**	**14 38 16.1**	**+0.3**	
	comp=Z,92nm,0.8s,baz=321,slow=3.6,SNR=4.5						
PGBU	**Glenifferbraes**	**126.62 345**	AMS	AMS	15 26 48.0		
	comp=Z,5µm,28.2s						
EKA	**Eskdalemuir Ar**	**126.69 344**	PKP	**PKPdf**	**14 38 15.2**	**+0.9**	
EKA			PP	PP	14 40 01.8	-8.9	
EKA			PKKPbc	**PKKPbc**	**14 47 48.7**	**+1.9**	
EKA	**Eskdalemuir Ar**	**126.69 344**	PKP	**PKPdf**	**14 38 15.2**	**+0.9**	
	comp=Z,12nm,0.4s,baz=347,slow=1.1,SNR=19						
EKA			PP	PP	14 40 01.8	-8.9	
	comp=Z,6.3nm,0.8s,baz=34,slow=7.7,SNR=2.9						
EKA			PKKPbc	**PKKPbc**	**14 47 48.7**	**+1.9**	
	comp=Z,1.8nm,0.8s,baz=210,slow=2.9,SNR=4.6						
TRI	**Trieste**	**126.77 326**	*e*PKIKP	**PKPdf**	**14 38 13.9**	**-0.8**	
TRI	**Trieste**	**126.77 326**	*e*PKPdf	**PKPdf**	**14 38 13.9**	**-0.8**	
BCIP	**Isla Barro Col**	**126.77 82**	*e*PKPdf	**PKPdf**	**14 38 12.6**	**-3.0**	
TOD	**Tromm**	**126.78 332**	PKIKP	**PKPdf**	**14 38 15.7**	**+1.0**	
TOD	**Tromm**	**126.78 332**	PKP	**PKPdf**	**14 38 15.7**	**+1.0**	
**ABT

comp=Z,7µm,32.0s
MCH1 Michaelchurch 129.53 342 P PKPdf 14 38 17.9 -2.0
MCH1 AMS AMS 15 26 30.6
comp=Z,7µm,32.0s
SWN1 Swindon 129.56 340 AMS AMS 15 34 36.5
comp=Z,10µm,24.9s
LVC Limon Verde 129.99 125 PKP **PKPdf 14 38 22.2 +0.3**
LVC SKP 14 41 48.2
LVC Limon Verde 129.99 125 PKP **PKPdf 14 38 22.3 +0.3**
comp=Z,19nm,0.8s,baz=270,slow=8.1,SNR=4.2
LVC SKP 14 41 48.2
comp=Z,17nm,1.0s,baz=271,slow=6.9,SNR=5.4
CABF La Chapelle 130.18 331 *e*PKIKP **PKPdf 14 38 20.5 -0.9**
comp=Z,69nm,0.6s
CABF La Chapelle 130.18 331 *e*PKIKP **PKPdf 14 38 20.5 -0.9**
CABF La Chapelle 130.18 331 *e*PKPdf **PKPdf 14 38 20.5 -0.9**
LPA La Plata 130.19 146 PKIKP **PKPdf 14 38 24.0 +2.4**
LPA PP PP 14 40 40.0 +5.8
HEX Exmoor 130.59 341 *e*P **PKPdf 14 38 21.2 -0.7**
HEX Exmoor 130.59 341 P **PKPdf 14 38 21.2 -0.7**
LPL La Plagne 130.64 330 *e*PKIKP **PKPdf 14 38 21.3 -1.1**
comp=Z,51nm,0.5s
LPL La Plagne 130.64 330 *e*PKIKP **PKPdf 14 38 21.3 -1.1**
LPL La Plagne 130.64 330 *e*PKPdf **PKPdf 14 38 21.3 -1.1**
LPG La Plagne 130.65 330 *e*PKIKP **PKPdf 14 38 21.4 -1.1**
comp=Z,74nm,0.5s
LPG La Plagne 130.65 330 *e*PKIKP **PKPdf 14 38 21.4 -1.1**
LPG La Plagne 130.65 330 *e*PKPdf **PKPdf 14 38 21.4 -1.1**
LOR Lormes 130.74 333 *e*PKIKP **PKPdf 14 38 21.3 -1.0**
comp=Z,36nm,0.7s
LOR *e*R
comp=Z,12µm,21.0s
LOR Lormes 130.74 333 *e*PKPdf **PKPdf 14 38 21.3 -1.0**
HTL Hartland 130.87 342 AMS AMS 15 34 03.5
comp=Z,7µm,23.1s
SSF Saint Saulge 131.05 333 *e*PKIKP **PKPdf 14 38 21.8 -1.1**
comp=Z,40nm,0.6s
SSF Saint Saulge 131.05 333 *e*PKIKP **PKPdf 14 38 21.8 -1.1**
SSF Saint Saulge 131.05 333 *e*PKPdf **PKPdf 14 38 21.8 -1.1**
MBDF Montbardon 131.17 329 *e*PKIKP **PKPdf 14 38 21.9 -1.5**
comp=Z,27nm,0.6s
MBDF Montbardon 131.17 329 *e*PKIKP **PKPdf 14 38 21.9 -1.5**
MBDF Montbardon 131.17 329 *e*PKPdf **PKPdf 14 38 21.9 -1.5**
SMF Signal de Mont 131.22 333 *e*PKIKP **PKPdf 14 38 21.6 -1.6**
comp=Z,36nm,0.5s
SMF Signal de Mont 131.22 333 *e*PKIKP **PKPdf 14 38 21.6 -1.6**
SMF Signal de Mont 131.22 333 *e*PKPdf **PKPdf 14 38 21.6 -1.6**
AVF Avril sur Loir 131.33 333 *e*PKIKP **PKPdf 14 38 22.0 -1.4**
comp=Z,23nm,0.6s
AVF Avril sur Loir 131.33 333 *e*PKIKP **PKPdf 14 38 22.0 -1.4**
AVF Avril sur Loir 131.33 333 *e*PKPdf **PKPdf 14 38 22.0 -1.4**
LDF La Druitiere 131.37 337 *e*PKIKP **PKPdf 14 38 21.9 -1.5**
LDF La Druitiere 131.37 337 *e*PKIKP **PKPdf 14 38 21.9 -1.5**
LDF La Druitiere 131.37 337 *e*PKPdf **PKPdf 14 38 21.9 -1.5**
FLN La Foliniere 131.37 337 *e*PKIKP **PKPdf 14 38 22.1 -1.3**
comp=Z,44nm,0.7s
FLN *e*R
comp=Z,11µm,22.8s
FLN La Foliniere 131.37 337 *e*PKIKP **PKPdf 14 38 22.1 -1.3**
FLN La Foliniere 131.37 337 *e*PKPdf **PKPdf 14 38 22.1 -1.3**
SBF Sospel 131.41 328 *e*PKIKP **PKPdf 14 38 22.2 -1.5**
comp=Z,96nm,0.6s
SBF Sospel 131.41 328 *e*PKIKP **PKPdf 14 38 22.2 -1.5**
SBF Sospel 131.41 328 *e*PKPdf **PKPdf 14 38 22.2 -1.5**
ORIF Oris-en-Rattie 131.49 330 *e*PKIKP **PKPdf 14 38 22.8 -1.1**
comp=Z,67nm,0.5s
ORIF *e*R
comp=Z,15µm,22.5s
ORIF Oris-en-Rattie 131.49 330 *e*PKIKP **PKPdf 14 38 22.8 -1.1**
ORIF Oris-en-Rattie 131.49 330 *e*PKPdf **PKPdf 14 38 22.8 -1.1**
REVF Revere 131.53 328 PKIKP **PKPdf 14 38 26.4 +2.5**
REVF Revere 131.53 328 PKP **PKPdf 14 38 26.4 +2.5**
REVF Revere 131.53 328 PKP **PKPdf 14 38 26.4 +2.5**
VAL Valentia 131.56 347 *e*PP PP 14 40 46.3 +3.8
BGF Bois d'Agland 131.73 333 *e*PKIKP **PKPdf 14 38 23.1 -1.1**
comp=Z,53nm,0.7s
BGF Bois d'Agland 131.73 333 *e*PKIKP **PKPdf 14 38 23.1 -1.1**
BGF Bois d'Agland 131.73 333 *e*PKPdf **PKPdf 14 38 23.1 -1.1**
CCA1 Carnmenellis 131.81 342 AMS AMS 15 34 01.7
comp=Z,8µm,25.5s
CCA1 Carnmenellis 131.81 342 AMS AMS 15 34 01.7
comp=Z,8µm,25.5s
GRR Gorron 131.82 337 *e*PKIKP **PKPdf 14 38 23.0 -1.3**
GRR Gorron 131.82 337 *e*PKIKP **PKPdf 14 38 23.0 -1.3**
GRR Gorron 131.82 337 *e*PKPdf **PKPdf 14 38 23.0 -1.3**
FRF La Foret Royal 132.04 328 *e*PKIKP **PKPdf 14 38 23.7 -1.1**
comp=Z,51nm,0.6s
FRF La Foret Royal 132.04 328 *e*PKIKP **PKPdf 14 38 23.7 -1.1**
FRF La Foret Royal 132.04 328 *e*PKPdf **PKPdf 14 38 23.7 -1.1**
VIVF Saint-Julien-l 132.13 330 *e*PKIKP **PKPdf 14 38 24.0 -1.0**
comp=Z,74nm,1.0s
VIVF Saint-Julien-l 132.13 330 *e*PKIKP **PKPdf 14 38 24.0 -1.0**
VIVF Saint-Julien-l 132.13 330 *e*PKPdf **PKPdf 14 38 24.0 -1.0**
ROSC El Rosal 132.16 88 PKP **PKPdf 14 38 25.1 -1.2**
ROSC SKP 14 41 51.6
ROSC El Rosal 132.16 88 PKP **PKPdf 14 38 25.1 -1.2**
comp=Z,23nm,0.6s,baz=64,slow=23,SNR=3.8
ROSC SKP 14 41 51.6
comp=Z,7.6nm,0.4s,baz=254,slow=20,SNR=2.8
TCF Toulx Ste Croi 132.22 333 *e*PKIKP **PKPdf 14 38 24.2 -0.9**
comp=Z,77nm,0.7s
TCF Toulx Ste Croi 132.22 333 *e*PKIKP **PKPdf 14 38 24.2 -0.9**
TCF Toulx Ste Croi 132.22 333 *e*PKPdf **PKPdf 14 38 24.2 -0.9**
LMR La Mourre 132.27 328 *e*PKIKP **PKPdf 14 38 24.1 -1.2**
comp=Z,97nm,0.6s
LMR La Mourre 132.27 328 *e*PKIKP **PKPdf 14 38 24.1 -1.2**
LMR La Mourre 132.27 328 *e*PKPdf **PKPdf 14 38 24.1 -1.2**
SMRF Simiane la Rot 132.31 329 *e*PKIKP **PKPdf 14 38 24.7 -0.7**
comp=Z,75nm,0.9s
SMRF Simiane la Rot 132.31 329 *e*PKPdf **PKPdf 14 38 24.7 -0.7**
SGMF Saint Gilles 132.57 339 *e*PKIKP **PKPdf 14 38 24.4 -1.3**
SGMF Saint Gilles 132.57 339 *e*PKIKP **PKPdf 14 38 24.4 -1.3**
SGMF Saint Gilles 132.57 339 *e*PKPdf **PKPdf 14 38 24.4 -1.3**
ROSF Rostrenen 132.76 339 *e*PKIKP **PKPdf 14 38 24.6 -1.4**
comp=Z,21nm,0.6s
ROSF Rostrenen 132.76 339 *e*PKIKP **PKPdf 14 38 24.6 -1.4**
ROSF Rostrenen 132.76 339 *e*PKPdf **PKPdf 14 38 24.6 -1.4**
MFF Saint Martin d 132.99 335 *e*PKIKP **PKPdf 14 38 24.9 -1.6**
MFF Saint Martin d 132.99 335 *e*PKIKP **PKPdf 14 38 24.9 -1.6**
MFF Saint Martin d 132.99 335 *e*PKPdf **PKPdf 14 38 24.9 -1.6**
QUIF Quistinic 133.07 339 *e*PKIKP **PKPdf 14 38 25.5 -1.1**
QUIF Quistinic 133.07 339 *e*PKIKP **PKPdf 14 38 25.5 -1.1**
QUIF Quistinic 133.07 339 *e*PKPdf **PKPdf 14 38 25.5 -1.1**
LASF Ste Croix 133.10 330 *e*PKIKP **PKPdf 14 38 26.1 -0.8**
comp=Z,75nm,0.7s
LASF Ste Croix 133.10 330 *e*PKPdf **PKPdf 14 38 26.1 -0.8**
RJF Les Rejaudoux 133.29 333 *e*PKIKP **PKPdf 14 38 26.0 -1.2**
comp=Z,28nm,0.8s
RJF *e*R
comp=Z,11µm,20.8s
RJF Les Rejaudoux 133.29 333 *e*PKIKP **PKPdf 14 38 26.0 -1.2**
RJF Les Rejaudoux 133.29 333 *e*PKPdf **PKPdf 14 38 26.0 -1.2**
CAF Calviac 133.33 332 *e*PKIKP **PKPdf 14 38 26.0 -1.3**
CAF Calviac 133.33 332 *e*PKIKP **PKPdf 14 38 26.0 -1.3**
CAF Calviac 133.33 332 *e*PKPdf **PKPdf 14 38 26.0 -1.3**
LPAZ La Paz 133.43 118 PKPpre PKPpre 14 38 21.6
LPAZ PKP **PKPdf 14 38 27.9 -1.1**
LPAZ SKP 14 41 54.9
LPAZ La Paz 133.43 118 PKhKP PKPpre 14 38 21.6
comp=Z,3.6nm,0.5s,baz=259,slow=2.8,SNR=12
LPAZ PKP **PKPdf 14 38 27.9 -1.1**
comp=Z,17nm,0.9s,baz=172,slow=1.6,SNR=9.0
LPAZ SKP 14 41 54.9
comp=Z,15nm,0.9s,baz=268,slow=4.1,SNR=3.4
LFF La Frestale 133.92 333 *e*PKIKP **PKPdf 14 38 27.1 -1.2**
LFF La Frestale 133.92 333 *e*PKIKP **PKPdf 14 38 27.1 -1.2**
LFF La Frestale 133.92 333 *e*PKPdf **PKPdf 14 38 27.1 -1.2**
MTLF Montolieu 134.45 331 *e*PKIKP **PKPdf 14 38 28.7 -0.7**
comp=Z,19nm,0.5s
MTLF Montolieu 134.45 331 *e*PKIKP **PKPdf 14 38 28.7 -0.7**
MTLF Montolieu 134.45 331 *e*PKPdf **PKPdf 14 38 28.7 -0.7**
KEST Kesra 135.32 318 PKPpre PKPpre 14 38 26.5
KEST PKP **PKPdf 14 38 30.4 -1.0**
KEST PP PP 14 41 12.9 +5.3
KEST SKP 14 41 58.3
KEST Kesra 135.32 318 PKhKP PKPpre 14 38 26.5
comp=Z,1.7nm,0.7s,baz=191,slow=7.7,SNR=4.2
KEST PKP **PKPdf 14 38 30.4 -1.0**
comp=Z,1.2nm,0.5s,baz=276,slow=4.2,SNR=3.5
KEST PP PP 14 41 12.9 +5.3
comp=Z,6.7nm,0.8s,baz=262,slow=2.7,SNR=3.6
KEST SKP 14 41 58.3
comp=Z,18nm,1.2s,baz=33,slow=4.2,SNR=2.3
EPF Esparros 135.58 332 *e*PKIKP **PKPdf 14 38 30.6 -1.0**
comp=Z,23nm,0.6s
EPF Esparros 135.58 332 *e*PKIKP **PKPdf 14 38 30.6 -1.0**
EPF Esparros 135.58 332 *e*PKPdf **PKPdf 14 38 30.6 -1.0**
CMAH Djebel Manchou 136.06 320 P PKPdf 14 38 38.3 +5.6
ETSF Etsaut 136.10 333 *e*PKIKP **PKPdf 14 38 31.2 -1.4**
comp=Z,89nm,0.6s
ETSF Etsaut 136.10 333 *e*PKIKP **PKPdf 14 38 31.2 -1.4**
ETSF Etsaut 136.10 333 *e*PKPdf **PKPdf 14 38 31.2 -1.4**
SJPF Ste Jean 136.23 333 *e*PKIKP **PKPdf 14 38 31.1 -1.6**
comp=Z,26nm,0.5s
SJPF Ste Jean 136.23 333 *e*PKIKP **PKPdf 14 38 31.1 -1.6**
SJPF Ste Jean 136.23 333 *e*PKPdf **PKPdf 14 38 31.1 -1.6**
ABSA Djebel Ababsia 136.24 320 P PKPdf 14 38 38.3 +5.2
CAEH 'Ain El Ouahch 136.33 321 P **PKPdf 14 38 35.4 +2.3**
CKFL Kef-Lekhel 136.65 320 P **PKPdf 14 38 33.9 0.0**
CASM Ain Smara 136.88 320 P **PKPdf 14 38 31.5 -2.7**
CTEI Djebel Teioual 137.05 320 P **PKPdf 14 38 31.5 -3.1**
DFRA Djebel Bou Aff 137.09 321 P **PKPdf 14 38 30.0 -4.7**
CKHR Kef el Ahmar 137.65 321 P PKPdf 14 38 28.6 -7.1
ABA Alger-Bouzarea 138.66 323 P PKPdf 14 38 43.8 +6.4
ADJB Djebel Djouab 138.85 322 P **PKPdf 14 38 37.3 -0.6**
EMHD Djebel Mahouad 139.11 323 P PKPdf 14 38 32.5 -5.9
PBRG Braganca 139.61 337 *e*PKPdf **PKPdf 14 38 34.6 -4.4**
PBRG Braganca 139.61 337 *e*PP PP 14 41 39.5 +6.0
SIV San Ignacio 139.64 122 PKPpre PKPpre 14 38 34.5
SIV SKPbc **SKiKP 14 42 10.9 -2.1**
SIV San Ignacio 139.64 122 PKhKP PKPpre 14 38 34.5
comp=Z,6.7nm,0.5s,baz=261,slow=4.5,SNR=6.9
SIV SKPbc **SKiKP 14 42 10.9 -2.1**
comp=Z,36nm,0.9s,baz=236,slow=3.4,SNR=7.5
EBNR Beni Rached 139.89 324 P PKPdf 14 38 46.3 +6.6
PGAV Gavieira, Arco 140.04 339 *e*PKPdf PKPdf 14 38 32.9 -7.0
PGAV *e*SS SS 15 00 20.2 +27
PGAV *e*LQ LQ 15 17 21.0
PGAV *e*LR LR 15 26 56.9
comp=Z,6µm,27.9s
STVI Saint Thomas 140.07 68 PKPdf **PKPdf 14 38 37.5 -2.9**
ECHA Ech Chlef 140.08 324 P **PKPdf 14 38 42.9 +2.9**
ESDC Sonseca Array 140.21 333 PKPpre PKPpre 14 38 10.3
ESDC PKP **PKPdf 14 38 39.8 -0.4**
ESDC PP PP 14 41 41.5 +4.2
ESDC Sonseca Array 140.21 333 PKhKP PKPpre 14 38 36.3
comp=Z,1.7nm,0.5s,baz=34,slow=3.1,SNR=6.8
ESDC PKP **PKPdf 14 38 39.8 -0.4**
comp=Z,1.7nm,0.4s,baz=23,slow=3.5,SNR=12
ESDC PP PP 14 41 41.5 +4.2
comp=Z,16nm,0.8s,baz=24,slow=7.1,SNR=11
MVO Moncorvo 140.27 337 *e*PKPdf **PKPdf 14 38 35.2 -5.1**
MVO Moncorvo 140.27 337 *e*PP PP 14 41 43.7 +6.1
MVO *e*LQ LQ 15 19 56.7
MVO *e*LR LR 15 28 57.5
comp=Z,7µm,14.0s
EANR 'Ain N'Sour 140.38 324 P **PKPdf 14 38 40.7 +0.1**
POLO Lamas de Olo 140.38 338 *e*PKPdf **PKPdf 14 38 36.4 -4.1**
POLO Lamas de Olo 140.38 338 *e*PP PP 14 41 45.5 +7.2
POLO *e*SS SS 14 59 40.7 -16
CDVI St. Croix 140.39 68 *e*PKPdf **PKPdf 14 38 37.6 -3.4**
ETRT Tiaret 140.65 323 P **PKPdf 14 38 37.8 -3.4**
PVIS Viseu 140.99 338 *e*PKPdf **PKPdf 14 38 42.3 +0.7**
MTE Manteigas 141.13 337 *e*PKPdf PKPdf 14 38 35.8 -6.1
MTE *e*SS SS 15 00 30.5 +25
MTE *e*LQ LQ 15 20 07.3
MTE *e*LR LR 15 29 04.9
comp=Z,7µm,20.9s
PCBR Castelo Branco 141.58 336 *e*PKPdf **PKPdf 14 38 44.7 +2.1**
PMRV Marv??o 141.90 336 *e*PKPdf PKPdf 14 38 35.8 -7.4
PMRV Marv??o 141.90 336 *e*PP PP 14 41 52.6 +5.1
PMRV *e*SS SS 15 00 41.9 +27
PMRV *e*LQ LQ 15 19 05.9
SKI Saint Kitts 142.37 68 *e*P **PKPdf 14 38 44.9 +0.3**
PESTR Estremoz 142.45 336 *e*PKPdf **PKPdf 14 38 40.6 -3.6**
PESTR Estremoz 142.45 336 *e*PP PP 14 41 58.3 +7.4
PESTR *e*SS SS 15 00 46.4 +25
PMTG Montargil 142.54 337 *e*PKPdf **PKPdf 14 38 41.8 -2.5**
PMTG Montargil 142.54 337 *e*PP PP 14 41 59.1 +7.8
PBAR Barrancos 142.81 335 *e*PKPdf **PKPdf 14 38 42.3 -2.5**
PBAR Barrancos 142.81 335 *e*PP PP 14 41 57.9 +4.9
PBAR *e*SS SS 15 00 55.2 +30
EVO Evora 142.91 336 *e*PKIKP **PKPdf 14 38 44.3 -0.7**
comp=Z,44nm,0.7s
EVO *e*R
comp=Z,12µm,22.2s
EVO Evora 142.91 336 *e*PKPdf **PKPdf 14 38 43.5 -1.5**
EVO Evora 142.91 336 *e*PP PP 14 41 57.9 +4.3
EVOP Sao Brissos 142.96 336 *e*PKIKP **PKPdf 14 38 44.3 -0.8**
EVOP Sao Brissos 142.96 336 *e*PKPdf **PKPdf 14 38 44.3 -0.8**
PMAFR Mafra 143.04 338 *e*PKPdf **PKPdf 14 38 44.1 -1.1**
PMAFR Mafra 143.04 338 *e*PP PP 14 42 01.1 +6.7
PMAFR *e*SS SS 15 00 49.8 +22
LIS Lisbon 143.20 337 *e*P **PKPdf 14 38 46.0 +0.5**
LIS AMS AMS 15 45 38.0
comp=Z,8µm,22.0s
LIS Lisbon 143.20 337 *e*P **PKPdf 14 38 46.0 +0.5**
LIS A A 15 45 38.0
comp=Z,8µm,22.0s
LIS Lisbon 143.20 337 *e*PKIKP **PKPdf 14 38 46.0 +0.5**
BPA Boggy Peak 143.25 68 *e*P **PKPdf 14 38 44.7 -1.5**
PBEJ Beja 143.28 335 *e*PKPdf **PKPdf 14 38 43.5 -2.2**
PBEJ Beja 143.28 335 *e*PP PP 14 41 59.7 +3.8
PNCL Nicolau / Gran 143.48 336 *e*PKPdf **PKPdf 14 38 45.9 -0.1**
PNCL Nicolau / Gran 143.48 336 *e*PP PP 14 42 03.6 +6.6
PNCL *e*SS SS 15 00 56.3 +23
MESJ Messejana 143.59 336 *e*P **PKPdf 14 38 46.6 +0.4**
MESJ *e*PP PP 14 42 02.1 +4.4
MESJ *e*SS SS 15 00 39.4 +5.2
MESJ AMS AMS 15 52 19.6
comp=Z,9µm,15.4s
MESJ Messejana 143.59 336 *e*P **PKPdf 14 38 46.6 +0.4**
MESJ Messejana 143.59 336 *e*PP PP 14 42 02.1 +4.4
MESJ *e*SS SS 15 00 39.4 +5.3
MESJ A A 15 52 19.6
comp=Z,9µm,15.4s
MESJ Messejana 143.59 336 *e*PKIKP **PKPdf 14 38 46.5 +0.4**
MESJ *e* 14 42 02.0
PCVE Castro Verde 143.69 335 *e*PKPdf **PKPdf 14 38 44.1 -2.3**
PCVE *e*SS SS 15 00 56.3 +21
PHG Guadaloupe-2 143.70 70 *e*P **PKPdf 14 38 45.1 -2.0**
DOG Dongo Capester 143.72 70 *e*P **PKPdf 14 38 46.2 -0.8**
TBG Guadaloupe-3 143.74 70 *e*P **PKPdf 14 38 46.6 -0.4**
PVAQ Vaqueiros 143.75 335 *e*PKPdf **PKPdf 14 38 45.3 -1.2**
PVAQ Vaqueiros 143.75 335 *e*PP PP 14 42 02.6 +3.9
PVAQ *e*LQ LQ 15 21 19.7
PVAQ *e*LR LR 15 30 58.2
comp=Z,7µm,20.9s
PBDV Barranco-do-Ve 143.97 335 *e*PKPdf **PKPdf 14 38 46.5 -0.4**
PBDV *e*SS SS 15 01 02.2 +23
MGG Marie-Galante 144.03 70 *e*P **PKPdf 14 38 46.5 -1.0**
DEG La Desirade 144.18 69 *e*P **PKPab 14 38 44.6 -1.1**
MORF Marmelete 144.22 336 *e*PKPdf **PKPdf 14 38 50.6 +3.2**
MORF *e*SS SS 15 00 59.4 +18
MORF Marmelete 144.22 336 *e*PKIKP **PKPdf 14 38 49.0 +1.6**
MORF *e* 14 42 05.8
PFVI Vila Bisbo 144.44 336 *e*PKPdf **PKPdf 14 38 49.5 +1.8**
TAM Tamanrasset 144.66 303 *e*PKIKP **PKPdf 14 38 47.9 -0.8**
TAM Tamanrasset 144.66 303 *e*PKPdf **PKPdf 14 38 47.9 -0.8**
SPB Sao Paulo 144.71 145 *e*PKPdf **PKPab 14 38 44.9 -2.5**
SPB Sao Paulo 144.71 145 *e*PKPdf **PKPdf 14 38 50.3 +1.7**
TPP Pointe-a-Pierr 144.81 80 *e*P **PKPdf 14 38 51.6 +2.7**
TRN Trinidad (W) 144.83 79 *e*P **PKPdf 14 38 49.5 +0.5**
TBH Brigand Hill 145.18 79 *e*P **PKPdf 14 38 52.6 +3.0**
TOSP Speyside 145.60 78 *e*P **PKPdf 14 38 49.1 -1.2**
MDT Midelt 145.90 326 PKPbc **PKPab 14 38 51.4 -0.4**
MDT Midelt 145.90 326 PKPbc **PKPab 14 38 51.3 -0.4**
comp=Z,25nm,0.6s,baz=52,slow=4.5,SNR=25
PGRA Graciosa 146.31 2 *e*PKP **PKPab 14 38 56.0 +3.1**
PGRA *e*LQ LQ 15 19 56.2
PGRA *e*LR LR 15 27 59.9
comp=Z,403nm,22.9s
ROSA Rosais 146.60 3 *e*PKP **PKPab 14 38 56.2 +2.2**
ROSA *e*LQ LQ 15 20 12.3
ROSA *e*LR LR 15 28 16.6
comp=Z,713nm,19.9s
PCED Cedros 146.67 3 *e*PKP PKPab 14 38 59.5 +5.2
PMAN Manadas 146.70 3 *e*PKP **PKPab 14 38 54.3 -0.1**
CALA Caldeira 146.72 3 *e*PKP **PKPab 14 38 58.3 +3.7**
PICO Pico 146.81 3 *e*PKP **PKPab 14 38 57.6 +2.7**
PCAN Candelaria 146.85 3 *e*PKP **PKPab 14 38 57.3 +2.3**
PSET Sete Cidades 147.54 359 *e*PKP **PKPab 14 38 58.7 +0.9**
PSET *e*LQ LQ 15 19 56.2
PSET *e*LR LR 15 28 57.3
comp=Z,525nm,29.0s
BART Pico Bartolome 147.58 358 *e*PKP **PKPab 14 38 57.0 -1.0**
GRON Grota Negra 147.59 359 *e*PKP **PKPab 14 38 57.0 -1.0**
CMLA Cha da Macela 147.60 359 *e*PKP **PKPab 14 38 58.7 +0.7**
CMLA *e*LQ LQ 15 20 20.8
CMLA *e*LR LR 15 28 24.9
comp=Z,905nm,21.3s
CAM4 Nova Friburgo 148.30 150⇑ *i*P **PKPab 14 39 01.5 -0.1**
CAM4 *i* 14 39 04.7
CAM4 *i* 14 39 08.2
CAM4 *i* 14 39 11.4
CAM4 *i* 14 39 22.0
CAM4 *i* 14 39 24.3
CAM4 *i* 14 39 28.1
CAM4 *i* 14 39 36.2
CAM4 *i* 14 39 44.5
CAM4 *i* 14 39 51.2
PSMN Pico do Norte, 148.34 358 *e*PKP **PKPbc 14 38 57.6 -0.2**
PSMN *e*LQ LQ 15 20 50.3
PSMN *e*LR LR 15 28 29.9
comp=Z,461nm,22.4s
PSMA Santa Maria 148.35 358 *e*PKP **PKPbc 14 38 58.0 +0.2**
BDFB Brasilia 150.13 134 PKPbc **PKPbc 14 39 01.9 -1.1**
BDFB Brasilia 150.13 134 PKPbc **PKPbc 14 39 01.9 -1.1**
comp=Z,88nm,0.8s,baz=260,slow=1.1,SNR=30
SHEL Horse Pasture 150.74 224 *e*PKIKP **PKPbc 14 39 04.4 +0.1**
SHEL Horse Pasture 150.74 224 *e*PKIKP **PKPab 14 39 10.2 -1.2**
SHEL Horse Pasture 150.74 224 *e*PKPbc **PKPbc 14 39 04.4 +0.1**
SHEL Horse Pasture 150.74 224 *e*PKPbc **PKPab 14 39 10.2 -1.2**
PMOZ Porto Moniz, M 151.25 344 *e*LR LR 15 31 34.7
comp=Z,7µm,20.9s
TOA0 Torodi Ar. Sit 151.29 288 *e*PKPbc **PKPbc 14 39 05.0 -0.6**
TOA0 Torodi Ar. Sit 151.29 288 *e*PKPbc **PKPab 14 39 09.8 -4.0**
TORD Torodi Ar. Bea 151.29 288 PKP **PKPdf 14 39 00.8 +1.2**
TORD PKPbc **PKiKP 14 39 05.7 -0.4**
TORD PP PP 14 42 48.9 +4.1
TORD Torodi Ar. Bea 151.29 288 PKP **PKPdf 14 39 00.8 +1.2**
comp=Z,34nm,0.8s,baz=48,slow=1.8,SNR=19
TORD PKPbc **PKiKP 14 39 05.7 -0.4**
comp=Z,421nm,0.7s,baz=63,slow=2.5,SNR=249
TORD PP PP 14 42 48.8 +4.1
comp=Z,42nm,0.9s,baz=61,slow=3.8,SNR=6.4
DBIC Dimbokro 158.63 275 PKP **PKPdf 14 39 10.4 +0.7**
DBIC PKPab **PKPab 14 39 44.4 -0.8**
DBIC Dimbokro 158.63 275 PKP **PKPdf 14 39 10.4 +0.7**
comp=Z,7.6nm,0.6s,baz=15,slow=4.1,SNR=5.0
DBIC PKPab **PKPab 14 39 44.4 -0.8**
comp=Z,54nm,0.7s,baz=92,slow=4.9,SNR=8.5
LIC Lamto 158.82 274 *e*PKIKP **PKPdf 14 39 10.5 +0.6**
comp=Z,42nm,0.8s
LIC *e*R
comp=Z,13µm,21.0s
LIC Lamto 158.82 274 *e*PKPdf **PKPdf 14 39 10.5 +0.6**
BBTS Babate 166.57 315 PKP **PKPdf 14 39 16.0 -1.3**
BBTS PKPab **PKPab 14 40 21.4 +1.8**
BBTS Babate 166.57 315 PKP **PKPdf 14 39 16.0 -1.3**
comp=Z,22nm,1.0s,baz=110,slow=2.9,SNR=1.6
BBTS PKPab **PKPab 14 40 21.4 +1.8**
comp=Z,68nm,0.8s,baz=357,slow=1.3,SNR=4.4

*ISCJB **23** 14:19:21.4±1.0,5°14S±0°.04×153°.72E±0°.03,h64km±9km, mb6.2/132, Error ellipse: s-maj=5.9km s-min=5.1km az=14.6*

*NEIC **23** 14:19:22.4±0.1,5°.16S×153°.78E,h64km, mb6.3/128, ME6.5,MW6.7,MW6.7,MW6.7(USGS), Error ellipse: s-maj=5.1km s-min=4.5km az=140.0 Broadband fault plane solution: P waves. NP1:φs325.00000°,δ50.00000°, λ90.00000°. NP2:φs145.00000°,δ40.00000°,λ90.00000°. Principal axes: T Plg85.0000°, Azm235.0000°; N Plg0.0000°, Azm0.0000°; P Plg5.0000°, Azm55.0000°; Moment Tensor Solution. s47 Moment tensor: Scale 10**19 *Nm; Mrr1.16; Mθθ-0.29; Mφφ-0.87; Mrθ-0.15; Mrφ0.63; Mθφ0.59; Best double couple: Ms1.40000×10**19 *NP1:φs336.00000°,δ58.00000°,λ100.00000°. NP2: φs138.00000°,δ33.00000°,λ75.00000°. Principal axes: T 1.3200, Plg74.0000°, Azm272.0000°; N 0.0900, Plg8.0000°, Azm150.0000°; P -1.4100, Plg12.0000°, Azm58.0000°; Two events about 4 seconds apart observed on broadband displacement seismograms. Depth and focal mechanism from synthetics of broadband displacement seismograms based on first event. Energy computed from BB mechanism.*

NEIC Felt [V] at Kokopo, New Britain. Also felt at Arawa, Bougainville.

ISC 23 14:19:22.6±0.3,5°13S±0°.04×153°.82E±0°.04,h65km±2km, h65km:pP-P,n777,σ1§08/828,mb6.3/129,218C-212D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.43**	**125**	*e*P	**Pn**	**14 21 06.1**	**-2.4**
	5µm,0.9s						
HNR	**Honiara**	**7.43**	**125**	P	**Pn**	**14 21 05.8**	**-2.6**
	40nm,0.3s,baz=249,slow=2.2,SNR=19						
PMG	**Port Moresby**	**7.85**	**237**	P	**Pn**	**14 21 14.4**	**+0.1**
	15µm,0.8s						
COEN	**Coen**	**13.67**	**229**	P	**Pn**	**14 22 34.0**	**+0.4**
	53µm,1.9s						
CTAO	**Charters Tower**	**16.59**	**206**	*e*P	**Pn**	**14 23 12.3**	**+1.2**
CTAO				pmax	pmax		
	comp=Z,3µm,1.5s						
CTAO	**Charters Tower**	**16.59**	**206**	*e*P	**Pn**	**14 23 12.3**	**+1.2**
	comp=Z,3µm,1.5s						
KWAJ	**Kwajalein Atol**	**19.51**	**45**	*e*P	**Pn**	**14 23 48.1**	**+1.4**
KWAJ				pmax	pmax		
	comp=Z,2µm,0.7s						
KWAJ	**Kwajalein Atol**	**19.51**	**45**	*e*P	**Pn**	**14 23 48.1**	**+1.4**
	comp=Z,2µm,0.7s						
TARA	**Tarawa**	**20.14**	**72**	*e*P	Pn	14 23 53.8	-0.3
	comp=Z,47nm,0.6s						
EIDS	**Eidsvold**	**20.29**	**187**	*e*P	**P**	**14 23 53.7**	**+0.5**
	comp=Z,753nm,1.0s						
GUMO	**Guam**	**20.61**	**335**	*e*P	Pn	14 23 58.9	-0.8
	comp=Z,13µm,1.4s						
WRAB	**Tennant Creek**	**23.99**	**230**	*e*P	**P**	**14 24 31.6**	**+0.2**
WRAB				pmax	pmax		
	comp=Z,2µm,1.0s						
WRAB	**Tennant Creek**	**23.99**	**230**	*e*P	**P**	**14 24 31.6**	**+0.2**
	comp=Z,2µm,1.0s						
ARMA	**Armidale**	**25.23**	**184**	*e*P	**P**	**14 24 43.6**	**+0.9**
	comp=Z,1µm,1.2s						
FUNA	**Funafuti**	**25.42**	**99**	*e*P	**P**	**14 24 47.3**	**+2.8**
	comp=Z,852nm,0.8s						
AS31	**Alice Springs**	**26.60**	**224**	*e*P	**P**	**14 24 55.1**	**-0.1**
MSVF	**Nonsavu**	**26.80**	**120**	P	**P**	**14 24 58.5**	**+1.4**
MSVF				pmax	pmax		
	comp=Z,298nm,1.4s						
MSVF	**Nonsavu**	**26.80**	**120**	P	**P**	**14 24 58.5**	**+1.4**
	comp=Z,298nm,1.4s						
WAKE	**Wake Island**	**27.36**	**27**	*e*P	**P**	**14 25 04.5**	**+2.7**
	comp=Z,599nm,1.3s						
STKA	**Stephens Creek**	**28.97**	**202**	*e*P	**P**	**14 25 16.7**	**+0.6**
	comp=Z,5.3nm,2.8s						
CAN	**Canberra**	**30.37**	**188**	*e*P	**P**	**14 25 29.6**	**+1.0**
CAN				pmax	pmax		
	comp=Z,566nm,1.2s						
CAN	**Canberra**	**30.37**	**188**	*e*P	**P**	**14 25 29.6**	**+1.0**
	comp=Z,566nm,1.2s						
FITZ	**Fitzroy Crossi**	**30.40**	**243**	*e*P	**P**	**14 25 28.8**	**-0.1**
	comp=Z,898nm,1.3s						
BBOO	**Buckleboo**	**32.14**	**209**	*e*P	**P**	**14 25 43.1**	**-1.0**
	comp=Z,6µm,1.1s						
KAPI	**Kappang**	**33.93**	**269**	*e*P	**P**	**14 25

JOW	**Kunigami**	**40.26**	**323**	*e*P	**P**	**14 26 54.6**	**+1.1**	HABR			*e*		14 29 49.9	
	comp=Z,2µm,1.5s							HABR			*e*		14 30 56.4	
SNZO	**South Karori**	**40.58**	**156**	*e*P	**P**	**14 26 55.5**	**-0.4**	HABR			*e*PPP	PPP	14 32 10.2	
	comp=Z,3µm,1.5s							HABR			*e*S	**S**	**14 36 33.7**	**-2.2**
KHZ	**Kahutara**	**41.06**	**158**	*e*P	**P**	**14 26 58.6**	**-1.2**	HABR			*e*		14 38 34.2	
	comp=Z,845nm,1.1s							HABR			*e*SS	**SS**	**14 40 21.7**	**-1.1**
RPZ	**Rata Peaks**	**41.32**	**161**	*e*P	**P**	**14 27 01.8**	**-0.2**	HABR			pmax	pmax		
	comp=Z,1µm,0.9s								comp=Z,263nm,0.8s					
TWG	**Pinlang**	**42.38**	**312**	*e*P	**P**	**14 27 10.2**	**-0.7**	HABR			pmax	pmax		
	comp=Z,796nm,1.0s								comp=E,98nm,0.8s					
ODZ	**Otahua Downs**	**42.39**	**162**	*e*P	**P**	**14 27 10.0**	**-0.7**	HABR			pmax	pmax		
	comp=Z,496nm,1.1s								comp=N,198nm,2.1s					
YULB	**Yu-li**	**42.56**	**313**	*e*P	**P**	**14 27 12.1**	**-0.3**	HABR			pmax	pmax		
NACB	**Ninganchiao**	**42.83**	**314**	*e*P	**P**	**14 27 15.1**	**+0.6**		comp=Z,5µm,5.7s					
TPUB	**Ta-pu**	**42.99**	**312**	*e*P	**P**	**14 27 15.5**	**-0.4**	HABR			MLR	MLR		
	comp=Z,439nm,0.9s								comp=N,3µm,18.0s					
SSLB	**Suanglung**	**43.05**	**313**	*e*P	**P**	**14 27 16.4**	**0.0**	HABR			MLR	MLR		
	comp=Z,791nm,1.4s								comp=E,7µm,19.0s					
MIDW	**Midway**	**43.25**	**38**	*e*P	**P**	**14 27 19.8**	**+2.0**	HABR			MLR	MLR		
	comp=Z,438nm,0.6s								comp=Z,8µm,20.0s					
YHNB	**Yeheng**	**43.29**	**315**	*e*P	**P**	**14 27 18.8**	**+0.5**	PPT2	**Papeete2**	**56.66**	**108**	*e*P	**P**	**14 29 02.4**	**+2.5**
	comp=Z,2µm,1.4s								comp=Z,217nm,0.8s						
TATO	**Taipei**	**43.41**	**315**	P	**P**	**14 27 21.2**	**+2.1**	PPT2				*e*S	**S**	**14 36 50.0**	**+2.2**
	SNR=9.8								comp=Z,31µm,27.8s						
TATO	**Taipei**	**43.41**	**315**	*e*P	**P**	**14 27 19.9**	**+0.8**	PPT2				*e*LQ	LQ	14 43 11.4	
	comp=Z,2µm,1.5s								comp=Z,39µm,26.8s						
JNU	**Nakatsue**	**43.83**	**332**	*e*P	**P**	**14 27 22.4**	**0.0**	PPT2				*e*LR	LR	14 45 37.5	
	comp=Z,292nm,0.8s								comp=Z,72µm,32.2s						
NWAO	**Narrogin (SRO)**	**43.88**	**226**	P	**P**	**14 27 23.2**	**+0.3**	PAE	**Paea**	**56.66**	**108**	*e*P	**P**	**14 29 02.0**	**+2.2**
	SNR=6.2								comp=Z,35nm,0.7s						
NWAO	**Narrogin (SRO)**	**43.88**	**226**	*e*P	**P**	**14 27 21.9**	**-1.1**	COCO	**West Island**	**56.68**	**259**	*e*P	**P**	**14 29 01.7**	**+1.8**
KSM	**Kuching**	**43.96**	**277**	*e*P	**P**	**14 27 23.8**	**0.0**	COCO				pmax	pmax		
	comp=Z,2µm,1.4s								comp=Z,610nm,1.2s						
MAT	**Matsushiro**	**43.96**	**342**	P	**P**	**14 27 22.4**	**-1.0**	COCO	**West Island**	**56.68**	**259**	*e*P	**P**	**14 29 01.7**	**+1.8**
MAT	**Matsushiro**	**43.96**	**342**	S	**S**	**14 33 45.9**	**-4.7**		comp=Z,610nm,1.2s						
QZH	**Quanzhou**	**45.47**	**313**	P	**P**	**14 27 37.4**	**+1.8**	BJT	**Baijiatuan**	**56.72**	**326**	*e*P	**P**	**14 28 59.8**	**0.0**
RAR	**Rarotonga**	**47.72**	**114**	*e*P	**P**	**14 27 55.0**	**+1.7**		comp=Z,246nm,0.7s						
	comp=Z,421nm,1.5s							BJI	**Beijing**	**56.73**	**326**	P	**P**	**14 29 00.5**	**+0.7**
ERM	**Erimo**	**47.92**	**349**	P	**P**	**14 27 56.5**	**+2.0**	BJI				sP	**sP**	**14 29 22.9**	**-1.2**
	comp=Z,1µm,0.7s,SNR=6.7							BJI				PP	**PP**	**14 31 10.0**	**+3.3**
ERM	**Erimo**	**47.92**	**349**	*e*P	**P**	**14 27 56.0**	**+1.5**	BJI				S	**S**	**14 36 45.6**	**-2.3**
ERM				pmax	pmax			BJI				sS	sS	14 37 21.4	+4.8
	comp=Z,123nm,0.7s							BJI				pmax	pmax		
ERM	**Erimo**	**47.92**	**349**	*e*P	**P**	**14 27 56.0**	**+1.5**		comp=Z,200nm,1.3s						
	comp=Z,123nm,0.7s							BJI				pmax	pmax		
XMIS	**Christmas Isla**	**47.98**	**261**	*e*P	**P**	**14 27 57.0**	**+1.5**		comp=Z,7µm,5.9s						
	comp=Z,9µm,0.9s							BJI				LR	LR		
XMAS	**Kiritimati**	**49.20**	**83**	*e*P	**P**	**14 28 06.1**	**+1.2**		comp=N,10µm,29.1s						
	comp=Z,592nm,1.1s							BJI				LR	LR		
INCN	**Inchon**	**49.39**	**331**	*e*P	**P**	**14 28 06.7**	**+0.8**		comp=E,14µm,21.9s						
MCQ	**Macquarie Isla**	**49.39**	**176**	*e*P	**P**	**14 28 05.9**	**+0.3**	BJI				LR	LR		
MCQ	**Macquarie Isla**	**49.39**	**176**	*e*P	**P**	**14 28 05.9**	**+0.3**		comp=Z,33µm,34.8s						
QIZ	**Qiongzhong**	**49.51**	**300**	P	**P**	**14 28 06.9**	**-0.2**	PEA0B	**Petropavlovsk-**	**58.12**	**3**	*e*P	**P**	**14 29 09.9**	**+0.6**
QIZ				pP	**pP**	**14 28 19.9**	**-3.9**	CHTO	**Chiang Mai**	**59.05**	**295**	*e*P	**P**	**14 29 17.3**	**+0.8**
QIZ				sP	**sP**	**14 28 29.6**	**-1.6**	CHTO				pmax	pmax		
QIZ				S	**S**	**14 35 09.8**	**-0.6**		comp=Z,799nm,1.2s						
QIZ				pmax	pmax			CHTO	**Chiang Mai**	**59.05**	**295**	*e*P	**P**	**14 29 17.3**	**+0.8**
	comp=Z,91nm,1.6s								comp=Z,799nm,1.2s						
QIZ				pmax	pmax			HHC	**Hu-ho-hao-te**	**59.91**	**324**⇑	*i*P	**P**	**14 29 22.4**	**+0.2**
	comp=Z,11µm,12.9s							HHC				pP	**pP**	**14 29 38.6**	**-0.7**
QIZ				LR	LR			HHC				sP	**sP**	**14 29 45.4**	**-1.2**
	comp=N,15µm,26.2s							HHC				PcP	**PcP**	**14 30 04.0**	**-3.9**
QIZ				LR	LR			HHC				PP	**PP**	**14 31 36.8**	**+1.7**
	comp=E,10µm,26.9s							HHC				ScP	**ScP**	**14 33 57.5**	**-6.0**
QIZ				LR	LR			HHC				S	**S**	**14 37 28.6**	**-0.9**
	comp=Z,44µm,26.0s							HHC				sS	**sS**	**14 37 56.0**	**-2.5**
QIZ	**Qiongzhong**	**49.51**	**300**	*e*P	**P**	**14 28 08.1**	**+1.0**	HHC				ScS	ScS	14 38 59.3	-7.8
	comp=Z,1µm,1.7s							HHC				SS	**SS**	**14 41 26.8**	**-0.3**
NJ2	**Nanjing**	**49.74**	**320**	*e*P	**P**	**14 28 09.3**	**+0.6**	HHC				pmax	pmax		
NJ2				pP	**pP**	**14 28 24.9**	**-0.4**		comp=Z,370nm,1.1s						
NJ2				sP	**sP**	**14 28 33.4**	**+0.7**	HHC				pmax	pmax		
NJ2				PcP	**PcP**	**14 29 30.9**	**+2.0**		comp=Z,19µm,7.9s						
NJ2				S	**S**	**14 35 16.0**	**+2.8**	HHC				LR	LR		
NJ2				sS	**sS**	**14 35 44.5**	**+3.1**		comp=N,20µm,19.6s						
NJ2				pmax	pmax			HHC				LR	LR		
	comp=Z,360nm,1.0s								comp=E,20µm,20.1s						
NJ2				pmax	pmax			HHC				LR	LR		
	comp=Z,13µm,7.5s								comp=Z,54µm,21.6s						
NJ2				LR	LR			FX1	**Attu Island--F**	**60.08**	**13**	*e*P	**P**	**14 29 22.8**	**-0.1**
	comp=N,24µm,22.4s							AMKA	**Amchitka**	**60.38**	**18**	*e*P	**P**	**14 29 26.1**	**+1.1**
NJ2				LR	LR				comp=Z,237nm,0.8s						
	comp=E,18µm,18.7s							HIA	**Hailar**	**61.75**	**335**	*e*P	**P**	**14 29 34.7**	**+0.3**
NJ2				LR	LR				comp=Z,195nm,0.9s						
	comp=Z,73µm,23.4s							LZH	**Lanzhou**	**62.18**	**315**⇑	P	**P**	**14 29 39.8**	**+2.1**
ASAJ	**Asahikawa**	**50.06**	**349**	*e*P	**P**	**14 28 11.8**	**+1.0**	LZH				pP	**pP**	**14 29 56.1**	**+1.2**
	comp=Z,108nm,0.6s							LZH				sP	**sP**	**14 30 02.9**	**+0.7**
VLA	**Vladivostok**	**51.98**	**340**	*c i*P	**P**	**14 28 25.7**	**+0.5**	LZH				PP	**PP**	**14 31 59.8**	**+4.5**
VLA				pmax	pmax			LZH				S	**S**	**14 38 00.5**	**+1.9**
	comp=Z,160nm,0.7s							LZH				sS	**sS**	**14 38 26.8**	**-1.0**
VLA				MLR	MLR			LZH				SS	**SS**	**14 42 04.8**	**+1.9**
	comp=Z,8µm,19.0s							LZH				pmax	pmax		
YSS	**Yuzh-Sakhalins**	**52.78**	**350**	*ce*P	**P**	**14 28 30.4**	**-0.7**		comp=Z,890nm,1.5s						
YSS				*e**PP	**pP**	**14 28 45.0**	**-2.9**	LZH				pmax	pmax		
YSS				*e**SP	**sP**	**14 28 52.0**	**-3.3**		comp=Z,2µm,9.5s						
YSS				*e*		14 29 44.0		LZH				LR	LR		
YSS				*e*PPP	PPP	14 31 34.0			comp=N,6µm,17.3s						
YSS				*e*S	**S**	**14 35 53.0**	**-1.6**	LZH				LR	LR		
YSS				*e*PS	PKiKP	14 36 08.0	-10		comp=E,11µm,18.0s						
YSS				*e*		14 38 08.0		LZH				LR	LR		
YSS				*e*SSS	SSS	14 41 17.0			comp=Z,38µm,19.7s						
YSS				pmax	pmax			PBA	**Port Blair**	**62.99**	**286**	*e*PKP	**P**	**14 29 43.6**	**+0.4**
	comp=N,140nm,0.9s							DGPR	**DIGLIPUR**	**63.14**	**287**	*e*PKP	**P**	**14 29 44.3**	**+0.1**
YSS				pmax	pmax			ULN	**Ulaanbaatar**	**66.82**	**328**	*e*P	**P**	**14 30 08.4**	**+0.7**
	comp=E,110nm,0.9s								comp=Z,262nm,0.9s						
YSS				pmax	pmax			SHL	**Shillong**	**67.35**	**300**	*e*PKP	**P**	**14 30 12.4**	**+0.8**
	comp=Z,190nm,0.9s							UNV	**Unalaska Valle**	**67.50**	**24**	*e*P	**P**	**14 30 11.9**	**+0.2**
YSS				MLR	MLR				comp=Z,166nm,0.6s						
	comp=Z,9µm,19.0s							CASY	**Casey**	**68.00**	**197**	*e*P	**P**	**14 30 14.6**	**-0.1**
YSS				MLR	MLR				comp=Z,414nm,1.2s						
	comp=N,6µm,16.0s							LSA	**Lhasa**	**69.26**	**304**	*e*P	**P**	**14 30 25.0**	**+1.2**
IPM	**Ipoh**	**53.59**	**279**	*e*P	**P**	**14 28 37.4**	**-0.3**	LSA				pmax	pmax		
	comp=N,532nm,1.2s								comp=Z,476nm,0.8s						
HON	**Honolulu**	**54.05**	**59**	*e*P	**P**	**14 28 42.0**	**+1.1**	LSA	**Lhasa**	**69.26**	**304**	*e*P	**P**	**14 30 25.0**	**+1.2**
HON	**Honolulu**	**54.05**	**59**	*e*P	**P**	**14 28 42.0**	**+1.1**		comp=Z,476nm,0.8s						
KIP	**Kipapa**	**54.08**	**59**	*i*P	**P**	**14 28 42.7**	**+1.6**	FALS	**False Pass**	**69.50**	**25**	*e*P	**P**	**14 30 23.7**	**-0.4**
KIP				pmax	pmax				comp=Z,317nm,0.6s						
	comp=Z,888nm,2.5s							ZAK	**Zakamensk**	**70.31**	**328**	*e*P	**P**	**14 30 30.3**	**+0.9**
KIP	**Kipapa**	**54.08**	**59**	*e*P	**P**	**14 28 43.1**	**+2.1**	TLY	**Talaya**	**70.88**	**330**	*i*P	**P**	**14 30 33.0**	**+0.3**
MDJ	**Mudanjiang**	**54.09**	**339**	P	**P**	**14 28 41.4**	**+0.6**	IRK	**Irkutsk**	**70.90**	**330**	*e*P	**P**	**14 30 33.0**	**+0.2**
MDJ				pP	**pP**	**14 28 57.0**	**-0.7**	IRK				*e*		14 30 54.2	
MDJ				sP	**sP**	**14 29 04.1**	**-0.9**	IRK				*e*S	**S**	**14 39 46.1**	**+2.9**
MDJ				PcP	**PcP**	**14 29 45.0**	**+0.1**	IRK				pmax	pmax		
MDJ				PP	**PP**	**14 30 42.8**	**-0.2**		comp=Z,301nm,1.2s						
MDJ				ScP	**ScP**	**14 33 37.9**	**+0.3**	SDPT	**Sand Point**	**71.08**	**26**	*e*P	**P**	**14 30 33.1**	**-0.6**
MDJ				PcS	**PcS**	**14 33 44.6**	**+0.4**		comp=Z,418nm,0.6s						
MDJ				S	**S**	**14 36 12.3**	**-0.2**	BOK	**Bokaro**	**72.11**	**297**	*e*PKP	**P**	**14 30 40.7**	**0.0**
MDJ				ScS	**ScS**	**14 38 25.0**	**+0.8**	VNDA	**Vanda**	**72.46**	**178**	*e*P	**P**	**14 30 42.1**	**+0.3**
MDJ				pmax	pmax				comp=Z,3.6nm,0.6s						
	comp=Z,110nm,0.9s							CHGN	**Chignik**	**72.58**	**26**	*e*P	**P**	**14 30 42.6**	**-0.1**
MDJ				pmax	pmax			SBA	**Scott Base**	**72.99**	**177**	*e*P	**P**	**14 30 46.1**	**+1.2**
	comp=Z,6µm,11.4s							SBA				pmax	pmax		
MDJ				LR	LR				comp=Z,3µm,1.6s						
	comp=Z,14µm,25.6s							SBA	**Scott Base**	**72.99**	**177**	*e*P	**P**	**14 30 46.1**	**+1.2**
MDJ	**Mudanjiang**	**54.09**	**339**	*e*P	**P**	**14 28 40.8**	**0.0**		comp=Z,3µm,1.6s						
	comp=Z,522nm,1.5s							GAMB	**Gambell**	**73.43**	**15**	*e*P	**P**	**14 30 48.0**	**+0.4**
KULM	**Kulim**	**54.09**	**280**	*e*P	**P**	**14 28 41.1**	**-0.3**		comp=Z,158nm,0.7s						
	comp=Z,414nm,1.0s							PALK	**Pallekele**	**73.99**	**279**	*e*P	**P**	**14 30 52.1**	**0.0**
CN2	**Changchun**	**55.02**	**335**	*e*P	**P**	**14 28 47.4**	**-0.1**		comp=Z,1µm,1.4s						
CN2				*e*pP	**pP**	**14 29 03.4**	**-1.0**	TNA	**Tin City**	**75.84**	**15**	*e*P	**P**	**14 31 02.0**	**+0.5**
CN2				*e*PP	**PP**	**14 30 53.0**	**+1.6**		comp=Z,281nm,1.3s						
CN2				*e*S	**S**	**14 36 24.6**	**-0.4**	HYB	**Hyderabad**	**77.56**	**289**	*e*PKP	**P**	**14 31 11.3**	**-1.0**
CN2				*e*SS	**SS**	**14 40 09.1**	**-0.7**	TIXI	**Tiksi**	**78.36**	**352**	*c i*P	**P**	**14 31 14.9**	**-0.7**
ENH	**Enshi**	**55.12**	**313**	*e*P	**P**	**14 28 49.4**	**+0.8**	TIXI				pmax	pmax		
	comp=Z,1µm,0.9s								comp=Z,180nm,1.9s						
GYA	**Guiyang**	**55.40**	**307**⇑	*i*P	**P**	**14 28 51.8**	**+1.0**	TIXI				MLR	MLR		
GYA				pP	**pP**	**14 29 08.5**	**+0.8**		comp=Z,5µm,20.0s						
GYA				sP	**sP**	**14 29 16.0**	**+1.0**	MCK	**McKinley**	**80.78**	**22**	*e*P	**P**	**14 31 28.1**	**-0.8**
GYA				PcP	**PcP**	**14 29 51.4**	**+0.9**	MCK				pmax	pmax		
GYA				PP	**PP**	**14 30 58.0**	**+2.7**		comp=Z,352nm,0.9s						
GYA				S	**S**	**14 36 31.0**	**0.0**	MCK	**McKinley**	**80.78**	**22**	*e*P	**P**	**14 31 28.1**	**-0.8**
GYA				sS	**sS**	**14 37 01.5**	**+1.9**		comp=Z,352nm,0.9s						
GYA				SS	**SS**	**14 40 16.4**	**-0.2**	DGAR	**Diego Garcia**	**80.81**	**263**	*e*P	**P**	**14 31 29.3**	**-0.8**
GYA				pmax	pmax			DGAR				pmax	pmax		
	comp=Z,170nm,1.0s								comp=Z,622nm,1.0s						
GYA				pmax	pmax			DGAR	**Diego Garcia**	**80.81**	**263**	*e*P	**P**	**14 31 29.3**	**-0.8**
	comp=Z,10µm,5.9s								comp=Z,622nm,1.0s						
GYA				LR	LR			MK31	**Makanchi Array**	**81.24**	**319**	*e*P	**P**	**14 31 32.2**	**+0.4**
	comp=N,9µm,22.7s							MK31	**Makanchi Array**	**81.24**	**319**	*e*P	**P**	**14 31 32.2**	**+0.4**
GYA				LR	LR			SMLA	**Simla**	**81.29**	**302**	*e*PKP	**P**	**14 31 33.0**	**+0.7**
	comp=E,14µm,21.1s							GOA	**Goa**	**81.76**	**286**	*e*PKP	**P**	**14 31 33.6**	**-1.5**
GYA				LR	LR			ZAA0	**Zalesovo Array**	**81.99**	**326**	*e*P	**P**	**14 31 34.5**	**-1.0**
	comp=Z,16µm,22.1s							POO	**Poona**	**82.15**	**289**	*e*PKP	**P**	**14 31 36.8**	**-0.4**
HABR	**Khabarovsk**	**55.86**	**345**	*de*P	**P**	**14 28 51.4**	**-2.0**	DLH	**Dalhousie**	**82.56**	**304**	*ex*	**P**	**14 31 40.0**	**+0.7**
HABR				*e**PP	**pP**	**14 29 08.3**	**-2.1**	PNL	**Peninsula**	**82.95**	**28**	*e*P	**P**	**14 31 40.7**	**+0.3**
HABR				*e**SP	**sP**	**14 29 15.9**	**-1.8**		comp=Z,200nm,0.8s						

KSH	**Kashi**	**83.92**	**310**	*e*P	**P**	**14 31 49.0**	**+3.0**		comp=Z,14µm,9.9s		
KSH				*e*pP	**pP**	**14 32 06.0**	**+2.0**	AAA		smax	smax
KSH				*e*sP	**sP**	**14 32 12.8**	**+1.7**	AAA		MLR	MLR
KSH				*e*PP	PP	14 35 06.5	+6.1		comp=E,14µm,13.6s		
KSH	**Kashi**	**83.92**	**310**	*e*S	**S**	**14 42 06.4**	**+1.4**	AAA		MLR	MLR
AAA	**Alma-Ata**	**84.00**	**314**	*e*P	**P**	**14 31 45.7**	**-0.5**		comp=Z,5µm,18.0s		
AAA				*e*S	**S**	**14 42 02.2**	**-3.3**	KURK	**Kurchatov**	**84.66**	**322**	*e*P	**P**	**14 31 48.7**	**-0.6**
AAA				pmax	pmax				comp=Z,969nm,1.3s						
	comp=Z,14µm,9.9s							TKM2	**Tokmak 2**	**84.89**	**314**	*e*P	**P**	**14 31 51.5**	**+0.6**
AAA				smax	smax			TKM2				pmax	pmax		
	comp=E,14µm,13.6s								comp=Z,305nm,0.7s		
AAA				MLR	MLR			TKM2	**Tokmak 2**	**84.89**	**314**	*e*P	**P**	**14 31 51.5**	**+0.6**
	comp=Z,5µm,18.0s								comp=Z,305nm,0.7s		
KURK	**Kurchatov**	**84.66**	**322**	*e*P	**P**	**14 31 48.7**	**-0.6**	WRAK	**Wrangell Islan**	**85.40**	**32**	*e*P	**P**	**14 31 50.7**	**-2.1**
	comp=Z,969nm,1.3s								comp=Z,2µm,2.0s		
TKM2	**Tokmak 2**	**84.89**	**314**	*e*P	**P**	**14 31 51.5**	**+0.6**	AAK	**Ala-Archa**	**85.63**	**313**	*i*P	**P**	**14 31 55.1**	**+0.6**
TKM2				pmax	pmax			AAK				pmax	pmax		
	comp=Z,305nm,0.7s								comp=Z,780nm,1.1s		
TKM2	**Tokmak 2**	**84.89**	**314**	*e*P	**P**	**14 31 51.5**	**+0.6**	AAK	**Ala-Archa**	**85.63**	**313**	*e*P	**P**	**14 31 55.2**	**+0.6**
	comp=Z,305nm,0.7s								comp=Z,329nm,0.9s		
WRAK	**Wrangell Islan**	**85.40**	**32**	*e*P	**P**	**14 31 50.7**	**-2.1**	EKS2	**Erkin-Say**	**86.16**	**313**	*e*P	**P**	**14 31 58.1**	**+0.9**
	comp=Z,2µm,2.0s							EKS2				pmax	pmax		
AAK	**Ala-Archa**	**85.63**	**313**	*i*P	**P**	**14 31 55.1**	**+0.6**		comp=Z,530nm,1.3s		
AAK				pmax	pmax			EKS2	**Erkin-Say**	**86.16**	**313**	*e*P	**P**	**14 31 58.0**	**+0.9**
	comp=Z,780nm,1.1s								comp=Z,530nm,1.3s		
AAK	**Ala-Archa**	**85.63**	**313**	*e*P	**P**	**14 31 55.2**	**+0.6**	HOPS	**Hopland**	**87.86**	**51**	P	**P**	**14 32 05.1**	**-0.2**
	comp=Z,329nm,0.9s								comp=Z,24nm,0.7s		
EKS2	**Erkin-Say**	**86.16**	**313**	*e*P	**P**	**14 31 58.1**	**+0.9**	OTR	**Olympics--Tyee**	**88.34**	**42**	P	**P**	**14 32 09.4**	**+1.9**
EKS2				pmax	pmax			PFB	**Port Renfrew**	**88.36**	**41**	P	**P**	**14 32 07.0**	**-0.5**
	comp=Z,530nm,1.3s							OOW	**Octopus West**	**88.39**	**42**	P	**P**	**14 32 08.4**	**+0.7**
EKS2	**Erkin-Say**	**86.16**	**313**	*e*P	**P**	**14 31 58.0**	**+0.9**	WDC	**Whiskeytown Da**	**88.48**	**49**	P	**P**	**14 32 09.2**	**+1.0**
	comp=Z,530nm,1.3s							WDC				pmax	pmax		
HOPS	**Hopland**	**87.86**	**51**	P	**P**	**14 32 05.1**	**-0.2**		comp=Z,1µm,2.3s		
	comp=Z,24nm,0.7s							WDC	**Whiskeytown Da**	**88.48**	**49**	P	**P**	**14 32 09.2**	**+1.0**
OTR	**Olympics--Tyee**	**88.34**	**42**	P	**P**	**14 32 09.4**	**+1.9**		comp=Z,1µm,2.3s		
PFB	**Port Renfrew**	**88.36**	**41**	P	**P**	**14 32 07.0**	**-0.5**	OBC	**Olympics--Boni**	**88.51**	**42**	P	**P**	**14 32 08.6**	**+0.3**
OOW	**Octopus West**	**88.39**	**42**	P	**P**	**14 32 08.4**	**+0.7**	YBH	**Yreka Blue Hor**	**88.52**	**48**	*e*P	**P**	**14 32 09.6**	**+1.1**
WDC	**Whiskeytown Da**	**88.48**	**49**	P	**P**	**14 32 09.2**	**+1.0**		comp=Z,89nm,1.1s		
WDC				pmax	pmax			KBL	**Kabul**	**88.58**	**305**	*e*P	**P**	**14 32 07.8**	**-1.3**
	comp=Z,1µm,2.3s							KBL				pmax	pmax		
WDC	**Whiskeytown Da**	**88.48**	**49**	P	**P**	**14 32 09.2**	**+1.0**		comp=Z,189nm,1.0s		
	comp=Z,1µm,2.3s							KBL	**Kabul**	**88.58**	**305**	*e*P	**P**	**14 32 07.8**	**-1.3**
OBC	**Olympics--Boni**	**88.51**	**42**	P	**P**	**14 32 08.6**	**+0.3**		comp=Z,189nm,1.0s		
YBH	**Yreka Blue Hor**	**88.52**	**48**	*e*P	**P**	**14 32 09.6**	**+1.1**	KKAR	**Karatay Array**	**88.60**	**313**	*e*P	**P**	**14 32 07.9**	**-0.8**
	comp=Z,89nm,1.1s							KKAR				pmax	pmax		
KBL	**Kabul**	**88.58**	**305**	*e*P	**P**	**14 32 07.8**	**-1.3**		comp=Z,103nm,0.8s		
KBL				pmax	pmax			KKAR	**Karatay Array**	**88.60**	**313**	*e*P	**P**	**14 32 07.9**	**-0.8**
	comp=Z,189nm,1.0s								comp=Z,103nm,0.8s		
KBL	**Kabul**	**88.58**	**305**	*e*P	**P**	**14 32 07.8**	**-1.3**	OSD	**Olympics--Snow**	**88.73**	**42**	P	**P**	**14 32 11.6**	**+2.1**
	comp=Z,189nm,1.0s							SAO	**San Andreas Ge**	**88.83**	**53**	*e*P	**P**	**14 32 12.2**	**+2.2**
KKAR	**Karatay Array**	**88.60**	**313**	*e*P	**P**	**14 32 07.9**	**-0.8**	SAO				pmax	pmax		
	comp=Z,103nm,0.8s								comp=Z,114nm,1.5s		
KKAR	**Karatay Array**	**88.60**	**313**	*e*P	**P**	**14 32 07.9**	**-0.8**	SAO	**San Andreas Ge**	**88.83**	**53**	*e*P	**P**	**14 32 12.2**	**+2.2**
	comp=Z,103nm,0.8s								comp=Z,114nm,1.5s		
OSD	**Olympics--Snow**	**88.73**	**42**	P	**P**	**14 32 11.6**	**+2.1**	PGC	**Sidney**	**89.02**	**41**	*e*P	**P**	**14 32 10.6**	**+0.1**
SAO	**San Andreas Ge**	**88.83**	**53**	*e*P	**P**	**14 32 12.2**	**+2.2**		comp=Z,11nm,1.4s		
SAO				pmax	pmax			LBCM	**Butte Creek Ri**	**89.42**	**49**	P	**P**	**14 32 13.0**	**+0.2**
	comp=Z,114nm,1.5s							TDL	**Tradedollar La**	**89.52**	**44**	P	**P**	**14 32 12.3**	**-0.8**
SAO	**San Andreas Ge**	**88.83**	**53**	*e*P	**P**	**14 32 12.2**	**+2.2**	SMMC	**Simmler**	**89.82**	**55**⇓	P	**P**	**14 32 15.0**	**+0.4**
	comp=Z,114nm,1.5s								baz=90		
PGC	**Sidney**	**89.02**	**41**	*e*P	**P**	**14 32 10.6**	**+0.1**	SMMC			⇑SKSac	**SKSac**		**14 42 38.5**	**-1.6**
	comp=Z,11nm,1.4s								baz=90		
LBCM	**Butte Creek Ri**	**89.42**	**49**	P	**P**	**14 32 13.0**	**+0.2**	GULW	**Guler Mountain**	**89.89**	**44**	P	**P**	**14 32 14.8**	**0.0**
TDL	**Tradedollar La**	**89.52**	**44**	P	**P**	**14 32 12.3**	**-0.8**	VFP	**Flag Point**	**89.90**	**45**	P	**P**	**14 32 14.9**	**-0.1**
SMMC	**Simmler**	**89.82**	**55**⇓	P	**P**	**14 32 15.0**	**+0.4**	PKM	**Peak Mountain**	**89.92**	**55**⇓	P	**P**	**14 32 15.4**	**0.0**
	baz=90								baz=90		
SMMC			⇑SKSac	**SKSac**		**14 42 38.5**	**-1.6**	SBC	**Santa Barbara**	**89.96**	**56**⇑	P	**P**	**14 32 15.5**	**+0.3**
	baz=90								baz=90		
GULW	**Guler Mountain**	**89.89**	**44**	P	**P**	**14 32 14.8**	**0.0**	BEKR	**Beckworth**	**90.05**	**50**	*e*P	**P**	**14 32 14.9**	**-0.9**
VFP	**Flag Point**	**89.90**	**45**	P	**P**	**14 32 14.9**	**-0.1**		comp=Z,49nm,1.1s		
PKM	**Peak Mountain**	**89.92**	**55**⇓	P	**P**	**14 32 15.4**	**0.0**	BRVK	**Borovoye**	**90.18**	**323**	*e*P	**P**	**14 32 14.7**	**-1.2**
	baz=90								comp=Z,304nm,0.8s		
SBC	**Santa Barbara**	**89.96**	**56**⇑	P	**P**	**14 32 15.5**	**+0.3**	B06A	**Marblemount**	**90.30**	**41**	P	**P**	**14 32 15.3**	**-1.2**
	baz=90							MOD	**Modoc**	**90.33**	**48**	*e*P	**P**	**14 32 16.5**	**-0.6**
BEKR	**Beckworth**	**90.05**	**50**	*e*P	**P**	**14 32 14.9**	**-0.9**		comp=Z,840nm,2.1s		
	comp=Z,49nm,1.1s							RCTC	**Rector, Farmer**	**90.54**	**54**⇓	P	**P**	**14 32 18.2**	**+0.3**
BRVK	**Borovoye**	**90.18**	**323**	*e*P	**P**	**14 32 14.7**	**-1.2**		baz=91		
	comp=Z,304nm,0.8s							VES	**Vestal, Richgr**	**90.62**	**54**⇑	P	**P**	**14 32 17.6**	**-0.7

	comp=Z,292nm,1.4s									
NEW	**Newport**	93.16	42	⇓P		P		14 32 28.6	-1.2	
	baz=93,SNR=17									
GMRC	**Granite Mounta**	93.32	56	⇑P		P		14 32 31.0	0.0	
	baz=93,SNR=13									
BC3	**Big Chuckawall**	93.42	57	⇓P		P		14 32 31.7	+0.2	
	baz=94,SNR=8.0									
R11A	**Troy Canyon, C**	93.62	52	⇑P		P		14 32 32.1	-0.3	
	baz=94,SNR=24									
SYO	**Syowa Base**	93.69	199	⇑*i*P		P		14 32 30.3	-1.5	
IRM	**Iron Mountain**	93.70	56	⇑P		P		14 32 32.9	+0.2	
	baz=94,SNR=10									
C11A	**Tepee Creek (N**	93.72	42	⇑P		P		14 32 32.0	-0.4	
	baz=94									
MFID	**Camas Ranch**	93.75	47	*e*P		P		14 32 32.0	-0.7	
	comp=Z,862nm,2.2s									
MFID	**Camas Ranch**	93.75	47	⇓P		P		14 32 32.2	-0.5	
	baz=94									
LDFC	**Landfair**	93.79	55	*e*P		P		14 32 33.3	+0.1	
	comp=Z,266nm,2.0s									
GLA	**Glamis**	93.90	57	*e*P		P		14 32 36.1	+2.4	
GLA					pmax	pmax				
	comp=Z,627nm,1.7s									
GLA	**Glamis**	93.90	57	*e*P		P		14 32 36.0	+2.4	
	comp=Z,627nm,1.7s									
GLA	**Glamis**	93.90	57	⇓P		P		14 32 34.3	+0.7	
	baz=94,SNR=6.9									
ELK	**Elko**	94.03	50	*e*P		P		14 32 33.5	-0.8	
	comp=Z,692nm,2.2s									
E12A	**Beaver Dam Sad**	94.10	44	⇑P		P		14 32 33.1	-1.3	
	baz=94,SNR=59									
A12A	**Yaak River Ran**	94.18	41	⇑P		P		14 32 34.3	-0.3	
	baz=94,SNR=5.8									
Y12C	**Blythe**	94.19	57	⇓P		P		14 32 35.0	+0.1	
	baz=94,SNR=9.5									
B12A	**Libby**	94.20	42	⇓P		P		14 32 34.0	-0.7	
	baz=94									
C12B	**Naegeli Ranch,**	94.23	43	⇑P		P		14 32 33.9	-0.9	
	baz=94									
H12A	**Diamond D Ranc**	94.51	46	⇓P		P		14 32 35.3	-1.0	
	baz=95,SNR=12									
PDMCI	**Parker Dam,Lak**	94.54	56	⇑P		P		14 32 36.6	+0.1	
	baz=95,SNR=6.2									
BSMT	**Bassoo Peak**	94.70	43	*e*P		P		14 32 38.5	+1.3	
	comp=Z,301nm,1.9s									
113A	**Mohawk Valley,**	94.78	58	⇑P		P		14 32 37.6	+0.1	
	baz=95									
HLID	**Hailey**	94.78	47	*e*P		P		14 32 39.5	+1.9	
	comp=Z,300nm,1.7s									
HLID	**Hailey**	94.78	47	⇑P		P		14 32 36.7	-0.9	
	baz=95,SNR=20									
W13A	**Hualapai Mount**	94.80	55	⇑P		P		14 32 38.0	0.0	
	baz=95,SNR=20									
C13A	**Hot Springs**	94.84	43	⇑P		P		14 32 36.7	-1.0	
	baz=95									
D13A	**Huson**	94.90	43	⇓P		P		14 32 36.4	-1.5	
	baz=95,SNR=6.3									
B13A	**Whitefish**	94.94	42	⇑P		P		14 32 37.6	-0.5	
	baz=95,SNR=7.3									
BLMT	**Blacktail Moun**	95.00	42	*e*P		P		14 32 39.9	+1.4	
	comp=Z,151nm,1.6s									
JTMT	**Jette**	95.04	43	*e*P		P		14 32 40.7	+2.1	
	comp=Z,74nm,1.7s									
SWMT	**Swartz Lake,**	95.22	43	P		P		14 32 41.6	+2.2	
	comp=Z,57nm,1.4s									
MSO	**Missoula**	95.24	44	*e*P		P		14 32 40.5	+1.0	
	comp=Z,109nm,1.8s									
MSO	**Missoula**	95.24	44	⇓P		P		14 32 38.1	-1.4	
	baz=95									
YKW3	**Yellowknife Ar**	95.24	28	*e*P		P		14 32 37.9	-1.1	
	comp=Z,3.2nm,1.3s									
ARUT	**Antelope Range**	95.28	53	*e*P		P		14 32 42.6	+2.6	
ARUT					pmax	pmax				
	comp=Z,201nm,1.5s									
ARUT	**Antelope Range**	95.28	53	*e*P		P		14 32 42.6	+2.6	
	comp=Z,202nm,1.5s									
CCUT	**Cedar City**	95.33	53	*e*P		P		14 32 40.3	0.0	
	comp=Z,64nm,1.9s									
WALA	**Waterton Lakes**	95.33	41	*e*P		P		14 32 41.5	+1.6	
	comp=Z,11nm,1.5s									
Y14A	**Wickenburg**	95.47	56	⇑P		P		14 32 40.1	-0.7	
	baz=96									
Z14A	**Wintersburg**	95.49	57	⇑P		P		14 32 40.7	-0.1	
	baz=96									
I14A	**Mackay**	95.49	46	⇑P		P		14 32 40.5	-0.3	
	baz=96,SNR=16									
214A	**Organ Pipe Nat**	95.54	58	⇓P		P		14 32 41.2	+0.1	
	baz=96									
D14A	**Greenough**	95.55	43	⇓P		P		14 32 39.1	-1.9	
	baz=96									
SLMT	**Seeley Lake**	95.56	43	*e*P		P		14 32 42.5	+1.4	
	comp=Z,85nm,0.6s									
F14A	**Wisdom**	95.61	45	⇑P		P		14 32 39.8	-1.6	
	baz=96									
A14A	**Double T Ranch**	95.65	41	⇑P		P		14 32 40.9	-0.5	
	baz=96,SNR=11									
CHMT	**Chamberlain Mo**	95.72	43	P		P		14 32 42.7	+0.8	
	comp=Z,111nm,1.7s									
B14A	**Marquette Ranc**	95.74	42	⇑P		P		14 32 40.9	-0.9	
	baz=96,SNR=8.3									
DUG	**Dugway**	95.85	50	⇓P		P		14 32 41.6	-1.0	
	baz=96									
MCMT	**McKenzie Canyo**	95.95	46	*e*P		P		14 32 45.4	+2.4	
	comp=Z,62nm,0.5s									
DLMT	**Dillon**	96.14	45	*e*P		P		14 32 42.0	-1.8	
	comp=Z,118nm,1.5s									
U15A	**North Rim**	96.14	54	⇓P		P		14 32 43.3	-0.8	
	baz=96									
C15A	**Salmond Ranch,**	96.17	43	⇑P		P		14 32 42.9	-0.9	
	baz=96,SNR=10.0									
B15A	**Bradely Ranch,**	96.21	42	⇓P		P		14 32 42.1	-1.8	
	baz=96,SNR=8.0									
D15A	**Lincoln**	96.22	43	⇓P		P		14 32 42.4	-1.7	
	baz=96									
F15A	**Butte**	96.22	45	⇑P		P		14 32 43.3	-0.9	
	baz=96,SNR=10									
LRM	**Limekiln Ridge**	96.25	45	*e*P		P		14 32 45.4	+1.1	
	comp=Z,942nm,1.6s									
MVU	**Marysvale**	96.27	52	*e*P		P		14 32 47.3	+2.7	
	comp=Z,441nm,2.0s									
MSU	**Marysvale**	96.30	52	*e*P		P		14 32 46.0	+1.3	
MSU					pmax	pmax				
	comp=Z,194nm,1.2s									
MSU	**Marysvale**	96.30	52	*e*P		P		14 32 46.0	+1.3	
	comp=Z,194nm,1.2s									
ABKAR	**Akbulak array**	96.39	319	*e*P		P		14 32 42.2	-2.3	
	comp=Z,49nm,0.8s									
C16A	**Fuhringer Ranc**	96.75	43	⇑P		P		14 32 45.0	-1.4	
	baz=97									
B16A	**M & M Farms, S**	96.78	42	⇓P		P		14 32 45.1	-1.4	
	baz=97									
X16A	**Lo Mia Camp, P**	96.78	56	⇓P		P		14 32 46.3	-0.7	
	baz=97									
E16A	**East Helena**	96.80	44	⇓P		P		14 32 45.6	-1.1	
	baz=97									
BOZ	**Bozeman (W)**	96.82	45	*e*P		P		14 32 48.4	+1.6	
BOZ					pmax	pmax				
	comp=Z,24nm,1.5s									
BOZ	**Bozeman (W)**	96.82	45	*e*P		P		14 32 48.4	+1.6	
	comp=Z,24nm,1.5s									
F16A	**Kennard Place,**	96.83	45	⇓P		P		14 32 45.6	-1.1	
	baz=97,SNR=12									
HWUT	**Hardware Ranch**	96.83	49	*e*P		P		14 32 48.3	+1.3	
	comp=Z,41nm,1.4s									
WUAZ	**Wupatki**	96.86	55	*e*P		P		14 32 47.1	-0.1	
	comp=Z,46nm,1.5s									
WUAZ	**Wupatki**	96.86	55	⇑P		P		14 32 46.0	-1.2	
	baz=97									
D16A	**Dana Ranch, Ca**	96.88	43	⇓P		P		14 32 46.1	-1.0	
	baz=97,SNR=6.6									
JLU	**Jordanelle**	96.90	50	*e*P		P		14 32 47.8	+0.4	
	comp=Z,443nm,2.2s									
I16A	**Newdale**	96.91	47	⇑P		P		14 32 47.1	-0.2	
	baz=97,SNR=5.7									
QLMT	**Earthquake Lak**	96.96	46	*e*P		P		14 32 49.4	+1.9	
	comp=Z,40nm,2.2s									
DAU	**Daniels Canyon**	97.05	50	P		Pdif		14 32 49.4	+1.1	
DAU					pmax	pmax				
	comp=Z,495nm,2.3s									
DAU	**Daniels Canyon**	97.05	50	P		Pdif		14 32 49.4	+1.2	
	comp=Z,495nm,2.3s									
H16A	**Russell Place,**	97.09	46	⇑P		P		14 32 47.2	-0.9	
	baz=97,SNR=11									
Q16A	**Castle Valley**	97.09	52	⇓P		P		14 32 47.9	-0.4	
	baz=97									
ARU	**Arti**	97.16	326	*c i*P		P		14 32 46.1	-1.7	
ARU								14 36 43.2		
ARU					PPP	PPP		14 38 49.8		
ARU						S	SKSac	14 43 17.2	-2.1	
ARU						PS	PS	14 46 09.4	+33	
ARU						pmax	pmax			
	comp=Z,94nm,1.0s									
TPAW	**Teton Pass**	97.30	47	*e*P		P		14 32 48.1	-1.0	
	comp=Z,55nm,1.2s									
IMW	**Indian Meadow**	97.31	47	*e*P		Pdif		14 32 50.4	+1.1	
	comp=Z,50nm,1.3s									
E17A	**Martinsdale**	97.36	44	⇑P		P		14 32 48.0	-1.2	
	baz=97,SNR=7.2									
YFT	**Old Faithful**	97.38	46	*e*P		Pdif		14 32 50.0	+0.4	
	comp=Z,27nm,0.7s									
B17A	**L&G Farms, Che**	97.39	42	⇑P		P		14 32 47.9	-1.3	
	baz=98,SNR=9.6									
C17A	**Wharram Farm,**	97.42	43	⇓P		P		14 32 48.2	-1.2	
	baz=98									
A17A	**Triple J Farms**	97.44	41	⇓P		P		14 32 48.0	-1.4	
	baz=98,SNR=6.5									
G17A	**Pierce Place,**	97.45	45	⇓P		Pdif		14 32 49.5	-0.2	
	baz=98									
MOOW	**Moose Ponds**	97.45	47	*e*P		P		14 32 48.8	-1.0	
	comp=Z,38nm,1.2s									
D17A	**Six Diamond Ra**	97.47	43	⇑P		P		14 32 48.3	-1.4	
	baz=98,SNR=12									
F17A	**Fitzpatrick Pl**	97.50	45	⇓P		P		14 32 49.4	-0.5	
	baz=98,SNR=8.2									
M17A	**Scullys Gap (B**	97.50	49	⇑P		P		14 32 49.0	-1.0	
	baz=98									
LOHW	**Long Hollow**	97.55	47	*e*P		P		14 32 49.3	-0.9	
	comp=Z,6.3nm,0.6s									
H17A	**Grant Village**	97.57	46	⇑P		P		14 32 49.7	-0.7	
	baz=98									
I17A	**Pilgrim Ck.**	97.57	47	⇓P		P		14 32 50.1	-0.3	
	baz=98									
SRU	**San Rafael**	97.60	51	⇓P		P		14 32 49.9	-0.6	
	baz=98									
L18A	**Fontenelle, Gr**	97.97	49	⇑Pdiff		P		14 32 51.0	-1.2	
	baz=98									
A18A	**Metzger Ranch,**	98.01	41	⇑Pdiff		P		14 32 51.0	-0.9	
	baz=98									
E18A	**Harlowton**	98.01	44	⇓Pdiff		P		14 32 51.8	-0.3	
	baz=98									
X18A	**Snowflake**	98.01	56	⇑Pdiff		Pdif		14 32 52.4	-0.1	
	baz=98									
B18A	**Beardsley Farm**	98.07	42	⇑Pdiff		P		14 32 51.2	-1.1	
	baz=98									
D18A	**Linhart Farms,**	98.08	43	⇓Pdiff		P		14 32 51.7	-0.6	
	baz=98									
EGMT	**Eagleton**	98.09	42	*e*P		Pdif		14 32 53.8	+1.4	
	comp=Z,194nm,1.6s									
EGMT	**Eagleton**	98.09	42	⇑Pdiff		P		14 32 50.2	-2.2	
	baz=98									
I18A	**Diamond G Ranc**	98.12	47	⇓Pdiff		P		14 32 51.8	-1.1	
	baz=98									
F18A	**Big Timber**	98.16	45	⇑Pdiff		P		14 32 52.3	-0.5	
	baz=98									
W18A	**Petrified Fore**	98.20	55	⇑Pdiff		Pdif		14 32 53.3	0.0	
	baz=98									
H18A	**Shoshone NF, C**	98.22	46	⇓Pdiff		P		14 32 52.2	-1.1	
	baz=98									
G18A	**Lazy EL Ranch,**	98.28	45	⇓Pdiff		P		14 32 52.8	-0.6	
	baz=98									
BW06	**Boulder Array**	98.32	48	*e*P		P		14 32 51.6	-2.1	
	comp=Z,13nm,0.6s									
L19A	**Fanson**	98.48	48	⇓Pdiff		P		14 32 53.0	-1.4	
	baz=98									
RLMT	**Red Lodge**	98.49	45	*e*P		P		14 32 54.0	-0.4	
	comp=Z,66nm,1.3s									
319A	**Douglas**	98.53	59	⇓Pdiff		Pdif		14 32 55.0	+0.1	
	baz=99									
C19A	**Slack Wire Ran**	98.57	43	⇓Pdiff		P		14 32 53.6	-1.0	
	baz=99									
B19A	**Brinkman Farms**	98.62	42	⇑Pdiff		P		14 32 53.6	-1.1	
	baz=99									
M19A	**Rock Springs**	98.64	49	⇑Pdiff		P		14 32 53.8	-1.3	
	baz=99									
O19A	**Miners Draw (B**	98.68	50	⇓Pdiff		P		14 32 54.3	-1.0	
	baz=99									
J19A	**Crowheart**	98.68	47	⇑Pdiff		P		14 32 54.0	-1.3	
	baz=99									
F19A	**Roth Farm, Mol**	98.70	45	⇑Pdiff		P		14 32 54.4	-0.8	
	baz=99									
H19A	**Powell**	98.70	46	⇓Pdiff		P		14 32 54.8	-0.5	
	baz=99									
D19A	**Cripps Ranch,**	98.70	43	⇓Pdiff		P		14 32 53.7	-1.5	
	baz=99									
I19A	**Meeteetse**	98.71	46	⇓Pdiff		P		14 32 55.1	-0.3	
	baz=99									
A19A	**Klindworth Far**	98.73	41	⇓Pdiff		P		14 32 54.8	-0.5	
	baz=99									
E19A	**Rath Farm, Rou**	98.79	44	⇑Pdiff		P		14 32 54.8	-0.8	
	baz=99									
P19A	**Cripple Cowboy**	98.79	51	⇑Pdiff		P		14 32 54.9	-1.0	
	baz=99									
K19A	**Absolon Red Bu**	98.84	48	⇑Pdiff		P		14 32 54.7	-1.3	
	baz=99									
PV04	**Paradox Valley**	98.86	52	*e*P		P		14 32 56.0	-0.2	
120A	**U Bar Ranch, L**	99.10	58	⇑Pdiff		Pdif		14 32 57.6	+0.2	
	baz=99									
Z20A	**Nine Sixteen R**	99.13	57	⇓Pdiff		Pdif		14 32 57.6	+0.1	
	baz=99									
320A	**Kipp Ranch, An**	99.18	59	⇓Pdiff		Pdif		14 32 58.6	+0.8	
	baz=99									
220A	**Playas Peak, P**	99.18	59	⇓Pdiff		Pdif		14 32 58.3	+0.6	
	baz=99									
U20A	**Newcomb**	99.19	54	⇑Pdiff		Pdif		14 32 57.7	0.0	
	baz=99									
W20A	**Ramah**	99.21	55	⇓Pdiff		Pdif		14 32 57.7	-0.2	
	baz=99									
X20A	**Quemado**	99.21	56	⇓Pdiff		Pdif		14 32 58.4	+0.5	
	baz=99									
D20A	**Manuel Ranch,**	99.22	43	⇓Pdiff		Pdif		14 32 56.9	-0.5	
	baz=99									
K20A	**Yellowstone Ra**	99.22	48	⇓Pdiff		Pdif		14 32 56.5	-1.2	
	baz=99									
G20A	**Bridger**	99.23	45	⇑Pdiff		Pdif		14 32 56.6	-1.0	
	baz=99									
B20A	**Solberg Farm,**	99.23	42	⇑Pdiff		Pdif		14 32 56.8	-0.6	
	baz=99									
V20A	**Brimhall**	99.23	55	⇑Pdiff		Pdif		14 32 58.4	+0.4	
	baz=99									
L20A	**Wamsutter**	99.24	48	⇓Pdiff		Pdif		14 32 57.1	-0.7	
	baz=99									
E20A	**Meyer Farm, Mu**	99.24	44	⇓Pdiff		Pdif		14 32 56.9	-0.6	
	baz=99									
P20A	**De Beque**	99.25	51	⇑Pdiff		Pdif		14 32 57.1	-0.8	
	baz=99									
F20A	**Billings**	99.26	45	⇓Pdiff		Pdif		14 32 57.1	-0.6	
	baz=99									
A20A	**Cobblestone Ra**	99.28	41	⇑Pdiff		Pdif		14 32 57.0	-0.6	
	baz=99									
C20A	**Veseth Ranch,**	99.28	43	⇑Pdiff		Pdif		14 32 57.1	-0.6	
	baz=99									
R20A	**Redvale**	99.28	52	⇑Pdiff		Pdif		14 32 58.1	0.0	
	baz=99									
S20A	**Disappointment**	99.30	53	⇓Pdiff		Pdif		14 32 57.5	-0.7	
	baz=99									
Y20A	**Horse Springs,**	99.31	57	⇓Pdiff		Pdif		14 32 58.6	+0.2	
	baz=99									
N20A	**Spence Gulch,**	99.32	50	⇑Pdiff		Pdif		14 32 57.9	-0.4	
	baz=99									
Q20A	**Ridgley Place,**	99.33	52	⇑Pdiff		Pdif		14 32 57.7	-0.6	
	baz=99									
I20A	**Worland**	99.34	46	⇑Pdiff		Pdif		14 32 56.9	-1.2	
	baz=99									
O20A	**White River Ci**	99.36	50	⇓Pdiff		Pdif		14 32 58.1	-0.2	
	baz=99									
M20A	**Sweetwater, Wa**	99.37	49	⇑Pdiff		Pdif		14 32 58.2	-0.3	
	baz=99									
J20A	**Shoshoni**	99.39	47	⇓Pdiff		Pdif		14 32 58.0	-0.4	
	baz=99									
H20A	**Greybull**	99.41	46	⇑Pdiff		Pdif		14 32 57.1	-1.3	
	baz=100									
S21A	**Coal Bank Pass**	99.75	53	⇑Pdiff		Pdif		14 32 59.4	-0.9	
	baz=100									
X21A	**Alamocita Cree**	99.80	56	⇓Pdiff		Pdif		14 33 00.5	0.0	
	baz=100									
121A	**Cookes Peak, D**	99.81	58	⇓Pdiff		Pdif		14 33 00.6	+0.1	
	baz=100									
221A	**Mesquite Ranch**	99.82	59	⇑Pdiff		Pdif		14 33 00.2	-0.4	
	baz=100									
J21A	**Lysite**	99.86	47	⇓Pdiff		Pdif		14 32 59.8	-0.7	
	baz=100									
U21A	**Nageezi**	99.88	54	⇓Pdiff		Pdif		14 33 00.3	-0.6	
	baz=100									
C21A	**Desert Coulee**	99.88	42	⇑Pdiff		Pdif		14 32 59.1	-1.2	
	baz=100									
N21A	**Black Mountain**	99.89	50	⇓Pdiff		Pdif		14 32 59.9	-0.9	
	baz=100									
Y21A	**Point of Rocks**	99.90	57	⇓Pdiff		Pdif		14 33 01.4	+0.4	
	baz=100									
Q21A	**Lamborn Mesa,**	99.90	52	⇑Pdiff		Pdif		14 33 00.8	0.0	
	baz=100									
B21A	**Ellsworth Farm**	99.90	42	⇓Pdiff		Pdif		14 32 59.8	-0.6	
	baz=100									
Z21A	**St. Cloud Mine**	99.91	57	⇓Pdiff		Pdif		14 33 00.3	-0.7	
	baz=100									
W21A	**San Fidel**	99.91	55	⇑Pdiff		Pdif		14 33 00.3	-0.7	
	baz=100									
R21A	**Cimarron**	99.93	52	⇑Pdiff		Pdif		14 33 00.3	-0.7	
	baz=100									
G21A	**Lodge Grass**	99.94	45	⇓Pdiff		Pdif		14 33 00.0	-0.7	
	baz=100									
O21A	**Pagoda**	99.94	50	⇓Pdiff		Pdif		14 33 00.1	-1.0	
	baz=100									
I21A	**Big Trails, Te**	99.95	47	⇑Pdiff		Pdif		14 32 59.8	-1.0	
	baz=100									
L21A	**Rawlins**	99.96	48	⇑Pdiff		Pdif		14 32 59.8	-1.3	
	baz=100									
E21A	**Keefer Ranch,**	99.97	44	⇑Pdiff		Pdif		14 33 00.4	-0.4	
	baz=100									
T21A	**Navajo Lake**	99.97	53	⇓Pdiff		Pdif		14 33 00.9	-0.3	
	baz=100									
F21A	**Absaloka Mine,**	99.97	45	⇑Pdiff		Pdif		14 32 59.8	-1.1	
	baz=100									
M21A	**Separation Pea**	99.98	49	⇑Pdiff		Pdif		14 32 59.9	-1.3	
	baz=100									
P21A	**Newcastle**	99.98	51	⇓Pdiff		Pdif		14 33 00.5	-0.7	
	baz=100									
D21A	**La Casta Ranch**	100.00	43	⇑Pdiff		Pdif		14 33 00.1	-0.8	
	baz=100									
LAZ	**Ladron**	100.34	56	*e*Pdif		Pdif		14 33 05.0	+2.1	
	comp=Z,72nm,2.0s									
SMCO	**Snowmass**	100.36	51	*e*Pdif		Pdif		14 33 02.3	-0.8	
	comp=Z,55nm,1.1s									
222A	**Williams Famil**	100.39	58	⇑Pdiff		Pdif		14 33 02.5	-0.7	
	baz=100									
Q22A	**Crested Butte,**	100.42	52	⇓Pdiff		Pdif		14 33 03.0	-0.3	
	baz=100									
X22A	**Bernardo**	100.44	56	⇓Pdiff		Pdif		14 33 02.1	-1.2	
	baz=100									
122A	**Conniff Cattle**	100.47	58	⇓Pdiff		Pdif		14 33 04.2	+0.7	
	baz=100									
T22A	**Edith**	100.48	53	⇓Pdiff		Pdif		14 33 03.0	-0.5	
	baz=100									
Y22A	**Socorro**	100.49	57	⇓Pdiff		Pdif		14 33 04.0	+0.4	
	baz=100									
V22A	**San Miguel Ran**	100.50	55	⇓Pdiff		Pdif		14 33 04.0	+0.4	
	baz=101									
Z22A	**Elephant Butte**	100.50	57	⇓Pdiff		Pdif		14 33 03.5	0.0	
	baz=101									
P22A	**Eagle**	100.51	51	⇓Pdiff		Pdif		14 33 02.6	-0.9	
	baz=101									
S22A	**4UR Ranch, Cre**	100.52	53	⇓Pdiff		Pdif		14 33 03.3	-0.4	
	baz=101									
Y22D	**IRIS PASSCAL I**	100.52	56	⇑Pdiff		Pdif		14 33 03.2	-0.4	
	baz=101									
I22A	**9 Mile Ranch,**	100.53	46	⇓Pdiff		Pdif		14 32 02.8	-0.7	
	baz=101									
U22A	**Llaves**	100.53	54	⇓Pdiff		Pdif		14 33 03.3	-0.5	
	baz=101									
D22A	**Cohagen**	100.55	43	⇓Pdiff		Pdif		14 32 03.3	-1.0	
	baz=101									
W22A	**Albuquerque**	100.55	55	⇑Pdiff		Pdif		14 33 02.5	-1.3	
	baz=101									
J22A	**Midwest**	100.56	47	⇑Pdiff		Pdif		14 33 02.8	-0.8	
	baz=101									
R22A	**Saguache, Gunn**	100.56	52	⇓Pdiff		Pdif		14 33 03.1	-0.8	
	baz=101									
K22A	**Casper**	100.56	48	⇓Pdiff		Pdif		14 33 02.4	-1.2	
	baz=101									
M22A	**Cedar Creek Ra**	100.56	49	⇓Pdiff		Pdif		14 33 03.0	-0.8	
	baz=101									
H22A	**Clearmont**	100.58	46	⇓Pdiff		Pdif		14 33 03.1	-0.5	
	baz=101									
B22A	**Reddig Ranch S**	100.59	42	⇑Pdiff		Pdif		14 33 02.5	-1.0	
	baz=101									
G22A	**Birney**	100.59	45	⇑Pdiff		Pdif

Q24A	Divide baz=102	101.79	51	⇓Pdiff	Pdif	14 33 08.7	-0.7		
S24A	Houchin Ranch, baz=102	101.80	53	⇓Pdiff	Pdif	14 33 09.0	-0.5		
U24A	Moreno Valley baz=102	101.80	54	⇓Pdiff	Pdif	14 33 08.9	-0.6		
D24A	Glendive baz=102	101.81	43	⇑Pdiff	Pdif	14 33 08.8	-0.2		
K24A	Anderson Ranch baz=102	101.81	48	⇓Pdiff	Pdif	14 33 08.6	-0.6		
SNAA	Sanae comp=Z,144nm,1.4s	101.83	187	*e*Pdif	Pdif	14 33 07.3	-1.2		
V24A	Rampart Ranch, baz=102	101.83	55	⇑Pdiff	Pdif	14 33 09.3	-0.3		
Z24A	Sheeppen Canyo baz=102	101.83	57	⇓Pdiff	Pdif	14 33 09.1	-0.5		
F24A	Ekalaka baz=102	101.84	44	⇑Pdiff	Pdif	14 33 08.5	-0.6		
A24A	Westby baz=102	101.85	41	⇑Pdiff	Pdif	14 33 08.8	-0.3		
H24A	Dirks Ranch, A baz=102	101.86	45	⇑Pdiff	Pdif	14 33 08.5	-0.8		
R24A	Sanders Place, baz=102	101.86	52	⇑Pdiff	Pdif	14 33 09.0	-0.6		
I24A	Kuemmerle Ranc baz=102	101.87	46	⇑Pdiff	Pdif	14 33 09.0	-0.4		
E24A	Baker baz=102	101.87	44	⇑Pdiff	Pdif	14 33 08.9	-0.3		
J24A	Dixon Ranch, L baz=102	101.88	47	⇓Pdiff	Pdif	14 33 08.9	-0.5		
N24A	Carr baz=102	101.89	50	⇑Pdiff	Pdif	14 33 09.0	-0.6		
M24A	Cheyenne baz=102	101.89	49	⇓Pdiff	Pdif	14 33 09.3	-0.3		
G24A	Alzada baz=102	101.90	45	⇑Pdiff	Pdif	14 33 09.1	-0.4		
P24A	Kohler Place, baz=102	101.94	51	⇓Pdiff	Pdif	14 33 09.8	-0.1		
325A	Bean Ranch, Si baz=102	102.22	59	⇑Pdiff	Pdif	14 33 10.8	-0.5		
425A	Indio Mountain baz=102	102.22	60	⇓Pdiff	Pdif	14 33 10.7	-0.6		
225A	Deer Hill, Car baz=102	102.33	58	⇑Pdiff	Pdif	14 33 11.5	-0.2		
V25A	Rancho No Teng baz=102	102.36	55	⇓Pdiff	Pdif	14 33 11.4	-0.5		
Y25A	Mesa, Roswell baz=102	102.38	57	⇓Pdiff	Pdif	14 33 11.6	-0.3		
X25A	Clemmons Ranch baz=102	102.38	56	⇑Pdiff	Pdif	14 33 11.8	-0.1		
Z25A	Roswell baz=102	102.38	57	⇑Pdiff	Pdif	14 33 11.5	-0.4		
S25A	Robets Cordova baz=102	102.42	53	⇓Pdiff	Pdif	14 33 11.3	-0.7		
125A	Gardner Draw, baz=102	102.45	58	⇓Pdiff	Pdif	14 33 11.8	-0.4		
T25A	Trinidad baz=102	102.46	53	⇑Pdiff	Pdif	14 33 11.9	-0.4		
M25A	Palm-Egli Farm baz=102	102.47	49	⇑Pdiff	Pdif	14 33 11.5	-0.6		
L25A	Engebretsen Ra baz=102	102.48	48	⇑Pdiff	Pdif	14 33 12.1	-0.1		
N25A	Grover baz=102	102.49	49	⇓Pdiff	Pdif	14 33 12.2	0.0		
Q25A	Bedland, Calha baz=102	102.49	51	⇓Pdiff	Pdif	14 33 12.2	-0.2		
E25A	Miller Ranch, baz=102	102.50	44	⇓Pdiff	Pdif	14 33 12.3	+0.3		
U25A	Circle Dot Ran baz=103	102.50	54	⇓Pdiff	Pdif	14 33 12.2	-0.2		
J25A	Sunshine Ranch baz=103	102.50	47	⇑Pdiff	Pdif	14 33 11.8	-0.4		
R25A	Fountain Ranch baz=103	102.51	52	⇓Pdiff	Pdif	14 33 12.1	-0.3		
O25A	Wiggins baz=103	102.51	50	⇑Pdiff	Pdif	14 33 11.6	-0.7		
P25A	Willow Gulch B baz=103	102.52	51	⇑Pdiff	Pdif	14 33 12.0	-0.4		
W25A	X Bar L Ranch, baz=103	102.52	55	⇑Pdiff	Pdif	14 33 11.9	-0.5		
K25A	Mack Ranch, Ha baz=103	102.52	48	⇑Pdiff	Pdif	14 33 11.6	-0.7		
226B	Tecolote Peak, baz=103	102.89	58	⇓Pdiff	Pdif	14 33 13.6	-0.5		
126A	Clayton Basin, baz=103	102.99	58	⇑Pdiff	Pdif	14 33 14.7	+0.1		
626A	Big Bend Ranch baz=103	102.99	61	⇓Pdiff	Pdif	14 33 14.5	-0.2		
Z26A	Caprock baz=103	103.00	57	⇑Pdiff	Pdif	14 33 14.7	+0.1		
526A	Mary Lane Ranc baz=103	103.01	60	⇑Pdiff	Pdif	14 33 14.8	0.0		
K26A	Motz Farm, Whi baz=103	103.02	47	⇑Pdiff	Pdif	14 33 13.8	-0.7		
V26A	Tequesquite Ra baz=103	103.04	55	⇓Pdiff	Pdif	14 33 14.9	+0.1		
U26A	Atchley Ranch, baz=103	103.04	54	⇑Pdiff	Pdif	14 33 15.0	+0.1		
426A	McDonald Obser baz=103	103.05	60	⇑Pdiff	Pdif	14 33 14.6	-0.4		
Q26A	Hugo baz=103	103.06	51	⇑Pdiff	Pdif	14 33 14.9	+0.1		
326A	Caldwell Ranch baz=103	103.07	59	⇓Pdiff	Pdif	14 33 14.9	0.0		
X26A	CR and CF Fran baz=103	103.08	56	⇑Pdiff	Pdif	14 33 14.6	-0.4		
W26A	Owens Ranch, T baz=103	103.09	55	⇓Pdiff	Pdif	14 33 14.6	-0.4		
Y26A	Elida baz=103	103.10	57	⇑Pdiff	Pdif	14 33 14.9	-0.2		
T26A	Comanche Natio baz=103	103.11	53	⇑Pdiff	Pdif	14 33 14.4	-0.7		
O26A	Horse Wrangler baz=103	103.12	50	⇑Pdiff	Pdif	14 33 14.7	-0.4		
N26A	Koester Ranch, baz=103	103.14	49	⇑Pdiff	Pdif	14 33 14.4	-0.7		
P26A	Davis Ranch, A baz=103	103.15	51	⇑Pdiff	Pdif	14 33 15.5	+0.3		
E26A	Carlson Angus baz=103	103.15	44	⇑Pdiff	Pdif	14 33 14.3	-0.6		
L26A	Underwood Farm baz=103	103.15	48	⇓Pdiff	Pdif	14 33 15.1	0.0		
M26A	McRoberts Ranc baz=103	103.15	49	⇓Pdiff	Pdif	14 33 15.0	-0.1		
R26A	Arlington baz=103	103.16	52	⇓Pdiff	Pdif	14 33 15.2	0.0		
S26A	Kim baz=103	103.18	53	⇑Pdiff	Pdif	14 33 15.5	+0.1		
527A	Woodward Ranch baz=104	103.42	60	⇑Pdiff	Pdif	14 33 16.6	0.0		
327A	Balmorhea Ranc baz=104	103.48	59	⇓Pdiff	Pdif	14 33 16.8	0.0		
127A	Arkansas Junct baz=104	103.55	58	⇓Pdiff	Pdif	14 33 17.1	+0.1		
427A	Hayter Ranch, baz=104	103.58	60	⇑Pdiff	Pdif	14 33 17.2	0.0		
227A	Bennet, Jal baz=104	103.63	58	⇓Pdiff	Pdif	14 33 17.4	0.0		
S27A	Las Animas baz=104	103.63	53	⇑Pdiff	Pdif	14 33 18.1	+0.7		
Z27A	Tatum baz=104	103.64	57	⇓Pdiff	Pdif	14 33 17.7	+0.2		
627A	Terlingua Ranc baz=104	103.64	61	⇓Pdiff	Pdif	14 33 17.6	0.0		
Y27A	Causey baz=104	103.65	57	⇑Pdiff	Pdif	14 33 17.8	+0.3		
X27A	F and S Farms, baz=104	103.66	56	⇓Pdiff	Pdif	14 33 17.6	+0.1		
N27A	Anderson Farm, baz=104	103.66	49	⇓Pdiff	Pdif	14 33 17.4	0.0		
R27A	Eads baz=104	103.67	52	⇓Pdiff	Pdif	14 33 17.6	+0.1		
W27A	Bowe Ranch, En baz=104	103.67	55	⇓Pdiff	Pdif	14 33 17.2	-0.4		
K27A	Flueckinger Fa baz=104	103.71	47	⇑Pdiff	Pdif	14 33 17.2	-0.3		
M27A	Reverse DX Ran baz=104	103.71	49	⇑Pdiff	Pdif	14 33 17.9	+0.3		
L27A	T5 Ranch, Ells baz=104	103.71	48	⇑Pdiff	Pdif	14 33 17.5	-0.1		
P27A	Ficken Ranch, baz=104	103.74	51	⇓Pdiff	Pdif	14 33 18.3	+0.5		
KSCO	Kaye Shedlock' baz=104	103.74	51	⇓Pdiff	Pdif	14 33 18.3	+0.5		
O27A	Beecher Island baz=104	103.76	50	⇓Pdiff	Pdif	14 33 18.6	+0.8		
U27A	Thompson Grove baz=104	103.78	54	⇓Pdiff	Pdif	14 33 19.1	+1.1		
V27A	Dan Oppiter Fa baz=104	103.81	55	⇑Pdiff	Pdif	14 33 18.8	+0.6		
T27A	Campo baz=104	103.82	53	⇑Pdiff	Pdif	14 33 18.8	+0.6		
MSTX	Muleshoe baz=104	103.97	56	⇑Pdiff	Pdif	14 33 19.4	+0.5		
OGNE	Ogallala baz=104	104.03	49	⇑Pdiff	Pdif	14 33 19.7	+0.7		
328A	Wristen Ranch, baz=104	104.07	59	⇓Pdiff	Pdif	14 33 20.0	+0.6		
628A	Black Gap, Mar baz=104	104.08	61	⇓Pdiff	Pdif	14 33 20.0	+0.6		
528A	Cox Ranch, San baz=104	104.14	60	⇓Pdiff	Pdif	14 33 20.3	+0.5		
428A	Kincaid Ranch, baz=104	104.20	60	⇓Pdiff	Pdif	14 33 20.6	+0.6		
228A	UT Block 9, Go baz=104	104.22	58	⇑Pdiff	Pdif	14 33 20.6	+0.6		
U28A	Mallet baz=104	104.26	54	⇑Pdiff	Pdif	14 33 20.5	+0.4		
128A	Castleberry Fa baz=104	104.28	58	⇑Pdiff	Pdif	14 33 20.8	+0.5		
O28A	Krutsinger Ran baz=104	104.31	50	⇓Pdiff	Pdif	14 33 20.8	+0.5		
V28A	Channing baz=104	104.31	55	⇑Pdiff	Pdif	14 33 20.7	+0.3		
Z28A	Tucker Farm, M baz=104	104.33	57	⇑Pdiff	Pdif	14 33 20.7	+0.2		
K28A	Ten Mile Ranch baz=104	104.35	47	⇓Pdiff	Pdif	14 33 20.4	+0.1		
W28A	Vega baz=104	104.36	55	⇓Pdiff	Pdif	14 33 20.8	+0.2		
Q28A	Sharon Springs baz=104	104.36	51	⇑Pdiff	Pdif	14 33 21.0	+0.5		
J28A	Allard Ranch, baz=104	104.36	47	⇑Pdiff	Pdif	14 33 20.4	0.0		
P28A	Saint Francis baz=104	104.37	51	⇓Pdiff	Pdif	14 33 21.0	+0.4		
Y28A	McKinney Farm, baz=104	104.41	56	⇑Pdiff	Pdif	14 33 20.8	0.0		
X28A	Dimmitt baz=104	104.41	56	⇑Pdiff	Pdif	14 33 21.0	+0.1		
S28A	Manter baz=104	104.43	53	⇓Pdiff	Pdif	14 33 21.1	+0.3		
R28A	Tribune baz=104	104.44	52	⇑Pdiff	Pdif	14 33 20.5	-0.4		
M28A	Bar X Bar Ranc baz=104	104.48	49	⇑Pdiff	Pdif	14 33 21.2	+0.2		
529A	Stev Forest Ra baz=105	104.63	60	⇑Pdiff	Pdif	14 33 22.3	+0.5		
329A	Wagon Wheel Ra baz=105	104.77	59	⇓Pdiff	Pdif	14 33 22.2	-0.3		
129A	Stewart Farms, baz=105	104.80	58	⇓Pdiff	Pdif	14 33 23.4	+0.8		
W29A	Amraillo baz=105	104.82	55	⇑Pdiff	Pdif	14 33 23.1	+0.4		
X29A	Tulia baz=105	104.83	56	⇑Pdiff	Pdif	14 33 23.1	+0.4		
V29A	Stinnett baz=105	104.87	54	⇓Pdiff	Pdif	14 33 22.4	-0.5		
229A	Bryant Ranch, baz=105	104.89	58	⇓Pdiff	Pdif	14 33 23.6	+0.6		
429A	Davenport Ranc baz=105	104.89	60	⇓Pdiff	Pdif	14 33 23.6	+0.6		
Y29A	Porterfield Fa baz=105	104.89	56	⇓Pdiff	Pdif	14 33 22.8	-0.2		
MDND	Maddock baz=105	104.90	42	⇓Pdiff	Pdif	14 33 21.1	-1.5		
Z29A	Hungry Hill Ra baz=105	104.90	57	⇑Pdiff	Pdif	14 33 24.0	+1.0		
T29A	Hugoton baz=105	104.95	53	⇓Pdiff	Pdif	14 33 23.3	+0.1		
R29A	Marienthal baz=105	104.95	52	⇑Pdiff	Pdif	14 33 22.9	-0.3		
M29A	Burnside Ranch baz=105	104.99	49	⇓Pdiff	Pdif	14 33 23.3	+0.1		
P29A	Atwood baz=105	105.00	51	⇓Pdiff	Pdif	14 33 22.2	-1.2		
U29A	Oasis Ranch, S baz=105	105.02	54	⇑Pdiff	Pdif	14 33 21.8	-1.7		
Q29A	Oakley baz=105	105.03	51	⇑Pdiff	Pdif	14 33 21.8	-1.7		
S29A	Ulysses baz=105	105.05	53	⇑Pdiff	Pdif	14 33 23.5	-0.1		
O29A	4D Ranch, Culb baz=105	105.05	50	⇑Pdiff	Pdif	14 33 22.3	-1.3		
L29A	Maesberg Ranch baz=105	105.07	48	⇓Pdiff	Pdif	14 33 23.9	+0.3		
N29A	Votaw Ranch, W baz=105	105.11	49	⇑Pdiff	Pdif	14 33 23.2	-0.6		
K29A	Lazy Trails An baz=105	105.11	47	⇓Pdiff	Pdif	14 33 22.7	-1.0		
Z30A	Sanderson Ranc baz=105	105.38	57	⇓Pdiff	Pdif	14 33 25.3	+0.1		
530A	J-C Ranch, Com baz=105	105.39	60	⇓Pdiff	Pdif	14 33 24.9	-0.3		
430A	Baggett Ranch, baz=106	105.45	60	⇓Pdiff	Pdif	14 33 25.0	-0.5		
330A	Mertzon baz=106	105.46	59	⇑Pdiff	Pdif	14 33 25.5	-0.1		
230A	Sterling City baz=106	105.49	58	⇓Pdiff	Pdif	14 33 25.5	-0.2		
N30A	Hueftle Ranch, baz=106	105.50	49	⇓Pdiff	Pdif	14 33 24.7	-0.9		
X30A	Coker Ranch, T baz=106	105.51	56	⇑Pdiff	Pdif	14 33 24.7	-0.9		
U30A	WK&E Inc. Balk baz=106	105.52	54	⇓Pdiff	Pdif	14 33 25.9	+0.2		
Y30A	Stafford Cattl baz=106	105.53	56	⇓Pdiff	Pdif	14 33 26.8	+0.9		
P30A	Selden baz=106	105.53	51	⇓Pdiff	Pdif	14 33 25.5	-0.1		
V30A	Spur Ranch, Mi baz=106	105.55	54	⇓Pdiff	Pdif	14 33 26.0	+0.1		
S30A	Montezuma baz=106	105.56	52	⇑Pdiff	Pdif	14 33 27.2	+1.3		
130A	Snyder baz=106	105.56	58	⇓Pdiff	Pdif	14 33 25.6	-0.3		
T30A	Plains baz=106	105.57	53	⇑Pdiff	Pdif	14 33 27.2	+1.3		
M30A	Dale-Ortello V baz=106	105.59	48	⇑Pdiff	Pdif	14 33 26.0	+0.1		
O30A	MW Ranch, Wils baz=106	105.61	50	⇓Pdiff	Pdif	14 33 25.3	-0.7		
Q30A	Quinter baz=106	105.61	51	⇓Pdiff	Pdif	14 33 24.9	-1.2		
R30A	Dighton baz=106	105.64	52	⇑Pdiff	Pdif	14 33 26.5	+0.3		
W30A	Crocket Farms baz=106	105.69	55	⇓Pdiff	Pdif	14 33 26.3	-0.3		
BRSD	Miller baz=106	105.86	45	⇓Pdiff	Pdif	14 33 26.5	-0.5		
431A	Sonora baz=106	105.99	60	⇓Pdiff	Pdif	14 33 28.0	+0.1		
131A	Roby baz=106	106.05	58	⇓Pdiff	Pdif	14 33 27.3	-0.8		
Y31A	Tekieta Farm, baz=106	106.05	56	⇓Pdiff	Pdif	14 33 29.3	+1.2		
531A	Rocksprings baz=106	106.08	60	⇓Pdiff	Pdif	14 33 27.8	-0.5		
631A	Perdido Creek baz=106	106.09	61	⇓Pdiff	Pdif	14 33 28.6	+0.3		
331A	San Angelo baz=106	106.11	59	⇑Pdiff	Pdif	14 33 28.2	-0.2		
231A	Bronte baz=106	106.16	58	⇑Pdiff	Pdif	14 33 28.7	+0.1		
U31A	Nine Bar Ranch baz=106	106.17	54	⇓Pdiff	Pdif	14 33 28.7	+0.1		
Z31A	Sharp Cattle R baz=106	106.20	57	⇓Pdiff	Pdif	14 33 29.6	+0.8		
P31A	Stockton baz=106	106.20	50	⇑Pdiff	Pdif	14 33 28.8	+0.1		
W31A	Holland Ranch, baz=106	106.21	55	⇑Pdiff	Pdif	14 33 28.8	0.0		
X31A	McDonald Ranch baz=106	106.23	56	⇓Pdiff	Pdif	14 33 29.2	+0.4		
R31A	Burdett baz=106	106.23	52	⇑Pdiff	Pdif	14 33 29.2	+0.4		
V31A	Spring Creek L baz=106	106.24	54	⇑Pdiff	Pdif	14 33 30.0	+1.2		
T31A	Randall Ranch, baz=106	106.24	53	⇑Pdiff	Pdif	14 33 29.2	+0.4		
Q31A	Ellis baz=106	106.25	51	⇑Pdiff	Pdif	14 33 29.2	+0.4		
S31A	Mullinville baz=106	106.34	52	⇑Pdiff	Pdif	14 33 29.8	+0.5		
532A	Rocksprings baz=107	106.63	60	⇑Pdiff	Pdif	14 33 30.8	0.0		
732A	Laxson Ranch, baz=107	106.66	62	⇑Pdiff	Pdif	14 33 30.5	-0.4		
432A	Menard baz=107	106.68	59	⇑Pdiff	Pdif	14 33 31.7	+0.7		
332A	Millersview baz=107	106.69	59	⇑Pdiff	Pdif	14 33 31.3	+0.3		
JCT	Junction City baz=107	106.70	60	⇓Pdiff	Pdif	14 33 31.7	+0.7		
Y32A	R-V Farms, Ver baz=107	106.73	56	⇑Pdiff	Pdif	14 33 32.5	+1.5		
232A	Coleman baz=107	106.73	58	⇑Pdiff	Pdif	14 33 31.0	-0.2		
Z32A	Haskell baz=107	106.76	57	⇓Pdiff	Pdif	14 33 32.2	+1.0		
632A	Uvalde baz=107	106.78	61	⇓Pdiff	Pdif	14 33 32.7	+1.3		
WHTX	Lake Whitney baz=109	108.58	58	⇑Pdiff	Pdif	14 33 39.6	+0.3		
TUL1	Tulsa baz=110	109.49	54	⇑Pdiff	Pdif	14 33 42.9	-0.4		
SPMN	St. Paul baz=110	110.01	44	⇑Pdiff	Pdif	14 33 43.8	-1.6		
EYMN	Ely	110.21	41	*e*PKPdf	PKiKP	14 37 46.1	-1.2		
FIA1	FINESS Array S	111.77	336	*e*PKiKP	PKiKP	14 37 48.9	-0.9		
SUMG	Summit	112.21	4	⇓*i*P	Pdif	14 33 54.9	-0.2		
COWI	Conover	112.27	42	*e*PKPdf	PKiKP	14 37 50.1	-1.2		
UALR	University of	112.45	55	*e*PKPdf	PKiKP	14 37 50.2	-1.8		
OLIL	Olney	114.97	50	*e*PKiKP	PKiKP	14 37 55.7	-0.9		
SFIN	Scholer Farm baz=115	115.29	48	⇑Pdiff	Pdif	14 34 07.7	-1.2		
AK01	Malin Array Si	115.36	325	*e*PKPdf	PKPdf	14 37 55.9	-1.1		
KIEV	Kiev	115.37	325	*e*PKiKP	PKPdf	14 37 56.0	-1.0		
KIEV	Kiev	115.37	325	*e*PKPdf	PKPdf	14 37 56.0	-1.0		
AK02	Malin Array Si	115.38	325	*e*PKPdf	PKPdf	14 37 55.6	-1.5		
USIN	University of	115.49	50	*e*PKPdf	PKPdf	14 37 56.4	-1.3		
BLO	Bloomington	116.04	49	*e*PKiKP	PKPdf	14 37 57.2	-1.5		
BLO	Bloomington	116.04	49	*e*PKPdf	PKPdf	14 37 57.2	-1.5		
BR131	Keskin Array S	116.28	312	*e*PKPdf	PKPdf	14 37 58.2	-1.2		
KMBO	Kilima Mbogo	116.34	266	*e*PKPdf	PKPdf	14 37 59.7	-0.6		
ANTO	Ankara	116.86	312	*e*PKiKP	PKPdf	14 37 59.9	-0.5		
ANTO	Ankara	116.86	312	⇓PKiKP	PKPdf	14 38 00.1	-0.3		
ANTO	Ankara SNR=5.3	116.86	312	P	PKPdf	14 37 59.7	-0.6		
ANTO	Ankara	116.86	312	*e*PKPdf	PKPdf	14 37 59.9	-0.5		
ANTO	Ankara	116.86	312	⇓*i*P	PKPdf	14 38 00.1	-0.3		
LRAL	Lakeview Retre	117.14	56	*e*PKPdf	PKPdf	14 37 58.8	-2.2		
CSS	Prodhromos	117.76	307	*e*PKPdf	PKPdf	14 38 00.8	-1.4		
NAO01	NORSAR Array S	117.82	341	PKPdf	PKPdf	14 38 02.5	+1.0		
TEIG	Tepich	117.92	70	*e*PKPdf	PKPdf	14 38 01.8	-1.1		
ACSO	Alum Creek Sta	118.34	47	*e*PKPdf	PKPdf	14 38 01.4	-1.7		
CPCT	Cooper Cave	118.56	52	*e*PKPdf	PKPdf	14 38 01.6	-2.0		
TZTN	Tazewell	119.03	51	*e*PKPdf	PKPdf	14 38 03.1	-1.4		
BUR08	Bucovina Ar. S	119.07	323	*e*PKPdf	PKPdf	14 38 04.5	0.0		
BOSA	Boshof	120.24	233	PKPdf	PKPdf	14 38 07.2	-0.1		
TIGA	Tifton baz=120	120.31	57	⇓Pdiff	Pdif	14 34 30.9	-0.6		
KMSC	Kings Mountain baz=121	121.16	52	⇓Pdiff	Pdif	14 34 36.4	+1.2		
BLA	Blacksburg	121.21	49	*e*PKiKP	PKPdf	14 38 07.2	-1.6		
BLA	Blacksburg	121.21	49	*e*PKPdf	PKPdf	14 38 07.2	-1.6		
MSNY	Massena	121.95	39	*e*PKPdf	PKPdf	14 38 08.0	-1.9		
PSZ	Piszkesteto	122.04	325	⇑PKiKP	PKPdf	14 38 09.4	-0.7		
PSZ	Piszkesteto	122.04	325	⇑*i*P	PKPdf	14 38 09.4	-0.7		
LONY	Lake Ozonia	122.31	39	*e*PKPdf	PKPdf	14 38 09.0	-1.7		
LSZ	Lusaka	122.46	248	PKPdf	PKPdf	14 38 12.6	+0.8		
BINY	Binghamton	122.49	42	*e*PKPdf	PKPdf	14 38 08.9	-2.2		
NHSC	New Hope	122.67	54	*e*PKPdf	PKPdf	14 38 11.0	-0.6		
NCB	Newcomb	122.84	40	*e*PKPdf	PKPdf	14 38 10.3	-1.4		
JSRW	J. Sargeant Re	122.95	48	*e*PKPdf	PKPdf	14 38 10.2	-1.8		
SDMD	Soldier's Deli	123.05	46	*e*PKPdf	PKPdf	14 38 10.6	-1.6		
BRG	Berggiesshubel	123.46	331	PDIF	Pdif	14 34 47.0	+2.0		
BRG	comp=Z,4.3nm,1.1s			*e*		14 35 11.2			
BRG	Berggiesshubel	123.46	331	P	Pdif	14 34 47.0	+2.0		
BRG	comp=Z,4.0nm,1.1s			pmax	pmax				
SANT	Santorini	123.46	311	*e*PKPdf	PKPdf	14 38 11.3	-1.8		
ACCN	Adirondack Com	123.47	40	*e*PKPdf	PKPdf	14 38 10.4	-2.4		
MDV	Middlebury	123.49	39	*e*PKPdf	PKPdf	14 38 11.6	-1.2		
TRY	Troy	123.78	41	*e*PKPdf	PKPdf	14 38 12.6	-0.9		
BRNJ	Basking Ridge	124.11	43	*e*PKPdf	PKPdf	14 38 13.9	-0.2		
LBNH	Lisbon	124.15	38	*e*PKiKP	PKPdf	14 38 13.2	-0.9		
LBNH	Lisbon	124.15	38	*e*PKPdf	PKPdf	14 38 13.2	-0.9		
HNH	Hanover	124.20	39	*e*PKPdf	PKPdf	14 38 13.6	-0.6		
IDI	Anoyia	124.27	310	PKPdf	PKPdf	14 38 14.3	-0.5		
CPNY	Central Park	124.47	43	*e*PKPdf	PKPdf	14 38 14.1	-0.7		
KHC	Kasperske Hory	124.75	329	*e*PKPdf	PKPdf	14 38 14.8	-0.4		
KHC	Kasperske Hory	124.75	329	*ex*	PKPdf	14 38 15.1	-0.1		
YLE	Yale	124.92	42	PKPdf	PKPdf	14 38 13.5	-1.2		
GVD	Gavdhos	125.05	309	*e*PKPdf	PKPdf	14 38 15.7	-0.4		
PQI	Presque Isle	125.13	34	*e*PKPdf	PKPdf	14 38 14.2	-1.7		
TIR	Tirane	125.38	318	*e*PKiKP	PKPdf	14 38 17.1	+0.5		
TIR	Tirane	125.38	318	*e*PKPdf	PKPdf	14 38 17.1	+0.5		
LCO	Las Campanas	125.39	131	*e*PKPdf	PKPdf	14 38 16.3	-1.1		
WES	Weston	125.47	40	*e*PKiKP	PKPdf	14 38 16.1	-0.6		
WES	Weston	125.47	40	*e*PKPdf	PKPdf	14 38 16.1	-0.6		
GRFO	Grafenberg	125.55	331	*e*PKiKP	PKPdf	14 38 16.1	-0.6		
GRFO	Grafenberg	125.55	331	*e*PKPdf	PKPdf	14 38 16.1	-0.6		
BRYW	Bryant College	125.56	41	*e*PKPdf	PKPdf	14 38 15.7	-1.2		
TRQA	Tornquist	125.67	145	*e*PKPdf	PKPdf	14 38 15.6	-1.7		
EMMW	East Machias	126.59	36	*e*PKPdf	PKPdf	14 38 17.9	-0.8		
BCIP	Isla Barro Col	126.65	82	*e*PKPdf	PKPdf	14 38 18.1	-1.7		
ESK	Eskdalemuir	126.66	344	*e*PKiKP	PKPdf	14 38 18.4	-0.2		
ESK	Eskdalemuir	126.66	344	*e*PKPdf	PKPdf	14 38 18.4	-0.2		
TRI	Trieste	126.76	326	*e*PKiKP	PKPdf	14 38 18.5	-0.6		
TRI	Trieste	126.76	326	*e*PKPdf	PKPdf	14 38 18.5	-0.6		
NNA	Nana	126.83	109	*e*PKPdf	PKPdf	14 38 18.8	-1.4		
ABH	Alteburg	127.13	333	PKP	PKPdf	14 38 19.8	+0.1		
STU	Stuttgart	127.15	331	*e*Pdiff	Pdif	14 35 01.0	-0.5		
STU				*e*PKPdf	PKPdf	14 38 19.6	-0.2		
STU				*e*PP	PP	14 40 23.0	+4.4		
STU	Stuttgart	127.15	331	*e*PKiKP	PKPdf	14 38 19.5	-0.2		
KTD	Kalmit	127.29	332	PKiKP	PKPdf	14 38 19.2	-0.9		
KTD	Kalmit	127.29	332	PKP	PKPdf	14 38 19.2	-0.9		
OTAV	Otavalo	127.58	94	PKPdf	PKPdf	14 38 21.3	-0.9	

LRS	**Lares**	**138.21**	**68**	*e*PKPdf	**PKPdf**	**14 38 40.3**	**-1.1**
CELP	**Cerrillos**	**138.50**	**69**	*e*PKPdf	**PKPdf**	**14 38 41.3**	**-0.7**
STVI	**Saint Thomas**	**139.94**	**68**	*e*PKPdf	**PKPdf**	**14 38 43.7**	**-0.8**
ESLA	**Sonseca Array**	**140.19**	**333**	*e*PKPdf	**PKPdf**	**14 38 42.6**	**-1.9**
CDVI	**St. Croix**	**140.26**	**68**	*e*PKPdf	**PKPdf**	**14 38 44.1**	**-1.1**
SAML	**Samuel**	**140.55**	**111**	*e*PKPdf	**PKPdf**	**14 38 44.9**	**-0.9**
TAM	**Tamanrasset**	**144.71**	**303**	*e*PKIKP	**PKPab**	**14 38 51.9**	**-0.1**
TAM	**Tamanrasset**	**144.71**	**303**	*e*PKPdf	**PKPab**	**14 38 51.9**	**-0.1**
BBGH	**Gun Hill**	**146.13**	**74**	*e*PKPbc	**PKPab**	**14 38 57.2**	**-0.2**
RTC	**Rabat Centre**	**146.14**	**330**	*e*PKPbc	**PKPbc**	**14 38 55.9**	**-0.2**
DBIC	**Dimbokro**	**158.73**	**275**	*e*PKPdf	**PKPdf**	**14 39 14.3**	**+0.2**

*BJI **23** 14:27:49.6,61˚.43N×149˚.97W,h53km,mb4.7/5*
*ISCJB **23** 14:27:54.8±0.2,61˚.95N±0˚.02×150˚.59W±0˚.05,h74km±3km, mb4.5/12, Error ellipse: s-maj=4.0km s-min=3.0km az=40.9*
*IDC **23** 14:27:54.0±1.6,61˚.95N×150˚.85W,h59km±17km,mb3.8/8, mb1 3.9/11,mb1mx3.8/30,mbtmp3.8/11, Error ellipse: s-maj=31.4km s-min=9.6km az=115.0*
*NEIC **23** 14:27:56.6,61˚.93N×150˚.66W,h58km,ML4.1(AEIC), MW4.1(USGS),After AEIC.*
NEIC Felt [III] at Anchorage and [II] at Eagle River and Wasilla. Also felt at Homer, Palmer, Talkeetna and Willow.

ISC 23 14:27:55.7±0.6,61˚.93N±0˚.03×150˚.64W±0˚.03,h63km±4km, n101,σ1911/121,mb4.4/12,Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKT	**Skwentna**	**0.42**	**277**	P	**Pn**	**14 28 06.9**	**-0.4**
TRAP	**Trapper Creek**	**0.45**	**24**	P	**Pn**	**14 28 07.5**	**+0.2**
SUA	**Susitna One**	**0.47**	**186**	P	**Pn**	**14 28 07.7**	**-0.1**
SUA				S	**Sn**	**14 28 17.3**	**+0.7**
STLK	**Strandline Lak**	**0.72**	**233**	P	**Pn**	**14 28 10.2**	**-0.2**
PMR	**Palmer**	**0.79**	**115**	P	**Pn**	**14 28 11.3**	**+0.1**
PMR				S	**Sn**	**14 28 23.5**	**+0.8**
SPU	**Mount Spurr**	**1.01**	**223**	P	**Pn**	**14 28 13.9**	**-0.2**
BGL	**Barrier Glacie**	**1.07**	**232**	P	**Pn**	**14 28 14.7**	**-0.3**
CKL	**Chakachamna La**	**1.10**	**229**	P	**Pn**	**14 28 15.0**	**-0.2**
SML	**Sawmill**	**1.10**	**95**	P	**Pn**	**14 28 15.5**	**+0.4**
SML				S	**Sn**	**14 28 30.9**	**+1.2**
PPLA	**Purkeypile**	**1.21**	**324**	P	**Pn**	**14 28 16.6**	**-0.1**
NKA	**Nikishka**	**1.23**	**194**	P	**Pn**	**14 28 18.9**	**+2.1**
SLKM	**Skilak Lake**	**1.44**	**172**	P	**Pn**	**14 28 19.7**	**0.0**
TRF	**Thorofare Moun**	**1.53**	**6**	P	**Pn**	**14 28 20.9**	**-0.2**
TRF				S	**Sn**	**14 28 40.2**	**+0.1**
RDT	**Redoubt**	**1.61**	**213**	P	**Pn**	**14 28 22.2**	**+0.2**
CAST	**Castle Rocks**	**1.64**	**337**	P	**Pn**	**14 28 22.4**	**+0.1**
CAST				S	**Sn**	**14 28 42.6**	**+0.2**
DFR	**Drift River**	**1.67**	**217**	P	**Pn**	**14 28 23.0**	**+0.2**
RDJH	**Redoubt Jeurge**	**1.70**	**219**	P	**Pn**	**14 28 23.5**	**+0.2**
RDJH				S	**Sn**	**14 28 45.7**	**+1.5**
RSO	**Redoubt South**	**1.80**	**216**	*e*P	**Pn**	**14 28 25.0**	**+0.4**
RDWB	**Redoubt West**	**1.80**	**217**	P	**Pn**	**14 28 25.0**	**+0.4**
RDWB				S	**Sn**	**14 28 48.0**	**+1.5**
DHY	**Denali Highway**	**1.90**	**51**	P	**Pn**	**14 28 26.5**	**+0.5**
MCK	**McKinley**	**1.97**	**23**	P	**Pn**	**14 28 27.5**	**+0.7**
CHUM	**Lake Minchumin**	**2.10**	**339**	P	**Pn**	**14 28 28.9**	**+0.3**
ILIM	**Iliamna**	**2.17**	**212**	P	**Pn**	**14 28 30.6**	**+1.0**
BRLK	**Bradley Lake**	**2.18**	**183**	P	**Pn**	**14 28 29.1**	**-0.5**
VLZ	**Valdez**	**2.21**	**109**	P	**Pn**	**14 28 29.6**	**-0.5**
KLU	**Klutina**	**2.29**	**99**	P	**Pn**	**14 28 31.3**	**+0.1**
ILS	**Iliamna Low So**	**2.31**	**212**	P	**Pn**	**14 28 32.0**	**+0.6**
BWN	**Browne**	**2.31**	**13**	P	**Pn**	**14 28 32.2**	**+0.8**
DIV	**Divide**	**2.46**	**107**	P	**Pn**	**14 28 33.1**	**-0.5**
SVW2	**Sparrevohn**	**2.51**	**253**	P	**Pn**	**14 28 33.7**	**-0.5**
HARP	**HAARP**	**2.62**	**77**	P	**Pn**	**14 28 36.8**	**+1.3**
OPT	**Oil Point**	**2.62**	**210**	P	**Pn**	**14 28 36.8**	**+1.3**
PAX	**Paxson**	**2.62**	**64**	*e*P	**Pn**	**14 28 36.7**	**+1.0**
TT01	**Tatalina**	**2.69**	**294**	P	**Pn**	**14 28 35.5**	**-1.0**
EYAK	**Cordova Ski Ar**	**2.74**	**118**	P	**Pn**	**14 28 36.4**	**-0.8**
NEA	**Nenana**	**2.75**	**14**	P	**Pn**	**14 28 37.2**	**-0.1**
WRH	**Wood River Hil**	**2.80**	**23**	P	**Pn**	**14 28 38.2**	**+0.2**
AUNW	**Augustine NWes**	**2.92**	**210**	P	**Pn**	**14 28 40.5**	**+0.9**
AUW	**Augustine West**	**2.92**	**210**	P	**Pn**	**14 28 41.1**	**+1.3**
CCB	**Clear Creek Bu**	**3.01**	**24**	P	**Pn**	**14 28 41.0**	**+0.1**
MLY	**Manley**	**3.11**	**359**	P	**Pn**	**14 28 42.5**	**+0.2**
COLA	**College**	**3.21**	**22**	P	**Pn**	**14 28 43.8**	**+0.2**
MDM	**Murphy Dome**	**3.23**	**19**	P	**Pn**	**14 28 44.1**	**+0.2**
IL1	**Eielson Array**	**3.31**	**29**	P	**Pn**	**14 28 45.1**	**+0.1**
ILAR	**Eielson Array**	**3.31**	**29**	P	**Pn**	**14 28 45.1**	**+0.1**
ILAR				S	**Sn**	**14 29 22.3**	**-0.9**
ILAR	**Eielson Array** 24nm,0.3s,baz=215,slow=14,SNR=944	**3.31**	**29**	P	**Pn**	**14 28 45.1**	**+0.1**
ILAR	37nm,0.3s,baz=216,slow=21,SNR=12			S	**Sn**	**14 29 22.3**	**-0.9**
MENT	**Mentasta**	**3.37**	**70**	*e*Pn	**Pn**	**14 28 46.0**	**+0.1**
GLM	**Gilmore Dome**	**3.40**	**24**	P	**Pn**	**14 28 47.2**	**+1.0**
DOT	**Dot Lake**	**3.48**	**57**	P	**Pn**	**14 28 48.1**	**+0.8**
VRDI	**Verde Repeater**	**3.51**	**98**	P	**Pn**	**14 28 48.1**	**+0.2**
NICHA	**Nichawak Mount**	**3.66**	**115**	P	**Pn**	**14 28 47.7**	**-2.0**
MCARA	**McCarthy VSAT**	**3.67**	**95**	P	**Pn**	**14 28 50.4**	**+0.5**
BERG	**Berg Lake**	**3.70**	**112**	P	**Pn**	**14 28 51.9**	**+1.6**
KHIT	**Khitrov Hills**	**3.88**	**109**	P	**Pn**	**14 28 54.4**	**+1.6**
PTPK	**Patty Peak**	**3.98**	**97**	P	**Pn**	**14 28 54.7**	**+0.3**
GCSA	**Galena City Sc**	**3.99**	**318**	P	**Pn**	**14 28 54.4**	**+0.2**
BALM	**Baldy**	**4.08**	**99**	P	**Pn**	**14 28 55.6**	**+0.1**
KIAG	**Kiagna River**	**4.10**	**101**	P	**Pn**	**14 28 55.5**	**-0.5**
KULT	**Kultieth River**	**4.20**	**110**	P	**Pn**	**14 28 58.7**	**+1.5**
BARK	**Barkley Ridge**	**4.23**	**108**	P	**Pn**	**14 28 57.4**	**-0.3**
BCA3	**Beaver Creek A**	**4.26**	**71**	P	**Pn**	**14 28 58.4**	**+0.3**
KAKN	**Katmai Kinfe C**	**4.26**	**213**	P	**Pn**	**14 28 58.6**	**+0.5**
KDAK	**Kodiak Island**	**4.28**	**194**	P	**Pn**	**14 28 57.6**	**-0.6**
KDAK				S	**Sn**	**14 29 44.5**	**-2.2**
KDAK	**Kodiak Island** 3.4nm,0.3s,baz=38,slow=9.1,SNR=27	**4.28**	**194**	P	**Pn**	**14 28 57.6**	**-0.6**
KDAK	11nm,0.3s,baz=338,slow=16,SNR=3.5			S	**Sn**	**14 29 44.5**	**-2.2**
IM3	**Indian Mountai**	**4.29**	**343**	P	**Pn**	**14 28 58.4**	**0.0**
KABU	**Katmai Buttres**	**4.35**	**214**	P	**Pn**	**14 29 00.6**	**+1.4**
BARN	**Barnard Glacie**	**4.39**	**98**	P	**Pn**	**14 29 00.4**	**+0.4**
GRNC	**Granite Creek**	**4.45**	**102**	P	**Pn**	**14 29 01.0**	**+0.3**
OHAK	**Old Harbor**	**4.91**	**197**	P	**Pn**	**14 29 06.3**	**-0.5**
EGAK	**Eagle** 74nm,0.3s	**5.13**	**52**	*e*P	**Pn**	**14 29 10.1**	**+0.2**
COLD	**Coldfoot**	**5.32**	**2**	*e*P	**Pn**	**14 29 12.9**	**+0.5**
DAWY	**Dawson**	**5.55**	**62**	P	**Pn**	**14 29 16.2**	**+0.6**
PNL	**Peninsula**	**5.95**	**107**	*e*Pn	**Pn**	**14 29 21.8**	**+0.7**
BM3	**Burnt Mountain**	**6.08**	**23**	P	**Pn**	**14 29 23.6**	**+0.7**
SKAG	**Skagway** 13nm,0.8s	**7.91**	**101**	*e*P	**Pn**	**14 29 47.7**	**-0.1**
INK	**Inuvik**	**9.61**	**41**	P	**Pn**	**14 30 10.8**	**-0.2**
INK				S	**Sn**	**14 31 58.7**	**+1.6**
INK	**Inuvik** 1.5nm,0.3s,baz=245,slow=15,SNR=13	**9.61**	**41**	P	**Pn**	**14 30 10.8**	**-0.2**
INK	1.5nm,0.3s,baz=266,slow=11,SNR=4.3			S	**Sn**	**14 31 58.7**	**+1.6**
YKA	**Yellowknife Ar**	**16.68**	**72**	P	**Pn**	**14 31 43.3**	**-1.5**
YKA	**Yellowknife Ar** 0.3nm,0.3s,baz=284,slow=10,SNR=10	**16.68**	**72**	P	**Pn**	**14 31 43.3**	**-1.5**
RES	**Resolute Bay**	**23.05**	**34**	P	**P**	**14 32 53.7**	**-1.4**
RES	**Resolute Bay** 15nm,0.8s,baz=246,slow=12,SNR=8.3	**23.05**	**34**	P	**P**	**14 32 53.7**	**-1.4**
SCHQ	**Schefferville**	**41.57**	**60**	P	**P**	**14 35 36.8**	**+0.1**
SCHQ	**Schefferville** 2.8nm,0.5s,baz=319,slow=7.2,SNR=13	**41.57**	**60**	P	**P**	**14 35 36.8**	**+0.1**
ARCES	**ARCESS Array B**	**48.79**	**2**	P	**P**	**14 36 32.1**	**-1.6**
ARCES	**ARCESS Array B** 1.7nm,0.6s,baz=358,slow=6.3,SNR=4.8	**48.79**	**2**	P	**P**	**14 36 32.1**	**-1.6**
CN2	**Changchun**	**49.91**	**290**	*e*P	**P**	**14 36 44.8**	**+2.3**
KSRS	**Korea Array** 0.7nm,0.5s,baz=32,slow=6.7,SNR=4.3	**53.88**	**283**	P	**P**	**14 37 11.2**	**-0.8**
KSAR	**Wonju Array Be**	**53.90**	**283**	P	**P**	**14 37 11.2**	**-1.0**
NOA	**NORSAR Array B**	**56.57**	**10**	P	**P**	**14 37 29.6**	**-1.6**
NOA	**NORSAR Array B** 1.4nm,0.7s,baz=350,slow=7.2,SNR=6.3	**56.57**	**10**	P	**P**	**14 37 29.6**	**-1.6**
FINES	**FINESS Array B**	**56.92**	**2**	P	**P**	**14 37 30.5**	**-3.1**
FINES	**FINESS Array B** 2.1nm,0.8s,baz=356,slow=8.4,SNR=3.5	**56.92**	**2**	P	**P**	**14 37 30.5**	**-3.1**
HFS	**Hagfors**	**57.67**	**9**	P	**P**	**14 37 37.0**	**-1.8**
HFS	**Hagfors** 2.0nm,0.5s,baz=31,slow=3.4,SNR=6.2	**57.67**	**9**	P	**P**	**14 37 37.0**	**-1.8**
HHC	**Hu-ho-hao-te**	**58.31**	**298**	*e*P	**P**	**14 37 44.4**	**+0.7**
HHC				pP	**pP**	**14 38 00.6**	**+0.2**
HHC				sP	**sP**	**14 38 07.5**	**0.0**
HHC				PP	**PP**	**14 39 55.6**	**+2.7**
HHC				S	**S**	**14 45 40.3**	**-0.8**
HHC				sS	**sS**	**14 46 07.3**	**-1.9**
HHC	comp=Z,60nm,0.9s			pmax	pmax		
EKA	**Eskdalemuir Ar**	**60.32**	**21**	P	**P**	**14 37 56.4**	**-0.9**
EKA	**Eskdalemuir Ar** comp=Z,0.9nm,0.3s,baz=330,slow=5.6,SNR=12	**60.32**	**21**	P	**P**	**14 37 56.4**	**-0.9**
WMQ	**Urumqi**	**64.65**	**317**	*e*P	**P**	**14 38 29.0**	**+2.6**
LZH	**Lanzhou**	**65.53**	**301**	*e*P	**P**	**14 38 35.0**	**+2.6**
LZH				pP	**pP**	**14 38 50.3**	**+1.0**
LZH				sP	**sP**	**14 38 57.5**	**+1.2**
LZH	comp=Z,15nm,1.5s			pmax	pmax		
CD2	**Chengdu**	**70.06**	**298**	*e*P	**P**	**14 39 02.5**	**+1.8**
CD2	comp=Z,10.0nm,0.6s			pmax	pmax		
GYA	**Guiyang**	**72.71**	**294**	*e*P	**P**	**14 39 18.0**	**+1.2**
GYA	comp=Z,10.0nm,1.0s			pmax	pmax		

*CSEM **23** 14:33:08.6,39˚.95N×33˚.51E,h11km,MD2.7,After DDA*
DDA 23 14:33:08.6,39˚.95N×33˚.51E,h11km,MD2.7,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELDT	**Eldivan**	**0.54**	**353**	*i* P	Pg	14 33 19.4	0.0
ELDT				*i* S	Sg	14 33 27.6	+0.8
ELDT	**Eldivan**	**0.54**	**353**	*i* P	Pg	14 33 19.4	0.0
ELDT				*i* S	Sb	14 33 27.6	-0.7
ILGA	**Ilgaz**	**1.11**	**8**	*i* P	Pb	14 33 29.4	-0.8
ILGA				*i* S	Sg	14 33 45.4	+0.4
ILGA	**Ilgaz**	**1.11**	**8**	*i* P	Pb	14 33 29.4	-0.7
ILGA				*i* S	Sg	14 33 45.4	+0.4
CTKT	**Corum**	**1.19**	**55**	*i* P	Pb	14 33 31.1	-0.2
CTKT				*i* S	Sb	14 33 44.8	-2.1
CTKT	**Corum**	**1.19**	**55**	*i* P	Pb	14 33 31.1	-0.2
CTKT				*i* S	Sb	14 33 44.8	-2.1
AVNT	**Avonos**	**1.57**	**138**	*i* P	Pg	14 33 38.6	-0.3
AVNT				*i* S	Sg	14 33 59.9	+0.5
AVNT	**Avonos**	**1.57**	**138**	*i* P	Pg	14 33 38.6	-0.3
AVNT				*i* S	Sg	14 33 59.9	+0.5
KDHN	**Kadinhani**	**1.79**	**218**	*i* P	Pb	14 33 41.9	+0.3
KDHN				*i* S	Sg	14 34 06.4	-0.2
KDHN	**Kadinhani**	**1.79**	**218**	*i* P	Pb	14 33 41.9	+0.3
KDHN				*i* S	Sg	14 34 06.4	-0.1
PRD	**Provadia**	**5.62**	**307**	*e*P	Pn	14 34 31.8	-0.2

*IDC **23** 14:42:21.7±0.7,10˚.81N×126˚.20E,h0km,mb4.0/14, mb1 4.0/14,mb1mx3.9/27,mbtmp4.0/14,Error ellipse: s-maj=41.3km s-min=13.8km az=79.0*
*ISCJB **23** 14:42:26.7±0.5,10˚.89N±0˚.06×126˚.29E±0˚.06,h49km, mb4.0/14,Error ellipse: s-maj=8.6km s-min=8.1km az=42.4*
*MAN **23** 14:42:28,10˚.94N×126˚.15E,h52km,mb4.9,ML3.8,MS3.8*
ISC 23 14:42:28.5±0.7,10˚.90N±0˚.07×126˚.27E±0˚.08,h49km,n25, σ1949/25,mb4.0/14,1C-3D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**1.29**	**282**	⫽*e*P	Pn	14 42 46.4	-3.8
PLP				*i* S	**Sn**	**14 43 03.5**	**-2.8**
MSLP	**Maasin**	**1.58**	**241**	*e*P	**Pn**	**14 42 52.6**	**-1.6**
OCLP	**Ormoc**	**1.64**	**275**	*e*P	**Pn**	**14 42 54.6**	**-0.3**
LLP	**Lapu-Lapu**	**2.34**	**256**	*e*P	**Pn**	**14 43 06.3**	**+1.8**
LLP				*e*S	**Sn**	**14 43 36.0**	**+4.0**
TBP	**Tagbilaran**	**2.66**	**243**	*e*P	**Pn**	**14 43 09.7**	**+0.8**
BUKP	**Musuan**	**3.23**	**202**	*e*P	**Pn**	**14 43 17.9**	**+1.0**
RCP	**Roxas**	**3.52**	**281**	⫽*e*P	**Pn**	**14 43 20.0**	**-0.8**
GUIM	**Jordan**	**3.62**	**266**	*e*P	**Pn**	**14 43 21.8**	**-0.4**
DCPH	**Dipolog City**	**3.68**	**232**	⫽*e*P	**Pn**	**14 43 22.6**	**-0.4**
PAGZ	**Pagadian**	**4.16**	**223**	*e*P	**Pn**	**14 43 31.3**	**+1.7**
CTBH	**Cotabato--PC H**	**4.17**	**209**	⫽*i*P	Pn	14 43 33.8	+4.1
FITZ	**Fitzroy Crossi** 2.0nm,0.8s,baz=7.1,slow=8.1,SNR=4.9	**28.83**	**181**	P	**P**	**14 48 21.8**	**-0.5**
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=346,slow=9.1,SNR=4.0	**31.66**	**165**	P	**P**	**14 48 45.5**	**-1.9**
USRK	**Ussuriysk Arra** 1.5nm,0.7s,baz=179,slow=9.0,SNR=4.4	**33.54**	**7**	P	**P**	**14 49 04.6**	**+1.0**
ASAR	**Alice Springs** 0.5nm,0.3s,baz=337,slow=6.7,SNR=9.6	**35.16**	**168**	P	**P**	**14 49 17.7**	**-0.1**
SONM	**Songino Array** 0.4nm,0.5s,baz=157,slow=7.6,SNR=4.0	**40.43**	**339**	P	**P**	**14 50 03.0**	**+0.8**
NWAO	**Narrogin (SRO)** 9.3nm,0.9s,baz=20,slow=13,SNR=3.0	**44.43**	**191**	P	**P**	**14 50 33.8**	**-0.9**
STKA	**Stephens Creek** 4.9nm,1.1s,baz=342,slow=8.2,SNR=3.8	**45.00**	**161**	P	**P**	**14 50 37.5**	**-1.8**
PETK	**Petropavlovsk-** 1.3nm,0.7s,baz=212,slow=5.1,SNR=2.8	**49.07**	**25**	P	**P**	**14 51 12.6**	**+1.8**
MKAR	**Makanchi Array** 2.3nm,0.7s,baz=116,slow=7.8,SNR=7.2	**51.52**	**322**	P	**P**	**14 51 30.1**	**+0.5**
ZALV	**Zalesovo Beam** 1.0nm,0.6s,baz=103,slow=4.6,SNR=2.4	**54.07**	**331**	P	**P**	**14 51 47.8**	**-0.4**
KURBB	**Kurchatov Arra** 1.5nm,0.7s,baz=127,slow=7.1,SNR=10	**55.55**	**325**	P	**P**	**14 51 59.1**	**+0.2**
ILAR	**Eielson Array** 0.5nm,0.7s,baz=244,slow=4.8,SNR=3.6	**78.88**	**26**	P	**P**	**14 54 26.4**	**0.0**
ARCES	**ARCESS Array B** 1.7nm,0.8s,baz=76,slow=6.8,SNR=7.1	**83.60**	**340**	P	**P**	**14 54 51.2**	**-0.2**
FINES	**FINESS Array B** 0.8nm,0.8s,baz=67,slow=3.6,SNR=3.4	**85.34**	**332**	P	**P**	**14 55 00.1**	**-0.2**

MEX 23 14:48:47.2±0.3,15˚.26N×95˚.99W,h16km±241km,MD3.9, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.52**	**347**	*i* P	Pg	14 48 56.0	-1.5
HUIG				*i* S	Sg	14 49 02.7	-1.9
PNIG	**Pinotepa**	**2.35**	**299**	*i* P	Pn	14 49 22.1	-3.1
PNIG				*i* S	Sn	14 49 49.6	-4.2
UTMO	**Huajuapan**	**3.09**	**326**	*i* P	Pn	14 49 33.0	-2.7
UTMO				*i* S	Sn	14 50 08.9	-3.7

*IDC **23** 14:49:17.8±1.1,39˚.06N×143˚.85E,h0km,mb3.8/7, mb1 3.9/11,mb1mx3.7/28,mbtmp3.8/11,ML3.4/4,Error ellipse: s-maj=29.5km s-min=17.9km az=74.0*
*ISCJB **23** 14:49:21.3±0.7,39˚.11N±0˚.04×143˚.42E±0˚.05,h20km, mb3.9/8,Error ellipse: s-maj=6.4km s-min=4.9km az=29.8*
*JMA **23** 14:49:21.3±0.1,39˚.12N×143˚.42E,h22km±3km,M4.2*
ISC 23 14:49:23.5±1.1,39˚.14N±0˚.05×143˚.34E±0˚.08,h20km,n28, σ0996/39,mb3.9/8,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	**1.25**	**291**	P	**Pn**	**14 49 44.7**	**-1.2**
MIYJ				*e*S	**Sn**	**14 50 01.3**	**-0.9**
OFUJ	**Ofunato**	**1.30**	**268**	P	**Pn**	**14 49 46.1**	**-1.2**
OFUJ				*e*S	**Sn**	**14 50 02.8**	**-0.4**
JTH	**Tanohata**	**1.39**	**306**	P	**Pn**	**14 49 46.6**	**-1.2**
JTH				*e*S	**Sn**	**14 50 05.3**	**-0.3**
JOM	**Ohasama**	**1.62**	**283**	P	**Pn**	**14 49 50.5**	**-0.4**
JOM				*e*S	**Sn**	**14 50 11.6**	**+0.4**
JMK	**Ichinoseki**	**1.66**	**264**	P	**Pn**	**14 49 50.9**	**-0.5**
JMK				*e*S	**Sn**	**14 50 11.9**	**-0.2**
JIO	**Ouri**	**1.69**	**247**	P	**Pn**	**14 49 51.0**	**-0.9**
JIO				*e*S	**Sn**	**14 50 12.9**	**-0.1**
JANG	**Nango**	**1.87**	**312**	P	**Pn**	**14 49 53.2**	**-1.2**
JRG	**Rokugo**	**2.11**	**278**	P	**Pn**	**14 49 57.8**	**+0.1**
JRG				*e*S	**Sn**	**14 50 24.7**	**+1.3**
JOU	**Okura**	**2.23**	**251**	P	**Pn**	**14 49 59.0**	**-0.3**
JOU				*e*S	**Sn**	**14 50 26.0**	**-0.2**
JYK	**Kaneyama**	**2.33**	**266**	P	**Pn**	**14 50 00.7**	**+0.1**
JAH	**Hinai**	**2.33**	**298**	P	**Pn**	**14 50 00.5**	**-0.2**
JAH				*e*S	**Sn**	**14 50 29.7**	**+0.9**
JMM	**Marumori**	**2.36**	**238**	P	**Pn**	**14 50 00.4**	**-0.7**
JTM	**Tenmabayashi**	**2.40**	**314**	P	**Pn**	**14 50 00.9**	**-0.1**
JTM				*e*S	**Sn**	**14 50 30.3**	**-0.1**
JFT	**Otama**	**2.86**	**237**	P	**Pn**	**14 50 07.5**	**-0.5**
JFT				*e*S	**Sn**	**14 50 41.0**	**-0.8**
MAT	**Matsushiro**	**4.81**	**239**	P	**Pn**	**14 50 36.6**	**+1.8**
MAT				*e*S	**Sn**	**14 51 30.9**	**+0.9**
MJAR	**Matsushiro Arr** 3.1nm,0.3s,baz=48,slow=12,SNR=57	**4.81**	**239**	Pn	**Pn**	**14 50 36.5**	**+1.7**
ASAJ	**Asahikawa** 2.0nm,0.3s,baz=203,slow=10,SNR=22	**5.01**	**354**	Pn	**Pn**	**14 50 36.9**	**-0.6**
ASAJ	0.7nm,0.3s,baz=21,slow=18,SNR=2.4			Sn	**Sn**	**14 51 37.2**	**+2.5**
USRK	**Ussuriysk Arra** 0.5nm,0.3s,baz=97,slow=14,SNR=8.0	**9.87**	**304**	Pn	Pn	14 51 47.8	+3.7
KSRS	**Korea Array** 0.1nm,0.3s,baz=93,slow=15,SNR=4.9	**12.23**	**267**	Pn	**Pn**	**14 52 18.9**	**+2.4**
SONM	**Songino Array** 1.3nm,0.5s,baz=95,slow=8.7,SNR=10	**27.95**	**300**	P	**P**	**14 55 12.6**	**0.0**
ZALV	**Zalesovo Beam** 1.0nm,0.5s,baz=89,slow=7.5,SNR=4.3	**41.66**	**311**	P	**P**	**14 57 09.4**	**-0.9**
CMAR	**Chiang Mai Arr** 0.5nm,0.7s,baz=40,slow=7.2,SNR=4.3	**43.50**	**255**	P	**P**	**14 57 25.8**	**+0.1**
MKAR	**Makanchi Array** 1.2nm,0.9s,baz=82,slow=9.9,SNR=7.7	**44.32**	**301**	P	**P**	**14 57 31.6**	**-0.4**
HNR	**Honiara** 41nm,0.6s,baz=225,slow=13,SNR=2.9	**50.73**	**159**	P	P	14 58 16.1	-5.8
WRA	**Warramunga Arr** 1.3nm,0.9s,baz=8.2,slow=6.9,SNR=5.7	**59.37**	**190**	P	**P**	**14 59 23.8**	**-0.6**
FINES	**FINESS Array B** 0.9nm,0.7s,baz=58,slow=10,SNR=3.4	**67.66**	**332**	P	**P**	**15 00 18.0**	**-0.7**
NB2	**NORSAR Subarra** comp=Z,0.5nm,0.5s,baz=37,slow=6.2	**72.83**	**338**	P	**P**	**15 00 50.5**	**+0.1**
NOA	**NORSAR Array B** comp=Z,0.3nm,0.6s,baz=32,slow=7.6,SNR=3.3	**72.83**	**338**	P	**P**	**15 00 50.3**	**-0.1**

*DDA **23** 15:03:32.4,37˚.80N×34˚.57E,h7km,MD2.9*
*ISCJB **23** 15:03:33.9±0.6,37˚.76N±0˚.03×34˚.64E±0˚.06,h12km,Error ellipse: s-maj=7.0km s-min=4.3km az=155.3*
*CSEM **23** 15:03:33.7±0.2,37˚.78N×34˚.64E,h2km,MD2.8,Error ellipse: s-maj=7.1km s-min=4.5km az=64.0*
*ISK **23** 15:03:33.5,37˚.76N×34˚.63E,h6km,MD2.8*
ISC 23 15:03:33.1±1.0,37˚.78N±0˚.03×34˚.65E±0˚.04,h12km,n16, σ0952/24,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIG	**Nigde**	**0.33**	**354**	*e*PG	**Pb**	**15 03 40.8**	**-0.4**
NIG	**Nigde**	**0.33**	**354**	*e*Pg	**Pb**	**15 03 40.8**	**-0.4**
GULE	**Gulek**	**0.51**	**169**	*i* P	**Pb**	**15 03 43.2**	**-0.8**
GULE				*i* S	**Sb**	**15 03 51.1**	**-0.3**
GULE	**Gulek**	**0.51**	**169**	*i* P	**Pb**	**15 03 43.2**	**-0.8**
GULE				*i* S	**Sb**	**15 03 51.1**	**-0.3**
KARA	**Karaisali**	**0.61**	**148**	*e*PG	**Pb**	**15 03 45.4**	**-0.3**
KARA				*e*SG	**Sb**	**15 03 54.4**	**+0.2**
KARA	**Karaisali**	**0.61**	**148**	*e*Pg	**Pb**	**15 03 45.4**	**-0.3**
KARA				*e*Sg	**Sb**	**15 03 54.4**	**+0.2**
KOZT	**Kozan**	**0.98**	**107**	*e*PG	**Pn**	**15 03 52.8**	**+0.1**
KOZT				*e*SG	**Sn**	**15 04 07.3**	**+0.9**
KOZT	**Kozan**	**0.98**	**107**	*e*Pg	**Pn**	**15 03 52.8**	**+0.1**
KOZT				*e*Sg	**Sn**	**15 04 07.3**	**+0.9**
SULT	**Sultanhani-AKS**	**0.99**	**295**	*e*PG	**Pn**	**15 03 53.1**	**+0.1**
SULT	**Sultanhani-AKS**	**0.99**	**295**	*e*Pg	**Pn**	**15 03 53.1**	**+0.1**
AVNT	**Avonos**	**1.01**	**9**	*e*P	**Pb**	**15 03 51.8**	**-0.8**
AVNT				*e*S	**Sn**	**15 04 07.9**	**+0.4**
AVNT	**Avonos**	**1.01**	**9**	*e*P	**Pb**	**15 03 51.8**	**-0.8**
AVNT				*e*S	**Sn**	**15 04 07.9**	**+0.4**
IKL	**Isikli**	**1.72**	**207**	*e*PN	**Pb**	**15 04 04.2**	**-0.5**
IKL	**Isikli**	**1.72**	**207**	*e*Pn	**Pb**	**15 04 04.2**	**-0.5**
KONT	**Konya--Tatoy**	**1.82**	**276**	*e*PN	**Pb**	**15 04 06.3**	**-0.1**
KONT	**Konya--Tatoy**	**1.82**	**276**	*e*Pn	**Pb**	**15 04 06.3**	**-0.1**

**JMA 23 15:08:35.2

*ISK **23** 17:03:52.3,38.07N 42.67E,h14km,MD3.0*
ISC 23 17:03:52.5±1.2, 38.12N±0.04×42.67E±0.03, h7km±12km, n18, σ0.52/30, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GEVA	**Gevas**	**0.36**	**58**	*i* P	**Pg**	**17 03 59.6**	**0.0**
GEVA				*i* S	**Sg**	**17 04 05.4**	**+1.0**
GEVA	**Gevas**	**0.36**	**58**	*i* P	**Pg**	**17 03 59.6**	**0.0**
GEVA				*i* S	**Sg**	**17 04 05.4**	**+1.0**
TATV	**Tatvan**	**0.50**	**321**	*i* P	**Pg**	**17 04 01.8**	**-0.4**
TATV				*i* S	**Sg**	**17 04 08.2**	**-0.5**
TATV	**Tatvan**	**0.50**	**321**	*i* P	**Pg**	**17 04 01.8**	**-0.4**
TATV				*i* S	**Sg**	**17 04 08.2**	**-0.5**
BTMT	**Batman**	**0.93**	**275**	*e*PG	**Pg**	**17 04 11.0**	**+0.5**
BTMT				*e*SG	**Sb**	**17 04 24.3**	**+0.6**
BTMT	**Batman**	**0.93**	**275**	*e*Pg	**Pg**	**17 04 11.0**	**+0.5**
BTMT				*e*Sg	**Sb**	**17 04 24.3**	**+0.6**
HAKT	**HAKKARI**	**1.00**	**124**	*i* P	**Pg**	**17 04 11.8**	**+0.1**
HAKT				*i* S	**Sb**	**17 04 25.6**	**0.0**
HAKT	**HAKKARI**	**1.00**	**124**	*i* P	**Pg**	**17 04 11.8**	**+0.1**
HAKT				*i* S	**Sb**	**17 04 25.6**	**0.0**
BEST	**Besiri**	**1.13**	**259**	*i* P	**Pg**	**17 04 14.4**	**+0.2**
BEST				*i* S	**Sn**	**17 04 30.8**	**+0.1**
CUKT	**Cukurca**	**1.15**	**139**	*e*PN	**Pg**	**17 04 14.0**	**-0.5**
CUKT	**Cukurca**	**1.15**	**139**	*e*Pn	**Pg**	**17 04 14.0**	**-0.5**
AGRB	**Hanur-Agry**	**1.47**	**10**	*e*PN	**Pn**	**17 04 19.5**	**-0.1**
AGRB				*e*SN	**Sg**	**17 04 40.0**	**+0.2**
AGRB	**Hanur-Agry**	**1.47**	**10**	*e*Pn	**Pn**	**17 04 19.5**	**-0.1**
AGRB				*e*Sn	**Sg**	**17 04 40.0**	**+0.2**
MARD	**Mardin**	**1.70**	**242**	*i* P	**Pb**	**17 04 23.7**	**-0.6**
MARD				*i* S	**Sb**	**17 04 46.6**	**+0.7**
BNGB	**Bing ¶‖**	**1.79**	**300**	*e*PN	**Pn**	**17 04 24.0**	**+0.1**
BINT	**Bingol**	**1.87**	**294**	*e*Pn	**Pn**	**17 04 24.0**	**-1.1**
PTK	**Pertek**	**2.68**	**288**	*e*PN	**Pn**	**17 04 36.6**	**+0.3**
PTK	**Pertek**	**2.68**	**288**	*e*Pn	**Pn**	**17 04 36.6**	**+0.3**

IDC 23 17:14:00.5±3.9, 5.96S×148.82E, h80km±34km, mb3.5/5, mb1 3.8/6, mb1mx3.5/17, mbtmp3.6/6, Error ellipse: s-maj=36.8km s-min=16.4km az=115.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.78**	**224**	P	P	17 18 24.2	-0.3
	1.1nm,0.3s,baz=49,slow=11,SNR=88						
WRA				PcP	PcP	17 22 39.9	0.0
	0.1nm,0.3s,baz=39,slow=1.9,SNR=5.6						
ASAR	**Alice Springs**	**22.71**	**218**	P	P	17 18 55.2	-0.8
	2.1nm,0.5s,baz=55,slow=9.3,SNR=146						
ASAR				PcP	PcP	17 22 45.9	+0.3
	0.6nm,0.8s,baz=72,slow=4.1,SNR=4.4						
ASAR				S	S	17 22 59.2	+0.5
	1.6nm,0.8s,baz=30,slow=23,SNR=8.4						
STKA	**Stephens Creek**	**26.65**	**194**	P	P	17 19 32.8	+0.9
	2.0nm,0.8s,baz=55,slow=12,SNR=2.4						
VNDA	**Vanda**	**71.85**	**177**	P	P	17 25 14.3	0.0
	0.4nm,0.5s,baz=353,slow=7.5,SNR=7.9						
MKAR	**Makanchi Array**	**78.62**	**320**	P	P	17 25 54.1	+0.2
	0.1nm,0.5s,baz=101,slow=8.2,SNR=2.6						
ILAR	**Eielson Array**	**84.74**	**23**	P	P	17 26 24.5	-1.1
	0.8nm,0.6s,baz=250,slow=4.9,SNR=5.8						
TORD	**Torodi Ar. Bea**	**146.83**	**285**	PKPbc	PKPbc	17 33 34.7	0.0
	0.2nm,0.3s,baz=83,slow=3.1,SNR=7.5						
BDFB	**Brasilia**	**152.82**	**142**	PKPbc	PKPbc	17 33 49.1	-0.5
	4.0nm,0.4s,baz=135,slow=2.9,SNR=5.6						

*ISCJB **23** 17:14:37.0±1.1,38.88N±0.04×142.6E±0.1,h47km±12km, mb3.6/4, Error ellipse: s-maj=13.6km s-min=6.0km az=18.4*
*JMA **23** 17:14:37.7±0.1,38.90N×142.51E,h38km±1km,M3.9*
JMA Felt I J1.
*IDC **23** 17:14:39.9±3.2,38.80N×142.52E,h63km±31km,mb3.3/4, mb1 3.5/7,mb1mx3.3/27,mbtmp3.3/7,ML3.5/2,Error ellipse: s-maj=36.1km s-min=19.8km az=106.0*
ISC 23 17:14:38.5±1.2, 38.91N±0.05×142.51E±0.09, h43km±12km, n19, σ1.23/30, mb3.6/4, 1C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.67**	**285**	⇓P	**Pn**	**17 14 51.1**	**-0.6**
OFUJ				S	**Sn**	**17 15 00.5**	**-0.6**
MIYJ	**Miyakonagasawa**	**0.85**	**321**	⇓P	**Pn**	**17 14 53.4**	**-0.7**
MIYJ				S	**Sn**	**17 15 04.8**	**-0.6**
JMK	**Ichinoseki**	**1.00**	**273**	⇓P	**Pn**	**17 14 55.8**	**-0.3**
JMK				S	**Sn**	**17 15 09.0**	**-0.1**
JIO	**Ouri**	**1.01**	**244**	⇑P	**Pn**	**17 14 55.4**	**-0.9**
JIO				S	**Sn**	**17 15 07.9**	**-1.4**
JOM	**Ohasama**	**1.10**	**301**	⇓P	**Pn**	**17 14 57.3**	**-0.1**
JOM				S	**Sn**	**17 15 11.8**	**+0.4**
JTH	**Tanohata**	**1.14**	**334**	P	**Pn**	**17 14 57.7**	**-0.3**
JTH				*e*S	**Sn**	**17 15 12.7**	**+0.3**
JRG	**Rokugo**	**1.53**	**289**	P	**Pn**	**17 15 03.9**	**+0.5**
JRG				S	**Sn**	**17 15 23.9**	**+1.8**
JOU	**Okura**	**1.54**	**250**	P	**Pn**	**17 15 03.4**	**-0.1**
JOU				*e*S	**Sn**	**17 15 22.7**	**+0.3**
JANG	**Nango**	**1.65**	**333**	P	**Pn**	**17 15 05.0**	**0.0**
JANG				S	**Sn**	**17 15 25.7**	**+0.8**
JYK	**Kaneyama**	**1.68**	**271**	P	**Pn**	**17 15 05.6**	**+0.3**
JMM	**Marumori**	**1.70**	**233**	P	**Pn**	**17 15 05.1**	**-0.6**
JMM				S	**Sn**	**17 15 25.6**	**-0.7**
MJAR	**Matsushiro Arr**	**4.15**	**237**	P	**Pn**	**17 15 40.7**	**+1.4**
	3.1nm,0.3s,baz=45,slow=10,SNR=38						
MAT	**Matsushiro**	**4.15**	**237**	P	**Pn**	**17 15 41.3**	**+2.0**
MAT				*e*S	**Sn**	**17 16 30.6**	**+4.0**
ASAJ	**Asahikawa**	**5.20**	**1**	P	**Pn**	**17 15 54.8**	**+1.1**
	1.3nm,0.3s,baz=176,slow=16,SNR=11						
USRK	**Ussuriysk Arr**	**9.48**	**307**	P	Pn	17 16 56.1	+3.7
	0.2nm,0.3s,baz=90,slow=19,SNR=4.8						
MKAR	**Makanchi Array**	**43.88**	**301**	P	**P**	**17 22 40.1**	**-0.4**
	0.5nm,0.8s,baz=92,slow=9.4,SNR=3.4						
ILAR	**Eielson Array**	**47.45**	**33**	P	**P**	**17 23 09.3**	**+0.9**
	0.8nm,0.8s,baz=271,slow=6.0,SNR=7.0						
WRA	**Warramunga Arr**	**59.04**	**189**	P	**P**	**17 24 32.1**	**-1.9**
	0.7nm,0.4s,baz=6.9,slow=7.1,SNR=14						
WRA				pP	**pP**	**17 24 47.0**	**+0.5**
	0.8nm,0.7s,baz=4.6,slow=7.1,SNR=6.0						
ASAR	**Alice Springs**	**62.77**	**189**	P	**P**	**17 24 58.1**	**-1.2**
	0.2nm,0.6s,baz=13,slow=9.3,SNR=6.5						

IDC 23 17:18:38.5±6.5, 27.26N×144.51E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/24, mbtmp3.5/4, ML3.3/1, MS3.9/1, Ms1 4.1/1, ms1mx3.0/22, Error ellipse: s-maj=218.7km s-min=27.0km az=68.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**17.28**	**310**	P	Pn	17 22 41.3	0.0
	0.1nm,0.3s,baz=128,slow=9.4,SNR=5.6						
CMAR	**Chiang Mai Arr**	**42.70**	**268**	LR	LR	17 45 28.3	
	comp=Z,146nm,20.0s,baz=185,slow=38						
WRA	**Warramunga Arr**	**47.95**	**193**	P	P	17 27 18.6	-0.5
	0.4nm,0.3s,baz=15,slow=9.5,SNR=42						
ASAR	**Alice Springs**	**51.66**	**192**	P	P	17 27 47.7	+0.4
	0.1nm,0.3s,baz=16,slow=7.0,SNR=7.8						
MKAR	**Makanchi Array**	**51.96**	**309**	P	P	17 27 49.2	-0.2
	0.2nm,0.6s,baz=93,slow=7.2,SNR=3.1						

*ISCJB **23** 17:27:33.7±0.6,44.33N±0.08×87.1E±0.1,h20km, Error ellipse: s-maj=15.9km s-min=4.9km az=139.2*
*IDC **23** 17:27:34.0±3.3,44.10N×86.73E,h0km,mb1 3.7/5, mb1mx3.4/32,mbtmp3.7/5,ML3.8/5, Error ellipse: s-maj=37.9km s-min=21.0km az=19.0*
*BJI **23** 17:27:35.3,43.97N×86.93E,h9km,ML3.5/10*
*NNC **23** 17:27:35.1±6.3,44.24N×86.83E,h0km,mb3.9,mpv3.6, Error ellipse: s-maj=46.4km s-min=44.4km az=176.0*
ISC 23 17:27:35.0±1.0, 44.2N±0.1×87.19E±0.09, h20km, n11, σ1.70/19, 9C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**0.52**	**136**	Pg	**Pb**	**17 27 46.3**	**+0.8**
WMQ				Sg	**Sn**	**17 27 55.6**	**-0.1**
WMQ				smax	smax		
	comp=N,2μm,0.4s						
WMQ				smax	smax		
	comp=E,1μm,0.5s						
MK31	**Makanchi Array**	**4.32**	**309**	⇓Pn	**Pn**	**17 28 40.0**	**+0.5**
	comp=E,3.0nm,0.3s,baz=127,slow=14,SNR=374						
MK31				⇑Pg	**Pb**	**17 28 51.6**	**+1.4**
	comp=E,2.1nm,0.3s,baz=129,slow=16,SNR=4.1						
MK31				⇑Sn	**Sn**	**17 29 27.0**	**-2.2**
	comp=E,2.8nm,0.3s,baz=136,slow=26,SNR=3.8						
MK31				⇑Lg	Lg	17 29 49.1	
	comp=E,16nm,0.5s,baz=121,slow=29,SNR=9.2						
MKAR	**Makanchi Array**	**4.32**	**309**	Pn	**Pn**	**17 28 40.0**	**+0.5**
	comp=E,5.0nm,0.3s,baz=130,slow=14,SNR=437						
MKAR				Sn	**Sn**	**17 29 29.6**	**+0.4**
	comp=E,4.3nm,0.3s,baz=133,slow=24,SNR=4.9						
MKAR				Lg	Lg	17 29 46.5	
	comp=E,15nm,0.3s,baz=131,slow=29,SNR=9.2						
KUR14	**Kurchatov Arra**	**8.67**	**321**	⇑Pn	**Pn**	**17 29 38.4**	**-0.8**
	comp=E,0.7nm,0.4s						
KUR14				⇑Lg	Lg	17 32 06.7	
	comp=E,4.5nm,0.6s						
KURBB	**Kurchatov Arra**	**8.70**	**321**	Pn	**Pn**	**17 29 38.7**	**-0.9**
	comp=E,0.9nm,0.3s,baz=134,slow=13,SNR=87						
KURBB				Sn	**Sn**	**17 31 17.4**	**+0.3**
	comp=E,0.2nm,0.3s,baz=66,slow=28,SNR=4.1						
KURBB				Lg	Lg	17 32 04.1	
	comp=E,0.2nm,0.3s,baz=340,slow=33,SNR=4.3						
KURK	**Kurchatov**	**8.73**	**321**	⇓Pn	**Pn**	**17 29 39.0**	**-1.0**
	comp=E,2.6nm,0.3s						
KURK				⇓Lg	Lg	17 32 06.3	
	comp=E,12nm,0.8s						
ZALV	**Zalesovo Beam**	**9.88**	**352**	Pn	**Pn**	**17 29 56.9**	**+1.1**
	comp=E,1.0nm,0.3s,baz=177,slow=13,SNR=18						
ZALV				Sn	**Sn**	**17 31 46.0**	**0.0**
	comp=E,0.8nm,0.3s,baz=167,slow=27,SNR=5.1						
ZALV				Lg	Lg	17 32 48.0	
	baz=181,slow=29,SNR=2.4						
VOSK	**Vostochnaya**	**13.70**	**314**	⇑Pn	**Pn**	**17 30 45.9**	**-2.1**
	comp=E,0.4nm,0.3s						
VOSK				⇑Sn	**Sn**	**17 33 23.7**	**+4.1**
	comp=E,2.3nm,0.8s						
SONM	**Songino Array**	**13.83**	**68**	Pn	**P**	**17 30 58.0**	**-0.2**
	comp=E,0.2nm,0.3s,baz=264,slow=13,SNR=2.8						
SONM				Lg	Lg	17 35 03.4	
	comp=E,0.1nm,0.3s,baz=257,slow=31,SNR=6.0						
BVAR	**Borovoye Array**	**14.17**	**314**	Pn	**Pn**	**17 30 52.9**	**-1.5**
	comp=E,0.3nm,0.3s,baz=113,slow=13,SNR=5.1						
BVAR				Lg	Lg	17 34 57.8	
	comp=E,0.2nm,0.3s,baz=121,slow=22,SNR=2.3						
ZRNK	**Zerenda**	**14.85**	**313**	⇑Pn	**Pn**	**17 31 00.9**	**-2.8**
	comp=E,0.9nm,0.5s						
ZRNK				⇑Sn	**Sn**	**17 33 46.0**	**-1.5**
	comp=E,1.1nm,0.9s						

IDC 23 17:44:27.4±1.9, 2.66N×126.62E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/23, mbtmp3.7/5, MS2.7/1, Ms1 2.7/1, ms1mx2.6/40, Error ellipse: s-maj=111.5km s-min=26.2km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAV	**Davao City (W)**	**4.50**	**347**	LR	LR	17 47 34.9	
	comp=Z,79nm,18.1s,baz=88,slow=42						
FITZ	**Fitzroy Crossi**	**20.65**	**183**	P	Pn	17 49 10.5	-0.6
	0.5nm,0.4s,baz=355,slow=12,SNR=2.7						
WRA	**Warramunga Arr**	**23.70**	**162**	P	P	17 49 41.0	-0.3
	0.9nm,0.4s,baz=339,slow=11,SNR=9.6						
ASAR	**Alice Springs**	**27.11**	**165**	P	P	17 50 11.8	-0.5
	0.4nm,0.5s,baz=344,slow=7.0,SNR=8.5						
STKA	**Stephens Creek**	**37.17**	**159**	P	P	17 51 40.3	-0.1
	1.8nm,0.8s,baz=335,slow=11,SNR=3.1						
MKAR	**Makanchi Array**	**58.37**	**326**	P	P	17 54 24.4	-0.3
	0.4nm,0.3s,baz=124,slow=5.4,SNR=2.2						

GUC 23 18:07:04.8±0.5, 21.28S×68.69W, h125km±5km, ML3.5, 4C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**Plate Boundary**	**0.73**	**225**	⇑*i* P	Pn	18 07 26.5	+1.3
PB09				*i* S	Sn	18 07 42.5	+1.9
PB09				AML	AML	18 07 43.2	
	comp=N,2μm,0.2s						
PB04	**Plate Boundary**	**1.23**	**217**	⇑*i* P	Pn	18 07 36.2	+6.6
PB04				*i* S	Sn	18 07 59.9	+11
PB04				AML	AML	18 08 01.1	
	comp=E,371nm,0.2s						
LVC	**Limon Verde**	**1.35**	**189**	⇑*i* P	Pn	18 07 32.1	+0.9
LVC				*i* S	Sn	18 07 52.4	+1.1
HMBC	**Humberstone**	**1.50**	**311**	⇓*i* P	Pn	18 07 33.6	+0.8
HMBC				*i* S	Sn	18 07 55.1	+1.1
HMBC				AML	AML	18 07 56.8	
	comp=E,636nm,0.5s						
PSGC	**Pisagua**	**2.15**	**321**	⇓*i* P	Pn	18 07 40.5	0.0
PSGC				*i* S	Sn	18 08 08.3	+0.5
PSGC				AML	AML	18 08 09.4	
	comp=E,212nm,0.3s						
MNMC	**Minimini**	**2.30**	**338**	⇑*i* P	Pn	18 07 43.5	+0.9
MNMC				*i* S	Sn	18 08 13.0	+1.4
MNMC				AML	AML	18 08 14.6	
	comp=E,671nm,0.5s						

IDC 23 18:26:20.9±0.8, 2.57N×128.53E, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.6/24, mbtmp3.7/8, Error ellipse: s-maj=59.9km s-min=15.5km az=76.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.74**	**188**	P	P	18 31 03.6	+0.4
	0.7nm,0.8s,baz=9.2,slow=12,SNR=5.2						
WRA	**Warramunga Arr**	**23.09**	**166**	P	P	18 31 28.7	+0.2
	2.3nm,0.5s,baz=344,slow=10.0,SNR=52						
ASAR	**Alice Springs**	**26.60**	**169**	P	P	18 32 01.4	+0.2
	0.6nm,0.4s,baz=350,slow=7.8,SNR=42						
ASAR				PcP	PcP	18 35 24.4	-1.2
	0.3nm,0.3s,baz=353,slow=2.2,SNR=13						
MJAR	**Matsushiro Arr**	**34.97**	**14**	P	P	18 33 14.9	0.0
	0.7nm,0.6s,baz=188,slow=11,SNR=4.8						
STKA	**Stephens Creek**	**36.44**	**161**	P	P	18 33 27.3	-0.2
	1.1nm,0.4s,baz=338,slow=10.0,SNR=12						
SONM	**Songino Array**	**48.97**	**340**	P	P	18 35 09.9	+0.6
	0.6nm,0.9s,baz=152,slow=10.0,SNR=4.2						
MKAR	**Makanchi Array**	**59.53**	**325**	P	P	18 36 26.0	-0.1
	0.4nm,0.6s,baz=114,slow=7.5,SNR=6.1						
KURBB	**Kurchatov Arra**	**63.68**	**327**	P	P	18 36 53.8	-0.3
	0.4nm,0.6s,baz=128,slow=6.0,SNR=5.9						

IDC 23 18:40:39.9±28.0, 21.78S×173.86W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.8/21, mbtmp4.1/4, Error ellipse: s-maj=511.3km s-min=147.3km az=77.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**37.22**	**265**	P	P	18 47 54.3	+0.9
	3.0nm,0.3s,baz=94,slow=8.8,SNR=5.8						
STKA	**Stephens Creek**	**40.76**	**246**	P	P	18 48 22.0	-0.9
	2.3nm,1.0s,baz=83,slow=8.1,SNR=2.5						
ASAR	**Alice Springs**	**48.00**	**257**	P	P	18 49 20.6	-0.4
	0.6nm,0.4s,baz=97,slow=7.5,SNR=22						
WRA	**Warramunga Arr**	**48.26**	**262**	P	P	18 49 23.0	0.0
	0.9nm,0.3s,baz=96,slow=8.4,SNR=45						

IDC 23 18:45:47.5±1.3, 24.40N×141.32E, h0km, mb3.3/4, mb1 3.5/4, mb1mx3.3/24, mbtmp3.3/4, Error ellipse: s-maj=57.1km s-min=26.4km az=94.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.59**	**189**	P	P	18 54 01.8	+0.1
	0.3nm,0.3s,baz=8.9,slow=8.7,SNR=14						
ASAR	**Alice Springs**	**48.32**	**189**	P	P	18 54 30.4	-0.5
	0.2nm,0.9s,baz=6.3,slow=4.4,SNR=3.4						
MKAR	**Makanchi Array**	**51.62**	**311**	P	P	18 54 56.0	+0.1
	0.1nm,0.4s,baz=90,slow=7.9,SNR=4.0						
ILAR	**Eielson Array**	**60.45**	**28**	P	P	18 55 58.5	-0.2
	0.4nm,0.7s,baz=277,slow=6.0,SNR=4.3						

IDC 23 18:52:39.3±12.0, 59.53S×27.07W, h0km, mb3.9/2, mb1 3.9/2, mb1mx3.6/15, mbtmp3.8/2, Error ellipse: s-maj=828.2km s-min=50.6km az=98.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**76.07**	**29**	P	P	19 04 28.4	0.0
	0.7nm,0.6s,baz=196,slow=6.5,SNR=7.6						
ASAR	**Alice Springs**	**95.64**	**163**	P	P	19 06 06.5	-0.2
	0.3nm,0.8s,baz=208,slow=2.7,SNR=4.9						
SONM	**Songino Array**	**150.69**	**93**	PKPbc	PKPbc	19 12 32.0	-0.3
	0.5nm,0.7s,baz=208,slow=3.6,SNR=5.9						

*ISCJB **23** 19:02:30.9±0.6,40.40N±0.05×43.36E±0.06,h10km±4km, Error ellipse: s-maj=9.1km s-min=5.5km az=39.4*
*DDA **23** 19:02:31.0,40.36N×43.31E,h7km,MD2.9*
*ISK **23** 19:02:30.1,40.36N×43.33E,h7km,MD2.8*
*CSEM **23** 19:02:30.2±0.1,40.36N×43.35E,h8km,MD2.9, Error ellipse: s-maj=3.1km s-min=2.1km az=53.0*
ISC 23 19:02:30.8±1.0, 40.36N±0.04×43.31E±0.03, h9km±7km, n15, σ0.30/25, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DIGO	**Kars**	**0.07**	**42**	*i* P	**Pg**	**19 02 33.1**	**0.0**
DIGO				*i* S	**Sg**	**19 02 34.8**	**0.0**
DIGO	**Kars**	**0.07**	**42**	*i* P	**Pg**	**19 02 33.1**	**0.0**
DIGO				*i* S	**Sg**	**19 02 34.8**	**0.0**
KARS	**Kars**	**0.32**	**327**	*e*PG	**Pg**	**19 02 36.9**	**-0.3**
KARS				*e*SG	**Sg**	**19 02 41.5**	**0.0**
KARS	**Kars**	**0.32**	**327**	*e*Pg	**Pg**	**19 02 36.9**	**-0.3**
KARS				*e*Sg	**Sg**	**19 02 41.5**	**0.0**
AGRB	**Hanur-Agry**	**0.82**	**197**	*e*PG	**Pg**	**19 02 46.2**	**-0.4**
AGRB	**Hanur-Agry**	**0.82**	**197**	*e*Pg	**Pg**	**19 02 46.2**	**-0.4**
TUTA	**Tutak**	**1.03**	**202**	*i* P	**Pg**	**19 02 50.7**	**+0.1**
TUTA				*i* S	**Sn**	**19 03 06.7**	**+0.4**
TUTA	**Tutak**	**1.03**	**202**	*i* P	**Pg**	**19 02 50.7**	**+0.1**
GNI	**Garni**	**1.11**	**100**	*e*PN	**Pg**	**19 02 51.9**	**-0.3**
GNI				*e*SN	**Sb**	**19 03 07.0**	**0.0**
GNI	**Garni**	**1.11**	**100**	*e*Pn	**Pg**	**19 02 51.9**	**-0.3**
GNI				*e*Sn	**Sb**	**19 03 07.0**	**0.0**
DAGI	**Agillar**	**1.28**	**304**	*i* P	**Pn**	**19 02 55.3**	**+0.3**
DAGI				*i* S	**Sb**	**19 03 11.1**	**-0.7**
DDEM	**Demirkent**	**1.30**	**295**	*i* P	**Pn**	**19 02 55.0**	**-0.3**
DDEM				*i* S	**Sb**	**19 03 12.5**	**+0.2**
DDEM	**Demirkent**	**1.30**	**295**	*i* P	**Pn**	**19 02 55.0**	**-0.3**
DDEM				*i* S	**Sb**	**19 03 12.5**	**+0.2**
BCA	**Borcka**	**1.68**	**311**	*e*PN	**Pn**	**19 03 00.8**	**+0.5**
BCA	**Borcka**	**1.68**	**311**	*e*Pn	**Pn**	**19 03 00.8**	**+0.5**

IDC 23 19:03:52.2±1.3, 14.12N×53.78E, h0km, mb3.6/7, mb1 3.7/7, mb1mx3.5/28, mbtmp3.6/7, Error ellipse: s-maj=36.1km s-min=31.5km az=106.0, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**40.37**	**30**	P	P	19 11 32.2	+0.4
	0.4nm,0.6s,baz=213,slow=6.5,SNR=5.0						
BVAR	**Borovoye Array**	**40.99**	**15**	P	P	19 11 37.3	+0.4
	0.8nm,0.7s,baz=212,slow=8.1,SNR=6.6						
ZALV	**Zalesovo Beam**	**46.61**	**25**	P	P	19 12 20.5	-1.6
	0.5nm,0.4s,baz=234,slow=7.1,SNR=4.4						
TORD	**Torodi Ar. Bea**	**50.54**	**276**	P	P	19 12 52.8	-0.1
	0.7nm,0.9s,baz=94,slow=6.1,SNR=3.1						
SONM	**Songino Array**	**54.83**	**41**	P	P	19 13 24.4	0.0
	0.5nm,0.8s,baz=251,slow=4.5,SNR=3.7						
WRA	**Warramunga Arr**	**86.13**	**112**	P	P	19 16 36.1	+0.3
	0.4nm,0.6s,baz=299,slow=3.9,SNR=6.6						
ASAR	**Alice Springs**	**86.80**	**115**	P	P	19 16 38.8	-0.3
	0.3nm,0.6s,baz=283,slow=4.8,SNR=8.7						

IDC 23 19:15:16.3±1.4, 3.85N×126.35E, h0km, mb3.6/6, mb1 3.7/6, mb1mx3.5/23, mbtmp3.6/6, MS2.8/1, Ms1 2.8/1, ms1mx2.6/21, Error ellipse: s-maj=214.1km s-min=17.7km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.91**	**162**	P	P	19 20 40.6	-0.7
	2.1nm,0.8s,baz=344,slow=9.6,SNR=15						
ASAR	**Alice Springs**	**28.32**	**165**	P	P	19 21 11.8	-0.2
	0.5nm,0.9s,baz=344,slow=7.8,SNR=7.6						
KSRS	**Korea Array**	**33.48**	**2**	LR	LR	19 34 05.7	
	comp=Z,18nm,20.3s,baz=159,slow=34						
STKA	**Stephens Creek**	**38.37**	**159**	P	P	19 22 40.0	+0.7
	2.3nm,0.8s,baz=338,slow=10,SNR=11						
SONM	**Songino Array**	**47.07**	**342**	P	P	19 23 50.1	+0.1
	0.2nm,0.6s,baz=159,slow=9.0,SNR=3.1						
MKAR	**Makanchi Array**	**57.24**	**325**	P	P	19 25 06.1	+0.5
	0.4nm,0.5s,baz=124,slow=7.5,SNR=12						
ZALV	**Zalesovo Beam**	**60.31**	**333**	P	P	19 25 25.5	-1.3
	0.3nm,0.5s,baz=116,slow=6.6,SNR=2.4						

*VIE **23** 19:23:43.6±0.2,46.44N×13.10E,h8km,mb1.7/12, ML2.3/13, Error ellipse: s-maj=2.3km s-min=1.2km az=16.0 7 km ENE of Tolmezzo*
*ROM **23** 19:23:43.4±0.1,46.42N×13.09E,h6km±1km,Md2.5/8, Ml2.2/7, Error ellipse: s-maj=1.4km s-min=1.2km az=3.0*
*CSEM **23** 19:23:43.3±0.1,46.42N×13.11E,h17km±1km,ML2.7/8, Error ellipse: s-maj=2.0km s-min=1.3km az=9.0*
**ISC 23 19:23:44.2±0.8, 46.42N±0.

	11nm,0.2s								
MYKA				⇑*e*Sg		**Sg**	**19 23 58.6**	**+0.1**
	40nm,0.1s								
MYKA	**Terra Mystica**	**0.43**	**60**	Pg		**Pg**	**19 23 52.5**	**-0.2**
	11nm,0.2s								
MYKA				Sg		**Sg**	**19 23 58.6**	**+0.1**
	40nm,0.1s								
MLNI	**MaInisio**	**0.43**	**232**	*e*Pg		**Pg**	**19 23 52.1**	**-0.7**
MLNI	**MaInisio**	**0.43**	**232**	*e*Pg		**Pg**	**19 23 52.1**	**-0.7**
DRE	**Drenchia**	**0.45**	**123**	⇓*e*Pg		**Pg**	**19 23 52.1**	**-0.9**
DRE				*e*Sg		**Sg**	**19 23 59.5**	**+0.5**
DRE	**Drenchia**	**0.45**	**123**	⇓*e*Pg		**Pg**	**19 23 52.1**	**-0.9**
DRE				*e*Sg		**Sg**	**19 23 59.5**	**+0.5**
CIMO	**Cimolais**	**0.47**	**257**	⇓*e*Pg		**Pg**	**19 23 52.5**	**-1.0**
CIMO				*e*Sg		**Sg**	**19 23 59.3**	**-0.5**
CIMO	**Cimolais**	**0.47**	**257**	⇓*e*Pg		**Pg**	**19 23 52.5**	**-1.0**
CIMO				*e*Sg		**Sg**	**19 23 59.3**	**-0.5**
CADS	**Cadrg**	**0.48**	**113**	*i* Pg		**Pg**	**19 23 52.8**	**-0.8**
CADS				*i* Sg		**Sg**	**19 24 00.2**	**+0.2**
CADS									
	comp=Z,22nm,0.1s								
CADS	**Cadrg**	**0.48**	**113**	*i* Pg		**Pg**	**19 23 52.8**	**-0.8**
CADS				*i* Sg		**Sg**	**19 24 00.2**	**+0.2**
	comp=Z,22nm,0.1s								
ABTA	**Abfaltersbach**	**0.52**	**309**	⇑*e*Pg		**Pg**	**19 23 54.0**	**-0.5**
	comp=Z,8.3nm,0.1s,SNR=23								
ABTA				⇓*i*Sg		**Sg**	**19 24 01.1**	**-0.4**
	comp=Z,24nm,0.1s								
ABTA	**Abfaltersbach**	**0.52**	**309**	Pg		**Pg**	**19 23 54.0**	**-0.5**
	comp=Z,8.3nm,0.1s,SNR=23								
ABTA				Sg		**Sg**	**19 24 01.1**	**-0.4**
	comp=Z,24nm,0.1s								
CSO	**Casso**	**0.56**	**255**	*e*Pg		**Pg**	**19 23 54.3**	**-0.8**
CSO	**Casso**	**0.56**	**255**	*e*Pg		**Pg**	**19 23 54.3**	**-0.8**
SABO	**M.te Sabotino**	**0.56**	**142**	⇓*e*Pg		**Pg**	**19 23 54.2**	**-0.9**
SABO				*e*Sg		**Sb**	**19 24 03.5**	**-0.2**
SABO	**M.te Sabotino**	**0.56**	**142**	Pg		**Pg**	**19 23 54.8**	**-0.3**
SABO				Sg		**Sb**	**19 24 04.2**	**+0.4**
	comp=Z,95nm,0.4s								
SABO	**M.te Sabotino**	**0.56**	**142**	⇓*e*Pg		**Pg**	**19 23 54.2**	**-0.9**
SABO				*e*Sg		**Sb**	**19 24 03.5**	**-0.2**
POLC	**Polcenigo**	**0.57**	**227**	Pg		**Pg**	**19 23 54.8**	**-0.5**
POLC				Sg		**Sb**	**19 24 03.9**	**-0.2**
CAE	**Caneva**	**0.62**	**229**	⇑*e*Pg		**Pg**	**19 23 56.3**	**+0.1**
CAE	**Caneva**	**0.62**	**229**	⇑*e*Pg		**Pg**	**19 23 56.3**	**+0.1**
GORS	**Gorjuse**	**0.63**	**99**	*i* Pn		**Pg**	**19 23 55.6**	**-0.8**
GORS				*e*Sn		**Sg**	**19 24 05.2**	**+0.5**
GORS									
	comp=Z,26nm,0.2s								
GORS	**Gorjuse**	**0.63**	**99**	*i* Pn		**Pg**	**19 23 55.6**	**-0.8**
GORS				*e*Sn		**Sg**	**19 24 05.2**	**+0.5**
	comp=Z,26nm,0.2s								
VOY	**Vojsko**	**0.67**	**125**	*e*Pg		**Pg**	**19 23 56.2**	**-1.0**
VOY				*e*Sg		**Sg**	**19 24 06.3**	**+0.2**
VOY				*e*			19 24 06.8		
VOY	**Vojsko**	**0.67**	**125**	*e*Pg		**Pg**	**19 23 55.2**	**-2.0**
VOY				*e*Sg		**Sg**	**19 24 05.3**	**-0.8**
KBA	**Koelnbreinsper**	**0.68**	**14**	⇓*i*Pg		**Pg**	**19 23 57.4**	**-0.1**
	comp=Z,9.3nm,0.1s								
KBA				⇑*e*Sg		**Sg**	**19 24 06.4**	**-0.1**
	comp=Z,3.7nm,0.1s								
KBA	**Koelnbreinsper**	**0.68**	**14**	Pg		**Pg**	**19 23 57.4**	**-0.1**
	comp=Z,9.3nm,0.1s								
KBA				Sg		**Sg**	**19 24 06.4**	**-0.1**
	comp=Z,3.7nm,0.1s								
AGOR	**Agordo**	**0.74**	**260**	⇑*e*Pg		**Pg**	**19 23 58.7**	**+0.1**
AGOR				*e*Sg		**Sb**	**19 24 09.1**	**0.0**
AGOR	**Agordo**	**0.74**	**260**	Pg		**Pg**	**19 23 58.7**	**+0.1**
AGOR				Sg		**Sb**	**19 24 09.1**	**0.0**
	comp=Z,49nm,0.3s								
JAVS	**Javornik**	**0.85**	**128**	*i* Pn		**Pg**	**19 23 59.1**	**-1.4**
JAVS				*i* Sn		**Sb**	**19 24 12.5**	**+0.3**
JAVS	**Javornik**	**0.85**	**128**	*i* Pn		**Pg**	**19 23 59.2**	**-1.4**
JAVS				*e*Sn		**Sb**	**19 24 12.5**	**+0.3**
RISI	**Rein**	**0.88**	**307**	Pg		**Pg**	**19 24 00.6**	**-0.7**
RISI				Sg		**Sg**	**19 24 12.3**	**-0.5**
	comp=Z,78nm,0.3s								
RISI	**Rein**	**0.88**	**307**	⇓*e*Pg		**Pg**	**19 24 00.7**	**-0.6**
RISI				*e*Sg		**Sg**	**19 24 12.4**	**-0.4**
OBKA	**Obir**	**1.00**	**84**	⇑*e*Pg		**Pb**	**19 24 03.2**	**-0.3**
	comp=Z,2.5nm,0.1s,SNR=7.1								
OBKA				⇓*e*Sg		**Sb**	**19 24 16.5**	**-0.2**
	comp=Z,17nm,0.3s								
OBKA	**Obir**	**1.00**	**84**	Pg		**Pb**	**19 24 03.2**	**-0.3**
	comp=Z,2.5nm,0.1s,SNR=7.1								
OBKA				*e*Sg		**Sb**	**19 24 16.5**	**-0.2**
CGRP	**Cima Grappa**	**1.05**	**240**	*e*Pg		**Pn**	**19 24 05.1**	**+0.2**
CGRP	**Cima Grappa**	**1.05**	**240**	*e*Pg		**Pn**	**19 24 05.1**	**+0.2**
KOSI	**Kohlern**	**1.19**	**273**	⇑*e*Pg		**Pn**	**19 24 06.7**	**-0.1**
ABSI	**Aberstueckl**	**1.27**	**285**	⇑*e*Pg		**Pn**	**19 24 07.6**	**-0.2**
PANI	**Panarotta**	**1.30**	**254**	*e*Pg		**Pg**	**19 24 09.0**	**-0.2**
PANI				*e*Sg		**Sg**	**19 24 26.7**	**+0.7**
PANI	**Panarotta**	**1.30**	**254**	*e*Pg		**Pg**	**19 24 09.0**	**-0.2**
PANI				*e*Sg		**Sg**	**19 24 26.7**	**+0.7**
WTTA	**Wattenberg**	**1.31**	**311**	⇑*e*Pg		**Pb**	**19 24 09.0**	**+0.1**
	comp=Z,4.4nm,0.2s								
WTTA				⇑*e*Sg		**Sn**	**19 24 26.0**	**0.0**
	comp=Z,9.9nm,0.3s								
WTTA	**Wattenberg**	**1.31**	**311**	Pg		**Pb**	**19 24 09.0**	**+0.1**
	comp=Z,4.4nm,0.2s								
WTTA				*e*Sg		**Sn**	**19 24 26.0**	**0.0**
SOKA	**Soboth**	**1.36**	**78**	⇑*e*Pg		**Pn**	**19 24 08.8**	**-0.1**
	comp=Z,2.0nm,0.2s								
SOKA				⇓*i*Sg		**Sb**	**19 24 27.0**	**+0.1**
	comp=Z,1.7nm,0.3s								
SOKA	**Soboth**	**1.36**	**78**	Pg		**Pn**	**19 24 08.8**	**-0.1**
	comp=Z,2.0nm,0.2s								
SOKA				*e*Sg		**Sb**	**19 24 27.0**	**+0.1**
MOTA	**Moosalm**	**1.66**	**305**	⇑*i*Pg		**Pg**	**19 24 15.3**	**-0.7**
	comp=Z,1.3nm,0.1s								
MOTA				⇑*e*Sg		**Sg**	**19 24 38.4**	**+0.9**
	comp=Z,4.5nm,0.3s								
MOTA	**Moosalm**	**1.66**	**305**	Pg		**Pg**	**19 24 15.3**	**-0.7**
	comp=Z,1.3nm,0.1s								
MOTA				*e*Sg		**Sg**	**19 24 38.4**	**+0.9**
FETA	**Feichten**	**1.74**	**291**	⇑*e*Pg		**Pg**	**19 24 16.9**	**-0.7**
	comp=Z,0.8nm,0.1s								
FETA				⇓*e*Sg		**Sg**	**19 24 40.5**	**+0.3**
	comp=Z,0.7nm,0.1s								
FETA	**Feichten**	**1.74**	**291**	Pg		**Pg**	**19 24 16.9**	**-0.7**
	comp=Z,0.8nm,0.1s								
FETA				*e*Sg		**Sg**	**19 24 40.5**	**+0.3**
MOSI	**Grossmontoni**	**1.77**	**277**	⇓*e*Pg		**Pb**	**19 24 16.8**	**+0.1**
ARSA	**Arzberg**	**1.86**	**62**	⇑*e*Pg		**Pb**	**19 24 18.3**	**+0.3**
	comp=Z,1.3nm,0.2s								
ARSA				⇓*e*Sg		**Sg**	**19 24 43.1**	**-0.8**
	comp=Z,2.3nm,0.3s								
ARSA	**Arzberg**	**1.86**	**62**	⇑*e*Pg		**Pb**	**19 24 18.4**	**+0.3**
ARSA				*e*Sg		**Sg**	**19 24 43.1**	**-0.8**
NVLJ	**Novalja**	**2.23**	**146**	*e*Pn		**Pn**	**19 24 21.1**	**+0.2**
NVLJ				Sn		**Sn**	**19 24 50.0**	**+1.7**
NVLJ	**Novalja**	**2.23**	**146**	*e*Pn		**Pn**	**19 24 21.0**	**+0.2**
NVLJ				Sn		**Sn**	**19 24 50.0**	**+1.7**
KHC	**Kasperske Hory**	**2.73**	**7**	*e*P		**Pg**	**19 24 35.0**	**-1.6**
KHC				*ex*		x	19 25 12.0		

JMA 23 19:44:38.3±0.1, 38°.90N×142°.49E, h40km±2km, M1.3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.67**	**286**	P	Pn	19 44 51.3	0.0
OFUJ				S	Sn	19 45 00.5	-0.1
MIYJ	**Miyakonagasawa**	**0.85**	**323**	P	Pn	19 44 53.7	-0.2
MIYJ				*e*S	Sn	19 45 05.1	-0.1
JMK	**Ichinoseki**	**0.99**	**273**	P	Pn	19 44 56.1	+0.4
JMK				*e*S	Sn	19 45 09.0	+0.5
JIO	**Ouri**	**1.00**	**244**	P	Pn	19 44 55.7	-0.1
JIO				*e*S	Sn	19 45 08.2	-0.5
JOM	**Ohasama**	**1.09**	**302**	P	Pn	19 44 57.7	+0.6
JOM				*e*S	Sn	19 45 11.7	+0.6
JTH	**Tanohata**	**1.15**	**335**	P	Pn	19 44 58.1	+0.2
JTH				*e*S	Sn	19 45 12.7	+0.4

*NIED **23** 19:45:00, 38°.90N×142°.50E, h68km, Mw3.9 Best double couple: M0 8.33000×10^14 NP1:φs 72.00000°, δ60.00000°, λ71.00000°. NP2:φs 287.00000°, δ35.00000°, λ120.00000°.*
*ISCJB **23** 19:45:38.3±1.1, 38°.93N±0°.05×142°.6E±0°.1, h50km±10km, mb3.5/7, Error ellipse: s-maj=14.9km s-min=6.6km az=20.8*
*JMA **23** 19:45:39.1±0.1, 38°.92N×142°.53E, h38km±2km, M3.8*

*IDC **23** 19:45:39.7±2.5, 38°.91N×142°.61E, h46km±23km, mb3.4/7, mb1 3.6/10, mb1mx3.4/27, mbtmp3.4/10, ML3.5/2, Error ellipse: s-maj=28.9km s-min=16.4km az=100.0*
ISC 23 19:45:38.5±2.1, 38°.93N±0°.06×142°.57E±0°.08, h31km±13km, n22, σ1s24/30, mb3.6/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.72**	**282**	P	**Pn**	**19 45 52.5**	**0.0**
OFUJ				*e*S	**Sb**	**19 46 02.0**	**-0.1**
MIYJ	**Miyakonagasawa**	**0.87**	**318**	P	**Pb**	**19 45 54.8**	**-0.3**
MIYJ				*e*S	**Sb**	**19 46 06.0**	**-0.4**
JMK	**Ichinoseki**	**1.06**	**272**	P	**Pn**	**19 45 57.3**	**+0.2**
JMK				*e*S	**Sn**	**19 46 10.5**	**-0.3**
JIO	**Ouri**	**1.07**	**244**	P	**Pn**	**19 45 57.0**	**-0.3**
JIO				S	**Sn**	**19 46 09.9**	**-1.2**
JOM	**Ohasama**	**1.13**	**299**	P	**Pn**	**19 45 58.7**	**+0.5**
JOM				*e*S	**Sn**	**19 46 13.2**	**+0.5**
JTH	**Tanohata**	**1.15**	**332**	P	**Pn**	**19 45 58.8**	**+0.4**
JRG	**Rokugo**	**1.58**	**288**	P	**Pn**	**19 46 05.3**	**+1.0**
JOU	**Okura**	**1.60**	**250**	P	**Pn**	**19 46 05.1**	**+0.5**
JOU				*e*S	**Sn**	**19 46 24.0**	**-0.2**
JANG	**Nango**	**1.66**	**331**	P	**Pn**	**19 46 05.8**	**+0.4**
JYK	**Kaneyama**	**1.73**	**270**	P	**Pn**	**19 46 07.3**	**+0.9**
JMM	**Marumori**	**1.76**	**233**	P	**Pn**	**19 46 06.6**	**-0.2**
MJAR	**Matsushiro Arr**	**4.20**	**237**	P	**Pn**	**19 46 41.6**	**+1.2**
	3.0nm,0.3s,baz=37,slow=13,SNR=21						
MAT	**Matsushiro**	**4.20**	**237**	P	**Pn**	**19 46 42.5**	**+2.0**
MAT				*e*S	**Sn**	**19 47 33.2**	**+4.7**
ASAJ	**Asahikawa**	**5.18**	**0**	P	**Pn**	**19 46 55.1**	**+1.2**
	1.3nm,0.3s,baz=144,slow=8.7,SNR=16						
ASAJ				S	**Sn**	**19 47 54.1**	**+1.6**
	0.7nm,0.3s,baz=120,slow=16,SNR=2.2						
USRK	**Ussuriysk Arra**	**9.51**	**307**	P	**Pn**	**19 47 54.1**	**+0.9**
	0.1nm,0.3s,baz=97,slow=14,SNR=3.6						
SONM	**Songino Array**	**27.55**	**301**	P	**P**	**19 51 22.4**	**-0.2**
	0.2nm,0.4s,baz=98,slow=9.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**41.34**	**311**	P	**P**	**19 53 21.4**	**+0.2**
	0.2nm,0.3s,baz=70,slow=8.3,SNR=2.5						
MKAR	**Makanchi Array**	**43.91**	**301**	P	**P**	**19 53 41.9**	**-0.4**
	0.5nm,0.7s,baz=86,slow=9.7,SNR=7.5						
ILAR	**Eielson Array**	**47.41**	**33**	P	**P**	**19 54 09.2**	**-0.3**
	0.6nm,0.6s,baz=262,slow=5.6,SNR=5.5						
WRA	**Warramunga Arr**	**59.07**	**189**	P	**P**	**19 55 34.7**	**-1.0**
	0.5nm,0.5s,baz=6.4,slow=6.8,SNR=6.0						
ASAR	**Alice Springs**	**62.80**	**189**	P	**P**	**19 56 00.2**	**-0.8**
	0.3nm,0.7s,baz=20,slow=10,SNR=5.6						
AKASG	**Malin Array Be**	**73.36**	**322**	P	**P**	**19 57 06.5**	**-0.6**
	0.7nm,0.4s,baz=43,slow=6.0,SNR=4.3						

IDC 23 19:52:05.3±2.3, 6°.33S×130°.46E, h0km, mb3.5/1, mb1 3.6/4, mb1mx3.4/19, mbtmp3.5/4, ML3.4/3, Error ellipse: s-maj=89.6km s-min=29.2km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.61**	**201**	Pn	Pn	19 55 06.0	-0.1
	0.2nm,0.3s,baz=29,slow=12,SNR=9.5						
FITZ				Sn	Sn	19 57 18.6	-8.8
	0.1nm,0.3s,baz=66,slow=20,SNR=3.1						
WRA	**Warramunga Arr**	**14.05**	**165**	Pn	Pn	19 55 24.4	-1.4
	0.2nm,0.3s,baz=348,slow=13,SNR=18						
WRA				Sn	Sn	19 57 56.3	-6.2
	0.3nm,0.3s,baz=342,slow=21,SNR=6.9						
ASAR	**Alice Springs**	**17.55**	**169**	P	P	19 56 12.6	-0.2
	0.1nm,0.3s,baz=352,slow=11,SNR=11						
ASAR				S	Sn	19 59 20.3	-7.5
	0.1nm,0.3s,baz=347,slow=24,SNR=3.6						
MKAR	**Makanchi Array**	**67.92**	**326**	P	P	20 03 06.0	0.0
	0.3nm,0.6s,baz=125,slow=7.7,SNR=4.5						

IDC 23 20:04:10.1±68.0, 14°.98S×167°.46E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/19, mbtmp3.7/3, Error ellipse: s-maj=1142.0km s-min=114.6km az=66.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**28.97**	**230**	P	P	20 10 11.3	-0.2
	1.2nm,0.7s,baz=65,slow=9.2,SNR=5.0						
WRA	**Warramunga Arr**	**31.94**	**256**	P	P	20 10 37.9	0.0
	0.3nm,0.3s,baz=88,slow=8.9,SNR=12						
ASAR	**Alice Springs**	**32.75**	**249**	P	P	20 10 45.1	+0.1
	0.4nm,0.4s,baz=76,slow=9.3,SNR=14						

*ISCJB **23** 20:08:41.6±0.7, 36°.28N±0°.05×140°.04E±0°.07, h84km±4km, mb3.2/4, Error ellipse: s-maj=9.9km s-min=7.0km az=25.9*
*IDC **23** 20:08:41.2±5.7, 36°.37N×140°.17E, h72km±43km, mb3.0/4, mb1 3.1/4, mb1mx3.0/25, mbtmp3.0/4, Error ellipse: s-maj=56.5km s-min=24.9km az=66.0*
*JMA **23** 20:08:43.2±0.1, 36°.31N×140°.02E, h73km±1km, M3.1*
JMA Felt I J1.
ISC 23 20:08:42.6±1.0, 36°.29N±0°.05×140°.03E±0°.06, h78km±7km, n14, σ0s57/23, mb3.3/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	**Yasato**	**0.15**	**116**	P	**Pn**	**20 08 54.0**	**+0.1**
JYT				S	**Sn**	**20 09 02.0**	**-0.2**
JAG	**Ashikaga**	**0.48**	**286**	P	**Pn**	**20 08 56.0**	**+0.1**
JAG				S	**Sn**	**20 09 05.4**	**-0.4**
JKT	**Katashina**	**0.79**	**307**	P	**Pn**	**20 08 59.2**	**+0.1**
JKT				S	**Sn**	**20 09 11.6**	**+0.2**
JRY	**Ryogami san**	**0.95**	**254**	P	**Pn**	**20 09 01.4**	**+0.5**
JRY				S	**Sn**	**20 09 14.9**	**+0.3**
JFY	**Yanaizu**	**1.14**	**347**	P	**Pn**	**20 09 03.9**	**+0.6**
JFY				S	**Sn**	**20 09 18.7**	**-0.1**
JFT	**Otama**	**1.25**	**11**	P	**Pn**	**20 09 04.9**	**+0.3**
JFT				S	**Sn**	**20 09 21.5**	**+0.4**
JOD2	**Odawara 2**	**1.28**	**217**	P	**Pn**	**20 09 05.3**	**+0.3**
JOD2				S	**Sn**	**20 09 21.6**	**-0.2**
JYN	**Shimob**	**1.44**	**237**	P	**Pn**	**20 09 08.1**	**+1.0**
MJAR	**Matsushiro Arr**	**1.49**	**280**	P	**Pn**	**20 09 06.7**	**-1.0**
	12nm,0.3s,baz=89,slow=14,SNR=153						
MJAR				S	**Sn**	**20 09 26.7**	**0.0**
	6.5nm,0.3s,baz=119,slow=13,SNR=9.2						
MAT	**Matsushiro**	**1.49**	**280**	P	**Pn**	**20 09 08.4**	**+0.7**
MAT				*e*S	**Sn**	**20 09 27.0**	**+0.3**
ZALV	**Zalesovo Beam**	**41.60**	**313**	P	**P**	**20 16 22.2**	**-0.4**
	0.2nm,0.3s,baz=105,slow=9.1,SNR=3.1						
MKAR	**Makanchi Array**	**43.57**	**303**	P	**P**	**20 16 38.5**	**-0.3**
	0.3nm,0.8s,baz=79,slow=7.5,SNR=3.3						
WRA	**Warramunga Arr**	**56.19**	**186**	P	**P**	**20 18 13.4**	**-1.1**
	0.3nm,0.5s,baz=1.7,slow=7.6,SNR=8.6						
ASAR	**Alice Springs**	**59.91**	**186**	P	**P**	**20 18 41.5**	**+1.0**
	0.1nm,0.6s,baz=14,slow=9.0,SNR=2.7						

*ISCJB **23** 20:08:57.6±0.9, 20°.18S±0°.04×69°.4W±0°.2, h119km±11km, mb3.4/1, Error ellipse: s-maj=29.1km s-min=6.6km az=174.4*
*GUC **23** 20:08:57.9±0.5, 20°.19S×69°.28W, h104km±4km, ML4.1*
*IDC **23** 20:09:00.5±1.7, 20°.18S×68°.74W, h121km±14km, mb3.4/1, mb1 3.5/4, mb1mx3.2/20, mbtmp3.5/4, Error ellipse: s-maj=43.6km s-min=14.5km az=106.0*
ISC 23 20:08:58.4±0.9, 20°.16S±0°.04×69°.4W±0°.1, h107km±8km, n16, σ1s29/22, 1C-4D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HMBC	**Humberstone**	**0.51**	**256**	⇓*i*P	**Pn**	**20 09 15.0**	**-0.1**
HMBC				*i* S	**Sn**	**20 09 28.2**	**+0.5**
HMBC				AML	AML	20 09 30.0	
	comp=E,8μm,0.5s						
PB01	**Plate Boundary**	**0.89**	**187**	⇓*i*P	**Pn**	**20 09 17.6**	**-0.7**
PB01				*i* S	**Sn**	**20 09 32.7**	**-0.7**
PB01				AML	AML	20 09 34.2	
	comp=N,6μm,0.4s						
MNMC	**Minimini**	**1.04**	**348**	⇑*i*P	**Pn**	**20 09 20.2**	**0.0**
MNMC				*i* S	**Sn**	**20 09 37.6**	**+1.1**
MNMC				AML	AML	20 09 39.8	
	comp=E,6μm,0.5s						
PB09	**Plate Boundary**	**1.63**	**176**	⇓*i*P	**Pn**	**20 09 26.6**	**-0.3**
PB09				*i* S	**Sn**	**20 09 48.5**	**0.0**
PB09				AML	AML	20 09 55.7	
	comp=E,4μm,0.2s						
PB07	**Plate Boundary**	**1.64**	**197**	⇓*i*P	**Pn**	**20 09 26.9**	**0.0**
PB07				*i* S	**Sn**	**20 09 49.0**	**+0.4**
PB07				AML	AML	20 09 55.8	
	comp=E,2μm,0.1s						
ARCH	**Arica**	**1.88**	**332**	*e*P	**Pn**	**20 09 30.7**	**+1.0**
ARCH				AML	AML	20 09 59.9	
	comp=E,3μm,0.5s						
PB04	**Plate Boundary**	**2.10**	**183**	*e*P	**Pn**	**20 09 35.6**	**+3.1**
PB04				AML	AML	20 10 15.8	
	comp=N,1μm,0.2s						
LVC	**Limon Verde**	**2.48**	**170**	*e*P	**Pn**	**20 09 37.6**	**-0.1**
LVC				*e*S	**Sn**	**20 10 08.6**	**+0.8**
LVC	**Limon Verde**	**2.48**	**170**	P	**Pn**	**20 09 38.7**	**+1.0**
	comp=N,30nm,0.3s,baz=346,slow=8.9,SNR=170						
LVC				S	**Sn**	**20 10 10.5**	**+2.6**
	comp=N,28nm,0.3s,baz=129,slow=19,SNR=18						
LPAZ	**La Paz**	**4.02**	**17**	P	**Pn**	**20 09 59.9**	**+1.2**
	comp=N,5.3nm,0.3s,baz=208,slow=5.3,SNR=81						
SIV	**San Ignacio**	**8.91**	**64**	P	Pn	20 10 59.1	-5.2
	comp=N,1.0nm,0.3s,baz=260,slow=12,SNR=16						
TORD	**Torodi Ar. Bea**	**77.31**	**71**	P	**P**	**20 20 39.2**	**-2.5**
	comp=N,0.4nm,0.5s,baz=255,slow=5.6,SNR=12						
ASAR	**Alice Springs**	**130.89**	**209**	PKP	**PKPdf**	**20 27 58.2**	**+0.2**
	comp=N,0.2nm,1.0s,baz=132,slow=1.4,SNR=4.2						
WRA	**Warramunga Arr**	**133.88**	**212**	PKP	**PKPdf**	**20 28 04.6**	**+0.8**
	comp=N,0.5nm,0.9s,baz=175,slow=4.2,SNR=2.8						
MKAR	**Makanchi Array**	**144.79**	**34**	PKP	**PKPab**	**20 28 21.8**	**-0.1**
	comp=N,0.4nm,0.4s,baz=297,slow=3.2,SNR=6.2						
SONM	**Songino Array**	**152.18**	**6**	PKPbc	**PKPbc**	**20 28 41.6**	**+0.1**
	comp=N,0.5nm,0.4s,baz=336,slow=1.3,SNR=5.3						

*CSEM **23** 20:10:03.0, 38°.57N×29°.23W, h2km, ML2.6, After PDA*
PDA 23 20:10:03.0±0.4, 38°.57N×29°.23W, h2km±2km, MD3.5, ML2.6, Error ellipse: s-maj=4.4km s-min=3.0km az=175.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CALA	**Caldeira**	**0.41**	**88**	*e*P	Pg	20 10 10.6	-0.4
CALA				*e*S	Sg	20 10 16.0	-0.5
CALA	**Caldeira**	**0.41**	**88**	*e*P	Pg	20 10 10.6	-0.4
CALA				*e*S	Sg	20 10 16.0	-0.5
PCED	**Cedros**	**0.42**	**82**	*e*P	Pg	20 10 10.4	-0.6
PCED				*e*S	Sg	20 10 16.2	-0.2
PCED				A	A	20 10 18.7	
	255nm,0.4s						
PCED	**Cedros**	**0.42**	**82**	*e*P	Pg	20 10 10.4	-0.6
PCED				*e*S	Sg	20 10 16.2	-0.2
HOR	**Horta**	**0.47**	**95**	*e*P	Pg	20 10 11.4	-0.6
HOR	**Horta**	**0.47**	**95**	*e*P	Pg	20 10 11.4	-0.6
PCAN	**Candelaria**	**0.59**	**100**	*e*P	Pg	20 10 13.3	-1.1
PCAN				*e*S	Sg	20 10 21.1	-1.0
PCAN				A	A	20 10 29.8	
	155nm,0.3s						
PCAN	**Candelaria**	**0.59**	**100**	*e*P	Pg	20 10 13.3	-1.1
PCAN				*e*S	Sg	20 10 21.1	-1.0
ROSA	**Rosais**	**0.79**	**79**	*e*P	Pg	20 10 16.0	-2.1
ROSA				*e*S	Sg	20 10 25.8	-2.5
ROSA				A	A	20 10 28.5	
	168nm,0.3s						
ROSA	**Rosais**	**0.79**	**79**	*e*P	Pg	20 10 16.0	-2.1
ROSA				*e*S	Sg	20 10 25.8	-2.5
PMAN	**Manadas**	**0.89**	**86**	*e*P	Pg	20 10 17.6	-2.6
PMAN				*e*S	Sg	20 10 28.5	-3.3
PMAN				A	A	20 10 41.3	
	90nm,0.6s						
PMAN	**Manadas**	**0.89**	**86**	*e*P	Pg	20 10 17.6	-2.6
PMAN				*e*S	Sg	20 10 28.5	-3.3

MEX 23 20:10:53.5±0.5, 15°.00N×95°.82W, h15km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.81**	**340**	*i* P	Pg	20 11 06.9	-2.5
HUIG				*i* S	Sg	20 11 16.6	-3.5
PCIG		**2.60**	**74**	*i* P	Pn	20 11 31.8	-3.2
PCIG				*i* S	Sn	20 12 02.0	-4.4
PNIG	**Pinotepa**	**2.62**	**302**	*i* P	Pn	20 11 32.5	-2.9
PNIG				*i* S	Sn	20 12 02.0	-5.0
UTMO	**

PTQR	**Pietraquaria**	**0.42**	**170**	Pg	**Pg**	**20 58 58.9**	**-0.7**
PTQR				Sg	**Sb**	**20 59 05.7**	**-1.5**
MNS	**Montasola**	**0.46**	**263**	Pg	**Pg**	**20 59 00.1**	**-0.3**
MNS				Sg	**Sg**	**20 59 07.3**	**+0.8**
MNS	**Montasola**	**0.46**	**263**	Pg	**Pg**	**20 59 00.1**	**-0.3**
MNS				Sg	**Sg**	**20 59 07.3**	**+0.8**
CERT	**Cerreto**	**0.55**	**206**	Pg	**Pg**	**20 59 01.3**	**-0.6**
	5µm,0.4s						
CERT	**Cerreto**	**0.55**	**206**	Pg	**Pg**	**20 59 01.3**	**-0.6**
	5µm,0.4s						
CESX	**Cesi**	**0.56**	**288**	Pg	**Pg**	**20 59 01.6**	**-0.6**
	569nm,0.2s						
CESX	**Cesi**	**0.56**	**288**	Pg	**Pg**	**20 59 01.6**	**-0.6**
	569nm,0.2s						
OFFI	**Offida**	**0.57**	**30**	Pg	**Pb**	**20 59 02.0**	**-1.2**
	3µm,0.3s						
OFFI	**Offida**	**0.57**	**30**	Pg	**Pb**	**20 59 02.0**	**-1.2**
	3µm,0.3s						
TRTR	**Tortoreto Alta**	**0.58**	**51**	Pg	**Pg**	**20 59 01.9**	**-0.7**
TRTR	**Tortoreto Alta**	**0.58**	**51**	Pg	**Pg**	**20 59 01.9**	**-0.7**
MTCE	**Montecelio**	**0.59**	**225**	Pg	**Pg**	**20 59 02.1**	**-0.6**
	701nm,0.5s						
MTCE	**Montecelio**	**0.59**	**225**	Pg	**Pg**	**20 59 02.1**	**-0.6**
	701nm,0.5s						
VVLD	**Villa Vallelon**	**0.61**	**157**	Pg	**Pg**	**20 59 01.9**	**-1.3**
	589nm,0.5s						
VVLD	**Villa Vallelon**	**0.61**	**157**	Pg	**Pg**	**20 59 01.9**	**-1.3**
	589nm,0.5s						
FDMO	**Fiordimonte**	**0.62**	**345**	Pg	**Pg**	**20 59 02.3**	**-1.0**
	527nm,0.2s						
FDMO	**Fiordimonte**	**0.62**	**345**	Pg	**Pg**	**20 59 02.3**	**-1.0**
	527nm,0.2s						
INTR	**Introdacqua**	**0.62**	**134**	Pg	**Pg**	**20 59 02.0**	**-1.3**
	3µm,0.6s						
INTR	**Introdacqua**	**0.62**	**134**	Pg	**Pg**	**20 59 02.0**	**-1.3**
	3µm,0.6s						
CESI	**CESI - Serrava**	**0.64**	**333**	Pg	**Pg**	**20 59 02.8**	**-0.8**
	171nm,0.4s						
CESI	**CESI - Serrava**	**0.64**	**333**	Pg	**Pg**	**20 59 02.8**	**-0.8**
	171nm,0.4s						
GUAR	**Guarcino**	**0.64**	**179**	Pg	**Pg**	**20 59 02.7**	**-1.1**
	751nm,0.4s						
GUAR	**Guarcino**	**0.64**	**179**	Pg	**Pg**	**20 59 02.7**	**-1.1**
	751nm,0.4s						
LPEL	**Lama dei Pelig**	**0.76**	**121**	Pg	**Pg**	**20 59 03.9**	**-2.1**
	2µm,0.4s						
LPEL	**Lama dei Pelig**	**0.76**	**121**	Pg	**Pg**	**20 59 03.9**	**-2.1**
	2µm,0.4s						
ASSB	**Assisi San Ben**	**0.77**	**322**	Pg	**Pg**	**20 59 05.1**	**-1.0**
	351nm,0.3s						
ASSB	**Assisi San Ben**	**0.77**	**322**	Pg	**Pg**	**20 59 05.1**	**-1.0**
	351nm,0.3s						
RMP	**Rome, Mte Porz**	**0.77**	**216**	Pg	**Pg**	**20 59 05.6**	**-0.5**
	1µm,0.4s						
RMP	**Rome, Mte Porz**	**0.77**	**216**	Pg	**Pg**	**20 59 05.6**	**-0.5**
	1µm,0.4s						
GUMA	**Gualdo di Mace**	**0.78**	**37**	Pg	Pg	20 59 02.6	-3.7
	2µm,0.4s						
POFI	**Posta Fibreno**	**0.78**	**157**	Pg	**Pg**	**20 59 04.8**	**-1.6**
POFI	**Posta Fibreno**	**0.78**	**157**	Pg	**Pg**	**20 59 04.8**	**-1.6**
CAFR	**Castel Frentan**	**0.80**	**105**	Pg	**Pg**	**20 59 05.1**	**-1.6**
	1µm,0.4s						
CAFR	**Castel Frentan**	**0.80**	**105**	Pg	**Pg**	**20 59 05.1**	**-1.6**
	1µm,0.4s						
RDP	**Rocca di Papa**	**0.81**	**213**	Pg	**Pg**	**20 59 06.3**	**-0.6**
	2µm,0.5s						
RDP	**Rocca di Papa**	**0.81**	**213**	Pg	**Pg**	**20 59 06.3**	**-0.6**
	2µm,0.5s						
SDI	**San Donato**	**0.82**	**152**	Pg	**Pg**	**20 59 05.4**	**-1.7**
	401nm,0.4s						
SDI	**San Donato**	**0.82**	**152**	Pg	**Pg**	**20 59 05.4**	**-1.7**
	401nm,0.4s						
SNTG	**Esanatoglia**	**0.86**	**342**	Pg	**Pg**	**20 59 06.6**	**-1.2**
	188nm,0.4s						
SNTG	**Esanatoglia**	**0.86**	**342**	Pg	**Pg**	**20 59 06.6**	**-1.2**
	188nm,0.4s						
GIUL	**Giuliano Di Ro**	**0.88**	**182**	Pg	**Pg**	**20 59 06.8**	**-1.4**
	1µm,1.1s						
GIUL	**Giuliano Di Ro**	**0.88**	**182**	Pg	**Pg**	**20 59 06.8**	**-1.4**
	1µm,1.1s						
CING	**Cingoli**	**0.94**	**355**	Pg	**Pg**	**20 59 07.9**	**-1.5**
	563nm,0.3s						
CING	**Cingoli**	**0.94**	**355**	Pg	**Pg**	**20 59 07.9**	**-1.5**
	563nm,0.3s						
RNI2	**Rionero Sannit**	**0.97**	**139**	Pg	**Pg**	**20 59 08.5**	**-1.4**
	606nm,0.5s						
RNI2	**Rionero Sannit**	**0.97**	**139**	Pg	**Pg**	**20 59 08.5**	**-1.4**
	606nm,0.5s						
CERA	**Filignano**	**1.00**	**147**	Pg	**Pg**	**20 59 08.2**	**-2.2**
	705nm,0.8s						
CERA	**Filignano**	**1.00**	**147**	Pg	**Pg**	**20 59 08.2**	**-2.2**
	705nm,0.8s						
MURB	**Monte Urbino**	**1.00**	**325**	Pg	**Pb**	**20 59 09.5**	**-1.1**
	594nm,0.3s						
MURB	**Monte Urbino**	**1.00**	**325**	Pg	**Pb**	**20 59 09.5**	**-1.1**
	594nm,0.3s						
MIDA	**Miranda**	**1.07**	**138**	Pg	**Pb**	**20 59 09.6**	**-2.1**
	492nm,0.6s						
MIDA	**Miranda**	**1.07**	**138**	Pg	**Pb**	**20 59 09.6**	**-2.1**
	492nm,0.6s						
ARVD	**Arcevia**	**1.09**	**346**	Pg	**Pb**	**20 59 10.8**	**-1.3**
	256nm,0.9s						
ARVD	**Arcevia**	**1.09**	**346**	Pg	**Pb**	**20 59 10.8**	**-1.3**
	256nm,0.9s						
AOI	**Ancona**	**1.13**	**11**	Pg	**Pb**	**20 59 11.6**	**-1.2**
	247nm,0.5s						
AOI	**Ancona**	**1.13**	**11**	Pg	**Pb**	**20 59 11.6**	**-1.2**
	247nm,0.5s						
MS1	**Monte Sant'Ang**	**2.10**	**110**	*e*Pn	**Pb**	**20 59 29.2**	**-0.1**
NVLJ	**Novalja**	**2.41**	**28**	*e*Pn	**Pn**	**20 59 29.7**	**-0.8**
NVLJ				Sn	**Sn**	**20 59 59.3**	**-0.7**
NVLJ	**Novalja**	**2.41**	**28**	*e*Pn	**Pn**	**20 59 29.7**	**-0.8**
NVLJ				Sn	**Sn**	**20 59 59.3**	**-0.7**
UDBI	**Udbina**	**2.75**	**40**	*i* Pn	**Pn**	**20 59 35.9**	**+0.6**
UDBI				Sn	**Sn**	**21 00 09.6**	**+1.1**
UDBI	**Udbina**	**2.75**	**40**	*i* Pn	**Pn**	**20 59 35.9**	**+0.6**
UDBI				Sn	**Sn**	**21 00 09.6**	**+1.1**
PGF	**Pioggiola**	**3.18**	**273**	*e*P	**Pn**	**20 59 42.4**	**+1.1**
PGF				*e*Sn	**Sn**	**21 00 16.0**	**-3.3**
	1.4nm,0.3s						
PGF	**Pioggiola**	**3.18**	**273**	*e*P	**Pn**	**20 59 42.4**	**+1.1**
STON	**Ston**	**3.27**	**81**	*e*Pn	**Pn**	**20 59 42.2**	**-0.2**
STON				Sn	**Sn**	**21 00 20.1**	**-1.1**
STON	**Ston**	**3.27**	**81**	*e*Pn	**Pn**	**20 59 42.1**	**-0.2**
STON				Sn	**Sn**	**21 00 20.1**	**-1.1**
PE1	**Pezze di Greco**	**3.49**	**116**	*e*Pn	Pb	20 59 49.1	-3.9
ABTA	**Abfaltersbach**	**4.34**	**353**	⇓ *i* Pn	**Pn**	**20 59 58.3**	**+1.1**
	1.3nm,0.2s						
ABTA				⇓ *i* Sn	**Sn**	**21 00 48.8**	**+0.9**
	24nm,0.8s						
ABTA	**Abfaltersbach**	**4.34**	**353**	Pn	**Pn**	**20 59 58.3**	**+1.1**
	1.3nm,0.2s						
ABTA				Sn	**Sn**	**21 00 48.8**	**+0.9**
	24nm,0.8s						
SOKA	**Soboth**	**4.42**	**16**	⇑ *i* Pn	**Pn**	**20 59 59.7**	**+1.5**
	0.6nm,0.2s						
SOKA				⇑ *e*Sn	**Sn**	**21 00 49.4**	**-0.2**
	1.3nm,0.3s						
SOKA	**Soboth**	**4.42**	**16**	Pn	**Pn**	**20 59 59.7**	**+1.5**
	0.6nm,0.2s						
SOKA				Sn	**Sn**	**21 00 49.4**	**-0.2**
	1.3nm,0.3s						
SBF	**Sospel**	**4.52**	**290**	*e*P	**Pn**	**21 00 00.8**	**+1.1**
SBF				*e*Sn	**Sn**	**21 00 47.6**	**-4.6**
	1.7nm,0.4s						
SBF	**Sospel**	**4.52**	**290**	*e*P	**Pn**	**21 00 00.8**	**+1.1**
BBLS	**Lazići**	**4.69**	**70**	*e*Pn	**Pn**	**21 00 04.1**	**+2.2**
PUK	**Puka**	**4.91**	**92**	*e*PN	**Pn**	**21 00 06.4**	**+1.4**
PUK	**Puka**	**4.91**	**92**	*e*Pn	**Pn**	**21 00 06.4**	**+1.4**
DAVOX	**Davos/Dischmat**	**4.98**	**332**	Pn	**Pn**	**21 00 04.9**	**-1.2**
	0.1nm,0.3s,baz=154,slow=18,SNR=1.8						
DAVOX				Sn	**Sn**	**21 01 06.5**	**+2.9**
	0.3nm,0.3s,baz=232,slow=19,SNR=2.2						
FRF	**La Foret Royal**	**5.01**	**285**	*e*P	**Pn**	**21 00 08.2**	**+1.9**
FRF				*e*Sn	**Sn**	**21 00 58.9**	**-5.2**
	1.2nm,0.4s						
FRF	**La Foret Royal**	**5.01**	**285**	*e*P	**Pn**	**21 00 08.2**	**+1.9**
BCI	**Bajram Curri**	**5.01**	**89**	*e*PN	**Pn**	**21 00 07.9**	**+1.6**
BCI	**Bajram Curri**	**5.01**	**89**	*e*Pn	**Pn**	**21 00 07.9**	**+1.6**
DIVS	**Divibare**	**5.16**	**69**	*e*Pn	**Pn**	**21 00 07.9**	**-0.5**
PHP	**Peshkopia**	**5.37**	**96**	*e*PN	**Pn**	**21 00 12.5**	**+1.3**
PHP	**Peshkopia**	**5.37**	**96**	*e*Pn	**Pn**	**21 00 12.5**	**+1.3**
GRUS	**Gruza**	**5.61**	**73**	*e*Pn	**Pn**	**21 00 14.9**	**+0.4**
LPL	**La Plagne**	**5.65**	**305**	*e*P	Pn	21 00 18.3	+3.0
LPL	**La Plagne**	**5.65**	**305**	*e*P	Pn	21 00 18.3	+3.0
CONA	**Conrad Observa**	**5.78**	**17**	⇓ *i* Pn	**Pn**	**21 00 17.2**	**+0.3**
	0.6nm,0.1s						
CONA	**Conrad Observa**	**5.78**	**17**	Pn	**Pn**	**21 00 17.2**	**+0.3**
	0.6nm,0.1s						
ORIF	**Oris-en-Rattie**	**5.92**	**297**	*e*P	**Pn**	**21 00 20.8**	**+1.9**
ORIF				*e*Sn	**Sn**	**21 01 21.1**	**-5.7**
	1.5nm,0.4s						
ORIF	**Oris-en-Rattie**	**5.92**	**297**	*e*P	**Pn**	**21 00 20.8**	**+1.9**
BARS	**Barje**	**6.29**	**84**	*e*Pn	**Pn**	**21 00 24.4**	**+0.5**
GERES	**GERESS Array B**	**6.41**	**2**	Pn	**Pn**	**21 00 24.0**	**-1.7**
	0.3nm,0.3s,baz=172,slow=12,SNR=6.8						
GERES				Sn	**Sn**	**21 01 36.4**	**-2.4**
	0.7nm,0.3s,baz=182,slow=23,SNR=4.0						
KHC	**Kasperske Hory**	**6.70**	**2**	*e*PN	**Pn**	**21 00 30.1**	**+0.6**
KHC				*ex*	x	21 00 48.5	
KHC				*e*SN	**Sn**	**21 01 43.5**	**-2.2**
KHC				*ex*	x	21 02 05.0	
KHC	**Kasperske Hory**	**6.70**	**2**	Pn	**Pn**	**21 00 30.1**	**+0.6**
HINF	**Hinteralfeld**	**7.05**	**322**	*e*Pn	**Pn**	**21 00 32.1**	**-2.2**
HINF				*e*Sn	Sn	21 01 48.1	-6.3
	2.0nm,0.3s						
CDF	**Champ du Feu**	**7.32**	**327**	*e*Pn	**Pn**	**21 00 37.4**	**-0.7**
CDF				*e*Sn	**Sn**	**21 01 55.2**	**-6.0**
	2.6nm,0.4s						
CDF	**Champ du Feu**	**7.32**	**327**	*e*Pn	**Pn**	**21 00 37.4**	**-0.7**
KEST	**Kesra**	**7.37**	**206**	Pn	Pn	21 00 42.3	+3.5
	0.2nm,0.3s,baz=314,slow=7.8,SNR=7.8						
HAU	**Haudompre**	**7.42**	**321**	*e*Pn	**Pn**	**21 00 37.3**	**-2.1**
HAU				*e*Sn	**Sn**	**21 01 57.8**	**-5.7**
	2.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**30.87**	**202**	P	**P**	**21 05 08.2**	**+0.7**
	0.1nm,0.4s,baz=14,slow=10,SNR=3.0						
MKAR	**Mananchi Array**	**47.87**	**60**	P	**P**	**21 07 31.2**	**+2.2**
	0.2nm,0.6s,baz=280,slow=8.2,SNR=3.7						

*ISCJB **23** 21:03:17.1±0.3,20.°79S±0.°03×68.°96W±0.°07,h118km±5km, mb4.1/7,Error ellipse: s-maj=11.1km s-min=5.3km az=177.4*
*NEIC **23** 21:03:17.9±0.3,20.°77S×68.°88W,h104km±4km,mb4.4/7, Error ellipse: s-maj=7.5km s-min=5.0km az=90.0*
*GUC **23** 21:03:18.0±0.8,20.°84S×69.°24W,h120km±4km,ML4.7*
*IDC **23** 21:03:19.2±0.6,20.°78S×68.°85W,h115km±4km,mb3.9/7, mb1 4.0/10,mb1mx3.8/19,mbtmpg3.9/10,Error ellipse: s-maj=15.9km s-min=14.0km az=83.0*
ISC 23 21:03:18.6±0.5,20.72S±0.°03×68.94W±0.°06,h113km±3km, h113km:pP-P,n62,σ1§62/90,mb4.6/7,16C-2D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
PB01	**Plate Boundary**	**0.61**	**238**	⇑ *i*P	**Pn**		**21 03 35.4**	**-1.3**
PB01				*i* S	**Sn**		**21 03 48.3**	**-1.9**
PB01	**Plate Boundary**	**0.61**	**238**	⇑ *i*P	**Pn**		**21 03 35.4**	**-1.3**
PB01				*i* S	**Sn**		**21 03 48.3**	**-1.9**
PB01				AML	AML		21 03 48.9	
	comp=N,72µm,0.3s							
HMBC	**Humberstone**	**1.00**	**296**	⇑ *i*P	**Pn**		**21 03 39.3**	**-0.8**
HMBC				*i* S	**Sn**		**21 03 54.8**	**-1.6**
HMBC	**Humberstone**	**1.00**	**296**	⇑ *i*P	**Pn**		**21 03 39.3**	**-0.8**
HMBC				*i* S	**Sn**		**21 03 54.8**	**-1.6**
HMBC				AML	AML		21 03 56.9	
	comp=E,23µm,0.4s							
PB09	**Plate Boundary**	**1.11**	**195**	⇑ *i*P	**Pn**		**21 03 40.5**	**-0.9**
PB09				*i* S	**Sn**		**21 03 57.5**	**-1.0**
PB09	**Plate Boundary**	**1.11**	**195**	⇑ *i*P	**Pn**		**21 03 40.5**	**-0.9**
PB09				*i* S	**Sn**		**21 03 57.5**	**-1.0**
PB09				AML	AML		21 03 58.2	
	comp=N,35µm,0.2s							
PB07	**Plate Boundary**	**1.34**	**221**	⇑ *i*P	**Pn**		**21 03 42.3**	**-1.6**
PB07				*i* S	**Sn**		**21 03 59.7**	**-3.3**
PB07	**Plate Boundary**	**1.34**	**221**	⇑ *i*P	**Pn**		**21 03 42.3**	**-1.6**
PB07				*i* S	**Sn**		**21 03 59.7**	**-3.3**
PB07				AML	AML		21 04 00.1	
	comp=N,16µm,0.4s							
PSGC	**Pisagua**	**1.58**	**315**	⇑ *i*P	**Pn**		**21 03 45.9**	**-0.8**
PSGC				*i* S	**Sn**		**21 04 07.1**	**-0.9**
PSGC	**Pisagua**	**1.58**	**315**	⇑ *i*P	**Pn**		**21 03 45.9**	**-0.8**
PSGC				*i* S	**Sn**		**21 04 07.1**	**-0.9**
PSGC				AML	AML		21 04 08.9	
	comp=E,6µm,0.6s							
PB04	**Plate Boundary**	**1.62**	**198**	⇑ *i*P	Pn		21 03 49.4	+2.4
PB04				*i* S	**Sn**		**21 04 12.3**	**+3.7**
PB04	**Plate Boundary**	**1.62**	**198**	⇑ *i*P	Pn		21 03 49.4	+2.4
PB04				*i* S	**Sn**		**21 04 12.3**	**+3.7**
PB04				AML	AML		21 04 15.5	
	comp=N,4µm,0.4s							
MNMC	**Minimini**	**1.70**	**338**	⇑ *i*P	**Pn**		**21 03 49.0**	**+0.7**
MNMC				*i* S	**Sn**		**21 04 13.0**	**+2.1**
MNMC	**Minimini**	**1.70**	**338**	⇑ *i*P	**Pn**		**21 03 49.0**	**+0.7**
MNMC				*i* S	**Sn**		**21 04 13.0**	**+2.1**
MNMC				AML	AML		21 04 14.4	
	comp=N,15µm,0.3s							
LVC	**Limon Verde**	**1.88**	**179**	⇓ *i*P	**Pn**		**21 03 50.1**	**-0.3**
LVC				*i* S	**Sn**		**21 04 14.4**	**-0.4**
LVC	**Limon Verde**	**1.88**	**179**	⇓ *i*P	**Pn**		**21 03 50.1**	**-0.3**
LVC				*i* S	**Sn**		**21 04 14.4**	**-0.4**
LVC	**Limon Verde**	**1.88**	**179**	P	**Pn**		**21 03 49.8**	**-0.7**
	comp=N,53nm,0.3s,baz=20,slow=8.8,SNR=243							
LVC				S	**Sn**		**21 04 13.3**	**-1.5**
	comp=N,237nm,0.3s,baz=328,slow=18,SNR=20							
ARCH	**Arica**	**2.56**	**330**	*e*P	**Pn**		**21 03 58.9**	**0.0**
ARCH	**Arica**	**2.56**	**330**	*e*P	**Pn**		**21 03 58.9**	**0.0**
ARCH				AML	AML		21 04 34.9	
	comp=N,5µm,0.4s							
ANCH	**Antofagasta**	**3.25**	**205**	⇑ *i*P	**Pn**		**21 04 05.4**	**-2.5**
ANCH	**Antofagasta**	**3.25**	**205**	⇑ *i*P	**Pn**		**21 04 05.4**	**-2.5**
LPAZ	**La Paz**	**4.47**	**10**	P	Pn		21 04 28.2	+3.3
LPAZ				S	Sn		21 05 09.9	-6.5
LPAZ	**La Paz**	**4.47**	**10**	P	Pn		21 04 28.2	+3.3
	comp=N,7.6nm,0.3s,baz=199,slow=5.5,SNR=112							
LPAZ				S	Sn		21 05 09.9	-6.5
	comp=N,3.3nm,0.3s,baz=181,slow=7.9,SNR=5.0							
LCO	**Las Campanas**	**8.41**	**191**	*e*Pn	**Pn**		**21 05 15.9**	**-1.9**
LCO				*e*Sn	Sn		21 06 40.9	-10
SIV	**San Ignacio**	**8.82**	**59**	P	**Pn**		**21 05 21.9**	**-1.4**
SIV				S	**Sn**		**21 06 56.0**	**-5.0**
SIV	**San Ignacio**	**8.82**	**59**	P	**Pn**		**21 05 21.9**	**-1.4**
	comp=N,6.7nm,0.3s,baz=259,slow=10.0,SNR=67							
SIV				S	**Sn**		**21 06 56.0**	**-5.0**
	baz=323,slow=21,SNR=3.8							
CFAA	**Coronel Fontan**	**10.86**	**177**	P	Pn		21 05 46.0	-4.7
CFAA				S	Sn		21 07 37.8	-12
CFAA	**Coronel Fontan**	**10.86**	**177**	P	Pn		21 05 46.0	-4.7
	comp=N,0.1nm,0.3s,baz=351,slow=14,SNR=9.8							
CFAA				S	Sn		21 07 37.8	-12
	comp=N,0.2nm,0.3s,baz=111,slow=17,SNR=5.8							
SAML	**Samuel**	**12.95**	**26**	*e*Pn	**Pn**		**21 06 18.1**	**-0.4**
	comp=N,1.7nm,0.6s							
SAML				*e*Sn	**Sn**		**21 08 40.9**	**-0.3**
TRQA	**Tornquist**	**18.30**	**162**	*e*P	**P**		**21 07 23.0**	**-0.7**
	comp=N,9.6nm,0.7s							
PLCA	**Paso Flores**	**20.00**	**184**	*e*P	**P**		**21 07 41.7**	**-0.5**
	comp=N,11nm,1.1s							
PLCA	**Paso Flores**	**20.00**	**184**	P	**P**		**21 07 42.0**	**-0.1**
	comp=N,0.2nm,0.3s,baz=354,slow=12,SNR=11							
SPB	**Sao Paulo**	**20.12**	**102**	*e*P	**P**		**21 07 43.4**	**-0.2**
	comp=N,11nm,0.8s							
BDFB	**Brasilia**	**20.50**	**79**	P	**P**		**21 07 47.6**	**-0.3**
BDFB	**Brasilia**	**20.50**	**79**	P	**P**		**21 07 47.6**	**-0.3**
	comp=N,16nm,0.3s,baz=242,slow=8.6,SNR=21							
RCBR	**Riachuelo**	**35.29**	**70**	*e*P	**P**		**21 10 02.8**	**-0.1**
	comp=N,17nm,0.7s							
RCBR	**Riachuelo**	**35.29**	**70**	P	**P**		**21 10 03.4**	**+0.5**
	comp=N,14nm,0.6s,baz=231,slow=11,SNR=18							
TXAR	**Lajitas Array**	**59.98**	**325**	P	**P**		**21 13 14.1**	**+0.8**
TXAR				pP	**pP**		**21 13 40.8**	**-0.1**
TXAR	**Lajitas Array**	**59.98**	**325**	P	**P**		**21 13 14.1**	**+0.8**
	comp=N,0.2nm,0.6s,baz=155,slow=4.5,SNR=3.4							
TXAR				pP	**pP**		**21 13 40.8**	**-0.1**
	comp=N,0.6nm,0.7s,baz=152,slow=8.1,SNR=4.6							
SNAA	**Sanae**	**63.02**	**161**	*e*P	**P**		**21 13 33.7**	**+0.5**
SNAA				pP	**pP**		**21 14 01.9**	**+1.0**
SNAA	**Sanae**	**63.02**	**161**	P	**P**		**21 13 33.3**	**+0.1**
	comp=N,0.2nm,0.6s,baz=297,slow=16,SNR=2.8							
SNAA				pP	**pP**		**21 14 01.9**	**+1.0**
	comp=N,0.5nm,0.7s,baz=332,slow=3.9,SNR=2.6							
DBIC	**Dimbokro**	**68.54**	**74**	*e*P	**P**		**21 14 09.5**	**+0.1**
	comp=N,6.2nm,0.7s							
DBIC	**Dimbokro**	**68.54**	**74**	P	**P**		**21 14 09.1**	**-0.4**
	comp=N,3.8nm,0.4s,baz=229,slow=4.5,SNR=11							
PDAR	**Pinedale Array**	**73.43**	**330**	pP	pP		21 15 08.7	+1.6
	comp=N,0.5nm,0.7s,baz=134,slow=6.4,SNR=3.2							
NVAR	**Mina Array Bea**	**74.87**	**322**	P	**P**		**21 14 48.2**	**+1.1**
NVAR				pP	**pP**		**21 15 16.8**	**+1.1**
NVAR	**Mina Array Bea**	**74.87**	**322**	P	**P**		**21 14 48.2**	**+1.1**
	comp=N,0.4nm,0.6s,baz=132,slow=3.8,SNR=3.3							
NVAR				pP	**pP**		**21 15 16.8**	**+1.1**
	comp=N,0.9nm,0.7s,baz=165,slow=7.0,SNR=4.1							
TOA0	**Torodi Ar. Sit**	**77.12**	**71**	*e*P	**P**		**21 14 59.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**77.12**	**71**	P	**P**		**21 14 59.7**	**-0.4**
TORD				pP	**pP**		**21 15 29.4**	**+0.5**
TORD				sP	**sP**		**21 15 42.0**	**+1.0**
TORD	**Torodi Ar. Bea**	**77.12**	**71**	P	**P**		**21 14 59.7**	**-0.4**
	comp=N,3.6nm,0.3s,baz=254,slow=5.1,SNR=97							
TORD				pP	**pP**		**21 15 29.4**	**+0.5**
	comp=N,3.8nm,0.6s,baz=251,slow=5.7,SNR=5.4							
TORD				sP	**sP**		**21 15 42.0**	**+1.0**
	comp=N,2.4nm,0.5s,baz=252,slow=5.3,SNR=3.2							
WVOR	**Wild Horse Val**	**77.78**	**325**	*e*P	**P**		**21 15 03.7**	**+0.3**
	comp=N,5.0nm,0.4s							
YKA	**Yellowknife Ar**	**90.45**	**341**	pP	pP		21 16 36.7	+0.3
	comp=N,2.0nm,0.8s,baz=134,slow=4.4,SNR=2.5							
WRA	**Warramunga Arr**	**133.61**	**211**	PKP	**PKPdf**		**21 22 22.6**	**-0.1**
WRA	**Warramunga Arr**	**133.61**	**211**	PKP	**PKPdf**		**21 22 22.6**	**-0.1**
	comp=N,0.4nm,1.0s,baz=154,slow=1.9,SNR=4.5							
KURBB	**Kurchatov Arra**	**140.70**	**33**	pPKP	pPKPdf		21 23 07.5	+2.1
	comp=N,0.4nm,0.7s,baz=295,slow=2.5,SNR=4.4							
ZALV	**Zalesovo Beam**	**141.26**	**25**	PKP	**PKPdf**		**21 22 37.9**	**+2.3**
ZALV				pPKP	**pPKPdf**		**21 23 06.4**	**0.0**
ZALV	**Zalesovo Beam**	**141.26**	**25**	PKP	**PKPdf**		**21 22 37.9**	**+2.3**
	comp=N,0.3nm,0.4s,baz=77,slow=3.1,SNR=2.4							
ZALV				pPKP	**pPKPdf**		**21 23 06.4**	**0.0**
	comp=N,0.8nm,0.6s,baz=301,slow=2.5,SNR=2.8							
MK31	**Makanchi Array**	**145.02**	**35**	*e*PKP	**PKPdf**		**21 22 42.6**	**+0.1**
MKAR	**Makanchi Array**	**145.02**	**35**	PKPbc	**PKPdf**		**21 22 42.8**	**+0.3**
MKAR				pPKPbc	pPKPbc		21 23 13.1	+0.5
MKAR	**Makanchi Array**	**145.02**	**35**	PKPbc	**PKPdf**		**21 22 42.8**	**+0.3**
	comp=N,1.1nm,0.7s,baz=326,slow=4.5,SNR=9.2							
MKAR				pPKPbc	pPKPbc		21 23 13.1	+0.5
	comp=N,0.8nm,0.6s,baz=321,slow=3.1,SNR=4.9							
USRK	**Ussuriysk Arra**	**150.84**	**328**	PKPbc	**PKPbc**		**21 22 58.7**	**+1.0**
	comp=N,0.7nm,0.7s,baz=12,slow=1.6,SNR=3.3							
USRK				pPKPbc	**pPKPbc**		**21 23 29.7**	**+1.3**
	comp=N,1.0nm,0.7s,baz=33,slow=4.5,SNR=3.2							
SONM	**Songino Array**	**152.69**	**7**	PKPbc	**PKPbc**		**21 23 01.2**	**-0.9**
SONM				pPKP	**pPKPdf**		**21 23 23.3**	**-2.5**
SONM				pPKPab	**pPKPab**		**21 23 46.1**	**+3.2**
SONM	**Songino Array**	**152.69**	**7**	PKPbc	**PKPbc**		**21 23 01.2**	**-0.9**
	comp=N,0.4nm,0.5s,baz=296,slow=0.8,SNR=4.2							
SONM				pPKP	**pPKPdf**		**21 23 23.3**	**-2.5**
	comp=N,0.3nm,0.4s,baz=313,slow=1.0,SNR=3.2							
SONM				pPKPab	**pPKPab**		**21 23 46.1**	**+3.2**
	comp=N,0.6nm,0.7s,baz=308,slow=1.9,SNR=3.0				

ARMT	**Armutlu**	**2.58**	**36**	*e*PN	**Pb**	**21**	**26**	**47.2 -1.3**
ARMT	**Armutlu**	**2.58**	**36**	*e*Pn	**Pb**	**21**	**26**	**47.3 -1.3**

IDC 23 21:28:36.0±1.2, 31°.84S × 177°.87W, h0km, mb4.0/3, mb1 4.2/5, mb1mx3.9/20, mbtmp4.1/5, ML4.0/2, MS3.1/1, Ms1 3.1/1, ms1mx2.6/22, Error ellipse: s-maj=35.2km s-min=27.4km az=119.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.58**	**359**	Pn	Pn	21 29 19.0	0.0
	123nm,0.3s,baz=103,slow=21,SNR=9.8						
RAO				Sn	Sn	21 29 49.5	-1.6
	98nm,0.3s,baz=40,slow=21,SNR=3.7						
URZ	**Urewera**	**7.61**	**211**	Pn	Pn	21 30 26.9	-1.3
	0.7nm,0.3s,baz=12,slow=9.3,SNR=4.2						
URZ				Sn	Sn	21 31 51.7	-3.5
	1.5nm,0.3s,baz=175,slow=17,SNR=6.9						
DZM	**Mont Dzumac**	**17.02**	**301**	LR	LR	21 37 32.9	
	comp=Z,68nm,20.6s,baz=19,slow=32						
CTA	**Charters Tower**	**34.16**	**281**	P	P	21 35 24.4	+1.3
	1.2nm,0.3s,baz=87,slow=13,SNR=3.2						
ASAR	**Alice Springs**	**43.16**	**268**	P	P	21 36 38.2	-0.4
	0.7nm,0.7s,baz=106,slow=7.0,SNR=8.0						
WRA	**Warramunga Arr**	**44.28**	**274**	P	P	21 36 47.0	-0.7
	1.1nm,0.3s,baz=114,slow=7.8,SNR=8.9						
MKAR	**Makanchi Array**	**118.78**	**309**	PKP	PKPdf	21 47 25.2	-0.8
	0.2nm,0.7s,baz=22,slow=1.6,SNR=3.5						
KAF	**Kangasniemi**	**145.94**	**340**	*ep*	PKPdf	21 48 15.5	-0.5
	1.3nm,0.5s						
FINES	**FINESS Array B**	**146.53**	**339**	PKPbc	PKPdf	21 48 17.7	+0.7
	1.5nm,0.6s,baz=75,slow=3.6,SNR=15						
NOA	**NORSAR Array B**	**150.19**	**351**	PKPbc	PKPbc	21 48 27.4	-0.8
	0.6nm,0.7s,baz=16,slow=4.2,SNR=3.1						
BRTR	**Keskin Array B**	**153.36**	**296**	PKPbc	PKPbc	21 48 36.1	-0.2
	0.4nm,0.7s,baz=90,slow=3.5,SNR=3.4						
TORD	**Torodi Ar. Bea**	**161.39**	**179**	PKPab	PKPab	21 49 23.8	+0.7
	0.5nm,0.8s,baz=179,slow=2.6,SNR=3.7						

*DDA **23** 21:36:46.4, 38°.55N × 26°.86E, h3km, MD2.8*
*CSEM **23** 21:36:46.3, 38°.55N × 26°.86E, h3km, MD2.8, After DDA*
*ISCJB **23** 21:36:47.2±0.7, 38°.54N±0°.03 × 26°.83E±0°.05, h7km±8km, Error ellipse: s-maj=6.7km s-min=5.0km az=0.3*
ISC 23 21:36:47.1±1.0, 38°.55N±0°.03 × 26°.85E±0°.04, h8km±11km, n13, σ0°.86/26, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLCB	**Balcova**	**0.22**	**137**	*e*PG	**Pg**	**21 36 51.4**	**-0.1**
BLCB				*e*SG	**Sg**	**21 36 54.7**	**+0.2**
URLA	**Izmir**	**0.27**	**228**	*i* P	**Pg**	**21 36 52.1**	**-0.4**
URLA				*i* S	**Sg**	**21 36 56.9**	**+0.7**
URLA	**Izmir**	**0.27**	**228**	*i* P	**Pg**	**21 36 52.1**	**-0.4**
URLA				*i* S	**Sg**	**21 36 56.9**	**+0.7**
AYVA	**Ayvalik**	**0.77**	**351**	*i* P	**Pg**	**21 37 01.5**	**-0.5**
AYVA				*i* S	**Sg**	**21 37 12.6**	**+0.5**
AYVA	**Ayvalik**	**0.77**	**351**	*i* P	**Pg**	**21 37 01.5**	**-0.5**
AYVA				*i* S	**Sg**	**21 37 12.6**	**+0.5**
AKHS	**Akhisar**	**0.82**	**66**	*i* P	**Pn**	**21 37 06.0**	**+0.9**
AKHS				*i* S	**Sb**	**21 37 15.5**	**+0.5**
AKHS	**Akhisar**	**0.82**	**66**	*i* P	**Pn**	**21 37 06.0**	**+0.9**
AKHS				*i* S	**Sb**	**21 37 15.5**	**+0.5**
AYDN	**Tasoluk**	**1.20**	**137**	*i* P	**Pb**	**21 37 10.0**	**-0.1**
AYDN				*i* S	**Sg**	**21 37 25.4**	**-0.3**
AYDN	**Tasoluk**	**1.20**	**137**	*i* P	**Pb**	**21 37 10.0**	**-0.1**
AYDN				*i* S	**Sg**	**21 37 25.4**	**-0.3**
BALY	**Balya**	**1.33**	**26**	*i* P	**Pn**	**21 37 11.1**	**-1.1**
BALY				*i* S	**Sn**	**21 37 31.8**	**+1.6**
BALY	**Balya**	**1.33**	**26**	*i* P	**Pn**	**21 37 11.1**	**-1.1**
BALY				*i* S	**Sn**	**21 37 31.8**	**+1.6**
DURS	**Dursunbey**	**1.65**	**50**	*i* P	**Pb**	**21 37 17.9**	**+0.1**
DURS				*i* S	**Sn**	**21 37 36.5**	**-1.4**
DURS	**Dursunbey**	**1.65**	**50**	*i* P	**Pb**	**21 37 17.9**	**+0.1**
DURS				*i* S	**Sn**	**21 37 36.5**	**-1.4**

*ISCJB **23** 21:51:55.1±0.7, 14°.66N±0°.09 × 51°.48E±0°.05, h10km, mb3.7/14, MS3.1/6, Error ellipse: s-maj=13.5km s-min=5.6km az=160.3*
*IDC **23** 21:51:55.8±1.0, 14°.67N × 51°.64E, h0km, mb3.7/10, mb1 3.8/10, mb1mx3.7/27, mbtmp3.7/10, ML5.3/1, MS3.2/7, Ms1 3.2/7, ms1mx2.9/35, Error ellipse: s-maj=27.0km s-min=21.3km az=170.0*
*DHMR **23** 21:52:00.0±1.5, 14°.10N × 51°.14E, h4km±61km, ML4.4*
ISC 23 21:51:56.2±0.8, 14°.5N±0°.1 × 51°.47E±0°.07, h10km, n25, σ1s65/25, mb3.8/13, MS3.1/6, 1C-3D, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**2.35**	**270**	↓*i*P	**Pn**	**21 52 35.9**	**+1.0**
MUKL				*i* S	**Sb**	**21 53 05.7**	**-2.2**
MUKL				AML	AML	21 53 06.9	
	comp=N,4μm,0.5s						
BDHA	**Al Bayda'**	**5.75**	**266**	↑*i*P	**Pn**	**21 53 24.2**	**+2.4**
BDHA				*i* S	**Sn**	**21 54 28.8**	**+0.9**
LBOS		**6.06**	**265**	↓*i*P	**Pn**	**21 53 28.2**	**+2.0**
LBOS				*i* S	**Sn**	**21 54 35.4**	**-0.4**
TRBA	**At Turbah**	**7.25**	**261**	↓*i*P	**Pn**	**21 53 42.9**	**+0.4**
TRBA				*i* S	**Sn**	**21 55 04.1**	**-1.0**
ATD	**Arta Tunnel**	**8.90**	**252**	Pn	Pn	21 54 10.7	+5.7
	comp=N,32nm,0.3s,baz=56,slow=18,SNR=87						
ATD				LR	LR	21 57 02.1	
	comp=N,96nm,19.3s,baz=26,slow=34						
KBD	**Kabd**	**15.02**	**347**	*e*P	**Pn**	**21 55 27.7**	**-0.8**
NAY	**Al-Naaiem**	**15.19**	**346**	*e*P	**Pn**	**21 55 29.9**	**-1.0**
NAY				AMb	AMB	21 55 40.3	
	comp=Z,17nm,0.8s						
MIB	**Mutribah**	**15.70**	**347**	*e*P	**Pn**	**21 55 35.9**	**-1.6**
MIB				AMb	AMB	21 55 44.4	
	comp=Z,18nm,0.8s						
KMBO	**Kilima Mbogo**	**20.96**	**223**	P	**P**	**21 56 37.7**	**-2.1**
	comp=Z,0.6nm,0.4s,baz=45,slow=4.3,SNR=3.6						
KMBO				LR	LR	22 05 52.8	
	comp=Z,40nm,18.9s,baz=273,slow=40						
MMAI	**Mount Meron Ar**	**23.52**	**324**	LR	LR	22 06 46.3	
	comp=Z,60nm,18.3s,baz=295,slow=38						
GNI	**Garni**	**26.22**	**348**	P	**P**	**21 57 35.6**	**+4.1**
	comp=Z,1.7nm,0.5s,baz=194,slow=0.9,SNR=4.7						
GNI				LR	LR	22 10 06.9	
	comp=Z,43nm,19.3s,baz=81,slow=42						
KBZ	**Khabaz**	**30.04**	**348**	LR	LR	22 12 49.1	
	comp=Z,74nm,19.3s,baz=294,slow=42						
MKAR	**Makanchi Array**	**41.21**	**32**	P	**P**	**21 59 40.2**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=218,slow=8.9,SNR=15						
MKAR				LR	LR	22 17 37.8	
	comp=Z,29nm,18.8s,baz=50,slow=38						
KURBB	**Kurchatov Arra**	**42.17**	**26**	P	**P**	**21 59 48.2**	**-0.6**
	comp=Z,0.3nm,0.6s,baz=230,slow=8.3,SNR=3.9						
CMAR	**Chiang Mai Arr**	**45.60**	**78**	P	**P**	**22 00 16.3**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=275,slow=9.3,SNR=10.0						
ZALV	**Zalesovo Beam**	**47.24**	**26**	P	**P**	**22 00 28.0**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=239,slow=10,SNR=3.6						
TORD	**Torodi Ar. Bea**	**48.27**	**275**	P	**P**	**22 00 38.5**	**+0.6**
	comp=Z,0.5nm,0.9s,baz=89,slow=6.7,SNR=2.5						
FINES	**FINESS Array B**	**50.31**	**344**	P	**P**	**22 00 54.2**	**+1.5**
	comp=Z,2.3nm,0.7s,baz=134,slow=11,SNR=12						
JOF	**Joensuu**	**50.40**	**348**	*ep*	**P**	**22 00 51.4**	**-2.0**
	comp=Z,0.3nm,0.3s						
KAF	**Kangasniemi**	**50.82**	**345**	*ep*	**P**	**22 00 57.5**	**+0.9**
	comp=Z,0.6nm,0.5s						
NOA	**NORSAR Array B**	**54.75**	**337**	LR	LR	22 27 09.8	
	comp=Z,18nm,21.5s,baz=285,slow=39						
SONM	**Songino Array**	**56.02**	**42**	P	**P**	**22 01 33.9**	**-1.4**
	comp=Z,0.8nm,0.9s,baz=237,slow=9.0,SNR=5.4						
ARCES	**ARCESS Array B**	**57.37**	**349**	P	**P**	**22 01 44.7**	**+0.3**
	comp=Z,0.7nm,0.6s,baz=124,slow=6.0,SNR=7.5						
WRA	**Warramunga Arr**	**88.36**	**111**	P	**P**	**22 04 49.7**	**+0.8**
	comp=Z,0.3nm,0.6s,baz=296,slow=4.0,SNR=3.9						
ASAR	**Alice Springs**	**88.99**	**115**	P	**P**	**22 04 53.5**	**+1.7**
	comp=Z,0.3nm,0.6s,baz=273,slow=3.3,SNR=3.0						

*ISCJB **23** 22:08:19.5±0.5, 37°.86N±0°.02 × 27°.53E±0°.04, h3km±6km, Error ellipse: s-maj=5.6km s-min=3.8km az=170.6*
*DDA **23** 22:08:19.2, 37°.83N × 27°.55E, h7km, MD2.9*
*ISK **23** 22:08:19.3, 37°.87N × 27°.51E, h5km, MD2.9*
*CSEM **23** 22:08:19.8±0.2, 37°.85N × 27°.55E, h5km, MD2.9, Error ellipse: s-maj=4.8km s-min=3.3km az=84.0*
ISC 23 22:08:19.6±1.0, 37°.87N±0°.02 × 27°.56E±0°.03, h7km±9km, n36, σ0°.46/50, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.31**	**236**	*i* P	**Pg**	**22 08 25.2**	**-0.4**
GCAM				*i* S	**Sg**	**22 08 28.9**	**-0.8**
GCAM	**G?zelcaml?**	**0.31**	**236**	*i* P	**Pg**	**22 08 25.2**	**-0.4**
GCAM				*i* S	**Sg**	**22 08 28.9**	**-0.8**
AYDN	**Tasoluk**	**0.33**	**129**	*i* P	**Pg**	**22 08 26.4**	**+0.3**
AYDN				*i* S	**Sg**	**22 08 30.7**	**+0.3**
AYDN	**Tasoluk**	**0.33**	**129**	*i* P	**Pg**	**22 08 26.4**	**+0.3**
AYDN				*i* S	**Sg**	**22 08 30.7**	**+0.3**
IZM	**Izmir**	**0.57**	**336**	*e*PG	**Pg**	**22 08 31.3**	**+0.6**
IZM				*e*SG	**Sg**	**22 08 38.2**	**0.0**
IZM	**Izmir**	**0.57**	**336**	*e*Pg	**Pg**	**22 08 31.3**	**+0.6**
IZM				*e*Sg	**Sg**	**22 08 38.2**	**0.0**
MLSB	**Milas**	**0.60**	**163**	*e*PG	**Pg**	**22 08 30.8**	**+0.2**
MLSB				*e*SG	**Sb**	**22 08 41.3**	**+0.2**
MLSB	**Milas**	**0.60**	**163**	*e*Pg	**Pg**	**22 08 30.8**	**-0.3**
MLSB				*e*Sg	**Sb**	**22 08 41.3**	**+0.2**
BLCB	**Balcova**	**0.66**	**322**	*e*PG	**Pg**	**22 08 32.4**	**+0.2**
BLCB	**Balcova**	**0.66**	**322**	*e*Pg	**Pg**	**22 08 32.4**	**+0.2**
BODT	**Bodrum**	**0.83**	**194**	*e*PG	**Pg**	**22 08 35.6**	**+0.1**
BODT				*e*SG	**Sg**	**22 08 46.7**	**+0.4**
BODT	**Bodrum**	**0.83**	**194**	*e*Pg	**Pg**	**22 08 35.6**	**+0.1**
BODT				*e*Sg	**Sg**	**22 08 46.7**	**+0.4**
URLA	**Izmir**	**0.90**	**303**	*i* P	**Pb**	**22 08 37.4**	**-0.2**
URLA	**Izmir**	**0.90**	**303**	*i* P	**Pb**	**22 08 37.4**	**-0.2**
YER	**Yerkesik**	**0.94**	**142**	*e*PG	**Pb**	**22 08 38.1**	**0.0**
YER	**Yerkesik**	**0.94**	**142**	*e*Pg	**Pb**	**22 08 38.1**	**0.0**
MANT	**Manisa**	**1.00**	**52**	*i* P	**Pg**	**22 08 38.1**	**-0.8**
MANT	**Manisa**	**1.00**	**52**	*i* P	**Pg**	**22 08 38.1**	**-0.8**
AKHS	**Akhisar**	**1.03**	**11**	*i* P	**Pb**	**22 08 40.1**	**+0.4**
AKHS				*i* S	**Sn**	**22 08 54.6**	**-0.5**
AKHS	**Akhisar**	**1.03**	**11**	*i* P	**Pb**	**22 08 40.1**	**+0.4**
AKHS				*i* S	**Sn**	**22 08 54.6**	**-0.5**
KULA	**Kula-Manisa**	**1.08**	**53**	*e*PN	**Pg**	**22 08 40.3**	**0.0**
KULA	**Kula-Manisa**	**1.08**	**53**	*e*Pn	**Pg**	**22 08 40.3**	**0.0**
DAT	**Datca**	**1.14**	**179**	*e*PN	**Pg**	**22 08 41.4**	**0.0**
DAT				*e*SN	**Sn**	**22 08 57.7**	**-0.3**
DAT	**Datca**	**1.14**	**179**	*e*Pn	**Pg**	**22 08 41.4**	**0.0**
DAT				*e*Sn	**Sn**	**22 08 57.7**	**-0.3**
DALY	**Dalyan (Mu¨la**	**1.37**	**140**	*e*PN	**Pg**	**22 08 45.9**	**+0.1**
DALY	**Dalyan (Mu¨la**	**1.37**	**140**	*e*Pn	**Pg**	**22 08 45.9**	**+0.1**
DEMI	**Demirci**	**1.48**	**38**	*i* P	**Pg**	**22 08 48.1**	**+0.1**
DEMI	**Demirci**	**1.48**	**38**	*i* P	**Pg**	**22 08 48.1**	**+0.1**
KHL	**Karahalli**	**1.62**	**73**	*e*PN	**Pb**	**22 08 49.8**	**0.0**
KHL	**Karahalli**	**1.62**	**73**	*e*Pn	**Pb**	**22 08 49.8**	**0.0**
BALB	**Balikesir**	**1.79**	**8**	*e*PN	**Pb**	**22 08 52.5**	**0.0**
BALB	**Balikesir**	**1.79**	**8**	*e*Pn	**Pb**	**22 08 52.6**	**0.0**
APE	**Apeiranthos**	**1.80**	**244**	*e*PN	**Pn**	**22 08 51.7**	**+0.6**
APE	**Apeiranthos**	**1.80**	**244**	*e*Pn	**Pn**	**22 08 51.7**	**+0.6**
TVSB	**Tavsanli**	**2.17**	**43**	*e*PN	**Pb**	**22 08 58.0**	**-1.3**
TVSB	**Tavsanli**	**2.17**	**43**	*e*Pn	**Pb**	**22 08 58.0**	**-1.3**

IDC 23 22:17:25.8±0.9, 16°.25S × 168°.04E, h196km±7km, mb3.7/13, mb1 3.9/15, mb1mx3.8/24, mbtmp3.8/15, MS3.3/1, Ms1 3.3/1, ms1mx2.6/26, Error ellipse: s-maj=16.9km s-min=11.9km az=78.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**5.99**	**194**	P	Pn	22 18 52.8	-0.2
	2.1nm,0.3s,baz=20,slow=20,SNR=19						
DZM				S	Sn	22 20 01.3	-0.7
	0.6nm,0.3s,baz=308,slow=20,SNR=10						
HNR	**Honiara**	**10.40**	**310**	P	Pn	22 19 50.5	+0.2
	21nm,0.3s,baz=204,slow=12,SNR=2.9						
HNR				S	S	22 21 47.1	+0.2
	baz=206,slow=14,SNR=1.5						
CTA	**Charters Tower**	**21.05**	**256**	P	P	22 21 55.1	+0.3
	8.9nm,0.8s,baz=78,slow=12,SNR=7.8						
PMG	**Port Moresby**	**21.45**	**286**	P	P	22 21 59.1	0.0
	21nm,0.8s,baz=108,slow=5.4,SNR=4.5						
URZ	**Urewera**	**23.34**	**162**	P	P	22 22 15.4	-1.1
	7.1nm,0.8s,baz=330,slow=8.1,SNR=3.4						
URZ				LR	LR	22 29 14.4	
	comp=Z,77nm,19.0s,baz=356,slow=30						
RPZ	**Rata Peaks**	**27.50**	**175**	P	P	22 22 55.0	+0.9
	7.7nm,0.6s,baz=270,slow=4.0,SNR=4.3						
STKA	**Stephens Creek**	**28.62**	**232**	P	P	22 23 04.1	0.0
	3.9nm,0.9s,baz=60,slow=5.3,SNR=5.0						
STKA				pP	pP	22 23 45.3	+1.4
	3.0nm,1.1s,baz=12,slow=12,SNR=2.3						
WRA	**Warramunga Arr**	**32.21**	**258**	P	P	22 23 34.4	-1.5
	2.2nm,0.8s,baz=88,slow=8.9,SNR=27						
ASAR	**Alice Springs**	**32.86**	**251**	P	P	22 23 40.9	-0.7
	13nm,0.8s,baz=76,slow=8.9,SNR=126						
ASAR				pP	pP	22 24 22.6	+0.8
	4.8nm,0.9s,baz=82,slow=8.9,SNR=3.4						
ASAR				S	S	22 28 43.0	-1.6
	0.8nm,0.9s,baz=77,slow=17,SNR=4.2						
MJAR	**Matsushiro Arr**	**59.59**	**332**	P	P	22 27 08.3	-0.7
	1.2nm,0.5s,baz=161,slow=8.8,SNR=4.7						
MJAR				pP	pP	22 27 53.3	-0.6
	1.0nm,0.4s,baz=238,slow=3.4,SNR=2.7						
VNDA	**Vanda**	**61.37**	**182**	P	P	22 27 21.1	+0.6
	1.4nm,0.7s,baz=0.2,slow=7.4,SNR=12						
USRK	**Ussuriysk Arra**	**68.56**	**333**	P	P	22 28 08.9	+1.6
	0.7nm,0.5s,baz=142,slow=7.4,SNR=3.5						
SONM	**Songino Array**	**84.15**	**323**	P	P	22 29 35.9	+0.8
	0.6nm,0.5s,baz=135,slow=6.3,SNR=5.9						
SONM				pP	pP	22 30 18.7	-4.2
	1.2nm,0.9s,baz=142,slow=6.1,SNR=2.9						
NVAR	**Mina Array Bea**	**87.70**	**49**	pP	pP	22 30 40.5	-0.6
	0.2nm,0.3s,baz=218,slow=5.7,SNR=3.1						
ILAR	**Eielson Array**	**87.73**	**18**	P	P	22 29 50.2	-1.8
	0.3nm,0.7s,baz=225,slow=5.0,SNR=3.4						
ILAR				pP	pP	22 30 36.2	-4.1
	1.4nm,0.8s,baz=230,slow=6.1,SNR=8.8						
MKAR	**Makanchi Array**	**98.81**	**316**	P	Pdif	22 30 44.9	+1.6
	0.2nm,0.6s,baz=76,slow=6.1,SNR=2.8						
MKAR				pP	pP	22 31 27.8	-4.2
	0.1nm,0.6s,baz=130,slow=4.3,SNR=2.4						
ARCES	**ARCESS Array B**	**121.90**	**345**	PKP	PKPdf	22 35 56.0	-0.1
	1.3nm,1.0s,baz=53,slow=2.2,SNR=8.3						
ARCES				pPKP	pPKPdf	22 36 45.6	-1.3
	0.7nm,0.6s,baz=120,slow=2.0,SNR=1.9						
TORD	**Torodi Ar. Bea**	**166.44**	**259**	PKP	PKPdf	22 37 06.8	-1.8
	0.4nm,0.9s,baz=119,slow=3.1,SNR=2.6						
TORD				pPKP	pPKPdf	22 37 59.0	-0.8
	0.3nm,0.7s,baz=159,slow=0.3,SNR=1.6						

IDC 23 23:10:00.6±4.0, 5°.51S × 153°.58E, h0km, mb3.8/7, mb1 3.9/7, mb1mx3.8/20, mbtmp3.8/7, Error ellipse: s-maj=130.9km s-min=25.1km az=112.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.58**	**231**	P	P	23 15 12.5	-0.7
	0.9nm,0.5s,baz=55,slow=10.0,SNR=13						
ASAR	**Alice Springs**	**26.17**	**224**	P	P	23 15 37.2	+0.1
	0.5nm,0.5s,baz=57,slow=9.1,SNR=6.2						
FITZ	**Fitzroy Crossi**	**30.01**	**243**	P	P	23 16 12.5	+1.1
	0.7nm,0.4s,baz=56,slow=7.8,SNR=2.5						
SONM	**Songino Array**	**67.34**	**328**	P	P	23 20 58.1	+0.4
	0.2nm,0.3s,baz=133,slow=6.3,SNR=3.4						
MKAR	**Makanchi Array**	**81.37**	**319**	P	P	23 22 19.4	0.0
	0.5nm,0.8s,baz=105,slow=7.3,SNR=5.3						
ZALV	**Zalesovo Beam**	**82.17**	**326**	P	P	23 22 23.2	-0.2
	0.5nm,0.3s,baz=116,slow=5.8,SNR=5.1						
BVAR	**Borovoye Array**	**90.27**	**323**	P	P	23 23 03.2	-0.2
	0.8nm,0.6s,baz=101,slow=4.6,SNR=7.5						
TORD	**Torodi Ar. Bea**	**151.26**	**287**	PKPbc	PKPbc	23 29 57.8	+0.5
	0.5nm,0.4s,baz=60,slow=2.8,SNR=4.6						
TORD				PKPab	PKPab	23 30 03.2	-1.9
	0.6nm,0.8s,baz=73,slow=2.8,SNR=5.7						

JMA 23 23:27:53.9, 39°.17N × 140°.85E, h6km±1km, M3.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JRG	**Rokugo**	**0.28**	**323**	P	Pg	23 27 59.7	+0.3
JRG				*e*S	Sg	23 28 03.8	+0.6
JMK	**Ichinoseki**	**0.36**	**127**	P	Pg	23 28 00.8	-0.1
JMK				S	Sg	23 28 05.6	-0.1
JOM	**Ohasama**	**0.46**	**48**	P	Pg	23 28 02.8	0.0
JOM				S	Sg	23 28 08.8	0.0
JYK	**Kaneyama**	**0.46**	**237**	P	Pg	23 28 02.8	0.0
JYK				S	Sg	23 28 09.0	+0.2
JIO	**Ouri**	**0.81**	**151**	P	Pg	23 28 09.0	-0.5
JIO				S	Sg	23 28 20.0	-0.1
JOU	**Okura**	**0.82**	**190**	P	Pg	23 28 09.6	0.0
WRA	**Warramunga Arr**	**59.12**	**187**	P	P	23 37 53.8	-1.4
	0.3nm,0.8s,baz=3.6,slow=7.2,SNR=3.3						

*JMA **23** 23:28:27.4±0.1, 36°.68N × 141°.25E, h46km±2km, M3.3*
*IDC **23** 23:28:27.9±2.0, 34°.23N × 138°.31E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.3/27, mbtmp3.3/4, ML3.2/1, Error ellipse: s-maj=61.3km s-min=22.7km az=83.0*
ISC 23 23:28:27.8±2.5, 36°.70N±0°.07 × 141°.2E±0°.1, h30km±12km, n12, σ0°89/20, 3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.52**	**320**	↓P	**Pb**	**23 28 38.9**	**+0.3**
ONAJ				S	**Sn**	**23 28 46.9**	**-0.2**
JHO	**Hitachi**	**0.53**	**260**	↓P	**Pb**	**23 28 38.9**	**+0.3**
JHO				S	**Sn**	**23 28 47.2**	**0.0**
JFK	**Kawauchi**	**0.72**	**338**	↓P	**Pn**	**23 28 41.3**	**-0.6**
JFK				S	**Sb**	**23 28 51.4**	**0.0**
JYT	**Yasato**	**0.95**	**240**	P	**Pn**	**23 28 44.6**	**-0.5**
JYT				S	**Sn**	**23 28 57.3**	**-0.3**
JFT	**Otama**	**1.07**	**320**	P	**Pb**	**23 28 47.7**	**-0.1**
JFT				S	**Sb**	**23 29 01.7**	**+0.2**
JMM	**Marumori**	**1.21**	**344**	*e*S	**Sn**	**23 29 03.8**	**-0.3**
JFY	**Yanaizu**	**1.40**	**301**	P	**Pn**	**23 28 51.7**	**+0.4**
JFY				*e*S	**Sn**	**23 29 08.8**	**0.0**
JAG	**Ashikaga**	**1.45**	**259**	P	**Pn**	**23 28 52.4**	**+0.5**
MJAR	**Matsushiro Arr**	**2.42**	**267**	Pn	**Pn**	**23 29 06.7**	**+1.3**
	5.8nm,0.3s,baz=118,slow=9.4,SNR=18						
MJAR				Sn	**Sb**	**23 29 38.5**	**-1.7**
	3.2nm,0.3s,baz=126,slow=27,SNR=4.7						
MAT	**Matsushiro**	**2.42**	**267**	P	**Pn**	**23 29 07.5**	**+2.1**
MAT				S	**Sb**	**23 29 38.7**	**-1.5**
SONM	**Songino Array**	**27.84**	**305**	P	**P**	**23 34 15.1**	**+0.4**
	0.8nm,0.9s,baz=120,slow=10,SNR=4.1						
MKAR	**Makanchi Array**	**44.16**	**302**	P	**P**	**23 36 33.4**	**-0.3**
	0.1nm,0.5s,baz=81,slow=9.2,SNR=3.1						

*ISCJB **23** 23:34:42.6±0.8, 41°.28N±0°.07 × 22°.79E±0°.05, h8km, Error ellipse: s-maj=9.5km s-min=5.2km az=4.8*
*ATH **23** 23:34:43.5, 41°.27N × 22°.71E, h30km±4km, MD3.0/4*
*SKO **23** 23:34:43.5, 41°.32N × 22°.71E, h15km, M0.7, ML1.0*
*CSEM **23** 23:34:43.5, 41°.27N × 22°.71E, h30km, MD3.0, After ATH*
ISC 23 23:34:43.6±1.1, 41°.26N±0°.05 × 22°.71E±0°.03, h8km, n9, σ0°19/16, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.12**	**301**	*i* Pg	**Pg**	**23 34 46.3**	**0.0**
VAY				*i* Sg	**Sg**	**23 34 48.1**	**-0.2**
VAY				*i* Lg	Lg	23 34 48.2	
	comp=E,42nm,0.3s						
VAY				*i* Lg	Lg	23 34 48.4	
	comp=N,137nm,0.2s						
GRG	**Griva**	**0.38**	**218**	*e*PB	**Pb**	**23 34 52.8**	**+0.2**
GRG				*e*SB	**Sb**	**23 34 58.6**	**-0.1**
GRG	**Griva**	**0.38**	**218**	*e*Pb	**Pb**	**23 34 52.8**	**+0.2**
GRG				*e*Sb	**Sb**	**23 34 58.6**	**-0.1**
SOH	**Sokhos**	**0.66**	**132**	*e*PN	**Pb**	**23 34 57.4**	**+0.1**
SOH				*e*SN	**Sb**	**23 35 06.8**	**+0.2**
SOH	**Sokhos**	**0.66**	**132**	*e*Pn	**Pb**	**23 34 57.4**	**+0.1**
SOH				*e*Sn	**Sb**	**23 35 06.8**	**+0.2**
NVR	**Nevrokopi**	**0.87**	**84**	*e*PN	**Pg**	**23 35 00.5**	**+0.1**
NVR				*e*SN	**Sb**	**23 35 12.6**	**-0.3**
NVR	**Nevrokopi**	**0.87**	**84**	*e*Pn	**Pg**	**23 35 00.5**	**+0.1**
NVR				*e*Sn	**Sb**	**23 35 12.6**	**-0.3**
PLG	**

BARS	**Barje**	**1.68**	**336**	*e*Sg	**Sn**	**00 29 15.0**	**-0.2**
PLD	**Plovdiv**	**1.69**	**60**	*e*Pn	**Pb**	**00 28 54.5**	**-0.1**
PLD				*e*Sg	**Sg**	**00 29 19.6**	**+2.3**
PLD	**Plovdiv**	**1.69**	**60**	*e*Pn	**Pb**	**00 28 54.5**	**-0.1**
ZAPS	**Zavoj**	**2.00**	**358**	*e*Pn	**Pb**	**00 29 00.1**	**+0.3**
ZAPS				*e*Sg	**Sg**	**00 29 26.7**	**-0.4**
NEO	**Neokhori**	**2.00**	**169**	*e*PN	**Pn**	**00 28 57.7**	**+0.1**
NEO	**Neokhori**	**2.00**	**169**	*e*Pn	**Pn**	**00 28 57.7**	**+0.1**
MPEP	**Malo Peshtene**	**2.21**	**19**	P	**Pb**	**00 29 04.1**	**+0.7**
ALN	**Alexandroupoli**	**2.53**	**98**	*e*PN	**Pn**	**00 29 05.4**	**+0.6**
ALN	**Alexandroupoli**	**2.53**	**98**	*e*Pn	**Pn**	**00 29 05.4**	**+0.6**

*IDC **24** 00:41:40.0±19.0, 41.°61N×143.°63E, h0km, mb3.8/7, mb1 3.8/7, mb1mx3.5/27, mbtmp3.8/7, Error ellipse: s-maj=437.3km s-min=60.9km az=163.0*

*ISCJB **24** 00:41:53.0±0.8, 42.°29N±0.°09×143.°04E±0.°09, h72km±5km, mb3.6/7, Error ellipse: s-maj=15.2km s-min=9.5km az=158.0*

*JMA **24** 00:41:54.9±0.1, 42.°33N×143.°00E, h52km±1km, M3.3*

JMA Felt I J1.

ISC 24 00:41:53.9±1.1, 42°29N±0.°08×143°02E±0.°06, h62km±8km, n16, σ0°72/20, mb3.8/7, 3C-2D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.20**	**267**	⇑P			**Pn**	**00 42 03.2**	**-0.4**
JEM	**Erimo**	**0.29**	**160**	⇑P			**Pn**	**00 42 04.6**	**+0.4**
JCH	**Churui**	**0.41**	**38**	⇑P			**Pn**	**00 42 05.0**	**-0.2**
JCH				*e*S			**Sn**	**00 42 13.1**	**-0.3**
JBT2	**Biratori 2**	**0.69**	**315**	⇓P			**Pn**	**00 42 08.2**	**0.0**
JOB	**Onbets**	**0.86**	**44**	P			**Pn**	**00 42 11.1**	**+0.9**
JOB				*e*S			**Sn**	**00 42 23.9**	**+1.7**
JFR	**Furan**	**0.93**	**340**	P			**Pn**	**00 42 10.5**	**-0.7**
JAR	**Ashorobuto**	**1.15**	**28**	P			**Pn**	**00 42 14.0**	**0.0**
JAR				*e*S			**Sn**	**00 42 28.2**	**-0.7**
JEW	**Eniwo**	**1.28**	**296**	⇓P			**Pn**	**00 42 16.3**	**+0.5**
JEW				*e*S			**Sn**	**00 42 33.4**	**+1.2**
JAB	**Ashibetsu**	**1.35**	**334**	P			**Pn**	**00 42 17.4**	**+0.8**
SONM	**Songino Array**	**26.29**	**295**	P			**P**	**00 47 22.9**	**-0.6**
	0.3nm,0.4s,baz=79,slow=8.3,SNR=4.1								
ZALV	**Zalesovo Beam**	**39.48**	**308**	P			**P**	**00 49 18.1**	**+0.2**
	0.7nm,0.4s,baz=93,slow=7.7,SNR=4.0								
MKAR	**Makanchi Array**	**42.58**	**298**	P			**P**	**00 49 43.5**	**0.0**
	0.3nm,0.5s,baz=83,slow=9.1,SNR=5.0								
KURBB	**Kurchatov Arra**	**43.92**	**304**	P			**P**	**00 49 54.3**	**+0.1**
	0.9nm,0.2s,baz=77,slow=8.6,SNR=5.5								
BVAR	**Borovoye Array**	**48.06**	**309**	P			**P**	**00 50 27.2**	**+0.3**
	0.5nm,0.5s,baz=80,slow=8.9,SNR=5.0								
FINES	**FINESS Array B**	**64.76**	**332**	P			**P**	**00 52 25.0**	**-0.3**
	0.5nm,0.5s,baz=54,slow=7.5,SNR=6.3								
HFS	**Hagfors**	**69.81**	**336**	P			**P**	**00 52 56.7**	**-0.7**
	0.8nm,0.6s,baz=52,slow=5.7,SNR=5.9								

*IDC **24** 00:58:18.8±0.8, 13.°93N×120.°79E, h103km±8km, mb3.6/13, mb1 3.6/13, mb1mx3.5/28, mbtmp3.6/13, Error ellipse: s-maj=38.8km s-min=14.7km az=64.0*

*ISCJB **24** 00:58:19.8±0.5, 13.°97N±0.°10×120.°59E±0.°06, h120km, mb3.9/13, Error ellipse: s-maj=14.5km s-min=7.6km az=16.2*

*MAN **24** 00:58:19, 13.°97N×120.°29E, h44km, mb4.4, ML3.3, MS3.1*

ISC 24 00:58:21.1±0.7, 14°1N±0.°1×120°57E±0.°09, h120km, n31, σ2°8/32, mb3.7/13, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TGY	**Tagaytay City**	**0.36**	**81**	⇑*i*P			Pn	00 58 34.7	-3.6
TGY				*i* S			**Sn**	**00 58 46.5**	**-4.9**
TGY	**Tagaytay City**	**0.36**	**81**	P			Pn	00 58 34.8	-3.6
	2μm,0.3s,baz=262,slow=1.7,SNR=73								
TGY				S			**Sn**	**00 58 45.9**	**-5.5**
	9μm,0.3s,baz=180,slow=20,SNR=76								
LQP	**Lukban**	**0.95**	**86**	*e*P			**Pn**	**00 58 40.8**	**-2.0**
GQP	**Guinayangan**	**1.83**	**94**	⇓*e*P			**Pn**	**00 58 52.4**	**0.0**
GQP				*e*S			**Sn**	**00 59 17.8**	**+1.4**
SCZP	**Santa Cruz**	**1.83**	**340**	*e*P			Pn	00 58 48.7	-3.8
SCZP				*e*S			**Sn**	**00 59 11.3**	**-5.2**
BALP	**Baler**	**1.95**	**30**	*e*P			**Pn**	**00 58 53.9**	**0.0**
BOLP	**Bolinao**	**2.41**	**345**	*e*P			**Pn**	**00 58 57.6**	**-2.0**
CMAR	**Chiang Mai Arr**	**21.21**	**285**	P			**P**	**01 02 59.0**	**+1.6**
	3.2nm,0.6s,baz=92,slow=7.9,SNR=16								
TAPN	**Taplejung**	**33.35**	**299**	*e*P			**P**	**01 04 49.1**	**+0.8**
ODAN	**Odare**	**33.48**	**298**	*e*P			**P**	**01 04 51.1**	**+1.7**
	29nm,0.4s								
RAMN	**Ramite**	**34.19**	**297**	*e*P			**P**	**01 04 56.9**	**+1.4**
	32nm,0.7s								
GUN	**Gumba**	**35.06**	**299**	*e*P			**P**	**01 05 04.3**	**+1.2**
	39nm,0.4s								
PKI	**Pulchoki**	**35.37**	**298**	*e*P			**P**	**01 05 06.3**	**+0.5**
	53nm,0.9s								
PKIN	**Phulchoki**	**35.39**	**298**	*e*P			**P**	**01 05 06.3**	**+0.5**
	21nm,0.4s								
KKN	**Kakani**	**35.54**	**298**	*e*P			**P**	**01 05 07.7**	**+0.6**
	19nm,0.6s								
DMN	**Daman**	**35.64**	**298**	*e*P			**P**	**01 05 08.7**	**+0.7**
	15nm,0.4s								
SONM	**Songino Array**	**35.69**	**344**	P			**P**	**01 05 09.6**	**+1.7**
	4.2nm,0.6s,baz=164,slow=10,SNR=42								
WRA	**Warramunga Arr**	**36.39**	**158**	P			**P**	**01 05 11.4**	**-2.7**
	0.5nm,0.8s,baz=333,slow=10,SNR=3.4								
KOLN	**Koldanda**	**36.98**	**298**	*e*P			**P**	**01 05 20.1**	**+0.8**
	12nm,0.7s								
DANN	**Dangsing**	**36.98**	**299**	*e*P			**P**	**01 05 20.0**	**+0.6**
	37nm,0.7s								
ASAR	**Alice Springs**	**39.69**	**161**	P			**P**	**01 05 40.0**	**-1.7**
	0.3nm,0.5s,baz=341,slow=7.1,SNR=6.1								
MKAR	**Makanchi Array**	**45.68**	**323**	P			**P**	**01 06 31.6**	**+1.7**
	0.9nm,0.6s,baz=124,slow=9.4,SNR=10.0								
ZALV	**Zalesovo Beam**	**48.69**	**333**	P			**P**	**01 06 53.9**	**+0.9**
	0.9nm,0.3s,baz=133,slow=6.7,SNR=4.6								
KURBB	**Kurchatov Arra**	**49.83**	**326**	P			**P**	**01 07 02.5**	**+0.7**
	0.9nm,0.4s,baz=124,slow=8.1,SNR=9.0								
BVAR	**Borovoye Array**	**55.41**	**326**	P			**P**	**01 07 44.5**	**+1.6**
	3.3nm,0.5s,baz=106,slow=8.6,SNR=26								
AKTO	**Aktyubinsk**	**61.87**	**320**	P			**P**	**01 08 28.8**	**+1.2**
	1.1nm,0.4s,baz=86,slow=8.9,SNR=5.6								
ARCES	**ARCESS Array B**	**78.72**	**339**	P			**P**	**01 10 10.8**	**+1.0**
	0.9nm,0.9s,baz=76,slow=6.4,SNR=3.6								
BRTR	**Keskin Array B**	**78.83**	**308**	P			**P**	**01 10 11.4**	**+0.2**
	0.5nm,0.7s,baz=64,slow=6.6,SNR=3.4								
FINES	**FINESS Array B**	**79.92**	**331**	P			**P**	**01 10 16.5**	**0.0**
	0.4nm,0.5s,baz=47,slow=3.9,SNR=7.8								
NB2	**NORSAR Subarra**	**86.89**	**333**	P			**P**	**01 10 52.0**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=67,slow=5.1								
NOA	**NORSAR Array B**	**86.89**	**333**	P			**P**	**01 10 52.1**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=67,slow=5.0,SNR=4.3								

*NIED **24** 01:32:00, 27.°90N×128.°50E, h89km, Mw4.5 Best double couple: M0 6.42000×10^15 NP1:φs 133.00000°, δ77.00000°, λ-127.00000°. NP2:φs 27.00000°, δ39.00000°, λ-21.00000°.*

*SZGRF **24** 01:32:08.3, 28.°37N×129.°49E, h33km, mb5.2, Ryukyu Islands, Japan*

*BJI **24** 01:32:11.7, 27.°68N×128.°67E, h94km, mB4.5/18, mb4.4/30*

*MOS **24** 01:32:14.5±1.0, 27.°93N×128.°43E, h94km, mb4.7/49, Error ellipse: s-maj=9.5km s-min=4.8km az=109.6*

*ISCJB **24** 01:32:14.8±0.2, 27.°94N±0.°03×128.°45E±0.°03, h95km±2km, mb4.6/134, Error ellipse: s-maj=5.6km s-min=3.0km az=135.1*

*JMA **24** 01:32:15.9±0.1, 28.°00N×128.°42E, h83km±2km, M4.4*

JMA Felt I J1.

*NEIC **24** 01:32:15.7±0.5, 27.°88N×128.°36E, h95km±4km, mb4.7/51, MW4.5(NIED), Error ellipse: s-maj=5.8km s-min=4.2km az=141.0*

NEIC Felt at Chatan, Okinawa. Recorded [1 JMA] on Kakeroma-jima, Okino-erabu-shima, Toku-no-shima and Uke-jima.

*IDC **24** 01:32:16.6±1.7, 27.°97N×128.°39E, h101km±14km, mb4.3/24, mb1 4.4/28, mb1mx4.4/32, mbtmp4.3/28, MS3.1/8, Ms1 3.1/8, ms1mx2.9/29, Error ellipse: s-maj=14.4km s-min=12.3km az=124.0*

ISC 24 01:32:16.0±0.4, 27°90N±0.°03×128°47E±0.°04, h97km±2km, h97km:pP-P, n476, σ1°10/527, mb4.7/146, 70C-82D, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
JTK	**Tokunoshima**	**0.45**	**105**	P			**Pn**	**01 32 30.2**	**-0.9**
JTK				S			**Sn**	**01 32 40.6**	**-1.7**
JAMN	**Amaminishikomi**	**0.71**	**61**	P			**Pn**	**01 32 31.9**	**-1.3**
JAMN				S			**Sn**	**01 32 43.9**	**-2.2**
JIH	**Iheya**	**0.97**	**207**	P			**Pn**	**01 32 36.0**	**+0.1**
JIH				S			**Sn**	**01 32 50.4**	**-0.4**
JOW	**Kunigami**	**1.08**	**189**	*e*Pn			**Pn**	**01 32 36.9**	**-0.1**
JOW				*e*Sn			**Sn**	**01 32 50.6**	**-2.4**
JOW	**Kunigami**	**1.08**	**189**	P			**Pn**	**01 32 37.0**	**-0.1**
JOW				S			**Sn**	**01 32 52.6**	**-0.4**
JAM	**Amami Oshima**	**1.13**	**63**	P			**Pn**	**01 32 36.6**	**-1.0**
JAM				S			**Sn**	**01 32 51.8**	**-2.1**
JZK	**Kikaishima**	**1.39**	**73**	P			**Pn**	**01 32 40.7**	**0.0**
JZK				S			**Sn**	**01 32 59.6**	**+0.1**
JAGN	**Aguni-jima**	**1.70**	**220**	P			**Pn**	**01 32 44.8**	**+0.2**
JAGN				S			**Sn**	**01 33 06.4**	**0.0**
JJT2	**Tamagusuku 2**	**1.87**	**200**	P			**Pn**	**01 32 47.6**	**+0.8**
JJT2				S			**Sn**	**01 33 11.0**	**+0.8**
JKE	**Kume jima 2**	**2.17**	**224**	P			**Pn**	**01 32 50.8**	**+0.1**
JKE				S			**Sn**	**01 33 16.9**	**-0.3**
JNN	**Nakanoshima**	**2.29**	**32**	P			**Pn**	**01 32 51.6**	**-0.7**
JNN				S			**Sn**	**01 33 17.9**	**-2.2**
JKC	**Kuchinoerabu**	**2.96**	**30**	P			**Pn**	**01 33 01.0**	**-0.2**
JKC				S			**Sn**	**01 33 34.0**	**-2.0**
JTN	**Tanegashima 3**	**3.51**	**38**	P			**Pn**	**01 33 08.6**	**+0.1**
JTN				S			**Sn**	**01 33 46.2**	**-3.0**
JNU	**Nakatsue**	**5.60**	**21**	*e*Pn			**Pn**	**01 33 37.9**	**+1.0**
JNU				S			**Sn**	**01 34 41.0**	**+1.0**
JNU	**Nakatsue**	**5.60**	**21**	P			**Pn**	**01 33 38.1**	**+1.2**
	10nm,0.3s,baz=196,slow=5.4,SNR=57								
JNU				S			**Sn**	**01 34 41.0**	**+1.0**
	3.5nm,0.3s,baz=212,slow=9.7,SNR=3.0								
JNU				LR			LR	01 35 16.4	
	comp=Z,167nm,21.3s,baz=126,slow=32								
TATO	**Taipei**	**6.90**	**247**	*e*Pn			**Pn**	**01 33 54.5**	**0.0**
YHNB	**Yeheng**	**7.13**	**245**	*e*Pn			**Pn**	**01 33 58.3**	**+0.5**
	247nm,0.6s								
NACB	**Ninganchiao**	**7.21**	**241**	*e*Pn			**Pn**	**01 33 56.9**	**-1.9**
YULB	**Yu-li**	**7.87**	**237**	*e*Pn			Pn	01 34 03.8	-4.0
	42nm,0.3s								
SSLB	**Suanglung**	**7.91**	**240**	*e*Pn			**Pn**	**01 34 05.9**	**-2.4**
TWG	**Pinlang**	**8.38**	**235**	*e*Pn			Pn	01 34 10.3	-4.4
TPUB	**Ta-pu**	**8.43**	**239**	*e*Pn			**Pn**	**01 34 13.1**	**-2.2**
	69nm,0.5s								
NJ2	**Nanjing**	**9.30**	**299**	*e*P			Pn	01 34 29.8	+2.6
NJ2				pmax			pmax		
	comp=Z,30nm,0.6s								
KSAR	**Wonju Array Be**	**9.53**	**357**	P			**Pn**	**01 34 31.3**	**+1.1**
KSRS	**Korea Array**	**9.54**	**357**	P			**Pn**	**01 34 31.3**	**+1.0**
	comp=Z,1.2nm,0.3s,baz=176,slow=14,SNR=84								
MJAR	**Matsushiro Arr**	**11.92**	**41**	P			Pn	01 35 12.2	+10
MJAR	**Matsushiro Arr**	**11.92**	**41**	P			Pn	01 35 12.2	+10
	comp=Z,1.6nm,0.3s,baz=230,slow=9.4,SNR=45								
MJAR				LR			LR	01 39 39.8	
	comp=Z,88nm,20.7s,baz=195,slow=37								
DL2	**Dalian**	**12.37**	**334**	*e*P			**P**	**01 35 17.8**	**+1.2**
DL2				*e*S			S	01 37 34.4	-11
DL2				pmax			pmax		
	comp=Z,38nm,0.9s								
DL2				pmax			pmax		
	comp=Z,66nm,5.9s								
VLA	**Vladivostok**	**15.43**	**9**	*i* P			**P**	**01 35 49.3**	**-1.3**
VLA				pmax			pmax		
	comp=Z,25nm,0.7s								
BJT	**Baijiatuau**	**15.79**	**323**	*e*Pn			**Pn**	**01 35 52.8**	**0.0**
	comp=Z,36nm,0.6s								
BJI	**Beijing**	**15.81**	**323**	P			**P**	**01 35 55.8**	**+1.0**
BJI				S			**S**	**01 38 52.1**	**-3.8**
BJI				pmax			pmax		
	comp=Z,53nm,0.6s								
CN2	**Changchun**	**16.05**	**352**	*e*P			**P**	**01 35 56.5**	**-0.9**
USRK	**Ussuriysk Arra**	**16.51**	**9**	P			**Pn**	**01 36 01.5**	**-0.1**
	comp=Z,0.4nm,0.3s,baz=193,slow=12,SNR=8.8								
MDJ	**Mudanjiang**	**16.70**	**3**	P			**Pn**	**01 36 03.8**	**-0.2**
MDJ				pP			**pP**	**01 36 24.3**	**+1.4**
MDJ				sP			**sP**	**01 36 36.1**	**+0.9**
MDJ				S			**Sn**	**01 39 09.8**	**+0.6**
MDJ				PcP			**PcP**	**01 40 47.8**	**+0.4**
MDJ				pmax			pmax		
	comp=Z,7.0nm,1.4s								
MDJ				pmax			pmax		
	comp=Z,62nm,3.4s								
MDJ				LR			LR		
	comp=E,100nm,29.4s								
MDJ				LR			LR		
	comp=Z,100nm,35.1s								
XAN	**Xi'an**	**17.83**	**295**	P			**Pn**	**01 36 18.6**	**+0.7**
XAN				pP			**pP**	**01 36 34.6**	**-0.9**
XAN				sP			**sP**	**01 36 46.8**	**-1.0**
XAN				S			**Sn**	**01 39 31.4**	**-5.2**
XAN				pmax			pmax		
	comp=Z,5.0nm,0.6s								
HHC	**Hu-ho-hao-te**	**18.97**	**317**	*e*P			**P**	**01 36 28.4**	**-1.3**
HHC				pP			**pP**	**01 36 45.3**	**-2.8**
HHC				sP			**sP**	**01 36 58.6**	**-1.8**
HHC				pmax			pmax		
	comp=Z,26nm,1.1s								
HHC				pmax			pmax		
	comp=Z,120nm,5.1s								
HHC				LR			LR		
	comp=N,240nm,5.8s								
HHC				LR			LR		
	comp=E,240nm,6.4s								
HHC				LR			LR		
	comp=Z,200nm,6.7s								
GYA	**Guiyang**	**19.45**	**271**	*e*P			**P**	**01 36 35.8**	**+0.7**
GYA				pP			**pP**	**01 36 51.3**	**-2.2**
GYA				sP			**sP**	**01 37 05.4**	**-0.4**
GYA				S			**S**	**01 40 03.3**	**-6.6**
GYA				PcP			**PcP**	**01 40 53.4**	**+0.9**
GYA				ScP			**ScP**	**01 44 20.1**	**+0.3**
GYA				pmax			pmax		
	comp=Z,10.0nm,0.8s								
GYA				pmax			pmax		
	comp=Z,90nm,4.6s								
ASAJ	**Asahikawa**	**19.76**	**31**	P			**P**	**01 36 39.0**	**+0.8**
ASAJ	**Asahikawa**	**19.76**	**31**	P			**P**	**01 36 39.0**	**+0.8**
	comp=Z,0.7nm,0.3s,baz=307,slow=13,SNR=3.6								
ASAJ				LR			LR	01 43 48.0	
	comp=Z,74nm,21.7s,baz=101,slow=35								
DAV	**Davao City (W)**	**20.90**	**188**	LR			LR	01 44 29.0	
	comp=Z,39nm,18.7s,baz=288,slow=35								
CD2	**Chengdu**	**21.72**	**284**	*e*P			**P**	**01 36 58.4**	**-1.0**
CD2				pP			**pP**	**01 37 17.9**	**-0.4**
CD2				PP			**PnPn**	**01 37 26.5**	**+1.1**
CD2				sP			**sP**	**01 37 30.0**	**-0.4**
CD2				S			S	01 40 46.9	-7.4
CD2				pmax			pmax		
	comp=Z,10.0nm,1.1s								
CD2				pmax			pmax		
	comp=Z,30nm,4.8s								
CD2				LR			LR		
	comp=N,120nm,10.8s								
CD2				LR			LR		
	comp=Z,130nm,11.2s								
YSS	**Yuzh-Sakhalins**	**22.08**	**27**	*e*P			**P**	**01 37 03.1**	**+0.1**
LZH	**Lanzhou**	**22.38**	**298**	*e*P			**P**	**01 37 04.5**	**-1.9**
LZH				pP			**pP**	**01 37 27.0**	**+1.6**
LZH				sP			**sP**	**01 37 35.0**	**-2.5**
LZH				S			S	01 40 58.0	-7.9
LZH				pmax			pmax		
	comp=Z,13nm,1.0s								
LZH				pmax			pmax		
	comp=Z,64nm,4.0s								
KMI	**Kunming**	**23.17**	**269**	P			**P**	**01 37 11.8**	**-2.8**
KMI				pmax			pmax		
	comp=Z,17nm,0.5s								
SDKM	**Sandakan**	**24.59**	**208**	P			**P**	**01 37 26.5**	**-0.8**
KKM	**Kota Kinabalu**	**24.66**	**210**	*e*P			**P**	**01 37 26.8**	**-1.1**
	comp=Z,30nm,1.1s								
KKM	**Kota Kinabalu**	**24.66**	**210**	P			**P**	**01 37 27.3**	**-0.5**
ULN	**Ulaanbaatar**	**25.98**	**326**	*e*P			**P**	**01 37 39.9**	**+0.2**
	comp=Z,3.3nm,0.7s								
SONM	**Songino Array**	**26.29**	**325**	P			**P**	**01 37 42.5**	**+0.1**
SONM				PcP			**PcP**	**01 41 05.9**	**-0.4**
SONM				ScP			**ScP**	**01 44 37.6**	**+0.3**
SONM	**Songino Array**	**26.29**	**325**	P			**P**	**01 37 42.5**	**+0.1**
	comp=Z,1.2nm,0.4s,baz=137,slow=9.2,SNR=13								
SONM				PcP			**PcP**	**01 41 05.9**	**-0.4**
	comp=Z,0.4nm,0.4s,baz=150,slow=1.5,SNR=3.6								
SONM				ScP			**ScP**	**01 44 37.6**	**+0.3**
	comp=Z,0.7nm,0.9s,baz=132,slow=2.1,SNR=4.0								
GTA	**Gaotai**	**26.36**	**303**	P			**P**	**01 37 44.5**	**+1.3**
GTA				pP			**pP**	**01 38 05.9**	**+1.2**
GTA				sP			**sP**	**01 38 17.6**	**+1.5**
GTA				S			**S**	**01 42 11.1**	**+1.8**
GTA				sS			**sS**	**01 42 48.3**	**+1.3**
GTA				SS			**SnSn**	**01 43 28.8**	**+8.6**
GTA				pmax			pmax		
	comp=Z,13nm,1.2s								
GTA				pmax			pmax		
	comp=Z,48nm,5.7s								
GTA				LR			LR		
	comp=N,62nm,16.1s								
GTA				LR			LR		
	comp=E,63nm,15.2s								
GTA				LR			LR		
	comp=Z,65nm,14.3s								
CHTO	**Chiang Mai**	**28.51**	**258**	*e*P			**P**	**01 38 01.6**	**-0.8**
CHTO				pmax			pmax		
	comp=Z,9.0nm,0.8s								
CHTO	**Chiang Mai**	**28.51**	**258**	*e*P			**P**	**01 38 01.6**	**-0.8**
	comp=Z,8.6nm,0.8s								
BTM	**Bintulu**	**28.62**	**214**	P			**P**	**01 38 03.0**	**-0.4**
CMAR	**Chiang Mai Arr**	**28.66**	**257**	P			**P**	**01 38 03.9**	**+0.1**
CMAR	**Chiang Mai Arr**	**28.66**	**257**	P			**P**	**01 38 03.9**	**+0.1**
	comp=Z,3.3nm,0.8s,baz=52,slow=6.8,SNR=8.1								
TLY	**Talaya**	**30.18**	**329**	*e*P			**P**	**01 38 18.0**	**+1.1**
TLY				pmax			pmax		
	comp=Z,2.0nm,0.6s								
TLY				MLR			MLR		
	comp=Z,34nm,17.0s								
PETK	**Petropavlovsk-**	**33.17**	**33**	P			**P**	**01 38 42.0**	**-1.1**
PETK				pmax			pmax		
	comp=Z,5.0nm,0.9s								
PETK				MLR			MLR		
	comp=Z,12nm,18.5s								
PETK	**Petropavlovsk-**	**33.17**	**33**	P			**P**	**01 38 42.0**	**-1.1**
PETK	**Petropavlovsk-**	**33.17**	**33**	P			**P**	**01 38 42.0**	**-1.1**
	comp=Z,5.4nm,0.9s,baz=225,slow=6.5,SNR=7.0								
PETK				LR			LR	01 54 10.4	
	comp=Z,12nm,18.5s,baz=145,slow=40								
HVS	**Khovu-Aksy**	**34.96**	**321**	*i* P			**P**	**01 38 57.8**	**-0.9**
HVS				pmax			pmax		
	comp=Z,5.0nm,0.4s								
TAPN	**Taplejung**	**36.00**	**279**	*e*P			**P**	**01 39 07.9**	**-0.2**
WMQ	**Urumqi**	**36.26**	**307**	*e*P			**P**	**01 39 11.1**	**+1.2**
WMQ				pP			**pP**	**01 39 33.0**	**+0.9**
WMQ				pmax			pmax		
	comp=Z,7.0nm,0.5s								
WMQ				pmax			pmax		
	comp=Z,110nm,3.5s								
WMQ				LR			LR		
	comp=Z,210nm,29.8s								
ODAN	**Odare**	**36.37**	**278**	*e*P			**P**	**01 39 11.9**	**+0.7**
	comp=Z,20nm,0.3s								
GUN	**Gumba**	**37.49**	**280**	*e*P			**P**	**01 39 22.2**	**+1.3**
	comp=Z,8.7nm,0.4s								
PKI	**Pulchoki**	**37.96**	**280**	*e*P			**P**	**01 39 25.5**	**+0.7**
	comp=Z,9.0nm,0.5s								
PKIN	**Phulchoki**	**37.97**	**280**	*e*P			**P**	**01 39 26.4**	**+1.6**
	comp=Z,6.7nm,0.3s								
SRBI	**Singaraja**	**38.00**	**202**	S			P	01 39 34.6	+10
KKN	**Kakani**	**38.04**	**280**	*e*P			**P**	**01 39 26.9**	**+1.6**
	comp=Z,8.3nm,0.3s								
WSI	**Waingapu**	**38.18**	**193**	P			P	01 39 36.8	+11
IGBI	**Denpasar**	**38.71**	**201**	S			**P**	**01 39 28.3**	**-2.4**
DANN	**Dangsing**	**39.26**	**282**	*e*P			**P**	**01 39 36.8**	**+1.2**
	comp=Z,14nm,0.4s								
KOLN	**Koldanda**	**39.50**	**281**	*e*P			**P**	**01 39 39.2**	**+1.7**
	comp=Z,5.5nm,0.4s								
MK31	**Makanchi Array**	**40.60**	**310**	*i* P			**P**	**01 39 44.5**	**-1.6**
MK31				pmax			pmax		
	comp=Z,2.0nm,0.6s								
MK31	**Makanchi Array**	**40.60**	**310**	*e*P			**P**	**01 39 46.3**	**+0.2**
MK31				*e*PcP			**PcP**	**01 41 46.3**	**-0.1**
MKAR	**Makanchi Array**	**40.60**	**310**	P			**P**	**01 39 44.6**	**-1.5**
MKAR								01 41 46.5	
MKAR				pmax			pmax		
	comp=Z,3.0nm,0.7s								
MKAR				pmax			pmax		
	comp=Z,2.0nm,0.7s								
MKAR				pmax			pmax		
	comp=N,1.0nm,0.7s								
MKAR	**Makanchi Array**	**40.60**	**310**	P			**P**	**01 39 44.6**	**-1.5**
MKAR				PcP			**PcP**	**01 41 46.5**	**+0.1**
MKAR				ScP			**ScP**	**01 45 26.9**	**-0.2**
MKAR	**Makanchi Array**	**40.60**	**310**	P			**P**	**01 39 44.6**	**-1.5**
	comp=N,2.7nm,0.7s,baz=92,slow=9.8,SNR=30								
MKAR				PcP			**PcP**	**01 41 46.5**	**+0.1**
	comp=N,1.7nm,0.7s,baz=78,slow=3.5,SNR=9.2								
MKAR				ScP			**ScP**	**01 45 26.9**	**-0.2**
	comp=N,0.6nm,0.7s,baz=101,slow=3.8,SNR=3.8								
**ZAA

comp=Z,33nm,20.9s,baz=253,slow=37
BRVK Borovoye 49.25 317 *d iP* **P 01 40 54.5 0.0**
BRVK pmax pmax
comp=Z,14nm,0.7s
BRVK Borovoye 49.25 317 *eP* **P 01 40 54.6 0.0**
comp=Z,17nm,0.8s
BRVK *ePcP* **PcP 01 42 15.7 -0.4**
ASAR Alice Springs 51.54 174 P **P 01 41 13.1 +1.0**
ASAR Alice Springs 51.54 174 P **P 01 41 13.1 +1.0**
comp=Z,1.5nm,0.5s,baz=359,slow=9.3,SNR=21
AB31 Akbulak array 55.67 312 *i* P **P 01 41 41.7 -0.3**
AB31 pmax pmax
comp=Z,5.0nm,0.5s
ABKAR Akbulak array 55.67 312 *eP* **P 01 41 41.9 -0.1**
comp=Z,7.7nm,0.7s
ARU Arti 56.22 321 *d iP* **P 01 41 45.2 -0.6**
ARU 01 42 40.6
ARU 01 43 50.2
ARU S **S 01 49 28.4 +0.6**
ARU pmax pmax
comp=Z,13nm,1.2s
CHGN Chignik 58.01 39 *eP* **P 01 41 57.3 -1.1**
RSO Redoubt South 60.68 34 *eP* **P 01 42 17.3 +0.3**
comp=Z,99nm,0.9s
PPLA Purkeypile 60.74 31 *eP* **P 01 42 17.8 +0.5**
comp=Z,15nm,0.6s
KDAK Kodiak Island 61.06 37 *eP* **P 01 42 19.2 -0.1**
comp=Z,24nm,0.8s
KDAK Kodiak Island 61.06 37 P **P 01 42 19.2 -0.1**
comp=Z,26nm,0.6s,baz=298,slow=2.6,SNR=25
COLD Coldfoot 61.27 26 *eP* **P 01 42 20.8 +0.2**
comp=Z,7.7nm,0.6s
TRF Thorofare Moun 61.55 30 *eP* **P 01 42 22.2 -0.6**
comp=Z,6.6nm,0.8s
MCK McKinley 62.12 30 *eP* **P 01 42 26.1 -0.3**
MCK pmax pmax
comp=Z,62nm,1.2s
MCK McKinley 62.12 30 *eP* **P 01 42 26.1 -0.3**
comp=Z,62nm,1.2s
PMR Palmer 62.30 32 *eP* **P 01 42 27.0 -0.6**
PMR pmax pmax
comp=Z,32nm,1.2s
PMR Palmer 62.30 32 *eP* **P 01 42 26.9 -0.6**
comp=Z,32nm,1.2s
COLA College 62.45 29 *eP* **P 01 42 28.7 +0.2**
COLA pmax pmax
comp=Z,16nm,0.8s
COLA College 62.45 29 *eP* **P 01 42 28.7 +0.2**
comp=Z,16nm,0.8s
SML Sawmill 62.65 32 *eP* **P 01 42 29.8 -0.2**
SML pmax pmax
comp=Z,6.0nm,0.9s
SML Sawmill 62.65 32 *eP* **P 01 42 29.8 -0.2**
comp=Z,5.6nm,0.9s
ILAR Eielson Array 62.87 29 P **P 01 42 30.4 -1.0**
ILAR Eielson Array 62.87 29 P **P 01 42 30.4 -1.0**
comp=Z,6.5nm,0.7s,baz=276,slow=6.6,SNR=70
DIV Divide 63.98 33 *eP* **P 01 42 39.1 +0.4**
comp=Z,35nm,1.0s
DOT Dot Lake 64.28 30 *eP* **P 01 42 40.1 -0.5**
comp=Z,23nm,0.9s
EGAK Eagle 65.28 28 *eP* **P 01 42 46.8 -0.3**
APA Apatity 66.43 335 *⇑eP* **P 01 42 53.0 -1.4**
APA *i* 01 43 23.0
APA pmax pmax
comp=Z,13nm,0.9s
APA MLR MLR
comp=Z,200nm,30.0s
INK Inuvik 67.28 24 P **P 01 42 59.9 +0.1**
INK Inuvik 67.28 24 P **P 01 42 59.9 +0.1**
comp=Z,12nm,0.5s,baz=296,slow=6.5,SNR=31
PNL Peninsula 67.40 33 *eP* **P 01 43 01.1 +0.4**
comp=Z,13nm,0.8s
GOF Gofitskoye 67.76 310 *eP* **P 01 43 03.6 +0.3**
KEV Kevo 67.96 338 *eP* **P 01 43 03.3 -0.8**
KEV pmax pmax
comp=Z,7.0nm,0.5s
KEV Kevo 67.96 338 *ep* **P 01 43 03.3 -0.8**
comp=Z,6.6nm,0.5s
KBZ Khabaz 68.27 309 P **P 01 43 07.6 +1.2**
KBZ pmax pmax
comp=Z,6.0nm,0.9s
KBZ Khabaz 68.27 309 P **P 01 43 07.6 +1.2**
KBZ Khabaz 68.27 309 P **P 01 43 07.6 +1.2**
comp=Z,6.1nm,0.9s,baz=101,slow=3.0,SNR=10
KIV Kislovodsk 68.34 309 *eP* **P 01 43 07.6 +0.5**
KIV pmax pmax
comp=Z,11nm,1.0s
ARCES ARCESS Array B 68.53 338 P **P 01 43 06.9 -0.8**
ARCES ARCESS Array B 68.53 338 P **P 01 43 06.9 -0.8**
comp=Z,4.0nm,0.8s,baz=65,slow=8.3,SNR=20
ARCES LR LR 02 15 41.3
comp=Z,19nm,20.0s,baz=39,slow=38
JOF Joensuu 68.69 331 *eP* **P 01 43 08.6 -0.1**
JOF pmax pmax
comp=Z,5.0nm,0.5s
JOF Joensuu 68.69 331 *ep* **P 01 43 08.6 -0.1**
comp=Z,5.3nm,0.5s
KAF Kangasniemi 71.14 331 *eP* **P 01 43 22.8 -1.0**
KAF pmax pmax
comp=Z,9.0nm,0.7s
KAF Kangasniemi 71.14 331 *ep* **P 01 43 22.8 -1.0**
comp=Z,9.2nm,0.7s
FIA1 FINESS Array S 71.52 330 *eP* **P 01 43 25.2 -0.8**
FINES FINESS Array B 71.52 330 P **P 01 43 25.6 -0.4**
FINES FINESS Array B 71.52 330 P **P 01 43 25.6 -0.4**
comp=Z,8.8nm,0.5s,baz=65,slow=5.7,SNR=93
DLBC Dease Lake 72.36 33 P **P 01 43 32.1 +0.9**
DLBC Dease Lake 72.36 33 P **P 01 43 32.1 +0.9**
comp=Z,3.0nm,0.5s,baz=324,slow=22,SNR=5.7
VSU Vasula 72.45 327 *i* P **P 01 43 31.0 -0.7**
VSU pmax pmax
comp=Z,24nm,0.9s
MALT Malatya 73.32 305 *⇑*P P 01 43 45.5 +8.1
MALT Malatya 73.32 305 *⇑iP* P 01 43 45.5 +8.1
AKASG Malin Array Be 74.40 319 *ceP* **P 01 43 42.4 -0.8**
AKASG pmax pmax
comp=Z,3.0nm,0.4s
AKASG Malin Array Be 74.40 319 P **P 01 43 42.2 -1.0**
AKASG Malin Array Be 74.40 319 P **P 01 43 42.2 -1.0**
comp=Z,3.0nm,0.4s,baz=60,slow=6.2,SNR=6.7
AK01 Malin Array Si 74.41 319 *eP* **P 01 43 42.4 -0.9**
KIEV Kiev 74.41 319 *eP* **P 01 43 42.2 -1.1**
KIEV pmax pmax
comp=Z,2.0nm,0.4s
KIEV Kiev 74.41 319 *eP* **P 01 43 42.2 -1.1**
comp=Z,2.1nm,0.4s
BR131 Keskin Array S 76.18 308 *eP* **P 01 43 53.7 -0.1**
comp=Z,3.3nm,0.7s
BRTR Keskin Array B 76.18 308 P **P 01 43 54.0 +0.1**
BRTR Keskin Array B 76.18 308 P **P 01 43 54.0 +0.1**
comp=Z,3.7nm,0.7s,baz=97,slow=4.8,SNR=26
SUW Suwalki 76.22 324 *eP* **P 01 43 53.4 -0.2**
SUW Suwalki 76.22 324 *eP* **P 01 43 53.3 -0.3**
YKW3 Yellowknife Ar 76.88 25 *eP* **P 01 43 57.3 +0.1**
YKA Yellowknife Ar 76.93 25 P **P 01 43 57.7 +0.3**
YKA Yellowknife Ar 76.93 25 P **P 01 43 57.7 +0.3**
comp=Z,14nm,0.9s,baz=299,slow=5.6,SNR=31
NB2 NORSAR Subarra 77.91 334 P **P 01 44 01.8 -1.2**
comp=Z,8.2nm,0.8s,baz=52,slow=5.6
NOA NORSAR Array B 77.91 334 P **P 01 44 02.1 -0.9**
NOA NORSAR Array B 77.91 334 P **P 01 44 02.1 -0.9**
comp=Z,5.1nm,0.7s,baz=52,slow=5.6,SNR=36
NOA LR LR 02 23 22.3
comp=Z,9.8nm,19.2s,baz=295,slow=39
VRI Vrincioaia 78.04 316 *⇓*P **P 01 44 05.3 +1.3**
VRI Vrincioaia 78.04 316 *⇓iP* **P 01 44 05.3 +1.3**
PLOR Plostina 78.09 316 *⇑*P **P 01 44 05.8 +1.5**
PLOR Plostina 78.09 316 *⇑iP* **P 01 44 05.8 +1.5**
BUR08 Bucovina Ar. S 78.13 318 *eP* **P 01 44 04.7 +0.1**
BURAR Bucovina Array 78.14 318 *⇓iP* **P 01 44 06.3 +1.7**
NAO01 NORSAR Array S 78.16 334 *eP* **P 01 44 03.8 -0.6**
comp=Z,1.6nm,0.6s
CSS Prodhromos 78.43 303 *eP* **P 01 44 06.4 0.0**
comp=Z,6.5nm,0.7s
KWP Kalwaria Pacla 78.61 320 *⇑*P **P 01 44 07.6 +0.5**
KWP Kalwaria Pacla 78.61 320 *eP* **P 01 44 07.4 +0.4**
comp=Z,7.0nm,0.6s
KWP Kalwaria Pacla 78.61 320 *⇑iP* **P 01 44 07.6 +0.5**
KWP Kalwaria Pacla 78.61 320 *eP* **P 01 44 07.7 +0.6**
MLR Muntele Rosu 78.70 316 *⇑iP* **P 01 44 09.0 +1.2**
KOLS Kolonicke sedl 79.21 320 *eP* **P 01 44 10.4 0.0**
KOLS pmax pmax
comp=Z,2.0nm,0.9s
KOLS Kolonicke sedl 79.21 320 *eP* **P 01 44 10.3 -0.1**

SUMG Summit 79.39 356 *⇓iP* **P 01 44 11.0 -0.4**
SUMG pmax pmax
comp=Z,8.0nm,0.8s
SUMG Summit 79.39 356 *⇓iP* **P 01 44 11.0 -0.4**
comp=Z,7.5nm,0.8s
STHS Stebnicka Huta 79.55 321 *eP* **P 01 44 12.9 +0.7**
STHS pmax pmax
comp=Z,6.0nm,1.8s
STHS Stebnicka Huta 79.55 321 *eP* **P 01 44 12.9 +0.7**
SCO Scoresbysund 79.64 350 *i P* **P 01 44 12.2 0.0**
SCO pmax pmax
comp=Z,4.0nm,0.8s
SCO Scoresbysund 79.64 350 *i* P **P 01 44 12.2 0.0**
comp=Z,3.9nm,0.8s
CRVS Cervenica-Dubn 79.69 320 *eP* **P 01 44 13.7 +0.8**
CRVS pmax pmax
comp=Z,6.0nm,1.1s
CRVS Cervenica-Dubn 79.69 320 *eP* **P 01 44 13.7 +0.8**
OJC Ojcow 79.93 322 *⇓iP* **P 01 44 14.5 +0.3**
OJC Ojcow 79.93 322 *i P* **P 01 44 14.5 +0.3**
DRGR 80.03 318 *⇓*P **P 01 44 15.6 +0.7**
DRGR 80.03 318 *⇓iP* **P 01 44 15.6 +0.7**
NIE Niedzica 80.07 321 *eP* **P 01 44 16.7 +1.7**
NIE Niedzica 80.07 321 *eP* **P 01 44 16.7 +1.7**
OKC Ostrava-Krasne 81.04 322 *eP* **P 01 44 20.7 +0.6**
OKC Ostrava-Krasne 81.04 322 *eP* **P 01 44 20.7 +0.6**
PSZ Piszkesteto 81.09 320 *eP* **P 01 44 20.7 +0.1**
PSZ pmax pmax
comp=Z,5.0nm,0.9s
PSZ Piszkesteto 81.09 320 *eP* **P 01 44 20.7 +0.1**
comp=Z,4.6nm,0.9s
VYHS Vyhne 81.38 321 *eP* **P 01 44 22.8 +0.8**
VYHS pmax pmax
comp=Z,5.0nm,0.9s
VYHS Vyhne 81.38 321 *eP* **P 01 44 22.8 +0.8**
MORC Moravsky Berou 81.40 322 *⇑*P **P 01 44 21.5 -0.6**
MORC Moravsky Berou 81.40 322 *eP* **P 01 44 21.2 -0.9**
comp=Z,5.0nm,1.0s
MORC Moravsky Berou 81.40 322 *⇑iP* **P 01 44 21.5 -0.6**
KSP Ksiaz 81.47 324 *eP* **P 01 44 23.1 +0.7**
KSP Ksiaz 81.47 324 *eP* **P 01 44 22.9 +0.5**
MUD Monsted U'grnd 81.56 331 *i P* **P 01 44 22.8 +0.1**
MUD pmax pmax
comp=Z,12nm,1.0s
MUD Monsted U'grnd 81.56 331 *i* P **P 01 44 22.8 +0.1**
comp=Z,12nm,1.0s
DPC Dobruska-Polom 81.73 323 *eP* **P 01 44 24.3 +0.4**
DPC Dobruska-Polom 81.73 323 *eP* **P 01 44 24.3 +0.4**
UPC Upice 81.81 323 *eP* **P 01 44 24.6 +0.4**
UPC Upice 81.81 323 *eP* **P 01 44 24.6 +0.4**
VTS Vitosha 81.84 314 *⇓*P **P 01 44 25.8 +1.1**
VTS Vitosha 81.84 314 *⇓iP* **P 01 44 25.8 +1.1**
VRAC Vranov 82.17 322 *⇑iP* **P 01 44 25.6 -0.6**
PVCC Panska Ves 82.56 324 *eP* **P 01 44 28.8 +0.7**
PVCC Panska Ves 82.56 324 *eP* **P 01 44 28.8 +0.7**
BSEG Bad Segeberg 82.61 328 *eP* **P 01 44 29.1 +0.8**
comp=Z,24nm,0.9s
BSEG Bad Segeberg 82.61 328 *eP* **P 01 44 29.1 +0.8**
BRG Berggiesshubel 82.68 324 *eP* **P 01 44 29.0 +0.3**
comp=Z,3.3nm,0.6s
BRG Berggiesshubel 82.68 324 *eP* **P 01 44 29.0 +0.3**
BRG pmax pmax
comp=Z,3.0nm,0.6s
PRU Pruhonice 82.88 324 *eP* **P 01 44 28.6 -1.2**
PRU Pruhonice 82.88 324 *eP* **P 01 44 28.6 -1.2**
CLL Collm 82.90 325 *eP* **P 01 44 30.4 +0.5**
comp=Z,12nm,0.6s
CLL Collm 82.90 325 *⇓iP* **P 01 44 30.1 +0.2**
CLL pmax pmax
comp=Z,25nm,1.4s
CLL Collm 82.90 325 *⇓iP* **P 01 44 30.1 +0.2**
comp=Z,25nm,1.4s
FBE Freiberg 82.95 325 *eP* **P 01 44 31.1 +1.0**
comp=Z,10.0nm,0.8s
CONA Conrad Observa 83.35 321 *⇓iPcP* **P 01 44 32.9 +0.5**
comp=Z,13nm,0.9s
NEUB Neuenburg 83.58 326 *eP* **P 01 44 34.1 +0.8**
comp=Z,36nm,0.9s
NRDL Niedersach Rie 83.61 327 *eP* **P 01 44 34.2 +0.8**
comp=Z,10.0nm,1.0s
TANN Tannbergstha 83.71 325 *eP* **P 01 44 34.7 +0.6**
comp=Z,7.0nm,1.0s
WERD Werda 83.77 325 *eP* **P 01 44 35.0 +0.6**
comp=Z,10.0nm,1.0s
GUNZ Gunzen 83.81 325 *eP* **P 01 44 35.4 +0.8**
comp=Z,17nm,0.9s
NKC Novy Kostel 83.83 325 *eP* **P 01 44 35.2 +0.5**
NKC Novy Kostel 83.83 325 *eP* **P 01 44 35.2 +0.5**
WERN Wernitzgruen 83.83 325 *eP* **P 01 44 35.5 +0.8**
comp=Z,19nm,1.0s
CLZ Clausthal 83.88 327 *eP* **P 01 44 36.1 +1.1**
comp=Z,38nm,0.9s
CLZ Clausthal 83.88 327 *eP* **P 01 44 36.1 +1.1**
CLZ pmax pmax
comp=Z,111nm,0.9s
KHC Kasperske Hory 83.89 323 *eP* **P 01 44 35.6 +0.5**
KHC Kasperske Hory 83.89 323 *eP* **P 01 44 35.6 +0.5**
ARSA Arzberg 83.93 321 *⇓ePcP* **P 01 44 36.9 +1.7**
comp=Z,4.8nm,0.8s
GEC2 GERESS Array S 84.00 323 *eP* **P 01 44 36.2 +0.5**
comp=Z,10.0nm,1.2s
GEC2 GERESS Array S 84.00 323 *eP* **P 01 44 36.2 +0.5**
GEC2 pmax pmax
comp=Z,47nm,1.2s
GERES GERESS Array B 84.00 323 P **P 01 44 36.0 +0.4**
GERES GERESS Array B 84.00 323 P **P 01 44 36.0 +0.4**
comp=Z,4.6nm,0.8s,baz=57,slow=4.9,SNR=19
MOX Moxa 84.00 325 *eP* **P 01 44 36.1 +0.6**
comp=Z,7.0nm,0.8s
MOX Moxa 84.00 325 *eP* **P 01 44 36.1 +0.6**
MOX pmax pmax
comp=Z,65nm,0.8s
NEW Newport 84.15 38 *eP* **P 01 44 36.7 +0.3**
comp=Z,10nm,1.1s
NEW Newport 84.15 38 *⇑*P **P 01 44 37.0 +0.6**
baz=84,SNR=8.3
MANZ Manzenberg 84.15 324 *eP* **P 01 44 37.1 +0.8**
comp=Z,13nm,1.0s
ROTZ Rotzenmuhle 84.23 324 *eP* **P 01 44 37.9 +1.2**
comp=Z,20nm,0.9s
WET Wettzell 84.26 323 *eP* **P 01 44 37.7 +0.8**
comp=Z,7.0nm,1.1s
WET Wettzell 84.26 323 *eP* **P 01 44 37.7 +0.8**
WET pmax pmax
comp=Z,72nm,1.1s
SOKA Soboth 84.53 321 *⇓iPcP* **P 01 44 38.8 +0.4**
comp=Z,6.7nm,1.0s
A12A Yaak River Ran 84.54 37 *⇑*P **P 01 44 39.0 +0.6**
baz=84
UBBA Unterbreizbach 84.70 326 *eP* **P 01 44 39.7 +0.8**
comp=Z,5.0nm,0.8s
GRF Grafenberg Arr 84.78 325 *eP* **P 01 44 40.7 +1.2**
comp=Z,25nm,1.3s
GRF Grafenberg Arr 84.78 325 *eP* **P 01 44 40.7 +1.2**
GRF pmax pmax
comp=Z,156nm,1.3s
GRFO Grafenberg 84.79 325 *eP* **P 01 44 40.3 +0.8**
GRFO pmax pmax
comp=Z,24nm,1.3s
GRFO Grafenberg 84.79 325 *eP* **P 01 44 40.3 +0.8**
comp=Z,24nm,1.3s
IBBN Ibbenburen 84.84 328 *eP* **P 01 44 40.2 +0.5**
comp=Z,25nm,0.8s
B12A Libby 84.85 37 *⇑*P **P 01 44 41.1 +1.2**
baz=85
C11A Tepee Creek (N 84.87 38 *⇑*P **P 01 44 41.0 +1.0**
baz=85
OBKA Obir 84.90 321 *⇓ePcP* **P 01 44 40.4 +0.2**
comp=Z,5.5nm,0.8s
RJOB Jochberg 85.14 322 *eP* **P 01 44 42.4 +1.0**
comp=Z,13nm,0.9s
A13A Flathead Natio 85.19 36 *⇓*P **P 01 44 42.4 +0.7**
baz=85
MYKA Terra Mystica 85.34 321 *⇓iP* **P 01 44 42.0 -0.4**
comp=Z,5.9nm,0.9s
C12B Naegeli Ranch, 85.37 37 *⇓*P **P 01 44 43.2 +0.6**
baz=85
WALA Waterton Lakes 85.37 36 *eP* **P 01 44 43.3 +0.7**
comp=Z,0.1nm,0.7s
SFJD Kangerlussuaq 85.40 360 *i* P **P 01 44 40.4 -1.8**
comp=Z,14nm,0.8s
B13A Whitefish 85.50 37 *⇓*P **P 01 44 44.4 +1.2**
baz=85,SNR=10
BUG Bochum--Univer 85.63 328 *eP* **P 01 44 44.1 +0.5**
comp=Z,11nm,0.8s
BSMT Bassoo Peak 85.65 37 *eP* **P 01 44 45.0 +0.8**

comp=Z,6.9nm,0.9s
A14A Double T Ranch 85.68 36 *⇓*P **P 01 44 45.1 +0.9**
baz=86,SNR=16
FUR Furstenfeldbru 85.69 323 *eP* **P 01 44 45.4 +1.3**
comp=Z,23nm,0.9s
FUR Furstenfeldbru 85.69 323 *eP* **P 01 44 45.4 +1.3**
FUR pmax pmax
comp=Z,157nm,0.9s
D12A Red Ives Fores 85.83 38 *⇓*P **P 01 44 45.4 +0.5**
baz=86
C13A Hot Springs 85.87 37 *⇑*P **P 01 44 45.9 +0.9**
baz=86,SNR=5.9
ABTA Abfaltersbach 85.89 322 *⇓iPcP* **P 01 44 44.8 -0.4**
comp=Z,12nm,1.1s
MOD Modoc 85.96 44 *eP* **P 01 44 46.7 +1.0**
comp=Z,8.2nm,1.1s
JTMT Jette 85.98 37 *eP* **P 01 44 46.6 +0.9**
comp=Z,1.5nm,0.8s
A15A Johnson Ranch, 86.03 35 *⇑*P **P 01 44 46.1 +0.3**
baz=86,SNR=7.2
BMO Blue Mountains 86.05 41 *eP* **P 01 44 46.5 +0.5**
comp=Z,7.5nm,1.3s
WTTA Wattenberg 86.05 322 *⇓eP* **P 01 44 45.2 -0.8**
comp=Z,10nm,0.9s
E12A Beaver Dam Sad 86.10 39 *⇓*P **P 01 44 47.1 +0.8**
baz=86
B14A Marquette Ranc 86.14 36 *⇓*P **P 01 44 47.6 +1.1**
baz=86,SNR=18
C14A Swan Lake 86.26 37 *⇑*P **P 01 44 47.8 +0.8**
baz=86
SWMT Swartz Lake 86.28 37 *eP* **P 01 44 47.6 +0.4**
comp=Z,5.9nm,1.1s
MOTA Moosalm 86.29 323 *⇓iP* **P 01 44 46.5 -0.8**
D13A Huson 86.29 38 *⇓*P **P 01 44 47.7 +0.6**
baz=86
SQTA Sankt Quirin 86.31 323 *⇓iP* **P 01 44 46.4 -0.8**
STU Stuttgart 86.40 325 *eP* **P 01 44 47.8 +0.3**
STU pmax pmax
comp=Z,10.0nm,0.8s
STU Stuttgart 86.40 325 *eP* **P 01 44 47.8 +0.3**
comp=Z,10nm,0.8s
B15A Bradely Ranch, 86.54 36 *⇑*P **P 01 44 48.9 +0.6**
baz=86,SNR=6.8
A16A West Butte Ran 86.63 35 *⇑*P **P 01 44 49.2 +0.4**
baz=86
FETA Feichten 86.69 323 *⇓iPcP* **P 01 44 48.7 -0.5**
comp=Z,4.1nm,0.7s
SLMT Seeley Lake 86.72 37 *eP* **P 01 44 49.6 +0.2**
comp=Z,20nm,1.2s
MSO Missoula 86.73 38 *⇑*P **P 01 44 49.6 +0.3**
baz=87
D14A Greenough 86.81 37 *⇓*P **P 01 44 49.8 +0.1**
baz=87,SNR=8.1
C15A Salmond Ranch, 86.85 36 *⇑*P **P 01 44 50.8 +0.9**
baz=87,SNR=15
B16A M & M Farms, S 86.91 35 *⇓*P **P 01 44 50.4 +0.3**
baz=87,SNR=6.3
DAVA Damuels 86.98 323 *⇓iP* **P 01 44 49.1 -1.4**
comp=Z,9.0nm,0.6s
FFC Flin Flon 87.00 27 *eP* **P 01 44 50.5 +0.2**
FFC pmax pmax
comp=Z,28nm,0.9s
FFC Flin Flon 87.00 27 *eP* **P 01 44 50.5 +0.2**
comp=Z,28nm,0.9s
G12A Big Creek, Yel 87.01 39 *⇑*P **P 01 44 51.2 +0.4**
baz=87
A17A Triple J Farms 87.08 35 *⇑*P **P 01 44 51.4 +0.4**
baz=87,SNR=6.4
BFO Black Forest 87.12 325 *eP* **P 01 44 51.7 +0.6**
comp=Z,6.0nm,1.1s
BFO Black Forest 87.12 325 *eP* **P 01 44 51.7 +0.6**
BFO pmax pmax
comp=Z,118nm,1.1s
C16A Fuhringer Ranc 87.28 36 *⇑*P **P 01 44 52.4 +0.4**
baz=87,SNR=5.9
WLF Walferdange 87.34 327 P **P 01 44 51.7 -0.3**
comp=Z,5.0nm,1.0s
WLF Walferdange 87.34 327 *eP* **P 01 44 52.5 +0.5**
comp=Z,7.0nm,0.8s
WLF Walferdange 87.34 327 *eP* **P 01 44 51.5 -0.5**
WLF pmax pmax
comp=Z,10.0nm,0.9s
WLF Walferdange 87.34 327 *eP* **P 01 44 51.5 -0.5**
comp=Z,9.6nm,0.9s
D15A Lincoln 87.36 37 *⇓*P **P 01 44 52.6 +0.2**
baz=87
ESK Eskdalemuir 87.39 335 *eP* **P 01 44 50.6 -1.6**
ESK pmax pmax
comp=Z,6.0nm,0.9s
ESK Eskdalemuir 87.39 335 *eP* **P 01 44 50.6 -1.6**
comp=Z,5.6nm,0.9s
B17A L&G Farms, Che 87.45 35 *⇑*P **P 01 44 53.4 +0.7**
baz=87,SNR=16
A18A Metzger Ranch, 87.52 34 *⇑*P **P 01 44 53.4 +0.3**
baz=87,SNR=6.0
CDF Champ du Feu 87.61 325 *eP* **P 01 44 53.1 -0.4**
comp=Z,14nm,1.1s
CDF Champ du Feu 87.61 325 *eP* **P 01 44 53.1 -0.4**
CDF pmax pmax
comp=Z,14nm,1.1s
CDF Champ du Feu 87.61 325 *eP* **P 01 44 53.1 -0.4**
comp=Z,14nm,1.1s
H12A Diamond D Ranc 87.63 40 *⇑*P **P 01 44 54.5 +0.7**
baz=88
F14A Wisdom 87.68 38 *⇓*P **P 01 44 54.5 +0.5**
baz=88
GIVF Givet 87.68 328 *eP* **P 01 44 53.2 -0.5**
GIVF Givet 87.68 328 *eP* **P 01 44 53.2 -0.5**
GIVF Givet 87.68 328 *eP* **P 01 44 53.2 -0.5**
MFID Camas Ranch 87.76 41 *⇑*P **P 01 44 55.0 +0.6**
baz=88
D16A Dana Ranch, Ca 87.88 36 *⇓*P **P 01 44 55.6 +0.7**
baz=88,SNR=13
C17A Wharram Farm, 87.90 36 *⇑*P **P 01 44 54.9 0.0**
baz=88
B18A Beardsley Farm 87.90 35 *⇓*P **P 01 44 55.4 +0.5**
baz=88,SNR=9.6
I12A Atlanta 87.93 40 *⇑*P **P 01 44 55.9 +0.7**
baz=88
A19A Klindworth Far 88.06 34 *⇑*P **P 01 44 56.2 +0.6**
baz=88,SNR=8.1
E16A East Helena 88.13 37 *⇑*P **P 01 44 56.7 +0.6**
baz=88
F15A Butte 88.14 38 *⇑*P **P 01 44 57.1 +0.9**
baz=88
EGMT Eagleton 88.16 35 *⇑*P **P 01 44 56.7 +0.5**
baz=88,SNR=7.4
LRM Limekiln Ridge 88.17 38 *eP* **P 01 44 57.1 +0.7**
comp=Z,26nm,0.7s
HINF Hinteralfeld 88.21 325 *eP* **P 01 44 55.2 -1.1**
comp=Z,5.2nm,0.8s
HINF Hinteralfeld 88.21 325 *eP* **P 01 44 55.2 -1.1**
HINF pmax pmax
comp=Z,5.0nm,0.8s
HINF Hinteralfeld 88.21 325 *eP* **P 01 44 55.2 -1.1**
comp=Z,5.2nm,0.8s
D17A Six Diamond Ra 88.25 36 *⇑*P **P 01 44 57.3 +0.7**
baz=88,SNR=6.5
B19A Brinkman Farms 88.28 34 *⇓*P **P 01 44 57.1 +0.4**
baz=88
PAGF Fort de Pagny 88.29 326 *eP* **P 01 44 56.3 -0.3**
comp=Z,5.9nm,1.2s
PAGF Fort de Pagny 88.29 326 *eP* **P 01 44 56.3 -0.3**
comp=Z,5.9nm,1.2s
DLMT Dillon 88.38 38 *eP* **P 01 44 57.9 +0.6**
comp=Z,13nm,1.1s
HLID Hailey 88.49 40 *eP* **P 01 44 59.1 +1.2**
comp=Z,6.4nm,1.0s
HLID Hailey 88.49 40 *⇑*P **P 01 44 59.2 +1.4**
baz=88
A20A Cobblestone Ra 88.49 33 *⇓*P **P 01 44 58.7 +1.0**
baz=88
E17A Martinsdale 88.61 36 *⇓*P **P 01 44 59.5 +1.1**
baz=88
F16A Kennard Place, 88.64 37 *⇓*P **P 01 44 59.7 +1.2**
baz=88
C19A Slack Wire Ran 88.71 35 *⇑*P **P 01 44 59.6 +0.9**
baz=88,SNR=9.2
BOZ Bozeman (W) 88.72 37 *eP* **P 01 45 00.0 +1.1**
BOZ pmax pmax
comp=Z,1.0nm,0.4s
BOZ Bozeman (W) 88.72 37 *eP* **P 01 44 60.0 +1.1**
comp=Z,1.3nm,0.4s
B20A Solberg Farm, 88.75 34 *⇑*P **P 01 44 58.8 -0.1**
baz=89
I14A Mackay 88.81 40 *⇓*P **P 01 45 00.8 +1.4**
baz=89
SFTF Sexfontaines 88.86 326 *eP* **P 01 44 58.9 -0.4**

SFTF	Sexfontaines	88.86	326	*e*P		P	01 44 58.9	-0.4
E18A	Harlowton	89.04	36	⇓P		P	01 45 01.5	+1.2
	baz=89,SNR=11							
F17A	Fitzpatrick Pl	89.08	37	⇓P		P	01 45 01.7	+1.2
	baz=89							
D19A	Cripps Ranch,	89.17	35	⇑P		P	01 45 01.8	+0.9
	baz=89,SNR=8.3							
NVAR	Mina Array Bea	89.20	46	P		P	01 45 01.9	+0.5
NVAR	Mina Array Bea	89.20	46	P		P	01 45 01.9	+0.5
	comp=Z,0.6nm,0.5s,baz=297,slow=4.4,SNR=8.4							
B21A	Ellsworth Farm	89.24	33	⇓P		P	01 45 01.8	+0.7
	baz=89							
C20A	Veseth Ranch,	89.24	34	⇓P		P	01 45 02.1	+0.9
	baz=89,SNR=10							
A22A	Carney Farms,	89.38	32	⇑P		P	01 45 02.3	+0.4
	baz=89,SNR=15							
CABF	La Chapelle	89.40	324	*e*P		P	01 45 02.3	+0.3
CABF	La Chapelle	89.40	324	*e*P		P	01 45 02.3	+0.3
CABF	La Chapelle	89.40	324	*e*P		P	01 45 02.3	+0.3
G17A	Pierce Place,	89.41	37	⇑P		P	01 45 03.6	+1.4
	baz=89							
H16A	Russell Place,	89.54	38	⇑P		P	01 45 03.8	+0.9
	baz=89							
F18A	Big Timber	89.58	36	⇓P		P	01 45 03.7	+0.8
	baz=89							
D20A	Manuel Ranch,	89.60	35	⇓P		P	01 45 03.9	+1.0
	baz=89,SNR=6.9							
C21A	Desert Coulee	89.62	34	⇓P		P	01 45 03.9	+1.0
	baz=89							
GCMT	Greycliff	89.67	36	*e*P		P	01 45 04.3	+0.9
	comp=Z,0.7nm,0.4s							
E19A	Rath Farm, Rou	89.69	36	⇓P		P	01 45 04.3	+1.0
	baz=90,SNR=10.0							
LPG	La Plagne	89.79	323	*e*P		P	01 45 03.6	-0.5
LPG	La Plagne	89.79	323	*e*P		P	01 45 03.6	-0.5
LPG	La Plagne	89.79	323	*e*P		P	01 45 03.6	-0.5
B22A	Reddig Ranch S	89.83	33	⇑P		P	01 45 05.0	+1.1
	baz=90							
E20A	Meyer Farm, Mu	90.00	35	⇓P		P	01 45 05.7	+1.0
	baz=90,SNR=5.8							
F19A	Roth Farm, Mol	90.01	36	⇓P		P	01 45 05.8	+0.9
	baz=90							
LOR	Lormes	90.08	326	*e*P		P	01 45 04.6	-0.5
LOR	Lormes	90.08	326	*e*P		P	01 45 04.6	-0.5
VES	Vestal, Richgr	90.19	49	⇑P		P	01 45 06.8	+1.0
	baz=90							
D21A	La Casta Ranch	90.19	34	⇑P		P	01 45 06.4	+0.7
	baz=90,SNR=6.4							
B23A	Brockton	90.19	32	⇑P		P	01 45 06.2	+0.7
	baz=90,SNR=5.9							
C22A	Vida	90.27	33	⇑P		P	01 45 06.3	+0.4
	baz=90							
A24A	Westby	90.33	32	⇑P		P	01 45 07.2	+1.0
	baz=90							
RLMT	Red Lodge	90.33	37	*e*P		P	01 45 07.9	+1.4
	comp=Z,8.0nm,1.1s							
H18A	Shoshone NF, C	90.41	37	⇑P		P	01 45 08.7	+1.8
	baz=90							
SBF	Sospel	90.49	322	*e*P		P	01 45 07.6	+0.5
	comp=Z,26nm,0.9s							
SBF	Sospel	90.49	322	*e*P		P	01 45 07.6	+0.5
SBF					pmax	pmax		
	comp=Z,26nm,0.9s							
SBF	Sospel	90.49	322	*e*P		P	01 45 07.6	+0.5
	comp=Z,26nm,0.9s							
SMF	Signal de Mont	90.52	325	*e*P		P	01 45 06.3	-0.8
SMF	Signal de Mont	90.52	325	*e*P		P	01 45 06.3	-0.8
SMF	Signal de Mont	90.52	325	*e*P		P	01 45 06.3	-0.8
D22A	Cohagen	90.53	34	⇓P		P	01 45 08.6	+1.4
	baz=90							
DGMT	Dagmar	90.56	32	⇑P		P	01 45 08.7	+1.4
	baz=90							
C23A	Lambert	90.56	33	⇓P		P	01 45 08.7	+1.4
	baz=90							
ORIF	Oris-en-Rattie	90.63	323	*e*P		P	01 45 07.9	+0.1
	comp=Z,10nm,1.0s							
ORIF	Oris-en-Rattie	90.63	323	*e*P		P	01 45 07.9	+0.1
ORIF					pmax	pmax		
	comp=Z,10.0nm,1.0s							
ORIF	Oris-en-Rattie	90.63	323	*e*P		P	01 45 07.9	+0.1
	comp=Z,10nm,1.0s							
H19A	Powell	90.78	37	⇑P		P	01 45 09.8	+1.3
	baz=91							
R11A	Troy Canyon, C	90.97	45	⇑P		P	01 45 10.7	+1.1
	baz=91							
D23A	Lindsay	90.99	33	⇑P		P	01 45 10.7	+1.3
	baz=91							
MPMC	Manual Prospec	91.11	48	⇑P		P	01 45 11.5	+1.2
	baz=91							
C24A	Savage	91.12	33	⇑P		P	01 45 11.5	+1.6
	baz=91							
E22A	Miles City	91.14	34	⇓P		P	01 45 11.4	+1.4
	baz=91							
I19A	Meeteetse	91.20	37	⇑P		P	01 45 11.8	+1.3
	baz=91							
HWUT	Hardware Ranch	91.35	41	*e*P		P	01 45 12.7	+1.4
	comp=Z,9.9nm,1.2s							
E23A	Ismay	91.42	34	⇑P		P	01 45 12.7	+1.4
	baz=91							
H20A	Greybull	91.42	37	⇑P		P	01 45 12.5	+1.0
	baz=91							
D24A	Glendive	91.46	33	⇓P		P	01 45 12.8	+1.3
	baz=91							
DUG	Dugway	91.52	42	*e*P		P	01 45 13.3	+1.3
DUG					pmax	pmax		
	comp=Z,12nm,1.5s							
DUG	Dugway	91.52	42	*e*P		P	01 45 13.3	+1.3
	comp=Z,12nm,1.5s							
DUG	Dugway	91.52	42	⇓P		P	01 45 13.4	+1.4
	baz=91							
KMBO	Kilima Mbogo	91.59	270	*e*P		P	01 45 13.4	+0.4
J19A	Crowheart	91.68	38	⇑P		P	01 45 13.8	+1.1
	baz=92							
PDAR	Pinedale Array	91.73	39	P		P	01 45 12.9	-0.2
PDAR	Pinedale Array	91.73	39	P		P	01 45 12.9	-0.2
	comp=Z,1.9nm,0.8s,baz=326,slow=0.5,SNR=13							
G22A	Birney	91.81	35	⇑P		P	01 45 13.9	+0.6
	baz=92							
E24A	Baker	91.86	33	⇓P		P	01 45 14.5	+1.1
	baz=92							
GSC	Goldstone	92.01	48	*e*P		P	01 45 15.3	+1.0
GSC					pmax	pmax		
	comp=Z,5.0nm,0.9s							
GSC	Goldstone	92.01	48	*e*P		P	01 45 15.3	+1.0
	comp=Z,4.5nm,0.9s							
GSC	Goldstone	92.01	48	⇑P		P	01 45 15.3	+1.0
	baz=92							
J20A	Shoshoni	92.14	38	⇑P		P	01 45 15.7	+0.8
	baz=92							
I21A	Big Trails, Te	92.26	37	⇓P		P	01 45 16.1	+0.7
	baz=92							
L19A	Farson	92.28	39	⇓P		P	01 45 16.6	+1.0
	baz=92							
SGMF	Saint Gilles	92.40	330	*e*P		P	01 45 15.6	-0.1
	comp=Z,44nm,1.2s							
SGMF	Saint Gilles	92.40	330	*e*P		P	01 45 15.6	-0.1
SGMF					pmax	pmax		
	comp=Z,44nm,1.2s							
SGMF	Saint Gilles	92.40	330	*e*P		P	01 45 15.6	-0.1
	comp=Z,44nm,1.2s							
J21A	Lysite	92.49	37	⇓P		P	01 45 17.6	+1.0
	baz=92							
TUQ	Turquoise Moun	92.50	47	⇓P		P	01 45 17.6	+0.9
	baz=92							
HEC	Hector,Ludlow	92.60	48	⇑P		P	01 45 18.1	+1.0
	baz=92							
I22A	9 Mile Ranch,	92.63	36	⇓P		P	01 45 17.8	+0.7
	baz=92							
ROSF	Rostrenen	92.66	330	*e*P		P	01 45 16.6	-0.3
	comp=Z,29nm,1.0s							
ROSF	Rostrenen	92.66	330	*e*P		P	01 45 16.6	-0.3
ROSF					pmax	pmax		
	comp=Z,29nm,1.0s							
ROSF	Rostrenen	92.66	330	*e*P		P	01 45 16.6	-0.3
	comp=Z,29nm,1.0s							
G24A	Alzada	92.68	34	⇓P		P	01 45 17.6	+0.4
	baz=92							
E26A	Carlson Angus	92.81	32	⇓P		P	01 45 18.7	+0.9
	baz=93							
ULM	Lac du Bonnet	92.83	27	P		P	01 45 17.6	-0.1
ULM	Lac du Bonnet	92.83	27	P		P	01 45 17.6	-0.1
	comp=Z,14nm,0.8s,baz=316,slow=5.3,SNR=13							
J22A	Midwest	92.96	37	⇓P		P	01 45 18.8	+0.2
	baz=93							
H24A	Dirks Ranch, A	93.03	35	⇑P		P	01 45 19.3	+0.5
	baz=93							
GMRC	Granite Mounta	93.07	48	⇓P		P	01 45 20.1	+0.8
	baz=93							
MDND	Maddock	93.11	30	⇓P		P	01 45 20.1	+1.1
	baz=93							
109C	Camp Elliot, M	93.23	50	⇓P		P	01 45 21.4	+1.5
	baz=93							
PFO	Pinyon Flat Ob	93.25	49	⇓P		P	01 45 20.9	+0.8
	baz=93							
BELC	Belle Mtn. Jos	93.32	49	⇓P		P	01 45 21.2	+0.8
	baz=93							
K22A	Casper	93.46	37	⇓P		P	01 45 21.4	+0.4
	baz=93							
L21A	Rawlins	93.47	38	⇓P		P	01 45 21.8	+0.7
	baz=93							
SRU	San Rafael	93.57	42	⇑P		P	01 45 22.5	+0.9
	baz=93							
I24A	Kuemmerle Ranc	93.61	35	⇑P		P	01 45 22.3	+0.7
	baz=93							
MONP	Monument Peak	93.70	50	⇓P		P	01 45 23.5	+1.2
	baz=94							
RSSD	Black Hills	93.73	35	*e*P		P	01 45 22.8	+0.5
RSSD					pmax	pmax		
	comp=Z,3.0nm,0.6s							
RSSD	Black Hills	93.73	35	*e*P		P	01 45 22.8	+0.5
	comp=Z,2.6nm,0.6s							
N20A	Spence Gulch,	93.74	39	⇓P		P	01 45 23.4	+1.1
	baz=94							
IRM	Iron Mountain	93.78	48	⇓P		P	01 45 23.7	+1.3
	baz=94							
BC3	Big Chuckawall	93.89	49	⇓P		P	01 45 23.9	+0.9
	baz=94							
W13A	Hualapai Mount	94.03	47	⇓P		P	01 45 25.1	+1.2
	baz=94							
O20A	White River Ci	94.22	40	⇓P		P	01 45 25.2	+0.6
	baz=94							
L23A	Garrett	94.27	37	⇑P		P	01 45 25.1	+0.3
	baz=94							
AGMN	Agassiz Nation	94.37	28	*e*P		P	01 45 24.1	-0.7
Y12C	Blythe	94.44	48	⇑P		P	01 45 26.9	+1.4
	baz=94							
SCHQ	Schefferville	96.56	9	P		P	01 45 33.8	-0.9
SCHQ	Schefferville	96.56	9	P		P	01 45 33.8	-0.9
	comp=Z,3.7nm,1.0s,baz=42,slow=2.3,SNR=4.7							
ESDC	Sonseca Array	99.49	325	P		Pdif	01 45 47.1	-1.1
ESDC	Sonseca Array	99.49	325	P		Pdif	01 45 47.1	-1.1
	comp=Z,0.1nm,0.3s,baz=44,slow=5.7,SNR=4.3							
TXAR	Lajitas Array	104.33	45	Pdif		Pdif	01 46 11.1	+1.1
TXAR	Lajitas Array	104.33	45	Pdiff		Pdif	01 46 11.1	+1.1
	comp=Z,0.3nm,0.7s,baz=293,slow=4.6,SNR=4.6							
TORD	Torodi Ar. Bea	114.26	301	PKP		PKPdf	01 50 44.3	-0.7
TORD	Torodi Ar. Bea	114.26	301	PKP		PKPdf	01 50 44.3	-0.7
	comp=Z,0.3nm,0.6s,baz=55,slow=1.8,SNR=7.4							
NNA	Nana	151.51	61	*e*PKPbc		PKPbc	01 51 59.9	+0.4
NNA				*e*PKPab		PKPab	01 52 09.4	+1.1
SAML	Samuel	158.18	32	*e*PKPdf		PKPdf	01 52 02.2	-0.2
SAML				*e*PKPab		PKPab	01 52 35.1	-1.4
LPAZ	La Paz	160.79	56	*e*PKPdf		PKPdf	01 52 06.5	+0.4
LPAZ				*e*PKPab		PKPab	01 52 48.3	-0.4

CSEM ***24*** *01:43:42.7, 42°.30N×13°.46E, h10km, After ROM*
ROM 24 01:43:42.7±0.1, 42°.30N×13°.46E, h10km, MI1.9/10, Error ellipse: s-maj=1.2km s-min=0.9km az=48.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.07**	**324**	Pg	Pg	01 43 45.4	+0.3
AQU				Sg	Sg	01 43 46.9	+0.1
	871nm,0.6s						
AQU	**L'Aquila**	**0.07**	**324**	Pg	Pg	01 43 45.4	+0.3
AQU				Sg	Sg	01 43 46.9	+0.1
	871nm,0.6s						
FIAM	**Fiamignano**	**0.26**	**264**	Pg	Pg	01 43 48.6	+0.5
FIAM				Sg	Sg	01 43 52.8	+1.1
	242nm,0.5s						
FIAM	**Fiamignano**	**0.26**	**264**	Pg	Pg	01 43 48.6	+0.5
FIAM				Sg	Sg	01 43 52.8	+1.1
	242nm,0.5s						
PTQR	**Pietraquaria**	**0.28**	**189**	Pg	Pg	01 43 48.9	+0.5
PTQR				Sg	Sg	01 43 53.3	+1.0
	32nm,0.2s						
PTQR	**Pietraquaria**	**0.28**	**189**	Pg	Pg	01 43 48.9	+0.5
PTQR				Sg	Sg	01 43 53.3	+1.0
	32nm,0.2s						
TERO	**Teramo**	**0.34**	**18**	Pg	Pg	01 43 49.6	-0.1
TERO				Sg	Sg	01 43 55.1	+0.8
	105nm,0.4s						
TERO	**Teramo**	**0.34**	**18**	Pg	Pg	01 43 49.6	-0.1
TERO				Sg	Sg	01 43 55.1	+0.8
	105nm,0.4s						
INTR	**Introdacqua**	**0.44**	**130**	Pg	Pg	01 43 51.6	+0.2
INTR				Sg	Sb	01 43 58.6	-0.7
	88nm,0.4s						
INTR	**Introdacqua**	**0.44**	**130**	Pg	Pg	01 43 51.6	+0.2
INTR				Sg	Sb	01 43 58.6	-0.7
	88nm,0.4s						
LNSS	**Leonessa**	**0.44**	**315**	Pg	Pg	01 43 51.8	+0.3
LNSS				Sg	Sb	01 43 58.9	-0.5
	59nm,0.4s						
LNSS	**Leonessa**	**0.44**	**315**	Pg	Pg	01 43 51.8	+0.3
LNSS				Sg	Sb	01 43 58.9	-0.5
	59nm,0.4s						
VVLD	**Villa Vallelon**	**0.44**	**164**	Pg	Pg	01 43 51.5	0.0
	40nm,0.5s						
VVLD	**Villa Vallelon**	**0.44**	**164**	Pg	Pg	01 43 51.5	0.0
	40nm,0.5s						
CERT	**Cerreto**	**0.49**	**226**	Pg	Pg	01 43 52.6	+0.1
CERT				Sg	Sg	01 43 59.8	+0.7
	106nm,0.3s						
CERT	**Cerreto**	**0.49**	**226**	Pg	Pg	01 43 52.6	+0.1
CERT				Sg	Sg	01 43 59.8	+0.7
	106nm,0.3s						
MNS	**Montasola**	**0.58**	**279**	Pg	Pg	01 43 54.2	+0.1
MNS				Sg	Sb	01 44 03.1	-0.4
	24nm,0.4s						
MNS	**Montasola**	**0.58**	**279**	Pg	Pg	01 43 54.2	+0.1
MNS				Sg	Sb	01 44 03.1	-0.4
	24nm,0.4s						
LPEL	**Lama dei Pelig**	**0.59**	**114**	Pg	Pg	01 43 54.4	+0.1
LPEL				Sg	Sb	01 44 03.3	-0.5
	48nm,0.4s						
LPEL	**Lama dei Pelig**	**0.59**	**114**	Pg	Pg	01 43 54.4	+0.1
LPEL				Sg	Sb	01 44 03.3	-0.5
	48nm,0.4s						
NRCA	**Norcia**	**0.59**	**335**	Pg	Pg	01 43 54.3	-0.1
NRCA				Sg	Sb	01 44 03.3	-0.6
	9.0nm,0.2s						
NRCA	**Norcia**	**0.59**	**335**	Pg	Pg	01 43 54.3	-0.1
NRCA				Sg	Sb	01 44 03.3	-0.6
	9.0nm,0.2s						
SDI	**San Donato**	**0.64**	**156**	Pg	Pb	01 43 55.9	-0.2
	25nm,0.2s						
SDI	**San Donato**	**0.64**	**156**	Pg	Pb	01 43 55.9	-0.2
	25nm,0.2s						
FDMO	**Fiordimonte**	**0.79**	**340**	Pg	Pg	01 43 58.0	0.0
FDMO	**Fiordimonte**	**0.79**	**340**	Pg	Pg	01 43 58.0	0.0
CESI	**CESI - Serrava**	**0.82**	**330**	Pg	Pg	01 43 58.5	-0.1
CESI	**CESI - Serrava**	**0.82**	**330**	Pg	Pg	01 43 58.5	-0.1
GUMA	**Gualdo di Mace**	**0.84**	**24**	Pg	Pg	01 43 58.0	-1.1
GUMA	**Gualdo di Mace**	**0.84**	**24**	Pg	Pg	01 43 58.0	-1.1

TIR ***24*** *01:51:42.6±2.8, 41°.06N×21°.42E, h7km±816km*
SKO ***24*** *01:51:45.8, 41°.03N×21°.31E, h15km, M1.7, ML2.2*
ISCJB ***24*** *01:51:45.4±0.4, 41°.05N±0°.03×21°.40E±0°.04, h7km±5km, Error ellipse: s-maj=4.7km s-min=4.4km az=33.8*
ATH ***24*** *01:51:46.4, 40°.99N×21°.37E, h4km, MD3.0/4*
CSEM ***24*** *01:51:46.2±0.4, 41°.05N×21°.47E, h8km, MD3.0, Error ellipse: s-maj=8.9km s-min=7.3km az=73.0*
BEO ***24*** *01:51:47.3±0.6, 41°.11N×21°.52E, h10km±3km, ML1.9/4*
ISC 24 01:51:45.3±1.1, 41°.06N±0°.02×21°.42E±0°.02, h1km±10km, n26, σ0°.86/42, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIA	**Bitola**	**0.09**	**243**	*i* Pg	**Pg**	**01 51 46.3**	**-0.7**
BIA				*i* Sg	**Sg**	**01 51 46.6**	**-1.5**
FNA	**Florina**	**0.28**	**188**	*e*PG	**Pg**	**01 51 50.6**	**0.0**
FNA				*e*SG	**Sg**	**01 51 53.4**	**-0.8**
FNA	**Florina**	**0.28**	**188**	*e*Pg	**Pg**	**01 51 50.6**	**0.0**
FNA				*e*Sg	**Sg**	**01 51 53.4**	**-0.8**
KBN	**Korca**	**0.65**	**228**	*e*PG	**Pg**	**01 51 57.0**	**-0.8**
KBN				*i* SG	**Sg**	**01 52 06.7**	**+0.5**
GRG	**Griva**	**0.75**	**97**	*e*PG	**Pb**	**01 52 01.1**	**-0.1**
GRG				*e*SG	**Sb**	**01 52 12.2**	**+0.3**
GRG	**Griva**	**0.75**	**97**	*e*Pg	**Pb**	**01 52 01.1**	**-0.1**
GRG				*e*Sg	**Sb**	**01 52 12.2**	**+0.3**
KZN	**Kozani**	**0.80**	**161**	*e*PB	**Pg**	**01 52 01.2**	**+0.6**
KZN	**Kozani**	**0.80**	**161**	*e*Pb	**Pg**	**01 52 01.2**	**+0.6**
VAY	**Valandovo**	**0.90**	**73**	*e*Sg	**Sg**	**01 52 14.2**	**-0.2**
VAY	**Valandovo**	**0.90**	**73**	*e*Pg	**Pn**	**01 52 05.7**	**+0.5**
VAY				*e*Lg	Lg	01 52 19.0	
	comp=N,32nm,0.5s						
VAY				*i* Sg	**Sn**	**01 52 19.0**	**+0.1**
VAY				*e*Lg	Lg	01 52 20.6	
	comp=E,33nm,0.5s						
VAY	**Valandovo**	**0.90**	**73**	*e*Sg	**Sg**	**01 52 14.2**	**-0.2**
SKO	**Skopje**	**0.91**	**1**	*e*Pg	**Pg**	**01 52 03.2**	**+0.3**
SKO				*e*Sg	**Sg**	**01 52 15.4**	**+0.7**
SKO	**Skopje**	**0.91**	**1**	*e*Pg	**Pn**	**01 52 04.9**	**-0.5**
SKO				*i* Sg	**Sn**	**01 52 17.8**	**-1.3**
SKO				*e*Lg	Lg	01 52 19.0	
	comp=E,35nm,0.3s						
SKO				*e*Lg	Lg	01 52 22.4	
	comp=N,52nm,0.5s						
SKO	**Skopje**	**0.91**	**1**	*e*Pg	**Pg**	**01 52 03.2**	**+0.3**
SKO				*e*Sg	**Sg**	**01 52 15.4**	**+0.7**
PHP	**Peshkopia**	**0.97**	**311**	*e*PG	**Pb**	**01 52 05.6**	**+0.6**
PHP				*i* SG	**Sb**	**01 52 18.2**	**-0.1**
TIR	**Tirane**	**1.21**	**284**	*e*Pg	**Pn**	**01 52 09.9**	**+0.5**
TIR				*e*Sg	**Sn**	**01 52 27.3**	**+0.8**
TIR	**Tirane**	**1.21**	**284**	*e*Pg	**Pn**	**01 52 09.9**	**+0.5**
TIR				*e*Sg	**Sn**	**01 52 27.3**	**+0.8**
LIT	**Litokhoron**	**1.25**	**139**	*e*PN	**Pn**	**01 52 10.4**	**+0.4**
LIT	**Litokhoron**	**1.25**	**139**	*e*Pn	**Pn**	**01 52 10.4**	**+0.4**
BARS	**Barje**	**1.78**	**9**	*e*Pn	**Pn**	**01 52 15.5**	**-1.8**
BARS				*e*Sn	**Sn**	**01 52 39.3**	**-1.3**
BARS	**Barje**	**1.78**	**9**	*e*Pn	**Pn**	**01 52 15.5**	**-1.8**
BARS				*e*Sn	**Sn**	**01 52 39.3**	**-1.3**
PDG	**Podgorica**	**2.12**	**311**	*e*Pn	**Pb**	**01 52 25.1**	**+0.5**
PDG	**Podgorica**	**2.12**	**311**	*e*Pn	**Pb**	**01 52 25.1**	**+0.5**
ZAPS	**Zavoj**	**2.39**	**22**	*e*Pn	**Pn**	**01 52 25.7**	**0.0**
ZAPS				*e*Sn	**Sn**	**01 52 53.9**	**-1.7**
GRUS	**Gruza**	**2.88**	**350**	*e*Pn	**Pn**	**01 52 33.5**	**+1.2**
GRUS	**Gruza**	**2.88**	**350**	*e*Pn	**Pn**	**01 52 33.5**	**+1.2**

ROM ***24*** *02:05:13.9±0.1, 42°.32N×13°.56E, h9km±1km, Md2.5/18, Ml1.8/14, Error ellipse: s-maj=1.4km s-min=1.1km az=98.0*
ISCJB ***24*** *02:05:14.4±0.4, 42°.32N±0°.02×13°.55E±0°.04, h11km±6km, Error ellipse: s-maj=5.0km s-min=3.2km az=159.1*
CSEM ***24*** *02:05:14.5±0.1, 42°.32N×13°.56E, h5km, ML2.2/10, Error ellipse: s-maj=3.1km s-min=2.1km az=66.0*
ISC 24 02:05:14.6±0.9, 42°.32N±0°.02×13°.57E±0°.03, h7km±9km, n38, σ0°.74/60, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.13**	**285**	Pg	**Pg**	**02 05 17.3**	**-0.1**
AQU				Sg	**Sg**	**02 05 19.2**	**-0.2**
	799nm,0.5s						
AQU	**L'Aquila**	**0.13**	**285**	Pg	**Pg**	**02 05 17.3**	**-0.1**
AQU				Sg	**Sg**	**02 05 19.2**	**-0.2**
	799nm,0.5s						
CAMP	**Campotosto**	**0.25**	**331**	Pg	**Pg**	**02 05 19.5**	**-0.1**
CAMP				Sg	**Sg**	**02 05 23.9**	**+1.0**
	124nm,0.6s						
CAMP	**Campotosto**	**0.25**	**331**	Pg	**Pg**	**02 05 19.5**	**-0.1**
CAMP				Sg	**Sg**	**02 05 23.9**	**+1.0**
	124nm,0.6s						
TERO	**Teramo**	**0.30**	**4**	Pg	**Pg**	**02 05 20.5**	**-0.1**
TERO				Sg	**Sg**	**02 05 25.3**	**+0.6**
	130nm,0.4s						
TERO	**Teramo**	**0.30**	**4**	Pg	**Pg**	**02 05 20.5**	**-0.1**
TERO				Sg	**Sg**	**02 05 25.3**	**+0.6**
	130nm,0.4s						
PTQR	**Pietraquaria**	**0.33**	**203**	Pg	**Pg**	**02 05 20.8**	**-0.2**
PTQR				Sg	**Sg**	**02 05 25.9**	**+0.6**
	28nm,0.4s						
PTQR	**Pietraquaria**	**0.33**	**203**	Pg	**Pg**	**02 05 20.8**	**-0.2**
PTQR				Sg	**Sg**	**02 05 25.9**	**+0.6**
	28nm,0.4s						
FIAM	**Fiamignano**	**0.34**	**261**	Pg	**Pg**	**02 05 21.1**	**-0.3**
FIAM				Sg	**Sg**	**02 05 26.5**	**+0.6**
	151nm,0.7s						
FIAM	**Fiamignano**	**0.34**	**261**	Pg	**Pg**	**02 05 21.1**	**-0.3**
FIAM				Sg	**Sg**	**02 05 26.5**	**+0.6**
	151nm,0.7s						
INTR	**Introdacqua**	**0.39**	**141**	Pg	**Pg**	**02 05 22.3**	**0.0**
INTR				Sg	**Sb**	**02 05 29.3**	**-1.0**
	112nm,0.5s						
INTR	**Introdacqua**	**0.39**	**141**	Pg	**Pg**	**02 05 22.3**	**0.0**
INTR				Sg	**Sb**	**02 05 29.3**	**-1.0**
	112nm,0.5s						
VVLD	**Villa Vallelon**	**0.45**	**175**	Pg	**Pg**	**02 05 23.0**	**-0.4**
VVLD				Sg	**Sg**	**02 05 30.7**	**+1.4**
	52nm,0.9s						
VVLD	**Villa Vallelon**	**0.45**	**175**	Pg	**Pg**	**02 05 23.0**	**-0.4**
VVLD				Sg	**Sg**	**02 05 30.7**	**+1.4**
	52nm,0.9s						
LNSS	**Leonessa**	**0.48**	**306**	Pg	**Pg**	**02 05 23.5**	**-0.5**
	47nm,0.4s						
LNSS	**Leonessa**	**0.48**	**306**	Pg	**Pg**	**02 05 23.5**	**-0.5**
	47nm,0.4s						
LPEL	**Lama dei Pelig**	**0.53**	**121**	Pg	**Pg**	**02 05 24.8**	**0.0**
LPEL				Sg	**Sb**	**02 05 33.5**	**-0.7**
	72nm,0.4s						
LPEL	**Lama dei Pelig**	**0.53**	**121**	Pg	**Pg**	**02 05 24.8**	**0.0**
LPEL				Sg	**S

BHHZ	Black Hill Sta	1.67	184	PN	Pn	02 16 23.5	-0.2
KAHZ	Kahuranaki	2.04	165	PN	Pn	02 16 27.0	+0.1
PNHZ	Pukenui	2.10	180	PN	Pn	02 16 27.3	0.0
TSZ	Takapari Road	2.25	185	⇑PN	Pn	02 16 28.6	-0.2
DVHZ	Dannevirke	2.48	181	PN	Pn	02 16 30.6	-0.4
BFZ	Birch Farm	2.86	179	PN	Pn	02 16 34.5	-0.5
MRZ	Mangatainoka R	2.88	190	PN	Pn	02 16 34.5	-0.7
TIWZ	Tintock	2.97	185	PN	Pn	02 16 35.8	-0.4
OGWZ	Otaki Gorge	3.10	195	PN	Pn	02 16 37.1	-0.4
HOWZ	Holdsworth Sta	3.12	190	PN	Pn	02 16 37.0	-0.9
KIW	Kapiti Island	3.21	198	PN	Pn	02 16 38.0	-0.7
CAW	Cannon Point	3.41	195	AML	AML	02 16 40.6	
SNZO	South Karori	3.68	198	PN	Pn	02 16 43.1	-0.9
TCW	Tory Channel	3.71	203	PN	Pn	02 16 43.6	-0.7
PLWZ	Palliser	3.82	191	PN	Pn	02 16 44.4	-1.3
TUWZ	Tuamarina	4.01	205	PN	Pn	02 16 47.2	-0.7
NNZ	Nelson	4.04	212	PN	Pn	02 16 46.9	-1.3
QRZ	Quartz Range	4.15	222	PN	Pn	02 16 47.6	-1.9
THZ	Tophouse	4.69	212	PN	Pn	02 16 55.5	-0.7
KHZ	Kahutara	5.03	203	⇓PN	Pn	02 16 59.5	-0.6

*IDC **24** 02:28:58.4±0.9,4°.93S×151°.26E,h0km,mb4.2/11, mb1 4.4/12,mb1mx4.3/19,mbtmp4.2/12,ML3.6/1,MS3.6/16, Ms1 3.6/16,ms1mx3.5/28,Error ellipse: s-maj=30.8km s-min=17.4km az=110.0*
*NEIC **24** 02:29:04.6±2.4,5°.00S×151°.15E,h45km±20km,mb4.5/8, Error ellipse: s-maj=22.2km s-min=14.4km az=100.0*
*ISCJB **24** 02:29:15.3±0.7,5°.09S±0°.08×150°.9E±0°.1,h155km, mb4.1/17,Error ellipse: s-maj=21.1km s-min=8.2km az=25.6*

ISC 24 02:29:16.2±0.8,5°.0S±0°.1×150°.8E±0°.2,h155km,n49, σ0s86/27,mb4.2/17,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.72	219	Pn		Pn		02 30 30.7	-8.6
PMG				Sn		Sn		02 31 43.9	-0.4
PMG	Port Moresby	5.72	219	Pn		Pn		02 30 30.7	-8.6
	9.0nm,0.3s,baz=42,slow=7.3,SNR=24								
PMG				Sn		Sn		02 31 43.9	-0.4
	10.0nm,0.3s,baz=336,slow=20,SNR=3.4								
PMG				LR		LR		02 32 36.0	
	comp=Z,531nm,19.9s,baz=76,slow=36								
COEN	Coen	11.70	220	ePn		Pn		02 31 51.5	-6.9
CTA	Charters Tower	15.68	196	Pn		P		02 32 49.8	+0.1
CTA	Charters Tower	15.68	196	Pn		P		02 32 49.8	+0.1
	0.5nm,0.3s,baz=30,slow=11,SNR=9.4								
CTAO	Charters Tower	15.68	196	ePn		Pn		02 32 42.2	-6.6
	28nm,1.4s								
WRAB	Tennant Creek	21.88	226	eP		P		02 33 55.4	-1.6
	14nm,0.9s								
WRA	Warramunga Arr	21.89	226	P		P		02 33 55.4	-1.7
WRA	Warramunga Arr	21.89	226	P		P		02 33 55.4	-1.7
	4.8nm,0.5s,baz=49,slow=10,SNR=32								
DZM	Mont Dzumac	22.75	140	LR		LR		02 41 28.3	
	comp=Z,328nm,18.8s,baz=340,slow=33								
AS31	Alice Springs	24.74	220	eP		P		02 34 23.6	+0.1
ASAR	Alice Springs	24.74	220	P		P		02 34 23.8	+0.2
ASAR	Alice Springs	24.74	220	P		P		02 34 23.8	+0.2
	13nm,0.8s,baz=58,slow=8.0,SNR=87								
ASAR				LR		LR		02 43 26.5	
	comp=Z,148nm,20.1s,baz=43,slow=35								
FITZ	Fitzroy Crossi	27.87	240	P		P		02 34 51.6	0.0
FITZ	Fitzroy Crossi	27.87	240	P		P		02 34 51.6	0.0
	9.4nm,0.7s,baz=55,slow=12,SNR=9.4								
STKA	Stephens Creek	28.14	197	P		P		02 34 54.8	+0.9
STKA	Stephens Creek	28.14	197	P		P		02 34 54.8	+0.9
	4.0nm,0.8s,baz=35,slow=12,SNR=6.1								
STKA				LR		LR		02 44 36.2	
	comp=Z,226nm,19.2s,baz=24,slow=33								
FORT	Forrest	33.45	217	eP		P		02 35 40.1	-0.4
	23nm,0.8s								
MBWA	Marble Bar	34.20	239	eP		P		02 35 47.1	0.0
	10nm,0.8s								
TGY	Tagaytay City	35.19	303	LR		LR		02 48 06.2	
	comp=Z,27nm,21.9s,baz=337,slow=32								
AFI	Afiamalu	37.89	106	LR		LR		02 46 48.2	
	comp=Z,165nm,21.9s,baz=116,slow=28								
URZ	Urewera	40.86	148	LR		LR		02 49 09.7	
	comp=Z,112nm,21.8s,baz=197,slow=30								
JNU	Nakatsue	42.34	335	LR		LR		02 53 48.6	
	comp=Z,52nm,18.8s,baz=98,slow=35								
MJAR	Matsushiro Arr	42.95	345	LR		LR		02 53 23.4	
	comp=Z,78nm,18.6s,baz=185,slow=34								
KSRS	Korea Array	47.29	335	LR		LR		02 54 44.5	
	comp=Z,64nm,19.2s,baz=340,slow=33								
ASAJ	Asahikawa	49.42	352	LR		LR		02 59 00.1	
	comp=Z,43nm,18.2s,baz=33,slow=36								
CMAR	Chiang Mai Arr	56.18	296	P		P		02 38 44.6	+4.2
CMAR	Chiang Mai Arr	56.18	296	P		P		02 38 44.6	+4.2
	3.3nm,0.8s,baz=118,slow=6.0,SNR=9.7								
CHTO	Chiang Mai	56.30	296	eP		P		02 38 43.5	+2.3
	6.3nm,0.9s								
PETK	Petropavlovsk-	58.15	5	LR		LR		02 58 44.4	
	comp=Z,44nm,20.3s,baz=97,slow=31								
SONM	Songino Array	65.43	329	P		P		02 39 46.2	+3.7
SONM	Songino Array	65.43	329	P		P		02 39 46.2	+3.7
	0.9nm,0.7s,baz=148,slow=6.3,SNR=5.7								
SONM				LR		LR		03 08 01.6	
	comp=Z,55nm,18.1s,baz=120,slow=36								
VNDA	Vanda	72.74	178	eP		P		02 40 29.2	+2.3
	9.4nm,1.6s								
VNDA	Vanda	72.74	178	P		P		02 40 29.5	+2.6
	1.4nm,1.0s,baz=333,slow=5.2,SNR=6.0								
BILL	Bilibino	73.65	6	eP		P		02 40 32.4	0.0
	6.0nm,1.3s								
MK31	Makanchi Array	79.17	319	eP		P		02 41 04.7	+0.8
MKAR	Makanchi Array	79.17	319	P		P		02 41 06.2	+2.3
MKAR	Makanchi Array	79.17	319	P		P		02 41 06.2	+2.3
	0.3nm,0.5s,baz=111,slow=6.3,SNR=3.8								
MKAR				LR		LR		03 14 55.4	
	comp=Z,29nm,19.9s,baz=171,slow=35								
ZALV	Zalesovo Beam	80.21	327	P		P		02 41 10.6	+1.2
ZALV	Zalesovo Beam	80.21	327	P		P		02 41 10.6	+1.2
	0.6nm,0.5s,baz=123,slow=5.3,SNR=3.9								
ZALV				LR		LR		03 13 24.2	
	comp=Z,36nm,21.7s,baz=62,slow=33								
KURK	Kurchatov	82.70	322	eP		P		02 41 24.6	+2.1
	4.5nm,1.2s								
ILAR	Eielson Array	83.06	22	P		P		02 41 23.2	-0.8
ILAR	Eielson Array	83.06	22	P		P		02 41 23.2	-0.8
	0.8nm,0.8s,baz=242,slow=5.7,SNR=9.0								
MAW	Mawson	84.66	203	LR		LR		03 15 27.4	
	comp=Z,71nm,19.0s,baz=206,slow=33								
NVAR	Mina Array Bea	93.73	52	P		P		02 42 15.6	-0.4
NVAR	Mina Array Bea	93.73	52	P		P		02 42 15.6	-0.4
	0.5nm,0.7s,baz=262,slow=4.5,SNR=4.3								
TOA0	Torodi Ar. Sit	148.49	287	ePKPdf		PKPbc		02 48 45.8	0.0
TORD	Torodi Ar. Bea	148.49	287	PKPbc		PKPab		02 48 48.7	-0.8
TORD	Torodi Ar. Bea	148.49	287	PKPbc		PKPab		02 48 48.7	-0.8
	0.7nm,0.8s,baz=82,slow=1.2,SNR=5.8								

IDC 24 02:29:40.9±0.6,14°.44N×120°.46E,h116km±7km,mb3.5/10, mb1 3.7/10,mb1mx3.5/25,mbtmp3.5/10,1C,Error ellipse: s-maj=33.0km s-min=14.8km az=66.0,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.57	126	⇑iP		Pn		02 29 58.3	-0.6
TGY	Tagaytay City	0.57	126	P		Pn		02 29 58.1	-0.9
	205nm,0.3s,baz=261,slow=1.5,SNR=31								
TGY				S		Sn		02 30 14.5	+2.0
	289nm,0.3s,baz=293,slow=15,SNR=8.1								
CMAR	Chiang Mai Arr	21.02	284	P		P		02 34 15.8	+0.3
	6.7nm,0.7s,baz=94,slow=7.8,SNR=20								
KSRS	Korea Array	23.86	15	P		P		02 34 43.2	-0.4
	0.6nm,0.5s,baz=196,slow=1,SNR=5.1								
SONM	Songino Array	35.28	344	P		P		02 36 25.3	+0.6
	0.6nm,0.5s,baz=162,slow=9.9,SNR=4.9								
WRA	Warramunga Arr	36.80	158	P		P		02 36 37.5	-0.3
	2.7nm,0.7s,baz=337,slow=9.4,SNR=9.8								
ASAR	Alice Springs	40.09	161	P		P		02 37 05.6	+0.3
	1.9nm,0.7s,baz=338,slow=6.5,SNR=10								
MKAR	Makanchi Array	45.30	323	P		P		02 37 47.1	-0.1
	0.2nm,0.6s,baz=124,slow=8.1,SNR=3.6								
ZALV	Zalesovo Beam	48.30	333	P		P		02 38 10.8	+0.5
	0.3nm,0.3s,baz=148,slow=8.5,SNR=3.0								
ARCES	ARCESS Array B	78.31	339	P		P		02 41 28.0	+0.1
	1.0nm,0.5s,baz=76,slow=7.5,SNR=19								
FINES	FINESS Array B	79.53	331	P		P		02 41 34.7	+0.1
	0.5nm,0.5s,baz=56,slow=5.2,SNR=6.4								
NB2	NORSAR Subarra	86.50	333	P		P		02 42 10.0	-0.7
	comp=Z,0.5nm,0.6s,baz=68,slow=5.1								
NOA	NORSAR Array B	86.50	333	P		P		02 42 09.8	-0.8
	comp=Z,0.9nm,0.8s,baz=66,slow=4.9,SNR=6.6								

IDC 24 02:46:33.9±1.5,5°.09S×152°.91E,h0km,mb3.9/9, mb1 4.0/9,mb1mx3.8/22,mbtmp3.9/9,MS3.3/4,Ms1 3.3/4, ms1mx2.9/25,Error ellipse: s-maj=55.5km s-min=21.7km az=109.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.13	233	LR		LR		02 50 30.3	
	comp=Z,42nm,20.7s,baz=260,slow=33								
ASAR	Alice Springs	26.01	223	P		P		02 52 08.0	-0.9
	1.0nm,0.8s,baz=44,slow=10,SNR=8.5								
STKA	Stephens Creek	28.68	200	P		P		02 52 34.5	+1.8
	1.3nm,0.7s,baz=24,slow=12,SNR=3.3								
STKA				LR		LR		03 04 44.8	
	comp=Z,102nm,18.1s,baz=24,slow=38								
FITZ	Fitzroy Crossi	29.62	242	P		P		02 52 40.4	-0.8
	1.0nm,0.6s,baz=63,slow=6.8,SNR=5.2								
JNU	Nakatsue	43.37	333	P		P		02 54 39.1	+0.8
	5.3nm,0.8s,baz=138,slow=7.6,SNR=4.1								
PETK	Petropavlovsk-	58.12	3	LR		LR		03 18 22.9	
	comp=Z,52nm,18.5s,baz=238,slow=33								
KDAK	Kodiak Island	76.39	27	LR		LR		03 25 20.3	
	comp=Z,50nm,19.7s,baz=303,slow=30								
MKAR	Makanchi Array	80.62	319	P		P		02 58 48.6	-0.1
	0.4nm,0.8s,baz=93,slow=6.1,SNR=4.3								
ZALV	Zalesovo Beam	81.46	326	P		P		02 58 53.2	+0.3
	0.8nm,0.4s,baz=90,slow=7.5,SNR=2.6								
ILAR	Eielson Array	82.39	22	P		P		02 58 56.7	-0.9
	0.3nm,0.7s,baz=254,slow=5.2,SNR=7.0								
KURBB	Kurchatov Arra	84.10	322	P		P		02 59 07.0	+0.3
	0.4nm,0.8s,baz=106,slow=3.6,SNR=4.0								
BVAR	Borovoye Array	89.54	323	P		P		02 59 33.1	-0.2
	1.3nm,0.6s,baz=116,slow=6.7,SNR=6.8								
TORD	Torodi Ar. Bea	150.50	288	PKPbc		PKPbc		03 06 28.6	-0.2
	1.0nm,0.8s,baz=91,slow=2.1,SNR=6.9								

IDC 24 03:21:11.1±2.0,4°.30S×148°.49E,h0km,mb3.9/3, mb1 4.3/3,mb1mx3.6/17,mbtmp4.0/3,Error ellipse: s-maj=212.5km s-min=27.9km az=122.0,Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.78	220	P		P		03 25 53.6	-0.4
	7.7nm,0.5s,baz=44,slow=12,SNR=114								
ASAR	Alice Springs	23.85	215	P		P		03 26 26.5	+0.2
	2.9nm,0.8s,baz=50,slow=8.5,SNR=26								
ILAR	Eielson Array	83.35	23	P		P		03 33 39.7	0.0
	0.5nm,1.1s,baz=232,slow=3.9,SNR=2.9								

DDA 24 03:28:19.0,40°.87N×27°.98E,h6km,MD2.4,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
BALY	Balya	1.16	194	*i* P		Pg		03 28 39.2	-2.0
BALY				*i* S		Sg		03 28 54.8	-1.5
DURS	Dursunbey	1.32	163	*i* P		Pb		03 28 44.1	-0.1
DURS				*i* S		Sb		03 28 59.4	-1.9

*TIR **24** 03:28:55.4±1.4,41°.78N×19°.47E,h14km±29km,ML3.3*
*THE **24** 03:28:57.8,41°.75N×19°.58E,h0km±2km,ML3.1/1,Error ellipse: s-maj=3.0km s-min=0.9km az=249.0*
*CSEM **24** 03:28:57.5±0.2,41°.72N×19°.52E,h2km,ML2.6/8,Error ellipse: s-maj=4.9km s-min=2.7km az=45.0*
*PDG **24** 03:28:57.9±0.3,41°.76N×19°.56E,h9km,ML2.6/8,Error ellipse: s-maj=0.5km s-min=0.6km az=0.0*
*BEO **24** 03:28:58.5±0.5,41°.69N×19°.53E,h7km±3km,ML2.5/1*
*SKO **24** 03:28:58.1,41°.75N×19°.51E,h7km,M2.4,ML2.8*

ISC 24 03:28:58.0±1.1,41°.75N±0°.02×19°.55E±0°.02,h4km±9km, n84,σ1s12/140,14C-10D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ULC	Ulcinj	0.31	313	⇑*i*Pg		Pg		03 29 03.7	-0.3
ULC				*e*Sg		Sg		03 29 09.2	+1.2
ULC	Ulcinj	0.31	313	⇑*i*Pg		Pg		03 29 03.7	-0.3
ULC				*e*Sg		Sg		03 29 09.2	+1.2
PUK	Puka	0.39	42	*e*PG		Pg		03 29 04.8	-0.7
PUK				*i* SG		Sg		03 29 11.2	+0.6
TIR	Tirane	0.47	149	*e*PG		Pg		03 29 06.0	-1.0
TIR				*i* SG		Sg		03 29 13.7	+0.7
TIR	Tirane	0.47	149	P		Pg		03 29 06.7	-0.3
TIR				S		Sg		03 29 13.8	+0.7
TIR	Tirane	0.47	149	*e*Pg		Pg		03 29 06.4	-0.6
TIR				*e*Sg		Sg		03 29 13.4	+0.3
TIR	Tirane	0.47	149	*e*Pg		Pg		03 29 06.4	-0.6
TIR				*e*Sg		Sg		03 29 13.4	+0.3
PHP	Peshkopia	0.67	95	*e*PG		Pg		03 29 10.0	-0.9
PHP				*i* SG		Sg		03 29 20.6	+1.0
PHP	Peshkopia	0.67	95	*e*PN		Sg		03 29 24.6	+5.0
PHP	Peshkopia	0.67	95	P		Pg		03 29 09.9	-0.9
PHP				S		Sg		03 29 20.2	+0.6
PHP	Peshkopia	0.67	95	*e*Pg		Pg		03 29 10.0	-0.9
	SNR=9.0								
PHP				S		Sg		03 29 20.2	+0.6
PDG	Podgorica	0.71	342	P		Pg		03 29 11.1	-0.5
PDG				S		Sb		03 29 22.2	-0.9
PDG	Podgorica	0.71	342	*e*Pg		Pg		03 29 11.3	-0.4
PDG				*e*Sg		Sb		03 29 22.9	-0.2
PDG	Podgorica	0.71	342	⇓*i*Pg		Pg		03 29 11.2	-0.4
PDG				S		Sb		03 29 22.2	-0.9
TTG	Podgorica	0.71	342	⇓*i*Pg		Pg		03 29 11.2	-0.4
TTG				*e*Sg		Sb		03 29 22.8	-0.3
BCI	Bajram Curri	0.73	32	*e*PG		Pg		03 29 10.7	-1.2
BCI				*i* SG		Sg		03 29 21.2	-0.1
BCI	Bajram Curri	0.73	32	*e*Pg		Pg		03 29 10.7	-1.2
	SNR=9.0								
BCI				*i* Sg		Sg		03 29 21.2	-0.1
	SNR=9.0								
BUM	Brajici-Budva	0.73	319	⇓*i*Pg		Pg		03 29 11.8	-0.2
BUM				*e*Sg		Sb		03 29 23.3	-0.5
BUM	Brajici-Budva	0.73	319	⇓*i*Pg		Pg		03 29 11.8	-0.2
BUM				*e*Sg		Sb		03 29 23.3	-0.5
PVY	Plav	0.90	20	⇓*i*Pg		Pg		03 29 14.0	-1.2
PVY				*e*Sg		Sb		03 29 28.3	-0.2
PVY	Plav	0.90	20	⇓*i*Pg		Pg		03 29 14.0	-1.2
PVY				*e*Sg		Sb		03 29 28.3	-0.2
HCY	Herceg Novi	1.05	312	⇑*i*Pg		Pg		03 29 16.9	-1.2
HCY				*e*Sg		Sn		03 29 34.1	-0.4
HCY	Herceg Novi	1.05	312	⇑*i*Pg		Pg		03 29 16.9	-1.2
HCY				*e*Sg		Sn		03 29 34.1	-0.4
NKY	Niksic	1.14	339	⇑*i*Pg		Pg		03 29 18.8	-1.0
NKY				*e*Sg		Sn		03 29 36.8	-0.1
NKY	Niksic	1.14	339	⇑*i*Pg		Pg		03 29 18.8	-1.0
NKY				*e*Sg		Sn		03 29 36.8	-0.1
BEY	Berane	1.15	13	⇓*i*Pg		Pg		03 29 18.9	-1.1
BEY				*e*Sg		Sn		03 29 37.2	+0.1
IVA	Berane	1.15	13	⇓*i*Pg		Pg		03 29 18.9	-1.1
IVA				*e*Sg		Sn		03 29 37.2	+0.1
BRY	Bratogost	1.37	327	*e*Pg		Pn		03 29 22.9	-1.1
BRY				*e*Sg		Sn		03 29 44.8	+2.1
BRY	Bratogost	1.37	327	*e*Pg		Pn		03 29 22.9	-1.1
BRY				*e*Sg		Sn		03 29 44.8	+2.1
SKO	Skopje	1.43	81	P		Pb		03 29 25.1	-0.1
SKO				*e*Sn		Sn		03 29 44.4	+0.4
SKO				S		Sn		03 29 46.1	+2.1
SKO	Skopje	1.43	81	*i* Pg		Pb		03 29 25.2	-0.1
SKO				*i* Sg		Sn		03 29 44.2	+0.2
SKO				*e*Lg		Lg		03 29 45.6	
	comp=N,110nm,0.3s								
SKO				*e*Lg		Lg		03 29 46.4	
	comp=E,95nm,0.8s								
SKO	Skopje	1.43	81	P		Pb		03 29 25.1	-0.1
SKO				*e*Sn		Sn		03 29 44.4	+0.4
SKO				S		Sn		03 29 46.1	+2.1
KBN	Korca	1.47	140	*e*PG		Pn		03 29 24.6	-0.7
KBN				*i* SG		Sg		03 29 48.2	+3.1
KBN	Korca	1.47	140	*e*Pg		Pn		03 29 24.6	-0.7
	SNR=9.0								
KBN				*i* Sg		Sg		03 29 48.2	+3.1
	SNR=9.0								
BIA	Bitola	1.52	118	P		Pn		03 29 24.2	-1.9
BIA				S		Sg		03 29 47.0	+0.1
BIA	Bitola	1.52	118	*i* Pg		Pn		03 29 24.2	-1.9
BIA				*i* Sg		Sg		03 29 47.2	+0.2
BIA	Bitola	1.52	118	P		Pn		03 29 24.2	-1.9
BIA				S		Sg		03 29 47.0	+0.1
UPM	Unac-Piva	1.52	342	*e*Pg		Pn		03 29 26.4	+0.2
UPM				*e*Sg		Sg		03 29 49.0	+2.0
UPM	Unac-Piva	1.52	342	*e*Pg		Pn		03 29 26.4	+0.2
UPM				*e*Sg		Sg		03 29 49.0	+2.0
FNA	Florina	1.69	124	P		Pn		03 29 27.8	-0.5
FNA				S		Sn		03 29 50.1	-0.2
FNA	Florina	1.69	124	*e*P		Pn		03 29 27.6	-0.7
FNA	Florina	1.69	124	P		Pn		03 29 27.8	-0.5
NEST	Nestorio	1.75	139	P		Pn		03 29 29.4	+0.1
NEST	Nestorio	1.75	139	P		Pn		03 29 29.4	+0.1
STON	Ston	1.77	310	*e*Pn		Pn		03 29 29.6	+0.2
STON				Sn		Sb		03 29 53.9	+0.4
SELS	Selova	1.87	38	*e*Pn		Pn		03 29 31.5	+0.7
SELS				*e*Sn		Sb		03 29 56.0	-0.5
BARS	Barje	1.99	57	*e*Pn		Pn		03 29 32.5	+0.1
BARS				*e*Sn		Sn		03 29 58.0	+0.2
KEK	Kerkira	2.05	175	*e*P		Pg		03 29 37.2	0.0
BBLS	Lazići	2.12	357	*e*Pn		Pn		03 29 35.5	+1.3
BBLS				*e*Sn		Sb		03 30 02.8	-0.8
BBLS	Lazići	2.12	357	*e*Pn		Pn		03 29 35.5	+1.3
BBLS				*e*Sn		Sb		03 30 02.8	-0.8
KZN	Kozani	2.22	130	*e*P		Pn		03 29 35.2	-0.4
GRG	Griva	2.29	109	*e*P		Pn		03 29 36.7	+0.1
GRUS	Gruza	2.30	22	*e*Pn		Pb		03 29 38.5	-1.6
GRUS				*e*Sn		Sb		03 30 07.2	-1.6
GRUS	Gruza	2.30	22	*e*Pn		Pb		03 29 38.5	-1.6
GRUS				*e*Sn		Sb		03 30 07.2	-1.6
VAY	Valandovo	2.31	100	*e*Sn		Sn		03 30 05.3	-0.4
VAY	Valandovo	2.31	100	*e*Pn		Pn		03 29 37.1	+0.3
VAY	Valandovo	2.31	100	*e*Sn		Sn		03 30 05.3	-0.4
DIVS	Divibare	2.37	8	*e*Pn		Pn		03 29 38.1	+0.4
DIVS				*e*Sn		Sn		03 30 08.9	+1.7
DIVS	Divibare	2.37	8	*e*Pn		Pn		03 29 38.1	+0.4
DIVS				*e*Sn		Sn		03 30 08.9	+1.7
ZAPS	Zavoj	2.74	55	*e*Pn		Pn		03 29 43.5	+0.7
ZAPS				*e*Sn		Sn		03 30 17.6	+1.2
ZAPS	Zavoj	2.74	55	*e*Pn		Pn		03 29 43.5	+0.7
ZAPS				*e*Sn		Sn		03 30 17.6	+1.2
VTS	Vitosha	2.85	72	*e*Pn		Pn		03 29 44.1	-0.2
VTS				*e*Sn		Sn		03 30 19.8	+0.6
VTS	Vitosha	2.85	72	⇑*i*P		Pn		03 29 45.6	+1.2
VTS	Vitosha	2.85	72	*e*Pn		Pn		03 29 44.1	-0.2
VTS	Vitosha	2.85	72	⇑*i*P		Pn		03 29 45.6	+1.2
VTS				S		Sn		03 30 19.8	+0.6
THL	Klokotos Trika	2.88	139	*e*P		Pn		03 29 43.8	-0.8
SOH	Sokhos	3.02	107	*e*P		Pn		03 29 47.2	+0.6
LKD2	Lefkada island	3.08	164	*e*P		Pn		03 29 47.2	-0.2
PLG	Polygyros	3.25	114	*e*P		Pn		03 29 50.6	+0.8
NVR	Nevrokopi	3.26	96	*e*P		Pn		03 29 51.7	+1.7
AGG	Agios Georgios	3.46	141	*e*P		Pn		03 29 52.3	-0.3
UDBI	Udbina	3.92	316	Sn		Sn		03 30 47.4	+1.9
UDBI	Udbina	3.92	316	Sn		Sn		03 30 47.3	+1.9
BZS	Buzias	4.14	21	⇓*i*P		Pn		03 30 02.5	+0.5
BZS	Buzias	4.14	21	⇓*i*P		Pn		03 30 02.5	+0.5
BZS				S		Sn		03 30 50.7	-0.2
NVLJ	Novalja	4.43	311	*e*Pn		Pn		03 30 05.8	-0.1
NVLJ				Sn		Sn		03 30 56.9	-0.9
NVLJ	Novalja	4.43	311	*e*Pn		Pn		03 30 05.8	-0.1
NVLJ				Sn		Sn		03 30 56.9	-0.9
DRGR		5.53	23	⇑*i*P		Pn		03 30 21.9	+0.8
DRGR		5.53	23	S		Sn		03 31 23.5	-1.6
DRGR		5.53	23	⇑*i*P		Pn		03 30 21.9	+0.8
MLR	Muntele Rosu	5.96	49	⇑*i*P		Pn		03 30 28.6	+1.5
MLR	Muntele Rosu	5.96	49	⇑*i*P		Pn		03 30 28.6	+1.5
PLOR	Plostina	6.57	49	⇑*i*P		P

BPAT Tungurahua Vol 0.96 278 ⇓S Sn 03 39 31.8 -0.9
BPAT Tungurahua Vol 0.96 278 ⇓P Pn 03 39 09.8 -0.4
PAT1 Patacocha 0.96 278 ⇑P Pn 03 39 09.7 -0.6
RUN5 Runtun 0.96 284 P Pn 03 39 09.6 -0.5
ARRY Arrayan 0.98 278 ⇓P Pn 03 39 09.4 -0.8
RETU Refugio 0.98 281 P Pn 03 39 09.8 -0.6
BMAS Trigal station 1.00 278 ⇑P Pn 03 39 09.8 -0.6
JUI6 Juive 1.00 283 ⇓P Pn 03 39 09.7 -0.6
BBIL Ulba Tungurahu 1.02 281 S Sn 03 39 32.3 -0.9
BBIL Ulba Tungurahu 1.02 281 P Pn 03 39 09.7 -0.8
BIL2 Estacion Bilba 1.03 280 ⇓P Pn 03 39 10.5 0.0
PISA Pisayambo 1.07 303 ⇑P Pn 03 39 10.8 -0.3
IGUA Igualata 1.16 278 ⇑P Pn 03 39 11.0 -0.9
TAMB Tambo 1.29 317 ⇓P Pn 03 39 12.5 -0.3
COV1 Cotopaxi Volc 1.30 319 ⇓P Pn 03 39 13.4 +0.4
BTAM Cotopaxi Volca 1.32 317 ⇓P Pn 03 39 12.8 -0.4
MOV1 Cotopaxi Vol s 1.33 314 ⇓P Pn 03 39 12.7 -0.5
BMOR Cotopaxi Volca 1.33 313 ⇓P Pn 03 39 13.0 -0.2
VC1 Cotopaxi 1 1.35 317 ⇓P Pn 03 39 13.0 -0.3
BREF Cotopaxi Volca 1.36 315 ⇓P Pn 03 39 13.3 -0.2
ANTI Antisana 1.36 330 ⇓P Pn 03 39 13.3 -0.2
BNAS Cotopaxi Volca 1.39 314 ⇓P Pn 03 39 13.5 -0.1
NAS2 Nasa 1.40 315 ⇓P Pn 03 39 13.9 +0.1
PITA Cotopaxi Volc 1.43 319 ⇓P Pn 03 39 13.6 -0.4
LAV4 Lava4-Reventad 1.55 355 ⇓P Pn 03 39 14.5 -0.3
CHAR Charly 1.56 353 ⇓P Pn 03 39 15.2 +0.1
CONE Cono NE Rev Vo 1.57 354 ⇓P Pn 03 39 15.0 -0.2
CAYR Refugio Cayamb 1.73 343 ⇓P Pn 03 39 17.2 +0.2
CAYA Cayambe 1.78 344 ⇓P Pn 03 39 17.6 +0.3
JUA2 San Juan 2 1.81 322 ⇓P Pn 03 39 16.9 -0.7
GGP Refugio Guagua 1.83 323 ⇓P Pn 03 39 17.2 -0.6
TERV Terraza Guagua 1.84 323 ⇓P Pn 03 39 17.4 -0.5
PINO Pino 1.85 323 ⇓P Pn 03 39 17.5 -0.6
OTAV Otavalo 2.10 333 ⇓P Pn 03 39 19.8 -0.8
OTAV Otavalo 2.10 333 eP Pn 03 39 19.6 -0.9
COTA Cotacachi 2.14 337 ⇓P Pn 03 39 21.0 -0.1
GOLV Golondrinas 2.47 318 P Pn 03 39 22.4 -1.8
GOLV Golondrinas 2.47 318 S Sn 03 39 54.7 -3.1
LITE Lita 2.59 340 ⇓P Pn 03 39 25.2 -0.5
MAG1 Magdalena 2.77 304 P Pn 03 39 25.6 -2.0
CATE Catamayo 2.97 219 ⇑S Sn 03 40 05.8 -2.7
CATE Catamayo 2.97 219 ⇑P Pn 03 39 28.1 -2.0
ARNL Arenillas 3.20 234 ⇑S Sn 03 40 08.5 -4.5
ARNL Arenillas 3.20 234 ⇑P Pn 03 39 28.8 -3.9
ATAH Atahualpa 5.53 189 P Pn 03 40 02.4 -0.2
ATAH S Sn 03 41 05.1 -1.6
168nm,0.3s,baz=18,slow=7.4,SNR=339
ATAH Atahualpa 5.53 189 P Pn 03 40 02.4 -0.2
ATAH S Sn 03 41 05.1 -1.6
137nm,0.3s,baz=6.0,slow=19,SNR=14
ROSC El Rosal 7.19 26 eP Pn 03 40 23.6 -0.5
ROSC El Rosal 7.19 26 P Pn 03 40 22.0 -2.2
0.9nm,0.3s,baz=103,slow=18,SNR=6.6
NNA Nana 10.30 176 eP Pn 03 41 05.2 +0.9
NNA eS Sn 03 42 50.6 -8.7
SDV Santo Domingo 12.49 33 eP Pn 03 41 33.0 +0.3
SAML Samuel 15.98 118 eP P 03 42 14.9 -0.5
0.6nm,0.9s
SAML eS S 03 45 07.7 -5.2
LPAZ La Paz 17.22 148 eP Pn 03 42 31.9 +0.7
41nm,0.9s
LPAZ La Paz 17.22 148 P Pn 03 42 31.7 +0.6
3.5nm,0.3s,baz=336,slow=11,SNR=83
MNMC Minimini 19.02 157⇑eP Pn 03 42 51.4 -0.5
MNMC Minimini 19.02 157⇑eP Pn 03 42 51.4 -0.5
MTDJ Mount Denham 19.75 360 eP P 03 42 58.2 +1.7
55nm,0.9s
HMBC Humberstone 19.95 159⇓eP P 03 43 01.0 +2.2
HMBC Humberstone 19.95 159⇓eP P 03 43 01.0 +2.2
PB01 Plate Boundary 20.80 159 eP Pn 03 43 11.3 -2.2
PB01 Plate Boundary 20.80 159 eP Pn 03 43 11.3 -2.2
SIV San Ignacio 21.56 132 P P 03 43 16.2 +0.4
SIV San Ignacio 21.56 132 P P 03 43 16.2 +0.4
11nm,0.5s,baz=324,slow=10,SNR=54
PB09 Plate Boundary 21.58 159⇑eP P 03 43 18.1 +2.1
PB09 Plate Boundary 21.58 159⇑eP P 03 43 18.1 +2.1
PB04 Plate Boundary 21.92 160 eP P 03 43 19.5 +0.2
PB04 Plate Boundary 21.92 160 eP P 03 43 19.5 +0.2
LVC Limon Verde 22.45 159⇑eP P 03 43 27.2 +2.7
LVC Limon Verde 22.45 159 P P 03 43 27.0 +2.5
22nm,0.7s,baz=330,slow=8.4,SNR=30
AOPR Arecibo Observ 22.50 28 eP P 03 43 24.3 -0.5
36nm,0.6s
TEIG Tepich 24.17 335 eP P 03 43 40.6 +0.7
3.4nm,0.6s
TEIG Tepich 24.17 335 P P 03 43 39.9 0.0
3.0nm,0.6s,baz=186,slow=10,SNR=8.0
CPUP Villa Florida 31.27 143 P P 03 44 43.1 0.0
CPUP Villa Florida 31.27 143 P P 03 44 43.1 0.0
7.9nm,0.8s,baz=314,slow=12
BDFB Brasilia 32.22 117 P P 03 44 52.9 +1.2
BDFB Brasilia 32.22 117 P P 03 44 52.9 +1.2
4.4nm,0.5s,baz=302,slow=9.5,SNR=9.7
NHSC New Hope 34.66 356 eP P 03 45 12.9 +0.6
81nm,1.1s
GOGA Godfrey 35.32 351 eP P 03 45 17.9 -0.1
11nm,1.0s
LRAL Lakeview Retre 35.64 346 eP P 03 45 20.3 -0.5
17nm,1.1s
KMSC Kings Mountain 36.77 355 ⇓P P 03 45 30.7 +0.4
baz=37,SNR=9.9
732A Laxson Ranch, 37.10 326 ⇓P P 03 45 33.8 +0.6
baz=37
CPCT Cooper Cave 37.48 351 eP P 03 45 36.1 -0.2
CPCT epP pP 03 46 17.4 +0.7
632A Uvalde 37.61 327 ⇑P P 03 45 38.7 +1.2
baz=38
631A Perdido Creek 37.97 326 ⇑P P 03 45 41.3 +0.8
baz=38
532A Rocksprings 38.16 328 ⇓P P 03 45 43.5 +1.4
baz=38,SNR=17
JCT Junction City 38.38 328 ⇑P P 03 45 45.5 +1.6
baz=38
TZTN Tazewell 38.41 352 eP P 03 45 43.8 -0.3
19nm,0.8s
WHTX Lake Whitney 38.44 332 ⇑P P 03 45 45.1 +0.8
baz=38
531A Rocksprings 38.53 327 ⇓P P 03 45 46.9 +1.7
baz=39
432A Menard 38.69 329 ⇓P P 03 45 48.3 +1.8
baz=39
UALR University of 38.82 340 eP P 03 45 46.5 -0.9
18nm,0.8s
TRQA Torquist 38.94 160 eP P 03 45 49.8 +1.3
33nm,1.4s
530A J-C Ranch, Com 38.95 326 ⇓P P 03 45 50.3 +1.5
baz=39
431A Sonora 38.97 327 ⇑P P 03 45 50.1 +1.3
baz=39
332A Millersview 39.06 329 ⇑P P 03 45 50.7 +1.1
baz=39,SNR=10
628A Black Gap, Mar 39.35 324 ⇓P P 03 45 53.0 +1.0
baz=39
331A San Angelo 39.36 328 ⇓P P 03 45 53.6 +1.6
baz=39
430A Baggett Ranch, 39.39 327 ⇓P P 03 45 53.7 +1.4
baz=39
PLCA Paso Flores 39.41 172 eP P 03 45 53.9 +1.5
50nm,1.3s
PLCA PcP PcP 03 47 57.7 +1.1
PLCA Paso Flores 39.41 172 P P 03 45 54.0 +1.6
21nm,0.7s,baz=341,slow=9.6,SNR=46
PLCA PcP PcP 03 47 57.7 +1.1
3.6nm,0.8s,baz=340,slow=2.6,SNR=3.8
232A Coleman 39.42 330 ⇓P P 03 45 54.1 +1.6
baz=40
529A Stev Forest Ra 39.43 325 ⇑P P 03 45 54.1 +1.4
baz=40
627A Terlingua Ranc 39.62 323 ⇓P P 03 45 55.7 +1.4
baz=40,SNR=7.0
429A Davenport Ranc 39.63 326 ⇓P P 03 45 55.3 +1.0
baz=40
TXAR Lajitas Array 39.70 323 P P 03 45 56.1 +1.1
TXAR pP pP 03 46 35.2 -0.5
TXAR PcP PcP 03 47 58.9 +1.1
TXAR ScP ScP 03 51 29.1 +0.6
TXAR Lajitas Array 39.70 323 P P 03 45 56.1 +1.1
0.7nm,0.6s,baz=151,slow=8.3,SNR=11
TXAR pP pP 03 46 35.2 -0.5
1.3nm,0.9s,baz=120,slow=8.8,SNR=4.2
TXAR PcP PcP 03 47 58.9 +1.1
1.2nm,0.7s,baz=156,slow=4.7,SNR=8.4
TXAR ScP ScP 03 51 29.1 +0.6
0.5nm,0.7s,baz=167,slow=4.4,SNR=5.8

PARMO Parma 39.78 345 eP P 03 45 54.3 -1.1
528A Cox Ranch, San 39.79 325 ⇓P P 03 45 56.5 +0.8
baz=40
330A Mertzon 39.83 328 ⇓P P 03 45 57.7 +1.7
baz=40
ABTX Abilene, Hawle 40.01 330 ⇓P P 03 45 58.8 +1.4
baz=40
626A Big Bend Ranch 40.14 323 ⇑P P 03 45 59.6 +1.0
baz=40,SNR=5.5
428A Kincaid Ranch, 40.15 325 ⇓P P 03 45 59.7 +1.1
baz=40
230A Sterling City 40.18 328 ⇑P P 03 45 59.9 +1.1
baz=40
527A Woodward Ranch 40.26 324 ⇓P P 03 46 00.6 +1.0
baz=40,SNR=7.0
329A Wagon Wheel Ra 40.33 327 ⇑P P 03 46 00.6 +0.5
baz=40
131A Roby 40.42 330 ⇓P P 03 46 02.6 +1.8
baz=40
526A Mary Lane Ranc 40.48 323 ⇑P P 03 46 02.0 +0.6
baz=40,SNR=7.7
Z32A Haskell 40.48 331 ⇑P P 03 46 02.2 +0.9
baz=40,SNR=7.8
USIN University of 40.52 348 eP P 03 46 00.3 -1.1
24nm,0.9s
229A Bryant Ranch, 40.61 327 ⇑P P 03 46 03.8 +1.4
baz=41
SIUC Southern Illin 40.64 346 eP P 03 46 01.4 -1.0
34nm,0.9s
427A Hayter Ranch, 40.65 325 ⇑P P 03 46 03.7 +1.0
baz=41
130A Snyder 40.66 329 ⇑P P 03 46 03.5 +0.8
baz=41
328A Wristen Ranch, 40.71 326 ⇓P P 03 46 04.2 +1.0
baz=41
Z31A Sharp Cattle R 40.82 330 ⇑P P 03 46 05.5 +1.5
baz=41
426A McDonald Obser 40.88 324 ⇓P P 03 46 05.7 +0.9
baz=41
Y32A R-V Farms, Ver 41.03 332 ⇓P P 03 46 07.0 +1.3
baz=41
129A Stewart Farms, 41.15 328 ⇓P P 03 46 07.7 +0.9
baz=41
Z30A Sanderson Ranc 41.28 329 ⇑P P 03 46 09.7 +1.8
baz=41,SNR=7.2
WMOK Wichita Mounta 41.34 333 eP P 03 46 08.2 0.0
3.7nm,1.0s
Y31A Rekieta Farm, 41.39 331 ⇓P P 03 46 10.2 +1.5
baz=42
MVL Millersville 41.46 1 eP P 03 46 08.9 -0.1
13nm,0.8s
BLO Bloomington 41.46 349 eP P 03 46 07.7 -1.4
10nm,0.8s
425A Indio Mountain 41.54 323 ⇑P P 03 46 10.8 +0.8
baz=42,SNR=7.7
Y30A Stafford Cattl 41.64 330 ⇑P P 03 46 11.8 +1.1
baz=42
X31A McDonald Ranch 41.80 332 ⇑P P 03 46 12.9 +0.9
baz=42,SNR=6.4
325A Bean Ranch, Si 41.95 324 ⇓P P 03 46 14.4 +1.0
baz=42
ACSO Alum Creek Sta 41.98 354 eP P 03 46 12.9 -0.4
19nm,0.8s
127A Arkansas Junct 41.99 327 ⇓P P 03 46 14.2 +0.5
baz=42
226B Tecolote Peak, 42.00 325 ⇑P P 03 46 15.2 +1.5
baz=42,SNR=5.5
Y29A Porterfield Fa 42.02 329 ⇑P P 03 46 14.7 +0.9
baz=42,SNR=8.4
X30A Coker Ranch, T 42.08 331 ⇓P P 03 46 15.0 +0.7
baz=42
W31A Holland Ranch, 42.24 332 ⇑P P 03 46 16.1 +0.5
baz=42
324A Moseley Ranch, 42.30 323 ⇓P P 03 46 17.0 +0.7
baz=42,SNR=6.4
126A Clayton Basin, 42.34 326 ⇑P P 03 46 17.9 +1.5
baz=42
Y28A McKinney Farm, 42.35 329 ⇓P P 03 46 17.8 +1.3
baz=42
225A Deer Hill, Car 42.40 325 ⇓P P 03 46 18.3 +1.2
baz=42
Z27A Tatum 42.40 327 ⇓P P 03 46 17.9 +1.0
baz=42
MNTX Cornudas Mount 42.43 324 eP P 03 46 17.9 +0.8
1.5nm,0.8s
MNTX epP pP 03 46 59.6 +1.3
X29A Tulia 42.49 330 ⇓P P 03 46 18.2 +0.6
baz=42
MSTX Muleshoe 42.67 328 ⇓P P 03 46 20.1 +1.0
baz=43
V31A Spring Creek L 42.68 333 ⇑P P 03 46 20.5 +1.4
baz=43
125A Gardner Draw, 42.71 325 ⇑P P 03 46 20.6 +1.2
baz=43,SNR=6.5
Z26A Caprock 42.78 327 ⇓P P 03 46 20.8 +0.7
baz=43
Y27A Causey 42.81 328 ⇑P P 03 46 21.4 +1.1
baz=43
W29A Amarillo 43.00 331 ⇓P P 03 46 22.6 +0.8
baz=43
124A Stringfield Ra 43.19 325 ⇓P P 03 46 24.7 +1.2
baz=43
Z25A Roswell 43.20 326 ⇑P P 03 46 24.3 +1.0
baz=43,SNR=7.6
HDIL Hopedale 43.36 347 eP P 03 46 22.5 -1.9
26nm,0.6s
Z24A Sheeppen Canyo 43.60 325 ⇓P P 03 46 28.2 +1.5
baz=44,SNR=7.2
X26A CR and CF Fran 43.66 328 ⇓P P 03 46 28.3 +1.2
baz=44
Y25A Mesa, Roswell 43.66 327 ⇓P P 03 46 28.2 +1.1
baz=44
W27A Bowe Ranch, En 43.67 329 ⇑P P 03 46 29.1 +2.0
baz=44
T31A Randall Ranch, 43.70 334 ⇓P P 03 46 28.2 +1.0
baz=44
222A Williams Famil 43.74 323 ⇓P P 03 46 29.2 +1.4
baz=44,SNR=5.2
T30A Plains 44.04 333 ⇑P P 03 46 31.6 +1.7
baz=44
W26A Owens Ranch, T 44.05 329 ⇓P P 03 46 32.5 +2.4
baz=44
Y24A Capitan 44.08 326 ⇓P P 03 46 31.9 +1.4
baz=44
320A Kipp Ranch, An 44.10 321 ⇑P P 03 46 32.4 +1.7
baz=44
Y23A Lovelace Mesa, 44.43 325 ⇓P P 03 46 34.9 +1.6
baz=44
121A Cookes Peak, D 44.46 323 ⇓P P 03 46 35.2 +1.7
baz=44
Z22A Elephant Butte 44.47 324 ⇓P P 03 46 34.8 +1.3
baz=44
220A Playas Peak, P 44.48 321 ⇑P P 03 46 34.9 +1.2
baz=44
W25A X Bar L Ranch, 44.52 328 ⇑P P 03 46 34.7 +0.8
baz=45
319A Douglas 44.61 320 ⇑P P 03 46 36.4 +1.7
baz=45
V26A Tequesquite Ra 44.61 329 ⇑P P 03 46 35.8 +1.2
baz=45,SNR=12
U27A Thompson Grove 44.62 331 ⇓P P 03 46 35.4 +0.8
baz=45
R31A Burdett 44.64 335 ⇓P P 03 46 35.5 +0.8
baz=45,SNR=5.5
S29A Ulysses 44.78 333 ⇓P P 03 46 36.7 +0.9
baz=45,SNR=5.3
BNM Barren Site 44.92 325 eP P 03 46 38.5 +1.3
0.9nm,0.4s
BNM epP pP 03 47 21.3 +2.4
Z21A St. Cloud Mine 44.93 323 ⇑P P 03 46 38.3 +1.0
baz=45
Y22A Socorro 44.96 325 ⇑P P 03 46 38.4 +1.0
baz=45
120A U Bar Ranch, L 44.98 322 ⇓P P 03 46 38.4 +0.7
baz=45
W24A Lazy 6 Ranch, 45.02 327 ⇓P P 03 46 38.8 +0.9
baz=45
U26A Atchley Ranch, 45.05 330 ⇓P P 03 46 39.2 +1.1
baz=45
V25A Rancho No Teng 45.07 328 ⇓P P 03 46 39.2 +0.9
baz=45,SNR=7.5
S28A Manter 45.11 332 ⇓P P 03 46 39.8 +1.4
baz=45
Q31A Ellis 45.19 336 ⇑P P 03 46 39.9 +0.8
baz=45
V24A Rampart Ranch, 45.33 328 ⇓P P 03 46 41.1 +0.7
baz=45,SNR=6.6
Z20A Nine Sixteen R 45.35 322 ⇑P P 03 46 41.6 +1.1
baz=45
W23A Werner Place, 45.39 326 ⇑P P 03 46 42.2 +1.3
baz=45
U25A Circle Dot Ran 45.39 329 ⇓P P 03 46 41.8 +0.9
baz=45
ANMO Albuquerque 45.40 326 eP P 03 46 42.1 +1.2
12nm,1.2s
ANMO epP pP 03 47 24.6 +2.0
Q30A Quinter 45.51 335 ⇓P P 03 46 42.2 +0.7
baz=46,SNR=7.4
P31A Stockton 45.62 336 ⇑P P 03 46 43.3 +0.9
baz=46
SCIA State Center 45.63 344 eP P 03 46 41.3 -1.0
17nm,0.6s
S27A Las Animas 45.66 332 ⇓P P 03 46 44.1 +1.3
baz=46
Q29A Oakley 45.77 334 ⇓P P 03 46 44.6 +1.0
baz=46
Y20A Horse Springs, 45.77 323 ⇑P P 03 46 45.1 +1.3
baz=46,SNR=6.7
X21A Alamocita Cree 45.80 324 ⇑P P 03 46 45.4 +1.3
baz=46,SNR=5.2
JFWS Jewell Farm 45.82 347 eP P 03 46 42.2 -1.7
22nm,0.8s
JFWS epP pP 03 47 23.9 -1.8
V23A Ortiz Mt. (NFS 45.84 327 ⇑P P 03 46 45.3 +1.0
baz=46
U24A Moreno Valley 45.85 328 ⇑P P 03 46 45.8 +1.3
baz=46
S26A Kim 45.88 331 ⇓P P 03 46 45.6 +1.0
baz=46
T25A Trinidad 45.97 330 ⇑P P 03 46 46.9 +1.5
baz=46,SNR=5.6
TUC Tucson 46.19 320 eP P 03 46 48.0 +1.1
12nm,0.7s
TUC epP pP 03 47 30.9 +2.0
W21A San Fidel 46.20 325 ⇓P P 03 46 48.4 +1.2
baz=46
U23A El Rito 46.28 328 ⇓P P 03 46 49.1 +1.4
baz=46,SNR=8.4
Q28A Sharon Springs 46.28 334 ⇑P P 03 46 48.2 +0.6
baz=46
V22A San Miguel Ran 46.36 327 ⇑P P 03 46 49.7 +1.2
baz=46
S25A Robets Cordova 46.38 330 ⇓P P 03 46 49.6 +1.1
baz=46,SNR=7.9
FRNY Flat Rock 46.41 4 eP P 03 46 48.3 0.0
14nm,1.1s
R26A Arlington 46.41 332 ⇓P P 03 46 49.5 +0.8
baz=46
O30A MW Ranch, Wils 46.46 336 ⇓P P 03 46 49.4 +0.5
baz=46
P28A Saint Francis 46.67 334 ⇓P P 03 46 52.0 +1.4
baz=47
U22A Llaves 46.67 327 ⇑P P 03 46 52.0 +1.1
baz=47
V21A Milan 46.69 326 ⇑P P 03 46 52.6 +1.6
baz=47
W20A Ramah 46.69 325 ⇑P P 03 46 52.7 +1.7
baz=47
T23A Casias Ranch, 46.72 328 ⇑P P 03 46 52.6 +1.3
baz=47
S24A Houchin Ranch, 46.76 330 ⇑P P 03 46 53.2 +1.6
baz=47
X18A Snowflake 47.14 323 ⇑P P 03 46 55.7 +1.2
baz=47
U21A Nageezi 47.15 326 ⇑P P 03 46 55.5 +1.0
baz=47
214A Organ Pipe Nat 47.29 318 ⇓P P 03 46 56.4 +0.9
baz=47,SNR=7.2
W18A Petrified Fore 47.41 324 ⇑P P 03 46 57.5 +1.0
baz=47
O27A Beecher Island 47.49 334 ⇑P P 03 46 58.6 +1.6
baz=48
R23A Moffat 47.49 330 ⇓P P 03 46 58.3 +1.1
baz=48
U20A Newcomb 47.59 326 ⇓P P 03 46 59.2 +1.3
baz=48
S22A 4UR Ranch, Cre 47.67 328 ⇑P P 03 46 60.0 +1.3
baz=48
P25A Willow Gulch B 47.71 332 ⇓P P 03 47 00.2 +1.4
baz=48
X16A Lo Mia Camp, P 47.98 322 ⇓P P 03 47 02.5 +1.5
baz=48
R22A Saguache, Gunn 48.00 329 ⇓P P 03 47 02.6 +1.4
baz=48
ECSD EROS Data Cent 48.32 341 eP P 03 47 01.8 -1.3
5.1nm,1.0s
Q22A Crested Butte, 48.55 329 ⇑P P 03 47 06.6 +1.2
baz=49
ISCO Idaho Springs 48.63 331 ⇓P P 03 47 07.1 +1.2
baz=49
COWI Conover 48.65 349 eP P 03 47 04.1 -1.4
4.9nm,0.5s
WUAZ Wupatki 48.67 323 eP P 03 47 08.0 +1.9
6.4nm,0.8s
WUAZ epP pP 03 47 50.8 +2.4
WUAZ Wupatki 48.67 323 ⇓P P 03 47 07.2 +1.1
baz=49,SNR=7.5
R20A Redvale 48.82 327 ⇑P P 03 47 09.1 +1.8
baz=49
P22A Eagle 49.03 330 ⇓P P 03 47 10.6 +1.7
baz=49
O23A Lake Granby, G 49.09 331 ⇓P P 03 47 11.1 +1.6
baz=49,SNR=6.7
P21A Newcastle 49.33 329 ⇑P P 03 47 12.8 +1.7
baz=49
O22A Kremmling 49.36 331 ⇑P P 03 47 12.6 +1.1
baz=49
U15A North Rim 49.83 323 ⇑P P 03 47 16.0 +1.0
baz=50
W13A Hualapai Mount 49.95 321 ⇑P P 03 47 17.4 +1.5
baz=50,SNR=5.7
IRM Iron Mountain 50.19 319 ⇓P P 03 47 18.6 +1.0
baz=50
BELC Belle Mtn. Jos 50.66 318 ⇑P P 03 47 22.1 +0.9
baz=51
N20A Spence Gulch, 50.72 330 ⇓P P 03 47 23.4 +1.8
baz=51
EYMN Ely 50.88 348 eP P 03 47 20.8 -1.6
12nm,0.5s
EYMN epP pP 03 48 03.4 -1.7
GMRC Granite Mounta 50.90 319 ⇑P P 03 47 24.3 +1.3
baz=51
HEC Hector,Ludlow 51.37 319 ⇓P P 03 47 27.8 +1.4
baz=51
J22A Midwest 51.86 333 ⇓P P 03 47 30.5 +0.6
baz=52
GSC Goldstone 51.97 319 ⇑P P 03 47 32.0 +1.2
baz=52
DAU Daniels Canyon 51.97 327 eP P 03 47 32.3 +1.3
JLU Jordanelle 52.21 327 eP P 03 47 34.2 +1.5
I22A 9 Mile Ranch, 52.24 334 ⇓P P 03 47 33.5 +0.9
baz=52
K19A Absolon Red Bu 52.51 331 ⇓P P 03 47 35.8 +1.0
baz=53
EDW2 Edwards Air Fo 52.51 318 ⇓P P 03 47 36.0 +1.3
baz=52
I21A Big Trails, Te 52.54 333 ⇓P P 03 47 36.5 +1.6
baz=53
J20A Shoshoni 52.55 332 ⇑P P 03 47 35.6 +0.6
baz=53
DUG Dugway 52.67 326 eP P 03 47 37.1 +1.1
2.2nm,0.7s
DUG Dugway 52.67 326 ⇑P P 03 47 36.9 +1.0
baz=53,SNR=5.3
FURC Furnace Creek, 52.70 320 ⇑P P 03 47 36.9 +0.9
baz=53
E26A Carlson Angus 52.72 338 ⇓P P 03 47 36.9 +0.8
baz=53
PDAR Pinedale Array 52.81 331 P P 03 47 37.4 +0.4
PDAR pP pP 03 48 17.8 -2.3
PDAR Pinedale Array 52.81 331 P P 03 47 37.4 +0.4
0.8nm,0.7s,baz=143,slow=9.1,SNR=5.2
PDAR pP pP 03 48 17.8 -2.3
0.8nm,0.6s,baz=148,slow=11,SNR=1.7
MDND Maddock 52.94 341 ⇓P P 03 47 37.6 0.0
baz=53,SNR=6.1
HWUT Hardware Ranch 52.98 328 eP P 03 47 37.8 -0.5
2.4nm,0.6s
I20A Worland 53.02 333 ⇑P P 03 47 39.6 +1.1
baz=53
R11A Troy Canyon, C 53.07 323 ⇓P P 03 47 40.3 +1.3
baz=53
F23A Volborg 53.24 336 ⇑P P 03 47 40.9 +1.0
baz=53
ISA Isabella 53.28 318 ⇓P P 03 47 41.3 +0.9
baz=53

GRAC	**Grapevine Rang**	**53.34**	**320**	⇓P		**P**	**03 47 42.0**	**+1.2**
	baz=53							
H20A	**Greybull**	**53.38**	**333**	⇑P		**P**	**03 47 41.8**	**+0.8**
	baz=53							
PKM	**Peak Mountain**	**53.76**	**317**	⇑P		**P**	**03 47 45.3**	**+1.3**
	baz=54							
ULM	**Lac du Bonnet**	**54.05**	**346**	P		**P**	**03 47 44.2**	**-1.4**
ULM	**Lac du Bonnet**	**54.05**	**346**	P		**P**	**03 47 44.2**	**-1.4**
	20nm,0.7s,baz=158,slow=8.8,SNR=16							
D22A	**Cohagen**	**54.72**	**336**	⇓P		**P**	**03 47 51.8**	**+1.2**
	baz=55							
G18A	**Lazy EL Ranch,**	**54.73**	**333**	⇓P		**P**	**03 47 51.0**	**+0.2**
	baz=55							
NVAR	**Mina Arroyo Bea**	**54.80**	**321**	P		**P**	**03 47 52.8**	**+1.3**
NVAR				pP		**pP**	**03 48 36.6**	**+1.8**
NVAR	**Mina Arroyo Bea**	**54.80**	**321**	P		**P**	**03 47 52.8**	**+1.3**
	1.1nm,0.6s,baz=122,slow=6.7,SNR=9.4							
NVAR				pP		**pP**	**03 48 36.6**	**+1.8**
	3.5nm,0.9s,baz=131,slow=6.7,SNR=7.6							
F19A	**Roth Farm, Mol**	**54.86**	**334**	⇑P		**P**	**03 47 53.2**	**+1.5**
	baz=55							
E20A	**Meyer Farm, Mu**	**55.01**	**335**	⇓P		**P**	**03 47 54.4**	**+1.7**
	baz=55							
H16A	**Russell Place,**	**55.07**	**331**	⇓P		**P**	**03 47 54.8**	**+1.4**
	baz=55							
C22A	**Vida**	**55.08**	**337**	⇑P		**P**	**03 47 54.3**	**+1.1**
	baz=55							
F18A	**Big Timber**	**55.25**	**333**	⇓P		**P**	**03 47 55.2**	**+0.7**
	baz=55,SNR=12							
E19A	**Rath Farm, Rou**	**55.26**	**334**	⇓P		**P**	**03 47 56.3**	**+1.8**
	baz=55							
B23A	**Brockton**	**55.33**	**338**	⇑P		**P**	**03 47 56.2**	**+1.3**
	baz=55							
A24A	**Westby**	**55.35**	**339**	⇓P		**P**	**03 47 56.5**	**+1.4**
	baz=56							
C21A	**Desert Coulee**	**55.63**	**336**	⇓P		**P**	**03 47 58.2**	**+1.1**
	baz=56,SNR=5.4							
HLID	**Hailey**	**55.85**	**328**	⇑P		**P**	**03 48 00.4**	**+1.4**
	baz=56							
C20A	**Veseth Ranch,**	**55.91**	**336**	⇓P		**P**	**03 48 00.2**	**+1.1**
	baz=56							
BOZ	**Bozeman (W)**	**55.94**	**332**	*e*P		**P**	**03 48 01.1**	**+1.7**
	1.9nm,0.9s							
BOZ				*e*pP		**pP**	**03 48 43.1**	**+0.2**
A22A	**Carney Farms,**	**56.11**	**338**	⇑P		**P**	**03 48 01.4**	**+0.9**
	baz=56							
E17A	**Martinsdale**	**56.19**	**333**	⇓P		**P**	**03 48 02.4**	**+1.1**
	baz=56							
C19A	**Slack Wire Ran**	**56.36**	**335**	⇓P		**P**	**03 48 03.1**	**+0.8**
	baz=56							
B20A	**Solberg Farm,**	**56.49**	**336**	⇓P		**P**	**03 48 04.4**	**+1.2**
	baz=57							
F15A	**Butte**	**56.50**	**331**	⇓P		**P**	**03 48 04.6**	**+1.1**
	baz=56							
MFID	**Camas Ranch**	**56.51**	**327**	*e*P		**P**	**03 48 04.4**	**+1.0**
	5.9nm,1.0s							
MFID				*e*pP		**pP**	**03 48 47.6**	**+0.6**
MFID	**Camas Ranch**	**56.51**	**327**	⇑P		**P**	**03 48 04.5**	**+1.0**
	baz=56,SNR=8.2							
E16A	**East Helena**	**56.62**	**332**	⇓P		**P**	**03 48 05.2**	**+1.0**
	baz=57							
D17A	**Six Diamond Ra**	**56.63**	**333**	⇑P		**P**	**03 48 04.9**	**+0.6**
	baz=57							
H12A	**Diamond D Ranc**	**56.76**	**329**	⇓P		**P**	**03 48 05.7**	**+0.3**
	baz=57							
A20A	**Cobblestone Ra**	**56.80**	**336**	⇓P		**P**	**03 48 05.7**	**+0.4**
	baz=57							
B19A	**Brinkman Farms**	**56.88**	**335**	⇓P		**P**	**03 48 06.5**	**+0.6**
	baz=57							
D16A	**Dana Ranch, Ca**	**56.93**	**333**	⇓P		**P**	**03 48 07.3**	**+1.0**
	baz=57							
SCHQ	**Schefferville**	**56.97**	**7**	P		**P**	**03 48 05.4**	**-0.9**
SCHQ	**Schefferville**	**56.97**	**7**	P		**P**	**03 48 05.4**	**-0.9**
	6.0nm,1.0s,baz=195,slow=7.4,SNR=6.4							
C17A	**Wharram Farm,**	**57.03**	**334**	⇓P		**P**	**03 48 06.9**	**-0.1**
	baz=57,SNR=5.5							
A19A	**Klindworth Far**	**57.17**	**336**	⇓P		**P**	**03 48 08.9**	**+1.0**
	baz=57							
B18A	**Beardsley Farm**	**57.18**	**335**	⇓P		**P**	**03 48 09.0**	**+1.0**
	baz=57							
G12A	**Big Creek, Yel**	**57.41**	**329**	⇓P		**P**	**03 48 10.4**	**+0.6**
	baz=57							
C16A	**Fuhringer Ranc**	**57.59**	**333**	⇓P		**P**	**03 48 12.5**	**+1.5**
	baz=58							
A18A	**Metzger Ranch,**	**57.62**	**335**	⇑P		**P**	**03 48 11.9**	**+0.9**
	baz=58							
D14A	**Greenough**	**57.88**	**332**	⇓P		**P**	**03 48 13.6**	**+0.6**
	baz=58							
MSO	**Missoula**	**57.91**	**331**	⇓P		**P**	**03 48 13.6**	**+0.5**
	baz=58							
C15A	**Salmond Ranch,**	**57.96**	**333**	⇓P		**P**	**03 48 14.2**	**+0.6**
	baz=58							
B15A	**Bradely Ranch,**	**58.34**	**333**	⇑P		**P**	**03 48 16.7**	**+0.5**
	baz=58							
D13A	**Huson**	**58.34**	**331**	⇑P		**P**	**03 48 16.9**	**+0.8**
	baz=58							
B14A	**Marquette Ranc**	**58.70**	**333**	⇓P		**P**	**03 48 19.1**	**+0.5**
	baz=59							
D12A	**Red Ives Fores**	**58.75**	**331**	⇑P		**P**	**03 48 19.2**	**+0.2**
	baz=59							
C13A	**Hot Springs**	**58.81**	**332**	⇓P		**P**	**03 48 19.8**	**+0.4**
	baz=59							
A15A	**Johnson Ranch,**	**58.91**	**334**	⇑P		**P**	**03 48 21.3**	**+1.3**
	baz=59							
B13A	**Whitefish**	**59.26**	**332**	⇓P		**P**	**03 48 24.0**	**+1.5**
	baz=59							
NEW	**Newport**	**60.45**	**331**	⇓P		**P**	**03 48 31.4**	**+0.9**
	baz=60							
YKA	**Yellowknife Ar**	**69.83**	**343**	P		**P**	**03 49 29.8**	**-0.7**
YKA				pP		**pP**	**03 50 18.4**	**+2.5**
YKA	**Yellowknife Ar**	**69.83**	**343**	P		**P**	**03 49 29.8**	**-0.7**
	1.6nm,0.8s,baz=146,slow=5.1,SNR=8.3							
YKA				pP		**pP**	**03 50 18.4**	**+2.5**
	0.7nm,0.7s,baz=139,slow=6.5,SNR=2.5							
LIC	**Lamto**	**72.76**	**83**	*e*P		**P**	**03 49 49.1**	**0.0**
	7.2nm,0.5s,baz=265							
LIC	**Lamto**	**72.76**	**83**	*e*P		**P**	**03 49 49.1**	**0.0**
	7.2nm,0.5s							
DBIC	**Dimbokro**	**72.95**	**83**	P		**P**	**03 49 50.1**	**-0.1**
DBIC	**Dimbokro**	**72.95**	**83**	P		**P**	**03 49 50.1**	**-0.1**
	7.2nm,0.6s,baz=263,slow=6.9,SNR=23							
PNCL	**Nicolau / Gran**	**74.60**	**50**	*e*pP		pP	03 50 46.0	+0.8
PMTG	**Montargil**	**75.07**	**49**	*e*pP		**pP**	**03 50 49.4**	**+1.4**
PMTG				A		A	03 50 52.3	
	16nm,1.7s							
PESTR	**Estremoz**	**75.50**	**49**	*e*pP		**pP**	**03 50 52.0**	**+1.5**
PESTR				A		A	03 50 53.3	
	14nm,1.2s							
PVIS	**Viseu**	**75.73**	**47**	*e*pP		**pP**	**03 50 52.3**	**+0.4**
PVIS				A		A	03 50 54.0	
	21nm,1.4s							
PCBR	**Castelo Branco**	**75.82**	**48**	*e*pP		pP	03 50 53.1	+0.7
PCAB	**Cabril**	**75.89**	**46**	*e*pP		**pP**	**03 50 52.9**	**+0.1**
PCAB				A		A	03 51 29.1	
	25nm,2.0s							
MTE	**Manteigas**	**75.91**	**48**	*e*pP		pP	03 50 54.0	+1.0
POLO	**Lamas de Olo**	**75.98**	**47**	*e*pP		pP	03 50 54.2	+0.9
PVRL	**Vila Real**	**76.01**	**47**	*e*pP		pP	03 50 54.8	+1.3
MVO	**Moncorvo**	**76.48**	**47**	*e*pP		pP	03 50 57.3	+1.1
PBRG	**Braganca**	**76.85**	**46**	*e*pP		pP	03 50 59.2	+0.9
SUMG	**Summit**	**78.07**	**11**	*e*P		**P**	**03 50 18.4**	**-0.2**
	25nm,1.1s							
SUMG				*e*pP		**pP**	**03 51 03.5**	**-1.4**
ESDC	**Sonseca Array**	**78.42**	**49**	P		**P**	**03 50 19.8**	**-1.1**
ESDC				pP		**pP**	**03 51 06.0**	**-1.2**
ESDC	**Sonseca Array**	**78.42**	**49**	P		**P**	**03 50 19.8**	**-1.1**
	0.1nm,0.3s,baz=278,slow=5.6,SNR=5.4							
ESDC				pP		**pP**	**03 51 06.0**	**-1.2**
	0.7nm,0.5s,baz=262,slow=6.4,SNR=2.3							
TORD	**Torodi Ar. Bea**	**79.84**	**76**	P		**P**	**03 50 28.6**	**-0.4**
TORD				pP		**pP**	**03 51 13.2**	**-2.2**
TORD	**Torodi Ar. Bea**	**79.84**	**76**	P		**P**	**03 50 28.6**	**-0.4**
	2.0nm,0.3s,baz=280,slow=5.8,SNR=135							
TORD				pP		**pP**	**03 51 13.3**	**-2.2**
	1.1nm,0.7s,baz=280,slow=5.3,SNR=2.5							
EGAK	**Eagle**	**80.55**	**337**	*e*P		**P**	**03 50 32.6**	**+0.9**
	7.5nm,0.9s							
PAX	**Paxson**	**81.61**	**335**	*e*P		**P**	**03 50 37.6**	**+0.2**
	3.1nm,0.8s							
PAX				*e*pP		**pP**	**03 51 22.4**	**-1.8**
EPF	**Esparros**	**82.23**	**46**	*e*P		**P**	**03 50 41.2**	**+0.1**
EPF				*e*pP		**pP**	**03 51 28.4**	**+0.5**
EPF	**Esparros**	**82.23**	**46**	*e*P		**P**	**03 50 41.2**	**+0.1**
EPF				*e*pP		**pP**	**03 51 28.4**	**+0.5**
MFF	**Saint Martin d**	**82.51**	**43**	*e*P		**P**	**03 50 42.2**	**-0.2**
MFF				*e*pP		**pP**	**03 51 29.2**	**0.0**
MFF	**Saint Martin d**	**82.51**	**43**	*e*P		**P**	**03 50 42.2**	**-0.2**
MFF				*e*pP		**pP**	**03 51 29.2**	**0.0**
ILAR	**Eielson Array**	**82.82**	**336**	P		**P**	**03 50 43.6**	**0.0**
ILAR				pP		**pP**	**03 51 28.8**	**-1.7**
ILAR	**Eielson Array**	**82.82**	**336**	P		**P**	**03 50 43.6**	**0.0**
	2.1nm,0.8s,baz=127,slow=4.0,SNR=24							
ILAR				pP		**pP**	**03 51 28.8**	**-1.7**
	1.3nm,0.8s,baz=110,slow=3.2,SNR=4.2							
LFF	**La Frestale**	**82.83**	**44**	*e*P		**P**	**03 50 44.0**	**-0.1**
	30nm,1.2s							
LFF	**La Frestale**	**82.83**	**44**	*e*P		**P**	**03 50 44.0**	**-0.1**
	30nm,1.2s							
RJF	**Les Rejaudoux**	**83.43**	**44**	*e*P		**P**	**03 50 47.1**	**-0.1**
RJF				*e*pP		**pP**	**03 51 33.8**	**-0.3**
RJF	**Les Rejaudoux**	**83.43**	**44**	*e*P		**P**	**03 50 47.1**	**-0.1**
RJF				*e*pP		**pP**	**03 51 33.8**	**-0.3**
MTLF	**Montolieu**	**83.64**	**46**	*e*P		**P**	**03 50 47.9**	**-0.3**
	28nm,1.4s							
MTLF	**Montolieu**	**83.64**	**46**	*e*P		**P**	**03 50 47.9**	**-0.3**
	28nm,1.4s							
SNAA	**Sanae**	**83.64**	**162**	*e*P		**P**	**03 50 48.5**	**+0.7**
	13nm,1.0s							
CAF	**Calviac**	**83.76**	**45**	*e*P		**P**	**03 50 48.7**	**-0.2**
	25nm,1.4s							
CAF				*e*pP		**pP**	**03 51 35.8**	**0.0**
CAF	**Calviac**	**83.76**	**45**	*e*P		**P**	**03 50 48.7**	**-0.2**
	25nm,1.4s							
CAF				*e*pP		**pP**	**03 51 35.8**	**0.0**
TCF	**Toulx Ste Croi**	**84.06**	**43**	*e*P		**P**	**03 50 49.9**	**-0.5**
	5.3nm,0.8s							
TCF				*e*pP		**pP**	**03 51 37.0**	**-0.3**
TCF	**Toulx Ste Croi**	**84.06**	**43**	*e*P		**P**	**03 50 49.9**	**-0.5**
	5.3nm,0.8s							
TCF				*e*pP		**pP**	**03 51 37.0**	**-0.3**
TAM	**Tamanrasset**	**84.19**	**67**	*e*P		**P**	**03 50 52.5**	**+0.9**
	18nm,0.9s							
TAM				*e*pP		**pP**	**03 51 39.4**	**+0.8**
BGF	**Bois d'Agland**	**84.54**	**43**	*e*P		**P**	**03 50 52.6**	**-0.1**
	43nm,1.2s							
BGF				*e*pP		**pP**	**03 51 39.6**	**-0.1**
BGF	**Bois d'Agland**	**84.54**	**43**	*e*P		**P**	**03 50 52.6**	**-0.1**
	43nm,1.2s							
BGF				*e*pP		**pP**	**03 51 39.6**	**-0.1**
AVF	**Avril sur Loir**	**84.92**	**43**	*e*P		**P**	**03 50 53.9**	**-0.7**
	8.4nm,0.9s							
AVF				*e*pP		**pP**	**03 51 41.2**	**-0.4**
AVF	**Avril sur Loir**	**84.92**	**43**	*e*P		**P**	**03 50 53.9**	**-0.7**
	8.4nm,0.9s							
AVF				*e*pP		**pP**	**03 51 41.2**	**-0.4**
SSF	**Saint Saulge**	**85.06**	**43**	*e*P		**P**	**03 50 54.6**	**-0.7**
	22nm,1.3s							
SSF				*e*pP		**pP**	**03 51 41.7**	**-0.7**
SSF	**Saint Saulge**	**85.06**	**43**	*e*P		**P**	**03 50 54.6**	**-0.7**
	22nm,1.3s							
SSF				*e*pP		**pP**	**03 51 41.7**	**-0.7**
SMF	**Signal de Mont**	**85.23**	**43**	*e*P		**P**	**03 50 55.7**	**-0.5**
	33nm,1.4s							
SMF				*e*pP		**pP**	**03 51 42.8**	**-0.5**
SMF	**Signal de Mont**	**85.23**	**43**	*e*P		**P**	**03 50 55.7**	**-0.5**
	33nm,1.4s							
SMF				*e*pP		**pP**	**03 51 42.8**	**-0.5**
LOR	**Lormes**	**85.32**	**42**	*e*P		**P**	**03 50 56.0**	**-0.6**
	9.3nm,1.0s							
LOR				*e*pP		**pP**	**03 51 43.2**	**-0.5**
LOR	**Lormes**	**85.32**	**42**	*e*P		**P**	**03 50 56.0**	**-0.6**
	9.3nm,1.0s							
LOR				*e*pP		**pP**	**03 51 43.2**	**-0.5**
SFTF	**Sexfontaines**	**86.23**	**42**	*e*P		**P**	**03 51 00.7**	**-0.3**
SFTF				*e*pP		**pP**	**03 51 47.7**	**-0.5**
SFTF	**Sexfontaines**	**86.23**	**42**	*e*P		**P**	**03 51 00.7**	**-0.3**
SFTF				*e*pP		**pP**	**03 51 47.7**	**-0.5**
MEZF	**Maizieres J'vi**	**86.27**	**41**	*e*P		**P**	**03 51 01.0**	**-0.2**
	56nm,1.5s							
MEZF				*e*pP		**pP**	**03 51 48.2**	**-0.2**
MEZF	**Maizieres J'vi**	**86.27**	**41**	*e*P		**P**	**03 51 01.0**	**-0.2**
	56nm,1.5s							
MEZF				*e*pP		**pP**	**03 51 48.2**	**-0.2**
GIVF	**Givet**	**86.31**	**40**	*e*P		**P**	**03 51 01.6**	**+0.2**
	21nm,0.9s							
GIVF	**Givet**	**86.31**	**40**	*e*P		**P**	**03 51 01.6**	**+0.2**
	21nm,0.9s							
ORIF	**Oris-en-Rattie**	**86.45**	**45**	*e*P		**P**	**03 51 03.0**	**+0.7**
ORIF				*e*pP		**pP**	**03 51 50.1**	**+0.6**
ORIF	**Oris-en-Rattie**	**86.45**	**45**	*e*P		**P**	**03 51 03.0**	**+0.7**
ORIF				*e*pP		**pP**	**03 51 50.1**	**+0.6**
PAGF	**Fort de Pagny**	**86.72**	**41**	*e*P		**P**	**03 51 03.5**	**+0.1**
	7.6nm,1.0s							
PAGF	**Fort de Pagny**	**86.72**	**41**	*e*P		**P**	**03 51 03.5**	**+0.1**
	7.6nm,1.0s							
CABF	**La Chapelle**	**86.76**	**43**	*e*P		**P**	**03 51 03.4**	**-0.4**
CABF	**La Chapelle**	**86.76**	**43**	*e*P		**P**	**03 51 03.4**	**-0.4**
WLF	**Walferdange**	**87.12**	**40**	P		**P**	**03 51 05.9**	**+0.7**
	comp=Z,10nm,1.1s							
WLF				AP		**pP**	**03 51 53.6**	**+1.0**
CDF	**Champ du Feu**	**87.73**	**42**	*e*P		**P**	**03 51 08.0**	**-0.4**
	comp=Z,13nm,0.9s							
CDF	**Champ du Feu**	**87.73**	**42**	*e*P		**P**	**03 51 08.0**	**-0.4**
	comp=Z,13nm,0.9s							
KEST	**Kesra**	**88.38**	**54**	P		**P**	**03 51 10.3**	**-1.3**
KEST	**Kesra**	**88.38**	**54**	P		**P**	**03 51 10.3**	**-1.3**
	comp=Z,2.3nm,0.9s,baz=212,slow=1.7,SNR=4.2							
QSPA	**South Pole Qui**	**88.42**	**180**	*e*P		**P**	**03 51 13.0**	**+1.8**
	comp=Z,39nm,1.0s							
QSPA				*e*pP		**pP**	**03 51 58.7**	**0.0**
NB2	**NORSAR Subarra**	**90.80**	**29**	P		**P**	**03 51 22.4**	**+0.1**
	comp=Z,2.7nm,1.1s,baz=267,slow=4.6							
NOA	**NORSAR Array B**	**90.80**	**29**	P		**P**	**03 51 20.5**	**-1.8**
NOA	**NORSAR Array B**	**90.80**	**29**	P		**P**	**03 51 20.5**	**-1.8**
	comp=Z,1.3nm,0.9s,baz=267,slow=4.5,SNR=4.6							
CLL	**Collm**	**91.58**	**39**	*i* P		pP	03 52 20.3	+6.6
	comp=Z,4.0nm,0.6s							
BRG	**Berggiesshubel**	**92.17**	**39**	*e*P		**P**	**03 51 29.8**	**+1.0**
	comp=Z,8.1nm,1.3s							
BRG	**Berggiesshubel**	**92.17**	**39**	*e*P		pP	03 52 17.7	+1.2
	comp=Z,7.7nm,1.4s							
VNDA	**Vanda**	**94.76**	**191**	P		**P**	**03 51 42.2**	**+1.9**
VNDA	**Vanda**	**94.76**	**191**	P		**P**	**03 51 42.2**	**+1.9**
	comp=Z,2.1nm,0.8s,baz=124,slow=2.7,SNR=14							
ARCES	**ARCESS Array B**	**96.07**	**20**	P		**P**	**03 51 45.6**	**-0.7**
ARCES	**ARCESS Array B**	**96.07**	**20**	P		**P**	**03 51 45.6**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=287,slow=3.7,SNR=3.6							
ZAA0	**Zalesovo Array**	**125.87**	**13**	PKPdf		**PKPdf**	**03 57 19.5**	**-0.5**
KURK	**Kurchatov**	**127.09**	**19**	PKP		**PKPdf**	**03 57 22.9**	**+0.4**
KURBB	**Kurchatov Arra**	**127.14**	**19**	PKP		**PKPdf**	**03 57 22.9**	**+0.3**
	comp=Z,1.5nm,0.7s,baz=320,slow=2.5,SNR=15							
STKA	**Stephens Creek**	**130.18**	**225**	PKP		**PKPdf**	**03 57 29.2**	**+0.3**
STKA	**Stephens Creek**	**130.18**	**225**	PKP		**PKPdf**	**03 57 29.2**	**+0.3**
	comp=Z,4.6nm,0.8s,baz=90,slow=1.0,SNR=8.8							
MKAR	**Makanchi Array**	**131.69**	**19**	PKP		**PKPdf**	**03 57 31.6**	**+0.1**
MKAR				SKPbc		**SKPbc**	**04 00 39.5**	**+0.3**
MKAR	**Makanchi Array**	**131.69**	**19**	PKP		**PKPdf**	**03 57 31.6**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=297,slow=2.9,SNR=10							
MKAR				SKPbc		**SKPbc**	**04 00 39.5**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=329,slow=4.2,SNR=5.9							
CN2	**Changchun**	**133.33**	**337**	*e*PKP		**PKPdf**	**03 57 38.9**	**+4.4**
SONM	**Songino Array**	**133.87**	**356**	PKP		**PKPdf**	**03 57 35.9**	**+0.3**
SONM				SKPbc		**SKPbc**	**04 00 45.9**	**-0.9**
SONM	**Songino Array**	**133.87**	**356**	PKP		**PKPdf**	**03 57 35.9**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=12,slow=1.8,SNR=4.7							
SONM				SKPbc		**SKPbc**	**04 00 45.9**	**-0.9**
	comp=Z,0.9nm,0.8s,baz=11,slow=1.5,SNR=5.1							
WMQ	**Urumqi**	**135.98**	**15**	*e*PKP		**PKPdf**	**03 57 43.0**	**+3.4**
KSRS	**Korea Array**	**137.37**	**330**	PKP		**PKPdf**	**03 57 42.9**	**+0.7**
	comp=Z,2.3nm,0.7s,baz=21,slow=1.2,SNR=11							
KSRS				SKPbc		**SKPbc**	**04 00 59.1**	**+1.4**
	comp=Z,3.0nm,1.1s,baz=20,slow=3.3,SNR=8.5							
KSAR	**Wonju Array Be**	**137.40**	**330**	PKP		**PKPdf**	**03 57 42.9**	**+0.6**
KSAR				SKPbc		**SKPbc**	**04 00 59.1**	**+1.3**
HHC	**Hu-ho-hao-te**	**140.12**	**349**	*e*PKP		**PKPdf**	**03 57 44.3**	**-3.1**
HHC				PP		**PP**	**04 00 47.1**	**+1.8**
HHC				PKS		**PKSdf**	**04 01 18.8**	**-4.6**
HHC				SKS		**SKSdf**	**04 04 33.8**	**-6.0**
HHC				SKKS		**SKKSac**	**04 07 16.0**	**-5.3**
HHC				SS		**SS**	**04 18 48.8**	**-2.7**
HHC				AMB		AMB		
	comp=Z,110nm,6.7s							
ASAR	**Alice Springs**	**140.44**	**229**	PKPpre		PKPpre	03 57 41.2	
ASAR				PKP		**PKPdf**	**03 57 48.5**	**+0.2**
ASAR	**Alice Springs**	**140.44**	**229**	PKhKP		PKPpre	03 57 41.2	
	comp=Z,1.3nm,0.6s,baz=128,slow=3.6,SNR=16							
ASAR				PKP		**PKPdf**	**03 57 48.5**	**+0.2**
	comp=Z,3.2nm,0.6s,baz=117,slow=2.0,SNR=19							
WRA	**Warramunga Arr**	**142.12**	**234**	PKPpre		PKPpre	03 57 46.8	
WRA	**Warramunga Arr**	**142.12**	**234**	PKhKP		PKPpre	03 57 46.8	
	comp=Z,4.1nm,0.8s,baz=122,slow=2.7,SNR=31							
LZH	**Lanzhou**	**145.71**	**358**	*e*PKPbc		**PKPab**	**03 57 59.0**	**+0.3**
LZH				PKPbc		**PKiKP**	**03 58 02.5**	**+0.9**
LZH				pPKP		**pPKPdf**	**03 58 44.1**	**-3.3**
LZH				sPKP			03 59 02.0	
NJ2	**Nanjing**	**146.06**	**335**	*e*PKPbc		**PKPdf**	**03 57 57.3**	**-0.6**
XAN	**Xi'an**	**147.22**	**350**	PKPbc		**PKPbc**	**03 58 02.5**	**+0.1**
XAN				pPKP		**pPKPdf**	**03 58 50.8**	**+1.0**
CD2	**Chengdu**	**150.87**	**358**	*e*PKPbc		**PKPdf**	**03 58 03.9**	**-1.9**
GYA	**Guiyang**	**155.01**	**351**	*e*PKPbc		**PKPdf**	**03 58 10.3**	**-1.7**
GYA				PKPab		**PKPab**	**03 58 39.0**	**+2.0**
GYA				pPKP		**pPKPdf**	**03 59 01.8**	**-0.3**
GYA				sPKP			03 59 21.8	
GYA				PKS		**PKSdf**	**04 01 43.0**	**-3.4**
GYA				PP		**PP**	**04 02 14.5**	**+2.3**
GYA				AMB		AMB		
	comp=Z,90nm,7.5s							

GUC 24 04:02:58.1±0.4, 28.48S×71.20W, h34km±3km, MD3.6, ML2.8,3D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.69**	**140**	⇓	*i*	P	Pn	04 03 11.7	0.0
LCO					*i*	S	Sb	04 03 22.2	+0.6
LCO						AML	AML	04 03 23.2	
	comp=E,881nm,0.1s								
CPCH	**Copiapo**	**1.35**	**34**		*e*	P	Pb	04 03 21.8	-1.2
CPCH					*e*	S	Sb	04 03 39.3	-0.6
CDCH	**Caldera**	**1.45**	**13**		*i*	P	Pn	04 03 20.7	-1.2
CDCH					*i*	S	Sn	04 03 39.5	-0.2
CDCH						AML	AML	04 03 42.8	
	comp=E,117nm,0.4s								
TLL	**Tololo Astrono**	**1.71**	**168**	⇓	*i*	P	Pn	04 03 27.5	+1.6
TLL					*i*	S	Sb	04 03 50.1	-0.7
TLL						AML	AML	04 03 56.3	
	comp=N,244nm,0.4s								
CMCH	**Combarbala**	**2.69**	**176**	⇓	*i*	P	Pn	04 03 39.0	0.0
CMCH					*e*	S	Sn	04 04 11.3	+0.8

IDC ***24*** *04:04:59.5±0.6, 35.49N×143.17E, h0km, mb4.0/18, mb1 4.2/23, mb1mx4.1/34, mbtmp4.0/23, ML3.7/5, MS3.1/13, Ms1 3.2/13, ms1mx2.9/43, Error ellipse: s-maj=15.3km s-min=14.9km az=162.0*

NIED ***24*** *04:05:00, 35.70N×143.00E, h5km, Mw4.2 Best double couple: M0 2.01000×10^15 NP1:ϕs198.00000°, δ66.00000°, λ-90.00000°. NP2:ϕs18.00000°, δ24.00000°, λ-90.00000°.*

NEIC ***24*** *04:05:00.9±0.5, 35.55N×143.15E, h10km, mb4.5/3, MW4.1(NIED), Error ellipse: s-maj=10.8km s-min=9.4km az=168.0*

JMA ***24*** *04:05:03.1±0.2, 35.65N×142.97E, h72km, M4.0*

ISC 24 04:05:00.5±3.6, 35.64N±0.05×143.00E±0.06, h5km±22km, n70, σ1°23/73, mb4.1/21, MS3.2/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.74**	**273**			P	**Pb**	**04 05 31.8**	**-1.1**
CHOJ						*e*S	**Sn**	**04 05 52.7**	**-1.3**
BSO1	**Boso 1**	**1.93**	**240**			P	**Pn**	**04 05 33.3**	**-0.1**
BSO1						*e*S	**Sn**	**04 05 57.8**	**0.0**
JHO	**Hitachi**	**2.19**	**297**			P	**Pn**	**04 05 37.2**	**-0.3**
JHO						*e*S	**Sn**	**04 06 02.8**	**-2.2**
BSO3	**Boso 3**	**2.20**	**248**			P	**Pn**	**04 05 38.4**	**+0.9

YKA	**Yellowknife Ar**	**64.36**	**30**	P		**P**	**04 15 37.4**	**+0.5**
YKA	**Yellowknife Ar**	**64.36**	**30**	P		**P**	**04 15 37.4**	**+0.5**
	1.1nm,0.7s,baz=298,slow=6.5,SNR=4.8							
STKA	**Stephens Creek**	**67.18**	**181**	P		**P**	**04 15 54.1**	**-1.2**
STKA	**Stephens Creek**	**67.18**	**181**	P		**P**	**04 15 54.1**	**-1.2**
	2.0nm,0.7s,baz=330,slow=6.3,SNR=4.4							
FINES	**FINESS Array B**	**70.63**	**333**	P		**P**	**04 16 16.9**	**+0.3**
FINES	**FINESS Array B**	**70.63**	**333**	P		**P**	**04 16 16.9**	**+0.3**
	1.0nm,0.8s,baz=64,slow=9.4,SNR=3.7							
NVAR	**Mina Array Bea**	**74.79**	**54**	P		**P**	**04 16 42.5**	**+0.5**
NVAR	**Mina Array Bea**	**74.79**	**54**	P		**P**	**04 16 42.5**	**+0.5**
	0.5nm,0.5s,baz=288,slow=6.6,SNR=5.5							
NOA	**NORSAR Array B**	**75.95**	**338**	P		**P**	**04 16 48.7**	**+0.6**
NOA	**NORSAR Array B**	**75.95**	**338**	P		**P**	**04 16 48.7**	**+0.6**
	0.6nm,0.9s,baz=28,slow=5.8,SNR=2.4							
NOA				LR		LR	04 53 38.6	
	comp=Z,16nm,18.1s,baz=20,slow=38							
PDAR	**Pinedale Array**	**77.72**	**46**	P		**P**	**04 16 58.6**	**-0.1**
PDAR	**Pinedale Array**	**77.72**	**46**	P		**P**	**04 16 58.6**	**-0.1**
	1.0nm,0.6s,baz=285,slow=3.5,SNR=9.6							
BRTR	**Keskin Array B**	**80.73**	**313**	P		**P**	**04 17 17.3**	**+2.3**
BRTR	**Keskin Array B**	**80.73**	**313**	P		**P**	**04 17 17.3**	**+2.3**
	0.6nm,0.8s,baz=51,slow=4.6,SNR=4.5							
CLL	**Collm**	**82.93**	**331**	*e*P		P	04 17 29.0	+2.8
TXAR	**Lajitas Array**	**89.94**	**53**	P		**P**	**04 18 00.9**	**-0.3**
TXAR	**Lajitas Array**	**89.94**	**53**	P		**P**	**04 18 00.9**	**-0.3**
	0.8nm,0.8s,baz=299,slow=3.7,SNR=13							
LPAZ	**La Paz**	**146.23**	**63**	PKPbc		**PKPbc**	**04 24 42.6**	**-0.7**
LPAZ	**La Paz**	**146.23**	**63**	PKPbc		**PKPbc**	**04 24 42.6**	**-0.7**
	1.3nm,0.6s,baz=346,slow=3.9,SNR=7.0							

IDC 24 04:32:11.3±1.9,**4°.05N**×**127°.06E**,**h0**km,**mb3.5**/4,
mb1 3.7/4,**mb1mx3.4**/24,**mbtmp3.5**/4,**Error ellipse:**
s-maj=115.8km s-min=23.2km az=70.0,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**22.05**	**184**	P	P	04 37 08.0	+0.1
	1.2nm,0.8s,baz=359,slow=9.2,SNR=6.2						
WRA	**Warramunga Arr**	**24.89**	**164**	P	P	04 37 36.1	0.0
	0.7nm,0.6s,baz=344,slow=9.6,SNR=14						
ASAR	**Alice Springs**	**28.34**	**167**	P	P	04 38 07.2	-0.1
	0.2nm,0.4s,baz=340,slow=7.9,SNR=3.6						
MKAR	**Makanchi Array**	**57.48**	**325**	P	P	04 42 02.2	-0.1
	0.4nm,0.5s,baz=126,slow=7.7,SNR=10						

*ISCJB **24** 04:40:03.8±0.3,41°.75S±0°.06×42°.5E±0°.1,h10km,*
mb4.4/29,MS4.4/25,Error ellipse: s-maj=11.5km
s-min=7.9km az=154.0
*IDC **24** 04:40:03.8±0.4,41°.69S×42°.64E,h0km,mb4.4/22,*
mb1 4.5/24,mb1mx4.4/30,mbtmp4.4/24,ML4.4/2,MS4.4/27,
Ms1 4.4/27,ms1mx4.3/30,Error ellipse: s-maj=16.1km
s-min=12.4km az=66.0
*NEIC **24** 04:40:05.5±0.2,41°.69S×42°.58E,h10km,mb4.7/10,Error*
ellipse: s-maj=7.6km s-min=5.5km az=62.0
*GCMT **24** 04:40:09.9±0.1,41°.67S×42°.72E,h20km,MW5.3,Moment*
Tensor Solution. s63,c102; s99,c166; Moment tensor:
Scale 10^17^Nm; Mrr=0.05±.02; Mθθ0.27±.02; Mφφ-0.22±.02;
Mrθ-0.01±.04; Mrφ 1.08±.02; Mθφ-0.31±.04; Best double
couple: M0 1.20000×10^17^ NP1:φs276.00000°,δ74.00000°,
λ-2.00000°. NP2:φs7.00000°,δ88.00000°,λ-164.00000°.
Principal axes: T 1.1700, Plg10.0000°, Azm140.0000°; N
-0.0300, Plg74.0000°, Azm13.0000°; P -1.1300,
Plg12.0000°, Azm232.0000°; Data Used: II IU G CN IC.
*DJA **24** 04:40:11.4±3.4,42°.3S±11°×47°.3E±21°,h65km±36km,M4.6/8,*
mb4.6/8

ISC 24 04:40:05.5±0.4,**41°.69S**±0°.08×**42°.61E**±0°.10,**h10**km,**n172,**
σ1s**96**/163,**mb4.5**/29,**MS4.5**/25,**44C-41D**,**Prince Edward**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**19.22**	**307**	*e*P	**P**	**04 44 30.3**	**+0.4**
BOSA				S	Sn	04 47 50.0	-16
BOSA	**Boshof**	**19.22**	**307**	P	**P**	**04 44 30.2**	**+0.4**
	0.8nm,0.3s,baz=147,slow=13,SNR=10						
BOSA				S	Sn	04 47 50.0	-16
	0.5nm,0.3s,baz=278,slow=19,SNR=3.7						
BOSA				LR	LR	04 50 23.5	
	comp=Z,2μm,18.0s,baz=140,slow=32						
SUR	**Sutherland**	**19.68**	**291**	*e*P	**P**	**04 44 35.7**	**+0.8**
SUR				S	S	04 48 01.4	-16
SUR	**Sutherland**	**19.68**	**291**	P	**P**	**04 44 35.8**	**+0.8**
	1.2nm,0.3s,baz=124,slow=14,SNR=6.5						
SUR				S	S	04 48 01.4	-16
	0.8nm,0.3s,baz=265,slow=6.9,SNR=3.2						
SUR				LR	LR	04 51 13.5	
	comp=Z,1μm,18.3s,baz=53,slow=34						
LBTB	**Lobatse**	**21.80**	**314**	*e*P	**P**	**04 44 57.0**	**-0.8**
	24nm,0.6s						
LBTB	**Lobatse**	**21.80**	**314**	P	**P**	**04 44 57.0**	**-0.8**
	17nm,1.0s,baz=148,slow=11,SNR=6.6						
LBTB				LR	LR	04 52 05.2	
	comp=Z,903nm,19.6s,baz=147,slow=33						
ABPO	**Ambohimpanom**	**22.94**	**11**	*e*P	**P**	**04 45 10.3**	**+0.3**
	24nm,1.2s						
OPO	**Ambohidratompo**	**23.37**	**11**	P	**P**	**04 45 15.0**	**+0.6**
OPO	**Ambohidratompo**	**23.37**	**11**	P	**P**	**04 45 15.0**	**+0.6**
	5.6nm,0.9s,baz=180,slow=8.5,SNR=6.0						
OPO				LR	LR	04 53 15.4	
	comp=Z,3μm,18.4s,baz=180,slow=34						
SYO	**Syowa Base**	**27.43**	**182**	*e*P	**P**	**04 45 49.0**	**-2.0**
MAW	**Mawson**	**28.21**	**164**	P	**P**	**04 45 58.0**	**0.0**
MAW	**Mawson**	**28.21**	**164**	P	**P**	**04 45 58.0**	**0.0**
	2.8nm,0.8s,baz=311,slow=9.3,SNR=5.9						
MAW				LR	LR	04 54 17.7	
	comp=Z,488nm,20.1s,baz=330,slow=30						
LSZ	**Lusaka**	**29.12**	**330**	P	**P**	**04 46 05.8**	**-0.9**
LSZ	**Lusaka**	**29.12**	**330**	P	**P**	**04 46 05.8**	**-0.9**
	4.4nm,0.9s,baz=142,slow=12,SNR=5.4						
LSZ				LR	LR	04 56 32.3	
	comp=Z,516nm,18.8s,baz=104,slow=34						
TSUM	**Tsumeb**	**30.90**	**309**	*e*P	**P**	**04 46 21.1**	**-1.4**
	18nm,1.0s						
SNAA	**Sanae**	**37.37**	**202**	*e*P	**P**	**04 47 18.8**	**+0.8**
SNAA	**Sanae**	**37.37**	**202**	P	**P**	**04 47 18.8**	**+0.8**
	7.8nm,0.9s,baz=75,slow=7.3,SNR=64						
KMBO	**Kilima Mbogo**	**40.66**	**352**	LR	LR	05 01 39.9	
	comp=Z,718nm,22.0s,baz=317,slow=32						
MBAR	**Mbarara**	**42.28**	**342**	P	**P**	**04 47 59.2**	**-0.3**
MBAR	**Mbarara**	**42.28**	**342**	P	**P**	**04 47 59.2**	**-0.3**
	2.9nm,0.3s,baz=219,slow=23,SNR=4.3						
QSPA	**South Pole Qui**	**48.52**	**180**	*e*P	**P**	**04 48 47.3**	**-1.1**
	53nm,1.1s						
QSPA	**South Pole Qui**	**48.52**	**180**	P	**P**	**04 48 47.4**	**-1.1**
	31nm,1.0s,baz=253,slow=6.8,SNR=40						
VNDA	**Vanda**	**55.45**	**167**	*e*P	**P**	**04 49 38.9**	**-0.7**
	6.9nm,0.9s						
VNDA	**Vanda**	**55.45**	**167**	P	**P**	**04 49 39.0**	**-0.7**
	6.7nm,0.9s,baz=245,slow=8.1,SNR=23						
VNDA				LR	LR	05 11 52.9	
	comp=Z,314nm,18.2s,baz=230,slow=34						
SBA	**Scott Base**	**56.05**	**168**	*e*P	**P**	**04 49 45.0**	**+1.0**
	20nm,0.9s						
DBIC	**Dimbokro**	**64.75**	**306**	LR	LR	05 14 33.8	
	comp=Z,382nm,21.2s,baz=129,slow=32						
TOA0	**Torodi Ar. Sit**	**66.32**	**316**	*e*P	**P**	**04 50 54.1**	**-0.2**
TORD	**Torodi Ar. Bea**	**66.32**	**316**	P	**P**	**04 50 53.7**	**-0.6**
TORD	**Torodi Ar. Bea**	**66.32**	**316**	P	**P**	**04 50 53.7**	**-0.6**
	1.6nm,0.7s,baz=144,slow=5.4,SNR=13						
TORD				LR	LR	05 17 22.1	
	comp=Z,304nm,18.4s,baz=115,slow=34						
PSI	**Prapat**	**67.50**	**64**	P	**P**	**04 51 01.9**	**-0.1**
PSI	**Prapat**	**67.50**	**64**	P	**P**	**04 51 01.9**	**-0.1**
	2.9nm,0.4s,baz=238,slow=6.9,SNR=4.4						
TAM	**Tamanrasset**	**72.77**	**324**	*e*P	**P**	**04 51 34.5**	**+0.3**
	0.7nm,0.4s						
FITZ	**Fitzroy Crossi**	**73.08**	**99**	P	**P**	**04 51 36.7**	**+0.6**
FITZ	**Fitzroy Crossi**	**73.08**	**99**	P	**P**	**04 51 36.7**	**+0.6**
	4.0nm,0.9s,baz=226,slow=6.3,SNR=6.9						
FITZ				LR	LR	05 17 22.2	
	comp=Z,226nm,19.0s,baz=291,slow=31						
ASAR	**Alice Springs**	**75.59**	**109**	P	**P**	**04 51 50.6**	**-0.2**
ASAR	**Alice Springs**	**75.59**	**109**	P	**P**	**04 51 50.6**	**-0.2**
	1.1nm,0.7s,baz=229,slow=6.0,SNR=4.6						
ASAR				LR	LR	05 19 47.1	
	comp=Z,456nm,20.3s,baz=229,slow=32						
STKA	**Stephens Creek**	**75.60**	**120**	P	**P**	**04 51 50.7**	**0.0**
STKA	**Stephens Creek**	**75.60**	**120**	P	**P**	**04 51 50.7**	**0.0**
	2.1nm,0.8s,baz=263,slow=8.1,SNR=3.7						
STKA				LR	LR	05 17 45.1	
	comp=Z,527nm,21.6s,baz=218,slow=30						
KAPI	**Kappang**	**77.08**	**85**	LR	LR	05 21 32.1	
	comp=Z,126nm,19.2s,baz=48,slow=32						
PLCA	**Paso Flores**	**78.06**	**226**	P	**P**	**04 52 04.0**	**-0.5**
PLCA	**Paso Flores**	**78.06**	**226**	P	**P**	**04 52 04.0**	**-0.5**
	3.3nm,0.7s,baz=131,slow=8.5,SNR=10						
PLCA				LR	LR	05 17 35.2	
	comp=Z,318nm,21.9s,baz=263,slow=29						
WRA	**Warramunga Arr**	**78.27**	**106**	P	**P**	**04 52 04.9**	**-1.0**
WRA	**Warramunga Arr**	**78.27**	**106**	P	**P**	**04 52 04.9**	**-1.0**
	0.8nm,0.8s,baz=232,slow=6.0,SNR=6.2						
WRA				LR	LR	05 23 55.5	
	comp=Z,81nm,18.8s,baz=235,slow=34						
WRAB	**Tennant Creek**	**78.28**	**106**	P	**P**	**04 52 06.2**	**+0.2**
	4.1nm,1.0s						
CMAR	**Chiang Mai Arr**	**79.30**	**54**	P	**P**	**04 52 10.9**	**-0.5**
CMAR	**Chiang Mai Arr**	**79.30**	**54**	P	**P**	**04 52 10.9**	**-0.5**
	1.1nm,0.3s,baz=230,slow=5.9,SNR=8.4						
CMAR				LR	LR	05 21 47.1	
	comp=Z,92nm,20.2s,baz=220,slow=32						
CPUP	**Villa Florida**	**79.85**	**244**	P	**P**	**04 52 14.0**	**-0.4**
CPUP	**Villa Florida**	**79.85**	**244**	P	**P**	**04 52 14.0**	**-0.4**
	2.1nm,0.8s,baz=85,slow=7.9,SNR=5.5						
CPUP				LR	LR	05 20 21.1	
	comp=Z,156nm,18.7s,baz=359,slow=30						
BDFB	**Brasilia**	**80.23**	**258**	P	**P**	**04 52 17.3**	**+0.6**
BDFB	**Brasilia**	**80.23**	**258**	P	**P**	**04 52 17.3**	**+0.6**
	2.4nm,0.8s,baz=135,slow=5.7,SNR=4.6						
BDFB				LR	LR	05 20 10.2	
	comp=Z,189nm,19.6s,baz=319,slow=30						
BR131	**Keskin Array S**	**81.44**	**353**	*e*P	**P**	**04 52 22.0**	**-0.5**
	2.4nm,0.8s						
BRTR	**Keskin Array B**	**81.44**	**353**	P	**P**	**04 52 22.1**	**-0.5**
BRTR	**Keskin Array B**	**81.44**	**353**	P	**P**	**04 52 22.1**	**-0.5**
	2.1nm,0.7s,baz=174,slow=7.8,SNR=14						
BRTR				LR	LR	05 26 54.1	
	comp=Z,206nm,19.8s,baz=326,slow=34						
KEST	**Kesra**	**82.86**	**333**	P	**P**	**04 52 31.7**	**+1.7**
KEST	**Kesra**	**82.86**	**333**	P	**P**	**04 52 31.7**	**+1.7**
	2.0nm,0.9s,baz=234,slow=5.4,SNR=4.9						
KEST				LR	LR	05 31 54.7	
	comp=Z,175nm,18.3s,baz=199,slow=38						
KBZ	**Khabaz**	**85.03**	**0**	LR	LR	05 32 54.4	
	comp=Z,166nm,18.6s,baz=347,slow=37						
KSH	**Kashi**	**86.33**	**25**	P	**P**	**04 52 46.3**	**-1.2**
KSH				pmax	pmax		
	comp=Z,87nm,2.4s						
MLR	**Muntele Rosu**	**88.06**	**348**	*i*P	**P**	**04 52 55.9**	**+0.1**
KKAR	**Karatay Array**	**88.07**	**20**	P	**P**	**04 52 56.6**	**+0.9**
	comp=Z,4.6nm,1.0s						
VOIR		**88.15**	**348**	*i*P	**P**	**04 52 56.3**	**+0.2**
VRI	**Vrincioaia**	**88.31**	**349**	*i*P	**P**	**04 52 57.2**	**+0.4**
BURAR	**Bucovina Array**	**90.25**	**348**	*i*P	**P**	**04 53 07.4**	**+1.5**
BUR08	**Bucovina Ar. S**	**90.28**	**348**	*e*P	**P**	**04 53 07.1**	**+1.0**
ESDC	**Sonseca Array**	**91.37**	**326**	P	**P**	**04 53 11.3**	**0.0**
ESDC	**Sonseca Array**	**91.37**	**326**	P	**P**	**04 53 11.3**	**0.0**
	comp=Z,0.1nm,0.3s,baz=142,slow=4.4,SNR=5.1						
ESDC				LR	LR	05 36 40.0	
	comp=Z,141nm,18.6s,baz=110,slow=37						
AKASG	**Malin Array Be**	**92.75**	**352**	LR	LR	05 36 51.5	
	comp=Z,92nm,19.4s,baz=190,slow=37						
GERES	**GERESS Array B**	**93.68**	**341**	LR	LR	05 39 27.3	
	comp=Z,130nm,18.5s,baz=87,slow=38						
LPAZ	**La Paz**	**94.02**	**244**	LR	LR	05 31 56.3	
	comp=Z,158nm,18.2s,baz=285,slow=33						
MKAR	**Makanchi Array**	**94.90**	**26**	P	**P**	**04 53 27.3**	**-0.1**
MKAR	**Makanchi Array**	**94.90**	**26**	P	**P**	**04 53 27.3**	**-0.1**
	comp=Z,2.2nm,1.0s,baz=228,slow=5.4,SNR=10.0						
MKAR				LR	LR	05 33 28.3	
	comp=Z,84nm,21.5s,baz=30,slow=34						
DZM	**Mont Dzumac**	**98.01**	**129**	*e*SS	SS	05 11 49.3	-0.9
	comp=Z,172nm,25.1s						
DZM				*e*LR	LR	05 25 27.7	
	comp=Z,140nm,23.2s						
TBI	**Tubuai**	**114.34**	**168**	*e*LR	LR	05 33 05.5	
	comp=Z,225nm,37.8s						
PPT2	**Papeete2**	**119.96**	**167**	*e*LR	LR	05 35 41.1	
	comp=Z,198nm,23.8s						
MIAR	**Mount Ida**	**145.09**	**273**	*e*PKPdf	**PKPbc**	**04 59 42.5**	**0.0**
FX1	**Attu Island--F**	**145.30**	**54**	PKPdf	**PKPdf**	**04 59 43.9**	**+1.2**
COWI	**Conover**	**145.37**	**294**	*e*PKPdf	**PKPbc**	**04 59 42.9**	**-0.1**
JFWS	**Jewell Farm**	**145.46**	**288**	*e*PKPdf	**PKPab**	**04 59 43.7**	**+0.1**
WHTX	**Lake Whitney**	**146.86**	**266**	⇓P	PKPab	04 59 54.7	+5.4
	baz=147						
732A	**Laxson Ranch,**	**147.06**	**259**	⇑P	**PKPab**	**04 59 50.3**	**+0.1**
	baz=147						
EYMN	**Ely**	**147.24**	**297**	*e*PKPbc	**PKPbc**	**04 59 48.5**	**-0.1**
632A	**Uvalde**	**147.34**	**260**	⇑P	**PKPbc**	**04 59 49.8**	**+0.3**
	baz=147						
532A	**Rocksprings**	**147.76**	**261**	⇓P	**PKPbc**	**04 59 50.5**	**-0.1**
	baz=148						
JCT	**Junction City**	**147.86**	**262**	⇓P	**PKPbc**	**04 59 50.8**	**0.0**
	baz=148						
631A	**Perdido Creek**	**147.88**	**260**	⇑P	**PKPbc**	**04 59 50.7**	**-0.1**
	baz=148						
432A	**Menard**	**148.06**	**263**	⇓P	**PKPab**	**04 59 54.4**	**+0.2**
	baz=148						
531A	**Rocksprings**	**148.25**	**261**	⇓P	**PKPbc**	**04 59 51.7**	**-0.2**
	baz=148						
332A	**Millersview**	**148.27**	**263**	⇓P	**PKPbc**	**04 59 52.3**	**+0.4**
	baz=148						
232A	**Coleman**	**148.44**	**264**	⇓P	**PKPdf**	**04 59 50.4**	**+1.6**
	baz=148						
431A	**Sonora**	**148.56**	**262**	⇑P	**PKPbc**	**04 59 52.3**	**-0.4**
	baz=149						
331A	**San Angelo**	**148.74**	**263**	⇓P	**PKPbc**	**04 59 52.9**	**-0.2**
	baz=149						
530A	**J-C Ranch, Com**	**148.83**	**260**	⇑P	**PKPbc**	**04 59 53.1**	**-0.2**
	baz=149,SNR=7.3						
231A	**Bronte**	**148.97**	**264**	⇓P	**PKPbc**	**04 59 53.5**	**-0.2**
	baz=149						
Z32A	**Haskell**	**148.98**	**267**	⇓P	**PKPbc**	**04 59 54.5**	**+0.9**
	baz=149						
WMOK	**Wichita Mounta**	**149.07**	**270**	*e*PKPbc	**PKPbc**	**04 59 54.1**	**+0.3**
WMOK				*e*PKPab	**PKPab**	**05 00 00.1**	**+2.0**
430A	**Baggett Ranch,**	**149.08**	**261**	⇑P	**PKPbc**	**04 59 53.1**	**-0.9**
	baz=149						
Y32A	**R-V Farms, Ver**	**149.26**	**268**	⇑P	**PKPbc**	**04 59 55.2**	**+0.9**
	baz=149						
330A	**Mertzon**	**149.35**	**262**	⇓P	**PKPbc**	**04 59 54.3**	**-0.4**
	baz=149,SNR=8.0						
131A	**Roby**	**149.37**	**265**	⇓P	**PKPbc**	**04 59 55.0**	**+0.3**
	baz=149						
529A	**Stev Forest Ra**	**149.47**	**259**	⇓P	**PKPbc**	**04 59 55.1**	**+0.1**
	baz=150,SNR=6.3						
Z31A	**Sharp Cattle R**	**149.48**	**266**	⇑P	**PKPbc**	**04 59 54.8**	**-0.1**
	baz=150,SNR=11						
429A	**Davenport Ranc**	**149.48**	**260**	⇑P	**PKPbc**	**04 59 54.9**	**-0.1**
	baz=150,SNR=7.4						
230A	**Sterling City**	**149.54**	**263**	⇑P	**PKPbc**	**04 59 54.1**	**-1.1**
	baz=150						
628A	**Black Gap, Mar**	**149.61**	**258**	⇑P	**PKPbc**	**04 59 55.8**	**+0.4**
	baz=150						
Y31A	**Rekieta Farm,**	**149.85**	**267**	⇑P	**PKPbc**	**04 59 56.6**	**+0.8**
	baz=150,SNR=5.8						
528A	**Cox Ranch, San**	**149.90**	**259**	⇓P	**PKPbc**	**04 59 56.8**	**+0.7**
	baz=150						
X31A	**McDonald Ranch**	**149.93**	**269**	⇓P	**PKPbc**	**04 59 57.1**	**+1.1**
	baz=150						
627A	**Terlingua Ranc**	**149.96**	**257**	⇑P	**PKPbc**	**04 59 56.5**	**+0.2**
	baz=150,SNR=7.5						
329A	**Wagon Wheel Ra**	**149.98**	**262**	⇑P	**PKPbc**	**04 59 56.3**	**+0.1**
	baz=150						
TXAR	**Lajitas Array**	**150.10**	**257**	PKPbc	**PKPbc**	**04 59 56.8**	**+0.1**
TXAR	**Lajitas Array**	**150.10**	**257**	PKPbc	**PKPbc**	**04 59 56.8**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=147,slow=5.1,SNR=5.7						
428A	**Kincaid Ranch,**	**150.12**	**260**	⇑P	**PKPbc**	**04 59 57.1**	**+0.5**
	baz=150						
AGMN	**Agassiz Nation**	**150.18**	**297**	*e*PKPbc	**PKPbc**	**04 59 56.9**	**+0.9**
Z30A	**Sanderson Ranc**	**150.20**	**266**	⇑P	**PKPbc**	**04 59 55.5**	**-1.2**
	baz=150						
ULM	**Lac du Bonnet**	**150.23**	**301**	PKPbc	**PKPbc**	**04 59 55.8**	**-0.4**
ULM	**Lac du Bonnet**	**150.23**	**301**	PKPbc	**PKPbc**	**04 59 55.8**	**-0.4**
	comp=Z,1.8nm,0.5s,baz=118,slow=2.4,SNR=1.9						
129A	**Stewart Farms,**	**150.45**	**264**	⇑P	**PKPbc**	**04 59 55.2**	**-2.1**
	baz=150						
527A	**Woodward Ranch**	**150.50**	**258**	⇓P	**PKPbc**	**04 59 57.0**	**-0.6**
	baz=150,SNR=9.6						
328A	**Wristen Ranch,**	**150.54**	**261**	⇑P	**PKPbc**	**04 59 57.2**	**-0.4**
	baz=151						
626A	**Big Bend Ranch**	**150.56**	**256**	⇓P	**PKPbc**	**04 59 56.7**	**-1.0**
	baz=151,SNR=7.0						
Z29A	**Hungry Hill Ra**	**150.62**	**265**	⇑P	**PKPdf**	**04 59 54.9**	**+2.6**
	baz=151						
T31A	**Randall Ranch,**	**150.65**	**274**	⇑P	**PKPab**	**05 00 04.1**	**-0.4**
	baz=151						
427A	**Hayter Ranch,**	**150.71**	**259**	⇓P	**PKPbc**	**04 59 58.0**	**0.0**
	baz=151,SNR=7.4						
526A	**Mary Lane Ranc**	**150.80**	**257**	⇓P	**PKPbc**	**04 59 58.3**	**0.0**
	baz=151						
Y29A	**Porterfield Fa**	**150.86**	**266**	⇑P	**PKPbc**	**04 59 58.0**	**-0.3**
	baz=151						
R31A	**Burdett**	**150.94**	**276**	⇓P	**PKPab**	**05 00 03.3**	**-2.4**
	baz=151						
426A	**McDonald Obser**	**151.08**	**258**	⇓P	**PKPbc**	**04 59 59.5**	**+0.4**
	baz=151,SNR=9.1						
X29A	**Tulia**	**151.14**	**267**	⇑P	**PKPbc**	**05 00 00.3**	**+1.4**
	baz=151						
Z28A	**Tucker Farm, M**	**151.14**	**265**	⇓P	**PKPdf**	**04 59 55.5**	**+2.4**
	baz=151						
Y28A	**McKinney Farm,**	**151.31**	**266**	⇑P	**PKPbc**	**05 00 00.2**	**+0.9**
	baz=151						
326A	**Caldwell Ranch**	**151.38**	**260**	⇑P	**PKPbc**	**04 59 57.9**	**-1.7**
	baz=151						
R30A	**Dighton**	**151.50**	**276**	⇓P	**PKPab**	**05 00 05.7**	**-2.4**
	baz=152						
X28A	**Dimmitt**	**151.54**	**267**	⇓P	**PKPbc**	**05 00 03.9**	**+4.1**
	baz=152						
Q30A	**Quinter**	**151.68**	**277**	⇓P	**PKPbc**	**05 00 01.0**	**+1.0**
	baz=152						
MSTX	**Muleshoe**	**151.73**	**266**	⇓P	**PKPbc**	**05 00 00.7**	**+0.4**
	baz=152						
Z27A	**Tatum**	**151.77**	**264**	⇓P	**PKPbc**	**04 59 59.8**	**-0.7**
	baz=152						
425A	**Indio Mountain**	**151.84**	**258**	⇑P	**PKPbc**	**05 00 01.1**	**+0.4**
	baz=152						
226B	**Tecolote Peak,**	**151.89**	**261**	⇓P	**PKPbc**	**05 00 00.5**	**-0.2**
	baz=152						
Y27A	**Causey**	**151.99**	**265**	⇑P	**PKPbc**	**05 00 00.7**	**-0.2**
	baz=152						
126A	**Clayton Basin,**	**152.06**	**262**	⇑P	**PKPbc**	**05 00 01.0**	**-0.1**
	baz=152						
325A	**Bean Ranch, Si**	**152.13**	**259**	⇓P	**PKPbc**	**05 00 02.1**	**+0.7**
	baz=152						
Q29A	**Oakley**	**152.21**	**276**	⇑P	**PKPbc**	**05 00 01.9**	**+0.7**
	baz=152						
Z26A	**Caprock**	**152.32**	**263**	⇑P	**PKPbc**	**05 00 01.4**	**-0.3**
	baz=152						
Y26A	**Elida**	**152.50**	**265**	⇑P	**PKPbc**	**05 00 03.7**	**+1.6**
	baz=152						
125A	**Gardner Draw,**	**152.54**	**262**	⇑P	**PKPbc**	**05 00 01.5**	**-0.7**
	baz=153						
324A	**Moseley Ranch,**	**152.55**	**259**	⇓P	**PKPbc**	**05 00 06.1**	**+3.8**
	baz=153						
MNTX	**Cornudas Mount**	**152.60**	**259**	*e*PKPbc	**PKPbc**	**05 00 02.1**	**-0.1**
MNTX				*e*PKPab	**PKPab**	**05 00 12.8**	**0.0**
R28A	**Tribune**	**152.66**	**275**	⇑P	**PKPbc**	**05 00 04.3**	**+2.0**
	baz=153						
X26A	**CR and CF Fran**	**152.76**	**266**	⇓P	**PKPbc**	**05 00 02.8**	**+0.2**
	baz=153						
U27A	**Thompson Grove**	**152.76**	**270**	⇑P	**PKPbc**	**05 00 03.2**	**+0.6**
	baz=153						
Z25A	**Roswell**	**152.87**	**263**	⇑P	**PKPdf**	**04 59 58.6**	**+2.8**
	baz=153						
Y25A	**Mesa, Roswell**	**153.15**	**264**	⇓P	**PKPbc**	**05 00 03.3**	**-0.2**
	baz=153						
124A	**Stringfield Ra**	**153.15**	**261**	⇓P	**PKPbc**	**05 00 03.9**	**+0.2**
	baz=153						
INK	**Inuvik**	**153.24**	**357**	PKPbc	**PKPbc**	**05 00 02.1**	**-0.3**
INK	**Inuvik**	**153.24**	**357**	PKPbc	**PKPbc**	**05 00 02.1**	**-0.3**
	comp=Z,5.0nm,0.9s,baz=81,slow=1.5,SNR=4.3						
Z24A	**Sheeppen Canyo**	**153.38**	**262**	⇑P	**PKPbc**	**05 00 03.2**	**-1.0**
	baz=153						
R27A	**Eads**	**153.38**	**274**	⇑P	**PKPbc**

PETK Petropavlovsk- 9.99 29 PN **Pn** 05 24 31.9 +1.2
PETK Petropavlovsk- 9.99 29 Pn **Pn** 05 24 31.9 +1.2
comp=E,0.4nm,0.3s,baz=201,slow=15,SNR=3.3
YAK Yakutsk 20.94 333 *e*P **P** 05 26 44.7 -4.4
YAK pmax pmax
comp=Z,14nm,0.7s
ILAR Eielson Array 39.71 37 P **P** 05 29 38.2 +0.1
comp=Z,0.8nm,0.8s,baz=266,slow=8.7,SNR=12
INK Inuvik 44.73 31 P **P** 05 30 20.6 +1.6
comp=Z,1.0nm,0.5s,baz=298,slow=9.4,SNR=6.2
MKAR Makanchi Array 45.75 298 P **P** 05 30 27.1 -0.4
MKAR Makanchi Array 45.75 298 P **P** 05 30 27.1 -0.4
comp=Z,0.3nm,0.6s,baz=64,slow=6.8,SNR=3.6
KURK Kurchatov 46.51 304 P **P** 05 30 32.5 -0.8
KURBB Kurchatov Arra 46.60 304 P **P** 05 30 32.5 -1.5
comp=Z,0.3nm,0.5s,baz=73,slow=8.3,SNR=3.8
ARU Arti 54.91 317*c* *i*P **P** 05 31 37.1 +0.6
ARU 05 33 36.9
ARU S **S** 05 39 15.0 -0.2
ARU SS **SKiKP** 05 42 46.8 +6.7
ARU pmax pmax
comp=Z,16nm,1.7s
FINES FINESS Array B 64.88 334 P **P** 05 32 43.4 -1.4
comp=Z,0.8nm,0.5s,baz=29,slow=9.0,SNR=5.4
OBN Obninsk 65.64 325↑ *e*P **P** 05 32 47.7 -2.1
OBN *e**PP **PcP** 05 33 18.3 -2.8
OBN *e*S **S** 05 41 30.6 -2.0
OBN pmax pmax
comp=Z,6.0nm,1.0s
PDAR Pinedale Array 67.96 51 P **P** 05 33 04.7 -0.5
comp=Z,0.5nm,0.6s,baz=311,slow=7.7,SNR=3.6
NB2 NORSAR Subarra 69.40 340 P **P** 05 33 13.0 -0.6
comp=Z,0.5nm,0.5s,baz=28,slow=6.5
NOA NORSAR Array B 69.40 340 P **P** 05 33 12.7 -0.9
comp=Z,0.7nm,0.5s,baz=30,slow=6.5,SNR=4.7
AKASG Malin Array Be 71.90 325 P **P** 05 33 28.0 -0.9
AKASG pmax pmax
comp=Z,1.0nm,0.5s
AKASG Malin Array Be 71.90 325 P **P** 05 33 28.0 -0.9
comp=Z,0.8nm,0.5s,baz=31,slow=5.8,SNR=4.2
CLL Collm 77.33 334 *e*P **P** 05 33 59.0 -1.3
CLL *e**PP **pP** 05 34 16.0 +4.5
CLL pmax pmax
comp=Z,3.0nm,0.7s
CLL Collm 77.33 334 *e*P **P** 05 33 59.0 -1.3
comp=Z,3.0nm,0.7s
CLL *i* 05 34 00.0
comp=Z,4.0nm,0.6s
CLL *e*pP **pP** 05 34 16.0 +4.5
TXAR Lajitas Array 80.67 58 P **P** 05 34 19.0 -0.2
comp=Z,0.9nm,0.5s,baz=299,slow=4.1,SNR=24

IDC ***24*** *05:25:20.3±1.5,24°.55N×121°.03E,h0km,mb3.4/3, mb1 3.6/4,mb1mx3.4/26,mbtmp3.5/4,ML3.6/1,Error ellipse: s-maj=67.5km s-min=25.9km az=69.0*
ISCJB ***24*** *05:25:33.2±0.4,24°.99N±0°.03×121°.85E±0°.03, h130km±2km,mb3.2/3,Error ellipse: s-maj=5.1km s-min=3.3km az=148.0*
TAP ***24*** *05:25:33.6,25°.01N×121°.86E,h128km,ML4.2,B*
JMA ***24*** *05:25:34.3±0.3,24°.98N×121°.89E,h124km,M3.1*
ISC 24 05:25:33.5±0.8,25°.02N±0°.04×121°.84E±0°.03,h130km±5km, n61,σ0°63/112,mb3.3/3,8D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
NWF	**Wu-fen Shan**	**0.08**	**314**	P			**Pn**	**05 25 51.1**	**-0.1**
	baz=311								
NWF					*e*	S	**Sn**	05 26 04.8	+0.1
	baz=311								
TWB1	**Santiao Chiao**	**0.13**	**94**	*i* P			**Pn**	05 25 51.2	0.0
	baz=109								
TWB1						S	**Sn**	05 26 04.0	-0.6
	baz=109								
ILA	**Ilan**	**0.27**	**199**	*e*P			**Pn**	05 25 51.6	+0.1
	baz=198								
ILA					*e*	S	**Sn**	05 26 05.5	+0.4
	baz=198								
TAP1	**Taipei**	**0.29**	**274**	P			**Pn**	05 25 51.6	+0.1
	baz=279								
TAP1						S	**Sn**	05 26 04.4	-0.9
	baz=279								
TAP	**Taipei**	**0.31**	**274**	P			**Pn**	05 25 51.7	0.0
	baz=279								
TAP						S	**Sn**	05 26 05.1	-0.3
	baz=279								
TWE	**Neicheng**	**0.34**	**208**	P			**Pn**	05 25 52.0	+0.2
	baz=209								
TWE						S	**Sn**	05 26 05.8	+0.2
	baz=209								
TWY	**Chenhua**	**0.34**	**319**	*e*P			**Pn**	05 25 51.9	+0.1
	baz=319								
TWY					*e*	S	**Sn**	05 26 05.4	-0.2
	baz=319								
TWS1	**Kuangyinshan**	**0.39**	**282**	P			**Pn**	05 25 52.4	+0.4
	baz=283								
TWS1					*e*	S	**Sn**	05 26 06.1	+0.1
	baz=283								
TWC	**Suao**	**0.41**	**179**	P			**Pn**	05 25 52.3	+0.2
	baz=170								
TWC						S	**Sn**	05 26 06.3	+0.1
	baz=170								
ENTT	**Nioudou**	**0.45**	**214**	*i* P			**Pn**	05 25 52.6	+0.2
	baz=225								
ENTT						S	**Sn**	05 26 06.3	-0.3
	baz=225								
NSK	**Sanguang**	**0.56**	**232**	⇓*i*P			**Pn**	05 25 52.8	-0.2
	baz=233								
NSK					*e*	S	**Sn**	05 26 06.3	-1.5
	baz=233								
ENA	**Nanau**	**0.59**	**189**	*e*P			**Pn**	05 25 54.1	+0.9
	baz=178								
ENA						S	**Sn**	05 26 08.8	+0.7
	baz=178								
NCU	**National Centr**	**0.60**	**266**	*e*P			**Pn**	05 25 53.6	+0.5
	baz=258								
NCU						S	**Sn**	05 26 08.0	-0.1
	baz=258								
PCYT	**Pengchaiyu**	**0.64**	**19**	P			**Pn**	05 25 53.4	-0.1
	baz=16								
PCYT					*e*	S	**Sn**	05 26 08.3	-0.4
	baz=16								
NNS	**Nan Shan**	**0.72**	**217**	P			**Pn**	05 25 54.4	+0.2
	baz=219								
NNS						S	**Sn**	05 26 09.4	-0.5
	baz=219								
HSN	**Hsinchu**	**0.82**	**255**	*e*P			**Pn**	05 25 54.8	0.0
	baz=250								
HSN						S	**Sn**	05 26 10.3	-0.7
	baz=250								
NSTT	**Nanjuang**	**0.86**	**243**	⇓*i*P			**Pn**	05 25 55.3	+0.2
	baz=243								
NSTT						S	**Sn**	05 26 10.8	-0.7
	baz=243								
TWD	**Chiawan**	**0.96**	**194**	P			**Pn**	05 25 55.5	-0.6
	baz=202								
TWD					*e*	S	**Sn**	05 26 12.1	-1.0
	baz=202								
TWT	**Tachien**	**0.97**	**219**	P			**Pn**	05 25 57.2	+0.8
	baz=227								
TWT						S	**Sn**	05 26 14.0	+0.3
	baz=227								
WHF	**Hehuan Shan**	**1.02**	**211**	⇓*i*P			**Pn**	05 25 57.5	+0.5
	baz=207								
WHF						S	**Sn**	05 26 14.7	-0.1
	baz=207								
HWA	**Hwalien**	**1.06**	**192**	*e*P			**Pn**	05 25 56.9	0.0
	baz=200								
HWA					*e*	S	**Sn**	05 26 15.2	+0.4
	baz=200								
NSY	**Sanyi**	**1.15**	**239**	*e*P			**Pn**	05 25 58.0	+0.1
	baz=244								
NSY					*e*	S	**Sn**	05 26 16.5	+0.1
	baz=244								
TWQ1	**Liyutan**	**1.18**	**236**	*i* P			**Pn**	05 25 58.3	+0.2
	baz=236								
TWQ1						S	**Sn**	05 26 16.4	-0.5
	baz=236								
YOJ	**Yonaguni jima**	**1.20**	**117**	P			**Pn**	05 25 58.3	0.0
YOJ						S	**Sn**	05 26 16.3	-0.9
ESL	**Shilin**	**1.25**	**197**	*e*P			**Pn**	05 25 58.0	-1.0
	baz=193								
ESL					*e*	S	**Sn**	05 26 17.7	-0.6
	baz=193								
TCU	**Taichung**	**1.37**	**231**	*e*P			**Pn**	05 26 00.8	+0.7
	baz=231								
TCU						S	**Sn**	05 26 20.5	0.0
	baz=231								
SMLT	**Sun Moon Lake**	**1.42**	**217**	⇓*i*P			**Pn**	05 26 01.3	+0.4
	baz=217								
SMLT						S	**Sn**	05 26 21.7	+0.1
	baz=217								
TYC	**Yuchr**	**1.43**	**219**	⇓*i*P			**Pn**	05 26 01.2	+0.5
	baz=219								
TYC						S	**Sn**	05 26 21.3	-0.2
	baz=219								
WNT	**Mingjian**	**1.55**	**223**	*e*P			**Pn**	05 26 02.7	+0.5
	baz=229								
EHY	**Hungye**	**1.58**	**198**	P			**Pn**	05 26 02.6	0.0
	baz=188								
EHY						*e*S	**Sn**	05 26 24.5	-0.1
	baz=188								
YUS	**Yu-Shan**	**1.73**	**208**	⇓*i*P			**Pn**	05 26 05.6	+0.9
	baz=217								
YUS						S	**Sn**	05 26 29.1	+0.7
	baz=217								
TWF1	**Yuli**	**1.73**	**197**	*e*P			**Pn**	05 26 03.7	-0.6
	baz=192								
WGK	**Gukeng**	**1.77**	**222**	*e*P			**Pn**	05 26 04.5	-0.2
	baz=222								
WGK						*e*S	**Sn**	05 26 29.0	+0.5
	baz=222								
CHN5	**Tsauling**	**1.77**	**217**	P			**Pn**	05 26 05.1	+0.3
	baz=225								
CHN5						S	**Sn**	05 26 28.5	-0.2
	baz=225								
ALS	**Alishan**	**1.77**	**212**	⇓*i*P			**Pn**	05 26 05.7	+0.6
	baz=219								
ALS						S	**Sn**	05 26 29.6	+0.4
	baz=219								
WTCT	**Ta-ch'eng**	**1.83**	**231**	*e*P			**Pn**	05 26 04.6	-0.8
	baz=227								
WTCT						*e*S	**Sn**	05 26 29.6	-0.2
	baz=227								
IRIF	**Iriomote-Funau**	**1.85**	**111**	P			**Pn**	05 26 05.2	-0.4
IRIF						S	**Sn**	05 26 29.4	-0.7
CHKT	**Chengkung**	**1.96**	**193**	*e*P			**Pn**	05 26 06.9	0.0
	baz=183								
CHKT						*e*S	**Sn**	05 26 31.3	-1.3
	baz=183								
CHY	**Chiayi**	**1.99**	**221**	*e*P			**Pn**	05 26 07.9	+0.6
	baz=226								
CHY						S	**Sn**	05 26 33.2	-0.1
	baz=226								
WSF	**Szhu**	**2.02**	**227**	*e*P			**Pn**	05 26 07.1	-0.6
	baz=222								
WSF						*e*S	**Sn**	05 26 33.7	-0.2
	baz=222								
HATJ	**Hateruma jima**	**2.03**	**118**	P			**Pn**	05 26 08.0	+0.2
HATJ						S	**Sn**	05 26 34.6	+0.6
WTP	**Ta-pu**	**2.09**	**213**	P			**Pn**	05 26 08.9	+0.2
	baz=212								
WTP						*e*S	**Sn**	05 26 35.4	-0.2
	baz=212								
JKRS	**Kuro-shima**	**2.12**	**111**	P			**Pn**	05 26 09.2	+0.3
TWK	**Hsinying**	**2.14**	**216**	⇓*i*P			**Pn**	05 26 09.6	+0.3
	baz=216								
TWK						S	**Sn**	05 26 36.3	-0.3
	baz=216								
CHN1	**Nanshi**	**2.19**	**214**	P			**Pn**	05 26 10.0	+0.2
	baz=214								
CHN1						S	**Sn**	05 26 37.4	-0.2
	baz=214								
JIJ	**Ishigaki jima**	**2.19**	**107**	P			**Pn**	05 26 09.9	+0.1
JIJ						S	**Sn**	05 26 36.8	-0.9
CHN8	**Yiju**	**2.23**	**222**	*e*P			**Pn**	05 26 10.1	-0.2
	baz=222								
CHN8						*e*S	**Sn**	05 26 39.2	+0.6
	baz=222								
TWG	**Pinlang**	**2.30**	**198**	*e*P			**Pn**	05 26 11.3	+0.2
	baz=188								
TWG						*e*S	**Sn**	05 26 38.8	-1.3
	baz=188								
CHN3	**Shinhua**	**2.36**	**215**	*e*P			**Pn**	05 26 13.0	+1.0
	baz=216								
CHN3						*e*S	**Sn**	05 26 42.7	+1.3
	baz=216								
PNG	**Penghu**	**2.54**	**236**	*e*P			**Pn**	05 26 14.0	-0.2
	baz=235								
PNG						S	**Sn**	05 26 43.4	-2.1
	baz=235								
TWM1	**Shoushan**	**2.54**	**211**	*e*P			**Pn**	05 26 15.2	+0.9
	baz=210								
ECL	**Taimali**	**2.54**	**199**	*e*P			**Pn**	05 26 14.7	+0.5
	baz=191								
JTJ	**Tarama**	**2.63**	**98**	P			**Pn**	05 26 16.0	+0.7
JTJ						S	**Sn**	05 26 47.2	-0.2
WDGT	**Dungji**	**2.65**	**229**	P			**Pn**	05 26 15.4	-0.2
	baz=223								
WDGT						*e*S	**Sn**	05 26 46.1	-2.0
	baz=223								
EAST	**Anshuo**	**2.78**	**199**	*e*P			**Pn**	05 26 17.9	+0.6
	baz=192								
SCZT	**Fangliau**	**2.86**	**203**	*e*P			**Pn**	05 26 18.5	+0.2
	baz=204								
SCZT						*e*S	**Sn**	05 26 51.4	-1.5
	baz=204								
TWK1	**Hengchun**	**3.21**	**197**	*e*P			**Pn**	05 26 23.9	+1.1
	baz=198								
TWK1						*e*S	**Sn**	05 27 00.1	-0.8
	baz=198								
KSRS	**Korea Array**	**13.44**	**21**	Pn			**P**	05 28 43.3	-0.3
	0.3nm,0.3s,baz=200,slow=13,SNR=6.9								
SONM	**Songino Array**	**25.85**	**336**	P			**P**	05 30 54.1	+1.3
	0.2nm,0.4s,baz=144,slow=12,SNR=2.4								
MKAR	**Makanchi Array**	**38.17**	**315**	P			**P**	05 32 40.0	-0.1
	0.3nm,0.4s,baz=103,slow=10,SNR=6.0								
WRA	**Warramunga Arr**	**46.31**	**164**	P			**P**	05 33 46.2	-0.2
	0.4nm,0.6s,baz=347,slow=8.7,SNR=5.9								

IDC ***24*** *05:35:57.7±0.6,35°.48N×143°.15E,h0km,mb4.0/19, mb1 4.2/24,mb1mx4.1/32,mbtmp4.0/24,ML3.8/5,MS3.1/6, Ms1 3.1/6,ms1mx2.7/40,Error ellipse: s-maj=15.8km s-min=13.7km az=138.0*
ISCJB ***24*** *05:35:58.9±1.6,35°.56N±0°.04×142°.96E±0°.04, h17km±11km,mb4.1/22,MS3.2/2,Error ellipse: s-maj=7.3km s-min=5.4km az=147.2*
NEIC ***24*** *05:35:58.9±4.2,35°.46N×143°.12E,h8km±25km,mb4.5/3, MW4.1(NIED),Error ellipse: s-maj=10.2km s-min=8.1km az=145.0*
JMA ***24*** *05:36:00.7±0.3,35°.63N×142°.98E,h75km,M4.1*
NIED ***24*** *05:36:00,35°.60N×143°.00E,h5km,Mw4.2 Best double couple: M≥2.08000×10¹⁵ NP1:φs202.00000°,δ65.00000°, λ-91.00000°. NP2:φs24.00000°,δ25.00000°,λ-88.00000°.*
ISC 24 05:36:00.4±4.5,35°.61N±0°.06×143°.04E±0°.06,h16km±28km, n72,σ1°44/80,mb4.0/22,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.78**	**274**	P			**Pn**	**05 36 29.7**	**-0.8**
CHOJ						S	**Sn**	05 36 51.3	-1.4
BSO1	**Boso 1**	**1.94**	**241**	P			**Pn**	05 36 30.9	-1.3
BSO1						S	**Sn**	05 36 53.0	-2.9
BSO3	**Boso 3**	**2.22**	**250**	P			**Pn**	05 36 36.1	-0.2
JFT	**Otama**	**2.89**	**312**	P			**Pn**	05 36 45.0	-0.8
JFT						S	**Sn**	05 37 17.7	-2.6
JAG	**Ashikaga**	**3.02**	**287**	P			**Pn**	05 36 46.3	-1.2
JOD2	**Odawara 2**	**3.24**	**265**	P			**Pn**	05 36 49.7	-1.0
JOD2						S	**Sn**	05 37 26.3	-2.6
JRY	**Ryogami san**	**3.39**	**278**	P			**Pn**	05 36 51.7	-0.9
JMK	**Ichinoseki**	**3.64**	**337**	P			**Pn**	05 36 54.2	-1.8
JMK						*e*S	Sn	05 37 34.5	-4.1
JHJ2	**Mitsune**	**3.65**	**228**	P			**Pn**	05 36 55.2	-1.0
JHJ2						*e*S	Sn	05 37 34.8	-4.0
JHJ	**Hachijo jima 2**	**3.66**	**228**	Pn			**Pn**	05 36 55.0	-1.4
	51nm,0.3s,baz=265,slow=23,SNR=15								
JHJ						Sn	**Sn**	05 37 35.6	-3.7
	428nm,0.3s,baz=34,slow=22,SNR=16								
JYN	**Shimob**	**3.67**	**270**	P			**Pn**	05 36 55.6	-0.9
JYN						*e*S	**Sn**	05 37 37.6	-1.8
JYK	**Kaneyama**	**3.94**	**328**	P			**Pn**	05 36 58.0	-2.1
MJAR	**Matsushiro Arr**	**4.02**	**285**	Pn			**Pn**	05 37 01.8	+0.5
MJAR							**Sn**	05 37 47.3	-0.8
MJAR	**Matsushiro Arr**	**4.02**	**285**	Pn			**Pn**	05 37 01.8	+0.5
	17nm,0.3s,baz=97,slow=9.7,SNR=66								
MJAR						Sn	**Sn**	05 37 47.3	-0.8
	4.8nm,0.3s,baz=130,slow=11,SNR=6.1								
MJAR						LR	LR	05 38 48.4	
	comp=Z,188nm,21.1s,baz=55,slow=42								

MAT Matsushiro 4.02 285 P **Pn** 05 37 01.9 +0.5
MAT S **Sn** 05 37 46.1 -2.1
MAT Matsushiro 4.02 285 P **Pn** 05 37 01.9 +0.5
JOM Ohasama 4.10 341 P **Pn** 05 37 00.5 -1.9
JSD Sado 4.54 304 P **Pn** 05 37 07.3 -1.1
ASAJ Asahikawa 8.51 358 Pn **Pn** 05 38 00.9 -1.9
ASAJ Sn **Sn** 05 39 34.3 -4.1
ASAJ Asahikawa 8.51 358 Pn **Pn** 05 38 00.9 -1.9
3.2nm,0.3s,baz=207,slow=7.1,SNR=4.3
ASAJ Sn **Sn** 05 39 34.3 -4.1
2.1nm,0.3s,baz=292,slow=31,SNR=3.9
ASAJ LR LR 05 42 09.8
comp=Z,98nm,19.6s,baz=158,slow=43
JNU Nakatsue 10.35 260 Pn **Pn** 05 38 27.9 -0.3
JNU Nakatsue 10.35 260 Pn **Pn** 05 38 27.9 -0.3
0.6nm,0.3s,baz=46,slow=9.8,SNR=4.8
USRK Ussuriysk Arra 12.05 319 Pn **Pn** 05 38 52.6 +1.3
0.8nm,0.3s,baz=126,slow=14,SNR=11
USRK LR LR 05 43 28.1
comp=Z,69nm,19.7s,baz=73,slow=37
KSRS Korea Array 12.30 283 Pn **Pn** 05 38 56.4 +1.6
0.4nm,0.3s,baz=98,slow=14,SNR=9.9
KSRS LR LR 05 43 23.6
comp=Z,79nm,20.3s,baz=235,slow=36
KSAR Wonju Array Be 12.33 283 Pn **Pn** 05 38 56.4 +1.2
PETK Petropavlovsk- 20.32 26 P Pn 05 40 38.0 +0.3
PETK Petropavlovsk- 20.32 26 P Pn 05 40 38.0 +0.3
1.3nm,0.6s,baz=248,slow=11,SNR=3.3
ENH Enshi 28.57 269 *e*P **P** 05 41 55.5 -0.1
SONM Songino Array 29.68 306 P **P** 05 42 06.9 +1.4
SONM Songino Array 29.68 306 P **P** 05 42 06.9 +1.4
1.0nm,0.4s,baz=107,slow=9.9,SNR=6.7
CMAR Chiang Mai Arr 42.45 258 P **P** 05 43 55.6 +0.9
CMAR Chiang Mai Arr 42.45 258 P **P** 05 43 55.6 +0.9
0.8nm,0.3s,baz=54,slow=9.1,SNR=3.1
CMAR LR LR 06 04 28.0
comp=Z,22nm,18.5s,baz=285,slow=40
ZALV Zalesovo Beam 43.84 313 P **P** 05 44 05.9 +0.4
ZALV Zalesovo Beam 43.84 313 P **P** 05 44 05.9 +0.4
1.1nm,0.5s,baz=102,slow=6.1,SNR=4.6
MK31 Makanchi Array 45.99 304 *e*P **P** 05 44 23.2 +0.3
MKAR Makanchi Array 45.99 304 P **P** 05 44 23.2 +0.4
MKAR Makanchi Array 45.99 304 P **P** 05 44 23.2 +0.4
0.5nm,0.6s,baz=90,slow=10,SNR=3.9
KDAK Kodiak Island 47.29 41 P **P** 05 44 32.2 -0.6
KDAK Kodiak Island 47.29 41 P **P** 05 44 32.2 -0.6
3.7nm,0.5s,baz=235,slow=3.8,SNR=5.4
KURK Kurchatov 47.85 309 *e*P **P** 05 44 39.0 +1.8
KURBB Kurchatov Arra 47.91 309 P **P** 05 44 37.7 0.0
1.1nm,0.5s,baz=86,slow=7.6,SNR=13
ILAR Eielson Array 50.00 32 P **P** 05 44 53.5 0.0
ILAR Eielson Array 50.00 32 P **P** 05 44 53.5 0.0
1.5nm,0.8s,baz=260,slow=6.3,SNR=23
TKM2 Tokmak 2 51.47 300 *e*P **P** 05 45 06.6 +1.4
3.7nm,0.5s
KKAR Karatay Array 54.98 301 P **P** 05 45 31.1 +0.3
3.0nm,0.9s
WRA Warramunga Arr 55.86 190 P **P** 05 45 35.9 -1.4
WRA Warramunga Arr 55.86 190 P **P** 05 45 35.9 -1.4
4.3nm,0.7s,baz=8.9,slow=7.6,SNR=58
ASAR Alice Springs 59.58 190 P **P** 05 46 02.5 -0.8
ASAR Alice Springs 59.58 190 P **P** 05 46 02.5 -0.8
1.5nm,0.7s,baz=16,slow=10,SNR=21
ABKAR Akbulak array 59.86 311 *e*P **P** 05 46 05.3 +0.2
3.1nm,0.6s
YKA Yellowknife Ar 64.38 30 P **P** 05 46 35.2 +0.1
YKA Yellowknife Ar 64.38 30 P **P** 05 46 35.2 +0.1
0.3nm,0.6s,baz=295,slow=6.1,SNR=5.2
STKA Stephens Creek 67.14 181 P **P** 05 46 52.9 -0.4
STKA Stephens Creek 67.14 181 P **P** 05 46 52.9 -0.4
1.3nm,0.7s,baz=346,slow=4.2,SNR=4.2
FINES FINESS Array B 70.68 333 P **P** 05 47 17.6 +2.6
FINES FINESS Array B 70.68 333 P **P** 05 47 17.6 +2.6
0.9nm,0.8s,baz=53,slow=9.2,SNR=2.4
NVAR Mina Array Bea 74.78 54 P **P** 05 47 39.7 -0.4
NVAR Mina Array Bea 74.78 54 P **P** 05 47 39.7 -0.4
0.8nm,0.7s,baz=292,slow=6.2,SNR=5.9
NB2 NORSAR Subarra 76.00 338 P P 05 47 53.9 +7.5
comp=Z,1.0nm,0.8s,baz=38,slow=5.6
NOA NORSAR Array B 76.00 338 P **P** 05 47 47.8 +1.3
NOA NORSAR Array B 76.00 338 P **P** 05 47 47.8 +1.3
comp=Z,0.2nm,0.5s,baz=230,slow=23,SNR=2.2
NOA LR LR 06 22 54.1
comp=Z,16nm,20.5s,baz=5.0,slow=37
AKASG Malin Array Be 76.22 323 P **P** 05 47 47.8 0.0
AKASG Malin Array Be 76.22 323 P **P** 05 47 47.8 0.0
comp=Z,0.3nm,0.3s,baz=47,slow=5.5,SNR=2.9
PDAR Pinedale Array 77.72 46 P **P** 05 47 56.8 +0.1
PDAR Pinedale Array 77.72 46 P **P** 05 47 56.8 +0.1
comp=Z,1.0nm,0.6s,baz=240,slow=1.8,SNR=9.0
BRTR Keskin Array B 80.78 313 P **P** 05 48 14.8 +1.4
BRTR Keskin Array B 80.78 313 P **P** 05 48 14.8 +1.4
comp=Z,0.9nm,0.8s,baz=90,slow=3.7,SNR=4.9
PV01 Paradox Valley 81.16 49 P **P** 05 48 15.8 +0.2
comp=Z,483nm,1.4s
TXAR Lajitas Array 89.93 53 P **P** 05 48 58.9 -0.3
TXAR Lajitas Array 89.93 53 P **P** 05 48 58.9 -0.3
comp=Z,0.8nm,0.8s,baz=293,slow=3.4,SNR=14
LPAZ La Paz 146.22 63 PKPbc **PKPdf** 05 55 40.9 +0.6
LPAZ La Paz 146.22 63 PKPbc **PKPdf** 05 55 40.9 +0.6
comp=Z,1.3nm,0.6s,baz=266,slow=5.3,SNR=8.8

IDC 24 05:39:37.9±13.0,23°.50N×36°.76E,h0km,mb3.9/3, mb1 3.8/4,mb1mx3.4/28,mbtmp3.8/4,ML3.3/1,Error ellipse: s-maj=258.1km s-min=51.0km az=28.0,Red Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
BRTR	**Keskin Array B**	**16.39**	**351**	Pn			Pn	05 43 29.6	+0.1
	0.1nm,0.3s,baz=169,slow=14,SNR=3.7								
AKASG	**Malin Array Be**	**27.78**	**350**	P			P	05 45 28.3	0.0
	0.6nm,0.5s,baz=167,slow=8.5,SNR=2.8								
KURBB	**Kurchatov Arra**	**42.11**	**39**	P			P	05 47 31.3	-0.4
	1.0nm,0.7s,baz=251,slow=8.6,SNR=4.8								
MKAR	**Makanchi Array**	**43.12**	**46**	P			P	05 47 40.0	+0.1
	1.6nm,0.9s,baz=250,slow=7.3,SNR=7.1								

ATH ***24*** *05:50:10.7,38°.40N×22°.01E,h15km,MD3.3/35,ML3.1*
IDC ***24*** *05:50:10.7±1.3,38°.51N×21°.87E,h0km,mb3.6/5, mb1 3.6/6,mb1mx3.4/28,mbtmp3.6/6,ML3.0/1,Error ellipse: s-maj=36.8km s-min=22.3km az=152.0*
ISCJB ***24*** *05:50:11.0±0.2,38°.39N±0°.01×21°.99E±0°.02,h9km±1km, mb3.7/4,Error ellipse: s-maj=2.3km s-min=2.0km az=6.4*
THE ***24*** *05:50:11.4,38°.40N×21°.99E,h4km,ML3.5/4,Error ellipse: s-maj=0.9km s-min=0.4km az=263.0*
CSEM ***24*** *05:50:11.2±0.1,38°.40N×21°.99E,h5km,MD3.3,Error ellipse: s-maj=2.5km s-min=2.0km az=85.0*
SKO ***24*** *05:50:16.1,38°.72N×22°.13E,h0km*
ISC 24 05:50:11.8±0.7,38°.40N±0°.01×22°.01E±0°.01,h8km±3km, n149,σ0°89/227,mb3.8/4,3C-6D,Greece

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.07**	**125**	P			**Pg**	**05 50 13.4**	**-0.2**
TRIZ						S	**Sg**	05 50 14.9	-0.2
TRIZ	**Trizonia**	**0.07**	**125**	*e*PB			**Pg**	05 50 13.5	-0.2
TRIZ					*e*	SB	**Sg**	05 50 15.3	+0.2
TRIZ	**Trizonia**	**0.07**	**125**	*e*Pb			**Pg**	05 50 13.5	-0.2
TRIZ						S	**Sg**	05 50 14.9	-0.2
TRIZ					*e*	Sb	**Sg**	05 50 15.3	+0.2
EFP	**Efpalio**	**0.08**	**287**	P			**Pg**	05 50 13.3	-0.6
EFP						S	**Sg**	05 50 14.8	-0.7
EFP	**Efpalio**	**0.08**	**287**	*e*PB

KLV				S	Sg	05 50 24.6	+0.4		
KLV	**Kalavryta, Ach**	**0.38**	**162**	*e*PB	Pg	05 50 18.3	-0.9		
KLV				*e*SB	Sg	05 50 24.3	+0.1		
KLV	**Kalavryta, Ach**	**0.38**	**162**	*e*Pb	Pg	05 50 18.3	-0.9		
KLV				*e*Sb	Sg	05 50 24.3	+0.1		
DSF	**Desfina**	**0.41**	**89**	P	Pg	05 50 19.0	-0.8		
DSF				S	Sg	05 50 25.9	+0.7		
DSF	**Desfina**	**0.41**	**89**	P	Pg	05 50 19.0	-0.8		
DSF				S	Sg	05 50 25.9	+0.7		
AXS	**Araxos**	**0.54**	**248**	P	Pg	05 50 21.3	-0.9		
AXS				S	Sg	05 50 28.9	-0.3		
AXS	**Araxos**	**0.54**	**248**	P	Pg	05 50 21.3	-0.9		
AXS				S	Sg	05 50 28.9	-0.3		
EVR	**Evrytania**	**0.54**	**343**	P	Pg	05 50 21.2	-1.0		
EVR				S	Sg	05 50 30.0	+0.7		
EVR	**Evrytania**	**0.54**	**343**	*e*PN	Pg	05 50 21.3	-1.0		
EVR				*e*SN	Sg	05 50 29.9	+0.7		
EVR	**Evrytania**	**0.54**	**343**	P	Pg	05 50 21.2	-1.0		
EVR				*e*Sn	Sg	05 50 29.9	+0.7		
GUR	**Goura**	**0.54**	**150**	P	Pg	05 50 20.9	-1.3		
GUR				S	Sg	05 50 29.3	0.0		
GUR	**Goura**	**0.54**	**150**	*e*PN	Pg	05 50 21.1	-1.1		
GUR				*e*SN	Sg	05 50 29.2	0.0		
GUR	**Goura**	**0.54**	**150**	*e*Pn	Pg	05 50 21.1	-1.1		
GUR				S	Sg	05 50 29.3	0.0		
RLS	**Riolos of Patr**	**0.55**	**231**	P	Pg	05 50 21.5	-0.9		
RLS				S	Sg	05 50 29.8	+0.3		
RLS	**Riolos of Patr**	**0.55**	**231**	*e*PN	Pg	05 50 21.7	-0.7		
RLS				*e*SN	Sg	05 50 29.9	+0.4		
RLS	**Riolos of Patr**	**0.55**	**231**	*e*Pn	Pg	05 50 21.7	-0.7		
RLS				S	Sg	05 50 29.8	+0.3		
MAKR	**Makrakomi, Fth**	**0.62**	**9**	P	Pg	05 50 32.5	+0.7		
MAKR				S	Sg	05 50 23.0	-0.8		
MAKR	**Makrakomi, Fth**	**0.62**	**9**	P	Pn	05 50 32.5	+0.7		
MAKR				S	Sg	05 50 23.3	-1.5		
AXAR	**Agios Charalam**	**0.63**	**54**	P	Pg	05 50 22.9	-1.0		
AXAR				S	Sb	05 50 33.4	-0.6		
AXAR	**Agios Charalam**	**0.63**	**54**	P	Pg	05 50 22.9	-1.0		
AXAR				S	Sb	05 50 33.4	-0.6		
THAL	**Thalero**	**0.63**	**125**	P	Pg	05 50 23.5	-0.5		
THAL	**Thalero**	**0.63**	**125**	P	Pg	05 50 23.5	-0.5		
AGG	**Agios Georgios**	**0.67**	**22**	P	Pg	05 50 23.2	-1.5		
AGG				S	Sg	05 50 33.8	+0.3		
AGG	**Agios Georgios**	**0.67**	**22**	*e*PB	Sg	05 50 23.3	-1.5		
AGG				*e*SN	Sg	05 50 33.3	-0.2		
AGG	**Agios Georgios**	**0.67**	**22**	*e*Pb	Sg	05 50 23.3	-1.5		
AGG				*e*Sn	Sg	05 50 33.3	-0.2		
LKR	**Lokris**	**0.82**	**72**	*e*PN	Pg	05 50 26.0	-1.5		
ATAL	**Atalanti**	**0.85**	**70**	P	Pg	05 50 26.8	-1.3		
ATAL				S	Sg	05 50 39.6	+0.5		
ATAL	**Atalanti**	**0.85**	**70**	P	Pg	05 50 26.8	-1.3		
ATAL				S	Sg	05 50 39.6	+0.5		
LTK	**Loutraki**	**0.85**	**116**	P	Pg	05 50 27.5	-0.6		
LTK				S	Sb	05 50 40.7	+0.4		
LTK	**Loutraki**	**0.85**	**116**	*e*PN	Pg	05 50 27.5	-0.6		
LTK	**Loutraki**	**0.85**	**116**	P	Pg	05 50 27.5	-0.6		
LTK				S	Sb	05 50 40.7	+0.4		
AMT	**Artemida-Makis**	**0.90**	**195**	*e*PN	Pg	05 50 28.1	-1.0		
AMT				*e*SN	Sg	05 50 41.2	+0.4		
AMT	**Artemida-Makis**	**0.90**	**195**	*e*Pn	Pg	05 50 28.1	-1.0		
AMT				*e*Sn	Sg	05 50 41.2	+0.4		
SMIA	**Simia**	**1.06**	**63**	P	Pg	05 50 31.3	-0.8		
SMIA				S	Sn	05 50 48.0	+0.2		
SMIA	**Simia**	**1.06**	**63**	P	Pg	05 50 31.3	-0.8		
SMIA				S	Sn	05 50 48.0	+0.2		
VLX	**Vlachokerasia**	**1.07**	**164**	P	Pg	05 50 30.7	-1.7		
VLX				S	Sb	05 50 40.7	+0.4		
VLX	**Vlachokerasia**	**1.07**	**164**	*e*PN	Pg	05 50 30.8	-1.7		
VLX	**Vlachokerasia**	**1.07**	**164**	P	Pg	05 50 30.7	-1.7		
VLX				S	Sb	05 50 47.2	+0.4		
LKD2	**Lefkada island**	**1.12**	**290**	P	Pg	05 50 32.3	-1.1		
LKD2				S	Sb	05 50 48.5	+0.2		
LKD2	**Lefkada island**	**1.12**	**290**	*e*PN	Pg	05 50 32.1	-1.3		
LKD2				*e*SN	Sb	05 50 48.7	+0.4		
LKD2	**Lefkada island**	**1.12**	**290**	P	Pg	05 50 32.3	-1.1		
LKD2				*e*Sn	Sb	05 50 48.7	+0.4		
VLS	**Valsamata**	**1.14**	**259**	P	Pg	05 50 31.5	-2.1		
VLS				S	Sb	05 50 48.9	+0.3		
VLS	**Valsamata**	**1.14**	**259**	*e*PB	Pg	05 50 31.5	-2.1		
VLS				*e*SN	Sb	05 50 48.7	+0.1		
VLS	**Valsamata**	**1.14**	**259**	P	Pg	05 50 31.5	-2.1		
VLS				*e*Sn	Sb	05 50 48.7	+0.1		
THL	**Klokotos Trika**	**1.16**	**0**	P	Pb	05 50 32.6	-1.5		
THL				S	Sn	05 50 50.0	-0.3		
THL	**Klokotos Trika**	**1.16**	**0**	*e*PN	Pb	05 50 33.0	-1.1		
THL				*e*SN	Sg	05 50 48.6	-0.6		
THL	**Klokotos Trika**	**1.16**	**0**	P	Pb	05 50 32.6	-1.5		
THL	**Klokotos Trika**	**1.16**	**0**	*e*Pn	Pb	05 50 33.0	-1.1		
THL				*e*Sn	Sg	05 50 48.6	-0.6		
THL				S	Sn	05 50 50.0	-0.3		
ITM	**Ithomi**	**1.22**	**183**	P	Pb	05 50 33.4	-1.7		
ITM				S	Sn	05 50 52.4	+0.5		
ITM	**Ithomi**	**1.22**	**183**	*e*PN	Pb	05 50 33.6	-1.5		
ITM				*e*SN	Sg	05 50 51.4	+0.3		
ITM	**Ithomi**	**1.22**	**183**	*e*Pn	Pb	05 50 33.6	-1.5		
ITM				*e*Sn	Sg	05 50 51.4	+0.3		
ITM				S	Sn	05 50 52.4	+0.5		
MRKA	**Markates**	**1.28**	**76**	P	Pn	05 50 34.9	-1.0		
MRKA				S	Sn	05 50 55.2	+2.0		
MRKA	**Markates**	**1.28**	**76**	P	Pn	05 50 34.9	-1.0		
MRKA				S	Sn	05 50 55.2	+2.0		
NEO	**Neokhori**	**1.31**	**46**	P	Pn	05 50 35.9	-0.5		
NEO	**Neokhori**	**1.31**	**46**	*e*PN	Pn	05 50 35.8	-0.6		
NEO				*e*SN	Sb	05 50 54.0	+0.3		
NEO	**Neokhori**	**1.31**	**46**	*e*Pn	Pn	05 50 35.8	-0.6		
NEO				*e*Sn	Sb	05 50 54.0	+0.3		
DID	**Didima**	**1.32**	**132**	P	Pn	05 50 36.0	-0.5		
DID				S	Sg	05 50 55.0	+0.7		
DID	**Didima**	**1.32**	**132**	*e*PN	Pn	05 50 36.1	-0.5		
DID				*e*SN	Sn	05 50 54.3	-0.1		
DID	**Didima**	**1.32**	**132**	*e*Pn	Pn	05 50 36.1	-0.5		
DID				*e*Sn	Sn	05 50 54.3	-0.1		
DID				S	Sg	05 50 55.0	+0.7		
NAIG	**Nisos Aigina**	**1.34**	**118**	*e*PN	Pn	05 50 36.2	-0.5		
NAIG	**Nisos Aigina**	**1.34**	**118**	*e*Pn	Pn	05 50 36.2	-0.5		
XOR	**Xorichti**	**1.34**	**44**	P	Pn	05 50 35.8	-1.0		
XOR				S	Sg	05 50 55.2	+0.4		
XOR	**Xorichti**	**1.34**	**44**	P	Pn	05 50 35.8	-1.0		
XOR				S	Sg	05 50 55.2	+0.4		
SKIA	**Skiathos**	**1.37**	**56**	P	Pn	05 50 36.7	-0.5		
SKIA	**Skiathos**	**1.37**	**56**	P	Pn	05 50 36.7	-0.5		
ATH	**Athens Observa**	**1.42**	**107**	*e*PN	Pn	05 50 37.4	-0.4		
ATH				*e*SN	Sb	05 50 56.0	-0.6		
ATH	**Athens Observa**	**1.42**	**107**	*e*Pn	Pn	05 50 37.4	-0.4		
ATH				*e*Sn	Sb	05 50 56.0	-0.6		
PTL	**Penteli**	**1.51**	**103**	*e*PN	Pn	05 50 39.0	-0.1		
PTL				*e*SN	Sb	05 50 59.8	+0.5		
PTL	**Penteli**	**1.51**	**103**	*e*Pn	Pn	05 50 39.0	-0.1		
PTL				*e*Sn	Sb	05 50 59.8	+0.5		
PYL	**PYLOS**	**1.52**	**188**	P	Pn	05 50 38.6	-0.6		
PYL	**PYLOS**	**1.52**	**188**	*e*PN	Pn	05 50 38.7	-0.5		
PYL				*e*SN	Sg	05 51 00.6	0.0		
PYL	**PYLOS**	**1.52**	**188**	*e*Pn	Pn	05 50 38.7	-0.5		
PYL				*e*Sn	Sg	05 51 00.6	0.0		
JAN	**Janina**	**1.54**	**325**	*e*PN	Pb	05 50 40.8	+0.2		
JAN	**Janina**	**1.54**	**325**	*e*Pn	Pb	05 50 40.8	+0.2		
AOS	**Alonnisos**	**1.65**	**62**	P	Pn	05 50 40.2	-0.9		
AOS	**Alonnisos**	**1.65**	**62**	*e*PN	Pn	05 50 40.2	-0.9		
AOS	**Alonnisos**	**1.65**	**62**	P	Pn	05 50 40.2	-0.9		
DYR	**Agios Nikonas**	**1.66**	**171**	*e*PN	Pn	05 50 40.9	-0.3		
DYR	**Agios Nikonas**	**1.66**	**171**	*e*Pn	Pn	05 50 40.9	-0.3		
LIT	**Litokhoron**	**1.74**	**12**	P	Pn	05 50 41.7	-0.5		
LIT	**Litokhoron**	**1.74**	**12**	*e*PN	Pn	05 50 41.8	-0.5		
LIT				*e*SN	Sn	05 51 05.4	+0.8		
LIT	**Litokhoron**	**1.74**	**12**	P	Pn	05 50 41.7	-0.5		
LIT				*e*Sn	Sn	05 51 05.4	+0.8		
VLI	**Veliai**	**1.84**	**156**	P	Pn	05 50 43.4	-0.2		
VLI				S	Sn	05 51 07.9	+0.9		
VLI	**Veliai**	**1.84**	**156**	*e*PN	Pn	05 50 43.4	-0.2		
VLI	**Veliai**	**1.84**	**156**	P	Pn	05 50 43.4	-0.2		
VLI				S	Sn	05 51 07.9	+0.9		
KZN	**Kozani**	**1.91**	**355**	*e*PN	Pn	05 50 45.2	+0.5		
KZN	**Kozani**	**1.91**	**355**	*e*Pn	Pn	05 50 45.2	+0.5		
PAIG	**Paliouri**	**2.00**	**40**	*e*PB	Pn	05 50 44.9	-1.0		
KEK	**Kerkira**	**2.16**	**308**	*e*PN	Pn	05 50 49.2	+1.2		
KEK	**Kerkira**	**2.16**	**308**	*e*Pn	Pn	05 50 49.2	+1.2		
PLG	**Polygyros**	**2.26**	**29**	*e*PB	Pn	05 50 48.8	-0.7		
KYTH	**Kithira**	**2.27**	**158**	*e*PN	Pn	05 50 50.9	+1.3		
KYTH	**Kithira**	**2.27**	**158**	*e*Pn	Pn	05 50 50.9	+1.3		
FNA	**Florina**	**2.43**	**349**	*e*PN	Pn	05 50 52.6	+0.8		
FNA	**Florina**	**2.43**	**349**	*e*Pn	Pn	05 50 52.6	+0.8		
GRG	**Griva**	**2.57**	**7**	*e*PN	Pn	05 50 53.7	0.0		
GRG	**Griva**	**2.57**	**7**	*e*Pn	Pn	05 50 53.7	0.0		
SOH	**Sokhos**	**2.63**	**23**	*e*PN	Pn	05 50 54.2	-0.4		
SOH	**Sokhos**	**2.63**	**23**	*e*Pn	Pn	05 50 54.2	-0.4		
ANKY	**Antikythira Is**	**2.73**	**157**	*e*PB	Pn	05 50 57.2	+1.3		
VAY	**Valandovo**	**2.95**	**8**	*e*Pn	Pn	05 51 00.9	+2.0		
APE	**Apeiranthos**	**3.10**	**114**	*e*PN	Pn	05 51 01.2	+0.2		
APE	**Apeiranthos**	**3.10**	**114**	*i*P	Pn	05 51 01.4	+0.4		
APE	**Apeiranthos**	**3.10**	**114**	*e*Pn	Pn	05 51 01.2	+0.2		
CHOS	**Chios island**	**3.18**	**89**	*e*PN	Pn	05 51 02.3	+0.1		
CHOS	**Chios island**	**3.18**	**89**	*e*Pn	Pn	05 51 02.3	+0.1		
NVR	**Nevrokopi**	**3.27**	**25**	*e*PN	Pn	05 51 03.6	+0.2		
NVR	**Nevrokopi**	**3.27**	**25**	*e*Pn	Pn	05 51 03.6	+0.2		
VAM	**Vamos**	**3.47**	**149**	*e*PN	Pn	05 51 06.2	+0.1		
VAM	**Vamos**	**3.47**	**149**	*e*Pn	Pn	05 51 06.2	+0.1		
IDI	**Anoyia**	**3.88**	**142**	*e*PN	Pn	05 51 12.8	+1.1		
IDI	**Anoyia**	**3.88**	**142**	*e*Pn	Pn	05 51 12.8	+1.1		
SMG	**Samos**	**3.88**	**99**	*e*PN	Pn	05 51 12.0	+0.3		
SMG	**Samos**	**3.88**	**99**	*e*Pn	Pn	05 51 12.0	+0.3		
LAST	**Lasithi**	**4.27**	**138**	*e*PN	Pn	05 51 17.6	+0.4		
LAST	**Lasithi**	**4.27**	**138**	*e*Pn	Pn	05 51 17.6	+0.4		
VTS	**Vitosha**	**4.28**	**12**	*i*P	Pn	05 51 19.9	+2.5		
VTS	**Vitosha**	**4.28**	**12**	*i*P	Pn	05 51 19.9	+2.5		
ZKR	**Zakros**	**4.71**	**133**	*e*PN	Pn	05 51 23.9	+0.8		
ZKR	**Zakros**	**4.71**	**133**	*e*Pn	Pn	05 51 23.9	+0.8		
BBLS	**Lazići**	**5.80**	**341**	*e*Pn	Pn	05 51 37.9	-0.2		
VOIR		**7.39**	**17**	*i*P	Pn	05 52 01.4	+1.5		
VOIR		**7.39**	**17**	*i*P	Pn	05 52 01.4	+1.5		
MLR	**Muntele Rosu**	**7.67**	**21**	*i*P	Pn	05 52 09.1	+5.3		
HARR	**Harsova**	**7.69**	**33**	*i*P	Pb	05 52 19.5	-5.8		
PLOR	**Plostina**	**8.20**	**23**	*i*P	Pn	05 52 14.0	+2.9		
VRI	**Vrincioaia**	**8.24**	**24**	*i*P	Pn	05 52 14.4	+2.8		
BRTR	**Keskin Array B**	**9.15**	**78**	Pn	Pn	05 52 26.0	+1.9		
	0.2nm,0.3s,baz=258,slow=11,SNR=3.6								
BURAR	**Bucovina Array**	**9.50**	**13**	S	Pn	05 52 24.0	-4.9		
ESDC	**Sonseca Array**	**20.19**	**282**	P	P	05 54 46.2	-0.7		
	0.4nm,0.4s,baz=88,slow=12,SNR=4.1								
NB2	**NORSAR Subarra**	**23.65**	**347**	P	P	05 55 22.1	-1.2		
	comp=Z,2.5nm,0.8s,baz=160,slow=11								
NB2	**NORSAR Subarra**	**23.65**	**347**	P	P	05 55 22.1	-1.2		
	comp=Z,2.5nm,0.8s,SNR=5.1								
NOA	**NORSAR Array B**	**23.65**	**347**	P	P	05 55 21.8	-1.5		
	comp=Z,1.0nm,0.6s,baz=156,slow=8.7,SNR=5.9								
TORD	**Torodi Ar. Bea**	**30.95**	**221**	P	P	05 56 29.5	+0.1		
	comp=Z,1.0nm,0.7s,baz=33,slow=9.3,SNR=7.3								
MKAR	**Makanchi Array**	**44.19**	**59**	P	P	05 58 20.4	-0.6		
	comp=Z,0.5nm,0.5s,baz=277,slow=7.6,SNR=8.6								
ZALV	**Zalesovo Beam**	**44.67**	**48**	P	P	05 58 26.1	+1.3		
	comp=Z,1.1nm,0.6s,baz=274,slow=8.9,SNR=3.5								

IDC ***24*** *06:15:26.7±1.0, 53°.59N×164°.48W, h0km, mb3.9/15, mb1 4.1/18, mb1mx4.0/32, mbtmp3.9/18, ML3.4/3, MS3.6/16, Ms1 3.6/16, ms1mx3.4/43, Error ellipse: s-maj=25.6km s-min=14.7km az=180.0*

NEIC ***24*** *06:15:32.0±1.4, 53°.67N×164°.42W, h30km±11km, mb4.2/6, ML4.0(AEIC), Error ellipse: s-maj=10.2km s-min=3.3km az=161.0*

ISC 24 06:15:29.5±1.7, 53°.61N±0°.06×164°.39W±0°.04, h15km±10km, n91, σ1§18/91, mb4.2/18, MS3.6/14, Unimak Island region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
WESE	**West Dahl East**	**0.88**	**352**	P		**Pn**	**06 15 47.1**	**-0.2**
AKUT	**Akutan**	**0.97**	**303**	P		**Pn**	**06 15 48.8**	**+0.3**
AKUT				S		**Sn**	**06 16 02.9**	**+0.8**
HSB	**Akutan Spr's B**	**1.07**	**303**	P		**Pg**	**06 15 50.6**	**+0.4**
AKLV	**Akutan Long Va**	**1.08**	**302**	P		**Pg**	**06 15 50.2**	**-0.2**
AKLV				S		**Sn**	**06 16 05.9**	**+1.1**
BRPK	**Brown Peak**	**1.11**	**20**	P		**Pb**	**06 15 50.0**	**-0.3**
AKGG	**Akutan Green G**	**1.12**	**303**	P		**Pg**	**06 15 50.9**	**-0.2**
AKRB	**Akutan Reef Bi**	**1.12**	**298**	P		**Pg**	**06 15 50.9**	**-0.2**
SSLW	**Shishaldin Wes**	**1.18**	**8**	P		**Pn**	**06 15 51.4**	**0.0**
SSBA	**Shishaldin**	**1.18**	**7**	P		**Pn**	**06 15 51.3**	**-0.2**
SSBA				S		**Sb**	**06 16 06.8**	**+0.2**
UNV	**Unalaska Valle**	**1.28**	**282**	P		**Pn**	**06 15 52.4**	**-0.3**
FALS	**False Pass**	**1.38**	**24**	P		**Pn**	**06 15 53.7**	**-0.4**
FALS				S		**Sb**	**06 16 12.5**	**+0.3**
MTBL	**Makushin Table**	**1.41**	**286**	P		**Pb**	**06 15 54.9**	**-0.5**
MREP	**Makushin Rep't**	**1.42**	**279**	P		**Pb**	**06 15 55.4**	**-0.2**
MCIR	**Makushin Cirqu**	**1.52**	**284**	P		**Pb**	**06 15 56.9**	**-0.5**
DRIA	**Deer Island**	**1.85**	**42**	P		**Pn**	**06 16 00.2**	**-0.4**
DT1	**Dutton Round H**	**1.94**	**39**	P		**Pn**	**06 16 02.0**	**+0.2**
DOL	**Dolgoi Island**	**2.14**	**43**	P		**Pn**	**06 16 05.4**	**+0.8**
OKCE	**Okmok Cone E**	**2.26**	**267**	P		**Pn**	**06 16 07.6**	**+1.3**
OKSO	**Okmok South**	**2.27**	**265**	P		**Pn**	**06 16 07.6**	**+1.2**
PS4A	**Pavlof South-4**	**2.29**	**39**	P		**Pn**	**06 16 07.9**	**+1.3**
OKSP	**Okmok Steeple**	**2.36**	**263**	P		**Pn**	**06 16 09.5**	**-2.2**
NIKH	**Nikolski High**	**2.75**	**258**	P		**Pn**	**06 16 14.0**	**+1.0**
SDPT	**Sand Point**	**2.87**	**51**	P		**Pn**	**06 16 14.7**	**-0.3**
VNWF	**Veniaminof 8**	**3.78**	**46**	P		**Pn**	**06 16 28.5**	**+1.3**
VNHG	**Veniaminof 1**	**3.99**	**47**	P		**Pn**	**06 16 31.0**	**+0.9**
CHGN	**Chignik**	**4.38**	**50**	*e*Pn		**Pn**	**06 16 35.2**	**0.0**
CHGN				*e*Sn		**Sn**	**06 17 26.1**	**+0.3**
ANPB	**Aniakchak Plen**	**4.74**	**45**	P		**Pn**	**06 16 40.5**	**+0.2**
ANNW	**Aniakchak Nort**	**4.88**	**44**	P		**Pn**	**06 16 43.3**	**+1.0**
KOFP	**Korovin Flat P**	**6.02**	**261**	P		**Pn**	**06 16 59.0**	**+1.1**
KABR	**Katmai Barrier**	**6.97**	**46**	P		**Pn**	**06 17 10.3**	**-0.7**
OHAK	**Old Harbor**	**7.28**	**56**	P		**Pn**	**06 17 14.5**	**-0.6**
KDAK	**Kodiak Island**	**7.87**	**53**	*e*Pn		**Pn**	**06 17 22.6**	**-0.7**
	22nm,0.8s							
KDAK				Sn		Sn	06 18 44.3	-7.6
KDAK				*e*Sn		**Sn**	**06 18 47.1**	**-4.7**
KDAK	**Kodiak Island**	**7.87**	**53**	Pn		**Pn**	**06 17 22.8**	**-0.4**
	1.7nm,0.3s,baz=270,slow=7.8,SNR=12							
KDAK				Sn		Sn	06 18 44.3	-7.6
	0.5nm,0.3s,baz=354,slow=23,SNR=6.7							
RSO	**Redoubt South**	**9.34**	**38**	*e*Pn		**Pn**	**06 17 45.6**	**+2.0**
	36nm,0.6s							
AMKA	**Amchitka**	**10.20**	**264**	*e*Pn		**Pn**	**06 17 56.1**	**+1.0**
	45nm,0.6s							
PPLA	**Purkeypile**	**11.29**	**30**	*e*Pn		**Pn**	**06 18 12.9**	**+2.7**
	13nm,0.8s							
PMR	**Palmer**	**11.42**	**39**	*e*Pn		**Pn**	**06 18 13.1**	**+1.3**
	5.6nm,0.8s							
TRF	**Thorofare Moun**	**12.28**	**31**	*e*Pn		**Pn**	**06 18 25.1**	**+1.4**
	54nm,1.6s							
PAX	**Paxson**	**13.62**	**39**	*e*Pn		**Pn**	**06 18 40.6**	**-1.3**
	5.1nm,0.7s							
COLA	**College**	**14.05**	**30**	*e*Pn		**Pn**	**06 18 49.2**	**+1.6**
	5.8nm,0.8s							
MENT	**Mentasta**	**14.27**	**41**	*e*Pn		**Pn**	**06 18 52.5**	**+1.8**
ILAR	**Eielson Array**	**14.27**	**32**	Pn		**Pn**	**06 18 49.1**	**-1.6**
ILAR	**Eielson Array**	**14.27**	**32**	Pn		**Pn**	**06 18 49.1**	**-1.6**
	0.1nm,0.3s,baz=229,slow=12,SNR=14							
ILAR					LR	LR	06 24 42.6	
	comp=Z,354nm,21.2s,baz=85,slow=39							
DOT	**Dot Lake**	**14.53**	**38**	*e*Pn		**Pn**	**06 18 56.0**	**+1.8**
	6.8nm,0.7s							
PNL	**Peninsula**	**14.97**	**56**	*e*Pn		**Pn**	**06 19 00.5**	**+0.3**
	20nm,0.8s							
COLD	**Coldfoot**	**15.29**	**21**	*e*Pn		**P**	**06 19 07.2**	**-2.0**
	9.9nm,0.9s							
EGAK	**Eagle**	**16.21**	**37**	*e*Pn		**Pn**	**06 19 17.2**	**+0.9**
	10nm,0.8s							
SKAG	**Skagway**	**16.97**	**58**	*e*Pn		**P**	**06 19 27.6**	**-0.2**
	14nm,1.0s							
DLBC	**Dease Lake**	**19.66**	**62**	P		**P**	**06 19 58.2**	**+0.7**
DLBC	**Dease Lake**	**19.66**	**62**	P		**P**	**06 19 58.2**	**+0.7**
	0.0nm,0.3s,baz=271,slow=15,SNR=6.8							
DLBC					LR	LR	06 27 30.9	
	comp=Z,150nm,18.1s,baz=162,slow=37							
INK	**Inuvik**	**20.66**	**33**	P		**P**	**06 20 07.1**	**-1.1**
INK	**Inuvik**	**20.66**	**33**	P		**P**	**06 20 07.1**	**-1.1**
	10nm,0.7s,baz=239,slow=10,SNR=12							
INK					LR	LR	06 29 36.2	
	comp=Z,203nm,20.2s,baz=252,slow=41							
PETK	**Petropavlovsk-**	**22.46**	**284**	LR		LR	06 28 28.1	
	comp=Z,68nm,20.2s,baz=278,slow=35							
YKA	**Yellowknife Ar**	**27.14**	**51**	P		**P**	**06 21 11.1**	**-0.5**
YKA	**Yellowknife Ar**	**27.14**	**51**	P		**P**	**06 21 11.1**	**-0.5**
	1.3nm,0.8s,baz=267,slow=8.3,SNR=8.7							
YBH	**Yreka Blue Hor**	**30.04**	**96**	LR		LR	06 30 42.7	
	comp=Z,55nm,19.9s,baz=320,slow=30							
NVAR	**Mina Array Bea**	**34.74**	**97**	P		**P**	**06 22 19.4**	**+0.3**
NVAR	**Mina Array Bea**	**34.74**	**97**	P		**P**	**06 22 19.4**	**+0.3**
	0.4nm,0.8s,baz=301,slow=7.3,SNR=3.4							
ASAJ	**Asahikawa**	**35.38**	**276**	LR		LR	06 36 33.1	
	comp=Z,61nm,18.1s,baz=44,slow=36							
PDAR	**Pinedale Array**	**37.24**	**84**	P		**P**	**06 22 40.4**	**0.0**
	0.4nm,0.7s,baz=284,slow=3.6,SNR=3.1							
AGMN	**Agassiz Nation**	**41.97**	**68**	*e*P		**P**	**06 23 21.7**	**+2.3**
	7.5nm,1.2s							
KSRS	**Korea Array**	**48.22**	**279**	P		**P**	**06 24 07.6**	**-1.6**
	1.4nm,0.6s,baz=52,slow=6.7,SNR=5.4							
KSRS					LR	LR	06 44 25.2	
	comp=Z,36nm,19.3s,baz=45,slow=36							
KSAR	**Wonju Array Be**	**48.25**	**279**	P		**P**	**06 24 07.6**	**-1.8**
SUMG	**Summit**	**48.67**	**19**	*i* P		**P**	**06 24 12.5**	**-0.2**
	5.8nm,0.9s							
TXAR	**Lajitas Array**	**49.77**	**94**	P		**P**	**06 24 20.8**	**-0.5**
TXAR	**Lajitas Array**	**49.77**	**94**	P		**P**	**06 24 20.8**	**-0.5**
	1.3nm,0.8s,baz=297,slow=5.3,SNR=22							
SONM	**Songino Array**	**53.21**	**303**	P		**P**	**06 24 45.8**	**-1.1**
SONM	**Songino Array**	**53.21**	**303**	P		**P**	**06 24 45.8**	**-1.1**
	0.8nm,0.8s,baz=19,slow=9.4,SNR=4.5							
SONM					LR	LR	06 47 24.5	
	comp=Z,55nm,19.5s,baz=118,slow=36							
WVT	**Waverly**	**54.30**	**76**	P		**P**	**06 24 57.9**	**+3.0**
	3.8nm,0.8s							
ARCES	**ARCESS Array B**	**56.95**	**356**	P		**P**	**06 25 11.9**	**-1.5**
ARCES	**ARCESS Array B**	**56.95**	**356**	P		**P**	**06 25 11.9**	**-1.5**
	1.5nm,0.7s,baz=32,slow=5.3,SNR=4.5							
ZALV	**Zalesovo Beam**	**58.49**	**320**	LR		LR	06 53 25.0	
	comp=Z,50nm,18.6s,baz=76,slow=39							
FINES	**FINESS Array B**	**64.99**	**354**	P		**P**	**06 26 07.8**	**-0.2**
FINES	**FINESS Array B**	**64.99**	**354**	P		**P**	**06 26 07.8**	**-0.2**
	1.6nm,0.6s,baz=40,slow=3

LBMI	**Labuha**	**6.26 136**	P	P	06 51 55.9	-5.4
	109nm,0.9s,2µm					
SKSI	**Soroako, Sulaw**	**6.61 196**	P	**P**	**06 52 02.3**	**-2.1**
	29nm,0.6s,2µm					
TTSI	**Tana Toraja**	**7.63 206**	P	P	06 52 11.0	-2.7
	127nm,1.0s,2µm					
NLAI	**Namlea**	**8.11 151**	P	**P**	**06 52 15.5**	**-2.7**
	162nm,0.6s,2µm					
SPSI	**Sidrap Palu**	**8.48 203**	P	**P**	**06 52 19.7**	**-2.1**
	126nm,0.8s,1µm					
KAPI	**Kappang**	**9.45 201**	P	**P**	**06 52 29.4**	**-1.8**
	3.5nm,0.3s,baz=313,slow=18,SNR=7.0					
BKSI	**Bulukumba**	**9.62 198**	P	**P**	**06 52 32.4**	**-0.5**
	18nm,0.9s					
FITZ	**Fitzroy Crossi**	**21.98 174**	P	**P**	**06 54 30.6**	**+1.2**
	2.0nm,0.9s,baz=136,slow=4.3,SNR=6.0					
WRA	**Warramunga Arr**	**26.11 155**	P	**P**	**06 55 06.0**	**0.0**
	1.3nm,0.3s,baz=334,slow=9.9,SNR=32					
WRA			S	**S**	**06 58 55.8**	**-0.8**
	0.3nm,0.5s,baz=337,slow=15,SNR=4.4					
CMAR	**Chiang Mai Arr**	**27.74 303**	P	**P**	**06 55 20.9**	**+0.7**
	1.0nm,0.5s,baz=141,slow=7.3,SNR=4.9					
ASAR	**Alice Springs**	**29.32 160**	P	**P**	**06 55 34.3**	**+0.5**
	0.2nm,0.4s,baz=343,slow=6.9,SNR=6.6					
ASAR			S	**S**	**06 59 49.2**	**+2.7**
	1.3nm,0.9s,baz=348,slow=20,SNR=8.7					
ASAR			ScP	ScP	07 01 12.7	+6.3
	0.3nm,0.5s,baz=336,slow=2.4,SNR=4.4					
TAPN	**Taplejung**	**41.07 308**	*e*P	P	06 57 12.2	+1.0
	5.0nm,0.3s					
ODAN	**Odare**	**41.09 307**	*e*P	**P**	**06 57 11.8**	**+0.5**
RAMN	**Ramite**	**41.76 307**	*e*P	**P**	**06 57 17.3**	**+0.7**
GUN	**Gumba**	**42.76 308**	*e*P	**P**	**06 57 25.2**	**+0.7**
	38nm,0.7s					
PKI	**Pulchoki**	**42.98 307**	*e*P	**P**	**06 57 26.5**	**+0.3**
	6.0nm,0.2s					
PKIN	**Phulchoki**	**42.99 307**	*e*P	**P**	**06 57 26.8**	**+0.6**
	5.1nm,0.2s					
KOLN	**Koldanda**	**44.51 306**	*e*P	P	06 57 39.0	+1.1
	25nm,0.3s					
DANN	**Dangsing**	**44.63 307**	*e*P	**P**	**06 57 39.5**	**+0.6**
	41nm,0.7s					
PYUN	**Piuthan**	**45.14 307**	*e*P	**P**	**06 57 43.7**	**+1.0**
	41nm,0.7s					
MKAR	**Makanchi Array**	**55.43 327**	P	P	06 58 57.5	+0.6
	5.4nm,0.3s,baz=122,slow=7.5,SNR=149					
ZALV	**Zalesovo Beam**	**58.87 335**	P	**P**	**06 59 18.3**	**-1.7**
	1.1nm,0.3s,baz=137,slow=6.5,SNR=6.0					
KURBB	**Kurchatov Arra**	**59.71 329**	P	P	06 59 26.1	+0.4
	7.5nm,0.8s,baz=130,slow=6.2,SNR=37					
BVAR	**Borovoye Array**	**65.26 328**	P	**P**	**07 00 00.7**	**-0.7**
	0.9nm,0.3s,baz=136,slow=9.5,SNR=7.5					
ARCES	**ARCESS Array B**	**89.06 340**	P	**P**	**07 02 09.7**	**0.0**
	1.5nm,1.0s,baz=89,slow=5.3,SNR=3.9					
TORD	**Torodi Ar. Bea**	**119.45 287**	PKP	**PKPdf**	**07 08 02.7**	**+1.5**
	0.2nm,0.4s,baz=134,slow=1.5,SNR=5.3					

*ISCJB **24** 06:52:55.6±0.7, 37°.21N±0°.06×28°.18E±0°.06, h8km±9km, Error ellipse: s-maj=11.3km s-min=4.5km az=37.3*
*DDA **24** 06:52:55.4, 37°.24N×28°.17E, h7km, MD2.8*
*CSEM **24** 06:52:55.9±0.1, 37°.21N×28°.18E, h5km, MD2.6, Error ellipse: s-maj=4.7km s-min=2.1km az=31.0*
*ISK **24** 06:52:55.4, 37°.21N×28°.17E, h4km, MD2.6*
ISC 24 06:52:55.4±1.0, 37°.20N±0°.05×28°.17E±0°.04, h12km±7km, n18, σ0s33/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.11**	**125**	*e*PG	**Pg**	**06 52 58.3**	**-0.2**
YER				*e*SG	**Sg**	**06 53 00.7**	**0.0**
YER	**Yerkesik**	**0.11**	**125**	*e*Pg	**Pg**	**06 52 58.3**	**-0.2**
YER				*e*Sg	**Sg**	**06 53 00.7**	**0.0**
MLSB	**Milas**	**0.33**	**287**	*e*PG	**Pg**	**06 53 02.3**	**+0.2**
MLSB				*e*SG	**Sb**	**06 53 08.1**	**-0.3**
MLSB	**Milas**	**0.33**	**287**	*e*Pg	**Pg**	**06 53 02.3**	**+0.2**
MLSB				*e*Sg	**Sb**	**06 53 08.1**	**-0.3**
TURN	**Turunc**	**0.48**	**133**	*i* P	**Pg**	**06 53 04.4**	**-0.3**
TURN				*i* S	**Sg**	**06 53 11.7**	**+0.7**
TURN	**Turunc**	**0.48**	**133**	*i* P	**Pg**	**06 53 04.4**	**-0.3**
TURN				*i* S	**Sg**	**06 53 11.7**	**+0.7**
AYDN	**Tasoluk**	**0.52**	**334**	*i* P	**Pg**	**06 53 05.4**	**-0.1**
AYDN				*i* S	**Sg**	**06 53 12.5**	**+0.1**
AYDN	**Tasoluk**	**0.52**	**334**	*i* P	**Pg**	**06 53 05.4**	**-0.1**
AYDN				*i* S	**Sg**	**06 53 12.5**	**+0.1**
DALY	**Dalyan (Mu¨la**	**0.54**	**134**	*e*PG	**Pb**	**06 53 06.5**	**-0.3**
DALY	**Dalyan (Mu¨la**	**0.54**	**134**	*e*Pg	**Pb**	**06 53 06.5**	**-0.3**
DAT	**Datca**	**0.67**	**225**	*e*PG	**Pb**	**06 53 08.9**	**-0.1**
DAT	**Datca**	**0.67**	**225**	*e*Pg	**Pb**	**06 53 08.9**	**-0.1**
BODT	**Bodrum**	**0.70**	**259**	*e*PG	**Pb**	**06 53 09.5**	**0.0**
BODT	**Bodrum**	**0.70**	**259**	*e*Pg	**Pb**	**06 53 09.5**	**0.0**
FETY	**Fethiye**	**0.92**	**127**	*e*PG	**Pb**	**06 53 13.9**	**+0.6**
FETY	**Fethiye**	**0.92**	**127**	*e*Pg	**Pb**	**06 53 13.9**	**+0.6**
ELL	**Elmali**	**1.46**	**107**	*e*PN	**Pg**	**06 53 23.4**	**-0.1**
ELL	**Elmali**	**1.46**	**107**	*e*Pn	**Pg**	**06 53 23.4**	**-0.1**

*NIED **24** 06:54:00, 35°.70N×142°.90E, h5km, Mw3.8 Best double couple: M₀6.11000×10¹⁴ NP1:φ₁97.00000°, δ67.00000°, λ-89.00000°. NP2:φ₂15.00000°, δ23.00000°, λ-92.00000°.*
*IDC **24** 06:54:03.1±0.8, 35°.46N×143°.24E, h0km, mb3.6/8, mb1 3.9/11, mb1mx3.7/29, mbtmp3.6/11, ML3.6/3, MS2.9/2, Ms1 2.9/2, ms1mx2.4/36, Error ellipse: s-maj=21.8km s-min=20.2km az=99.0*
*ISCJB **24** 06:54:08.0±0.7, 35°.68N±0°.04×142°.91E±0°.06, h59km, mb3.6/8, Error ellipse: s-maj=6.9km s-min=5.5km az=8.4*
*JMA **24** 06:54:07.4±0.3, 35°.66N×142°.92E, h80km, M3.6*
ISC 24 06:54:08.6±1.2, 35°.64N±0°.05×142°.99E±0°.08, h59km, n26, σ1s57/28, mb3.6/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.73**	**273**	P	**Pn**	**06 54 35.9**	**-0.5**
BSO1	**Boso 1**	**1.92**	**240**	P	**Pn**	**06 54 37.2**	**-1.2**
BSO1				*e*S	**Sn**	**06 55 00.6**	**-0.5**
JHO	**Hitachi**	**2.19**	**297**	P	**Pn**	**06 54 41.1**	**-1.4**
BSO3	**Boso 3**	**2.19**	**248**	P	**Pn**	**06 54 42.4**	**0.0**
JFT	**Otama**	**2.84**	**312**	P	**Pn**	**06 54 51.0**	**-0.5**
JFT				*e*S	**Sn**	**06 55 23.3**	**-1.2**
JAG	**Ashikaga**	**2.97**	**286**	P	**Pn**	**06 54 52.5**	**-0.8**
JOD2	**Odawara 2**	**3.21**	**264**	P	**Pn**	**06 54 55.6**	**-0.9**
JOD2				*e*S	**Sn**	**06 55 32.5**	**-1.0**
JRY	**Ryogami san**	**3.34**	**278**	P	**Pn**	**06 54 58.6**	**+0.2**
JMK	**Ichinoseki**	**3.59**	**337**	P	**Pn**	**06 55 01.0**	**-0.8**
JMK				*e*S	**Sn**	**06 55 40.8**	**-2.2**
JYN	**Shimob**	**3.62**	**269**	P	**Pn**	**06 55 02.2**	**-0.1**
JHJ2	**Mitsune**	**3.64**	**227**	P	**Pn**	**06 55 01.8**	**-0.6**
JHJ	**Hachijo jima 2**	**3.65**	**227**	Pn	**Pn**	**06 55 00.8**	**-1.8**
	8.9nm,0.3s,baz=260,slow=21,SNR=6.1						
JHJ				Sn	**Sn**	**06 55 39.6**	**-4.9**
	118nm,0.3s,baz=64,slow=21,SNR=10						
JHJ				LR	LR	06 55 44.3	
	comp=Z,323nm,21.1s,baz=84,slow=28						
JYK	**Kaneyama**	**3.89**	**328**	P	**Pn**	**06 55 04.7**	**-1.1**
JYK				*e*S	**Sn**	**06 55 49.3**	**-0.8**
MJAR	**Matsushiro Arr**	**3.97**	**284**	Pn	**Pn**	**06 55 07.8**	**+0.8**
	7.4nm,0.3s,baz=119,slow=8.5,SNR=28						
MJAR				Sn	**Sn**	**06 55 53.2**	**+0.8**
	1.5nm,0.3s,baz=66,slow=15,SNR=4.6						
MAT	**Matsushiro**	**3.98**	**285**	P	Pn	06 55 08.2	+1.2
MAT				S	**Sn**	**06 55 53.8**	**+1.4**
JOM	**Ohasama**	**4.06**	**341**	P	**Pn**	**06 55 07.3**	**-0.8**
JOM				*e*S	**Sn**	**06 55 51.3**	**-3.0**
JSD	**Sado**	**4.48**	**304**	P	**Pn**	**06 55 13.3**	**-0.7**
KSRS	**Korea Array**	**12.25**	**283**	Pn	Pn	06 57 02.8	+2.6
	0.2nm,0.3s,baz=87,slow=14,SNR=4.1						
KSRS				LR	LR	07 01 17.9	
	comp=Z,27nm,20.9s,baz=110,slow=35						
ZALV	**Zalesovo Beam**	**43.79**	**313**	P	P	07 02 11.4	+3.1
	0.5nm,0.3s,baz=43,slow=8.7,SNR=2.6						
MKAR	**Makanchi Array**	**45.94**	**304**	P	P	07 02 31.2	+5.7
	0.3nm,0.7s,baz=72,slow=9.3,SNR=3.1						
KURBB	**Kurchatov Arra**	**47.86**	**309**	P	P	07 02 44.3	+3.9
	0.3nm,0.5s,baz=88,slow=7.6,SNR=3.5						
ILAR	**Eielson Array**	**50.00**	**32**	P	P	07 02 59.7	+3.2
	0.5nm,0.8s,baz=267,slow=6.1,SNR=8.4						
WRA	**Warramunga Arr**	**55.88**	**190**	P	**P**	**07 03 41.4**	**+1.1**
	1.1nm,0.7s,baz=8.4,slow=7.6,SNR=16						
ASAR	**Alice Springs**	**59.61**	**190**	P	**P**	**07 04 08.1**	**+1.6**
	0.3nm,0.6s,baz=18,slow=11,SNR=7.8						
PDAR	**Pinedale Array**	**77.73**	**46**	P	**P**	**07 06 00.8**	**+1.4**
	0.4nm,0.5s,baz=311,slow=5.5,SNR=4.2						
TXAR	**Lajitas Array**	**89.95**	**53**	P	P	07 07 05.1	+3.3
	0.3nm,0.7s,baz=310,slow=3.8,SNR=4.7						

*ISCJB **24** 06:55:32.2±0.6, 43°.09N±0°.06×104°.45E±0°.09, h10km, mb3.8/7, Error ellipse: s-maj=9.5km s-min=8.5km az=43.8*
*IDC **24** 06:55:32.5±1.0, 43°.18N×104°.46E, h0km, mb3.8/7, mb1 4.0/9, mb1mx3.8/27, mbtmp3.8/9, ML3.8/2, Error ellipse: s-maj=27.8km s-min=20.1km az=92.0*
*BJI **24** 06:55:35.0, 42°.98N×104°.56E, h7km, mb3.9/1, ML4.0/7, Ms3.7/5, Ms7 3.5/5*
ISC 24 06:55:34.1±0.6, 43°.05N±0°.05×104°.48E±0°.05, h10km, n15, σ2s22/21, mb3.8/7, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTO	**Baotou**	**4.80**	**119**	*e*Pn	Pn	06 56 50.5	+3.9
BTO				Pg	Pg	06 57 02.0	-4.1
BTO				Sg	**Sg**	**06 58 05.1**	**-3.2**
BTO				smax	smax		
	comp=N,77nm,0.8s						
BTO				smax	smax		
	comp=E,66nm,0.8s						
SONM	**Songino Array**	**4.98**	**15**	Pn	**Pn**	**06 56 48.5**	**-0.5**
	comp=E,2.2nm,0.3s,baz=195,slow=14,SNR=98						
SONM				Pg	**Pb**	**06 57 02.5**	**+1.1**
	comp=E,9.6nm,0.3s,baz=198,slow=19,SNR=29						
SONM				Lg	Lg	06 58 06.4	
	comp=E,17nm,0.3s,baz=207,slow=29,SNR=9.6						
GTA	**Gaotai**	**5.05**	**226**	Pn	**Pn**	**06 56 52.8**	**+2.7**
GTA				Pg	Pb	06 57 06.8	+4.1
GTA				Sn	**Sn**	**06 57 50.8**	**+2.2**
GTA				Sg	**Sg**	**06 58 12.5**	**-3.9**
GTA				smax	smax		
	comp=N,120nm,1.2s						
GTA				smax	smax		
	comp=E,140nm,1.3s						
GTA				LR	LR		
	comp=N,280nm,8.1s						
GTA				LR	LR		
	comp=E,410nm,6.9s						
GTA				LR	LR		
	comp=Z,290nm,9.0s						
ULN	**Ulaanbaatar**	**5.15**	**20**	P	**Pn**	**06 56 49.8**	**-1.6**
HHC	**Hu-ho-hao-te**	**5.72**	**110**	*e*Pn	**Pn**	**06 57 00.4**	**+1.2**
HHC				Sn	**Sn**	**06 58 07.5**	**+2.6**
HHC				LR	LR		
	comp=N,1µm,5.2s						
HHC				LR	LR		
	comp=E,1µm,5.7s						
HHC				LR	LR		
	comp=Z,360nm,7.5s						
LZH	**Lanzhou**	**6.97**	**184**	Pn	**Pn**	**06 57 19.3**	**+2.9**
LZH				Sn	**Sn**	**06 58 32.3**	**-3.4**
LZH				Sg	**Sg**	**06 59 16.5**	**-1.2**
LZH				LR	LR		
	comp=N,280nm,6.9s						
LZH				LR	LR		
	comp=E,220nm,5.4s						
LZH				LR	LR		
	comp=Z,270nm,7.7s						
MKAR	**Makanchi Array**	**16.14**	**291**	Pn	**Pn**	**06 59 23.6**	**+2.6**
	comp=Z,0.1nm,0.3s,baz=95,slow=12,SNR=5.5						
KURBB	**Kurchatov Arra**	**19.23**	**302**	P	**P**	**06 59 59.0**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=105,slow=11,SNR=5.5						
BVAR	**Borovoye Array**	**24.67**	**306**	P	**P**	**07 00 53.5**	**-1.3**
	comp=Z,0.9nm,0.4s,baz=109,slow=10,SNR=3.5						
ARCES	**ARCESS Array B**	**46.69**	**332**	P	**P**	**07 04 00.9**	**-1.6**
	comp=Z,1.7nm,0.9s,baz=61,slow=10.0,SNR=4.6						
ILAR	**Eielson Array**	**59.06**	**28**	P	**P**	**07 05 33.3**	**-0.6**
	comp=Z,0.7nm,0.6s,baz=295,slow=6.0,SNR=16						
YKA	**Yellowknife Ar**	**70.23**	**18**	P	**P**	**07 06 45.0**	**-1.8**
	comp=Z,0.4nm,0.5s,baz=330,slow=6.0,SNR=3.1						
ASAR	**Alice Springs**	**71.70**	**152**	P	**P**	**07 06 57.3**	**+1.1**
	comp=Z,0.7nm,1.0s,baz=335,slow=6.1,SNR=3.7						
PDAR	**Pinedale Array**	**89.27**	**24**	P	**P**	**07 08 30.1**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=323,slow=0.7,SNR=3.9						
NVAR	**Mina Array Bea**	**90.09**	**32**	P	**P**	**07 08 34.4**	**-0.2**
	comp=Z,0.3nm,0.7s,baz=333,slow=2.0,SNR=4.8						

WEL 24 07:06:36.2±0.2, 37°.92S×177°.33E, h65km±2km, ML3.5/5, 8C-3D, Error ellipse: s-maj=1.1km s-min=1.0km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**0.38**	**207**	⇑P*	Pn	07 06 46.9	-0.5
URZ				S*	Sn	07 06 55.5	-0.1
URZ				AML	AML	07 06 56.2	
WIZ	**White Island**	**0.41**	**344**	P*	Pn	07 06 47.4	-0.2
WIZ				S*	Sn	07 06 56.7	+0.7
MWZ	**Matawai**	**0.44**	**159**	⇑P*	Pn	07 06 47.5	-0.7
MWZ				S*	Sn	07 06 56.3	-0.5
MWZ				AML	AML	07 06 56.9	
MWZ				AML	AML	07 06 57.3	
MWZ				AML	AML	07 06 57.3	
MARZ	**Manawahe**	**0.52**	**262**	P*	Pn	07 06 48.6	-0.2
OPRZ	**Ohinepanea**	**0.62**	**277**	⇑P*	Pn	07 06 49.5	-0.3
OPRZ				S*	Sn	07 06 59.8	0.0
PUZ	**Puketiti**	**0.75**	**102**	PN	Pn	07 06 51.0	-0.3
PUZ				SN	Sn	07 07 03.2	+0.7
PUZ				AML	AML	07 07 06.2	
RRRZ	**Republican Roa**	**0.77**	**237**	P*	Pn	07 06 51.8	+0.2
MXZ	**Matakaoa Point**	**0.85**	**66**	⇓P*	Pn	07 06 52.7	+0.1
MXZ				AML	AML	07 07 09.0	
MXZ				AML	AML	07 07 10.6	
TGRZ	**Tauranga**	**0.87**	**282**	P*	Pn	07 06 52.4	-0.3
TGRZ				S*	Sn	07 07 03.7	-1.3
CNGZ	**Carnagh Statio**	**0.89**	**130**	⇑PN	Pn	07 06 53.0	-0.1
PRRZ	**Plateau Road**	**0.94**	**232**	P*	Pn	07 06 53.5	-0.2
ALRZ	**Allen Road**	**1.01**	**230**	P*	Pn	07 06 54.5	-0.1
RAHZ	**Arahi**	**1.01**	**191**	PN	Pn	07 06 54.9	+0.2
PRGZ	**Paritu Road**	**1.09**	**157**	PN	Pn	07 06 55.2	-0.5
KNZ	**Kokohu**	**1.13**	**166**	PN	Pn	07 06 55.6	-0.5
NMHZ	**Naumai**	**1.25**	**199**	PN	Pn	07 06 57.9	+0.2
MHGZ	**Mahia Peninsul**	**1.31**	**160**	PN	Pn	07 06 57.9	-0.6
BKZ	**Black Stump Fm**	**1.41**	**208**	AML	AML	07 07 23.5	
BKZ				AML	AML	07 07 24.0	
TOZ	**Tahuroa Road**	**1.46**	**277**	⇑P*	Pn	07 07 00.5	+0.1
MCHZ	**McNeill Hill**	**1.60**	**198**	PN	Pn	07 07 02.3	-0.1
KUZ	**Kuaotunu**	**1.74**	**312**	⇑PN	Pn	07 07 03.8	-0.3
KRVZ	**Karewarewa**	**1.77**	**225**	P*	Pn	07 07 05.3	+0.5
OTVZ	**Oturere**	**1.80**	**226**	P*	Pn	07 07 05.4	+0.1
NGZ	**Ngauruhoe**	**1.85**	**227**	P*	Pn	07 07 06.4	+0.6
BHHZ	**Black Hill Sta**	**1.85**	**212**	P*	Pn	07 07 05.7	-0.1
TUVZ	**Tukino**	**1.88**	**224**	⇓P*	Pn	07 07 06.5	+0.2
WPVZ	**Whakapapa**	**1.90**	**227**	⇑P*	Pn	07 07 07.2	+0.7
KAHZ	**Kahuranaki**	**1.91**	**191**	PN	Pn	07 07 05.4	-1.2
FWVZ	**Far West T-bar**	**1.93**	**226**	P*	Pn	07 07 07.2	+0.2
MOVZ	**Moawhango**	**1.93**	**219**	⇑P*	Pn	07 07 06.7	-0.3
WNVZ	**Wahianoa**	**1.95**	**223**	⇓P*	Pn	07 07 07.4	+0.1

IDC 24 07:09:15.8±66.0, 21°.01S×179°.69E, h0km, mb3.6/3, mb1 3.7/3, mb1mx3.5/18, mbtmp3.6/3, MS3.6/1, Ms1 3.6/1, ms1mx2.9/16, Error ellipse: s-maj=1184.0km s-min=150.3km az=83.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**35.62**	**244**	P	P	07 16 15.1	-0.4
	0.5nm,0.6s,baz=101,slow=10,SNR=2.5						
ASAR	**Alice Springs**	**42.30**	**258**	P	P	07 17 11.6	0.0
	0.8nm,0.8s,baz=95,slow=7.9,SNR=9.2						
WRA	**Warramunga Arr**	**42.40**	**263**	P	P	07 17 12.4	0.0
	0.6nm,0.8s,baz=96,slow=8.4,SNR=9.4						
NWAO	**Narrogin (SRO)**	**56.21**	**244**	LR	LR	07 39 03.5	
	comp=Z,59nm,21.7s,baz=62,slow=32						

*ISCJB **24** 07:11:57.5±0.4, 39°.12N±0°.02×27°.55E±0°.04, h0km, Error ellipse: s-maj=4.4km s-min=3.2km az=167.6*
*CSEM **24** 07:11:57.7±0.2, 39°.12N×27°.58E, h1km, MD2.5, Error ellipse: s-maj=4.5km s-min=3.0km az=76.0*
*DDA **24** 07:11:57.8, 39°.09N×27°.55E, h7km, MD2.5*
*ISK **24** 07:11:57.8, 39°.12N×27°.62E, h9km, MD2.9*
ISC 24 07:11:56.9±0.8, 39°.11N±0°.02×27°.62E±0°.03, h0km, n45, σ0s65/57, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.27**	**147**	*i* P	**Pb**	**07 12 03.9**	**-0.8**
AKHS				*i* S	**Sb**	**07 12 09.0**	**-0.9**
BALB	**Balikesir**	**0.57**	**21**	*e*PG	**Pb**	**07 12 09.3**	**-0.5**
BALB				*e*SG	**Sb**	**07 12 17.6**	**-0.8**
BALB	**Balikesir**	**0.57**	**21**	*e*Pg	**Pb**	**07 12 09.3**	**-0.5**
BALB				*e*Sg	**Sb**	**07 12 17.6**	**-0.8**
BALY	**Balya**	**0.63**	**360**	*i* P	**Pb**	**07 12 10.2**	**-0.7**
BALY	**Balya**	**0.63**	**360**	*i* P	**Pb**	**07 12 10.2**	**-0.7**
DURS	**Dursunbey**	**0.82**	**53**	*i* P	**Pb**	**07 12 14.4**	**+0.2**
DURS				*i* S	**Sn**	**07 12 27.8**	**-1.1**
DURS	**Dursunbey**	**0.82**	**53**	*i* P	**Pb**	**07 12 14.4**	**+0.2**
BLCB	**Balcova**	**0.85**	**212**	*e*PG	**Pb**	**07 12 14.5**	**-0.1**
BLCB				*e*SG	**Sb**	**07 12 27.5**	**+1.0**
BLCB	**Balcova**	**0.85**	**212**	*e*Pg	**Pb**	**07 12 14.5**	**-0.1**
BLCB				*e*Sg	**Sb**	**07 12 27.5**	**+1.0**
DEMI	**Demirci**	**0.86**	**94**	*i* P	**Pn**	**07 12 15.8**	**-0.5**
DEMI				*i* S	**Sb**	**07 12 28.4**	**+1.7**
DEMI	**Demirci**	**0.86**	**94**	*i* P	**Pn**	**07 12 15.8**	**-0.5**
DEMI				*i* S	**Sb**	**07 12 28.4**	**+1.7**
GONE	**Gonen-Balikesi**	**0.94**	**3**	*e*PG	**Pb**	**07 12 15.9**	**-0.2**
GONE	**Gonen-Balikesi**	**0.94**	**3**	*e*Pg	**Pb**	**07 12 15.9**	**-0.2**
MANT	**Manisa**	**0.96**	**130**	*i* P	**Pb**	**07 12 16.7**	**+0.2**
MANT				*i* S	**Sn**	**07 12 33.3**	**+1.0**
MANT	**Manisa**	**0.96**	**130**	*i* P	**Pb**	**07 12 16.7**	**+0.2**
KULA	**Kula-Manisa**	**1.01**	**126**	*e*PG	**Pb**	**07 12 17.5**	**+0.2**
KULA	**Kula-Manisa**	**1.01**	**126**	*e*Pg	**Pb**	**07 12 17.5**	**+0.2**
KCTX	**Karacabey (Bur**	**1.29**	**26**	*e*PN	**Pn**	**07 12 22.5**	**+0.3**
KCTX	**Karacabey (Bur**	**1.29**	**26**	*e*Pn	**Pn**	**07 12 22.5**	**+0.3**
KRBG	**Karabiga-Canak**	**1.31**	**349**	*e*PN	**Pb**	**07 12 22.3**	**-0.1**
KRBG	**Karabiga-Canak**	**1.31**	**349**	*e*Pn	**Pb**	**07 12 22.3**	**-0.1**
ORLT	**Orhaneli**	**1.36**	**46**	*e*PN	**Pb**	**07 12 23.3**	**0.0**
ORLT	**Orhaneli**	**1.36**	**46**	*e*Pn	**Pb**	**07 12 23.3**	**0.0**
BOZC	**Bozcaada**	**1.42**	**302**	*i* P	**Pb**	**07 12 24.7**	**+0.5**
LPK	**Lapseki**	**1.43**	**333**	*e*PN	**Pg**	**07 12 24.2**	**-0.1**
LPK	**Lapseki**	**1.43**	**333**	*e*Pn	**Pg**	**07 12 24.2**	**-0.1**
AYDN	**Tasoluk**	**1.46**	**172**	*i* P	**Pn**	**07 12 24.3**	**-0.3**
AYDN				*i* S	**Sg**	**07 12 43.0**	**-0.8**
AYDN	**Tasoluk**	**1.46**	**172**	*i* P	**Pn**	**07 12 24.3**	**-0.3**
AYDN				*i* S	**Sg**	**07 12 43.0**	**-0.8**
TVSB	**Tavsanli**	**1.47**	**76**	*e*PN	**Pn**	**07 12 25.0**	**+0.2**
TVSB	**Tavsanli**	**1.47**	**76**	*e*Pn	**Pn**	**07 12 25.0**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.61**	**348**	*e*PN	**Pn**	**07 12 27.0**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.61**	**348**	*e*Pn	**Pn**	**07 12 27.0**	**+0.3**
KHL	**Karahalli**	**1.68**	**117**	*e*PN	**Pn**	**07 12 28.5**	**+0.8**
KHL	**Karahalli**	**1.68**	**117**	*e*Pn	**Pn**	**07 12 28.5**	**+0.8**
MFT	**Murefte**	**1.70**	**351**	*e*PN	**Pb**	**07 12 28.8**	**-0.2**
MFT	**Murefte**	**1.70**	**351**	*e*Pn	**Pb**	**07 12 28.8**	**-0.2**
ARMT	**Armutlu**	**1.74**	**33**	*e*PN	**Pn**	**07 12 28.9**	**+0.5**
ARMT	**Armutlu**	**1.74**	**33**	*e*Pn	**Pn**	**07 12 28.9**	**+0.5**
ERIK	**Erikli-Kesan**	**1.78**	**332**	*e*PN	**Pn**	**07 12 29.3**	**+0.4**
ERIK	**Erikli-Kesan**	**1.78**	**332**	*e*Pn	**Pn**	**07 12 29.3**	**+0.4**
ENEZ	**Enez**	**1.98**	**326**	*e*PN	**Pn**	**07 12 32.2**	**+0.5**
ENEZ	**Enez**	**1.98**	**326**	*e*Pn	**Pn**	**07 12 32.2**	**+0.5**
YLV	**Yalova**	**1.99**	**42**	*e*PN	**Pn**	**07 12 32.7**	**+0.9**
YLV	**Yalova**	**1.99**	**42**	*e*Pn	**Pn**	**07 12 32.7**	**+0.9**

IDC 24 07:17:00.1±2.9, 8°.51S×118°.43E, h144km±26km, mb3.2/3, mb1 3.3/6, mb1mx3.1/24, mbtmp3.1/6, Error ellipse: s-maj=51.3km s-min=15.1km az=52.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**3.71**	**21**	P	Pn	07 17 57.4	+1.0
	1.5nm,0.3s,baz=184,slow=7.3,SNR=5.3						
FITZ	**Fitzroy Crossi**	**11.83**	**144**	P	Pn	07 19 43.3	-1.1
	0.1nm,0.3s,baz=318,slow=8.5,SNR=6.2						
FITZ				S	Sn	07 21 46.1	-9.1
	0.7nm,0.3s,baz=169,slow=20,SNR=15						
WRA

BHK	**Bhakra**	**7.01**	**150**	*e*S		**Sn**	**07 35 49.5**	**-3.2**
SDNR	**Sundarnagar**	**7.17**	**147**	*e*PKP		**Pn**	**07 34 34.0**	**-1.7**
SDNR				*e*4			07 35 49.0	
SMLA	**Simla**	**7.57**	**147**	*i* P		**Pn**	**07 34 40.6**	**-0.3**
SMLA				*i* S		**Sn**	**07 36 00.9**	**-5.1**
SMLA				AML	AML		07 36 05.4	
	comp=E,544nm,0.2s							
SMLA				AML	AML		07 36 06.9	
	comp=N,510nm,0.6s							
DDI	**Dehra Dun**	**8.65**	**145**	*e*PKP		**Pn**	**07 34 54.2**	**-1.1**
DDI				*e*S		**Sn**	**07 36 27.7**	**-4.3**
DDI				AML	AML		07 36 29.8	
	comp=N,1μm,0.5s							
DDI				AML	AML		07 36 32.0	
	comp=E,873nm,0.4s							
NDI	**New Delhi**	**9.77**	**154**	*ex*		x	07 35 03.0	
NDI				*e*S		Sn	07 36 51.0	-7.7
LGTI	**Lohaghat**	**10.44**	**139**	*e*S		Sn	07 37 08.2	-6.6
AJM	**Ajmer**	**11.25**	**170**	*e*S		Sn	07 37 19.0	-15
MK31	**Makanchi Array**	**11.76**	**35**	⇑P		**Pn**	**07 35 38.6**	**+3.0**
	comp=E,1.6nm,0.4s,baz=198,slow=8.8,SNR=55							
MKAR	**Makanchi Array**	**11.76**	**35**	*c*eP		**P**	**07 35 41.5**	**-0.1**
MKAR				pmax	pmax			
	comp=Z,3.0nm,0.4s							
MKAR	**Makanchi Array**	**11.76**	**35**	P		**Pn**	**07 35 37.8**	**+2.2**
	comp=Z,1.1nm,0.3s,baz=207,slow=10,SNR=12							
PYUN	**Piuthan**	**13.00**	**134**	*e*P		**Pn**	**07 35 50.2**	**-1.7**
	comp=Z,100nm,0.4s							
DANN	**Dangsing**	**13.27**	**131**	*e*P		**Pn**	**07 35 53.9**	**-1.4**
	comp=Z,101nm,0.3s							
KOLN	**Koldanda**	**13.60**	**133**	*e*P		**Pn**	**07 35 58.6**	**-0.8**
	comp=Z,71nm,0.4s							
KUR17	**Kurchatov Arra**	**13.74**	**17**	⇑P		**P**	**07 36 05.3**	**+1.8**
	comp=Z,1.7nm,0.6s							
KURBB	**Kurchatov Arra**	**13.74**	**17**	P		**P**	**07 36 03.5**	**0.0**
	comp=Z,0.4nm,0.3s,baz=204,slow=11,SNR=46							
KURK	**Kurchatov**	**13.85**	**17**	⇓P		**P**	**07 36 05.6**	**+0.8**
	comp=Z,5.6nm,1.0s							
KURK	**Kurchatov**	**13.85**	**17**	*e*P		**P**	**07 36 06.8**	**+2.0**
KURK				pmax	pmax			
	comp=Z,7.0nm,1.2s							
KKN	**Kakani**	**14.60**	**128**	*e*P		**Pn**	**07 36 11.6**	**-0.3**
	comp=Z,82nm,0.4s							
DMN	**Daman**	**14.62**	**129**	*e*P		**Pn**	**07 36 12.3**	**+0.1**
	comp=Z,85nm,0.5s							
AB31	**Akbulak array**	**14.72**	**326**	⇑P		**Pn**	**07 36 12.3**	**-0.5**
	comp=Z,9.7nm,0.5s,baz=133,slow=12,SNR=199							
AB31				⇓S		Sn	07 38 48.6	-8.2
	comp=Z,17nm,0.7s,baz=148,slow=23,SNR=12							
PKIN	**Phulchoki**	**14.83**	**129**	*e*P		**Pn**	**07 36 15.0**	**+0.3**
	comp=Z,58nm,0.3s							
PKI	**Pulchoki**	**14.84**	**129**	*e*P		**Pn**	**07 36 15.3**	**+0.4**
	comp=Z,35nm,0.2s							
GUN	**Gumba**	**14.90**	**127**	*e*P		**Pn**	**07 36 16.1**	**+0.4**
	comp=Z,114nm,0.4s							
BHPL	**Bhopal**	**14.95**	**162**	*e*PKP		**Pn**	**07 36 16.2**	**+0.2**
BHPL				*ex*		x	07 38 48.7	
VOSK	**Vostochnaya**	**15.16**	**357**	⇑P		**Pn**	**07 36 18.2**	**0.0**
	comp=Z,1.7nm,0.5s							
BVA0	**Borovoye Array**	**15.49**	**356**	⇑P		**Pn**	**07 36 22.2**	**-0.1**
	comp=Z,3.9nm,0.9s,baz=177,slow=18,SNR=18							
BVA0				⇑S		**Sn**	**07 39 10.9**	**-4.3**
	comp=Z,2.7nm,0.7s,baz=168,slow=22,SNR=5.3							
BVAR	**Borovoye Array**	**15.49**	**356**	P		**P**	**07 36 22.7**	**-0.2**
BVAR				S		**Sn**	**07 39 13.0**	**-2.2**
BVAR				pmax	pmax			
	comp=Z,1.0nm,0.3s							
BVAR	**Borovoye Array**	**15.49**	**356**	P		**P**	**07 36 22.7**	**-0.2**
	comp=Z,0.7nm,0.3s,baz=166,slow=11,SNR=18							
BVAR				S		**Sn**	**07 39 13.0**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=162,slow=25,SNR=5.7							
BRVK	**Borovoye**	**15.53**	**355**	⇑P		**P**	**07 36 23.5**	**+0.1**
	comp=Z,6.1nm,0.9s							
BRVK				⇑S		**Sn**	**07 39 11.1**	**-5.0**
	comp=Z,4.7nm,1.1s							
BRVK	**Borovoye**	**15.53**	**355**	*c i* P		**P**	**07 36 24.5**	**+1.1**
BRVK				pmax	pmax			
	comp=Z,4.0nm,0.8s							
RAMN	**Ramite**	**16.02**	**127**	*e*P		**Pn**	**07 36 29.8**	**+0.5**
	comp=Z,138nm,0.6s							
AKTO	**Aktyubinsk**	**16.43**	**326**	⇓P		**Pn**	**07 36 34.4**	**+0.6**
	comp=Z,15nm,0.4s							
AKTO				⇑S		**S**	**07 39 28.7**	**-6.6**
	comp=Z,15nm,0.7s							
AKTO	**Aktyubinsk**	**16.43**	**326**	P		**Pn**	**07 36 34.9**	**+1.1**
AKTO				S		**S**	**07 39 29.3**	**-5.9**
AKTO				pmax	pmax			
	comp=Z,8.0nm,0.3s							
AKTO				smax	smax			
	comp=N,2.0nm,0.3s							
AKTO	**Aktyubinsk**	**16.43**	**326**	P		**Pn**	**07 36 34.9**	**+1.1**
	comp=N,7.8nm,0.3s,baz=120,slow=7.0,SNR=70							
AKTO				S		**S**	**07 39 29.3**	**-5.9**
	comp=N,1.6nm,0.3s,baz=169,slow=20,SNR=6.7							
TAPN	**Taplejung**	**16.47**	**124**	*e*P		**Pn**	**07 36 36.0**	**+1.3**
	comp=N,35nm,0.3s							
ODAN	**Odare**	**16.59**	**126**	*e*P		**Pn**	**07 36 37.3**	**+1.1**
	comp=N,113nm,0.8s							
ZALV	**Zalesovo Beam**	**18.46**	**24**	P		**Pn**	**07 36 57.5**	**-0.3**
ZALV				pmax	pmax			
	comp=Z,3.0nm,0.3s							
ZALV	**Zalesovo Beam**	**18.46**	**24**	P		**Pn**	**07 36 57.5**	**-0.3**
	comp=Z,3.1nm,0.3s,baz=221,slow=10,SNR=45							
ZALV				S		**Sn**	**07 40 24.9**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=218,slow=17,SNR=4.0							
NVS	**Novosibirsk**	**18.77**	**20**	*e*P		**P**	**07 36 56.6**	**-2.2**
HVS	**Khovu-Aksy**	**20.29**	**41**	*e*P		Pn	07 37 18.0	-1.7
HVS				pmax	pmax			
	comp=Z,51nm,0.7s							
ARU	**Arti**	**20.99**	**338**	*d i* P		**P**	**07 37 23.7**	**+1.1**
ARU				S		**S**	**07 41 06.9**	**+0.8**
ARU				pmax	pmax			
	comp=Z,23nm,1.7s							
DGRG	**David-gareji**	**21.15**	**289**	P		**P**	**07 37 26.4**	**+1.9**
TBLG	**Delisi**	**21.63**	**290**	*e*P		**P**	**07 37 30.7**	**+1.1**
TBLG	**Delisi**	**21.63**	**290**	P		**P**	**07 37 30.8**	**+1.1**
GNI	**Garni**	**21.63**	**285**	P		**P**	**07 37 29.6**	**-0.2**
	comp=Z,4.5nm,0.4s,baz=182,slow=1.6,SNR=4.3							
AKH	**Akhalkalaki**	**22.56**	**289**	P		**P**	**07 37 41.5**	**+2.7**
ONI	**Oni**	**22.62**	**292**	P		**P**	**07 37 41.1**	**+1.8**
KBZ	**Khabaz**	**23.11**	**295**	P		**P**	**07 37 44.0**	**+0.5**
KBZ				pmax	pmax			
	comp=Z,5.0nm,0.7s							
KBZ	**Khabaz**	**23.11**	**295**	P		**P**	**07 37 44.0**	**+0.5**
	comp=Z,5.0nm,0.7s,baz=114,slow=7.3,SNR=14							
KIV	**Kislovodsk**	**23.28**	**295**	*e*P		**P**	**07 37 46.1**	**+0.8**
KIV				*e*S		**S**	**07 41 42.9**	**-1.4**
KIV				pmax	pmax			
	comp=Z,7.0nm,0.9s							
ZAK	**Zakamensk**	**25.44**	**50**	*e*P		**P**	**07 38 04.0**	**-0.8**
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.3s							
SONM	**Songino Array**	**26.81**	**57**	P		**P**	**07 38 18.6**	**+1.4**
	comp=Z,1.8nm,0.6s,baz=257,slow=9.9,SNR=13							
OBN	**Obninsk**	**29.85**	**318**	⇓P		**P**	**07 38 43.6**	**-0.1**
OBN				*e*			07 39 51.0	
OBN				*e*S		S	07 43 16.2	-11
OBN				pmax	pmax			
	comp=Z,5.0nm,1.0s							
BRTR	**Keskin Array B**	**30.17**	**286**	P		**P**	**07 38 47.8**	**+0.8**
	comp=Z,2.6nm,0.5s,baz=103,slow=8.1,SNR=17							
AKASG	**Malin Array Be**	**33.14**	**307**	P		**P**	**07 39 12.7**	**+0.1**
AKASG							07 40 32.5	
AKASG				pmax	pmax			
	comp=Z,2.0nm,0.4s							
AKASG				pmax	pmax			
	comp=Z,1.0nm,0.5s							
AKASG	**Malin Array Be**	**33.14**	**307**	P		**P**	**07 39 12.7**	**+0.1**
	comp=Z,1.8nm,0.4s,baz=109,slow=8.6,SNR=4.0							
AKASG				PP		**PP**	**07 40 32.5**	**+1.5**
	comp=Z,1.0nm,0.5s,baz=85,slow=10,SNR=5.0							
JOF	**Joensuu**	**35.48**	**329**	*e*P		**P**	**07 39 33.9**	**+1.3**
JOF				pmax	pmax			
	comp=Z,5.0nm,0.3s							
JOF	**Joensuu**	**35.48**	**329**	*e*p		**P**	**07 39 33.9**	**+1.3**
	comp=Z,5.2nm,0.3s							
FINES	**FINESS Array B**	**37.20**	**325**	P		**P**	**07 39 47.9**	**+0.7**
	comp=Z,1.9nm,0.3s,baz=119,slow=9.5,SNR=16							
KAF	**Kangasniemi**	**37.32**	**326**	*e*P		**P**	**07 39 48.7**	**+0.6**
KAF				pmax	pmax			
	comp=Z,2.0nm,0.4s							
KAF	**Kangasniemi**	**37.32**	**326**	*e*p		**P**	**07 39 48.7**	**+0.6**
	comp=Z,2.1nm,0.4s							
KEV	**Kevo**	**40.20**	**337**	*e*P		**P**	**07 40 13.2**	**+1.2**
KEV				pmax	pmax			
	comp=Z,1.0nm,0.3s							
KEV	**Kevo**	**40.20**	**337**	*ep*		**P**	**07 40 13.2**	**+1.2**
	comp=Z,0.7nm,0.3s							
ARCES	**ARCESS Array B**	**40.56**	**337**	P		**P**	**07 40 16.2**	**+1.2**
	comp=Z,3.3nm,0.5s,baz=111,slow=8.2,SNR=55							
DPC	**Dobruska-Polom**	**41.35**	**306**	*e*P		**P**	**07 40 23.0**	**+1.2**
UPC	**Upice**	**41.54**	**307**	*e*P		**P**	**07 40 24.5**	**+1.3**
GERES	**GERESS Array B**	**43.20**	**304**	P		**P**	**07 40 37.8**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=70,slow=8.5,SNR=3.2							
KHC	**Kasperske Hory**	**43.25**	**305**	*e*P		**P**	**07 40 38.2**	**+1.1**
NB2	**NORSAR Subarra**	**44.18**	**322**	P		**P**	**07 40 44.3**	**0.0**
	comp=Z,4.2nm,0.6s,baz=92,slow=7.9							
NOA	**NORSAR Array B**	**44.18**	**322**	P		**P**	**07 40 44.5**	**+0.3**
	comp=Z,3.3nm,0.5s,baz=93,slow=7.7,SNR=22							
TIXI	**Tiksi**	**44.34**	**22**	*c i*P		**P**	**07 40 46.5**	**+1.1**
TIXI				pmax	pmax			
	comp=Z,3.0nm,0.6s							
TIXI				MLR	MLR			
	comp=Z,120nm,23.0s							
MJAR	**Matsushiro Arr**	**51.53**	**70**	P		**P**	**07 41 41.9**	**+0.7**
	comp=Z,1.6nm,0.7s,baz=289,slow=11,SNR=4.5							
BILL	**Bilibino**	**57.14**	**27**	⇑*e*P		**P**	**07 42 22.1**	**+1.1**
BILL				*e*			07 44 37.3	
BILL				*e*S		**S**	**07 49 59.6**	**-2.3**
BILL				pmax	pmax			
	comp=Z,2.0nm,0.8s							
ESDC	**Sonseca Array**	**57.92**	**298**	P		**P**	**07 42 27.0**	**0.0**
	comp=Z,1.2nm,0.5s,baz=56,slow=7.4,SNR=8.9							
TORD	**Torodi Ar. Bea**	**66.84**	**269**	P		**P**	**07 43 24.8**	**-1.6**
	comp=Z,2.4nm,0.4s,baz=48,slow=5.6,SNR=76							
ILAR	**Eielson Array**	**73.42**	**16**	P		**P**	**07 44 05.5**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=321,slow=4.6,SNR=14							
YKA	**Yellowknife Ar**	**80.09**	**3**	P		**P**	**07 44 43.5**	**+0.5**
	comp=Z,1.0nm,0.4s,baz=350,slow=5.5,SNR=18							
WRA	**Warramunga Arr**	**81.65**	**123**	P		**P**	**07 44 50.5**	**-1.4**
	comp=Z,1.0nm,0.4s,baz=327,slow=5.1,SNR=48							
ASAR	**Alice Springs**	**83.99**	**126**	P		**P**	**07 45 02.6**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=314,slow=4.8,SNR=4.9							

IDC 24 07:55:45.7±2.1, 18°.95S×177°.90W, h0km, mb3.8/4, mb1 4.1/4, mb1mx3.7/19, mbtmp3.8/4, Error ellipse: s-maj=131.8km s-min=27.5km az=155.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**44.93**	**260**	P	P	08 04 02.9	+0.2
	0.7nm,0.3s,baz=96,slow=7.6,SNR=70						
ASAR	**Alice Springs**	**44.99**	**255**	P	P	08 04 02.8	-0.4
	1.6nm,0.5s,baz=95,slow=7.5,SNR=36						
TXAR	**Lajitas Array**	**86.14**	**57**	P	P	08 08 29.3	+0.1
	0.3nm,0.7s,baz=232,slow=6.8,SNR=3.7						
ILAR	**Eielson Array**	**86.79**	**13**	P	P	08 08 31.1	-0.3
	0.1nm,0.6s,baz=210,slow=5.2,SNR=4.3						

IDC 24 08:13:04.5±1.2, 23°.69N×45°.02W, h0km, mb3.8/5, mb1 4.1/5, mb1mx3.6/26, mbtmp3.8/5, MS3.1/3, Ms1 3.1/3, ms1mx2.8/33, Error ellipse: s-maj=37.5km s-min=29.9km az=49.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BBTS	**Babate**	**28.32**	**103**	LR	LR	08 27 19.7	
	comp=Z,38nm,21.2s,baz=306,slow=30						
TORD	**Torodi Ar. Bea**	**45.36**	**95**	P	P	08 21 24.9	0.0
	0.8nm,0.8s,baz=289,slow=7.9,SNR=4.3						
LPAZ	**La Paz**	**45.70**	**212**	P	P	08 21 27.8	-0.5
	1.3nm,0.8s,baz=33,slow=5.5,SNR=4.7						
ULM	**Lac du Bonnet**	**47.33**	**317**	LR	LR	08 39 19.3	
	comp=Z,40nm,18.5s,baz=279,slow=33						
TXAR	**Lajitas Array**	**52.33**	**290**	P	P	08 22 21.5	+3.0
	0.2nm,0.9s,baz=112,slow=7.2,SNR=3.0						
NOA	**NORSAR Array B**	**53.35**	**30**	LR	LR	08 40 43.7	
	comp=Z,10nm,19.9s,baz=170,slow=31						
PDAR	**Pinedale Array**	**55.91**	**307**	P	P	08 22 45.4	+0.8
	0.9nm,0.8s,baz=96,slow=11,SNR=6.0						
YKA	**Yellowknife Ar**	**59.85**	**330**	P	P	08 23 09.7	-1.9
	0.7nm,0.8s,baz=93,slow=7.6,SNR=5.3						
ILAR	**Eielson Array**	**73.73**	**334**	P	P	08 24 40.9	+0.7
	1.7nm,1.0s,baz=69,slow=4.5,SNR=15						

MEX 24 08:55:10.3±0.3, 17°.09N×99°.78W, h9km±5km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.23**	**198**	*i* P	Pg	08 55 14.4	-0.7
ACX				*i* S	Sg	08 55 19.0	+0.8
CAIG	**El Cayaco**	**0.46**	**265**	*i* P	Pg	08 55 19.0	-0.4
CAIG				*i* S	Sg	08 55 25.7	+0.2
ARIG	**Puente Sto Nin**	**1.30**	**336**	*i* P	Pn	08 55 30.9	-3.8
ARIG				*i* S	Sb	08 55 46.7	-5.1
PNIG	**Pinotepa**	**1.73**	**113**	*i* P	Pn	08 55 37.3	-3.4
PNIG				*i* S	Sn	08 55 58.0	-5.0

IDC 24 09:06:22.8±3.6, 42°.93N×127°.22W, h0km, mb3.0/3, mb1 3.4/5, mb1mx3.3/29, mbtmp3.1/5, ML2.8/2, MS2.7/1, Ms1 2.6/1, ms1mx2.2/13, Error ellipse: s-maj=95.2km s-min=20.6km az=51.0

NEIC 24 09:06:25.6±1.4, 43°.26N×126°.71W, h10km, mb3.8/2, Error ellipse: s-maj=18.3km s-min=9.0km az=74.0

ISC 24 09:06:24.7±1.6, 43°.20N±0°.07×126°.9W±0°.1, h10km, n32, σ1°90/33, mb3.4/4, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**1.89**	**99**	*e*Pn	**Pn**	**09 06 54.5**	**-2.7**
KEBM				*e*Sn	**Sn**	**09 07 17.6**	**-3.5**
RNO	**Roman Nose**	**2.39**	**71**	P	**Pn**	**09 07 01.9**	**-2.1**
MPOR	**Mary's Peak**	**2.74**	**60**	P	**Pn**	**09 07 06.6**	**-2.2**
KRMB	**Red Mountain**	**2.76**	**126**	*e*Pn	**Pn**	**09 07 07.1**	**-2.1**
COR	**Corvallis**	**2.93**	**60**	*e*P	**Pn**	**09 07 11.2**	**-0.2**
HUMO	**Hull Mountain**	**2.94**	**100**	*e*Pn	**Pn**	**09 07 09.6**	**-1.9**
HUMO				*e*Sn	**Sn**	**09 07 46.4**	**-0.4**
BBOR	**Butler Butte**	**3.09**	**94**	P	**Pn**	**09 07 12.5**	**-1.2**
BROR	**Big Rock Looko**	**3.38**	**70**	P	**Pn**	**09 07 16.3**	**-1.2**
G04A	**Mutino**	**3.75**	**75**	P	**Pn**	**09 07 22.1**	**-0.5**
BKCOR	**Black Crater**	**3.91**	**72**	P	**Pn**	**09 07 24.2**	**-0.7**
F04A	**Amboy**	**4.20**	**48**	P	**Pn**	**09 07 28.1**	**-0.7**
VBEM	**Beaver Butte**	**4.24**	**62**	P	**Pn**	**09 07 29.4**	**-0.1**
LVP	**Lakeview Peak**	**4.29**	**46**	P	**Pn**	**09 07 29.7**	**-0.5**
VFP	**Flag Point**	**4.43**	**59**	P	**Pn**	**09 07 32.3**	**+0.2**
NLWA	**Neilton Lookou**	**4.70**	**26**	*e*Pn	**Pn**	**09 07 34.1**	**-1.7**
NLWA				*e*Sn	**Sn**	**09 08 27.2**	**-3.1**
LON	**Longmire**	**5.05**	**44**	*e*Pn	**Pn**	**09 07 39.9**	**-0.7**
LON				*e*Sn	**Sn**	**09 08 43.1**	**+4.1**
PGC	**Sidney**	**5.96**	**22**	*e*Pn	**Pn**	**09 07 50.7**	**-2.1**
PGC				*e*Sn	**Sn**	**09 08 56.8**	**-4.2**
NVAR	**Mina Array Bea**	**8.05**	**123**	Pn	**Pn**	**09 08 23.4**	**+1.5**
NVAR	**Mina Array Bea**	**8.05**	**123**	Pn	**Pn**	**09 08 23.4**	**+1.5**
	0.1nm,0.3s,baz=297,slow=14,SNR=5.8						
NEW	**Newport**	**8.49**	**50**	*e*Pn	**Pn**	**09 08 27.8**	**0.0**
ARUT	**Antelope Range**	**11.56**	**113**	*e*Pn	Pn	09 09 13.9	+3.9
	2.4nm,0.7s						
PFO	**Pinyon Flat Ob**	**12.57**	**136**	*e*Pn	Pn	09 09 19.4	-4.4
	1.9nm,0.5s						
ANMO	**Albuquerque**	**17.84**	**111**	P	**P**	**09 10 34.5**	**+0.6**
ANMO	**Albuquerque**	**17.84**	**111**	P	**P**	**09 10 34.5**	**+0.6**
	0.1nm,0.3s,baz=324,slow=8.9,SNR=4.0						
YKA	**Yellowknife Ar**	**20.63**	**16**	P	Pn	09 11 07.2	+0.9
YKA	**Yellowknife Ar**	**20.63**	**16**	P	Pn	09 11 07.2	+0.9
	0.3nm,0.6s,baz=202,slow=8.8,SNR=4.3						
AGMN	**Agassiz Nation**	**22.14**	**66**	*e*P	**P**	**09 11 22.5**	**+2.1**
	2.0nm,0.7s						
TXAR	**Lajitas Array**	**23.17**	**119**	P	**P**	**09 11 32.7**	**+1.2**
TXAR	**Lajitas Array**	**23.17**	**119**	P	**P**	**09 11 32.7**	**+1.2**
	0.2nm,0.7s,baz=306,slow=9.1,SNR=3.5						
TXAR				LR	LR	09 21 55.8	
	comp=Z,17nm,20.2s,baz=180,slow=40						
WMOK	**Wichita Mounta**	**23.34**	**102**	*e*P	**P**	**09 11 34.2**	**+1.1**
	4.5nm,1.0s						
ILAR	**Eielson Array**	**24.39**	**339**	P	**P**	**09 11 43.7**	**+0.8**
ILAR	**Eielson Array**	**24.39**	**339**	P	**P**	**09 11 43.7**	**+0.8**
	0.5nm,0.9s,baz=157,slow=8.6,SNR=5.4						

ISK 24 09:16:45.3, 36°.80N×27°.91E, h5km, MD3.0
DDA 24 09:16:46.3, 36°.79N×27°.84E, h7km, MD3.0
ATH 24 09:16:46.4, 36°.76N×27°.77E, h17km±4km, MD3.1/4
CSEM 24 09:16:46.6±0.2, 36°.79N×27°.89E, h5km, MD3.0, Error ellipse: s-maj=4.1km s-min=3.1km az=21.0

ISC 24 09:16:46.8±1.0, 36°.79N±0°.02×27°.88E±0°.02, h8km±9km, n53, σ0°77/73, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DAT	**Datca**	**0.25**	**256**	PG	**Pg**	**09 16 51.6**	**-0.2**
DAT				*e*SG	**Sg**	**09 16 56.8**	**+1.7**
DAT	**Datca**	**0.25**	**256**	*i* Pg	**Pg**	**09 16 51.6**	**-0.2**
DAT				*e*Sg	**Sg**	**09 16 56.8**	**+1.7**
YER	**Yerkesik**	**0.47**	**43**	*e*PG	**Pg**	**09 16 55.1**	**-0.8**
YER				*e*SG	**Sg**	**09 17 02.1**	**0.0**
YER	**Yerkesik**	**0.47**	**43**	*e*Pg	**Pg**	**09 16 55.1**	**-0.8**
YER				*e*Sg	**Sg**	**09 17 02.2**	**0.0**
MLSB	**Milas**	**0.51**	**351**	*e*PG	**Pg**	**09 16 56.3**	**-0.4**
MLSB				*e*SG	**Sg**	**09 17 04.1**	**+0.7**
MLSB	**Milas**	**0.51**	**351**	*e*Pg	**Pg**	**09 16 56.3**	**-0.4**
MLSB				*e*Sg	**Sg**	**09 17 04.1**	**+0.7**
BODT	**Bodrum**	**0.53**	**301**	*e*PG	**Pg**	**09 16 57.0**	**0.0**
BODT				*e*SG	**Sb**	**09 17 05.6**	**-0.6**
BODT	**Bodrum**	**0.53**	**301**	*e*Pg	**Pg**	**09 16 57.0**	**0.0**
BODT				*e*Sg	**Sb**	**09 17 05.6**	**-0.6**
ARG	**Arkhangelos**	**0.61**	**161**	*e*PB	**Pg**	**09 16 57.8**	**-0.6**
ARG				*e*SN	**Sb**	**09 17 07.7**	**-0.6**
ARG	**Arkhangelos**	**0.61**	**161**	*e*Pb	**Pg**	**09 16 57.8**	**-0.6**
DALY	**Dalyan (Mu¨la**	**0.62**	**87**	*e*PG	**Pg**	**09 16 57.7**	**-1.0**
DALY				*e*SG	**Sg**	**09 17 06.9**	**0.0**
DALY	**Dalyan (Mu¨la**	**0.62**	**87**	*e*Pg	**Pg**	**09 16 57.7**	**-1.0**
DALY				*e*Sg	**Sg**	**09 17 06.9**	**0.0**
AYDN	**Tasoluk**	**0.87**	**360**	*i* P	**Pg**	**09 17 02.9**	**-0.6**
AYDN				*i* S	**Sg**	**09 17 14.7**	**-0.1**
AYDN	**Tasoluk**	**0.87**	**360**	*i* P	**Pg**	**09 17 02.9**	**-0.6**
AYDN				*i* S	**Sg**	**09 17 14.7**	**-0.1**
FETY	**Fethiye**	**0.98**	**99**	*e*PG	**Pg**	**09 17 04.8**	**-0.8**
FETY	**Fethiye**	**0.98**	**99**	*e*Pg	**Pg**	**09 17 04.8**	**-0.8**
GCAM	**G?zelcaml?**	**1.04**	**331**	*i* P	**Pg**	**09 17 06.8**	**-0.1**
GCAM				*i* S	**Sn**	**09 17 22.9**	**+0.3**
GCAM	**G?zelcaml?**	**1.04**	**331**	*i* P	**Pg**	**09 17 06.8**	**-0.1**
GCAM				*i* S	**Sn**	**09 17 22.9**	**+0.3**
SMG	**Samos**	**1.24**	**318**	*e*PN	**Pg**	**09 17 09.1**	**-1.4**
SMG	**Samos**	**1.24**	**318**	*e*Pn	**Pg**	**09 17 09.1**	**-1.4**
DNZL	**Cakiroluk**	**1.29**	**46**	*i* P	**Pn**	**09 17 10.6**	**-0.8**
DNZL				*i* S	**Sn**	**09 17 30.3**	**+1.3**
DNZL	**Cakiroluk**	**1.29**	**46**	*i* P	**Pn**	**09 17 10.6**	**-0.8**
DNZL				*i* S	**Sn**	**09 17 30.3**	**+1.3**
DENT	**Denizli**	**1.33**	**43**	*e*PN	**Pn**	**09 17 11.2**	**-0.6**
DENT	**Denizli**	**1.33**	**43**	*e*Pn	**Pn**	**09 17 11.2**	**-0.6**
GLHS	**Glhisar (BURDU**	**1.35**	**74**	*e*PN	**Pn**	**09 17 11.7**	**-0.3**
GLHS	**Glhisar (BURDU**	**1.35**	**74**	*e*Pn	**Pn**	**09 17 11.7**	**-0.3**
KARP	**Karpathos**	**1.37**	**205**	*e*PN	**Pn**	**09 17 11.2**	**-1.0**
KARP	**Karpathos**	**1.37**	**205**	*e*Pn	**Pn**	**09 17 11.2**	**-1.0**
GOLH	**Golhisar**	**1.42**	**71**	*i* P	**Pb**	**09 17 13.3**	**-0.3**
GOLH				*i* S	**Sg**	**09 17 34.1**	**+1.7**
GOLH	**Golhisar**	**1.42**	**71**	*i* P	**Pb**	**09 17 13.3**	**-0.3**
GOLH				*i* S	**Sg**	**09 17 34.1**	**+1.7**
AKAS	**Kas**	**1.50**	**111**	*i* P	**Pg**	**09 17 15.6**	**+0.1**
AKAS				*i* S	**Sg**	**09 17 36.5**	**+1.6**
AKAS	**Kas**	**1.50**	**111**	*i* P	**Pg**	**09 17 15.6**	**+0.1**
KSL	**Kastellorizon**	**1.52**	**114**	*e*PN	**Pg**	**09 17 15.8**	**0.0**
ELL	**Elmali**	**1.63**	**91**	*e*PN	**Pn**	**09 17 16.1**	**+0.2**
ELL	**Elmali**	**1.63**	**91**	*e*Pn	**Pn**	**09 17 16.1**	**+0.2**
**B

DEMI	**Demirci**	**1.48**	**82**	*i* P		**Pn**	**09 32 09.8**	**0.0**
DEMI				*i* S		**Sn**	**09 32 28.7**	**-0.6**
DEMI	**Demirci**	**1.48**	**82**	*i* P		**Pn**	**09 32 09.8**	**0.0**
DEMI				*i* S		**Sn**	**09 32 28.7**	**-0.6**
DURS	**Dursunbey**	**1.48**	**59**	*i* P		**Pn**	**09 32 09.5**	**-0.4**
DURS				*i* S		**Sn**	**09 32 29.3**	**-0.1**
DURS	**Dursunbey**	**1.48**	**59**	*i* P		**Pn**	**09 32 09.5**	**-0.4**
DURS				*i* S		**Sn**	**09 32 29.3**	**-0.1**
LPK	**Lapseki**	**1.53**	**358**	*e*PN		**Pn**	**09 32 10.2**	**-0.2**
LPK	**Lapseki**	**1.53**	**358**	*e*Pn		**Pn**	**09 32 10.2**	**-0.2**
KRBG	**Karabiga-Canak**	**1.59**	**13**	*e*PN		**Pn**	**09 32 10.9**	**-0.3**
KRBG	**Karabiga-Canak**	**1.59**	**13**	*e*Pn		**Pn**	**09 32 10.9**	**-0.3**
LIA	**Limnos Island**	**1.66**	**310**	P		**Pn**	**09 32 12.1**	**-0.1**
LIA				S		**Sg**	**09 32 35.6**	**-0.7**
LIA	**Limnos Island**	**1.66**	**310**	*e*PG		**Pb**	**09 32 13.2**	**-0.5**
LIA				*e*SB		**Sg**	**09 32 36.8**	**+0.5**
LIA	**Limnos Island**	**1.66**	**310**	P		**Pn**	**09 32 12.1**	**-0.1**
LIA	**Limnos Island**	**1.66**	**310**	*e*Pg		**Pb**	**09 32 13.2**	**-0.5**
LIA				S		**Sg**	**09 32 35.6**	**-0.7**
LIA				*e*Sb		**Sg**	**09 32 36.8**	**+0.5**
MLSB	**Milas**	**1.71**	**154**	*e*PN		**Pn**	**09 32 13.6**	**+0.6**
MLSB	**Milas**	**1.71**	**154**	*e*Pn		**Pn**	**09 32 13.6**	**+0.6**
BNT	**Bandirma**	**1.73**	**29**	*e*PN		**Pn**	**09 32 12.4**	**-0.8**
BNT	**Bandirma**	**1.73**	**29**	*e*Pn		**Pn**	**09 32 12.4**	**-0.8**
BODT	**Bodrum**	**1.81**	**168**	*e*PN		**Pn**	**09 32 15.1**	**+0.8**
BODT	**Bodrum**	**1.81**	**168**	*e*Pn		**Pn**	**09 32 15.1**	**+0.8**
ERIK	**Erikli-Kesan**	**1.85**	**352**	*e*PN		**Pn**	**09 32 14.9**	**+0.2**
ERIK	**Erikli-Kesan**	**1.85**	**352**	*e*Pn		**Pn**	**09 32 14.9**	**+0.2**
KCTX	**Karacabey (Bur**	**1.85**	**39**	*e*PN		**Pn**	**09 32 14.1**	**-0.7**
KCTX	**Karacabey (Bur**	**1.85**	**39**	*e*Pn		**Pn**	**09 32 14.1**	**-0.7**
RKY	**Sarkoy-Tekirda**	**1.86**	**8**	*e*PN		**Pn**	**09 32 15.4**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.86**	**8**	*e*Pn		**Pn**	**09 32 15.4**	**+0.3**
SMTH	**Samothraki Isl**	**1.92**	**329**	P		**Pn**	**09 32 16.2**	**+0.5**
SMTH	**Samothraki Isl**	**1.92**	**329**	*e*PN		**Pn**	**09 32 16.7**	**+1.0**
SMTH				*e*SN		**Sb**	**09 32 43.0**	**+1.0**
SMTH	**Samothraki Isl**	**1.92**	**329**	P		**Pn**	**09 32 16.2**	**+0.5**
SMTH	**Samothraki Isl**	**1.92**	**329**	*e*Pn		**Pn**	**09 32 16.7**	**+1.0**
SMTH				*e*Sn		**Sb**	**09 32 43.0**	**+1.0**
ENEZ	**Enez**	**1.97**	**345**	*e*PN		**Pn**	**09 32 16.4**	**0.0**
ENEZ	**Enez**	**1.97**	**345**	*e*Pn		**Pn**	**09 32 16.4**	**0.0**
MFT	**Murefte**	**1.98**	**10**	*e*PN		**Pn**	**09 32 16.9**	**+0.3**
MFT	**Murefte**	**1.98**	**10**	*e*Pn		**Pn**	**09 32 16.9**	**+0.3**
ORLT	**Orhaneli**	**2.00**	**52**	*e*PN		**Pn**	**09 32 17.5**	**+0.6**
ORLT	**Orhaneli**	**2.00**	**52**	*e*Pn		**Pn**	**09 32 17.5**	**+0.6**
DENT	**Denizli**	**2.04**	**121**	*e*PN		**Pn**	**09 32 18.1**	**+0.6**
DENT	**Denizli**	**2.04**	**121**	*e*Pn		**Pn**	**09 32 18.1**	**+0.6**
APE	**Apeiranthos**	**2.05**	**211**	*e*PN		**Pn**	**09 32 18.6**	**+1.0**
APE	**Apeiranthos**	**2.05**	**211**	*e*PN		**Pb**	**09 32 19.3**	**-1.0**
APE				*e*SN		**Sb**	**09 32 46.8**	**+1.0**
APE	**Apeiranthos**	**2.05**	**211**	*e*Pn		**Pn**	**09 32 18.6**	**+1.0**
APE				*e*Sn		**Sb**	**09 32 46.8**	**+1.0**
YER	**Yerkesik**	**2.05**	**146**	*e*PN		**Pn**	**09 32 18.1**	**+0.5**
YER	**Yerkesik**	**2.05**	**146**	*e*Pn		**Pn**	**09 32 18.1**	**+0.5**
TVSB	**Tavsanli**	**2.13**	**73**	*e*PN		**Pn**	**09 32 19.0**	**+0.2**
TVSB	**Tavsanli**	**2.13**	**73**	*e*Pn		**Pn**	**09 32 19.0**	**+0.2**
ALN	**Alexandroupoli**	**2.14**	**344**	P		**Pn**	**09 32 18.7**	**-0.1**
ALN				S		**Sb**	**09 32 47.9**	**-0.7**
ALN	**Alexandroupoli**	**2.14**	**344**	*e*PB		**Pn**	**09 32 18.7**	**-0.1**
ALN				*e*SN		**Sb**	**09 32 48.3**	**-0.3**
ALN	**Alexandroupoli**	**2.14**	**344**	*e*Pb		**Pn**	**09 32 18.7**	**-0.1**
ALN				S		**Sb**	**09 32 47.9**	**-0.7**
ALN				*e*Sn		**Sb**	**09 32 48.3**	**-0.3**
KHL	**Karahalli**	**2.17**	**103**	*e*PN		**Pn**	**09 32 19.9**	**+0.6**
KHL	**Karahalli**	**2.17**	**103**	*e*Pn		**Pn**	**09 32 19.9**	**+0.6**
DAT	**Datca**	**2.19**	**164**	*e*PN		**Pn**	**09 32 20.0**	**+0.5**
DAT	**Datca**	**2.19**	**164**	*e*Pn		**Pn**	**09 32 20.0**	**+0.5**
MDNY	**Mudanya-Bursa**	**2.20**	**45**	*e*PN		**Pn**	**09 32 20.0**	**+0.4**
MDNY	**Mudanya-Bursa**	**2.20**	**45**	*e*Pn		**Pn**	**09 32 20.0**	**+0.4**
TKR	**Tekirdag**	**2.21**	**14**	*e*PN		**Pn**	**09 32 20.3**	**+0.5**
TKR	**Tekirdag**	**2.21**	**14**	*e*Pn		**Pn**	**09 32 20.3**	**+0.5**
NIS1	**Nisyros Isl.**	**2.25**	**173**	*e*PG		**Pb**	**09 32 23.5**	**-0.2**
NIS1	**Nisyros Isl.**	**2.25**	**173**	*e*Pg		**Pb**	**09 32 23.5**	**-0.2**
AOS	**Alonnisos**	**2.33**	**279**	*e*PG		**Pb**	**09 32 25.3**	**+0.3**
AOS	**Alonnisos**	**2.33**	**279**	*e*Pg		**Pb**	**09 32 25.3**	**+0.3**
ARMT	**Armutlu**	**2.33**	**42**	*e*PN		**Pn**	**09 32 21.0**	**-0.4**
ARMT	**Armutlu**	**2.33**	**42**	*e*Pn		**Pn**	**09 32 21.0**	**-0.4**
GEMT	**Gemlik**	**2.42**	**48**	*e*PN		**Pn**	**09 32 23.6**	**+1.0**
GEMT	**Gemlik**	**2.42**	**48**	*e*Pn		**Pn**	**09 32 23.6**	**+1.0**
DALY	**Dalyan (Mu¨la**	**2.48**	**144**	*e*PN		**Pn**	**09 32 24.1**	**+0.7**
DALY	**Dalyan (Mu¨la**	**2.48**	**144**	*e*Pn		**Pn**	**09 32 24.1**	**+0.7**
ALT	**Altintas**	**2.56**	**84**	*e*PN		**Pn**	**09 32 25.3**	**+0.6**
ALT	**Altintas**	**2.56**	**84**	*e*Pn		**Pn**	**09 32 25.3**	**+0.6**
YLV	**Yalova**	**2.61**	**48**	*e*PN		**Pn**	**09 32 26.1**	**+0.8**
YLV	**Yalova**	**2.61**	**48**	*e*Pn		**Pn**	**09 32 26.1**	**+0.8**
SLVT	**Silivri**	**2.61**	**23**	*e*PN		**Pn**	**09 32 25.9**	**+0.6**
SLVT	**Silivri**	**2.61**	**23**	*e*Pn		**Pn**	**09 32 25.9**	**+0.6**
PAIG	**Paliouri**	**2.67**	**295**	*e*PN		**Pb**	**09 32 29.2**	**-1.8**
PAIG	**Paliouri**	**2.67**	**295**	*e*Pn		**Pb**	**09 32 29.2**	**-1.8**
CAVI	**Cavuskoy**	**2.69**	**59**	*e*PN		**Pn**	**09 32 27.7**	**+1.2**
CAVI	**Cavuskoy**	**2.69**	**59**	*e*Pn		**Pn**	**09 32 27.7**	**+1.2**
CTKS	**Kestanelik-??a**	**2.72**	**28**	*e*PN		**Pn**	**09 32 26.9**	**+0.2**
CTKS	**Kestanelik-??a**	**2.72**	**28**	*e*Pn		**Pn**	**09 32 26.9**	**+0.2**
BGKT	**Bogazkoy**	**2.77**	**32**	*e*PN		**Pn**	**09 32 28.4**	**+0.9**
BGKT	**Bogazkoy**	**2.77**	**32**	*e*Pn		**Pn**	**09 32 28.4**	**+0.9**
ISK	**Istanbul-Kandi**	**2.81**	**37**	*e*PN		**Pn**	**09 32 28.6**	**+0.7**
ISK	**Istanbul-Kandi**	**2.81**	**37**	*e*Pn		**Pn**	**09 32 28.7**	**+0.7**
FETY	**Fethiye**	**2.83**	**140**	*e*PN		**Pn**	**09 32 28.9**	**+0.5**
FETY	**Fethiye**	**2.83**	**140**	*e*Pn		**Pn**	**09 32 28.9**	**+0.5**
CTYL	**Yal??k??y-??at**	**2.86**	**22**	*e*PN		**Pn**	**09 32 29.7**	**+1.0**
CTYL	**Yal??k??y-??at**	**2.86**	**22**	*e*Pn		**Pn**	**09 32 29.7**	**+1.0**
SHUT	**Suhut-Afyon**	**2.92**	**94**	*e*PN		**Pn**	**09 32 30.6**	**+0.9**
SHUT	**Suhut-Afyon**	**2.92**	**94**	*e*Pn		**Pn**	**09 32 30.6**	**+0.9**
HRT	**Hereke**	**2.95**	**47**	*e*PN		**Pn**	**09 32 31.0**	**+1.1**
HRT	**Hereke**	**2.95**	**47**	*e*Pn		**Pn**	**09 32 31.0**	**+1.1**
KLYT	**Kilyos**	**2.95**	**34**	*e*PN		**Pn**	**09 32 30.6**	**+0.8**
KLYT	**Kilyos**	**2.95**	**34**	*e*Pn		**Pn**	**09 32 30.7**	**+0.8**
EDRB	**Edirne**	**3.00**	**359**	*e*PN		**Pn**	**09 32 31.2**	**+0.5**
EDRB	**Edirne**	**3.00**	**359**	*e*Pn		**Pn**	**09 32 31.2**	**+0.5**
KDZ	**Kurdzhali**	**3.01**	**339**	*i* P		**Pn**	**09 32 30.6**	**-0.2**
KDZ	**Kurdzhali**	**3.01**	**339**	*i* P		**Pn**	**09 32 30.6**	**-0.2**
PLG	**Polygyros**	**3.03**	**301**	*e*PN		**Pn**	**09 32 32.3**	**+1.2**
PLG	**Polygyros**	**3.03**	**301**	*e*Pn		**Pn**	**09 32 32.3**	**+1.2**
GPA	**Golpazari**	**3.05**	**61**	*e*PN		**Pn**	**09 32 32.4**	**+1.0**
GPA	**Golpazari**	**3.05**	**61**	*e*Pn		**Pn**	**09 32 32.4**	**+1.0**
DID	**Didima**	**3.13**	**246**	*e*PB		**Pb**	**09 32 36.0**	**-2.8**
DID	**Didima**	**3.13**	**246**	*e*Pb		**Pb**	**09 32 36.0**	**-2.8**
SILT	**Sile**	**3.16**	**42**	*e*PN		**Pn**	**09 32 33.9**	**+1.1**
SILT	**Sile**	**3.16**	**42**	*e*Pn		**Pn**	**09 32 33.9**	**+1.1**
GULT	**Gulveren**	**3.26**	**60**	*e*PN		**Pn**	**09 32 34.7**	**+0.5**
GULT	**Gulveren**	**3.26**	**60**	*e*Pn		**Pn**	**09 32 34.7**	**+0.5**
NVR	**Nevrokopi**	**3.39**	**319**	*e*PN		**Pn**	**09 32 37.0**	**+1.0**
NVR	**Nevrokopi**	**3.39**	**319**	*e*Pn		**Pn**	**09 32 37.0**	**+1.0**
SUTC	**Sutluce-Ispart**	**3.55**	**111**	*e*PN		**Pn**	**09 32 39.4**	**+1.0**
SUTC	**Sutluce-Ispart**	**3.55**	**111**	*e*Pn		**Pn**	**09 32 39.4**	**+1.0**
KIZT	**Kizilcal**	**3.94**	**88**	*e*PN		**Pn**	**09 32 44.7**	**+1.1**
KIZT	**Kizilcal**	**3.94**	**88**	*e*Pn		**Pn**	**09 32 44.7**	**+1.1**
GRG	**Griva**	**4.01**	**303**	*e*PN		**Pn**	**09 32 46.5**	**+1.9**
GRG	**Griva**	**4.01**	**303**	*e*Pn		**Pn**	**09 32 46.5**	**+1.9**
PRD	**Provadia**	**4.38**	**5**	*i* P		**Pn**	**09 32 47.5**	**-2.0**
PRD	**Provadia**	**4.38**	**5**	*i* P		**Pn**	**09 32 47.5**	**-2.0**
KONT	**Konya--Tatoy**	**4.43**	**100**	*e*PN		**Pn**	**09 32 51.9**	**+1.5**
KONT	**Konya--Tatoy**	**4.43**	**100**	*e*Pn		**Pn**	**09 32 51.9**	**+1.5**
VTS	**Vitosha**	**4.65**	**325**	*i* P		**Pn**	**09 32 52.8**	**-0.7**
VTS	**Vitosha**	**4.65**	**325**	*i* P		**Pn**	**09 32 52.8**	**-0.7**
VTS	**Vitosha**	**4.65**	**325**	*e*Pn		**Pn**	**09 32 53.3**	**-0.2**
MPEP	**Malo Peshtene**	**5.08**	**334**	*i* P		Pn	09 32 49.1	-10
BARS	**Barje**	**5.50**	**318**	*e*Pn		**Pn**	**09 33 05.8**	**+0.8**

MEX 24 09:43:04.8±0.7, 15°67'N×95°83'W, h24km±11km, MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**0.29**	**289**	*i* P	Pb	09 43 10.2	-1.4
HUIG				*i* S	Sb	09 43 14.7	-1.5
PNIG	**Pinotepa**	**2.32**	**288**	*i* P	Pn	09 43 39.1	-2.5
PNIG				*i* S	Sn	09 44 06.5	-3.0
PCIG		**2.51**	**89**	*i* P	Pn	09 43 42.8	-1.4
PCIG				*i* S	Sn	09 44 10.4	-3.6
UTMO	**Huajuapan**	**2.86**	**319**	*i* P	Pn	09 43 46.8	-2.5
UTMO				*i* S	Sn	09 44 20.6	-2.6

IDC 24 09:49:40.0±1.2, 5°15'N×127°93'E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.5/23, mbtmp3.5/4, Error ellipse: s-maj=73.3km s-min=24.9km az=73.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**25.72**	**166**	P	P	09 55 12.5	+0.2
	0.5nm,0.7s,baz=344,slow=11,SNR=6.5						
STKA	**Stephens Creek**	**39.05**	**161**	P	P	09 57 08.6	-0.2
	0.8nm,0.5s,baz=336,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**57.10**	**324**	P	P	09 59 28.7	+0.4
	0.4nm,0.5s,baz=110,slow=8.6,SNR=6.5						
ILAR	**Eielson Array**	**83.31**	**25**	P	P	10 02 08.0	-0.6
	0.1nm,0.6s,baz=248,slow=5.3,SNR=5.0						

IDC 24 10:43:04.4±1.3, 6°60S×155°04E, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.7/20, mbtmp3.8/7, ML2.6/1, MS2.8/2, Ms1 2.8/2, ms1mx2.5/27, Error ellipse: s-maj=48.3km s-min=21.0km az=127.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**5.61**	**120**	LR	LR	10 46 26.8	
	comp=Z,70nm,19.0s,baz=206,slow=36						
PMG	**Port Moresby**	**8.29**	**250**	Pn	Pn	10 45 05.0	-1.0
	0.4nm,0.3s,baz=264,slow=18,SNR=2.4						
PMG				Sn	Sn	10 46 43.8	+3.5
	1.5nm,0.3s,baz=143,slow=20,SNR=3.6						
PMG				LR	LR	10 48 17.5	
	comp=Z,90nm,18.3s,baz=54,slow=38						
WRA	**Warramunga Arr**	**24.08**	**235**	P	P	10 48 22.0	+0.2
	2.5nm,0.7s,baz=60,slow=9.8,SNR=29						
WRA				PcP	PcP	10 52 03.7	+0.1
	0.3nm,0.4s,baz=56,slow=2.4,SNR=5.7						
ASAR	**Alice Springs**	**26.47**	**228**	P	P	10 48 43.4	-0.1
	0.8nm,0.6s,baz=60,slow=8.9,SNR=22						
STKA	**Stephens Creek**	**28.11**	**205**	P	P	10 48 58.0	-0.1
	0.8nm,0.7s,baz=72,slow=6.4,SNR=3.0						
FITZ	**Fitzroy Crossi**	**30.86**	**246**	P	P	10 49 22.5	-0.1
	0.6nm,0.6s,baz=67,slow=6.8,SNR=6.8						
SONM	**Songino Array**	**69.03**	**327**	P	P	10 54 12.2	+0.1
	0.2nm,0.4s,baz=146,slow=5.2,SNR=2.5						
ILAR	**Eielson Array**	**83.00**	**21**	P	P	10 55 31.3	+0.1
	0.1nm,0.3s,baz=242,slow=5.6,SNR=8.0						
TORD	**Torodi Ar. Bea**	**152.97**	**286**	PKPbc	PKPbc	11 03 04.3	-0.5
	0.5nm,0.5s,baz=91,slow=2.2,SNR=7.5						

*ATH **24** 10:51:27.8, 40°.57N×24°.16E, h22km±6km, MD2.8/5*
*CSEM **24** 10:51:27.7±0.4, 40°.56N×24°.17E, h15km, ML2.3/3, Error ellipse: s-maj=7.7km s-min=5.6km az=119.0*
*THE **24** 10:51:28.5, 40°.58N×24°.18E, h13km±7km, ML2.3/3, Error ellipse: s-maj=7.2km s-min=0.8km az=158.0*

ISC 24 10:51:27.8±1.4, 40°.55N±0°.04×24°.17E±0°.05, h26km±12km, n18, σ0s31/30, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.26**	**214**	P	**Pb**	**10 51 34.4**	**+0.1**
OUR				S	**Sb**	**10 51 38.7**	**0.0**
OUR	**Ouranopolis**	**0.26**	**214**	P	**Pb**	**10 51 34.4**	**+0.1**
OUR				S	**Sb**	**10 51 38.7**	**0.0**
KAVA	**Kavala**	**0.52**	**30**	P	**Pb**	**10 51 38.4**	**+0.1**
KAVA				S	**Sb**	**10 51 45.3**	**-0.2**
KAVA	**Kavala**	**0.52**	**30**	P	**Pb**	**10 51 38.4**	**+0.1**
KAVA				S	**Sb**	**10 51 45.3**	**-0.2**
PLG	**Polygyros**	**0.58**	**253**	*e*PN	**Pb**	**10 51 39.6**	**+0.2**
PLG				*e*SN	**Sb**	**10 51 47.1**	**-0.2**
PLG	**Polygyros**	**0.58**	**253**	*e*Pn	**Pb**	**10 51 39.6**	**+0.2**
PLG				*e*Sn	**Sb**	**10 51 47.1**	**-0.2**
SOH	**Sokhos**	**0.68**	**294**	P	**Pb**	**10 51 40.8**	**-0.2**
SOH				S	**Sn**	**10 51 51.8**	**+0.2**
SOH	**Sokhos**	**0.68**	**294**	*e*PN	**Pb**	**10 51 41.0**	**-0.1**
SOH				*e*SN	**Sb**	**10 51 49.4**	**-0.7**
SOH	**Sokhos**	**0.68**	**294**	P	**Pb**	**10 51 40.8**	**-0.2**
SOH	**Sokhos**	**0.68**	**294**	*e*Pn	**Pb**	**10 51 41.0**	**-0.1**
SOH				*e*Sn	**Sb**	**10 51 49.4**	**-0.7**
SOH				S	**Sn**	**10 51 51.8**	**+0.2**
SRS	**Serrai**	**0.72**	**322**	P	**Pb**	**10 51 41.4**	**-0.3**
SRS				S	**Sb**	**10 51 51.5**	**+0.3**
SRS	**Serrai**	**0.72**	**322**	P	**Pb**	**10 51 41.4**	**-0.3**
SRS				S	**Sb**	**10 51 51.5**	**+0.3**
PAIG	**Paliouri**	**0.73**	**211**	*e*PB	**Pb**	**10 51 41.5**	**-0.3**
PAIG	**Paliouri**	**0.73**	**211**	*e*Pb	**Pb**	**10 51 41.5**	**-0.3**
NVR	**Nevrokopi**	**0.83**	**344**	*e*PN	**Pb**	**10 51 43.5**	**-0.2**
NVR	**Nevrokopi**	**0.83**	**344**	*e*Pn	**Pb**	**10 51 43.5**	**-0.2**
GRG	**Griva**	**1.40**	**287**	*e*PN	**Pb**	**10 51 53.8**	**+0.5**
GRG	**Griva**	**1.40**	**287**	*e*Pn	**Pb**	**10 51 53.8**	**+0.5**

*ATH **24** 10:56:31.6, 40°.56N×24°.08E, h36km±4km, MD3.1/10*
*CSEM **24** 10:56:31.5±0.2, 40°.56N×24°.14E, h15km, ML2.6/3, Error ellipse: s-maj=4.0km s-min=3.3km az=114.0*
*ISCJB **24** 10:56:31.5±0.6, 40°.58N±0°.02×24°.11E±0°.04, h14km±4km, Error ellipse: s-maj=5.0km s-min=3.8km az=9.3*
*THE **24** 10:56:31.6, 40°.57N×24°.18E, h17km±1km, ML2.6/3, Error ellipse: s-maj=2.0km s-min=0.6km az=110.0*
*SKO **24** 10:56:33.8, 40°.66N×24°.10E, h2km*
*BEO **24** 10:56:35.7±1.4, 40°.63N×24°.20E, h0km, ML1.7/4*

ISC 24 10:56:32.1±1.0, 40°.55N±0°.02×24°.09E±0°.03, h21km±2km, n38, σ1s01/61, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUR	**Ouranopolis**	**0.23**	**200**	P	**Pb**	**10 56 37.8**	**-0.1**
OUR				S	**Sb**	**10 56 42.1**	**+0.1**
OUR	**Ouranopolis**	**0.23**	**200**	P	**Pb**	**10 56 37.8**	**-0.1**
OUR				S	**Sb**	**10 56 42.1**	**+0.1**
PLG	**Polygyros**	**0.52**	**250**	*e*PN	**Pb**	**10 56 42.8**	**+0.2**
PLG				*e*SN	**Sb**	**10 56 50.6**	**+0.9**
PLG	**Polygyros**	**0.52**	**250**	*e*Pn	**Pb**	**10 56 42.8**	**+0.2**
PLG				*e*Sn	**Sb**	**10 56 50.6**	**+0.9**
KAVA	**Kavala**	**0.55**	**36**	P	**Pb**	**10 56 41.8**	**-1.3**
KAVA				S	**Sb**	**10 56 48.5**	**-2.1**
KAVA	**Kavala**	**0.55**	**36**	P	**Pb**	**10 56 41.8**	**-1.3**
KAVA				S	**Sb**	**10 56 48.5**	**-2.1**
SOH	**Sokhos**	**0.62**	**296**	P	**Pb**	**10 56 44.4**	**+0.1**
SOH	**Sokhos**	**0.62**	**296**	*e*PN	**Pb**	**10 56 44.4**	**+0.1**
SOH				*e*SN	**Sb**	**10 56 53.0**	**+0.3**
SOH	**Sokhos**	**0.62**	**296**	P	**Pb**	**10 56 44.4**	**+0.1**
SOH				*e*Sn	**Sb**	**10 56 53.0**	**+0.3**
SRS	**Serrai**	**0.68**	**327**	P	**Pb**	**10 56 44.8**	**-0.5**
SRS				S	**Sb**	**10 56 55.1**	**+0.8**
SRS	**Serrai**	**0.68**	**327**	P	**Pb**	**10 56 44.8**	**-0.5**
SRS				S	**Sb**	**10 56 55.1**	**+0.8**
PAIG	**Paliouri**	**0.70**	**207**	P	**Pb**	**10 56 45.9**	**+0.4**
PAIG				S	**Sn**	**10 56 56.0**	**-0.9**
PAIG	**Paliouri**	**0.70**	**207**	*e*PN	**Pb**	**10 56 45.9**	**+0.4**
PAIG				*e*SN	**Sn**	**10 56 55.7**	**-1.2**
PAIG	**Paliouri**	**0.70**	**207**	P	**Pb**	**10 56 45.9**	**+0.4**
PAIG				*e*Sn	**Sn**	**10 56 55.7**	**-1.2**
PAIG				S	**Sn**	**10 56 56.0**	**-0.9**
NVR	**Nevrokopi**	**0.82**	**348**	*e*PB	**Pb**	**10 56 46.8**	**-0.8**
NVR				*e*SN	**Sn**	**10 56 59.6**	**-0.3**
NVR	**Nevrokopi**	**0.82**	**348**	*e*Pb	**Pb**	**10 56 46.8**	**-0.8**
NVR				*e*Sn	**Sn**	**10 56 59.6**	**-0.3**
LIA	**Limnos Island**	**1.06**	**127**	*e*PB	**Pn**	**10 56 51.3**	**-0.4**
LIA				*e*SN	**Sn**	**10 57 07.4**	**+1.5**
LIA	**Limnos Island**	**1.06**	**127**	*e*Pb	**Pn**	**10 56 51.3**	**-0.4**
LIA				*e*Sn	**Sn**	**10 57 07.4**	**+1.5**
SMTH	**Samothraki Isl**	**1.10**	**94**	*e*PN	**Pb**	**10 56 53.0**	**+0.6**
SMTH	**Samothraki Isl**	**1.10**	**94**	*e*Pn	**Pb**	**10 56 53.0**	**+0.6**
LIT	**Litokhoron**	**1.30**	**250**	*e*PN	**Pb**	**10 56 55.3**	**-0.5**
LIT	**Litokhoron**	**1.30**	**250**	*e*Pn	**Pb**	**10 56 55.3**	**-0.5**
GRG	**Griva**	**1.34**	**288**	*e*PN	**Pb**	**10 56 57.3**	**+0.8**
GRG	**Griva**	**1.34**	**288**	*e*Pn	**Pb**	**10 56 57.3**	**+0.8**
VAY	**Valandovo**	**1.38**	**304**	*e*Pn	**Pb**	**10 56 57.8**	**+0.6**
VAY				*e*Sg	**Sb**	**10 57 16.2**	**+1.8**
AOS	**Alonnisos**	**1.39**	**187**	*e*PB	**Pn**	**10 56 55.5**	**-0.7**
AOS	**Alonnisos**	**1.39**	**187**	*e*Pb	**Pn**	**10 56 55.5**	**-0.7**
NEO	**Neokhori**	**1.41**	**208**	*e*PN	**Pb**	**10 56 57.8**	**+0.1**
NEO	**Neokhori**	**1.41**	**208**	*e*Pn	**Pb**	**10 56 57.8**	**+0.1**
ALN	**Alexandroupoli**	**1.53**	**76**	*e*PB	**Pn**	**10 56 57.7**	**-0.4**
ALN	**Alexandroupoli**	**1.53**	**76**	*e*Pb	**Pn**	**10 56 57.7**	**-0.4**
PLD	**Plovdiv**	**1.62**	**16**	*e*Pg	**Pb**	**10 57 02.9**	**+1.6**
PLD				*e*Sg	**Sb**	**10 57 23.7**	**+2.4**
PLD	**Plovdiv**	**1.62**	**16**	*e*Pg	**Pb**	**10 57 02.9**	**+1.6**
PLD				*e*Sg	**Sb**	**10 57 23.7**	**+2.4**
VTS	**Vitosha**	**2.14**	**342**	*e*PN	**Pb**	**10 57 11.8**	**+1.5**
VTS	**Vitosha**	**2.14**	**342**	*e*Pn	**Pb**	**10 57 11.8**	**+1.5**
BARS	**Barje**	**2.83**	**324**	*e*PN	**Pb**	**10 57 21.2**	**-0.7**
BARS				*e*Sn	**Sb**	**10 57 55.9**	**-0.2**
BARS	**Barje**	**2.83**	**324**	*e*Pn	**Pb**	**10 57 21.2**	**-0.7**
ZAPS	**Zavoj**	**2.93**	**339**	*e*Pn	**Pb**	**10 57 24.1**	**+0.5**
ZAPS				*e*Sn	**Sb**	**10 57 58.4**	**-0.6**

*IDC **24** 10:57:12.3±4.5, 36°.24N×70°.40E, h164km±38km, mb3.3/8, mb1 3.3/13, mb1mx3.2/32, mbtmp3.2/13, Error ellipse: s-maj=30.9km s-min=19.0km az=30.0*
*ISCJB **24** 10:57:16.0±0.5, 36°.47N±0°.03×70°.43E±0°.07, h204km, mb3.3/7, Error ellipse: s-maj=8.5km s-min=3.8km az=156.6*
*NNC **24** 10:57:19.9±7.3, 36°.91N×69°.92E, h142km±92km, mb3.1, mpv4.1, Error ellipse: s-maj=59.3km s-min=27.4km az=13.0*

ISC 24 10:57:16.4±0.7, 36°.50N±0°.06×70°.41E±0°.08, h204km, n43, σ1s37/47, mb3.4/7, 3C-5D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.94**	**155**	⇑P	**Pn**	**10 58 06.7**	**+1.0**
CEP				S	**S**	**10 58 41.0**	**-2.6**
CHCP	**Chirah Chowk**	**3.67**	**140**	P	**Pn**	**10 58 15.2**	**+0.8**
THN	**Thein Dam**	**5.97**	**131**	*e*PKP	**Pn**	**10 58 41.6**	**-1.7**
THN				*e*S	**S**	**10 59 48.0**	**-3.8**
DLH	**Dalhousie**	**6.05**	**129**	*e*PKP	**Pn**	**10 58 45.0**	**+0.4**
DLH				*ex*	**S**	**10 59 54.0**	**-0.1**
AML	**Almayashu**	**6.17**	**23**	P	**Pn**	**10 58 46.9**	**+0.6**
	SNR=57						
UCH	**Uchtor**	**6.54**	**28**	P	**S**	**11 00 04.4**	**-1.6**
	SNR

MS4.8/16,Error ellipse: s-maj=11.6km s-min=3.6km az=65.9

SZGRF ***24*** *11:12:20.1, 1.04S×16.15W,h37km,mb5.1,MS4.6,North of Ascension Island*

IDC ***24*** *11:12:20.2±0.4,0.25N×16.91W,h0km,mb4.5/29, mb1 4.7/32,mb1mx4.6/34,mbtmp4.6/32,ML4.9/3,MS4.6/27, Ms1 4.6/27,ms1mx4.6/28,Error ellipse: s-maj=14.2km s-min=10.8km az=132.0*

BJI ***24*** *11:12:21.6,0.20N×16.90W,h10km,mB5.5/5,mb5.4/1, Ms5.3/9,Ms7 4.9/10*

NEIC ***24*** *11:12:22.0±0.2,0.18N×16.88W,h10km,mb5.2/32,Error ellipse: s-maj=7.2km s-min=5.0km az=135.0*

GCMT ***24*** *11:12:26.4±0.1,0.30N×17.02W,h17km,MW5.3,Moment Tensor Solution. s61,c94; s95,c173; Moment tensor: Scale 10¹⁷Nm; Mrr0.00; Mθθ0.00; Mφφ0.00; Mrθ0.00; Mθφ0.00; Mφr0.00; Best double couple: M₀1.10000×10¹⁷ NP1:φs178.00000°,δ68.00000°,λ26.00000°. NP2: φs178.00000°,δ68.00000°,λ26.00000°. Principal axes: T 1.0300, Plg33.0000°, Azm38.0000°; N 0.1200, Plg57.0000°, Azm216.0000°; P -1.1500, Plg1.0000°, Azm307.0000°; Data Used: ll IU G CN IC.*

ISC 24 11:12:22.6±0.5,**0.19N**±0.06×**16.89W**±0.06,**h15**km±2km, **n725**,σ1°**04**/767,**mb5.0**/171,**MS4.7**/50,**165C-127D,North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LIC	**Lamto**	**13.27**	**63**	*e*Pn	**Pn**	**11 15 28.4**	**-2.2**
	baz=252						
LIC				*e*Sn	Sn	11 17 49.7	-8.3
	30nm,0.2s						
LIC				*e*R			
	3μm,20.2s						
LIC	**Lamto**	**13.27**	**63**	*e*Pn	**Pn**	**11 15 28.4**	**-2.2**
LIC				*e*Sn	Sn	11 17 49.7	-8.3
DBIC	**Dimbokro**	**13.62**	**62**	*e*Pn	**Pn**	**11 15 33.8**	**-1.6**
DBIC				Sn	Sn	11 17 53.8	-13
DBIC				*e*Sn	Sn	11 17 58.1	-8.5
DBIC	**Dimbokro**	**13.62**	**62**	Pn	**Pn**	**11 15 33.6**	**-1.8**
	7.9nm,0.3s,baz=235,slow=14,SNR=96						
DBIC				Sn	Sn	11 17 53.8	-13
	9.5nm,0.3s,baz=139,slow=13,SNR=6.2						
DBIC				LR	LR	11 19 53.2	
	comp=Z,3μm,19.6s,baz=218,slow=33						
BBTS	**Babate**	**14.38**	**1**	Pn	**Pn**	**11 15 43.9**	**-1.9**
BBTS				Sn	Sn	11 18 10.5	-15
BBTS	**Babate**	**14.38**	**1**	Pn	**Pn**	**11 15 43.9**	**-1.9**
	4.1nm,0.3s,baz=330,slow=3.0,SNR=5.9						
BBTS				Sn	Sn	11 18 10.5	-15
	7.5nm,0.3s,baz=12,slow=22,SNR=13						
BBTS				LR	LR	11 20 53.7	
	comp=Z,5μm,18.4s,baz=187,slow=36						
RCBR	**Riachuelo**	**19.90**	**252**	*e*P	**Pn**	**11 16 54.2**	**-1.3**
	328nm,2.3s						
RCBR				S	S	11 20 15.2	-22
RCBR	**Riachuelo**	**19.90**	**252**	P	**P**	**11 16 53.8**	**0.0**
	4.4nm,0.3s,baz=79,slow=14,SNR=42						
RCBR				S	S	11 20 15.2	-22
	0.9nm,0.3s,baz=80,slow=18,SNR=7.1						
RCBR				LR	LR	11 22 32.0	
	comp=Z,2μm,19.3s,baz=68,slow=31						
TOA0	**Torodi Ar. Sit**	**22.47**	**54**	*e*P	**P**	**11 17 19.9**	**-1.6**
TORD	**Torodi Ar. Bea**	**22.47**	**54**	P	**P**	**11 17 20.3**	**-1.3**
TORD	**Torodi Ar. Bea**	**22.47**	**54**	P	**P**	**11 17 20.3**	**-1.3**
	19nm,0.6s,baz=235,slow=11,SNR=70						
TORD				LR	LR	11 25 23.5	
	comp=Z,3μm,20.2s,baz=235,slow=35						
TAM	**Tamanrasset**	**31.31**	**43**	*e*P	**P**	**11 18 43.7**	**+1.1**
TAM				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TAM	**Tamanrasset**	**31.31**	**43**	*e*P	**P**	**11 18 43.7**	**+1.1**
	comp=Z,10.0nm,0.9s						
PMOZ	**Porto Moniz, M**	**32.46**	**360**	*e*P	**P**	**11 18 53.7**	**+1.2**
	comp=Z,59nm,1.1s						
PMOZ				*e*LR	LR	11 29 30.2	
	comp=Z,731nm,16.0s						
PMPST	**Porto Santo, M**	**32.72**	**1**	*e*P	**P**	**11 18 54.8**	**+0.1**
	comp=Z,62nm,1.6s						
MDT	**Midelt**	**34.45**	**18**	P	**P**	**11 19 11.2**	**+1.3**
MDT	**Midelt**	**34.45**	**18**	P	**P**	**11 19 11.2**	**+1.3**
	comp=Z,13nm,1.1s,baz=217,slow=7.9,SNR=20						
BDFB	**Brasilia**	**34.53**	**241**	P	**P**	**11 19 11.7**	**+0.8**
BDFB	**Brasilia**	**34.53**	**241**	P	**P**	**11 19 11.7**	**+0.8**
	comp=Z,18nm,0.9s,baz=64,slow=9.0,SNR=13						
BDFB				LR	LR	11 31 04.5	
	comp=Z,917nm,19.8s,baz=209,slow=33						
PFVI	**Vila Bisbo**	**37.51**	**11**	*e*P	**P**	**11 19 36.1**	**+0.2**
	comp=Z,40nm,1.2s						
MORF	**Marmelete**	**37.71**	**11**	*e*P	**P**	**11 19 38.3**	**+0.6**
	comp=Z,34nm,1.4s						
MORF	**Marmelete**	**37.71**	**11**	*e*P	**P**	**11 19 39.0**	**+1.3**
MORF				*e*		11 21 04.3	
MORF				*e*S	**S**	**11 25 29.9**	**+2.4**
PBDV	**Barranco-do-Ve**	**37.79**	**12**	*i* P	**P**	**11 19 38.7**	**+0.4**
	comp=Z,83nm,1.6s						
PTEO	**Sao Teotonio**	**37.93**	**11**	*e*P	**P**	**11 19 40.6**	**+1.2**
	comp=Z,95nm,1.6s						
PVAQ	**Vaqueiros**	**37.99**	**12**	*e*P	**P**	**11 19 39.7**	**-0.3**
	comp=Z,81nm,1.7s						
PVAQ				*e*LR	LR	11 31 00.2	
	comp=Z,377nm,16.0s						
PCVE	**Castro Verde**	**38.14**	**11**	*i* P	**P**	**11 19 42.2**	**+0.9**
	comp=Z,46nm,1.7s						
MESJ	**Messejana**	**38.31**	**11**	*e*P	**P**	**11 19 44.2**	**+1.6**
MESJ				AMb	AMB	11 19 47.0	
	comp=Z,48nm,1.5s						
MESJ				*e*S	**S**	**11 25 39.2**	**+2.8**
MESJ	**Messejana**	**38.31**	**11**	*e*P	**P**	**11 19 44.2**	**+1.6**
	comp=Z,48nm,1.5s						
MESJ				*e*S	**S**	**11 25 39.3**	**+2.8**
MESJ	**Messejana**	**38.31**	**11**	*e*P	**P**	**11 19 44.2**	**+1.6**
MESJ				*e*S	**S**	**11 25 39.2**	**+2.8**
PNCL	**Nicolau / Gran**	**38.51**	**11**	*i* P	**P**	**11 19 45.4**	**+1.0**
	comp=Z,46nm,1.7s						
PBEJ	**Beja**	**38.56**	**11**	*e*P	**P**	**11 19 45.8**	**+1.0**
PBAR	**Barrancos**	**38.87**	**12**	*i* P	**P**	**11 19 48.0**	**+0.6**
	comp=Z,27nm,1.5s						
TSUM	**Tsumeb**	**38.92**	**122**	P	**P**	**11 19 49.1**	**+0.8**
TSUM	**Tsumeb**	**38.92**	**122**	P	**P**	**11 19 49.1**	**+0.8**
	comp=Z,7.6nm,1.0s,baz=320,slow=8.4,SNR=4.9						
EVOP	**Sao Brissos**	**38.99**	**11**	⇑*i*P	**P**	**11 19 49.6**	**+1.2**
EVOP				pmax	pmax		
	comp=Z,96nm,1.4s						
EVOP	**Sao Brissos**	**38.99**	**11**	⇑*i*P	**P**	**11 19 49.6**	**+1.2**
	comp=Z,96nm,1.4s						
LIS	**Lisbon**	**38.99**	**10**	*e*P	**P**	**11 19 49.9**	**+1.5**
LIS				AMb	AMB	11 19 57.4	
	comp=Z,64nm,1.3s						
LIS				*e*PP	**PnPn**	**11 21 19.3**	**-1.0**
LIS				*e*S	**S**	**11 25 49.2**	**+2.4**
LIS	**Lisbon**	**38.99**	**10**	*e*P	**P**	**11 19 49.9**	**+1.5**
	comp=Z,64nm,1.3s						
LIS	**Lisbon**	**38.99**	**10**	*e*P	**P**	**11 19 49.8**	**+1.5**
LIS				*e*		11 21 19.3	
LIS				*e*S	**S**	**11 25 49.1**	**+2.4**
EVO	**Evora**	**39.02**	**11**	*e*P	**P**	**11 19 49.4**	**+0.8**
EVO	**Evora**	**39.02**	**11**	⇑*i*P	**P**	**11 19 49.6**	**+1.0**
	comp=Z,96nm,1.4s						
EVO				*e*R			
	comp=Z,907nm,20.8s						
PMAFR	**Mafra**	**39.20**	**9**	*e*P	**P**	**11 19 51.5**	**+1.3**
	comp=Z,67nm,1.6s						
PESTR	**Estremoz**	**39.42**	**11**	*i* P	**P**	**11 19 51.7**	**-0.3**
	comp=Z,24nm,2.1s						
PMTG	**Montargil**	**39.50**	**11**	*i* P	**P**	**11 19 53.6**	**+1.0**
	comp=Z,45nm,1.6s						
PTOM	**Tomar**	**40.00**	**10**	*e*P	**P**	**11 19 55.9**	**-0.9**
	comp=Z,72nm,1.7s						
PMRV	**Marv??o**	**40.01**	**11**	*i* P	**P**	**11 19 58.1**	**+1.2**
	comp=Z,50nm,1.9s						
PMRV				*e*LR	LR	11 33 26.6	
	comp=Z,544nm,18.0s						
PAB	**San Pablo**	**40.81**	**15**	*e*P	**P**	**11 20 04.4**	**+0.8**
PAB				pmax	pmax		
	comp=Z,60nm,1.4s						
PAB	**San Pablo**	**40.81**	**15**	*e*P	**P**	**11 20 04.4**	**+0.8**
	comp=Z,60nm,1.4s						
MTE	**Manteigas**	**40.91**	**11**	*i* P	**P**	**11 20 05.4**	**+1.0**
	comp=Z,44nm,1.7s						
MTE				*i* P	PKiKP	11 29 21.5	+7.8
MTE				*e*LR	LR	11 33 30.6	
	comp=Z,787nm,14.0s						
MTE	**Manteigas**	**40.91**	**11**	*e*P	**P**	**11 20 05.2**	**+0.8**
	comp=Z,22nm,0.9s						
ESDC	**Sonseca Array**	**41.03**	**15**	P	**P**	**11 20 06.6**	**+1.2**
ESDC				PP	**PP**	**11 21 38.2**	**-2.1**
ESDC	**Sonseca Array**	**41.03**	**15**	P	**P**	**11 20 06.6**	**+1.2**
	comp=Z,0.4nm,0.3s,baz=202,slow=7.2,SNR=17						
ESDC				PP	**PP**	**11 21 38.2**	**-2.1**
	comp=Z,0.3nm,0.3s,baz=198,slow=7.7,SNR=2.9						
ESDC				LR	LR	11 37 50.7	
	comp=Z,698nm,18.2s,baz=180,slow=37						
ESLA	**Sonseca Array**	**41.03**	**15**	*e*P	**P**	**11 20 06.9**	**+1.5**
	comp=Z,14nm,1.5s						
PVIS	**Viseu**	**41.16**	**10**	*e*P	**P**	**11 20 08.0**	**+1.6**
PVRL	**Vila Real**	**41.73**	**10**	*e*P	**P**	**11 20 12.7**	**+1.6**
MVO	**Moncorvo**	**41.75**	**11**	*i* P	**P**	**11 20 11.4**	**+0.1**
	comp=Z,57nm,1.7s						
MVO				*i* P	PKiKP	11 29 21.5	+7.1
MVO				*e*LR	LR	11 33 40.0	
	comp=Z,633nm,20.0s						
POLO	**Lamas de Olo**	**41.81**	**10**	*e*P	**P**	**11 20 11.7**	**-0.1**
	comp=Z,15nm,1.5s						
PGAV	**Gavieira, Arco**	**42.31**	**10**	*e*LR	LR	11 32 59.7	
	comp=Z,782nm,22.0s						
PBRG	**Braganca**	**42.43**	**11**	*e*P	**P**	**11 20 18.7**	**+1.9**
KEST	**Kesra**	**42.97**	**32**	P	**P**	**11 20 22.5**	**+1.2**
KEST	**Kesra**	**42.97**	**32**	P	**P**	**11 20 22.5**	**+1.2**
	comp=Z,3.1nm,0.7s,baz=165,slow=4.1,SNR=7.5						
KEST				LR	LR	11 39 14.4	
	comp=Z,1μm,19.2s,baz=18,slow=38						
ETSF	**Etsaut**	**44.97**	**17**	*e*P	**P**	**11 20 37.9**	**+0.6**
	comp=Z,92nm,1.5s						
ETSF	**Etsaut**	**44.97**	**17**	*e*P	**P**	**11 20 37.9**	**+0.6**
ETSF				pmax	pmax		
	comp=Z,93nm,1.5s						
ETSF	**Etsaut**	**44.97**	**17**	*e*P	**P**	**11 20 37.9**	**+0.6**
	comp=Z,92nm,1.5s						
SJPF	**Ste Jean**	**44.98**	**16**	*e*P	**P**	**11 20 37.9**	**+0.6**
	comp=Z,67nm,1.2s						
SJPF	**Ste Jean**	**44.98**	**16**	*e*P	**P**	**11 20 37.9**	**+0.6**
SJPF				pmax	pmax		
	comp=Z,67nm,1.2s						
SJPF	**Ste Jean**	**44.98**	**16**	*e*P	**P**	**11 20 37.9**	**+0.6**
	comp=Z,67nm,1.2s						
LABF	**Labassere**	**45.30**	**18**	*e*P	**P**	**11 20 41.4**	**+1.5**
VALF	**Valcebollere**	**45.34**	**20**	*e*P	**P**	**11 20 41.2**	**+0.9**
VALF	**Valcebollere**	**45.34**	**20**	*e*P	**P**	**11 20 41.2**	**+0.9**
EPF	**Esparros**	**45.36**	**18**	*e*P	**P**	**11 20 41.0**	**+0.6**
	comp=Z,168nm,1.9s						
EPF	**Esparros**	**45.36**	**18**	*e*P	**P**	**11 20 41.0**	**+0.6**
EPF				pmax	pmax		
	comp=Z,168nm,1.9s						
EPF	**Esparros**	**45.36**	**18**	*e*P	**P**	**11 20 41.0**	**+0.6**
	comp=Z,168nm,1.9s						
SALF	**Salau**	**45.38**	**19**	*e*P	**P**	**11 20 42.0**	**+1.4**
MLS	**Moulis**	**45.53**	**19**	*e*P	**P**	**11 20 43.0**	**+1.3**
MLS	**Moulis**	**45.53**	**19**	*e*P	**P**	**11 20 43.0**	**+1.3**
MTLF	**Montolieu**	**46.24**	**19**	*e*P	**P**	**11 20 47.0**	**-0.2**
	comp=Z,23nm,1.0s						
MTLF	**Montolieu**	**46.24**	**19**	*e*P	**P**	**11 20 47.0**	**-0.2**
MTLF				pmax	pmax		
	comp=Z,23nm,1.0s						
MTLF	**Montolieu**	**46.24**	**19**	*e*P	**P**	**11 20 47.0**	**-0.2**
	comp=Z,23nm,1.0s						
SAML	**Samuel**	**46.99**	**258**	*e*P	**P**	**11 20 52.5**	**-1.1**
	comp=Z,35nm,1.0s						
CPUP	**Villa Florida**	**47.03**	**233**	P	**P**	**11 20 54.1**	**+0.3**
CPUP	**Villa Florida**	**47.03**	**233**	P	**P**	**11 20 54.1**	**+0.3**
	comp=Z,2.4nm,0.6s,baz=52,slow=9.4,SNR=7.3						
CPUP				LR	LR	11 38 59.1	
	comp=Z,1μm,18.3s,baz=1.5,slow=34						
LSZ	**Lusaka**	**47.11**	**111**	P	**P**	**11 20 55.6**	**+1.0**
LSZ	**Lusaka**	**47.11**	**111**	P	**P**	**11 20 55.6**	**+1.0**
	comp=Z,2.6nm,0.7s,baz=66,slow=5.8,SNR=5.3						
LFF	**La Frestale**	**47.22**	**17**	*e*P	**P**	**11 20 55.4**	**+0.5**
	comp=Z,84nm,1.1s						
LFF	**La Frestale**	**47.22**	**17**	*e*P	**P**	**11 20 55.4**	**+0.5**
LFF				pmax	pmax		
	comp=Z,84nm,1.1s						
LFF	**La Frestale**	**47.22**	**17**	*e*P	**P**	**11 20 55.4**	**+0.5**
	comp=Z,84nm,1.1s						
LASF	**Ste Croix**	**47.45**	**20**	*e*P	**P**	**11 20 57.0**	**+0.3**
	comp=Z,127nm,1.7s						
LASF	**Ste Croix**	**47.45**	**20**	*e*P	**P**	**11 20 57.0**	**+0.3**
	comp=Z,127nm,1.7s						
CAF	**Calviac**	**47.61**	**18**	*e*P	**P**	**11 20 57.9**	**-0.1**
	comp=Z,45nm,1.1s						
CAF	**Calviac**	**47.61**	**18**	*e*P	**P**	**11 20 57.9**	**-0.1**
CAF				pmax	pmax		
	comp=Z,45nm,1.1s						
CAF	**Calviac**	**47.61**	**18**	*e*P	**P**	**11 20 57.9**	**-0.1**
	comp=Z,45nm,1.1s						
RJF	**Les Rejaudoux**	**47.78**	**18**	*e*P	**P**	**11 20 59.4**	**+0.1**
	comp=Z,48nm,1.1s						
RJF				*e*R			
	comp=Z,1μm,20.8s						
RJF	**Les Rejaudoux**	**47.78**	**18**	*e*P	**P**	**11 20 59.4**	**+0.1**
RJF				pmax	pmax		
	comp=Z,48nm,1.1s						
RJF	**Les Rejaudoux**	**47.78**	**18**	*e*P	**P**	**11 20 59.4**	**+0.1**
	comp=Z,48nm,1.1s						
LMR	**La Mourre**	**47.78**	**23**	*e*P	**P**	**11 20 59.5**	**+0.2**
	comp=Z,76nm,1.2s						
LMR	**La Mourre**	**47.78**	**23**	*e*P	**P**	**11 20 59.5**	**+0.2**
LMR				pmax	pmax		
	comp=Z,76nm,1.2s						
LMR	**La Mourre**	**47.78**	**23**	*e*P	**P**	**11 20 59.5**	**+0.2**
	comp=Z,76nm,1.2s						
SMRF	**Simiane la Rot**	**47.98**	**22**	*e*P	**P**	**11 21 01.8**	**+1.0**
	comp=Z,86nm,1.5s						
SMRF	**Simiane la Rot**	**47.98**	**22**	*e*P	**P**	**11 21 01.8**	**+1.0**
	comp=Z,86nm,1.5s						
FRF	**La Foret Royal**	**48.03**	**23**	*e*P	**P**	**11 21 01.4**	**+0.2**
	comp=Z,43nm,1.2s						
FRF	**La Foret Royal**	**48.03**	**23**	*e*P	**P**	**11 21 01.4**	**+0.2**
FRF				pmax	pmax		
	comp=Z,43nm,1.2s						
FRF	**La Foret Royal**	**48.03**	**23**	*e*P	**P**	**11 21 01.4**	**+0.2**
	comp=Z,43nm,1.2s						
LBTB	**Lobatse**	**48.11**	**125**	P	**P**	**11 21 02.5**	**+0.1**
LBTB	**Lobatse**	**48.11**	**125**	P	**P**	**11 21 02.5**	**+0.1**
	comp=Z,3.3nm,0.8s,baz=298,slow=16,SNR=2.9						
PGF	**Pioggiola**	**48.16**	**26**	*e*P	**P**	**11 21 02.7**	**+0.3**
	comp=Z,39nm,1.2s						
PGF	**Pioggiola**	**48.16**	**26**	*e*P	**P**	**11 21 02.7**	**+0.3**
PGF				pmax	pmax		
	comp=Z,39nm,1.2s						
PGF	**Pioggiola**	**48.16**	**26**	*e*P	**P**	**11 21 02.7**	**+0.3**
	comp=Z,39nm,1.2s						
LBL	**Lubilhac**	**48.26**	**19**	*e*P	**P**	**11 21 05.3**	**+2.2**
LBL	**Lubilhac**	**48.26**	**19**	*e*P	**P**	**11 21 05.3**	**+2.2**
LBL	**Lubilhac**	**48.26**	**19**	*e*P	**P**	**11 21 05.3**	**+2.2**
CALN	**Calern**	**48.29**	**23**	*e*P	**P**	**11 21 04.7**	**+1.3**
CALN	**Calern**	**48.29**	**23**	*e*P	**P**	**11 21 04.7**	**+1.3**
CALN	**Calern**	**48.29**	**23**	*e*P	**P**	**11 21 04.7**	**+1.3**
VIVF	**Saint-Julien-l**	**48.41**	**20**	*e*P	**P**	**11 21 04.5**	**+0.3**
	comp=Z,37nm,1.2s						
VIVF	**Saint-Julien-l**	**48.41**	**20**	*e*P	**P**	**11 21 04.5**	**+0.3**
VIVF				pmax	pmax		
	comp=Z,37nm,1.2s						
VIVF	**Saint-Julien-l**	**48.41**	**20**	*e*P	**P**	**11 21 04.5**	**+0.3**
	comp=Z,37nm,1.2s						
MFF	**Saint Martin d**	**48.50**	**15**	*e*P	**P**	**11 21 04.6**	**-0.2**
	comp=Z,47nm,1.2s						
MFF	**Saint Martin d**	**48.50**	**15**	*e*P	**P**	**11 21 04.6**	**-0.2**
MFF				pmax	pmax		
	comp=Z,47nm,1.2s						
MFF	**Saint Martin d**	**48.50**	**15**	*e*P	**P**	**11 21 04.6**	**-0.2**
	comp=Z,47nm,1.2s						
SBF	**Sospel**	**48.59**	**23**	*e*P	**P**	**11 21 05.9**	**+0.3**
	comp=Z,57nm,1.0s						
SBF	**Sospel**	**48.59**	**23**	*e*P	**P**	**11 21 05.9**	**+0.3**
SBF				pmax	pmax		
	comp=Z,57nm,1.0s						
SBF	**Sospel**	**48.59**	**23**	*e*P	**P**	**11 21 05.9**	**+0.3**
	comp=Z,57nm,1.0s						
PYM	**Petit Puy Mans**	**48.64**	**19**	*e*P	**P**	**11 21 08.3**	**+2.3**
PYM	**Petit Puy Mans**	**48.64**	**19**	*e*P	**P**	**11 21 08.3**	**+2.3**
PYM	**Petit Puy Mans**	**48.64**	**19**	*e*P	**P**	**11 21 08.3**	**+2.3**
TOUF	**Mont Tournerai**	**48.65**	**23**	*e*P	**P**	**11 21 07.1**	**+0.9**
TOUF	**Mont Tournerai**	**48.65**	**23**	*e*P	**P**	**11 21 07.1**	**+0.9**
TOUF	**Mont Tournerai**	**48.65**	**23**	*e*P	**P**	**11 21 07.1**	**+0.9**
SSB	**Saint Sauveur**	**48.73**	**20**	*e*P	**P**	**11 21 06.4**	**-0.3**
SSB				pmax	pmax		
	comp=Z,24nm,1.6s						
SSB	**Saint Sauveur**	**48.73**	**20**	*e*P	**P**	**11 21 06.4**	**-0.3**
	comp=Z,24nm,1.6s						
SAOF	**Saorge**	**48.74**	**23**	*e*P	**P**	**11 21 07.6**	**+0.8**
SAOF	**Saorge**	**48.74**	**23**	*e*P	**P**	**11 21 07.6**	**+0.8**
TCF	**Toulx Ste Croi**	**48.88**	**18**	*e*P	**P**	**11 21 08.3**	**+0.6**
	comp=Z,157nm,1.9s						
TCF	**Toulx Ste Croi**	**48.88**	**18**	*e*P	**P**	**11 21 08.3**	**+0.6**
TCF				pmax	pmax		
	comp=Z,157nm,1.9s						
TCF	**Toulx Ste Croi**	**48.88**	**18**	*e*P	**P**	**11 21 08.3**	**+0.6**
	comp=Z,157nm,1.9s						
ORIF	**Oris-en-Rattie**	**48.90**	**21**	*e*P	**P**	**11 21 09.1**	**+1.1**
	comp=Z,40nm,1.2s						
ORIF				*e*R			
	comp=Z,1μm,18.2s						
ORIF	**Oris-en-Rattie**	**48.90**	**21**	*e*P	**P**	**11 21 09.1**	**+1.1**
ORIF				pmax	pmax		
	comp=Z,40nm,1.2s						
ORIF	**Oris-en-Rattie**	**48.90**	**21**	*e*P	**P**	**11 21 09.1**	**+1.1**
	comp=Z,40nm,1.2s						
AGO	**Saint Agoulin**	**48.95**	**18**	*e*P	**P**	**11 21 09.4**	**+1.1**
AGO	**Saint Agoulin**	**48.95**	**18**	*e*P	**P**	**11 21 09.4**	**+1.1**
QUIF	**Quistinic**	**49.01**	**12**	*e*P	**P**	**11 21 08.4**	**-0.2**
	comp=Z,124nm,1.6s						
QUIF	**Quistinic**	**49.01**	**12**	*e*P	**P**	**11 21 08.4**	**-0.2**
QUIF				pmax	pmax		
	comp=Z,124nm,1.6s						
QUIF	**Quistinic**	**49.01**	**12**	*e*P	**P**	**11 21 08.4**	**-0.2**
	comp=Z,124nm,1.6s						
MBDF	**Montbardon**	**49.06**	**22**	*e*P	**P**	**11 21 10.4**	**+1.1**
	comp=Z,48nm,1.0s						
MBDF	**Montbardon**	**49.06**	**22**	*e*P	**P**	**11 21 10.4**	**+1.1**
MBDF				pmax	pmax		
	comp=Z,48nm,1.0s						
MBDF	**Montbardon**	**49.06**	**22**	*e*P	**P**	**11 21 10.4**	**+1.1**
	comp=Z,48nm,1.0s						
BNI	**Bardonecchia**	**49.30**	**22**	*e*P	**P**	**11 21 13.1**	**+1.9**
BNI				pmax	pmax		
	comp=Z,22nm,1.0s						
BNI	**Bardonecchia**	**49.30**	**22**	*e*P	**P**	**11 21 13.1**	**+1.9**
	comp=Z,22nm,1.0s						
BGF	**Bois d'Agland**	**49.31**	**18**	*e*P	**P**	**11 21 11.6**	**+0.6**
	comp=Z,29nm,1.0s						
BGF	**Bois d'Agland**	**49.31**	**18**	*e*P	**P**	**11 21 11.6**	**+0.6**
BGF				pmax	pmax		
	comp=Z,29nm,1.0s						
BGF	**Bois d'Agland**	**49.31**	**18**	*e*P	**P**	**11 21 11.6**	**+0.6**
	comp=Z,29nm,1.0s						
BOSA	**Boshof**	**49.44**	**129**	P	**P**	**11 21 12.4**	**0.0**
BOSA	**Boshof**	**49.44**	**129**	P	**P**	**11 21 12.4**	**0.0**
	comp=Z,9.6nm,1.0s,baz=258,slow=6.1,SNR=4.3						
SGMF	**Saint Gilles**	**49.46**	**13**	*e*P	**P**	**11 21 12.1**	**0.0**
	comp=Z,101nm,1.4s						
SGMF	**Saint Gilles**	**49.46**	**13**	*e*P	**P**	**11 21 12.1**	**0.0**
SGMF				pmax	pmax		
	comp=Z,101nm,1.4s						
SGMF	**Saint Gilles**	**49.46**	**13**	*e*P	**P**	**11 21 12.1**	**0.0**
	comp=Z,101nm,1.4s						
TIP	**Timpagrande**	**49.53**	**34**	*e*P	**P**	**11 21 14.2**	**+1.4**
	comp=Z,86nm,1.5s						
AVF	**Avril sur Loir**	**49.68**	**18**	*e*P	**P**	**11 21 14.2**	**+0.4**
	comp=Z,34nm,1.1s						
AVF	**Avril sur Loir**	**49.68**	**18**	*e*P	**P**	**11 21 14.2**	**+0.4**
AVF				pmax	pmax		
	comp=Z,35nm,1.1s						
AVF	**Avril sur Loir**	**49.68**	**18**	*e*P	**P**	**11 21 14.2**	**+0.4**
	comp=Z,34nm,1.1s						
SMF	**Signal de Mont**	**49.70**	**19**	*e*P	**P**	**11 21 14.4**	**+0.4**
	comp=Z,35nm,1.4s						
SMF	**Signal de Mont**	**49.70**	**19**	*e*P	**P**	**11 21 14.4**	**+0.4**
SMF				pmax	pmax		
	comp=Z,35nm,1.4s						
SMF	**Signal de Mont**	**49.70**	**19**	*e*P	**P**	**11 21 14.4**	**+0.4**
	comp=Z,35nm,1.4s						
LPG	**La Plagne**	**49.71**	**22**	*e*P	**P**	**11 21 15.4**	**+1.0**
	comp=Z,56nm,1.1s						
LPG	**La Plagne**	**49.71**	**22**	*e*P	**P**	**11 21 15.4**	**+1.0**
LPG				pmax	pmax		
	comp=Z,56nm,1.1s						
LPG	**La Plagne**	**49.71**	**22**	*e*P	**P**	**11 21 15.4**	**+1.0**
	comp=Z,56nm,1.1s						
LPL	**La Plagne**	**49.72**	**22**	*e*P	**P**	**11 21 15.2**	**+0.8**
LPL	**La Plagne**	**49.72**	**22**	*e*P	**P**	**11 21 15.2**	**+0.8**
LPL	**La Plagne**	**49.72**	**22**	*e*P	**P**	**11 21 15.2**	**+0.8**
SSF	**Saint Saulge**	**49.97**	**18**	*e*P	**P**	**11 21 16.4**	**+0.4**
	comp=Z,144nm,1.9s						
SSF	**Saint Saulge**	**49.97**	**18**	*e*P	**P**	**11 21 16.4**	**+0.4**
SSF				pmax	pmax		
	comp=Z,144nm,1.9s						
SSF	**Saint Saulge**	**49.97**	**18**	*e*P	**P**	**11 21 16.4**	**+0.4**
	comp=Z,144nm,1.9s						
GRR	**Gorron**	**49.98**	**14**	*e*P	**P**	**11 21 15.9**	**-0.1**
	comp=Z,173nm,1.7s						
GRR	**Gorron**	**49.98**	**14**	*e*P	**P**	**11 21 15.9**	**-0.1**
GRR				pmax	pmax		
	comp=Z

BFO ep P pP 11 21 47.4 +6.1
BFO es P sP 11 21 52.3 +9.1
BFO Black Forest 52.69 21 *e* P **P 11 21 37.2 +0.8**
BFO pmax pmax
comp=Z,6.0nm,1.6s
BFO Black Forest 52.69 21 *e* P **P 11 21 36.4 0.0**
comp=Z,34nm,1.0s
BAIF Baives 52.85 17 *e* P **P 11 21 37.0 -0.6**
comp=Z,88nm,1.1s
BAIF Baives 52.85 17 *e* P **P 11 21 37.0 -0.6**
BAIF pmax pmax
comp=Z,88nm,1.1s
BAIF Baives 52.85 17 *e* P **P 11 21 37.0 -0.6**
comp=Z,88nm,1.1s
RETA Reutte 52.90 23⇓ *i* P **P 11 21 38.3 +0.2**
comp=Z,11nm,1.1s
DOU Dourbes 53.00 17 P **P 11 21 40.0 +1.3**
comp=Z,11nm,1.2s
ABTA Abfaltersbach 53.02 25⇓ *i* P **P 11 21 40.3 +1.3**
comp=Z,20nm,1.5s
JAVS Javornik 53.04 27 *i* P **P 11 21 39.6 +0.4**
LANF Langenberg 53.05 20 *e* P **P 11 21 39.5 +0.4**
LANF Langenberg 53.05 20 *e* P **P 11 21 39.5 +0.4**
LANF Langenberg 53.05 20 *e* P **P 11 21 39.5 +0.4**
VOY Vojsko 53.07 26 *e* P **P 11 21 39.8 +0.4**
VOY *e* 11 21 54.1
WTTA Wattenberg 53.07 24⇓ *i* P **P 11 21 39.7 +0.2**
comp=Z,22nm,1.1s
GIVF Givet 53.07 17 *e* P **P 11 21 38.6 -0.6**
comp=Z,56nm,1.1s
GIVF Givet 53.07 17 *e* P **P 11 21 38.6 -0.6**
GIVF pmax pmax
comp=Z,56nm,1.1s
GIVF Givet 53.07 17 *e* P **P 11 21 38.6 -0.6**
comp=Z,56nm,1.1s
LPAZ La Paz 53.11 249 P **P 11 21 41.1 +0.4**
LPAZ La Paz 53.11 249 P **P 11 21 41.1 +0.4**
comp=Z,3.9nm,0.3s,baz=345,slow=2.3,SNR=14
LPAZ LR LR 11 42 12.1
comp=Z,660nm,18.2s,baz=259,slow=34
MYKA Terra Mystica 53.42 26⇓ *i* P **P 11 21 43.6 +1.7**
comp=Z,19nm,1.2s
BCLA Clavier 53.50 17 P **P 11 21 43.0 +0.7**
comp=Z,14nm,2.1s
KBA Koelnbreinsper 53.64 25⇓ *i* P **P 11 21 44.5 +0.8**
comp=Z,5.1nm,0.6s
FUR Furstenfeldbru 53.66 23 *e* P **P 11 21 44.4 +0.8**
comp=Z,36nm,0.9s
FUR *e* pP pP 11 21 54.3 +5.8
FUR Furstenfeldbru 53.66 23 *e* P **P 11 21 44.4 +0.8**
FUR pmax pmax
comp=Z,23nm,0.9s
MEM Membach 53.88 18 P **P 11 21 45.9 +0.8**
comp=Z,12nm,1.8s
RJOB Jochberg 53.92 24 *e* P **P 11 21 45.8 +0.2**
comp=Z,15nm,1.1s
RJOB *e* pP pP 11 21 56.0 +5.5
TOD Tromm 53.93 20 *e* P **P 11 21 45.8 +0.2**
TOD Tromm 53.93 20 *e* P **P 11 21 45.8 +0.2**
SOKA Soboth 54.07 27⇓ *i* P **P 11 21 47.7 +1.0**
comp=Z,17nm,1.1s
KMBO Kilima Mbogo 54.16 92 P P 11 21 50.6 +2.5
KMBO Kilima Mbogo 54.16 92 P P 11 21 50.6 +2.5
comp=Z,9.1nm,1.0s,baz=254,slow=7.0,SNR=12
KMBO LR LR 11 43 37.1
comp=Z,415nm,20.9s,baz=276,slow=35
SDV Santo Domingo 54.20 281 *e* P **P 11 21 50.5 +2.1**
comp=Z,20nm,1.2s
TNS Taunus Mts 54.33 20 *e* P **P 11 21 49.6 +1.1**
comp=Z,28nm,1.2s
TNS *e* sP sP 11 22 04.2 +8.9
TNS Taunus Mts 54.33 20 *e* P **P 11 21 49.6 +1.1**
TNS pmax pmax
comp=Z,54nm,1.2s
BEHE Becsehely 54.72 28⇑ *e* P **P 11 21 52.1 +0.8**
ARSA Arzberg 54.72 27⇓ *i* P **P 11 21 52.1 +0.8**
comp=Z,14nm,1.4s
GRF Grafenberg Arr 54.88 22 *e* P **P 11 21 53.1 +0.7**
comp=Z,23nm,1.4s
GRF *e* L L 11 46 03.9
comp=Z,520nm,19.5s
GRF Grafenberg Arr 54.88 22 *e* P **P 11 21 53.1 +0.7**
GRF pmax pmax
comp=Z,25nm,1.4s
GRF MLR MLR
comp=Z,23µm,19.5s
KKB Krupnik 54.93 36 *i* P **P 11 21 53.6 +0.6**
BUG Bochum-Univer 54.99 18 *e* P **P 11 21 54.6 +1.4**
comp=Z,12nm,0.9s
BUG *e* pP pP 11 22 04.5 +6.4
BUG *e* sP sP 11 22 09.2 +9.2
WET Wettzell 55.08 23 *e* P **P 11 21 54.5 +0.6**
comp=Z,39nm,1.3s
WET *e* sP sP 11 22 09.7 +9.0
WET Wettzell 55.08 23 *e* P **P 11 21 54.5 +0.6**
WET pmax pmax
comp=Z,7.0nm,1.3s
GEC2 GERESS Array S 55.17 24 *e* P **P 11 21 55.3 +0.6**
comp=Z,54nm,1.7s
GEC2 GERESS Array S 55.17 24 *e* P **P 11 21 55.3 +0.6**
GEC2 pmax pmax
comp=Z,10.0nm,1.7s
GERES GERESS Array B 55.17 24 P **P 11 21 54.1 -0.6**
GERES PP **PP 11 23 55.8 -2.4**
GERES GERESS Array B 55.17 24 P **P 11 21 54.1 -0.6**
comp=Z,4.0nm,0.7s,baz=205,slow=5.9,SNR=29
GERES PP **PP 11 23 55.8 -2.4**
comp=Z,5.0nm,0.8s,baz=206,slow=8.7,SNR=6.8
GERES LR LR 11 45 35.3
comp=Z,472nm,19.1s,baz=237,slow=36
ROTZ Rotzenmuhle 55.31 23 *e* P **P 11 21 56.2 +0.6**
comp=Z,44nm,1.9s
ROTZ *e* pP pP 11 22 06.5 +6.0
ROTZ *e* sP sP 11 22 11.1 +8.8
KHC Kasperske Hory 55.34 24 *e* P **P 11 21 55.3 -0.6**
KHC *e* 11 22 02.0
KHC *e* S **S 11 29 37.1 -2.5**
KHC MLR MLR
comp=Z,600nm,12.9s
KHC Kasperske Hory 55.34 24 *e* P **P 11 21 55.3 -0.6**
KHC *e* pP **pP 11 22 02.0 +1.2**
KHC *e* S **S 11 29 37.1 -2.5**
KHC AMS AMS 11 51 30.0
comp=Z,600nm,12.9s
KHC Kasperske Hory 55.34 24 *e* P **P 11 21 56.0 +0.1**
UBBA Unterbreizbach 55.37 20 *e* P **P 11 21 57.0 +1.2**
comp=Z,55nm,1.9s
UBBA *e* sP sP 11 22 12.0 +9.4
CONA Conrad Observa 55.38 26⇓ *i* P **P 11 21 57.0 +0.8**
comp=Z,16nm,1.3s
PKSM Moragy 55.42 29⇑ *e* P **P 11 21 56.8 +0.4**
MANZ Manzenberg 55.45 22 *e* P **P 11 21 57.2 +0.6**
comp=Z,32nm,1.5s
MANZ *e* pP pP 11 22 07.3 +5.8
MANZ *e* sP sP 11 22 12.0 +8.6
VTS Vitosha 55.45 35 ⇓ P **P 11 21 58.7 +1.8**
VTS Vitosha 55.45 35 *i* P **P 11 21 57.8 +0.9**
VTS Vitosha 55.45 35⇓ *i* P **P 11 21 58.7 +1.8**
SOP Sopron 55.51 27⇑ *e* P **P 11 21 57.2 +0.2**
NKC Novy Kostel 55.78 22 *e* P **P 11 21 58.7 -0.2**
NKC MLR MLR
comp=Z,500nm,14.6s
NKC Novy Kostel 55.78 22 *e* P **P 11 21 58.7 -0.2**
NKC AMS AMS 11 52 30.0
comp=Z,500nm,14.6s
WERN Wernitzgruen 55.80 22 *e* P **P 11 21 59.6 +0.5**
comp=Z,39nm,1.8s
WERN *e* pP pP 11 22 09.7 +5.7
WERN *e* sP sP 11 22 14.5 +8.6
MOX Moxa 55.80 22 *e* P **P 11 22 00.0 +0.9**
comp=Z,81nm,2.2s
MOX *e* pP pP 11 22 09.9 +5.9
MOX *e* sP sP 11 22 14.8 +8.9
MOX Moxa 55.80 22 *e* P **P 11 22 00.0 +0.9**
MOX pmax pmax
comp=Z,7.0nm,2.2s
GUNZ Gunzen 55.84 22 *e* P **P 11 21 59.9 +0.5**
comp=Z,15nm,1.2s
GUNZ *e* pP pP 11 22 09.8 +5.5
GUNZ *e* sP sP 11 22 15.0 +8.8
PLN Plauen 55.87 22 *e* P **P 11 22 00.3 +0.7**
comp=Z,56nm,1.2s
PLN *e* pP pP 11 22 10.1 +5.6
PLN *e* sP sP 11 22 15.0 +8.6

PKST T"s 55.88 28⇓ *e* P **P 11 22 00.9 +1.2**
WERD Werda 55.90 22 *e* P **P 11 22 00.4 +0.6**
comp=Z,33nm,1.7s
WERD *e* pP pP 11 22 10.5 +5.8
TANN Tannenbergstha 55.93 22 *e* P **P 11 22 00.7 +0.6**
comp=Z,25nm,1.4s
TANN *e* pP pP 11 22 10.8 +5.8
TANN *e* sP sP 11 22 15.6 +8.7
ESK Eskdalemuir 56.08 9 *i* P **P 11 22 02.5 +1.6**
ZST Bratislava 56.14 27 *e* P **P 11 22 02.0 +0.5**
ZST Bratislava 56.14 27 *e* P **P 11 22 02.0 +0.5**
KDZ Kurdzhali 56.19 37 *i* P **P 11 22 01.7 -0.3**
MPEP Malo Peshtene 56.23 35 *i* P **P 11 22 03.0 +0.7**
TREC Trest 56.26 25 *e* P **P 11 22 02.6 +0.2**
TREC MLR MLR
comp=Z,800nm,15.0s
TREC Trest 56.26 25 *e* P **P 11 22 02.6 +0.2**
TREC AMS AMS 11 51 00.0
comp=Z,800nm,15.0s
NEUB Neuenburg 56.32 21 *e* P **P 11 22 03.6 +0.9**
comp=Z,44nm,1.4s
CLZ Clausthal 56.35 20 *e* P **P 11 22 04.0 +1.0**
comp=Z,8.0nm,1.1s
CLZ *e* sP sP 11 22 18.7 +8.9
CLZ Clausthal 56.35 20 *e* P **P 11 22 04.0 +1.0**
CLZ pmax pmax
comp=Z,38nm,1.1s
PRU Pruhonice 56.41 24 *e* P **P 11 22 03.3 -0.1**
PRU *e* 11 22 10.4
PRU *e* S **S 11 29 50.9 -2.7**
PRU MLR MLR
comp=Z,700nm,14.2s
PRU Pruhonice 56.41 24 *e* P **P 11 22 03.3 -0.1**
PRU *e* pP **pP 11 22 10.4 +2.1**
PRU *e* S **S 11 29 50.9 -2.7**
PRU AMS AMS 11 50 40.0
comp=Z,700nm,14.2s
PRA Prague 56.43 24 P **P 11 22 03.0 -0.5**
PRA AMS AMS 11 51 00.0
SDDR Presa de Saban 56.50 293 *e* P **P 11 22 05.5 +0.8**
comp=Z,57nm,1.2s
BUD Budapest 56.51 28⇑ *e* P **P 11 22 04.7 +0.5**
BZS Buzias 56.52 32 ⇑ P **P 11 22 06.1 +1.8**
BZS Buzias 56.52 32⇑ *i* P **P 11 22 06.1 +1.8**
FBE Freiberg 56.68 22 *e* P **P 11 22 06.1 +0.8**
comp=Z,40nm,1.7s
FBE *e* pP pP 11 22 16.3 +6.1
FBE *e* sP sP 11 22 21.0 +8.9
NRDL Niedersach Rie 56.81 19 *e* P **P 11 22 07.7 +1.6**
comp=Z,9.0nm,1.0s
NRDL *e* pP pP 11 22 17.6 +6.6
PVCC Panska Ves 56.84 23 *e* P **P 11 22 07.2 +0.7**
PVCC MLR MLR
comp=Z,800nm,13.4s
PVCC Panska Ves 56.84 23 *e* P **P 11 22 07.2 +0.7**
PVCC *ex* x 11 22 17.7
PVCC AMS AMS 11 53 00.0
comp=Z,800nm,13.4s
CLL Collm 56.85 22 *e* P **P 11 22 07.2 +0.7**
comp=Z,23nm,1.4s
CLL *e* pP pP 11 22 17.5 +6.0
CLL *e* sP sP 11 22 22.0 +8.7
CLL Collm 56.85 22 *e* P **P 11 22 06.0 -0.5**
CLL *e* 11 22 13.0
CLL *e* S **S 11 29 57.0 -2.5**
CLL pmax pmax
comp=Z,23nm,1.4s
CLL Collm 56.85 22 *e* P **P 11 22 06.0 -0.5**
comp=Z,23nm,1.4s
CLL *e*(sP) **sP 11 22 13.0 -0.3**
CLL *e*PP **PP 11 24 10.0 -3.1**
CLL *e*S **S 11 29 57.0 -2.5**
CLL *e*SS **SS 11 33 48.0 +0.1**
CLL *e*SSS SSS 11 35 54.0
CLL Lm MLR 11 46 00.0
comp=N,400nm,18.5s
CLL Lm MLR 11 46 00.0
comp=E,200nm,21.2s
BRG Berggiesshubel 56.87 23 *e* P **P 11 22 07.2 +0.6**
comp=E,17nm,1.4s
BRG *e* 11 22 21.8
comp=E,11nm,1.0s
BRG *e*PP **PP 11 24 12.4 -0.8**
comp=E,42nm,2.0s
BRG *e* 11 27 06.4
comp=E,3.1nm,0.8s
BRG S **S 11 29 58.0 -1.6**
BRG *e*PKPPKP **P'P'df 11 51 58.3 -0.4**
comp=E,3.1nm,0.8s
BRG
comp=N,392nm,16.2s
BRG MLR MLR
comp=E,478nm,15.0s
BRG MLR MLR
comp=E,645nm,15.3s
BRG Berggiesshubel 56.87 23 *e* P **P 11 22 07.2 +0.6**
comp=Z,17nm,1.4s
BRG *e*pP pP 11 22 17.3 +5.7
BRG *e*sP sP 11 22 21.9 +8.5
BRG Berggiesshubel 56.87 23 *e* P **P 11 22 07.2 +0.6**
BRG *e* 11 24 12.4
BRG S **S 11 29 58.0 -1.6**
BRG pmax pmax
comp=Z,17nm,1.4s
BRG pmax pmax
comp=Z,42nm,2.0s
BRG MLR MLR
comp=N,392nm,16.2s
BRG MLR MLR
comp=E,478nm,15.0s
BRG MLR MLR
comp=Z,645nm,15.3s
PVL Pavlikeni 57.07 36 *i* P **P 11 22 07.7 -0.5**
VYHS Vyhne 57.15 28 *e* P **P 11 22 09.0 +0.3**
VYHS pmax pmax
comp=Z,17nm,1.4s
VYHS Vyhne 57.15 28 *e* P **P 11 22 09.0 +0.3**
VYHS *e*PP **PP 11 24 11.3 -4.5**
PSZ Piszkesteto 57.24 29 *e* P **P 11 22 10.6 +1.2**
PSZ pmax pmax
comp=Z,36nm,1.4s
PSZ Piszkesteto 57.24 29 *e* P **P 11 22 10.6 +1.2**
comp=Z,36nm,1.4s
PSZ Piszkesteto 57.24 29⇑ *e* P **P 11 22 09.4 0.0**
UPC Upice 57.41 24 *e* P **P 11 22 10.1 -0.4**
UPC Upice 57.41 24 *e* P **P 11 22 10.1 -0.4**
UPC *ex* x 11 22 21.0
DPC Dobruska-Polom 57.42 25 *e* P **P 11 22 09.7 -0.9**
DPC *e* S **S 11 30 07.1 +0.1**
DPC Dobruska-Polom 57.42 25 *e* P **P 11 22 09.7 -0.9**
DPC *ex* x 11 22 19.2
DPC *e* S **S 11 30 07.1 +0.1**
SZH Strazhica 57.45 36 *i* P **P 11 22 11.1 +0.2**
MORC Moravsky Berou 57.51 26 *e* P **P 11 22 10.9 -0.3**
MORC Moravsky Berou 57.51 26 *e* P **P 11 22 10.9 -0.3**
ROSC El Rosal 57.55 276 P **P 11 22 13.5 +0.9**
ROSC El Rosal 57.55 276 P **P 11 22 13.5 +0.9**
comp=Z,10.0nm,0.5s,baz=259,slow=7.9,SNR=5.3
ROSC LR LR 11 45 26.5
comp=Z,365nm,18.4s,baz=183,slow=34
KSP Ksiaz 57.78 24 *e* P **P 11 22 13.1 0.0**
KSP *e* S **S 11 30 10.0 -1.7**
KSP MLR MLR
comp=Z,2µm,17.8s
KSP Ksiaz 57.78 24 *e* P **P 11 22 13.1 0.0**
OKC Ostrava-Krasne 57.81 26 *e* P **P 11 22 13.9 +0.6**
OKC *e* S **S 11 30 14.9 +2.8**
OKC MLR MLR
comp=Z,500nm,15.0s
OKC Ostrava-Krasne 57.81 26 *e* P **P 11 22 13.9 +0.6**
OKC *e* S **S 11 30 14.9 +2.8**
OKC AMS AMS 11 49 40.0
comp=Z,500nm,15.0s
DRGR 57.87 31⇓ P **P 11 22 15.8 +1.9**
DRGR 57.87 31⇓ *i* P **P 11 22 15.8 +1.9**
KECS Kecovo 57.91 28 *e* P **P 11 22 15.5 +1.4**
KECS pmax pmax
comp=Z,8.0nm,1.4s
KECS Kecovo 57.91 28 *e* P **P 11 22 15.5 +1.4**
KECS *e*PP **PP 11 24 25.9 +3.3**
ARR Arges 57.99 33⇓ *i* P **P 11 22 16.5 +1.8**
BSEG Bad Segeberg 58.09 19 *e* P **P 11 22 16.1 +0.9**
comp=Z,25nm,0.8s
BSEG *e* sP sP 11 22 30.8 +8.8

BSEG Bad Segeberg 58.09 19 *e* P **P 11 22 16.1 +0.9**
BSEG pmax pmax
comp=Z,24nm,0.8s
VOIR 58.26 34⇓ P **P 11 22 17.1 +0.4**
VOIR 58.26 34⇓ *i* P **P 11 22 17.1 +0.4**
NIE Niedzica 58.49 28 *e* P **P 11 22 19.3 +1.2**
NIE Niedzica 58.49 28 *e* P **P 11 22 19.3 +1.2**
CRVS Cervenica-Dubn 58.67 29 *e* P **P 11 22 17.1 -2.3**
CRVS pmax pmax
comp=Z,19nm,1.4s
CRVS Cervenica-Dubn 58.67 29 *e* P **P 11 22 17.1 -2.3**
CRVS *e*PP **PP 11 24 26.0 -3.3**
TRPA Tarpa 58.67 30⇑ *e* P **P 11 22 19.3 -0.1**
MLR Muntele Rosu 58.79 34⇑ *i* P **P 11 22 20.6 +0.2**
OJC Ojcow 58.83 27 *e* P **P 11 22 20.6 +0.2**
OJC Ojcow 58.83 27 *e* P **P 11 22 20.6 +0.2**
STHS Stebnicka Huta 58.92 28 *e* P **P 11 22 22.4 +1.3**
STHS Stebnicka Huta 58.92 28 *e* P **P 11 22 22.4 +1.3**
KOLS Kolonicke sedl 59.08 29 *e* P **P 11 22 23.0 +0.7**
KOLS pmax pmax
comp=Z,14nm,1.4s
KOLS Kolonicke sedl 59.08 29 *e* P **P 11 22 23.0 +0.7**
KOLS *e*PP **PP 11 24 31.9 -1.1**
PLOR Plostina 59.40 34⇓ P **P 11 22 24.2 -0.4**
PLOR Plostina 59.40 34⇓ *i* P **P 11 22 24.2 -0.4**
VRI Vrincioaia 59.45 34⇑ *i* P **P 11 22 25.0 +0.1**
VRI Vrincioaia 59.45 34⇑ *i* P **P 11 22 25.0 +0.1**
BURAR Bucovina Array 59.71 32⇑ *i* P **P 11 22 27.6 +0.9**
BUR08 Bucovina Ar. S 59.72 32 *e* P **P 11 22 27.7 +0.9**
KWP Kalwaria Pacla 59.77 29 *e* P **P 11 22 27.8 +0.8**
KWP Kalwaria Pacla 59.77 29 *e* P **P 11 22 27.7 +0.8**
ASF Jabal al Asfar 59.82 52 P **P 11 22 28.3 +0.6**
ASF Jabal al Asfar 59.82 52 P **P 11 22 28.3 +0.6**
comp=Z,6.4nm,1.1s,baz=89,slow=6.5,SNR=13
MUD Monsted U'grnd 59.90 16 *i* P **P 11 22 30.0 +2.3**
MUD pmax pmax
comp=Z,15nm,0.7s
MUD Monsted U'grnd 59.90 16 *i* P **P 11 22 30.0 +2.3**
MUD *i* 11 22 39.6
BR131 Keskin Array S 60.50 43 *e* P **P 11 22 32.9 +0.5**
comp=Z,17nm,1.2s
BRTR Keskin Array B 60.50 43 P **P 11 22 32.5 +0.1**
BRTR Keskin Array B 60.50 43 P **P 11 22 32.5 +0.1**
comp=Z,9.5nm,1.0s,baz=232,slow=6.1,SNR=43
BRTR LR LR 11 52 39.4
comp=Z,258nm,18.5s,baz=212,slow=40
KIS Kishinev 61.29 34 *e* P **P 11 22 36.0 -1.4**
KIS *e* 11 22 44.0
KIS *e* 11 34 51.0
KIS pmax pmax
comp=Z,144nm,1.5s
KIS pmax pmax
comp=Z,700nm,20.0s
KIS pmax pmax
comp=Z,700nm,17.0s
KIS Kishinev 61.29 34 *e* P **P 11 22 36.0 -1.4**
comp=Z,100nm,1.5s
KIS *e*L L 11 43 30.0
KIS LRM MLR 11 51 06.0
comp=Z,700nm,20.0s
SUW Suwalki 62.98 25 *e* P **P 11 22 49.4 +0.8**
SUW Suwalki 62.98 25 *e* P **P 11 22 49.4 +0.8**
MALT Malatya 63.28 46 ⇑ P P 11 22 59.0 +8.0
MALT Malatya 63.28 46 *e* P P 11 22 59.1 +8.1
comp=Z,32nm,1.3s
MALT Malatya 63.28 46⇑ *i* P P 11 22 59.0 +8.0
PLCA Paso Flores 63.38 223 P **P 11 22 52.1 +0.5**
PLCA Paso Flores 63.38 223 P **P 11 22 52.1 +0.5**
comp=Z,1.8nm,0.7s,baz=75,slow=8.6,SNR=3.2
PLCA LR LR 11 45 54.0
comp=Z,604nm,19.5s,baz=73,slow=32
AK02 Malin Array Si 63.65 31 *e* P **P 11 22 51.8 -1.3**
KIEV Kiev 63.67 31 *e* P **P 11 22 52.5 -0.7**
KIEV pmax pmax
comp=Z,39nm,1.3s
KIEV Kiev 63.67 31 *e* P **P 11 22 52.5 -0.7**
comp=Z,39nm,1.3s
AK01 Malin Array Si 63.67 31 *e* P **P 11 22 52.3 -0.9**
AKASG Malin Array Be 63.68 31 *i* P **P 11 22 52.9 -0.4**
AKASG pmax pmax
comp=Z,6.0nm,0.7s
AKASG Malin Array Be 63.68 31 P **P 11 22 51.8 -1.5**
AKASG Malin Array Be 63.68 31 P **P 11 22 51.8 -1.5**
comp=Z,5.5nm,0.7s,baz=234,slow=6.8,SNR=18
AKASG LR LR 11 53 01.0
comp=Z,762nm,18.5s,baz=240,slow=38
NB2 NORSAR Subarra 64.39 15 P **P 11 22 57.6 -0.2**
comp=Z,14nm,1.1s,baz=210,slow=6.9
NOA NORSAR Array B 64.39 15 P **P 11 22 57.7 -0.1**
NOA NORSAR Array B 64.39 15 P **P 11 22 57.7 -0.1**
comp=Z,5.7nm,0.9s,baz=209,slow=6.6,SNR=12
NOA LR LR 11 53 20.7
comp=Z,497nm,18.9s,baz=210,slow=38
RAYN Ar Rayn 64.75 64 *e* P **P 11 23 03.1 +2.2**
ANN Anapa 65.32 40 *e* P **P 11 23 01.4 -2.7**
ANN *e**PP **pP 11 23 08.1 -1.0**
ANN pmax pmax
comp=Z,72nm,1.8s
ANN MLR MLR
comp=Z,297nm,20.0s
BHD Baghdad 66.14 53 *e* P **P 11 23 08.8 -0.9**
BHD *e*S **S 11 31 56.0 -2.0**
SOC Sochi 66.28 42*c* *i* P **P 11 23 09.6 -0.8**
SOC *e* 11 23 39.8
SOC pmax pmax
comp=Z,26nm,1.0s
SOC MLR MLR
comp=Z,234nm,21.0s
JSRW J. Sargeant Re 67.25 311 P **P 11 23 18.7 +2.1**
IBDR Badra 67.35 54 *e* P **PcP 11 23 48.6 +3.6**
IBDR *e*S **SKiKP 11 33 15.1 -1.5**
SCHQ Schefferville 67.97 331 *e* P **P 11 23 20.5 -0.4**
comp=Z,12nm,1.5s
SCHQ Schefferville 67.97 331 P **P 11 23 20.5 -0.4**
comp=Z,4.0nm,0.8s,baz=117,slow=6.5,SNR=7.3
SCHQ LR LR 11 49 18.8
comp=Z,335nm,18.1s,baz=295,slow=33
AKH Akhalkalaki 68.04 45 P **P 11 23 22.3 +0.4**
KIV Kislovodsk 68.41 42 *e* P **P 11 23 24.1 +0.1**
KIV *e*S **S 11 32 24.5 -0.7**
KIV pmax pmax
comp=Z,22nm,1.1s
KIV MLR MLR
comp=Z,179nm,18.0s
ONI Oni 68.43 44 P **P 11 23 23.6 -0.5**
KBZ Khabaz 68.47 42 P **P 11 23 24.5 +0.3**
KBZ Khabaz 68.47 42 P **P 11 23 24.5 +0.3**
KBZ Khabaz 68.47 42 P **P 11 23 24.5 +0.3**
comp=Z,12nm,1.0s,baz=265,slow=4.1,SNR=19
KBZ LR LR 11 55 41.2
comp=Z,213nm,20.6s,baz=256,slow=38
GNI Garni 68.51 46 *e* P **P 11 23 25.9 +1.0**
comp=Z,38nm,1.4s
TBLG Delisi 69.03 45 *e* P **P 11 23 28.1 +0.3**
TBLG Delisi 69.03 45 P **P 11 23 28.1 +0.3**
FINES FINESS Array B 69.24 21 P **P 11 23 28.3 -0.3**
FINES FINESS Array B 69.24 21 P **P 11 23 28.3 -0.3**
comp=Z,12nm,0.9s,baz=202,slow=4.1,SNR=27
FINES LR LR 11 54 16.9
comp=Z,538nm,20.5s,baz=195,slow=36
FIA1 FINESS Array S 69.24 21 *e* P **P 11 23 28.7 0.0**
VORD Divnogorie 69.24 34 *e* P **P 11 23 27.1 -1.8**
VORD pmax pmax
comp=Z,20nm,0.9s
VORD pmax pmax
comp=N,30nm,1.3s
VORD pmax pmax
comp=E,20nm,1.1s
VORD MLR MLR
comp=Z,470nm,16.0s
VORD MLR MLR
comp=N,260nm,22.0s
VORD MLR MLR
comp=E,630nm,24.0s
VSR Storozhevoye 69.28 34 *e* P **P 11 23 27.7 -1.4**
VSR pmax pmax
comp=N,20nm,1.2s
VSR pmax pmax
comp=Z,50nm,1.2s
VSR pmax pmax
comp=E,40nm,1.4s
VSR MLR MLR
comp=Z,420nm,19.0s
VSR MLR MLR
comp=N,240nm,22.0s

VSR MLR MLR
comp=E,260nm,14.0s
DGRG David-gareji 69.39 45 P **P 11 23 30.2 +0.1**
OBN Obninsk 69.83 29⇓*e*P **P 11 23 31.7 -0.7**
OBN *e* 11 26 08.6
OBN *e*S **S 11 32 41.5 +0.2**
OBN pmax pmax
comp=Z,11nm,0.5s
OBN MLR MLR
comp=Z,700nm,19.0s
TIGA Tifton 70.13 303 ⇓P **P 11 23 33.8 -1.0**
baz=70
SCO Scoresbysund 70.25 358 *i* P **P 11 23 37.0 +2.3**
SCO pmax pmax
comp=Z,4.0nm,0.8s
SCO Scoresbysund 70.25 358 *i* P **P 11 23 37.0 +2.3**
comp=Z,4.0nm,0.8s
SCO *i* 11 23 47.5
MOS Moscow 70.67 29 *e*P P 11 23 34.0 -3.5
MOS *e* 11 23 53.4
MOS pmax pmax
comp=Z,71nm,0.8s
MOS pmax pmax
comp=Z,200nm,1.4s
MAK Makhachkala 71.37 44 *e*P **P 11 23 41.2 -0.9**
MAK *e* 11 26 21.1
MAK *e*PPP PPP 11 28 01.4
MAK *e* 11 33 47.7
MAK pmax pmax
comp=Z,37nm,0.5s
ACSO Alum Creek Sta 71.80 313 *e*P P 11 23 49.9 +5.1
comp=Z,12nm,0.8s
JOF Joensuu 72.06 21 *e*P **P 11 23 45.9 +0.1**
JOF pmax pmax
comp=Z,11nm,0.8s
JOF Joensuu 72.06 21 *e*p **P 11 23 45.9 +0.1**
comp=Z,11nm,0.8s
SNAA Sanae 72.32 175 *e*P **P 11 23 47.3 0.0**
SNAA Sanae 72.32 175 P **P 11 23 47.2 -0.1**
comp=Z,3.1nm,1.0s,baz=350,slow=6.4,SNR=53
LRAL Lakeview Retre 73.28 304 *e*P **P 11 23 55.1 +1.3**
comp=Z,13nm,1.1s
SUMG Summit 73.54 353 *i* P **P 11 23 56.2 +1.2**
SUMG *i* 11 24 06.9
SUMG pmax pmax
comp=Z,3.0nm,0.8s
SUMG Summit 73.54 353 *e*P **P 11 23 56.2 +1.2**
SUMG Summit 73.54 353 *i* P **P 11 23 56.2 +1.2**
comp=Z,2.7nm,0.8s
SUMG *i* 11 24 06.9
ARCES ARCESS Array B 74.76 14 P **P 11 24 00.2 -1.5**
ARCES ARCESS Array B 74.76 14 P **P 11 24 00.2 -1.5**
comp=Z,4.0nm,0.8s,baz=224,slow=3.3,SNR=11
ARCES LR LR 11 59 14.5
comp=Z,351nm,18.8s,baz=1.1,slow=38
SFIN Scholer Farm 74.88 312 ⇓P **P 11 24 01.6 -1.3**
baz=75
KEV Kevo 75.29 14 *e*P **P 11 24 04.9 +0.2**
KEV pmax pmax
comp=Z,7.0nm,0.8s
KEV Kevo 75.29 14 *e*p **P 11 24 04.9 +0.2**
comp=Z,6.7nm,0.8s
KEV Kevo 75.29 14 *e*P **P 11 24 05.0 +0.4**
comp=Z,58nm,1.6s
APA Apatity 75.63 18⇑*i*P **P 11 24 07.4 +0.8**
APA *i* 11 24 18.7
APA pmax pmax
comp=Z,34nm,1.3s
APA MLR MLR
comp=Z,400nm,16.0s
LVZ Lovozero 76.21 18*c i*P **P 11 24 10.1 +0.1**
LVZ pmax pmax
comp=Z,34nm,1.2s
DAG Danmarks Havn 76.50 360⇑*i*P **P 11 24 11.5 0.0**
DAG *i* *PP **PcP 11 24 23.1 0.0**
DAG pmax pmax
comp=Z,6.0nm,0.9s
DAG Danmarks Havn 76.50 360⇑*i*P **P 11 24 11.5 0.0**
comp=Z,7.1nm,0.9s
DAG *i* pP **PcP 11 24 23.1 0.0**
COWI Conover 77.61 317 *e*P **P 11 24 17.6 -0.7**
comp=Z,17nm,1.4s
UALR University of 77.96 305 *e*P P 11 24 24.1 +3.6
comp=Z,0.8nm,1.0s
SYO Syowa Base 78.70 162⇑*e*P **P 11 24 22.2 -1.7**
SYO Syowa Base 78.70 162*e*PcP **PcP 11 24 33.6 +0.9**
EYMN Ely 79.58 319 *e*P **P 11 24 27.7 -1.5**
TUL1 Tulsa 80.90 306 ⇓P **P 11 24 35.1 -1.4**
baz=81
SOKR Solikamsk 81.62 30*d i*P **P 11 24 40.7 +0.9**
SOKR S **S 11 34 52.7 +1.4**
SOKR pmax pmax
comp=Z,30nm,1.3s
SOKR MLR MLR
comp=Z,500nm,19.0s
ARU Arti 81.82 33*c i*P **P 11 24 40.7 -0.2**
ARU 11 27 45.9
ARU S **S 11 34 54.2 +0.6**
ARU pmax pmax
comp=Z,39nm,1.7s
ARU MLR MLR
comp=Z,531nm,19.0s
WHTX Lake Whitney 81.89 302 ⇑P **P 11 24 40.8 -1.0**
baz=82
ULM Lac du Bonnet 82.81 321 P **P 11 24 44.8 -1.4**
ULM Lac du Bonnet 82.81 321 P **P 11 24 44.8 -1.4**
comp=Z,2.0nm,0.4s,baz=106,slow=5.4,SNR=4.3
ULM LR LR 11 55 17.3
comp=Z,224nm,20.8s,baz=134,slow=31
SVE Sverdlovsk 83.02 33⇓*e*P **P 11 24 47.3 +0.1**
SVE pmax pmax
comp=Z,30nm,1.5s
Z32A Haskell 83.69 303 ⇓P **P 11 24 50.2 -1.1**
baz=84
Y32A R-V Farms, Ver 83.71 304 ⇑P **P 11 24 50.4 -1.0**
baz=84
632A Uvalde 83.72 300 ⇓P **P 11 24 50.9 -0.6**
baz=84
232A Coleman 83.74 302 ⇓P **P 11 24 50.7 -0.9**
baz=84
ABTX Abilene, Hawle 83.79 303 ⇓P **P 11 24 51.0 -0.8**
baz=84
JCT Junction City 83.79 300 ⇓P **P 11 24 51.1 -0.7**
baz=84
332A Millersview 83.79 301 ⇑P **P 11 24 50.9 -0.9**
baz=84
432A Menard 83.80 301 ⇑P **P 11 24 51.0 -0.9**
baz=84
732A Laxson Ranch, 83.83 299 ⇑P **P 11 24 51.5 -0.5**
baz=84
532A Rocksprings 83.86 300 ⇑P **P 11 24 51.6 -0.6**
baz=84
R31A Burdett 84.09 308 ⇑P **P 11 24 52.2 -1.0**
baz=84
V31A Spring Creek L 84.16 306 ⇑P **P 11 24 53.2 -0.5**
baz=84
X31A McDonald Ranch 84.20 305 ⇑P **P 11 24 52.7 -1.1**
baz=84
W31A Holland Ranch, 84.20 305 ⇑P **P 11 24 53.1 -0.7**
baz=84
Z31A Sharp Cattle R 84.25 303 ⇑P **P 11 24 53.5 -0.6**
baz=84
231A Bronte 84.31 302 ⇑P **P 11 24 53.7 -0.8**
baz=84
331A San Angelo 84.37 301 ⇑P **P 11 24 54.2 -0.6**
baz=84
Y31A Rekieta Farm, 84.39 304 ⇓P **P 11 24 54.6 -0.3**
baz=84
631A Perdido Creek 84.40 299 ⇑P **P 11 24 54.0 -0.9**
baz=84
531A Rocksprings 84.41 300 ⇓P **P 11 24 54.1 -1.0**
baz=84
131A Roby 84.42 303 ⇓P **P 11 24 54.5 -0.5**
baz=84
431A Sonora 84.49 301 ⇓P **P 11 24 54.5 -1.0**
baz=84
O30A MW Ranch, Wils 84.65 310 ⇓P **P 11 24 55.1 -0.9**
baz=85
R30A Dighton 84.68 308 ⇑P **P 11 24 55.4 -0.8**
baz=85
Q30A Quinter 84.69 309 ⇑P **P 11 24 55.3 -0.9**
baz=85
W30A Crocket Farms 84.72 305 ⇓P **P 11 24 55.7 -0.8**
baz=85
P30A Selden 84.75 310 ⇑P **P 11 24 55.5 -1.0**
baz=85
S30A Montezuma 84.79 308 ⇑P **P 11 24 56.2 -0.6**
baz=85
V30A Spur Ranch, Mi 84.85 306 ⇑P **P 11 24 56.5 -0.7**
baz=85
U30A WK&E Inc. Balk 84.86 306 ⇓P **P 11 24 56.8 -0.4**
baz=85
130A Snyder 84.90 303 ⇓P **P 11 24 57.4 -0.1**
baz=85
X30A Coker Ranch, T 84.92 304 ⇑P **P 11 24 57.1 -0.4**
baz=85
MDND Maddock 84.96 318 ⇑P **P 11 24 57.1 -0.3**
baz=85
230A Sterling City 84.99 302 ⇓P **P 11 24 56.6 -1.3**
baz=85
330A Mertzon 85.02 301 ⇑P **P 11 24 57.5 -0.6**
baz=85
K29A Lazy Trails An 85.03 313 ⇑P **P 11 24 57.2 -0.7**
baz=85
430A Baggett Ranch, 85.04 301 ⇑P **P 11 24 57.2 -1.0**
baz=85
Z30A Sanderson Ranc 85.07 303 ⇓P **P 11 24 57.4 -0.9**
baz=85,SNR=7.7
530A J-C Ranch, Com 85.10 300 ⇓P **P 11 24 57.4 -1.1**
baz=85,SNR=13
M29A Burnside Ranch 85.22 311 ⇑P **P 11 24 57.6 -1.3**
baz=85
Q29A Oakley 85.27 309 ⇑P **P 11 24 58.4 -0.8**
baz=85
P29A Atwood 85.28 310 ⇓P **P 11 24 57.9 -1.3**
baz=85
S29A Ulysses 85.30 308 ⇑P **P 11 24 58.0 -1.4**
baz=85
U29A Oasis Ranch, S 85.36 306 ⇑P **P 11 24 58.3 -1.4**
baz=85
R29A Marienthal 85.37 308 ⇑P **P 11 24 57.2 -2.5**
baz=85
Y29A Porterfield Fa 85.55 304 ⇑P **P 11 24 59.4 -1.4**
baz=86
Z29A Hungry Hill Ra 85.55 303 ⇓P **P 11 24 59.5 -1.2**
baz=86,SNR=12
229A Bryant Ranch, 85.58 302 ⇑P **P 11 24 59.7 -1.2**
baz=86
429A Davenport Ranc 85.60 301 ⇑P **P 11 25 00.1 -0.9**
baz=86
X29A Tulia 85.61 304 ⇑P **P 11 24 59.9 -1.1**
baz=86
AMTX Amarillo 85.61 305 P P 11 25 07.0 +6.0
comp=Z,18nm,1.2s
129A Stewart Farms, 85.66 303 ⇑P **P 11 25 00.5 -0.7**
baz=86
329A Wagon Wheel Ra 85.71 301 ⇓P **P 11 25 01.4 -0.1**
baz=86
J28A Allard Ranch, 85.75 313 ⇓P **P 11 25 00.9 -0.6**
baz=86
K28A Ten Mile Ranch 85.80 313 ⇑P **P 11 25 01.1 -0.7**
baz=86
529A Stev Forest Ra 85.86 300 ⇓P **P 11 25 01.4 -0.9**
baz=86
R28A Tribune 85.89 308 ⇓P **P 11 25 01.9 -0.4**
baz=86
P28A Saint Francis 85.91 309 ⇓P **P 11 25 01.4 -1.0**
baz=86
S28A Manter 85.92 307 ⇑P **P 11 25 02.0 -0.5**
baz=86
Q28A Sharon Springs 85.94 309 ⇓P **P 11 25 01.9 -0.6**
baz=86
X28A Dimmitt 86.02 304 ⇓P **P 11 25 02.3 -0.8**
baz=86
Y28A McKinney Farm, 86.03 304 ⇑P **P 11 25 02.4 -0.8**
baz=86
U28A Mallet 86.12 306 ⇑P **P 11 25 02.5 -1.1**
baz=86
Z28A Tucker Farm, M 86.12 303 ⇓P **P 11 25 02.5 -1.1**
baz=86
128A Castleberry Fa 86.18 303 ⇓P **P 11 25 02.5 -1.4**
baz=86,SNR=7.0
OGNE Ogallala 86.20 311 ⇑P **P 11 25 02.6 -1.2**
baz=86
228A UT Block 9, Go 86.25 302 ⇑P **P 11 25 02.8 -1.4**
baz=86,SNR=5.9
MAW Mawson 86.27 158 P **P 11 25 03.8 +0.4**
MAW Mawson 86.27 158 P **P 11 25 03.8 +0.4**
comp=Z,4.5nm,0.8s,baz=305,slow=7.8,SNR=7.6
MAW LR LR 11 58 16.2
comp=Z,296nm,18.2s,baz=293,slow=32
528A Cox Ranch, San 86.35 300 ⇑P **P 11 25 03.5 -1.4**
baz=86
328A Wristen Ranch, 86.41 301 ⇓P **P 11 25 03.7 -1.3**
baz=86
628A Black Gap, Mar 86.42 299 ⇓P **P 11 25 04.0 -1.0**
baz=86,SNR=8.0
K27A Fluecknger Fa 86.44 313 ⇓P **P 11 25 04.4 -0.6**
baz=86
MSTX Muleshoe 86.47 304 ⇑P **P 11 25 04.8 -0.5**
baz=86,SNR=13
T27A Campo 86.55 307 ⇑P **P 11 25 04.6 -1.1**
baz=87
KSCO Kaye Shedlock' 86.56 309 ⇑P **P 11 25 05.0 -0.7**
baz=87
N27A Anderson Farm, 86.57 311 ⇓P **P 11 25 05.3 -0.4**
baz=87
U27A Thompson Grove 86.61 306 ⇑P **P 11 25 05.3 -0.6**
baz=87
R27A Eads 86.66 308 ⇑P **P 11 25 05.7 -0.4**
baz=87
W27A Bowe Ranch, En 86.75 305 ⇑P **P 11 25 05.9 -0.8**
baz=87
X27A F and S Farms, 86.77 305 ⇑P **P 11 25 06.1 -0.7**
baz=87
Y27A Causey 86.79 304 ⇓P **P 11 25 06.0 -0.9**
baz=87,SNR=14
Z27A Tatum 86.82 303 ⇑P **P 11 25 06.0 -1.1**
baz=87
227A Bennet, Jal 86.84 302 ⇓P **P 11 25 06.4 -0.8**
baz=87
627A Terlingua Ranc 86.85 299 ⇓P **P 11 25 06.6 -0.6**
baz=87
427A Hayter Ranch, 86.90 301 ⇑P **P 11 25 06.8 -0.7**
baz=87
127A Arkansas Junct 86.92 303 ⇑P **P 11 25 06.5 -1.1**
baz=87
FFC Flin Flon 87.00 325*ce*P **P 11 25 08.3 +1.0**
M26A McRoberts Ranc 87.06 311 ⇓P **P 11 25 07.8 -0.3**
baz=87
527A Woodward Ranch 87.06 300 ⇑P **P 11 25 07.7 -0.7**
baz=87,SNR=15
N26A Koester Ranch, 87.09 311 ⇑P **P 11 25 07.6 -0.7**
baz=87
TXAR Lajitas Array 87.09 299 P **P 11 25 07.9 -0.5**
TXAR Lajitas Array 87.09 299 P **P 11 25 07.9 -0.5**
comp=Z,2.6nm,0.9s,baz=119,slow=6.0,SNR=16
TXAR LR LR 12 01 01.4
comp=Z,110nm,20.2s,baz=140,slow=34
K26A Motz Farm, Whi 87.14 313 ⇑P **P 11 25 08.0 -0.3**
baz=87
O26A Horse Wrangler 87.14 310 ⇑P **P 11 25 08.3 -0.2**
baz=87
P26A Davis Ranch, A 87.14 309 ⇓P **P 11 25 08.4 -0.1**
baz=87
S26A Kim 87.17 307 ⇑P **P 11 25 08.3 -0.4**
baz=87
R26A Arlington 87.17 308 ⇑P **P 11 25 08.4 -0.2**
baz=87
Q26A Hugo 87.25 309 ⇑P **P 11 25 08.8 -0.3**
baz=87
T26A Comanche Natio 87.25 307 ⇓P **P 11 25 08.9 -0.2**
baz=87
W26A Owens Ranch, T 87.33 305 ⇓P **P 11 25 09.2 -0.3**
baz=87
Y26A Elida 87.34 304 ⇑P **P 11 25 08.8 -0.8**
baz=87
U26A Atchley Ranch, 87.35 306 ⇑P **P 11 25 09.0 -0.6**
baz=87
X26A CR and CF Fran 87.35 304 ⇑P **P 11 25 09.1 -0.6**
baz=87
V26A Tequesquite Ra 87.37 306 ⇑P **P 11 25 09.0 -0.7**
baz=87
326A Caldwell Ranch 87.41 301 ⇑P **P 11 25 09.6 -0.3**
baz=87
426A McDonald Obser 87.44 301 ⇑P **P 11 25 09.6 -0.6**
baz=88
E25A Miller Ranch, 87.45 316 ⇓P **P 11 25 09.2 -0.6**
baz=88
Z26A Caprock 87.46 303 ⇑P **P 11 25 09.4 -0.7**
baz=88
126A Clayton Basin, 87.48 302 ⇓P **P 11 25 08.7 -1.6**
baz=88
526A Mary Lane Ranc 87.48 300 ⇑P **P 11 25 09.5 -0.8**
baz=88
626A Big Bend Ranch 87.50 299 ⇑P **P 11 25 09.9 -0.5**
baz=88,SNR=13
226B Tecolote Peak, 87.59 302 ⇑P **P 11 25 10.2 -0.6**
baz=88,SNR=8.6
J25A Sunshine Ranch 87.62 313 ⇓P **P 11 25 10.2 -0.5**
baz=88
K25A Mack Ranch, Ha 87.64 312 ⇓P **P 11 25 10.6 -0.3**
baz=88
O25A Wiggins 87.75 310 ⇑P **P 11 25 11.3 -0.1**
baz=88
P25A Willow Gulch B 87.77 309 ⇓P **P 11 25 11.3 -0.3**
baz=88
Q25A Bedland, Calha 87.82 309 ⇑P **P 11 25 11.2 -0.7**
baz=88
R25A Fountain Ranch 87.83 308 ⇑P **P 11 25 11.6 -0.3**
baz=88
U25A Circle Dot Ran 87.89 306 ⇑P **P 11 25 11.5 -0.8**
baz=88
W25A X Bar L Ranch, 87.90 305 ⇓P **P 11 25 11.7 -0.6**
baz=88
T25A Trinidad 87.90 307 ⇑P **P 11 25 12.1 -0.3**
baz=88
S25A Robets Cordova 87.94 307 ⇓P **P 11 25 12.5 0.0**
baz=88
A24A Westby 87.95 319 ⇑P **P 11 25 11.7 -0.4**
baz=88
125A Gardner Draw, 88.01 302 ⇓P **P 11 25 12.2 -0.6**
baz=88
V25A Rancho No Teng 88.04 306 ⇓P **P 11 25 12.6 -0.4**
baz=88
X25A Clemmons Ranch 88.05 304 ⇑P **P 11 25 12.1 -0.9**
baz=88
DGMT Dagmar 88.06 318 ⇓P **P 11 25 12.2 -0.4**
baz=88
Z25A Roswell 88.08 303 ⇓P **P 11 25 12.6 -0.5**
baz=88
BRVK Borovoye 88.14 37*c i*P **P 11 25 12.9 +0.1**
BRVK pmax pmax
comp=Z,13nm,2.5s
F24A Ekalaka 88.15 316 ⇑P **P 11 25 13.0 -0.2**
baz=88
H24A Dirks Ranch, A 88.20 315 ⇓P **P 11 25 13.1 -0.3**
baz=88
I24A Kuemmerle Ranc 88.23 314 ⇑P **P 11 25 13.1 -0.5**
baz=88
J24A Dixon Ranch, L 88.24 313 ⇑P **P 11 25 13.3 -0.4**
baz=88
325A Bean Ranch, Si 88.26 301 ⇑P **P 11 25 13.5 -0.6**
baz=88
425A Indio Mountain 88.26 301 ⇑P **P 11 25 13.6 -0.4**
baz=88
M24A Cheyenne 88.32 311 ⇓P **P 11 25 13.9 -0.3**
baz=88
N24A Carr 88.35 311 ⇑P **P 11 25 14.3 0.0**
baz=88
L24A Wheatland 88.42 312 ⇓P **P 11 25 14.2 -0.3**
baz=88
R24A Sanders Place, 88.48 308 ⇓P **P 11 25 14.3 -0.8**
baz=88
Q24A Divide 88.52 309 ⇑P **P 11 25 15.2 -0.1**
baz=88
S24A Houchin Ranch, 88.55 307 ⇓P **P 11 25 15.1 -0.4**
baz=89
V24A Rampart Ranch, 88.57 306 ⇑P **P 11 25 15.1 -0.5**
baz=89
U24A Moreno Valley 88.59 306 ⇓P **P 11 25 15.2 -0.5**
baz=89
B23A Brockton 88.59 318 ⇑P **P 11 25 15.2 +0.1**
baz=89
Z24A Sheeppen Canyo 88.62 303 ⇓P **P 11 25 15.2 -0.6**
baz=89
W24A Lazy 6 Ranch, 88.68 305 ⇑P **P 11 25 15.3 -0.7**
baz=89
Y24A Capitan 88.69 304 ⇑P **P 11 25 15.5 -0.6**
baz=89
124A Stringfield Ra 88.69 303 ⇑P **P 11 25 15.0 -1.2**
baz=89
X24A Lazy VL Ranch, 88.69 304 ⇓P **P 11 25 15.1 -1.0**
baz=89
324A Moseley Ranch, 88.70 301 ⇑P **P 11 25 15.3 -0.8**
baz=89
C23A Lambert 88.71 318 ⇑P **P 11 25 15.5 -0.2**
baz=89
D23A Lindsay 88.71 317 ⇑P **P 11 25 15.6 -0.1**
baz=89
H23A Clabaugh Cattl 88.80 314 ⇓P **P 11 25 15.9 -0.4**
baz=89
G23A Biddle 88.81 315 ⇑P **P 11 25 15.7 -0.6**
baz=89
F23A Volborg 88.82 316 ⇑P **P 11 25 16.5 +0.2**
baz=89
I23A Meade Ranch, G 88.84 314 ⇑P **P 11 25 16.6 +0.1**
baz=89
ISCO Idaho Springs 88.89 310 ⇓P **P 11 25 16.3 -0.7**
baz=89
K23A Bowen Ranch, D 88.94 313 ⇑P **P 11 25 16.5 -0.5**
baz=89
L23A Garrett 88.99 312 ⇓P **P 11 25 16.9 -0.5**
baz=89
R23A Moffat 89.04 308 ⇓P **P 11 25 17.5 -0.2**
baz=89
O23A Lake Granby, G 89.13 310 ⇑P **P 11 25 17.6 -0.6**
baz=89
N23A Red Feather La 89.16 311 ⇓P **P 11 25 17.4 -0.8**
baz=89
C22A Vida 89.18 318 ⇓P **P 11 25 17.8 -0.1**
baz=89
Y23A Lovelace Mesa, 89.20 304 ⇑P **P 11 25 17.5 -1.0**
baz=89
T23A Casias Ranch, 89.20 307 ⇓P **P 11 25 18.2 -0.4**
baz=89
E22A Miles City 89.21 316 ⇑P **P 11 25 17.6 -0.5**
baz=89
A22A Carney Farms, 89.21 319 ⇑P **P 11 25 17.8 -0.2**
baz=89
B22A Reddig Ranch S 89.26 318 ⇓P **P 11 25 17.9 -0.4**
baz=89
W23A Werner Place, 89.28 305 ⇓P **P 11 25 17.8 -1.1**
baz=89
V23A Ortiz Mt. (NFS 89.31 306 ⇑P **P 11 25 18.4 -0.6**
baz=89
U23A El Rito 89.32 306 ⇑P **P 11 25 18.1 -1.0**
baz=89
Z23A Rita Site, Whi 89.34 303 ⇓P **P 11 25 18.5 -0.6**
baz=89
D22A Cohagen 89.38 317 ⇑P **P 11 25 18.3 -0.5**
baz=89
G22A Birney 89.44 315 ⇑P **P 11 25 18.5 -0.7**
baz=90
L22A Ellis Ranch, M 89.53 312 ⇓P **P 11 25 19.1 -0.8**
baz=90
ANMO Albuquerque 89.53 305 *e*P **P 11 25 19.9 -0.2**
comp=Z,5.1nm,1.1s
N22A Wattenberg Ran 89.55 311 ⇓P **P 11 25 19.1 -0.9**
baz=90
J22A Midwest 89.57 313 ⇓P **P 11 25 19.4 -0.6**
baz=90
I22A 9 Mile Ranch, 89.58 314 ⇓P **P 11 25 19.4 -0.6**
baz=90
K22A Casper 89.60 312 ⇓P **P 11 25 19.3 -0.9**
baz=90
O22A Kremmling 89.61 310 ⇑P **P 11 25 19.8 -0.6**
baz=90
M22A Cedar Creek Ra 89.65 311 ⇓P **P 11 25 19.9 -0.7**
baz=90
P22A Eagle 89.78 309 ⇓P **P 11 25 20.7 -0.4**
baz=90
R22A Saguache, Gunn 89.78 308 ⇑P **P 11 25 20.3 -0.9**
baz=90,SNR=5.3
S22A 4UR Ranch, Cre 89.83 308 ⇓P **P 11 25 21.4 -0.2**
baz=90
U22A Llaves 89.86 306 ⇑P **P 11 25 21.3 -0.2**
baz=90
Q22A Crested Butte, 89.90 309 ⇓P **P 11 25 21.9 +0.1**
baz=90
T22A Edith 89.90 307 ⇑P **P 11 25 21.6 -0.1**
baz=90
V22A San Miguel Ran 89.90 306 ⇓P **P 11 25 21.6 -0.3**
baz=90
D21A La Casta Ranch 89.93 317 ⇓P **P 11 25 21.7 +0.2**
baz=90
B21A Ellsworth Farm 89.94 318 ⇑P **P 11 25 20.7 -0.7**
baz=90,SNR=9.0
Y22A Socorro 89.96 304 ⇓P **P 11 25 21.3 -0.7**
baz=90
Z22A Elephant Butte 89.96 303 ⇓P **P 11 25 21.6 -0.4**
baz=90

H21A	**Big Horn, Sher**	**89.97**	**314**	⇓P		**P**		**11 25 21.0**	**-0.8**
	baz=90									
122A	**Conniff Cattle**	**89.99**	**303**	⇓P		**P**		**11 25 21.7**	**-0.4**
	baz=90									
E21A	**Keefer Ranch,**	**89.99**	**316**	⇑P		**P**		**11 25 21.2**	**-0.5**
	baz=90									
X22A	**Bernardo**	**89.99**	**304**	⇑P		**P**		**11 25 22.1**	**-0.1**
	baz=90									
C21A	**Desert Coulee**	**90.00**	**318**	⇓P		**P**		**11 25 21.7**	**0.0**
	baz=90									
G21A	**Lodge Grass**	**90.09**	**315**	⇑P		**P**		**11 25 21.7**	**-0.6**
	baz=90									
I21A	**Big Trails, Te**	**90.16**	**314**	⇑P		**P**		**11 25 20.9**	**-1.9**
	baz=90,SNR=9.6									
L21A	**Rawlins**	**90.23**	**312**	⇓P		**P**		**11 25 21.9**	**-1.2**
	baz=90									
P21A	**Newcastle**	**90.31**	**309**	⇑P		**P**		**11 25 23.1**	**-0.5**
	baz=90									
O21A	**Pagoda**	**90.32**	**310**	⇓P		**P**		**11 25 23.2**	**-0.4**
	baz=90									
R21A	**Cimarron**	**90.40**	**308**	⇑P		**P**		**11 25 23.9**	**-0.2**
	baz=90									
Q21A	**Lamborn Mesa,**	**90.42**	**309**	⇓P		**P**		**11 25 24.2**	**+0.1**
	baz=90									
U21A	**Nageezi**	**90.51**	**306**	⇓P		**P**		**11 25 24.6**	**0.0**
	baz=90									
A20A	**Cobblestone Ra**	**90.54**	**319**	⇑P		**P**		**11 25 24.2**	**0.0**
	baz=91									
Y21A	**Point of Rocks**	**90.55**	**304**	⇓P		**P**		**11 25 24.5**	**-0.3**
	baz=91									
Z21A	**St. Cloud Mine**	**90.55**	**303**	⇑P		**P**		**11 25 24.7**	**-0.2**
	baz=91									
S21A	**Coal Bank Pass**	**90.60**	**307**	⇑P		**P**		**11 25 24.9**	**-0.2**
	baz=91									
B20A	**Solberg Farm,**	**90.61**	**318**	⇓P		**P**		**11 25 24.6**	**0.0**
	baz=91									
C20A	**Veseth Ranch,**	**90.61**	**318**	⇓P		**P**		**11 25 24.6**	**0.0**
	baz=91									
X21A	**Alamocita Cree**	**90.63**	**304**	⇓P		**P**		**11 25 24.6**	**-0.7**
	baz=91									
H20A	**Greybull**	**90.66**	**314**	⇓P		**P**		**11 25 24.7**	**-0.3**
	baz=91									
D20A	**Manuel Ranch,**	**90.71**	**317**	⇓P		**P**		**11 25 24.9**	**-0.2**
	baz=91									
J20A	**Shoshoni**	**90.74**	**313**	⇓P		**P**		**11 25 25.0**	**-0.4**
	baz=91									
AAK	**Ala-Archa**	**90.89**	**48**	*d*iP		**P**		**11 25 27.6**	**+1.4**
AAK					pmax	pmax				
	comp=Z,21nm,1.2s									
N20A	**Spence Gulch,**	**90.92**	**311**	⇑P		**P**		**11 25 26.0**	**-0.4**
	baz=91									
K20A	**Yellowstone Ra**	**90.94**	**312**	⇑P		**P**		**11 25 26.1**	**-0.3**
	baz=91									
L20A	**Wamsutter**	**90.95**	**312**	⇓P		**P**		**11 25 26.7**	**+0.1**
	baz=91									
Q20A	**Ridgley Place,**	**90.98**	**309**	⇑P		**P**		**11 25 26.6**	**0.0**
	baz=91									
R20A	**Redvale**	**91.06**	**308**	⇓P		**P**		**11 25 26.6**	**-0.5**
	baz=91									
A19A	**Klindworth Far**	**91.08**	**319**	⇑P		**P**		**11 25 26.8**	**+0.1**
	baz=91									
Y20A	**Horse Springs,**	**91.13**	**304**	⇑P		**P**		**11 25 27.1**	**-0.4**
	baz=91									
E19A	**Rath Farm, Rou**	**91.17**	**316**	⇑P		**P**		**11 25 26.9**	**-0.4**
	baz=91									
U20A	**Newcomb**	**91.20**	**306**	⇓P		**P**		**11 25 27.6**	**-0.2**
	baz=91									
W20A	**Ramah**	**91.21**	**305**	⇑P		**P**		**11 25 27.7**	**-0.2**
	baz=91									
X20A	**Quemado**	**91.22**	**304**	⇑P		**P**		**11 25 28.4**	**+0.5**
	baz=91									
220A	**Playas Peak, P**	**91.29**	**302**	⇑P		**P**		**11 25 27.6**	**-0.6**
	baz=91									
F19A	**Roth Farm, Mol**	**91.30**	**316**	⇓P		**P**		**11 25 27.9**	**0.0**
	baz=91									
320A	**Kipp Ranch, An**	**91.30**	**301**	⇑P		**P**		**11 25 27.7**	**-0.6**
	baz=91									
K19A	**Absolon Red Bu**	**91.31**	**313**	⇓P		**P**		**11 25 27.8**	**-0.3**
	baz=91									
C19A	**Slack Wire Ran**	**91.32**	**318**	⇑P		**P**		**11 25 27.0**	**-0.9**
	baz=91									
Z20A	**Nine Sixteen R**	**91.32**	**303**	⇓P		**P**		**11 25 28.5**	**+0.1**
	baz=91									
H19A	**Powell**	**91.36**	**315**	⇑P		**P**		**11 25 28.2**	**-0.1**
	baz=91									
120A	**U Bar Ranch, L**	**91.37**	**302**	⇑P		**P**		**11 25 28.4**	**-0.2**
	baz=91									
I19A	**Meeteetse**	**91.39**	**314**	⇑P		**P**		**11 25 28.0**	**-0.5**
	baz=91									
J19A	**Crowheart**	**91.45**	**313**	⇑P		**P**		**11 25 28.6**	**-0.2**
	baz=92									
P19A	**Cripple Cowboy**	**91.49**	**309**	⇓P		**P**		**11 25 28.4**	**-0.7**
	baz=92									
O19A	**Miners Draw (B**	**91.58**	**310**	⇑P		**P**		**11 25 29.0**	**-0.5**
	baz=92									
L19A	**Farson**	**91.71**	**312**	⇓P		**P**		**11 25 30.0**	**0.0**
	baz=92									
B18A	**Beardsley Farm**	**91.78**	**318**	⇑P		**P**		**11 25 29.2**	**-0.8**
	baz=92									
A18A	**Metzger Ranch,**	**91.81**	**319**	⇑P		**P**		**11 25 30.2**	**+0.1**
	baz=92									
PDAR	**Pinedale Array**	**91.83**	**313**	P		**P**		**11 25 29.2**	**-1.4**
PDAR	**Pinedale Array**	**91.83**	**313**	P		**P**		**11 25 29.2**	**-1.4**
	comp=Z,0.7nm,0.9s,baz=108,slow=8.6,SNR=2.8									
PDAR					LR	LR		12 00 16.8		
	comp=Z,160nm,20.8s,baz=101,slow=31									
KSH	**Kashi**	**92.09**	**51**	*e*P		**P**		**11 25 31.5**	**-0.3**
KSH				*ep*P		**pP**		**11 25 36.1**	**-0.8**
KSH				*es*P		**sP**		**11 25 38.6**	**-0.1**
KSH				*e*PP		**PP**		**11 29 13.0**	**+1.3**
KSH				*e*SKS		**SKSac**		**11 36 02.1**	**-2.7**
KSH				*e*S		S		11 36 27.8	-6.2
KSH				*es*S		**ScS**		**11 36 37.1**	**+0.7**
KSH				pmax	pmax					
	comp=Z,21nm,0.9s									
KSH				pmax	pmax					
	comp=Z,97nm,3.9s									
KSH				LR	LR					
	comp=N,190nm,5.7s									
KSH				LR	LR					
	comp=E,180nm,6.1s									
KSH				LR	LR					
	comp=Z,200nm,6.1s									
A17A	**Triple J Farms**	**92.37**	**319**	⇑P		**P**		**11 25 33.1**	**+0.4**
	baz=92									
E16A	**East Helena**	**93.16**	**316**	⇑P		**P**		**11 25 36.9**	**+0.4**
	baz=93									
KURK	**Kurchatov**	**93.35**	**39**	*e*P		**P**		**11 25 37.4**	**+0.3**
KURK				pmax	pmax					
	comp=Z,7.0nm,1.7s									
YKA	**Yellowknife Ar**	**93.41**	**333**	P		**P**		**11 25 36.1**	**-0.9**
YKA	**Yellowknife Ar**	**93.41**	**333**	P		**P**		**11 25 36.1**	**-0.9**
	comp=Z,3.3nm,0.8s,baz=86,slow=5.3,SNR=19									
NVS	**Novosibirsk**	**95.68**	**35**	*e*P		**P**		**11 25 48.2**	**+0.5**
MKAR	**Makanchi Array**	**96.16**	**43**	P		**P**		**11 25 48.3**	**-1.8**
MKAR	**Makanchi Array**	**96.16**	**43**	P		**P**		**11 25 48.3**	**-1.8**
MKAR	**Makanchi Array**	**96.16**	**43**	P		**P**		**11 25 48.3**	**-1.8**
	comp=Z,1.1nm,0.9s,baz=301,slow=5.9,SNR=6.9									
MKAR					LR	LR		12 15 58.4		
	comp=Z,299nm,18.5s,baz=84,slow=40									
ZALV	**Zalesovo Beam**	**96.74**	**36**	LR		LR		12 12 13.2		
	comp=Z,288nm,20.1s,baz=249,slow=37									
NVAR	**Mina Array Bea**	**98.82**	**309**	LR		LR		12 06 02.2		
	comp=Z,129nm,20.6s,baz=310,slow=33									
GTA	**Gaotai**	**110.25**	**48**	*e*PKP		**PKiKP**		**11 30 54.9**	**+0.3**
LZH	**Lanzhou**	**114.33**	**50**	*e*PKP		PKPdf		11 30 59.0	-3.5
LZH				sPKP				11 31 03.5		
LZH				LR	LR					
	comp=N,470nm,19.1s									
LZH				LR	LR					
	comp=E,310nm,16.0s									
LZH				LR	LR					
	comp=Z,280nm,16.5s									
GYA	**Guiyang**	**119.61**	**59**	Pdif		**Pdif**		**11 27 34.3**	**-0.8**
GYA				PKP		**PKiKP**		**11 31 13.0**	**+0.1**
GYA				PP		**PP**		**11 32 37.8**	**+2.7**
GYA				PKS		**PKSdf**		**11 34 46.9**	**-2.9**
GYA				SKKS				11 39 31.0		
GYA				SS		**SS**		**11 48 57.6**	**-1.5**
GYA				AMB	AMB					
	comp=Z,120nm,7.6s									
GYA				LR	LR					
	comp=N,180nm,20.7s									
GYA				LR	LR					
	comp=E,110nm,21.1s									
GYA				LR	LR					
	comp=Z,150nm,20.1s									

BJI	**Beijing**	**121.47**	**41**	PKP		**PKPdf**		**11 31 11.4**	**-4.5**
BJI				LR	LR					
	comp=N,290nm,21.5s									
BJI				LR	LR					
	comp=E,260nm,23.0s									
BJI				LR	LR					
	comp=Z,150nm,28.0s									
QIZ	**Qiongzhong**	**124.38**	**67**	PKP		**PKPdf**		**11 31 18.8**	**-3.3**
QIZ				LR	LR					
	comp=Z,110nm,30.1s									
CN2	**Changchun**	**124.81**	**33**	*e*PKP		**PKPdf**		**11 31 19.3**	**-2.9**
CN2				PP		**PP**		**11 33 10.6**	**+1.3**
CN2				AMB	AMB					
	comp=Z,200nm,3.0s									
CN2				LR	LR					
	comp=N,200nm,17.0s									
CN2				LR	LR					
	comp=E,200nm,17.0s									
CN2				LR	LR					
	comp=Z,200nm,16.0s									
MDJ	**Mudanjiang**	**126.38**	**29**	PKP		**PKPdf**		**11 31 24.6**	**-0.6**
MDJ				PP		**PP**		**11 33 20.0**	**+0.4**
MDJ				SKS		**SKSdf**		**11 38 35.6**	**-1.0**
MDJ				LR	LR					
	comp=N,110nm,32.9s									
MDJ				LR	LR					
	comp=E,140nm,27.7s									
MDJ				LR	LR					
	comp=Z,220nm,19.1s									
PETK	**Petropavlovsk-**	**126.69**	**4**	PKIKP		**PKPdf**		**11 31 25.9**	**+0.3**
PETK	**Petropavlovsk-**	**126.69**	**4**	PKP		**PKPdf**		**11 31 25.9**	**+0.3**
PETK	**Petropavlovsk-**	**126.69**	**4**	PKP		**PKPdf**		**11 31 25.9**	**+0.3**
	comp=Z,4.2nm,0.9s,baz=14,slow=0.6,SNR=4.8									
NJ2	**Nanjing**	**127.33**	**48**	*e*PKP		**PKPdf**		**11 31 27.5**	**+0.2**
NJ2				sPKP				11 31 32.4		
NJ2				SKS		**SKSdf**		**11 38 39.0**	**+0.1**
NJ2				SKKS		**SKKSac**		**11 40 22.5**	**-2.1**
NJ2				SS		**SS**		**11 50 38.5**	**+2.6**
NJ2				AMB	AMB					
	comp=Z,70nm,10.0s									
NJ2				LR	LR					
	comp=N,300nm,28.2s									
NJ2				LR	LR					
	comp=E,150nm,28.2s									
NJ2				LR	LR					
	comp=Z,170nm,26.1s									
TBI	**Tubuai**	**128.54**	**240**	*e*LR		LR		12 11 46.0		
	comp=Z,239nm,23.5s									
PPT2	**Papeete2**	**130.37**	**247**	*e*LR		LR		12 12 43.1		
	comp=Z,250nm,24.0s									
MJAR	**Matsushiro Arr**	**136.76**	**30**	PKP		**PKPdf**		**11 31 45.4**	**+0.4**
MJAR	**Matsushiro Arr**	**136.76**	**30**	PKP		**PKPdf**		**11 31 45.4**	**+0.4**
	comp=Z,1.0nm,0.8s,baz=274,slow=3.3,SNR=4.4									
STKA	**Stephens Creek**	**142.49**	**149**	PKP		**PKPdf**		**11 31 53.5**	**-2.1**
STKA	**Stephens Creek**	**142.49**	**149**	PKP		**PKPdf**		**11 31 53.5**	**-2.1**
	comp=Z,1.0nm,0.7s,baz=323,slow=5.1,SNR=2.3									
ASAR	**Alice Springs**	**143.29**	**132**	PKPpre		PKPpre		11 31 52.5		
ASAR				PKP		**PKPdf**		**11 31 58.0**	**+0.7**
ASAR	**Alice Springs**	**143.29**	**132**	PKhKP		PKPpre		11 31 52.5		
	comp=Z,4.6nm,0.9s,baz=222,slow=2.4,SNR=27									
ASAR				PKP		**PKPdf**		**11 31 58.0**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=219,slow=2.6,SNR=14									
WRA	**Warramunga Arr**	**145.66**	**127**	PKPbc		**PKPdf**		**11 32 00.6**	**-0.8**
WRA	**Warramunga Arr**	**145.66**	**127**	PKPbc		**PKPdf**		**11 32 00.6**	**-0.8**
	comp=Z,11nm,0.9s,baz=250,slow=2.6,SNR=57									
DZM	**Mont Dzumac**	**158.01**	**188**	*e*LR		LR		12 25 35.3		
	comp=Z,208nm,22.3s									

IDC 24 11:14:02.0±7.5, 15.85S×173.55W, h0km, mb3.3/3, mb1 3.6/4, mb1mx3.5/21, mbtmp3.4/4, ML1.3/1, Error ellipse: s-maj=356.0km s-min=25.4km az=142.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.58**	**42**	Pn	Pn	11 14 44.1	-1.1
	3.7nm,0.3s,baz=309,slow=6.5,SNR=3.8						
AFI				Sn	Sn	11 15 11.0	-6.4
	5.4nm,0.3s,baz=107,slow=19,SNR=5.1						
WRA	**Warramunga Arr**	**49.60**	**257**	P	P	11 22 55.2	-0.3
	0.2nm,0.7s,baz=90,slow=8.0,SNR=3.3						
ASAR	**Alice Springs**	**49.83**	**252**	P	P	11 22 56.9	-0.4
	0.4nm,0.6s,baz=88,slow=8.0,SNR=10.0						
ILAR	**Eielson Array**	**82.91**	**11**	P	P	11 26 28.8	+0.5
	0.3nm,0.8s,baz=224,slow=6.6,SNR=5.0						
BRTR	**Keskin Array B**	**146.41**	**320**	PKPbc	PKPbc	11 33 45.2	-0.3
	0.7nm,0.7s,baz=46,slow=4.2,SNR=3.6						

IDC 24 11:15:02.4±2.0, 0.56N×126.45E, h0km, mb3.1/3, mb1 3.4/3, mb1mx3.3/21, mbtmp3.2/3, Error ellipse: s-maj=167.0km s-min=26.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.79**	**160**	P	P	11 19 55.4	-0.8
	0.6nm,0.7s,baz=338,slow=11,SNR=10						
ASAR	**Alice Springs**	**25.15**	**164**	P	P	11 20 30.1	+0.6
	0.1nm,0.3s,baz=343,slow=10,SNR=7.2						
MKAR	**Makanchi Array**	**60.00**	**326**	P	P	11 25 10.8	-0.1
	0.1nm,0.3s,baz=115,slow=7.2,SNR=4.5						

GUC 24 11:17:37.0±0.8, 30.95S×71.70W, h15km±5km, MD3.6, ML3.5, 3C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMCH	**Combarbala**	**0.64**	**111**	⇑*i*P	Pg	11 17 49.1	-0.6
CMCH				*i* S	Sg	11 17 58.1	-0.1
CMCH				AML	AML	11 17 58.4	
	comp=E,10μm,0.3s						
CHNG	**Los Chungos**	**0.94**	**170**	⇑*i*P	Pb	11 17 53.8	-1.3
CHNG				*i* S	Sb	11 18 06.0	-1.4
CHNG				AML	AML	11 18 08.8	
	comp=E,940nm,0.7s						
TLL	**Tololo Astrono**	**1.10**	**45**	⇓*i*P	Pb	11 17 56.9	-1.2
TLL				*i* S	Sb	11 18 11.6	-0.8
TLL				AML	AML	11 18 15.8	
	comp=E,715nm,0.4s						
ROCH	**El Roble**	**2.10**	**164**	*i* P	Pn	11 18 10.6	-1.3
ROCH				*i* S	Sn	11 18 38.3	+0.3
ROCH				AML	AML	11 18 43.3	
	comp=E,493nm,0.4s						
LCO	**Las Campanas**	**2.12**	**24**	⇑*i*P	Pn	11 18 11.5	-0.7
LCO				*i* S	Sn	11 18 39.1	+0.5
LCO				AML	AML	11 18 48.2	
	comp=E,211nm,0.5s						
PEL	**Peldehue**	**2.35**	**159**	*e*P	Pn	11 18 16.1	+1.0
PEL				*i* S	Sn	11 18 45.8	+2.0
PEL				AML	AML	11 18 53.1	
	comp=N,630nm,0.3s						
CLCH	**Cerro Calan**	**2.63**	**158**	AML	AML	11 19 03.8	
	comp=N,418nm,0.8s						
LMEL	**Las Melosas**	**3.15**	**157**	AML	AML	11 19 15.6	
	comp=N,139nm,0.2s						

KRSC 24 11:26:18.4±0.2, 52.54N×160.81E, h5km±5km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.73**	**320**	P	Pb	11 26 33.5	-0.2
SPN				*i* S	Sb	11 26 43.5	-0.6
NLC	**Nalytchevo**	**1.09**	**306**	P	Pg	11 26 38.9	-0.4
NLC				*i* S	Sg	11 26 53.5	+0.1
UGLR	**Uglovaya**	**1.38**	**300**	P	Pn	11 26 44.3	-0.1
UGLR				*i* S	Sn	11 27 03.5	+0.3
SDLR	**Sedlovina**	**1.38**	**303**	P	Pn	11 26 43.6	-0.9
SDLR				*i* S	Sb	11 27 02.0	-0.9
PET	**Petropavlovsk**	**1.40**	**291**	P	Pn	11 26 44.2	-0.3
PET				*i* S	Sb	11 27 02.7	-0.4
RUS	**Russkaya**	**1.41**	**267**	P	Pn	11 26 44.6	-0.1
RUS				*i* S	Sb	11 27 03.4	0.0
SMAR	**Somma**	**1.42**	**302**	P	Pn	11 26 45.2	+0.1
SMAR				*i* S	Sg	11 27 04.5	+0.1
AVH	**Avacha**	**1.45**	**301**	P	Pn	11 26 45.5	+0.1
AVH				*i* S	Sg	11 27 05.4	+0.2
KRER	**Koryakskii**	**1.46**	**302**	P	Pn	11 26 45.4	-0.3
KRER				*i* S	Sn	11 27 05.3	-0.2
KOK	**Koryaka**	**1.52**	**301**	P	Pb	11 26 46.8	-0.4
KOK				*i* S	Sg	11 27 07.9	+0.5

MTVR	**Mutnovka**	**1.61**	**269**	P		Pn		11 26 47.7	+0.1
MTVR				*i* S		Sb		11 27 09.4	-0.1
GRL	**Gorelyy**	**1.67**	**271**	P		Pb		11 26 49.7	-0.1
GRL				*i* S		Sb		11 27 11.7	+0.4
KII	**Karymskiy**	**1.71**	**332**	P		Pn		11 26 49.2	+0.3
KII				*i* S		Sb		11 27 12.1	-0.1
ASAK	**Asacha**	**1.79**	**266**	P		Pn		11 26 50.6	+0.6
ASAK				*i* S		Sb		11 27 14.7	+0.2
GNL	**Ganaly**	**2.08**	**305**	P		Pn		11 26 55.2	+1.1
GNL				*i* S		Sb		11 27 22.6	-0.4
MKZ	**Mys Kozlova**	**2.09**	**15**	P		Pn		11 26 54.1	0.0
MKZ				*i* S		Sn		11 27 19.6	-0.9
APC	**Apacha**	**2.25**	**281**	P		Pn		11 26 57.4	+1.1
APC				*i* S		Sb		11 27 26.8	-0.9
MIPR	**Malaya Ipel'ka**	**2.50**	**266**	P		Pn		11 27 01.4	+1.7
MIPR				*i* S		Sb		11 27 33.3	-1.4
TUMR	**Tumrok**	**2.78**	**352**	P		Pn		11 27 05.0	+1.3
TUMR				*i* S		Sn		11 27 40.3	+2.6
KMNR	**Kamenistaya**	**3.24**	**354**	P		Pn		11 27 11.8	+1.8
BZGR	**Bezymyannyi-Gr**	**3.41**	**359**	P		Pn		11 27 15.3	+3.0
KIRR	**Kirishev**	**3.43**	**356**	P		Pn		11 27 13.8	+1.1
ESO	**Esso**	**3.61**	**341**	P		Pn		11 27 16.3	+1.3
SRDR	**Sredinnyy**	**3.84**	**351**	P		Pn		11 27 19.4	+1.2

*ISK **24** 11:31:41.7, 37.68N×26.83E, h8km, MD2.7*
*ISCJB **24** 11:31:42.2±0.8, 37.69N±0.03×26.87E±0.05, h9km±5km, Error ellipse: s-maj=7.1km s-min=4.9km az=164.8*
*CSEM **24** 11:31:42.2±0.3, 37.68N×26.85E, h8km, MD2.9, Error ellipse: s-maj=6.4km s-min=4.2km az=71.0*
*DDA **24** 11:31:43.4, 37.77N×26.98E, h5km, MD2.9*

ISC 24 11:31:42.2±1.1, 37.68N±0.03×26.87E±0.04, h11km±8km, n24, σ0.8s34/38, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	**G?zelcaml?**	**0.29**	**87**	*i* P	**Pg**	**11 31 48.2**	**0.0**
GCAM				*i* S	**Sg**	**11 31 52.1**	**0.0**
GCAM	**G?zelcaml?**	**0.29**	**87**	*i* P	**Pg**	**11 31 48.2**	**0.0**
GCAM				*i* S	**Sg**	**11 31 52.1**	**0.0**
URLA	**Izmir**	**0.71**	**343**	*i* P	**Pg**	**11 31 55.6**	**-0.4**
URLA				*i* S	**Sg**	**11 32 05.8**	**+0.5**
URLA	**Izmir**	**0.71**	**343**	*i* P	**Pg**	**11 31 55.6**	**-0.4**
URLA				*i* S	**Sg**	**11 32 05.8**	**+0.5**
BLCB	**Balcova**	**0.71**	**11**	*e*PG	**Pg**	**11 31 55.9**	**-0.1**
BLCB				*e*SG	**Sb**	**11 32 06.6**	**+0.1**
BLCB	**Balcova**	**0.71**	**11**	*e*Pg	**Pg**	**11 31 55.9**	**-0.1**
BLCB				*e*Sg	**Sb**	**11 32 06.6**	**+0.1**
BODT	**Bodrum**	**0.71**	**150**	*e*PG	**Pg**	**11 31 56.4**	**+0.3**
BODT				*e*SG	**Sb**	**11 32 06.7**	**+0.2**
BODT	**Bodrum**	**0.71**	**150**	*e*Pg	**Pg**	**11 31 56.4**	**+0.3**
BODT				*e*Sg	**Sb**	**11 32 06.7**	**+0.2**
AYDN	**Tasoluk**	**0.80**	**91**	*i* P	**Pg**	**11 31 57.3**	**-0.5**
AYDN				*i* S	**Sg**	**11 32 07.8**	**-0.5**
AYDN	**Tasoluk**	**0.80**	**91**	*i* P	**Pg**	**11 31 57.3**	**-0.5**
AYDN				*i* S	**Sg**	**11 32 07.8**	**-0.5**
MLSB	**Milas**	**0.82**	**118**	*e*PG	**Pb**	**11 31 58.6**	**+0.1**
MLSB	**Milas**	**0.82**	**118**	*e*Pg	**Pb**	**11 31 58.6**	**+0.1**
DAT	**Datca**	**1.11**	**149**	*e*PN	**Pb**	**11 32 03.5**	**0.0**
DAT	**Datca**	**1.11**	**149**	*e*Pn	**Pb**	**11 32 03.5**	**0.0**
APE	**Apeiranthos**	**1.23**	**240**	*e*PN	**Pn**	**11 32 05.3**	**-0.1**
APE	**Apeiranthos**	**1.23**	**240**	*e*Pn	**Pn**	**11 32 05.3**	**-0.1**
YER	**Yerkesik**	**1.25**	**115**	*e*PN	**Pg**	**11 32 06.3**	**0.0**
YER	**Yerkesik**	**1.25**	**115**	*e*Pn	**Pg**	**11 32 06.3**	**0.0**
AKHS	**Akhisar**	**1.41**	**32**	*i* P	**Pn**	**11 32 08.1**	**+0.3**
AKHS				*i* S	**Sn**	**11 32 25.8**	**-0.5**
AKHS	**Akhisar**	**1.41**	**32**	*i* P	**Pn**	**11 32 08.1**	**+0.3**
AKHS				*i* S	**Sn**	**11 32 25.8**	**-0.5**
MANT	**Manisa**	**1.56**	**58**	*i* P	**Pg**	**11 32 12.8**	**+0.6**
MANT				*i* S	**Sn**	**11 32 30.5**	**+0.1**
MANT	**Manisa**	**1.56**	**58**	*i* P	**Pg**	**11 32 12.8**	**+0.6**
MANT				*i* S	**Sn**	**11 32 30.5**	**+0.1**
DALY	**Dalyan (Mu¨la**	**1.67**	**121**	*e*PN	**Pb**	**11 32 12.7**	**-0.2**
DALY	**Dalyan (Mu¨la**	**1.67**	**121**	*e*Pn	**Pb**	**11 32 12.7**	**-0.2**

MAN 24 11:35:49.10˝28N×126˝51E, h17km, mb4.5, ML3.3, MS3.2, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.57**	**214**	*e*P	Pn	11 36 16.3	+0.2
BUTP				*e*S	Sn	11 36 29.1	-6.9
MSLP	**Maasin**	**1.63**	**265**	*e*P	Pn	11 36 17.3	+0.4
MSLP				*e*S	Sn	11 36 29.4	-8.1
PLP	**Palo**	**1.74**	**301**	⇑*e*P	Pn	11 36 19.2	+0.7
PLP				*i* S	Sb	11 36 41.8	-0.4
TBP	**Tagbilaran**	**2.67**	**258**	*e*P	Pn	11 36 33.1	+1.8

IDC 24 12:10:09.4±2.5, 30.77S×178.37W, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.7/19, mbtmp3.8/4, ML3.3/1, Error ellipse: s-maj=65.4km s-min=23.7km az=124.0, Kermadec Islands

| Code |

MDUB	**Mudurnu**	**0.46**	**314**	*e*Pg		**Pb**	**12 44 04.5**	**-1.0**
MDUB				*e*Sg		**Sb**	**12 44 12.1**	**-0.8**
SVRH	**Sivrihisar-ESK**	**0.71**	**186**	*e*PG		**Pg**	**12 44 07.6**	**-0.5**
SVRH				*e*SG		**Sg**	**12 44 18.2**	**+0.9**
SVRH	**Sivrihisar-ESK**	**0.71**	**186**	*e*Pg		**Pg**	**12 44 07.6**	**-0.5**
SVRH				*e*Sg		**Sg**	**12 44 18.2**	**+0.9**
SEYT	**Eskypehyr**	**0.87**	**224**	*i* P		**Pg**	**12 44 11.1**	**-0.1**
SEYT				*i* S		**Sn**	**12 44 28.6**	**+1.2**
SEYT	**Eskypehyr**	**0.87**	**224**	*i* P		**Pg**	**12 44 11.1**	**-0.1**
GULT	**Gulveren**	**0.89**	**289**	*e*PG		**Pg**	**12 44 12.0**	**+0.3**
GULT	**Gulveren**	**0.89**	**289**	*e*Pg		**Pg**	**12 44 12.0**	**+0.3**
LOD	**Lodumlu**	**0.91**	**106**	*e*PG		**Pg**	**12 44 10.8**	**-1.3**
LOD				*e*SG		**Sg**	**12 44 23.4**	**-0.5**
LOD	**Lodumlu**	**0.91**	**106**	*e*Pg		**Pg**	**12 44 10.8**	**-1.3**
LOD				*e*Sg		**Sg**	**12 44 23.4**	**-0.5**
BORA	**Eskisehir**	**0.94**	**254**	*i* P		**Pb**	**12 44 13.8**	**+0.1**
BORA				*i* S		**Sb**	**12 44 26.7**	**0.0**
BORA	**Eskisehir**	**0.94**	**254**	*i* P		**Pb**	**12 44 13.8**	**+0.1**
BORA				*i* S		**Sb**	**12 44 26.7**	**0.0**
ANTO	**Ankara**	**0.94**	**107**	*e*PG		**Pg**	**12 44 11.6**	**-1.0**
ANTO	**Ankara**	**0.94**	**107**	*e*Pg		**Pg**	**12 44 11.6**	**-1.0**
GPA	**Golpazari**	**1.02**	**278**	*e*PG		**Pg**	**12 44 13.8**	**-0.2**
KIZT	**Kizilcal**	**1.29**	**171**	*e*PN		**Pn**	**12 44 18.4**	**-1.4**
KIZT	**Kizilcal**	**1.29**	**171**	*e*Pn		**Pn**	**12 44 18.4**	**-1.4**
BBAL	**Bala**	**1.30**	**117**	*i* P		**Pn**	**12 44 19.3**	**-0.8**
BBAL				*i* S		**Sn**	**12 44 40.0**	**+1.8**
BBAL	**Bala**	**1.30**	**117**	*i* P		**Pn**	**12 44 19.3**	**-0.8**
AFSR	**Af˙ar-Bala (A**	**1.32**	**122**	*e*PN		**Pn**	**12 44 18.4**	**-1.8**
AFSR	**Af˙ar-Bala (A**	**1.32**	**122**	*e*Pn		**Pn**	**12 44 18.4**	**-1.8**
SAFT	**Safranbolu**	**1.35**	**36**	*e*PN		**Pn**	**12 44 20.0**	**-0.6**
SAFT	**Safranbolu**	**1.35**	**36**	*e*Pn		**Pn**	**12 44 20.0**	**-0.6**
CAVI	**Cavuskoy**	**1.37**	**273**	*e*PN		**Pb**	**12 44 20.7**	**-0.2**
CAVI	**Cavuskoy**	**1.37**	**273**	*e*Pn		**Pb**	**12 44 20.7**	**-0.2**
ELDT	**Eldivan**	**1.42**	**76**	*i* P		**Pn**	**12 44 21.2**	**-0.5**
ELDT				*i* S		**Sg**	**12 44 43.4**	**+3.2**
ELDT	**Eldivan**	**1.42**	**76**	*i* P		**Pn**	**12 44 21.2**	**-0.5**
ELDT				*i* S		**Sg**	**12 44 43.4**	**+3.2**
ADVT	**Abdulvahap**	**1.47**	**282**	*e*PN		**Pg**	**12 44 22.7**	**0.0**
ADVT	**Abdulvahap**	**1.47**	**282**	*e*Pn		**Pg**	**12 44 22.7**	**0.0**
BOLV	**Bolvadin**	**1.52**	**200**	*i* P		**Pb**	**12 44 24.2**	**+0.5**
BOLV	**Bolvadin**	**1.52**	**200**	*i* P		**Pb**	**12 44 24.2**	**+0.5**
ALT	**Altintas**	**1.60**	**227**	*e*PN		**Pn**	**12 44 24.0**	**-0.1**
ALT	**Altintas**	**1.60**	**227**	*e*Pn		**Pn**	**12 44 24.0**	**-0.1**
HRT	**Hereke**	**1.64**	**295**	*e*PN		**Pb**	**12 44 25.0**	**-0.6**
HRT	**Hereke**	**1.64**	**295**	*e*Pn		**Pb**	**12 44 25.0**	**-0.6**
YLV	**Yalova**	**1.77**	**284**	*e*PN		**Pb**	**12 44 27.4**	**-0.4**
YLV	**Yalova**	**1.77**	**284**	*e*Pn		**Pb**	**12 44 27.4**	**-0.4**
TVSB	**Tavsanli**	**1.81**	**248**	*e*PN		**Pb**	**12 44 27.7**	**-0.8**
TVSB	**Tavsanli**	**1.81**	**248**	*e*Pn		**Pb**	**12 44 27.7**	**-0.8**
SILT	**Sile**	**1.81**	**304**	*e*PN		**Pb**	**12 44 27.2**	**-1.3**
SILT	**Sile**	**1.81**	**304**	*e*Pn		**Pb**	**12 44 27.2**	**-1.3**
ILGA	**Ilgaz**	**1.83**	**60**	*i* P		**Pb**	**12 44 29.5**	**+0.5**
ILGA	**Ilgaz**	**1.83**	**60**	*i* P		**Pb**	**12 44 29.5**	**+0.5**
BALT	**Daday**	**1.92**	**44**	*i* P		**Pb**	**12 44 30.7**	**+0.2**
BALT	**Daday**	**1.92**	**44**	*i* P		**Pb**	**12 44 30.7**	**+0.2**
LADK	**Ladik-KONYA**	**2.03**	**163**	*e*PN		**Pn**	**12 44 29.6**	**-0.5**
LADK	**Ladik-KONYA**	**2.03**	**163**	*e*Pn		**Pn**	**12 44 29.6**	**-0.5**
CORM	**Corum**	**2.30**	**88**	*e*PN		**Pn**	**12 44 33.1**	**-0.7**
CORM	**Corum**	**2.30**	**88**	*e*Pn		**Pn**	**12 44 33.1**	**-0.7**

*ISK **24** 13:05:17.8, 38˙16N×37˙28E, h2km, MD2.9*
*CSEM **24** 13:05:19.0±0.2, 38˙15N×37˙29E, h5km, MD2.9, Error ellipse: s-maj=6.2km s-min=5.2km az=133.0*
*DDA **24** 13:05:19.0, 38˙20N×37˙30E, h7km, MD2.8*

ISC 24 13:05:19.5±1.1, **38˙18N**±0˙03×**37˙27E**±0˙03, **h11**km±10km, **n25**, σ1**9**14/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DARE	**Darende-Malaty**	**0.42**	**23**	*e*PG	**Pg**	**13 05 27.1**	**-0.8**
DARE				*e*SG	**Sb**	**13 05 34.4**	**-1.1**
KMRS	**Kahramanmaras**	**0.74**	**204**	*e*PG	**Pg**	**13 05 32.4**	**-1.3**
KMRS				*e*SG	**Sg**	**13 05 42.6**	**-0.7**
KMRS	**Kahramanmaras**	**0.74**	**204**	*e*Pg	**Pg**	**13 05 32.4**	**-1.3**
KMRS				*e*Sg	**Sg**	**13 05 42.7**	**-0.7**
PINB	**Pinarbasi**	**0.84**	**306**	*i* P	**Pg**	**13 05 35.2**	**-0.6**
PINB				*i* S	**Sb**	**13 05 49.0**	**+1.2**
PINB	**Pinarbasi**	**0.84**	**306**	*i* P	**Pg**	**13 05 35.2**	**-0.6**
PINB				*i* S	**Sb**	**13 05 49.0**	**+1.2**
AYKD	**Aykdinkavak**	**0.85**	**206**	*i* P	**Pg**	**13 05 35.2**	**-0.7**
AYKD				*i* S	**Sg**	**13 05 47.6**	**+0.7**
GZT	**Gaziantep**	**0.85**	**164**	*i* P	**Pn**	**13 05 37.8**	**+0.3**
GZT				*i* S	**Sn**	**13 05 50.2**	**+1.1**
MYA	**Malataya**	**0.92**	**81**	*e*PG	**Pg**	**13 05 36.0**	**-1.1**
MYA				*e*SG	**Sn**	**13 05 50.4**	**-1.2**
MYA	**Malataya**	**0.92**	**81**	*e*Pg	**Pg**	**13 05 36.1**	**-1.1**
MYA				*e*Sg	**Sn**	**13 05 50.4**	**-1.2**
BNN	**Bunyan**	**1.31**	**301**	*e*PN	**Pn**	**13 05 43.7**	**0.0**
BNN	**Bunyan**	**1.31**	**301**	*e*Pn	**Pn**	**13 05 43.7**	**0.0**
KOZT	**Kozan**	**1.34**	**239**	*e*PN	**Pn**	**13 05 44.6**	**+0.6**
KOZT	**Kozan**	**1.34**	**239**	*e*Pn	**Pn**	**13 05 44.7**	**+0.6**
ELZG	**Elazig**	**1.38**	**76**	*i* P	**Pg**	**13 05 45.3**	**-0.7**
ELZG				*i* S	**Sg**	**13 06 07.1**	**+3.1**
ELZG	**Elazig**	**1.38**	**76**	*i* P	**Pg**	**13 05 45.3**	**-0.7**
ELZG				*i* S	**Sg**	**13 06 07.1**	**+3.1**
KUZU	**Kuzuini**	**1.41**	**186**	*i* P	**Pg**	**13 05 46.6**	**0.0**
KUZU				*i* S	**Sg**	**13 06 06.3**	**+1.3**
KUZU	**Kuzuini**	**1.41**	**186**	*i* P	**Pg**	**13 05 46.6**	**0.0**
KUZU				*i* S	**Sg**	**13 06 06.3**	**+1.3**
ILIC	**ilic-Erzincan**	**1.62**	**38**	*e*PN	**Pn**	**13 05 48.3**	**+0.2**
ILIC	**ilic-Erzincan**	**1.62**	**38**	*e*Pn	**Pn**	**13 05 48.3**	**+0.2**
SVSK	**Karacayir**	**1.75**	**353**	*e*PN	**Pb**	**13 05 50.9**	**-0.6**
SVSK	**Karacayir**	**1.75**	**353**	*e*Pn	**Pb**	**13 05 50.9**	**-0.6**
PTK	**Pertek**	**1.81**	**66**	*e*PN	**Pn**	**13 05 50.8**	**+0.1**
PTK	**Pertek**	**1.81**	**66**	*e*Pn	**Pn**	**13 05 50.8**	**+0.1**
NIG	**Nigde**	**2.10**	**269**	*e*PN	**Pn**	**13 05 55.9**	**+1.1**
NIG	**Nigde**	**2.10**	**269**	*e*Pn	**Pn**	**13 05 55.9**	**+1.1**

*ISCJB **24** 13:16:08.1±1.5, 58˙30N±0˙08×6˙5E±0˙1, h0km, Error ellipse: s-maj=13.6km s-min=6.1km az=28.5*
*CSEM **24** 13:16:09.7±0.7, 58˙36N×6˙49E, h1km, ML1.6, Error ellipse: s-maj=15.0km s-min=4.7km az=20.0, Suspected Mining explosion.*
*BER **24** 13˙16:10.9±2.3, 58˙33N×6˙42E, h0km, MD1.7, ML1.6, ML1.4(NAO), Suspected explosion*
*NAO **24** 13˙16:12.8±4.2, 58˙56N×6˙44E*

ISC 24 13:16:08.4±1.9, **58˙30N**±0˙09×**6˙44E**±0˙06, **h0**km, **n16**, σ0**99**/29, **Southern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOMB	**Homborsund**	**1.09**	**91**	*e*S	**Sb**	**13 16 45.2**	**+0.3**
HOMB				AML	AML	13 16 48.7	
	comp=Z,20nm,0.0s						
HOMB	**Homborsund**	**1.09**	**91**	*e*S	**Sb**	**13 16 45.2**	**+0.3**
	comp=Z,20nm,0.0s,SNR=90						
KMY	**Karmoy**	**1.10**	**326**	*e*P	**Pg**	**13 16 29.7**	**+0.1**
KMY				*e*S	**Sb**	**13 16 45.4**	**0.0**
KMY				AML	AML	13 16 48.1	
	comp=Z,36nm,0.1s						
KMY	**Karmoy**	**1.10**	**326**	*e*P	**Pg**	**13 16 29.7**	**+0.1**
	SNR=90						
KMY				*e*S	**Sb**	**13 16 45.4**	**+0.1**
	comp=Z,10nm,0.3s,SNR=90						
BLS5	**Blasjo**	**1.13**	**0**	*e*P	**Pg**	**13 16 30.6**	**+0.6**
BLS5				*e*P	**Pb**	**13 16 31.2**	**+0.4**
BLS5				*e*S	**Sg**	**13 16 45.5**	**+1.0**
BLS5				AML	AML	13 16 51.1	
	comp=Z,10nm,0.3s						
ODD1	**Odda**	**1.62**	**3**	*e*P	**Pn**	**13 16 39.1**	**+0.9**
ODD1				*e*S	**Sb**	**13 17 00.6**	**+0.4**
ODD1				AML	AML	13 17 03.3	
	comp=Z,15nm,0.1s						
ODD1	**Odda**	**1.62**	**3**	*e*P	**Pn**	**13 16 39.1**	**+0.8**
	SNR=50						
ODD1				*e*S	**Sb**	**13 17 00.6**	**+0.4**
	comp=Z,8.5nm,0.1s,SNR=50						
ASK	**Askoy**	**2.28**	**344**	*e*P	**Pn**	**13 16 46.6**	**-0.6**
ASK				*e*Sg	**Sb**	**13 17 18.8**	**-0.3**
ASK				AML	AML	13 17 20.9	
	comp=Z,8.5nm,0.1s						
SUE	**Sulen**	**2.89**	**344**	*e*P	**Pn**	**13 16 55.8**	**+0.1**
SUE	**Sulen**	**2.89**	**344**	*e*P	**Pn**	**13 16 55.8**	**+0.1**
	SNR=50						
NB2	**NORSAR Subarra**	**3.66**	**39**	Pn	**Pn**	**13 17 06.8**	**+0.5**
NB2				Sn	**Sn**	**13 17 48.3**	**-1.9**
NB2				Lg	Lg	13 18 02.3	
NB2	**NORSAR Subarra**	**3.66**	**39**	Pn	**Pn**	**13 17 06.8**	**+0.4**
NB2				Sn	**Sn**	**13 17 48.3**	**-1.9**
NB2				Lg	Lg	13 18 02.3	
HFS	**Hagfors**	**4.16**	**61**	Pn	**Pn**	**13 17 13.7**	**+0.7**
	baz=235,slow=16						
HFS				Sn	**Sn**	**13 18 00.6**	**-1.7**
	baz=250,slow=28						
HFS				Lg	Lg	13 18 19.8	
	baz=245,slow=37						
HFS	**Hagfors**	**4.16**	**61**	Pn	**Pn**	**13 17 13.7**	**+0.7**
	baz=235,slow=16						
HFS				Sn	**Sn**	**13 18 00.6**	**-1.7**
	baz=250,slow=28						
HFS				Lg	Lg	13 18 19.8	
	baz=245,slow=37						
HFS	**Hagfors**	**4.16**	**61**	Pn	**Pn**	**13 17 13.7**	**+0.7**
	baz=235,slow=14,SNR=50						
HFS				Sn	**Sn**	**13 18 00.6**	**-1.7**
	baz=250,slow=28,SNR=50						
HFS				Lg	Lg	13 18 19.8	
	baz=245,slow=29,SNR=5.0						

*ISCJB **24** 13:17:05.7±0.6, 17˙5S±0˙1×177˙0W±0˙1, h10km, mb4.1/11, MS4.0/7, Error ellipse: s-maj=20.5km s-min=13.4km az=143.9*
*IDC **24** 13:17:06.0±0.8, 17˙40S×176˙98W, h0km, mb3.9/8, mb1 4.2/8, mb1mx4.0/19, mbtmp3.9/8, MS4.0/10, Ms1 4.0/10, ms1mx3.5/34, Error ellipse: s-maj=31.0km s-min=21.3km az=126.0*
*NEIC **24** 13:17:09.2±7.7, 17˙44S×176˙98W, h22km±54km, mb4.8/2, Error ellipse: s-maj=23.0km s-min=18.5km az=85.0*

ISC 24 13:17:07.3±0.7, **17˙4S**±0˙1×**177˙0W**±0˙1, **h10**km, **n37**, σ1**9**00/22, **mb4.1**/11, **MS4.0**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**4.75**	**266**	*e*Pn	**Pn**	**13 18 19.3**	**+0.1**
RAO	**Raoul Island**	**11.80**	**184**	LR	LR	13 23 49.7	
	comp=Z,791nm,21.9s,baz=8.4,slow=34						
DZM	**Mont Dzumac**	**16.27**	**251**	*e*LR	LR	13 24 41.9	
	729nm,25.6s						
DZM	**Mont Dzumac**	**16.27**	**251**	LR	LR	13 25 28.5	
	comp=Z,151nm,18.2s,baz=247,slow=31						
RAR	**Rarotonga**	**16.67**	**106**	LR	LR	13 26 07.9	
	comp=Z,263nm,19.5s,baz=270,slow=32						
URZ	**Urewera**	**21.39**	**193**	P	**P**	**13 21 55.5**	**+0.4**
URZ	**Urewera**	**21.39**	**193**	P	**P**	**13 21 55.5**	**+0.4**
	5.8nm,0.9s,baz=68,slow=16,SNR=2.4						
URZ				LR	LR	13 29 10.5	
	comp=Z,556nm,21.2s,baz=32,slow=34						
HNR	**Honiara**	**23.79**	**287**	LR	LR	13 30 06.7	
	comp=Z,397nm,19.2s,baz=131,slow=33						
PPT2	**Papeete2**	**26.12**	**95**	*e*LR	LR	13 29 09.8	
	697nm,27.2s,baz=260						
PPT	**Papeete**	**26.12**	**94**	LR	LR	13 30 04.2	
	comp=Z,396nm,19.4s,baz=238,slow=30						
TBI	**Tubuai**	**26.43**	**107**	*e*LR	LR	13 29 26.3	
	703nm,28.2s						
RKT	**Rikitea**	**39.70**	**105**	*e*LR	LR	13 35 32.2	
	499nm,28.5s,baz=276						
STKA	**Stephens Creek**	**40.06**	**241**	P	P	13 24 47.0	+4.1
STKA	**Stephens Creek**	**40.06**	**241**	P	P	13 24 47.0	+4.1
	3.7nm,0.9s,baz=72,slow=12,SNR=6.2						
WRA	**Warramunga Arr**	**46.06**	**259**	P	**P**	**13 25 33.1**	**+1.3**
WRA	**Warramunga Arr**	**46.06**	**259**	P	**P**	**13 25 33.1**	**+1.3**
	0.6nm,1.0s,baz=91,slow=7.2,SNR=3.4						
ASAR	**Alice Springs**	**46.24**	**254**	P	**P**	**13 25 33.5**	**+0.4**
ASAR	**Alice Springs**	**46.24**	**254**	P	**P**	**13 25 33.5**	**+0.4**
	5.9nm,1.0s,baz=89,slow=7.9,SNR=22						
FITZ	**Fitzroy Crossi**	**54.46**	**260**	LR	LR	13 48 24.3	
	comp=Z,210nm,20.4s,baz=109,slow=34						
VNDA	**Vanda**	**61.04**	**185**	*e*P	**P**	**13 27 18.9**	**-1.9**
VNDA	**Vanda**	**61.04**	**185**	P	**P**	**13 27 20.1**	**-0.6**
	0.8nm,0.8s,baz=28,slow=4.8,SNR=5.1						
MJAR	**Matsushiro Arr**	**68.35**	**322**	P	**P**	**13 28 08.2**	**-0.9**
MJAR	**Matsushiro Arr**	**68.35**	**322**	P	**P**	**13 28 08.2**	**-0.9**
	1.2nm,0.8s,baz=157,slow=6.6,SNR=3.4						
YBH	**Yreka Blue Hor**	**77.30**	**39**	LR	LR	13 53 57.7	
	comp=Z,71nm,21.4s,baz=101,slow=29						
NVAR	**Mina Array Bea**	**78.14**	**43**	P	**P**	**13 29 08.4**	**+1.3**
NVAR	**Mina Array Bea**	**78.14**	**43**	P	**P**	**13 29 08.4**	**+1.3**
	1.3nm,1.0s,baz=226,slow=9.9,SNR=4.2						
NEW	**Newport**	**84.32**	**35**	LR	LR	13 59 38.8	
	comp=Z,48nm,19.4s,baz=234,slow=30						
TXAR	**Lajitas Array**	**84.59**	**57**	P	**P**	**13 29 42.6**	**+1.2**
TXAR	**Lajitas Array**	**84.59**	**57**	P	**P**	**13 29 42.6**	**+1.2**
	0.2nm,0.5s,baz=221,slow=5.4,SNR=4.0						
PV01	**Paradox Valley**	**84.61**	**47**	P	**P**	**13 29 40.8**	**-0.6**
MAW	**Mawson**	**84.77**	**199**	LR	LR	14 03 05.2	
	comp=Z,149nm,18.2s,baz=313,slow=32						
COLA	**College**	**85.02**	**12**	*e*P	**P**	**13 29 41.7**	**-0.8**
	7.5nm,1.0s						
ILAR	**Eielson Array**	**85.12**	**12**	P	**P**	**13 29 42.2**	**-0.9**
ILAR	**Eielson Array**	**85.12**	**12**	P	**P**	**13 29 42.2**	**-0.9**
	3.3nm,1.0s,baz=220,slow=6.1,SNR=11						
BILL	**Bilibino**	**86.10**	**354**	*e*P	**P**	**13 29 47.5**	**-0.4**
	6.6nm,1.3s						
BRTR	**Keskin Array B**	**145.40**	**316**	PKPbc	**PKPab**	**13 36 46.1**	**0.0**
BRTR	**Keskin Array B**	**145.40**	**316**	PKPbc	**PKPab**	**13 36 46.1**	**0.0**
	3.6nm,0.8s,baz=94,slow=2.0,SNR=9.0						

*CSEM **24** 13:32:49.0, 40˙14N×32˙66E, h31km, MD2.6, After ISK*

ISK 24 13:32:49.0, 40˙14N×32˙66E, h1km, **MD2.6, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOD	**Lodumlu**	**0.26**	**163**	*e*PG	Pn	13 32 56.6	-0.2
LOD				*e*SG	Sn	13 33 02.1	+0.1
LOD	**Lodumlu**	**0.26**	**163**	*e*Pg	Pn	13 32 56.7	-0.2
LOD				*e*Sg	Sn	13 33 02.1	+0.1
ANTO	**Ankara**	**0.29**	**160**	*e*PG	Pn	13 32 57.2	-0.1
ANTO				*e*SG	Sn	13 33 02.6	0.0
ANTO	**Ankara**	**0.29**	**160**	*e*Pg	Pn	13 32 57.2	0.0
ANTO				*e*Sg	Sn	13 33 02.6	0.0
MDUB	**Mudurnu**	**1.17**	**287**	*e*PN	Pn	13 33 09.5	+0.1
MDUB				*e*SN	Sn	13 33 24.6	+0.3
MDUB	**Mudurnu**	**1.17**	**287**	*e*Pn	Pn	13 33 09.5	+0.1
MDUB				*e*Sn	Sn	13 33 24.6	+0.2
KIZT	**Kizilcal**	**1.40**	**206**	*e*PN	Pn	13 33 12.9	+0.3
KIZT	**Kizilcal**	**1.40**	**206**	*e*Pn	Pn	13 33 12.9	+0.4
CDAG	**Cicekdag**	**1.41**	**111**	*i* P	Pb	13 33 20.2	+5.3
CDAG				*i* S	Sb	13 33 42.8	+10
GULT	**Gulveren**	**1.67**	**281**	*e*PN	Pn	13 33 16.7	+0.5
GULT	**Gulveren**	**1.67**	**281**	*e*Pn	Pn	13 33 16.7	+0.5

*IDC **24** 13:36:16.1±0.6, 16˙20S×178˙39E, h0km, mb4.3/17, mb1 4.5/17, mb1mx4.5/21, mbtmp4.3/17, MS4.0/20, Ms1 4.0/20, ms1mx3.9/29, Error ellipse: s-maj=22.6km s-min=14.8km az=117.0*
*BJI **24** 13:36:18.0, 15˙94S×179˙32E, h30km, mB5.2/9, mb4.8/20, Ms4.8/7, Ms7 4.5/9*
*ISCJB **24** 13:36:20.0±0.3, 16˙32S±0˙06×178˙40E±0˙07, h34km, mb4.6/57, MS4.1/22, Error ellipse: s-maj=11.0km s-min=6.9km az=39.1*
*SZGRF **24** 13:36:20.5, 16˙27S×178˙40E, h19km, Fiji Islands*
*MOS **24** 13:36:20.1±0.9, 16˙25S×178˙32E, h33km, mb5.0/12, Error ellipse: s-maj=18.0km s-min=10.8km az=69.5*
*NEIC **24** 13:36:21.5±0.2, 16˙29S×178˙38E, h35km, mb4.8/29, Error ellipse: s-maj=9.2km s-min=4.8km az=126.0*
*GCMT **24** 13:36:21.2±0.3, 16˙14S×178˙50E, h17km±1km, MW5.0, Moment Tensor Solution. s17,c25; s60,c87; Moment tensor: Scale 10¹⁶Nm; Mrr-2.54±.22; Mθθ0.18±.14; Mϕϕ2.36±.14; Mrθ-1.30±.36; Mθϕ1.92±.09; Mϕr-0.57±.30; Best double couple: Mo3.40000×10¹⁶ NP1:ϕs 189.00000°, δ39.00000°, λ-124.00000°. NP2:ϕs49.00000°, δ59.00000°, λ-66.00000°. Principal axes: T 3.7000, Plg11.0000°, Azm122.0000°; N -0.6200, Plg20.0000°, Azm216.0000°; P -3.0700, Plg67.0000°, Azm6.0000°; Data Used: IU IC G II.*

ISC 24 13:36:21.5±0.5, **16˙25S**±0˙08×**178˙53E**±0˙08, **h34**km±1km, **h34**km:**pP-P**, **n332**, σ1**9**18/354, **mb4.6**/57, **MS4.1**/22, **74C-90D**, **Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**1.55**	**197**	*e*P	Pn	13 36 43.9	-2.8
MSVF	**Nonsavu**	**1.55**	**197**	*e*Pn	Pn	13 36 43.9	-2.8
AFI	**Afiamalu**	**9.64**	**77**	LR	LR	13 41 38.2	
	comp=Z,936nm,19.8s,baz=256,slow=33						
DZM	**Mont Dzumac**	**12.80**	**241**	*e*LR	LR	13 42 11.6	
	1µm,24.6s						
DZM	**Mont Dzumac**	**12.80**	**241**	LR	LR	13 43 10.0	
	comp=Z,670nm,20.4s,baz=45,slow=33						
RAO	**Raoul Island**	**13.35**	**166**	LR	LR	13 43 42.9	
	comp=Z,745nm,19.0s,baz=350,slow=33						
HNR	**Honiara**	**19.34**	**288**	LR	LR	13 47 02.1	
	comp=Z,615nm,19.4s,baz=353,slow=34						
RAR	**Rarotonga**	**21.12**	**107**	LR	LR	13 47 11.6	
	comp=Z,772nm,21.3s,baz=270,slow=31						
URZ	**Urewera**	**21.96**	**183**	*e*P	**P**	**13 41 10.6**	**-1.7**
URZ	**Urewera**	**21.96**	**183**	P	**P**	**13 41 10.2**	**-2.1**
	16nm,1.0s,baz=27,slow=9.0,SNR=4.8						
URZ				LR	LR	13 48 19.7	
	comp=Z,374nm,19.5s,baz=8.2,slow=33						
RPZ	**Rata Peaks**	**28.11**	**192**	P	**P**	**13 42 09.0**	**-1.1**
RPZ	**Rata Peaks**	**28.11**	**192**	P	**P**	**13 42 09.0**	**-1.1**
	5.0nm,0.8s,baz=0.0,slow=5.1,SNR=2.8						
PPT2	**Papeete2**	**30.52**	**97**	*e*S	**S**	**13 47 27.2**	**-4.3**
	183nm,26.5s						
PPT2				*e*LR	LR	13 50 19.0	
	1µm,30.0s						
PPT	**Papeete**	**30.52**	**97**	LR	LR	13 50 45.8	
	comp=Z,288nm,20.9s,baz=310,slow=28						
TBI	**Tubuai**	**30.88**	**108**	*e*LR	LR	13 50 33.9	
	1µm,30.2s						
STKA	**Stephens Creek**	**36.93**	**238**	*e*P	**P**	**13 43 27.8**	**+0.4**
	5.0nm,1.3s						
STKA	**Stephens Creek**	**36.93**	**238**	P	**P**	**13 43 27.8**	**+0.4**
	5.5nm,0.7s,baz=56,slow=7.8,SNR=15						
STKA				LR	LR	13 56 55.1	
	comp=Z,263nm,18.4s,baz=315,slow=34						
BBOO	**Buckleboo**	**41.70**	**239**	*e*P	**P**	**13 44 06.1**	**-1.1**
WRA	**Warramunga Arr**	**42.08**	**258**	P	**P**	**13 44 08.2**	**-2.2**
WRA	**Warramunga Arr**	**42.08**	**258**	P	**P**	**13 44 08.2**	**-2.2**
	4.4nm,0.8s,baz=90,slow=8.5,SNR=10						
WRA				LR	LR	13 58 03.4	
	comp=Z,88nm,21.7s,baz=85,slow=31						
AS31	**Alice Springs**	**42.46**	**253**	*e*P	**P**	**13 44 12.8**	**-0.7**
ASAR	**Alice Springs**	**42.46**	**253**	P	**P**	**13 44 11.7**	**-1.9**
ASAR	**Alice Springs**	**42.46**	**253**	P	**P**	**13 44 11.7**	**-1.9**
	4.9nm,0.6s,baz=83,slow=8.9,SNR=34						
ASAR				LR	LR	14 01 29.2	
	comp=Z,237nm,18.4s,baz=88,slow=36						
RKT	**Rikitea**	**44.16**	**107**	*e*LR	LR	13 56 42.5	
	704nm,28.0s,baz=270						
FORT	**Forrest**	**48.11**	**243**	*e*P	**P**	**13 44 58.2**	**+0.1**
	23nm,0.8s						
FITZ	**Fitzroy Crossi**	**50.43**	**260**	P	P	13 45 20.2	+4.1
FITZ	**Fitzroy Crossi**	**50.43**	**260**	P	P	13 45 20.2	+4.1
	4.9nm,1.1s,baz=129,slow=13,SNR=3.3						
VNDA	**Vanda**	**61.86**	**184**	P	**P**	**13 46 38.4**	**+1.5**
VNDA	**Vanda**	**61.86**	**184**	P	**P**	**13 46 38.4**	**+1.5**
	0.8nm,0.9s,baz=2.7,slow=8.6,SNR=2.8						
SBA	**Scott Base**	**61.90**	**183**	P	**P**	**13 46 36.9**	**-0.2**
SBA				pmax	pmax		
	comp=Z,14nm,1.2s						
SBA	**Scott Base**	**61.90**	**183**	P	**P**	**13 46 36.9**	**-0.2**
	comp=Z,14nm,1.2s						
MJAR	**Matsushiro Arr**	**64.85**	**325**	P	**P**	**13 46 56.2**	**-1.1**
MJAR	**Matsushiro Arr**	**64.85**	**325**	P	**P**	**13 46 56.2**	**-1.1**
	comp=Z,0.6nm,0.6s,baz=166,slow=8.4,SNR=4.5						
MJAR				LR		14 08 09.1	
	comp=Z,127nm,21.6s,baz=135,slow=30						
PETK	**Petropavlovsk-**	**71.37**	**347**	*e*P	**P**	**13 47 39.3**	**+1.5**
PETK				pmax	pmax		
	comp=Z,4.0nm,1.0s					

NV11	Mina Array Sit	80.41	45	eP		P	13 48 30.8	+1.0
GMRC	Granite Mounta	80.44	50	⇓P		P	13 48 31.2	+1.2
	baz=81							
SHOC	Shoshone	80.51	48	⇓P		P	13 48 31.3	+1.0
	baz=81							
IRM	Iron Mountain	80.53	50	⇑P		P	13 48 31.5	+1.0
	baz=81							
TUQ	Turquoise Moun	80.55	49	⇑P		P	13 48 31.5	+0.9
	baz=81,SNR=5.2							
MOD	Modoc	80.75	41	eP		P	13 48 32.1	+0.5
	comp=Z,14nm,1.3s							
LDFC	Landfair	80.98	50	eP		P	13 48 34.1	+1.2
	comp=Z,28nm,1.3s							
214A	Organ Pipe Nat	81.33	53	⇑P		P	13 48 36.0	+1.2
	baz=82							
PDMC	Parker Dam,Lak	81.34	51	⇑P		P	13 48 36.4	+1.7
	baz=82							
GYA	Guiyang	81.68	301	eP		P	13 48 38.0	+1.1
GYA				pP		pP	13 48 48.8	+1.1
GYA				sP		sP	13 48 53.0	+1.4
GYA				PP		PP	13 51 47.3	+3.2
GYA				S		S	13 58 47.5	0.0
GYA				SKS		SKSac	13 58 51.9	-2.7
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
VLL	Laurance Lake	81.80	38	P		P	13 48 38.1	+1.1
FL2	Flat Top 2	81.81	37	P		P	13 48 38.4	+1.3
W13A	Hualapai Mount	81.88	50	⇓P		P	13 48 39.1	+1.2
	baz=82							
VIPM	Ingram Point	81.92	39	P		P	13 48 38.8	+1.0
VIPM	Ingram Point	81.92	39	P		P	13 48 38.8	+1.0
WVOR	Wild Horse Val	82.08	42	eP		P	13 48 39.6	+1.0
WVOR				pmax		pmax		
	comp=Z,8.0nm,1.1s							
WVOR	Wild Horse Val	82.08	42	eP		P	13 48 39.6	+1.0
	comp=Z,8.5nm,1.1s							
R11A	Troy Canyon, C	82.14	46	⇓P		P	13 48 39.4	+0.3
	baz=82,SNR=6.1							
HDW	Hoodsport	82.22	36	P		P	13 48 40.2	+1.0
X16A	Lo Mia Camp, P	83.41	51	⇓P		P	13 48 47.2	+1.4
	baz=84							
HAWA	Hanford	83.56	38	eP		P	13 48 47.0	+0.9
	comp=Z,25nm,1.3s							
U15A	North Rim	83.63	49	⇓P		P	13 48 48.5	+1.5
	baz=84							
319A	Douglas	83.84	55	⇓P		P	13 48 49.7	+1.7
	baz=84							
WUAZ	Wupatki	83.92	50	eP		P	13 48 49.7	+1.3
	comp=Z,3.3nm,1.1s							
WUAZ	Wupatki	83.92	50	⇑P		P	13 48 49.7	+1.3
	baz=84							
HHC	Hu-ho-hao-te	84.04	315	eP		P	13 48 48.3	-0.5
HHC				pP		pP	13 48 58.8	-0.8
HHC				sP		sP	13 49 02.8	-0.8
HHC				PP		PP	13 52 04.6	+1.4
HHC				SKS		SKSac	13 59 05.4	-4.2
HHC				S		S	13 59 09.6	-1.3
HHC				sS		sS	13 59 27.1	-1.8
HHC				SS		SS	14 04 42.0	+1.7
HHC				pmax		pmax		
	comp=Z,52nm,1.0s							
HHC				pmax		pmax		
	comp=Z,220nm,5.1s							
HHC				LR		LR		
	comp=N,100nm,15.1s							
HHC				LR		LR		
	comp=E,190nm,15.7s							
HHC				LR		LR		
	comp=Z,110nm,15.9s							
BMO	Blue Mountains	84.13	40	eP		P	13 48 49.2	+0.1
	comp=Z,21nm,1.9s							
MFID	Camas Ranch	84.36	42	eP		P	13 48 51.1	+0.7
	comp=Z,12nm,1.2s							
MFID	Camas Ranch	84.36	42	⇓P		P	13 48 51.1	+0.7
	baz=85							
MAW	Mawson	84.41	200	P		P	13 48 50.1	0.0
MAW	Mawson	84.41	200	P		P	13 48 50.1	0.0
	comp=Z,1.5nm,0.7s,baz=142,slow=14,SNR=3.0							
MAW				LR		LR	14 24 02.5	
	comp=Z,100nm,18.5s,baz=306,slow=34							
320A	Kipp Ranch, An	84.42	55	⇓P		P	13 48 52.8	+1.8
	baz=85							
BILL	Bilibino	84.53	355	i/P		P	13 48 50.1	-0.4
BILL				e			13 52 09.4	
BILL				pmax		pmax		
	comp=Z,4.0nm,1.2s							
MVU	Marysvale	84.58	47	eP		P	13 48 53.3	+1.5
	comp=Z,9.6nm,1.2s							
X18A	Snowflake	84.58	52	⇑P		P	13 48 53.1	+1.3
	baz=85							
MSU	Marysvale	84.60	47	eP		P	13 48 53.2	+1.4
MSU				pmax		pmax		
	comp=Z,7.0nm,0.5s							
MSU	Marysvale	84.60	47	eP		P	13 48 53.2	+1.4
	comp=Z,6.8nm,0.5s							
220A	Playas Peak, P	84.64	55	⇓P		P	13 48 54.3	+2.2
	baz=85							
COLA	College	84.83	14	eP		P	13 48 51.0	-1.0
COLA				pmax		pmax		
	comp=Z,18nm,1.1s							
COLA	College	84.83	14	eP		P	13 48 51.0	-1.0
	comp=Z,18nm,1.1s							
DUG	Dugway	84.89	46	⇑P		P	13 48 53.9	+0.8
	baz=85							
ILAR	Eielson Array	84.97	14	P		P	13 48 52.0	-0.7
ILAR	Eielson Array	84.97	14	P		P	13 48 52.0	-0.7
	comp=Z,8.8nm,0.9s,baz=234,slow=5.9,SNR=63							
ILAR				LR		LR	14 19 28.4	
	comp=Z,79nm,21.2s,baz=178,slow=30							
I12A	Atlanta	84.98	42	⇑P		P	13 48 54.7	+1.1
	baz=85							
Z20A	Nine Sixteen R	85.06	54	⇓P		P	13 48 55.5	+1.3
	baz=85							
HLID	Hailey	85.34	42	eP		P	13 48 56.2	+0.9
	comp=Z,3.2nm,0.7s							
HLID	Hailey	85.34	42	⇓P		P	13 48 56.4	+1.0
	baz=86,SNR=7.5							
Q16A	Castle Valley	85.49	47	⇓P		P	13 48 57.6	+1.3
	baz=86							
H12A	Diamond D Ranc	85.51	41	⇑P		P	13 48 56.7	+0.5
	baz=86							
Y20A	Horse Springs,	85.53	53	⇑P		P	13 48 58.2	+1.6
	baz=86							
CMAR	Chiang Mai Arr	85.57	291	P		P	13 48 57.1	+0.3
CMAR	Chiang Mai Arr	85.57	291	P		P	13 48 57.1	+0.3
	comp=Z,2.1nm,0.9s,baz=114,slow=3.8,SNR=10							
CMAR				LR		LR	14 23 05.3	
	comp=Z,38nm,20.2s,baz=120,slow=33							
X20A	Quemado	85.68	52	⇓P		P	13 48 58.3	+0.9
	baz=86							
CD2	Chengdu	85.72	304	eP		P	13 48 57.8	+0.4
CD2				pP		pP	13 49 09.0	+0.7
CD2				sP		sP	13 49 13.3	+1.1
CD2				PP		PP	13 52 19.3	+2.3
CD2				SKS		SKSac	13 59 17.8	-2.9
CD2				S		SKKSac	13 59 27.0	-0.7
CD2				sS		sS	13 59 45.3	-0.6
CD2				SS		SS	14 05 08.1	+2.8
CD2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
CD2				pmax		pmax		
	comp=Z,50nm,6.2s							
CD2				LR		LR		
	comp=N,140nm,19.0s							
CD2				LR		LR		
	comp=Z,170nm,15.5s							
Z21A	St. Cloud Mine	85.84	54	⇓P		P	13 48 59.6	+1.5
	baz=86							
W20A	Ramah	85.91	52	⇓P		P	13 48 59.9	+1.4
	baz=86							
NEW	Newport	85.93	37	⇓P		P	13 48 57.6	-0.4
	baz=86							
E12A	Beaver Dam Sad	85.95	39	⇑P		P	13 48 58.2	-0.1
	baz=86							
SRU	San Rafael	86.03	47	⇓P		P	13 48 59.5	+0.6
	baz=86							
I14A	Mackay	86.13	42	⇓P		P	13 48 60.0	+0.7
	baz=86,SNR=6.5							
X21A	Alamocita Cree	86.19	53	⇑P		P	13 49 01.0	+1.1
	baz=86							
C11A	Tepee Creek (N	86.23	38	⇑P		P	13 49 00.3	+0.8
	baz=86							
Z22A	Elephant Butte	86.37	54	⇓P		P	13 49 01.6	+0.9
	baz=87							
EGAK	Eagle	86.41	16	eP		P	13 48 59.1	-0.8
	comp=Z,10nm,1.2s							
Y22A	Socorro	86.63	53	⇑P		P	13 49 03.1	+1.1
	baz=87							
M17A	Scullys Gap (B	86.91	45	⇑P		P	13 49 03.7	+0.5
	baz=87							
MCMT	McKenzie Canyo	86.91	42	eP		P	13 49 03.9	+0.7
	comp=Z,4.6nm,1.2s							
D13A	Huson	86.94	39	⇑P		P	13 49 03.3	+0.2
	baz=87,SNR=5.6							
F14A	Wisdom	87.03	41	⇓P		P	13 49 04.3	+0.6
	baz=87							
425A	Indio Mountain	87.04	57	⇓P		P	13 49 04.6	+0.6
	baz=87							
U21A	Nageezi	87.04	51	⇑P		P	13 49 04.6	+0.6
	baz=87							
S20A	Disappointment	87.07	49	⇓P		P	13 49 04.7	+0.5
	baz=87							
BSMT	Bassoo Peak	87.10	38	eP		P	13 49 03.9	0.0
	comp=Z,3.7nm,0.9s							
MSO	Missoula	87.14	39	⇑P		P	13 49 04.0	0.0
	baz=87							
C13A	Hot Springs	87.15	38	⇑P		P	13 49 03.7	-0.4
	baz=87							
325A	Bean Ranch, Si	87.26	56	⇓P		P	13 49 06.1	+1.0
	baz=88							
626A	Big Bend Ranch	87.30	58	⇑P		P	13 49 06.0	+0.8
	baz=88							
DLMT	Dillon	87.31	41	eP		P	13 49 05.2	+0.2
	comp=Z,12nm,1.2s							
Y23A	Lovelace Mesa,	87.33	54	⇑P		P	13 49 06.5	+1.1
	baz=88							
I16A	Newdale	87.38	43	⇑P		P	13 49 06.9	+1.5
	baz=88							
ANMO	Albuquerque	87.39	53	eP		P	13 49 06.2	+0.6
	comp=Z,4.4nm,1.1s							
S21A	Coal Bank Pass	87.42	50	⇑P		P	13 49 06.8	+0.9
	baz=88							
O19A	Miners Draw (B	87.50	47	⇓P		P	13 49 07.2	+1.2
	baz=88							
526A	Mary Lane Ranc	87.51	58	⇑P		P	13 49 07.4	+1.1
	baz=88							
D14A	Greenough	87.52	39	⇓P		P	13 49 05.8	-0.1
	baz=88							
B13A	Whitefish	87.53	38	⇑P		P	13 49 06.0	+0.1
	baz=88							
LZH	Lanzhou	87.57	309	eP		P	13 49 07.0	+0.5
LZH				pP		pP	13 49 17.5	+0.1
LZH				sP		sP	13 49 21.3	0.0
LZH				pmax		pmax		
	comp=Z,14nm,1.0s							
LZH				LR		LR		
	comp=N,250nm,16.9s							
LZH				LR		LR		
	comp=E,340nm,19.6s							
LZH				LR		LR		
	comp=Z,100nm,10.7s							
F15A	Butte	87.59	41	⇑P		P	13 49 06.5	+0.1
	baz=88,SNR=8.7							
CHMT	Chamberlain Mo	87.60	40	eP		P	13 49 06.5	+0.1
	comp=Z,2.9nm,1.0s							
LRM	Limekiln Ridge	87.61	41	eP		P	13 49 06.4	-0.1
	comp=Z,50nm,1.1s							
TXAR	Lajitas Array	87.61	59	P		P	13 49 07.9	+1.2
TXAR	Lajitas Array	87.61	59	P		P	13 49 07.9	+1.2
	comp=Z,0.8nm,0.8s,baz=225,slow=5.1,SNR=9.0							
TXAR				LR		LR	14 21 32.1	
	comp=Z,70nm,18.2s,baz=0.0,slow=31							
IMW	Indian Meadow	87.75	43	eP		P	13 49 08.3	+1.0
	comp=Z,3.8nm,0.9s							
Y24A	Capitan	87.80	54	⇑P		P	13 49 09.0	+1.3
	baz=88							
A13A	Flathead Natio	87.83	37	⇑P		P	13 49 08.3	+1.0
	baz=88							
R21A	Cimarron	87.86	49	⇓P		P	13 49 09.0	+1.0
	baz=88							
627A	Terlingua Ranc	87.88	59	⇓P		P	13 49 09.4	+1.4
	baz=88							
H16A	Russell Place,	87.89	42	⇑P		P	13 49 08.7	+0.9
	baz=88,SNR=11							
527A	Woodward Ranch	87.93	58	⇓P		P	13 49 09.0	+0.7
	baz=88							
BOZ	Bozeman (W)	88.05	41	eP		P	13 49 09.1	+0.6
BOZ				pmax		pmax		
	comp=Z,7.0nm,1.4s							
BOZ	Bozeman (W)	88.05	41	eP		P	13 49 09.1	+0.6
	comp=Z,7.3nm,1.4s							
D15A	Lincoln	88.10	40	⇑P		P	13 49 08.8	+0.1
	baz=88,SNR=9.4							
F16A	Kennard Place,	88.11	41	⇓P		P	13 49 09.4	+0.6
	baz=88							
226B	Tecolote Peak,	88.15	56	⇓P		P	13 49 10.2	+0.9
	baz=88							
PDAR	Pinedale Array	88.19	44	P		P	13 49 09.6	+0.2
PDAR	Pinedale Array	88.19	44	P		P	13 49 09.6	+0.2
	comp=Z,2.2nm,0.9s,baz=219,slow=3.8,SNR=11							
PDAR				LR		LR	14 25 40.8	
	comp=Z,45nm,18.7s,baz=345,slow=34							
B14A	Marquette Ranc	88.24	38	⇑P		P	13 49 09.1	-0.2
	baz=88,SNR=11							
W24A	Lazy 6 Ranch,	88.29	53	⇓P		P	13 49 10.5	+0.5
	baz=89							
628A	Black Gap, Mar	88.30	59	⇑P		P	13 49 10.1	+0.1
	baz=89							
N20A	Spence Gulch,	88.31	47	⇑P		P	13 49 10.8	+0.8
	baz=89							
427A	Hayter Ranch,	88.34	57	⇓P		P	13 49 11.4	+1.2
	baz=89							
C15A	Salmond Ranch,	88.37	39	⇓P		P	13 49 09.9	-0.1
	baz=89,SNR=10							
Y25A	Mesa, Roswell	88.38	54	⇑P		P	13 49 11.3	+1.0
	baz=89							
E16A	East Helena	88.40	40	⇓P		P	13 49 10.5	+0.4
	baz=89,SNR=5.9							
A14A	Double T Ranch	88.43	38	⇑P		P	13 49 10.1	-0.1
	baz=89,SNR=7.2							
G17A	Pierce Place,	88.47	42	⇓P		P	13 49 10.8	+0.3
	baz=89							
528A	Cox Ranch, San	88.61	58	⇓P		P	13 49 12.2	+0.7
	baz=89							
M20A	Sweetwater, Wa	88.62	46	⇑P		P	13 49 12.0	+0.6
	baz=89							
B15A	Bradley Ranch,	88.64	39	⇑P		P	13 49 10.8	-0.4
	baz=89,SNR=12							
D16A	Dana Ranch, Ca	88.69	40	⇓P		P	13 49 12.1	+0.6
	baz=89,SNR=8.8							
K19A	Absolon Red Bu	88.70	45	⇓P		P	13 49 12.1	+0.4
	baz=89							
Z26A	Caprock	88.71	55	⇑P		P	13 49 12.6	+0.7
	baz=89							
L20A	Wamsutter	88.72	46	⇑P		P	13 49 12.2	+0.4
	baz=89							
J19A	Crowheart	88.73	44	⇓P		P	13 49 12.1	+0.3
	baz=89							
F17A	Fitzpatrick Pl	88.77	41	⇓P		P	13 49 13.1	+1.2
	baz=89							
N21A	Black Mountain	88.80	47	⇑P		P	13 49 13.4	+1.1
	baz=89							
A15A	Johnson Ranch,	88.83	38	⇑P		P	13 49 11.8	-0.2
	baz=89,SNR=6.8							
E17A	Martinsdale	88.88	41	⇓P		P	13 49 13.1	+0.7
	baz=89							
C16A	Fuhringer Ranc	88.91	39	⇑P		P	13 49 12.8	+0.3
	baz=89,SNR=7.3							
K20A	Yellowstone Ra	88.97	45	⇓P		P	13 49 13.0	0.0
	baz=89							
W25A	X Bar L Ranch,	89.02	53	⇓P		P	13 49 13.3	0.0
	baz=89							
V25A	Rancho No Teng	89.11	52	⇓P		P	13 49 14.0	+0.2
	baz=89							
B16A	M & M Farms, S	89.20	39	⇑P		P	13 49 13.1	-0.7
	baz=90,SNR=5.7							
M21A	Separation Pea	89.23	46	⇓P		P	13 49 15.2	+0.9
	baz=90							
O22A	Kremmling	89.26	48	⇓P		P	13 49 15.2	+0.6
	baz=90							
D17A	Six Diamond Ra	89.28	40	⇑P		P	13 49 14.6	+0.3
	baz=90,SNR=12							
S24A	Houchin Ranch,	89.31	50	⇑P		P	13 49 15.8	+1.0
	baz=90							
H19A	Powell	89.34	43	⇓P		P	13 49 15.8	+1.2
	baz=90							
L21A	Rawlins	89.37	46	⇓P		P	13 49 15.7	+0.8
	baz=90							
F18A	Big Timber	89.37	42	⇓P		P	13 49 15.3	+0.6
	baz=90							
J20A	Shoshoni	89.42	44	⇑P		P	13 49 15.7	+0.7
	baz=90							
429A	Davenport Ranc	89.49	58	⇓P		P	13 49 16.9	+1.4
	baz=90							
E18A	Harlowton	89.52	41	⇑P		P	13 49 16.1	+0.7
	baz=90							
Y27A	Causey	89.56	55	⇑P		P	13 49 16.1	+0.2
	baz=90							
N22A	Wattenberg Ran	89.57	47	⇓P		P	13 49 16.8	+0.9
	baz=90							
I20A	Worland	89.62	44	⇓P		P	13 49 16.3	+0.4
	baz=90							
B17A	L&G Farms, Che	89.69	39	⇓P		P	13 49 16.5	+0.5
	baz=90							
F19A	Roth Farm, Mol	89.84	42	⇑P		P	13 49 17.2	+0.3
	baz=90							
J21A	Lysite	89.84	45	⇑P		P	13 49 17.6	+0.6
	baz=90							
D18A	Linhart Farms,	89.85	40	⇑P		P	13 49 18.4	+1.5
	baz=90							
S25A	Robets Cordova	89.89	51	⇓P		P	13 49 17.7	+0.2
	baz=90							
N23A	Red Feather La	89.96	47	⇑P		P	13 49 18.8	+1.0
	baz=90							
A17A	Triple J Farms	90.03	38	⇓P		P	13 49 18.1	+0.5
	baz=90,SNR=12							
L22A	Ellis Ranch, M	90.04	46	⇑P		P	13 49 18.6	+0.5
	baz=90							
I21A	Big Trails, Te	90.13	44	⇓P		P	13 49 18.6	+0.3
	baz=90							
K22A	Casper	90.21	45	⇑P		P	13 49 19.8	+1.0
	baz=90							
EGMT	Eagleton	90.22	40	⇑P		P	13 49 19.0	+0.4
	baz=90							
B18A	Beardsley Farm	90.35	39	⇑P		P	13 49 19.3	+0.1
	baz=91,SNR=5.5							
SONM	Songino Array	90.40	320	P		P	13 49 18.8	-0.7
SONM	Songino Array	90.40	320	P		P	13 49 18.8	-0.7
	comp=Z,0.6nm,0.7s,baz=111,slow=4.1,SNR=6.7							
SONM				LR		LR	14 23 40.1	
	comp=Z,83nm,21.7s,baz=86,slow=32							
J22A	Midwest	90.52	45	⇓P		P	13 49 20.6	+0.4
	baz=91							
A18A	Metzger Ranch,	90.53	39	⇑P		P	13 49 20.8	+0.8
	baz=91							
C19A	Slack Wire Ran	90.53	40	⇓P		P	13 49 20.9	+0.9
	baz=91							
L23A	Garrett	90.58	46	⇑P		P	13 49 21.2	+0.6
	baz=91							
S26A	Kim	90.60	51	⇑P		P	13 49 21.1	+0.4
	baz=91							
I22A	9 Mile Ranch,	90.70	44	⇑P		P	13 49 21.6	+0.7
	baz=91							
P25A	Willow Gulch B	90.74	49	⇓P		P	13 49 22.2	+0.9
	baz=91							
C20A	Veseth Ranch,	91.17	40	⇑P		P	13 49 23.8	+0.9
	baz=92							
A19A	Klindworth Far	91.20	39	⇑P		P	13 49 23.3	+0.2
	baz=92							
432A	Menard	91.28	58	⇓P		P	13 49 24.2	+0.3
	baz=92							
K24A	Anderson Ranch	91.41	46	⇓P		P	13 49 25.1	+0.8
	baz=92							
332A	Millersview	91.48	58	⇑P		P	13 49 25.7	+0.9
	baz=92							
D21A	La Casta Ranch	91.56	41	⇓P		P	13 49 25.9	+1.1
	baz=92							
A20A	Cobblestone Ra	91.67	39	⇑P		P	13 49 26.0	+0.7
	baz=92							
232A	Coleman	91.72	57	⇓P		P	13 49 26.4	+0.5
	baz=92							
GTA	Gaotai	91.73	311	eP		P	13 49 28.1	+2.2
GTA				pP		pP	13 49 38.8	+2.0
GTA				sP		sP	13 49 42.6	+1.9
GTA				pmax		pmax		
	comp=Z,3.0nm,2.2s							
C21A	Desert Coulee	91.78	40	⇓P		P	13 49 26.4	+0.6
	baz=92							
G23A	Biddle	91.91	43	⇓P		P	13 49 27.5	+1.1
	baz=92							
F23A	Volborg	92.08	43	⇓P		P	13 49 28.2	+0.9
	baz=92							
D22A	Cohagen	92.11	41	⇓P		P	13 49 28.0	+0.7
	baz=92							
SNAA	Sanae	92.29	180	eP		P	13 49 27.1	-0.8
	comp=Z,12nm,1.3s							
H24A	Dirks Ranch, A	92.30	44	⇑P		P	13 49 28.8	+0.4
	baz=93							
B22A	Reddig Ranch S	92.64	40	⇑P		P	13 49 30.9	+1.1
	baz=93							
C23A	Lambert	92.97	41	⇑P		P	13 49 32.3	+1.0
	baz=93							
D24A	Glendive	93.27	42	⇓P		P	13 49 33.9	+1.3
	baz=94							
B23A	Brockton	93.33	40	⇓P		P	13 49 33.9	+1.0
	baz=94							
DGMT	Dagmar	93.83	41	⇓P		P	13 49 35.6	+0.5
	baz=94							
TIXI	Tiksi	93.83	346	c i/P		P	13 49 33.4	-1.2
TIXI				pmax		pmax		
	comp=Z,4.0nm,1.2s							
YKA	Yellowknife Ar	94.07	25	P		P	13 49 36.3	+0.4
YKA	Yellowknife Ar	94.07	25	P		P	13 49 36.3	+0.4
	comp=Z,0.7nm,0.7s,baz=229,slow=3.8,SNR=3.1							
WMQ	Urumqi	101.66	312	eP		Pdif	13 50 09.5	-1.1
WMQ				pP		pP	13 50 20.0	-1.8
WMQ				pmax		pmax		
	comp=Z,6.0nm,0.5s							
WMQ				pmax		pmax		
	comp=Z,72nm,3.9s							
WMQ				LR		LR		
	comp=N,150nm,24.0s							
WMQ				LR		LR		
	comp=E,160nm,25.6s							
WMQ				LR		LR		
	comp=Z,200nm,24.0s							
ARCES	ARCESS Array B	124.15	349		PKP	PKPdf	13 55 15.0	-0.9
ARCES	ARCESS Array B	124.15	349		PKP	PKPdf	13 55 15.0	-0.9
	comp=Z,2.0nm,0.7s,baz=96,slow=1.2,SNR=9.8							
FINES	FINESS Array B	130.78	343		PKP	PKPdf	13 55 27.6	-1.1
FINES	FINESS Array B	130.78	343		PKP	PKPdf	13 55 27.6	-1.1
	comp=Z,0.5nm,0.6s,baz=24,slow=3.8,SNR=2.8							
KOLS	Kolonicke sedl	142.08	334		ePKIKP	PKPdf	13 55 50.5	+0.5
KOLS	Kolonicke sedl	142.08	334		ePKP	PKPdf	13 55 50.5	+0.5
CRVS	Cervenica-Dubn	142.44	335		ePKIKP	PKPdf	13 55 52.3	+1.6
CRVS	Cervenica-Dubn	142.44	335		ePKP	PKPdf	13 55 52.3	+1.6
CLL	Collm	143.16	345		ePKIKP	PKPdf	13 55 55.0	+3.2
CLL	Collm	143.16	345		ePKPdf	PKPdf	13 55 55.0	+3.2
BRG	Berggiesshubel	143.31	344		e(P)	PKPdf	13 56 00.9	+8.8
	comp=Z,2.8nm,0.6s							
VYHS	Vyhne	143.79	337		ePKIKP	PKPbc	13 55 51.4	+0.7
VYHS	Vyhne	143.79	337		ePKP	PKPbc	13 55 51.3	+0.6
MOX	Moxa	144.11	346		ePKPbc	PKPab	13 55 51.7	+0.6
MOX	Moxa	144.11	346		ePKIKP	PKPab	13 55 51.7	+0.6
WERD	Werda	144.12	345		ePKPbc	PKPbc	13 55 52.1	+0.4
WERD					epPKPbc	PKiKP	13 55 57.9	+0.7
PLN	Plauen	144.12	345		ePKPbc	PKPbc	13 55 52.1	+0.5
GUNZ	Gunzen	144.19	345		ePKPbc	PKPbc	13 55 52.4	+0.5
GUNZ					epPKPbc	PKiKP	13 55 58.1	+0.8
WERN

GERES	**GERESS Array B**	**145.21**	**342**	PKPbc	**PKPbc**	**13**	**55**	**54.9 -0.4**
	comp=Z,5.1nm,0.8s,baz=29,slow=3.0,SNR=38							
CONA	**Conrad Observa**	**145.33**	**339**	⇓*i*PKPdf	**PKPbc**	**13**	**55**	**56.1 +0.4**
	comp=Z,26nm,1.4s							
BCLA	**Clavier**	**145.48**	**352**	PKP	**PKPdf**	**13**	**56**	**56.1 +0.2**
BCLA				APKP	**PKiKP**	**13**	**56**	**02.2 +2.3**
DOU	**Dourbes**	**145.88**	**353**	PKP	**PKPbc**	**13**	**55**	**57.5 +0.3**
DOU				APKP	**PKiKP**	**13**	**56**	**03.4 +2.7**
WLF	**Walferdange**	**146.10**	**351**	PKP	**PKPab**	**13**	**55**	**58.9 +0.4**
WLF				APKP	**PKiKP**	**13**	**56**	**04.6 +3.4**
WLF	**Walferdange**	**146.10**	**351**	ePKPbc	**PKPab**	**13**	**55**	**59.1 +0.6**
WLF				epPKPbc	**PKiKP**	**13**	**56**	**04.9 +3.7**
WLF	**Walferdange**	**146.10**	**351**	*e*PKP2	**PKPab**	**13**	**55**	**58.7 +0.2**
WLF	**Walferdange**	**146.10**	**351**	*e*PKPbc	**PKPab**	**13**	**55**	**58.7 +0.2**
STU	**Stuttgart**	**146.41**	**347**	*e*PKPbc	**PKPbc**	**13**	**55**	**59.6 +0.7**
RJOB	**Jochberg**	**146.47**	**342**	*e*PKPbc	**PKPbc**	**13**	**55**	**59.5 +0.3**
FUR	**Furstenfeldbru**	**146.49**	**344**	*e*PKPbc	**PKPbc**	**13**	**55**	**59.8 +0.6**
FUR	**Furstenfeldbru**	**146.49**	**344**	*e*PKP2	**PKPbc**	**13**	**55**	**59.8 +0.6**
SOKA	**Soboth**	**146.70**	**339**	⇓*i*PKPab	**PKPbc**	**13**	**55**	**59.5 -0.4**
	comp=Z,12nm,1.2s							
PERS	**Pernice**	**146.71**	**339**	*i* PKPbc	**PKPdf**	**13**	**55**	**59.3 +1.1**
PERS				*i*		13	56	05.5
KBA	**Koelnbreinsper**	**146.90**	**341**	⇓*i*PKPab	**PKPdf**	**13**	**55**	**59.9 +1.2**
	comp=Z,11nm,0.8s							
BFO	**Black Forest**	**147.01**	**348**	*e*PKPbc	**PKPbc**	**13**	**56**	**01.2 +0.6**
BFO				epPKPbc	**PKiKP**	**13**	**56**	**07.0 +3.8**
BFO	**Black Forest**	**147.01**	**348**	*e*PKP2	**PKPbc**	**13**	**56**	**01.2 +0.6**
BFO	**Black Forest**	**147.01**	**348**	*e*PKPbc	**PKPdf**	**13**	**55**	**59.9 +1.3**
MYKA	**Terra Mystica**	**147.20**	**341**	⇓*i*PKPbc	**PKPdf**	**13**	**56**	**00.5 +1.5**
	comp=Z,8.7nm,0.8s							
WTTA	**Wattenberg**	**147.22**	**343**	⇓*i*PKPab	**PKPbc**	**13**	**56**	**01.4 -0.1**
	comp=Z,26nm,1.3s							
RETA	**Reutte**	**147.25**	**345**	⇓*i*PKPab	**PKPbc**	**13**	**56**	**01.6 +0.2**
	comp=Z,13nm,1.0s							
MOTA	**Moosalm**	**147.29**	**344**	⇓*i*PKPab	**PKPbc**	**13**	**56**	**01.3 -0.3**
	comp=Z,24nm,0.3s							
ABTA	**Abfaltersbach**	**147.44**	**342**	⇓*i*PKPbc	**PKPbc**	**13**	**56**	**01.4 -0.6**
	comp=Z,14nm,1.3s							
VISS	**Visnje**	**147.52**	**339**	*i* PKPbc	**PKPbc**	**13**	**56**	**02.0 -0.1**
VISS				*i*		13	56	07.8
BOJS	**Bojanci**	**147.63**	**338**	*i* PKPbc	**PKPdf**	**13**	**56**	**01.0 +1.3**
BOJS				*i*		13	56	08.7
DAVA	**Damuels**	**147.65**	**346**	⇓*i*PKPab	**PKPbc**	**13**	**56**	**02.7 0.0**
	comp=Z,16nm,1.1s							
FETA	**Feichten**	**147.69**	**344**	⇑*i*PKPab	**PKPbc**	**13**	**56**	**02.8 +0.1**
	comp=Z,17nm,1.1s							
JAVS	**Javornik**	**147.71**	**340**	*i* PKPbc	**PKPbc**	**13**	**56**	**02.1 -0.7**
JAVS				*i*		13	56	07.7
TUE	**Stuetta**	**148.55**	**346**	*e*PKPbc	**PKPbc**	**13**	**56**	**05.3 +0.2**
BNI	**Bardonecchia**	**150.48**	**348**	*e*PKIKP	**PKPbc**	**13**	**56**	**10.4 +0.6**
BNI	**Bardonecchia**	**150.48**	**348**	*e*PKPbc	**PKPbc**	**13**	**56**	**10.4 +0.6**
SSB	**Saint Sauveur**	**150.62**	**351**	*e*PKIKP	**PKPbc**	**13**	**56**	**10.5 +0.5**
SSB	**Saint Sauveur**	**150.62**	**351**	*e*PKPbc	**PKPbc**	**13**	**56**	**10.5 +0.5**
ESDC	**Sonseca Array**	**156.56**	**5**	PKPab	**PKPab**	**13**	**56**	**42.0 0.0**
ESDC	**Sonseca Array**	**156.56**	**5**	PKPab	**PKPab**	**13**	**56**	**42.0 0.0**
	comp=Z,0.2nm,0.3s,baz=356,slow=5.4,SNR=5.0							
TORD	**Torodi Ar. Bea**	**175.66**	**225**	PKP	**PKPdf**	**13**	**56**	**27.9 -1.0**
TORD	**Torodi Ar. Bea**	**175.66**	**225**	PKP	**PKPdf**	**13**	**56**	**27.9 -1.0**
	comp=Z,1.6nm,1.0s,baz=198,slow=4.1,SNR=5.3							

IDC 24 13:38:15.3±1.8, 7°02S×125°52E, h488km±27km, mb3.1/9, mb1 3.3/13, mb1mx3.2/24, mbtmp3.2/13, Error ellipse: s-maj=32.9km s-min=11.1km az=58.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
KAPI	**Kappang**	**6.07**	**289**	P		P	13 39 51.9	0.0
	2.7nm,0.3s,baz=123,slow=7.1,SNR=16							
FITZ	**Fitzroy Crossi**	**11.02**	**179**	P		P	13 40 43.3	-0.1
	2.1nm,0.3s,baz=11,slow=7.9,SNR=99							
FITZ				S		S	13 42 42.7	-2.7
	0.2nm,0.3s,baz=187,slow=19,SNR=13							
WRA	**Warramunga Arr**	**15.44**	**147**	P		P	13 41 29.5	-0.8
	0.6nm,0.3s,baz=324,slow=11,SNR=68							
ASAR	**Alice Springs**	**18.41**	**155**	P		P	13 42 00.6	+0.4
	0.8nm,0.3s,baz=327,slow=8.5,SNR=61							
ASAR				S		S	13 45 03.4	-0.2
	baz=339,slow=19,SNR=7.1							
CMAR	**Chiang Mai Arr**	**36.45**	**314**	P		P	13 44 38.4	+0.2
	0.5nm,0.5s,baz=134,slow=7.8,SNR=3.3							
MJAR	**Matsushiro Arr**	**44.93**	**15**	P		P	13 45 45.1	-0.7
	2.2nm,0.6s,baz=196,slow=9.3,SNR=7.1							
USRK	**Ussuriysk Arra**	**51.31**	**6**	P		P	13 46 33.6	+0.2
	1.2nm,0.7s,baz=210,slow=8.0,SNR=4.2							
RPZ	**Rata Peaks**	**54.00**	**140**	P		P	13 46 53.2	+0.3
	3.6nm,0.6s,baz=346,slow=4.2,SNR=3.0							
URZ	**Urewera**	**55.92**	**132**	P		P	13 47 05.8	-0.5
	5.4nm,1.0s,baz=288,slow=16,SNR=2.6							
SONM	**Songino Array**	**57.17**	**345**	P		P	13 47 15.5	+0.6
	0.8nm,0.8s,baz=151,slow=6.5,SNR=4.3							
PETK	**Petropavlovsk-**	**65.81**	**21**	P		P	13 48 12.2	+0.8
	1.7nm,0.9s,baz=238,slow=8.0,SNR=4.2							
MKAR	**Makanchi Array**	**65.88**	**329**	P		P	13 48 11.8	-0.1
	0.5nm,0.5s,baz=125,slow=6.3,SNR=9.8							
ZALV	**Zalesovo Beam**	**69.70**	**336**	P		P	13 48 34.4	-0.8
	0.6nm,0.4s,baz=114,slow=6.5,SNR=3.2							

*ISCJB **24** 13:49:19.7±1.3, 23°.89N±0°.03×122°.65E±0°.02, h12km±9km, Error ellipse: s-maj=5.4km s-min=3.0km az=169.8*
*JMA **24** 13:49:20.9±0.3, 24°.07N×122°.59E, h34km, M1.8*
*TAP **24** 13:49:21.6, 23°.94N×122°.57E, h8km±2km, ML2.7, D*
ISC 24 13:49:19.6±1.4, 23°.91N±0°.04×122°.66E±0°.02, h13km±11km, n24, σ0°64/44, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
YOJ	**Yonaguni jima**	**0.64**	**30**	P		**Pg**	**13 49 32.1**	**-0.1**
YOJ				S		**Sg**	**13 49 39.9**	**-0.8**
ENA	**Nanau**	**0.98**	**302**	*e*P		**Pb**	**13 49 38.4**	**-0.2**
	baz=302							
ENA				*e*S		**Sb**	**13 49 50.8**	**-0.6**
	baz=302							
TWD	**Chiawan**	**0.98**	**280**	*e*P		**Pb**	**13 49 38.3**	**-0.3**
	baz=278							
TWD				S		**Sb**	**13 49 50.5**	**-1.0**
	baz=278							
TWC	**Suao**	**1.02**	**314**	*i* P		**Pb**	**13 49 38.8**	**-0.3**
	baz=315							
TWC				*i* S		**Sb**	**13 49 51.4**	**-1.0**
	baz=315							
HATJ	**Hateruma jima**	**1.06**	**82**	P		**Pb**	**13 49 40.3**	**+0.4**
HATJ				*e*S		**Sn**	**13 49 55.1**	**+0.2**
IRIF	**Iriomote-Funau**	**1.07**	**66**	P		**Pb**	**13 49 40.2**	**+0.2**
IRIF				*e*S		**Sg**	**13 49 54.9**	**+0.6**
ESL	**Shilin**	**1.12**	**266**	*e*P		**Pb**	**13 49 40.2**	**-0.7**
	baz=262							
ESL				*e*S		**Sb**	**13 49 54.6**	**-0.8**
	baz=262							
TWE	**Neicheng**	**1.21**	**312**	*e*P		**Pn**	**13 49 42.8**	**+0.5**
	baz=313							
TWE				*e*S		**Sg**	**13 49 59.5**	**+0.7**
	baz=313							
ENTT	**Nioudou**	**1.23**	**307**	*e*P		**Pn**	**13 49 42.6**	**0.0**
	baz=307							
ENTT				*e*S		**Sb**	**13 49 59.3**	**+0.7**
	baz=307							
TWB1	**Santiao Chiao**	**1.25**	**331**	*e*P		**Pn**	**13 49 42.6**	**-0.2**
	baz=333							
JKRS	**Kuro-shima**	**1.28**	**75**	P		**Pn**	**13 49 43.7**	**+0.5**
JKRS				*e*S		**Sn**	**13 50 00.5**	**+0.3**
EHY	**Hungye**	**1.28**	**252**	*e*P		**Pn**	**13 49 43.2**	**-0.1**
	baz=248							
EHY				*e*S		**Sb**	**13 50 00.2**	**+0.1**
	baz=248							
NNS	**Nan Shan**	**1.29**	**295**	*e*P		**Pn**	**13 49 43.4**	**-0.1**
	baz=294							
NNS				*e*S		**Sb**	**13 50 00.7**	**+0.4**
	baz=294							
TWF1	**Yuli**	**1.36**	**246**	*e*P		**Pn**	**13 49 43.9**	**-0.5**
	baz=243							
TWF1				*e*S		**Sn**	**13 50 02.3**	**+0.1**
	baz=243							
NWF	**Wu-fen Shan**	**1.41**	**326**	*e*P		**Pn**	**13 49 45.0**	**-0.1**
	baz=327							
NWF				*e*S		**Sn**	**13 50 03.6**	**+0.1**
	baz=327							
NSK	**Sanguang**	**1.41**	**303**	*e*P		**Pn**	**13 49 45.2**	**+0.1**
	baz=303							
NSK				*e*S		**Sb**	**13 50 04.5**	**+0.7**
	baz=303							
CHKT	**Chengkung**	**1.43**	**236**	*e*P		**Pn**	**13 49 44.2**	**-1.0**
	baz=232							
JIJ	**Ishigaki jima**	**1.43**	**71**	P		**Pn**	**13 49 45.0**	**-0.3**
JIJ				*e*S		**Sn**	**13 50 02.7**	**-1.3**
SMLT	**Sun Moon Lake**	**1.61**	**270**	*e*P		**Pn**	**13 49 48.8**	**+1.0**
	baz=267							
TYC	**Yuchr**	**1.65**	**270**	*e*P		**Pn**	**13 49 49.1**	**+0.9**
	baz=268							
TYC				*e*S		**Sn**	**13 50 09.9**	**+0.7**
	baz=268							
CHN5	**Tsauling**	**1.84**	**261**	*e*P		**Pn**	**13 49 52.2**	**+1.2**
	baz=258							
CHN5				*e*S		**Sn**	**13 50 14.8**	**+0.6**
	baz=258							
WTP	**Ta-pu**	**1.98**	**251**	*e*P		**Pn**	**13 49 54.4**	**+1.4**
	baz=248							
WTP				*e*S		**Sn**	**13 50 17.6**	**-0.1**
	baz=248							
CHN1	**Nanshi**	**2.08**	**250**	*e*P		**Pn**	**13 49 54.4**	**+0.2**
	baz=248							
CHN1				*e*S		**Sn**	**13 50 19.8**	**-0.3**
	baz=248							
EAST	**Anshuo**	**2.25**	**228**	*e*P		**Pn**	**13 49 56.6**	**0.0**
	baz=225							

*CSEM **24** 13:54:22.0, 37°.26N×28°.21E, h10km, MD2.6, After ISK*
ISK 24 13:54:22.0, 37°.26N×28°.21E, h10km, MD2.6, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
YER	**Yerkesik**	**0.14**	**154**	*e*PG		Pg	13 54 25.3	+0.1
YER				*e*SG		Sg	13 54 28.3	+0.8
YER	**Yerkesik**	**0.14**	**154**	*e*Pg		Pg	13 54 25.3	+0.1
YER				*e*Sg		Sg	13 54 28.3	+0.8
MLSB	**Milas**	**0.35**	**276**	*e*PG		Pg	13 54 29.1	+0.1
MLSB				*e*SG		Sb	13 54 35.1	-0.9
MLSB	**Milas**	**0.35**	**276**	*e*Pg		Pg	13 54 29.1	+0.1
MLSB				*e*Sg		Sb	13 54 35.1	-0.9
DALY	**Dalyan (Mu¨la**	**0.57**	**141**	*e*PG		Pg	13 54 33.5	+0.5
DALY				*e*SG		Sb	13 54 41.9	-0.2
DALY	**Dalyan (Mu¨la**	**0.57**	**141**	*e*Pg		Pb	13 54 33.5	-0.5
DALY				*e*Sg		Sb	13 54 41.9	-0.2
DAT	**Datca**	**0.73**	**224**	*e*PG		Pg	13 54 36.3	0.0
DAT	**Datca**	**0.73**	**224**	*e*Pg		Pg	13 54 36.3	0.0
BODT	**Bodrum**	**0.74**	**255**	*e*PG		Pg	13 54 36.6	+0.2
BODT	**Bodrum**	**0.74**	**255**	*e*Pg		Pg	13 54 36.7	+0.3
DENT	**Denizli**	**0.82**	**53**	*e*PG		Pb	13 54 38.5	0.0
DENT	**Denizli**	**0.82**	**53**	*e*Pg		Pb	13 54 38.5	0.0
FETY	**Fethiye**	**0.94**	**131**	*e*PG		Pg	13 54 40.2	+0.1
FETY	**Fethiye**	**0.94**	**131**	*e*Pg		Pg	13 54 40.2	+0.1
ELL	**Elmali**	**1.45**	**110**	*e*PN		Pb	13 54 48.9	-0.4
ELL	**Elmali**	**1.45**	**110**	*e*Pn		Pn	13 54 48.9	+0.4

IDC 24 14:02:05.6±0.9, 55°.65S×26°.87W, h0km, mb4.2/5, mb1 4.3/5, mb1mx4.0/16, mbtmp4.1/5, Error ellipse: s-maj=36.8km s-min=25.4km az=68.0, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
CPUP	**Villa Florida**	**36.68**	**310**	P		P	14 09 13.6	-0.4
	1.8nm,0.8s,baz=148,slow=6.4,SNR=5.1							
VNDA	**Vanda**	**46.98**	**183**	P		P	14 10 38.2	+0.6
	2.0nm,0.6s,baz=191,slow=7.5,SNR=15							
LPAZ	**La Paz**	**50.29**	**305**	P		P	14 11 04.8	+0.2
	1.8nm,0.6s,baz=166,slow=7.5,SNR=9.2							
TORD	**Torodi Ar. Bea**	**72.62**	**29**	P		P	14 13 35.0	+0.4
	0.7nm,0.5s,baz=202,slow=5.7,SNR=13							
ASAR	**Alice Springs**	**99.32**	**162**	P		Pdif	14 15 47.8	-1.9
	0.3nm,0.7s,baz=180,slow=3.4,SNR=3.9							
ILAR	**Eielson Array**	**149.98**	**312**	PKPbc		PKPbc	14 21 55.7	-0.7
	1.8nm,0.7s,baz=133,slow=3.3,SNR=27							
SONM	**Songino Array**	**150.52**	**86**	PKPbc		PKPbc	14 21 58.0	-0.4
	0.9nm,0.5s,baz=223,slow=3.3,SNR=7.1							

IDC 24 14:10:15.0±7.3, 49°.21S×114°.75E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/15, mbtmp3.6/3, Error ellipse: s-maj=262.0km s-min=28.9km az=100.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
ASAR	**Alice Springs**	**29.61**	**37**	P		P	14 16 22.1	+0.2
	0.5nm,0.7s,baz=205,slow=8.3,SNR=7.2							
WRA	**Warramunga Arr**	**33.15**	**35**	P		P	14 16 52.7	-0.3
	0.5nm,1.0s,baz=204,slow=8.1,SNR=2.9							
VNDA	**Vanda**	**33.50**	**163**	P		P	14 16 55.5	0.0
	0.7nm,0.6s,baz=297,slow=9.1,SNR=5.6							

*IDC **24** 14:36:01.3±2.2, 33°.22N×46°.36E, h0km, mb3.6/6, mb1 3.6/7, mb1mx3.5/25, mbtmp3.6/7, ML3.6/1, Error ellipse: s-maj=45.6km s-min=27.0km az=153.0*
*TEH **24** 14:36:02.8, 33°.09N×46°.26E, h8km, ML3.7*
*CSEM **24** 14:36:02.0±0.3, 33°.01N×46°.11E, h20km, ML3.7, Error ellipse: s-maj=7.1km s-min=5.2km az=22.0*
*ISCJB **24** 14:36:04.1±0.7, 33°.11N±0°.04×46°.34E±0°.04, h27km±7km, mb3.4/6, Error ellipse: s-maj=6.4km s-min=5.9km az=159.2*
ISC 24 14:36:03.8±1.2, 33°.17N±0°.04×46°.33E±0°.04, h15km±8km, n51, σ0°82/62, mb3.4/6, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
IBDR	**Badra**	**0.34**	**260**	*e*Pg		**Pg**	**14 36 10.2**	**-0.6**
IBDR				*e*Sg		**Sb**	**14 36 18.1**	**+1.3**
IGHG	**Ghaleghazi**	**1.17**	**10**	*e*Pg		**Pn**	**14 36 25.2**	**-0.8**
IGHG				*e*			14 36 27.7	
	comp=Z,11μm,0.1s							
IGHG				*e*Sg		**Sn**	**14 36 42.6**	**+0.7**
IGHG	**Ghaleghazi**	**1.17**	**10**	*e*Pg		**Pn**	**14 36 25.2**	**-0.8**
IGHG				*e*Sg		**Sn**	**14 36 42.6**	**+0.7**
IKOM	**Komasi**	**1.41**	**44**	*e*Pn		**Pn**	**14 36 29.3**	**+0.2**
IKOM				*e*			14 36 30.6	
	comp=Z,14μm,0.1s							
IKOM				*e*Sg		**Sg**	**14 36 49.7**	**+0.5**
IKOM	**Komasi**	**1.41**	**44**	*e*Pn		**Pn**	**14 36 29.3**	**+0.2**
IKOM				*e*Sg		**Sg**	**14 36 49.7**	**+0.5**
IVIS	**Veis**	**1.42**	**18**	*e*Pn		**Pn**	**14 36 30.2**	**+0.9**
IVIS				*e*Sg		**Sg**	**14 36 49.9**	**+0.2**
IVIS				*e*			14 36 52.0	
	comp=Z,14μm,0.2s							
IVIS	**Veis**	**1.42**	**18**	*e*Pn		**Pn**	**14 36 30.2**	**+0.9**
IVIS				*e*Sg		**Sg**	**14 36 49.9**	**+0.2**
IDHR	**Dehrash**	**1.53**	**2**	*e*Pn		**Pn**	**14 36 31.5**	**+0.7**
IDHR				*e*Sg		**Sb**	**14 36 53.0**	**+1.8**
IDHR				*e*			14 36 54.6	
	comp=Z,22μm,0.2s							
IDHR	**Dehrash**	**1.53**	**2**	*e*Pn		**Pn**	**14 36 31.5**	**+0.7**
IDHR				*e*Sg		**Sb**	**14 36 53.0**	**+1.8**
BHD	**Baghdad**	**1.64**	**274**	*e*Pg		Pg	14 36 38.7	+3.5
BHD				*e*Sg		**Sb**	**14 36 54.7**	**+0.5**
ILIN	**Lien**	**1.82**	**17**	*e*Pn		**Pn**	**14 36 35.9**	**+1.0**
ILIN				*e*			14 36 37.5	
	comp=Z,6μm,0.3s							
ILIN	**Lien**	**1.82**	**17**	*e*Pn		**Pn**	**14 36 35.9**	**+1.0**
SNGE	**Sanandaj**	**2.10**	**23**	*e*Pg		**Pn**	**14 36 39.8**	**+1.2**
SNGE				*e*Sg		**Sb**	**14 37 08.2**	**+0.6**
SHGR	**Shooshtar-Gavs**	**2.34**	**116**	*e*Pn		**Pn**	**14 36 42.7**	**+0.9**
KHMZ	**Khomeyn**	**3.09**	**78**	*e*Pn		**Pn**	**14 36 52.4**	**+0.1**
ASAO	**Ashtian**	**3.37**	**65**	*e*Pn		**Pn**	**14 36 57.2**	**+1.0**
MIB	**Mutribah**	**3.46**	**165**	*e*P		**Pn**	**14 36 58.3**	**+1.1**
MIB	**Mutribah**	**3.46**	**165**	*e*P		**Pn**	**14 36 58.3**	**+1.1**
IRAZ	**Razeghan**	**3.72**	**52**	*e*Pn		**Pn**	**14 37 01.9**	**+0.9**
IRAZ				*e*			14 38 09.3	
	comp=Z,833nm,0.4s							
IRAZ	**Razeghan**	**3.72**	**52**	*e*Pn		**Pn**	**14 37 01.9**	**+0.9**
IPIR	**Pirpir**	**3.87**	**96**	*e*Pn		**Pn**	**14 37 03.4**	**+0.3**
IPIR				*e*			14 38 17.6	
	comp=Z,275nm,0.2s							
IPIR	**Pirpir**	**3.87**	**96**	*e*Pn		**Pn**	**14 37 03.4**	**+0.3**
NAY	**Al-Naaiem**	**3.99**	**168**	*e*P		**Pn**	**14 37 05.0**	**+0.7**
NAY					AML	AML	14 37 54.4	
	comp=Z,14nm,0.6s							
NAY	**Al-Naaiem**	**3.99**	**168**	*e*P		**Pn**	**14 37 05.1**	**+0.7**
ZNJK	**Zanjan**	**3.99**	**28**	*e*Pn		**Pn**	**14 37 05.5**	**+0.8**
GHVR	**GHOM**	**4.33**	**71**	*e*Pn		**Pn**	**14 37 09.6**	**+0.3**
RDF	**Al-Radifah**	**4.36**	**166**	*e*P		**Pn**	**14 37 11.0**	**+1.5**
RDF					AML	AML	14 38 05.1	
	comp=Z,21nm,0.4s							
RDF	**Al-Radifah**	**4.36**	**166**	*e*P		**Pn**	**14 37 11.0**	**+1.5**
IKLH	**Kolahrood**	**4.40**	**87**	*e*Pn		**Pn**	**14 37 10.4**	**0.0**
IKLH				*e*Pn		**Pn**	**14 37 10.4**	**0.0**
IKLH				*e*			14 37 12.4	
	comp=Z,339nm,0.2s							
IKLH	**Kolahrood**	**4.40**	**87**	*e*Pn		**Pn**	**14 37 10.4**	**0.0**
IAZR	**Azarshahr**	**4.51**	**356**	*e*Pn		**Pn**	**14 37 12.1**	**+0.3**
IAZR				*e*			14 38 40.9	
	comp=Z,1μm,0.3s							
IAZR	**Azarshahr**	**4.51**	**356**	*e*Pn		**Pn**	**14 37 12.1**	**+0.3**
IR3	**Iran Long-Peri**	**4.51**	**58**	*e*Pn		**Pn**	**14 37 12.8**	**+1.0**
IR3	**Iran Long-Peri**	**4.51**	**58**	*e*Pn		**Pn**	**14 37 12.8**	**+1.0**
IGZV	**Ghazvin**	**4.53**	**44**	*e*Pn		**Pn**	**14 37 11.7**	**-0.4**
IGZV				*e*			14 37 33.0	
	comp=Z,310nm,0.3s							
IGZV	**Ghazvin**	**4.53**	**44**	*e*Pn		**Pn**	**14 37 11.7**	**-0.4**
ISRB	**Sarab**	**4.77**	**13**	*e*Pn		**Pn**	**14 37 16.3**	**+0.9**
ISRB				*e*			14 39 30.8	
	comp=Z,223nm,0.0s							
ISRB	**Sarab**	**4.77**	**13**	*e*Pn		**Pn**	**14 37 16.3**	**+0.9**
IVRN	**Varamin**	**4.84**	**66**	*e*Pn		**Pn**	**14 37 16.4**	**+0.2**
IVRN				*e*			14 37 54.7	
	comp=Z,190nm,0.2s							
IVRN	**Varamin**	**4.84**	**66**	*e*Pn		**Pn**	**14 37 16.4**	**+0.2**
IZEF	**Zefreh**	**5.05**	**91**	*e*Pn		**Pn**	**14 37 19.1**	**-0.1**
IZEF				*e*			14 38 51.0	
	comp=Z,144nm,0.0s							
IZEF	**Zefreh**	**5.05**	**91**	*e*Pn		**Pn**	**14 37 19.1**	**-0.1**
ISHB	**Shabestar**	**5.13**	**354**	*e*Pn		**Pn**	**14 37 20.7**	**+0.3**
ISHB				*e*			14 37 43.3	
	comp=Z,388nm,0.3s							
ISHB	**Shabestar**	**5.13**	**354**	*e*Pn		**Pn**	**14 37 20.7**	**+0.3**
AKTO	**Aktyubinsk**	**19.29**	**23**	P		**P**	**14 40 28.3**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=206,slow=12,SNR=5.5							
AKASG	**Malin Array Be**	**21.56**	**329**	P		**P**	**14 40 51.9**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=140,slow=9.6,SNR=4.7							
BVAR	**Borovoye Array**	**26.29**	**34**	P		**P**	**14 41 38.2**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=216,slow=7.1,SNR=4.9							
MKAR	**Makanchi Array**	**30.45**	**53**	P		**P**	**14 42 14.5**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=251,slow=11,SNR=4.7							
FINES	**FINESS Array B**	**31.17**	**341**	P		**P**	**14 42 20.6**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=137,slow=12,SNR=4.2							
ARCES	**ARCESS Array B**	**38.24**	**348**	P		**P**	**14 43 22.3**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=163,slow=9.4,SNR=5.2							
TORD	**Torodi Ar. Bea**	**45.21**	**255**	P		**P**	**14 44 20.9**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=54,slow=6.5,SNR=4.0							

*ISCJB **24** 14:36:22.8±0.7, 33°.9N±0°.1×136°.88E±0°.09, h369km±7km, mb2.8/3, Error ellipse: s-maj=19.1km s-min=9.6km az=152.2*
*JMA **24** 14:36:23.0±0.3, 33°.80N×136°.78E, h370km±3km, M2.9*
*IDC **24** 14:36:23.9±1.1, 33°.85N×136°.77E, h353km±17km, mb2.7/3, mb1 2.8/7, mb1mx2.6/29, mbtmp2.7/7, Error ellipse: s-maj=25.9km s-min=23.1km az=30.0*
ISC 24 14:36:23.6±1.0, 33°.9N±0°.1×136°.84E±0°.09, h359km±10km, n18, σ1°45/24, mb2.9/3, Near south coast of western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
				Op				
JWZ	**Kozaga**	**1.00**	**251**	P		**Pn**	**14 37 10.6**	**+0.2**
JWY	**Kouya**	**1.10**	**289**	P		**Pn**	**14 37 11.7**	**+0.9**
JNY	**Yasuok**	**1.71**	**29**	P		**Pn**	**14 37 15.2**	**+1.3**
JWT	**Wachi**	**1.85**	**320**	P		**Pn**	**14 37 15.4**	**+0.7**
JAI	**Aioi**	**1.99**	**269**	P		**Pn**	**14 37 15.9**	**+0.2**
JRY	**Ryogami san**	**2.74**	**38**	P		**Pn**	**14 37 23.2**	**+1.9**
JRY				*e*S		**S**	**14 38 10.2**	**+2.3**
JHU	**Hanno

RDF						AML	AML	14 41 06.2	
	comp=Z,52nm,0.5s								
RDF	**Al-Radifah**	**4.38**	**166**	*eP*		**Pn**	**Pn**	**14 40 09.4**	**+2.0**
IKLH	**Kolahrood**	**4.40**	**87**	*ePn*		**Pn**	**Pn**	**14 40 08.3**	**+0.4**
IKLH				*e*				14 41 05.0	
	comp=Z,625nm,0.1s								
IKLH	**Kolahrood**	**4.40**	**87**	*ePn*		**Pn**		**14 40 08.3**	**+0.4**
IVRN	**Varamin**	**4.83**	**67**	*ePn*		**Pn**	**Pn**	**14 40 14.0**	**+0.4**
IVRN				*e*				14 41 37.1	
	comp=Z,296nm,0.3s								
IVRN	**Varamin**	**4.83**	**67**	*ePn*		**Pn**	**Pn**	**14 40 14.0**	**+0.4**
IGAR	**Gharneh**	**4.88**	**98**	*ePn*		**Pn**	**Pn**	**14 40 14.5**	**+0.1**
IGAR				*e*				14 41 12.9	
	comp=Z,671nm,0.1s								
IZEF	**Zefreh**	**5.05**	**92**	*ePn*		**Pn**	**Pn**	**14 40 16.9**	**+0.1**
IZEF				*e*				14 41 52.0	
	comp=Z,235nm,0.3s								
IZEF	**Zefreh**	**5.05**	**92**	*ePn*		**Pn**	**Pn**	**14 40 16.9**	**+0.1**
AKTO	**Aktyubinsk**	**19.26**	**23**	P		**P**	**P**	**14 43 24.1**	**-1.0**
	comp=Z,0.1nm,0.3s,baz=212,slow=11,SNR=3.1								
AKASG	**Malin Array Be**	**21.54**	**329**	P		**P**	**P**	**14 43 49.2**	**-0.5**
	comp=Z,0.6nm,0.4s,baz=141,slow=10,SNR=4.1								
BVAR	**Borovoye Array**	**26.27**	**34**	P		**P**	**P**	**14 44 34.9**	**-0.9**
	comp=Z,0.8nm,0.7s,baz=217,slow=9.1,SNR=4.6								
MKAR	**Makanchi Array**	**30.43**	**53**	P		**P**	**P**	**14 45 12.9**	**-0.2**
	comp=Z,0.9nm,0.8s,baz=248,slow=8.8,SNR=7.7								
ZALV	**Zalesovo Beam**	**34.16**	**41**	P		**P**	**P**	**14 45 45.5**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=245,slow=9.4,SNR=3.3								
TORD	**Torodi Ar. Bea**	**45.22**	**255**	P		**P**	**P**	**14 47 18.9**	**+0.9**
	comp=Z,0.8nm,0.9s,baz=52,slow=7.5,SNR=3.4								

*ISCJB **24** 14:50:04.4±0.6,26˚44S±0˚03×27˚33E±0˚03,h11km±4km, mb3.8/4, Error ellipse: s-maj=4.9km s-min=4.2km az=31.6*
*PRE **24** 14:50:04.3±3.5,26˚44S×27˚38E,h2km, ML3.8*
*IDC **24** 14:50:05.0±1.0,26˚42S×27˚33E,h0km, mb3.8/4, mb1 4.0/9,mb1mx3.7/30,mbtmp4.0/9,ML4.0/3, Error ellipse: s-maj=21.6km s-min=12.7km az=66.0*

ISC 24 14:50:05.1±0.9,26˚40S±0˚03×27˚35E±0˚03,h16km±6km, n29,σ2s21/50,mb3.8/4,3C-3D,South Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLOF	**Kloof**	**0.24**	**79**	⇑*iP*	**Pg**	**14 50 10.3**	**-0.3**
KLOF				*eS*	**Sg**	**14 50 13.2**	**-1.2**
KLOF				AML	AML	14 50 14.4	
	comp=Z,6μm,0.2s						
PRYS	**Parys**	**0.53**	**179**	*eP*	**Pg**	**14 50 14.8**	**-0.9**
PRYS				*eS*	**Sg**	**14 50 21.1**	**-1.8**
PRYS				AML	AML	14 50 26.3	
	comp=Z,1μm,0.8s						
KSR	**Koster**	**0.68**	**323**	⇑*eP*	**Pg**	**14 50 18.7**	**+0.2**
KSR				*eS*	**Sg**	**14 50 27.9**	**+0.4**
KSR				AML	AML	14 50 28.6	
	comp=Z,1μm,0.4s						
ERPM	**east rand prop**	**0.80**	**87**	⇓*iP*	**Pb**	**14 50 20.6**	**-0.3**
ERPM				*eS*	**Sb**	**14 50 28.8**	**-2.8**
ERPM				AML	AML	14 50 38.4	
	comp=Z,378nm,0.9s						
SLR	**Silverton**	**1.07**	**52**	⇓*iP*	**Pb**	**14 50 25.4**	**+0.1**
SLR				*eS*	**Sg**	**14 50 39.6**	**-0.2**
SLR				AML	AML	14 50 44.6	
	comp=Z,877nm,0.7s						
SEK	**Senekal**	**1.94**	**173**	*eP*	**Pb**	**14 50 39.7**	**-0.5**
SEK				*eS*	**Sb**	**14 51 03.5**	**-0.6**
SEK				AML	AML	14 51 05.2	
	comp=Z,937nm,0.6s						
SWZ	**Schweizer**	**1.97**	**246**	*eP*	**Pn**	**14 50 39.3**	**+1.3**
SWZ				*eS*	**Sb**	**14 51 05.8**	**+0.8**
SWZ				AML	AML	14 51 08.0	
	comp=Z,764nm,0.2s						
LBTB	**Lobatse**	**2.10**	**311**	⇓*iP*	**Pb**	**14 50 42.6**	**-0.3**
LBTB				*eS*	**Sb**	**14 51 09.3**	**+0.6**
LBTB				AML	AML	14 51 12.5	
	comp=Z,815nm,0.3s						
LBTB	**Lobatse**	**2.10**	**311**	Pn	**Pb**	**14 50 42.4**	**-0.5**
	comp=Z,50nm,0.3s,baz=146,slow=13,SNR=523						
LBTB				Pg	**Pg**	**14 50 44.0**	**-1.4**
	comp=Z,50nm,0.3s,baz=138,slow=17,SNR=508						
LBTB				Lg	Lg	14 51 11.1	
	comp=Z,195nm,0.3s,baz=47,slow=23,SNR=90						
BOSA	**Boshof**	**2.89**	**220**	⇑*iP*	**Pn**	**14 50 51.8**	**+1.1**
BOSA				*eS*	**Sn**	**14 51 24.8**	**-0.3**
BOSA				AML	AML	14 51 33.6	
	comp=Z,196nm,0.3s						
BOSA	**Boshof**	**2.89**	**220**	Pn	**Pn**	**14 50 51.8**	**+1.1**
	comp=Z,12nm,0.3s,baz=42,slow=13,SNR=213						
BOSA				Pg	**Pb**	**14 50 56.6**	**+0.3**
	comp=Z,16nm,0.3s,baz=44,slow=16,SNR=27						
BOSA				Lg	Lg	14 51 32.2	
	comp=Z,81nm,0.3s,baz=320,slow=13,SNR=23						
POGA	**Pongola**	**3.93**	**105**	*eP*	**Pn**	**14 51 07.3**	**+2.5**
POGA				*eS*	**Sn**	**14 51 52.0**	**+1.3**
POGA				AML	AML	14 52 18.6	
	comp=Z,114nm,0.4s						
HVD	**Gariep Dam**	**4.50**	**201**	*eP*	**Pn**	**14 51 14.0**	**+1.1**
HVD				*eS*	**Sn**	**14 52 02.9**	**-2.0**
HVD				AML	AML	14 52 31.3	
	comp=Z,71nm,0.3s						
KSD	**Kokstad**	**4.51**	**157**	*eP*	**Pn**	**14 51 15.4**	**+2.4**
KSD				*eS*	**Sn**	**14 52 01.3**	**-3.9**
KSD				AML	AML	14 52 25.2	
	comp=Z,148nm,0.7s						
SOE	**Somerset East**	**6.48**	**193**	*eS*	**Sn**	**14 52 54.1**	**+0.4**
SOE				AML	AML	14 53 48.1	
	comp=Z,25nm,0.5s						
GRM	**Grahamstown**	**6.93**	**186**	*eS*	**Sn**	**14 52 59.9**	**-4.8**
GRM				AML	AML	14 53 56.6	
	comp=Z,26nm,0.6s						
SUR	**Sutherland**	**8.25**	**222**	*eP*	**Pn**	**14 52 05.3**	**+0.9**
SUR				*eS*	**Sn**	**14 53 33.4**	**-4.0**
SUR				AML	AML	14 54 30.2	
	comp=Z,18nm,0.6s						
SUR	**Sutherland**	**8.25**	**222**	Pn	**Pn**	**14 52 05.9**	**+1.5**
	comp=Z,3.1nm,0.3s,baz=54,slow=13,SNR=28						
SUR				Sn	**Sn**	**14 53 33.2**	**-4.2**
	comp=Z,2.4nm,0.3s,baz=343,slow=20,SNR=4.3						
SUR				Lg	Lg	14 54 18.9	
	comp=Z,5.3nm,0.3s,baz=315,slow=20,SNR=3.4						
CVNA	**Calvinia**	**8.36**	**231**	*eP*	**Pn**	**14 52 06.8**	**+1.0**
CVNA				*eS*	**Sn**	**14 53 37.6**	**-2.3**
CVNA				AML	AML	14 54 35.1	
	comp=Z,62nm,0.5s						
KOMG	**Komaggas**	**9.35**	**246**	*eS*	**Sn**	**14 54 02.7**	**-1.4**
KOMG				AML	AML	14 55 09.6	
	comp=Z,41nm,0.5s						
LSZ	**Lusaka**	**11.09**	**4**	*eP*	**Pn**	**14 52 43.6**	**+0.3**
LSZ				*eS*	**Sn**	**14 54 42.5**	**-4.6**
LSZ	**Lusaka**	**11.09**	**4**	Pn	**Pn**	**14 52 43.7**	**+0.4**
	comp=Z,1.5nm,0.3s,baz=185,slow=12,SNR=10						
LSZ				Sn	**Sn**	**14 54 41.8**	**-5.3**
	comp=Z,0.7nm,0.3s,baz=81,slow=4.5,SNR=4.6						
LSZ				Lg	Lg	14 55 48.5	
	comp=Z,0.4nm,0.3s,baz=112,slow=19,SNR=2.7						
TSUM	**Tsumeb**	**11.50**	**306**	*eP*	**Pn**	**14 52 49.4**	**+0.4**
TSUM				*eS*	**Sn**	**14 54 56.7**	**-0.5**
TSUM	**Tsumeb**	**11.50**	**306**	Pn	**Pn**	**14 52 49.7**	**+0.8**
	comp=Z,1.0nm,0.3s,baz=113,slow=11,SNR=8.1						
TSUM				Sn	**Sn**	**14 54 51.6**	**-5.6**
	comp=Z,0.3nm,0.3s,baz=78,slow=19,SNR=3.4						
TSUM				Lg	Lg	14 56 03.2	
	comp=Z,0.3nm,0.3s,baz=75,slow=20,SNR=2.8						
TORD	**Torodi Ar. Bea**	**46.55**	**324**	P	**P**	**14 58 34.1**	**+1.7**
	comp=Z,1.7nm,0.4s,baz=148,slow=7.4,SNR=48						
SNAA	**Sanae**	**48.34**	**192**	P	**P**	**14 58 47.9**	**+2.2**
	comp=Z,0.7nm,0.9s,baz=21,slow=6.0,SNR=21						
QSPA	**South Pole Qui**	**63.79**	**180**	P	**P**	**15 00 38.0**	**+1.7**
	comp=Z,0.4nm,0.4s,baz=221,slow=11,SNR=6.4						
MKAR	**Makanchi Array**	**88.13**	**34**	P	**P**	**15 02 57.7**	**+2.7**
	comp=Z,0.2nm,0.6s,baz=240,slow=8.2,SNR=2.5						
NVAR	**Mina Array Bea**	**148.79**	**301**	PKPbc	**PKPab**	**15 09 56.0**	**-0.1**
	comp=Z,0.3nm,0.6s,baz=66,slow=4.4,SNR=3.6						

WEL 24 14:59:56.3±0.2,38˚45S×176˚00E,h144km±1km,ML4.3/18, 34C-8D,Error ellipse: s-maj=1.3km s-min=1.1km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WHTZ	**Whakaora**	**0.22**	**189**	⇑PN	Pn	15 00 16.1	+0.1
HRRZ	**Handcock Road**	**0.23**	**75**	⇑PN	Pn	15 00 15.9	-0.1
HRRZ				SN	Sn	15 00 30.7	-0.1
ALRZ	**Allen Road**	**0.29**	**113**	⇓PN	Pn	15 00 15.9	-0.2
ALRZ				SN	Sn	15 00 31.1	0.0
PRRZ	**Plateau Road**	**0.31**	**99**	PN	Pn	15 00 15.8	-0.4
PRRZ				SN	Sn	15 00 31.1	-0.1
WATZ	**Wairara**	**0.33**	**219**	⇑PN	Pn	15 00 16.3	+0.1
WATZ				SN	Sn	15 00 31.1	-0.4
RRRZ	**Republican Roa**	**0.42**	**75**	⇑PN	Pn	15 00 16.4	-0.3
RRRZ				SN	Sn	15 00 32.0	0.0
HATZ	**Hinemaiaia**	**0.45**	**171**	PN	Pn	15 00 16.5	-0.3
RATZ	**Rangitukua**	**0.45**	**203**	PN	Pn	15 00 16.3	-0.5
TARZ	**Mount Tarawera**	**0.45**	**62**	PN	Pn	15 00 16.7	-0.2
TARZ				SN	Sn	15 00 32.8	+0.4
RITZ	**Rihia Road**	**0.54**	**192**	⇑PN	Pn	15 00 17.4	+0.1
KATZ	**Kakaramea**	**0.57**	**204**	⇑PN	Pn	15 00 17.5	-0.1
KRVZ	**Karewarewa**	**0.70**	**203**	⇑PN	Pn	15 00 18.2	-0.2
WTVZ	**West Tongariro**	**0.74**	**206**	PN	Pn	15 00 18.4	-0.1
OPRZ	**Ohinepanea**	**0.75**	**36**	⇓PN	Pn	15 00 18.3	-0.2
TGRZ	**Tauranga**	**0.75**	**16**	⇓PN	Pn	15 00 18.5	0.0
OTVZ	**Oturere**	**0.76**	**200**	PN	Pn	15 00 18.7	-0.1
TWVZ	**Taurewa**	**0.76**	**215**	⇑PN	Pn	15 00 18.7	0.0
NGZ	**Ngauruhoe**	**0.79**	**203**	PN	Pn	15 00 18.7	-0.3
BKZ	**Black Stump Fm**	**0.81**	**152**	⇑PN	Pn	15 00 18.8	-0.3
BKZ				AML	AML	15 00 36.6	
BKZ				AML	AML	15 00 38.4	
TOZ	**Tahuroa Road**	**0.82**	**331**	⇓PN	Pn	15 00 19.3	+0.2
WPVZ	**Whakapapa**	**0.83**	**205**	PN	Pn	15 00 19.0	-0.3
TUVZ	**Tukino**	**0.86**	**198**	PN	Pn	15 00 19.5	0.0
FWVZ	**Far West T-bar**	**0.88**	**203**	⇑PN	Pn	15 00 19.4	-0.4
DRZ	**Dome Shelter**	**0.89**	**202**	PN	Pn	15 00 20.0	0.0
URZ	**Urewera**	**0.89**	**78**	PN	Pn	15 00 19.0	-0.6
URZ				AML	AML	15 00 35.9	
URZ				AML	AML	15 00 37.4	
HIZ	**Hauiti**	**0.90**	**266**	PN	Pn	15 00 19.9	+0.3
NMHZ	**Naumai**	**0.90**	**136**	⇓PN	Pn	15 00 20.4	+0.6
TRVZ	**Turoa**	**0.92**	**202**	PN	Pn	15 00 19.8	-0.4
WNVZ	**Wahianoa**	**0.93**	**200**	⇑PN	Pn	15 00 20.1	-0.1
RAHZ	**Arahi**	**0.97**	**119**	PN	Pn	15 00 20.5	+0.2
MOVZ	**Moawhango**	**0.97**	**191**	⇑PN	Pn	15 00 20.0	-0.4
PKVZ	**Pokaka**	**0.98**	**211**	⇑PN	Pn	15 00 20.3	-0.1
MTVZ	**Mangateitei**	**1.02**	**204**	PN	Pn	15 00 20.8	0.0
BHHZ	**Black Hill Sta**	**1.04**	**177**	⇑PN	Pn	15 00 20.5	-0.4
MCHZ	**McNeill Hill**	**1.13**	**151**	⇑PN	Pn	15 00 22.3	+0.6
VRZ	**Vera Road**	**1.18**	**235**	PN	Pn	15 00 22.1	0.0
MWZ	**Matawai**	**1.21**	**85**	⇑PN	Pn	15 00 22.0	-0.4
MWZ				AML	AML	15 00 41.9	
MWZ				AML	AML	15 00 41.9	
KNZ	**Kokohu**	**1.43**	**114**	PN	Pn	15 00 24.6	0.0
CKHZ	**Cape Kidnapper**	**1.47**	**145**	PN	Pn	15 00 25.3	+0.2
PNHZ	**Pukenui**	**1.47**	**174**	⇑PN	Pn	15 00 24.6	-0.5
MKAZ	**Moumakai**	**1.49**	**334**	PN	Pn	15 00 25.4	+0.1
KAHZ	**Kahuranaki**	**1.50**	**153**	⇑PN	Pn	15 00 25.6	0.0
RAIZ	**Rainy Point**	**1.51**	**236**	PN	Pn	15 00 26.1	+0.7
WAZ	**Wanganui**	**1.52**	**211**	⇑PN	Pn	15 00 25.6	-0.1
PRGZ	**Paritu Road**	**1.55**	**108**	PN	Pn	15 00 26.0	0.0
TSZ	**Takapari Road**	**1.61**	**181**	⇑PN	Pn	15 00 26.0	-0.6
TSZ				AML	AML	15 00 50.4	
TSZ				AML	AML	15 00 50.7	
MHGZ	**Mahia Peninsul**	**1.65**	**116**	PN	Pn	15 00 27.0	0.0
WPHZ	**Waipukurau**	**1.65**	**168**	⇑PN	Pn	15 00 26.5	-0.5
NEZ	**North Egmont**	**1.70**	**241**	⇓PN	Pn	15 00 28.4	+0.7
PXZ	**Pawanui**	**1.71**	**157**	⇑PN	Pn	15 00 27.3	-0.4
PXZ				AML	AML	15 00 52.2	
PXZ				AML	AML	15 00 53.1	
PXZ				AML	AML	15 00 53.1	
PXZ				AML	AML	15 00 53.6	
KUZ	**Kuaotunu**	**1.72**	**352**	PN	Pn	15 00 27.5	-0.3
DFE	**Dawson Falls**	**1.72**	**239**	PN	Pn	15 00 27.9	0.0
CNGZ	**Carnagh Statio**	**1.73**	**92**	PN	Pn	15 00 28.6	+0.7
PKZ	**Pukeiti**	**1.74**	**244**	PN	Pn	15 00 28.5	+0.4
PUZ	**Pukeiti**	**1.82**	**79**	PN	Pn	15 00 28.6	-0.4
PUZ				AML	AML	15 00 52.8	
PUZ				AML	AML	15 00 53.5	
DVHZ	**Dannevirke**	**1.85**	**176**	⇑PN	Pn	15 00 28.4	-1.0
NWEZ	**Newall Road**	**1.86**	**243**	PN	Pn	15 00 29.8	+0.5
PRHZ	**Porangahau**	**1.88**	**165**	⇑PN	Pn	15 00 29.0	-0.6
POWZ	**Post Office Ro**	**1.95**	**185**	⇑PN	Pn	15 00 29.4	-1.0
MXZ	**Matakaoa Point**	**2.03**	**65**	PN	Pn	15 00 31.5	+0.1
MRZ	**Mangatainoka R**	**2.23**	**188**	⇑PN	Pn	15 00 32.3	-1.5
MRZ				AML	AML	15 01 01.6	
MRZ				AML	AML	15 01 02.4	
BFZ	**Birch Farm**	**2.23**	**175**	⇓PN	Pn	15 00 32.6	-1.3
TIWZ	**Tintock**	**2.32**	**182**	⇓PN	Pn	15 00 33.5	-1.5
OGWZ	**Otaki Gorge**	**2.45**	**195**	⇑PN	Pn	15 00 34.9	-1.5
HOWZ	**Holdsworth Sta**	**2.47**	**189**	⇑PN	Pn	15 00 34.9	-1.9
KIW	**Kapiti Island**	**2.55**	**199**	PN	Pn	15 00 35.8	-2.0
KIW				AML	AML	15 01 07.9	
KIW				AML	AML	15 01 08.2	
TMWZ	**Te Maipa**	**2.65**	**182**	⇑PN	Pn	15 00 37.7	-2.0
MTW	**Mount Morrison**	**2.73**	**188**	⇑PN	Pn	15 00 37.8	-2.2
MTW				AML	AML	15 01 11.6	
MTW				AML	AML	15 01 11.7	
CAW	**Cannon Point**	**2.75**	**195**	PN	Pn	15 00 38.1	-2.2
CAW				AML	AML	15 01 11.9	
CAW				AML	AML	15 01 15.4	
DUWZ	**D'Urville Isla**	**2.84**	**214**	PN	Pn	15 00 39.4	-2.0
TRWZ	**Traveller**	**2.95**	**185**	⇓PN	Pn	15 00 40.6	-2.2
TRWZ				AML	AML	15 01 17.0	
TRWZ				AML	AML	15 01 18.5	
PAWZ	**Paruwai Farm**	**2.96**	**188**	⇑PN	Pn	15 00 40.4	-2.5
PAWZ				AML	AML	15 01 17.3	
PAWZ				AML	AML	15 01 17.9	
WEL	**Wellington**	**2.98**	**198**	PN	Pn	15 00 40.9	-2.3
MSWZ	**Moikau Station**	**3.02**	**191**	⇑PN	Pn	15 00 41.1	-2.6
MSWZ				AML	AML	15 01 17.4	
MSWZ				AML	AML	15 01 18.8	
SNZO	**South Karori**	**3.02**	**199**	PN	Pn	15 00 41.7	-2.6
SNZO				AML	AML	15 01 18.1	
SNZO				AML	AML	15 01 18.5	
TCW	**Tory Channel**	**3.06**	**205**	PN	Pn	15 00 41.8	-2.4
TCW				AML	AML	15 01 18.0	
TCW				AML	AML	15 01 19.2	
BHW	**Baring Head**	**3.08**	**196**	PN	Pn	15 00 41.8	-2.6
BHW				AML	AML	15 01 19.1	
BHW				AML	AML	15 01 19.2	
PLWZ	**Palliser**	**3.17**	**190**	⇑PN	Pn	15 00 42.8	-2.8
TUWZ	**Tuamarina**	**3.37**	**207**	PN	Pn	15 00 45.5	-2.6
TUWZ				AML	AML	15 01 25.7	
TUWZ				AML	AML	15 01 25.9	
NNZ	**Nelson**	**3.42**	**215**	PN	Pn	15 00 46.4	-2.4
QRZ	**Quartz Range**	**3.58**	**227**	PN	Pn	15 00 48.2	-2.7
THZ	**Tophouse**	**4.07**	**215**	⇓PN	Pn	15 00 54.5	-2.9
KHZ	**Kahutara**	**4.38**	**205**	PN	Pn	15 00 58.2	-3.1
KHZ				AML	AML	15 01 48.2	
KHZ				AML	AML	15 01 48.5	
LTZ	**Lake Taylor**	**5.17**	**212**	PN	Pn	15 01 07.7	-4.2
MQZ	**McQueen's Vall**	**5.83**	**205**	PN	Pn	15 01 15.5	-5.0

*ISK **24** 15:10:02.9,41˚09N×34˚53E,h10km,MD2.8*
*ISCJB **24** 15:10:03.3±0.5,41˚07N±0˚03×34˚55E±0˚04,h0km±8km, Error ellipse: s-maj=5.5km s-min=4.5km az=178.5*
*DDA **24** 15:10:03.4,41˚05N×34˚53E,h7km,MD3.0*
*CSEM **24** 15:10:03.4±0.2,41˚07N×34˚55E,h8km,MD2.8,Error ellipse: s-maj=3.5km s-min=2.9km az=171.0*

ISC 24 15:10:03.7±1.1,41˚07N±0˚03×34˚56E±0˚02,h4km±14km, n20,σ0s48/34,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TOS	**Tosya**	**0.40**	**265**	*e*PG	**Pg**	**15 10 11.1**	**-0.4**
TOS				*e*SG	**Sg**	**15 10 16.8**	**0.0**
TOS	**Tosya**	**0.40**	**265**	*e*Pg	**Pg**	**15 10 11.1**	**-0.4**
TOS				*e*Sg	**Sg**	**15 10 16.8**	**0.0**
BYBT	**Boyabat**	**0.43**	**22**	*e*PG	**Pg**	**15 10 11.9**	**0.0**
BYBT				*e*SG	**Sg**	**15 10 18.3**	**+0.8**
BYBT	**Boyabat**	**0.43**	**22**	*e*Pg	**Pg**	**15 10 11.9**	**0.0**
BYBT				*e*Sg	**Sg**	**15 10 18.3**	**+0.8**
CTKT	**Corum**	**0.48**	**158**	*eP*	**Pg**	**15 10 12.6**	**-0.4**
CTKT				*eS*	**Sg**	**15 10 19.5**	**+0.2**
CTKT	**Corum**	**0.48**	**158**	*eP*	**Pg**	**15 10 12.6**	**-0.4**
CTKT				*eS*	**Sg**	**15 10 19.5**	**+0.2**
ILGA	**Ilgaz**	**0.63**	**269**	*eP*	**Pg**	**15 10 15.3**	**-0.6**
ILGA				*eS*	**Sg**	**15 10 24.6**	**+0.5**
ILGA	**Ilgaz**	**0.63**	**269**	*eP*	**Pg**	**15 10 15.3**	**-0.6**
ILGA				*eS*	**Sg**	**15 10 24.6**	**+0.5**
DIKM	**Dikmen**	**0.78**	**42**	*e*PG	**Pg**	**15 10 17.9**	**-0.8**
DIKM	**Dikmen**	**0.78**	**42**	*e*Pg	**Pg**	**15 10 17.9**	**-0.8**
HAVZ	**Havza**	**0.88**	**89**	*eP*	**Pg**	**15 10 20.4**	**-0.2**
HAVZ				*eS*	**Sb**	**15 10 34.3**	**+0.6**
HAVZ	**Havza**	**0.88**	**89**	*eP*	**Pg**	**15 10 20.4**	**-0.2**
HAVZ				*eS*	**Sb**	**15 10 34.3**	**+0.6**
CORM	**Corum**	**0.89**	**176**	*e*PG	**Pg**	**15 10 20.9**	**+0.1**
CORM	**Corum**	**0.89**	**176**	*e*Pg	**Pg**	**15 10 20.9**	**+0.1**
BALT	**Daday**	**0.99**	**298**	*eP*	**Pg**	**15 10 22.8**	**0.0**
BALT				*eS*	**Sg**	**15 10 35.7**	**0.0**
BALT	**Daday**	**0.99**	**298**	*eP*	**Pg**	**15 10 22.8**	**0.0**
BALT				*eS*	**Sg**	**15 10 35.7**	**0.0**
ELDT	**Eldivan**	**1.03**	**236**	*eP*	**Pg**	**15 10 23.6**	**0.0**
ELDT				*eS*	**Sb**	**15 10 39.0**	**+0.7**
ELDT	**Eldivan**	**1.03**	**236**	*eP*	**Pg**	**15 10 23.6**	**0.0**
ELDT				*eS*	**Sb**	**15 10 39.0**	**+0.7**
YOZ	**Yozgat**	**1.54**	**158**	*e*PN	**Pn**	**15 10 31.6**	**-0.6**
YOZ	**Yozgat**	**1.54**	**158**	*e*Pn	**Pn**	**15 10 31.6**	**-0.6**

IDC 24 15:40:14.0±2.6,18˚52S×175˚41W,h167km±25km, mb3.7/12,mb1 3.9/13,mb1mx3.8/22,mbtmp3.8/13,Error ellipse: s-maj=23.1km s-min=13.1km az=124.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.75**	**38**	P	Pn	15 41 38.0	+0.2
	16nm,0.3s,baz=184,slow=9.5,SNR=12						
AFI				S	Sn	15 42 37.1	-6.4
	18nm,0.3s,baz=241,slow=23,SNR=3.0						
URZ	**Urewera**	**20.73**	**197**	P	P	15 44 40.4	-1.0
	13nm,0.4s,baz=357,slow=3.7,SNR=36						
URZ				S	S	15 48 15.5	-8.1
	2.6nm,0.6s,baz=137,slow=21,SNR=1.1						
RPZ	**Rata Peaks**	**27.59**	**202**	P	P	15 45 46.9	+1.3
	7.2nm,0.4s,baz=2.9,slow=1.4,SNR=9.4						
STKA	**Stephens Creek**	**40.86**	**242**	P	P	15 47 39.3	-0.4
	1.3nm,0.4s,baz=88,slow=12,SNR=19						
ASAR	**Alice Springs**	**47.38**	**255**	P	P	15 48 31.3	-0.4
	14nm,0.7s,baz=82,slow=8.7,SNR=161						
FITZ	**Fitzroy Crossi**	**55.74**	**260**	P	P	15 49 33.7	0.0
	1.5nm,0.4s,baz=63,slow=4.7,SNR=18						
VNDA	**Vanda**	**60.10**	**186**	P	P	15 50 03.5	+0.4
	0.8nm,0.9s,baz=24,slow=9.4,SNR=4.3						
MJAR	**Matsushiro Arr**	**70.12**	**322**	P	P	15 51 08.3	-0.1
	1.8nm,0.8s,baz=153,slow=7.2,SNR=4.9						
NVAR	**Mina Array Bea**	**77.91**	**42**	P	P	15 51 53.5	-0.2
	0.7nm,0.7s,baz=228,slow=9.1,SNR=5.7						
MAW	**Mawson**	**84.24**	**199**	P	P	15 52 25.5	-0.9
	0.9nm,0.5s,baz=104,slow=12,SNR=3.9						
PDAR	**Pinedale Array**	**85.85**	**42**	P	P	15 52 35.4	+0.2
	0.3nm,0.6s,baz=200,slow=10,SNR=2.9						
ILAR	**Eielson Array**	**85.86**	**12**	P	P	15 52 33.8	-0.6
	0.2nm,0.5s,baz=244,slow=5.9,SNR=4.5						
CMAR	**Chiang Mai Arr**	**91.78**	**289**	P	P	15 53 04.1	+0.7
	1.2nm,0.8s,baz=107,slow=3.1,SNR=6.2						
BRTR	**Keskin Array B**	**147.21**	**316**	PKPbc	PKPbc	15 59 37.5	-0.5
	1.8nm,0.7s,baz=100,slow=3.8,SNR=8.0						

*CSEM **24** 15:41:35.0,42˚50N×13˚43E,h10km,MD1.7/5,After ROM*
ROM 24 15:41:35.0±0.1,42˚50N×13˚43E,h10km±1km,Md1.7/5, Ml1.5/3,Error ellipse: s-maj=2.4km s-min=0.6km az=119.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.04**	**342**	Pg	Pg	15 41 37.3	+0.2
CAMP				Sg	Sg	15 41 38.5	-0.1
	90nm,0.2s						
CAMP	**Campotosto**	**0.04**	**342**	Pg	Pg

mb3.6/4, Error ellipse: s-maj=14.2km s-min=9.0km az=173.9

DJA ***24*** *15:53:47.8±0.7,2°N±3°×9°E±°, h20km, M3.8/5, MLv3.8/5*

ISC 24 15:53:49.8±1.4,1°58N±0°09×98°8E±0°1, h90km, n11, σ2s18/9, mb3.8/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MNSI	**Mandailing Nat**	**1.09**	**136**	P	Pn	15 54 04.6	-5.9
PSI	**Prapat**	**1.21**	**5**	Pg	Pn	15 54 01.5	-11
	42nm,0.3s,baz=166,slow=7.2,SNR=51						
PSI				Lg	Lg	15 54 15.2	
	55nm,0.3s,baz=258,slow=22,SNR=12						
TSI	**Tuntungan**	**1.92**	**352**	P	**Pn**	**15 54 18.5**	**-2.5**
TSI				S	**Sn**	**15 54 46.6**	**+1.8**
BKNI	**Bangkinang**	**2.54**	**119**	P	**Pn**	**15 54 27.6**	**-1.6**
PPI	**Padang Panjang**	**2.56**	**142**	P	Pn	15 54 31.6	+2.1
IPM	**Ipoh**	**3.62**	**37**	P	**Pn**	**15 54 41.0**	**-2.8**
IPM				S	Sn	15 55 29.7	+4.2
KULM	**Kulim**	**4.11**	**26**	P	Pn	15 54 43.0	-7.3
KULM				S	**Sn**	**15 55 39.7**	**+2.4**
ASAR	**Alice Springs**	**42.34**	**129**	P	**P**	**16 01 36.1**	**+0.8**
	0.2nm,0.7s,baz=306,slow=8.0,SNR=4.2						
MKAR	**Makanchi Array**	**47.28**	**345**	P	**P**	**16 02 15.7**	**+1.6**
	0.4nm,0.3s,baz=161,slow=8.3,SNR=5.8						
KURBB	**Kurchatov Arra**	**51.80**	**344**	P	**P**	**16 02 48.4**	**0.0**
	0.7nm,0.6s,baz=162,slow=6.9,SNR=5.7						
ZALV	**Zalesovo Beam**	**53.46**	**350**	P	**P**	**16 03 00.7**	**+0.2**
	1.0nm,0.6s,baz=165,slow=6.6,SNR=6.6						

DJA 24 15:57:18.4±1.1,1°N±8°×12°1E±°, h30km, M3.9/4, MLv3.9/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
MRSI	**Marisa**	**1.18**	**139**	P	Pn	15 57 33.4	-5.5
GTOI	**Gorontalo**	**1.99**	**111**	P	Pn	15 57 46.8	-3.2
GTOI				S	Sn	15 58 15.6	+1.7
LUWI	**Luwuk**	**2.89**	**146**	P	Pn	15 58 03.8	+1.4
LUWI				S	Sn	15 58 39.3	+3.2
KMSI	**Cibinong**	**2.93**	**106**	P	Pb	15 58 08.0	-2.0
KMSI				S	Sb	15 58 48.6	+3.2
TTSI	**Tana Toraja**	**4.59**	**197**	P	Pn	15 58 27.0	+1.2

IDC ***24*** *16:00:27.5±0.4,6°86S×105°12E, h0km, mb4.5/29, mb1 4.5/29, mb1mx4.5/33, mbtmp4.5/29, MS4.0/11, Ms1 4.0/11, ms1mx3.7/25, Error ellipse: s-maj=16.3km s-min=9.9km az=53.0*

NEIC ***24*** *16:00:30.2±1.4,6°85S×105°06E, h17km±7km, mb4.8/17, Error ellipse: s-maj=11.8km s-min=6.3km az=55.0*

DJA ***24*** *16:00:32.1±1.1,7°S±3°×107°5E±°, h22km±11km, M4.8/19, mb5.0/18, mB5.2/9, MLv5.1/19, Mw(mB)4.6/9, Mwp5.8/1*

BJI ***24*** *16:00:32.0,6°90S×105°00E, h48km, mB4.9/23, mb4.7/31, Ms4.6/26, Ms7 4.2/26*

MOS ***24*** *16:00:32.2±1.0,6°47S×105°27E, h33km, mb5.0/24, MS4.2/5, Error ellipse: s-maj=19.6km s-min=9.0km az=117.1*

ISCJB ***24*** *16:00:33.8±0.6,7°02S±0°04×104°95E±0°04, h59km±5km, mb4.6/77, MS4.2/27, Error ellipse: s-maj=8.9km s-min=4.8km az=45.0*

ISC 24 16:00:34.3±0.4,6°99S±0°04×104°93E±0°05, h48km±2km, h48km:pP-P,n205, σ1s65/252, mb4.7/77, MS4.2/27, 13C-9D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase Op	ID ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.52**	**343**	P	**Pn**	**16 00 59.4**	**+0.3**
KASI				S	**Sn**	**16 01 22.5**	**+4.9**
SKJI	**Sukabumi**	**1.61**	**91**	P	**Pn**	**16 01 00.0**	**-0.4**
DBJI	**Dramaga**	**1.85**	**77**	P	**Pn**	**16 01 03.9**	**+0.2**
DBJI				S	**Sn**	**16 01 30.5**	**+4.5**
TNG	**Tangerang**	**1.89**	**65**	P	Pn	16 01 09.2	+5.1
LWLI	**Liwa**	**2.14**	**336**	P	**Pn**	**16 01 09.4**	**+1.7**
LEM	**Lembang**	**2.67**	**87**	P	**Pn**	**16 01 17.2**	**+2.2**
CISI	**Cisompet, Garu**	**2.92**	**101**	P	**Pn**	**16 01 17.0**	**-1.3**
MNAI	**Manna**	**3.27**	**323**	P	**Pn**	**16 01 22.8**	**-0.3**
XMIS	**Christmas Isla**	**3.54**	**168**	*e*Pn	Pn	16 01 23.5	-6.4
XMIS				*e*S	Sn	16 01 56.8	-11
PMBI	**Palembang**	**4.04**	**358**	P	Pn	16 01 37.9	+4.3
KSI	**Kapahiang**	**4.05**	**325**	P	**Pn**	**16 01 35.3**	**+1.4**
TGJI	**Tegal**	**4.16**	**89**	P	Pn	16 01 42.3	+7.0
BJII	**Banjamegara**	**4.75**	**94**	P	Pn	16 01 47.9	+4.4
PPBI	**Pangkal Pinang**	**4.94**	**14**	P	**Pn**	**16 01 49.1**	**+3.0**
	124nm,1.1s,2μm0.8nm						
UGM	**Wanagama**	**5.62**	**100**	P	**Pn**	**16 01 56.3**	**+0.9**
	132nm,1.3s,0.7nm						
PCJI	**Pacitan**	**6.31**	**101**	P	**Pn**	**16 02 05.6**	**+0.8**
	91nm,0.6s,2μm0.6nm						
SJI	**Sawahan**	**6.82**	**97**	P	**Pn**	**16 02 15.0**	**+3.1**
	62nm,0.6s,1μm0.3nm						
PWJI	**Pagerwojo**	**6.89**	**99**	P	**Pn**	**16 02 13.5**	**+0.7**
	86nm,0.6s,2μm0.4nm						
RGRI	**Rengat**	**7.08**	**338**	P	Pn	16 02 11.8	-3.7
PPI	**Padang Panjang**	**7.91**	**325**	P	Pn	16 02 39.3	+13
GMJI	**Gumukmas**	**8.53**	**99**	P	**Pn**	**16 02 36.8**	**+1.5**
	74nm,0.7s,0.3nm						
BLJI	**Banyuglugur**	**8.62**	**96**	P	**Pn**	**16 02 39.5**	**+2.9**
	76nm,0.6s,1μm0.3nm						
MYKOM	**Kota Tinggi**	**8.79**	**353**	P	Pn	16 02 47.6	+8.8
JAGI	**Jajag, Banyuwa**	**9.26**	**100**	P	**Pn**	**16 02 45.3**	**0.0**
	181nm,0.7s,2μm						
STKI	**Sintang**	**9.58**	**43**	P	Pn	16 02 58.0	+8.3
IGBI	**Denpasar**	**10.28**	**101**	P	Pn	16 03 06.6	+7.3
KHKI	**Kahang-Kahang**	**10.67**	**98**	P	**Pn**	**16 03 02.8**	**-1.8**
	97nm,0.6s,1μm						
SBUM	**Sibu**	**11.87**	**38**	P	Pn	16 03 26.6	+5.6
	24nm,1.5s,474nm						
KAPI	**Kappang**	**14.87**	**83**	LR	LR	16 10 25.4	
	comp=Z,851nm,19.7s,baz=96,slow=41						
BKSI	**Bulukumba**	**15.19**	**85**	P	**Pn**	**16 04 07.9**	**+2.0**
	28nm,1.1s						
MMRI	**Maumere**	**17.22**	**97**	P	**Pn**	**16 04 29.3**	**-2.3**
	87nm,1.1s,1μm						
MBWA	**Marble Bar**	**20.09**	**136**	*e*P	**P**	**16 05 03.1**	**-0.8**
FITZ	**Fitzroy Crossi**	**23.00**	**121**	*e*P	**P**	**16 05 34.3**	**-1.0**
	7.0nm,0.8s						
FITZ				S	**S**	**16 09 43.3**	**+0.9**
FITZ	**Fitzroy Crossi**	**23.00**	**121**	P	**P**	**16 05 34.4**	**-0.8**
	4.8nm,0.9s,baz=291,slow=7.5,SNR=15						
FITZ				S	**S**	**16 09 43.3**	**+0.9**
	1.5nm,0.8s,baz=2.6,slow=16,SNR=2.1						
PBKT	**Sadao Pong**	**23.73**	**351**	P	**P**	**16 05 43.5**	**+1.3**
	5.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**25.96**	**347**	P	**P**	**16 06 01.6**	**-1.0**
CMAR				PcP	**PcP**	**16 09 31.4**	**+1.1**
CMAR				ScP	ScP	16 13 14.7	+8.6
CMAR	**Chiang Mai Arr**	**25.96**	**347**	P	**P**	**16 06 01.6**	**-1.0**
	2.5nm,0.6s,baz=179,slow=8.8,SNR=16						
CMAR				PcP	**PcP**	**16 09 31.4**	**+1.1**
	2.1nm,1.1s,baz=218,slow=2.3,SNR=4.5						
CMAR				ScP	ScP	16 13 14.7	+8.6
	1.1nm,1.0s,baz=199,slow=3.0,SNR=4.6						
CMAR				LR	LR	16 17 27.6	
	comp=Z,355nm,19.7s,baz=170,slow=39						
QIZ	**Qiongzhong**	**26.30**	**11**	P	**P**	**16 06 05.8**	**+0.2**
QIZ				sP	**sP**	**16 06 22.4**	**-1.5**
QIZ				S	**S**	**16 10 37.1**	**+2.0**
QIZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
QIZ				LR	LR		
	comp=N,620nm,18.5s						
QIZ				LR	LR		
	comp=E,94nm,16.9s						
QIZ				LR	LR		
	comp=Z,810nm,18.5s						
CMMT	**Chiang Mai**	**26.31**	**347**	P	P	16 06 19.7	+14
CHTO	**Chiang Mai**	**26.31**	**347**	*e*P	**P**	**16 06 04.8**	**-0.8**
	comp=Z,5.5nm,0.7s						
CHTO	**Chiang Mai**	**26.31**	**347**	P	P	16 06 19.1	+13
WRAB	**Tennant Creek**	**31.30**	**117**	*e*P	**P**	**16 06 49.8**	**-0.4**
WRAB	**Tennant Creek**	**31.30**	**117**	*e*P	**P**	**16 06 49.5**	**-0.6**
	comp=Z,16nm,1.0s						
KMI	**Kunming**	**31.99**	**356**	P	P	16 06 52.4	-3.9
KMI				S	**S**	**16 12 05.3**	**+0.5**
KMI				LR	LR		
	comp=N,760nm,16.3s						
KMI				LR	LR		
	comp=E,200nm,15.9s						
KMI				LR	LR		
	comp=Z,1μm,17.8s						
AS31	**Alice Springs**	**32.38**	**124**	*e*P	**P**	**16 06 58.5**	**-1.2**
ASAR	**Alice Springs**	**32.38**	**124**	P	**P**	**16 06 58.9**	**-0.8**
ASAR				PcP	**PcP**	**16 09 46.9**	**+0.3**
ASAR	**Alice Springs**	**32.38**	**124**	P	**P**	**16 06 58.9**	**-0.8**
	comp=Z,1.6nm,0.5s,baz=290,slow=7.4,SNR=71						
ASAR				PcP	**PcP**	**16 09 46.9**	**+0.3**
	comp=Z,1.8nm,0.6s,baz=308,slow=2.2,SNR=11						
GYA	**Guiyang**	**33.29**	**3**	P	**P**	**16 07 08.8**	**+1.2**
GYA				pP	**pP**	**16 07 21.3**	**+1.0**
GYA				sP	**sP**	**16 07 29.4**	**+3.4**
GYA				PP	**PP**	**16 08 22.0**	**-1.6**
GYA				S	**S**	**16 12 25.3**	**+0.5**
GYA				sS	**sS**	**16 12 47.6**	**+1.4**
GYA				ScP	**ScP**	**16 13 28.9**	**-0.7**
GYA				ScS	**ScS**	**16 17 27.8**	**-2.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=N,480nm,17.7s						
GYA				LR	LR		
	comp=E,310nm,18.1s						
GYA				LR	LR		
	comp=Z,450nm,17.6s						
CD2	**Chengdu**	**37.70**	**358**	P	**P**	**16 07 45.3**	**0.0**
CD2				pP	**pP**	**16 07 58.5**	**+0.4**
CD2				sP	**sP**	**16 08 04.8**	**+1.0**
CD2				PP	**PnPn**	**16 09 15.9**	**+2.3**
CD2				S	**S**	**16 13 33.3**	**+1.0**
CD2				sS	**sS**	**16 13 54.8**	**+1.0**
CD2				SS	**SnSn**	**16 16 10.5**	**-5.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,40nm,4.8s						
CD2				LR	LR		
	comp=N,330nm,20.2s						
CD2				LR	LR		
	comp=E,540nm,20.2s						
CD2				LR	LR		
	comp=Z,320nm,16.6s						
ODAN	**Odare**	**37.70**	**334**	*e*P	**P**	**16 07 44.9**	**-0.7**
	comp=Z,19nm,0.8s						
TAPN	**Taplejung**	**37.99**	**335**	*e*P	**P**	**16 07 47.8**	**-0.3**
	comp=Z,32nm,0.9s						
LSA	**Lhasa**	**38.81**	**341**	P	**P**	**16 07 53.9**	**-1.3**
LSA	**Lhasa**	**38.81**	**341**	*e*P	**P**	**16 07 54.4**	**-0.8**
	comp=Z,9.0nm,0.5s						
PKI	**Pulchoki**	**39.20**	**332**	*e*P	**P**	**16 07 57.7**	**-0.6**
PKIN	**Phulchoki**	**39.21**	**332**	*e*P	**P**	**16 07 57.7**	**-0.7**
	comp=Z,7.4nm,0.5s						
GUN	**Gumba**	**39.28**	**333**	*e*P	**P**	**16 07 58.5**	**-0.5**
	comp=Z,20nm,0.4s						
DMN	**Daman**	**39.38**	**332**	*e*P	**P**	**16 07 59.2**	**-0.5**
KKN	**Kakani**	**39.45**	**332**	*e*P	**P**	**16 07 59.6**	**-0.7**
	comp=Z,18nm,0.7s						
KOLN	**Koldanda**	**40.24**	**330**	*e*P	**P**	**16 08 06.4**	**-0.4**
	comp=Z,30nm,0.6s						
DANN	**Dangsing**	**40.64**	**331**	*e*P	**P**	**16 08 09.7**	**-0.5**
	comp=Z,29nm,0.6s						
PYUN	**Piuthan**	**40.81**	**330**	*e*P	**P**	**16 08 11.1**	**-0.5**
	comp=Z,14nm,0.4s						
NJ2	**Nanjing**	**41.03**	**18**	*e*P	**P**	**16 08 14.0**	**+1.0**
NJ2				pP	**pP**	**16 08 25.0**	**-0.9**
NJ2				sP	**sP**	**16 08 29.8**	**-1.8**
NJ2				PP	**PP**	**16 09 49.0**	**+0.5**
NJ2				S	**S**	**16 14 24.5**	**+2.4**
NJ2				sS	**sS**	**16 14 43.5**	**-0.3**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,160nm,4.5s						
NJ2				LR	LR		
	comp=N,250nm,25.2s						
NJ2				LR	LR		
	comp=E,140nm,20.1s						
NJ2				LR	LR		
	comp=Z,210nm,23.8s						
PMG	**Port Moresby**	**41.85**	**96**	*e*P	**P**	**16 08 19.4**	**-0.6**
	comp=Z,34nm,0.9s						
PMG	**Port Moresby**	**41.85**	**96**	P	**P**	**16 08 21.4**	**+1.4**
	comp=Z,44nm,1.4s						
PMG	**Port Moresby**	**41.85**	**96**	P	**P**	**16 08 19.6**	**-0.4**
	comp=Z,18nm,0.8s,baz=268,slow=5.9,SNR=5.7						
STKA	**Stephens Creek**	**42.19**	**131**	*e*P	**P**	**16 08 22.7**	**+0.1**
	comp=Z,8.2nm,0.6s						
STKA				PcP	**PcP**	**16 10 15.6**	**-0.7**
STKA	**Stephens Creek**	**42.19**	**131**	P	**P**	**16 08 22.6**	**0.0**
	comp=Z,38nm,0.6s,baz=303,slow=8.0,SNR=304						
STKA				PcP	**PcP**	**16 10 15.6**	**-0.7**
	comp=Z,2.1nm,0.5s,baz=288,slow=4.7,SNR=3.0						
LZH	**Lanzhou**	**42.86**	**359**	*e*P	**P**	**16 08 29.5**	**+1.4**
LZH				S	**S**	**16 14 48.3**	**-1.1**
LZH				sS	**sS**	**16 15 11.6**	**+0.4**
LZH				SS	**SS**	**16 17 58.0**	**-4.3**
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,5.2s						
LZH				LR	LR		
	comp=N,440nm,15.8s						
LZH				LR	LR		
	comp=E,290nm,15.1s						
LZH				LR	LR		
	comp=Z,370nm,16.0s						
NDI	**New Delhi**	**44.40**	**324**	*e*PKP	P	16 08 37.0	-3.4
GTA	**Gaotai**	**46.41**	**355**	P	**P**	**16 08 57.5**	**+1.2**
GTA				pP	**pP**	**16 09 10.0**	**+0.6**
GTA				sP	**sP**	**16 09 15.4**	**+0.4**
GTA				PcP	**PcP**	**16 10 31.1**	**+0.5**
GTA				S	**S**	**16 15 43.1**	**+2.4**
GTA				sS	**sS**	**16 16 04.3**	**+1.6**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,66nm,6.4s						
GTA				LR	LR		
	comp=N,260nm,19.0s						
GTA				LR	LR		
	comp=E,260nm,20.9s						
GTA				LR	LR		
	comp=Z,270nm,19.0s						
JNU	**Nakatsue**	**46.89**	**30**	P	**P**	**16 08 58.5**	**-1.6**
JNU	**Nakatsue**	**46.89**	**30**	P	**P**	**16 08 58.5**	**-1.6**
	comp=Z,4.9nm,1.0s,baz=240,slow=8.1,SNR=4.2						
EIDS	**Eidsvold**	**47.65**	**118**	*e*P	**P**	**16 09 06.7**	**+0.5**
	comp=Z,22nm,1.2s						
BJI	**Beijing**	**47.93**	**12**	P	**P**	**16 09 08.3**	**+0.4**
BJI				S	**S**	**16 16 07.5**	**+5.4**
BJI				pmax	pmax		
	comp=Z,15nm,0.4s						
BJI				LR	LR		
	comp=N,190nm,18.2s						
BJI				LR	LR		
	comp=E,170nm,22.6s						
BJI				LR	LR		
	comp=Z,140nm,20.1s						
HHC	**Hu-ho-hao-te**	**47.99**	**7**	*e*P	**P**	**16 09 08.3**	**-0.3**
HHC				pP	**pP**	**16 09 20.6**	**-1.1**
HHC				sP	**sP**	**16 09 25.9**	**-1.5**
HHC				PP	**PP**	**16 11 00.1**	**-1.0**
HHC				PcS	**PcS**	**16 14 30.1**	**-1.8**
HHC				S	**S**	**16 16 02.6**	**-0.6**
HHC				sS	**sS**	**16 16 23.6**	**-1.7**
HHC				ScS	**ScS**	**16 18 54.4**	**-3.4**
HHC				SS	**SS**	**16 19 26.8**	**-6.0**
HHC				pmax	pmax		
	comp=Z,41nm,1.1s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
HHC				LR	LR		
	comp=N,510nm,17.5s						
HHC				LR	LR		
	comp=E,370nm,16.1s						
HHC				LR	LR		
	comp=Z,510nm,15.7s						
KSAR	**Wonju Array Be**	**49.13**	**24**	P	**P**	**16 09 17.1**	**-0.1**
KSRS	**Korea Array**	**49.15**	**24**	P	**P**	**16 09 17.2**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=225,slow=6.6,SNR=4.5						
KSRS				LR	LR	16 30 42.3	
	comp=Z,63nm,19.4s,baz=230,slow=37						
WMQ	**Urumqi**	**52.92**	**344**	*e*P	**P**	**16 09 45.6**	**-0.1**
WMQ				pP	**pP**	**16 09 59.0**	**-0.1**
WMQ				pP	**pwP**	**16 10 04.0**	**+4.9**
WMQ				PcP	**PcP**	**16 10 54.0**	**-0.2**
WMQ				*e*S	**S**	**16 17 09.0**	**-2.5**
WMQ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
WMQ				pmax	pmax		
	comp=Z,110nm,5.6s						
WMQ				LR	LR		
	comp=N,260nm,10.0s						
WMQ				LR	LR		
	comp=E,240nm,12.0s						
WMQ				LR	LR		
	comp=Z,290nm,22.2s						
MJAR	**Matsushiro Arr**	**53.37**	**33**	P	P	16 09 45.4	-3.6
MJAR	**Matsushiro Arr**	**53.37**	**33**	P	P	16 09 45.4	-3.6
	comp=Z,0.9nm,0.6s,baz=200,slow=8.9,SNR=4.5						
KSH	**Kashi**	**53.47**	**332**	P	**P**	**16 09 47.3**	**-2.6**
KSH				*e*pP	**pP**	**16 09 59.8**	**-3.5**
KSH				*e*sP	**sP**	**16 10 06.9**	**-1.9**
KSH				*e*PcP	**PcP**	**16 10 56.1**	**-0.3**
KSH				*e*PP	**PP**	**16 11 48.1**	**-2.8**
KSH				*e*S	S	16 17 09.8	-9.4
KSH				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,250nm,4.2s						
KSH				LR	LR		
	comp=N,260nm,5.4s						
KSH				LR	LR		
	comp=E,350nm,7.1s						
KSH				LR	LR		
	comp=Z,330nm,4.9s						
CN2	**Changchun**	**53.85**	**18**	*e*P	P	16 09 55.8	+3.3
CN2				*e*sP	sP	16 10 08.4	-3.0
CN2				*e*S	**S**	**16 17 26.8**	**+2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,200nm,16.0s						
CN2				LR	LR		
	comp=E,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
SONM	**Songino Array**	**54.60**	**1**	P	**P**	**16 09 57.9**	**0.0**
SONM				PcP	**PcP**	**16 10 60.0**	**-0.6**
SONM				ScP	**ScP**	**16 15 00.9**	**+5.8**
SONM	**Songino Array**	**54.60**	**1**	P	**P**	**16 09 57.9**	**0.0**
	comp=Z,1.3nm,0.4s,baz=178,slow=8.9,SNR=9.2						
SONM				PcP	**PcP**	**16 10 60.0**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=175,slow=3.1,SNR=4.5						
SONM				ScP	**ScP**	**16 15 00.9**	**+5.8**
	comp=Z,0.6nm,0.6s,baz=333,slow=1.7,SNR=3.9						
ULN	**Ulaanbaatar**	**54.65**	**2**	*e*P	**P**	**16 09 58.5**	**+0.1**
	comp=Z,2.3nm,0.8s						
MDJ	**Mudanjiang**	**55.96**	**21**	P	**P**	**16 10 09.1**	**+1.4**
MDJ				pP	**pP**	**16 10 21.0**	**-0.2**
MDJ				sP	**sP**	**16 10 25.6**	**-1.1**
MDJ				PP	**PP**	**16 12 14.3**	**+1.3**
MDJ				S	**S**	**16 17 54.8**	**+2.5**
MDJ				sS	**sS**	**16 18 15.8**	**+1.0**
MDJ				pmax	pmax		
	comp=Z,4.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,36nm,5.0s						
MDJ				LR	LR		
	comp=N,54nm,32.0s						
MDJ				LR	LR		
	comp=Z,59nm,29.9s						
TKM2	**Tokmak 2**	**56.38**	**334**	*e*P	**P**	**16 10 09.4**	**-1.5**
	comp=Z,8.5nm,0.6s						
USRK	**Ussuriysk Arra**	**56.51**	**23**	P	**P**	**16 10 09.9**	**-1.7**
	comp=Z,5.1nm,0.6s,baz=199,slow=4.6,SNR=26						
AAK	**Ala-Archa**	**56.63**	**333**	*e*P	**P**	**16 10 12.5**	**-0.2**
AAK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
EKS2	**Erkin-Say**	**56.97**	**333**	*e*P	**P**	**16 10 14.7**	**-0.4**
	comp=Z,11nm,0.8s						
ZAK	**Zakamensk**	**57.15**	**359**	*e*P	**P**	**16 10 16.1**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MK31	**Makanchi Array**	**57.20**	**342**	*i* P	**P**	**16 10 15.3**	**-1.2**
MK31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MK31	**Makanchi Array**	**57.20**	**342**	*e*P	**P**	**16 10 13.8**	**-2.7**
MKAR	**Makanchi Array**	**57.20**	**342**	*ce*P	**P**	**16 10 15.3**	**-1.2**
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**57.20**	**342**	P	**P**	**16 10 15.0**	**-1.5**
MKAR	**Makanchi Array**	**57.20**	**342**	P	**P**	**16 10 15.0**	**-1.5**
	comp=Z,3.3nm,0.7s,baz=146,slow=7.8,SNR=34						
MKAR				LR	LR	16 40 37.9	
	comp=Z,78nm,19.3s,baz=152,slow=42						
CASY	**Casey**	**59.33**	**177**	*e*P	**P**	**16 10 30.6**	**-0.4**
	comp=Z,8.1nm,0.7s						
KLR	**Kul'dur**	**60.69**	**20**	*e*P	P	16 10 34.3	-6.3
HABR	**Khabarovsk**	**61.23**	**22**	*e*P	P	16 10 40.7	-3.6
HABR				*PP	pP	16 10 50.9	-7.0
HABR				*e*SP	sP	16 10 54.9	-8.5
HABR						16 11 23.9	
HABR				*e*S	**S**	**16 18 56.1**	**-4.5**
HABR				*e*SS	sS	16 19 13.7	-10
HABR				pmax	pmax		
	comp=Z,43nm,2.5s						
HABR				pmax	pmax		
	comp=E,30nm,1.9s						
HABR				pmax	pmax		
	comp=N,30nm,2.5s						
HABR				MLR	MLR		
	comp=Z,100nm,19.0s						
KURBB	**Kurchatov Arra**	**61.76**	**341**	P	**P**	**16 10 47.5**	**-0.3**
	comp=Z,3.8nm,0.7s,baz=156,slow=5.7,SNR=23						
KURK	**Kurchatov**	**61.81**	**341**	P	**P**	**16 10 46.6**	**-1.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURK	**Kurchatov**	**61.81**	**341**	*e*P	**P**	**16 10 47.0**	**-1.2**
	comp=Z,5.7nm,0.8s						
ZAA0	**Zalesovo Array**	**63.03**	**347**	*e*P	**P**	**16 10 54.6**	**-1.6**
ZALV	**Zalesovo Beam**	**63.03**	**347**	*i* P	**P**	**16 10 54.7**	**-1.5**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZALV	**Zalesovo Beam**	**63.03**	**347**	P	**P**	**16 10 54.7**	**-1.5**
ZALV	**Zalesovo Beam**	**63.03**	**347**	P	**P**	**16 10 54.7**	**-1.5**
	comp=Z,2.6nm,0.4s,baz=156,slow=5.5,SNR=20						
ZALV				LR	LR	16 40 58.9	
	comp=Z,332nm,19.4s,baz=340,slow=39						
YSS	**Yuzh-Sakhalins**	**63.31**	**28**	*e*P	**P**	**16 10 57.0**	**-1.2**
BVA0	**Borovoye Array**	**66.57**	**338**	*i* P	**P**	**16 11 17.7**	**-1.6**
BVA0				pmax	pmax		
	comp=Z,13nm,0.9s						
BVAR	**Borovoye Array**	**66.57**	**338**	P	**P**	**16 11 18.4**	**-0.9**
BVAR	**Borovoye Array**	**66.57**	**338**	P	**P**	**16 11 18.4**	**-0.9**
	comp=Z,4.2nm,0.6s,baz=146,slow=8.6,SNR=26						
BRVK	**Borovoye**	**66.64**	**338**	*ce*P	**P**	**16 11 19.1**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,15nm,2.5s						
MAW	**Mawson**	**66.80**	**196**	P	**P**	**16 11 21.3**	**+0.8**
MAW	**Mawson**

ARU S **S** **16 21 31.9 +1.5**
ARU pmax pmax
comp=Z,22nm,1.2s
ARU MLR MLR
comp=Z,147nm,24.0s
PETK Petropavlovsk- 74.59 30 P **P** **16 12 05.5 -2.7**
PETK Petropavlovsk- 74.59 30 P **P** **16 12 05.5 -2.7**
comp=Z,1.8nm,0.8s,baz=182,slow=5.4,SNR=4.3
PETK LR LR 16 43 07.4
comp=Z,33nm,20.3s,baz=239,slow=34
KBZ Khabaz 75.27 319 P **P** **16 12 13.0 +0.7**
KBZ Khabaz 75.27 319 P **P** **16 12 13.0 +0.7**
comp=Z,9.1nm,1.0s,baz=145,slow=3.2,SNR=15
RAO Raoul Island 75.42 118 P **P** **16 12 13.9 +0.4**
comp=Z,509nm,1.1s
ASF Jabal al Asfar 75.47 306 P **P** **16 12 15.4 +1.5**
ASF Jabal al Asfar 75.47 306 P **P** **16 12 15.4 +1.5**
comp=Z,20nm,1.3s,baz=12,slow=1.7,SNR=8.6
KIV Kislovodsk 75.51 319 *eP* **P** **16 12 14.3 +0.5**
KIV *e* 16 12 27.7
KIV *eS* **S** **16 21 50.5 -0.4**
KIV pmax pmax
comp=Z,8.0nm,1.1s
EIL Elat 76.33 303 P **P** **16 12 19.4 +0.7**
EIL Elat 76.33 303 P **P** **16 12 19.4 +0.7**
comp=Z,11nm,0.9s,baz=35,slow=3.3,SNR=7.0
VNDA Vanda 76.36 169 *eP* **P** **16 12 18.2 +0.2**
comp=Z,8.5nm,1.1s
VNDA Vanda 76.36 169 P **P** **16 12 18.3 +0.4**
comp=Z,5.8nm,1.1s,baz=302,slow=6.3,SNR=9.0
SOKR Solikamsk 76.52 337*c iP* **P** **16 12 19.5 +0.5**
SOKR pmax pmax
comp=Z,20nm,1.8s
MMAI Mount Meron Ar 76.93 306 P **P** **16 12 23.3 +1.2**
MMAI Mount Meron Ar 76.93 306 P **P** **16 12 23.3 +1.2**
comp=Z,7.6nm,0.9s,baz=101,slow=16,SNR=6.0
ANN Anapa 79.30 318 *eP* **P** **16 12 35.1 +0.3**
ANN pmax pmax
comp=Z,10.0nm,0.8s
TIXI Tiksi 80.05 7*c iP* **P** **16 12 36.4 -1.9**
TIXI pmax pmax
comp=Z,8.0nm,1.0s
TIXI MLR MLR
comp=Z,193nm,20.0s
BR131 Keskin Array S 80.29 312 *eP* **P** **16 12 40.3 -0.3**
comp=Z,8.7nm,0.9s
BRTR Keskin Array B 80.29 312 P **P** **16 12 40.3 -0.3**
BRTR Keskin Array B 80.29 312 P **P** **16 12 40.3 -0.3**
comp=Z,9.1nm,1.0s,baz=126,slow=6.4,SNR=32
VORD Divnogorie 80.48 324 *eP* P 16 12 35.8 -5.3
VORD pmax pmax
comp=Z,7.0nm,0.4s
VORD pmax pmax
comp=N,50nm,0.6s
VORD pmax pmax
comp=E,30nm,0.6s
VSR Storozhevoye 80.66 324 *eP* **P** **16 12 41.6 -0.4**
VSR pmax pmax
comp=Z,10.0nm,0.9s
VSR pmax pmax
comp=N,2.0nm,0.5s
VSR pmax pmax
comp=E,10.0nm,0.6s
QSPA South Pole Qui 83.00 180 P **P** **16 12 54.9 +0.5**
QSPA South Pole Qui 83.00 180 P **P** **16 12 54.9 +0.5**
comp=E,8.8nm,1.1s,baz=314,slow=1.8,SNR=18
MOS Moscow 83.28 328 *eP* P 16 13 01.3 +5.6
OBN Obninsk 83.61 327⇓ *iP* **P** **16 12 56.8 -0.5**
OBN *eS* S 16 23 05.5 -10
OBN *eSS* SS 16 28 50.6 +7.4
OBN pmax pmax
comp=Z,24nm,1.7s
OBN MLR MLR
comp=Z,100nm,23.0s
BILL Bilibino 86.15 19⇑ *iP* **P** **16 13 08.2 -1.7**
BILL *eS* S 16 23 24.3 -16
BILL pmax pmax
comp=Z,3.0nm,1.7s
AKASG Malin Array Be 86.41 322 *i* P **P** **16 13 11.3 -0.3**
AKASG Malin Array Be 86.41 322 P **P** **16 13 11.1 -0.5**
AKASG Malin Array Be 86.41 322 P **P** **16 13 11.1 -0.5**
comp=Z,0.2nm,0.3s,baz=88,slow=4.6,SNR=9.7
KIEV Kiev 86.42 322 *eP* **P** **16 13 10.5 -1.1**
comp=Z,3.0nm,0.8s
KIEV *epP* **pP** **16 13 24.1 -1.7**
VRI Vrincioaia 86.83 317⇑ P **P** **16 13 15.2 +1.4**
VRI Vrincioaia 86.83 317⇑ *iP* **P** **16 13 15.2 +1.4**
PLOR Plostina 86.88 317⇑ P **P** **16 13 15.5 +1.5**
PLOR Plostina 86.88 317⇑ *iP* **P** **16 13 15.5 +1.5**
TESR Tescani 87.03 317⇓ *iP* **P** **16 13 16.6 +1.9**
MLR Muntele Rosu 87.28 316⇓ *iP* **P** **16 13 17.7 +1.6**
VOIR 87.88 316⇓ P **P** **16 13 19.9 +1.0**
VOIR 87.88 316⇓ *iP* **P** **16 13 19.9 +1.0**
ARR Arges 88.15 316⇑ *iP* **P** **16 13 21.2 +1.0**
BURAR Bucovina Array 88.23 318⇓ *iP* **P** **16 13 21.4 +0.8**
BUR08 Bucovina Ar. S 88.25 318 *eP* **P** **16 13 22.0 +1.3**
VTS Vitosha 88.62 313⇑ P **P** **16 13 23.4 +0.8**
VTS Vitosha 88.62 313⇑ *iP* **P** **16 13 23.4 +0.8**
LOT Lotru 88.77 316⇑ *iP* **P** **16 13 24.7 +1.5**
SNAA Sanae 88.92 198 *eP* **P** **16 13 25.0 +1.6**
comp=Z,18nm,1.4s
SNAA *epP* **pP** **16 13 39.9 +2.3**
APA Apatity 89.48 339⇓ *eP* P 16 13 29.6 +3.8
APA MLR MLR
comp=Z,200nm,19.0s
KOLS Kolonicke sedl 90.41 319 *eP* **P** **16 13 31.9 +1.2**
KOLS pmax pmax
comp=Z,6.0nm,1.0s
KOLS Kolonicke sedl 90.41 319 *eP* **P** **16 13 31.9 +1.2**
FINES FINESS Array B 90.79 332 P **P** **16 13 31.4 -0.6**
FINES FINESS Array B 90.79 332 P **P** **16 13 31.4 -0.6**
comp=Z,1.3nm,0.8s,baz=108,slow=6.2,SNR=7.0
FINES LR LR 16 59 11.4
comp=Z,81nm,20.4s,baz=3.0,slow=39
STHS Stebnicka Huta 91.16 320 *eP* **P** **16 13 35.7 +1.6**
STHS pmax pmax
comp=Z,2.0nm,0.9s
STHS Stebnicka Huta 91.16 320 *eP* **P** **16 13 35.7 +1.6**
KECS Kecovo 91.51 319 *eP* **P** **16 13 35.8 +0.1**
KECS pmax pmax
comp=Z,2.0nm,1.1s
KECS Kecovo 91.51 319 *eP* **P** **16 13 35.8 +0.1**
VYHS Vyhne 92.59 318 *eP* **P** **16 13 42.1 +1.3**
VYHS pmax pmax
comp=Z,3.0nm,1.4s
VYHS Vyhne 92.59 318 *eP* **P** **16 13 42.0 +1.3**
ARCES ARCESS Array B 92.81 340 P **P** **16 13 41.9 +0.6**
ARCES ARCESS Array B 92.81 340 P **P** **16 13 41.9 +0.6**
comp=Z,0.4nm,0.4s,baz=130,slow=9.7,SNR=3.9
ARCES LR LR 17 00 57.5
comp=Z,95nm,20.8s,baz=249,slow=39
HFS Hagfors 96.62 330 P **P** **16 14 00.9 +2.0**
HFS Hagfors 96.62 330 P **P** **16 14 00.9 +2.0**
comp=Z,1.9nm,0.8s,baz=128,slow=28,SNR=3.4
NOA NORSAR Array B 97.87 331 LR LR 17 04 15.3
comp=Z,65nm,21.0s,baz=85,slow=39
NVAR Mina Array Bea 130.00 45 PKP **PKPdf** **16 19 40.9 +1.4**
NVAR Mina Array Bea 130.00 45 PKP **PKPdf** **16 19 40.8 +1.4**
comp=Z,0.8nm,0.9s,baz=318,slow=2.0,SNR=6.5
PDAR Pinedale Array 133.18 35 SKPbc **SKPab** **16 23 14.4 +3.0**
PDAR SKP 16 23 19.4
PDAR Pinedale Array 133.18 35 SKPbc **SKPab** **16 23 14.4 +3.0**
comp=Z,1.1nm,0.9s,baz=254,slow=1.1,SNR=4.9
PDAR SKP 16 23 19.4
comp=Z,1.0nm,0.9s,baz=294,slow=1.5,SNR=5.1
ULM Lac du Bonnet 133.50 18 SKPbc **SKPab** **16 23 12.6 +0.4**
ULM Lac du Bonnet 133.50 18 SKPbc **SKPab** **16 23 12.6 +0.4**
comp=Z,4.8nm,0.9s,baz=353,slow=5.3,SNR=3.2
ANMO Albuquerque 139.91 42 SKPbc **SKiKP** **16 23 31.9 -1.0**
ANMO Albuquerque 139.91 42 SKPbc **SKiKP** **16 23 31.9 -1.0**
comp=Z,0.4nm,0.3s,baz=0.0,slow=3.0,SNR=4.1
WMOK Wichita Mounta 144.79 35 *e*PKPdf **PKPab** **16 20 03.5 -1.9**
BINY Binghamton 144.92 1 *e*PKPdf **PKPab** **16 20 04.9 -0.8**
BDFB Brasilia 145.02 230 PKPbc **PKPdf** **16 20 07.8 +0.3**
BDFB Brasilia 145.02 230 PKPbc **PKPdf** **16 20 07.8 +0.3**
comp=Z,9.5nm,0.9s,baz=95,slow=2.4,SNR=8.3
TXAR Lajitas Array 145.08 47 PKP **PKPab** **16 20 07.0 +0.2**
TXAR Lajitas Array 145.08 47 PKP **PKPab** **16 20 07.0 +0.2**
comp=Z,2.2nm,0.5s,baz=288,slow=1.0,SNR=32
JCT Junction City 147.07 42 *e*PKPdf **PKPdf** **16 20 10.4 -0.1**
WVT Waverly 148.73 20 *e*PKPbc **PKPbc** **16 20 16.0 -0.8**
LVC Limon Verde 149.97 191 PKPbc **PKPbc** **16 20 20.6 -0.1**
LVC Limon Verde 149.97 191 PKPbc **PKPbc** **16 20 20.6 -0.1**
comp=Z,5.5nm,0.8s,baz=28,slow=0.8,SNR=4.8
TKL Tuckaleechee C 150.37 14 PKPbc **PKPbc** **16 20 20.6 -0.4**
TKL Tuckaleechee C 150.37 14 PKPbc **PKPbc** **16 20 20.6 -0.4**
comp=Z,12nm,1.0s,baz=166,slow=2.6,SNR=5.4

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*IDC **24** 16:48:27.9±0.6,20.˙90S×174.˚26W,h0km,mb4.6/19, mb1 4.7/20,mb1mx4.6/27,mbtmp4.6/20,ML4.4/1,MS4.2/17, Ms1 4.2/17,ms1mx4.0/33,Error ellipse: s-maj=20.8km s-min=14.6km az=118.0*
*ISCJB **24** 16:48:30.4±0.3,21.˚02S±0.˙07×174.˚21W±0.˚07,h26km, mb4.7/45,MS4.3/22,Error ellipse: s-maj=11.0km s-min=8.1km az=147.4*
*NEIC **24** 16:48:33.1±0.3,20.˚95S×174.˚22W,h35km,mb4.8/18, Error ellipse: s-maj=12.8km s-min=8.1km az=140.0*
*BJI **24** 16:48:34.0,21.˚12S×173.˚37W,h82km,mB4.9/10, mb4.8/23,Ms4.8/8,Ms7 4.5/9*
*GCMT **24** 16:48:34.8±0.4,21.˚09S×173.˚69W,h19km±1km,MW4.9, Moment Tensor Solution. s21,c29; s50,c72; Moment tensor: Scale 10^16^Nm; Mrr2.49±.22; Mθθ-0.40±.14; Mϕϕ-2.08±.14; Mrθ0.99±.31; Mrϕ-0.94±.07; Mθϕ1.49±.25; Best double couple: Mo3.10000×10^16^ NP1:ϕs199.00000°, δ28.00000°,λ80.00000°. NP2:ϕs30.00000°,δ63.00000°, λ95.00000°. Principal axes: T 3.0800, Plg72.0000°, Azm311.0000°; N 0.0000, Plg4.0000°, Azm207.0000°; P -3.0700, Plg18.0000°, Azm116.0000°; Data Used: IU IC II G CN.*
*MOS **24** 16:48:39.8±1.5,20.˚25S×175.˚69W,h33km,mb5.0/10 Error ellipse: s-maj=20.5km s-min=14.5km az=15.6*
*SZGRF **24** 16:48:42.5,21.˚43S×172.˚40W,h33km,Tonga Islands region*

ISC 24 16:48:32.1±0.4, 20.˚99S±0.˚08×174.˚07W±0.˚09, h26km, n232,σ1°82/204, mb4.8/45, MS4.3/23, 17C-11D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.37**	**18**	Pn		Pn	Pn	16 50 10.7	-7.4
AFI	**Afiamalu**	**7.37**	**18**	Pn		Pn	Pn	16 50 10.7	-7.4
	7.4nm,0.3s,baz=172,slow=15,SNR=5.3								
MSVF	**Nonsavu**	**8.11**	**292**	*e*P		Pn		16 50 33.9	+5.6
	207nm,1.0s								
RAR	**Rarotonga**	**13.35**	**94**	Pn		Pn	Pn	16 51 31.5	-8.5
RAR	**Rarotonga**	**13.35**	**94**	Pn		Pn	Pn	16 51 31.5	-8.5
	5.2nm,0.3s,baz=236,slow=6.3,SNR=7.7								
DZM	**Mont Dzumac**	**18.16**	**263**	*e*P		**P**		**16 52 46.9**	**+4.1**
	82nm,1.1s								
DZM				*e*LR		LR		16 57 02.4	
	788nm,23.0s								
DZM	**Mont Dzumac**	**18.16**	**263**	*e*P		**P**		**16 52 43.9**	**+1.1**
	20nm,0.8s								
DZM	**Mont Dzumac**	**18.16**	**263**	P		**P**		**16 52 43.9**	**+1.1**
	1.1nm,0.3s,baz=70,slow=18,SNR=11								
DZM				LR		LR		16 57 41.9	
	comp=Z,220nm,19.6s,baz=359,slow=31								
URZ	**Urewera**	**18.83**	**202**	P		**P**		**16 52 49.6**	**-0.3**
URZ	**Urewera**	**18.83**	**202**	P		**P**		**16 52 49.6**	**-0.3**
	1.3nm,0.3s,baz=13,slow=13,SNR=10								
TBI	**Tubuai**	**22.91**	**100**	*e*S		**S**		**16 57 40.6**	**-2.0**
	536nm,27.8s								
TBI				*e*LR		LR		16 58 58.0	
	948nm,27.5s,baz=277								
PPT2	**Papeete2**	**23.36**	**86**	*e*S		S		16 57 44.1	-6.3
	761nm,28.0s								
PPT2				*e*LR		LR		16 59 04.6	
	1μm,26.8s,baz=260								
PPT	**Papeete**	**23.36**	**86**	LR		LR		17 01 20.6	
	comp=Z,408nm,18.4s,baz=77,slow=33								
RPZ	**Rata Peaks**	**25.83**	**205**	P		**P**		**16 54 00.2**	**-1.1**
RPZ	**Rata Peaks**	**25.83**	**205**	P		**P**		**16 54 00.2**	**-1.1**
	10nm,0.7s,baz=237,slow=18,SNR=8.0								
HNR	**Honiara**	**27.53**	**291**	LR		LR		17 03 29.7	
	comp=Z,290nm,19.4s,baz=153,slow=33								
RKT	**Rikitea**	**36.23**	**101**	*e*LR		LR		17 04 50.1	
	701nm,30.0s,baz=264								
CTA	**Charters Tower**	**37.10**	**264**	P		**P**		**16 55 38.9**	**-1.7**
CTA	**Charters Tower**	**37.10**	**264**	P		**P**		**16 55 38.9**	**-1.7**
	7.6nm,0.7s,baz=99,slow=9.7,SNR=11								
CTAO	**Charters Tower**	**37.10**	**264**	*e*P		**P**		**16 55 38.8**	**-1.8**
CTAO				pmax		pmax			
	comp=Z,8.0nm,0.8s								
CTAO	**Charters Tower**	**37.10**	**264**	*e*P		**P**		**16 55 38.8**	**-1.8**
	comp=Z,8.2nm,0.8s								
PMG	**Port Moresby**	**39.04**	**281**	P		P		16 55 53.7	-3.3
PMG	**Port Moresby**	**39.04**	**281**	P		P		16 55 53.7	-3.3
	comp=Z,17nm,0.8s,baz=132,slow=7.7,SNR=3.5								
PMG				LR		LR		17 10 41.7	
	comp=Z,313nm,18.2s,baz=268,slow=34								
STKA	**Stephens Creek**	**40.91**	**245**	*e*P		P		16 56 09.7	-2.7
	comp=Z,1.2nm,0.9s								
STKA	**Stephens Creek**	**40.91**	**245**	P		**P**		**16 56 10.2**	**-2.1**
	comp=Z,6.5nm,0.8s,baz=96,slow=9.7,SNR=14								
STKA				LR		LR		17 12 34.9	
	comp=Z,371nm,18.8s,baz=202,slow=36								
AS31	**Alice Springs**	**47.98**	**257**	*e*P		P		16 57 04.7	-4.5
ASAR	**Alice Springs**	**47.98**	**257**	P		P		16 57 06.0	-3.1
ASAR				PcP		**PcP**		**16 58 37.2**	**0.0**
ASAR				ScP		**ScP**		**17 02 34.2**	**+4.2**
ASAR	**Alice Springs**	**47.98**	**257**	P		P		16 57 06.0	-3.1
	comp=Z,12nm,0.9s,baz=100,slow=7.3,SNR=136								
ASAR				PcP		**PcP**		**16 58 37.2**	**0.0**
	comp=Z,3.2nm,0.8s,baz=101,slow=4.0,SNR=5.8								
ASAR				ScP		**ScP**		**17 02 34.2**	**+4.2**
	comp=Z,0.4nm,0.9s,baz=61,slow=4.8,SNR=3.9								
ASAR				LR		LR		17 17 10.7	
	comp=Z,264nm,18.5s,baz=5.2,slow=36								
FORT	**Forrest**	**52.48**	**247**	*e*P		P		16 57 40.5	-2.5
	comp=Z,27nm,0.8s								
FITZ	**Fitzroy Crossi**	**56.60**	**262**	P		**P**		**16 58 11.5**	**-1.6**
FITZ	**Fitzroy Crossi**	**56.60**	**262**	P		**P**		**16 58 11.5**	**-1.6**
	comp=Z,2.4nm,0.6s,baz=99,slow=4.8,SNR=6.4								
VNDA	**Vanda**	**57.78**	**186**	P		**P**		**16 58 22.4**	**+1.8**
VNDA	**Vanda**	**57.78**	**186**	P		**P**		**16 58 22.4**	**+1.8**
	comp=Z,1.5nm,0.8s,baz=355,slow=9.0,SNR=5.9								
MBWA	**Marble Bar**	**61.33**	**257**	*e*P		**P**		**16 58 44.1**	**-1.8**
NWAO	**Narrogin (SRO)**	**61.43**	**243**	P		**P**		**16 58 45.8**	**-0.7**
NWAO	**Narrogin (SRO)**	**61.43**	**243**	P		**P**		**16 58 45.8**	**-0.7**
	comp=Z,20nm,1.1s,baz=162,slow=20,SNR=3.4								
CASY	**Casey**	**65.11**	**206**	*e*P		**P**		**16 59 10.8**	**+0.6**
	comp=Z,24nm,1.4s								
MJAR	**Matsushiro Arr**	**72.83**	**321**	P		**P**		**16 59 57.7**	**-0.9**
MJAR	**Matsushiro Arr**	**72.83**	**321**	P		**P**		**16 59 57.7**	**-0.9**
	comp=Z,6.0nm,0.8s,baz=159,slow=5.8,SNR=19								
MAJO	**Matsushiro**	**72.83**	**321**	*e*P		**P**		**16 59 59.2**	**+0.6**
MAJO				pmax		pmax			
	comp=Z,8.0nm,0.8s								
MAJO	**Matsushiro**	**72.83**	**321**	*e*P		**P**		**16 59 59.1**	**+0.6**
	comp=Z,7.7nm,0.8s								
MAT	**Matsushiro**	**72.83**	**321**	P		**P**		**16 59 57.3**	**-1.3**
JNU	**Nakatsue**	**75.19**	**315**	*e*P		**P**		**17 00 11.5**	**-1.0**
	comp=Z,7.2nm,1.0s								
JNU	**Nakatsue**	**75.19**	**315**	P		**P**		**17 00 11.6**	**-1.0**
	comp=Z,13nm,0.9s,baz=111,slow=5.6,SNR=8.8								
ASAJ	**Asahikawa**	**75.96**	**329**	P		**P**		**17 00 15.5**	**-1.1**
ASAJ	**Asahikawa**	**75.96**	**329**	P		**P**		**17 00 15.5**	**-1.1**
	comp=Z,4.1nm,0.7s,baz=237,slow=16,SNR=4.0								
ISA	**Isabella**	**77.10**	**44**	*e*P		**P**		**17 00 23.5**	**+0.1**
ISA				pmax		pmax			
	comp=Z,8.0nm,1.1s								
ISA	**Isabella**	**77.10**	**44**	*e*P		**P**		**17 00 23.5**	**+0.1**
	comp=Z,8.1nm,1.1s								
KSM	**Kuching**	**77.12**	**277**	*e*P		**P**		**17 00 23.2**	**-0.7**
	comp=Z,16nm,0.8s								
TPUB	**Ta-pu**	**77.35**	**301**	*e*P		P		17 00 22.2	-2.8
	comp=Z,14nm,0.8s								
PETK	**Petropavlovsk-**	**77.74**	**343**	P		**P**		**17 00 25.0**	**-1.5**
PETK	**Petropavlovsk-**	**77.74**	**343**	P		**P**		**17 00 25.0**	**-1.5**
PETK	**Petropavlovsk-**	**77.74**	**343**	P		**P**		**17 00 25.0**	**-1.5**
	comp=Z,5.4nm,0.8s,baz=134,slow=8.5,SNR=7.4								
YSS	**Yuzh-Sakhalins**	**78.03**	**331**⇑	*e*P		**P**		**17 00 29.0**	**+0.8**
YSS				pmax		pmax			
	comp=Z,30nm,1.0s								
NVAR	**Mina Array Bea**	**78.90**	**41**	P		**P**		**17 00 33.4**	**-0.1**
NVAR	**Mina Array Bea**	**78.90**	**41**	P		**P**		**17 00 33.4**	**-0.1**
	comp=Z,6.6nm,1.0s,baz=225,slow=9.0,SNR=25								
NV11	**Mina Array Sit**	**79.00**	**42**	*e*P		**P**		**17 00 33.5**	**-0.5**
PMSA	**Palmer Station**	**79.36**	**156**	LR		LR		17 29 23.3	
	comp=Z,229nm,19.8s,baz=252,slow=31								
KSRS	**Korea Array**	**79.72**	**317**	P		**P**		**17 00 38.3**	**+0.6**
	comp=Z,6.4nm,1.0s,baz=136,slow=6.2,SNR=15								
KSRS				LR		LR		17 31 49.0	
	comp=Z,68nm,18.6s,baz=32,slow=33								
KSAR	**Wonju Array Be**	**79.74**	**317**	P		**P**		**17 00 38.3**	**+0.5**
USRK	**Ussuriysk Arra**	**81.47**	**324**	P		**P**		**17 00 47.3**	**+0.4**
	comp=Z,1.6nm,0.8s,baz=128,slow=3.2,SNR=5.4								
USRK				LR		LR		17 34 55.3	
	comp=Z,154nm,19.8s,baz=218,slow=34								
MAW	**Mawson**	**82.33**	**199**	P		**P**		**17 00 52.1**	**+1.0**
MAW	**Mawson**	**82.33**	**199**	P		**P**		**17 00 52.1**	**+1.0**
	comp=Z,3.4nm,0.8s,baz=120,slow=7.0,SNR=8.4								
HABR	**Khabarovsk**	**82.72**	**329**	P		**P**		**17 00 52.0**	**-1.4**
HABR				*e*S		S		17 10 54.7	-15
HABR				*e*				17 11 08.4	
HABR				*e**SS		**PnS**		**17 12 04.0**	**+1.9**
HABR				MLR		MLR			
	comp=Z,132nm,18.0s								
MVU	**Marysvale**	**82.82**	**44**	*e*P		**P**		**17 00 55.4**	**+0.9**
	comp=Z,4.8nm,0.9s								
MSU	**Marysvale**	**82.84**	**44**	*e*P		**P**		**17 00 55.6**	**+1.0**
MSU				pmax		pmax			
	comp=Z,8.0nm,1.0s								
MSU	**Marysvale**	**82.84**	**44**	*e*P		**P**		**17 00 55.6**	**+1.0**
	comp=Z,7.6nm,1.0s								
NJ2	**Nanjing**	**83.05**	**308**	*e*P		**P**		**17 00 56.1**	**+0.6**
NJ2				pmax		pmax			
	comp=Z,20nm,1.0s								
MDJ	**Mudanjiang**	**83.06**	**323**	P		**P**		**17 00 55.9**	**+0.6**
MDJ				pP		pP		17 01 16.8	+13
MDJ				sP		sP		17 01 26.1	+19
MDJ				PP		**PP**		**17 04 07.0**	**+0.2**
MDJ				S		S		17 11 06.0	-7.2
MDJ				SS		**SS**		**17 16 34.5**	**-3.4**
MDJ				pmax		pmax			
	comp=Z,12nm,1.1s								
MDJ				pmax		pmax			
	comp=Z,84nm,7.0s								
MDJ				LR		LR			
	comp=N,73nm,32.6s								
MDJ				LR		LR			
	comp=E,45nm,32.6s								
MDJ				LR		LR			
	comp=Z,52nm,29.6s								
MDJ	**Mudanjiang**	**83.06**	**323**	*e*P		**P**		**17 00 56.4**	**+1.1**
	comp=Z,7.3nm,0.8s								
TXAR	**Lajitas Array**	**84.26**	**56**	LR		LR		17 32 05.4	
	comp=Z,86nm,19.6s,baz=315,slow=31								
HLID	**Hailey**	**84.34**	**39**	*e*P		**P**		**17 01 01.9**	**-0.2**
	comp=Z,7.0nm,1.0s								
ANMO	**Albuquerque**	**84.88**	**50**	*e*P		**P**		**17 01 05.1**	**+0.1**
	comp=Z,6.9nm,1.2s								
ANMO	**Albuquerque**	**84.88**	**50**	LR		LR		17 34 54.9	
	comp=Z,113nm,18.3s,baz=216,slow=33								
CN2	**Changchun**	**84.96**	**321**	*e*P		**P**		**17 01 04.9**	**-0.1**
CN2				*ep*P		pP		17 01 30.5	+17
CN2				*e*S		S		17 11 25.3	-6.9
CN2				pmax		pmax			
	comp=Z,10.0nm,1.0s								
CN2				pmax		pmax			
	comp=Z,200nm,3.0s								
CN2				LR		LR			
	comp=N,200nm,15.0s								
CN2				LR		LR			
	comp=E,200nm,15.0s								
CN2				LR		LR			
	comp=Z,200nm,15.0s								
MCMT	**McKenzie Canyo**	**85.99**	**39**	*e*P		**P**		**17 01 10.4**	**0.0**
	comp=Z,1.0nm,0.9s								
PLCA	**Paso Flores**	**86.25**	**132**	LR		LR		17 33 59.3	
	comp=Z,188nm,18.1s,baz=77,slow=32								
BW06	**Boulder Array**	**86.83**	**42**	*e*P		**P**		**17 01 13.2**	**-1.4**
	comp=Z,2.2nm,0.9s								
PDAR	**Pinedale Array**	**86.84**	**42**	P		**P**		**17 01 13.6**	**-1.0**
PDAR	**Pinedale Array**	**86.84**	**42**	P		**P**		**17 01 13.6**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=197,slow=4.6,SNR=4.6								
ILAR	**Eielson Array**	**88.02**	**11**	P		**P**		**17 01 18.9**	**-0.6**
ILAR	**Eielson Array**	**88.02**	**11**	P		**P**		**17 01 18.9**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=219,slow=4.9,SNR=8.3								
BJI	**Beijing**	**88.85**	**314**	P		**P**		**17 01 25.0**	**+1.1**
BJI				S		S		17 12 00.1	-10
BJI				pmax		pmax			
	comp=Z,10.0nm,1.7s								
BJI				pmax		pmax			
	comp=Z,94nm,3.6s								
BJI				LR		LR			
	comp=N,66nm,14.8s								
BJI				LR		LR			
	comp=E,130nm,21.0s								
BJI				LR		LR			
	comp=Z,38nm,26.0s								
ENH	**Enshi**	**89.37**	**303**	*e*P		**P**		**17 01 27.3**	**+0.6**
	comp=Z,44nm,1.4s								
BILL	**Bilibino**	**89.94**	**353**⇑	*i*P		**P**		**17 01 27.7**	**-0.7**
BILL				*e*				17 04 59.1	
BILL				pmax		pmax			
	comp=Z,2.0nm,0.8s								
GYA	**Guiyang**	**90.10**	**298**	*e*P		**P**		**17 01 30.0**	**-0.3**
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
XAN	**Xi'an**	**91.37**	**306**	P		**P**		**17 01 36.4**	**+0.4**
XAN				pmax		pmax			
	comp=Z,3.0nm,1.9s								
XAN				pmax		pmax			
	comp=Z,24nm,7.4s								
HHC	**Hu-ho-hao-te**	**92.34**	**313**	*e*P		**P**		**17 01 40.4**	**0.0**
HHC				pP		pP		17 02 01.3	+12
HHC				sP		sP		17 02 09.4	+17
HHC				PP		**PP**		**17 05 25.1**	**+3.5**
HHC				SKS		SKSac		17 12 05.5	-6.7
HHC				S		**SKKSac**		**17 12 35.8**	**+6.2**
HHC				sS		sS		17 13 11.5	+15
HHC				SS		**SS**		**17 18 53.0**	**-0.9**
HHC				pmax		pmax			
	comp=Z,32nm,1.0s								
HHC				pmax		pmax			
	comp=Z,130nm,5.1s								
HHC				LR		LR			
	comp=N,110nm,15.3s								
HHC				LR		LR			
	comp=E,150nm,16.1s								
HHC				LR		LR			
	comp=Z,170nm,16.9s								
ATAH	**Atahualpa**	**92.74**	**99**	LR		LR		17 35 59.1	
	comp=Z,99nm,21.1s,baz=86,slow=31								
KMI	**Kunming**	**92.86**	**296**	P		**P**		**17 01 44.8**	**+1.5**
KMI				pmax		pmax			
	comp=Z,11nm,1.2s								
CMAR	**Chiang Mai Arr**	**93.75**	**288**	P		**P**		**17 01 48.1**	**+0.8**
CMAR	**Chiang Mai Arr**	**93.75**	**288**	P		**P**		**17 01 48.1**	**+0.8**
	comp=Z,6.2nm,0.9s,baz=121,slow=3.1,SNR=27								
CMAR				LR		LR		17 41 33.3	
	comp=Z,38nm,19.4s,baz=110,slow=34								
CHTO	**

BRVK	**Borovoye**	**121.87**	**320**	*c* iPKIKP	**PKPdf**	**17 07 23.6**	**-0.1**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRVK	**Borovoye**	**121.87**	**320**	*e*PKPdf	**PKPdf**	**17 07 23.3**	**-0.4**
KKAR	**Karatay Array**	**122.42**	**308**	*e*PKIKP	**PKPdf**	**17 07 24.4**	**-0.7**
KKAR	**Karatay Array**	**122.42**	**308**	*e*PKPdf	**PKPdf**	**17 07 24.4**	**-0.7**
ARU	**Arti**	**127.67**	**326**	*i* PKIKP	**PKPdf**	**17 07 34.4**	**-0.3**
ARU						17 09 31.8	
ABKAR	**Akbulak array**	**128.96**	**317**	*e*PKPdf	**PKPdf**	**17 07 37.5**	**+0.1**
ARCES	**ARCESS Array B**	**130.01**	**351**	PKP	**PKPdf**	**17 07 36.2**	**-2.7**
ARCES	**ARCESS Array B**	**130.01**	**351**	PKP	**PKPdf**	**17 07 36.2**	**-2.7**
	comp=Z,2.2nm,0.8s,baz=349,slow=1.8,SNR=5.6						
FINES	**FINESS Array B**	**137.20**	**346**	PKP	**PKPdf**	**17 07 50.7**	**-1.8**
FINES	**FINESS Array B**	**137.20**	**346**	PKP	**PKPdf**	**17 07 50.7**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=18,slow=6.8,SNR=3.9						
OBN	**Obninsk**	**138.88**	**334**	⇓*e*PKIKP	**PKPdf**	**17 07 54.7**	**-1.1**
OBN				*i* SS	SS	17 28 47.7	-13
OBN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,100nm,19.0s						
NOA	**NORSAR Array B**	**139.81**	**356**	PKPpre	PKPpre	17 07 49.2	
NOA	**NORSAR Array B**	**139.81**	**356**	PKHKP	PKPpre	17 07 49.3	
	comp=Z,0.8nm,0.8s,baz=15,slow=5.0,SNR=3.5						
KBZ	**Khabaz**	**141.86**	**315**	PKIKP	**PKPdf**	**17 08 05.0**	**+3.5**
KBZ	**Khabaz**	**141.86**	**315**	PKP	**PKPdf**	**17 08 05.0**	**+3.5**
KBZ	**Khabaz**	**141.86**	**315**	PKP	**PKPdf**	**17 08 05.0**	**+3.5**
	comp=Z,1.5nm,0.8s,baz=173,slow=4.1,SNR=3.6						
SUW	**Suwalki**	**144.50**	**342**	*e*PKP	**PKPab**	**17 08 03.6**	**-0.6**
AKASG	**Malin Array Be**	**145.14**	**334**	PKP	**PKPbc**	**17 08 05.6**	**-1.0**
AKASG	**Malin Array Be**	**145.14**	**334**	PKP	**PKPbc**	**17 08 05.6**	**-1.0**
	comp=Z,16nm,0.7s,baz=41,slow=4.3,SNR=47						
KIEV	**Kiev**	**145.15**	**334**	*e*PKPdf	**PKPbc**	**17 08 05.4**	**-1.3**
AK01	**Malin Array Si**	**145.15**	**334**	*e*PKPdf	**PKPbc**	**17 08 05.9**	**-0.7**
AK02	**Malin Array Si**	**145.18**	**334**	*e*PKPdf	**PKPbc**	**17 08 05.5**	**-1.3**
GUMT	**Gumushane**	**145.52**	**312**	*e*P	**PKPdf**	**17 08 08.5**	**+0.2**
PTK	**Pertek**	**146.20**	**309**	*e*P	**PKPdf**	**17 08 10.3**	**+0.8**
SVRC	**Sivrice-ELAZID**	**146.45**	**309**	*e*P	**PKPdf**	**17 08 10.6**	**+0.6**
SVSK	**Karacayir**	**147.47**	**312**	*e*P	**PKPdf**	**17 08 12.8**	**+1.4**
LVV	**L'vov**	**147.84**	**338**	*e*PKIKP	**PKPbc**	**17 08 16.5**	**+1.9**
NRDL	**Niedersach Rie**	**148.38**	**355**	*e*PKPbc	PKPab	17 08 26.5	+7.4
KWP	**Kalwaria Pacla**	**148.46**	**339**	⇓PKIKP	**PKPbc**	**17 08 16.8**	**+0.5**
KWP	**Kalwaria Pacla**	**148.46**	**339**	*e*PKPbc	**PKPbc**	**17 08 16.5**	**+0.2**
KWP	**Kalwaria Pacla**	**148.46**	**339**	⇓*i*P	**PKPbc**	**17 08 16.8**	**+0.5**
KWP	**Kalwaria Pacla**	**148.46**	**339**	*e*PKP	**PKPbc**	**17 08 16.1**	**-0.2**
KMRS	**Kahramanmaras**	**148.54**	**308**	*e*P	**PKPbc**	**17 08 17.8**	**+0.9**
BNN	**Bunyan**	**148.74**	**311**	*e*P	**PKPdf**	**17 08 09.8**	**-3.9**
OJC	**Ojcow**	**148.83**	**343**	*e*PKP	**PKPbc**	**17 08 17.2**	**0.0**
CORM	**Corum**	**148.96**	**314**	*e*P	**PKPbc**	**17 08 17.9**	**-0.1**
CLZ	**Clausthal**	**149.01**	**355**	*e*PKPbc	PKPab	17 08 28.6	+6.8
KSP	**Ksiaz**	**149.11**	**347**	*e*PKP2	**PKPab**	**17 08 21.4**	**-0.8**
KSP	**Ksiaz**	**149.11**	**347**	*e*PKP	**PKPbc**	**17 08 18.3**	**+0.4**
STHS	**Stebnicka Huta**	**149.12**	**340**	*e*PKIKP	**PKPbc**	**17 08 18.0**	**0.0**
STHS	**Stebnicka Huta**	**149.12**	**340**	*e*PKP	**PKPbc**	**17 08 18.0**	**0.0**
BUR08	**Bucovina Ar. S**	**149.18**	**334**	*e*PKPbc	**PKPbc**	**17 08 18.6**	**+0.3**
BURAR	**Bucovina Array**	**149.20**	**334**	⇓*i*P	**PKPbc**	**17 08 19.2**	**+0.8**
KOLS	**Kolonicke sedl**	**149.20**	**339**	*e*PKIKP	**PKPbc**	**17 08 18.3**	**+0.1**
KOLS				*e*		17 08 24.8	
KOLS	**Kolonicke sedl**	**149.20**	**339**	*e*PKP	**PKPbc**	**17 08 18.3**	**+0.1**
KOLS				*e*		17 08 24.8	
CLL	**Collm**	**149.23**	**351**	*e*PKPbc	PKPab	17 08 28.9	+6.3
CLL	**Collm**	**149.23**	**351**	⇑*i*PKHKP	PKPpre	17 08 18.0	
CLL				*i*		17 08 21.5	
CLL				*i*		17 08 28.7	
CLL				pmax	pmax		
	comp=Z,12nm,0.9s						
NIE	**Niedzica**	**149.40**	**341**	*e*PKIKP	**PKPbc**	**17 08 19.9**	**+1.2**
NIE	**Niedzica**	**149.40**	**341**	*e*PKP	**PKPbc**	**17 08 19.9**	**+1.2**
TESR	**Tescani**	**149.44**	**331**	⇓*i*P	**PKPab**	**17 08 23.3**	**-0.4**
UPC	**Upice**	**149.48**	**347**	*e*PKIKP	**PKPbc**	**17 08 18.9**	**0.0**
UPC	**Upice**	**149.48**	**347**	⇑*e*PKP	**PKPbc**	**17 08 18.9**	**0.0**
NEUB	**Neuenburg**	**149.49**	**353**	*e*PKPbc	PKPab	17 08 29.6	+5.9
CRVS	**Cervenica-Dubn**	**149.50**	**340**	*e*PKP	**PKPdf**	**17 08 16.8**	**+2.3**
BRG	**Berggiesshubel**	**149.51**	**350**	*e*PKP	**PKPbc**	**17 08 18.9**	**0.0**
	comp=Z,11nm,1.0s						
BRG				*e*		17 08 29.2	
	comp=Z,20nm,1.1s						
BRG	**Berggiesshubel**	**149.51**	**350**	*e*PKPbc	PKPab	17 08 29.8	+6.0
BRG	**Berggiesshubel**	**149.51**	**350**	*e*PKHKP	PKPpre	17 08 18.9	
BRG				pmax	pmax		
	comp=Z,11nm,1.0s						
BRG				pmax	pmax		
	comp=Z,20nm,1.1s						
FBE	**Freiberg**	**149.56**	**351**	*e*PKPbc	PKPab	17 08 30.2	+6.2
DPC	**Dobruska-Polom**	**149.57**	**347**	*e*PKIKP	**PKPbc**	**17 08 19.6**	**+0.5**
DPC	**Dobruska-Polom**	**149.57**	**347**	⇑*e*PKP	**PKPbc**	**17 08 19.6**	**+0.5**
CFR	**Carcaliu**	**149.72**	**328**	⇑*i*P	**PKPbc**	**17 08 18.5**	**-1.1**
PVCC	**Panska Ves**	**149.74**	**349**	*e*PKIKP	**PKPbc**	**17 08 19.6**	**+0.1**
PVCC	**Panska Ves**	**149.74**	**349**	⇑*e*PKP	**PKPbc**	**17 08 19.6**	**+0.1**
MORC	**Moravsky Berou**	**149.82**	**345**	*e*PKPbc	**PKPbc**	**17 08 19.5**	**-0.3**
BR131	**Keskin Array S**	**149.84**	**314**	*e*PKPbc	**PKPbc**	**17 08 19.8**	**-0.5**
BRTR	**Keskin Array B**	**149.84**	**314**	PKPbc	**PKPbc**	**17 08 19.8**	**-0.5**
BRTR	**Keskin Array B**	**149.84**	**314**	PKPbc	**PKPbc**	**17 08 19.8**	**-0.5**
	comp=Z,7.9nm,0.8s,baz=135,slow=3.7,SNR=36						
VRI	**Vrincioaia**	**149.89**	**330**	*e*PKIKP	**PKPbc**	**17 08 20.2**	**+0.2**
VRI	**Vrincioaia**	**149.89**	**330**	⇓*i*P	**PKPbc**	**17 08 20.2**	**+0.2**
NIG	**Nigde**	**149.94**	**311**	*e*P	**PKPdf**	**17 08 18.8**	**+2.9**
KARA	**Karaisali**	**149.99**	**309**	*e*P	**PKPdf**	**17 08 15.8**	**+0.2**
UBBA	**Unterbreizbach**	**150.06**	**355**	*e*PKPbc	**PKPab**	**17 08 30.5**	**+4.6**
MOX	**Moxa**	**150.06**	**353**	*e*PKPbc	**PKPab**	**17 08 31.0**	**+4.9**
MOX	**Moxa**	**150.06**	**353**	*e*PKP2	**PKPab**	**17 08 31.0**	**+4.9**
PLN	**Plauen**	**150.15**	**352**	*e*PKPbc	**PKPab**	**17 08 31.4**	**+4.9**
WERD	**Werda**	**150.17**	**352**	*e*PKPbc	**PKPab**	**17 08 31.4**	**+4.8**
KECS	**Kecovo**	**150.18**	**340**	*e*PKIKP	**PKPbc**	**17 08 20.9**	**+0.3**
KECS	**Kecovo**	**150.18**	**340**	*e*PKP	**PKPbc**	**17 08 20.9**	**+0.3**
TANN	**Tannenbergstha**	**150.18**	**352**	*e*PKPbc	**PKPab**	**17 08 31.4**	**+4.8**
GUNZ	**Gunzen**	**150.25**	**352**	*e*PKPbc	**PKPab**	**17 08 31.8**	**+4.9**
PRU	**Pruhonice**	**150.26**	**349**	⇑*e*PKP	**PKPbc**	**17 08 21.0**	**+0.2**
WERN	**Wernitzgruen**	**150.32**	**352**	*e*PKPbc	**PKPab**	**17 08 32.0**	**+4.8**
ANTO	**Ankara**	**150.33**	**315**	⇑PKIKP	**PKPbc**	**17 08 20.3**	**-1.1**
ANTO	**Ankara**	**150.33**	**315**	*e*PKPbc	**PKPbc**	**17 08 21.9**	**+0.5**
ANTO	**Ankara**	**150.33**	**315**	⇑*i*P	**PKPbc**	**17 08 20.3**	**-1.1**
LOD	**Lodumlu**	**150.34**	**315**	*e*P	**PKPbc**	**17 08 20.9**	**-0.5**
NKC	**Novy Kostel**	**150.36**	**352**	*e*PKPAB	**PKPbc**	**17 08 25.1**	**+4.1**
MEM	**Membach**	**150.44**	**360**	PKPbc	**PKPbc**	**17 08 20.9**	**-0.3**
MLR	**Muntele Rosu**	**150.54**	**331**	⇑*i*P	**PKPbc**	**17 08 22.1**	**+0.4**
MANZ	**Manzenberg**	**150.65**	**352**	*e*PKPbc	**PKPab**	**17 08 32.6**	**+4.1**
VYHS	**Vyhne**	**150.66**	**342**	*e*PKP	**PKPbc**	**17 08 22.0**	**+0.2**
TNS	**Taunus Mts**	**150.76**	**357**	*e*PKPbc	**PKPab**	**17 08 32.6**	**+3.6**
ROTZ	**Rotzenmuhle**	**150.85**	**352**	*e*PKPbc	**PKPab**	**17 08 33.2**	**+3.8**
DRGR		**150.86**	**336**	⇑*i*P	**PKPbc**	**17 08 22.9**	**+0.5**
PSZ	**Piszkesteto**	**150.86**	**341**	*e*PKPbc	**PKPbc**	**17 08 22.8**	**+0.5**
PSZ	**Piszkesteto**	**150.86**	**341**	⇓*i*P	**PKPbc**	**17 08 23.4**	**+1.0**
DOU	**Dourbes**	**150.93**	**2**	PKPbc	**PKPbc**	**17 08 22.5**	**+0.2**
VOIR		**150.98**	**332**	⇑*i*P	**PKPbc**	**17 08 23.5**	**+0.8**
MDUB	**Mudurnu**	**151.03**	**318**	*e*P	**PKPbc**	**17 08 22.5**	**-0.5**
GRF	**Grafenberg Arr**	**151.05**	**353**	*e*PKPbc	**PKPab**	**17 08 33.5**	**+3.3**
ARR	**Arges**	**151.22**	**332**	⇑*i*P	**PKPbc**	**17 08 24.6**	**+1.3**
KHC	**Kasperske Hory**	**151.26**	**350**	*e*PKIKP	**PKPbc**	**17 08 22.7**	**-0.5**
KHC				*e*		17 08 33.5	
KHC	**Kasperske Hory**	**151.26**	**350**	⇑*e*PKP	**PKPbc**	**17 08 22.7**	**-0.5**
KHC				*e*PKPAB	**PKPab**	**17 08 33.5**	**+2.4**
KHC	**Kasperske Hory**	**151.26**	**350**	*e*PKPbc	**PKPbc**	**17 08 23.0**	**-0.2**
WET	**Wettzell**	**151.36**	**350**	*e*PKPbc	**PKPab**	**17 08 34.1**	**+2.6**
WLF	**Walferdange**	**151.38**	**360**	PKPbc	**PKPbc**	**17 08 24.2**	**+0.8**
WLF	**Walferdange**	**151.38**	**360**	*e*PKPbc	**PKPab**	**17 08 34.3**	**+2.8**
KIZT	**Kizilcal**	**151.45**	**314**	*e*P	**PKPdf**	**17 08 21.6**	**+3.6**
GEC2	**GERESS Array S**	**151.51**	**349**	*e*PKPbc	**PKPab**	**17 08 34.5**	**+2.2**
GERES	**GERESS Array B**	**151.51**	**349**	PKPbc	**PKPbc**	**17 08 23.7**	**-0.2**
GERES				PKPab	**PKPab**	**17 08 33.8**	**+1.6**
GERES	**GERESS Array B**	**151.51**	**349**	PKPbc	**PKPbc**	**17 08 23.7**	**-0.2**
	comp=Z,3.3nm,0.8s,baz=22,slow=1.4,SNR=24						
GERES				PKPab	**PKPab**	**17 08 33.8**	**+1.6**
	comp=Z,4.9nm,0.8s,baz=48,slow=2.0,SNR=12						
LOT	**Lotru**	**151.53**	**333**	⇓*i*P	**PKPbc**	**17 08 33.3**	**+0.8**
BZS	**Buzias**	**152.26**	**336**	⇓PKIKP	**PKPbc**	**17 08 28.7**	**+3.2**
BZS	**Buzias**	**152.26**	**336**	⇓*i*P	**PKPbc**	**17 08 28.7**	**+3.2**
FUR	**Furstenfeldbru**	**152.54**	**352**	*e*PKPbc	**PKPab**	**17 08 36.7**	**+0.2**
BFO	**Black Forest**	**152.65**	**357**	*e*PKPbc	**PKPab**	**17 08 36.8**	**-0.1**
BFO	**Black Forest**	**152.65**	**357**	*e*PKPbc	**PKPbc**	**17 08 26.6**	**+0.3**
TVSB	**Tavsanli**	**152.71**	**318**	*e*P	**PKPbc**	**17 08 24.9**	**-2.0**
SUTC	**Sutluce-Ispart**	**152.76**	**313**	*e*P	**PKPdf**	**17 08 20.1**	**+0.1**
TORD	**Torodi Ar. Bea**	**171.22**	**152**	PKPab	**PKPab**	**17 09 59.1**	**+0.4**
TORD	**Torodi Ar. Bea**	**171.22**	**152**	PKPab	**PKPab**	**17 09 59.1**	**+0.4**
	comp=Z,0.8nm,0.8s,baz=214,slow=3.5,SNR=3.3						

*IDC **24** 16:51:16.1±0.6,4°.06N×132°.86E, h0km, mb4.1/9, mb1 4.3/9, mb1mx4.0/22, mbtmp4.1/9, MS3.2/4, Ms1 3.2/4, ms1mx2.8/28, Error ellipse: s-maj=31.2km s-min=15.7km az=70.0*

*ISCJB **24** 16:51:19.1±0.5,4°.05N±0°.05×132°.86E±0°.06, h33km, mb4.4/21, MS3.1/4, Error ellipse: s-maj=8.4km s-min=6.4km az=31.2*

*NEIC **24** 16:51:21.3±0.3,3°.99N×132°.78E, h35km, mb4.6/10, Error ellipse: s-maj=12.6km s-min=7.4km az=66.0*

*DJA **24** 16:51:25.1±2.0,4°.N±9°×13°.3E±°, h19km±15km, M4.7/17, mB5.2/10, mb4.9/17, MLv4.8/4, Mw(mB)4.6/10*

ISC 24 16:51:21.3±0.5,4°.06N±0°.07×132°.87E±0°.07, h35km, n63, σ1°06/61, mb4.5/21, MS3.0/4, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**5.53**	**247**	P	**Pn**	**16 52 40.0**	**-1.2**
	337nm,0.8s,4μm1.3nm						
GAMI				S	**Sn**	**16 53 43.7**	**0.0**
	337nm,0.8s,4μm1.3nm						
RKPI	**Ransiki, Papua**	**5.68**	**167**	P	**Pn**	**16 52 43.8**	**+0.5**
	75nm,0.6s,1μm0.3nm						
TNTI	**Ternate**	**6.39**	**239**	P	**Pn**	**16 52 52.8**	**-0.2**
	232nm,0.7s,2μm0.7nm						
LBMI	**Labuha**	**7.11**	**229**	P	**Pn**	**16 53 04.3**	**+1.4**
	54nm,1.1s,633nm0.2nm						
MSAI	**Masohi**	**8.34**	**208**	P	**Pn**	**16 53 21.0**	**+1.2**
	17nm,0.7s						
MNI	**Manado**	**8.43**	**252**	P	**Pn**	**16 53 20.8**	**-0.2**
	231nm,0.8s,2μm						
AAI	**Ambon**	**9.00**	**211**	P	**Pn**	**16 53 29.1**	**+0.2**
KMSI	**Cibinong**	**9.53**	**249**	P	**Pn**	**16 53 39.3**	**+3.2**
	143nm,1.0s						
GTOI	**Gorontalo**	**10.42**	**251**	P	**Pn**	**16 53 49.1**	**+0.8**
	66nm,0.6s,1μm						
MRSI	**Marisa**	**11.48**	**252**	P	**Pn**	**16 54 03.4**	**+0.5**
	72nm,0.9s,709nm						
MYLDM	**Labad Datu**	**14.37**	**275**	P	**Pn**	**16 54 45.2**	**+2.9**
TTSI	**Tana Toraja**	**14.83**	**242**	P	**Pn**	**16 54 46.6**	**-1.9**
	23nm,1.4s						
KDM	**Kudat**	**16.21**	**281**	P	**Pn**	**16 55 05.5**	**-1.0**
BTM	**Bintulu**	**19.76**	**268**	P	**Pn**	**16 55 49.6**	**-0.6**
SBUM	**Sibu**	**20.68**	**266**	P	Pn	16 55 59.9	-1.1
SBUM	**Sibu**	**20.68**	**266**	P	**P**	**16 55 59.7**	**+1.2**
	40nm,1.0s,340nm						
PBKI	**Pangkalan Bun**	**22.23**	**253**	P	P	16 56 20.6	+5.5
	69nm,1.2s						
BLJI	**Banyuglugur**	**22.52**	**239**	P	P	16 56 26.2	+7.9
	152nm,0.4s,11μm						
KSM	**Kuching**	**22.68**	**264**	*e*P	**P**	**16 56 19.3**	**-0.7**
	65nm,1.3s						
KSM	**Kuching**	**22.68**	**264**	P	**P**	**16 56 21.9**	**+2.0**
KSM	**Kuching**	**22.68**	**264**	P	**P**	**16 56 22.0**	**+2.0**
	41nm,1.3s						
FITZ	**Fitzroy Crossi**	**23.14**	**198**	P	**P**	**16 56 24.0**	**-0.7**
FITZ	**Fitzroy Crossi**	**23.14**	**198**	P	**P**	**16 56 24.0**	**-0.7**
	4.4nm,0.8s,baz=29,slow=8.0,SNR=11						
WRAB	**Tennant Creek**	**23.89**	**177**	*e*P	**P**	**16 56 30.1**	**-1.7**
	12nm,1.1s						
SJI	**Sawahan**	**24.09**	**241**	P	**P**	**16 56 33.5**	**-0.5**
JNU	**Nakatsue**	**28.98**	**357**	LR	LR	17 06 34.9	
	comp=Z,41nm,20.1s,baz=224,slow=32						
KSRS	**Korea Array**	**33.55**	**353**	LR	LR	17 09 04.8	
	comp=Z,29nm,20.3s,baz=344,slow=32						
CMAR	**Chiang Mai Arr**	**36.12**	**296**	P	**P**	**16 58 20.6**	**+0.2**
CMAR				PcP	PcP	17 00 56.4	+10
CMAR	**Chiang Mai Arr**	**36.12**	**296**	P	**P**	**16 58 20.6**	**+0.2**
	5.6nm,0.9s,baz=108,slow=7.0,SNR=23						
CMAR				PcP	PcP	17 00 56.4	+10
	0.6nm,0.8s,baz=48,slow=2.1,SNR=4.2						
CMAR				LR	LR	17 13 21.9	
	comp=Z,23nm,20.8s,baz=120,slow=37						
CHTO	**Chiang Mai**	**36.24**	**297**	*e*P	**P**	**16 58 21.0**	**-0.4**
	11nm,1.2s						
STKA	**Stephens Creek**	**36.69**	**168**	P	**P**	**16 58 24.7**	**-0.3**
STKA	**Stephens Creek**	**36.69**	**168**	P	**P**	**16 58 24.7**	**-0.3**
	8.8nm,0.8s,baz=337,slow=8.2,SNR=12						
USRK	**Ussuriysk Arra**	**39.98**	**359**	P	**P**	**16 58 52.0**	**-0.5**
	1.8nm,0.1s,baz=175,slow=10,SNR=4.6						
SHL	**Shillong**	**44.74**	**303**	*e*PKP	**P**	**16 59 32.0**	**+0.2**
LSA	**Lhasa**	**46.96**	**308**	*e*P	**P**	**16 59 50.5**	**+0.8**
	7.6nm,0.7s						
ULN	**Ulaanbaatar**	**48.96**	**337**	*e*P	**P**	**17 00 04.4**	**0.0**
	9.1nm,1.2s						
SONM	**Songino Array**	**49.19**	**337**	P	**P**	**17 00 06.7**	**+0.5**
SONM	**Songino Array**	**49.19**	**337**	P	**P**	**17 00 06.7**	**+0.5**
	1.5nm,1.0s,baz=152,slow=6.7,SNR=4.9						
SONM				LR	LR	17 21 22.4	
	comp=Z,56nm,19.6s,baz=236,slow=37						
MK31	**Makanchi Array**	**60.90**	**323**	*e*P	**P**	**17 01 29.9**	**-0.7**
MKAR	**Makanchi Array**	**60.90**	**323**	P	**P**	**17 01 30.6**	**-0.1**
MKAR	**Makanchi Array**	**60.90**	**323**	P	**P**	**17 01 30.6**	**-0.1**
	1.3nm,0.6s,baz=115,slow=7.7,SNR=22						
ZALV	**Zalesovo Beam**	**63.20**	**330**	P	**P**	**17 01 45.5**	**-0.4**
ZALV	**Zalesovo Beam**	**63.20**	**330**	P	**P**	**17 01 45.5**	**-0.4**
	0.4nm,0.2s,baz=117,slow=5.2,SNR=3.9						
KURK	**Kurchatov**	**64.86**	**325**	*e*P	**P**	**17 01 55.9**	**-1.0**
	12nm,1.3s						
KKAR	**Karatay Array**	**67.24**	**315**	*e*P	**P**	**17 02 12.0**	**-0.3**
	5.3nm,1.0s						
BRVK	**Borovoye**	**70.53**	**325**	*e*P	**P**	**17 02 33.4**	**+0.8**
	2.2nm,0.7s						
ABKAR	**Akbulak array**	**75.82**	**320**	*e*P	**P**	**17 03 03.3**	**-0.6**
	3.0nm,0.8s						
COLD	**Coldfoot**	**81.22**	**23**	*e*P	**P**	**17 03 34.3**	**+0.9**
	5.4nm,1.1s						
ILAR	**Eielson Array**	**82.19**	**25**	P	**P**	**17 03 37.7**	**-0.8**
ILAR	**Eielson Array**	**82.19**	**25**	P	**P**	**17 03 37.7**	**-0.8**
	0.8nm,0.7s,baz=259,slow=5.7,SNR=7.3						
VNDA	**Vanda**	**83.04**	**174**	P	**P**	**17 03 41.6**	**-1.0**
VNDA	**Vanda**	**83.04**	**174**	P	**P**	**17 03 41.6**	**-1.0**
	0.6nm,0.6s,baz=298,slow=8.1,SNR=5.5						
QSPA	**South Pole Qui**	**93.96**	**180**	*e*P	**P**	**17 04 34.4**	**-1.0**
NVAR	**Mina Array Bea**	**102.08**	**49**	P	**Pdif**	**17 05 14.3**	**+1.5**
NVAR	**Mina Array Bea**	**102.08**	**49**	P	**Pdif**	**17 05 14.3**	**+1.5**
	0.1nm,0.3s,baz=253,slow=4.6,SNR=3.1						
CFAA	**Coronel Fontan**	**146.17**	**147**	PKPbc	**PKPbc**	**17 10 58.8**	**+0.2**
CFAA	**Coronel Fontan**	**146.17**	**147**	PKPbc	**PKPbc**	**17 10 58.8**	**+0.2**
	0.9nm,0.7s,baz=230,slow=3.1,SNR=14						
LVC	**Limon Verde**	**151.98**	**133**	PKPbc	**PKPbc**	**17 11 15.2**	**+1.1**
LVC				PKPab	**PKPab**	**17 11 22.6**	**-0.7**
LVC	**Limon Verde**	**151.98**	**133**	PKPbc	**PKPbc**	**17 11 15.2**	**+1.1**
	1.4nm,0.4s,baz=34,slow=7.3,SNR=3.2						
LVC				PKPab	**PKPab**	**17 11 22.6**	**-0.7**
	2.7nm,0.7s,baz=198,slow=5.7,SNR=4.4						
CPUP	**Villa Florida**	**155.79**	**157**	PKPab	**PKPab**	**17 11 39.2**	**+0.4**
CPUP	**Villa Florida**	**155.79**	**157**	PKPab	**PKPab**	**17 11 39.2**	**+0.4**
	0.5nm,0.5s,baz=225,slow=19,SNR=3.3						
LPAZ	**La Paz**	**156.06**	**122**	PKPab	**PKPab**	**17 11 42.5**	**+1.3**
LPAZ	**La Paz**	**156.06**	**122**	PKPab	**PKPab**	**17 11 42.5**	**+1.3**
	4.9nm,0.8s,baz=275,slow=2.6,SNR=17						

*ISCJB **24** 17:00:15.4±0.6,38°.18N±0°.04×39°.40E±0°.03, h3km±6km, Error ellipse: s-maj=6.3km s-min=4.1km az=25.8*

*DDA **24** 17:00:15.2,38°.17N×39°.39E, h6km, ML3.3*

*ISK **24** 17:00:15.0,38°.17N×39°.38E, h8km, MD2.6*

*CSEM **24** 17:00:15.5±0.2,38°.21N×39°.41E, h10km, MD2.6, Error ellipse: s-maj=6.5km s-min=3.8km az=27.0*

ISC 24 17:00:15.6±0.9,38°.20N±0°.04×39°.39E±0°.03, h13km±7km, n21, σ0°52/34, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SVRC	**Sivrice-ELAZID**	**0.19**	**340**	*e*PG	**Pg**	**17 00 19.8**	**-0.3**
SVRC				*e*SG	**Sg**	**17 00 23.4**	**+0.3**
SVRC	**Sivrice-ELAZID**	**0.19**	**340**	*e*Pg	**Pg**	**17 00 19.8**	**-0.3**
SVRC				*e*Sg	**Sg**	**17 00 23.4**	**+0.3**
ELZG	**Elazig**	**0.44**	**313**	*e*P	**Pg**	**17 00 24.3**	**0.0**
ELZG				*e*S	**Sg**	**17 00 30.8**	**+0.6**
ELZG	**Elazig**	**0.44**	**313**	*e*P	**Pg**	**17 00 24.3**	**0.0**
ELZG				*e*S	**Sg**	**17 00 30.8**	**+0.6**
DIYA	**Diyarbakir**	**0.64**	**115**	*i* P	**Pb**	**17 00 28.4**	**-0.2**
DIYA				*i* S	**Sg**	**17 00 35.7**	**-0.8**
DIYA	**Diyarbakir**	**0.64**	**115**	*i* P	**Pb**	**17 00 28.4**	**-0.2**
DIYA				*i* S	**Sg**	**17 00 35.7**	**-0.8**
DIY	**Diyarbakir**	**0.73**	**114**	*e*PG	**Pg**	**17 00 29.6**	**-0.1**
DIY	**Diyarbakir**	**0.73**	**114**	*e*Pg	**Pg**	**17 00 29.6**	**-0.1**
MYA	**Malataya**	**0.77**	**280**	*e*PG	**Pg**	**17 00 30.0**	**-0.5**
MYA				*e*SG	**Sb**	**17 00 41.4**	**+0.1**
MYA	**Malataya**	**0.77**	**280**	*e*Pg	**Pg**	**17 00 30.0**	**-0.5**
MYA				*e*Sg	**Sb**	**17 00 41.4**	**+0.1**
ATAB	**Bozova**	**1.13**	**230**	*e*P	**Pn**	**17 00 37.7**	**+0.6**
ATAB				*e*S	**Sn**	**17 00 52.4**	**-0.1**
ATAB	**Bozova**	**1.13**	**230**	*e*P	**Pn**	**17 00 37.7**	**+0.6**
ATAB				*e*S	**Sn**	**17 00 52.4**	**-0.1**
BNGB	**Bing˜¶l**	**1.28**	**52**	*e*PN	**Pg**	**17 00 40.3**	**0.0**
BNGB				*e*SN	**Sg**	**17 00 58.3**	**+1.3**
ILIC	**ilic-Erzincan**	**1.41**	**333**	*e*PN	**Pg**	**17 00 42.4**	**-0.3**
ILIC	**ilic-Erzincan**	**1.41**	**333**	*e*Pn	**Pg**	**17 00 42.4**	**-0.3**
ERZN	**Erzincan**	**1.41**	**11**	*e*PN	**Pb**	**17 00 41.8**	**0.0**
MARD	**Mardin**	**1.41**	**128**	*i* P	**Pn**	**17 00 41.2**	**+0.2**
MARD				*i* S	**Sn**	**17 00 59.4**	**-0.2**
BEST	**Besiri**	**1.52**	**101**	*e*P	**Pb**	**17 00 43.5**	**-0.1**
BEST				*e*S	**Sg**	**17 01 05.2**	**+0.8**
EZC	**Erzincan**	**1.55**	**359**	*e*Pn	**Pn**	**17 00 41.8**	**-1.2**
BTMT	**Batman**	**1.65**	**90**	*e*PN	**Pn**	**17 00 44.8**	**+0.5**
BTMT	**Batman**	**1.65**	**90**	*e*Pn	**Pn**	**17 00 44.8**	**+0.5**

IDC 24 17:14:41.3±1.3,55°.18S×27°.03W, h0km, mb3.8/2, mb1 3.9/2, mb1mx3.7/16, mbtmp3.8/2, Error ellipse: s-maj=90.8km s-min=35.7km az=102.0, South Sandwich Islands region

| Code | Station Name | Δ° | AZ° | Phase |

s-min=11.9km az=78.0
BJI ***24*** *18:06:11.8,3˚.32N×126˚.71E,h54km,mB4.9/26,mb4.7/49, Ms4.4/40,Ms7 4.1/43*
NEIC ***24*** *18:06:15.6±1.3,3˚.58N×126˚.79E,h59km±12km,mb4.8/33, Error ellipse: s-maj=10.8km s-min=5.9km az=76.0*
ISCJB ***24*** *18:06:15.1±0.4,3˚.56N±0˚.02×126˚.76E±0˚.03,h67km±4km, mb4.7/99,Error ellipse: s-maj=5.9km s-min=3.9km az=164.5*
MOS ***24*** *18:06:18.5±1.5,3˚.52N×126˚.63E,h96km,mb4.8/30, MS4.0/5, Error ellipse: s-maj=13.0km s-min=5.7km az=116.1*
DJA ***24*** *18:06:19.1±0.4,4˚N±4˚×12˚.7E±˚,h67km±4km,M4.7/27, mB5.1/12,mb4.9/27,MLv5.1/9,Mw(mB)4.5/12*
ISC 24 18:06:15.4±0.4,3˚.54N±0˚.03×126˚.75E±0˚.05,h55km±2km, n262,σ1§67/291,mb4.8/99,MS4.1/30,19C-9D,Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.98**	**149**	P		**Pn**		**18 06 46.6**	**0.0**
TNTI	**Ternate**	**2.82**	**167**	P		**Pn**		**18 06 56.3**	**-1.7**
MNI	**Manado**	**2.83**	**223**	P		**Pn**		**18 06 59.3**	**+1.2**
DAV	**Davao City (W)**	**3.70**	**342**	Pn		**Pn**		**18 07 11.4**	**+1.4**
DAV				Sn		Sn		18 08 01.1	+8.7
DAV	**Davao City (W)**	**3.70**	**342**	P		Pn		18 07 14.5	+4.5
DAV	**Davao City (W)**	**3.70**	**342**	Pn		**Pn**		**18 07 11.4**	**+1.4**
	47nm,0.3s,baz=110,slow=1.5,SNR=11								
DAV				Sn		Sn		18 08 01.1	+8.7
	69nm,0.3s,baz=83,slow=20,SNR=4.0								
KMSI	**Cibinong**	**4.04**	**223**	P		**Pn**		**18 07 17.5**	**+2.7**
LBMI	**Labuha**	**4.22**	**170**	P		**Pn**		**18 07 17.3**	**+0.1**
CTBH	**Cotabato--PC H**	**4.43**	**326**	*eP*		**Pn**		**18 07 19.8**	**-0.3**
BUKP	**Musuan**	**4.63**	**339**	*eP*		**Pn**		**18 07 24.0**	**+1.1**
GTOI	**Gorontalo**	**4.72**	**232**	P		**Pn**		**18 07 25.6**	**+1.5**
CGP	**Cagayan de Oro**	**5.29**	**337**	*eP*		**Pn**		**18 07 32.7**	**+0.7**
PAGZ	**Pagadian**	**5.44**	**322**	*eP*		**Pn**		**18 07 35.4**	**+1.5**
BUTP	**Butuan**	**5.51**	**348**	*eP*		**Pn**		**18 07 36.9**	**+2.0**
MRSI	**Marisa**	**5.69**	**238**	P		**Pn**		**18 07 40.3**	**+2.9**
	316nm,0.7s,3μm1.2nm								
LUWI	**Luwuk**	**6.05**	**221**	P		Pn		18 07 46.9	+4.6
	649nm,1.2s,5μm3.0nm								
SNPH	**Sibulan**	**6.74**	**329**	*eP*		Pn		18 07 46.1	-5.8
MSLP	**Maasin**	**6.81**	**344**	*eP*		Pn		18 07 56.0	+3.2
MSAI	**Masohi**	**7.18**	**162**	P		Pn		18 08 01.4	+3.6
	12nm,0.9s,1μm0.0nm								
LLP	**Lapu-Lapu**	**7.28**	**338**	*eP*		Pn		18 08 04.0	+4.9
OCLP	**Ormoc**	**7.76**	**344**	*eP*		Pn		18 08 09.0	+3.2
PLP	**Palo**	**7.78**	**347**	*eP*		**Pn**		**18 08 05.7**	**-0.3**
SKSI	**Soroako, Sulaw**	**8.10**	**222**	P		**Pn**		**18 08 13.6**	**+3.0**
	101nm,0.7s,881nm								
MYLDM	**Lahad Datu**	**8.39**	**281**	P		Pn		18 08 17.9	+3.5
MYLDM	**Lahad Datu**	**8.39**	**281**	P		Pn		18 08 22.1	+7.7
	134nm,1.0s,1μm								
FAKI	**Fak Fak**	**8.45**	**139**	P		**Pn**		**18 08 15.3**	**+0.1**
	78nm,0.7s								
TSM	**Tawau**	**8.89**	**275**	P		**Pn**		**18 08 23.2**	**+1.9**
RKPI	**Ransiki, Papua**	**8.96**	**124**	P		Pn		18 08 26.6	+4.4
	96nm,0.9s,1μm								
TTSI	**Tana Toraja**	**9.53**	**227**	P		**Pn**		**18 08 32.8**	**+2.8**
	85nm,1.3s,1μm								
SDKM	**Sandakan**	**9.75**	**283**	P		**Pn**		**18 08 33.6**	**+0.5**
BAKI	**Biak**	**10.46**	**117**	P		**Pn**		**18 08 45.7**	**+2.9**
	91nm,1.4s,1μm								
KKM	**Kota Kinabalu**	**10.79**	**284**	P		**Pn**		**18 08 47.5**	**+0.2**
SRPI	**Serui, Papua**	**10.90**	**119**	P		Pn		18 08 52.8	+4.0
KAPI	**Kappang**	**11.01**	**219**	Pn		**Pn**		**18 08 52.9**	**+2.6**
KAPI	**Kappang**	**11.01**	**219**	P		Pn		18 08 56.5	+6.3
	28nm,1.0s								
KAPI	**Kappang**	**11.01**	**219**	Pn		**Pn**		**18 08 52.9**	**+2.6**
	0.8nm,0.3s,baz=48,slow=14,SNR=3.0								
MTKI	**Muara Teweh, K**	**12.66**	**250**	P		P		18 09 18.5	-4.0
SBUM	**Sibu**	**14.55**	**266**	P		**Pn**		**18 09 39.9**	**+1.6**
SBUM	**Sibu**	**14.55**	**266**	P		**P**		**18 09 43.4**	**-0.1**
	30nm,0.8s,472nm								
BASI	**Baing, Sumba**	**14.99**	**204**	P		**P**		**18 09 50.3**	**+1.9**
JAY	**Jayapura**	**15.19**	**113**	P		**P**		**18 09 50.3**	**-0.3**
	48nm,0.8s								
STKI	**Sintang**	**15.65**	**258**	P		P		18 10 03.2	+7.4
KHKI	**Kahang-Kahang**	**16.23**	**223**	P		P		18 10 08.0	+5.9
PBKI	**Pangkalan Bun**	**16.30**	**248**	P		**P**		**18 10 04.9**	**+1.9**
	109nm,1.0s,1μm								
KSM	**Kuching**	**16.56**	**263**	*e*Pn		**P**		**18 10 07.3**	**+1.5**
	37nm,1.1s								
KSM	**Kuching**	**16.56**	**263**	P		P		18 10 15.8	+10
GMJI	**Gumukmas**	**17.72**	**228**	P		P		18 10 24.1	+5.5
	46nm,1.2s								
SJI	**Sawahan**	**18.68**	**233**	P		**Pn**		**18 10 32.3**	**+2.1**
	31nm,1.0s,944nm								
PWJI	**Pagerwojo**	**18.82**	**232**	P		Pn		18 10 38.1	+6.3
TWG	**Pinlang**	**19.94**	**344**	*eP*		**P**		**18 10 40.0**	**-3.0**
	110nm,0.7s								
BJII	**Banjamegara**	**20.15**	**238**	P		Pn		18 10 57.6	+10
YULB	**Yu-li**	**20.43**	**346**	*eP*		**P**		**18 10 44.7**	**-3.5**
	16nm,0.6s								
TPUB	**Ta-pu**	**20.52**	**344**	*eP*		**P**		**18 10 46.9**	**-2.3**
	112nm,1.2s								
SSLB	**Suanglung**	**20.89**	**345**	*eP*		**P**		**18 10 50.2**	**-3.0**
FITZ	**Fitzroy Crossi**	**21.53**	**183**	*eP*		**P**		**18 10 58.4**	**-1.7**
	11nm,0.7s								
FITZ				S		**S**		**18 14 51.6**	**-4.4**
FITZ	**Fitzroy Crossi**	**21.53**	**183**	P		**S**		**18 10 60.0**	**-0.1**
	4.8nm,0.4s,baz=9.7,slow=12,SNR=30								
FITZ				S		**S**		**18 14 51.6**	**-4.4**
	2-4nm,0.8s,baz=0.0,slow=20,SNR=3.7								
YHNB	**Yeheng**	**21.64**	**347**	*eP*		**P**		**18 10 59.1**	**-2.1**
	31nm,0.7s								
LEM	**Lembang**	**21.70**	**242**	P		**P**		**18 11 06.4**	**+4.2**
	44nm,0.8s								
QIZ	**Qiongzhong**	**22.59**	**314**	P		**P**		**18 11 10.3**	**-1.2**
QIZ				pP		**pP**		**18 11 21.6**	**-2.3**
QIZ				S		**S**		**18 15 15.9**	**+0.5**
QIZ				pmax		pmax			
	comp=Z,16nm,1.8s								
QIZ				LR		LR			
	comp=N,270nm,16.4s								
QIZ				LR		LR			
	comp=E,75nm,16.6s								
QIZ				LR		LR			
	comp=Z,280nm,17.6s								
QIZ	**Qiongzhong**	**22.59**	**314**	*eP*		**P**		**18 11 11.7**	**+0.2**
QZH	**Quanzhou**	**22.68**	**340**	P		**P**		**18 11 12.3**	**-0.1**
QZH				S		**S**		**18 15 12.3**	**-4.5**
QZH				pmax		pmax			
	comp=Z,80nm,0.7s								
QZH				LR		LR			
	comp=Z,870nm,16.6s								
MYKOM	**Kota Tinggi**	**22.94**	**266**	P		**P**		**18 11 15.4**	**+0.1**
KTGM	**Kuala Trenggan**	**23.61**	**275**	P		**P**		**18 11 21.6**	**-0.1**
KASI	**Kota Agung**	**23.98**	**248**	P		**P**		**18 11 27.2**	**+2.1**
	comp=Z,54nm,0.9s								
LWLI	**Liwa**	**24.21**	**250**	P		pP		18 11 44.7	+3.6
WRAB	**Tennant Creek**	**24.49**	**163**	*eP*		**P**		**18 11 28.1**	**-1.5**
WRAB				pmax		pmax			
	comp=Z,80nm,0.8s								
WRAB	**Tennant Creek**	**24.49**	**163**	*eP*		**P**		**18 11 28.1**	**-1.5**
	comp=Z,80nm,0.8s								
MBWA	**Marble Bar**	**25.49**	**195**	*eP*		**P**		**18 11 38.7**	**0.0**
IPM	**Ipoh**	**25.68**	**273**	*eP*		**P**		**18 11 43.1**	**+2.5**
	comp=Z,36nm,1.3s								
KULM	**Kulim**	**26.08**	**275**	P		**P**		**18 11 44.6**	**+0.4**
	comp=Z,29nm,1.2s								
PSI	**Prapat**	**27.80**	**269**	P		**P**		**18 11 58.8**	**-0.9**
PSI	**Prapat**	**27.80**	**269**	P		**P**		**18 11 58.8**	**-0.9**
	comp=Z,2.9nm,0.6s,baz=179,slow=12,SNR=3.5								
SSE	**Sheshan**	**27.91**	**350**	P		**P**		**18 12 01.1**	**+0.8**
SSE				S		**S**		**18 16 41.8**	**+1.6**
SSE				pmax		pmax			
	comp=Z,22nm,0.9s								
SSE				pmax		pmax			
	comp=Z,87nm,3.7s								
SSE				LR		LR			
	comp=N,63nm,26.0s								
SSE				LR		LR			
	comp=E,170nm,25.7s								
SSE				LR		LR			
	comp=Z,91nm,25.0s								
AS31	**Alice Springs**	**27.93**	**166**	*eP*		**P**		**18 11 59.5**	**-1.1**
ASAR	**Alice Springs**	**27.93**	**166**	P		**P**		**18 11 59.8**	**-0.9**
ASAR				PcP		**PcP**		**18 15 16.0**	**+0.8**
ASAR				S		**S**		**18 16 36.6**	**-4.1**
ASAR	**Alice Springs**	**27.93**	**166**	P		**P**		**18 11 59.8**	**-0.9**
	comp=Z,4.8nm,0.6s,baz=346,slow=6.7,SNR=126								
ASAR				PcP		**PcP**		**18 15 16.0**	**+0.8**
	comp=Z,1.6nm,0.7s,baz=346,slow=1.3,SNR=4.1								
ASAR				S		**S**		**18 16 36.6**	**-4.1**
	comp=Z,0.6nm,0.8s,baz=352,slow=18,SNR=2.7								
PBKT	**Sadao Pong**	**28.44**	**299**	P		**P**		**18 12 06.2**	**+0.9**
	comp=Z,9.5nm,1.0s								
WHN	**Wuhan**	**29.30**	**338**	P		**P**		**18 12 13.0**	**+0.2**
WHN				LR		LR			
	comp=Z,880nm,20.7s								
NJ2	**Nanjing**	**29.32**	**346**	*e*P		**P**		**18 12 14.8**	**+2.0**
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
JNU	**Nakatsue**	**29.68**	**7**	P		**P**		**18 12 15.5**	**-0.6**
JNU	**Nakatsue**	**29.68**	**7**	P		**P**		**18 12 15.5**	**-0.6**
	comp=Z,10nm,1.0s,baz=203,slow=6.8,SNR=3.7								
GYA	**Guiyang**	**29.83**	**322**	P		**P**		**18 12 18.8**	**+1.2**
GYA				pP		**pP**		**18 12 32.6**	**+1.1**
GYA				sP		**sP**		**18 12 39.0**	**+1.0**
GYA				S		**S**		**18 17 12.5**	**+1.6**
GYA				sS		**sS**		**18 17 35.3**	**+0.9**
GYA				ScP		**ScP**		**18 18 59.0**	**+1.3**
GYA				ScS		**ScS**		**18 22 51.0**	**-2.1**
GYA				pmax		pmax			
	comp=Z,10.0nm,0.8s								
GYA				pmax		pmax			
	comp=Z,120nm,4.7s								
GYA				LR		LR			
	comp=N,490nm,17.5s								
GYA				LR		LR			
	comp=E,360nm,18.0s								
GYA				LR		LR			
	comp=Z,480nm,17.8s								
CTA	**Charters Tower**	**30.30**	**142**	P		**P**		**18 12 21.9**	**+0.2**
CTA	**Charters Tower**	**30.30**	**142**	P		**P**		**18 12 21.9**	**+0.2**
	comp=Z,3.8nm,0.7s,baz=305,slow=17,SNR=2.4								
CTAO	**Charters Tower**	**30.30**	**142**	*eP*		**P**		**18 12 19.7**	**-2.0**
CTAO	**Charters Tower**	**30.30**	**142**	*eP*		**P**		**18 12 19.7**	**-2.0**
CMAR	**Chiang Mai Arr**	**30.99**	**301**	P		**P**		**18 12 25.6**	**-2.2**
CMAR				ScP		**ScP**		**18 19 05.2**	**+3.8**
CMAR	**Chiang Mai Arr**	**30.99**	**301**	P		**P**		**18 12 25.6**	**-2.2**
	comp=Z,3.9nm,0.8s,baz=112,slow=7.0,SNR=24								
CMAR				ScP		**ScP**		**18 19 05.2**	**+3.8**
	comp=Z,0.6nm,0.9s,baz=114,slow=2.2,SNR=3.5								
CMMT	**Chiang Mai**	**31.14**	**301**	P		**P**		**18 12 30.4**	**+1.2**
	comp=Z,11nm,1.0s								
CHTO	**Chiang Mai**	**31.14**	**301**	*eP*		**P**		**18 12 28.3**	**-0.9**
CHTO				pmax		pmax			
	comp=Z,6.0nm,0.8s								
CHTO	**Chiang Mai**	**31.14**	**301**	*eP*		**P**		**18 12 28.2**	**-0.9**
	comp=Z,6.1nm,0.8s								
CHTO	**Chiang Mai**	**31.14**	**301**	P		**P**		**18 12 29.9**	**+0.7**
	comp=Z,12nm,1.1s								
ENH	**Enshi**	**31.20**	**330**	*eP*		**P**		**18 12 28.7**	**-0.9**
	comp=Z,22nm,0.8s								
KSAR	**Wonju Array Be**	**33.76**	**2**	P		**P**		**18 12 52.3**	**+0.5**
KSRS	**Korea Array**	**33.77**	**2**	P		**P**		**18 12 52.3**	**+0.4**
	comp=Z,6.3nm,0.8s,baz=182,slow=10,SNR=15								
FORT	**Forrest**	**34.15**	**178**	*eP*		**P**		**18 12 55.1**	**-0.2**
	comp=Z,21nm,0.6s								
MJAR	**Matsushiro Arr**	**34.49**	**16**	P		**P**		**18 12 58.2**	**0.0**
MJAR	**Matsushiro Arr**	**34.49**	**16**	P		**P**		**18 12 58.2**	**0.0**
	comp=Z,1.9nm,0.8s,baz=190,slow=8.7,SNR=3.7								
MAT	**Matsushiro**	**34.50**	**16**	P		P		18 12 54.8	-3.5
XAN	**Xi'an**	**34.59**	**333**	P		**P**		**18 12 57.4**	**-1.8**
XAN				pmax		pmax			
	comp=Z,7.0nm,0.8s								
XAN				LR		LR			
	comp=N,220nm,22.8s								
XAN				LR		LR			
	comp=E,45nm,20.6s								
XAN				LR		LR			
	comp=Z,65nm,20.1s								
CD2	**Chengdu**	**34.81**	**324**	P		**P**		**18 13 01.9**	**+0.8**
CD2				pP		**pP**		**18 13 15.5**	**+0.4**
CD2				sP		**sP**		**18 13 21.8**	**+0.2**
CD2				PP		**PP**		**18 14 21.1**	**+0.2**
CD2				S		**S**		**18 18 28.9**	**+0.8**
CD2				sS		**sS**		**18 18 51.8**	**-0.1**
CD2				SS		**SnSn**		**18 20 45.8**	**-0.6**
CD2				pmax		pmax			
	comp=Z,30nm,1.1s								
CD2				pmax		pmax			
	comp=Z,120nm,8.2s								
CD2				LR		LR			
	comp=N,260nm,15.6s								
CD2				LR		LR			
	comp=Z,230nm,20.2s								
EIDS	**Eidsvold**	**37.19**	**142**	*eP*		**P**		**18 13 20.5**	**-0.9**
	comp=Z,31nm,1.4s								
BBOO	**Buckleboo**	**37.21**	**167**	*eP*		**P**		**18 13 21.1**	**-0.5**
	comp=Z,157nm,0.4s								
NWAO	**Narrogin (SRO)**	**37.37**	**193**	*eP*		**P**		**18 13 24.1**	**+1.2**
BJI	**Beijing**	**37.58**	**347**	P		**P**		**18 13 25.3**	**+0.8**
BJI				S		**S**		**18 19 12.0**	**+2.0**
BJI				pmax		pmax			
	comp=Z,65nm,1.1s								
BJI				LR		LR			
	comp=N,80nm,20.4s								
BJI				LR		LR			
	comp=E,190nm,24.0s								
BJI				LR		LR			
	comp=Z,92nm,22.2s								
STKA	**Stephens Creek**	**37.95**	**159**	*eP*		**P**		**18 13 27.3**	**-0.5**
	comp=Z,4.1nm,0.7s								
STKA	**Stephens Creek**	**37.95**	**159**	P		**P**		**18 13 27.3**	**-0.5**
	comp=Z,20nm,0.7s,baz=333,slow=8.4,SNR=77								
SNY	**Shenyang**	**38.23**	**356**	P		**P**		**18 13 31.6**	**+1.6**
SNY				S		**S**		**18 19 24.1**	**+4.3**
SNY				ScS		**ScS**		**18 23 33.5**	**-2.9**
SNY				pmax		pmax			
	comp=Z,24nm,0.6s								
SNY				pmax		pmax			
	comp=Z,89nm,3.5s								
SNY				LR		LR			
	comp=N,200nm,18.1s								
SNY				LR		LR			
	comp=E,210nm,18.5s								
SNY				LR		LR			
	comp=Z,170nm,18.4s								
LZH	**Lanzhou**	**38.68**	**330**	*eP*		**P**		**18 13 34.0**	**-0.1**
LZH				pP		**pP**		**18 13 47.5**	**-0.8**
LZH				sP		**sP**		**18 13 53.0**	**-1.7**
LZH				pmax		pmax			
	comp=Z,51nm,1.1s								
LZH				LR		LR			
	comp=N,160nm,11.3s								
LZH				LR		LR			
	comp=E,400nm,18.5s								
LZH				LR		LR			
	comp=Z,380nm,20.8s								
HHC	**Hu-ho-hao-te**	**39.58**	**342**	*eP*		**P**		**18 13 40.8**	**-0.7**
HHC				pP		**pP**		**18 13 54.6**	**-1.1**
HHC				sP		**sP**		**18 14 00.9**	**-1.3**
HHC				PP		**PnPn**		**18 15 17.1**	**+0.4**
HHC				PcS		**PcS**		**18 19 36.3**	**-1.7**
HHC				S		**S**		**18 19 40.4**	**-0.2**
HHC				sS		**sS**		**18 20 03.4**	**-1.2**
HHC				SS		**SS**		**18 22 31.3**	**-6.1**
HHC				ScS		**ScS**		**18 23 41.6**	**-3.1**
HHC				pmax		pmax			
	comp=Z,28nm,1.0s								
HHC				pmax		pmax			
	comp=Z,170nm,5.2s								
HHC				LR		LR			
	comp=N,360nm,13.2s								
HHC				LR		LR			
	comp=E,310nm,12.4s								
HHC				LR		LR			
	comp=Z,440nm,12.7s								
CN2	**Changchun**	**40.11**	**359**	*eP*		**P**		**18 13 46.1**	**+0.4**
CN2				*e*pP		**pP**		**18 14 01.4**	**+1.5**
CN2				*e*S		**S**		**18 19 48.4**	**+0.3**
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
CN2				pmax		pmax			
	comp=Z,200nm,3.0s								
CN2				LR		LR			
	comp=N,200nm,18.0s								
CN2				LR		LR			
	comp=E,200nm,18.0s								
CN2				LR		LR			
	comp=Z,200nm,18.0s								
USRK	**Ussuriysk Arra**	**40.76**	**6**	P		**P**		**18 13 51.4**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=190,slow=7.9,SNR=10								
MDJ	**Mudanjiang**	**40.98**	**3**	P		**P**		**18 13 53.6**	**+0.7**
MDJ				pP		**pP**		**18 14 08.1**	**+0.9**
MDJ				PP		**PP**		**18 15 29.6**	**+1.3**
MDJ				S		**S**		**18 20 03.4**	**+2.3**
MDJ				sS		**sS**		**18 20 26.8**	**+1.6**
MDJ				pmax		pmax			
	comp=Z,15nm,1.4s								
MDJ				pmax		pmax			
	comp=Z,65nm,5.0s								
MDJ				LR		LR			
	comp=N,110nm,28.6s								
MDJ				LR		LR			
	comp=E,100nm,31.4s								
MDJ				LR		LR			
	comp=Z,110nm,27.5s								
ARMA	**Armidale**	**41.30**	**147**	*e*P		**P**		**18 13 56.0**	**+0.2**
	comp=Z,9.0nm,0.6s								
LSA	**Lhasa**	**42.58**	**312**	P		**P**		**18 14 06.3**	**-0.5**
GTA	**Gaotai**	**43.27**	**329**	P		**P**		**18 14 12.1**	**+0.3**
GTA				pP		**pP**		**18 14 26.0**	**-0.1**
GTA				sP		**sP**		**18 14 32.3**	**-0.2**
GTA				S		**S**		**18 20 37.5**	**+2.2**
GTA				sS		**sS**		**18 21 00.8**	**+1.3**
GTA				SS		**SS**		**18 23 45.8**	**-4.5**
GTA				pmax		pmax			
	comp=Z,6.0nm,1.4s								
GTA				pmax		pmax			
	comp=Z,63nm,5.2s								
GTA				LR		LR			
	comp=N,200nm,19.5s								
GTA				LR		LR			
	comp=E,240nm,19.7s								
GTA				LR		LR			
	comp=Z,340nm,20.0s								
TAPN	**Taplejung**	**44.15**	**306**	*e*P		**P**		**18 14 17.3**	**-1.9**
	comp=Z,54nm,1.3s								
ODAN	**Odare**	**44.20**	**306**	*e*P		**P**		**18 14 18.7**	**-0.9**
	comp=Z,33nm,1.0s								
RAMN	**Ramite**	**44.88**	**305**	*e*P		**P**		**18 14 24.4**	**-0.6**
	comp=Z,15nm,0.5s								
HABR	**Khabarovsk**	**45.33**	**8**	P		**P**		**18 14 26.6**	**-1.3**
HABR				*e*				18 16 04.8	
HABR								18 16 13.4	
HABR				*e*				18 24 20.2	
HABR				*e*SSS		SSS		18 25 20.3	
HABR				pmax		pmax			
	comp=Z,35nm,2.4s								
HABR				pmax		pmax			
	comp=N,40nm,2.4s								
HABR				pmax		pmax			
	comp=E,50nm,2.4s								
HABR				MLR		MLR			
	comp=Z,86nm,18.0s								
YSS	**Yuzh-Sakhalins**	**45.42**	**15**	*e*P		**P**		**18 14 30.0**	**+1.4**
KLR	**Kul'dur**	**45.72**	**5**	*e*P		**P**		**18 14 28.0**	**-3.0**
GUN	**Gumba**	**45.85**	**306**	*e*P		**P**		**18 14 31.1**	**-1.8**
	comp=Z,13nm,0.4s								
PKI	**Pulchoki**	**46.10**	**306**	*e*P		**P**		**18 14 33.2**	**-1.5**
PKIN	**Phulchoki**	**46.11**	**306**	*e*P		**P**		**18 14 33.4**	**-1.4**
	comp=Z,44nm,1.4s								
KKN	**Kakani**	**46.29**	**306**	*e*P		**P**		**18 14 35.0**	**-1.1**
	comp=Z,8.0nm,0.5s								
DMN	**Daman**	**46.36**	**305**	*e*P		**P**		**18 14 35.0**	**-1.7**
	comp=Z,34nm,1.0s								
ULN	**Ulaanbaatar**	**47.30**	**342**	*e*P		**P**		**18 14 44.0**	**+0.3**
	comp=Z,9.3nm,0.9s								
SONM	**Songino Array**	**47.48**	**341**	P		**P**		**18 14 45.1**	**+0.1**
SONM	**Songino Array**	**47.48**	**341**	P		**P**		**18 14 45.1**	**+0.1**
	comp=Z,7.2nm,0.9s,baz=162,slow=8.7,SNR=33								
SONM				LR		LR		18 36 54.0	
	comp=Z,175nm,21.3s,baz=156,slow=39								
KOLN	**Koldanda**	**47.65**	**305**	*e*P		**P**		**18 14 46.8**	**+0.1**
	comp=Z,23nm,0.5s								
DANN	**Dangsing**	**47.74**	**306**	*e*P		**P**		**18 14 46.6**	**-1.0**
	comp=Z,34nm,0.6s								
PYUN	**Piuthan**	**48.27**	**305**	*e*P		**P**		**18 14 50.8**	**-0.8**
	comp=Z,87nm,1.1s								
HYB	**Hyderabad**	**49.20**	**290**	*i* P		**P**		**18 14 57.0**	**-1.6**
ZAK	**Zakamensk**	**50.71**	**341**	*e*P		**P**		**18 15 09.6**	**0.0**
ZAK				*e*				18 16 27.2	
ZAK				pmax		pmax			
	comp=Z,3.0nm,1.3s								
TLY	**Talaya**	**51.72**	**342**	*e*P		**P**		**18 15 17.8**	**+0.8**
TLY				*e*				18 22 48.5	
TLY				pmax		pmax			
	comp=Z,11nm,0.9s								
TLY				MLR		MLR			
	comp=Z,113nm,17.0s								
IRK	**Irkutsk**	**52.01**	**343**	*e*P		**P**		**18 15 19.8**	**+0.6**
IRK				pmax		pmax			
	comp=Z,18nm,0.8s								
MOY	**Mondy**	**52.57**	**340**	*e*P		**P**		**18 15 25.3**	**+1.9**
WMQ	**Urumqi**	**52.89**	**325**	P		**P**		**18 15 25.5**	**-0.4**
WMQ				pP		**pP**		**18 15 39.0**	**-1.7**
WMQ				pP		**pwP**		**18 15 44.0**	**+3.3**
WMQ				PcP		**PcP**		**18 16 35.0**	**+0.6**
WMQ				*e*S		**S**		**18 22 49.0**	**-2.1**
WMQ				ScS		**ScS**		**18 25 08.0**	**-2.9**
WMQ				pmax		pmax			
	comp=Z,11nm,1.1s								
WMQ				pmax		pmax			
	comp=Z,130nm,3.7s								
WMQ				LR		LR			
	comp=N,470nm,19.6s								
WMQ				LR		LR			
	comp=E,280nm,20.8s								
WMQ				LR		LR			
	comp=Z,330nm,21.0s								
HVS	**Khovu-Aksy**	**54.92**	**335**	*e*P		**P**		**18 15 41.0**	**+0.4**
HVS				pmax		pmax			
	comp=Z,70nm,1.0s								
PEA0B	**Petropavlovsk-**	**55.59**	**22**	*e*P		P		18 15 48.8	+3.5
PETK	**Petropavlovsk-**

	comp=Z,9.4nm,0.8s								
KBL	**Kabul**	**61.66**	**308**	*e*P		**P**		**18 16 27.5**	**-0.6**
KBL				pmax		pmax			
	comp=Z,8.0nm,0.9s								
KBL	**Kabul**	**61.66**	**308**	*e*P		**P**		**18 16 27.5**	**-0.6**
	comp=Z,7.9nm,0.9s								
KURK	**Kurchatov**	**61.91**	**328**	*e*P		**P**		**18 16 28.4**	**-0.8**
KURK				pmax		pmax			
	comp=Z,35nm,0.8s								
KURK	**Kurchatov**	**61.91**	**328**	*e*P		**P**		**18 16 28.4**	**-0.8**
	comp=Z,35nm,0.8s								
NVS	**Novosibirsk**	**62.05**	**333**	⇓*i*P		**P**		**18 16 29.0**	**-1.1**
NVS				*e*S		**S**		**18 24 45.7**	**-5.0**
NVS				pmax		pmax			
	comp=Z,10.0nm,0.9s								
NVS				pmax		pmax			
	comp=N,7.0nm,1.1s								
NVS				smax		smax			
	comp=E,6.0nm,1.6s								
FX1	**Attu Island--F**	**62.23**	**30**	*e*P		**P**		**18 16 29.7**	**-1.7**
URZ	**Urewera**	**62.39**	**137**	LR		LR		18 43 25.2	
	comp=E,140nm,18.7s,baz=314,slow=36								
KK31	**Karatay Array**	**63.38**	**317**	*i* P		**P**		**18 16 38.8**	**-0.5**
KK31				pmax		pmax			
	comp=Z,6.0nm,0.8s								
KKAR	**Karatay Array**	**63.38**	**317**	*e*P		**P**		**18 16 38.5**	**-0.7**
KKAR				pmax		pmax			
	comp=Z,8.0nm,0.8s								
KKAR	**Karatay Array**	**63.38**	**317**	*e*P		**P**		**18 16 38.5**	**-0.7**
	comp=Z,8.0nm,0.8s								
BVA0	**Borovoye Array**	**67.49**	**327**	*i* P		**P**		**18 17 05.0**	**-0.6**
BVA0				pmax		pmax			
	comp=Z,11nm,0.9s								
BRVK	**Borovoye**	**67.56**	**327**	*d i*P		**P**		**18 17 05.9**	**-0.1**
BRVK				pmax		pmax			
	comp=Z,20nm,1.0s								
BRVK	**Borovoye**	**67.56**	**327**	*e*P		**P**		**18 17 05.3**	**-0.7**
	comp=Z,16nm,0.9s								
TIXI	**Tiksi**	**68.03**	**1**	*c i*P		**P**		**18 17 09.1**	**+0.5**
TIXI				pmax		pmax			
	comp=Z,19nm,1.7s								
BILL	**Bilibino**	**69.73**	**15**	⇓*e*P		**P**		**18 17 22.0**	**+2.8**
BILL				*e*				18 19 53.9	
BILL				pmax		pmax			
	comp=Z,2.0nm,1.7s								
BILL				MLR		MLR			
	comp=Z,100nm,21.0s								
CASY	**Casey**	**70.63**	**187**	*e*P		**P**		**18 17 26.3**	**+1.6**
	comp=Z,5.9nm,0.8s								
AB31	**Akbulak array**	**72.31**	**321**	*i* P		**P**		**18 17 34.2**	**-1.0**
AB31				pmax		pmax			
	comp=Z,1.0nm,0.3s								
ABKAR	**Akbulak array**	**72.31**	**321**	*e*P		**P**		**18 17 34.6**	**-0.6**
	comp=Z,5.9nm,0.8s								
AKTO	**Aktyubinsk**	**73.82**	**322**	P		**P**		**18 17 43.0**	**-1.1**
AKTO				pmax		pmax			
	comp=Z,9.0nm,0.9s								
SVE	**Sverdlovsk**	**74.13**	**328**	⇑*e*P		**P**		**18 17 45.8**	**0.0**
SVE				pmax		pmax			
	comp=Z,22nm,1.1s								
ARU	**Arti**	**75.11**	**328**	*c i*P		**P**		**18 17 50.4**	**-1.1**
ARU								18 20 37.0	
ARU				PPP		PPP		18 22 22.5	
ARU				S		**S**		**18 27 28.0**	**+2.4**
ARU				pmax		pmax			
	comp=Z,11nm,1.2s								
SDPT	**Sand Point**	**77.34**	**34**	*e*P		**P**		**18 18 04.9**	**+0.8**
	comp=Z,15nm,0.6s								
UMR	**Umm Al-Rimmam**	**78.73**	**299**	*e*P		**P**		**18 18 11.3**	**-1.1**
RDF	**Al-Radifah**	**78.85**	**299**	*e*P		**P**		**18 18 12.2**	**-0.9**
RDF				AMb		AMB		18 18 14.0	
	comp=Z,16nm,0.7s								
MIB	**Mutribah**	**79.06**	**300**	*e*P		**P**		**18 18 13.5**	**-0.7**
MIB				AMb		AMB		18 18 14.2	
	comp=Z,23nm,0.7s								
NAY	**Al-Naaiem**	**79.13**	**299**	*e*P		**P**		**18 18 13.4**	**-1.3**
NAY				AMb		AMB		18 18 14.4	
	comp=Z,8.5nm,0.7s								
ABPO	**Ambohimpanom**	**81.27**	**250**	*e*P		**P**		**18 18 26.5**	**0.0**
ABPO				pmax		pmax			
	comp=Z,11nm,1.1s								
ABPO	**Ambohimpanom**	**81.27**	**250**	*e*P		**P**		**18 18 26.5**	**0.0**
	comp=Z,12nm,1.1s								
KBZ	**Khabaz**	**83.12**	**313**	P		**P**		**18 18 35.0**	**-0.5**
KBZ	**Khabaz**	**83.12**	**313**	P		**P**		**18 18 35.0**	**-0.5**
KBZ	**Khabaz**	**83.12**	**313**	P		**P**		**18 18 35.0**	**-0.5**
	comp=Z,1.6nm,0.8s,baz=117,slow=7.6,SNR=3.5								
VNDA	**Vanda**	**83.24**	**173**	*e*P		**P**		**18 18 36.3**	**+0.9**
	comp=Z,6.4nm,1.1s								
VNDA	**Vanda**	**83.24**	**173**	P		**P**		**18 18 36.3**	**+0.9**
	comp=Z,1.6nm,0.8s,baz=321,slow=6.8,SNR=11								
KIV	**Kislovodsk**	**83.28**	**314**	*e*P		**P**		**18 18 37.8**	**+1.3**
KIV				pmax		pmax			
	comp=Z,4.0nm,0.9s								
KIV				MLR		MLR			
	comp=Z,71nm,19.0s								
MAW	**Mawson**	**83.59**	**200**	P		**P**		**18 18 38.5**	**+1.2**
MAW	**Mawson**	**83.59**	**200**	P		**P**		**18 18 38.5**	**+1.2**
	comp=Z,1.1nm,0.6s,baz=122,slow=19,SNR=2.8								
COLD	**Coldfoot**	**84.06**	**23**	P		**P**		**18 18 40.5**	**+0.7**
	comp=Z,12nm,1.1s								
PMR	**Palmer**	**84.10**	**29**	*e*P		**P**		**18 18 41.3**	**+1.2**
PMR				pmax		pmax			
	comp=Z,4.0nm,0.6s								
PMR	**Palmer**	**84.10**	**29**	*e*P		**P**		**18 18 41.3**	**+1.2**
	comp=Z,4.4nm,0.6s								
SBA	**Scott Base**	**84.15**	**172**	P		**P**		**18 18 37.8**	**-2.2**
SBA	**Scott Base**	**84.15**	**172**	P		**P**		**18 18 37.8**	**-2.2**
SML	**Sawmill**	**84.49**	**28**	*e*P		**P**		**18 18 43.1**	**+0.9**
SML				pmax		pmax			
	comp=Z,4.0nm,1.0s								
SML	**Sawmill**	**84.49**	**28**	*e*P		**P**		**18 18 43.1**	**+0.9**
	comp=Z,4.4nm,1.0s								
PPT	**Papeete**	**85.03**	**108**	LR		LR		18 50 47.7	
	comp=Z,227nm,18.2s,baz=310,slow=31								
ILAR	**Eielson Array**	**85.26**	**25**	P		**P**		**18 18 47.9**	**+1.9**
ILAR	**Eielson Array**	**85.26**	**25**	P		**P**		**18 18 47.9**	**+1.9**
	comp=Z,1.2nm,1.0s,baz=250,slow=6.5,SNR=7.2								
SOC	**Sochi**	**85.43**	**313**	*i* P		**P**		**18 18 45.9**	**-1.4**
SOC				pmax		pmax			
	comp=Z,24nm,0.9s								
VORD	**Divnogorie**	**85.67**	**321**	*e*P		**P**		**18 18 47.6**	**-0.6**
VORD				pmax		pmax			
	comp=Z,20nm,1.2s								
VORD				pmax		pmax			
	comp=N,8.0nm,0.6s								
VORD				pmax		pmax			
	comp=E,20nm,0.8s								
DIV	**Divide**	**85.70**	**29**	*e*P		**P**		**18 18 50.3**	**+2.0**
	comp=E,10nm,1.1s								
VSR	**Storozhevoye**	**85.75**	**321**	*e*P		**P**		**18 18 47.7**	**-0.9**
VSR				pmax		pmax			
	comp=Z,10.0nm,0.8s								
VSR				pmax		pmax			
	comp=N,4.0nm,0.4s								
VSR				pmax		pmax			
	comp=E,20nm,1.0s								
MALT	**Malatya**	**86.51**	**308**	⇑*i*P		pP		18 19 09.2	**+0.6**
ANN	**Anapa**	**87.05**	**315**	*e*P		**P**		**18 18 53.6**	**-1.5**
ANN				pmax		pmax			
	comp=Z,25nm,0.8s								
OBN	**Obninsk**	**87.23**	**325**	⇓*i*P		**P**		**18 18 57.3**	**+1.5**
OBN				*e*S		S		18 29 24.6	-6.7
OBN				pmax		pmax			
	comp=Z,46nm,1.7s								
OBN				MLR		MLR			
	comp=Z,100nm,20.0s								
APA	**Apatity**	**88.03**	**337**	⇓*e*P		P		18 18 48.6	-11
APA				MLR		MLR			
	comp=Z,500nm,22.0s								
KMBO	**Kilima Mbogo**	**89.57**	**269**	P		**P**		**18 19 08.1**	**0.0**
KMBO	**Kilima Mbogo**	**89.57**	**269**	P		**P**		**18 19 08.1**	**0.0**
	comp=Z,5.8nm,1.0s,baz=73,slow=23,SNR=11								
BR131	**Keskin Array S**	**90.16**	**310**	*e*P		**P**		**18 19 08.9**	**-1.3**
	comp=Z,4.7nm,0.9s								
BRTR	**Keskin Array B**	**90.16**	**310**	P		**P**		**18 19 09.3**	**-0.9**
BRTR	**Keskin Array B**	**90.16**	**310**	P		**P**		**18 19 09.3**	**-0.9**
	comp=Z,5.2nm,0.9s,baz=112,slow=4.1,SNR=21								
ARCES	**ARCESS Array B**	**90.63**	**340**	P		**P**		**18 19 10.9**	**-0.7**
ARCES	**ARCESS Array B**	**90.63**	**340**	P		**P**		**18 19 10.9**	**-0.7**
	comp=Z,4.4nm,0.8s,baz=69,slow=6.8,SNR=9.5								
ARCES				LR		LR		19 05 48.5	
	comp=Z,70nm,20.3s,baz=250,slow=40								
FINES	**FINESS Array B**	**92.01**	**332**	P		**P**		**18 19 18.1**	**0.0**
FINES	**FINESS Array B**	**92.01**	**332**	P		**P**		**18 19 18.1**	**0.0**
	comp=Z,2.6nm,0.8s,baz=100,slow=4.6,SNR=7.8								
FINES				LR		LR		19 06 30.3	
	comp=Z,78nm,19.9s,baz=183,slow=39								
AKASG	**Malin Array Be**	**92.05**	**321**	*ce*P		**P**		**18 19 18.3**	**-0.2**
AKASG				pmax		pmax			
	comp=Z,3.0nm,0.8s								
AKASG	**Malin Array Be**	**92.05**	**321**	P		**P**		**18 19 17.8**	**-0.7**
AKASG	**Malin Array Be**	**92.05**	**321**	P		**P**		**18 19 17.8**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=69,slow=4.8,SNR=10								
AK01	**Malin Array Si**	**92.06**	**321**	*e*P		**P**		**18 19 17.9**	**-0.7**
CFR	**Carcaliu**	**93.58**	**316**	⇓P		**P**		**18 19 26.2**	**+0.5**
CFR	**Carcaliu**	**93.58**	**316**	⇓*i*P		**P**		**18 19 26.2**	**+0.5**
DIB	**Dawson Inlet,**	**93.62**	**36**	T		T		20 03 30.4	
	SNR=6.9								
TESR	**Tescani**	**94.39**	**317**	⇑*i*P		**P**		**18 19 30.2**	**+0.8**
VRI	**Vrincioaia**	**94.45**	**316**	⇑P		**P**		**18 19 30.4**	**+0.7**
VRI	**Vrincioaia**	**94.45**	**316**	⇑*i*P		**P**		**18 19 30.4**	**+0.7**
PLOR	**Plostina**	**94.50**	**316**	⇑P		**P**		**18 19 30.8**	**+0.8**
PLOR	**Plostina**	**94.50**	**316**	⇑*i*P		**P**		**18 19 30.8**	**+0.8**
MLR	**Muntele Rosu**	**95.05**	**316**	⇓*i*P		**P**		**18 19 32.9**	**+0.2**
BURAR	**Bucovina Array**	**95.16**	**318**	⇑*i*P		**P**		**18 19 33.8**	**+0.8**
BUR08	**Bucovina Ar. S**	**95.16**	**318**	*e*P		**P**		**18 19 32.5**	**-0.5**
ARR	**Arges**	**95.98**	**316**	⇑*i*P		**P**		**18 19 35.1**	**-1.7**
LOT	**Lotru**	**96.56**	**316**	⇑*i*P		**P**		**18 19 39.8**	**+0.3**
KOLS	**Kolonicke sedl**	**96.80**	**320**	*e*P		**P**		**18 19 41.3**	**+0.9**
KOLS				pmax		pmax			
	comp=Z,2.0nm,0.9s								
KOLS	**Kolonicke sedl**	**96.80**	**320**	*e*P		**P**		**18 19 41.3**	**+0.9**
DRGR		**97.00**	**318**	⇑P		**P**		**18 19 42.1**	**+0.7**
DRGR		**97.00**	**318**	⇑*i*P		**P**		**18 19 42.0**	**+0.7**
CRVS	**Cervenica-Dubn**	**97.33**	**320**	*e*P		**P**		**18 19 41.5**	**-1.3**
CRVS				pmax		pmax			
	comp=Z,4.0nm,1.1s								
CRVS	**Cervenica-Dubn**	**97.33**	**320**	*e*P		**P**		**18 19 41.5**	**-1.3**
STHS	**Stebnicka Huta**	**97.34**	**321**	*e*P		Pdif		18 19 44.0	+1.1
STHS				pmax		pmax			
	comp=Z,3.0nm,1.2s								
STHS	**Stebnicka Huta**	**97.34**	**321**	*e*P		Pdif		18 19 44.0	+1.1
VTS	**Vitosha**	**97.54**	**314**	⇑P		Pdif		18 19 45.2	+1.1
VTS	**Vitosha**	**97.54**	**314**	⇑*i*P		Pdif		18 19 45.2	+1.1
KECS	**Kecovo**	**98.06**	**320**	*e*P		Pdif		18 19 47.5	+1.4
KECS				pmax		pmax			
	comp=Z,3.0nm,0.9s								
KECS	**Kecovo**	**98.06**	**320**	*e*P		Pdif		18 19 47.5	+1.4
NB2	**NORSAR Subarra**	**98.97**	**334**	P		**P**		**18 19 48.0**	**-1.9**
	comp=Z,1.5nm,0.8s,baz=71,slow=4.4								
NOA	**NORSAR Array B**	**98.97**	**334**	P		**P**		**18 19 48.0**	**-1.9**
NOA	**NORSAR Array B**	**98.97**	**334**	P		**P**		**18 19 48.0**	**-1.9**
	comp=Z,1.4nm,0.9s,baz=67,slow=4.6,SNR=4.3								
NOA				LR		LR		19 10 39.4	
	comp=Z,82nm,20.4s,baz=50,slow=39								
SCHQ	**Schefferville**	**120.75**	**9**	PKP		**PKPdf**		**18 25 02.8**	**+1.5**
SCHQ	**Schefferville**	**120.75**	**9**	PKP		**PKPdf**		**18 25 02.8**	**+1.5**
	comp=Z,1.9nm,0.5s,baz=350,slow=18,SNR=3.8								
TXAR	**Lajitas Array**	**121.69**	**52**	PKP		**PKPdf**		**18 25 05.0**	**+1.0**
TXAR	**Lajitas Array**	**121.69**	**52**	PKP		**PKPdf**		**18 25 05.0**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=333,slow=1.4,SNR=3.1								
TORD	**Torodi Ar. Bea**	**123.00**	**288**	PKP		**PKPdf**		**18 25 06.3**	**-0.4**
TORD	**Torodi Ar. Bea**	**123.00**	**288**	PKP		**PKPdf**		**18 25 06.3**	**-0.4**
	comp=Z,1.3nm,0.8s,baz=44,slow=2.1,SNR=5.9								

IDC 24 18:36:26.4±13.0, 22.28S×176.77W, h274km±110km, mb3.7/4, mb1 3.7/5, mb1mx3.3/20, mbtmp3.6/5, Error ellipse: s-maj=69.3km s-min=33.5km az=57.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
DZM	**Mont Dzumac**	**15.55**	**268**	P		Pn	18 39 51.9	-0.6
	0.4nm,0.3s,baz=66,slow=18,SNR=4.2							
RPZ	**Rata Peaks**	**23.64**	**202**	P		P	18 41 13.2	-0.1
	2.0nm,0.4s,baz=45,slow=5.7,SNR=4.9							
CTA	**Charters Tower**	**34.49**	**267**	P		P	18 42 48.7	-0.5
	3.5nm,0.4s,baz=92,slow=10,SNR=7.3							
STKA	**Stephens Creek**	**38.09**	**246**	P		P	18 43 19.2	-0.1
	2.9nm,0.6s,baz=101,slow=9.3,SNR=16							
ASAR	**Alice Springs**	**45.25**	**258**	P		P	18 44 17.2	0.0
	3.7nm,0.8s,baz=91,slow=8.0,SNR=37							
ASAR				PcP		PcP	18 45 52.3	+0.1
	0.5nm,0.7s,baz=108,slow=3.8,SNR=5.5							
AKASG	**Malin Array Be**	**145.12**	**331**	PKPbc		PKPdf	18 55 30.3	-0.7
	0.5nm,0.4s,baz=36,slow=3.6,SNR=4.6							
BRTR	**Keskin Array B**	**148.87**	**311**	PKPbc		PKPbc	18 55 41.4	-0.6
	1.0nm,0.7s,baz=114,slow=3.6,SNR=6.5							

*CSEM **24** 18:58:11.4, 40.11N×29.54W, h5km, ML3.2, After PDA*
PDA 24 18:58:11.4±0.8, 40.11N×29.54W, h5km, MD3.5, ML3.2, Error ellipse: s-maj=9.8km s-min=4.6km az=79.0, Azores Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PCED	**Cedros**	**1.61**	**156**	*e*P		Pn	18 58 35.9	-4.6
PCED				*e*S		Sn	18 58 53.8	-7.9
PCED				A		A	18 58 56.2	
	81nm,0.2s							
PCED	**Cedros**	**1.61**	**156**	*e*P		Pn	18 58 35.9	-4.6
PCED				*e*S		Sn	18 58 53.8	-7.9
PGRA	**Graciosa**	**1.62**	**131**	*e*P		Pn	18 58 35.4	-5.2
PGRA				*e*S		Sn	18 58 54.1	-7.7
PGRA				A		A	18 58 56.8	
	43nm,0.3s							
PGRA	**Graciosa**	**1.62**	**131**	*e*P		Pn	18 58 35.4	-5.2
PGRA				*e*S		Sn	18 58 54.1	-7.7
CALA	**Caldeira**	**1.66**	**157**	*e*S		Sn	18 58 55.4	-7.6
CALA	**Caldeira**	**1.66**	**157**	*e*S		Sn	18 58 55.4	-7.6
ROSA	**Rosais**	**1.71**	**144**	*i* P		Pn	18 58 37.1	-4.8
ROSA				*e*S		Sn	18 58 56.2	-8.0
ROSA				A		A	18 58 58.2	
	18nm,0.3s							
HOR	**Horta**	**1.73**	**156**	*e*S		Sn	18 58 56.4	-8.1
HOR	**Horta**	**1.73**	**156**	*e*S		Sn	18 58 56.4	-8.1
PCAN	**Candelaria**	**1.83**	**153**	*e*P		Pn	18 58 38.9	-4.7
PCAN				*e*S		Sn	18 58 59.7	-7.5
PCAN				A		A	18 59 05.5	
	130nm,0.3s							
PCAN	**Candelaria**	**1.83**	**153**	*e*P		Pn	18 58 38.9	-4.7
PCAN				*e*S		Sn	18 58 59.7	-7.5
PMAN	**Manadas**	**1.85**	**142**	*e*P		Pn	18 58 39.0	-4.8
PMAN				*e*S		Sn	18 58 59.8	-7.8
PMAN				A		A	18 59 00.0	
	42nm,0.2s							
PMAN	**Manadas**	**1.85**	**142**	*e*P		Pn	18 58 39.0	-4.8
PMAN				*e*S		Sn	18 58 59.8	-7.8
ADH	**Angra Heroismo**	**2.30**	**128**	*e*P		Pn	18 58 45.6	-4.4
ADH	**Angra Heroismo**	**2.30**	**128**	*e*P		Pn	18 58 45.6	-4.4

*BJI **24** 19:09:10.8, 7.84S×105.07E, h20km, mB4.9/7, mb4.7/13, Ms4.4/2, Ms7 4.2/2*
*IDC **24** 19:09:17.7±0.6, 6.78S×105.10E, h0km, mb4.5/20, mb1 4.6/20, mb1mx4.4/27, mbtmp4.5/20, MS3.8/10, Ms1 3.8/10, ms1mx3.4/30, Error ellipse: s-maj=20.6km s-min=11.0km az=50.0*
*ISCJB **24** 19:09:19.8±0.4, 6.91S±0.07×104.87E±0.05, h23km, mb4.5/47, MS3.8/11, Error ellipse: s-maj=10.6km s-min=4.5km az=30.9*
*DJA **24** 19:09:20.8±1.4, 7.5S±3°×107.5E±°, h12km±10km, M4.7/16, mB5.1/7, mb4.7/16, MLv4.9/14, Mw(mB)4.5/7*
*MOS **24** 19:09:21.8±1.0, 6.62S×105.25E, h33km, mb4.8/17, Error ellipse: s-maj=15.0km s-min=7.8km az=113.9*
*NEIC **24** 19:09:23.0±4.2, 6.77S×105.12E, h35km±29km, mb4.6/9, Error ellipse: s-maj=12.4km s-min=5.7km az=54.0*
ISC 24 19:09:21.4±0.5, 6.82S±0.08×105.06E±0.06, h23km, n157, σ1°06/149, mb4.5/47, MS3.8/11, 9C-9D, Sunda Strait

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KASI	**Kota Agung**	**1.40**	**336**	P		**Pb**	**19 09 49.4**	**+2.5**
KASI				S		Sb	19 10 11.5	+7.1
SKJI	**Sukabumi**	**1.49**	**97**	P		**Pb**	**19 09 49.3**	**+0.8**
DBJI	**Dramaga**	**1.69**	**81**	P		**Pb**	**19 09 53.9**	**+1.9**
TNG	**Tangerang**	**1.70**	**68**	P		Pb	19 09 56.7	+4.7
LWLI	**Liwa**	**2.05**	**331**	P		**Pb**	**19 09 58.8**	**+0.8**
LEM	**Lembang**	**2.54**	**90**	P		**Pb**	**19 10 07.4**	**+1.0**
CISI	**Cisompet, Garu**	**2.83**	**105**	P		**Pn**	**19 10 08.3**	**+3.0**
MNAI	**Manna**	**3.22**	**319**	P		**Pn**	**19 10 13.4**	**+2.8**
XMIS	**Christmas Isla**	**3.69**	**171**	*e*P		Pn	19 10 10.8	-6.3
PMBI	**Palembang**	**3.88**	**356**	P		Pb	19 10 25.1	-4.0
KSI	**Kapahiang**	**3.99**	**322**	P		Pn	19 10 25.1	+3.8
TGJI	**Tegal**	**4.03**	**91**	P		**Pb**	**19 10 31.9**	**+0.1**
BJII	**Banjamegara**	**4.64**	**97**	P		Pn	19 10 35.6	+5.4
PPBI	**Pangkal Pinang**	**4.75**	**13**	P		Pn	19 10 37.4	+5.8
	62nm,0.8s,1μm0.5nm							
PCJI	**Pacitan**	**6.21**	**103**	P		Pn	19 10 55.7	+3.9
	59nm,1.6s,2μm0.4nm							
SJI	**Sawahan**	**6.71**	**98**	P		Pn	19 11 04.1	+5.4
	48nm,1.1s,1μm0.3nm							
PWJI	**Pagerwojo**	**6.79**	**101**	P		Pn	19 11 04.0	+4.3
	54nm,0.7s,0.3nm							
TPRI	**Tanjung Pinang**	**7.70**	**356**	P		Pb	19 11 31.0	-3.4
GMJI	**Gumukmas**	**8.43**	**100**	P		Pn	19 11 26.9	+4.6
	52nm,0.7s,2μm							
MYKOM	**Kota Tinggi**	**8.63**	**352**	P		Pn	19 11 39.8	+15
ABJI	**Asem Bagus**	**9.15**	**97**	P		Pn	19 11 45.4	+13
STKI	**Sintang**	**9.36**	**43**	P		Pn	19 11 48.0	+13
KHKI	**Kahang-Kahang**	**10.57**	**99**	P		**Pn**	**19 11 53.3**	**+1.8**
	84nm,0.7s							
PSI	**Prapat**	**11.35**	**327**	LR		LR	19 17 20.1	
	comp=Z,588nm,20.8s,baz=150,slow=43							
SBUM	**Sibu**	**11.65**	**38**	P		Pn	19 12 17.1	+11
WBSI	**Waikabubak, Su**	**14.46**	**102**	P		P	19 12 55.8	+4.4
BKSI	**Bulukumba**	**15.05**	**85**	P		**P**	**19 12 58.3**	**+0.4**
	40nm,1.0s							
MMRI	**Maumere**	**17.11**	**97**	P		**P**	**19 13 21.2**	**+0.3**
	50nm,0.7s,669nm							
FITZ	**Fitzroy Crossi**	**22.98**	**121**	P		**P**	**19 14 24.2**	**-0.5**
FITZ				S		**S**	**19 18 35.4**	**+1.5**
FITZ	**Fitzroy Crossi**	**22.98**	**121**	P		**P**	**19 14 24.2**	**-0.5**
	4.3nm,0.8s,baz=287,slow=7.7,SNR=9.2							
FITZ				S		**S**	**19 18 35.4**	**+1.5**
	1.7nm,0.9s,baz=258,slow=19,SNR=2.6							
FITZ				LR		LR	19 23 24.0	
	comp=Z,212nm,18.6s,baz=292,slow=37							
LBMI	**Labuha**	**23.21**	**76**	P		P	19 14 32.3	+5.3
	53nm,0.9s,926nm							
PBKT	**Sadao Pong**	**23.59**	**350**	P		**P**	**19 14 32.7**	**+2.1**
	6.4nm,0.8s							
CMAR	**Chiang Mai Arr**	**25.83**	**347**	P		**P**	**19 14 49.6**	**-1.6**
CMAR	**Chiang Mai Arr**	**25.83**	**347**	P		**P**	**19 14 49.6**	**-1.6**
	0.7nm,0.7s,baz=180,slow=8.8,SNR=24							
CMAR				LR		LR	19 26 07.9	
	comp=Z,140nm,19.1s,baz=170,slow=39							
QIZ	**Qiongzhong**	**26.11**	**10**	P		**P**	**19 14 54.6**	**+0.8**
QIZ				S		**S**	**19 19 22.3**	**-1.8**
QIZ				pmax		pmax		
	comp=Z,5.0nm,1.7s							
QIZ				LR		LR		
	comp=N,300nm,19.4s							
QIZ				LR		LR		
	comp=Z,360nm,19.4s							
CMMT	**Chiang Mai**	**26.17**	**347**	P		**P**	**19 14 57.8**	**+3.4**
	comp=Z,7.2nm,0.8s							
CHTO	**Chiang Mai**	**26.17**	**347**	*e*P		**P**	**19 14 54.6**	**+0.2**
CHTO				pmax		pmax		
	comp=Z,5.0nm,0.8s							
CHTO	**Chiang Mai**	**26.17**	**347**	*e*P		**P**	**19 14 54.6**	**+0.2**
	comp=Z,5.2nm,0.8s							
CHTO	**Chiang Mai**	**26.17**	**347**	P		**P**	**19 14 57.2**	**+2.8**
	comp=Z,7.7nm,1.0s							
NWAO	**Narrogin (SRO)**	**28.34**	**158**	LR		LR	19 25 06.9	
	comp=Z,329nm,20.7s,baz=259,slow=34							
WRAB	**Tennant Creek**	**31.26**	**118**	*e*P		**P**	**19 15 39.4**	**-0.4**
WRAB				pmax		pmax		
	comp=Z,7.0nm,1.0s							
WRAB	**Tennant Creek**	**31.26**	**118**	*e*P		**P**	**19 15 39.4**	**-0.4**
	comp=Z,7.3nm,1.0s							
ASAR	**Alice Springs**	**32.37**	**124**	P		**P**	**19 15 49.2**	**-0.3**
ASAR				PcP		**PcP**	**19 18 37.0**	**-0.2**
ASAR	**Alice Springs**	**32.37**	**124**	P		**P**	**19 15 49.2**	**-0.3**
	comp=Z,3.2nm,1.0s,baz=303,slow=7.8,SNR=27							
ASAR				PcP		**PcP**	**19 18 37.0**	**-0.2**
	comp=Z,1.5nm,0.8s,baz=300,slow=2.0,SNR=9.6							
ASAR				LR		LR	19 28 24.0	
	comp=Z,188nm,21.3s,baz=356,slow=35							
AS31	**Alice Springs**	**32.37**	**124**	*e*P		**P**	**19 15 49.4**	**-0.2**
ODAN	**Odare**	**37.60**	**334**	*e*P		**P**	**19 16 34.7**	**-

	comp=Z,7.0nm,0.8s								
KURK	**Kurchatov**	**61.69**	**341**	*e*P		**P**		19 19 37.1	**-0.5**
	comp=Z,6.9nm,0.8s								
ZAA0	**Zalesovo Array**	**62.90**	**347**	*e*P		**P**		19 19 44.6	**-1.0**
ZAA0				*e*				19 19 59.4	
ZALV	**Zalesovo Beam**	**62.90**	**347**	P		**P**		19 19 44.7	**-0.9**
ZALV	**Zalesovo Beam**	**62.90**	**347**	P		**P**		19 19 44.7	**-0.9**
ZALV	**Zalesovo Beam**	**62.90**	**347**	P		**P**		19 19 44.7	**-0.9**
	comp=Z,4.2nm,0.3s,baz=152,slow=5.6,SNR=31								
ZALV				LR		LR		19 49 49.5	
	comp=Z,137nm,19.6s,baz=340,slow=39								
YSS	**Yuzh-Sakhalins**	**63.10**	**28**	*e*P		**P**		19 19 48.0	**+0.9**
BVAR	**Borovoye Array**	**66.46**	**338**	P		**P**		19 20 08.5	**-0.4**
BVAR	**Borovoye Array**	**66.46**	**338**	P		**P**		19 20 08.5	**-0.4**
BVAR	**Borovoye Array**	**66.46**	**338**	P		**P**		19 20 08.5	**-0.4**
	comp=Z,8.4nm,0.7s,baz=141,slow=8.6,SNR=72								
BRVK	**Borovoye**	**66.53**	**338**	*d* iP		**P**		19 20 08.9	**-0.4**
BRVK				pmax		pmax			
	comp=Z,5.0nm,0.6s								
BRVK	**Borovoye**	**66.53**	**338**	*e*P		**P**		19 20 09.2	**-0.2**
	comp=Z,4.9nm,0.8s								
KMBO	**Kilima Mbogo**	**67.84**	**272**	LR		LR		19 45 15.8	
	comp=Z,91nm,18.8s,baz=94,slow=32								
ABKAR	**Akbulak array**	**68.28**	**330**	*e*P		**P**		19 20 20.0	**-0.5**
	comp=Z,6.0nm,0.5s								
YAK	**Yakutsk**	**71.24**	**12**	*e*P		**P**		19 20 36.8	**-1.6**
YAK				pmax		pmax			
	comp=Z,36nm,1.0s								
SVE	**Sverdlovsk**	**73.06**	**336**	⇓ *i* P		**P**		19 20 50.3	**+0.8**
SVE				*e*PPP		PPP		19 25 11.4	
SVE				*e*S		**S**		19 30 11.9	**-3.4**
SVE				pmax		pmax			
	comp=Z,26nm,1.1s								
ARU	**Arti**	**73.64**	**335**	*d* iP		**P**		19 20 52.7	**-0.2**
ARU								19 23 33.3	
ARU				PPP		PPP		19 25 23.6	
ARU				S		**S**		19 30 22.1	**+0.2**
ARU				pmax		pmax			
	comp=Z,18nm,1.2s								
PETK	**Petropavlovsk-**	**74.38**	**30**	P		**P**		19 20 56.8	**-0.5**
PETK	**Petropavlovsk-**	**74.38**	**30**	P		**P**		19 20 56.8	**-0.5**
PETK	**Petropavlovsk-**	**74.38**	**30**	P		**P**		19 20 56.8	**-0.5**
	comp=Z,2.9nm,0.7s,baz=182,slow=4.3,SNR=3.9								
KBZ	**Khabaz**	**75.23**	**318**	P		**P**		19 21 02.8	**+0.4**
KBZ	**Khabaz**	**75.23**	**318**	P		**P**		19 21 02.8	**+0.4**
KBZ	**Khabaz**	**75.23**	**318**	P		**P**		19 21 02.8	**+0.4**
	comp=Z,6.2nm,0.9s,baz=161,slow=3.9,SNR=12								
KIV	**Kislovodsk**	**75.47**	**319**	*e*P		**P**		19 21 04.9	**+1.0**
KIV				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KIV				MLR		MLR			
	comp=Z,27nm,18.0s								
VNDA	**Vanda**	**76.50**	**169**	P		**P**		19 21 08.5	**-0.7**
VNDA	**Vanda**	**76.50**	**169**	P		**P**		19 21 08.5	**-0.7**
	comp=Z,2.3nm,0.9s,baz=289,slow=6.0,SNR=10								
TIXI	**Tiksi**	**79.87**	**7**	*e*P		**P**		19 21 26.6	**-1.1**
TIXI				pmax		pmax			
	comp=Z,15nm,1.0s								
BR131	**Keskin Array S**	**80.28**	**312**	*e*P		**P**		19 21 30.7	**-0.2**
	comp=Z,1.6nm,0.8s								
BRTR	**Keskin Array B**	**80.28**	**312**	P		**P**		19 21 30.2	**-0.7**
BRTR	**Keskin Array B**	**80.28**	**312**	P		**P**		19 21 30.2	**-0.7**
	comp=Z,5.1nm,1.0s,baz=134,slow=7.0,SNR=20								
OBN	**Obninsk**	**83.53**	**327**	⇓ *i* P		**P**		19 21 47.5	**+0.1**
OBN				*e*S		S		19 31 58.4	-9.4
OBN				pmax		pmax			
	comp=Z,4.0nm,0.5s								
BILL	**Bilibino**	**85.95**	**19**	⇑ *e*P		**P**		19 21 58.6	**-0.8**
BILL				*e*				19 25 19.0	
BILL				pmax		pmax			
	comp=Z,2.0nm,1.0s								
VRI	**Vrincioaia**	**86.79**	**317**	⇓ P		**P**		19 22 05.7	**+1.7**
VRI	**Vrincioaia**	**86.79**	**317**	⇓ *i* P		**P**		19 22 05.7	**+1.7**
PLOR	**Plostina**	**86.84**	**317**	⇓ P		**P**		19 22 04.8	**+0.5**
PLOR	**Plostina**	**86.84**	**317**	⇓ *i* P		**P**		19 22 04.8	**+0.5**
TESR	**Tescani**	**86.99**	**317**	⇑ *i* P		**P**		19 22 06.0	**+1.0**
MLR	**Muntele Rosu**	**87.25**	**316**	⇑ *i* P		**P**		19 22 07.4	**+1.0**
ARR	**Arges**	**88.12**	**316**	⇑ *i* P		**P**		19 22 11.8	**+1.3**
BURAR	**Bucovina Array**	**88.19**	**318**	⇓ *i* P		**P**		19 22 12.8	**+2.0**
BUR08	**Bucovina Ar. S**	**88.20**	**318**	*e*P		**P**		19 22 12.2	**+1.3**
VTS	**Vitosha**	**88.60**	**313**	⇑ P		**P**		19 22 13.5	**+0.5**
VTS	**Vitosha**	**88.60**	**313**	⇑ *i* P		**P**		19 22 13.5	**+0.5**
GZR	**Gura Zlata**	**89.41**	**316**	⇑ P		**P**		19 22 13.7	**-2.9**
GZR	**Gura Zlata**	**89.41**	**316**	⇑ *i* P		**P**		19 22 13.7	**-2.9**
KOLS	**Kolonicke sedl**	**90.37**	**319**	*e*P		**P**		19 22 22.0	**+1.1**
KOLS				pmax		pmax			
	comp=Z,5.0nm,1.1s								
KOLS	**Kolonicke sedl**	**90.37**	**319**	*e*P		**P**		19 22 22.0	**+1.1**
FINES	**FINESS Array B**	**90.70**	**332**	P		**P**		19 22 22.5	**+0.4**
FINES	**FINESS Array B**	**90.70**	**332**	P		**P**		19 22 22.5	**+0.4**
	comp=Z,1.1nm,0.7s,baz=152,slow=8.6,SNR=4.3								
CRVS	**Cervenica-Dubn**	**90.89**	**319**	*e*P		**P**		19 22 23.2	**-0.2**
CRVS				pmax		pmax			
	comp=Z,3.0nm,1.5s								
CRVS	**Cervenica-Dubn**	**90.89**	**319**	*e*P		**P**		19 22 23.2	**-0.2**
STHS	**Stebnicka Huta**	**91.11**	**320**	*e*P		**P**		19 22 25.3	**+0.9**
STHS				pmax		pmax			
	comp=Z,2.0nm,0.8s								
STHS	**Stebnicka Huta**	**91.11**	**320**	*e*P		**P**		19 22 25.3	**+0.9**
ARCES	**ARCESS Array B**	**92.70**	**340**	P		**P**		19 22 31.7	**+0.4**
ARCES	**ARCESS Array B**	**92.70**	**340**	P		**P**		19 22 31.7	**+0.4**
	comp=Z,0.7nm,0.6s,baz=87,slow=5.3,SNR=4.8								
NOA	**NORSAR Array B**	**97.78**	**331**	LR		LR		20 13 16.5	
	comp=Z,26nm,20.3s,baz=85,slow=39								
WMOK	**Wichita Mounta**	**144.58**	**35**	*e*PKIKP		**PKPab**		19 28 55.0	**-0.2**
WMOK	**Wichita Mounta**	**144.58**	**35**	*e*PKPdf		**PKPab**		19 28 55.0	**-0.2**
BINY	**Binghamton**	**144.75**	**1**	*e*PKPdf		**PKPab**		19 28 55.4	**-0.2**
TXAR	**Lajitas Array**	**144.87**	**47**	PKP		**PKPdf**		19 28 57.3	**-0.2**
TXAR	**Lajitas Array**	**144.87**	**47**	PKP		**PKPdf**		19 28 57.3	**-0.2**
	comp=Z,4.6nm,0.7s,baz=280,slow=1.3,SNR=44								
BDFB	**Brasilia**	**145.23**	**230**	PKPbc		**PKPdf**		19 28 57.9	**-0.5**
BDFB	**Brasilia**	**145.23**	**230**	PKPbc		**PKPdf**		19 28 57.9	**-0.5**
	comp=Z,3.2nm,0.7s,baz=153,slow=6.9,SNR=4.7								
ACSO	**Alum Creek Sta**	**145.96**	**11**	*e*PKPdf		**PKPdf**		19 28 59.0	**+0.1**
ACSO				*e*				19 29 11.9	
JCT	**Junction City**	**146.86**	**42**	*e*PKP2		**PKPdf**		19 29 01.2	**+0.4**
JCT	**Junction City**	**146.86**	**42**	*e*PKPdf		**PKPdf**		19 29 01.2	**+0.4**
WVT	**Waverly**	**148.52**	**20**	*e*PKP2		**PKPbc**		19 29 06.3	**-0.6**
WVT	**Waverly**	**148.52**	**20**	*e*PKPbc		**PKPbc**		19 29 06.3	**-0.6**
TKL	**Tuckaleechee C**	**150.17**	**15**	*e*PKPbc		**PKPbc**		19 29 10.8	**-0.3**
CPCT	**Cooper Cave**	**150.17**	**16**	*e*PKPbc		**PKPbc**		19 29 10.2	**-0.9**

DDA **24** *19:17:04.7,35°.73N×29°.40E,h7km,MD3.3*
CSEM **24** *19:17:09.9,37°.30N×29°.60E,h10km,MD2.9, After ISK*
ISK **24** *19:17:09.9,37°.30N×29°.60E,h10km, MD2.9*
ISC 24 19:17:05.8±2.1,**35.76N**±0°.09×**29.49E**±0°.05,**h19**km±4km,
n15,σ1°**35**/19,**Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKAS	**Kas**	**0.49**	**11**	*e*Pn	**Pg**	19 17 14.4	**-1.4**
AKAS				*e*Sn	**Sb**	19 17 23.5	**+0.8**
FETY	**Fethiye**	**0.94**	**339**	*e*PG	**Pn**	19 17 24.9	**+0.9**
FETY				*e*SG	**Sn**	19 17 37.0	**0.0**
FETY	**Fethiye**	**0.94**	**339**	*e*Pg	**Pn**	19 17 24.9	**+0.9**
FETY				*e*Sg	**Sn**	19 17 37.0	**0.0**
DALY	**Dalyan (Mu˘la**	**1.26**	**328**	*e*PG	**Pb**	19 17 27.8	**-1.1**
DALY	**Dalyan (Mu˘la**	**1.26**	**328**	*e*Pg	**Pb**	19 17 27.8	**-1.1**
KORT	**Korkueli**	**1.42**	**29**	*e*Pn	**Pn**	19 17 29.0	**-1.8**
KORT				*e*Sn	**Sg**	19 17 53.8	**+1.9**
GOLH	**Golhisar**	**1.48**	**2**	*e*Pn	Pg	19 17 36.2	+1.9
GOLH				*e*Sn	**Sg**	19 17 56.4	**+2.7**
DAT	**Datca**	**1.83**	**303**	*e*PN	**Pg**	19 17 41.0	**0.0**
DAT	**Datca**	**1.83**	**303**	*e*Pn	**Pg**	19 17 41.0	**0.0**
DNZL	**Cakiroluk**	**1.96**	**350**	*e*Pn	**Pg**	19 17 42.1	**-1.5**
DNZL				*e*Sn	**Sg**	19 18 10.4	**+1.3**
SUTC	**Sutluce-Ispart**	**2.10**	**35**	*e*PN	Pn	19 17 32.1	-8.0
SUTC	**Sutluce-Ispart**	**2.10**	**35**	*e*Pn	Pn	19 17 32.1	-8.0
AYDN	**Tasoluk**	**2.30**	**326**	*e*Pn	**Pb**	19 17 46.3	**-0.5**
AYDN				*e*Sn	**Sg**	19 18 18.9	**-1.0**
HDMB	**Hadim**	**2.70**	**63**	*e*PN	**Pn**	19 17 49.3	**+0.9**
HDMB	**Hadim**	**2.70**	**63**	*e*Pn	**Pn**	19 17 49.3	**+0.9**

IDC 24 19:27:58.1±2.4,**56°.04S×27°.60W,h150**km±20km,**mb4.1**/9,
mb1 4.2/10,**mb1mx4.0**/19,**mbtmp4.1**/10,**Error ellipse:**
s-maj=19.3km s-min=13.4km az=78.0,South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**18.84**	**156**	P	P	19 32 05.4	-0.8
	2.9nm,0.3s,baz=308,slow=11,SNR=638						
SNAA					ScP	ScP	19 39 48.0	+1.0
	0.1nm,0.3s,baz=5.1,slow=5.2,SNR=6.7							
QSPA	**South Pole Qui**	**34.21**	**180**	P	P	19 34 29.2	+0.2
	8.6nm,0.6s,baz=192,slow=2.5,SNR=39							
QSPA					PcP	PcP	19 37 00.1	-1.7
	2.3nm,0.6s,baz=270,slow=3.0,SNR=5.0							
QSPA					ScP	ScP	19 40 30.8	-1.7
	1.3nm,0.8s,baz=180,slow=1.0,SNR=5.0							
CPUP	**Villa Florida**	**36.63**	**312**	P	P	19 34 49.2	-0.6
	0.8nm,0.3s,baz=88,slow=2.2,SNR=2.0							
CPUP					PcP	PcP	19 37 09.4	0.0
	1.1nm,0.4s,baz=90,slow=20,SNR=3.6							
CFAA	**Coronel Fontan**	**37.34**	**294**	PcP	PcP	19 37 11.2	-0.4
	0.2nm,0.4s,baz=220,slow=14,SNR=2.4							
VNDA	**Vanda**	**46.57**	**183**	P	P	19 36 10.7	+0.7
	3.7nm,0.7s,baz=186,slow=5.0,SNR=46							
LBTB	**Lobatse**	**49.23**	**74**	P	P	19 36 30.9	-0.2
	2.3nm,0.6s,baz=208,slow=8.6,SNR=7.6							
LBTB					PcP	PcP	19 37 51.9	+0.1
	2.9nm,1.0s,baz=225,slow=5.7,SNR=2.9							
LPAZ	**La Paz**	**50.18**	**306**	P	P	19 36 39.4	+0.3
	2.5nm,0.4s,baz=154,slow=6.2,SNR=11							
DBIC	**Dimbokro**	**65.25**	**25**	P	P	19 38 23.6	+0.1
	11nm,1.1s,baz=151,slow=13,SNR=4.7							
TORD	**Torodi Ar. Bea**	**73.16**	**30**	P	P	19 39 12.4	+0.4
	8.1nm,0.5s,baz=200,slow=6.5,SNR=78							
STKA	**Stephens Creek**	**91.95**	**171**	P	P	19 40 49.0	-0.3
	1.3nm,0.6s,baz=163,slow=14,SNR=4.0							
ASAR	**Alice Springs**	**99.07**	**163**	P	Pdif	19 41 21.2	-0.6
	1.0nm,0.6s,baz=187,slow=3.8,SNR=13							
PDAR	**Pinedale Array**	**120.14**	**303**	PKP	PKPdf	19 46 29.4	-1.0
	0.3nm,0.4s,baz=141,slow=5.8,SNR=3.0							
NVAR	**Mina Array Bea**	**121.18**	**293**	PKP	PKPdf	19 46 32.3	-0.2
	0.3nm,0.3s,baz=144,slow=2.1,SNR=2.8							
FINES	**FINESS Array B**	**124.48**	**28**	PKP	PKPdf	19 46 37.1	-0.6
	1.5nm,0.6s,baz=231,slow=1.5,SNR=11							
KAF	**Kangasniemi**	**125.10**	**28**	*e*pkp	PKPdf	19 46 38.3	-0.6
CMAR	**Chiang Mai Arr**	**125.28**	**111**	PKP	PKPdf	19 46 40.5	-0.3
	1.1nm,0.8s,baz=226,slow=4.6,SNR=7.4							
JOF	**Joensuu**	**127.11**	**29**	*e*pkp	PKPdf	19 46 41.9	-0.8
ARCES	**ARCESS Array B**	**131.02**	**22**	PKP	PKPdf	19 46 49.8	-0.3
	0.9nm,0.6s,baz=195,slow=1.9,SNR=10							
YKA	**Yellowknife Ar**	**136.01**	**318**	PKP	PKPdf	19 46 58.6	-1.0
	0.5nm,0.4s,baz=116,slow=2.7,SNR=4.2							
MKAR	**Makanchi Array**	**137.10**	**72**	PKP	PKPdf	19 47 02.4	+0.2
	0.6nm,0.6s,baz=222,slow=3.1,SNR=5.8							
ZALV	**Zalesovo Beam**	**142.57**	**64**	PKhKP	PKPpre	19 47 07.2	
	1.1nm,0.4s,baz=242,slow=4.1,SNR=6.5							
ILAR	**Eielson Array**	**149.94**	**312**	PKPbc	PKPbc	19 47 28.8	-0.2
	12nm,0.8s,baz=128,slow=1.8,SNR=72							
SONM	**Songino Array**	**150.96**	**87**	PKPbc	PKPbc	19 47 31.8	-0.3
	9.3nm,0.4s,baz=221,slow=3.8,SNR=96							

ISK **24** *19:47:26.6,37°.74N×27°.20E,h22km,MD2.7*
DDA **24** *19:47:27.2,37°.71N×26°.88E,h7km,MD2.8*
CSEM **24** *19:47:27.3±0.1,37°.76N×27°.25E,h34km±2km,MD2.7,*
Error ellipse: s-maj=6.8km s-min=3.0km az=74.0
ISC 24 19:47:27.5±1.2,**37.70N**±0°.03×**27.08E**±0°.05,**h21**km±1km,
n16,σ1°**02**/25,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GCAM	**G?zelcaml?**	**0.12**	**88**	*i* P	**Pb**	19 47 33.2	**-0.3**
GCAM				*i* S	**Sb**	19 47 37.7	**-0.1**
GCAM	**G?zelcaml?**	**0.12**	**88**	*i* P	**Pb**	19 47 33.2	**-0.3**
GCAM				*i* S	**Sb**	19 47 37.7	**-0.1**
AYDN	**Tasoluk**	**0.64**	**93**	*e*P	**Pn**	19 47 42.6	**+1.2**
AYDN				*e*S	**Sn**	19 47 54.1	**+3.1**
AYDN	**Tasoluk**	**0.64**	**93**	*e*P	**Pn**	19 47 42.6	**+1.2**
BODT	**Bodrum**	**0.66**	**164**	*e*PG	**Pb**	19 47 40.4	**0.0**
BODT				*e*SG	**Sn**	19 47 50.9	**-0.6**
BODT	**Bodrum**	**0.66**	**164**	*e*Pg	**Pb**	19 47 40.4	**0.0**
BODT				*e*Sg	**Sn**	19 47 50.9	**-0.6**
MLSB	**Milas**	**0.68**	**126**	*e*PG	**Pb**	19 47 39.7	**-1.1**
MLSB				*e*SG	**Sb**	19 47 49.4	**-0.5**
MLSB	**Milas**	**0.68**	**126**	*e*Pg	**Pb**	19 47 39.7	**-1.1**
MLSB				*e*Sg	**Sb**	19 47 49.4	**-0.5**
BLCB	**Balcova**	**0.69**	**358**	*e*PG	**Pb**	19 47 40.0	**-0.8**
BLCB				*e*SG	**Sb**	19 47 49.8	**-0.1**
BLCB	**Balcova**	**0.69**	**358**	*e*Pg	**Pb**	19 47 40.0	**-0.8**
BLCB				*e*Sg	**Sb**	19 47 49.8	**-0.1**
IZM	**Izmir**	**0.71**	**12**	*e*PG	**Pb**	19 47 40.1	**-1.2**
IZM	**Izmir**	**0.71**	**12**	*e*Pg	**Pb**	19 47 40.1	**-1.2**
DAT	**Datca**	**1.04**	**157**	*e*PG	**Pn**	19 47 46.4	**-0.6**
DAT	**Datca**	**1.04**	**157**	*e*Pg	**Pn**	19 47 46.4	**-0.6**
APE	**Apeiranthos**	**1.38**	**244**	*e*PN	**Pb**	19 47 52.8	**+0.1**
APE	**Apeiranthos**	**1.38**	**244**	*e*Pn	**Pb**	19 47 52.8	**+0.1**

BJI 24 20:07:28.1,40°.24N×105°.53E,h9km,**ML3.7**/12,**Ms3.4**/2,
Ms7 3.1/1,**Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTO	**Baotou**	**3.45**	**82**	*e*Pn	Pb	20 08 20.8	-1.3
BTO				Pg	Pb	20 08 27.1	-2.4
BTO				Sn	Sn	20 09 01.5	-1.7
BTO				Sg	Sb	20 09 12.0	+0.4
BTO				smax	smax		
	comp=N,40nm,0.3s						
BTO				smax	smax		
	comp=E,33nm,0.3s						
LZH	**Lanzhou**	**4.35**	**198**	Pg	Pb	20 08 46.1	+1.1
LZH				Sn	Sn	20 09 27.3	+1.6
LZH				Sg	Sb	20 09 42.4	+4.6
LZH				smax	smax		
	comp=N,310nm,0.6s						
LZH				smax	smax		
	comp=E,310nm,0.8s						
LZH				LR	LR		
	comp=N,310nm,7.8s						
LZH				LR	LR		
	comp=E,310nm,6.7s						
LZH				LR	LR		
	comp=Z,180nm,8.2s						
GTA	**Gaotai**	**4.48**	**261**	Pn	Pn	20 08 35.8	-0.5
GTA				Pg	Pb	20 08 44.8	-2.3
GTA				Sn	Sn	20 09 23.1	-5.6
GTA				smax	smax		
	comp=N,130nm,1.0s						
GTA				smax	smax		
	comp=E,110nm,0.9s						
GTA				LR	LR		
	comp=N,240nm,6.6s						
GTA				LR	LR		
	comp=E,96nm,5.7s						
HHC	**Hu-ho-hao-te**	**4.64**	**81**	*e*Pg	Pb	20 08 51.4	+1.6
HHC				Sg	Sb	20 09 50.3	+4.5
HHC				smax	smax		
	comp=N,370nm,0.7s						
HHC				smax	smax		
	comp=E,340nm,0.7s						
XAN	**Xi'an**	**6.75**	**155**	Pg	Pb	20 09 31.6	+5.8
XAN				smax	smax		
	comp=N,34nm,0.6s						
XAN				smax	smax		
	comp=E,17nm,1.0s						

ISK **24** *20:24:29.4,39°.18N×26°.15E,h9km,MD2.9*
CSEM **24** *20:24:31.2±1.3,39°.33N×25°.99E,h10km,MD2.9,Error*
ellipse: s-maj=27.3km s-min=11.4km az=35.0
DDA **24** *20:24:35.5,39°.46N×26°.27E,h7km,MD2.8*
ISC 24 20:24:29.6±3.4,**39°.2N**±0°.1×**26°.1E**±0°.1,**h3**km±14km,**n15,**
σ0°**54**/24,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.48**	**78**	*e*P	**Pn**	20 24 42.9	**-0.5**
AYVA				*e*S	**Sb**	20 24 48.5	**+0.3**
AYVA	**Ayvalik**	**0.48**	**78**	*e*P	**Pn**	20 24 42.9	**-0.5**
AYVA				*e*S	**Sb**	20 24 48.5	**+0.3**
BOZC	**Bozcaada**	**0.63**	**358**	*e*P	**Pb**	20 24 43.3	**-0.1**
BOZC				*e*S	**Sg**	20 24 50.4	**+0.3**
LPK	**Lapseki**	**1.27**	**24**	*e*Pn	**Pg**	20 24 53.9	**-0.2**
LPK				*e*SN	**Sn**	20 25 12.1	**+0.1**
LPK	**Lapseki**	**1.27**	**24**	*e*Pn	**Pg**	20 24 53.9	**-0.2**
LPK				*e*Sn	**Sn**	20 25 12.1	**+0.1**
BALY	**Balya**	**1.30**	**65**	*e*P	**Pn**	20 24 55.9	**+1.2**
BALY				*e*S	**Sn**	20 25 12.9	**+0.2**
BALY	**Balya**	**1.30**	**65**	*e*P	**Pn**	20 24 55.9	**+1.2**
BALY				*e*S	**Sn**	20 25 12.9	**+0.2**

GONE	**Gonen-Balikesi**	**1.49**	**55**	*e*PN		**Pn**		20 24 56.7	**-0.6**
GONE				*e*SN		**Sn**		20 25 16.7	**-0.6**
GONE	**Gonen-Balikesi**	**1.49**	**55**	*e*Pn		**Pn**		20 24 56.7	**-0.6**
GONE				*e*Sn		**Sn**		20 25 16.7	**-0.6**
ERIK	**Erikli-Kesan**	**1.50**	**13**	*e*PN		**Pn**		20 24 57.6	**+0.2**
ERIK	**Erikli-Kesan**	**1.50**	**13**	*e*Pn		**Pn**		20 24 57.6	**+0.2**
KRBG	**Karabiga-Canak**	**1.51**	**38**	*e*PN		**Pn**		20 24 57.2	**-0.3**
KRBG	**Karabiga-Canak**	**1.51**	**38**	*e*Pn		**Pn**		20 24 57.2	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.70**	**29**	*e*PN		**Pn**		20 24 60.0	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.70**	**29**	*e*Pn		**Pn**		20 25 00.0	**-0.2**

SKO **24** *20:43:47.7,41°.31N×22°.72E,h15km,M0.8,ML1.1*
CSEM **24** *20:43:48.8,41°.19N×22°.72E,h27km,MD2.5,After ATH*
ATH 24 20:43:48.8,41°.19N×22°.72E,h27km±10km,**MD2.5**/4,
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.17**	**319**	*i* Pg	Pb	20 43 50.9	-3.5
VAY				*i* Sg	Sb	20 43 53.1	-5.0
VAY				*e*Lg	Lg	20 43 53.2	
	comp=E,105nm,0.2s						
VAY				*e*Lg	Lg	20 43 53.2	
	comp=N,163nm,0.3s						
GRG	**Griva**	**0.34**	**226**	*e*PB	Pb	20 43 56.6	0.0
GRG				*e*SB	Sb	20 44 02.2	+0.4
GRG	**Griva**	**0.34**	**226**	*e*Pb	Pb	20 43 56.6	0.0
GRG				*e*Sb	Sb	20 44 02.2	+0.4
SOH	**Sokhos**	**0.60**	**127**	*e*PN	Pb	20 44 00.6	-0.3
SOH				*e*SN	Sn	20 44 10.6	0.0
SOH	**Sokhos**	**0.60**	**127**	*e*Pn	Pb	20 44 00.6	-0.3
SOH				*e*Sn	Sn	20 44 10.6	0.0
PLG	**Polygyros**	**0.98**	**146**	*e*PN	Pn	20 44 07.0	+0.1
PLG	**Polygyros**	**0.98**	**146**	*e*Pn	Pn	20 44 07.0	+0.1
FNA	**Florina**	**1.09**	**249**	*e*PN	Pb	20 44 10.2	+1.0
FNA	**Florina**	**1.09**	**249**	*e*Pn	Pb	20 44 10.2	+1.0

IDC **24** *20:50:17.6±2.2,29°.70N×57°.84E,h0km,mb3.7/9,*
mb1 3.9/12,mb1mx3.6/32,mbtmp3.8/12,ML3.7/3,MS3.1/5,
Ms1 3.1/5,ms1mx2.6/47,Error ellipse: s-maj=49.7km
s-min=16.9km az=157.0
TEH **24** *20:50:21.8,29°.89N×57°.84E,h5km,ML4.0*
CSEM **24** *20:50:21.4±0.2,29°.92N×57°.74E,h2km,ML4.0,Error*
ellipse: s-maj=5.8km s-min=4.5km az=151.0
THR **24** *20:50:22.0±0.8,29°.96N×57°.71E,h18km±9km,ML4.0*
ISC 24 20:50:19.8±1.4,**29°.89N**±0°.04×**57°.83E**±0°.03,**h3**km±10km,
n73,σ1°**45**/89,**mb3.7**/8,**Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRBR	**Kerman**	**0.94**	**276**	*e*Pg	**Pg**	20 50 38.2	**+0.4**
KRBR				*e*Sg	**Sg**	20 50 49.6	**-0.3**
KRBR				AML	AML	20 50 52.5	
	comp=N,6μm,0.4s						
KRBR				AML	AML	20 50 53.1	
	comp=E,4μm,0.3s						
KRBR	**Kerman**	**0.94**	**276**	*e*Pg	**Pg**	20 50 38.2	**+0.4**
KRBR				*e*Sg	**Sg**	20 50 49.7	**-0.3**
ZHSF	**Zahedan**	**2.57**	**95**	*e*Pn	**Pb**	20 51 06.8	**+0.1**
ZHSF				AML	AML	20 51 48.1	
	comp=N,646nm,0.5s						
ZHSF				AML	AML	20 51 55.2	
	comp=E,493nm,0.6s						
ZHSF	**Zahedan

IFIR				*e*			20 53 04.0	
	comp=Z,124nm,0.2s							
IFIR	**Firoozkooh**	**7.15**	**325**	*e*Pn	**Pn**	**20 52 06.5**	**+0.9**	
IVRN	**Varamin**	**7.25**	**316**	*e*		20 52 44.6		
	comp=Z,156nm,0.2s							
IVRN				*e*Pn	**Pn**	**20 52 07.8**	**+1.1**	
IRAZ	**Razeghan**	**8.64**	**312**	*e*Pn	**Pn**	**20 52 26.7**	**+0.8**	
IRAZ				*e*		20 56 47.7		
	comp=Z,93nm,0.2s							
IRAZ	**Razeghan**	**8.64**	**312**	*e*Pn	**Pn**	**20 52 26.7**	**+0.8**	
UMR	**Umm Al-Rimmam**	**8.80**	**270**	*e*P	**Pn**	**20 52 27.1**	**-0.9**	
UMR	**Umm Al-Rimmam**	**8.80**	**270**	*e*P	**Pn**	**20 52 27.0**	**-0.9**	
KBD	**Kabd**	**8.86**	**268**	*e*P	**Pn**	**20 52 28.0**	**-0.8**	
KBD	**Kabd**	**8.86**	**268**	*e*P	**Pn**	**20 52 28.0**	**-0.8**	
RDF	**Al-Radifah**	**9.02**	**266**	*e*P	**Pn**	**20 52 30.5**	**-0.4**	
RDF				AML	AML	20 54 09.9		
	comp=Z,5.0nm,0.4s							
RDF	**Al-Radifah**	**9.02**	**266**	*e*P	**Pn**	**20 52 30.5**	**-0.4**	
NAY	**Al-Naaiem**	**9.25**	**269**	*e*P	**Pn**	**20 52 32.8**	**-1.2**	
NAY				AML	AML	20 54 08.9		
	comp=Z,1.5nm,0.7s							
NAY	**Al-Naaiem**	**9.25**	**269**	*e*P	**Pn**	**20 52 32.8**	**-1.2**	
ASF	**Jabal al Asfar**	**18.09**	**283**	P	**Pn**	**20 54 32.6**	**+0.4**	
	comp=Z,0.2nm,0.3s,baz=51,slow=6.5,SNR=5.0							
ASF				LR	LR	21 03 07.2		
	comp=Z,84nm,18.1s,baz=120,slow=42							
AAK	**Ala-Archa**	**18.46**	**42**	P	**P**	**20 54 36.9**	**+0.2**	
	comp=Z,0.2nm,0.3s,baz=213,slow=11,SNR=4.5							
AAK				LR	LR	21 03 02.0		
	comp=Z,55nm,19.2s,baz=268,slow=41							
MMAI	**Mount Meron Ar**	**19.38**	**285**	LR	LR	21 03 51.6		
	comp=Z,70nm,18.8s,baz=65,slow=42							
EIL	**Elat**	**19.86**	**275**	P	**P**	**20 54 52.4**	**+0.3**	
	comp=Z,0.2nm,0.3s,baz=65,slow=9.7,SNR=5.8							
EIL				LR	LR	21 03 52.1		
	comp=Z,46nm,21.3s,baz=119,slow=41							
AKTO	**Aktyubinsk**	**20.52**	**0**	P	**P**	**20 54 59.5**	**+0.5**	
	comp=Z,1.9nm,0.7s,baz=187,slow=15,SNR=5.0							
BRTR	**Keskin Array B**	**22.10**	**303**	P	**P**	**20 55 15.4**	**-0.9**	
	comp=Z,1.4nm,0.8s,baz=124,slow=12,SNR=7.7							
BVAR	**Borovoye Array**	**24.88**	**18**	P	**P**	**20 55 43.4**	**-0.2**	
	comp=Z,1.3nm,0.6s,baz=190,slow=7.3,SNR=10							
BVAR				LR	LR	21 05 28.6		
	comp=Z,24nm,18.1s,baz=73,slow=36							
MKAR	**Makanchi Array**	**25.39**	**42**	P	**P**	**20 55 48.2**	**-0.1**	
	comp=Z,1.5nm,0.6s,baz=230,slow=8.3,SNR=12							
KURBB	**Kurchatov Area**	**25.88**	**31**	P	**P**	**20 55 52.8**	**+0.1**	
	comp=Z,1.3nm,0.8s,baz=229,slow=8.9,SNR=16							
ZALV	**Zalesovo Beam**	**30.98**	**31**	P	**P**	**20 56 37.6**	**-0.4**	
	comp=Z,1.7nm,0.6s,baz=239,slow=9.4,SNR=9.1							
FINES	**FINESS Array B**	**37.85**	**336**	P	**P**	**20 57 36.9**	**-0.5**	
	comp=Z,0.7nm,0.8s,baz=128,slow=11,SNR=3.0							
GERES	**GERESS Array B**	**38.37**	**312**	P	**P**	**20 57 41.2**	**-1.0**	
	comp=Z,0.5nm,0.6s,baz=104,slow=8.4,SNR=6.4							
TORD	**Torodi Ar. Bea**	**54.31**	**265**	P	**P**	**20 59 45.4**	**-2.4**	
	comp=Z,1.0nm,0.5s,baz=61,slow=7.0,SNR=34							

CSEM ***24*** *20:50:46.8, 42.46N×13.34E, h11km, MD1.9/11, After ROM*
ROM 24 20:50:46.8±0.1, 42.46N×13.34E, h11km, Md1.9/11, Ml1.4/6, Error ellipse: s-maj=1.2km s-min=1.0km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.09**	**33**	Pg	Pg	20 50 49.9	+0.3
CAMP				Sg	Sg	20 50 52.1	+0.5
	49nm,0.3s						
CAMP	**Campotosto**	**0.09**	**33**	Pg	Pg	20 50 49.9	+0.3
CAMP				Sg	Sg	20 50 52.1	+0.5
	49nm,0.3s						
AQU	**L'Aquila**	**0.12**	**157**	Pg	Pg	20 50 50.0	+0.2
AQU				Sg	Sg	20 50 52.4	+0.5
AQU	**L'Aquila**	**0.12**	**157**	Pg	Pg	20 50 50.0	+0.2
AQU				Sg	Sg	20 50 52.4	+0.5
TERO	**Teramo**	**0.25**	**50**	Pg	Pg	20 50 52.1	0.0
TERO				Sg	Sg	20 50 56.2	+0.5
	27nm,0.4s						
TERO	**Teramo**	**0.25**	**50**	Pg	Pg	20 50 52.1	0.0
TERO				Sg	Sg	20 50 56.2	+0.5
	27nm,0.4s						
FIAM	**Fiamignano**	**0.25**	**221**	Pg	Pg	20 50 52.5	+0.3
FIAM				Sg	Sg	20 50 56.8	+1.0
FIAM	**Fiamignano**	**0.25**	**221**	Pg	Pg	20 50 52.5	+0.3
FIAM				Sg	Sg	20 50 56.8	+1.0
FAGN	**Fagnano**	**0.26**	**137**	Pg	Pg	20 50 52.6	+0.3
FAGN				Sg	Sb	20 50 57.7	-0.6
	71nm,0.3s						
FAGN	**Fagnano**	**0.26**	**137**	Pg	Pg	20 50 52.6	+0.3
FAGN				Sg	Sb	20 50 57.7	-0.6
	71nm,0.3s						
LNSS	**Leonessa**	**0.27**	**303**	Pg	Pg	20 50 52.7	+0.3
LNSS				Sg	Sb	20 50 57.4	-1.1
	29nm,0.2s						
LNSS	**Leonessa**	**0.27**	**303**	Pg	Pg	20 50 52.7	+0.3
LNSS				Sg	Sb	20 50 57.4	-1.1
	29nm,0.2s						
VCEL	**Villa Celiera**	**0.38**	**100**	Pg	Pg	20 50 54.6	+0.2
VCEL				Sg	Sb	20 51 01.4	-0.2
	33nm,0.4s						
VCEL	**Villa Celiera**	**0.38**	**100**	Pg	Pg	20 50 54.6	+0.2
VCEL				Sg	Sb	20 51 01.4	-0.2
	33nm,0.4s						
NRCA	**Norcia**	**0.41**	**336**	Pg	Pg	20 50 55.0	-0.1
NRCA				Sg	Sg	20 51 01.5	+0.9
	41nm,0.1s						
NRCA	**Norcia**	**0.41**	**336**	Pg	Pg	20 50 55.0	-0.1
NRCA				Sg	Sg	20 51 01.5	+0.9
	41nm,0.1s						

JMA ***24*** *21:01:33.9±0.3, 24.93N×122.50E, h127km, M2.1*
TAP ***24*** *21:01:34.0, 25.02N×122.49E, h121km, ML3.2, C*
ISCJB ***24*** *21:01:34.6±0.9, 24.97N±0.07×122.52E±0.03, h119km±7km, Error ellipse: s-maj=12.0km s-min=4.0km az=176.9*
ISC 24 21:01:35.6±2.1, 24.9N±0.1×122.51E±0.03, h114km±13km, n23, σ0963/44, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.48**	**278**	*e*P	**Pn**	**21 01 52.3**	**-0.5**
	baz=276						
TWB1				*e*S	**Sn**	**21 02 05.5**	**-0.2**
	baz=276						
YOJ	**Yonaguni jima**	**0.66**	**136**	P	**Pn**	**21 01 53.8**	**-0.2**
YOJ				*e*S	**Sn**	**21 02 09.2**	**+1.3**
NWF	**Wu-fen Shan**	**0.68**	**281**	*e*P	**Pn**	**21 01 54.2**	**-0.1**
	baz=277						
TWC	**Suao**	**0.69**	**242**	P	**Pn**	**21 01 53.9**	**-0.4**
	baz=232						
TWC				*e*S	**Sn**	**21 02 08.4**	**+0.1**
	baz=232						
TWE	**Neicheng**	**0.80**	**254**	P	**Pn**	**21 01 55.0**	**-0.2**
	baz=255						
TWE				*e*S	**Sn**	**21 02 10.3**	**+0.3**
	baz=255						
ENA	**Nanau**	**0.87**	**234**	P	**Pn**	**21 01 55.6**	**-0.2**
	baz=221						
ENA				*e*S	**Sn**	**21 02 11.9**	**+0.7**
	baz=221						
ENTT	**Nioudou**	**0.91**	**251**	P	**Pn**	**21 01 56.1**	**-0.2**
	baz=245						
ENTT				*e*S	**Sn**	**21 02 13.6**	**+1.7**
	baz=245						
NSK	**Sanguang**	**1.08**	**256**	*e*P	**Pn**	**21 01 57.8**	**-0.2**
	baz=257						
NSK				*e*S	**Sn**	**21 02 15.0**	**-0.1**
	baz=257						
NNS	**Nan Shan**	**1.15**	**245**	*e*P	**Pn**	**21 01 58.7**	**-0.1**
	baz=231						
NNS				*e*S	**Sn**	**21 02 16.9**	**+0.4**
	baz=231						
TWD	**Chiawan**	**1.20**	**224**	P	**Pn**	**21 01 58.4**	**-0.8**
	baz=215						
TWD				*e*S	**Sn**	**21 02 16.7**	**-0.4**
	baz=215						
IRIF	**Iriomote-Funau**	**1.26**	**118**	P	**Pn**	**21 01 59.2**	**-0.7**
IRIF				S	**Sn**	**21 02 18.5**	**+0.2**
WHF	**Hehuan Shan**	**1.38**	**235**	*e*P	**Pn**	**21 02 01.4**	**-0.4**
	baz=226						
WHF				*e*S	**Sn**	**21 02 21.2**	**-0.4**
	baz=226						
TWT	**Tachien**	**1.40**	**241**	*e*P	**Pn**	**21 02 01.3**	**-0.3**
	baz=231						
TWT				*e*S	**Sn**	**21 02 21.6**	**+0.2**
	baz=231						
NSTT	**Nanjuang**	**1.41**	**258**	*e*P	**Pn**	**21 02 01.2**	**-0.4**
	baz=245						
NSTT				*e*S	**Sn**	**21 02 20.4**	**-0.9**
	baz=245						
HATJ	**Hateruma jima**	**1.47**	**126**	*e*S	**Sn**	**21 02 23.4**	**+0.8**
ESL	**Shilin**	**1.49**	**222**	*e*P	**Pn**	**21 02 01.4**	**-1.2**
	baz=225						
ESL				*e*S	**Sn**	**21 02 22.1**	**-0.9**
	baz=225						
JKRS	**Kuro-shima**	**1.53**	**117**	P	**Pn**	**21 02 02.9**	**-0.1**
JKRS				S	**Sn**	**21 02 24.2**	**+0.3**
JIJ	**Ishigaki jima**	**1.59**	**111**	P	**Pn**	**21 02 03.3**	**-0.4**
JIJ				S	**Sn**	**21 02 24.5**	**-0.7**
SMLT	**Sun Moon Lake**	**1.81**	**235**	*e*P	**Pn**	**21 02 06.7**	**+0.2**
	baz=228						
SMLT				*e*S	**Sn**	**21 02 31.2**	**+1.1**
	baz=228						
TYC	**Yuchr**	**1.83**	**236**	P	**Pn**	**21 02 06.6**	**0.0**
	baz=232						
TYC				*e*S	**Sn**	**21 02 30.9**	**+0.6**
	baz=232						
JTJ	**Tarama**	**2.01**	**98**	P	**Pn**	**21 02 08.8**	**-0.1**
JTJ				*e*S	**Sn**	**21 02 35.0**	**+0.6**
ALS	**Alishan**	**2.11**	**228**	*e*P	**Pn**	**21 02 10.6**	**+0.1**
	baz=217						
ALS				*e*S	**Sn**	**21 02 38.3**	**+1.1**
	baz=217						
CHN5	**Tsauling**	**2.14**	**232**	*e*P	**Pn**	**21 02 10.9**	**+0.2**
	baz=237						
CHN5				S	**Sn**	**21 02 37.6**	**+0.1**
	baz=237						

ISCJB ***24*** *21:03:13.1±0.4, 21.47S±0.04×66.74W±0.06, h216km±6km, mb4.2/4, Error ellipse: s-maj=8.7km s-min=6.5km az=11.4*
IDC ***24*** *21:03:13.9±0.7, 21.44S×66.69W, h206km±10km, mb4.1/4, mb1 4.0/12, mb1mx3.7/25, mbtmp4.0/12, Error ellipse: s-maj=16.0km s-min=9.3km az=115.0*
NEIC ***24*** *21:03:14.1±0.4, 21.48S×66.74W, h213km±6km, mb4.5/6, Error ellipse: s-maj=7.6km s-min=6.3km az=84.0*
GUC ***24*** *21:03:15.2±0.7, 21.44S×67.26W, h243km±12km, ML5.3*
ISC 24 21:03:14.5±0.8, 21.44S±0.05×66.9W±0.1, h227km±12km, n50, σ0996/55, mb4.3/4, 6C-10D, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.18**	**237**	⇓*i*P	**Pn**	**21 03 58.1**	**+1.0**
LVC				*i* S	**S**	**21 04 31.1**	**+0.8**
LVC	**Limon Verde**	**2.18**	**237**	⇓*i*P	**Pn**	**21 03 58.1**	**+1.0**
LVC				*i* S	**S**	**21 04 31.1**	**+0.8**
LVC	**Limon Verde**	**2.18**	**237**	P	**Pn**	**21 03 57.9**	**+0.8**
	36nm,0.3s,baz=60,slow=11,SNR=368						
LVC				S	**S**	**21 04 30.9**	**+0.5**
	99nm,0.3s,baz=247,slow=22,SNR=22						
PB09	**Plate Boundary**	**2.18**	**260**	⇓*i*P	**Pn**	**21 03 58.3**	**+1.3**
PB09	**Plate Boundary**	**2.18**	**260**	⇓*i*P	**Pn**	**21 03 58.3**	**+1.3**
PB09				AML	AML	21 04 34.1	
	comp=N,5μm,0.4s						
PB01	**Plate Boundary**	**2.42**	**279**	⇓*i*P	**Pn**	**21 03 60.0**	**+0.6**
PB01				*i* S	**S**	**21 04 34.2**	**-0.3**
PB01	**Plate Boundary**	**2.42**	**279**	⇓*i*P	**Pn**	**21 03 60.0**	**+0.6**
PB01				*i* S	**S**	**21 04 34.2**	**-0.3**
PB01				AML	AML	21 04 36.2	
	comp=N,6μm,0.2s						
PB04	**Plate Boundary**	**2.51**	**250**	*e*P	Pn	21 04 07.7	+7.4
PB04				*i* S	S	21 04 47.5	+11
PB04	**Plate Boundary**	**2.51**	**250**	*e*P	Pn	21 04 07.7	+7.4
PB04				*i* S	S	21 04 47.5	+11
PB04				AML	AML	21 04 49.8	
	comp=N,2μm,0.2s						
PB07	**Plate Boundary**	**2.77**	**264**	*e*P	**Pn**	**21 04 03.7**	**+0.5**
PB07				*i* S	**S**	**21 04 40.5**	**-0.7**
PB07	**Plate Boundary**	**2.77**	**264**	*e*P	**Pn**	**21 04 03.7**	**+0.5**
PB07				*i* S	**S**	**21 04 40.5**	**-0.7**
PB07				AML	AML	21 04 41.9	
	comp=N,5μm,0.5s						
HMBC	**Humberstone**	**3.00**	**292**	⇓*i*P	**Pn**	**21 04 06.1**	**+0.4**
HMBC				*i* S	**S**	**21 04 45.1**	**-0.7**
HMBC	**Humberstone**	**3.00**	**292**	⇓*i*P	**Pn**	**21 04 06.1**	**+0.4**
HMBC				*i* S	**S**	**21 04 45.1**	**-0.7**
HMBC				AML	AML	21 04 48.2	
	comp=N,10μm,0.4s						
MNMC	**Minimini**	**3.40**	**312**	⇑*i*P	**Pn**	**21 04 11.6**	**+1.1**
MNMC				*i* S	**S**	**21 04 54.9**	**+0.5**
MNMC	**Minimini**	**3.40**	**312**	⇑*i*P	**Pn**	**21 04 11.6**	**+1.1**
MNMC				*i* S	**S**	**21 04 54.9**	**+0.5**
MNMC				AML	AML	21 04 57.5	
	comp=N,11μm,0.2s						
PSGC	**Pisagua**	**3.51**	**301**	⇑*i*P	**Pn**	**21 04 11.4**	**-0.2**
PSGC				*i* S	**S**	**21 04 54.7**	**-1.7**
PSGC	**Pisagua**	**3.51**	**301**	⇑*i*P	**Pn**	**21 04 11.4**	**-0.2**
PSGC				*i* S	**S**	**21 04 54.7**	**-1.7**
PSGC				AML	AML	21 04 58.0	
	comp=N,3μm,0.8s						
CEN1	**Los Morros**	**3.59**	**237**	⇑*i*P	Pn	21 04 16.5	+3.9
CEN1	**Los Morros**	**3.59**	**237**	⇑*i*P	Pn	21 04 16.5	+3.9
ANCH	**Antofagasta**	**3.92**	**235**	⇓*i*P	**Pn**	**21 04 17.2**	**+0.9**
ANCH	**Antofagasta**	**3.92**	**235**	⇓*i*P	**Pn**	**21 04 17.2**	**+0.9**
LPAZ	**La Paz**	**5.25**	**347**	P	**Pn**	**21 04 33.8**	**+0.4**
LPAZ				S	**S**	**21 05 36.0**	**+0.2**
LPAZ	**La Paz**	**5.25**	**347**	P	**Pn**	**21 04 33.8**	**+0.4**
	comp=N,65nm,0.3s,baz=156,slow=9.5,SNR=632						
LPAZ				S	**S**	**21 05 36.0**	**+0.2**
	baz=246,slow=20,SNR=1.2						
SIV	**San Ignacio**	**7.76**	**47**	P	Pn	21 05 02.2	-2.5
SIV				S	S	21 06 26.0	-7.1
SIV	**San Ignacio**	**7.76**	**47**	P	Pn	21 05 02.2	-2.5
	comp=N,21nm,0.3s,baz=234,slow=13,SNR=208						
SIV				S	S	21 06 26.0	-7.1
	comp=N,7.0nm,0.3s,baz=137,slow=24,SNR=4.3						
LCO	**Las Campanas**	**8.28**	**204**	*e*Pn	**Pn**	**21 05 10.0**	**-1.4**
	comp=N,14nm,0.4s						
CPUP	**Villa Florida**	**10.04**	**121**	P	Pn	21 05 32.7	-1.2
CPUP	**Villa Florida**	**10.04**	**121**	P	Pn	21 05 32.7	-1.2
	comp=N,0.5nm,0.3s,baz=280,slow=13,SNR=5.3						
CFAA	**Coronel Fontan**	**10.19**	**186**	P	**Pn**	**21 05 34.2**	**-1.6**
CFAA				S	S	21 07 21.1	-9.1
CFAA	**Coronel Fontan**	**10.19**	**186**	P	**Pn**	**21 05 34.2**	**-1.6**
	comp=N,0.8nm,0.3s,baz=18,slow=11,SNR=47						
CFAA				S	S	21 07 21.1	-9.1
	comp=N,0.9nm,0.3s,baz=120,slow=21,SNR=7.9						
SAML	**Samuel**	**12.93**	**17**	*e*Pn	**Pn**	**21 06 09.4**	**-1.0**
	comp=N,4.9nm,0.6s						
SAML				*e*S	**S**	**21 08 33.3**	**-0.3**
NNA	**Nana**	**13.35**	**313**	*e*Pn	P	21 06 18.5	+1.0
	comp=N,30nm,0.8s						
TRQA	**Tornquist**	**17.10**	**167**	*e*Pn	**P**	**21 06 57.7**	**-1.0**
	comp=N,13nm,0.8s						
ATAH	**Atahualpa**	**18.03**	**320**	P	**Pn**	**21 07 12.4**	**+0.4**
ATAH	**Atahualpa**	**18.03**	**320**	P	**Pn**	**21 07 12.4**	**+0.4**
	comp=N,0.5nm,0.3s,baz=141,slow=14,SNR=2.6						
BDFB	**Brasilia**	**18.83**	**75**	P	**P**	**21 07 17.3**	**-0.5**
BDFB	**Brasilia**	**18.83**	**75**	P	**P**	**21 07 17.3**	**-0.5**
	comp=N,2.1nm,0.3s,baz=256,slow=10,SNR=14						
PLCA	**Paso Flores**	**19.48**	**188**	*e*P	**P**	**21 07 25.5**	**+1.1**
	comp=N,13nm,0.9s						
PLCA	**Paso Flores**	**19.48**	**188**	P	**Pn**	**21 07 25.9**	**-2.6**
	comp=N,1.1nm,0.3s,baz=6.9,slow=11,SNR=16						
RCBR	**Riachuelo**	**33.81**	**67**	P	**P**	**21 09 35.5**	**0.0**
RCBR	**Riachuelo**	**33.81**	**67**	P	**P**	**21 09 35.5**	**0.0**
	comp=N,3.4nm,0.5s,baz=241,slow=10,SNR=5.8						
TGUH	**Tegucigalpa,Un**	**40.54**	**329**	P	P	21 10 34.2	+2.4
WMOK	**Wichita Mounta**	**63.54**	**331**	P	P	21 13 23.0	+2.2
DBIC	**Dimbokro**	**66.95**	**73**	*e*P	**P**	**21 13 42.7**	**-0.4**
	comp=N,19nm,1.1s						
DBIC	**Dimbokro**	**66.95**	**73**	P	**P**	**21 13 43.0**	**-0.2**
	comp=N,20nm,1.2s,baz=223,slow=10,SNR=4.5						
TORD	**Torodi Ar. Bea**	**75.60**	**69**	P	**P**	**21 14 34.9**	**0.0**
TORD	**Torodi Ar. Bea**	**75.60**	**69**	P	**P**	**21 14 34.9**	**0.0**
	comp=N,4.4nm,0.5s,baz=255,slow=5.6,SNR=96						
MAW	**Mawson**	**83.85**	**163**	P	**P**	**21 15 20.0**	**+1.8**
	comp=N,1.5nm,0.6s,baz=225,slow=5.7,SNR=6.5						
MKAR	**Makanchi Array**	**144.49**	**37**	PKP	**PKPdf**	**21 22 24.9**	**+1.2**
MKAR	**Makanchi Array**	**144.49**	**37**	PKP	**PKPdf**	**21 22 24.9**	**+1.2**
	comp=N,1.0nm,0.7s,baz=308,slow=3.2,SNR=4.5						

NEIC ***24*** *21:09:51.3, 23.85N×122.41E, h18km, mb5.2/53, ML5.3(TAP), After TAP.*
NEIC Recorded [2 TAP] in Hua-lien and I-lan; [1 TAP] in Chang-hua, Nan-t'ou, T'ai-chung, T'ai-pei T'ai-tung and Yun-lin. Recorded [1 JMA] on Iriomote-jima and Yonaguni-jima.
BJI ***24*** *21:09:53.0, 24.09N×122.26E, h15km, mB4.8/42, mb4.6/51, ML4.7/9, Ms4.7/57, Ms7 4.7/50*
JMA ***24*** *21:09:53.9±0.3, 24.04N×122.28E, h28km, M5.1*
JMA Felt I J1.
MOS ***24*** *21:09:53.7±0.9, 24.25N×122.42E, h33km, mb5.3/59, MS4.5/13, Error ellipse: s-maj=9.9km s-min=4.2km az=123.3*
TAP ***24*** *21:09:53.8, 24.03N×122.29E, h22km, ML5.0, C*
IDC ***24*** *21:09:54.6±2.5, 24.22N×122.38E, h29km±17km, mb4.6/36, mb1 4.6/37, mb1mx4.6/41, mbtmp4.5/37, ML4.0/1, MS4.2/26, Ms1 4.2/26, ms1mx4.0/39, Error ellipse: s-maj=13.9km s-min=12.6km az=45.0*
DJA ***24*** *21:09:54.3±3.1, 24°N±7°×12°2E±°, h10km, M4.8/7, mB5.5/4, mb4.7/7, Mw(mB)4.9/4*
ISCJB ***24*** *21:09:54.4±0.2, 24.02N±0.02×122.33E±0.01, h44km±1km, mb4.9/152, MS4.5/45, Error ellipse: s-maj=2.7km s-min=2.0km az=152.6*
GCMT ***24*** *21:09:54.3±0.4, 23.80N×122.18E, h36km±1km, MW4.9, Moment Tensor Solution. s34,c40; s53,c78; Moment tensor: Scale 10^16 Nm; Mrr 2.13±.17; Mθθ -2.34±.10; Mφφ 0.20±.11; Mrθ 1.45±.10; Mθφ 0.27±.07; Mrφ 0.73±.13; Best double couple: M0 2.80000×10^16 NP1: φs 294.00000°, δ 32.00000°, λ 122.00000°. NP2: φs 78.00000°, δ 63.00000°, λ 72.00000°. Principal axes: T 2.7900, Plg67.0000°, Azm314.0000°; N -0.0300, Plg16.0000°, Azm86.0000°; P -2.7700, Plg16.0000°, Azm181.0000°; Data Used: II IC G IU CN.*
NIED ***24*** *21:10:00, 24.00N×122.30E, h20km, Mw4.7 Best double couple: M0 1.26000×10^18 NP1: φs 72.00000°, δ 76.00000°, λ 15.00000°. NP2: φs 338.00000°, δ 75.00000°, λ 166.00000°.*
SZGRF ***24*** *21:10:02.8, 25.44N×121.95E, h33km, mb5.0, MS4.7, Taiwan*
ISC 24 21:09:54.2±0.4, 23.99N±0.02×122.32E±0.02, h30km±2km, h29km: pP-P, n548, σ1944/674, mb5.0/152, MS4.5/47, 51C-29D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.62**	**301**	*e*P	**Pb**	**21 10 06.2**	**-0.4**
	baz=300						
HWA	**Hwalien**	**0.66**	**269**	*i* P	**Pb**	**21 10 06.6**	**-0.6**
	baz=251						
HWA				*e*S	**Sb**	**21 10 15.7**	**-0.3**
	baz=251						
TWD	**Chiawan**	**0.67**	**278**	⇓*i*P	**Pb**	**21 10 06.2**	**-1.2**
	baz=275						
TWD				*i* S	**Sb**	**21 10 15.2**	**-1.2**
	baz=275						
ENA	**Nanau**	**0.69**	**309**	⇑*i*P	**Pb**	**21 10 06.2**	**-1.5**
	baz=318						
NACB	**Ninganchiao**	**0.69**	**285**	*e*Pn	**Pb**	**21 10 06.3**	**-1.5**
NACB				*e*Sn	**Sb**	**21 10 17.1**	**+0.1**
TWC	**Suao**	**0.75**	**325**	⇑*i*P	**Pb**	**21 10 07.1**	**-1.7**
	baz=332						
ESF	**Shoufeng Towns**	**0.76**	**261**	*e*P	**Pb**	**21 10 08.3**	**-0.5**
	baz=247						
TEGC	**Jichi Village**	**0.77**	**249**	*e*P	**Pn**	**21 10 07.2**	**-1.8**
	baz=245						
YOJ	**Yonaguni jima**	**0.78**	**53**	P	**Pn**	**21 10 08.8**	**-0.4**
YOJ				S	**Sb**	**21 10 19.0**	**-0.6**
ESL	**Shilin**	**0.83**	**258**	⇑*i*P	**Pn**	**21 10 08.3**	**-1.6**
	baz=243						
ILA	**Ilan**	**0.93**	**326**	⇑P	**Pn**	**21 10 10.9**	**-0.4**
	baz=326						
ILA				*e*S	**Sn**	**21 10 23.6**	**0.0**
	baz=326						
TWE	**Neicheng**	**0.94**	**321**	⇑*i*P	**Pn**	**21 10 10.8**	**-0.6**
	baz=329						
TWE				*e*S	**Sn**	**21 10 23.1**	**-0.7**
	baz=329						
ENTT	**Nioudou**	**0.94**	**313**	⇑*i*P	**Pn**	**21 10 11.0**	**-0.5**
	baz=313						
NNS	**Nan Shan**	**0.97**	**297**	⇓*i*P	**Pn**	**21 10 11.4**	**-0.6**
	baz=296						
WHF	**Hehuan Shan**	**0.98**	**279**	⇓*i*P	**Pn**	**21 10 11.4**	**-0.9**
	baz=263						
EHY	**Hungye**	**1.04**	**242**	⇑*i*P	**Pn**	**21 10 11.7**	**-1.0**
	baz=240						
EHY				*e*S	**Sn**	**21 10 24.8**	**-1.5**
	baz=240						
TWB1	**Santiao Chiao**	**1.05**	**343**	*e*P	**Pn**	**21 10 12.6**	**-0.4**
	baz=344						
TWT	**Tachien**	**1.08**	**284**	⇓P	**Pn**	**21 10 13.6**	**+0.1**
	baz=271						
TWT				*e*S	**Sn**	**21 10 27.5**	**-0.1**
	baz=271						
YHNB	**Yeheng**	**1.10**	**308**	*e*Pn	**Pn**	**21 10 13.4**	**-0.2**
YHNB				*e*Sn	**Sn**	**21 10 24.5**	**-3.3**
NSK	**Sanguang**	**1.11**	**308**	⇓*i*P	**Pn**	**21 10 13.6**	**-0.3**
	baz=307						
NSK				S	**Sn**	**21 10 27.9**	**-0.3**
	baz=307						
YULB	**Yu-li**	**1.11**	**238**	⇓*e*Pn	**Pn**	**21 10 12.7**	**-1.2**
YULB				S	**Sn**	**21 10 24.3**	**-3.8**
TWF1	**Yuli**	**1.14**	**236**	⇑*i*P	**Pn**	**21 10 13.4**	**-0.7**
	baz=221						
TWF1				*e*S	**Sn**	**21 10 27.9**	**-0.9**
	baz=221						
NWF	**Wu-fen Shan**	**1.18**	**335**	⇓*i*P	**Pn**	**21 10 14.9**	**+0.1**
	baz=334						
NWF				*e*S	**Sb**	**21 10 31.2**	**+0.

baz=285
NSY eS Sb 21 10 39.9 +0.2
baz=285
WNT Mingjian 1.50 266 eP Pb 21 10 20.4 -1.1
baz=265
WNT eS Sb 21 10 39.3 -0.9
baz=265
TCU Taichung 1.51 276 ⇓iP Pb 21 10 20.9 -0.8
baz=275
TCU eS Sb 21 10 40.5 0.0
baz=275
CHN5 Tsauling 1.56 256 ⇑iP Pn 21 10 20.9 +0.9
baz=243
JKRS Kuro-shima 1.56 81 P Pn 21 10 21.1 +1.2
JKRS S Sb 21 10 42.9 +1.2
TWG Pinlang 1.64 225 ⇑iP Pn 21 10 20.0 -1.0
baz=236
TWG eS Sn 21 10 38.9 -2.2
baz=236
TWG Pinlang 1.64 225 ePn Pn 21 10 19.6 -1.4
TWG eSn Sn 21 10 38.9 -2.2
TTN Taitung 1.64 221 eP Pn 21 10 18.7 -2.3
baz=220
WGK Gukeng 1.64 260 eP Pn 21 10 22.2 +1.2
baz=258
WGK eS Sb 21 10 45.8 +1.7
baz=258
TPUB Ta-pu 1.70 246 ePn Pn 21 10 22.7 +0.9
TPUB eSn Sn 21 10 42.0 -0.7
JIJ Ishigaki jima 1.70 77 P Pn 21 10 22.4 +0.5
JIJ S Sb 21 10 45.0 -0.8
WTP Ta-pu 1.73 245 ⇑iP Pn 21 10 23.4 +1.0
baz=244
WTP eS Sb 21 10 46.3 -0.5
baz=244
CHY Chiayi 1.81 255 eP Pn 21 10 24.6 +1.3
baz=254
CHY eS Sb 21 10 47.5 -1.4
baz=254
TWK Hsinying 1.83 247 ⇓P Pn 21 10 25.3 +1.6
baz=246
TWK eS Sb 21 10 48.4 -1.2
baz=246
CHN1 Nanshi 1.83 244 eP Pn 21 10 24.8 +1.1
baz=244
CHN1 eS Sb 21 10 49.0 -0.6
baz=244
SGST Jiashian 1.84 241 ⇑eP Pn 21 10 24.9 +1.2
baz=229
WTCT Ta-ch'eng 1.87 266 P Pn 21 10 25.8 +1.6
baz=265
WTCT eS Sb 21 10 49.6 -1.1
baz=265
ECL Taimali 1.88 222 ⇑P Pn 21 10 23.0 -1.3
baz=233
WSF Szhu 1.96 260 eP Pn 21 10 26.8 +1.4
baz=259
WSF eS Sb 21 10 52.5 -0.6
baz=259
CHN3 Shinhua 2.02 243 eP Pb 21 10 28.4 -1.8
baz=243
CHN3 eS Sb 21 10 55.2 +0.4
baz=243
CHN8 Yiju 2.04 252 eP Pn 21 10 27.6 +1.1
baz=251
CHN8 eS Sb 21 10 53.3 -2.3
baz=251
LAY Lan-yu 2.07 200 eP Pn 21 10 25.4 -1.6
baz=200
TAW Tawu 2.09 219 eP Pn 21 10 26.4 -0.9
baz=218
TWM1 Shoushan 2.10 237 P Pb 21 10 30.4 -1.2
baz=235
TWM1 eS Sb 21 10 57.5 +0.2
baz=235
EAST Anshuo 2.10 221 ⇑P Pn 21 10 26.6 -0.8
baz=220
SGLT Jiouru 2.10 233 eP Pb 21 10 30.4 -1.3
baz=233
SCLT Jiali 2.12 248 eP Pn 21 10 29.1 +1.6
baz=247
SCLT eS Sb 21 10 55.6 -2.2
baz=247
TAI1 Yung-k'ang 2.15 244 eP Pn 21 10 30.0 +2.0
baz=244
TAI1 eS Sb 21 10 56.6 -1.9
baz=244
SCZT Fangliau 2.25 224 eP Pn 21 10 29.8 +0.4
baz=217
JTJ Tarama 2.26 73 P Pn 21 10 30.7 +1.1
JTJ S Sb 21 10 59.9 -2.1
KAU Kaohsiung 2.33 233 eP Pb 21 10 33.5 -2.1
baz=232
TWP Hsiaoliuchiu 2.44 228 eP Pb 21 10 35.5 -1.9
baz=228
HEN Hengchun 2.46 217 eP Pn 21 10 32.5 +0.2
baz=217
HEN eS Sn 21 11 01.6 +0.2
baz=217
TSEB Hengchuen, Pin 2.46 212 eP Pn 21 10 32.6 +0.2
baz=214
TSEB eS Sn 21 11 02.2 +0.8
baz=214
TWK1 Hengchun 2.47 215 eP Pn 21 10 32.4 -0.1
baz=215
TWK1 eS Sn 21 11 02.0 +0.2
baz=215
PNG Penghu 2.57 261 P Pn 21 10 34.3 +0.5
baz=260
PNG eS Sn 21 11 04.4 +0.3
baz=260
JMJ Miyako jima 2 2.83 73 P Pn 21 10 39.5 +2.1
JMJ S Sn 21 11 13.7 +3.2
JOGS Gusukube 2.91 74 P Pn 21 10 40.5 +2.0
JOGS S Sb 21 11 16.7 -4.0
QZH Quanzhou 3.53 286 ⇑iPn Pn 21 10 47.3 +0.3
QZH Sn Sn 21 11 25.6 -2.1
QZH smax smax
comp=N,3μm,0.9s
QZH smax smax
comp=E,2μm,0.8s
QZH LR LR
comp=N,13μm,13.6s
QZH LR LR
comp=E,15μm,14.6s
QZH LR LR
comp=Z,13μm,11.4s
KNM Kinmen 3.58 278 eP Pn 21 10 49.1 +1.4
baz=276
JKE Kume jima 2 4.66 59 P Pn 21 11 03.2 +0.6
JKE eS Sn 21 11 57.3 +1.6
JAGN Aguni-jima 5.15 59 P Pn 21 11 10.4 +1.1
JAGN eS Sn 21 12 11.0 +3.3
JIH Iheya 5.93 58 P Pn 21 11 18.3 -1.7
JIH S Sn 21 12 27.5 +0.5
JOW Kunigami 6.08 61 eP Pn 21 11 21.3 -0.8
baz=65
JOW Kunigami 6.08 61 ePn Pn 21 11 21.4 -0.6
JOW eSn Sn 21 12 28.7 -1.9
JOW Kunigami 6.08 61 P Pn 21 11 21.3 -0.8
JOW eS Sn 21 12 29.1 -1.5
JTK Tokunoshima 7.06 56 P Pn 21 11 34.2 -1.4
JTK eS Sn 21 12 53.5 -1.4
SSE Sheshan 7.15 352 P Pn 21 11 36.3 -0.4
SSE pP Pb 21 11 41.5 -16
SSE S Sn 21 13 00.4 +3.5
SSE pmax pmax
comp=Z,64nm,0.7s
SSE pmax pmax
comp=Z,30nm,3.7s
SSE LR LR
comp=N,3μm,12.2s
SSE LR LR
comp=E,560nm,12.2s
SSE LR LR
comp=Z,4μm,14.0s
JAMN Amaminishikomi 7.47 54 P Pn 21 11 39.8 -1.4
JAMN S Sn 21 13 04.3 -0.6
JAM Amami Oshima 7.88 55 P Pn 21 11 45.1 -1.7
GZH Guangzhou 8.29 266 P Pn 21 11 48.4 -4.0
GZH S Sn 21 13 11.3 -14
GZH smax smax
comp=N,340nm,1.1s
GZH smax smax
comp=E,240nm,1.1s
NJ2 Nanjing 8.59 340 eP Pn 21 11 55.1 -1.4

NJ2 sP 21 12 08.5
NJ2 S Sn 21 13 31.1 -1.4
NJ2 pmax pmax
comp=Z,40nm,0.6s
NJ2 smax smax
comp=N,240nm,1.1s
NJ2 smax smax
comp=E,260nm,1.0s
NJ2 LR LR
comp=N,4μm,13.0s
NJ2 LR LR
comp=E,3μm,11.3s
NJ2 LR LR
comp=Z,6μm,13.0s
WHN Wuhan 9.63 314 P Pn 21 12 13.8 +3.0
WHN S Sn 21 13 53.3 -4.8
WHN LR LR
comp=N,6μm,12.0s
WHN LR LR
comp=E,3μm,7.9s
WHN LR LR
comp=Z,8μm,12.8s
JNU Nakatsue 11.79 38 ePn Pn 21 12 40.2 -0.2
JNU Nakatsue 11.79 38 Pn Pn 21 12 43.1 +2.6
comp=Z,0.4nm,0.3s,baz=258,slow=17,SNR=4.5
JNU LR LR 21 17 33.5
comp=Z,1μm,19.1s,baz=219,slow=40
TIA Tai'an 12.98 341 P Pn 21 13 01.3 +4.7
TIA LR LR
comp=N,3μm,13.7s
TIA LR LR
comp=E,2μm,14.7s
TIA LR LR
comp=Z,5μm,12.7s
ENH Enshi 13.02 301 ePn Pn 21 12 57.9 +0.6
comp=Z,21nm,0.9s
ENH Sn Sn 21 15 23.6 +2.4
KSAR Wonju Array Be 14.23 18 Pn Pn 21 13 16.4 +2.8
KSRS Korea Array 14.25 18 Pn Pn 21 13 16.4 +2.5
comp=Z,2.8nm,0.3s,baz=198,slow=12,SNR=27
KSRS LR LR 21 19 15.2
comp=Z,874nm,19.9s,baz=332,slow=40
GYA Guiyang 14.38 283 ⇑iP Pn 21 13 16.9 +0.9
GYA pP P 21 13 24.0 +1.4
GYA sS S 21 16 07.3 -6.7
GYA SS SnSn 21 16 12.0 +4.9
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,100nm,8.0s
GYA LR LR
comp=N,1μm,11.5s
GYA LR LR
comp=E,2μm,15.9s
GYA LR LR
comp=Z,2μm,14.9s
XAN Xi'an 15.40 314 P Pn 21 13 29.4 0.0
XAN pP pP 21 13 38.8 -2.8
XAN sP sP 21 13 42.1 -3.3
XAN pmax pmax
comp=Z,15nm,1.0s
XAN pmax pmax
comp=Z,40nm,6.2s
XAN LR LR
comp=N,640nm,11.6s
XAN LR LR
comp=E,590nm,13.9s
XAN LR LR
comp=Z,590nm,12.6s
BJI Beijing 16.82 343 P P 21 13 48.6 -0.8
BJI S Sn 21 16 53.3 -0.1
BJI pmax pmax
comp=Z,15nm,1.2s
BJI pmax pmax
comp=Z,380nm,9.3s
BJI LR LR
comp=N,2μm,13.9s
BJI LR LR
comp=E,700nm,22.9s
BJI LR LR
comp=Z,2μm,13.9s
DAV Davao City (W) 17.11 169 LR LR 21 20 37.9
comp=Z,1μm,18.4s,baz=357,slow=37
SNY Shenyang 17.82 3 ⇑P P 21 14 00.4 0.0
SNY S S 21 17 25.3 +1.6
SNY pmax pmax
comp=Z,11nm,1.1s
SNY pmax pmax
comp=Z,490nm,12.0s
SNY LR LR
comp=N,2μm,12.6s
SNY LR LR
comp=E,780nm,13.1s
SNY LR LR
comp=Z,2μm,12.5s
CD2 Chengdu 17.85 297 P Pn 21 13 59.8 -0.6
CD2 pP pP 21 14 09.3 +0.5
CD2 sP sP 21 14 14.8 +2.2
CD2 PP PnPn 21 14 16.8 +5.4
CD2 S Sn 21 17 14.0 -4.6
CD2 sS S 21 17 27.8 +3.2
CD2 SS SnSn 21 17 37.8 +5.6
CD2 pmax pmax
comp=Z,80nm,0.9s
CD2 pmax pmax
comp=Z,210nm,4.2s
CD2 LR LR
comp=N,2μm,11.8s
CD2 LR LR
comp=E,2μm,11.6s
CD2 LR LR
comp=Z,3μm,11.8s
KMI Kunming 17.85 278 P P 21 14 04.0 +2.8
KMI pP pP 21 14 11.1 +2.0
KMI sP sP 21 14 14.5 +1.6
KMI S Sn 21 17 20.5 +1.5
KMI pmax pmax
comp=Z,13nm,1.3s
KMI pmax pmax
comp=Z,180nm,5.1s
KMI LR LR
comp=N,630nm,8.0s
KMI LR LR
comp=E,2μm,14.1s
KMI LR LR
comp=Z,2μm,13.9s
MAT Matsushiro 18.53 44 P Pn 21 14 09.0 +0.3
MAT S S 21 17 39.4 +1.2
MJAR Matsushiro Arr 18.53 44 P P 21 14 06.0 -2.3
MJAR Matsushiro Arr 18.53 44 P P 21 14 06.0 -2.3
comp=Z,0.4nm,0.3s,baz=220,slow=9.5,SNR=7.7
MJAR LR LR 21 21 52.0
comp=Z,281nm,19.0s,baz=235,slow=39
HHC Hu-ho-hao-te 19.08 334 eP Pn 21 14 15.5 +0.2
HHC pP pP 21 14 25.1 +2.8
HHC sP sP 21 14 31.4 +5.3
HHC PP PnPn 21 14 32.9 +4.6
HHC S Sn 21 17 42.1 -6.1
HHC sS sS 21 17 57.1 -4.9
HHC SS SnSn 21 18 05.5 +2.9
HHC PcS PcS 21 22 14.9 -0.5
HHC pmax pmax
comp=Z,71nm,1.0s
HHC pmax pmax
comp=Z,540nm,5.2s
HHC LR LR
comp=N,5μm,13.1s
HHC LR LR
comp=E,2μm,12.4s
BTO Baotou 19.52 331 eP P 21 14 19.0 -0.3
CN2 Changchun 19.93 7 eP P 21 14 23.3 -0.2
CN2 esP sP 21 14 36.3 +1.1
CN2 eS S 21 18 01.3 -4.8
CN2 pmax pmax
comp=Z,10.0nm,1.0s
CN2 pmax pmax
comp=Z,200nm,10.0s
CN2 LR LR
comp=N,2μm,13.0s
CN2 LR LR
comp=E,800nm,13.0s
CN2 LR LR
comp=Z,3μm,14.0s
LZH Lanzhou 19.99 311 eP Pn 21 14 26.3 0.0
LZH pP pP 21 14 35.5 +3.1
LZH sP sP 21 14 41.0 +4.8
LZH S S 21 17 59.5 -8.4
LZH sS Sn 21 18 15.0 +4.6
LZH SS SnSn 21 18 29.5 +4.5
LZH pmax pmax
comp=Z,36nm,1.0s
LZH pmax pmax
comp=Z,280nm,6.4s
LZH LR LR
comp=N,1μm,10.4s
LZH LR LR
comp=E,1μm,13.5s
LZH LR LR
comp=Z,2μm,14.6s
PBKT Sadao Pong 21.33 254 P P 21 14 42.1 +3.2
comp=Z,12nm,0.9s
MDJ Mudanjiang 21.41 14 P P 21 14 39.5 -0.1
MDJ S S 21 18 33.4 -2.3
MDJ pmax pmax
comp=Z,9.0nm,1.6s
MDJ pmax pmax
comp=Z,160nm,11.8s
MDJ LR LR
comp=E,2μm,13.8s
MDJ LR LR
comp=Z,2μm,13.3s
USRK Ussuriysk Arra 21.66 19 P P 21 14 40.0 -2.2
comp=Z,8.0nm,0.6s,baz=202,slow=10,SNR=32
USRK LR LR 21 23 38.6
comp=Z,639nm,19.5s,baz=190,slow=38
CMMT Chiang Mai 22.35 261 P P 21 14 53.2 +3.2
comp=Z,28nm,1.5s
CHTO Chiang Mai 22.36 261 eP P 21 14 50.4 +0.4
CHTO pmax pmax
comp=Z,22nm,1.0s
CHTO Chiang Mai 22.36 261 eP P 21 14 50.4 +0.4
comp=Z,22nm,1.0s
CHTO Chiang Mai 22.36 261 P P 21 14 52.7 +2.7
comp=Z,31nm,1.5s
CMAR Chiang Mai Arr 22.47 260 P P 21 14 52.8 +1.6
CMAR PcP PcP 21 18 45.9 +0.9
CMAR Chiang Mai Arr 22.47 260 P P 21 14 52.8 +1.6
comp=Z,7.7nm,0.9s,baz=61,slow=8.2,SNR=27
CMAR PcP PcP 21 18 45.9 +0.9
comp=Z,1.0nm,0.5s,baz=42,slow=0.7,SNR=8.0
GTOI Gorontalo 23.23 178 P P 21 15 05.4 +6.4
comp=Z,80nm,1.4s,comp=Z,1μm
TNTI Ternate 23.60 167 P P 21 15 08.5 +5.9
comp=Z,117nm,1.9s,comp=Z,2μm
GTA Gaotai 24.46 314 ⇑P P 21 15 10.4 -0.3
GTA pP pP 21 15 19.8 +0.5
GTA sP sP 21 15 23.8 +0.9
GTA PcP PcP 21 18 50.3 +1.3
GTA S S 21 19 27.3 -1.8
GTA sS sS 21 19 42.3 -0.9
GTA SS SnSn 21 20 22.8 +8.4
GTA ScP ScP 21 22 26.8 +1.1
GTA pmax pmax
comp=Z,20nm,2.0s
GTA pmax pmax
comp=Z,220nm,5.0s
GTA LR LR
comp=N,430nm,15.7s
GTA LR LR
comp=E,1μm,17.8s
GTA LR LR
comp=Z,1μm,17.8s
LBMI Labuha 25.00 168 P P 21 15 18.0 +2.5
ASAJ Asahikawa 26.05 35 P P 21 15 22.9 -2.0
ASAJ Asahikawa 26.05 35 P P 21 15 22.9 -2.0
comp=Z,6.2nm,0.4s,baz=225,slow=9.0,SNR=24
ASAJ LR LR 21 25 50.5
comp=Z,567nm,19.3s,baz=79,slow=37
KLR Kul'dur 26.26 14 eP P 21 15 25.6 -1.1
KLR MLR MLR
comp=E,11μm,12.0s
KLR MLR MLR
comp=Z,10μm,12.0s
HABR Khabarovsk 26.43 19 eP P 21 15 25.2 -3.0
HABR e*SP sP 21 15 39.1 -1.3
HABR eS S 21 19 55.9 -4.0
HABR e*SS sS 21 20 12.1 -2.0
HABR eSS SnSn 21 20 57.2 -4.9
HABR e 21 26 18.3
HABR pmax pmax
comp=N,28nm,1.8s
HABR pmax pmax
comp=Z,48nm,2.7s
HABR pmax pmax
comp=E,41nm,2.7s
HABR MLR MLR
comp=Z,864nm,18.0s
ULN Ulaanbaatar 26.74 337 ⇑eP P 21 15 30.4 -0.9
comp=Z,60nm,0.6s
ULN ePcP PcP 21 18 53.2 -0.8
ULN eScP ScP 21 22 31.4 -0.7
ULN Ulaanbaatar 26.74 337 P P 21 15 30.8 -0.5
SONM Songino Array 26.96 336 P P 21 15 32.4 -0.8
SONM PcP PcP 21 18 54.5 -0.1
SONM ScP ScP 21 22 32.5 -0.3
SONM Songino Array 26.96 336 P P 21 15 32.4 -0.8
comp=Z,68nm,0.7s,baz=150,slow=9.5,SNR=412
SONM PcP PcP 21 18 54.5 -0.1
comp=Z,2.0nm,0.6s,baz=161,slow=4.2,SNR=8.0
SONM ScP ScP 21 22 32.5 -0.3
comp=Z,1.5nm,1.0s,baz=164,slow=4.7,SNR=7.4
SONM LR LR 21 27 22.9
comp=Z,2μm,18.4s,baz=154,slow=39
SHL Shillong 27.66 280 ePKP P 21 15 41.0 +1.2
LSA Lhasa 28.34 288 P P 21 15 47.6 +1.5
LSA pmax pmax
comp=Z,20nm,0.7s
LSA LR LR
comp=E,1μm,13.8s
LSA LR LR
comp=Z,1μm,14.6s
LSA Lhasa 28.34 288 eP P 21 15 45.7 -0.5
LSA pmax pmax
comp=Z,11nm,0.7s
LSA Lhasa 28.34 288 eP P 21 15 45.7 -0.5
comp=Z,11nm,0.7s
KAPI Kappang 28.94 185 LR LR 21 27 25.0
comp=Z,211nm,20.4s,baz=9.4,slow=36
ZAK Zakamensk 30.22 335 ⇑iP P 21 16 00.5 -1.7
ZAK pmax pmax
comp=Z,8.0nm,1.1s
PSI Prapat 30.91 231 LR LR 21 29 28.3
comp=Z,203nm,18.8s,baz=30,slow=38
TLY Talaya 31.14 337 eP P 21 16 09.4 -0.8
TLY e 21 17 11.6
TLY pmax pmax
comp=Z,42nm,0.6s
TLY MLR MLR
comp=Z,1μm,13.0s
TLY Talaya 31.14 337 P P 21 16 09.3 -0.9
comp=Z,412nm,0.7s,SNR=8.4
TAPN Taplejung 31.32 284 eP P 21 16 13.7 +1.3
comp=Z,16nm,0.6s
IRK Irkutsk 31.40 339 eP P 21 16 10.8 -1.6
IRK pmax pmax
comp=Z,54nm,1.2s
ODAN Odare 31.62 283 eP P 21 16 16.0 +1.0
comp=Z,34nm,0.8s
MOY Mondy 32.12 335 eP P 21 16 18.4 -0.5
MOY pmax pmax
comp=Z,26nm,1.3s
RAMN Ramite 32.32 283 eP P 21 16 22.2 +1.1
comp=Z,17nm,0.7s
GUN Gumba 32.92 285 eP P 21 16 27.3 +0.8
comp=Z,26nm,0.8s
PKI Pulchoki 33.35 284 eP P 21 16 30.5 +0.2
comp=Z,7.9nm,0.6s
PKIN Phulchoki 33.36 284 eP P 21 16 30.2 -0.1
comp=Z,48nm,1.5s
KKN Kakani 33.46 285 eP P 21 16 31.5 +0.4
comp=Z,14nm,0.6s
DMN Daman 33.62 284 eP P 21 16 32.8 +0.3
comp=Z,15nm,0.7s
UGM Wanagama 33.74 201 eP P 21 16 43.4 +10
WMQ Urumqi 34.54 313 P P 21 16 39.8 -0.3
WMQ pP pP 21 16 51.0 +2.2
WMQ PP PnPn 21 17 57.0 +1.3
WMQ S S 21 22 04.0 -3.1
WMQ sS sS 21 22 22.0 +0.5
WMQ SS SnSn 21 24 15.0 -4.7
WMQ pmax pmax
comp=Z,10.0nm,1.2s

WMQ pmax pmax
comp=Z,98nm,3.9s
WMQ LR LR
comp=N,1µm,14.8s
WMQ LR LR
comp=E,1µm,11.4s
WMQ LR LR
comp=Z,900nm,14.8s
DANN Dangsing 34.78 286 *e*P **P 21 16 43.2 +0.6**
comp=Z,22nm,0.8s
HVS Khovu-Aksy 34.93 328*c i*P **P 21 16 42.5 -0.9**
HVS pmax pmax
comp=Z,49nm,1.2s
KOLN Koldanda 34.95 285 *e*P **P 21 16 44.5 +0.6**
comp=Z,12nm,0.6s
PYUN Piuthan 35.47 285 *e*P **P 21 16 49.1 +0.6**
YAK Yakutsk 38.35 6 *e*P **P 21 17 09.4 -2.8**
YAK pmax pmax
comp=Z,14nm,1.1s
YAK MLR MLR
comp=Z,810nm,14.0s
YAK MLR MLR
comp=N,657nm,15.0s
MK31 Makanchi Array 39.20 316 *e*P **P 21 17 19.1 -0.5**
MK31 Makanchi Array 39.20 316 *e*P **P 21 17 19.1 -0.5**
MKAR Makanchi Array 39.20 316*ce*P **P 21 17 19.2 -0.4**
MKAR pmax pmax
comp=Z,12nm,0.5s
MKAR Makanchi Array 39.20 316 *e*P **P 21 17 19.4 -0.2**
MKAR PcP **PcP 21 19 28.6 +0.1**
MKAR Makanchi Array 39.20 316 P **P 21 17 19.1 -0.5**
comp=Z,12nm,0.5s,baz=101,slow=9.6,SNR=93
MKAR PcP **PcP 21 19 28.6 +0.1**
comp=Z,1.8nm,0.7s,baz=112,slow=2.7,SNR=5.2
MKAR LR LR 21 35 00.9
comp=Z,617nm,18.9s,baz=110,slow=38
ZAA0 Zalesovo Array 40.97 327 *e*P **P 21 17 32.6 -1.6**
ZAA0 *e*PcP **PcP 21 19 32.4 -1.5**
ZALV Zalesovo Beam 40.97 327 P **P 21 17 32.6 -1.6**
ZALV 21 19 32.8
ZALV Zalesovo Beam 40.97 327 P **P 21 17 32.5 -1.6**
ZALV PcP **PcP 21 19 32.8 -1.2**
ZALV ScP **ScP 21 23 20.4 -1.3**
ZALV Zalesovo Beam 40.97 327 P **P 21 17 32.5 -1.6**
comp=Z,22nm,0.5s,baz=116,slow=8.4,SNR=126
ZALV PcP **PcP 21 19 32.8 -1.2**
comp=Z,2.7nm,0.5s,baz=106,slow=4.3,SNR=5.9
ZALV ScP **ScP 21 23 20.3 -1.3**
comp=Z,0.3nm,0.4s,baz=100,slow=3.5,SNR=3.5
ZALV LR LR 21 35 17.7
comp=Z,373nm,22.0s,baz=70,slow=37
PMG Port Moresby 41.12 141 LR LR 21 34 21.3
comp=Z,260nm,18.3s,baz=98,slow=36
KSH Kashi 41.88 303 P P 21 17 45.8 +3.8
KSH *e*pP pP 21 17 55.0 +4.2
KSH *e*sP sP 21 17 59.5 +5.1
KSH *e*PP **PnPn 21 19 26.6 +2.4**
KSH *e*PcP **PcP 21 19 41.5 +4.1**
KSH *e*S **S 21 24 01.0 +2.7**
KSH *e*sS sS 21 24 19.8 +6.9
KSH pmax pmax
comp=Z,38nm,1.2s
KSH pmax pmax
comp=Z,120nm,3.3s
KSH LR LR
comp=N,420nm,6.9s
KSH LR LR
comp=E,520nm,10.5s
ULHL Ulahol 42.11 307 *i*P **P 21 17 45.6 +1.7**
ULHL Ulahol 42.11 307 P **P 21 17 45.6 +1.7**
SNR=7.2
NVS Novosibirsk 42.23 327⇓ *i*P **P 21 17 43.5 -0.9**
NVS pmax pmax
comp=Z,19nm,0.9s
NVS pmax pmax
comp=E,11nm,0.9s
TKM2 Tokmak 2 42.70 308 *e*P **P 21 17 49.9 +1.1**
TKM2 *e* 21 19 39.3
TKM2 pmax pmax
comp=Z,23nm,0.8s
TKM2 Tokmak 2 42.70 308 *e*P **P 21 17 49.9 +1.1**
comp=Z,23nm,0.8s
TKM2 *e*PcP **PcP 21 19 39.3 -0.9**
TKM2 Tokmak 2 42.70 308 P **P 21 17 49.6 +0.8**
SNR=27
KZA Kyzart 42.80 307 *i*P **P 21 17 51.1 +1.3**
KZA Kyzart 42.80 307 P **P 21 17 51.1 +1.3**
SNR=9.4
COEN Coen 42.87 149 *e*P **P 21 17 52.0 +1.9**
comp=Z,188nm,0.8s
KURK Kurchatov 42.91 320 P **P 21 17 49.0 -1.0**
comp=Z,106nm,0.5s,SNR=16
KURK Kurchatov 42.91 320*c i*P **P 21 17 49.1 -1.0**
KURK pmax pmax
comp=Z,42nm,1.7s
KURK Kurchatov 42.91 320 *e*P **P 21 17 49.3 -0.7**
comp=Z,44nm,1.4s
KURK PcP **PcP 21 19 39.8 -0.6**
KURK ScP **ScP 21 23 29.0 -0.5**
KURBB Kurchatov Arra 42.92 320 P **P 21 17 49.3 -0.9**
comp=Z,2.5nm,0.5s,baz=107,slow=9.5,SNR=67
KURBB PcP **PcP 21 19 39.8 -0.7**
comp=Z,1.3nm,0.5s,baz=114,slow=3.4,SNR=5.4
KURBB ScP **ScP 21 23 29.0 -0.5**
comp=Z,0.5nm,0.8s,baz=111,slow=3.8,SNR=4.3
KBK Karagaybulak 43.12 307 *i*P **P 21 17 53.8 +1.7**
KBK Karagaybulak 43.12 307 P **P 21 17 53.8 +1.7**
SNR=17
CHMS Chumysh 43.33 308 *i*P **P 21 17 54.1 +0.5**
CHMS Chumysh 43.33 308 P **P 21 17 54.1 +0.5**
SNR=18
UCH Uchtor 43.37 307 *i*P **P 21 17 56.3 +1.9**
UCH Uchtor 43.37 307 P **P 21 17 56.3 +1.9**
SNR=5.5
AAK Ala-Archa 43.45 307 *e*P **P 21 17 55.5 +0.8**
AAK Ala-Archa 43.45 307 *e*P **P 21 17 55.9 +1.1**
AAK Ala-Archa 43.45 307 P **P 21 17 55.9 +1.1**
SNR=6.2
AAK Ala-Archa 43.45 307 P **P 21 17 55.3 +0.6**
comp=Z,6.9nm,0.6s,baz=102,slow=6.6,SNR=12
USP Ospenovka 43.55 308 *i*P **P 21 17 56.5 +1.0**
USP Ospenovka 43.55 308 P **P 21 17 56.5 +1.0**
SNR=6.2
AML Almayashu 43.95 306 *i*P **P 21 18 00.6 +1.5**
AML Almayashu 43.95 306 P **P 21 18 00.6 +1.5**
SNR=19
EKS2 Erkin-Say 43.98 307 *e*P **P 21 17 59.8 +0.9**
EKS2 pmax pmax
comp=Z,9.0nm,0.7s
EKS2 Erkin-Say 43.98 307 *e*P **P 21 17 59.8 +0.9**
comp=Z,8.8nm,0.7s
EKS2 Erkin-Say 43.98 307 P **P 21 18 00.3 +1.4**
SNR=12
WRAB Tennant Creek 45.21 164 P **P 21 18 09.2 +0.5**
comp=Z,92nm,0.8s,SNR=8.1
WRAB Tennant Creek 45.21 164 *e*P **P 21 18 08.2 -0.5**
WRAB pmax pmax
comp=Z,12nm,0.8s
WRAB Tennant Creek 45.21 164 *e*P **P 21 18 08.2 -0.5**
comp=Z,12nm,0.8s
KKAR Karatay Array 46.41 307 *e*P **P 21 18 18.0 -0.1**
KKAR Karatay Array 46.41 307 *e*P **P 21 18 18.0 -0.1**
KBL Kabul 47.18 296 *e*P **P 21 18 25.6 +1.1**
KBL pmax pmax
comp=Z,19nm,0.9s
KBL Kabul 47.18 296 *e*P **P 21 18 25.6 +1.1**
comp=Z,20nm,0.9s
TIXI Tiksi 47.83 3*c i*P **P 21 18 27.1 -1.6**
TIXI pmax pmax
comp=Z,16nm,0.8s
TIXI MLR MLR
comp=Z,1µm,17.0s
BVAR Borovoye Array 48.48 321 P **P 21 18 33.4 -0.7**
BVAR 21 19 59.4
BVAR Borovoye Array 48.48 321 P **P 21 18 33.4 -0.7**
BVAR PcP **PcP 21 19 59.4 -0.4**
BVAR Borovoye Array 48.48 321 P **P 21 18 33.4 -0.7**
comp=Z,12nm,0.6s,baz=103,slow=8.0,SNR=69
BVAR PcP **PcP 21 19 59.4 -0.4**
comp=Z,5.0nm,0.8s,baz=100,slow=4.5,SNR=7.4
BRVK Borovoye 48.55 321 P **P 21 18 34.2 -0.4**
comp=Z,160nm,1.0s,SNR=7.8
BRVK Borovoye 48.55 321 *e*P **P 21 18 34.0 -0.6**
BRVK pmax pmax
comp=Z,18nm,0.9s
BRVK Borovoye 48.55 321 *e*P **P 21 18 34.0 -0.6**
comp=Z,18nm,0.9s
AS31 Alice Springs 48.69 166 *e*P **P 21 18 34.2 -1.8**
ASAR Alice Springs 48.69 166 P **P 21 18 37.4 +1.5**
ASAR Alice Springs 48.69 166 P **P 21 18 37.4 +1.5**
comp=Z,2.4nm,0.5s,baz=344,slow=6.8,SNR=38
ASAR LR LR 21 39 30.2
comp=Z,106nm,18.9s,baz=7.7,slow=36
HNR Honiara 49.54 128 LR LR 21 35 25.1
comp=Z,99nm,20.0s,baz=276,slow=31
CTA Charters Tower 49.63 150 P **P 21 18 44.8 +1.6**
CTA Charters Tower 49.63 150 P **P 21 18 44.8 +1.6**
comp=Z,3.0nm,0.6s,baz=296,slow=13,SNR=3.6
BILL Bilibino 51.51 19⇑ *e*P **P 21 18 55.1 -1.7**
BILL *i*S **S 21 26 12.9 -2.1**
BILL pmax pmax
comp=Z,2.0nm,1.0s
BILL MLR MLR
comp=Z,200nm,16.0s
ABKAR Akbulak array 54.32 314 *e*P **P 21 19 17.8 0.0**
SVE Sverdlovsk 54.81 324*de*P **P 21 19 20.8 -0.5**
SVE *e* 21 20 22.9
SVE *e* 21 21 27.1
SVE *e*PPP PPP 21 22 44.4
SVE *e* 21 28 58.9
SVE *e*SS SKiKP 21 30 46.9 +20
SVE *e*SSS SSS 21 32 41.7
SVE pmax pmax
comp=Z,19nm,0.8s
SVE MLR MLR
comp=Z,529nm,15.0s
AKTO Aktyubinsk 55.64 316 P **P 21 19 26.9 -0.5**
AKTO Aktyubinsk 55.64 316 P **P 21 19 26.9 -0.5**
AKTO Aktyubinsk 55.64 316 P **P 21 19 26.9 -0.5**
comp=Z,6.6nm,0.6s,baz=87,slow=8.6,SNR=24
ABKT Ailbek 55.79 301 P **P 21 19 30.7 +2.0**
comp=Z,91nm,0.7s,SNR=7.4
ARU Arti 55.88 323*c i*P **P 21 19 27.6 -1.4**
ARU 21 20 25.6
ARU 21 21 31.7
ARU S **S 21 27 13.6 -0.9**
ARU SS SS 21 30 50.7 -9.5
ARU pmax pmax
comp=Z,18nm,1.0s
ARU MLR MLR
comp=Z,242nm,22.0s
ARU Arti 55.88 323 P **P 21 19 27.1 -1.9**
comp=Z,154nm,0.5s,SNR=8.8
EIDS Eidsvold 56.42 149 *e*P **P 21 19 34.7 +1.5**
comp=Z,35nm,1.9s
STKA Stephens Creek 58.53 161 *e*P **P 21 19 49.5 +1.5**
comp=Z,1.5nm,0.9s
STKA Stephens Creek 58.53 161 P **P 21 19 49.4 +1.5**
comp=Z,4.2nm,0.7s,baz=321,slow=7.7,SNR=14
DGRG David-gareji 65.05 306 P **P 21 20 32.1 +0.2**
DUS Dusheti 65.42 307 P **P 21 20 36.3 +2.0**
TBLG Delisi 65.46 307 *e*P **P 21 20 34.5 0.0**
TBLG Delisi 65.46 307 P **P 21 20 34.6 0.0**
GNI Garni 65.77 305 *e*P **P 21 20 35.3 -1.5**
comp=Z,12nm,1.0s
UMR Umm Al-Rimmam 65.80 293 *e*P **P 21 20 36.3 -0.6**
UMR AMb AMB 21 20 38.2
comp=Z,21nm,0.7s
MIB Mutribah 66.05 293 *e*P **P 21 20 37.7 -0.8**
MIB AMb AMB 21 20 38.9
comp=Z,38nm,0.6s
RDF Al-Radifah 66.10 292 *e*P **P 21 20 38.6 -0.3**
RDF AMb AMB 21 20 40.0
comp=Z,53nm,0.6s
ONI Oni 66.23 308 P **P 21 20 41.0 +1.4**
NAY Al-Naaiem 66.28 293 *e*P **P 21 20 39.2 -0.8**
NAY AMb AMB 21 20 40.3
comp=Z,18nm,0.6s
KBZ Khabaz 66.41 309 P **P 21 20 40.8 +0.2**
KBZ Khabaz 66.41 309 P **P 21 20 40.8 +0.2**
KBZ Khabaz 66.41 309 P **P 21 20 40.8 +0.2**
comp=Z,11nm,0.9s,baz=76,slow=7.2,SNR=21
KBZ LR LR 21 53 19.7
comp=Z,216nm,19.3s,baz=305,slow=39
AKH Akhalkalaki 66.44 306 P **P 21 20 42.0 +1.0**
KIV Kislovodsk 66.52 309 *e*P **P 21 20 41.8 +0.4**
KIV *e* 21 23 06.7
KIV *e*S **S 21 29 30.9 +0.6**
KIV pmax pmax
comp=Z,33nm,1.0s
KIV MLR MLR
comp=Z,196nm,18.0s
KIV Kislovodsk 66.52 309 P **P 21 20 41.9 +0.5**
comp=Z,177nm,1.5s,SNR=10.0
PPLA Pureypile 66.90 30 *e*P **P 21 20 44.0 +0.5**
comp=Z,55nm,2.2s
VORD Divnogorie 67.45 317 *e*P **P 21 20 45.5 -1.6**
VORD pmax pmax
comp=Z,20nm,1.2s
VORD pmax pmax
comp=N,7.0nm,0.9s
VORD pmax pmax
comp=E,10.0nm,0.8s
KDAK Kodiak Island 67.46 35 P **P 21 20 46.3 -0.7**
KDAK Kodiak Island 67.46 35 P **P 21 20 46.3 -0.7**
comp=E,4.6nm,0.4s,baz=230,slow=2.4,SNR=11
VSR Storozhevoye 67.49 317 *e*P **P 21 20 46.1 -1.2**
VSR pmax pmax
comp=Z,30nm,1.2s
VSR pmax pmax
comp=N,5.0nm,0.6s
VSR pmax pmax
comp=E,20nm,1.0s
MOS Moscow 67.59 322 *e*P P 21 20 43.4 -4.4
OBN Obninsk 68.29 322⇑ *e*P **P 21 20 51.6 -0.6**
OBN *e*S **S 21 29 55.7 +4.7**
OBN pmax pmax
comp=Z,23nm,1.2s
OBN MLR MLR
comp=Z,300nm,21.0s
SOC Sochi 68.70 309*c i*P **P 21 20 54.2 -0.8**
SOC *e*S **S 21 29 55.1 -1.2**
SOC pmax pmax
comp=Z,14nm,0.5s
SOC MLR MLR
comp=Z,206nm,15.0s
ILAR Eielson Array 68.90 27 P **P 21 20 54.9 -1.1**
ILAR Eielson Array 68.90 27 P **P 21 20 54.9 -1.1**
comp=Z,1.0nm,0.5s,baz=274,slow=5.0,SNR=12
ILAR LR LR 21 54 12.4
comp=Z,94nm,18.3s,baz=292,slow=39
JOF Joensuu 69.38 331 *e*P **P 21 20 57.7 -1.2**
JOF pmax pmax
comp=Z,3.0nm,0.4s
JOF Joensuu 69.38 331 *ep* **P 21 20 57.7 -1.2**
comp=Z,3.4nm,0.4s
RAYN Ar Rayn 69.40 287 P **P 21 21 00.5 +0.7**
comp=Z,62nm,1.0s,SNR=7.7
RAYN Ar Rayn 69.40 287 *e*P **P 21 20 59.8 0.0**
comp=Z,15nm,1.1s
KEV Kevo 69.54 338 *e*P **P 21 20 58.8 -1.0**
KEV pmax pmax
comp=Z,6.0nm,0.5s
KEV Kevo 69.54 338 *ep* **P 21 20 58.8 -1.0**
comp=Z,6.3nm,0.5s
SPITS Spitsbergen Ar 69.89 348 P **P 21 21 00.9 -1.0**
SPITS Spitsbergen Ar 69.89 348 P **P 21 21 00.9 -1.0**
comp=Z,12nm,0.5s,baz=72,slow=6.3,SNR=66
ANN Anapa 70.00 311*c i*P **P 21 21 01.7 -1.4**
ANN pmax pmax
comp=Z,58nm,1.0s
ANN MLR MLR
comp=Z,211nm,17.0s
ARCES ARCESS Array B 70.10 338 P **P 21 21 02.2 -1.0**
ARCES ARCESS Array B 70.10 338 P **P 21 21 02.3 -1.0**
comp=Z,3.2nm,0.6s,baz=67,slow=8.6,SNR=36
ARCES LR LR 21 58 15.2
comp=Z,205nm,18.7s,baz=61,slow=42
ARE0 ARCESS Array S 70.10 338 *e*P **P 21 21 00.9 -2.4**
KBS Kingsbay 70.42 349*ce*P **P 21 21 05.1 0.0**
KBS pmax pmax
comp=Z,34nm,2.5s
EGAK Eagle 71.28 27 *e*P **P 21 21 10.8 +0.3**
comp=Z,5.6nm,0.6s
KAF Kangasniemi 71.83 331 *e*P **P 21 21 13.6 -0.3**
KAF pmax pmax
comp=Z,2.0nm,0.5s
KAF Kangasniemi 71.83 331 *ep* **P 21 21 13.6 -0.3**
comp=Z,2.2nm,0.5s
FIA1 FINESS Array S 72.13 330 *e*P **P 21 21 15.1 -0.6**
FINES FINESS Array B 72.13 330 P **P 21 21 15.2 -0.4**
FINES FINESS Array B 72.13 330 P **P 21 21 15.2 -0.4**
comp=Z,4.4nm,0.4s,baz=52,slow=6.0,SNR=68
FINES LR LR 21 56 14.7
comp=Z,735nm,18.8s,baz=73,slow=39
INK Inuvik 73.01 22 P **P 21 21 20.3 -0.5**
INK Inuvik 73.01 22 P **P 21 21 20.3 -0.5**
comp=Z,7.2nm,0.6s,baz=316,slow=5.7,SNR=11
AKASG Malin Array Be 73.70 319 P **P 21 21 24.2 -1.0**
AKASG Malin Array Be 73.70 319 P **P 21 21 24.2 -1.0**
AKASG Malin Array Be 73.70 319 P **P 21 21 24.2 -1.0**
comp=Z,12nm,0.6s,baz=61,slow=6.1,SNR=45
AKASG LR LR 21 57 41.7
comp=Z,135nm,18.9s,baz=95,slow=39
AK01 Malin Array Si 73.71 319 *e*P **P 21 21 23.9 -1.4**
KIEV Kiev 73.71 319 *e*P **P 21 21 23.9 -1.3**
KIEV pmax pmax
comp=Z,15nm,0.6s
KIEV Kiev 73.71 319 *e*P **P 21 21 23.9 -1.3**
comp=Z,15nm,0.6s
NACGM Naroch 73.80 323 *e* **P 21 21 23.0 -2.6**
BR131 Keskin Array S 74.12 307 *e*P **P 21 21 27.7 -0.4**
comp=Z,11nm,0.7s
BRTR Keskin Array B 74.12 307 P **P 21 21 28.0 -0.1**
BRTR Keskin Array B 74.12 307 P **P 21 21 28.0 -0.1**
comp=Z,17nm,0.8s,baz=97,slow=5.2,SNR=67
BRTR LR LR 22 01 30.6
comp=Z,56nm,20.2s,baz=81,slow=42
ANTO Ankara 74.69 307 *e*P **P 21 21 31.6 +0.3**
ANTO pmax pmax
comp=Z,27nm,0.7s
ANTO Ankara 74.69 307 *e*P **P 21 21 31.6 +0.3**
comp=Z,26nm,0.7s
LEOM Leova 75.68 315⇓ P **P 21 21 36.6 -0.1**
LEOM Leova 75.68 315⇓ *i*P **P 21 21 36.6 -0.1**
CSS Prodhromos 75.89 302 *e*P **P 21 21 37.9 -0.3**
comp=Z,42nm,1.2s
SUW Suwalki 76.08 323 *e*P **P 21 21 38.3 -0.5**
SUW pmax pmax
comp=Z,62nm,0.9s
SUW Suwalki 76.08 323 *e*P **P 21 21 38.3 -0.5**
comp=Z,62nm,0.9s
SUW Suwalki 76.08 323 *e*P **P 21 21 38.5 -0.3**
SUW LMZ LR 21 58 04.5
CFR Carcaliu 76.19 313⇓ P **P 21 21 39.7 0.0**
CFR Carcaliu 76.19 313⇓ *i*P **P 21 21 39.7 0.0**
HARR Harsova 76.50 313⇑ P **P 21 21 42.0 +0.6**
HARR Harsova 76.50 313⇑ *i*P **P 21 21 42.0 +0.6**
TESR Tescani 76.70 315⇓ *i*P **P 21 21 42.6 0.0**
DAG Danmarks Havn 76.71 351 *i* P **P 21 21 40.1 -1.9**
DAG pmax pmax
comp=Z,5.0nm,0.9s
DAG Danmarks Havn 76.71 351 *i* P **P 21 21 40.1 -1.9**
comp=Z,5.4nm,0.9s
VRI Vrincioaia 76.88 314⇓ P **P 21 21 44.3 +0.7**
VRI Vrincioaia 76.88 314⇓ *i*P **P 21 21 44.3 +0.7**
PLOR Plostina 76.94 314⇓ P **P 21 21 44.4 +0.4**
PLOR Plostina 76.94 314⇓ *i*P **P 21 21 44.4 +0.4**
ISP Isparta 77.05 306 *e*P **P 21 21 44.8 0.0**
ISP pmax pmax
comp=Z,21nm,0.8s
ISP Isparta 77.05 306 *e*P **P 21 21 44.8 0.0**
comp=Z,22nm,0.8s
LVV L'vov 77.14 319 *e*P **P 21 21 45.5 +0.6**
BUR08 Bucovina Ar. S 77.22 317 *e*P **P 21 21 44.5 -1.1**
BURAR Bucovina Array 77.22 316⇓ *i*P **P 21 21 46.0 +0.4**
MLR Muntele Rosu 77.53 314⇑ *i*P **P 21 21 47.9 +0.5**
KWP Kalwaria Pacla 78.00 319⇑ P **P 21 21 50.1 +0.3**
KWP Kalwaria Pacla 78.00 319 *e*P **P 21 21 49.0 -0.8**
comp=Z,26nm,0.6s
KWP Kalwaria Pacla 78.00 319⇑ *i*P **P 21 21 50.1 +0.3**
KWP Kalwaria Pacla 78.00 319 *e*P **P 21 21 49.9 +0.1**
KWP LMZ LR 21 56 47.2
VOIR 78.14 314⇑ P **P 21 21 50.4 -0.3**
VOIR 78.14 314⇑ *i*P **P 21 21 50.3 -0.4**
BEL Belsk 78.25 322 *e*P **P 21 21 51.5 +0.4**
BEL MLR MLR
comp=Z,200nm,18.5s
BEL Belsk 78.25 322 *e*P **P 21 21 51.5 +0.4**
BEL LMZ LR 21 59 50.0
BMR Baia Mare 78.28 317⇓ P **P 21 21 51.7 +0.4**
BMR Baia Mare 78.28 317⇓ *i*P **P 21 21 51.7 +0.4**
ARR Arges 78.43 315⇑ *i*P **P 21 21 53.0 +0.7**
KOLS Kolonicke sedl 78.54 319 *e*P **P 21 21 51.9 -0.9**
KOLS pmax pmax
comp=Z,3.0nm,0.8s
KOLS Kolonicke sedl 78.54 319 *e*P **P 21 21 51.9 -0.9**
DLBC Dease Lake 78.58 31 P **P 21 21 53.1 +0.2**
DLBC Dease Lake 78.58 31 P **P 21 21 53.1 +0.2**
comp=Z,4.3nm,0.6s,baz=326,slow=5.8,SNR=9.8
RES Resolute Bay 78.68 9 P **P 21 21 52.2 -0.8**
RES Resolute Bay 78.68 9 P **P 21 21 52.2 -0.8**
comp=Z,5.1nm,0.5s,baz=327,slow=5.5,SNR=14
NB2 NORSAR Subarra 78.88 332 P **P 21 21 52.8 -1.6**
comp=Z,7.3nm,1.0s,baz=62,slow=5.6
NOA NORSAR Array B 78.88 332 P **P 21 21 53.4 -1.1**
NOA NORSAR Array B 78.88 332 P **P 21 21 53.4 -1.1**
comp=Z,2.4nm,0.4s,baz=55,slow=5.9,SNR=18
NOA LR LR 22 00 25.8
comp=Z,546nm,18.1s,baz=65,slow=38
LOT Lotru 78.96 315⇓ *i*P **P 21 21 55.3 0.0**
STHS Stebnicka Huta 78.96 319 *e*P **P 21 21 55.7 +0.6**
STHS pmax pmax
comp=Z,4.0nm,1.1s
STHS Stebnicka Huta 78.96 319 *e*P **P 21 21 55.7 +0.6**
CRVS Cervenica-Dubn 79.04 319 *e*P **P 21 21 53.1 -2.4**
CRVS pmax pmax
comp=Z,30nm,2.2s
CRVS Cervenica-Dubn 79.04 319 *e*P **P 21 21 53.1 -2.4**
DRGR 79.11 316⇑ P **P 21 21 54.9 -1.2**
DRGR 79.11 316⇑ *i*P **P 21 21 54.9 -1.2**
OJC Ojcow 79.49 320 *e*P **P 21 21 58.0 +0.1**
OJC Ojcow 79.49 320 *e*P **P 21 21 58.0 +0.1**
NIE Niedzica 79.52 319 *e*P **P 21 21 58.9 +0.7**
NIE Niedzica 79.52 319 *e*P **P 21 21 58.9 +0.7**
MPEP Malo Peshtene 79.80 313 *i*P **P 21 22 00.0 +0.2**
KECS Kecovo 79.80 319 *e*P **P 21 22 00.0 +0.3**
KECS pmax pmax
comp=Z,9.0nm,1.7s
KECS Kecovo 79.80 319 *e*P **P 21 22 00.0 +0.3**
BSD Bornholm Skovb 79.99 326 *e*P **P 21 21 59.9 -0.6**
BSD pmax pmax
comp=Z,27nm,0.9s
BSD Bornholm Skovb 79.99 326 *i*P **P 21 21 59.9 -0.6**
comp=Z,27nm,0.9s
BZS Buzias 80.28 316⇑ P **P 21 22 02.0 -0.3**
BZS Buzias 80.28 316⇑ *i*P **P 21 22 02.0 -0.3**
PSZ Piszkesteto 80.40 318 *e*P **P 21 22 03.1 +0.1**
PSZ pmax pmax
comp=Z,10.0nm,1.0s
PSZ Piszkesteto 80.40 318 *e*P **P 21 22 03.1 +0.1**
comp=Z,10nm,1.0s
VTS Vitosha 80.46 312⇑ P **P 21 22 04.0 +0.4**
VTS Vitosha 80.46 312 *i*P **P 21 22 02.2 -1.4**
VTS Vitosha 80.46 312⇑ *i*P **P 21 22 04.0 +0.4**
MMB Musomiste 80.51 311 *e*P **P 21 22 01.6 -2.1**
OKC Ostrava-Krasne 80.61 320 *e*P **P 21 22 04.4 +0.4**
OKC Ostrava-Krasne 80.61 320 *e*P **P 21 22 04.4 +0.4**
VYHS Vyhne 80.79 319 *e*P **P 21 22 05.1 +0.1**
VYHS pmax pmax
comp=Z,9.0nm,0.9s
VYHS Vyhne 80.79 319 *e*P **P 21 22 05.1 +0.1**
KKB Krupnik 80.84 312 *i*P **P 21 22 05.6 +0.2**
MORC Moravsky Berou 80.99 321 *e*P **P 21 22 05.9 -0.2**
MORC pmax pmax
comp=Z,10.0nm,1.2s
MORC Moravsky Berou 80.99 321 *e*P **P 21 22 05.9 -0.2**
comp=Z,9.9nm,1.2s
KSP Ksiaz 81.22 322 *e*P **P 21 22 06.8 -0.5**
KSP Ksiaz 81.22 322 *e*P **P 21 22 07.0 -0.3**
KSP LMZ LR 22 01 40.0
DPC Dobruska-Polom 81.43 321 *e*P **P 21 22 08.6 +0.2**
DPC MLR MLR
comp=Z,2µm,19.0s
DPC Dobruska-Polom 81.43 321 *e*P **P 21 22 08.6 +0.2**
DPC AMS AMS 22 01 50.0
comp=Z,2µm,19.0s
ZST Bratislava 81.96 319 *e*P **P 21 22 10.7 -0.5**
ZST Bratislava 81.96 319 *e*P **P 21 22 10.7 -0.5**
MUD Monsted U'grnd 82.14 329 *i*P **P 21 22 12.6 +0.7**
MUD pmax pmax
comp=Z,6.0nm,1.0s
MUD Monsted U'grnd 82.14 329 *i*P **P 21 22 12.6 +0.7**
comp=Z,6.4nm,1.0s
PVCC Panska Ves 82.34 322 AMS AMS 22 03 30.0

	comp=Z,500nm,18.7s							
TREC	**Trest**	**82.40**	**321**	AMS	AMS	22 02 00.0		
	comp=Z,200nm,12.8s							
BRG	**Berggiesshubel**	**82.52**	**323**	*e*P	**P**	**21 22 13.7**	**-0.4**	
	comp=Z,5.8nm,1.2s							
BRG	**Berggiesshubel**	**82.52**	**323**	*e*P	**P**	**21 22 14.3**	**+0.2**	
	comp=Z,6.0nm,1.2s							
BRG	**Berggiesshubel**	**82.52**	**323**	*e*P	**P**	**21 22 13.7**	**-0.4**	
BRG				pmax	pmax			
	comp=Z,6.0nm,1.2s							
PRU	**Pruhonice**	**82.61**	**322**	*e*P	**P**	**21 22 14.4**	**-0.2**	
PRU				MLR	MLR			
	comp=Z,300nm,22.3s							
PRU	**Pruhonice**	**82.61**	**322**	*e*P	**P**	**21 22 14.4**	**-0.2**	
PRU				AMS	AMS	22 02 20.0		
	comp=Z,300nm,22.3s							
PRA	**Prague**	**82.64**	**322**	P	**P**	**21 22 15.0**	**+0.3**	
YKW3	**Yellowknife Ar**	**82.69**	**23**	*e*P	**P**	**21 22 13.9**	**-0.8**	
	comp=Z,0.2nm,0.8s							
YKA	**Yellowknife Ar**	**82.74**	**23**	P	**P**	**21 22 14.3**	**-0.6**	
YKA	**Yellowknife Ar**	**82.74**	**23**	P	**P**	**21 22 14.3**	**-0.6**	
	comp=Z,4.7nm,0.7s,baz=315,slow=5.0,SNR=18							
SUMG	**Summit**	**82.80**	**354**	*e*P	**P**	**21 22 14.8**	**-0.8**	
SUMG				pmax	pmax			
	comp=Z,12nm,0.6s							
SUMG	**Summit**	**82.80**	**354**	*e*P	**P**	**21 22 14.8**	**-0.8**	
	comp=Z,12nm,0.6s							
SUMG	**Summit**	**82.80**	**354**	*i* P	**P**	**21 22 15.0**	**-0.6**	
	comp=Z,8.7nm,0.8s							
FBE	**Freiberg**	**82.83**	**323**	*e*P	**P**	**21 22 16.2**	**+0.5**	
	comp=Z,18nm,1.4s							
CLL	**Collm**	**82.83**	**323**	*e*P	**P**	**21 22 15.6**	**-0.1**	
	comp=Z,10.0nm,1.4s							
CLL	**Collm**	**82.83**	**323**	*i* P	**P**	**21 22 15.0**	**-0.7**	
CLL				pmax	pmax			
	comp=Z,10.0nm,1.3s							
CLL	**Collm**	**82.83**	**323**	*i* P	**P**	**21 22 15.0**	**-0.7**	
	comp=Z,10.0nm,1.3s							
CLL				*e*		21 22 37.0		
CLL				*e*PP	**PP**	**21 25 25.0**	**-0.6**	
CLL				*e*S	**S**	**21 32 36.0**	**+4.0**	
CLL				*e*(SSS)		21 42 00.0		
CLL				Lm	MLR	22 03 00.0		
	comp=N,200nm,18.1s							
CLL				Lm	MLR	22 03 00.0		
	comp=E,200nm,19.8s							
CLL				Lm	MLR	22 03 00.0		
	comp=Z,300nm,20.9s							
NEUB	**Neuenburg**	**83.55**	**324**	*e*P	**P**	**21 22 19.7**	**+0.3**	
	comp=Z,15nm,0.9s							
TANN	**Tannenbergstha**	**83.57**	**323**	*e*P	**P**	**21 22 19.6**	**0.0**	
	comp=Z,9.0nm,1.4s							
KHC	**Kasperske Hory**	**83.58**	**321**	*e*P	**P**	**21 22 19.2**	**-0.5**	
KHC				MLR	MLR			
	comp=Z,300nm,15.2s							
KHC	**Kasperske Hory**	**83.58**	**321**	*e*P	**P**	**21 22 19.7**	**0.0**	
KHC	**Kasperske Hory**	**83.58**	**321**	*e*P	**P**	**21 22 19.2**	**-0.5**	
KHC				*ex*	x	21 22 48.0		
KHC				AMS	AMS	22 04 30.0		
	comp=Z,300nm,15.2s							
KHC	**Kasperske Hory**	**83.58**	**321**	*e*P	**P**	**21 22 19.7**	**0.0**	
WERD	**Werda**	**83.64**	**323**	*e*P	**P**	**21 22 19.9**	**0.0**	
	comp=Z,7.0nm,1.2s							
GEC2	**GERESS Array S**	**83.65**	**321**	*e*P	**P**	**21 22 20.1**	**0.0**	
	comp=Z,12nm,1.0s							
GEC2	**GERESS Array S**	**83.65**	**321**	*e*P	**P**	**21 22 20.1**	**0.0**	
GEC2				pmax	pmax			
	comp=Z,54nm,1.0s							
GERES	**GERESS Array B**	**83.65**	**321**	P	**P**	**21 22 20.1**	**0.0**	
GERES	**GERESS Array B**	**83.65**	**321**	P	**P**	**21 22 20.1**	**0.0**	
	comp=Z,6.6nm,0.9s,baz=57,slow=4.9,SNR=48							
GERES				LR	LR	22 03 43.6		
	comp=Z,234nm,19.1s,baz=65,slow=39							
GUNZ	**Gunzen**	**83.67**	**323**	*e*P	**P**	**21 22 20.3**	**+0.2**	
	comp=Z,15nm,1.3s							
WERN	**Wernitzgruen**	**83.68**	**323**	*e*P	**P**	**21 22 20.5**	**+0.3**	
	comp=Z,10.0nm,1.4s							
PLN	**Plauen**	**83.70**	**323**	*e*P	**P**	**21 22 20.4**	**+0.2**	
	comp=Z,27nm,1.0s							
PERS	**Pernice**	**83.88**	**319**	*i* P	**P**	**21 22 20.6**	**-0.7**	
MOX	**Moxa**	**83.92**	**323**	*e*P	**P**	**21 22 21.5**	**+0.2**	
	comp=Z,8.0nm,1.4s							
MOX	**Moxa**	**83.92**	**323**	*e*P	**P**	**21 22 21.5**	**+0.2**	
MOX				pmax	pmax			
	comp=Z,81nm,1.4s							
CLZ	**Clausthal**	**83.97**	**325**	*e*P	**P**	**21 22 22.1**	**+0.5**	
	comp=Z,17nm,1.4s							
CLZ	**Clausthal**	**83.97**	**325**	*e*P	**P**	**21 22 22.1**	**+0.5**	
CLZ				pmax	pmax			
	comp=Z,8.0nm,1.4s							
WET	**Wettzell**	**83.97**	**321**	*e*P	**P**	**21 22 22.0**	**+0.3**	
	comp=Z,9.0nm,1.3s							
WET	**Wettzell**	**83.97**	**321**	*e*P	**P**	**21 22 22.0**	**+0.3**	
WET				pmax	pmax			
	comp=Z,39nm,1.3s							
MANZ	**Manzenberg**	**83.98**	**322**	*e*P	**P**	**21 22 22.0**	**+0.3**	
	comp=Z,7.0nm,1.1s							
ROTZ	**Rotzenmuhle**	**84.04**	**322**	*e*P	**P**	**21 22 22.5**	**+0.6**	
BOJS	**Bojanci**	**84.34**	**318**	*i* P	**P**	**21 22 23.1**	**-0.4**	
VISS	**Visnje**	**84.45**	**318**	*i* P	**P**	**21 22 24.0**	**-0.1**	
GRF	**Grafenberg Arr**	**84.63**	**323**	*e*P	**P**	**21 22 25.4**	**+0.5**	
	comp=Z,25nm,1.4s							
GRF				*e*L	L	22 04 28.8		
	comp=Z,283nm,19.4s							
GRF	**Grafenberg Arr**	**84.63**	**323**	*e*P	**P**	**21 22 25.4**	**+0.5**	
GRF				pmax	pmax			
	comp=Z,1.0nm,1.4s							
GRF				MLR	MLR			
	comp=Z,25µm,19.4s							
GRFO	**Grafenberg**	**84.63**	**323**	*e*P	**P**	**21 22 25.1**	**+0.1**	
GRFO				pmax	pmax			
	comp=Z,11nm,1.0s							
GRFO	**Grafenberg**	**84.63**	**323**	*e*P	**P**	**21 22 25.1**	**+0.1**	
	comp=Z,11nm,1.0s							
UBBA	**Unterbreizbach**	**84.71**	**324**	*e*P	**P**	**21 22 25.5**	**+0.3**	
	comp=Z,23nm,2.0s							
RJOB	**Jochberg**	**84.72**	**320**	*e*P	**P**	**21 22 25.8**	**+0.3**	
	comp=Z,9.0nm,0.9s							
JAVS	**Javornik**	**84.88**	**318**	*i* P	**P**	**21 22 25.6**	**-0.8**	
FUR	**Furstenfeldbru**	**85.38**	**321**	*e*P	**P**	**21 22 29.3**	**+0.5**	
	comp=Z,29nm,1.1s							
FUR	**Furstenfeldbru**	**85.38**	**321**	*e*P	**P**	**21 22 29.3**	**+0.5**	
FUR				pmax	pmax			
	comp=Z,36nm,1.1s							
BUG	**Bochum--Univer**	**85.82**	**325**	*e*P	**P**	**21 22 31.1**	**+0.3**	
	comp=Z,13nm,1.1s							
KMBO	**Kilima Mbogo**	**85.95**	**267**	*e*P	**P**	**21 22 34.0**	**+1.5**	
KMBO	**Kilima Mbogo**	**85.95**	**267**	P	**P**	**21 22 33.9**	**+1.4**	
	comp=Z,5.0nm,0.9s,baz=45,slow=9.2,SNR=14							
DAVOX	**Davos/Dischmat**	**86.92**	**320**	P	**P**	**21 22 36.4**	**-0.2**	
DAVOX	**Davos/Dischmat**	**86.92**	**320**	P	**P**	**21 22 36.4**	**-0.2**	
	comp=Z,2.2nm,0.5s,baz=191,slow=4.4,SNR=5.9							
AQU	**L'Aquila**	**87.04**	**315**	*e*P	**P**	**21 22 37.5**	**+0.4**	
	comp=Z,34nm,1.1s							
WLF	**Walferdange**	**87.41**	**324**	P	**P**	**21 22 39.2**	**+0.6**	
	comp=Z,12nm,1.5s							
WLF	**Walferdange**	**87.41**	**324**	*e*P	**P**	**21 22 39.2**	**+0.6**	
	comp=Z,19nm,1.0s							
BCLA	**Clavier**	**87.42**	**325**	P	**P**	**21 22 38.8**	**+0.1**	
	comp=Z,11nm,2.3s							
CDF	**Champ du Feu**	**87.50**	**323**	*e*P	**P**	**21 22 38.1**	**-1.2**	
	comp=Z,30nm,1.3s							
CDF	**Champ du Feu**	**87.50**	**323**	*e*P	**P**	**21 22 38.1**	**-1.2**	
CDF				pmax	pmax			
	comp=Z,30nm,1.3s							
CDF	**Champ du Feu**	**87.50**	**323**	*e*P	**P**	**21 22 38.1**	**-1.2**	
	comp=Z,30nm,1.3s							
GIVF	**Givet**	**87.86**	**325**	*e*P	**P**	**21 22 39.5**	**-1.3**	
GIVF	**Givet**	**87.86**	**325**	*e*P	**P**	**21 22 39.5**	**-1.3**	
GIVF	**Givet**	**87.86**	**325**	*e*P	**P**	**21 22 39.5**	**-1.3**	
HAU	**Haudompre**	**88.25**	**323**	*e*P	**P**	**21 22 41.1**	**-1.6**	
HAU				*e*R				
	comp=Z,199nm,17.2s							
HAU	**Haudompre**	**88.25**	**323**	*e*P	**P**	**21 22 41.1**	**-1.6**	
HAU	**Haudompre**	**88.25**	**323**	*e*P	**P**	**21 22 41.1**	**-1.6**	
PAGF	**Fort de Pagny**	**88.27**	**324**	*e*P	**P**	**21 22 41.7**	**-1.1**	
	comp=Z,2.7nm,0.8s							
PAGF	**Fort de Pagny**	**88.27**	**324**	*e*P	**P**	**21 22 41.7**	**-1.1**	
	comp=Z,2.7nm,0.8s							
EKA	**Eskdalemuir Ar**	**88.37**	**332**	P	**P**	**21 22 42.7**	**-0.4**	
EKA	**Eskdalemuir Ar**	**88.37**	**332**	P	**P**	**21 22 42.7**	**-0.4**	
	comp=Z,0.7nm,0.5s,baz=56,slow=2.7,SNR=6.6							
SENIN	**Lac Senin/Sane**	**88.64**	**321**	*e*P	**P**	**21 22 44.5**	**-0.4**	
	comp=Z,41nm,2.1s							
MEZF	**Maizieres J'vi**	**88.67**	**324**	*e*P	**P**	**21 22 43.6**	**-1.1**	
MEZF	**Maizieres J'vi**	**88.67**	**324**	*e*P	**P**	**21 22 43.6**	**-1.1**	
SFTF	**Sexfontaines**	**88.85**	**324**	*e*P	**P**	**21 22 44.2**	**-1.3**	
	comp=Z,36nm,1.2s							
SFTF	**Sexfontaines**	**88.85**	**324**	*e*P	**P**	**21 22 44.2**	**-1.3**	
	comp=Z,36nm,1.2s							
LON	**Longmire**	**88.90**	**38**	*e*P	**P**	**21 22 47.1**	**+1.2**	
LON	**Longmire**	**88.90**	**38**	*e*P	**P**	**21 22 47.0**	**+1.2**	
SFJD	**Kangerlussuaq**	**89.14**	**357**	P	**P**	**21 22 45.5**	**-0.9**	
SFJD	**Kangerlussuaq**	**89.14**	**357**	*i* P	**P**	**21 22 45.4**	**-1.1**	
	comp=Z,13nm,0.5s							
SFJD	**Kangerlussuaq**	**89.14**	**357**	P	**P**	**21 22 45.5**	**-0.9**	
	comp=Z,12nm,0.5s,baz=25,slow=1.7,SNR=13							
LPG	**La Plagne**	**89.44**	**321**	*e*P	**P**	**21 22 47.8**	**-0.9**	
	comp=Z,16nm,0.6s							
LPG	**La Plagne**	**89.44**	**321**	*e*P	**P**	**21 22 47.8**	**-0.9**	
LPG				pmax	pmax			
	comp=Z,16nm,0.6s							
LPG	**La Plagne**	**89.44**	**321**	*e*P	**P**	**21 22 47.8**	**-0.9**	
	comp=Z,16nm,0.6s							
LPL	**La Plagne**	**89.44**	**321**	*e*P	**P**	**21 22 47.7**	**-1.0**	
	comp=Z,18nm,0.6s							
LPL	**La Plagne**	**89.44**	**321**	*e*P	**P**	**21 22 47.7**	**-1.0**	
LPL				pmax	pmax			
	comp=Z,19nm,0.6s							
LPL	**La Plagne**	**89.44**	**321**	*e*P	**P**	**21 22 47.7**	**-1.0**	
	comp=Z,18nm,0.6s							
PGF	**Pioggiola**	**89.72**	**317**	*e*P	**P**	**21 22 48.9**	**-1.0**	
	comp=Z,27nm,0.8s							
PGF	**Pioggiola**	**89.72**	**317**	*e*P	**P**	**21 22 48.9**	**-1.0**	
PGF				pmax	pmax			
	comp=Z,27nm,0.8s							
PGF	**Pioggiola**	**89.72**	**317**	*e*P	**P**	**21 22 48.9**	**-1.0**	
	comp=Z,27nm,0.8s							
BNI	**Bardonecchia**	**89.73**	**320**	*e*P	**P**	**21 22 48.7**	**-1.3**	
BNI				pmax	pmax			
	comp=Z,10.0nm,1.2s							
BNI	**Bardonecchia**	**89.73**	**320**	*e*P	**P**	**21 22 48.7**	**-1.3**	
	comp=Z,9.6nm,1.2s							
LOR	**Lormes**	**90.04**	**323**	*e*P	**P**	**21 22 49.5**	**-1.7**	
	comp=Z,12nm,1.0s							
LOR				*e*R				
	comp=Z,282nm,17.2s							
LOR	**Lormes**	**90.04**	**323**	*e*P	**P**	**21 22 49.5**	**-1.7**	
	comp=Z,12nm,1.0s							
ORIF	**Oris-en-Rattie**	**90.28**	**320**	*e*P	**P**	**21 22 51.2**	**-1.2**	
	comp=Z,8.5nm,0.7s							
ORIF				*e*R				
	comp=Z,315nm,18.5s							
ORIF	**Oris-en-Rattie**	**90.28**	**320**	*e*P	**P**	**21 22 51.2**	**-1.2**	
ORIF				pmax	pmax			
	comp=Z,9.0nm,0.7s							
ORIF	**Oris-en-Rattie**	**90.28**	**320**	*e*P	**P**	**21 22 51.2**	**-1.2**	
	comp=Z,8.5nm,0.7s							
SSF	**Saint Saulge**	**90.36**	**323**	*e*P	**P**	**21 22 51.1**	**-1.5**	
	comp=Z,21nm,1.4s							
SSF	**Saint Saulge**	**90.36**	**323**	*e*P	**P**	**21 22 51.1**	**-1.5**	
SSF				pmax	pmax			
	comp=Z,21nm,1.4s							
SSF	**Saint Saulge**	**90.36**	**323**	*e*P	**P**	**21 22 51.1**	**-1.5**	
	comp=Z,21nm,1.4s							
HAWA	**Hanford**	**90.39**	**38**	*e*P	**P**	**21 22 54.7**	**+1.9**	
	comp=Z,9.0nm,0.8s							
SMF	**Signal de Mont**	**90.42**	**323**	*e*P	**P**	**21 22 51.6**	**-1.4**	
	comp=Z,38nm,0.9s							
SMF	**Signal de Mont**	**90.42**	**323**	*e*P	**P**	**21 22 51.6**	**-1.4**	
SMF				pmax	pmax			
	comp=Z,38nm,0.9s							
SMF	**Signal de Mont**	**90.42**	**323**	*e*P	**P**	**21 22 51.6**	**-1.4**	
	comp=Z,38nm,0.9s							
HUMO	**Hull Mountain**	**90.55**	**42**	*e*P	**P**	**21 22 55.1**	**+1.5**	
	comp=Z,11nm,1.6s							
NEW	**Newport**	**90.56**	**35**	*e*P	**P**	**21 22 54.9**	**+1.2**	
	comp=Z,9.8nm,0.8s							
FRF	**La Foret Royal**	**90.60**	**319**	*e*P	**P**	**21 22 52.1**	**-1.7**	
	comp=Z,19nm,1.1s							
FRF	**La Foret Royal**	**90.60**	**319**	*e*P	**P**	**21 22 52.1**	**-1.7**	
FRF				pmax	pmax			
	comp=Z,19nm,1.1s							
FRF	**La Foret Royal**	**90.60**	**319**	*e*P	**P**	**21 22 52.1**	**-1.7**	
	comp=Z,19nm,1.1s							
AVF	**Avril sur Loir**	**90.61**	**323**	*e*P	**P**	**21 22 52.4**	**-1.4**	
	comp=Z,30nm,1.1s							
AVF	**Avril sur Loir**	**90.61**	**323**	*e*P	**P**	**21 22 52.4**	**-1.4**	
AVF				pmax	pmax			
	comp=Z,30nm,1.1s							
AVF	**Avril sur Loir**	**90.61**	**323**	*e*P	**P**	**21 22 52.4**	**-1.4**	
	comp=Z,30nm,1.1s							
HYF	**Humbligny**	**90.71**	**324**	*e*P	**P**	**21 22 53.4**	**-0.9**	
HYF	**Humbligny**	**90.71**	**324**	*e*P	**P**	**21 22 53.4**	**-0.9**	
LMR	**La Mourre**	**90.81**	**319**	*e*P	**P**	**21 22 53.6**	**-1.2**	
	comp=Z,24nm,1.1s							
LMR	**La Mourre**	**90.81**	**319**	*e*P	**P**	**21 22 53.6**	**-1.2**	
LMR				pmax	pmax			
	comp=Z,24nm,1.1s							
LMR	**La Mourre**	**90.81**	**319**	*e*P	**P**	**21 22 53.6**	**-1.2**	
	comp=Z,24nm,1.1s							
SMRF	**Simiane la Rot**	**91.00**	**320**	*e*P	**P**	**21 22 54.8**	**-0.9**	
SMRF	**Simiane la Rot**	**91.00**	**320**	*e*P	**P**	**21 22 54.8**	**-0.9**	
VIVF	**Saint-Julien-l**	**91.01**	**321**	*e*P	**P**	**21 22 54.4**	**-1.4**	
	comp=Z,15nm,0.9s							
VIVF	**Saint-Julien-l**	**91.01**	**321**	*e*P	**P**	**21 22 54.4**	**-1.4**	
VIVF				pmax	pmax			
	comp=Z,15nm,0.9s							
VIVF	**Saint-Julien-l**	**91.01**	**321**	*e*P	**P**	**21 22 54.4**	**-1.4**	
	comp=Z,15nm,0.9s							
BGF	**Bois d'Agland**	**91.03**	**323**	*e*P	**P**	**21 22 54.5**	**-1.3**	
BGF	**Bois d'Agland**	**91.03**	**323**	*e*P	**P**	**21 22 54.5**	**-1.3**	
BGF	**Bois d'Agland**	**91.03**	**323**	*e*P	**P**	**21 22 54.5**	**-1.3**	
YBH	**Yreka Blue Hor**	**91.19**	**43**	P	**P**	**21 22 57.0**	**+0.3**	
YBH	**Yreka Blue Hor**	**91.19**	**43**	P	**P**	**21 22 57.1**	**+0.3**	
	comp=Z,2.2nm,0.8s,baz=202,slow=5.6,SNR=5.5							
TCF	**Toulx Ste Croi**	**91.54**	**323**	*e*P	**P**	**21 22 57.2**	**-1.0**	
	comp=Z,22nm,1.3s							
TCF	**Toulx Ste Croi**	**91.54**	**323**	*e*P	**P**	**21 22 57.2**	**-1.0**	
TCF				pmax	pmax			
	comp=Z,22nm,1.3s							
TCF	**Toulx Ste Croi**	**91.54**	**323**	*e*P	**P**	**21 22 57.2**	**-1.0**	
	comp=Z,22nm,1.3s							
LASF	**Ste Croix**	**91.94**	**321**	*e*P	**P**	**21 22 59.0**	**-1.1**	
	comp=Z,33nm,1.5s							
LASF	**Ste Croix**	**91.94**	**321**	*e*P	**P**	**21 22 59.0**	**-1.1**	
	comp=Z,33nm,1.5s							
BSMT	**Bassoo Peak**	**92.04**	**34**	*e*P	**P**	**21 23 01.9**	**+1.2**	
FRB	**Frobisher Bay**	**92.14**	**5**	P	**P**	**21 22 59.5**	**-1.0**	
FRB	**Frobisher Bay**	**92.14**	**5**	P	**P**	**21 22 59.5**	**-1.0**	
	comp=Z,9.4nm,0.7s,baz=17,slow=6.8,SNR=16							
CAF	**Calviac**	**92.45**	**322**	*e*P	**P**	**21 23 01.8**	**-0.6**	
	comp=Z,31nm,1.1s							
CAF	**Calviac**	**92.45**	**322**	*e*P	**P**	**21 23 01.8**	**-0.6**	
CAF				pmax	pmax			
	comp=Z,31nm,1.1s							
CAF	**Calviac**	**92.45**	**322**	*e*P	**P**	**21 23 01.8**	**-0.6**	
	comp=Z,31nm,1.1s							
RJF	**Les Rejaudoux**	**92.53**	**323**	*e*P	**P**	**21 23 02.2**	**-0.5**	
	comp=Z,34nm,1.0s							
RJF				*e*R				
	comp=Z,266nm,17.0s							
RJF	**Les Rejaudoux**	**92.53**	**323**	*e*P	**P**	**21 23 02.2**	**-0.5**	
RJF				pmax	pmax			
	comp=Z,34nm,1.0s							
RJF	**Les Rejaudoux**	**92.53**	**323**	*e*P	**P**	**21 23 02.2**	**-0.5**	
	comp=Z,34nm,1.0s							
SWMT	**Swartz Lake**	**92.67**	**34**	*e*P	**P**	**21 23 04.5**	**+1.0**	
FFC	**Flin Flon**	**92.89**	**24**	*ce*P	**P**	**21 23 04.4**	**+0.2**	
FFC	**Flin Flon**	**92.89**	**24**	*e*P	**P**	**21 23 03.5**	**-0.7**	
	comp=Z,14nm,1.1s							
SLMT	**Seeley Lake**	**93.10**	**34**	*e*P	**P**	**21 23 06.2**	**+0.7**	
KEST	**Kesra**	**93.17**	**311**	P	**P**	**21 23 05.9**	**-0.1**	
KEST	**Kesra**	**93.17**	**311**	P	**P**	**21 23 05.9**	**-0.1**	
	comp=Z,2.6nm,1.0s,baz=103,slow=5.6,SNR=4.7							
LFF	**La Frestale**	**93.18**	**323**	*e*P	**P**	**21 23 05.0**	**-0.7**	
	comp=Z,40nm,1.4s							
LFF	**La Frestale**	**93.18**	**323**	*e*P	**P**	**21 23 05.0**	**-0.7**	
LFF				pmax	pmax			
	comp=Z,40nm,1.4s							
LFF	**La Frestale**	**93.18**	**323**	*e*P	**P**	**21 23 05.0**	**-0.7**	
	comp=Z,40nm,1.4s							
MTLF	**Montolieu**	**93.33**	**321**	*e*P	**P**	**21 23 05.9**	**-0.6**	
MTLF	**Montolieu**	**93.33**	**321**	*e*P	**P**	**21 23 05.9**	**-0.6**	
MTLF	**Montolieu**	**93.33**	**321**	*e*P	**P**	**21 23 05.9**	**-0.6**	
ETSF	**Etsaut**	**95.20**	**322**	*e*P	**P**	**21 23 14.4**	**-0.8**	
	comp=Z,10nm,1.1s							
ETSF	**Etsaut**	**95.20**	**322**	*e*P	**P**	**21 23 14.4**	**-0.8**	
ETSF				pmax	pmax			
	comp=Z,10.0nm,1.1s							
ETSF	**Etsaut**	**95.20**	**322**	*e*P	**P**	**21 23 14.4**	**-0.8**	
	comp=Z,10nm,1.1s							
PPT	**Papeete**	**95.30**	**107**	LR	LR	22 01 52.7		
	comp=Z,229nm,19.9s,baz=348,slow=33							
NVAR	**Mina Array Bea**	**95.86**	**43**	P	**P**	**21 23 18.6**	**+0.2**	
NVAR	**Mina Array Bea**	**95.86**	**43**	P	**P**	**21 23 18.6**	**+0.2**	
	comp=Z,1.4nm,0.6s,baz=302,slow=4.1,SNR=8.1							
PDAR	**Pinedale Array**	**98.17**	**36**	P	**P**	**21 23 28.4**	**-0.4**	
PDAR	**Pinedale Array**	**98.17**	**36**	P	**P**	**21 23 28.4**	**-0.4**	
	comp=Z,0.3nm,0.5s,baz=315,slow=3.2,SNR=2.9							
PDAR				LR	LR	22 11 57.6		
	comp=Z,47nm,18.4s,baz=232,slow=38							
ULM	**Lac du Bonnet**	**98.71**	**24**	LR	LR	22 12 56.6		
	comp=Z,115nm,18.0s,baz=337,slow=38							
ESDC	**Sonseca Array**	**99.24**	**321**	LR	LR	22 13 45.9		
	comp=Z,135nm,19.5s,baz=150,slow=39							
TXAR	**Lajitas Array**	**110.96**	**42**	PKiKP	**PKiKP**	**21 28 25.1**	**-0.1**	
TXAR	**Lajitas Array**	**110.96**	**42**	PKiKP	**PKiKP**	**21 28 25.1**	**-0.1**	
	comp=Z,0.4nm,0.6s,baz=337,slow=1.6,SNR=3.7							
TORD	**Torodi Ar. Bea**	**111.25**	**296**	PKiKP	**PKiKP**	**21 28 25.0**	**-1.0**	
TORD	**Torodi Ar. Bea**	**111.25**	**296**	PKiKP	**PKiKP**	**21 28 25.0**	**-1.0**	
	comp=Z,0.5nm,0.6s,baz=33,slow=2.2,SNR=8.0							
SDV	**Santo Domingo**	**144.96**	**23**	*e*PKP	**PKPab**	**21 29 27.9**	**-0.9**	
LPAZ	**La Paz**	**167.55**	**54**	PKP	**PKPdf**	**21 30 00.6**	**+1.6**	
LPAZ	**La Paz**	**167.55**	**54**	PKP	**PKPdf**	**21 30 00.6**	**+1.6**	
	comp=Z,2.1nm,0.9s,baz=275,slow=1.2,SNR=6.4							

*ISCJB **24** 21:10:13.9±1.2,35°80N±0'.04×28°22E±0'.04,h0km±9km, Error ellipse: s-maj=7.8km s-min=4.4km az=150.1*
*ISK **24** 21:10:14.1,35°77N×28°24E,h10km, MD3.2*
*ATH **24** 21:10:15.7,35°82N×28°19E,h15km±4km, MD3.3/8*
*CSEM **24** 21:10:16.0±0.3,35°86N×28°27E,h10km, MD3.3, Error ellipse: s-maj=7.8km s-min=4.7km az=147.0*
*DDA **24** 21:10:19.6,36°13N×28°35E,h5km, MD3.4*

ISC 24 21:10:15.6±1.3,35°85N±0'.04×28°24E±0'.03,h5km±10km, n50,σ0s74/68,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.37**	**346**	*e*PB	**Pg**	**21 10 23.2**	**+0.4**
ARG				*e*SB	**Sb**	**21 10 30.5**	**-0.3**
ARG	**Arkhangelos**	**0.37**	**346**	*e*Pb	**Pg**	**21 10 23.2**	**+0.4**
ARG				*e*Sb	**Sb**	**21 10 30.5**	**-0.3**
KARP	**Karpathos**	**0.93**	**251**	*e*PN	**Pg**	**21 10 32.6**	**-0.8**
KARP				*e*SN	**Sg**	**21 10 44.8**	**-0.6**
DALY	**Dalyan (Mu¨la**	**1.02**	**19**	*e*PN	**Pg**	**21 10 35.5**	**+0.5**
DALY				*e*SN	**Sn**	**21 10 50.7**	**-0.4**
DALY	**Dalyan (Mu¨la**	**1.02**	**19**	*e*Pn	**Pg**	**21 10 35.6**	**+0.5**
DALY				*e*Sn	**Sn**	**21 10 50.7**	**-0.4**
DAT	**Datca**	**1.02**	**329**	*e*PN	**Pg**	**21 10 34.8**	**-0.4**
DAT				*e*SN	**Sn**	**21 10 51.2**	**-0.2**
DAT	**Datca**	**1.02**	**329**	*e*Pn	**Pg**	**21 10 34.8**	**-0.4**
DAT				*e*Sn	**Sn**	**21 10 51.3**	**-0.2**
FETY	**Fethiye**	**1.04**	**41**	*e*PN	**Pg**	**21 10 35.9**	**+0.4**
FETY				*e*SN	**Sn**	**21 10 51.7**	**0.0**
FETY	**Fethiye**	**1.04**	**41**	*e*Pn	**Pg**	**21 10 35.9**	**+0.4**
FETY				*e*Sn	**Sn**	**21 10 51.7**	**0.0**
TURN	**Turunc**	**1.06**	**16**	*e*Pn	**Pg**	**21 10 33.2**	**-2.6**
TURN				*e*Sn	**Sb**	**21 10 50.9**	**+0.3**
NIS1	**Nisyros Isl.**	**1.14**	**311**	*e*PN	**Pg**	**21 10 36.5**	**-0.9**
NIS1	**Nisyros Isl.**	**1.14**	**311**	*e*Pn	**Pg**	**21 10 36.5**	**-0.9**
AKAS	**Kas**	**1.17**	**71**	*e*Pn	**Pg**	**21 10 37.8**	**-0.2**
AKAS				*e*Sn	**Sn**	**21 10 55.1**	**0.0**
YER	**Yerkesik**	**1.28**	**2**	*e*PN	**Pn**	**21 10 39.8**	**-0.4**
YER				*e*SN	**Sn

ULN	**Ulaanbaatar**	**42.66**	**340**	*eP*	**P**	**21 27 30.7**	**-0.8**
	1.4nm,0.7s							
SONM	**Songino Array**	**42.86**	**339**	P	**P**	**21 27 33.1**	**+0.1**
SONM	**Songino Array**	**42.86**	**339**	P	**P**	**21 27 33.1**	**+0.1**
	1.4nm,0.9s,baz=159,slow=7.7,SNR=7.0							
MK31	**Makanchi Array**	**53.88**	**323**	*eP*	**P**	**21 28 57.7**	**-0.2**
MKAR	**Makanchi Array**	**53.88**	**323**	P	**P**	**21 28 58.1**	**+0.2**
MKAR	**Makanchi Array**	**53.88**	**323**	P	**P**	**21 28 58.1**	**+0.2**
	2.1nm,0.7s,baz=126,slow=7.9,SNR=18							
ZALV	**Zalesovo Beam**	**56.49**	**331**	P	**P**	**21 29 16.6**	**+0.1**
ZALV	**Zalesovo Beam**	**56.49**	**331**	P	**P**	**21 29 16.7**	**+0.1**
	0.7nm,0.4s,baz=124,slow=5.9,SNR=4.6							
KURK	**Kurchatov**	**57.93**	**326**	*eP*	**P**	**21 29 26.9**	**+0.1**
	6.4nm,1.0s							
KURBB	**Kurchatov Arra**	**57.93**	**326**	P	**P**	**21 29 26.9**	**+0.1**
	1.6nm,0.8s,baz=125,slow=6.7,SNR=19							
KBL	**Kabul**	**59.02**	**305**	*eP*	**P**	**21 29 34.0**	**-0.9**
	2.0nm,0.6s							
ABKAR	**Akbulak array**	**68.71**	**320**	*eP*	**P**	**21 30 37.3**	**-0.9**
	1.2nm,0.7s							
ARCES	**ARCESS Array B**	**86.03**	**340**	P	**P**	**21 32 14.4**	**-0.2**
ARCES	**ARCESS Array B**	**86.03**	**340**	P	**P**	**21 32 14.4**	**-0.2**
	0.9nm,0.7s,baz=47,slow=5.3,SNR=4.6							
BRTR	**Keskin Array B**	**87.28**	**310**	P	**P**	**21 32 22.2**	**+0.6**
BRTR	**Keskin Array B**	**87.28**	**310**	P	**P**	**21 32 22.2**	**+0.6**
	0.6nm,0.7s,baz=98,slow=5.0,SNR=3.7							
FINES	**FINESS Array B**	**87.75**	**332**	P	**P**	**21 32 23.0**	**-0.2**
FINES	**FINESS Array B**	**87.75**	**332**	P	**P**	**21 32 23.0**	**-0.2**
	1.7nm,0.8s,baz=96,slow=5.7,SNR=10							
AKASG	**Malin Array Be**	**88.41**	**321**	P	**P**	**21 32 25.9**	**-0.6**
AKASG	**Malin Array Be**	**88.41**	**321**	P	**P**	**21 32 25.9**	**-0.6**
	0.1nm,0.3s,baz=72,slow=4.7,SNR=4.2							

JMA ***24*** *21:24:31.9±0.6,45.°57N×150.°61E,h30km,M4.4*
IDC ***24*** *21:24:37.6±2.9,45.°68N×150.°37E,h93km±25km,mb3.3/7, mb1 3.5/10,mb1mx3.3/26,mbtmp3.3/10,Error ellipse: s-maj=29.5km s-min=17.7km az=144.0*

ISC 24 21:24:29.2±1.0,44.°6N±0.°2×151.°2E±0.°1,h35km,n27, σ2.°13/31,mb3.6/7,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.12**	**254**	P	**Pn**	**21 25 32.0**	**+2.4**
NEM2				*e*S	**Sn**	**21 26 16.3**	**-0.3**
JNK	**Nakash**	**4.77**	**260**	*i* P	**Pn**	**21 25 41.2**	**+2.7**
JNK				*e*S	**Sn**	**21 26 32.4**	**-0.2**
JAK	**Akkeshi**	**4.97**	**253**	P	**Pn**	**21 25 43.3**	**+2.1**
JAK				*e*S	**Sn**	**21 26 36.4**	**-1.0**
JTKR	**Abashiri--Toko**	**5.26**	**265**	P	**Pn**	**21 25 47.2**	**+1.9**
JAR	**Ashorobuto**	**5.51**	**259**	P	Pn	21 25 51.8	+3.0
JAR				*e*S	**Sn**	**21 26 50.8**	**-0.1**
JOB	**Onbets**	**5.59**	**255**	P	Pn	21 25 52.9	+3.1
JOB				*e*S	**Sn**	**21 26 52.8**	**0.0**
JMP	**Maruseppu**	**5.65**	**267**	P	**Pn**	**21 25 52.6**	**+2.0**
JCH	**Churui**	**6.02**	**253**	P	**Pn**	**21 25 58.1**	**+2.4**
JCH				*e*S	**Sn**	**21 27 02.7**	**-0.7**
JKK2	**Kamakawa 2**	**6.11**	**266**	P	**Pn**	**21 25 59.1**	**+2.2**
ASAJ	**Asahikawa**	**6.18**	**268**	P	Pn	21 26 00.2	+2.3
ASAJ	**Asahikawa**	**6.18**	**268**	P	**Pn**	**21 26 00.0**	**+2.2**
	1.1nm,0.3s,baz=81,slow=13,SNR=9.5							
JEM	**Erimo**	**6.41**	**249**	P	Pn	21 26 05.0	+4.0
JNBK	**Urakawa-nobuka**	**6.57**	**252**	P	**Pn**	**21 26 05.3**	**+2.1**
JNBK				*e*S	**Sn**	**21 27 13.0**	**-3.8**
JBT2	**Biratori 2**	**6.65**	**257**	P	**Pn**	**21 26 06.5**	**+2.1**
JNB	**Noboribetsu**	**7.68**	**257**	P	**Pn**	**21 26 20.2**	**+1.7**
JNB				*e*S	**Sn**	**21 27 42.9**	**-1.3**
JKB	**Kayabe**	**7.90**	**253**	P	**Pn**	**21 26 23.3**	**+1.8**
JKB				*e*S	**Sn**	**21 27 46.2**	**-3.3**
JANG	**Nango**	**8.31**	**243**	P	**Pn**	**21 26 29.0**	**+1.9**
JANG				*e*S	**Sn**	**21 27 56.7**	**-3.0**
JTM	**Tenmabayashi**	**8.38**	**246**	P	**Pn**	**21 26 30.5**	**+2.5**
JTM				*e*S	**Sn**	**21 27 57.5**	**-3.8**
PETK	**Petropavlovsk-**	**9.51**	**24**	P	**Pn**	**21 26 42.7**	**-0.9**
	0.3nm,0.3s,baz=198,slow=15,SNR=4.7							
KSRS	**Korea Array**	**18.91**	**256**	P	**Pn**	**21 28 48.0**	**+0.5**
	0.2nm,0.3s,baz=64,slow=11,SNR=4.7							
ILAR	**Eielson Array**	**39.06**	**37**	P	**P**	**21 31 50.6**	**-1.7**
	0.5nm,0.8s,baz=267,slow=8.1,SNR=5.0							
MKAR	**Makanchi Array**	**46.74**	**298**	P	P	21 32 50.0	-4.8
	0.5nm,0.6s,baz=73,slow=8.8,SNR=4.7							
MKAR				PcP	**PcP**	**21 34 25.8**	**-1.9**
	0.4nm,0.6s,baz=62,slow=2.3,SNR=5.3							
FINES	**FINESS Array B**	**65.38**	**334**	P	P	21 35 01.3	-6.3
	0.6nm,0.6s,baz=42,slow=3.4,SNR=3.3							
PDAR	**Pinedale Array**	**67.11**	**52**	P	**P**	**21 35 20.1**	**+0.8**
	0.4nm,0.7s,baz=338,slow=1.9,SNR=3.7							
ASAR	**Alice Springs**	**69.77**	**197**	P	P	21 35 42.8	+7.1
	0.3nm,0.6s,baz=8.2,slow=5.4,SNR=5.5							
NOA	**NORSAR Array B**	**69.80**	**341**	P	P	21 35 29.6	-5.9
	0.3nm,0.5s,baz=29,slow=6.5,SNR=4.0							
TXAR	**Lajitas Array**	**79.73**	**59**	P	**P**	**21 36 35.1**	**+1.4**
	0.2nm,0.3s,baz=307,slow=5.1,SNR=5.7							

MEX 24 21:36:11.8±0.8,16.°80N×99.°74W,h20km±16km,MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.13**	**300**	*i* P	Pb	21 36 15.7	-1.8
ACX				*i* S	Sb	21 36 19.1	-2.4
CAIG	**El Cayaco**	**0.56**	**296**	*i* P	Pb	21 36 20.9	-2.1
CAIG				*i* S	Sb	21 36 28.7	-1.9
MEIG	**Mezcala**	**1.12**	**6**	*i* P	Pn	21 36 28.4	-4.1
MEIG				*i* S	Sb	21 36 42.5	-4.4
ARIG	**Puente Sto Nin**	**1.58**	**339**	*i* P	Pn	21 36 36.3	-2.4
ARIG				*i* S	Sn	21 36 55.0	-3.6
PLIG	**Platanillo**	**1.60**	**8**	*i* P	Pn	21 36 36.7	-2.3
PLIG				*i* S	Sn	21 36 55.2	-3.9
PNIG	**Pinotepa**	**1.60**	**105**	*i* P	Pn	21 36 36.1	-2.9
PNIG				*i* S	Sn	21 36 55.5	-3.6
ZIIG	**Zihuatanejo**	**1.83**	**296**	*i* P	Pn	21 36 39.3	-2.8
ZIIG				*i* S	Sn	21 37 00.6	-4.1
UTMO	**Huajuapan**	**2.11**	**61**	*i* P	Pn	21 36 43.9	-2.3
UTMO				*e*S	Sn	21 37 09.1	-3.0
YAIG	**Yautepec**	**2.15**	**17**	*i* P	Pn	21 36 44.5	-2.2
YAIG				*i* S	Sn	21 37 09.7	-3.2

ISCJB ***24*** *21:50:43.1±0.7,23.°97N±0.°02×122.°28E±0.°02,h10km±5km, Error ellipse: s-maj=3.8km s-min=2.8km az=155.5*
TAP ***24*** *21:50:43.6,24.°02N×122.°30E,h29km±1km,ML3.2,D*
JMA ***24*** *21:50:45.0±0.5,24.°86N×122.°32E,h29km,M2.4*

ISC 24 21:50:44.2±1.1,23.°99N±0.°03×122.°26E±0.°02,h28km±12km, n33,σ1.°06/63,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.62**	**278**	P	**Pb**	**21 50 56.0**	**-0.5**
	baz=275						
TWD				S	**Sb**	**21 51 05.1**	**+0.2**
	baz=275						
ENA	**Nanau**	**0.65**	**312**	*e*P	**Pn**	**21 50 56.3**	**-1.2**
	baz=315						
ENA				*e*S	**Sb**	**21 51 06.2**	**+0.5**
	baz=315						
TWC	**Suao**	**0.72**	**329**	P	**Pn**	**21 50 56.9**	**-1.7**
	baz=325						
TWC				*e*S	**Sb**	**21 51 05.3**	**-2.5**
	baz=325						
ESL	**Shilin**	**0.78**	**257**	*e*P	**Pn**	**21 50 58.4**	**-1.0**
	baz=243						
ESL				*e*S	**Sn**	**21 51 09.8**	**-0.3**
	baz=243						
YOJ	**Yonaguni jima**	**0.83**	**55**	P	**Pn**	**21 50 58.9**	**-1.1**
YOJ				S	**Sn**	**21 51 08.9**	**-2.4**
ENTT	**Nioudou**	**0.91**	**316**	P	**Pn**	**21 51 01.0**	**-0.1**
	baz=322						
ENTT				*e*S	**Sn**	**21 51 13.5**	**+0.2**
	baz=322						
TWE	**Neicheng**	**0.91**	**323**	P	**Pn**	**21 51 00.7**	**-0.4**
	baz=320						
TWE				*e*S	**Sn**	**21 51 13.5**	**+0.2**
	baz=320						
WHF	**Hehuan Shan**	**0.93**	**280**	P	**Pn**	**21 51 00.9**	**-0.8**
	baz=265						
WHF				S	**Sn**	**21 51 13.2**	**-1.1**
	baz=265						
NNS	**Nan Shan**	**0.93**	**299**	*e*P	**Pn**	**21 51 01.2**	**-0.3**
	baz=285						
NNS				*e*S	**Sn**	**21 51 14.0**	**+0.1**
	baz=285						
EHY	**Hungye**	**0.99**	**241**	*e*P	**Pn**	**21 51 01.9**	**-0.3**
	baz=240						
EHY				*e*S	**Sn**	**21 51 15.5**	**+0.2**
	baz=240						
TWT	**Tachien**	**1.03**	**285**	*e*P	**Pn**	**21 51 03.6**	**+0.7**
	baz=272						
TWT				*e*S	**Sb**	**21 51 18.1**	**+1.4**
	baz=272						
TWB1	**Santiao Chiao**	**1.04**	**346**	*e*P	**Pn**	**21 51 03.0**	**0.0**
	baz=343						
TWB1				*e*S	**Sn**	**21 51 17.4**	**+0.7**
	baz=343						
NSK	**Sanguang**	**1.07**	**310**	*e*P	**Pn**	**21 51 03.5**	**0.0**
	baz=292						
NSK				*e*S	**Sn**	**21 51 17.2**	**-0.2**
	baz=292						
TWF1	**Yuli**	**1.09**	**235**	P	**Pn**	**21 51 03.1**	**-0.6**
	baz=222						
TWF1				*e*S	**Sn**	**21 51 17.8**	**0.0**
	baz=222						
NWF	**Wu-fen Shan**	**1.16**	**338**	*e*P	**Pn**	**21 51 04.9**	**+0.2**
	baz=333						
NWF				*e*S	**Sn**	**21 51 20.4**	**+0.7**
	baz=333						
CHKT	**Chengkung**	**1.21**	**223**	*e*P	**Pn**	**21 51 04.4**	**-0.8**
	baz=213						
CHKT				*e*S	**Sn**	**21 51 18.5**	**-2.3**
	baz=213						
SMLT	**Sun Moon Lake**	**1.25**	**265**	*e*P	**Pn**	**21 51 06.3**	**+0.4**
	baz=263						
SMLT				*e*S	**Sn**	**21 51 22.0**	**0.0**
	baz=263						
TYC	**Yuchr**	**1.29**	**266**	*e*P	**Pn**	**21 51 06.6**	**+0.2**
	baz=265						
YUS	**Yu-Shan**	**1.30**	**248**	*e*P	**Pn**	**21 51 06.6**	**-0.4**
	baz=246						
YUS				*e*S	**Sn**	**21 51 23.9**	**+0.2**
	baz=246						
NSTT	**Nanjuang**	**1.32**	**299**	*e*P	**Pn**	**21 51 08.0**	**+1.2**
	baz=296						
NSTT				*e*S	**Sb**	**21 51 25.5**	**+0.7**
	baz=296						
TWS1	**Kuangyinshan**	**1.35**	**325**	*e*P	**Pn**	**21 51 07.4**	**+0.3**
	baz=322						
TWS1				*e*S	**Sn**	**21 51 25.0**	**+0.9**
	baz=322						
IRIF	**Iriomote-Funau**	**1.38**	**75**	P	**Pn**	**21 51 08.2**	**+0.6**
IRIF				S	**Sb**	**21 51 26.1**	**-0.6**
ELDTW	**Lidau**	**1.39**	**235**	*e*P	**Pn**	**21 51 07.8**	**-0.2**
	baz=235						
ELDTW				*e*S	**Sn**	**21 51 24.2**	**-1.2**
	baz=235						
TWQ1	**Liyutan**	**1.41**	**285**	*e*P	**Pn**	**21 51 09.4**	**+1.4**
	baz=282						
TWQ1				*e*S	**Sb**	**21 51 28.3**	**+0.9**
	baz=282						
HATJ	**Hateruma jima**	**1.41**	**87**	*e*S	**Sb**	**21 51 31.6**	**+4.1**
ALS	**Alishan**	**1.42**	**251**	*e*P	**Pn**	**21 51 09.1**	**+0.7**
	baz=249						
ALS				*e*S	**Sn**	**21 51 26.7**	**+0.4**
	baz=249						
CHN5	**Tsauling**	**1.50**	**255**	*e*P	**Pn**	**21 51 11.0**	**+1.6**
	baz=255						
TWG	**Pinlang**	**1.60**	**223**	P	**Pn**	**21 51 10.6**	**0.0**
	baz=235						
TWG				*e*S	**Sn**	**21 51 29.3**	**-1.1**
	baz=235						
JKRS	**Kuro-shima**	**1.61**	**81**	P	**Pb**	**21 51 13.4**	**0.0**
JKRS				*e*S	**Sb**	**21 51 34.2**	**+0.9**
WTP	**Ta-pu**	**1.69**	**244**	*e*P	**Pn**	**21 51 13.7**	**+1.9**
	baz=243						
WTP				*e*S	**Sb**	**21 51 35.6**	**+0.2**
	baz=243						
JIJ	**Ishigaki jima**	**1.76**	**77**	P	**Pb**	**21 51 14.9**	**-0.9**
JIJ				S	**Sn**	**21 51 34.6**	**+0.4**
TWK	**Hsinying**	**1.78**	**246**	*e*P	**Pb**	**21 51 16.3**	**+0.1**
	baz=245						
TWK				*e*S	**Sb**	**21 51 37.4**	**-0.8**
	baz=245						
CHN1	**Nanshi**	**1.78**	**244**	*e*P	**Pb**	**21 51 16.3**	**0.0**
	baz=243						
CHN1				*e*S	**Sb**	**21 51 38.8**	**+0.6**
	baz=243						

ISCJB ***24*** *21:52:30.5±0.7,21.°45S±0.°07×67.°23W±0.°07,h181km, mb3.9/1,Error ellipse: s-maj=11.5km s-min=6.8km az=144.0*
IDC ***24*** *21:52:30.8±1.0,21.°61S×67.°03W,h159km±14km,mb3.9/1, mb1 3.5/5,mb1mx3.3/19,mbtmp3.4/5,MS3.1/1,Ms1 3.1/1, ms1mx2.4/29,Error ellipse: s-maj=35.6km s-min=13.2km az=131.0*
GUC ***24*** *21:52:31.8±0.8,21.°58S×67.°72W,h204km±12km,ML4.1*

ISC 24 21:52:31.3±0.9,21.°45S±0.°09×67.°27W±0.°09,h181km,n16, σ2.°03/20,2C-3D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**Plate Boundary**	**1.87**	**259**	*i*P	**Pn**	**21 53 07.5**	**+0.3**
PB09				*i* S	**Sn**	**21 53 34.0**	**-1.0**
PB09				AML	AML	21 53 38.9	
	comp=N,471nm,0.4s						
LVC	**Limon Verde**	**1.91**	**233**	*i*P	**Pn**	**21 53 07.5**	**-0.3**
LVC				*i* S	**Sn**	**21 53 34.5**	**-1.6**
LVC	**Limon Verde**	**1.91**	**233**	P	**Pn**	**21 53 07.5**	**-0.3**
	comp=N,6.0nm,0.3s,baz=47,slow=10,SNR=64						
LVC				S	**Sn**	**21 53 34.8**	**-1.3**
	comp=N,24nm,0.3s,baz=276,slow=21,SNR=85						
PB01	**Plate Boundary**	**2.11**	**281**	*i*P	**Pn**	**21 53 09.5**	**-0.2**
PB01				*e*S	**Sn**	**21 53 37.8**	**-1.8**
PB01				AML	AML	21 53 39.8	
	comp=N,558nm,0.4s						
PB04	**Plate Boundary**	**2.22**	**248**	*e*P	Pn	21 53 17.0	+6.2
PB04				*i* S	Sn	21 53 50.3	+8.9
PB04				AML	AML	21 53 52.5	
	comp=N,308nm,0.2s						
HMBC	**Humberstone**	**2.72**	**295**	*i*P	**Pn**	**21 53 16.3**	**-0.4**
HMBC				AML	AML	21 53 49.8	
	comp=N,1μm,0.2s						
MNMC	**Minimini**	**3.18**	**316**	*i*P	**Pn**	**21 53 23.5**	**+1.0**
MNMC				AML	AML	21 54 04.0	
	comp=E,1μm,0.2s						
CEN1	**Los Morros**	**3.33**	**234**	*i* P	**Pn**	**21 53 26.7**	**+2.6**
CEN1				*e*S	**Sn**	**21 54 07.1**	**+1.7**
CEN1				AML	AML	21 54 09.5	
	comp=N,124nm,0.3s						
ANCH	**Antofagasta**	**3.66**	**232**	*i* S	**Sn**	**21 54 07.9**	**-4.6**
ANCH				AML	AML	21 54 09.1	
	comp=E,502nm,0.1s						
LPAZ	**La Paz**	**5.20**	**351**	P	**Pn**	**21 53 51.2**	**+2.7**
	comp=E,4.7nm,0.3s,baz=168,slow=6.1,SNR=59						
SIV	**San Ignacio**	**8.00**	**48**	P	**Pn**	**21 54 24.3**	**-0.3**
	comp=E,2.0nm,0.3s,baz=249,slow=11,SNR=19						
SIV				S	**Sn**	**21 55 50.3**	**-4.1**
	comp=E,0.8nm,0.3s,baz=330,slow=23,SNR=7.1						
CFAA	**Coronel Fontan**	**10.15**	**185**	P	**Pn**	**21 54 51.8**	**-1.0**
	comp=E,0.2nm,0.3s,baz=2.8,slow=12,SNR=9.2						
ROSC	**El Rosal**	**27.05**	**344**	LR	LR	22 09 38.5	
	comp=E,37nm,18.1s,baz=147,slow=38						
TORD	**Torodi Ar. Bea**	**75.90**	**70**	P	**P**	**22 03 59.6**	**+1.2**
	comp=E,1.1nm,0.3s,baz=256,slow=5.6,SNR=68						
ASAR	**Alice Springs**	**130.64**	**206**	PKP	**PKPdf**	**22 11 22.6**	**+1.2**
	comp=E,0.2nm,0.4s,baz=132,slow=1.9,SNR=4.3						
MKAR	**Makanchi Array**	**144.69**	**37**	PKP	**PKPdf**	**22 11 47.8**	**+1.4**
	comp=E,1.0nm,0.7s,baz=330,slow=2.6,SNR=8.8						

FUNV 24 22:03:51.0,7.°04N×72.°66W,h136km,MW3.6,3D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**0.89**	**22**	*i*P	Pn	22 04 12.7	-1.1
CAPV				*e*S	Sn	22 04 29.7	-1.4
SOCV	**Socops**	**2.17**	**55**	*e*P	Pn	22 04 26.6	-0.8
SOCV				*e*S	Sn	22 04 52.7	-2.7
VIGV	**El Vigia**	**2.20**	**36**	*e*P	Pn	22 04 27.0	-0.8
VIGV				*e*S	Sn	22 04 53.6	-2.5
ELOV	**Elorza**	**3.15**	**91**	*e*P	Pn	22 04 38.5	-1.3
QARV	**Quebrada Arrib**	**3.79**	**34**	*e*P	Pn	22 04 47.1	-1.1
SANV	**Sanarito**	**3.94**	**51**	*e*P	Pn	22 04 49.0	-1.3
SANV				*e*S	Sn	22 05 31.7	-4.6
CURV	**Curarigua**	**3.98**	**42**	*e*P	Pn	22 04 49.3	-1.5
CURV				*e*S	Sn	22 05 32.0	-5.1
DABV	**Dabajuro**	**4.34**	**27**	*e*P	Pn	22 04 54.0	-1.5
TEPV	**Terepaima**	**4.49**	**49**	*e*P	Pn	22 04 55.8	-1.8
BAUV	**El Baul**	**4.95**	**67**	*e*P	Pn	22 05 00.8	-2.7
MAPV	**Macapo**	**4.99**	**56**	*e*P	Pn	22 05 02.8	-1.4
MONV	**Montecano**	**5.55**	**28**	*e*P	Pn	22 05 08.9	-2.7
TURV	**Turiamo**	**5.84**	**54**	*e*P	Pn	22 05 13.8	-1.7
BIRV	**Birongo**	**7.18**	**61**	*e*P	Pn	22 05 31.2	-2.2

NIED ***24*** *22:10:00,24.°10N×122.°30E,h38km,Mw4.5 Best double couple: M0 5.50000×10^15 NP1:φs66.00000°,δ80.00000°, λ-15.00000°. NP2:φs159.00000°,δ75.00000°, λ-170.00000°.*
BJI ***24*** *22:10:51.8,24.°07N×122.°19E,h25km,mB4.6/34,mb4.3/41, ML4.3/9,Ms4.2/46,Ms7 4.2/43*
MOS ***24*** *22:10:51.7±0.8,24.°16N×122.°32E,h33km,mb5.0/42, MS4.1/7,Error ellipse: s-maj=12.3km s-min=5.4km az=124.1*
TAP ***24*** *22:10:52.3,24.°02N×122.°29E,h21km,ML4.7,C*
IDC ***24*** *22:10:52.7±3.0,24.°21N×122.°35E,h28km±20km,mb4.3/26, mb1 4.4/27,mb1mx4.4/33,mbtmp4.3/27,ML3.7/1,MS3.8/16, Ms1 3.8/16,ms1mx3.5/35,Error ellipse: s-maj=15.9km s-min=13.2km az=58.0*
NEIC ***24*** *22:10:53.5±0.5,24.°04N×122.°27E,h37km±4km,mb4.9/36, Error ellipse: s-maj=5.7km s-min=5.1km az=149.0*
NEIC Recorded [1 TAP] in Hua-lien and I-lan.
DJA ***24*** *22:10:53.5±2.1,24.°N±7.°×12.°3E±.°,h34km±15km,M4.6/10, mB5.2/2,mb4.7/10,MLv4.6/1,Mw(mB)4.6/2*
JMA ***24*** *22:10:53.1±0.3,24.°11N×122.°28E,h30km,M4.7*
ISCJB ***24*** *22:10:53.0±0.2,24.°01N±0.°02×122.°28E±0.°01,h47km±1km, mb4.7/93,MS4.0/24,Error ellipse: s-maj=2.8km s-min=2.0km az=155.5*

ISC 24 22:10:52.9±0.4,23.°98N±0.°02×122.°28E±0.°02,h31km±2km, n350,σ1.°45/446,mb4.7/93,MS4.0/24,44C-26D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.61**	**270**	*e*P	**Pb**	**22 11 04.8**	**-0.4**
	baz=252						
HWA				*e*S	**Sn**	**22 11 14.4**	**+0.1**
	baz=252						
TWD	**Chiawan**	**0.63**	**280**	*i*P	**Pb**	**22 11 04.7**	**-0.8**
	baz=276						
TWD				*i* S	**Sb**	**22 11 13.8**	**-0.3**
	baz=276						
NACB	**Ninganchiao**	**0.65**	**288**	*e*P	**Pb**	**22 11 04.7**	**-1.2**
NACB				*e*S	**Sb**	**22 11 14.5**	**-0.3**
ENA	**Nanau**	**0.67**	**313**	P	**Pb**	**22 11 04.7**	**-1.3**
	baz=319						
ESF	**Shoufeng Towns**	**0.71**	**262**	*e*P	**Pn**	**22 11 05.2**	**-1.6**
	baz=247						
ESF				*e*S	**Sn**	**22 11 17.0**	**+0.2**
	baz=247						
TWC	**Suao**	**0.74**	**328**	*i*P	**Pn**	**22 11 05.6**	**-1.6**
	baz=334						
TWC				S	**Sb**	**22 11 14.5**	**-2.6**
	baz=334						
ESL	**Shilin**	**0.79**	**258**	*e*P	**Pn**	**22 11 06.7**	**-1.2**
	baz=243						
YOJ	**Yonaguni jima**	**0.83**	**54**	P	**Pn**	**22 11 07.3**	**-1.1**
YOJ				S	**Sb**	**22 11 17.2**	**-2.4**
ILA	**Ilan**	**0.92**	**329**	*e*P	**Pn**	**22 11 09.6**	**-0.1**
	baz=326						
ILA				*e*S	**Sb**	**22 11 22.3**	**0.0**
	baz=326						
ENTT	**Nioudou**	**0.93**	**316**	P	**Pn**	**22 11 09.5**	**-0.3**
	baz=325						
ENTT				*e*S	**Sn**	**22 11 21.5**	**-0.6**
	baz=325						
TWE	**Neicheng**	**0.93**	**323**	*i*P	**Pn**	**22 11 09.3**	**-0.5**
	baz=328						
TWE				*e*S	**Sb**	**22 11 23.3**	**+0.9**
	baz=328						
WHF	**Hehuan Shan**	**0.94**	**281**	*i*P	**Pn**	**22 11 09.7**	**-0.6**
	baz=278						
WHF				S	**Sn**	**22 11 22.1**	**-0.9**
	baz=278						
NNS	**Nan Shan**	**0.95**	**299**	*i*P	**Pn**	**22 11 09.9**	**-0.3**
	baz=297						
EHY	**Hungye**	**0.99**	**242**	P	**Pn**	**22 11 10.2**	**-0.5**
	baz=240						
EHY				S	**Sn**	**22 11 23.7**	**0.0**
	baz=240						
TWT	**Tachien**	**1.04**	**286**	P	**Pn**	**22 11 11.7**	**+0.1**
	baz=269						
TWB1	**Santiao Chiao**	**1.06**	**346**	*i*P	**Pn**	**22 11 11.2**	**-0.5**
	baz=331						
TWB1				*e*S	**Sb**	**22 11 25.8**	**-0.4**
	baz=331						
YULB	**Yu-li**	**1.07**	**237**	*i*P	**Pn**	**22 11 11.1**	**-0.6**
YULB				*e*S	**Sn**	**22 11 24.6**	**-1.0**
YHNB	**Yeheng**	**1.07**	**310**	*i*P	**Pn**	**22 11 11.5**	**-0.4**
YHNB				S	**Sn**	**22 11 25.6**	**-0.2**
NSK	**Sanguang**	**1.09**	**310**	*i*P	**Pn**	**22 11 12.1**	**0.0**
	baz=308						
TWF1	**Yuli**	**1.09**	**236**	*i*P	**Pn**	**22 11 11.9**	**-0.2**
	baz=222						
TWF1				S	**Sn**	**22 11 26.4**	**+0.2**
	baz=222						
NWF	**Wu-fen Shan**	**1.18**	**338**	*i*P	**Pn**	**22 11 13.5**	**+0.1**
	baz=334						
NWF				S	**Sb**	**22 11 29.3**	**-0.4**
	baz=334						
CHKT	**Chengkung**	**1.21**	**224**	P	**Pn**	**22 11 12.7**	**-1.0**
	baz=211						
CHKT				*e*S	**Sn**	**22 11 27.2**	**-1.8**
	baz=211						
SSLB	**Suanglung**	**1.23**	**261**	*e*Pn	**Pn**	**22 11 13.6**	**-0.4**
SSLB				*e*Sn	**Sn**	**22 11 27.8**	**-1.7**
TATO	**Taipei**	**1.23**	**324**	*i*Pn	**Pn**	**22 11 14.3**	**+0.4**
TATO				*e*Sn	**Sn**	**22 11 28.4**	**-1.1**
TAP1	**Taipei**	**1.26**	**327**	*e*P	**Pn**	**22 11 15.0**	**+0.6**
	baz=323						
TAP1				*e*S	**Sb**	**22 11 32.4**	**+0.4**
	baz=323						
SMLT	**Sun Moon Lake**	**

baz=237
TWG Pinlang 1.60 224 *e*Pn **Pn** **22 11 17.7 -1.3**
TWG *e*Sn **Sn** **22 11 33.6 -5.0**
WGK Gukeng 1.60 260 *e*P **Pb** **22 11 20.5 -1.2**
baz=259
TTN Taitung 1.60 221 *e*P **Pn** **22 11 17.4 -1.6**
baz=220
JKRS Kuro-shima 1.60 80 P **Pn** **22 11 19.6 +0.5**
JKRS S **Sb** **22 11 40.8 -1.0**
TPUB Ta-pu 1.65 246 *e*Pn **Pn** **22 11 21.1 +1.3**
TPUB *e*Sn **Sn** **22 11 38.5 -1.6**
PCYT Pengchaiyu 1.66 354 *e*P **Pn** **22 11 19.5 -0.4**
baz=352
WTP Ta-pu 1.69 245 ⇑P **Pn** **22 11 21.8 +1.5**
baz=244
JIJ Ishigaki jima 1.75 77 P **Pn** **22 11 20.9 -0.2**
JIJ S **Sn** **22 11 42.9 +0.6**
CHY Chiayi 1.76 255 *e*P **Pb** **22 11 23.2 -1.4**
baz=254
CHY *e*S **Sn** **22 11 44.0 +1.3**
baz=254
TWK Hsinying 1.79 247⇑*e*P **Pb** **22 11 24.1 -0.9**
baz=246
CHN1 Nanshi 1.79 244 ⇑P **Pb** **22 11 23.6 -1.4**
baz=243
WTCT Ta-ch'eng 1.83 267 *e*P **Pn** **22 11 23.7 +1.5**
baz=266
WTCT *e*S **Sb** **22 11 48.7 +0.5**
baz=266
ECL Taimali 1.83 222 *e*P **Pn** **22 11 21.2 -1.1**
baz=233
WSF Szhu 1.91 260 *e*P **Pb** **22 11 25.4 -1.7**
baz=259
WSF *e*S **Sb** **22 11 50.1 -0.5**
baz=259
CHN3 Shinhua 1.97 243 *e*P **Pb** **22 11 27.0 -1.1**
baz=243
CHN8 Yiju 2.00 252 *e*P **Pn** **22 11 24.8 +0.3**
baz=252
CHN8 *e*S **Sb** **22 11 50.9 -2.1**
baz=252
LAY Lan-yu 2.04 199 *e*P **Pn** **22 11 23.9 -1.2**
baz=200
TAW Tawu 2.05 219 *e*P **Pn** **22 11 24.6 -0.6**
baz=218
TWM1 Shoushan 2.05 236 *e*P **Pb** **22 11 29.0 -0.5**
baz=235
SGLT Jiouru 2.06 233 *e*P **Pb** **22 11 28.6 -1.0**
baz=233
SCLT Jiali 2.07 248 *e*P **Pb** **22 11 27.8 -2.0**
baz=247
SCLT *e*S **Sb** **22 11 54.0 -1.1**
baz=247
TAI1 Yung-k'ang 2.10 244 *e*P **Pb** **22 11 28.4 -1.9**
baz=243
SCZT Fangliau 2.21 224 *e*P **Pn** **22 11 28.3 +0.9**
baz=216
JTJ Tarama 2.31 73 P **Pn** **22 11 29.8 +1.0**
JTJ S **Sn** **22 11 57.8 +1.6**
TWP Hsiaoliuchiu 2.40 228 *e*P **Pb** **22 11 33.8 -1.6**
baz=228
HEN Hengchun 2.42 216 *e*P **Pn** **22 11 32.2 +1.8**
baz=217
HEN *e*S **Sn** **22 12 00.4 +1.5**
baz=217
TSEB Hengchuen, Pin 2.42 212 *e*P **Pn** **22 11 31.1 +0.7**
baz=214
TSEB *e*S **Sn** **22 12 00.6 +1.5**
baz=214
TWK1 Hengchun 2.44 214 ⇓P **Pn** **22 11 31.0 +0.4**
baz=215
TWK1 *e*S **Sn** **22 12 00.6 +1.3**
baz=215
PNG Penghu 2.53 261 P **Pn** **22 11 32.3 +0.5**
baz=260
PNG *e*S **Sn** **22 12 02.6 +1.1**
baz=260
JMJ Miyako jima 2 2.88 72 P **Pn** **22 11 38.0 +1.4**
JMJ S **Sn** **22 12 11.9 +1.8**
JOGS Gusukube 2.96 74 P **Pn** **22 11 39.5 +1.7**
JOGS *e*S **Sn** **22 12 14.6 +2.4**
QZH Quanzhou 3.49 287⇑*i*Pn **Pn** **22 11 45.8 +0.7**
QZH Sn **Sn** **22 12 24.1 -1.3**
QZH smax smax
comp=N,1μm,1.0s
QZH smax smax
comp=E,750nm,0.8s
QZH LR LR
comp=N,3μm,11.4s
QZH LR LR
comp=E,2μm,9.3s
QZH LR LR
comp=Z,4μm,11.9s
KNM Kinmen 3.54 278 *e*P **Pn** **22 11 46.3 +0.6**
baz=276
JKE Kume jima 2 4.71 59 P **Pn** **22 12 02.3 +0.5**
JKE *e*S **Sn** **22 12 56.1 +0.7**
JAGN Aguni-jima 5.19 59 P **Pn** **22 12 10.0 +1.5**
JAGN *e*S **Sn** **22 13 08.5 +1.2**
JIH Iheya 5.97 58 P **Pn** **22 12 18.5 -0.7**
JOW Kunigami 6.12 61 *e*P **Pn** **22 12 20.5 -0.8**
baz=65
JOW Kunigami 6.12 61 *e*Pn **Pn** **22 12 19.6 -1.8**
JOW Sn **Sn** **22 13 30.5 +0.2**
JOW Kunigami 6.12 61 P **Pn** **22 12 19.5 -1.8**
SSE Sheshan 7.16 352 P **Pn** **22 12 34.3 -1.1**
SSE pmax pmax
comp=Z,30nm,0.6s
SSE pmax pmax
comp=Z,31nm,3.6s
SSE LR LR
comp=N,250nm,14.2s
SSE LR LR
comp=E,930nm,14.0s
SSE LR LR
comp=Z,1μm,13.1s
GZH Guangzhou 8.24 266 P Pn 22 12 46.8 -3.6
GZH S Sn 22 14 09.4 -13
GZH smax smax
comp=N,140nm,0.8s
GZH smax smax
comp=E,120nm,1.1s
NJ2 Nanjing 8.59 340 *e*P **Pn** **22 12 53.1 -2.1**
NJ2 sP 22 13 06.4
NJ2 S **Sn** **22 14 31.1 0.0**
NJ2 sS 22 14 39.5
NJ2 pmax pmax
comp=Z,20nm,0.8s
NJ2 smax smax
comp=N,110nm,1.0s
NJ2 smax smax
comp=E,180nm,1.2s
NJ2 LR LR
comp=N,1μm,12.4s
NJ2 LR LR
comp=E,770nm,11.2s
NJ2 LR LR
comp=Z,2μm,12.8s
WHN Wuhan 9.62 315 P **Pn** **22 13 11.3 +2.1**
WHN S **Sn** **22 14 59.6 +3.4**
WHN LR LR
comp=N,2μm,11.8s
WHN LR LR
comp=E,990nm,8.6s
WHN LR LR
comp=Z,3μm,13.0s
JNU Nakatsue 11.83 38 Pn **Pn** **22 13 41.6 +2.0**
JNU Nakatsue 11.83 38 Pn **Pn** **22 13 41.6 +2.0**
comp=Z,0.1nm,0.3s,baz=186,slow=9.2,SNR=3.0
JNU LR LR 22 18 31.7
comp=Z,347nm,18.8s,baz=224,slow=40
QIZ Qiongzhong 12.57 249 P **Pn** **22 13 49.3 -0.4**
QIZ S **Sn** **22 16 08.4 -0.4**
QIZ pmax pmax
comp=Z,6.0nm,1.5s
QIZ pmax pmax
comp=Z,50nm,3.6s
QIZ LR LR
comp=N,320nm,18.3s
QIZ LR LR
comp=E,130nm,18.3s
ENH Enshi 13.00 302 *e*Pn **Pn** **22 13 55.5 0.0**
KSAR Wonju Array Be 14.26 18 Pn **Pn** **22 14 14.1 +1.4**
KSRS Korea Array 14.28 19 Pn **Pn** **22 14 14.1 +1.1**
comp=E,0.4nm,0.3s,baz=202,slow=14,SNR=9.1
KSRS LR LR 22 20 13.9

comp=E,268nm,19.8s,baz=190,slow=40
GYA Guiyang 14.35 283⇑*i*P **Pn** **22 14 15.3 +1.3**
GYA pP **P** **22 14 22.5 +1.8**
GYA S **Sn** **22 16 50.6 -1.6**
GYA SS **S** **22 17 11.4 -0.3**
GYA pmax pmax
comp=Z,10.0nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.6s
GYA LR LR
comp=N,320nm,10.9s
GYA LR LR
comp=E,520nm,16.4s
GYA LR LR
comp=Z,730nm,16.8s
XAN Xi'an 15.38 314 P **Pn** **22 14 27.3 -0.5**
XAN pP **P** **22 14 35.3 +3.2**
XAN sP **sP** **22 14 40.8 -3.4**
XAN pmax pmax
comp=Z,7.0nm,0.9s
XAN LR LR
comp=N,210nm,12.5s
XAN LR LR
comp=E,180nm,13.6s
XAN LR LR
comp=Z,180nm,12.5s
BJI Beijing 16.82 344 P **Pn** **22 14 46.3 +0.2**
BJI S **Sn** **22 17 49.8 -2.2**
BJI pmax pmax
comp=Z,8.0nm,1.2s
BJI pmax pmax
comp=Z,99nm,4.0s
BJI LR LR
comp=N,660nm,13.2s
BJI LR LR
comp=E,130nm,15.3s
DAV Davao City (W) 17.11 169 LR LR 22 21 14.8
comp=E,233nm,19.3s,baz=313,slow=36
CD2 Chengdu 17.82 297 *e*P **Pn** **22 14 58.8 +0.2**
CD2 pP **pP** **22 15 05.9 -1.4**
CD2 sP **sP** **22 15 10.3 -0.9**
CD2 PP **PnPn** **22 15 13.6 +4.0**
CD2 S **Sn** **22 18 13.6 -2.8**
CD2 sS **S** **22 18 25.3 +2.8**
CD2 SS **SnSn** **22 18 36.5 +6.5**
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 pmax pmax
comp=Z,110nm,7.2s
CD2 LR LR
comp=N,800nm,14.2s
CD2 LR LR
comp=E,920nm,11.2s
CD2 LR LR
comp=Z,930nm,13.2s
MJAR Matsushiro Arr 18.57 44 P **P** **22 15 06.3 -1.1**
MJAR Matsushiro Arr 18.57 44 P **P** **22 15 06.3 -1.1**
comp=Z,0.2nm,0.3s,baz=220,slow=6.3,SNR=4.2
MJAR LR LR 22 22 42.0
comp=Z,84nm,21.3s,baz=225,slow=39
HHC Hu-ho-hao-te 19.07 334 *e*P **P** **22 15 12.6 -0.3**
HHC pP **pP** **22 15 20.6 -0.5**
HHC sP **sP** **22 15 25.3 +0.2**
HHC PP **PnPn** **22 15 29.5 +2.6**
HHC S **Sn** **22 18 40.8 -5.9**
HHC sS **S** **22 18 53.4 +5.8**
HHC SS **SnSn** **22 19 06.6 +5.6**
HHC pmax pmax
comp=Z,39nm,0.9s
HHC pmax pmax
comp=Z,180nm,5.2s
HHC LR LR
comp=N,1μm,12.0s
HHC LR LR
comp=E,760nm,12.5s
HHC LR LR
comp=Z,2μm,12.9s
CN2 Changchun 19.95 7 *e*P **P** **22 15 22.6 +0.3**
CN2 *es*P **sP** **22 15 35.8 +1.4**
CN2 *e*S **S** **22 19 00.8 -4.3**
CN2 pmax pmax
comp=Z,10.0nm,0.7s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,800nm,15.0s
CN2 LR LR
comp=E,200nm,15.0s
CN2 LR LR
comp=Z,700nm,13.0s
LZH Lanzhou 19.97 311 *e*P **Pn** **22 15 24.5 -0.2**
LZH pP **pP** **22 15 32.1 +1.1**
LZH sP **sP** **22 15 38.0 +3.0**
LZH *e*S S 22 18 57.1 -8.9
LZH sS **sS** **22 19 14.6 -4.4**
LZH SS **SnSn** **22 19 31.3 +8.3**
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,110nm,4.0s
LZH LR LR
comp=N,460nm,11.0s
LZH LR LR
comp=E,410nm,14.4s
LZH LR LR
comp=Z,670nm,15.2s
PBKT Sadao Pong 21.29 254 P P 22 15 45.6 +8.6
comp=Z,5.7nm,0.9s
MDJ Mudanjiang 21.44 14 P **P** **22 15 39.5 +1.1**
MDJ pP **pP** **22 15 47.6 +0.9**
MDJ S **S** **22 19 36.5 +1.8**
MDJ pmax pmax
comp=Z,8.0nm,2.0s
MDJ pmax pmax
comp=Z,69nm,7.4s
MDJ LR LR
comp=N,150nm,20.8s
MDJ LR LR
comp=E,180nm,19.6s
MDJ LR LR
comp=Z,160nm,22.1s
USRK Ussuriysk Arra 21.69 19 P **P** **22 15 38.7 -2.4**
comp=Z,5.1nm,0.8s,baz=204,slow=10,SNR=11
USRK LR LR 22 24 46.4
comp=Z,189nm,18.3s,baz=45,slow=39
CMMT Chiang Mai 22.31 261 P **P** **22 15 52.2 +4.2**
comp=Z,7.5nm,1.1s
CHTO Chiang Mai 22.31 261 *e*P **P** **22 15 47.9 -0.2**
CHTO pmax pmax
comp=Z,8.0nm,1.1s
CHTO Chiang Mai 22.31 261 *e*P **P** **22 15 47.9 -0.2**
comp=Z,8.3nm,1.1s
CHTO Chiang Mai 22.31 261 P **P** **22 15 51.7 +3.6**
comp=Z,8.2nm,1.1s
CMAR Chiang Mai Arr 22.42 260 P **P** **22 15 50.6 +1.4**
CMAR Chiang Mai Arr 22.42 260 P **P** **22 15 50.6 +1.4**
comp=Z,3.5nm,1.1s,baz=59,slow=8.7,SNR=12
GTA Gaotai 24.44 314 P **P** **22 16 10.3 +1.2**
GTA pP **pP** **22 16 19.4 +1.4**
GTA sP **sP** **22 16 23.3 +1.6**
GTA S **S** **22 20 29.8 +2.5**
GTA pmax pmax
comp=Z,9.0nm,1.1s
GTA pmax pmax
comp=Z,76nm,4.8s
GTA LR LR
comp=N,150nm,15.4s
GTA LR LR
comp=E,330nm,16.1s
GTA LR LR
comp=Z,340nm,17.6s
LBMI Labuha 24.99 168 P **P** **22 16 18.7 +4.7**
comp=Z,71nm,0.9s,comp=Z,871nm
ERM Erimo 25.00 39 *e*P P 22 16 07.4 -6.5
ERM pmax pmax
comp=Z,22nm,1.2s
ASAJ Asahikawa 26.09 35 P **P** **22 16 20.9 -2.8**
ASAJ Asahikawa 26.09 35 P **P** **22 16 20.9 -2.8**
comp=Z,2.8nm,0.4s,baz=230,slow=7.9,SNR=5.4
ASAJ LR LR 22 26 58.6
comp=Z,124nm,18.0s,baz=166,slow=37
ULN Ulaanbaatar 26.74 337 *e*P **P** **22 16 29.0 -0.8**
comp=Z,29nm,0.7s
ULN *e*PcP **PcP** **22 19 52.6 0.0**
ULN Ulaanbaatar 26.74 337 P **P** **22 16 27.3 -2.5**
comp=Z,46nm,0.8s,comp=Z,352nm

SONM Songino Array 26.95 336 P **P** **22 16 31.0 -0.7**
SONM PcP **PcP** **22 19 52.9 -0.2**
SONM ScP **ScP** **22 23 30.5 -0.6**
SONM Songino Array 26.95 336 P **P** **22 16 31.0 -0.7**
comp=Z,51nm,0.9s,baz=150,slow=9.7,SNR=244
SONM PcP **PcP** **22 19 52.9 -0.2**
comp=Z,0.8nm,0.5s,baz=131,slow=2.2,SNR=3.5
SONM ScP **ScP** **22 23 30.5 -0.6**
comp=Z,0.3nm,0.3s,baz=171,slow=4.9,SNR=5.4
SONM LR LR 22 28 21.7
comp=Z,496nm,18.4s,baz=144,slow=39
LSA Lhasa 28.30 288 P **P** **22 16 45.0 +0.6**
LSA LR LR
comp=Z,380nm,14.7s
LSA Lhasa 28.30 288 *e*P **P** **22 16 44.6 +0.2**
LSA pmax pmax
comp=Z,7.0nm,0.8s
LSA Lhasa 28.30 288 *e*P **P** **22 16 44.6 +0.2**
comp=Z,6.5nm,0.8s
ZAK Zakamensk 30.22 336⇑*i*P **P** **22 16 59.0 -1.7**
ZAK pmax pmax
comp=Z,6.0nm,1.0s
TLY Talaya 31.14 337 *e*P **P** **22 17 08.2 -0.6**
TLY *e*S **S** **22 22 16.9 +4.4**
TLY pmax pmax
comp=Z,23nm,0.7s
TLY MLR MLR
comp=Z,419nm,15.0s
TAPN Taplejung 31.28 284 *e*P **P** **22 17 11.7 +1.1**
comp=Z,12nm,0.8s
ODAN Odare 31.58 283 *e*P **P** **22 17 14.1 +0.9**
comp=Z,15nm,0.8s
MOY Mondy 32.12 335 *e*P **P** **22 17 16.0 -1.4**
RAMN Ramite 32.28 283 *e*P **P** **22 17 19.9 +0.5**
comp=Z,24nm,1.1s
GUN Gumba 32.89 285 *e*P **P** **22 17 25.5 +0.7**
comp=Z,31nm,1.0s
KKN Kakani 33.42 285 *e*P **P** **22 17 29.7 +0.4**
comp=Z,7.8nm,0.7s
DMN Daman 33.58 284 *e*P **P** **22 17 31.1 +0.4**
comp=Z,114nm,2.1s
WMQ Urumqi 34.52 314 P **P** **22 17 38.8 +0.3**
WMQ pP **pP** **22 17 49.0 +1.6**
WMQ sP **sP** **22 17 52.5 +1.3**
WMQ PP **PnPn** **22 18 55.0 +0.9**
WMQ *e*S **S** **22 23 04.0 -1.3**
WMQ SS **SnSn** **22 25 16.0 -1.8**
WMQ pmax pmax
comp=Z,9.0nm,0.8s
WMQ pmax pmax
comp=Z,92nm,4.0s
WMQ LR LR
comp=N,390nm,12.7s
WMQ LR LR
comp=E,350nm,10.3s
WMQ LR LR
comp=Z,370nm,15.4s
DANN Dangsing 34.74 286 *e*P **P** **22 17 41.0 +0.1**
comp=Z,18nm,1.0s
KOLN Koldanda 34.91 285 *e*P **P** **22 17 42.5 +0.3**
comp=Z,8.9nm,0.8s
HVS Khovu-Aksy 34.92 328 *e*P **P** **22 17 40.7 -1.2**
HVS pmax pmax
comp=Z,29nm,1.0s
PYUN Piuthan 35.43 285 *e*P **P** **22 17 47.3 +0.6**
comp=Z,21nm,0.9s
MK31 Makanchi Array 39.18 316 *e*P **P** **22 18 17.6 -0.5**
MK31 *e* 22 20 27.8
MK31 Makanchi Array 39.18 316 *e*P **P** **22 18 17.6 -0.5**
MK31 *e*PcP **PcP** **22 20 27.8 +0.8**
MKAR Makanchi Array 39.18 316*ce*P **P** **22 18 17.7 -0.3**
MKAR pmax pmax
comp=Z,5.0nm,0.6s
MKAR Makanchi Array 39.18 316 *e*P **P** **22 18 17.8 -0.2**
MKAR PcP **PcP** **22 20 26.4 -0.6**
MKAR Makanchi Array 39.18 316 P **P** **22 18 17.7 -0.3**
comp=Z,5.3nm,0.6s,baz=101,slow=10.0,SNR=64
MKAR PcP **PcP** **22 20 26.4 -0.6**
comp=Z,0.9nm,0.7s,baz=87,slow=2.7,SNR=3.6
MKAR LR LR 22 35 59.7
comp=Z,176nm,18.6s,baz=249,slow=39
PETK Petropavlovsk- 39.49 33 LR LR 22 38 05.0
comp=Z,66nm,18.0s,baz=230,slow=42
ZAA0 Zalesovo Array 40.96 327 *e*P **P** **22 18 30.9 -1.7**
ZALV Zalesovo Beam 40.96 327 P **P** **22 18 31.1 -1.5**
ZALV 22 20 31.0
ZALV Zalesovo Beam 40.96 327 P **P** **22 18 31.1 -1.5**
ZALV PcP **PcP** **22 20 31.0 -1.5**
ZALV Zalesovo Beam 40.96 327 P **P** **22 18 31.1 -1.5**
comp=Z,20nm,0.8s,baz=113,slow=7.7,SNR=79
ZALV PcP **PcP** **22 20 31.0 -1.5**
comp=Z,1.1nm,0.5s,baz=92,slow=3.7,SNR=3.7
ZALV LR LR 22 37 07.9
comp=Z,181nm,18.1s,baz=250,slow=39
PMG Port Moresby 41.13 141 LR LR 22 33 19.2
comp=Z,61nm,20.6s,baz=273,slow=33
KSH Kashi 41.85 303 *e*P P 22 18 43.8 +3.5
KSH *ep*P pP 22 18 53.4 +4.0
KSH *es*P sP 22 18 57.4 +4.3
KSH *e*PP **PnPn** **22 20 24.1 +1.7**
KSH *e*PcP **PcP** **22 20 38.6 +2.7**
KSH *e*S **S** **22 24 59.8 +3.4**
KSH *es*S sS 22 25 16.4 +5.0
KSH pmax pmax
comp=Z,7.0nm,0.7s
KSH pmax pmax
comp=Z,140nm,4.6s
KSH LR LR
comp=N,160nm,4.8s
KSH LR LR
comp=E,180nm,4.8s
KSH LR LR
comp=Z,410nm,12.1s
NVS Novosibirsk 42.22 327⇑*i*P **P** **22 18 41.1 -1.8**
NVS pmax pmax
comp=Z,10.0nm,0.9s
NVS pmax pmax
comp=N,6.0nm,0.9s
NVS pmax pmax
comp=E,6.0nm,0.9s
TKM2 Tokmak 2 42.68 308 *e*P **P** **22 18 47.9 +0.8**
TKM2 pmax pmax
comp=Z,15nm,0.9s
TKM2 Tokmak 2 42.68 308 *e*P **P** **22 18 47.9 +0.8**
comp=Z,15nm,0.9s
COEN Coen 42.88 149 *e*P **P** **22 18 50.2 +1.5**
comp=Z,135nm,0.8s
KURK Kurchatov 42.89 320 *e*P **P** **22 18 48.0 -0.4**
KURK pmax pmax
comp=Z,12nm,1.2s
KURK Kurchatov 42.89 320 *e*P **P** **22 18 47.5 -1.0**
comp=Z,12nm,1.2s
AAK Ala-Archa 43.42 307*c i*P **P** **22 18 53.9 +0.8**
AAK pmax pmax
comp=Z,9.0nm,0.8s
AAK Ala-Archa 43.42 307 *e*P **P** **22 18 54.0 +0.9**
comp=Z,7.5nm,1.1s
EKS2 Erkin-Say 43.95 307 *e*P **P** **22 18 58.5 +1.2**
EKS2 pmax pmax
comp=Z,6.0nm,0.8s
EKS2 Erkin-Say 43.95 307 *e*P **P** **22 18 58.5 +1.2**
comp=Z,6.0nm,0.8s
WRAB Tennant Creek 45.20 164 *e*P **P** **22 19 07.7 +0.5**
WRAB pmax pmax
comp=Z,9.0nm,0.9s
WRAB Tennant Creek 45.20 164 *e*P **P** **22 19 07.7 +0.5**
comp=Z,9.3nm,0.9s
KK31 Karatay Array 46.39 307 *i* P **P** **22 19 16.7 +0.2**
KK31 pmax pmax
comp=Z,3.0nm,0.4s
KKAR Karatay Array 46.39 307 *e*P **P** **22 19 16.9 +0.4**
KKAR *e* 22 20 50.6
KKAR Karatay Array 46.39 307 *e*P **P** **22 19 16.9 +0.4**
KKAR *e*PcP **PcP** **22 20 50.6 -0.5**
KBL Kabul 47.15 296 *e*P **P** **22 19 24.0 +1.1**
KBL pmax pmax
comp=Z,8.0nm,0.8s
KBL Kabul 47.15 296 *e*P **P** **22 19 24.0 +1.1**
comp=Z,8.5nm,0.8s
TIXI Tiksi 47.85 3*ce*P **P** **22 19 25.2 -2.2**
TIXI pmax pmax
comp=Z,7.0nm,0.8s
TIXI MLR MLR
comp=Z,372nm,17.0s
BVAR Borovoye Array 48.47 321 P **P** **22 19 31.9 -0.6**
BVAR 22 20 57.6

BVAR	**Borovoye Array**	**48.47 321**		P	**P**	**22 19 31.9**	**-0.6**
BVAR				PcP	**PcP**	**22 20 57.6**	**-0.7**
BVAR				ScP	**ScP**	**22 24 50.8**	**-0.2**
BVAR	**Borovoye Array**	**48.47 321**		P	**P**	**22 19 31.9**	**-0.6**
	comp=Z,5.0nm,0.6s,baz=107,slow=8.3,SNR=51						
BVAR				PcP	**PcP**	**22 20 57.6**	**-0.7**
	comp=Z,3.0nm,0.8s,baz=108,slow=3.5,SNR=8.8						
BVAR				ScP	**ScP**	**22 24 50.8**	**-0.2**
	comp=Z,0.3nm,0.5s,baz=123,slow=5.3,SNR=3.6						
BRVK	**Borovoye**	**48.54 321**	*c iP*		**P**	**22 19 32.4**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRVK	**Borovoye**	**48.54 321**	*eP*		**P**	**22 19 32.5**	**-0.5**
	comp=Z,12nm,1.0s						
AS31	**Alice Springs**	**48.68 166**	*eP*		**P**	**22 19 34.4**	**0.0**
ASAR	**Alice Springs**	**48.69 166**	P		**P**	**22 19 35.5**	**+1.1**
ASAR	**Alice Springs**	**48.69 166**	P		**P**	**22 19 35.5**	**+1.1**
	comp=Z,2.0nm,0.5s,baz=343,slow=7.1,SNR=29						
CTA	**Charters Tower**	**49.64 150**	P		**P**	**22 19 43.8**	**+2.0**
CTA	**Charters Tower**	**49.64 150**	P		**P**	**22 19 43.8**	**+2.0**
	comp=Z,2.8nm,0.7s,baz=343,slow=14,SNR=3.1						
BILL	**Bilibino**	**51.54 19⇑**	*eP*		P	22 19 51.6	-4.0
BILL			*eS*		**S**	**22 27 16.5**	**+2.7**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,100nm,17.0s						
AB31	**Akbulak array**	**54.30 314**	*i* P		**P**	**22 20 15.9**	**-0.3**
AB31				pmax	pmax		
	comp=Z,15nm,0.7s						
ABKAR	**Akbulak array**	**54.30 314**	*eP*		**P**	**22 20 16.1**	**-0.1**
SVE	**Sverdlovsk**	**54.80 324⇑**	*iP*		**P**	**22 20 19.3**	**-0.4**
SVE				pmax	pmax		
	comp=Z,12nm,0.9s						
SVE				MLR	MLR		
	comp=Z,168nm,15.0s						
AKTO	**Aktyubinsk**	**55.62 316**	*i* P		**P**	**22 20 24.8**	**-1.0**
AKTO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ARU	**Arti**	**55.87 323**	*c iP*		**P**	**22 20 26.1**	**-1.3**
ARU						22 21 23.5	
ARU						22 22 30.2	
ARU				S	**S**	**22 28 12.4**	**-0.4**
ARU				SS	**SS**	**22 31 56.0**	**-2.4**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
STKA	**Stephens Creek**	**58.53 161**	*eP*		**P**	**22 20 47.5**	**+1.1**
STKA	**Stephens Creek**	**58.53 161**	P		**P**	**22 20 47.4**	**+1.0**
	comp=Z,2.6nm,0.7s,baz=334,slow=6.3,SNR=9.9						
DGRG	**David-gareji**	**65.02 306**	P		**P**	**22 21 31.2**	**+1.0**
DUS	**Dusheti**	**65.40 307**	P		**P**	**22 21 34.7**	**+2.0**
TBLG	**Delisi**	**65.44 307**	*eP*		**P**	**22 21 30.3**	**-2.6**
TBLG	**Delisi**	**65.44 307**	P		**P**	**22 21 30.3**	**-2.6**
GNI	**Garni**	**65.74 305**	*eP*		**P**	**22 21 35.0**	**-0.1**
	comp=Z,3.9nm,0.8s						
MIB	**Mutribah**	**66.02 293**	*eP*		**P**	**22 21 36.2**	**-0.7**
MIB				AMb	AMB	22 21 37.4	
	comp=Z,20nm,1.0s						
RDF	**Al-Radifah**	**66.07 292**	*eP*		**P**	**22 21 37.0**	**-0.2**
RDF				AMb	AMB	22 21 38.5	
	comp=Z,30nm,1.0s						
ONI	**Oni**	**66.21 308**	P		**P**	**22 21 39.4**	**+1.4**
NAY	**Al-Naaiem**	**66.24 293**	*eP*		**P**	**22 21 37.5**	**-0.8**
NAY				AMb	AMB	22 21 38.4	
	comp=Z,11nm,0.8s						
KBZ	**Khabaz**	**66.39 309**	P		**P**	**22 21 38.7**	**-0.2**
KBZ	**Khabaz**	**66.39 309**	P		**P**	**22 21 38.7**	**-0.2**
KBZ	**Khabaz**	**66.39 309**	P		**P**	**22 21 38.7**	**-0.2**
	comp=Z,6.7nm,1.0s,baz=101,slow=4.7,SNR=12						
AKH	**Akhalkalaki**	**66.42 306**	P		**P**	**22 21 40.8**	**+1.3**
KIV	**Kislovodsk**	**66.49 309**	*eP*		**P**	**22 21 40.2**	**+0.4**
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
KIV				MLR	MLR		
	comp=Z,59nm,17.0s						
VORD	**Divnogorie**	**67.44 317**	*eP*		P	22 21 42.2	-3.3
VORD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VORD				pmax	pmax		
	comp=N,30nm,0.7s						
VORD				pmax	pmax		
	comp=E,50nm,0.6s						
VSR	**Storozhevoye**	**67.47 317**	*eP*		**P**	**22 21 44.4**	**-1.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR				pmax	pmax		
	comp=N,4.0nm,0.8s						
VSR				pmax	pmax		
	comp=E,10.0nm,0.9s						
OBN	**Obninsk**	**68.28 322⇑**	*eP*		**P**	**22 21 50.3**	**-0.4**
OBN			*e**PP		**PcP**	**22 22 14.7**	**-1.5**
OBN			*e*			22 24 24.5	
OBN			*eS*		**S**	**22 30 47.8**	**-1.5**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,100nm,17.0s						
ILAR	**Eielson Array**	**68.94 27**	P		**P**	**22 21 54.0**	**-0.7**
ILAR	**Eielson Array**	**68.94 27**	P		**P**	**22 21 54.0**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=292,slow=7.7,SNR=6.0						
ILAR				LR	LR	22 52 39.0	
	comp=Z,40nm,19.0s,baz=68,slow=36						
RAYN	**Ar Rayn**	**69.36 287**	*eP*		**P**	**22 21 58.1**	**0.0**
	comp=Z,6.6nm,1.0s						
JOF	**Joensuu**	**69.38 331**	*eP*		**P**	**22 21 56.3**	**-1.1**
JOF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
JOF	**Joensuu**	**69.38 331**	*ep*		**P**	**22 21 56.3**	**-1.1**
	comp=Z,4.6nm,1.0s						
KEV	**Kevo**	**69.54 338**	*eP*		**P**	**22 21 57.4**	**-0.9**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KEV	**Kevo**	**69.54 338**	*ep*		**P**	**22 21 57.4**	**-0.9**
	comp=Z,5.1nm,0.7s						
ANN	**Anapa**	**69.98 311**	*eP*		**P**	**22 22 00.0**	**-1.5**
ANN			*eS*		**S**	**22 31 09.8**	**0.0**
ANN				pmax	pmax		
	comp=Z,36nm,0.9s						
ARCES	**ARCESS Array B**	**70.10 338**	P		**P**	**22 22 00.4**	**-1.4**
ARCES	**ARCESS Array B**	**70.10 338**	P		**P**	**22 22 00.4**	**-1.4**
	comp=Z,4.1nm,0.9s,baz=71,slow=7.8,SNR=13						
ARCES				LR	LR	22 57 56.5	
	comp=Z,56nm,18.4s,baz=30,slow=40						
MALT	**Malatya**	**70.94 304**	⇓*P*		PcP	22 22 22.4	-5.6
MALT	**Malatya**	**70.94 304**	⇓*iP*		PcP	22 22 22.4	-5.6
KAF	**Kangasniemi**	**71.83 331**	*eP*		**P**	**22 22 12.0**	**-0.4**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KAF	**Kangasniemi**	**71.83 331**	*ep*		**P**	**22 22 12.0**	**-0.4**
	comp=Z,1.1nm,0.4s						
FINES	**FINESS Array B**	**72.13 330**	P		**P**	**22 22 12.7**	**-1.5**
FINES	**FINESS Array B**	**72.13 330**	P		**P**	**22 22 12.7**	**-1.5**
	comp=Z,1.1nm,0.4s,baz=50,slow=4.8,SNR=25						
FINES				LR	LR	22 57 22.9	
	comp=Z,210nm,18.9s,baz=74,slow=39						
INK	**Inuvik**	**73.04 22**	P		**P**	**22 22 18.3**	**-1.2**
INK	**Inuvik**	**73.04 22**	P		**P**	**22 22 18.3**	**-1.2**
	comp=Z,3.5nm,0.8s,baz=282,slow=6.4,SNR=5.5						
AKASG	**Malin Array Be**	**73.69 319**	P		**P**	**22 22 22.3**	**-1.3**
AKASG	**Malin Array Be**	**73.69 319**	P		**P**	**22 22 22.3**	**-1.3**
AKASG	**Malin Array Be**	**73.69 319**	P		**P**	**22 22 22.3**	**-1.3**
	comp=Z,7.9nm,0.8s,baz=60,slow=6.2,SNR=18						
BR131	**Keskin Array S**	**74.10 307**	*eP*		**P**	**22 22 25.1**	**-1.4**
	comp=Z,9.9nm,0.9s						
BRTR	**Keskin Array B**	**74.10 307**	P		**P**	**22 22 26.3**	**-0.1**
BRTR	**Keskin Array B**	**74.10 307**	P		**P**	**22 22 26.3**	**-0.1**
	comp=Z,10nm,0.9s,baz=105,slow=6.4,SNR=43						
ANTO	**Ankara**	**74.67 307**	*eP*		**P**	**22 22 30.1**	**+0.4**
ANTO				pmax	pmax		
	comp=Z,16nm,0.7s						
ANTO	**Ankara**	**74.67 307**	*eP*		**P**	**22 22 30.1**	**+0.4**
	comp=Z,16nm,0.7s						
SUW	**Suwalki**	**76.06 323**	*eP*		**P**	**22 22 36.4**	**-0.9**
SUW				pmax	pmax		
	comp=Z,35nm,0.9s						
SUW	**Suwalki**	**76.06 323**	*eP*		**P**	**22 22 36.4**	**-0.9**
	comp=Z,35nm,0.9s						
SUW	**Suwalki**	**76.06 323**	*eP*		**P**	**22 22 36.6**	**-0.7**
CFR	**Carcaliu**	**76.18 313**	⇓*P*		**P**	**22 22 36.4**	**-1.7**
CFR	**Carcaliu**	**76.18 313**	⇓*iP*		**P**	**22 22 36.4**	**-1.7**
TESR	**Tescani**	**76.69 315⇑**	*iP*		**P**	**22 22 40.0**	**-1.0**
VRI	**Vrincioaia**	**76.86 314**	⇑*P*		**P**	**22 22 42.7**	**+0.7**
VRI	**Vrincioaia**	**76.86 314⇑**	*iP*		**P**	**22 22 42.7**	**+0.7**
BUR08	**Bucovina Ar. S**	**77.20 317**	*eP*		**P**	**22 22 43.6**	**-0.4**
BURAR	**Bucovina Array**	**77.20 316⇑**	*iP*		**P**	**22 22 43.2**	**-0.8**
MLR	**Muntele Rosu**	**77.51 314⇑**	*iP*		**P**	**22 22 46.3**	**+0.5**
KWP	**Kalwaria Pacla**	**77.99 319**	⇓*P*		P	22 22 41.7	-6.5
KWP	**Kalwaria Pacla**	**77.99 319**	*eP*		**P**	**22 22 47.4**	**-0.8**
	comp=Z,24nm,1.0s						
KWP	**Kalwaria Pacla**	**77.99 319**	⇓*iP*		P	22 22 41.7	-6.5
KWP	**Kalwaria Pacla**	**77.99 319**	*eP*		**P**	**22 22 47.9**	**-0.3**
BEL	**Belsk**	**78.24 322**	*eP*		**P**	**22 22 49.6**	**0.0**
BEL	**Belsk**	**78.24 322**	*eP*		**P**	**22 22 49.5**	**0.0**
ARR	**Arges**	**78.41 315**	⇓*iP*		**P**	**22 22 50.9**	**+0.1**
KOLS	**Kolonicke sedl**	**78.52 318**	*eP*		**P**	**22 22 50.5**	**-0.7**
KOLS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KOLS	**Kolonicke sedl**	**78.52 318**	*eP*		**P**	**22 22 50.5**	**-0.7**
DLBC	**Dease Lake**	**78.61 31**	P		**P**	**22 22 50.3**	**-1.3**
DLBC	**Dease Lake**	**78.61 31**	P		**P**	**22 22 50.3**	**-1.3**
	comp=Z,1.4nm,0.4s,baz=212,slow=19,SNR=3.4						
NB2	**NORSAR Subarra**	**78.87 332**	P		**P**	**22 22 51.5**	**-1.4**
	comp=Z,4.2nm,1.0s,baz=58,slow=5.3						
NOA	**NORSAR Array B**	**78.87 332**	P		**P**	**22 22 51.6**	**-1.4**
NOA	**NORSAR Array B**	**78.87 332**	P		**P**	**22 22 51.6**	**-1.4**
	comp=Z,1.4nm,0.6s,baz=58,slow=5.4,SNR=7.7						
NOA				LR	LR	23 01 24.8	
	comp=Z,164nm,18.1s,baz=65,slow=38						
LOT	**Lotru**	**78.95 315**	⇓*iP*		**P**	**22 22 53.6**	**-0.2**
STHS	**Stebnicka Huta**	**78.95 319**	*eP*		**P**	**22 22 54.0**	**+0.4**
STHS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STHS	**Stebnicka Huta**	**78.95 319**	*eP*		**P**	**22 22 54.0**	**+0.4**
CRVS	**Cervenica-Dubn**	**79.03 319**	*eP*		P	22 23 01.8	+7.8
CRVS	**Cervenica-Dubn**	**79.03 319**	*eP*	CP	P	22 23 01.8	+7.8
DRGR		**79.10 316**	⇓*P*		**P**	**22 22 54.4**	**-0.1**
DRGR		**79.10 316**	⇓*iP*		**P**	**22 22 54.4**	**-0.1**
VTS	**Vitosha**	**80.44 312**	⇑*P*		**P**	**22 23 02.1**	**+0.1**
VTS	**Vitosha**	**80.44 312**	⇑*iP*		**P**	**22 23 02.0**	**+0.1**
VYHS	**Vyhne**	**80.78 319**	*eP*		**P**	**22 23 03.4**	**-0.1**
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VYHS	**Vyhne**	**80.78 319**	*eP*		**P**	**22 23 03.4**	**-0.1**
MORC	**Moravsky Berou**	**80.98 321**	*eP*		**P**	**22 23 03.2**	**-1.4**
MORC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MORC	**Moravsky Berou**	**80.98 321**	*eP*		**P**	**22 23 03.2**	**-1.4**
	comp=Z,3.8nm,1.1s						
KSP	**Ksiaz**	**81.21 322**	*eP*		**P**	**22 23 05.8**	**+0.1**
KSP	**Ksiaz**	**81.21 322**	*eP*		**P**	**22 23 06.0**	**+0.3**
DPC	**Dobruska-Polom**	**81.42 321**	*eP*		**P**	**22 23 06.3**	**-0.6**
DPC	**Dobruska-Polom**	**81.42 321**	*eP*		**P**	**22 23 06.3**	**-0.6**
PKSM	**Moragy**	**81.89 317**	⇑*P*		**P**	**22 23 07.7**	**-1.7**
PKSM	**Moragy**	**81.89 317**	⇑*iP*		**P**	**22 23 07.7**	**-1.7**
PRU	**Pruhonice**	**82.60 322**	*eP*		**P**	**22 23 13.1**	**+0.1**
PRU	**Pruhonice**	**82.60 322**	*eP*		**P**	**22 23 13.1**	**+0.1**
YKA	**Yellowknife Ar**	**82.77 23**	P		**P**	**22 23 12.8**	**-0.8**
YKA	**Yellowknife Ar**	**82.77 23**	P		**P**	**22 23 12.8**	**-0.8**
	comp=Z,3.0nm,0.7s,baz=315,slow=4.8,SNR=15						
SUMG	**Summit**	**82.81 354**	*i* P		**P**	**22 23 13.3**	**-0.9**
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SUMG	**Summit**	**82.81 354**	*eP*		**P**	**22 23 13.3**	**-0.9**
	comp=Z,5.6nm,0.7s						
SUMG	**Summit**	**82.81 354**	*i* P		**P**	**22 23 13.3**	**-0.9**
	comp=Z,5.3nm,0.9s						
CLL	**Collm**	**82.82 323**	*eP*		**P**	**22 23 13.0**	**-1.1**
CLL				MLR	MLR		
	comp=Z,100nm,20.3s						
CLL	**Collm**	**82.82 323**	*eP*		**P**	**22 23 13.0**	**-1.1**
CLL				L	L	23 04 00.0	
	comp=Z,100nm,20.3s						
KHC	**Kasperske Hory**	**83.57 321**	*eP*		**P**	**22 23 17.2**	**-0.9**
KHC	**Kasperske Hory**	**83.57 321**	*eP*		**P**	**22 23 17.2**	**-0.9**
GEC2	**GERESS Array S**	**83.64 321**	*eP*		**P**	**22 23 18.8**	**+0.3**
GEC2	**GERESS Array S**	**83.64 321**	*eP*		**P**	**22 23 18.8**	**+0.3**
GERES	**GERESS Array B**	**83.64 321**	P		**P**	**22 23 18.2**	**-0.3**
GERES	**GERESS Array B**	**83.64 321**	P		**P**	**22 23 18.2**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=57,slow=4.9,SNR=30						
GERES				LR	LR	23 04 42.9	
	comp=Z,65nm,19.1s,baz=211,slow=39						
KMBO	**Kilima Mbogo**	**85.90 267**	*eP*		**P**	**22 23 29.4**	**-1.4**
	comp=Z,2.8nm,0.9s						
KMBO	**Kilima Mbogo**	**85.90 267**	P		**P**	**22 23 31.6**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=59,slow=24,SNR=7.1						
LON	**Longmire**	**88.94 38**	*eP*		**P**	**22 23 45.4**	**+0.8**
LON				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LON	**Longmire**	**88.94 38**	*eP*		**P**	**22 23 45.4**	**+0.8**
	comp=Z,6.5nm,1.0s						
LPG	**La Plagne**	**89.43 321**	⇑*iP*		**P**	**22 23 46.7**	**-0.5**
	comp=Z,13nm,0.8s						
LPG	**La Plagne**	**89.43 321**	⇑*iP*		**P**	**22 23 46.7**	**-0.5**
LPG				pmax	pmax		
	comp=Z,13nm,0.8s						
LPG	**La Plagne**	**89.43 321**	⇑*iP*		**P**	**22 23 46.7**	**-0.5**
	comp=Z,13nm,0.8s						
LPL	**La Plagne**	**89.43 321**	⇑*iP*		**P**	**22 23 46.6**	**-0.5**
	comp=Z,8.2nm,0.7s						
LPL	**La Plagne**	**89.43 321**	⇑*iP*		**P**	**22 23 46.6**	**-0.5**
LPL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
LPL	**La Plagne**	**89.43 321**	⇑*iP*		**P**	**22 23 46.6**	**-0.5**
	comp=Z,8.2nm,0.6s						
LOR	**Lormes**	**90.03 323**	*eP*		**P**	**22 23 48.5**	**-1.2**
	comp=Z,8.9nm,0.9s						
LOR				eR			
	comp=Z,77nm,17.5s						
LOR	**Lormes**	**90.03 323**	*eP*		**P**	**22 23 48.5**	**-1.2**
	comp=Z,8.9nm,0.9s						
ORIF	**Oris-en-Rattie**	**90.26 320**	*eP*		**P**	**22 23 50.1**	**-0.8**
	comp=Z,11nm,1.0s						
ORIF				eR			
	comp=Z,104nm,20.2s						
ORIF	**Oris-en-Rattie**	**90.26 320**	*eP*		**P**	**22 23 50.1**	**-0.8**
ORIF				pmax	pmax		
	comp=Z,11nm,1.0s						
ORIF	**Oris-en-Rattie**	**90.26 320**	*eP*		**P**	**22 23 50.1**	**-0.8**
	comp=Z,11nm,1.0s						
SMF	**Signal de Mont**	**90.41 323**	*eP*		**P**	**22 23 50.5**	**-0.9**
	comp=Z,21nm,1.0s						
SMF	**Signal de Mont**	**90.41 323**	*eP*		**P**	**22 23 50.5**	**-0.9**
SMF				pmax	pmax		
	comp=Z,21nm,1.0s						
SMF	**Signal de Mont**	**90.41 323**	*eP*		**P**	**22 23 50.5**	**-0.9**
	comp=Z,21nm,1.0s						
FRF	**La Foret Royal**	**90.58 319**	*eP*		**P**	**22 23 51.3**	**-1.0**
	comp=Z,18nm,1.1s						
FRF	**La Foret Royal**	**90.58 319**	*eP*		**P**	**22 23 51.3**	**-1.0**
FRF				pmax	pmax		
	comp=Z,18nm,1.1s						
FRF	**La Foret Royal**	**90.58 319**	*eP*		**P**	**22 23 51.3**	**-1.0**
	comp=Z,18nm,1.1s						
AVF	**Avril sur Loir**	**90.60 323**	*eP*		**P**	**22 23 51.2**	**-1.0**
	comp=Z,8.1nm,0.8s						
AVF	**Avril sur Loir**	**90.60 323**	*eP*		**P**	**22 23 51.2**	**-1.0**
AVF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
AVF	**Avril sur Loir**	**90.60 323**	*eP*		**P**	**22 23 51.2**	**-1.0**
	comp=Z,8.1nm,0.8s						
NEW	**Newport**	**90.60 35**	P		**P**	**22 23 51.3**	**-1.0**
NEW	**Newport**	**90.60 35**	P		**P**	**22 23 51.3**	**-1.0**
	comp=Z,7.5nm,0.9s,baz=241,slow=21,SNR=4.2						
SMRF	**Simiane la Rot**	**90.98 320**	*eP*		**P**	**22 23 52.9**	**-1.3**
SMRF	**Simiane la Rot**	**90.98 320**	*eP*		**P**	**22 23 52.9**	**-1.3**
VIVF	**Saint-Julien-l**	**91.00 321**	⇑*iP*		**P**	**22 23 53.4**	**-0.8**
	comp=Z,6.2nm,0.8s						
VIVF	**Saint-Julien-l**	**91.00 321**	⇑*iP*		**P**	**22 23 53.4**	**-0.8**
VIVF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VIVF	**Saint-Julien-l**	**91.00 321**	⇑*iP*		**P**	**22 23 53.4**	**-0.8**
	comp=Z,6.2nm,0.8s						
BGF	**Bois d'Agland**	**91.01 323**	*eP*		**P**	**22 23 53.3**	**-0.9**
	comp=Z,8.6nm,0.9s						
BGF	**Bois d'Agland**	**91.01 323**	*eP*		**P**	**22 23 53.3**	**-0.9**
BGF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BGF	**Bois d'Agland**	**91.01 323**	*eP*		**P**	**22 23 53.3**	**-0.9**
	comp=Z,8.6nm,0.9s						
YBH	**Yreka Blue Hor**	**91.23 43**	P		**P**	**22 23 55.3**	**-0.2**
YBH	**Yreka Blue Hor**	**91.23 43**	P		**P**	**22 23 55.3**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=288,slow=6.4,SNR=3.5						
TCF	**Toulx Ste Croi**	**91.53 323**	*eP*		**P**	**22 23 56.1**	**-0.6**
	comp=Z,7.4nm,1.1s						
TCF	**Toulx Ste Croi**	**91.53 323**	*eP*		**P**	**22 23 56.1**	**-0.6**
TCF				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TCF	**Toulx Ste Croi**	**91.53 323**	*eP*		**P**	**22 23 56.1**	**-0.6**
	comp=Z,7.4nm,1.1s						
FRB	**Frobisher Bay**	**92.16 5**	P		**P**	**22 23 57.5**	**-1.6**
	comp=Z,5.1nm,0.8s,baz=342,slow=5.6,SNR=5.2						
CAF	**Calviac**	**92.44 322**	*eP*		**P**	**22 24 00.7**	**-0.2**
	comp=Z,14nm,1.1s						
CAF	**Calviac**	**92.44 322**	*eP*		**P**	**22 24 00.7**	**-0.2**
CAF				pmax	pmax		
	comp=Z,14nm,1.1s						
CAF	**Calviac**	**92.44 322**	*eP*		**P**	**22 24 00.7**	**-0.2**
	comp=Z,14nm,1.1s						
RJF	**Les Rejaudoux**	**92.52 323**	*eP*		**P**	**22 24 01.1**	**-0.1**
	comp=Z,22nm,1.0s						
RJF			*eR*				
	comp=Z,63nm,17.5s						
RJF	**Les Rejaudoux**	**92.52 323**	*eP*		**P**	**22 24 01.1**	**-0.1**
RJF				pmax	pmax		
	comp=Z,22nm,1.0s						
RJF	**Les Rejaudoux**	**92.52 323**	*eP*		**P**	**22 24 01.1**	**-0.1**
	comp=Z,22nm,1.0s						
FFC	**Flin Flon**	**92.92 24**	*ceP*		**P**	**22 24 02.5**	**-0.3**
FFC	**Flin Flon**	**92.92 24**	*eP*		**P**	**22 24 01.8**	**-1.1**
	comp=Z,5.1nm,1.0s						
MTLF	**Montolieu**	**93.32 321**	*eP*		**P**	**22 24 04.4**	**-0.6**
	comp=Z,7.2nm,1.1s						
MTLF	**Montolieu**	**93.32 321**	*eP*		**P**	**22 24 04.4**	**-0.6**
MTLF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MTLF	**Montolieu**	**93.32 321**	*eP*		**P**	**22 24 04.4**	**-0.6**
	comp=Z,7.2nm,1.0s						
NVAR	**Mina Array Bea**	**95.90 43**	P		**P**	**22 24 17.1**	**-0.1**
NVAR	**Mina Array Bea**	**95.90 43**	P		**P**	**22 24 17.1**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=292,slow=5.6,SNR=4.3						
MOOW	**Moose Ponds**	**96.91 36**	*eP*		P	22 24 16.6	-5.1
	comp=Z,3.7nm,0.7s						
TXAR	**Lajitas Array**	**111.00 42**	PKiKP		**PKiKP**	**22 29 23.2**	**-0.6**
TXAR	**Lajitas Array**	**111.00 42**	PKiKP		**PKiKP**	**22 29 23.2**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=332,slow=1.8,SNR=4.3						
SDV	**Santo Domingo**	**144.99 23**	*e*PKPab		**PKPab**	**22 30 26.8**	**-0.6**
ROSC	**El Rosal**	**147.09 32**	PKPbc		**PKPbc**	**22 30 34.0**	**-0.1**
ROSC	**El Rosal**	**147.09 32**	PKPbc		**PKPbc**	**22 30 34.0**	**-0.1**
	comp=Z,4.3nm,0.4s,baz=279,slow=19,SNR=2.7						
LPAZ	**La Paz**	**167.59 54**	PKP		**PKPdf**	**22 30 58.7**	**+1.1**
LPAZ				PKPab	**PKPab**	**22 32 00.3**	**-3.2**
LPAZ	**La Paz**	**167.59 54**	PKP		**PKPdf**	**22 30 58.7**	**+1.1**
	comp=Z,0.8nm,0.7s,baz=61,slow=4.7,SNR=3.7						
LPAZ				PKPab	**PKPab**	**22 32 00.3**	**-3.2**
	comp=Z,0.9nm,0.7s,baz=352,slow=7.1,SNR=3.0						

*ISCJB **24** 22:17:22.1±0.8,23.99N±0.02×122.28E±0.02,h11km±5km,*
Error ellipse: s-maj=4.0km s-min=2.7km az=162.6
*TAP **24** 22:17:22.5,24.02N×122.28E,h21km,ML2.9,C*
*JMA **24** 22:17:24.1±0.4,24.14N×122.28E,h21km,M2.4*

ISC 24 22:17:21.9±1.2,24.01N±0.03×122.29E±0.02,h19km±3km,
n31,σ0.967/59,Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.64**	**276**	P	**Pg**	**22 17 34.7**	**+0.2**
TWD	baz=276			S	**Sg**	**22 17 44.0**	**+0.9**
ENA	**Nanau**	**0.65**	**310**	P	**Pg**	**22 17 34.9**	**+0.1**
ENA	baz=321			*eS*	**Sn**	**22 17 44.5**	**-1.4**
TWC	**Suao**	**0.72**	**326**	*i* P	**Pg**	**22 17 35.8**	**-0.2**
TWC	baz=334			*eS*	**Sb**	**22 17 44.5**	**-0.9**
YOJ	**Yonaguni jima**	**0.80**	**55**	P	**Pn**	**22 17 38.0**	**-0.1**
YOJ				S	**Sb**	**22 17 47.8**	**+0.2**
ESL	**Shilin**	**0.81**	**256**	*eP*	**Pb**	**22 17 37.5**	**+0.1**
ESL	baz=242			*eS*	**Sb**	**22 17 47.1**	**-0.7**
TWE	**Neicheng**	**0.91**	**321**	P	**Pg**	**22 17 39.5**	**-0.1**
TWE	baz=328			S	**Sn**	**22 17 52.0**	**-0.2**
ENTT	**Nioudou**	**0.91**	**314**	*i* P	**Pn**	**22 17 40.0**	**+0.3**
ENTT	baz=326			*eS*	**Sn**	**22 17 52.2**	**-0.1**
NNS	**Nan Shan**	**0.94**	**297**	P	**Pg**	**22 17 40.2**	**0.0**
NNS	baz=296			*eS*	**Sg**	**22 17 52.8**	**+0.2**
WHF	**Hehuan Shan**	**0.95**	**278**	P	**Pb**	**22 17 40.1**

*CSEM **24** 22:21:45.7, 42˚.57N×13˚.21E, h10km, MD1.9/9, After ROM*
ROM 24 22:21:45.7±0.1, 42˚.57N×13˚.21E, h10km, Md1.9/9, MI1.2/5, Error ellipse: s-maj=1.1km s-min=0.8km az=39.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.13**	**285**	Pg	Pg	22 21 49.4	+0.4
LNSS	91nm,0.2s			Sg	Sg	22 21 51.8	+0.6
LNSS	**Leonessa**	**0.13**	**285**	Pg	Pg	22 21 49.4	+0.4
LNSS	91nm,0.2s			Sg	Sg	22 21 51.8	+0.6
CAMP	**Campotosto**	**0.15**	**102**	Pg	Pb	22 21 50.1	-0.7
CAMP	21nm,0.4s			Sg	Sg	22 21 52.1	+0.4
CAMP	**Campotosto**	**0.15**	**102**	Pg	Pb	22 21 50.1	-0.7
CAMP	21nm,0.4s			Sg	Sg	22 21 52.1	+0.4
NRCA	**Norcia**	**0.28**	**345**	Pg	Pg	22 21 51.8	+0.4
NRCA	62nm,0.1s			Sg	Sg	22 21 56.3	+1.0
NRCA	**Norcia**	**0.28**	**345**	Pg	Pg	22 21 51.8	+0.4
NRCA	62nm,0.1s			Sg	Sg	22 21 56.3	+1.0
TERO	**Teramo**	**0.29**	**79**	Pg	Pg	22 21 52.3	+0.6
TERO	27nm,0.2s			Sg	Sg	22 21 56.9	+1.1
TERO	**Teramo**	**0.29**	**79**	Pg	Pg	22 21 52.3	+0.6
TERO	27nm,0.2s			Sg	Sg	22 21 56.9	+1.1
FIAM	**Fiamignano**	**0.31**	**193**	Pg	Pg	22 21 52.7	+0.7
FIAM	19nm,0.4s			Sg	Sg	22 21 57.4	+1.1
FIAM	**Fiamignano**	**0.31**	**193**	Pg	Pg	22 21 52.7	+0.7
FIAM	19nm,0.4s			Sg	Sg	22 21 57.4	+1.1
MNS	**Montasola**	**0.43**	**245**	Pg	Pg	22 21 54.6	+0.3
MNS	**Montasola**	**0.43**	**245**	Pg	Pg	22 21 54.6	+0.3
FDMO	**Fiordimonte**	**0.48**	**349**	Pg	Pg	22 21 55.3	+0.2
FDMO				Sg	Sb	22 22 03.1	-0.3
FDMO	**Fiordimonte**	**0.48**	**349**	Pg	Pg	22 21 55.3	+0.2
FDMO				Sg	Sb	22 22 03.1	-0.3
CESI	**CESI - Serrava**	**0.49**	**333**	Pg	Pg	22 21 55.7	+0.3
CESI				Sg	Sb	22 22 03.4	-0.5
CESI	**CESI - Serrava**	**0.49**	**333**	Pg	Pg	22 21 55.7	+0.3
CESI				Sg	Sb	22 22 03.4	-0.5
GUMA	**Gualdo di Mace**	**0.73**	**47**	Pg	Pg	22 21 56.3	-3.5
GUMA	**Gualdo di Mace**	**0.73**	**47**	Pg	Pg	22 21 56.3	-3.5

*IDC **24** 22:31:18.8±68.0, 22˚.83N×123˚.07E, h0km, mb3.7/3, mb1 3.7/3, mb1mx3.3/23, mbtmp3.7/3, Error ellipse: s-maj=1220.0km s-min=168.9km az=134.0*
*TAP **24** 22:31:35.8, 24˚.01N×122˚.29E, h22km, ML3.4, C*
*JMA **24** 22:31:37.2±0.4, 24˚.86N×122˚.33E, h39km, M3.1*
ISC 24 22:31:35.6±1.0, 23˚.96N±0˚.03×122˚.28E±0˚.02, h31km±10km, n46, σ1s06/80, mb3.6/3, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.64**	**281**	*eP*	**Pb**	**22 31 47.7**	**-0.6**
TWD	baz=276			*eS*	**Sn**	**22 31 57.3**	**-0.3**
ENA	**Nanau**	**0.68**	**313**	*eP*	**Pn**	**22 31 48.4**	**-0.6**
ENA	baz=321			*eS*	**Sn**	**22 31 58.8**	**+0.2**
TWC	**Suao**	**0.75**	**329**	⇑P	**Pb**	**22 31 49.3**	**-1.0**
TWC	baz=333			*eS*	**Sn**	**22 32 00.2**	**-0.2**
ESL	**Shilin**	**0.79**	**259**	P	**Pb**	**22 31 50.5**	**-0.3**
ESL	baz=245			*eS*	**Sb**	**22 32 00.8**	**-0.4**
YOJ	**Yonaguni jima**	**0.83**	**53**	P	**Pn**	**22 31 51.1**	**-0.1**
YOJ				S	**Sb**	**22 32 01.1**	**-1.3**
ENTT	**Nioudou**	**0.94**	**316**	P	**Pn**	**22 31 53.4**	**+0.8**
ENTT	baz=325			*eS*	**Sn**	**22 32 06.5**	**+1.4**
TWE	**Neicheng**	**0.94**	**324**	P	**Pn**	**22 31 53.1**	**+0.4**
TWE	baz=329			*eS*	**Sn**	**22 32 06.7**	**+1.6**
WHF	**Hehuan Shan**	**0.94**	**281**	*eP*	**Pb**	**22 31 53.1**	**-0.7**
WHF	baz=278			*eS*	**Sb**	**22 32 05.9**	**-0.2**
NNS	**Nan Shan**	**0.95**	**300**	P	**Pn**	**22 31 53.6**	**+0.6**
NNS	baz=283			*eS*	**Sn**	**22 32 06.3**	**+0.7**
EHY	**Hungye**	**0.99**	**243**	*eP*	**Pb**	**22 31 53.6**	**-0.6**
EHY	baz=241			*eS*	**Sb**	**22 32 07.0**	**+0.1**
TWT	**Tachien**	**1.05**	**286**	*eP*	**Pb**	**22 31 55.6**	**+0.2**
TWT	baz=272			*eS*	**Sn**	**22 32 09.6**	**+1.6**
TWB1	**Santiao Chiao**	**1.07**	**346**	*eP*	**Pn**	**22 31 54.9**	**+0.4**
TWB1	baz=331			*eS*	**Sn**	**22 32 09.6**	**+1.2**
TWF1	**Yuli**	**1.09**	**236**	⇑P	**Pn**	**22 31 55.5**	**+0.7**
TWF1	baz=222			*eS*	**Sb**	**22 32 09.6**	**-0.2**
NSK	**Sanguang**	**1.10**	**310**	*eP*	**Pb**	**22 31 55.7**	**-0.5**
NWF	**Wu-fen Shan**	**1.19**	**338**	P	**Pb**	**22 31 57.1**	**-0.6**
NWF	baz=334			S	**Sn**	**22 32 13.3**	**+1.9**
CHKT	**Chengkung**	**1.20**	**224**	*eP*	**Pn**	**22 31 56.4**	**+0.1**
CHKT	baz=212			*eS*	**Sn**	**22 32 11.2**	**-0.4**
SMLT	**Sun Moon Lake**	**1.27**	**267**	*eP*	**Pb**	**22 31 58.2**	**-0.7**
SMLT	baz=253			*eS*	**Sn**	**22 32 14.3**	**+1.0**
TAP1	**Taipei**	**1.27**	**327**	*eP*	**Pb**	**22 31 59.4**	**+0.4**
TYC	**Yuchr**	**1.30**	**268**	P	**Pb**	**22 31 58.9**	**-0.6**
TYC	baz=266			*eS*	**Sb**	**22 32 16.2**	**+0.3**
YUS	**Yu-Shan**	**1.30**	**249**	P	**Pb**	**22 31 59.6**	**-0.2**
YUS	baz=248			S	**Sn**	**22 32 16.2**	**+1.4**
NSTT	**Nanjuang**	**1.34**	**300**	P	**Pb**	**22 32 00.2**	**0.0**
IRIF	**Iriomote-Funau**	**1.38**	**74**	P	**Pb**	**22 32 00.6**	**-0.1**
IRIF				*eS*	**Sb**	**22 32 18.9**	**+1.0**
TWS1	**Kuangyinshan**	**1.38**	**325**	*eP*	**Pb**	**22 32 00.8**	**0.0**
TWS1	baz=335			*eS*	**Sb**	**22 32 21.2**	**+3.3**
ELDTW	**Lidau**	**1.39**	**237**	*eP*	**Pn**	**22 31 59.4**	**+0.4**
ELDTW	baz=236			*eS*	**Sn**	**22 32 16.5**	**+0.1**
HATJ	**Hateruma jima**	**1.40**	**86**	P	**Pb**	22 32 03.4	+2.3
HATJ				*eS*	**Sb**	**22 32 20.8**	**+2.2**
ALS	**Alishan**	**1.43**	**252**	P	**Pb**	**22 32 01.3**	**-0.4**
ALS	baz=250			S	**Sn**	**22 32 19.3**	**+1.8**
TWQ1	**Liyutan**	**1.43**	**286**	*eP*	**Pb**	**22 32 01.4**	**-0.3**
TWQ1	baz=283			*eS*	**Sb**	**22 32 19.6**	**+0.1**
TWY	**Chenhua**	**1.45**	**335**	*eP*	**Pb**	**22 32 01.4**	**-0.5**
TCU	**Taichung**	**1.48**	**277**	*eP*	**Pn**	**22 32 01.0**	**+0.9**
TCU	baz=275			*eS*	**Sb**	**22 32 22.1**	**+1.2**
CHN5	**Tsauling**	**1.51**	**256**	*eP*	**Pb**	**22 32 02.7**	**-0.4**
	baz=244						
CHN5				*eS*	**Sb**	**22 32 22.8**	**+0.8**
	baz=244						
TWG	**Pinlang**	**1.59**	**225**	*eP*	**Pn**	**22 32 02.4**	**+0.7**
	baz=237						
TWG				*eS*	**Sn**	**22 32 20.6**	**-0.6**
	baz=237						
WGK	**Gukeng**	**1.60**	**260**	*eP*	**Pb**	**22 32 03.4**	**-1.1**
	baz=259						
JKRS	**Kuro-shima**	**1.60**	**80**	P	**Pb**	**22 32 05.1**	**+0.5**
JKRS				*eS*	**Sb**	**22 32 24.3**	**-0.2**
PCYT	**Pengchaiyu**	**1.67**	**354**	*eP*	**Pb**	**22 32 03.4**	**-2.3**
	baz=351						
WTP	**Ta-pu**	**1.69**	**245**	*eP*	**Pb**	**22 32 05.2**	**-0.9**
	baz=244						
WTP				*eS*	**Sb**	**22 32 26.9**	**0.0**
	baz=244						
JIJ	**Ishigaki jima**	**1.75**	**76**	P	**Pn**	**22 32 04.8**	**+1.0**
JIJ				S	**Sb**	**22 32 27.3**	**-1.3**
CHY	**Chiayi**	**1.76**	**255**	*eP*	**Pb**	**22 32 07.3**	**0.0**
	baz=254						
CHN1	**Nanshi**	**1.78**	**245**	*eP*	**Pb**	**22 32 07.0**	**-0.7**
	baz=244						
CHN1				*eS*	**Sb**	**22 32 30.0**	**+0.3**
	baz=244						
TWK	**Hsinying**	**1.78**	**247**	*eP*	**Pb**	**22 32 06.6**	**-1.1**
	baz=247						
TWK				*eS*	**Sb**	**22 32 29.9**	**+0.2**
	baz=247						
ECL	**Taimali**	**1.83**	**222**	*eP*	**Pn**	**22 32 05.4**	**+0.5**
	baz=223						
ECL				*eS*	**Sn**	**22 32 26.3**	**-0.7**
	baz=223						
LAY	**Lan-yu**	**2.03**	**199**	*eP*	**Pn**	**22 32 08.1**	**+0.3**
	baz=211						
LAY				*eS*	**Sn**	**22 32 34.9**	**+2.8**
	baz=211						
TWM1	**Shoushan**	**2.05**	**237**	*eP*	**Pb**	**22 32 10.6**	**-1.6**
	baz=236						
SCZT	**Fangliau**	**2.20**	**224**	*eP*	**Pn**	**22 32 11.6**	**+1.5**
	baz=218						
SCZT				*eS*	**Sn**	**22 32 38.8**	**+2.6**
	baz=218						
SONM	**Songino Array**	**26.97**	**336**	P	**P**	**22 37 14.2**	**-0.3**
	1.1nm,0.6s,baz=150,slow=9.9,SNR=12						
MKAR	**Makanchi Array**	**39.19**	**316**	P	**P**	**22 38 59.5**	**-1.3**
	0.2nm,0.5s,baz=103,slow=9.7,SNR=4.1						
ZALV	**Zalesovo Beam**	**40.97**	**327**	P	**P**	**22 39 14.0**	**-1.5**
	0.5nm,0.4s,baz=120,slow=8.7,SNR=3.0						

*SZGRF **24** 22:36:13.7, 17˚.13N×93˚.34W, h33km, mb5.2, Chiapas, Mexico*
*ISCJB **24** 22:36:28.6±0.2, 17˚.39N±0˚.03×93˚.91W±0˚.02, h193km±2km, mb4.5/143, Error ellipse: s-maj=4.8km s-min=3.0km az=20.0*
*MOS **24** 22:36:29.8±0.9, 17˚.52N×93˚.63W, h193km, mb4.9/57, Error ellipse: s-maj=9.0km s-min=5.0km az=72.7*
*MEX **24** 22:36:30.7±2.1, 17˚.42N×93˚.95W, h194km±6km, MD4.8*
*BJI **24** 22:36:30.4, 17˚.60N×93˚.60W, h213km, mB5.1/3*
*NEIC **24** 22:36:30.6, 17˚.39N×93˚.96W, h195km, mb4.7/91, MD4.8(MEX), After MEX.*
*IDC **24** 22:36:31.7±0.7, 17˚.49N×93˚.58W, h206km±5km, mb3.8/29, mb1 4.0/31, mb1mx4.0/33, mbtmp3.8/31, Error ellipse: s-maj=11.0km s-min=7.5km az=66.0*
ISC 24 22:36:30.4±0.4, 17˚.35N±0˚.03×93˚.91W±0˚.03, h199km±3km, h199km:pP-P, n771, σ1s34/825, mb4.6/145, 165C-173D, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.83**	**324**	*eP*	**Pn**	**22 36 56.8**	**-2.2**
TUIG				*i* S	**Sn**	**22 37 17.5**	**-3.8**
TUIG	**Tuzandepetl**	**0.83**	**324**	*eP*	**Pn**	**22 36 56.8**	**-2.2**
TUIG				*i* S	**Sn**	**22 37 17.5**	**-3.8**
TGIG		**0.95**	**127**	*eP*	**Pn**	**22 36 59.0**	**-0.7**
TGIG				*i* S	**Sn**	**22 37 20.5**	**-2.0**
TGIG		**0.95**	**127**	*eP*	**Pn**	**22 36 59.0**	**-0.7**
TGIG				*i* S	**Sn**	**22 37 20.5**	**-2.0**
SCX	**San Cristobal**	**1.37**	**116**	*i* P	**Pn**	**22 37 02.4**	**-0.4**
SCX	**San Cristobal**	**1.37**	**116**	*i* P	**Pn**	**22 37 02.4**	**-0.4**
PCIG		**1.77**	**158**	*eP*	**Pn**	**22 37 05.9**	**-0.6**
PCIG				*i* S	**Sn**	**22 37 33.4**	**-1.3**
PCIG		**1.77**	**158**	*eP*	**Pn**	**22 37 05.9**	**-0.6**
PCIG				*i* S	**Sn**	**22 37 33.4**	**-1.3**
CCIG	**Comitan**	**2.00**	**122**	*i* P	**Pn**	**22 37 08.9**	**-0.2**
CCIG				*i* S	**Sn**	**22 37 38.0**	**-1.1**
CCIG	**Comitan**	**2.00**	**122**	*i* P	**Pn**	**22 37 08.9**	**-0.2**
CCIG				*i* S	**Sn**	**22 37 38.0**	**-1.1**
HUIG	**Huatulco**	**2.63**	**234**	*eP*	Pn	22 37 12.5	-3.2
HUIG				*i* S	**Sn**	**22 37 48.1**	**-3.0**
HUIG	**Huatulco**	**2.63**	**234**	*eP*	Pn	22 37 12.3	-3.4
HUIG				*i* S	**Sn**	**22 37 46.8**	**-4.3**
OXX	**Oaxaca**	**2.70**	**265**	*eP*	**Pn**	**22 37 14.5**	**-2.2**
OXX	**Oaxaca**	**2.70**	**265**	*eP*	**Pn**	**22 37 14.5**	**-2.2**
OXBJ	**Oaxaca**	**2.70**	**264**	*i* P	**Pn**	**22 37 15.8**	**-1.0**
OXBJ				*i* S	**Sn**	**22 37 50.0**	**-2.8**
THIG		**2.90**	**147**	*eP*	**Pn**	**22 37 17.5**	**-1.3**
THIG				*i* S	**Sn**	**22 37 56.2**	**-0.5**
THIG		**2.90**	**147**	*eP*	**Pn**	**22 37 56.0**	**+0.2**
THIG				*i* S	**Sn**	**22 37 56.2**	**-0.5**
PANG	**Puerto Angel**	**2.98**	**236**	*i* P	Pn	22 37 16.4	-3.3
PANG				*i* S	**Sn**	**22 37 55.5**	**-2.7**
SCIG	**Sabancuy**	**3.05**	**58**	*eP*	**Pn**	**22 37 19.1**	**-1.4**
SCIG				*i* S	**Sn**	**22 37 56.7**	**-3.1**
SCIG	**Sabancuy**	**3.05**	**58**	*eP*	**Pn**	**22 37 19.1**	**-1.4**
SCIG				*i* S	**Sn**	**22 37 56.7**	**-3.1**
LVIG	**Laguna Verde**	**3.35**	**315**	*eP*	**Pn**	**22 37 23.3**	**-0.8**
LVIG				*i* S	**Sn**	**22 38 02.7**	**-3.5**
LVIG	**Laguna Verde**	**3.35**	**315**	*eP*	**Pn**	**22 37 23.3**	**-0.8**
LVIG				*i* S	**Sn**	**22 38 02.7**	**-3.5**
TPIG	**Tehuac#an**	**3.45**	**288**	*eP*	**Pn**	**22 37 24.8**	**-0.7**
TPIG				*i* S	**Sn**	**22 38 05.3**	**-3.4**
TPIG	**Tehuac#an**	**3.45**	**288**	*eP*	**Pn**	**22 37 24.8**	**-0.7**
TPIG				*i* S	**Sn**	**22 38 05.3**	**-3.4**
UTMO	**Huajuapan**	**3.74**	**278**	*eP*	**Pn**	**22 37 28.4**	**-0.7**
UTMO				*i* S	**Sn**	**22 38 11.8**	**-3.4**
UTMO	**Huajuapan**	**3.74**	**278**	*eP*	**Pn**	**22 37 28.4**	**-0.7**
UTMO				*i* S	**Sn**	**22 38 11.8**	**-3.4**
PNIG	**Pinotepa**	**4.15**	**257**	*eP*	**Pn**	**22 37 31.3**	**-2.7**
PNIG				*i* S	**Sn**	**22 38 20.7**	**-3.3**
PNIG	**Pinotepa**	**4.15**	**257**	*eP*	**Pn**	**22 37 31.3**	**-2.7**
PNIG				*i* S	**Sn**	**22 38 21.6**	**-2.4**
PPM	**Popocatepetl**	**4.79**	**292**	*eP*	**Pn**	**22 37 42.1**	**-0.5**
PPM				*i* S	**Sn**	**22 38 35.8**	**-3.7**
PPM	**Popocatepetl**	**4.79**	**292**	*eP*	**Pn**	**22 37 42.1**	**-0.5**
PPM				*i* S	**Sn**	**22 38 35.8**	**-3.7**
PPM	**Popocatepetl**	**4.79**	**292**	*eP*	**Pn**	**22 37 42.1**	**-0.5**
PPM				*i* S	**Sn**	**22 38 35.8**	**-3.7**
YAIG	**Yautepec**	**5.13**	**288**	*eP*	**Pn**	**22 37 45.7**	**-0.9**
YAIG				*i* S	**Sn**	**22 38 44.1**	**-2.5**
YAIG	**Yautepec**	**5.13**	**288**	*eP*	**Pn**	**22 37 45.7**	**-0.9**
YAIG				*i* S	**Sn**	**22 38 44.1**	**-2.5**
MZVM		**5.37**	**291**	*eP*	**Pn**	**22 37 51.0**	**+1.5**
PLIG	**Platanillo**	**5.42**	**282**	*i* P	**Pn**	**22 37 50.0**	**-0.2**
PLIG				*i* S	**Sn**	**22 38 50.4**	**-2.9**
PLIG	**Platanillo**	**5.42**	**282**	*i* P	**Pn**	**22 37 50.0**	**-0.2**
PLIG				*i* S	**Sn**	**22 38 50.4**	**-2.9**
ACX	**Acapulco**	**5.71**	**266**	*eP*	**Pn**	**22 37 52.4**	**-1.5**
ACX	**Acapulco**	**5.71**	**266**	*eP*	**Pn**	**22 37 52.4**	**-1.5**
TEIG	**Tepich**	**6.05**	**61**	⇑ePn	**Pn**	**22 37 56.2**	**-2.1**
TEIG				*eS*	Sn	22 38 53.4	-15
TEIG	**Tepich**	**6.05**	**61**	P	**Pn**	**22 37 56.2**	**-2.1**
	56nm,0.3s,baz=279,slow=1.4,SNR=325						
TEIG				S	Sn	22 39 02.3	-5.6
	9.4nm,0.3s,baz=144,slow=23,SNR=14						
CAIG	**El Cayaco**	**6.08**	**268**	*eP*	**Pn**	**22 37 57.4**	**-1.3**
CAIG	**El Cayaco**	**6.08**	**268**	*eP*	**Pn**	**22 37 57.4**	**-1.3**
ARIG	**Puente Sto Nin**	**6.20**	**280**	*i* P	**Pn**	**22 37 59.1**	**-1.1**
ARIG				*eS*	**Sn**	**22 39 07.6**	**-3.7**
TGUH	**Tegucigalpa,Un**	**7.18**	**116**	⇑ePn	**Pn**	**22 38 14.4**	**+1.3**
ZIIG	**Zihuatanejo**	**7.21**	**273**	*i* P	**Pn**	**22 38 12.4**	**-1.0**
ZIIG				*i* S	**Sn**	**22 39 32.2**	**-3.0**
ZIIG	**Zihuatanejo**	**7.21**	**273**	*i* P	**Pn**	**22 38 12.4**	**-1.0**
ZIIG				*i* S	**Sn**	**22 39 32.2**	**-3.0**
IGIG	**Irapuato, Guan**	**7.79**	**297**	*i* P	**Pn**	**22 38 19.9**	**-1.2**
LNIG	**Linares**	**9.12**	**326**	*i* P	**Pn**	**22 38 39.0**	**+0.8**
LNIG	**Linares**	**9.12**	**326**	*i* P	**Pn**	**22 38 39.0**	**+0.8**
EZ5V		**9.44**	**284**	*eP*	**Pn**	**22 38 45.1**	**+2.4**
ZAIG	**Zacatecas**	**9.76**	**305**	*i* P	**Pn**	**22 38 48.8**	**+2.0**
ZAIG	**Zacatecas**	**9.76**	**305**	*i* P	**Pn**	**22 38 48.8**	**+2.0**
732A	**Laxson Ranch,**	**12.62**	**335**	⇓P	**Pn**	**22 39 23.6**	**+0.5**
	baz=13,SNR=6.5						
632A	**Uvalde**	**13.24**	**337**	⇑P	**Pn**	**22 39 31.2**	**+0.3**
	baz=13						
631A	**Perdido Creek**	**13.47**	**334**	⇑P	**Pn**	**22 39 34.4**	**+0.6**
	baz=14,SNR=7.1						
532A	**Rocksprings**	**13.85**	**338**	⇑P	**Pn**	**22 39 39.9**	**+1.4**
	baz=14,SNR=10.0						
532A				⇑S	**S**	**22 42 17.2**	**+4.4**
	baz=14						
531A	**Rocksprings**	**14.12**	**336**	⇑P	**Pn**	**22 39 43.5**	**+1.7**
	baz=14,SNR=7.1						
JCT	**Junction City**	**14.13**	**339**	*eP*	**Pn**	**22 39 43.1**	**+1.1**
JCT	**Junction City**	**14.13**	**339**	*ePn*	**Pn**	**22 39 43.1**	**+1.1**
JCT	**Junction City**	**14.13**	**339**	⇓P	**Pn**	**22 39 43.4**	**+1.4**
	baz=14,SNR=6.1						
530A	**J-C Ranch, Com**	**14.43**	**333**	⇑P	**P**	**22 39 48.3**	**+1.2**
	baz=14,SNR=6.5						
HPIG		**14.46**	**313**	*i* P	**P**	**22 39 49.2**	**+1.6**
HPIG		**14.46**	**313**	*i* P	**P**	**22 39 49.2**	**+1.6**
432A	**Menard**	**14.49**	**339**	⇓P	**Pn**	**22 39 48.2**	**+1.8**
	baz=14,SNR=6.6						
431A	**Sonora**	**14.61**	**337**	⇑P	**Pn**	**22 39 49.3**	**+1.5**
	baz=15,SNR=7.1						
628A	**Black Gap, Mar**	**14.61**	**327**	⇑P	**P**	**22 39 50.5**	**+1.4**
	baz=15,SNR=7.2						
529A	**Stev Forest Ra**	**14.81**	**331**	⇑P	**P**	**22 39 52.5**	**+1.2**
	baz=15						
627A	**Terlingua Ranc**	**14.85**	**326**	⇑P	**P**	**22 39 53.6**	**+1.9**
	baz=15,SNR=13						
TXAR	**Lajitas Array**	**14.90**	**325**	P	**P**	**22 39 53.9**	**+1.5**
TXAR				ScP	**ScP**	**22 48 03.8**	**+1.4**
TXAR	**Lajitas Array**	**14.90**	**325**	P	**P**	**22 39 53.9**	**+1.5**
	0.2nm,0.3s,baz=148,slow=13,SNR=18						
TXAR				ScP	**ScP**	**22 48 03.8**	**+1.4**
	0.0nm,0.3s,baz=158,slow=2.6,SNR=3.6						
WHTX	**Lake Whitney**	**14.93**	**348**	⇓P	**Pn**	**22 39 52.3**	**+0.6**
	baz=15						
332A	**Millersview**	**14.94**	**340**	⇓P	**Pn**	**22 39 52.8**	**+0.9**
	baz=15,SNR=8.3						
430A	**Baggett Ranch,**	**14.95**	**335**	⇑P	**P**	**22 39 54.1**	**+1.4**
	baz=15,SNR=5.3						
BRAL	**Brewton**	**14.96**	**23**	*ePn*	**Pn**	**22 39 51.4**	**-0.8**
	384nm,1.3s						
429A	**Davenport Ranc**	**15.08**	**333**	⇓P	**P**	**22 39 56.0**	**+1.7**
	baz=15,SNR=18						
331A	**San Angelo**	**15.10**	**338**	⇓P	**P**	**22 39 55.5**	**+1.0**
	baz=15,SNR=10.0						
528A	**Cox Ranch, San**	**15.11**	**329**	⇓P	**P**	**22 39 56.1**	**+1.4**
	baz=15						
VBMS	**Vicksburg**	**15.12**	**11**	*ePn*	**Pn**	**22 39 53.1**	**-0.9**
626A	**Big Bend Ranch**	**15.33**	**324**	⇑P	**P**	**22 39 59.0**	**+1.9**
	baz=15						
232A	**Coleman**	**15.38**	**341**	⇑P	**Pn**	**22 39 57.9**	**+0.6**
	baz=15,SNR=9.2						
330A	**Mertzon**	**15.47**	**336**	⇑P	**Pn**	**22 39 59.4**	**+1.0**
	baz=16,SNR=7.7						
527A	**Woodward Ranch**	**15.51**	**327**	⇓P	**P**	**22 40 01.3**	**+2.2**
	baz=16,SNR=14						
MTDJ	**Mount Denham**	**15.62**	**84**	*ePn*	**Pn**	**22 39 59.2**	**-1.2**
	460nm,1.5s						
231A	**Bronte**	**15.64**	**339**	⇑P	**P**	**22 40 01.1**	**+0.7**
	baz=16,SNR=5.1						
526A	**Mary Lane Ranc**	**15.70**	**326**	⇓P	**Pn**	**22 40 03.6**	**+2.3**
	baz=16,SNR=5.4						
RFTA	**Plano**	**15.79**	**351**	*eP*	**P**	**22 40 02.5**	**+0.5**
329A	**Wagon Wheel Ra**	**15.86**	**334**	⇑P	**Pn**	**22 40 04.2**	**+1.0**
	baz=16						
230A	**Sterling City**	**15.88**	**337**	⇓P	**P**	**22 40 04.0**	**+1.0**
	baz=16						
BCIP	**Isla Barro Col**	**15.92**	**119**	*eP*	**Pn**	**22 40 04.8**	**+0.8**
	10nm,0.6s						
427A	**Hayter Ranch,**	**15.97**	**329**	⇑P	**Pn**	**22 40 05.8**	**+1.2**
	baz=16						
ABTX	**Abilene, Hawle**	**16.06**	**342**	⇑P	**P**	**22 40 06.0**	**+0.9**
	baz=16,SNR=8.5						
328A	**Wristen Ranch,**	**16.14**	**332**	⇑P	**Pn**	**22 40 07.6**	**+1.2**
	baz=16,SNR=7.7						
426A	**McDonald Obser**	**16.15**	**327**	⇓P	**Pn**	**22 40 08.2**	**+1.5**
	baz=16,SNR=7.6						
229A	**Bryant Ranch,**	**16.21**	**335**	⇑P	**Pn**	**22 40 08.5**	**+1.1**
	baz=16						
131A	**Roby**	**16.34**	**340**	⇓P	**P**	**22 40 09.4**	**+1.3**
	baz=16						
130A	**Snyder**	**16.46**	**339**	⇓P	**P**	**22 40 11.1**	**+1.6**
	baz=16						
326A	**Caldwell Ranch**	**16.64**	**329**	⇓P	**Pn**	**22 40 13.6**	**+1.1**
	baz=17,SNR=9.1						
Z32A	**Haskell**	**16.66**	**344**	⇑P	**P**	**22 40 12.5**	**+1.0**
	baz=17,SNR=14						
228A	**UT Block 9, Go**	**16.67**	**333**	⇑P	**P**	**22 40 13.1**	**+1.3**
	baz=17,SNR=6.5						
425A	**Indio Mountain**	**16.75**	**325**	⇑P	**P**	**22 40 14.3**	**+1.5**
	baz=17						
LRAL	**Lakeview Retre**	**16.81**	**20**	*eP*	**P**	**22 40 11.9**	**-1.4**
	17nm,0.4s						
129A	**Stewart Farms,**	**16.82**	**336**	⇑P	**P**	**22 40 14.4**	**+0.9**
	baz=17						
Z31A	**Sharp Cattle R**	**16.86**	**342**	⇑P	**P**	**22 40 14.5**	**+0.7**
	baz=17,SNR=7.3						
TIGA	**Tifton**	**16.87**	**32**	⇓P	**P**	**22 40 12.7**	**-1.1**
	baz=17,SNR=6.0						
227A	**Bennet, Jal**	**16.89**	**332**	⇓P	**Pn**	**22 40 16.0**	**+0.5**
	baz=17,SNR=5.9						
128A	**Castleberry Fa**	**17.06**	**335**	⇑P	**P**	**22 40 17.4**	**+1.3**
	baz=17,SNR=10						
Z30A	**Sanderson Ranc**	**17.14**	**339**	⇑P	**P**	**22 40 17.1**	**+0.2**
	baz=17,SNR=13						
325A	**Bean Ranch, Si**	**17.20**	**326**	⇑P	**P**	**22 40 19.3**	**+1.7**
	baz=17						
Y32A	**R-V Farms, Ver**	**17.31**	**344**	⇑P	**P**	**22 40 19.2**	**+0.5**
	baz=17,SNR=12						
Z29A	**Hungry Hill Ra**	**17.32**	**338**	⇓P	**P**	**22 40 20.0**	**+1.0**
	baz=17						
226B	**Tecolote Peak,**	**17.35**	**330**	⇑P	**P**	**22 40 21.1**	**+1.8**
	baz=17,SNR=6.1						
UALR	**University of**	**17.41**	**4**	*ePn*	**P**	**22 40 19.3**	**-0.4**
	196nm,1.7s						
Y31A	**Rekieta Farm,**	**17.49**	**342**	⇓P	**P**	**22 40 21.4**	**+0.7**
	baz=18,SNR=10						
324A	**Moseley Ranch,**	**17.52**	**325**	⇑P	**Pn**	**22 40 23

baz=19,SNR=10
TUL1 **Tulsa** 18.56 355 ⇑P P 22 40 32.2 -0.1
baz=19,SNR=6.5
Z25A **Roswell** 18.60 331 ⇑P P 22 40 34.1 +1.1
baz=19,SNR=7.3
Y26A **Elida** 18.75 334 ⇑P P 22 40 35.4 +0.9
baz=19
AMTX **Amarillo** 18.79 340 eP P 22 40 35.4 +0.5
comp=Z,87nm,0.9s
222A **Williams Famil** 18.93 323 ⇓P P 22 40 38.9 +2.5
baz=19
Z24A **Sheeppen Canyo** 18.95 329 ⇓P P 22 40 38.5 +1.7
baz=19,SNR=8.0
W29A **Amraillo** 18.99 340 ⇑P P 22 40 37.3 +0.2
baz=19,SNR=11
X27A **F and S Farms,** 19.08 336 ⇓P P 22 40 38.7 +0.6
baz=19
V31A **Spring Creek L** 19.09 345 ⇓P P 22 40 39.2 +1.1
baz=19,SNR=21
Y25A **Mesa, Roswell** 19.13 332 ⇓P P 22 40 40.3 +1.7
baz=19,SNR=17
X26A **CR and CF Fran** 19.28 335 ⇑P P 22 40 40.8 +0.5
baz=19,SNR=7.2
V30A **Spur Ranch, Mi** 19.30 343 ⇑P P 22 40 40.9 +0.5
baz=19
W28A **Vega** 19.30 339 ⇓P P 22 40 41.1 +0.6
baz=19
122A **Conniff Cattle** 19.31 325 ⇑P P 22 40 42.9 +2.3
baz=19
Z23A **Rita Site, Whi** 19.34 327 ⇓P P 22 40 42.7 +1.8
baz=19,SNR=9.6
W27A **Bowe Ranch, En** 19.44 337 ⇓P P 22 40 42.1 +0.2
baz=19,SNR=27
WVT **Waverly** 19.47 15 eP P 22 40 40.2 -1.9
WVT eS S 22 44 05.9 -5.3
WVT pmax pmax
comp=Z,16nm,0.8s
WVT **Waverly** 19.47 15 eP P 22 40 40.2 -1.9
comp=Z,16nm,0.8s
WVT eS S 22 44 05.9 -5.3
Y24A **Capitan** 19.48 330 ⇑P P 22 40 44.1 +1.7
baz=20,SNR=13
X25A **Clemmons Ranch** 19.62 333 ⇑P P 22 40 45.0 +1.1
baz=20,SNR=11
220A **Playas Peak, P** 19.62 320 ⇓P P 22 40 46.5 +2.6
baz=20,SNR=9.1
121A **Cookes Peak, D** 19.63 323 ⇑P P 22 40 46.4 +2.3
baz=20,SNR=6.8
U31A **Nine Bar Ranch** 19.66 346 ⇑P P 22 40 44.9 +0.7
baz=20
Z22A **Elephant Butte** 19.72 326 ⇓P P 22 40 47.4 +2.4
baz=20
W26A **Owens Ranch, T** 19.73 335 ⇓P P 22 40 46.6 +1.5
baz=20
319A **Douglas** 19.74 318 ⇓P Pn 22 40 48.4 -0.8
baz=20
V28A **Channing** 19.76 340 ⇑P P 22 40 46.4 +1.1
baz=20
Y23A **Lovelace Mesa,** 19.78 329 ⇓P P 22 40 47.3 +1.7
baz=20,SNR=11
CPCT **Cooper Cave** 19.87 23 eP P 22 40 44.4 -2.0
U30A **WK&E Inc. Balk** 20.01 344 ⇓P P 22 40 48.3 +0.3
baz=20,SNR=11
U29A **Oasis Ranch, S** 20.11 343 ⇑P P 22 40 50.0 +1.0
baz=20
W25A **X Bar L Ranch,** 20.12 334 ⇑P P 22 40 50.4 +1.1
baz=20,SNR=15
120A **U Bar Ranch, L** 20.14 321 ⇑P P 22 40 52.0 +2.5
baz=20
BNM **Barren Site** 20.24 328 eP P 22 40 52.9 +2.3
comp=Z,32nm,1.6s
Y22A **Socorro** 20.25 327 ⇑P P 22 40 52.5 +1.8
baz=20
T31A **Randall Ranch,** 20.32 347 ⇑P P 22 40 51.2 0.0
baz=20,SNR=6.3
U28A **Mallet** 20.33 340 ⇓P P 22 40 51.9 +0.5
baz=20,SNR=8.0
TKL **Tuckaleechee C** 20.34 24 P P 22 40 49.9 -1.5
TKL S S 22 44 26.9 -1.3
TKL **Tuckaleechee C** 20.34 24 P P 22 40 49.9 -1.5
comp=Z,9.0nm,0.6s,baz=196,slow=10,SNR=14
TKL S S 22 44 26.9 -1.3
comp=Z,1.3nm,0.6s,baz=131,slow=19,SNR=7.1
V26A **Tequesquite Ra** 20.36 336 ⇑P P 22 40 52.6 +0.8
baz=20,SNR=14
LPM **Los Pinos Moun** 20.37 328 eP P 22 40 55.2 +3.2
T30A **Plains** 20.48 345 ⇓P P 22 40 53.1 +0.2
baz=20
W24A **Lazy 6 Ranch,** 20.53 332 ⇓P P 22 40 54.7 +1.1
baz=20,SNR=9.0
U27A **Thompson Grove** 20.57 339 ⇑P P 22 40 54.5 +0.5
baz=21,SNR=11
LAZ **Ladron** 20.70 328 eP Pn 22 40 59.7 -1.5
comp=Z,4.9nm,1.0s
LAZ e 22 41 35.1
SIUC **Southern Illin** 20.70 11 eP P 22 40 53.8 -1.4
comp=Z,36nm,0.8s
X22A **Bernardo** 20.71 328 ⇑P P 22 40 57.3 +1.7
baz=21
V25A **Rancho No Teng** 20.72 335 ⇑P P 22 40 56.4 +0.7
baz=21,SNR=18
T29A **Hugoton** 20.77 343 ⇓P P 22 40 56.4 +0.3
baz=21,SNR=5.2
S31A **Mullinville** 20.78 347 ⇓P P 22 40 56.1 0.0
baz=21
ANMO **Albuquerque** 20.79 330 eP P 22 40 58.2 +1.8
comp=Z,4.6nm,0.6s
ANMO e 22 41 33.4
ANMO **Albuquerque** 20.79 330 P P 22 40 58.0 +1.6
comp=Z,1.6nm,0.7s,baz=136,slow=8.6,SNR=6.4
W23A **Werner Place,** 20.82 331 ⇓P P 22 40 58.2 +1.3
baz=21
U26A **Atchley Ranch,** 20.87 337 ⇑P P 22 40 57.8 +0.5
baz=21,SNR=7.4
V24A **Rampart Ranch,** 20.90 333 ⇓P P 22 40 58.6 +0.9
baz=21,SNR=10
KMSC **Kings Mountain** 20.97 30 ⇓P P 22 40 56.0 -2.0
baz=21
Y20A **Horse Springs,** 20.98 325 ⇑P P 22 41 00.2 +1.7
baz=21
S30A **Montezuma** 21.02 345 ⇓P P 22 40 58.7 0.0
baz=21
X21A **Alamocita Cree** 21.07 327 ⇑P P 22 41 01.1 +1.7
baz=21,SNR=7.1
T27A **Campo** 21.12 340 ⇓P P 22 41 00.2 +0.4
baz=21,SNR=8.0
U25A **Circle Dot Ran** 21.13 336 ⇑P P 22 41 00.5 +0.5
baz=21,SNR=11
S29A **Ulysses** 21.16 344 ⇓P P 22 41 00.2 0.0
baz=21,SNR=8.6
TZTN **Tazewell** 21.20 24 eP P 22 40 59.0 -1.5
comp=Z,23nm,0.6s
USIN **University of** 21.25 14 eP P 22 40 59.9 -1.2
comp=Z,37nm,0.8s
TUC **Tucson** 21.32 317 eP P 22 41 04.2 +2.3
TUC pmax pmax
comp=Z,39nm,1.1s
TUC **Tucson** 21.32 317 eP P 22 41 04.2 +2.3
comp=Z,39nm,1.1s
S28A **Manter** 21.35 342 ⇑P P 22 41 02.5 +0.3
baz=21
R31A **Burdett** 21.43 348 ⇓P P 22 41 02.7 -0.2
baz=22,SNR=8.8
T26A **Comanche Natio** 21.51 339 ⇑P P 22 41 04.3 +0.3
baz=22
W21A **San Fidel** 21.52 328 ⇓P P 22 41 05.3 +1.2
baz=22
X20A **Quemado** 21.52 325 ⇓P P 22 41 05.5 +1.3
baz=22
SDDR **Presa de Saban** 21.56 82 P P 22 41 04.5 +0.1
R30A **Dighton** 21.59 346 ⇓P P 22 41 04.1 -0.5
baz=22,SNR=17
S27A **Las Animas** 21.74 340 ⇑P P 22 41 06.0 -0.2
baz=22
T25A **Trinidad** 21.78 337 ⇑P P 22 41 07.5 +0.8
baz=22,SNR=22
V22A **San Miguel Ran** 21.79 331 ⇑P P 22 41 07.7 +0.8
baz=22
KSU1 **Kansas State U** 21.80 354 eP P 22 41 06.2 -0.4
comp=Z,56nm,1.3s
U23A **El Rito** 21.81 332 ⇑P P 22 41 08.2 +1.1
baz=22,SNR=10
WCI **Wyandotte Cave** 21.84 16 eP P 22 41 05.5 -1.6
WCI e 22 41 41.5
WCI pmax pmax
comp=Z,35nm,0.8s
WCI **Wyandotte Cave** 21.84 16 eP P 22 41 05.5 -1.6
comp=Z,35nm,0.8s
WCI e 22 41 41.5
S26A **Kim** 21.87 339 ⇓P P 22 41 08.1 +0.5
baz=22,SNR=6.8
OLIL **Olney** 21.90 12 eP P 22 41 06.2 -1.4
comp=Z,99nm,1.0s
R29A **Marienthal** 21.93 345 ⇑P P 22 41 07.8 -0.2
baz=22,SNR=7.3
W20A **Ramah** 21.96 326 ⇑P P 22 41 09.6 +1.0
baz=22
R28A **Tribune** 22.03 343 ⇓P P 22 41 09.0 0.0
baz=22
V21A **Milan** 22.06 329 ⇓P P 22 41 09.6 +0.2
baz=22
Q31A **Ellis** 22.10 349 ⇓P P 22 41 09.2 -0.4
baz=22
U22A **Llaves** 22.15 331 ⇓P P 22 41 11.4 +1.1
baz=22,SNR=5.9
Q30A **Quinter** 22.24 347 ⇑P P 22 41 10.4 -0.5
baz=22,SNR=5.3
S25A **Robets Cordova** 22.25 337 ⇑P P 22 41 11.8 +0.6
baz=22,SNR=20
R27A **Eads** 22.26 341 ⇓P P 22 41 11.0 -0.3
baz=22
Q29A **Oakley** 22.33 345 ⇓P P 22 41 11.7 -0.1
baz=22,SNR=7.5
T23A **Casias Ranch,** 22.34 334 ⇓P P 22 41 13.3 +1.1
baz=22
214A **Organ Pipe Nat** 22.45 314 ⇓P P 22 41 15.6 +2.7
baz=22,SNR=7.1
V20A **Brimhall** 22.47 328 ⇑P P 22 41 14.4 +1.2
baz=22
R26A **Arlington** 22.48 340 ⇑P P 22 41 13.8 +0.6
baz=22,SNR=5.9
S24A **Houchin Ranch,** 22.52 336 ⇓P P 22 41 14.5 +0.7
baz=22,SNR=7.9
U21A **Nageezi** 22.56 330 ⇓P P 22 41 15.7 +1.5
baz=23,SNR=7.3
P31A **Stockton** 22.59 349 ⇑P P 22 41 14.1 -0.1
baz=23
R25A **Fountain Ranch** 22.63 338 ⇓P P 22 41 15.5 +1.0
baz=23,SNR=9.4
BLO **Bloomington** 22.68 15 eP P 22 41 13.4 -1.4
BLO pmax pmax
comp=Z,74nm,0.8s
BLO **Bloomington** 22.68 15 eP P 22 41 13.4 -1.4
comp=Z,74nm,0.8s
T22A **Edith** 22.70 332 ⇓P P 22 41 16.5 +1.2
baz=23,SNR=7.7
Q28A **Sharon Springs** 22.71 344 ⇑P P 22 41 15.6 +0.4
baz=23,SNR=6.1
P30A **Selden** 22.79 347 ⇓P P 22 41 15.9 0.0
baz=23,SNR=8.2
U20A **Newcomb** 22.94 329 ⇓P P 22 41 19.4 +1.9
baz=23
T21A **Navajo Lake** 22.96 331 ⇓P P 22 41 18.9 +1.2
baz=23
P29A **Atwood** 23.00 346 ⇓P P 22 41 17.8 0.0
baz=23,SNR=5.5
R24A **Sanders Place,** 23.00 337 ⇓P P 22 41 18.5 +0.5
baz=23,SNR=6.2
Q26A **Hugo** 23.07 341 ⇓P P 22 41 19.4 +0.9
baz=23
BLA **Blacksburg** 23.08 28 eP P 22 41 18.1 -0.5
BLA pmax pmax
comp=Z,25nm,0.9s
BLA **Blacksburg** 23.08 28 eP P 22 41 18.1 -0.5
comp=Z,25nm,0.9s
X16A **Lo Mia Camp, P** 23.12 321 ⇑P P 22 41 20.8 +1.7
baz=23
P28A **Saint Francis** 23.17 344 ⇓P P 22 41 19.6 +0.2
baz=23,SNR=8.5
R23A **Moffat** 23.24 336 ⇓P P 22 41 21.0 +0.7
baz=23,SNR=7.4
Q25A **Bedland, Calha** 23.30 339 ⇓P P 22 41 21.5 +0.8
baz=23,SNR=14
O30A **MW Ranch, Wils** 23.36 348 ⇓P P 22 41 21.3 +0.2
baz=23
P27A **Ficken Ranch,** 23.37 343 ⇑P P 22 41 21.9 +0.6
baz=23
O29A **4D Ranch, Culb** 23.46 347 ⇓P P 22 41 22.1 +0.1
baz=24,SNR=5.2
HDIL **Hopedale** 23.46 9 eP P 22 41 21.4 -0.5
comp=Z,57nm,1.0s
S21A **Coal Bank Pass** 23.63 332 ⇓P P 22 41 25.1 +1.3
baz=24
R22A **Saguache, Gunn** 23.65 334 ⇑P P 22 41 25.1 +1.0
baz=24
Q24A **Divide** 23.66 338 ⇑P P 22 41 24.8 +0.7
baz=24
SFIN **Scholer Farm** 23.69 13 ⇓P P 22 41 22.9 -1.1
baz=24,SNR=5.5
P25A **Willow Gulch B** 23.82 340 ⇑P P 22 41 26.4 +1.1
baz=24,SNR=8.2
WUAZ **Wupatki** 23.84 323 ⇑P P 22 41 27.7 +2.0
baz=24
O27A **Beecher Island** 23.94 344 ⇑P P 22 41 27.4 +1.0
baz=24
N30A **Hueftle Ranch,** 23.96 348 ⇑P P 22 41 27.0 +0.4
baz=24
S20A **Disappointment** 24.03 331 ⇑P P 22 41 28.9 +1.5
baz=24
P24A **Kohler Place,** 24.07 339 ⇓P P 22 41 28.6 +0.9
baz=24
N29A **Votaw Ranch, W** 24.09 347 ⇑P P 22 41 28.3 +0.6
baz=24
R21A **Cimarron** 24.11 333 ⇓P P 22 41 30.2 +2.1
baz=24
SDV **Santo Domingo** 24.16 107 eP P 22 41 27.8 -1.0
comp=Z,20nm,0.8s
N28A **Pribbeno Ranch** 24.17 346 ⇑P P 22 41 29.1 +0.6
baz=24
O26A **Horse Wrangler** 24.22 342 ⇓P P 22 41 30.3 +1.3
baz=24
Q22A **Crested Butte,** 24.25 335 ⇓P P 22 41 31.1 +1.6
baz=24
R20A **Redvale** 24.33 331 ⇑P P 22 41 32.1 +2.0
baz=24
O25A **Wiggins** 24.34 341 ⇑P P 22 41 31.7 +1.6
baz=24
PV01 **Paradox Valley** 24.37 331 eP P 22 41 31.7 +1.2
comp=Z,604nm,1.0s
SCIA **State Center** 24.48 1 eP P 22 41 30.5 -0.7
comp=Z,45nm,0.4s
Q21A **Lamborn Mesa,** 24.50 334 ⇓P P 22 41 33.4 +1.7
baz=24
N27A **Anderson Farm,** 24.53 344 ⇓P P 22 41 32.8 +1.1
baz=25
OGNE **Ogallala** 24.53 345 ⇑P P 22 41 32.4 +0.7
baz=25
SMCO **Snowmass** 24.55 335 eP P 22 41 33.6 +1.3
comp=Z,24nm,1.5s
ISCO **Idaho Springs** 24.57 338 eP P 22 41 33.5 +1.1
ISCO pmax pmax
comp=Z,8.0nm,0.6s
ISCO **Idaho Springs** 24.57 338 eP P 22 41 33.5 +1.1
comp=Z,8.3nm,0.6s
ISCO **Idaho Springs** 24.57 338 ⇓P P 22 41 33.0 +0.7
baz=25,SNR=7.2
O24A **Longmont** 24.67 339 ⇓P P 22 41 33.4 +0.3
baz=25
ACSO **Alum Creek Sta** 24.69 20 eP P 22 41 29.5 -3.5
comp=Z,13nm,0.9s
PV04 **Paradox Valley** 24.73 331 eP P 22 41 35.6 +1.9
N26A **Koester Ranch,** 24.74 343 ⇑P P 22 41 33.9 +0.3
baz=25
P22A **Eagle** 24.82 336 ⇓P P 22 41 35.8 +1.2
baz=25
N25A **Grover** 24.98 341 ⇑P P 22 41 37.0 +1.2
baz=25
SWSC **Sam W. Stewart** 25.09 312 ⇑P P 22 41 39.6 +2.8
baz=25
M27A **Reverse DX Ran** 25.17 345 ⇑P P 22 41 38.4 +0.9
baz=25
O22A **Kremmling** 25.23 337 ⇓P P 22 41 38.8 +0.5
baz=25
BC3 **Big Chuckawall** 25.25 314 ⇓P P 22 41 40.7 +2.3
baz=25
L29A **Maesberg Ranch** 25.26 348 ⇓P P 22 41 38.5 +0.2
baz=25
M26A **McRoberts Ranc** 25.31 344 ⇑P P 22 41 38.9 +0.1
baz=25
P20A **De Beque** 25.41 333 ⇓P P 22 41 41.5 +1.7
baz=25
MONP **Monument Peak** 25.50 312 ⇑P P 22 41 43.6 +2.8
baz=26
N23A **Red Feather La** 25.65 339 ⇓P P 22 41 43.0 +0.9
baz=25
JFWS **Jewell Farm** 25.67 6 eP P 22 41 40.6 -1.3
JFWS pmax pmax
comp=Z,42nm,1.2s
JFWS **Jewell Farm** 25.67 6 eP P 22 41 40.6 -1.3
comp=Z,42nm,1.2s
N22A **Wattenberg Ran** 25.75 338 ⇓P P 22 41 44.1 +1.1
baz=26
M24A **Cheyenne** 25.80 341 ⇓P P 22 41 44.1 +0.8
baz=26
BELC **Belle Mtn. Jos** 25.82 314 ⇑P P 22 41 46.6 +3.1
baz=26
L26A **Underwood Farm** 25.82 344 ⇑P P 22 41 44.9 +1.4
baz=26
K29A **Lazy Trails An** 25.91 349 ⇑P P 22 41 44.9 +0.8
baz=26
PFO **Pinyon Flat Ob** 25.91 313 P P 22 41 46.8 +2.4
PFO pP pP 22 42 28.1 +3.7
PFO **Pinyon Flat Ob** 25.91 313 P P 22 41 46.8 +2.4
comp=Z,1.8nm,0.6s,baz=117,slow=8.6,SNR=3.5
PFO pP pP 22 42 28.1 +3.7
comp=Z,2.3nm,0.8s,baz=120,slow=7.9,SNR=3.0
PFO **Pinyon Flat Ob** 25.91 313 ⇓P P 22 41 47.2 +2.8
baz=26
GMRC **Granite Mounta** 26.04 316 ⇓P P 22 41 48.3 +2.8
baz=26
N21A **Black Mountain** 26.12 336 ⇓P P 22 41 47.6 +1.3
baz=26
ECSD **EROS Data Cent** 26.40 356 eP P 22 41 47.2 -1.2
comp=Z,14nm,0.9s
MURC **Murrieta** 26.43 312 ⇓P P 22 41 52.4 +3.4
baz=26
N20A **Spence Gulch,** 26.47 335 ⇓P P 22 41 50.3 +0.9
baz=26
HEC **Hector,Ludlow** 26.51 315 ⇑P P 22 41 52.7 +3.1
baz=26
K25A **Mack Ranch, Ha** 26.57 343 ⇑P P 22 41 51.2 +1.1
baz=27
L23A **Garrett** 26.66 340 ⇑P P 22 41 52.4 +1.3
baz=27
J28A **Allard Ranch,** 26.72 348 ⇓P P 22 41 52.1 +0.7
baz=27
M21A **Separation Pea** 26.79 337 ⇑P P 22 41 53.4 +1.1
baz=27,SNR=5.7
MTP **Monte Pirata** 27.01 84 eP P 22 41 53.3 -0.9
L21A **Rawlins** 27.10 338 ⇓P P 22 41 55.6 +0.6
baz=27
GSC **Goldstone** 27.10 316 ⇓P P 22 41 57.3 +2.4
baz=27
J25A **Sunshine Ranch** 27.28 344 ⇑P P 22 41 57.5 +1.1
baz=27
SPMN **St. Paul** 27.80 2 ⇑P P 22 42 00.1 -0.8
baz=28,SNR=5.2
MPMC **Manual Prospec** 28.00 316 ⇑P P 22 42 05.2 +2.2
baz=28
J22A **Midwest** 28.08 340 ⇑P P 22 42 04.6 +1.0
baz=28
R11A **Troy Canyon, C** 28.24 322 ⇓P P 22 42 07.2 +2.1
baz=28
K19A **Absolon Red Bu** 28.40 337 ⇓P P 22 42 07.2 +0.7
baz=28
I22A **9 Mile Ranch,** 28.51 341 ⇓P P 22 42 07.9 +0.5
baz=28
PDAR **Pinedale Array** 28.62 336 P P 22 42 08.8 +0.3
PDAR pP pP 22 42 51.7 +2.7
PDAR ScP ScP 22 48 37.5 +0.6
PDAR **Pinedale Array** 28.62 336 P P 22 42 08.8 +0.3
comp=Z,0.6nm,0.8s,baz=129,slow=14,SNR=4.5
PDAR pP pP 22 42 51.7 +2.7
comp=Z,0.5nm,0.5s,baz=123,slow=6.6,SNR=2.7
PDAR ScP ScP 22 48 37.5 +0.6
comp=Z,0.2nm,0.5s,baz=132,slow=4.0,SNR=3.8
I21A **Big Trails, Te** 28.70 340 ⇓P P 22 42 10.0 +0.9
baz=29
H24A **Dirks Ranch, A** 28.74 344 ⇑P P 22 42 09.8 +0.5
baz=29,SNR=5.1
J19A **Crowheart** 28.85 337 ⇓P P 22 42 11.6 +1.1
baz=29
COWI **Conover** 28.94 7 eP P 22 42 08.6 -2.4
comp=Z,8.4nm,0.9s
VES **Vestal, Richgr** 28.94 314 ⇑P P 22 42 14.1 +3.0
baz=29
PKM **Peak Mountain** 28.96 312 ⇑P P 22 42 14.0 +2.4
baz=29
I20A **Worland** 29.11 339 ⇓P P 22 42 14.1 +1.4
baz=29
G24A **Alzada** 29.25 345 ⇓P P 22 42 14.5 +0.7
baz=29
H21A **Big Horn, Sher** 29.35 341 ⇑P P 22 42 15.5 +0.8
baz=29
G23A **Biddle** 29.38 343 ⇑P P 22 42 15.7 +0.7
baz=29
I19A **Meeteetse** 29.49 338 ⇑P P 22 42 17.3 +1.1
baz=30
H20A **Greybull** 29.54 339 ⇓P P 22 42 17.0 +0.6
baz=30
G22A **Birney** 29.66 342 ⇑P P 22 42 18.3 +0.8
baz=30
LOHW **Long Hollow** 29.75 335 eP P 22 42 19.1 +0.7
comp=Z,15nm,1.6s
MOOW **Moose Ponds** 29.92 335 eP P 22 42 21.2 +1.3
comp=Z,4.6nm,1.0s
NVAR **Mina Array Bea** 29.93 319 P P 22 42 22.9 +2.8
NVAR pP pP 22 43 04.4 +3.7
NVAR ScP ScP 22 48 42.6 +1.5
NVAR **Mina Array Bea** 29.93 319 P P 22 42 22.9 +2.8
comp=Z,3.4nm,0.6s,baz=132,slow=8.6,SNR=16
NVAR pP pP 22 43 04.4 +3.7
comp=Z,1.7nm,0.7s,baz=126,slow=9.4,SNR=3.6
NVAR ScP ScP 22 48 42.6 +1.5
comp=Z,1.0nm,0.7s,baz=136,slow=5.6,SNR=5.2
SADO **Sadowa** 30.02 21 P P 22 42 18.0 -2.5
SADO **Sadowa** 30.02 21 P P 22 42 18.0 -2.5
comp=Z,8.7nm,0.9s,baz=260,slow=7.3,SNR=10
H19A **Powell** 30.04 338 ⇓P P 22 42 22.4 +1.5
baz=30
E25A **Miller Ranch,** 30.11 347 ⇑P P 22 42 22.2 +0.8
baz=30
G20A **Bridger** 30.26 340 ⇑P P 22 42 23.8 +1.1
baz=30
H18A **Shoshone NF, C** 30.29 337 ⇓P P 22 42 24.1 +1.0
baz=30
I16A **Newdale** 30.33 334 ⇓P P 22 42 24.6 +1.1
baz=30
E24A **Baker** 30.37 346 ⇓P P 22 42 24.3 +0.6
baz=30
E23A **Ismay** 30.56 344 ⇑P P 22 42 26.2 +0.9
baz=31
E22A **Miles City** 30.68 344 ⇑P P 22 42 27.1 +0.8
baz=31
MDND **Maddock** 30.77 352 ⇓P P 22 42 27.2 +0.1
baz=31
G18A **Lazy EL Ranch,** 30.80 338 ⇓P P 22 42 28.5 +0.9
baz=31
D24A **Glendive** 30.90 346 ⇓P P 22 42 29.1 +0.8
baz=31
AGMN **Agassiz Nation** 30.90 357 eP P 22 42 27.1 -1.1
comp=Z,22nm,0.9s
F19A **Roth Farm, Mol** 31.06 339 ⇓P P 22 42 30.5 +0.7
baz=31
E21A **Keefer Ranch,** 31.09 342 ⇑P P 22 42 30.6 +0.6
baz=31
D23A **Lindsay** 31.16 345 ⇓P P 22 42 31.6 +1.0
baz=31
I14A **Mackay** 31.21 332 ⇓P P 22 42 32.9 +1.6
baz=31
G17A **Pierce Place,** 31.24 337 ⇑P P 22 42 33.2 +1.8
baz=31
C24A **Savage** 31.31 346 ⇓P P 22 42 33.0 +1.1
baz=31
F18A **Big Timber** 31.36 339 ⇓P P 22 42 33.5 +1.0
baz=31
HLID **Hailey** 31.37 331 eP P 22 42 35.1 +2.5
comp=Z,5.6nm,1.3s
HLID **Hailey** 31.37 331 ⇑P P 22 42 34.7 +2.1
baz=31
E20A **Meyer Farm, Mu** 31.37 341 ⇓P P 22 42 33.5 +1.1
baz=31
D22A **Cohagen** 31.39 344 ⇓P P 22 42 33.4 +0.8
baz=31
D21A **La Casta Ranch** 31.54 343 ⇓P P 22 42 35.4 +1.4
baz=32
E19A **Rath Farm, Rou** 31.54 340 ⇓P P 22 42 34.5 +0.6
baz=32
MCMT **McKenzie Canyo** 31.67 334 eP P 22 42 37.7 +2.4
comp=Z,4.8nm,1.1s
MCMT epP pP 22 43 22.5 +6.5
F17A **Fitzpatrick Pl** 31.70 337 ⇓P P 22 42 37.0 +1.6
baz=32
C23A **Lambert** 31.75 345 ⇓P P 22 42 36.4 +0.7

baz=32
BOZ Bozeman (W) 31.85 336 *e*P **P 22 42 37.0 +0.2**
BOZ *e**PP **pP 22 43 20.9 +3.4**
BOZ pmax pmax
comp=Z,6.0nm,1.3s
BOZ Bozeman (W) 31.85 336 *e*P **P 22 42 37.0 +0.2**
comp=Z,6.5nm,1.3s
BOZ *e*pP **pP 22 43 20.9 +3.4**
C22A Vida 31.87 345 ⇓P **P 22 42 37.5 +0.8**
baz=32
I12A Atlanta 31.88 330 ⇑P **P 22 42 38.6 +1.5**
baz=32
D20A Manuel Ranch, 31.90 341 ⇑P **P 22 42 37.9 +0.9**
baz=32
MFID Camas Ranch 31.93 329 ⇓P **P 22 42 39.4 +2.0**
baz=32
F16A Kennard Place, 31.96 336 ⇑P **P 22 42 38.9 +1.2**
baz=32
DLMT Dillon 32.00 335 *e*P **P 22 42 39.3 +1.2**
comp=Z,11nm,1.2s
E18A Harlowton 32.01 339 ⇑P **P 22 42 39.1 +1.0**
baz=32
DGMT Dagmar 32.15 347 ⇑P **P 22 42 39.8 +0.6**
baz=32
D19A Cripps Ranch, 32.19 341 ⇓P **P 22 42 40.9 +1.3**
baz=32
E17A Martinsdale 32.25 338 ⇑P **P 22 42 41.5 +1.2**
baz=32
C21A Desert Coulee 32.26 343 ⇓P **P 22 42 41.4 +1.2**
baz=32
LRM Limekiln Ridge 32.32 335 *e*P **P 22 42 42.7 +1.8**
B23A Brockton 32.32 346 ⇑P **P 22 42 41.7 +1.1**
baz=32
H12A Diamond D Ranc 32.33 331 ⇓P **P 22 42 42.8 +1.8**
baz=32
F15A Butte 32.35 335 ⇑P **P 22 42 42.4 +1.2**
baz=32
B22A Reddig Ranch S 32.41 345 ⇑P **P 22 42 42.3 +0.8**
baz=32
C20A Veseth Ranch, 32.42 342 ⇓P **P 22 42 42.8 +1.2**
baz=32
D18A Linhart Farms, 32.52 340 ⇑P **P 22 42 43.6 +1.1**
baz=32
A24A Westby 32.54 348 ⇑P **P 22 42 43.5 +0.9**
baz=33
E16A East Helena 32.61 337 ⇑P **P 22 42 45.0 +1.7**
baz=33
F14A Wisdom 32.68 334 ⇓P **P 22 42 45.5 +1.4**
baz=33
C19A Slack Wire Ran 32.75 341 ⇓P **P 22 42 45.5 +1.0**
baz=33
A23A Redstone 32.76 347 ⇑P **P 22 42 45.8 +1.3**
baz=33
D17A Six Diamond Ra 32.78 339 ⇓P **P 22 42 45.9 +1.1**
baz=33
ULM Lac du Bonnet 32.85 358 *e*P **P 22 42 43.6 -1.7**
comp=Z,7.7nm,0.8s
ULM Lac du Bonnet 32.85 358 P **P 22 42 43.5 -1.7**
comp=Z,4.3nm,0.3s,baz=176,slow=10,SNR=6.0
D16A Dana Ranch, Ca 32.98 338 ⇓P **P 22 42 47.5 +0.9**
baz=33
G12A Big Creek, Yel 32.99 332 ⇓P **P 22 42 48.4 +1.7**
baz=33
A22A Carney Farms, 33.03 345 ⇑P **P 22 42 47.8 +0.9**
baz=33
C17A Wharram Farm, 33.22 339 ⇓P **P 22 42 49.6 +1.0**
baz=33
EGMT Eagleton 33.23 340 *e*P **P 22 42 49.6 +1.0**
comp=Z,7.5nm,0.8s
EGMT Eagleton 33.23 340 ⇓P **P 22 42 49.6 +1.0**
baz=33
D15A Lincoln 33.35 337 ⇓P **P 22 42 51.0 +1.2**
baz=33
B19A Brinkman Farms 33.36 342 ⇑P **P 22 42 50.7 +1.0**
baz=33
A20A Cobblestone Ra 33.45 343 ⇓P **P 22 42 51.7 +1.2**
baz=34
B18A Beardsley Farm 33.56 341 ⇑P **P 22 42 52.8 +1.3**
baz=34
C16A Fuhringer Ranc 33.71 338 ⇑P **P 22 42 53.8 +1.0**
baz=34
A19A Klindworth Far 33.73 342 ⇑P **P 22 42 54.0 +1.1**
baz=34
MSO Missoula 33.74 335 ⇓P **P 22 42 54.2 +1.1**
baz=34
D14A Greenough 33.77 336 ⇑P **P 22 42 54.3 +0.9**
baz=34
B17A L&G Farms, Che 33.80 340 ⇓P **P 22 42 54.5 +1.0**
baz=34
C15A Salmond Ranch, 34.00 337 ⇑P **P 22 42 56.7 +1.4**
baz=34
A18A Metzger Ranch, 34.05 341 ⇑P **P 22 42 56.3 +0.7**
baz=34
E12A Beaver Dam Sad 34.09 333 ⇑P **P 22 42 57.1 +1.0**
baz=34
D13A Huson 34.16 335 ⇓P **P 22 42 57.8 +1.2**
baz=34
B16A M & M Farms, S 34.22 339 ⇑P **P 22 42 57.9 +0.8**
baz=34
A17A Triple J Farms 34.34 340 ⇑P **P 22 42 59.1 +0.9**
baz=34
C14A Swan Lake 34.42 336 ⇑P **P 22 43 00.2 +1.3**
baz=34
B15A Bradely Ranch, 34.43 338 ⇓P **P 22 43 00.1 +1.0**
baz=34
YBH Yreka Blue Hor 34.61 321 P **P 22 43 00.5 -0.1**
YBH Yreka Blue Hor 34.61 321 P **P 22 43 00.5 -0.1**
comp=Z,1.1nm,0.8s,baz=119,slow=6.1,SNR=2.8
C13A Hot Springs 34.68 335 ⇓P **P 22 43 02.5 +1.4**
baz=35
A15A Johnson Ranch, 35.05 338 ⇓P **P 22 43 05.2 +0.9**
baz=35
B13A Whitefish 35.20 336 ⇑P **P 22 43 06.5 +0.9**
baz=35
A14A Double T Ranch 35.30 338 ⇓P **P 22 43 07.6 +1.1**
baz=35
FFC Flin Flon 37.81 352*c**e*P **P 22 43 27.2 -0.2**
FFC Flin Flon 37.81 352 *e*P **P 22 43 26.4 -1.0**
comp=Z,13nm,1.3s
SAML Samuel 40.07 128 *e*P **P 22 43 45.3 -1.3**
LPAZ La Paz 41.99 141 *e*P **P 22 44 03.1 +0.2**
comp=Z,7.6nm,0.7s
LPAZ La Paz 41.99 141 P **P 22 44 02.9 -0.1**
comp=Z,8.2nm,0.7s,baz=322,slow=6.7,SNR=41
SCHQ Schefferville 42.80 23 *e*P P 22 44 05.8 -2.5
comp=Z,8.3nm,1.1s
SCHQ PcP **PP 22 45 54.6 +2.7**
SCHQ Schefferville 42.80 23 P P 22 44 05.3 -3.0
comp=Z,4.2nm,0.8s,baz=225,slow=7.9,SNR=7.7
SCHQ PcP **PP 22 45 54.6 +2.7**
comp=Z,2.0nm,0.6s,baz=226,slow=5.2,SNR=4.5
SIV San Ignacio 46.32 134 P **P 22 44 35.3 -1.4**
SIV San Ignacio 46.32 134 P **P 22 44 35.3 -1.4**
comp=Z,5.7nm,0.7s,baz=316,slow=10,SNR=22
LVC Limon Verde 46.65 148 *e*P **P 22 44 41.4 +2.0**
comp=Z,8.8nm,0.9s
LVC Limon Verde 46.65 148 P **P 22 44 41.1 +1.7**
comp=Z,2.0nm,0.4s,baz=308,slow=7.0,SNR=7.0
YKA Yellowknife Ar 47.36 347 P **P 22 44 43.9 -0.2**
YKA pP **pP 22 45 28.5 +0.9**
YKA Yellowknife Ar 47.36 347 P **P 22 44 43.8 -0.2**
comp=Z,9.8nm,0.8s,baz=150,slow=7.5,SNR=38
YKA pP **pP 22 45 28.5 +0.9**
comp=Z,1.8nm,0.6s,baz=153,slow=7.5,SNR=3.1
BDFB Brasilia 55.88 123 P **P 22 45 47.8 -0.1**
BDFB Brasilia 55.88 123 P **P 22 45 47.8 -0.1**
comp=Z,1.5nm,0.4s,baz=218,slow=2.4,SNR=3.0
CPUP Villa Florida 56.12 140 P **P 22 45 48.2 -1.0**
CPUP Villa Florida 56.12 140 P **P 22 45 48.2 -1.0**
comp=Z,1.2nm,0.4s,baz=307,slow=8.1,SNR=7.8
SFJD Kangerlussuaq 56.92 19 P **P 22 45 52.5 -1.9**
SFJD Kangerlussuaq 56.92 19 P **P 22 45 52.5 -1.9**
comp=Z,8.6nm,0.8s,baz=225,slow=2.9,SNR=4.4
EGAK Eagle 56.93 338 *e*P **P 22 45 53.9 -0.6**
comp=Z,1.9nm,0.4s
RES Resolute Bay 57.35 360 P **P 22 45 55.7 -1.6**
RES Resolute Bay 57.35 360 P **P 22 45 55.7 -1.6**
comp=Z,3.8nm,0.9s,baz=196,slow=12,SNR=9.3
PAX Paxson 57.66 335 *e*P **P 22 46 01.2 +1.5**
PAX pmax pmax
comp=Z,11nm,1.0s
PAX Paxson 57.66 335 *e*P **P 22 46 01.2 +1.5**
comp=Z,11nm,1.0s
ILAR Eielson Array 59.05 336 P **P 22 46 09.7 +0.4**
ILAR pP **PcP 22 46 56.9 +1.0**
ILAR Eielson Array 59.05 336 P **P 22 46 09.7 +0.4**
comp=Z,4.3nm,1.0s,baz=124,slow=5.0,SNR=25
ILAR pP **PcP 22 46 56.9 +1.0**
comp=Z,0.9nm,0.5s,baz=152,slow=4.9,SNR=3.9
SPU Mount Spurr 59.77 332 *e*P **P 22 46 15.7 +1.5**
RSO Redoubt South 59.85 331 *e*P **P 22 46 16.8 +1.9**
PPLA Purkeypile 60.43 333 *e*P **P 22 46 19.5 +0.7**
comp=Z,13nm,1.3s
COLD Coldfoot 61.35 338 *e*P **P 22 46 26.7 +1.9**
comp=Z,6.4nm,1.0s
SVW2 Sparrevohn 61.36 331 *e*P **P 22 46 25.8 +0.8**
comp=Z,5.7nm,1.0s
PLCA Paso Flores 61.73 160 *e*P **P 22 46 29.1 +1.3**
comp=Z,10nm,0.9s
PLCA Paso Flores 61.73 160 P **P 22 46 28.8 +1.0**
comp=Z,8.4nm,0.9s,baz=332,slow=7.3,SNR=15
SUMG Summit 63.52 16⇑*i*P **P 22 46 38.8 -0.8**
SUMG pmax pmax
comp=Z,10.0nm,0.8s
SUMG Summit 63.52 16 *e*P **P 22 46 38.7 -0.8**
comp=Z,15nm,0.9s
SUMG Summit 63.52 16⇑*i*P **P 22 46 38.8 -0.8**
comp=Z,10nm,0.8s
DAG Danmarks Havn 69.85 14⇑*i*P **P 22 47 17.7 -1.3**
DAG pmax pmax
comp=Z,8.0nm,0.9s
DAG Danmarks Havn 69.85 14⇑*i*P **P 22 47 17.7 -1.3**
comp=Z,10.0nm,0.9s
EFI East Falkland 75.52 158 *e*P P 22 47 48.7 -3.9
EFI pmax pmax
comp=Z,140nm,1.2s
KBS Kingsbay 76.09 11*c i*P **P 22 47 57.3 +1.7**
KBS pmax pmax
comp=Z,13nm,0.8s
EVO Evora 76.26 54 *e*P **P 22 47 56.2 -1.1**
ESK Eskdalemuir 76.32 36 *i*P **P 22 47 57.1 -0.2**
ESK Eskdalemuir 76.32 36 *e*P **P 22 47 56.3 -1.0**
comp=Z,16nm,0.9s
MVO Moncorvo 76.49 51 *e*P **P 22 47 58.2 -0.4**
PMRV Marv??o 76.56 53 *e*P **P 22 47 57.7 -1.3**
PBRG Braganca 76.58 50 *e*P **P 22 47 59.0 -0.1**
ROSF Rostrenen 77.66 43 *e*P **P 22 48 03.3 -1.6**
comp=Z,16nm,1.0s
ROSF Rostrenen 77.66 43 *e*P **P 22 48 03.3 -1.6**
ROSF pmax pmax
comp=Z,16nm,1.0s
ROSF Rostrenen 77.66 43 *e*P **P 22 48 03.3 -1.6**
comp=Z,16nm,1.0s
BILL Bilibino 77.68 338⇓*e*P **P 22 48 06.0 +1.4**
BILL *e**PP **pP 22 48 53.9 +1.5**
BILL *e* 22 51 00.7
BILL pmax pmax
comp=Z,15nm,1.7s
QUIF Quistinic 77.82 43 *e*P **P 22 48 05.0 -0.8**
comp=Z,13nm,0.8s
QUIF Quistinic 77.82 43 *e*P **P 22 48 05.0 -0.8**
QUIF pmax pmax
comp=Z,13nm,0.8s
QUIF Quistinic 77.82 43 *e*P **P 22 48 05.0 -0.8**
comp=Z,13nm,0.8s
SGMF Saint Gilles 78.15 43 *e*P **P 22 48 06.5 -1.1**
SGMF Saint Gilles 78.15 43 *e*P **P 22 48 06.5 -1.1**
SGMF Saint Gilles 78.15 43 *e*P **P 22 48 06.5 -1.1**
ESDC Sonseca Array 79.10 52 P **P 22 48 12.2 -0.8**
ESDC Sonseca Array 79.10 52 P **P 22 48 12.2 -0.8**
comp=Z,0.8nm,0.7s,baz=292,slow=5.3,SNR=10
GRR Gorron 79.22 43 *e*P **P 22 48 12.8 -0.6**
comp=Z,12nm,0.4s
GRR Gorron 79.22 43 *e*P **P 22 48 12.8 -0.6**
GRR pmax pmax
comp=Z,12nm,0.4s
GRR Gorron 79.22 43 *e*P **P 22 48 12.8 -0.6**
comp=Z,12nm,0.4s
FLN La Foliniere 79.37 42 *e*P **P 22 48 13.7 -0.5**
comp=Z,11nm,0.5s
FLN La Foliniere 79.37 42 *e*P **P 22 48 13.7 -0.5**
FLN pmax pmax
comp=Z,11nm,0.5s
FLN La Foliniere 79.37 42 *e*P **P 22 48 13.7 -0.5**
comp=Z,11nm,0.5s
LDF La Druitiere 79.64 42 *e*P **P 22 48 15.2 -0.5**
LDF La Druitiere 79.64 42 *e*P **P 22 48 15.2 -0.5**
LDF La Druitiere 79.64 42 *e*P **P 22 48 15.2 -0.5**
MFF Saint Martin d 80.13 44 *e*P **P 22 48 17.7 -0.6**
MFF Saint Martin d 80.13 44 *e*P **P 22 48 17.7 -0.6**
MFF Saint Martin d 80.13 44 *e*P **P 22 48 17.7 -0.6**
SJPF Ste Jean 80.27 48 *e*P **P 22 48 18.9 -0.3**
comp=Z,20nm,1.2s
SJPF Ste Jean 80.27 48 *e*P **P 22 48 18.9 -0.3**
SJPF pmax pmax
comp=Z,20nm,1.2s
SJPF Ste Jean 80.27 48 *e*P **P 22 48 18.9 -0.3**
comp=Z,20nm,1.2s
ETSF Etsaut 80.79 48 *e*P **P 22 48 21.4 -0.7**
comp=Z,10.0nm,0.9s
ETSF Etsaut 80.79 48 *e*P **P 22 48 21.4 -0.7**
ETSF pmax pmax
comp=Z,10.0nm,0.9s
ETSF Etsaut 80.79 48 *e*P **P 22 48 21.4 -0.7**
comp=Z,10.0nm,0.9s
LFF La Frestale 81.16 46 *e*P **P 22 48 23.1 -0.7**
comp=Z,8.0nm,0.5s
LFF La Frestale 81.16 46 *e*P **P 22 48 23.1 -0.7**
LFF pmax pmax
comp=Z,8.0nm,0.5s
LFF La Frestale 81.16 46 *e*P **P 22 48 23.1 -0.7**
comp=Z,8.0nm,0.5s
EPF Esparros 81.39 48 *e*P **P 22 48 24.4 -0.8**
comp=Z,19nm,1.2s
EPF Esparros 81.39 48 *e*P **P 22 48 24.4 -0.8**
EPF pmax pmax
comp=Z,19nm,1.2s
EPF Esparros 81.39 48 *e*P **P 22 48 24.4 -0.8**
comp=Z,19nm,1.2s
RJF Les Rejaudoux 81.59 45 *e*P **P 22 48 25.1 -1.0**
RJF Les Rejaudoux 81.59 45 *e*P **P 22 48 25.1 -1.0**
RJF Les Rejaudoux 81.59 45 *e*P **P 22 48 25.1 -1.0**
TCF Toulx Ste Croi 81.78 44 *e*P **P 22 48 26.3 -0.8**
comp=Z,20nm,0.9s
TCF Toulx Ste Croi 81.78 44 *e*P **P 22 48 26.3 -0.8**
TCF pmax pmax
comp=Z,20nm,0.9s
TCF Toulx Ste Croi 81.78 44 *e*P **P 22 48 26.3 -0.8**
comp=Z,20nm,0.9s
HYF Humbligny 81.79 43 *e*P **P 22 48 26.7 -0.4**
HYF Humbligny 81.79 43 *e*P **P 22 48 26.7 -0.4**
BAIF Baives 81.97 40 *e*P **P 22 48 27.5 -0.5**
comp=Z,33nm,1.1s
BAIF Baives 81.97 40 *e*P **P 22 48 27.5 -0.5**
BAIF pmax pmax
comp=Z,33nm,1.1s
BAIF Baives 81.97 40 *e*P **P 22 48 27.5 -0.5**
comp=Z,33nm,1.1s
CAF Calviac 82.07 46 *e*P **P 22 48 28.0 -0.7**
CAF Calviac 82.07 46 *e*P **P 22 48 28.0 -0.7**
CAF Calviac 82.07 46 *e*P **P 22 48 28.0 -0.7**
NB2 NORSAR Subarra 82.09 28 P **P 22 48 28.7 +0.3**
comp=Z,0.7nm,0.8s,baz=296,slow=5.6
NOA NORSAR Array B 82.09 28 P **P 22 48 28.6 +0.2**
NOA NORSAR Array B 82.09 28 P **P 22 48 28.6 +0.2**
comp=Z,6.6nm,0.8s,baz=291,slow=5.2,SNR=27
BGF Bois d'Agland 82.13 44 *e*P **P 22 48 28.2 -0.7**
comp=Z,29nm,0.9s
BGF Bois d'Agland 82.13 44 *e*P **P 22 48 28.2 -0.7**
BGF pmax pmax
comp=Z,29nm,0.9s
BGF Bois d'Agland 82.13 44 *e*P **P 22 48 28.2 -0.7**
comp=Z,29nm,0.9s
DOU Dourbes 82.20 40 P **P 22 48 29.1 -0.1**
comp=Z,9.8nm,2.1s
GIVF Givet 82.33 40 *e*P **P 22 48 29.5 -0.4**
GIVF Givet 82.33 40 *e*P **P 22 48 29.5 -0.4**
GIVF Givet 82.33 40 *e*P **P 22 48 29.5 -0.4**
AVF Avril sur Loir 82.39 43 *e*P **P 22 48 29.0 -1.2**
comp=Z,21nm,1.1s
AVF Avril sur Loir 82.39 43 *e*P **P 22 48 29.0 -1.2**
AVF pmax pmax
comp=Z,21nm,1.1s
AVF Avril sur Loir 82.39 43 *e*P **P 22 48 29.0 -1.2**
comp=Z,21nm,1.1s
SSF Saint Saulge 82.41 43 *e*P **P 22 48 29.4 -1.0**
comp=Z,9.1nm,0.7s
SSF Saint Saulge 82.41 43 *e*P **P 22 48 29.4 -1.0**
SSF pmax pmax
comp=Z,9.0nm,0.7s
SSF Saint Saulge 82.41 43 *e*P **P 22 48 29.4 -1.0**
comp=Z,9.1nm,0.7s
PYM Petit Puy Mans 82.47 45 *e*P **P 22 48 29.7 -1.1**
PYM Petit Puy Mans 82.47 45 *e*P **P 22 48 29.7 -1.1**
BCLA Clavier 82.53 40 P **P 22 48 30.8 -0.1**
comp=Z,13nm,1.2s
LOR Lormes 82.58 43 *e*P **P 22 48 30.6 -0.7**
comp=Z,10nm,0.6s
LOR Lormes 82.58 43 *e*P **P 22 48 30.6 -0.7**
comp=Z,10nm,0.6s
MTLF Montolieu 82.63 47 *e*P **P 22 48 30.7 -0.9**
comp=Z,12nm,0.9s
MTLF Montolieu 82.63 47 *e*P **P 22 48 30.7 -0.9**
MTLF pmax pmax
comp=Z,12nm,0.9s
MTLF Montolieu 82.63 47 *e*P **P 22 48 30.7 -0.9**
comp=Z,12nm,0.9s
SMF Signal de Mont 82.76 43 *e*P **P 22 48 31.0 -1.2**
comp=Z,18nm,0.9s
SMF Signal de Mont 82.76 43 *e*P **P 22 48 31.0 -1.2**
SMF pmax pmax
comp=Z,18nm,0.9s
SMF Signal de Mont 82.76 43 *e*P **P 22 48 31.0 -1.2**
comp=Z,18nm,0.9s
LBL Lubilhac 82.78 45 *e*P **P 22 48 32.2 -0.2**
LBL Lubilhac 82.78 45 *e*P **P 22 48 32.2 -0.2**
LBL Lubilhac 82.78 45 *e*P **P 22 48 32.2 -0.2**
MEM Membach 82.90 39 P **P 22 48 32.8 +0.1**
comp=Z,10nm,1.0s
MEZF Maizieres J'vi 82.97 41 *e*P **P 22 48 32.9 -0.3**
comp=Z,36nm,0.7s
MEZF Maizieres J'vi 82.97 41 *e*P **P 22 48 32.9 -0.3**
comp=Z,36nm,0.7s
SFTF Sexfontaines 83.05 42 *e*P **P 22 48 33.1 -0.5**
comp=Z,24nm,0.8s
SFTF Sexfontaines 83.05 42 *e*P **P 22 48 33.1 -0.5**
comp=Z,24nm,0.8s
WLF Walferdange 83.29 40 P **P 22 48 35.1 +0.3**
comp=Z,11nm,1.1s
WLF Walferdange 83.29 40 *e*P **P 22 48 35.6 +0.8**
comp=Z,18nm,0.8s
IBBN Ibbenburen 83.37 37 *e*P **P 22 48 36.0 +0.9**
comp=Z,29nm,1.4s
PAGF Fort de Pagny 83.38 41 *e*P **P 22 48 35.1 -0.2**
comp=Z,12nm,0.9s
PAGF Fort de Pagny 83.38 41 *e*P **P 22 48 35.1 -0.2**
comp=Z,12nm,0.9s
BUG Bochum--Univer 83.38 38 *e*P **P 22 48 35.7 +0.5**
comp=Z,29nm,1.7s
ARCES ARCESS Array B 83.54 18 P **P 22 48 35.7 0.0**
ARCES pP **pP 22 49 25.4 +1.2**
ARCES ARCESS Array B 83.54 18 P **P 22 48 35.7 0.0**
comp=Z,10nm,0.8s,baz=291,slow=5.0,SNR=53
ARCES pP **pP 22 49 25.4 +1.2**
comp=Z,1.6nm,0.8s,baz=310,slow=4.2,SNR=2.6
ARE0 ARCESS Array S 83.54 18 *e*P **P 22 48 35.6 -0.1**
ARE0 *e*pP **pP 22 49 25.8 +1.6**
LASF Ste Croix 83.54 46 *e*P **P 22 48 36.2 -0.1**
comp=Z,20nm,1.1s
LASF Ste Croix 83.54 46 *e*P **P 22 48 36.2 -0.1**
comp=Z,20nm,1.1s
THEF They Montfort 83.65 42 *e*P **P 22 48 36.4 -0.3**
THEF They Montfort 83.65 42 *e*P **P 22 48 36.4 -0.3**
THEF They Montfort 83.65 42 *e*P **P 22 48 36.4 -0.3**
VIVF Saint-Julien-l 83.86 45 *e*P **P 22 48 37.7 -0.2**
VIVF Saint-Julien-l 83.86 45 *e*P **P 22 48 37.7 -0.2**
VIVF Saint-Julien-l 83.86 45 *e*P **P 22 48 37.7 -0.2**
HAU Haudompre 83.95 42 *e*P **P 22 48 37.8 -0.4**
comp=Z,28nm,0.7s
HAU Haudompre 83.95 42 *e*P **P 22 48 37.8 -0.4**
HAU pmax pmax
comp=Z,28nm,0.7s
HAU Haudompre 83.95 42 *e*P **P 22 48 37.8 -0.4**
comp=Z,28nm,0.7s
ABH Alteburg 84.07 40 *e*P **P 22 48 39.0 +0.2**
CABF La Chapelle 84.24 43 *e*P **P 22 48 39.6 -0.2**
comp=Z,17nm,1.1s
CABF La Chapelle 84.24 43 *e*P **P 22 48 39.6 -0.2**
CABF pmax pmax
comp=Z,17nm,1.1s
CABF La Chapelle 84.24 43 *e*P **P 22 48 39.6 -0.2**
comp=Z,17nm,1.1s
BSEG Bad Segeberg 84.25 35 *e*P **P 22 48 40.5 +1.0**
comp=Z,62nm,1.1s
BSEG Bad Segeberg 84.25 35 *e*P **P 22 48 40.5 +1.0**
BSEG pmax pmax
comp=Z,25nm,1.1s
HINF Hinteralfeld 84.33 42 *e*P **P 22 48 39.5 -0.7**
comp=Z,6.2nm,0.4s
HINF Hinteralfeld 84.33 42 *e*P **P 22 48 39.5 -0.7**
HINF pmax pmax
comp=Z,6.0nm,0.4s
HINF Hinteralfeld 84.33 42 *e*P **P 22 48 39.5 -0.7**
comp=Z,6.2nm,0.4s
ECH Echery 84.39 41 *e*P **P 22 48 40.0 -0.4**
ECH pmax pmax
comp=Z,17nm,1.1s
ECH Echery 84.39 41 *e*P **P 22 48 40.0 -0.4**
comp=Z,16nm,1.1s
ECH Echery 84.39 41 *e*P **P 22 48 40.1 -0.4**
CDF Champ du Feu 84.40 41 *e*P **P 22 48 40.2 -0.4**
comp=Z,32nm,1.1s
CDF Champ du Feu 84.40 41 *e*P **P 22 48 40.2 -0.4**
CDF pmax pmax
comp=Z,32nm,1.1s
CDF Champ du Feu 84.40 41 *e*P **P 22 48 40.2 -0.4**
comp=Z,32nm,1.1s
LOMF Lomont 84.47 42 *e*P **P 22 48 40.5 -0.4**
LOMF Lomont 84.47 42 *e*P **P 22 48 40.5 -0.4**
LOMF Lomont 84.47 42 *e*P **P 22 48 40.5 -0.4**
TNS Taunus Mts 84.50 39 *e*P **P 22 48 41.8 +0.8**
comp=Z,43nm,0.9s
TNS Taunus Mts 84.50 39 *e*P **P 22 48 41.8 +0.8**
TNS pmax pmax
comp=Z,28nm,0.9s
MOF Molkenrain 84.50 42 *e*P **P 22 48 40.5 -0.6**
MOF Molkenrain 84.50 42 *e*P **P 22 48 40.5 -0.6**
MOF Molkenrain 84.50 42 *e*P **P 22 48 40.5 -0.6**
LANF Langenberg 84.53 40 *e*P **P 22 48 41.2 +0.1**
LANF Langenberg 84.53 40 *e*P **P 22 48 41.2 +0.1**
LANF Langenberg 84.53 40 *e*P **P 22 48 41.2 +0.1**
ORIF Oris-en-Rattie 84.65 45 *e*P **P 22 48 41.9 0.0**
ORIF Oris-en-Rattie 84.65 45 *e*P **P 22 48 41.9 0.0**
ORIF Oris-en-Rattie 84.65 45 *e*P **P 22 48 41.9 0.0**
NRDL Niedersach Rie 84.66 37 *e*P **P 22 48 42.5 +1.0**
comp=Z,30nm,1.1s
SMRF Simiane la Rot 84.75 46 *e*P **P 22 48 42.8 +0.4**
comp=Z,26nm,1.1s
SMRF Simiane la Rot 84.75 46 *e*P **P 22 48 42.8 +0.4**
comp=Z,26nm,1.1s
BBS Basel-Blauen 84.87 42 *e*P **P 22 48 42.0 -0.9**
BBS Basel-Blauen 84.87 42 *e*P **P 22 48 42.0 -0.9**
TOD Tromm 84.93 40 *e*P **P 22 48 43.1 0.0**
TOD Tromm 84.93 40 *e*P **P 22 48 43.1 0.0**
LPL La Plagne 85.02 44 *e*P **P 22 48 44.2 +0.3**
comp=Z,14nm,1.0s
LPL La Plagne 85.02 44 *e*P **P 22 48 44.2 +0.3**
LPL pmax pmax
comp=Z,14nm,1.0s
LPL La Plagne 85.02 44 *e*P **P 22 48 44.2 +0.3**
comp=Z,14nm,1.0s
FELD Feldberg im Sc 85.04 41 *e*P **P 22 48 43.6 -0.3**
LPG La Plagne 85.04 44 *e*P **P 22 48 44.4 +0.3**
LPG La Plagne 85.04 44 *e*P **P 22 48 44.4 +0.3**
LPG La Plagne 85.04 44 *e*P **P 22 48 44.4 +0.3**
CLZ Clausthal 85.05 37 *e*P **P 22 48 44.8 +1.1**
comp=Z,21nm,0.9s
CLZ Clausthal 85.05 37 *e*P **P 22 48 44.8 +1.1**
CLZ pmax pmax
comp=Z,17nm,0.9s
BFO Black Forest 85.09 41 *e*P **P 22 48 44.1 +0.2**
comp=Z,13nm,1.1s
BFO Black Forest 85.09 41 *e*P **P 22 48 43.5 -0.4**
BFO pmax pmax
comp=Z,13nm,1.1s
BFO Black Forest 85.09 41 *e*P **P 22 48 43.5 -0.4**
comp=Z,13nm,1.1s
SENIN Lac Senin/Sane 85.11 43 *e*P **P 22 48 45.1 +0.8**
comp=Z,15nm,0.9s
UBBA Unterbreizbach 85.21 38 *e*P **P 22 48 45.3 +1.0**
comp=Z,8.0nm,1.1s
MBDF Montbardon 85.31 45 *e*P **P 22 48 45.2 -0.1**
MBDF Montbardon 85.31 45 *e*P **P 22 48 45.2 -0.1**
MBDF Montbardon 85.31 45 *e*P **P 22 48 45.2 -0.1**
SPAK Spaichingen-Ko 85.45 41 *e*P **P 22 48 45.3 -0.5**
STU Stuttgart 85.47 40 *e*P **P 22 48 46.3 +0.5**
comp=Z,37nm,1.0s

STU	**Stuttgart**	**85.47**	**40**	*e*P		**P**	**22 48 45.6**	**-0.2**
STU					pmax	pmax		
	comp=Z,31nm,0.9s							
STU	**Stuttgart**	**85.47**	**40**	*e*P		**P**	**22 48 45.6**	**-0.2**
	comp=Z,31nm,0.9s							
LMR	**La Mourre**	**85.60**	**46**	*e*P		**P**	**22 48 46.3**	**-0.2**
	comp=Z,22nm,0.9s							
LMR	**La Mourre**	**85.60**	**46**	*e*P		**P**	**22 48 46.3**	**-0.2**
LMR					pmax	pmax		
	comp=Z,23nm,0.9s							
LMR	**La Mourre**	**85.60**	**46**	*e*P		**P**	**22 48 46.3**	**-0.2**
	comp=Z,22nm,0.9s							
FRF	**La Foret Royal**	**85.62**	**46**	*e*P		**P**	**22 48 46.4**	**-0.2**
	comp=Z,34nm,1.2s							
FRF	**La Foret Royal**	**85.62**	**46**	*e*P		**P**	**22 48 46.4**	**-0.2**
FRF					pmax	pmax		
	comp=Z,35nm,1.2s							
FRF	**La Foret Royal**	**85.62**	**46**	*e*P		**P**	**22 48 46.4**	**-0.2**
	comp=Z,34nm,1.2s							
NEUB	**Neuenburg**	**86.10**	**37**	*e*P		**P**	**22 48 49.7**	**+0.9**
	comp=Z,26nm,1.1s							
MOX	**Moxa**	**86.23**	**38**	*e*P		**P**	**22 48 50.1**	**+0.6**
	comp=Z,16nm,1.1s							
MOX	**Moxa**	**86.23**	**38**	*e*P		**P**	**22 48 50.1**	**+0.6**
MOX					pmax	pmax		
	comp=Z,8.0nm,1.1s							
GRF	**Grafenberg Arr**	**86.36**	**39**	*e*P		**P**	**22 48 51.3**	**+1.2**
	comp=Z,21nm,1.0s							
GRF	**Grafenberg Arr**	**86.36**	**39**	*e*P		**P**	**22 48 51.3**	**+1.2**
GRFO	**Grafenberg**	**86.36**	**39**	*e*P		**P**	**22 48 50.5**	**+0.4**
GRFO					pmax	pmax		
	comp=Z,54nm,1.7s							
GRFO	**Grafenberg**	**86.36**	**39**	*e*P		**P**	**22 48 50.5**	**+0.4**
	comp=Z,54nm,1.7s							
TUE	**Stuetta**	**86.40**	**42**	*e*P		**P**	**22 48 51.4**	**+0.8**
	comp=Z,16nm,1.0s							
DAVA	**Damuels**	**86.44**	**41**	⇓*i*PcP		**P**	**22 48 51.4**	**+0.7**
	comp=Z,25nm,1.1s							
PLN	**Plauen**	**86.61**	**38**	*e*P		**P**	**22 48 52.0**	**+0.7**
	comp=Z,73nm,1.1s							
TIXI	**Tiksi**	**86.61**	**348**	*ce*P		**P**	**22 48 50.6**	**-0.3**
TIXI					pmax	pmax		
	comp=Z,3.0nm,0.9s							
WERD	**Werda**	**86.71**	**38**	*e*P		**P**	**22 48 52.5**	**+0.7**
	comp=Z,14nm,1.3s							
GUNZ	**Gunzen**	**86.76**	**38**	*e*P		**P**	**22 48 53.0**	**+0.9**
	comp=Z,14nm,1.0s							
CLL	**Collm**	**86.77**	**37**	*e*P		**P**	**22 48 52.8**	**+0.7**
	comp=Z,8.0nm,0.8s							
CLL	**Collm**	**86.77**	**37**	*i* P		**P**	**22 48 52.9**	**+0.8**
CLL					pmax	pmax		
	comp=Z,9.0nm,0.8s							
CLL	**Collm**	**86.77**	**37**	*i* P		**P**	**22 48 52.9**	**+0.8**
	comp=Z,9.0nm,0.8s							
MANZ	**Manzenberg**	**86.77**	**38**	*e*P		**P**	**22 48 52.9**	**+0.7**
	comp=Z,7.0nm,1.0s							
TANN	**Tannenbergstha**	**86.81**	**38**	*e*P		**P**	**22 48 53.1**	**+0.7**
	comp=Z,14nm,1.1s							
WERN	**Wernitzgruen**	**86.81**	**38**	*e*P		**P**	**22 48 53.2**	**+0.8**
	comp=Z,20nm,1.1s							
PETK	**Petropavlovsk-**	**86.86**	**325**	P		**P**	**22 48 54.2**	**+1.7**
PETK	**Petropavlovsk-**	**86.86**	**325**	P		**P**	**22 48 54.2**	**+1.7**
PETK	**Petropavlovsk-**	**86.86**	**325**	P		**P**	**22 48 54.2**	**+1.7**
	comp=Z,1.1nm,0.7s,baz=79,slow=7.5,SNR=3.7							
NKC	**Novy Kostel**	**86.88**	**38**	*e*P		**P**	**22 48 53.0**	**+0.3**
NKC	**Novy Kostel**	**86.88**	**38**	*e*P		**P**	**22 48 53.0**	**+0.3**
RETA	**Reutte**	**86.92**	**41**	⇓*i*P		**P**	**22 48 53.5**	**+0.5**
	comp=Z,17nm,1.1s							
ROTZ	**Rotzenmuhle**	**86.92**	**39**	*e*P		**P**	**22 48 53.7**	**+0.9**
	comp=Z,7.0nm,1.1s							
FUORN	**Ofenpass-Fuorn**	**86.93**	**42**	*e*P		**P**	**22 48 53.9**	**+0.6**
	comp=Z,16nm,1.1s							
FUR	**Furstenfeldbru**	**86.98**	**40**	*e*P		**P**	**22 48 53.9**	**+0.7**
	comp=Z,16nm,1.0s							
FUR	**Furstenfeldbru**	**86.98**	**40**	*e*P		**P**	**22 48 53.9**	**+0.7**
FUR					pmax	pmax		
	comp=Z,29nm,1.0s							
FETA	**Feichten**	**87.07**	**42**	⇓*i*PcP		**P**	**22 48 54.4**	**+0.5**
	comp=Z,5.3nm,0.9s							
LIC	**Lamto**	**87.11**	**84**	*e*P		**P**	**22 48 53.8**	**-0.6**
	comp=Z,22nm,0.9s,baz=252							
LIC	**Lamto**	**87.11**	**84**	*e*P		**P**	**22 48 53.8**	**-0.6**
	comp=Z,22nm,0.9s							
DBIC	**Dimbokro**	**87.14**	**84**	*e*P		**P**	**22 48 53.9**	**-0.7**
DBIC	**Dimbokro**	**87.14**	**84**	P		**P**	**22 48 53.9**	**-0.7**
	comp=Z,12nm,1.1s,baz=298,slow=10,SNR=5.1							
MOTA	**Moosalm**	**87.19**	**41**	⇓*i*P		**P**	**22 48 54.5**	**+0.2**
	comp=Z,6.5nm,0.9s							
SQTA	**Sankt Quirin**	**87.30**	**41**	⇑*i*PcP		**P**	**22 48 56.0**	**+1.1**
BRG	**Berggiesshubel**	**87.49**	**37**	*e*P		**P**	**22 48 55.3**	**-0.2**
	comp=Z,5.0nm,0.8s							
BRG								
	comp=N,56nm,18.4s							
BRG								
	comp=E,78nm,10.9s							
BRG								
	comp=Z,167nm,18.5s							
BRG	**Berggiesshubel**	**87.49**	**37**	*e*P		**P**	**22 48 56.0**	**+0.5**
	comp=Z,5.0nm,0.8s							
BRG	**Berggiesshubel**	**87.49**	**37**	*e*P		**P**	**22 48 55.3**	**-0.2**
BRG					pmax	pmax		
	comp=Z,5.0nm,0.8s							
BRG					MLR	MLR		
	comp=N,56nm,18.4s							
BRG					MLR	MLR		
	comp=E,78nm,10.9s							
BRG					MLR	MLR		
	comp=Z,167nm,18.5s							
WET	**Wettzell**	**87.57**	**39**	*e*P		**P**	**22 48 56.8**	**+0.8**
	comp=Z,7.0nm,0.9s							
WET	**Wettzell**	**87.57**	**39**	*e*P		**P**	**22 48 56.8**	**+0.8**
WET					pmax	pmax		
	comp=Z,9.0nm,0.9s							
KHC	**Kasperske Hory**	**88.00**	**39**	*e*P		**P**	**22 48 57.9**	**-0.1**
KHC	**Kasperske Hory**	**88.00**	**39**	*e*P		**P**	**22 48 57.9**	**-0.1**
KHC	**Kasperske Hory**	**88.00**	**39**	*e*P		**P**	**22 48 58.4**	**+0.4**
	comp=Z,4.8nm,0.9s							
GEC2	**GERESS Array S**	**88.19**	**39**	*e*P		**P**	**22 48 59.4**	**+0.4**
	comp=Z,8.0nm,1.0s							
GEC2	**GERESS Array S**	**88.19**	**39**	*e*P		**P**	**22 48 59.3**	**+0.3**
GEC2	**GERESS Array S**	**88.19**	**39**	*e*P		**P**	**22 48 59.3**	**+0.3**
GERES	**GERESS Array B**	**88.19**	**39**	P		**P**	**22 48 58.8**	**-0.2**
GERES	**GERESS Array B**	**88.19**	**39**	P		**P**	**22 48 58.8**	**-0.2**
	comp=Z,4.2nm,0.8s,baz=316,slow=3.7,SNR=30							
PRU	**Pruhonice**	**88.21**	**38**	*e*P		**P**	**22 48 58.7**	**-0.2**
PRU	**Pruhonice**	**88.21**	**38**	*e*P		**P**	**22 48 58.7**	**-0.2**
FINES	**FINESS Array B**	**88.25**	**25**	P		**P**	**22 48 58.3**	**-0.5**
FINES	**FINESS Array B**	**88.25**	**25**	P		**P**	**22 48 58.3**	**-0.5**
	comp=Z,1.0nm,0.6s,baz=263,slow=2.0,SNR=6.6							
ABTA	**Abfaltersbach**	**88.31**	**41**	⇓*i*P		**P**	**22 48 59.8**	**+0.2**
	comp=Z,5.1nm,1.1s							
UPC	**Upice**	**88.83**	**37**	*e*P		**P**	**22 49 02.2**	**+0.3**
UPC	**Upice**	**88.83**	**37**	*e*P		**P**	**22 49 02.2**	**+0.3**
DPC	**Dobruska-Polom**	**89.08**	**37**	*e*P		**P**	**22 49 02.0**	**-1.1**
DPC	**Dobruska-Polom**	**89.08**	**37**	*e*P		**P**	**22 49 02.0**	**-1.1**
OBKA	**Obir**	**89.69**	**41**	⇓*i*P		**P**	**22 49 05.9**	**-0.1**
	comp=Z,7.3nm,0.8s							
CONA	**Conrad Observa**	**89.88**	**39**	⇓*i*P		**P**	**22 49 06.6**	**-0.3**
	comp=Z,7.6nm,1.0s							
SOKA	**Soboth**	**89.91**	**41**	⇓*i*P		**P**	**22 49 06.8**	**-0.3**
	comp=Z,9.0nm,1.2s							
MORC	**Moravsky Berou**	**90.04**	**37**	*e*P		**P**	**22 49 07.0**	**-0.6**
MORC					pmax	pmax		
	comp=Z,7.0nm,0.9s							
MORC	**Moravsky Berou**	**90.04**	**37**	*e*P		**P**	**22 49 07.0**	**-0.6**
	comp=Z,7.2nm,0.9s							
KEST	**Kesra**	**90.33**	**52**	P		P	22 49 06.7	-2.6
KEST	**Kesra**	**90.33**	**52**	P		P	22 49 06.7	-2.6
	comp=Z,1.4nm,0.9s,baz=306,slow=14,SNR=4.7							
OKC	**Ostrava-Krasne**	**90.36**	**37**	*e*P		**P**	**22 49 09.0**	**0.0**
OKC	**Ostrava-Krasne**	**90.36**	**37**	*e*P		**P**	**22 49 09.0**	**0.0**
OJC	**Ojcow**	**91.12**	**36**	*e*P		**P**	**22 49 12.5**	**0.0**
OJC	**Ojcow**	**91.12**	**36**	*e*P		**P**	**22 49 12.5**	**0.0**
TORD	**Torodi Ar. Bea**	**91.37**	**76**	P		**P**	**22 49 12.5**	**-1.8**
TORD	**Torodi Ar. Bea**	**91.37**	**76**	P		**P**	**22 49 12.5**	**-1.8**
	comp=Z,1.1nm,0.9s,baz=301,slow=4.1,SNR=7.0							
VYHS	**Vyhne**	**91.39**	**38**	*e*P		**P**	**22 49 14.0**	**+0.2**
VYHS					pmax	pmax		
	comp=Z,3.0nm,1.1s							
VYHS	**Vyhne**	**91.39**	**38**	*e*P		**P**	**22 49 14.0**	**+0.2**
NIE	**Niedzica**	**91.80**	**37**	*e*P		**P**	**22 49 17.1**	**+1.4**
NIE	**Niedzica**	**91.80**	**37**	*e*P		**P**	**22 49 17.1**	**+1.4**
PSZ	**Piszkesteto**	**92.29**	**38**	*e*P		**P**	**22 49 18.8**	**+0.7**
PSZ					pmax	pmax		
	comp=Z,14nm,1.4s							
PSZ	**Piszkesteto**	**92.29**	**38**	*e*P		**P**	**22 49 18.8**	**+0.7**
	comp=Z,14nm,1.4s							
PSZ	**Piszkesteto**	**92.29**	**38**	⇑*i*P		**P**	**22 49 17.0**	**-1.1**
STHS	**Stebnicka Huta**	**92.33**	**36**	*e*P		**P**	**22 49 18.3**	**+0.1**
STHS					pmax	pmax		
	comp=Z,4.0nm,1.0s							
STHS	**Stebnicka Huta**	**92.33**	**36**	*e*P		**P**	**22 49 18.3**	**+0.1**
PKSM	**Moragy**	**92.35**	**40**	⇓P		**P**	**22 49 16.6**	**-1.7**
PKSM	**Moragy**	**92.35**	**40**	⇓*i*P		**P**	**22 49 16.6**	**-1.7**
KECS	**Kecovo**	**92.36**	**37**	*e*P		**P**	**22 49 18.9**	**+0.6**
KECS					pmax	pmax		
	comp=Z,4.0nm,1.0s							
KECS	**Kecovo**	**92.36**	**37**	*e*P		**P**	**22 49 18.9**	**+0.6**
CRVS	**Cervenica-Dubn**	**92.71**	**37**	*e*P		**P**	**22 49 17.9**	**-2.0**
CRVS					pmax	pmax		
	comp=Z,7.0nm,1.1s							
CRVS	**Cervenica-Dubn**	**92.71**	**37**	*e*P		**P**	**22 49 17.8**	**-2.1**
KWP	**Kalwaria Pacla**	**93.04**	**36**	⇓P		**P**	**22 49 22.0**	**+0.6**
KWP	**Kalwaria Pacla**	**93.04**	**36**	*e*P		**P**	**22 49 21.5**	**0.0**
	comp=Z,14nm,1.1s							
KWP	**Kalwaria Pacla**	**93.04**	**36**	⇓*i*P		**P**	**22 49 22.0**	**+0.6**
KOLS	**Kolonicke sedl**	**93.16**	**36**	*e*P		**P**	**22 49 22.5**	**+0.5**
KOLS					pmax	pmax		
	comp=Z,7.0nm,1.1s							
KOLS	**Kolonicke sedl**	**93.16**	**36**	*e*P		**P**	**22 49 22.5**	**+0.5**
TRPA	**Tarpa**	**93.72**	**37**	⇓*i*P		**P**	**22 49 24.9**	**+0.4**
BZS	**Buzias**	**94.46**	**39**	⇓P		**P**	**22 49 28.4**	**+0.4**
BZS	**Buzias**	**94.46**	**39**	⇓*i*P		**P**	**22 49 28.4**	**+0.4**
DRGR		**94.51**	**38**	⇓P		**P**	**22 49 28.4**	**+0.1**
DRGR		**94.51**	**38**	⇓*i*P		**P**	**22 49 28.4**	**+0.1**
GZR	**Gura Zlata**	**95.27**	**39**	⇑P		**P**	**22 49 31.9**	**+0.1**
GZR	**Gura Zlata**	**95.27**	**39**	⇑*i*P		**P**	**22 49 31.9**	**+0.1**
BURAR	**Bucovina Array**	**95.52**	**36**	⇑*i*P		**P**	**22 49 31.7**	**-1.2**
LOT	**Lotru**	**95.84**	**39**	⇓*i*P		P	22 49 31.9	-2.6
AKASG	**Malin Array Be**	**95.92**	**32**	P		**P**	**22 49 33.2**	**-1.3**
AKASG	**Malin Array Be**	**95.92**	**32**	P		**P**	**22 49 33.2**	**-1.3**
AKASG	**Malin Array Be**	**95.92**	**32**	P		**P**	**22 49 33.2**	**-1.3**
	comp=Z,0.2nm,0.3s,baz=307,slow=3.4,SNR=3.2							
ARR	**Arges**	**96.40**	**39**	⇓*i*P		**P**	**22 49 35.9**	**-1.0**
OBN	**Obninsk**	**96.52**	**26**	⇓*e*P		**P**	**22 49 36.7**	**-0.4**
OBN				*e*			22 53 33.9	
OBN				*e*S		**SKSac**	**22 59 52.6**	**-2.0**
OBN				pmax	pmax			
	comp=Z,7.0nm,1.4s							
MLR	**Muntele Rosu**	**97.11**	**38**	⇑*i*P		**P**	**22 49 40.0**	**-0.2**
ZALV	**Zalesovo Beam**	**108.98**	**1**	PP		PP	22 55 01.2	-4.5
ZALV	**Zalesovo Beam**	**108.98**	**1**	PP		PP	22 55 01.2	-4.5
	comp=Z,0.3nm,0.4s,baz=4.4,slow=7.7,SNR=3.6							
HHC	**Hu-ho-hao-te**	**117.45**	**338**	*e*PKP		**PKPdf**	**22 54 49.1**	**-3.7**
HHC				PP		**PP**	**22 56 06.3**	**+0.2**
HHC				PKS		PKSdf	22 58 24.5	-5.1
HHC				SKS		SKSdf	23 01 37.8	-8.4
HHC				SKKS		SKKSac	23 02 35.1	-13
HHC				AMB		AMB		
	comp=Z,120nm,7.2s							
WMQ	**Urumqi**	**119.11**	**359**	*e*PKP		**PKPdf**	**22 54 54.0**	**-1.9**
NJ2	**Nanjing**	**121.70**	**327**	*e*PKP		**PKPdf**	**22 55 02.1**	**+1.1**
STKA	**Stephens Creek**	**128.02**	**243**	PKP		**PKPdf**	**22 55 13.1**	**0.0**
STKA	**Stephens Creek**	**128.02**	**243**	PKP		**PKPdf**	**22 55 13.1**	**0.0**
	comp=Z,3.2nm,0.9s,baz=135,slow=1.4,SNR=5.5							
CD2	**Chengdu**	**129.09**	**340**	*e*PKP		**PKPdf**	**22 55 15.1**	**-0.2**
GYA	**Guiyang**	**132.08**	**335**	*e*Pdif		**Pdif**	**22 52 15.8**	**-0.4**
GYA				PKP		**PKPdf**	**22 55 21.4**	**+0.2**
GYA				sPKP			22 56 35.9	
GYA				PP		**PP**	**22 57 47.0**	**+3.2**
GYA				AMB		AMB		
	comp=Z,80nm,7.6s							
ASAR	**Alice Springs**	**134.94**	**254**	PKP		**PKPdf**	**22 55 26.9**	**+0.5**
ASAR				SKPbc		**SKPbc**	**22 58 38.2**	**-0.1**
ASAR	**Alice Springs**	**134.94**	**254**	PKP		**PKPdf**	**22 55 26.9**	**+0.5**
	comp=Z,1.1nm,0.8s,baz=105,slow=1.9,SNR=13							
ASAR				SKPbc		**SKPbc**	**22 58 38.2**	**-0.1**
	comp=Z,1.0nm,1.0s,baz=98,slow=3.3,SNR=5.2							
CMAR	**Chiang Mai Arr**	**142.24**	**340**	SKPbc		**SKPbc**	**22 59 00.5**	**+1.6**
CMAR	**Chiang Mai Arr**	**142.24**	**340**	SKPbc		**SKPbc**	**22 59 00.5**	**+1.6**
	comp=Z,0.6nm,0.3s,baz=349,slow=4.3,SNR=4.3							
HYB	**Hyderabad**	**144.66**	**13**	*i* PKP		**PKPab**	**22 55 42.0**	**-1.4**

*ISCJB **24** 22:47:36.7±0.5, 23.99N±0.02×122.27E±0.02, h17km±6km, Error ellipse: s-maj=4.3km s-min=2.9km az=144.1*
*TAP **24** 22:47:37.6, 24.06N×122.22E, h20km, ML2.8, C*
*JMA **24** 22:47:37.7±0.3, 24.85N×122.30E, h30km, M2.2*

ISC 24 22:47:37.1±1.2, 24.01N±0.03×122.24E±0.02, h23km±13km, n33, σ0.84/62, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.59**	**267**	*e*P		**Pb**	**22 47 49.0**	**+0.4**
	baz=247							
HWA				*e*S		**Sn**	**22 47 58.8**	**-0.1**
	baz=247							
TWD	**Chiawan**	**0.60**	**277**	*e*P		**Pb**	**22 47 49.1**	**+0.3**
	baz=273							
TWD				*e*S		**Sb**	**22 47 57.8**	**+0.9**
	baz=273							
ENA	**Nanau**	**0.62**	**313**	*e*P		**Pb**	**22 47 49.0**	**-0.4**
	baz=321							
ENA				*e*S		**Sb**	**22 47 57.3**	**-0.4**
	baz=321							
ESF	**Shoufeng Towns**	**0.69**	**259**	*e*P		**Pb**	**22 47 50.3**	**-0.1**
	baz=241							
TWC	**Suao**	**0.70**	**329**	*i* P		**Pb**	**22 47 49.9**	**-0.7**
	baz=338							
TWC				S		**Sb**	**22 47 58.4**	**-1.5**
	baz=338							
ESL	**Shilin**	**0.77**	**256**	P		**Pb**	**22 47 51.1**	**-0.6**
	baz=241							
ESL				*e*S		**Sb**	**22 48 01.9**	**+0.2**
	baz=241							
YOJ	**Yonaguni jima**	**0.83**	**57**	P		**Pb**	**22 47 51.8**	**-1.1**
YOJ				*e*S		**Sb**	**22 48 01.8**	**-1.9**
ENTT	**Nioudou**	**0.88**	**316**	P		**Pb**	**22 47 53.9**	**+0.1**
	baz=321							
ENTT				*e*S		**Sb**	**22 48 05.2**	**+0.1**
	baz=321							
TWE	**Neicheng**	**0.89**	**324**	P		**Pb**	**22 47 53.8**	**0.0**
	baz=330							
TWE				*e*S		**Sb**	**22 48 05.1**	**0.0**
	baz=330							
NNS	**Nan Shan**	**0.91**	**299**	P		**Pn**	**22 47 54.0**	**-0.6**
	baz=297							
NNS				*e*S		**Sb**	**22 48 06.3**	**+0.4**
	baz=297							
WHF	**Hehuan Shan**	**0.91**	**279**	P		**Pn**	**22 47 54.3**	**-0.5**
	baz=262							
WHF				S		**Sb**	**22 48 06.7**	**+0.5**
	baz=262							
EHY	**Hungye**	**0.98**	**240**	*e*P		**Pn**	**22 47 55.2**	**-0.2**
	baz=227							
EHY				*e*S		**Sb**	**22 48 08.0**	**+0.1**
	baz=227							
TWT	**Tachien**	**1.01**	**284**	*e*P		**Pn**	**22 47 56.1**	**+0.1**
	baz=270							
TWT				*e*S		**Sn**	**22 48 09.7**	**+0.1**
	baz=270							
TWB1	**Santiao Chiao**	**1.02**	**347**	*e*P		**Pb**	**22 47 56.1**	**-0.1**
	baz=347							
TWB1				*e*S		**Sn**	**22 48 09.5**	**-0.1**
	baz=347							
NSK	**Sanguang**	**1.05**	**310**	*e*P		**Pn**	**22 47 56.5**	**+0.1**
	baz=308							
NSK				*e*S		**Sb**	**22 48 10.3**	**+0.4**
	baz=308							
TWF1	**Yuli**	**1.09**	**233**	*e*P		**Pn**	**22 47 56.0**	**-0.9**
	baz=218							
TWF1				*e*S		**Sn**	**22 48 10.8**	**-0.4**
	baz=218							
NWF	**Wu-fen Shan**	**1.14**	**338**	*e*P		**Pb**	**22 47 58.2**	**0.0**
	baz=337							
NWF				*e*S		**Sb**	**22 48 13.0**	**+0.4**
	baz=337							
CHKT	**Chengkung**	**1.21**	**222**	*e*P		**Pn**	**22 47 58.8**	**+0.2**
	baz=207							
CHKT				*e*S		**Sn**	**22 48 11.9**	**-2.4**
	baz=207							
SMLT	**Sun Moon Lake**	**1.24**	**265**	*e*P		**Pn**	**22 47 59.7**	**+0.6**
	baz=263							
SMLT				*e*S		**Sn**	**22 48 15.6**	**+0.5**
	baz=263							
TYC	**Yuchr**	**1.27**	**266**	*e*P		**Pn**	**22 47 59.9**	**+0.4**
	baz=264							
TYC				*e*S		**Sn**	**22 48 15.8**	**-0.1**
	baz=264							
YUS	**Yu-Shan**	**1.29**	**247**	*e*P		**Pn**	**22 48 00.5**	**+0.3**
	baz=245							
YUS				*e*S		**Sn**	**22 48 17.0**	**+0.1**
	baz=245							
NSTT	**Nanjuang**	**1.29**	**299**	*e*P		**Pb**	**22 48 00.8**	**+0.1**
	baz=284							
NSTT				*e*S		**Sb**	**22 48 17.7**	**+0.7**
	baz=284							
ELDTW	**Lidau**	**1.39**	**234**	*e*P		**Pn**	**22 48 00.3**	**-0.9**
	baz=233							
IRIF	**Iriomote-Funau**	**1.40**	**76**	P		**Pn**	**22 48 02.1**	**+1.0**
IRIF				*e*S		**Sb**	**22 48 19.8**	**0.0**
ALS	**Alishan**	**1.41**	**250**	*e*P		**Pn**	**22 48 02.3**	**+0.8**
	baz=248							
ALS				*e*S		**Sn**	**22 48 19.9**	**+0.3**
	baz=248							
HATJ	**Hateruma jima**	**1.43**	**88**	*e*S		**Sb**	**22 48 23.9**	**+3.1**
CHN5	**Tsauling**	**1.49**	**254**	*e*P		**Pn**	**22 48 03.6**	**+1.1**
	baz=241							
CHN5				*e*S		**Sb**	**22 48 23.0**	**+0.3**
	baz=241							
TWG	**Pinlang**	**1.60**	**223**	*e*P		**Pn**	**22 48 03.5**	**-0.5**
	baz=222							
TWG				*e*S		**Sn**	**22 48 22.3**	**-1.6**
	baz=222							
PCYT	**Pengchaiyu**	**1.62**	**354**	*e*P		**Pn**	**22 48 04.7**	**+0.5**
	baz=353							
PCYT				*e*S		**Sb**	**22 48 25.8**	**-0.6**
	baz=353							
JKRS	**Kuro-shima**	**1.63**	**82**	P		**Pn**	**22 48 05.2**	**+0.9**
JKRS				S		**Sb**	**22 48 26.8**	**+0.3**
WTP	**Ta-pu**	**1.68**	**243**	*e*P		**Pn**	**22 48 06.0**	**+1.0**
	baz=243							
JIJ	**Ishigaki jima**	**1.77**	**78**	P		**Pn**	**22 48 06.6**	**+0.3**
JIJ				*e*S		**Sn**	**22 48 28.1**	**0.0**
CHN1	**Nanshi**	**1.77**	**243**	*e*P		**Pn**	**22 48 08.1**	**+1.8**
	baz=242							
CHN1				*e*S		**Sb**	**22 48 30.5**	**-0.2**
	baz=242							

WEL 24 22:49:27.5±0.6, 36.88S×176.92E, h252km±4km, ML3.8/11, 5C, Error ellipse: s-maj=6.1km s-min=5.8km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**1.30**	**122**	PN		Pn	22 50 04.4	-0.1
MXZ				SN		S	22 50 33.0	-0.7
URZ	**Urewera**	**1.39**	**174**	PN		Pn	22 50 05.1	0.0
URZ				SN		S	22 50 34.0	-0.8
MWZ	**Matawai**	**1.54**	**162**	⇑PN		Pn	22 50 06.5	+0.2
MWZ				SN		S	22 50 36.7	-0.2
MWZ				AML		AML	22 50 39.5	
PUZ	**Puketiti**	**1.60**	**139**	⇑PN		Pn	22 50 06.7	0.0
PUZ				SN		S	22 50 36.8	-0.9
CNGZ	**Carnagh Statio**	**1.91**	**148**	PN		Pn	22 50 09.7	+0.5
RAHZ	**Arahi**	**2.04**	**176**	⇑PN		Pn	22 50 10.9	+0.5
NMHZ	**Naumai**	**2.22**	**182**	PN		Pn	22 50 12.9	+0.8
KNZ	**Kokohu**	**2.22**	**165**	⇑PN		Pn	22 50 11.9	-0.1
BKZ	**Black Stump Fm**	**2.31**	**188**	⇑PN		Pn	22 50 12.8	-0.2
BKZ				AML		AML	22 50 50.1	
BKZ				AML		AML	22 50 50.1	
MHGZ	**Mahia Peninsul**	**2.41**	**161**	PN		Pn	22 50 13.9	+0.1
NGZ	**Ngauruhoe**	**2.52**	**204**	PN		Pn	22 50 16.0	+0.8
MCHZ	**McNeill Hill**	**2.57**	**184**	PN		Pn	22 50 15.8	+0.3
TUVZ	**Tukino**	**2.59**	**202**	PN		Pn	22 50 16.2	+0.3
FWVZ	**Far West T-bar**	**2.61**	**204**	PN		Pn	22 50 16.5	+0.3
BHHZ	**Black Hill Sta**	**2.69**	**194**	PN		Pn	22 50 16.6	-0.3
KAHZ	**Kahuranaki**	**2.92**	**181**	PN		Pn	22 50 18.9	-0.3
PNHZ	**Pukenui**	**3.09**	**190**	PN		Pn	22 50 20.0	-1.0
PXZ	**Pawanui**	**3.15**	**181**	PN		Pn	22 50 20.9	-0.7
PXZ				AML		AML	22 51 04.1	
PXZ				AML		AML	22 51 05.2	
MRZ	**Mangatainoka R**	**3.92**	**195**	PN		Pn	22 50 28.8	-1.6
MRZ				AML		AML	22 51 20.9	
TIWZ	**Tintock**	**3.98**	**191**	PN		Pn	22 50 30.0	-1.1
HOWZ	**Holdsworth Sta**	**4.16**	**195**	PN		Pn	22 50 31.

az=158.1
*TAP **24** 23:22:06.5,24.°02N×122.°30E,h23km,ML3.6,C*
*JMA **24** 23:22:07.2±0.3,24.°04N×122.°34E,h11km,M3.2*
ISC 24 23:22:04.9±1.0**,23.°95N**±0.°02×**122.°32E**±0.°02**,h19**km±3km**,**
n46,σ0**.°59/83,mb3.5/3,1C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.65**	**273**	*e*P	**Pn**	**23 22 19.0**	**-0.2**
	baz=252						
HWA				*e*S	**Sn**	**23 22 28.1**	**-0.9**
	baz=252						
TWD	**Chiawan**	**0.67**	**282**	*i* P	**Pn**	**23 22 19.1**	**-0.4**
	baz=276						
TWD				*i* S	**Sg**	**23 22 28.4**	**+1.1**
	baz=276						
ENA	**Nanau**	**0.71**	**312**	*e*P	**Pn**	**23 22 19.7**	**-0.3**
	baz=320						
ENA				*e*S	**Sn**	**23 22 29.7**	**-0.8**
	baz=320						
TWC	**Suao**	**0.79**	**327**⇑	*i*P	**Pb**	**23 22 20.0**	**0.0**
	baz=325						
TWC				*e*S	**Sb**	**23 22 29.7**	**-0.6**
	baz=325						
YOJ	**Yonaguni jima**	**0.81**	**51**	P	**Pn**	**23 22 21.5**	**+0.1**
YOJ				*e*S	**Sb**	**23 22 31.4**	**+0.3**
ESL	**Shilin**	**0.82**	**261**	*e*P	**Pg**	**23 22 20.9**	**0.0**
	baz=245						
ESL				*e*S	**Sg**	**23 22 32.0**	**+0.1**
	baz=245						
ENTT	**Nioudou**	**0.97**	**315**	P	**Pg**	**23 22 23.9**	**+0.1**
	baz=324						
ENTT				S	**Sg**	**23 22 36.7**	**0.0**
	baz=324						
TWE	**Neicheng**	**0.97**	**323**	*i* P	**Pn**	**23 22 23.6**	**0.0**
	baz=328						
TWE				*e*S	**Sn**	**23 22 37.0**	**+0.1**
	baz=328						
WHF	**Hehuan Shan**	**0.98**	**282**	*i* P	**Pb**	**23 22 24.1**	**+0.5**
	baz=278						
WHF				S	**Sb**	**23 22 36.4**	**0.0**
	baz=278						
NNS	**Nan Shan**	**0.99**	**300**	*i* P	**Pn**	**23 22 24.2**	**+0.2**
	baz=283						
NNS				*e*S	**Sg**	**23 22 37.1**	**-0.2**
	baz=283						
EHY	**Hungye**	**1.01**	**245**	P	**Pg**	**23 22 24.7**	**+0.1**
	baz=241						
EHY				*e*S	**Sg**	**23 22 38.0**	**+0.1**
	baz=241						
TWT	**Tachien**	**1.09**	**287**	*e*P	**Pg**	**23 22 26.1**	**0.0**
	baz=272						
TWT				*e*S	**Sn**	**23 22 40.5**	**+0.5**
	baz=272						
TWB1	**Santiao Chiao**	**1.10**	**344**	P	**Pn**	**23 22 25.7**	**+0.4**
	baz=330						
TWB1				*e*S	**Sn**	**23 22 40.4**	**+0.3**
	baz=330						
TWF1	**Yuli**	**1.11**	**238**	*i* P	**Pg**	**23 22 26.3**	**-0.1**
	baz=222						
TWF1				S	**Sg**	**23 22 41.1**	**+0.1**
	baz=222						
NSK	**Sanguang**	**1.14**	**310**	P	**Pb**	**23 22 26.4**	**+0.4**
	baz=306						
NSK				*e*S	**Sg**	**23 22 41.7**	**-0.2**
	baz=306						
CHKT	**Chengkung**	**1.22**	**226**	*e*P	**Pn**	**23 22 26.5**	**-0.4**
	baz=213						
CHKT				*e*S	**Sb**	**23 22 41.8**	**-0.8**
	baz=213						
NWF	**Wu-fen Shan**	**1.22**	**336**	P	**Pb**	**23 22 27.6**	**+0.2**
	baz=334						
NWF				*e*S	**Sn**	**23 22 43.7**	**+0.5**
	baz=334						
SMLT	**Sun Moon Lake**	**1.30**	**267**	P	**Pb**	**23 22 29.0**	**+0.2**
	baz=254						
SMLT				S	**Sn**	**23 22 45.2**	**+0.1**
	baz=254						
TAP1	**Taipei**	**1.31**	**326**	*e*P	**Pb**	**23 22 29.1**	**+0.2**
	baz=323						
YUS	**Yu-Shan**	**1.33**	**250**	*e*P	**Pb**	**23 22 30.1**	**+0.5**
	baz=248						
YUS				*e*S	**Sn**	**23 22 46.2**	**-0.3**
	baz=248						
TYC	**Yuchr**	**1.34**	**268**	P	**Pb**	**23 22 29.5**	**+0.1**
	baz=265						
TYC				*e*S	**Sn**	**23 22 46.1**	**+0.2**
	baz=265						
IRIF	**Iriomote-Funau**	**1.35**	**73**	P	**Pg**	**23 22 31.0**	**+0.1**
IRIF				*e*S	**Sg**	**23 22 48.9**	**+0.4**
HATJ	**Hateruma jima**	**1.36**	**85**	P	**Pg**	**23 22 31.3**	**+0.1**
HATJ				*e*S	**Sg**	**23 22 49.5**	**+0.4**
NSTT	**Nanjuang**	**1.38**	**300**	*e*P	**Pb**	**23 22 30.7**	**+0.5**
	baz=296						
NSTT				*e*S	**Sb**	**23 22 48.1**	**+0.7**
	baz=296						
ELDTW	**Lidau**	**1.41**	**238**	*e*P	**Pb**	**23 22 30.8**	**0.0**
	baz=236						
ELDTW				*e*S	**Sn**	**23 22 47.2**	**-0.7**
	baz=236						
TWS1	**Kuangyinshan**	**1.41**	**325**	*e*P	**Pn**	**23 22 28.8**	**-0.9**
	baz=322						
ALS	**Alishan**	**1.45**	**253**	*e*P	**Pb**	**23 22 32.2**	**+0.7**
	baz=250						
ALS				*e*S	**Sn**	**23 22 49.9**	**+0.7**
	baz=250						
TWQ1	**Liyutan**	**1.47**	**286**	*e*P	**Pn**	**23 22 30.8**	**+0.4**
	baz=282						
TWQ1				*e*S	**Sb**	**23 22 50.0**	**0.0**
	baz=282						
TWY	**Chenhua**	**1.48**	**334**	*e*P	**Pn**	**23 22 31.0**	**+0.5**
	baz=348						
TCU	**Taichung**	**1.52**	**278**	*e*P	**Pb**	**23 22 33.0**	**+0.6**
	baz=275						
TCU				*e*S	**Sg**	**23 22 53.2**	**-0.7**
	baz=275						
CHN5	**Tsauling**	**1.54**	**257**	*e*P	**Pb**	**23 22 33.4**	**+0.4**
	baz=255						
JKRS	**Kuro-shima**	**1.57**	**79**	P	**Pg**	**23 22 35.4**	**+0.2**
JKRS				*e*S	**Sg**	**23 22 55.5**	**-0.2**
TWG	**Pinlang**	**1.60**	**226**	*e*P	**Pn**	**23 22 33.1**	**+0.9**
	baz=237						
TWG				*e*S	**Sn**	**23 22 51.9**	**-0.6**
	baz=237						
PCYT	**Pengchaiyu**	**1.69**	**352**	P	**Pn**	**23 22 34.3**	**+0.8**
	baz=351						
WTP	**Ta-pu**	**1.71**	**246**	*e*P	**Pb**	**23 22 35.5**	**-0.3**
	baz=244						
WTP				*e*S	**Sb**	**23 22 57.6**	**+0.6**
	baz=244						
JIJ	**Ishigaki jima**	**1.72**	**76**	P	**Pb**	**23 22 36.2**	**+0.3**
JIJ				*e*S	**Sb**	**23 22 57.9**	**+0.8**
CHN1	**Nanshi**	**1.81**	**246**	*e*P	**Pb**	**23 22 37.5**	**0.0**
	baz=244						
CHN1				*e*S	**Sb**	**23 23 00.0**	**+0.2**
	baz=244						
TWK	**Hsinying**	**1.81**	**248**	*e*P	**Pb**	**23 22 38.2**	**+0.7**
	baz=246						
TWK				*e*S	**Sb**	**23 23 00.5**	**+0.6**
	baz=246						
CHN8	**Yiju**	**2.02**	**253**	*e*P	**Pn**	**23 22 39.7**	**+1.7**
	baz=251						
CHN8				*e*S	**Sn**	**23 23 04.5**	**+1.6**
	baz=251						
LAY	**Lan-yu**	**2.03**	**201**	*e*P	**Pn**	**23 22 38.8**	**+0.6**
	baz=200						
SCZT	**Fangliau**	**2.21**	**225**	*e*P	**Pb**	**23 22 43.3**	**-1.0**
	baz=218						
SCZT				*e*S	**Sb**	**23 23 11.0**	**-0.4**
	baz=218						
JTJ	**Tarama**	**2.28**	**72**	P	**Pb**	**23 22 45.5**	**0.0**
JTJ				*e*S	**Sb**	**23 23 13.0**	**-0.4**
PNG	**Penghu**	**2.56**	**262**	*e*P	**Pn**	**23 22 46.9**	**+1.5**
	baz=260						
PNG				*e*S	**Sn**	**23 23 17.0**	**+1.0**
	baz=260						
SONM	**Songino Array**	**27.00**	**336**	P	**P**	**23 27 44.8**	**-0.9**
	1.3nm,0.6s,baz=149,slow=9.7,SNR=9.5						
MKAR	**Makanchi Array**	**39.23**	**316**	P	**P**	**23 29 32.2**	**+0.1**
	0.3nm,0.5s,baz=103,slow=9.3,SNR=4.8						
ZALV	**Zalesovo Beam**	**41.01**	**327**	P	**P**	**23 29 45.5**	**-1.2**
	0.6nm,0.6s,baz=116,slow=6.6,SNR=3.4						

*NNC **24** 23:42:19.2±3.3,37.°03N×70.°35E,h208km±27km,mb2.9,*
mpv3.8,Error ellipse: s-maj=28.5km s-min=17.4km az=9.0
ISC 24 23:42:17.3±3.1**,36.°9N**±0.°2×**70.°3E**±0.°1**,h200**km**,n29,**

*DDA **24** 23:57:41.4,40.°40N×40.°62E,h7km,MD2.9*
*CSEM **24** 23:57:41.4,40.°40N×40.°62E,h7km,MD2.9,After DDA*
ISC 24 23:57:41.1±1.1**,40.°41N**±0.°04×**40.°58E**±0.°04**,h8**km±12km**,**
n14,σ0**.°40/25,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KOPT	**Kop Dagi**	**0.40**	**189**	*e*P	**Pg**	**23 57 49.1**	**+0.3**
KOPT				*e*S	**Sg**	**23 57 54.6**	**+0.6**
KOPT	**Kop Dagi**	**0.40**	**189**	*e*P	**Pg**	**23 57 49.1**	**+0.3**
KOPT				*e*S	**Sg**	**23 57 54.6**	**+0.6**
ERZM	**Erzurum**	**0.78**	**130**	*e*P	**Pb**	**23 57 56.7**	**-0.4**
ERZM				*e*S	**Sg**	**23 58 05.7**	**-0.7**
ERZM	**Erzurum**	**0.78**	**130**	*e*P	**Pb**	**23 57 56.7**	**-0.4**
ERZM				*e*S	**Sg**	**23 58 05.7**	**-0.7**
GUMT	**Gumushane**	**0.84**	**274**	*e*PG	**Pg**	**23 57 57.1**	**-0.2**
GUMT				*e*SG	**Sg**	**23 58 07.8**	**-0.5**
DDEM	**Demirkent**	**1.01**	**61**	*e*P	**Pb**	**23 58 00.9**	**0.0**
DDEM				*e*S	**Sb**	**23 58 14.5**	**0.0**
DDEM	**Demirkent**	**1.01**	**61**	*e*P	**Pb**	**23 58 00.9**	**0.0**
DDEM				*e*S	**Sb**	**23 58 14.5**	**0.0**
DAGI	**Agillar**	**1.21**	**56**	*e*P	**Pn**	**23 58 04.6**	**+0.1**
DAGI				*e*S	**Sn**	**23 58 20.8**	**-0.4**
DBOC	**Borcka**	**1.25**	**41**	*e*P	**Pg**	**23 58 05.5**	**+0.5**
DBOC				*e*S	**Sn**	**23 58 21.9**	**0.0**
DBOC	**Borcka**	**1.25**	**41**	*e*P	**Pg**	**23 58 05.5**	**+0.5**
DBOC				*e*S	**Sn**	**23 58 21.9**	**0.0**
ARTV	**Artvin**	**1.28**	**52**	*e*P	**Pg**	**23 58 05.7**	**0.0**
ARTV				*e*S	**Sn**	**23 58 23.5**	**+0.5**
ARTV	**Artvin**	**1.28**	**52**	*e*P	**Pg**	**23 58 05.7**	**0.0**
ARTV				*e*S	**Sn**	**23 58 23.5**	**+0.5**
BCA	**Borcka**	**1.30**	**37**	*e*PN	**Pg**	**23 58 05.9**	**-0.1**
CLDR	**Caldiran**	**2.86**	**115**	*e*PN	Pn	23 58 21.3	-5.9

CASC 24 23:57:47.5±2.7**,13.°49N**×**90.°79W,h20**km±9km**,MD3.8,**
ML3.9,1C,Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IXG	**Ixpaco**	**0.76**	**25**	*e*P	Pn	23 58 03.2	-0.1
PCG	**Pacaya**	**0.92**	**11**	*e*P	Pb	23 58 04.8	-0.3
FUG	**Fuego 3**	**0.96**	**357**	*e*P	Pb	23 58 04.7	-1.0
JAT	**Jato**	**1.17**	**315**	*e*P	Pn	23 58 06.1	-2.7
NBG	**Las Nubes**	**1.18**	**21**	*e*P	Pb	23 58 09.7	+0.2
NBG				*e*S	Sg	23 58 27.0	+0.6
RTR	**El Retiro**	**1.18**	**70**	*e*P	Pn	23 58 08.8	-0.4
RTR				*e*S	Sb	23 58 24.5	0.0
SBLS	**San Blas**	**1.18**	**73**	*e*P	Pn	23 58 08.9	-0.4
SBLS				*e*S	Sn	23 58 25.2	+0.1
SNJE	**San Jose**	**1.21**	**72**	*e*P	Pn	23 58 09.3	-0.3
SNJE				*e*S	Sn	23 58 25.6	0.0
RBDL	**Robledal**	**1.24**	**60**⇑	*e*P	Pn	23 58 10.0	+0.1
RBDL				*e*S	Sb	23 58 25.8	-0.3
BOQS	**Boqueron**	**1.48**	**80**	*e*P	Pn	23 58 13.8	+0.3
BOQS				*e*S	Sb	23 58 33.7	+0.3
SNET	**Serv Nac Est T**	**1.52**	**82**	*e*P	Pn	23 58 13.1	-0.7
SNET				*e*S	Sb	23 58 33.7	-0.5
SNET				AML	AML	23 58 40.6	
	comp=Z,2µm,0.4s						
LFU	**La Fuente**	**1.65**	**81**	*e*P	Pn	23 58 16.1	+0.6
LFRS	**El Faro**	**1.68**	**85**	*e*P	Pn	23 58 16.2	+0.2
LFRS				*e*S	Sn	23 58 37.8	+0.7
LBRS	**Las Brisas**	**1.71**	**81**	*e*P	Pn	23 58 17.3	+0.9
MRL	**Marmol**	**1.90**	**34**	*e*P	Pn	23 58 20.2	+1.2
MRL				*e*S	Sg	23 58 49.8	+0.7
SNVI	**San Vicente**	**1.90**	**86**	*e*P	Pn	23 58 19.0	0.0
SNVI				*e*S	Sn	23 58 43.4	+0.9
CNCH	**Conchagua**	**2.88**	**94**	*e*P	Pn	23 58 32.9	+0.4
COPN	**Copaltepe**	**4.29**	**107**	*e*P	Pn	23 58 52.2	+0.4
COPN				*e*S	Sn	23 59 40.8	-0.5

*IDC **25** 00:01:30.9±1.0,0.°61S×123.°63E,h0km,mb3.9/5,*
mb1 4.0/7,mb1mx3.8/23,mbtmp3.9/7,ML3.8/2,MS2.8/2,
Ms1 3.0/2,ms1mx2.6/34,Error ellipse: s-maj=46.1km
s-min=18.0km az=67.0
*DJA **25** 00:01:34.5±0.4,1.°S×3.°×12.°3E±.°,h27km±6km,M4.4/8,*
mb4.7/2,mB5.3/2,MLv4.3/8,Mw(mB)4.7/2
*ISCJB **25** 00:01:35.0±0.5,0.°68S±0.°05×123.°33E±0.°05,h54km,*
mb3.8/5,MS2.9/1,Error ellipse: s-maj=8.6km s-min=4.9km
az=37.2
ISC 25 00:01:37.5±0.8**,0.°69S**±0.°05×**123.°38E**±0.°06**,h54**km**,n18,**
σ1s75/17,mb3.8/5,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**0.70**	**240**	P	Pn	00 01 47.2	-4.2
LUWI				S	**Sn**	**00 01 57.3**	**-4.2**
GTOI	**Gorontalo**	**1.37**	**345**	P	**Pn**	**00 01 58.6**	**-1.7**
KMSI	**Cibinong**	**1.40**	**26**	P	Pn	00 01 56.9	-3.8
KMSI				S	**Sn**	**00 02 14.8**	**-3.2**
MRSI	**Marisa**	**1.85**	**309**	P	Pn	00 02 02.8	-4.0
MNI	**Manado**	**2.58**	**35**	P	Pn	00 02 23.7	+6.9
MNI				S	**Sn**	**00 02 47.4**	**+0.4**
LBMI	**Labuha**	**4.13**	**89**	P	**Pn**	**00 02 36.5**	**-1.5**
TTSI	**Tana Toraja**	**4.25**	**237**	P	**Pn**	**00 02 39.4**	**-0.4**
NLAI	**Namlea**	**4.50**	**124**	P	**Pn**	**00 02 42.8**	**-0.4**
SPSI	**Sidrap Palu**	**4.85**	**228**	P	**Pn**	**00 02 47.7**	**-0.3**
KAPI	**Kappang**	**5.62**	**220**	Pn	**Pn**	**00 02 58.2**	**-0.3**
	6.0nm,0.3s,baz=42,slow=3.6,SNR=24						
KAPI				Sn	**Sn**	**00 04 00.4**	**-1.3**
	5.9nm,0.3s,baz=202,slow=23,SNR=7.8						
KAPI				LR	LR	00 05 33.9	
	comp=Z,64nm,19.8s,baz=127,slow=42						
BKSI	**Bulukumba**	**5.63**	**215**	P	Pn	00 02 49.9	-8.8
	32nm,0.8s,490nm						
FITZ	**Fitzroy Crossi**	**17.44**	**173**	P	**P**	**00 05 37.3**	**-0.4**
	0.1nm,0.3s,baz=27,slow=9.0,SNR=5.0						
ASAR	**Alice Springs**	**25.02**	**157**	P	**P**	**00 06 57.2**	**+0.5**
	2.8nm,0.8s,baz=328,slow=6.8,SNR=23						
CMAR	**Chiang Mai Arr**	**30.64**	**310**	P	**P**	**00 07 49.2**	**+2.3**
	1.5nm,0.6s,baz=135,slow=7.4,SNR=8.6						
CMAR				LR	LR	00 21 29.7	
	comp=Z,24nm,18.1s,baz=200,slow=39						
STKA	**Stephens Creek**	**35.48**	**153**	P	**P**	**00 08 28.6**	**-0.4**
	1.7nm,0.7s,baz=312,slow=14,SNR=4.8						
SONM	**Songino Array**	**50.55**	**345**	P	**P**	**00 10 31.0**	**+0.3**
	0.3nm,0.4s,baz=159,slow=4.3,SNR=3.2						
MKAR	**Makanchi Array**	**59.40**	**328**	P	**P**	**00 11 35.8**	**+1.3**
	0.4nm,0.5s,baz=124,slow=9.0,SNR=6.7						
TORD	**Torodi Ar. Bea**	**120.95**	**285**	PKP	**PKPdf**	**00 20 25.4**	**+0.5**
	0.5nm,0.8s,baz=35,slow=0.6,SNR=4.0						

IDC 25 00:04:59.5±1.4**,0.°53S×122.°60E,h0km,mb3.5/3,**
mb1 3.7/4,mb1mx3.5/22,mbtmp3.7/4,ML4.2/1,Error
ellipse: s-maj=59.4km s-min=23.7km az=75.0,
Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**5.28**	**213**	Pn	Pn	00 06 20.0	+0.2
	7.5nm,0.3s,baz=34,slow=5.1,SNR=10.0						
KAPI				Sn	**Sn**	00 07 16.0	-5.4
	1.5nm,0.3s,baz=252,slow=20,SNR=2.0						
ASAR	**Alice Springs**	**25.48**	**155**	P	P	00 10 29.6	-0.1
	0.9nm,0.5s,baz=339,slow=11,SNR=18						
SONM	**Songino Array**	**50.20**	**346**	P	P	00 13 57.8	+0.6
	0.4nm,0.5s,baz=165,slow=6.7,SNR=3.7						
MKAR	**Makanchi Array**	**58.86**	**329**	P	P	00 14 59.6	-0.5
	0.3nm,0.6s,baz=112,slow=9.9,SNR=4.0						

*IDC **25** 00:09:18.7±0.8,19.°10S×169.°71E,h0km,mb4.3/12,*
mb1 4.5/13,mb1mx4.3/20,mbtmp4.3/13,ML3.9/1,MS3.8/12,
Ms1 3.8/12,ms1mx3.6/24,Error ellipse: s-maj=25.1km
s-min=18.4km az=125.0
*ISCJB **25** 00:09:19.0±0.7,19.°11S±0.°09×169.°6E±0.°1,h10km,*
mb4.3/15,MS3.8/10,Error ellipse: s-maj=17.6km
s-min=9.4km az=36.1
*NEIC **25** 00:09:24.1±0.6,19.°10S×169.°61E,h35km,mb4.4/8,Error*
ellipse: s-maj=16.6km s-min=11.9km az=137.0
ISC 25 00:09:20.0±0.8**,19.°2S**±0.°1×**169.°7E**±0.°1**,h10**km**,n43,**
σ1s43/38,mb4.4/15,MS3.8/10,Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.18**	**226**	*e*P	**Pn**	**00 10 24.2**	**+0.3**
DZM				*e*S	**Sn**	**00 11 14.2**	**+1.3**
DZM	**Mont Dzumac**	**4.18**	**226**	Pn	**Pn**	**00 10 24.9**	**+1.0**
DZM				Sn	**Sn**	**00 11 14.4**	**+1.6**
DZM	**Mont Dzumac**	**4.18**	**226**	Pn	**Pn**	**00 10 24.9**	**+1.0**
	6.4nm,0.3s,baz=68,slow=18,SNR=83						
DZM				Sn	**Sn**	**00 11 14.4**	**+1.6**
	24nm,0.3s,baz=130,slow=23,SNR=8.5						
DZM				LR	LR	00 11 52.2	
	comp=Z,2µm,18.2s,baz=279,slow=36						
NOUC	**Port Laguerre**	**4.29**	**226**	*e*P	Pb	00 10 31.2	-4.4
NOUC				*e*S	**Sb**	**00 11 21.8**	**-5.8**
AFI	**Afiamalu**	**18.54**	**76**	LR	LR	00 19 06.2	
	comp=Z,340nm,19.6s,baz=160,slow=32						
URZ	**Urewera**	**20.11**	**163**	LR	LR	00 20 09.3	
	comp=Z,175nm,20.9s,baz=104,slow=32						
CTA	**Charters Tower**	**22.06**	**264**	P	**P**	**00 14 16.5**	**+1.3**
CTA	**Charters Tower**	**22.06**	**264**	P	**P**	**00 14 16.5**	**+1.3**
	2.3nm,0.5s,baz=93,slow=11,SNR=3.6						
CTAO	**Charters Tower**	**22.06**	**264**	*e*P	**P**	**00 14 16.1**	**+0.9**
	2.8nm,0.4s						
PMG	**Port Moresby**	**23.83**	**291**	*e*P	**P**	**00 14 33.2**	**-0.3**
	15nm,0.7s						
PMG	**Port Moresby**	**23.83**	**291**	P	**P**	**00 14 35.0**	**+1.5**
	6.5nm,0.3s,baz=124,slow=8.5,SNR=4.1						
RPZ	**Rata Peaks**	**24.51**	**178**	LR	LR	00 23 25.9	
	comp=Z,372nm,18.8s,baz=355,slow=34						
STKA	**Stephens Creek**	**28.22**	**238**	*e*P	**P**	**00 15 13.4**	**+0.2**
	0.6nm,0.6s						
STKA	**Stephens Creek**	**28.22**	**238**	P	**P**	**00 15 13.6**	**+0.4**
	2.5nm,0.6s,baz=76,slow=9.0,SNR=13						
STKA				LR	LR	00 26 11.3	
	comp=Z,192nm,18.1s,baz=37,slow=36						
WRAB	**Tennant Creek**	**33.25**	**263**	*e*P	**P**	**00 15 57.8**	**+0.1**
	4.4nm,1.1s						
AS31	**Alice Springs**	**33.53**	**256**	*e*P	**P**	**00 16 00.2**	**+0.1**
ASAR	**Alice Springs**	**33.53**	**256**	P	**P**	**00 16 00.1**	**0.0**
ASAR				PcP	**PcP**	**00 18 39.8**	**-1.2**
ASAR	**Alice Springs**	**33.53**	**256**	P	**P**	**00 16 00.1**	**0.0**
	11nm,0.4s,baz=83,slow=8.7,SNR=182						
ASAR				PcP	**PcP**	**00 18 39.8**	**-1.2**
	0.8nm,0.9s,baz=104,slow=3.1,SNR=5.1						
ASAR				LR	LR	00 29 02.1	
	comp=Z,129nm,20.1s,baz=0.7,slow=35						
FITZ	**Fitzroy Crossi**	**41.64**	**264**	*e*P	**P**	**00 17 09.1**	**+0.3**
	8.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**41.64**	**264**	P	**P**	**00 17 09.4**	**+0.6**
	17nm,0.9s,baz=114,slow=6.8,SNR=36						
VNDA	**Vanda**	**58.52**	**182**	*e*P	**P**	**00 19 16.6**	**+0.5**
	1.0nm,0.7s						
VNDA	**Vanda**	**58.52**	**182**	P	**P**	**00 19 17.2**	**+1.1**
	0.4nm,0.4s,baz=358,slow=11,SNR=7.4						
VNDA				LR	LR	00 39 48.1	
	comp=Z,74nm,21.6s,baz=27,slow=31						
SBA	**Scott Base**	**58.75**	**181**	*e*P	P	00 19 19.8	+2.1
	8.5nm,1.0s						
MJAR	**Matsushiro Arr**	**62.87**	**332**	P	**P**	**00 19 46.1**	**-0.1**
MJAR	**Matsushiro Arr**	**62.87**	**332**	P	**P**	**00 19 46.1**	**-0.1**
	6.4nm,0.9s,baz=172,slow=7.2,SNR=10						
PETK	**Petropavlovsk-**	**72.71**	**352**	LR	LR	00 46 50.7	
	comp=Z,43nm,19.7s,baz=172,slow=31						
MAW	**Mawson**	**78.66**	**202**	P	**P**	**00 21 23.4**	**+1.5**
	3.8nm,0.7s,baz=141,slow=4.3,SNR=8.4						
MAW				LR	LR	00 51 56.4	
	comp=Z,86nm,20.8s,baz=298,slow=32						
CMAR	**Chiang Mai Arr**	**78.83**	**294**	P	P	00 21 25.6	+1.9
CMAR	**Chiang Mai Arr**	**78.83**	**294**	P	P	00 21 25.6	+1.9
	1.2nm,0.7s,baz=128,slow=9.3,SNR=7.6						
ULN	**Ulaanbatar**	**87.04**	**323**	*e*P	**P**	**00 22 05.6**	**-0.2**
	6.2nm,1.3s						
SONM	**Songino Array**	**87.39**	**323**	P	**P**	**00 22 08.0**	**+0.5**
SONM	**Songino Array**	**87.39**	**323**	P	**P**	**00 22 08.0**	**+0.5**
	1.7nm,0.8s,baz=142,slow=6.0,SNR=12						
SONM				LR	LR	01 00 42.9	
	comp=Z,28nm,21.2s,baz=210,slow=35						
NVAR	**Mina Array Bea**	**88.45**	**48**	P	P	00 22 14.9	+2.0
NVAR	**Mina Array Bea**	**88.45**	**48**	P	P	00 22 15.0	+2.0
	0.3nm,0.7s,baz=235,slow=5.2,SNR=3.7						
ILAR	**Eielson Array**	**90.04**	**17**	P	**P**	**00 22 17.7**	**-1.8**
ILAR	**Eielson Array**	**90.04**	**17**	P	**P**	**00 22 17.7**	**-1.8**
	0.7nm,0.9s,baz=228,slow=6.1,SNR=5.4						
ILAR				LR	LR	01 01 40.1	
	comp=Z,55nm,18.4s,baz=163,slow=35						
TXAR	**Lajitas Array**	**96.38**	**61**	LR	LR	00 57 36.3	
	comp=Z,47nm,20.7s,baz=5.0,slow=30						
MKAR	**Makanchi Array**	**101.96**	**315**	P	**Pdif**	**00 23 15.3**	**+1.2**
MKAR	**Makanchi Array**	**101.96**	**315**	P	**Pdif**	**00 23 15.3**	**+1.2**
	0.4nm,0.9s,baz=91,slow=6.3,SNR=3.5						
ARCES	**ARCESS Array B**	**125.09**	**345**	PKP	**PKPdf**	**00 28 19.1**	**-0.8**
ARCES	**ARCESS Array B**	**125.09**	**345**	PKP	**PKPdf**	**00 28 19.1**	**-0.8**
	1.3nm,0.7s,baz=34,slow=3.2,SNR=6.9						
GERES	**GERESS Array B**	**144.61**	**332**	PKP	**PKPdf**	**00 28 55.5**	**-1.4**
GERES	**GERESS Array B**	**144.61**	**332**	PKP	**PKPdf**	**00 28 55.5**	**-1.4**
	1.9nm,0.9s,baz=46,slow=3.9,SNR=12						

*ISCJB **25** 00:12:46.3±0.5,50.°16N±0.°04×19.°08E±0.°03,h0km,Error*
ellipse: s-maj=5.8km s-min=2.5km az=8.8
*CSEM **25** 00:12:47.4±0.3,50.°14N×19.°13E,h2km,ML2.8/6,Error*
ellipse: s-maj=9.3km s-min=3.0km az=7.0
*PRU **25** 00:12:48.1,50.°18N×19.°11E,h0km*
*WAR **25** 00:12:48.5,50.°10N×19.°22E*
*IPEC **25** 00:12:49.4±0.4,50.°15N×19.°07E,h0km,ML2.0/3,Error*
ellipse: s-maj=2.6km s-min=2.1km az=128.0
ISC 25 00:12:48.1±0.8**,50.°07N**±0.°05×**19.°20E**±0.°02**,h0**km**,n30,**

σ1ᵍ33/50, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.41**	**69**	*e*Pg	**Pg**	**00 12 55.6**	**-0.5**
OJC				*i* Sg	**Sg**	**00 13 01.5**	**+0.1**
OKC	**Ostrava-Krasne**	**0.72**	**251**	*e*PG	**Pg**	**00 13 01.6**	**-0.3**
OKC				*e*SG	**Sg**	**00 13 09.4**	**-1.7**
	comp=Z,15nm,0.3s						
OKC	**Ostrava-Krasne**	**0.72**	**251**	Pg	**Pg**	**00 13 01.6**	**-0.3**
OKC				Sg	**Sg**	**00 13 09.4**	**-1.7**
	15nm,0.3s						
NIE	**Niedzica**	**0.97**	**132**	*e*Pg	**Pb**	**00 13 07.5**	**-0.4**
NIE				*e*Sg	**Sn**	**00 13 24.0**	**+0.4**
NIE	**Niedzica**	**0.97**	**132**	*e*Pg	**Pb**	**00 13 07.5**	**-0.4**
NIE				*e*Sg	**Sn**	**00 13 24.0**	**+0.4**
MORC	**Moravsky Berou** baz=68	**1.11**	**255**	*e*Pg	**Pg**	**00 13 09.2**	**-0.2**
MORC				*e*Sg	**Sg**	**00 13 22.4**	**-1.3**
	20nm,0.3s,baz=68						
STHS	**Stebnicka Huta**	**1.48**	**115**	*e*PN	**Pb**	**00 13 17.0**	**+0.5**
STHS				*e*SN	**Sn**	**00 13 39.5**	**+3.4**
STHS	**Stebnicka Huta**	**1.48**	**115**	*e*Pn	**Pb**	**00 13 17.0**	**+0.5**
VYHS	**Vyhne**	**1.59**	**189**	*e*PN	**Pn**	**00 13 16.9**	**-0.7**
VYHS				*e*SN	**Sn**	**00 13 38.3**	**-0.6**
KECS	**Kecovo**	**1.80**	**152**	*e*PN	**Pn**	**00 13 19.5**	**-0.9**
KECS				*e*SN	**Sn**	**00 13 43.8**	**-0.1**
KECS	**Kecovo**	**1.80**	**152**	*e*Pn	**Pn**	**00 13 19.5**	**-0.9**
KECS				*e*Sn	**Sn**	**00 13 43.8**	**-0.1**
VRAC	**Vranov** 12nm,0.6s,baz=61	**1.85**	**247**	*e*Sg	**Sn**	**00 13 46.2**	**+0.9**
DPC	**Dobruska-Polom**	**1.87**	**280**	*e*PG	**Pn**	**00 13 21.5**	**+0.1**
DPC				*e*SG	**Sn**	**00 13 44.1**	**-1.6**
DPC	**Dobruska-Polom**	**1.87**	**280**	Pg	**Pn**	**00 13 21.5**	**+0.1**
DPC				Sg	**Sn**	**00 13 44.1**	**-1.6**
CRVS	**Cervenica-Dubn**	**1.88**	**128**	*e*PN	**Pn**	**00 13 21.4**	**-0.2**
CRVS				*e*SN	**Sn**	**00 13 46.1**	**+0.1**
CRVS	**Cervenica-Dubn**	**1.88**	**128**	*e*Pn	**Pn**	**00 13 21.4**	**-0.2**
CRVS				*e*Sn	**Sn**	**00 13 46.1**	**+0.1**
SMOL	**Smolenice**	**1.94**	**217**	*e*	Pg	00 13 29.8	+4.5
SMOL	**Smolenice**	**1.94**	**217**	*e*SN	**Sn**	**00 13 47.6**	**+0.2**
SMOL	**Smolenice**	**1.94**	**217**	*e*Sn	**Sn**	**00 13 47.6**	**+0.2**
KSP	**Ksiaz**	**2.01**	**294**	*e*Pg	**Pb**	**00 13 25.1**	**-0.5**
KSP				*e*Sg	**Sb**	**00 13 50.8**	**-0.3**
KRUC	**Moravsky** baz=57	**2.08**	**242**	*e*Pn	**Pn**	**00 13 25.0**	**+0.7**
KRUC				*e*Sn	**Sn**	**00 13 52.8**	**+1.8**
	8.9nm,0.6s,baz=57						
KOLS	**Kolonicke sedl**	**2.31**	**118**	*e*PG	**Pg**	**00 13 32.3**	**0.0**
KOLS				*e*SN	**Sb**	**00 13 59.0**	**-0.6**
KOLS	**Kolonicke sedl**	**2.31**	**118**	*e*Pg	**Pg**	**00 13 32.3**	**0.0**
KOLS				*e*Sn	**Sb**	**00 13 59.0**	**-0.6**
PRU	**Pruhonice** comp=Z,6.3nm,0.7s	**3.00**	**270**	*e*SG	**Sb**	**00 14 20.8**	**+1.1**
PRU	**Pruhonice** 6.3nm,0.7s	**3.00**	**270**	Sg	**Sb**	**00 14 20.8**	**+1.1**
PVCC	**Panska Ves** comp=Z,9.0nm,0.3s	**3.00**	**281**	*e*SG	**Sb**	**00 14 21.4**	**+1.7**
PVCC	**Panska Ves** 9.0nm,0.3s	**3.00**	**281**	Sg	**Sb**	**00 14 21.4**	**+1.7**
BRG	**Berggiesshubel** 3.8nm,0.5s	**3.45**	**285**	SG	Sg	00 14 46.6	+7.6
KHC	**Kasperske Hory**	**3.77**	**258**	*e*PG	**Pg**	**00 14 00.0**	**-0.4**
KHC				*e*SN	**Sn**	**00 14 32.0**	**-0.7**
KHC				*e*SG	**Sb**	**00 14 46.3**	**+4.4**
	comp=Z,2.7nm,0.5s						
KHC	**Kasperske Hory**	**3.77**	**258**	Pg	**Pg**	**00 14 00.0**	**-0.4**
KHC				Sn	**Sn**	**00 14 32.0**	**-0.7**
KHC				Sg	**Sb**	**00 14 46.3**	**+4.4**
	2.7nm,0.5s						

*MOS **25** 00:26:10.6±1.7,50.°79N×157.°29E,h22ᵏᵐ,mb4.2/1,Error ellipse: s-maj=45.9km s-min=13.7km az=69.3*
*KRSC **25** 00:26:12.1±0.5,50.°90N×157.°50E,h11ᵏᵐ±10ᵏᵐ,ML4.0*
ISC 25 00:26:09.0±2.2,**50.°7N**±0.°1×**157.°43E**±0.°07,**h7**ᵏᵐ±16ᵏᵐ,
n26, σ1ᵍ**41**/40, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.84**	**267**	*e*PN	**Pg**	**00 26 24.3**	**-0.8**
SKR				*i* S	**Sg**	**00 26 36.0**	**+0.1**
SKR				pmax	pmax		
	comp=Z,250nm,0.5s						
SKR				pmax	pmax		
	comp=N,230nm,0.2s						
SKR				pmax	pmax		
	comp=E,150nm,0.2s						
SKR				smax	smax		
	comp=N,1μm,0.2s						
SKR				smax	smax		
	comp=E,2μm,0.2s						
SKR	**Severo-Kuril's**	**0.84**	**267**	*i* P	**Pn**	**00 26 27.6**	**+0.4**
SKR				*e*S	**Sb**	**00 26 38.6**	**+1.3**
MIPR	**Malaya Ipel'ka**	**1.60**	**345**	*e*P	**Pn**	**00 26 38.4**	**+0.6**
MIPR				*e*S	**Sn**	**00 26 57.5**	**-1.2**
ASAK	**Asacha**	**1.68**	**10**	*e*P	**Pn**	**00 26 39.5**	**+0.6**
ASAK				*e*S	**Sn**	**00 26 59.0**	**-1.7**
MTVR	**Mutnovka**	**1.82**	**15**	*e*P	**Pn**	**00 26 41.6**	**+0.8**
MTVR				*e*S	**Sn**	**00 27 02.9**	**-1.3**
RUS	**Russkaya**	**1.83**	**21**	PN	**Pn**	**00 26 41.0**	**+0.1**
RUS				S	**Sn**	**00 27 02.0**	**-2.4**
RUS	**Russkaya**	**1.83**	**21**	*e*P	**Pn**	**00 26 41.0**	**+0.1**
RUS				*e*S	**Sn**	**00 27 02.0**	**-2.4**
GRL	**Gorelyy**	**1.87**	**12**	P	**Pn**	**00 26 42.5**	**+1.0**
GRL				*e*S	**Sn**	**00 27 04.4**	**-1.0**
APC	**Apacha**	**2.20**	**356**	*e*P	**Pn**	**00 26 46.8**	**+0.8**
APC				*e*S	**Sn**	**00 27 12.2**	**-1.3**
PET	**Petropavlovsk**	**2.42**	**18**	*e*PN	**Pn**	**00 26 51.0**	**+2.1**
PET				*e*S	**Sn**	**00 27 17.6**	**-1.2**
PET				pmax	pmax		
	comp=Z,24nm,0.3s						
PET				smax	smax		
	comp=E,236nm,0.6s						
PET	**Petropavlovsk**	**2.42**	**18**	P	**Pn**	**00 26 49.4**	**+0.5**
PET				*e*S	**Sn**	**00 27 17.4**	**-1.4**
UGLR	**Uglovaya**	**2.63**	**19**	*e*P	**Pn**	**00 26 54.4**	**+2.5**
UGLR				*e*S	**Sn**	**00 27 24.7**	**+0.6**
KOK	**Koryaka**	**2.67**	**16**	P	**Pn**	**00 26 55.2**	**+2.7**
KOK				*e*S	**Sn**	**00 27 26.0**	**+0.8**
SMAR	**Somma**	**2.67**	**18**	*e*P	**Pn**	**00 26 55.1**	**+2.4**
SMAR				S	**Sn**	**00 27 25.7**	**+0.3**
KRER	**Koryakskii**	**2.70**	**17**	P	**Pn**	**00 26 55.5**	**+2.4**
KRER				*e*S	**Sn**	**00 27 26.3**	**+0.2**
SDLR	**Sedlovina**	**2.71**	**19**	*e*P	**Pn**	**00 26 54.1**	**+1.1**
SDLR				*e*S	**Sn**	**00 27 24.8**	**-1.2**
SPN	**Mys Shipunski**	**2.86**	**33**	PN	**Pn**	**00 26 56.0**	**+0.9**
SPN	**Mys Shipunski**	**2.86**	**33**	*e*P	**Pn**	**00 26 56.0**	**+0.9**
SPN				*e*S	**Sn**	**00 27 28.0**	**-1.8**
GNL	**Ganaly**	**2.98**	**6**	*e*P	**Pn**	**00 26 58.3**	**+1.4**
GNL				S	**Sn**	**00 27 31.4**	**-1.6**
KII	**Karymskiy**	**3.53**	**20**	S	**Sn**	**00 27 46.8**	**+0.4**
MKZ	**Mys Kozlova**	**4.64**	**33**	PN	**Pn**	**00 27 19.8**	**+0.4**
MKZ	**Mys Kozlova**	**4.64**	**33**	P	**Pn**	**00 27 19.8**	**+0.4**
TUMR	**Tumrok**	**4.85**	**19**	P	Pn	00 27 26.2	+3.8
ESO	**Esso**	**5.26**	**8**	PN	Pn	00 27 31.0	+3.0
ESO	**Esso**	**5.26**	**8**	P	Pn	00 27 31.0	+3.0
KUR	**Kuril'sk**	**8.45**	**233**	*e*PN	Pn	00 28 15.5	+3.8

*NEIC **25** 00:29:57.0,38.°96S×175.°74E,h3ᵏᵐ,ML3.5(WEL),After WEL.*
NEIC Felt [IV] at Turangi.
WEL 25 00:29:56.8±0.1,**38.°97S**×**175.°75E,h5**ᵏᵐ,**ML3.5**/35,
14C-8D,Error ellipse: s-maj=0.9km s-min=0.6km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KATZ	**Kakaramea**	**0.04**	**262**	⇑P*	Pg	00 29 58.5	+0.2
KATZ				S*	Sg	00 29 60.0	+0.7
KATZ				AML	AML	00 30 02.0	
KATZ	**Kakaramea**	**0.04**	**262**	P*	Pg	00 29 58.5	+0.2
KATZ				S*	Sg	00 29 60.0	+0.7
RITZ	**Rihia Road**	**0.08**	**96**	⇑PG	Pg	00 29 58.7	0.0
RITZ				AML	AML	00 30 04.0	
RITZ				AML	AML	00 30 04.8	
RITZ	**Rihia Road**	**0.08**	**96**	P*	Pg	00 29 58.7	0.0
RATZ	**Rangitukua**	**0.10**	**8**	⇓PG	Pg	00 29 59.3	+0.2
RATZ				AML	AML	00 30 04.2	
RATZ				AML	AML	00 30 04.5	
RATZ	**Rangitukua**	**0.10**	**8**	P*	Pg	00 29 59.3	+0.2
KRVZ	**Karewarewa**	**0.15**	**214**	⇓PG	Pg	00 30 00.5	+0.3
KRVZ				AML	AML	00 30 03.8	
KRVZ				AML	AML	00 30 05.1	
KRVZ	**Karewarewa**	**0.15**	**214**	P*	Pg	00 30 00.5	+0.3
WTVZ	**West Tongariro**	**0.19**	**221**	⇓PG	Pg	00 30 01.2	+0.3
WTVZ				SG	Sg	00 30 04.5	+0.9
WTVZ				AML	AML	00 30 04.9	
WTVZ	**West Tongariro**	**0.19**	**221**	Pg	Pg	00 30 01.2	+0.3
WTVZ				Sg	Sg	00 30 04.5	+0.9
OTVZ	**Oturere**	**0.21**	**199**	⇓PG	Pg	00 30 01.5	+0.3
OTVZ				AML	AML	00 30 05.3	
OTVZ				AML	AML	00 30 05.5	
OTVZ	**Oturere**	**0.21**	**199**	Pg	Pg	00 30 01.5	+0.3
NGZ	**Ngauruhoe**	**0.24**	**210**	⇓PG	Pg	00 30 02.1	+0.4
NGZ				AML	AML	00 30 08.4	
NGZ				AML	AML	00 30 10.7	
NGZ	**Ngauruhoe**	**0.24**	**210**	Pg	Pg	00 30 02.1	+0.3
WATZ	**Wairara**	**0.26**	**357**	PG	Pg	00 30 02.3	+0.4
WATZ				AML	AML	00 30 06.8	
WATZ				AML	AML	00 30 07.4	
WATZ	**Wairara**	**0.26**	**357**	Pg	Pg	00 30 02.3	+0.4
TWVZ	**Taurewa**	**0.27**	**247**	⇑PG	Pg	00 30 02.5	+0.3
TWVZ				AML	AML	00 30 06.6	
TWVZ				AML	AML	00 30 07.6	
TWVZ	**Taurewa**	**0.27**	**247**	Pg	Pg	00 30 02.5	+0.3
HATZ	**Hinemaiaia**	**0.28**	**74**	⇑PG	Pg	00 30 01.9	-0.4
HATZ				AML	AML	00 30 06.0	
HATZ				AML	AML	00 30 06.1	
WPVZ	**Whakapapa**	**0.28**	**214**	PG	Pg	00 30 02.9	+0.3
WPVZ				AML	AML	00 30 08.1	
WPVZ				AML	AML	00 30 09.6	
WPVZ	**Whakapapa**	**0.28**	**214**	Pg	Pg	00 30 02.9	+0.3
TUVZ	**Tukino**	**0.31**	**194**	⇑PG	Pg	00 30 03.4	+0.4
TUVZ				AML	AML	00 30 09.1	
TUVZ				AML	AML	00 30 14.2	
TUVZ	**Tukino**	**0.31**	**194**	Pg	Pg	00 30 03.4	+0.4
FWVZ	**Far West T-bar**	**0.33**	**208**	⇓PG	Pg	00 30 03.6	+0.1
FWVZ				AML	AML	00 30 09.0	
FWVZ				AML	AML	00 30 11.4	
DRZ	**Dome Shelter**	**0.34**	**205**	⇑PG	Pg	00 30 04.1	+0.2
DRZ				AML	AML	00 30 15.8	
DRZ				AML	AML	00 30 16.8	
DRZ	**Dome Shelter**	**0.34**	**205**	Pg	Pg	00 30 04.1	+0.2
WHTZ	**Whakaora**	**0.34**	**28**	PG	Pg	00 30 04.4	+0.8
WHTZ	**Whakaora**	**0.34**	**28**	Pg	Pg	00 30 04.3	+0.8
TRVZ	**Turoa**	**0.37**	**206**	PG	Pg	00 30 04.4	+0.1
TRVZ				AML	AML	00 30 12.7	
TRVZ				AML	AML	00 30 15.1	
WNVZ	**Wahianoa**	**0.38**	**198**	PG	Pg	00 30 04.6	+0.2
WNVZ				AML	AML	00 30 10.9	
WNVZ				AML	AML	00 30 12.5	
MOVZ	**Moawhango**	**0.44**	**180**	⇑PG	Pg	00 30 05.4	-0.1
MOVZ				SG	Sg	00 30 10.9	-0.4
MOVZ				AML	AML	00 30 11.0	
PKVZ	**Pokaka**	**0.45**	**224**	⇓PG	Pg	00 30 05.9	+0.2
PKVZ				AML	AML	00 30 19.0	
PKVZ				AML	AML	00 30 20.6	
MTVZ	**Mangateitei**	**0.47**	**208**	PG	Pg	00 30 06.1	+0.1
MTVZ				AML	AML	00 30 13.5	
MTVZ				AML	AML	00 30 14.8	
BHHZ	**Black Hill Sta**	**0.57**	**155**	⇑PG	Pg	00 30 07.9	-0.1
BKZ	**Black Stump Fm**	**0.61**	**109**	⇑P*	Pg	00 30 08.6	-0.1
BKZ				AML	AML	00 30 17.7	
BKZ				AML	AML	00 30 19.1	
BKZ	**Black Stump Fm**	**0.61**	**109**	Pg	Pg	00 30 08.6	-0.1
ALRZ	**Allen Road**	**0.61**	**49**	P*	Pb	00 30 09.4	-0.7
PRRZ	**Plateau Road**	**0.69**	**47**	P*	Pg	00 30 10.7	+0.6
HRRZ	**Handcock Road**	**0.71**	**36**	P*	Pb	00 30 11.6	-0.2
VRZ	**Vera Road**	**0.79**	**258**	P*	Pg	00 30 12.2	+0.2
VRZ				AML	AML	00 30 27.3	
VRZ				AML	AML	00 30 28.0	
NMHZ	**Naumai**	**0.83**	**99**	⇑P*	Pb	00 30 13.5	-0.4
HIZ	**Hauiti**	**0.84**	**303**	⇑P*	Pg	00 30 13.0	+0.1
HIZ				AML	AML	00 30 27.7	
HIZ				AML	AML	00 30 27.8	
HIZ	**Hauiti**	**0.84**	**303**	P*	Pg	00 30 13.0	+0.1
RRRZ	**Republican Roa**	**0.87**	**44**	P*	Pb	00 30 14.9	+0.5
MCHZ	**McNeill Hill**	**0.87**	**123**	⇑P*	Pb	00 30 15.0	+0.5
WAZ	**Wanganui**	**0.98**	**217**	⇓P*	Pg	00 30 15.6	-0.2
WAZ				AML	AML	00 30 32.7	
WAZ				AML	AML	00 30 39.6	
PNHZ	**Pukenui**	**1.01**	**160**	⇑P*	Pg	00 30 16.3	+0.1
PNHZ				S*	Sg	00 30 29.2	-0.2
PNHZ	**Pukenui**	**1.01**	**160**	P*	Pg	00 30 16.3	+0.1
PNHZ				S*	Sg	00 30 29.1	-0.2
RAHZ	**Arahi**	**1.04**	**88**	⇑P*	Pb	00 30 17.2	-0.2
RAHZ	**Arahi**	**1.04**	**88**	P*	Pb	00 30 17.2	-0.2
TSZ	**Takapari Road**	**1.10**	**172**	P*	Pg	00 30 18.0	-0.1
TSZ				AML	AML	00 30 32.1	
TSZ				AML	AML	00 30 33.5	
RAEZ	**Rainy Point**	**1.10**	**253**	P*	Pn	00 30 18.9	-0.1
MHEZ	**Mangahewa**	**1.12**	**264**	P*	Pg	00 30 18.1	-0.3
KAHZ	**Kahuranaki**	**1.20**	**134**	P*	Pn	00 30 21.1	+0.7
WPHZ	**Waipukurau**	**1.22**	**154**	P*	Pn	00 30 21.0	+0.4
DREZ	**Durham Road**	**1.23**	**259**	P*	Pn	00 30 21.1	+0.4
CKHZ	**Cape Kidnapper**	**1.24**	**124**	P*	Pn	00 30 22.1	+1.3
TOZ	**Tahuroa Road**	**1.25**	**351**	P*	Pg	00 30 19.3	-1.5
URZ	**Urewera**	**1.28**	**57**	P*	Pn	00 30 20.1	-1.3
URZ				AML	AML	00 30 40.4	
URZ				AML	AML	00 30 47.6	
URZ	**Urewera**	**1.28**	**57**	*e*P	Pn	00 30 20.0	-1.4
NEZ	**North Egmont**	**1.32**	**256**	P*	Pg	00 30 22.8	+0.4
DFE	**Dawson Falls**	**1.33**	**254**	P*	Pg	00 30 23.3	+0.8
PXZ	**Pawanui**	**1.36**	**141**	PN	Pg	00 30 23.8	+0.7
PXZ				AML	AML	00 30 47.5	
PXZ				AML	AML	00 30 59.1	
DVHZ	**Dannevirke**	**1.37**	**167**	PN	Pg	00 30 23.3	+0.2
PKE	**Pukeiti**	**1.39**	**260**	PN	Pb	00 30 23.4	0.0
PKE				AML	AML	00 30 45.1	
PKE				AML	AML	00 30 46.4	
PKE	**Pukeiti**	**1.39**	**260**	Pn	Pb	00 30 23.5	+0.1
POWZ	**Post Office Ro**	**1.42**	**180**	PN	Pb	00 30 23.8	0.0
PRHZ	**Porangahau**	**1.47**	**153**	PN	Pg	00 30 25.7	+0.7
NWEZ	**Newall Road**	**1.50**	**258**	PN	Pg	00 30 25.6	0.0
MWZ	**Matawai**	**1.53**	**66**	P*	Pn	00 30 23.7	-1.2
MWZ				AML	AML	00 30 51.8	
MRZ	**Mangatainoka R**	**1.70**	**184**	PN	Pb	00 30 28.5	-0.1
MRZ				AML	AML	00 30 32.2	
MRZ				AML	AML	00 31 01.0	
BFZ	**Birch Farm**	**1.75**	**168**	PN	Pb	00 30 29.4	-0.1
TIWZ	**Tintock**	**1.81**	**177**	PN	Pg	00 30 30.2	-0.2
OGWZ	**Otaki Gorge**	**1.90**	**193**	PN	Pb	00 30 31.5	-0.5
MKAZ	**Moumakai**	**1.91**	**346**	PN	Pn	00 30 29.8	-0.3
HOWZ	**Holdsworth Sta**	**1.94**	**185**	PN	Pb	00 30 31.8	-0.8
KIW	**Kapiti Island**	**2.00**	**199**	PN	Pb	00 30 32.7	-1.0
KIW				AML	AML	00 31 06.7	
KIW				AML	AML	00 31 07.1	
KIW	**Kapiti Island**	**2.00**	**199**	Pn	Pb	00 30 32.7	-1.0
TMWZ	**Te Maipa**	**2.14**	**177**	PN	Pb	00 30 36.9	+0.8
MTW	**Mount Morrison**	**2.19**	**185**	PN	Pb	00 30 37.0	0.0
MTW				AML	AML	00 31 13.0	
MTW				AML	AML	00 31 14.6	
CAW	**Cannon Point**	**2.20**	**194**	PN	Pn	00 30 35.2	+1.1
CAW				AML	AML	00 31 10.5	
CAW				AML	AML	00 31 12.2	
DUWZ	**D'Urville Isla**	**2.31**	**217**	PN	Pb	00 30 38.0	-1.0
SNZO	**South Karori**	**2.47**	**199**	PN	Pb	00 30 41.1	-0.7
SNZO				AML	AML	00 31 17.4	
TCW	**Tory Channel**	**2.51**	**206**	PN	Pb	00 30 40.9	-1.5
TCW				AML	AML	00 31 20.3	
TCW				AML	AML	00 31 23.6	
TUWZ	**Tuamarina**	**2.82**	**209**	PN	Pb	00 30 47.2	-0.5
TUWZ				AML	AML	00 31 29.3	
NNZ	**Nelson**	**2.89**	**218**	PN	Pb	00 30 46.6	-2.3
BSWZ	**Blackbirch Sta**	**3.09**	**207**	PN	Pb	00 30 52.4	0.0
QRZ	**Quartz Range**	**3.10**	**232**	PN	Pn	00 30 47.4	+1.0
THZ	**Tophouse**	**3.54**	**217**	PN	Pn	00 30 54.5	+2.0

*ISCJB **25** 00:39:14.8±1.1,23.°96N±0.°02×122.°30E±0.°02,h11ᵏᵐ±8ᵏᵐ, Error ellipse: s-maj=4.3km s-min=2.6km az=158.9*
*TAP **25** 00:39:15.9,24.°04N×122.°28E,h24ᵏᵐ,ML3.1,C*
*JMA **25** 00:39:17.2±0.2,24.°39N×122.°25E,h47ᵏᵐ,M2.6*
ISC 25 00:39:14.5±1.1,**23.°98N**±0.°03×**122.°27E**±0.°02,**h15**ᵏᵐ±9ᵏᵐ,
n39, σ0ᵍ**61**/63, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=274	**0.63**	**280**	P	**Pn**	**00 39 28.2**	**-0.7**
TWD				S	**Sn**	**00 39 37.2**	**-1.5**
ENA	**Nanau** baz=316	**0.66**	**313**	P	**Pb**	**00 39 28.2**	**+0.4**
TWC	**Suao** baz=329	**0.74**	**329**	*i* P	**Pb**	**00 39 29.1**	**-0.1**
TWC				S	**Sg**	**00 39 38.1**	**-0.6**
	baz=329						
ESL	**Shilin** baz=242	**0.79**	**258**	P	**Pb**	**00 39 30.3**	**+0.4**
ESL				*e*S	**Sg**	**00 39 39.9**	**-0.3**
	baz=242						
YOJ	**Yonaguni jima**	**0.83**	**54**	P	**Pg**	**00 39 30.9**	**+0.2**
YOJ				*e*S	**Sb**	**00 39 40.7**	**-1.0**
ENTT	**Nioudou** baz=312	**0.92**	**316**	*e*P	**Pn**	**00 39 33.3**	**+0.3**
TWE	**Neicheng** baz=321	**0.92**	**323**	P	**Pn**	**00 39 32.9**	**-0.1**
WHF	**Hehuan Shan** baz=264	**0.94**	**281**	P	**Pg**	**00 39 33.2**	**+0.4**
WHF				S	**Sg**	**00 39 45.5**	**+0.4**
	baz=264						
NNS	**Nan Shan** baz=285	**0.94**	**300**	*e*P	**Pn**	**00 39 33.3**	**0.0**
EHY	**Hungye** baz=239	**0.99**	**242**	*e*P	**Pg**	**00 39 33.9**	**+0.2**
EHY				S	**Sb**	**00 39 46.7**	**+0.4**
	baz=239						
TWT	**Tachien** baz=272	**1.04**	**286**	*e*P	**Pg**	**00 39 35.0**	**+0.3**
TWT				*e*S	**Sn**	**00 39 49.7**	**+0.6**
	baz=272						
TWB1	**Santiao Chiao** baz=356	**1.06**	**346**	*e*P	**Pb**	**00 39 34.2**	**-0.3**
TWB1				*e*S	**Sn**	**00 39 49.0**	**-0.4**
	baz=356						
NSK	**Sanguang** baz=307	**1.09**	**310**	P	**Pg**	**00 39 35.6**	**0.0**
TWF1	**Yuli** baz=233	**1.09**	**235**	P	**Pn**	**00 39 35.4**	**+0.1**
TWF1				S	**Sb**	**00 39 49.8**	**+0.6**
	baz=233						
NWF	**Wu-fen Shan** baz=334	**1.18**	**338**	P	**Pg**	**00 39 36.9**	**-0.4**
NWF				*e*S	**Sn**	**00 39 52.1**	**-0.3**
	baz=334						
CHKT	**Chengkung** baz=211	**1.21**	**224**	*e*P	**Pb**	**00 39 37.2**	**+0.1**
CHKT				*e*S	**Sb**	**00 39 51.0**	**-1.5**
	baz=211						
SMLT	**Sun Moon Lake** baz=263	**1.26**	**266**	*e*P	**Pb**	**00 39 38.5**	**+0.4**
SMLT				*e*S	**Sb**	**00 39 54.3**	**+0.2**
	baz=263						
TYC	**Yuchr** baz=264	**1.30**	**267**	P	**Pb**	**00 39 38.9**	**+0.3**
TYC				*e*S	**Sn**	**00 39 55.3**	**+0.1**
	baz=264						
YUS	**Yu-Shan** baz=246	**1.30**	**248**	*e*P	**Pb**	**00 39 39.7**	**+0.6**
YUS				*e*S	**Sb**	**00 39 55.8**	**0.0**
	baz=246						
NSTT	**Nanjuang** baz=296	**1.33**	**300**	*e*P	**Pg**	**00 39 40.0**	**-0.2**
NSTT				*e*S	**Sg**	**00 39 57.5**	**0.0**
	baz=296						
TWS1	**Kuangyinshan** baz=306	**1.36**	**325**	*e*P	**Pb**	**00 39 40.0**	**+0.2**
IRIF	**Iriomote-Funau**	**1.38**	**75**	P	**Pb**	**00 39 40.2**	**+0.2**
IRIF				*e*S	**Sb**	**00 39 57.4**	**-0.1**
ELDTW	**Lidau** baz=235	**1.39**	**236**	*e*P	**Pn**	**00 39 39.9**	**+0.3**
ELDTW				S	**Sn**	**00 39 56.6**	**-1.2**
	baz=235						
HATJ	**Hateruma jima**	**1.40**	**86**	*e*S	**Sg**	**00 39 59.2**	**-0.7**
TWQ1	**Liyutan** baz=269	**1.42**	**285**	*e*P	**Pb**	**00 39 41.2**	**+0.5**
TWQ1				*e*S	**Sg**	**00 40 00.6**	**+0.3**
	baz=269						
ALS	**Alishan** baz=249	**1.42**	**251**	*e*P	**Pb**	**00 39 40.8**	**-0.2**
ALS				*e*S	**Sn**	**00 39 58.6**	**-0.1**
	baz=249						
TWY	**Chenhua** baz=349	**1.43**	**335**	*e*P	**Pg**	**00 39 41.3**	**-0.8**
TCU	**Taichung** baz=274	**1.47**	**277**	*e*S	**Sg**	**00 40 02.4**	**+0.4**
CHN5	**Tsauling** baz=244	**1.51**	**256**	*e*P	**Pg**	**00 39 43.3**	**-0.3**
CHN5				*e*S	**Sb**	**00 40 02.1**	**+0.8**
	baz=244						
TWG	**Pinlang** baz=224	**1.59**	**224**	*e*P	**Pn**	**00 39 42.5**	**+0.3**
TWG				*e*S	**Sn**	**00 40 01.2**	**-1.3**
	baz=224						
JKRS	**Kuro-shima**	**1.61**	**80**	*e*S	**Sb**	**00 40 04.5**	**+0.4**
PCYT	**Pengchaiyu** baz=352	**1.66**	**354**	*e*P	**Pn**	**00 39 43.5**	**+0.4**
WTP	**Ta-pu** baz=243	**1.69**	**245**	*e*P	**Pb**	**00 39 45.7**	**+0.4**
WTP				*e*S	**Sb**	**00 40 07.2**	**+0.8**
	baz=243						
JIJ	**Ishigaki jima**	**1.75**	**77**	P	**Pn**	**00 39 45.2**	**+0.8**
JIJ				*e*S	**Sn**	**00 40 07.0**	**+0.5**
TWK	**Hsinying** baz=245	**1.78**	**247**	*e*S	**Sg**	**00 40 10.9**	**-1.1**
CHN1	**Nanshi** baz

EFP				S	Sn	00 49 07.4	+2.3
IGT	Igoumenitsa	1.37	4	P	Pg	00 48 47.8	+0.2
IGT	Igoumenitsa	1.37	4	P	Pg	00 48 47.8	+0.2
LAKA	Lakka	1.40	86	P	Pn	00 48 46.5	-0.8
LAKA				S	Sb	00 49 05.9	0.0
LAKA	Lakka	1.40	86	P	Pn	00 48 46.5	-0.8
LAKA				S	Sb	00 49 05.9	0.0
EVR	Evrytania	1.47	59	*e*PB	Pg	00 48 49.9	+0.4
EVR	Evrytania	1.47	59	*e*Pb	Pg	00 48 49.9	+0.4
TRIZ	Trizonia	1.49	82	P	Pn	00 48 47.9	-0.5
TRIZ	Trizonia	1.49	82	P	Pn	00 48 47.9	-0.5
KALE	Kalithea	1.54	81	P	Pn	00 48 48.9	-0.4
KALE	Kalithea	1.54	81	P	Pn	00 48 48.9	-0.4
KLV	Kalavryta, Ach	1.54	94	*e*PG	Pb	00 48 50.6	+0.4
KLV	Kalavryta, Ach	1.54	94	*e*Pg	Pb	00 48 50.6	+0.4
JAN	Janina	1.58	19	*e*PB	Pg	00 48 51.5	0.0
JAN	Janina	1.58	19	*e*Pb	Pg	00 48 51.5	0.0
KEK	Kerkira	1.58	349	*e*PB	Pg	00 48 51.2	-0.4
KEK	Kerkira	1.58	349	*e*Pb	Pg	00 48 51.2	-0.4
ITM	Ithomi	1.68	125	*e*PB	Pb	00 48 52.2	-0.4
ITM	Ithomi	1.68	125	*e*Pb	Pb	00 48 52.2	-0.4
GUR	Goura	1.71	97	P	Pn	00 48 51.7	+0.2
GUR	Goura	1.71	97	*e*PN	Pb	00 48 52.9	-0.1
GUR	Goura	1.71	97	P	Pn	00 48 51.7	+0.2
GUR	Goura	1.71	97	*e*Pn	Pb	00 48 52.9	-0.1
SRN	Sarande	1.72	355	*e*PN	Pb	00 48 53.1	-0.2
SRN				*i* SN	Sg	00 49 26.4	+10
SRN	Sarande	1.72	355	P	Pb	00 48 53.2	-0.1
SRN				S	Sb	00 49 15.5	+0.4
SRN	Sarande	1.72	355	*e*Pn	Pb	00 48 53.1	-0.2
SRN				S	Sb	00 49 15.5	+0.4
PYL	PYLOS	1.76	135	*e*PG	Pb	00 48 54.6	+0.7
PYL	PYLOS	1.76	135	*e*Pg	Pb	00 48 54.6	+0.7
DSF	Desfina	1.85	82	P	Pn	00 48 54.0	+0.6
DSF	Desfina	1.85	82	P	Pn	00 48 54.0	+0.6
LTK	Loutraki	2.19	93	*e*PB	Pn	00 48 59.0	+0.9
LTK	Loutraki	2.19	93	*e*Pb	Pn	00 48 59.0	+0.9
DYR	Agios Nikonas	2.20	129	*e*PN	Pn	00 48 59.7	+1.5
DYR	Agios Nikonas	2.20	129	*e*Pn	Pn	00 48 59.7	+1.5
LKR	Lokris	2.25	77	*e*PB	Pn	00 48 59.7	+0.8
LKR	Lokris	2.25	77	*e*Pb	Pn	00 48 59.7	+0.8
DID	Didima	2.49	104	P	Pn	00 49 03.3	+1.0
DID	Didima	2.49	104	P	Pn	00 49 03.3	+1.0
KBN	Korca	2.50	10	*e*PN	Pb	00 49 06.7	+0.1
KBN	Korca	2.50	10	*e*Pn	Pb	00 49 06.7	+0.1
VLI	Veliai	2.61	123	*e*PN	Pb	00 49 06.7	-1.7
VLI	Veliai	2.61	123	*e*Pn	Pb	00 49 06.7	-1.7
NEO	Neokhori	2.62	63	*e*PB	Pn	00 49 05.3	+1.2
NEO	Neokhori	2.62	63	*e*Pb	Pn	00 49 05.3	+1.2
ATH	Athens Observa	2.78	93	*e*PB	Pn	00 49 08.7	+2.5
ATH	Athens Observa	2.78	93	*e*Pb	Pn	00 49 08.7	+2.5
BIA	Bitola	2.98	17	*e*Pn	Pn	00 49 11.3	+2.2
BIA				*e*Sg	Sn	00 49 45.7	+0.6
TIR	Tirane	3.19	355	*e*PN	Pn	00 49 13.7	+1.8
TIR				*i* SN	Sn	00 49 51.4	+1.2
TIR	Tirane	3.19	355	*e*Pn	Pn	00 49 13.7	+1.8
TIR				*i* Sn	Sn	00 49 51.4	+1.2
PHP	Peshkopia	3.52	3	*e*PN	Sn	00 49 58.8	+0.4
ULC	Ulcinj	3.87	349	*e*Pn	Pn	00 49 21.7	+0.5
ULC				*e*Sn	Sn	00 50 07.0	+0.1
ULC	Ulcinj	3.87	349	*e*Pn	Pn	00 49 21.7	+0.5
ULC				*e*Sn	Sn	00 50 07.0	+0.1
PUK	Puka	3.88	357	*e*PN	Pn	00 49 22.8	+1.3
PUK				*i* SN	Sn	00 50 09.7	+2.4
PUK	Puka	3.88	357	*e*Pn	Pn	00 49 22.8	+1.3
PUK				*i* Sn	Sn	00 50 09.7	+2.4
BUM	Brajici-Budva	4.25	347	*e*Pn	Pn	00 49 26.7	+0.2
BUM				*e*Sn	Sn	00 50 16.5	+0.1
BUM	Brajici-Budva	4.25	347	*e*Pn	Pn	00 49 26.7	+0.2
BUM				*e*Sn	Sn	00 50 16.5	+0.1
PDG	Podgorica	4.32	351	⇑*i*Pn	Pn	00 49 27.7	+0.3
PDG				*e*Sn	Sn	00 50 18.3	+0.3
TTG	Podgorica	4.32	351	⇑*i*Pn	Pn	00 49 27.7	+0.3
TTG				*e*Sn	Sn	00 50 18.3	+0.3
PVY	Plav	4.43	358	⇓*i*Pn	Pn	00 49 29.7	+0.7
PVY				*e*Sn	Sn	00 50 21.6	+0.7
PVY	Plav	4.43	358	⇓*i*Pn	Pn	00 49 29.7	+0.7
PVY				*e*Sn	Sn	00 50 21.6	+0.7
HCY	Herceg Novi	4.47	344	⇓*i*Pn	Pn	00 49 29.6	+0.1
HCY				*e*Sn	Sn	00 50 21.8	0.0
HCY	Herceg Novi	4.47	344	⇓*i*Pn	Pn	00 49 29.6	+0.1
HCY				*e*Sn	Sn	00 50 21.8	0.0
BEY	Berane	4.71	357	⇑*i*Pn	Pn	00 49 33.9	+1.1
BEY				*e*Sn	Sn	00 50 28.8	+1.1
IVA	Berane	4.71	357	⇑*i*Pn	Pn	00 49 33.9	+1.1
IVA				*e*Sn	Sn	00 50 28.8	+1.1
NKY	Niksic	4.74	349	⇓*i*Pn	Pn	00 49 34.1	+0.9
NKY				*e*Sn	Sn	00 50 28.4	0.0
NKY	Niksic	4.74	349	⇓*i*Pn	Pn	00 49 34.1	+0.9
NKY				*e*Sn	Sn	00 50 28.4	0.0
BRY	Bratogost	4.90	346	⇓*i*Pn	Pn	00 49 35.9	+0.4
BRY				*e*Sn	Sn	00 50 32.5	0.0
BRY	Bratogost	4.90	346	⇓*i*Pn	Pn	00 49 35.9	+0.4
BRY				*e*Sn	Sn	00 50 32.5	0.0
STON	Ston	5.08	339	*i* Pn	Pn	00 49 37.9	+0.1
STON				Sn	Sn	00 50 32.8	-3.7
STON	Ston	5.08	339	*i* Pn	Pn	00 49 37.8	+0.1
STON				Sn	Sn	00 50 32.8	-3.7
UPM	Unac-Piva	5.13	349	⇑*i*Pn	Pn	00 49 39.2	+0.5
UPM				*e*Sn	Sn	00 50 38.6	+0.4
UPM	Unac-Piva	5.13	349	⇑*i*Pn	Pn	00 49 39.2	+0.5
UPM				*e*Sn	Sn	00 50 38.6	+0.4
GRUS	Gruza	5.73	4	*e*Pn	Pn	00 49 46.3	-0.5
DIVS	Divibare	5.93	359	*e*Pn	Pn	00 49 50.7	+1.1
UDBI	Udbina	7.18	334	*i* Pn	Pn	00 50 08.7	+1.9
UDBI				Sn	Sn	00 51 27.5	-1.0
UDBI	Udbina	7.18	334	*i* Pn	Pn	00 50 08.6	+1.9
UDBI				Sn	Sn	00 51 27.5	-1.0
NVLJ	Novalja	7.55	330	*e*Pn	Pn	00 50 12.7	+1.1
NVLJ				Sn	Sn	00 51 35.6	-1.8
NVLJ	Novalja	7.55	330	*e*Pn	Pn	00 50 12.7	+1.1
NVLJ				Sn	Sn	00 51 35.6	-1.8
BOJS	Bojanci	8.21	335	*i* Pn	Pn	00 50 21.8	+1.0
BOJS	Bojanci	8.21	335	*i* Pn	Pn	00 50 21.8	+1.0
GBRS	Gornja Briga	8.39	333	*i* Pn	Pn	00 50 24.7	+1.4
CRES	Cresnjev	8.43	337	*i* Pn	Pn	00 50 24.2	+0.4
CRES	Cresnjev	8.43	337	*i* Pn	Pn	00 50 24.2	+0.4
MLR	Muntele Rosu	8.48	29	Pn	Pn	00 50 28.1	+3.4
	0.0nm,0.3s,baz=252,slow=17,SNR=3.4						
OBKA	Obir	9.33	335	⇓*e*Pn	Pn	00 50 36.2	0.0
	2.4nm,0.3s						
OBKA				⇓*i*Sn	Sn	00 52 19.1	-2.3
	5.6nm,0.4s						
OBKA	Obir	9.33	335	Pn	Pn	00 50 36.2	0.0
	2.4nm,0.3s						
OBKA				Sn	Sn	00 52 19.1	-2.3
	5.6nm,0.4s						
GERES	GERESS Array B	11.67	338	Pn	Pn	00 51 08.5	+0.3
	0.2nm,0.3s,baz=160,slow=14,SNR=5.3						
KBZ	Khabaz	18.00	65	P	Pn	00 52 31.8	-0.1
	0.1nm,0.3s,baz=293,slow=7.7,SNR=2.7						
ESDC	Sonseca Array	18.86	282	P	Pn	00 52 43.7	+1.3
	0.2nm,0.3s,baz=82,slow=12,SNR=3.2						
HFS	Hagfors	22.38	351	P	P	00 53 19.1	-0.7
	1.7nm,0.8s,baz=152,slow=23,SNR=2.8						
FINES	FINESS Array B	23.59	7	P	P	00 53 31.5	-0.8
	1.4nm,0.9s,baz=184,slow=17,SNR=3.9						
TORD	Torodi Ar. Bea	29.86	218	P	P	00 54 30.6	+1.2
	0.6nm,0.9s,baz=28,slow=9.7,SNR=3.7						
MKAR	Makanchi Array	45.52	58	P	P	00 56 39.6	-1.8
	0.4nm,0.5s,baz=273,slow=7.2,SNR=8.9						
ZALV	Zalesovo Beam	45.89	48	P	P	00 56 42.5	-1.6
	0.9nm,0.5s,baz=270,slow=9.2,SNR=5.1						

IDC ***25*** *00:56:38.7±0.7,6.82N×72.87W,h153km±6km,mb3.7/12, mb1 3.9/14,mb1mx3.6/25,mbtmp3.7/14,Error ellipse: s-maj=20.4km s-min=10.3km az=64.0*

ISCJB ***25*** *00:56:39.3±0.4,6.78N±0.04×72.94W±0.04,h173km±5km, mb4.0/31,Error ellipse: s-maj=7.5km s-min=6.1km az=24.9*

NEIC ***25*** *00:56:40.4±0.6,6.77N×73.09W,h162km±6km,mb4.2/24, Error ellipse: s-maj=9.6km s-min=6.0km az=82.0*

FUNV ***25*** *00:56:48.1,7.13N×72.62W,h136km,MW4.2*

ISC 25 00:56:38.2±0.5,6.89N±0.04×72.99W±0.04,h143km±4km, h143km:pP-P,n307,σ1s22/317,mb4.2/31,121C-120D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAPV	**Capacho**	**1.18**	**34**	⇑*i*P	Pn	00 57 09.1	+4.8
CAPV				*e*S	Sn	**00 57 25.0**	**+0.9**
ROSC	**El Rosal**	**2.42**	**214**	*e*Pn	Pn	**00 57 21.0**	**+2.5**
ROSC				*e*Sn	Sn	**00 57 48.4**	**-1.0**
ROSC	**El Rosal**	**2.42**	**214**	P	Pn	**00 57 20.8**	**+2.4**
	101nm,0.3s,baz=301,slow=4.7,SNR=142						
ROSC				S	Sn	**00 57 47.9**	**-1.5**
	82nm,0.3s,baz=107,slow=18,SNR=10						
VIGV	**El Vigia**	**2.52**	**40**	⇑*i*P	Pn	00 57 23.6	+4.3
VIGV				*e*S	Sn	**00 57 49.0**	**-2.0**
SOCV	**Socops**	**2.53**	**57**	⇑*e*P	Pn	00 57 23.2	+3.8
SOCV				*e*S	Sn	**00 57 48.4**	**-2.7**
SDV	**Santo Domingo**	**3.06**	**49**	*e*Pn	Pn	00 57 30.5	+4.2
SDV				*e*Sn	Sn	**00 58 07.2**	**+3.7**
ELOV	**Elorza**	**3.48**	**88**	⇓*i*P	Pn	00 57 35.0	+3.5
QARV	**Quebrada Arrib**	**4.10**	**36**	*e*S	Sn	**00 58 23.3**	**-4.2**
SANV	**Sanarito**	**4.29**	**53**	*e*P	Pn	**00 57 45.0**	**+2.8**
SANV				*e*S	Sn	00 58 27.1	-4.9
CURV	**Curarigua**	**4.31**	**44**	*e*P	Pn	00 57 45.6	+3.1
CURV				*e*S	Sn	00 58 26.8	-5.7
DABV	**Dabajuro**	**4.63**	**30**	⇑*e*P	Pn	00 57 50.0	+3.3
TEPV	**Terepaima**	**4.84**	**51**	⇑*i*P	Pn	00 57 52.6	+3.1
SIQV	**Siquisique**	**4.88**	**40**	⇑*i*P	Pn	**00 57 52.7**	**+2.7**
SIQV				*e*S	Sn	00 58 40.3	-5.7
BAUV	**El Baul**	**5.31**	**67**	⇑*e*P	Pn	**00 57 57.3**	**+1.6**
MAPV	**Macapo**	**5.35**	**57**	⇑*i*P	Pn	**00 57 58.9**	**+2.7**
MONV	**Montecano**	**5.85**	**30**	⇑*e*P	Pn	**00 58 04.9**	**+2.0**
JACV	**Jacura**	**5.86**	**44**	*e*P	Pn	**00 58 04.7**	**+1.7**
TURV	**Turiamo**	**6.20**	**55**	*e*P	Pn	**00 58 09.9**	**+2.4**
MERV	**Las Mercedes**	**7.03**	**70**	⇑*e*P	Pn	**00 58 19.6**	**+1.0**
BCIP	**Isla Barro Col**	**7.15**	**289**	*e*Pn	Pn	**00 58 18.9**	**-1.4**
BCIP				*e*Sn	Sn	**00 59 37.5**	**-2.8**
BIRV	**Birongo**	**7.54**	**61**	*e*P	Pn	**00 58 26.4**	**+0.9**
CUPV	**Cœpira**	**7.79**	**66**	*e*P	Pn	**00 58 29.9**	**+1.0**
PRGV	**PARIAGUAN**	**8.47**	**77**	*e*P	Pn	**00 58 40.5**	**+2.4**
OTAV	**Otavalo**	**8.56**	**220**	*e*Pn	Pn	**00 58 41.1**	**+1.5**
PCRV	**Puerto La Cruz**	**8.88**	**68**	*e*P	Pn	**00 58 44.9**	**+1.3**
MTDJ	**Mount Denham**	**12.11**	**339**	*e*Pn	Pn	**00 59 29.3**	**+3.0**
SDDR	**Presa de Saban**	**12.14**	**8**	*e*Pn	P	**00 59 31.1**	**-2.1**
ATAH	**Atahualpa**	**14.94**	**201**	P	P	**01 00 03.8**	**-0.9**
	0.6nm,0.3s,baz=0.0,slow=7.1,SNR=3.7						
TGUH	**Tegucigalpa,Un**	**15.74**	**298**	*e*P	Pn	**01 00 12.7**	**+0.5**
	9.4nm,0.4s						
SAML	**Samuel**	**18.52**	**148**	*e*P	P	**01 00 43.2**	**-0.5**
	4.3nm,0.4s						
SAML				*e*		01 01 11.2	
SAML				*e*S	S	**01 04 07.2**	**-0.4**
NNA	**Nana**	**19.14**	**192**	P	P	**01 00 49.8**	**-0.7**
TEIG	**Tepich**	**19.89**	**313**	*e*P	P	**01 01 00.6**	**+2.0**
	16nm,0.5s						
TEIG	**Tepich**	**19.89**	**313**	P	P	**01 01 00.1**	**+1.5**
	16nm,0.5s,baz=148,slow=0.9,SNR=18						
DWPF	**Disney**	**22.57**	**340**	*e*P	P	**01 01 28.2**	**+1.6**
LPAZ	**La Paz**	**23.52**	**168**	*e*P	P	**01 01 35.4**	**-0.8**
	2.2nm,0.7s						
LPAZ				*e*		01 02 06.9	
LPAZ	**La Paz**	**23.52**	**168**	P	P	**01 01 34.8**	**-1.3**
	1.9nm,0.6s,baz=343,slow=15,SNR=9.9						
LPAZ				pP	pP	**01 02 05.6**	**+1.5**
	2.9nm,0.7s,baz=5.9,slow=4.7,SNR=5.2						
SIV	**San Ignacio**	**25.61**	**153**	P	P	**01 01 53.0**	**-1.4**
	1.3nm,0.7s,baz=338,slow=9.7,SNR=7.3						
SIV				pP	pP	**01 02 25.0**	**+0.3**
	2.1nm,0.8s,baz=330,slow=8.6,SNR=4.4						
LVC	**Limon Verde**	**29.59**	**172**	*e*P	P	**01 02 29.6**	**-0.6**
PLAL	**Pickwick Lake**	**31.22**	**336**	*e*P	P	**01 02 46.2**	**+2.1**
	5.0nm,0.8s						
WVT	**Waverly**	**32.12**	**337**	*e*P	P	**01 02 53.2**	**+1.2**
	3.2nm,0.4s						
BDFB	**Brasilia**	**33.36**	**132**	P	P	**01 03 01.9**	**-1.3**
	2.2nm,0.5s,baz=294,slow=6.8,SNR=5.2						
632A	**Uvalde**	**33.81**	**315**	⇓P	P	**01 03 06.8**	**0.0**
	baz=34						
WHTX	**Lake Whitney**	**33.83**	**321**	⇑P	P	**01 03 06.8**	**-0.1**
	baz=34						
SIUC	**Southern Illin**	**34.05**	**337**	*e*P	P	**01 03 10.1**	**+1.4**
	10nm,0.6s						
532A	**Rocksprings**	**34.26**	**316**	⇑P	P	**01 03 11.0**	**+0.3**
	baz=34,SNR=6.1						
631A	**Perdido Creek**	**34.31**	**314**	⇑P	P	**01 03 11.6**	**+0.5**
	baz=34						
432A	**Menard**	**34.64**	**317**	⇑P	P	**01 03 13.6**	**-0.4**
	baz=35						
531A	**Rocksprings**	**34.73**	**315**	⇓P	P	**01 03 15.1**	**+0.3**
	baz=35						
332A	**Millersview**	**34.92**	**318**	⇓P	P	**01 03 16.7**	**+0.3**
	baz=35						
431A	**Sonora**	**35.08**	**316**	⇑P	P	**01 03 18.0**	**+0.3**
	baz=35						
232A	**Coleman**	**35.17**	**318**	⇑P	P	**01 03 18.7**	**+0.2**
	baz=35,SNR=6.5						
530A	**J-C Ranch,Com**	**35.27**	**315**	⇑P	P	**01 03 19.7**	**+0.2**
	baz=35,SNR=7.1						
331A	**San Angelo**	**35.33**	**317**	⇑P	P	**01 03 20.8**	**+0.9**
	baz=35						
430A	**Baggett Ranch,**	**35.57**	**316**	⇓P	P	**01 03 22.9**	**+0.9**
	baz=36						
ABTX	**Abilene, Hawle**	**35.64**	**319**	⇓P	P	**01 03 22.9**	**+0.4**
	baz=36						
231A	**Bronte**	**35.64**	**318**	⇑P	P	**01 03 22.6**	**0.0**
	baz=36						
TUL1	**Tulsa**	**35.65**	**327**	⇑P	P	**01 03 23.7**	**+1.2**
	baz=36						
SFIN	**Scholer Farm**	**35.66**	**341**	⇓P	P	**01 03 23.7**	**+1.2**
	baz=36						
529A	**Stev Forest Ra**	**35.89**	**314**	⇑P	P	**01 03 24.8**	**+0.1**
	baz=36						
429A	**Davenport Ranc**	**35.94**	**315**	⇑P	P	**01 03 25.5**	**+0.4**
	baz=36						
Z32A	**Haskell**	**35.98**	**321**	⇓P	P	**01 03 26.1**	**+0.8**
	baz=36						
628A	**Black Gap, Mar**	**36.02**	**312**	⇓P	P	**01 03 26.7**	**+0.9**
	baz=36						
230A	**Sterling City**	**36.15**	**317**	⇑P	P	**01 03 27.2**	**+0.3**
	baz=36						
131A	**Roby**	**36.15**	**319**	⇓P	P	**01 03 26.9**	**0.0**
	baz=36						
528A	**Cox Ranch, San**	**36.32**	**313**	⇑P	P	**01 03 28.6**	**+0.1**
	baz=36,SNR=5.1						
627A	**Terlingua Ranc**	**36.37**	**312**	⇑P	P	**01 03 29.4**	**+0.5**
	baz=36,SNR=7.9						
Z31A	**Sharp Cattle R**	**36.41**	**320**	⇑P	P	**01 03 29.7**	**+0.7**
	baz=36						
Y32A	**R-V Farms, Ver**	**36.41**	**321**	⇓P	P	**01 03 30.0**	**+1.0**
	baz=36						
130A	**Snyder**	**36.48**	**318**	⇑P	P	**01 03 30.1**	**+0.3**
	baz=37						
329A	**Wagon Wheel Ra**	**36.50**	**316**	⇑P	P	**01 03 30.3**	**+0.4**
	baz=37						
WMOK	**Wichita Mounta**	**36.51**	**323**	*e*P	P	**01 03 29.1**	**-0.8**
	2.1nm,0.5s						
TXAR	**Lajitas Array**	**36.52**	**312**	P	P	**01 03 30.5**	**+0.4**
	1.9nm,0.6s,baz=126,slow=9.1,SNR=24						
TXAR				PcP	PcP	**01 05 51.4**	**+0.6**
	0.2nm,0.6s,baz=117,slow=5.4,SNR=3.2						
428A	**Kincaid Ranch,**	**36.56**	**314**	⇑P	P	**01 03 31.0**	**+0.6**
	baz=37,SNR=7.4						
229A	**Bryant Ranch,**	**36.67**	**317**	⇓P	P	**01 03 32.4**	**+1.0**
	baz=37						
Y31A	**Rekieta Farm,**	**36.90**	**321**	⇓P	P	**01 03 34.1**	**+1.0**
	baz=37,SNR=5.3						
527A	**Woodward Ranch**	**36.91**	**313**	⇑P	P	**01 03 34.7**	**+1.3**
	baz=37						
626A	**Big Bend Ranch**	**36.98**	**311**	⇓P	P	**01 03 34.7**	**+0.7**
	baz=37						
328A	**Wristen Ranch,**	**37.02**	**315**	⇑P	P	**01 03 34.7**	**+0.4**
	baz=37						
Z30A	**Sanderson Ranc**	**37.02**	**319**	⇓P	P	**01 03 34.6**	**+0.3**
	baz=37						
129A	**Stewart Farms,**	**37.10**	**318**	⇓P	P	**01 03 35.9**	**+0.9**
	baz=37						
427A	**Hayter Ranch,**	**37.14**	**314**	⇑P	P	**01 03 35.4**	**0.0**
	baz=37,SNR=6.1						
X31A	**McDonald Ranch**	**37.16**	**322**	⇑P	P	**01 03 36.1**	**+0.7**
	baz=37						
526A	**Mary Lane Ranc**	**37.21**	**312**	⇑P	P	**01 03 36.8**	**+0.7**
	baz=37						
Z29A	**Hungry Hill Ra**	**37.38**	**318**	⇓P	P	**01 03 37.6**	**+0.3**
	baz=38,SNR=7.0						
426A	**McDonald Obser**	**37.49**	**313**	⇓P	P	**01 03 39.0**	**+0.6**
	baz=38,SNR=8.4						
W31A	**Holland Ranch,**	**37.51**	**322**	⇑P	P	**01 03 38.4**	**+0.1**
	baz=38						
128A	**Castleberry Fa**	**37.52**	**317**	⇑P	P	**01 03 39.1**	**+0.6**
	baz=38,SNR=10						
X30A	**Coker Ranch, T**	**37.60**	**321**	⇑P	P	**01 03 39.9**	**+0.8**
	baz=38,SNR=5.2						
227A	**Bennet, Jal**	**37.72**	**316**	⇑P	P	**01 03 40.7**	**+0.5**
	baz=38						
425A	**Indio Mountain**	**38.25**	**313**	⇑P	P	**01 03 45.0**	**+0.3**
	baz=38,SNR=5.5						
226B	**Tecolote Peak,**	**38.36**	**315**	⇑P	P	**01 03 45.4**	**-0.2**
	baz=38						
Z27A	**Tatum**	**38.42**	**317**	⇓P	P	**01 03 46.0**	**-0.1**
	baz=38,SNR=14						
MSTX	**Muleshoe**	**38.52**	**318**	⇑P	P	**01 03 47.4**	**+0.5**
	baz=39						
325A	**Bean Ranch, Si**	**38.55**	**313**	⇑P	P	**01 03 47.4**	**+0.2**
	baz=39						
T31A	**Randall Ranch,**	**38.66**	**325**	⇑P	P	**01 03 48.2**	**+0.3**
	baz=39						
Y27A	**Causey**	**38.73**	**318**	⇓P	P	**01 03 48.8**	**+0.2**
	baz=39						
225A	**Deer Hill, Car**	**38.84**	**314**	⇓P	P	**01 03 50.8**	**+1.1**
	baz=39						
Z26A	**Caprock**	**38.91**	**317**	⇓P	P	**01 03 50.6**	**+0.4**
	baz=39,SNR=11						
V29A	**Stinnett**	**38.93**	**322**	⇓P	P	**01 03 51.3**	**+1.1**
	baz=39						
324A	**Moseley Ranch,**	**38.96**	**313**	⇓P	P	**01 03 51.0**	**+0.3**
	baz=39,SNR=6.7						
JFWS	**Jewell Farm**	**38.98**	**340**	*e*P	P	**01 03 51.2**	**+0.8**
	9.9nm,0.6s						
MNTX	**Cornudas Mount**	**39.02**	**314**	*e*P	P	**01 03 51.4**	**+0.4**
	3.6nm,0.7s						
125A	**Gardner Draw,**	**39.03**	**315**	⇑P	P	**01 03 51.8**	**+0.6**
	baz=39,SNR=6.6						
U29A	**Oasis Ranch, S**	**39.16**	**323**	⇓P	P	**01 03 52.6**	**+0.5**
	baz=39						
Y26A	**Elida**	**39.19**	**318**	⇓P	P	**01 03 53.2**	**+0.6**
	baz=39						
W27A	**Bowe Ranch, En**	**39.38**	**320**	⇑P	P	**01 03 54.6**	**+0.5**
	baz=40,SNR=5.1						
Z25A	**Roswell**	**39.42**	**316**	⇓P	P	**01 03 55.2**	**+0.7**
	baz=40,SNR=8.7						
X26A	**CR and CF Fran**	**39.55**	**318**	⇓P	P	**01 03 56.1**	**+0.6**
	baz=40,SNR=5.3						
124A	**Stringfield Ra**	**39.61**	**315**	⇑P	P	**01 03 58.0**	**+1.8**
	baz=40						
Y25A	**Mesa, Roswell**	**39.77**	**317**	⇓P	P	**01 03 58.2**	**+0.8**
	baz=40						
W26A	**Owens Ranch, T**	**39.85**	**319**	⇓P	P	**01 03 58.5**	**+0.5**
	baz=40						
Z24A	**Sheeppen Canyo**	**39.90**	**316**	⇑P	P	**01 03 59.1**	**+0.6**
	baz=40						
U27A	**Thompson Grove**	**40.09**	**321**	⇑P	P	**01 04 01.0**	**+1.1**
	baz=40						
X25A	**Clemmons Ranch**	**40.11**	**318**	⇑P	P	**01 04 01.0**	**+0.9**
	baz=40,SNR=6.6						
Y24A	**Capitan**	**40.28**	**316**	⇑P	P	**01 04 02.7**	**+1.1**
	baz=40,SNR=6.1						
V26A	**Tequesquite Ra**	**40.30**	**320**	⇓P	P	**01 04 02.5**	**+0.9**
	baz=40						
W25A	**X Bar L Ranch,**	**40.38**	**319**	⇑P	P	**01 04 03.1**	**+0.7**
	baz=40,SNR=6.7						
T27A	**Campo**	**40.43**	**322**	⇓P	P	**01 04 03.6**	**+0.8**
	baz=41						
Z23A	**Rita Site, Whi**	**40.47**	**315**	⇑P	P	**01 04 04.2**	**+1.1**
	baz=40						
222A	**Williams Famil**	**40.48**	**313**	⇑P	P	**01 04 04.2**	**+1.0**
	baz=40						
U26A	**Atchley Ranch,**	**40.64**	**321**	⇓P	P	**01 04 04.8**	**+0.2**
	baz=41						
Y23A	**Lovelace Mesa,**	**40.71**	**316**	⇑P	P	**01 04 06.5**	**+1.4**
	baz=41						
V25A	**Rancho No Teng**	**40.86**	**319**	⇓P	P	**01 04 07.4**	**+1.1**
	baz=41						
Z22A	**Elephant Butte**	**40.98**	**314**	⇑P	P	**01 04 08.9**	**+1.6**
	baz=41						
W24A	**Lazy 6 Ranch,**	**41.00**	**318**	⇓P	P	**01 04 08.7**	**+1.2**
	baz=41						
T26A	**Comanche

R20A	Redvale baz=45	44.67 320	⇓P	P	01 04 38.3	+1.3
214A	Organ Pipe Nat baz=45	44.69 309	⇑P	P	01 04 38.0	+1.0
O22A	Kremmling baz=45,SNR=6.5	44.72 323	⇑P	P	01 04 38.2	+0.7
X16A	Lo Mia Camp, P baz=45	44.78 313	⇓P	P	01 04 39.0	+1.1
N23A	Red Feather La baz=45	44.83 324	⇓P	P	01 04 39.3	+1.0
Q20A	Ridgley Place, baz=45	45.06 320	⇑P	P	01 04 41.4	+1.3
WUAZ	Wupatki 8.6nm,1.0s	45.27 315	*e*P	P	01 04 42.5	+0.7
WUAZ	Wupatki baz=45,SNR=6.0	45.27 315	⇓P	P	01 04 43.0	+1.2
O21A	Pagoda baz=45	45.30 322	⇑P	P	01 04 43.3	+1.3
Z14A	Wintersburg baz=46	45.40 311	⇓P	P	01 04 43.4	+0.7
L23A	Garrett baz=46	45.48 326	⇑P	P	01 04 44.7	+1.3
AGMN	Agassiz Nation 3.5nm,0.5s	45.61 339	*e*P	P	01 04 44.7	+0.6
N21A	Black Mountain baz=46	45.67 323	⇑P	P	01 04 46.5	+1.5
Y14A	Wickenburg baz=46	45.70 312	⇓P	P	01 04 46.0	+0.9
O20A	White River Ci baz=46	45.73 322	⇓P	P	01 04 46.3	+1.0
113A	Mohawk Valley, baz=46	45.77 310	⇑P	P	01 04 46.0	+0.6
M21A	Separation Pea baz=46	46.10 324	⇑P	P	01 04 49.2	+0.9
N20A	Spence Gulch, baz=46	46.16 323	⇓P	P	01 04 50.7	+2.0
J23A	Dilts Ranch, B baz=46	46.26 327	⇑P	P	01 04 51.4	+2.0
K22A	Casper baz=46	46.29 326	⇓P	P	01 04 50.4	+0.8
U15A	North Rim baz=46,SNR=5.2	46.37 315	⇓P	P	01 04 51.9	+1.4
M20A	Sweetwater, Wa baz=47	46.52 323	⇑P	P	01 04 52.7	+1.2
SRU	San Rafael baz=47	46.58 319	⇓P	P	01 04 53.0	+0.9
GLA	Glamis baz=47	46.69 310	⇓P	P	01 04 53.9	+1.0
J22A	Midwest baz=47,SNR=5.4	46.77 327	⇓P	P	01 04 53.9	+0.5
E26A	Carlson Angus baz=47	46.88 332	⇑P	P	01 04 54.5	+0.5
I22A	9 Mile Ranch, baz=47	47.09 327	⇑P	P	01 04 56.6	+0.8
J21A	Lysite baz=47	47.26 326	⇑P	P	01 04 57.9	+0.7
ULM	Lac du Bonnet 8.1nm,1.2s	47.27 340	*e*P	P	01 04 57.0	+0.1
ULM	Lac du Bonnet 4.2nm,0.4s,baz=147,slow=6.4,SNR=5.1	47.27 340	P	P	01 04 56.8	-0.1
K20A	Yellowstone Ra baz=48,SNR=5.6	47.33 325	⇑P	P	01 04 58.6	+0.8
MSU	Marysvale	47.34 318	*e*P	P	01 04 59.3	+1.3
MVU	Marysvale 1.0nm,0.5s	47.36 318	*e*P	P	01 04 58.4	+0.2
IRM	Iron Mountain baz=47	47.40 311	⇑P	P	01 04 58.9	+0.6
I21A	Big Trails, Te baz=48	47.47 326	⇑P	P	01 04 59.4	+0.6
L19A	Farson baz=48	47.58 323	⇑P	P	01 05 00.7	+0.9
J20A	Shoshoni baz=48	47.62 325	⇓P	P	01 05 00.7	+0.8
K19A	Absolon Red Bu baz=48	47.72 324	⇓P	P	01 05 02.0	+1.2
F23A	Volborg baz=48	47.77 330	⇓P	P	01 05 02.1	+1.2
G22A	Birney baz=48	47.87 328	⇓P	P	01 05 02.6	+0.8
L18A	Fontenelle, Gr baz=48	47.88 323	⇓P	P	01 05 02.5	+0.4
I20A	Worland baz=48	48.02 326	⇓P	P	01 05 03.7	+0.7
SCHQ	Schefferville 2.6nm,0.6s,baz=205,slow=4.2,SNR=4.6	48.06 5	P	P	01 05 04.2	+1.2
PDAR	Pinedale Array 2.6nm,0.4s,baz=128,slow=10,SNR=9.8	48.10 324	P	P	01 05 03.7	-0.1
J19A	Crowheart baz=48	48.12 325	⇑P	P	01 05 04.1	+0.3
D24A	Glendive baz=48	48.23 332	⇑P	P	01 05 05.5	+1.1
H20A	Greybull baz=48	48.30 327	⇑P	P	01 05 05.7	+0.6
G21A	Lodge Grass baz=48	48.36 328	⇓P	P	01 05 06.0	+0.5
E22A	Miles City baz=49	48.53 330	⇓P	P	01 05 07.3	+0.5
I19A	Meeteetse baz=49	48.56 326	⇓P	P	01 05 07.9	+0.6
HEC	Hector,Ludlow baz=49	48.57 311	⇑P	P	01 05 08.6	+1.3
HWUT	Hardware Ranch 1.6nm,0.4s	48.63 321	*e*P	P	01 05 08.4	+0.6
DUG	Dugway baz=49	48.65 319	⇓P	P	01 05 09.5	+1.6
MURC	Murrieta baz=49	48.73 309	⇑P	P	01 05 07.8	-0.7
G20A	Bridger baz=49	48.89 327	⇓P	P	01 05 10.4	+0.7
SHOC	Shoshone baz=49	48.98 312	⇑P	P	01 05 12.0	+1.6
GSC	Goldstone baz=49	49.12 311	⇑P	P	01 05 12.5	+1.0
D22A	Cohagen baz=49,SNR=6.2	49.14 330	⇓P	P	01 05 12.6	+1.2
DGMT	Dagmar 19nm,0.6s	49.15 333	*e*P	P	01 05 12.9	+1.5
DGMT	Dagmar baz=49	49.15 333	⇓P	P	01 05 12.9	+1.5
E21A	Keefer Ranch, baz=49	49.17 329	⇑P	P	01 05 12.4	+0.7
LOHW	Long Hollow 3.0nm,0.6s	49.22 324	*e*P	P	01 05 13.4	+1.1
C22A	Vida baz=50	49.42 331	⇑P	P	01 05 14.8	+1.3
D21A	La Casta Ranch baz=50	49.49 330	⇓P	P	01 05 15.3	+1.2
B23A	Brockton baz=50	49.51 332	⇓P	P	01 05 15.9	+1.7
R11A	Troy Canyon, C baz=50	49.59 316	⇑P	P	01 05 16.0	+0.8
FURC	Furnace Creek, baz=50	49.65 313	⇓P	P	01 05 16.8	+1.4
H17A	Grant Village baz=50	49.68 325	⇑P	P	01 05 16.8	+1.0
G18A	Lazy EL Ranch, baz=50	49.68 327	⇑P	P	01 05 16.4	+0.7
E20A	Meyer Farm, Mu baz=50,SNR=6.5	49.69 329	⇑P	P	01 05 16.5	+0.9
F19A	Roth Farm, Mol baz=50	49.69 327	⇓P	P	01 05 16.2	+0.6
A23A	Redstone baz=50	49.82 333	⇓P	P	01 05 17.9	+1.4
B22A	Reddig Ranch S baz=50	49.86 332	⇓P	P	01 05 18.4	+1.5
I16A	Newdale baz=50	49.89 324	⇓P	P	01 05 18.9	+1.6
E19A	Rath Farm, Rou baz=50	50.00 328	⇓P	P	01 05 18.7	+0.7
C21A	Desert Coulee baz=50	50.06 330	⇑P	P	01 05 19.4	+1.1
D20A	Manuel Ranch, baz=50	50.08 329	⇓P	P	01 05 19.9	+1.3
F18A	Big Timber baz=50,SNR=5.4	50.14 327	⇓P	P	01 05 19.9	+0.9
A22A	Carney Farms, baz=50,SNR=5.9	50.32 332	⇑P	P	01 05 21.5	+1.2
C20A	Veseth Ranch, baz=51	50.43 330	⇓P	P	01 05 22.3	+1.1
ISA	Isabella	50.51 311	*e*P	P	01 05 21.7	-0.2
ISA	Isabella baz=51	50.51 311	⇑P	P	01 05 21.8	-0.2
F17A	Fitzpatrick Pl baz=51	50.65 327	⇑P	P	01 05 23.7	+0.7
E18A	Harlowton baz=51	50.66 328	⇑P	P	01 05 24.0	+0.9
C19A	Slack Wire Ran baz=51	50.97 329	⇓P	P	01 05 26.6	+1.3
I14A	Mackay baz=51	51.09 323	⇑P	P	01 05 27.6	+1.3
E17A	Martinsdale baz=51	51.11 327	⇑P	P	01 05 27.1	+0.7
MCMT	McKenzie Canyo 1.1nm,0.6s	51.24 324	*e*P	P	01 05 28.4	+0.8
D17A	Six Diamond Ra baz=52	51.45 328	⇓P	P	01 05 29.9	+1.1
HLID	Hailey 3.8nm,1.2s	51.47 322	*e*P	P	01 05 30.1	+0.9
HLID	Hailey baz=52	51.47 322	⇓P	P	01 05 30.1	+0.9
EGMT	Eagleton baz=52	51.52 329	⇓P	P	01 05 30.8	+1.5
NVAR	Mina Array Bea 0.8nm,0.6s,baz=129,slow=6.5,SNR=7.1	51.53 315	P	P	01 05 30.7	+0.9
LRM	Limekiln Ridge	51.60 325	*e*P	P	01 05 31.1	+0.9
A19A	Klindworth Far baz=52	51.62 331	⇑P	P	01 05 30.9	+0.9
F15A	Butte baz=52	51.63 325	⇓P	P	01 05 31.3	+0.9
B18A	Beardsley Farm baz=52	51.77 329	⇓P	P	01 05 31.9	+0.7
C17A	Wharram Farm, baz=52	51.79 328	⇑P	P	01 05 32.2	+0.8
D16A	Dana Ranch, Ca baz=52	51.83 327	⇓P	P	01 05 32.8	+1.1
I12A	Atlanta baz=52,SNR=5.1	52.03 322	⇓P	P	01 05 33.7	+0.4
F14A	Wisdom baz=52	52.11 325	⇓P	P	01 05 34.7	+0.8
A18A	Metzger Ranch, baz=52	52.15 330	⇓P	P	01 05 34.7	+0.7
B17A	L&G Farms, Che baz=52	52.23 329	⇓P	P	01 05 35.4	+0.9
MFID	Camas Ranch 3.6nm,0.8s	52.26 321	*e*P	P	01 05 35.9	+0.9
MFID	Camas Ranch baz=52,SNR=5.2	52.26 321	⇑P	P	01 05 35.3	+0.4
H12A	Diamond D Ranc baz=52	52.27 323	⇓P	P	01 05 35.9	+0.8
C16A	Fuhringer Ranc baz=52	52.41 328	⇓P	P	01 05 36.8	+0.8
A17A	Triple J Farms baz=53	52.60 329	⇓P	P	01 05 38.0	+0.7
B16A	M & M Farms, S baz=53	52.77 328	⇓P	P	01 05 39.3	+0.7
C15A	Salmond Ranch, baz=53	52.86 327	⇓P	P	01 05 40.3	+1.0
G12A	Big Creek, Yel baz=53	52.87 323	⇓P	P	01 05 40.3	+0.8
D14A	Greenough baz=53	52.93 326	⇑P	P	01 05 40.6	+0.8
A16A	West Butte Ran baz=53	53.05 329	⇓P	P	01 05 42.2	+1.5
B15A	Bradely Ranch, baz=53	53.16 328	⇑P	P	01 05 42.7	+1.2
C14A	Swan Lake baz=54	53.47 327	⇓P	P	01 05 44.7	+1.0
D13A	Huson baz=54	53.47 326	⇑P	P	01 05 44.5	+0.8
B14A	Marquette Ranc baz=54	53.57 328	⇑P	P	01 05 45.3	+0.8
A15A	Johnson Ranch, baz=54	53.66 328	⇓P	P	01 05 45.6	+0.5
E12A	Beaver Dam Sad baz=54	53.72 324	⇑P	P	01 05 46.4	+0.8
C13A	Hot Springs baz=54	53.87 326	⇑P	P	01 05 47.7	+1.1
D12A	Red Ives Fores baz=54	53.95 325	⇓P	P	01 05 48.1	+0.9
C12B	Naegeli Ranch, baz=54	54.38 326	⇓P	P	01 05 51.7	+1.4
A13A	Flathead Natio baz=55	54.52 328	⇓P	P	01 05 52.2	+0.9
C11A	Tepee Creek (N baz=55	54.89 326	⇓P	P	01 05 55.1	+1.1
A12A	Yaak River Ran baz=55	55.18 327	⇓P	P	01 05 57.5	+1.5
YKA	Yellowknife Ar 3.1nm,0.6s,baz=133,slow=6.6,SNR=40	63.25 340	P	P	01 06 51.2	+0.1
YKA			pP	PcP	01 07 27.6	+0.5
	0.6nm,0.6s,baz=134,slow=6.7,SNR=2.5					
TORD	Torodi Ar. Bea 0.2nm,0.4s,baz=284,slow=6.2,SNR=7.2	73.59 78	P	P	01 07 55.0	-1.4
ILAR	Eielson Array 0.5nm,0.8s,baz=104,slow=4.2,SNR=5.1	76.96 335	P	P	01 08 14.4	-0.3
ILAR			pP	pP	01 08 53.3	+3.1
	0.2nm,0.6s,baz=120,slow=5.3,SNR=2.1					
ARCES	ARCESS Array B 2.4nm,1.0s,baz=302,slow=4.1,SNR=3.1	86.56 20	P	P	01 09 04.9	0.0
WMQ	Urumqi	126.58 17	*e*P	PKPdf	01 15 24.0	-0.9
HHC	Hu-ho-hao-te	132.31 355	*e*PKP	PKPdf	01 15 33.0	-2.9
HHC			sPKP		01 16 32.3	
HHC			PP	PP	01 18 01.3	+2.6
HHC			PKS	PKSdf	01 19 07.9	-4.5
HHC			SKS	SKSdf	01 22 26.5	-7.7
HHC			SKKS	SKKSac	01 24 34.5	-7.7
HHC	Hu-ho-hao-te	132.31 355	SS	SS	01 35 23.3	-1.6
HHC			AMB	AMB		
	comp=Z,83nm,7.1s					
LZH	Lanzhou	137.15 4	*e*PKP	PKPdf	01 15 44.6	-0.5
LZH			pPKP	pPKPdf	01 16 20.9	-2.4
LZH			sPKP		01 16 42.3	
ASAR	Alice Springs comp=Z,1.3nm,0.6s,baz=122,slow=3.0,SNR=9.0	149.26 234	PKP	PKPdf	01 16 05.9	-0.6
ASAR			PKPbc	PKPbc	01 16 09.3	-1.6
	comp=Z,1.4nm,0.6s,baz=123,slow=3.3,SNR=14					
WRA	Warramunga Arr comp=Z,0.9nm,0.4s,baz=105,slow=2.7,SNR=5.6	150.48 241	PKP	PKPdf	01 16 07.7	-0.8
WRA			PKPbc	PKPbc	01 16 12.5	-1.4
	comp=Z,0.9nm,0.4s,baz=110,slow=2.3,SNR=44					
WRA			pPKPbc	pPKPbc	01 16 51.5	-0.4
	comp=Z,0.3nm,0.4s,baz=108,slow=2.5,SNR=2.2					

*JMA **25** 01:07:32.5±0.2, 33.˚15N× 138.˚33E, h341km, M3.2*
*ISCJB **25** 01:07:33.3±0.6, 33.˚15N±0.˚07× 138.˚26E±0.˚08, h334km±5km, mb3.3/4, Error ellipse: s-maj=11.9km s-min=9.8km az=148.3*
*IDC **25** 01:07:34.4±0.8, 33.˚08N× 138.˚12E, h324km±14km, mb3.2/4, mb1 3.2/7, mb1mx2.9/29, mbtmp3.0/7, Error ellipse: s-maj=40.3km s-min=13.3km az=66.0*

ISC 25 01:07:34.6±0.9, 33.˚19N±0.˚08× 138.˚26E±0.˚08, h328km±7km, n27, σ0s95/36, mb3.4/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
TK01	Tokai 1	0.81	316	P		Pn	01 08 16.9	+0.1
TK02	Tokai 2	0.87	331	P		Pn	01 08 17.1	0.0
TTO3	TONANKAI O.B.S	0.99	313	P		Pn	01 08 17.8	+0.1
TTO5	TONANKAI O.B.S	1.16	337	P		Pn	01 08 18.6	+0.2
TTO2	TONANKAI O.B.S	1.17	298	P		Pn	01 08 18.4	+0.1
TK04	Tokai 4	1.24	345	P		Pn	01 08 19.3	+0.4
JHJ	Hachijo jima 2 6.7nm,0.3s,baz=208,slow=23,SNR=14	1.28	93	P		Pn	01 08 19.3	0.0
JHJ				S		S	01 08 56.2	+1.2
	19nm,0.3s,baz=81,slow=22,SNR=2.1							
JHJ2	Mitsune	1.30	93	P		Pn	01 08 19.5	+0.1
JHJ2				*e*S		S	01 08 55.5	+0.2
TTO1	TONANKAI O.B.S	1.31	290	P		Pn	01 08 18.7	-0.4
JIE	Ise	1.77	313	P		Pn	01 08 21.7	-0.5
JOD2	Odawara 2	2.18	18	P		Pn	01 08 25.0	-0.2
JOD2				*e*S		S	01 09 06.2	+0.5
JYN	Shimodo	2.31	6	P		Pn	01 08 26.7	+0.4
JWY	Kouya	2.45	296	P		Pn	01 08 26.8	-0.7
BSO1	Boso 1	2.69	56	P		Pn	01 08 27.6	-1.2
BSO1				S		S	01 09 10.2	-2.2
JGM	Miyama	2.81	333	P		Pn	01 08 30.8	+0.3
JRY	Ryogami san	2.87	10	P		Pn	01 08 31.5	+0.4
JRY				*e*S		S	01 09 16.4	0.0
JWT	Wachi	3.16	312	P		Pn	01 08 33.4	-0.4
JWT				S		S	01 09 19.7	-1.6
MJAR	Matsushiro Arr 4.2nm,0.3s,baz=181,slow=11,SNR=32	3.35	359	P		Pn	01 08 35.4	-0.2
MJAR				S		S	01 09 24.6	0.0
	baz=288,slow=30,SNR=1.1							
MAT	Matsushiro	3.35	359	P		Pn	01 08 35.4	-0.2
MAT				S		S	01 09 25.8	+1.2
MAT	Matsushiro	3.35	359	P		Pn	01 08 35.6	0.0
JAG	Ashikaga	3.37	17	P		Pn	01 08 34.8	-1.0
JAG				*e*S		S	01 09 22.0	-3.0
KSRS	Korea Array 0.5nm,0.3s,baz=112,slow=12,SNR=8.1	9.46	300	P		Pn	01 09 46.5	+0.5
USRK	Ussuriysk Arra	12.03	338	P		P	01 10 18.7	+1.5
	0.2nm,0.3s,baz=148,slow=9.3,SNR=3.2							
SONM	Songino Array 1.1nm,0.7s,baz=103,slow=12,SNR=4.1	28.07 311	P	P		P	01 12 56.1	-0.6
MKAR	Makanchi Array 0.3nm,0.4s,baz=87,slow=9.2,SNR=7.8	44.09 305	P	P		P	01 15 10.9	-0.1
ASAR	Alice Springs 0.6nm,0.4s,baz=21,slow=11,SNR=11	56.69 185	P	P		P	01 16 43.6	-1.1
ARCES	ARCESS Array B 5.1nm,1.2s,baz=67,slow=9.3,SNR=6.7	66.68 339	P	P		P	01 17 51.5	+1.2

WEL 25 01:08:01.1±0.4, 36.˚82S× 178.˚13E, h83km±4km, ML3.6/4, Error ellipse: s-maj=3.1km s-min=2.9km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
MXZ	Matakaoa Point	0.76	169	P*		Pn	01 08 17.6	-0.1
MXZ				S*		Sn	01 08 30.1	+0.1
MXZ				AML		AML	01 08 30.7	
MXZ				AML		AML	01 08 34.0	
MXZ				AML		AML	01 08 34.0	
PUZ	Puketiti	1.26	175	PN		Pn	01 08 23.2	-0.3
PUZ				AML		AML	01 08 46.9	
PUZ				AML		AML	01 08 49.1	
MWZ	Matawai	1.59	197	P*		Pn	01 08 28.2	+0.4
MWZ				AML		AML	01 08 56.2	
MWZ				AML		AML	01 08 59.8	
OPRZ	Ohinepanea	1.62	230	P*		Pn	01 08 28.2	+0.1
URZ	Urewera	1.65	209	P*		Pn	01 08 28.5	0.0
URZ				S*		Sn	01 08 49.0	-0.3
URZ				AML		AML	01 08 50.5	
CNGZ	Carnagh Statio	1.67	178	PN		Pn	01 08 28.9	+0.2
KNZ	Kokohu	2.23	189	PN		Pn	01 08 35.3	-0.8
KNZ				SN		Sn	01 09 02.5	-0.4
NMHZ	Naumai	2.51	204	PN		Pn	01 08 40.0	0.0
BKZ	Black Stump Fm	2.68	208	PN		Pn	01 08 42.3	0.0
BHHZ	Black Hill Sta	3.12	211	PN		Pn	01 08 48.7	+0.4
KAHZ	Kahuranaki	3.13	198	PN		Pn	01 08 47.5	-0.8
FWVZ	Far West T-bar	3.17	219	*e*PN		Pn	01 08 51.6	+2.4

*ISK **25** 01:17:18.8, 36.˚72N× 35.˚96E, h12km, MD2.7*
*ISCJB **25** 01:17:19.2±0.6, 36.˚73N±0.˚04× 35.˚99E±0.˚05, h10km±8km, Error ellipse: s-maj=7.8km s-min=5.0km az=139.2*
*DDA **25** 01:17:19.2, 36.˚72N× 35.˚99E, h7km, MD2.9*
*CSEM **25** 01:17:19.3±0.1, 36.˚73N× 35.˚99E, h10km, MD2.9, Error ellipse: s-maj=2.7km s-min=1.7km az=60.0*

ISC 25 01:17:19.2±1.0, 36.73N±0.03× 35.97E±0.03, h15km±9km, n18, σ0s36/28, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
YURE	YUREGIR	0.29	290	*e*P		Pg	01 17 25.6	+0.2
YURE				*e*S		Sb	01 17 30.5	-0.3
YURE	YUREGIR	0.29	290	*e*P		Pg	01 17 25.6	+0.2
YURE				*e*S		Sb	01 17 30.5	-0.3
COBT	Iskenderun	0.31	132	*i* P		Pg	01 17 26.0	+0.3
COBT				*i* S		Sg	01 17 29.5	-0.7
COBT	Iskenderun	0.31	132	*i* P		Pg	01 17 26.0	+0.3
COBT				*i* S		Sg	01 17 29.5	-0.7
CEYT	Ceyhan	0.34	328	*e*PG		Pg	01 17 25.8	-0.4
CEYT				*e*SG		Sg	01 17 31.3	+0.4
CEYT	Ceyhan	0.34	328	*e*Pg		Pg	01 17 25.8	-0.4
CEYT				*e*Sg		Sg	01 17 31.3	+0.4
KRTS	Karatas	0.50	253	*e*PG		Pg	01 17 29.0	-0.2
KRTS				*e*SG		Sg	01 17 36.5	+0.5
KRTS	Karatas	0.50	253	*e*Pg		Pg	01 17 29.0	-0.2
KRTS				*e*Sg		Sg	01 17 36.5	+0.5
HTY	Hatay	0.62	167	*e*PG		Pg	01 17 31.2	-0.1
HTY	Hatay	0.62	167	*e*Pg		Pg	01 17 31.2	-0.1
YAYL	Yayladag	0.70	171	*e*P		Pb	01 17 33.5	+0.3
YAYL				*e*S		Sb	01 17 42.4	-0.2
YAYL	Yayladag	0.70	171	*e*P		Pb	01 17 33.5	+0.3
YAYL				*e*S		Sb	01 17 42.4	-0.2
KOZT	Kozan	0.76	351	*e*PG		Pg	01 17 34.1	0.0
KOZT	Kozan	0.76	351	*e*Pg		Pg	01 17 34.1	0.0
KARA	Karaisali	0.91	306	*e*PG		Pb	01 17 36.6	0.0
KARA	Karaisali	0.91	306	*e*Pg		Pb	01 17 36.7	0.0
KMRS	Kahramanmaras	1.08	43	*e*PN		Pg	01 17 40.2	+0.2
KMRS	Kahramanmaras	1.08	43	*e*Pn		Pg	01 17 40.3	+0.2

IDC 25 01:18:41.7±0.9, 23.˚20S× 175.˚42W, h0km, mb4.1/8, mb1 4.3/8, mb1mx4.1/19, mbtmp4.1/8, MS3.7/4, Ms1 3.6/4, ms1mx3.2/22, Error ellipse: s-maj=38.1km s-min=22.5km az=155.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
RAR	Rarotonga	14.63	85	LR		LR	01 26 45.8	
	comp=Z,371nm,18.9s,baz=283,slow=33							
DZM	Mont Dzumac 136nm,26.1s	16.78	270	*e*LR		LR	01 26 48.5	
TBI	Tubuai 159nm,22.8s	23.84	96	*e*LR		LR	01 29 23.1	
PPT2	Papeete2 130nm,21.8s	24.84	82	*e*LR		LR	01 29 47.8	
PPT	Papeete comp=Z,195nm,18.4s,baz=183,slow=31	24.85	82	LR		LR	01 31 27.3	
CTA	Charters Tower 2.8nm,0.4s,baz=88,slow=10,SNR=5.5	35.69	268	P		P	01 25 42.0	-0.1
STKA	Stephens Creek comp=Z,94nm,18.2s,baz=203,slow=34	38.87	248	LR		LR	01 40 28.6	
ASAR	Alice Springs 0.8nm,0.7s,baz=102,slow=6.8,SNR=10	46.29	259	P		P	01 27 09.4	0.0
WRA	Warramunga Arr 3.3nm,0.7s,baz=102,slow=8.1,SNR=56	46.65	264	P		P	01 27 11.7	-0.6
MAW	Mawson 2.3nm,0.9s,baz=101,slow=7.4,SNR=4.2	79.83	199	P		P	01 30 51.5	-0.1
KSRS	Korea Array comp=Z,20nm,20.8s,baz=160,slow=32	80.49	318	LR		LR	02 00 54.5	
NVAR	Mina Array Bea 0.6nm,0.6s,baz=253,slow=12,SNR=5.2	81.39	42	P		P	01 31 00.2	-0.5
USRK	Ussuriysk Arra 3.1nm,0.8s,baz=147,slow=1.9,SNR=9.4	82.53	325	P		P	01 31 07.3	+1.1
TXAR	Lajitas Array 0.2nm,0.5s,baz=224,slow=3.8,SNR=3.8	86.53	56	P		P	01 31 27.3	+0.3
ILAR	Eielson Array 0.4nm,0.9s,baz=202,slow=5.5,SNR=4.5	90.43	12	P		P	01 31 43.8	-0.7
CMAR	Chiang Mai Arr 1.6nm,0.4s,baz=143,slow=4.1,SNR=9.4	93.26	289	P		P	01 32 01.6	+2.8
AKASG	Malin Array Be 2.1nm,0.7s,baz=39,slow=4.6,SNR=8.5	146.53	331	PKPbc		PKPdf	01 38 23.7	+0.3
BRTR	Keskin Array B 1.1nm,0.9s,baz=116,slow=3.4,SNR=4.5	150.41	311	PKPbc		PKPbc	01 38 35.2	-0.3
TORD	Torodi Ar. Bea 0.5nm,0.9s,baz=212,slow=9.8,SNR=2.7	169.63	164	PKPab		PKPab	01 40 05.5	+0.2

*IDC **25** 01:24:02.2±5.6, 22.˚81N× 94.˚03E, h101km±48km, mb3.4/5, mb1 3.4/6, mb1mx3.1/27, mbtmp3.3/6, MS3.3/1, Ms1 3.3/1, ms1mx2.3/20, Error ellipse: s-maj=141.2km s-min=21.2km az=60.0*

ISC 25 01:24:02.2±1.0, 22.˚8N±0.˚2× 94.˚0E±0.˚2, h100km, n17, σ0s83/13, mb3.6/5, Myanmar

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
							h m s	ISC
CMAR	Chiang Mai Arr 0.4nm,0.3s,baz=311,slow=12,SNR=6.4	6.30	132	P		Pn	01 25 32.8	+0.2
ODAN	Odare 78nm,0.3s	7.27	305	*e*Pn		Pn	01 25 50.0	+4.1
ODAN				*e*Sn		Sn	01 27 08.5	+1.5
TAPN	Taplejung 37nm,0.3s	7.31	310	*e*Pn		Pn	01 25 50.5	+3.9
TAPN				*e*Sn		Sn	01 27 08.3	+0.1
RAMN	Ramite 32nm,0.2s	7.92	303	*e*Pn		Pn	01 25 59.0	+4.2
RAMN				*e*Sn		Sn	01 27 22.5	-0.3
GUN	Gumba 36nm,0.3s	8.96	306	*e*Pn		Pn	01 26 13.2	+4.1
GUN				*e*Sn		Sn	01 27 48.3	-0.2
PKI	Pulchoki 14nm,0.3s	9.14	303	*e*Pn		Pn	01 26 16.2	+4.7
PKI				*e*Sn		Sn	01 27 52.6	-0.2
PKIN	Phulchoki 37nm,0.4s	9.16	303	*e*Pn		Pn	01 26 15.9	+4.2
PKIN				*e*Sn		Sn	01 27 53.3	+0.2
KKN

MKAR	**Makanchi Array**	**25.77**	**341**	P		**P**	**01 29 23.9**	**+0.4**
	0.7nm,0.4s,baz=151,slow=9.2,SNR=16							
MKAR				pP		**pP**	**01 29 47.0**	**+1.4**
	0.5nm,0.5s,baz=146,slow=9.7,SNR=4.8							
ZALV	**Zalesovo Beam**	**31.89**	**350**	P		**P**	**01 30 17.4**	**-0.4**
	0.5nm,0.4s,baz=166,slow=12,SNR=3.4							
BVAR	**Borovoye Array**	**35.16**	**335**	P		**P**	**01 30 44.8**	**-1.5**
	0.3nm,0.4s,baz=152,slow=4.8,SNR=3.3							
PETK	**Petropavlovsk-**	**56.37**	**40**	LR		LR	01 59 07.2	
	comp=Z,24nm,18.1s,baz=119,slow=37							
ASAR	**Alice Springs**	**60.28**	**137**	P		**P**	**01 34 00.5**	**0.0**
	0.2nm,0.4s,baz=319,slow=6.2,SNR=4.2							
ARCES	**ARCESS Array B**	**61.36**	**338**	P		**P**	**01 34 06.8**	**-0.3**
	5.3nm,1.1s,baz=100,slow=7.3,SNR=5.6							

*ISCJB **25** 01:29:28.8±1.2,50.07N±0.05×88.0E±0.1,h11km,mb3.3/2, Error ellipse: s-maj=11.8km s-min=7.2km az=20.3*
*IDC **25** 01:29:28.6±1.6,50.08N×88.05E,h0km,mb3.4/2, mb1 3.6/6,mb1mx3.4/30,mbtmp3.6/6,ML3.6/4,Error ellipse: s-maj=18.5km s-min=13.1km az=118.0*
*NNC **25** 01:29:32.5±2.4,49.99N×87.69E,h0km,mb4.2,mpv3.8, Error ellipse: s-maj=17.6km s-min=10.3km az=71.0*

ISC 25 01:29:31.0±1.4,50.10N±0.07×88.0E±0.1,h11km,n10, σ1§72/17,7C-3D,Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**4.32**	**335**	Pn		Pn	**Pn**	**01 30 37.8**	**+1.3**
	2.3nm,0.3s,baz=158,slow=13,SNR=19								
ZALV				Sn		Sn	**Sn**	**01 31 28.5**	**+1.8**
	4.3nm,0.3s,baz=160,slow=24,SNR=8.2								
ZALV				Lg		Lg		01 31 46.7	
	4.7nm,0.3s,baz=151,slow=28,SNR=6.5								
MK31	**Makanchi Array**	**5.01**	**231**	↑Pn		Pn	**Pn**	**01 30 47.3**	**+1.2**
	10.0nm,0.5s,baz=55,slow=12,SNR=196								
MK31				↓Pg		Pb	**Pb**	**01 31 00.4**	**+1.7**
	6.0nm,0.5s,baz=51,slow=16,SNR=6.5								
MK31				↓Sn		Sn	**Sn**	**01 31 43.4**	**-0.7**
	8.5nm,0.6s,baz=54,slow=24,SNR=5.3								
MK31				↑Lg		Lg		01 32 04.7	
	14nm,0.6s,baz=55,slow=28,SNR=6.2								
MKAR	**Makanchi Array**	**5.01**	**231**	Pn		**Pn**	**Pn**	**01 30 47.3**	**+1.2**
	4.7nm,0.3s,baz=50,slow=13,SNR=162								
MKAR				Sn		**Sn**	**Sn**	**01 31 45.4**	**+1.3**
	4.7nm,0.3s,baz=54,slow=23,SNR=8.2								
MKAR				Lg		Lg		01 32 06.0	
	4.8nm,0.3s,baz=48,slow=28,SNR=9.8								
KURK	**Kurchatov**	**6.00**	**280**	↑Pn		**Pn**	**Pn**	**01 30 59.6**	**0.0**
	3.5nm,0.5s								
KURK				↓Sn		**Sn**	**Sn**	**01 32 09.8**	**+1.5**
	5.4nm,0.8s								
KURK				↑Lg		Lg		01 32 37.2	
	15nm,0.5s								
KURBB	**Kurchatov Arra**	**6.06**	**279**	↑Pn		**Pn**	**Pn**	**01 31 00.4**	**0.0**
	12nm,0.6s								
KURBB				↑Sn		**Sn**	**Sn**	**01 32 10.6**	**+1.0**
	33nm,0.7s								
KURBB				↑Lg		Lg		01 32 39.4	
	59nm,0.7s								
KURBB	**Kurchatov Arra**	**6.06**	**279**	Pn		**Pn**	**Pn**	**01 31 00.8**	**+0.4**
	0.6nm,0.3s,baz=91,slow=14,SNR=32								
KURBB				Sn		**Sn**	**Sn**	**01 32 10.8**	**+1.2**
	0.6nm,0.3s,baz=88,slow=27,SNR=6.6								
KURBB				Lg		Lg		01 32 39.7	
	0.7nm,0.3s,baz=88,slow=32,SNR=7.7								
BVAR	**Borovoye Array**	**11.32**	**292**	Sn		**Sn**	**Sn**	**01 34 14.4**	**-4.5**
	0.3nm,0.3s,baz=81,slow=20,SNR=3.8								
AKTO	**Aktyubinsk**	**19.09**	**283**	P		**P**	**01 33 53.8**	**+0.4**
	0.1nm,0.3s,baz=72,slow=15,SNR=4.2								
BRTR	**Keskin Array B**	**39.04**	**276**	P		**P**	**01 36 56.4**	**-1.3**
	0.3nm,0.5s,baz=69,slow=4.1,SNR=2.9								
ILAR	**Eielson Array**	**57.84**	**24**	P		**P**	**01 39 20.6**	**-1.4**
	0.3nm,0.8s,baz=308,slow=4.5,SNR=3.6								

KRSC 25 02:01:39.3±0.7,50.86N×157.34E,h24km±23km,ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.80**	**258**	*e*P		Pb	**Pb**	02 01 52.9	-1.6
SKR				*e*S		Sb	Sb	02 02 03.2	-1.6
MIPR	**Malaya Ipel'ka**	**1.46**	**346**	P		Pn	**Pn**	02 02 04.2	0.0
ASAK	**Asacha**	**1.56**	**13**	P		Pn	**Pn**	02 02 06.6	+0.9
ASAK				S		Sn	**Sn**	02 02 26.0	+0.7
MTVR	**Mutnovka**	**1.71**	**18**	*e*P		Pb	**Pb**	02 02 09.0	-1.2
MTVR				*e*S		Sb	**Sb**	02 02 30.8	-0.6
RUS	**Russkaya**	**1.74**	**24**	*e*P		Pn	**Pn**	02 02 08.4	+0.5
RUS				*e*S		Sn	**Sn**	02 02 29.9	+0.6
GRL	**Gorelyy**	**1.75**	**15**	P		Pb	**Pb**	02 02 10.2	-0.8
GRL				*e*S		Sb	**Sb**	02 02 32.5	-0.2
APC	**Apacha**	**2.07**	**357**	P		Pn	**Pn**	02 02 14.0	+1.5
UGLR	**Uglovaya**	**2.52**	**21**	P		Pn	**Pn**	02 02 21.3	+2.4
KOK	**Koryaka**	**2.56**	**18**	P		Pn	**Pn**	02 02 21.6	+2.1
SDLR	**Sedlovina**	**2.60**	**21**	P		Pn	**Pn**	02 02 21.3	+1.3
NLC	**Nalytchevo**	**2.62**	**27**	S		Sn	**Sn**	02 02 50.1	-1.1
SPN	**Mys Shipunski**	**2.79**	**35**	P		Pn	**Pn**	02 02 23.3	+0.9
SPN				*e*S		Sn	**Sn**	02 02 55.1	-0.2
GNL	**Ganaly**	**2.86**	**7**	P		Pn	**Pn**	02 02 26.0	+2.4

*IDC **25** 02:29:05.1±1.1,35.39N×28.60E,h0km,mb3.6/6, mb1 3.6/11,mb1mx3.5/30,mbtmp3.6/11,ML3.5/5,MS4.3/1, Ms1 4.3/1,ms1mx2.3/36,Error ellipse: s-maj=21.7km s-min=17.6km az=12.0*
*ISK **25** 02:29:06.3,35.19N×28.53E,h25km,ML3.7*
*ISCJB **25** 02:29:08.5±0.2,35.26N±0.02×28.62E±0.02,h50km±7km, mb3.4/6,MS4.4/1,Error ellipse: s-maj=3.6km s-min=2.5km az=7.4*
*ATH **25** 02:29:09.1,35.37N×28.56E,h40km,MD3.7/10*
*CSEM **25** 02:29:10.3±0.1,35.29N×28.62E,h40km,Mw3.2,Error ellipse: s-maj=2.6km s-min=1.9km az=14.0*
*NIC **25** 02:29:10.2±0.1,35.18N×28.76E,h71km,ML3.5,MW3.2*
*HLW **25** 02:29:11.4,35.27N×28.60E,h32km±17km,Md3.4,ML3.4*

ISC 25 02:29:10.2±1.1,35.27N±0.03×28.61E±0.03,h36km±3km, n184,σ1§19/227,mb3.5/6,Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**1.02**	**337**	*e*P		Pn	**Pn**	**02 29 27.0**	**-1.0**
ARG				*e*S		Sn	**Sn**	02 29 40.1	-1.0
ARG	**Arkhangelos**	**1.02**	**337**	*e*P		Pn	**Pn**	02 29 27.0	-1.0
ARG				*e*S		Sn	**Sn**	02 29 40.1	-1.0
KSL	**Kastellorizon**	**1.18**	**42**	*e*P		Pn	**Pn**	02 29 30.1	0.0
KARP	**Karpathos**	**1.22**	**284**	*e*P		Pn	**Pn**	02 29 30.4	-0.3
KARP				*e*S		Sn	**Sn**	02 29 46.2	+0.3
KARP	**Karpathos**	**1.22**	**284**	*e*P		Pn	**Pn**	02 29 30.4	-0.3
KARP				*e*S		Sn	**Sn**	02 29 46.2	+0.3
FETY	**Fethiye**	**1.41**	**16**	*e*PN		Pn	**Pn**	02 29 32.4	-1.0
FETY	**Fethiye**	**1.41**	**16**	*e*Pn		Pn	**Pn**	02 29 32.4	-1.0
DALY	**Dalyan (Mu¨la**	**1.54**	**1**	*e*PN		Pn	**Pn**	02 29 34.4	-0.8
DALY				*e*SN		Sn	**Sn**	02 29 53.9	0.0
DALY	**Dalyan (Mu¨la**	**1.54**	**1**	*e*Pn		Pn	**Pn**	02 29 34.4	-0.8
DALY				*e*Sn		Sn	**Sn**	02 29 53.9	0.0
DAT	**Datca**	**1.68**	**330**	*e*PN		Pn	**Pn**	02 29 35.5	-1.6
DAT	**Datca**	**1.68**	**330**	*e*Pn		Pn	**Pn**	02 29 35.5	-1.6
NIS1	**Nisyros Isl.**	**1.77**	**319**	*e*P		Pn	**Pn**	02 29 37.0	-1.2
NIS1	**Nisyros Isl.**	**1.77**	**319**	*e*P		Pn	**Pn**	02 29 37.0	-1.2
ELL	**Elmali**	**1.81**	**35**	*e*PN		Pn	**Pn**	02 29 38.1	-0.9
ELL	**Elmali**	**1.81**	**35**	*e*Pn		Pn	**Pn**	02 29 38.1	-0.9
YER	**Yerkesik**	**1.88**	**352**	*e*PN		Pn	**Pn**	02 29 39.1	-0.7
YER				*e*SN		Sn	**Sn**	02 30 02.8	+0.5
YER	**Yerkesik**	**1.88**	**352**	*e*Pn		Pn	**Pn**	02 29 39.1	-0.7
YER				*e*Sn		Sn	**Sn**	02 30 02.8	+0.5
ZKR	**Zakros**	**1.97**	**266**	*e*P		Pn	**Pn**	02 29 41.1	+0.1
ZKR				*e*S		Sn	**Sn**	02 30 05.0	+0.6
ZKR	**Zakros**	**1.97**	**266**	*e*P		Pn	**Pn**	02 29 41.1	+0.1
ZKR				*e*S		Sn	**Sn**	02 30 05.0	+0.6
BODT	**Bodrum**	**2.08**	**330**	*e*PN		Pn	**Pn**	02 29 40.6	-1.9
BODT	**Bodrum**	**2.08**	**330**	*e*Pn		Pn	**Pn**	02 29 40.6	-1.9
MLSB	**Milas**	**2.13**	**342**	*e*PN		Pn	**Pn**	02 29 42.3	-1.0
MLSB	**Milas**	**2.13**	**342**	*e*Pn		Pn	**Pn**	02 29 42.3	-1.0
ANTB	**Antalya**	**2.32**	**45**	*e*PN		Pn	**Pn**	02 29 46.3	+0.5
ANTB	**Antalya**	**2.32**	**45**	*e*Pn		Pn	**Pn**	02 29 46.3	+0.5
NPS	**Neapolis**	**2.45**	**271**	*e*P		Pn	**Pn**	02 29 47.9	+0.2
NPS				*e*S		Sn	**Sn**	02 30 15.9	-0.6
NPS	**Neapolis**	**2.45**	**271**	*e*P		Pn	**Pn**	02 29 47.9	+0.2
NPS				*e*S		Sn	**Sn**	02 30 15.9	-0.6
DENT	**Denizli**	**2.50**	**8**	*e*PN		Pn	**Pn**	02 29 48.1	-0.3
DENT	**Denizli**	**2.50**	**8**	*e*Pn		Pn	**Pn**	02 29 48.1	-0.3
LAST	**Lasithi**	**2.57**	**268**	*e*P		Pn	**Pn**	02 29 49.7	+0.4
LAST				*e*S		Sn	**Sn**	02 30 19.4	+0.1
LAST	**Lasithi**	**2.57**	**268**	*e*P		Pn	**Pn**	02 29 49.7	+0.4
LAST				*e*S		Sn	**Sn**	02 30 19.4	+0.1
BCK	**Bucak**	**2.71**	**36**	*e*PN		Pn	**Pn**	02 29 51.6	+0.4
BCK	**Bucak**	**2.71**	**36**	*e*Pn		Pn	**Pn**	02 29 51.6	+0.4
SMG	**Samos**	**2.82**	**330**	*e*P		Pn	**Pn**	02 29 52.2	-0.5
SMG				*e*S		Sn	**Sn**	02 30 23.5	-2.0
SMG	**Samos**	**2.82**	**330**	*e*P		Pn	**Pn**	02 29 52.2	-0.5
SMG				*e*S		Sn	**Sn**	02 30 23.5	-2.0
SUTC	**Sutluce-Ispart**	**2.92**	**41**	*e*PN		Pn	**Pn**	02 29 54.4	+0.1
SUTC	**Sutluce-Ispart**	**2.92**	**41**	*e*Pn		Pn	**Pn**	02 29 54.4	+0.1
IDI	**Anoyia**	**3.04**	**271**	*e*P		Pn	**Pn**	02 29 55.9	0.0
IDI				*e*S		Sn	**Sn**	02 30 30.1	-1.0
IDI	**Anoyia**	**3.04**	**271**	*e*P		Pn	**Pn**	02 29 55.9	0.0
IDI				*e*S		Sn	**Sn**	02 30 30.1	-1.0
AKMC	**Akamas**	**3.06**	**94**	P		Pn	**Pn**	02 29 55.2	-0.8
AKMC	**Akamas**	**3.06**	**94**	P		Pn	**Pn**	02 29 55.2	-0.8
APE	**Apeiranthos**	**3.07**	**307**	*e*PN		Pn	**Pn**	02 29 55.0	-1.2
APE	**Apeiranthos**	**3.07**	**307**	*e*P		Pn	**Pn**	02 29 55.5	-0.7
APE				*e*S		Sn	**Sn**	02 30 29.7	-2.0
APE	**Apeiranthos**	**3.07**	**307**	*e*Pn		Pn	**Pn**	02 29 55.0	-1.2
APE	**Apeiranthos**	**3.07**	**307**	*e*P		Pn	**Pn**	02 29 55.5	-0.7
APE				*e*S		Sn	**Sn**	02 30 29.7	-2.0
PPCY	**Paphos**	**3.09**	**96**	P		Pn	**Pn**	02 29 55.7	-0.6
PPCY	**Paphos**	**3.09**	**96**	P		Pn	**Pn**	02 29 55.7	-0.6
SIVA	**Sivas**	**3.13**	**266**	*e*P		Pn	**Pn**	02 29 57.3	+0.4
SIVA				*e*S		Sn	**Sn**	02 30 33.1	+0.1
SIVA	**Sivas**	**3.13**	**266**	*e*P		Pn	**Pn**	02 29 57.3	+0.4
SIVA				*e*S		Sn	**Sn**	02 30 33.1	+0.1
KHL	**Karahalli**	**3.13**	**13**	*e*PN		Pn	**Pn**	02 29 56.9	-0.2
KHL	**Karahalli**	**3.13**	**13**	*e*Pn		Pn	**Pn**	02 29 56.9	-0.2
KULA	**Kula-Manisa**	**3.24**	**1**	*e*PN		Pn	**Pn**	02 29 58.4	-0.1
KULA	**Kula-Manisa**	**3.24**	**1**	*e*Pn		Pn	**Pn**	02 29 58.4	-0.1
ALFC	**Alevga**	**3.27**	**91**	P		Pn	**Pn**	02 29 58.1	-0.8
	4.0nm,0.2s								
ALFC				S		Sn	**Sn**	02 30 35.4	-1.1
ALFC	**Alevga**	**3.27**	**91**	P		Pn	**Pn**	02 29 58.1	-0.8
	4.0nm,0.2s								
ALFC				S		Sn	**Sn**	02 30 35.4	-1.1
BLCB	**Balcova**	**3.35**	**338**	*e*PN		Pn	**Pn**	02 29 59.2	-0.8
BLCB	**Balcova**	**3.35**	**338**	*e*Pn		Pn	**Pn**	02 29 59.2	-0.8
LEF	**Lefka**	**3.51**	**91**	*e*PN		Pn	**Pn**	02 30 01.3	-0.9
LEF	**Lefka**	**3.51**	**91**	*e*Pn		Pn	**Pn**	02 30 01.3	-0.9
HDMB	**Hadim**	**3.56**	**61**	*e*PN		Pn	**Pn**	02 30 03.5	+0.4
HDMB	**Hadim**	**3.56**	**61**	*e*Pn		Pn	**Pn**	02 30 03.5	+0.4
VAM	**Vamos**	**3.61**	**273**	*e*P		Pn	**Pn**	02 30 04.1	+0.5
VAM				*e*S		Sn	**Sn**	02 30 44.1	-0.8
VAM	**Vamos**	**3.61**	**273**	*e*P		Pn	**Pn**	02 30 04.1	+0.5
VAM				*e*S		Sn	**Sn**	02 30 44.1	-0.8
SHUT	**Suhut-Afyon**	**3.63**	**25**	*e*PN		Pn	**Pn**	02 30 04.1	+0.2
SHUT	**Suhut-Afyon**	**3.63**	**25**	*e*Pn		Pn	**Pn**	02 30 04.1	+0.2
CHOS	**Chios island**	**3.73**	**327**	*e*P		Pn	**Pn**	02 30 05.2	0.0
CHOS	**Chios island**	**3.73**	**327**	*e*P		Pn	**Pn**	02 30 05.2	0.0
GVD	**Gavdhos**	**3.74**	**265**	*e*P		Pn	**Pn**	02 30 06.3	+1.0
GVD				*e*S		Sn	**Sn**	02 30 47.5	-0.6
GVD	**Gavdhos**	**3.74**	**265**	*e*P		Pn	**Pn**	02 30 06.3	+1.0
GVD				*e*S		Sn	**Sn**	02 30 47.5	-0.6
MAMC	**Mammari**	**3.77**	**90**	P		Pn	**Pn**	02 30 05.1	-0.7
MAMC	**Mammari**	**3.77**	**90**	P		Pn	**Pn**	02 30 05.1	-0.7
CSS	**Prodhromos**	**3.88**	**93**	P		Pn	**Pn**	02 30 06.5	-0.8
	0.9nm,0.3s								
CSS				S		Sn	**Sn**	02 30 50.6	-1.0
CSS	**Prodhromos**	**3.88**	**93**	*e*PN		Pn	**Pn**	02 30 07.3	0.0
CSS	**Prodhromos**	**3.88**	**93**	P		Pn	**Pn**	02 30 06.5	-0.8
	0.9nm,0.3s								
CSS	**Prodhromos**	**3.88**	**93**	*e*Pn		Pn	**Pn**	02 30 07.3	0.0
CSS				S		Sn	**Sn**	02 30 50.6	-1.0
LFK	**Lefkose**	**4.03**	**88**	*e*PN		Pn	**Pn**	02 30 08.9	-0.4
LFK	**Lefkose**	**4.03**	**88**	*e*Pn		Pn	**Pn**	02 30 08.9	-0.4
KONT	**Konya--Tatoy**	**4.03**	**47**	*e*PN		Pn	**Pn**	02 30 10.1	+0.8
KONT	**Konya--Tatoy**	**4.03**	**47**	*e*Pn		Pn	**Pn**	02 30 10.1	+0.8
LADK	**Ladik-KONYA**	**4.20**	**45**	*e*PN		Pn	**Pn**	02 30 12.1	+0.4
LADK	**Ladik-KONYA**	**4.20**	**45**	*e*Pn		Pn	**Pn**	02 30 12.1	+0.4
TVSB	**Tavsanli**	**4.23**	**9**	*e*PN		Pn	**Pn**	02 30 12.4	+0.3
TVSB	**Tavsanli**	**4.23**	**9**	*e*Pn		Pn	**Pn**	02 30 12.4	+0.3
IKL	**Isikli**	**4.24**	**75**	*e*PN		Pn	**Pn**	02 30 12.3	+0.1
IKL	**Isikli**	**4.24**	**75**	*e*Pn		Pn	**Pn**	02 30 12.3	+0.1
HMAT	**Matruh**	**4.36**	**197**	P		Pn	**Pn**	02 30 13.9	+0.1
	baz=198								
HMAT				S		Sn	**Sn**	02 30 58.9	-4.4
	baz=198								
HMAT				AMP				02 31 00.0	
	comp=N,40μm,0.4s,logA/T=5.0,baz=198								
HMAT	**Matruh**	**4.36**	**197**	P		Pn	**Pn**	02 30 13.9	+0.1
HMAT				S		Sn	**Sn**	02 30 58.9	-4.4
ANKY	**Antikythira Is**	**4.37**	**279**	*e*P		Pn	**Pn**	02 30 15.1	+1.1
ANKY	**Antikythira Is**	**4.37**	**279**	*e*P		Pn	**Pn**	02 30 15.1	+1.1
KIZT	**Kizilcal**	**4.45**	**35**	*e*PN		Pn	**Pn**	02 30 15.4	+0.2
KIZT	**Kizilcal**	**4.45**	**35**	*e*Pn		Pn	**Pn**	02 30 15.4	+0.2
KYTH	**Kithira**	**4.64**	**284**	*e*P		Pn	**Pn**	02 30 17.5	-0.3
KYTH	**Kithira**	**4.64**	**284**	*e*P		Pn	**Pn**	02 30 17.5	-0.3
SLUM		**4.72**	**218**	P		Pn	**Pn**	02 30 19.1	+0.2
	baz=218								
SLUM				S		Sn	**Sn**	02 31 07.8	-4.5
	baz=218								
SLUM		**4.72**	**218**	P		Pn	**Pn**	02 30 19.1	+0.2
SLUM				S		Sn	**Sn**	02 31 07.8	-4.5
VLI	**Veliai**	**4.82**	**289**	*e*P		Pn	**Pn**	02 30 19.9	-0.3
VLI				*e*S		Sn	**Sn**	02 31 12.6	-2.2
VLI	**Veliai**	**4.82**	**289**	*e*P		Pn	**Pn**	02 30 19.9	-0.3
GONE	**Gonen-Balikesi**	**4.82**	**352**	*e*PN		Pn	**Pn**	02 30 20.6	+0.4
GONE	**Gonen-Balikesi**	**4.82**	**352**	*e*Pn		Pn	**Pn**	02 30 20.6	+0.4
DID	**Didima**	**4.88**	**299**	*e*P		Pn	**Pn**	02 30 21.0	0.0
DID	**Didima**	**4.88**	**299**	*e*P		Pn	**Pn**	02 30 21.0	0.0
SULT	**Sultanhani-AKS**	**4.90**	**52**	*e*PN		Pn	**Pn**	02 30 22.4	+1.0
SULT	**Sultanhani-AKS**	**4.90**	**52**	*e*Pn		Pn	**Pn**	02 30 22.4	+1.0
KRBG	**Karabiga-Canak**	**5.22**	**349**	*e*PN		Pn	**Pn**	02 30 26.2	+0.6
KRBG	**Karabiga-Canak**	**5.22**	**349**	*e*Pn		Pn	**Pn**	02 30 26.2	+0.6
DYR	**Agios Nikonas**	**5.30**	**288**	*e*P		Pn	**Pn**	02 30 27.8	+1.0
DYR				*e*S		Sn	**Sn**	02 31 24.4	-2.3
DYR	**Agios Nikonas**	**5.30**	**288**	*e*P		Pn	**Pn**	02 30 27.8	+1.0
LTK	**Loutraki**	**5.30**	**303**	*e*P		Pn	**Pn**	02 30 26.9	0.0
LTK	**Loutraki**	**5.30**	**303**	*e*P		Pn	**Pn**	02 30 26.9	0.0
VLX	**Vlachokerasia**	**5.45**	**294**	*e*P		Pn	**Pn**	02 30 30.0	+1.1
VLX	**Vlachokerasia**	**5.45**	**294**	*e*P		Pn	**Pn**	02 30 30.0	+1.1
KARA	**Karaisali**	**5.57**	**67**	*e*PN		Pn	**Pn**	02 30 31.7	+1.2
KARA	**Karaisali**	**5.57**	**67**	*e*Pn		Pn	**Pn**	02 30 31.7	+1.2
LKR	**Lokris**	**5.62**	**309**	*e*P		Pn	**Pn**	02 30 32.0	+0.9
LKR	**Lokris**	**5.62**	**309**	*e*P		Pn	**Pn**	02 30 32.0	+0.9
GUR	**Goura**	**5.70**	**300**	*e*P		Pn	**Pn**	02 30 33.2	+0.8
GUR				*e*S		Sn	**Sn**	02 31 37.1	-2.9
GUR	**Goura**	**5.70**	**300**	*e*P		Pn	**Pn**	02 30 33.2	+0.8
ITM	**Ithomi**	**5.73**	**291**	*e*P		Pn	**Pn**	02 30 33.1	+0.4
ITM				*e*S		Sn	**Sn**	02 31 34.8	-2.4
ITM	**Ithomi**	**5.73**	**291**	*e*P		Pn	**Pn**	02 30 33.1	+0.4
PYL	**PYLOS**	**5.79**	**288**	*e*P		Pn	**Pn**	02 30 34.4	+0.8
PYL				*e*S		Sn	**Sn**	02 31 36.6	-2.2
PYL	**PYLOS**	**5.79**	**288**	*e*P		Pn	**Pn**	02 30 34.4	+0.8
HNAT	**Natroun**	**5.87**	**163**	P		Pn	**Pn**	02 30 35.0	+0.4
	baz=162								
HNAT	**Natroun**	**5.87**	**163**	P		Pn	**Pn**	02 30 35.1	+0.4
KLV	**Kalavryta, Ach**	**5.88**	**300**	*e*P		Pn	**Pn**	02 30 35.5	+0.6
KLV				*e*S		Sn	**Sn**	02 31 39.0	-2.1
KLV	**Kalavryta, Ach**	**5.88**	**300**	*e*P		Pn	**Pn**	02 30 35.5	+0.6
BRTR	**Keskin Array B**	**5.98**	**40**	Pn		Pn	**Pn**	02 30 36.0	-0.2
	comp=N,0.2nm,0.3s,baz=222,slow=14,SNR=8.1								
BRTR				Sn		Sn	**Sn**	02 31 42.0	-1.5
	comp=N,0.3nm,0.3s,baz=189,slow=22,SNR=3.9								
KOT	**Kottamia**	**5.98**	**152**	P		Pn	**Pn**	02 30 36.9	+0.6
	baz=152								
KOT	**Kottamia**	**5.98**	**152**	P		Pn	**Pn**	02 30 36.8	+0.6
AMT	**Artemida-Makis**	**6.01**	**294**	*e*P		Pn	**Pn**	02 30 37.2	+0.7
AMT				*e*S		Sn	**Sn**	02 31 42.5	-1.6
AMT	**Artemida-Makis**	**6.01**	**294**	*e*P		Pn	**Pn**	02 30 37.2	+0.7
AMT				*e*S		Sn	**Sn**	02 31 42.5	-1.6
AMAG	**Maghara**	**6.02**	**139**	P		Pn	**Pn**	02 30 36.6	-0.1
	baz=138								
AMAG	**Maghara**	**6.02**	**139**	P		Pn	**Pn**	02 30 36.6	-0.1
KALE	**Kalithea**	**6.05**	**303**	*e*P		Pn	**Pn**	02 30 37.8	+0.6
KALE	**Kalithea**	**6.05**	**303**	*e*P		Pn	**Pn**	02 30 37.8	+0.6
HHAG	**Hagoal**	**6.06**	**150**	P		Pn	**Pn**	02 30 38.3	+1.0
	baz=149								
HHAG	**Hagoal**	**6.06**	**150**	P		Pn	**Pn**	02 30 38.3	+1.0
MMAI	**Mount Meron Ar**	**6.06**	**110**	Pn		Pn	**Pn**	02 30 36.7	-0.6
	comp=N,3.4nm,0.3s,baz=310,slow=13,SNR=13								
MMAI				Sn		Sn	**Sn**	02 31 42.1	-3.4
	comp=N,6.0nm,0.3s,baz=312,slow=19,SNR=7.6								
RSH		**6.07**	**134**	P		Pn	**Pn**	02 30 37.8	+0.4
	baz=133								
RSH		**6.07**	**134**	P		Pn	**Pn**	02 30 37.8	+0.4
TRIZ	**Trizonia**	**6.09**	**302**	*e*P		Pn	**Pn**	02 30 38.2	+0.6
TRIZ	**Trizonia**	**6.09**	**302**	*e*P		Pn	**Pn**	02 30 38.2	+0.6
LAKA	**Lakka**	**6.09**	**301**	*e*P		Pn	**Pn**	02 30 38.0	+0.3
LAKA	**Lakka**	**6.09**	**301**	*e*P		Pn	**Pn**	02 30 38.0	+0.3
KOZT	**Kozan**	**6.22**	**67**	*e*PN		Pn	**Pn**	02 30 40.8	+1.3
KOZT	**Kozan**	**6.22**	**67**	*e*Pn		Pn	**Pn**	02 30 40.8	+1.3
EFP	**Efpalio**	**6.23**	**302**	*e*P		Pn	**Pn**	02 30 40.6	+1.0
EFP	**Efpalio**	**6.23**	**302**	*e*P		Pn	**Pn**	02 30 40.6	+1.0
AGG	**Agios Georgios**	**6.26**	**309**	*e*P		Pn	**Pn**	02 30 40.4	+0.4
AGG	**Agios Georgios**	**6.26**	**309**	*e*P		Pn	**Pn**	02 30 40.4	+0.4
RLS	**Riolos of Patr**	**6.38**	**298**	*e*P		Pn	**Pn**	02 30 43.0	+1.4
RLS	**Riolos of Patr**	**6.38**	**298**	*e*P		Pn	**Pn**	02 30 43.0	+1.4
**E

KZN				*e*Sb	**Sb**	03 40 03.0	0.0		
FNA	**Florina**	**0.37**	**357**	P	**Pg**	03 39 58.8	+0.1		
FNA				S	**Sg**	03 40 03.7	-0.1		
FNA	**Florina**	**0.37**	**357**	*e*PB	**Pg**	03 39 58.8	+0.1		
FNA				*e*SB	**Sg**	03 40 03.8	-0.1		
FNA	**Florina**	**0.37**	**357**	*e*Pb	**Pg**	03 39 58.8	+0.1		
FNA				*e*Sb	**Sg**	03 40 03.8	-0.1		
KBN	**Korca**	**0.51**	**294**	P	**Pb**	03 40 01.9	+0.1		
KBN				S	**Sb**	03 40 10.2	+1.1		
KBN	**Korca**	**0.51**	**294**	P	**Pb**	03 40 01.9	+0.1		
KBN				S	**Sb**	03 40 10.2	+1.1		
BIA	**Bitola**	**0.60**	**354**	P	**Pg**	03 40 02.5	-0.6		
BIA				S	**Sg**	03 40 11.2	0.0		
BIA	**Bitola**	**0.60**	**354**	*i* Pg	**Pg**	03 40 02.6	-0.6		
BIA				*i* Sg	**Sb**	03 40 12.0	+0.2		
BIA	**Bitola**	**0.60**	**354**	P	**Pg**	03 40 02.5	-0.6		
BIA				S	**Sg**	03 40 11.2	0.0		
LIT	**Litokhoron**	**0.89**	**110**	P	**Pb**	03 40 08.1	-0.1		
LIT				S	**Sg**	03 40 20.7	+0.6		
LIT	**Litokhoron**	**0.89**	**110**	*e*PG	**Pb**	03 40 07.8	-0.4		
LIT				*e*SB	**Sg**	03 40 21.0	+0.9		
LIT	**Litokhoron**	**0.89**	**110**	*e*Pg	**Pb**	03 40 07.8	-0.4		
LIT	**Litokhoron**	**0.89**	**110**	P	**Pb**	03 40 08.1	-0.1		
LIT				S	**Sg**	03 40 20.7	+0.6		
LIT				*e*Sb	**Sg**	03 40 21.0	+0.9		
GRG	**Griva**	**0.93**	**54**	*e*PB	**Pb**	03 40 09.2	+0.2		
GRG				*e*SB	**Sn**	03 40 23.1	+0.4		
GRG	**Griva**	**0.93**	**54**	*e*Pb	**Pb**	03 40 09.2	+0.2		
GRG				*e*Sb	**Sn**	03 40 23.1	+0.4		
THL	**Klokotos Trika**	**0.97**	**151**	*e*PN	**Pb**	03 40 09.4	-0.2		
THL				*e*SB	**Sb**	03 40 22.3	+0.1		
THL	**Klokotos Trika**	**0.97**	**151**	*e*Pn	**Pb**	03 40 09.4	-0.2		
THL				*e*Sb	**Sb**	03 40 22.3	+0.1		
KEK	**Kerkira**	**1.42**	**241**	*e*PB	**Pn**	03 40 15.5	-0.8		
KEK	**Kerkira**	**1.42**	**241**	*e*Pb	**Pn**	03 40 15.5	-0.8		
PLG	**Polygyros**	**1.56**	**91**	*e*PB	**Pb**	03 40 19.9	+0.2		
PLG	**Polygyros**	**1.56**	**91**	*e*Pb	**Pb**	03 40 19.9	+0.2		
AGG	**Agios Georgios**	**1.57**	**153**	*e*PB	**Pb**	03 40 20.0	+0.2		
AGG	**Agios Georgios**	**1.57**	**153**	*e*Pb	**Pb**	03 40 20.0	+0.2		

IDC 25 03:45:27.7±1.7, 47°36N×153°14E, h0km, mb3.6/7, mb1 3.8/9, mb1mx3.6/26, mbtmp3.6/9, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx1.8/35, Error ellipse: s-maj=50.0km s-min=24.0km az=164.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ASAJ	**Asahikawa**	**8.05**	**250**	Pn	Pn	03 47 26.1	+0.2
	0.6nm,0.3s,baz=109,slow=27,SNR=2.7						
USRK	**Ussuriysk Arra**	**15.08**	**266**	LR	LR	03 54 10.9	
	comp=Z,42nm,18.8s,baz=132,slow=35						
MJAR	**Matsushiro Arr**	**15.47**	**231**	Pn	Pn	03 49 07.5	+0.3
	0.2nm,0.3s,baz=30,slow=10,SNR=4.1						
ILAR	**Eielson Array**	**36.06**	**39**	P	P	03 52 32.1	+1.6
	0.1nm,0.5s,baz=263,slow=7.6,SNR=4.2						
MKAR	**Makanchi Array**	**46.68**	**297**	P	P	03 53 59.2	+1.3
	0.3nm,0.8s,baz=71,slow=8.4,SNR=2.5						
FINES	**FINESS Array B**	**63.50**	**335**	P	P	03 55 58.7	-0.4
	1.1nm,0.8s,baz=15,slow=7.2,SNR=2.7						
PDAR	**Pinedale Array**	**64.37**	**54**	P	P	03 56 05.0	-0.6
	0.4nm,0.7s,baz=341,slow=4.9,SNR=2.8						
NOA	**NORSAR Array B**	**67.66**	**341**	P	P	03 56 25.8	-0.3
	0.6nm,0.7s,baz=28,slow=6.3,SNR=3.7						
AKASG	**Malin Array Be**	**71.05**	**326**	P	P	03 56 46.2	-1.0
	0.6nm,0.3s,baz=33,slow=5.9,SNR=4.4						
TXAR	**Lajitas Array**	**77.18**	**61**	P	P	03 57 23.3	-0.2
	0.4nm,0.6s,baz=304,slow=5.0,SNR=5.9						

*ISCJB **25** 03:48:13.5±0.6, 37°.21S±0°.03×72°.76W±0°.1, h64km±5km, mb4.1/11, Error ellipse: s-maj=17.1km s-min=3.9km az=12.5*
*NEIC **25** 03:48:13.4, 37°.17S×72°.83W, h72km, mb4.3/3, After GUC. NEIC Felt [III] at Angol, Chillan, Concepcion, Curacautin, La Florida and Los Angeles.*
*GUC **25** 03:48:13.4±0.8, 37°.17S×72°.83W, h72km±13km, ML5.0*
*IDC **25** 03:48:15.3±2.8, 37°.21S×72°.45W, h57km±24km, mb3.7/9, mb1 3.9/14, mb1mx3.8/22, mbtmp3.8/14, ML4.2/5, MS3.6/5, Ms1 3.5/5, ms1mx3.1/20, Error ellipse: s-maj=33.6km s-min=13.0km az=98.0*
ISC 25 03:48:14.4±1.0, 37°.20S±0°.03×72°.77W±0°.09, h61km±9km, n62, σ1§14/68, mb4.2/11, 7C-5D, Central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CCHI	**Chillan**	**0.81**	**43**	⇓*i* P	**Pn**	03 48 30.1	0.0
CCHI				*i* S	**Sn**	03 48 41.6	0.0
CCHI	**Chillan**	**0.81**	**43**	⇓*i* P	**Pn**	03 48 30.1	0.0
CCHI				*i* S	**Sn**	03 48 41.6	0.0
CCHI				AML	AML	03 48 42.6	
	comp=E,14μm,0.6s						
TMU	**Temuco**	**1.54**	**175**	*e*P	**Pn**	03 48 39.7	+0.1
TMU				*i* S	**Sn**	03 48 59.1	+0.5
TMU	**Temuco**	**1.54**	**175**	*e*P	**Pn**	03 48 39.7	+0.1
TMU				*i* S	**Sn**	03 48 59.1	+0.5
CTCH	**Constitucion**	**1.89**	**9**	⇑*i* P	Pn	03 48 47.7	+3.4
CTCH				*i* S	**Sn**	03 49 10.9	+3.9
CTCH	**Constitucion**	**1.89**	**9**	⇑*i* P	Pn	03 48 47.7	+3.4
CTCH				*i* S	**Sn**	03 49 10.9	+3.9
TALC	**Talca**	**2.02**	**27**	⇑*i* P	**Pn**	03 48 46.3	+0.2
TALC				*i* S	**Sn**	03 49 10.2	0.0
TALC	**Talca**	**2.02**	**27**	⇑*i* P	**Pn**	03 48 46.3	+0.2
TALC				*i* S	**Sn**	03 49 10.2	0.0
TALC				AML	AML	03 49 17.2	
	comp=E,14μm,0.5s						
VLCH	**Valdivia**	**2.63**	**188**	⇓*i* P	**Pn**	03 48 53.8	-0.7
VLCH				*e*S	**Sn**	03 49 24.6	-0.5
VLCH	**Valdivia**	**2.63**	**188**	⇓*i* P	**Pn**	03 48 53.8	-0.7
VLCH				*e*S	**Sn**	03 49 24.6	-0.5
VLCH				AML	AML	03 49 37.1	
	comp=N,47μm,0.7s						
LNV	**Longovilo**	**3.42**	**19**	*e*P	**Pn**	03 49 04.9	-0.4
LNV	**Longovilo**	**3.42**	**19**	*e*P	**Pn**	03 49 04.9	-0.4
PUYE	**Entre Lagos**	**3.48**	**178**	*e*P	**Pn**	03 49 06.2	+0.1
PUYE				*i* S	**Sn**	03 49 46.0	0.0
PUYE	**Entre Lagos**	**3.48**	**178**	*e*P	**Pn**	03 49 06.2	+0.1
PUYE				*i* S	**Sn**	03 49 46.0	0.0
PUYE				AML	AML	03 50 17.2	
	comp=N,8μm,0.8s						
CACH	**El Canelo**	**3.54**	**30**	*e*P	**Pn**	03 49 07.1	-0.1
CACH	**El Canelo**	**3.54**	**30**	*e*P	**Pn**	03 49 07.1	-0.1
CHCH	**Chadas Angostu**	**3.69**	**28**	*e*P	**Pn**	03 49 08.6	-0.3
CHCH	**Chadas Angostu**	**3.69**	**28**	*e*P	**Pn**	03 49 08.6	-0.3
TACH	**Talagante**	**3.84**	**23**	⇑*i* P	**Pn**	03 49 10.5	-0.6
TACH	**Talagante**	**3.84**	**23**	⇑*i* P	**Pn**	03 49 10.5	-0.6
PLCA	**Paso Flores**	**3.93**	**155**	*e*Pn	**Pn**	03 49 12.3	0.0
PLCA				*e*S	**Sn**	03 50 02.9	+5.8
PLCA	**Paso Flores**	**3.93**	**155**	P	**Pn**	03 49 12.3	0.0
	comp=N,8.3nm,0.3s,baz=325,slow=15,SNR=127						
PLCA				S	Sn	03 50 06.8	+10
	comp=N,8.6nm,0.3s,baz=12,slow=14,SNR=3.7						
PCH	**Pirque**	**4.02**	**28**	*e*P	**Pn**	03 49 13.3	-0.3
PCH	**Pirque**	**4.02**	**28**	*e*P	**Pn**	03 49 13.3	-0.3
CLCH	**Cerro Calan**	**4.21**	**26**	⇓*i* P	**Pn**	03 49 15.8	-0.4
CLCH				*i* S	**Sn**	03 50 03.0	-1.1
PEL	**Peldehue**	**4.39**	**23**	⇑*i* P	**Pn**	03 49 18.3	-0.3
JACH	**Jahuel**	**4.85**	**22**	*e*P	**Pn**	03 49 24.2	-0.7
JACH	**Jahuel**	**4.85**	**22**	*e*P	**Pn**	03 49 24.2	-0.7
CFAA	**Coronel Fontan**	**6.72**	**35**	P	**Pn**	03 49 49.4	-1.1
CFAA				S	**Sn**	03 51 04.5	-1.2
CFAA	**Coronel Fontan**	**6.72**	**35**	P	**Pn**	03 49 49.4	-1.1
	comp=N,0.8nm,0.3s,baz=205,slow=13,SNR=53						
CFAA				S	**Sn**	03 51 04.5	-1.2
	comp=N,0.8nm,0.3s,baz=254,slow=10,SNR=3.6						
LCO	**Las Campanas**	**8.35**	**13**	*e*Pn	**Pn**	03 50 12.6	-0.4
	comp=N,24nm,0.5s						
TRQA	**Tornquist**	**8.60**	**99**	*e*Pn	**Pn**	03 50 15.5	-0.7
	comp=N,63nm,1.0s						
LVC	**Limon Verde**	**14.91**	**14**	*e*Pn	**Pn**	03 51 41.0	-0.9
	comp=N,7.8nm,0.8s						
LVC				*e*S	S	03 54 47.9	+7.0
LVC	**Limon Verde**	**14.91**	**14**	P	**Pn**	03 51 40.3	-1.6
	comp=N,0.1nm,0.3s,baz=203,slow=12,SNR=2.9						
LVC				LR	LR	03 58 10.1	
	comp=N,143nm,20.2s,baz=126,slow=40						
CPUP	**Villa Florida**	**17.00**	**55**	P	**P**	03 52 08.4	-0.6
CPUP	**Villa Florida**	**17.00**	**55**	P	**P**	03 52 08.4	-0.6
	comp=N,0.5nm,0.3s,baz=222,slow=14,SNR=4.8						
CPUP				LR	LR	03 58 55.0	
	comp=N,126nm,20.4s,baz=6.9,slow=38						
USHA	**Ushuaia**	**17.88**	**172**	P	**Pn**	03 52 19.1	+0.4
USHA	**Ushuaia**	**17.88**	**172**	P	**Pn**	03 52 19.1	+0.4
	comp=N,1.5nm,0.3s,baz=339,slow=12,SNR=9.9						
USHA				LR	LR	04 00 02.7	
	comp=N,288nm,18.1s,baz=118,slow=40						
LPAZ	**La Paz**	**21.23**	**12**	*e*P	**P**	03 52 57.2	+1.2
	comp=N,3.4nm,0.7s						
LPAZ	**La Paz**	**21.23**	**12**	P	**P**	03 52 56.2	+0.3
	comp=N,1.4nm,0.7s,baz=201,slow=5.2,SNR=7.5						
SIV	**San Ignacio**	**23.53**	**29**	P	**P**	03 53 18.6	-0.6
SIV	**San Ignacio**	**23.53**	**29**	P	**P**	03 53 18.6	-0.6
	comp=N,6.3nm,0.9s,baz=213,slow=8.3,SNR=15						
PMSA	**Palmer Station**	**28.10**	**172**	LR	LR	04 04 01.9	
	comp=N,159nm,20.4s,baz=262,slow=34						
BDFB	**Brasilia**	**30.69**	**52**	P	**P**	03 54 23.7	+0.1
BDFB	**Brasilia**	**30.69**	**52**	P	**P**	03 54 23.7	+0.1
	comp=N,3.7nm,0.7s,baz=219,slow=9.3,SNR=6.4						
BDFB				LR	LR	04 07 19.2	
	comp=N,78nm,18.8s,baz=45,slow=38						
SNAA	**Sanae**	**48.87**	**157**	*e*P	**P**	03 56 53.0	-0.5
	comp=N,4.9nm,0.9s						
SNAA	**Sanae**	**48.87**	**157**	P	**P**	03 56 53.6	+0.1
	comp=N,1.3nm,0.9s,baz=276,slow=9.1,SNR=7.0						
QSPA	**South Pole Qui**	**53.04**	**180**	P	P	03 57 26.2	+1.2
QSPA	**South Pole Qui**	**53.04**	**180**	P	P	03 57 26.2	+1.2
	comp=N,7.2nm,0.9s,baz=143,slow=6.6,SNR=19						
MAW	**Mawson**	**70.29**	**163**	P	**P**	03 59 21.1	+0.4
MAW	**Mawson**	**70.29**	**163**	P	**P**	03 59 21.1	+0.4
	comp=N,2.1nm,0.9s,baz=311,slow=20,SNR=3.5						
TXAR	**Lajitas Array**	**72.25**	**332**	P	P	03 59 36.0	+2.9
TXAR	**Lajitas Array**	**72.25**	**332**	P	P	03 59 36.0	+2.9
	comp=N,0.2nm,0.9s,baz=133,slow=9.1,SNR=2.9						
WVT	**Waverly**	**74.29**	**347**	P	P	03 59 46.2	+1.4
	comp=N,4.3nm,0.9s						
DBIC	**Dimbokro**	**76.77**	**71**	P	**P**	03 59 59.7	+0.1
DBIC	**Dimbokro**	**76.77**	**71**	P	**P**	03 59 59.7	+0.1
	comp=N,6.2nm,0.9s,baz=221,slow=8.5,SNR=4.0						
BOSA	**Boshof**	**79.11**	**118**	P	P	04 00 17.8	+5.1
BOSA	**Boshof**	**79.11**	**118**	P	P	04 00 17.8	+5.1
	comp=N,5.1nm,0.6s,baz=216,slow=5.6,SNR=10.0						
TORD	**Torodi Ar. Bea**	**85.85**	**70**	P	**P**	04 00 48.0	+0.3
TORD	**Torodi Ar. Bea**	**85.85**	**70**	P	**P**	04 00 48.0	+0.3
	comp=N,0.6nm,0.8s,baz=225,slow=5.8,SNR=5.4						
MKAR	**Makanchi Array**	**159.21**	**55**	PKPab	**PKPab**	04 08 43.0	+0.3
MKAR	**Makanchi Array**	**159.21**	**55**	PKPab	**PKPab**	04 08 43.0	+0.3
	comp=N,1.0nm,0.8s,baz=281,slow=4.1,SNR=7.0						

GUC 25 03:59:45.6±0.6, 25°.66S×70°.69W, h58km±44km, ML3.9, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CDCH	**Caldera**	**1.41**	**185**	*e*P	Pn	04 00 10.0	+1.0
CDCH				*e*S	Sn	04 00 27.6	+1.1
CDCH				AML	AML	04 00 32.8	
	comp=E,587nm,0.6s						
CPCH	**Copiapo**	**1.72**	**170**	*e*P	Pn	04 00 14.0	+0.7
CPCH				*e*S	Sn	04 00 35.6	+1.4
CPCH				AML	AML	04 00 40.0	
	comp=N,6μm,0.1s						
ANCH	**Antofagasta**	**1.98**	**7**	*e*P	Pn	04 00 17.7	+0.9
ANCH				*e*S	Sn	04 00 41.7	+1.2
LCO	**Las Campanas**	**3.34**	**180**	*e*P	Pn	04 00 37.3	+1.5
LCO				*e*S	Sn	04 01 16.0	+1.6
LCO				AML	AML	04 01 38.6	
	comp=E,171nm,0.4s						
TLL	**Tololo Astrono**	**4.49**	**181**	*e*P	Pn	04 00 53.5	+1.9
TLL				*e*S	Sn	04 01 45.3	+2.6
TLL				AML	AML	04 02 14.0	
	comp=N,101nm,0.6s						

*ISCJB **25** 04:21:18.3±0.8, 37°.38N±0°.03×21°.26E±0°.04, h12km±5km, Error ellipse: s-maj=5.8km s-min=3.6km az=142.9*
*ATH **25** 04:21:18.8, 37°.45N×21°.29E, h20km±1km, MD3.5/20*
*THE **25** 04:21:19.1, 37°.41N×21°.29E, h3km±1km, ML3.1/4, Error ellipse: s-maj=1.9km s-min=1.1km az=49.0*
*CSEM **25** 04:21:19.6±0.4, 37°.47N×21°.30E, h15km, MD3.5, Error ellipse: s-maj=8.8km s-min=4.7km az=56.0*
ISC 25 04:21:19.0±1.1, 37°.44N±0°.02×21°.29E±0°.03, h13km±8km, n75, σ0§58/113, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMT	**Artemida-Makis**	**0.35**	**74**	P	**Pb**	04 21 26.8	-0.3
AMT				S	**Sg**	04 21 30.8	0.0
AMT	**Artemida-Makis**	**0.35**	**74**	*e*PB	**Pb**	04 21 26.9	-0.2
AMT				*e*SB	**Sb**	04 21 32.3	-0.2
AMT	**Artemida-Makis**	**0.35**	**74**	*e*Pb	**Pb**	04 21 26.9	-0.2
AMT				S	**Sg**	04 21 30.8	0.0
AMT				*e*Sb	**Sb**	04 21 32.3	-0.2
ITM	**Ithomi**	**0.57**	**116**	*e*PN	**Pb**	04 21 30.7	-0.1
ITM				*e*SN	**Sb**	04 21 38.9	0.0
ITM	**Ithomi**	**0.57**	**116**	*e*Pn	**Pb**	04 21 30.7	-0.1
ITM				*e*Sn	**Sb**	04 21 38.9	0.0
RLS	**Riolos of Patr**	**0.64**	**13**	*e*PB	**Pg**	04 21 30.5	-0.9
RLS				*e*SN	**Sg**	04 21 39.5	-0.4
RLS	**Riolos of Patr**	**0.64**	**13**	*e*Pb	**Pg**	04 21 30.5	-0.9
PYL	**PYLOS**	**0.65**	**146**	P	**Pb**	04 21 31.8	-0.4
PYL	**PYLOS**	**0.65**	**146**	*e*PN	**Pb**	04 21 31.9	-0.3
PYL				*e*SN	**Sb**	04 21 41.0	-0.1
PYL	**PYLOS**	**0.65**	**146**	P	**Pb**	04 21 31.8	-0.4
PYL				*e*Sn	**Sb**	04 21 41.0	-0.1
AXS	**Araxos**	**0.76**	**5**	P	**Pg**	04 21 33.9	+0.1
AXS				S	**Sn**	04 21 45.8	-1.1
AXS	**Araxos**	**0.76**	**5**	P	**Pg**	04 21 33.9	+0.1
AXS				S	**Sn**	04 21 45.8	-1.1
KFL	**Anninata**	**0.78**	**330**	P	**Pg**	04 21 34.0	-0.2
KFL				S	**Sn**	04 21 47.0	-0.4
KFL	**Anninata**	**0.78**	**330**	P	**Pg**	04 21 34.0	-0.2
KFL				S	**Sn**	04 21 47.0	-0.4
VLX	**Vlachokerasia**	**0.87**	**94**	P	**Pb**	04 21 35.6	-0.4
VLX				S	**Sn**	04 21 48.8	-0.9
VLX	**Vlachokerasia**	**0.87**	**94**	*e*PN	**Pb**	04 21 35.8	-0.2
VLX				*e*SN	**Sg**	04 21 47.7	+0.4
VLX	**Vlachokerasia**	**0.87**	**94**	P	**Pb**	04 21 35.6	-0.4
VLX				*e*Sn	**Sg**	04 21 47.7	+0.4
VLX				S	**Sn**	04 21 48.8	-0.9
KLV	**Kalavryta, Ach**	**0.91**	**48**	*e*PN	**Pb**	04 21 35.8	-1.0
KLV				*e*SN	**Sb**	04 21 48.3	-0.6
KLV	**Kalavryta, Ach**	**0.91**	**48**	*e*Pn	**Pb**	04 21 35.8	-1.0
KLV				*e*Sn	**Sb**	04 21 48.3	-0.6
VLS	**Valsamata**	**0.93**	**323**	*e*PN	**Pb**	04 21 36.1	-0.8
VLS				*e*SN	**Sg**	04 21 49.9	+0.9
VLS	**Valsamata**	**0.93**	**323**	*e*Pn	**Pb**	04 21 36.1	-0.8
VLS				*e*Sn	**Sg**	04 21 49.9	+0.9
LAKA	**Lakka**	**0.97**	**34**	P	**Pb**	04 21 37.0	-0.7
LAKA				S	**Sn**	04 21 52.9	+0.8
LAKA	**Lakka**	**0.97**	**34**	*e*PN	**Pb**	04 21 37.2	-0.5
LAKA				*e*SN	**Sb**	04 21 50.4	-0.1
LAKA	**Lakka**	**0.97**	**34**	P	**Pb**	04 21 37.0	-0.7
LAKA				*e*Sn	**Sb**	04 21 50.4	-0.1
LAKA				S	**Sn**	04 21 52.9	+0.8
GUR	**Goura**	**0.97**	**59**	P	**Pb**	04 21 36.4	-1.4
GUR				S	**Sn**	04 21 53.0	+0.7
GUR	**Goura**	**0.97**	**59**	*e*PB	**Pb**	04 21 36.6	-1.2
GUR				*e*SN	**Sg**	04 21 51.5	+0.9
GUR	**Goura**	**0.97**	**59**	*e*Pb	**Pb**	04 21 36.6	-1.2
GUR				*e*Sn	**Sg**	04 21 51.5	+0.9
GUR				S	**Sn**	04 21 53.0	+0.7
PSA1	**Psathopyrgos**	**1.01**	**28**	*e*PN	**Pg**	04 21 38.5	+0.1
DYR	**Agios Nikonas**	**1.07**	**128**	P	**Pn**	04 21 39.5	-0.3
DYR	**Agios Nikonas**	**1.07**	**128**	*e*PN	**Pg**	04 21 39.7	0.0
DYR	**Agios Nikonas**	**1.07**	**128**	*e*Pn	**Pg**	04 21 39.7	0.0
EFP	**Efpalio**	**1.10**	**26**	P	**Pb**	04 21 39.8	-0.2
EFP				S	**Sn**	04 21 56.1	+0.8
EFP	**Efpalio**	**1.10**	**26**	*e*PN	**Pb**	04 21 39.6	-0.4
EFP	**Efpalio**	**1.10**	**26**	P	**Pb**	04 21 39.8	-0.2
EFP				S	**Sn**	04 21 56.1	+0.8
TRIZ	**Trizonia**	**1.12**	**34**	P	**Pb**	04 21 39.5	-0.7
TRIZ	**Trizonia**	**1.12**	**34**	*e*PN	**Pg**	04 21 40.6	+0.1
TRIZ	**Trizonia**	**1.12**	**34**	P	**Pb**	04 21 39.5	-0.7
TRIZ	**Trizonia**	**1.12**	**34**	*e*Pn	**Pg**	04 21 40.6	+0.1
KALE	**Kalithea**	**1.17**	**35**	P	**Pn**	04 21 40.3	-0.8
KALE	**Kalithea**	**1.17**	**35**	*e*PN	**Pn**	04 21 40.8	-0.3
KALE	**Kalithea**	**1.17**	**35**	P	**Pn**	04 21 40.3	-0.8
KALE	**Kalithea**	**1.17**	**35**	*e*Pn	**Pn**	04 21 40.8	-0.3
DSF	**Desfina**	**1.38**	**45**	P	**Pb**	04 21 45.0	+0.3
DSF	**Desfina**	**1.38**	**45**	P	**Pb**	04 21 45.0	+0.3
LKD2	**Lefkada island**	**1.44**	**340**	P	**Pb**	04 21 45.4	-0.3
LKD2				S	**Sg**	04 22 06.2	+0.8
LKD2	**Lefkada island**	**1.44**	**340**	P	**Pb**	04 21 45.4	-0.3
LKD2				S	**Sg**	04 22 06.2	+0.8
LTK	**Loutraki**	**1.46**	**66**	P	**Pn**	04 21 45.1	+0.1
LTK	**Loutraki**	**1.46**	**66**	*e*PN	**Pn**	04 21 45.3	+0.3
LTK	**Loutraki**	**1.46**	**66**	P	**Pn**	04 21 45.1	+0.1
VLI	**Veliai**	**1.50**	**118**	*e*PN	**Pg**	04 21 47.7	-0.1
VLI				*e*SN	**Sg**	04 22 07.3	0.0
VLI	**Veliai**	**1.50**	**118**	*e*Pn	**Pg**	04 21 47.7	-0.1
EVR	**Evrytania**	**1.54**	**15**	*e*PN	**Pb**	04 21 47.7	+0.3
EVR	**Evrytania**	**1.54**	**15**	*e*Pn	**Pb**	04 21 47.7	+0.3
DID	**Didima**	**1.55**	**87**	P	**Pn**	04 21 46.0	-0.4
DID				S	**Sb**	04 22 08.0	+0.8
DID	**Didima**	**1.55**	**87**	*e*PN	**Pb**	04 21 47.3	-0.3
DID	**Didima**	**1.55**	**87**	P	**Pn**	04 21 46.0	-0.4
DID	**Didima**	**1.55**	**87**	*e*Pn	**Pb**	04 21 47.3	-0.3
DID				S	**Sb**	04 22 08.0	+0.8
MAKR	**Makrakomi, Fth**	**1.71**	**23**	P	**Pb**	04 21 50.4	+0.1
MAKR	**Makrakomi, Fth**	**1.71**	**23**	P	**Pb**	04 21 50.4	+0.1
AXAR	**Agios Charalam**	**1.71**	**39**	P	**Pb**	04 21 49.5	-0.9
AXAR				S	**Sg**	04 22 14.1	0.0
AXAR	**Agios Charalam**	**1.71**	**39**	P	**Pb**	04 21 49.5	-0.9
AXAR				S	**Sg**	04 22 14.1	0.0
AGG	**Agios Georgios**	**1.78**	**27**	P	**Pn**	04 21 50.5	+0.9
AGG	**Agios Georgios**	**1.78**	**27**	*e*PN	**Pb**	04 21 51.5	-0.1
AGG	**Agios Georgios**	**1.78**	**27**	P	**Pn**	04 21 50.5	+0.9
AGG	**Agios Georgios**	**1.78**	**27**	*e*Pn	**Pb**	04 21 51.5	-0.1
KYTH	**Kithira**	**1.81**	**129**	*e*PN	**Pb**	04 21 52.1	0.0
KYTH	**Kithira**	**1.81**	**129**	*e*Pn	**Pb**	04 21 52.1	0.0
LKR	**Lokris**	**1.82**	**48**	*e*PB	**Pn**	04 21 50.5	+0.5
LKR	**Lokris**	**1.82**	**48**	*e*Pb	**Pn**	04 21 50.5	+0.5
ATAL	**Atalanti**	**1.86**	**47**	P	**Pn**	04 21 51.1	+0.6
ATAL	**Atalanti**	**1.86**	**47**	P	**Pn**	04 21 51.1	+0.6
SMIA	**Simia**	**2.09**	**46**	P	**Pn**	04 21 54.2	+0.4
SMIA	**Simia**	**2.09**	**46**	P	**Pn**	04 21 54.2	+0.4
THL	**Klokotos Trika**	**2.20**	**15**	*e*PB	**Pn**	04 21 55.8	+0.5
THL	**Klokotos Trika**	**2.20**	**15**	*e*Pb	**Pn**	04 21 55.8	+0.5

*HLW **25** 04:23:38.9, 34°.51N×25°.21E, h32km±21km, Md3.3, Ml3.3*
*ISCJB **25** 04:23:40.1±0.5, 34°.13N±0°.03×25°.28E±0°.08, h20km, Error ellipse: s-maj=9.9km s-min=4.1km az=167.5*
*ATH **25** 04:23:40.5, 34°.19N×25°.23E, h25km±2km, MD3.5/9*
*CSEM **25** 04:23:42.0±0.2, 34°.17N×25°.30E, h30km, MD3.5, Error ellipse: s-maj=9.4km s-min=4.8km az=72.0*
ISC 25 04:23:40.7±1.0, 34°.19N±0°.03×25°.31E±0°.04, h20km, n29, σ0§84/36, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.92**	**334**	*e*PN	**Pn**	04 23 58.0	-0.5
SIVA				*e*SN	**Sn**	04 24 10.4	-0.8
SIVA	**Sivas**	**0.92**	**334**	*e*Pn	**Pn**	04 23 58.0	-0.5
SIVA				*e*Sn	**Sn**	04 24 10.4	-0.8
**LA

8.4nm,0.2s
PKIN Phulchoki 14.56 122 eP Pn 04 33 34.4 -0.5
12nm,0.3s
PKI Pulchoki 14.57 122 eP Pn 04 33 34.2 -0.9
9.9nm,0.3s
GUN Gumba 14.69 120 eP Pn 04 33 36.2 -0.4
9.5nm,0.3s
KURBB Kurchatov Arra 15.27 17 ⇓P Pn 04 33 40.6 -2.7
2.0nm,0.7s
KURBB Kurchatov Arra 15.27 17 P P 04 33 46.7 +1.3
0.1nm,0.3s,baz=208,slow=10,SNR=11
AB31 Akbulak array 15.56 331 P Pn 04 33 44.2 -2.8
0.9nm,0.3s,baz=145,slow=12,SNR=42
AB31 ⇓S Sn 04 36 25.3 -14
3.3nm,0.6s,baz=150,slow=22,SNR=11
RAMN Ramite 15.78 122 eP Pn 04 33 49.9 -0.3
8.1nm,0.3s
TAPN Taplejung 16.32 118 eP P 04 33 57.7 +0.1
7.5nm,0.2s
ODAN Odare 16.39 120 eP Pn 04 33 57.5 -0.2
14nm,0.5s
BVA0 Borovoye Array 16.84 358 ⇑P Pn 04 33 58.7 -4.0
2.8nm,0.9s,baz=164,slow=12,SNR=6.2
BVAR Borovoye Array 16.84 358 P P 04 34 04.5 +1.7
0.4nm,0.3s,baz=168,slow=10.0,SNR=5.4
BRVK Borovoye 16.87 357 ⇑P Pn 04 33 57.9 -5.2
7.4nm,1.4s
AKTO Aktyubinsk 17.26 330 ⇑P P 04 34 04.3 -3.2
8.8nm,0.7s
AKTO ⇓S Sn 04 37 04.3 -16
3.0nm,0.8s
AKTO Aktyubinsk 17.26 330 P Pn 04 34 08.4 +0.6
0.8nm,0.3s,baz=141,slow=10,SNR=44
AKTO S Sn 04 37 05.7 -14
0.3nm,0.3s,baz=5.0,slow=21,SNR=6.0
ZALV Zalesovo Beam 20.00 23 P Pn 04 34 39.5 -0.7
3.6nm,0.4s,baz=213,slow=12,SNR=16
SONM Songino Array 28.14 55 P P 04 35 60.0 +4.7
0.4nm,0.6s,baz=233,slow=8.9,SNR=3.2
FINES FINESS Array B 37.98 326 P P 04 37 21.4 +1.2
1.2nm,0.5s,baz=114,slow=9.6,SNR=6.5
ARCES ARCESS Array B 41.59 338 P P 04 37 51.7 +1.7
0.5nm,0.4s,baz=115,slow=8.0,SNR=13
NB2 NORSAR Subarra 44.89 323 P P 04 38 17.0 +0.4
comp=Z,1.2nm,0.5s,baz=96,slow=7.9
NOA NORSAR Array B 44.88 323 P P 04 38 17.1 +0.4
comp=Z,1.6nm,0.7s,baz=97,slow=7.9,SNR=9.3
TORD Torodi Ar. Bea 66.16 269 P P 04 40 47.6 -1.8
comp=Z,1.2nm,0.6s,baz=50,slow=5.9,SNR=40
YKA Yellowknife Ar 81.52 3 P P 04 42 20.2 +2.1
comp=Z,0.5nm,0.5s,baz=350,slow=5.2,SNR=6.4

ROM 25 04:50:38.2±0.1, 42°.37N×13°.31E, h7km±1km, Md1.5/3, Ml0.7/2, Error ellipse: s-maj=1.3km s-min=0.6km az=136.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	L'Aquila	0.07	104	Pg	Pg	04 50 40.4	+0.3
AQU				Sg	Sg	04 50 41.7	+0.3
	99nm,0.4s						
FIAM	Fiamignano	0.18	235	Pg	Pg	04 50 42.5	+0.5
FIAM				Sg	Sg	04 50 45.4	+0.9
	25nm,1.0s						
CAMP	Campotosto	0.18	23	Pg	Pg	04 50 42.5	+0.4
CAMP				Sg	Sg	04 50 45.6	+0.9
	18nm,0.3s						

*NIED **25** 04:55:00, 46°.90N×153°.20E, h26km, Mw3.9 Best double couple: M₀8.52000×10¹⁴ NP1:φs128.00000°, δ82.00000°, λ-17.00000°. NP2:φs220.00000°, δ73.00000°, λ-171.00000°.*
*MOS **25** 04:55:33.9±1.1, 46°.94N×152°.92E, h66km, mb4.4/8, Error ellipse: s-maj=15.0km s-min=10.1km az=61.6*
*IDC **25** 04:55:35.5±2.9, 46°.84N×152°.97E, h71km±25km, mb3.8/16, mb1 3.9/19, mb1mx3.8/31, mbtmp3.8/19, MS3.2/4, Ms1 3.2/4, ms1mx2.6/41, Error ellipse: s-maj=30.5km s-min=15.3km az=165.0*

ISC 25 04:55:31.0±0.9, 46°.6N±0°.1×153°.3E±0°.1, h40km, n52, σ1s71/54, mb4.1/20, 2C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	4.03	252	*d* iPN	Pn	04 56 32.4	+2.4
KUR				*e*S	Sn	04 57 18.0	+2.1
KUR				pmax	pmax		
	comp=Z,57nm,0.4s						
KUR				pmax	pmax		
	comp=E,18nm,0.4s						
KUR				pmax	pmax		
	comp=N,37nm,0.2s						
KUR				smax	smax		
	comp=N,94nm,0.8s						
KUR				smax	smax		
	comp=E,196nm,0.7s						
SKR	Severo-Kuril's	4.50	23	ePN	Pn	04 56 38.0	+1.4
SKR				*e*S	Sn	04 57 24.5	-3.2
SKR				pmax	pmax		
	comp=Z,70nm,0.5s						
SKR				smax	smax		
	comp=N,190nm,0.7s						
SKR				smax	smax		
	comp=E,120nm,0.3s						
YUK	Yuzh-Kuril'sk	5.83	247	*i* PN	Pn	04 56 56.6	+1.8
YUK				*i* S	Sn	04 58 01.9	+1.5
YUK				pmax	pmax		
	comp=N,19nm,0.4s						
YUK				pmax	pmax		
	comp=E,13nm,0.4s						
YUK				pmax	pmax		
	comp=Z,56nm,0.4s						
YUK				smax	smax		
	comp=N,125nm,0.7s						
YUK				smax	smax		
	comp=E,161nm,0.7s						
NEM2	Nemuro 2	6.25	242	P	Pn	04 56 59.5	-1.1
NEM2				*e*S	Sn	04 58 06.3	-4.4
JRA	Rausu	6.35	248	P	Pn	04 57 03.5	+1.6
JNK	Nakash	6.77	247	P	Pn	04 57 08.7	+0.9
JAK	Akkeshi	7.09	243	P	Pn	04 57 11.4	-0.8
PETK	Petropavlovsk-	7.12	22	PN	Pn	04 57 14.8	+2.3
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	Petropavlovsk-	7.12	22	P	Pn	04 57 14.8	+2.3
	comp=Z,1.1nm,0.3s,baz=194,slow=13,SNR=7.0						
JTKR	Abashiri--Toko	7.12	252	P	Pn	04 57 14.3	+1.8
YSS	Yuzh-Sakhalins	7.25	277	ePN	Pn	04 57 17.1	+2.8
PET	Petropavlovsk	7.31	26	ePN	Pn	04 57 10.6	-4.5
JMP	Maruseppu	7.47	253	P	Pn	04 57 19.5	+2.2
JAR	Ashorobuto	7.52	247	P	Pn	04 57 19.0	+1.0
JAR				*e*S	Sn	04 58 41.3	-0.6
JOB	Onbets	7.68	245	*e*S	Sn	04 58 42.1	-3.7
ASAJ	Asahikawa	7.93	256	P	Pn	04 57 26.8	+3.1
ASAJ	Asahikawa	7.93	256	P	Pn	04 57 26.2	+2.5
	comp=Z,1.3nm,0.3s,baz=66,slow=14,SNR=8.6						
ASAJ				LR	LR	05 00 16.1	
	comp=Z,88nm,20.7s,baz=2.9,slow=36						
JCH	Churui	8.12	244	P	Pn	04 57 26.1	-0.2
JCH				*e*S	Sn	04 58 51.5	-5.3
ERM	Erimo	8.59	241	⇓*e*PN	Pn	04 57 33.3	+0.7
JBT2	Biratori 2	8.67	248	P	Pn	04 57 34.1	+0.3
JANG	Nango	10.57	238	P	Pn	04 57 57.3	-2.5
MJA0	Matsu Arr-Jizo	15.06	234	*e*P	P	04 59 08.0	+2.3
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	15.08	234	P	P	04 59 06.8	+0.9
	comp=Z,0.5nm,0.3s,baz=35,slow=8.2,SNR=6.2						
MJAR				LR	LR	05 04 10.0	
	comp=Z,67nm,18.8s,baz=180,slow=34						
USRK	Ussuriysk Arra	15.15	269	P	Pn	04 59 01.6	-0.3
	comp=Z,0.4nm,0.3s,baz=80,slow=14,SNR=6.6						
YAK	Yakutsk	20.53	327	*e*P	P	04 59 56.9	-8.6
KSRS	Korea Array	20.87	253	P	P	05 00 10.6	+1.2
	comp=Z,2.1nm,0.8s,baz=55,slow=12,SNR=7.1						
SONM	Songino Array	31.51	290	P	P	05 01 49.6	+0.5
	comp=Z,0.4nm,0.7s,baz=91,slow=8.6,SNR=2.2						
INK	Inuvik	41.72	32	P	P	05 03 16.2	+0.8
	comp=Z,2.9nm,0.8s,baz=310,slow=7.9,SNR=5.7						
ZALV	Zalesovo Beam	42.81	306	LR	LR	05 22 22.8	
	comp=Z,49nm,18.1s,baz=72,slow=38						
MKAR	Makanchi Array	47.13	298	*e*P	P	05 03 57.4	-1.6
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MKAR	Makanchi Array	47.13	298	P	P	05 03 57.0	-2.0
	comp=Z,0.5nm,0.5s,baz=64,slow=8.0,SNR=7.4						
MKAR				PcP	PcP	05 05 29.9	-0.3
	comp=Z,0.6nm,0.8s,baz=69,slow=4.8,SNR=3.7						
MKAR				LR	LR	05 24 47.5	
	comp=Z,37nm,18.4s,baz=355,slow=37						
KURK	Kurchatov	47.56	304	P	P	05 04 01.0	-1.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURBB	Kurchatov Arra	47.65	304	P	P	05 04 01.0	-2.0
	comp=Z,0.7nm,0.3s,baz=70,slow=8.3,SNR=4.5						
YKA	Yellowknife Ar	50.98	37	P	P	05 04 29.0	+0.8
	comp=Z,1.1nm,0.7s,baz=298,slow=7.2,SNR=8.4						
ARCES	ARCESS Array B	58.05	341	P	P	05 05 18.3	-1.1
	comp=Z,1.0nm,0.5s,baz=30,slow=7.3,SNR=7.3						
FINES	FINESS Array B	64.24	335	P	P	05 06 00.0	-1.4
	comp=Z,2.1nm,0.4s,baz=38,slow=7.0,SNR=20						
PDAR	Pinedale Array	64.74	54	P	P	05 06 06.2	+0.9
	comp=Z,0.8nm,0.8s,baz=316,slow=5.0,SNR=5.1						
NB2	NORSAR Subarra	68.42	341	P	P	05 06 26.9	-1.3
	comp=Z,3.0nm,0.6s,baz=28,slow=6.5						
NOA	NORSAR Array B	68.42	341	P	P	05 06 27.4	-0.8
	comp=Z,3.5nm,0.6s,baz=28,slow=6.2,SNR=14						
HFS	Hagfors	68.65	340	P	P	05 06 28.7	-0.9
	comp=Z,5.7nm,0.5s,baz=52,slow=5.7,SNR=36						
AKASG	Malin Array Be	71.75	326	*e*P	P	05 06 47.5	-1.2
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKASG	Malin Array Be	71.75	326	P	P	05 06 47.2	-1.5
	comp=Z,2.8nm,0.4s,baz=34,slow=6.3,SNR=15						
EKA	Eskdalemuir Ar	76.53	346	P	P	05 07 17.1	+0.7
	comp=Z,0.3nm,0.4s,baz=25,slow=5.5,SNR=3.6						
CLL	Collm	76.67	336	*i* P		05 07 16.4	-0.9
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CLL	Collm	76.67	336	⇑*i* P	P	05 07 16.4	-0.9
	comp=Z,5.0nm,1.1s						
CLL				*e*PcP	PcP	05 07 28.0	-0.6
TXAR	Lajitas Array	77.46	61	P	P	05 07 24.0	+1.7
	comp=Z,0.7nm,0.5s,baz=310,slow=4.2,SNR=23						
BRTR	Keskin Array B	78.59	317	P	P	05 07 28.4	-0.1
	comp=Z,1.3nm,0.8s,baz=72,slow=5.2,SNR=6.2						
GERES	GERESS Array B	78.66	334	P	P	05 07 27.5	-1.1
	comp=Z,0.3nm,0.2s,baz=34,slow=7.1,SNR=3.6						
MIB	Mutribah	78.86	302	*e*P	P	05 07 29.6	-0.3
MIB				AMb	AMB	05 07 30.6	
	comp=Z,19nm,0.7s						
NAY	Al-Naaiem	79.32	301	*e*P	P	05 07 32.0	-0.5
NAY				AMb	AMB	05 07 32.8	
	comp=Z,6.1nm,0.8s						
RDF	Al-Radifah	79.38	301	*e*P	P	05 07 33.4	+0.6
RDF				AMb	AMB	05 07 34.0	
	comp=Z,14nm,0.7s						
CFAA	Coronel Fontan	144.90	80	PKPbc	PKPbc	05 15 02.1	-0.7
	comp=Z,0.1nm,0.4s,baz=277,slow=5.6,SNR=4.5						

MEX 25 04:56:13.7±0.5, 15°.32N×93°.30W, h92km±4km, MD4.1, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.39	11	*i* P	Pn	04 56 26.5	-1.4
PCIG				*i* S	Sn	04 56 36.6	-1.7
THIG		1.08	112	*i* P	Pn	04 56 32.9	-1.5
THIG				*i* S	Sn	04 56 48.3	-1.7
TGIG		1.46	7	*i* P	Pn	04 56 38.0	-1.1
TGIG				*i* S	Sn	04 56 55.9	-2.4
CCIG	Comitan	1.47	49	*i* P	Pn	04 56 38.3	-1.1
CCIG				*i* S	Sn	04 56 57.2	-1.6
HUIG	Huatulco	2.75	280	*i* P	Pn	04 56 54.7	-1.2
HUIG				*i* S	Sn	04 57 26.9	-1.4

IDC 25 05:09:01.4±7.9, 23°.51S×177°.71W, h311km±73km, mb3.4/5, mb1 3.7/6, mb1mx3.3/20, mbtmp3.5/6, Error ellipse: s-maj=31.5km s-min=25.4km az=67.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.69	272	P	P	05 12 14.7	+0.1
	baz=83,slow=18						
CTA	Charters Tower	33.58	269	P	P	05 15 13.6	+0.4
	3.5nm,0.3s,baz=88,slow=11,SNR=5.9						
ASAR	Alice Springs	44.17	260	P	P	05 16 39.8	-0.6
	0.5nm,0.5s,baz=87,slow=8.3,SNR=7.0						
ASAR				PcP	PcP	05 18 19.4	0.0
	0.4nm,0.5s,baz=96,slow=3.7,SNR=5.3						
QSPA	South Pole Qui	66.57	180	P	P	05 19 18.4	0.0
	1.7nm,0.6s,baz=350,slow=1.0,SNR=19						
NVAR	Mina Array Bea	83.03	43	P	P	05 20 52.7	+0.1
	0.2nm,0.3s,baz=216,slow=8.6,SNR=5.4						
PDAR	Pinedale Array	90.96	43	P	P	05 21 30.4	-0.2
	0.6nm,0.7s,baz=238,slow=2.8,SNR=4.9						
HFS	Hagfors	142.54	351	PKhKP	PKPpre	05 27 52.3	
	0.7nm,0.3s,baz=72,slow=4.8,SNR=7.2						
HFS				PKP	PKPdf	05 27 57.0	+0.1
	1.8nm,0.9s,baz=27,slow=3.6,SNR=5.2						
AKASG	Malin Array Be	145.75	329	PKPbc	PKPdf	05 28 02.9	+0.1
	1.0nm,0.4s,baz=43,slow=3.7,SNR=6.8						
BRTR	Keskin Array B	148.99	309	PKPbc	PKPbc	05 28 12.3	-0.8
	0.7nm,0.6s,baz=156,slow=5.9,SNR=3.8						
CLL	Collm	151.04	346	*i* P	PKPbc	05 28 17.5	+0.1
	comp=Z,6.0nm,0.6s						

IDC 25 05:15:07.8±1.2, 22°.89S×66°.28W, h236km±20km, mb3.3/2, mb1 3.1/8, mb1mx3.0/22, mbtmp3.1/8, Error ellipse: s-maj=30.3km s-min=13.6km az=113.0, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	Limon Verde	2.44	276	P	Pn	05 15 55.1	+1.3
	34nm,0.3s,baz=122,slow=15,SNR=386						
LVC				S	S	05 16 29.9	+0.1
	8.0nm,0.3s,baz=250,slow=21,SNR=7.8						
LPAZ	La Paz	6.80	345	P	Pn	05 16 47.6	+1.0
	0.6nm,0.3s,baz=155,slow=8.5,SNR=20						
LPAZ				S	S	05 18 04.5	-1.1
	0.0nm,0.3s,baz=270,slow=20,SNR=3.4						
SIV	San Ignacio	8.44	37	P	Pn	05 17 07.1	+0.2
	0.4nm,0.3s,baz=235,slow=12,SNR=7.1						
CFAA	Coronel Fontan	8.85	191	P	Pn	05 17 10.1	-1.8
	0.1nm,0.3s,baz=11,slow=10,SNR=17						
CFAA				S	S	05 18 43.3	-8.7
	0.2nm,0.3s,baz=154,slow=20,SNR=14						
PLCA	Paso Flores	18.15	190	P	P	05 19 03.0	+0.1
	0.1nm,0.3s,baz=32,slow=9.5,SNR=3.3						
BDFB	Brasilia	18.68	71	P	P	05 19 09.6	+0.7
	0.4nm,0.3s,baz=248,slow=11,SNR=4.8						
QSPA	South Pole Qui	67.31	180	P	P	05 25 37.9	+0.8
	1.3nm,1.1s,baz=140,slow=7.9,SNR=5.8						
TORD	Torodi Ar. Bea	75.56	69	P	P	05 26 26.4	-0.6
	0.7nm,0.5s,baz=253,slow=5.2,SNR=20						

MEX 25 05:21:38.4±0.3, 18°.36N×100°.16W, h56km±5km, MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.20	246	*i* P	Pn	05 21 46.0	-1.4
ARIG				*i* S	Sn	05 21 52.0	-1.9
PLIG	Platanillo	0.62	87	*i* P	Pn	05 21 50.0	-1.6
PLIG				*i* S	Sn	05 21 58.9	-2.3
MEIG	Mezcala	0.67	130	*i* P	Pn	05 21 50.7	-1.5
MEIG				*i* S	Sn	05 22 00.3	-1.8
YAIG	Yautepec	1.15	64	*i* P	Pn	05 21 57.2	-1.3
YAIG				*i* S	Sn	05 22 11.9	-1.5
CAIG	El Cayaco	1.31	185	*i* P	Pn	05 21 58.5	-1.9
CAIG				*i* S	Sn	05 22 15.3	-1.6

NNC 25 05:38:01.4±9.9, 37°.93N×71°.44E, h214km±128km, mb2.4, mpv3.5, 3C-3D, Error ellipse: s-maj=100.7km s-min=49.7km az=10.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	Karatay Array	5.22	352	⇓P	Pn	05 39 19.5	+0.7
	3.0nm,0.3s,baz=181,slow=14,SNR=82						
KK31				⇑S	S	05 40 21.1	+1.1
	2.7nm,0.5s,baz=172,slow=22,SNR=7.0						
TKM2	Tokmak 2	5.91	31	⇑P	Pn	05 39 27.2	-0.6
	1.7nm,0.4s						
TKM2				⇓S	S	05 40 35.9	-0.4
	0.8nm,0.5s						
AB31	Akbulak array	14.04	327	⇑P	Pn	05 41 11.7	+0.7
	0.2nm,0.3s,baz=4.3,slow=27,SNR=8.4						
AB31				⇓S	S	05 43 46.5	+0.3
	0.2nm,0.4s						

*ATH **25** 05:47:00.4, 37°.62N×26°.89E, h5km, MD2.8/3*
*ISCJB **25** 05:47:01.7±0.5, 37°.70N±0°.03×26°.87E±0°.03, h7km±3km, Error ellipse: s-maj=4.9km s-min=4.1km az=137.7*
*DDA **25** 05:47:01.5, 37°.70N×26°.91E, h7km, MD2.8*
*ISK **25** 05:47:01.3, 37°.72N×26°.85E, h5km, MD2.6*
*CSEM **25** 05:47:01.8±0.2, 37°.70N×26°.85E, h8km, MD2.8, Error ellipse: s-maj=4.6km s-min=3.5km az=57.0*

ISC 25 05:47:00.9±0.8, 37°.69N±0°.02×26°.87E±0°.02, h10km±5km, n33, σ1s09/54, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	Samos	0.04	308	*e*PG	Pg	05 47 02.8	+0.1
SMG				*e*SG	Sg	05 47 03.6	-0.4
SMG	Samos	0.04	308	*e*Pg	Pg	05 47 02.8	+0.1
SMG				*e*Sg	Sg	05 47 03.6	-0.4
GCAM	G?zelcaml?	0.29	87	*i* P	Pg	05 47 07.4	+0.8
GCAM				*i* S	Sg	05 47 11.8	+1.3
GCAM	G?zelcaml?	0.29	87	*i* P	Pg	05 47 07.4	+0.8
GCAM				*i* S	Sg	05 47 11.8	+1.3
URLA	Izmir	0.71	342	*i* P	Pb	05 47 15.8	+0.4
URLA				*i* S	Sb	05 47 25.7	+0.5
URLA	Izmir	0.71	342	*i* P	Pb	05 47 15.8	+0.4
URLA				*i* S	Sb	05 47 25.7	+0.5
BLCB	Balcova	0.71	11	*e*PG	Pg	05 47 14.8	+0.2
BLCB				*e*SG	Sb	05 47 25.1	-0.1
BLCB	Balcova	0.71	11	*e*Pg	Pg	05 47 14.8	+0.2
BLCB				*e*Sg	Sb	05 47 25.1	-0.1
BODT	Bodrum	0.71	151	*e*PG	Pb	05 47 16.4	+1.0
BODT				*e*SG	Sn	05 47 27.1	-1.0
BODT	Bodrum	0.71	151	*e*Pg	Pb	05 47 16.4	+1.0
BODT				*e*Sg	Sn	05 47 27.1	-1.0
AYDN	Tasoluk	0.80	92	*i* P	Pg	05 47 16.6	+0.3
AYDN				*i* S	Sg	05 47 27.4	+0.7
AYDN	Tasoluk	0.80	92	*i* P	Pg	05 47 16.6	+0.3
AYDN				*i* S	Sg	05 47 27.4	+0.7
MLSB	Milas	0.82	118	*e*PG	Pn	05 47 18.2	-0.3
MLSB	Milas	0.82	118	*e*Pg	Pn	05 47 18.2	-0.3
CHOS	Chios island	0.95	318	*e*PN	Pn	05 47 20.4	0.0
CHOS				*e*SB	Sb	05 47 33.2	+0.9
CHOS	Chios island	0.95	318	*e*Pn	Pn	05 47 20.4	0.0
CHOS				*e*Sb	Sb	05 47 33.2	+0.9
DAT	Datca	1.11	149	*e*PN	Pn	05 47 23.2	+0.6
DAT	Datca	1.11	149	*e*Pn	Pn	05 47 23.2	+0.6
APE	Apeiranthos	1.23	240	*e*PN	Pg	05 47 25.5	+0.9
APE	Apeiranthos	1.23	240	*e*PN	Pn	05 47 23.0	-1.3
APE				*e*SB	Sg	05 47 40.9	+0.3
APE	Apeiranthos	1.23	240	*e*Pn	Pg	05 47 25.5	+0.9
APE				*e*Sb	Sg	05 47 40.9	+0.3
YER	Yerkesik	1.25	116	*e*PN	Pg	05 47 26.2	+1.4
YER	Yerkesik	1.25	116	*e*Pn	Pg	05 47 26.2	+1.4
AKHS	Akhisar	1.40	32	*i* P	Pg	05 47 28.0	+0.2
AKHS				*i* S	Sg	05 47 47.4	+1.4
AKHS	Akhisar	1.40	32	*i* P	Pg	05 47 28.0	+0.2
AKHS				*i* S	Sg	05 47 47.4	+1.4
MANT	Manisa	1.55	58	*i* P	Pg	05 47 30.8	+0.1
MANT				*i* S	Sn	05 47 48.3	-0.9
MANT	Manisa	1.55	58	*i* P	Pg	05 47 30.8	+0.1
MANT				*i* S	Sn	05 47 48.3	-0.9
TURN	Turunc	1.60	120	*i* P	Pn	05 47 26.9	-2.3
TURN				*i* S	Sn	05 47 45.4	-4.6
TURN	Turunc	1.60	120	*i* P	Pn	05 47 26.9	-2.3
KULA	Kula-Manisa	1.64	59	*e*PN	Pb	05 47 31.6	+0.4
KULA	Kula-Manisa	1.64	59	*e*Pn	Pb	05 47 31.6	+0.4
DALY	Dalyan (Mu˘la	1.67	121	*e*PN	Pg	05 47 32.5	-0.3
DALY	Dalyan (Mu˘la	1.67	121	*e*Pn	Pg	05 47 32.5	-0.3

IDC 25 06:10:49.1±1.3, 6°.21S×146°.91E, h0km, mb3.8/4, mb1 3.9/5, mb1mx3.7/18, mbtmp3.8/5, ML2.3/1, MS3.0/2, Ms1 3.0/2, ms1mx2.7/27, Error ellipse: s-maj=45.1km s-min=23.0km az=104.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.19	176	Pn	Pn	06 11 41.8	+1.3
	3.0nm,0.3s,baz=312,slow=18,SNR=3.5						
PMG				Sn	Sn	06 12 20.3	+1.0
	5.0nm,0.3s,baz=24,slow=20,SNR=4.0						
PMG				LR	LR	06 13 12.6	
	comp=Z,185nm,19.0s,baz=53,slow=45						
HNR	Honiara	13.30	105	LR	LR	06 18 21.0	
	comp=Z,68nm,19.5s,baz=135,slow=34						
ASAR	Alice Springs	21.40	214	P	P	06 15 39.2	+0.5
	1.2nm,0.8s,baz=46,slow=9.7,SNR=12						
FITZ	Fitzroy Crossi	23.89	238	P	P	06 16 03.5	-1.1
	2.3nm,0.7s,baz=80,slow=10,SNR=12						
STKA	Stephens Creek	26.02	190	P	P	06 16 22.8	-1.2
	1.3nm,0.6s,baz=5.2,slow=11,SNR=3.4						
ILAR	Eielson Array	85.70	23	P	P	06 23 28.9	-0.8
	0.7nm,0.7s,baz=258,slow=4.9,SNR=12						
TORD	Torodi Ar. Bea	145.06	284	PKPbc	PKPdf	06 30 30.0	+0.4
	2.8nm,0.8s,baz=78,slow=3.8,SNR=14						

*ISCJB **25** 06:11:52.6±0.5, 3°.81N±0°.08×126°.3E±0°.2, h45km, mb4.3/18, MS3.3/7, Error ellipse: s-maj=27.9km s-min=9.6km az=164.0*
*NEIC **25** 06:11:53.4±0.4, 3°.84N×126°.43E, h35km, mb4.5/6, Error ellipse: s-maj=26.9km s-min=7.6km az=72.0*
*IDC **25** 06:11:57.5±5.1, 3°.78N×126°.35E, h72km±48km, mb4.0/13, mb1 4.0/13, mb1mx3.8/24, mbtmp4.0/13, MS3.3/8, Ms1 3.3/8, ms1mx2.9/41, Error ellipse: s-maj=38.2km s-min=10.1km az=78.0*

ISC 25 06:11:54.6±0.7, 3°.81N±0°.09×126°.4E±0°.2, h45km, n36, σ0s70/36, mb4.3/18, MS3.3/7, 1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.34	346	LR	LR	06 14 17.2	
	comp=Z,415nm,19.0s,baz=116,slow=42						
CTBH	Cotabato--PC H	4.00	328	*i* P	Pn	06 12 58.9	+5.5
FITZ	Fitzroy Crossi	21.79	182	P	P	06 16 44.0	+1.2
FITZ				S	S	06 20 40.6	-0.8
FITZ	Fitzroy Crossi	21.79	182	P	P	06 16 44.0	+1.2
FITZ				S	S	06 20 40.6	-0.8
	1.6nm,1.1s,baz=354,slow=19,SNR=2.5						
PMG	Port Moresby	24.51	122	LR	LR	06 26 49.7	
	comp=Z,87nm,18.8s,baz=242,slow=36						
WRAB	Tennant Creek	24.86	162	*e*P	P	06 17 12.0	-1.1
	13nm,0.8s						
ASAR	Alice Springs	28.28	165	P	P	06 17 43.6	-0.3
ASAR	Alice Springs	28.28	165	P	P	06 17 43.6	-0.3

ZALV	**Zalesovo Beam**	**60.36 333**	P	**P**	**06 21 58.1**	**-0.9**
ZALV	**Zalesovo Beam**	**60.36 333**	P	**P**	**06 21 58.1**	**-0.9**
	0.9nm,0.3s,baz=124,slow=7.7,SNR=3.0					
ZALV			LR	LR	06 49 29.8	
	comp=Z,16nm,18.7s,baz=63,slow=37					
KURBB	**Kurchatov Arra**	**61.49 327**	P	**P**	**06 22 06.2**	**-0.4**
	2.7nm,0.5s,baz=130,slow=6.4,SNR=29					
KURK	**Kurchatov**	**61.49 328**	P	**P**	**06 22 06.2**	**-0.4**
	1.0nm,0.7s					
KKAR	**Karatay Array**	**62.94 317**	*e*P	**P**	**06 22 17.1**	**+0.5**
	1.5nm,0.6s					
BVAR	**Borovoye Array**	**67.07 327**	P	**P**	**06 22 44.3**	**+1.1**
BVAR	**Borovoye Array**	**67.07 327**	P	**P**	**06 22 44.3**	**+1.1**
	3.2nm,0.9s,baz=132,slow=8.0,SNR=11					
ABKAR	**Akbulak array**	**71.87 321**	*e*P	**P**	**06 23 12.2**	**-0.7**
	1.4nm,0.6s					
ARCES	**ARCESS Array B**	**90.26 340**	P	**P**	**06 24 49.6**	**-0.6**
ARCES	**ARCESS Array B**	**90.26 340**	P	**P**	**06 24 49.6**	**-0.6**
	2.5nm,0.8s,baz=78,slow=6.7,SNR=4.8					
FINES	**FINESS Array B**	**91.60 332**	P	**P**	**06 24 56.1**	**-0.4**
FINES	**FINESS Array B**	**91.60 332**	P	**P**	**06 24 56.1**	**-0.4**
	0.5nm,0.4s,baz=54,slow=4.9,SNR=5.6					
FINES			LR	LR	07 12 15.0	
	comp=Z,26nm,18.1s,baz=105,slow=40					
AKASG	**Malin Array Be**	**91.61 321**	P	**P**	**06 24 55.9**	**-0.9**
AKASG	**Malin Array Be**	**91.61 321**	P	**P**	**06 24 55.9**	**-0.9**
	0.3nm,0.3s,baz=98,slow=6.5,SNR=3.1					
NOA	**NORSAR Array B**	**98.56 334**	LR	LR	07 14 48.0	
	comp=Z,16nm,20.2s,baz=190,slow=38					

ISCJB ***25*** *06:32:26.1±0.5,23°.96N±0°.03×122°.28E±0°.02,h17km±5km, Error ellipse: s-maj=4.8km s-min=2.7km az=151.5*
TAP ***25*** *06:32:26.6,24°.04N×122.29E,h26km,ML3.3,C*
JMA ***25*** *06:32:27.4±0.2,24°.46N×122°.20E,h40km,M2.9*
ISC 25 06:32:25.7±1.2,23°.98N±0°.03×122°.27E±0°.02,h15km±9km**, n38,σ0°76/64,2C,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.62**	**279**	*e*P	**Pb**	**06 32 38.7**	**+0.5**
	baz=273						
TWD				S	**Sb**	**06 32 48.0**	**+1.3**
	baz=273						
ENA	**Nanau**	**0.65**	**313**	*i* P	**Pb**	**06 32 38.9**	**+0.1**
	baz=315						
TWC	**Suao**	**0.73**	**329**	↑*i*P	**Pg**	**06 32 39.7**	**-0.3**
	baz=325						
TWC				*e*S	**Sg**	**06 32 49.1**	**-0.6**
	baz=325						
ESL	**Shilin**	**0.78**	**258**	*e*P	**Pb**	**06 32 41.5**	**+0.5**
	baz=247						
ESL				*e*S	**Sb**	**06 32 51.6**	**+0.1**
	baz=247						
YOJ	**Yonaguni jima**	**0.83**	**55**	P	**Pb**	**06 32 41.4**	**-0.4**
YOJ				S	**Sb**	**06 32 51.4**	**-1.4**
ENTT	**Nioudou**	**0.92**	**316**	*e*P	**Pg**	**06 32 43.6**	**+0.1**
	baz=322						
ENTT				*e*S	**Sg**	**06 32 55.3**	**-0.2**
	baz=322						
TWE	**Neicheng**	**0.92**	**323**	P	**Pg**	**06 32 43.2**	**-0.3**
	baz=320						
WHF	**Hehuan Shan**	**0.93**	**280**	P	**Pb**	**06 32 43.9**	**+0.1**
	baz=264						
WHF				*e*S	**Sb**	**06 32 56.5**	**+0.4**
	baz=264						
NNS	**Nan Shan**	**0.94**	**299**	*i* P	**Pg**	**06 32 44.0**	**+0.1**
	baz=283						
NNS				S	**Sn**	**06 32 56.8**	**-0.8**
	baz=283						
EHY	**Hungye**	**0.99**	**241**	*e*P	**Pb**	**06 32 44.5**	**-0.1**
	baz=239						
EHY				*e*S	**Sb**	**06 32 58.1**	**+0.8**
	baz=239						
TWT	**Tachien**	**1.03**	**285**	*e*P	**Pb**	**06 32 45.6**	**+0.2**
	baz=270						
TWB1	**Santiao Chiao**	**1.05**	**346**	*e*P	**Pb**	**06 32 45.4**	**-0.2**
	baz=343						
NSK	**Sanguang**	**1.08**	**310**	*e*P	**Pb**	**06 32 46.1**	**-0.1**
	baz=306						
TWF1	**Yuli**	**1.09**	**235**	↑*i*P	**Pb**	**06 32 46.1**	**-0.1**
	baz=222						
TWF1				*e*S	**Sb**	**06 33 00.0**	**-0.3**
	baz=222						
NWF	**Wu-fen Shan**	**1.17**	**338**	P	**Pb**	**06 32 47.5**	**-0.2**
	baz=334						
NWF				S	**Sn**	**06 33 02.5**	**-0.8**
	baz=334						
CHKT	**Chengkung**	**1.21**	**223**	*e*P	**Pn**	**06 32 46.8**	**-1.2**
	baz=212						
CHKT				*e*S	**Sb**	**06 33 01.7**	**-2.0**
	baz=212						
SMLT	**Sun Moon Lake**	**1.26**	**266**	*e*P	**Pn**	**06 32 49.1**	**+0.3**
	baz=254						
SMLT				S	**Sb**	**06 33 05.3**	**+0.2**
	baz=254						
TYC	**Yuchr**	**1.29**	**267**	*e*P	**Pn**	**06 32 49.6**	**+0.4**
	baz=264						
TYC				*e*S	**Sn**	**06 33 06.6**	**+0.4**
	baz=264						
YUS	**Yu-Shan**	**1.30**	**248**	*e*P	**Pn**	**06 32 49.9**	**+0.1**
	baz=246						
YUS				S	**Sn**	**06 33 06.3**	**-0.9**
	baz=246						
NSTT	**Nanjuang**	**1.32**	**299**	*e*P	**Pb**	**06 32 50.3**	**0.0**
	baz=295						
NSTT				*e*S	**Sn**	**06 33 07.3**	**+0.3**
	baz=295						
TWS1	**Kuangyinshan**	**1.35**	**325**	*e*P	**Pn**	**06 32 49.8**	**-0.3**
	baz=322						
IRIF	**Iriomote-Funau**	**1.38**	**75**	P	**Pb**	**06 32 51.0**	**-0.2**
IRIF				*e*S	**Sb**	**06 33 09.3**	**+0.6**
ELDTW	**Lidau**	**1.39**	**236**	P	**Pn**	**06 32 50.3**	**-0.5**
	baz=234						
ELDTW				*e*S	**Sn**	**06 33 07.5**	**-1.4**
	baz=234						
HATJ	**Hateruma jima**	**1.41**	**87**	S	**Sg**	**06 33 12.0**	**+0.8**
TWQ1	**Liyutan**	**1.41**	**285**	*e*P	**Pb**	**06 32 52.3**	**+0.5**
	baz=282						
TCU	**Taichung**	**1.46**	**277**	*e*P	**Pn**	**06 32 52.2**	**+0.6**
	baz=273						
TCU				*e*S	**Sg**	**06 33 13.0**	**+0.1**
	baz=273						
WGK	**Gukeng**	**1.59**	**260**	*e*P	**Pn**	**06 32 52.5**	**-0.7**
	baz=258						
TWG	**Pinlang**	**1.60**	**224**	*e*P	**Pn**	**06 32 53.0**	**-0.4**
	baz=235						
TWG				*e*S	**Sn**	**06 33 11.9**	**-1.8**
	baz=235						
JKRS	**Kuro-shima**	**1.61**	**81**	P	**Pb**	**06 32 55.0**	**-0.2**
JKRS				S	**Sb**	**06 33 15.1**	**-0.2**
PCYT	**Pengchaiyu**	**1.65**	**354**	P	**Pn**	**06 32 53.9**	**-0.2**
	baz=351						
WTP	**Ta-pu**	**1.69**	**244**	*e*P	**Pn**	**06 32 56.0**	**+1.3**
	baz=243						
WTP				*e*S	**Sb**	**06 33 17.8**	**+0.3**
	baz=243						
JIJ	**Ishigaki jima**	**1.75**	**77**	P	**Pn**	**06 32 56.1**	**+0.5**
JIJ				S	**Sn**	**06 33 17.8**	**+0.2**
TWK	**Hsinying**	**1.78**	**247**	*e*P	**Pn**	**06 32 57.4**	**+1.4**
	baz=245						
TWK				*e*S	**Sn**	**06 33 19.4**	**+1.0**
	baz=245						
CHN1	**Nanshi**	**1.78**	**244**	*e*P	**Pn**	**06 32 56.2**	**+0.2**
	baz=242						
CHN1				*e*S	**Sb**	**06 33 20.3**	**0.0**
	baz=242						
ECL	**Taimali**	**1.83**	**221**	*e*P	**Pn**	**06 32 56.2**	**-0.4**
	baz=232						
EAST	**Anshuo**	**2.06**	**220**	*e*P	**Pn**	**06 33 00.1**	**+0.3**
	baz=219						
SCZT	**Fangliau**	**2.21**	**224**	*e*P	**Pn**	**06 33 04.0**	**+2.2**
	baz=219						
SCZT				*e*S	**Sn**	**06 33 28.4**	**-0.4**
	baz=219						
JTJ	**Tarama**	**2.31**	**73**	P	**Pn**	**06 33 04.3**	**+1.0**
JTJ				*e*S	**Sn**	**06 33 32.4**	**+0.9**

IDC ***25*** *06:43:42.7±0.6,19°.23S×169°.36E,h0km,mb4.6/19, mb1 4.7/20,mb1mx4.6/25,mbtmp4.6/20,ML4.6/1,MS4.5/25, Ms1 4.5/25,ms1mx4.5/27,Error ellipse: s-maj=19.8km s-min=15.5km az=130.0*
SZGRF ***25*** *06:43:44.6,19°.72S×171°.14E,h33km, Vanuatu Islands region*

ISCJB ***25*** *06:43:45.6±2.1,19°.34S±0°.04×169°.25E±0°.04,h29km±15km, mb5.0/62,MS4.6/34,Error ellipse: s-maj=8.3km s-min=5.7km az=135.1*
MOS ***25*** *06:43:46.6±1.2,19°.27S×169°.26E,h33km,mb5.2/18,Error ellipse: s-maj=10.5km s-min=9.2km az=3.5*
NEIC ***25*** *06:43:48.0±0.2,19°.31S×169°.30E,h35km,mb5.1/33,Error ellipse: s-maj=7.5km s-min=6.2km az=143.0*
GCMT ***25*** *06:43:49.0±0.2,19°.23S×169°.32E,h13km,MW5.2, Moment Tensor Solution. s60,c82; s97,c158; Moment tensor: Scale 10^{16}Nm; M_{rr}-2.09±.17; $M_{\theta\theta}$-4.58±.15; $M_{\phi\phi}$6.66±.18; $M_{r\theta}$-0.37±.35; $M_{\theta\phi}$-4.70±.13; $M_{\phi r}$-1.09±.35; Best double couple: $M_0$7.40000×10^{16} NP1:ϕ_s115.00000°, δ80.00000°,λ-177.00000°. NP2:ϕ_{s2}25.00000°,δ87.00000°, λ-10.00000°. Principal axes: T 8.4400, Plg5.0000°, Azm70.0000°; N -2.0400, Plg79.0000°, Azm187.0000°; P -6.4100, Plg10.0000°, Azm339.0000°; Data Used: II IU IC G CN.*
BJI ***25*** *06:43:50.7,19°.01S×169°.61E,h66km,mB5.0/21,mb4.8/27, Ms5.0/19,Ms7 4.6/20*
DJA ***25*** *06:44:12.8±3.6,19°S±9°×16°9E±1°6,h259km±32km, M4.7/17,mB5.1/2,mb4.7/17,Mw(mB)4.4/2*
ISC 25 06:43:49.2±0.7,19°.35S±0°.05×169°.25E±0°.05,h45km±5km**, n209,σ1°50/219,mb5.0/62,MS4.6/35,9C-5D,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**3.56**	**218**	*e*P	Pn	06 44 38.7	-3.3
BAYA				*e*S	**Sn**	**06 45 21.9**	**-1.1**
DZM	**Mont Dzumac**	**3.78**	**224**	*e*Pn	Pn	06 44 41.6	-3.5
	251nm,0.3s						
DZM				*e*Sn	**Sn**	**06 45 27.9**	**-0.4**
	372nm,0.3s						
DZM	**Mont Dzumac**	**3.78**	**224**	*e*P	Pn	06 44 41.6	-3.5
DZM	**Mont Dzumac**	**3.78**	**224**	Pn	**Pn**	**06 44 42.8**	**-2.3**
DZM				*e*Sn	**Sn**	**06 45 28.0**	**-0.4**
DZM				Sn	Sn	06 45 28.1	-0.3
DZM	**Mont Dzumac**	**3.78**	**224**	Pn	**Pn**	**06 44 42.8**	**-2.3**
	43nm,0.3s,baz=60,slow=20,SNR=103						
DZM				Sn	**Sn**	**06 45 28.1**	**-0.2**
	80nm,0.3s,baz=289,slow=22,SNR=6.1						
NOUC	**Port Laguerre**	**3.89**	**225**	*e*P	Pn	06 44 43.5	-3.0
NOUC				*e*S	**Sn**	**06 45 31.0**	**+0.1**
MSVF	**Nonsavu**	**8.50**	**81**	Pn	**Pn**	**06 45 51.6**	**+1.7**
	1μm,1.4s,SNR=10						
MSVF	**Nonsavu**	**8.50**	**81**	*e*P	**Pn**	**06 45 50.9**	**+1.0**
MSVF	**Nonsavu**	**8.50**	**81**	*e*Pn	**Pn**	**06 45 50.9**	**+1.0**
HNR	**Honiara**	**13.35**	**316**	*e*P	**Pn**	**06 46 55.5**	**-0.7**
HNR	**Honiara**	**13.35**	**316**	LR	LR	06 51 39.4	
	comp=Z,2μm,18.2s,baz=311,slow=36						
RAO	**Raoul Island**	**15.29**	**133**	*e*Pn	**Pn**	**06 47 23.9**	**+1.9**
	104nm,0.4s						
RAO	**Raoul Island**	**15.29**	**133**	LR	LR	06 51 50.4	
	comp=Z,2μm,21.9s,baz=201,slow=32						
OUZ	**Omahuta**	**16.27**	**167**	Pn	**Pn**	**06 47 34.9**	**+0.3**
	79nm,1.5s						
EIDS	**Eidsvold**	**17.84**	**247**	*e*P	**P**	**06 47 56.2**	**+1.7**
	25nm,0.9s						
AFI	**Afiamalu**	**18.96**	**76**	LR	LR	06 53 42.0	
	comp=Z,4μm,21.8s,baz=254,slow=32						
ARMA	**Armidale**	**19.39**	**232**	*e*P	**Pn**	**06 48 14.8**	**+1.7**
	80nm,1.0s						
URZ	**Urewera**	**20.05**	**162**	*e*P	**P**	**06 48 18.6**	**+0.1**
URZ	**Urewera**	**20.05**	**162**	P	**P**	**06 48 18.0**	**-0.5**
	12nm,0.7s,baz=331,slow=14,SNR=16						
URZ				LR	LR	06 55 17.8	
	comp=Z,1μm,18.1s,baz=336,slow=34						
TARA	**Tarawa**	**20.89**	**10**	*e*P	**P**	**06 48 27.8**	**0.0**
	183nm,1.3s						
CTA	**Charters Tower**	**21.66**	**264**	P	**P**	**06 48 37.1**	**+0.9**
CTA	**Charters Tower**	**21.66**	**264**	P	**P**	**06 48 37.1**	**+0.9**
	9.4nm,0.5s,baz=77,slow=11,SNR=14						
CTA				LR	LR	06 56 21.6	
	comp=Z,1μm,18.9s,baz=86,slow=35						
CTAO	**Charters Tower**	**21.66**	**264**	*e*P	**P**	**06 48 38.3**	**+2.1**
CTAO	**Charters Tower**	**21.66**	**264**	*e*P	**P**	**06 48 38.3**	**+2.1**
SNZO	**South Karori**	**22.38**	**169**	*e*P	**P**	**06 48 41.5**	**-2.1**
	66nm,1.2s						
PMG	**Port Moresby**	**23.55**	**292**	*e*P	**P**	**06 48 56.8**	**+1.1**
PMG	**Port Moresby**	**23.55**	**292**	P	**P**	**06 48 56.2**	**+0.5**
	69nm,1.7s,1μm						
PMG	**Port Moresby**	**23.55**	**292**	P	**P**	**06 48 56.4**	**+0.6**
	40nm,1.0s,baz=100,slow=11,SNR=5.2						
PMG				LR	LR	06 56 48.8	
	comp=Z,1μm,20.8s,baz=120,slow=33						
CAN	**Canberra**	**23.95**	**224**	*e*P	**P**	**06 49 00.8**	**+1.5**
CAN				pmax	pmax		
	comp=Z,29nm,0.8s						
CAN	**Canberra**	**23.95**	**224**	*e*P	**P**	**06 49 00.8**	**+1.5**
	comp=Z,29nm,0.8s						
RPZ	**Rata Peaks**	**24.34**	**177**	LR	LR	06 57 35.7	
	comp=Z,2μm,20.9s,baz=344,slow=34						
COEN	**Coen**	**25.54**	**278**	*e*P	**P**	**06 49 13.8**	**-0.2**
	comp=Z,345nm,1.1s						
STKA	**Stephens Creek**	**27.80**	**238**	P	**P**	**06 49 35.0**	**+0.8**
STKA	**Stephens Creek**	**27.80**	**238**	P	**P**	**06 49 35.0**	**+0.8**
	comp=Z,16nm,0.6s,baz=64,slow=8.2,SNR=23						
STKA				LR	LR	07 00 00.7	
	comp=Z,2μm,19.9s,baz=61,slow=35						
RAR	**Rarotonga**	**29.09**	**99**	LR	LR	06 58 57.6	
	comp=Z,570nm,20.2s,baz=292,slow=32						
BBOO	**Buckleboo**	**32.54**	**239**	*e*P	**P**	**06 50 17.1**	**+1.0**
	comp=Z,292nm,0.8s						
WRAB	**Tennant Creek**	**32.84**	**263**	P	**P**	**06 50 18.5**	**-0.4**
	comp=Z,73nm,0.8s,SNR=6.8						
WRAB	**Tennant Creek**	**32.84**	**263**	*e*P	**P**	**06 50 18.6**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,16nm,1.0s						
WRAB	**Tennant Creek**	**32.84**	**263**	*e*P	**P**	**06 50 18.6**	**-0.4**
	comp=Z,16nm,1.0s						
WRA	**Warramunga Arr**	**32.85**	**263**	LR	LR	07 03 19.8	
	comp=Z,1μm,19.4s,baz=85,slow=36						
AS31	**Alice Springs**	**33.11**	**256**	*e*P	**P**	**06 50 19.8**	**-1.5**
ASAR	**Alice Springs**	**33.11**	**256**	P	**P**	**06 50 20.6**	**-0.7**
ASAR	**Alice Springs**	**33.11**	**256**	P	**P**	**06 50 20.6**	**-0.7**
	comp=Z,30nm,0.8s,baz=84,slow=8.7,SNR=99						
ASAR				LR	LR	07 03 34.4	
	comp=Z,2μm,19.2s,baz=89,slow=36						
TBI	**Tubuai**	**38.57**	**103**	*e*S	S	06 57 10.1	+9.0
	comp=Z,149nm,25.0s						
TBI				*e*LQ	LQ	06 59 54.2	
	comp=Z,3μm,30.0s						
TBI				*e*LR	LR	07 01 50.7	
	comp=Z,829nm,27.5s						
FORT	**Forrest**	**38.81**	**245**	*e*P	**P**	**06 51 09.9**	**-0.1**
	comp=Z,38nm,0.8s						
PPT2	**Papeete2**	**39.03**	**94**	*e*S	**S**	**06 57 12.5**	**+4.2**
	comp=Z,293nm,25.0s						
PPT2				*e*LQ	LQ	07 00 19.7	
	comp=Z,3μm,30.2s						
PPT2				*e*LR	LR	07 02 05.6	
	comp=Z,2μm,25.8s						
PPT	**Papeete**	**39.03**	**94**	LR	LR	07 03 09.7	
	comp=Z,531nm,18.4s,baz=65,slow=30						
MBWA	**Marble Bar**	**46.35**	**259**	*e*P	**P**	**06 52 12.6**	**+1.4**
	comp=Z,68nm,1.0s						
MBWA				*e*PcP	**PcP**	**06 53 46.0**	**+0.1**
NWAO	**Narrogin (SRO)**	**48.17**	**243**	*e*P	**P**	**06 52 27.4**	**+2.1**
	comp=Z,41nm,0.9s						
KAPI	**Kappang**	**50.25**	**280**	P	**P**	**06 52 40.6**	**-0.8**
	comp=Z,21nm,1.1s						
RKT	**Rikitea**	**51.87**	**105**	*e*S	S	07 00 21.1	+8.0
	comp=Z,248nm,28.5s						
RKT				*e*LQ	LQ	07 05 45.5	
	comp=Z,499nm,30.2s						
RKT				*e*LR	LR	07 07 58.4	
	comp=Z,417nm,27.5s						
VNDA	**Vanda**	**58.32**	**182**	*e*P	**P**	**06 53 38.3**	**-0.9**
	comp=Z,14nm,1.7s						
VNDA	**Vanda**	**58.32**	**182**	P	**P**	**06 53 39.5**	**+0.3**
	comp=Z,1.5nm,0.8s,baz=9.1,slow=7.4,SNR=9.4						
VNDA				LR	LR	07 17 26.9	
	comp=Z,348nm,18.5s,baz=116,slow=35						
SBA	**Scott Base**	**58.56**	**181**	*e*P	**P**	**06 53 39.8**	**-1.0**
SBA				pmax	pmax		
	comp=Z,13nm,0.9s						
SBA	**Scott Base**	**58.56**	**181**	*e*P	**P**	**06 53 39.8**	**-1.0**
	comp=Z,13nm,0.9s						
CASY	**Casey**	**60.03**	**204**	*e*P	**P**	**06 53 49.9**	**-1.3**
MJAR	**Matsushiro Arr**	**62.85**	**332**	P	**P**	**06 54 09.8**	**-0.8**
MJAR	**Matsushiro Arr**	**62.85**	**332**	P	**P**	**06 54 09.8**	**-0.8**
	comp=Z,2.8nm,0.9s,baz=169,slow=7.0,SNR=9.2						
MJAR				LR	LR	07 20 57.2	
	comp=Z,84nm,19.1s,baz=150,slow=36						

MAJO	**Matsushiro**	**62.85**	**332**	P	**P**	**06 54 11.1**	**+0.5**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.3s						
MAJO	**Matsushiro**	**62.85**	**332**	P	**P**	**06 54 11.1**	**+0.5**
	comp=Z,3.5nm,0.3s						
JNU	**Nakatsue**	**63.76**	**324**	P	**P**	**06 54 16.2**	**-0.5**
JNU	**Nakatsue**	**63.76**	**324**	P	**P**	**06 54 16.2**	**-0.5**
	comp=Z,4.3nm,0.7s,baz=126,slow=8.9,SNR=3.5						
SSE	**Sheshan**	**68.16**	**317**	P	P	06 54 51.0	+6.1
SSE				S	S	07 03 49.0	+7.1
SSE				pmax	pmax		
	comp=Z,18nm,0.7s						
SSE				pmax	pmax		
	comp=Z,29nm,3.6s						
SSE				LR	LR		
	comp=N,190nm,31.6s						
SSE				LR	LR		
	comp=E,200nm,32.3s						
SSE				LR	LR		
	comp=Z,180nm,19.8s						
KSRS	**Korea Array**	**68.60**	**326**	LR	LR	07 23 38.0	
	comp=Z,165nm,18.7s,baz=147,slow=35						
COCO	**West Island**	**69.64**	**264**	P	**P**	**06 54 55.4**	**+0.9**
COCO				pmax	pmax		
	comp=Z,73nm,0.5s						
COCO	**West Island**	**69.64**	**264**	P	**P**	**06 54 55.4**	**+0.9**
	comp=Z,73nm,0.5s						
QIZ	**Qiongzhong**	**69.64**	**300**	P	**P**	**06 54 54.5**	**+0.1**
QIZ				pP	**PcP**	**06 55 14.3**	**-2.9**
QIZ				S	**S**	**07 03 58.5**	**-1.5**
QIZ				LR	LR		
	comp=Z,170nm,27.9s						
YSS	**Yuzh-Sakhalins**	**70.19**	**341**	P	P	06 55 11.9	+15
NJ2	**Nanjing**	**70.30**	**316**	*e*P	**P**	**06 54 56.5**	**-1.6**
NJ2				PP	**PP**	**06 57 33.3**	**-1.2**
NJ2				S	**S**	**07 04 04.0**	**-3.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,90nm,11.0s						
NJ2				LR	LR		
	comp=N,530nm,22.0s						
NJ2				LR	LR		
	comp=E,110nm,20.1s						
NJ2				LR	LR		
	comp=Z,90nm,17.2s						
QSPA	**South Pole Qui**	**70.71**	**180**	*e*P	**P**	**06 54 59.1**	**-1.3**
	comp=Z,12nm,0.8s						
USRK	**Ussuriysk Arra**	**71.83**	**333**	P	**P**	**06 55 07.5**	**+0.3**
	comp=Z,2.5nm,0.9s,baz=195,slow=5.9,SNR=4.3						
USRK				LR	LR	07 22 58.4	
	comp=Z,253nm,20.7s,baz=300,slow=33						
PET	**Petropavlovsk**	**72.65**	**353**	*e*P	**P**	**06 55 11.7**	**-0.2**
PET				*e*S	**S**	**07 04 35.3**	**+1.9**
PET				pmax	pmax		
	comp=Z,100nm,12.8s						
PETK	**Petropavlovsk-**	**72.84**	**353**	P	**P**	**06 55 11.3**	**-1.7**
PETK	**Petropavlovsk-**	**72.84**	**353**	P	**P**	**06 55 11.3**	**-1.7**
PETK	**Petropavlovsk-**	**72.84**	**353**	P	**P**	**06 55 11.3**	**-1.7**
	comp=Z,4.4nm,0.6s,baz=151,slow=13,SNR=6.0						
PETK				LR	LR	07 21 15.8	
	comp=Z,368nm,21.4s,baz=160,slow=31						
MDJ	**Mudanjiang**	**73.22**	**332**	P	**P**	**06 55 15.5**	**0.0**
MDJ				pP	**PcP**	**06 55 34.0**	**+2.2**
MDJ				sP	sP	06 55 41.8	+8.1
MDJ				S	**SKiKP**	**07 04 42.5**	**-1.1**
MDJ				pmax	pmax		
	comp=Z,13nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,78nm,4.8s						
MDJ				LR	LR		
	comp=N,200nm,12.2s						
MDJ				LR	LR		
	comp=E,89nm,7.8s						
MDJ				LR	LR		
	comp=Z,190nm,9.6s						
CN2	**Changchun**	**74.56**	**329**	*e*P	**P**	**06 55 23.5**	**+0.2**
CN2				*es*P	sP	06 55 50.5	+9.0
CN2				*e*S	**S**	**07 04 53.0**	**-2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				LR	LR		
	comp=N,300nm,18.0s						
CN2				LR	LR		
	comp=E,500nm,18.0s						
CN2				LR	LR		
	comp=Z,600nm,19.0s						
ENH	**Enshi**	**75.75**	**310**	*e*P	**P**	**06 55 30.4**	**-0.2**
	comp=Z,10nm,0.3s						
GYA	**Guiyang**	**75.89**	**305**	P	**P**	**06 55 33.3**	**+1.7**
GYA				pP	pP	06 55 52.8	+8.1
GYA				sP	sP	06 56 01.5	+12
GYA				PP	**PP**	**06 58 27.0**	**+4.5**
GYA				S	**S**	**07 05 10.3**	**-0.9**
GYA				SKS	**SKSac**	**07 05 33.0**	**-5.9**
GYA				SS	**SS**	**07 10 07.3**	**+2.6**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=N,520nm,19.9s						
GYA				LR	LR		
	comp=E,420nm,20.4s						
GYA				LR	LR		
	comp=Z,560nm,19.8s						
KLR	**Kul'dur**	**75.97**	**336**	*e*P	P	06 55 28.0	-3.3
BJI	**Beijing**	**77.03**	**321**	P	**P**	**06 55 37.8**	**+0.3**
BJI				S	**S**	**07 05 27.5**	**+4.7**
BJI				sS	**ScS**	**07 05 56.5**	**+5.5**
BJI				SS	**SS**	**07 10 22.0**	**+0.9**
BJI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,110nm,4.5s						
BJI				LR	LR		
	comp=N,190nm,22.8s						
BJI				LR	LR		
	comp=E,180nm,19.4s						
BJI				LR	LR		
	comp=Z,270nm,31.4s						
MAW	**Mawson**	**78.34**	**202**	LR	LR	07 26 26.8	
	comp=Z,292nm,19.0s,baz=98,slow=33						
KMI	**Kunming**	**78.34**	**302**	P	**P**	**06 55 47.5**	**+2.0**
KMI				PcP	**PcP**	**06 55 56.5**	**+1.8**
KMI				pP	pP	06 56 07.3	+8.6
KMI				sP	sP	06 56 15.0	+11
KMI				PP	**PP**	**06 58 47.5**	**+4.3**
KMI				S	**S**	**07 05 36.8**	**-1.3**
KMI				sS	ScS	07 06 10.5	+7.6
KMI				SS	**SS**	**07 10 44.5**	**+2.6**
KMI				pmax	pmax		
	comp=Z,14nm,0.7s						
KMI				pmax	pmax		
	comp=Z,120nm,3.4s						
KMI				LR	LR		
	comp=N,

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
CD2				PP	**PP**	**06 59 03.8**	**+4.5**
CD2				S	**S**	**07 05 56.5**	**-1.9**
CD2				sS	sS	07 06 30.5	+10
CD2				SS	**SS**	**07 11 13.3**	**+2.3**
CD2				pmax	pmax		
	comp=Z,30nm,1.2s						
CD2				pmax	pmax		
	comp=Z,140nm,6.8s						
CD2				LR	LR		
	comp=N,210nm,21.4s						
CD2				LR	LR		
	comp=E,330nm,24.0s						
CD2				LR	LR		
	comp=Z,230nm,19.0s						
LZH	**Lanzhou**	**82.81**	**312**	*e*P	P	06 56 13.5	+4.4
LZH				pP	pP	06 56 31.8	+9.4
LZH				sP	sP	06 56 39.5	+12
LZH				PP	**PP**	**06 59 20.0**	**0.0**
LZH				*e*S	**S**	**07 06 25.0**	**+0.7**
LZH				sS	sS	07 06 55.0	+8.4
LZH				pmax	pmax		
	comp=Z,37nm,1.4s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=N,170nm,14.1s						
LZH				LR	LR		
	comp=E,270nm,18.1s						
LZH				LR	LR		
	comp=Z,500nm,20.0s						
KDAK	**Kodiak Island**	**83.13**	**19**	P	**P**	**06 56 10.3**	**+0.4**
KDAK	**Kodiak Island**	**83.13**	**19**	P	**P**	**06 56 10.3**	**+0.4**
	comp=Z,8.2nm,1.0s,baz=202,slow=5.4,SNR=3.8						
SYO	**Syowa Base**	**84.83**	**196**	⇓*e*P	**P**	**06 56 19.9**	**+1.2**
ULN	**Ulaanbaatar**	**86.96**	**323**	*e*P	**P**	**06 56 29.0**	**-0.7**
	comp=Z,20nm,1.4s						
ULN	**Ulaanbaatar**	**86.96**	**323**	P	**P**	**06 56 28.5**	**-1.2**
	comp=Z,11nm,1.8s						
BILL	**Bilibino**	**87.16**	**359**	⇑*i*P	**P**	**06 56 28.9**	**-1.1**
BILL				*e*		06 59 54.6	
BILL				pmax	pmax		
	comp=Z,51nm,1.0s						
BILL	**Bilibino**	**87.16**	**359**	*e*P	**P**	**06 56 29.3**	**-0.6**
	comp=Z,8.7nm,0.9s						
GTA	**Gaotai**	**87.21**	**313**	*e*P	**P**	**06 56 31.0**	**-0.1**
GTA				pP	pP	06 56 51.8	+7.3
GTA				sP	sP	06 56 59.8	+10
GTA				SKS	**SKSac**	**07 06 50.0**	**-5.1**
GTA				S	**SKKSac**	**07 07 04.8**	**+0.7**
GTA				sS	sS	07 07 40.3	+10
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,93nm,5.9s						
GTA				LR	LR		
	comp=N,160nm,18.5s						
GTA				LR	LR		
	comp=E,260nm,20.9s						
GTA				LR	LR		
	comp=Z,270nm,19.5s						
CMB	**Columbia Colle**	**87.22**	**48**	*e*P	**P**	**06 56 31.1**	**+0.1**
CMB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CMB	**Columbia Colle**	**87.22**	**48**	*e*P	**P**	**06 56 31.1**	**+0.1**
	comp=Z,7.0nm,1.0s						
SONM	**Songino Array**	**87.31**	**323**	P	**P**	**06 56 30.8**	**-0.6**
SONM	**Songino Array**	**87.31**	**323**	P	**P**	**06 56 30.8**	**-0.6**
	comp=Z,3.3nm,0.9s,baz=138,slow=5.3,SNR=17						
YBH	**Yreka Blue Hor**	**87.37**	**44**	*e*P	**P**	**06 56 31.2**	**-0.5**
YBH	**Yreka Blue Hor**	**87.37**	**44**	P	**P**	**06 56 30.9**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=177,slow=2.4,SNR=5.7						
YBH				LR	LR	07 26 21.4	
	comp=Z,452nm,21.1s,baz=241,slow=29						
SHL	**Shillong**	**87.41**	**298**	*e*x	P	06 56 36.0	+3.6
ISA	**Isabella**	**87.54**	**51**	*e*P	**P**	**06 56 33.2**	**+0.6**
ISA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ISA	**Isabella**	**87.54**	**51**	*e*P	**P**	**06 56 33.2**	**+0.6**
	comp=Z,9.8nm,1.0s						
HUMO	**Hull Mountain**	**87.63**	**43**	P	**P**	**06 56 32.9**	**0.0**
	comp=Z,14nm,1.3s						
BEKR	**Beckworth**	**88.07**	**47**	*e*P	**P**	**06 56 35.5**	**+0.2**
	comp=Z,23nm,1.8s						
PFO	**Pinyon Flat Ob**	**88.17**	**53**	LR	LR	07 26 42.9	
	comp=Z,278nm,21.0s,baz=249,slow=29						
GSC	**Goldstone**	**88.61**	**52**	*e*P	**P**	**06 56 38.4**	**+0.6**
GSC				pmax	pmax		
	comp=Z,30nm,1.8s						
GSC	**Goldstone**	**88.61**	**52**	*e*P	**P**	**06 56 38.4**	**+0.6**
	comp=Z,30nm,1.8s						
NVAR	**Mina Array Bea**	**88.86**	**49**	P	**P**	**06 56 38.8**	**-0.2**
NVAR	**Mina Array Bea**	**88.86**	**49**	P	**P**	**06 56 38.8**	**-0.2**
	comp=Z,1.8nm,1.0s,baz=227,slow=6.8,SNR=12						
NVAR				LR	LR	07 27 23.2	
	comp=Z,528nm,21.9s,baz=123,slow=30						
NV11	**Mina Array Sit**	**88.97**	**49**	*e*P	**P**	**06 56 39.2**	**-0.3**
MOD	**Modoc**	**89.04**	**45**	*e*P	**P**	**06 56 38.4**	**-1.3**
	comp=Z,13nm,1.3s						
SNAA	**Sanae**	**89.06**	**182**	*e*P	**P**	**06 56 37.1**	**-2.2**
	comp=Z,8.8nm,0.8s						
LDFC	**Landfair**	**89.79**	**53**	*e*P	**P**	**06 56 42.8**	**-0.5**
	comp=Z,22nm,1.1s						
ILAR	**Eielson Array**	**90.33**	**17**	P	**P**	**06 56 43.2**	**-1.8**
ILAR	**Eielson Array**	**90.33**	**17**	P	**P**	**06 56 43.2**	**-1.8**
	comp=Z,1.6nm,0.8s,baz=237,slow=5.9,SNR=10						
ILAR				LR	LR	07 37 24.5	
	comp=Z,327nm,18.2s,baz=124,slow=36						
WVOR	**Wild Horse Val**	**90.38**	**45**	*e*P	**P**	**06 56 45.6**	**-0.4**
WVOR				pmax	pmax		
	comp=Z,22nm,1.4s						
WVOR	**Wild Horse Val**	**90.38**	**45**	*e*P	**P**	**06 56 45.5**	**-0.4**
	comp=Z,22nm,1.4s						
ZAK	**Zakamensk**	**90.39**	**324**	*e*P	P	06 56 41.9	-3.9
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.9s						
EGAK	**Eagle**	**92.02**	**19**	*e*P	**P**	**06 56 52.5**	**-0.3**
	comp=Z,169nm,1.2s						
TUC	**Tucson**	**92.05**	**57**	*e*P	**P**	**06 56 54.0**	**+0.1**
TUC				pmax	pmax		
	comp=Z,12nm,1.3s						
TUC	**Tucson**	**92.05**	**57**	*e*P	**P**	**06 56 54.0**	**+0.1**
	comp=Z,12nm,1.3s						
CCUT	**Cedar City**	**92.06**	**51**	*e*P	**P**	**06 56 53.8**	**-0.2**
	comp=Z,10nm,1.2s						
ARUT	**Antelope Range**	**92.09**	**51**	*e*P	**P**	**06 56 53.2**	**-0.9**
ARUT				pmax	pmax		
	comp=Z,17nm,1.5s						
ARUT	**Antelope Range**	**92.09**	**51**	*e*P	**P**	**06 56 53.2**	**-0.9**
	comp=Z,17nm,1.5s						
DLBC	**Dease Lake**	**92.13**	**27**	P	**P**	**06 56 52.6**	**-1.0**
DLBC	**Dease Lake**	**92.13**	**27**	P	**P**	**06 56 52.6**	**-1.0**
	comp=Z,4.3nm,1.1s,baz=236,slow=7.9,SNR=3.8						
WUAZ	**Wupatki**	**92.78**	**53**	*e*P	**P**	**06 56 58.0**	**+0.7**
	comp=Z,11nm,1.2s						
HVS	**Khovu-Aksy**	**96.16**	**322**	⇑*e*P	**P**	**06 57 11.7**	**-0.6**
HVS				pmax	pmax		
	comp=Z,16nm,1.2s						
INK	**Inuvik**	**96.64**	**18**	P	**P**	**06 57 13.0**	**-0.9**
INK	**Inuvik**	**96.64**	**18**	P	**P**	**06 57 13.0**	**-0.9**
	comp=Z,1.7nm,1.0s,baz=206,slow=6.4,SNR=2.6						
PDAR	**Pinedale Array**	**96.68**	**47**	LR	LR	07 37 01.7	
	comp=Z,181nm,18.4s,baz=259,slow=33						
TXAR	**Lajitas Array**	**96.81**	**61**	P	**P**	**06 57 15.6**	**-0.2**
TXAR	**Lajitas Array**	**96.81**	**61**	P	**P**	**06 57 15.6**	**-0.2**
	comp=Z,0.8nm,0.9s,baz=227,slow=5.8,SNR=8.9						
TXAR				LR	LR	07 33 21.3	
	comp=Z,301nm,18.2s,baz=345,slow=31						
WMQ	**Urumqi**	**97.29**	**314**	*e*P	Pdif	06 57 19.0	+1.3
WMQ				pP	pP	06 57 39.0	+7.9
WMQ				SKS	**SKSac**	**07 07 48.0**	**-3.3**
WMQ				*e*S	**S**	**07 08 33.0**	**-5.1**
WMQ				pmax	pmax		
	comp=Z,7.0nm,1.2s						
WMQ				pmax	pmax		
	comp=Z,88nm,4.6s						
WMQ				LR	LR		
	comp=N,310nm,24.7s						
WMQ				LR	LR		
	comp=E,370nm,29.2s						
WMQ				LR	LR		
	comp=Z,310nm,22.5s						
PLCA	**Paso Flores**	**98.44**	**138**	LR	LR	07 31 23.8	
	comp=Z,233nm,21.1s,baz=232,slow=29						
YKA	**Yellowknife Ar**	**100.76**	**27**	P	**Pdif**	**06 57 32.2**	**-0.3**
YKA	**Yellowknife Ar**	**100.76**	**27**	P	**Pdif**	**06 57 32.2**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=254,slow=4.8,SNR=4.7						
MKAR	**Makanchi Array**	**101.82**	**315**	P	**Pdif**	**06 57 39.0**	**+1.3**
MKAR	**Makanchi Array**	**101.82**	**315**	P	**Pdif**	**06 57 39.0**	**+1.3**
MKAR	**Makanchi Array**	**101.82**	**315**	P	**Pdif**	**06 57 39.0**	**+1.3**
	comp=Z,0.5nm,0.7s,baz=76,slow=6.1,SNR=5.2						
ARU	**Arti**	**117.33**	**324**	*i* PKIKP	**PKPdf**	**07 02 27.9**	**-1.5**
ARU						07 03 37.9	
ARCES	**ARCESS Array B**	**125.17**	**345**	PKPpre	PKPpre	07 02 39.4	
ARCES				PKP	**PKiKP**	**07 02 45.3**	**+0.7**
ARCES	**ARCESS Array B**	**125.17**	**345**	PKhKP	PKPpre	07 02 39.4	
	comp=Z,1.2nm,0.8s,baz=28,slow=2.3,SNR=6.3						
ARCES				PKP	**PKiKP**	**07 02 45.3**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=51,slow=1.7,SNR=11						
KIV	**Kislovodsk**	**129.35**	**311**	*i* PKIKP	**PKPdf**	**07 02 53.1**	**+0.1**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN	**Obninsk**	**129.59**	**327**	*i* PKIKP	**PKPdf**	**07 02 56.7**	**+3.8**
OBN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
AKASG	**Malin Array Be**	**135.59**	**324**	PKIKP	**PKPdf**	**07 03 04.1**	**-0.4**
AKASG	**Malin Array Be**	**135.59**	**324**	PKP	**PKPdf**	**07 03 04.0**	**-0.4**
AKASG	**Malin Array Be**	**135.59**	**324**	PKP	**PKPdf**	**07 03 04.1**	**-0.4**
	comp=Z,0.9nm,0.3s,baz=68,slow=2.6,SNR=9.2						
BRTR	**Keskin Array B**	**136.89**	**308**	PKP	**PKPdf**	**07 03 08.4**	**+1.0**
BRTR	**Keskin Array B**	**136.89**	**308**	PKP	**PKPdf**	**07 03 08.4**	**+1.0**
	comp=Z,0.6nm,0.5s,baz=98,slow=2.9,SNR=2.7						
DPC	**Dobruska-Polom**	**142.33**	**332**	*e*PKIKP	**PKPdf**	**07 03 16.2**	**-0.6**
DPC	**Dobruska-Polom**	**142.33**	**332**	*e*PKP	**PKPdf**	**07 03 16.2**	**-0.6**
BRG	**Berggiesshubel**	**142.97**	**334**	*e*P	**PKPdf**	**07 03 18.9**	**+1.0**
	comp=Z,3.6nm,1.0s						
BRG	**Berggiesshubel**	**142.97**	**334**	*e*PKIKP	**PKPdf**	**07 03 18.9**	**+1.0**
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
CLL	**Collm**	**143.02**	**335**	*e*PKHKP	PKPpre	07 03 13.0	
PRA	**Prague**	**143.36**	**333**	PKP	**PKPdf**	**07 03 19.0**	**+0.4**
PRU	**Pruhonice**	**143.38**	**332**	*e*PKIKP	**PKPdf**	**07 03 18.9**	**+0.3**
PRU	**Pruhonice**	**143.38**	**332**	*e*PKP	**PKPdf**	**07 03 18.9**	**+0.3**
TANN	**Tannenbergstha**	**143.93**	**335**	*e*PKPbc	PKPab	07 03 17.2	+0.2
WERD	**Werda**	**143.97**	**335**	*e*PKPbc	**PKPab**	**07 03 17.3**	**+0.3**
PLN	**Plauen**	**144.00**	**335**	*e*PKPbc	**PKPab**	**07 03 17.4**	**+0.3**
GUNZ	**Gunzen**	**144.02**	**335**	*e*PKPbc	**PKPab**	**07 03 17.5**	**+0.2**
WERN	**Wernitzgruen**	**144.06**	**335**	*e*PKPbc	PKPbc	07 03 17.8	-0.1
NKC	**Novy Kostel**	**144.08**	**334**	*e*PKIKP	**PKPab**	**07 03 16.8**	**-0.7**
NKC	**Novy Kostel**	**144.08**	**334**	*e*PKP	**PKPab**	**07 03 16.8**	**-0.7**
MOX	**Moxa**	**144.09**	**336**	*e*PKPbc	**PKPab**	**07 03 17.5**	**0.0**
MOX	**Moxa**	**144.09**	**336**	*e*PKIKP	**PKPab**	**07 03 17.5**	**0.0**
CONA	**Conrad Observa**	**144.24**	**329**	⇑*i*PKPdf	PKPbc	07 03 19.4	+0.8
	comp=Z,8.4nm,1.0s						
MANZ	**Manzenberg**	**144.41**	**334**	*e*PKPbc	**PKPab**	**07 03 18.9**	**+0.2**
KHC	**Kasperske Hory**	**144.44**	**332**	*e*PKIKP	**PKPab**	**07 03 17.8**	**-1.1**
KHC	**Kasperske Hory**	**144.44**	**332**	*e*PKP	**PKPab**	**07 03 17.8**	**-1.1**
KHC				*e*x	x	07 03 21.5	
KHC	**Kasperske Hory**	**144.44**	**332**	*e*PKPdf	**PKPab**	**07 03 18.1**	**-0.7**
ROTZ	**Rotzenmuhle**	**144.53**	**334**	*e*PKPbc	PKPbc	07 03 19.5	+0.1
UBBA	**Unterbreizbach**	**144.56**	**337**	*e*PKPbc	**PKPab**	**07 03 19.1**	**+0.1**
GEC2	**GERESS Array S**	**144.59**	**332**	*e*PKPbc	**PKPab**	**07 03 19.2**	**-0.4**
GEC2	**GERESS Array S**	**144.59**	**332**	*e*PKIKP	**PKPab**	**07 03 19.2**	**-0.4**
GERES	**GERESS Array B**	**144.59**	**332**	PKP	**PKPab**	**07 03 19.2**	**-0.4**
GERES	**GERESS Array B**	**144.59**	**332**	PKP	**PKPab**	**07 03 19.2**	**-0.4**
	comp=Z,3.9nm,0.9s,baz=20,slow=4.3,SNR=11						
WET	**Wettzell**	**144.73**	**333**	*e*PKPbc	**PKPab**	**07 03 19.9**	**0.0**
WET	**Wettzell**	**144.73**	**333**	*e*PKIKP	**PKPab**	**07 03 19.9**	**0.0**
ARSA	**Arzberg**	**144.87**	**328**	⇑*i*PKPdf	**PKPab**	**07 03 20.5**	**0.0**
	comp=Z,22nm,1.3s						
GRF	**Grafenberg Arr**	**144.99**	**335**	*e*PKPbc	**PKPab**	**07 03 21.1**	**+0.2**
GRF	**Grafenberg Arr**	**144.99**	**335**	*e*PKIKP	**PKPab**	**07 03 21.1**	**+0.2**
GRFO	**Grafenberg**	**145.00**	**335**	*e*PKIKP	**PKPdf**	**07 03 21.5**	**0.0**
GRFO	**Grafenberg**	**145.00**	**335**	*e*PKPbc	**PKPdf**	**07 03 21.5**	**0.0**
MOA	**Molln**	**145.06**	**330**	⇓*i*PKPdf	**PKPbc**	**07 03 20.6**	**-0.5**
	comp=Z,41nm,1.1s						
SOKA	**Soboth**	**145.51**	**328**	⇑*i*PKPdf	**PKPdf**	**07 03 21.6**	**-1.0**
	comp=Z,29nm,1.2s						
TNS	**Taunus Mts**	**145.61**	**338**	*e*PKPbc	**PKPdf**	**07 03 21.8**	**-0.8**
TNS	**Taunus Mts**	**145.61**	**338**	*e*PKP2	**PKPdf**	**07 03 21.8**	**-0.8**
RJOB	**Jochberg**	**145.82**	**331**	*e*PKPbc	**PKPbc**	**07 03 23.5**	**-0.1**
OBKA	**Obir**	**145.87**	**328**	⇑*e*PKPab	**PKPbc**	**07 03 23.6**	**-0.2**
	comp=Z,13nm,0.9s						
KBA	**Koelnbreinsper**	**146.05**	**330**	⇑*i*PKPab	**PKPdf**	**07 03 23.7**	**+0.1**
	comp=Z,5.5nm,0.6s						
ABTA	**Abfaltersbach**	**146.68**	**330**	⇑*i*PKPbc	**PKPdf**	**07 03 24.5**	**0.0**
	comp=Z,17nm,1.3s						
WTTA	**Wattenberg**	**146.69**	**332**	⇓*i*PKPdf	**PKPdf**	**07 03 24.3**	**-0.4**
	comp=Z,20nm,1.2s						
RETA	**Reutte**	**146.91**	**333**	⇓*i*PKPbc	**PKPbc**	**07 03 25.9**	**-0.9**
	comp=Z,12nm,1.2s						
BFO	**Black Forest**	**147.22**	**336**	*e*PKPbc	**PKPbc**	**07 03 27.2**	**-0.4**
BFO	**Black Forest**	**147.22**	**336**	*e*PKP2	**PKPbc**	**07 03 27.0**	**-0.6**
BFO	**Black Forest**	**147.22**	**336**	*e*PKPbc	**PKPbc**	**07 03 27.0**	**-0.6**
FETA	**Feichten**	**147.28**	**332**	⇓*e*PKPdf	**PKPdf**	**07 03 25.3**	**-0.4**
	comp=Z,19nm,0.9s						
DAVA	**Damuels**	**147.44**	**334**	⇑*i*PKPbc	**PKPbc**	**07 03 28.0**	**-0.5**
	comp=Z,20nm,1.2s						
TUE	**Stuetta**	**148.31**	**333**	*e*PKPbc	**PKPbc**	**07 03 30.4**	**-0.5**
TIP	**Timpagrande**	**149.11**	**316**	*e*PKPbc	**PKPbc**	**07 03 32.6**	**-0.3**
TIP				*e*PKPab	**PKPab**	**07 03 37.1**	**-0.2**
BNI	**Bardonecchia**	**150.56**	**334**	*e*PKIKP	**PKPbc**	**07 03 35.8**	**-0.6**
BNI	**Bardonecchia**	**150.56**	**334**	*e*PKPbc	**PKPbc**	**07 03 35.8**	**-0.6**
TORD	**Torodi Ar. Bea**	**166.56**	**245**	PKP	**PKPdf**	**07 03 51.5**	**+0.9**
TORD				PKPab	**PKPab**	**07 04 55.3**	**+2.4**
TORD	**Torodi Ar. Bea**	**166.56**	**245**	PKP	**PKPdf**	**07 03 51.5**	**+0.9**
	comp=Z,1.0nm,1.0s,baz=117,slow=0.6,SNR=3.3						
TORD				PKPab	**PKPab**	**07 04 55.3**	**+2.4**
	comp=Z,2.8nm,1.0s,baz=125,slow=2.6,SNR=6.3						

*NEIC **25** 07:27:51.1, 28°.45S×70°.45W, h71km, MG4.0(GUC), After GUC.*

GUC 25 07:27:51.1±0.6**, 28°.45S**×**70°.45W, h71**km±7km**, ML4.0, 8C-2D, Central Chile**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LCO	**Las Campanas**	**0.61**	**202**	⇑*i*P	Pn	07 28 06.0	+0.5
LCO				*i* S	Sn	07 28 17.2	+1.3
LCO	**Las Campanas**	**0.61**	**202**	⇑*i*P	Pn	07 28 06.0	+0.5
LCO				*i* S	Sn	07 28 17.2	+1.3
LCO				AML	AML	07 28 18.2	
	comp=N,4μm,0.4s						
CPCH	**Copiapo**	**1.09**	**4**	⇑*i*P	Pn	07 28 11.2	+0.4
CPCH				*i* S	Sn	07 28 26.0	+0.5
CPCH	**Copiapo**	**1.09**	**4**	⇑*i*P	Pn	07 28 11.2	+0.4
CPCH				*i* S	Sn	07 28 26.0	+0.5
CPCH				AML	AML	07 28 29.2	
	comp=N,12μm,0.1s						
CDCH	**Caldera**	**1.41**	**346**	⇑*i*P	Pn	07 28 15.1	+0.1
CDCH				*i* S	Sn	07 28 33.5	+0.6
CDCH	**Caldera**	**1.41**	**346**	⇑*i*P	Pn	07 28 15.1	+0.1
CDCH				*i* S	Sn	07 28 33.5	+0.6
TLL	**Tololo Astrono**	**1.74**	**190**	⇑*i*P	Pn	07 28 20.4	+0.7
TLL				*i* S	Sn	07 28 42.5	+1.2
TLL	**Tololo Astrono**	**1.74**	**190**	⇑*i*P	Pn	07 28 20.4	+0.7
TLL				*i* S	Sn	07 28 42.5	+1.2
CMCH	**Combarbala**	**2.76**	**190**	⇓*i*P	Pn	07 28 32.6	-0.6
CMCH				*i* S	Sn	07 29 04.5	-1.0
CMCH	**Combarbala**	**2.76**	**190**	⇓*i*P	Pn	07 28 32.6	-0.6
CMCH				*i* S	Sn	07 29 04.5	-1.0
CMCH				AML	AML	07 29 31.0	
	comp=E,687nm,0.6s						

IDC 25 07:32:21.9±3.3**, 14°.38S**×**76°.08W, h40**km±31km**, mb3.5**/3**, mb1 3.7**/7**, mb1mx3.5**/22**, mbtmp3.6**/7**, ML3.2**/5**, MS3.8**/2**, Ms1 3.8**/2**, ms1mx2.9**/20**, Error ellipse: s-maj=52.1km s-min=20.8km az=52.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**7.55**	**342**	Pn	Pn	07 34 08.6	-1.4
	1.6nm,0.3s,baz=162,slow=9.6,SNR=7.6						
ATAH				Sn	Sn	07 35 40.7	+6.0
	0.2nm,0.3s,baz=302,slow=19,SNR=3.3						
LPAZ	**La Paz**	**7.90**	**105**	Pn	Pn	07 34 16.9	+1.8
	0.2nm,0.3s,baz=279,slow=8.3,SNR=5.7						
LVC	**Limon Verde**	**10.64**	**141**	Pn	Pn	07 34 49.9	-2.3
	0.2nm,0.3s,baz=325,slow=11,SNR=3.7						
SIV	**San Ignacio**	**14.57**	**98**	Pn	Pn	07 35 46.0	+0.4
	0.1nm,0.3s,baz=288,slow=13,SNR=1.9						
CFAA	**Coronel Fontan**	**18.59**	**159**	P	Pn	07 36 36.4	-0.1
	0.0nm,0.3s,baz=321,slow=13,SNR=3.6						
CPUP	**Villa Florida**	**21.19**	**127**	P	P	07 37 04.3	+0.2
	0.4nm,0.5s,baz=280,slow=13,SNR=4.0						
PLCA	**Paso Flores**	**26.70**	**171**	LR	LR	07 47 31.5	
	comp=Z,200nm,18.4s,baz=178,slow=34						
BDFB	**Brasilia**	**27.13**	**96**	LR	LR	07 50 23.2	
	comp=Z,202nm,19.0s,baz=82,slow=40						
TXAR	**Lajitas Array**	**50.97**	**329**	P	P	07 41 20.4	+0.5
	0.5nm,0.7s,baz=141,slow=8.1,SNR=7.5						
TORD	**Torodi Ar. Bea**	**81.71**	**74**	P	P	07 44 36.4	-0.6
	1.5nm,0.7s,baz=254,slow=3.9,SNR=10						

*ISCJB **25** 07:35:31.8±0.7, 38°.93N±0°.03×26°.98E±0°.05, h6km±7km, Error ellipse: s-maj=7.3km s-min=4.7km az=156.8*
*ISK **25** 07:35:31.4, 38°.90N×26°.99E, h19km, MD2.5*
*CSEM **25** 07:35:31.6±0.2, 38°.92N×26°.94E, h10km, MD2.8, Error ellipse: s-maj=5.9km s-min=3.9km az=65.0*
*DDA **25** 07:35:32.4, 38°.92N×27°.03E, h7km, MD2.8*

ISC 25 07:35:31.7±1.1**, 38°.93N**±0°.03×**26°.98E**±0°.04**, h8**km±11km**, n23, σ0ˢ47**/36**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.44**	**329**	*e*P	**Pg**	**07 35 40.0**	**-0.2**
AYVA				*i* S	**Sb**	**07 35 48.7**	**+0.3**
AYVA	**Ayvalik**	**0.44**	**329**	*e*P	**Pg**	**07 35 40.0**	**-0.2**
BLCB	**Balcova**	**0.55**	**175**	*e*PG	**Pg**	**07 35 42.1**	**-0.2**
BLCB				*e*SG	**Sg**	**07 35 50.0**	**+0.5**
BLCB	**Balcova**	**0.55**	**175**	*e*Pg	**Pg**	**07 35 42.1**	**-0.2**
BLCB				*e*Sg	**Sg**	**07 35 50.0**	**+0.5**
AKHS	**Akhisar**	**0.65**	**95**	*e*P	**Pb**	**07 35 45.2**	**-0.1**
AKHS				*e*S	**Sg**	**07 35 52.7**	**-0.1**
AKHS	**Akhisar**	**0.65**	**95**	*e*P	**Pb**	**07 35 45.2**	**-0.1**
AKHS				*e*S	**Sg**	**07 35 52.7**	**-0.1**
BALY	**Balya**	**0.94**	**31**	*i* P	**Pn**	**07 35 51.5**	**+0.1**
BALY				*i* S	**Sn**	**07 36 05.5**	**+0.4**
BALY	**Balya**	**0.94**	**31**	*i* P	**Pn**	**07 35 51.5**	**+0.1**
GONE	**Gonen-Balikesi**	**1.24**	**26**	*e*PN	**Pn**	**07 35 54.7**	**-0.6**
GONE				*e*SN	**Sg**	**07 36 11.8**	**+0.3**
GONE	**Gonen-Balikesi**	**1.24**	**26**	*e*Pn	**Pn**	**07 35 54.7**	**-0.6**
GONE				*e*Sn	**Sg**	**07 36 11.8**	**+0.3**
DURS	**Dursunbey**	**1.34**	**60**	*i* P	**Pn**	**07 35 56.5**	**-0.3**
DURS				*i* S	**Sb**	**07 36 14.6**	**+0.2**
DURS	**Dursunbey**	**1.34**	**60**	*i* P	**Pn**	**07 35 56.5**	**-0.3**
DURS				*i* S	**Sb**	**07 36 14.6**	**+0.2**
DEMI	**Demirci**	**1.36**	**85**	*i* P	**Pg**	**07 35 57.8**	**+0.1**
DEMI				*i* S	**Sg**	**07 36 15.5**	**+0.2**
DEMI	**Demirci**	**1.36**	**85**	*i* P	**Pg**	**07 35 57.8**	**+0.1**
DEMI				*i* S	**Sg**	**07 36 15.5**	**+0.2**
KULA	**Kula-Manisa**	**1.38**	**107**	*e*PN	**Pn**	**07 35 56.2**	**-1.1**
KULA	**Kula-Manisa**	**1.38**	**107**	*e*Pn	**Pn**	**07 35 56.2**	**-1.1**
LPK	**Lapseki**	**1.45**	**353**	*e*PN	**Pn**	**07 35 57.9**	**-0.3**
LPK	**Lapseki**	**1.45**	**353**	*e*Pn	**Pn**	**07 35 57.9**	**-0.3**
AYDN	**Tasoluk**	**1.46**	**151**	*e*P	**Pg**	**07 36 01.0**	**+1.4**
AYDN				*i* S	**Sg**	**07 36 18.3**	**-0.2**
KRBG	**Karabiga-Canak**	**1.48**	**9**	*e*PN	**Pn**	**07 35 58.4**	**-0.2**
KRBG	**Karabiga-Canak**	**1.48**	**9**	*e*Pn	**Pn**	**07 35 58.4**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.51**	**345**	*e*PN	**Pn**	**07 35 58.9**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.51**	**345**	*e*Pn	**Pn**	**07 35 58.9**	**-0.2**

*ATH **25** 07:37:15.8, 38°.96N×27°.20E, h4km, MD3.0/5*
*ISCJB **25** 07:37:17.9±0.6, 38°.92N±0°.02×27°.03E±0°.03, h2km±5km, Error ellipse: s-maj=3.8km s-min=3.4km az=159.2*
*DDA **25** 07:37:17.5, 38°.92N×27°.05E, h18km, MD3.2*
*CSEM **25** 07:37:17.7±0.2, 38°.91N×27°.04E, h1km±1km, MD3.2, Error ellipse: s-maj=4.8km s-min=4.4km az=94.0*

ISC 25 07:37:17.9±1.1**, 38°.92N**±0°.02×**27°.07E**±0°.02**, h4**km±10km**, n29, σ0ˢ64**/56**, Turkey**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.49**	**324**	*i* P	**Pg**	**07 37 27.6**	**+0.3**
AYVA				*i* S	**Sg**	**07 37 34.0**	**+0.3**
AYVA	**Ayvalik**	**0.49**	**324**	*i* P	**Pg**	**07 37 27.6**	**+0.3**
AYVA				*i* S	**Sg**	**07 37 34.0**	**+0.3**
AKHS	**Akhisar**	**0.58**	**93**	*i* P	**Pg**	**07 37 29.5**	**+0.4**
AKHS				*i* S	**Sb**	**07 37 38.7**	**-0.6**
AKHS	**Akhisar**	**0.58**	**93**	*i* P	**Pg**	**07 37 29.5**	**+0.4**
AKHS				*i* S	**Sb**	**07 37 38.7**	**-0.6**
URLA	**Izmir**	**0.67**	**214**	*i* P	**Pg**	**07 37 30.3**	**-0.3**
URLA				*i* S	**Sg**	**07 37 40.1**	**+0.8**
URLA	**Izmir**	**0.67**	**214**	*i* P	**Pg**	**07 37 30.3**	**-0.3**
URLA				*i* S	**Sg**	**07 37 40.1**	**+0.8**
PRK	**Paraskevi**	**0.70**	**298**	*e*PB	**Pg**	**07 37 31.5**	**+0.2**
PRK				*e*SG	**Sg**	**07 37 40.8**	**+0.4**
PRK	**Paraskevi**	**0.70**	**298**	*e*Pb	**Pg**	**07 37 31.5**	**+0.2**
PRK				*e*Sg	**Sg**	**07 37 40.8**	**+0.4**
BALY	**Balya**	**0.93**	**27**	*i* P	**Pb**	**07 37 36.1**	**-0.5**
BALY				*i* S	**Sn**	**07 37 50.8**	**-0.7**
BALY	**Balya**	**0.93**	**27**	*i* P	**Pb**	**07 37 36.1**	**-0.5**
CHOS	**Chios island**	**0.95**	**237**	*e*PG	**Pg**	**07 37 35.6**	**-0.5**
CHOS				*e*SG	**Sb**	**07 37 50.5**	**+0.6**
CHOS	**Chios island**	**0.95**	**237**	*e*Pg	**Pg**	**07 37 35.6**	**-0.5**
CHOS				*e*Sg	**Sb**	**07 37 50.5**	**+0.6**
BOZC	**Bozcaada**	**1.21**	**320**	*i* P	**Pn**	**07 37 41.9**	**+0.4**
BOZC				*i* S	**Sg**	**07 37 56.1**	**-0.8**
SMG	**Samos**	**1.22**	**189**	*e*PB	**Pg**	**07 37 39.2**	**-2.0**
SMG				*e*SB	**Sb**	**07 37 58.0**	**+0.5**
SMG	**Samos**	**1.22**	**189**	*e*Pb	**Pg**	**07 37 39.2**	**-2.0**
SMG				*e*Sb	**Sb**	**07 37 58.0**	**+0.5**
GCAM	**G?zelcaml?**	**1.22**	**174**	*i* P	**Pg**	**07 37 40.4**	**-0.8**
GCAM				*i* S	**Sg**	**07 37 57.1**	**0.0**
GCAM	**G?zelcaml?**	**1.22**	**174**	*i* P	**Pg**	**07 37 40.4**	**-0.8**
GCAM				*i* S	**Sg**	**07 37 57.1**	**0.0**
DURS	**Dursunbey**	**1.29**	**57**	*i* P	**Pg**	**07 37 41.9**	**-0.8**
DURS				*i* S	**Sg**	**07 37 59.5**	**+0.1**
DURS	**Dursunbey**	**1.29**	**57**	*i* P	**Pg**	**07 37 41.9**	**-0.8**
DURS				*i* S	**Sg**	**07 37 59.5**	**+0.1**
DEMI	**Demirci**	**1.29**	**84**	*i* P	**Pg**	**07 37 42.4**	**-0.3**
DEMI				*i* S	**Sb**	**07 37 59.8**	**+0.1**
DEMI	**Demirci**	**1.29**	**84**	*i* P	**Pg**	**07 37 42.4**	**-0.3**
DEMI				*i* S	**Sb**	**07 37 59.8**	**+0.1**
AYDN	**Tasoluk**	**1.41**	**153**	*i* P	**Pg**	**07 37 45.1**	**+0.3**
AYDN				*i* S	**Sn**	**07 38 04.0**	**+0.7**
AYDN	**Tasoluk**	**1.41**	**153**	*i* P	**Pg**	**07 37 45.1**	**+0.3**
AYDN				*i* S	**Sn**	**07 38 04.0**	**+0.7**
GDZ	**Gediz**	**1.89**	**84**	*i* P	**Pb**	**07 37 53.5**	**+0.5**
GDZ				*i* S	**Sg**	**07 38 19.3**	**+0.7**
GDZ	**Gediz**	**1.89**	**84**	*i* P	**Pb**	**07 37 53.5**	**+0.5**
SMTH	**Samothraki Isl**	**1.95**	**323**	*e*PG	**Pb**	**07 37 53.4**	**-0.6**
SMTH				*e*SN	**Sb**	**07 38 19.1**	**+0.4**
SMTH	**Samothraki Isl**	**1.95**	**323**	*e*Pg	**Pb**	**07 37 53.4**	**-0.6**
SMTH				*e*Sn	**Sb**	**07 38 19.1**	**+0.4**
ALN	**Alexandroupoli**	**2.13**	**339**	*e*PN	**Pn**	**07 37 54.0**	**-0.2**
ALN				*e*SN	**Sn**	**07 38 21.0**	**0.0**
ALN	**Alexandroupoli**	**2.13**	**339**	*e*Pn	**Pn**	**07 37 54.0**	**-0.2**
ALN				*e*Sn	**Sn**	**07 38 21.0**	**0.0**

*BJI **25** 07:54:37.2, 3°.69S×127°.65E, h35km, mB5.1/15, mb4.7/26, Ms4.7/12, Ms7 4.3/13*
*MOS **25** 07:54:39.4±1.0, 3°.02S×127°.88E, h33km, mb4.8/12, Error ellipse: s-maj=21.1km s-min=8.5km az=115.5*
*ISCJB **25** 07:54:40.6±0.3, 3°.05S±0°.03×127°.77E±0°.03, h38km, mb4.5/36, MS4.0/12, Error ellipse: s-maj=5.0km s-min=3.8km az=141.1*
*DJA **25** 07:54:41.2±0.6, 3°S±3°×12°8E±°, h10km, M4.8/15, mB5.3/10, mb4.9/15, MLv4.8/12, Mw(mB)4.7/10*
*NEIC **25** 07:54:41.5±0.3, 3°.00S×127°.88E, h35km, mb4.8/8, Error ellipse: s-maj=11.7km s-min=5.9km az=65.0*
*IDC **25** 07:54:43.0±3.0, 3°.09S×127°.83E, h49km±28km, mb4.0/14, mb1 4.1/16, mb1mx4.0/24, mbtmp4.0/16, ML3.9/2, MS3.7/7, Ms1 3.7/7, ms1mx3.3/32, Error ellipse: s-maj=26.5km s-min=9.8km az=74.0*

ISC 25 07:54:42.1±0.3**, 3°.10S**±0°.04×**127°.78E**±0°.04**, h38**km**, n108,** σ**1ˢ43**/146**, mb4.6**/36**, MS4.0**/12**, 4C-2D, Seram**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
NLAI	**Namlea**	**0.70**	**258**	P	**Pn**	**07 54 53.4**	**-2.1**
NLAI				S	**Sn**	**07 55 03.2**	**-1.8**
AAI	**Ambon**	**0.72**	**145**	P	**Pn**	**07 54 55.1**	**-0.7**
LBMI	**Labuha**	**2.46**	**353**	P	**Pn**	**07 55 21.0**	**+1.3**
LBMI				S	**Sn**	**07 55 49.0**	**+0.5**
BNDI	**Bandanaira**	**2.55**	**124**	P	Pn	07 55 26.3	+5.4
TNTI	**Ternate**	**3.86**	**354**	P	**Pn**	**07 55 39.2**	**+0.2**
FAKI	**Fak Fak**	**4.46**	**88**	P	Pn	07 55 50.9	+3.6
FAKI				S	**Sn**	**07 56 40.0**	**+2.0**
KMSI	**Cibinong**	**5.26**	**314**	P	Pn	07 56 01.8	+3.5
	574nm,0.6s,3.5nm						
MNI	**Manado**	**5.38**	**327**	S	**Sn**	**07 56 59.5**	**-1.2**
LUWI	**Luwuk**	**5.41**	**292**	P	**Pn**	**07 55 59.4**	**-0.8**
	324nm,0.9s,4μm1.2nm						

GTOI	**Gorontalo**	**6.04**	**308**	P		**Pn**	**07 56 11.1**	**+2.2**
	183nm,0.8s,11µm1.0nm								
GTOI				S		**Sn**	**07 57 18.1**	**+1.2**
	183nm,0.8s,11µm1.0nm								
MRSI	**Marisa**	**6.83**	**301**	P		**Pn**	**07 56 19.6**	**-0.2**
	84nm,0.5s,1µm0.4nm								
MRSI				S		**Sn**	**07 57 34.7**	**-1.7**
	84nm,0.5s,1µm0.4nm								
MMRI	**Maumere**	**7.79**	**225**	P		Pn	07 56 37.5	+4.5
	68nm,1.1s,0.3nm								
BSSI	**Bau Bau, Buton**	**7.87**	**247**	P		Pn	07 56 44.4	+10
TTSI	**Tana Toraja**	**7.95**	**270**	P		Pn	07 56 51.0	+16
BKSI	**Bulukumba**	**7.95**	**254**	P		**Pn**	**07 56 38.1**	**+2.9**
	73nm,1.1s,777nm0.2nm								
SPSI	**Sidrap Palu**	**8.04**	**264**	P		**Pn**	**07 56 39.4**	**+2.9**
	44nm,0.9s,563nm								
KAPI	**Kappang**	**8.23**	**256**	*e*Pn		**Pn**	**07 56 40.9**	**+1.8**
KAPI				*e*Sn		Sn	07 58 18.4	+7.5
KAPI	**Kappang**	**8.23**	**256**	P		**Pn**	**07 56 40.7**	**+1.6**
	52nm,1.1s,582nm								
KAPI	**Kappang**	**8.23**	**256**	P		**Pn**	**07 56 41.2**	**+2.1**
	5.5nm,0.3s,baz=80,slow=13,SNR=9.0								
KAPI				S		Sn	07 58 19.3	+8.4
	0.8nm,0.3s,baz=48,slow=16,SNR=1.8								
KAPI				LR		LR	08 00 05.6		
	comp=Z,483nm,19.8s,baz=101,slow=39								
FITZ	**Fitzroy Crossi**	**15.06**	**188**	P		**Pn**	**07 58 12.5**	**+0.2**
FITZ	**Fitzroy Crossi**	**15.06**	**188**	P		**Pn**	**07 58 12.5**	**+0.2**
	0.2nm,0.3s,baz=15,slow=11,SNR=13								
FITZ				LR		LR	08 05 08.4		
	comp=Z,236nm,18.6s,baz=358,slow=42								
PWJI	**Pagerwojo**	**16.64**	**252**	P		**P**	**07 58 39.3**	**+4.7**
WRAB	**Tennant Creek**	**17.92**	**160**	*e*P		**P**	**07 58 49.3**	**+0.5**
WRAB				*e*			08 02 06.9		
WRAB				pmax		pmax			
	comp=Z,47nm,0.7s								
WRAB	**Tennant Creek**	**17.92**	**160**	*e*Pn		**P**	**07 58 49.3**	**+0.5**
	comp=Z,47nm,0.7s								
WRAB				*e*Sn		**Sn**	**08 02 06.9**	**-0.6**
BJII	**Banjamegara**	**18.48**	**256**	P		**Pn**	**07 58 57.7**	**+2.2**
	comp=Z,71nm,1.8s,comp=Z,1µm								
COEN	**Coen**	**18.64**	**126**	*e*P		**Pn**	**07 58 58.0**	**+0.6**
	comp=Z,136nm,0.8s								
COEN				*e*S		**S**	**08 02 30.6**	**+3.2**
CISI	**Cisompet, Garu**	**20.36**	**257**	P		**P**	**07 59 15.4**	**-0.3**
	comp=Z,117nm,1.0s,comp=Z,3µm								
AS31	**Alice Springs**	**21.29**	**164**	*e*P		**P**	**07 59 26.2**	**+0.6**
AS31				*e*S		**S**	**08 03 21.9**	**+1.7**
ASAR	**Alice Springs**	**21.29**	**164**	P		**P**	**07 59 25.8**	**+0.2**
ASAR				S		**S**	**08 03 20.0**	**-0.3**
ASAR				PcP		**PcP**	**08 03 28.0**	**-1.5**
ASAR	**Alice Springs**	**21.29**	**164**	P		**P**	**07 59 25.8**	**+0.2**
	comp=Z,23nm,0.7s,baz=341,slow=9.2,SNR=267								
ASAR				S		**S**	**08 03 20.0**	**-0.3**
	comp=Z,3.0nm,0.9s,baz=340,slow=19,SNR=7.1								
ASAR				PcP		**PcP**	**08 03 28.0**	**-1.5**
	comp=Z,1.2nm,0.4s,baz=2.2,slow=1.3,SNR=8.0								
PPBI	**Pangkal Pinang**	**21.64**	**272**	P		**P**	**07 59 33.5**	**+4.1**
	comp=Z,34nm,1.2s,comp=Z,3µm								
CTA	**Charters Tower**	**24.70**	**135**	P		**P**	**07 59 59.9**	**0.0**
CTA	**Charters Tower**	**24.70**	**135**	P		**P**	**07 59 59.9**	**0.0**
	comp=Z,1.2nm,0.3s,baz=311,slow=10,SNR=5.1								
CTAO	**Charters Tower**	**24.70**	**135**	*e*P		**P**	**07 59 56.7**	**-3.2**
CTAO	**Charters Tower**	**24.70**	**135**	*e*P		**P**	**07 59 56.7**	**-3.2**
PPI	**Padang Panjang**	**27.50**	**275**	P		**P**	**08 00 26.0**	**+0.8**
QIZ	**Qiongzhong**	**28.19**	**322**	P		**P**	**08 00 31.5**	**+0.1**
QIZ				S		**S**	**08 05 17.3**	**+2.7**
QIZ				pmax		pmax			
	comp=Z,3.0nm,0.8s								
QIZ				LR		LR			
	comp=Z,82nm,18.0s								
STKA	**Stephens Creek**	**31.44**	**157**	*e*P		**P**	**08 00 59.5**	**-0.5**
	comp=Z,3.1nm,1.4s								
STKA	**Stephens Creek**	**31.44**	**157**	P		**P**	**08 00 59.0**	**-1.1**
	comp=Z,3.5nm,0.5s,baz=325,slow=10,SNR=6.7								
STKA				LR		LR	08 14 59.4		
	comp=Z,160nm,20.4s,baz=202,slow=39								
CMAR	**Chiang Mai Arr**	**35.57**	**308**	P		**P**	**08 01 35.8**	**-0.3**
CMAR				PcP		**PcP**	**08 04 05.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**35.57**	**308**	P		**P**	**08 01 35.8**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=121,slow=8.6,SNR=3.4								
CMAR				PcP		**PcP**	**08 04 05.5**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=108,slow=2.9,SNR=4.4								
GYA	**Guiyang**	**35.78**	**326**	P		**P**	**08 01 39.5**	**+1.6**
GYA				pP		**pP**	**08 01 49.8**	**+1.1**
GYA				S		**S**	**08 07 16.0**	**+3.1**
GYA				ScP		**ScP**	**08 07 49.3**	**+0.6**
GYA				pmax		pmax			
	comp=Z,10.0nm,0.8s								
GYA				pmax		pmax			
	comp=Z,90nm,4.6s								
GYA				LR		LR			
	comp=N,450nm,17.6s								
GYA				LR		LR			
	comp=E,380nm,18.0s								
GYA				LR		LR			
	comp=Z,460nm,17.5s								
KMI	**Kunming**	**37.11**	**321**	P		**P**	**08 01 52.3**	**+2.8**
KMI				pmax		pmax			
	comp=Z,11nm,0.9s								
CAN	**Canberra**	**37.62**	**151**	*e*P		**P**	**08 01 54.8**	**+1.3**
CAN				pmax		pmax			
	comp=Z,16nm,1.0s								
CAN	**Canberra**	**37.62**	**151**	*e*P		**P**	**08 01 54.8**	**+1.3**
	comp=Z,16nm,1.0s								
KSAR	**Wonju Array Be**	**40.33**	**0**	P		**P**	**08 02 14.9**	**-1.1**
KSRS	**Korea Array**	**40.34**	**0**	P		**P**	**08 02 14.9**	**-1.2**
	comp=Z,2.2nm,1.0s,baz=179,slow=10.0,SNR=4.5								
KSRS				LR		LR	08 17 12.4		
	comp=Z,44nm,20.8s,baz=15,slow=34								
MJAR	**Matsushiro Arr**	**40.62**	**13**	P		**P**	**08 02 17.8**	**-0.6**
MJAR	**Matsushiro Arr**	**40.62**	**13**	P		**P**	**08 02 17.8**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=190,slow=9.6,SNR=3.7								
MJAR				LR		LR	08 16 53.1		
	comp=Z,91nm,18.4s,baz=175,slow=33								
CD2	**Chengdu**	**40.84**	**328**	*e*P		**P**	**08 02 20.8**	**+0.4**
CD2				pP		**pP**	**08 02 31.3**	**0.0**
CD2				sP		**sP**	**08 02 35.5**	**-0.4**
CD2				PP		**PnPn**	**08 03 59.5**	**0.0**
CD2				S		**S**	**08 08 30.5**	**+1.3**
CD2				sS		**sS**	**08 08 47.3**	**0.0**
CD2				pmax		pmax			
	comp=Z,10.0nm,0.8s								
CD2				pmax		pmax			
	comp=Z,30nm,7.2s								
CD2				LR		LR			
	comp=N,110nm,19.0s								
CD2				LR		LR			
	comp=Z,100nm,15.5s								
LZH	**Lanzhou**	**44.94**	**332**	*e*P		**P**	**08 02 55.0**	**+1.3**
LZH				pP		**pP**	**08 03 05.8**	**+1.1**
LZH				sP		**sP**	**08 03 09.5**	**+0.3**
LZH				PP		**PP**	**08 04 40.5**	**+1.3**
LZH				*e*S		**S**	**08 09 25.0**	**-4.5**
LZH				sS		**sS**	**08 09 47.0**	**-0.7**
LZH				pmax		pmax			
	comp=Z,21nm,1.0s								
LZH				pmax		pmax			
	comp=Z,130nm,4.6s								
LZH				LR		LR			
	comp=N,410nm,17.2s								
LZH				LR		LR			
	comp=E,270nm,16.8s								
LZH				LR		LR			
	comp=Z,530nm,18.3s								
HHC	**Hu-ho-hao-te**	**46.18**	**343**	*e*P		**P**	**08 03 03.5**	**+0.2**
HHC				pP		**pP**	**08 03 13.3**	**-1.1**
HHC				sP		**sP**	**08 03 17.3**	**-1.6**
HHC				PP		**PP**	**08 04 52.0**	**-0.2**
HHC				PcS		**PcS**	**08 08 32.0**	**-1.3**
HHC				S		**S**	**08 09 47.5**	**+0.4**
HHC				sS		**sS**	**08 10 03.8**	**-1.5**
HHC				ScS		**ScS**	**08 12 53.5**	**-2.5**
HHC				pmax		pmax			
	comp=Z,35nm,1.1s								
HHC				pmax		pmax			
	comp=Z,220nm,5.1s								
HHC				LR		LR			
	comp=N,360nm,16.7s								
HHC				LR		LR			
	comp=E,920nm,15.3s								
HHC				LR		LR			
	comp=Z,250nm,15.5s								
CN2	**Changchun**	**46.73**	**358**	*e*P		P	08 03 10.8	+3.4
CN2				pmax		pmax			
	comp=Z,10.0nm,0.6s								
USRK	**Ussuriysk Arra**	**47.23**	**4**	P		**P**	**08 03 11.7**	**+0.4**
	comp=Z,1.8nm,0.6s,baz=183,slow=7.4,SNR=7.1								
LSA	**Lhasa**	**47.87**	**316**	P		**P**	**08 03 17.3**	**+0.1**
LSA	**Lhasa**	**47.87**	**316**	*e*P		**P**	**08 03 18.3**	**+1.1**
LSA				pmax		pmax			
	comp=Z,11nm,0.6s								
LSA	**Lhasa**	**47.87**	**316**	*e*P		**P**	**08 03 18.2**	**+1.1**
	comp=Z,11nm,0.6s								
ODAN	**Odare**	**49.06**	**310**	*e*P		**P**	**08 03 27.3**	**+1.2**
TAPN	**Taplejung**	**49.07**	**311**	*e*P		**P**	**08 03 26.3**	**+0.1**
	comp=Z,6.3nm,0.4s								
GTA	**Gaotai**	**49.51**	**331**	*e*P		**P**	**08 03 29.8**	**+0.6**
GTA				pP		**pP**	**08 03 39.8**	**-0.5**
GTA				sP		**sP**	**08 03 43.5**	**-1.3**
GTA				S		**S**	**08 10 36.0**	**+1.6**
GTA				sS		**sS**	**08 10 52.3**	**-0.5**
GTA				pmax		pmax			
	comp=Z,5.0nm,1.0s								
GTA				pmax		pmax			
	comp=Z,90nm,5.9s								
GTA				LR		LR			
	comp=N,81nm,20.0s								
GTA				LR		LR			
	comp=E,180nm,20.0s								
GTA				LR		LR			
	comp=Z,110nm,17.6s								
RAMN	**Ramite**	**49.71**	**310**	*e*P		**P**	**08 03 31.7**	**+0.6**
	comp=Z,35nm,0.7s								
GUN	**Gumba**	**50.75**	**310**	*e*P		**P**	**08 03 39.1**	**+0.1**
	comp=Z,24nm,0.6s								
PKI	**Pulchoki**	**50.94**	**310**	*e*P		**P**	**08 03 40.7**	**+0.3**
KOLN	**Koldanda**	**52.43**	**309**	*e*P		**P**	**08 03 51.6**	**+0.1**
	comp=Z,30nm,0.7s								
DANN	**Dangsing**	**52.59**	**310**	*e*P		**P**	**08 03 52.5**	**-0.2**
	comp=Z,34nm,0.7s								
SONM	**Songino Array**	**54.07**	**342**	P		**P**	**08 04 03.1**	**0.0**
SONM	**Songino Array**	**54.07**	**342**	P		**P**	**08 04 03.1**	**0.0**
	comp=Z,2.5nm,0.9s,baz=163,slow=9.1,SNR=14								
RPZ	**Rata Peaks**	**55.66**	**143**	LR		LR	08 29 13.5		
	comp=Z,144nm,18.0s,baz=25,slow=37								
WMQ	**Urumqi**	**58.94**	**327**	*e*P		**P**	**08 04 38.5**	**+0.8**
WMQ				pP		**pP**	**08 04 48.5**	**-0.5**
WMQ				pmax		pmax			
	comp=Z,13nm,1.0s								
WMQ				pmax		pmax			
	comp=Z,120nm,4.3s								
PETK	**Petropavlovsk-**	**61.38**	**20**	P		**P**	**08 04 53.3**	**-0.9**
PETK	**Petropavlovsk-**	**61.38**	**20**	P		**P**	**08 04 53.3**	**-0.9**
PETK	**Petropavlovsk-**	**61.38**	**20**	P		**P**	**08 04 53.3**	**-0.9**
	comp=Z,4.5nm,0.8s,baz=222,slow=4.0,SNR=3.8								
KSH	**Kashi**	**63.67**	**317**	*e*P		**P**	**08 05 10.0**	**+0.1**
KSH				*e*pP		**pP**	**08 05 20.5**	**-0.8**
KSH				*e*sP		**sP**	**08 05 24.3**	**-1.4**
KSH				*e*PcP		**PcP**	**08 05 46.5**	**+0.6**
KSH				*e*PP		**PP**	**08 07 31.5**	**+1.2**
KSH				*e*S		**S**	**08 13 37.0**	**-4.7**
KSH				pmax		pmax			
	comp=Z,7.0nm,0.8s								
KSH				pmax		pmax			
	comp=Z,190nm,4.7s								
KSH				LR		LR			
	comp=N,400nm,4.9s								
KSH				LR		LR			
	comp=E,230nm,5.5s								
KSH				LR		LR			
	comp=Z,240nm,4.5s								
MK31	**Makanchi Array**	**63.77**	**327**	*e*P		**P**	**08 05 09.7**	**-0.6**
MK31	**Makanchi Array**	**63.77**	**327**	*e*P		**P**	**08 05 09.7**	**-0.6**
MKAR	**Makanchi Array**	**63.77**	**327**	P		**P**	**08 05 10.0**	**-0.3**
MKAR	**Makanchi Array**	**63.77**	**327**	P		**P**	**08 05 10.0**	**-0.3**
MKAR	**Makanchi Array**	**63.77**	**327**	P		**P**	**08 05 10.0**	**-0.3**
	comp=Z,4.4nm,0.7s,baz=128,slow=7.8,SNR=51								
YAK	**Yakutsk**	**64.96**	**1**	*e*P		**P**	**08 05 17.3**	**-0.4**
YAK				pmax		pmax			
	comp=E,5.0nm,0.9s								
YAK				pmax		pmax			
	comp=Z,18nm,0.9s								
YAK				pmax		pmax			
	comp=N,3.0nm,0.9s								
TKM2	**Tokmak 2**	**65.58**	**320**	*e*P		**P**	**08 05 22.1**	**-0.3**
TKM2				pmax		pmax			
	comp=Z,5.0nm,0.8s								
TKM2	**Tokmak 2**	**65.58**	**320**	*e*P		**P**	**08 05 22.1**	**-0.3**
	comp=Z,4.5nm,0.8s								
AAK	**Ala-Archa**	**66.15**	**320**	*i*P		**P**	**08 05 26.0**	**0.0**
AAK				pmax		pmax			
	comp=Z,11nm,1.7s								
EKS2	**Erkin-Say**	**66.63**	**319**	*e*P		**P**	**08 05 29.2**	**+0.1**
EKS2				pmax		pmax			
	comp=Z,4.0nm,0.8s								
EKS2	**Erkin-Say**	**66.63**	**319**	*e*P		**P**	**08 05 29.1**	**+0.1**
	comp=Z,3.9nm,0.8s								
ZAA0	**Zalesovo Array**	**67.13**	**334**	*e*P		**P**	**08 05 30.5**	**-1.2**
ZALV	**Zalesovo Beam**	**67.13**	**334**	P		**P**	**08 05 30.7**	**-1.1**
ZALV	**Zalesovo Beam**	**67.13**	**334**	P		**P**	**08 05 30.6**	**-1.1**
ZALV	**Zalesovo Beam**	**67.13**	**334**	P		**P**	**08 05 30.6**	**-1.1**
	comp=Z,3.9nm,0.9s,baz=112,slow=6.6,SNR=9.4								
KURK	**Kurchatov**	**68.06**	**329**	*c i*P		**P**	**08 05 36.7**	**-1.0**
KURK				pmax		pmax			
	comp=Z,19nm,1.2s								
KURK	**Kurchatov**	**68.06**	**329**	*e*P		**P**	**08 05 37.0**	**-0.7**
	comp=Z,12nm,0.9s								
BRVK	**Borovoye**	**73.67**	**328**	*c i*P		**P**	**08 06 10.9**	**-0.9**
BRVK				pmax		pmax			
	comp=Z,4.0nm,1.2s								
TIXI	**Tiksi**	**74.61**	**0**	*e*P		**P**	**08 06 16.7**	**-0.2**
TIXI				pmax		pmax			
	comp=Z,3.0nm,0.6s								
BILL	**Bilibino**	**75.86**	**14**	*e*P		**P**	**08 06 23.8**	**-0.4**
BILL				pmax		pmax			
	comp=Z,4.0nm,1.6s								
VNDA	**Vanda**	**76.57**	**173**	P		**P**	**08 06 27.6**	**-0.5**
VNDA	**Vanda**	**76.57**	**173**	P		**P**	**08 06 27.6**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=327,slow=4.0,SNR=7.1								
VNDA				LR		LR	08 37 09.3		
	comp=Z,68nm,18.5s,baz=313,slow=33								
ABKAR	**Akbulak array**	**78.10**	**322**	*e*P		**P**	**08 06 36.2**	**-0.9**
ARU	**Arti**	**81.24**	**328**	*d i*P		**P**	**08 06 55.0**	**+0.9**
ARU							08 09 56.1		
ARU				S		**S**	**08 17 05.3**	**+3.7**
ARU				pmax		pmax			
	comp=Z,9.0nm,1.7s								
ILAR	**Eielson Array**	**90.78**	**25**	P		**P**	**08 07 39.9**	**-1.1**
ILAR	**Eielson Array**	**90.78**	**25**	P		**P**	**08 07 39.9**	**-1.1**
	comp=Z,0.6nm,0.7s,baz=259,slow=4.3,SNR=8.4								
APA	**Apatity**	**94.52**	**337**	*e*P		**P**	**08 07 58.0**	**-0.2**
APA				MLR		MLR			
	comp=Z,200nm,24.0s								
ARCES	**ARCESS Array B**	**97.17**	**340**	P		**P**	**08 08 08.3**	**-2.0**
ARCES	**ARCESS Array B**	**97.17**	**340**	P		**P**	**08 08 08.3**	**-2.0**
	comp=Z,2.9nm,0.9s,baz=92,slow=2.7,SNR=3.5								
TXAR	**Lajitas Array**	**124.72**	**56**	PKP		**PKPdf**	**08 13 38.9**	**+0.3**
TXAR	**Lajitas Array**	**124.72**	**56**	PKP		**PKPdf**	**08 13 38.9**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=223,slow=3.6,SNR=7.2								
TORD	**Torodi Ar. Bea**	**125.81**	**284**	PKP		**PKPdf**	**08 13 40.6**	**-0.3**
TORD	**Torodi Ar. Bea**	**125.81**	**284**	PKP		**PKPdf**	**08 13 40.6**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=80,slow=1.7,SNR=9.4								
CPUP	**Villa Florida**	**150.33**	**171**	PKPbc		**PKPbc**	**08 14 30.0**	**-0.2**
CPUP	**Villa Florida**	**150.33**	**171**	PKPbc		**PKPbc**	**08 14 30.0**	**-0.2**
	baz=232,slow=1.1								

*ISK **25** 07:55:11.4,38.91N×27.01E,h5km,MD2.7*
*ISCJB **25** 07:55:12.1±0.6,38.93N±0.02×27.01E±0.04,h1km±6km, Error ellipse: s-maj=4.8km s-min=3.9km az=171.5*
*CSEM **25** 07:55:12.7±0.2,38.92N×27.01E,h10km,MD2.7, Error ellipse: s-maj=3.9km s-min=2.9km az=90.0*
*DDA **25** 07:55:12.3,38.95N×27.04E,h7km,MD2.8*

ISC 25 07:55:12.5±1.1,38.92N±0.02×27.02E±0.03,h8km±10km, n37,σ055/54,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BLCB	**Balcova**	**0.54**	**178**	*e*PG	**Pg**	**07 55 22.5**	**-0.3**
BLCB				*e*SG	**Sg**	**07 55 29.3**	**-0.6**
BLCB	**Balcova**	**0.54**	**178**	*e*Pg	**Pg**	**07 55 22.5**	**-0.3**
BLCB				*e*Sg	**Sg**	**07 55 29.3**	**-0.6**
AKHS	**Akhisar**	**0.62**	**94**	*i*P	**Pg**	**07 55 24.3**	**-0.2**
AKHS				*i*S	**Sb**	**07 55 33.8**	**-0.8**
AKHS	**Akhisar**	**0.62**	**94**	*i*P	**Pg**	**07 55 24.3**	**-0.2**
AKHS				*i*S	**Sb**	**07 55 33.8**	**-0.8**
URLA	**Izmir**	**0.65**	**211**	*i*P	**Pg**	**07 55 25.0**	**0.0**
URLA				*i*S	**Sb**	**07 55 35.3**	**-0.1**
BALY	**Balya**	**0.94**	**30**	*i*P	**Pg**	**07 55 30.7**	**+0.1**
BALY				*i*S	**Sn**	**07 55 45.8**	**0.0**
BALY	**Balya**	**0.94**	**30**	*i*P	**Pg**	**07 55 30.7**	**+0.1**
BALY				*i*S	**Sn**	**07 55 45.8**	**0.0**
BALB	**Balikesir**	**0.98**	**43**	*e*PG	**Pg**	**07 55 31.1**	**-0.2**
BALB				*e*SG	**Sb**	**07 55 45.0**	**+0.2**
BALB	**Balikesir**	**0.98**	**43**	*e*Pg	**Pg**	**07 55 31.1**	**-0.2**
BALB				*e*Sg	**Sb**	**07 55 45.0**	**+0.2**
EZN	**Ezine**	**1.05**	**330**	*e*PG	**Pg**	**07 55 32.1**	**-0.5**
EZN				*e*SG	**Sb**	**07 55 47.1**	**+0.3**
EZN	**Ezine**	**1.05**	**330**	*e*Pg	**Pg**	**07 55 32.1**	**-0.5**
EZN				*e*Sg	**Sb**	**07 55 47.1**	**+0.3**
BOZC	**Bozcaada**	**1.18**	**321**	*i*P	**Pb**	**07 55 35.2**	**0.0**
BOZC				*i*S	**Sn**	**07 55 51.4**	**-0.3**
GONE	**Gonen-Balikesi**	**1.24**	**25**	*e*PN	**Pb**	**07 55 35.4**	**-0.7**
GONE	**Gonen-Balikesi**	**1.24**	**25**	*e*Pn	**Pb**	**07 55 35.4**	**-0.7**
DEMI	**Demirci**	**1.33**	**84**	*e*P	**Pn**	**07 55 37.4**	**-0.1**
DEMI				*i*S	**Sn**	**07 55 55.6**	**+0.2**
DEMI	**Demirci**	**1.33**	**84**	*e*P	**Pn**	**07 55 37.4**	**-0.1**
DEMI				*i*S	**Sn**	**07 55 55.6**	**+0.2**
KULA	**Kula-Manisa**	**1.35**	**107**	*e*PN	**Pn**	**07 55 37.5**	**-0.2**
KULA	**Kula-Manisa**	**1.35**	**107**	*e*Pn	**Pn**	**07 55 37.5**	**-0.2**
AYDN	**Tasoluk**	**1.43**	**151**	*i*P	**Pg**	**07 55 39.9**	**0.0**
AYDN				*i*S	**Sg**	**07 56 00.6**	**+2.1**
AYDN	**Tasoluk**	**1.43**	**151**	*i*P	**Pg**	**07 55 39.9**	**0.0**
AYDN				*i*S	**Sg**	**07 56 00.6**	**+2.1**
LPK	**Lapseki**	**1.46**	**352**	*e*PN	**Pn**	**07 55 39.2**	**0.0**
LPK	**Lapseki**	**1.46**	**352**	*e*Pn	**Pn**	**07 55 39.2**	**0.0**
KRBG	**Karabiga-Canak**	**1.48**	**8**	*e*PN	**Pn**	**07 55 39.5**	**0.0**
KRBG	**Karabiga-Canak**	**1.48**	**8**	*e*Pn	**Pn**	**07 55 39.5**	**0.0**
GELI	**Tayfur-Gelibol**	**1.53**	**344**	*e*PN	**Pn**	**07 55 40.1**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.53**	**344**	*e*Pn	**Pn**	**07 55 40.1**	**-0.1**
KCTX	**Karacabey (Bur**	**1.69**	**37**	*e*PN	**Pn**	**07 55 42.7**	**+0.3**
KCTX	**Karacabey (Bur**	**1.69**	**37**	*e*Pn	**Pn**	**07 55 42.7**	**+0.3**
RKY	**Sarkoy-Tekirda**	**1.77**	**4**	*e*PN	**Pn**	**07 55 43.5**	**0.0**
RKY	**Sarkoy-Tekirda**	**1.77**	**4**	*e*Pn	**Pn**	**07 55 43.5**	**0.0**
ERIK	**Erikli-Kesan**	**1.79**	**348**	*e*PN	**Pn**	**07 55 44.0**	**+0.3**
ERIK	**Erikli-Kesan**	**1.79**	**348**	*e*Pn	**Pn**	**07 55 44.0**	**+0.3**
MFT	**Murefte**	**1.87**	**6**	*e*PN	**Pn**	**07 55 45.8**	**+0.9**
MFT	**Murefte**	**1.87**	**6**	*e*Pn	**Pn**	**07 55 45.8**	**+0.9**
TVSB	**Tavsanli**	**1.97**	**74**	*e*PN	**Pn**	**07 55 46.4**	**+0.1**
TVSB	**Tavsanli**	**1.97**	**74**	*e*Pn	**Pn**	**07 55 46.4**	**+0.1**

MEX 25 07:59:15.1±0.4,15.30N×92.82W,h107km±7km,MD4.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.56**	**317**	*i*P	Pn	07 59 30.7	-1.3
PCIG				*i*S	Sn	07 59 43.0	-1.7
THIG		**0.66**	**126**	*i*P	Pn	07 59 31.4	-1.4
THIG				*i*S	Sn	07 59 44.6	-1.5
TGIG		**1.50**	**349**	*i*P	Pn	07 59 40.8	-1.1
TGIG				*i*S	Sn	08 00 00.2	-1.9

*ISCJB **25** 08:24:21.1±0.3,48.63N±0.02×123.07W±0.02,h15km±5km, Error ellipse: s-maj=3.3km s-min=2.5km az=30.0*
*PNSN **25** 08:24:22.0,48.62N×123.07W,h13km,MD2.8, Fault plane solution: NP1:φs220.00000°,δ85.00000°, NP2: φs130.00000°,δ90.00000°, Principal axes: T Plg4.0000°, Azm175.0000°; P Plg4.0000°, Azm85.0000°;*
*PGC **25** 08:24:21.8±0.2,48.61N×123.07W,h18km,ML2.6/13*
PGC 25km east of Sidney, Bc Vancouver Island Region Felt (I) at Victoria.
*NEIC **25** 08:24:22.0,48.62N×123.07W,h13km,MD2.8(SEA), ML2.6(PGC),After SEA.*

ISC 25 08:24:20.8±0.9,48.62N±0.02×123.07W±0.02,h18km±2km, n47,σ057/70,4C-32D,Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNB	**Saturna Island**	**0.17**	**337**	⇑P	**Pg**	**08 24 26.1**	**+0.7**
SNB	**Saturna Island**	**0.17**	**337**	⇑P	**Pg**	**08 24 26.1**	**+0.7**
SNB				⇓S	**Sg**	**08 24 29.2**	**+0.8**
MCW	**Mount Constitu**	**0.17**	**69**	⇓P	**Pg**	**08 24 25.5**	**+0.2**
PGC	**Sidney**	**0.25**	**277**	*e*Pg	**Pb**	**08 24 27.1**	**+0.4**
PGC				*e*Sg	**Sg**	**08 24 31.1**	**+0.5**
PGC	**Sidney**	**0.25**	**277**	⇓P	**Pb**	**08 24 27.1**	**+0.4**
PGC				⇓S	**Sg**	**08 24 31.0**	**+0.5**
VGZ	**Gonzales**	**0.27**	**219**	⇓P	**Pb**	**08 24 27.1**	**+0.2**
VGZ	**Gonzales**	**0.27**	**219**	⇓P	**Pb**	**08 24 27.1**	**+0.2**
VGZ				⇑S	**Sg**	**08 24

RCY				eS		Sg	08 26 41.6	-0.4	
BRBR	**Barbar**	**0.29**	**74**	⇑eP		**Pg**	**08 26 39.6**	**+0.1**	
BRBR				eS		Sg	08 26 42.6	-0.8	
BRBR				eS		Sg	08 26 43.9	+0.5	
BRBR					AML	AML	08 26 45.4		
	comp=N,121nm,0.2s								
BRBR					AML	AML	08 26 45.9		
	comp=E,92nm,0.4s								
BRBR	**Barbar**	**0.29**	**74**	⇑eP		**Pg**	**08 26 39.6**	**+0.1**	
	SNR=104								
BRBR				eS		Sg	08 26 43.9	+0.5	
	comp=E,92nm,0.4s,SNR=106								
BHL	**Bhannes**	**0.57**	**3**	eP		**Pg**	**08 26 45.0**	**+0.3**	
BHL	**Bhannes**	**0.57**	**3**	eP		**Pg**	**08 26 45.0**	**+0.3**	
QASN	**Qassioun**	**0.59**	**70**	eP		**Pg**	**08 26 45.0**	**+0.1**	
QASN				eS		Sg	08 26 52.8	+0.1	
QASN					AML	AML	08 26 55.9		
QASN					AML	AML	08 26 57.5		
	comp=N,122nm,0.5s								
QASN	**Qassioun**	**0.59**	**70**	eP		**Pg**	**08 26 45.0**	**+0.1**	
	SNR=72								
QASN				eS		Sg	08 26 52.8	+0.1	
	comp=N,122nm,0.5s,SNR=94								
TOTH	**TOTAH**	**0.68**	**87**	eP		**Pg**	**08 26 47.0**	**+0.3**	
TOTH				eS		Sb	08 26 56.5	-0.5	
TOTH					AML	AML	08 27 00.5		
	comp=E,35nm,0.4s								
TOTH					AML	AML	08 27 02.4		
	comp=N,22nm,0.3s								
TOTH	**TOTAH**	**0.68**	**87**	eP		**Pg**	**08 26 47.0**	**+0.3**	
	SNR=72								
TOTH				eS		Sb	08 26 56.5	-0.5	
	comp=N,22nm,0.3s,SNR=93								
TCHB	**Talchebab**	**0.72**	**156**	eP		**Pg**	**08 26 47.4**	**-0.1**	
TCHB				eS		Sb	08 26 58.0	-0.2	
TCHB					AML	AML	08 27 00.8		
	comp=E,69nm,0.3s								
TCHB					AML	AML	08 27 00.9		
	comp=N,61nm,0.6s								
TCHB	**Talchebab**	**0.72**	**156**	eP		**Pg**	**08 26 47.4**	**-0.1**	
	SNR=72								
TCHB				eS		Sb	08 26 58.0	-0.2	
	comp=N,61nm,0.6s,SNR=93								
HWQ	**Hawqa**	**0.98**	**16**	eP		**Pg**	**08 26 52.3**	**-0.2**	
HWQ				eS		Sg	08 27 05.2	-0.1	
HWQ	**Hawqa**	**0.98**	**16**	eP		**Pg**	**08 26 52.3**	**-0.2**	
HWQ				eS		Sg	08 27 05.2	-0.1	
ZALF	**Zalf**	**1.50**	**105**	eP		**Pn**	**08 27 00.7**	**+0.2**	
ZALF				eS		Sn	08 27 20.1	0.0	
ZALF					AML	AML	08 27 22.7		
	comp=E,24nm,0.4s								
ZALF					AML	AML	08 27 23.0		
	comp=N,20nm,0.7s								
ZALF	**Zalf**	**1.50**	**105**	eP		**Pn**	**08 27 00.7**	**+0.2**	
	SNR=61								
ZALF				eS		Sn	08 27 20.1	0.0	
	comp=N,20nm,0.7s,SNR=62								

DJA 25 09:01:17.9±1.4,1°S±7°×12°5E±°,h116km±20km,M3.9/5,MLv3.9/5,Southern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUWI	**Luwuk**	**1.74**	**277**	P	Pn	09 01 47.4	-0.6
LUWI				S	Sn	09 02 12.5	+1.6
KMSI	**Cibinong**	**1.90**	**344**	P	Pn	09 01 48.1	-1.8
GTOI	**Gorontalo**	**2.40**	**322**	P	Pn	09 01 58.0	+1.7
GTOI				S	Sn	09 02 28.4	+2.7
LBMI	**Labuha**	**3.06**	**78**	P	Pn	09 02 04.9	0.0
LBMI				S	Sn	09 02 39.7	-1.5
MRSI	**Marisa**	**3.09**	**304**	P	Pn	09 02 06.4	+1.2
MRSI				S	Sn	09 02 41.2	-0.5

IDC ***25*** *09:11:45.8±2.1, 10°.05N×126°.29E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/24, mbtmp3.6/4, MS3.4/2, Ms1 3.4/2, ms1mx2.5/39, Error ellipse: s-maj=159.4km s-min=21.5km az=74.0*

ISCJB ***25*** *09:11:50.6±1.8, 10°.00N±0°.06×126°.5E±0°.1, h51km±17km, mb3.5/4, MS4.0/1, Error ellipse: s-maj=20.2km s-min=9.0km az=166.5*

MAN ***25*** *09:11:51, 9°.90N×126°.32E, h72km, mb4.4, ML3.2, MS3.1*

ISC 25 09:11:51.7±2.9,10°.01N±0°.07×126°.5E±0°.2,h45km±27km,n15,σ1§53/17,mb3.5/4,2C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUTP	**Butuan**	**1.35**	**221**	eP	**Pn**	**09 12 13.4**	**-0.8**
BUTP				eS	**Sn**	**09 12 28.9**	**-2.0**
MSLP	**Maasin**	**1.64**	**275**	eP	**Pn**	**09 12 16.4**	**-1.6**
MSLP				eS	**Sn**	**09 12 36.2**	**-1.7**
PLP	**Palo**	**1.90**	**308**	⇑eP	**Pn**	**09 12 21.5**	**-0.2**
PLP				*i* S	**Sn**	**09 12 45.2**	**+0.9**
CGP	**Cagayan de Oro**	**2.37**	**230**	⇑eP	**Pn**	**09 12 28.3**	**+0.3**
CGP				eS	**Sn**	**09 12 56.7**	**+0.8**
LLP	**Lapu-Lapu**	**2.53**	**277**	eP	Pn	09 12 33.8	+3.5
LLP				eS	**Sn**	**09 13 03.5**	**+3.7**
BUKP	**Musuan**	**2.55**	**214**	eP	**Pn**	**09 12 32.0**	**+1.4**
TBP	**Tagbilaran**	**2.63**	**263**	eP	**Pn**	**09 12 31.6**	**-0.1**
DAV	**Davao City (W)**	**3.06**	**198**	Lg	Lg	09 13 21.3	
	34nm,0.3s,baz=270,slow=20,SNR=4.0						
DAV				LR	LR	09 14 13.0	
	comp=Z,188nm,18.2s,baz=233,slow=48						
RCP	**Roxas**	**4.01**	**293**	eP	**Pn**	**09 12 51.4**	**+0.8**
FITZ	**Fitzroy Crossi**	**27.94**	**182**	P	**P**	**09 17 38.9**	**+0.9**
	1.0nm,0.7s,baz=350,slow=6.2,SNR=3.3						
ASAR	**Alice Springs**	**34.24**	**168**	P	**P**	**09 18 34.0**	**+0.6**
	0.1nm,0.3s,baz=348,slow=7.1,SNR=5.0						
SONM	**Songino Array**	**41.35**	**339**	P	**P**	**09 19 33.1**	**-0.2**
	0.7nm,0.8s,baz=161,slow=9.2,SNR=2.9						
MKAR	**Makanchi Array**	**52.38**	**323**	P	**P**	**09 20 58.4**	**-1.1**
	1.0nm,0.7s,baz=123,slow=8.1,SNR=10						
HFS	**Hagfors**	**92.39**	**333**	LR	LR	10 11 38.8	
	comp=Z,52nm,20.5s,baz=303,slow=39						
TORD	**Torodi Ar. Bea**	**120.59**	**292**	PKP	**PKPdf**	**09 30 39.0**	**-0.6**
	0.4nm,0.9s,baz=79,slow=1.9,SNR=2.7						

BJI ***25*** *09:15:39.7, 1°.75S×98°.83E, h35km, mB4.9/33, mb5.2/45, Ms4.5/39, Ms7 4.4/38*

IDC ***25*** *09:15:40.4±0.5, 1°.20S×98°.73E, h0km, mb4.6/27, mb1 4.6/29, mb1mx4.6/32, mbtmp4.6/29, ML4.5/2, MS4.0/14, Ms1 3.9/14, ms1mx3.6/32, Error ellipse: s-maj=15.5km s-min=11.1km az=65.0*

ISCJB ***25*** *09:15:42.2±1.0, 1°.25S±0°.03×98°.66E±0°.03, h25km±6km, mb4.9/81, MS4.2/29, Error ellipse: s-maj=6.0km s-min=4.8km az=40.3*

MOS ***25*** *09:15:43.5±1.0, 1°.20S×98°.72E, h33km, mb5.2/29, Error ellipse: s-maj=13.3km s-min=5.6km az=106.3*

DJA ***25*** *09:15:43.2±1.5, 1°S±4°×9°9E±°, h10km, M4.8/20, mB5.2/17, mb5.0/20, MLv5.2/14, Mw(mB)4.6/17*

NEIC ***25*** *09:15:46.5±1.1, 1°.20S×98°.79E, h44km±8km, mb5.0/18, Error ellipse: s-maj=9.2km s-min=4.7km az=51.0*

NEIC Felt [III] in the Kepulauan Mentawai.

ISC 25 09:15:45.2±0.4,1°.27S±0°.04×98°.68E±0°.05,h33km±1km,h33km:pP-P,n250,σ1§43/305,mb5.0/80,MS4.2/29,11C-6D,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPI	**Padang Panjang**	**1.90**	**65**	P	**Pn**	**09 16 15.1**	**-0.2**
PPI				S	**Sn**	**09 16 38.8**	**+0.7**
MNSI	**Mandailing Nat**	**2.24**	**24**	P	**Pn**	**09 16 20.0**	**0.0**
BKNI	**Bangkinang**	**2.84**	**56**	P	**Pn**	**09 16 29.5**	**+1.2**
RGRI	**Rengat**	**3.77**	**76**	P	**Pn**	**09 16 40.9**	**-0.2**
PSI	**Prapat**	**4.05**	**3**	Pn	**Pn**	**09 16 43.2**	**-1.9**
PSI				Lg	Lg	09 17 42.6	
PSI	**Prapat**	**4.05**	**3**	Pn	**Pn**	**09 16 43.2**	**-1.9**
	14nm,0.3s,baz=178,slow=9.0,SNR=40						
PSI				Pg	Pb	09 16 52.4	-3.6
	14nm,0.3s,baz=167,slow=14,SNR=23						
PSI				Lg	Lg	09 17 42.6	
	7.5nm,0.3s,baz=168,slow=19,SNR=3.0						
KSI	**Kapahiang**	**4.57**	**121**	P	**Pn**	**09 16 52.4**	**+0.2**
TSI	**Tuntungan**	**4.74**	**359**	P	**Pn**	**09 16 56.7**	**+2.3**
MNAI	**Manna**	**5.26**	**126**	P	**Pn**	**09 17 01.3**	**-0.4**
	582nm,0.7s,21μm4.7nm						
FRIM	**Kepong**	**5.36**	**33**	P	**Pn**	**09 17 02.6**	**-0.3**
KGM	**Kluang**	**5.67**	**55**	P	**Pn**	**09 17 07.7**	**+0.4**
BTDF	**Bukit Timah Da**	**5.72**	**63**	P	**Pn**	**09 17 08.0**	**0.0**
	142nm,0.7s,1μm1.1nm						

MYKOM	**Kota Tinggi**	**6.00**	**60**	P		**Pn**	**09 17 11.8**	**+0.1**	
MYKOM	**Kota Tinggi**	**6.00**	**60**	P		**Pn**	**09 17 11.7**	**0.0**	
	107nm,0.7s,1μm1.1nm								
IPM	**Ipoh**	**6.17**	**22**	ePn		**Pn**	**09 17 14.7**	**+0.5**	
IPM	**Ipoh**	**6.17**	**22**	P		**Pn**	**09 17 14.9**	**+0.8**	
IPM	**Ipoh**	**6.17**	**22**	P		**Pn**	**09 17 14.3**	**+0.2**	
	168nm,0.9s,1μm0.8nm								
LWLI	**Liwa**	**6.54**	**125**	P		**Pn**	**09 17 19.8**	**+0.5**	
	624nm,0.7s,15μm3.9nm								
KULM	**Kulim**	**6.80**	**17**	ePn		**Pn**	**09 17 22.2**	**-0.6**	
KULM	**Kulim**	**6.80**	**17**	P		**Pn**	**09 17 22.7**	**-0.2**	
KULM	**Kulim**	**6.80**	**17**	P		**Pn**	**09 17 21.8**	**-1.0**	
	126nm,0.9s,1μm0.6nm								
KASI	**Kota Agung**	**7.18**	**126**	P		**Pn**	**09 17 27.5**	**-0.5**	
	141nm,0.9s,3μm1.3nm								
PPBI	**Pangkal Pinang**	**7.51**	**97**	P		Pn	09 17 36.1	+3.6	
	25nm,0.8s,0.6nm								
BSI	**Banda Aceh**	**7.52**	**333**	P		**Pn**	**09 17 30.9**	**-1.8**	
	137nm,0.5s,2μm0.6nm								
BSI				S		Sn	09 18 48.4	-8.4	
	137nm,0.5s,2μm0.6nm								
KTGM	**Kuala Trenggan**	**7.92**	**34**	P		**Pn**	**09 17 37.4**	**-0.8**	
SKLT	**Songkhla**	**8.60**	**13**	P		**Pn**	**09 17 45.6**	**-1.9**	
	124nm,1.3s,2μm								
DBJI	**Dramaga**	**9.61**	**123**	P		Pn	09 18 09.0	+7.6	
CISI	**Cisompet, Garu**	**11.04**	**125**	P		Pn	09 18 17.7	-3.4	
	132nm,0.6s,5μm								
TGJI	**Tegal**	**11.81**	**118**	P		Pn	09 18 43.6	+12	
KSM	**Kuching**	**11.94**	**77**	Pn		**Pn**	**09 18 32.7**	**-0.6**	
	28nm,0.6s								
KSM	**Kuching**	**11.94**	**77**	P		Pn	09 18 43.8	+10	
KSM	**Kuching**	**11.94**	**77**	P		Pn	09 18 45.9	+13	
STKI	**Sintang**	**12.87**	**84**	P		**P**	**09 18 59.1**	**+2.8**	
SBUM	**Sibu**	**14.03**	**75**	P		**Pn**	**09 19 01.8**	**-0.1**	
SBUM	**Sibu**	**14.03**	**75**	P		**Pn**	**09 19 03.4**	**+1.5**	
	24nm,1.2s,440nm								
CHBT	**CHBT**	**14.39**	**14**	P		**P**	**09 19 16.2**	**+3.0**	
BTM	**Bintulu**	**15.07**	**73**	P		**Pn**	**09 19 16.8**	**+0.9**	
PBKT	**Sadao Pong**	**17.86**	**7**	P		**Pn**	**09 19 50.6**	**-0.8**	
	20nm,0.7s								
KKM	**Kota Kinabalu**	**18.95**	**67**	ePn		**P**	**09 20 03.8**	**-0.2**	
	82nm,0.6s								
KKM	**Kota Kinabalu**	**18.95**	**67**	P		**P**	**09 20 04.1**	**+0.1**	
KKM	**Kota Kinabalu**	**18.95**	**67**	P		**P**	**09 20 04.1**	**+0.1**	
	114nm,0.6s,839nm								
CMAR	**Chiang Mai Arr**	**19.60**	**1**	P		**P**	**09 20 10.2**	**-0.7**	
CMAR	**Chiang Mai Arr**	**19.60**	**1**	P		**P**	**09 20 10.2**	**-0.7**	
	1.3nm,0.3s,baz=190,slow=10,SNR=69								
SDKM	**Sandakan**	**19.72**	**69**	P		**P**	**09 20 12.4**	**+0.1**	
KDM	**Kudat**	**19.86**	**66**	P		**P**	**09 20 14.4**	**+0.7**	
CMMT	**Chiang Mai**	**19.95**	**1**	P		**P**	**09 20 15.2**	**+0.5**	
	21nm,1.2s,387nm								
CHTO	**Chiang Mai**	**19.95**	**1**	eP		**P**	**09 20 14.5**	**-0.2**	
CHTO					pmax	pmax			
	comp=Z,19nm,1.1s								
CHTO	**Chiang Mai**	**19.95**	**1**	eP		**P**	**09 20 14.5**	**-0.2**	
	comp=Z,19nm,1.1s								
CHTO	**Chiang Mai**	**19.95**	**1**	P		**P**	**09 20 14.6**	**-0.2**	
	comp=Z,23nm,1.2s,comp=Z,289nm								
TSM	**Tawau**	**19.96**	**74**	P		**P**	**09 20 14.8**	**0.0**	
MYLDM	**Lahad Datu**	**20.81**	**72**	P		**P**	**09 20 24.1**	**+0.1**	
MYLDM	**Lahad Datu**	**20.81**	**72**	P		**P**	**09 20 24.3**	**+0.2**	
	comp=Z,99nm,0.9s,comp=Z,884nm								
KAPI	**Kappang**	**21.36**	**101**	eP		**P**	**09 20 29.3**	**-0.7**	
	comp=Z,21nm,0.8s								
KAPI	**Kappang**	**21.36**	**101**	P		**P**	**09 20 31.8**	**+1.7**	
	comp=Z,30nm,1.1s								
KAPI	**Kappang**	**21.36**	**101**	P		**P**	**09 20 30.6**	**+0.5**	
	comp=Z,25nm,1.0s,baz=274,slow=12,SNR=4.7								
BKSI	**Bulukumba**	**21.78**	**101**	P		P	09 20 40.3	+5.8	
QIZ	**Qiongzhong**	**22.96**	**28**	P		**P**	**09 20 44.5**	**-2.5**	
QIZ				S		**S**	**09 24 53.5**	**-1.7**	
QIZ					pmax	pmax			
	comp=Z,20nm,1.2s								
QIZ					LR	LR			
	comp=N,270nm,18.4s								
QIZ					LR	LR			
	comp=E,250nm,14.3s								
QIZ	**Qiongzhong**	**22.96**	**28**	eP		**P**	**09 20 46.6**	**-0.4**	
KMI	**Kunming**	**26.53**	**8**	⇑P		**P**	**09 21 21.5**	**+1.2**	
KMI				pP		**pP**	**09 21 31.5**	**+1.7**	
KMI				sP		**sP**	**09 21 34.8**	**+1.0**	
KMI				PP		**PnPn**	**09 22 06.8**	**+5.5**	
KMI				S		**S**	**09 25 54.3**	**+1.6**	
KMI				sS		**sS**	**09 26 09.3**	**+0.8**	
KMI					pmax	pmax			
	comp=Z,99nm,1.1s								
KMI					pmax	pmax			
	comp=Z,140nm,3.1s								
KMI					LR	LR			
	comp=N,530nm,10.7s								
KMI					LR	LR			
	comp=E,360nm,14.8s								
KMI					LR	LR			
	comp=Z,580nm,11.2s								
SHL	**Shillong**	**27.47**	**347**	ePKP		**P**	**09 21 29.0**	**+0.3**	
GYA	**Guiyang**	**28.62**	**15**	P		**P**	**09 21 41.3**	**+2.4**	
GYA				pP		**pP**	**09 21 51.8**	**+3.3**	
GYA				PP		**PnPn**	**09 22 35.0**	**+5.2**	
GYA				S		**S**	**09 26 25.8**	**+0.3**	
GYA				sS		**sS**	**09 26 44.3**	**+3.0**	
GYA				SS		**SnSn**	**09 27 54.0**	**+6.8**	
GYA				ScS		**ScS**	**09 32 21.3**	**-0.8**	
GYA					pmax	pmax			
	comp=Z,20nm,0.8s								
GYA					pmax	pmax			
	comp=Z,110nm,4.6s								
GYA					LR	LR			
	comp=N,520nm,15.6s								
GYA					LR	LR			
	comp=E,480nm,16.0s								
GYA					LR	LR			
	comp=Z,510nm,15.5s								
ODAN	**Odare**	**30.00**	**340**	eP		**P**	**09 21 52.2**	**+0.9**	
	comp=Z,29nm,0.9s								
TAPN	**Taplejung**	**30.35**	**340**	eP		**P**	**09 21 54.7**	**+0.3**	
	comp=Z,34nm,0.9s								
RAMN	**Ramite**	**30.37**	**338**	eP		**P**	**09 21 56.3**	**+1.7**	
	comp=Z,18nm,0.6s								
FITZ	**Fitzroy Crossi**	**31.32**	**124**	P		**P**	**09 22 01.9**	**-0.8**	
FITZ	**Fitzroy Crossi**	**31.32**	**124**	P		**P**	**09 22 01.9**	**-0.8**	
	comp=Z,8.4nm,0.7s,baz=300,slow=6.2,SNR=13								
GUN	**Gumba**	**31.51**	**338**	eP		**P**	**09 22 05.8**	**+1.1**	
	comp=Z,28nm,0.5s								
LSA	**Lhasa**	**31.62**	**347**	P		**P**	**09 22 07.0**	**+1.2**	
LSA	**Lhasa**	**31.62**	**347**	eP		**P**	**09 22 05.9**	**+0.1**	
LSA					pmax	pmax			
	comp=Z,27nm,1.0s								
LSA	**Lhasa**	**31.62**	**347**	eP		**P**	**09 22 05.9**	**+0.1**	
	comp=Z,28nm,1.0s								
KKN	**Kakani**	**31.63**	**337**	eP		**P**	**09 22 06.3**	**+0.7**	
	comp=Z,33nm,0.8s								
KOLN	**Koldanda**	**32.30**	**334**	eP		**P**	**09 22 12.6**	**+1.1**	
	comp=Z,54nm,0.7s								
CD2	**Chengdu**	**32.36**	**8**	eP		**P**	**09 22 11.8**	**0.0**	
CD2				pP		**pP**	**09 22 21.8**	**+0.4**	
CD2				sP		**sP**	**09 22 26.0**	**+0.6**	
CD2				PP		**PnPn**	**09 23 20.8**	**+1.6**	
CD2				S		**S**	**09 27 23.3**	**-0.6**	
CD2				sS		**sS**	**09 27 40.3**	**+0.6**	
CD2				SS		**SnSn**	**09 29 21.0**	**+3.0**	
CD2					pmax	pmax			
	comp=Z,90nm,0.8s								
CD2					pmax	pmax			
	comp=Z,70nm,8.2s								
CD2					LR	LR			
	comp=N,390nm,19.0s								
CD2					LR	LR			
	comp=E,510nm,14.2s								
CD2					LR	LR			
	comp=Z,520nm,19.0s								
DANN	**Dangsing**	**32.74**	**335**	eP		**P**	**09 22 16.3**	**+0.8**	
	comp=Z,50nm,1.0s								
ENH	**Enshi**	**33.01**	**17**	eP		**P**	**09 22 16.2**	**-1.3**	
	comp=Z,25nm,0.6s								
XAN	**Xi'an**	**36.41**	**14**	P		**P**	**09 22 44.8**	**-2.1**	
XAN				pP		**pP**	**09 22 54.3**	**-2.3**	
XAN				sP		**sP**	**09 22 59.0**	**-1.6**	
XAN				S		**S**	**09 28 20.5**	**-5.9**	
XAN					pmax	pmax			
	comp=Z,15nm,0.7s								
XAN					pmax	pmax			
	comp=Z,21nm,8.7s								
XAN					LR	LR			
	comp=N,350nm,17.3s								
XAN					LR	LR			
	comp=E,50nm,18.4s								
XAN					LR	LR			
	comp=Z,180nm,18.4s								
LZH	**Lanzhou**	**37.47**	**7**	⇑P		**P**	**09 22 56.0**	**0.0**	
LZH				pP		**pP**	**09 23 04.0**	**-1.7**	
LZH				sP		**sP**	**09 23 07.8**	**-1.9**	
LZH				PP		**PnPn**	**09 24 24.5**	**+1.7**	
LZH				eS		**S**	**09 28 43.0**	**+0.3**	
LZH				sS		**ScP**	**09 29 05.0**	**+5.9**	
LZH				pmax	pmax				
	comp=Z,73nm,1.0s								
LZH				pmax	pmax				
	comp=Z,270nm,4.0s								
LZH				LR	LR				
	comp=N,540nm,16.3s								
LZH				LR	LR				
	comp=E,330nm,17.0s								
LZH				LR	LR				
	comp=Z,850nm,19.6s								
NJ2	**Nanjing**	**38.25**	**28**	eP		**P**	**09 23 01.5**	**-0.9**	
NJ2				pP		**pP**	**09 23 11.5**	**-0.6**	
NJ2				sP		**sP**	**09 23 15.5**	**-0.6**	
NJ2				PP		**PnPn**	**09 24 34.0**	**+1.9**	
NJ2				S		**S**	**09 28 52.5**	**-1.8**	
NJ2				sS		**sS**	**09 29 09.5**	**-0.8**	
NJ2				pmax	pmax				
	comp=Z,20nm,0.8s								
NJ2				pmax	pmax				
	comp=Z,80nm,5.6s								
NJ2				LR	LR				
	comp=N,440nm,18.0s								
NJ2				LR	LR				
	comp=E,320nm,22.0s								
NJ2				LR	LR				
	comp=Z,470nm,18.1s								
SSE	**Sheshan**	**38.65**	**32**	P	P	09 23 10.5	+4.8		
SSE				pmax	pmax				
	comp=Z,33nm,0.7s								
SSE				pmax	pmax				
	comp=Z,70nm,4.9s								
SSE				LR	LR				
	comp=N,440nm,16.3s								
SSE				LR	LR				
	comp=E,300nm,16.3s								
SSE				LR	LR				
	comp=Z,640nm,15.3s								
WRAB	**Tennant Creek**	**39.51**	**120**	eP	**P**	**09 23 11.3**	**-1.9**		
WRAB				pmax	pmax				
	comp=Z,22nm,0.8s								
WRAB	**Tennant Creek**	**39.51**	**120**	eP	**P**	**09 23 11.3**	**-1.9**		
	comp=Z,22nm,0.8s								
GTA	**Gaotai**	**40.49**	**1**	⇑P	**P**	**09 23 21.5**	**+0.3**		
GTA				pP	**pP**	**09 23 31.3**	**+0.4**		
GTA				sP	**sP**	**09 23 35.3**	**+0.4**		
GTA				S	**S**	**09 29 28.0**	**0.0**		
GTA				sS	**sS**	**09 29 44.3**	**+0.2**		
GTA				pmax	pmax				
	comp=Z,12nm,1.6s								
GTA				pmax	pmax				
	comp=Z,110nm,8.1s								
GTA				LR	LR				
	comp=N,210nm,15.7s								
GTA				LR	LR				
	comp=E,250nm,17.1s								
GTA				LR	LR				
	comp=Z,240nm,15.2s								
AS31	**Alice Springs**	**40.75**	**126**	eP	**P**	**09 23 23.3**	**-0.2**		
ASAR	**Alice Springs**	**40.75**	**126**	P	**P**	**09 23 23.3**	**-0.2**		
ASAR				PcP	**PcP**	**09 25 25.4**	**+0.8**		
ASAR				S	**S**	**09 29 30.4**	**-1.9**		
ASAR	**Alice Springs**	**40.75**	**126**	P	**P**	**09 23 23.3**	**-0.2**		
	comp=Z,13nm,0.7s,baz=302,slow=8.0,SNR=76								
ASAR				PcP	**PcP**	**09 25 25.4**	**+0.8**		
	comp=Z,2.1nm,0.8s,baz=309,slow=3.8,SNR=4.5								
ASAR				S	**S**	**09 29 30.4**	**-1.9**		
	comp=Z,0.6nm,0.8s,baz=301,slow=15,SNR=5.1								
HHC	**Hu-ho-hao-te**	**43.53**	**14**	eP	**P**	**09 23 46.5**	**+0.6**		
HHC				pP	**pP**	**09 23 56.5**	**+0.7**		
HHC				sP	**sP**	**09 24 00.5**	**+0.8**		
HHC				PP	**PP**	**09 25 30.3**	**+2.7**		
HHC				PcS	**PcS**	**09 29 25.3**	**-0.9**		
HHC				S	**S**	**09 30 14.0**	**+1.2**		
HHC				sS	**sS**	**09 30 30.3**	**+1.3**		
HHC				SS	**SS**	**09 33 22.3**	**-6.0**		
HHC				ScS	**ScS**	**09 33 41.0**	**-2.4**		
HHC				pmax	pmax				
	comp=Z,44nm,1.1s								
HHC				pmax	pmax				
	comp=Z,94nm,5.0s								
HHC				LR	LR				
	comp=N,660nm,15.1s								
HHC				LR	LR				
	comp=E,650nm,15.5s								
HHC				LR	LR				
	comp=Z,370nm,15.1s								
BJT	**Baijiatuau**	**44.09**	**19**	eP	**P**	**09 23 49.7**	**-0.6**		
	comp=Z,10nm,0.4s								
BJI	**Beijing**	**44.11**	**19**	P	**P**	**09 23 50.5**	**0.0**		
BJI				pP	**pP**	**09 24 00.0**	**-0.3**		
BJI				PcP	**PcP**	**09 25 36.0**	**+0.7**		
BJI				S	S	09 30 29.8	+8.7		
BJI				pmax	pmax				
	comp=Z,34nm,0.9s								
BJI				pmax	pmax				
	comp=Z,110nm,5.7s								
BJI				LR	LR				
	comp=N,290nm,19.1s								
BJI				LR	LR				
	comp=E,380nm,17.2s								
BJI				LR	LR				
	comp=Z,130nm,20.2s								
KSH	**Kashi**	**45.61**	**335**	P	**P**	**09 24 01.5**	**-1.1**		
KSH				epP	**pP**	**09 24 11.3**	**-1.2**		
KSH				esP	**sP**	**09 24 15.5**	**-0.9**		
KSH				ePcP	**PcP**	**09 25 41.8**	**+1.1**		
KSH				ePP	**PP**	**09 25 47.5**	**-2.3**		
KSH				eS	**S**	**09 30 37.8**	**-5.4**		
KSH				pmax	pmax				
	comp=Z,11nm,0.5s								
KSH				pmax	pmax				
	comp=Z,51nm,2.8s								
KSH				LR	LR				
	comp

KBK	**Karagaybulak**	**48.67**	**337**	*i* P		**P**	**09 24 28.0**	**+1.5**
KBK	**Karagaybulak**	**48.67**	**337**	P		**P**	**09 24 28.0**	**+1.5**
	SNR=14							
AML	**Almayashu**	**48.74**	**335**	*i* P		**P**	**09 24 28.4**	**+1.1**
AML	**Almayashu**	**48.74**	**335**	P		**P**	**09 24 28.4**	**+1.1**
	SNR=12							
AAK	**Ala-Archa**	**48.83**	**336***c*	*i*P		**P**	**09 24 28.7**	**+1.0**
AAK				pmax	pmax			
	comp=Z,27nm,1.2s							
AAK	**Ala-Archa**	**48.83**	**336**	*e*P		**P**	**09 24 28.9**	**+1.2**
AAK	**Ala-Archa**	**48.83**	**336**	P		**P**	**09 24 28.7**	**+1.0**
	comp=Z,6.8nm,0.7s,baz=136,slow=6.8,SNR=9.5							
CHMS	**Chumysh**	**49.04**	**337**	*i* P		**P**	**09 24 29.9**	**+0.8**
CHMS	**Chumysh**	**49.04**	**337**	P		**P**	**09 24 30.0**	**+0.8**
	SNR=5.3							
EKS2	**Erkin-Say**	**49.15**	**336**	*e*P		**P**	**09 24 31.1**	**+1.0**
EKS2				pmax	pmax			
	comp=Z,23nm,0.8s							
EKS2	**Erkin-Say**	**49.15**	**336**	*e*P		**P**	**09 24 31.1**	**+1.0**
	comp=Z,23nm,0.8s							
EKS2	**Erkin-Say**	**49.15**	**336**	P		**P**	**09 24 31.3**	**+1.2**
	SNR=28							
SONM	**Songino Array**	**49.36**	**7**	P		**P**	**09 24 32.4**	**+0.8**
SONM	**Songino Array**	**49.36**	**7**	P		**P**	**09 24 32.4**	**+0.8**
	comp=Z,11nm,0.5s,baz=189,slow=9.4,SNR=66							
USP	**Ospenovka**	**49.37**	**337**	*i* P		**P**	**09 24 32.4**	**+0.8**
USP	**Ospenovka**	**49.37**	**337**	P		**P**	**09 24 32.5**	**+0.8**
	SNR=34							
ULN	**Ulaanbaatar**	**49.47**	**7**	*e*P		**P**	**09 24 33.0**	**+0.5**
	comp=Z,17nm,0.8s							
ULN	**Ulaanbaatar**	**49.47**	**7**	P		**P**	**09 24 33.1**	**+0.6**
MK31	**Makanchi Array**	**49.98**	**345**	*i* P		**P**	**09 24 36.4**	**+0.2**
MK31				pmax	pmax			
	comp=Z,18nm,0.6s							
MK31	**Makanchi Array**	**49.98**	**345**	*e*P		**P**	**09 24 36.6**	**+0.3**
MKAR	**Makanchi Array**	**49.98**	**345**	P		**P**	**09 24 36.7**	**+0.4**
MKAR	**Makanchi Array**	**49.98**	**345**	P		**P**	**09 24 36.6**	**+0.4**
MKAR	**Makanchi Array**	**49.98**	**345**	P		**P**	**09 24 36.6**	**+0.4**
	comp=Z,23nm,0.6s,baz=150,slow=8.1,SNR=235							
MKAR				LR	LR		09 50 50.7	
	comp=Z,79nm,18.5s,baz=172,slow=42							
CTA	**Charters Tower**	**50.10**	**115**	P		**P**	**09 24 36.9**	**-0.7**
CTA	**Charters Tower**	**50.10**	**115**	P		**P**	**09 24 36.9**	**-0.7**
	comp=Z,5.8nm,0.9s,baz=279,slow=11,SNR=7.0							
CTAO	**Charters Tower**	**50.10**	**115**	*e*P		**P**	**09 24 37.2**	**-0.5**
CTAO				pmax	pmax			
	comp=Z,4.0nm,0.8s							
CTAO	**Charters Tower**	**50.10**	**115**	*e*P		**P**	**09 24 37.1**	**-0.5**
	comp=Z,3.6nm,0.8s							
STKA	**Stephens Creek**	**50.62**	**131**	P		**P**	**09 24 42.0**	**+0.6**
STKA	**Stephens Creek**	**50.62**	**131**	P		**P**	**09 24 42.0**	**+0.6**
	comp=Z,10nm,0.7s,baz=305,slow=7.5,SNR=32							
STKA				LR		LR	09 44 21.8	
	comp=Z,208nm,21.3s,baz=312,slow=34							
CN2	**Changchun**	**50.86**	**25**	*e*P		P	09 24 46.3	+3.4
CN2				*es*P		sP	09 25 01.0	+4.2
CN2				*e*S		**S**	**09 31 59.5**	**+2.5**
CN2				pmax	pmax			
	comp=Z,20nm,0.7s							
CN2				pmax	pmax			
	comp=Z,300nm,3.0s							
CN2				LR	LR			
	comp=N,200nm,15.0s							
CN2				LR	LR			
	comp=E,300nm,15.0s							
CN2				LR	LR			
	comp=Z,300nm,16.0s							
KK31	**Karatay Array**	**50.91**	**334**	*i* P		**P**	**09 24 42.6**	**-0.7**
KK31				pmax	pmax			
	comp=Z,1.0nm,0.4s							
KKAR	**Karatay Array**	**50.91**	**334**	*e*P		**P**	**09 24 43.4**	**+0.1**
KKAR				pmax	pmax			
	comp=Z,3.0nm,0.6s							
KKAR	**Karatay Array**	**50.91**	**334**	*e*P		**P**	**09 24 43.4**	**+0.1**
	comp=Z,2.6nm,0.6s							
ZAK	**Zakamensk**	**51.60**	**4**⇑	*i*P		**P**	**09 24 48.6**	**+0.1**
ZAK				pmax	pmax			
	comp=Z,5.0nm,1.0s							
MJAR	**Matsushiro Arr**	**52.56**	**40**	P		**P**	**09 24 54.2**	**-1.6**
MJAR	**Matsushiro Arr**	**52.56**	**40**	P		**P**	**09 24 54.2**	**-1.6**
	comp=Z,2.7nm,0.7s,baz=230,slow=7.2,SNR=9.8							
MOY	**Mondy**	**52.77**	**2**	*e*P		**P**	**09 24 57.7**	**+0.5**
OPO	**Ambohidratompo**	**53.31**	**248**	P		**P**	**09 25 03.4**	**+1.6**
OPO	**Ambohidratompo**	**53.31**	**248**	P		**P**	**09 25 03.4**	**+1.6**
	comp=Z,1.3nm,0.7s,baz=80,slow=9.8,SNR=2.5							
MDJ	**Mudanjiang**	**53.33**	**27**	P		**P**	**09 25 01.5**	**+0.2**
MDJ				pP		**pP**	**09 25 10.3**	**-1.0**
MDJ				sP		**sP**	**09 25 13.8**	**-1.4**
MDJ				PcP		**PcP**	**09 26 08.5**	**0.0**
MDJ				PP		**PP**	**09 27 01.0**	**-0.8**
MDJ				S		**S**	**09 32 34.0**	**+3.2**
MDJ				pmax	pmax			
	comp=Z,6.0nm,0.5s							
MDJ				pmax	pmax			
	comp=Z,55nm,4.6s							
MDJ				LR	LR			
	comp=N,540nm,13.5s							
MDJ				LR	LR			
	comp=E,410nm,13.5s							
MDJ				LR	LR			
	comp=Z,790nm,13.0s							
IRK	**Irkutsk**	**53.52**	**4**	*e*P		**P**	**09 25 02.9**	**+0.4**
IRK				pmax	pmax			
	comp=Z,37nm,1.4s							
USRK	**Ussuriysk Arra**	**54.15**	**29**	P		**P**	**09 25 06.8**	**-0.5**
	comp=Z,14nm,1.0s,baz=188,slow=5.6,SNR=11							
USRK				LR		LR	09 51 21.8	
	comp=Z,312nm,18.5s,baz=310,slow=40							
KURBB	**Kurchatov Arra**	**54.48**	**344**	P		**P**	**09 25 09.6**	**+0.1**
	comp=Z,8.1nm,0.8s,baz=166,slow=7.3,SNR=40							
KURK	**Kurchatov**	**54.54**	**344***c*	*i*P		**P**	**09 25 09.9**	**-0.1**
KURK				pmax	pmax			
	comp=Z,19nm,0.8s							
KURK	**Kurchatov**	**54.54**	**344**	*e*P		**P**	**09 25 09.1**	**-0.9**
	comp=Z,17nm,0.9s							
EIDS	**Eidsvold**	**55.86**	**120**	*e*P		**P**	**09 25 19.4**	**-0.6**
	comp=Z,4.9nm,0.6s							
ZAA0	**Zalesovo Array**	**56.22**	**350**	*e*P		**P**	**09 25 21.9**	**-0.1**
ZALV	**Zalesovo Beam**	**56.22**	**350**	P		**P**	**09 25 21.8**	**-0.2**
ZALV	**Zalesovo Beam**	**56.22**	**350**	P		**P**	**09 25 21.8**	**-0.2**
ZALV	**Zalesovo Beam**	**56.22**	**350**	P		**P**	**09 25 21.8**	**-0.2**
	comp=Z,25nm,0.8s,baz=183,slow=5.8,SNR=71							
ZALV				LR		LR	09 52 01.7	
	comp=Z,84nm,18.8s,baz=37,slow=39							
NVS	**Novosibirsk**	**57.35**	**349**	*e*P		**P**	**09 25 29.3**	**-0.7**
NVS				pmax	pmax			
	comp=Z,12nm,0.9s							
NVS				pmax	pmax			
	comp=N,6.0nm,0.6s							
NVS				pmax	pmax			
	comp=E,7.0nm,0.8s							
RDF	**Al-Radifah**	**57.35**	**306**	*e*P		**P**	**09 25 30.8**	**+0.3**
RDF				AMb	AMB		09 25 32.5	
	comp=Z,36nm,0.8s							
UMR	**Umm Al-Rimmam**	**57.46**	**307**	*e*P		**P**	**09 25 31.5**	**+0.2**
NAY	**Al-Naaiem**	**57.73**	**306**	*e*P		**P**	**09 25 32.6**	**-0.6**
NAY				AMb	AMB		09 25 34.2	
	comp=Z,14nm,0.6s							
KLR	**Kul'dur**	**57.82**	**25**	*e*P		P	09 25 29.6	-3.8
KLR				pmax	pmax			
	comp=E,24nm,1.0s							
KLR				pmax	pmax			
	comp=Z,60nm,1.0s							
MIB	**Mutribah**	**57.86**	**307**	*e*P		**P**	**09 25 33.9**	**-0.2**
MIB				AMb	AMB		09 25 35.5	
	comp=Z,41nm,0.8s							
VOSK	**Vostochnaya**	**58.60**	**341**	P		**P**	**09 25 37.6**	**-1.3**
VOSK				pmax	pmax			
	comp=Z,12nm,0.7s							
HABR	**Khabarovsk**	**58.71**	**28**	*e*P		**P**	**09 25 36.7**	**-3.0**
HABR				*e**SP		**sP**	**09 25 50.4**	**-3.3**
HABR				*e*			09 26 25.7	
HABR				*e*			09 27 46.1	
HABR				S		**S**	**09 33 39.7**	**-2.5**
HABR				*e**SS		**sS**	**09 33 56.3**	**-2.6**
HABR							09 35 23.2	
HABR				*e*SS		**SS**	**09 37 33.9**	**-1.9**
HABR				pmax	pmax			
	comp=Z,45nm,2.2s							
HABR				pmax	pmax			
	comp=E,66nm,3.3s							
HABR				pmax	pmax			
	comp=N,33nm,3.3s							
HABR				MLR	MLR			
	comp=Z,461nm,18.0s							

BVA0	**Borovoye Array**	**59.05**	**340**	*i* P		**P**	**09 25 41.0**	**-1.0**
BVA0				pmax	pmax				
	comp=Z,15nm,0.9s								
BRVK	**Borovoye**	**59.11**	**340***c*	*i*P		**P**	**09 25 41.6**	**-0.8**
BRVK				pmax	pmax				
	comp=Z,8.0nm,0.7s								
BRVK	**Borovoye**	**59.11**	**340**	*e*P		**P**	**09 25 40.8**	**-1.6**
	comp=Z,11nm,1.0s								
ZRNK	**Zerenda**	**59.46**	**340**	P		**P**	**09 25 43.5**	**-1.3**
ZRNK				pmax	pmax				
	comp=Z,9.0nm,0.9s								
ASAJ	**Asahikawa**	**59.77**	**35**	P		**P**	**09 25 47.5**	**+0.4**
ASAJ	**Asahikawa**	**59.77**	**35**	P		**P**	**09 25 47.5**	**+0.4**
	comp=Z,3.7nm,0.4s,baz=242,slow=5.8,SNR=4.7								
AB31	**Akbulak array**	**60.37**	**332**	*i* P		**P**	**09 25 50.0**	**-1.1**
AB31				pmax	pmax				
	comp=Z,14nm,0.8s								
ABKAR	**Akbulak array**	**60.37**	**332**	*e*P		**P**	**09 25 50.4**	**-0.7**
	comp=Z,13nm,0.8s								
KMBO	**Kilima Mbogo**	**61.41**	**269**	LR		LR	09 50 30.3		
	comp=Z,65nm,18.6s,baz=94,slow=34								
YSS	**Yuzh-Sakhalins**	**61.57**	**33**⇑	*i*P		**P**	**09 26 01.6**	**+2.3**
YSS				*e*			09 26 13.0		
CLNS	**Chul'man**	**61.66**	**16**	*e*P		**P**	**09 25 59.9**	**+0.1**
CLNS				pmax	pmax				
	comp=Z,11nm,1.0s								
CLNS				pmax	pmax				
	comp=E,4.0nm,1.0s								
CLNS				pmax	pmax				
	comp=N,5.0nm,0.9s								
AKTO	**Aktyubinsk**	**62.09**	**332**	P		**P**	**09 26 01.1**	**-1.6**
AKTO				pmax	pmax				
	comp=Z,9.0nm,0.9s								
GNI	**Garni**	**64.09**	**316**	*e*P		**P**	**09 26 17.0**	**+0.6**
	comp=Z,17nm,0.6s								
DGRG	**David-gareji**	**64.24**	**318**	P		**P**	**09 26 18.5**	**+1.3**
TBLG	**Delisi**	**64.79**	**318**	P		**P**	**09 26 21.3**	**+0.5**
TBLG	**Delisi**	**64.79**	**318**	P		**P**	**09 26 21.3**	**+0.5**
SVE	**Sverdlovsk**	**65.51**	**338**⇓	*e*P		**P**	**09 26 24.8**	**-0.3**
SVE				pmax	pmax				
	comp=Z,27nm,0.9s								
ARU	**Arti**	**66.02**	**337***c*	*i*P		**P**	**09 26 27.5**	**-0.9**
ARU				S		**S**	**09 35 15.5**	**+1.6**
ARU				pmax	pmax				
	comp=Z,17nm,1.7s								
ONI	**Oni**	**66.03**	**318**	P		**P**	**09 26 29.5**	**+0.6**
KBZ	**Khabaz**	**66.89**	**319**	P		**P**	**09 26 34.3**	**+0.1**
KBZ	**Khabaz**	**66.89**	**319**	P		**P**	**09 26 34.3**	**+0.1**
KBZ	**Khabaz**	**66.89**	**319**	P		**P**	**09 26 34.3**	**+0.1**
	comp=Z,14nm,0.8s,baz=124,slow=6.0,SNR=39								
KIV	**Kislovodsk**	**67.13**	**319**	*e*P		**P**	**09 26 35.7**	**-0.2**
KIV				pmax	pmax				
	comp=Z,22nm,1.0s								
SOC	**Sochi**	**68.93**	**318**	*e*P		**P**	**09 26 45.2**	**-1.9**
SOC				*e*S		**S**	**09 35 49.1**	**-0.3**
SOC				*e*SS		**SS**	**09 40 14.6**	**-0.8**
SOC				pmax	pmax				
	comp=Z,17nm,0.6s								
MAW	**Mawson**	**70.67**	**194**	P		**P**	**09 26 58.2**	**+0.9**
MAW	**Mawson**	**70.67**	**194**	P		**P**	**09 26 58.2**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=68,slow=5.4,SNR=2.4								
MAW				LR		LR	09 53 31.7		
	comp=Z,114nm,18.7s,baz=180,slow=32								
ANN	**Anapa**	**70.91**	**319**	*e*P		**P**	**09 26 59.0**	**-0.2**
ANN				pmax	pmax				
	comp=Z,25nm,1.3s								
BRTR	**Keskin Array B**	**71.86**	**313**	P		**P**	**09 27 04.5**	**-0.9**
BRTR	**Keskin Array B**	**71.86**	**313**	P		**P**	**09 27 04.5**	**-0.9**
	comp=Z,2.8nm,0.7s,baz=133,slow=7.1,SNR=16								
BR131	**Keskin Array S**	**71.86**	**313**	*e*P		**P**	**09 27 04.4**	**-0.9**
	comp=Z,1.9nm,0.6s								
VORD	**Divnogorie**	**72.25**	**325**	*e*P		**P**	**09 27 06.7**	**-0.4**
VORD				pmax	pmax				
	comp=N,10.0nm,0.6s								
VORD				pmax	pmax				
	comp=Z,7.0nm,0.6s								
VORD				pmax	pmax				
	comp=E,20nm,0.7s								
VSR	**Storozhevoye**	**72.42**	**325**	*e*P		**P**	**09 27 06.6**	**-1.6**
VSR				pmax	pmax				
	comp=Z,10.0nm,0.6s								
VSR				pmax	pmax				
	comp=N,8.0nm,0.7s								
VSR				pmax	pmax				
	comp=E,10.0nm,1.2s								
PETK	**Petropavlovsk-**	**72.98**	**33**	P		**P**	**09 27 10.8**	**-0.7**
PETK	**Petropavlovsk-**	**72.98**	**33**	P		**P**	**09 27 10.8**	**-0.7**
PETK	**Petropavlovsk-**	**72.98**	**33**	P		**P**	**09 27 10.8**	**-0.7**
	comp=E,5.5nm,0.7s,baz=207,slow=6.3,SNR=6.2								
PETK				LR		LR	10 01 16.6		
	comp=E,45nm,19.9s,baz=338,slow=38								
BOSA	**Boshof**	**74.86**	**241**	LR		LR	09 54 03.2		
	comp=E,130nm,21.2s,baz=176,slow=31								
TIXI	**Tiksi**	**75.35**	**9***ce*	P		**P**	**09 27 23.6**	**-1.3**
TIXI				pmax	pmax				
	comp=Z,7.0nm,1.0s								
OBN	**Obninsk**	**75.48**	**328**	*e*P		**P**	**09 27 25.6**	**-0.4**
OBN				*e*			09 27 36.5		
OBN				pmax	pmax				
	comp=Z,18nm,1.2s								
AKASG	**Malin Array Be**	**78.10**	**323**	P		**P**	**09 27 40.0**	**-0.9**
AKASG	**Malin Array Be**	**78.10**	**323**	P		**P**	**09 27 40.0**	**-0.9**
AKASG	**Malin Array Be**	**78.10**	**323**	P		**P**	**09 27 40.0**	**-0.9**
	comp=Z,1.5nm,0.6s,baz=80,slow=6.4,SNR=6.9								
VRI	**Vrincioaia**	**78.42**	**317**⇓	*i*P		**P**	**09 27 43.7**	**+0.9**
MLR	**Muntele Rosu**	**78.86**	**317**⇓	*i*P		**P**	**09 27 45.8**	**+0.4**
WPVZ	**Whakapapa**	**79.03**	**130**	PN		**P**	**09 27 47.7**	**+1.2**
FWVZ	**Far West T-bar**	**79.04**	**130**	PN		**P**	**09 27 47.5**	**+0.9**
WNVZ	**Wahianoa**	**79.09**	**130**	PN		**P**	**09 27 47.4**	**+0.6**
VOIR		**79.47**	**317**⇓	*i*P		**P**	**09 27 49.9**	**+1.2**
BKZ	**Black Stump Fm**	**79.75**	**129**	PN		**P**	**09 27 50.8**	**+0.5**
BURAR	**Bucovina Array**	**79.84**	**319**⇓	*i*P		**P**	**09 27 52.0**	**+1.3**
BUR08	**Bucovina Ar. S**	**79.86**	**319**	*e*P		**P**	**09 27 51.4**	**+0.6**
VTS	**Vitosha**	**80.19**	**313**⇑	*i*P		**P**	**09 27 52.1**	**-0.6**
FINES	**FINESS Array B**	**82.85**	**332**	P		**P**	**09 28 06.0**	**-0.2**
FINES	**FINESS Array B**	**82.85**	**332**	P		**P**	**09 28 06.0**	**-0.2**
	comp=Z,5.4nm,0.8s,baz=117,slow=6.6,SNR=11								
FINES				LR		LR	10 11 17.6		
	comp=Z,60nm,19.5s,baz=357,slow=40								
BILL	**Bilibino**	**82.93**	**21**	*e*P		**P**	**09 28 05.0**	**-1.5**
BILL				pmax	pmax				
	comp=Z,15nm,1.2s								
VNDA	**Vanda**	**83.13**	**169**	P		**P**	**09 28 09.0**	**+1.6**
VNDA	**Vanda**	**83.13**	**169**	P		**P**	**09 28 09.0**	**+1.6**
	comp=Z,0.8nm,1.1s,baz=288,slow=5.9,SNR=3.0								
VNDA				LR		LR	10 03 05.7		
	comp=Z,78nm,18.1s,baz=301,slow=34								
ARCES	**ARCESS Array B**	**85.34**	**340**	P		**P**	**09 28 18.6**	**-0.1**
ARCES	**ARCESS Array B**	**85.34**	**340**	P		**P**	**09 28 18.6**	**-0.1**
	comp=Z,3.7nm,0.7s,baz=65,slow=6.8,SNR=7.6								
ARCES				LR		LR	10 09 11.5		
	comp=Z,78nm,20.1s,baz=96,slow=38								
GERES	**GERESS Array B**	**87.63**	**319**	P		**P**	**09 28 30.6**	**+0.1**
GERES	**GERESS Array B**	**87.63**	**319**	P		**P**	**09 28 30.6**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=88,slow=4.1,SNR=6.8								
CLL	**Collm**	**88.27**	**321**	*e*P		**P**	**09 28 33.0**	**-0.3**
CLL	**Collm**	**88.27**	**321**	*e*P		**P**	**09 28 33.0**	**-0.3**
SPITS	**Spitsbergen Ar**	**89.65**	**348**	LR		LR	10 15 04.3		
	comp=Z,65nm,20.0s,baz=65,slow=40								
NOA	**NORSAR Array B**	**89.86**	**331**	P		**P**	**09 28 40.2**	**-0.5**
NOA	**NORSAR Array B**	**89.86**	**331**	P		**P**	**09 28 40.2**	**-0.5**
	comp=Z,1.1nm,0.8s,baz=94,slow=4.6,SNR=3.9								
JMIC	**Jan Mayen**	**96.75**	**342**	LR		LR	10 17 27.3		
	comp=Z,46nm,20.2s,baz=257,slow=38								
TORD	**Torodi Ar. Bea**	**97.09**	**283**	P		Pdif	09 29 14.9	0.0	
TORD	**Torodi Ar. Bea**	**97.09**	**283**	P		Pdif	09 29 14.9	0.0	
	comp=Z,0.4nm,0.8s,baz=86,slow=7.4,SNR=3.2								
ILAR	**Eielson Array**	**101.36**	**23**	PP		PP	09 33 40.2	-2.1	
ILAR	**Eielson Array**	**101.36**	**23**	PP		PP	09 33 40.2	-2.1	
	comp=Z,0.3nm,0.8s,baz=282,slow=7.1,SNR=4.2								
DLMT	**Dillon**	**128.17**	**28**	*e*PKPdf		**PKPdf**	**09 34 49.1**	**+0.5**	
ULM	**Lac du Bonnet**	**129.65**	**12**	PKP		**PKPdf**	**09 34 50.4**	**-0.7**	
ULM	**Lac du Bonnet**	**129.65**	**12**	PKP		**PKPdf**	**09 34 50.4**	**-0.7**	
	comp=Z,3.6nm,0.6s,baz=265,slow=1.1,SNR=3.2								
NVAR	**Mina Array Bea**	**129.85**	**38**	PKP		**PKPdf**	**09 34 52.4**	**+0.2**	
NVAR	**Mina Array Bea**	**129.85**	**38**	PKP		**PKPdf**	**09 34 52.4**	**+0.2**	
	comp=Z,0.5nm,0.7s,baz=285,slow=1.8,SNR=5.3								
PDAR	**Pinedale Array**	**131.56**	**28**	PKP		**PKPdf**	**09 34 55.4**	**+0.1**	
PDAR	**Pinedale Array**	**131.56**	**28**	PKP		**PKPdf**	**09 34 55.4**	**+0.1**	
	comp=Z,0.2nm,0.4s,baz=318,slow=2.4,SNR=3.3								
CPUP	**Villa Florida**	**144.10**	**218**	PKP		PKPbc	09 35 17.1	+0.7	
CPUP	**Villa Florida**	**144.10**	**218**	PKP		PKPbc	09 35 17.1	+0.7	
	comp=Z,2.3nm,0.8s,baz=105,slow=4.6,SNR=6.5								
WVT	**Waverly**	**144.79**	**9**	*e*PKIKP		**PKPab**	**09 35 17.0**	**-1.2**	
WVT	**Waverly**	**144.79**	**9**	*e*PKPdf		**PKPab**	**09 35 17.0**	**-1.2**	
TZTN	**Tazewell**	**144.84**	**3**	*e*PKPdf		**PKPab**	**09 35 17.5**	**-0.8**	
TXAR	**Lajitas Array**	**144.90**	**35**	PKP		**PKPdf**	**09 35 19.6**	**-0.3**	
TXAR	**Lajitas Array**	**144.90**	**35**	PKP		**PKPdf**	**09 35 19.6**	**-0.3**	
	comp=Z,14nm,0.6s,baz=274,slow=1.6,SNR=200								
MIAR	**Mount Ida**	**144.97**	**18**	*e*PKIKP		**PKPab**	**09 35 18.8**	**-0.1**	
MIAR	**Mount Ida**	**144.97**	**18**	*e*PKPdf		**PKPab**	**09 35 18.8**	**-0.1**	
UALR	**University of**	**145.11**	**16**	*e*PKPdf		**PKPbc**	**09 35 18.7**	**-0.7**	
CPCT	**Cooper Cave**	**145.86**	**5**	*e*PKPdf		**PKPdf**	**09 35 20.8**	**-0.4**	
JCT	**Junction City**	**146.06**	**29**	*e*PKP2		**PKPdf**	**09 35 22.0**	**+0.2**	
JCT	**Junction City**	**146.06**	**29**	*e*PKPdf		**PKPdf**	**09 35 22.0**	**+0.2**	
LRAL	**Lakeview Retre**	**147.95**	**9**	*e*PKPbc		**PKPbc**	**09 35 26.4**	**-1.4**	
LVC	**Limon Verde**	**153.36**	**206**	PKPbc		**PKPbc**	**09 35 42.4**	**+1.1**	
LVC	**Limon Verde**	**153.36**	**206**	PKPbc		**PKPbc**	**09 35 42.4**	**+1.1**	
	comp=Z,0.6nm,0.4s,baz=90,slow=5.1,SNR=1.7								

IDC 25 09:17:06.8±3.2, 0°03N×123°20E, h175km±33km, mb3.5/7, mb1 3.6/9, mb1mx3.4/24, mbtmp3.5/9, MS3.6/2, Ms1 3.6/2, ms1mx2.7/19, Error ellipse: s-maj=31.1km s-min=14.6km az=75.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**6.08**	**214**	P		P	Pn	09 18 34.5	-0.3
	1.8nm,0.3s,baz=51,slow=3.9,SNR=8.4								
KAPI				S			Sn	09 19 42.2	-1.8
	0.3nm,0.3s,baz=229,slow=20,SNR=2.7								
KAPI				LR		LR	LR	09 21 15.5	
	comp=Z,62nm,18.4s,baz=229,slow=41								
FITZ	**Fitzroy Crossi**	**18.17**	**173**	P		P	P	09 21 06.5	+0.2
	1.2nm,0.3s,baz=7.7,slow=8.5,SNR=33								
ASAR	**Alice Springs**	**25.74**	**157**	P		P	P	09 22 21.2	-0.1
	1.0nm,0.5s,baz=342,slow=14,SNR=12								
ASAR				pP			pP	09 22 55.0	-2.2
	0.4nm,0.5s,baz=344,slow=16,SNR=3.1								
STKA	**Stephens Creek**	**36.19**	**153**	P		P	P	09 23 53.0	+0.2
	1.4nm,0.6s,baz=336,slow=11,SNR=4.9								
MJAR	**Matsushiro Arr**	**38.91**	**19**	P		P	P	09 24 15.0	-0.5
	2.0nm,0.6s,baz=191,slow=9.5,SNR=9.7								
USRK	**Ussuriysk Arra**	**44.68**	**9**	P		P	P	09 25 02.6	+0.5
	12nm,0.9s,baz=195,slow=5.7,SNR=7.6								
SONM	**Songino Array**	**49.81**	**345**	LR		LR	LR	09 47 40.4	
	comp=Z,378nm,19.0s,baz=202,slow=37								
MKAR	**Makanchi Array**	**58.70**	**328**	P		P	P	09 26 46.4	+0.4
	0.7nm,0.4s,baz=124,slow=8.3,SNR=6.8								
MKAR				pP			PcP	09 27 30.7	-3.3
	0.5nm,0.7s,baz=120,slow=5.2,SNR=1.4								
KURBB	**Kurchatov Arra**	**63.04**	**330**	P		P	P	09 27 14.9	-0.3
	0.7nm,0.6s,baz=139,slow=6.2,SNR=3.8								
ILAR	**Eielson Array**	**89.94**	**25**	P		P	P	09 29 45.4	-0.5
	0.1nm,0.6s,baz=243,slow=4.9,SNR=4.5								
TORD	**Torodi Ar. Bea**	**120.59**	**285**	PKP		PKPdf	P	09 35 38.3	-0.5
	0.3nm,0.3s,baz=87,slow=1.4,SNR=12								

IDC 25 09:19:10.5±1.5, 4°34S×128°78E, h0km, mb4.0/3, mb1 4.2/4, mb1mx3.7/21, mbtmp4.1/4, ML4.1/1, Error ellipse: s-maj=112.3km s-min=25.2km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.02**	**192**	Pn		Pn	Pn	09 22 31.0	+0.4
	0.7nm,0.3s,baz=6.7,slow=13,SNR=22								
STKA	**Stephens Creek**	**29.92**	**158**	P		P	P	09 25 20.2	-0.1
	4.7nm,0.8s,baz=338,slow=9.4,SNR=3.5								
MKAR	**Makanchi Array**	**65.35**	**327**	P		P	P	09 29 54.1	-0.6

	222nm,0.3s									
KZA	**Kyzart**	**0.90**	**91**	⇓P		**Pn**	**10 02 47.9**	**-0.5**		
	41nm,0.2s,SNR=256									
KZA				⇓S		**Sn**	**10 03 01.2**	**-0.5**		
	139nm,0.2s									
CHMS	**Chumysh**	**1.04**	**30**	⇑P		**Pb**	**10 02 49.3**	**-0.2**		
	11nm,0.1s,SNR=6.6									
CHMS				⇓S		**Sg**	**10 03 02.9**	**+0.1**		
	43nm,0.2s									
USP	**Ospenovka**	**1.22**	**16**	⇑P		**Pb**	**10 02 52.2**	**-0.3**		
	12nm,0.1s,SNR=21									
USP				⇑S		**Sg**	**10 03 07.7**	**-0.7**		
	32nm,0.1s									
TKM2	**Tokmak 2**	**1.42**	**54**	⇑P		**Pg**	**10 02 56.0**	**-0.3**		
	3.4nm,0.2s									
TKM2				⇓S		**Sg**	**10 03 14.9**	**+0.3**		
	11nm,0.2s									
TKM2	**Tokmak 2**	**1.42**	**54**	⇑P		**Pg**	**10 02 56.3**	**0.0**		
	25nm,0.1s,SNR=15									
KK31	**Karatay Array**	**2.80**	**292**	⇑Pn		**Pb**	**10 03 18.1**	**-1.2**		
	3.6nm,0.3s,baz=116,slow=16,SNR=83									
KK31				⇑Sn		**Sb**	**10 03 54.8**	**+1.1**		
	8.5nm,0.3s,baz=119,slow=26,SNR=4.2									
MK31	**Makanchi Array**	**7.54**	**49**	⇓Pn		**Pn**	**10 04 21.0**	**+1.7**		
	0.2nm,0.3s,baz=235,slow=14,SNR=4.3									
MK31				⇑Lg		Lg	10 06 28.7			
	0.4nm,0.4s									

IDC 25 10:03:22.7±3.3, 8°06'S×117°16'E, h0km, mb3.6/3, mb1 3.6/4, mb1mx3.4/22, mbtmp3.6/4, ML2.5/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/27, Error ellipse: s-maj=392.9km s-min=25.8km az=54.0, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.95**	**141**	Pn	Pn	10 06 26.5	-1.7
	0.0nm,0.3s,baz=310,slow=12,SNR=2.5						
FITZ				Sn	Sn	10 08 44.7	-8.3
	0.1nm,0.3s,baz=9.0,slow=19,SNR=3.1						
ASAR	**Alice Springs**	**22.32**	**136**	P	P	10 08 21.4	-0.9
	0.7nm,0.8s,baz=309,slow=9.3,SNR=8.4						
STKA	**Stephens Creek**	**32.83**	**140**	P	P	10 09 59.5	+1.3
	0.5nm,0.4s,baz=333,slow=6.8,SNR=4.4						
MJAR	**Matsushiro Arr**	**48.57**	**23**	LR	LR	10 33 12.5	
	comp=Z,42nm,18.4s,baz=220,slow=37						
MKAR	**Makanchi Array**	**62.81**	**334**	P	P	10 13 50.0	-0.2
	0.5nm,0.6s,baz=160,slow=7.1,SNR=4.3						

*CSEM **25** 10:07:52.2, 34°.66N×61°.07E, h4km, ML3.5, After TEH*
TEH 25 10:07:52.2, 34°.66N×61°.07E, h4km, ML3.5, Northwestern Afghanistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMYA	**Miami**	**1.85**	**335**	*e*Pn	Pn	10 08 24.4	-0.6
IMYA				*e*		10 08 49.9	
	comp=Z,5μm,0.3s						
IMYA	**Miami**	**1.85**	**335**	*e*Pn	Pn	10 08 24.4	-0.6
IMOG	**Moghan**	**2.02**	**316**	*e*	Pn	10 08 25.2	-2.2
	comp=Z,3μm,0.1s						
IDAH	**Dahanechah**	**2.17**	**208**	*e*Pn	Pn	10 08 29.5	+0.1
IDAH				*e*Sn	Sn	10 08 56.2	-0.7
IDAH				*e*		10 09 02.5	
	comp=Z,3μm,0.2s						
IDAH	**Dahanechah**	**2.17**	**208**	*e*Pn	Pn	10 08 29.5	+0.1
IDAH				*e*Sn	Sn	10 08 56.2	-0.7
IPAY	**Payeh**	**2.46**	**317**	*e*Pn	Pn	10 08 31.7	-1.7
IPAY				*e*		10 09 04.8	
	comp=Z,3μm,0.2s						
IPAY	**Payeh**	**2.46**	**317**	*e*Pn	Pn	10 08 31.7	-1.7
ITEG	**Tejag**	**2.62**	**228**	*e*Pn	Pn	10 08 35.1	-0.4
ITEG				*e*		10 09 14.3	
	comp=Z,2μm,0.3s						
ITEG	**Tejag**	**2.62**	**228**	*e*Pn	Pn	10 08 35.1	-0.4
IAKL	**Akhelmad**	**2.70**	**316**	*e*Pn	Pn	10 08 34.4	-2.4
IAKL				*e*		10 08 36.9	
	comp=Z,2μm,0.2s						
IAKL	**Akhelmad**	**2.70**	**316**	*e*Pn	Pn	10 08 34.4	-2.4
IKOO	**Kooshah**	**2.82**	**218**	*e*Pn	Pn	10 08 37.2	-1.2
IKOO	**Kooshah**	**2.82**	**218**	*e*Pn	Pn	10 08 37.2	-1.2
IKRD	**Kardeh**	**2.96**	**316**	*e*Pn	Pn	10 08 32.9	-7.4
IKRD				*e*Sn	Sn	10 09 03.0	-14
IKRD				*e*		10 09 05.9	
	comp=Z,2μm,0.3s						
IKRD	**Kardeh**	**2.96**	**316**	*e*Pn	Pn	10 08 32.9	-7.4
IKRD				*e*Sn	Sn	10 09 03.0	-14
IEMG	**Emamgholi**	**3.38**	**325**	*e*Pn	Pn	10 08 45.4	-0.6
IEMG				*e*		10 09 45.1	
	comp=Z,687nm,0.3s						
IEMG	**Emamgholi**	**3.38**	**325**	*e*Pn	Pn	10 08 45.4	-0.6
ISFR	**Sfrayin**	**3.45**	**315**	*e*Pn	Pn	10 08 46.5	-0.6
ISFR	**Sfrayin**	**3.45**	**315**	*e*Pn	Pn	10 08 46.5	-0.6
ISHV	**Shirvan**	**3.96**	**317**	*e*Pn	Pn	10 08 53.6	-0.3
ISHV				*e*		10 11 07.7	
	comp=Z,792nm,0.1s						
ISHV	**Shirvan**	**3.96**	**317**	*e*Pn	Pn	10 08 53.6	-0.3

IDC 25 10:13:57.6±2.6, 28°.16N×139°.94E, h407km±66km, mb2.8/4, mb1 3.0/5, mb1mx2.8/23, mbtmp3.0/5, Error ellipse: s-maj=170.1km s-min=20.5km az=69.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	**Hachijo jima 2**	**4.95**	**358**	P	P	10 15 19.2	+0.1
	4.2nm,0.3s,baz=241,slow=20,SNR=5.5						
JHJ				S	S	10 16 20.4	-5.3
	3.4nm,0.3s,baz=74,slow=20,SNR=2.8						
SONM	**Songino Array**	**32.57**	**316**	P	P	10 19 53.0	-0.1
	0.5nm,0.4s,baz=127,slow=9.4,SNR=5.5						
MKAR	**Makanchi Array**	**48.26**	**309**	P	P	10 21 59.5	-0.1
	0.2nm,0.4s,baz=99,slow=8.0,SNR=3.2						
ASAR	**Alice Springs**	**51.85**	**187**	P	P	10 22 26.3	-0.1
	0.2nm,0.5s,baz=6.7,slow=5.9,SNR=8.0						
KBZ	**Khabaz**	**75.82**	**312**	P	P	10 25 00.7	+0.2
	0.8nm,0.5s,baz=80,slow=6.1,SNR=3.7						

*ISCJB **25** 10:22:10.0±0.5, 33°.38S±0°.09×77°.9E±0°.1, h10km, mb4.2/17, MS4.0/16, Error ellipse: s-maj=14.7km s-min=13.4km az=171.3*
*IDC **25** 10:22:10.2±0.6, 33°.32S×77°.88E, h0km, mb4.1/15, mb1 4.2/15, mb1mx4.1/26, mbtmp4.1/15, MS3.9/16, Ms1 3.9/16, ms1mx3.8/23, Error ellipse: s-maj=21.3km s-min=16.6km az=96.0*
*NEIC **25** 10:22:11.7±0.3, 33°.33S×77°.89E, h10km, mb4.6/2, Error ellipse: s-maj=10.1km s-min=9.3km az=80.0*
ISC 25 10:22:11.7±0.5, 33°.3S±0°.1×77°.9E±0°.1, h10km, n46, σ0s64/39, mb4.1/17, MS4.0/16, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**31.12**	**291**	LR	LR	10 38 11.8	
	comp=Z,180nm,18.3s,baz=292,slow=31						
NWAO	**Narrogin (SRO)**	**32.83**	**100**	LR	LR	10 38 24.5	
	comp=Z,346nm,21.9s,baz=336,slow=30						
MAW	**Mawson**	**35.41**	**190**	P	**P**	**10 29 08.6**	**+1.2**
MAW	**Mawson**	**35.41**	**190**	P	**P**	**10 29 08.6**	**+1.2**
	2.6nm,0.9s,baz=45,slow=15,SNR=3.9						
MAW				LR	LR	10 40 34.1	
	comp=Z,136nm,19.3s,baz=1.8,slow=31						
BOSA	**Boshof**	**44.98**	**261**	LR	LR	10 45 17.4	
	comp=Z,230nm,21.3s,baz=118,slow=31						
FITZ	**Fitzroy Crossi**	**45.24**	**83**	P	**P**	**10 30 29.4**	**0.0**
FITZ	**Fitzroy Crossi**	**45.24**	**83**	P	**P**	**10 30 29.4**	**0.0**
	2.2nm,0.9s,baz=238,slow=10,SNR=5.2						
LSZ	**Lusaka**	**48.25**	**279**	P	**P**	**10 30 52.3**	**-0.9**
LSZ	**Lusaka**	**48.25**	**279**	P	**P**	**10 30 52.3**	**-0.9**
	3.0nm,0.7s,baz=116,slow=12,SNR=5.7						
ASAR	**Alice Springs**	**49.67**	**94**	P	**P**	**10 31 03.7**	**-0.2**
ASAR	**Alice Springs**	**49.67**	**94**	P	**P**	**10 31 03.7**	**-0.2**
	4.3nm,0.8s,baz=246,slow=6.3,SNR=51						
ASAR				LR	LR	10 48 21.7	
	comp=Z,168nm,21.8s,baz=227,slow=32						
AS31	**Alice Springs**	**49.67**	**94**	*e*P	**P**	**10 31 03.6**	**-0.3**
KMBO	**Kilima Mbogo**	**49.76**	**301**	LR	LR	10 46 22.0	
	comp=Z,82nm,20.4s,baz=94,slow=29						
WRAB	**Tennant Creek**	**51.66**	**90**	*e*P	**P**	**10 31 18.8**	**-0.1**
	16nm,1.3s						
STKA	**Stephens Creek**	**52.93**	**107**	LR	LR	10 49 32.8	
	comp=Z,166nm,18.6s,baz=206,slow=31						
CMAR	**Chiang Mai Arr**	**55.28**	**25**	P	**P**	**10 31 45.5**	**+0.1**
	0.8nm,0.4s,baz=220,slow=8.0,SNR=3.1						
CMAR				LR	LR	10 50 24.8	
	comp=Z,81nm,20.6s,baz=185,slow=31						
SNAA	**Sanae**	**55.84**	**202**	P	**P**	**10 31 49.2**	**+0.3**
SNAA	**Sanae**	**55.84**	**202**	P	**P**	**10 31 49.2**	**+0.3**
	0.3nm,0.8s,baz=125,slow=12,SNR=3.5						
VNDA	**Vanda**	**56.44**	**165**	P	**P**	**10 31 52.1**	**-0.8**
VNDA	**Vanda**	**56.44**	**165**	P	**P**	**10 31 52.1**	**-0.8**
	1.0nm,1.0s,baz=257,slow=8.5,SNR=4.1						
VNDA				LR	LR	10 53 11.1	
	comp=Z,100nm,20.4s,baz=272,slow=33						
QSPA	**South Pole Qui**	**56.82**	**180**	P	**P**	**10 31 56.0**	**0.0**
QSPA	**South Pole Qui**	**56.82**	**180**	P	**P**	**10 31 56.0**	**0.0**
	3.7nm,1.0s,baz=312,slow=1.7,SNR=9.1						
KKAR	**Karatay Array**	**76.36**	**354**	*e*P	**P**	**10 34 00.7**	**-0.1**
	2.8nm,0.7s						
MKAR	**Makanchi Array**	**79.85**	**3**	P	**P**	**10 34 19.9**	**-0.2**
MKAR	**Makanchi Array**	**79.85**	**3**	P	**P**	**10 34 19.9**	**-0.2**
	0.8nm,0.8s,baz=165,slow=5.0,SNR=6.5						
MKAR				LR	LR	11 06 23.2	
	comp=Z,93nm,21.8s,baz=175,slow=33						
BRTR	**Keskin Array B**	**83.42**	**327**	P	**P**	**10 34 40.1**	**+0.8**
BRTR	**Keskin Array B**	**83.42**	**327**	P	**P**	**10 34 40.1**	**+0.8**
	1.1nm,0.8s,baz=161,slow=7.2,SNR=6.3						
BRTR				LR	LR	11 06 52.4	
	comp=Z,24nm,19.0s,baz=284,slow=32						
SONM	**Songino Array**	**84.75**	**19**	P	**P**	**10 34 46.1**	**+0.3**
SONM	**Songino Array**	**84.75**	**19**	P	**P**	**10 34 46.1**	**+0.3**
	0.8nm,0.6s,baz=206,slow=4.9,SNR=2.6						
SONM				LR	LR	11 10 10.7	
	comp=Z,72nm,21.4s,baz=240,slow=34						
AKTO	**Aktyubinsk**	**85.23**	**347**	P	**P**	**10 34 48.8**	**+0.8**
AKTO	**Aktyubinsk**	**85.23**	**347**	P	**P**	**10 34 48.8**	**+0.8**
	1.5nm,0.6s,baz=211,slow=3.6,SNR=9.1						
TORD	**Torodi Ar. Bea**	**85.92**	**288**	P	**P**	**10 34 52.0**	**-0.3**
TORD	**Torodi Ar. Bea**	**85.92**	**288**	P	**P**	**10 34 52.0**	**-0.3**
	2.2nm,1.1s,baz=115,slow=5.0,SNR=5.7						
TORD				LR	LR	11 09 15.7	
	comp=Z,136nm,21.7s,baz=145,slow=33						
BVAR	**Borovoye Array**	**86.24**	**355**	LR	LR	11 09 07.0	
	comp=Z,35nm,21.3s,baz=70,slow=33						
ZALV	**Zalesovo Beam**	**87.12**	**4**	P	**P**	**10 34 57.5**	**+0.3**
ZALV	**Zalesovo Beam**	**87.12**	**4**	P	**P**	**10 34 57.5**	**+0.3**
	1.4nm,0.7s,baz=186,slow=2.6,SNR=5.3						
ZALV				LR	LR	11 11 09.2	
	comp=Z,65nm,20.5s,baz=76,slow=34						
DBIC	**Dimbokro**	**87.59**	**280**	LR	LR	11 09 55.6	
	comp=Z,112nm,21.2s,baz=117,slow=33						
MLR	**Muntele Rosu**	**91.47**	**326**	P	**P**	**10 35 18.9**	**+0.9**
MLR	**Muntele Rosu**	**91.47**	**326**	P	**P**	**10 35 18.9**	**+0.9**
	0.8nm,0.8s,baz=127,slow=10,SNR=3.0						
SCHQ	**Schefferville**	**147.29**	**322**	PKPbc	**PKPbc**	**10 41 54.0**	**-0.9**
SCHQ	**Schefferville**	**147.29**	**322**	PKPbc	**PKPbc**	**10 41 54.0**	**-0.9**
	3.0nm,0.8s,baz=61,slow=2.5,SNR=5.8						
YKA	**Yellowknife Ar**	**149.75**	**11**	PKPbc	**PKPbc**	**10 41 59.9**	**-1.1**
YKA	**Yellowknife Ar**	**149.75**	**11**	PKPbc	**PKPbc**	**10 41 59.9**	**-1.1**
	0.7nm,0.7s,baz=320,slow=3.4,SNR=5.2						
NVAR	**Mina Array Bea**	**165.93**	**64**	PKPab	**PKPab**	**10 43 16.9**	**-0.2**
NVAR	**Mina Array Bea**	**165.93**	**64**	PKPab	**PKPab**	**10 43 16.9**	**-0.2**
	0.3nm,0.5s,baz=258,slow=5.0,SNR=4.3						

*CASC **25** 10:34:28.2±3.3, 12°.74N×88°.75W, h24km±17km, MD4.1, ML4.4, mb4.3(NEIC)*
*NEIC **25** 10:34:33.1±1.4, 12°.88N×88°.43W, h89km±10km, mb4.3/21, MD4.4(SNET), Error ellipse: s-maj=16.5km s-min=9.1km az=222.0*
NEIC Felt [II] at San Salvador.
*IDC **25** 10:34:34.0±3.8, 13°.02N×88°.35W, h87km±31km, mb3.9/11, mb1 4.1/12, mb1mx3.8/27, mbtmp3.9/12, MS3.3/7, Ms1 3.3/7, ms1mx3.1/26, Error ellipse: s-maj=33.0km s-min=17.1km az=54.0*
ISC 25 10:34:27.9±0.5, 12°.75N±0°.06×88°.70W±0°.05, h40km, n370, σ1s24/378, mb4.3/31, MS3.5/5, 142C-154D, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VSM	**San Miguel**	**0.79**	**32**	*e*P	**Pn**	**10 34 44.1**	**+1.3**
SNVI	**San Vicente**	**0.87**	**351**	*e*P	**Pn**	**10 34 44.5**	**+0.7**
LFRS	**El Faro**	**0.94**	**338**	*e*P	**Pn**	**10 34 45.1**	**+0.4**
LBRS	**Las Brisas**	**1.04**	**341**	*e*P	**Pn**	**10 34 46.9**	**+0.9**
SNET	**Serv Nac Est T**	**1.06**	**331**	*e*P	**Pn**	**10 34 46.6**	**+0.2**
SNET				*e*S	**Sn**	**10 35 00.5**	**+0.4**
SNET				AML	AML	10 35 04.3	
	comp=Z,9μm,0.3s						
LFU	**La Fuente**	**1.07**	**338**	*e*P	**Pn**	**10 34 46.9**	**+0.3**
LFU				*e*S	**Sn**	**10 35 01.6**	**+1.3**
CAHU	**Cacacuatique**	**1.12**	**25**	*e*P	**Pn**	**10 34 48.9**	**+1.6**
CAHU				*e*S	**Sn**	**10 35 06.4**	**+4.8**
BOQS	**Boqueron**	**1.13**	**330**	*e*P	**Pn**	**10 34 48.1**	**+0.6**
BOQS				*e*S	**Sn**	**10 35 03.1**	**+1.2**
SBLS	**San Blas**	**1.41**	**320**	*e*P	**Pn**	**10 34 51.8**	**+0.5**
SNJE	**San Jose**	**1.42**	**322**	*e*P	**Pn**	**10 34 52.2**	**+0.8**
RTR	**El Retiro**	**1.47**	**321**	*e*P	**Pn**	**10 34 53.1**	**+1.1**
RBDL	**Robledal**	**1.66**	**325**	*e*P	**Pn**	**10 34 56.0**	**+1.3**
TGUH	**Tegucigalpa,Un**	**1.90**	**47**	*e*Pn	**Pn**	**10 34 59.8**	**+2.0**
NBG	**Las Nubes**	**2.43**	**319**	*e*P	**Pn**	**10 35 08.1**	**+2.7**
MRL	**Marmol**	**2.49**	**337**	*e*P	**Pn**	**10 35 09.2**	**+3.1**
FUG	**Fuego 3**	**2.68**	**309**	*e*P	**Pn**	**10 35 10.4**	**+1.7**
JAT	**Jato**	**3.25**	**299**	*e*P	Pn	10 35 19.9	+3.4
CGA2	**Cerro Gallo 2**	**4.96**	**123**	*e*P	Pn	10 35 44.9	+4.8
QCR	**Quepos**	**5.54**	**126**	*e*P	**Pn**	**10 35 49.8**	**+1.8**
BUS	**Buena Vista**	**5.80**	**123**	*e*P	Pn	10 35 55.4	+3.5
BUS				*e*S	**Sn**	**10 36 55.8**	**-1.5**
TEIG	**Tepich**	**7.44**	**3**	P	Pn	10 36 17.4	+3.4
TEIG				S	**Sn**	**10 37 33.5**	**-3.7**
TEIG				Lg	Lg	10 38 27.9	
TEIG	**Tepich**	**7.44**	**3**	P	Pn	10 36 17.4	+3.4
	comp=Z,3.9nm,0.3s,baz=302,slow=0.9,SNR=33						
TEIG				S	**Sn**	**10 37 33.5**	**-3.7**
	baz=126,slow=17,SNR=2.0						
TEIG				Lg	Lg	10 38 27.9	
	baz=93,slow=19,SNR=2.7						
TEIG				LR	LR	10 39 43.1	
	comp=Z,296nm,19.2s,baz=20,slow=43						
ROSC	**El Rosal**	**16.21**	**118**	LR	LR	10 44 56.2	
	comp=Z,19nm,21.4s,baz=248,slow=39						
732A	**Laxson Ranch,**	**19.05**	**328**	⇓P	**Pn**	**10 38 48.2**	**+0.4**
	baz=19,SNR=18						
632A	**Uvalde**	**19.60**	**330**	⇑P	**Pn**	**10 38 53.8**	**-0.6**
	baz=20						
631A	**Perdido Creek**	**19.91**	**328**	⇓P	**Pn**	**10 38 57.2**	**-1.0**
	baz=20,SNR=18						
532A	**Rocksprings**	**20.17**	**331**	⇓P	Pn	10 39 00.1	-1.1
	baz=20,SNR=12						
LRAL	**Lakeview Retre**	**20.25**	**4**	*e*P	Pn	10 39 01.6	-0.5
	comp=Z,4.3nm,0.8s						
JCT	**Junction City**	**20.41**	**332**	*e*P	**P**	**10 39 02.6**	**+0.9**
	comp=Z,6.1nm,0.8s						
JCT	**Junction City**	**20.41**	**332**	⇑P	**P**	**10 39 02.3**	**+0.6**
	baz=20						
531A	**Rocksprings**	**20.51**	**330**	⇓P	**P**	**10 39 03.5**	**+0.8**
	baz=21						
432A	**Menard**	**20.74**	**332**	⇓P	**P**	**10 39 06.1**	**+0.8**
	baz=21,SNR=9.5						
WHTX	**Lake Whitney**	**20.77**	**339**	⇓P	**P**	**10 39 06.0**	**+0.5**
	baz=21						
530A	**J-C Ranch, Com**	**20.90**	**328**	⇓P	Pn	10 39 08.3	-1.4
	baz=21,SNR=17						
431A	**Sonora**	**20.96**	**330**	⇓P	**P**	**10 39 08.5**	**+0.8**
	baz=21,SNR=11						
332A	**Millersview**	**21.15**	**333**	⇓P	**P**	**10 39 11.2**	**+1.5**
	baz=21,SNR=24						
628A	**Black Gap, Mar**	**21.23**	**324**	⇑P	**P**	**10 39 12.5**	**+1.9**
	baz=21,SNR=12						
529A	**Stev Forest Ra**	**21.35**	**326**	⇑P	**P**	**10 39 12.6**	**+0.8**
	baz=22,SNR=5.8						
430A	**Baggett Ranch,**	**21.36**	**329**	⇑P	**P**	**10 39 13.2**	**+1.3**
	baz=22,SNR=6.3						
331A	**San Angelo**	**21.40**	**332**	⇓P	**P**	**10 39 12.8**	**+0.5**
	baz=22,SNR=11						
627A	**Terlingua Ranc**	**21.50**	**323**	⇑P	**P**	**10 39 15.7**	**+2.2**
	baz=22,SNR=13						
232A	**Coleman**	**21.54**	**334**	⇓P	**P**	**10 39 14.2**	**+0.3**
	baz=22,SNR=21						
429A	**Davenport Ranc**	**21.57**	**328**	⇓P	**P**	**10 39 15.0**	**+0.8**
	baz=22,SNR=11						
TXAR	**Lajitas Array**	**21.58**	**322**	P	**P**	**10 39 16.3**	**+2.0**
TXAR				PcP	**PcP**	**10 43 17.1**	**+1.6**
TXAR	**Lajitas Array**	**21.58**	**322**	P	**P**	**10 39 16.3**	**+2.0**
	comp=Z,3.9nm,0.7s,baz=145,slow=11,SNR=51						
TXAR				PcP	**PcP**	**10 43 17.1**	**+1.6**
	comp=Z,0.4nm,0.9s,baz=134,slow=3.9,SNR=3.3						
TXAR				LR	LR	10 49 00.5	
	comp=Z,50nm,21.2s,baz=0.0,slow=40						
528A	**Cox Ranch, San**	**21.69**	**325**	⇑P	**P**	**10 39 16.3**	**+0.7**
	baz=22						
330A	**Mertzon**	**21.84**	**330**	⇑P	**P**	**10 39 17.1**	**+0.1**
	baz=22						
231A	**Bronte**	**21.88**	**333**	⇓P	**P**	**10 39 17.5**	**+0.1**
	baz=22,SNR=5.4						
626A	**Big Bend Ranch**	**22.02**	**322**	⇓P	**P**	**10 39 20.5**	**+1.5**
	baz=22,SNR=11						
428A	**Kincaid Ranch,**	**22.07**	**326**	⇑P	**P**	**10 39 20.2**	**+0.6**
	baz=22						
527A	**Woodward Ranch**	**22.14**	**324**	⇓P	**P**	**10 39 21.4**	**+0.9**
	baz=22						
MIAR	**Mount Ida**	**22.14**	**349**	*e*P	**P**	**10 39 20.9**	**+0.6**
	comp=Z,9.1nm,0.7s						
UALR	**University of**	**22.17**	**352**	*e*P	**P**	**10 39 21.1**	**+0.5**
	comp=Z,10nm,0.6s						
ABTX	**Abilene, Hawle**	**22.18**	**335**	⇑P	**P**	**10 39 21.2**	**+0.5**
	baz=22,SNR=9.1						
230A	**Sterling City**	**22.20**	**331**	⇑P	**P**	**10 39 21.1**	**+0.1**
	baz=22,SNR=9.0						
329A	**Wagon Wheel Ra**	**22.30**	**329**	⇓P	**P**	**10 39 22.3**	**+0.3**
	baz=22,SNR=15						
526A	**Mary Lane Ranc**	**22.36**	**323**	⇑P	**P**	**10 39 23.3**	**+0.5**
	baz=22						
427A	**Hayter Ranch,**	**22.55**	**325**	⇓P	**P**	**10 39 25.0**	**+0.2**
	baz=23						
229A	**Bryant Ranch,**	**22.60**	**330**	⇓P	**P**	**10 39 25.0**	**-0.3**
	baz=23						
328A	**Wristen Ranch,**	**22.64**	**327**	⇓P	**P**	**10 39 27.0**	**+1.3**
	baz=23,SNR=27						
Z32A	**Haskell**	**22.71**	**336**	⇑P	**P**	**10 39 26.1**	**-0.2**
	baz=23,SNR=21						
130A	**Snyder**	**22.73**	**332**	⇑P	**P**	**10 39 25.7**	**-0.8**
	baz=23,SNR=11						
426A	**McDonald Obser**	**22.77**	**324**	⇑P	**P**	**10 39 27.4**	**+0.2**
	baz=23						
Z31A	**Sharp Cattle R**	**22.99**	**335**	⇓P	**P**	**10 39 28.8**	**-0.4**
	baz=23,SNR=16						
HALT	**Halls**	**23.07**	**359**	*e*P	**P**	**10 39 30.3**	**+0.4**
228A	**UT Block 9, Go**	**23.11**	**329**	⇑P	**P**	**10 39 30.1**	**-0.5**
	baz=23,SNR=7.5						
129A	**Stewart Farms,**	**23.17**	**331**	⇑P	**P**	**10 39 30.6**	**-0.6**
	baz=23,SNR=12						
326A	**Caldwell Ranch**	**23.23**	**325**	⇑P	**P**	**10 39 31.9**	**+0.1**
	baz=23						
TKL	**Tuckaleechee C**	**23.24**	**10**	P	**P**	**10 39 32.3**	**+0.6**
TKL	**Tuckaleechee C**	**23.24**	**10**	P	**P**	**10 39 32.3**	**+0.6**
	comp=Z,8.3nm,0.7s,baz=182,slow=10,SNR=18						
KMSC	**Kings Mountain**	**23.27**	**15**	⇓P	**P**	**10 39 31.4**	**-0.6**
	baz=23						
Y32A	**R-V Farms, Ver**	**23.31**	**337**	⇑P	**P**	**10 39 32.2**	**-0.2**
	baz=23						
Z30A	**Sanderson Ranc**	**23.38**	**333**	⇓P	**P**	**10 39 32.6**	**-0.6**
	baz=24,SNR=14						
227A	**Bennet, Jal**	**23.39**	**327**	⇓P	**P**	**10 39 33.3**	**0.0**
	baz=24,SNR=6.1						
425A	**Indio Mountain**	**23.42**	**323**	⇑P	**P**	**10 39 34.2**	**+0.6**
	baz=24						
128A	**Castleberry Fa**	**23.47**	**330**	⇓P	**P**	**10 39 33.7**	**-0.4**
	baz=24,SNR=7.2						
Y31A	**Rekieta Farm,**	**23.59**	**335**	⇑P	**P**	**10 39 34.9**	**-0.3**
	baz=24,SNR=9.8						
Z29A	**Hungry Hill Ra**	**23.62**	**332**	⇓P	**P**	**10 39 34.8**	**-0.7**
	baz=24,SNR=11						
WMOK	**Wichita Mounta**	**23.72**	**339**	*e*P	**P**	**10 39 36.6**	**+0.2**
	comp=Z,4.6nm,0.7s						
Y30A	**Stafford Cattl**	**23.79**	**334**	⇓P	**P**	**10 39 37.9**	**+0.9**
	baz=24,SNR=12						
325A	**Bean Ranch, Si**	**23.83**	**324**	⇓P	**P**	**10 39 37.7**	**0.0**
	baz=24,SNR=9.9						
226B	**Tecolote Peak,**	**23.91**	**326**	⇓P	**P**	**10 39 38.2**	**0.0**
	baz=24						
TUL1	**Tulsa**	**23.93**	**346**	⇓P	**P**	**10 39 37.4**	**-0.9**
	baz=24						
127A	**Arkansas Junct**	**23.95**	**328**	⇓P	**P**	**10 39 38.4**	**-0.2**
	baz=24,SNR=7.9						
Z28A	**Tucker Farm, M**	**23.96**	**331**	⇑P	**P**	**10 39 37.8**	**-0.9**
	baz=24,SNR=12						
X31A	**McDonald Ranch**	**24.07**	**337**	⇓P	**P**	**10 39 40.5**	**+0.9**
	baz=24,SNR=15						
Y29A	**Porterfield Fa**	**24.11**	**333

	baz=27					
BNM	Barren Site	26.83	326	eP	P	10 40 06.5 +1.6
	comp=Z,2.1nm,0.7s					
Y22A	Socorro	26.86	325	⇓P	P	10 40 06.8 +1.8
	baz=27,SNR=7.6					
120A	U Bar Ranch, L	26.86	320	⇓P	P	10 40 06.5 +1.3
	baz=27					
S30A	Montezuma	26.92	339	⇑P	P	10 40 05.5 0.0
	baz=27					
Y22D	IRIS PASSCAL I	26.93	325	⇑P	P	10 40 06.5 +0.8
	baz=27					
W24A	Lazy 6 Ranch,	26.99	329	⇓P	P	10 40 07.6 +1.3
	baz=27,SNR=5.4					
T28A	Walsh	27.08	336	⇑P	P	10 40 07.3 +0.3
	baz=27					
V25A	Rancho No Teng	27.10	331	⇑P	P	10 40 08.4 +1.1
	baz=27,SNR=12					
S29A	Ulysses	27.14	338	⇓P	P	10 40 08.2 +0.8
	baz=27					
U26A	Atchley Ranch,	27.15	333	⇓P	P	10 40 08.6 +0.8
	baz=27,SNR=14					
R31A	Burdett	27.20	341	⇑P	P	10 40 08.5 +0.6
	baz=27					
T27A	Campo	27.28	335	⇓P	P	10 40 09.8 +1.1
	baz=27					
X22A	Bernardo	27.30	326	⇓P	P	10 40 11.3 +2.2
	baz=27					
Y21A	Point of Rocks	27.31	324	⇑P	P	10 40 11.5 +2.3
	baz=27,SNR=7.8					
V24A	Rampart Ranch,	27.33	330	⇑P	P	10 40 10.7 +1.3
	baz=27					
ANMO	Albuquerque	27.33	327	eP	P	10 40 11.1 +1.7
ANMO				PcP	PcP	10 43 28.5 +0.4
ANMO	Albuquerque	27.33	327	P	P	10 40 11.4 +2.0
	comp=Z,1.0nm,0.6s,baz=152,slow=7.9,SNR=7.7					
ANMO				PcP	PcP	10 43 28.5 +0.4
	comp=Z,0.6nm,0.6s,baz=157,slow=0.4,SNR=3.7					
ANMO				LR	LR	10 53 54.8
	comp=Z,43nm,19.2s,baz=22,slow=42					
W23A	Werner Place,	27.33	328	⇓P	P	10 40 11.1 +1.7
	baz=27,SNR=5.7					
S28A	Manter	27.41	337	⇑P	P	10 40 10.1 +0.3
	baz=28,SNR=6.4					
U25A	Circle Dot Ran	27.46	332	⇑P	P	10 40 12.3 +1.8
	baz=28,SNR=11					
Y20A	Horse Springs,	27.65	323	⇓P	P	10 40 14.2 +2.0
	baz=28					
X21A	Alamocita Cree	27.69	324	⇑P	P	10 40 14.6 +2.0
	baz=28					
T26A	Comanche Natio	27.74	334	⇑P	P	10 40 13.6 +0.7
	baz=28					
V23A	Ortiz Mt. (NFS	27.80	328	⇓P	P	10 40 15.2 +1.6
	baz=28					
Q31A	Ellis	27.82	342	⇓P	P	10 40 14.0 +0.6
	baz=28					
S27A	Las Animas	27.88	335	⇑P	P	10 40 14.6 +0.4
	baz=28					
R28A	Tribune	28.03	338	⇑P	P	10 40 15.8 +0.4
	baz=28,SNR=11					
Q30A	Quinter	28.05	341	⇑P	P	10 40 16.2 +0.6
	baz=28					
S26A	Kim	28.07	335	⇑P	P	10 40 16.5 +0.7
	baz=28,SNR=5.2					
T25A	Trinidad	28.07	333	⇓P	P	10 40 17.4 +1.4
	baz=28,SNR=8.0					
W21A	San Fidel	28.11	326	⇓P	P	10 40 18.0 +1.7
	baz=28					
Q29A	Oakley	28.22	339	⇑P	P	10 40 18.2 +1.1
	baz=28					
U23A	El Rito	28.26	329	⇑P	P	10 40 19.2 +1.5
	baz=28,SNR=11					
V22A	San Miguel Ran	28.31	328	⇑P	P	10 40 20.1 +2.0
	baz=28,SNR=5.5					
R27A	Eads	28.36	336	⇓P	P	10 40 19.4 +1.0
	baz=28,SNR=7.8					
S25A	Robets Cordova	28.51	333	⇑P	P	10 40 21.3 +1.5
	baz=29					
W20A	Ramah	28.59	325	⇑P	P	10 40 23.0 +2.3
	baz=29					
V21A	Milan	28.61	327	⇓P	P	10 40 22.5 +1.7
	baz=29					
R26A	Arlington	28.63	335	⇓P	P	10 40 21.5 +0.7
	baz=29,SNR=8.0					
U22A	Llaves	28.64	328	⇓P	P	10 40 23.5 +2.4
	baz=29					
Q28A	Sharon Springs	28.68	338	⇑P	P	10 40 22.4 +1.2
	baz=29					
T23A	Casias Ranch,	28.74	330	⇑P	P	10 40 24.0 +2.0
	baz=29					
S24A	Houchin Ranch,	28.84	332	⇑P	P	10 40 24.6 +1.6
	baz=29					
P29A	Atwood	28.85	340	⇓P	P	10 40 24.0 +1.4
	baz=29					
R25A	Fountain Ranch	28.85	334	⇑P	P	10 40 24.2 +1.4
	baz=29,SNR=8.7					
KSCO	Kaye Shedlock'	28.92	337	⇓P	P	10 40 24.7 +1.2
	baz=29					
X18A	Snowflake	29.02	322	⇑P	P	10 40 26.8 +2.4
	baz=29					
V20A	Brimhall	29.06	326	⇑P	P	10 40 26.7 +1.9
	baz=29					
U21A	Nageezi	29.09	327	⇓P	P	10 40 27.1 +2.0
	baz=29					
Q26A	Hugo	29.20	336	⇓P	P	10 40 26.8 +0.9
	baz=29,SNR=5.2					
R24A	Sanders Place,	29.28	333	⇓P	P	10 40 28.5 +1.8
	baz=29					
P27A	Ficken Ranch,	29.38	338	⇑P	P	10 40 29.3 +1.9
	baz=30					
Q25A	Bedland, Calha	29.48	335	⇑P	P	10 40 29.4 +0.9
	baz=30,SNR=6.6					
R23A	Moffat	29.57	332	⇑P	P	10 40 31.0 +1.7
	baz=30,SNR=6.5					
P26A	Davis Ranch, A	29.68	337	⇑P	P	10 40 31.5 +1.4
	baz=30					
S22A	4UR Ranch, Cre	29.69	330	⇓P	P	10 40 31.8 +1.4
	baz=30,SNR=11					
X16A	Lo Mia Camp, P	29.86	320	⇓P	P	10 40 33.9 +2.1
	baz=30					
O27A	Beecher Island	29.91	339	⇓P	P	10 40 33.1 +1.0
	baz=30					
P25A	Willow Gulch B	29.96	336	⇓P	P	10 40 33.4 +0.8
	baz=30					
N28A	Pribbeno Ranch	30.03	340	⇑P	P	10 40 34.1 +1.0
	baz=30					
R22A	Saguache, Gunn	30.04	331	⇑P	P	10 40 35.5 +1.9
	baz=30					
M30A	Dale-Ortello V	30.29	343	⇓P	P	10 40 36.5 +1.0
	baz=30					
M29A	Burnside Ranch	30.45	342	⇑P	P	10 40 38.1 +1.3
	baz=30					
O25A	Wiggins	30.45	336	⇓P	P	10 40 38.6 +1.6
	baz=30					
N27A	Anderson Farm,	30.47	339	⇑P	P	10 40 38.6 +1.5
	baz=30					
P23A	Jefferson	30.55	333	⇓P	P	10 40 39.7 +1.7
	baz=31					
Q22A	Crested Butte,	30.62	331	⇑P	P	10 40 40.0 +1.4
	baz=31					
N26A	Koester Ranch,	30.73	338	⇑P	P	10 40 40.8 +1.4
	baz=31					
ISCO	Idaho Springs	30.80	334	eP	P	10 40 40.7 +0.4
	comp=Z,2.6nm,0.8s					
ISCO	Idaho Springs	30.80	334	⇑P	P	10 40 41.5 +1.3
	baz=31					
R20A	Redvale	30.80	329	⇓P	P	10 40 42.0 +1.8
	baz=31					
O24A	Longmont	30.84	335	⇓P	P	10 40 42.1 +1.7
	baz=31					
SMCO	Snowmass	30.90	332	eP	P	10 40 41.7 +0.4
	comp=Z,1.6nm,0.6s					
N25A	Grover	31.04	337	⇓P	P	10 40 43.7 +1.5
	baz=31					
P22A	Eagle	31.14	332	⇑P	P	10 40 45.0 +1.9
	baz=31					
PV04	Paradox Valley	31.23	328	eP	P	10 40 44.1 +0.2
O23A	Lake Granby, G	31.27	334	⇓P	P	10 40 45.6 +1.2
	baz=31,SNR=8.6					
N24A	Carr	31.36	336	⇓P	P	10 40 46.4 +1.4
	baz=31					
Y12C	Blythe	31.46	316	⇓P	P	10 40 48.2 +2.4
	baz=32					
O22A	Kremmling	31.50	333	⇓P	P	10 40 47.4 +0.9
	baz=32,SNR=7.3					
PDMCI	Parker Dam,Lak	31.53	317	⇓P	P	10 40 48.3 +2.0
	baz=32					
U15A	North Rim	31.70	322	⇓P	P	10 40 50.0 +1.7
	baz=32					
K28A	Ten Mile Ranch	31.81	342	⇓P	P	10 40 50.3 +1.5
	baz=32					
W13A	Hualapai Mount	31.84	319	⇑P	P	10 40 51.4 +2.0
	baz=32					
N23A	Red Feather La	31.85	335	⇓P	P	10 40 50.4 +0.9
	baz=32,SNR=5.5					
M24A	Cheyenne	31.89	337	⇓P	P	10 40 50.9 +1.2
	baz=32					
N22A	Wattenberg Ran	31.99	334	⇓P	P	10 40 52.2 +1.6
	baz=32					
BC3	Big Chuckawall	32.04	315	⇑P	P	10 40 54.3 +3.3
	baz=32					
O20A	White River Ci	32.25	331	⇓P	P	10 40 54.8 +1.9
	baz=32,SNR=8.3					
MONP	Monument Peak	32.31	313	⇑P	P	10 40 56.0 +2.5
	baz=32					
N21A	Black Mountain	32.42	333	⇓P	P	10 40 56.8 +2.4
	baz=32					
J28A	Allard Ranch,	32.42	343	⇑P	P	10 40 55.4 +1.2
	baz=32					
SRU	San Rafael	32.60	328	⇑P	P	10 40 57.2 +1.3
	baz=33,SNR=6.2					
L23A	Garrett	32.78	336	⇓P	P	10 40 58.2 +0.7
	baz=33,SNR=7.0					
BRSD	Miller	32.78	346	⇓P	P	10 40 57.8 +0.5
	baz=33					
N20A	Spence Gulch,	32.82	332	⇑P	P	10 40 59.3 +1.4
	baz=33,SNR=6.3					
SADO	Sadowa	32.94	13	P	P	10 40 57.3 -1.2
SADO	Sadowa	32.94	13	P	P	10 40 57.3 -1.2
	comp=Z,1.3nm,0.6s,baz=249,slow=5.1,SNR=7.0					
M21A	Separation Pea	33.04	334	⇑P	P	10 41 01.6 +1.7
	baz=33					
J25A	Sunshine Ranch	33.20	340	⇓P	P	10 41 02.4 +1.5
	baz=33					
MURC	Murrieta	33.23	313	⇑P	P	10 41 04.4 +3.0
	baz=33					
COWI	Conover	33.24	359	eP	P	10 40 59.7 -1.5
	comp=Z,6.2nm,0.8s					
K23A	Bowen Ranch, D	33.30	337	⇓P	P	10 41 03.4 +1.5
	baz=33					
M20A	Sweetwater, Wa	33.31	333	⇑P	P	10 41 03.4 +1.3
	baz=33					
L21A	Rawlins	33.34	334	⇑P	P	10 41 02.7 +0.4
	baz=33,SNR=8.0					
K22A	Casper	33.56	336	⇑P	P	10 41 05.0 +0.7
	baz=34					
L20A	Wamsutter	33.79	333	⇓P	P	10 41 07.7 +1.4
	baz=34					
RSSD	Black Hills	33.92	340	eP	P	10 41 08.3 +0.9
	comp=Z,5.2nm,0.6s					
J22A	Midwest	34.19	337	⇓P	P	10 41 10.8 +1.1
	baz=34					
L19A	Farson	34.32	332	⇑P	P	10 41 13.0 +2.0
	baz=34					
EDW2	Edwards Air Fo	34.47	315	⇓P	P	10 41 14.8 +2.7
	baz=35					
J21A	Lysite	34.51	336	⇓P	P	10 41 13.6 +1.1
	baz=35,SNR=11					
I22A	9 Mile Ranch,	34.60	337	⇓P	P	10 41 14.0 +0.9
	baz=35,SNR=11					
DUG	Dugway	34.60	327	⇑P	P	10 41 14.8 +1.5
	baz=35					
H24A	Dirks Ranch, A	34.65	340	⇓P	P	10 41 14.8 +1.2
	baz=35,SNR=9.3					
K19A	Absolon Red Bu	34.67	334	⇓P	P	10 41 14.5 +0.5
	baz=35					
J20A	Shoshoni	34.78	335	⇑P	P	10 41 16.3 +1.5
	baz=35					
MPMC	Manual Prospec	34.78	317	⇑P	P	10 41 17.3 +2.4
	baz=35					
I21A	Big Trails, Te	34.84	336	⇓P	P	10 41 16.2 +0.8
	baz=35					
PDAR	Pinedale Array	34.94	333	P	P	10 41 16.8 +0.5
PDAR				PcP	PcP	10 43 48.0 -0.3
PDAR	Pinedale Array	34.94	333	P	P	10 41 16.8 +0.5
	comp=Z,0.7nm,0.5s,baz=131,slow=10,SNR=6.2					
PDAR				PcP	PcP	10 43 48.0 -0.3
	comp=Z,0.8nm,0.6s,baz=142,slow=6.3,SNR=7.0					
HWUT	Hardware Ranch	34.99	329	eP	P	10 41 16.5 -0.2
	comp=Z,2.2nm,0.8s					
J19A	Crowheart	35.12	334	⇓P	P	10 41 18.7 +0.9
	baz=35					
G24A	Alzada	35.12	341	⇑P	P	10 41 18.3 +0.7
	baz=35					
H22A	Clearmont	35.15	338	⇑P	P	10 41 18.8 +0.9
	baz=35					
I20A	Worland	35.29	335	⇑P	P	10 41 20.3 +1.2
	baz=35,SNR=12					
G23A	Biddle	35.33	339	⇑P	P	10 41 19.7 +0.2
	baz=35					
H21A	Big Horn, Sher	35.43	337	⇑P	P	10 41 20.9 +0.5
	baz=36,SNR=9.3					
E26A	Carlson Angus	35.56	344	⇑P	P	10 41 22.0 +0.6
	baz=36					
F24A	Ekalaka	35.59	341	⇑P	P	10 41 22.3 +0.7
	baz=36					
G22A	Birney	35.66	339	⇑P	P	10 41 22.7 +0.4
	baz=36,SNR=5.1					
H20A	Greybull	35.68	336	⇑P	P	10 41 23.5 +1.0
	baz=36					
I19A	Meeteetse	35.72	335	⇓P	P	10 41 24.1 +1.2
	baz=36					
F23A	Volborg	35.79	340	⇑P	P	10 41 24.0 +0.6
	baz=36,SNR=5.3					
I18A	Diamond G Ranc	35.80	333	⇑P	P	10 41 24.5 +0.8
	baz=36					
E25A	Miller Ranch,	35.86	343	⇓P	P	10 41 24.6 +0.7
	baz=36					
AGMN	Agassiz Nation	35.94	352	eP	P	10 41 23.5 -1.0
	comp=Z,3.9nm,0.6s					
G21A	Lodge Grass	36.00	338	⇑P	P	10 41 25.5 +0.3
	baz=36,SNR=5.1					
SNOW	Snow King Moun	36.03	332	eP	P	10 41 26.6 +0.9
	comp=Z,6.5nm,0.6s					
LOHW	Long Hollow	36.08	333	eP	P	10 41 26.6 +0.6
	comp=Z,2.3nm,0.6s					
F22A	Rosebud	36.13	339	⇑P	P	10 41 26.7 +0.4
	baz=36,SNR=5.8					
MDND	Maddock	36.16	348	⇓P	P	10 41 26.8 +0.4
	baz=36					
E24A	Baker	36.18	342	⇓P	P	10 41 27.5 +0.8
	baz=36					
H19A	Powell	36.23	335	⇓P	P	10 41 28.3 +1.0
	baz=36					
G20A	Bridger	36.38	337	⇓P	P	10 41 29.6 +1.1
	baz=36					
E23A	Ismay	36.44	341	⇓P	P	10 41 29.7 +0.8
	baz=36					
IMW	Indian Meadow	36.45	333	eP	P	10 41 30.2 +0.9
	comp=Z,2.3nm,0.5s					
H18A	Shoshone NF, C	36.52	335	⇑P	P	10 41 30.6 +0.8
	baz=37,SNR=8.0					
E22A	Miles City	36.60	340	⇑P	P	10 41 31.0 +0.8
	baz=37,SNR=5.7					
NVAR	Mina Array Bea	36.68	319	P	P	10 41 33.2 +2.0
NVAR				PcP	PcP	10 43 54.9 +1.4
NVAR	Mina Array Bea	36.68	319	P	P	10 41 33.2 +2.0
	comp=Z,1.3nm,0.7s,baz=132,slow=7.3,SNR=13					
NVAR				PcP	PcP	10 43 54.9 +1.4
	comp=Z,1.5nm,0.7s,baz=134,slow=4.1,SNR=11					
NVAR				LR	LR	10 58 29.3
	comp=Z,65nm,18.2s,baz=320,slow=39					
D24A	Glendive	36.69	342	⇓P	P	10 41 31.7 +0.7
	baz=37,SNR=6.9					
RLMT	Red Lodge	36.72	335	eP	P	10 41 31.9 +0.4
	comp=Z,3.5nm,0.7s					
G18A	Lazy EL Ranch,	37.00	335	⇓P	P	10 41 34.0 +0.2
	baz=37,SNR=8.8					
D23A	Lindsay	37.01	341	⇓P	P	10 41 34.7 +1.0
	baz=37					
E21A	Keefer Ranch,	37.08	339	⇓P	P	10 41 35.2 +0.9
	baz=37					
C24A	Savage	37.09	342	⇓P	P	10 41 35.4 +1.0
	baz=37,SNR=5.3					
F19A	Roth Farm, Mol	37.19	336	⇓P	P	10 41 35.8 +0.4
	baz=37,SNR=7.1					
H16A	Russell Place,	37.22	333	⇓P	P	10 41 37.4 +1.6
	baz=37					
D22A	Cohagen	37.30	340	⇓P	P	10 41 37.0 +0.8
	baz=37,SNR=13					
E20A	Meyer Farm, Mu	37.43	338	⇑P	P	10 41 38.1 +0.8
	baz=38,SNR=13					
G17A	Pierce Place,	37.49	334	⇑P	P	10 41 39.1 +1.2
	baz=38					
D21A	La Casta Ranch	37.50	339	⇓P	P	10 41 38.8 +0.9
	baz=38					
F18A	Big Timber	37.54	336	⇑P	P	10 41 38.9 +0.5
	baz=38,SNR=8.7					
C23A	Lambert	37.56	342	⇑P	P	10 41 39.1 +0.8
	baz=38					
E19A	Rath Farm, Rou	37.64	337	⇓P	P	10 41 39.8 +0.7
	baz=38,SNR=5.9					
I14A	Mackay	37.65	330	⇑P	P	10 41 40.4 +1.1
	baz=38,SNR=5.6					
C22A	Vida	37.73	341	⇑P	P	10 41 40.6 +0.8
	baz=38,SNR=12					
HLID	Hailey	37.85	329	⇑P	P	10 41 43.1 +2.0
	baz=38					
ULM	Lac du Bonnet	37.85	352	P	P	10 41 39.2 -1.5
ULM	Lac du Bonnet	37.85	352	P	P	10 41 39.2 -1.5
	comp=Z,4.5nm,0.5s,baz=168,slow=9.6,SNR=5.4					
DGMT	Dagmar	37.87	343	⇑P	P	10 41 41.5 +0.5
	baz=38,SNR=13					
F17A	Fitzpatrick Pl	37.92	335	⇑P	P	10 41 43.0 +1.4
	baz=38					
D20A	Manuel Ranch,	37.93	338	⇑P	P	10 41 42.8 +1.3
	baz=38					
MCMT	McKenzie Canyo	38.04	332	eP	P	10 41 44.5 +1.8
	comp=Z,3.3nm,0.6s					
B23A	Brockton	38.10	342	⇓P	P	10 41 43.6 +0.8
	baz=38,SNR=7.8					
BOZ	Bozeman (W)	38.13	334	eP	P	10 41 43.9 +0.5
	comp=Z,2.1nm,0.8s					
E18A	Harlowton	38.16	336	⇓P	P	10 41 44.3 +0.8
	baz=38,SNR=6.8					
C21A	Desert Coulee	38.20	340	⇑P	P	10 41 44.9 +1.1
	baz=38					
A24A	Westby	38.23	344	⇓P	P	10 41 44.6 +0.6
	baz=38,SNR=5.9					
F16A	Kennard Place,	38.24	334	⇑P	P	10 41 45.4 +1.2
	baz=38					
B22A	Reddig Ranch S	38.26	341	⇓P	P	10 41 45.2 +1.0
	baz=38					
D19A	Cripps Ranch,	38.26	338	⇓P	P	10 41 45.3 +0.9
	baz=38,SNR=13					
I12A	Atlanta	38.38	329	⇓P	P	10 41 46.7 +1.1
	baz=38					
C20A	Veseth Ranch,	38.41	339	⇓P	P	10 41 46.2 +0.7
	baz=38,SNR=9.2					
E17A	Martinsdale	38.45	335	⇑P	P	10 41 47.1 +1.0
	baz=38					
A23A	Redstone	38.51	343	⇑P	P	10 41 47.3 +1.0
	baz=39					
D18A	Linhart Farms,	38.64	337	⇑P	P	10 41 48.3 +0.8
	baz=39,SNR=8.3					
F15A	Butte	38.66	333	⇑P	P	10 41 49.5 +1.7
	baz=39					
B21A	Ellsworth Farm	38.69	340	⇑P	P	10 41 49.9 +2.0
	baz=39					
H12A	Diamond D Ranc	38.79	330	⇑P	P	10 41 51.0 +2.1
	baz=39					
C19A	Slack Wire Ran	38.80	338	⇑P	P	10 41 49.9 +1.0
	baz=39,SNR=20					
E16A	East Helena	38.85	335	⇓P	P	10 41 50.1 +0.7
	baz=39					
D17A	Six Diamond Ra	38.95	336	⇓P	P	10 41 50.4 +0.3
	baz=39,SNR=11					
B20A	Solberg Farm,	39.04	340	⇓P	P	10 41 51.6 +0.8
	baz=39					
D16A	Dana Ranch, Ca	39.20	335	⇑P	P	10 41 53.5 +1.3
	baz=39					
EGMT	Eagleton	39.30	338	eP	P	10 41 53.8 +0.7
	comp=Z,18nm,0.6s					
EGMT	Eagleton	39.30	338	⇓P	P	10 41 53.9 +0.7
	baz=39,SNR=11					
C17A	Wharram Farm,	39.37	336	⇓P	P	10 41 54.3 +0.7
	baz=39,SNR=7.1					
B19A	Brinkman Farms	39.37	339	⇑P	P	10 41 54.3 +0.7
	baz=39,SNR=18					
A20A	Cobblestone Ra	39.39	340	⇓P	P	10 41 54.5 +0.8
	baz=39,SNR=16					
G12A	Big Creek, Yel	39.44	330	⇑P	P	10 41 54.9 +0.5
	baz=40					
SIV	San Ignacio	39.53	136	P	P	10 41 55.2 0.0
SIV				PcP	PcP	10 44 04.3 +1.9
SIV	San Ignacio	39.53	136	P	P	10 41 55.2 0.0
	comp=Z,2.9nm,0.8s,baz=318,slow=9.7,SNR=14					
SIV				PcP	PcP	10 44 04.3 +1.9
	comp=Z,0.5nm,0.5s,baz=353,slow=2.7,SNR=3.9					
D15A	Lincoln	39.61	334	⇑P	P	10 41 56.5 +0.8
	baz=40					
B18A	Beardsley Farm	39.62	338	⇓P	P	10 41 57.0 +1.3
	baz=40					
A19A	Klindworth Far	39.71	339	⇑P	P	10 41 57.0 +0.6
	baz=40					
C16A	Fuhringer Ranc	39.89	336	⇑P	P	10 41 58.3 +0.3
	baz=40,SNR=8.0					
B17A	L&G Farms, Che	39.92	337	⇓P	P	10 41 58.5 +0.3
	baz=40,SNR=6.5					
MSO	Missoula	40.06	333	⇑P	P	10 42 00.2 +0.8
	baz=40					
D14A	Greenough	40.06	334	⇓P	P	10 41 59.5 +0.1
	baz=40					
A18A	Metzger Ranch,	40.09	338	⇓P	P	10 41 60.0 +0.4
	baz=40,SNR=13					
C15A	Salmond Ranch,	40.22	335	⇑P	P	10 42 02.1 +1.3
	baz=40					
A17A	Triple J Farms	40.42	338	⇓P	P	10 42 02.9 +0.6
	baz=40,SNR=16					
D13A	Huson	40.49	333	⇓P	P	10 42 03.4 +0.5
	baz=41					
E12A	Beaver Dam Sad	40.49	331	⇓P	P	10 42 03.5 +0.4
	baz=41					
B15A	Bradely Ranch,	40.63	335	⇑P	P	10 42 05.3 +1.2
	baz=41					
C14A	Swan Lake	40.70	334	⇓P	P	10 42 05.7 +1.0
	baz=41					
D12A	Red Ives Fores	40.86	332	⇓P	P	10 42 06.5 +0.5
	baz=41					
C13A	Hot Springs	40.99	333	⇓P	P	10 42 07.7 +0.7
	baz=41					
A15A	Johnson Ranch,	41.23	336	⇑P	P	10 42 09.3 +0.3
	baz=41,SNR=11					
B13A	Whitefish	41.47	334	⇓P	P	10 42 11.9 +0.9
	baz=42					
A14A	Double T Ranch	41.50	335	⇑P	P	10 42 11.9 +0.6
	baz=42,SNR=9.2					
C11A	Tepee Creek (N	41.86	332	⇑P	P	10 42 14.9 +0.7
	baz=42					
FFC	Flin Flon	43.16	349	eP	P	10 42 24.3 -0.2
	comp=Z,6.9nm,0.6s					
SCHQ	Schefferville	45.35	18	P	P	10 42 40.2 -1.9
SCHQ	Schefferville	45.35	18	P	P	10 42 40.2 -1.9
	comp=Z,3.1nm,0.6s,baz=227,slow=11,SNR=5.4					
YKA	Yellowknife Ar	53.01	345	P	P	10 43 39.7 -0.8
YKA				PcP	PcP	10 44 48.0 -0.7
YKA	Yellowknife Ar	53.01	345	P	P	10 43 39.7 -0.8
	comp=Z,6.0nm,0.6s,baz=137,slow=7.9,SNR=55					
YKA				PcP	PcP	10 44 47.9 -0.7
	comp=Z,0.5nm,0.6s,baz=151,slow=3.6,SNR=4.6					
YKW3	Yellowknife Ar	53.07	345	eP	P	10 43 38.7 -2.2
	comp=Z,0.2nm,0.8s					
ILAR	Eielson Array	65.25	336	P	P	10 45 04.3 -0.9
ILAR	Eielson Array	65.25	336	P	P	10 45 04.3 -0.9
	comp=Z,1.4nm,1.0s,baz=121,slow=4.6,SNR=16					
ILAR				LR	LR	11 19 50.6
	comp=Z,37nm,18.4s,baz=348,slow=42					
ARCES	ARCESS Array B	86.30	19	LR	LR	11 24 54.4
	comp=Z,29nm,19.0s,baz=256,slow=35					
SONM	Songino Array	118.20	349	PKP	PKPdf	10 53 10.2 -1.0
SONM	Songino Array	118.20	349	PKP	PKPdf	10 53 10.2 -1.0
	comp=Z,0.3nm,0.6s,baz=44,slow=2.1,SNR=3.3					
MKAR	Makanchi Array	120.18	7	PKP	PKPdf	10 53 13.4 -1.4
MKAR	Makanchi Array	120.18	7	PKP	PKPdf	10 53 13.4 -1.4
	comp=Z,0.3nm,0.7s,baz=270,slow=2.2,SNR=2.6					
ASAR	Alice Springs	138.24	249	PKPpre	PKPpre	10 53

ISC 25 10:42:52.4±0.9, 39°54N±0°02×23°47E±0°03, h14km±8km, n27, σ0°35/47, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
XOR	**Xorichti**	**0.28**	**231**	**P**	**Pg**	**10 42 58.0**	**-0.2**
XOR				S	Sg	10 43 02.1	0.0
XOR	**Xorichti**	**0.28**	**231**	**P**	**Pg**	**10 42 58.0**	**-0.2**
XOR				S	Sg	10 43 02.1	0.0
NEO	**Neokhori**	**0.30**	**219**	*e*PB	**Pg**	**10 42 58.4**	**-0.2**
NEO				*e*SB	**Sb**	**10 43 05.2**	**+0.8**
NEO	**Neokhori**	**0.30**	**219**	*e*Pb	**Pg**	**10 42 58.4**	**-0.2**
NEO				*e*Sb	**Sb**	**10 43 05.2**	**+0.8**
SKIA	**Skiathos**	**0.37**	**180**	P	**Pg**	**10 42 59.9**	**0.0**
SKIA				S	**Sg**	**10 43 05.5**	**+0.5**
SKIA	**Skiathos**	**0.37**	**180**	P	**Pg**	**10 42 59.9**	**0.0**
SKIA				S	**Sg**	**10 43 05.5**	**+0.5**
PAIG	**Paliouri**	**0.42**	**23**	P	**Pb**	**10 43 01.4**	**-0.2**
PAIG	**Paliouri**	**0.42**	**23**	*e*PB	**Pb**	**10 43 01.3**	**-0.3**
PAIG				*e*SB	**Sb**	**10 43 08.1**	**+0.3**
PAIG	**Paliouri**	**0.42**	**23**	*e*Pb	**Pb**	**10 43 01.3**	**-0.3**
PAIG				*e*Sb	**Sb**	**10 43 08.1**	**+0.3**
AOS	**Alonnisos**	**0.49**	**139**	P	**Pg**	**10 43 02.0**	**+0.1**
AOS				S	**Sb**	**10 43 09.7**	**-0.1**
AOS	**Alonnisos**	**0.49**	**139**	*e*PB	**Pg**	**10 43 02.1**	**+0.1**
AOS				*e*SB	**Sb**	**10 43 09.4**	**-0.4**
AOS	**Alonnisos**	**0.49**	**139**	*e*Pb	**Pg**	**10 43 02.1**	**+0.1**
AOS				*e*Sb	**Sb**	**10 43 09.4**	**-0.4**
PLG	**Polygyros**	**0.83**	**359**	*e*PN	**Pb**	**10 43 08.2**	**-0.5**
PLG	**Polygyros**	**0.83**	**359**	*e*Pn	**Pb**	**10 43 08.2**	**-0.5**
OUR	**Ouranopolis**	**0.89**	**26**	P	**Pg**	**10 43 09.7**	**+0.2**
OUR				S	**Sn**	**10 43 22.8**	**-0.3**
OUR	**Ouranopolis**	**0.89**	**26**	P	**Pg**	**10 43 09.7**	**+0.2**
OUR				S	**Sn**	**10 43 22.8**	**-0.3**
ATAL	**Atalanti**	**0.92**	**202**	P	**Pb**	**10 43 09.8**	**-0.2**
ATAL	**Atalanti**	**0.92**	**202**	P	**Pb**	**10 43 09.8**	**-0.2**
LIT	**Litokhoron**	**0.94**	**307**	*e*PN	**Pg**	**10 43 10.6**	**+0.1**
LIT				*e*SN	**Sg**	**10 43 23.2**	**+0.4**
LIT	**Litokhoron**	**0.94**	**307**	*e*Pn	**Pg**	**10 43 10.6**	**+0.1**
LIT				*e*Sn	**Sg**	**10 43 23.2**	**+0.4**
LKR	**Lokris**	**0.96**	**202**	*e*PN	**Pb**	**10 43 10.6**	**-0.2**
LKR	**Lokris**	**0.96**	**202**	*e*Pn	**Pb**	**10 43 10.6**	**-0.2**
AGG	**Agios Georgios**	**1.02**	**240**	P	**Pb**	**10 43 11.4**	**-0.4**
AGG				S	**Sn**	**10 43 27.0**	**+0.4**
AGG	**Agios Georgios**	**1.02**	**240**	*e*PN	**Pb**	**10 43 11.5**	**-0.4**
AGG				*e*SN	**Sn**	**10 43 26.6**	**0.0**
AGG	**Agios Georgios**	**1.02**	**240**	*e*Pn	**Pb**	**10 43 11.5**	**-0.4**
AGG				*e*Sn	**Sn**	**10 43 26.6**	**0.0**
THL	**Klokotos Trika**	**1.12**	**272**	*e*PN	**Pb**	**10 43 13.0**	**-0.6**
THL				*e*SN	**Sb**	**10 43 28.1**	**0.0**
THL	**Klokotos Trika**	**1.12**	**272**	*e*Pn	**Pb**	**10 43 13.0**	**-0.6**
THL				*e*Sn	**Sb**	**10 43 28.1**	**0.0**

*CSEM **25** 10:57:59.0, 34°.72N×24°.04E, h21km, MD2.9, After ATH*
ATH 25 10:57:59.0, 34°.72N×24°.04E, h21km±3km, MD2.9/5, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GVD	**Gavdhos**	**0.12**	**18**	*e*PB	Pb	10 58 02.7	-2.7
GVD				*e*SB	Sb	10 58 07.1	-2.9
GVD	**Gavdhos**	**0.12**	**18**	*e*Pb	Pb	10 58 02.7	-2.7
GVD				*e*Sb	Sb	10 58 07.1	-2.9
VAM	**Vamos**	**0.70**	**11**	*e*PB	Pb	10 58 10.6	-1.9
VAM				*e*SN	Sn	10 58 23.0	-0.8
VAM	**Vamos**	**0.70**	**11**	*e*Pb	Pb	10 58 10.6	-1.9
VAM				*e*Sn	Sn	10 58 23.0	-0.8
SIVA	**Sivas**	**0.70**	**65**	*e*PN	Pb	10 58 12.7	+0.2
SIVA	**Sivas**	**0.70**	**65**	*e*Pn	Pb	10 58 12.7	+0.2
IDI	**Anoyia**	**0.90**	**51**	*e*PN	Pb	10 58 15.9	-0.1
IDI	**Anoyia**	**0.90**	**51**	*e*Pn	Pb	10 58 15.9	-0.1
LAST	**Lasithi**	**1.26**	**69**	*e*PN	Pb	10 58 23.1	+0.9
LAST	**Lasithi**	**1.26**	**69**	*e*Pn	Pb	10 58 23.1	+0.9
KYTH	**Kithira**	**1.76**	**333**	*e*PN	Pb	10 58 30.0	-0.6
KYTH	**Kithira**	**1.76**	**333**	*e*Pn	Pb	10 58 30.0	-0.6
VLI	**Veliai**	**2.19**	**336**	*e*PN	Pb	10 58 37.8	-0.1
VLI	**Veliai**	**2.19**	**336**	*e*Pn	Pb	10 58 37.8	-0.1

*IDC **25** 11:19:12.6±1.4, 17°.02N×119°.84E, h0km, mb3.6/4, mb1 3.7/4, mb1mx3.5/23, mbtmp3.6/4, MS3.2/2, Ms1 3.3/2, ms1mx2.5/35, Error ellipse: s-maj=82.8km s-min=24.8km az=78.0*
*MAN **25** 11:19:15, 17°.27N×119°.70E, h28km, mb4.7, ML3.5, MS3.5*
*ISCJB **25** 11:19:16.8±0.8, 17°.25N±0°.05×119°.73E±0°.08, h34km, mb3.5/4, MS3.2/2, Error ellipse: s-maj=11.2km s-min=6.7km az=12.3*
ISC 25 11:19:17.6±0.8, 17°.15N±0°.05×119°.93E±0°.08, h34km, n14, σ1§34/17, mb3.4/4, 2C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	**Bolinao**	**0.77**	**181**	*e*P	**Pb**	**11 19 32.6**	**0.0**
BOLP				*e*S	**Sb**	**11 19 44.5**	**+1.7**
ABRA	**Dolores**	**0.90**	**56**	*e*P	**Pn**	**11 19 33.5**	**-0.4**
ABRA				*e*S	**Sb**	**11 19 48.3**	**+1.7**
BCPH	**Baguio City Da**	**0.99**	**141**	*e*P	**Pn**	**11 19 36.0**	**+0.6**
PIP	**Pasuquin**	**1.34**	**29**	*e*P	**Pn**	**11 19 38.7**	**-1.3**
SCZP	**Santa Cruz**	**1.37**	**181**	*e*P	**Pn**	**11 19 40.5**	**+0.1**
APYP	**Conner**	**1.44**	**60**	*e*P	**Pn**	**11 19 41.5**	**+0.2**
CAUP	**Cauayan**	**1.83**	**96**	*e*P	**Pb**	**11 19 51.4**	**+0.9**
BALP	**Baler**	**2.12**	**131**	*e*P	**Pb**	**11 19 53.8**	**-1.5**
PALP	**Palanan**	**2.39**	**92**	*e*P	**Pb**	**11 19 58.1**	**-2.0**
TGY	**Tagaytay City**	**3.18**	**162**	Pg	**Pb**	**11 20 10.9**	**-2.7**
	44nm,0.3s,baz=151,slow=14,SNR=3.0						
TGY				Lg	Lg	11 20 54.8	
	78nm,0.3s,baz=194,slow=17,SNR=4.6						
KSRS	**Korea Array**	**21.42**	**18**	P	**P**	**11 24 03.2**	**+0.6**
	1.0nm,0.7s,baz=202,slow=9.9,SNR=4.6						
SONM	**Songino Array**	**32.56**	**343**	P	**P**	**11 25 47.0**	**+1.3**
	0.3nm,0.6s,baz=171,slow=10,SNR=2.3						
SONM				LR	LR	11 38 46.4	
	comp=Z,34nm,19.4s,baz=193,slow=36						
ASAR	**Alice Springs**	**42.80**	**161**	P	**P**	**11 27 11.5**	**-0.9**
	0.4nm,0.5s,baz=340,slow=6.9,SNR=12						
NOA	**NORSAR Array B**	**83.87**	**332**	P	**P**	**11 31 43.9**	**+0.1**
	0.8nm,0.7s,baz=66,slow=4.8,SNR=3.5						
NOA				pP	**pP**	**11 31 54.0**	**-0.5**
	0.4nm,0.5s,baz=57,slow=6.0,SNR=2.6						
NOA				LR	LR	12 11 52.6	
	comp=Z,15nm,19.3s,baz=55,slow=38						

*ISK **25** 11:29:25.8, 37°.67N×26°.93E, h2km, MD2.8*
*ISCJB **25** 11:29:26.4±0.5, 37°.65N±0°.03×26°.87E±0°.03, h6km±4km, Error ellipse: s-maj=5.2km s-min=4.0km az=136.3*
*CSEM **25** 11:29:26.3±0.2, 37°.64N×26°.85E, h5km, MD2.8, Error ellipse: s-maj=3.7km s-min=2.9km az=56.0*
*ATH **25** 11:29:27.7, 37°.69N×26°.75E, h5km, MD2.8/4*
*DDA **25** 11:29:29.2, 37°.75N×26°.96E, h5km, MD2.8*
ISC 25 11:29:27.0±0.9, 37°.65N±0°.02×26°.85E±0°.02, h7km±6km, n37, σ0°84/54, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.06**	**347**	*e*PG	**Pg**	**11 29 28.6**	**-0.1**
SMG				*e*SG	**Sg**	**11 29 29.6**	**-0.2**
SMG	**Samos**	**0.06**	**347**	*e*Pg	**Pg**	**11 29 28.6**	**-0.1**
SMG				*e*Sg	**Sg**	**11 29 29.6**	**-0.2**
GCAM	**G?zelcaml?**	**0.30**	**81**	*i* P	**Pg**	**11 29 32.7**	**-0.3**
GCAM				*i* S	**Sg**	**11 29 37.5**	**+0.4**
GCAM	**G?zelcaml?**	**0.30**	**81**	*i* P	**Pg**	**11 29 32.7**	**-0.3**
GCAM				*i* S	**Sg**	**11 29 37.4**	**+0.4**
BODT	**Bodrum**	**0.69**	**148**	*e*PG	**Pg**	**11 29 40.0**	**-0.3**
BODT				*e*SG	**Sg**	**11 29 50.0**	**+0.6**
BODT	**Bodrum**	**0.69**	**148**	*e*Pg	**Pg**	**11 29 40.0**	**-0.3**
BODT				*e*Sg	**Sg**	**11 29 50.0**	**+0.6**
URLA	**Izmir**	**0.73**	**344**	*i* P	**Pg**	**11 29 40.9**	**-0.3**
URLA				*i* S	**Sb**	**11 29 52.1**	**-0.4**
URLA	**Izmir**	**0.73**	**344**	*i* P	**Pg**	**11 29 40.9**	**-0.3**
URLA				*i* S	**Sb**	**11 29 52.1**	**-0.4**
BLCB	**Balcova**	**0.75**	**11**	*e*PG	**Pg**	**11 29 40.5**	**-0.9**
BLCB	**Balcova**	**0.75**	**11**	*e*Pg	**Pg**	**11 29 40.5**	**-0.9**
IZM	**Izmir**	**0.81**	**23**	*e*PG	**Pg**	**11 29 41.7**	**-0.9**
IZM				*e*SG	**Sg**	**11 29 53.2**	**0.0**
IZM	**Izmir**	**0.81**	**23**	*e*Pg	**Pg**	**11 29 41.7**	**-0.9**
IZM				*e*Sg	**Sg**	**11 29 53.2**	**0.0**
AYDN	**Tasoluk**	**0.81**	**89**	*i* P	**Pg**	**11 29 41.6**	**-1.0**
AYDN				*i* S	**Sg**	**11 29 54.0**	**+0.7**
AYDN	**Tasoluk**	**0.81**	**89**	*i* P	**Pg**	**11 29 41.6**	**-1.0**
AYDN				*i* S	**Sg**	**11 29 54.0**	**+0.7**
MLSB	**Milas**	**0.82**	**116**	*e*PG	**Pg**	**11 29 41.4**	**-1.3**
MLSB	**Milas**	**0.82**	**116**	*e*Pg	**Pg**	**11 29 41.4**	**-1.3**
CHOS	**Chios island**	**0.97**	**320**	*e*PB	**Pg**	**11 29 45.6**	**0.0**
CHOS				*e*SB	**Sg**	**11 29 57.6**	**-0.5**
CHOS	**Chios island**	**0.97**	**320**	*e*Pb	**Pg**	**11 29 45.6**	**0.0**
CHOS				*e*Sb	**Sg**	**11 29 57.6**	**-0.5**
NIS1	**Nisyros Isl.**	**1.08**	**166**	*e*PB	**Pn**	**11 29 50.8**	**+2.2**
NIS1				*e*SB	**Sn**	**11 30 06.2**	**+2.3**
DAT	**Datca**	**1.09**	**148**	*e*PG	**Pg**	**11 29 46.8**	**-1.1**
DAT	**Datca**	**1.09**	**148**	*e*Pg	**Pg**	**11 29 46.8**	**-1.1**
APE	**Apeiranthos**	**1.21**	**241**	*e*PN	**Pn**	**11 29 50.8**	**+0.4**
APE	**Apeiranthos**	**1.21**	**241**	*e*PB	**Pg**	**11 29 48.5**	**-1.6**
APE				*e*SB	**Sg**	**11 30 05.4**	**-0.3**
APE	**Apeiranthos**	**1.21**	**241**	*e*Pb	**Pg**	**11 29 48.5**	**-1.6**
APE	**Apeiranthos**	**1.21**	**241**	*e*Pn	**Pn**	**11 29 50.8**	**+0.4**
APE				*e*Sb	**Sg**	**11 30 05.4**	**-0.3**
YER	**Yerkesik**	**1.25**	**114**	*e*PN	**Pn**	**11 29 49.6**	**-1.4**
YER	**Yerkesik**	**1.25**	**114**	*e*Pn	**Pn**	**11 29 49.6**	**-1.4**
KULA	**Kula-Manisa**	**1.67**	**58**	*e*PN	**Pn**	**11 29 56.6**	**-0.1**
KULA	**Kula-Manisa**	**1.67**	**58**	*e*Pn	**Pn**	**11 29 56.6**	**-0.1**
FETY	**Fethiye**	**2.05**	**119**	*e*PN	**Pn**	**11 30 01.8**	**-0.2**
FETY	**Fethiye**	**2.05**	**119**	*e*Pn	**Pn**	**11 30 01.8**	**-0.2**
GONE	**Gonen-Balikesi**	**2.48**	**15**	*e*PN	**Pn**	**11 30 08.4**	**+0.6**
GONE	**Gonen-Balikesi**	**2.48**	**15**	*e*Pn	**Pn**	**11 30 08.4**	**+0.6**
ELL	**Elmali**	**2.60**	**109**	*e*PN	**Pn**	**11 30 09.6**	**0.0**
ELL	**Elmali**	**2.60**	**109**	*e*Pn	**Pn**	**11 30 09.6**	**0.0**
TVSB	**Tavsanli**	**2.72**	**48**	*e*PN	**Pn**	**11 30 11.3**	**0.0**
TVSB	**Tavsanli**	**2.72**	**48**	*e*Pn	**Pn**	**11 30 11.3**	**0.0**

*NOU **25** 11:45:01.1±0.8, 18°.71S×169°.33E, h30km, MD3.7*
*IDC **25** 11:45:04.2±0.8, 19°.17S×169°.25E, h0km, mb4.2/13, mb1 4.4/14, mb1mx4.3/20, mbtmp4.2/14, ML4.0/1, MS3.9/11, Ms1 3.9/11, ms1mx3.5/30, Error ellipse: s-maj=22.8km s-min=18.3km az=125.0*
*ISCJB **25** 11:45:07.6±0.3, 19°.24S±0°.05×169°.14E±0°.06, h35km, mb4.5/28, MS3.9/8, Error ellipse: s-maj=10.6km s-min=4.4km az=39.4*
*NEIC **25** 11:45:09.5±0.3, 19°.27S×169°.17E, h35km, mb4.8/11, Error ellipse: s-maj=12.1km s-min=7.2km az=153.0*
*BJI **25** 11:45:37.5, 19°.40S×168°.60E, h301km, mB4.7/4, mb4.7/11*
ISC 25 11:45:09.1±0.5, 19°.22S±0°.07×169°.15E±0°.08, h35km, n75, σ1§46/67, mb4.7/28, MS3.9/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BAYA	**Yate Dam**	**3.61**	**216**	*e*P	**Pn**	**11 46 00.6**	**-1.9**
BAYA				*e*S	**Sn**	**11 46 45.2**	**+1.3**
BAYA				AMP		11 46 45.6	
	comp=N,16nm,9.2s						
DZM	**Mont Dzumac**	**3.80**	**221**	*e*P	**Pn**	**11 46 04.0**	**-1.3**
DZM				*e*S	**Sn**	**11 46 50.2**	**+1.4**
DZM				AMP		11 47 01.8	
	comp=Z,1μm,6.5s						
DZM	**Mont Dzumac**	**3.80**	**221**	Pn	**Pn**	**11 46 04.2**	**-1.1**
DZM				Sn	**Sn**	**11 46 47.2**	**-1.6**
DZM	**Mont Dzumac**	**3.80**	**221**	Pn	**Pn**	**11 46 04.8**	**-0.5**
	comp=Z,10nm,0.3s,baz=270,slow=24,SNR=26						
DZM				Sn	**Sn**	**11 46 47.2**	**-1.6**
	comp=Z,12nm,0.3s,baz=90,slow=24,SNR=6.3						
PLUM	**Mont Dore**	**3.84**	**217**	*e*S	**Sn**	**11 46 50.5**	**+0.9**
NOUC	**Port Laguerre**	**3.91**	**222**	*e*S	**Sn**	**11 46 52.6**	**+1.1**
MVNO	**Noumea**	**3.95**	**219**	*e*S	**Sn**	**11 46 53.5**	**+1.1**
MSVF	**Nonsavu**	**8.58**	**81**	*e*Pn	**Pn**	**11 47 12.0**	**+1.1**
HNR	**Honiara**	**13.19**	**316**	LR	LR	11 52 50.8	
	comp=Z,301nm,18.8s,baz=262,slow=35						
RAO	**Raoul Island**	**15.44**	**133**	LR	LR	11 52 58.9	
	comp=Z,287nm,21.9s,baz=3.0,slow=31						
EIDS	**Eidsvold**	**17.79**	**247**	*e*P	**P**	**11 49 16.3**	**+1.7**
	comp=Z,14nm,1.3s						
AFI	**Afiamalu**	**19.03**	**77**	LR	LR	11 55 02.3	
	comp=Z,704nm,19.5s,baz=203,slow=32						
ARMA	**Armidale**	**19.39**	**232**	*e*P	**P**	**11 49 32.4**	**+0.2**
	comp=Z,75nm,1.6s						
URZ	**Urewera**	**20.20**	**162**	P	**P**	**11 49 40.1**	**-0.7**
URZ	**Urewera**	**20.20**	**162**	P	**P**	**11 49 40.1**	**-0.7**
	comp=Z,4.9nm,0.6s,baz=310,slow=7.9,SNR=6.6						
CTA	**Charters Tower**	**21.58**	**264**	P	P	11 50 01.7	+5.8
CTA	**Charters Tower**	**21.58**	**264**	P	P	11 50 01.7	+5.8
	comp=Z,12nm,1.0s,baz=83,slow=12,SNR=7.1						
CTA				LR	LR	11 57 19.5	
	comp=Z,344nm,18.8s,baz=16,slow=34						
CTAO	**Charters Tower**	**21.58**	**264**	*e*P	**P**	**11 49 57.3**	**+1.4**
	comp=Z,22nm,1.2s						
PMG	**Port Moresby**	**23.41**	**292**	P	**P**	**11 50 15.5**	**+0.4**
PMG	**Port Moresby**	**23.41**	**292**	P	**P**	**11 50 15.5**	**+0.4**
	comp=Z,17nm,1.1s,baz=137,slow=11,SNR=2.2						
PMG				LR	LR	11 58 27.0	
	comp=Z,292nm,18.1s,baz=107,slow=34						
STKA	**Stephens Creek**	**27.78**	**238**	P	**P**	**11 50 56.5**	**+1.7**
STKA	**Stephens Creek**	**27.78**	**238**	P	**P**	**11 50 56.5**	**+1.7**
	comp=Z,2.8nm,0.5s,baz=65,slow=9.0,SNR=6.3						
STKA				LR	LR	12 01 22.1	
	comp=Z,244nm,19.3s,baz=35,slow=35						
RAR	**Rarotonga**	**29.21**	**99**	LR	LR	11 59 55.4	
	comp=Z,301nm,19.1s,baz=276,slow=31						
WRAB	**Tennant Creek**	**32.76**	**263**	*e*P	**P**	**11 51 37.7**	**-1.3**
	comp=Z,5.1nm,1.2s						
ASAR	**Alice Springs**	**33.05**	**256**	P	**P**	**11 51 42.5**	**+1.0**
ASAR	**Alice Springs**	**33.05**	**256**	P	**P**	**11 51 42.5**	**+1.0**
	comp=Z,7.8nm,0.6s,baz=85,slow=9.1,SNR=44						
ASAR				LR	LR	12 05 26.2	
	comp=Z,354nm,18.8s,baz=85,slow=37						
TBI	**Tubuai**	**38.70**	**104**	*e*LR	LR	12 03 09.5	
	comp=Z,270nm,30.0s						
PPT2	**Papeete2**	**39.14**	**94**	*e*LR	LR	12 03 23.7	
	comp=Z,381nm,26.5s						
PPT	**Papeete**	**39.14**	**94**	LR	LR	12 05 23.6	
	comp=Z,102nm,21.9s,baz=186,slow=31						
FITZ	**Fitzroy Crossi**	**41.16**	**264**	P	**P**	**11 52 51.2**	**+0.8**
FITZ	**Fitzroy Crossi**	**41.16**	**264**	P	**P**	**11 52 51.2**	**+0.8**
	comp=Z,3.5nm,0.9s,baz=94,slow=17,SNR=6.4						
FITZ				LR	LR	12 09 27.7	
	comp=Z,183nm,18.4s,baz=270,slow=36						
NWAO	**Narrogin (SRO)**	**48.14**	**243**	LR	LR	12 14 03.8	
	comp=Z,239nm,20.2s,baz=68,slow=36						
RKT	**Rikitea**	**51.99**	**105**	*e*LR	LR	12 09 16.9	
	comp=Z,223nm,31.8s						
VNDA	**Vanda**	**58.45**	**182**	P	**P**	**11 55 02.1**	**+1.2**
VNDA	**Vanda**	**58.45**	**182**	P	**P**	**11 55 02.1**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=343,slow=6.5,SNR=6.7						
MJAR	**Matsushiro Arr**	**62.70**	**332**	P	**P**	**11 55 30.6**	**+0.2**
MJAR	**Matsushiro Arr**	**62.70**	**332**	P	**P**	**11 55 30.6**	**+0.2**
	comp=Z,0.6nm,0.5s,baz=161,slow=8.1,SNR=4.2						
NJ2	**Nanjing**	**70.13**	**316**	*e*P	**P**	**11 56 20.0**	**+1.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PETK	**Petropavlovsk-**	**72.71**	**353**	P	**P**	**11 56 34.1**	**+0.9**
PETK	**Petropavlovsk-**	**72.71**	**353**	P	**P**	**11 56 34.1**	**+0.9**
	comp=Z,1.5nm,0.5s,baz=142,slow=6.3,SNR=8.1						
CN2	**Changchun**	**74.40**	**329**	*e*P	**P**	**11 56 44.0**	**+0.6**
CN2				*e*pP	PcP	11 57 54.0	+56
CN2				*e*S	SKiKP	12 05 52.0	-16
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
GYA	**Guiyang**	**75.74**	**305**	*e*P	**P**	**11 56 50.8**	**-0.8**
GYA				pP	PcP	11 58 01.5	+57
GYA				sP	sP	11 58 33.8	+87
GYA				S	**SKiKP**	**12 06 05.0**	**-5.3**
GYA				SKS	**S**	**12 06 27.3**	**-4.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	**Kunming**	**78.19**	**302**	P	**P**	**11 57 04.5**	**-1.1**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**78.42**	**294**	P	**P**	**11 57 08.2**	**+1.5**
CMAR	**Chiang Mai Arr**	**78.42**	**294**	P	**P**	**11 57 08.2**	**+1.5**
	comp=Z,0.4nm,0.5s,baz=145,slow=3.5,SNR=4.2						
HHC	**Hu-ho-hao-te**	**80.15**	**319**	*e*P	P	11 57 11.5	-4.3
HHC				pP	pP	11 58 25.8	+59
HHC				sP	sP	11 58 58.8	+88
HHC				PP	**PP**	**12 00 20.8**	**+2.1**
HHC				S	S	12 06 48.3	-30
HHC				SKS	SKSac	12 06 54.0	-37
HHC				sS	sS	12 08 58.3	+82
HHC				SS	SS	12 12 10.5	-19
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,6.0s						
CD2	**Chengdu**	**80.16**	**308**	*e*P	**P**	**11 57 14.5**	**-1.5**
CD2				pP	pP	11 58 25.0	+58
CD2				sP	sP	11 58 56.5	+85
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,30nm,5.8s						
OHAK	**Old Harbor**	**82.37**	**20**	*e*P	P	11 57 23.4	-3.6
	comp=Z,45nm,1.8s						
LZH	**Lanzhou**	**82.65**	**312**	*e*P	**P**	**11 57 27.3**	**-2.0**
LZH				pP	pP	11 58 41.3	+61
LZH				sP	sP	11 59 14.5	+90
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
SONM	**Songino Array**	**87.15**	**323**	P	**P**	**11 57 52.4**	**+0.8**
SONM	**Songino Array**	**87.15**	**323**	P	**P**	**11 57 52.4**	**+0.8**
	comp=Z,0.9nm,0.6s,baz=144,slow=3.3,SNR=6.7						
CMB	**Columbia Colle**	**87.21**	**48**	*e*P	**P**	**11 57 52.7**	**+0.7**
	comp=Z,5.2nm,1.1s						
ISA	**Isabella**	**87.54**	**51**	*e*P	**P**	**11 57 54.5**	**+0.8**
NVAR	**Mina Array Bea**	**88.85**	**49**	P	**P**	**11 58 00.7**	**+0.6**
NVAR	**Mina Array Bea**	**88.85**	**49**	P	**P**	**11 58 00.7**	**+0.6**
	comp=Z,1.4nm,0.8s,baz=226,slow=6.9,SNR=7.3						
MOD	**Modoc**	**89.02**	**45**	*e*P	**P**	**11 58 01.2**	**+0.5**
	comp=Z,12nm,1.4s						
SNAA	**Sanae**	**89.18**	**183**	*e*P	**P**	**11 57 59.3**	**-1.5**
LDFC	**Landfair**	**89.79**	**53**	*e*P	**P**	**11 58 05.1**	**+0.7**
	comp=Z,11nm,1.1s						
DOT	**Dot Lake**	**90.24**	**19**	*e*P	**P**	**11 58 02.7**	**-3.0**
ILAR	**Eielson Array**	**90.24**	**17**	P	**P**	**11 58 04.3**	**-1.3**
ILAR	**Eielson Array**	**90.24**	**17**	P	**P**	**11 58 04.3**	**-1.3**
	comp=Z,0.8nm,1.0s,baz=245,slow=6.8,SNR=6.0						
CCUT	**Cedar City**	**92.06**	**51**	*e*P	**P**	**11 58 16.1**	**+1.1**
	comp=Z,5.4nm,1.3s						
TUC	**Tucson**	**92.07**	**57**	*e*P	**P**	**11 58 16.1**	**+1.2**
	comp=Z,38nm,1.4s						
WUAZ	**Wupatki**	**92.78**	**53**	*e*P	**P**	**11 58 18.7**	**+0.4**
	comp=Z,4.0nm,1.0s						
TXAR	**Lajitas Array**	**96.83**	**61**	P	**P**	**11 58 37.3**	**+0.3**
TXAR	**Lajitas Array**	**96.83**	**61**	P	**P**	**11 58 37.3**	**+0.3**
	comp=Z,0.6nm,0.8s,baz=224,slow=5.2,SNR=7.1						
WMQ	**Urumqi**	**97.13**	**314**	*e*P	**P**	**11 58 35.0**	**-2.9**
YKA	**Yellowknife Ar**	**100.69**	**27**	P	**Pdif**	**11 58 53.9**	**+0.7**
YKA	**Yellowknife Ar**	**100.69**	**27**	P	**Pdif**	**11 58 53.9**	**+0.7**
	comp=Z,0.7nm,0.9s,baz=248,slow=4.6,SNR=2.9						
GERES	**GERESS Array B**	**144.43**	**332**	PKP	PKPbc	12 04 40.4	+0.1
GERES	**GERESS Array B**	**144.43**	**332**	PKP	PKPbc	12 04 40.4	+0.1
	comp=Z,1.5nm,0.6s,baz=29,slow=3.0,SNR=12						
PERS	**Pernice**	**145.34**	**328**	*e*PKPbc	**PKPbc**	**12 04 43.0**	**-0.1**
CRES	**Cresnjev**	**145.71**	**327**	*i* PKPbc	**PKPbc**	**12 04 44.2**	**-0.1**
PDKS	**Podkum**	**145.79**	**327**	*e*PKPbc	**PKPbc**	**12 04 44.5**	**-0.1**
LJU	**Ljubljana**	**146.04**	**328**	*i* PKPbc	**PKPbc**	**12 04 45.2**	**-0.1**

IDC 25 11:47:24.5±1.4, 19°.17S×169°.21E, h0km, mb4.2/6, mb1 4.5/7, mb1mx4.1/17, mbtmp4.2/7, ML4.0/1, Error ellipse: s-maj=74.7km s-min=22.7km az=147.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**3.88**	**221**	Pn	Pn	11 48 25.0	-0.5
	11nm,0.3s,baz=90,slow=24,SNR=8.3						
DZM				Sn	Sn	11 49 08.8	-3.2
	19nm,0.3s,baz=272,slow=24,SNR=4.3						
CTA	**Charters Tower**	**21.64**	**264**	P	P	11 52 19.3

	10nm,0.2s,SNR=7.9								
PMAFR	**Mafra**	**2.77**	**48**	P		Pb		12 27 19.7	-4.2
	3.6nm,0.2s,SNR=7.9								
PMAFR				*e*Sn		**Sn**		**12 27 54.4**	**+2.1**
	16nm,0.6s								
PMAFR				S		**Sb**		**12 27 55.5**	**-2.5**
	10nm,0.2s,SNR=7.9								
PNCL	**Nicolau / Gran**	**2.87**	**69**	*e*Pn		**Pn**		**12 27 20.5**	**+0.5**
PNCL				*e*Sn		**Sb**		**12 27 57.3**	**-3.4**
PNCL				A		A		12 27 59.4	
	1.4nm,0.2s								
PNCL	**Nicolau / Gran**	**2.87**	**69**	*e*Pn		**Pn**		**12 27 20.5**	**+0.5**
PNCL				*e*Sn		**Sb**		**12 27 57.3**	**-3.4**
	1.4nm,0.2s								
PCVE	**Castro Verde**	**3.14**	**79**	*e*Pn		**Pn**		**12 27 24.6**	**+0.9**
PCVE				*e*Sn		**Sn**		**12 28 02.3**	**+1.1**
PCVE				A		A		12 28 06.5	
	1.1nm,0.2s								
PCVE	**Castro Verde**	**3.14**	**79**	P		**Pn**		**12 27 24.6**	**+0.9**
PCVE				S		**Sn**		**12 28 02.3**	**+1.1**
	1.1nm,0.2s								
PCVE	**Castro Verde**	**3.14**	**79**	P		**Pn**		**12 27 24.6**	**+0.9**
PCVE				S		**Sn**		**12 28 02.3**	**+1.1**
	1.1nm,0.2s								
MOE	**Montemor**	**3.16**	**63**	*e*Sn		**Sn**		**12 28 04.0**	**+2.3**
MOE	**Montemor**	**3.16**	**63**	S		**Sn**		**12 28 04.0**	**+2.3**
MOE	**Montemor**	**3.16**	**63**	S		**Sn**		**12 28 04.0**	**+2.3**
PVAQ	**Vaqueiros**	**3.37**	**84**	*e*Pn		**Pn**		**12 27 27.1**	**+0.2**
PVAQ				*e*Sn		**Sn**		**12 28 08.1**	**+1.2**
PVAQ				A		A		12 28 11.7	
	1.2nm,0.1s								
PVAQ	**Vaqueiros**	**3.37**	**84**	P		**Pn**		**12 27 27.1**	**+0.2**
PVAQ				S		**Sn**		**12 28 08.1**	**+1.2**
	1.2nm,0.1s								
PVAQ	**Vaqueiros**	**3.37**	**84**	P		**Pn**		**12 27 27.1**	**+0.2**
PVAQ				S		**Sn**		**12 28 08.1**	**+1.2**
	1.2nm,0.1s								
PMTG	**Montargil**	**3.51**	**55**	*e*Pn		Pn		12 27 29.6	+0.8
PMTG				*e*Sn		**Sn**		**12 28 12.4**	**+2.1**
PMTG				A		A		12 28 16.6	
	1.9nm,0.1s								
PMTG	**Montargil**	**3.51**	**55**	*e*Pn		Pn		12 27 29.6	+0.8
PMTG				*e*Sn		**Sn**		**12 28 12.4**	**+2.1**
	12nm,0.1s								
EGRO	**El Granado**	**3.56**	**82**	P		**Pn**		**12 27 30.1**	**+0.5**
	0.4nm,0.1s,SNR=7.9								
EGRO				S		**Sn**		**12 28 13.1**	**+1.4**
	0.7nm,0.1s,SNR=7.9								
EGRO	**El Granado**	**3.56**	**82**	P		**Pn**		**12 27 30.1**	**+0.5**
	0.4nm,0.1s,SNR=7.9								
EGRO				S		**Sn**		**12 28 13.1**	**+1.4**
	0.7nm,0.1s,SNR=7.9								
PTOM	**Tomar**	**3.72**	**47**	A		A		12 28 09.9	
	12nm,0.1s								
PESTR	**Estremoz**	**3.84**	**62**	*e*Sn		**Sn**		**12 28 20.1**	**+1.5**
PESTR				A		A		12 28 24.3	
	3.8nm,0.6s								
PESTR	**Estremoz**	**3.84**	**62**	S		**Sn**		**12 28 20.1**	**+1.5**
	3.8nm,0.6s								
PESTR	**Estremoz**	**3.84**	**62**	S		**Sn**		**12 28 20.1**	**+1.5**
	3.8nm,0.6s								
PBAR	**Barrancos**	**4.02**	**73**	*e*Pn		Pn		12 27 36.9	+1.1
PBAR				*e*Sn		**Sn**		**12 28 24.7**	**+1.8**
PBAR				A		A		12 28 27.3	
	0.7nm,0.2s								
PBAR	**Barrancos**	**4.02**	**73**	P		Pn		12 27 36.9	+1.1
PBAR				S		**Sn**		**12 28 24.7**	**+1.8**
	0.7nm,0.2s								
PBAR	**Barrancos**	**4.02**	**73**	P		Pn		12 27 36.9	+1.1
PBAR				S		**Sn**		**12 28 24.7**	**+1.8**
	0.7nm,0.2s								
EBAD	**Badajoz**	**4.21**	**66**	P		**Pn**		**12 27 39.2**	**+0.8**
	0.4nm,0.1s,SNR=7.9								
EBAD	**Badajoz**	**4.21**	**66**	P		**Pn**		**12 27 39.2**	**+0.8**
	0.4nm,0.1s,SNR=7.9								
EMIN	**Mina Concepcio**	**4.23**	**80**	P		**Pn**		**12 27 38.9**	**+0.2**
	0.4nm,0.1s,SNR=7.9								
EMIN				S		**Sn**		**12 28 28.5**	**+0.3**
	0.1nm,0.1s,SNR=7.9								
EMIN	**Mina Concepcio**	**4.23**	**80**	P		**Pn**		**12 27 38.9**	**+0.2**
	0.4nm,0.1s,SNR=7.9								
EMIN				S		**Sn**		**12 28 28.5**	**+0.3**
	0.1nm,0.1s,SNR=7.9								
PMRV	**Marv??o**	**4.25**	**56**	*e*Pn		**Pn**		**12 27 39.6**	**+0.6**
PMRV				*e*Sn		**Sn**		**12 28 29.6**	**+1.0**
PMRV				A		A		12 28 31.5	
	1.0nm,0.1s								
PMRV	**Marv??o**	**4.25**	**56**	P		**Pn**		**12 27 39.6**	**+0.6**
PMRV				S		**Sn**		**12 28 29.6**	**+1.0**
	1.0nm,0.1s								
PMRV	**Marv??o**	**4.25**	**56**	P		**Pn**		**12 27 39.6**	**+0.6**
PMRV				S		**Sn**		**12 28 29.6**	**+1.0**
	1.0nm,0.1s								
ESPR	**Espera**	**4.87**	**91**	P		**Pn**		**12 27 47.4**	**0.0**
	2.8nm,0.2s,SNR=7.9								
ESPR	**Espera**	**4.87**	**91**	P		**Pn**		**12 27 47.4**	**0.0**
	2.8nm,0.2s,SNR=7.9								
POLO	**Lamas de Olo**	**5.32**	**36**	*e*Sn		**Sn**		**12 28 53.5**	**-1.7**
EPLA	**Plasencia**	**5.44**	**56**	S		**Sn**		**12 28 58.8**	**+0.8**
	0.6nm,0.1s,SNR=7.9								
EPLA	**Plasencia**	**5.44**	**56**	S		**Sn**		**12 28 58.8**	**+0.8**
	0.6nm,0.1s,SNR=7.9								
MVO	**Moncorvo**	**5.55**	**42**	*e*Sn		**Sn**		**12 29 00.3**	**-0.4**
MVO				A		A		12 29 03.1	
	1.5nm,0.1s								
MVO	**Moncorvo**	**5.55**	**42**	S		**Sn**		**12 29 01.0**	**+0.2**
	1.7nm,0.1s,SNR=7.9								
MVO	**Moncorvo**	**5.55**	**42**	*e*Sn		**Sn**		**12 29 00.3**	**-0.4**
	1.5nm,0.1s								
MVO				S		**Sn**		**12 29 01.0**	**+0.2**
	1.7nm,0.1s,SNR=7.9								
PGAV	**Gavieira, Arco**	**5.60**	**29**	*e*Sn		**Sn**		**12 28 58.7**	**-3.4**
PGAV				A		A		12 29 03.4	
	1.7nm,0.2s								
ELOB	**Lobios**	**5.60**	**31**	S		**Sn**		**12 29 00.5**	**-1.6**
	1.6nm,0.2s,SNR=7.9								
EADA	**Adamuz**	**5.92**	**78**	S		**Sn**		**12 29 11.3**	**+1.3**
	0.4nm,0.1s,SNR=7.9								
EADA	**Adamuz**	**5.92**	**78**	S		**Sn**		**12 29 11.3**	**+1.3**
	0.4nm,0.1s,SNR=7.9								
EMAZ	**Mazaricos**	**6.24**	**20**	S		Sn		12 29 11.2	-6.6
	3.3nm,0.1s,SNR=7.9								

*ISCJB **25** 12:29:18.6±0.8,5°.4S±0°.1×68°.74E±0°.09,h10km,mb4.1/12, MS3.9/13,Error ellipse: s-maj=19.7km s-min=11.9km az=24.3*

*IDC **25** 12:29:19.3±1.6,5°.44S×68°.69E,h0km,mb4.0/10, mb1 4.2/10,mb1mx3.9/28,mbtmp4.0/10,MS4.0/12, Ms1 4.0/12,ms1mx3.8/31,Error ellipse: s-maj=45.7km s-min=24.5km az=46.0*

*NEIC **25** 12:29:21.0±0.6,5°.41S×68°.79E,h10km,mb4.2/2,Error ellipse: s-maj=17.2km s-min=11.3km az=22.0*

*GCMT **25** 12:29:22.9±0.4,5°.56S×68°.52E,h12km,MW4.9,Moment Tensor Solution. s11,c13; s66,c87; Moment tensor: Scale 10^{16}Nm; M_{rr}-0.68±.12; $M_{\theta\theta}$-1.80±.09; $M_{\phi\phi}$2.48±.09; $M_{r\theta}$-0.99±.32; $M_{r\phi}$-0.15±.10; $M_{\theta r}$-0.01±.28; Best double couple: $M_0$2.40000×10^{16} NP1:ϕ_s39.00000°,δ69.00000°, λ-22.00000°. NP2:ϕ_s137.00000°,δ70.00000°, λ-157.00000°. Principal axes: T 2.4800, Plg0.0000°, Azm268.0000°; N -0.1100, Plg60.0000°, Azm177.0000°; P -2.3800, Plg30.0000°, Azm358.0000°; Data Used: II IU IC G CN.*

ISC 25 12:29:21.1±0.8,**5°.4S**±0°.2×**68°.8E**±0°.1,**h10**km,**n43,** σ**0**°**93**/35,**mb4.2**/12,**MS4.0**/13,**Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DGAR	**Diego Garcia**	**4.14**	**119**	Pn	**Pn**	**12 30 23.3**	**-1.0**
MSEY	**Mahe Island**	**13.28**	**273**	*e*Pn	**Pn**	**12 32 29.8**	**-0.1**
	26nm,0.3s						
OPO	**Ambohidratompo**	**24.79**	**236**	LR	LR	12 41 49.8	
	comp=Z,649nm,21.5s,baz=56,slow=30						
KMBO	**Kilima Mbogo**	**31.77**	**277**	LR	LR	12 45 53.2	
	comp=Z,326nm,21.0s,baz=272,slow=31						
CMAR	**Chiang Mai Arr**	**38.05**	**51**	P	**P**	**12 36 40.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**38.05**	**51**	P	**P**	**12 36 40.9**	**+0.8**
	3.2nm,0.6s,baz=242,slow=9.2,SNR=20						
CMAR				LR	LR	12 51 54.0	
	comp=Z,120nm,18.1s,baz=235,slow=36						
CHTO	**Chiang Mai**	**38.26**	**50**	*e*P	**P**	**12 36 42.3**	**+0.5**
	5.9nm,1.0s						

KAPI	**Kappang**	**50.74**	**92**	LR		LR		12 58 30.4	
	comp=Z,177nm,19.6s,baz=281,slow=34								
MKAR	**Makanchi Array**	**53.36**	**12**	P		**P**		**12 38 39.2**	**-1.6**
MKAR	**Makanchi Array**	**53.36**	**12**	P		**P**		**12 38 39.2**	**-1.6**
	1.0nm,0.6s,baz=203,slow=7.7,SNR=5.6								
MKAR				LR		LR		13 02 02.5	
	comp=Z,62nm,20.3s,baz=178,slow=37								
KBZ	**Khabaz**	**54.24**	**337**	P		**P**		**12 38 46.6**	**-0.4**
KBZ	**Khabaz**	**54.24**	**337**	P		**P**		**12 38 46.6**	**-0.4**
	3.0nm,0.9s,baz=188,slow=6.9,SNR=5.5								
ABKAR	**Akbulak array**	**55.01**	**353**	*e*P		**P**		**12 38 51.9**	**-0.7**
	1.6nm,0.7s								
TGY	**Tagaytay City**	**55.25**	**69**	LR		LR		12 57 56.4	
	comp=Z,3.0nm,19.2s,baz=181,slow=31								
BRTR	**Keskin Array B**	**55.40**	**327**	P		**P**		**12 38 54.5**	**-1.3**
BRTR	**Keskin Array B**	**55.40**	**327**	P		**P**		**12 38 54.5**	**-1.3**
	0.3nm,0.5s,baz=146,slow=8.0,SNR=2.9								
AKTO	**Aktyubinsk**	**56.42**	**352**	P		**P**		**12 39 03.7**	**+0.9**
AKTO	**Aktyubinsk**	**56.42**	**352**	P		**P**		**12 39 03.7**	**+0.9**
	0.7nm,0.4s,baz=156,slow=10.0,SNR=3.0								
KURBB	**Kurchatov Array**	**56.46**	**7**	P		**P**		**12 39 02.5**	**-0.5**
	0.5nm,0.5s,baz=201,slow=7.4,SNR=8.0								
KURK	**Kurchatov**	**56.57**	**7**	P		**P**		**12 39 02.5**	**-1.2**
FITZ	**Fitzroy Crossi**	**56.85**	**108**	LR		LR		13 02 01.3	
	comp=Z,145nm,18.6s,baz=244,slow=34								
DAV	**Davao City (W)**	**58.02**	**78**	LR		LR		13 02 40.9	
	comp=Z,138nm,20.9s,baz=330,slow=34								
BVAR	**Borovoye Array**	**58.26**	**1**	P		**P**		**12 39 16.3**	**+0.6**
BVAR	**Borovoye Array**	**58.26**	**1**	P		**P**		**12 39 16.3**	**+0.6**
	1.6nm,0.7s,baz=180,slow=5.9,SNR=8.4								
ZALV	**Zalesovo Beam**	**60.68**	**11**	P		**P**		**12 39 31.3**	**-1.1**
ZALV	**Zalesovo Beam**	**60.68**	**11**	P		**P**		**12 39 31.3**	**-1.1**
	1.9nm,0.5s,baz=209,slow=8.5,SNR=4.1								
ZALV				LR		LR		13 06 11.0	
	comp=Z,57nm,19.6s,baz=250,slow=36								
SONM	**Songino Array**	**62.49**	**28**	P		**P**		**12 39 45.3**	**+0.4**
SONM	**Songino Array**	**62.49**	**28**	P		**P**		**12 39 45.3**	**+0.4**
	1.7nm,0.7s,baz=224,slow=7.6,SNR=6.0								
SONM				LR		LR		13 06 48.8	
	comp=Z,114nm,19.3s,baz=63,slow=36								
ASAR	**Alice Springs**	**65.06**	**113**	P		**P**		**12 40 02.6**	**+0.3**
ASAR	**Alice Springs**	**65.06**	**113**	P		**P**		**12 40 02.6**	**+0.3**
	1.4nm,0.7s,baz=278,slow=6.1,SNR=21								
ASAR				LR		LR		13 04 06.3	
	comp=Z,169nm,18.4s,baz=270,slow=32								
STKA	**Stephens Creek**	**72.55**	**122**	LR		LR		13 09 44.6	
	comp=Z,117nm,18.2s,baz=30,slow=33								
PMG	**Port Moresby**	**77.68**	**98**	LR		LR		13 12 46.2	
	comp=Z,68nm,20.6s,baz=69,slow=34								
PDAR	**Pinedale Array**	**142.80**	**358**	PKP		**PKPdf**		**12 48 55.7**	**+0.2**
PDAR	**Pinedale Array**	**142.80**	**358**	PKP		**PKPdf**		**12 48 55.7**	**+0.2**
	0.3nm,0.5s,baz=354,slow=1.8,SNR=3.5								
DUG	**Dugway**	**145.36**	**2**	*e*PKPbc		**PKPbc**		**12 48 59.6**	**-0.1**
ISCO	**Idaho Springs**	**145.42**	**352**	*e*PKPbc		**PKPbc**		**12 49 00.1**	**0.0**
SMCO	**Snowmass**	**146.19**	**354**	*e*PKPdf		**PKPdf**		**12 49 02.3**	**+0.6**
NVAR	**Mina Array Bea**	**146.53**	**10**	PKPbc		**PKPdf**		**12 49 01.4**	**-0.7**
NVAR	**Mina Array Bea**	**146.53**	**10**	PKPbc		**PKPdf**		**12 49 01.4**	**-0.7**
	1.0nm,0.8s,baz=341,slow=3.9,SNR=7.9								
GSC	**Goldstone**	**149.83**	**9**	*e*PKPdf		**PKPdf**		**12 49 09.7**	**+2.3**
MNTX	**Cornudas Mount**	**153.31**	**349**	*e*PKPbc		**PKPbc**		**12 49 20.9**	**+0.7**
TXAR	**Lajitas Array**	**155.18**	**344**	PKPbc		PKPdf		12 49 23.8	+8.3
TXAR				PKPab		**PKPab**		**12 49 41.0**	**+1.0**
TXAR	**Lajitas Array**	**155.18**	**344**	PKPbc		PKPdf		12 49 23.8	+8.3
	0.2nm,0.5s,baz=115,slow=1.3,SNR=2.5								
TXAR				PKPab		**PKPab**		**12 49 41.0**	**+1.0**
	1.2nm,1.1s,baz=35,slow=3.1,SNR=4.6								

*ISK **25** 12:31:15.8,37°.68N×26°.85E,h10km,MD2.8*

*ISCJB **25** 12:31:16.7±0.4,37°.68N±0°.03×26°.87E±0°.03,h7km±4km, Error ellipse: s-maj=5.2km s-min=3.6km az=140.3*

*CSEM **25** 12:31:16.6±0.1,37°.67N×26°.85E,h10km,MD2.9,Error ellipse: s-maj=3.3km s-min=2.5km az=62.0*

*DDA **25** 12:31:16.2,37°.66N×26°.83E,h6km,MD2.8*

*ATH **25** 12:31:17.1,37°.65N×26°.84E,h5km±4km,MD2.9/4*

ISC 25 12:31:16.2±0.8,**37°.67N**±0°.02×**26°.88E**±0°.03,**h9**km±5km, **n32,** σ**0**°**46**/52,**Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMG	**Samos**	**0.05**	**317**	*e*PG	**Pg**	**12 31 18.3**	**+0.2**
SMG				*e*SG	**Sg**	**12 31 19.0**	**-0.4**
SMG	**Samos**	**0.05**	**317**	*e*Pg	**Pg**	**12 31 18.3**	**+0.2**
SMG				*e*Sg	**Sg**	**12 31 19.0**	**-0.4**
GCAM	**G?zelcaml?**	**0.28**	**84**	*i* P	**Pb**	**12 31 23.1**	**-0.4**
GCAM				*i* S	**Sb**	**12 31 27.7**	**-0.6**
GCAM	**G?zelcaml?**	**0.28**	**84**	*i* P	**Pb**	**12 31 23.1**	**-0.4**
GCAM				*i* S	**Sb**	**12 31 27.7**	**-0.6**
BODT	**Bodrum**	**0.70**	**150**	*e*PG	**Pb**	**12 31 30.8**	**+0.2**
BODT				*e*SG	**Sb**	**12 31 40.2**	**-0.1**
BODT	**Bodrum**	**0.70**	**150**	*e*Pg	**Pb**	**12 31 30.8**	**+0.2**
BODT				*e*Sg	**Sb**	**12 31 40.2**	**-0.1**
BLCB	**Balcova**	**0.72**	**10**	*e*PG	**Pg**	**12 31 30.6**	**+0.4**
BLCB				*e*SG	**Sg**	**12 31 39.9**	**+0.2**
BLCB	**Balcova**	**0.72**	**10**	*e*Pg	**Pg**	**12 31 30.6**	**+0.4**
BLCB				*e*Sg	**Sg**	**12 31 39.9**	**+0.2**
URLA	**Izmir**	**0.72**	**342**	*i* P	**Pb**	**12 31 31.5**	**+0.4**
URLA				*i* S	**Sb**	**12 31 41.0**	**-0.2**
URLA	**Izmir**	**0.72**	**342**	*i* P	**Pb**	**12 31 31.5**	**+0.4**
URLA				*i* S	**Sb**	**12 31 41.0**	**-0.2**
IZM	**Izmir**	**0.79**	**22**	*e*PG	**Pg**	**12 31 31.5**	**+0.1**
IZM	**Izmir**	**0.79**	**22**	*e*Pg	**Pg**	**12 31 31.5**	**+0.1**
AYDN	**Tasoluk**	**0.79**	**90**	*i* P	**Pb**	**12 31 32.4**	**+0.1**
AYDN				*i* S	**Sn**	**12 31 44.8**	**-0.9**
AYDN	**Tasoluk**	**0.79**	**90**	*i* P	**Pb**	**12 31 32.4**	**+0.1**
AYDN				*i* S	**Sn**	**12 31 44.8**	**-0.9**
MLSB	**Milas**	**0.81**	**117**	*e*PG	**Pb**	**12 31 33.0**	**+0.6**
MLSB				*e*SG	**Sb**	**12 31 44.1**	**+0.7**
MLSB	**Milas**	**0.81**	**117**	*e*Pg	**Pb**	**12 31 33.0**	**+0.6**
MLSB				*e*Sg	**Sb**	**12 31 44.1**	**+0.7**
CHOS	**Chios island**	**0.97**	**318**	*e*PN	**Pn**	**12 31 36.5**	**+0.3**
CHOS				*e*SB	**Sn**	**12 31 49.0**	**-1.1**
CHOS	**Chios island**	**0.97**	**318**	*e*Pn	**Pn**	**12 31 36.5**	**+0.3**
CHOS				*e*Sb	**Sn**	**12 31 49.0**	**-1.1**
DAT	**Datca**	**1.09**	**149**	*e*PN	**Pg**	**12 31 37.1**	**-0.1**
DAT	**Datca**	**1.09**	**149**	*e*Pn	**Pg**	**12 31 37.1**	**-0.1**
NIS1	**Nisyros Isl.**	**1.09**	**167**	*e*PG	**Pb**	**12 31 37.5**	**+0.2**
NIS1				*e*SB	**Sn**	**12 31 53.3**	**+0.2**
NIS1	**Nisyros Isl.**	**1.09**	**167**	*e*Pg	**Pb**	**12 31 37.5**	**+0.2**
NIS1				*e*Sb	**Sn**	**12 31 53.3**	**+0.2**
APE	**Apeiranthos**	**1.23**	**241**	*e*PN	**Pn**	**12 31 39.2**	**-0.5**
APE	**Apeiranthos**	**1.23**	**241**	*e*PB	**Pg**	**12 31 39.9**	**0.0**
APE				*e*SB	**Sn**	**12 31 57.0**	**+0.4**
APE	**Apeiranthos**	**1.23**	**241**	*e*Pn	**Pn**	**12 31 39.2**	**-0.5**
APE	**Apeiranthos**	**1.23**	**241**	*e*Pb	**Pg**	**12 31 39.9**	**0.0**
APE				*e*Sb	**Sn**	**12 31 57.0**	**+0.4**
YER	**Yerkesik**	**1.24**	**115**	*e*PN	**Pn**	**12 31 40.0**	**+0.2**
YER	**Yerkesik**	**1.24**	**115**	*e*Pn	**Pn**	**12 31 40.1**	**+0.2**
KULA	**Kula-Manisa**	**1.64**	**58**	*e*PN	**Pn**	**12 31 45.8**	**+0.4**
KULA	**Kula-Manisa**	**1.64**	**58**	*e*Pn	**Pn**	**12 31 45.8**	**+0.4**
EZN	**Ezine**	**2.19**	**349**	*e*PN	**Pn**	**12 31 53.1**	**+0.2**
EZN	**Ezine**	**2.19**	**349**	*e*Pn	**Pn**	**12 31 53.1**	**+0.2**

MEX 25 12:33:15.6±0.6,**28°.34N**×**112°.34W,h10**km,**MD4.3,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**1.02**	**175**	*e*P	Pg	12 33 31.6	-3.7
SRIG				*i* S	Sg	12 33 45.8	-2.8
HSIG		**1.40**	**61**	*e*P	Pn	12 33 37.5	-3.7
HSIG				*i* S	Sn	12 33 54.9	-4.8
SPIG	**San Pedro Mart**	**3.83**	**316**	*i* P	Pn	12 34 12.7	-2.3
SPIG				*i* S	Sn	12 34 56.9	-3.6
CGIG		**4.31**	**61**	*i* P	Pn	12 34 19.2	-2.3
CGIG				*i* S	Sn	12 35 08.9	-3.1
HPIG		**6.08**	**102**	*i* P	Pn	12 34 43.6	-2.3
HPIG				*i* S	Sn	12 35 53.4	-2.4

*BJI **25** 12:34:15.4,23°.80S×13°.50W,h10km,mB5.5/17,Ms5.3/21, Ms7 5.1/22*

*MOS **25** 12:34:16.4±0.8,23°.72S×13°.48W,h10km,mb5.4/39, MS4.8/11,Error ellipse: s-maj=12.7km s-min=5.4km az=73.2*

*IDC **25** 12:34:16.2±0.4,23°.85S×13°.41W,h0km,mb4.5/31, mb1 4.6/31,mb1mx4.6/32,mbtmp4.5/31,MS4.7/26, Ms1 4.7/26,ms1mx4.7/28,Error ellipse: s-maj=14.2km s-min=10.3km az=158.0*

*NEIC **25** 12:34:17.8±0.2,23°.81S×13°.43W,h10km,mb5.3/34,Error ellipse: s-maj=5.8km s-min=4.2km az=140.0*

*ISCJB **25** 12:34:18.3±0.2,23°.71S±0°.05×13°.49W±0°.05,h21km, mb5.0/133,MS4.8/49,Error ellipse: s-maj=7.9km s-min=6.2km az=139.4*

*TEH **25** 12:34:18.0,23°.76S×13°.53W,h10km,ML5.2*

*GCMT **25** 12:34:19.1±0.2,23°.90S×13°.34W,h12km,MW5.3, Moment Tensor Solution. s60,c86; s99,c182; Moment tensor: Scale 10^{17}Nm; M_{rr}-1.04±.02; $M_{\theta\theta}$0.15±.02; $M_{\phi\phi}$0.89±.02; $M_{r\theta}$-0.33±.05; $M_{\theta\phi}$-0.28±.01; $M_{\phi r}$0.17±.05; Best double couple: $M_0$1.10000×10^{17} NP1:ϕ_s353.00000°, δ39.00000°,λ-71.00000°. NP2:ϕ_s149.00000°,δ54.00000°, λ-105.00000°. Principal axes: T 1.0200, Plg8.0000°, Azm249.0000°; N 0.1100, Plg12.0000°, Azm158.0000°; P -1.1300, Plg76.0000°, Azm12.0000°; Data Used: II IU IC CN G. Surface waves from 101 sta.*

*SZGRF **25** 12:34:24.4,22°.96S×11°.76W,h24km,mb5.2,MS4.7, Southern Mid-Atlantic Ridge*

ISC 25 12:34:19.1±0.7,**23°.83S**±0°.06×**13°.45W**±0°.06,**h19**km±2km, **h18**km:**pP-P,n408,** σ**1**°**10**/484,**mb5.2**/133,**MS4.8**/50,**7C-4D, Southern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**28.05**	**306**	LR	LR	12 48 48.3	
	comp=Z,1μm,19.4s,baz=120,slow=31						
TSUM	**Tsumeb**	**29.20**	**87**	*e*P	**P**	**12 40 19.3**	**-0.7**
TSUM				S	S	12 45 20.2	+8.3
TSUM	**Tsumeb**	**29.20**	**87**	P	**P**	**12 40 17.8**	**-2.1**
	9.5nm,0.9s,baz=264,slow=9.7,SNR=6.5						
TSUM				S	S	12 45 20.2	+8.3
	1.0nm,0.6s,baz=260,slow=18,SNR=1.4						
TSUM				LR	LR	12 50 07.2	
	comp=Z,3μm,19.4s,baz=270,slow=33						
SUR	**Sutherland**	**31.29**	**113**	LR	LR	12 50 09.9	
	comp=Z,2μm,21.0s,baz=128,slow=30						
DBIC	**Dimbokro**	**31.45**	**17**	P	**P**	**12 40 39.4**	**-0.3**
DBIC	**Dimbokro**	**31.45**	**17**	P	**P**	**12 40 39.4**	**-0.3**
	10nm,1.0s,baz=186,slow=10,SNR=3.4						
DBIC				LR	LR	12 50 09.8	
	comp=Z,2μm,21.1s,baz=174,slow=30						
BDFB	**Brasilia**	**33.47**	**278**	P	**P**	**12 40 57.7**	**+0.1**
BDFB	**Brasilia**	**33.47**	**278**	P	**P**	**12 40 57.7**	**+0.1**
	17nm,0.9s,baz=117,slow=5.9,SNR=12						
BDFB				LR	LR	12 52 30.5	
	comp=Z,4μm,19.7s,baz=98,slow=33						
BOSA	**Boshof**	**34.94**	**106**	P	**P**	**12 41 09.6**	**-0.7**
BOSA	**Boshof**	**34.94**	**106**	P	**P**	**12 41 09.6**	**-0.7**
	23nm,0.9s,baz=275,slow=7.9,SNR=14						
BOSA				LR	LR	12 52 20.5	
	comp=Z,2μm,21.9s,baz=271,slow=31						
LBTB	**Lobatse**	**35.49**	**100**	P	**P**	**12 41 14.5**	**-0.5**
LBTB	**Lobatse**	**35.49**	**100**	P	**P**	**12 41 14.5**	**-0.5**
	27nm,1.0s,baz=280,slow=10.0,SNR=16						
TORD	**Torodi Ar. Bea**	**39.62**	**24**	P	**P**	**12 41 49.4**	**-0.5**
TORD	**Torodi Ar. Bea**	**39.62**	**24**	P	**P**	**12 41 49.4**	**-0.5**
	17nm,0.9s,baz=202,slow=8.7,SNR=48						
TORD				LR	LR	12 55 07.1	
	comp=Z,2μm,19.9s,baz=200,slow=32						
CPUP	**Villa Florida**	**39.68**	**257**	P	**P**	**12 41 51.0**	**+0.7**
CPUP	**Villa Florida**	**39.68**	**257**	P	**P**	**12 41 51.0**	**+0.7**
	7.7nm,1.0s,baz=72,slow=7.8,SNR=8.9						
CPUP				LR	LR	12 55 59.9	
	comp=Z,2μm,18.6s,baz=356,slow=33						
LSZ	**Lusaka**	**40.03**	**86**	*e*P	**P**	**12 41 54.6**	**+1.1**
LSZ	**Lusaka**	**40.03**	**86**	P	**P**	**12 41 53.7**	**+0.2**
	8.0nm,1.0s,baz=259,slow=5.2,SNR=9.4						
TRQA	**Tornquist**	**43.50**	**239**	*e*P	**P**	**12 42 22.0**	**+0.4**
	241nm,1.2s						
**SI

CMLA	**Cha da Macela**	**62.31**	**349**	*e*P		**P**	**12 44 38.1**	**-2.1**
	comp=Z,117nm,1.9s								
CMLA				*e*LQ		LQ	12 59 29.8		
CMLA				*e*LR		LR	13 03 09.2		
	comp=Z,72nm,24.2s								
LIS	**Lisbon**	**62.35**	**4**	*e*P		**P**	**12 44 39.9**	**-0.4**
LIS				AMb		AMB	12 44 50.5		
	comp=Z,93nm,1.3s								
LIS	**Lisbon**	**62.35**	**4**	*e*P		**P**	**12 44 39.9**	**-0.4**
	comp=Z,93nm,1.3s								
LIS	**Lisbon**	**62.35**	**4**	*e*P		**P**	**12 44 39.9**	**-0.4**
PMAFR	**Mafra**	**62.58**	**4**	*e*P		**P**	**12 44 41.9**	**0.0**
	comp=Z,83nm,2.2s								
PESTR	**Estremoz**	**62.61**	**5**	*e*P		**P**	**12 44 42.7**	**+0.5**
	comp=Z,32nm,2.3s								
PMTG	**Montargil**	**62.76**	**5**	*e*P		**P**	**12 44 42.8**	**-0.3**
	comp=Z,34nm,1.6s								
MAW	**Mawson**	**62.99**	**155**	P		**P**	**12 44 44.7**	**+0.3**
MAW	**Mawson**	**62.99**	**155**	P		**P**	**12 44 44.7**	**+0.3**
	comp=Z,17nm,0.9s,baz=282,slow=7.3,SNR=30								
KEST	**Kesra**	**63.05**	**21**	P		**P**	**12 44 45.7**	**+0.5**
KEST	**Kesra**	**63.05**	**21**	P		**P**	**12 44 45.7**	**+0.5**
	comp=Z,7.5nm,1.1s,baz=178,slow=8.9,SNR=6.6								
PMRV	**Marv??o**	**63.18**	**5**	*e*P		**P**	**12 44 46.8**	**+0.8**
	comp=Z,45nm,1.5s								
PMRV				*e*LQ		LQ	12 59 42.0		
PMRV				*e*LR		LR	13 04 25.4		
	comp=Z,413nm,18.0s								
PTOM	**Tomar**	**63.29**	**4**	*e*P		**P**	**12 44 46.6**	**-0.1**
	comp=Z,30nm,1.8s								
PCBR	**Castelo Branco**	**63.58**	**5**	*e*P		**P**	**12 44 49.0**	**+0.4**
	comp=Z,24nm,2.0s								
ROSA	**Rosais**	**63.75**	**347**	*e*P		**P**	**12 44 50.9**	**+1.2**
	comp=Z,180nm,1.9s								
ROSA				*e*LR		LR	13 04 00.8		
	comp=Z,51nm,22.7s								
ESDC	**Sonseca Array**	**63.79**	**8**	P		**P**	**12 44 50.1**	**+0.1**
ESDC	**Sonseca Array**	**63.79**	**8**	P		**P**	**12 44 50.1**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=184,slow=7.1,SNR=9.5								
ESDC				LR		LR	13 11 26.4		
	comp=Z,280nm,18.9s,baz=160,slow=35								
PGRA	**Graciosa**	**63.99**	**347**	*e*P		**P**	**12 44 53.5**	**+2.2**
	comp=Z,103nm,0.8s								
PGRA				*e*LR		LR	13 03 49.7		
	comp=Z,48nm,20.0s								
MTE	**Manteigas**	**64.13**	**5**	*e*P		**P**	**12 44 53.2**	**+0.9**
	comp=Z,39nm,2.2s								
MTE				*e*LQ		LQ	13 00 42.1		
MTE				*e*LR		LR	13 05 11.2		
	comp=Z,371nm,20.0s								
MVO	**Moncorvo**	**64.94**	**5**	*e*P		**P**	**12 44 58.0**	**+0.5**
	comp=Z,38nm,1.1s								
MVO				*e*LQ		LQ	12 59 13.4		
MVO				*e*LR		LR	13 03 10.3		
	comp=Z,251nm,22.0s								
ATD	**Arta Tunnel**	**65.28**	**64**	LR		LR	13 12 18.0		
	comp=Z,962nm,18.1s,baz=228,slow=35								
PCAB	**Cabril**	**65.40**	**4**	*e*P		**P**	**12 45 00.7**	**+0.2**
	comp=Z,43nm,1.9s								
PBRG	**Braganca**	**65.60**	**6**	*e*P		**P**	**12 45 01.8**	**0.0**
	comp=Z,33nm,1.6s								
ROSC	**El Rosal**	**65.78**	**287**	P		**P**	**12 45 04.8**	**+0.8**
ROSC	**El Rosal**	**65.78**	**287**	P		**P**	**12 45 04.8**	**+0.8**
	comp=Z,5.6nm,0.5s,baz=129,slow=2.2,SNR=7.7								
ROSC				LR		LR	13 12 54.4		
	comp=Z,1µm,18.7s,baz=179,slow=35								
QSPA	**South Pole Qui**	**66.38**	**180**	LR		LR	13 09 23.7		
	comp=Z,650nm,21.9s,baz=28,slow=32								
OTAV	**Otavalo**	**67.33**	**281**	*e*P		**P**	**12 45 15.1**	**+1.0**
	comp=Z,35nm,1.9s								
ETSF	**Etsaut**	**67.45**	**10**	*e*P		**P**	**12 45 13.8**	**+0.2**
ETSF	**Etsaut**	**67.45**	**10**	*e*P		**P**	**12 45 13.8**	**+0.2**
ETSF	**Etsaut**	**67.45**	**10**	*e*P		**P**	**12 45 13.8**	**+0.2**
SJPF	**Ste Jean**	**67.56**	**10**	*e*P		**P**	**12 45 14.6**	**+0.4**
	comp=Z,68nm,1.4s								
SJPF	**Ste Jean**	**67.56**	**10**	*e*P		**P**	**12 45 14.6**	**+0.4**
SJPF				pmax		pmax			
	comp=Z,68nm,1.4s								
SJPF	**Ste Jean**	**67.56**	**10**	*e*P		**P**	**12 45 14.6**	**+0.4**
	comp=Z,68nm,1.4s								
EPF	**Esparros**	**67.73**	**11**	*e*P		**P**	**12 45 15.4**	**0.0**
EPF	**Esparros**	**67.73**	**11**	*e*P		**P**	**12 45 15.4**	**0.0**
EPF	**Esparros**	**67.73**	**11**	*e*P		**P**	**12 45 15.4**	**0.0**
MTLF	**Montolieu**	**68.38**	**12**	*e*P		**P**	**12 45 18.6**	**-0.8**
MTLF	**Montolieu**	**68.38**	**12**	*e*P		**P**	**12 45 18.6**	**-0.8**
MTLF	**Montolieu**	**68.38**	**12**	*e*P		**P**	**12 45 18.6**	**-0.8**
TIP	**Timpagrande**	**68.76**	**25**	*e*P		**P**	**12 45 22.4**	**+0.5**
	comp=Z,35nm,1.4s								
TIP				*e*pP		**pP**	**12 45 29.3**	**+1.3**
LASF	**Ste Croix**	**69.41**	**13**	*e*P		**P**	**12 45 25.6**	**-0.2**
	comp=Z,26nm,1.4s								
LASF	**Ste Croix**	**69.41**	**13**	*e*P		**P**	**12 45 25.6**	**-0.2**
	comp=Z,26nm,1.4s								
LFF	**La Frestale**	**69.65**	**11**	*e*P		**P**	**12 45 27.3**	**+0.1**
LFF	**La Frestale**	**69.65**	**11**	*e*P		**P**	**12 45 27.3**	**+0.1**
LFF	**La Frestale**	**69.65**	**11**	*e*P		**P**	**12 45 27.3**	**+0.1**
SMRF	**Simiane la Rot**	**69.69**	**15**	*e*P		**P**	**12 45 28.1**	**+0.5**
SMRF	**Simiane la Rot**	**69.69**	**15**	*e*P		**P**	**12 45 28.1**	**+0.5**
CAF	**Calviac**	**69.87**	**12**	*e*P		**P**	**12 45 28.3**	**-0.4**
CAF	**Calviac**	**69.87**	**12**	*e*P		**P**	**12 45 28.3**	**-0.4**
CAF	**Calviac**	**69.87**	**12**	*e*P		**P**	**12 45 28.3**	**-0.4**
RJF	**Les Rejaudoux**	**70.14**	**11**	*e*P		**P**	**12 45 29.9**	**-0.4**
RJF				*e*R					
	comp=Z,984nm,20.2s								
RJF	**Les Rejaudoux**	**70.14**	**11**	*e*P		**P**	**12 45 29.9**	**-0.4**
RJF	**Les Rejaudoux**	**70.14**	**11**	*e*P		**P**	**12 45 29.9**	**-0.4**
VIVF	**Saint-Julien-l**	**70.33**	**14**	*e*P		**P**	**12 45 31.5**	**0.0**
VIVF	**Saint-Julien-l**	**70.33**	**14**	*e*P		**P**	**12 45 31.5**	**0.0**
VIVF	**Saint-Julien-l**	**70.33**	**14**	*e*P		**P**	**12 45 31.5**	**0.0**
AQU	**L'Aquila**	**70.37**	**21**	*e*P		**P**	**12 45 31.2**	**-0.6**
EIL	**Elat**	**70.65**	**44**	P		**P**	**12 45 35.0**	**+1.2**
EIL	**Elat**	**70.65**	**44**	P		**P**	**12 45 35.0**	**+1.2**
	comp=Z,11nm,0.8s,baz=248,slow=4.2,SNR=9.8								
ORIF	**Oris-en-Rattie**	**70.66**	**14**	*e*P		**P**	**12 45 33.8**	**+0.3**
	comp=Z,60nm,1.5s								
ORIF				*e*R					
	comp=Z,2µm,19.2s								
ORIF	**Oris-en-Rattie**	**70.66**	**14**	*e*P		**P**	**12 45 33.8**	**+0.3**
ORIF				pmax		pmax			
	comp=Z,60nm,1.5s								
ORIF	**Oris-en-Rattie**	**70.66**	**14**	*e*P		**P**	**12 45 33.8**	**+0.3**
	comp=Z,60nm,1.5s								
MBDF	**Montbardon**	**70.68**	**15**	*e*P		**P**	**12 45 34.1**	**+0.3**
	comp=Z,28nm,1.1s								
MBDF	**Montbardon**	**70.68**	**15**	*e*P		**P**	**12 45 34.1**	**+0.3**
MBDF				pmax		pmax			
	comp=Z,28nm,1.1s								
MBDF	**Montbardon**	**70.68**	**15**	*e*P		**P**	**12 45 34.1**	**+0.3**
	comp=Z,28nm,1.1s								
MFF	**Saint Martin d**	**71.13**	**10**	*e*P		**P**	**12 45 36.2**	**0.0**
	comp=Z,32nm,1.2s								
MFF	**Saint Martin d**	**71.13**	**10**	*e*P		**P**	**12 45 36.2**	**0.0**
MFF				pmax		pmax			
	comp=Z,33nm,1.2s								
MFF	**Saint Martin d**	**71.13**	**10**	*e*P		**P**	**12 45 36.2**	**0.0**
	comp=Z,32nm,1.2s								
TCF	**Toulx Ste Croi**	**71.22**	**11**	*e*P		**P**	**12 45 36.9**	**+0.1**
	comp=Z,46nm,1.5s								
TCF	**Toulx Ste Croi**	**71.22**	**11**	*e*P		**P**	**12 45 36.9**	**+0.1**
TCF				pmax		pmax			
	comp=Z,46nm,1.5s								
TCF	**Toulx Ste Croi**	**71.22**	**11**	*e*P		**P**	**12 45 36.9**	**+0.1**
	comp=Z,46nm,1.5s								
LPG	**La Plagne**	**71.41**	**15**	*e*P		**P**	**12 45 38.6**	**+0.3**
	comp=Z,26nm,1.0s								
LPG	**La Plagne**	**71.41**	**15**	*e*P		**P**	**12 45 38.6**	**+0.3**
LPG				pmax		pmax			
	comp=Z,26nm,1.0s								
LPG	**La Plagne**	**71.41**	**15**	*e*P		**P**	**12 45 38.6**	**+0.3**
	comp=Z,26nm,1.0s								
LPL	**La Plagne**	**71.42**	**15**	*e*P		**P**	**12 45 38.5**	**+0.2**
	comp=Z,19nm,0.9s								
LPL	**La Plagne**	**71.42**	**15**	*e*P		**P**	**12 45 38.5**	**+0.2**
LPL				pmax		pmax			
	comp=Z,19nm,0.9s								
LPL	**La Plagne**	**71.42**	**15**	*e*P		**P**	**12 45 38.5**	**+0.2**
	comp=Z,19nm,0.9s								
BGF	**Bois d'Agland**	**71.59**	**12**	*e*P		**P**	**12 45 38.9**	**-0.2**
BGF	**Bois d'Agland**	**71.59**	**12**	*e*P		**P**	**12 45 38.9**	**-0.2**
BGF	**Bois d'Agland**	**71.59**	**12**	*e*P		**P**	**12 45 38.9**	**-0.2**
SMF	**Signal de Mont**	**71.87**	**12**	*e*P		**P**	**12 45 40.5**	**-0.2**
	comp=Z,33nm,1.2s								
SMF	**Signal de Mont**	**71.87**	**12**	*e*P		**P**	**12 45 40.5**	**-0.2**
SMF				pmax		pmax			
	comp=Z,33nm,1.2s								
SMF	**Signal de Mont**	**71.87**	**12**	*e*P		**P**	**12 45 40.5**	**-0.2**
	comp=Z,33nm,1.2s								
AVF	**Avril sur Loir**	**71.91**	**12**	*e*P		**P**	**12 45 40.9**	**-0.1**
	comp=Z,61nm,1.6s								
AVF	**Avril sur Loir**	**71.91**	**12**	*e*P		**P**	**12 45 40.9**	**-0.1**
AVF				pmax		pmax			
	comp=Z,61nm,1.6s								
AVF	**Avril sur Loir**	**71.91**	**12**	*e*P		**P**	**12 45 40.9**	**-0.1**
	comp=Z,61nm,1.6s								
SSF	**Saint Saulge**	**72.20**	**12**	*e*P		**P**	**12 45 42.6**	**-0.1**
	comp=Z,36nm,1.2s								
SSF	**Saint Saulge**	**72.20**	**12**	*e*P		**P**	**12 45 42.6**	**-0.1**
SSF				pmax		pmax			
	comp=Z,36nm,1.2s								
SSF	**Saint Saulge**	**72.20**	**12**	*e*P		**P**	**12 45 42.6**	**-0.1**
	comp=Z,36nm,1.2s								
CABF	**La Chapelle**	**72.31**	**14**	*e*P		**P**	**12 45 43.0**	**-0.5**
	comp=Z,87nm,1.5s								
CABF	**La Chapelle**	**72.31**	**14**	*e*P		**P**	**12 45 43.0**	**-0.5**
CABF				pmax		pmax			
	comp=Z,87nm,1.5s								
CABF	**La Chapelle**	**72.31**	**14**	*e*P		**P**	**12 45 43.0**	**-0.5**
	comp=Z,87nm,1.5s								
ROSF	**Rostrenen**	**72.41**	**7**	*e*P		**P**	**12 45 43.8**	**-0.1**
	comp=Z,58nm,1.3s								
ROSF	**Rostrenen**	**72.41**	**7**	*e*P		**P**	**12 45 43.8**	**-0.1**
ROSF				pmax		pmax			
	comp=Z,58nm,1.3s								
ROSF	**Rostrenen**	**72.41**	**7**	*e*P		**P**	**12 45 43.8**	**-0.1**
	comp=Z,58nm,1.3s								
LOR	**Lormes**	**72.47**	**12**	*e*P		**P**	**12 45 44.0**	**-0.3**
	comp=Z,64nm,1.6s								
LOR				*e*R					
	comp=Z,630nm,22.2s								
LOR	**Lormes**	**72.47**	**12**	*e*P		**P**	**12 45 44.0**	**-0.3**
	comp=Z,64nm,1.6s								
GRR	**Gorron**	**72.77**	**9**	*e*P		**P**	**12 45 45.6**	**-0.4**
GRR	**Gorron**	**72.77**	**9**	*e*P		**P**	**12 45 45.6**	**-0.4**
GRR	**Gorron**	**72.77**	**9**	*e*P		**P**	**12 45 45.6**	**-0.4**
TUE	**Stuetta**	**72.96**	**16**	*e*P		**P**	**12 45 46.6**	**-0.9**
	comp=Z,61nm,1.8s								
LDF	**La Druitiere**	**73.07**	**9**	*e*P		**P**	**12 45 47.6**	**-0.2**
LDF	**La Druitiere**	**73.07**	**9**	*e*P		**P**	**12 45 47.6**	**-0.2**
LDF	**La Druitiere**	**73.07**	**9**	*e*P		**P**	**12 45 47.6**	**-0.2**
FLN	**La Foliniere**	**73.19**	**9**	*e*P		**P**	**12 45 48.1**	**-0.4**
	comp=Z,127nm,1.6s								
FLN				*e*R					
	comp=Z,673nm,18.5s								
FLN	**La Foliniere**	**73.19**	**9**	*e*P		**P**	**12 45 48.1**	**-0.4**
FLN				pmax		pmax			
	comp=Z,127nm,1.6s								
FLN	**La Foliniere**	**73.19**	**9**	*e*P		**P**	**12 45 48.1**	**-0.4**
	comp=Z,127nm,1.6s								
FUORN	**Ofenpass-Fuorn**	**73.33**	**17**	*e*P		**P**	**12 45 49.9**	**+0.1**
ASF	**Jabal al Asfar**	**73.58**	**43**	P		**P**	**12 45 53.0**	**+1.7**
ASF	**Jabal al Asfar**	**73.58**	**43**	P		**P**	**12 45 53.0**	**+1.7**
	comp=Z,4.5nm,1.1s,baz=95,slow=2.1,SNR=11								
KKB	**Krupnik**	**73.59**	**28**	P		**P**	**12 45 50.1**	**-1.0**
HINF	**Hinteralfeld**	**73.62**	**14**	*e*P		**P**	**12 45 50.3**	**-0.8**
HINF	**Hinteralfeld**	**73.62**	**14**	*e*P		**P**	**12 45 50.3**	**-0.8**
HINF	**Hinteralfeld**	**73.62**	**14**	*e*P		**P**	**12 45 50.3**	**-0.8**
MMB	**Musomiste**	**73.64**	**28**	P		**P**	**12 45 51.2**	**-0.2**
HAU	**Haudompre**	**73.68**	**14**	*e*P		**P**	**12 45 50.9**	**-0.6**
HAU				*e*R					
	comp=Z,557nm,21.8s								
HAU	**Haudompre**	**73.68**	**14**	*e*P		**P**	**12 45 50.9**	**-0.6**
HAU	**Haudompre**	**73.68**	**14**	*e*P		**P**	**12 45 50.9**	**-0.6**
BOJS	**Bojanci**	**73.78**	**21**	*i* P		**P**	**12 45 52.6**	**+0.5**
MEZF	**Maizieres J'vi**	**73.89**	**13**	*e*P		**P**	**12 45 52.5**	**-0.1**
MEZF	**Maizieres J'vi**	**73.89**	**13**	*e*P		**P**	**12 45 52.5**	**-0.1**
CADS	**Cadrg**	**73.96**	**19**	*i* P		**P**	**12 45 53.3**	**+0.1**
LJU	**Ljubljana**	**74.04**	**20**	*i* P		**P**	**12 45 54.0**	**+0.4**
PAGF	**Fort de Pagny**	**74.07**	**13**	*e*P		**P**	**12 45 53.6**	**-0.1**
PAGF	**Fort de Pagny**	**74.07**	**13**	*e*P		**P**	**12 45 53.6**	**-0.1**
RAYN	**Ar Rayn**	**74.09**	**55**	P		**P**	**12 45 56.1**	**+1.6**
	comp=Z,90nm,1.2s,SNR=5.1								
RAYN	**Ar Rayn**	**74.09**	**55**	*e*P		**P**	**12 45 56.4**	**+1.9**
	comp=Z,32nm,1.3s								
VTS	**Vitosha**	**74.24**	**27**	P		**P**	**12 45 53.8**	**-1.3**
CDF	**Champ du Feu**	**74.27**	**14**	*e*P		**P**	**12 45 54.6**	**-0.4**
CDF	**Champ du Feu**	**74.27**	**14**	*e*P		**P**	**12 45 54.6**	**-0.4**
CDF	**Champ du Feu**	**74.27**	**14**	*e*P		**P**	**12 45 54.6**	**-0.4**
BFO	**Black Forest**	**74.44**	**15**	*e*P		**P**	**12 45 55.4**	**-0.5**
	comp=Z,25nm,1.3s								
BFO				*e*pP		**pP**	**12 46 02.2**	**+0.2**
BFO	**Black Forest**	**74.44**	**15**	*e*P		**P**	**12 45 55.4**	**-0.5**
BFO				*e**PP		**pP**	**12 46 02.2**	**+0.2**
BFO				pmax		pmax			
	comp=Z,13nm,1.3s								
BFO	**Black Forest**	**74.44**	**15**	*e*P		**P**	**12 45 55.2**	**-0.8**
	comp=Z,20nm,1.3s								
MIR	**Mirnyy**	**74.67**	**157**	*j* P		**P**	**12 45 59.0**	**+1.9**
MIR				pmax		pmax			
	comp=Z,84nm,1.0s								
PERS	**Pernice**	**74.75**	**20**	*i* P		**P**	**12 45 58.1**	**+0.3**
KOGS	**Kog**	**74.94**	**21**	*i* P		**P**	**12 45 59.5**	**+0.7**
RJOB	**Jochberg**	**75.05**	**18**	*e*P		**P**	**12 45 58.5**	**-1.0**
	comp=Z,10.0nm,1.2s								
RJOB				*e*pP		**pP**	**12 46 05.2**	**-0.4**
STU	**Stuttgart**	**75.06**	**15**	*e*P		**P**	**12 45 58.9**	**-0.5**
	comp=Z,33nm,1.3s								
MPEP	**Malo Peshtene**	**75.09**	**27**	P		**P**	**12 45 59.0**	**-0.8**
BAIF	**Baives**	**75.21**	**12**	*e*P		**P**	**12 45 59.8**	**-0.5**
BAIF	**Baives**	**75.21**	**12**	*e*P		**P**	**12 45 59.8**	**-0.5**
BAIF	**Baives**	**75.21**	**12**	*e*P		**P**	**12 45 59.8**	**-0.5**
DOU	**Dourbes**	**75.32**	**12**	P		**P**	**12 46 00.5**	**-0.4**
	comp=Z,9.6nm,2.3s								
GIVF	**Givet**	**75.37**	**12**	*e*P		**P**	**12 46 00.8**	**-0.4**
	comp=Z,64nm,1.4s								
GIVF	**Givet**	**75.37**	**12**	*e*P		**P**	**12 46 00.8**	**-0.4**
GIVF				pmax		pmax			
	comp=Z,64nm,1.4s								
GIVF	**Givet**	**75.37**	**12**	*e*P		**P**	**12 46 00.8**	**-0.4**
	comp=Z,64nm,1.4s								
BCLA	**Clavier**	**75.76**	**12**	P		**P**	**12 46 03.9**	**+0.5**
	comp=Z,18nm,2.2s								
MEM	**Membach**	**76.08**	**13**	P		**P**	**12 46 05.4**	**+0.1**
BEBN	**Eben Emael**	**76.20**	**12**	P		**P**	**12 46 07.1**	**+1.3**
TNS	**Taunus Mts**	**76.24**	**14**	*e*P		**P**	**12 46 05.8**	**-0.5**
	comp=Z,42nm,1.8s								
TNS				*e*pP		**pP**	**12 46 12.9**	**+0.5**
TNS	**Taunus Mts**	**76.24**	**14**	*e*P		**P**	**12 46 05.8**	**-0.5**
TNS				*e**PP		**pP**	**12 46 12.9**	**+0.5**
TNS				pmax		pmax			
	comp=Z,43nm,1.8s								
GEC2	**GERESS Array S**	**76.31**	**18**	*e*P		**P**	**12 46 06.1**	**-0.7**
	comp=Z,19nm,1.7s								
GEC2				*e*pP		**pP**	**12 46 12.9**	**+0.1**
GEC2	**GERESS Array S**	**76.31**	**18**	*e*P		**P**	**12 46 06.1**	**-0.7**
GEC2				*e**PP		**pP**	**12 46 12.9**	**+0.1**
GEC2				pmax		pmax			
	comp=Z,8.0nm,1.7s								
GERES	**GERESS Array B**	**76.31**	**18**	P		**P**	**12 46 06.0**	**-0.7**
GERES				PP		**PP**	**12 48 59.1**	**+0.4**
GERES	**GERESS Array B**	**76.31**	**18**	P		**P**	**12 46 06.0**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=201,slow=2.3,SNR=6.3								
GERES				PP		**PP**	**12 48 59.1**	**+0.4**
	comp=Z,0.4nm,0.4s,baz=207,slow=8.7,SNR=4.0								
GERES				LR		LR	13 19 32.6		
	comp=Z,454nm,18.9s,baz=215,slow=36								
WET	**Wettzell**	**76.35**	**17**	*e*P		**P**	**12 46 06.4**	**-0.5**
	comp=Z,63nm,2.1s								
WET				*e*pP		**pP**	**12 46 13.2**	**+0.2**
WET	**Wettzell**	**76.35**	**17**	*e*P		**P**	**12 46 06.4**	**-0.5**
WET				*e**PP		**pP**	**12 46 13.2**	**+0.2**
WET				pmax		pmax			
	comp=Z,7.0nm,2.1s								
GRF	**Grafenberg Arr**	**76.41**	**16**	*e*P		**P**	**12 46 07.0**	**-0.2**
	comp=Z,22nm,0.8s								
GRF				*e*pP		**pP**	**12 46 13.7**	**+0.4**
GRF				*e*L		L	13 17 44.8		
	comp=Z,440nm,21.1s								
GRF	**Grafenberg Arr**	**76.41**	**16**	*e*P		**P**	**12 46 07.0**	**-0.2**
GRF				*e**PP		**pP**	**12 46 13.7**	**+0.4**
GRF				pmax		pmax			
	comp=Z,21nm,0.8s								
KHC	**Kasperske Hory**	**76.53**	**18**	*e*P		**P**	**12 46 07.7**	**-0.2**
KHC				*e**PP		**pP**	**12 46 14.1**	**+0.1**
KHC				*e*S		**S**	**12 55 48.5**	**-4.4**
KHC				MLR		MLR			
	comp=Z,600nm,20.0s								
KHC	**Kasperske Hory**	**76.53**	**18**	*e*P		**P**	**12 46 07.7**	**-0.2**
KHC				*e*pP		**pP**	**12 46 14.1**	**+0.1**
KHC				*e*S		**S**	**12 55 48.5**	**-4.4**
KHC				AMS		AMS	13 17 10.0		
	comp=Z,600nm,20.0s								
KHC	**Kasperske Hory**	**76.53**	**18**	*e*P		**P**	**12 46 07.7**	**-0.2**
	comp=Z,33nm,1.9s								
ROTZ	**Rotzenmuhle**	**76.74**	**17**	*e*P		**P**	**12 46 08.6**	**-0.4**
	comp=Z,60nm,2.0s								
ROTZ				*e*pP		**pP**	**12 46 15.6**	**+0.5**
ZST	**Bratislava**	**76.76**	**20**	*e*P		**P**	**12 46 11.1**	**+1.9**
ZST	**Bratislava**	**76.76**	**20**	*e*P		**P**	**12 46 11.1**	**+1.9**
MANZ	**Manzenberg**	**76.91**	**17**	*e*P		**P**	**12 46 09.7**	**-0.3**
	comp=Z,58nm,2.2s								
MANZ				*e*pP		**pP**	**12 46 16.6**	**+0.5**
BR131	**Keskin Array S**	**76.99**	**35**	*e*P		**P**	**12 46 11.1**	**+0.3**
	comp=Z,5.3nm,0.9s								
BRTR	**Keskin Array B**	**76.99**	**35**	P		**P**	**12 46 11.5**	**+0.6**
BRTR	**Keskin Array B**	**76.99**	**35**	P		**P**	**12 46 11.5**	**+0.6**
	comp=Z,6.3nm,1.0s,baz=189,slow=7.3,SNR=20								
BRTR				LR		LR	13 19 17.1		
	comp=Z,123nm,21.2s,baz=31,slow=35								
BUG	**Bochum--Univer**	**77.13**	**13**	*e*P		**P**	**12 46 11.2**	**+0.1**
	comp=Z,24nm,1.3s								
UBBA	**Unterbreizbach**	**77.16**	**15**	*e*P		**P**	**12 46 11.5**	**+0.3**
	comp=Z,36nm,1.7s								
UBBA				*e*pP		**pP**	**12 46 18.2**	**+0.9**
NKC	**Novy Kostel**	**77.23**	**17**	*e*P		**P**	**12 46 12.7**	**+0.9**
NKC				MLR		MLR			
	comp=Z,700nm,17.7s								
NKC	**Novy Kostel**	**77.23**	**17**	*e*P		**P**	**12 46 12.7**	**+0.9**
NKC				AMS		AMS	13 18 50.0		
	comp=Z,700nm,17.7s								
TREC	**Trest**	**77.23**	**19**	*e*P		**P**	**12 46 11.8**	**-0.1**
TREC				MLR		MLR			
	comp=Z,400nm,19.3s								
TREC	**Trest**	**77.23**	**19**	*e*P		**P**	**12 46 11.8**	**-0.1**
TREC				AMS		AMS	13 20 40.0		
	comp=Z,400nm,19.3s								
WERN	**Wernitzgruen**	**77.26**	**17**	*e*P		**P**	**12 46 11.6**	**-0.4**
	comp=Z,19nm,1.7s								
WERN				*e*pP		**pP**	**12 46 18.3**	**+0.2**
GUNZ	**Gunzen**	**77.32**	**17**	*e*P		**P**	**12 46 11.7**	**-0.6**
	comp=Z,26nm,1.7s								
GUNZ				*e*pP		**pP**	**12 46 18.6**	**+0.2**
WERD	**Werda**	**77.39**	**17**	*e*P		**P**	**12 46 12.3**	**-0.4**
	comp=Z,21nm,1.6s								
WERD				*e*pP		**pP**	**12 46 19.0**	**+0.2**
MOX	**Moxa**	**77.39**	**16**	*e*P		**P**	**12 46 12.2**	**-0.5**
	comp=Z,21nm,1.6s								
MOX				*e*pP		**pP**	**12 46 19.4**	**+0.6**
MOX	**Moxa**	**77.39**	**16**	*e*P		**P**	**12 46 12.2**	**-0.5**
MOX				*e**PP		**pP**	**12 46 19.4**	**+0.6**
MOX				pmax		pmax			
	comp=Z,16nm,1.6s								
TANN	**Tannenbergstha**	**77.40**	**17**	*e*P		**P**	**12 46 12.5**	**-0.3**
	comp=Z,46nm,2.2s								
TANN				*e*pP		**pP**	**12 46 19.1**	**+0.2**
PSZ	**Piszkesteto**	**77.45**	**22**	*e*P		**P**	**12 46 13.4**	**+0.3**
PSZ				pmax		pmax			
	comp=Z,19nm,1.1s								
PSZ	**Piszkesteto**	**77.45**	**22**	*e*P		**P**	**12 46 13.4**	**+0.3**
	comp=Z,19nm,1.1s								
PRU	**Pruhonice**	**77.58**	**18**	*e*P		**P**	**12 46 13.6**	**-0.1**
PRU				*e**PP		**pP**	**12 46 19.9**	**+0.1**
PRU				*e*S		**S**	**12 56 04.7**	**+0.6**

RDF	**Al-Radifah**	**78.70**	**51**	*e*P		**P**	**12 46 21.1**	**+0.6**
RDF				AMb		AMB	12 46 25.5	
	comp=Z,62nm,2.3s							
NRDL	**Niedersach Rie**	**78.74**	**14**	*e*P		**P**	**12 46 20.8**	**+0.8**
	comp=Z,66nm,1.7s							
NRDL				*e*pP		**PcP**	**12 46 27.8**	**-1.0**
CRVS	**Cervenica-Dubn**	**78.83**	**23**	*e*P		**P**	**12 46 18.4**	**-2.3**
CRVS				*e*			12 46 25.4	
CRVS				pmax		pmax		
	comp=Z,87nm,2.5s							
CRVS	**Cervenica-Dubn**	**78.83**	**23**	*e*P		**P**	**12 46 18.4**	**-2.3**
CRVS				*e*pP		**pP**	**12 46 25.4**	**-1.5**
VNDA	**Vanda**	**78.84**	**179**	P		**P**	**12 46 20.9**	**+0.4**
VNDA	**Vanda**	**78.84**	**179**	P		**P**	**12 46 20.9**	**+0.4**
	comp=Z,4.3nm,1.0s,baz=206,slow=4.5,SNR=13							
VNDA				LR		LR	13 16 36.5	
	comp=Z,493nm,21.8s,baz=178,slow=32							
KSP	**Ksiaz**	**78.85**	**19**	*e*P		**P**	**12 46 21.5**	**+0.8**
KBD	**Kabd**	**78.95**	**51**	*e*P		**P**	**12 46 22.0**	**+0.2**
KBD				AMb		AMB	12 46 27.2	
	comp=Z,37nm,1.9s							
MIB	**Mutribah**	**79.06**	**51**	*e*P		**P**	**12 46 22.6**	**+0.2**
MIB				AMb		AMB	12 46 27.5	
	comp=Z,49nm,1.9s							
BHD	**Baghdad**	**79.10**	**46**	*e*P		P	12 46 16.5	-6.0
BHD				*e*S		**S**	**12 56 24.1**	**+3.0**
KOLS	**Kolonicke sedl**	**79.15**	**23**	*e*P		**P**	**12 46 22.8**	**+0.3**
KOLS				pmax		pmax		
	comp=Z,14nm,1.6s							
KOLS	**Kolonicke sedl**	**79.15**	**23**	*e*P		**P**	**12 46 22.8**	**+0.3**
IBDR	**Badra**	**80.03**	**47**	*e*P		P	12 46 23.0	-4.6
IBDR				*e*S		S	12 56 24.1	-7.0
BSEG	**Bad Segeberg**	**80.12**	**14**	*e*P		**P**	**12 46 27.7**	**+0.1**
	comp=Z,60nm,1.5s							
BSEG				*e*pP		**PcP**	**12 46 34.7**	**-0.1**
BSEG	**Bad Segeberg**	**80.12**	**14**	*e*P		**P**	**12 46 27.7**	**+0.1**
BSEG				*e**PP		**PcP**	**12 46 34.7**	**-0.1**
BSEG				pmax		pmax		
	comp=Z,62nm,1.5s							
KIS	**Kishinev**	**80.16**	**28**	*e*P		**P**	**12 46 26.0**	**-2.0**
KIS				*e*			12 46 35.0	
KIS				pmax		pmax		
	comp=Z,170nm,2.0s							
KIS				pmax		pmax		
	comp=Z,300nm,4.0s							
KIS				MLR		MLR		
	comp=Z,300nm,18.0s							
KIS	**Kishinev**	**80.16**	**28**	*e*P		**P**	**12 46 26.0**	**-2.0**
KIS				XM			12 46 29.0	
	comp=Z,200nm,2.0s							
KIS				LRM		MLR	13 24 08.0	
	comp=Z,300nm,18.0s							
LVV	**L'vov**	**80.52**	**24**	*e*P		**P**	**12 46 28.7**	**-1.2**
LVV				*e*			12 51 30.1	
LVV				MLR		MLR		
	comp=N,400nm,19.0s							
LVV				MLR		MLR		
	comp=E,600nm,19.0s							
LVV				MLR		MLR		
	comp=Z,400nm,19.0s							
IDHR	**Dehrash**	**81.29**	**46**	*e*P		**P**	**12 46 35.7**	**+1.1**
ANN	**Anapa**	**82.58**	**34**	*e*P		**P**	**12 46 39.3**	**-1.5**
ANN				*e**PP		**PcP**	**12 46 42.7**	**-3.1**
ANN				*e*S		**S**	**12 56 57.2**	**+0.3**
ANN				pmax		pmax		
	comp=Z,55nm,2.1s							
SOC	**Sochi**	**82.94**	**36***c*	*i*P		**P**	**12 46 43.6**	**+0.8**
SOC				*e*			12 50 01.3	
SOC				*e*S		**S**	**12 57 01.4**	**+0.7**
SOC				pmax		pmax		
	comp=Z,36nm,1.2s							
ISHB	**Shabestar**	**82.96**	**43**	*e*P		**P**	**12 46 43.3**	**0.0**
ISRV	**Sarvestan**	**83.00**	**54**	*e*P		**P**	**12 46 44.7**	**+0.8**
UOSS	**Wadi Hilu**	**83.08**	**59**	P		**P**	**12 46 44.8**	**+0.8**
	comp=Z,105nm,1.2s,SNR=5.8							
AKASG	**Malin Array Be**	**83.22**	**26***c*	*e*P		**P**	**12 46 43.2**	**-0.8**
AKASG				pmax		pmax		
	comp=Z,4.0nm,0.8s							
AKASG	**Malin Array Be**	**83.22**	**26**	P		**P**	**12 46 43.3**	**-0.8**
AKASG	**Malin Array Be**	**83.22**	**26**	P		**P**	**12 46 43.3**	**-0.8**
	comp=Z,4.0nm,0.8s,baz=220,slow=5.2,SNR=15							
AKASG				LR		LR	13 24 32.4	
	comp=Z,296nm,19.5s,baz=235,slow=36							
EMMW	**East Machias**	**84.14**	**325**	P		**P**	**12 46 48.9**	**0.0**
	comp=Z,18nm,0.5s							
IZEF	**Zefreh**	**84.32**	**50**	*e*P		**P**	**12 46 51.4**	**+0.9**
ISAD	**Sadrabad**	**84.76**	**52**	*e*P		**P**	**12 46 54.4**	**+1.6**
KBZ	**Khabaz**	**84.77**	**37**	P		**P**	**12 46 52.8**	**+0.7**
KBZ	**Khabaz**	**84.77**	**37**	P		**P**	**12 46 52.8**	**+0.7**
KBZ	**Khabaz**	**84.77**	**37**	P		**P**	**12 46 52.8**	**+0.7**
	comp=Z,3.3nm,0.8s,baz=275,slow=5.4,SNR=14							
KBZ				LR		LR	13 25 48.2	
	comp=Z,154nm,20.1s,baz=105,slow=36							
KIV	**Kislovodsk**	**84.80**	**37**	*e*P		**P**	**12 46 52.6**	**+0.2**
KIV				*e*			12 57 15.1	
KIV				pmax		pmax		
	comp=Z,16nm,1.1s							
IGZV	**Ghazvin**	**84.81**	**47**	*e*P		**P**	**12 46 53.1**	**+0.3**
IR3	**Iran Long-Peri**	**84.84**	**48**	*e*P		**P**	**12 46 53.6**	**+0.8**
IMEH	**Mehriz**	**85.16**	**53**	*e*P		**P**	**12 46 55.3**	**+0.6**
ICHK	**Chekchek**	**85.46**	**52**	*e*P		**P**	**12 46 56.7**	**+0.5**
IDMV	**Damavand**	**85.58**	**48**	*e*P		**P**	**12 46 58.0**	**+1.2**
IBAF	**Bafgh**	**85.96**	**53**	*e*P		**P**	**12 46 59.5**	**+0.9**
ISHM	**Shahmirzad**	**86.56**	**48**	*e*P		**P**	**12 47 03.2**	**+1.6**
IANJ	**Anjilo**	**86.81**	**49**	*e*P		**P**	**12 47 04.1**	**+1.3**
NOA	**NORSAR Array B**	**86.90**	**12**	P		**P**	**12 47 03.0**	**+0.7**
NOA	**NORSAR Array B**	**86.90**	**12**	P		**P**	**12 47 03.0**	**+0.7**
	comp=Z,0.6nm,0.7s,baz=200,slow=5.1,SNR=2.4							
NOA				LR		LR	13 26 33.6	
	comp=Z,116nm,18.4s,baz=190,slow=36							
MAK	**Makhachkala**	**86.93**	**40**	*e*P		**P**	**12 47 05.6**	**+2.8**
BINY	**Binghamton**	**87.42**	**319**	*e*P		**P**	**12 47 05.9**	**+0.6**
	comp=Z,19nm,1.2s							
VORD	**Divnogorie**	**87.75**	**30**	*e*P		**P**	**12 47 06.8**	**+0.2**
VORD				pmax		pmax		
	comp=N,20nm,1.1s							
VORD				pmax		pmax		
	comp=Z,10.0nm,1.1s							
VORD				pmax		pmax		
	comp=E,10.0nm,0.9s							
VSR	**Storozhevoye**	**87.86**	**30**	*e*P		**P**	**12 47 07.2**	**+0.1**
VSR				pmax		pmax		
	comp=Z,20nm,1.5s							
VSR				pmax		pmax		
	comp=N,20nm,1.4s							
VSR				pmax		pmax		
	comp=E,9.0nm,0.6s							
OBN	**Obninsk**	**89.47**	**26**	*e*P		**P**	**12 47 15.0**	**+0.4**
OBN				*i*			12 50 44.1	
OBN				*i* S		**S**	**12 58 04.7**	**+0.8**
OBN				*i* PS		PS	12 59 38.4	+27
OBN				pmax		pmax		
	comp=Z,29nm,1.6s							
OBN				MLR		MLR		
	comp=Z,200nm,19.0s							
ALLY	**Alegheny Colle**	**89.68**	**317**	*e*P		**P**	**12 47 16.3**	**+0.3**
LRAL	**Lakeview Retre**	**90.01**	**306**	*e*P		**P**	**12 47 17.5**	**-0.2**
	comp=Z,20nm,1.4s							
MOS	**Moscow**	**90.34**	**26**	*e*P		P	12 47 13.0	-5.7
MOS				pmax		pmax		
	comp=Z,59nm,1.3s							
ISFR	**Sfrayin**	**90.46**	**49**	*e*P		**P**	**12 47 21.8**	**+1.7**
ISHV	**Shirvan**	**90.49**	**49**	*e*P		**P**	**12 47 21.5**	**+1.4**
SCHQ	**Schefferville**	**90.67**	**332**	P		**P**	**12 47 20.7**	**+0.4**
SCHQ	**Schefferville**	**90.67**	**332**	P		**P**	**12 47 20.7**	**+0.4**
	comp=Z,4.0nm,0.9s,baz=130,slow=5.6,SNR=6.6							
SCHQ				LR		LR	13 20 50.0	
	comp=Z,210nm,20.4s,baz=83,slow=31							
FINES	**FINESS Array B**	**90.74**	**18**	P		**P**	**12 47 20.9**	**+0.5**
FINES	**FINESS Array B**	**90.74**	**18**	P		**P**	**12 47 20.9**	**+0.5**
	comp=Z,4.2nm,1.0s,baz=180,slow=3.8,SNR=9.0							
FINES				LR		LR	13 26 56.4	
	comp=Z,438nm,21.7s,baz=352,slow=35							
IAKL	**Akhelmad**	**90.76**	**50**	*e*P		P	12 47 12.8	-8.7
IMYA	**Miami**	**91.59**	**51**	*e*P		**P**	**12 47 24.7**	**-0.5**
WVT	**Waverly**	**92.08**	**309**	*e*P		**P**	**12 47 27.2**	**-0.1**
WVT				pmax		pmax		
	comp=Z,2.0nm,0.7s							
WVT	**Waverly**	**92.08**	**309**	*e*P		**P**	**12 47 27.2**	**-0.1**
	comp=Z,1.8nm,0.7s							
AKTO	**Aktyubinsk**	**97.05**	**38**	P		**P**	**12 47 49.6**	**-0.1**
AKTO	**Aktyubinsk**	**97.05**	**38**	P		**P**	**12 47 49.5**	**-0.1**
AKTO	**Aktyubinsk**	**97.05**	**38**	P		**P**	**12 47 49.5**	**-0.1**
	comp=Z,0.6nm,0.4s,baz=243,slow=3.9,SNR=6.5							
AKTO				LR		LR	13 33 36.7	
	comp=Z,141nm,20.1s,baz=249,slow=37							
ARCES	**ARCESS Array B**	**97.22**	**13**	LR		LR	13 31 07.4	
	comp=Z,249nm,19.3s,baz=88,slow=35							
APA	**Apatity**	**97.51**	**16**‖	*e*P		P	12 47 46.0	-5.3
APA				pmax		pmax		
	comp=Z,8.0nm,1.0s							
APA				MLR		MLR		
	comp=Z,400nm,18.0s							
ABKAR	**Akbulak array**	**97.59**	**39**	*e*P		**P**	**12 47 52.0**	**-0.2**
	comp=Z,1.4nm,0.9s							
RKT	**Rikitea**	**106.50**	**235**	*e*LR		LR	13 23 34.3	
	comp=Z,487nm,28.5s							
WMQ	**Urumqi**	**113.91**	**51**	*e*PKP		**PKiKP**	**12 52 54.0**	**-3.0**
WMQ				PP		**PP**	**12 53 53.0**	**+2.0**
WMQ				PKS		**PKSdf**	**12 56 29.0**	**-4.6**
WMQ				SS		SS	13 09 37.0	-2.9
WMQ				AMB		AMB		
	comp=Z,110nm,8.0s							
WMQ				LR		LR		
	comp=N,220nm,15.9s							
WMQ				LR		LR		
	comp=E,210nm,20.0s							
WMQ				LR		LR		
	comp=Z,340nm,28.6s							
NVAR	**Mina Array Bea**	**115.66**	**303**	PKP		**PKPdf**	**12 53 01.0**	**+0.3**
NVAR	**Mina Array Bea**	**115.66**	**303**	PKP		**PKPdf**	**12 53 01.0**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=129,slow=1.3,SNR=3.2							
YKA	**Yellowknife Ar**	**115.98**	**330**	PKP		**PKPdf**	**12 52 59.6**	**-0.6**
YKA	**Yellowknife Ar**	**115.98**	**330**	PKP		**PKPdf**	**12 52 59.6**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=79,slow=1.9,SNR=5.6							
TBI	**Tubuai**	**116.56**	**226**	*e*SS		SS	13 10 18.0	+4.5
	comp=Z,116nm,36.8s							
TBI				*e*LR		LR	13 28 13.7	
	comp=Z,373nm,36.2s							
CMAR	**Chiang Mai Arr**	**117.23**	**81**	PKP		**PKPdf**	**12 53 03.1**	**-0.9**
CMAR	**Chiang Mai Arr**	**117.23**	**81**	PKP		**PKPdf**	**12 53 03.1**	**-0.9**
	comp=Z,0.5nm,0.5s,baz=249,slow=4.4,SNR=5.2							
PPT2	**Papeete2**	**120.60**	**230**	*e*SP		SP	13 04 28.1	+1.6
	comp=Z,64nm,24.8s							
PPT2				*e*SS		**SS**	**13 11 10.5**	**+4.3**
	comp=Z,333nm,29.0s							
PPT2				*e*LR		LR	13 30 08.5	
	comp=Z,615nm,27.5s							
FITZ	**Fitzroy Crossi**	**122.29**	**133**	PKP		**PKPdf**	**12 53 13.5**	**-0.3**
FITZ	**Fitzroy Crossi**	**122.29**	**133**	PKP		**PKPdf**	**12 53 13.5**	**-0.3**
	comp=Z,3.7nm,1.0s,baz=230,slow=2.8,SNR=8.2							
GTA	**Gaotai**	**122.29**	**57**	*e*PKP		**PKPdf**	**12 53 14.3**	**+1.0**
GTA				PP		PP	12 54 55.0	+5.6
GTA				SKS		**SKSdf**	**13 00 24.8**	**+0.2**
GTA				SKKS		**SKKSac**	**13 01 46.8**	**-0.8**
GTA				SS		**SS**	**13 11 33.0**	**+4.1**
GTA				AMB		AMB		
	comp=Z,38nm,5.0s							
GTA				LR		LR		
	comp=N,270nm,19.5s							
GTA				LR		LR		
	comp=E,320nm,18.5s							
GTA				LR		LR		
	comp=Z,290nm,20.0s							
KMI	**Kunming**	**122.41**	**74**	PKP		**PKPdf**	**12 53 14.0**	**-0.1**
KMI				sPKP			12 53 18.5	
KMI				PP		**PP**	**12 54 52.5**	**+1.8**
KMI				PKS		**PKSdf**	**12 56 49.5**	**-1.6**
KMI				SKKS			13 01 46.3	
KMI				LR		LR		
	comp=N,260nm,16.6s							
KMI				LR		LR		
	comp=E,190nm,23.5s							
KMI				LR		LR		
	comp=Z,340nm,27.3s							
ASAR	**Alice Springs**	**123.14**	**144**	PKP		**PKPdf**	**12 53 14.6**	**-0.8**
ASAR	**Alice Springs**	**123.14**	**144**	PKP		**PKPdf**	**12 53 14.6**	**-0.8**
	comp=Z,3.4nm,0.9s,baz=200,slow=2.1,SNR=27							
CD2	**Chengdu**	**124.42**	**68**	*e*PKP		**PKPdf**	**12 53 17.0**	**-0.5**
CD2				PP		**PP**	**12 55 07.8**	**+3.9**
CD2				PKS		**PKSdf**	**12 56 52.3**	**-2.0**
CD2				SKS		**SKSdf**	**13 00 26.3**	**-2.5**
CD2				SKKS		**SKKSac**	**13 01 58.5**	**-3.0**
CD2				SS		**SS**	**13 11 57.5**	**+1.3**
CD2				AMB		AMB		
	comp=Z,120nm,8.8s							
CD2				LR		LR		
	comp=N,290nm,23.4s							
CD2				LR		LR		
	comp=Z,430nm,19.0s							
LZH	**Lanzhou**	**125.15**	**62**	*e*PKP		**PKPdf**	**12 53 19.3**	**+0.4**
LZH				PKS		**PKSdf**	**12 56 53.0**	**-2.7**
LZH				LR		LR		
	comp=N,110nm,17.1s							
LZH				LR		LR		
	comp=E,130nm,16.9s							
LZH				LR		LR		
	comp=Z,180nm,19.5s							
GYA	**Guiyang**	**126.15**	**74**	*e*Pdif		**Pdif**	**12 50 01.3**	**+1.3**
GYA				PKP		**PKPdf**	**12 53 21.0**	**-0.1**
GYA				PP		**PP**	**12 55 19.8**	**+4.2**
GYA				PKS		**PKSdf**	**12 56 55.5**	**-2.4**
GYA				SKKS			13 02 09.5	
GYA				SS		**SS**	**13 12 19.5**	**+1.2**
GYA				AMB		AMB		
	comp=Z,120nm,7.8s							
GYA				LR		LR		
	comp=N,120nm,20.6s							
GYA				LR		LR		
	comp=E,110nm,21.0s							
GYA				LR		LR		
	comp=Z,140nm,20.5s							
EGAK	**Eagle**	**127.08**	**335**	*e*PKPdf		**PKPdf**	**12 53 21.1**	**-0.4**
SONM	**Songino Array**	**127.15**	**47**	PKP		**PKPdf**	**12 53 22.1**	**-0.2**
SONM	**Songino Array**	**127.15**	**47**	PKP		**PKPdf**	**12 53 22.1**	**-0.2**
	comp=Z,3.3nm,1.0s,baz=220,slow=2.7,SNR=11							
QIZ	**Qiongzhong**	**127.28**	**84**	PKP		**PKPdf**	**12 53 22.5**	**-0.8**
QIZ				PP		**PP**	**12 55 22.5**	**-0.6**
QIZ				SS		SS	13 12 34.0	+1.6
QIZ				LR		LR		
	comp=N,210nm,22.4s							
QIZ				LR		LR		
	comp=E,120nm,28.7s							
QIZ				LR		LR		
	comp=Z,440nm,26.5s							
ULN	**Ulaanbaatar**	**127.59**	**47**	*e*PKPdf		**PKPdf**	**12 53 23.0**	**-0.3**
TIXI	**Tiksi**	**127.63**	**14**‖	*i*PKIKP		**PKPdf**	**12 53 21.1**	**-1.3**
TIXI				pmax		pmax		
	comp=Z,15nm,2.5s							
COLD	**Coldfoot**	**129.03**	**340**	*e*PKPdf		**PKPdf**	**12 53 25.5**	**+0.3**
ILAR	**Eielson Array**	**129.26**	**336**	PKP		**PKPdf**	**12 53 25.4**	**-0.3**
ILAR	**Eielson Array**	**129.26**	**336**	PKP		**PKPdf**	**12 53 25.4**	**-0.3**
	comp=Z,5.3nm,0.9s,baz=4.5,slow=1.7,SNR=48							
COLA	**College**	**129.56**	**337**	*e*PKIKP		**PKPdf**	**12 53 25.6**	**-0.6**
COLA	**College**	**129.56**	**337**	*e*PKPdf		**PKPdf**	**12 53 25.6**	**-0.6**
PAX	**Paxson**	**129.60**	**334**	*e*PKIKP		**PKPdf**	**12 53 26.3**	**-0.2**
PAX	**Paxson**	**129.60**	**334**	*e*PKPdf		**PKPdf**	**12 53 26.3**	**-0.2**
HHC	**Hu-ho-hao-te**	**131.33**	**56**	*e*PKP		**PKPdf**	**12 53 30.8**	**+0.3**
HHC				PP		**PP**	**12 55 51.5**	**+2.4**
HHC				PKS		**PKSdf**	**12 57 05.8**	**-1.2**
HHC				SKS		**SKSdf**	**13 00 40.8**	**-0.4**
HHC				SKKS		**SKKSac**	**13 02 44.5**	**-0.1**
HHC				SS		**SS**	**13 13 24.3**	**+2.8**
HHC				AMB		AMB		
	comp=Z,190nm,6.9s							
HHC				LR		LR		
	comp=N,290nm,19.6s							
HHC				LR		LR		
	comp=E,590nm,20.4s							
HHC				LR		LR		
	comp=Z,760nm,20.6s							
SML	**Sawmill**	**131.33**	**333**	*e*PKIKP		**PKPdf**	**12 53 30.2**	**+0.4**
SML	**Sawmill**	**131.33**	**333**	*e*PKPdf		**PKPdf**	**12 53 30.2**	**+0.4**
PMR	**Palmer**	**131.77**	**333**	*e*PKIKP		**PKPdf**	**12 53 30.7**	**+0.2**
PMR	**Palmer**	**131.77**	**333**	*e*PKPdf		**PKPdf**	**12 53 30.7**	**+0.2**
PPLA	**Purkeypile**	**132.25**	**336**	*e*PKPdf		**PKPdf**	**12 53 31.4**	**-0.2**
BJI	**Beijing**	**134.89**	**57**	PKP		**PKPdf**	**12 53 37.0**	**0.0**
BJI				SS		SS	13 14 07.8	+3.3
BJI				LR		LR		
	comp=N,220nm,21.1s							
BJI				LR		LR		
	comp=E,270nm,23.2s							
BJI				LR		LR		
	comp=Z,420nm,25.0s							
BILL	**Bilibino**	**135.78**	**0***c*	*i*PKIKP		**PKPdf**	**12 53 38.8**	**+0.9**
BILL				*i*			12 56 15.2	
BILL				pmax		pmax		
	comp=Z,26nm,1.4s							
BILL	**Bilibino**	**135.78**	**0**	*e*PKPdf		**PKPdf**	**12 53 37.6**	**-0.3**
NJ2	**Nanjing**	**137.35**	**68**	*e*PKP		**PKPdf**	**12 53 37.0**	**-4.9**
NJ2				PP		**PP**	**12 56 26.5**	**-1.0**
NJ2				AMB		AMB		
	comp=Z,140nm,5.3s							
NJ2				LR		LR		
	comp=N,280nm,21.0s							
NJ2				LR		LR		
	comp=E,350nm,26.0s							
NJ2				LR		LR		
	comp=Z,90nm,24.2s							
SDPT	**Sand Point**	**140.22**	**331**	*e*PKPdf		**PKPdf**	**12 53 45.8**	**-0.6**
CN2	**Changchun**	**140.96**	**49**	*e*PKP		**PKPdf**	**12 53 43.8**	**-4.3**
CN2				*e*PP		**PP**	**12 56 49.0**	**-0.2**
CN2				AMB		AMB		
	comp=Z,200nm,8.0s							
CN2				LR		LR		
	comp=N,300nm,21.0s							
CN2				LR		LR		
	comp=E,500nm,21.0s							
CN2				LR		LR		
	comp=Z,600nm,23.0s							
FALS	**False Pass**	**141.83**	**332**	*e*PKPdf		**PKPdf**	**12 53 48.6**	**-0.7**
KLR	**Kul'dur**	**142.78**	**38**	*e*PKHKP		PKPpre	12 53 42.2	
MDJ	**Mudanjiang**	**143.50**	**46**	PKP		PKPab	12 53 49.3	+0.4
MDJ				pPKP		**PKiKP**	**12 53 55.8**	**-0.2**
MDJ				sPKP			12 53 57.0	
MDJ				PP		**PP**	**12 57 04.8**	**+0.3**
MDJ				PKS		**PKSdf**	**12 57 26.5**	**-1.7**
MDJ				AMB		AMB		
	comp=Z,71nm,4.5s							
MDJ				LR		LR		
	comp=N,52nm,8.9s							
MDJ				LR		LR		
	comp=E,210nm,11.5s							
MDJ				LR		LR		
	comp=Z,260nm,13.6s							
KSAR	**Wonju Array Be**	**144.32**	**59**	PKP		**PKPab**	**12 53 52.0**	**-0.3**
KSRS	**Korea Array**	**144.35**	**58**	PKP		**PKPab**	**12 53 52.0**	**-0.4**
	comp=Z,8.4nm,1.1s,baz=272,slow=2.9,SNR=16							
HABR	**Khabarovsk**	**145.03**	**37***c*	*e*PKIKP		**PKPbc**	**12 53 52.1**	**-2.4**
HABR				*e*			12 53 55.3	
HABR				*e*			12 53 56.3	
HABR				*e*			13 01 02.4	
HABR				*e*SS		SS	13 16 02.5	+0.4
USRK	**Ussuriysk Arra**	**145.25**	**46**	PKPbc		**PKPbc**	**12 53 54.0**	**-1.4**
	comp=Z,14nm,0.9s,baz=271,slow=3.5,SNR=26							
VLA	**Vladivostok**	**145.61**	**47***d*	*i*PKP2		**PKPdf**	**12 53 54.8**	**-1.5**
JNU	**Nakatsue**	**147.44**	**65**	*e*PKPdf		**PKPdf**	**12 54 00.3**	**+0.5**
PETK	**Petropavlovsk-**	**150.00**	**11**	PKP2		**PKPbc**	**12 54 08.0**	**-0.2**
PETK	**Petropavlovsk-**	**150.00**	**11**	PKPbc		**PKPbc**	**12 54 08.0**	**-0.2**
PETK	**Petropavlovsk-**	**150.00**	**11**	PKPbc		**PKPbc**	**12 54 08.0**	**-0.2**
	comp=Z,7.8nm,1.0s,baz=177,slow=2.7,SNR=7.9							
YSS	**Yuzh-Sakhalins**	**150.07**	**34**‖	*i*PKP2		**PKPbc**	**12 54 08.9**	**+0.4**
YSS				pmax		pmax		
	comp=Z,30nm,1.0s							
PET	**Petropavlovsk**	**150.24**	**10**	*i*PKIKP		**PKPbc**	**12 54 06.1**	**-2.6**
FX1	**Attu Island--F**	**150.56**	**352**	*e*PKPdf		**PKPdf**	**12 54 02.3**	**-1.9**
FX1				*e*PKPbc		**PKPbc**	**12 54 08.2**	**-1.3**
FX1				*e*PKPab		**PKPab**	**12 54 16.2**	**0.0**
MAJO	**Matsushiro**	**152.53**	**56**	*e*PKIKP		**PKPbc**	**12 54 14.8**	**+0.2**
MAJO	**Matsushiro**	**152.53**	**56**	*e*PKPbc		**PKPbc**	**12 54 14.8**	**+0.2**
MAT	**Matsushiro**	**152.53**	**56**	PKP		**PKPdf**	**12 54 06.7**	**-1.0**
MJAR	**Matsushiro Arr**	**152.53**	**56**	PKP		**PKPdf**	**12 54 07.2**	**-0.5**
MJAR				PKPbc		**PKPbc**	**12 54 14.2**	**-0.4**
MJAR	**Matsushiro Arr**	**152.53**	**56**	PKP		**PKPdf**	**12 54 07.2**	**-0.5**
	comp=Z,1.6nm,0.9s,baz=283,slow=2.4,SNR=4.8							
MJAR				PKPbc		**PKPbc**	**12 54 14.2**	**-0.4**
	comp=Z,5.0nm,1.0s,baz=271,slow=3.1,SNR=13							

GUC ***25*** *12:51:59.3±0.7, 21.°65S×68.°44W, h109km±8km, ML3.6*
IDC ***25*** *12:51:59.7±1.2, 21.°89S×67.°88W, h91km±19km, mb3.4/1, mb1 3.4/4, mb1mx3.2/18, mbtmp3.3/4, Error ellipse: s-maj=31.2km s-min=12.9km az=105.0*
ISCJB ***25*** *12:52:00.6±0.9, 21.°69S±0.°05×68.°6W±0.°1, h118km, mb3.4/1, Error ellipse: s-maj=14.6km s-min=6.6km az=176.2*

ISC 25 12:52:01.0±1.1, 21.°71S±0.°05×68.°7W±0.°1, h118km, n12, σ0s89/13, 2C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
					Op	ISC	h m s	ISC
PB04	**Plate Boundary**	**0.92**	**233**‖	*i*P		Pn	12 52 28.9	+6.9
PB04				*i* S		Sn	12 52 51.5	+14
PB04				AML		AML	12 52 55.4	
	comp=N,388nm,0.7s							
LVC	**Limon Verde**	**0.92**	**193**‖	*i*P		**Pn**	**12 52 22.0**	**-0.3**
LVC				*i* S		**Sn**	**12 52 38.8**	**+0.3**
LVC	**Limon Verde**	**0.92**	**193**	P		**Pn**	**12 52 22.1**	**-0.3**
	comp=N,106nm,0.3s,baz=61,slow=17,SNR=760							
LVC				S		**Sn**	**12 52 38.9**	**+0.3**
	comp=N,41nm,0.3s,baz=120,slow=22,SNR=14							
HMBC	**Humberstone**	**1.81**	**322**	*e*P		**Pn**	**12 52 32.0**	**-0.2**
HMBC				*i* S		**Sn**	**12 52 56.9**	**+1.0**
HMBC				AML		AML	12 53 00.0	
	comp=N,2μm,0.6s							
CEN1	**Los Morros**	**2.17**	**220**	*e*P		Pn	12 52 40.8	+4.2

45nm,0.7s,3µm
TTSI Tana Toraja 6.70 23 P Pn 12 54 03.5 +5.1
22nm,0.7s
BJII Banjamegara 7.69 284 P Pn 12 54 25.1 +13
CISI Cisompet, Garu 9.47 280 P **Pn** **12 54 36.6 +0.3**
85nm,0.6s,2µm
FITZ Fitzroy Crossi 11.98 138 P **Pn** **12 55 10.5 0.0**
FITZ S **Sn** **12 57 17.2 -5.1**
FITZ Fitzroy Crossi 11.98 138 P **Pn** **12 55 10.5 0.0**
baz=335,slow=14
FITZ S **Sn** **12 57 17.2 -5.1**
MBWA Marble Bar 12.06 169 *e*Pn **Pn** **12 55 09.7 -1.8**
28nm,0.3s
KSM Kuching 12.71 327 Pn **Pn** **12 55 17.9 -2.5**
KKM Kota Kinabalu 15.25 356 *e*Pn **Pn** **12 55 51.4 -2.3**
WRAB Tennant Creek 19.64 125 *e*P **Pn** **12 56 47.8 +0.5**
6.8nm,0.9s
ASAR Alice Springs 21.42 134 P **P** **12 57 07.1 +2.7**
ASAR S **S** **13 01 02.6 +4.5**
ASAR Alice Springs 21.42 134 P **P** **12 57 07.1 +2.7**
1.6nm,0.5s,baz=313,slow=9.8,SNR=40
ASAR S **S** **13 01 02.6 +4.5**
1.3nm,0.8s,baz=304,slow=23,SNR=6.5
NWAO Narrogin (SRO) 23.54 180 pP **pP** **12 57 42.5 -0.4**
NWAO S S 13 01 41.1 +6.9
NWAO Narrogin (SRO) 23.54 180 pP **pP** **12 57 42.5 -0.4**
8.3nm,0.5s,baz=357,slow=11,SNR=16
NWAO S S 13 01 41.1 +6.9
7.2nm,0.5s,baz=112,slow=19,SNR=3.4
MJAR Matsushiro Arr 49.66 22 P **P** **13 01 07.3 +0.7**
MJAR Matsushiro Arr 49.66 22 P **P** **13 01 07.3 +0.7**
1.6nm,0.7s,baz=203,slow=8.8,SNR=5.9
USRK Ussuriysk Arra 54.88 13 P **P** **13 01 45.2 +0.1**
4.0nm,0.7s,baz=171,slow=4.5,SNR=15
SONM Songino Array 57.66 351 P **P** **13 02 04.6 -0.4**
SONM Songino Array 57.66 351 P **P** **13 02 04.6 -0.4**
1.7nm,0.5s,baz=169,slow=8.1,SNR=11
MKAR Makanchi Array 63.92 334 P **P** **13 02 46.2 -1.2**
MKAR Makanchi Array 63.92 334 P **P** **13 02 46.2 -1.2**
1.3nm,0.6s,baz=145,slow=6.3,SNR=12
EKS2 Erkin-Say 65.14 326 P **P** **13 02 53.7 -1.9**
5.3nm,0.6s
ZAA0 Zalesovo Array 68.69 340 *e*P **P** **13 03 16.9 -0.7**
ZALV Zalesovo Beam 68.69 340 P **P** **13 03 15.7 -1.9**
ZALV Zalesovo Beam 68.69 340 P **P** **13 03 15.7 -1.9**
0.8nm,0.3s,baz=146,slow=4.0,SNR=5.3
YKA Yellowknife Ar 115.15 24 PKP **PKPdf** **13 10 54.9 +0.3**
YKA Yellowknife Ar 115.15 24 PKP **PKPdf** **13 10 54.9 +0.3**
0.3nm,0.4s,baz=301,slow=1.9,SNR=4.8

MEX 25 12:52:48.3±0.3, 17.38N×101.03W, h14km±5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	**0.47**	**298**	*i* P	Pg	12 52 56.5	-1.2
ZIIG				*i* S	Sg	12 53 03.2	-0.9
CAIG	**El Cayaco**	**0.80**	**115**	*i* P	Pg	12 53 01.3	-2.5
CAIG				*i* S	Sg	12 53 11.3	-3.0
ARIG	**Puente Sto Nin**	**1.10**	**36**	*i* P	Pb	12 53 05.7	-3.6
ARIG				*i* S	Sb	12 53 19.2	-4.4
PLIG	**Platanillo**	**1.77**	**55**	*i* P	Pn	12 53 15.3	-3.4
PLIG				*i* S	Sn	12 53 35.6	-5.5

NNC 25 13:00:40.7±2.7, 39.21N×69.39E, h0km, mb3.8, mpv3.3, 3C-2D, Error ellipse: s-maj=25.4km s-min=13.0km az=179.0, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**3.98**	**12**	Pn	Pn	13 01 44.1	+1.2
	3.2nm,0.4s,baz=194,slow=13,SNR=68						
KK31				⇓Lg	Lg	13 02 47.5	
	13nm,0.5s,baz=184,slow=26,SNR=3.7						
TKM2	**Tokmak 2**	**5.97**	**50**	⇑Pn	Pn	13 02 10.0	-0.6
	1.5nm,0.6s						
TKM2				⇑Sn	Sn	13 03 20.4	+0.4
	4.0nm,0.8s						
AB31	**Akbulak array**	**12.10**	**329**	Pn	Pn	13 03 33.8	-0.5
	0.7nm,0.3s,baz=139,slow=11,SNR=33						
AB31				⇑Sn	Sn	13 05 49.3	-0.5
	0.5nm,0.4s,baz=147,slow=24,SNR=4.8						
AKTO	**Aktyubinsk**	**13.80**	**328**	⇓Pn	Pn	13 03 56.6	-0.9
	1.3nm,0.7s						

IDC 25 13:04:12.0±1.0, 55.38S×1.28W, h0km, mb4.1/8, mb1 4.2/9, mb1mx4.1/18, mbtmp4.1/9, ML3.7/1, MS4.1/12, Ms1 4.1/12, ms1mx4.0/19, Error ellipse: s-maj=31.4km s-min=20.3km az=67.0, Bouvet Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**16.37**	**182**	Pn	Pn	13 08 03.5	+0.5
	0.3nm,0.3s,baz=2.8,slow=15,SNR=38						
SNAA				Sn	Sn	13 10 46.5	-19
	0.0nm,0.3s,baz=60,slow=10.0,SNR=3.4						
SNAA				LR	LR	13 13 09.5	
	comp=Z,86nm,18.8s,baz=353,slow=33						
SUR	**Sutherland**	**27.73**	**43**	LR	LR	13 18 12.3	
	comp=Z,629nm,21.5s,baz=200,slow=30						
MAW	**Mawson**	**31.37**	**139**	LR	LR	13 20 56.9	
	comp=Z,283nm,18.9s,baz=274,slow=32						
BOSA	**Boshof**	**32.84**	**46**	LR	LR	13 21 39.4	
	comp=Z,377nm,19.7s,baz=205,slow=32						
QSPA	**South Pole Qui**	**34.86**	**180**	P	P	13 11 04.3	-0.4
	7.3nm,0.9s,baz=218,slow=7.8,SNR=15						
PLCA	**Paso Flores**	**46.59**	**258**	P	P	13 12 41.1	-0.4
	2.4nm,1.1s,baz=146,slow=3.6,SNR=3.1						
PLCA				LR	LR	13 29 45.8	
	comp=Z,221nm,19.4s,baz=176,slow=33						
VNDA	**Vanda**	**46.95**	**175**	P	P	13 12 44.5	+0.7
	3.8nm,0.8s,baz=223,slow=8.3,SNR=14						
CPUP	**Villa Florida**	**49.59**	**282**	P	P	13 13 06.5	+1.7
	0.3nm,0.3s,baz=148,slow=9.5,SNR=3.7						
CPUP				LR	LR	13 29 52.4	
	comp=Z,308nm,19.5s,baz=180,slow=31						
CFAA	**Coronel Fontan**	**51.77**	**268**	P	P	13 13 19.9	-1.3
	1.6nm,0.9s,baz=147,slow=6.4,SNR=15						
BDFB	**Brasilia**	**53.35**	**299**	LR	LR	13 32 44.9	
	comp=Z,278nm,19.1s,baz=307,slow=32						
KMBO	**Kilima Mbogo**	**62.46**	**45**	LR	LR	13 39 54.0	
	comp=Z,363nm,18.1s,baz=258,slow=34						
LPAZ	**La Paz**	**63.62**	**280**	P	P	13 14 45.8	+0.3
	5.6nm,1.1s,baz=138,slow=5.8,SNR=7.3						
LPAZ				LR	LR	13 38 24.0	
	comp=Z,175nm,18.4s,baz=285,slow=32						
TORD	**Torodi Ar. Bea**	**68.31**	**3**	P	P	13 15 15.0	+0.2
	0.5nm,0.8s,baz=197,slow=9.0,SNR=3.2						
TORD				LR	LR	13 41 41.3	
	comp=Z,71nm,18.1s,baz=220,slow=33						
ROSC	**El Rosal**	**84.45**	**287**	LR	LR	13 54 00.0	
	comp=Z,161nm,18.6s,baz=216,slow=35						
ASAR	**Alice Springs**	**92.49**	**140**	P	P	13 17 24.2	-0.8
	0.4nm,0.7s,baz=202,slow=4.7,SNR=4.8						
BRTR	**Keskin Array B**	**99.31**	**27**	LR	LR	14 04 24.0	
	comp=Z,38nm,19.9s,baz=286,slow=36						
YKA	**Yellowknife Ar**	**146.32**	**310**	PKPbc	PKPdf	13 23 51.7	-0.2
	1.8nm,0.8s,baz=102,slow=3.3,SNR=8.4						
ILAR	**Eielson Array**	**160.69**	**313**	PKPab	PKPab	13 24 54.0	-0.4
	0.2nm,0.9s,baz=119,slow=3.2,SNR=3.7						

*ISK **25** 13:29:05.9, 37.39N×35.88E, h5km, MD3.0*
*ISCJB **25** 13:29:06.3±0.5, 37.38N±0.03×35.88E±0.04, h6km±5km, Error ellipse: s-maj=5.3km s-min=4.9km az=164.2*
*DDA **25** 13:29:06.2, 37.42N×35.91E, h7km, MD2.9*
*CSEM **25** 13:29:06.4±0.2, 37.40N×35.90E, h8km, MD3.0, Error ellipse: s-maj=4.4km s-min=4.2km az=148.0*

ISC 25 13:29:05.8±0.9, 37.39N±0.02×35.89E±0.03, h10km±6km, n38, σ1.903/47, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.10**	**329**	*e*PG	**Pg**	**13 29 08.8**	**+0.3**
KOZT				*e*SG	**Sg**	**13 29 10.5**	**+0.1**
KOZT	**Kozan**	**0.10**	**329**	*e*Pg	**Pg**	**13 29 08.8**	**+0.3**
KOZT				*e*Sg	**Sg**	**13 29 10.5**	**+0.1**
CEYT	**Ceyhan**	**0.40**	**197**	*e*PG	**Pb**	**13 29 13.7**	**-1.3**
CEYT	**Ceyhan**	**0.40**	**197**	*e*Pg	**Pb**	**13 29 13.7**	**-1.3**
YURE	**YUREGIR**	**0.60**	**200**	*i* P	**Pn**	**13 29 20.1**	**-0.4**
YURE	**YUREGIR**	**0.60**	**200**	*i* P	**Pn**	**13 29 20.1**	**-0.4**
KARA	**Karaisali**	**0.68**	**259**	*e*PG	**Pb**	**13 29 19.3**	**-0.5**
KARA				*e*SG	**Sb**	**13 29 29.0**	**-0.3**
KARA	**Karaisali**	**0.68**	**259**	*e*Pg	**Pb**	**13 29 19.3**	**-0.5**
KARA				*e*Sg	**Sb**	**13 29 29.0**	**-0.3**
AYKD	**Aykdinkavak**	**0.73**	**88**	*i* P	**Pg**	**13 29 19.2**	**-0.6**
AYKD				*i* S	**Sn**	**13 29 33.9**	**+0.5**
KMRS	**Kahramanmaras**	**0.81**	**82**	*e*PG	**Pb**	**13 29 22.2**	**+0.2**
KMRS	**Kahramanmaras**	**0.81**	**82**	*e*Pg	**Pb**	**13 29 22.2**	**+0.2**
GULE	**Gulek**	**0.90**	**263**	*i* P	**Pb**	**13 29 23.6**	**0.0**
GULE	**Gulek**	**0.90**	**263**	*i* P	**Pb**	**13 29 23.6**	**0.0**
KRTS	**Karatas**	**0.92**	**207**	*e*PG	**Pb**	**13 29 23.8**	**0.0**
KRTS	**Karatas**	**0.92**	**207**	*e*Pg	**Pb**	**13 29 23.8**	**0.0**
COBT	**Iskenderun**	**0.92**	**161**	*i* P	**Pg**	**13 29 23.2**	**-0.3**
COBT	**Iskenderun**	**0.92**	**161**	*i* P	**Pg**	**13 29 23.2**	**-0.3**
GAZ	**Gaziantep**	**1.07**	**101**	*e*PN	**Pn**	**13 29 27.1**	**+0.2**
GAZ	**Gaziantep**	**1.07**	**101**	*e*Pn	**Pn**	**13 29 27.2**	**+0.2**
KUZU	**Kuzuini**	**1.13**	**123**	*i* P	**Pn**	**13 29 28.0**	**+0.3**
KUZU				*i* S	**Sn**	**13 29 43.8**	**+0.5**
KUZU	**Kuzuini**	**1.13**	**123**	*i* P	**Pn**	**13 29 28.0**	**+0.3**
KUZU				*i* S	**Sn**	**13 29 43.8**	**+0.5**
NIG	**Nigde**	**1.25**	**306**	*e*PN	**Pn**	**13 29 29.8**	**+0.3**
NIG	**Nigde**	**1.25**	**306**	*e*Pn	**Pn**	**13 29 29.8**	**+0.3**
HTY	**Hatay**	**1.28**	**171**	*e*PN	**Pb**	**13 29 30.8**	**+0.8**
HTY	**Hatay**	**1.28**	**171**	*e*Pn	**Pb**	**13 29 30.8**	**+0.8**
PINB	**Pinarbasi**	**1.34**	**17**	*i* P	**Pg**	**13 29 31.5**	**-0.2**
PINB				*i* S	**Sn**	**13 29 52.4**	**+3.4**
PINB	**Pinarbasi**	**1.34**	**17**	*i* P	**Pg**	**13 29 31.5**	**-0.2**
PINB				*i* S	**Sn**	**13 29 52.4**	**+3.4**
BNN	**Bunyan**	**1.46**	**359**	*e*PN	**Pg**	**13 29 33.1**	**-0.7**
BNN	**Bunyan**	**1.46**	**359**	*e*Pn	**Pg**	**13 29 33.1**	**-0.7**
DARE	**Darende-Malaty**	**1.72**	**46**	*e*PN	**Pg**	**13 29 38.1**	**-0.8**
AKCD	**Akcadag**	**1.84**	**60**	*i* P	**Pn**	**13 29 37.4**	**-0.2**
AKCD	**Akcadag**	**1.84**	**60**	*i* P	**Pn**	**13 29 37.4**	**-0.2**
IKL	**Isikli**	**2.11**	**238**	*e*PN	**Pb**	**13 29 43.0**	**-1.2**
IKL	**Isikli**	**2.11**	**238**	*e*Pn	**Pb**	**13 29 43.0**	**-1.2**
MYA	**Malataya**	**2.21**	**64**	*e*PN	**Pb**	**13 29 44.5**	**-1.4**
MYA	**Malataya**	**2.21**	**64**	*e*Pn	**Pb**	**13 29 44.5**	**-1.4**
YOZ	**Yozgat**	**2.29**	**349**	*e*PN	**Pb**	**13 29 45.5**	**-1.8**
YOZ	**Yozgat**	**2.29**	**349**	*e*Pn	**Pb**	**13 29 45.5**	**-1.8**

*ISCJB **25** 13:43:41.2±0.6, 21.04S±0.05×68.18W±0.1, h110km±9km, mb3.6/2, Error ellipse: s-maj=17.7km s-min=7.7km az=166.4*
*GUC **25** 13:43:41.9±0.6, 21.15S×69.06W, h117km±3km, ML3.8*
*IDC **25** 13:43:43.9±1.6, 21.15S×68.57W, h105km±13km, mb3.4/3, mb1 3.4/6, mb1mx3.3/20, mbtmp3.4/6, Error ellipse: s-maj=46.8km s-min=14.4km az=108.0*

ISC 25 13:43:42.0±0.8, 21.06S±0.05×68.9W±0.1, h108km±10km, n14, σ0.966/18, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**Plate Boundary**	**0.59**	**272**	⇓*i*P	**Pn**	**13 43 59.5**	**+0.1**
PB01				*i* S	**Sn**	**13 44 12.6**	**+0.2**
PB01				AML	AML	13 44 13.4	
	comp=E,14µm,0.3s						
PB09	**Plate Boundary**	**0.81**	**206**	⇑*i*P	**Pn**	**13 44 01.5**	**+0.1**
PB09				*i* S	**Sn**	**13 44 16.1**	**+0.1**
PB09				AML	AML	13 44 18.6	
	comp=E,6µm,0.3s						
HMBC	**Humberstone**	**1.24**	**309**	⇑*i*P	**Pn**	**13 44 05.9**	**+0.1**
HMBC				*i* S	**Sn**	**13 44 24.2**	**+0.4**
HMBC				AML	AML	13 44 25.8	
	comp=E,2µm,0.7s						
PB04	**Plate Boundary**	**1.33**	**206**	⇑*i*P	Pn	13 44 10.9	+4.2
PB04				*i* S	Sn	13 44 32.6	+7.2
PB04				AML	AML	13 44 35.6	
	comp=E,637nm,0.3s						
LVC	**Limon Verde**	**1.54**	**182**	⇑*i*P	**Pn**	**13 44 09.8**	**+0.3**
LVC				*i* S	**Sn**	**13 44 30.7**	**+0.4**
LVC	**Limon Verde**	**1.54**	**182**	P	**Pn**	**13 44 09.8**	**+0.3**
	comp=E,21nm,0.3s,baz=16,slow=7.3,SNR=554						
LVC				S	**Sn**	**13 44 30.5**	**+0.1**
	comp=E,68nm,0.3s,baz=104,slow=20,SNR=34						
PSGC	**Pisagua**	**1.88**	**321**	⇑*i*P	**Pn**	**13 44 13.2**	**-0.3**
PSGC				*i* S	**Sn**	**13 44 37.7**	**+0.2**
PSGC				AML	AML	13 44 40.0	
	comp=N,423nm,0.4s						
ANCH	**Antofagasta**	**2.98**	**209**	⇑*i*P	**Pn**	**13 44 26.2**	**-1.5**
LPAZ	**La Paz**	**4.80**	**8**	P	Pn	13 44 56.1	+3.4
	comp=N,1.4nm,0.3s,baz=187,slow=9.1,SNR=18						
SIV	**San Ignacio**	**8.94**	**57**	P	**Pn**	**13 45 47.0**	**-1.4**
	comp=N,2.0nm,0.3s,baz=256,slow=10.0,SNR=31						
PLCA	**Paso Flores**	**19.66**	**184**	P	**Pn**	**13 48 05.1**	**+0.2**
	comp=N,0.1nm,0.3s,baz=354,slow=9.3,SNR=4.2						
BDFB	**Brasilia**	**20.50**	**78**	P	**P**	**13 48 12.2**	**+0.4**
	comp=N,2.6nm,0.5s,baz=252,slow=9.6,SNR=3.1						
SNAA	**Sanae**	**62.67**	**161**	P	**P**	**13 53 55.0**	**0.0**
	comp=N,0.4nm,0.9s,baz=303,slow=12,SNR=4.2						
TORD	**Torodi Ar. Bea**	**77.17**	**70**	P	**P**	**13 55 25.5**	**+1.0**
	comp=N,0.8nm,0.4s,baz=260,slow=5.5,SNR=8.1						

*ISCJB **25** 13:51:44.5±0.8, 43.36N±0.05×146.47E±0.07, h54km±6km, mb3.8/14, Error ellipse: s-maj=10.8km s-min=6.4km az=139.3*
*JMA **25** 13:51:44.9±0.2, 43.29N×146.43E, h45km±1km, M4.0*
JMA Felt II J1.
*MOS **25** 13:51:46.1±1.4, 43.60N×146.47E, h61km, mb4.2/9, Error ellipse: s-maj=14.7km s-min=10.6km az=76.1*
*IDC **25** 13:51:48.6±2.6, 43.86N×146.42E, h54km±25km, mb3.6/13, mb1 3.8/16, mb1mx3.6/29, mbtmp3.6/16, ML3.6/3, Error ellipse: s-maj=40.6km s-min=16.1km az=167.0*

ISC 25 13:51:44.7±1.0, 43.33N±0.07×146.51E±0.06, h40km±9km, n34, σ0.998/41, mb3.9/14, 2C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.56**	**274**	P	**Pn**	**13 51 55.9**	**-0.3**
NEM2				*e*S	**Sn**	**13 52 04.0**	**-0.3**
YUK	**Yuzh-Kuril'sk**	**0.85**	**327**	*i* PN	**Pn**	**13 51 59.7**	**-0.5**
YUK				*i* S	**Sn**	**13 52 11.4**	**0.0**
YUK				pmax	pmax		
	comp=N,312nm,0.2s						
YUK				pmax	pmax		
	comp=Z,3µm,0.3s						
YUK				pmax	pmax		
	comp=E,259nm,0.1s						
YUK				smax	smax		
	comp=N,2µm,0.4s						
YUK				smax	smax		
	comp=E,3µm,0.4s						
JRA	**Rausu**	**1.18**	**302**	P	**Pn**	**13 52 04.9**	**+0.3**
JRA				*e*S	**Sn**	**13 52 19.1**	**-0.3**
JNK	**Nakash**	**1.33**	**282**	P	**Pn**	**13 52 06.4**	**-0.3**
JNK				*e*S	**Sn**	**13 52 22.4**	**-0.8**
JAK	**Akkeshi**	**1.36**	**257**	P	**Pn**	**13 52 06.8**	**-0.4**
JAK				*e*S	**Sn**	**13 52 22.7**	**-1.3**
JTKR	**Abashiri--Toko**	**1.99**	**290**	P	**Pn**	**13 52 17.0**	**+1.2**
JAR	**Ashorobuto**	**2.00**	**270**	P	**Pn**	**13 52 16.4**	**+0.5**
JAR				*e*S	**Sn**	**13 52 40.5**	**+0.8**
JOB	**Onbets**	**2.00**	**259**	P	**Pn**	**13 52 16.8**	**+0.9**
KUR	**Kuril'sk**	**2.14**	**27**	*d i*PN	**Pn**	**13 52 18.1**	**+0.2**
KUR				*i* S	**Sn**	**13 52 44.3**	**+1.0**
KUR				pmax	pmax		
	comp=Z,78nm,0.4s						
KUR				pmax	pmax		
	comp=N,52nm,0.2s						
KUR				pmax	pmax		
	comp=E,21nm,0.2s						
KUR				smax	smax		
	comp=E,188nm,0.2s						
KUR				smax	smax		
	comp=N,302nm,0.2s						
JMP	**Maruseppu**	**2.38**	**288**	P	**Pn**	**13 52 22.6**	**+1.4**
JCH	**Churui**	**2.41**	**254**	P	**Pn**	**13 52 22.5**	**+0.9**
ERM	**Erimo**	**2.79**	**243**	⇑*i*PN	**Pn**	**13 52 29.2**	**+2.3**
ASAJ	**Asahikawa**	**2.94**	**287**	P	**Pn**	**13 52 31.2**	**+2.3**
	comp=N,10nm,0.3s,baz=110,slow=14,SNR=22						
YSS	**Yuzh-Sakhalins**	**4.50**	**325**	⇑*e*PN	**Pn**	**13 52 52.1**	**+1.9**
YSS				*e*S	**Sn**	**13 53 42.0**	**+0.8**
YSS				smax	smax		
	comp=N,20nm,0.8s						
YSS				MLR	MLR		
	comp=Z,100nm,18.0s						
MJAR	**Matsushiro Arr**	**9.30**	**226**	P	Pn	13 54 04.4	+8.2
	comp=Z,0.3nm,0.3s,baz=31,slow=13,SNR=4.7						
PETK	**Petropavlovsk-**	**12.29**	**33**	*e*PN	**Pn**	**13 54 36.6**	**-0.4**
PETK	**Petropavlovsk-**	**12.29**	**33**	P	Pn	13 54 34.0	-3.1
	comp=Z,0.3nm,0.3s,baz=184,slow=15,SNR=7.7						
SONM	**Songino Array**	**28.20**	**293**	P	**P**	**13 57 34.1**	**+0.5**
	comp=Z,0.4nm,0.3s,baz=106,slow=11,SNR=3.2						
KDAK	**Kodiak Island**	**39.88**	**47**	P	**P**		**13 59 13.5 -0.7**
	comp=Z,3.3nm,0.6s,baz=247,slow=7.7,SNR=6.3						
ILAR	**Eielson Array**	**42.11**	**36**	P	**P**		**13 59 32.2 -0.2**
	comp=Z,0.8nm,0.6s,baz=268,slow=5.6,SNR=18						
MKAR	**Makanchi Array**	**44.37**	**298**	P	**P**		**13 59 50.6 -0.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**44.37**	**298**	P	**P**		**13 59 50.6 -0.3**
	comp=Z,0.5nm,0.7s,baz=78,slow=7.9,SNR=3.3						
KURK	**Kurchatov**	**45.38**	**304**	P	**P**		**13 59 58.9 0.0**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**45.46**	**304**	P	**P**		**13 59 58.9 -0.7**
	comp=Z,0.6nm,0.4s,baz=74,slow=7.2,SNR=4.3						
INK	**Inuvik**	**47.01**	**30**	P	**P**		**14 00 11.3 -0.1**
	comp=Z,1.1nm,0.3s,baz=312,slow=8.9,SNR=8.1						
YKA	**Yellowknife Ar**	**56.41**	**33**	P	**P**		**14 01 21.4 -0.3**
	comp=Z,0.9nm,0.7s,baz=302,slow=6.6,SNR=5.9						
FINES	**FINESS Array B**	**65.04**	**333**	P	**P**		**14 02 18.9 -1.4**
	comp=Z,1.1nm,0.6s,baz=122,slow=2.5,SNR=4.1						
NVAR	**Mina Array Bea**	**68.20**	**57**	P	**P**		**14 02 42.4 +1.2**
	comp=Z,0.4nm,0.6s,baz=299,slow=8.2,SNR=3.1						
KBZ	**Khabaz**	**69.73**	**311**	P	**P**		**14 02 51.3 +1.0**
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KBZ	**Khabaz**	**69.73**	**311**	P	**P**		**14 02 51.3 +1.0**
	comp=Z,1.2nm,0.5s,baz=44,slow=8.4,SNR=5.8						
NOA	**NORSAR Array B**	**69.83**	**339**	P	**P**		**14 02 49.4 -1.3**
	comp=Z,0.2nm,0.3s,baz=32,slow=6.5,SNR=5.2						
AKASG	**Malin Array Be**	**71.64**	**323**	P	**P**		**14 03 01.1 -0.7**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AKASG	**Malin Array Be**	**71.64**	**323**	P	**P**		**14 03 01.1 -0.7**
	comp=Z,0.5nm,0.3s,baz=40,slow=6.2,SNR=4.2						
TXAR	**Lajitas Array**	**83.28**	**56**	P	**P**		**14 04 07.6 +0.2**
	comp=Z,0.2nm,0.6s,baz=341,slow=4.4,SNR=3.1						
TXAR				pP	**pP**		**14 04 19.5 0.0**
	comp=Z,0.4nm,0.6s,baz=312,slow=5.2,SNR=4.5						

KRSC 25 13:58:42.3±1.2, 51.02N×158.24E, h51km±51km, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAK	**Asacha**	**1.38**	**351**	*i* P	Pn	13 59 06.9	+1.6
ASAK				*i* S	Sn	13 59 25.2	+2.7
SKR	**Severo-Kuril's**	**1.39**	**257**	*i* P	Pn	13 59 03.8	-1.4
SKR				*i* S	Sn	13 59 19.9	-2.5
RUS	**Russkaya**	**1.43**	**7**	*i* P	Pn	13 59 07.0	+1.2
RUS				*i* S	Sn	13 59 25.3	+1.9
MTVR	**Mutnovka**	**1.47**	**359**	*i* P	Pn	13 59 08.2	+1.7
MTVR				*i* S	Sn	13 59 27.3	+2.6
GRL	**Gorelyy**	**1.54**	**356**	*e*P	Pn	13 59 09.4	+1.9
GRL				*i* S	Sn	13 59 29.2	+2.8
MIPR	**Malaya Ipel'ka**	**1.56**	**324**	*e*P	Pn	13 59 08.5	+0.9
MIPR				*e*S	Sn	13 59 27.5	+0.8
APC	**Apacha**	**2.02**	**341**	*i* P	Pn	13 59 15.3	+1.4
PET	**Petropavlovsk**	**2.02**	**7**	*i* P	Pn	13 59 15.4	+1.5
PET				*i* S	Sn	13 59 39.6	+1.6
UGLR	**Uglovaya**	**2.22**	**9**	*i* P	Pn	13 59 18.7	+1.9
UGLR				*e*S	Sn	13 59 45.0	+1.8
AVH	**Avacha**	**2.27**	**8**	*i* P	Pn	13 59 19.8	+2.4
AVH				*i* S	Sn	13 59 46.8	+2.5
SMAR	**Somma**	**2.27**	**9**	*i* P	Pn	13 59 19.2	+1.5
SMAR				*e*S	Sn	13 59 46.0	+1.3
KOK	**Koryaka**	**2.29**	**6**	*i* P	Pn	13 59 20.2	+2.5
SDLR	**Sedlovina**	**2.30**	**10**	*i* P	Pn	13 59 19.2	+1.4
SDLR				*e*S	Sn	13 59 46.0	+1.0
KRER	**Koryakskii**	**2.31**	**8**	*e*P	Pn	13 59 20.3	+2.2
SPN	**Mys Shipunski**	**2.35**	**27**	*i* P	Pn	13 59 20.2	+1.7
SPN				*i* S	Sn	13 59 47.8	+1.7
GNL	**Ganaly**	**2.69**	**356**	*i* P	Pn	13 59 25.0	+1.8
MKZ	**Mys Kozlova**	**4.13**	**30**	P	Pn	13 59 43.4	+0.7
MKZ				*i* S	Sn	14 00 28.6	-1.0
TUMR	**Tumrok**	**4.42**	**14**	P	Pn	13 59 49.0	+2.0

*BJI **25** 14:03:55.8, 33.25N×130.63E, h7km, mB4.6/25, mb4.5/36, Ms4.4/36, Ms7 4.2/36*
*ISCJB **25** 14:03:56.0±0.5, 33.33N±0.03×130.81E±0.04, h21km±3km, mb4.6/68, MS4.2/22, Error ellipse: s-maj=5.4km s-min=4.2km az=17.2*
*NEIC **25** 14:03:56.3±0.9, 33.28N×130.75E, h14km±6km, mb4.8/20, MW4.5(NIED), Error ellipse: s-maj=6.6km s-min=5.0km az=137.0*
NEIC Recorded [4 JMA] in Fukuoka and Oita; [2 JMA] in Kumamoto and Miyazaki; [1 JMA] in Nagasaki and Saga. Recorded [3 JMA] in Yamaguchi and [2 JMA] in Hiroshima and Shimane, Honshu and [1 JMA] in Ehime, Shikoku.
*JMA **25** 14:03:56.7, 33.37N×130.89E, h12km, M4.7 Broadband fault plane solution: P waves. NP1:ϕ=82.00000°, δ46.00000°, λ-95.00000°. NP2:ϕ=270.00000°, δ44.00000°, λ-84.00000°. Principal axes: T Plg1.0000°, Azm176.0000°; N Plg4.0000°, Azm86.0000°; P Plg86.0000°, Azm278.0000°;*
JMA Felt IV J1.
*IDC **25** 14:03:57.1±0.6, 33.28N×130.87E

NJ2 S **Sn** **14 08 13.0 -2.1**
NJ2 sS 14 08 21.5
NJ2 pmax pmax
comp=Z,20nm,1.2s
NJ2 pmax pmax
comp=Z,70nm,5.5s
NJ2 LR LR
comp=N,550nm,14.1s
NJ2 LR LR
comp=E,710nm,10.1s
NJ2 LR LR
comp=Z,850nm,12.2s
SNY Shenyang 10.26 328 ⇓P Pn 14 06 32.3 +8.7
SNY S Sn 14 08 39.3 +21
SNY pmax pmax
comp=Z,120nm,2.6s
SNY LR LR
comp=N,2μm,9.4s
SNY LR LR
comp=E,2μm,6.7s
SNY LR LR
comp=Z,2μm,8.2s
USRK Ussuriysk Arra 10.94 5 Pn **Pn** **14 06 33.9 +1.1**
comp=Z,0.4nm,0.3s,baz=188,slow=14,SNR=9.5
USRK LR LR 14 10 18.1
comp=Z,212nm,21.4s,baz=137,slow=35
CN2 Changchun 11.30 340 *e*P **Pn** **14 06 37.0 -0.7**
CN2 *e*S **Sn** **14 08 43.3 -0.2**
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 pmax pmax
comp=Z,200nm,3.0s
CN2 LR LR
comp=N,200nm,11.0s
CN2 LR LR
comp=E,400nm,11.0s
CN2 LR LR
comp=Z,500nm,12.0s
MDJ Mudanjiang 11.35 356 P **Pn** **14 06 41.0 +2.5**
MDJ pmax pmax
comp=Z,7.0nm,1.0s
MDJ pmax pmax
comp=Z,170nm,5.1s
YHNB Yeheng 11.89 226 *e*Pn **Pn** **14 06 44.3 -1.8**
SSLB Suanglung 12.81 225 *e*Pn **Pn** **14 06 56.0 -2.5**
ERM Erimo 13.10 45⇓*e*P **Pn** **14 07 02.2 -0.2**
ERM pmax pmax
comp=Z,19nm,1.0s
TPUB Ta-pu 13.37 225 *e*Pn **Pn** **14 07 04.8 -1.4**
TWG Pinlang 13.49 222 *e*Pn **Pn** **14 07 05.3 -2.5**
BJI Beijing 13.52 304 P **Pn** **14 07 06.0 -2.1**
BJI S **Sn** **14 09 37.5 -0.4**
BJI LR LR
comp=N,890nm,11.4s
BJI LR LR
comp=E,1μm,11.4s
BJI LR LR
comp=Z,450nm,14.8s
ASAJ Asahikawa 14.19 37 *e*Pn **Pn** **14 07 15.7 -1.6**
ASAJ Asahikawa 14.19 37 Pn **Pn** **14 07 17.8 +0.5**
comp=Z,0.5nm,0.3s,baz=280,slow=6.1,SNR=7.4
ASAJ LR LR 14 12 43.1
comp=Z,328nm,18.1s,baz=340,slow=37
HABR Khabarovsk 15.51 11 *e*P **P** **14 07 40.9 +1.7**
HABR MLR MLR
comp=Z,281nm,14.0s
YUK Yuzh-Kuril'sk 15.90 43*c i*P **P** **14 07 42.0 -1.6**
YUK *i* S **Sn** **14 10 39.6 +3.7**
YUK MLR MLR
comp=Z,199nm,16.0s
KLR Kul'dur 15.95 2 *e*P **P** **14 07 43.2 -0.9**
KLR pmax pmax
comp=Z,96nm,1.4s
KLR MLR MLR
comp=E,600nm,11.5s
KLR MLR MLR
comp=Z,2μm,11.5s
YSS Yuzh-Sakhalins 16.41 30⇑*e*P **P** **14 07 48.8 -0.4**
YSS *e*S **Sn** **14 10 52.0 +4.0**
YSS MLR MLR
comp=Z,400nm,17.0s
YSS MLR MLR
comp=N,500nm,14.0s
YSS MLR MLR
comp=E,500nm,15.0s
HHC Hu-ho-hao-te 17.08 302 *e*P **Pn** **14 07 50.8 -4.4**
HHC pP **P** **14 07 54.3 -2.6**
HHC sP sP 14 07 57.8 -6.4
HHC PP **PnPn** **14 08 05.5 +0.6**
HHC S Sn 14 10 57.5 -7.2
HHC sS S 14 11 03.0 -11
HHC SS **SnSn** **14 11 18.0 +0.1**
HHC pmax pmax
comp=Z,22nm,1.0s
HHC pmax pmax
comp=Z,87nm,5.1s
HHC LR LR
comp=N,770nm,12.0s
HHC LR LR
comp=E,2μm,10.2s
HHC LR LR
comp=Z,1μm,11.8s
XAN Xi'an 18.22 278 P **P** **14 08 11.0 +1.6**
XAN pmax pmax
comp=Z,38nm,10.2s
XAN LR LR
comp=N,270nm,12.5s
XAN LR LR
comp=E,110nm,12.8s
XAN LR LR
comp=Z,140nm,12.8s
GYA Guiyang 21.97 258 *e*P **P** **14 08 49.5 -0.9**
GYA pmax pmax
comp=Z,10.0nm,0.8s
LZH Lanzhou 22.31 285 *e*P **P** **14 08 50.5 -3.5**
LZH PP **PnPn** **14 09 17.0 +0.3**
LZH *e*S S 14 12 48.5 -10
LZH SS **SnSn** **14 13 29.0 +2.6**
LZH pmax pmax
comp=Z,19nm,1.0s
LZH pmax pmax
comp=Z,180nm,4.2s
LZH LR LR
comp=N,670nm,12.4s
LZH LR LR
comp=E,740nm,13.6s
LZH LR LR
comp=Z,930nm,14.0s
CD2 Chengdu 23.00 271 *e*P **P** **14 09 00.5 -0.7**
CD2 pP **pP** **14 09 04.5 -1.8**
CD2 sP **sP** **14 09 07.3 -1.4**
CD2 PP **PnPn** **14 09 29.3 +3.2**
CD2 S **S** **14 13 05.5 -5.5**
CD2 sS sS 14 13 11.5 -8.4
CD2 SS **SnSn** **14 13 48.5 +5.2**
CD2 pmax pmax
comp=Z,20nm,0.7s
CD2 pmax pmax
comp=Z,50nm,5.8s
CD2 LR LR
comp=N,910nm,12.0s
CD2 LR LR
comp=E,470nm,13.2s
CD2 LR LR
comp=Z,790nm,14.2s
ULN Ulaanbaatar 23.05 316 *e*P **P** **14 08 59.1 -2.6**
comp=Z,41nm,1.0s
SONM Songino Array 23.42 316 P **P** **14 09 06.4 +1.1**
SONM Songino Array 23.42 316 P **P** **14 09 06.4 +1.1**
comp=Z,11nm,0.9s,baz=134,slow=8.0,SNR=42
QIZ Qiongzhong 23.50 238 P **P** **14 09 06.3 +0.1**
QIZ S **S** **14 13 20.5 +1.3**
QIZ pmax pmax
comp=Z,6.0nm,1.4s
QIZ pmax pmax
comp=Z,77nm,7.8s
QIZ LR LR
comp=N,290nm,19.6s
QIZ LR LR
comp=E,100nm,21.5s
QIZ LR LR
comp=Z,260nm,11.8s
CLNS Chul'man 23.90 352 *e*P **P** **14 09 10.4 +0.6**
CLNS *e* 14 09 43.3
CLNS *e*SS Sn 14 14 25.1 +37
CLNS *e* 14 20 07.9

CLNS pmax pmax
comp=Z,21nm,1.1s
CLNS pmax pmax
comp=N,20nm,1.2s
CLNS pmax pmax
comp=E,6.0nm,1.2s
CLNS pmax pmax
comp=E,8.0nm,1.3s
CLNS pmax pmax
comp=N,12nm,1.3s
CLNS pmax pmax
comp=Z,6.0nm,1.1s
CLNS MLR MLR
comp=E,151nm,10.0s
CLNS MLR MLR
comp=Z,242nm,11.0s
CLNS MLR MLR
comp=N,163nm,10.0s
GTA Gaotai 25.61 293 *e*P **P** **14 09 27.5 +1.8**
GTA pP **pP** **14 09 31.8 +0.7**
GTA sP **sP** **14 09 34.5 +1.1**
GTA S **S** **14 13 58.0 +5.0**
GTA sS **sS** **14 14 05.3 +3.3**
GTA pmax pmax
comp=Z,5.0nm,2.1s
GTA pmax pmax
comp=Z,74nm,5.9s
GTA LR LR
comp=N,710nm,17.1s
GTA LR LR
comp=E,330nm,15.2s
GTA LR LR
comp=Z,370nm,15.7s
KMI Kunming 25.74 259 P **P** **14 09 28.3 +1.2**
KMI S **S** **14 13 53.0 -2.5**
KMI pmax pmax
comp=Z,13nm,0.6s
KMI LR LR
comp=Z,150nm,10.0s
ZAK Zakamensk 26.46 318 *e*P **P** **14 09 33.8 +0.6**
ZAK pmax pmax
comp=Z,9.0nm,1.2s
IRK Irkutsk 26.92 323 *e*P **P** **14 09 37.1 -0.2**
IRK pmax pmax
comp=Z,28nm,2.0s
YAK Yakutsk 28.77 359 *e*P **P** **14 09 51.7 -1.9**
YAK pmax pmax
comp=N,10.0nm,1.0s
YAK pmax pmax
comp=Z,24nm,1.0s
YAK pmax pmax
comp=E,2.0nm,0.9s
CMAR Chiang Mai Arr 32.08 251 P **P** **14 10 23.5 +0.1**
CMAR PcP **PcP** **14 13 13.0 +0.4**
CMAR Chiang Mai Arr 32.08 251 P **P** **14 10 23.5 +0.1**
comp=E,0.6nm,0.4s,baz=357,slow=17,SNR=4.5
CMAR PcP **PcP** **14 13 13.0 +0.4**
comp=E,0.7nm,0.5s,baz=70,slow=1.1,SNR=3.8
LSA Lhasa 33.85 275 P **P** **14 10 41.5 +2.2**
WMQ Urumqi 34.95 300 *e*P **P** **14 10 48.5 +0.3**
WMQ pP **pP** **14 10 55.0 +1.3**
WMQ PP **PP** **14 12 07.0 -0.5**
WMQ *e*S **S** **14 16 19.0 -0.1**
WMQ pmax pmax
comp=Z,13nm,1.1s
WMQ pmax pmax
comp=Z,87nm,4.0s
WMQ LR LR
comp=N,890nm,12.6s
WMQ LR LR
comp=E,460nm,13.7s
WMQ LR LR
comp=Z,590nm,17.4s
ZAA0 Zalesovo Array 38.30 317 *e*P **P** **14 11 15.1 -1.5**
ZALV Zalesovo Beam 38.30 317 P **P** **14 11 16.9 +0.4**
ZALV 14 13 30.0
ZALV pmax pmax
comp=Z,4.0nm,1.0s
ZALV pmax pmax
comp=Z,2.0nm,0.8s
ZALV MLR MLR
comp=Z,62nm,19.8s
ZALV Zalesovo Beam 38.30 317 P **P** **14 11 16.9 +0.4**
ZALV PcP **PcP** **14 13 30.0 -0.2**
ZALV Zalesovo Beam 38.30 317 P **P** **14 11 16.9 +0.4**
comp=Z,3.9nm,0.9s,baz=98,slow=7.6,SNR=11
ZALV PcP **PcP** **14 13 30.0 -0.2**
comp=Z,1.7nm,0.8s,baz=126,slow=2.6,SNR=5.1
ZALV LR LR 14 26 18.8
comp=Z,62nm,19.8s,baz=72,slow=35
TIXI Tiksi 38.44 359⇓*e*P **P** **14 11 16.6 -0.8**
TIXI pmax pmax
comp=Z,14nm,1.7s
MKAR Makanchi Array 38.90 305 P **P** **14 11 22.0 +0.3**
MKAR 14 13 32.4
MKAR pmax pmax
comp=Z,4.0nm,0.9s
MKAR pmax pmax
comp=Z,2.0nm,0.9s
MKAR Makanchi Array 38.90 305 P **P** **14 11 22.0 +0.3**
MKAR PcP **PcP** **14 13 32.4 +0.1**
MKAR Makanchi Array 38.90 305 P **P** **14 11 22.0 +0.3**
comp=Z,4.3nm,0.9s,baz=92,slow=10.0,SNR=12
MKAR PcP **PcP** **14 13 32.4 +0.1**
comp=Z,1.9nm,0.9s,baz=81,slow=3.4,SNR=5.8
BILL Bilibino 40.30 20 *e*P **P** **14 11 33.3 +0.3**
BILL *e* 14 13 06.2
BILL *i* 14 13 36.4
BILL pmax pmax
comp=Z,22nm,1.2s
BILL Bilibino 40.30 20 *e*P **P** **14 11 32.0 -1.0**
comp=Z,24nm,1.2s
KURK Kurchatov 41.56 311*de*P **P** **14 11 44.5 +0.9**
KURK pmax pmax
comp=Z,41nm,1.7s
KURK Kurchatov 41.56 311 *e*P **P** **14 11 43.3 -0.3**
comp=Z,37nm,1.3s
KURK PcP **PcP** **14 13 40.6 0.0**
KURBB Kurchatov Arra 41.61 311 P **P** **14 11 45.0 +0.9**
comp=Z,7.7nm,0.7s,baz=95,slow=9.1,SNR=53
KURBB PcP **PcP** **14 13 40.6 -0.2**
comp=Z,2.1nm,0.8s,baz=94,slow=3.5,SNR=7.4
TKM2 Tokmak 2 43.79 299 *e*P **P** **14 12 00.9 -1.3**
TKM2 pmax pmax
comp=Z,17nm,1.3s
TKM2 Tokmak 2 43.79 299 *e*P **P** **14 12 00.9 -1.3**
comp=Z,17nm,1.3s
KSH Kashi 43.98 294 *e*P P 14 12 09.0 +5.3
KSH *ep*P pP 14 12 13.5 +4.2
KSH *es*P sP 14 12 16.3 +4.8
KSH *e*PcP **PcP** **14 13 51.3 +2.1**
KSH *e*PP PP 14 13 54.3 +8.2
KSH *e*S S 14 18 44.0 +9.1
KSH *es*S sS 14 18 52.8 +8.7
KSH pmax pmax
comp=Z,11nm,0.5s
KSH pmax pmax
comp=Z,100nm,3.2s
KSH LR LR
comp=N,220nm,4.7s
KSH LR LR
comp=E,220nm,4.8s
KSH LR LR
comp=Z,170nm,6.1s
AAK Ala-Archa 44.63 299⇑*i*P **P** **14 12 10.3 +1.5**
AAK pmax pmax
comp=Z,7.0nm,1.0s
PMG Port Moresby 45.23 157 LR LR 14 29 37.6
comp=Z,106nm,19.4s,baz=139,slow=34
BVAR Borovoye Array 46.74 314 P **P** **14 12 26.1 +0.9**
BVAR 14 13 58.6
BVAR pmax pmax
comp=Z,5.0nm,0.7s
BVAR pmax pmax
comp=Z,3.0nm,0.8s
BVAR Borovoye Array 46.74 314 P **P** **14 12 26.1 +0.9**
BVAR PcP **PcP** **14 13 58.6 +0.2**
BVAR Borovoye Array 46.74 314 P **P** **14 12 26.1 +0.9**
comp=Z,5.2nm,0.7s,baz=98,slow=8.5,SNR=30
BVAR PcP **PcP** **14 13 58.6 +0.2**
comp=Z,2.8nm,0.8s,baz=90,slow=4.4,SNR=6.6
BRVK Borovoye 46.81 314*d i*P **P** **14 12 26.5 +0.8**
BRVK pmax pmax
comp=Z,21nm,1.2s
BRVK Borovoye 46.81 314 *e*P **P** **14 12 25.8 +0.1**
comp=Z,24nm,1.3s

KKAR Karatay Array 47.46 300 *e*P **P** **14 12 30.9 -0.1**
KKAR Karatay Array 47.46 300 *e*P **P** **14 12 30.9 -0.1**
SVE Sverdlovsk 52.22 319⇑*e*P **P** **14 13 07.8 +0.9**
SVE pmax pmax
comp=Z,24nm,0.9s
WRAB Tennant Creek 53.03 176 *e*P **P** **14 13 13.5 +0.3**
WRAB pmax pmax
comp=Z,3.0nm,0.7s
WRAB Tennant Creek 53.03 176 *e*P **P** **14 13 13.4 +0.3**
comp=Z,3.5nm,0.7s
ARU Arti 53.40 319*d i*P **P** **14 13 16.2 +0.6**
ARU 14 15 15.4
ARU S **S** **14 20 50.5 +3.8**
ARU SS **SS** **14 24 20.4 -5.9**
ARU pmax pmax
comp=Z,29nm,1.2s
ABKAR Akbulak array 53.65 310 *e*P **P** **14 13 16.1 -1.4**
CTAO Charters Tower 55.09 162 *e*P **P** **14 13 29.0 +0.7**
CTAO pmax pmax
comp=Z,15nm,1.3s
CTAO Charters Tower 55.09 162 *e*P **P** **14 13 29.0 +0.7**
comp=Z,15nm,1.3s
PPLA Purkeypile 55.13 33 *e*P **P** **14 13 28.6 +0.3**
comp=Z,10nm,1.1s
RSO Redoubt South 55.13 36 *e*P **P** **14 13 25.8 -2.6**
KDAK Kodiak Island 55.59 39 P **P** **14 13 31.1 -0.4**
KDAK Kodiak Island 55.59 39 P **P** **14 13 31.1 -0.4**
comp=Z,2.6nm,0.6s,baz=252,slow=6.4,SNR=5.2
ASAR Alice Springs 56.71 177 P **P** **14 13 39.8 -0.1**
ASAR Alice Springs 56.71 177 P **P** **14 13 39.8 -0.1**
comp=Z,2.8nm,0.7s,baz=3.5,slow=7.1,SNR=37
PMR Palmer 56.72 34 *e*P **P** **14 13 39.4 -0.1**
PMR pmax pmax
comp=Z,5.0nm,1.0s
PMR Palmer 56.72 34 *e*P **P** **14 13 39.4 -0.1**
comp=Z,4.6nm,1.0s
COLA College 56.79 30 *e*P **P** **14 13 39.4 -0.6**
COLA pmax pmax
comp=Z,14nm,0.3s
COLA College 56.79 30 *e*P **P** **14 13 39.4 -0.6**
comp=Z,14nm,0.3s
SML Sawmill 57.06 34 *e*P **P** **14 13 41.4 -0.6**
SML pmax pmax
comp=Z,1.0nm,0.8s
SML Sawmill 57.06 34 *e*P **P** **14 13 41.4 -0.6**
comp=Z,1.0nm,0.8s
ILAR Eielson Array 57.22 30 P **P** **14 13 42.7 -0.3**
ILAR Eielson Array 57.22 30 P **P** **14 13 42.7 -0.3**
comp=Z,1.5nm,0.8s,baz=267,slow=5.4,SNR=14
EGAK Eagle 59.62 30 *e*P **P** **14 13 59.4 -0.4**
comp=Z,12nm,1.6s
APA Apatity 62.41 335⇑*e*P **P** **14 14 17.6 -1.1**
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,200nm,16.0s
MAK Makhachkala 63.71 306 *e*P **P** **14 14 27.1 -0.6**
MAK MLR MLR
comp=Z,204nm,14.0s
KEV Kevo 63.73 338 *e*P **P** **14 14 27.9 +0.6**
KEV pmax pmax
comp=Z,9.0nm,0.7s
KEV Kevo 63.73 338 *ep* **P** **14 14 27.9 +0.6**
comp=Z,8.7nm,0.7s
ARCES ARCESS Array B 64.30 338 P **P** **14 14 31.4 +0.3**
ARCES ARCESS Array B 64.30 338 P **P** **14 14 31.4 +0.3**
comp=Z,4.2nm,0.7s,baz=58,slow=8.8,SNR=9.3
ARCES LR LR 14 44 31.9
comp=Z,84nm,19.4s,baz=64,slow=38
JOF Joensuu 65.00 330 *e*P **P** **14 14 36.8 +1.0**
JOF pmax pmax
comp=Z,21nm,1.0s
JOF Joensuu 65.00 330 *ep* **P** **14 14 36.8 +1.0**
comp=Z,21nm,1.0s
STKA Stephens Creek 65.61 170 P **P** **14 14 40.4 +0.3**
STKA Stephens Creek 65.61 170 P **P** **14 14 40.4 +0.3**
comp=Z,3.1nm,0.9s,baz=0.0,slow=5.1,SNR=3.7
STKA LR LR 14 45 32.7
comp=Z,62nm,18.7s,baz=207,slow=38
OBN Obninsk 65.69 321 *e*P **P** **14 14 40.7 +0.3**
OBN pmax pmax
comp=Z,26nm,1.6s
OBN MLR MLR
comp=Z,100nm,17.0s
VSR Storozhevoye 65.81 316 *e*P **P** **14 14 41.4 +0.2**
VSR pmax pmax
comp=Z,20nm,1.3s
VSR pmax pmax
comp=N,10.0nm,0.9s
VSR pmax pmax
comp=E,10.0nm,1.3s
VORD Divnogorie 65.84 316 *e*P **P** **14 14 38.3 -3.1**
VORD pmax pmax
comp=N,3.0nm,0.3s
VORD pmax pmax
comp=Z,5.0nm,0.3s
VORD pmax pmax
comp=E,10.0nm,1.0s
ARMA Armidale 66.36 160 *e*P P 14 14 49.5 +4.5
comp=E,299nm,3.0s
KBZ Khabaz 66.51 308 P **P** **14 14 46.6 +0.8**
KBZ pmax pmax
comp=Z,12nm,0.9s
KBZ Khabaz 66.51 308 P **P** **14 14 46.6 +0.8**
KBZ Khabaz 66.51 308 P **P** **14 14 46.6 +0.8**
comp=Z,12nm,0.9s,baz=73,slow=8.6,SNR=23
KIV Kislovodsk 66.56 308 *e*P **P** **14 14 47.6 +1.3**
KIV *e*S **S** **14 23 36.1 -0.4**
KIV pmax pmax
comp=Z,32nm,1.1s
KIV MLR MLR
comp=Z,103nm,18.0s
GNI Garni 66.73 304 *e*P **P** **14 14 47.7 +0.2**
comp=Z,26nm,1.3s
KAF Kangasniemi 67.44 330 *e*P **P** **14 14 51.5 0.0**
KAF Kangasniemi 67.44 330 *ep* **P** **14 14 51.5 0.0**
baz=64,slow=6.0
FINES FINESS Array B 67.86 330 P **P** **14 14 54.2 +0.1**
FINES FINESS Array B 67.86 330 P **P** **14 14 54.2 +0.1**
comp=Z,5.8nm,0.7s,baz=84,slow=6.7,SNR=12
DAG Danmarks Havn 68.56 353⇓*i*P **P** **14 14 58.6 +0.3**
DAG pmax pmax
comp=Z,13nm,0.9s
DAG Danmarks Havn 68.56 353⇓*i*P **P** **14 14 58.6 +0.3**
comp=Z,15nm,0.9s
ANN Anapa 69.59 311 *e*P **P** **14 15 04.7 -0.5**
ANN *e*S **S** **14 24 11.0 -1.5**
ANN pmax pmax
comp=Z,39nm,1.3s
YKA Yellowknife Ar 71.22 26 P **P** **14 15 14.9 0.0**
YKA Yellowknife Ar 71.22 26 P **P** **14 15 14.9 0.0**
comp=Z,1.8nm,0.7s,baz=304,slow=6.3,SNR=16
AKASG Malin Array Be 71.65 319 P **P** **14 15 17.7 +0.1**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 71.65 319 P **P** **14 15 17.7 +0.1**
AKASG Malin Array Be 71.65 319 P **P** **14 15 17.7 +0.1**
comp=Z,1.8nm,0.5s,baz=55,slow=6.3,SNR=16
AK01 Malin Array Si 71.66 319 *e*P **P** **14 15 16.6 -1.1**
KIEV Kiev 71.66 319 *e*P **P** **14 15 15.7 -2.0**
KIEV pmax pmax
comp=Z,7.0nm,1.0s
KIEV Kiev 71.66 319 *e*P **P** **14 15 15.7 -2.0**
comp=Z,7.2nm,1.0s
AK02 Malin Array Si 71.68 319 *e*P **P** **14 15 17.1 -0.8**
RAYN Ar Rayn 73.74 288 *e*P **P** **14 15 31.9 +1.3**
comp=Z,7.4nm,1.1s
NB2 NORSAR Subarra 73.98 334 P **P** **14 15 30.7 -0.7**
comp=Z,2.7nm,0.9s,baz=47,slow=5.9
NOA NORSAR Array B 73.98 334 P **P** **14 15 31.6 +0.3**
NOA NORSAR Array B 73.98 334 P **P** **14 15 31.6 +0.3**
comp=Z,1.8nm,0.8s,baz=50,slow=5.9,SNR=5.8
NOA LR LR 14 51 38.3
comp=Z,39nm,19.6s,baz=30,slow=39
SUMG Summit 74.16 357⇓*i*P **P** **14 15 33.7 +1.0**
SUMG pmax pmax
comp=Z,19nm,1.1s
SUMG Summit 74.16 357 *e*P **P** **14 15 31.5 -1.2**
comp=Z,31nm,1.0s
SUMG Summit 74.16 357⇓*i*P **P** **14 15 33.7 +1.0**
comp=Z,19nm,1.1s
BR131 Keskin Array S 74.50 307 *e*P **P** **14 15 33.5 -1.4**
comp=Z,6.2nm,1.0s
BRTR Keskin Array B 74.50 307 P **P** **14 15 35.7 +0.8**
BRTR Keskin Array B 74.50 307 P **P** **14 15 35.7 +0.8**
comp=Z,6.5nm,0.9s,baz=97,slow=5.0,SNR=21

BUR08	**Bucovina Ar. S**	**75.51**	**318**	*eP*	**P**	**14 15 39.8**	**-0.8**
KOLS	**Kolonicke sedl**	**76.39**	**320**	*eP*	**P**	**14 15 45.0**	**-0.5**
KOLS				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KOLS	**Kolonicke sedl**	**76.39**	**320**	*eP*	**P**	**14 15 45.0**	**-0.5**
CRVS	**Cervenica-Dubn**	**76.85**	**320**	*eP*	**P**	**14 15 48.1**	**+0.1**
CRVS				pmax	pmax		
	comp=Z,9.0nm,2.0s						
CRVS	**Cervenica-Dubn**	**76.85**	**320**	*eP*	**P**	**14 15 48.1**	**+0.1**
OKC	**Ostrava-Krasne**	**78.02**	**322**	AMS	AMS	14 54 30.0	
	comp=Z,300nm,17.0s						
VYHS	**Vyhne**	**78.49**	**321**	*eP*	**P**	**14 15 58.6**	**+1.4**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.6s						
VYHS	**Vyhne**	**78.49**	**321**	*eP*	**P**	**14 15 58.6**	**+1.4**
DPC	**Dobruska-Polom**	**78.63**	**324**	*eP*	**P**	**14 15 58.0**	**0.0**
DPC	**Dobruska-Polom**	**78.63**	**324**	*eP*	**P**	**14 15 58.0**	**0.0**
DPC				AMS	AMS	14 54 40.0	
UPC	**Upice**	**78.68**	**324**	*eP*	**P**	**14 15 58.3**	**+0.1**
UPC	**Upice**	**78.68**	**324**	*eP*	**P**	**14 15 58.3**	**+0.1**
CLL	**Collm**	**79.62**	**326**	*eP*	**P**	**14 16 05.0**	**+1.7**
CLL	**Collm**	**79.62**	**326**	*eP*	**P**	**14 16 05.0**	**+1.7**
TREC	**Trest**	**79.72**	**323**	AMS	AMS	14 55 30.0	
	comp=Z,300nm,14.5s						
PRU	**Pruhonice**	**79.74**	**324**	AMS	AMS	14 55 00.0	
	comp=Z,200nm,15.9s						
NKC	**Novy Kostel**	**80.60**	**325**	AMS	AMS	14 55 50.0	
	comp=Z,400nm,16.1s						
KHC	**Kasperske Hory**	**80.78**	**324**	AMS	AMS	14 55 50.0	
	comp=Z,300nm,17.1s						
GERES	**GERESS Array B**	**80.90**	**323**	LR	LR	14 56 06.4	
	comp=Z,129nm,20.7s,baz=236,slow=39						
SLMT	**Seeley Lake**	**81.25**	**306**	*eP*	**P**	**14 16 12.0**	**-0.4**
FFC	**Flin Flon**	**81.32**	**28**	*i* P	**P**	**14 16 12.9**	**+0.5**
FFC	**Flin Flon**	**81.32**	**28**	*eP*	**P**	**14 16 11.6**	**-0.8**
	comp=Z,3.9nm,0.8s						
EGMT	**Eagleton**	**82.62**	**36**	*eP*	**P**	**14 16 19.4**	**-0.1**
	comp=Z,7.9nm,1.1s						
LRM	**Limekiln Ridge**	**82.72**	**39**	*eP*	**P**	**14 16 19.7**	**-0.5**
DLMT	**Dillon**	**82.94**	**39**	*eP*	**P**	**14 16 20.7**	**-0.6**
	comp=Z,7.0nm,1.0s						
NVAR	**Mina Array Bea**	**84.07**	**48**	P	**P**	**14 16 28.0**	**+0.7**
NVAR	**Mina Array Bea**	**84.07**	**48**	P	**P**	**14 16 28.0**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=307,slow=5.6,SNR=15						
PDAR	**Pinedale Array**	**86.31**	**40**	P	**P**	**14 16 38.3**	**-0.1**
PDAR	**Pinedale Array**	**86.31**	**40**	P	**P**	**14 16 38.3**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=318,slow=2.0,SNR=9.8						
SCHQ	**Schefferville**	**90.94**	**10**	P	**P**	**14 16 59.9**	**0.0**
SCHQ	**Schefferville**	**90.94**	**10**	P	**P**	**14 16 59.9**	**0.0**
	comp=Z,3.3nm,0.9s,baz=317,slow=5.8,SNR=5.3						
TXAR	**Lajitas Array**	**99.14**	**46**	P	**Pdif**	**14 17 37.5**	**-0.5**
TXAR	**Lajitas Array**	**99.14**	**46**	P	**Pdif**	**14 17 37.4**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=345,slow=2.8,SNR=4.0						
UTMT	**University of**	**101.44**	**32**	*e*Pdif	**Pdif**	**14 17 46.6**	**-1.3**
SIV	**San Ignacio**	**159.71**	**35**	PKPab	**PKPab**	**14 24 33.9**	**-0.3**
SIV	**San Ignacio**	**159.71**	**35**	PKPab	**PKPab**	**14 24 33.9**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=294,slow=3.7,SNR=6.4						

*ISCJB **25** 14:28:05.9±0.8,31°.57N±0°.06×140°.5E±0°.2,h97km, mb3.4/7,Error ellipse: s-maj=24.0km s-min=7.6km az=167.0*
*IDC **25** 14:28:06.3±2.3,31°.49N×140°.29E,h82km±19km,mb3.2/7, mb1 3.4/7,mb1mx3.2/24,mbtmp3.2/7,Error ellipse: s-maj=35.7km s-min=19.0km az=89.0*
*JMA **25** 14:28:08.0±0.2,31°.97N×140°.87E,h7km,M3.5*
ISC 25 14:28:07.9±0.9,31°.62N±0°.09×140°.5E±0°.2,h97km,n16, σ1§31/18,mb3.5/7,Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**1.56**	**339**	P	**Pn**	**14 28 34.0**	**-0.7**
JHCJ				*e*S	**Sn**	**14 28 53.3**	**-1.7**
JHJ2	**Mitsune**	**1.59**	**340**	P	**Pn**	**14 28 34.7**	**-0.4**
JHJ2				*e*S	**Sn**	**14 28 54.3**	**-1.4**
JHJ	**Hachijo jima 2**	**1.61**	**339**	P	**Pn**	**14 28 34.5**	**-0.8**
	26nm,0.3s,baz=124,slow=17,SNR=28						
JHJ				S	**Sn**	**14 28 55.0**	**-1.1**
	67nm,0.3s,baz=89,slow=18,SNR=14						
BSO1	**Boso 1**	**3.06**	**8**	P	**Pn**	**14 28 52.3**	**-1.5**
BSO3	**Boso 3**	**3.17**	**1**	P	**Pn**	**14 28 54.7**	**-0.9**
JOD2	**Odawara 2**	**3.82**	**343**	*e*S	**Sn**	**14 29 48.2**	**-0.2**
JYN	**Shimob**	**4.19**	**338**	P	**Pn**	**14 29 11.8**	**+2.2**
JAG	**Ashikaga**	**4.87**	**350**	P	**Pn**	**14 29 19.7**	**+1.0**
MJAR	**Matsushiro Arr**	**5.26**	**340**	P	Pn	14 29 29.6	+5.5
	0.6nm,0.3s,baz=154,slow=13,SNR=6.2						
MKAR	**Makanchi Array**	**46.52**	**306**	P	**P**	**14 36 24.9**	**-0.6**
	0.3nm,0.5s,baz=76,slow=9.5,SNR=4.8						
WRA	**Warramunga Arr**	**51.60**	**187**	P	**P**	**14 37 02.9**	**-1.5**
	0.2nm,0.4s,baz=5.1,slow=7.7,SNR=8.5						
ILAR	**Eielson Array**	**54.52**	**30**	P	**P**	**14 37 26.2**	**+0.9**
	0.2nm,0.7s,baz=282,slow=6.4,SNR=3.8						
ASAR	**Alice Springs**	**55.33**	**187**	P	**P**	**14 37 30.4**	**-1.3**
	0.2nm,0.8s,baz=1.7,slow=6.9,SNR=5.6						
FINES	**FINESS Array B**	**73.25**	**333**	P	**P**	**14 39 28.2**	**0.0**
	0.5nm,0.5s,baz=54,slow=4.9,SNR=4.5						
BRTR	**Keskin Array B**	**81.86**	**312**	P	**P**	**14 40 17.5**	**+0.8**
	0.8nm,0.7s,baz=42,slow=7.0,SNR=3.9						
TXAR	**Lajitas Array**	**94.05**	**52**	P	**P**	**14 41 17.7**	**+2.0**
	0.1nm,0.4s,baz=318,slow=1.2,SNR=3.5						

JMA 25 14:38:14.0±0.3,25°.27N×129°.16E,h53km,M3.5, Southeast of Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JJT2	**Tamagusuku 2**	**1.54**	**004**	P	Pn	14 38 39.8	+0.7
JJT2				S	Sn	14 38 58.4	+0.4
JOW	**Kunigami**	**1.75**	**333**	P	Pn	14 38 43.0	+1.0
JOW				S	Sn	14 39 02.9	-0.2
JMZ	**Minamidaito 2**	**1.94**	**73**	P	Pn	14 38 45.2	+0.7
JMZ				S	Sn	14 39 05.4	-2.4
JIH	**Iheya**	**2.06**	**329**	P	Pn	14 38 47.5	+1.3
JIH				S	Sn	14 39 10.1	-0.6
JAGN	**Aguni-jima**	**2.17**	**308**	P	Pn	14 38 48.5	+0.8
JAGN				S	Sn	14 39 13.1	-0.3
JKE	**Kume jima 2**	**2.38**	**297**	P	Pn	14 38 50.9	+0.3
JKE				S	Sn	14 39 16.6	-2.1
JTK	**Tokunoshima**	**2.51**	**356**	P	Pn	14 38 53.8	+1.4
JTK				S	Sn	14 39 20.3	-1.6
JAMN	**Amaminishikomi**	**2.96**	**0**	P	Pn	14 39 00.1	+1.6
JAMN				S	Sn	14 39 33.8	+1.0
JAM	**Amami Oshima**	**3.15**	**7**	S	Sn	14 39 36.7	-0.9

*CSEM **25** 14:38:35.3,42°.48N×13°.36E,h12km, MD2.0/11,After ROM*
ROM 25 14:38:35.3±0.1,42°.48N×13°.36E,h12km±1km,Md2.0/11, Ml1.7/8,Error ellipse: s-maj=0.9km s-min=0.8km az=87.0,Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.07**	**36**	Pg	Pg	14 38 38.4	+0.4
CAMP				Sg	Sg	14 38 40.2	+0.2
	181nm,0.3s						
CAMP	**Campotosto**	**0.07**	**36**	Pg	Pg	14 38 38.4	+0.4
CAMP				Sg	Sg	14 38 40.2	+0.2
	181nm,0.3s						
AQU	**L'Aquila**	**0.13**	**166**	Pg	Pg	14 38 39.2	+0.5
AQU				Sg	Sg	14 38 41.7	+0.5
	157nm,0.3s						
AQU	**L'Aquila**	**0.13**	**166**	Pg	Pg	14 38 39.2	+0.5
AQU				Sg	Sg	14 38 41.7	+0.5
	157nm,0.3s						
TERO	**Teramo**	**0.23**	**52**	Pg	Pg	14 38 40.6	+0.3
TERO				Sg	Sg	14 38 44.4	+0.7
	123nm,0.1s						
TERO	**Teramo**	**0.23**	**52**	Pg	Pg	14 38 40.6	+0.3
TERO				Sg	Sg	14 38 44.4	+0.7
	123nm,0.1s						
LNSS	**Leonessa**	**0.26**	**297**	Pg	Pg	14 38 41.2	+0.2
LNSS				Sg	Sg	14 38 45.7	+0.9
	180nm,0.2s						
LNSS	**Leonessa**	**0.26**	**297**	Pg	Pg	14 38 41.2	+0.2
LNSS				Sg	Sg	14 38 45.7	+0.9
	180nm,0.2s						
FIAM	**Fiamignano**	**0.28**	**220**	Pg	Pg	14 38 41.7	+0.5
FIAM				Sg	Sb	14 38 46.2	-0.9
	33nm,0.5s						
FIAM	**Fiamignano**	**0.28**	**220**	Pg	Pg	14 38 41.7	+0.5
FIAM				Sg	Sb	14 38 46.2	-0.9
	33nm,0.5s						
VCEL	**Villa Celiera**	**0.37**	**104**	Pg	Pg	14 38 43.2	+0.3
VCEL				Sg	Sb	14 38 49.6	-0.2
	73nm,0.2s						
VCEL	**Villa Celiera**	**0.37**	**104**	Pg	Pg	14 38 43.2	+0.3
VCEL				Sg	Sb	14 38 49.6	-0.2
	73nm,0.2s						
NRCA	**Norcia**	**0.39**	**333**	Pg	Pg	14 38 43.4	+0.1
NRCA				Sg	Sg	14 38 49.5	+0.8
	100nm,0.1s						
NRCA	**Norcia**	**0.39**	**333**	Pg	Pg	14 38 43.4	+0.1
NRCA				Sg	Sg	14 38 49.5	+0.8
	100nm,0.1s						
MNS	**Montasola**	**0.51**	**259**	Pg	Pg	14 38 45.2	-0.2
	16nm,0.5s						
MNS	**Montasola**	**0.51**	**259**	Pg	Pg	14 38 45.2	-0.2
	16nm,0.5s						
FDMO	**Fiordimonte**	**0.59**	**340**	Pg	Pg	14 38 47.1	+0.2
FDMO	**Fiordimonte**	**0.59**	**340**	Pg	Pg	14 38 47.1	+0.2
INTR	**Introdacqua**	**0.62**	**139**	Pg	Pg	14 38 47.2	-0.4
INTR	**Introdacqua**	**0.62**	**139**	Pg	Pg	14 38 47.2	-0.4

*THR **25** 15:04:49.0±0.9,32°.71N×45°.88E,h46km±7km,ML4.5*
*BJI **25** 15:04:50.0,32°.90N×46°.40E,h10km,mB4.9/9,mb4.6/13, Ms4.5/5,Ms7 4.2/6*
*IDC **25** 15:04:50.9±0.7,33°.17N×46°.41E,h0km,mb4.1/21, mb1 4.2/22,mb1mx4.2/28,mbtmp4.1/22,ML4.1/1,MS3.4/17, Ms1 3.4/17,ms1mx3.2/42,Error ellipse: s-maj=17.7km s-min=13.9km az=173.0*
*TEH **25** 15:04:53.7,33°.10N×46°.34E,h8km,ML4.4*
*NEIC **25** 15:04:54.1,33°.12N×46°.38E,h8km,mb4.5/20, ML4.3(THR),MN4.4(TEH),After TEH.*
*CSEM **25** 15:04:56.4±0.1,33°.15N×46°.39E,h40km,mb4.5/27,Ms4.5, Error ellipse: s-maj=3.5km s-min=2.6km az=19.0*
*MOS **25** 15:04:59.0±1.0,33°.16N×46°.36E,h83km,mb4.3/41,Error ellipse: s-maj=7.4km s-min=4.7km az=108.5*
ISC 25 15:04:53.5±0.5,33°.13N±0°.03×46°.40E±0°.02,h18km±2km, n413,σ1§40/417,mb4.3/68,MS3.5/19,9C-7D,Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.39**	**268**	*e*Pg	**Pg**	**15 04 59.5**	**-2.1**
IBDR				*i* Sg	**Sb**	**15 05 09.0**	**+1.3**
IGHG	**Ghaleghazi**	**1.21**	**7**	*e*Pg	**Pn**	**15 05 15.1**	**-0.6**
IGHG				*e*Sg	**Sn**	**15 05 32.9**	**+1.1**
IGHG				*e*		15 05 38.4	
	comp=Z,68μm,0.2s						
IGHG	**Ghaleghazi**	**1.21**	**7**	Pg	**Pn**	**15 05 15.4**	**-0.3**
IGHG				Sg	**Sn**	**15 05 32.9**	**+1.1**
IGHG	**Ghaleghazi**	**1.21**	**7**	Pg	**Pn**	**15 05 15.4**	**-0.3**
IGHG				*e*Sg	**Sn**	**15 05 32.9**	**+1.1**
IKOM	**Komasi**	**1.40**	**41**	*e*Pn	**Pb**	**15 05 19.5**	**+0.3**
IKOM				*e*Sg	**Sg**	**15 05 38.8**	**0.0**
IKOM				*e*		15 05 42.5	
	comp=Z,33μm,0.2s						
IKOM	**Komasi**	**1.40**	**41**	Pn	**Pb**	**15 05 19.4**	**+0.3**
IKOM	**Komasi**	**1.40**	**41**	*e*Pn	**Pb**	**15 05 19.5**	**+0.3**
IKOM				*e*Sg	**Sg**	**15 05 38.8**	**0.0**
IVIS	**Veis**	**1.45**	**15**	*e*Pn	**Pb**	**15 05 20.0**	**0.0**
IVIS				*e*Sg	**Sb**	**15 05 40.0**	**+1.9**
IVIS				*e*		15 05 44.9	
	comp=Z,88μm,0.4s						
IVIS	**Veis**	**1.45**	**15**	Pn	**Pb**	**15 05 20.0**	**0.0**
IVIS				Sg	**Sb**	**15 05 39.7**	**+1.6**
IVIS	**Veis**	**1.45**	**15**	*e*Pn	**Pb**	**15 05 20.0**	**0.0**
IVIS				Sg	**Sb**	**15 05 39.7**	**+1.6**
IDHR	**Dehrash**	**1.57**	**360**	*e*Pn	**Pb**	**15 05 21.9**	**-0.2**
IDHR				*e*Sg	**Sg**	**15 05 44.3**	**+0.1**
IDHR				*e*		15 05 45.6	
	comp=Z,84μm,0.3s						
IDHR	**Dehrash**	**1.57**	**360**	*e*Pn	**Pb**	**15 05 21.9**	**-0.2**
IDHR				*e*Sg	**Sg**	**15 05 44.3**	**+0.1**
BHD	**Baghdad**	**1.70**	**275**	*e*Pn	**Pn**	**15 05 22.0**	**-0.2**
BHD				*e*Sn	**Sn**	**15 05 43.8**	**+0.3**
BHD				*e*Sg	**Sb**	**15 05 45.7**	**+0.5**
BHD	**Baghdad**	**1.70**	**275**	*e*Pn	**Pn**	**15 05 22.0**	**-0.2**
BHD				*e*Sn	**Sn**	**15 05 43.8**	**+0.3**
BHD				*e*Sg	**Sb**	**15 05 45.7**	**+0.5**
ILIN	**Lien**	**1.85**	**15**	*e*Pn	**Pn**	**15 05 26.2**	**+1.7**
ILIN				*e*Sg	**Sb**	**15 05 52.1**	**+2.3**
ILIN				*e*		15 05 58.5	
	comp=Z,45μm,0.3s						
ILIN	**Lien**	**1.85**	**15**	Pn	**Pn**	**15 05 26.0**	**+1.5**
ILIN				Sg	**Sb**	**15 05 52.1**	**+2.3**
ILIN	**Lien**	**1.85**	**15**	Pn	**Pn**	**15 05 26.0**	**+1.5**
ILIN				*e*Sg	**Sb**	**15 05 52.1**	**+2.3**
SNGE	**Sanandaj**	**2.11**	**22**	*e*Pn	**Pn**	**15 05 30.3**	**+2.1**
SNGE				AML	AML	15 06 03.0	
	comp=N,2μm,0.4s						
SNGE				AML	AML	15 06 07.5	
	comp=E,3μm,0.7s						
SNGE	**Sanandaj**	**2.11**	**22**	*e*Pn	**Pn**	**15 05 30.0**	**+1.8**
SNGE	**Sanandaj**	**2.11**	**22**	*e*Pn	**Pn**	**15 05 30.0**	**+1.8**
SHGR	**Shooshtar-Gavs**	**2.27**	**116**	*e*Pg	**Pb**	**15 05 34.1**	**+0.2**
SHGR				AML	AML	15 06 18.8	
	comp=E,2μm,0.5s						
SHGR				AML	AML	15 06 27.6	
	comp=N,2μm,0.2s						
SHGR	**Shooshtar-Gavs**	**2.27**	**116**	*e*Pg	**Pb**	**15 05 34.0**	**+0.1**
SHGR	**Shooshtar-Gavs**	**2.27**	**116**	*e*Pg	**Pb**	**15 05 34.0**	**+0.1**
KHMZ	**Khomeyn**	**3.04**	**77**	*e*Pn	**Pn**	**15 05 43.0**	**+2.1**
KHMZ	**Khomeyn**	**3.04**	**77**	*e*Pn	**Pn**	**15 05 43.0**	**+2.1**
ASAO	**Ashtian**	**3.34**	**64**	*e*Pn	**Pn**	**15 05 47.5**	**+2.5**
ASAO	**Ashtian**	**3.34**	**64**	*e*Pn	**Pn**	**15 05 46.0**	**+1.0**
ASAO	**Ashtian**	**3.34**	**64**	*e*Pn	**Pn**	**15 05 46.0**	**+1.0**
MIB	**Mutribah**	**3.41**	**166**	*e*P	**Pn**	**15 05 48.2**	**+2.4**
MIB				AML	AML	15 06 33.4	
	comp=Z,578nm,0.5s						
MIB	**Mutribah**	**3.41**	**166**	*e*P	**Pn**	**15 05 48.2**	**+2.4**
IRAZ	**Razeghan**	**3.70**	**51**	*e*Pn	**Pn**	**15 05 51.8**	**+1.7**
IRAZ				*e*		15 06 58.3	
	comp=Z,7μm,0.4s						
IRAZ	**Razeghan**	**3.70**	**51**	Pn	**Pn**	**15 05 51.7**	**+1.7**
IRAZ	**Razeghan**	**3.70**	**51**	Pn	**Pn**	**15 05 51.7**	**+1.7**
UMR	**Umm Al-Rimmam**	**3.74**	**162**	*e*P	**Pn**	**15 05 52.6**	**+2.3**
UMR				AML	AML	15 06 47.3	
	comp=Z,318nm,0.5s						
UMR	**Umm Al-Rimmam**	**3.74**	**162**	*e*P	**Pn**	**15 05 52.6**	**+2.3**
IPIR	**Pirpir**	**3.81**	**95**	*e*Pn	**Pn**	**15 05 54.0**	**+2.5**
IPIR				*e*		15 06 42.3	
	comp=Z,10μm,0.3s						
IPIR	**Pirpir**	**3.81**	**95**	Pn	**Pn**	**15 05 54.0**	**+2.5**
IPIR	**Pirpir**	**3.81**	**95**	*e*Pn	**Pn**	**15 05 54.0**	**+2.5**
NAY	**Al-Naaiem**	**3.93**	**169**	*e*P	**Pn**	**15 05 55.9**	**+2.9**
NAY	**Al-Naaiem**	**3.93**	**169**	*e*P	**Pn**	**15 05 55.9**	**+2.9**
IR5	**Iran Long-Peri**	**4.04**	**58**	*e*Pn	**Pn**	**15 05 56.9**	**+2.2**
IR5	**Iran Long-Peri**	**4.04**	**58**	*e*Pn	**Pn**	**15 05 56.9**	**+2.2**
KBD	**Kabd**	**4.09**	**164**	*e*P	**Pn**	**15 05 57.5**	**+2.3**
KBD	**Kabd**	**4.09**	**164**	*e*P	**Pn**	**15 05 57.5**	**+2.3**
GHVR	**GHOM**	**4.30**	**70**	*e*P	**Pn**	**15 05 59.9**	**+1.9**
GHVR				*e*Pg	**Pg**	**15 06 13.7**	**-2.1**
GHVR	**GHOM**	**4.30**	**70**	*e*P	**Pn**	**15 05 59.9**	**+1.9**
RDF	**Al-Radifah**	**4.30**	**166**	*e*P	Pn	15 06 01.2	+3.1
RDF				AML	AML	15 06 58.2	
	comp=Z,233nm,0.5s						
RDF	**Al-Radifah**	**4.30**	**166**	*e*P	Pn	15 06 01.2	+3.1
IKLH	**Kolahrood**	**4.35**	**86**	*e*Pn	**Pn**	**15 06 00.9**	**+2.0**
IKLH				*e*		15 07 18.6	
	comp=Z,4μm,0.4s						
IKLH	**Kolahrood**	**4.35**	**86**	*e*Pn	**Pn**	**15 06 00.9**	**+2.0**
IMHD	**Mahdasht**	**4.36**	**53**	*e*Pn	**Pn**	**15 06 00.3**	**+1.4**
IMHD				*e*		15 06 16.4	
	comp=Z,2μm,0.3s						
IMHD	**Mahdasht**	**4.36**	**53**	*e*Pn	**Pn**	**15 06 00.3**	**+1.4**
IR3	**Iran Long-Peri**	**4.49**	**57**	*e*Pn	**Pn**	**15 06 02.3**	**+1.6**
IR3	**Iran Long-Peri**	**4.49**	**57**	*e*Pn	**Pn**	**15 06 02.3**	**+1.6**
IGZV	**Ghazvin**	**4.52**	**43**	*e*Pn	**Pn**	**15 06 02.7**	**+1.4**
IGZV				*e*		15 06 23.1	
	comp=Z,2μm,0.3s						
IGZV	**Ghazvin**	**4.52**	**43**	*e*Pn	**Pn**	**15 06 02.7**	**+1.4**
IAZR	**Azarshahr**	**4.55**	**356**	*e*Pn	**Pn**	**15 06 03.2**	**+1.4**
IAZR				*e*		15 07 27.2	
	comp=Z,10μm,0.3s						
IAZR	**Azarshahr**	**4.55**	**356**	Pn	**Pn**	**15 06 03.1**	**+1.3**
IAZR	**Azarshahr**	**4.55**	**356**	Pn	**Pn**	**15 06 03.1**	**+1.3**
CUKT	**Cukurca**	**4.70**	**332**	*e*Pn	**Pn**	**15 06 03.8**	**+0.1**
ISRB	**Sarab**	**4.80**	**12**	*e*		15 06 27.6	
	comp=Z,2μm,0.4s						
ISRB				*e*Pn	**Pn**	**15 06 06.3**	**+1.2**
IVRN	**Varamin**	**4.80**	**66**	*e*Pn	**Pn**	**15 06 06.2**	**+1.2**
IVRN				*e*		15 07 48.8	
	comp=Z,3μm,0.4s						
IVRN	**Varamin**	**4.80**	**66**	Pn	**Pn**	**15 06 06.0**	**+1.0**
IVRN	**Varamin**	**4.80**	**66**	*e*Pn	**Pn**	**15 06 06.2**	**+1.2**
IGAR	**Gharneh**	**4.81**	**97**	*e*Pn	**Pn**	**15 06 06.3**	**+1.0**
IGAR				*e*		15 07 05.2	
	comp=Z,4μm,0.1s						
IZEF	**Zefreh**	**4.99**	**91**	*e*Pn	**Pn**	**15 06 09.1**	**+1.3**
IZEF				*e*		15 07 42.8	
	comp=Z,1μm,0.4s						
IZEF	**Zefreh**	**4.99**	**91**	*e*Pn	**Pn**	**15 06 09.1**	**+1.3**
ITBZ	**Tabriz**	**5.10**	**358**	*e*Pn	**Pn**	**15 06 10.4**	**+1.2**
ITBZ				*e*		15 06 31.7	
	comp=Z,1μm,0.2s						
ITBZ	**Tabriz**	**5.10**	**358**	*e*Pn	**Pn**	**15 06 10.4**	**+1.2**
ISHB	**Shabestar**	**5.18**	**353**	*e*Pn	**Pn**	**15 06 11.2**	**+0.8**
ISHB				*e*		15 06 33.7	
	comp=Z,3μm,0.3s						
ISHB	**Shabestar**	**5.18**	**353**	*e*Pn	**Pn**	**15 06 11.2**	**+0.8**
IHRS	**Heris**	**5.21**	**6**	*e*Pn	**Pn**	**15 06 11.9**	**+1.2**
IHRS				*e*		15 06 45.1	
	comp=Z,1μm,0.3s						
IHRS	**Heris**	**5.21**	**6**	*e*Pn	**Pn**	**15 06 11.9**	**+1.2**
DAMV	**Damavand**	**5.24**	**60**	*e*Pn	**Pn**	**15 06 13.3**	**+2.1**
DAMV	**Damavand**	**5.24**	**60**	*e*Pn	**Pn**	**15 06 13.3**	**+2.1**
IDMV	**Damavand**	**5.26**	**61**	*e*Pn	**Pn**	**15 06 12.9**	**+1.4**
IDMV				*e*		15 07 57.4	
	comp=Z,2μm,0.6s						
IDMV	**Damavand**	**5.26**	**61**	*e*Pn	**Pn**	**15 06 12.9**	**+1.4**
NASN	**Na'in**	**5.40**	**92**	*e*Pn	**Pn**	**15 06 14.5**	**+1.0**
NASN				Sn	**Sn**	**15 07 16.0**	**+0.7**
NASN	**Na'in**	**5.40**	**92**	*e*Pn	**Pn**	**15 06 14.5**	**+1.0**
IFIR	**Firoozkooh**	**5.82**	**63**	*e*Pn	**Pn**	**15 06 20.5**	**+1.3**
IFIR				*e*		15 07 06.3	
	comp=Z,475nm,0.1s						
IFIR	**Firoozkooh**	**5.82**	**63**	Pn	**Pn**	**15 06 20.6**	**+1.3**
IFIR	**Firoozkooh**	**5.82**	**63**	Pn	**Pn**	**15 06 20.6**	**+1.3**
ILAS	**Lasjerd**	**5.88**	**66**	*e*Pn	**Pn**	**15 06 21.1**	**+1.1**
ILAS				*e*		15 08 33.5	
	comp=Z,2μm,0.5s						
ILAS	**Lasjerd**	**5.88**	**66**	*e*Pn	**Pn**	**15 06 21.1**	**+1.1**
ISAD	**Sadrabad**	**6.27**	**99**	*e*Pn	**Pn**	**15 06 26.1**	**+0.7**
ISAD				*e*		15 07 42.7	
	comp=Z,928nm,0.2s						
ISAD	**Sadrabad**	**6.27**	**99**	*e*Pn	**Pn**	**15 06 26.1**	**+0.7**
ISHM	**Shahmirzad**	**6.29**	**63**	*e*Pn	**Pn**	**15 06 26.7**	**+1.0**
ISHM				*e*		15 08 28.2	
	comp=Z,2μm,0.4s						
ISHM	**Shahmirzad**	**6.29**	**63**	*e*Pn	**Pn**	**15 06 26.7**	**+1.0**
CLDR	**Caldiran**	**6.33**	**342**	*e*PN	**Pn**	**15 06 27.3**	**+1.2**
CLDR	**Caldiran**	**6.33**	**342**	P	**Pn**	**15 06 28.2**	**+2.1**
CLDR	**Caldiran**	**6.33**	**342**	P	**Pn**	**15 06 28.2**	**+2.1**
BTMT	**Batman**	**6.44**	**323**	*e*PN	**Pn**	**15 06 27.3**	**-0.2**
ICHK	**Chekchek**	**6.81**	**95**	*e*Pn	**Pn**	**15 06 33.1**	**+0.3**
ICHK				*e*		15 07 52.2	
	comp=Z,715nm,0.2s						
ICHK	**Chekchek**	**6.81**	**95**	*e*Pn	**Pn**	**15 06 33.1**	**+0.3**
ISRV	**Sarvestan**	**6.86**	**121**	*e*Pn	**Pn**	**15 06 34.3**	**+0.8**
ISRV				*e*		15 07 57.6	
	comp=Z,996nm,0.1s						
ISRV	**Sarvestan**	**6.86**	**121**	Pn	**Pn**	**15 06 34.8**	**+1.3**
ISRV	**Sarvestan**	**6.86**	**121**	Pn	**Pn**	**15 06 34.8**	**+1.3**
AGRB	**Hanur-Agry**	**7.00**	**338**	*e*PN	**Pn**	**15 06 34.6**	**-0.6**
GNI	**Garni**	**7.13**	**350**	*e*PN	Pn	15 06 41.4	+4.3
GNI	**Garni**	**7.13**	**350**	Pn	Pn	15 06 40.6	+3.5
	comp=Z,32nm,0.8s						
GNI				*e*Sg	**Sg**	**15 08 44.9**	**+2.5**
GNI	**Garni**	**7.13**	**350**	Pn	Pn

comp=Z,21nm,0.9s
VORD Divnogorie 18.57 346 *e*P **Pn** **15 09 12.2 +2.6**
VORD pmax pmax
comp=Z,30nm,0.5s
VORD pmax pmax
comp=N,140nm,0.8s
VORD pmax pmax
comp=E,90nm,0.6s
VORD Divnogorie 18.57 346 *e*P **Pn** **15 09 12.2 +2.6**
comp=E,140nm,0.8s
VSR Storozhevoye 18.84 346 *e*P **P** **15 09 12.0 -0.2**
VSR pmax pmax
comp=Z,50nm,1.0s
VSR pmax pmax
comp=N,70nm,0.7s
VSR pmax pmax
comp=E,20nm,0.7s
VSR Storozhevoye 18.84 346 *e*P **P** **15 09 12.0 -0.2**
comp=E,50nm,1.0s
AB31 Akbulak array 19.02 28 *i* P **Pn** **15 09 15.5 +0.5**
AB31 pmax pmax
comp=Z,9.0nm,0.6s
AB31 Akbulak array 19.02 28 *i* P **Pn** **15 09 15.5 +0.5**
comp=Z,9.0nm,0.6s
ABKAR Akbulak array 19.02 28 *e*P **P** **15 09 14.7 +0.4**
comp=Z,14nm,0.8s
ABKAR Akbulak array 19.02 28 *e*P **P** **15 09 14.7 +0.4**
comp=Z,14nm,0.8s
AKTK Aktyubinsk 19.30 23 P **P** **15 09 17.8 +0.4**
comp=Z,105nm,18.9s
AKTO Aktyubinsk 19.30 23 P **P** **15 09 17.8 +0.5**
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO MLR MLR
comp=Z,105nm,18.9s
AKTO Aktyubinsk 19.30 23 P **P** **15 09 17.8 +0.5**
AKTO Aktyubinsk 19.30 23 P **P** **15 09 17.8 +0.5**
comp=Z,0.5nm,0.3s,baz=206,slow=12,SNR=7.5
AKTO LR LR 15 19 21.1
comp=Z,105nm,18.9s,baz=34,slow=45
AKTO Aktyubinsk 19.30 23 P **P** **15 09 17.8 +0.5**
MMB Musomiste 19.86 302 *e*P **P** **15 09 23.4 -0.2**
MMB Musomiste 19.86 302 *e*P **P** **15 09 23.4 -0.2**
MLR Muntele Rosu 20.00 314 P Pn 15 09 27.7 +0.6
MLR Muntele Rosu 20.00 314‖ *i*P Pn 15 09 28.3 +1.3
MLR Muntele Rosu 20.00 314 P Pn 15 09 27.7 +0.6
comp=Z,0.1nm,0.3s,baz=162,slow=13,SNR=7.9
MLR Muntele Rosu 20.00 314 P Pn 15 09 27.7 +0.7
KKB Krupnik 20.40 302 *e*P **P** **15 09 28.8 -0.7**
KKB Krupnik 20.40 302 *e*P **P** **15 09 28.8 -0.7**
MPEP Malo Peshtene 20.46 307 *e*P **P** **15 09 30.9 +0.9**
VOIR 20.52 313‖ *i*P Pn 15 09 32.5 -0.6
VTS Vitosha 20.55 304 *e*P **P** **15 09 31.5 +0.3**
VTS Vitosha 20.55 304 *e*P **P** **15 09 31.5 +0.3**
KK31 Karatay Array 21.36 55 *i* P **P** **15 09 43.0 +3.2**
KK31 pmax pmax
comp=Z,2.0nm,0.5s
KKAR Karatay Array 21.36 55 *e*P **P** **15 09 41.3 +1.5**
KKAR pmax pmax
comp=Z,11nm,0.9s
KKAR Karatay Array 21.36 55 *e*P **P** **15 09 41.3 +1.5**
comp=Z,11nm,0.9s
KKAR Karatay Array 21.36 55 *e*P **P** **15 09 41.3 +1.5**
comp=Z,11nm,0.9s
BARS Barje 21.59 304 *e*P **P** **15 09 43.3 +1.0**
AKASG Malin Array Be 21.63 329 *i* P **P** **15 09 41.9 -0.6**
AKASG pmax pmax
comp=Z,3.0nm,0.5s
AKASG Malin Array Be 21.63 329 P **P** **15 09 41.4 -1.1**
AKASG Malin Array Be 21.63 329 P **P** **15 09 41.4 -1.1**
comp=Z,3.4nm,0.5s,baz=138,slow=10,SNR=24
AKASG Malin Array Be 21.63 329 *i* P **P** **15 09 41.9 -0.6**
comp=Z,3.0nm,0.5s
KIEV Kiev 21.63 329 *e*P **P** **15 09 41.3 -1.2**
KIEV pmax pmax
comp=Z,13nm,0.9s
KIEV Kiev 21.63 329 *e*P **P** **15 09 41.3 -1.2**
comp=Z,13nm,0.9s
KIEV Kiev 21.63 329 *e*P **P** **15 09 41.3 -1.2**
comp=Z,13nm,0.9s
ATD Arta Tunnel 21.74 189 LR LR 15 19 04.4
comp=Z,90nm,19.6s,baz=17,slow=39
OBN Obninsk 23.04 345 *e*P **P** **15 09 55.4 -2.1**
OBN *i* 15 10 28.6
OBN *i* S S 15 14 00.3 -7.0
OBN pmax pmax
comp=Z,32nm,1.3s
OBN Obninsk 23.04 345 *e*P **P** **15 09 55.4 -2.1**
comp=Z,32nm,1.3s
DIVS Divibare 23.26 306 *e*P **P** **15 09 59.3 -0.7**
TRPA Tarpa 23.37 317‖ *e*P **P** **15 10 02.4 +1.5**
MOS Moscow 23.42 347 *e*P **P** **15 10 00.9 -0.4**
MOS *e* 15 10 14.9
MOS *e* 15 10 39.4
MOS *e* 15 13 50.3
MOS *e*S **S** **15 14 09.8 -3.8**
MOS pmax pmax
comp=Z,61nm,0.8s
MOS Moscow 23.42 347 *e*P **P** **15 10 00.9 -0.4**
comp=Z,61nm,0.8s
EKS2 Erkin-Say 23.52 58 P **P** **15 10 01.8 -0.9**
EKS2 pmax pmax
comp=Z,3.0nm,0.3s
EKS2 Erkin-Say 23.52 58 P **P** **15 10 01.8 -0.9**
comp=Z,3.2nm,0.3s
EKS2 Erkin-Say 23.52 58 P **P** **15 10 01.8 -0.9**
comp=Z,3.0nm,0.3s
BBLS Lazići 23.59 305 *e*P **P** **15 10 03.3 0.0**
KOLS Kolonicke sedl 23.95 318 *e*P **P** **15 10 08.1 +1.6**
KOLS pmax pmax
comp=Z,16nm,1.6s
KOLS Kolonicke sedl 23.95 318 *e*P **P** **15 10 08.1 +1.6**
KOLS Kolonicke sedl 23.95 318 *e*P **P** **15 10 08.1 +1.6**
comp=Z,16nm,1.6s
AAK Ala-Archa 24.03 59‖ *e*P **P** **15 10 11.3 +3.7**
AAK pmax pmax
comp=Z,4.0nm,0.6s
AAK Ala-Archa 24.03 59 P **P** **15 10 04.5 -3.1**
comp=Z,7.9nm,1.3s
AAK Ala-Archa 24.03 59 LR LR 15 20 55.9
comp=Z,112nm,18.7s,baz=259,slow=40
KWP Kalwaria Pacla 24.09 320 *e*P **P** **15 10 08.2 +0.3**
KWP Kalwaria Pacla 24.09 320 *e*P **P** **15 10 08.4 +0.5**
comp=Z,5.9nm,0.6s
KWP Kalwaria Pacla 24.09 320 *e*P **P** **15 10 08.1 +0.2**
KWP Kalwaria Pacla 24.09 320 *e*P **P** **15 10 08.2 +0.3**
CRVS Cervenica-Dubn 24.38 318 *e*P **P** **15 10 14.0 +3.4**
CRVS pmax pmax
comp=Z,6.0nm,1.2s
CRVS Cervenica-Dubn 24.38 318 *e*P **P** **15 10 14.0 +3.4**
KSH Kashi 24.60 67 P **P** **15 10 11.0 -1.8**
KSH *e*pP **pP** **15 10 15.5 -2.8**
KSH *e*sP **sP** **15 10 18.3 -2.2**
KSH *e*PP **PnPn** **15 10 47.0 +2.8**
KSH *e*PcP **PcP** **15 13 49.5 -0.8**
KSH *e*S **S** **15 14 27.5 -5.7**
KSH *e*sS sS 15 14 35.5 -6.6
KSH pmax pmax
comp=Z,10.0nm,0.5s
KSH pmax pmax
comp=Z,140nm,2.8s
KSH LR LR
comp=N,270nm,6.9s
KSH LR LR
comp=E,360nm,7.5s
KSH LR LR
comp=Z,510nm,6.6s
TIP Timpagrande 24.62 293 P **P** **15 10 11.2 -1.7**
comp=Z,23nm,1.2s
TIP Timpagrande 24.62 293 P **P** **15 10 11.2 -1.7**
comp=Z,23nm,1.2s
KECS Kecovo 24.74 316 *e*P **P** **15 10 14.6 +0.8**
KECS pmax pmax
comp=Z,11nm,1.3s
KECS Kecovo 24.74 316 *e*P **P** **15 10 14.6 +0.8**
KECS Kecovo 24.74 316 *e*P **P** **15 10 14.6 +0.8**
comp=Z,11nm,1.3s
ARU Arti 24.77 16*c i*P **P** **15 10 14.6 +0.6**
ARU 15 10 51.8
ARU S **S** **15 14 29.5 -5.8**
ARU pmax pmax
comp=Z,10.0nm,1.2s
ARU Arti 24.77 16 *i* P **P** **15 10 14.6 +0.6**
comp=Z,10.0nm,1.2s
STHS Stebnicka Huta 24.77 319 *e*P **P** **15 10 17.7 +3.6**
STHS pmax pmax
comp=Z,3.0nm,0.7s
STHS Stebnicka Huta 24.77 319 *e*P **P** **15 10 17.7 +3.6**
PSZ Piszkesteto 24.82 314 P **P** **15 10 15.2 +0.5**
PSZ pmax pmax
comp=Z,6.0nm,0.8s
PSZ Piszkesteto 24.82 314 P **P** **15 10 15.2 +0.5**
comp=Z,6.2nm,0.8s
PSZ Piszkesteto 24.82 314‖ *e*P **P** **15 10 15.1 +0.5**
PSZ Piszkesteto 24.82 314 P **P** **15 10 15.2 +0.5**
comp=Z,6.2nm,0.8s
TKM2 Tokmak 2 24.89 58 *e*P **P** **15 10 17.0 +1.5**
TKM2 pmax pmax
comp=Z,8.0nm,0.9s
TKM2 Tokmak 2 24.89 58 *e*P **P** **15 10 17.0 +1.5**
comp=Z,8.2nm,0.9s
TKM2 Tokmak 2 24.89 58 *e*P **P** **15 10 17.0 +1.5**
comp=Z,8.2nm,0.9s
PKSM Moragy 24.90 310‖ *e*P **P** **15 10 15.8 +0.5**
PKSM Moragy 24.90 310 *e*P **P** **15 10 15.7 +0.5**
PKSG 25.52 312‖ *e*P **P** **15 10 22.2 +1.4**
ZRNK Zerenda 25.61 33 P **P** **15 10 24.6 +3.0**
ZRNK pmax pmax
comp=Z,8.0nm,1.0s
PKST T"'s 25.68 312‖ *e*P **P** **15 10 23.5 +1.1**
VYHS Vyhne 25.71 315 *e*P **P** **15 10 22.9 +0.3**
VYHS pmax pmax
comp=Z,5.0nm,1.4s
VYHS Vyhne 25.71 315 *e*P **P** **15 10 22.9 +0.3**
VYHS Vyhne 25.71 315 *e*P **P** **15 10 22.9 +0.3**
comp=Z,5.2nm,1.4s
OJC Ojcow 25.99 319 *e*P **P** **15 10 25.5 +0.4**
OJC Ojcow 25.99 319 *e*P **P** **15 10 25.5 +0.4**
OJC Ojcow 25.99 319 *e*P **P** **15 10 25.5 +0.4**
BRVK Borovoye 26.26 34*c i*P **P** **15 10 27.4 -0.1**
BRVK pmax pmax
comp=Z,15nm,1.2s
BRVK Borovoye 26.26 34 *e*P **P** **15 10 26.3 -1.2**
comp=Z,12nm,1.0s
BRVK Borovoye 26.26 34 *e*P **P** **15 10 26.3 -1.2**
comp=Z,12nm,1.0s
BVAO Borovoye Array 26.29 34 P **P** **15 10 27.4 -0.4**
BVA0 pmax pmax
comp=Z,12nm,0.8s
BVAR Borovoye Array 26.29 34 P **P** **15 10 27.7 -0.1**
BVAR 15 13 53.5
BVAR pmax pmax
comp=Z,7.0nm,0.7s
BVAR pmax pmax
comp=Z,1.0nm,0.6s
BVAR MLR MLR
comp=Z,74nm,20.5s
BVAR Borovoye Array 26.29 34 P **P** **15 10 27.7 -0.1**
BVAR PcP **PcP** **15 13 53.5 -0.2**
BVAR Borovoye Array 26.29 34 P **P** **15 10 27.7 -0.1**
comp=Z,6.8nm,0.7s,baz=213,slow=9.9,SNR=23
BVAR PcP **PcP** **15 13 53.5 -0.2**
comp=Z,1.1nm,0.6s,baz=168,slow=2.6,SNR=3.8
BVAR LR LR 15 23 32.9
comp=Z,74nm,20.5s,baz=122,slow=43
BVAR Borovoye Array 26.29 34 P **P** **15 10 27.7 -0.1**
BVAR Borovoye Array 26.29 34 PcP **PcP** **15 13 53.5 -0.2**
VOSK Vostochnaya 26.38 35 P **P** **15 10 27.8 -0.8**
VOSK pmax pmax
comp=Z,8.0nm,1.2s
ZST Bratislava 26.63 313 *e*P **P** **15 10 32.4 +1.5**
ZST Bratislava 26.63 313 *e*P **P** **15 10 32.4 +1.5**
ZST Bratislava 26.63 313 *e*P **P** **15 10 32.4 +1.5**
OKC Ostrava-Krasne 26.73 317 *e*P **P** **15 10 32.4 +0.6**
OKC Ostrava-Krasne 26.73 317 *e*P **P** **15 10 32.4 +0.6**
OKC Ostrava-Krasne 26.73 317 P **P** **15 10 32.4 +0.6**
CRES Cresnjev 26.86 307 *e*P **P** **15 10 33.5 +0.5**
CRES Cresnjev 26.86 307 P **P** **15 10 33.5 +0.5**
BOJS Bojanci 26.90 307 *e*P **P** **15 10 33.7 +0.3**
BOJS Bojanci 26.90 307 *e*P **P** **15 10 33.7 +0.3**
MORC Moravsky Berou 27.05 317 *e*P **P** **15 10 34.0 -0.7**
MORC pmax pmax
comp=Z,13nm,1.3s
MORC Moravsky Berou 27.05 317 *e*P **P** **15 10 34.0 -0.7**
comp=Z,13nm,1.3s
MORC Moravsky Berou 27.05 317 *e*P **P** **15 10 34.0 -0.7**
comp=Z,13nm,1.3s
CONA Conrad Observa 27.30 312‖ *e*P **P** **15 10 38.4 +1.3**
comp=Z,11nm,1.1s
CONA Conrad Observa 27.30 312 P **P** **15 10 38.4 +1.3**
comp=Z,11nm,1.1s
VRAC Vranov 27.40 315 P **P** **15 10 38.6 +0.7**
VRAC Vranov 27.40 315 P **P** **15 10 38.6 +0.7**
comp=Z,3.4nm,0.8s,baz=128,slow=11,SNR=5.6
VRAC LR LR 15 23 44.3
comp=Z,51nm,19.1s,baz=246,slow=41
VRAC Vranov 27.40 315 P **P** **15 10 38.6 +0.7**
VNDS Vrh nad Dolski 27.45 308 *e*P **P** **15 10 38.9 +0.6**
OBKA Obir 27.67 308‖ *i*P **P** **15 10 42.1 +1.8**
comp=Z,8.7nm,1.4s
OBKA Obir 27.67 308 P **P** **15 10 42.1 +1.8**
comp=Z,8.7nm,1.4s
DPC Dobruska-Polom 28.01 317 *e*P **P** **15 10 43.4 +0.1**
DPC Dobruska-Polom 28.01 317 *e*P **P** **15 10 43.4 +0.1**
DPC AMS AMS 15 25 00.0
DPC Dobruska-Polom 28.01 317 P **P** **15 10 43.4 +0.1**
TREC Trest 28.05 314 AMS AMS 15 25 10.0
comp=Z,100nm,11.6s
PRU Pruhonice 28.89 315 AMS AMS 15 25 10.0
comp=Z,100nm,19.9s
GERES GERESS Array B 28.97 313 P **P** **15 10 51.7 -0.3**
GERES GERESS Array B 28.97 313 P **P** **15 10 51.7 -0.3**
comp=Z,0.3nm,0.4s,baz=123,slow=11,SNR=3.4
GERES LR LR 15 24 06.6
comp=Z,23nm,19.1s,baz=258,slow=40
GERES GERESS Array B 28.97 313 P **P** **15 10 51.7 -0.3**
KHC Kasperske Hory 29.15 313 AMS AMS 15 25 50.0
comp=Z,100nm,12.0s
KURBB Kurchatov Arra 29.32 44 P **P** **15 10 55.2 +0.4**
comp=Z,1.7nm,0.8s,baz=249,slow=9.1,SNR=9.9
KURK Kurchatov 29.41 44‖ *e*P **P** **15 10 56.9 +1.2**
KURK pmax pmax
comp=Z,5.0nm,1.0s
KURK Kurchatov 29.41 44 P **P** **15 10 56.8 +1.1**
KURK Kurchatov 29.41 44 P **P** **15 10 56.8 +1.1**
BRG Berggiesshubel 29.61 317 *e*P **P** 15 11 06.2 +8.8
comp=Z,4.9nm,0.9s
BRG Berggiesshubel 29.61 317 *e*P **P** 15 11 06.2 +8.8
BRG pmax pmax
comp=Z,5.0nm,1.0s
CLL Collm 30.32 317 *e*P **P** **15 11 04.0 +0.2**
CLL pmax pmax
comp=Z,5.0nm,1.2s
CLL Collm 30.32 317 *e*P **P** **15 11 04.0 +0.2**
comp=Z,5.0nm,1.2s
MK31 Makanchi Array 30.43 53 *i* P **P** **15 11 04.6 -0.2**
MK31 pmax pmax
comp=Z,3.0nm,0.5s
MK31 Makanchi Array 30.43 53 *e*P **P** **15 11 05.2 +0.4**
MK31 Makanchi Array 30.43 53 *e*P **P** **15 11 05.2 +0.4**
MKAR Makanchi Array 30.43 53*ce*P **P** **15 11 05.6 +0.8**
MKAR pmax pmax
comp=Z,8.0nm,0.9s
MKAR Makanchi Array 30.43 53 P **P** **15 11 05.2 +0.4**
MKAR Makanchi Array 30.43 53 P **P** **15 11 05.2 +0.4**
comp=Z,7.5nm,0.8s,baz=249,slow=8.7,SNR=32
MKAR LR LR 15 25 14.6
comp=Z,84nm,18.2s,baz=121,slow=40
MKAR Makanchi Array 30.43 53 P **P** **15 11 05.2 +0.4**
PGF Pioggiola 30.79 299 *e*P **P** **15 11 07.9 -0.2**
comp=Z,25nm,0.9s
PGF Pioggiola 30.79 299 *e*P **P** **15 11 07.9 -0.2**
PGF pmax pmax
comp=Z,25nm,0.9s
PGF Pioggiola 30.79 299 *e*P **P** **15 11 07.9 -0.2**
comp=Z,25nm,0.9s
PGF Pioggiola 30.79 299 *e*P **P** **15 11 07.9 -0.2**
comp=Z,25nm,0.9s
FINES FINESS Array B 31.23 341 P **P** **15 11 11.2 -0.4**
FINES FINESS Array B 31.23 341 P **P** **15 11 11.2 -0.4**
comp=Z,1.3nm,0.5s,baz=150,slow=10,SNR=12
FINES FINESS Array B 31.23 341 P **P** **15 11 11.2 -0.4**
MBDF Montbardon 32.63 303 *e*P **P** **15 11 24.2 -0.1**
comp=Z,7.1nm,0.5s
MBDF Montbardon 32.63 303 *e*P **P** **15 11 24.2 -0.1**
MBDF pmax pmax
comp=Z,7.0nm,0.5s
MBDF Montbardon 32.63 303 *e*P **P** **15 11 24.2 -0.1**
comp=Z,7.1nm,0.5s
MBDF Montbardon 32.63 303 *e*P **P** **15 11 24.2 -0.1**
comp=Z,7.1nm,0.5s
BNI Bardonecchia 32.73 303 *e*P **P** **15 11 24.4 -0.9**
BNI pmax pmax
comp=Z,9.0nm,0.8s
BNI Bardonecchia 32.73 303 *e*P **P** **15 11 24.4 -0.9**
comp=Z,8.6nm,0.8s
BNI Bardonecchia 32.73 303 *e*P **P** **15 11 24.4 -0.9**
comp=Z,8.6nm,0.8s
LPG La Plagne 32.74 304 *e*P **P** **15 11 25.9 +0.4**
LPG La Plagne 32.74 304 *e*P **P** **15 11 25.9 +0.4**
LPG La Plagne 32.74 304 *e*P **P** **15 11 25.9 +0.4**
LPG La Plagne 32.74 304 *e*P **P** **15 11 25.9 +0.4**
LPL La Plagne 32.76 304 *e*P **P** **15 11 25.2 -0.4**
comp=Z,12nm,0.7s
LPL La Plagne 32.76 304 *e*P **P** **15 11 25.2 -0.4**
LPL pmax pmax
comp=Z,12nm,0.7s
LPL La Plagne 32.76 304 *e*P **P** **15 11 25.2 -0.4**
comp=Z,12nm,0.7s
LPL La Plagne 32.76 304 *e*P **P** **15 11 25.2 -0.4**
comp=Z,12nm,0.7s
HYB Hyderabad 32.85 111 *i* P **P** **15 11 28.0 +1.6**
CABF La Chapelle 33.37 306 *e*P **P** **15 11 30.7 0.0**
comp=Z,49nm,1.2s
CABF La Chapelle 33.37 306 *e*P **P** **15 11 30.7 0.0**
CABF pmax pmax
comp=Z,49nm,1.2s
CABF La Chapelle 33.37 306 *e*P **P** **15 11 30.7 0.0**
comp=Z,49nm,1.2s
CABF La Chapelle 33.37 306 *e*P **P** **15 11 30.7 0.0**
comp=Z,49nm,1.2s
NVS Novosibirsk 33.68 39 *e*P P 15 11 36.6 +3.4
WMQ Urumqi 33.73 59 *e*P **P** **15 11 35.5 +1.6**
WMQ pP **pP** **15 11 42.0 +2.5**
WMQ pmax pmax
comp=Z,13nm,1.2s
WMQ pmax pmax
comp=Z,100nm,4.0s
WMQ LR LR
comp=Z,110nm,14.6s
VIVF Saint-Julien-l 34.13 302 *e*P **P** **15 11 36.6 -0.7**
VIVF Saint-Julien-l 34.13 302 *e*P **P** **15 11 36.6 -0.7**
VIVF Saint-Julien-l 34.13 302 *e*P **P** **15 11 36.6 -0.7**
VIVF Saint-Julien-l 34.13 302 *e*P **P** **15 11 36.6 -0.7**
ZAA0 Zalesovo Array 34.17 41 *e*P **P** **15 11 37.0 -0.5**
ZAA0 Zalesovo Array 34.17 41 *e*P **P** **15 11 37.0 -0.5**
ZALV Zalesovo Beam 34.17 41 P **P** **15 11 37.5 0.0**
ZALV 15 12 59.1
ZALV pmax pmax
comp=Z,2.0nm,0.5s
ZALV pmax pmax
comp=Z,4.0nm,1.0s
ZALV MLR MLR
comp=Z,62nm,19.1s
ZALV Zalesovo Beam 34.17 41 P **P** **15 11 37.5 0.0**
ZALV PP **PP** **15 12 59.0 +4.2**
ZALV Zalesovo Beam 34.17 41 P **P** **15 11 37.5 0.0**
comp=Z,2.3nm,0.5s,baz=256,slow=10.0,SNR=9.9
ZALV PP **PP** **15 12 59.0 +4.2**
comp=Z,3.6nm,0.9s,baz=257,slow=12,SNR=4.6
ZALV LR LR 15 29 08.8
comp=Z,62nm,19.1s,baz=254,slow=43
ZALV Zalesovo Beam 34.17 41 P **P** **15 11 37.5 0.0**
MEZF Maizieres J'vi 34.39 309 *e*P **P** **15 11 39.1 -0.4**
MEZF Maizieres J'vi 34.39 309 *e*P **P** **15 11 39.1 -0.4**
MEZF Maizieres J'vi 34.39 309 *e*P **P** **15 11 39.1 -0.4**
SMF Signal de Mont 34.91 305 *e*P **P** **15 11 43.4 -0.6**
comp=Z,8.7nm,0.5s
SMF Signal de Mont 34.91 305 *e*P **P** **15 11 43.4 -0.6**
SMF pmax pmax
comp=Z,9.0nm,0.5s
SMF Signal de Mont 34.91 305 *e*P **P** **15 11 43.4 -0.6**
comp=Z,8.7nm,0.5s
SMF Signal de Mont 34.91 305 *e*P **P** **15 11 43.4 -0.6**
comp=Z,8.7nm,0.5s
BAIF Baives 35.25 311 *e*P **P** **15 11 46.7 -0.2**
BAIF Baives 35.25 311 *e*P **P** **15 11 46.7 -0.2**
BAIF Baives 35.25 311 *e*P **P** **15 11 46.7 -0.2**
BAIF Baives 35.25 311 *e*P **P** **15 11 46.7 -0.2**
AVF Avril sur Loir 35.26 306 *e*P **P** **15 11 46.1 -0.9**
comp=Z,17nm,1.1s
AVF Avril sur Loir 35.26 306 *e*P **P** **15 11 46.1 -0.9**
AVF pmax pmax
comp=Z,17nm,1.1s
AVF Avril sur Loir 35.26 306 *e*P **P** **15 11 46.1 -0.9**
comp=Z,17nm,1.1s
AVF Avril sur Loir 35.26 306 *e*P **P** **15 11 46.1 -0.9**
comp=Z,17nm,1.1s
TCF Toulx Ste Croi 35.98 305 *e*P **P** **15 11 52.8 -0.5**
TCF Toulx Ste Croi 35.98 305 *e*P **P** **15 11 52.8 -0.5**
TCF Toulx Ste Croi 35.98 305 *e*P **P** **15 11 52.8 -0.5**
TCF Toulx Ste Croi 35.98 305 *e*P **P** **15 11 52.8 -0.5**
NB2 NORSAR Subarra 36.01 332 P **P** **15 11 52.1 -1.2**
comp=Z,0.8nm,0.5s,baz=124,slow=9.3
NB2 NORSAR Subarra 36.01 332 P **P** **15 11 52.1 -1.2**
comp=Z,0.8nm,0.5s,SNR=5.9
NOA NORSAR Array B 36.01 332 P **P** **15 11 52.6 -0.7**
NOA PP **PnPn** **15 13 14.0 -0.1**
NOA NORSAR Array B 36.01 332 P **P** **15 11 52.6 -0.7**
comp=Z,1.0nm,0.6s,baz=125,slow=8.7,SNR=6.8
NOA PP **PnPn** **15 13 14.0 -0.1**
comp=Z,1.2nm,0.8s,baz=127,slow=11,SNR=3.9
NOA LR LR 15 29 41.0
comp=Z,30nm,18.2s,baz=125,slow=41
NOA NORSAR Array B 36.01 332 P **P** **15 11 52.6 -0.7**
NOA NORSAR Array B 36.01 332 PP PP 15 13 14.0 -1.1
LDF La Druitiere 37.80 308 *e*P **P** **15 12 08.6 -0.1**
LDF La Druitiere 37.80 308 *e*P **P** **15 12 08.6 -0.1**
LDF La Druitiere 37.80 308 *e*P **P** **15 12 08.6 -0.1**
LDF La Druitiere 37.80 308 *e*P **P** **15 12 08.6 -0.1**
ARCES ARCESS Array B 38.29 348 P **P** **15 12 12.4 -0.1**
ARCES ARCESS Array B 38.29 348 P **P** **15 12 12.4 -0.1**
comp=Z,4.8nm,0.9s,baz=153,slow=8.2,SNR=13
ARCES LR LR 15 29 18.4
comp=Z,74nm,18.2s,baz=261,slow=38
ARCES ARCESS Array B 38.29 348 P **P** **15 12 12.4 -0.1**
ESDC Sonseca Array 40.62 294 P **P** **15 12 32.9 +0.4**
ESDC Sonseca Array 40.62 294 P **P** **15 12 32.9 +0.4**
comp=Z,0.2nm,0.3s,baz=79,slow=8.2,SNR=5.5
ESDC Sonseca Array 40.62 294 P **P** **15 12 32.8 +0.4**
GTA Gaotai 43.00 66 *e*P **P** **15 12 53.0 +1.0**
GTA pP **pP** **15 12 57.5 -0.1**
GTA sP **sP** **15 13 00.0 +0.2**
GTA pmax pmax
comp=Z,5.0nm,1.2s
ZAK Zakamensk 44.66 50 *e*P **P** **15 13 02.9 -2.2**
ZAK *e* 15 13 26.4
ZAK pmax pmax
comp=Z,2.0nm,1.6s
TOA0 Torodi Ar. Sit 45.26 255 P **P** **15 13 09.9 -0.2**
TOA0 Torodi Ar. Sit 45.26 255 P **P** **15 13 09.9 -0.2**
TORD Torodi Ar. Bea 45.26 255 P **P** **15 13 10.9 +0.8**
TORD Torodi Ar. Bea 45.26 255 P **P** **15 13 10.9 +0.8**
comp=Z,24nm,0.9s,baz=54,slow=8.1,SNR=11
TORD LR LR 15 34 54.7
comp=Z,65nm,18.4s,baz=345,slow=40
TORD Torodi Ar. Bea 45.26 255 P **P** **15 13 10.9 +0.8**
LZH Lanzhou 46.79 70 *e*P **P** **15 13 23.0 +0.8**
LZH pP **pP** **15 13 27.5 -0.4**
LZH sP **sP** **15 13 30.3 +0.2**
LZH PP **PP** **15 15 14.0 +1.8**
LZH *e*S **S** **15 20 08.8 -2.9**
LZH SS SS 15 23 30.5 -7.6
LZH pmax pmax
comp=Z,16nm,1.1s
LZH pmax pmax
comp=Z,66nm,4.8s
LZH LR LR
comp=N,240nm,16.7s
LZH LR LR
comp=E,130nm,12.4s
LZH LR LR
comp=Z,290nm,17.0s
SONM Songino Array 46.79 53 P **P** **15 13 22.5 +0.4**
SONM PcP **PcP** **15 14 56.0 +1.0**
SONM Songino Array 46.79 53 P **P** **15 13 22.5 +0.4**
comp=Z,0.8nm,0.7s,baz=282,slow=8.7,SNR=5.4
SONM PcP **PcP** **15 14 56.0 +1.0**
comp=Z,0.7nm,0.5s,baz=270,slow=4.3,SNR=3.5
SONM Songino Array 46.79 53 P **P** **15 13 22.5 +0.4**
SONM Songino Array 46.79 53 PcP **PcP** **15 14 56.0 +1.0**
ULN Ulaanbaatar 47.23 53 *e*P **P** **15 13 25.6 +0.1**
comp=Z,5.3nm,0.8s
ULN Ulaanbaatar 47.23 53 *e*P **P** **15 13 25.6 +0.1**
comp=Z,5.3nm,0.8s

CD2	**Chengdu**	**48.16**	**76**	*e*P		**P**	**15 13 32.5**	**-0.3**		
CD2	comp=Z,10.0nm,1.0s			pmax	pmax					
CD2	comp=Z,40nm,6.4s			pmax	pmax					
CHTO	**Chiang Mai**	**48.87**	**93**	*e*P		**P**	**15 13 37.9**	**-0.5**		
CHTO	comp=Z,3.0nm,0.7s			pmax	pmax					
CHTO	**Chiang Mai**	**48.87**	**93**	*e*P		**P**	**15 13 37.9**	**-0.5**		
CHTO	comp=Z,2.5nm,0.7s **Chiang Mai**	**48.87**	**93**	*e*P		**P**	**15 13 37.8**	**-0.6**		
CMAR	comp=Z,2.5nm,0.7s **Chiang Mai Arr**	**49.04**	**94**	P		**P**	**15 13 39.5**	**-0.1**		
CMAR	**Chiang Mai Arr**	**49.04**	**94**	P		**P**	**15 13 39.5**	**-0.1**		
CMAR	comp=Z,3.6nm,0.7s,baz=290,slow=8.4,SNR=30 **Chiang Mai Arr**	**49.04**	**94**	P		**P**	**15 13 39.5**	**-0.1**		
HHC	**Hu-ho-hao-te**	**51.56**	**62**	*e*P		**P**	**15 13 56.3**	**-2.3**		
HHC				PP		**PP**	**15 15 54.3**	**-1.5**		
HHC				PcS		**PcS**	**15 19 07.0**	**-3.4**		
HHC				S		**S**	**15 21 14.5**	**-4.0**		
HHC				ScS		**ScS**	**15 23 43.0**	**-5.3**		
HHC				SS		**SS**	**15 24 48.5**	**-5.9**		
HHC	comp=Z,24nm,1.0s			pmax	pmax					
HHC	comp=Z,150nm,5.0s			pmax	pmax					
HHC	comp=N,170nm,14.7s			LR	LR					
HHC	comp=E,200nm,14.3s			LR	LR					
HHC	comp=Z,95nm,13.7s			LR	LR					
GYA	**Guiyang**	**52.11**	**81**	*e*P		**P**	**15 14 02.3**	**-0.6**		
GYA	comp=Z,10.0nm,1.0s			pmax	pmax					
DBIC	**Dimbokro**	**54.24**	**253**	LR	LR		15 38 58.8			
TIXI	comp=Z,46nm,21.0s,baz=213,slow=38 **Tiksi**	**56.58**	**22**⇑	*e*P		**P**	**15 14 33.4**	**-1.2**		
TIXI				*i* *PP		pP	15 14 59.6	+19		
TIXI	comp=Z,3.0nm,1.2s			pmax	pmax					
CN2	**Changchun**	**60.62**	**55**	*e*P		**P**	**15 15 03.3**	**+0.1**		
BOSA	**Boshof**	**64.60**	**201**	P		**P**	**15 15 30.4**	**+0.5**		
BOSA	**Boshof**	**64.60**	**201**	P		**P**	**15 15 30.4**	**+0.5**		
BOSA	comp=Z,10nm,1.0s,baz=32,slow=9.8,SNR=8.0 **Boshof**	**64.60**	**201**	P		**P**	**15 15 30.4**	**+0.5**		
KSAR	**Wonju Array Be**	**64.65**	**61**	P		**P**	**15 15 29.8**	**-0.4**		
KSAR	**Wonju Array Be**	**64.65**	**61**	P		**P**	**15 15 29.8**	**-0.4**		
KSRS	**Korea Array**	**64.67**	**61**	P		**P**	**15 15 29.8**	**-0.5**		
KSRS	comp=Z,1.1nm,0.3s,baz=285,slow=7.0,SNR=6.5			LR	LR		15 47 17.9			
USRK	comp=Z,34nm,18.8s,baz=265,slow=39 **Ussuriysk Arra**	**64.90**	**52**	P		**P**	**15 15 30.0**	**-1.7**		
	comp=Z,2.0nm,0.7s,baz=310,slow=7.9,SNR=5.3									
BILL	**Bilibino**	**69.71**	**20**	*e*P		**P**	**15 16 01.9**	**+0.1**		
BILL				*i*			15 16 22.6			
BILL	comp=Z,7.0nm,1.2s			pmax	pmax					
MJAR	**Matsushiro Arr**	**72.48**	**58**	P		**P**	**15 16 19.6**	**+0.4**		
MJAR	**Matsushiro Arr**	**72.48**	**58**	P		**P**	**15 16 19.6**	**+0.4**		
MJAR	comp=Z,0.7nm,0.7s,baz=331,slow=4.2,SNR=3.5 **Matsushiro Arr**	**72.48**	**58**	P		**P**	**15 16 19.6**	**+0.4**		
SCHQ	**Schefferville**	**75.39**	**327**	P		**P**	**15 16 35.8**	**-0.1**		
SCHQ	**Schefferville**	**75.39**	**327**	P		**P**	**15 16 35.8**	**-0.1**		
SCHQ	comp=Z,1.9nm,0.5s,baz=60,slow=6.9,SNR=6.6 **Schefferville**	**75.39**	**327**	P		**P**	**15 16 35.8**	**-0.1**		
PETK	**Petropavlovsk-**	**75.51**	**35**	LR	LR		15 57 40.7			
ILAR	comp=Z,24nm,18.3s,baz=324,slow=42 **Eielson Array**	**81.87**	**6**	P		**P**	**15 17 11.3**	**0.0**		
ILAR	**Eielson Array**	**81.87**	**6**	P		**P**	**15 17 11.3**	**0.0**		
ILAR	comp=Z,0.8nm,0.9s,baz=337,slow=4.3,SNR=5.8 **Eielson Array**	**81.87**	**6**	P		**P**	**15 17 11.3**	**0.0**		
YKA	**Yellowknife Ar**	**83.49**	**351**	P		**P**	**15 17 19.8**	**0.0**		
YKA	**Yellowknife Ar**	**83.49**	**351**	P		**P**	**15 17 19.8**	**0.0**		
YKA	comp=Z,2.2nm,1.0s,baz=11,slow=5.2,SNR=8.6 **Yellowknife Ar**	**83.49**	**351**	P		**P**	**15 17 19.8**	**0.0**		
FFC	**Flin Flon**	**88.36**	**342**	*i* P		**P**	**15 17 45.7**	**+1.7**		
FFC	**Flin Flon**	**88.36**	**342**	*i* P		**P**	**15 17 45.7**	**+1.7**		
QSPA	**South Pole Qui**	**122.96**	**180**	PKP		**PKPdf**	**15 23 48.1**	**+0.3**		
QSPA	**South Pole Qui**	**122.96**	**180**	PKP		**PKPdf**	**15 23 48.1**	**+0.3**		
QSPA	comp=Z,4.1nm,1.0s,baz=259,slow=1.8,SNR=14 **South Pole Qui**	**122.96**	**180**	PKIKP		**PKPdf**	**15 23 48.1**	**+0.3**		

BJI ***25*** *15:12:50.7,0.93N×127.73E,h105km,mB4.9/25,mb4.8/42*
MOS ***25*** *15:12:57.5±0.9, 1.76N×127.20E,h106km,mb4.7/19,Error ellipse: s-maj=15.0km s-min=6.7km az=117.1*
NEIC ***25*** *15:12:59.1±1.0, 1.74N×127.27E,h107km±10km,mb4.8/25, Error ellipse: s-maj=8.2km s-min=4.1km az=69.0*
ISCJB ***25*** *15:13:00.3±0.3, 1.75N±0.03×127.27E±0.03,h132km±3km, mb4.5/69,Error ellipse: s-maj=5.1km s-min=4.5km az=162.1*
IDC ***25*** *15:13:01.0±2.0, 1.67N×127.23E,h125km±18km,mb4.1/21, mb1 4.2/23,mb1mx4.1/30,mbtmp4.1/23,Error ellipse: s-maj=17.4km s-min=7.7km az=75.0*
DJA ***25*** *15:13:03.5±0.3,2.2N±4.4×12.7E±., h104km±3km,M4.5/19, mB5.0/13,mb4.7/19,MLv4.7/11,Mw(mB)4.4/13*
ISC 25 15:13:00.3±0.3,1.76N±0.03×127.26E±0.04,h116km±2km, h116km:pP-P,n173,σ1.940/223,mb4.6/69,6C-6D, Halmahera

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**0.53**	**82**	P			**Pn**	**15 13 19.6**	**+1.6**
GAMI				S			**Sn**	**15 13 33.5**	**+2.1**
TNTI	**Ternate**	**0.99**	**174**	P			**Pn**	**15 13 23.7**	**+1.8**
TNTI				S			**Sn**	**15 13 42.8**	**+4.5**
LBMI	**Labuha**	**2.40**	**174**	P			**Pn**	**15 13 40.4**	**+1.8**
LBMI				S			**Sn**	**15 14 10.8**	**+2.7**
MNI	**Manado**	**2.44**	**263**	P			**Pn**	**15 13 40.2**	**+1.0**
MNI				S			**Sn**	**15 14 09.8**	**+0.7**
KMSI	**Cibinong**	**3.49**	**250**	P			**Pn**	**15 13 54.1**	**+1.2**
KMSI				S			**Sn**	**15 14 34.1**	**+0.5**
GTOI	**Gorontalo**	**4.40**	**255**	P			**Pn**	**15 14 07.2**	**+2.1**
GTOI				S			**Sn**	**15 14 56.5**	**+1.1**
LUWI	**Luwuk**	**5.28**	**238**	P			**Pn**	**15 14 19.6**	**+2.5**
LUWI	94nm,1.1s,11μm2.3nm			S			**Sn**	**15 15 18.5**	**+1.7**
MSAI	94nm,1.1s,11μm2.3nm **Masohi**	**5.34**	**162**	P			Pn	15 14 22.4	+4.6
MRSI	12nm,1.0s,0.1nm **Marisa**	**5.47**	**257**	P			**Pn**	**15 14 20.5**	**+0.9**
DAV	107nm,1.2s,1μm0.4nm **Davao City (W)**	**5.54**	**342**	S			**Sn**	**15 15 24.4**	**+1.5**
CTBH	34nm,0.3s,baz=156,slow=20,SNR=5.0 **Cotabato--PC H**	**6.20**	**331**	⇓*i* P			**Pn**	**15 14 29.9**	**+0.4**
FAKI	**Fak Fak**	**6.82**	**133**	P			**Pn**	**15 14 40.8**	**+3.0**
CGP	84nm,1.2s,914nm0.3nm **Cagayan de Oro**	**7.12**	**339**⇑	*e*P			**Pn**	**15 14 44.4**	**+2.4**
CGP				*e*S			**Sn**	**15 15 59.1**	**-2.3**
BBSI	**Bau Bau**	**8.59**	**213**	P			Pn	15 15 12.8	+11
TTSI	**Tana Toraja**	**8.84**	**237**	P			**Pn**	**15 15 05.0**	**-0.2**
BAKI	36nm,0.7s,488nm **Biak**	**9.32**	**108**	P			Pn	15 15 17.7	+6.0
MYLDM	121nm,0.9s,1μm **Lahad Datu**	**9.38**	**291**	P			**Pn**	**15 15 14.8**	**+2.3**
SPSI	70nm,1.1s,814nm **Sidrap Palu**	**9.40**	**233**	P			**Pn**	**15 15 14.1**	**+1.3**
BKSI	63nm,0.6s,875nm **Bulukumba**	**10.02**	**225**	P			**Pn**	**15 15 24.3**	**+3.2**
KAPI	46nm,0.4s,665nm **Kappang**	**10.08**	**228**	*e*Pn			**Pn**	**15 15 21.1**	**-0.9**
KAPI	25nm,0.3s			S			**Sn**	**15 17 09.5**	**-3.7**
KAPI	**Kappang**	**10.08**	**228**	P			**Pn**	**15 15 23.2**	**+1.2**
KAPI	23nm,0.5s,466nm **Kappang**	**10.08**	**228**	P			**Pn**	**15 15 22.9**	**+0.9**
KAPI	8.9nm,0.3s,baz=100,slow=7.3,SNR=14 6.1nm,0.3s,baz=78,slow=23,SNR=12			S			**Sn**	**15 17 09.5**	**-3.7**
BSSI	**Bau Bau, Buton**	**10.36**	**221**	P			Pn	15 15 29.1	+3.3
MMRI	40nm,0.5s **Maumere**	**11.48**	**206**	P			P	15 15 56.2	+6.5
KKM	**Kota Kinabalu**	**11.81**	**291**	P			**Pn**	**15 15 45.7**	**+0.4**
JAY	26nm,0.9s **Jayapura**	**14.09**	**108**	P			**P**	**15 16 19.9**	**+0.9**
SBUM	41nm,0.8s,3μm **Sibu**	**15.05**	**273**	P			**P**	**15 16 30.7**	**+1.2**
MTNI	47nm,1.3s,508nm **Mataram**	**15.13**	**227**	P			**Pn**	**15 16 25.2**	**-2.8**
KHKI	44nm,0.8s **Kahang-Kahang**	**15.37**	**229**	P			**P**	**15 16 36.0**	**+2.9**
	57nm,0.9s								

KSM	**Kuching**	**16.95**	**269**	*e*Pn			**Pn**	**15 16 49.9**	**-0.6**	
KSM	14nm,0.9s **Kuching**	**16.95**	**269**	P			**Pn**	**15 16 50.0**	**-0.6**	
SJI	19nm,1.1s **Sawahan**	**18.11**	**238**	P			**Pn**	**15 17 04.8**	**+0.2**	
FITZ	37nm,1.1s,1μm **Fitzroy Crossi**	**19.80**	**185**	P			**P**	**15 17 20.5**	**-1.2**	
FITZ	**Fitzroy Crossi**	**19.80**	**185**	P			**P**	**15 17 20.5**	**-1.2**	
GUMO	0.7nm,0.3s,baz=27,slow=11,SNR=39 **Guam**	**21.01**	**55**	P			**P**	**15 17 34.7**	**-0.1**	
TWG	47nm,1.0s **Pinlang**	**21.78**	**344**	P			**P**	**15 17 41.5**	**-1.4**	
YULB	92nm,0.6s **Yu-li**	**22.27**	**345**	*e*P			**P**	**15 17 46.1**	**-1.9**	
TPUB	19nm,0.9s **Ta-pu**	**22.36**	**344**	*e*P			**P**	**15 17 46.9**	**-2.0**	
WRAB	61nm,0.9s **Tennant Creek**	**22.65**	**162**	*e*P			**P**	**15 17 50.5**	**-1.4**	
WRAB	comp=Z,56nm,0.9s			pmax	pmax					
WRAB	**Tennant Creek**	**22.65**	**162**	*e*P			**P**	**15 17 50.5**	**-1.4**	
WRAB	comp=Z,56nm,0.9s			*e*				15 17 57.0		
WRA	**Warramunga Arr**	**22.66**	**162**	P			**P**	**15 17 50.7**	**-1.3**	
WRA				S			**S**	**15 21 50.0**	**-1.5**	
WRA	**Warramunga Arr**	**22.66**	**162**	P			**P**	**15 17 50.7**	**-1.3**	
WRA	comp=Z,19nm,0.6s,baz=343,slow=11,SNR=487			S			**S**	**15 21 50.0**	**-1.5**	
SSLB	comp=Z,1.2nm,0.4s,baz=347,slow=15,SNR=5.5 **Suanglung**	**22.73**	**345**	*e*P			**P**	**15 17 52.4**	**-0.2**	
NACB	comp=Z,40nm,0.8s **Ninganchiao**	**22.95**	**347**	P			**P**	**15 17 52.9**	**-1.8**	
YHNB	comp=Z,43nm,1.1s **Yeheng**	**23.48**	**346**	*e*P			**P**	**15 17 60.0**	**+0.3**	
MBWA	comp=Z,100nm,1.1s **Marble Bar**	**23.94**	**198**	*e*P			**P**	**15 18 03.2**	**-0.6**	
ASAR	comp=Z,90nm,1.7s **Alice Springs**	**26.09**	**166**	P			**P**	**15 18 22.2**	**-1.1**	
ASAR				S			S	15 22 58.1	+12	
ASAR	**Alice Springs**	**26.09**	**166**	P			**P**	**15 18 22.2**	**-1.1**	
ASAR	comp=Z,3.7nm,0.7s,baz=344,slow=8.3,SNR=70			S			S	15 22 58.1	+12	
CTA	comp=Z,1.9nm,0.5s,baz=347,slow=23,SNR=9.3 **Charters Tower**	**28.61**	**140**	P			**P**	**15 18 46.7**	**+0.8**	
CTA	**Charters Tower**	**28.61**	**140**	P			**P**	**15 18 46.7**	**+0.8**	
CTAO	comp=Z,6.9nm,0.9s,baz=328,slow=8.9,SNR=8.3 **Charters Tower**	**28.61**	**140**	P			**P**	**15 18 45.8**	**0.0**	
CTAO	comp=Z,8.0nm,0.8s			pmax	pmax					
CTAO	**Charters Tower**	**28.61**	**140**	P			**P**	**15 18 45.8**	**0.0**	
WHN	comp=Z,7.7nm,0.8s **Wuhan**	**31.13**	**338**	⇑P			**P**	**15 19 10.3**	**+2.3**	
NJ2	**Nanjing**	**31.16**	**346**	*e*P			**P**	**15 19 09.3**	**+1.1**	
NJ2				pP			**pP**	**15 19 32.0**	**-1.8**	
NJ2				sP			**sP**	**15 19 46.5**	**-0.7**	
NJ2				PP			**PnPn**	**15 20 15.0**	**0.0**	
NJ2				S			**S**	**15 24 04.5**	**-1.1**	
NJ2				sS			**sS**	**15 24 49.5**	**-0.7**	
NJ2	comp=Z,20nm,1.0s			pmax	pmax					
NJ2	comp=Z,70nm,5.8s			pmax	pmax					
NJ2	comp=E,90nm,19.0s			LR	LR					
NJ2	comp=Z,110nm,23.9s			LR	LR					
GYA	**Guiyang**	**31.54**	**323**	P			**P**	**15 19 13.5**	**+1.7**	
GYA				pP			**pP**	**15 19 37.5**	**+0.1**	
GYA				sP			**sP**	**15 19 51.0**	**+0.1**	
GYA				PP			**PnPn**	**15 20 21.3**	**+1.3**	
GYA				PcP			**PcP**	**15 22 02.0**	**0.0**	
GYA				S			**S**	**15 24 13.8**	**+1.8**	
GYA				PcS			**PcS**	**15 25 46.5**	**-0.3**	
GYA				ScS			**ScS**	**15 29 32.0**	**-0.9**	
GYA	comp=Z,20nm,0.8s			pmax	pmax					
GYA	comp=Z,110nm,4.8s			pmax	pmax					
CMAR	**Chiang Mai Arr**	**32.35**	**303**	P			**P**	**15 19 19.1**	**+0.2**	
CMAR				ScP			**ScP**	**15 25 36.2**	**-1.2**	
CMAR	**Chiang Mai Arr**	**32.35**	**303**	P			**P**	**15 19 19.1**	**+0.2**	
CMAR	comp=Z,2.6nm,1.0s,baz=110,slow=7.0,SNR=12			ScP			**ScP**	**15 25 36.2**	**-1.2**	
CHTO	comp=Z,2.0nm,1.1s,baz=146,slow=1.8,SNR=9.7 **Chiang Mai**	**32.51**	**303**	*e*P			**P**	**15 19 19.6**	**-0.7**	
CHTO	comp=Z,3.0nm,0.9s			pmax	pmax					
CHTO	**Chiang Mai**	**32.51**	**303**	*e*P			**P**	**15 19 19.6**	**-0.7**	
KMI	comp=Z,3.1nm,0.9s **Kunming**	**33.15**	**317**	⇑P			**P**	**15 19 28.0**	**+2.0**	
KMI				pP			**pP**	**15 19 52.5**	**+0.7**	
KMI				sP			**sP**	**15 20 05.0**	**-0.2**	
KMI				PP			**PP**	**15 20 43.0**	**-0.3**	
KMI				S			**S**	**15 24 39.5**	**+2.2**	
KMI	comp=Z,17nm,1.1s			pmax	pmax					
KMI	comp=Z,53nm,3.1s			LR	LR					
KMI	comp=N,100nm,17.9s			LR	LR					
KMI	comp=E,120nm,14.6s			LR	LR					
EIDS	comp=Z,80nm,13.7s **Eidsvold**	**35.49**	**141**	*e*P			**P**	**15 19 45.1**	**-0.8**	
KSAR	comp=Z,16nm,1.1s **Wonju Array Be**	**35.51**	**1**	P			**P**	**15 19 46.5**	**+0.6**	
KSRS	**Korea Array**	**35.52**	**1**	P			**P**	**15 19 46.5**	**+0.5**	
MJAR	comp=Z,5.9nm,0.6s,baz=176,slow=9.5,SNR=27 **Matsushiro Arr**	**36.06**	**15**	P			**P**	**15 19 49.9**	**-0.8**	
MJAR	**Matsushiro Arr**	**36.06**	**15**	P			**P**	**15 19 49.9**	**-0.8**	
MAJO	comp=Z,5.4nm,0.8s,baz=187,slow=10,SNR=18 **Matsushiro**	**36.06**	**15**	*e*P			**P**	**15 19 51.1**	**+0.4**	
MAJO	comp=Z,6.0nm,0.8s			pmax	pmax					
MAJO	**Matsushiro**	**36.06**	**15**	*e*P			**P**	**15 19 51.0**	**+0.4**	
STKA	comp=Z,6.4nm,0.8s **Stephens Creek**	**36.11**	**159**	P			**P**	**15 19 50.5**	**-0.7**	
STKA	**Stephens Creek**	**36.11**	**159**	P			**P**	**15 19 50.5**	**-0.7**	
XAN	comp=Z,24nm,0.7s,baz=336,slow=7.8,SNR=66 **Xi'an**	**36.41**	**334**	P			**P**	**15 19 54.0**	**+0.3**	
XAN	comp=Z,11nm,1.1s			pmax	pmax					
CD2	**Chengdu**	**36.54**	**325**	*e*P			**P**	**15 19 55.8**	**+0.9**	
CD2				pP			**pP**	**15 20 20.0**	**-0.9**	
CD2				sP			**sP**	**15 20 32.5**	**-1.8**	
CD2				PP			**PnPn**	**15 21 24.0**	**+2.3**	
CD2				S			**S**	**15 25 30.5**	**+1.6**	
CD2	comp=Z,30nm,1.4s			pmax	pmax					
CD2	comp=Z,100nm,5.2s			pmax	pmax					
CD2	comp=N,120nm,13.2s			LR	LR					
CD2	comp=Z,130nm,15.5s			LR	LR					
BJI	**Beijing**	**39.41**	**347**	P			**P**	**15 20 19.5**	**+0.7**	
BJI				pP			**pP**	**15 20 43.3**	**-1.8**	
BJI	comp=Z,24nm,0.7s			pmax	pmax					
BJI	comp=N,54nm,13.8s			LR	LR					
BJI	comp=E,92nm,17.8s			LR	LR					
ARMA	comp=Z,37nm,20.3s **Armidale**	**39.54**	**146**	*e*P			**P**	**15 20 20.5**	**+0.3**	
LZH	comp=Z,27nm,0.9s **Lanzhou**	**40.46**	**330**	⇓P			**P**	**15 20 29.8**	**+2.0**	
LZH				pP			**pP**	**15 20 54.8**	**+0.6**	
LZH				sP			**sP**	**15 21 05.5**	**-1.9**	
LZH				PP			**PnPn**	**15 22 07.8**	**-0.4**	
LZH				*e*S			S	15 26 34.3	+6.3	
LZH				sS			**sS**	**15 27 17.0**	**+3.3**	
LZH	comp=Z,91nm,1.4s			pmax	pmax					
LZH	comp=Z,250nm,4.0s			pmax	pmax					
LZH	comp=N,130nm,10.8s			LR	LR					
LZH	comp=E,130nm,12.0s			LR	LR					
LZH	comp=Z,210nm,13.9s			LR	LR					
HHC	**Hu-ho-hao-te**	**41.42**	**342**	*e*P			**P**	**15 20 34.5**	**-1.0**	

HHC				pP			**pP**	**15 21 00.0**	**-2.0**	
HHC				sP			**sP**	**15 21 13.0**	**-2.2**	
HHC				PP			**PP**	**15 22 15.5**	**+2.0**	
HHC				PcS			**PcS**	**15 26 20.5**	**-2.3**	
HHC				S			**S**	**15 26 42.0**	**0.0**	
HHC				ScS			**ScS**	**15 30 24.0**	**-3.4**	
HHC				pmax	pmax					
HHC	comp=Z,24nm,1.0s			pmax	pmax					
HHC	comp=Z,220nm,5.0s			LR	LR					
HHC	comp=N,180nm,10.9s			LR	LR					
HHC	comp=E,200nm,10.8s			LR	LR					
HHC	comp=Z,180nm,10.4s									
SHL	**Shillong**	**41.48**	**308**	*e*PKP			**P**	**15 20 37.0**	**+0.7**	
CN2	**Changchun**	**41.89**	**358**	*e*P			P	15 20 45.0	+5.9	
CN2				*e*sP			sP	15 21 23.0	+4.1	
CN2				*e*S			S	15 26 57.0	+8.5	
CN2	comp=Z,10.0nm,0.7s			pmax	pmax					
CN2	comp=Z,200nm,3.0s			pmax	pmax					
USRK	**Ussuriysk Arra**	**42.47**	**5**	P			**P**	**15 20 44.6**	**+0.9**	
MDJ	comp=Z,5.3nm,0.9s,baz=182,slow=6.5,SNR=11 **Mudanjiang**	**42.73**	**2**	P			**P**	**15 20 46.5**	**+0.7**	
MDJ	comp=Z,11nm,1.2s			pmax	pmax					
MDJ	comp=Z,31nm,4.0s			pmax	pmax					
LSA	**Lhasa**	**44.14**	**313**	P			**P**	**15 20 59.3**	**+1.2**	
GTA	**Gaotai**	**45.05**	**330**	⇓P			**P**	**15 21 06.0**	**+1.3**	
GTA				pP			**pP**	**15 21 27.5**	**-4.1**	
GTA				sP			**sP**	**15 21 40.3**	**-4.4**	
GTA				S			**S**	**15 27 38.5**	**+3.4**	
GTA	comp=Z,12nm,1.3s			pmax	pmax					
GTA	comp=Z,65nm,4.8s			pmax	pmax					
GTA	comp=N,120nm,14.7s			LR	LR					
GTA	comp=E,80nm,14.7s			LR	LR					
GTA	comp=Z,88nm,14.7s			LR	LR					
TAPN	**Taplejung**	**45.62**	**308**	*e*P			**P**	**15 21 10.0**	**+0.4**	
ODAN	comp=Z,25nm,1.0s **Odare**	**45.65**	**307**	*e*P			**P**	**15 21 10.4**	**+0.6**	
RAMN	comp=Z,37nm,0.9s **Ramite**	**46.33**	**306**	*e*P			**P**	**15 21 15.8**	**+0.7**	
HABR	comp=Z,95nm,1.3s **Khabarovsk**	**47.02**	**7**	*e*P			**P**	**15 21 19.1**	**-0.7**	
HABR				*e**PP			**pP**	**15 21 46.8**	**0.0**	
HABR				*e**SP			**sP**	**15 22 00.6**	**+0.7**	
HABR				*e*				15 22 48.5		
HABR				*e*				15 23 11.2		
HABR				*e*PPP			PPP	15 23 59.8		
HABR				*e*S			**S**	**15 28 03.1**	**+0.6**	
HABR				*e**SS			**sS**	**15 28 51.7**	**+2.5**	
HABR				*e*				15 31 00.6		
HABR	comp=N,5.0nm,1.4s			pmax	pmax					
HABR	comp=Z,18nm,1.7s			pmax	pmax					
HABR	comp=E,16nm,2.2s			pmax	pmax					
HABR	comp=Z,23nm,17.0s			MLR	MLR					
GUN	**Gumba**	**47.32**	**307**	*e*P			**P**	**15 21 23.4**	**+0.4**	
KLR	comp=Z,31nm,0.7s **Kul'dur**	**47.45**	**4**	*e*P			P	15 21 19.1	-4.0	
PKI	**Pulchoki**	**47.55**	**307**	*e*P			**P**	**15 21 24.8**	**+0.1**	
PKIN	comp=Z,6.2nm,0.5s **Phulchoki**	**47.56**	**307**	*e*P			**P**	**15 21 25.7**	**+1.0**	
KKN	comp=Z,11nm,0.9s **Kakani**	**47.75**	**307**	*e*P			**P**	**15 21 26.1**	**0.0**	
DMN	comp=Z,40nm,1.4s **Daman**	**47.81**	**306**	*e*P			**P**	**15 21 27.0**	**+0.4**	
KOLN	comp=Z,32nm,1.0s **Koldanda**	**49.09**	**306**	*e*P			**P**	**15 21 37.0**	**+0.6**	
ULN	comp=Z,32nm,0.8s **Ulaanbaatar**	**49.14**	**342**	*e*P			**P**	**15 21 37.0**	**+0.6**	
DANN	comp=Z,17nm,1.1s **Dangsing**	**49.20**	**307**	*e*P			**P**	**15 21 37.7**	**+0.4**	
SONM	comp=Z,36nm,0.8s **Songino Array**	**49.32**	**342**	P			**P**	**15 21 38.2**	**+0.5**	
SONM	**Songino Array**	**49.32**	**342**	P			**P**	**15 21 38.2**	**+0.5**	
ZAK	comp=Z,4.3nm,0.7s,baz=160,slow=8.9,SNR=18 **Zakamensk**	**52.55**	**341**	*e*P			**P**	**15 22 01.9**	**+0.1**	
ZAK	comp=Z,1.0nm,0.9s			pmax	pmax					
WMQ	**Urumqi**	**54.63**	**326**⇑	*i*P			**P**	**15 22 18.8**	**+1.7**	
WMQ				pP			**pP**	**15 22 43.0**	**-1.9**	
WMQ	comp=Z,17nm,1.3s			pmax	pmax					
WMQ	comp=Z,100nm,5.0s			pmax	pmax					
PETK	**Petropavlovsk-**	**57.05**	**21**	P			**P**	**15 22 35.0**	**+0.9**	
PETK	**Petropavlovsk-**	**57.05**	**21**	P			**P**	**15 22 35.0**	**+0.9**	
PETK	**Petropavlovsk-**	**57.05**	**21**	P			**P**	**15 22 35.0**	**+0.9**	
MK31	comp=Z,1.8nm,0.5s,baz=183,slow=6.4,SNR=18 **Makanchi Array**	**59.47**	**326**	*e*P			**P**	**15 22 51.2**	**+0.1**	
MK31	comp=Z,6.0nm,0.4s			pmax	pmax					
MK31	**Makanchi Array**	**59.47**	**326**	*e*P			**P**	**15 22 51.4**	**+0.4**	
MKAR	**Makanchi Array**	**59.47**	**326**	P			**P**	**15 22 51.7**	**+0.6**	
MKAR	**Makanchi Array**	**59.47**	**326**	P			**P**	**15 22 51.7**	**+0.6**	
MKAR	**Makanchi Array**	**59.47**	**326**	P			**P**	**15 22 51.7**	**+0.6**	
KSH	comp=Z,8.0nm,0.4s,baz=114,slow=7.5,SNR=124 **Kashi**	**59.81**	**316**	*e*P			**P**	**15 22 55.5**	**+1.8**	
KSH				*e*pP			**pP**	**15 23 22.5**	**+0.6**	
KSH				*e*sP			**sP**	**15 23 34.8**	**+0.1**	
KSH				*e*PcP			**PcP**	**15 23 40.0**	**+0.8**	
KSH				*e*PP			**PP**	**15 25 10.5**	**+3.5**	
KSH				*e*S			**S**	**15 30 54.5**	**-1.8**	
KSH	comp=Z,9.0nm,0.9s			pmax	pmax					
KSH	comp=Z,170nm,5.9s			pmax	pmax					
KSH	comp=N,220nm,4.9s			LR	LR					
KSH	comp=E,210nm,4.7s			LR	LR					
KSH	comp=Z,170nm,5.6s			LR	LR					
RPZ	**Rata Peaks**	**59.86**	**145**	P			**P**	**15 22 53.3**	**-0.5**	
RPZ	**Rata Peaks**	**59.86**	**145**	P			**P**	**15 22 53.3**	**-0.5**	
YAK	comp=Z,13nm,0.8s,baz=326,slow=3.6,SNR=4.3 **Yakuts

comp=Z,20nm,0.8s,baz=124,slow=6.2,SNR=106
KURK Kurchatov 63.68 328 eP P 15 23 19.2 0.0
KURK pmax pmax
comp=Z,40nm,0.8s
KURK Kurchatov 63.68 328 eP P 15 23 19.2 0.0
comp=Z,40nm,0.8s
NVS Novosibirsk 63.86 333 eP P 15 23 18.9 -1.4
KKAR Karatay Array 65.03 317 eP P 15 23 28.5 +0.3
KKAR pmax pmax
comp=Z,5.0nm,0.9s
KKAR Karatay Array 65.03 317 eP P 15 23 28.5 +0.3
comp=Z,5.0nm,0.9s
VOSK Vostochnaya 68.80 327 P P 15 23 50.5 -1.4
VOSK pmax pmax
comp=Z,4.0nm,0.6s
CASY Casey 68.94 187 eP P 15 23 51.4 -1.1
comp=Z,5.2nm,0.9s
BVA0 Borovoye Array 69.25 327 i P P 15 23 54.4 -0.3
BVA0 pmax pmax
comp=Z,9.0nm,0.9s
BVAR Borovoye Array 69.25 327 P P 15 23 54.7 0.0
BVAR Borovoye Array 69.25 327 P P 15 23 54.7 0.0
BVAR Borovoye Array 69.25 327 P P 15 23 54.7 0.0
comp=Z,3.8nm,0.7s,baz=126,slow=7.5,SNR=26
BRVK Borovoye 69.32 327 d iP P 15 23 54.9 -0.2
BRVK pmax pmax
comp=Z,16nm,1.5s
BRVK Borovoye 69.32 327 eP P 15 23 54.7 -0.4
comp=Z,10nm,1.0s
TIXI Tiksi 69.79 1 eP P 15 23 56.9 -0.7
TIXI pmax pmax
comp=Z,6.0nm,2.1s
ZRNK Zerenda 69.97 327 P P 15 23 57.9 -1.2
ZRNK pmax pmax
comp=Z,9.0nm,1.0s
BILL Bilibino 71.31 14 eP P 15 24 01.0 -5.9
BILL i 15 24 24.2
BILL e*PP pP 15 24 37.8 +1.8
BILL pmax pmax
comp=Z,9.0nm,1.3s
AB31 Akbulak array 74.00 321 i P P 15 24 22.7 -0.5
AB31 pmax pmax
comp=Z,1.0nm,0.3s
ABKAR Akbulak array 74.00 321 eP P 15 24 22.4 -0.8
comp=Z,2.9nm,0.7s
AKTO Aktyubinsk 75.52 322 P P 15 24 31.9 -0.1
AKTO Aktyubinsk 75.52 322 P P 15 24 31.9 -0.1
AKTO Aktyubinsk 75.52 322 P P 15 24 31.9 -0.1
comp=Z,4.7nm,0.8s,baz=98,slow=7.3,SNR=18
SVE Sverdlovsk 75.91 329 eP P 15 24 33.9 -0.1
SVE pmax pmax
comp=Z,16nm,0.9s
ARU Arti 76.88 328 d iP P 15 24 38.5 -1.0
ARU S S 15 34 16.7 -1.0
ARU pmax pmax
comp=Z,9.0nm,1.0s
VNDA Vanda 81.42 173 P P 15 25 02.7 -1.1
VNDA Vanda 81.42 173 P P 15 25 02.7 -1.1
comp=Z,3.5nm,0.8s,baz=312,slow=6.4,SNR=18
SBA Scott Base 82.33 172 P P 15 25 08.2 -0.3
SBA Scott Base 82.33 172 P P 15 25 08.2 -0.3
ILAR Eielson Array 86.64 25 P P 15 25 29.6 -1.0
ILAR Eielson Array 86.64 25 P P 15 25 29.6 -1.0
comp=Z,0.2nm,0.5s,baz=252,slow=4.3,SNR=4.2
ANN Anapa 88.65 315 eP P 15 25 49.7 +9.2
ANN pmax pmax
comp=Z,27nm,1.3s
OBN Obninsk 88.97 325 eP P 15 25 44.3 +2.5
OBN pmax pmax
comp=Z,5.0nm,1.1s
QSPA South Pole Qui 91.68 180 P P 15 25 53.6 -0.7
QSPA South Pole Qui 91.68 180 P P 15 25 53.6 -0.7
comp=Z,1.7nm,0.8s,baz=306,slow=5.5,SNR=7.0
FINES FINESS Array B 93.81 332 P P 15 26 03.8 -0.3
FINES FINESS Array B 93.81 332 P P 15 26 03.8 -0.3
comp=Z,0.7nm,0.6s,baz=64,slow=4.4,SNR=4.2
CRVS Cervenica-Dubn 99.01 320 eP Pdif 15 26 29.7 +1.7
CRVS Cervenica-Dubn 99.01 320 PDIF Pdif 15 26 29.7 +1.7
TXAR Lajitas Array 122.36 53 PKP PKPdf 15 31 42.2 -0.4
TXAR Lajitas Array 122.36 53 PKP PKPdf 15 31 42.2 -0.4
comp=Z,0.4nm,0.6s,baz=132,slow=1.9,SNR=6.0
TORD Torodi Ar. Bea 124.02 287 PKP PKPdf 15 31 45.0 -1.0
TORD Torodi Ar. Bea 124.02 287 PKP PKPdf 15 31 45.0 -1.0
comp=Z,0.4nm,0.4s,baz=48,slow=1.2,SNR=5.9
PLCA Paso Flores 137.99 160 PKP PKPdf 15 32 12.0 +0.2
PLCA Paso Flores 137.99 160 PKP PKPdf 15 32 12.0 +0.2
comp=Z,2.7nm,1.2s,baz=333,slow=2.3,SNR=4.2

*ISCJB **25** 15:16:46.8±0.5, 30.53S×0.05×117.93E×0.07, h9km, mb3.9/7, MS3.6/2, Error ellipse: s-maj=9.2km s-min=6.5km az=35.9*

*IDC **25** 15:16:47.3±0.8, 30.59S×117.93E, h0km, mb3.9/6, mb1 4.3/10, mb1mx4.1/20, mbtmp4.1/10, ML4.6/3, MS3.7/2, Ms1 3.6/2, ms1mx3.0/29, Error ellipse: s-maj=37.2km s-min=13.3km az=103.0*

*NEIC **25** 15:16:49.0, 30.62S×117.47E, h0km, mb4.2/3, ML4.2(AUST), After AUST.*

ISC 25 15:16:48.4±0.6, 30.64S±0.07×118.02E±0.08, h9km, n36, σ2s21/38, mb3.9/7, 1C, Western Australia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**2.38**	**196**	i Pn	**Pn**	**15 17 26.4**	**-1.1**
NWAO				Sn	**Sb**	**15 17 58.6**	**-2.2**
NWAO				Lg	Lg	15 18 04.7	
NWAO				Rg	Rg	15 18 13.2	
NWAO	**Narrogin (SRO)**	**2.38**	**196**	Pn	**Pn**	**15 17 26.6**	**-1.0**
	93nm,0.3s,baz=6.9,slow=13,SNR=1086						
NWAO				Sn	**Sb**	**15 17 58.6**	**-2.2**
	334nm,0.3s,baz=129,slow=7.0,SNR=19						
NWAO				Lg	Lg	15 18 04.7	
	318nm,0.3s,baz=90,slow=20,SNR=16						
NWAO				Rg	Rg	15 18 13.2	
	2μm,0.8s,baz=90,slow=3.0,SNR=18						
FORT	**Forrest**	**8.65**	**93**	ePn	Pn	15 18 59.1	+5.4
	106nm,0.5s						
FORT				eSn	**Sn**	**15 20 35.6**	**+4.1**
MBWA	**Marble Bar**	**9.57**	**10**	ePn	**Pn**	**15 19 04.7**	**-1.7**
MBWA				eSn	Sn	15 20 46.0	-8.1
FITZ	**Fitzroy Crossi**	**14.28**	**31**	Pn	**Pn**	**15 20 10.5**	**-0.3**
FITZ				Sn	Sn	15 22 40.8	-8.6
FITZ	**Fitzroy Crossi**	**14.28**	**31**	Pn	**Pn**	**15 20 10.5**	**-0.3**
	6.3nm,0.3s,baz=209,slow=12,SNR=70						
FITZ				Sn	Sn	15 22 40.8	-8.6
	6.8nm,0.3s,baz=332,slow=21,SNR=14						
ASAR	**Alice Springs**	**15.75**	**68**	Pn	**Pn**	**15 20 30.1**	**-0.4**
ASAR				Sn	**Sn**	**15 23 19.2**	**-6.1**
ASAR	**Alice Springs**	**15.75**	**68**	Pn	**Pn**	**15 20 30.1**	**-0.4**
	2.4nm,0.3s,baz=238,slow=11,SNR=48						
ASAR				Sn	**Sn**	**15 23 19.2**	**-6.1**
	3.3nm,0.3s,baz=245,slow=23,SNR=7.5						
AS31	**Alice Springs**	**15.75**	**68**	ePn	**Pn**	**15 20 29.9**	**-0.6**
WRA	**Warramunga Arr**	**18.18**	**58**	P	**Pn**	**15 21 00.9**	**-0.2**
WRA				S	Sn	15 24 16.1	-8.2
WRA	**Warramunga Arr**	**18.18**	**58**	P	**Pn**	**15 21 00.9**	**-0.2**
	1.0nm,0.3s,baz=231,slow=13,SNR=14						
WRA				S	Sn	15 24 16.1	-8.2
	1.4nm,0.3s,baz=226,slow=23,SNR=14						
WRAB	**Tennant Creek**	**18.19**	**58**	eP	**Pn**	**15 21 00.9**	**-0.5**
	9.4nm,0.5s						
STKA	**Stephens Creek**	**20.19**	**100**	P	Pn	15 21 27.8	+2.5
STKA				S	**S**	**15 25 08.3**	**-1.9**
STKA	**Stephens Creek**	**20.19**	**100**	P	Pn	15 21 27.8	+2.5
	8.9nm,0.6s,baz=275,slow=9.5,SNR=8.4						
STKA				S	**S**	**15 25 08.3**	**-1.9**
	7.3nm,0.5s,baz=336,slow=9.6,SNR=4.7						
STKA				LR	LR	15 29 57.9	
	comp=Z,57nm,18.7s,baz=23,slow=39						
CTA	**Charters Tower**	**27.52**	**74**	P	**P**	**15 22 40.3**	**+4.8**
CTA	**Charters Tower**	**27.52**	**74**	P	**P**	**15 22 40.3**	**+4.8**
	1.7nm,0.3s,baz=240,slow=9.7,SNR=4.9						
CTAO	**Charters Tower**	**27.52**	**74**	eP	P	15 22 40.7	+5.2
	4.1nm,0.8s						
VNDA	**Vanda**	**50.94**	**169**	eP	**P**	**15 25 50.4**	**+0.8**
	0.8nm,0.5s						
VNDA	**Vanda**	**50.94**	**169**	P	**P**	**15 25 50.9**	**+1.3**
	1.0nm,0.6s,baz=333,slow=7.9,SNR=6.8						
QSPA	**South Pole Qui**	**59.46**	**180**	P	**P**	**15 26 52.0**	**+0.5**
QSPA	**South Pole Qui**	**59.46**	**180**	P	**P**	**15 26 52.0**	**+0.5**
	1.5nm,0.6s,baz=11,slow=2.8,SNR=9.0						
SNAA	**Sanae**	**70.05**	**197**	P	**P**	**15 28 00.5**	**+0.2**
SNAA	**Sanae**	**70.05**	**197**	P	**P**	**15 28 00.5**	**+0.2**
	0.6nm,0.8s,baz=100,slow=6.0,SNR=5.6						
SONM	**Songino Array**	**78.81**	**352**	P	**P**	**15 28 52.5**	**+1.0**
SONM	**Songino Array**	**78.81**	**352**	P	**P**	**15 28 52.5**	**+1.0**
	1.2nm,0.7s,baz=170,slow=5.9,SNR=4.3						
MKAR	**Makanchi Array**	**83.55**	**336**	P	**P**	**15 29 16.3**	**-0.3**
MKAR	**Makanchi Array**	**83.55**	**336**	P	**P**	**15 29 16.3**	**-0.3**
	0.2nm,0.4s,baz=156,slow=7.6,SNR=4.5						
KURBB	**Kurchatov Arra**	**88.12**	**336**	P	**P**	**15 29 39.0**	**-0.1**
	0.4nm,0.7s,baz=144,slow=4.7,SNR=4.6						
KURK	**Kurchatov**	**88.17**	**336**	P	**P**	**15 29 39.0**	**-0.3**
TSUM	**Tsumeb**	**88.95**	**248**	LR	LR	16 05 28.8	
	comp=Z,125nm,21.4s,baz=346,slow=33						
TORD	**Torodi Ar. Bea**	**119.14**	**268**	PKP	**PKPdf**	**15 35 37.1**	**-1.3**
TORD	**Torodi Ar. Bea**	**119.14**	**268**	PKP	**PKPdf**	**15 35 37.1**	**-1.3**
	0.6nm,0.7s,baz=24,slow=1.9,SNR=3.0						
TXAR	**Lajitas Array**	**144.02**	**81**	PKP	**PKPdf**	**15 36 25.6**	**+0.7**
TXAR	**Lajitas Array**	**144.02**	**81**	PKP	**PKPdf**	**15 36 25.6**	**+0.7**
	0.7nm,0.6s,baz=190,slow=4.6,SNR=6.6						
ULM	**Lac du Bonnet**	**148.01**	**43**	PKPbc	**PKPbc**	**15 36 34.7**	**+0.8**
ULM	**Lac du Bonnet**	**148.01**	**43**	PKPbc	**PKPbc**	**15 36 34.7**	**+0.8**
	1.4nm,0.3s,baz=258,slow=1.8,SNR=3.0						

KISR 25 15:23:11.4±0.8, 32.69N×45.60E, h12km±999km, ML2.5, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.50**	**34**	ePg	Pg	15 23 21.1	-0.1
IBDR				eSg	Sg	15 23 26.1	-1.8
MIB	**Mutribah**	**3.24**	**152**	eP	Pn	15 24 05.1	+3.0
MIB				eS	Sb	15 24 46.3	-2.2
MIB				AML	AML	15 24 46.7	
	comp=Z,11nm,0.5s						
NAY	**Al-Naaiem**	**3.71**	**157**	eP	Pn	15 24 12.4	+3.8
NAY				eS	Sb	15 24 57.5	-4.5
NAY				AML	AML	15 25 02.4	
	comp=Z,6.0nm,0.7s						
RDF	**Al-Radifah**	**4.11**	**155**	eP	Pn	15 24 18.2	+4.0
RDF				eS	Sb	15 25 08.0	-5.5
RDF				AML	AML	15 25 11.2	
	comp=Z,6.0nm,0.3s						

IDC 25 15:25:54.1±3.2, 22.85S×171.13E, h0km, mb4.1/3, mb1 4.2/4, mb1mx3.8/19, mbtmp4.0/4, ML3.3/1, Error ellipse: s-maj=123.5km s-min=49.0km az=165.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.40**	**279**	eP	Pn	15 27 03.2	+0.9
DZM				eS	Sn	15 27 48.6	-5.8
DZM	**Mont Dzumac**	**4.40**	**279**	Pn	Pn	15 27 02.0	-0.3
	1.5nm,0.3s,baz=100,slow=19,SNR=31						
DZM				Sn	Sn	15 27 48.8	-5.6
	2.2nm,0.3s,baz=341,slow=21,SNR=5.5						
ASAR	**Alice Springs**	**34.15**	**261**	P	P	15 32 41.0	-0.1
	3.8nm,0.7s,baz=84,slow=8.9,SNR=19						
WRA	**Warramunga Arr**	**34.32**	**268**	P	P	15 32 41.6	-1.1
	0.8nm,1.0s,baz=105,slow=8.1,SNR=4.2						
FITZ	**Fitzroy Crossi**	**42.75**	**268**	P	P	15 33 54.5	+1.0
	2.9nm,1.0s,baz=105,slow=10,SNR=4.0						
GERES	**GERESS Array B**	**148.49**	**331**	PKPbc	PKPbc	15 45 42.1	-0.7
	0.2nm,0.3s,baz=46,slow=2.8,SNR=4.5						

*ISCJB **25** 15:45:13.7±0.7, 40.08N×0.03×43.22E×0.05, h2km±7km, Error ellipse: s-maj=6.7km s-min=4.5km az=4.2*

*ISK **25** 15:45:13.6, 40.10N×43.20E, h8km, MD2.8*

*DDA **25** 15:45:13.3, 40.08N×43.21E, h7km, MD2.9*

*CSEM **25** 15:45:13.5±0.2, 40.09N×43.24E, h2km, MD2.8, Error ellipse: s-maj=5.6km s-min=3.4km az=89.0*

ISC 25 15:45:14.0±1.1, 40.10N±0.02×43.19E±0.04, h10km±10km, n16, σ0s88/30, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DIGO	**Kars**	**0.35**	**24**	i Pg	**Pg**	**15 45 20.2**	**-0.9**
DIGO				i Sg	**Sg**	**15 45 26.6**	**+0.8**
KARS	**Kars**	**0.54**	**351**	ePG	**Pg**	**15 45 23.8**	**-0.7**
KARS				eSG	**Sg**	**15 45 32.3**	**+0.6**
KARS	**Kars**	**0.54**	**351**	ePg	**Pg**	**15 45 23.8**	**-0.7**
KARS				eSg	**Sg**	**15 45 32.3**	**+0.6**
AGRB	**Hanur-Agry**	**0.54**	**196**	ePG	**Pg**	**15 45 24.0**	**-0.5**
AGRB				eSG	**Sb**	**15 45 33.2**	**-0.3**
AGRB	**Hanur-Agry**	**0.54**	**196**	ePg	**Pg**	**15 45 24.0**	**-0.5**
AGRB				eSg	**Sb**	**15 45 33.3**	**-0.3**
TUTA	**Tutak**	**0.75**	**203**	eP	**Pg**	**15 45 28.1**	**-0.4**
TUTA				eS	**Sg**	**15 45 38.3**	**0.0**
TUTA	**Tutak**	**0.75**	**203**	eP	**Pg**	**15 45 28.1**	**-0.4**
TUTA				eS	**Sg**	**15 45 38.3**	**0.0**
GNI	**Garni**	**1.19**	**87**	ePN	**Pn**	**15 45 37.2**	**+0.3**
GNI				eSN	**Sn**	**15 45 53.3**	**+0.1**
GNI	**Garni**	**1.19**	**87**	ePn	**Pn**	**15 45 37.2**	**+0.3**
GNI				eSn	**Sn**	**15 45 53.3**	**+0.1**
DDEM	**Demirkent**	**1.35**	**306**	eP	**Pn**	**15 45 39.3**	**+0.3**
DDEM				eS	**Sb**	**15 45 54.8**	**-2.1**
DDEM	**Demirkent**	**1.35**	**306**	eP	**Pn**	**15 45 39.3**	**+0.3**
DDEM				eS	**Sb**	**15 45 54.8**	**-2.1**
DAGI	**Agillar**	**1.38**	**316**	eP	**Pn**	**15 45 39.5**	**+0.1**
DAGI				eS	**Sg**	**15 45 59.7**	**+1.3**
ARTV	**Artvin**	**1.45**	**319**	eP	**Pb**	**15 45 41.7**	**+0.5**
ARTV				eS	**Sg**	**15 46 01.8**	**+1.1**
ARTV	**Artvin**	**1.45**	**319**	eP	**Pb**	**15 45 41.7**	**+0.5**
ARTV				eS	**Sg**	**15 46 01.8**	**+1.1**
BCA	**Borcka**	**1.80**	**319**	ePN	**Pn**	**15 45 46.0**	**+0.9**
BCA	**Borcka**	**1.80**	**319**	ePn	**Pn**	**15 45 46.0**	**+0.9**

IDC 25 15:52:27.0±2.2, 29.44S×177.52W, h78km±8km, mb3.1/2, mb1 3.5/3, mb1mx3.3/18, mbtmp3.3/3, Error ellipse: s-maj=39.7km s-min=25.5km az=98.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.40**	**298**	P	Pn	15 52 41.2	+1.5
	546nm,0.3s,baz=75,slow=16,SNR=66						
RAO				S	Sn	15 52 51.3	+2.2
	3μm,0.3s,baz=78,slow=20,SNR=30						
URZ	**Urewera**	**9.87**	**205**	P	Pn	15 54 44.2	-1.7
	0.1nm,0.3s,baz=66,slow=18,SNR=2.8						
URZ				S	Sn	15 56 36.0	+1.2
	0.5nm,0.3s,baz=48,slow=22,SNR=8.9						
ASAR	**Alice Springs**	**43.59**	**266**	P	P	16 00 23.7	+0.1
	0.4nm,0.5s,baz=101,slow=6.6,SNR=22						
WRA	**Warramunga Arr**	**44.49**	**271**	P	P	16 00 30.8	-0.1
	0.5nm,0.8s,baz=110,slow=7.9,SNR=6.3						
FINES	**FINESS Array B**	**144.38**	**341**	PKP	PKPdf	16 11 53.8	+0.4
	1.1nm,0.9s,baz=85,slow=3.1,SNR=3.6						
AKASG	**Malin Array Be**	**150.78**	**324**	PKPbc	PKPbc	16 12 08.7	-1.2
	0.9nm,0.4s,baz=46,slow=3.4,SNR=4.7						

IDC 25 15:54:44.7±1.7, 2.85N×126.48E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.5/22, mbtmp3.6/4, Error ellipse: s-maj=169.5km s-min=24.0km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.93**	**162**	P	P	16 00 00.7	-0.1
	1.0nm,0.5s,baz=340,slow=10,SNR=25						
ASAR	**Alice Springs**	**27.33**	**165**	P	P	16 00 31.4	-0.2
	0.1nm,0.5s,baz=351,slow=7.6,SNR=4.5						
ASAR				PcP	PcP	16 03 50.7	-0.6
	0.1nm,0.5s,baz=345,slow=2.5,SNR=4.1						
STKA	**Stephens Creek**	**37.41**	**159**	P	P	16 01 59.8	+0.2
	2.0nm,0.8s,baz=338,slow=10,SNR=5.4						
MKAR	**Makanchi Array**	**58.13**	**326**	P	P	16 04 40.2	0.0
	0.3nm,0.6s,baz=119,slow=7.2,SNR=6.2						

DJA 25 16:08:29.4±1.2, 3.3S±9.3×10.3E±, h30km, M4.0/4, MLv4.0/4, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSI	**Kapahiang**	**1.19**	**215**	P	Pn	16 08 49.6	-0.5
KSI				S	Sn	16 09 05.6	+0.3
PMBI	**Palembang**	**1.52**	**100**	P	Pn	16 08 55.1	+0.5
PMBI				S	Sn	16 09 13.7	+0.3
MNAI	**Manna**	**1.71**	**191**	P	Pn	16 08 56.5	-0.7
MNAI				S	Sn	16 09 19.0	+1.0
LWLI	**Liwa**	**2.46**	**161**	P	Pn	16 09 09.0	+1.3

IDC 25 16:17:38.8±54.0, 14.54S×164.77E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.5/19, mbtmp3.8/3, Error ellipse: s-maj=901.1km s-min=99.3km az=64.0, Vanuatu Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**27.31**	**227**	P	P	16 23 25.4	-0.1
	1.3nm,0.4s,baz=51,slow=9.5,SNR=8.1						
WRA	**Warramunga Arr**	**29.53**	**255**	P	P	16 23 45.4	+0.1
	0.3nm,0.6s,baz=85,slow=9.1,SNR=10						
ASAR	**Alice Springs**	**30.49**	**248**	P	P	16 23 53.8	-0.1
	0.2nm,0.4s,baz=78,slow=9.2,SNR=9.1						

*CSEM **25** 16:51:31.1, 36.61N×41.13E, h8km, MD3.8, After ISK*

ISK 25 16:51:31.1, 36.61N×41.13E, h8km, MD3.8, Iraq

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DIY	**Diyarbakir**	**1.47**	**331**	ePN	Pn	16 51 57.6	-0.5
DIY				eSN	Sg	16 52 18.8	+0.1
DIY	**Diyarbakir**	**1.47**	**331**	ePn	Pn	16 51 57.6	-0.5
DIY				eSn	Sg	16 52 18.8	+0.1
BTMT	**Batman**	**1.61**	**10**	ePN	Pn	16 52 00.4	+0.4
BTMT	**Batman**	**1.61**	**10**	ePn	Pn	16 52 00.4	+0.5
CUKT	**Cukurca**	**2.09**	**72**	ePN	Pn	16 52 07.4	+0.8
CUKT				eSN	Sn	16 52 34.0	+1.0
CUKT	**Cukurca**	**2.09**	**72**	ePn	Pn	16 52 07.4	+0.8
CUKT				eSn	Sn	16 52 34.0	+1.1
SVRC	**Sivrice-ELAZID**	**2.28**	**321**	ePN	Pn	16 52 09.9	+0.6
SVRC				eSN	Sn	16 52 38.6	+0.7
SVRC	**Sivrice-ELAZID**	**2.28**	**321**	ePn	Pn	16 52 09.9	+0.6
SVRC				eSn	Sn	16 52 38.6	+0.8
HKR	**Hakkari**	**2.30**	**64**	ePN	Pn	16 52 10.6	+0.9
HKR				eSN	Sn	16 52 38.9	+0.5
HKR	**Hakkari**	**2.30**	**64**	ePn	Pn	16 52 10.6	+0.9
HKR				eSn	Sn	16 52 38.9	+0.5
BINT	**Bingol**	**2.32**	**348**	ePn	Pb	16 52 11.7	-1.7
BNGB	**Bing ¶‖**	**2.40**	**352**	ePN	Pn	16 52 11.7	+0.8
PTK	**Pertek**	**2.66**	**329**	ePN	Pn	16 52 15.5	+1.0
PTK	**Pertek**	**2.66**	**329**	ePn	Pn	16 52 15.5	+0.9
MYA	**Malataya**	**2.75**	**309**	ePN	Pn	16 52 17.1	+1.4
MYA	**Malataya**	**2.75**	**309**	ePn	Pn	16 52 17.1	+1.5
ERZN	**Erzincan**	**3.17**	**340**	ePN	Pn	16 52 23.1	+1.6
GAZ	**Gaziantep**	**3.19**	**281**	ePN	Pn	16 52 24.0	+2.3
GAZ	**Gaziantep**	**3.19**	**281**	ePn	Pn	16 52 24.0	+2.4
EZM	**Erzurum**	**3.30**	**3**	ePN	Pn	16 52 24.9	+1.5
EZM	**Erzurum**	**3.30**	**3**	ePn	Pn	16 52 24.9	+1.5
AGRB	**Hanur-Agry**	**3.31**	**26**	ePN	Pn	16 52 25.1	+1.6
AGRB	**Hanur-Agry**	**3.31**	**26**	ePn	Pn	16 52 25.1	+1.6
EZC	**Erzincan**	**3.43**	**337**	ePN	Pn	16 52 27.4	+2.2
EZC	**Erzincan**	**3.43**	**337**	ePn	Pn	16 52 23.1	-2.0
EZC	**Erzincan**	**3.43**	**337**	ePn	Pn	16 52 27.4	+2.3
DARE	**Darende-Malaty**	**3.49**	**305**	ePN	Pn	16 52 27.4	+1.5
DARE	**Darende-Malaty**	**3.49**	**305**	ePn	Pn	16 52 27.4	+1.5
KMRS	**Kahramanmaras**	**3.50**	**286**	ePN	Pn	16 52 27.1	+1.2
KMRS	**Kahramanmaras**	**3.50**	**286**	ePn	Pn	16 52 27.1	+1.3
BHD	**Baghdad**	**4.27**	**140**	ePg	Sn	16 53 35.0	+8.6
BHD				eSg	Sg	16 53 48.0	-0.3
KOZT	**Kozan**	**4.33**	**283**	ePN	Pn	16 52 38.9	+1.7
KOZT	**Kozan**	**4.33**	**283**	ePn	Pn	16 52 38.9	+1.7
SVSK	**Karacayir**	**4.63**	**317**	ePN	Pn	16 52 43.9	+2.6
SVSK	**Karacayir**	**4.63**	**317**	ePn	Pn	16 52 43.9	+2.6
BNN	**Bunyan**	**4.75**	**300**	ePN	Pn	16 52 45.2	+2.0
BNN	**Bunyan**	**4.75**	**300**	ePn	Pn	16 52 45.2	+2.1
NIG	**Nigde**	**5.40**	**288**	ePN	Pn	16 52 54.6	+2.3
NIG	**Nigde**	**5.40**	**288**	ePn	Pn	16 52 54.6	+2.3

*IDC **25** 17:08:38.7±0.7, 33.12N×46.44E, h0km, mb4.1/16, mb1 4.1/21, mb1mx4.0/32, mbtmp4.0/21, ML3.5/4, MS3.0/2, Ms1 3.0/2, ms1mx2.2/44, Error ellipse: s-maj=15.8km s-min=14.3km az=166.0*

*CSEM **25** 17:08:41.2±0.2, 33.14N×46.36E, h10km, mb4.4/6, Ms4.4, Error ellipse: s-maj=6.5km s-min=5.1km az=53.0*

*NEIC **25** 17:08:41.2, 33.07N×46.32E, h3km, mb4.3/7, ML4.0(THR), MN4.1(TEH), After TEH.*

*TEH **25** 17:08:42.1, 33.10N×46.34E, h8km, ML4.1*

*THR **25** 17:08:42.9±0.5, 33.27N×46.53E, h14km±5km, ML4.0*

ISC 25 17:08:41.8±1.0, 33.16N±0.03×46.36E±0.03, h17km±7km, n169, σ1s10/173, mb4.2/21, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
IBDR	**Badra**	**0.36**	**262**	ePg	**Pg**	**17 08 48.5**	**-0.8**
IBDR				i Sg	**Sg**	**17 08 54.0**	**-0.4**
IGHG	**Ghaleghazi**	**1.18**	**9**	eSg	**Sg**	**17 09 20.9**	**+0.8**
IGHG				ePg	**Pn**	**17 09 04.0**	**+0.3**
IGHG				e		17 09 25.9	
	comp=Z,39μm,0.3s						
IKOM	**Komasi**	**1.40**	**43**	eSg	**Sg**	**17 09 27.5**	**+0.6**
IKOM				ePn	**Pn**	**17 09 07.2**	**+0.6**
IKOM				e		17 09 31.4	
	comp=Z,98μm,0.2s						
IVIS	**Veis**	**1.42**	**17**	eSg	**Sg**	**17 09 28.5**	**+0.7**
IVIS				ePn	**Pb**	**17 09 08.4**	**+0.5**
IVIS				e		17 09 33.5	
	comp=Z,36μm,0.3s						
IDHR	**Dehrash**	**1.53**	**1**	ePn	**Pb**	**17 09 10.0**	**+0.1**
IDHR				eSg	**Sg**	**17 09 32.4**	**+1.0**
IDHR				e		17 09 33.4	
	comp=Z,53μm,0.4s						
IDHR	**Dehrash**	**1.53**	**1**	Pn	**Pb**	**17 09 10.0**	**+0.1**
IDHR	**Dehrash**	**1.53**	**1**	ePn	**Pb**	**17 09 10.0**	**+0.1**
BHD	**Baghdad**	**1.66**	**274**	ePb	**Pg**	**17 09 15.4**	**+1.7**
BHD				eSb	**Sb**	**17 09 31.9**	**-0.6**
BHD				i Sn	**Sg**	**17 09 34.2**	**-1.1**
BHD	**Baghdad**	**1.66**	**274**	eP	**Pg**	**17 09 15.4**	**+1.7**
BHD				eS	**Sb**	**17 09 31.9**	**-0.6**
BHD				i Sn	**Sg**	**17 09 34.2**	**-1.1**
ILIN	**Lien**	**1.82**	**16**	ePn	**Pb**	**17 09 14.4**	**-0.4**
ILIN				e		17 09 16.1	
	comp=Z,17μm,0.3s						
ILIN				eSg	**Sg**	**17 09 39.9**	**-0.7**
ILIN	**Lien**	**1.82**	**16**	Pn

KBD	Kabd	4.14	164	*e*P		Pn		17 09 46.0	+1.9
IMHD	Mahdasht	4.36	54	*e*Pn		Pn		17 09 47.3	0.0
IMHD				*e*				17 10 09.6	
	comp=Z,1μm,0.4s								
IMHD	Mahdasht	4.36	54	*e*Pn		Pn		17 09 47.3	0.0
IKLH	Kolahrood	4.38	87	*e*Pn		Pn		17 09 49.2	+1.5
IKLH				*e*				17 09 51.0	
	comp=Z,2μm,0.2s								
IKLH	Kolahrood	4.38	87	*e*Pn		Pn		17 09 49.2	+1.5
IR3	Iran Long-Peri	4.50	58	*e*Pn		Pn		17 09 50.7	+1.5
IR3	Iran Long-Peri	4.50	58	*e*Pn		Pn		17 09 50.7	+1.5
IAZR	Azarshahr	4.52	356	*e*Pn		Pn		17 09 52.0	+2.4
IAZR				*e*				17 11 15.4	
	comp=Z,2μm,0.3s								
IAZR	Azarshahr	4.52	356	Pn		Pn		17 09 51.9	+2.4
IAZR	Azarshahr	4.52	356	Pn		Pn		17 09 51.9	+2.4
IGZV	Ghazvin	4.52	44	*e*Pn		Pn		17 09 51.0	+1.4
IGZV				*e*				17 10 11.3	
	comp=Z,940nm,0.2s								
IGZV	Ghazvin	4.52	44	*e*Pn		Pn		17 09 51.0	+1.4
ISRB	Sarab	4.77	13	*e*Pn		Pn		17 09 54.8	+1.7
ISRB				*e*				17 10 16.2	
	comp=Z,854nm,0.3s								
ISRB	Sarab	4.77	13	*e*Pn		Pn		17 09 54.8	+1.7
IVRN	Varamin	4.82	66	*e*Pn		Pn		17 09 54.8	+1.2
IVRN				*e*				17 10 37.5	
	comp=Z,930nm,0.3s								
IVRN	Varamin	4.82	66	*e*Pn		Pn		17 09 54.8	+1.2
IGAR	Gharneh	4.85	97	*e*Pn		Pn		17 09 54.7	+0.6
IGAR				*e*				17 10 53.4	
	comp=Z,2μm,0.1s								
IZEF	Zefreh	5.02	91	*e*Pn		Pn		17 09 57.5	+0.9
IZEF				*e*				17 10 19.9	
	comp=Z,776nm,0.3s								
IZEF	Zefreh	5.02	91	*e*Pn		Pn		17 09 57.5	+0.9
ISHB	Shabestar	5.14	354	*e*Pn		Pn		17 09 59.8	+1.6
ISHB				*e*				17 10 21.7	
	comp=Z,862nm,0.4s								
ISHB	Shabestar	5.14	354	*e*Pn		Pn		17 09 59.8	+1.6
IDMV	Damavand	5.28	61	*e*Pn		Pn		17 09 58.8	-1.3
IDMV				*e*				17 11 02.6	
	comp=Z,794nm,0.4s								
IDMV	Damavand	5.28	61	*e*Pn		Pn		17 09 58.8	-1.3
IFIR	Firoozkooh	5.84	63	*e*Pn		Pn		17 10 08.9	+1.1
IFIR				*e*				17 11 19.2	
	comp=Z,358nm,0.2s								
IFIR	Firoozkooh	5.84	63	*e*Pn		Pn		17 10 08.9	+1.1
ISHM	Shahmirzad	6.31	63	*e*Pn		Pn		17 10 15.2	+1.0
ISHM	Shahmirzad	6.31	63	*e*Pn		Pn		17 10 15.2	+1.0
ISAD	Sadrabad	6.31	99	*e*Pn		Pn		17 10 14.8	+0.5
ISAD				*e*				17 11 34.4	
	comp=Z,596nm,0.2s								
ISAD	Sadrabad	6.31	99	*e*Pn		Pn		17 10 14.8	+0.5
ISRV	Sarvestan	6.90	121	*e*Pn		Pn		17 10 22.8	+0.4
ISRV	Sarvestan	6.90	121	*e*Pn		Pn		17 10 22.8	+0.4
GNI	Garni	7.09	350	Pn		Pn		17 10 28.5	+3.6
GNI				Lg		Lg		17 12 41.7	
GNI	Garni	7.09	350	Pn		Pn		17 10 28.5	+3.6
	baz=254,slow=18,SNR=1.6								
GNI				Lg		Lg		17 12 41.7	
	comp=Z,0.7nm,0.3s,baz=180,slow=20,SNR=2.4								
GNI	Garni	7.09	350	Pn		Pn		17 10 28.5	+3.6
IMEH	Mehriz	7.21	102	*e*Pn		Pn		17 10 26.5	-0.1
IMEH				*e*				17 10 38.9	
	comp=Z,170nm,0.2s								
IMEH	Mehriz	7.21	102	*e*Pn		Pn		17 10 26.5	-0.1
IBAF	Bafgh	7.95	99	*e*Pn		Pn		17 10 37.0	+0.4
IBAF				*e*				17 10 37.6	
	comp=Z,138nm,0.2s								
IBAF	Bafgh	7.95	99	Pn		Pn		17 10 37.0	+0.4
IBAF	Bafgh	7.95	99	*e*Pn		Pn		17 10 37.0	+0.4
ASF	Jabal al Asfar	8.04	266	Pn		Pn		17 10 37.6	-0.2
ASF				Lg		Lg		17 13 04.3	
ASF	Jabal al Asfar	8.04	266	Pn		Pn		17 10 37.6	-0.2
	comp=Z,0.3nm,0.3s,baz=322,slow=7.7,SNR=2.7								
ASF				Lg		Lg		17 13 04.3	
	comp=Z,0.7nm,0.3s,baz=102,slow=17,SNR=3.9								
MMAI	Mount Meron Ar	9.19	272	Lg		Lg		17 13 42.6	
	comp=Z,1.3nm,0.3s,baz=105,slow=30,SNR=3.5								
EIL	Elat	10.35	253	Pn		Pn		17 11 09.3	-0.1
EIL				Lg		Lg		17 14 18.9	
EIL	Elat	10.35	253	Pn		Pn		17 11 09.3	-0.1
	comp=Z,0.2nm,0.3s,baz=41,slow=20,SNR=2.4								
EIL				Lg		Lg		17 14 18.9	
	comp=Z,0.6nm,0.3s,baz=49,slow=19,SNR=4.4								
EIL				LR		LR		17 15 57.6	
	comp=Z,76nm,21.8s,baz=78,slow=42								
KBZ	Khabaz	10.89	347	Pn		Pn		17 11 21.3	+4.6
KBZ	Khabaz	10.89	347	Pn		Pn		17 11 21.3	+4.6
	comp=Z,0.1nm,0.3s,baz=110,slow=0.9,SNR=1.9								
KBZ	Khabaz	10.89	347	Pn		Pn		17 11 21.3	+4.6
NAZ	Nazwa, Dubai	11.51	133	P		Pn		17 11 24.6	-0.7
ASUD	Al Ashush, Dub	11.58	135	P		Pn		17 11 25.5	-0.7
FAQ	Al Faqa, Dubai	11.64	134	P		Pn		17 11 26.4	-0.8
HATD	Hatta, Dubai	11.92	132	P		Pn		17 11 29.7	-1.2
BRTR	Keskin Array B	12.15	306	Pn		Pn		17 11 38.1	+4.0
BRTR	Keskin Array B	12.15	306	Pn		Pn		17 11 38.1	+4.0
	comp=Z,0.1nm,0.3s,baz=133,slow=16,SNR=3.1								
BRTR	Keskin Array B	12.15	306	Pn		Pn		17 11 38.1	+4.0
ABKAR	Akbulak array	19.00	28	*e*P		P		17 13 02.5	+0.1
	comp=Z,1.7nm,0.6s								
ABKAR	Akbulak array	19.00	28	*e*P		P		17 13 02.5	+0.1
	comp=Z,1.7nm,0.6s								
AKTO	Aktyubinsk	19.28	23	P		P		17 13 05.3	-0.2
AKTO	Aktyubinsk	19.28	23	P		P		17 13 05.3	-0.2
	comp=Z,0.5nm,0.3s,baz=204,slow=13,SNR=12								
AKTO	Aktyubinsk	19.28	23	P		P		17 13 05.3	-0.2
MLR	Muntele Rosu	19.96	314	P		P		17 13 13.9	+0.8
MLR	Muntele Rosu	19.96	314	P		P		17 13 13.9	+0.8
	comp=Z,0.4nm,0.5s,baz=112,slow=19,SNR=2.6								
MLR	Muntele Rosu	19.96	314	P		P		17 13 13.9	+0.8
KKAR	Karatay Array	21.37	55	*e*P		P		17 13 29.5	+1.2
	comp=Z,6.2nm,0.8s								
KKAR	Karatay Array	21.37	55	*e*P		P		17 13 29.5	+1.2
	comp=Z,6.2nm,0.8s								
AKASG	Malin Array Be	21.58	329	P		P		17 13 29.9	-0.5
AKASG	Malin Array Be	21.58	329	P		P		17 13 29.9	-0.5
	comp=Z,3.2nm,0.5s,baz=138,slow=10,SNR=19								
AKASG	Malin Array Be	21.58	329	P		P		17 13 29.9	-0.5
KIEV	Kiev	21.58	329	*e*P		P		17 13 29.6	-0.8
	comp=Z,4.0nm,0.6s								
KIEV	Kiev	21.58	329	*e*P		P		17 13 29.6	-0.8
	comp=Z,4.0nm,0.6s								
AAK	Ala-Archa	24.04	59	LR		LR		17 25 15.8	
	comp=Z,44nm,18.6s,baz=56,slow=42								
TKM2	Tokmak 2	24.90	58	*e*P		P		17 14 05.5	+1.6
	comp=Z,1.7nm,0.5s								
TKM2	Tokmak 2	24.90	58	*e*P		P		17 14 05.5	+1.6
	comp=Z,1.7nm,0.5s								
BVAR	Borovoye Array	26.28	34	P		P		17 14 16.3	+0.3
BVAR				PcP		PcP		17 17 41.2	-0.9
BVAR	Borovoye Array	26.28	34	P		P		17 14 16.3	+0.3
	comp=Z,2.1nm,0.7s,baz=216,slow=8.8,SNR=16								
BVAR				PcP		PcP		17 17 41.2	-0.9
	comp=Z,0.7nm,0.5s,baz=224,slow=1.4,SNR=4.4								
BVAR	Borovoye Array	26.28	34	P		P		17 14 16.3	+0.3
BVAR	Borovoye Array	26.28	34	PcP		PcP		17 17 41.2	-0.9
KURBB	Kurchatov Arra	29.32	44	P		P		17 14 43.3	+0.1
	comp=Z,0.6nm,0.5s,baz=249,slow=9.1,SNR=6.2								
KURK	Kurchatov	29.41	44	P		P		17 14 43.3	-0.7
KURK	Kurchatov	29.41	44	P		P		17 14 43.3	-0.7
MKAR	Makanchi Array	30.43	53	P		P		17 14 53.8	+0.5
MKAR	Makanchi Array	30.43	53	P		P		17 14 53.8	+0.5
	comp=Z,2.1nm,0.6s,baz=249,slow=8.8,SNR=26								
MKAR	Makanchi Array	30.43	53	P		P		17 14 53.8	+0.5
FINES	FINESS Array B	31.18	341	P		P		17 14 59.5	-0.1
FINES	FINESS Array B	31.18	341	P		P		17 14 59.5	-0.1
	comp=Z,0.7nm,0.5s,baz=145,slow=10,SNR=8.9								
FINES	FINESS Array B	31.18	341	P		P		17 14 59.5	-0.1
LPG	La Plagne	32.70	304	*e*P		P		17 15 14.4	+1.0
LPG	La Plagne	32.70	304	*e*P		P		17 15 14.4	+1.0
LPG	La Plagne	32.70	304	*e*P		P		17 15 14.4	+1.0
LPL	La Plagne	32.71	304	*e*P		P		17 15 13.8	+0.3
	comp=Z,11nm,0.9s								
LPL	La Plagne	32.71	304	*e*P		P		17 15 13.8	+0.3
	comp=Z,11nm,0.9s								
LPL	La Plagne	32.71	304	*e*P		P		17 15 13.8	+0.3
	comp=Z,11nm,0.9s								
CABF	La Chapelle	33.32	306	*e*P		P		17 15 19.0	+0.3
	comp=Z,6.4nm,0.7s								
CABF	La Chapelle	33.32	306	*e*P		P		17 15 19.0	+0.3
	comp=Z,6.4nm,0.6s								
CABF	La Chapelle	33.32	306	*e*P		P		17 15 19.0	+0.3
	comp=Z,6.4nm,0.6s								
ZALV	Zalesovo Beam	34.17	41	P		P		17 15 25.4	-0.5
ZALV	Zalesovo Beam	34.17	41	P		P		17 15 25.4	-0.5
	comp=Z,1.5nm,0.4s,baz=247,slow=9.9,SNR=8.6								
ZALV	Zalesovo Beam	34.17	41	P		P		17 15 25.4	-0.5
SMF	Signal de Mont	34.86	305	*e*P		P		17 15 31.7	-0.2
	comp=Z,9.7nm,0.6s								
SMF	Signal de Mont	34.86	305	*e*P		P		17 15 31.7	-0.2
	comp=Z,9.7nm,0.6s								
SMF	Signal de Mont	34.86	305	*e*P		P		17 15 31.7	-0.2
	comp=Z,9.7nm,0.6s								
NOA	NORSAR Array B	35.96	332	P		P		17 15 41.0	-0.3
NOA	NORSAR Array B	35.96	332	P		P		17 15 41.0	-0.3
	comp=Z,0.8nm,0.7s,baz=125,slow=8.8,SNR=3.6								
NOA	NORSAR Array B	35.96	332	P		P		17 15 41.0	-0.3
ARCES	ARCESS Array B	38.25	348	P		P		17 16 00.9	+0.4
ARCES	ARCESS Array B	38.25	348	P		P		17 16 00.9	+0.4
	comp=Z,4.2nm,0.9s,baz=153,slow=8.2,SNR=8.3								
ARCES	ARCESS Array B	38.25	348	P		P		17 16 00.9	+0.4
TORD	Torodi Ar. Bea	45.23	255	P		P		17 16 58.8	+0.5
TORD	Torodi Ar. Bea	45.23	255	P		P		17 16 58.8	+0.5
	comp=Z,1.8nm,0.8s,baz=45,slow=8.6,SNR=10								
TORD	Torodi Ar. Bea	45.23	255	P		P		17 16 58.8	+0.5
CMAR	Chiang Mai Arr	49.08	94	P		P		17 17 27.5	-0.8
CMAR	Chiang Mai Arr	49.08	94	P		P		17 17 27.5	-0.8
	comp=Z,2.2nm,0.6s,baz=290,slow=8.5,SNR=23								
CMAR	Chiang Mai Arr	49.08	94	P		P		17 17 27.5	-0.8
BOSA	Boshof	64.62	201	P		P		17 19 19.4	+1.0
BOSA	Boshof	64.62	201	P		P		17 19 19.4	+1.0
	comp=Z,4.4nm,0.9s,baz=2.4,slow=3.9,SNR=5.7								
BOSA	Boshof	64.62	201	P		P		17 19 19.4	+1.0
KSAR	Wonju Array Be	64.66	61	P		P		17 19 17.7	-0.9
KSAR	Wonju Array Be	64.66	61	P		P		17 19 17.7	-0.9
KSRS	Korea Array	64.69	61	P		P		17 19 17.7	-1.1
	comp=Z,0.9nm,0.4s,baz=283,slow=6.6,SNR=7.5								
USRK	Ussuriysk Arra	64.91	52	P		P		17 19 18.4	-1.7
	comp=Z,1.2nm,0.6s,baz=290,slow=4.0,SNR=4.4								
FRB	Frobisher Bay	70.70	335	P		P		17 19 55.2	-1.0
FRB	Frobisher Bay	70.70	335	P		P		17 19 55.2	-1.0
	comp=Z,2.5nm,0.6s,baz=49,slow=6.3,SNR=3.5								
FRB	Frobisher Bay	70.70	335	P		P		17 19 55.2	-1.0
SCHQ	Schefferville	75.35	327	P		P		17 20 24.2	+0.2
SCHQ	Schefferville	75.35	327	P		P		17 20 24.2	+0.2
	comp=Z,2.8nm,0.7s,baz=147,slow=16,SNR=5.5								
SCHQ	Schefferville	75.35	327	P		P		17 20 24.2	+0.2
WRA	Warramunga Arr	99.02	108	P		Pdif		17 22 20.2	-1.7
WRA	Warramunga Arr	99.02	108	P		Pdif		17 22 20.2	-1.7
	comp=Z,0.2nm,0.5s,baz=319,slow=3.9,SNR=7.7								
WRA	Warramunga Arr	99.02	108	P		Pdif		17 22 20.2	-1.7
ASAR	Alice Springs	100.63	111	P		Pdif		17 22 27.4	-1.6
ASAR	Alice Springs	100.63	111	P		Pdif		17 22 27.4	-1.6
	comp=Z,0.4nm,1.0s,baz=303,slow=4.8,SNR=4.2								
ASAR	Alice Springs	100.63	111	P		Pdif		17 22 27.4	-1.6
QSPA	South Pole Qui	123.00	180	PKP		PKPdf		17 27 35.6	-0.7
QSPA	South Pole Qui	123.00	180	PKP		PKPdf		17 27 35.6	-0.7
	comp=Z,1.6nm,0.8s,baz=241,slow=4.2,SNR=7.7								

ISCJB ***25*** *17:09:57.4±0.8, 39°.69N±0°.07×29°.7W±0°.1, h10km, mb3.8/6, MS3.3/7, Error ellipse: s-maj=16.1km s-min=4.9km az=147.6*

IDC ***25*** *17:09:57.2±0.9, 40°.07N×30°.49W, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.5/32, mbtmp3.8/6, MS3.4/7, Ms1 3.4/7, ms1mx3.0/42, Error ellipse: s-maj=72.1km s-min=12.6km az=141.0*

CSEM ***25*** *17:09:58.2, 39°.86N×29°.88W, h5km, ML2.9, After PDA*

PDA ***25*** *17:09:58.2±1.0, 39°.86N×29°.88W, h5km, MD3.8, ML2.9, Error ellipse: s-maj=12.7km s-min=7.1km az=67.0*

ISC 25 17:09:58.8±1.1, 39°.62N±0°.08×29°.6W±0°.1, h10km, n30, σ0s69/30, mb3.9/6, MS3.3/7, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time		Res
					Op		h	m s	ISC
PCED	Cedros	1.21	145	*e*P		Pn	17 10 21.3		-0.5
PCED				*e*S		Sn	17 10 38.2		-0.1
PCED				A		A	17 10 38.8		
	20nm,0.3s								
PCED	Cedros	1.21	145	*e*P		Pn	17 10 21.3		-0.5
PCED				*e*S		Sn	17 10 38.2		-0.1
CALA	Caldeira	1.25	146	*e*P		Pb	17 10 22.1		-0.4
CALA				*e*S		Sg	17 10 39.6		+0.5
CALA	Caldeira	1.25	146	*e*P		Pb	17 10 22.1		-0.4
CALA				*e*S		Sg	17 10 39.6		+0.5
HOR	Horta	1.33	145	*e*S		Sg	17 10 41.8		+0.3
HOR	Horta	1.33	145	*e*S		Sg	17 10 41.8		+0.3
PGRA	Graciosa	1.39	115	*e*P		Pn	17 10 23.3		-0.9
PGRA				*e*S		Sb	17 10 42.6		+0.1
PGRA				A		A	17 10 45.6		
	61nm,0.4s								
PGRA	Graciosa	1.39	115	*e*P		Pn	17 10 23.3		-0.9
PGRA				*e*S		Sb	17 10 42.6		+0.1
ROSA	Rosais	1.39	130	*e*S		Sn	17 10 42.6		0.0
ROSA				A		A	17 10 43.3		
	14nm,0.1s								
ROSA	Rosais	1.39	130	*e*S		Sn	17 10 42.6		0.0
PCAN	Candelaria	1.45	143	*e*P		Pn	17 10 24.6		-0.4
PCAN				*e*S		Sb	17 10 44.8		+0.5
PCAN				A		A	17 10 46.8		
	75nm,0.3s								
PCAN	Candelaria	1.45	143	*e*P		Pn	17 10 24.6		-0.4
PCAN				*e*S		Sb	17 10 44.8		+0.5
PICO	Pico	1.45	140	*e*S		Sn	17 10 44.2		+0.1
PICO	Pico	1.45	140	*e*S		Sn	17 10 44.2		+0.1
PMAN	Manadas	1.53	130	*e*S		Sn	17 10 44.9		-1.3
PMAN				A		A	17 10 47.6		
	13nm,0.1s								
PMAN	Manadas	1.53	130	*e*S		Sn	17 10 44.9		-1.3
ESDC	Sonseca Array	19.72	82	P		Pn	17 14 35.0		+5.0
	1.1nm,0.7s,baz=283,slow=9.1,SNR=7.8								
MDT	Midelt	21.23	101	LR		LR	17 21 05.3		
	comp=Z,61nm,19.1s,baz=338,slow=30								
SADO	Sadowa	36.60	295	LR		LR	17 30 12.6		
	comp=Z,94nm,18.6s,baz=199,slow=34								
TORD	Torodi Ar. Bea	38.14	125	LR		LR	17 32 14.9		
	comp=Z,40nm,19.0s,baz=205,slow=34								
DBIC	Dimbokro	39.64	139	LR		LR	17 32 17.8		
	comp=Z,25nm,18.3s,baz=303,slow=33								
FINES	FINESS Array B	39.98	38	LR		LR	17 33 07.9		
	comp=Z,39nm,19.3s,baz=177,slow=35								
ULM	Lac du Bonnet	46.65	306	LR		LR	17 37 22.3		
	comp=Z,54nm,21.1s,baz=40,slow=36								
PDAR	Pinedale Array	58.07	301	P		P	17 19 51.2		-1.1
	0.8nm,0.8s,baz=68,slow=8.6,SNR=4.2								
AKTO	Aktyubinsk	59.41	48	P		P	17 20 02.8		+1.5
	1.0nm,0.5s,baz=298,slow=8.6,SNR=5.4								
BVAR	Borovoye Array	64.83	41	P		P	17 20 38.5		+0.9
	0.3nm,0.4s,baz=318,slow=4.0,SNR=4.5								
LPAZ	La Paz	66.22	221	LR		LR	17 48 59.0		
	comp=Z,35nm,18.9s,baz=148,slow=35								
KURBB	Kurchatov Arra	70.33	40	P		P	17 21 12.4		0.0
	1.0nm,0.9s,baz=310,slow=6.0,SNR=8.0								
ZALV	Zalesovo Beam	71.12	35	P		P	17 21 17.7		+0.6
	0.8nm,0.7s,baz=308,slow=7.1,SNR=5.0								
MKAR	Makanchi Array	74.71	41	P		P	17 21 39.3		+0.7
	1.7nm,0.9s,baz=316,slow=5.1,SNR=11								

ISCJB ***25*** *17:20:17.0±0.3, 63°.94N±0°.02×21°.99W±0°.04, h11km±2km, mb3.9/23, MS3.2/7, Error ellipse: s-maj=3.9km s-min=2.8km az=169.3*

IDC ***25*** *17:20:17.2±1.0, 63°.98N×22°.05W, h0km, mb3.6/8, mb1 3.8/8, mb1mx3.5/31, mbtmp3.6/8, MS3.2/8, Ms1 3.2/8, ms1mx2.9/43, Error ellipse: s-maj=22.5km s-min=9.7km az=100.0*

NEIC ***25*** *17:20:17.2±0.5, 63°.96N×21°.99W, h1km±4km, mb4.4/14, ML3.9(REY), Error ellipse: s-maj=6.9km s-min=4.3km az=154.0*

NEIC Felt in the Reykjavik area.

CSEM ***25*** *17:20:17.4±0.2, 63°.96N×21°.93W, h5km, mb4.3/12, Error ellipse: s-maj=4.1km s-min=3.4km az=3.0*

REY ***25*** *17:20:17.7, 63°.92N×22°.01W, h6km, ML3.7, ML3.5*

ISC 25 17:20:17.8±0.8, 63°.93N±0°.02×21°.98W±0°.02, h9km±5km, n110, σ1s16/131, mb4.0/23, MS3.1/7, Iceland region

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time		Res
					Op		h	m s	ISC
IKRI	Krysuvik	0.07	220	P		Pg	17 20 18.5		-1.3
IKRI	Krysuvik	0.07	220	P		Pg	17 20 19.1		-0.7
IKRI				S		Sg	17 20 20.1		-1.2
IKAS	Kald??rsel	0.11	30	P		Pg	17 20 20.6		+0.2
IKAS				S		Sg	17 20 22.7		+0.5
IVOS	Vogsosar	0.14	123	P		Pg	17 20 20.9		0.0
IVOS				S		Sg	17 20 23.6		+0.6
IVOG	Vogar	0.19	282	P		Pg	17 20 21.4		-0.3
IVOG				S		Sg	17 20 23.9		-0.4
ISAN	Sandskeio	0.22	55	P		Pg	17 20 22.3		+0.1
ISAN	Sandskeio	0.22	55	P		Pg	17 20 22.3		+0.1
ISAN				S		Sg	17 20 25.9		+0.6
IGRV	Grindav??k	0.23	251	P		Pg	17 20 21.9		-0.4
IGRV	Grindav??k	0.23	251	P		Pg	17 20 21.9		-0.4
IGRV				S		Sg	17 20 24.9		-0.5
IBJA	Bjarnastaoir	0.30	87	P		Sg	17 20 23.7		0.0
IBJA				S		Sg	17 20 28.3		+0.7
INYL	Nylenda	0.34	278	P		Pg	17 20 23.7		-0.8
INYL	Nylenda	0.34	278	P		Pg	17 20 23.7		-0.8
INYL				S		Sg	17 20 28.3		-0.7
IKUD	Kuludalsa	0.40	6	P		Pg	17 20 24.4		-1.1
IKUD				S		Sg	17 20 30.6		-0.1
IKUD	Kuludalsa	0.40	6	P		Pg	17 20 25.0		-0.5
IKUD				S		Sg	17 20 30.6		-0.1
IKRO	Krokur	0.41	66	P		Pg	17 20 25.5		-0.3
IKRO				S		Sg	17 20 31.9		+0.6
IHEI	Heioarbar	0.42	50	P		Pg	17 20 25.7		-0.4
IHEI	Heioarbar	0.42	50	P		Pg	17 20 25.7		-0.4
ISOL	Solvholt	0.46	90	P		Pg	17 20 26.2		-0.5
ISOL				S		Sg	17 20 32.7		+0.1
ISOL	Solvholt	0.46	90	P		Pg	17 20 26.2		-0.5
ISOL				S		Sg	17 20 32.7		+0.1
IASM	Asmuli	0.61	98	P		Pg	17 20 28.8		-0.8
IASM				S		Sg	17 20 37.3		-0.2
IASM	Asmuli	0.61	98	P		Pg	17 20 28.8		-0.8
IASM				S		Sg	17 20 37.3		-0.2
ISAU	Saurbar	0.69	84	P		Pg	17 20 30.1		-1.0
ISAU				S		Sg	17 20 39.0		-0.2
ISAU	Saurbar	0.69	84	P		Pg	17 20 30.1		-1.0
ISAU				S		Sg	17 20 39.9		-0.2
IGYG	Gygjarholskot	0.85	65	P		Pg	17 20 32.7		-1.4
IGYG	Gygjarholskot	0.85	65	P		Pg	17 20 32.7		-1.4
IGYG				S		Sg	17 20 44.6		-0.5
BORG	Borgarnes	0.87	19	*e*Pg		Pg	17 20 32.6		-1.8
BORG				*e*Sg		Sb	17 20 45.3		-1.4
BORG	Borgarnes	0.87	19	Pg		Pg	17 20 32.8		-1.8
	70nm,0.3s,baz=184,slow=8.9,SNR=210								
BORG				Lg		Lg	17 20 44.8		
	396nm,0.3s,baz=183,slow=18,SNR=85								
BORG	Borgarnes	0.87	19	*e*Pg		Pg	17 20 32.7		-1.8
BORG				*e*Sg		Sb	17 20 45.3		-1.4
IASB	`sbjarnarst	0.87	19	P		Pg	17 20 44.8		-1.8
IASB				S		Sg	17 20 44.8		-1.0
IHAU	Haukadalur	0.89	87	P		Pg	17 20 33.5		-1.3
IHAU				S		Sg	17 20 45.8		-0.6
IVES	Vestmannaeyjar	0.90	122	P		Pg	17 20 33.2		-1.8
IVES				S		Sg	17 20 45.7		-1.0
IMID	Miomork	0.97	105	P		Pg	17 20 34.6		-1.7
IMID				S		Sg	17 20 47.8		-1.1
IGOD	Go??abunga	1.21	102	S		Sg	17 20 54.8		-1.8
IVAT	Vatnsfell	1.37	78	P		Pn	17 20 41.3		-1.8
IHVE	Hveravellir	1.41	47	P		Pn	17 20 41.4		-2.2
IHVO	Lagu-Hvolar	1.45	105	P		Pn	17 20 42.2		-1.9
IHVO		

ORIF	**Oris-en-Rattie**	**24.65**	**127**	*e*P	**P**	**17 25 39.6**	**+1.0**
	comp=Z,6.4nm,0.8s							
ORIF	**Oris-en-Rattie**	**24.65**	**127**	*e*P	**P**	**17 25 39.6**	**+1.0**
	comp=Z,6.4nm,0.8s							
MBDF	**Montbardon**	**25.14**	**126**	*e*P	**P**	**17 25 44.0**	**+1.0**
MBDF	**Montbardon**	**25.14**	**126**	*e*P	**P**	**17 25 44.0**	**+1.0**
MBDF	**Montbardon**	**25.14**	**126**	*e*P	**P**	**17 25 44.0**	**+1.0**
MORC	**Moravsky Berou**	**25.31**	**105**	*e*P	**P**	**17 25 42.4**	**-2.0**
	comp=Z,2.8nm,0.9s							
ESDC	**Sonseca Array**	**26.52**	**148**	P	**P**	**17 25 55.6**	**+0.1**
	comp=Z,0.3nm,0.3s,baz=338,slow=9.8,SNR=4.0							
ESDC				LR	LR	17 36 13.2		
	comp=Z,60nm,18.8s,baz=310,slow=36							
MDT	**Midelt**	**32.97**	**152**	P	**P**	**17 26 54.4**	**+1.7**
	comp=Z,1.6nm,0.8s,baz=308,slow=6.2,SNR=4.8							
KEST	**Kesra**	**34.04**	**131**	P	**P**	**17 27 02.9**	**+1.0**
	comp=Z,1.1nm,0.8s,baz=55,slow=10,SNR=3.7							
KEST				LR	LR	17 41 50.6		
	comp=Z,18nm,18.7s,baz=218,slow=38							
KBZ	**Khabaz**	**41.07**	**88**	LR	LR	17 47 23.3		
	comp=Z,28nm,18.4s,baz=113,slow=40							
ILAR	**Eielson Array**	**45.40**	**330**	P	**P**	**17 28 37.2**	**+1.2**
	comp=Z,0.3nm,0.9s,baz=30,slow=9.3,SNR=3.6							
PDAR	**Pinedale Array**	**51.64**	**290**	P	**P**	**17 29 25.0**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=22,slow=5.3,SNR=4.7							
TORD	**Torodi Ar. Bea**	**53.35**	**151**	P	**P**	**17 29 37.0**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=347,slow=7.5,SNR=5.4							
ANMO	**Albuquerque**	**56.88**	**282**	LR	LR	17 55 08.0		
	comp=Z,30nm,19.6s,baz=45,slow=37							
CMAR	**Chiang Mai Arr**	**86.17**	**55**	LR	LR	18 13 31.0		
	comp=Z,20nm,20.8s,baz=200,slow=37							

KRSC 25 17:24:22.3±1.7, 49.60N×156.66E, h5km±5km, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.14**	**342**	*i* P	Pn	17 24 44.9	0.0
SKR				*i* S	Sn	17 25 01.4	+0.5
ASAK	**Asacha**	**2.90**	**15**	*e*P	Pn	17 25 10.5	+1.4
MTVR	**Mutnovka**	**3.04**	**18**	P	Pn	17 25 12.4	+1.1
MTVR				*e*S	Sn	17 25 49.2	+1.0
RUS	**Russkaya**	**3.07**	**22**	*e*P	Pn	17 25 12.6	+1.2
RUS				*e*S	Sn	17 25 49.6	+1.2
PET	**Petropavlovsk**	**3.65**	**19**	S	Sn	17 26 03.9	+1.1
UGLR	**Uglovaya**	**3.86**	**20**	P	Pn	17 25 23.3	+0.9
AVH	**Avacha**	**3.89**	**19**	P	Pn	17 25 23.6	+0.7
GNL	**Ganaly**	**4.18**	**11**	P	Pn	17 25 28.1	+1.3

*ISCJB **25** 17:36:44.6±0.8, 24°38N±0°08×125°29E±0°06, h50km±6km, mb3.7/8, Error ellipse: s-maj=15.4km s-min=5.9km az=153.5*
*JMA **25** 17:36:44.9±0.2, 24°31N×125°23E, h36km±5km, M3.4*
*IDC **25** 17:36:44.1±1.0, 24°29N×125°08E, h26km±5km, mb3.6/8, mb1 3.7/9, mb1mx3.5/25, mbtmp3.6/9, ML3.6/1, MS2.8/1, Ms1 2.8/1, ms1mx2.1/29, Error ellipse: s-maj=53.2km s-min=15.4km az=65.0*

ISC 25 17:36:43.8±0.8, 24°28N±0°07×125°25E±0°05, h32km±5km, n23, σ1§35/33, mb3.7/8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JOGS	**Gusukube**	**0.50**	**16**	P	**Pb**	**17 36 55.0**	**+0.7**
JOGS				S	**Sn**	**17 37 02.8**	**+0.5**
JMJ	**Miyako jima 2**	**0.53**	**4**	P	**Pb**	**17 36 55.3**	**+0.5**
JMJ				S	**Sn**	**17 37 03.0**	**-0.1**
JTJ	**Tarama**	**0.62**	**306**	P	**Pn**	**17 36 56.5**	**+0.2**
JTJ				S	**Sn**	**17 37 04.2**	**-1.0**
JIJ	**Ishigaki jima**	**1.02**	**275**	P	**Pb**	**17 37 02.7**	**-0.1**
JIJ				S	**Sb**	**17 37 16.9**	**+1.0**
JKRS	**Kuro-shima**	**1.14**	**268**	P	**Pb**	**17 37 04.6**	**-0.3**
JKRS				S	**Sb**	**17 37 21.3**	**+2.0**
HATJ	**Hateruma jima**	**1.34**	**261**	P	**Pb**	**17 37 08.4**	**+0.1**
HATJ				S	**Sb**	**17 37 25.3**	**+0.2**
IRIF	**Iriomote-Funau**	**1.39**	**273**	P	**Pb**	**17 37 08.5**	**-0.7**
IRIF				S	**Sb**	**17 37 30.1**	**+3.5**
YOJ	**Yonaguni jima**	**2.05**	**276**	P	**Pb**	**17 37 18.9**	**-1.5**
YOJ				S	**Sb**	**17 37 47.9**	**+2.4**
JKE	**Kume jima 2**	**2.47**	**34**	P	**Pn**	**17 37 23.0**	**+1.2**
JTK	**Tokunoshima**	**4.82**	**43**	P	**Pn**	**17 37 53.5**	**-0.7**
JMZ	**Minamidaito 2**	**5.62**	**73**	P	Pn	17 38 03.3	-1.9
JAM	**Amami Oshima**	**5.67**	**43**	P	**Pn**	**17 38 03.8**	**-2.1**
KSRS	**Korea Array**	**13.33**	**9**	Pn	**P**	**17 39 57.2**	**-2.8**
	0.2nm,0.3s,baz=190,slow=13,SNR=4.5							
KSRS				LR	LR	17 45 17.4		
	comp=Z,38nm,19.4s,baz=195,slow=38							
MJAR	**Matsushiro Arr**	**16.54**	**39**	Pn	**P**	**17 40 36.1**	**+0.4**
	0.2nm,0.3s,baz=234,slow=11,SNR=7.6							
CMAR	**Chiang Mai Arr**	**25.16**	**262**	pP	pP	17 42 15.0	-0.4
	0.6nm,0.7s,baz=59,slow=8.3,SNR=4.0							
MKAR	**Makanchi Array**	**40.89**	**314**	P	**P**	**17 44 23.6**	**+0.7**
	1.2nm,0.3s,baz=98,slow=9.6,SNR=36							
ZALV	**Zalesovo Beam**	**42.23**	**325**	P	**P**	**17 44 33.1**	**-0.7**
	1.1nm,0.5s,baz=116,slow=9.1,SNR=8.7							
WRA	**Warramunga Arr**	**44.84**	**168**	P	**P**	**17 44 56.3**	**+1.2**
	0.4nm,0.5s,baz=348,slow=8.8,SNR=7.9							
WRA				pP	**pP**	**17 45 03.5**	**-1.1**
	0.8nm,0.7s,baz=348,slow=8.8,SNR=6.3							
ASAR	**Alice Springs**	**48.39**	**169**	P	**P**	**17 45 25.1**	**+2.1**
	0.3nm,0.7s,baz=354,slow=7.9,SNR=7.3							
ASAR				pP	**pP**	**17 45 32.2**	**-0.2**
	0.3nm,0.6s,baz=357,slow=8.0,SNR=3.9							
BVAR	**Borovoye Array**	**49.98**	**320**	P	**P**	**17 45 34.9**	**+0.2**
	0.5nm,0.6s,baz=110,slow=7.8,SNR=3.5							
FINES	**FINESS Array B**	**73.22**	**330**	P	**P**	**17 48 12.2**	**+0.8**
	1.5nm,0.6s,baz=81,slow=6.2,SNR=8.1							
AKASG	**Malin Array Be**	**75.25**	**319**	P	**P**	**17 48 23.6**	**+0.1**
	0.3nm,0.4s,baz=66,slow=5.6,SNR=2.7							
AKASG				pP	**pP**	**17 48 32.2**	**-1.2**
	0.7nm,0.5s,baz=65,slow=6.0,SNR=3.0							
BRTR	**Keskin Array B**	**76.09**	**307**	P	**P**	**17 48 27.8**	**-0.9**
	0.2nm,0.3s,baz=98,slow=4.4,SNR=3.3							
BRTR				pP	**pP**	**17 48 38.8**	**+0.2**
	0.7nm,0.5s,baz=76,slow=2.9,SNR=3.7							

KRSC 25 17:37:28.7±1.2, 50.02N×156.89E, h5km±5km, ML3.5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.83**	**324**	*i* P	Pb	17 37 45.6	0.0
SKR				*i* S	Sb	17 37 57.5	+0.5
ASAK	**Asacha**	**2.45**	**15**	P	Pn	17 38 10.5	+1.1
MTVR	**Mutnovka**	**2.60**	**18**	P	Pn	17 38 12.7	+1.2
MTVR				*i* S	Sn	17 38 45.3	+1.7
RUS	**Russkaya**	**2.62**	**22**	*e*P	Pn	17 38 13.2	+1.5
RUS				*i* S	Sn	17 38 45.5	+1.6
UGLR	**Uglovaya**	**3.41**	**20**	P	Pn	17 38 24.7	+2.0
GNL	**Ganaly**	**3.74**	**10**	P	Pn	17 38 28.1	+0.9

WEL 25 18:01:38.0±0.4, 37.08S×176.40E, h286km±4km, ML3.7/10, 2C, Error ellipse: s-maj=8.0km s-min=5.5km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**1.31**	**155**	PN	Pn	18 02 18.5	+0.1
URZ				SN	S	18 02 50.0	-0.5
MWZ	**Matawai**	**1.54**	**145**	⇑PN	Pn	18 02 20.2	+0.2
MWZ				SN	S	18 02 53.4	0.0
MXZ	**Matakaoa Point**	**1.60**	**108**	PN	Pn	18 02 20.3	0.0
MXZ				SN	S	18 02 52.8	-1.1
PUZ	**Puketiti**	**1.78**	**125**	PN	Pn	18 02 21.8	+0.1
PUZ				SN	S	18 02 54.9	-1.5
RAHZ	**Arahi**	**1.92**	**164**	PN	Pn	18 02 23.4	+0.6
CNGZ	**Carnagh Statio**	**2.01**	**135**	PN	Pn	18 02 23.8	+0.4
BKZ	**Black Stump Fm**	**2.09**	**178**	⇑PN	Pn	18 02 24.3	+0.1
BKZ				SN	S	18 02 60.0	-1.0
KNZ	**Kokohu**	**2.19**	**153**	PN	Pn	18 02 24.8	-0.1
MCHZ	**McNeill Hill**	**2.38**	**174**	PN	Pn	18 02 27.1	+0.4
BHHZ	**Black Hill Sta**	**2.42**	**186**	PN	Pn	18 02 27.2	0.0
KAHZ	**Kahuranaki**	**2.74**	**172**	PN	Pn	18 02 30.0	-0.2
PXZ	**Pawanui**	**2.98**	**173**	PN	Pn	18 02 31.8	-0.6
PXZ				SN	S	18 03 14.8	-0.9
WPHZ	**Waipukurau**	**2.99**	**179**	PN	Pn	18 02 32.1	-0.4
TSZ	**Takapari Road**	**3.00**	**186**	PN	Pn	18 02 31.9	-0.8
PRHZ	**Porangahau**	**3.19**	**177**	PN	Pn	18 02 33.9	-0.7
MRZ	**Mangatainoka R**	**3.64**	**190**	PN	Pn	18 02 37.9	-1.5
MRZ				AML	AML	18 03 28.0	
MRZ				AML	AML	18 03 28.0	

OGWZ	**Otaki Gorge**	**3.86**	**194**	PN	Pn	18 02 40.4	-1.3
MTW	**Mount Morrison**	**4.14**	**189**	PN	Pn	18 02 42.9	-2.0
CAW	**Cannon Point**	**4.16**	**194**	PN	Pn	18 02 43.8	-1.3
TUWZ	**Tuamarina**	**4.75**	**203**	AML	AML	18 02 50.7	
NNZ	**Nelson**	**4.76**	**209**	PN	Pn	18 02 50.0	-2.0
QRZ	**Quartz Range**	**4.81**	**218**	PN	Pn	18 02 51.6	-1.0
THZ	**Tophouse**	**5.41**	**209**	PN	Pn	18 02 58.1	-1.6

IDC 25 18:14:19.1±3.8, 24.53N×94.78E, h93km±35km, mb3.2/5, mb1 3.4/6, mb1mx3.1/28, mbtmp3.2/6, 1C, Error ellipse: s-maj=129.9km s-min=16.8km az=64.0, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**2.82**	**292**	*i* PN	Pn	18 14 57.0	-5.5
SHL				*e*SN	Sn	18 15 25.0	-11
CMAR	**Chiang Mai Arr**	**7.18**	**146**	P	Pn	18 16 01.2	-0.2
	0.4nm,0.3s,baz=316,slow=13,SNR=15						
MKAR	**Makanchi Array**	**24.36**	**339**	P	P	18 19 28.5	+0.2
	0.4nm,0.4s,baz=152,slow=9.2,SNR=11						
ZALV	**Zalesovo Beam**	**30.32**	**348**	P	P	18 20 21.3	-0.2
	0.5nm,0.4s,baz=165,slow=6.7,SNR=4.0						
WRA	**Warramunga Arr**	**58.63**	**135**	P	P	18 24 06.7	0.0
	0.6nm,0.5s,baz=324,slow=7.4,SNR=20						
WRA				PcP	PcP	18 24 54.9	-1.0
	0.1nm,0.4s,baz=336,slow=4.3,SNR=3.0						
ASAR	**Alice Springs**	**61.12**	**139**	P	P	18 24 23.9	+0.2
	0.4nm,0.5s,baz=320,slow=6.5,SNR=16						
ILAR	**Eielson Array**	**79.18**	**23**	P	P	18 26 13.4	0.0
	0.3nm,0.7s,baz=295,slow=4.7,SNR=3.5						

IDC 25 18:20:09.4±1.7, 28.58S×67.43W, h119km±15km, mb3.7/1, mb1 3.2/4, mb1mx3.1/19, mbtmp3.1/4, Error ellipse: s-maj=35.5km s-min=16.0km az=109.0, La Rioja Province

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CFAA	**Coronel Fontan**	**3.09**	**193**	P	Pn	18 20 58.6	+1.6
	0.6nm,0.3s,baz=2.8,slow=10,SNR=34						
CFAA				S	Sn	18 21 33.9	+0.2
	3.2nm,0.3s,baz=276,slow=22,SNR=15						
LVC	**Limon Verde**	**6.09**	**347**	P	Pn	18 21 36.6	-0.9
	1.6nm,0.3s,baz=186,slow=8.2,SNR=6.1						
LVC				S	Sn	18 22 40.7	-5.4
	1.3nm,0.3s,baz=107,slow=14,SNR=5.1						
CPUP	**Villa Florida**	**9.25**	**78**	P	Pn	18 22 19.1	-0.6
	0.6nm,0.3s,baz=236,slow=14,SNR=3.1						
TORD	**Torodi Ar. Bea**	**78.60**	**68**	P	P	18 31 58.1	-0.2
	1.2nm,0.4s,baz=262,slow=5.6,SNR=9.0						
ASAR	**Alice Springs**	**124.14**	**204**	PKP	PKPdf	18 38 53.3	-1.2
	0.2nm,0.5s,baz=136,slow=1.9,SNR=4.0						
WRA	**Warramunga Arr**	**127.37**	**206**	PKP	PKPdf	18 38 59.7	-1.1
	0.5nm,0.8s,baz=177,slow=1.7,SNR=8.2						
KURBB	**Kurchatov Arra**	**146.21**	**40**	PKPbc	PKPbc	18 39 35.4	-0.1
	4.6nm,1.3s,baz=301,slow=3.3,SNR=12						
ZALV	**Zalesovo Beam**	**147.56**	**31**	PKPbc	PKPbc	18 39 39.1	-0.1
	1.0nm,0.4s,baz=292,slow=3.4,SNR=8.8						
MKAR	**Makanchi Aray**	**150.19**	**44**	PKPbc	PKPbc	18 39 46.1	0.0
	1.0nm,0.7s,baz=302,slow=2.3,SNR=9.9						
MKAR				pPKPbc	pPKPbc	18 40 20.4	+2.1
	0.3nm,0.7s,baz=308,slow=6.0,SNR=3.2						

*ISCJB **25** 18:25:35.8±0.5, 10.54S±0.06×84.18W±0.06, h10km, mb4.1/15, MS3.6/10, Error ellipse: s-maj=9.4km s-min=8.5km az=135.7*
*IDC **25** 18:25:35.5±0.6, 10.55S×84.21W, h0km, mb4.1/13, mb1 4.3/15, mb1mx4.2/21, mbtmp4.1/15, ML3.9/2, MS3.6/13, Ms1 3.6/13, ms1mx3.5/21, Error ellipse: s-maj=23.6km s-min=15.5km az=53.0*
*NEIC **25** 18:25:37.2±0.4, 10.59S×84.19W, h10km, mb4.6/6, Error ellipse: s-maj=11.0km s-min=7.3km az=50.0*

ISC 25 18:25:37.3±0.5, 10.62S±0.07×84.15W±0.07, h10km, n55, σ1§01/54, mb4.2/15, MS3.8/10, Southeast of Galapagos Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATAH	**Atahualpa**	**6.66**	**59**	Pn	**Pn**	**18 27 15.1**	**-0.6**
ATAH				Sn	**Sn**	**18 28 32.7**	**+0.8**
ATAH	**Atahualpa**	**6.66**	**59**	Pn	**Pn**	**18 27 15.1**	**-0.6**
	2.9nm,0.3s,baz=279,slow=5.7,SNR=9.9						
ATAH				Sn	**Sn**	**18 28 32.7**	**+0.8**
	0.7nm,0.3s,baz=286,slow=17,SNR=2.0						
ATAH				LR	LR	18 29 32.6	
	comp=Z,549nm,21.9s,baz=206,slow=36						
NNA	**Nana**	**7.29**	**101**	*e*Pn	Pn	18 27 19.9	-4.1
NNA				*e*Sn	**Sn**	**18 28 44.2**	**-2.8**
PAYG	**Puerto Ayora**	**11.61**	**328**	*e*P	**Pn**	**18 28 25.0**	**+1.7**
OTAV	**Otavalo**	**12.19**	**28**	P	**Pn**	**18 28 32.4**	**+0.9**
	6.7nm,1.0s						
LPAZ	**La Paz**	**16.56**	**112**	*e*P	**P**	**18 29 32.0**	**-0.9**
	29nm,1.3s						
LPAZ	**La Paz**	**16.56**	**112**	Pn	**P**	**18 29 32.1**	**-0.9**
	0.2nm,0.3s,baz=298,slow=9.9,SNR=14						
ROSC	**El Rosal**	**18.22**	**33**	LR	LR	18 36 46.1	
	comp=Z,45nm,19.1s,baz=12,slow=37						
LVC	**Limon Verde**	**18.83**	**131**	*e*P	**Pn**	**18 29 58.8**	**+0.7**
	140nm,2.0s						
LVC	**Limon Verde**	**18.83**	**131**	P	**Pn**	**18 30 00.7**	**+2.6**
	0.2nm,0.3s,baz=304,slow=5.8,SNR=7.5						
LVC				LR	LR	18 35 41.3	
	comp=Z,170nm,20.9s,baz=214,slow=32						
SAML	**Samuel**	**20.73**	**87**	*e*P	**P**	**18 30 19.1**	**+0.9**
	28nm,1.3s						
SIV	**San Ignacio**	**23.07**	**106**	P	**P**	**18 30 43.3**	**-0.1**
SIV	**San Ignacio**	**23.07**	**106**	P	**P**	**18 30 43.3**	**-0.1**
	2.4nm,0.9s,baz=293,slow=9.7,SNR=5.6						
SIV				LR	LR	18 39 50.8	
	comp=Z,374nm,19.8s,slow=37						
CFAA	**Coronel Fontan**	**25.55**	**147**	P	**P**	**18 31 07.1**	**+0.7**
CFAA	**Coronel Fontan**	**25.55**	**147**	P	**P**	**18 31 07.1**	**+0.7**
	1.9nm,1.0s,baz=314,slow=8.6,SNR=13						
CFAA				LR	LR	18 38 41.4	
	comp=Z,21nm,21.2s,baz=316,slow=31						
CPUP	**Villa Florida**	**29.76**	**125**	P	**P**	**18 31 45.4**	**+1.3**
CPUP	**Villa Florida**	**29.76**	**125**	P	**P**	**18 31 45.4**	**+1.3**
	2.3nm,0.8s,baz=286,slow=8.9,SNR=4.5						
CPUP				LR	LR	18 42 48.9	
	comp=Z,101nm,18.0s,baz=318,slow=35						
PLCA	**Paso Flores**	**32.31**	**160**	P	**P**	**18 32 07.6**	**+1.0**
PLCA	**Paso Flores**	**32.31**	**160**	P	**P**	**18 32 07.6**	**+1.0**
	8.3nm,1.1s,baz=349,slow=12,SNR=3.2						
PLCA				LR	LR	18 42 28.9	
	comp=Z,92nm,19.2s,baz=344,slow=31						
BDFB	**Brasilia**	**35.51**	**102**	P	**P**	**18 32 35.4**	**+0.6**
BDFB	**Brasilia**	**35.51**	**102**	P	**P**	**18 32 35.4**	**+0.6**
	3.8nm,1.0s,baz=260,slow=14,SNR=4.2						
BDFB				LR	LR	18 47 23.1	
	comp=Z,169nm,21.8s,baz=5.1,slow=37						
TXAR	**Lajitas Array**	**43.96**	**335**	PcP	**PcP**	**18 35 30.8**	**+0.1**
TXAR	**Lajitas Array**	**43.96**	**335**	PcP	**PcP**	**18 35 30.8**	**+0.1**
	1.3nm,1.0s,baz=145,slow=4.6,SNR=7.5						
TXAR				LR	LR	18 49 56.9	
	comp=Z,78nm,21.0s,baz=185,slow=33						
RSSD	**Black Hills**	**57.40**	**343**	*e*P	**P**	**18 35 25.1**	**-1.2**
	3.3nm,1.0s						
PDAR	**Pinedale Array**	**57.99**	**338**	P	**P**	**18 35 30.1**	**-0.3**
PDAR	**Pinedale Array**	**57.99**	**338**	P	**P**	**18 35 30.1**	**-0.3**
	1.0nm,0.9s,baz=133,slow=8.3,SNR=5.3						
NVAR	**Mina Array Bea**	**58.29**	**329**	P	**P**	**18 35 32.5**	**-0.1**
NVAR	**Mina Array Bea**	**58.29**	**329**	P	**P**	**18 35 32.5**	**-0.1**
	1.5nm,1.0s,baz=159,slow=8.3,SNR=8.8						
PPT	**Papeete**	**63.58**	**256**	LR	LR	18 55 53.8	
	comp=Z,113nm,18.5s,baz=237,slow=29						
YKA	**Yellowknife Ar**	**76.63**	**346**	P	**P**	**18 37 27.4**	**-0.4**
YKA	**Yellowknife Ar**	**76.63**	**346**	P	**P**	**18 37 27.4**	**-0.4**
	2.1nm,1.0s,baz=144,slow=5.8,SNR=9.1						
SNAA	**Sanae**	**77.25**	**161**	*e*P	**P**	**18 37 31.7**	**+0.2**
	10nm,1.1s						
SNAA	**Sanae**	**77.25**	**161**	P	**P**	**18 37 31.5**	**+0.1**
	2.4nm,1.0s,baz=261,slow=4.3,SNR=13						
DBIC	**Dimbokro**	**80.78**	**81**	LR	LR	19 11 28.4	
	comp=Z,54nm,19.5s,baz=48,slow=34						
VNDA	**Vanda**	**84.73**	**192**	P	**P**	**18 38 11.8**	**+0.6**
VNDA	**Vanda**	**84.73**	**192**	P	**P**	**18 38 11.8**	**+0.6**
	1.7nm,1.0s,baz=106,slow=4.0,SNR=7.4						
SUMG	**Summit**	**88.15**	**12**	*e*P	**P**	**18 38 28.6**	**+0.2**
	10nm,1.0s						
TORD	**Torodi Ar. Bea**	**88.40**	**76**	P	**P**	**18 38 30.7**	**+0.4**
TORD	**Torodi Ar. Bea**	**88.40**	**76**	P	**P**	**18 38 30.7**	**+0.4**
	2.4nm,1.0s,baz=277,slow=4.4,SNR=5.7						
TORD				LR	LR	19 17 40.9	
	comp=Z,32nm,18.6s,baz=15,slow=35						
ILAR	**Eielson Array**	**88.42**	**338**	P	**P**	**18 38 28.2**	**-1.1**
ILAR	**Eielson Array**	**88.42**	**338**	P	**P**	**18 38 28.2**	**-1.1**
	0.3nm,0.7s,baz=134,slow=3.9,SNR=3.1						
ILAR				LR	LR	19 16 36.7	
	comp=Z,32nm,19.0s,baz=353,slow=35						
KEST	**Kesra**	**98.93**	**55**	P	**P**	**18 39 16.8**	**-1.6**
KEST	**Kesra**	**98.93**	**55**	P	**P**	**18 39 16.8**	**-1.6**
	1.3nm,1.1s,baz=335,slow=16,SNR=3.5						
ASAR	**Alice Springs**	**129.54**	**227**	PKP	**PKPdf**	**18 44 46.7**	**-0.7**
ASAR	**Alice Springs**	**129.54**	**227**	PKP	**PKPdf**	**18 44 46.7**	**-0.7**
	1.2nm,1.0s,baz=108,slow=3.0,SNR=6.7						
WRA	**Warramunga Arr**	**131.44**	**231**	PKP	**PKPdf**	**18 44 49.9**	**-1.2**
WRA	**Warramunga Arr**	**131.44**	**231**	PKP	**PKPdf**	**18 44 49.8**	**-1.2**
	1.0nm,0.6s,baz=118,slow=2.1,SNR=12						
ZALV	**Zalesovo Beam**	**135.90**	**9**	PKP	**PKPdf**	**18 44 57.4**	**-1.0**
ZALV	**Zalesovo Beam**	**135.90**	**9**	PKP	**PKPdf**	**18 44 57.4**	**-1.0**
	0.5nm,0.5s,baz=354,slow=1.5,SNR=4.0						
KSRS	**Korea Array**	**140.70**	**318**	PKP	**PKPdf**	**18 45 07.3**	**-0.4**
	0.7nm,0.7s,baz=13,slow=1.6,SNR=3.5						
KSAR	**Wonju Array Be**	**140.73**	**318**	PKP	**PKPdf**	**18 45 07.3**	**-0.5**
MKAR	**Makanchi Array**	**142.16**	**15**	PKP	**PKPdf**	**18 45 09.4**	**-0.6**
MKAR	**Makanchi Array**	**142.16**	**15**	PKP	**PKPdf**	**18 45 09.4**	**-0.6**
	0.4nm,0.8s,baz=343,slow=2.0,SNR=4.0						
CMAR	**Chiang Mai Arr**	**171.66**	**339**	PKP	**PKPdf**	**18 45 46.0**	**-1.2**
CMAR	**Chiang Mai Arr**	**171.66**	**339**	PKP	**PKPdf**	**18 45 46.0**	**-1.2**
	1.2nm,1.0s,baz=249,slow=2.5,SNR=7.6						

*ISCJB **25** 18:43:35.1±1.0, 27.48S±0.07×179.2W±0.1, h300km, mb3.0/3, Error ellipse: s-maj=16.5km s-min=9.8km az=179.9*
*IDC **25** 18:43:36.5±2.1, 27.46S×179.04W, h296km±15km, mb3.0/3, mb1 3.4/5, mb1mx3.1/18, mbtmp3.3/5, Error ellipse: s-maj=52.0km s-min=25.4km az=57.0*

ISC 25 18:43:37.6±1.6, 27.7S±0.1×179.1W±0.2, h300km, n20, σ1§31/28, mb3.0/3, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.92**	**147**	P	**Pn**	**18 44 23.9**	**+0.2**
	37nm,0.3s,baz=18,slow=19,SNR=3.3						
RAO				S	**S**	**18 45 00.6**	**+0.2**
	66nm,0.3s,baz=37,slow=20,SNR=5.6						
MXZ	**Matakaoa Point**	**10.12**	**192**	PN	**Pn**	**18 45 58.5**	**+1.4**
MXZ				SN	**S**	**18 47 51.0**	**0.0**
PUZ	**Puketiti**	**10.62**	**191**	PN	**Pn**	**18 46 04.7**	**+1.4**
PUZ				SN	**S**	**18 48 01.7**	**-0.8**
MWZ	**Matawai**	**11.02**	**194**	PN	**P**	**18 46 10.3**	**-0.2**
MWZ				SN	**S**	**18 48 12.0**	**+0.6**
CNGZ	**Carnagh Statio**	**11.03**	**191**	PN	**Pn**	**18 46 08.5**	**+0.2**
CNGZ				SN	**S**	**18 48 09.4**	**-2.2**
URZ	**Urewera**	**11.04**	**196**	PN	**P**	**18 46 09.9**	**-0.9**
URZ				SN	**S**	**18 48 14.0**	**+2.1**
URZ	**Urewera**	**11.04**	**196**	P	**P**	**18 46 09.9**	**-0.9**
	3.9nm,0.3s,baz=274,slow=2.3,SNR=36						
URZ				S	**S**	**18 48 14.9**	**+3.1**
	1.4nm,0.3s,baz=244,slow=22,SNR=13						
PRHZ	**Porangahau**	**13.06**	**194**	PN	**Pn**	**18 46 31.6**	**-1.3**
DVHZ	**Dannevirke**	**13.20**	**196**	PN	**Pn**	**18 46 34.1**	**-0.5**
MRZ	**Mangatainoka R**	**13.69**	**197**	PN	**P**	**18 46 39.0**	**-1.2**
MRZ				SN	**S**	**18 49 08.3**	**-3.0**
HOWZ	**Holdsworth Sta**	**13.93**	**197**	PN	**P**	**18 46 41.7**	**-1.1**
OGWZ	**Otaki Gorge**	**13.95**	**198**	PN	**P**	**18 46 42.5**	**-0.5**
KIW	**Kapiti Island**	**14.06**	**199**	PN	**P**	**18 46 43.9**	**-0.4**
MTW	**Mount Morrison**	**14.18**	**197**	PN	**P**	**18 46 44.4

TAP 25 19:14:42.2,24°40N×121°82E,h10km±1km,ML1.2,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ENA	**Nanau**	**0.08**	**291**	P	Pg	19 14 44.4	-0.1
	baz=291						
ENA				S	Sg	19 14 46.0	-0.2
	baz=291						
TWC	**Suao**	**0.21**	**6**	*e*P	Pg	19 14 46.7	+0.1
	baz=9.0						
TWC				S	Sg	19 14 49.7	+0.2
	baz=9.0						
TWD	**Chiawan**	**0.38**	**213**	*e*P	Pb	19 14 50.7	-0.4
	baz=212						
NNS	**Nan Shan**	**0.41**	**276**	*e*S	Sg	19 14 55.3	-0.8
	baz=275						
NSK	**Sanguang**	**0.51**	**303**	*e*P	Pg	19 14 52.3	+0.1
	baz=303						
NSK				*e*S	Sg	19 14 59.0	+0.1
	baz=303						

JMA 25 19:15:00.6±0.5,25°40N×122°85E,h218km,M2.7,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.95**	**171**	*e*S	S	19 15 56.5	+0.2
IRIF	**Iriomote-Funau**	**1.33**	**143**	P	Pn	19 15 34.6	0.0
IRIF				*e*S	S	19 16 01.2	+0.3
JIJ	**Ishigaki jima**	**1.56**	**131**	P	Pn	19 15 36.3	-0.2
JIJ				*e*S	S	19 16 03.8	-0.4
JKRS	**Kuro-shima**	**1.56**	**137**	P	Pn	19 15 36.9	+0.4
JKRS				*e*S	S	19 16 04.9	+0.6
JTJ	**Tarama**	**1.84**	**114**	P	Pn	19 15 39.5	+0.5
JTJ				*e*S	S	19 16 09.0	+0.4

IDC 25 19:36:18.4±24.0,18°59S×178°12W,h477km±239km, mb2.9/5,mb1 3.0/5,mb1mx2.9/20,mbtmp2.9/5,Error ellipse: s-maj=148.7km s-min=53.8km az=95.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.55**	**242**	P	P	19 42 59.1	-0.1
	1.1nm,0.7s,baz=78,slow=9.3,SNR=4.3						
WRA	**Warramunga Arr**	**44.78**	**260**	P	P	19 43 48.3	-0.6
	0.2nm,0.5s,baz=96,slow=6.3,SNR=12						
ASAR	**Alice Springs**	**44.88**	**255**	P	P	19 43 49.8	+0.2
	0.6nm,0.5s,baz=89,slow=8.6,SNR=22						
FITZ	**Fitzroy Crossi**	**53.19**	**261**	P	P	19 44 51.3	-0.1
	1.5nm,1.0s,baz=90,slow=9.1,SNR=3.1						
MJAR	**Matsushiro Arr**	**66.61**	**323**	P	P	19 46 32.9	-0.1
	0.3nm,0.4s,baz=154,slow=4.3,SNR=4.5						
ARCES	**ARCESS Array B**	**127.03**	**350**	PKP	PKPdf	19 54 26.2	-0.8
	4.9nm,1.1s,baz=9.5,slow=2.7,SNR=4.2						
BRTR	**Keskin Array B**	**145.45**	**314**	PKPbc	PKPdf	19 55 02.4	+0.5
	0.4nm,0.6s,baz=59,slow=3.7,SNR=2.8						
GERES	**GERESS Array B**	**148.33**	**345**	PKPbc	PKPbc	19 55 10.0	-0.4
	0.1nm,0.4s,baz=354,slow=4.0,SNR=5.0						

IDC 25 19:42:15.3±2.5,18°19S×177°79W,h342km±26km, mb3.6/6,mb1 3.9/7,mb1mx3.4/21,mbtmp3.6/7,Error ellipse: s-maj=86.5km s-min=14.7km az=152.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.18**	**54**	P	Pn	19 44 00.0	+0.3
	9.6nm,0.3s,baz=35,slow=11,SNR=6.0						
AFI				S	S	19 45 19.5	-5.2
	15nm,0.3s,baz=222,slow=23,SNR=9.4						
STKA	**Stephens Creek**	**39.01**	**242**	P	P	19 49 10.2	+0.1
	2.5nm,0.5s,baz=74,slow=7.0,SNR=8.5						
WRA	**Warramunga Arr**	**45.16**	**260**	P	P	19 49 58.5	-0.9
	1.6nm,0.5s,baz=98,slow=7.0,SNR=36						
ASAR	**Alice Springs**	**45.28**	**254**	P	P	19 50 00.3	-0.1
	10nm,0.4s,baz=90,slow=8.4,SNR=338						
ASAR				PcP	PcP	19 51 32.9	-0.8
	0.6nm,0.5s,baz=101,slow=4.0,SNR=5.5						
FITZ	**Fitzroy Crossi**	**53.56**	**261**	P	P	19 51 02.7	+0.3
	0.6nm,0.3s,baz=73,slow=9.1,SNR=10						
NVAR	**Mina Array Bea**	**79.22**	**44**	P	P	19 53 42.6	-0.8
	1.0nm,0.8s,baz=229,slow=8.2,SNR=5.5						
TXAR	**Lajitas Array**	**85.65**	**57**	P	P	19 54 16.6	+0.2
	2.2nm,0.9s,baz=217,slow=6.1,SNR=4.7						
BRTR	**Keskin Array B**	**145.40**	**315**	PKPbc	PKPdf	20 01 12.7	-0.5
	1.1nm,0.9s,baz=177,slow=4.6,SNR=4.6						
GERES	**GERESS Array B**	**148.04**	**346**	PKPbc	PKPbc	20 01 21.4	+0.5
	0.5nm,0.4s,baz=21,slow=4.5,SNR=7.6						

*ISCJB **25** 19:44:52.7±0.5,39°08N±0°03×29°06E±0°03,h2km±6km, Error ellipse: s-maj=4.5km s-min=3.8km az=150.9*
*DDA **25** 19:44:52.8,39°11N×29°03E,h7km,MD3.0*
*CSEM **25** 19:44:53.2±0.1,39°09N×29°08E,h2km,MD2.9,Error ellipse: s-maj=3.4km s-min=3.3km az=113.0*
*ISK **25** 19:44:53.2,39°07N×29°12E,h1km,MD2.9*

ISC 25 19:44:53.1±1.0,39°09N±0°02×29°08E±0°02,h10km±11km, n50,σ0§81/68,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TVSB	**Tavsanli**	**0.47**	**39**	*e*PG	**Pg**	**19 45 02.8**	**+0.6**
TVSB				*e*SG	**Sb**	**19 45 09.8**	**-0.7**
TVSB	**Tavsanli**	**0.47**	**39**	*e*Pg	**Pg**	**19 45 02.8**	**+0.6**
TVSB				*e*Sg	**Sb**	**19 45 09.8**	**-0.7**
KULA	**Kula-Manisa**	**0.66**	**210**	*e*PG	**Pg**	**19 45 06.1**	**+0.3**
KULA	**Kula-Manisa**	**0.66**	**210**	*e*Pg	**Pg**	**19 45 06.1**	**+0.3**
DURS	**Dursunbey**	**0.69**	**318**	*i* P	**Pg**	**19 45 06.5**	**0.0**
DURS				*i* S	**Sg**	**19 45 15.1**	**-0.5**
MANT	**Manisa**	**0.72**	**214**	*i* P	**Pg**	**19 45 06.6**	**-0.5**
MANT				*i* S	**Sg**	**19 45 14.9**	**-1.6**
MANT	**Manisa**	**0.72**	**214**	*i* P	**Pg**	**19 45 06.6**	**-0.5**
MANT				*i* S	**Sg**	**19 45 14.9**	**-1.6**
KHAL	**Karahalli**	**0.79**	**156**	*i* P	**Pb**	**19 45 09.3**	**+0.4**
KHAL				*i* S	**Sg**	**19 45 18.2**	**-0.3**
KHAL	**Karahalli**	**0.79**	**156**	*i* P	**Pb**	**19 45 09.3**	**+0.4**
KHAL				*i* S	**Sg**	**19 45 18.2**	**-0.3**
ALT	**Altintas**	**0.80**	**92**	*e*PG	**Pb**	**19 45 09.2**	**+0.1**
ALT				*e*SG	**Sg**	**19 45 19.5**	**+0.4**
ALT	**Altintas**	**0.80**	**92**	*e*Pg	**Pb**	**19 45 09.3**	**+0.1**
ALT				*e*Sg	**Sg**	**19 45 19.5**	**+0.4**
KHL	**Karahalli**	**0.84**	**155**	*e*PG	**Pg**	**19 45 09.5**	**+0.3**
KHL	**Karahalli**	**0.84**	**155**	*e*Pg	**Pg**	**19 45 09.5**	**+0.3**
AKHS	**Akhisar**	**1.01**	**258**	*i* P	**Pg**	**19 45 12.7**	**+0.2**
AKHS				*i* S	**Sg**	**19 45 25.5**	**-0.1**
AKHS	**Akhisar**	**1.01**	**258**	*i* P	**Pg**	**19 45 12.7**	**+0.2**
AKHS				*i* S	**Sg**	**19 45 25.5**	**-0.1**
ULDT	**Uludag**	**1.05**	**2**	*i* P	**Pg**	**19 45 13.2**	**-0.2**
ULDT				*e*S	**Sg**	**19 45 26.2**	**-0.9**
BALB	**Balikesir**	**1.08**	**301**	*e*PN	**Pn**	**19 45 15.4**	**+1.1**
BALB	**Balikesir**	**1.08**	**301**	*e*Pn	**Pn**	**19 45 15.4**	**+1.1**
SHUT	**Suhut-Afyon**	**1.27**	**114**	*e*PN	**Pn**	**19 45 16.6**	**-0.4**
SHUT	**Suhut-Afyon**	**1.27**	**114**	*e*Pn	**Pn**	**19 45 16.6**	**-0.4**
KCTX	**Karacabey (Bur**	**1.30**	**335**	*e*PN	**Pg**	**19 45 18.3**	**+0.3**
KCTX	**Karacabey (Bur**	**1.30**	**335**	*e*Pn	**Pg**	**19 45 18.3**	**+0.3**
BALY	**Balya**	**1.30**	**300**	*i* P	**Pn**	**19 45 17.3**	**-0.1**
BALY				*e*S	**Sb**	**19 45 33.2**	**-1.3**
BALY	**Balya**	**1.30**	**300**	*i* P	**Pn**	**19 45 17.3**	**-0.1**
BALY				*e*S	**Sb**	**19 45 33.2**	**-1.3**
BORA	**Eskisehir**	**1.32**	**53**	*i* P	**Pg**	**19 45 18.7**	**+0.2**
BORA				*i* S	**Sg**	**19 45 36.7**	**+1.0**
BORA	**Eskisehir**	**1.32**	**53**	*i* P	**Pg**	**19 45 18.7**	**+0.2**
BORA				*i* S	**Sg**	**19 45 36.7**	**+1.0**
GEMT	**Gemlik**	**1.35**	**4**	*e*PN	**Pg**	**19 45 19.1**	**+0.2**
GEMT	**Gemlik**	**1.35**	**4**	*e*Pn	**Pg**	**19 45 19.1**	**+0.2**
ADVT	**Abdulvahap**	**1.44**	**21**	*e*PN	**Pn**	**19 45 19.5**	**+0.3**
ADVT	**Abdulvahap**	**1.44**	**21**	*e*Pn	**Pn**	**19 45 19.5**	**+0.3**
ESKT	**Eskisehir**	**1.44**	**72**	*e*PN	**Pn**	**19 45 18.8**	**-0.6**
ESKT	**Eskisehir**	**1.44**	**72**	*e*Pn	**Pn**	**19 45 18.8**	**-0.6**
GONE	**Gonen-Balikesi**	**1.44**	**312**	*e*PN	**Pb**	**19 45 19.8**	**-0.2**
GONE	**Gonen-Balikesi**	**1.44**	**312**	*e*Pn	**Pb**	**19 45 19.8**	**-0.2**
ARMT	**Armutlu**	**1.48**	**354**	*e*PN	**Pb**	**19 45 20.9**	**+0.1**
ARMT	**Armutlu**	**1.48**	**354**	*e*Pn	**Pb**	**19 45 20.9**	**+0.1**
YLV	**Yalova**	**1.49**	**9**	*e*PN	**Pb**	**19 45 20.7**	**-0.2**
YLV	**Yalova**	**1.49**	**9**	*e*Pn	**Pb**	**19 45 20.7**	**-0.2**
BNT	**Bandirma**	**1.55**	**325**	*e*PN	**Pb**	**19 45 22.0**	**+0.1**
BNT	**Bandirma**	**1.55**	**325**	*e*Pn	**Pb**	**19 45 22.0**	**+0.1**
AYDN	**Tasoluk**	**1.71**	**214**	*i* P	**Pg**	**19 45 26.1**	**+0.3**
AYDN				*i* S	**Sg**	**19 45 50.1**	**+2.1**
AYDN	**Tasoluk**	**1.71**	**214**	*i* P	**Pg**	**19 45 26.1**	**+0.3**
AYDN				*i* S	**Sg**	**19 45 50.1**	**+2.1**
GULT	**Gulveren**	**1.74**	**39**	*e*PN	**Pb**	**19 45 24.5**	**-0.7**
GULT	**Gulveren**	**1.74**	**39**	*e*Pn	**Pb**	**19 45 24.5**	**-0.7**
KRBG	**Karabiga-Canak**	**1.89**	**314**	*e*PN	**Pb**	**19 45 27.0**	**-0.7**
KRBG	**Karabiga-Canak**	**1.89**	**314**	*e*Pn	**Pb**	**19 45 27.0**	**-0.7**
RKY	**Sarkoy-Tekirda**	**2.17**	**318**	*e*PN	**Pn**	**19 45 30.9**	**+1.6**
RKY	**Sarkoy-Tekirda**	**2.17**	**318**	*e*Pn	**Pn**	**19 45 30.9**	**+1.6**
MFT	**Murefte**	**2.19**	**321**	*e*PN	**Pn**	**19 45 31.3**	**+1.7**
MFT	**Murefte**	**2.19**	**321**	*e*Pn	**Pn**	**19 45 31.3**	**+1.7**

IDC 25 19:49:47.8±4.3,18°33N×145°96E,h0km,mb3.7/3, mb1 3.9/4,mb1mx3.4/26,mbtmp3.6/4,ML4.1/1,Error ellipse: s-maj=175.1km s-min=30.4km az=87.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**19.39**	**341**	P	P	19 54 15.2	-0.2
	0.5nm,0.3s,baz=160,slow=9.4,SNR=6.3						
WRA	**Warramunga Arr**	**39.70**	**197**	P	P	19 57 21.4	-0.6
	0.4nm,0.4s,baz=19,slow=8.7,SNR=12						
FITZ	**Fitzroy Crossi**	**41.34**	**210**	P	P	19 57 35.6	0.0
	0.8nm,0.2s,baz=38,slow=9.0,SNR=29						
ASAR	**Alice Springs**	**43.36**	**196**	P	P	19 57 52.1	+0.1
	0.2nm,0.5s,baz=17,slow=6.1,SNR=9.1						

IDC 25 19:50:03.0±2.8,28°17N×141°66E,h0km,mb3.7/4, mb1 3.8/4,mb1mx3.4/24,mbtmp3.7/4,Error ellipse: s-maj=118.9km s-min=29.3km az=75.0,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**48.35**	**189**	P	P	19 58 46.5	-0.1
	0.3nm,0.8s,baz=1.1,slow=8.8,SNR=3.0						
MKAR	**Makanchi Array**	**49.44**	**309**	P	P	19 58 54.8	-0.1
	0.1nm,0.3s,baz=75,slow=8.4,SNR=2.9						
KURBB	**Kurchatov Arra**	**51.96**	**314**	P	P	19 59 13.9	+0.2
	0.6nm,0.6s,baz=91,slow=8.4,SNR=8.5						
FINES	**FINESS Array B**	**76.78**	**334**	P	P	20 01 56.0	-0.2
	0.6nm,0.3s,baz=70,slow=4.7,SNR=8.1						

*ISCJB **25** 19:59:23.3±0.2,43°68N±0°02×105°29W±0°03,h0km, mb4.2/1,Error ellipse: s-maj=2.7km s-min=2.2km az=161.4*
*IDC **25** 19:59:23.4±1.9,43°75N×105°55W,h0km,mb4.0/1, mb1 4.0/3,mb1mx3.5/28,mbtmp3.8/3,ML3.4/2,Error ellipse: s-maj=51.1km s-min=8.6km az=150.0*
*NEIC **25** 19:59:23.2±0.5,43°75N×105°42W,h0km,ML2.9,Error ellipse: s-maj=8.3km s-min=5.6km az=177.0,Suspected Mining explosion.*
NEIC 60 km [40 miles] S of Gillette.

ISC 25 19:59:23.1±0.6,43°67N±0°02×105°34W±0°02,h0km,n156, σ1§16/187,68C-72D,Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I23A	**Meade Ranch, G**	**0.30**	**343**	P	**Pb**	**19 59 30.9**	**-0.7**
	baz=0.2,SNR=102						
I23A				⇑S	**Sg**	**19 59 33.9**	**+1.0**
	baz=0.2						
I23A	**Meade Ranch, G**	**0.30**	**343**	P	**Pb**	**19 59 30.9**	**-0.7**
	baz=0.2,SNR=102						
I23A				⇑S	**Sg**	**19 59 33.9**	**+1.0**
	baz=0.2						
J23A	**Dilts Ranch, B**	**0.31**	**210**	⇑P	**Pg**	**19 59 30.5**	**+1.4**
	baz=0.4						
J23A	**Dilts Ranch, B**	**0.31**	**210**	⇑P	**Pg**	**19 59 30.5**	**+1.4**
	baz=0.4						
I24A	**Kuemmerle Ranc**	**0.55**	**70**	⇓P	**Pg**	**19 59 34.1**	**+0.4**
	baz=0.6						
I24A	**Kuemmerle Ranc**	**0.55**	**70**	⇓P	**Pg**	**19 59 34.1**	**+0.4**
	baz=0.6						
J24A	**Dixon Ranch, L**	**0.60**	**124**	P	**Pg**	**19 59 34.7**	**+0.1**
	baz=0.7,SNR=63						
J24A	**Dixon Ranch, L**	**0.60**	**124**	P	**Pg**	**19 59 34.7**	**+0.1**
	baz=0.7,SNR=63						
I22A	**9 Mile Ranch,**	**0.86**	**285**	⇓P	**Pb**	**19 59 40.9**	**-0.1**
	baz=0.8						
I22A	**9 Mile Ranch,**	**0.86**	**285**	⇓P	**Pb**	**19 59 40.9**	**-0.1**
	baz=0.8						
J22A	**Midwest**	**0.87**	**253**	⇓P	**Pb**	**19 59 40.7**	**-0.5**
	baz=0.8						
J22A	**Midwest**	**0.87**	**253**	⇓P	**Pb**	**19 59 40.7**	**-0.5**
	baz=0.8						
H23A	**Clabaugh Cattl**	**0.89**	**357**	⇑P	**Pg**	**19 59 40.7**	**+0.5**
	baz=0.8,SNR=20						
H23A	**Clabaugh Cattl**	**0.89**	**357**	⇑P	**Pg**	**19 59 40.7**	**+0.5**
	baz=0.8,SNR=20						
K23A	**Bowen Ranch, D**	**0.94**	**193**	⇓P	**Pg**	**19 59 41.8**	**+0.7**
	baz=1.0						
K23A	**Bowen Ranch, D**	**0.94**	**193**	⇓P	**Pg**	**19 59 41.8**	**+0.7**
	baz=1.0						
K24A	**Anderson Ranch**	**1.02**	**158**	⇑P	**Pg**	**19 59 42.5**	**-0.2**
	baz=1.1,SNR=27						
K24A	**Anderson Ranch**	**1.02**	**158**	⇑P	**Pg**	**19 59 42.5**	**-0.2**
	baz=1.1,SNR=27						
RSSD	**Black Hills**	**1.04**	**64**	*e*P	**Pg**	**19 59 42.8**	**-0.4**
RSSD				*e*S	**Sn**	**19 59 59.9**	**-0.8**
J25A	**Sunshine Ranch**	**1.15**	**104**	⇓P	**Pg**	**19 59 44.7**	**-0.5**
	baz=1.2,SNR=105						
J25A	**Sunshine Ranch**	**1.15**	**104**	⇓P	**Pg**	**19 59 44.7**	**-0.5**
	baz=1.2,SNR=105						
H22A	**Clearmont**	**1.18**	**322**	⇓P	**Pb**	**19 59 46.7**	**+0.3**
	baz=1.1,SNR=23						
H22A	**Clearmont**	**1.18**	**322**	⇓P	**Pb**	**19 59 46.7**	**+0.3**
	baz=1.1,SNR=23						
H24A	**Dirks Ranch, A**	**1.22**	**27**	P	**Pg**	**19 59 46.0**	**-0.4**
	baz=1.2,SNR=111						
H24A				⇓S	**Sb**	**20 00 03.3**	**-0.1**
	baz=1.2						
H24A	**Dirks Ranch, A**	**1.22**	**27**	P	**Pg**	**19 59 46.0**	**-0.4**
	baz=1.2,SNR=111						
H24A				⇓S	**Sb**	**20 00 03.3**	**-0.1**
	baz=1.2						
K22A	**Casper**	**1.34**	**221**	⇑P	**Pg**	**19 59 48.5**	**-0.2**
	baz=1.4						
K22A	**Casper**	**1.34**	**221**	⇑P	**Pg**	**19 59 48.5**	**-0.2**
	baz=1.4						
I21A	**Big Trails, Te**	**1.42**	**276**	⇑P	**Pn**	**19 59 49.9**	**-0.5**
	baz=1.4						
I21A				⇓S	**Sn**	**20 00 11.2**	**+1.3**
	baz=1.4						
I21A	**Big Trails, Te**	**1.42**	**276**	⇑P	**Pn**	**19 59 49.9**	**-0.5**
	baz=1.4						
I21A				⇓S	**Sn**	**20 00 11.2**	**+1.3**
	baz=1.4						
K25A	**Mack Ranch, Ha**	**1.51**	**134**	⇑P	**Pn**	**19 59 51.5**	**0.0**
	baz=1.6,SNR=55						
K25A	**Mack Ranch, Ha**	**1.51**	**134**	⇑P	**Pn**	**19 59 51.5**	**0.0**
	baz=1.6,SNR=55						
G23A	**Biddle**	**1.53**	**359**	P	**Pn**	**19 59 52.1**	**+0.3**
	baz=1.4,SNR=117						
G23A	**Biddle**	**1.53**	**359**	P	**Pn**	**19 59 52.1**	**+0.3**
	baz=1.4,SNR=117						
H21A	**Big Horn, Sher**	**1.56**	**309**	⇓P	**Pg**	**19 59 53.1**	**+0.1**
	baz=1.5,SNR=22						
H21A	**Big Horn, Sher**	**1.56**	**309**	⇓P	**Pg**	**19 59 53.1**	**+0.1**
	baz=1.5,SNR=22						
J21A	**Lysite**	**1.57**	**259**	⇑P	**Pn**	**19 59 52.7**	**+0.3**
	baz=1.5						
J21A				⇓S	**Sg**	**20 00 15.3**	**+1.9**
	baz=1.5						
J21A	**Lysite**	**1.57**	**259**	⇑P	**Pn**	**19 59 52.7**	**+0.3**
	baz=1.5						
J21A				⇓S	**Sg**	**20 00 15.3**	**+1.9**
	baz=1.5						
L23A	**Garrett**	**1.58**	**190**	⇑P	**Pn**	**19 59 52.3**	**-0.3**
	baz=1.6						
L23A				⇑S	**Sn**	**20 00 14.1**	**+0.3**
	baz=1.6						
L23A	**Garrett**	**1.58**	**190**	⇑P	**Pn**	**19 59 52.3**	**-0.3**
	baz=1.6						
L23A				⇑S	**Sn**	**20 00 14.1**	**+0.3**
	baz=1.6						
L24A	**Wheatland**	**1.65**	**169**	⇑P	**Pn**	**19 59 53.7**	**+0.2**
	baz=1.7,SNR=38						
L24A	**Wheatland**	**1.65**	**169**	⇑P	**Pn**	**19 59 53.7**	**+0.2**
	baz=1.7,SNR=38						
G22A	**Birney**	**1.69**	**337**	⇑P	**Pb**	**19 59 55.2**	**0.0**
	baz=1.6,SNR=203						
G22A	**Birney**	**1.69**	**337**	⇑P	**Pb**	**19 59 55.2**	**0.0**
	baz=1.6,SNR=203						
G24A	**Alzada**	**1.79**	**21**	⇑P	**Pn**	**19 59 56.1**	**+0.8**
	baz=1.7,SNR=23						
G24A	**Alzada**	**1.79**	**21**	⇑P	**Pn**	**19 59 56.1**	**+0.8**
	baz=1.7,SNR=23						
L25A	**Engebretsen Ra**	**1.82**	**146**	⇓P	**Pn**	**19 59 56.8**	**+1.0**
	baz=1.9,SNR=38						
L25A	**Engebretsen Ra**	**1.82**	**146**	⇓P	**Pn**	**19 59 56.8**	**+1.0**
	baz=1.9,SNR=38						
L22A	**Ellis Ranch, M**	**1.82**	**207**	⇓P	**Pn**	**19 59 56.9**	**+0.9**
	baz=1.9,SNR=86						
L22A				⇓Sb	**Sg**	**20 00 22.7**	**+0.9**
	baz=1.9						
L22A	**Ellis Ranch, M**	**1.82**	**207**	⇓P	**Pn**	**19 59 56.9**	**+0.9**
	baz=1.9,SNR=86						
L22A				⇓Sb	**Sg**	**20 00 22.7**	**+0.9**
	baz=1.9						
K26A	**Motz Farm, Whi**	**1.85**	**121**	⇓P	**Pn**	**19 59 57.1**	**+0.9**
	baz=1.9						
K26A	**Motz Farm, Whi**	**1.85**	**121**	⇓P	**Pn**	**19 59 57.1**	**+0.9**
	baz=1.9						
J20A	**Shoshoni**	**2.02**	**262**	⇓Pb	**Pg**	**20 00 01.7**	**-0.1**
	baz=2.0,SNR=227						
J20A				⇓Sb	**Sg**	**20 00 29.7**	**+1.7**
	baz=2.0						
J20A	**Shoshoni**	**2.02**	**262**	⇓Pb	**Pg**	**20 00 01.7**	**-0.1**
	baz=2.0,SNR=227						
J20A				⇓Sb	**Sg**	**20 00 29.7**	**+1.7**
	baz=2.0						
I20A	**Worland**	**2.04**	**279**	P	**Pb**	**20 00 00.8**	**-0.3**
	baz=2.0,SNR=188						
I20A				⇑Sb	**Sg**	**20 00 29.5**	**+1.0**
	baz=2.0						
I20A	**Worland**	**2.04**	**279**	P	**Pb**	**20 00 00.8**	**-0.3**
	baz=2.0,SNR=188						
I20A				⇑Sb	**Sg**	**20 00 29.5**	**+1.0**
	baz=2.0						
G21A	**Lodge Grass**	**2.05**	**320**	⇑P	**Pb**	**20 00 00.4**	**-0.9**
	baz=2.0,SNR=21						
G21A	**Lodge Grass**	**2.05**	**320**	⇑P	**Pb**	**20 00 00.4**	**-0.9**
	baz=2.0,SNR=21						
F23A	**Volborg**	**2.05**	**359**	⇑P	**Pn**	**19 59 59.7**	**+0.8**
	baz=2.0,SNR=92						
F23A	**Volborg**	**2.05**	**359**	⇑P	**Pn**	**19 59 59.7**	**+0.8**
	baz=2.0,SNR=92						
H20A	**Greybull**	**2.08**	**294**	⇑P	**Pn**	**20 00 00.7**	**+1.3**
	baz=2.0,SNR=20						
H20A	**Greybull**	**2.08**	**294**	⇑P	**Pn**	**20 00 00.7**	**+1.3**
	baz=2.0,SNR=20						
F22A	**Rosebud**	**2.21**	**343**	⇑P	**Pn**	**20 00 01.9**	**+0.8**
	baz=2.1						
F22A	**Rosebud**	**2.21**	**343**	⇑P	**Pn**	**20 00 01.9**	**+0.8**
	baz=2.1						
M24A	**Cheyenne**	**2.23**	**170**	⇓P	**Pn**	**20 00 03.1**	**+1.5**
	baz=2.3,SNR=83						
M24A				⇑Sb	**Sg**	**20 00 34.7**	**-0.2**
	baz=2.3						
M24A	**Cheyenne**	**2.23**	**170**	⇓P	**Pn**	**20 00 03.1**	**+1.5**
	baz=2.3,SNR=83						
M24A				⇑Sb	**Sg**	**20 00 34.7**	**-0.2**
	baz=2.3						
L21A	**Rawlins**	**2.27**	**222**	⇓P	**Pn**	**20 00 03.7**	**+1.6**
	baz=2.3,SNR=79						
L21A	**Rawlins**	**2.27**	**222**	⇓P	**Pn**	**20 00 03.7**	**+1.6**
	baz=2.3,SNR=79						
PHWY	**Pilot Hill**	**2.37**	**182**	*e*Pn	**Pn**	**20 00 04.4**	**+0.9**
PHWY				*e*Sn	**Sb**	**20 00 35.7**	**-1.1**
M25A	**Palm-Egli Farm**	**2.43**	**157**	⇓P	**Pn**	**20 00 05.6**	**+1.4**
	baz=2.5						
M25A	**Palm-Egli Farm**	**2.43**	**157**	⇓P	**Pn**	**20 00 05.6**	**+1.4**
	baz=2.5						
M22A	**Cedar Creek Ra**	**2.45**	**203**	⇓P	**Pb**	**20 00 06.8**	**-1.4**
	baz=2.5,SNR=95						
M22A	**Cedar Creek Ra**	**2.45**	**203**	⇓P	**Pb**	**20 00 06.8**	**-1.4**
	baz=2.5,SNR=95						
F21A	**Absaloka Mine,**	**2.50**	**330**	⇓Sb	**Sg**	**20 00 43.5**	**+0.1**
	baz=2.4						
F21A	**Absaloka Mine,**	**2.50**	**330**	⇓Sb	**Sg**	**20 00 43.5**	**+0.1**
	baz=2.4						
M21A	**Separation Pea**	**2.55**	**217**	⇑P	**Pb**	**20 00 08.4**	**-1.5**
	baz=2.6,SNR=81						
M21A	**Separation Pea**	**2.55**	**217**	⇑P	**Pb**	**20 00 08.4**	**-1.5**
	baz=2.6,SNR=81						
G20A	**Bridger**	**2.58**	**308**	P	**Pn**	**20 00 07.0**	**+0.8**
	baz=2.5,SNR=136						
G20A				⇑Sb	**Sg**	**20 00 46.0**	**+0.1**
	baz=2.5						
G20A	**Bridger**	**2.58**	**308**	P	**Pn**	**20 00 07.0**	**+0.8**
	baz=2.5,SNR=136						
G20A				⇑Sb	**Sg**	**20 00 46.0**	**+0.1**
	baz=2.5						
I19A	**Meeteetse**	**2.67**	**279**	⇑P	**Pb**	**20 00 09.8**	**-2.1**
	baz=2.6,SNR=28						
I19A	**Meeteetse**	**2.67**	**279**	⇑P	**Pb**	**20 00 09.8**	**-2.1**
	baz=2.6,SNR=28						
K19A	**Absolon Red Bu**	**2.70**	**253**	⇓P	**Pn**	**20 00 09.5**	**+1.6**
	baz=

	baz=3.6,SNR=9.6							
GCMT	**Greycliff**	**3.74**	**306**	*e*Pn	**Pn**	**20 00 22.2**	**0.0**	
GCMT				*e*Sn	**Sn**	**20 01 04.7**	**-2.4**	
LOHW	**Long Hollow**	**3.82**	**271**	*e*Pn	**Pn**	**20 00 20.8**	**-2.6**	
LOHW				*e*Pg	**Pg**	**20 00 34.9**	**-1.4**	
LOHW				*e*Sn	**Sn**	**20 01 06.9**	**-2.3**	
F18A	**Big Timber** baz=3.7,SNR=11	**3.83**	**307**	⇓P	**Pn**	**20 00 25.4**	**+1.9**	
F18A	**Big Timber** baz=3.7,SNR=11	**3.83**	**307**	⇓P	**Pn**	**20 00 25.4**	**+1.9**	
MOOW	**Moose Ponds**	**3.92**	**273**	*e*Pn	**Pn**	**20 00 22.4**	**-2.4**	
SNOW	**Snow King Moun**	**3.94**	**269**	*e*Pn	**Pn**	**20 00 23.7**	**-1.4**	
IMW	**Indian Meadow**	**4.06**	**275**	*e*Pn	**Pn**	**20 00 25.4**	**-1.3**	
TPAW	**Teton Pass**	**4.08**	**269**	*e*Pn	**Pn**	**20 00 25.8**	**-1.2**	
TPAW				*e*Pg	**Pg**	**20 00 39.4**	**-2.0**	
C22A	**Vida** baz=4.0,SNR=13	**4.09**	**355**	⇑P	**Pn**	**20 00 28.4**	**+1.4**	
C22A	**Vida** baz=4.0,SNR=13	**4.09**	**355**	⇑P	**Pn**	**20 00 28.4**	**+1.4**	
E18A	**Harlowton** baz=4.2,SNR=21	**4.34**	**313**	⇑P	**Pn**	**20 00 31.7**	**+1.1**	
E18A	**Harlowton** baz=4.2,SNR=21	**4.34**	**313**	⇑P	**Pn**	**20 00 31.7**	**+1.1**	
P26A	**Davis Ranch, A** baz=4.5,SNR=13	**4.37**	**159**	⇓P	**Pn**	**20 00 31.8**	**+0.9**	
P26A	**Davis Ranch, A** baz=4.5,SNR=13	**4.37**	**159**	⇓P	**Pn**	**20 00 31.8**	**+0.9**	
E17A	**Martinsdale** baz=4.7,SNR=9.4	**4.80**	**307**	⇓P	**Pn**	**20 00 38.8**	**+1.9**	
E17A	**Martinsdale** baz=4.7,SNR=9.4	**4.80**	**307**	⇓P	**Pn**	**20 00 38.8**	**+1.9**	
C19A	**Slack Wire Ran** baz=4.7,SNR=12	**4.82**	**329**	⇑P	**Pn**	**20 00 38.5**	**+1.5**	
C19A	**Slack Wire Ran** baz=4.7,SNR=12	**4.82**	**329**	⇑P	**Pn**	**20 00 38.5**	**+1.5**	
D17A	**Six Diamond Ra** baz=5.0,SNR=16	**5.13**	**315**	⇓P	**Pn**	**20 00 42.5**	**+1.2**	
D17A	**Six Diamond Ra** baz=5.0,SNR=16	**5.13**	**315**	⇓P	**Pn**	**20 00 42.5**	**+1.2**	
DLMT	**Dillon**	**5.46**	**291**	*e*Pn	**Pn**	**20 00 45.5**	**-0.4**	
DLMT				*e*Pg	Pb	20 01 03.2	+3.8	
MCMT	**McKenzie Canyo** 1.2nm,0.4s	**5.52**	**285**	*e*Pn	**Pn**	**20 00 44.5**	**-2.3**	
R26A	**Arlington** baz=5.6,SNR=7.4	**5.55**	**164**	⇓P	**Pn**	**20 00 47.8**	**+0.7**	
R26A	**Arlington** baz=5.6,SNR=7.4	**5.55**	**164**	⇓P	**Pn**	**20 00 47.8**	**+0.7**	
R25A	**Fountain Ranch** baz=5.7,SNR=6.7	**5.58**	**171**	⇑P	**Pn**	**20 00 48.1**	**+0.6**	
R25A	**Fountain Ranch** baz=5.7,SNR=6.7	**5.58**	**171**	⇑P	**Pn**	**20 00 48.1**	**+0.6**	
SRU	**San Rafael** 6.9nm,0.3s	**5.99**	**222**	*e*Pn	**Pn**	**20 00 53.3**	**0.0**	
SRU				*e*Sg	Sg	20 02 29.3	-6.4	
S26A	**Kim** baz=6.3,SNR=8.7	**6.21**	**166**	⇑P	**Pn**	**20 00 56.4**	**+0.3**	
S26A	**Kim** baz=6.3,SNR=8.7	**6.21**	**166**	⇑P	**Pn**	**20 00 56.4**	**+0.3**	
CHMT	**Chamberlain Mo** 1.3nm,0.4s	**6.45**	**303**	*e*Pn	**Pn**	**20 00 58.3**	**-1.3**	
Q16A	**Castle Valley** baz=6.5,SNR=12	**6.47**	**225**	⇑P	**Pn**	**20 01 00.8**	**+1.1**	
Q16A	**Castle Valley** baz=6.5,SNR=12	**6.47**	**225**	⇑P	**Pn**	**20 01 00.8**	**+1.1**	
B14A	**Marquette Ranc** baz=7.1,SNR=5.5	**7.24**	**313**	⇓P	**Pn**	**20 01 11.4**	**+1.1**	
B14A	**Marquette Ranc** baz=7.1,SNR=5.5	**7.24**	**313**	⇓P	**Pn**	**20 01 11.4**	**+1.1**	
MSU	**Marysvale** 1.4nm,0.3s	**7.29**	**227**	*e*Pn	**Pn**	**20 01 10.6**	**-0.5**	
MSU				*e*Sg	**Sg**	**20 03 14.6**	**-2.7**	
AGMN	**Agassiz Nation** 4.5nm,0.4s	**8.06**	**52**	*e*Pn	**Pn**	**20 01 20.4**	**-1.0**	
ULM	**Lac du Bonnet**	**9.22**	**41**	Pn	**Pn**	**20 01 37.3**	**0.0**	
ULM				Lg	Lg	20 04 10.2		
ULM	**Lac du Bonnet** 1.1nm,0.3s,baz=231,slow=8.1,SNR=3.4	**9.22**	**41**	Pn	**Pn**	**20 01 37.3**	**0.0**	
ULM	0.3nm,0.3s,baz=119,slow=19,SNR=2.0			Lg	Lg	20 04 10.2		
MIAR	**Mount Ida** 5.3nm,0.7s	**12.89**	**131**	Pn	**Pn**	**20 02 29.1**	**+1.5**	
ARCES	**ARCESS Array B**	**61.50**	**18**	P	**P**	**20 09 40.3**	**-0.8**	
ARCES	**ARCESS Array B** 1.5nm,0.8s,baz=317,slow=7.8,SNR=3.6	**61.50**	**18**	P	**P**	**20 09 40.3**	**-0.8**	

CSEM ***25*** *20:01:15.3, 42.41N×13.37E, h11km, After ROM*
ROM 25 20:01:15.3±0.1, 42.41N×13.37E, h11km, MI2.5/10, Error ellipse: s-maj=1.7km s-min=1.2km az=103.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**155**	Pg	Pg	20 01 17.9	+0.3
AQU				Sg	Sg	20 01 19.5	+0.2
AQU	**L'Aquila**	**0.06**	**155**	Pg	Pg	20 01 17.9	+0.3
AQU				Sg	Sg	20 01 19.5	+0.2
CAMP	**Campotosto**	**0.13**	**13**	Pg	Pg	20 01 19.0	+0.3
CAMP				Sg	Sg	20 01 21.5	+0.5
CAMP	**Campotosto**	**0.13**	**13**	Pg	Pg	20 01 19.0	+0.3
CAMP				Sg	Sg	20 01 21.5	+0.5
FIAM	**Fiamignano**	**0.23**	**233**	Pg	Pg	20 01 20.6	+0.3
FIAM				Sg	Sg	20 01 24.2	+0.5
FIAM	**Fiamignano**	**0.23**	**233**	Pg	Pg	20 01 20.6	+0.3
FIAM				Sg	Sg	20 01 24.2	+0.5
TERO	**Teramo**	**0.28**	**39**	Pg	Pg	20 01 21.1	0.0
TERO				Sg	Sg	20 01 25.4	+0.5
TERO	**Teramo**	**0.28**	**39**	Pg	Pg	20 01 21.1	0.0
TERO				Sg	Sg	20 01 25.4	+0.5
LNSS	**Leonessa**	**0.31**	**309**	Pg	Pg	20 01 22.4	+0.6
LNSS				Sg	Sb	20 01 27.4	-0.9
LNSS	**Leonessa**	**0.31**	**309**	Pg	Pg	20 01 22.4	+0.6
LNSS				Sg	Sb	20 01 27.4	-0.9
PTQR	**Pietraquaria**	**0.39**	**177**	Pg	Pg	20 01 23.2	+0.1
PTQR	**Pietraquaria**	**0.39**	**177**	Pg	Pg	20 01 23.2	+0.1
NRCA	**Norcia**	**0.47**	**336**	Pg	Pg	20 01 24.6	0.0
NRCA	**Norcia**	**0.47**	**336**	Pg	Pg	20 01 24.6	0.0
MNS	**Montasola** 256nm,0.7s	**0.51**	**268**	Pg	Pg	20 01 25.2	-0.2
MNS	**Montasola** 256nm,0.7s	**0.51**	**268**	Pg	Pg	20 01 25.2	-0.2
CERT	**Cerreto** 794nm,0.4s	**0.54**	**212**	Pg	Pg	20 01 25.5	-0.4
CERT	**Cerreto** 794nm,0.4s	**0.54**	**212**	Pg	Pg	20 01 25.5	-0.4
INTR	**Introdacqua** 357nm,0.9s	**0.56**	**135**	Pg	Pg	20 01 26.4	0.0
INTR	**Introdacqua** 357nm,0.9s	**0.56**	**135**	Pg	Pg	20 01 26.4	0.0
TRTR	**Tortoreto Alta** 381nm,0.4s	**0.57**	**45**	Pg	Pb	20 01 27.5	+0.2
TRTR	**Tortoreto Alta** 381nm,0.4s	**0.57**	**45**	Pg	Pb	20 01 27.5	+0.2
VVLD	**Villa Vallelon** 143nm,0.6s	**0.57**	**161**	Pg	Pb	20 01 27.1	-0.3
VVLD	**Villa Vallelon** 143nm,0.6s	**0.57**	**161**	Pg	Pb	20 01 27.1	-0.3
MTCE	**Montecelio** 145nm,0.5s	**0.60**	**231**	Pg	Pb	20 01 28.0	+0.1
MTCE	**Montecelio** 145nm,0.5s	**0.60**	**231**	Pg	Pb	20 01 28.0	+0.1
GUAR	**Guarcino** 130nm,0.5s	**0.61**	**184**	Pg	Pb	20 01 28.2	0.0
GUAR	**Guarcino** 130nm,0.5s	**0.61**	**184**	Pg	Pb	20 01 28.2	0.0
CESX	**Cesi** 129nm,0.5s	**0.62**	**289**	Pg	Pg	20 01 27.2	-0.2
CESX	**Cesi** 129nm,0.5s	**0.62**	**289**	Pg	Pg	20 01 27.2	-0.2
FDMO	**Fiordimonte** 97nm,0.3s	**0.66**	**342**	Pg	Pg	20 01 28.0	-0.2
FDMO	**Fiordimonte** 97nm,0.3s	**0.66**	**342**	Pg	Pg	20 01 28.0	-0.2
CESI	**CESI - Serrava**	**0.69**	**330**	Pg	Pg	20 01 28.7	-0.1
CESI	**CESI - Serrava**	**0.69**	**330**	Pg	Pg	20 01 28.7	-0.1
LPEL	**Lama dei Pelig**	**0.70**	**120**	Pg	Pg	20 01 28.7	-0.3
LPEL	**Lama dei Pelig**	**0.70**	**120**	Pg	Pg	20 01 28.7	-0.3
GUMA	**Gualdo di Mace** 641nm,0.4s	**0.78**	**32**	Pg	Pg	20 01 28.1	-2.3
GUMA	**Gualdo di Mace** 641nm,0.4s	**0.78**	**32**	Pg	Pg	20 01 28.1	-2.3
ASSB	**Assisi San Ben**	**0.82**	**321**	Pg	Pg	20 01 30.8	-0.5
ASSB	**Assisi San Ben**	**0.82**	**321**	Pg	Pg	20 01 30.8	-0.5

HLW ***25*** *20:08:19.0, 36.83N×21.11E, h26km±18km, Md4.1, Ml4.0*
IDC ***25*** *20:08:19.1±0.6, 36.80N×21.69E, h0km, mb4.2/23, mb1 4.3/29, mb1mx4.3/37, mbtmp4.2/29, ML3.9/6, MS3.2/8, Ms1 3.2/8, ms1mx2.9/50, Error ellipse: s-maj=14.1km s-min=13.2km az=147.0*
PDG ***25*** *20:08:22.1±0.7, 36.80N×21.45E, h11km±1km, ML4.4/8, Error ellipse: s-maj=1.3km s-min=1.3km az=90.0*
NEIC ***25*** *20:08:22.3, 36.75N×21.51E, h24km, mb4.2/9, ML4.1(ATH), After ATH.*
ATH ***25*** *20:08:22.3, 36.75N×21.51E, h24km, ML4.1*
CSEM ***25*** *20:08:22.9±0.1, 36.71N×21.44E, h20km, mb4.3/5, Ms2.8, Error ellipse: s-maj=4.1km s-min=2.8km az=28.0*
THE ***25*** *20:08:24.4, 36.77N×21.61E, h14km, ML4.3/3, Error ellipse: s-maj=1.4km s-min=0.7km az=60.0*
TIR ***25*** *20:08:25.7±5.5, 37.54N×21.38E, h39km±719km*
PRU ***25*** *20:08:26.7, 37.25N×21.20E, h0km, M4.2*
BEO ***25*** *20:08:37.6±2.3, 37.61N×21.18E, h0km, ML3.9/1*
ISC 25 20:08:22.1±0.5, 36.76N±0.03×21.51E±0.03, h20km±3km, n568, σ1$48/590, mb4.3/36, MS3.2/5, 31C-19D, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.23**	**54**	P	**Pb**	**20 08 28.5**	**+0.6**
PYL				S	**Sb**	**20 08 31.4**	**-0.5**
PYL	**PYLOS**	**0.23**	**54**	*e*PB	**Pb**	**20 08 28.5**	**+0.6**
PYL				*e*SB	**Sb**	**20 08 32.4**	**+0.5**
PYL	**PYLOS**	**0.23**	**54**	P	**Pb**	**20 08 28.5**	**+0.6**
PYL				S	**Sb**	**20 08 31.4**	**-0.5**
PYL				*e*Sb	Sb	20 08 32.4	+0.5
ITM	**Ithomi**	**0.54**	**38**	P	**Pb**	**20 08 33.5**	**+0.6**
ITM				S	**Sb**	**20 08 41.3**	**+1.1**
ITM	**Ithomi**	**0.54**	**38**	*e*PN	**Pb**	**20 08 33.5**	**+0.6**
ITM				*e*SN	**Sn**	**20 08 41.7**	**-1.3**
ITM	**Ithomi**	**0.54**	**38**	P	**Pb**	**20 08 33.5**	**+0.6**
ITM				S	**Sb**	**20 08 41.3**	**+1.1**
DYR	**Agios Nikonas**	**0.66**	**90**	P	**Pb**	**20 08 35.3**	**+0.3**
DYR				S	**Sb**	**20 08 44.7**	**+0.9**
DYR	**Agios Nikonas**	**0.66**	**90**	*e*PN	**Pb**	**20 08 35.6**	**+0.6**
DYR				*e*SN	**Sb**	**20 08 44.9**	**+1.1**
DYR	**Agios Nikonas**	**0.66**	**90**	P	**Pb**	**20 08 35.3**	**+0.3**
DYR	**Agios Nikonas**	**0.66**	**90**	*e*Pn	**Pb**	**20 08 35.6**	**+0.6**
DYR				*e*Sn	**Sb**	**20 08 44.9**	**+1.1**
AMT	**Artemida-Makis**	**0.79**	**12**	*e*PN	**Pn**	**20 08 38.0**	**-0.1**
AMT				*e*SN	**Sn**	**20 08 49.4**	**+0.1**
AMT	**Artemida-Makis**	**0.79**	**12**	*e*Pn	**Pn**	**20 08 38.0**	**-0.1**
AMT				*e*Sn	**Sn**	**20 08 49.4**	**+0.1**
VLX	**Vlachokerasia**	**0.92**	**49**	P	**Pn**	**20 08 40.5**	**+0.5**
VLX				S	**Sn**	**20 08 52.9**	**+0.2**
VLX	**Vlachokerasia**	**0.92**	**49**	*e*PN	**Pn**	**20 08 40.2**	**+0.2**
VLX				*e*SN	**Sn**	**20 08 53.0**	**+0.2**
VLX	**Vlachokerasia**	**0.92**	**49**	*e*Pn	**Pn**	**20 08 40.2**	**+0.2**
VLX	**Vlachokerasia**	**0.92**	**49**	P	**Pn**	**20 08 40.5**	**+0.5**
VLX				*e*Sn	**Sn**	**20 08 53.0**	**+0.2**
VLI	**Veliai**	**1.15**	**92**	P	**Pn**	**20 08 44.3**	**+1.1**
VLI	**Veliai**	**1.15**	**92**	*e*PN	**Pb**	**20 08 44.5**	**+1.3**
VLI				*e*SN	**Sn**	**20 09 00.6**	**+2.5**
VLI	**Veliai**	**1.15**	**92**	P	**Pb**	**20 08 44.3**	**+1.1**
VLI				*e*Sn	**Sn**	**20 09 00.6**	**+2.5**
RLS	**Riolos of Patr**	**1.29**	**358**	P	**Pb**	**20 08 46.8**	**+1.0**
RLS	**Riolos of Patr**	**1.29**	**358**	*e*PN	**Pb**	**20 08 46.5**	**+0.7**
RLS				*e*SN	**Sb**	**20 09 05.1**	**+3.2**
RLS	**Riolos of Patr**	**1.29**	**358**	*e*Pn	**Pb**	**20 08 46.5**	**+0.7**
RLS	**Riolos of Patr**	**1.29**	**358**	P	**Pb**	**20 08 46.8**	**+1.0**
RLS				*e*Sn	**Sb**	**20 09 05.1**	**+3.2**
KYTH	**Kithira**	**1.32**	**111**	P	**Pb**	**20 08 46.9**	**+0.7**
KYTH	**Kithira**	**1.32**	**111**	*e*PN	**Pb**	**20 08 46.9**	**+0.7**
KYTH	**Kithira**	**1.32**	**111**	P	**Pb**	**20 08 46.9**	**+0.7**
GUR	**Goura**	**1.35**	**29**	P	**Pb**	**20 08 47.0**	**+0.3**
GUR				S	**Sb**	**20 09 05.2**	**+1.6**
GUR	**Goura**	**1.35**	**29**	*e*PN	**Pb**	**20 08 47.1**	**+0.3**
GUR				*e*SN	**Sb**	**20 09 05.8**	**+2.2**
GUR	**Goura**	**1.35**	**29**	P	**Pb**	**20 08 47.0**	**+0.3**
GUR				S	**Sb**	**20 09 05.2**	**+1.6**
KLV	**Kalavryta, Ach**	**1.38**	**22**	P	**Pb**	**20 08 47.6**	**+0.4**
KLV	**Kalavryta, Ach**	**1.38**	**22**	*e*PN	**Pb**	**20 08 47.7**	**+0.5**
KLV				*e*SN	**Sb**	**20 09 07.0**	**+2.6**
KLV	**Kalavryta, Ach**	**1.38**	**22**	P	**Pb**	**20 08 47.6**	**+0.4**
KLV				*e*Sn	**Sb**	**20 09 07.0**	**+2.6**
AXS	**Araxos**	**1.44**	**356**	P	**Pb**	**20 08 49.5**	**+1.3**
AXS	**Araxos**	**1.44**	**356**	P	**Pb**	**20 08 49.5**	**+1.3**
KFL	**Anninata**	**1.46**	**337**	P	**Pb**	**20 08 49.5**	**+0.9**
KFL	**Anninata**	**1.46**	**337**	P	**Pb**	**20 08 49.5**	**+0.9**
LAKA	**Lakka**	**1.52**	**14**	P	**Pb**	**20 08 50.3**	**+0.6**
LAKA	**Lakka**	**1.52**	**14**	*e*PN	**Pb**	**20 08 50.7**	**+1.0**
LAKA				*e*SN	**Sb**	**20 09 11.2**	**+2.7**
LAKA	**Lakka**	**1.52**	**14**	P	**Pb**	**20 08 50.3**	**+0.6**
LAKA	**Lakka**	**1.52**	**14**	*e*Pn	**Pb**	**20 08 50.7**	**+1.0**
LAKA				*e*Sn	**Sb**	**20 09 11.2**	**+2.7**
DIDY	**Didyma**	**1.54**	**62**	P	**Pb**	**20 08 50.8**	**+0.9**
DIDY	**Didyma**	**1.54**	**62**	P	**Pb**	**20 08 50.8**	**+0.9**
DID	**Didima**	**1.57**	**61**	P	**Pb**	**20 08 51.1**	**+0.7**
DID	**Didima**	**1.57**	**61**	*e*PN	**Pb**	**20 08 51.2**	**+0.8**
DID				*e*SN	**Sb**	**20 09 12.0**	**+2.2**
DID	**Didima**	**1.57**	**61**	*e*Pn	**Pb**	**20 08 51.2**	**+0.8**
DID				*e*Sn	**Sb**	**20 09 12.0**	**+2.2**
THAL	**Thalero**	**1.57**	**35**	P	**Pb**	**20 08 52.1**	**+1.7**
THAL	**Thalero**	**1.57**	**35**	P	**Pb**	**20 08 52.1**	**+1.7**
PSA1	**Psathopyrgos**	**1.59**	**11**	*e*PN	**Pb**	**20 08 51.5**	**+0.7**
VLS	**Valsamata**	**1.59**	**333**	P	**Pb**	**20 08 51.6**	**+0.8**
VLS	**Valsamata**	**1.59**	**333**	*e*PN	**Pb**	**20 08 51.2**	**+0.4**
VLS	**Valsamata**	**1.59**	**333**	*e*Pn	**Pb**	**20 08 51.2**	**+0.4**
VLS	**Valsamata**	**1.59**	**333**	P	**Pb**	**20 08 51.6**	**+0.8**
TRIZ	**Trizonia**	**1.66**	**15**	P	**Pb**	**20 08 52.6**	**+0.6**
TRIZ	**Trizonia**	**1.66**	**15**	*e*PN	**Pb**	**20 08 52.6**	**+0.9**
TRIZ	**Trizonia**	**1.66**	**15**	P	**Pb**	**20 08 52.6**	**+0.6**
TRIZ	**Trizonia**	**1.66**	**15**	*e*Pn	**Pb**	**20 08 52.9**	**+0.9**
EFP	**Efpalio**	**1.69**	**11**	P	**Pb**	**20 08 53.7**	**+1.2**
EFP	**Efpalio**	**1.69**	**11**	*e*PN	**Pb**	**20 08 52.8**	**+0.3**
EFP	**Efpalio**	**1.69**	**11**	*e*Pn	**Pb**	**20 08 52.8**	**+0.3**
EFP	**Efpalio**	**1.69**	**11**	P	**Pb**	**20 08 53.7**	**+1.2**
ANKY	**Antikythira Is**	**1.70**	**121**	P	**Pb**	**20 08 53.4**	**+0.8**
ANKY	**Antikythira Is**	**1.70**	**121**	*e*PN	**Pb**	**20 08 53.3**	**+0.7**
ANKY	**Antikythira Is**	**1.70**	**121**	*e*Pn	**Pb**	**20 08 53.3**	**+0.7**
KALE	**Kalithea**	**1.70**	**17**	P	**Pb**	**20 08 52.9**	**+0.2**
KALE	**Kalithea**	**1.70**	**17**	*e*PN	**Pb**	**20 08 53.0**	**+0.2**
KALE	**Kalithea**	**1.70**	**17**	*e*Pn	**Pb**	**20 08 53.0**	**+0.2**
LTK	**Loutraki**	**1.71**	**42**	P	**Pb**	**20 08 53.4**	**+0.5**
LTK	**Loutraki**	**1.71**	**42**	*e*PN	**Pb**	**20 08 53.4**	**+0.5**
LTK	**Loutraki**	**1.71**	**42**	P	**Pb**	**20 08 53.4**	**+0.5**
DSF	**Desfina**	**1.83**	**26**	P	**Pb**	**20 08 55.3**	**+0.3**
DSF	**Desfina**	**1.83**	**26**	P	**Pb**	**20 08 55.3**	**+0.3**
VILE	**Platees**	**2.01**	**43**	P	**Pb**	**20 08 56.3**	**+1.4**
ATH	**Athens Observa**	**2.13**	**55**	P	**Pb**	**20 08 58.6**	**-1.4**
ATH	**Athens Observa**	**2.13**	**55**	*e*PB	**Pb**	**20 08 58.9**	**-1.1**
ATH	**Athens Observa**	**2.13**	**55**	P	**Pb**	**20 08 58.6**	**-1.4**
ATH	**Athens Observa**	**2.13**	**55**	*e*Pb	**Pb**	**20 08 58.9**	**-1.1**
LKD2	**Lefkada island**	**2.13**	**342**	P	**Pb**	**20 09 00.2**	**+0.1**
LKD2	**Lefkada island**	**2.13**	**342**	P	**Pb**	**20 09 00.2**	**+0.1**
EVR	**Evrytania**	**2.17**	**6**	P	**Pb**	**20 09 01.9**	**+1.2**
EVR	**Evrytania**	**2.17**	**6**	*e*PB	**Pb**	**20 08 59.8**	**-0.9**
EVR	**Evrytania**	**2.17**	**6**	*e*Pb	**Pb**	**20 08 59.8**	**-0.9**
EVR	**Evrytania**	**2.17**	**6**	P	**Pb**	**20 09 01.9**	**+1.2**
ATHU	**Athens Univers**	**2.17**	**56**	P	**Pn**	**20 08 59.0**	**+1.9**
ATHU	**Athens Univers**	**2.17**	**56**	P	**Pn**	**20 08 59.0**	**+1.9**
AXAR	**Agios Charalam**	**2.20**	**24**	P	**Pb**	**20 09 00.8**	**-0.4**
AXAR	**Agios Charalam**	**2.20**	**24**	P	**Pb**	**20 09 00.8**	**-0.4**
LKR	**Lokris**	**2.23**	**32**	*e*PN	**Pb**	**20 09 00.3**	**-1.3**
LKR	**Lokris**	**2.23**	**32**	*e*Pn	**Pb**	**20 09 00.3**	**-1.3**
ATAL	**Atalanti**	**2.27**	**31**	P	**Pb**	**20 09 01.2**	**-1.2**
ATAL	**Atalanti**	**2.27**	**31**	P	**Pb**	**20 09 01.2**	**-1.2**
PTL	**Penteli**	**2.27**	**55**	P	**Pn**	**20 09 00.3**	**+1.8**
PTL	**Penteli**	**2.27**	**55**	*e*PN	**Pn**	**20 09 00.3**	**+1.8**
PTL	**Penteli**	**2.27**	**55**	P	**Pn**	**20 09 00.3**	**+1.8**
MAKR	**Makrakomi, Fth**	**2.30**	**12**	P	**Pb**	**20 09 03.4**	**+0.5**
MAKR	**Makrakomi, Fth**	**2.30**	**12**	P	**Pb**	**20 09 03.4**	**+0.5**
AGG	**Agios Georgios**	**2.35**	**16**	P	**Pb**	**20 09 03.1**	**-0.7**
AGG	**Agios Georgios**	**2.35**	**16**	P	**Pb**	**20 09 03.1**	**-0.7**
SMIA	**Simia**	**2.51**	**32**	P	**Pn**	**20 09 04.1**	**+2.4**
SMIA	**Simia**	**2.51**	**32**	P	**Pn**	**20 09 04.1**	**+2.4**
MRKA	**Markates**	**2.55**	**40**	P	**Pn**	**20 09 04.2**	**+1.9**
MRKA	**Markates**	**2.55**	**40**	P	**Pn**	**20 09 04.2**	**+1.9**
VAM	**Vamos**	**2.56**	**121**	P	**Pn**	**20 09 04.6**	**+2.1**
VAM	**Vamos**	**2.56**	**121**	*e*PN	**Pn**	**20 09 04.3**	**+1.8**
VAM	**Vamos**	**2.56**	**121**	*e*Pn	**Pn**	**20 09 04.3**	**+1.8**
VAM	**Vamos**	**2.56**	**121**	P	**Pn**	**20 09 04.6**	**+2.1**
MRMA	**Marmari**	**2.63**	**60**	P	**Pn**	**20 09 05.3**	**+2.0**
MRMA	**Marmari**	**2.63**	**60**	P	**Pn**	**20 09 05.3**	**+2.0**

THL	**Klokotos Trika**	**2.83**	**8**	P	**Pb**	**20 09 09.3**	**-2.6**	
THL	**Klokotos Trika**	**2.83**	**8**	P	**Pb**	**20 09 09.3**	**-2.6**	
GVD	**Gavdhos**	**2.84**	**132**	*e*Pn	**Pn**	**20 09 05.5**	**-0.7**	
GVD	**Gavdhos**	**2.84**	**132**	*e*Pn	**Pn**	**20 09 05.6**	**-0.7**	
SKIA	**Skiathos**	**2.86**	**32**	P	**Pn**	**20 09 09.1**	**+2.6**	
SKIA	**Skiathos**	**2.86**	**32**	P	**Pn**	**20 09 09.1**	**+2.6**	
NEO	**Neokhori**	**2.88**	**28**	P	**Pn**	**20 09 09.2**	**+2.4**	
NEO	**Neokhori**	**2.88**	**28**	*e*PN	**Pn**	**20 09 09.1**	**+2.3**	
NEO	**Neokhori**	**2.88**	**28**	*e*Pn	**Pn**	**20 09 09.1**	**+2.3**	
IGT	**Igoumenitsa**	**2.92**	**342**	P	**Pn**	**20 09 09.8**	**+2.4**	
IGT	**Igoumenitsa**	**2.92**	**342**	P	**Pn**	**20 09 09.8**	**+2.4**	
XOR	**Xorichti**	**2.92**	**27**	P	**Pn**	**20 09 10.0**	**+2.6**	
XOR	**Xorichti**	**2.92**	**27**	P	**Pn**	**20 09 10.0**	**+2.6**	
JAN	**Janina**	**2.94**	**350**	P	**Pn**	**20 09 11.1**	**-2.7**	
JAN	**Janina**	**2.94**	**350**	*e*PN	**Pn**	**20 09 10.2**	**+2.5**	
JAN	**Janina**	**2.94**	**350**	*e*Pn	**Pn**	**20 09 10.2**	**+2.5**	
JAN	**Janina**	**2.94**	**350**	P	**Pb**	**20 09 11.1**	**-2.7**	
AOS	**Alonnisos**	**3.05**	**37**	P	**Pn**	**20 09 10.9**	**+1.8**	
AOS	**Alonnisos**	**3.05**	**37**	P	**Pn**	**20 09 10.9**	**+1.8**	
IDI	**Anoyia**	**3.11**	**117**	P	**Pn**	**20 09 12.1**	**+2.0**	
IDI	**Anoyia**	**3.11**	**117**	*e*PN	**Pn**	**20 09 12.0**	**+2.0**	
IDI	**Anoyia**	**3.11**	**117**	*e*Pn	**Pn**	**20 09 12.1**	**+2.0**	
IDI				*e*Sn	**Sn**	**20 09 43.6**	**-2.9**	
IDI	**Anoyia**	**3.11**	**117**	*e*Pn	**Pn**	**20 09 12.0**	**+2.0**	
IDI				*e*Sn	**Sn**	**20 09 43.7**	**-2.9**	
THR3	**Thira Island,**	**3.15**	**95**	P	**Pn**	**20 09 12.3**	**+1.8**	
THR3	**Thira Island,**	**3.15**	**95**	P	**Pn**	**20 09 12.3**	**+1.8**	
SIVA	**Sivas**	**3.19**	**122**	P	**Pn**	**20 09 13.1**	**+1.9**	
SIVA	**Sivas**	**3.19**	**122**	*e*PN	**Pn**	**20 09 13.0**	**+1.9**	
SIVA	**Sivas**	**3.19**	**122**	*e*Pn	**Pn**	**20 09 13.0**	**+1.9**	
APE	**Apeiranthos**	**3.24**	**83**	*e*PN	**Pn**	**20 09 12.6**	**+0.8**	
APE	**Apeiranthos**	**3.24**	**83**	P	**Pn**	**20 09 13.2**	**+1.2**	
APE	**Apeiranthos**	**3.24**	**83**	⇓P	**Pn**	**20 09 12.9**	**+1.2**	
APE	**Apeiranthos**	**3.24**	**83**	P	**Pn**	**20 09 13.0**	**+1.2**	
KEK	**Kerkira**	**3.24**	**336**	P	**Pn**	**20 09 14.0**	**+2.2**	
KEK	**Kerkira**	**3.24**	**336**	P	**Pn**	**20 09 14.0**	**+2.2**	
SRN	**Sarande**	**3.33**	**340**	*e*PN	**Pn**	**20 09 15.1**	**+2.1**	
SRN				*i* SN	**Sn**	**20 09 53.1**	**+1.1**	
SRN	**Sarande**	**3.33**	**340**	P	**Pn**	**20 09 15.2**	**+2.2**	
SRN	**Sarande** SNR=4.0	**3.33**	**340**	P	**Pn**	**20 09 15.2**	**+2.2**	
SRN				*i* Sn	**Sn**	**20 09 53.1**	**+1.1**	
KBN								
LIT	**Litokhoron**	**3.42**	**13**	P	Pn	20 09 18.2	+3.9	
LIT	**Litokhoron**	**3.42**	**13**	P	Pn	20 09 18.2	+3.9	
KZN	**Kozani**	**3.55**	**3**	P	**Pn**	**20 09 19.0**	**+2.9**	
KZN	**Kozani**

KRBG Karabiga-Canak 5.81 50 *e*PN **Pn** **20 09 47.5 +0.5**
GONE Gonen-Balikesi 5.86 54 *e*PN **Pn** **20 09 48.0 +0.3**
PLD Plovdiv 5.88 24 *e*Pn Pn 20 09 51.3 +3.3
BUM Brajici-Budva 5.89 341 ⇓*i*Pn **Pn** **20 09 49.3 +1.1**
BUM *e*Sn **Sn** **20 10 56.2 +1.0**
BUM Brajici-Budva 5.89 341 ⇓*i*Pn **Pn** **20 09 49.3 +1.1**
BUM *e*Sn **Sn** **20 10 56.2 +1.0**
RKY Sarkoy-Tekirda 5.92 47 *e*PN **Pn** **20 09 49.5 +0.9**
PDG Podgorica 5.92 344 *e*Pn **Pn** **20 09 49.5 +0.9**
PDG *e*Sn Sn 20 10 40.4 -15
PDG Podgorica 5.92 344 ⇑*i*Pn **Pn** **20 09 49.9 +1.3**
PDG *e*Sn **Sn** **20 10 57.0 +1.2**
TTG Podgorica 5.92 344 ⇑*i*Pn **Pn** **20 09 49.9 +1.3**
TTG *e*Sn **Sn** **20 10 57.0 +1.2**
CDT Castel del Mon 5.94 318 *e*PN **Pn** **20 09 50.1 +1.2**
KULA Kula-Manisa 5.94 71 *e*PN **Pn** **20 09 49.0 0.0**
PVY Plav 5.95 349 ⇓*i*PN **Pn** **20 09 51.4 +2.3**
PVY *e*Sn **Sn** **20 10 57.8 +1.1**
PVY Plav 5.95 349 ⇓*i*Pn **Pn** **20 09 51.4 +2.3**
PVY *e*Sn **Sn** **20 10 57.8 +1.1**
VTS Vitosha 5.97 12 P **Pn** **20 09 51.8 +2.4**
VTS Vitosha 5.97 12 *e*Pn **Pn** **20 09 52.2 +2.8**
VTS Vitosha 5.97 12 P **Pn** **20 09 51.8 +2.4**
VTS Vitosha 5.97 12 *e*Pn **Pn** **20 09 52.2 +2.8**
BARS Barje 6.05 2 *e*Pn **Pn** **20 09 51.6 +1.2**
BARS *e*Sn Sn 20 10 43.5 -16
BARS Barje 6.05 2 *e*Pn **Pn** **20 09 51.6 +1.2**
DNZL Cakiroluk 6.08 79 *i* P Pn 20 09 54.2 +3.1
DNZL Cakiroluk 6.08 79 *i* P Pn 20 09 54.2 +3.1
SLUM 6.09 149 P Pn 20 09 49.2 -1.7
baz=146
SLUM AMP 20 11 00.0
comp=E,160µm,0.3s,logA/T=5.7,baz=146
FETY Fethiye 6.09 89 *e*PN **Pn** **20 09 53.7 +2.8**
HCY Herceg Novi 6.14 339 ⇑*i*Pn **Pn** **20 09 51.8 +0.2**
HCY *e*Sn **Sn** **20 11 01.5 +0.3**
HCY Herceg Novi 6.14 339 ⇑*i*Pn **Pn** **20 09 51.8 +0.2**
HCY *e*Sn **Sn** **20 11 01.5 +0.3**
DURS Dursunbey 6.17 61 *i* P **Pn** **20 09 53.9 +1.7**
DURS Dursunbey 6.17 61 *i* P **Pn** **20 09 53.9 +1.7**
BEY Berane 6.23 349 ⇑*i*Pn **Pn** **20 09 55.0 +2.1**
BEY *e*Sn **Sn** **20 11 04.5 +1.0**
IVA Berane 6.23 349 ⇑*i*Pn **Pn** **20 09 55.0 +2.1**
IVA *e*Sn **Sn** **20 11 04.5 +1.0**
NKY Niksic 6.35 343 ⇓*i*Pn **Pn** **20 09 55.6 +1.0**
NKY *e*Sn **Sn** **20 11 06.9 +0.4**
NKY Niksic 6.35 343 ⇓*i*Pn **Pn** **20 09 55.6 +1.0**
NKY *e*Sn **Sn** **20 11 06.9 +0.4**
KCTX Karacabey (Bur 6.41 55 *e*PN **Pn** **20 09 54.9 -0.5**
SELS Selova 6.46 357 *e*Pn **Pn** **20 09 56.4 +0.4**
SELS *e*Sn Sn 20 10 53.7 -15
GOLH Golhisar 6.46 83 *i* P Pn 20 10 01.2 +5.1
EDRB Edirne 6.50 37 *e*PN Pn 20 10 00.2 +3.7
KHAL Karahalli 6.54 73 *i* P **Pn** **20 09 59.3 +2.1**
KHAL Karahalli 6.54 73 *i* P **Pn** **20 09 59.3 +2.1**
AKAS Kas 6.54 92 *i* P **Pn** **20 09 59.9 +2.6**
AKAS Kas 6.54 92 *i* P **Pn** **20 09 59.9 +2.6**
BRY Bratogost 6.54 340 ⇓*i*Pn **Pn** **20 09 57.8 +0.5**
BRY *e*Sn **Sn** **20 11 11.4 0.0**
BRY Bratogost 6.54 340 ⇓*i*Pn **Pn** **20 09 57.8 +0.5**
BRY *e*Sn **Sn** **20 11 11.4 0.0**
KHL Karahalli 6.55 74 *e*PN **Pn** **20 09 57.8 +0.4**
MSI Monte Sant'Ang 6.56 321 *e*Pn **Pn** **20 09 59.3 +1.5**
ZAPS Zavoj 6.56 7 *e*Sn Sn 20 10 57.7 -14
SJES Sjenica 6.60 350 *e*PN **Pn** **20 09 58.3 +0.3**
SJES *e*Sn Sn 20 10 55.8 -17
SJES Sjenica 6.60 350 *e*Pn **Pn** **20 09 58.3 +0.3**
UPM Unac-Piva 6.74 344 ⇑*i*Pn **Pn** **20 10 01.6 +1.6**
UPM *e*Sn **Sn** **20 11 16.6 +0.4**
UPM Unac-Piva 6.74 344 ⇑*i*Pn **Pn** **20 10 01.6 +1.6**
UPM *e*Sn **Sn** **20 11 16.6 +0.4**
ELL Elmali 6.74 88 *e*PN Pn 20 10 03.7 +3.7
PLE Pljevlja 6.76 347 ⇑*i*Pn **Pn** **20 10 02.4 +2.2**
PLE *e*Sn **Sn** **20 11 17.2 +0.6**
PLE Pljevlja 6.76 347 ⇑*i*Pn **Pn** **20 10 02.4 +2.2**
PLE *e*Sn **Sn** **20 11 17.2 +0.6**
TVSB Tavsanli 6.82 64 *e*PN **Pn** **20 10 00.7 -0.3**
JMB Yambol 6.91 33 *e*Pn Pn 20 10 07.5 +5.3
CTKS Kestenelik-??a 7.04 49 *e*PN **Pn** **20 10 05.7 +1.6**
GRUS Gruza 7.14 355 *e*Pn **Pn** **20 10 05.8 +0.4**
GRUS *e*Sn Sn 20 11 08.8 -17
GRUS Gruza 7.14 355 *e*PN **Pn** **20 10 05.8 +0.4**
ALT Altintas 7.17 69 *e*PN **Pn** **20 10 05.7 -0.3**
BBLS Lazići 7.28 348 *e*Pn **Pn** **20 10 07.5 +0.2**
BBLS *e*Sn Sn 20 11 12.3 -17
BBLS Lazići 7.28 348 *e*PN **Pn** **20 10 07.5 +0.2**
HMAT Matruh 7.31 139 P Pn 20 10 06.2 -1.5
baz=137
HMAT AMP 20 11 00.0
comp=E,50µm,0.3s,logA/T=5.2,baz=137
HMAT S Sn 20 11 23.5 -6.7
baz=137
DIVS Divibare 7.42 352 P **Pn** **20 10 09.9 +0.6**
DIVS Divibare 7.42 352 *e*Pn **Pn** **20 10 09.5 +0.2**
DIVS *e*Sn Sn 20 11 16.2 -17
DIVS Divibare 7.42 352 *e*Pn **Pn** **20 10 09.5 +0.2**
DIVS Divibare 7.42 352 P **Pn** **20 10 09.9 +0.6**
GULT Gulveren 7.95 60 *e*PN **Pn** **20 10 16.5 0.0**
KIZT Kizilcal 8.47 72 *e*PN **Pn** **20 10 24.3 +0.5**
FGSL Fruska Gora 8.49 352 *e*Pn **Pn** **20 10 23.7 -0.1**
FRGS Fruska Gora 8.49 352 *e*Pn **Pn** **20 10 23.7 -0.1**
GZR Gura Zlata 8.68 6 ⇑*i*P **Pn** **20 10 28.5 +2.0**
GZR Gura Zlata 8.68 6 ⇑*i*P **Pn** **20 10 28.5 +2.0**
KONT Konya--Tatoy 8.72 79 *e*PN **Pn** **20 10 28.7 +1.6**
LOT Lotru 8.84 10 ⇑*i*P **Pn** **20 10 30.8 +2.0**
LOT Lotru 8.84 10 ⇑*i*P **Pn** **20 10 30.8 +2.0**
BZS Buzias 8.85 0 ⇑*i*P **Pn** **20 10 28.7 -0.1**
BZS Buzias 8.85 0 ⇑*i*P **Pn** **20 10 28.7 -0.1**
VOIR 9.07 16 ⇑*i*P Pn 20 10 35.8 +3.9
VOIR 9.07 16 ⇑*i*P Pn 20 10 35.8 +3.9
MLR Muntele Rosu 9.34 20 Pn Pn 20 10 39.7 +4.1
MLR Muntele Rosu 9.34 20 ⇑*i*P Pn 20 10 40.4 +4.8
MLR Muntele Rosu 9.34 20 Pn Pn 20 10 39.7 +4.1
comp=E,0.1nm,0.3s,baz=197,slow=14,SNR=10
MLR Muntele Rosu 9.34 20 Pn Pn 20 10 39.7 +4.1
PKSM Moragy 9.68 348 ⇓*i*P **Pn** **20 10 39.2 -1.0**
PKSM Moragy 9.68 348 ⇓*e*Pn **Pn** **20 10 39.5 -0.7**
PKSM *e*sn Sn 20 12 22.3 -6.0
IKL Isikli 9.82 89 *e*PN **Pn** **20 10 42.0 -0.1**
PLOR Plostina 9.87 21 ⇓*i*P Pn 20 10 47.1 +4.3
PLOR Plostina 9.87 21 ⇓*i*P Pn 20 10 47.1 +4.3
KEST Kesra 9.88 268 Pn **Pn** **20 10 44.9 +1.8**
KEST Kesra 9.88 268 Pn **Pn** **20 10 44.9 +1.8**
comp=E,0.2nm,0.3s,baz=58,slow=13,SNR=6.7
KEST LR LR 20 15 21.2
comp=E,30nm,20.0s,baz=19,slow=42
KEST Kesra 9.88 268 Pn **Pn** **20 10 44.8 +1.8**
VRI Vrincioaia 9.90 22 ⇑*i*P Pn 20 10 48.0 +4.7
BOJS Bojanci 9.92 334 *i* Pn **Pn** **20 10 43.9 +0.4**
BOJS *i* Sn **Sn** **20 12 29.5 -4.7**
BOJS
comp=Z,19nm,0.7s
BOJS Bojanci 9.92 334 Pn **Pn** **20 10 43.9 +0.4**
BRTR Keskin Array B 9.99 69 Pn Pn 20 10 48.9 +4.3
BRTR Keskin Array B 9.99 69 Pn Pn 20 10 48.9 +4.3
comp=Z,0.7nm,0.3s,baz=260,slow=13,SNR=18
BRTR Keskin Array B 9.99 69 Pn Pn 20 10 48.9 +4.3
DRGR 10.06 5 ⇓*i*P **Pn** **20 10 46.7 +1.2**
DRGR 10.06 5 ⇓*i*P **Pn** **20 10 46.7 +1.2**
PKS9 Tamasi 10.11 347 ⇓*e*Pn **Pn** **20 10 46.5 +0.5**
SKDS Skadanscina 10.43 330 *i* Pn **Pn** **20 10 50.3 -0.2**
SKDS *e*Sn Sn 20 12 39.4 -7.4
SKDS
comp=Z,15nm,0.4s
SKDS Skadanscina 10.43 330 *i* Pn **Pn** **20 10 50.3 -0.2**
AWBH 10.47 141 P Pn **20 10 49.8 -1.3**
baz=140
PKST T``s 10.80 347 ⇑*e*Pn **Pn** **20 10 56.5 +1.0**
PKST *e*Sn Sn 20 12 48.5 -7.3
KARA Karaisali 10.84 83 *e*P **Pn** **20 10 58.0 +1.8**
PKSG 10.87 349 *e*Pn **Pn** **20 10 56.5 0.0**
PKSG *e*Sn Sn 20 12 49.6 -7.8
VOJS Vojsko 10.88 331 *i* Pn **Pn** **20 10 57.0 +0.3**
VOJS *e*Sn Sn 20 12 50.6 -7.3
VOJS
comp=Z,12nm,0.3s
VOJS Vojsko 10.88 331 *i* Pn **Pn** **20 10 57.0 +0.3**
SOKA Soboth 11.02 336 ⇑*i*Pn **Pn** **20 10 58.1 -0.5**
comp=Z,4.8nm,0.3s
SOKA Soboth 11.02 336 P **Pn** **20 10 58.1 -0.5**
comp=Z,4.8nm,0.3s

OBKA Obir 11.04 334 ⇑*i*Pn **Pn** **20 10 60.0 +1.1**
comp=Z,0.4nm,0.0s
OBKA ⇑*i*Sn **Sn** **20 12 58.0 -3.7**
comp=Z,21nm,0.7s
OBKA Obir 11.04 334 P **Pn** **20 11 00.0 +1.1**
comp=Z,0.4nm,0.0s
HFRF Wahat Farafira 11.19 147 P Pn 20 10 59.2 -1.7
baz=145
HFRF S Sn 20 12 54.6 -11
baz=145
PSZ Piszkesteto 11.21 354 *e*Pn **Pn** **20 11 00.1 -1.1**
comp=Z,5.2nm,0.8s
PSZ *e*Sn **Sn** **20 13 03.0 -2.9**
PSZ Piszkesteto 11.21 354 ⇓*i*P **Pn** **20 11 02.3 +1.1**
PSZ Piszkesteto 11.21 354 ⇓*e*Pn **Pn** **20 11 02.1 +0.9**
PSZ *e*Sn Sn 20 12 59.2 -6.7
PSZ Piszkesteto 11.21 354 ⇓*i*P **Pn** **20 11 02.3 +1.1**
MYKA Terra Mystica 11.47 332 ⇑*i*P **Pn** **20 11 07.7 +2.9**
comp=Z,2.2nm,0.3s
MYKA Terra Mystica 11.47 332 P **Pn** **20 11 07.7 +2.9**
comp=Z,2.2nm,0.3s
SUZ 11.71 123 P **Pn** **20 11 08.2 +0.1**
baz=122
SUZ 11.71 123 P **Pn** **20 11 08.2 +0.1**
KECS Kecovo 11.74 357 *e*PN **Pn** **20 11 09.8 +1.5**
KECS *e*SN Sn 20 13 08.5 -10
KECS Kecovo 11.74 357 *e*Pn **Pn** **20 11 09.8 +1.5**
VYHS Vyhne 11.89 351 *e*PN **Pn** **20 11 12.0 +1.6**
VYHS Vyhne 11.89 351 *e*SN Sn 20 13 13.2 -9.2
VYHS Vyhne 11.89 351 *e*Pn **Pn** **20 11 12.0 +1.6**
MMAI Mount Meron Ar 12.00 104 Pn **Pn** **20 11 11.2 -0.9**
MMAI Sn Sn 20 13 17.0 -8.4
MMAI Mount Meron Ar 12.00 104 Pn **Pn** **20 11 11.2 -0.9**
comp=Z,1.1nm,0.3s,baz=303,slow=14,SNR=5.3
MMAI Sn Sn 20 13 17.0 -8.4
comp=Z,1.9nm,0.3s,baz=318,slow=25,SNR=3.4
CRVS Cervenica-Dubn 12.13 360 *e*PN **Pn** **20 11 13.0 -0.7**
KOLS Kolonicke sedl 12.18 2 *e*PN Pn 20 11 18.6 +4.3
KOLS Kolonicke sedl 12.18 2 *e*Pn Pn 20 11 18.6 +4.3
STHS Stebnicka Huta 12.65 359 *e*PN P 20 11 27.4 -4.6
WTTA Wattenberg 12.79 328 ⇑*i*Pn **Pn** **20 11 24.7 +1.8**
WTTA ⇑*i*Sn **Sn** **20 13 44.0 -0.8**
comp=Z,18nm,0.7s
WTTA Wattenberg 12.79 328 P **Pn** **20 11 24.7 +1.8**
WTTA S **Sn** **20 13 44.0 -0.8**
comp=Z,18nm,0.7s
MOTA Moosalm 13.09 327 ⇓*i*P **Pn** **20 11 29.8 +2.9**
comp=Z,3.1nm,0.5s
MOTA Moosalm 13.09 327 P **Pn** **20 11 29.8 +2.9**
comp=Z,3.1nm,0.5s
DAVOX Davos/Dischmat 13.23 323 LR LR 20 17 10.5
comp=Z,57nm,19.3s,baz=84,slow=40
TREC Trest 13.27 343 AMS AMS 20 17 20.0
comp=Z,400nm,14.9s
EIL Elat 13.28 118 Pn Pn 20 11 27.2 -2.3
EIL Sn Sn 20 13 46.0 -11
EIL Elat 13.28 118 Pn Pn 20 11 27.2 -2.3
comp=Z,0.6nm,0.3s,baz=325,slow=12,SNR=16
EIL Sn Sn 20 13 46.0 -11
comp=Z,1.4nm,0.3s,baz=53,slow=20,SNR=5.8
OKC Ostrava-Krasne 13.30 350 *e*P **P** **20 11 41.6 +2.4**
OKC *ex* x 20 11 46.5
OKC AMS AMS 20 17 30.0
comp=Z,200nm,17.3s
MORC Moravsky Berou 13.32 349 *e*Pn **Pn** **20 11 29.4 -0.6**
comp=Z,3.1nm,0.7s
MORC Moravsky Berou 13.32 349 *e*Pn **Pn** **20 11 29.4 -0.6**
comp=Z,3.1nm,0.7s
GERES GERESS Array B 13.36 337 Pn **Pn** **20 11 30.9 +0.3**
GERES Sn Sn 20 13 51.9 -6.5
GERES GERESS Array B 13.36 337 Pn **Pn** **20 11 30.9 +0.3**
comp=Z,0.3nm,0.3s,baz=159,slow=14,SNR=8.3
GERES Sn Sn 20 13 51.9 -6.5
comp=Z,0.4nm,0.3s,baz=148,slow=25,SNR=5.4
GERES GERESS Array B 13.36 337 Pn **Pn** **20 11 30.9 +0.3**
MALT Malatya 13.52 78 *e*Pn **Pn** **20 11 31.3 -1.4**
comp=Z,3.2nm,0.6s
MALT Malatya 13.52 78 ⇑*i*P P 20 11 52.1 +10
AKRG Al Kharijah 13.60 143 P **Pn** **20 11 32.6 -1.3**
baz=142
KHC Kasperske Hory 13.65 337 *e*P **Pn** **20 11 33.5 -0.9**
KHC *ex* x 20 11 43.8
KHC *ex* x 20 11 46.0
KHC *ex* x 20 11 53.5
KHC *e*S **Sn** **20 14 00.4 -5.0**
KHC AMS AMS 20 17 40.0
comp=Z,400nm,13.3s
KHC Kasperske Hory 13.65 337 *e*Pn **Pn** **20 11 33.1 -1.3**
comp=Z,4.3nm,0.8s
DPC Dobruska-Polom 14.09 346 *e*P **P** **20 11 49.6 +1.6**
DPC *ex* x 20 11 55.0
DPC AMS AMS 20 18 10.0
DPC Dobruska-Polom 14.09 346 P **P** **20 11 49.6 +1.6**
LPG La Plagne 14.12 313 *e*P **Pn** **20 11 42.6 +1.5**
comp=Z,4.5nm,0.7s
LPL La Plagne 14.14 313 *e*P **Pn** **20 11 42.8 +1.4**
comp=Z,5.8nm,0.7s
PRU Pruhonice 14.15 341 *e*P **P** **20 11 49.8 +1.1**
PRU *es*P 20 11 59.0
PRU AMS AMS 20 17 50.0
comp=Z,400nm,13.5s
PRU Pruhonice 14.15 341 P **P** **20 11 49.8 +1.1**
UPC Upice 14.30 346 *e*P **P** **20 11 52.1 +1.8**
UPC *es*P 20 12 03.1
UPC Upice 14.30 346 P **P** **20 11 52.1 +1.8**
PVCC Panska Ves 14.64 342 AMS AMS 20 18 30.0
comp=Z,300nm,13.9s
NKC Novy Kostel 14.97 337 AMS AMS 20 18 30.0
comp=Z,400nm,15.9s
AKASG Malin Array Be 15.00 19 Pn **Pn** **20 11 51.1 -1.6**
AKASG Malin Array Be 15.00 19 Pn **Pn** **20 11 51.1 -1.6**
comp=Z,0.4nm,0.3s,baz=212,slow=11,SNR=3.5
BFO Black Forest 15.07 324 *e*Pn **Pn** **20 11 55.1 +1.4**
comp=Z,3.8nm,0.8s
BFO Black Forest 15.07 324 *e*Pn **Pn** **20 11 55.2 +1.4**
comp=Z,3.8nm,0.8s
CABF La Chapelle 15.13 315 *e*P **Pn** **20 11 55.1 +0.5**
comp=Z,6.9nm,0.6s
LASF Ste Croix 15.29 304 *e*P **Pn** **20 11 58.4 +1.8**
HINF Hinteralfeld 15.45 320 *e*P **Pn** **20 11 59.1 +0.3**
comp=Z,5.9nm,0.5s
ECH Echery 15.56 322 *e*Pn **Pn** **20 12 00.9 +0.7**
comp=Z,5.7nm,0.9s
ECH Echery 15.56 322 *e*Pn **Pn** **20 12 00.9 +0.7**
comp=Z,5.7nm,0.9s
CDF Champ du Feu 15.64 323 *e*P **Pn** **20 12 02.2 +1.0**
comp=Z,4.6nm,0.5s
HAU Haudompre 15.83 320 *e*P **Pn** **20 12 03.6 -0.1**
comp=Z,12nm,0.6s
HAU *e*R
comp=Z,96nm,19.0s
SMF Signal de Mont 16.45 312 *e*P **Pn** **20 12 11.9 +0.3**
comp=Z,9.2nm,0.8s
SMF Signal de Mont 16.45 312 *e*P **Pn** **20 12 11.9 +0.3**
comp=Z,4.6nm,0.8s
PAGF Fort de Pagny 16.51 320 *e*P **Pn** **20 12 13.2 +0.9**
comp=Z,3.2nm,0.6s
PAGF Fort de Pagny 16.51 320 *e*P **Pn** **20 12 13.2 +0.9**
comp=Z,1.6nm,0.6s
LOR Lormes 16.76 314 *e*P **P** **20 12 16.7 -1.0**
comp=Z,4.7nm,0.6s
LOR *e*R
comp=Z,80nm,17.2s
LOR Lormes 16.76 314 *e*P **P** **20 12 16.7 -1.0**
comp=Z,2.3nm,0.6s
CAF Calviac 16.80 305 *e*P **P** **20 12 17.9 -0.2**
comp=Z,4.5nm,0.7s
CAF Calviac 16.80 305 *e*P **P** **20 12 17.9 -0.2**
comp=Z,2.2nm,0.7s
AVF Avril sur Loir 16.81 312 *e*P **P** **20 12 17.5 -0.7**
comp=Z,6.3nm,0.8s
AVF Avril sur Loir 16.81 312 *e*P **P** **20 12 17.5 -0.7**
comp=Z,3.2nm,0.8s
MEZF Maizieres J'vi 16.82 319 *e*P **P** **20 12 17.8 -0.5**
comp=Z,5.5nm,0.4s
MEZF Maizieres J'vi 16.82 319 *e*P **P** **20 12 17.8 -0.5**
comp=Z,2.8nm,0.4s
SSF Saint Saulge 16.86 313 *e*P **P** **20 12 18.2 -0.5**
comp=Z,4.3nm,0.7s
SSF Saint Saulge 16.86 313 *e*P **P** **20 12 18.2 -0.5**
comp=Z,2.2nm,0.7s
BGF Bois d'Agland 17.00 311 *e*P **P** **20 12 20.3 0.0**
comp=Z,7.7nm,0.6s
BGF Bois d'Agland 17.00 311 *e*P **P** **20 12 20.3 0.0**
comp=Z,3.8nm,0.6s
WLF Walferdange 17.03 324 P **P** **20 12 24.1 +3.5**

SUW Suwalki 17.29 3 *e*Pn **Pn** **20 12 21.4 -0.7**
comp=Z,35nm,0.8s
SUW Suwalki 17.29 3 *e*Pn **Pn** **20 12 21.4 -0.7**
comp=Z,34nm,0.8s
RJF Les Rejaudoux 17.30 306 *e*P **P** **20 12 23.8 +0.2**
comp=Z,26nm,1.5s
RJF *e*R
comp=Z,67nm,17.2s
RJF Les Rejaudoux 17.30 306 *e*P **P** **20 12 23.8 +0.2**
comp=Z,13nm,1.5s
KBZ Khabaz 17.72 60 Pn **P** **20 12 28.5 +0.2**
KBZ Khabaz 17.72 60 Pn **P** **20 12 28.5 +0.2**
comp=Z,0.4nm,0.3s,baz=257,slow=8.4,SNR=7.6
KBZ Khabaz 17.72 60 Pn **P** **20 12 28.5 +0.2**
MEM Membach 17.76 326 P **P** **20 12 30.8 +2.1**
GIVF Givet 17.96 323 *e*P **P** **20 12 32.9 +2.0**
comp=Z,15nm,0.7s
GIVF Givet 17.96 323 *e*P **P** **20 12 32.9 +2.0**
comp=Z,7.4nm,0.7s
ETSF Etsaut 18.00 297 *e*P **P** **20 12 32.9 +1.4**
comp=Z,4.4nm,0.6s
ETSF Etsaut 18.00 297 *e*P **P** **20 12 32.9 +1.4**
comp=Z,2.2nm,0.6s
DOU Dourbes 18.07 323 P **P** **20 12 33.9 +1.8**
comp=Z,5.8nm,1.5s
BAIF Baives 18.23 322 *e*P **P** **20 12 35.3 +1.4**
comp=Z,12nm,0.6s
BAIF Baives 18.23 322 *e*P **P** **20 12 35.3 +1.4**
comp=Z,6.0nm,0.6s
GNI Garni 18.50 72 LR LR 20 21 09.2
comp=Z,92nm,18.4s,baz=7.3,slow=42
SJPF Ste Jean 18.52 297 *e*P **Pn** **20 12 39.3 +1.9**
comp=Z,5.2nm,0.6s
SJPF Ste Jean 18.52 297 *e*P **Pn** **20 12 39.3 +1.9**
comp=Z,2.6nm,0.6s
MFF Saint Martin d 18.88 308 *e*P **Pn** **20 12 42.9 +1.3**
comp=Z,2.6nm,0.8s
MFF Saint Martin d 18.88 308 *e*P **Pn** **20 12 42.9 +1.3**
comp=Z,3.1nm,0.8s
BSD Bornholm Skovb 18.90 348 *i* P **Pn** **20 12 41.9 0.0**
comp=Z,3.6nm,0.4s
BSD Bornholm Skovb 18.90 348 *i* P **Pn** **20 12 41.9 0.0**
comp=Z,3.6nm,0.4s
LDF La Druitiere 19.74 314 *e*P **Pn** **20 12 51.6 -0.4**
LDF La Druitiere 19.74 314 *e*P **Pn** **20 12 51.6 -0.4**
FLN La Foliniere 20.03 314 *e*P Pn 20 12 54.5 -0.9
comp=Z,11nm,0.7s
FLN *e*R
comp=Z,48nm,18.0s
FLN La Foliniere 20.03 314 *e*P Pn 20 12 54.5 -0.9
comp=Z,5.4nm,0.7s
GRR Gorron 20.08 312 *e*P Pn 20 12 56.3 +0.3
GRR Gorron 20.08 312 *e*P Pn 20 12 56.3 +0.3
ESDC Sonseca Array 20.20 286 P Pn 20 12 57.2 -0.4
ESDC Sonseca Array 20.20 286 P Pn 20 12 57.2 -0.4
comp=Z,1.0nm,0.5s,baz=86,slow=10,SNR=8.9
ESDC Sonseca Array 20.20 286 P Pn 20 12 57.2 -0.4
SGMF Saint Gilles 21.04 311 *e*P **P** **20 13 06.7 +2.2**
SGMF Saint Gilles 21.04 311 *e*P **P** **20 13 06.7 +2.2**
QUIF Quistinic 21.28 309 *e*P **P** **20 13 08.8 +1.7**
QUIF Quistinic 21.28 309 *e*P **P** **20 13 08.8 +1.7**
ROSF Rostrenen 21.51 310 *e*P **P** **20 13 10.3 +0.7**
comp=Z,8.5nm,0.6s
ROSF Rostrenen 21.51 310 *e*P **P** **20 13 10.3 +0.7**
comp=Z,4.2nm,0.6s
MIB Mutribah 22.64 100 *e*P **P** **20 13 19.7 -2.2**
MIB AMb AMB 20 13 23.6
comp=Z,23nm,0.6s
MIB Mutribah 22.64 100 *e*P **P** **20 13 19.7 -2.2**
comp=Z,23nm,0.6s
NAY Al-Naaiem 22.80 102 *e*P **P** **20 13 21.3 -2.2**
NAY AMb AMB 20 13 25.4
comp=Z,7.2nm,0.7s
UMR Umm Al-Rimmam 23.04 101 *e*P **P** **20 13 23.7 -2.3**
UMR AMb AMB 20 13 27.3
comp=Z,12nm,0.4s
HFS Hagfors 23.92 350 P **P** **20 13 33.6 -0.7**
HFS Hagfors 23.92 350 P **P** **20 13 33.7 -0.7**
comp=Z,8.3nm,0.4s,baz=159,slow=12,SNR=72
HFS LR LR 20 24 05.2
comp=Z,47nm,21.2s,baz=236,slow=40
HFS Hagfors 23.92 350 P **P** **20 13 33.7 -0.7**
FINES FINESS Array B 24.87 5 P **P** **20 13 42.9 -0.2**
FINES FINESS Array B 24.87 5 P **P** **20 13 42.9 -0.2**
comp=Z,4.4nm,0.4s,baz=163,slow=10,SNR=50
FINES FINESS Array B 24.87 5 P **P** **20 13 42.9 -0.2**
NAO01 NORSAR Array S 25.03 348 *e*Pn **P** **20 13 44.2 -0.3**
comp=Z,8.3nm,0.6s
NAO01 NORSAR Array S 25.03 348 *e*Pn **P** **20 13 44.2 -0.3**
comp=Z,8.3nm,0.6s
EKA Eskdalemuir Ar 25.04 326 P **P** **20 13 45.2 +0.6**
EKA Eskdalemuir Ar 25.04 326 P **P** **20 13 45.2 +0.6**
comp=Z,4.2nm,0.5s,baz=128,slow=9.3,SNR=43
EKA Eskdalemuir Ar 25.04 326 P **P** **20 13 45.2 +0.6**
NB2 NORSAR Subarra 25.16 348 P **P** **20 13 45.6 -0.1**
comp=Z,0.8nm,0.5s,baz=153,slow=10
NB2 NORSAR Subarra 25.16 348 P **P** **20 13 45.6 -0.1**
comp=Z,0.8nm,0.5s,SNR=5.3
NOA NORSAR Array B 25.16 348 P **P** **20 13 45.6 -0.1**
NOA NORSAR Array B 25.16 348 P **P** **20 13 45.6 -0.1**
comp=Z,5.4nm,0.5s,baz=158,slow=9.0,SNR=40
NOA NORSAR Array B 25.16 348 P **P** **20 13 45.7 -0.1**
KAF Kangasniemi 25.55 5 *e*p **P** **20 13 49.3 +0.1**
comp=Z,6.3nm,0.5s,baz=179,slow=9.0
KAF Kangasniemi 25.55 5 *e*P **P** **20 13 49.3 +0.1**
comp=Z,6.3nm,0.5s
JOF Joensuu 26.87 10 *e*p **P** **20 14 01.0 -0.2**
comp=Z,7.1nm,0.6s
JOF Joensuu 26.87 10 *e*P **P** **20 14 01.0 -0.2**
comp=Z,7.1nm,0.6s
AKTO Aktyubinsk 29.43 51 P **P** **20 14 23.6 -0.6**
AKTO Aktyubinsk 29.43 51 P **P** **20 14 23.6 -0.6**
comp=Z,2.1nm,0.6s,baz=261,slow=9.1,SNR=8.7
AKTO Aktyubinsk 29.43 51 P **P** **20 14 23.6 -0.6**
TORD Torodi Ar. Bea 29.47 222 P **P** **20 14 26.1 +1.4**
TORD Torodi Ar. Bea 29.47 222 P **P** **20 14 26.1 +1.4**
comp=Z,1.6nm,0.5s,baz=32,slow=9.1,SNR=49
TORD LR LR 20 27 43.0
comp=Z,67nm,18.1s,baz=85,slow=39
ABKAR Akbulak array 30.42 54 *e*Pn **P** **20 14 31.7 -1.2**
comp=Z,0.8nm,0.3s
ABKAR Akbulak array 30.42 54 *e*Pn **P** **20 14 31.7 -1.2**
comp=Z,0.8nm,0.3s
ARCES ARCESS Array B 32.90 3 P **P** **20 14 54.2 -0.3**
ARCES ARCESS Array B 32.90 3 P **P** **20 14 54.2 -0.3**
comp=Z,2.6nm,0.6s,baz=191,slow=9.3,SNR=19
ARCES LR LR 20 29 24.2
comp=Z,57nm,21.0s,baz=256,slow=38
ARCES ARCESS Array B 32.90 3 P **P** **20 14 54.2 -0.3**
KEV Kevo 33.19 3 *e*p **P** **20 14 56.8 -0.1**
KEV Kevo 33.19 3 *e*P **P** **20 14 56.8 -0.1**
BRVK Borovoye 37.39 48 *e*Pn **P** **20 15 31.9 -1.4**
comp=Z,3.8nm,0.6s
KKAR Karatay Array 37.67 65 *e*Pn **P** **20 15 34.6 -1.2**
comp=Z,3.2nm,0.6s
DBIC Dimbokro 38.42 225 P **P** **20 15 43.2 +0.9**
DBIC Dimbokro 38.42 225 P **P** **20 15 43.2 +0.9**
comp=Z,4.7nm,0.7s,baz=16,slow=11,SNR=6.4
DBIC LR LR 20 32 26.7
comp=Z,33nm,20.9s,baz=261,slow=38
DBIC Dimbokro 38.42 225 P **P** **20 15 43.2 +0.9**
LIC Lamto 38.88 225 *e*P **P** **20 15 47.0 +0.8**
comp=Z,12nm,0.5s
LIC Lamto 38.88 225 *e*P **P** **20 15 47.0 +0.8**
comp=Z,5.8nm,0.5s
EKS2 Erkin-Say 40.10 65 *e*Pn **P** **20 15 55.8 -0.6**
comp=Z,3.9nm,0.8s
KURK Kurchatov 42.51 52 *e*Pn **P** **20 16 14.3 -1.5**
comp=Z,2.3nm,0.6s
MK31 Makanchi Array 45.39 57 *e*Pn **P** **20 16 37.7 -1.4**
MK31 *e*PcP **PcP** **20 18 18.1 -0.1**
MK31 Makanchi Array 45.39 57 *e*Pn **P** **20 16 37.7 -1.4**
MKAR Makanchi Array 45.39 57 P **P** **20 16 38.0 -1.1**
MKAR Makanchi Array 45.39 57 P **P** **20 16 38.0 -1.1**
comp=Z,0.9nm,0.3s,baz=273,slow=7.8,SNR=31
MKAR Makanchi Array 45.39 57 P **P** **20 16 38.0 -1.1**
ZAA0 Zalesovo Array 46.06 47 *e*Pn **P** **20 16 42.7 -1.6**
ZALV Zalesovo Beam 46.06 47 P **P** **20 16 43.0 -1.3**
ZALV Zalesovo Beam 46.06 47 P **P** **20 16 43.0 -1.3**
comp=Z,5.7nm,0.5s,baz=268,slow=9.0,SNR=24
PYUN Piuthan 51.83 81 *e*P **P** **20 17 29.0 -0.1**
comp=Z,49nm,1.0s
DANN Dangsing 52.33 80 *e*P **P** **20 17 32.9 -0.1**

GKN	Gorkha	53.18	80	*e*P		P		20 17 38.6	-0.5
	comp=Z,0.5nm,0.2s								
DMN	Daman	53.73	80	*e*P		P		20 17 42.6	-0.6
	comp=Z,16nm,0.7s								
KKN	Kakani	53.78	80	*e*P		P		20 17 43.0	-0.6
	comp=Z,7.2nm,0.7s								
PKIN	Phulchoki	53.97	80	*e*P		P		20 17 44.5	-0.5
	comp=Z,7.4nm,0.8s								
PKI	Pulchoki	53.98	80	*e*P		P		20 17 44.7	-0.5
	comp=Z,9.5nm,0.8s								
GUN	Gumba	54.20	80	*e*P		P		20 17 46.4	-0.4
RAMN	Ramite	55.21	80	*e*P		P		20 17 52.5	-1.5
	comp=Z,10nm,0.7s								
ODAN	Odare	55.88	80	*e*P		P		20 17 57.5	-1.3
	comp=Z,4.1nm,0.5s								
TAPN	Taplejung	55.91	79	*e*P		P		20 17 58.3	-0.7
	comp=Z,15nm,1.1s								
SCHQ	Schefferville	60.03	318	P		P		20 18 26.9	-0.3
SCHQ	Schefferville	60.03	318	P		P		20 18 26.9	-0.3
	comp=Z,1.3nm,0.5s,baz=332,slow=0.4,SNR=3.8								
SCHQ	Schefferville	60.03	318	P		P		20 18 26.9	-0.3
SONM	Songino Array	60.75	50	P		P		20 18 31.7	-0.7
SONM	Songino Array	60.75	50	P		P		20 18 31.7	-0.7
	comp=Z,0.8nm,0.6s,baz=281,slow=5.8,SNR=3.6								
SONM	Songino Array	60.75	50	P		P		20 18 31.7	-0.7
BOSA	Boshof	65.12	176	P		P		20 19 02.5	+1.0
BOSA	Boshof	65.12	176	P		P		20 19 02.5	+1.0
	comp=Z,11nm,1.2s,baz=14,slow=4.2,SNR=4.7								
BOSA	Boshof	65.12	176	P		P		20 19 02.5	+1.0
CMAR	Chiang Mai Arr	69.31	82	P		P		20 19 27.4	-0.9
CMAR	Chiang Mai Arr	69.31	82	P		P		20 19 27.4	-0.9
	comp=Z,1.3nm,0.6s,baz=301,slow=7.3,SNR=8.4								
INK	Inuvik	73.59	351	P		P		20 19 53.7	+0.4
INK	Inuvik	73.59	351	P		P		20 19 53.7	+0.4
	comp=Z,0.8nm,0.5s,baz=54,slow=8.7,SNR=5.0								
INK	Inuvik	73.59	351	P		P		20 19 53.7	+0.4
YKA	Yellowknife Ar	74.99	341	P		P		20 20 02.5	+0.9
YKA	Yellowknife Ar	74.99	341	P		P		20 20 02.4	+0.9
	comp=Z,1.6nm,0.7s,baz=31,slow=5.3,SNR=5.8								
YKA	Yellowknife Ar	74.99	341	P		P		20 20 02.5	+0.9
USRK	Uusuriysk Arra	77.77	44	P		P		20 20 17.0	-0.6
	comp=Z,3.0nm,0.7s,baz=297,slow=5.0,SNR=11								
ILAR	Eielson Array	78.39	355	P		P		20 20 21.8	+1.0
ILAR	Eielson Array	78.39	355	P		P		20 20 21.8	+1.0
	comp=Z,0.5nm,0.9s,baz=339,slow=3.9,SNR=5.7								
ILAR					LR	LR		20 56 59.8	
	comp=Z,24nm,19.0s,baz=21,slow=37								
ILAR	Eielson Array	78.39	355	P		P		20 20 21.8	+1.0
KSAR	Wonju Array Be	79.60	51	P		P		20 20 27.6	-0.3
KSAR	Wonju Array Be	79.60	51	P		P		20 20 27.5	-0.3
KSRS	Korea Array	79.61	51	P		P		20 20 27.6	-0.4
	comp=Z,2.1nm,0.6s,baz=304,slow=4.4,SNR=6.3								
SIUC	Southern Illin	82.09	312	*e*P		P		20 20 41.9	+0.7
	comp=Z,28nm,0.6s								
SIUC	Southern Illin	82.09	312	*e*P		P		20 20 41.9	+0.7
	comp=Z,28nm,0.6s								
MJAR	Matsushiro Arr	86.41	46	P		P		20 21 02.8	-0.3
MJAR	Matsushiro Arr	86.41	46	P		P		20 21 02.8	-0.3
	comp=Z,0.8nm,0.8s,baz=303,slow=7.1,SNR=5.2								
MJAR	Matsushiro Arr	86.41	46	P		P		20 21 02.8	-0.3
PDAR	Pinedale Array	89.16	326	P		P		20 21 17.3	+0.8
PDAR	Pinedale Array	89.16	326	P		P		20 21 17.3	+0.8
	comp=Z,0.5nm,0.7s,baz=20,slow=5.9,SNR=3.4								
PDAR	Pinedale Array	89.16	326	P		P		20 21 17.3	+0.8
TXAR	Lajitas Array	96.52	314	P		P		20 21 52.4	+1.8
TXAR	Lajitas Array	96.52	314	P		P		20 21 52.4	+1.8
	comp=Z,0.3nm,0.6s,baz=69,slow=5.1,SNR=2.8								
WRA	Warramunga Arr	119.68	94	PKP		PKPdf		20 27 10.4	-0.5
WRA	Warramunga Arr	119.68	94	PKP		PKPdf		20 27 10.4	-0.5
	comp=Z,0.6nm,0.9s,baz=308,slow=2.0,SNR=3.9								
WRA	Warramunga Arr	119.68	94	PKIKP		PKPdf		20 27 10.4	-0.5
ASAR	Alice Springs	121.22	98	PKP		PKPdf		20 27 13.4	-0.5
ASAR	Alice Springs	121.22	98	PKP		PKPdf		20 27 13.4	-0.5
	comp=Z,0.3nm,0.4s,baz=303,slow=1.4,SNR=6.8								
ASAR	Alice Springs	121.22	98	PKIKP		PKPdf		20 27 13.4	-0.5

CSEM ***25*** *20:16:14.3, 42°.41N×13°.34E, h9km, MD1.7/7, After ROM*
ROM 25 20:16:14.3±0.1, 42°.41N×13°.34E, h9km±1km, Md1.7/7, MI0.9/4, Error ellipse: s-maj=1.9km s-min=1.8km az=81.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	L'Aquila	0.08	142	Pg	Pg	20 16 16.7	+0.2
AQU				Sg	Sg	20 16 18.4	+0.3
	129nm,0.2s						
AQU	L'Aquila	0.08	142	Pg	Pg	20 16 16.7	+0.2
AQU				Sg	Sg	20 16 18.4	+0.3
	129nm,0.2s						
CAMP	Campotosto	0.13	23	Pg	Pg	20 16 17.8	+0.3
CAMP				Sg	Sg	20 16 20.4	+0.7
	33nm,0.3s						
CAMP	Campotosto	0.13	23	Pg	Pg	20 16 17.8	+0.3
CAMP				Sg	Sg	20 16 20.4	+0.7
	33nm,0.3s						
FIAM	Fiamignano	0.22	228	Pg	Pg	20 16 19.4	+0.5
FIAM				Sg	Sg	20 16 23.2	+1.1
	9.0nm,0.4s						
FIAM	Fiamignano	0.22	228	Pg	Pg	20 16 19.4	+0.5
FIAM				Sg	Sg	20 16 23.2	+1.1
	9.0nm,0.4s						
TERO	Teramo	0.29	43	Pg	Pg	20 16 19.9	-0.2
	18nm,0.4s						
TERO	Teramo	0.29	43	Pg	Pg	20 16 19.9	-0.2
	18nm,0.4s						
VCEL	Villa Celiera	0.37	93	Pg	Pg	20 16 22.4	+0.6
VCEL				Sg	Sb	20 16 28.7	-0.6
	20nm,0.5s						
VCEL	Villa Celiera	0.37	93	Pg	Pg	20 16 22.4	+0.6
VCEL				Sg	Sb	20 16 28.7	-0.6
	20nm,0.5s						
NRCA	Norcia	0.45	338	Pg	Pb	20 16 24.6	0.0
NRCA				Sg	Sb	20 16 30.6	-0.9
NRCA	Norcia	0.45	338	Pg	Pb	20 16 24.6	0.0
NRCA				Sg	Sb	20 16 30.6	-0.9

THE ***25*** *20:17:16.5, 42°.58N×24°.27E, h0km±1km, ML3.0/6, Error ellipse: s-maj=2.2km s-min=0.8km az=15.0*
CSEM ***25*** *20:17:16.8±0.1, 42°.54N×24°.29E, h2km, MD3.1, Error ellipse: s-maj=2.9km s-min=2.5km az=64.0*
SOF ***25*** *20:17:17.2, 42°.57N×24°.29E, h15km, MD3.1*
BEO ***25*** *20:17:17.1±0.3, 42°.60N×24°.34E, h0km, ML3.1/1*
ISK ***25*** *20:17:34.3, 42°.08N×25°.65E, h5km, MD3.5*
ISC 25 20:17:17.4±0.9, 42°.55N±0°.02×24°.31E±0°.02, h10km±7km, n131, σ1s03/170, 14C-6D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGB	Panagyurishte	0.10	268	*i* Pg	Pg	20 17 20.6	+0.5
PGB	Panagyurishte	0.10	268	*i* Pg	Pg	20 17 20.6	+0.5
PLD	Plovdiv	0.54	147	P	Pg	20 17 27.6	-0.2
PLD				S	Sg	20 17 35.0	+0.2
PLD	Plovdiv	0.54	147	P	Pg	20 17 27.7	-0.1
PLD	Plovdiv	0.54	147	*e*Pg	Pg	20 17 27.6	-0.2
PLD				*e*Sg	Sg	20 17 35.2	+0.4
PLD	Plovdiv	0.54	147	P	Pg	20 17 27.6	-0.2
PLD				S	Sg	20 17 35.0	+0.2
VTS	Vitosha	0.81	273	P	Pg	20 17 31.4	-1.7
VTS				S	Sg	20 17 42.1	-1.6
VTS	Vitosha	0.81	273	*i* P	Pg	20 17 31.6	-1.5
VTS	Vitosha	0.81	273	*e*Pg	Pg	20 17 31.7	-1.3
VTS				*e*Sg	Sg	20 17 42.9	-0.8
VTS	Vitosha	0.81	273	⇓ *i*P	Pg	20 17 31.8	-1.3
VTS				S	Sg	20 17 42.2	-1.5
VTS	Vitosha	0.81	273	*e*Pg	Pg	20 17 31.7	-1.3
VTS				S	Sg	20 17 42.1	-1.6
MPEP	Malo Peshtene	0.91	333	P	Pg	20 17 33.9	-0.9
RZN	Rozhen	0.92	161	P	Pg	20 17 34.5	-0.5
RZN	Rozhen	0.92	161	P	Pg	20 17 34.5	-0.5
PVL	Pavlikeni	1.00	48	P	Pg	20 17 33.7	-2.9
DIM	Dimitrovgrad	1.04	119	P	Pg	20 17 37.2	-0.1
DIM	Dimitrovgrad	1.04	119	P	Pg	20 17 37.2	-0.1
MMB	Musomiste	1.06	204	P	Pg	20 17 37.7	0.0
MMB	Musomiste	1.06	204	P	Pg	20 17 37.7	0.0
KKB	Krupnik	1.14	233	P	Pb	20 17 38.3	-0.8
KKB	Krupnik	1.14	233	P	Pb	20 17 38.3	-0.8
KDZ	Kurdzhali	1.22	137	P	Pn	20 17 39.7	-0.8
KDZ	Kurdzhali	1.22	137	P	Pn	20 17 39.7	-0.8
NVR	Nevrokopi	1.25	196	P	Pn	20 17 40.2	-0.7
NVR				S	Sn	20 17 59.0	+1.3
NVR	Nevrokopi	1.25	196	*e*PB	Pn	20 17 40.5	-0.4
ZIMR		1.35	35	⇑ *i*P	Pb	20 17 42.8	+0.1
ZIMR				S	Sg	20 18 01.2	+0.5
ZAPS	Zavoj	1.43	301	*e*Pg	Pn	20 17 43.4	+0.1
ZAPS				*e*Sg	Sb	20 18 02.4	+0.1
SRS	Serrai	1.53	201	P	Pn	20 17 44.6	-0.1
SRS				S	Sg	20 18 06.8	+0.2
SRS	Serrai	1.53	201	P	Pn	20 17 44.6	-0.1
SRS				S	Sg	20 18 06.8	+0.2
KAVA	Kavala	1.56	174	P	Pn	20 17 45.3	+0.2
KAVA				S	Sg	20 18 07.7	+0.1
KAVA	Kavala	1.56	174	P	Pn	20 17 45.3	+0.2
KAVA				S	Sg	20 18 07.7	+0.1
JMB	Yambol	1.68	92	P	Pn	20 17 46.9	+0.1
JMB	Yambol	1.68	92	P	Pn	20 17 46.8	0.0
JMB	Yambol	1.68	92	P	Pn	20 17 46.9	+0.1
JMB				*e*Sn	Sb	20 18 09.6	0.0
KNT	Kendrikon	1.75	218	P	Pn	20 17 47.8	+0.1
KNT				S	Sb	20 18 11.1	-0.3
KNT	Kendrikon	1.75	218	P	Pn	20 17 47.8	+0.1
KNT				S	Sb	20 18 11.1	-0.3
VAY	Valandovo	1.79	227	P	Pn	20 17 47.6	-0.6
VAY				S	Sb	20 18 12.8	+0.2
VAY	Valandovo	1.79	227	*e*Pn	Pb	20 17 49.8	-0.4
VAY				*e*Sn	Sb	20 18 13.0	+0.3
VAY	Valandovo	1.79	227	*e*Pn	Pb	20 17 49.8	-0.4
VAY				*e*Sg	Sb	20 18 13.0	+0.3
VAY	Valandovo	1.79	227	P	Pn	20 17 47.6	-0.6
VAY	Valandovo	1.79	227	*e*Pn	Pb	20 17 49.8	-0.4
VAY				S	Sb	20 18 12.8	+0.2
BARS	Barje	1.86	279	*e*Pn	Pb	20 17 49.2	0.0
BARS				*e*Sn	Sb	20 18 14.7	+0.1
BARS	Barje	1.86	279	*e*Pn	Pb	20 17 49.2	0.0
BARS				*e*Sn	Sb	20 18 14.7	+0.1
SOH	Sokhos	1.87	203	P	Pn	20 17 49.6	+0.1
SOH	Sokhos	1.87	203	P	Pn	20 17 49.6	+0.1
EDRB	Edirne	1.94	110	*e*PG	Pn	20 17 50.8	+0.4
EDRB	Edirne	1.94	110	P	Pn	20 17 50.5	+0.1
EDRB	Edirne	1.94	110	P	Pn	20 17 50.5	+0.1
EDRB	Edirne	1.94	110	*e*Pg	Pn	20 17 50.8	+0.4
HUMR	Humele	2.03	14	⇑ *i*P	Pb	20 17 54.2	-0.2
HUMR				S	Sn	20 18 17.0	-0.1
ALN	Alexandroupoli	2.10	141	P	Pn	20 17 52.8	+0.2
ALN				S	Sb	20 18 21.9	+0.2
ALN	Alexandroupoli	2.10	141	*e*PB	Pn	20 17 52.9	+0.3
ALN	Alexandroupoli	2.10	141	P	Pn	20 17 52.8	+0.2
ALN				S	Sb	20 18 21.9	+0.2
GRG	Griva	2.14	222	P	Pn	20 17 53.2	+0.1
GRG	Griva	2.14	222	*e*PG	Pb	20 17 56.8	+0.6
GRG	Griva	2.14	222	P	Pn	20 17 53.2	+0.1
HORT	Hortiatis	2.15	205	P	Pn	20 17 53.3	-0.1
HORT	Hortiatis	2.15	205	P	Pn	20 17 53.3	-0.1
SKO	Skopje	2.21	256	*e*Pn	Pn	20 17 55.2	+1.2
SKO				*e*Sn	Sb	20 18 24.9	+0.2
SKO	Skopje	2.21	256	*e*Pn	Pg	20 17 59.5	-0.2
SKO				*e*Sg	Sg	20 18 27.2	-1.0
SKO	Skopje	2.21	256	*e*Pn	Pn	20 17 55.2	+1.2
SKO				*e*Sn	Sb	20 18 24.9	+0.2
OUR	Ouranopolis	2.23	186	P	Pn	20 17 53.9	-0.4
OUR	Ouranopolis	2.23	186	P	Pn	20 17 53.9	-0.4
PLG	Polygyros	2.27	197	P	Pn	20 17 55.1	+0.2
PLG	Polygyros	2.27	197	*e*PN	Pb	20 17 56.8	-1.7
PLG	Polygyros	2.27	197	P	Pn	20 17 55.1	+0.2
SMTH	Samothraki Isl	2.27	156	P	Pn	20 17 55.8	+0.9
SMTH	Samothraki Isl	2.27	156	*e*PG	Pb	20 17 59.4	+0.9
SMTH	Samothraki Isl	2.27	156	P	Pn	20 17 55.8	+0.9
ENEZ	Enez	2.28	142	*e*PN	Pg	20 18 00.8	-0.3
ENEZ				*e*SN	Sn	20 18 22.4	-0.7
ENEZ	Enez	2.28	142	*e*Pn	Pg	20 18 00.8	-0.3
ENEZ				*e*Sn	Sn	20 18 22.4	-0.7
PRD	Provadia	2.36	73	P	Pb	20 18 01.1	+1.2
SELS	Selova	2.44	287	*e*Sn	Sn	20 18 28.9	+1.8
SELS	Selova	2.44	287	*e*Sn	Sn	20 18 28.9	+1.8
SULR		2.55	33	⇓ *i*P	Pb	20 18 04.4	+1.2
SULR		2.55	33	⇓ *i*P	Pb	20 18 04.4	+1.2
PAIG	Paliouri	2.67	190	P	Pn	20 17 59.7	-0.6
PAIG				S	Sn	20 18 34.4	+1.8
PAIG	Paliouri	2.67	190	P	Pn	20 17 59.7	-0.6
PAIG				S	Sn	20 18 34.4	+1.8
GELI	Tayfur-Gelibol	2.70	142	*e*PN	Pb	20 18 07.4	+1.7
LIA	Limnos Island	2.73	166	P	Pn	20 18 00.8	-0.5
LIA	Limnos Island	2.73	166	*e*PN	Pn	20 18 00.8	-0.5
LIA	Limnos Island	2.73	166	P	Pn	20 18 00.8	-0.5
FNA	Florina	2.82	232	*e*PN	Pn	20 18 03.9	+1.4
SVIS	Svilajnac	2.83	308	*e*Pn	Pn	20 18 03.9	+1.3
SVIS				*e*Sn	Sn	20 18 38.0	+1.3
MFT	Murefte	2.84	127	*e*PN	Pb	20 18 08.2	0.0
MFT	Murefte	2.84	127	*e*Pn	Pb	20 18 08.2	0.0
RKY	Sarkoy-Tekirda	2.85	130	*e*PN	Pb	20 18 08.2	0.0
RKY	Sarkoy-Tekirda	2.85	130	*e*Pn	Pb	20 18 08.2	0.0
LPK	Lapseki	2.85	139	*e*PN	Pb	20 18 08.7	+0.4
LPK	Lapseki	2.85	139	*e*Pn	Pb	20 18 08.7	+0.4
VOIR		2.93	10	⇑ *i*P	Pn	20 18 03.8	-0.3
VOIR		2.93	10	⇑ *i*P	Pn	20 18 03.8	-0.3
GRUS	Gruza	2.95	298	*e*Pn	Pn	20 18 03.5	-0.7
GRUS				*e*Sn	Sn	20 18 41.4	+1.8
GRUS	Gruza	2.95	298	*e*Pn	Pn	20 18 03.5	-0.7
GRUS				*e*Sn	Sn	20 18 41.4	+1.8
ISR	Istrita	3.03	31	⇓ *i*P	Pn	20 18 06.7	+1.3
ISR	Istrita	3.03	31	⇓ *i*P	Pn	20 18 06.7	+1.3
KRBG	Karabiga-Canak	3.11	133	*e*PN	Pb	20 18 11.2	-1.6
KRBG	Karabiga-Canak	3.11	133	*e*Pn	Pb	20 18 11.2	-1.6
CTYL	Yal??k??y-??at	3.15	109	*e*PN	Pb	20 18 11.2	-2.2
CTYL	Yal??k??y-??at	3.15	109	*e*Pn	Pb	20 18 11.2	-2.2
MLR	Muntele Rosu	3.17	21	⇓ *i*P	Pn	20 18 09.0	+1.7
SLVT	Silivri	3.20	113	*e*PN	Pb	20 18 12.6	-1.6
SLVT	Silivri	3.20	113	*e*Pn	Pb	20 18 12.6	-1.6
SJES	Sjenica	3.26	284	*e*Pn	Pn	20 18 09.3	+0.7
SJES				*e*Sn	Sn	20 18 49.2	+1.6
XOR	Xorichti	3.29	195	P	Pn	20 18 08.6	-0.4
XOR	Xorichti	3.29	195	P	Pn	20 18 08.6	-0.4
CTKS	Kestanelik-??a	3.40	111	*e*PN	Pb	20 18 14.4	-3.2
CTKS	Kestanelik-??a	3.40	111	*e*Pn	Pb	20 18 14.4	-3.2
DIVS	Divibare	3.51	298	*e*Pn	Pn	20 18 10.9	-1.1
DIVS	Divibare	3.51	298	*e*Pn	Pn	20 18 10.9	-1.1
GONE	Gonen-Balikesi	3.57	133	*e*PN	Pb	20 18 19.0	-1.5
BGKT	Bogazkoy	3.60	111	*e*PN	Pb	20 18 18.5	-2.6
BGKT	Bogazkoy	3.60	111	*e*Pn	Pb	20 18 18.5	-2.6
BZS	Buzias	3.62	329	⇑ *i*P	Pn	20 18 12.2	-1.3
BZS	Buzias	3.62	329	⇑ *i*P	Pn	20 18 12.2	-1.3
PLOR	Plostina	3.70	26	⇑ *i*P	Pn	20 18 15.6	+1.0
PLOR	Plostina	3.70	26	⇑ *i*P	Pn	20 18 15.6	+1.0
VRI	Vrincioaia	3.74	27	⇑ *i*P	Pn	20 18 16.5	+1.4
VRI	Vrincioaia	3.74	27	⇑ *i*P	Pn	20 18 16.5	+1.4
CFR	Carcaliu	3.81	45	⇑ *i*P	Pn	20 18 16.2	+0.1
CFR	Carcaliu	3.81	45	⇑ *i*P	Pn	20 18 16.2	+0.1
BBLS	Lazići	3.82	292	*e*Pn	Pn	20 18 16.5	+0.3
BBLS				*e*Sn	Sn	20 19 02.4	+1.2
BBLS	Lazići	3.82	292	*e*Pn	Pn	20 18 16.5	+0.3
BBLS				*e*Sn	Sn	20 19 02.4	+1.2
DRGR		4.39	345	⇑ *i*P	Pn	20 18 22.2	-1.9
DRGR		4.39	345	⇑ *i*P	Pn	20 18 22.2	-1.9
KECS	Kecovo	6.51	337	*e*PN	Pn	20 18 45.6	-7.5
KOLS	Kolonicke sedl	6.54	348	*e*SG	Sg	20 20 47.4	+0.3
KOLS	Kolonicke sedl	6.54	348	*e*Sg	Sg	20 20 47.4	+0.3
CRVS	Cervenica-Dubn	6.65	344	*e*SG	Sg	20 20 52.1	+1.3
CRVS	Cervenica-Dubn	6.65	344	*e*Sg	Sg	20 20 52.1	+1.3

ISCJB ***25*** *20:20:59.4±0.5, 35°.95N±0°.03×25°.38E±0°.06, h26km±6km, Error ellipse: s-maj=8.5km s-min=4.9km az=177.8*
ATH ***25*** *20:20:59.3, 35°.92N×25°.35E, h37km±7km, MD3.0/7*
THE ***25*** *20:20:59.2, 35°.93N×25°.38E, h12km±1km, Error ellipse: s-maj=1.8km s-min=0.4km az=288.0*
CSEM ***25*** *20:20:59.1±0.2, 35°.93N×25°.37E, h18km±2km, MD3.0, Error ellipse: s-maj=5.4km s-min=2.9km az=92.0*
ISC 25 20:20:58.9±1.1, 35°.94N±0°.02×25°.36E±0°.04, h18km±4km, n30, σ0s43/45, Crete

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THR1	Thera Island	0.43	11	P	Pb	20 21 08.5	+0.4
THR1				S	Sb	20 21 14.9	+0.6
THR1	Thera Island	0.43	11	P	Pb	20 21 08.5	+0.4
THR1				S	Sb	20 21 14.9	+0.6
THR3	Thira Island,	0.47	4	P	Pb	20 21 08.6	0.0
THR3	Thira Island,	0.47	4	P	Pb	20 21 08.6	0.0
THR5	Thira Island,	0.47	359	P	Pb	20 21 09.1	+0.4
THR5	Thira Island,	0.47	359	P	Pb	20 21 09.1	+0.4
THR2	Thira island,	0.51	7	P	Pg	20 21 08.9	-0.2
THR2	Thira island,	0.51	7	P	Pg	20 21 08.9	-0.2
NPS	Neapolis	0.71	163	P	Pb	20 21 12.6	-0.1
NPS				S	Sg	20 21 22.7	+0.4
NPS	Neapolis	0.71	163	*e*PN	Pn	20 21 13.8	-0.2
NPS				*e*SB	Sb	20 21 22.5	+0.4
NPS	Neapolis	0.71	163	P	Pb	20 21 12.6	-0.1
NPS	Neapolis	0.71	163	*e*Pn	Pn	20 21 13.8	-0.2
NPS				*e*Sb	Sb	20 21 22.5	+0.4
IDI	Anoyia	0.76	210	P	Pb	20 21 13.6	0.0
IDI				S	Sn	20 21 24.8	-0.9
IDI	Anoyia	0.76	210	*e*PN	Pg	20 21 13.9	+0.2
IDI				*e*SN	Sn	20 21 25.0	-0.7
IDI	Anoyia	0.76	210	P	Pb	20 21 13.6	0.0
IDI	Anoyia	0.76	210	*e*Pn	Pg	20 21 13.9	+0.2
IDI				S	Sn	20 21 24.8	-0.9
IDI				*e*Sn	Sn	20 21 25.0	-0.7
LAST	Lasithi	0.79	173	*e*PN	Pb	20 21 14.1	0.0
LAST				*e*SN	Sg	20 21 25.4	+0.7
LAST	Lasithi	0.79	173	*e*Pn	Pb	20 21 14.1	0.0
LAST				*e*Sn	Sg	20 21 25.4	+0.7
SIVA	Sivas	1.03	206	*e*PN	Pg	20 21 18.8	0.0
SIVA	Sivas	1.03	206	*e*Pn	Pg	20 21 18.8	0.0
ZKR	Zakros	1.08	140	P	Pb	20 21 18.8	-0.3
ZKR				S	Sb	20 21 33.4	+0.5
ZKR	Zakros	1.08	140	*e*PN	Pg	20 21 20.1	+0.2
ZKR	Zakros	1.08	140	P	Pb	20 21 18.8	-0.3
ZKR	Zakros	1.08	140	*e*Pn	Pg	20 21 20.1	+0.2
ZKR				S	Sb	20 21 33.4	+0.5
VAM	Vamos	1.08	241	*e*PN	Pg	20 21 20.5	+0.6
VAM				*e*SN	Sg	20 21 33.9	-0.2
VAM	Vamos	1.08	241	*e*Pn	Pg	20 21 20.5	+0.6
VAM				*e*Sn	Sg	20 21 33.9	-0.2
APE	Apeiranthos	1.13	7	P	Pb	20 21 19.9	0.0
APE	Apeiranthos	1.13	7	*e*PN	Pg	20 21 20.6	-0.2
APE	Apeiranthos	1.13	7	P	Pb	20 21 19.9	0.0
APE	Apeiranthos	1.13	7	*e*Pn	Pg	20 21 20.6	-0.2

ISCJB ***25*** *20:24:32.1±0.9, 37°.64N±0°.04×26°.89E±0°.07, h12km±6km, Error ellipse: s-maj=9.9km s-min=5.0km az=155.7*
ISK ***25*** *20:24:32.3, 37°.68N×26°.97E, h18km, MD2.7*
CSEM ***25*** *20:24:32.5±0.2, 37°.66N×26°.92E, h15km, MD2.8, Error ellipse: s-maj=5.5km s-min=2.3km az=64.0*
DDA ***25*** *20:24:33, 37°.69N×26°.94E, h7km, MD2.8*
ISC 25 20:24:32.7±1.2, 37.68N±0°.04×26.95E±0°.05, h15km±12km, n18, σ0s37/30, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	G?zelcaml?	0.23	85	*i* P	Pb	20 24 38.2	-0.3
GCAM				*i* S	Sb	20 24 42.8	+0.3
GCAM	G?zelcaml?	0.23	85	*i* P	Pb	20 24 38.2	-0.3
GCAM				*i* S	Sb	20 24 42.8	+0.3
BODT	Bodrum	0.68	155	*e*PG	Pb	20 24 46.6	+0.4
BODT				*e*SG	Sg	20 24 54.9	-0.1
BODT	Bodrum	0.68	155	*e*Pg	Pb	20 24 46.7	+0.4
BODT				*e*Sg	Sg	20 24 54.9	-0.1
BLCB	Balcova	0.71	6	*e*PG	Pg	20 24 46.6	+0.2
BLCB				*e*SG	Sb	20 24 56.8	+0.5
BLCB	Balcova	0.71	6	*e*Pg	Pg	20 24 46.7	+0.2
BLCB				*e*Sg	Sb	20 24 56.8	+0.5
URLA	Izmir	0.73	338

NEM2	Nemuro 2	3.84	247	P		Pn	20 59 13.3	+1.1
NEM2				eS		Sn	20 59 54.3	-1.8
JRA	Rausu	4.04	257	P		Pn	20 59 18.1	+3.0
JRA				eS		Sn	21 00 03.4	+2.2
JNK	Nakash	4.43	254	P		Pn	20 59 22.9	+2.4
JNK				eS		Sn	21 00 11.5	+0.7
JAK	Akkeshi	4.69	247	P		Pn	20 59 25.1	+1.2
JAK				eS		Sn	21 00 15.3	-1.7
JTKR	Abashiri--Toko	4.88	260	P		Pn	20 59 29.4	+2.8
JAR	Ashorobuto	5.18	253	P		Pn	20 59 33.5	+2.8
JAR				eS		Sn	21 00 30.2	+1.0
JOB	Onbets	5.30	249	P		Pn	20 59 34.4	+2.1
JOB				eS		Sn	21 00 30.9	-1.1
JKK2	Kamakawa 2	5.72	261	P		Pn	20 59 41.9	+3.8
JCH	Churui	5.74	248	P		Pn	20 59 39.6	+1.3
JCH				eS		Sn	21 00 40.5	-2.3
ASAJ	Asahikawa	5.77	264	P		Pn	20 59 41.6	+2.8
	0.4nm,0.3s,baz=78,slow=18,SNR=2.4							
JFR	Furan	6.04	255	P		Pn	20 59 46.3	+3.9
JEM	Erimo	6.16	244	P		Pn	20 59 46.4	+2.3
JNBK	Urakawa-nobuka	6.29	247	P		Pn	20 59 47.2	+1.3
JNBK				eS		Sn	21 00 52.7	-3.8
JNB	Noboribetsu	7.36	253	P		Pn	21 00 02.3	+1.8
JNB				eS		Sn	21 01 20.5	-2.2
JKB	Kayabe	7.61	249	P		Pn	21 00 05.3	+1.3
JKB				eS		Sn	21 01 23.9	-4.9
JANG	Nango	8.11	239	P		Pn	21 00 10.4	-0.5
JANG				eS		Sn	21 01 33.5	-7.8
JTM	Tenmabayashi	8.15	242	eS		Sn	21 01 35.8	-6.3
JTH	Tanohata	8.18	235	P		Pn	21 00 11.3	-0.6
JTH				eS		Sn	21 01 35.1	-7.9
PETK	Petropavlovsk-	9.37	27	P		Pn	21 00 29.0	+0.9
	0.2nm,0.3s,baz=242,slow=11,SNR=2.9							
PETK				LR		LR	21 03 34.6	
	comp=Z,30nm,20.7s,baz=333,slow=34							
JIO	Ouri	9.49	230	P		Pn	21 00 29.9	0.0
JIO				eS		Sn	21 02 06.8	-8.4
ILAR	Eielson Array	39.02	37	P		P	21 05 38.9	+0.8
	0.2nm,0.4s,baz=262,slow=6.3,SNR=3.6							
ZALV	Zalesovo Beam	42.22	307	LR		LR	21 24 24.3	
	comp=Z,20nm,20.5s,baz=311,slow=37							
INK	Inuvik	44.08	31	P		P	21 06 20.3	+0.8
	1.0nm,0.4s,baz=334,slow=5.7,SNR=5.5							
MKAR	Makanchi Array	46.19	298	P		P	21 06 35.3	-1.2
	0.4nm,0.7s,baz=76,slow=7.6,SNR=5.1							
FINES	FINESS Array B	64.86	334	P		P	21 08 46.9	-3.4
	0.8nm,0.7s,baz=35,slow=7.0,SNR=4.4							
WRA	Warramunga Arr	66.29	197	P		P	21 09 01.7	+1.7
	0.5nm,0.9s,baz=14,slow=6.9,SNR=3.0							
NOA	NORSAR Array B	69.30	340	P		P	21 09 16.4	-2.2
	0.4nm,0.6s,baz=54,slow=8.2,SNR=4.3							
KBZ	Khabaz	70.79	313	P		P	21 09 27.5	-0.4
	2.8nm,0.9s,baz=32,slow=4.1,SNR=7.0							
AKASG	Malin Array Be	72.00	325	P		P	21 09 32.5	-2.6
	0.5nm,0.3s,baz=38,slow=6.2,SNR=3.4							
EKA	Eskdalemuir Ar	77.61	345	P		P	21 10 06.4	-1.0
	0.6nm,0.4s,baz=21,slow=5.2,SNR=6.3							
GERES	GERESS Array B	79.23	333	P		P	21 10 15.1	-1.6
	0.7nm,0.5s,baz=46,slow=6.1,SNR=7.4							
TXAR	Lajitas Array	79.91	59	P		P	21 10 21.8	+1.0
	0.7nm,0.5s,baz=308,slow=4.4,SNR=8.5							
MMAI	Mount Meron Ar	82.62	310	P		P	21 10 34.9	0.0
	0.6nm,0.5s,baz=69,slow=7.9,SNR=3.0							

*SZGRF **25** 21:00:07.7, 42°.25N×13°.69E, h10km, mb4.0, Central Italy*
*ISCJB **25** 21:00:08.3±0.2, 42°.58N±0°.01×13°.17E±0°.02, h11km±1km, mb3.8/3, Error ellipse: s-maj=2.7km s-min=1.7km az=35.5*
*LDG **25** 21:00:08.2±0.1, 42°.59N×13°.19E, h2km, Ml3.5/9, Error ellipse: s-maj=2.8km s-min=1.7km az=33.0*
*ROM **25** 21:00:08.3±0.1, 42°.56N×13°.20E, h10km, Ml3.9/13, Error ellipse: s-maj=1.0km s-min=0.7km az=50.0*
*CSEM **25** 21:00:08.7±0.1, 42°.56N×13°.17E, h2km, ML4.1/15, Error ellipse: s-maj=2.5km s-min=1.8km az=31.0*
*IDC **25** 21:00:09.0±1.2, 42°.67N×13°.16E, h0km, mb3.7/4, mb1 3.7/8, mb1mx3.6/30, mbtmp3.6/8, ML3.4/4, MS2.7/1, Ms1 2.7/1, ms1mx2.0/41, Error ellipse: s-maj=31.3km s-min=12.2km az=99.0*
*PRU **25** 21:00:09.6, 42°.60N×13°.49E, h4km*
*PDG **25** 21:00:09.0±0.5, 42°.58N×13°.19E, h11km, ML3.7/9, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*
*STR **25** 21:00:17.4±0.7, 43°.26N×13°.06E, h5km, Ml3.5, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 25 21:00:09.2±0.7, 42°.58N±0°.02×13°.19E±0°.02, h8km±5km, n259, σ1s61/335, mb3.8/3, 18C-27D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	Leonessa	0.11	284	Pg	Pg	21 00 11.8	0.0
LNSS				Sg	Sg	21 00 14.4	+0.8
	91μm,0.4s						
LNSS	Leonessa	0.11	284	Pg	Pg	21 00 11.8	0.0
LNSS				Sg	Sg	21 00 14.4	+0.8
	91μm,0.4s						
CAMP	Campotosto	0.17	104	Pg	Pg	21 00 12.4	-0.3
CAMP				Sg	Sg	21 00 15.1	0.0
	16μm,0.4s						
CAMP	Campotosto	0.17	104	Pg	Pg	21 00 12.4	-0.3
CAMP				Sg	Sg	21 00 15.1	0.0
	16μm,0.4s						
GAVE	Gavelli	0.25	298	Pg	Pg	21 00 14.1	0.0
GAVE	Gavelli	0.25	298	Pg	Pg	21 00 14.1	0.0
NRCA	Norcia	0.26	348	Pg	Pg	21 00 14.1	-0.3
NRCA				Sg	Sg	21 00 18.6	+0.6
	21μm,0.1s						
NRCA	Norcia	0.26	348	Pg	Pg	21 00 14.1	-0.3
NRCA				Sg	Sg	21 00 18.6	+0.6
	21μm,0.1s						
AQU	L'Aquila	0.27	144	Pg	Pg	21 00 14.1	-0.5
AQU				Sg	Sg	21 00 18.8	+0.6
	11μm,0.6s						
AQU	L'Aquila	0.27	144	Pg	Pg	21 00 14.1	-0.5
AQU				Sg	Sg	21 00 18.8	+0.6
	11μm,0.6s						
TERO	Teramo	0.31	81	Pg	Pg	21 00 14.6	-0.7
TERO				Sg	Sg	21 00 19.2	-0.2
	16μm,0.7s						
TERO	Teramo	0.31	81	Pg	Pg	21 00 14.6	-0.7
TERO				Sg	Sg	21 00 19.2	-0.2
	16μm,0.7s						
FIAM	Fiamignano	0.31	190	Pg	Pg	21 00 15.0	-0.3
FIAM				Sg	Sg	21 00 19.9	+0.4
	10μm,0.6s						
FIAM	Fiamignano	0.31	190	Pg	Pg	21 00 15.0	-0.3
FIAM				Sg	Sg	21 00 19.9	+0.4
	10μm,0.6s						
MNS	Montasola	0.42	243	Pg	Pg	21 00 16.9	-0.5
MNS				Sg	Sg	21 00 23.3	+0.4
	6μm,0.6s						
MNS	Montasola	0.42	243	Pg	Pg	21 00 16.9	-0.5
MNS				Sg	Sg	21 00 23.3	+0.4
	6μm,0.6s						
CESX	Cesi	0.45	275	Pg	Pg	21 00 17.3	-0.6
CESX				Sg	Sg	21 00 24.6	+0.8
	5μm,0.6s						
CESX	Cesi	0.45	275	Pg	Pg	21 00 17.3	-0.6
CESX				Sg	Sg	21 00 24.6	+0.8
	5μm,0.6s						
FDMO	Fiordimonte	0.47	351	Pg	Pg	21 00 17.7	-0.5
FDMO				Sg	Sg	21 00 25.3	+0.9
	4μm,0.5s						
FDMO	Fiordimonte	0.47	351	Pg	Pg	21 00 17.7	-0.5
FDMO				Sg	Sg	21 00 25.3	+0.9
	4μm,0.5s						
CESI	CESI - Serrava	0.48	334	Pg	Pg	21 00 18.0	-0.4
CESI				Sg	Sb	21 00 25.8	-1.4
CESI	CESI - Serrava	0.48	334	Pg	Pg	21 00 18.0	-0.4
CESI				Sg	Sb	21 00 25.8	-1.4
OFFI	Offida	0.51	45	Pg	Pg	21 00 19.3	+0.2
	25μm,0.5s						
OFFI	Offida	0.51	45	Pg	Pg	21 00 19.3	+0.2
	25μm,0.5s						
VCEL	Villa Celiera	0.52	110	Pg	Pg	21 00 18.5	-0.6
VCEL				Sg	Sg	21 00 26.9	+1.0
	7μm,0.5s						
VCEL	Villa Celiera	0.52	110	Pg	Pg	21 00 18.5	-0.6
VCEL				Sg	Sg	21 00 26.9	+1.0
	7μm,0.5s						
PTQR	Pietraquaria	0.57	164	Pg	Pg	21 00 19.1	-1.2
PTQR	Pietraquaria	0.57	164	Pg	Pg	21 00 19.1	-1.2
TRTR	Tortoreto Alta	0.58	66	Pg	Pg	21 00 20.8	+0.4
TRTR	Tortoreto Alta	0.58	66	Pg	Pg	21 00 20.8	+0.4
ASSB	Assisi San Ben	0.61	320	Pg	Pg	21 00 20.2	-0.7
ASSB	Assisi San Ben	0.61	320	Pg	Pg	21 00 20.2	-0.7
MTCE	Montecelio	0.64	211	Pg	Pg	21 00 20.4	-1.2
MTCE	Montecelio	0.64	211	Pg	Pg	21 00 20.4	-1.2
CERT	Cerreto	0.65	194	Pg	Pg	21 00 20.4	-1.2
CERT	Cerreto	0.65	194	Pg	Pg	21 00 20.4	-1.2
SNTG	Esanatoglia	0.70	345	Pg	Pg	21 00 21.9	-0.8
SNTG	Esanatoglia	0.70	345	Pg	Pg	21 00 21.9	-0.8
GUMA	Gualdo di Mace	0.73	48	Pg	Pg	21 00 18.7	-4.6
	17μm,0.5s						
VVLD	Villa Vallelon	0.77	155	Pg	Pg	21 00 23.5	-0.6
VVLD	Villa Vallelon	0.77	155	Pg	Pg	21 00 23.5	-0.6
INTR	Introdacqua	0.78	136	Pg	Pg	21 00 22.6	-1.5
INTR	Introdacqua	0.78	136	Pg	Pg	21 00 22.6	-1.5
CING	Cingoli	0.80	0	Pg	Pg	21 00 23.6	-1.0
CING	Cingoli	0.80	0	Pg	Pg	21 00 23.6	-1.0
MURB	Monte Urbino	0.84	325	Pg	Pg	21 00 24.7	-0.7
MURB	Monte Urbino	0.84	325	Pg	Pg	21 00 24.7	-0.7
RMP	Rome, Mte Porz	0.84	205	Pg	Pg	21 00 23.8	-1.6
RMP	Rome, Mte Porz	0.84	205	Pg	Pg	21 00 23.8	-1.6
MGAB	Montegabbione	0.86	293	Pg	Pg	21 00 24.9	-0.8
MGAB	Montegabbione	0.86	293	Pg	Pg	21 00 24.9	-0.8
RDP	Rocca di Papa	0.89	203	Pg	Pg	21 00 24.7	-1.5
RDP	Rocca di Papa	0.89	203	Pg	Pg	21 00 24.7	-1.5
LPEL	Lama dei Pelig	0.91	125	Pg	Pg	21 00 24.7	-1.9
LPEL	Lama dei Pelig	0.91	125	Pg	Pg	21 00 24.7	-1.9
CAFR	Castel Frentan	0.93	112	Pg	Pg	21 00 25.7	-1.2
CAFR	Castel Frentan	0.93	112	Pg	Pg	21 00 25.7	-1.2
ARVD	Arcevia	0.94	349	Pg	Pg	21 00 25.9	-1.3
ARVD	Arcevia	0.94	349	Pg	Pg	21 00 25.9	-1.3
SACS	San Casciano d	0.98	287	Pg	Pg	21 00 27.0	-1.0
SACS	San Casciano d	0.98	287	Pg	Pg	21 00 27.0	-1.0
SDI	San Donato	0.98	152	Pg	Pg	21 00 26.6	-1.4
SDI	San Donato	0.98	152	Pg	Pg	21 00 26.6	-1.4
TOLF	Tolfa	1.02	240	Pg	Pg	21 00 27.3	-1.4
TOLF	Tolfa	1.02	240	Pg	Pg	21 00 27.3	-1.4
AOI	Ancona	1.02	17	Pg	Pg	21 00 27.7	-1.1
AOI	Ancona	1.02	17	Pg	Pg	21 00 27.7	-1.1
PIEI	Pieia	1.07	334	Pg	Pg	21 00 28.2	-1.6
PIEI	Pieia	1.07	334	Pg	Pg	21 00 28.2	-1.6
BADI	Badiali	1.16	324	Pg	Pg	21 00 30.8	-0.7
BADI	Badiali	1.16	324	Pg	Pg	21 00 30.8	-0.7
CAFI	Castiglion Fio	1.17	310	Pg	Pg	21 00 30.7	-0.9
CAFI	Castiglion Fio	1.17	310	Pg	Pg	21 00 30.7	-0.9
MIDA	Miranda	1.22	139	Pg	Pb	21 00 30.1	-2.5
MIDA	Miranda	1.22	139	Pg	Pb	21 00 30.1	-2.5
PARC	Parchiule	1.28	327	Pg	Pn	21 00 32.4	-1.0
PARC	Parchiule	1.28	327	Pg	Pn	21 00 32.4	-1.0
ARCI	Arcidosso	1.29	283	Pg	Pn	21 00 33.0	-0.7
ARCI	Arcidosso	1.29	283	Pg	Pn	21 00 33.0	-0.7
MS1	Monte Sant'Ang	2.23	112	ePn	Pn	21 00 47.2	+0.8
MAIM	Mastiano	2.38	305	P	Pn	21 00 49.1	+0.6
SARO	Sassorosso	2.59	309	P	Pn	21 00 51.2	-0.3
VINC	Vinca	2.71	306	P	Pn	21 00 53.5	+0.4
CDT	Castel del Mon	2.75	122	ePn	Pn	21 00 54.6	+1.0
CDT				eSn	Sn	21 01 28.7	+1.7
VALM	Valbona	2.78	311	P	Pn	21 00 54.7	+0.6
GRAM	Graiana	2.97	311	P	Pn	21 00 57.7	+1.0
SKDS	Skadanscina	3.03	11	i Pn	Pn	21 00 56.8	-0.7
SKDS				eSn	Sn	21 01 33.4	-0.5
SKDS							
	comp=Z,72nm,0.2s						
SKDS	Skadanscina	3.03	11	Pn	Pn	21 00 56.8	-0.7
SKDS				eSn	Sn	21 01 33.4	-0.5
	comp=Z,72nm,0.2s						
PGF	Pioggiola	3.10	271	eP	Pn	21 00 58.3	-0.1
PGF				eSn	Sn	21 01 31.0	-4.7
	comp=Z,33nm,0.7s						
PGF	Pioggiola	3.10	271	eP	Pn	21 00 58.3	-0.1
BAI	Bari	3.12	117	ePn	Pn	21 00 59.6	+0.9
BAI				eSn	Sn	21 01 37.7	+1.5
SC2M	Scurtabo	3.23	306	P	Pn	21 01 01.1	+0.9
BOJS	Bojanci	3.28	26	i Pn	Pn	21 01 01.3	+0.4
BOJS				i Sn	Sn	21 01 41.4	+1.2
BOJS							
	comp=Z,73nm,0.7s						
BOJS	Bojanci	3.28	26	i Pn	Pn	21 01 01.3	+0.4
BOJS				i Sn	Sn	21 01 41.4	+1.2
	comp=Z,73nm,0.7s						
VISS	Visnje	3.44	20	i Pn	Pn	21 01 02.9	-0.2
VISS				eSn	Sn	21 01 43.4	-0.6
VISS							
	comp=Z,50nm,0.5s						
VISS	Visnje	3.44	20	i Pn	Pn	21 01 02.9	-0.2
VISS				eSn	Sn	21 01 43.4	-0.6
	comp=Z,50nm,0.5s						
VOJS	Vojsko	3.49	8	i Pn	Pn	21 01 03.1	-0.8
VOJS				eSn	Sn	21 01 45.3	-0.2
VOJS							
	comp=Z,49nm,0.6s						
VOJS	Vojsko	3.49	8	i Pn	Pn	21 01 03.1	-0.8
VOJS				eSn	Sn	21 01 45.3	-0.2
	comp=Z,49nm,0.6s						
PE1	Pezze di Greco	3.63	118	ePn	Pn	21 01 06.7	+1.0
TAR1	Taranto	3.69	122	ePn	Pn	21 01 08.0	+1.5
PCP	Piancastagn	3.91	302	P	Pn	21 01 09.7	+0.2
HCY	Herceg Novi	3.92	90	i Pn	Pn	21 01 10.2	+0.5
HCY				eSn	Sn	21 01 56.6	+0.6
HCY	Herceg Novi	3.92	90	i Pn	Pn	21 01 10.2	+0.5
HCY				eSn	Sn	21 01 56.6	+0.6
BRY	Bratogost	3.95	83	↓i Pn	Pn	21 01 11.2	+0.9
BRY				eSn	Sn	21 01 57.6	+0.7
BRY	Bratogost	3.95	83	↓i Pn	Pn	21 01 11.2	+0.9
BRY				eSn	Sn	21 01 57.6	+0.7
OBKA	Obir	4.05	13	ePn	Pn	21 01 11.9	+0.3
OBKA	Obir	4.05	13	↑i Pn	Pn	21 01 11.9	+0.3
	comp=Z,2.1nm,0.2s						
OBKA				↓i Sn	Sn	21 02 02.6	+3.3
OBKA	Obir	4.05	13	Pn	Pn	21 01 11.9	+0.3
	comp=Z,2.1nm,0.2s						
OBKA				Sn	Sn	21 02 02.6	+3.3
MYKA	Terra Mystica	4.07	4	↓i Pn	Pn	21 01 12.3	+0.5
	comp=Z,11nm,0.4s						
MYKA	Terra Mystica	4.07	4	Pn	Pn	21 01 12.3	+0.5
	comp=Z,11nm,0.4s						
ABTA	Abfaltersbach	4.20	354	i Pn	Pn	21 01 14.5	+0.9
	comp=Z,27nm,0.5s,SNR=79						
ABTA	Abfaltersbach	4.20	354	Pn	Pn	21 01 14.5	+0.9
	comp=Z,27nm,0.5s,SNR=79						
BUM	Brajici-Budva	4.23	92	↓i Pn	Pn	21 01 14.6	+0.6
BUM				eSn	Sn	21 02 04.3	+0.6
BUM	Brajici-Budva	4.23	92	↓i Pn	Pn	21 01 14.6	+0.6
BUM				eSn	Sn	21 02 04.3	+0.6
UPM	Unac-Piva	4.25	80	↑i Pn	Pn	21 01 14.6	+0.2
UPM				eSn	Sn	21 02 05.2	+1.0
UPM	Unac-Piva	4.25	80	↑i Pn	Pn	21 01 14.6	+0.2
UPM				eSn	Sn	21 02 05.2	+1.0
NKY	Niksic	4.29	85	↓i Pn	Pn	21 01 14.8	0.0
NKY				eSn	Sn	21 02 06.0	+0.9
NKY	Niksic	4.29	85	↓i Pn	Pn	21 01 14.8	0.0
NKY				eSn	Sn	21 02 06.0	+0.9
SOKA	Soboth	4.31	17	↓i Pn	Pn	21 01 17.1	+2.0
	comp=Z,1.2nm,0.2s						
SOKA	Soboth	4.31	17	Pn	Pn	21 01 17.1	+2.0
	comp=Z,1.2nm,0.2s						
SBF	Sospel	4.40	289	ePn	Pn	21 01 15.0	-1.3
SBF				eSn	Sn	21 02 03.1	-4.7
	comp=Z,25nm,0.5s						
SBF	Sospel	4.40	289	ePn	Pn	21 01 15.0	-1.3
PDG	Podgorica	4.49	90	↓i Pn	Pn	21 01 17.9	+0.4
PDG				eSn	Sn	21 02 11.0	+1.1
TTG	Podgorica	4.49	90	↓i Pn	Pn	21 01 17.9	+0.4
TTG				eSn	Sn	21 02 11.0	+1.1
KBA	Koelnbreinsper	4.50	1	ePn	Pn	21 01 18.7	+0.8
KBA				eSn	Sn	21 02 10.0	-0.5
KBA	Koelnbreinsper	4.50	1	↓i Pn	Pn	21 01 19.1	+1.2
	comp=Z,19nm,0.7s,SNR=18						
KBA	Koelnbreinsper	4.50	1	Pn	Pn	21 01 19.1	+1.2
	comp=Z,19nm,0.7s,SNR=18						
ULC	Ulcinj	4.54	96	↑i Pn	Pn	21 01 18.8	+0.6
ULC				eSn	Sn	21 02 11.4	+0.3
ULC	Ulcinj	4.54	96	↑i Pn	Pn	21 01 18.8	+0.6
ULC				eSn	Sn	21 02 11.4	+0.3
PLE	Pljevlja	4.61	78	↓i Pn	Pn	21 01 19.5	+0.2
PLE				eSn	Sn	21 02 14.0	+0.8
PLE	Pljevlja	4.61	78	↓i Pn	Pn	21 01 19.5	+0.2
PLE				eSn	Sn	21 02 14.0	+0.8
BEHE	Becsehely	4.66	32	epn	Pb	21 01 31.0	-0.2
BEHE				esn	Sn	21 02 17.5	+3.3
BBLS	Lazići	4.72	72	ePn	Pn	21 01 22.1	+1.3
FETA	Feichten	4.78	339	↓i Pn	Pn	21 01 23.4	+1.8
	comp=Z,5.2nm,0.4s,SNR=8.4						
FETA	Feichten	4.78	339	Pn	Pn	21 01 23.4	+1.8
	comp=Z,5.2nm,0.4s,SNR=8.4						
WTTA	Wattenberg	4.82	347	ePn	Pn	21 01 24.6	+2.5
WTTA	Wattenberg	4.82	347	↑i Pn	Pn	21 01 24.7	+2.5
	comp=Z,3.1nm,0.2s,SNR=11						
WTTA	Wattenberg	4.82	347	Pn	Pn	21 01 24.7	+2.5
	comp=Z,3.1nm,0.2s,SNR=11						
DAVOX	Davos/Dischmat	4.82	332	Pn	Pn	21 01 23.8	+1.5
	comp=Z,3.1nm,0.3s,baz=156,slow=19,SNR=24						
DAVOX				Sn	Sn	21 02 20.0	+1.7
	comp=Z,3.7nm,0.3s,baz=108,slow=20,SNR=7.4						
FRF	La Foret Royal	4.89	284	ePn	Pn	21 01 21.7	-1.4
FRF				eSn	Sn	21 02 14.6	-5.3
	comp=Z,11nm,0.6s						
FRF	La Foret Royal	4.89	284	ePn	Pn	21 01 21.7	-1.4
TRAV	Traversella	4.90	309	P	Pn	21 01 23.5	+0.3
BEY	Berane	4.95	84	↓i Pn	Pn	21 01 25.1	+1.2
BEY				eSn	Sn	21 02 21.7	+0.3
IVA	Berane	4.95	84	↓i Pn	Pn	21 01 25.1	+1.2
IVA				eSn	Sn	21 02 21.7	+0.3
ARSA	Arzberg	4.96	19	ePn	Pn	21 01 23.7	-0.3
ARSA				eSn	Sn	21 02 19.0	-2.6
ARSA	Arzberg	4.96	19	↑i Pn	Pn	21 01 24.1	+0.1
	SNR=5.2						
ARSA	Arzberg	4.96	19	Pn	Pn	21 01 24.1	+0.1
	SNR=5.2						
LMR	La Mourre	4.96	281	ePn	Pn	21 01 22.6	-1.4
LMR	La Mourre	4.96	281	ePn	Pn	21 01 22.6	-1.4
MOTA	Moosalm	4.99	343	↓eP	Pn	21 01 27.2	+2.6
	SNR=6.4						
MOTA	Moosalm	4.99	343	P	Pn	21 01 27.2	+2.6
	SNR=6.4						
PVY	Plav	5.00	88	↑i Pn	Pn	21 01 26.1	+1.5
PVY				eSn	Sn	21 02 23.9	+1.2
PUK	Puka	5.00	94	ePN	Pn	21 01 26.4	+1.8
PUK				i SN	Sn	21 02 17.6	-5.0
PUK	Puka	5.00	94	ePn	Pn	21 01 26.4	+1.8
	SNR=4.0						
BCI	Bajram Curri	5.09	90	ePN	Pn	21 01 27.6	+1.8
BCI				i SN	Sn	21 02 23.7	-1.1
BCI	Bajram Curri	5.09	90	ePn	Pn	21 01 27.6	+1.8
	SNR=4.0						
BCI				i Sn	Sn	21 02 23.7	-1.1
	SNR=4.0						
TIR	Tirane	5.13	102	ePN	Pn	21 01 27.3	+1.0
TIR				i SN	Sn	21 02 22.3	-3.3
TIR	Tirane	5.13	102	ePn	Pn	21 01 27.3	+1.0
	SNR=4.0						
TIR				i Sn	Sn	21 02 22.3	-3.3
	SNR=4.0						
MBDF	Montbardon	5.13	297	ePn	Pn	21 01 23.7	-2.7
MBDF				eSn	Sn	21 02 20.0	-5.9
	comp=Z,15nm,0.7s						
MBDF	Montbardon	5.13	297	ePn	Pn	21 01 23.7	-2.7
RJOB	Jochberg	5.17	357	ePn	Pn	21 01 28.3	+1.4
RJOB				eSn	Sn	21 02 27.3	+0.5
DIVS	Divibare	5.19	71	ePn	Pn	21 01 27.9	+0.7
RETA	Reutte	5.20	342	↓i Pn	Pn	21 01 29.6	+2.2
RETA	Reutte	5.20	342	Pn	Pn	21 01 29.6	+2.2
DAVA	Damuels	5.26	335	ePn	Pn	21 01 30.7	+2.4
DAVA				eSn	Sn	21 02 32.8	+3.6
DAVA	Damuels	5.26	335	↑i Pn	Pn	21 01 30.1	+1.8
	SNR=9.1						
DAVA	Damuels	5.26	335	Pn	Pn	21 01 30.1	+1.8
	SNR=9.1						
MOA	Molln	5.33	8	ePn	Pn	21 01 29.9	+0.8
MOA				eSn	Sn	21 02 30.6	0.0
MOA	Molln	5.33	8	↓ePn	Pn	21 01 29.9	+0.8
	comp=Z,7.8nm,0.4s,SNR=8.1						
MOA	Molln	5.33	8	Pn	Pn	21 01 29.9	+0.8
	comp=Z,7.8nm,0.4s,SNR=8.1						
PKSM	Moragy	5.34	45	↑iP	Pg	21 01 58.4	+7.1
PKSM	Moragy	5.34	45	↓epn	Pn	21 01 21.7	-7.4
PKSM				sn	Sb	21 02 43.4	-3.4
PHP	Peshkopia	5.47	97	ePN	Pn	21 01 32.9	+1.9
PHP				i SN	Sn	21 02 29.8	-4.3
PHP	Peshkopia	5.47	97	ePn	Pn	21 01 32.9	+1.9
	SNR=4.0						
LPG	La Plagne	5.48	304	eP	Pn	21 01 33.2	+1.8
LPG				eSn	Sn	21 02 27.9	-6.9
	comp=Z,12nm,0.6s						
LPG	La Plagne	5.48	304	eP	Pn	21 01 33.2	+1.8
LPL	La Plagne	5.50	304	eP

VTS	Vitosha	7.40	86	ǁ	*i*P		Pn	21 01 59.0	+1.4
LIT	Litokhoron	7.42	106		*e*PN		Pn	21 01 57.2	-0.6
KEST	Kesra	7.46	205		Pn		Pn	21 02 00.7	+2.3
	comp=Z,0.2nm,0.3s,baz=291,slow=2.8,SNR=8.2								
PRU	Pruhonice	7.47	7		*e*PN		Pn	21 01 57.5	-1.0
PRU					*e*SN		Sn	21 03 18.8	-4.6
PRU	Pruhonice	7.47	7		Pn		Pn	21 01 57.5	-1.0
EVR	Evrytania	7.50	116		*e*PN		Pn	21 02 01.3	+2.4
THEF	They Montfort	7.59	321		P		Pn	21 02 00.3	+0.2
THEF	They Montfort	7.59	321		P		Pn	21 02 00.3	+0.2
NKC	Novy Kostel	7.68	356		*e*PN		Pn	21 02 00.8	-0.5
NKC					*e*SN		Sn	21 03 25.2	-3.2
NKC	Novy Kostel	7.68	356		Pn		Pn	21 02 00.8	-0.5
AGG	Agios Georgios	7.79	114		*e*PN		Pn	21 02 05.2	+2.3
PAGF	Fort de Pagny	7.95	321		*e*P		Pn	21 02 06.9	+2.0
	baz=142								
PAGF	Fort de Pagny	7.95	321		*e*P		Pn	21 02 06.9	+2.0
	baz=142								
OKC	Ostrava-Krasne	8.03	24		*e*SN		Sn	21 03 30.9	-6.3
DPC	Dobruska-Polom	8.07	14		*e*PN		Pn	21 02 05.3	-1.4
DPC					*e*SN		Sn	21 03 32.7	-5.4
DPC	Dobruska-Polom	8.07	14		Pn		Pn	21 02 05.3	-1.4
MOX	Moxa	8.14	353		*e*Sn		Sn	21 03 35.0	-4.9
LOT	Lotru	8.15	66	ǁ	*i*P		Pn	21 02 11.6	+3.7
UPC	Upice	8.17	13		*e*PN		Pn	21 02 06.8	-1.2
UPC					*e*SN		Sn	21 03 34.7	-5.8
UPC	Upice	8.17	13		Pn		Pn	21 02 06.8	-1.2
CAF	Calviac	8.39	290		*e*P		Pn	21 02 12.4	+1.3
CAF	Calviac	8.39	290		*e*P		Pn	21 02 12.4	+1.3
CRVS	Cervenica-Dubn	8.57	40		*e*PN		Pn	21 02 17.9	+4.4
CRVS					*e*SN		Sn	21 03 47.9	-2.5
ARR	Arges	8.71	67	ǁ	*i*P		Pn	21 02 19.7	+4.2
HUMR	Humele	8.78	73	ǁ	*i*P		Pg	21 02 45.8	-11
STHS	Stebnicka Huta	8.84	37		*e*PN		Pn	21 02 20.3	+3.1
STHS					*e*SN		Sn	21 03 53.0	-4.0
VOIR		9.01	67	ǁ	*i*P		Pn	21 02 23.4	+3.7
MLR	Muntele Rosu	9.64	68	ǁ	*i*P		Pn	21 02 34.1	+5.8
BRTR	Keskin Array B	15.66	94		Pn		P	21 03 54.3	-0.2
	comp=Z,0.0nm,0.3s,baz=283,slow=13,SNR=7.0								
HFS	Hagfors	17.59	1		LR		LR	21 11 40.2	
	comp=Z,24nm,18.5s,baz=240,slow=40								
FINES	FINESS Array B	20.42	18		P		Pn	21 04 47.4	-1.2
	comp=Z,2.9nm,0.9s,baz=206,slow=12,SNR=8.7								
TORD	Torodi Ar. Bea	30.97	202		P		P	21 06 27.6	+0.7
	comp=Z,1.2nm,0.9s,baz=17,slow=8.6,SNR=7.1								
MKAR	Makanchi Array	47.87	60		P		P	21 08 48.2	+0.7
	comp=Z,0.4nm,0.6s,baz=281,slow=6.7,SNR=5.4								
SONM	Songino Array	61.95	50		P		P	21 10 30.6	+1.1
	comp=Z,1.1nm,0.8s,baz=300,slow=7.5,SNR=5.7								

ISCJB ***25*** *21:02:45.9±0.6,21°.0S±0°.1×169°.89E±0°.07, h90km, mb4.1/14, Error ellipse: s-maj=17.8km s-min=6.6km az=158.0*
IDC ***25*** *21:02:45.7±1.6,20°.97S×170°.04E, h81km±9km, mb3.8/10, mb1 4.0/10, mb1mx3.8/19, mbtmp3.8/10, MS3.3/3, Ms1 3.3/3, ms1mx2.9/28, Error ellipse: s-maj=29.4km s-min=21.8km az=138.0*
NEIC ***25*** *21:02:46.4±0.6,20°.96S×169°.92E, mb4.4/7, Error ellipse: s-maj=20.4km s-min=11.2km az=153.0*
NOU ***25*** *21:02:47.7±1.0,20°.28S×169°.58E, h30km, MD2.9, ML4.2*

ISC 25 21:02:47.2±0.6, 21°.0S±0°.1×169°.87E±0°.08, h90km, n42, σ1§19/55, mb4.1/14, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
					Op	ISC	h	m	s	ISC
BAYA	Yate Dam	3.02	247	*e*P		Pn	21	03	33.5	+0.6
BAYA				*e*S		Sn	21	04	07.9	-0.2
BAYA				AMP			21	04	12.8	
	comp=Z,234nm,2.1s									
DZM	Mont Dzumac	3.37	251	*e*P		Pn	21	03	38.9	+1.1
DZM				*e*S		Sn	21	04	15.6	-1.3
DZM				AMP			21	04	21.1	
	comp=Z,17μm,2.5s									
DZM	Mont Dzumac	3.37	251	*e*Pn		Pn	21	03	38.8	+1.1
DZM				*e*Sn		Sn	21	04	15.0	-1.9
DZM				S		Sn	21	04	16.2	-0.7
DZM	Mont Dzumac	3.37	251	P		Pn	21	03	38.9	+1.1
	comp=Z,140nm,0.3s,baz=86,slow=22,SNR=1146									
DZM				S		Sn	21	04	16.2	-0.7
	comp=Z,430nm,0.3s,baz=190,slow=20,SNR=24									
DZM				LR		LR	21	04	55.9	
	comp=Z,247nm,20.0s,baz=359,slow=37									
NOUC	Port Laguerre	3.50	251	*e*P		Pn	21	03	40.2	+0.7
NOUC				*e*S		Sn	21	04	19.6	-0.3
NOUC				AMP			21	04	22.3	
	comp=Z,708nm,0.7s									
MSVF	Nonsavu	8.37	69	*e*Pn		Pn	21	04	47.7	+1.9
EIDS	Eidsvold	17.82	252	*e*Pn		Pn	21	06	51.9	+2.6
	comp=Z,21nm,1.0s									
ARMA	Armidale	18.91	237	*e*Pn		Pn	21	07	04.2	+1.6
	comp=Z,43nm,1.4s									
CTA	Charters Tower	22.13	268	P		P	21	07	36.9	+1.2
CTA	Charters Tower	22.13	268	P		P	21	07	36.9	+1.2
	comp=Z,2.7nm,0.6s,baz=85,slow=13,SNR=5.6									
CAN	Canberra	23.23	228	*e*P		P	21	07	47.8	+1.1
STKA	Stephens Creek	27.47	241	*e*P		P	21	08	25.5	+0.5
STKA	Stephens Creek	27.47	241	P		P	21	08	26.0	+1.0
	comp=Z,7.0nm,0.9s,baz=77,slow=12,SNR=19									
WRAB	Tennant Creek	33.26	265	*e*P		P	21	09	14.8	-1.4
	comp=Z,3.3nm,0.9s									
WRA	Warramunga Arr	33.27	265	P		P	21	09	15.7	-0.6
WRA				pP		pP	21	09	34.4	-2.5
WRA	Warramunga Arr	33.27	265	P		P	21	09	15.7	-0.6
	comp=Z,1.4nm,0.5s,baz=94,slow=8.2,SNR=28									
WRA				pP		pP	21	09	34.4	-2.5
	comp=Z,0.5nm,0.4s,baz=89,slow=8.4,SNR=2.6									
AS31	Alice Springs	33.33	259	*e*P		P	21	09	16.9	+0.2
AS31				*e*sP		sP	21	09	41.8	-6.1
ASAR	Alice Springs	33.33	259	P		P	21	09	16.9	+0.2
ASAR				pP		pP	21	09	36.3	-1.1
ASAR	Alice Springs	33.33	259	P		P	21	09	16.9	+0.2
	comp=Z,9.5nm,0.5s,baz=96,slow=9.4,SNR=155									
ASAR				pP		pP	21	09	36.3	-1.1
	comp=Z,0.9nm,0.6s,baz=85,slow=9.0,SNR=1.3									
ASAR				LR		LR	21	21	53.6	
	comp=Z,55nm,19.9s,baz=167,slow=34									
FITZ	Fitzroy Crossi	41.69	266	*e*P		P	21	10	28.0	+0.7
	comp=Z,3.4nm,0.6s									
FITZ				pP		pP	21	10	48.1	-0.5
FITZ	Fitzroy Crossi	41.69	266	P		P	21	10	28.0	+0.7
	comp=Z,5.0nm,0.8s,baz=113,slow=9.0,SNR=17									
FITZ				pP		pP	21	10	48.1	-0.5
	comp=Z,3.0nm,0.5s,baz=93,slow=6.9,SNR=5.7									
NWAO	Narrogin (SRO)	47.97	244	*e*P		P	21	11	16.3	-0.7
	comp=Z,11nm,0.8s									
VNDA	Vanda	56.72	182	P		P	21	12	20.7	-0.3
VNDA	Vanda	56.72	182	P		P	21	12	20.7	-0.3
	comp=Z,0.7nm,0.7s,baz=357,slow=8.5,SNR=5.6									
CASY	Casey	58.78	204	*e*P		P	21	12	34.9	-0.7
	comp=Z,1.5nm,0.5s									
MJAR	Matsushiro Arr	64.56	332	P		P	21	13	14.6	-0.3
MJAR	Matsushiro Arr	64.56	332	P		P	21	13	14.6	-0.3
	comp=Z,0.4nm,0.5s,baz=165,slow=7.4,SNR=3.6									
JNU	Nakatsue	65.42	325	LR		LR	21	40	52.4	
	comp=Z,24nm,18.6s,baz=70,slow=35									
QSPA	South Pole Qui	69.08	180	*e*P		P	21	13	42.9	-0.5
	comp=Z,3.3nm,0.7s									
CMAR	Chiang Mai Arr	79.76	294	P		P	21	14	47.9	+2.1
CMAR	Chiang Mai Arr	79.76	294	P		P	21	14	47.9	+2.1
	comp=Z,0.9nm,0.7s,baz=98,slow=3.7,SNR=5.5									
SONM	Songino Array	88.96	323	P		P	21	15	32.4	+0.6
SONM	Songino Array	88.96	323	P		P	21	15	32.4	+0.6
	comp=Z,0.6nm,0.5s,baz=134,slow=4.1,SNR=4.9									
ILAR	Eielson Array	91.71	17	P		P	21	15	42.4	-1.7
ILAR	Eielson Array	91.71	17	P		P	21	15	42.4	-1.7
	comp=Z,0.3nm,0.5s,baz=241,slow=5.0,SNR=3.8									
ARCES	ARCESS Array B	126.89	345	PKP		PKPdf	21	21	38.7	-1.1
ARCES	ARCESS Array B	126.89	345	PKP		PKPdf	21	21	38.7	-1.1
	comp=Z,2.2nm,0.7s,baz=50,slow=1.4,SNR=7.8									
FINES	FINESS Array B	132.41	337	PKP		PKPdf	21	21	49.7	-0.8
FINES				SKPbc		SKPbc	21	25	07.6	-1.7
FINES	FINESS Array B	132.41	337	PKP		PKPdf	21	21	49.7	-0.8
	comp=Z,1.7nm,1.0s,baz=49,slow=2.8,SNR=3.5									
FINES				SKPbc		SKPbc	21	25	07.6	-1.7
	comp=Z,2.0nm,1.0s,baz=29,slow=4.4,SNR=4.3									
CLL	Collm	144.74	335	*e*PKPdf		PKPab	21	22	12.0	-0.3
GERES	GERESS Array B	146.30	331	PKPbc		PKPbc	21	22	17.2	-0.3
GERES	GERESS Array B	146.30	331	PKPbc		PKPbc	21	22	17.2	-0.3
	comp=Z,1.7nm,0.5s,baz=28,slow=2.3,SNR=20									

ISK ***25*** *21:10:02.0,38°.88N×39°.14E, h17km, MD2.6*

CSEM ***25*** *21:10:03.8±0.3,38°.96N×39°.22E, h12km, MD2.6, Error ellipse: s-maj=6.8km s-min=5.8km az=59.0*
ISCJB ***25*** *21:10:04.1±0.5,38°.96N±0°.03×39°.21E±0°.05, h8km±6km, Error ellipse: s-maj=6.0km s-min=4.8km az=10.1*
DDA ***25*** *21:10:05.0,38°.89N×39°.16E, h7km, MD2.4*

ISC 25 21:10:03.7±1.0, 38°.92N±0°.03×39°.16E±0°.04, h9km±10km, n14, σ0§80/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
					Op	ISC	h	m	s	ISC
PTK	Pertek	0.18	100	*e*PG		Pg	21	10	07.4	-0.1
PTK				*e*SG		Sg	21	10	10.7	+0.5
PTK	Pertek	0.18	100	*e*Pg		Pg	21	10	07.4	-0.1
PTK				*e*Sg		Sg	21	10	10.7	+0.5
ELZG	Elazig	0.45	198	*i*P		Pb	21	10	13.6	-0.3
ELZG				*i*S		Sb	21	10	20.9	+0.1
ELZG	Elazig	0.45	198	*i*P		Pb	21	10	13.6	-0.3
ELZG				*i*S		Sb	21	10	20.9	+0.1
KEMA	Kemaliye	0.62	304	*i*P		Pb	21	10	17.3	+0.4
KEMA				*i*S		Sb	21	10	27.2	+1.4
KEMA	Kemaliye	0.62	304	*i*P		Pb	21	10	17.3	+0.4
KEMA				*i*S		Sb	21	10	27.3	+1.4
ILIC	ilic-Erzincan	0.70	319	*e*PG		Pg	21	10	16.2	-1.0
ILIC				*e*SG		Sb	21	10	27.4	-0.7
ILIC	ilic-Erzincan	0.70	319	*e*Pg		Pg	21	10	16.3	-1.0
ILIC				*e*Sg		Sb	21	10	27.4	-0.7
ERZN	Erzincan	0.79	33	*e*PG		Pg	21	10	18.6	-0.3
ERZN				*e*SG		Sb	21	10	31.1	+0.4
EZC	Erzincan	0.84	10	*e*Pg		Pg	21	10	18.6	-1.3
EZC				*e*Sg		Sg	21	10	31.1	+0.2
BINT	Bingol	1.03	92	*e*Pn		Pn	21	10	24.7	+0.1
AKCD	Akcadag	1.16	238	*i*P		Pn	21	10	26.1	-0.1
AKCD				*i*S		Sn	21	10	42.9	+0.6
AKCD	Akcadag	1.16	238	*i*P		Pn	21	10	26.1	-0.1
AKCD				*i*S		Sn	21	10	42.9	+0.6
BNGB	Bing¯¶l	1.18	86	*e*PN		Pg	21	10	24.7	-1.7

GUC 25 21:12:31.9±0.8, 32°.64S×71°.09W, h4km±2km, MD3.5, ML2.3, 4C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
					Op	ISC	h	m	s	ISC
ROCH	El Roble	0.33	169	ǁ	*i*P	Pg	21	12	39.5	+0.8
ROCH					*i*S	Sg	21	12	44.6	+1.3
ROCH					AML	AML	21	12	50.1	
	comp=N,225nm,0.5s									
JACH	Jahuel	0.42	95		*e*P	Pg	21	12	41.0	+0.8
JACH					*i*S	Sg	21	12	47.2	+1.4
PEL	Peldehue	0.60	146	ǁ	*i*P	Pg	21	12	44.3	+0.7
PEL					*i*S	Sb	21	12	53.1	-0.9
PEL					AML	AML	21	12	53.7	
	comp=N,287nm,0.2s									
CHNG	Los Chungos	0.83	335		*e*P	Pg	21	12	48.3	+0.4
CHNG					*i*S	Sb	21	12	59.9	-0.6
CHNG					AML	AML	21	13	01.3	
	comp=E,217nm,0.4s									
TACH	Talagante	1.01	173	ǁ	*i*P	Pg	21	12	51.0	-0.4
TACH					*i*S	Sg	21	13	05.2	+0.5
PCH	Pirque	1.09	154	ǁ	*i*P	Pg	21	12	52.6	-0.3
PCH					*i*S	Sb	21	13	08.0	-0.1
LMEL	Las Melosas	1.41	149	ǁ	*i*P	Pn	21	12	58.0	-0.6
LMEL					*i*S	Sb	21	13	17.2	-0.3
LMEL					AML	AML	21	13	18.2	
	comp=N,207nm,0.3s									
CACH	El Canelo	1.52	165	ǁ	*i*P	Pn	21	13	00.5	+0.4
CACH					*i*S	Sg	21	13	21.6	+0.3

IDC 25 21:24:43.4±26.0, 47°.15N×153°.07E, h124km±73km, mb3.5/5, mb1 3.5/5, mb1mx3.1/26, mbtmp3.5/5, Error ellipse: s-maj=458.7km s-min=59.3km az=152.0, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
					Op	ISC	h	m	s	ISC
PETK	Petropavlovsk-	6.66	25		P	Pn	21	26	18.7	0.0
	0.1nm,0.3s,baz=197,slow=14,SNR=5.5									
MKAR	Makanchi Array	46.73	297		P	P	21	32	59.7	0.0
	0.1nm,0.4s,baz=67,slow=8.8,SNR=4.3									
FINES	FINESS Array B	63.66	335		P	P	21	35	00.5	-0.4
	0.5nm,0.3s,baz=38,slow=7.0,SNR=14									
NB2	NORSAR Subarra	67.84	341		P	P	21	35	28.1	+0.4
	comp=Z,0.6nm,0.6s,baz=28,slow=6.5									
NOA	NORSAR Array B	67.84	341		P	P	21	35	28.2	+0.5
	comp=Z,0.8nm,0.6s,baz=28,slow=6.3,SNR=4.3									
HFS	Hagfors	68.07	339		P	P	21	35	29.3	+0.2
	comp=Z,1.2nm,0.5s,baz=38,slow=7.3,SNR=8.5									
AKASG	Malin Array Be	71.19	326		P	P	21	35	48.4	0.0
	comp=Z,0.6nm,0.3s,baz=34,slow=6.9,SNR=4.1									

IDC ***25*** *21:33:54.7±1.4,35°.49N×28°.62E, h0km, mb3.5/3, mb1 3.5/7, mb1mx3.3/28, mbtmp3.4/7, ML3.4/4, Error ellipse: s-maj=26.8km s-min=23.0km az=124.0*
ISK ***25*** *21:33:56.2,35°.31N×28°.57E, h25km, ML3.4*
DDA ***25*** *21:33:57.1,35°.49N×28°.39E, h7km, MD3.5*
CSEM ***25*** *21:33:57.6±0.2,35°.33N×28°.61E, h20km, Mw3.2, Error ellipse: s-maj=4.8km s-min=3.2km az=11.0*
ISCJB ***25*** *21:33:57.7±0.3,35°.33N±0°.03×28°.63E±0°.02, h43km±10km, mb3.4/3, Error ellipse: s-maj=4.8km s-min=3.4km az=0.8*
ATH ***25*** *21:33:57.9,35°.38N×28°.51E, h27km±4km, MD3.7/10*
NIC ***25*** *21:33:58.4±0.1,35°.41N×28°.65E, h20km, ML3.2, MW3.2*
THE ***25*** *21:34:00.1,35°.47N×28°.40E, h5km±3km, ML3.2/1, Error ellipse: s-maj=4.3km s-min=0.8km az=91.0*
HLW ***25*** *21:34:04.7,34°.80N×28°.91E, h15km±10km, Md3.2, Ml3.3*

ISC 25 21:33:58.4±1.3, 35°.38N±0°.03×28°.60E±0°.02, h30km±11km, n137, σ1§32/167, mb3.5/3, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID			Time			Res
					Op	ISC	h	m	s	ISC
ARG	Arkhangelos	0.92	336		P	Pn	21	34	15.2	-0.1
ARG					S	Sn	21	34	26.9	-0.6
ARG	Arkhangelos	0.92	336		*e*PN	Pn	21	34	15.2	-0.1
ARG					*e*SB	Sb	21	34	28.0	+0.2
ARG	Arkhangelos	0.92	336		P	Pn	21	34	15.2	-0.1
ARG					S	Sn	21	34	26.9	-0.6
ARG					*e*Sb	Sb	21	34	28.0	+0.2
KARP	Karpathos	1.18	279		P	Pn	21	34	19.0	+0.1
KARP					S	Sn	21	34	33.9	-0.1
KARP	Karpathos	1.18	279		*e*PN	Pn	21	34	19.2	+0.3
KARP					*e*SN	Sn	21	34	34.6	+0.6
KARP	Karpathos	1.18	279		P	Pn	21	34	19.0	+0.1
KARP					S	Sn	21	34	33.9	-0.1
AKAS	Kas	1.19	43	*i*	P	Pn	21	34	19.8	+0.8
AKAS				*i*	S	Sb	21	34	38.6	+3.2
AKAS	Kas	1.19	43	*i*	P	Pn	21	34	19.8	+0.8
AKAS				*i*	S	Sb	21	34	38.6	+3.2
FETY	Fethiye	1.32	17	*e*	PN	Pn	21	34	20.6	-0.1
FETY				*e*	SN	Sb	21	34	38.5	-0.6
FETY	Fethiye	1.32	17	*e*	Pn	Pn	21	34	20.7	-0.1
FETY				*e*	Sn	Sb	21	34	38.5	-0.6
DALY	Dalyan (Mu¯la	1.44	2	*e*	PN	Pn	21	34	22.4	0.0
DALY				*e*	SN	Sn	21	34	41.3	+1.1
TURN	Turunc	1.49	0	*i*	P	Pn	21	34	22.6	-0.5
TURN				*i*	S	Sn	21	34	39.4	-2.1
DAT	Datca	1.58	329	*e*	PN	Pn	21	34	24.6	+0.2
DAT	Datca	1.58	329	*e*	Pn	Pn	21	34	24.6	+0.2
NIS1	Nisyros Isl.	1.68	317		P	Pn	21	34	25.7	0.0
NIS1	Nisyros Isl.	1.68	317	*e*	PN	Pb	21	34	27.6	-1.0
NIS1	Nisyros Isl.	1.68	317		P	Pn	21	34	25.7	0.0
NIS1	Nisyros Isl.	1.68	317	*e*	Pn	Pb	21	34	27.6	-1.0
ELL	Elmali	1.73	37	*e*	PN	Pn	21	34	26.8	+0.3
ELL	Elmali	1.73	37	*e*	Pn	Pn	21	34	26.8	+0.3
YER	Yerkesik	1.77	352	*e*	PN	Pn	21	34	27.2	+0.2
YER	Yerkesik	1.77	352	*e*	Pn	Pn	21	34	27.2	+0.2
ZKR	Zakros	1.96	263		P	Pn	21	34	30.0	+0.4
ZKR					S	Sn	21	34	53.7	+0.5
ZKR	Zakros	1.96	263	*e*	PB	Pn	21	34	30.1	+0.4
ZKR	Zakros	1.96	263		P	Pn	21	34	30.0	+0.4
ZKR					S	Sn	21	34	53.7	+0.5
BODT	Bodrum	1.98	329	*e*	PN	Pn	21	34	29.7	-0.1
BODT	Bodrum	1.98	329	*e*	Pn	Pn	21	34	29.7	-0.1
GOLH	Golhisar	2.01	22	*i*	P	Pn	21	34	32.1	+1.8
MLSB	Milas	2.03	341	*e*	PN	Pn	21	34	30.3	-0.2
MLSB	Milas	2.03	341	*e*	Pn	Pn	21	34	30.3	-0.2
KORT	Korkueli	2.15	41	*i*	P	Pn	21	34	34.5	+2.2
KORT				*i*	S	Sb	21	35	04.3	+1.2
KORT	Korkueli	2.15	41	*i*	P	Pn	21	34	34.5	+2.2
ANTB	Antalya	2.25	47	*e*	PN	Pn	21	34	33.9	+0.3
ANTB	Antalya	2.25	47	*e*	Pn	Pn	21	34	33.9	+0.3
DNZL	Cakiroluk	2.34	9	*i*	P	Pn	21	34	35.5	+0.6
DNZL	Cakiroluk	2.34	9	*i*	P	Pn	21	34	35.5	+0.6
AYDN	Tasoluk	2.35	346	*i*	P	Pn	21	34	36.0	+1.0
AYDN				*i*	S	Sn	21	35	01.5	-1.4
AYDN	Tasoluk	2.35	346	*i*	P	Pn	21	34	36.0	+1.0
AYDN				*i*	S	Sn	21	35	01.5	-1.4
DENT	Denizli	2.40	8	*e*	PN	Pn	21	34	36.1	+0.5
DENT	Denizli	2.40	8	*e*	Pn	Pn	21	34	36.1	+0.5
NPS	Neapolis	2.44	268		P	Pn	21	34	37.2	+1.0
NPS	Neapolis	2.44	268	*e*	PN	Pn	21	34	37.1	+0.9
NPS	Neapolis	2.44	268	*e*	Pn	Pn	21	34	37.1	+0.9
LAST	Lasithi	2.56	266	*e*	PN	Pn	21	34	39.3	+1.4
LAST	Lasithi	2.56	266	*e*	Pn	Pn	21	34	39.3	+1.4
BCK	Bucak	2.63	37	*e*	PN	Pn	21	34	39.6	+0.8
SMG	Samos	2.73	329		P	Pn	21	34	40.9	+0.8
SMG	Samos	2.73	329	*e*	PN	Pn	21	34	40.9	+0.8
SMG	Samos	2.73	329		P	Pn	21	34	40.9	+0.8
THR2	Thira island,	2.78	294		P	Pn	21	34	41.1	+0.3
THR2	Thira island,	2.78	294		P	Pn	21	34	41.1	+0.3
SUTC	Sutluce-Ispart	2.85	42	*e*	PN	Pn	21	34	42.6	+0.6
ISP	Isparta	2.89	32	*e*	PN	Pn	21	34	43.5	+1.1
ISP	Isparta	2.89	32	*e*	Pn	Pn	21	34	43.5	+1.1
APE	Apeiranthos	3.00	305	*e*	PN	Pn	21	34	43.6	-0.3
APE	Apeiranthos	3.00	305		P	Pn	21	34	43.7	-0.2
APE	Apeiranthos	3.00	305		P	Pn	21	34	43.7	-0.2
IDI	Anoyia	3.03	269	*e*	PN	Pn	21	34	44.6	+0.3
IDI	Anoyia	3.03	269	*e*	Pn	Pn	21	34	44.6	+0.3
KHL	Karahalli	3.03	14	*e*	PN	Pn	21	34	45.2	+0.8
KHL	Karahalli	3.03	14	*e*	Pn	Pn	21	34	45.2	+0.8
KHAL	Karahalli	3.07	13	*i*	P	Pn	21	34	45.1	+0.2
KHAL				*i*	S	Sn	21	35	16.3	-4.5
KHAL	Karahalli	3.07	13	*i*	P	Pn	21	34	45.1	+0.2
AKMC	Akamas	3.08	95		P	Pn	21	34	44.9	0.0
AKMC	Akamas	3.08	95		P	Pn	21	34	44.9	0.0
MANT	Manisa	3.11	359	*i*	P	Pn	21	34	43.7	-1.8
MANT	Manisa	3.11	359	*i*	P	Pn	21	34	43.7	-1.8
PPCY	Paphos	3.11	98		P	Pn	21	34	45.1	-0.2
PPCY	Paphos	3.11	98		P	Pn	21	34	45.1	-0.2
SIVA	Sivas	3.12	265	*e*	PN	Pn	21	34	48.0	+2.5
SIVA	Sivas	3.12	265	*e*	Pn	Pn	21	34

NRCA	**Norcia**	**0.48**	**334**	Pg	Pg	21 45 05.0	+0.3
NRCA				Sg	Sg	21 45 12.0	+0.9
NRCA	**Norcia**	**0.48**	**334**	Pg	Pg	21 45 05.0	+0.3
NRCA				Sg	Sg	21 45 12.0	+0.9

IDC 25 21:45:06.8±11.0, 21°.63S×179°.58W, h514km±139km, mb3.3/7, mb1 3.6/7, mb1mx3.2/19, mbtmp3.3/7, Error ellipse: s-maj=121.6km s-min=33.9km az=170.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**35.98**	**245**	P	P	21 51 23.9	-0.1
	3.6nm,0.6s,baz=91,slow=12,SNR=9.8						
ASAR	**Alice Springs**	**42.84**	**258**	P	P	21 52 19.2	-0.3
	4.7nm,0.6s,baz=92,slow=8.5,SNR=70						
WRA	**Warramunga Arr**	**43.00**	**264**	P	P	21 52 20.4	-0.4
	2.5nm,0.3s,baz=96,slow=7.9,SNR=77						
FITZ	**Fitzroy Crossi**	**51.43**	**264**	P	P	21 53 24.4	+0.1
	1.0nm,0.3s,baz=106,slow=7.5,SNR=11						
NVAR	**Mina Array Bea**	**82.85**	**44**	P	P	21 56 37.1	-0.4
	0.3nm,0.4s,baz=225,slow=8.9,SNR=3.7						
TXAR	**Lajitas Array**	**88.90**	**58**	P	P	21 57 07.2	+0.7
	0.9nm,0.8s,baz=216,slow=5.5,SNR=6.1						
CMAR	**Chiang Mai Arr**	**89.11**	**290**	P	P	21 57 08.9	+1.3
	0.8nm,0.9s,baz=124,slow=4.8,SNR=5.0						
GERES	**GERESS Array B**	**150.85**	**342**	PKPbc	PKPbc	22 03 59.5	-1.6
	0.2nm,0.4s,baz=54,slow=2.3,SNR=3.7						

*CSEM **25** 21:45:36.1, 42°.41N×13°.36E, h10km, MD2.0/5, After ROM*
ROM 25 21:45:36.1±0.1, 42°.41N×13°.36E, h10km±1km, Md2.0/5, Ml2.2/13, Error ellipse: s-maj=1.5km s-min=1.4km az=145.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AQU	**L'Aquila**	**0.06**	**150**	Pg	Pg	21 45 38.7	+0.4
AQU				Sg	Sg	21 45 40.3	+0.4
	2µm,0.2s						
AQU	**L'Aquila**	**0.06**	**150**	Pg	Pg	21 45 38.7	+0.4
AQU				Sg	Sg	21 45 40.3	+0.4
	2µm,0.2s						
CAMP	**Campotosto**	**0.13**	**16**	Pg	Pg	21 45 39.8	+0.4
CAMP				Sg	Sg	21 45 42.4	+0.7
	966nm,0.3s						
CAMP	**Campotosto**	**0.13**	**16**	Pg	Pg	21 45 39.8	+0.4
CAMP				Sg	Sg	21 45 42.4	+0.7
	966nm,0.3s						
FIAM	**Fiamignano**	**0.23**	**232**	Pg	Pg	21 45 41.4	+0.5
FIAM				Sg	Sg	21 45 44.9	+0.7
	212nm,0.5s						
FIAM	**Fiamignano**	**0.23**	**232**	Pg	Pg	21 45 41.4	+0.5
FIAM				Sg	Sg	21 45 44.9	+0.7
	212nm,0.5s						
TERO	**Teramo**	**0.28**	**40**	Pg	Pg	21 45 41.9	0.0
TERO				Sg	Sg	21 45 46.3	+0.5
	310nm,0.6s						
TERO	**Teramo**	**0.28**	**40**	Pg	Pg	21 45 41.9	0.0
TERO				Sg	Sg	21 45 46.3	+0.5
	310nm,0.6s						
LNSS	**Leonessa**	**0.31**	**310**	Pg	Pb	21 45 43.2	-0.7
LNSS				Sg	Sb	21 45 48.3	-0.8
	230nm,0.4s						
LNSS	**Leonessa**	**0.31**	**310**	Pg	Pb	21 45 43.2	-0.7
LNSS				Sg	Sb	21 45 48.3	-0.8
	230nm,0.4s						
VCEL	**Villa Celiera**	**0.36**	**92**	Pg	Pg	21 45 43.7	+0.3
VCEL				Sg	Sb	21 45 50.1	-0.4
	380nm,0.3s						
VCEL	**Villa Celiera**	**0.36**	**92**	Pg	Pg	21 45 43.7	+0.3
VCEL				Sg	Sb	21 45 50.1	-0.4
	380nm,0.3s						
PTQR	**Pietraquaria**	**0.39**	**176**	Pg	Pg	21 45 44.1	+0.2
	62nm,0.8s						
PTQR	**Pietraquaria**	**0.39**	**176**	Pg	Pg	21 45 44.1	+0.2
	62nm,0.8s						
NRCA	**Norcia**	**0.46**	**337**	Pg	Pg	21 45 45.4	+0.1
NRCA				Sg	Sb	21 45 52.7	-0.9
	136nm,0.1s						
NRCA	**Norcia**	**0.46**	**337**	Pg	Pg	21 45 45.4	+0.1
NRCA				Sg	Sb	21 45 52.7	-0.9
	136nm,0.1s						
MNS	**Montasola**	**0.50**	**268**	Pg	Pg	21 45 46.4	+0.4
	84nm,0.7s						
MNS	**Montasola**	**0.50**	**268**	Pg	Pg	21 45 46.4	+0.4
	84nm,0.7s						
CERT	**Cerreto**	**0.54**	**212**	Pg	Pg	21 45 46.4	-0.3
	274nm,0.4s						
CERT	**Cerreto**	**0.54**	**212**	Pg	Pg	21 45 46.4	-0.3
	274nm,0.4s						
INTR	**Introdacqua**	**0.57**	**134**	Pg	Pg	21 45 47.1	-0.1
	139nm,0.6s						
INTR	**Introdacqua**	**0.57**	**134**	Pg	Pg	21 45 47.1	-0.1
	139nm,0.6s						
VVLD	**Villa Vallelon**	**0.57**	**160**	Pg	Pg	21 45 47.3	0.0
	49nm,0.5s						
VVLD	**Villa Vallelon**	**0.57**	**160**	Pg	Pg	21 45 47.3	0.0
	49nm,0.5s						
OFFI	**Offida**	**0.58**	**24**	Pg	Pb	21 45 48.2	-0.2
	439nm,0.6s						
OFFI	**Offida**	**0.58**	**24**	Pg	Pb	21 45 48.2	-0.2
	439nm,0.6s						
MTCE	**Montecelio**	**0.60**	**230**	Pg	Pb	21 45 48.7	0.0
	58nm,0.5s						
MTCE	**Montecelio**	**0.60**	**230**	Pg	Pb	21 45 48.7	0.0
	58nm,0.5s						
GUAR	**Guarcino**	**0.61**	**183**	Pg	Pb	21 45 49.1	+0.1
GUAR	**Guarcino**	**0.61**	**183**	Pg	Pb	21 45 49.1	+0.1
FDMO	**Fiordimonte**	**0.66**	**342**	Pg	Pg	21 45 48.7	-0.3
	34nm,0.2s						
FDMO	**Fiordimonte**	**0.66**	**342**	Pg	Pg	21 45 48.7	-0.3
	34nm,0.2s						
LPEL	**Lama dei Pelig**	**0.71**	**120**	Pg	Pg	21 45 49.5	-0.4
LPEL	**Lama dei Pelig**	**0.71**	**120**	Pg	Pg	21 45 49.5	-0.4

*IDC **25** 21:47:15.3±2.2, 0°.71N×98°.85E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.4/26, mbtmp3.6/4, ML3.6/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/36, Error ellipse: s-maj=76.0km s-min=25.1km az=69.0*
*DJA **25** 21:47:23.1±0.6, 1°.N±4°×10°.0E±°, h30km, M4.2/5, MLv4.2/5*
ISC 25 21:47:23.2±1.1, 1°.09N±0°.07×99°.5E±0°.1, h35km, n15, σ1s70/15, mb3.9/3, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKNI	**Bangkinang**	**1.71**	**116**	P	**Pn**	21 47 50.2	**-0.4**
BKNI				S	**Sn**	**21 48 13.2**	**+1.9**
PPI	**Padang Panjang**	**1.78**	**150**	P	**Pn**	21 47 49.7	**-1.8**
PPI				S	**Sn**	**21 48 16.4**	**+3.5**
PSI	**Prapat**	**1.80**	**341**	Pn	**Pn**	21 47 50.8	**-1.0**
	13nm,0.3s,baz=155,slow=9.2,SNR=33						
PSI				Sn	**Sn**	**21 48 14.9**	**+1.5**
	14nm,0.3s,baz=262,slow=19,SNR=18						
PSI				LR	LR	21 48 46.4	
	comp=Z,361nm,19.0s,baz=317,slow=46						
TSI	**Tuntungan**	**2.57**	**339**	P	**Pn**	**21 48 04.3**	**+1.9**
IPM	**Ipoh**	**3.69**	**24**	P	**Pn**	**21 48 18.0**	**+0.1**
IPM	**Ipoh**	**3.69**	**24**	P	**Pn**	**21 48 18.0**	**+0.1**
BTDF	**Bukit Timah Da**	**4.28**	**86**	P	Pn	21 48 38.4	+13
KULM	**Kulim**	**4.33**	**15**	P	**Pn**	**21 48 25.2**	**-1.4**
KULM	**Kulim**	**4.33**	**15**	P	**Pn**	**21 48 25.1**	**-1.5**
MYKOM	**Kota Tinggi**	**4.40**	**81**	P	Pn	21 48 42.1	+15
CMAR	**Chiang Mai Arr**	**17.27**	**358**	P	**P**	**21 51 23.6**	**+0.7**
	0.1nm,0.3s,baz=184,slow=12,SNR=6.0						
KAPI	**Kappang**	**21.12**	**107**	LR	LR	22 01 47.4	
	comp=Z,42nm,20.2s,baz=113,slow=40						
WRA	**Warramunga Arr**	**40.04**	**123**	P	**P**	**21 54 55.3**	**0.0**
	0.2nm,0.4s,baz=300,slow=9.4,SNR=3.1						
MKAR	**Makanchi Array**	**47.94**	**344**	P	**P**	**21 55 57.0**	**-1.3**
	0.8nm,0.6s,baz=157,slow=7.5,SNR=9.6						
ZALV	**Zalesovo Beam**	**54.06**	**349**	P	**P**	**21 56 42.6**	**-1.5**
	1.7nm,0.7s,baz=180,slow=6.4,SNR=6.4						

*MDD **25** 21:58:13.7±2.1, 36°.74N×12°.34W, h0km, mb3.8/2, Error ellipse: s-maj=22.0km s-min=16.6km az=2.0*
*INMG **25** 21:58:14.8±1.4, 36°.59N×12°.76W, h10km, ML2.3, Error ellipse: s-maj=7.8km s-min=5.2km az=127.0*
*PDA **25** 21:58:14.8±1.4, 36°.59N×12°.76W, h10km, ML2.3, Error ellipse: s-maj=7.8km s-min=5.2km az=127.0*
*CSEM **25** 21:58:16.4±0.5, 36°.91N×12°.16W, h10km, ML2.7/11, Error ellipse: s-maj=7.9km s-min=7.4km az=35.0*
ISC 25 21:58:11.0±3.6, 36°.8N±0°.1×12°.5W±0°.2, h10km, n76, σ1s81/115, 1C, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	**2.94**	**82**	*e*Pn	**Pn**	**21 58 58.9**	**+1.1**
PFVI				*e*Sn	**Sn**	**21 59 32.1**	**-1.1**
PFVI				A	A	21 59 33.4	
	6.8nm,0.3s						
PFVI	**Vila Bisbo**	**2.94**	**82**	⇑P	**Pn**	**21 58 58.9**	**+1.1**
	1.8nm,0.1s,SNR=18						
PFVI				S	**Sn**	**21 59 32.5**	**-0.6**
	4.3nm,0.1s,SNR=9.9						
PFVI	**Vila Bisbo**	**2.94**	**82**	P	**Pn**	**21 58 58.9**	**+1.1**
	1.8nm,0.1s,SNR=18						
PFVI				*e*Sn	**Sn**	**21 59 32.1**	**-1.1**
	6.8nm,0.3s						
PFVI				S	**Sn**	**21 59 32.5**	**-0.6**
	4.3nm,0.1s,SNR=9.9						
PTEO	**Sao Teotonio**	**3.09**	**75**	*e*Sn	**Sn**	**21 59 35.8**	**-1.0**
PTEO				A	A	21 59 38.6	
	7.9nm,0.4s						
PTEO	**Sao Teotonio**	**3.09**	**75**	S	**Sn**	**21 59 35.8**	**-1.0**
	4.0nm,0.4s						
PTEO	**Sao Teotonio**	**3.09**	**75**	S	**Sn**	**21 59 35.8**	**-1.0**
	4.0nm,0.4s						
MORF	**Marmelete**	**3.10**	**79**	*e*Sn	**Sn**	**21 59 36.4**	**-0.8**
MORF				A	A	21 59 38.3	
	3.7nm,0.3s						
MORF	**Marmelete**	**3.10**	**79**	S	**Sn**	**21 59 36.4**	**-0.8**
	3.7nm,0.3s						
MORF	**Marmelete**	**3.10**	**79**	S	**Sn**	**21 59 36.4**	**-0.8**
	3.7nm,0.3s						
PMAFR	**Mafra**	**3.32**	**49**	*e*Pn	**Pn**	**21 59 05.8**	**+2.8**
PMAFR				*e*Sn	**Sn**	**21 59 43.7**	**+1.2**
PMAFR				A	A	21 59 47.3	
	11nm,0.5s						
PMAFR	**Mafra**	**3.32**	**49**	P	**Pn**	**21 59 05.2**	**+2.2**
	1.8nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**21 59 43.9**	**+1.4**
	4.1nm,0.2s,SNR=7.1						
PMAFR	**Mafra**	**3.32**	**49**	P	**Pn**	**21 59 05.2**	**+2.2**
	1.8nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	**3.32**	**49**	*e*Pn	**Pn**	**21 59 05.8**	**+2.8**
PMAFR				*e*Sn	**Sn**	**21 59 43.7**	**+1.2**
	11nm,0.5s						
PNCL	**Nicolau / Gran**	**3.40**	**66**	*e*Pn	**Pn**	**21 59 06.2**	**+2.1**
PNCL				*e*Sn	**Sn**	**21 59 44.6**	**+0.1**
PNCL				A	A	21 59 45.9	
	3.4nm,0.4s						
PNCL	**Nicolau / Gran**	**3.40**	**66**	*e*Pn	**Pn**	**21 59 06.2**	**+2.1**
PNCL				*e*Sn	**Sn**	**21 59 44.6**	**+0.1**
	3.4nm,0.4s						
PCVE	**Castro Verde**	**3.64**	**75**	*e*Pn	**Pn**	**21 59 09.5**	**+2.1**
PCVE				*e*Sn	**Sn**	**21 59 48.8**	**-1.6**
PCVE				A	A	22 00 03.1	
	3.4nm,0.5s						
PCVE	**Castro Verde**	**3.64**	**75**	P	**Pn**	**21 59 09.5**	**+2.1**
PCVE				S	**Sn**	**21 59 48.8**	**-1.6**
	3.4nm,0.5s						
PCVE	**Castro Verde**	**3.64**	**75**	P	**Pn**	**21 59 09.5**	**+2.1**
PCVE				S	**Sn**	**21 59 48.8**	**-1.6**
	3.4nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.67**	**82**	*e*Pn	**Pn**	**21 59 09.9**	**+2.1**
PBDV				*e*Sn	**Sn**	**21 59 50.5**	**-0.5**
PBDV				A	A	22 00 09.9	
	3.2nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.67**	**82**	P	**Pn**	**21 59 09.9**	**+2.1**
PBDV				S	**Sn**	**21 59 50.5**	**-0.5**
	3.2nm,0.5s						
PBDV	**Barranco-do-Ve**	**3.67**	**82**	P	**Pn**	**21 59 09.9**	**+2.1**
PBDV				S	**Sn**	**21 59 50.5**	**-0.5**
	3.2nm,0.5s						
MOE	**Montemor**	**3.70**	**61**	*e*Sn	**Sn**	**21 59 51.5**	**-0.3**
MOE	**Montemor**	**3.70**	**61**	S	**Sn**	**21 59 51.5**	**-0.3**
MOE	**Montemor**	**3.70**	**61**	S	**Sn**	**21 59 51.5**	**-0.3**
PVAQ	**Vaqueiros**	**3.85**	**80**	*e*Pn	**Pn**	**21 59 12.0**	**+1.7**
PVAQ				*e*Sn	**Sn**	**21 59 54.6**	**-1.0**
PVAQ				A	A	21 59 57.7	
	3.2nm,0.5s						
PVAQ	**Vaqueiros**	**3.85**	**80**	P	**Pn**	**21 59 12.0**	**+1.7**
PVAQ				S	**Sn**	**21 59 54.6**	**-1.0**
	3.2nm,0.5s						
PVAQ	**Vaqueiros**	**3.85**	**80**	P	**Pn**	**21 59 12.0**	**+1.7**
PVAQ				S	**Sn**	**21 59 54.6**	**-1.0**
	3.2nm,0.5s						
PBEJ	**Beja**	**3.87**	**70**	*e*Pn	**Pn**	**21 59 11.4**	**+0.9**
PBEJ				*e*Sn	**Sn**	**21 59 54.9**	**-1.2**
PBEJ				A	A	21 59 58.4	
	3.1nm,0.7s						
PBEJ	**Beja**	**3.87**	**70**	P	**Pn**	**21 59 11.4**	**+0.9**
PBEJ				S	**Sn**	**21 59 54.9**	**-1.2**
	1.6nm,0.7s						
PBEJ	**Beja**	**3.87**	**70**	P	**Pn**	**21 59 11.4**	**+0.9**
PBEJ				S	**Sn**	**21 59 54.9**	**-1.2**
	1.6nm,0.7s						
EVO	**Evora**	**3.94**	**63**	*e*Pn	**Pn**	**21 59 13.9**	**+2.4**
EVO				*e*Sn	**Sn**	**21 59 57.1**	**-0.7**
EVO				A	A	22 00 00.6	
	2.7nm,0.4s						
EVO	**Evora**	**3.94**	**63**	P	**Pn**	**21 59 13.9**	**+2.4**
EVO				S	**Sn**	**21 59 57.1**	**-0.7**
	2.7nm,0.4s						
EVO	**Evora**	**3.94**	**63**	P	**Pn**	**21 59 13.9**	**+2.4**
EVO				S	**Sn**	**21 59 57.1**	**-0.7**
	2.7nm,0.4s						
PMTG	**Montargil**	**4.05**	**55**	*e*Pn	**Pn**	**21 59 15.2**	**+2.1**
PMTG				*e*Sn	**Sn**	**22 00 00.2**	**-0.4**
PMTG				A	A	22 00 03.9	
	1.8nm,0.5s						
PMTG	**Montargil**	**4.05**	**55**	*e*Pn	**Pn**	**21 59 15.2**	**+2.1**
PMTG				*e*Sn	**Sn**	**22 00 00.2**	**-0.4**
	1.8nm,0.5s						
EGRO	**El Granado**	**4.06**	**78**	P	**Pn**	**21 59 13.3**	**+0.2**
	0.8nm,0.3s,SNR=7.9						
EGRO				S	**Sn**	**21 59 58.3**	**-2.3**
	0.7nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**4.06**	**78**	P	**Pn**	**21 59 13.3**	**+0.2**
	0.8nm,0.3s,SNR=7.9						
EGRO				S	**Sn**	**21 59 58.3**	**-2.3**
	0.7nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	**4.38**	**60**	*e*Sn	**Sn**	**22 00 08.3**	**-0.5**
PESTR				A	A	22 00 15.2	
	2.2nm,0.6s						
PESTR	**Estremoz**	**4.38**	**60**	*e*Sn	**Sn**	**22 00 08.3**	**-0.5**
	2.2nm,0.6s						
PBAR	**Barrancos**	**4.54**	**71**	*e*Pn	**Pn**	**21 59 21.9**	**+2.2**
PBAR				*e*Sn	**Sn**	**22 00 10.5**	**-2.0**
PBAR				A	A	22 00 17.0	
	1.7nm,0.5s						
PBAR	**Barrancos**	**4.54**	**71**	P	**Pn**	**21 59 21.9**	**+2.2**
PBAR	**Barrancos**	**4.54**	**71**	P	**Pn**	**21 59 21.9**	**+2.2**
PBAR				*e*Sn	**Sn**	**22 00 10.5**	**-2.0**
	1.7nm,0.5s						
EMIN	**Mina Concepcio**	**4.73**	**76**	P	**Pn**	**21 59 23.6**	**+1.3**
	0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**22 00 14.7**	**-2.5**
	0.8nm,0.1s,SNR=6.9						
EMIN	**Mina Concepcio**	**4.73**	**76**	P	**Pn**	**21 59 23.6**	**+1.3**
	0.2nm,0.1s,SNR=7.9						
EMIN				S	**Sn**	**22 00 14.7**	**-2.5**
	0.8nm,0.1s,SNR=6.9						
EBAD	**Badajoz**	**4.75**	**64**	P	**Pn**	**21 59 24.5**	**+1.9**
	0.4nm,0.1s,SNR=4.6						
EBAD				S	**Sn**	**22 00 16.7**	**-1.0**
	1.1nm,0.2s,SNR=12						
EBAD	**Badajoz**	**4.75**	**64**	P	**Pn**	**21 59 24.5**	**+1.9**
	0.4nm,0.1s,SNR=4.6						
EBAD				S	**Sn**	**22 00 16.7**	**-1.0**
	1.1nm,0.2s,SNR=12						
PMRV	**Marv??o**	**4.79**	**55**	*e*Pn	**Pn**	**21 59 24.9**	**+1.7**
PMRV				*e*Sn	**Sn**	**22 00 17.7**	**-1.1**
PMRV				A	A	22 00 23.4	
	1.7nm,0.7s						
PMRV	**Marv??o**	**4.79**	**55**	P	**Pn**	**21 59 24.9**	**+1.7**
PMRV	**Marv??o**	**4.79**	**55**	P	**Pn**	**21 59 24.9**	**+1.7**
PMRV				*e*Sn	**Sn**	**22 00 17.7**	**-1.1**
	1.7nm,0.7s						
PMPST	**Porto Santo, M**	**4.88**	**222**	*e*Pn	Pn	21 59 16.4	-8.0
PMPS	**Porto Santo**	**4.89**	**221**	P	Pn	21 59 16.4	-8.2
PMPS	**Porto Santo**	**4.89**	**221**	P	Pn	21 59 16.4	-8.2
MTE	**Manteigas**	**5.28**	**46**	*e*Sn	**Sn**	**22 00 30.1**	**-0.8**
MTE	**Manteigas**	**5.28**	**46**	*e*Sn	**Sn**	**22 00 30.1**	**-0.8**
PVIS	**Viseu**	**5.30**	**41**	*e*Pn	**Pn**	**21 59 32.2**	**+1.9**
PVIS	**Viseu**	**5.30**	**41**	P	**Pn**	**21 59 32.2**	**+1.9**
PVIS	**Viseu**	**5.30**	**41**	P	**Pn**	**21 59 32.2**	**+1.9**
ESPR	**Espera**	**5.31**	**87**	S	**Sn**	**22 00 29.5**	**-2.1**
	2.0nm,0.1s,SNR=4.8						
ESPR	**Espera**	**5.31**	**87**	S	**Sn**	**22 00 29.5**	**-2.1**
	2.0nm,0.1s,SNR=4.8						
PMOZ	**Porto Moniz, M**	**5.55**	**226**	*e*Pn	Pn	21 59 26.3	-7.5
POLO	**Lamas de Olo**	**5.84**	**37**	*e*Sn	**Sn**	**22 00 42.6**	**-2.2**
POLO				A	A	22 00 58.5	
	1.1nm,0.6s						
POLO	**Lamas de Olo**	**5.84**	**37**	*e*Sn	**Sn**	**22 00 42.6**	**-2.2**
	1.1nm,0.6s						
EPLA	**Plasencia**	**5.99**	**55**	P	**Pn**	**21 59 41.9**	**+2.2**
	0.8nm,0.2s,SNR=6.9						
EPLA				S	**Sn**	**22 00 46.8**	**-1.5**
	0.2nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**5.99**	**55**	P	**Pn**	**21 59 41.9**	**+2.2**
	0.8nm,0.2s,SNR=6.9						
EPLA				S	**Sn**	**22 00 46.8**	**-1.5**
	0.2nm,0.1s,SNR=7.9						
PCAB	**Cabril**	**6.00**	**34**	*e*Sn	**Sn**	**22 00 45.8**	**-2.8**
PCAB				A	A	22 00 54.8	
	3.6nm,0.6s						
PCAB	**Cabril**	**6.00**	**34**	*e*Sn	**Sn**	**22 00 45.8**	**-2.8**
	3.6nm,0.6s						
MVO	**Moncorvo**	**6.08**	**43**	*e*Pn	**Pn**	**21 59 42.8**	**+1.8**
MVO				*e*Sn	**Sn**	**22 00 48.5**	**-2.2**
MVO				A	A	22 01 00.9	
	2.1nm,0.6s						
MVO	**Moncorvo**	**6.08**	**43**	P	**Pn**	**21 59 42.4**	**+1.3**
	0.8nm,0.2s,SNR=7.9						
MVO				S	**Sn**	**22 00 48.2**	**-2.5**
	0.6nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**6.08**	**43**	P	**Pn**	**21 59 42.3**	**+1.3**
	0.8nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**6.08**	**43**	*e*Pn	**Pn**	**21 59 42.8**	**+1.8**
MVO				S	**Sn**	**22 00 48.2**	**-2.5**
	0.6nm,0.1s,SNR=7.9						
MVO				*e*Sn	Sb	22 00 48.5	-22
	2.1nm,0.6s						
PGAV	**Gavieira, Arco**	**6.10**	**31**	*e*Sn	**Sn**	**22 00 49.4**	**-1.8**
PGAV				A	A	22 00 52.2	
	2.9nm,0.6s						
PGAV	**Gavieira, Arco**	**6.10**	**31**	*e*Sn	**Sn**	**22 00 49.4**	**-1.8**
	2.9nm,0.6s						
EADA	**Adamuz**	**6.43**	**75**	P	**Pn**	**21 59 46.0**	**+0.3**
	0.3nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**22 00 55.7**	**-3.5**
	0.2nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**6.43**	**75**	P	**Pn**	**21 59 46.0**	**+0.3**
	0.3nm,0.2s,SNR=7.9						
EADA				S	**Sn**	**22 00 55.7**	**-3.5**
	0.2nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.71**	**23**	S	**Sn**	**22 01 01.2**	**-4.7**
	2.3nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.71**	**23**	S	**Sn**	**22 01 01.2**	**-4.7**
	2.3nm,0.2s,SNR=7.9						

IDC 25 22:07:25.6±9.2, 11°.65S×165°.90E, h0km, mb3.8/3, mb1 3.9/3, mb1mx3.6/19, mbtmp3.7/3, Error ellipse: s-maj=283.5km s-min=50.9km az=125.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**31.43**	**251**	P	P	22 13 48.9	0.0
	0.2nm,0.5s,baz=84,slow=9.3,SNR=6.0						
ASAR	**Alice Springs**	**32.67**	**244**	P	P	22 13 59.8	0.0
	0.4nm,0.6s,baz=64,slow=9.8,SNR=6.3						
MKAR	**Makanchi Array**	**94.06**	**317**	P	P	22 20 45.8	-0.2
	1.3nm,0.7s,baz=92,slow=6.4,SNR=17						

*NIED **25** 22:27:00, 32°.90N×140°.90E, h50km, Mw4.3 Best double couple: M0 3.18000×10^15 NP1:φs319.00000°, δ56.00000°, λ-96.00000°. NP2:φs150.00000°, δ35.00000°, λ-81.00000°.*
*MOS **25** 22:27:54.9±0.9, 32°.89N×140°.73E, h33km, mb4.5/29, Error ellipse: s-maj=12.8km s-min=7.0km az=109.7*
*JMA **25** 22:27:56.7±0.2, 32°.93N×140°.92E, h45km, M4.1*
*ISCJB **25** 22:27:57.7±0.7, 32°.87N±0°.04×140°.77E±0°.05, h58km±5km, mb4.2/45, MS3.4/9, Error ellipse: s-maj=7.6km s-min=6.5km az=12.7*
*BJI **25** 22:27:57.7, 32°.94N×141°.14E, h86km, mB4.8/9, mb4.4/15, Ms4.1/7, Ms7 3.8/6*
*NEIC **25** 22:27:58.9±0.3, 32°.90N×140°.77E, mb4.6/6, MW4.3(NIED), Error ellipse: s-maj=9.1km s-min=7.3km az=78.0*
*IDC **25** 22:27:58.7±0.6, 32°.81N×140°.65E, h51km±4km, mb3.8/23, mb1 4.0/26, mb1mx4.0/31, mbtmp3.8/26, MS3.2/8, Ms1 3.2/8, ms1mx2.9/34, Error ellipse: s-maj=11.7km s-min=7.7km az=21.0*
ISC 25 22:27:59.0±0.5, 32°.90N±0°.05×140°.82E±0°.05, h55km±3km, h55km:pP-P, n129, σ1s56/184, mb4.3/45, MS3.3/9, 3C-4D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	**0.87**	**284**	P	**Pn**	**22 28 14.1**	**-1.0**
JHCJ	**Hachijojimakas**	**0.88**	**281**	P	**Pn**	**22 28 14.0**	**-1.2**
JHCJ				*e*S	**Sn**	**22 28 25.6**	**-1.5**
JHJ	**Hachijo jima 2**	**0.90**	**284**	P	**Pn**	**22 28 14.1**	**-1.4**
	571nm,0.3s,baz=130,slow=2.7,SNR=508						
JHJ				S	**Sn**	**22 28 25.2**	**-2.4**
	909nm,0.3s,baz=56,slow=18,SNR=49						
JMY	**Miyakejima3**	**1.60**	**317**	P	**Pn**	**22 28 24.1**	**-0.8**
BSO1	**Boso 1**	**1.75**	**4**	P	**Pn**	**22 28 24.6**	**-1.9**
JKO	**Kozu shima**	**1.90**	**

NJ2 pmax pmax
comp=Z,90nm,5.7s
NJ2 LR LR
comp=N,270nm,18.9s
NJ2 LR LR
comp=E,180nm,17.1s
NJ2 LR LR
comp=Z,140nm,16.0s
GUMO Guam 19.58 168 *e*P **Pn** **22 32 24.2 0.0**
comp=Z,127nm,1.2s
BJI Beijing 21.02 297 P **P** **22 32 38.8 +0.9**
BJI S **S** **22 36 27.3 -1.6**
PETK Petropavlovsk- 23.56 26 LR LR 22 41 45.4
comp=Z,43nm,18.7s,baz=338,slow=35
HHC Hu-ho-hao-te 24.63 297 *e*P **P** **22 33 10.5 -3.8**
HHC pP **pP** **22 33 31.5 +3.4**
HHC sP sP 22 33 43.5 +8.8
HHC PP **PnPn** **22 33 50.8 +2.7**
HHC S S 22 37 22.3 -10
HHC pmax pmax
comp=Z,27nm,0.8s
HHC pmax pmax
comp=Z,160nm,5.4s
HHC LR LR
comp=N,230nm,13.5s
HHC LR LR
comp=E,180nm,12.2s
HHC LR LR
comp=Z,240nm,14.5s
SONM Songino Array 29.88 310 P **P** **22 34 01.0 -0.3**
SONM PcP **PcP** **22 37 02.9 -0.2**
SONM Songino Array 29.88 310 P **P** **22 34 01.0 -0.3**
comp=Z,0.5nm,0.5s,baz=99,slow=8.9,SNR=4.4
SONM PcP **PcP** **22 37 02.9 -0.2**
comp=Z,0.4nm,0.5s,baz=164,slow=5.0,SNR=3.6
SONM LR LR 22 46 34.3
comp=Z,56nm,18.4s,baz=237,slow=37
GYA Guiyang 30.27 267 *e*P **P** **22 34 05.3 +0.3**
GYA pP pP 22 34 25.5 +6.6
GYA sP sP 22 34 36.8 +11
GYA PP **PnPn** **22 35 07.3 +2.6**
GYA S **S** **22 38 57.5 -3.6**
GYA sS sS 22 39 32.3 +7.6
GYA ScP **ScP** **22 40 37.5 -4.6**
GYA ScS **ScS** **22 44 32.0 -6.3**
GYA pmax pmax
comp=Z,10.0nm,0.8s
LZH Lanzhou 30.52 286 *e*P **P** **22 34 07.0 -0.2**
LZH pP **pP** **22 34 24.5 +3.4**
LZH PP **PnPn** **22 35 08.5 +0.6**
LZH *e*S S 22 38 57.5 -7.5
LZH SS **SnSn** **22 40 47.8 +2.2**
LZH pmax pmax
comp=Z,20nm,1.0s
LZH pmax pmax
comp=Z,76nm,4.0s
LZH LR LR
comp=N,120nm,11.8s
LZH LR LR
comp=E,140nm,13.1s
LZH LR LR
comp=Z,210nm,14.6s
QIZ Qiongzhong 30.95 251 P **P** **22 34 11.8 +0.9**
QIZ pP pP 22 34 30.5 +5.6
QIZ S **S** **22 39 08.0 -3.7**
QIZ pmax pmax
comp=Z,9.0nm,1.6s
CD2 Chengdu 31.42 277 *e*P **P** **22 34 15.3 +0.3**
CD2 pP pP 22 34 35.3 +6.3
CD2 sP sP 22 34 45.8 +10
CD2 PP **PnPn** **22 35 22.0 +2.5**
CD2 S **S** **22 39 15.0 -3.9**
CD2 sS sS 22 39 48.8 +6.2
CD2 SS **SnSn** **22 41 07.8 +0.4**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,30nm,4.8s
CD2 LR LR
comp=N,110nm,14.4s
CD2 LR LR
comp=Z,120nm,15.5s
ZAK Zakamensk 32.61 314 *e*P **P** **22 34 24.8 -0.5**
ZAK pmax pmax
comp=Z,2.0nm,1.4s
KMI Kunming 34.05 267 P P 22 34 41.3 +3.1
KMI pmax pmax
comp=Z,5.0nm,0.7s
TIXI Tiksi 39.33 354⇑ *e*P **P** **22 35 21.9 -0.4**
TIXI pmax pmax
comp=Z,5.0nm,2.5s
CMAR Chiang Mai Arr 40.12 260 P **P** **22 35 28.8 -0.7**
CMAR Chiang Mai Arr 40.12 260 P **P** **22 35 28.8 -0.7**
comp=Z,1.4nm,0.6s,baz=58,slow=6.8,SNR=9.7
CMAR LR LR 22 53 01.7
comp=Z,23nm,19.9s,baz=205,slow=38
WMQ Urumqi 42.40 301 *e*P **P** **22 35 48.5 +0.4**
WMQ pmax pmax
comp=Z,7.0nm,0.6s
ZAA0 Zalesovo Array 44.43 316 P **P** **22 36 03.5 -0.6**
ZAA0 *e*PcP **PcP** **22 37 46.4 -0.5**
ZALV Zalesovo Beam 44.43 316 P **P** **22 36 03.7 -0.4**
ZALV 22 37 47.0
ZALV pmax pmax
comp=Z,1.0nm,0.7s
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV Zalesovo Beam 44.43 316 P **P** **22 36 03.6 -0.4**
ZALV PcP **PcP** **22 37 47.0 +0.1**
ZALV Zalesovo Beam 44.43 316 P **P** **22 36 03.6 -0.4**
comp=Z,1.0nm,0.7s,baz=116,slow=6.6,SNR=5.6
ZALV PcP **PcP** **22 37 47.0 +0.1**
comp=Z,4.2nm,0.7s,baz=101,slow=2.8,SNR=16
MK31 Makanchi Array 46.01 305 *e*P **P** **22 36 16.6 -0.2**
MK31 Makanchi Array 46.01 305 *e*P **P** **22 36 16.6 -0.2**
MKAR Makanchi Array 46.01 305 P **P** **22 36 16.7 -0.1**
MKAR pmax pmax
comp=Z,1.0nm,0.6s
MKAR MLR MLR
comp=Z,25nm,19.7s
MKAR Makanchi Array 46.01 305 P **P** **22 36 16.6 -0.1**
MKAR ScP **ScP** **22 41 39.9 -1.1**
MKAR Makanchi Array 46.01 305 P **P** **22 36 16.6 -0.1**
comp=Z,1.4nm,0.6s,baz=88,slow=9.1,SNR=20
MKAR ScP **ScP** **22 41 39.9 -1.1**
comp=Z,0.4nm,0.6s,baz=88,slow=5.7,SNR=3.7
MKAR LR LR 22 56 07.7
comp=Z,25nm,19.6s,baz=258,slow=37
KURK Kurchatov 48.18 311*c i*P **P** **22 36 33.2 -0.4**
KURK pmax pmax
comp=Z,8.0nm,2.5s
KURK Kurchatov 48.18 311 *e*P **P** **22 36 32.8 -0.8**
comp=Z,4.4nm,0.6s
KDAK Kodiak Island 50.54 40 P **P** **22 36 52.5 +1.1**
KDAK Kodiak Island 50.54 40 P **P** **22 36 52.5 +1.1**
comp=Z,1.9nm,0.4s,baz=276,slow=5.8,SNR=7.6
WRAB Tennant Creek 52.90 188 *e*P **P** **22 37 08.9 -0.5**
WRAB pmax pmax
comp=Z,7.0nm,1.0s
WRAB Tennant Creek 52.90 188 *e*P **P** **22 37 08.9 -0.5**
comp=Z,7.4nm,1.0s
WRA Warramunga Arr 52.91 188 P **P** **22 37 08.7 -0.9**
WRA PcP **PcP** **22 38 18.5 +0.5**
WRA Warramunga Arr 52.91 188 P **P** **22 37 08.7 -0.9**
comp=Z,5.2nm,0.5s,baz=6.2,slow=7.6,SNR=119
WRA PcP **PcP** **22 38 18.5 +0.5**
comp=Z,2.0nm,0.7s,baz=360,slow=3.9,SNR=8.4
BRVK Borovoye 53.11 315*ce*P **P** **22 37 10.9 +0.2**
BRVK pmax pmax
comp=Z,2.0nm,0.8s
BRVK Borovoye 53.11 315 *e*P **P** **22 37 10.7 0.0**
comp=Z,2.6nm,0.8s
BRVK *e*PcP **PcP** **22 38 18.8 +0.5**
ILAR Eielson Array 53.27 31 P **P** **22 37 12.4 +0.8**
ILAR Eielson Array 53.27 31 P **P** **22 37 12.4 +0.8**
comp=Z,0.7nm,0.6s,baz=263,slow=6.5,SNR=9.9
PAX Paxson 53.94 33 *e*P **P** **22 37 16.4 -0.3**
PAX pmax pmax
comp=Z,9.0nm,0.8s
PAX Paxson 53.94 33 *e*P **P** **22 37 16.4 -0.3**
comp=Z,8.8nm,0.8s
KKAR Karatay Array 54.85 303 *e*P **P** **22 37 23.6 0.0**
KKAR Karatay Array 54.85 303 *e*P **P** **22 37 23.6 0.0**
AS31 Alice Springs 56.64 188 *e*P **P** **22 37 35.9 -0.5**
ASAR Alice Springs 56.64 188 P **P** **22 37 35.8 -0.7**
ASAR PcP **PcP** **22 38 33.5 +1.3**
ASAR Alice Springs 56.64 188 P **P** **22 37 35.8 -0.7**
comp=Z,2.0nm,0.5s,baz=357,slow=6.3,SNR=36
ASAR PcP **PcP** **22 38 33.5 +1.3**
comp=Z,1.7nm,0.5s,baz=0.8,slow=3.4,SNR=10
SVE Sverdlovsk 57.96 320 *e*P **P** **22 37 45.6 +0.1**
SVE pmax pmax
comp=Z,9.0nm,0.6s
INK Inuvik 58.30 26 P **P** **22 37 49.2 +1.6**
INK Inuvik 58.30 26 P **P** **22 37 49.2 +1.6**
comp=Z,1.4nm,0.5s,baz=294,slow=8.7,SNR=5.4
ARU Arti 59.17 320*d i*P **P** **22 37 53.4 -0.4**
ARU 22 40 02.6
ARU S **S** **22 46 00.5 +3.4**
ARU SS **SS** **22 49 46.6 -4.9**
ARU pmax pmax
comp=Z,6.0nm,0.6s
ABKAR Akbulak array 60.28 312 *e*P **P** **22 38 01.3 -0.3**
STKA Stephens Creek 64.44 179 P **P** **22 38 29.8 +0.4**
STKA Stephens Creek 64.44 179 P **P** **22 38 29.8 +0.4**
comp=Z,2.2nm,0.6s,baz=1.2,slow=6.8,SNR=6.1
YKA Yellowknife Ar 67.63 29 P **P** **22 38 50.5 +0.9**
YKA Yellowknife Ar 67.63 29 P **P** **22 38 50.5 +0.9**
comp=Z,0.7nm,0.7s,baz=302,slow=5.9,SNR=4.0
ARCES ARCESS Array B 67.69 340 P **P** **22 38 50.4 +0.5**
ARCES ARCESS Array B 67.69 340 P **P** **22 38 50.4 +0.5**
comp=Z,4.2nm,0.9s,baz=67,slow=6.9,SNR=3.8
FINES FINESS Array B 72.25 333 P **P** **22 39 17.9 0.0**
FINES pP **pP** **22 39 31.9 -1.4**
FINES FINESS Array B 72.25 333 P **P** **22 39 17.9 0.0**
comp=Z,2.1nm,0.7s,baz=84,slow=7.9,SNR=7.1
FINES pP **pP** **22 39 31.9 -1.4**
comp=Z,1.6nm,0.7s,baz=77,slow=7.1,SNR=3.2
KBZ Khabaz 73.24 311 P **P** **22 39 23.6 -0.6**
KBZ pmax pmax
comp=Z,2.0nm,0.8s
KBZ Khabaz 73.24 311 P **P** **22 39 23.6 -0.6**
KBZ Khabaz 73.24 311 P **P** **22 39 23.6 -0.6**
comp=Z,2.4nm,0.8s,baz=128,slow=3.7,SNR=6.2
KIV Kislovodsk 73.26 312 *e*P **P** **22 39 25.5 +1.0**
KIV pmax pmax
comp=Z,7.0nm,1.1s
AKASG Malin Array Be 77.27 323 P **P** **22 39 46.9 -0.3**
AKASG *PP **pP** **22 40 01.4 -1.4**
AKASG pmax pmax
comp=Z,2.0nm,0.7s
AKASG Malin Array Be 77.27 323 P **P** **22 39 46.9 -0.3**
AKASG pP **pP** **22 40 01.4 -1.4**
AKASG Malin Array Be 77.27 323 P **P** **22 39 46.9 -0.3**
comp=Z,0.4nm,0.3s,baz=47,slow=5.9,SNR=6.0
AKASG pP **pP** **22 40 01.4 -1.4**
comp=Z,2.3nm,0.7s,baz=48,slow=5.9,SNR=4.6
FFC Flin Flon 77.45 32 *i* P **P** **22 39 49.9 +1.8**
HFS Hagfors 77.65 336 P **P** **22 39 48.4 -0.7**
HFS pP **pP** **22 40 03.4 -1.4**
HFS Hagfors 77.65 336 P **P** **22 39 48.4 -0.7**
comp=Z,1.9nm,0.8s,baz=79,slow=7.7,SNR=4.4
HFS pP **pP** **22 40 03.4 -1.4**
comp=Z,1.1nm,0.6s,baz=90,slow=3.0,SNR=2.2
NB2 NORSAR Subarra 77.80 337 P **P** **22 39 49.7 -0.4**
comp=Z,0.8nm,0.7s,baz=42,slow=5.6
NOA NORSAR Array B 77.80 337 P **P** **22 39 49.6 -0.5**
NOA pP **pP** **22 40 05.0 -0.7**
NOA NORSAR Array B 77.80 337 P **P** **22 39 49.6 -0.5**
comp=Z,2.5nm,1.0s,baz=42,slow=5.6,SNR=5.4
NOA pP **pP** **22 40 05.0 -0.7**
comp=Z,0.8nm,0.6s,baz=44,slow=5.5,SNR=3.6
NOA LR LR 23 17 22.9
comp=Z,14nm,19.9s,baz=35,slow=38
NVAR Mina Array Bea 77.88 52 P **P** **22 39 53.1 +1.9**
NVAR Mina Array Bea 77.88 52 P **P** **22 39 53.1 +1.9**
comp=Z,0.4nm,0.3s,baz=288,slow=6.2,SNR=4.0
PDAR Pinedale Array 80.93 45 P **P** **22 40 09.1 +1.4**
PDAR Pinedale Array 80.93 45 P **P** **22 40 09.1 +1.4**
comp=Z,0.2nm,0.5s,baz=309,slow=5.7,SNR=2.5
BRTR Keskin Array B 81.23 312 P **P** **22 40 08.6 -0.6**
BRTR pP **pP** **22 40 24.9 -0.1**
BRTR Keskin Array B 81.23 312 P **P** **22 40 08.6 -0.6**
comp=Z,2.6nm,0.9s,baz=129,slow=4.2,SNR=9.2
BRTR pP **pP** **22 40 24.9 -0.1**
comp=Z,3.1nm,1.0s,baz=72,slow=4.0,SNR=6.1
RAYN Ar Rayn 81.78 293 *e*P **P** **22 40 12.5 +0.3**
comp=Z,3.9nm,1.0s
STHS Stebnicka Huta 82.05 325 *e*P **P** **22 40 12.6 -0.6**
STHS pmax pmax
comp=Z,1.0nm,0.7s
STHS Stebnicka Huta 82.05 325 *e*P **P** **22 40 12.6 -0.6**
CRVS Cervenica-Dubn 82.30 325 *e*P **P** **22 40 14.0 -0.5**
CRVS pmax pmax
comp=Z,8.0nm,2.1s
CRVS Cervenica-Dubn 82.30 325 *e*P **P** **22 40 14.0 -0.5**
DPC Dobruska-Polom 83.69 328 *e*P **P** **22 40 22.1 +0.4**
DPC *e* 22 40 34.2
DPC Dobruska-Polom 83.69 328 *e*P **P** **22 40 22.1 +0.4**
DPC *e*pP **pP** **22 40 34.2 -3.3**
VYHS Vyhne 83.84 325 *e*P **P** **22 40 23.5 +1.0**
VYHS pmax pmax
comp=Z,1.0nm,1.0s
VYHS Vyhne 83.84 325 *e*P **P** **22 40 23.5 +1.0**
PVCC Panska Ves 84.33 329 *e*P **P** **22 40 25.7 +0.8**
PVCC *e* 22 40 39.2
PVCC Panska Ves 84.33 329 *e*P **P** **22 40 25.7 +0.8**
PVCC *e*pP **pP** **22 40 39.2 -1.5**
BRG Berggiesshubel 84.35 329 *e*(P) **P** **22 40 25.3 +0.3**
comp=Z,2.9nm,0.8s
BRG *e* 22 40 42.2
comp=Z,4.1nm,1.0s
BRG *i* 23 35 07.6
BRG Berggiesshubel 84.35 329 *e*P **P** **22 40 25.3 +0.3**
BRG *e* 22 40 42.2
BRG pmax pmax
comp=Z,3.0nm,0.8s
BRG pmax pmax
comp=Z,4.0nm,1.0s
CLL Collm 84.43 330⇓ *i*P **P** **22 40 25.2 -0.2**
CLL *i* 22 40 39.8
CLL pmax pmax
comp=Z,5.0nm,0.9s
CLL Collm 84.43 330⇓ *i*P **P** **22 40 25.2 -0.2**
comp=Z,5.0nm,0.9s
CLL *i* pP **pP** **22 40 39.8 -1.3**
GERES GERESS Array B 85.96 328 P **P** **22 40 32.2 -1.0**
GERES pP **pP** **22 40 48.0 -1.0**
GERES GERESS Array B 85.96 328 P **P** **22 40 32.2 -1.0**
comp=Z,0.7nm,0.6s,baz=54,slow=5.0,SNR=6.2
GERES pP **pP** **22 40 48.0 -1.0**
comp=Z,0.5nm,0.7s,baz=5.7,slow=5.4,SNR=2.4
GERES LR LR 23 23 39.4
comp=Z,17nm,18.9s,baz=276,slow=39
EKA Eskdalemuir Ar 86.85 340 P **P** **22 40 38.2 +0.9**
EKA Eskdalemuir Ar 86.85 340 P **P** **22 40 38.2 +0.9**
comp=Z,0.2nm,0.4s,baz=72,slow=4.6,SNR=3.3
TXAR Lajitas Array 93.03 52 P **P** **22 41 08.4 +1.5**
TXAR pP **pP** **22 41 23.1 +0.2**
TXAR Lajitas Array 93.03 52 P **P** **22 41 08.4 +1.5**
comp=Z,1.5nm,0.7s,baz=309,slow=3.1,SNR=25
TXAR pP **pP** **22 41 23.1 +0.2**
comp=Z,0.6nm,0.7s,baz=290,slow=3.3,SNR=5.4
TORD Torodi Ar. Bea 119.83 313 PKP **PKPdf** **22 46 43.0 -0.7**
TORD Torodi Ar. Bea 119.83 313 PKP **PKPdf** **22 46 43.0 -0.7**
comp=Z,1.0nm,0.6s,baz=36,slow=1.7,SNR=22
LPAZ La Paz 149.06 65 PKPbc **PKPbc** **22 47 43.2 +0.9**
LPAZ La Paz 149.06 65 PKPbc **PKPbc** **22 47 43.2 +0.9**
comp=Z,3.0nm,0.7s,baz=19,slow=5.2,SNR=14

ROM ***25*** *22:31:53.7±0.2, 46.˚43N×13.˚58E, h6km±2km, Ml2.2/6, Error ellipse: s-maj=2.6km s-min=1.9km az=103.0*
LJU ***25*** *22:31:53.6, 46.˚46N×13.˚57E, h14km, ML1.9*
ISCJB ***25*** *22:31:54.1±0.2, 46.˚46N±0.˙01×13.˚58E±0.˙02, h8km±3km, Error ellipse: s-maj=2.4km s-min=1.7km az=29.3*
CSEM ***25*** *22:31:54.4±0.1, 46.˚44N×13.˚58E, h2km, ML2.8/23, Error ellipse: s-maj=2.0km s-min=1.7km az=32.0*
VIE ***25*** *22:31:54.7±0.2, 46.˚45N×13.˚59E, h3km±6km, mb2.2/14, ML2.5/16, Error ellipse: s-maj=2.0km s-min=1.4km az=13.0 13 km NNE of Bovec*
PRU ***25*** *22:31:56.2, 46.˚48N×13.˚60E, h0km*
ISC 25 22:31:54.4±0.9, 46.˚45N±0.˙01×13.˚60E±0.˙01, h4km±6km, n107,σ1§04/190, 26C-38D, Austria

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LSR	**Lussari**	**0.05**	**301**⇓	*e*Pg	**Pg**	**22 31 55.6**	**-0.2**
LSR				*e*Sg	**Sg**	**22 31 56.7**	**-0.1**
LSR	**Lussari**	**0.05**	**301**⇓	*e*Pg	**Pg**	**22 31 55.6**	**-0.2**
LSR				*e*Sg	**Sg**	**22 31 56.7**	**-0.1**
ACOM	**Acomizza, Ital**	**0.12**	**330**⇓	*e*Pg	**Pg**	**22 31 57.0**	**+0.1**
ACOM				*e*Sg	**Sg**	**22 31 59.0**	**+0.5**
ACOM	**Acomizza, Ital**	**0.12**	**330**	Pg	**Pg**	**22 31 56.9**	**+0.1**
ACOM				Sg	**Sg**	**22 31 59.1**	**+0.6**
	4μm,0.4s						
ACOM	**Acomizza, Ital**	**0.12**	**330**	Pg	**Pg**	**22 31 56.9**	**+0.1**
ACOM				*e*Sg	**Sg**	**22 31 59.0**	**+0.5**
PTCC	**Patocco-Chiusa**	**0.17**	**256**	Pg	**Pg**	**22 31 57.4**	**-0.4**
PTCC				Sg	**Sg**	**22 32 00.5**	**+0.4**
	456nm,0.5s						
PTCC	**Patocco-Chiusa**	**0.17**	**256**	Pg	**Pg**	**22 31 57.4**	**-0.4**
PTCC				Sg	**Sg**	**22 32 00.5**	**+0.4**
	456nm,0.5s						
MYKA	**Terra Mystica**	**0.18**	**10**⇑	*i*Pg	**Pg**	**22 31 58.6**	**+0.5**
	13nm,0.1s						
MYKA			⇑	*i*Sg	**Sg**	**22 32 01.3**	**+0.8**
	56nm,0.1s						
MYKA	**Terra Mystica**	**0.18**	**10**	Pg	**Pg**	**22 31 58.6**	**+0.5**
	13nm,0.1s						
MYKA				Sg	**Sg**	**22 32 01.3**	**+0.8**
	56nm,0.1s						
ROBS	**Robic**	**0.21**	**196**	*i* Pg	**Pg**	**22 31 58.3**	**-0.2**
ROBS				*i* Sg	**Sg**	**22 32 01.6**	**+0.2**
ROBS							
	comp=Z,120nm,0.1s						
ROBS	**Robic**	**0.21**	**196**	*i* Pg	**Pg**	**22 31 58.3**	**-0.2**
ROBS				*i* Sg	**Sg**	**22 32 01.5**	**+0.2**
CADS	**Cadrg**	**0.24**	**156**⇓	*i*Pg	**Pg**	**22 31 59.1**	**0.0**
CADS				*i* Sg	**Sg**	**22 32 03.6**	**+1.3**
CADS							
	comp=Z,147nm,0.1s						
CADS	**Cadrg**	**0.24**	**156**⇓	*i*Pg	**Pg**	**22 31 59.1**	**0.0**
CADS				*i* Sg	**Sg**	**22 32 03.6**	**+1.3**
DRE	**Drenchia**	**0.28**	**173**⇓	*e*Pg	**Pg**	**22 31 59.6**	**-0.2**
DRE	**Drenchia**	**0.28**	**173**⇓	*e*Pg	**Pg**	**22 31 59.6**	**-0.2**
VINO	**Villanova**	**0.29**	**229**⇑	*e*Pg	**Pg**	**22 31 59.6**	**-0.3**
VINO				*e*Sg	**Sg**	**22 32 04.4**	**+0.6**
VINO	**Villanova**	**0.29**	**229**	Pg	**Pg**	**22 31 59.7**	**-0.3**
VINO				Sg	**Sg**	**22 32 04.7**	**+0.9**
	comp=Z,348nm,0.6s						
VINO	**Villanova**	**0.29**	**229**	Pg	**Pg**	**22 31 59.7**	**-0.3**
VINO				*e*Sg	**Sg**	**22 32 04.4**	**+0.6**
GORS	**Gorjuse**	**0.31**	**115**⇓	*i*Pg	**Pg**	**22 32 00.5**	**+0.1**
GORS				*i* Sg	**Sg**	**22 32 05.6**	**+1.2**
GORS							
	comp=Z,51nm,0.1s						
GORS	**Gorjuse**	**0.31**	**115**⇓	*i*Pg	**Pg**	**22 32 00.4**	**+0.1**
GORS				*i* Sg	**Sg**	**22 32 05.6**	**+1.2**
BAD	**Bernadia**	**0.32**	**229**⇑	*e*Pg	**Pg**	**22 32 00.3**	**-0.3**
BAD				*e*Sg	**Sg**	**22 32 05.8**	**+0.9**
BAD	**Bernadia**	**0.32**	**229**⇑	*e*Pg	**Pg**	**22 32 00.3**	**-0.3**
BAD				*e*Sg	**Sg**	**22 32 05.8**	**+0.9**
PLRO	**Paularo**	**0.33**	**288**⇓	*e*Pg	**Pg**	**22 32 00.5**	**-0.2**
PLRO				*e*Sg	**Sg**	**22 32 05.7**	**+0.7**
PLRO	**Paularo**	**0.33**	**288**⇓	*e*Pg	**Pg**	**22 32 00.5**	**-0.2**
PLRO				*e*Sg	**Sg**	**22 32 05.7**	**+0.7**
COLI	**Coloredo**	**0.35**	**206**⇓	*e*Pg	**Pg**	**22 32 01.0**	**-0.2**
COLI				*e*Sg	**Sg**	**22 32 06.9**	**+1.2**
COLI	**Coloredo**	**0.35**	**206**⇓	*e*Pg	**Pg**	**22 32 01.0**	**-0.2**
COLI				*e*Sg	**Sg**	**22 32 06.9**	**+1.2**
BOO	**Bordano**	**0.37**	**250**⇑	*e*Pg	**Pg**	**22 32 00.9**	**-0.6**
BOO	**Bordano**	**0.37**	**250**⇑	*e*Pg	**Pg**	**22 32 00.9**	**-0.6**
FUSE	**Fusea**	**0.41**	**265**⇓	*e*Pg	**Pg**	**22 32 02.3**	**-0.1**
FUSE				*e*Sg	**Sg**	**22 32 08.8**	**+1.1**
FUSE	**Fusea**	**0.41**	**265**⇓	*e*Pg	**Pg**	**22 32 02.3**	**-0.1**
FUSE				*e*Sg	**Sg**	**22 32 08.8**	**+1.1**
ZOU	**Zoufplan**	**0.44**	**284**⇓	*e*Pg	**Pg**	**22 32 02.7**	**-0.3**
ZOU				*e*Sg	**Sg**	**22 32 09.6**	**+0.8**
VOJS	**Vojsko**	**0.46**	**154**⇓	*i*Pg	**Pg**	**22 32 03.0**	**-0.3**
VOJS				*e*Sg	**Sg**	**22 32 10.7**	**+1.4**
VOJS							
	comp=Z,21nm,0.1s						
VOJS	**Vojsko**	**0.46**	**154**⇓	*i*Pg	**Pg**	**22 32 03.0**	**-0.3**
VOJS				*e*Sg	**Sg**	**22 32 10.7**	**+1.4**
	comp=Z,21nm,0.1s						
MPRI	**Monte Prat**	**0.47**	**244**⇓	*e*Pg	**Pg**	**22 32 03.0**	**-0.4**
MPRI				*e*Sg	**Sg**	**22 32 10.7**	**+1.2**
MPRI	**Monte Prat**	**0.47**	**244**⇓	*e*Pg	**Pg**	**22 32 03.0**	**-0.4**
MPRI				*e*Sg	**Sg**	**22 32 10.7**	**+1.2**
SABO	**M.te Sabotino**	**0.47**	**180**⇓	*e*Pg	**Pg**	**22 32 03.2**	**-0.2**
SABO				*e*Sg	**Sg**	**22 32 10.8**	**+1.3**
SABO	**M.te Sabotino**	**0.47**	**180**	Pg	**Pg**	**22 32 03.2**	**-0.2**
SABO				Sg	**Sb**	**22 32 11.4**	**-1.1**
	comp=Z,379nm,0.9s						
SABO	**M.te Sabotino**	**0.47**	**180**⇓	*e*Pg	**Pg**	**22 32 03.2**	**-0.2**
SABO				*e*Sg	**Sg**	**22 32 10.8**	**+1.3**
FVI	**Forni Avoltri**	**0.58**	**285**	Pg	**Pg**	**22 32 05.6**	**0.0**
FVI				Sg	**Sb**	**22 32 14.5**	**-1.4**
	comp=Z,100nm,0.5s						
FVI	**Forni Avoltri**	**0.58**	**285**	Pg	**Pg**	**22 32 05.6**	**0.0**
FVI				Sg	**Sb**	**22 32 14.5**	**-1.4**
	comp=Z,100nm,0.5s						
CRNS	**Crni Vrh**	**0.59**	**128**⇓	*i*Pg	**Pg**	**22 32 05.4**	**-0.3**
CRNS				*i* Sg	**Sg**	**22 32 14.6**	**+1.2**
CRNS							
	comp=Z,19nm,0.1s						
MOZS	**Mozjanca**	**0.61**	**104**	*i* Pg	**Pb**	**22 32 06.8**	**-0.8**
MOZS				*i* Sg	**Sb**	**22 32 16.3**	**-0.2**
MOZS							
	comp=Z,30nm,0.2s						
MOZS	**Mozjanca**	**0.61**	**104**	*i* Pg	**Pb**	**22 32 06.8**	**-0.8**
MOZS				*i* Sg	**Sb**	**22 32 16.3**	**-0.2**
	comp=Z,30nm,0.2s						
JAVS	**Javornik**	**0.64**	**149**	*i* Pg	**Pg**	**22 32 06.0**	**-0.8**
JAVS	**Javornik**	**0.64**	**149**	*i* Pg	**Pg**	**22 32 06.0**	**-0.8**
KBA	**Koelnbreinsper**	**0.65**	**345**⇓	*e*Pg	**Pb**	**22 32 07.5**	**-1.0**
	comp=Z,2.2nm,0.1s,SNR=9.1						
KBA			⇑	*i*Sg	**Sg**	**22 32 16.3**	**+0.8**
	comp=Z,14nm,0.1s						
KBA	**Koelnbreinsper**	**0.65**	**345**	Pg	**Pb**	**22 32 07.5**	**-1.0**
	comp=Z,2.2nm,0.1s,SNR=9.1						
KBA				Sg	**Sg**	**22 32 16.3**	**+0.8**
	comp=Z,14nm,0.1s						
CSMI	**Casera Mimoias**	**0.66**	**276**⇓	*e*Pg	**Pg**	**22 32 06.8**	**-0.2**
CSMI	**Casera Mimoias**	**0.66**	**276**⇓	*e*Pg	**Pg**	**22 32 06.8**	**-0.2**
OBKA	**Obir**	**0.66**	**84**⇓	*i*Pg	**Pg**	**22 32 07.5**	**+0.4**
	comp=Z,12nm,0.2s,SNR=28						
OBKA			⇑	*i*Sg	**Sb**	**22 32 18.1**	**-0.1**
	comp=Z,89nm,0.3s						
OBKA	**Obir**	**0.66**	**84**	Pg	**Pg**	**22 32 07.5**	**+0.4**
	comp=Z,12nm,0.2s,SNR=28						
OBKA				Sg	**Sb**	**22 32 18.1**	**-0.1**
	comp=Z,89nm,0.3s						
TRI	**Trieste**	**0.75**	**171**⇓	*e*Pg	**Pg**	**22 32 07.6**	**-1.1**
TRI				*e*Sg	**Sb**	**22 32 19.6**	**-0.9**
TRI	**Trieste**	**0.75**	**171**	Pg	**Pg**	**22 32 07.8**	**-1.0**
TRI				Sg	**Sb**	**22 32 19.9**	**-0.6**
	comp=Z,31nm,0.4s						
TRI	**Trieste**	**0.75**	**171**	Pg	**Pg**	**22 32 07.8**	**-1.0**
TRI				*e*Sg	**Sb**	**22 32 19.6**	**-0.9**
LJU	**Ljubljana**	**0.76**	**122**	*i* Pg	**Pg**	**22 32 09.1**	**+0.1**
LJU				*i* Sg	**Sb**	**22 32 21.1**	**+0.1**
LJU							
	comp=Z,14nm,0.1s						
LJU	**Ljubljana**	**0.76**	**122**	*i* Pg	**Pg**	**22 32 09.1**	**+0.1**
LJU				*i* Sg	**Sb**	**22 32 21.1**	**+0.1**
	comp=Z,14nm,0.1s						
ABTA	**Abfaltersbach**	**0.80**	**292**⇓	*e*Pg	**Pg**	**22 32 09.1**	**-0.7**
	comp=Z,2.8nm,0.2s,SNR=8.3						
ABTA			⇑	*i*Sg	**Sg**	**22 32 21.0**	**+0.7**
	comp=Z,43nm,0.4s						
ABTA	**Abfaltersbach**	**0.80**	**292**	Pg	**Pg**	**22 32 09.1**	**-0.7**
	comp=Z,2.8nm,0.2s,SNR=8.3						
ABTA				Sg	**Sg**	**22 32 21.0**	**+0.7**
	comp=Z,43nm,0.4s						
CIMO	**Cimolais**	**0.81**	**261**	*e*Pg	**Pg**	**22 32 09.7**	**-0.3**
CIMO	**Cimolais**	**0.81**	**261**	*e*Pg	**Pg**	**22 32 09.7**	**-0.3**
VNDS	**Vrh nad Dolski**	**0.84**	**114**	*i* Pg	**Pg**	**22 32 10.5**	**0.0**
VNDS				*i* Sg	**Sb**	**22 32 23.2**	**-0.1**
VNDS							
	comp=Z,9.0nm,0.1s						
CEY	**Cerknica**	**0.92**	**140**	*i* Pg	**Pg**	**22 32 10.8**	**-1.2**
CEY				*i* Sg	**Sb**	**22 32 25.8**	**+0.4**
CEY							
	comp=Z,11nm,0.1s						
CEY	**Cerknica**	**0.92**	**140**	*i* Pg	**Pg**	**22 32 10.8**	**-1.2**
CEY				*i* Sg	**Sb**	**22 32 25.8**	**+0.4**
	comp=Z,11nm,0.1s						
SKDS	**Skadanscina**	**0.95**	**162**	*i* Pg	**Pg**	**22 32 11.1**	**-1.5**
SKDS				*i* Sg	**Sb**	**22 32 26.8**	**+0.5**

SKDS									
	comp=Z,9.0nm,0.1s								
SKDS	**Skadanscina**	**0.95**	**162**	*i* Pg		**Pg**	**22 32 11.1**	**-1.5**
SKDS				*i* Sg		**Sb**	**22 32 26.8**	**+0.5**
	comp=Z,9.0nm,0.1s								
SOKA	**Soboth**	**1.02**	**76**	⇑*e*Pg		**Pg**	**22 32 13.7**	**-0.3**
	comp=Z,1.0nm,0.1s								
SOKA				⇓*e*Sg		**Sb**	**22 32 28.4**	**0.0**
	comp=Z,18nm,0.3s								
SOKA	**Soboth**	**1.02**	**76**	Pg		**Pg**	**22 32 13.7**	**-0.3**
	comp=Z,1.0nm,0.1s								
SOKA				Sg		**Sb**	**22 32 28.4**	**0.0**
	comp=Z,18nm,0.3s								
VISS	**Visnje**	**1.08**	**126**	*i* Pg		**Pg**	**22 32 14.6**	**-0.5**
VISS				*i* Sg		**Sn**	**22 32 31.6**	**-0.1**
VISS									
	comp=Z,59nm,0.4s								
VISS	**Visnje**	**1.08**	**126**	*i* Pg		**Pg**	**22 32 14.6**	**-0.5**
VISS				*i* Sg		**Sn**	**22 32 31.6**	**-0.1**
	comp=Z,59nm,0.4s								
RISI	**Rein**	**1.16**	**296**	⇓*e*Pg		**Pg**	**22 32 16.5**	**-0.1**
CGRP	**Cima Grappa**	**1.37**	**246**	⇑*e*Pg		**Pg**	**22 32 20.7**	**0.0**
CGRP	**Cima Grappa**	**1.37**	**246**	⇑*e*Pg		**Pg**	**22 32 20.7**	**0.0**
MOA	**Molln**	**1.48**	**18**	*e*Pg		**Pg**	**22 32 24.3**	**+1.6**
	comp=Z,6.1nm,0.3s,SNR=17								
MOA				⇓*e*Sg		**Sg**	**22 32 45.7**	**+3.9**
	comp=Z,23nm,0.4s								
MOA	**Molln**	**1.48**	**18**	Pg		**Pg**	**22 32 24.3**	**+1.6**
	comp=Z,6.1nm,0.3s,SNR=17								
KOSI	**Kohlern**	**1.53**	**271**	⇑*e*Pg		**Pg**	**22 32 24.4**	**+0.6**
KOSI				*e*Sg		**Sg**	**22 32 46.4**	**+2.7**
ARSA	**Arzberg**	**1.55**	**58**	⇑*e*Pg		**Pb**	**22 32 23.5**	**-0.2**
	comp=Z,8.8nm,0.4s,SNR=20								
ARSA				⇓*i*Sg		**Sg**	**22 32 45.0**	**+0.9**
	comp=Z,7.9nm,0.3s								
ARSA	**Arzberg**	**1.55**	**58**	Pg		**Pb**	**22 32 23.5**	**-0.2**
	comp=Z,8.8nm,0.4s,SNR=20								
ARSA				Sg		**Sg**	**22 32 45.0**	**+0.9**
	comp=Z,7.9nm,0.3s								
WTTA	**Wattenberg**	**1.57**	**302**	⇑*i*Pn		**Pb**	**22 32 23.6**	**-0.6**
	comp=Z,2.2nm,0.2s								
WTTA				⇑*e*Sg		**Sg**	**22 32 46.3**	**+1.4**
	comp=Z,28nm,0.6s								
WTTA	**Wattenberg**	**1.57**	**302**	Pn		**Pb**	**22 32 23.6**	**-0.6**
	comp=Z,2.2nm,0.2s								
WTTA				Sg		**Sg**	**22 32 46.3**	**+1.4**
	comp=Z,28nm,0.6s								
ABSI	**Aberstueckl**	**1.59**	**281**	⇓*e*Pg		**Pb**	**22 32 24.0**	**-0.5**
SQTA	**Sankt Quirin**	**1.81**	**296**	⇓*i*Pg		**Pg**	**22 32 30.7**	**+1.6**
SQTA				⇓*i*Sg		**Sg**	**22 32 53.5**	**+0.9**
SQTA	**Sankt Quirin**	**1.81**	**296**	⇑*i*Pg		**Pg**	**22 32 30.7**	**+1.6**
SQTA				*i* Sg		**Sg**	**22 32 53.5**	**+0.9**
MOTA	**Moosalm**	**1.93**	**299**	⇓Pg		**Pg**	**22 32 31.2**	**-0.2**
	comp=Z,6.8nm,0.5s,SNR=13								
MOTA				⇑*e*Sg		**Sg**	**22 33 00.2**	**+3.8**
	comp=Z,20nm,0.7s								
MOTA	**Moosalm**	**1.93**	**299**	Pg		**Pg**	**22 32 31.2**	**-0.2**
	comp=Z,6.8nm,0.5s,SNR=13								
MOTA				Sg		**Sg**	**22 33 00.2**	**+3.8**
	comp=Z,20nm,0.7s								
FETA	**Feichten**	**2.05**	**287**	⇑*i*Pg		**Pg**	**22 32 33.9**	**+0.2**
	comp=Z,1.5nm,0.3s								
FETA				⇑*e*Sg		**Sg**	**22 33 01.9**	**+1.6**
	comp=Z,4.7nm,0.5s								
FETA	**Feichten**	**2.05**	**287**	Pg		**Pg**	**22 32 33.9**	**+0.2**
	comp=Z,1.5nm,0.3s								
FETA				Sg		**Sg**	**22 33 01.9**	**+1.6**
	comp=Z,4.7nm,0.5s								
MOSI	**Grossmontoni**	**2.11**	**276**	*e*Pg		**Pb**	**22 32 32.9**	**-0.4**
CONA	**Conrad Observa**	**2.14**	**45**	⇑*e*Pn		**Pb**	**22 32 32.8**	**-1.0**
	comp=Z,3.8nm,0.6s								
CONA				⇑*i*Sg		**Sg**	**22 33 02.3**	**-0.9**
	comp=Z,6.6nm,0.6s								
CONA	**Conrad Observa**	**2.14**	**45**	Pn		**Pb**	**22 32 32.8**	**-1.0**
	comp=Z,3.8nm,0.6s								
CONA				Sg		**Sg**	**22 33 02.3**	**-0.9**
	comp=Z,6.6nm,0.6s								
RETA	**Reutte**	**2.20**	**299**	⇓Pg		**Pg**	**22 32 36.4**	**-0.2**
	comp=Z,4.3nm,0.5s								
RETA				⇑*i*Sg		**Sg**	**22 33 06.2**	**+1.1**
	comp=Z,9.1nm,0.4s								
RETA	**Reutte**	**2.20**	**299**	Pg		**Pg**	**22 32 36.4**	**-0.2**
	comp=Z,4.3nm,0.5s								
RETA				Sg		**Sg**	**22 33 06.2**	**+1.1**
	comp=Z,9.1nm,0.4s								
DAVA	**Damuels**	**2.68**	**290**	⇑Pn		**Pb**	**22 32 42.1**	**-1.0**
	comp=Z,1.6nm,0.3s								
DAVA				⇑*i*Sg		**Sg**	**22 33 21.4**	**+0.8**
	comp=Z,13nm,0.5s								
DAVA	**Damuels**	**2.68**	**290**	Pn		**Pb**	**22 32 42.1**	**-1.0**
	comp=Z,1.6nm,0.3s								
DAVA				Sg		**Sg**	**22 33 21.4**	**+0.8**
	comp=Z,13nm,0.5s								
KHC	**Kasperske Hory**	**2.68**	**360**	*e*PN		**Pn**	**22 32 40.2**	**+1.8**
KHC				*e*PG		**Pg**	**22 32 45.6**	**-0.2**
KHC				*ex*		x	22 32 49.5	
KHC				*e*SG		**Sg**	**22 33 20.8**	**+0.2**
	comp=Z,9.5nm,0.6s								
KHC	**Kasperske Hory**	**2.68**	**360**	Pn		**Pn**	**22 32 40.2**	**+1.8**
PRU	**Pruhonice**	**3.60**	**10**	*e*SG		**Sg**	**22 33 49.7**	**-0.3**
	comp=Z,4.9nm,0.3s								
PRU	**Pruhonice**	**3.60**	**10**	Sg		**Sg**	**22 33 49.7**	**-0.3**
	comp=Z,4.9nm,0.3s								
NKC	**Novy Kostel**	**3.86**	**349**	*e*PN		**Pn**	**22 32 56.3**	**+1.7**
NKC				*e*SN		**Sn**	**22 33 41.2**	**+0.8**
NKC				*e*SG		**Sg**	**22 33 57.4**	**-1.1**
	comp=Z,7.3nm,0.6s								
NKC	**Novy Kostel**	**3.86**	**349**	Pn		**Pn**	**22 32 56.3**	**+1.7**
NKC				Sg		**Sg**	**22 33 57.4**	**-1.1**
	comp=Z,7.3nm,0.6s								
PVCC	**Panska Ves**	**4.13**	**9**	*e*SG		**Sg**	**22 34 06.4**	**-0.7**
	comp=Z,10nm,0.4s								
PVCC	**Panska Ves**	**4.13**	**9**	Sg		**Sg**	**22 34 06.4**	**-0.7**
	comp=Z,10nm,0.4s								
DPC	**Dobruska-Polom**	**4.31**	**24**	*e*SG		**Sg**	**22 34 11.2**	**-1.5**
DPC	**Dobruska-Polom**	**4.31**	**24**	Sg		**Sg**	**22 34 11.2**	**-1.5**
UPC	**Upice**	**4.37**	**21**	*e*SG		**Sg**	**22 34 13.3**	**-1.4**
UPC	**Upice**	**4.37**	**21**	Sg		**Sg**	**22 34 13.3**	**-1.4**
BRG	**Berggiesshubel**	**4.43**	**3**	SG		**Sg**	**22 34 15.7**	**-1.1**
	comp=Z,3.5nm,0.5s								
CLL	**Collm**	**4.88**	**356**	*e*Sn		**Sn**	**22 34 00.0**	**-5.4**
CLL				*e*			22 34 08.0	
CLL				*i* Sg		**Sg**	**22 34 30.5**	**-0.5**
	comp=Z,9.0nm,0.9s								

*ISCJB **25** 22:36:10.0±0.4,24.°45N±0.°03×122.°24E±0.°02, h60km±5km, Error ellipse: s-maj=4.4km s-min=2.7km az=165.3*
*TAP **25** 22:36:10.1,24.°44N×122.°19E, h64km, ML4.1, B*
*JMA **25** 22:36:11.0±0.2,24.°72N×122.°34E, h63km, M3.3*
ISC 25 22:36:10.7±1.2,24.°45N±0.°03×122.°23E±0.°02, h56km±9km, n59, σ0°79/98, 1C-16D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWC	**Suao**	**0.38**	**295**	⇓*i*P	**Pn**	**22 36 21.3**	**+0.2**
	baz=300						
TWC				*i* S	**Sn**	**22 36 29.1**	**+0.4**
	baz=300						
ENA	**Nanau**	**0.45**	**268**	⇓P	**Pn**	**22 36 21.8**	**0.0**
	baz=269						
ENA				S	**Sn**	**22 36 30.5**	**+0.7**
	baz=269						
EHP	**Heping Village**	**0.47**	**253**	*e*P	**Pn**	**22 36 21.8**	**-0.2**
	baz=249						
EHP				*e*S	**Sn**	**22 36 31.2**	**+1.0**
	baz=249						
ILA	**Ilan**	**0.54**	**306**	⇓*i*P	**Pn**	**22 36 23.2**	**+0.4**
	baz=315						
ILA				*i* S	**Sn**	**22 36 32.4**	**+0.7**
	baz=315						
TWE	**Neicheng**	**0.58**	**298**	⇓*i*P	**Pn**	**22 36 23.6**	**+0.3**
	baz=304						
TWE				S	**Sn**	**22 36 32.3**	**-0.2**
	baz=304						
TWB1	**Santiao Chiao**	**0.60**	**339**	⇓*i*P	**Pn**	**22 36 23.3**	**-0.3**
	baz=336						
TWB1				*i* S	**Sn**	**22 36 32.3**	**-0.5**
	baz=336						
TWD	**Chiawan**	**0.69**	**238**	⇓*i*P	**Pn**	**22 36 23.9**	**-0.7**
	baz=230						
TWD				S	**Sn**	**22 36 34.1**	**-0.5**
	baz=230						
YOJ	**Yonaguni jima**	**0.71**	**89**	⇓*i*P	**Pn**	**22 36 25.1**	**+0.2**
	baz=87						
YOJ				S	**Sn**	**22 36 35.6**	**+0.4**
	baz=87						
YOJ	**Yonaguni jima**	**0.71**	**89**	P	**Pn**	**22 36 25.1**	**+0.2**
YOJ				*e*S	**Sn**	**22 36 35.4**	**+0.2**
HWA	**Hwalien**	**0.74**	**231**	*e*P	**Pn**	**22 36 24.7**	**-0.5**
	baz=222						
HWA				*e*S	**Sn**	**22 36 36.0**	**+0.1**
	baz=222						
NWF	**Wu-fen Shan**	**0.74**	**327**	⇓*i*P	**Pn**	**22 36 25.2**	**-0.2**
	baz=330						
NWF				*i* S	**Sn**	**22 36 35.8**	**-0.3**
	baz=330						
NNS	**Nan Shan**	**0.78**	**270**	⇓*i*P	**Pn**	**22 36 25.5**	**-0.4**
	baz=263						
NNS				*e*S	**Sn**	**22 36 36.8**	**-0.2**
	baz=263						
TWA	**Mucha**	**0.79**	**312**	⇓*i*P	**Pn**	**22 36 25.9**	**0.0**
	baz=325						
TWA				*e*S	**Sn**	**22 36 36.8**	**-0.2**
	baz=325						
NSK	**Sanguang**	**0.83**	**286**	⇓*i*P	**Pn**	**22 36 26.4**	**0.0**
	baz=280						
NSK				S	**Sn**	**22 36 37.8**	**-0.1**
	baz=280						
TAP1	**Taipei**	**0.87**	**313**	*e*P	**Pn**	**22 36 26.4**	**-0.5**
	baz=326						
TAP1				*e*S	**Sn**	**22 36 38.3**	**-0.5**
	baz=326						
TAP	**Taipei**	**0.88**	**312**	*e*P	**Pn**	**22 36 26.4**	**-0.6**
	baz=324						
WHF	**Hehuan Shan**	**0.93**	**251**	⇓*i*P	**Pn**	**22 36 27.6**	**-0.5**
	baz=251						
WHF				S	**Sn**	**22 36 39.9**	**-1.0**
	baz=251						
ESL	**Shilin**	**0.96**	**229**	P	**Pn**	**22 36 27.1**	**-1.1**
	baz=239						
ESL				*e*S	**Sn**	**22 36 39.5**	**-1.5**
	baz=239						
TWT	**Tachien**	**0.98**	**259**	⇓P	**Pn**	**22 36 28.7**	**+0.2**
	baz=256						
TWT				S	**Sn**	**22 36 41.5**	**-0.1**
	baz=256						
TWS1	**Kuangyinshan**	**0.98**	**312**	⇓*i*P	**Pn**	**22 36 28.3**	**-0.1**
	baz=322						
TWS1				*e*S	**Sn**	**22 36 41.4**	**-0.1**
	baz=322						
TWY	**Chenhua**	**1.00**	**325**	*e*P	**Pn**	**22 36 28.2**	**-0.5**
	baz=328						
TWY				*e*S	**Sn**	**22 36 41.0**	**-1.0**
	baz=328						
NCU	**National Centr**	**1.08**	**299**	⇓*i*P	**Pn**	**22 36 29.9**	**+0.2**
	baz=301						
NCU				S	**Sn**	**22 36 44.3**	**+0.5**
	baz=301						
NSTT	**Nanjuang**	**1.13**	**280**	⇓*i*P	**Pn**	**22 36 30.6**	**+0.2**
	baz=281						
NSTT				*e*S	**Sn**	**22 36 45.3**	**+0.2**
	baz=281						
PCYT	**Pengchaiyu**	**1.19**	**353**	*e*P	**Pn**	**22 36 31.1**	**-0.1**
	baz=348						
HSN	**Hsinchu**	**1.20**	**287**	*e*P	**Pn**	**22 36 30.6**	**-0.7**
	baz=291						
EHY	**Hungye**	**1.25**	**222**	*e*P	**Pn**	**22 36 30.5**	**-1.5**
	baz=229						
TWQ1	**Liyutan**	**1.33**	**266**	*e*P	**Pn**	**22 36 33.2**	**+0.1**
	baz=267						
TWQ1				*e*S	**Sn**	**22 36 49.8**	**0.0**
	baz=267						
SMLT	**Sun Moon Lake**	**1.34**	**245**	P	**Pn**	**22 36 33.5**	**+0.3**
	baz=240						
SMLT				*e*S	**Sn**	**22 36 49.9**	**-0.3**
	baz=240						
NSY	**Sanyi**	**1.34**	**269**	*e*P	**Pn**	**22 36 33.3**	**+0.1**
	baz=270						
NSY				*e*S	**Sn**	**22 36 50.8**	**+0.8**
	baz=270						
TYC	**Yuchr**	**1.37**	**247**	*e*P	**Pn**	**22 36 33.8**	**+0.3**
	baz=241						
TYC				*e*S	**Sn**	**22 36 50.2**	**-0.4**
	baz=241						
IRIF	**Iriomote-Funau**	**1.37**	**94**	P	**Pn**	**22 36 33.4**	**-0.2**
IRIF				*e*S	**Sn**	**22 36 50.4**	**-0.3**
TWF1	**Yuli**	**1.39**	**218**	⇑*i*P	**Pn**	**22 36 32.4**	**-1.4**
	baz=226						
TCU	**Taichung**	**1.45**	**258**	*e*P	**Pn**	**22 36 34.3**	**-0.3**
	baz=259						
HATJ	**Hateruma jima**	**1.49**	**105**	P	**Pn**	**22 36 36.3**	**+1.1**
HATJ				*e*S	**Sn**	**22 36 54.5**	**+0.9**
YUS	**Yu-Shan**	**1.51**	**231**	*e*P	**Pn**	**22 36 35.8**	**-0.2**
	baz=230						
WNT	**Mingjian**	**1.52**	**248**	*e*P	**Pn**	**22 36 36.3**	**+0.7**
	baz=262						
WNT				*e*S	**Sn**	**22 36 56.4**	**+2.0**
	baz=262						
CHKT	**Chengkung**	**1.56**	**211**	*e*P	**Pn**	**22 36 35.5**	**-0.6**
	baz=201						
ALS	**Alishan**	**1.60**	**235**	*e*P	**Pn**	**22 36 37.4**	**+0.4**
	baz=227						
ALS				*e*S	**Sn**	**22 36 56.3**	**-0.5**
	baz=227						
JKRS	**Kuro-shima**	**1.64**	**97**	P	**Pn**	**22 36 37.5**	**+0.3**
JKRS				*e*S	**Sn**	**22 36 57.6**	**+0.5**
CHN5	**Tsauling**	**1.65**	**239**	P	**Pn**	**22 36 38.3**	**+0.8**
	baz=231						
CHN5				S	**Sn**	**22 36 59.2**	**+1.5**
	baz=231						
ELDTW	**Lidau**	**1.68**	**222**	*e*P	**Pn**	**22 36 36.6**	**-1.2**
	baz=215						
JIJ	**Ishigaki jima**	**1.75**	**92**	P	**Pn**	**22 36 38.4**	**-0.3**
JIJ				*e*S	**Sn**	**22 36 58.8**	**-1.0**
WTCT	**Ta-ch'eng**	**1.87**	**252**	*e*P	**Pn**	**22 36 40.9**	**+0.5**
	baz=265						
WTCT				*e*S	**Sn**	**22 37 03.1**	**+0.2**
	baz=265						
WTP	**Ta-pu**	**1.90**	**231**	*e*P	**Pn**	**22 36 41.2**	**+0.3**
	baz=223						
WTP				*e*S	**Sn**	**22 37 05.4**	**+1.7**
	baz=223						
CHY	**Chiayi**	**1.90**	**241**	*e*P	**Pn**	**22 36 42.0**	**+1.1**
	baz=232						
CHY				*e*S	**Sn**	**22 37 05.6**	**+1.9**
	baz=232						
TWG	**Pinlang**	**1.94**	**213**	*e*P	**Pn**	**22 36 39.2**	**-2.1**
	baz=212						
TWK	**Hsinying**	**1.98**	**234**	*e*P	**Pn**	**22 36 42.4**	**+0.5**
	baz=234						
TWK				*e*S	**Sn**	**22 37 06.6**	**+1.0**
	baz=234						
CHN1	**Nanshi**	**2.00**	**231**	*e*P	**Pn**	**22 36 42.2**	**0.0**
	baz=231						
CHN1				*e*S	**Sn**	**22 37 06.7**	**+0.5**
	baz=231						
ECL	**Taimali**	**2.18**	**213**	*e*P	**Pn**	**22 36 42.8**	**-1.8**
	baz=211						
SCLT	**Jiali**	**2.25**	**236**	*e*P	**Pn**	**22 36 45.6**	**0.0**
	baz=236						
JTJ	**Tarama**	**2.26**	**85**	P	**Pn**	**22 36 46.3**	**+0.6**
JTJ				*e*S	**Sn**	**22 37 12.1**	**-0.3**
TWM1	**Shoushan**	**2.32**	**226**	*e*P	**Pn**	**22 36 47.6**	**+1.2**
	baz=225						
LAY	**Lan-yu**	**2.48**	**195**	*e*P	**Pn**	**22 36 46.9**	**-1.8**
	baz=187						
SCZT	**Fangliau**	**2.54**	**216**	*e*P	**Pn**	**22 36 50.5**	**+1.0**
	baz=214						
SCZT				*e*S	**Sn**	**22 37 20.5**	**+1.2**
	baz=214						
PNG	**Penghu**	**2.60**	**251**	*e*P	**Pn**	**22 36 49.1**	**-1.2**
	baz=252						
HEN	**Hengchun**	**2.79**	**210**	*e*P	Pn	22 36 55.3	+2.3
	baz=221						
TSEB	**Hengchuen, Pin**	**2.82**	**206**	*e*P	**Pn**	**22 36 53.7**	**+0.4**
	baz=206						
TWK1	**Hengchun**	**2.82**	**208**	*e*P	**Pn**	**22 36 52.4**	**-0.9**
	baz=201						
JOW	**Kunigami**	**5.95**	**65**	*e*P	**Pn**	**22 37 35.6**	**-0.7**
	baz=67						

NNC 25 22:59:28.3±3.2,37.°23N×69.°80E, h0km, mb3.7, mpv3.4, 6C-3D, Error ellipse: s-maj=25.1km s-min=18.0km az=178.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**5.89**	**5**	Pn	Pn	23 00 58.6	+1.6
	0.7nm,0.3s,baz=182,slow=13,SNR=25						
KK31				⇑Pg	Pb	23 01 15.6	+3.5
	4.8nm,0.9s,baz=181,slow=14						
KK31				⇑Sn	Sn	23 02 06.8	+1.6
	1.4nm,0.5s						
KK31				⇓Lg	Lg	23 02 35.1	
	5.4nm,0.7s,baz=186,slow=27,SNR=6.2						
TKM2	**Tokmak 2**	**7.21**	**36**	⇑Pn	Pn	23 01 14.7	-0.6
	3.1nm,0.7s						
TKM2				⇑Sn	Sn	23 02 39.1	+0.9
	3.7nm,1.2s						
TKM2				⇑Lg	Lg	23 03 18.1	
	4.2nm,0.9s						
MK31	**Makanchi Array**	**13.31**	**40**	⇓Pn	Pn	23 02 38.1	-0.4
	1.1nm,0.7s,baz=224,slow=13,SNR=9.2						
AB31	**Akbulak array**	**13.99**	**332**	Pn	Pn	23 02 46.8	-1.0
	0.2nm,0.3s,baz=163,slow=13,SNR=13						
AB31				⇓Sn	Sn	23 05 20.6	-3.0
	0.8nm,0.7s,baz=154,slow=23,SNR=3.0						
AKTO	**Aktyubinsk**	**15.68**	**331**	⇑Pn	Pn	23 03 10.4	0.0
	1.4nm,0.7s						

*IDC **25** 23:31:53.9±1.7, 43.°30N×13.°41E, h0km, mb3.5/1, mb1 3.5/4, mb1mx3.3/28, mbtmp3.5/4, ML3.0/3, Error ellipse: s-maj=47.7km s-min=15.6km az=97.0*
*ROM **25** 23:31:54.6±0.1, 43.°25N×13.°09E, h8km, Ml3.3/29, Error ellipse: s-maj=1.0km s-min=0.8km az=82.0*
*PDG **25** 23:31:55.4±0.7, 43.°28N×13.°06E, h11km, ML3.4/8, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*CSEM **25** 23:31:55.3±0.1, 43.°25N×13.°03E, h5km, ML3.7/13, Error ellipse: s-maj=2.1km s-min=1.8km az=31.0*
*LDG **25** 23:31:55.1±0.1, 43.°29N×13.°10E, h2km, Ml3.3/11, Error ellipse: s-maj=3.9km s-min=2.8km az=47.0*
*ISCJB **25** 23:31:55.3±0.2, 43.°27N±0.°01×13.°05E±0.°02, h17km±2km, mb3.5/1, Error ellipse: s-maj=2.5km s-min=2.0km az=22.7*
*PRU **25** 23:31:55.5, 43.°28N×13.°39E, h2km*
*STR **25** 23:32:03.8±0.8, 43.°64N×12.°44E, h5km, Ml3.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 25 23:31:55.0±0.6, 43.°26N±0.°02×13.°05E±0.°02, h13km±3km, n200, σ1°61/267, 13C-19D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNTG	**Esanatoglia**	**0.08**	**264**	Pg	**Pg**	**23 31 57.9**	**0.0**
SNTG				Sg	**Sg**	**23 32 00.7**	**+0.8**
SNTG	**Esanatoglia**	**0.08**	**264**	Pg	**Pg**	**23 31 57.9**	**0.0**
CING	**Cingoli**	**0.15**	**43**	Pg	**Pg**	**23 31 58.2**	**-0.6**
CING				Sg	**Sg**	**23 32 00.8**	**-0.6**
	11μm,0.4s						
CING	**Cingoli**	**0.15**	**43**	Pg	**Pg**	**23 31 58.2**	**-0.6**
CING				Sg	**Sg**	**23 32 00.8**	**-0.6**
	11μm,0.4s						
FDMO	**Fiordimonte**	**0.23**	**174**	Pg	**Pg**	**23 31 59.7**	**-0.2**
FDMO				Sg	**Sg**	**23 32 03.5**	**+0.2**
	4μm,0.2s						
FDMO	**Fiordimonte**	**0.23**	**174**	Pg	**Pg**	**23 31 59.7**	**-0.2**
FDMO				Sg	**Sg**	**23 32 03.5**	**+0.2**
	4μm,0.2s						
ARVD	**Arcevia**	**0.25**	**341**	Pg	**Pg**	**23 32 00.3**	**0.0**
ARVD				Sg	**Sg**	**23 32 05.1**	**+1.2**
ARVD	**Arcevia**	**0.25**	**341**	Pg	**Pg**	**23 32 00.3**	**0.0**
ARVD				Sg	**Sg**	**23 32 05.1**	**+1.2**
CESI	**CESI - Serrava**	**0.28**	**203**	Pg	**Pg**	**23 32 01.1**	**+0.2**
CESI				Sg	**Sg**	**23 32 06.1**	**+1.3**
	4μm,0.3s						
CESI	**CESI - Serrava**	**0.28**	**203**	Pg	**Pg**	**23 32 01.1**	**+0.2**
CESI				Sg	**Sg**	**23 32 06.1**	**+1.3**
	4μm,0.3s						
ASSB	**Assisi San Ben**	**0.36**	**233**	Pg	**Pg**	**23 32 02.7**	**+0.4**
ASSB				Sg	**Sg**	**23 32 09.0**	**+1.7**
	5μm,0.2s						
ASSB	**Assisi San Ben**	**0.36**	**233**	Pg	**Pg**	**23 32 02.7**	**+0.4**
ASSB				Sg	**Sg**	**23 32 09.0**	**+1.7**
	5μm,0.2s						
MURB	**Monte Urbino**	**0.39**	**270**	Pg	**Pg**	**23 32 03.5**	**+0.8**
MURB				Sg	**Sb**	**23 32 10.5**	**+0.9**
	9μm,0.2s						
MURB	**Monte Urbino**	**0.39**	**270**	Pg	**Pg**	**23 32 03.5**	**+0.8**
NRCA	**Norcia**	**0.43**	**174**	Pg	**Pg**	**23 32 03.3**	**-0.3**
NRCA				Sg	**Sg**	**23 32 10.0**	**+0.6**
NRCA	**Norcia**	**0.43**	**174**	Pg	**Pg**	**23 32 03.3**	**-0.3**
NRCA				Sg	**Sg**	**23 32 10.0**	**+0.6**
SENI	**Senigallia**	**0.46**	**17**	Pg	**Pb**	**23 32 05.1**	**+0.2**
	2μm,1.1s						
SENI	**Senigallia**	**0.46**	**17**	Pg	**Pb**	**23 32 05.1**	**+0.2**
	2μm,1.1s						
PIEI	**Pieia**	**0.47**	**306**	Pg	**Pg**	**23 32 04.4**	**+0.2**
PIEI				Sg	**Sb**	**23 32 12.5**	**+0.6**
	3μm,0.2s						
PIEI	**Pieia**	**0.47**	**306**	Pg	**Pg**	**23 32 04.4**	**+0.2**
FSSB	**Fossombrone**	**0.47**	**335**	Pg	**Pb**	**23 32 04.8**	**-0.4**
	241nm,0.3s						
FSSB	**Fossombrone**	**0.47**	**335**	Pg	**Pb**	**23 32 04.8**	**-0.4**
	241nm,0.3s						
AOI	**Ancona**	**0.49**	**54**	Pg	**Pg**	**23 32 04.4**	**-0.3**
AOI				Sg	**Sb**	**23 32 12.3**	**-0.3**
	1μm,0.3s						
AOI	**Ancona**	**0.49**	**54**	Pg	**Pg**	**23 32 04.4**	**-0.3**
AOI				Sg	**Sb**	**23 32 12.3**	**-0.3**
	1μm,0.3s						
OFFI	**Offida**	**0.57**	**125**	Pg	**Pg**	**23 32 06.6**	**+0.5**
	6μm,0.6s						
OFFI	**Offida**	**0.57**	**125**	Pg	**Pg**	**23 32 06.6**	**+0.5**
	6μm,0.6s						
GAVE	**Gavelli**	**0.58**	**192**	Pg	**Pg**	**23 32 06.3**	**-0.1**
GAVE				Sg	**Sg**	**23 32 15.8**	**+1.7**
GAVE	**Gavelli**	**0.58**	**192**	Pg	**Pg**	**23 32 06.3**	**-0.1**
GAVE				Sg	**Sg**	**23 32 15.8**	**+1.7**
CDCA	**Citt' di Caste**	**0.63**	**288**	Pg	**Pg**	**23 32 07.6**	**+0.4**
	885nm,0.5s						
CDCA	**Citt' di Caste**	**0.63**	**288**	Pg	**Pg**	**23

SACS	San Casciano d		0.94	244	Pg		Pg	23 32 12.9	-0.1
	634nm,0.6s								
AQU	L'Aquila		0.94	164	Pg		Pg	23 32 12.1	-1.1
	617nm,0.4s								
AQU	L'Aquila		0.94	164	Pg		Pg	23 32 12.1	-1.1
	617nm,0.4s								
FIAM	Fiamignano		1.00	177	Pg		Pg	23 32 13.2	-1.0
	368nm,0.5s								
FIAM	Fiamignano		1.00	177	Pg		Pg	23 32 13.2	-1.0
	368nm,0.5s								
VCEL	Villa Celiera		1.04	146	Pg		Pg	23 32 14.0	-1.1
	641nm,0.4s								
VCEL	Villa Celiera		1.04	146	Pg		Pg	23 32 14.0	-1.1
	641nm,0.4s								
ASQU	Asqua		1.06	301	Pg		Pg	23 32 15.2	-0.3
	556nm,1.0s								
ASQU	Asqua		1.06	301	Pg		Pg	23 32 15.2	-0.3
	556nm,1.0s								
ARCI	Arcidosso		1.23	251	Pg		Pb	23 32 18.2	+0.1
	110nm,0.9s								
ARCI	Arcidosso		1.23	251	Pg		Pb	23 32 18.2	+0.1
	110nm,0.9s								
INTR	Introdacqua		1.40	153	Pg		Pn	23 32 19.9	-0.4
	625nm,0.8s								
MAIM	Mastiano		1.97	290	P		Pn	23 32 29.1	+1.1
MAIM					S		Sn	23 32 54.9	+2.3
SARO	Sassorosso		2.13	297	P		Pn	23 32 31.2	+0.9
SARO					S		Sb	23 32 59.4	-0.4
VINC	Vinca		2.28	294	P		Pn	23 32 33.2	+0.9
VALM	Valbona		2.30	299	P		Pn	23 32 34.4	+1.8
SKDS	Skadanscina		2.38	16	*i* Pn		Pn	23 32 34.0	+0.2
SKDS					*e*Sn		Sn	23 33 03.7	+0.9
	comp=Z,77nm,0.2s								
SKDS	Skadanscina		2.38	16	*i* Pn		Pn	23 32 34.0	+0.2
SKDS					*e*Sn		Sn	23 33 03.7	+0.9
	comp=Z,77nm,0.2s								
GRAM	Graiana		2.48	301	P		Pn	23 32 37.7	+2.6
CODM	Codolo		2.58	297	P		Pn	23 32 37.9	+1.5
BOJS	Bojanci		2.74	34	*i* Pn		Pn	23 32 39.9	+1.3
BOJS					*e*Sn		Sn	23 33 13.0	+1.5
BOJS									
	comp=Z,34nm,0.3s								
BOJS	Bojanci		2.74	34	*i* Pn		Pn	23 32 39.9	+1.3
BOJS					*e*Sn		Sn	23 33 13.0	+1.5
	comp=Z,34nm,0.3s								
SC2M	Scurtabo		2.79	295	P		Pn	23 32 41.3	+2.0
VOJS	Vojsko		2.83	12	*e*Pn		Pn	23 32 40.3	+0.4
VOJS					*i* Sn		Sn	23 33 15.3	+1.4
VOJS									
	comp=Z,12nm,0.2s								
VOJS	Vojsko		2.83	12	*e*Pn		Pn	23 32 40.3	+0.4
VOJS					*i* Sn		Sn	23 33 15.3	+1.4
	comp=Z,12nm,0.2s								
PGF	Pioggiola		3.06	258	*e*Pn		Pn	23 32 44.3	+1.2
	SNR=1.0								
PGF					*e*Sn		Sn	23 33 19.1	-0.6
	comp=Z,9.0nm,0.5s								
PGF	Pioggiola		3.06	258	*e*Pn		Pn	23 32 44.3	+1.2
	SNR=1.0								
PGF					*e*Sn		Sn	23 33 19.1	-0.6
	comp=Z,4.5nm,0.5s								
MYKA	Terra Mystica		3.39	7	⇓*i* Pn		Pn	23 32 49.3	+1.7
	comp=Z,2.1nm,0.2s								
MYKA	Terra Mystica		3.39	7	Pn		Pn	23 32 49.3	+1.7
	comp=Z,2.1nm,0.2s								
OBKA	Obir		3.42	18	⇑*e*Pn		Pn	23 32 48.7	+0.8
	comp=Z,12nm,0.4s,SNR=5.2								
OBKA	Obir		3.42	18	Pn		Pn	23 32 48.7	+0.8
	comp=Z,12nm,0.4s,SNR=5.2								
PCP	Piancastagn		3.50	293	P		Pn	23 32 49.7	+0.6
ABTA	Abfaltersbach		3.50	354	⇓*i* Pn		Pn	23 32 51.1	+1.9
	SNR=28								
ABTA					⇑*i* Sn		Sn	23 33 32.1	+1.6
	comp=Z,35nm,0.8s								
ABTA	Abfaltersbach		3.50	354	Pn		Pn	23 32 51.1	+1.9
	SNR=28								
ABTA					Sn		Sn	23 33 32.1	+1.6
	comp=Z,35nm,0.8s								
RORO	Rocca Rossa		3.71	285	P		Pn	23 32 52.7	+0.7
BRY	Bratogost		4.04	93	*e*Pn		Pn	23 32 58.8	+2.3
BRY					*e*Sn		Sn	23 33 46.8	+3.1
BRY	Bratogost		4.04	93	*e*Pn		Pn	23 32 58.8	+2.3
BRY					*e*Sn		Sn	23 33 46.8	+3.1
SAOF	Saorge		4.06	282	P		Pn	23 32 59.1	+2.4
SAOF	Saorge		4.06	282	P		Pn	23 32 59.1	+2.4
HCY	Herceg Novi		4.08	100	⇓*i* Pn		Pn	23 32 58.6	+1.5
HCY					*e*Sn		Sn	23 33 47.4	+2.7
HCY	Herceg Novi		4.08	100	⇓*i* Pn		Pn	23 32 58.6	+1.5
HCY					*e*Sn		Sn	23 33 47.4	+2.7
FETA	Feichten		4.10	337	⇑*i* Pn		Pn	23 33 00.3	+2.8
	comp=Z,4.3nm,0.4s								
FETA	Feichten		4.10	337	Pn		Pn	23 33 00.3	+2.8
	comp=Z,4.3nm,0.4s								
WTTA	Wattenberg		4.12	346	⇓*e*Pn		Pn	23 33 00.4	+2.6
	SNR=11								
WTTA	Wattenberg		4.12	346	Pn		Pn	23 33 00.4	+2.6
	SNR=11								
SBF	Sospel		4.13	280	*e*Pn		Pn	23 32 58.0	+0.3
SBF					*e*Sn		Sn	23 33 45.0	-0.8
	comp=Z,22nm,0.6s								
SBF	Sospel		4.13	280	*e*Pn		Pn	23 32 58.0	+0.3
SBF					*e*Sn		Sn	23 33 45.0	-0.8
	comp=Z,11nm,0.6s								
DAVOX	Davos/Dischmat		4.17	328	Pn		Pn	23 33 01.8	+3.3
	comp=Z,1.7nm,0.3s,baz=146,slow=14,SNR=19								
DAVOX					Sn		Sn	23 33 49.4	+2.2
	comp=Z,1.1nm,0.3s,baz=155,slow=13,SNR=3.1								
UPM	Unac-Piva		4.28	89	⇓*i* Pn		Pn	23 33 02.2	+2.3
UPM					*e*Sn		Sn	23 33 52.8	+3.1
UPM	Unac-Piva		4.28	89	⇓*i* Pn		Pn	23 33 02.2	+2.3
UPM					*e*Sn		Sn	23 33 52.8	+3.1
TOUF	Mont Tournerai		4.28	282	P		Pn	23 33 02.7	+2.8
TOUF	Mont Tournerai		4.28	282	P		Pn	23 33 02.7	+2.8
MOTA	Moosalm		4.31	342	⇑*i* Pn		Pn	23 33 03.1	+2.8
	SNR=15								
MOTA	Moosalm		4.31	342	Pn		Pn	23 33 03.1	+2.8
	SNR=15								
ARSA	Arzberg		4.35	23	⇓*i* Pn		Pn	23 33 01.5	+0.7
	comp=Z,2.0nm,0.3s,SNR=7.5								
ARSA					⇑*i* Sn		Sn	23 33 50.4	-0.9
	comp=Z,23nm,0.5s								
ARSA	Arzberg		4.35	23	Pn		Pn	23 33 01.5	+0.7
	comp=Z,2.0nm,0.3s,SNR=7.5								
ARSA					Sn		Sn	23 33 50.4	-0.9
	comp=Z,23nm,0.5s								
NKY	Niksic		4.38	94	⇓*i* Pn		Pn	23 33 03.4	+2.2
NKY					*e*Sn		Sn	23 33 55.0	+2.9
NKY	Niksic		4.38	94	⇓*i* Pn		Pn	23 33 03.4	+2.2
NKY					*e*Sn		Sn	23 33 55.0	+2.9
BUM	Brajici-Budva		4.41	101	⇓*i* Pn		Pn	23 33 04.4	+2.8
BUM					*e*Sn		Sn	23 33 55.3	+2.6
BUM	Brajici-Budva		4.41	101	⇓*i* Pn		Pn	23 33 04.4	+2.8
BUM					*e*Sn		Sn	23 33 55.3	+2.6
TRAV	Traversella		4.42	302	P		Pn	23 33 02.5	+0.8
RETA	Reutte		4.52	340	⇑*i* Pn		Pn	23 33 06.4	+3.2
RETA	Reutte		4.52	340	Pn		Pn	23 33 06.4	+3.2
DAVA	Damuels		4.60	332	⇑*e*Pn		Pn	23 33 07.4	+3.0
	comp=Z,3.9nm,0.4s,SNR=11								
DAVA					⇑*i* Sn		Sn	23 34 02.9	+5.1
	comp=Z,7.2nm,0.3s								
DAVA	Damuels		4.60	332	Pn		Pn	23 33 07.4	+3.0
	comp=Z,3.9nm,0.4s,SNR=11								
DAVA					Sn		Sn	23 34 02.9	+5.1
	comp=Z,7.2nm,0.3s								
PLE	Pljevlja		4.63	87	⇓*i* Pn		Pn	23 33 06.2	+1.6
PLE					*e*Sn		Sn	23 34 01.0	+2.8
PLE	Pljevlja		4.63	87	⇓*i* Pn		Pn	23 33 06.2	+1.6
PLE					*e*Sn		Sn	23 34 01.0	+2.8
PDG	Podgorica		4.64	98	⇑*i* Pn		Pn	23 33 06.5	+1.9
PDG					*e*Sn		Sn	23 34 00.5	+2.2
TTG	Podgorica		4.64	98	⇑*i* Pn		Pn	23 33 06.5	+1.9
TTG					*e*Sn		Sn	23 34 00.5	+2.2
BBLS	Lazići		4.66	80	*e*Pn		Pn	23 33 03.9	-1.1
MOA	Molln		4.67	10	⇓*i* Pn		Pn	23 33 06.9	+1.8
	comp=Z,1.0nm,0.1s								
MOA	Molln		4.67	10	Pn		Pn	23 33 06.9	+1.8
	comp=Z,1.0nm,0.1s								
FRF	La Foret Royal		4.68	276	*e*Pn		Pn	23 33 06.4	+1.2
	SNR=1.0								
FRF					*e*Sn		Sn	23 33 59.0	-0.3
	comp=Z,12nm,0.7s,SNR=1.0								
FRF	La Foret Royal		4.68	276	*e*Pn		Pn	23 33 06.4	+1.2
	SNR=1.0								
FRF					*e*Sn		Sn	23 33 59.0	-0.3
	comp=Z,5.8nm,0.7s,SNR=1.0								
ULC	Ulcinj		4.75	104	⇓*i* Pn		Pn	23 33 09.0	+2.7
ULC	Ulcinj		4.75	104	⇓*i* Pn		Pn	23 33 09.0	+2.7
MBDF	Montbardon		4.76	290	*e*Pn		Pn	23 33 06.0	-0.5
MBDF	Montbardon		4.76	290	*e*P		Pn	23 33 10.6	+4.1
MBDF					*e*Sn		Sn	23 33 58.6	-3.0
	comp=Z,14nm,0.7s								
MBDF	Montbardon		4.76	290	*e*Pn		Pn	23 33 06.0	-0.5
MBDF	Montbardon		4.76	290	*e*P		Pn	23 33 10.6	+4.1
MBDF					*e*Sn		Sn	23 33 58.6	-3.0
	comp=Z,6.8nm,0.7s								
LMR	La Mourre		4.78	273	*e*Pn		Pn	23 33 07.4	+0.8
	SNR=1.0								
LMR	La Mourre		4.78	273	*e*Pn		Pn	23 33 07.4	+0.8
	SNR=1.0								
BEY	Berane		5.03	92	⇑*i* Pn		Pn	23 33 12.1	+2.0
BEY					*e*Sn		Sn	23 34 10.4	+2.3
IVA	Berane		5.03	92	⇑*i* Pn		Pn	23 33 12.1	+2.0
IVA					*e*Sn		Sn	23 34 10.4	+2.3
LPG	La Plagne		5.04	298	*e*Pn		Pn	23 33 11.1	+0.7
	SNR=1.0								
LPG	La Plagne		5.04	298	*e*Pn		Pn	23 33 11.1	+0.7
	SNR=1.0								
LPL	La Plagne		5.06	299	*e*Pn		Pn	23 33 11.9	+1.2
	SNR=1.0								
LPL					*e*Sn		Sn	23 34 05.3	-3.7
	comp=Z,4.6nm,0.3s,SNR=1.0								
LPL	La Plagne		5.06	299	*e*Pn		Pn	23 33 11.9	+1.2
	SNR=1.0								
LPL					*e*Sn		Sn	23 34 05.3	-3.7
	comp=Z,2.3nm,0.3s,SNR=1.0								
CONA	Conrad Observa		5.06	22	⇓*i* Pn		Pn	23 33 11.8	+1.2
	comp=Z,2.4nm,0.2s								
CONA					⇑*i* Sn		Sn	23 34 08.0	-1.0
	comp=Z,6.4nm,0.4s								
CONA	Conrad Observa		5.06	22	Pn		Pn	23 33 11.8	+1.2
	comp=Z,2.4nm,0.2s								
CONA					Sn		Sn	23 34 08.0	-1.0
	comp=Z,6.4nm,0.4s								
DIVS	Divibare		5.10	78	*e*Pn		Pn	23 33 14.3	+3.2
PVY	Plav		5.12	95	⇓*i* Pn		Pn	23 33 14.0	+2.6
PVY					*e*Sn		Sn	23 34 12.9	+2.6
ORIF	Oris-en-Rattie		5.42	290	*e*P		Pn	23 33 19.5	+3.9
SMRF	Simiane la Rot		5.47	280	*e*P		Pn	23 33 18.8	+2.6
	SNR=1.0								
SMRF	Simiane la Rot		5.47	280	*e*P		Pn	23 33 18.8	+2.6
	SNR=1.0								
GERES	GERESS Array B		5.60	4	Pn		Pn	23 33 18.5	+0.5
	comp=Z,0.4nm,0.3s,baz=172,slow=13,SNR=16								
GERES					Sn		Sn	23 34 20.2	-2.0
	comp=Z,2.2nm,0.3s,baz=176,slow=24,SNR=13								
GRUS	Gruza		5.60	81	*e*Pn		Pn	23 33 18.1	+0.2
KHC	Kasperske Hory		5.88	3	*e*PN		Pn	23 33 22.2	+0.4
KHC					*ex*		x	23 33 31.5	
KHC					*ex*		x	23 33 59.0	
KHC					*e*SN		Sn	23 34 27.3	-1.7
KHC	Kasperske Hory		5.88	3	Pn		Pn	23 33 22.2	+0.4
CABF	La Chapelle		5.97	307	*e*Pn		Pn	23 33 24.4	+1.3
	SNR=1.0								
CABF	La Chapelle		5.97	307	*e*Pn		Pn	23 33 24.4	+1.3
	SNR=1.0								
LOMF	Lomont		6.00	315	P		Pn	23 33 25.5	+2.1
LOMF	Lomont		6.00	315	P		Pn	23 33 25.5	+2.1
MOF	Molkenrain		6.19	320	P		Pn	23 33 27.6	+1.5
MOF					S		Sn	23 34 37.3	+0.6
MOF	Molkenrain		6.19	320	P		Pn	23 33 27.6	+1.5
MOF					S		Sn	23 34 37.3	+0.6
VIVF	Saint-Julien-l		6.25	288	*e*Pn		Pn	23 33 26.3	-0.5
	SNR=1.0								
VIVF	Saint-Julien-l		6.25	288	*e*Pn		Pn	23 33 26.3	-0.5
	SNR=1.0								
TREC	Trest		6.26	15	*e*SN		Sn	23 34 36.0	-2.4
HINF	Hinteralfeld		6.30	318	*e*Pn		Pn	23 33 28.1	+0.6
	SNR=1.0								
HINF					*e*Sn		Sn	23 34 37.2	-2.1
	comp=Z,14nm,0.4s,SNR=1.0								
HINF	Hinteralfeld		6.30	318	*e*Pn		Pn	23 33 28.1	+0.6
	SNR=1.0								
BARS	Barje		6.44	91	*e*Pn		Pn	23 33 30.1	+0.7
ECH	Echery		6.44	322	P		Pn	23 33 30.7	+1.2
ECH	Echery		6.44	322	P		Pn	23 33 30.7	+1.2
CDF	Champ du Feu		6.54	324	*e*Pn		Pn	23 33 31.9	+1.0
	SNR=1.0								
CDF					*e*Sn		Sn	23 34 41.1	-4.2
	comp=Z,7.5nm,0.5s,SNR=1.0								
CDF	Champ du Feu		6.54	324	*e*Pn		Pn	23 33 31.9	+1.0
	SNR=1.0								
VYHS	Vyhne		6.61	36	*e*PN		Pn	23 33 28.3	-3.4
VYHS					*e*SN		Sn	23 34 34.8	-12
HAU	Haudompre		6.67	318	*e*Pn		Pn	23 33 33.5	+0.8
	SNR=1.0								
HAU					*e*Sn		Sn	23 34 45.4	-3.2
	comp=Z,19nm,0.4s,SNR=1.0								
HAU	Haudompre		6.67	318	*e*Pn		Pn	23 33 33.5	+0.8
	SNR=1.0								
LASF	Ste Croix		6.72	280	*e*Pn		Pn	23 33 33.4	+0.1
	SNR=1.0								
LASF	Ste Croix		6.72	280	*e*Pn		Pn	23 33 33.4	+0.1
	SNR=1.0								
PRU	Pruhonice		6.80	8	*e*PN		Pn	23 33 34.6	+0.2
PRU					*e*SN		Sn	23 34 49.1	-2.6
PRU	Pruhonice		6.80	8	Pn		Pn	23 33 34.6	+0.2
NKC	Novy Kostel		6.99	357	*e*SN		Sn	23 34 54.5	-1.7
ZAPS	Zavoj		7.00	87	*e*Pn		Pn	23 33 38.5	+1.4
PAGF	Fort de Pagny		7.36	319	*e*Pn		Pn	23 33 42.5	+0.5
PAGF					*e*Sn		Sn	23 35 00.5	-4.7
	comp=Z,2.1nm,0.5s								
PAGF	Fort de Pagny		7.36	319	*e*Pn		Pn	23 33 42.5	+0.5
SMF	Signal de Mont		7.36	301	*e*Pn		Pn	23 33 42.8	+0.8
SMF					*e*Sn		Sn	23 35 02.6	-2.7
	comp=Z,8.2nm,0.7s,SNR=1.0								
SMF	Signal de Mont		7.36	301	*e*Pn		Pn	23 33 42.8	+0.8
SFTF	Sexfontaines		7.47	314	*e*Pn		Pn	23 33 43.0	-0.6
	baz=129								
SFTF	Sexfontaines		7.47	314	*e*Pn		Pn	23 33 43.0	-0.6
	baz=129								
LOR	Lormes		7.62	305	*e*Pn		Pn	23 33 46.5	+0.9
	baz=123,SNR=1.0								
LOR					*e*Sn		Sn	23 35 07.2	-4.6
	comp=Z,4.8nm,0.3s								
LOR	Lormes		7.62	305	*e*Pn		Pn	23 33 46.5	+0.9
	baz=123,SNR=1.0								
BRG	Berggiesshubel		7.64	4	SG		Sg	23 36 10.6	+11
	comp=Z,1.8nm,0.6s								
AVF	Avril sur Loir		7.72	301	*e*Pn		Pn	23 33 47.7	+0.7
	SNR=1.0								
AVF	Avril sur Loir		7.72	301	*e*Pn		Pn	23 33 47.7	+0.7
	SNR=1.0								
MTLF	Montolieu		7.91	274	*e*Pn		Pn	23 33 52.0	+2.5
	SNR=1.0								
MTLF	Montolieu		7.91	274	*e*Pn		Pn	23 33 52.0	+2.5
	SNR=1.0								
BGF	Bois d'Agland		7.96	298	*e*Pn		Pn	23 33 51.5	+1.3
	SNR=1.0								
BGF	Bois d'Agland		7.96	298	*e*Pn		Pn	23 33 51.5	+1.3
	SNR=1.0								
CAF	Calviac		8.08	286	*e*Pn		Pn	23 33 52.1	+0.1
CAF	Calviac		8.08	286	*e*Pn		Pn	23 33 52.1	+0.1
FINES	FINESS Array B		19.80	19	P		P	23 36 25.5	+0.8
	comp=Z,0.1nm,0.3s,baz=176,slow=12,SNR=3.6								
TORD	Torodi Ar. Bea		31.57	201	P		P	23 38 18.5	+1.3
	comp=Z,0.4nm,0.5s,baz=13,slow=9.0,SNR=8.4								

*ISCJB **26** 00:04:29.0±0.6,38.°72N±0.′04×35.°59E±0.′04, h5km±7km,*
Error ellipse: s-maj=7.7km s-min=4.6km az=167.5
*ISK **26** 00:04:28.7,38.°66N×35.°70E, h9km, MD3.0*
*DDA **26** 00:04:28.2,38.°75N×35.°57E, h7km, MD2.8*
*CSEM **26** 00:04:28.9±0.3,38.°69N×35.°62E, h5km, MD3.0, Error*
ellipse: s-maj=7.5km s-min=5.1km az=157.0

ISC 26 00:04:28.6±1.0, **38.°72N**±0.′04×**35.°57E**±0.′03, **h9**km±10km,
n19, σ0**.61**/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNN	Bunyan	0.26	58	*e*PG	Pg	00 04 33.6	-0.2
BNN				*e*SG	Sg	00 04 37.3	0.0
BNN	Bunyan	0.26	58	*e*Pg	Pg	00 04 33.6	-0.2
BNN				*e*Sg	Sg	00 04 37.3	0.0
AVNT	Avonos	0.56	277	*i* P	Pg	00 04 39.3	-0.3
AVNT				*i* S	Sg	00 04 47.4	+0.4
AVNT	Avonos	0.56	277	*i* P	Pg	00 04 39.3	-0.3
AVNT				*i* S	Sg	00 04 47.4	+0.4
PINB	Pinarbasi	0.65	93	*i* P	Pg	00 04 41.3	0.0
PINB				*i* S	Sb	00 04 50.5	-1.2
NIG	Nigde	0.97	232	*e*PG	Pn	00 04 48.6	0.0
NIG				*e*SG	Sn	00 05 03.0	+0.4
NIG	Nigde	0.97	232	*e*Pg	Pn	00 04 48.7	0.0
NIG				*e*Sg	Sn	00 05 03.1	+0.4
KOZT	Kozan	1.25	171	*e*PN	Pn	00 04 51.8	-0.5
KOZT				*e*SN	Sg	00 05 08.6	-0.2
KOZT	Kozan	1.25	171	*e*Pn	Pn	00 04 51.8	-0.5
KOZT				*e*Sn	Sg	00 05 08.6	-0.2
KARA	Karaisali	1.51	196	*e*PN	Pn	00 04 56.1	+0.2
KARA	Karaisali	1.51	196	*e*Pn	Pn	00 04 56.1	+0.2
AYKD	Aykdinkavak	1.62	143	*i* P	Pg	00 05 00.3	+0.5
AYKD				*i* S	Sg	00 05 22.6	+1.7
CORM	Corum	1.63	334	*e*PN	Pb	00 04 59.8	+0.8
CORM	Corum	1.63	334	*e*Pn	Pb	00 04 59.8	+0.8
SVSK	Karacayir	1.63	42	*e*PN	Pn	00 04 57.8	+0.2
SVSK	Karacayir	1.63	42	*e*Pn	Pn	00 04 57.8	+0.2
AFSR	Af˘ar-Bala (A	2.08	291	*e*PN	Pb	00 05 06.2	-0.4
AFSR	Af˘ar-Bala (A	2.08	291	*e*Pn	Pb	00 05 06.2	-0.4

IDC 26 00:08:38.7±4.1, **19.°22S**×**168.°98E, h0**km, **mb4.1**/3,
mb1 4.3/4, **mb1mx3.8**/18, **mbtmp4.1**/4, **ML3.7**/1, **MS3.3**/3,
Ms1 3.3/3, **ms1mx2.7**/23, **Error ellipse: s-maj=91.9km**
s-min=42.2km az=117.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	3.70	220	*e*P	Pn	00 09 36.6	-0.8
DZM				*e*S	Sn	00 10 21.1	-0.7
DZM	Mont Dzumac	3.70	220	Pn	Pn	00 09 37.1	-0.2
	6.1nm,0.3s,baz=270,slow=24,SNR=18						
DZM				Sn	Sn	00 10 21.4	-0.4
	11nm,0.3s,baz=270,slow=24,SNR=2.6						
NOUC	Port Laguerre	3.81	221	*e*S	Sn	00 10 25.0	+0.7
RAO	Raoul Island	15.56	132	LR	LR	00 16 33.3	
	comp=Z,137nm,19.5s,baz=31,slow=30						
URZ	Urewera	20.25	161	LR	LR	00 18 56.1	
	comp=Z,70nm,18.9s,baz=145,slow=30						
CTA	Charters Tower	21.42	264	P	P	00 13 32.8	+4.3
	1.6nm,0.2s,baz=100,slow=6.1,SNR=2.3						
STKA	Stephens Creek	27.65	237	P	P	00 14 29.7	+1.3
	2.5nm,0.8s,baz=78,slow=10.0,SNR=4.5						
WRA	Warramunga Arr	32.62	263	P	P	00 15 11.8	-0.7
	0.8nm,0.8s,baz=96,slow=7.7,SNR=9.0						
ASAR	Alice Springs	32.90	256	P	P	00 15 14.8	-0.2
	4.2nm,0.6s,baz=85,slow=8.8,SNR=44						
ASAR				LR	LR	00 29 09.6	
	comp=Z,66nm,20.4s,baz=259,slow=37						
GERES	GERESS Array B	144.36	332	PKP	PKPbc	00 28 16.1	+0.8
	0.7nm,0.7s,baz=67,slow=2.6,SNR=5.4						

*ISCJB **26** 00:27:14.6±0.5,38.°92N±0.′02×27.°02E±0.′04, h1km±5km,*
Error ellipse: s-maj=4.8km s-min=3.3km az=178.5
*DDA **26** 00:27:14.7,38.°94N×27.°07E, h7km, MD3.0*
*ISK **26** 00:27:14.0,38.°91N×26.°94E, h5km, MD2.9*
*CSEM **26** 00:27:14.9±0.1,38.°93N×27.°02E, h2km, MD3.0, Error*
ellipse: s-maj=3.0km s-min=2.2km az=83.0

ISC 26 00:27:14.7±1.1, **38.°93N**±0.′02×**27.°02E**±0.′02, **h6**km±10km,
n46, σ0**.58**/67, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AYVA	Ayvalik	0.46	326	*i* P	Pg	00 27 24.3	+0.7
AYVA				*i* S	Sb	00 27 31.4	-0.9
AYVA	Ayvalik	0.46	326	*i* P	Pg	00 27 24.3	+0.7
AYVA				*i* S	Sb	00 27 31.4	-0.9
BLCB	Balcova	0.54	178	*e*PG	Pg	00 27 25.2	+0.1
BLCB				*e*SG	Sg	00 27 32.2	0.0
BLCB	Balcova	0.54	178	*e*Pg	Pg	00 27 25.2	+0.1
BLCB				*e*Sg	Sg	00 27 32.2	0.0
AKHS	Akhisar	0.62	94	*i* P	Pg	00 27 26.8	+0.2
AKHS				*i* S	Sg	00 27 34.4	-0.2
AKHS	Akhisar	0.62	94	*i* P	Pg	00 27 26.8	+0.2

WRA				S	S	00 46 32.9	-6.1
	0.3nm,0.3s,baz=340,slow=23,SNR=5.7							
ASAR	**Alice Springs**	**17.26**	**166**	P	Pn	00 44 45.4	-0.9
	0.5nm,0.3s,baz=345,slow=10,SNR=23							
MKAR	**Makanchi Array**	**67.84**	**327**	P	P	00 51 31.0	0.0
	0.2nm,0.4s,baz=118,slow=8.1,SNR=5.0							

*IDC **26** 01:31:32.6±4.8, 36°.73N×71°.80E, h79km±42km, mb3.4/9, mb1 3.6/13, mb1mx3.4/30, mbtmp3.5/13, ML3.9/4, MS2.8/1, Ms1 2.8/1, ms1mx2.1/29, Error ellipse: s-maj=32.6km s-min=18.9km az=16.0*

*ISCJB **26** 01:31:35.4±0.5, 36°.85N±0°.03×72°.26E±0°.08, h142km, mb3.5/9, Error ellipse: s-maj=9.7km s-min=3.4km az=162.4*

*NNC **26** 01:31:41.1±2.7, 37°.42N×71°.53E, h158km±25km, mb3.3, mpv3.8, Error ellipse: s-maj=23.8km s-min=13.5km az=7.0*

ISC 26 01:31:36.1±0.7, 36°.82N±0°.06×72°.27E±0°.09, h142km, n52, σ1§93/53, mb3.5/9, 6C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THN	**Thein Dam**	**5.22**	**146**	*e*PKP	**Pn**	**01 32 51.8**	**-0.5**
THN				*e*S	**Sn**	**01 33 51.3**	**-0.4**
DLH	**Dalhousie**	**5.24**	**143**	*e*PKP	**Pn**	**01 32 55.0**	**+2.1**
DLH				*e*S	**Sn**	**01 33 57.0**	**+4.3**
AML	**Almayashu**	**5.41**	**11**	P	**Pn**	**01 32 54.6**	**-0.7**
	SNR=29						
UCH	**Uchtor**	**5.67**	**17**	P	**Sn**	**01 34 00.7**	**-2.3**
	SNR=8.5						
KZA	**Kyzart**	**5.73**	**23**	P	**Pn**	**01 33 00.1**	**+0.6**
	SNR=6.0						
EKS2	**Erkin-Say**	**5.95**	**11**	P	**Pn**	**01 33 02.3**	**+0.2**
	SNR=12						
AAK	**Ala-Archa**	**6.05**	**16**	P	**Pn**	**01 33 04.6**	**+1.1**
	SNR=6.5						
AAK	**Ala-Archa**	**6.05**	**16**	P	**Pn**	**01 33 03.4**	**-0.1**
	3.0nm,0.3s,baz=170,slow=6.1,SNR=10						
AAK				S	**Sn**	**01 34 09.4**	**-2.3**
	2.0nm,0.3s,baz=319,slow=22,SNR=13						
KK31	**Karatay Array**	**6.42**	**348**	P	Pn	01 33 04.6	-3.7
	3.8nm,0.3s,baz=182,slow=13,SNR=26						
KK31				⇑S	Sn	01 34 10.0	-10
	6.4nm,0.3s,baz=174,slow=21,SNR=6.0						
CHMS	**Chumysh**	**6.46**	**16**	P	**Pn**	**01 33 09.4**	**+0.6**
	SNR=6.8						
SDNR	**Sundarnagar**	**6.58**	**142**	*e*PKP	**Pn**	**01 33 12.0**	**+1.4**
SDNR				*e*S	**Sn**	**01 34 24.0**	**-0.5**
TKM2	**Tokmak 2**	**6.61**	**22**	⇓P	**Pn**	**01 33 12.0**	**+1.0**
	3.4nm,0.5s						
TKM2				⇓S	**Sn**	**01 34 24.2**	**-1.0**
	11nm,0.7s						
TKM2	**Tokmak 2**	**6.61**	**22**	P	**Pn**	**01 33 12.1**	**+1.2**
	SNR=6.8						
USP	**Ospenovka**	**6.66**	**14**	P	**Pn**	**01 33 11.1**	**-0.4**
	SNR=5.0						
SMLA	**Simla**	**6.98**	**143**	*i* P	**Pn**	**01 33 17.8**	**+1.9**
SMLA				*i* S	**Sn**	**01 34 33.9**	**-0.2**
SMLA				*i* S	**Sn**	**01 34 33.9**	**-0.2**
AYAN	**Aya Nagar**	**9.27**	**152**	*e*PKP	**Pn**	**01 33 46.9**	**+0.5**
AYAN				*e*S	**Sn**	**01 35 25.7**	**-3.4**
KUDL	**Kundal**	**9.36**	**156**	*e*PKP	**Pn**	**01 33 47.4**	**-0.3**
KUDL				*e*S	**Sn**	**01 35 26.2**	**-5.1**
KUDL				AML	AML	01 35 30.6	
	comp=E,14nm,0.8s						
KUDL				AML	AML	01 35 31.3	
	comp=N,13nm,0.6s						
AGRA	**Agra**	**10.70**	**152**	*e*S	**Sn**	**01 35 58.1**	**-5.8**
AGRA				AML	AML	01 36 19.6	
	comp=N,52nm,0.5s						
AGRA				AML	AML	01 36 19.9	
	comp=E,50nm,0.2s						
MK31	**Makanchi Array**	**12.44**	**34**	⇑P	**Pn**	**01 34 29.9**	**+1.6**
	comp=E,1.1nm,0.6s,baz=211,slow=14,SNR=7.8						
MKAR	**Makanchi Array**	**12.44**	**34**	P	**Pn**	**01 34 29.6**	**+1.3**
	comp=E,0.2nm,0.3s,baz=213,slow=14,SNR=12						
PYUN	**Piuthan**	**12.54**	**131**	*e*P	**Pn**	**01 34 30.2**	**+0.3**
	comp=E,58nm,0.6s						
DANN	**Dangsing**	**12.84**	**128**	*e*P	**Pn**	**01 34 34.9**	**+1.0**
	comp=E,18nm,0.4s						
KOLN	**Koldanda**	**13.15**	**130**	*e*P	**Pn**	**01 34 38.7**	**+0.9**
	comp=E,19nm,0.4s						
KKN	**Kakani**	**14.20**	**126**	*e*P	**Pn**	**01 34 51.5**	**+0.3**
	comp=E,26nm,0.7s						
PKIN	**Phulchoki**	**14.42**	**126**	*e*P	**Pn**	**01 34 54.3**	**+0.3**
	comp=E,17nm,0.5s						
PKI	**Pulchoki**	**14.44**	**126**	*e*P	**Pn**	**01 34 54.8**	**+0.6**
	comp=E,28nm,0.6s						
KURBB	**Kurchatov Arra**	**14.51**	**16**	⇑P	**Pn**	**01 34 53.2**	**-1.3**
	comp=E,7.4nm,0.9s						
KURBB	**Kurchatov Arra**	**14.51**	**16**	P	**Pn**	**01 34 52.1**	**-2.5**
	comp=E,0.0nm,0.3s,baz=202,slow=12,SNR=5.8						
GUN	**Gumba**	**14.52**	**124**	*e*P	**Pn**	**01 34 55.5**	**+0.3**
	comp=E,71nm,1.0s						
KURK	**Kurchatov**	**14.62**	**16**	⇑P	**Pn**	**01 34 56.5**	**+0.7**
	comp=E,4.4nm,0.8s						
AB31	**Akbulak array**	**15.32**	**328**	P	Pn	01 34 59.1	-5.6
	comp=E,2.1nm,0.5s,baz=139,slow=13,SNR=43						
AB31				⇓S	Sn	01 37 38.9	-16
	comp=E,2.8nm,0.5s,baz=148,slow=22,SNR=10						
RAMN	**Ramite**	**15.63**	**125**	*e*P	**Pn**	**01 35 09.0**	**0.0**
	comp=E,31nm,0.6s						
VOSK	**Vostochnaya**	**15.93**	**357**	⇑P	**Pn**	**01 35 10.0**	**-2.1**
	comp=E,4.1nm,1.4s						
TAPN	**Taplejung**	**16.12**	**121**	*e*P	**Pn**	**01 35 14.8**	**-0.2**
	comp=E,14nm,0.6s						
ODAN	**Odare**	**16.22**	**123**	*e*P	**Pn**	**01 35 15.7**	**-0.5**
	comp=E,24nm,0.6s						
BVA0	**Borovoye Array**	**16.25**	**356**	⇓P	**Pn**	**01 35 12.4**	**-3.8**
	comp=E,4.4nm,1.5s,baz=184,slow=10,SNR=6.0						
BVAR	**Borovoye Array**	**16.25**	**356**	P	**Pn**	**01 35 13.7**	**-2.5**
	comp=E,0.2nm,0.3s,baz=148,slow=11,SNR=2.8						
ZRNK	**Zerenda**	**16.29**	**353**	⇑P	**Pn**	**01 35 14.8**	**-1.8**
	comp=E,1.7nm,0.6s						
AKTO	**Aktyubinsk**	**17.04**	**327**	⇓P	P	01 35 18.5	-6.6
	comp=E,5.5nm,0.6s						
AKTO	**Aktyubinsk**	**17.04**	**327**	P	**P**	**01 35 22.9**	**-2.2**
	comp=E,0.8nm,0.3s,baz=150,slow=14,SNR=12						
AKTO				S	S	01 38 15.6	-20
	comp=E,0.1nm,0.3s,baz=141,slow=23,SNR=2.9						
ZALV	**Zalesovo Beam**	**19.21**	**23**	P	**Pn**	**01 35 52.0**	**+0.7**
	comp=E,0.5nm,0.3s,baz=217,slow=9.8,SNR=9.0						
SONM	**Songino Array**	**27.31**	**55**	P	P	01 37 13.1	+5.6
	comp=E,0.8nm,0.7s,baz=253,slow=10,SNR=4.8						
FINES	**FINESS Array B**	**37.79**	**326**	P	**P**	**01 38 40.2**	**+2.0**
	comp=E,1.7nm,0.6s,baz=117,slow=8.7,SNR=11						
ARCES	**ARCESS Array B**	**41.24**	**337**	P	**P**	**01 39 09.2**	**+2.5**
	comp=E,3.4nm,0.8s,baz=33,slow=4.6,SNR=5.2						
GERES	**GERESS Array B**	**43.58**	**305**	LR	LR	01 59 38.3	
	comp=E,12nm,18.9s,baz=7.0,slow=39						
NB2	**NORSAR Subarra**	**44.74**	**323**	P	**P**	**01 39 36.6**	**+1.6**
	comp=Z,1.2nm,0.7s,baz=94,slow=7.9						
NOA	**NORSAR Array B**	**44.74**	**323**	P	**P**	**01 39 36.5**	**+1.5**
	comp=Z,1.9nm,0.7s,baz=96,slow=7.9,SNR=9.4						
ESDC	**Sonseca Array**	**58.21**	**298**	P	**P**	**01 41 17.4**	**+2.0**
	comp=Z,0.2nm,0.3s,baz=57,slow=8.0,SNR=3.8						
TORD	**Torodi Ar. Bea**	**66.75**	**269**	P	**P**	**01 42 12.5**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=48,slow=6.1,SNR=13						
ILAR	**Eielson Array**	**74.19**	**16**	P	P	01 43 00.4	+3.7
	comp=Z,0.2nm,0.8s,baz=305,slow=1.9,SNR=3.8						
WRA	**Warramunga Arr**	**81.30**	**123**	P	P	01 43 42.4	+5.6
	comp=Z,0.3nm,0.7s,baz=325,slow=4.8,SNR=5.7						
ASAR	**Alice Springs**	**83.61**	**126**	P	P	01 43 53.8	+5.1
	comp=Z,0.4nm,0.7s,baz=307,slow=3.4,SNR=2.8						

*DDA **26** 01:34:01.0, 42°.07N×30°.31E, h8km, MD3.2, ML3.3*

*ISK **26** 01:34:02.6, 42°.34N×30°.15E, h32km, ML3.4*

*CSEM **26** 01:34:02.4±0.1, 42°.33N×30°.16E, h20km, ML3.4, Error ellipse: s-maj=4.3km s-min=2.6km az=62.0*

ISC 26 01:34:01.2±1.4, 42°.34N±0°.03×30°.21E±0°.04, h24km±15km, n93, σ1§48/112, 13C-6D, Black Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SILT	**Sile**	**1.26**	**200**	*e*PN	**Pn**	**01 34 23.6**	**+0.4**
SILT	**Sile**	**1.26**	**200**	*e*Pn	**Pn**	**01 34 23.6**	**+0.4**
KDZE	**Karadeniz Ereo**	**1.38**	**138**	*e*PN	**Pn**	**01 34 26.0**	**+1.1**
KDZE				*e*SN	**Sb**	**01 34 43.8**	**+0.3**
KDZE	**Karadeniz Ereo**	**1.38**	**138**	*e*Pn	**Pn**	**01 34 26.0**	**+1.1**
KDZE				*e*Sn	**Sb**	**01 34 43.8**	**+0.3**
KLYT	**Kilyos**	**1.40**	**219**	*e*PN	**Pn**	**01 34 25.7**	**+0.6**
KLYT	**Kilyos**	**1.40**	**219**	*e*Pn	**Pn**	**01 34 25.7**	**+0.6**
ISK	**Istanbul-Kandi**	**1.54**	**214**	*e*PN	**Pn**	**01 34 28.1**	**+1.1**
ISK				*e*SN	**Sn**	**01 34 46.0**	**-0.2**
ISK	**Istanbul-Kandi**	**1.54**	**214**	*e*Pn	**Pn**	**01 34 28.1**	**+1.1**
ISK				*e*Sn	**Sn**	**01 34 46.0**	**-0.2**
HRT	**Hereke**	**1.57**	**195**	*e*PN	**Pb**	**01 34 29.0**	**-0.6**
HRT	**Hereke**	**1.57**	**195**	*e*Pn	**Pb**	**01 34 29.0**	**-0.6**
BGKT	**Bogazkoy**	**1.58**	**223**	*e*PN	**Pn**	**01 34 28.2**	**+0.7**
BGKT	**Bogazkoy**	**1.58**	**223**	*e*Pn	**Pn**	**01 34 28.3**	**+0.7**
SPNC	**Sapanca-Adapaz**	**1.66**	**177**	*e*PN	**Pb**	**01 34 30.7**	**-0.2**
SPNC	**Sapanca-Adapaz**	**1.66**	**177**	*e*Pn	**Pb**	**01 34 30.7**	**-0.2**
CTYL	**Yal??k??y-??at**	**1.68**	**240**	*e*PN	**Pn**	**01 34 29.6**	**+0.7**
CTYL	**Yal??k??y-??at**	**1.68**	**240**	*e*Pn	**Pn**	**01 34 29.6**	**+0.7**
CTKS	**Kestanelik-??a**	**1.69**	**230**	*e*PN	**Pn**	**01 34 30.1**	**+1.0**
CTKS	**Kestanelik-??a**	**1.69**	**230**	*e*Pn	**Pn**	**01 34 30.1**	**+1.0**
ELBA	**Catalca**	**1.79**	**229**	*i* P	**Pn**	**01 34 31.9**	**+1.5**
ELBA				*i* S	**Sn**	**01 34 51.9**	**-0.6**
ELBA	**Catalca**	**1.79**	**229**	*i* P	**Pn**	**01 34 32.0**	**+1.5**
ELBA				*i* S	**Sn**	**01 34 51.9**	**-0.6**
SLVT	**Silivri**	**1.86**	**234**	*e*PN	**Pn**	**01 34 32.7**	**+1.2**
SLVT	**Silivri**	**1.86**	**234**	*e*Pn	**Pn**	**01 34 32.7**	**+1.2**
YLV	**Yalova**	**1.88**	**200**	*e*PN	**Pn**	**01 34 33.4**	**+1.5**
YLV	**Yalova**	**1.88**	**200**	*e*Pn	**Pn**	**01 34 33.4**	**+1.5**
MANR	**Mangalia**	**1.90**	**322**	⇓*i*P	**Pn**	**01 34 32.7**	**+0.8**
MANR	**Mangalia**	**1.90**	**322**	S	**Sn**	**01 34 54.2**	**-0.8**
GULT	**Gulveren**	**1.92**	**173**	*e*PN	**Pb**	**01 34 34.5**	**-1.0**
GULT	**Gulveren**	**1.92**	**173**	*e*Pn	**Pb**	**01 34 34.5**	**-1.0**
ADVT	**Abdulvahap**	**1.94**	**191**	*e*PN	**Pb**	**01 34 34.5**	**-1.3**
ADVT	**Abdulvahap**	**1.94**	**191**	*e*Pn	**Pb**	**01 34 34.5**	**-1.3**
MDUB	**Mudurnu**	**2.01**	**158**	*e*PN	**Pn**	**01 34 35.5**	**+1.8**
MDUB	**Mudurnu**	**2.01**	**158**	*e*Pn	**Pn**	**01 34 35.5**	**+1.8**
ARMT	**Armutlu**	**2.04**	**210**	*e*PN	**Pn**	**01 34 35.8**	**+1.8**
ARMT	**Armutlu**	**2.04**	**210**	*e*Pn	**Pn**	**01 34 35.8**	**+1.8**
GPA	**Golpazari**	**2.05**	**178**	*e*PN	**Pn**	**01 34 36.0**	**+1.8**
GPA	**Golpazari**	**2.05**	**178**	*e*Pn	**Pn**	**01 34 36.0**	**+1.8**
GEMT	**Gemlik**	**2.05**	**202**	*e*PN	**Pn**	**01 34 35.7**	**+1.5**
GEMT	**Gemlik**	**2.05**	**202**	*e*Pn	**Pn**	**01 34 35.7**	**+1.5**
SAFT	**Safranbolu**	**2.15**	**120**	*e*PN	**Pn**	**01 34 37.6**	**+2.1**
SAFT	**Safranbolu**	**2.15**	**120**	*e*Pn	**Pn**	**01 34 37.6**	**+2.1**
MDNY	**Mudanya-Bursa**	**2.21**	**207**	*e*PN	**Pn**	**01 34 38.0**	**+1.7**
MDNY	**Mudanya-Bursa**	**2.21**	**207**	*e*Pn	**Pn**	**01 34 38.0**	**+1.7**
BORA	**Eskisehir**	**2.46**	**176**	*i* P	**Pn**	**01 34 41.5**	**+1.6**
BORA				*i* S	**Sn**	**01 35 08.8**	**-0.4**
BORA	**Eskisehir**	**2.46**	**176**	*i* P	**Pn**	**01 34 41.5**	**+1.6**
BORA				*i* S	**Sn**	**01 35 08.8**	**-0.4**
TIRR	**Tirgusor**	**2.49**	**329**	⇓*i*P	**Pn**	**01 34 40.9**	**+0.8**
TIRR	**Tirgusor**	**2.49**	**329**	S	**Sn**	**01 35 08.1**	**-1.6**
TIRR	**Tirgusor**	**2.49**	**329**	S	**Sn**	**01 35 08.1**	**-1.6**
BALT	**Daday**	**2.50**	**108**	*i* P	**Pn**	**01 34 41.8**	**+1.3**
BALT	**Daday**	**2.50**	**108**	*i* P	**Pn**	**01 34 41.8**	**+1.3**
KCTX	**Karacabey (Bur**	**2.50**	**215**	*e*PN	**Pn**	**01 34 42.0**	**+1.7**
KCTX	**Karacabey (Bur**	**2.50**	**215**	*e*Pn	**Pn**	**01 34 42.0**	**+1.7**
CVD	**Cernavoda**	**2.53**	**322**	⇓*i*P	**Pn**	**01 34 42.2**	**+1.5**
CVD	**Cernavoda**	**2.53**	**322**	⇓*i*P	**Pn**	**01 34 42.2**	**+1.5**
CVD				S	**Sn**	**01 35 10.4**	**-0.4**
EDRB	**Edirne**	**2.63**	**260**	*e*PN	**Pn**	**01 34 42.9**	**+0.9**
EDRB	**Edirne**	**2.63**	**260**	*e*Pn	**Pn**	**01 34 42.9**	**+0.9**
MFT	**Murefte**	**2.69**	**236**	*e*PN	**Pn**	**01 34 44.6**	**+1.6**
MFT	**Murefte**	**2.69**	**236**	*e*Pn	**Pn**	**01 34 44.6**	**+1.6**
RKY	**Sarkoy-Tekirda**	**2.81**	**235**	*e*PN	**Pn**	**01 34 46.2**	**+1.5**
RKY	**Sarkoy-Tekirda**	**2.81**	**235**	*e*Pn	**Pn**	**01 34 46.2**	**+1.5**
SEYT	**Eskypehyr**	**2.86**	**170**	*i* P	**Pn**	**01 34 47.3**	**+2.0**
SEYT				*i* S	**Sn**	**01 35 17.4**	**-1.6**
SEYT	**Eskypehyr**	**2.86**	**170**	*i* P	**Pn**	**01 34 47.3**	**+2.0**
SEYT				*i* S	**Sn**	**01 35 17.4**	**-1.6**
HARR	**Harsova**	**2.88**	**326**	⇑*i*P	**Pn**	**01 34 46.1**	**+0.7**
KRBG	**Karabiga-Canak**	**2.93**	**229**	*e*PN	**Pn**	**01 34 47.9**	**+1.7**
KRBG	**Karabiga-Canak**	**2.93**	**229**	*e*Pn	**Pn**	**01 34 47.9**	**+1.7**
TVSB	**Tavsanli**	**2.94**	**191**	*e*PN	**Pn**	**01 34 48.2**	**+1.7**
TVSB	**Tavsanli**	**2.94**	**191**	*e*Pn	**Pn**	**01 34 48.2**	**+1.7**
GONE	**Gonen-Balikesi**	**2.98**	**221**	*e*PN	**Pn**	**01 34 48.7**	**+1.8**
GONE	**Gonen-Balikesi**	**2.98**	**221**	*e*Pn	**Pn**	**01 34 48.7**	**+1.8**
TLCR		**3.02**	**341**	⇑*i*P	**Pn**	**01 34 48.6**	**+1.2**
TLCR		**3.02**	**341**	S	**Sn**	**01 35 20.6**	**-2.1**
TLCR		**3.02**	**341**	S	**Sn**	**01 35 20.6**	**-2.1**
DURS	**Dursunbey**	**3.04**	**206**	*i* P	**Pn**	**01 34 48.9**	**+1.2**
DURS				*i* S	**Sn**	**01 35 22.4**	**-1.0**
DURS	**Dursunbey**	**3.04**	**206**	*i* P	**Pn**	**01 34 48.9**	**+1.2**
DURS				*i* S	**Sn**	**01 35 22.4**	**-1.0**
CFR	**Carcaliu**	**3.21**	**333**	⇑*i*P	**Pn**	**01 34 50.4**	**+0.4**
CFR	**Carcaliu**	**3.21**	**333**	S	**Sn**	**01 35 26.2**	**-1.2**
CFR	**Carcaliu**	**3.21**	**333**	S	**Sn**	**01 35 26.2**	**-1.2**
GDZ	**Gediz**	**3.30**	**190**	*i* P	**Pn**	**01 34 52.6**	**+1.3**
GDZ				*i* S	**Sn**	**01 35 28.7**	**-1.1**
GDZ	**Gediz**	**3.30**	**190**	*i* P	**Pn**	**01 34 52.6**	**+1.3**
ISR	**Istrita**	**3.84**	**317**	⇑*i*P	**Pn**	**01 35 01.1**	**+2.3**
ISR	**Istrita**	**3.84**	**317**	⇑*i*P	**Pn**	**01 35 01.1**	**+2.3**
ISR				S	**Sn**	**01 35 42.0**	**-1.2**
KDHN	**Kadinhani**	**4.08**	**159**	*i* P	**Pn**	**01 35 03.3**	**+1.2**
KDHN				*i* S	**Sn**	**01 35 45.8**	**-3.4**
KDHN	**Kadinhani**	**4.08**	**159**	*i* P	**Pn**	**01 35 03.3**	**+1.2**
KDHN				*i* S	**Sn**	**01 35 45.8**	**-3.4**
VRI	**Vrincioaia**	**4.33**	**326**	⇑*i*P	**Pn**	**01 35 07.4**	**+2.0**
VRI	**Vrincioaia**	**4.33**	**326**	⇑*i*P	**Pn**	**01 35 07.4**	**+2.0**
PLOR	**Plostina**	**4.35**	**325**	⇑*i*P	**Pn**	**01 35 07.8**	**+2.1**
PLOR	**Plostina**	**4.35**	**325**	⇑*i*P	**Pn**	**01 35 07.8**	**+2.1**
MLR	**Muntele Rosu**	**4.41**	**317**	⇑*i*P	**Pn**	**01 35 08.5**	**+1.9**
MLR	**Muntele Rosu**	**4.41**	**317**	⇑*i*P	**Pn**	**01 35 08.5**	**+1.9**
MLR				S	**Sn**	**01 35 57.1**	**-0.1**
VOIR		**4.85**	**311**	⇑*i*P	**Pn**	**01 35 14.1**	**+1.5**
VOIR		**4.85**	**311**	S	**Sn**	**01 36 08.3**	**+0.3**
VOIR		**4.85**	**311**	⇑*i*P	**Pn**	**01 35 14.1**	**+1.5**
LOT	**Lotru**	**5.59**	**306**	⇓*i*P	**Pn**	**01 35 24.7**	**+1.8**
LOT	**Lotru**	**5.59**	**306**	⇓*i*P	**Pn**	**01 35 24.7**	**+1.8**
LOT				S	**Sn**	**01 36 25.1**	**-1.4**

*ISCJB **26** 01:49:39.1±1.2, 35°.66N±0°.04×37°.14E±0°.05, h8km±9km, Error ellipse: s-maj=7.4km s-min=6.4km az=14.7*

*CSEM **26** 01:49:39.8±0.2, 35°.66N×37°.11E, h10km, MD3.4, Error ellipse: s-maj=5.2km s-min=4.3km az=132.0*

*ISK **26** 01:49:40.8, 35°.81N×37°.11E, h11km, MD3.4*

*DDA **26** 01:49:41.2, 35°.84N×37°.15E, h4km, MD3.3*

ISC 26 01:49:41.3±3.7, 35°.69N±0°.05×37°.06E±0°.05, h18km±26km, n43, σ0§84/53, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YAYL	**Yayladag**	**0.84**	**295**	*i* P	**Pb**	**01 49 57.3**	**-0.2**
YAYL				*i* S	**Sb**	**01 50 10.5**	**+1.9**
YAYL	**Yayladag**	**0.84**	**295**	*i* P	**Pb**	**01 49 57.3**	**-0.2**
YAYL				*i* S	**Sb**	**01 50 10.5**	**+1.9**
HTY	**Hatay**	**0.86**	**300**	*e*PG	**Pb**	**01 49 57.0**	**-0.8**
HTY				*e*SG	**Sb**	**01 50 10.1**	**+1.1**
HTY	**Hatay**	**0.86**	**300**	*e*Pg	**Pb**	**01 49 57.0**	**-0.8**
HTY				*e*Sg	**Sb**	**01 50 10.1**	**+1.1**
COBT	**Iskenderun**	**1.05**	**322**	*i* P	**Pb**	**01 50 01.0**	**-0.2**
COBT				*i* S	**Sb**	**01 50 14.5**	**-0.3**
COBT	**Iskenderun**	**1.05**	**322**	*i* P	**Pb**	**01 50 01.0**	**-0.2**
COBT				*i* S	**Sb**	**01 50 14.5**	**-0.3**
KUZU	**Kuzuini**	**1.08**	**1**	*i* P	Pn	01 50 00.2	-1.5
KUZU				*i* S	**Sb**	**01 50 15.8**	**+0.3**
KUZU	**Kuzuini**	**1.08**	**1**	*i* P	Pn	01 50 00.2	-1.5
KUZU				*i* S	**Sb**	**01 50 15.8**	**+0.3**
GAZ	**Gaziantep**	**1.49**	**5**	*e*PN	**Pn**	**01 50 06.8**	**-0.5**
GAZ				*e*SN	**Sn**	**01 50 24.8**	**-1.5**
GAZ	**Gaziantep**	**1.49**	**5**	*e*Pn	**Pn**	**01 50 06.8**	**-0.5**
GAZ				*e*Sn	**Sn**	**01 50 24.8**	**-1.5**
FKH	**Fakeheh**	**1.53**	**200**	*e*P	Pn	01 50 06.3	-1.6
FKH	**Fakeheh**	**1.53**	**200**	*e*P	Pn	01 50 06.3	-1.6
KRTS	**Karatas**	**1.62**	**304**	*e*PN	**Pn**	**01 50 10.2**	**+1.2**
KRTS	**Karatas**	**1.62**	**304**	*e*Pn	**Pn**	**01 50 10.2**	**+1.2**
HWQ	**Hawqa**	**1.67**	**213**	*e*P	**Pn**	**01 50 09.1**	**-0.8**
CEYT	**Ceyhan**	**1.69**	**322**	*e*PN	**Pn**	**01 50 10.4**	**+0.4**
CEYT	**Ceyhan**	**1.69**	**322**	*e*Pn	**Pn**	**01 50 10.4**	**+0.4**
GZT	**Gaziantep**	**1.71**	**14**	*i* P	**Pn**	**01 50 10.4**	**0.0**
GZT				*i* S	**Sn**	**01 50 31.9**	**-0.1**
AYKD	**Aykdinkavak**	**1.74**	**353**	*i* P	**Pn**	**01 50 09.8**	**-0.9**
AYKD				*i* S	**Sn**	**01 50 32.3**	**-0.1**
KMRS	**Kahramanmaras**	**1.82**	**356**	*e*PN	**Pn**	**01 50 12.0**	**+0.2**
KMRS	**Kahramanmaras**	**1.82**	**356**	*e*Pn	**Pn**	**01 50 12.0**	**+0.2**
ATAB	**Bozova**	**2.04**	**29**	*i* P	**Pn**	**01 50 17.3**	**+2.5**
ATAB				*i* S	**Sn**	**01 50 40.1**	**+0.2**
ATAB	**Bozova**	**2.04**	**29**	*i* P	**Pn**	**01 50 17.3**	**+2.5**
ATAB				*i* S	**Sn**	**01 50 40.1**	**+0.2**
KOZT	**Kozan**	**2.05**	**331**	*e*PN	**Pn**	**01 50 14.6**	**-0.3**
KOZT	**Kozan**	**2.05**	**331**	*e*Pn	**Pn**	**01 50 14.6**	**-0.3**
BHL	**Bhannes**	**2.12**	**213**	*e*P	**Pn**	**01 50 15.9**	**-0.1**
BHL	**Bhannes**	**2.12**	**213**	*e*P	**Pn**	**01 50 15.9**	**-0.1**
KARA	**Karaisali**	**2.25**	**315**	*e*PN	**Pn**	**01 50 17.9**	**+0.2**
KARA	**Karaisali**	**2.25**	**315**	*e*Pn	**Pn**	**01 50 17.9**	**+0.2**
AKCD	**Akcadag**	**2.69**	**15**	*i* P	**Pn**	**01 50 24.0**	**+0.1**
AKCD	**Akcadag**	**2.69**	**15**	*i* P	**Pn**	**01 50 24.0**	**+0.1**
MYA	**Malataya**	**2.85**	**22**	*e*PN	**Pn**	**01 50 25.7**	**-0.4**
MYA	**Malataya**	**2.85**	**22**	*e*Pn	**Pn**	**01 50 25.7**	**-0.4**
NIG	**Nigde**	**3.11**	**322**	*e*PN	**Pn**	**01 50 29.3**	**-0.5**
NIG	**Nigde**	**3.11**	**322**	*e*Pn	**Pn**	**01 50 29.3**	**-0.5**
SVRC	**Sivrice-ELAZID**	**3.23**	**33**	*e*PN	**Pn**	**01 50 31.1**	**-0.3**
SVRC	**Sivrice-ELAZID**	**3.23**	**33**	*e*Pn	**Pn**	**01 50 31.1**	**-0.3**
BNN	**Bunyan**	**3.30**	**343**	*e*PN	**Pn**	**01 50 32.0**	**-0.3**
BNN	**Bunyan**	**3.30**	**343**	*e*Pn	**Pn**	**01 50 32.0**	**-0.3**
PTK	**Pertek**	**3.70**	**30**	*e*PN	**Pn**	**01 50 38.4**	**+0.6**
PTK	**Pertek**	**3.70**	**30**	*e*Pn	**Pn**	**01 50 38.4**	**+0.6**
SVSK	**Karacayir**	**4.22**	**359**	*e*PN	**Pn**	**01 50 44.7**	**-0.1**
SVSK	**Karacayir**	**4.22**	**359**	*e*Pn	**Pn**	**01 50 44.7**	**-0.1**

*ISCJB **26** 01:59:56.1±0.5, 49°.71S±0°.08×121°.8E±0°.2, h10km, mb4.2/14, MS3.8/8, Error ellipse: s-maj=22.3km s-min=8.5km az=24.6*

*IDC **26** 01:59:56.3±0.7, 49°.72S×121°.81E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.1/17, mbtmp4.1/10, MS3.8/9, Ms1 3.8/9, ms1mx3.6/18, Error ellipse: s-maj=36.9km s-min=14.4km az=108.0*

*NEIC **26** 01:59:57.8±0.2, 49°.74S×121°.90E, h10km, mb4.5/8, Error ellipse: s-maj=12.1km s-min=4.7km az=115.0*

ISC 26 01:59:57.8±0.5, 49°.74S±0°.10×121°.9E±0°.2, h10km, n49, σ0§44/45, mb4.3/14, MS4.0/8, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**17.15**	**347**	LR	LR	02 09 12.3	
	comp=Z,224nm,19.5s,baz=327,slow=32						
**C

RSO				*e*Sn		**Sn**	02 08 32.3	-1.5
PMR	**Palmer**	**1.39**	**95**	P		**Pn**	02 08 14.5	-0.9
PMR				S		**Sn**	02 08 35.2	+0.6
SLKM	**Skilak Lake**	**1.51**	**144**	P		**Pn**	02 08 17.1	+0.2
HUR	**Hurricane**	**1.67**	**41**	P		**Pn**	02 08 19.0	+0.2
CAST	**Castle Rocks**	**1.69**	**359**	P		**Pn**	02 08 18.5	-0.4
CAST				S		**Sn**	02 08 39.1	-2.1
ILIM	**Iliamna**	**1.72**	**196**	P		**Pn**	02 08 19.1	-0.4
SML	**Sawmill**	**1.76**	**86**	P		**Pn**	02 08 19.0	-0.8
SML				S		**Sn**	02 08 42.1	-0.5
ILW	**Iliamna West**	**1.77**	**198**	P		**Pn**	02 08 20.0	-0.1
IVE	**Iliamna Volcan**	**1.79**	**196**	P		**Pn**	02 08 20.2	-0.1
SVW2	**Sparrevohn**	**1.83**	**251**	P		**Pn**	02 08 19.8	-0.9
SVW2				S		**Sn**	02 08 42.5	-1.7
CHUM	**Lake Minchumin**	**2.16**	**357**	P		**Pn**	02 08 24.6	-0.2
OPT	**Oil Point**	**2.17**	**196**	P		**Pn**	02 08 25.3	+0.2
TT01	**Tatalina**	**2.20**	**304**	P		**Pn**	02 08 24.5	-0.9
RND	**Reindeer**	**2.23**	**40**	P		**Pn**	02 08 25.8	0.0
CNPM	**China Poot**	**2.25**	**170**	P		**Pn**	02 08 24.9	-1.2
AUE	**Augustine Isla**	**2.48**	**196**	P		**Pn**	02 08 28.7	-0.2
AUH	**Augustine H**	**2.48**	**197**	P		**Pn**	02 08 29.3	+0.2
DHY	**Denali Highway**	**2.55**	**56**	P		**Pn**	02 08 29.7	-0.3
BWN	**Browne**	**2.71**	**24**	P		**Pn**	02 08 32.6	+0.6
VLZ	**Valdez**	**2.80**	**100**	P		**Pn**	02 08 31.9	-1.3
VLZ				S		**Sn**	02 09 05.8	-0.7
MCNL	**McNeil River**	**2.81**	**205**	P		**Pn**	02 08 33.6	+0.3
KLU	**Klutina**	**2.93**	**92**	P		**Pn**	02 08 33.7	-1.2
FOSS	**Fourpeaked Sta**	**3.06**	**196**	P		**Pn**	02 08 36.1	-0.6
DIV	**Divide**	**3.07**	**99**	P		**Pn**	02 08 35.3	-1.4
DIV				S		**Sn**	02 09 11.5	-1.4
NEA	**Nenana**	**3.15**	**24**	P		**Pn**	02 08 37.4	-0.4
WRH	**Wood River Hil**	**3.27**	**31**	P		**Pn**	02 08 38.7	-0.8
PAX	**Paxson**	**3.30**	**65**	P		**Pn**	02 08 39.8	0.0
PAX				S		**Sn**	02 09 17.8	-0.6
HARP	**HAARP**	**3.30**	**75**	P		**Pn**	02 08 40.0	+0.1
MLY	**Manley**	**3.36**	**9**	P		**Pn**	02 08 40.6	0.0
CCB	**Clear Creek Bu**	**3.49**	**31**	P		**Pn**	02 08 42.5	+0.2
HDA	**Harding Lake**	**3.54**	**39**	P		**Pn**	02 08 42.4	-0.5
KAWH	**Katmai**	**3.64**	**204**	P		**Pn**	02 08 44.4	0.0
MDM	**Murphy Dome**	**3.66**	**26**	P		**Pn**	02 08 44.0	-0.5
COLA	**College**	**3.67**	**29**	P		**Pn**	02 08 45.0	+0.4
KAKN	**Katmai Knife C**	**3.77**	**205**	P		**Pn**	02 08 46.0	-0.2
IL1	**Eielson Array**	**3.83**	**35**	P		**Pn**	02 08 45.8	-1.0
ILAR	**Eielson Array**	**3.83**	**35**	P		**Pn**	02 08 45.7	-1.2
ILAR				S		**Sn**	02 09 28.6	-2.3
ILAR	**Eielson Array**	**3.83**	**35**	P		**Pn**	02 08 45.7	-1.2
	6.7nm,0.3s,baz=222,slow=14,SNR=144							
ILAR				S		**Sn**	02 09 28.6	-2.3
	6.4nm,0.3s,baz=225,slow=17,SNR=6.2							
KABU	**Katmai Buttres**	**3.84**	**207**	P		**Pn**	02 08 47.5	+0.4
GLM	**Gilmore Dome**	**3.87**	**31**	P		**Pn**	02 08 47.5	+0.1
KDAK	**Kodiak Island**	**3.98**	**184**	P		**Pn**	02 08 47.7	-1.1
KDAK	**Kodiak Island**	**3.98**	**184**	P		**Pn**	02 08 46.4	-2.5
	10nm,0.3s,baz=22,slow=10.0,SNR=40							
KDAK				S		**Sn**	02 09 31.1	-3.4
	5.4nm,0.3s,baz=80,slow=18,SNR=8.7							
MENT	**Mentasta**	**4.06**	**69**	*e*Pn		**Pn**	02 08 49.5	-0.4
VRDI	**Verde Repeater**	**4.14**	**93**	P		**Pn**	02 08 49.7	-1.5
NICHA	**Nichawak Mount**	**4.20**	**107**	P		**Pn**	02 08 50.7	-1.2
BERG	**Berg Lake**	**4.26**	**105**	P		**Pn**	02 08 53.3	+0.6
MCARA	**McCarthy VSAT**	**4.32**	**91**	P		**Pn**	02 08 53.2	-0.3
IM3	**Indian Mountai**	**4.33**	**351**	P		**Pn**	02 08 52.9	-0.6
KHIT	**Khitrov Hills**	**4.45**	**103**	P		**Pn**	02 08 55.3	0.0
OHAK	**Old Harbor**	**4.58**	**189**	P		**Pn**	02 08 55.1	-1.7
PTPK	**Patty Peak**	**4.62**	**93**	P		**Pn**	02 08 56.9	-0.7
BALM	**Baldy**	**4.71**	**94**	P		**Pn**	02 08 58.6	-0.2
KIAG	**Kiagna River**	**4.73**	**96**	P		**Pn**	02 08 58.6	-0.5
KULT	**Kultieth River**	**4.77**	**104**	P		**Pn**	02 08 58.6	-1.0
BARK	**Barkley Ridge**	**4.82**	**102**	P		**Pn**	02 08 59.2	-1.0
BCA3	**Beaver Creek A**	**4.95**	**70**	P		**Pn**	02 09 01.6	-0.3
BARN	**Barnard Glacie**	**5.03**	**93**	P		**Pn**	02 09 03.5	+0.3
GRNC	**Granite Creek**	**5.06**	**97**	P		**Pn**	02 09 03.4	-0.3
MESA	**MESA**	**5.15**	**103**	P		**Pn**	02 09 04.1	-0.7
COLD	**Coldfoot**	**5.57**	**7**	P		**Pn**	02 09 10.2	0.0
SAMH	**Samovar Hills**	**5.71**	**101**	P		**Pn**	02 09 12.0	-0.4
EGAK	**Eagle**	**5.78**	**53**	*e*Pn		**Pn**	02 09 12.5	-0.5
	16nm,0.5s							
DAWY	**Dawson**	**6.23**	**62**	P		**Pn**	02 09 19.0	-0.2
CHGN	**Chignik**	**6.37**	**214**	*e*Pn		**Pn**	02 09 20.2	-0.9
BM3	**Burnt Mountain**	**6.53**	**26**	P		**Pn**	02 09 22.6	-0.7
PNL	**Peninsula**	**6.54**	**103**	P		**Pn**	02 09 22.6	-0.8
YKA	**Yellowknife Ar**	**17.36**	**71**	P		**P**	02 11 45.3	+0.7
YKA	**Yellowknife Ar**	**17.36**	**71**	P		**P**	02 11 45.3	+0.7
	0.3nm,0.3s,baz=285,slow=12,SNR=3.5							
KSRS	**Korea Array**	**53.27**	**282**	P		**P**	02 16 57.0	+0.2
	0.7nm,0.3s,baz=57,slow=9.0,SNR=3.9							
KSAR	**Wonju Array Be**	**53.30**	**282**	P		**P**	02 16 57.0	0.0
SONM	**Songino Array**	**54.16**	**305**	P		**P**	02 17 04.1	+0.7
SONM	**Songino Array**	**54.16**	**305**	P		**P**	02 17 04.1	+0.7
	1.4nm,0.8s,baz=26,slow=6.2,SNR=8.5							
ZALV	**Zalesovo Beam**	**56.26**	**323**	P		**P**	02 17 17.5	-0.6
ZALV	**Zalesovo Beam**	**56.26**	**323**	P		**P**	02 17 17.5	-0.6
	1.4nm,0.5s,baz=34,slow=7.7,SNR=5.9							
BVAR	**Borovoye Array**	**60.75**	**332**	P		**P**	02 17 49.0	-0.3
BVAR	**Borovoye Array**	**60.75**	**332**	P		**P**	02 17 49.0	-0.3
	1.0nm,0.8s,baz=58,slow=14,SNR=3.7							
KURK	**Kurchatov**	**60.86**	**326**	P		**P**	02 17 50.1	0.0
KURBB	**Kurchatov Arra**	**60.97**	**326**	P		**P**	02 17 50.1	-0.7
	0.6nm,0.4s,baz=29,slow=6.7,SNR=5.4							
MKAR	**Makanchi Array**	**63.37**	**321**	P		**P**	02 18 05.8	-1.1
MKAR	**Makanchi Array**	**63.37**	**321**	P		**P**	02 18 05.8	-1.1
	0.4nm,0.6s,baz=44,slow=5.7,SNR=6.2							
BRTR	**Keskin Array B**	**78.78**	**356**	P		**P**	02 19 42.4	+2.3
BRTR	**Keskin Array B**	**78.78**	**356**	P		**P**	02 19 42.4	+2.3
	0.3nm,0.7s,baz=334,slow=5.3,SNR=2.3							

*CSEM **26** 02:14:21.9, 42°.46N×13°.35E, h11km, After ROM*
ROM 26 02:14:21.9±0.1, **42°.46N×13°.35E, h11km, MI2.6/13, Error ellipse: s-maj=0.9km s-min=0.3km az=37.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.09**	**30**	Pg	Pg	02 14 24.9	+0.2
CAMP				Sg	Sg	02 14 26.9	+0.2
	2µm,0.3s						
CAMP	**Campotosto**	**0.09**	**30**	Pg	Pg	02 14 24.9	+0.2
CAMP				Sg	Sg	02 14 26.9	+0.2
	2µm,0.3s						
AQU	**L'Aquila**	**0.11**	**160**	Pg	Pg	02 14 25.2	+0.3
AQU				Sg	Sg	02 14 27.5	+0.5
	2µm,0.3s						
AQU	**L'Aquila**	**0.11**	**160**	Pg	Pg	02 14 25.2	+0.3
AQU				Sg	Sg	02 14 27.5	+0.5
	2µm,0.3s						
TERO	**Teramo**	**0.25**	**49**	Pg	Pg	02 14 27.1	-0.1
TERO				Sg	Sg	02 14 30.9	+0.2
	572nm,0.3s						
TERO	**Teramo**	**0.25**	**49**	Pg	Pg	02 14 27.1	-0.1
TERO				Sg	Sg	02 14 30.9	+0.2
	572nm,0.3s						
FIAM	**Fiamignano**	**0.26**	**222**	Pg	Pg	02 14 27.8	+0.4
FIAM				Sg	Sg	02 14 31.9	+0.9
	232nm,0.4s						
FIAM	**Fiamignano**	**0.26**	**222**	Pg	Pg	02 14 27.8	+0.4
FIAM				Sg	Sg	02 14 31.9	+0.9
	232nm,0.4s						
LNSS	**Leonessa**	**0.27**	**302**	Pg	Pg	02 14 27.9	+0.3
LNSS				Sg	Sg	02 14 32.5	+1.1
	531nm,0.2s						
LNSS	**Leonessa**	**0.27**	**302**	Pg	Pg	02 14 27.9	+0.3
LNSS				Sg	Sg	02 14 32.5	+1.1
	531nm,0.2s						
VCEL	**Villa Celiera**	**0.37**	**100**	Pg	Pg	02 14 29.5	0.0
VCEL				Sg	Sb	02 14 36.3	-0.3
	813nm,0.6s						
VCEL	**Villa Celiera**	**0.37**	**100**	Pg	Pg	02 14 29.5	0.0
VCEL				Sg	Sb	02 14 36.3	-0.3
	813nm,0.6s						
NRCA	**Norcia**	**0.41**	**335**	Pg	Pg	02 14 30.1	-0.1
NRCA				Sg	Sg	02 14 36.6	+0.8
	754nm,0.1s						
NRCA	**Norcia**	**0.41**	**335**	Pg	Pg	02 14 30.1	-0.1
NRCA				Sg	Sg	02 14 36.6	+0.8
	754nm,0.1s						
PTQR	**Pietraquaria**	**0.44**	**175**	Pg	Pg	02 14 30.7	0.0
	25nm,0.2s						
PTQR	**Pietraquaria**	**0.44**	**175**	Pg	Pg	02 14 30.7	0.0
	25nm,0.2s						
MNS	**Montasola**	**0.50**	**262**	Pg	Pg	02 14 31.7	-0.1
MNS				Sg	Sg	02 14 39.3	+0.8
	106nm,0.4s						
MNS	**Montasola**	**0.50**	**262**	Pg	Pg	02 14 31.7	-0.1
MNS				Sg	Sg	02 14 39.3	+0.8
	106nm,0.4s						
OFFI	**Offida**	**0.54**	**27**	Pg	Pb	02 14 33.1	-0.3
	325nm,0.5s						
OFFI	**Offida**	**0.54**	**27**	Pg	Pb	02 14 33.1	-0.3
	325nm,0.5s						
TRTR	**Tortoreto Alta**	**0.54**	**50**	Pg	Pb	02 14 33.2	-0.2
TRTR	**Tortoreto Alta**	**0.54**	**50**	Pg	Pb	02 14 33.2	-0.2
CERT	**Cerreto**	**0.58**	**208**	Pg	Pg	02 14 33.4	+0.1
	262nm,0.5s						
CERT	**Cerreto**	**0.58**	**208**	Pg	Pg	02 14 33.4	+0.1
	262nm,0.5s						
CESX	**Cesi**	**0.59**	**285**	Pg	Pg	02 14 33.1	-0.3
	68nm,0.3s						
CESX	**Cesi**	**0.59**	**285**	Pg	Pg	02 14 33.1	-0.3
	68nm,0.3s						
FDMO	**Fiordimonte**	**0.61**	**342**	Pg	Pg	02 14 33.5	-0.3
	383nm,0.2s						
FDMO	**Fiordimonte**	**0.61**	**342**	Pg	Pg	02 14 33.5	-0.3
	383nm,0.2s						
INTR	**Introdacqua**	**0.61**	**137**	Pg	Pg	02 14 33.4	-0.5
INTR	**Introdacqua**	**0.61**	**137**	Pg	Pg	02 14 33.4	-0.5
VVLD	**Villa Vallelon**	**0.62**	**161**	Pg	Pb	02 14 34.7	-0.2
VVLD	**Villa Vallelon**	**0.62**	**161**	Pg	Pb	02 14 34.7	-0.2
CESI	**CESI - Serrava**	**0.64**	**329**	Pg	Pg	02 14 34.1	-0.3
CESI	**CESI - Serrava**	**0.64**	**329**	Pg	Pg	02 14 34.1	-0.3
GUAR	**Guarcino**	**0.67**	**182**	Pg	Pb	02 14 35.8	+0.2
GUAR	**Guarcino**	**0.67**	**182**	Pg	Pb	02 14 35.8	+0.2
GUMA	**Gualdo di Mace**	**0.74**	**35**	Pg	Pg	02 14 33.7	-2.6
	960nm,0.3s						
GUMA	**Gualdo di Mace**	**0.74**	**35**	Pg	Pg	02 14 33.7	-2.6
	960nm,0.3s						
LPEL	**Lama dei Pelig**	**0.74**	**123**	Pg	Pg	02 14 35.4	-1.0
LPEL	**Lama dei Pelig**	**0.74**	**123**	Pg	Pg	02 14 35.4	-1.0
ASSB	**Assisi San Ben**	**0.77**	**319**	Pg	Pg	02 14 36.5	-0.5
ASSB	**Assisi San Ben**	**0.77**	**319**	Pg	Pg	02 14 36.5	-0.5
CAFR	**Castel Frentan**	**0.78**	**107**	Pg	Pg	02 14 36.6	-0.3
CAFR	**Castel Frentan**	**0.78**	**107**	Pg	Pg	02 14 36.6	-0.3
POFI	**Posta Fibreno**	**0.79**	**160**	Pg	Pg	02 14 37.0	-0.3
POFI	**Posta Fibreno**	**0.79**	**160**	Pg	Pg	02 14 37.0	-0.3
SDI	**San Donato**	**0.82**	**155**	Pg	Pg	02 14 37.3	-0.6
SDI	**San Donato**	**0.82**	**155**	Pg	Pg	02 14 37.3	-0.6
MIDA	**Miranda**	**1.06**	**140**	Pg	Pb	02 14 41.1	-1.3
MIDA	**Miranda**	**1.06**	**140**	Pg	Pb	02 14 41.1	-1.3

*CSEM **26** 02:14:43.1, 43°.26N×13°.08E, h7km, After ROM*
ROM 26 02:14:43.1±0.1, **43°.26N×13°.08E, h7km, MI2.5/12, 4C, Error ellipse: s-maj=1.0km s-min=0.8km az=93.0, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNTG	**Esanatoglia**	**0.10**	**267**	*i*Pg	Pg	02 14 46.2	+0.7
SNTG				Sg	Sg	02 14 48.4	+1.2
SNTG	**Esanatoglia**	**0.10**	**267**	*i*Pg	Pg	02 14 46.2	+0.7
SNTG				Sg	Sg	02 14 48.4	+1.2
CING	**Cingoli**	**0.14**	**36**	Pg	Pg	02 14 46.6	+0.4
CING				Sg	Sg	02 14 49.2	+0.9
	2µm,0.1s						
CING	**Cingoli**	**0.14**	**36**	Pg	Pg	02 14 46.6	+0.4
CING				Sg	Sg	02 14 49.2	+0.9
	2µm,0.1s						
FDMO	**Fiordimonte**	**0.22**	**179**	Pg	Pg	02 14 48.1	+0.5
FDMO				Sg	Sg	02 14 51.8	+1.1
	383nm,0.2s						
FDMO	**Fiordimonte**	**0.22**	**179**	Pg	Pg	02 14 48.1	+0.5
FDMO				Sg	Sg	02 14 51.8	+1.1
	383nm,0.2s						
ARVD	**Arcevia**	**0.26**	**337**	Pg	Pg	02 14 48.8	+0.5
ARVD				Sg	Sb	02 14 53.4	-1.5
	133nm,0.1s						
ARVD	**Arcevia**	**0.26**	**337**	Pg	Pg	02 14 48.8	+0.5
ARVD				Sg	Sb	02 14 53.4	-1.5
	133nm,0.1s						
CESI	**CESI - Serrava**	**0.29**	**207**	*i*Pg	Pg	02 14 49.5	+0.6
CESI				Sg	Sb	02 14 54.5	-1.2
	296nm,0.3s						
CESI	**CESI - Serrava**	**0.29**	**207**	*i*Pg	Pg	02 14 49.5	+0.6
CESI				Sg	Sb	02 14 54.5	-1.2
	296nm,0.3s						
ASSB	**Assisi San Ben**	**0.38**	**235**	Pg	Pg	02 14 51.1	+0.5
ASSB				Sg	Sb	02 14 57.3	-1.0
ASSB	**Assisi San Ben**	**0.38**	**235**	Pg	Pg	02 14 51.1	+0.5
ASSB				Sg	Sb	02 14 57.3	-1.0
MURB	**Monte Urbino**	**0.41**	**271**	Pg	Pg	02 14 51.8	+0.7
MURB				Sg	Sb	02 14 59.1	-0.1
	618nm,0.2s						
MURB	**Monte Urbino**	**0.41**	**271**	Pg	Pg	02 14 51.8	+0.7
MURB				Sg	Sb	02 14 59.1	-0.1
	618nm,0.2s						
NRCA	**Norcia**	**0.43**	**177**	Pg	Pg	02 14 52.0	+0.5
NRCA				Sg	Sb	02 14 58.9	-0.9
	754nm,0.1s						
NRCA	**Norcia**	**0.43**	**177**	Pg	Pg	02 14 52.0	+0.5
NRCA				Sg	Sb	02 14 58.9	-0.9
	754nm,0.1s						
AOI	**Ancona**	**0.48**	**52**	Pg	Pg	02 14 52.8	+0.4
AOI				Sg	Sb	02 15 00.8	-0.4
	169nm,0.2s						
AOI	**Ancona**	**0.48**	**52**	Pg	Pg	02 14 52.8	+0.4
AOI				Sg	Sb	02 15 00.8	-0.4
	169nm,0.2s						
PIEI	**Pieia**	**0.48**	**305**	Pg	Pg	02 14 52.8	+0.2
PIEI				Sg	Sb	02 15 00.9	-0.5
	163nm,0.2s						
PIEI	**Pieia**	**0.48**	**305**	Pg	Pg	02 14 52.8	+0.2
PIEI				Sg	Sb	02 15 00.9	-0.5
	163nm,0.2s						
OFFI	**Offida**	**0.55**	**126**	Pg	Pb	02 14 55.2	+0.1
	325nm,0.5s						
OFFI	**Offida**	**0.55**	**126**	Pg	Pb	02 14 55.2	+0.1
	325nm,0.5s						
GUMA	**Gualdo di Mace**	**0.66**	**107**	Pg	Pg	02 14 49.2	-6.6
GUMA				Sg	Sg	02 14 54.1	-10
	960nm,0.3s						
GUMA	**Gualdo di Mace**	**0.66**	**107**	Pg	Pg	02 14 49.2	-6.6
GUMA				Sg	Sg	02 14 54.1	-10
	960nm,0.3s						
BADI	**Badiali**	**0.66**	**293**	Pg	Pg	02 14 56.2	+0.3
BADI	**Badiali**	**0.66**	**293**	Pg	Pg	02 14 56.2	+0.3
PARC	**Parchiule**	**0.73**	**303**	Pg	Pg	02 14 57.3	+0.1
PARC	**Parchiule**	**0.73**	**303**	Pg	Pg	02 14 57.3	+0.1
TERO	**Teramo**	**0.74**	**149**	Pg	Pg	02 14 57.5	0.0
TERO				Sg	Sb	02 15 09.5	+0.7
	572nm,0.3s						
TERO	**Teramo**	**0.74**	**149**	Pg	Pg	02 14 57.5	0.0
TERO				Sg	Sb	02 15 09.5	+0.7
	572nm,0.3s						
CESX	**Cesi**	**0.75**	**210**	Pg	Pg	02 14 57.3	-0.2
CESX				Sg	Sb	02 15 09.1	+0.3
	68nm,0.3s						
CESX	**Cesi**	**0.75**	**210**	Pg	Pg	02 14 57.3	-0.2
CESX				Sg	Sb	02 15 09.1	+0.3
	68nm,0.3s						

*IDC **26** 02:18:28.9±2.0, 37°.71N×71°.80E, h0km, mb3.6/4, mb1 3.7/9, mb1mx3.5/32, mbtmpb3.6/9, ML3.4/5, MS3.1/1, Ms1 3.2/1, ms1mx2.3/35, Error ellipse: s-maj=37.4km s-min=17.6km az=135.0*
*NNC **26** 02:18:33.8±2.5, 38°.14N×71°.06E, h10km±11km, mb3.8, mpv3.4, Error ellipse: s-maj=18.2km s-min=13.3km az=9.0*
ISC 26 02:18:30.9±1.3, **37°.8N**±0.1×**71°.41E**±0.08, **h10km, n15, σ2s39/21, mb3.5/4, 7C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	**Kashi**	**3.94**	**64**	Pn	**Pn**	**02 19 30.5**	**-1.1**
KSH				Sn	**Sn**	**02 20 12.8**	**-5.2**
KSH				smax	smax		
	comp=N,110nm,0.8s						
KSH				smax	smax		
	comp=E,100nm,0.9s						
KK31	**Karatay Array**	**5.30**	**353**	Pn	**Pn**	**02 19 49.6**	**-0.6**
	comp=E,1.0nm,0.3s,baz=188,slow=16,SNR=54						
KK31				⇑Pg	**Pb**	**02 20 05.5**	**+1.8**
	comp=E,2.4nm,0.4s						
KK31				⇑Sn	**Sn**	**02 20 46.9**	**-4.4**
	comp=E,4.1nm,0.5s,baz=170,slow=18,SNR=3.9						
KK31				⇑Lg	Lg	02 21 09.8	
	comp=E,10.0nm,0.6s						

AAK	**Ala-Archa**	**5.34**	**25**	Pn		**Pn**	**02 19 52.8**	**+1.9**
	comp=E,1.1nm,0.3s,baz=180,slow=7.1,SNR=3.5							
AAK				Pg		**Pb**	**02 20 06.6**	**+2.2**
	comp=E,2.3nm,0.3s,baz=203,slow=7.0,SNR=13							
AAK				Sn		**Sn**	**02 20 54.8**	**+2.4**
	comp=E,0.8nm,0.3s,baz=328,slow=21,SNR=3.9							
AAK				Lg		Lg	02 21 18.4	
	comp=E,0.8nm,0.3s,baz=231,slow=21,SNR=4.6							
TKM2	**Tokmak 2**	**6.00**	**31**	⇑Pn		**Pn**	**02 20 01.6**	**+1.6**
	comp=E,5.4nm,0.8s							
TKM2				⇓Sn		**Sn**	**02 21 10.7**	**+1.9**
	comp=E,8.1nm,1.1s							
TKM2				⇑Lg		Lg	02 21 41.0	
	comp=E,16nm,1.4s							
MK31	**Makanchi Array**	**12.03**	**39**	⇑P		**Pn**	**02 21 22.8**	**+0.5**
	comp=E,1.8nm,0.8s,baz=234,slow=12,SNR=12							
MKAR	**Makanchi Array**	**12.03**	**39**	Pn		**Pn**	**02 21 21.8**	**-0.5**
	comp=E,0.1nm,0.3s,baz=224,slow=10,SNR=15							
AB31	**Akbulak array**	**14.10**	**328**	⇑P		**Pn**	**02 21 48.4**	**-2.1**
	comp=E,0.7nm,0.6s,baz=143,slow=13,SNR=11							
AB31				⇓S		**Sn**	**02 24 23.0**	**-4.0**
	comp=E,1.4nm,0.7s,baz=147,slow=22,SNR=3.9							
BVAR	**Borovoye Array**	**15.20**	**358**	Pn		**Pn**	**02 22 04.3**	**-1.2**
	comp=E,0.2nm,0.3s,baz=143,slow=11,SNR=2.6							
AKTO	**Aktyubinsk**	**15.81**	**327**	⇓P		Pn	02 22 08.4	-5.1
	comp=E,2.6nm,0.8s							
AKTO	**Aktyubinsk**	**15.81**	**327**	Pn		**Pn**	**02 22 14.3**	**+0.9**
	comp=E,0.1nm,0.3s,baz=128,slow=12,SNR=3.3							
ZALV	**Zalesovo Beam**	**18.56**	**26**	P		**P**	**02 22 46.3**	**-1.5**
	comp=E,0.2nm,0.3s,baz=215,slow=10.0,SNR=5.2							
FINES	**FINESS Array B**	**36.56**	**325**	P		**P**	**02 25 36.5**	**-0.1**
	comp=E,1.0nm,0.8s,baz=100,slow=8.3,SNR=7.3							
ARCES	**ARCESS Array B**	**40.04**	**337**	P		**P**	**02 26 07.3**	**+1.5**
	comp=E,2.2nm,0.7s,baz=116,slow=11,SNR=6.9							
ARCES				LR		LR	02 43 26.1	
	comp=E,28nm,19.9s,baz=79,slow=37							
TORD	**Torodi Ar. Bea**	**66.08**	**268**	P		**P**	**02 29 19.8**	**+1.4**
	comp=E,0.2nm,0.7s,baz=44,slow=6.4,SNR=4.3							
ILAR	**Eielson Array**	**73.40**	**16**	P		**P**	**02 30 03.5**	**+0.8**
	comp=E,0.2nm,0.7s,baz=331,slow=7.2,SNR=3.6							

*SOF **26** 02:26:27.6, 41°.47N×24°.92E, h10km, MD3.1*
*ATH **26** 02:26:27.7, 41°.49N×24°.91E, h26km±2km, MD3.4/9*
*CSEM **26** 02:26:28.4±0.1, 41°.48N×24°.92E, h2km, MD3.1, Error ellipse: s-maj=3.1km s-min=2.2km az=10.0*
*THE **26** 02:26:28.6, 41°.44N×24°.91E, h2km±1km, ML3.0/8, Error ellipse: s-maj=1.3km s-min=0.7km az=137.0*
*BEO **26** 02:26:28.3±0.7, 41°.35N×25°.02E, h0km, ML3.0/8*
*ISK **26** 02:26:30.4, 41°.53N×25°.23E, h3km, MD3.8*
ISC 26 02:26:27.4±1.0, **41°.48N±0°.02×24°.92E±0°.01, h8km±9km, n136, σ16s31/175, 5C-3D, Greece-Bulgaria border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RZN	**Rozhen**	**0.26**	**324**	Pg	**Pb**	**02 26 33.6**	**-0.9**
RZN	**Rozhen**	**0.26**	**324**	Pg	**Pb**	**02 26 33.6**	**-0.9**
KDZ	**Kurdzhali**	**0.41**	**65**	Pg	**Pg**	**02 26 35.2**	**-0.3**
KDZ	**Kurdzhali**	**0.41**	**65**	Pg	**Pg**	**02 26 35.2**	**-0.3**
KAVA	**Kavala**	**0.57**	**213**	P	**Pb**	**02 26 39.4**	**-0.2**
KAVA				S	**Sb**	**02 26 47.0**	**-0.8**
KAVA	**Kavala**	**0.57**	**213**	P	**Pb**	**02 26 39.4**	**-0.2**
KAVA				S	**Sb**	**02 26 47.0**	**-0.8**
RDO	**Rodhopi**	**0.57**	**125**	P	**Pb**	**02 26 39.5**	**-0.1**
RDO	**Rodhopi**	**0.57**	**125**	*e*PN	**Pb**	**02 26 39.5**	**-0.1**
RDO	**Rodhopi**	**0.57**	**125**	P	**Pb**	**02 26 39.5**	**-0.1**
PLD	**Plovdiv**	**0.65**	**346**	P	**Pb**	**02 26 41.1**	**+0.1**
PLD	**Plovdiv**	**0.65**	**346**	P

PAIG	**Paliouri**	**1.81**	**212**	P	**Pn**	02 26 58.8	**-0.1**
PAIG				S	**Sb**	02 27 23.9	**+0.3**
PAIG	**Paliouri**	**1.81**	**212**	*e*PB	**Pn**	02 26 58.8	**-0.1**
RKY	**Sarkoy-Tekirda**	**1.88**	**114**	*e*PN	**Pb**	02 27 02.1	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.88**	**114**	*e*Pn	**Pb**	02 27 02.1	**+0.1**
MFT	**Murefte**	**1.91**	**110**	*e*Pn	**Pb**	02 27 02.6	**0.0**
MFT	**Murefte**	**1.91**	**110**	*e*Pn	**Pb**	02 27 02.6	**0.0**
GRG	**Griva**	**1.97**	**255**	P	**Pb**	02 27 02.6	**-0.9**
GRG	**Griva**	**1.97**	**255**	*e*PN	**Pb**	02 27 02.7	**-0.8**
GRG	**Griva**	**1.97**	**255**	*e*Pn	**Pb**	02 27 02.7	**-0.8**
TKR	**Tekirdag**	**2.03**	**103**	*e*PN	**Pb**	02 27 03.7	**-0.9**
TKR	**Tekirdag**	**2.03**	**103**	*e*Pn	**Pb**	02 27 03.7	**-0.9**
MPEP	**Malo Peshtene**	**2.07**	**335**	P	**Pg**	02 27 06.7	**-0.4**
KRBG	**Karabiga-Canak**	**2.10**	**120**	*e*PN	**Pb**	02 27 05.2	**-0.6**
KRBG	**Karabiga-Canak**	**2.10**	**120**	*e*Pn	**Pb**	02 27 05.2	**-0.6**
ZIMR		**2.20**	**8**	‖*i*P	**Pg**	02 27 10.2	**+0.6**
AOS	**Alonnisos**	**2.44**	**199**	*e*PN	**Pn**	02 27 07.3	**-0.2**
PRK	**Paraskevi**	**2.46**	**155**	P	**Pn**	02 27 08.6	**+0.9**
PRK	**Paraskevi**	**2.46**	**155**	*e*PN	**Pn**	02 27 08.0	**+0.3**
PRK				*e*SN	**Sn**	02 27 37.8	**-0.1**
PRK	**Paraskevi**	**2.46**	**155**	*e*Pn	**Pn**	02 27 08.0	**+0.3**
PRK	**Paraskevi**	**2.46**	**155**	P	**Pn**	02 27 08.6	**+0.9**
PRK				*e*Sn	**Sn**	02 27 37.8	**-0.1**
ZAPS	**Zavoj**	**2.47**	**317**	*e*Sn	**Sg**	02 27 45.2	**-1.5**
XOR	**Xorichti**	**2.49**	**213**	P	**Pn**	02 27 08.2	**0.0**
XOR	**Xorichti**	**2.49**	**213**	P	**Pn**	02 27 08.2	**0.0**
SLVT	**Silivri**	**2.49**	**95**	*e*PN	**Pb**	02 27 09.8	**-2.5**
SLVT	**Silivri**	**2.49**	**95**	*e*Pn	**Pb**	02 27 09.8	**-2.5**
CTYL	**Yal??k??y-??at**	**2.53**	**89**	*e*PN	**Pn**	02 27 10.1	**+1.4**
CTYL	**Yal??k??y-??at**	**2.53**	**89**	*e*Pn	**Pn**	02 27 10.1	**+1.4**
BNT	**Bandirma**	**2.54**	**115**	*e*PN	**Pb**	02 27 10.8	**-2.3**
BNT	**Bandirma**	**2.54**	**115**	*e*Pn	**Pb**	02 27 10.8	**-2.3**
GONE	**Gonen-Balikesi**	**2.54**	**123**	*e*PN	**Pb**	02 27 12.1	**-1.1**
GONE	**Gonen-Balikesi**	**2.54**	**123**	*e*Pn	**Pb**	02 27 12.1	**-1.1**
BARS	**Barje**	**2.67**	**301**	*e*Pn	**Pb**	02 27 14.7	**-0.7**
BARS				*e*Sn	**Sb**	02 27 48.9	**+0.7**
BARS	**Barje**	**2.67**	**301**	*e*Pn	**Pb**	02 27 14.7	**-0.7**
BARS				*e*Sn	**Sb**	02 27 48.9	**+0.7**
CTKS	**Kestanelik-??a**	**2.71**	**94**	*e*PN	**Pn**	02 27 12.3	**+1.1**
CTKS	**Kestanelik-??a**	**2.71**	**94**	*e*Pn	**Pn**	02 27 12.3	**+1.1**
KCTX	**Karacabey (Bur**	**2.88**	**114**	*e*PN	**Pn**	02 27 15.5	**+2.0**
KCTX	**Karacabey (Bur**	**2.88**	**114**	*e*Pn	**Pn**	02 27 15.5	**+2.0**
BALB	**Balikesir**	**2.91**	**128**	*e*PN	**Pb**	02 27 16.9	**-2.6**
BALB	**Balikesir**	**2.91**	**128**	*e*Pn	**Pb**	02 27 16.9	**-2.6**
BGKT	**Bogazkoy**	**2.92**	**95**	*e*PN	**Pn**	02 27 15.8	**+1.8**
BGKT	**Bogazkoy**	**2.92**	**95**	*e*Pn	**Pn**	02 27 15.8	**+1.8**
KLYT	**Kilyos**	**3.11**	**93**	*e*PN	**Pn**	02 27 18.7	**+2.0**
KLYT	**Kilyos**	**3.11**	**93**	*e*Pn	**Pn**	02 27 18.7	**+2.0**
ARMT	**Armutlu**	**3.12**	**106**	*e*PN	**Pn**	02 27 18.7	**+1.8**
ARMT	**Armutlu**	**3.12**	**106**	*e*Pn	**Pn**	02 27 18.7	**+1.8**
ISK	**Istanbul-Kandi**	**3.15**	**96**	*e*PN	**Pn**	02 27 19.0	**+1.8**
ISK	**Istanbul-Kandi**	**3.15**	**96**	*e*Pn	**Pn**	02 27 19.0	**+1.8**
MDNY	**Mudanya-Bursa**	**3.20**	**109**	*e*PN	**Pn**	02 27 20.5	**+2.5**
MDNY	**Mudanya-Bursa**	**3.20**	**109**	*e*Pn	**Pn**	02 27 20.5	**+2.5**
SELS	**Selova**	**3.31**	**303**	*e*Pn	Pb	02 27 22.9	-3.5
SELS				*e*Sn	**Sb**	02 28 04.3	**-2.5**
YLV	**Yalova**	**3.49**	**104**	*e*PN	**Pn**	02 27 24.5	**+2.5**
YLV	**Yalova**	**3.49**	**104**	*e*Pn	**Pn**	02 27 24.5	**+2.5**
SILT	**Sile**	**3.57**	**94**	*e*PN	**Pn**	02 27 25.1	**+2.0**
SILT	**Sile**	**3.57**	**94**	*e*Pn	**Pn**	02 27 25.1	**+2.0**
GRUS	**Gruza**	**3.92**	**309**	*e*Pn	**Pn**	02 27 28.9	**+1.0**
GRUS				*e*Sn	**Sb**	02 28 19.2	**-5.2**
GRUS	**Gruza**	**3.92**	**309**	*e*Pn	**Pn**	02 27 28.9	**+1.0**
GRUS				*e*Sn	**Sb**	02 28 19.2	**-5.2**
TVSB	**Tavsanli**	**4.01**	**119**	*e*PN	Pn	02 27 32.6	+3.3
TVSB	**Tavsanli**	**4.01**	**119**	*e*Pn	Pn	02 27 32.6	+3.3
MLR	**Muntele Rosu**	**4.08**	**10**	‖*i*P	**Pn**	02 27 31.8	**+1.6**
MLR	**Muntele Rosu**	**4.08**	**10**	‖*i*P	**Pn**	02 27 31.8	**+1.6**
GULT	**Gulveren**	**4.37**	**102**	*e*PN	**Pn**	02 27 35.8	**+1.7**
GULT	**Gulveren**	**4.37**	**102**	*e*Pn	**Pn**	02 27 35.8	**+1.7**
DIVS	**Divibare**	**4.47**	**307**	*e*Sn	**Sn**	02 28 32.4	**+4.7**
DIVS	**Divibare**	**4.47**	**307**	*e*Sn	**Sn**	02 28 32.4	**+4.7**
PLOR	**Plostina**	**4.55**	**15**	⇑*i*P	Pb	02 27 41.6	-5.9
PLOR	**Plostina**	**4.55**	**15**	⇑*i*P	Pb	02 27 41.6	-5.9
VRI	**Vrincioaia**	**4.58**	**16**	⇑*i*P	Pb	02 27 42.1	-5.9
VRI	**Vrincioaia**	**4.58**	**16**	⇑*i*P	Pb	02 27 42.1	-5.9

JSN 26 03:11:42.3±1.1, 18°00'N×78°01'W, h16km±6km, MD3.6, Jamaica region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MCJ	**Malvern**	**0.32**	**104**	*i* P	Pg	03 11 48.8	-0.4
MBJ	**Montego Bay**	**0.42**	**20**	*i* P	Pg	03 11 50.6	-0.4
MBJ				*i* S	Sg	03 11 56.3	-0.6
CVJ	**Coleyville**	**0.51**	**64**	*i* P	Pg	03 11 51.4	-1.2
BBJ	**Bamboo Saint A**	**0.81**	**62**	*i* P	Pb	03 11 56.5	-1.5
PCJ	**Portland Cotta**	**0.85**	**107**	*i* P	Pb	03 11 57.7	-1.1
STH	**Stony Hill**	**1.15**	**86**	*i* P	Pn	03 12 02.0	-1.7
STH				*i* S	Sb	03 12 17.2	-1.4
HOJ	**Hope**	**1.20**	**90**	*i* P	Pn	03 12 02.1	-2.4
GWJ	**Greenwich**	**1.23**	**86**	*i* P	Pn	03 12 03.4	-1.6
YHJ	**Yallahs**	**1.45**	**94**	*i* P	Pn	03 12 07.2	-0.8

*IDC **26** 03:20:33.1±10.0, 35°.68N×71°.76E, h78km±104km, mb3.5/4, mb1 3.5/6, mb1mx3.1/29, mbtmp3.4/6, ML3.2/2, Error ellipse: s-maj=72.1km s-min=54.9km az=129.0*
*ISCJB **26** 03:20:37.8±1.3, 36°.28N±0°.09×71°.3E±0°.1, h99km, mb3.8/3, Error ellipse: s-maj=13.8km s-min=12.3km az=11.4*
*NNC **26** 03:20:44.5±7.7, 36°.56N×70°.52E, h34km±262km, mb3.8, mpv3.7, Error ellipse: s-maj=168.0km s-min=45.3km az=127.0*

ISC 26 03:20:38.5±1.8, 36°.2N±0°.1×71°.4E±0°.2, h99km, n10, σ1§89/11, mb3.6/3, 3C-1D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**6.87**	**19**	S	**Sn**	**03 23 35.2**	**+1.8**
	0.4nm,0.3s,baz=296,slow=19,SNR=1.4						
KK31	**Karatay Array**	**6.95**	**355**	⇑P	**Pn**	**03 22 18.4**	**+0.7**
	2.7nm,0.4s,baz=181,slow=12,SNR=71						
KK31				‖S	**Sn**	**03 23 32.0**	**-3.1**
	2.1nm,0.5s,baz=177,slow=21,SNR=5.7						
MKAR	**Makanchi Array**	**13.36**	**34**	P	**Pn**	**03 23 42.4**	**-1.6**
	0.0nm,0.3s,baz=238,slow=8.3,SNR=2.1						
AB31	**Akbulak array**	**15.52**	**331**	⇑P	**Pn**	**03 24 10.9**	**-0.8**
	0.6nm,0.5s,baz=342,slow=16,SNR=22						
AB31				S	Sn	03 26 56.9	-6.2
	0.9nm,0.4s,baz=156,slow=23,SNR=4.1						
AKTO	**Aktyubinsk**	**17.22**	**330**	⇑P	**Pn**	**03 24 33.9**	**+1.3**
	1.7nm,0.6s						
AKTO	**Aktyubinsk**	**17.22**	**330**	P	**Pn**	**03 24 35.1**	**+2.5**
	0.3nm,0.3s,baz=129,slow=11,SNR=10						
AKTO				S	Sn	03 27 36.2	-7.9
	0.1nm,0.3s,baz=225,slow=20,SNR=2.8						
ZALV	**Zalesovo Beam**	**20.07**	**24**	P	**P**	**03 25 03.8**	**0.0**
	1.0nm,0.5s,baz=215,slow=10,SNR=4.0						
ARCES	**ARCESS Array B**	**41.57**	**338**	P	**P**	**03 28 17.4**	**+1.4**
	6.6nm,1.0s,baz=121,slow=11,SNR=3.6						
NOA	**NORAR Array B**	**44.84**	**323**	P	**P**	**03 28 42.9**	**+0.5**
	0.8nm,0.7s,baz=97,slow=7.8,SNR=3.3						
TORD	**Torodi Ar. Bea**	**66.05**	**269**	P	**P**	**03 31 13.6**	**-1.4**
	0.3nm,0.5s,baz=51,slow=6.2,SNR=6.4						

NDI 26 03:22:10.1±0.8, 32°.76N×74°.46E, h10km, ML2.7, Southwestern Kashmir

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THN	**Thein Dam**	**1.11**	**107**	*e*S	Sn	03 22 46.8	-0.3
SDNR	**Sundarnagar**	**2.48**	**120**	*e*x	Sn	03 23 18.0	-2.9
SDNR				*e*S	Sn	03 23 21.0	+0.1
SMLA	**Simla**	**2.82**	**124**	*e*PKP	Pn	03 22 56.1	+0.9
SMLA				*e*S	Sn	03 23 28.5	-0.7
SMLA				AML	AML	03 23 32.5	
	comp=E,99nm,0.2s						
SMLA				AML	AML	03 23 32.8	
	comp=N,90nm,0.2s						
RTK	**Rohtak**	**4.08**	**155**	*e*x	Sn	03 23 47.3	-13
AYAN	**Aya Nagar**	**4.84**	**151**	*e*S	Sn	03 24 16.3	-2.9
KUDL	**Kundal**	**4.92**	**159**	*e*PKP	Pn	03 23 23.5	-0.7
KUDL				*e*S	Sn	03 24 18.1	-3.1
KUDL				AML	AML	03 24 37.7	
	comp=N,4.6nm,0.4s						
KUDL				AML	AML	03 24 38.4	
	comp=E,5.7nm,0.3s						

IDC 26 03:27:52.5±2.8, 6°.29S×147°.92E, h0km, mb3.9/3, mb1 3.9/5, mb1mx3.6/19, mbtmp3.8/5, ML3.2/2, Error ellipse: s-maj=61.6km s-min=33.4km az=94.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.19**	**194**	Pn	Pn	03 28 45.6	+1.7
	2.2nm,0.3s,baz=14,slow=4.2,SNR=4.3						
PMG				Sn	Sn	03 29 25.3	+2.5
	3.8nm,0.3s,baz=267,slow=6.9,SNR=1.9						
WRA	**Warramunga Arr**	**18.93**	**223**	P	P	03 32 14.2	-1.0
	0.3nm,0.3s,baz=51,slow=11,SNR=11						
ASAR	**Alice Springs**	**21.92**	**217**	P	P	03 32 47.2	-0.4
	1.1nm,0.4s,baz=55,slow=8.9,SNR=24						
FITZ	**Fitzroy Crossi**	**24.70**	**240**	P	P	03 33 14.8	-0.9
	1.6nm,0.4s,baz=61,slow=10.0,SNR=11						
STKA	**Stephens Creek**	**26.14**	**192**	P	P	03 33 29.1	+0.6
	2.6nm,0.7s,baz=32,slow=13,SNR=3.4						
TORD	**Torodi Ar. Bea**	**146.05**	**284**	PKPbc	PKPbc	03 47 35.2	-0.4
	0.3nm,0.5s,baz=92,slow=3.5,SNR=5.0						

*ISCJB **26** 03:30:47.5±0.4, 35°.30N±0°.04×28°.56E±0°.06, h73km±22km, Error ellipse: s-maj=8.1km s-min=7.2km az=158.0*
*ISK **26** 03:30:47.5, 35°.31N×28°.54E, h30km, MD3.6*
*CSEM **26** 03:30:48.4±0.1, 35°.31N×28°.53E, h30km, MD2.9, Error ellipse: s-maj=4.0km s-min=2.3km az=67.0*
*DDA **26** 03:30:50.4, 35°.56N×28°.58E, h34km, MD3.3*
*ATH **26** 03:30:58.0, 36°.07N×27°.60E, h8km±6km, MD2.9/4*

ISC 26 03:30:49.3±1.5, 35°.33N±0°.07×28°.55E±0°.06, h49km±58km, n40, σ0§73/20, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**0.95**	**339**	*e*PB	**Pn**	**03 31 06.4**	**0.0**
ARG				*e*SB	Sn	03 31 13.6	-5.3
ARG	**Arkhangelos**	**0.95**	**339**	*e*Pb	**Pn**	**03 31 06.4**	**0.0**
KARP	**Karpathos**	**1.16**	**281**	*e*PB	**Pn**	**03 31 10.2**	**+1.0**
KARP	**Karpathos**	**1.16**	**281**	*e*Pb	**Pn**	**03 31 10.2**	**+1.0**
AKAS	**Kas**	**1.25**	**43**	*e*Pn	Pn	03 31 10.5	+0.1
AKAS				*e*Sn	**Sn**	**03 31 25.7**	**-0.5**
FETY	**Fethiye**	**1.38**	**18**	*e*PN	Pn	03 31 11.5	-0.6
FETY				*e*SN	**Sn**	**03 31 28.8**	**-0.4**
FETY	**Fethiye**	**1.38**	**18**	*e*Pn	Pn	03 31 11.5	-0.6
FETY				*e*Sn	**Sn**	**03 31 28.8**	**-0.4**
DALY	**Dalyan (Mu¨la**	**1.49**	**3**	*e*PN	Pn	03 31 13.0	-0.6
DALY	**Dalyan (Mu¨la**	**1.49**	**3**	*e*Pn	Pn	03 31 13.0	-0.6
TURN	**Turunc**	**1.54**	**1**	*e*Pn	Pn	03 31 13.4	-1.0
TURN				*e*Sn	Sn	03 31 30.8	-2.4
DAT	**Datca**	**1.61**	**331**	*e*PN	Pn	03 31 14.6	-0.8
DAT	**Datca**	**1.61**	**331**	*e*Pn	Pn	03 31 14.6	-0.8
YER	**Yerkesik**	**1.82**	**353**	*e*PN	Pn	03 31 17.6	-0.6
YER	**Yerkesik**	**1.82**	**353**	*e*Pn	Pn	03 31 17.6	-0.6
BODT	**Bodrum**	**2.00**	**330**	*e*PN	Pn	03 31 20.1	-0.6
BODT	**Bodrum**	**2.00**	**330**	*e*Pn	Pn	03 31 20.1	-0.6
MLSB	**Milas**	**2.06**	**343**	*e*PN	Pn	03 31 21.3	-0.2
MLSB	**Milas**	**2.06**	**343**	*e*Pn	Pn	03 31 21.3	-0.2
GOLH	**Golhisar**	**2.07**	**23**	*e*Pn	**Pn**	**03 31 22.7**	**+1.0**
GOLH				*e*Sn	**Sn**	**03 31 46.6**	**+0.2**
DNZL	**Cakiroluk**	**2.39**	**9**	*e*Pn	Pn	03 31 25.5	-0.7
DNZL				*e*Sn	**Sn**	**03 31 53.0**	**-1.3**
AYDN	**Tasoluk**	**2.39**	**347**	*e*Pn	**Pn**	**03 31 26.4**	**+0.3**
AYDN				*e*Sn	**Sn**	**03 31 53.3**	**-0.9**
NPS	**Neapolis**	**2.41**	**269**	*e*PN	Pn	03 31 31.1	+4.9
SMG	**Samos**	**2.75**	**330**	*e*PN	Pn	03 31 30.6	-0.3
SMG	**Samos**	**2.75**	**330**	*e*Pn	Pn	03 31 30.6	-0.3
SUTC	**Sutluce-Ispart**	**2.92**	**42**	*e*PN	Pn	03 31 33.3	0.0
SUTC	**Sutluce-Ispart**	**2.92**	**42**	*e*Pn	Pn	03 31 33.3	0.0
APE	**Apeiranthos**	**3.00**	**306**	*e*PN	**Pn**	**03 31 34.6**	**+0.2**
APE	**Apeiranthos**	**3.00**	**306**	*e*Pn	**Pn**	**03 31 34.6**	**+0.2**
HDMB	**Hadim**	**3.58**	**62**	*e*PN	**Pn**	**03 31 43.3**	**+0.9**
HDMB	**Hadim**	**3.58**	**62**	*e*Pn	**Pn**	**03 31 43.3**	**+0.9**
IKL	**Isikli**	**4.27**	**76**	*e*PN	**Pn**	**03 31 52.2**	**+0.5**
IKL	**Isikli**	**4.27**	**76**	*e*Pn	**Pn**	**03 31 52.2**	**+0.5**
HMAT	**Matruh**	**4.39**	**197**	P	Pn	03 31 52.1	-1.4
HNAT	**Natroun**	**5.94**	**162**	P	**Pn**	**03 32 14.4**	**-0.3**
AMAG	**Maghara**	**6.09**	**139**	P	Pn	03 32 16.2	-0.6
HHAG	**Hagoal**	**6.13**	**150**	P	Pn	03 32 16.5	-0.9
RSH		**6.14**	**134**	P	Pn	03 32 16.6	-0.9
SUZ		**6.55**	**145**	P	**Pn**	**03 32 23.1**	**0.0**
HFRF	**Wahat Farafira**	**8.15**	**182**	P	Pn	03 32 44.4	-0.7
HKAT	**Jabal Katrina**	**8.21**	**144**	P	Pn	03 32 45.3	-0.6

IDC 26 03:34:16.3±6.9, 5°.53S×145°.42E, h54km±61km, mb3.3/3, mb1 3.6/5, mb1mx3.2/19, mbtmp3.5/5, ML3.4/2, Error ellipse: s-maj=66.4km s-min=38.2km az=38.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.22**	**156**	P	Pn	03 35 19.1	+1.0
	2.6nm,0.3s,baz=324,slow=8.7,SNR=9.3						
PMG				S	Sn	03 36 05.9	-0.3
	1.9nm,0.3s,baz=264,slow=12,SNR=1.8						
WRA	**Warramunga Arr**	**17.93**	**216**	P	P	03 38 22.7	+0.8
	0.4nm,0.3s,baz=41,slow=11,SNR=15						
ASAR	**Alice Springs**	**21.17**	**210**	P	P	03 38 56.2	-1.1
	0.8nm,0.8s,baz=42,slow=7.6,SNR=8.4						
FITZ	**Fitzroy Crossi**	**23.00**	**235**	P	P	03 39 15.9	-0.9
	0.6nm,0.3s,baz=42,slow=10,SNR=12						
STKA	**Stephens Creek**	**26.45**	**187**	P	P	03 39 49.9	+1.6
	0.4nm,0.3s,baz=12,slow=9.3,SNR=4.6						

MEX 26 04:00:45.4±0.4, 16°.55N×99°.84W, h6km±8km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.65**	**321**	*i* P	Pg	04 00 57.2	-0.6
CAIG				*i* S	Sg	04 01 06.2	-0.1
PNIG	**Pinotepa**	**1.65**	**95**	*i* P	Pn	04 01 11.3	-3.7
PNIG				*i* S	Sn	04 01 31.9	-4.7
ARIG	**Puente Sto Nin**	**1.79**	**344**	*i* P	Pn	04 01 13.3	-3.7
ARIG				*i* S	Sn	04 01 34.9	-5.3
UTMO	**Huajuapan**	**2.33**	**56**	*i* P	Pn	04 01 22.2	-2.4
UTMO				*i* S	Sn	04 01 50.0	-3.8
YAIG	**Yautepec**	**2.42**	**18**	*i* P	Pn	04 01 22.6	-3.2
YAIG				*i* S	Sn	04 01 51.2	-4.7

*IDC **26** 04:45:04.1±0.5, 3°.05N×126°.81E, h0km, mb4.4/18, mb1 4.5/18, mb1mx4.4/24, mbtmp4.4/18, MS3.8/9, Ms1 3.8/9, ms1mx3.4/29, Error ellipse: s-maj=28.1km s-min=10.2km az=78.0*
*BJI **26** 04:45:05.7, 2°.79N×126°.97E, h39km, mB4.8/25, mb4.7/32, Ms4.4/22, Ms7 4.2/20*
*MOS **26** 04:45:07.9±1.2, 3°.14N×126°.69E, h33km, mb4.8/26, Error ellipse: s-maj=15.6km s-min=6.7km az=112.2*
*NEIC **26** 04:45:10.6±1.0, 3°.12N×126°.79E, h43km±9km, mb4.7/34, Error ellipse: s-maj=9.4km s-min=4.5km az=77.0*
*ISCJB **26** 04:45:11.1±0.6, 3°.17N±0°.04×126°.95E±0°.05, h66km±6km, mb4.5/75, Error ellipse: s-maj=8.1km s-min=5.1km az=152.7*
*DJA **26** 04:45:12.4±1.3, 3°N±6°×12°7E±°, h18km±15km, M4.6/10, mB5.2/6, mb4.7/10, MLv4.5/8, Mw(mB)4.5/6*

ISC 26 04:45:10.5±0.4, 3°.16N±0°.04×126°.86E±0°.07, h41km±2km, h41km:pP-P, n165, σ1§59/199, mb4.6/74, MS3.9/19, 6C-1D, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GAMI	**Galela, Maluku**	**1.60**	**145**	P	**Pn**	**04 45 36.0**	**-0.4**
GAMI				S	**Sn**	**04 45 56.3**	**+0.5**
TNTI	**Ternate**	**2.42**	**168**	P	**Pn**	**04 45 49.2**	**+1.6**
TNTI				S	**Sn**	**04 46 20.2**	**+4.2**
MNI	**Manado**	**2.64**	**230**	P	Pn	04 45 55.8	+5.1
LBMI	**Labuha**	**3.82**	**170**	P	Pn	**04 46 09.2**	**+2.3**
KMSI	**Cibinong**	**3.86**	**228**	P	Sn	04 46 32.4	-19
DAV	**Davao City (W)**	**4.09**	**342**	Pn	**Pn**	**04 46 12.3**	**+1.6**
DAV				Sn	Sn	04 47 05.8	+8.4
DAV	**Davao City (W)**	**4.09**	**342**	Pn	**Pn**	**04 46 12.3**	**+1.6**
	34nm,0.3s,baz=59,slow=17,SNR=2.8						
DAV				Sn	Sn	04 47 05.8	+8.4
	47nm,0.3s,baz=67,slow=21,SNR=4.8						
GTOI	**Gorontalo**	**4.59**	**237**	P	Pn	04 46 21.4	+3.9
CTBH	**Cotabato--PC H**	**4.81**	**327**	⇑*i*P	Pn	04 46 23.2	+2.7
MRSI	**Marisa**	**5.59**	**242**	P	Pn	04 46 36.1	+4.8

	130nm,1.0s,1µm0.6nm						
LUWI	**Luwuk**	**5.84**	**225**	P	Pn	04 46 46.1	+11
NLAI	**Namlea**	**6.36**	**178**	P	Pn	04 46 44.3	+2.6
	32nm,0.7s,1µm0.3nm						
SKSI	**Soroako, Sulaw**	**7.90**	**224**	P	Pn	04 47 05.4	+2.4
FAKI	**Fak Fak**	**8.09**	**138**	P	**Pn**	**04 47 07.2**	**+1.7**
	40nm,1.3s,0.1nm						
MYLDM	**Lahad Datu**	**8.58**	**284**	P	Pn	04 47 17.9	+5.6
	62nm,1.1s						
TTSI	**Tana Toraja**	**9.36**	**229**	P	Pn	04 47 29.4	+6.5
	58nm,1.3s,994nm						
SPSI	**Sidrap Palu**	**10.01**	**225**	P	Pn	04 47 42.2	+10
KAPI	**Kappang**	**10.79**	**221**	Pn	**Pn**	**04 47 42.5**	**0.0**
KAPI	**Kappang**	**10.79**	**221**	Pn	**Pn**	**04 47 42.5**	**0.0**
	0.3nm,0.3s,baz=160,slow=12,SNR=2.3						
SBUM	**Sibu**	**14.64**	**268**	P	P	04 48 42.7	+2.0
	17nm,1.8s						
STKI	**Sintang**	**15.68**	**259**	P	P	04 48 56.8	+4.5
	41nm,1.0s,14µm						
KSM	**Kuching**	**16.63**	**265**	*e*Pn	**P**	**04 49 04.4**	**+1.7**
	17nm,0.6s						
KSM	**Kuching**	**16.63**	**265**	P	**P**	**04 49 05.3**	**+2.5**
	29nm,1.1s,456nm						
TPUB	**Ta-pu**	**20.92**	**344**	*e*P	**P**	**04 49 48.5**	**-1.2**
	44nm,0.8s						
FITZ	**Fitzroy Crossi**	**21.16**	**183**	*e*P	**P**	**04 49 51.7**	**-0.7**
	12nm,0.9s						
FITZ	**Fitzroy Crossi**	**21.16**	**183**	P	**P**	**04 49 51.4**	**-0.9**
	4.9nm,0.5s,baz=18,slow=11,SNR=35						
SSLB	**Suanglung**	**21.29**	**345**	*e*P	**P**	**04 49 52.2**	**-1.5**
	23nm,0.8s						
YHNB	**Yeheng**	**22.04**	**347**	*e*P	**P**	**04 50 00.4**	**-1.4**
	19nm,0.8s						
QIZ	**Qiongzhong**	**22.93**	**315**	P	**P**	**04 50 11.0**	**-0.3**
QIZ				S	**S**	**04 54 20.5**	**+1.8**
QIZ				sS	Sn	04 54 33.3	-3.1
QIZ				LR	LR		
	comp=N,180nm,18.6s						
QIZ				LR	LR		
	comp=E,85nm,15.2s						
QIZ				LR	LR		
	comp=Z,270nm,16.3s						
COEN	**Coen**	**23.47**	**137**	*e*P	**P**	**04 50 17.7**	**+1.1**
	comp=Z,34nm,0.8s						
WRAB	**Tennant Creek**	**24.09**	**163**	*e*P	**P**	**04 50 20.7**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,20nm,0.8s						
WRAB	**Tennant Creek**	**24.09**	**163**	*e*P	**P**	**04 50 20.7**	**-1.8**
	comp=Z,20nm,0.8s						
WRA	**Warramunga Arr**	**24.10**	**163**	P	**P**	**04 50 21.0**	**-1.5**
WRA				PcP	**PcP**	**04 54 03.3**	**0.0**
WRA				S	**S**	**04 54 38.2**	**+0.6**
WRA	**Warramunga Arr**	**24.10**	**163**	P	**P**	**04 50 21.0**	**-1.5**
	comp=Z,10nm,0.5s,baz=337,slow=10,SNR=24						
WRA				PcP	**PcP**	**04 54 03.3**	**0.0**
	comp=Z,0.5nm,0.4s,baz=333,slow=2.2,SNR=3.9						
WRA				S	**S**	**04 54 38.2**	**+0.6**
	comp=Z,0.4nm,0.4s,baz=333,slow=14,SNR=5.8						
MBWA	**Marble Bar**	**25.15**	**196**	*e*P	**P**	**04 50 32.7**	**+0.7**
	comp=Z,31nm,1.2s						
AS31	**Alice Springs**	**27.53**	**166**	*e*P	**P**	**04 50 53.6**	**+0.1**
ASAR	**Alice Springs**	**27.53**	**166**	P	**P**	**04 50 52.6**	**-0.9**
ASAR				PcP	**PcP**	**04 54 11.3**	**+0.2**
ASAR	**Alice Springs**	**27.53**	**

LZH					SS	**SS**	05 01 18.3	-5.9		
LZH					pmax	pmax				
	comp=Z,35nm,1.4s									
LZH					pmax	pmax				
	comp=Z,65nm,4.2s									
LZH					LR	LR				
	comp=N,210nm,14.9s									
LZH					LR	LR				
	comp=E,240nm,16.0s									
LZH					LR	LR				
	comp=Z,340nm,16.2s									
HHC	**Hu-ho-hao-te**	**39.98**	**342**	*e*P	**P**	04 52 42.8	+1.4			
HHC				pP	**pP**	04 52 53.3	+0.4			
HHC				sP	**sP**	04 52 57.8	0.0			
HHC				PP	**PnPn**	04 54 19.5	+2.0			
HHC				S	**S**	04 58 46.3	+2.1			
HHC				sS	**sS**	04 59 02.5	-0.8			
HHC				SS	**SS**	05 01 36.8	-5.5			
HHC				ScS	**ScS**	05 02 45.0	-0.2			
HHC				pmax	pmax					
	comp=Z,58nm,0.9s									
HHC				pmax	pmax					
	comp=Z,120nm,5.4s									
HHC				LR	LR					
	comp=N,350nm,12.2s									
HHC				LR	LR					
	comp=E,220nm,11.9s									
HHC				LR	LR					
	comp=Z,380nm,13.1s									
USRK	**Ussuriysk Arra**	**41.13**	**6**	P	**P**	04 52 50.9	+0.3			
	comp=Z,7.7nm,0.8s,baz=192,slow=8.0,SNR=12									
MDJ	**Mudanjiang**	**41.36**	**3**	P	**P**	04 52 53.5	+1.0			
MDJ				pmax	pmax					
	comp=Z,13nm,1.0s									
MDJ				pmax	pmax					
	comp=Z,30nm,3.8s									
MDJ	**Mudanjiang**	**41.36**	**3**	*e*P	**P**	04 52 53.7	+1.2			
	comp=Z,13nm,0.8s									
LSA	**Lhasa**	**42.92**	**312**	*e*P	**P**	04 53 05.3	-0.8			
LSA				pmax	pmax					
	comp=Z,9.0nm,0.6s									
LSA	**Lhasa**	**42.92**	**312**	*e*P	**P**	04 53 05.3	-0.8			
	comp=Z,9.2nm,0.6s									
ASAJ	**Asahikawa**	**43.10**	**17**	*e*P	**P**	04 53 07.7	+1.0			
	comp=Z,7.6nm,0.9s									
ASAJ	**Asahikawa**	**43.10**	**17**	P	**P**	04 53 07.0	+0.3			
	comp=Z,3.5nm,0.3s,baz=221,slow=14,SNR=4.4									
GTA	**Gaotai**	**43.66**	**329**	*e*P	**P**	04 53 12.3	+0.8			
GTA				pP	**pP**	04 53 27.5	+4.4			
GTA				pmax	pmax					
	comp=Z,4.0nm,1.6s									
TAPN	**Taplejung**	**44.46**	**307**	*e*P	**P**	04 53 18.1	-0.2			
	comp=Z,28nm,1.0s									
ODAN	**Odare**	**44.51**	**306**	*e*P	**P**	04 53 17.8	-0.8			
	comp=Z,33nm,1.0s									
RAMN	**Ramite**	**45.19**	**306**	*e*P	**P**	04 53 23.5	-0.6			
	comp=Z,32nm,1.0s									
HABR	**Khabarovsk**	**45.69**	**8**	P	**P**	04 53 25.3	-2.0			
HABR				PPP	PPP	04 55 54.2				
HABR				*e*S	**S**	05 00 05.5	-2.0			
HABR				*e**SS	**sS**	05 00 28.6	+1.7			
HABR				*e*		05 03 16.3				
HABR				pmax	pmax					
	comp=Z,67nm,2.1s									
HABR				pmax	pmax					
	comp=E,52nm,1.7s									
HABR				pmax	pmax					
	comp=N,20nm,0.9s									
HABR				MLR	MLR					
	comp=Z,71nm,19.0s									
YSS	**Yuzh-Sakhalins**	**45.76**	**15**	*e*P	**P**	04 53 28.8	+0.9			
YSS				pmax	pmax					
	comp=Z,20nm,1.0s									
KLR	**Kul'dur**	**46.10**	**4**	*e*P	**P**	04 53 27.6	-2.9			
KLR				pmax	pmax					
	comp=Z,40nm,1.6s									
GUN	**Gumba**	**46.17**	**306**	*e*P	**P**	04 53 30.8	-1.1			
	comp=Z,28nm,0.7s									
PKI	**Pulchoki**	**46.41**	**306**	*e*P	**P**	04 53 32.9	-0.9			
	comp=Z,23nm,1.0s									
KKN	**Kakani**	**46.60**	**306**	*e*P	**P**	04 53 34.2	-1.0			
	comp=Z,12nm,0.6s									
DMN	**Daman**	**46.67**	**306**	*e*P	**P**	04 53 34.9	-0.9			
	comp=Z,31nm,1.0s									
ULN	**Ulaanbaatar**	**47.70**	**342**	*e*P	**P**	04 53 44.0	+0.7			
	comp=Z,6.3nm,0.9s									
SONM	**Songino Array**	**47.88**	**341**	P	**P**	04 53 44.4	-0.3			
SONM	**Songino Array**	**47.88**	**341**	P	**P**	04 53 44.4	-0.3			
	comp=Z,3.4nm,0.9s,baz=160,slow=8.9,SNR=6.9									
SONM				LR	LR	05 15 59.1				
	comp=Z,117nm,19.5s,baz=71,slow=39									
KOLN	**Koldanda**	**47.96**	**305**	*e*P	**P**	04 53 45.0	-0.7			
	comp=Z,49nm,0.8s									
DANN	**Dangsing**	**48.06**	**306**	*e*P	**P**	04 53 45.6	-1.0			
	comp=Z,50nm,0.8s									
TLY	**Talaya**	**52.11**	**342**	*e*P	**P**	04 54 18.2	+1.6			
TLY				*e*		04 54 32.6				
TLY				pmax	pmax					
	comp=Z,8.0nm,1.5s									
TLY				MLR	MLR					
	comp=Z,85nm,20.0s									
MOY	**Mondy**	**52.97**	**340**	*e*P	**P**	04 54 23.8	+0.8			
WMQ	**Urumqi**	**53.27**	**325**	*e*P	**P**	04 54 26.0	+0.7			
WMQ				pP	**pP**	04 54 36.0	-1.2			
WMQ				sP	**sP**	04 54 40.0	-2.0			
WMQ				PcP	**PcP**	04 55 34.0	+1.3			
WMQ				*e*S	**S**	05 01 53.0	-1.0			
WMQ				ScS	**ScS**	05 04 10.0	-1.7			
WMQ				pmax	pmax					
	comp=Z,11nm,0.7s									
WMQ				pmax	pmax					
	comp=Z,190nm,5.1s									
WMQ				LR	LR					
	comp=N,400nm,26.4s									
WMQ				LR	LR					
	comp=E,280nm,26.2s									
WMQ				LR	LR					
	comp=Z,370nm,23.4s									
PETK	**Petropavlovsk-**	**55.91**	**22**	P	**P**	04 54 44.9	+0.6			
PETK	**Petropavlovsk-**	**55.91**	**22**	P	**P**	04 54 44.9	+0.6			
PETK	**Petropavlovsk-**	**55.91**	**22**	P	**P**	04 54 44.9	+0.6			
	comp=Z,7.1nm,0.7s,baz=193,slow=5.8,SNR=16									
PETK				LR	LR	05 19 22.1				
	comp=Z,51nm,19.3s,baz=60,slow=37									
MK31	**Makanchi Array**	**58.10**	**325**	P	**P**	04 54 59.2	-0.7			
MK31				pmax	pmax					
	comp=Z,1.0nm,0.4s									
MK31	**Makanchi Array**	**58.10**	**325**	*e*P	**P**	04 54 59.0	-0.9			
MKAR	**Makanchi Array**	**58.10**	**325**	P	**P**	04 54 59.3	-0.6			
MKAR	**Makanchi Array**	**58.10**	**325**	P	**P**	04 54 59.2	-0.6			
MKAR	**Makanchi Array**	**58.10**	**325**	P	**P**	04 54 59.2	-0.6			
	comp=Z,5.5nm,0.7s,baz=120,slow=8.3,SNR=40									
MKAR				LR	LR	05 22 17.5				
	comp=Z,123nm,19.8s,baz=134,slow=38									
YAK	**Yakutsk**	**58.78**	**2**	*e*P	**P**	04 55 04.4	+0.2			
YAK				pmax	pmax					
	comp=Z,26nm,0.8s									
YAK				pmax	pmax					
	comp=N,6.0nm,0.9s									
YAK				pmax	pmax					
	comp=E,4.0nm,0.9s									
TKM2	**Tokmak 2**	**60.26**	**319**	*e*P	**P**	04 55 15.2	0.0			
TKM2				pmax	pmax					
	comp=Z,3.0nm,0.9s									
TKM2	**Tokmak 2**	**60.26**	**319**	*e*P	**P**	04 55 15.2	0.0			
	comp=Z,3.1nm,0.9s									
AAK	**Ala-Archa**	**60.87**	**318**⇑	*e*P	**P**	04 55 19.9	+0.6			
AAK				pmax	pmax					
	comp=Z,9.0nm,1.7s									
ZAA0	**Zalesovo Array**	**61.16**	**333**	*e*P	**P**	04 55 21.4	+0.7			
ZALV	**Zalesovo Beam**	**61.16**	**333**	P	**P**	04 55 19.8	-0.9			
ZALV	**Zalesovo Beam**	**61.16**	**333**	P	**P**	04 55 19.8	-0.9			
ZALV	**Zalesovo Beam**	**61.16**	**333**	P	**P**	04 55 19.8	-0.9			
	comp=Z,2.4nm,0.5s,baz=113,slow=6.9,SNR=7.2									
ZALV				LR	LR	05 23 48.0				
	comp=Z,50nm,20.5s,baz=58,slow=38									
EKS2	**Erkin-Say**	**61.36**	**318**	*e*P	**P**	04 55 22.6	0.0			
EKS2				pmax	pmax					
	comp=Z,3.0nm,0.7s									
EKS2	**Erkin-Say**	**61.36**	**318**	*e*P	**P**	04 55 22.6	0.0			
	comp=Z,3.1nm,0.7s									
KBL	**Kabul**	**61.98**	**308**	*e*P	**P**	04 55 26.4	-0.6			
KBL				pmax	pmax					
	comp=Z,6.0nm,0.8s									
KBL	**Kabul**	**61.98**	**308**	*e*P	**P**	04 55 26.4	-0.6			
	comp=Z,6.5nm,0.8s									
KURK	**Kurchatov**	**62.30**	**328***c*	*i*P	**P**	04 55 27.8	-0.7			
KURK				pmax	pmax					
	comp=Z,19nm,0.7s									
KURK	**Kurchatov**	**62.30**	**328**	*e*P	**P**	04 55 27.9	-0.6			
	comp=Z,22nm,0.9s									
NVS	**Novosibirsk**	**62.44**	**333**	*e*P	**P**	04 55 28.0	-1.4			
NVS				pmax	pmax					
	comp=Z,10.0nm,1.1s									
NVS				pmax	pmax					
	comp=N,6.0nm,1.2s									
NVS				pmax	pmax					
	comp=E,7.0nm,1.0s									
KK31	**Karatay Array**	**63.74**	**317**	*i* P	**P**	04 55 36.8	-1.5			
KK31				pmax	pmax					
	comp=Z,5.0nm,0.8s									
KKAR	**Karatay Array**	**63.74**	**317**	*e*P	**P**	04 55 37.9	-0.4			
KKAR				pmax	pmax					
	comp=Z,3.0nm,0.8s									
KKAR	**Karatay Array**	**63.74**	**317**	*e*P	**P**	04 55 37.9	-0.4			
	comp=Z,3.2nm,0.8s									
BVA0	**Borovoye Array**	**67.87**	**327**	*i* P	**P**	04 56 03.7	-1.0			
BVA0				pmax	pmax					
	comp=Z,4.0nm,0.9s									
BRVK	**Borovoye**	**67.94**	**327***c*	*i*P	**P**	04 56 04.6	-0.5			
BRVK				pmax	pmax					
	comp=Z,11nm,1.7s									
BRVK	**Borovoye**	**67.94**	**327**	*e*P	**P**	04 56 04.3	-0.8			
	comp=Z,6.3nm,0.8s									
TIXI	**Tiksi**	**68.41**	**1**⇓	*e*P	**P**	04 56 07.4	-0.3			
TIXI				pmax	pmax					
	comp=Z,14nm,1.7s									
BILL	**Bilibino**	**70.07**	**15**	P	**P**	04 56 18.0	0.0			
BILL				*e*		04 56 26.9				
BILL				*e*		04 56 34.4				
BILL				pmax	pmax					
	comp=Z,12nm,2.5s									
AB31	**Akbulak array**	**72.68**	**321**	*i* P	**P**	04 56 33.1	-1.0			
AB31				pmax	pmax					
	comp=Z,3.0nm,0.5s									
ABKAR	**Akbulak array**	**72.68**	**321**	*e*P	**P**	04 56 33.6	-0.6			
	comp=Z,4.2nm,0.6s									
AKUT	**Akutan**	**74.31**	**34**	*e*P	**P**	04 56 43.6	0.0			
	comp=Z,37nm,1.0s									
SVE	**Sverdlovsk**	**74.52**	**329**⇑	*e*P	**P**	04 56 45.2	+0.4			
SVE				pmax	pmax					
	comp=Z,23nm,1.2s									
ARU	**Arti**	**75.49**	**328***c*	*i*P	**P**	04 56 49.8	-0.6			
ARU						04 59 34.8				
ARU				S	**S**	05 06 28.5	+0.7			
ARU				pmax	pmax					
	comp=Z,22nm,1.7s									
SDPT	**Sand Point**	**77.59**	**34**	*e*P	**P**	04 57 02.0	-0.3			
	comp=Z,19nm,0.8s									
VNDA	**Vanda**	**82.84**	**173**	*e*P	**P**	04 57 30.5	+0.3			
	comp=Z,2.5nm,1.0s									
VNDA	**Vanda**	**82.84**	**173**	P	**P**	04 57 29.9	-0.2			
	comp=Z,1.1nm,0.7s,baz=307,slow=7.8,SNR=8.3									
KBZ	**Khabaz**	**83.47**	**313**	LR	LR	05 40 19.2				
	comp=Z,58nm,20.7s,baz=306,slow=40									
KIV	**Kislovodsk**	**83.63**	**314**	P	**P**	04 57 36.0	+1.0			
KIV				pmax	pmax					
	comp=Z,4.0nm,0.6s									
COLD	**Coldfoot**	**84.37**	**23**	*e*P	**P**	04 57 39.3	+1.2			
	comp=Z,6.6nm,1.0s									
PMR	**Palmer**	**84.38**	**29**	*e*P	**P**	04 57 38.4	+0.1			
PMR				pmax	pmax					
	comp=Z,10.0nm,1.0s									
PMR	**Palmer**	**84.38**	**29**	*e*P	**P**	04 57 38.4	+0.1			
	comp=Z,10nm,1.0s									
SML	**Sawmill**	**84.78**	**28**	*e*P	**P**	04 57 41.5	+1.1			
SML				pmax	pmax					
	comp=Z,6.0nm,1.4s									
SML	**Sawmill**	**84.78**	**28**	*e*P	**P**	04 57 41.5	+1.1			
	comp=Z,6.1nm,1.4s									
ILAR	**Eielson Array**	**85.56**	**25**	P	**P**	04 57 44.4	+0.2			
ILAR	**Eielson Array**	**85.56**	**25**	P	**P**	04 57 44.4	+0.2			
	comp=Z,0.6nm,0.9s,baz=260,slow=5.2,SNR=6.3									
DIV	**Divide**	**85.98**	**29**	*e*P	**P**	04 57 47.9	+1.5			
	comp=Z,10nm,0.9s									
VORD	**Divnogorie**	**86.04**	**321**	*e*P	**P**	04 57 46.4	-0.4			
VORD				pmax	pmax					
	comp=N,6.0nm,0.9s									
VORD				pmax	pmax					
	comp=Z,10.0nm,0.9s									
VORD				pmax	pmax					
	comp=E,7.0nm,0.5s									
VSR	**Storozhevoye**	**86.12**	**321**	*e*P	**P**	04 57 47.0	-0.2			
VSR				pmax	pmax					
	comp=Z,20nm,1.0s									
VSR				pmax	pmax					
	comp=N,7.0nm,0.5s									
VSR				pmax	pmax					
	comp=E,10.0nm,1.1s									
OBN	**Obninsk**	**87.61**	**325**	P	**P**	04 57 54.0	-0.4			
OBN				pmax	pmax					
	comp=Z,9.0nm,0.4s									
KMBO	**Kilima Mbogo**	**89.67**	**269**	*e*P	**P**	04 58 06.0	+0.6			
	comp=Z,2.0nm,0.6s									
BRTR	**Keskin Array B**	**90.49**	**310**	P	**P**	04 58 08.1	-0.4			
BRTR	**Keskin Array B**	**90.49**	**310**	P	**P**	04 58 08.1	-0.4			
	comp=Z,2.2nm,0.8s,baz=106,slow=4.3,SNR=7.8									
ARCES	**ARCESS Array B**	**91.03**	**340**	P	**P**	04 58 09.1	-1.1			
ARCES	**ARCESS Array B**	**91.03**	**340**	P	**P**	04 58 09.1	-1.1			
	comp=Z,12nm,1.2s,baz=80,slow=7.4,SNR=3.0									
ARCES				LR	LR	05 47 57.1				
	comp=Z,60nm,18.1s,baz=50,slow=41									
BUR08	**Bucovina Ar. S**	**95.52**	**318**	*e*P	**P**	04 58 31.2	-0.3			
CRVS	**Cervenica-Dubn**	**97.70**	**320**	*e*P	**P**	04 58 39.0	-2.3			
CRVS	**Cervenica-Dubn**	**97.70**	**320**	*e*P	**P**	04 58 38.9	-2.3			
NOA	**NORSAR Array B**	**99.36**	**334**	P	**Pdif**	04 58 46.9	-1.5			
NOA	**NORSAR Array B**	**99.36**	**334**	P	**Pdif**	04 58 46.9	-1.5			
	comp=Z,0.5nm,0.7s,baz=78,slow=4.1,SNR=2.8									
NOA				LR	LR	05 51 15.9				
	comp=Z,46nm,21.6s,baz=55,slow=40									
NKC	**Novy Kostel**	**102.89**	**323**	*e*P	**Pdif**	04 58 53.8	-11			
MNTX	**Cornudas Mount**	**119.51**	**51**	*e*PKPdf	**PKPdf**	05 03 57.4	+0.9			
TXAR	**Lajitas Array**	**121.84**	**53**	PKP	**PKPdf**	05 04 01.4	+0.3			
TXAR	**Lajitas Array**	**121.84**	**53**	PKP	**PKPdf**	05 04 01.4	+0.3			
	comp=Z,0.3nm,0.7s,baz=356,slow=3.8,SNR=4.7									
WMOK	**Wichita Mounta**	**122.95**	**45**	*e*PKIKP	**PKPdf**	05 04 03.5	+0.5			
WMOK	**Wichita Mounta**	**122.95**	**45**	*e*PKPdf	**PKPdf**	05 04 03.5	+0.5			
TOA0	**Torodi Ar. Sit**	**123.22**	**288**	*e*PKPdf	**PKPdf**	05 04 04.1	+0.1			
TORD	**Torodi Ar. Bea**	**123.22**	**288**	PKP	**PKPdf**	05 04 03.9	-0.1			
TORD	**Torodi Ar. Bea**	**123.22**	**288**	PKP	**PKPdf**	05 04 03.9	-0.1			
	comp=Z,2.6nm,0.7s,baz=73,slow=1.8,SNR=19									
JCT	**Junction City**	**124.33**	**49**	*e*PKIKP	**PKPdf**	05 04 06.5	+0.7			
JCT	**Junction City**	**124.33**	**49**	*e*PKPdf	**PKPdf**	05 04 06.5	+0.7			
WVT	**Waverly**	**129.24**	**37**	*e*PKIKP	**PKPdf**	05 04 15.9	+1.0			
WVT	**Waverly**	**129.24**	**37**	*e*PKPdf	**PKPdf**	05 04 15.9	+1.0			
BCIP	**Isla Barro Col**	**150.71**	**65**	*e*PKPbc	**PKPbc**	05 04 59.5	+0.1			
LPAZ	**La Paz**	**160.31**	**132**	*e*PKPdf	**PKPdf**	05 05 08.2	+0.7			
LPAZ				*e*PKPab	**PKPab**	05 05 48.4	+0.4			

*CSEM **26** 05:15:22.8±0.3, 47.60N×15.80E, h2km, ML2.6/10, Error ellipse: s-maj=7.1km s-min=2.7km az=109.0*
*PRU **26** 05:15:23.4, 47.58N×15.83E, h0km, M2.0*
*IPEC **26** 05:15:23.4±0.1, 47.61N×15.76E, h6km±2km, ML1.8/4, Error ellipse: s-maj=1.0km s-min=0.9km az=129.0*
*VIE **26** 05:15:23.1±0.4, 47.59N×15.74E, h7km±10km, mb1.8/7, ML2.1/7, Error ellipse: s-maj=4.5km s-min=2.3km az=116.0 3 km SSW of Spital am Semmering felt 4 ems98 at Mrzzuschlag / STYRIA*

ISC 26 05:15:23.3±1.1, 47.60N±0.03×15.74E±0.05, h5km±10km, n26, σ0.87/45, 6C-6D, Austria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONA	**Conrad Observa**	**0.34**	**14**⇓	*i*Pg	**Pg**	**05 15 29.8**	**-0.1**
	3.8nm,0.1s						
CONA				⇓*i*Sg	**Sg**	**05 15 35.6**	**+1.2**
	38nm,0.3s						
CONA	**Conrad Observa**	**0.34**	**14**	Pg	**Pg**	**05 15 29.8**	**-0.1**
	3.8nm,0.1s						
CONA				Sg	**Sg**	**05 15 35.6**	**+1.2**
	38nm,0.3s						
ARSA	**Arzberg**	**0.38**	**203**⇓	*i*Pg	**Pg**	**05 15 30.6**	**0.0**
	3.9nm,0.1s						
ARSA				⇓*i*Sg	**Sg**	**05 15 35.7**	**+0.1**
	27nm,0.1s						
ARSA	**Arzberg**	**0.38**	**203**	Pg	**Pg**	**05 15 30.6**	**0.0**
	3.9nm,0.1s						
ARSA				Sg	**Sg**	**05 15 35.7**	**+0.1**
	27nm,0.1s						
MOA	**Molln**	**1.03**	**285**⇑	*i*Pg	**Pb**	**05 15 43.0**	**-0.5**
	0.6nm,0.1s						
MOA				⇑*i*Sg	**Sn**	**05 15 58.1**	**-0.9**
	12nm,0.1s						
MOA	**Molln**	**1.03**	**285**	Pg	**Pb**	**05 15 43.0**	**-0.5**
	0.6nm,0.1s						
MOA				Sg	**Sn**	**05 15 58.1**	**-0.9**
	12nm,0.1s						
SOKA	**Soboth**	**1.04**	**208**⇓	*e*Pg	**Pg**	**05 15 42.7**	**-0.5**
	0.4nm,0.1s						
SOKA				⇑*i*Sg	**Sg**	**05 15 55.9**	**-0.8**
	1.3nm,0.1s						
SOKA	**Soboth**	**1.04**	**208**	Pg	**Pg**	**05 15 42.7**	**-0.5**
	0.4nm,0.1s						
SOKA				Sg	**Sg**	**05 15 55.9**	**-0.8**
	1.3nm,0.1s						
OBKA	**Obir**	**1.36**	**217**⇓	*e*Pg	**Pg**	**05 15 50.0**	**+0.7**
	6.6nm,0.3s						
OBKA				⇑*i*Sg	**Sn**	**05 16 09.3**	**+1.9**
	6.6nm,0.3s						
OBKA	**Obir**	**1.36**	**217**	Pg	**Pg**	**05 15 50.0**	**+0.7**
	6.6nm,0.3s						
OBKA				Sg	**Sn**	**05 16 09.3**	**+1.9**
	6.6nm,0.3s						
KRUC	**Moravsky**	**1.53**	**16**	*e*Pn	**Pn**	**05 15 51.0**	**-0.2**
	baz=197						
KRUC				*e*Sg	**Sn**	**05 16 11.2**	**-0.2**
	21nm,0.5s,baz=197						
TREC	**Trest**	**1.70**	**354**	*e*PG	**Pb**	**05 15 54.6**	**-0.5**
TREC				*e*SN	**Sb**	**05 16 17.2**	**+0.4**
TREC	**Trest**	**1.70**	**354**	Pg	**Pb**	**05 15 54.6**	**-0.5**
TREC				Sn	**Sb**	**05 16 17.2**	**+0.4**
MYKA	**Terra Mystica**	**1.73**	**237**⇑	*e*Pg	**Pg**	**05 15 57.1**	**+0.7**
MYKA				⇑*e*Sg	**Sg**	**05 16 19.2**	**+0.4**
	3.5nm,0.4s						
MYKA	**Terra Mystica**	**1.73**	**237**	Pg	**Pg**	**05 15 57.1**	**+0.7**
MYKA				Sg	**Sg**	**05 16 19.2**	**+0.4**
	3.5nm,0.4s						
VRAC	**Vranov**	**1.80**	**18**	*e*Sg	**Sb**	**05 16 19.0**	**-0.6**
	7.3nm,0.2s,baz=198						
KHC	**Kasperske Hory**	**2.10**	**318**	*e*PG	**Pb**	**05 16 02.1**	**+0.2**
KHC				*e*SN	**Sb**	**05 16 27.9**	**-0.4**
KHC	**Kasperske Hory**	**2.10**	**318**	Pg	**Pb**	**05 16 02.1**	**+0.2**
KHC				Sn	**Sb**	**05 16 27.9**	**-0.4**
PRU	**Pruhonice**	**2.52**	**342**	*e*SN	**Sb**	**05 16 38.2**	**-2.0**
PRU	**Pruhonice**	**2.52**	**342**	Sn	**Sb**	**05 16 38.2**	**-2.0**
DPC	**Dobruska-Polom**	**2.78**	**8**	*e*SG	**Sg**	**05 16 52.3**	**-0.2**
DPC	**Dobruska-Polom**	**2.78**	**8**	Sg	**Sg**	**05 16 52.3**	**-0.2**
UPC	**Upice**	**2.92**	**3**	*e*SN	**Sn**	**05 16 47.1**	**+1.5**
UPC				*e*SG	**Sg**	**05 16 56.6**	**-0.3**
	comp=Z,2.2nm,0.3s						
UPC	**Upice**	**2.92**	**3**	Sn	**Sn**	**05 16 47.1**	**+1.5**
UPC				Sg	**Sg**	**05 16 56.6**	**-0.3**
	2.2nm,0.3s						
NKC	**Novy Kostel**	**3.41**	**322**	*e*SG	**Sg**	**05 17 13.6**	**+0.7**
	comp=Z,3.7nm,0.4s						
NKC	**Novy Kostel**	**3.41**	**322**	Sg	**Sg**	**05 17 13.6**	**+0.7**
	3.7nm,0.4s						

*IDC **26** 05:49:29.5±1.5, 1.02N×97.04E, h0km, mb3.9/9, mb1 3.9/11, mb1mx3.7/29, mbtmp3.8/11, ML3.8/2, Error ellipse: s-maj=39.5km s-min=20.2km az=56.0*
*ISCJB **26** 05:49:31.6±0.8, 1.10N±0.09×97.07E±0.10, h25km, mb4.0/13, Error ellipse: s-maj=15.5km s-min=12.2km az=142.3*
*NEIC **26** 05:49:35.0±0.5, 1.11N×97.16E, h35km, mb4.2/3, Error ellipse: s-maj=10.7km s-min=8.4km az=60.0*
*BJI **26** 05:49:38.8, 1.72N×97.99E, h35km, mB4.8/2, mb4.5/4*

ISC 26 05:49:33.8±1.3, 1.1N±0.1×97.1E±0.2, h25km, n29, σ0.944/27, mb4.1/13, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**2.46**	**47**	Pn	**Pn**	**05 50 11.8**	**-0.6**
PSI	**Prapat**	**2.46**	**47**	Pn	**Pn**	**05 50 11.8**	**-0.6**
	2.7nm,0.3s,baz=190,slow=11,SNR=17						
IPM	**Ipoh**	**5.13**	**49**	*e*Pn	**Pn**	**05 50 49.9**	**+0.7**
	23nm,1.0s						
KULM	**Kulim**	**5.44**	**40**	*e*Pn	**Pn**	**05 50 53.0**	**-0.4**
	25nm,0.9s						
CMAR	**Chiang Mai Arr**	**17.34**	**6**	P	**Pn**	**05 53 34.0**	**-0.3**
CMAR	**Chiang Mai Arr**	**17.34**	**6**	P	**Pn**	**05 53 34.0**	**-0.3**
	0.4nm,0.3s,baz=192,slow=11,SNR=4.9						
GTA	**Gaotai**	**38.20**	**3**	*e*P	**P**	**05 56 52.0**	**+0.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WRA	**Warramunga Arr**	**42.03**	**122**	P	**P**	**05 57 23.2**	**-0.5**
WRA	**Warramunga Arr**	**42.03**	**122**	P	**P**	**05 57 23.2**	**-0.5**
	comp=Z,0.5nm,0.5s,baz=299,slow=9.1,SNR=4.0						
WRAB	**Tennant Creek**	**42.04**	**122**	*e*P	**P**	**05 57 23.9**	**+0.1**
	comp=Z,11nm,1.6s						
**ASAR

LNV	**Longovilo**	**0.58**	**93**	⇓*i*P	Pb	06 01 55.7	-0.3
LNV				*i* S	Sb	06 02 04.2	-0.3
IHA	**Instituto Hidr**	**0.98**	**24**	*e*P	Pg	06 02 01.7	-0.6
IHA				*i* S	Sg	06 02 15.5	+0.4
TACH	**Talagante**	**1.02**	**75**	⇑*i*P	Pg	06 02 01.9	-1.1
TACH				*i* S	Sg	06 02 16.4	+0.1
CHCH	**Chadas Angostu**	**1.22**	**91**	⇓*i*P	Pb	06 02 05.5	-1.4
CACH	**El Canelo**	**1.27**	**99**	⇓*i*P	Pn	06 02 06.7	-1.1
CACH				*i* S	Sn	06 02 25.6	+0.3
ROCH	**El Roble**	**1.33**	**44**	*e*P	Pn	06 02 07.6	-1.1
ROCH				*i* S	Sb	06 02 26.0	-0.4
ROCH				AML	AML	06 02 29.9	
	comp=N,234nm,0.4s						
PCH	**Pirque**	**1.37**	**77**	⇑*i*P	Pn	06 02 07.9	-1.2
PCH				*i* S	Sb	06 02 26.9	-0.4
CLCH	**Cerro Calan**	**1.42**	**68**	⇓*i*P	Pn	06 02 08.8	-0.9
CLCH				*i* S	Sb	06 02 28.0	-0.7
CLCH				AML	AML	06 02 34.5	
	comp=E,133nm,0.6s						
PEL	**Peldehue**	**1.43**	**57**	*i* P	Pn	06 02 09.1	-0.7
PEL				*i* S	Sb	06 02 28.3	-0.6
PEL				AML	AML	06 02 34.6	
	comp=E,423nm,0.6s						
SJCH	**San Jose de Ma**	**1.49**	**79**	*e*P	Pn	06 02 08.8	-2.0
SJCH				*i* S	Sn	06 02 28.9	-1.7
SJCH				AML	AML	06 02 35.4	
	comp=E,139nm,0.4s						
JACH	**Jahuel**	**1.78**	**46**	*e*P	Pn	06 02 14.6	-0.1

BJI ***26*** *06:16:48.8, 52˚.88N×35˚.35W, h7km, mB5.0/10, mb4.9/17, Ms5.0/4, Ms7 4.5/4*

MOS ***26*** *06:16:51.4±0.8, 53˚.20N×35˚.36W, h10km, mb4.7/26, Error ellipse: s-maj=12.7km s-min=8.6km az=148.7*

ISCJB ***26*** *06:16:51.8±2.8, 53˚.18N±0˚.08×35˚.37W±0˚.05, h13km±18km, mb4.4/58, MS3.7/25, Error ellipse: s-maj=13.9km s-min=5.4km az=1.6*

IDC ***26*** *06:16:51.1±0.7, 53˚.14N×35˚.35W, h0km, mb4.0/17, mb1 4.2/19, mb1mx4.1/34, mbtmp4.0/19, ML3.6/2, MS3.5/22, Ms1 3.5/22, ms1mx3.4/50, Error ellipse: s-maj=22.8km s-min=12.1km az=12.0*

NEIC ***26*** *06:16:53.0±0.2, 53˚.16N×35˚.38W, h10km, mb4.6/26, Error ellipse: s-maj=10.1km s-min=3.9km az=183.0*

CSEM ***26*** *06:16:54.2±0.1, 53˚.18N×35˚.36W, h20km, mb4.5/33, Ms3.1, Error ellipse: s-maj=9.6km s-min=3.8km az=1.0*

ISC 26 06:16:53.9±0.6, 53.16N±0.09×35.35W±0.05, h18km±2km, h18km:pP-P, n397, σ0991/391, mb4.5/59, MS3.6/25, 90C-88D, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORG	**Borgarnes**	**13.64**	**26**	LR	LR	06 23 33.4	
	comp=Z,141nm,18.1s,baz=220,slow=30						
DRLN	**Deer Lake**	**14.41**	**263**	*e*Pn	**Pn**	**06 20 16.2**	**-0.6**
DRLN	**Deer Lake**	**14.41**	**263**	*e*Pn	**Pn**	**06 20 16.2**	**-0.6**
SFJD	**Kangerlussuaq**	**15.75**	**338**	LR	LR	06 25 12.8	
	comp=Z,174nm,18.6s,baz=170,slow=32						
SCO	**Scoresbysund**	**18.41**	**14**	*i* P	Pn	06 21 15.5	+7.7
SCO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SCO	**Scoresbysund**	**18.41**	**14**	*i* P	Pn	06 21 15.5	+7.7
	comp=Z,9.6nm,0.9s						
SCHQ	**Schefferville**	**18.51**	**288**	*e*P	**P**	**06 21 07.4**	**-1.5**
	comp=Z,24nm,1.1s						
SCHQ	**Schefferville**	**18.51**	**288**	P	**P**	**06 21 07.5**	**-1.5**
	comp=Z,0.9nm,0.3s,baz=84,slow=12,SNR=27						
SCHQ				LR	LR	06 27 04.7	
	comp=Z,138nm,21.2s,baz=85,slow=33						
SCHQ	**Schefferville**	**18.51**	**288**	*e*P	**P**	**06 21 07.4**	**-1.5**
	comp=Z,24nm,1.1s						
EKA	**Eskdalemuir Ar**	**18.85**	**70**	P	**Pn**	**06 21 13.3**	**+0.1**
EKA	**Eskdalemuir Ar**	**18.85**	**70**	P	**Pn**	**06 21 13.3**	**+0.1**
	baz=272,slow=9.9,SNR=9.3						
EKA	**Eskdalemuir Ar**	**18.85**	**70**	P	**Pn**	**06 21 13.3**	**+0.1**
SUMG	**Summit**	**19.54**	**357**	*e*P	**Pn**	**06 21 22.4**	**+0.6**
SUMG				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SUMG	**Summit**	**19.54**	**357**	*e*P	**Pn**	**06 21 22.4**	**+0.6**
	comp=Z,8.4nm,0.9s						
SUMG	**Summit**	**19.54**	**357**	*i* P	**Pn**	**06 21 24.4**	**+2.6**
	comp=Z,6.1nm,0.9s						
SUMG	**Summit**	**19.54**	**357**	*e*P	**Pn**	**06 21 22.4**	**+0.6**
	comp=Z,8.0nm,0.9s						
ROSF	**Rostrenen**	**20.75**	**90**	*e*P	Pn	06 21 36.1	+0.2
	comp=Z,68nm,1.4s						
ROSF	**Rostrenen**	**20.75**	**90**	*e*P	Pn	06 21 36.1	+0.2
ROSF				pmax	pmax		
	comp=Z,68nm,1.4s						
ROSF	**Rostrenen**	**20.75**	**90**	*e*P	Pn	06 21 36.1	+0.2
	comp=Z,68nm,1.4s						
QUIF	**Quistinic**	**21.00**	**91**	*e*P	**P**	**06 21 37.7**	**+1.6**
QUIF	**Quistinic**	**21.00**	**91**	*e*P	**P**	**06 21 37.7**	**+1.6**
QUIF	**Quistinic**	**21.00**	**91**	*e*P	**P**	**06 21 37.7**	**+1.6**
QUIF	**Quistinic**	**21.00**	**91**	*e*P	**P**	**06 21 37.7**	**+1.6**
SGMF	**Saint Gilles**	**21.22**	**90**	*e*P	**P**	**06 21 40.0**	**+1.5**
	comp=Z,34nm,1.2s						
SGMF	**Saint Gilles**	**21.22**	**90**	*e*P	**P**	**06 21 40.0**	**+1.5**
SGMF				pmax	pmax		
	comp=Z,35nm,1.2s						
SGMF	**Saint Gilles**	**21.22**	**90**	*e*P	**P**	**06 21 40.0**	**+1.5**
	comp=Z,34nm,1.2s						
SGMF	**Saint Gilles**	**21.22**	**90**	*e*P	**P**	**06 21 40.0**	**+1.5**
	comp=Z,17nm,1.2s						
JMIC	**Jan Mayen**	**21.51**	**24**	LR	LR	06 27 46.7	
	comp=Z,142nm,20.1s,baz=250,slow=30						
GRR	**Gorron**	**22.19**	**88**	*e*P	**P**	**06 21 49.3**	**+0.5**
GRR	**Gorron**	**22.19**	**88**	*e*P	**P**	**06 21 49.3**	**+0.5**
GRR	**Gorron**	**22.19**	**88**	*e*P	**P**	**06 21 49.3**	**+0.5**
GRR	**Gorron**	**22.19**	**88**	*e*P	**P**	**06 21 49.3**	**+0.5**
EMMW	**East Machias**	**22.56**	**261**	*e*P	**P**	**06 21 52.5**	**-0.4**
	comp=Z,25nm,1.0s						
EMMW	**East Machias**	**22.56**	**261**	*e*P	**P**	**06 21 52.5**	**-0.4**
	comp=Z,25nm,1.0s						
MFF	**Saint Martin d**	**23.44**	**92**	*e*P	**P**	**06 22 01.8**	**-0.1**
	comp=Z,22nm,1.2s						
MFF	**Saint Martin d**	**23.44**	**92**	*e*P	**P**	**06 22 01.8**	**-0.1**
MFF				pmax	pmax		
	comp=Z,22nm,1.2s						
MFF	**Saint Martin d**	**23.44**	**92**	*e*P	**P**	**06 22 01.8**	**-0.1**
	comp=Z,22nm,1.2s						
MFF	**Saint Martin d**	**23.44**	**92**	*e*P	**P**	**06 22 01.8**	**-0.1**
	comp=Z,11nm,1.2s						
TCF	**Toulx Ste Croi**	**25.01**	**91**	*e*P	**P**	**06 22 18.7**	**+2.2**
	comp=Z,23nm,1.2s						
TCF	**Toulx Ste Croi**	**25.01**	**91**	*e*P	**P**	**06 22 18.7**	**+2.2**
TCF				pmax	pmax		
	comp=Z,23nm,1.2s						
TCF	**Toulx Ste Croi**	**25.01**	**91**	*e*P	**P**	**06 22 18.7**	**+2.2**
	comp=Z,23nm,1.2s						
TCF	**Toulx Ste Croi**	**25.01**	**91**	*e*P	**P**	**06 22 18.7**	**+2.2**
	comp=Z,12nm,1.2s						
ETSF	**Etsaut**	**25.19**	**100**	*e*P	**P**	**06 22 20.1**	**+1.8**
	comp=Z,7.4nm,0.8s						
ETSF	**Etsaut**	**25.19**	**100**	*e*P	**P**	**06 22 20.1**	**+1.8**
ETSF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ETSF	**Etsaut**	**25.19**	**100**	*e*P	**P**	**06 22 20.1**	**+1.8**
	comp=Z,7.4nm,0.8s						
ETSF	**Etsaut**	**25.19**	**100**	*e*P	**P**	**06 22 20.1**	**+1.8**
	comp=Z,3.7nm,0.8s						
ESDC	**Sonseca Array**	**25.26**	**110**	P	**P**	**06 22 18.6**	**-0.3**
ESDC	**Sonseca Array**	**25.26**	**110**	P	**P**	**06 22 18.6**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=310,slow=9.6,SNR=8.3						
ESDC				LR	LR	06 30 49.3	
	comp=Z,130nm,18.5s,baz=275,slow=33						
ESDC	**Sonseca Array**	**25.26**	**110**	P	**P**	**06 22 18.6**	**-0.3**
KONO	**Kongsberg**	**25.29**	**57**	*e*P	**P**	**06 22 18.2**	**-0.7**
KONO				pmax	pmax		
	comp=Z,14nm,1.1s						
KONO	**Kongsberg**	**25.29**	**57**	*e*P	**P**	**06 22 18.2**	**-0.7**
	comp=Z,14nm,1.1s						
KONO	**Kongsberg**	**25.29**	**57**	*e*P	**P**	**06 22 18.2**	**-0.7**
	comp=Z,14nm,1.1s						
SSF	**Saint Saulge**	**25.41**	**88**	*e*P	**P**	**06 22 20.2**	**0.0**
	comp=Z,22nm,1.0s						
SSF	**Saint Saulge**	**25.41**	**88**	*e*P	**P**	**06 22 20.2**	**0.0**
SSF				pmax	pmax		
	comp=Z,22nm,1.0s						
SSF	**Saint Saulge**	**25.41**	**88**	*e*P	**P**	**06 22 20.2**	**0.0**
	comp=Z,22nm,1.0s						
SSF	**Saint Saulge**	**25.41**	**88**	*e*P	**P**	**06 22 20.2**	**0.0**
	comp=Z,11nm,1.0s						
AVF	**Avril sur Loir**	**25.45**	**89**	*e*P	**P**	**06 22 20.4**	**-0.1**
	comp=Z,20nm,1.0s						
AVF	**Avril sur Loir**	**25.45**	**89**	*e*P	**P**	**06 22 20.4**	**-0.1**
AVF				pmax	pmax		
	comp=Z,20nm,1.0s						
AVF	**Avril sur Loir**	**25.45**	**89**	*e*P	**P**	**06 22 20.4**	**-0.1**
	comp=Z,20nm,1.0s						
AVF	**Avril sur Loir**	**25.45**	**89**	*e*P	**P**	**06 22 20.4**	**-0.1**
	comp=Z,10nm,1.0s						
LOR	**Lormes**	**25.53**	**87**	*e*P	**P**	**06 22 21.1**	**-0.1**
	comp=Z,15nm,1.0s						
LOR				*e*R			
	comp=Z,109nm,21.5s						
LOR	**Lormes**	**25.53**	**87**	*e*P	**P**	**06 22 21.1**	**-0.1**
	comp=Z,15nm,1.0s						
LOR	**Lormes**	**25.53**	**87**	*e*P	**P**	**06 22 21.1**	**-0.1**
	comp=Z,7.5nm,1.0s						
SMF	**Signal de Mont**	**25.82**	**89**	*e*P	**P**	**06 22 24.5**	**+0.7**
SMF	**Signal de Mont**	**25.82**	**89**	*e*P	**P**	**06 22 24.5**	**+0.7**
SMF	**Signal de Mont**	**25.82**	**89**	*e*P	**P**	**06 22 24.5**	**+0.7**
SMF	**Signal de Mont**	**25.82**	**89**	*e*P	**P**	**06 22 24.5**	**+0.7**
NOA	**NORSAR Array B**	**25.98**	**54**	P	**P**	**06 22 25.6**	**+0.3**
NOA	**NORSAR Array B**	**25.98**	**54**	P	**P**	**06 22 25.6**	**+0.3**
	comp=Z,2.1nm,0.8s,baz=276,slow=10,SNR=4.4						
NOA				LR	LR	06 31 24.5	
	comp=Z,63nm,18.7s,baz=275,slow=34						
NOA	**NORSAR Array B**	**25.98**	**54**	P	**P**	**06 22 25.6**	**+0.3**
HAU	**Haudompre**	**26.68**	**84**	*e*P	**P**	**06 22 31.9**	**+0.2**
HAU				*e*R			
	comp=Z,62nm,19.9s						
HAU	**Haudompre**	**26.68**	**84**	*e*P	**P**	**06 22 31.9**	**+0.2**
HAU	**Haudompre**	**26.68**	**84**	*e*P	**P**	**06 22 31.9**	**+0.2**
HAU	**Haudompre**	**26.68**	**84**	*e*P	**P**	**06 22 31.9**	**+0.2**
HFS	**Hagfors**	**27.29**	**56**	LR	LR	06 31 55.5	
	comp=Z,111nm,18.7s,baz=306,slow=33						
CLL	**Collm**	**29.23**	**74**	*e*P	**P**	**06 22 54.0**	**-0.3**
CLL				*e*		06 23 00.0	
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	**Collm**	**29.23**	**74**	*e*P	**P**	**06 22 54.0**	**-0.3**
	comp=Z,5.0nm,0.9s						
DAVOX	**Davos/Dischmat**	**29.38**	**84**	LR	LR	06 33 03.4	
	comp=Z,97nm,20.8s,baz=264,slow=33						
SADO	**Sadowa**	**29.54**	**271**	LR	LR	06 33 57.2	
	comp=Z,184nm,18.3s,baz=110,slow=35						
BRG	**Berggiesshubel**	**29.95**	**74**	*e*P	P	06 22 57.1	-3.6
	comp=Z,1.9nm,0.6s						
BRG				*e*		07 18 00.4	
BRG	**Berggiesshubel**	**29.95**	**74**	*e*P	P	06 22 57.1	-3.6
BRG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KHC	**Kasperske Hory**	**30.47**	**78**	*e*P	**P**	**06 23 04.6**	**-0.8**
KHC				*e*		06 23 08.3	
KHC				MLR	MLR		
	comp=Z,200nm,18.6s						
KHC	**Kasperske Hory**	**30.47**	**78**	*e*P	**P**	**06 23 04.6**	**-0.8**
KHC				*e*pP	**pP**	**06 23 08.3**	**-2.6**
KHC				AMS	AMS	06 34 20.0	
	comp=Z,200nm,18.6s						
KHC	**Kasperske Hory**	**30.47**	**78**	*e*P	**P**	**06 23 04.6**	**-0.8**
	comp=Z,200nm,18.6s						
PRU	**Pruhonice**	**30.66**	**75**	AMS	AMS	06 34 30.0	
	comp=Z,100nm,18.5s						
GEC2	**GERESS Array S**	**30.68**	**78**	*e*P	**P**	**06 23 08.1**	**+0.8**
GEC2				pmax	pmax		
	comp=Z,1μm,1.1s						
GEC2	**GERESS Array S**	**30.68**	**78**	*e*P	**P**	**06 23 08.1**	**+0.8**
	comp=Z,1μm,1.1s						
GEC2	**GERESS Array S**	**30.68**	**78**	*e*P	**P**	**06 23 08.1**	**+0.8**
	comp=Z,1μm,1.1s						
GERES	**GERESS Array B**	**30.68**	**78**	P	**P**	**06 23 07.3**	**0.0**
GERES	**GERESS Array B**	**30.68**	**78**	P	**P**	**06 23 07.3**	**0.0**
	comp=Z,1.4nm,0.8s,baz=302,slow=7.7,SNR=10.0						
GERES				LR	LR	06 34 56.7	
	comp=Z,94nm,18.1s,baz=289,slow=35						
GERES	**GERESS Array B**	**30.68**	**78**	P	**P**	**06 23 07.3**	**0.0**
UPC	**Upice**	**31.30**	**74**	*e*P	**P**	**06 23 13.4**	**+0.8**
UPC				*e*		06 23 17.7	
UPC	**Upice**	**31.30**	**74**	*e*P	**P**	**06 23 13.4**	**+0.8**
UPC				*e*pP	**pP**	**06 23 17.7**	**-0.4**
UPC	**Upice**	**31.30**	**74**	*e*P	**P**	**06 23 13.4**	**+0.8**
DPC	**Dobruska-Polom**	**31.54**	**74**	*e*P	**P**	**06 23 15.5**	**+0.7**
DPC				*e*		06 23 19.5	
DPC	**Dobruska-Polom**	**31.54**	**74**	*e*P	**P**	**06 23 15.5**	**+0.7**
DPC				*e*pP	**pP**	**06 23 19.5**	**-0.8**
DPC	**Dobruska-Polom**	**31.54**	**74**	*e*P	**P**	**06 23 15.5**	**+0.7**
ARCES	**ARCESS Array B**	**31.73**	**36**	LR	LR	06 35 13.7	
	comp=Z,31nm,18.2s,baz=257,slow=35						
MORC	**Moravsky Berou**	**32.50**	**74**	*e*P	**P**	**06 23 23.3**	**0.0**
MORC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MORC	**Moravsky Berou**	**32.50**	**74**	*e*P	**P**	**06 23 23.3**	**0.0**
	comp=Z,1.5nm,0.6s						
MORC	**Moravsky Berou**	**32.50**	**74**	*e*P	**P**	**06 23 23.3**	**0.0**
	comp=Z,1.5nm,0.6s						
OKC	**Ostrava-Krasne**	**32.82**	**74**	AMS	AMS	06 37 10.0	
	comp=Z,200nm,15.3s						
FINES	**FINESS Array B**	**33.01**	**51**	P	**P**	**06 23 26.9**	**-0.6**
FINES	**FINESS Array B**	**33.01**	**51**	P	**P**	**06 23 26.9**	**-0.6**
	comp=Z,1.9nm,0.8s,baz=289,slow=8.7,SNR=5.7						
FINES				LR	LR	06 35 16.9	
	comp=Z,91nm,19.8s,baz=181,slow=34						
FINES	**FINESS Array B**	**33.01**	**51**	P	**P**	**06 23 26.9**	**-0.6**
VYHS	**Vyhne**	**33.85**	**76**	*e*P	**P**	**06 23 35.7**	**+0.7**
VYHS	**Vyhne**	**33.85**	**76**	*e*P	**P**	**06 23 35.7**	**+0.7**
VYHS	**Vyhne**	**33.85**	**76**	*e*P	**P**	**06 23 35.7**	**+0.7**
APA	**Apatity**	**34.82**	**39**	⇑*e*P	P	06 23 50.0	+6.9
APA				pmax	pmax		
	comp=Z,13nm,1.0s						
APA				MLR	MLR		
	comp=Z,300nm,19.0s						
CRVS	**Cervenica-Dubn**	**35.17**	**73**	*e*P	P	06 23 53.7	+7.2
CRVS	**Cervenica-Dubn**	**35.17**	**73**	*e*pP	P	06 23 53.7	+7.2
EYMN	**Ely**	**35.26**	**285**	*e*P	**P**	**06 23 47.2**	**0.0**
	comp=Z,10nm,1.3s						
EYMN	**Ely**	**35.26**	**285**	*e*P	**P**	**06 23 47.2**	**0.0**
	comp=Z,10nm,1.3s						
KOLS	**Kolonicke sedl**	**35.63**	**73**	*e*P	**P**	**06 23 51.1**	**+0.7**
KOLS	**Kolonicke sedl**	**35.63**	**73**	*e*P	**P**	**06 23 51.1**	**+0.7**
KOLS	**Kolonicke sedl**	**35.63**	**73**	*e*P	**P**	**06 23 51.1**	**+0.7**
KEST	**Kesra**	**35.66**	**101**	*e*P	**P**	**06 23 49.5**	**-1.4**
KEST	**Kesra**	**35.66**	**101**	P	**P**	**06 23 49.9**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=236,slow=6.9,SNR=4.5						
KEST	**Kesra**	**35.66**	**101**	*e*P	**P**	**06 23 49.5**	**-1.4**
ULM	**Lac du Bonnet**	**36.65**	**291**	P	**P**	**06 23 58.3**	**-0.7**
ULM	**Lac du Bonnet**	**36.65**	**291**	P	**P**	**06 23 58.3**	**-0.7**
	comp=Z,2.7nm,0.5s,baz=53,slow=8.8,SNR=3.6						
ULM				LR	LR	06 37 47.8	
	comp=Z,84nm,19.0s,baz=281,slow=34						
ULM	**Lac du Bonnet**	**36.65**	**291**	P	**P**	**06 23 58.3**	**-0.7**
SFIN	**Scholer Farm**	**36.87**	**271**	⇑P	**P**	**06 24 01.9**	**+0.9**
	baz=37						
SPMN	**St. Paul**	**37.46**	**282**	⇑P	**P**	**06 24 06.3**	**+0.3**
	baz=37						
SIUC	**Southern Illin**	**39.83**	**269**	*e*P	**P**	**06 24 27.1**	**+1.2**
	comp=Z,10nm,0.6s						
SIUC	**Southern Illin**	**39.83**	**269**	*e*P	**P**	**06 24 27.1**	**+1.2**
	comp=Z,10nm,0.6s						
OBN	**Obninsk**	**40.46**	**57**	⇓*i*P	**P**	**06 24 31.0**	**0.0**
OBN				*e*		06 24 35.6	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.4s						
OBN	**Obninsk**	**40.46**	**57**	*i* P	**P**	**06 24 31.0**	**0.0**
	comp=Z,10.0nm,0.4s						
ECSD	**EROS Data Cent**	**40.55**	**282**	*e*P	**P**	**06 24 32.5**	**+0.6**
	comp=Z,7.5nm,1.0s						
ECSD	**EROS Data Cent**	**40.55**	**282**	*e*P	**P**	**06 24 32.5**	**+0.6**
	comp=Z,7.5nm,1.0s						
YKA	**Yellowknife Ar**	**40.60**	**316**	P	**P**	**06 24 32.1**	**0.0**
YKA	**Yellowknife Ar**	**40.60**	**316**	P	**P**	**06 24 32.1**	**0.0**
	comp=Z,0.8nm,0.8s,baz=65,slow=8.9,SNR=3.9						
YKA	**Yellowknife Ar**	**40.60**	**316**	P	**P**	**06 24 32.1**	**0.0**
D24A	**Glendive**	**43.05**	**291**	⇑P	**P**	**06 24 53.0**	**+0.7**
	baz=43						
C23A	**Lambert**	**43.15**	**292**	⇓P	**P**	**06 24 54.0**	**+0.9**
	baz=43						
A21A	**Bergtoll Ranch**	**43.44**	**295**	⇑P	**P**	**06 24 56.2**	**+0.7**
	baz=43						
D23A	**Lindsay**	**43.52**	**292**	⇓P	**P**	**06 24 57.3**	**+1.1**
	baz=43						
C22A	**Vida**	**43.57**	**293**	⇓P	**P**	**06 24 57.2**	**+0.7**
	baz=43						
VSR	**Storozhevoye**	**43.80**	**61**	*e*P	**P**	**06 24 59.3**	**+1.1**
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
VSR				pmax	pmax		
	comp=N,6.0nm,0.6s						
VSR				pmax	pmax		
	comp=E,20nm,1.2s						
VSR	**Storozhevoye**	**43.80**	**61**	*e*P	**P**	**06 24 59.3**	**+1.1**
	comp=E,6.0nm,0.6s						
K28A	**Ten Mile Ranch**	**43.95**	**284**	⇓P	**P**	**06 25 00.5**	**+0.8**
	baz=44						
E23A	**Ismay**	**43.96**	**291**	⇓P	**P**	**06 25 00.6**	**+0.9**
	baz=44						
VORD	**Divnogorie**	**44.00**	**61**	*e*P	**P**	**06 24 58.3**	**-1.5**
VORD				pmax	pmax		
	comp=Z,5.0nm,0.4s						
VORD				pmax	pmax		
	comp=N,5.0nm,0.8s						
VORD				pmax	pmax		
	comp=E,10.0nm,0.8s						
VORD	**Divnogorie**	**44.00**	**61**	*e*P	**P**	**06 24 58.3**	**-1.5**
	comp=E,5.0nm,0.4s						
D22A	**Cohagen**	**44.07**	**292**	⇓P	**P**	**06 25 01.5**	**+0.9**
	baz=44						
C21A	**Desert Coulee**	**44.19**	**293**	⇓P	**P**	**06 25 01.9**	**+0.4**
	baz=44						
F23A	**Volborg**	**44.47**	**290**	⇓P	**P**	**06 25 04.4**	**+0.6**
	baz=44						
H24A	**Dirks Ranch, A**	**44.56**	**288**	⇑P	**P**	**06 25 04.8**	**+0.2**
	baz=44						
MIAR	**Mount Ida**	**44.57**	**269**	*e*P	**P**	**06 25 05.6**	**+1.0**
MIAR				pmax	pmax		
	comp=E,8.0nm,1.0s						
MIAR	**Mount Ida**	**44.57**	**269**	*e*P	**P**	**06 25 05.6**	**+1.0**
	comp=E,8.2nm,1.0s						
MIAR	**Mount Ida**	**44.57**	**269**	*e*P	**P**	**06 25 05.6**	**+1.0**
	comp=E,8.2nm,1.0s						
C20A	**Veseth Ranch,**	**44.76**	**294**	⇓P	**P**	**06 25 06.2**	**+0.1**
	baz=45						
P31A	**Stockton**	**44.77**	**279**	⇑P	**P**	**06 25 06.6**	**+0.4**
	baz=45						
TUL1	**Tulsa**	**44.98**	**273**	⇑P	**P**	**06 25 08.1**	**+0.2**
	baz=45						
K26A	**Motz Farm, Whi**	**45.01**	**285**	⇑P	**P**	**06 25 08.5**	**+0.3**
	baz=45						
A18A	**Metzger Ranch,**	**45.07**	**296**	⇓P	**P**	**06 25 08.9**	**+0.4**
	baz=45						
D20A	**Manuel Ranch,**	**45.20**	**293**	⇑P	**P**	**06 25 10.0**	**+0.5**
	baz=45						
P30A	**Selden**	**45.27**	**280**	⇑P	**P**	**06 25 10.4**	**+0.2**
	baz=45						
C19A	**Slack Wire Ran**	**45.32**	**294**	⇑P	**P**	**06 25 11.0**	**+0.5**
	baz=45						
B18A	**Beardsley Farm**	**45.34**	**295**	⇑P	**P**	**06 25 10.7**	**0.0**
	baz=45						
E20A	**Meyer Farm, Mu**	**45.54**	**292**	⇓P	**P**	**06 25 12.6**	**+0.4**
	baz=45						
EGMT	**Eagleton**	**45.54**	**295**	*e*P	**P**	**06 25 12.8**	**+0.5**
	comp=Z,6.7nm,0.8s						
EGMT	**Eagleton**	**45.54**	**295**	*e*P	**P**	**06 25 12.8**	**+0.5**
	comp=Z,6.7nm,0.8s						
EGMT	**Eagleton**	**45.54**	**295**	⇑P	**P**	**06 25 12.8**	**+0.5**
	baz=45						
D19A	**Cripps Ranch,**	**45.56**	**294**	⇓P	**P**	**06 25 13.1**	**+0.6**
	baz=45						
E19A	**Rath Farm, Rou**	**45.93**	**293**	⇓P	**P**	**06 25 16.0**	**+0.6**
	baz=46						
B17A	**L&G Farms, Che**	**45.95**	**296**	⇑P	**P**	**06 25 16.1**	**+0.6**
	baz=46						
F20A	**Billings**	**45.97**	**292**	⇑P	**P**	**06 25 16.7**	**+0.9**
	baz=46						
A16A	**West Butte Ran**	**46.00**	**297**	⇑P	**P**	**06 25 16.4**	**+0.4**
	baz=46						
S31A	**Mullinville**	**46.06**	**277**	⇑P	**P**	**06 25 16.6**	**+0.1**
	baz=46						
I22A	**9 Mile Ranch,**	**46.18**	**289**	⇑P	**P**	**06 25 18.1**	**+0.6**
	baz=46						
C17A	**Wharram Farm,**	**46.32**	**295**	⇑P	**P**	**06 25 18.3**	**-0.2**
	baz=46						
B16A	**M & M Farms, S**	**46.37**	**297**	⇓P	**P**	**06 25 19.3**	**+0.5**
	baz=46						
F19A	**Roth Farm, Mol**	**46.38**	**292**	⇓P	**P**	**06 25 18.9**	**-0.1**
	baz=46						
J22A	**Midwest**	**46.48**	**288**	⇑P	**P**	**06 25 19.9**	**+0.1**
	baz=46						
T31A	**Randall Ranch,**	**46.52**	**277**	⇓P	**P**	**06 25 19.9**	**-0.2**
	baz=46						
D17A	**Six Diamond Ra**	**46.56**	**295**	⇓P	**P**	**06 25 20.6**	**+0.1**
	baz=46						
A15A	**Johnson Ranch,**	**46.59**	**298**	⇑P	**P**	**06 25 20.7**	**+0.2**
	baz=46						
H20A	**Greybull**	**46.68**	**290**	⇑P	**P**	**06 25 21.8**	**+0.4**
	baz=46						
I21A	**Big Trails, Te**	**46.69**	**289**	⇓P	**P**	**06 25 22.0**	**+0.5**
	baz=46						

baz=48
O22A Kremmling 48.58 285 ⇑P **P 06 25 36.0 -0.3**
baz=48
PDAR Pinedale Array 48.64 289 P **P 06 25 36.5 -0.2**
PDAR Pinedale Array 48.64 289 P **P 06 25 36.5 -0.2**
comp=Z,1.6nm,0.6s,baz=60,slow=7.6,SNR=14
PDAR LR LR 06 44 43.4
comp=Z,79nm,20.8s,baz=67,slow=34
PDAR Pinedale Array 48.64 289 P **P 06 25 36.5 -0.2**
D13A Huson 48.65 297 ⇓P **P 06 25 36.5 0.0**
baz=48
M20A Sweetwater, Wa 48.67 287 ⇓P **P 06 25 37.0 0.0**
baz=48
WHTX Lake Whitney 48.68 270 ⇑P **P 06 25 36.8 0.0**
baz=48,SNR=5.8
T26A Comanche Natio 48.80 280 ⇓P **P 06 25 38.6 +0.6**
baz=49
C12B Naegeli Ranch, 48.81 298 ⇓P **P 06 25 38.2 +0.5**
baz=49
F14A Wisdom 48.85 295 ⇓P **P 06 25 38.7 +0.4**
baz=49
U27A Thompson Grove 48.85 278 ⇑P **P 06 25 38.7 +0.4**
baz=49
V28A Channing 48.95 277 ⇑P **P 06 25 40.0 +0.9**
baz=49
L19A Farson 48.95 288 ⇑P **P 06 25 39.0 -0.1**
baz=49
Z32A Haskell 48.98 273 ⇓P **P 06 25 39.4 +0.2**
baz=49
Y31A Rekieta Farm, 48.99 274 ⇓P **P 06 25 40.0 +0.7**
baz=49
X30A Coker Ranch, T 49.03 275 ⇓P **P 06 25 40.2 +0.6**
baz=49
W29A Amraillo 49.03 276 ⇓P **P 06 25 40.0 +0.3**
baz=49
N20A Spence Gulch, 49.13 286 ⇓P **P 06 25 40.6 0.0**
baz=49
D12A Red Ives Fores 49.15 297 ⇑P **P 06 25 40.4 -0.1**
baz=49
AMTX Amarillo 49.21 276 *eP* **P 06 25 42.2 +1.2**
comp=Z,6.2nm,0.6s
AMTX Amarillo 49.21 276 *eP* **P 06 25 42.2 +1.2**
comp=Z,6.2nm,0.6s
T25A Trinidad 49.31 280 ⇓P **P 06 25 42.7 +0.8**
baz=49
Z31A Sharp Cattle R 49.37 273 ⇑P **P 06 25 42.6 +0.4**
baz=49
EGAK Eagle 49.38 327 *eP* **P 06 25 42.2 +0.4**
comp=Z,4.3nm,1.0s
EGAK Eagle 49.38 327 *eP* **P 06 25 42.2 +0.4**
comp=Z,4.3nm,1.0s
R23A Moffat 49.45 282 ⇓P **P 06 25 43.0 0.0**
baz=49
P21A Newcastle 49.52 285 ⇑P **P 06 25 43.8 +0.3**
baz=49,SNR=6.6
X29A Tulia 49.52 276 ⇓P **P 06 25 43.9 +0.5**
baz=49
TORD Torodi Ar. Bea 49.56 130 P **P 06 25 43.3 -0.4**
TORD Torodi Ar. Bea 49.56 130 P **P 06 25 43.3 -0.4**
comp=Z,1.2nm,0.4s,baz=335,slow=7.3,SNR=17
TORD Torodi Ar. Bea 49.56 130 P **P 06 25 43.3 -0.4**
O20A White River Ci 49.58 286 ⇓P **P 06 25 44.3 +0.4**
baz=49
E12A Beaver Dam Sad 49.67 297 ⇑P **P 06 25 44.4 0.0**
baz=49
X28A Dimmitt 49.77 276 ⇓P **P 06 25 46.3 +0.9**
baz=50
V26A Tequesquite Ra 49.85 278 ⇓P **P 06 25 46.3 +0.4**
baz=50
Y29A Porterfield Fa 49.91 275 ⇓P **P 06 25 47.2 +0.9**
baz=50
W27A Bowe Ranch, En 49.91 277 ⇑P **P 06 25 47.1 +0.7**
baz=50
R22A Saguache, Gunn 49.97 283 ⇑P **P 06 25 47.5 +0.4**
baz=50
O19A Miners Draw (B 49.98 286 ⇑P **P 06 25 47.0 +0.1**
baz=50,SNR=7.5
232A Coleman 50.07 272 ⇓P **P 06 25 47.2 -0.3**
baz=50
ARU Arti 50.13 46 *c i* P **P 06 25 47.9 +0.3**
ARU S **S 06 32 57.8 -0.2**
ARU pmax pmax
comp=Z,5.0nm,1.0s
ARU Arti 50.13 46 *i* P **P 06 25 47.9 +0.3**
comp=Z,5.0nm,1.0s
ARU S **S 06 32 57.8 -0.2**
V25A Rancho No Teng 50.31 279 ⇑P **P 06 25 50.2 +0.7**
baz=50
130A Snyder 50.36 273 ⇓P **P 06 25 50.2 +0.4**
baz=50
Q20A Ridgley Place, 50.39 285 ⇓P **P 06 25 50.6 +0.6**
baz=50
H12A Diamond D Ranc 50.46 294 ⇑P **P 06 25 51.5 +0.9**
baz=50
332A Millersview 50.48 271 ⇑P **P 06 25 50.5 -0.2**
baz=50
MSTX Muleshoe 50.49 276 ⇑P **P 06 25 51.1 +0.3**
baz=50
W25A X Bar L Ranch, 50.64 278 ⇑P **P 06 25 53.0 +1.0**
baz=50
Z28A Tucker Farm, M 50.73 275 ⇓P **P 06 25 53.1 +0.5**
baz=51
Y27A Causey 50.79 276 ⇑P **P 06 25 54.9 +1.8**
baz=51
T22A Edith 50.87 282 ⇓P **P 06 25 54.7 +0.9**
baz=51
432A Menard 50.87 271 ⇑P **P 06 25 53.2 -0.4**
baz=51,SNR=7.9
U23A El Rito 50.91 281 ⇓P **P 06 25 55.4 +1.3**
baz=51
R20A Redvale 50.95 284 ⇑P **P 06 25 55.5 +1.2**
baz=51
331A San Angelo 50.95 272 ⇓P **P 06 25 55.1 +0.9**
baz=51
230A Sterling City 50.95 273 ⇓P **P 06 25 54.6 +0.4**
baz=51
JCT Junction City 51.16 270 *eP* **P 06 25 56.0 +0.2**
JCT pmax pmax
comp=Z,5.0nm,0.8s
JCT Junction City 51.16 270 *eP* **P 06 25 56.0 +0.2**
comp=Z,5.5nm,0.8s
JCT Junction City 51.16 270 *eP* **P 06 25 56.0 +0.2**
comp=Z,5.5nm,0.8s
JCT Junction City 51.16 270 ⇑P **P 06 25 56.1 +0.3**
baz=51
ILAR Eielson Array 51.20 329 P **P 06 25 56.4 +0.7**
ILAR PcP **PcP 06 27 11.3 +0.7**
ILAR Eielson Array 51.20 329 P **P 06 25 56.4 +0.7**
comp=Z,1.0nm,0.9s,baz=38,slow=5.6,SNR=11
ILAR PcP **PcP 06 27 11.3 +0.7**
comp=Z,0.5nm,0.9s,baz=0.6,slow=2.6,SNR=4.3
ILAR LR LR 06 50 05.5
comp=Z,34nm,18.3s,baz=230,slow=39
ILAR Eielson Array 51.20 329 P **P 06 25 56.3 +0.7**
ILAR Eielson Array 51.20 329 PcP **PcP 06 27 11.3 +0.7**
W24A Lazy 6 Ranch, 51.21 279 ⇓P **P 06 25 57.3 +0.9**
baz=51,SNR=13
229A Bryant Ranch, 51.31 273 ⇑P **P 06 25 57.5 +0.5**
baz=51
330A Mertzon 51.33 272 ⇑P **P 06 25 57.6 +0.6**
baz=51
532A Rocksprings 51.48 270 ⇑P **P 06 25 58.6 +0.5**
baz=51
431A Sonora 51.50 271 ⇓P **P 06 25 58.6 +0.2**
baz=51
Y25A Mesa, Roswell 51.67 277 ⇓P **P 06 26 00.6 +0.9**
baz=52
W23A Werner Place, 51.69 280 ⇓P **P 06 26 00.8 +0.9**
baz=52
Z26A Caprock 51.70 276 ⇑P **P 06 26 00.6 +0.7**
baz=52
127A Arkansas Junct 51.74 275 ⇑P **P 06 26 00.7 +0.5**
baz=52
329A Wagon Wheel Ra 51.76 273 ⇑P **P 06 26 00.7 +0.4**
baz=52
430A Baggett Ranch, 51.80 272 ⇑P **P 06 26 01.3 +0.7**
baz=52
531A Rocksprings 51.84 271 ⇓P **P 06 26 01.2 +0.3**
baz=52
632A Uvalde 51.85 270 ⇑P **P 06 26 02.1 +1.1**
baz=52
Y24A Capitan 52.12 278 ⇑P **P 06 26 04.2 +1.1**
baz=52,SNR=5.1
Z25A Roswell 52.14 277 ⇓P **P 06 26 04.2 +1.1**
baz=52
DUG Dugway 52.17 289 ⇓P **P 06 26 03.9 +0.6**
baz=52
429A Davenport Ranc 52.32 272 ⇑P **P 06 26 04.4 -0.1**
baz=52,SNR=6.5
530A J-C Ranch, Com 52.32 271 ⇑P **P 06 26 04.6 +0.1**
baz=52
328A Wristen Ranch, 52.33 274 ⇓P **P 06 26 04.5 -0.1**
baz=52
631A Perdido Creek 52.39 270 ⇑P **P 06 26 05.4 +0.4**
baz=52
Y23A Lovelace Mesa, 52.48 278 ⇓P **P 06 26 06.8 +1.0**
baz=52
Z24A Sheeppen Canyo 52.49 277 ⇓P **P 06 26 06.6 +0.7**
baz=52
125A Gardner Draw, 52.54 276 ⇓P **P 06 26 06.8 +0.7**
baz=52
DBIC Dimbokro 52.59 141 P **P 06 26 06.7 +0.2**
DBIC Dimbokro 52.59 141 P **P 06 26 06.7 +0.2**
comp=Z,6.8nm,1.1s,baz=333,slow=8.2,SNR=5.0
DBIC LR LR 06 45 13.7
comp=Z,64nm,19.1s,baz=79,slow=32
DBIC Dimbokro 52.59 141 P **P 06 26 06.7 +0.2**
428A Kincaid Ranch, 52.72 273 ⇓P **P 06 26 07.6 +0.2**
baz=53
529A Stev Forest Ra 52.87 272 ⇑P **P 06 26 08.5 0.0**
baz=53,SNR=7.1
124A Stringfield Ra 52.98 277 ⇓P **P 06 26 09.3 -0.3**
baz=53,SNR=5.2
Y22A Socorro 53.02 279 ⇓P **P 06 26 10.7 +1.0**
baz=53
225A Deer Hill, Car 53.02 276 ⇓P **P 06 26 09.3 -0.5**
baz=53
Z23A Rita Site, Whi 53.05 278 ⇑P **P 06 26 10.8 +0.8**
baz=53
427A Hayter Ranch, 53.06 274 ⇑P **P 06 26 10.6 +0.6**
baz=53
326A Caldwell Ranch 53.08 274 ⇑P **P 06 26 10.5 +0.4**
baz=53
MMAI Mount Meron Ar 53.15 82 LR LR 06 48 54.3
comp=Z,64nm,20.0s,baz=160,slow=36
X21A Alamocita Cree 53.15 280 ⇑P **P 06 26 12.1 +1.3**
baz=53
528A Cox Ranch, San 53.19 273 ⇑P **P 06 26 12.7 +1.7**
baz=53
Y21A Point of Rocks 53.39 280 ⇓P **P 06 26 14.0 +1.4**
baz=53
Z22A Elephant Butte 53.49 278 ⇓P **P 06 26 14.6 +1.4**
baz=53
X20A Quemado 53.51 281 ⇑P **P 06 26 14.7 +1.3**
baz=53
426A McDonald Obser 53.57 274 ⇓P **P 06 26 14.6 +0.7**
baz=53
GNI Garni 53.69 70 LR LR 06 48 40.2
comp=Z,62nm,19.9s,baz=279,slow=36
527A Woodward Ranch 53.69 273 ⇓P **P 06 26 15.3 +0.6**
baz=54
628A Black Gap, Mar 53.73 272 ⇑P **P 06 26 15.7 +0.8**
baz=54
AKTO Aktyubinsk 53.76 52 LR LR 06 49 20.2
comp=Z,36nm,18.6s,baz=316,slow=36
Y20A Horse Springs, 53.88 280 ⇓P **P 06 26 17.8 +1.7**
baz=54
Z21A St. Cloud Mine 53.88 279 ⇑P **P 06 26 17.6 +1.5**
baz=54
WVOR Wild Horse Val 53.93 295 *eP* **P 06 26 17.8 +1.6**
WVOR pmax pmax
comp=Z,93nm,3.0s
WVOR Wild Horse Val 53.93 295 *eP* **P 06 26 17.8 +1.6**
comp=Z,93nm,3.0s
WVOR Wild Horse Val 53.93 295 *eP* **P 06 26 17.8 +1.6**
comp=Z,93nm,3.0s
526A Mary Lane Ranc 54.04 273 ⇑P **P 06 26 18.3 +1.1**
baz=54
627A Terlingua Ranc 54.06 272 ⇑P **P 06 26 17.7 +0.4**
baz=54,SNR=11
425A Indio Mountain 54.06 275 ⇓P **P 06 26 18.3 +1.0**
baz=54
TXAR Lajitas Array 54.31 273 P **P 06 26 19.6 +0.5**
TXAR Lajitas Array 54.31 273 P **P 06 26 19.6 +0.5**
comp=Z,1.1nm,0.8s,baz=56,slow=9.0,SNR=12
TXAR LR LR 06 48 15.6
comp=Z,62nm,19.2s,baz=180,slow=35
TXAR Lajitas Array 54.31 273 P **P 06 26 19.6 +0.5**
X18A Snowflake 54.37 282 ⇓P **P 06 26 20.9 +1.2**
baz=54
U15A North Rim 54.43 285 ⇑P **P 06 26 20.5 +0.3**
baz=54
626A Big Bend Ranch 54.43 273 ⇑P **P 06 26 21.2 +1.2**
baz=54
121A Cookes Peak, D 54.49 278 ⇓P **P 06 26 21.4 +0.9**
baz=54
120A U Bar Ranch, L 54.99 279 ⇓P **P 06 26 25.2 +1.0**
baz=55
TIXI Tiksi 54.99 6 ⇓ *iP* **P 06 26 23.8 +0.5**
TIXI pmax pmax
comp=Z,3.0nm,1.0s
TIXI Tiksi 54.99 6 *i* P **P 06 26 23.8 +0.5**
comp=Z,3.0nm,1.0s
X16A Lo Mia Camp, P 55.33 283 ⇑P **P 06 26 26.5 -0.1**
baz=55
220A Playas Peak, P 55.38 278 ⇑P **P 06 26 27.5 +0.6**
baz=55
NVAR Mina Array Bea 56.48 291 P **P 06 26 35.2 +0.3**
NVAR Mina Array Bea 56.48 291 P **P 06 26 35.2 +0.3**
comp=Z,0.7nm,0.7s,baz=57,slow=6.6,SNR=4.6
NVAR Mina Array Bea 56.48 291 P **P 06 26 35.2 +0.3**
BRVK Borovoye 57.41 44 ⇑ *iP* **P 06 26 41.8 +0.9**
BRVK pmax pmax
comp=Z,12nm,2.5s
BRVK Borovoye 57.41 44 *i* P **P 06 26 41.8 +0.9**
comp=Z,12nm,2.5s
MPMC Manual Prospec 57.68 288 ⇑P **P 06 26 43.9 +0.6**
baz=58
113A Mohawk Valley, 57.86 283 ⇑P **P 06 26 45.9 +1.5**
baz=58
214A Organ Pipe Nat 57.88 282 ⇑P **P 06 26 46.2 +1.6**
baz=58
BC3 Big Chuckawall 58.22 285 ⇑P **P 06 26 48.3 +1.3**
baz=58
PFO Pinyon Flat Ob 58.83 286 ⇑P **P 06 26 52.9 +1.6**
baz=59
MONP Monument Peak 59.33 285 ⇑P **P 06 26 56.1 +1.2**
baz=59
ZALV Zalesovo Beam 62.28 35 *i* P **P 06 27 14.8 +0.4**
ZALV pmax pmax
comp=Z,1.0nm,0.4s
ZALV Zalesovo Beam 62.28 35 P **P 06 27 14.3 -0.1**
ZALV Zalesovo Beam 62.28 35 P **P 06 27 14.3 -0.1**
comp=Z,0.7nm,0.4s,baz=320,slow=6.0,SNR=4.6
ZALV Zalesovo Beam 62.28 35 P **P 06 27 14.3 -0.1**
KURK Kurchatov 62.56 41 *eP* **P 06 27 16.5 +0.2**
KURK pmax pmax
comp=Z,2.0nm,0.8s
KURK Kurchatov 62.56 41 *eP* **P 06 27 16.1 -0.2**
comp=Z,3.1nm,1.0s
KURK Kurchatov 62.56 41 *eP* **P 06 27 16.5 +0.2**
comp=Z,2.0nm,0.8s
EKS2 Erkin-Say 66.83 49 *eP* **P 06 27 45.6 +1.2**
EKS2 pmax pmax
comp=Z,5.0nm,1.0s
EKS2 Erkin-Say 66.83 49 *eP* **P 06 27 45.6 +1.2**
comp=Z,4.6nm,1.0s
EKS2 Erkin-Say 66.83 49 *eP* **P 06 27 45.6 +1.2**
comp=Z,5.0nm,1.0s
MK31 Makanchi Array 67.16 41 *eP* **P 06 27 46.2 -0.2**
MK31 Makanchi Array 67.16 41 *eP* **P 06 27 46.2 -0.2**
MK31 Makanchi Array 67.16 41 *eP* **P 06 27 46.2 -0.2**
MKAR Makanchi Array 67.16 41 P **P 06 27 46.2 -0.2**
MKAR Makanchi Array 67.16 41 P **P 06 27 46.2 -0.2**
MKAR Makanchi Array 67.16 41 P **P 06 27 46.2 -0.2**
comp=Z,2.1nm,0.7s,baz=336,slow=5.6,SNR=23
MKAR Makanchi Array 67.16 41 P **P 06 27 46.2 -0.2**
AAK Ala-Archa 67.17 49 *eP* **P 06 27 47.4 +0.7**
AAK pmax pmax
comp=Z,18nm,2.5s
AAK Ala-Archa 67.17 49 *eP* **P 06 27 47.4 +0.7**
comp=Z,18nm,2.5s
WMQ Urumqi 71.75 40 *eP* **P 06 28 16.8 +2.0**
WMQ pP **pP 06 28 23.5 +2.8**
WMQ pmax pmax
comp=Z,11nm,0.6s
WMQ pmax pmax
comp=Z,88nm,3.5s
PETK Petropavlovsk- 73.54 352 LR LR 07 01 57.4
comp=Z,39nm,18.1s,baz=256,slow=37
SONM Songino Array 74.25 26 P **P 06 28 29.6 -0.1**
SONM Songino Array 74.25 26 P **P 06 28 29.6 -0.1**
comp=Z,1.3nm,0.7s,baz=329,slow=6.1,SNR=7.2
SONM Songino Array 74.25 26 P **P 06 28 29.6 -0.1**
GTA Gaotai 79.98 34 *eP* **P 06 29 02.0 +0.1**
GTA pP **pP 06 29 07.0 -0.9**
GTA sP **sP 06 29 09.0 -1.0**
GTA pmax pmax
comp=Z,3.0nm,1.1s
MDJ Mudanjiang 81.75 11 P **P 06 29 10.5 -0.6**
MDJ pmax pmax
comp=Z,4.0nm,0.7s
MDJ pmax pmax
comp=Z,36nm,5.2s
CN2 Changchun 82.02 14 *eP* **P 06 29 12.3 -0.2**
HHC Hu-ho-hao-te 82.10 25 *eP* P 06 29 10.3 -2.9
HHC pP pP 06 29 15.3 -3.8
HHC sP sP 06 29 17.8 -3.5
HHC PP **PP 06 32 20.0 -0.4**
HHC S **S 06 39 22.5 -4.4**
HHC SKS **SKSac 06 39 26.5 -6.2**
HHC pmax pmax
comp=Z,27nm,0.8s
HHC pmax pmax
comp=Z,160nm,5.4s
HHC LR LR
comp=N,270nm,17.5s
HHC LR LR
comp=E,290nm,16.9s
HHC LR LR
comp=Z,190nm,16.7s
LZH Lanzhou 84.32 32 *eP* **P 06 29 24.3 -0.5**
LZH pP **pP 06 29 30.0 -0.8**
LZH sP **sP 06 29 32.8 -0.1**
LZH PP **PP 06 32 35.5 -3.3**
LZH *e*S **SKSac 06 39 46.0 -1.6**
LZH SS **SS 06 45 19.3 +1.3**
LZH pmax pmax
comp=Z,19nm,1.2s
LZH pmax pmax
comp=Z,68nm,5.2s
LZH LR LR
comp=N,250nm,18.4s
LZH LR LR
comp=E,290nm,17.2s
LZH LR LR
comp=Z,390nm,19.0s
CD2 Chengdu 89.03 34 *eP* **P 06 29 47.0 -0.8**
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,30nm,5.2s
NJ2 Nanjing 92.22 22 *eP* **P 06 30 01.8 -0.7**
NJ2 pmax pmax
comp=Z,10.0nm,0.8s
KMI Kunming 93.96 37 P **P 06 30 09.8 -1.1**
KMI pmax pmax
comp=Z,4.0nm,1.3s
GYA Guiyang 94.11 34 *eP* **P 06 30 12.0 +0.6**
GYA pmax pmax
comp=Z,10.0nm,1.0s
WRA Warramunga Arr 145.90 17 PKPbc **PKPdf 06 36 31.5 0.0**
WRA Warramunga Arr 145.90 17 PKPbc **PKPdf 06 36 31.5 0.0**
comp=Z,1.3nm,0.6s,baz=344,slow=3.5,SNR=13
ASAR Alice Springs 149.44 20 PKPbc **PKPbc 06 36 40.7 -1.0**
ASAR Alice Springs 149.44 20 PKPbc **PKPbc 06 36 40.7 -1.0**
comp=Z,1.8nm,0.7s,baz=354,slow=2.6,SNR=19
ASAR Alice Springs 149.44 20 PKPbc **PKPbc 06 36 40.7 -1.0**

IDC 26 06:23:07.2±6.3, 23°.36S×178°.20W, *h*0km, mb4.1/4, mb1 4.3/4, mb1mx3.8/19, mbtmp4.1/4, Error ellipse: s-maj=162.7km s-min=97.2km az=140.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**36.45**	**248**	P	P	06 30 13.9	0.0
	1.6nm,0.5s,baz=86,slow=9.9,SNR=10.0						
ASAR	**Alice Springs**	**43.75**	**260**	P	P	06 31 14.5	-0.2
	0.8nm,0.5s,baz=88,slow=6.5,SNR=4.6						
WRA	**Warramunga Arr**	**44.09**	**265**	P	P	06 31 17.7	+0.2
	3.0nm,0.5s,baz=104,slow=8.1,SNR=26						
FITZ	**Fitzroy Crossi**	**52.52**	**265**	P	P	06 32 21.9	-0.7
	1.7nm,0.6s,baz=128,slow=8.4,SNR=7.0						
HFS	**Hagfors**	**142.32**	**350**	PKP	PKPdf	06 42 41.5	+0.3
	1.3nm,0.7s,baz=64,slow=6.6,SNR=4.8						

*ISCJB **26** 06:38:47.8±1.3, 12°.7N±0°.1×57°.8E±0°.2, h10km, mb3.9/13, MS3.0/3, Error ellipse: s-maj=35.8km s-min=16.6km az=156.7*
*IDC **26** 06:38:47.9±1.7, 12°.66N×57°.87E, h0km, mb3.9/11, mb1 4.0/11, mb1mx3.8/28, mbtmp3.9/11, MS3.1/3, Ms1 3.1/3, ms1mx2.4/40, Error ellipse: s-maj=48.3km s-min=22.7km az=64.0*
*NEIC **26** 06:38:49.6±1.0, 12°.67N×57°.85E, h10km, mb4.2/3, Error ellipse: s-maj=27.1km s-min=12.5km az=66.0*
ISC 26 06:38:49.5±2.0, 12°.7N±0°.2×57°.9E±0°.3, h10km, n28, σ0s64/25, mb4.0/13, MS3.0/3, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EIL	**Elat**	**27.17**	**312**	LR	LR	06 54 50.3	
	comp=Z,39nm,20.7s,baz=312,slow=35						
ASF	**Jabal al Asfar**	**27.34**	**319**	LR	LR	06 56 04.0	
	comp=Z,29nm,21.4s,baz=155,slow=38						
GNI	**Garni**	**29.72**	**339**	LR	LR	06 58 24.9	
	comp=Z,43nm,18.2s,baz=207,slow=40						
MK31	**Makanchi Array**	**39.75**	**26**	*eP*	**P**	**06 46 22.8**	**+0.4**
MKAR	**Makanchi Array**	**39.75**	**26**	P	**P**	**06 46 23.0**	**+0.6**
MKAR	**Makanchi Array**	**39.75**	**26**	P	**P**	**06 46 23.0**	**+0.6**
	0.4nm,0.5s,baz=207,slow=8.0,SNR=5.6						
CMAR	**Chiang Mai Arr**	**39.92**	**76**	P	**P**	**06 46 24.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**39.92**	**76**	P	**P**	**06 46 24.5**	**+0.3**
	1.2nm,0.3s,baz=281,slow=9.8,SNR=4.7						
KURBB	**Kurchatov Array**	**41.44**	**20**	P	**P**	**06 46 37.1**	**+0.8**
	0.3nm,0.3s,baz=218,slow=8.4,SNR=7.7						
KURK	**Kurchatov**	**41.55**	**20**	*eP*	**P**	**06 46 38.4**	**+1.2**
	1.6nm,0.8s						
ZAA0	**Zalesovo Array**	**46.37**	**22**	*eP*	**P**	**06 47 15.9**	**+0.1**
ZALV	**Zalesovo Beam**	**46.37**	**22**	P	**P**	**06 47 15.4**	**-0.4**
ZALV	**Zalesovo Beam**	**46.37**	**22**	P	**P**	**06 47 15.4**	**-0.4**
	2.4nm,0.8s,baz=223,slow=7.4,SNR=8.6						
SONM	**Songino Array**	**53.38**	**39**	P	**P**	**06 48 09.7**	**+0.2**
SONM	**Songino Array**	**53.38**	**39**	P	**P**	**06 48 09.7**	**+0.2**
	0.6nm,0.8s,baz=232,slow=7.1,SNR=4.3						
FINES	**FINESS Array B**	**53.87**	**342**	P	**P**	**06 48 12.6**	**0.0**
FINES	**FINESS Array B**	**53.87**	**342**	P	**P**	**06 48 12.6**	**0.0**
	1.6nm,0.7s,baz=140,slow=12,SNR=4.7						
ARCES	**ARCESS Array B**	**60.40**	**347**	P	**P**	**06 48 58.6**	**-0.1**
ARCES	**ARCESS Array B**	**60.40**	**347**	P	**P**	**06 48 58.6**	**-0.1**
	2.4nm,0.8s,baz=138,slow=7.0,SNR=3.7						
KSAR	**Wonju Array Be**	**66.59**	**55**	P	**P**	**06 49 38.9**	**-1.3**
KSRS	**Korea Array**	**66.62**	**55**	P	**P**	**06 49 38.9**	**-1.5**
	0.9nm,0.7s,baz=271,slow=8.9,SNR=3.8						
FITZ	**Fitzroy Crossi**	**73.51**	**113**	*eP*	**P**	**06 50 23.5**	**+0.5**
	3.6nm,1.1s						
FITZ	**Fitzroy Crossi**	**73.51**	**113**	P	**P**	**06 50 23.2**	**+0.2**
	1.6nm,0.8s,baz=247,slow=7.7,SNR=3.6						
WRA	**Warramunga Arr**	**81.90**	**112**	P	**P**	**06 51 09.8**	**0.0**
WRA	**Warramunga Arr**	**81.90**	**112**	P	**P**	**06 51 09.8**	**0.0**
	1.0nm,0.7s,baz=297,slow=4.3,SNR=10.0						
WRAB	**Tennant Creek**	**81.91**	**112**	*eP*	**P**	**06 51 10.2**	**+0.3**
	1.7nm,0.7s						
ASAR	**Alice Springs**	**82.59**	**116**	P	**P**	**06 51 14.0**	**+0.6**
ASAR	**Alice Springs**	**82.59**	**116**	P	**P**	**06 51 14.0**	**+0.6**
	1.0nm,0.6s,baz=291,slow=5.1,SNR=11						

*ISCJB **26** 07:14:30.2±0.2, 42°.56N±0°.02×13°.16E±0°.02, h13km±2km, Error ellipse: s-maj=3.2km s-min=2.6km az=32.3*
*LDG **26** 07:14:30.4±0.1, 42°.56N×13°.12E, h2km, Ml3.3/8, Error ellipse: s-maj=4.1km s-min=2.4km az=46.0*
*ROM **26** 07:14:30.1±0.1, 42°.56N×13°.19E, h10km, Ml3.5/23, Error ellipse: s-maj=1.0km s-min=0.7km az=61.0*
*CSEM **26** 07:14:30.7±0.1, 42°.56N×13°.16E, h2km, ML3.7/12, Error ellipse: s-maj=3.0km s-min=2.4km az=38.0*
*PRU **26** 07:14:32.2, 42°.57N×13°.43E, h6km*
ISC 26 07:14:30.4±0.8, 42°.56N±0°.02×13°.15E±0°.02, h14km±4km, n115, σ1s71/162, 7C-5D, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.09**	**299**	Pg	**Pg**	**07 14 33.7**	**+0.1**
LNSS				Sg	**Sg**	**07 14 36.0**	**+0.3**
	53μm,0.4s						
LNSS	**Leonessa**	**0.09**	**299**	Pg	**Pg**	**07 14 33.7**	**+0.1**

LNSS					Sg	**Sg**	07 14 36.0	+0.3
	53µm,0.4s								
CAMP	**Campotosto**	**0.19**	**96**	Pg	**Pg**	07 14 34.3	-0.6		
CAMP					Sg	**Sg**	07 14 37.1	-0.8	
	14µm,0.4s								
CAMP	**Campotosto**	**0.19**	**96**	Pg	**Pg**	07 14 34.3	-0.6		
CAMP					Sg	**Sg**	07 14 37.1	-0.8	
	14µm,0.4s								
GAVE	**Gavelli**	**0.23**	**305**	Pg	**Pg**	07 14 36.0	+0.5		
GAVE	**Gavelli**	**0.23**	**305**	Pg	**Pg**	07 14 36.0	+0.5		
AQU	**L'Aquila**	**0.28**	**138**	Pg	**Pg**	07 14 36.1	-0.1		
AQU					Sg	**Sg**	07 14 40.7	+0.6	
	8µm,0.4s								
AQU	**L'Aquila**	**0.28**	**138**	Pg	**Pg**	07 14 36.1	-0.1		
AQU					Sg	**Sg**	07 14 40.7	+0.6	
	8µm,0.4s								
NRCA	**Norcia**	**0.28**	**354**	Pg	**Pg**	07 14 36.1	-0.2		
NRCA					Sg	**Sg**	07 14 40.6	+0.3	
NRCA	**Norcia**	**0.28**	**354**	Pg	**Pg**	07 14 36.1	-0.2		
NRCA					Sg	**Sg**	07 14 40.6	+0.3	
FIAM	**Fiamignano**	**0.29**	**185**	Pg	**Pg**	07 14 36.9	+0.4		
FIAM					Sg	**Sg**	07 14 41.7	+1.1	
	5µm,0.3s								
FIAM	**Fiamignano**	**0.29**	**185**	Pg	**Pg**	07 14 36.9	+0.4		
FIAM					Sg	**Sg**	07 14 41.7	+1.1	
	5µm,0.3s								
TERO	**Teramo**	**0.34**	**79**	Pg	**Pg**	07 14 36.5	-0.9		
TERO					Sg	**Sg**	07 14 41.2	-0.9	
TERO	**Teramo**	**0.34**	**79**	Pg	**Pg**	07 14 36.5	-0.9		
TERO					Sg	**Sg**	07 14 41.2	-0.9	
MNS	**Montasola**	**0.39**	**244**	Pg	**Pg**	07 14 38.8	+0.6		
MNS					Sg	**Sb**	07 14 45.3	+0.3	
	2µm,0.4s								
MNS	**Montasola**	**0.39**	**244**	Pg	**Pg**	07 14 38.8	+0.6		
MNS					Sg	**Sb**	07 14 45.3	+0.3	
	2µm,0.4s								
CESX	**Cesi**	**0.42**	**277**	Pg	**Pg**	07 14 39.3	+0.4		
CESX					Sg	**Sb**	07 14 46.5	+0.5	
	3µm,0.5s								
CESX	**Cesi**	**0.42**	**277**	Pg	**Pg**	07 14 39.3	+0.4		
CESX					Sg	**Sb**	07 14 46.5	+0.5	
	3µm,0.5s								
FDMO	**Fiordimonte**	**0.48**	**354**	Pg	**Pg**	07 14 39.7	-0.2		
FDMO					Sg	**Sg**	07 14 47.1	+0.7	
	1µm,0.3s								
FDMO	**Fiordimonte**	**0.48**	**354**	Pg	**Pg**	07 14 39.7	-0.2		
FDMO					Sg	**Sg**	07 14 47.1	+0.7	
	1µm,0.3s								
CESI	**CESI - Serrava**	**0.48**	**338**	Pg	**Pg**	07 14 40.0	0.0		
CESI					Sg	**Sb**	07 14 47.6	-0.1	
	786nm,0.5s								
CESI	**CESI - Serrava**	**0.48**	**338**	Pg	**Pg**	07 14 40.0	0.0		
CESI					Sg	**Sb**	07 14 47.6	-0.1	
	786nm,0.5s								
VCEL	**Villa Celiera**	**0.54**	**107**	Pg	**Pg**	07 14 40.7	-0.3		
VCEL					Sg	**Sg**	07 14 48.9	+0.8	
VCEL	**Villa Celiera**	**0.54**	**107**	Pg	**Pg**	07 14 40.7	-0.3		
VCEL					Sg	**Sg**	07 14 48.9	+0.8	
OFFI	**Offida**	**0.55**	**46**	Pg	**Pg**	07 14 41.3	+0.2		
	12µm,0.5s								
OFFI	**Offida**	**0.55**	**46**	Pg	**Pg**	07 14 41.3	+0.2		
	12µm,0.5s								
PTQR	**Pietraquaria**	**0.57**	**161**	Pg	**Pg**	07 14 41.2	-0.3		
	428nm,0.8s								
PTQR	**Pietraquaria**	**0.57**	**161**	Pg	**Pg**	07 14 41.2	-0.3		
	428nm,0.8s								
ASSB	**Assisi San Ben**	**0.61**	**323**	Pg	**Pg**	07 14 42.0	-0.3		
	2µm,0.4s								
ASSB	**Assisi San Ben**	**0.61**	**323**	Pg	**Pg**	07 14 42.0	-0.3		
	2µm,0.4s								
MTCE	**Montecelio**	**0.61**	**210**	Pg	**Pg**	07 14 42.3	-0.1		
	1µm,0.6s								
MTCE	**Montecelio**	**0.61**	**210**	Pg	**Pg**	07 14 42.3	-0.1		
	1µm,0.6s								
TRTR	**Tortoreto Alta**	**0.62**	**66**	Pg	**Pg**	07 14 42.7	+0.3		
	6µm,0.5s								
TRTR	**Tortoreto Alta**	**0.62**	**66**	Pg	**Pg**	07 14 42.7	+0.3		
	6µm,0.5s								
CERT	**Cerreto**	**0.62**	**192**	Pg	**Pg**	07 14 42.2	-0.3		
	4µm,0.5s								
CERT	**Cerreto**	**0.62**	**192**	Pg	**Pg**	07 14 42.2	-0.3		
	4µm,0.5s								
SNTG	**Esanatoglia**	**0.71**	**348**	Pg	**Pg**	07 14 43.8	-0.5		
SNTG	**Esanatoglia**	**0.71**	**348**	Pg	**Pg**	07 14 43.8	-0.5		
GUMA	**Gualdo di Mace**	**0.77**	**49**	Pg	Pg	07 14 40.7	-4.6		
	12µm,0.7s								
GUAR	**Guarcino**	**0.77**	**171**	Pg	**Pg**	07 14 45.4	0.0		
	1µm,0.7s								
GUAR	**Guarcino**	**0.77**	**171**	Pg	**Pg**	07 14 45.4	0.0		
	1µm,0.7s								
INTR	**Introdacqua**	**0.78**	**134**	Pg	**Pg**	07 14 44.6	-1.0		
	2µm,0.7s								
INTR	**Introdacqua**	**0.78**	**134**	Pg	**Pg**	07 14 44.6	-1.0		
	2µm,0.7s								
CING	**Cingoli**	**0.82**	**2**	Pg	**Pg**	07 14 45.7	-0.6		
	1µm,0.4s								
CING	**Cingoli**	**0.82**	**2**	Pg	**Pg**	07 14 45.7	-0.6		
	1µm,0.4s								
MURB	**Monte Urbino**	**0.84**	**327**	Pg	**Pg**	07 14 46.8	+0.1		
	2µm,0.3s								
MURB	**Monte Urbino**	**0.84**	**327**	Pg	**Pg**	07 14 46.8	+0.1		
	2µm,0.3s								
MGAB	**Montegabbione**	**0.84**	**295**	Pg	**Pg**	07 14 46.8	0.0		
MGAB	**Montegabbione**	**0.84**	**295**	Pg	**Pg**	07 14 46.8	0.0		
ARVD	**Arcevia**	**0.95**	**351**	Pg	**Pb**	07 14 48.2	-0.5		
	2µm,0.8s								
ARVD	**Arcevia**	**0.95**	**351**	Pg	**Pb**	07 14 48.2	-0.5		
	2µm,0.8s								
SACS	**San Casciano d**	**0.96**	**288**	Pg	**Pg**	07 14 49.3	+0.3		
	1µm,0.8s								
AOI	**Ancona**	**1.05**	**18**	Pg	**Pb**	07 14 49.6	-0.7		
	1µm,0.8s								
AOI	**Ancona**	**1.05**	**18**	Pg	**Pb**	07 14 49.6	-0.7		
	1µm,0.8s								
PIEI	**Pieia**	**1.08**	**335**	Pg	**Pb**	07 14 50.4	-0.5		
	590nm,0.4s								
PIEI	**Pieia**	**1.08**	**335**	Pg	**Pb**	07 14 50.4	-0.5		
	590nm,0.4s								
NVLJ	**Novalja**	**2.36**	**31**	*e*Pn	**Pn**	07 15 09.6	+0.8		
NVLJ					Sn	**Sn**	07 15 39.1	+1.6	
MAIM	**Mastiano**	**2.37**	**306**	P	**Pb**	07 15 11.3	-1.5		
MAIM					S	**Sn**	07 15 39.5	+1.8	
UDBI	**Udbina**	**2.74**	**43**	*e*Pn	**Pn**	07 15 16.6	+2.6		
UDBI					Sn	**Sn**	07 15 49.7	+2.8	
UDBI	**Udbina**	**2.74**	**43**	*e*Pn	**Pn**	07 15 16.5	+2.6		
UDBI					Sn	**Sn**	07 15 49.7	+2.8	
PGF	**Pioggiola**	**3.07**	**271**	*e*Pn	**Pn**	07 15 19.9	+1.4		
PGF					*e*Sn	**Sn**	07 15 52.7	-2.4	
	22nm,0.6s								
PGF	**Pioggiola**	**3.07**	**271**	*e*Pn	**Pn**	07 15 19.9	+1.4		
PGF					*e*Sn	**Sn**	07 15 52.7	-2.4	
	11nm,0.6s								
STON	**Ston**	**3.37**	**83**	*e*Pn	**Pn**	07 15 23.4	+0.9		
STON					Sn	**Sn**	07 16 03.6	+1.3	
STON	**Ston**	**3.37**	**83**	*e*Pn	**Pn**	07 15 23.4	+0.9		
STON					Sn	**Sn**	07 16 03.6	+1.3	
VOY	**Vojsko**	**3.52**	**8**	*e*Pn	**Pn**	07 15 26.4	+1.7		
VOY				*e*		07 15 29.3			
VOY					*e*Sn	**Sn**	07 16 07.9	+1.8	
VOY	**Vojsko**	**3.52**	**8**	*e*Pn	**Pn**	07 15 26.4	+1.7		
VOY					*e*Sn	**Sn**	07 16 07.9	+1.8	
OBKA	**Obir**	**4.08**	**14**⇓	*e*Pn	**Pn**	07 15 35.2	+2.8		
OBKA	**Obir**	**4.08**	**14**	Pn	**Pn**	07 15 35.2	+2.8		
MYKA	**Terra Mystica**	**4.09**	**5**⇓	*e*Pn	**Pn**	07 15 34.6	+2.1		
	13nm,0.5s								
MYKA	**Terra Mystica**	**4.09**	**5**	Pn	**Pn**	07 15 34.6	+2.1		
	13nm,0.5s								
ABTA	**Abfaltersbach**	**4.21**	**354**⇑	*i*Pn	**Pn**	07 15 36.5	+2.2		
	29nm,0.5s								
ABTA				⇑*i*	*i*Sn	**Sn**	07 16 25.6	+2.2	
	24nm,0.5s								
ABTA	**Abfaltersbach**	**4.21**	**354**	Pn	**Pn**	07 15 36.5	+2.2		
	29nm,0.5s								
ABTA					*i*Sn	**Sn**	07 16 25.6	+2.2	
	24nm,0.5s								
SBF	**Sospel**	**4.38**	**289**	*e*Pn	**Pn**	07 15 35.1	-1.4		
SBF					*e*Sn	**Sn**	07 16 23.3	-4.0	
	11nm,0.4s								
SBF	**Sospel**	**4.38**	**289**	*e*Pn	**Pn**	07 15 35.1	-1.4		
KBA	**Koelnbreinsper**	**4.52**	**2**⇑	*i*Pn	**Pn**	07 15 41.6	+3.0		
	15nm,0.6s								
KBA				⇑*i*	*i*Sn	**Sn**	07 16 32.5	+1.4	
	9.8nm,0.3s								
KBA	**Koelnbreinsper**	**4.52**	**2**	Pn	**Pn**	07 15 41.6	+3.0		
	15nm,0.6s								
KBA					Sn	**Sn**	07 16 32.5	+1.4	
	9.8nm,0.3s								
FRF	**La Foret Royal**	**4.87**	**284**	*e*Pn	**Pn**	07 15 42.5	-0.7		
FRF					*e*Sn	**Sn**	07 16 35.9	-3.5	
	4.9nm,0.5s								
FRF	**La Foret Royal**	**4.87**	**284**	*e*Pn	**Pn**	07 15 42.5	-0.7		
LMR	**La Mourre**	**4.94**	**281**	*e*Pn	**Pn**	07 15 44.1	0.0		
LMR	**La Mourre**	**4.94**	**281**	*e*Pn	**Pn**	07 15 44.1	0.0		
ARSA	**Arzberg**	**4.99**	**19**⇑	*i*Pn	**Pn**	07 15 47.4	+2.6		
	2.1nm,0.3s								
ARSA				⇓	*i*Sn	**Sn**	07 16 41.4	-0.9	
	5.7nm,0.4s								
ARSA	**Arzberg**	**4.99**	**19**	Pn	**Pn**	07 15 47.4	+2.6		
	2.1nm,0.3s								
ARSA					Sn	**Sn**	07 16 41.4	-0.9	
	5.7nm,0.4s								
PUK	**Puka**	**5.03**	**94**	*e*PN	**Pn**	07 15 47.6	+2.2		
PUK					*i* SN	**Sn**	07 16 45.0	+1.7	
PUK	**Puka**	**5.03**	**94**	*e*Pn	**Pn**	07 15 47.6	+2.2		
PUK					*i* Sn	**Sn**	07 16 45.0	+1.7	
MBDF	**Montbardon**	**5.11**	**297**	*e*Pn	**Pn**	07 15 46.3	-0.4		
MBDF					*e*Sn	**Sn**	07 16 41.2	-4.4	
	12nm,0.8s								
MBDF	**Montbardon**	**5.11**	**297**	*e*Pn	**Pn**	07 15 46.3	-0.4		
BCI	**Bajram Curri**	**5.12**	**90**	*e*PN	**Pn**	07 15 46.0	-0.7		
BCI	**Bajram Curri**	**5.12**	**90**	*e*Pn	**Pn**	07 15 46.0	-0.7		
DIVS	**Divibare**	**5.22**	**71**	*e*Pn	**Pn**	07 15 50.4	+2.3		
MOA	**Molln**	**5.35**	**8**⇓	*i*Pn	**Pn**	07 15 53.0	+3.2		
	4.7nm,0.5s								
MOA				⇑	*i*Sn	**Sn**	07 16 53.9	+2.7	
	13nm,0.5s								
MOA	**Molln**	**5.35**	**8**	Pn	**Pn**	07 15 53.0	+3.2		
	4.7nm,0.5s								
MOA					Sn	**Sn**	07 16 53.9	+2.7	
	13nm,0.5s								
LPG	**La Plagne**	**5.47**	**305**	*e*Pn	**Pn**	07 15 50.4	-1.3		
PHP	**Peshkopia**	**5.49**	**97**	*e*PN	**Pn**	07 15 54.5	+2.7		
PHP					*i* SN	**Sn**	07 16 50.4	-4.4	
PHP	**Peshkopia**	**5.49**	**97**	*e*Pn	**Pn**	07 15 54.5	+2.7		
GRUS	**Gruza**	**5.69**	**74**	*e*Pn	**Pn**	07 15 57.4	+3.0		
CONA	**Conrad Observa**	**5.70**	**19**⇓	*i*Pn	Pn	07 15 58.1	+3.4		
	3.9nm,0.3s								
CONA				⇑	*i*Sn	**Sn**	07 17 00.1	+0.1	
	9.0nm,0.5s								
CONA	**Conrad Observa**	**5.70**	**19**	Pn	Pn	07 15 58.1	+3.4		
	3.9nm,0.3s								
CONA					Sn	**Sn**	07 17 00.1	+0.1	
	9.0nm,0.5s								
SMRF	**Simiane la Rot**	**5.71**	**287**	*e*P	**Pn**	07 15 57.9	+3.1		
SMRF	**Simiane la Rot**	**5.71**	**287**	*e*P	**Pn**	07 15 57.9	+3.1		
ORIF	**Oris-en-Rattie**	**5.77**	**297**	*e*Pn	**Pn**	07 15 53.7	-2.0		
ORIF	**Oris-en-Rattie**	**5.77**	**297**	*e*P	**Pn**	07 15 58.4	+2.7		
ORIF					*e*Sn	**Sn**	07 16 57.7	-4.0	
	6.9nm,0.5s								
ORIF	**Oris-en-Rattie**	**5.77**	**297**	*e*P	**Pn**	07 15 58.4	+2.7		
SELS	**Selova**	**5.89**	**81**	*e*Pn	**Pn**	07 16 00.0	+2.7		
BARS	**Barje**	**6.39**	**85**	*e*Pn	**Pn**	07 16 06.1	+2.0		
KHC	**Kasperske Hory**	**6.58**	**2**	*e*PN	**Pn**	07 16 08.1	+1.4		
KHC					*e*SN	**Sn**	07 17 19.9	-1.7	
KHC	**Kasperske Hory**	**6.58**	**2**	Pn	**Pn**	07 16 08.1	+1.4		
HINF	**Hinteralfeld**	**6.89**	**322**	*e*Pn	**Pn**	07 16 10.2	-0.7		
HINF					*e*Sn	**Sn**	07 17 24.4	-4.7	
	9.2nm,0.4s								
HINF	**Hinteralfeld**	**6.89**	**322**	*e*Pn	**Pn**	07 16 10.2	-0.7		
CDF	**Champ du Feu**	**7.16**	**327**	*e*Pn	**Pn**	07 16 15.6	+0.8		
CDF					*e*Sn	**Sn**	07 17 30.9	-5.0	
	6.6nm,0.4s								
CDF	**Champ du Feu**	**7.16**	**327**	*e*Pn	**Pn**	07 16 15.6	+0.8		
HAU	**Haudompre**	**7.26**	**321**	*e*Pn	**Pn**	07 16 14.8	-1.2		
HAU	**Haudompre**	**7.26**	**321**	*e*P	Pn	07 16 19.5	+3.5		
HAU					*e*Sn	Sn	07 17 32.4	-5.8	
	8.4nm,0.4s								
HAU	**Haudompre**	**7.26**	**321**	*e*P	Pn	07 16 19.5	+3.5		
PRU	**Pruhonice**	**7.50**	**7**	*e*SN	**Sn**	07 17 41.7	-2.3		
DPC	**Dobruska-Polom**	**8.10**	**15**	*e*SN	**Sn**	07 17 55.6	-3.2		

*ATH **26** 07:16:14.6,37.°65N×22.°51E,h55km±1km, MD2.8/15, ML2.9*
*ISCJB **26** 07:16:15.3±0.5,37.°65N±0.°02×22.°51E±0.°03,h55km±6km, Error ellipse: s-maj=4.4km s-min=3.8km az=135.9*
*THE **26** 07:16:15.9,37.°65N×22.°51E,h49km±1km,ML3.2/7, Error ellipse: s-maj=1.4km s-min=0.5km az=248.0*
*CSEM **26** 07:16:15.7±0.1,37.°65N×22.°51E,h47km±1km, MD2.8, Error ellipse: s-maj=1.7km s-min=1.4km az=51.0*

ISC 26 07:16:15.9±1.2,37.65N±0.02×22.51E±0.02,h49km±7km, n94,σ0942/135, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VLX	**Vlachokerasia**	**0.30**	**200**	P	**Pn**		**07 16 25.0**	**-0.1**
VLX				S	**Sn**		**07 16 31.4**	**-0.2**
VLX	**Vlachokerasia**	**0.30**	**200**	*e*P	**Pn**		**07 16 25.0**	**-0.1**
VLX				*e*S	**Sn**		**07 16 31.4**	**-0.2**
VLX	**Vlachokerasia**	**0.30**	**200**	*e*P	**Pn**		**07 16 25.0**	**-0.1**
VLX				*e*S	**Sn**		**07 16 31.4**	**-0.2**
GUR	**Goura**	**0.31**	**335**	P	**Pn**		**07 16 25.2**	**-0.1**
GUR				S	**Sn**		**07 16 32.0**	**+0.2**
GUR	**Goura**	**0.31**	**335**	*e*P	**Pn**		**07 16 25.2**	**-0.1**
GUR				*e*S	**Sn**		**07 16 32.1**	**+0.2**
GUR	**Goura**	**0.31**	**335**	*e*P	**Pn**		**07 16 25.2**	**-0.1**
GUR				*e*S	**Sn**		**07 16 32.1**	**+0.2**
THAL	**Thalero**	**0.40**	**17**	P	**Pn**		**07 16 26.2**	**+0.2**
THAL	**Thalero**	**0.40**	**17**	P	**Pn**		**07 16 26.2**	**+0.2**
KLV	**Kalavryta, Ach**	**0.48**	**324**	P	**Pn**		**07 16 26.6**	**-0.5**
KLV				S	**Sn**		**07 16 34.8**	**-0.2**
KLV	**Kalavryta, Ach**	**0.48**	**324**	*e*P	**Pn**		**07 16 26.5**	**-0.5**
KLV				*e*S	**Sn**		**07 16 34.8**	**-0.2**
KLV	**Kalavryta, Ach**	**0.48**	**324**	P	**Pn**		**07 16 26.6**	**-0.5**
KLV				*e*S	**Sn**		**07 16 34.8**	**-0.2**
LTK	**Loutraki**	**0.52**	**44**	P	**Pn**		**07 16 27.6**	**+0.2**
LTK	**Loutraki**	**0.52**	**44**	*e*P	**Pn**		**07 16 27.6**	**+0.2**
LTK	**Loutraki**	**0.52**	**44**	*e*P	**Pn**		**07 16 27.6**	**+0.2**
DIDY	**Didyma**	**0.58**	**107**	P	**Pn**		**07 16 27.9**	**-0.4**
DIDY	**Didyma**	**0.58**	**107**	P	**Pn**		**07 16 27.9**	**-0.4**
DID	**Didima**	**0.59**	**104**	P	**Pn**		**07 16 28.0**	**-0.4**
DID				S	**Sn**		**07 16 37.3**	**0.0**
DID	**Didima**	**0.59**	**104**	*e*P	**Pn**		**07 16 27.9**	**-0.4**
DID				*e*S	**Sn**		**07 16 37.8**	**+0.5**
DID	**Didima**	**0.59**	**104**	P	**Pn**		**07 16 28.0**	**-0.4**
DID				*e*S	**Sn**		**07 16 37.8**	**+0.5**
AMT	**Artemida-Makis**	**0.65**	**260**	P	**Pn**		**07 16 28.7**	**-0.3**
AMT				S	**Sn**		**07 16 38.4**	**0.0**
AMT	**Artemida-Makis**	**0.65**	**260**	*e*P	**Pn**		**07 16 29.0**	**0.0**
AMT				*e*S	**Sn**		**07 16 39.5**	**+1.1**
AMT	**Artemida-Makis**	**0.65**	**260**	P	**Pn**		**07 16 28.7**	**-0.3**
AMT				*e*S	**Sn**		**07 16 39.5**	**+1.1**
ITM	**Ithomi**	**0.66**	**225**	P	**Pn**		**07 16 29.1**	**-0.1**
ITM	**Ithomi**	**0.66**	**225**	*e*P	**Pn**		**07 16 29.1**	**-0.1**
ITM				*e*S	**Sn**		**07 16 39.3**	**+0.6**
ITM	**Ithomi**	**0.66**	**225**	*e*P	**Pn**		**07 16 29.1**	**-0.1**
ITM				*e*S	**Sn**		**07 16 39.3**	**+0.6**
LAKA	**Lakka**	**0.72**	**325**	P	**Pn**		**07 16 29.3**	**-0.7**
LAKA				S	**Sn**		**07 16 39.7**	**-0.5**
LAKA	**Lakka**	**0.72**	**325**	*e*P	**Pn**		**07 16 29.3**	**-0.7**
LAKA	**Lakka**	**0.72**	**325**	*e*P	**Pn**		**07 16 29.3**	**-0.7**
LAKA				S	**Sn**		**07 16 39.7**	**-0.5**
DSF	**Desfina**	**0.76**	**1**	P	**Pn**		**07 16 30.0**	**-0.5**
DSF				S	**Sn**		**07 16 41.0**	**-0.1**
DSF	**Desfina**	**0.76**	**1**	P	**Pn**		**07 16 30.0**	**-0.5**
NAIG	**Nisos Aigina**	**0.78**	**82**	*e*P	**Pn**		**07 16 30.5**	**-0.2**
NAIG	**Nisos Aigina**	**0.78**	**82**	*e*P	**Pn**		**07 16 30.5**	**-0.2**
TRIZ	**Trizonia**	**0.79**	**334**	P	**Pn**		**07 16 30.3**	**-0.6**
TRIZ				S	**Sn**		**07 16 41.3**	**-0.4**
TRIZ	**Trizonia**	**0.79**	**334**	*e*P	**Pn**		**07 16 30.3**	**-0.6**
TRIZ				*e*S	**Sn**		**07 16 41.8**	**+0.1**
TRIZ	**Trizonia**	**0.79**	**334**	*e*P	**Pn**		**07 16 30.3**	**-0.6**
TRIZ				S	**Sn**		**07 16 41.3**	**-0.4**
KALE	**Kalithea**	**0.80**	**338**	P	**Pn**		**07 16 30.6**	**-0.4**
KALE				S	**Sn**		**07 16 42.0**	**+0.1**
KALE	**Kalithea**	**0.80**	**338**	*e*P	**Pn**		**07 16 30.3**	**-0.7**
KALE				*e*S	**Sn**		**07 16 41.6**	**-0.3**
KALE	**Kalithea**	**0.80**	**338**	*e*P	**Pn**		**07 16 30.3**	**-0.7**
KALE				*e*S	**Sn**		**07 16 41.6**	**-0.3**
DYR	**Agios Nikonas**	**0.90**	**189**	P	**Pn**		**07 16 32.3**	**0.0**
DYR	**Agios Nikonas**	**0.90**	**189**	*e*P	**Pn**		**07 16 32.3**	**0.0**
DYR	**Agios Nikonas**	**0.90**	**189**	*e*P	**Pn**		**07 16 32.3**	**0.0**
EFP	**Efpalio**	**0.91**	**329**	P	**Pn**		**07 16 31.8**	**-0.6**
EFP				S	**Sn**		**07 16 44.6**	**+0.1**
EFP	**Efpalio**	**0.91**	**329**	*e*P	**Pn**		**07 16 31.8**	**-0.6**
EFP	**Efpalio**	**0.91**	**329**	*e*P	**Pn**		**07 16 31.8**	**-0.6**
EFP				S	**Sn**		**07 16 44.6**	**+0.1**
RLS	**Riolos of Patr**	**0.92**	**296**	P	**Pn**		**07 16 32.6**	**+0.1**
RLS	**Riolos of Patr**	**0.92**	**296**	*e*P	**Pn**		**07 16 32.6**	**+0.1**
RLS				*e*S	**Sn**		**07 16 45.2**	**+0.4**
RLS	**Riolos of Patr**	**0.92**	**296**	*e*P	**Pn**		**07 16 32.6**	**+0.1**
RLS				*e*S	**Sn**		**07 16 45.2**	**+0.4**
PYL	**PYLOS**	**0.97**	**219**	P	**Pn**		**07 16 32.7**	**-0.6**
PYL	**PYLOS**	**0.97**	**219**	*e*P	**Pn**		**07 16 32.6**	**-0.7**
PYL	**PYLOS**	**0.97**	**219**	P	**Pn**		**07 16 32.7**	**-0.6**
VLI	**Veliai**	**0.99**	**160**	P	**Pn**		**07 16 32.4**	**-1.1**
VLI	**Veliai**	**0.99**	**160**	*e*P	**Pn**		**07 16 32.4**	**-1.1**
VLI	**Veliai**	**0.99**	**160**	*e*P	**Pn**		**07 16 32.4**	**-1.1**
ATH	**Athens Observa**	**1.01**	**71**	P	**Pn**		**07 16 33.8**	**0.0**
ATH				S	**Sn**		**07 16 47.3**	**+0.4**
ATH	**Athens Observa**	**1.01**	**71**	*e*P	**Pn**		**07 16 33.7**	**0.0**
ATH				*e*S	**Sn**		**07 16 47.2**	**+0.4**
ATH	**Athens Observa**	**1.01**	**71**	*e*P	**Pn**		**07 16 33.7**	**0.0**
ATH				*e*S	**Sn**		**07 16 47.2**	**+0.4**
AXS	**Araxos**	**1.05**	**302**	P	**Pn**		**07 16 34.4**	**+0.1**
AXS	**Araxos**	**1.05**	**302**	P	**Pn**		**07 16 34.4**	**+0.1**
ATHU	**Athens Univers**	**1.06**	**72**	P	**Pn**		**07 16 34.1**	**-0.3**
ATHU	**Athens Univers**	**1.06**	**72**	P	**Pn**		**07 16 34.1**	**-0.3**
LKR	**Lokris**	**1.07**	**21**	*e*P	**Pn**		**07 16 34.2**	**-0.4**
LKR	**Lokris**	**1.07**	**21**	*e*P	**Pn**		**07 16 34.2**	**-0.4**
ATAL	**Atalanti**	**1.11**	**21**	P	**Pn**		**07 16 34.9**	**-0.3**
ATAL	**Atalanti**	**1.11**	**21**	P	**Pn**		**07 16 34.9**	**-0.3**
AXAR	**Agios Charalam**	**1.12**	**6**	P	**Pn**		**07 16 35.3**	**0.0**
AXAR	**Agios Charalam**	**1.12**	**6**	P	**Pn**		**07 16 35.3**	**0.0**
PTL	**Penteli**	**1.14**	**69**	P	**Pn**		**07 16 35.5**	**-0.1**
PTL				S	**Sn**		**07 16 50.2**	**0.0**
PTL	**Penteli**	**1.14**	**69**	*e*P	**Pn**		**07 16 35.4**	**-0.1**
PTL	**Penteli**	**1.14**	**69**	P	**Pn**		**07 16 35.5**	**-0.1**
PTL				S	**Sn**		**07 16 50.2**	**0.0**
SMIA	**Simia**	**1.34**	**24**	P	**Pn**		**07 16 38.3**	**0.0**
SMIA	**Simia**	**1.34**	**24**	P	**Pn**		**07 16 38.3**	**0.0**
MRKA	**Markates**	**1.35**	**39**	P	**Pn**		**07 16 38.4**	**0.0**
MRKA	**Markates**	**1.35**	**39**	P	**Pn**		**07 16 38.4**	**0.0**
AGG	**Agios Georgios**	**1.38**	**354**	P	**Pn**		**07 16 38.5**	**-0.3**
AGG				S	**Sn**		**07 16 56.2**	**+0.3**
AGG	**Agios Georgios**	**1.38**	**354**	*e*P	**Pn**		**07 16 37.6**	**-1.2**
AGG	**Agios Georgios**	**1.38**	**354**	P	**Pn**		**07 16 38.5**	**-0.3**
AGG				S	**Sn**		**07 16 56.2**	**+0.3**
EVR	**Evrytania**	**1.38**	**337**	P	**Pn

CELP	**Cerrillos**	**1.52 187**	⇑*e*P	Pn	07 38 57.2	-3.5
CELP	**Cerrillos**	**1.52 187**	⇓*e*P	Pn	07 38 57.2	-3.5
OBIP	**Obispado Ponce**	**1.56 188**	⇑*e*P	Pn	07 38 58.3	-2.9
OBIP	**Obispado Ponce**	**1.56 188**	*e*S	Sn	07 39 17.7	-3.8
OBIP	**Obispado Ponce**	**1.56 188**	⇓*e*P	Pn	07 38 58.3	-2.9
OBIP			*e*S	Sn	07 39 17.7	-3.8
LSP	**Las Mesas**	**1.56 206**	⇓*e*P	Pn	07 38 58.6	-2.7
LSP	**Las Mesas**	**1.56 206**	⇓*e*P	Pn	07 38 58.6	-2.7
CPD	**Cerro la Pandu**	**1.60 164**	⇑*e*P	Pn	07 38 58.4	-3.5
CPD	**Cerro la Pandu**	**1.60 164**	*e*S	Sn	07 39 18.4	-4.4
CPD	**Cerro la Pandu**	**1.60 164**	⇓*e*P	Pn	07 38 58.4	-3.5
CPD			*e*S	Sn	07 39 18.4	-4.4
MTP	**Monte Pirata**	**1.68 152**	⇑*e*P	Pn	07 38 59.3	-3.5
MTP	**Monte Pirata**	**1.68 152**	*e*S	Sn	07 39 20.2	-4.3
MTP	**Monte Pirata**	**1.68 152**	⇓*e*P	Pn	07 38 59.3	-3.5
MTP			*e*S	Sn	07 39 20.2	-4.3
CRPR	**Cabo Rojo, PR**	**1.72 204**	⇑*e*P	Pn	07 39 00.6	-2.9
CRPR	**Cabo Rojo, PR**	**1.72 204**	*e*S	Sn	07 39 22.1	-3.5
CRPR	**Cabo Rojo, PR**	**1.72 204**	⇓*e*P	Pn	07 39 00.6	-2.9
CRPR			*e*S	Sn	07 39 22.1	-3.5
STVI	**Saint Thomas**	**1.82 132**	⇑*e*P	Pn	07 39 02.4	-2.5
STVI	**Saint Thomas**	**1.82 132**	*e*S	Sn	07 39 24.7	-3.4
STVI	**Saint Thomas**	**1.82 132**	⇓*e*P	Pn	07 39 02.4	-2.5
STVI			*e*S	Sn	07 39 24.7	-3.4
SMN1	**Samana, DR**	**2.77 262**	⇑*e*P	Pn	07 39 15.6	-2.3
SMN1			*e*S	Sn	07 39 47.2	-4.3
SDDR	**Presa de Saban**	**4.68 263**	*e*Pn	Pn	07 39 43.9	-0.4

NEIC ***26*** *07:41:22.2, 17.60N×95.23W, h117km, MD4.2(MEX), After MEX.*

MEX 26 07:41:22.2±0.8, 17.60N×95.23W, h117km±12km, MD4.2, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.88**	**61**	*i* P	Pn	07 41 41.4	-1.4
TUIG				*i* S	Sn	07 41 56.8	-1.6
TUIG	**Tuzandepetl**	**0.88**	**61**	*i* P	Pn	07 41 41.4	-1.4
TUIG				*i* S	Sn	07 41 56.8	-1.6
OXX	**Oaxaca**	**1.52**	**250**	*i* P	Pn	07 41 48.7	-1.2
OXX				*i* S	Sn	07 42 09.3	-1.6
OXX	**Oaxaca**	**1.52**	**250**	*i* P	Pn	07 41 48.7	-1.2
OXX				*i* S	Sn	07 42 09.3	-1.6
HUIG	**Huatulco**	**2.01**	**205**	*i* P	Pn	07 41 54.3	-1.3
HUIG				*i* S	Sn	07 42 19.8	-1.3
HUIG	**Huatulco**	**2.01**	**205**	*i* P	Pn	07 41 54.3	-1.3
HUIG				*i* S	Sn	07 42 19.8	-1.3
TGIG		**2.18**	**112**	*i* P	Pn	07 41 57.1	-0.7
TGIG				*i* S	Sn	07 42 22.6	-2.5
TGIG		**2.18**	**112**	*i* P	Pn	07 41 57.1	-0.7
TGIG				*i* S	Sn	07 42 22.6	-2.5
UTMO	**Huajupan**	**2.46**	**276**	*i* P	Pn	07 42 00.9	-0.8
UTMO				*i* S	Sn	07 42 30.3	-1.7
UTMO	**Huajupan**	**2.46**	**276**	*i* P	Pn	07 42 00.9	-0.8
UTMO				*i* S	Sn	07 42 30.3	-1.7
PCIG		**2.70**	**134**	*i* P	Pn	07 42 03.9	-0.5
PCIG				*i* S	Sn	07 42 35.4	-1.5
PCIG		**2.70**	**134**	*i* P	Pn	07 42 03.9	-0.5
PCIG				*i* S	Sn	07 42 35.4	-1.5
PNIG	**Pinotepa**	**3.02**	**247**	*i* P	Pn	07 42 06.7	-2.0
PNIG				*i* S	Sn	07 42 43.6	-1.0
PNIG	**Pinotepa**	**3.02**	**247**	*i* P	Pn	07 42 06.7	-2.0
PNIG				*i* S	Sn	07 42 43.6	-1.0
CCIG	**Comitan**	**3.24**	**113**	*i* P	Pn	07 42 10.9	-0.9
CCIG				*i* S	Sn	07 42 48.1	-2.0
CCIG	**Comitan**	**3.24**	**113**	*i* P	Pn	07 42 10.9	-0.9
CCIG				*i* S	Sn	07 42 48.1	-2.0

NOU ***26*** *07:42:02.8±3.2, 14.11S×167.28E, h30km, MD4.1, ML3.2, MS2.8*

IDC ***26*** *07:42:08.4±2.0, 14.71S×167.35E, h110km±16km, mb4.3/22, mb1 4.4/23, mb1mx4.3/28, mbtmp4.3/23, MS3.3/7, Ms1 3.4/7, ms1mx3.1/30, Error ellipse: s-maj=15.6km s-min=12.4km az=77.0*

ISCJB ***26*** *07:42:09.4±0.4, 14.71S±0.03×167.32E±0.07, h129km, mb4.5/43, Error ellipse: s-maj=9.8km s-min=3.8km az=172.3*

NEIC ***26*** *07:42:14.4±1.5, 14.81S×167.31E, h165km±13km, mb4.8/22, Error ellipse: s-maj=11.1km s-min=8.2km az=65.0*

BJI ***26*** *07:42:17.7, 14.85S×167.20E, h201km, mB4.8/15, mb4.5/24*

DJA ***26*** *07:42:36.0±5.3, 15.S±12.×16.6E±3.5, h274km±37km, M4.6/12, mB4.8/2, mb4.6/12, Mw(mB)4.0/2*

ISC 26 07:42:10.7±0.5, 14.76S±0.05×167.41E±0.08, h129km, n102, σ1°33/113, mb4.7/43, 1C, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.33**	**187**	P	**Pn**	**07 43 54.9**	**-0.4**
DZM				S	**Sn**	**07 45 19.1**	**+2.0**
DZM	**Mont Dzumac**	**7.33**	**187**	P	**Pn**	**07 43 54.9**	**-0.4**
	31nm,0.3s,baz=70,slow=21,SNR=35						
DZM				S	**Sn**	**07 45 19.1**	**+2.0**
	52nm,0.3s,baz=288,slow=23,SNR=7.8						
DZM				LR	LR	07 45 34.4	
	comp=Z,194nm,21.4s,baz=0.0,slow=28						
BAYA	**Yate Dam**	**7.38**	**184**	*e*P	**Pn**	**07 43 54.9**	**-0.8**
BAYA				*e*S	**Sn**	**07 45 20.1**	**+2.1**
BAYA				AMP		07 45 24.9	
	comp=Z,25nm,1.4s						
NOUC	**Port Laguerre**	**7.38**	**188**	*e*P	**Pn**	**07 43 54.9**	**-0.9**
NOUC				*e*S	**Sn**	**07 45 20.0**	**+1.9**
NOUC				AMP		07 45 28.4	
	comp=Z,92nm,10.1s						
LASL	**Noumea**	**7.48**	**186**	*e*S	**Sn**	**07 45 22.5**	**+2.0**
NORM	**Noumea**	**7.48**	**187**	*e*P	**Pn**	**07 43 57.6**	**+0.4**
PLUM	**Mont Dore**	**7.51**	**185**	*e*P	**Pn**	**07 43 57.4**	**-0.1**
PLUM				*e*S	**Sn**	**07 45 24.3**	**+3.0**
MVNO	**Noumea**	**7.53**	**187**	*e*P	**Pn**	**07 43 59.5**	**+1.7**
MVNO				*e*S	**Sn**	**07 45 19.5**	**-2.2**
HNR	**Honiara**	**9.02**	**305**	*e*Pn	Pn	07 44 22.9	+5.1
HNR				*e*Sn	Sn	07 46 02.7	+4.9
HNR	**Honiara**	**9.02**	**305**	P	**Pn**	**07 44 20.5**	**+2.6**
	comp=Z,28nm,0.3s,baz=189,slow=4.0,SNR=3.5						
HNR				S	**Sn**	**07 45 56.3**	**-1.5**
	comp=Z,21nm,0.3s,baz=184,slow=18,SNR=4.0						
HNR				LR	LR	07 46 23.1	
	comp=Z,92nm,22.0s,baz=307,slow=28						
MSVF	**Nonsavu**	**10.64**	**108**	*e*Pn	Pn	07 44 52.1	+12
EIDS	**Eidsvold**	**18.60**	**233**	*e*P	**Pn**	**07 46 19.5**	**-0.4**
	comp=Z,78nm,0.6s						
PMG	**Port Moresby**	**20.50**	**283**	*e*P	**P**	**07 46 38.5**	**-0.2**
	comp=Z,50nm,0.9s						
PMG	**Port Moresby**	**20.50**	**283**	P	**P**	**07 46 38.6**	**-0.2**
	comp=Z,61nm,1.0s,comp=Z,543nm						
PMG	**Port Moresby**	**20.50**	**283**	P	**P**	**07 46 38.5**	**-0.2**
	comp=Z,38nm,0.8s,baz=90,slow=8.1,SNR=14						
CTA	**Charters Tower**	**20.86**	**252**	P	**P**	**07 46 42.4**	**-0.3**
CTA	**Charters Tower**	**20.86**	**252**	P	**P**	**07 46 42.4**	**-0.3**
	comp=Z,46nm,0.8s,baz=82,slow=13,SNR=95						
CTAO	**Charters Tower**	**20.86**	**252**	*e*P	**P**	**07 46 42.6**	**0.0**
	comp=Z,56nm,0.8s						
OUZ	**Omahuta**	**21.12**	**166**	*e*P	**P**	**07 46 47.2**	**+2.0**
	comp=Z,104nm,1.0s						
ARMA	**Armidale**	**21.30**	**220**	*e*P	**P**	**07 46 48.3**	**+1.0**
	comp=Z,24nm,1.4s						
COEN	**Coen**	**23.49**	**269**	*e*P	**P**	**07 47 08.1**	**-1.0**
	comp=Z,169nm,1.3s						
URZ	**Urewera**	**24.93**	**162**	*e*P	**P**	**07 47 23.5**	**+1.6**
	comp=Z,35nm,1.0s						
URZ	**Urewera**	**24.93**	**162**	P	**P**	**07 47 22.8**	**+0.9**
	comp=Z,5.4nm,0.3s,baz=136,slow=13,SNR=9.5						
URZ				LR	LR	07 55 50.2	
	comp=Z,124nm,18.7s,baz=24,slow=33						
RPZ	**Rata Peaks**	**29.03**	**175**	*e*P	**P**	**07 47 59.3**	**+0.7**
	comp=Z,36nm,0.9s						
RPZ	**Rata Peaks**	**29.03**	**175**	P	**P**	**07 47 58.4**	**-0.1**
	comp=Z,24nm,0.8s,baz=68,slow=0.6,SNR=8.0						
STKA	**Stephens Creek**	**29.08**	**230**	*e*P	**P**	**07 47 59.6**	**+0.4**
	comp=Z,5.5nm,0.8s						
STKA	**Stephens Creek**	**29.08**	**230**	P	**P**	**07 47 59.4**	**+0.2**
	comp=Z,26nm,0.7s,baz=41,slow=7.8,SNR=69						
WRAB	**Tennant Creek**	**31.94**	**256**	*e*P	**P**	**07 48 22.4**	**-2.1**
	comp=Z,12nm,1.1s						
WRA	**Warramunga Arr**	**31.95**	**256**	P	**P**	**07 48 22.3**	**-2.3**
WRA	**Warramunga Arr**	**31.95**	**256**	P	**P**	**07 48 22.3**	**-2.3**
	comp=Z,7.9nm,0.9s,baz=86,slow=9.1,SNR=67						
AS31	**Alice Springs**	**32.79**	**249**	*e*P	**P**	**07 48 30.1**	**-1.9**
ASAR	**Alice Springs**	**32.79**	**249**	P	**P**	**07 48 30.1**	**-1.9**
ASAR				PcP	**PcP**	**07 51 13.1**	**-1.2**
ASAR				ScP	**ScP**	**07 54 47.1**	**+0.7**
ASAR	**Alice Springs**	**32.79**	**249**	P	**P**	**07 48 30.1**	**-1.9**
	comp=Z,17nm,0.8s,baz=76,slow=9.1,SNR=211						
ASAR				PcP	**PcP**	**07 51 13.1**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=107,slow=3.1,SNR=4.2						
ASAR				ScP	**ScP**	**07 54 47.1**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=86,slow=2.9,SNR=7.6						
ASAR				LR	LR	08 02 25.5	
	comp=Z,61nm,18.1s,baz=333,slow=37						
BBOO	**Buckleboo**	**33.67**	**232**	*e*P	**P**	**07 48 39.4**	**0.0**
	comp=Z,304nm,0.6s						
FORT	**Forrest**	**39.40**	**239**	*e*P	**P**	**07 49 27.1**	**-1.0**
	comp=Z,70nm,0.8s						
FITZ	**Fitzroy Crossi**	**40.15**	**259**	*e*P	**P**	**07 49 32.9**	**-1.5**
	comp=Z,17nm,0.8s						
FITZ	**Fitzroy Crossi**	**40.15**	**259**	P	**P**	**07 49 32.9**	**-1.5**
	comp=Z,16nm,0.7s,baz=96,slow=9.6,SNR=46						
MBWA	**Marble Bar**	**45.67**	**255**	*e*P	**P**	**07 50 18.2**	**-0.6**
	comp=Z,26nm,0.8s						
KAPI	**Kappang**	**47.85**	**277**	*e*P	**P**	**07 50 34.6**	**-1.2**
	comp=Z,12nm,0.8s						
KAPI	**Kappang**	**47.85**	**277**	P	**P**	**07 50 34.7**	**-1.2**
	comp=Z,14nm,0.7s,baz=124,slow=6.9,SNR=8.0						
NWAO	**Narrogin (SRO)**	**48.85**	**239**	P	**P**	**07 50 41.9**	**-1.5**
NWAO	**Narrogin (SRO)**	**48.85**	**239**	P	**P**	**07 50 41.9**	**-1.5**
	comp=Z,12nm,0.8s,baz=78,slow=6.3,SNR=4.6						
MYLDM	**Lahad Datu**	**52.37**	**289**	P	**P**	07 51 13.4	+3.4
	comp=Z,27nm,1.0s						
KKM	**Kota Kinabalu**	**54.80**	**288**	*e*P	**P**	**07 51 27.9**	**+0.1**
	comp=Z,16nm,0.8s						
KKM	**Kota Kinabalu**	**54.80**	**288**	P	**P**	**07 51 28.7**	**+0.8**
	comp=Z,43nm,1.3s						
JOW	**Kunigami**	**56.16**	**317**	*e*P	**P**	**07 51 37.5**	**+0.3**
	comp=Z,5.5nm,0.7s						
SBUM	**Sibu**	**57.25**	**283**	P	**P**	**07 51 46.4**	**+1.2**
	comp=Z,12nm,1.0s						
KSM	**Kuching**	**58.75**	**281**	*e*P	**P**	**07 51 55.3**	**-0.4**
	comp=Z,7.3nm,0.7s						
KSM	**Kuching**	**58.75**	**281**	P	**P**	**07 51 56.3**	**+0.7**
JNU	**Nakatsue**	**59.02**	**324**	*e*P	**P**	**07 51 56.9**	**-0.3**
	comp=Z,2.4nm,0.7s						
JNU	**Nakatsue**	**59.02**	**324**	P	**P**	**07 51 56.2**	**-1.0**
	comp=Z,5.8nm,0.7s,baz=162,slow=3.2,SNR=4.4						
VNDA	**Vanda**	**62.84**	**181**	*e*P	**P**	**07 52 22.3**	**0.0**
	comp=Z,5.8nm,0.9s						
VNDA	**Vanda**	**62.84**	**181**	P	**P**	**07 52 21.9**	**-0.4**
	comp=Z,4.1nm,0.8s,baz=7.1,slow=6.9,SNR=24						
SBA	**Scott Base**	**63.11**	**180**	*e*P	**P**	**07 52 25.1**	**+1.1**
	comp=Z,19nm,0.8s						
CASY	**Casey**	**63.55**	**202**	*e*P	**P**	**07 52 26.4**	**-0.8**
	comp=Z,7.8nm,0.8s						
KSRS	**Korea Array**	**63.84**	**326**	P	**P**	**07 52 29.1**	**-0.3**
	comp=Z,0.9nm,0.5s,baz=138,slow=8.2,SNR=4.6						
KSAR	**Wonju Array Be**	**63.85**	**326**	P	**P**	**07 52 29.1**	**-0.4**
QIZ	**Qiongzhong**	**65.87**	**299**	P	**P**	**07 52 43.3**	**+0.3**
QIZ				S	S	08 01 13.5	-6.6
USRK	**Ussuriysk Arra**	**66.97**	**333**	P	**P**	**07 52 50.1**	**+0.8**
	comp=Z,2.0nm,1.0s,baz=86,slow=5.9,SNR=5.9						
FX1	**Attu Island--F**	**67.54**	**4**	LR	LR	08 16 04.3	
	comp=Z,21nm,20.4s,baz=191,slow=30						
PETK	**Petropavlovsk-**	**68.10**	**354**	P	**P**	**07 52 57.1**	**+0.7**
PETK	**Petropavlovsk-**	**68.10**	**354**	P	**P**	**07 52 57.1**	**+0.7**
	comp=Z,4.4nm,0.7s,baz=183,slow=8.9,SNR=3.5						
PETK				LR	LR	08 16 23.4	
	comp=Z,20nm,21.2s,baz=158,slow=30						
MDJ	**Mudanjiang**	**68.37**	**332**	P	**P**	**07 53 00.8**	**+2.6**
MDJ				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,42nm,4.0s						
CN2	**Changchun**	**69.74**	**329**	*e*P	P	07 53 10.5	+3.8
GYA	**Guiyang**	**71.84**	**305**	*e*P	**P**	**07 53 21.0**	**+1.0**
GYA				pP	pP	07 54 10.5	+19
GYA				sP	sP	07 54 33.3	+28
GYA				PP	**PP**	**07 56 04.3**	**+2.9**
GYA				S	S	08 02 23.5	-7.1
GYA				SKS	SKSac	08 02 59.8	-12
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**73.81**	**313**	P	**P**	**07 53 31.3**	**-0.1**
XAN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KMI	**Kunming**	**74.44**	**302**	P	**P**	**07 53 36.5**	**+1.1**
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
CMAR	**Chiang Mai Arr**	**75.09**	**294**	P	**P**	**07 53 39.5**	**+0.6**
CMAR	**Chiang Mai Arr**	**75.09**	**294**	P	**P**	**07 53 39.5**	**+0.6**
	comp=Z,2.5nm,0.7s,baz=111,slow=4.9,SNR=6.4						
CMAR				LR	LR	08 28 50.6	
	comp=Z,29nm,18.7s,baz=175,slow=37						
QSPA	**South Pole Qui**	**75.27**	**180**	*e*P	**P**	**07 53 38.5**	**-0.9**
	comp=Z,17nm,1.1s						
HHC	**Hu-ho-hao-te**	**75.69**	**320**	*e*P	**P**	**07 53 43.5**	**+1.4**
HHC				pP	pP	07 54 32.8	+18
HHC				sP	sP	07 54 54.3	+26
HHC				PP	**PP**	**07 56 37.3**	**+3.5**
HHC				S	S	08 03 06.3	-7.0
HHC				sS	sS	08 04 32.5	+24
HHC				SS	**SS**	**08 08 07.0**	**-1.0**
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,5.7s						
CD2	**Chengdu**	**76.14**	**308**	*e*P	**P**	**07 53 44.8**	**0.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CD2				pmax	pmax		
	comp=Z,30nm,5.2s						
LZH	**Lanzhou**	**78.44**	**312**	*e*P	**P**	**07 53 58.3**	**+0.6**
LZH				pP	pP	07 54 46.5	+16
LZH				sP	sP	07 55 09.8	+26
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
SONM	**Songino Array**	**82.60**	**324**	P	**P**	**07 54 19.6**	**0.0**
SONM	**Songino Array**	**82.60**	**324**	P	**P**	**07 54 19.6**	**0.0**
	comp=Z,1.4nm,0.8s,baz=134,slow=4.2,SNR=11						
GTA	**Gaotai**	**82.79**	**314**	⇑*e*P	**P**	**07 54 22.0**	**+1.3**
GTA				pmax	pmax		
	comp=Z,6.0nm,2.0s						
ILAR	**Eielson Array**	**86.51**	**18**	P	**P**	**07 54 37.5**	**-1.2**
ILAR	**Eielson Array**	**86.51**	**18**	P	**P**	**07 54 37.5**	**-1.2**
	comp=Z,1.4nm,0.6s,baz=243,slow=5.3,SNR=29						
NVAR	**Mina Array Bea**	**87.18**	**49**	P	**P**	**07 54 43.3**	**+0.4**
NVAR	**Mina Array Bea**	**87.18**	**49**	P	**P**	**07 54 43.3**	**+0.4**
	comp=Z,0.6nm,0.7s,baz=242,slow=8.7,SNR=4.0						
WMQ	**Urumqi**	**92.84**	**315**	*e*P	**P**	**07 55 09.8**	**+0.8**
TXAR	**Lajitas Array**	**96.17**	**61**	P	**P**	**07 55 22.8**	**-1.8**
TXAR	**Lajitas Array**	**96.17**	**61**	P	**P**	**07 55 22.8**	**-1.8**
	comp=Z,0.1nm,0.5s,baz=237,slow=3.0,SNR=2.8						
MK31	**Makanchi Array**	**97.32**	**316**	*e*P	**P**	**07 55 28.4**	**-0.9**
MKAR	**Makanchi Array**	**97.32**	**316**	P	**P**	**07 55 28.6**	**-0.7**
MKAR	**Makanchi Array**	**97.32**	**316**	P	**P**	**07 55 28.6**	**-0.7**
	comp=Z,1.9nm,0.8s,baz=106,slow=5.9,SNR=12						
ZALV	**Zalesovo Beam**	**97.50**	**324**	P	**P**	**07 55 28.3**	**-1.5**
ZALV	**Zalesovo Beam**	**97.50**	**324**	P	**P**	**07 55 28.3**	**-1.5**
	comp=Z,2.0nm,0.7s,baz=101,slow=4.9,SNR=6.8						
ARCES	**ARCESS Array B**	**120.31**	**345**	PKP	**PKPdf**	**08 00 45.5**	**-0.6**
ARCES	**ARCESS Array B**	**120.31**	**345**	PKP	**PKPdf**	**08 00 45.5**	**-0.6**
	comp=Z,5.1nm,0.8s,baz=56,slow=1.6,SNR=7.9						
NB2	**NORSAR Subarra**	**130.69**	**345**	SKPa		08 04 21.3	
	baz=38,slow=4.8						
NOA	**NORSAR Array B**	**130.69**	**345**	PKP	**PKPdf**	**08 01 05.7**	**-0.5**
NOA				SKPbc	**SKPab**	**08 04 21.3**	**+2.8**
NOA	**NORSAR Array B**	**130.69**	**345**	PKP	**PKPdf**	**08 01 05.6**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=345,slow=1.8,SNR=3.6						
NOA				SKPbc	**SKPab**	**08 04 21.3**	**+2.8**
	comp=Z,9.6nm,0.9s,baz=32,slow=3.0,SNR=14						
HFS	**Hagfors**	**130.79**	**343**	SKPbc	**SKPab**	**08 04 20.8**	**+1.9**
HFS	**Hagfors**	**130.79**	**343**	SKPbc	**SKPab**	**08 04 20.8**	**+1.9**
	comp=Z,2.8nm,0.8s,baz=27,slow=7.0,SNR=5.4						
TIP	**Timpagrande**	**144.56**	**319**	*e*PKPdf	PKPbc	08 01 31.9	+0.6
KEST	**Kesra**	**151.32**	**321**	*e*PKPbc	**PKPbc**	**08 01 48.5**	**-1.2**
KEST	**Kesra**	**151.32**	**321**	PKPbc	**PKPbc**	**08 01 49.7**	**+0.1**
	comp=Z,1.7nm,0.7s,baz=87,slow=3.6,SNR=5.2						
ESDC	**Sonseca Array**	**154.05**	**345**	PKPab	**PKPab**	**08 02 07.6**	**-1.8**
ESDC	**Sonseca Array**	**154.05**	**345**	PKPab	**PKPab**	**08 02 07.6**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=3.7,slow=4.0,SNR=4.2						
TORD	**Torodi Ar. Bea**	**166.04**	**265**	PKP	**PKPdf**	**08 02 01.4**	**0.0**
TORD				PKPab	**PKPab**	**08 03 01.9**	**-0.6**
TORD	**Torodi Ar. Bea**	**166.04**	**265**	PKP	**PKPdf**	**08 02 01.4**	**0.0**
	comp=Z,1.0nm,0.9s,baz=51,slow=0.5,SNR=3.3						
TORD				PKPab	**PKPab**	**08 03 01.8**	**-0.6**
	comp=Z,1.0nm,0.7s,baz=83,slow=3.2,SNR=7.9						

IDC 26 07:48:39.2±1.8, 4.18S×133.45E, h0km, mb3.9/3, mb1 3.9/6, mb1mx3.7/19, mbtmp3.8/6, ML3.6/3, Error ellipse: s-maj=66.1km s-min=26.5km az=69.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.69**	**177**	P	Pn	07 52 20.3	-1.5
	0.2nm,0.3s,baz=354,slow=13,SNR=8.3						
WRA				S	Sn	07 55 07.5	-8.9
	0.3nm,0.3s,baz=359,slow=24,SNR=8.6						
FITZ	**Fitzroy Crossi**	**15.81**	**208**	P	Pn	07 52 23.1	-0.2
	0.3nm,0.3s,baz=34,slow=12,SNR=9.1						
FITZ				S	Sn	07 55 10.3	-9.0
	0.1nm,0.3s,baz=75,slow=20,SNR=3.5						
ASAR	**Alice Springs**	**19.38**	**179**	P	Pn	07 53 08.7	+0.9
	0.2nm,0.3s,baz=358,slow=11,SNR=9.9						
ASAR				S	Sn	07 56 34.9	-11
	baz=3.2,slow=26,SNR=5.1						
CTA	**Charters Tower**	**20.14**	**143**	P	P	07 53 15.3	+0.3
	1.4nm,0.3s,baz=319,slow=12,SNR=7.2						
STKA	**Stephens Creek**	**28.59**	**165**	P	P	07 54 36.0	-1.2
	1.0nm,0.4s,baz=337,slow=9.6,SNR=3.8						
MKAR	**Makanchi Array**	**67.85**	**325**	P	P	07 59 39.5	+0.1
	0.5nm,0.7s,baz=126,slow=7.3,SNR=3.6						

NIED ***26*** *07:49:00, 38.90N×142.50E, h74km, Mw3.7 Best double couple: M0 4.01000×10^14 NP1:φ=73.00000°, δ=50.00000°, λ=84.00000°. NP2:φ=262.00000°, δ=41.00000°, λ=97.00000°.*

ISCJB ***26*** *07:49:33.2±1.1, 38.88N±0.04×142.56E±0.10, h48km±11km, mb3.6/5, MS3.9/1, Error ellipse: s-maj=13.3km s-min=6.1km az=20.8*

JMA ***26*** *07:49:34.1±0.1, 38.91N×142.51E, h39km±2km, M3.8*

JMA Felt I J1.

IDC ***26*** *07:49:35.2±2.8, 38.82N×142.61E, h54km±27km, mb3.4/5, mb1 3.7/8, mb1mx3.4/28, mbtmp3.5/8, ML3.5/3, MS3.9/1, Ms1 3.9/1, ms1mx2.3/27, Error ellipse: s-maj=31.9km s-min=19.9km az=102.0*

ISC 26 07:49:33.0±2.1, 38.88N±0.04×142.62E±0.08, h32km±14km, n22, σ1°36/29, mb3.8/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**0.76**	**285**	P	**Pb**	**07 49 47.3**	**-0.5**
MIYJ	**Miyakonagasawa**	**0.93**	**319**	P	**Pn**	**07 49 49.7**	**-0.1**
MIYJ				S	**Sn**	**07 50 00.9**	**-1.1**
JIO	**Ouri**	**1.08**	**247**	P	**Pn**	**07 49 51.7**	**-0.1**
JIO				S	**Sn**	**07 50 04.0**	**-1.6**
JMK	**Ichinoseki**	**1.09**	**274**	P	**Pn**	**07 49 52.1**	**+0.2**
JMK				*e*S	**Sn**	**07 50 05.1**	**-0.8**
JOM	**Ohasama**	**1.19**	**300**	P	**Pn**	**07 49 53.6**	**+0.3**
JOM				S	**Sn**	**07 50 07.6**	**-0.7**
JTH	**Tanohata**	**1.21**	**331**	P	**Pn**	**07 49 53.8**	**+0.2**
JTH				*e*S	**Sn**	**07 50 08.6**	**-0.2**
JOU	**Okura**	**1.61**	**252**	P	**Pn**	**07 49 59.7**	**+0.5**
JOU				*e*S	**Sn**	**07 50 18.9**	**+0.1**
JRG	**Rokugo**	**1.62**	**289**	P	**Pn**	**07 50 00.0**	**+0.7**
JRG				*e*S	**Sn**	**07 50 18.6**	**-0.5**
JANG	**Nango**	**1.72**	**331**	P	**Pn**	**07 50 00.8**	**+0.2**
JMM	**Marumori**	**1.75**	**235**	S	**Sn**	**07 50 21.5**	**-0.8**
JYK	**Kaneyama**	**1.76**	**272**	P	**Pn**	**07 50 01.9**	**+0.7**
MAT	**Matsushiro**	**4.20**	**238**	P	**Pn**	**07 50 37.7**	**+2.9**
MAT				S	**Sn**	**07 51 24.6**	**+1.8**
MJAR	**Matsushiro Arr**	**4.20**	**238**	P	**Pn**	**07 50 37.6**	**+2.8**
	1.8nm,0.3s,baz=50,slow=11,SNR=5.8						
ASAJ	**Asahikawa**	**5.23**	**360**	P	**Pn**	**07 50 51.1**	**+2.2**
	1.5nm,0.3s,baz=197,slow=17,SNR=5.4						
JHJ	**Hachijo jima 2**	**6.19**	**203**	P	**Pn**	**07 51 01.9**	**-0.2**
	4.6n

17nm,0.2s,SNR=52
KK31 Karatay Array 4.39 275 Pg **Pb** 07 54 02.3 **+2.7**
0.9nm,0.5s,baz=94,slow=16,SNR=14
KK31 Lg Lg 07 54 58.8
16nm,0.8s,baz=92,slow=28,SNR=23
MK31 Makanchi Array 5.69 44 ⇓Pn **Pn** 07 54 07.5 **+0.6**
0.5nm,0.6s,baz=224,slow=16,SNR=6.3
MK31 ⇑Lg Lg 07 55 40.2
1.1nm,0.5s,baz=231,slow=28,SNR=5.0
KURBB Kurchatov Arra 7.88 10 ⇑Lg Lg 07 56 49.9
7.7nm,0.7s
KURK Kurchatov 7.98 10 ⇑Lg Lg 07 56 51.3
5.6nm,1.1s

*NEIC **26** 07:58:38.2, 39°.79S×176°.89E, h28km, ML3.7(WEL), After WEL.*
NEIC Felt in the Taradale area.
WEL 26 07:58:38.5±0.1, 39°.75S×176°.85E, h26km±1km, ML3.7/37, 7C-15D, Error ellipse: s-maj=1.6km s-min=1.2km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAHZ	**Kahuranaki**	**0.05**	**154**	⇓P*	Pb	07 58 43.3	+0.2
KAHZ				S*	Sb	07 58 47.5	+1.2
KAHZ	**Kahuranaki**	**0.05**	**154**	P*	Pb	07 58 43.3	+0.2
CKHZ	**Cape Kidnapper**	**0.20**	**63**	⇑P*	Pb	07 58 45.0	+0.7
CKHZ				S*	Sb	07 58 50.6	+2.4
CKHZ	**Cape Kidnapper**	**0.20**	**63**	P*	Pb	07 58 45.0	+0.7
PXZ	**Pawanui**	**0.28**	**178**	⇑P*	Pn	07 58 46.2	-0.7
PXZ				S*	Sn	07 58 53.9	+1.6
PXZ				S*	Sb	07 58 54.0	+4.0
PXZ				AML	AML	07 58 55.6	
PXZ				AML	AML	07 58 56.1	
PXZ	**Pawanui**	**0.28**	**178**	P*	Pn	07 58 46.2	-0.7
MCHZ	**McNeill Hill**	**0.33**	**339**	⇓P*	Pb	07 58 45.2	-0.9
MCHZ	**McNeill Hill**	**0.33**	**339**	P*	Pb	07 58 45.2	-0.9
WPHZ	**Waipukurau**	**0.44**	**225**	⇑P*	Pb	07 58 47.9	0.0
WPHZ	**Waipukurau**	**0.44**	**225**	P*	Pb	07 58 47.9	0.0
PNHZ	**Pukenui**	**0.53**	**252**	⇑P*	Pb	07 58 48.3	-1.0
PNHZ				S*	Sb	07 58 56.2	-0.4
PNHZ	**Pukenui**	**0.53**	**252**	P*	Pb	07 58 48.3	-1.0
PNHZ				S*	Sb	07 58 56.2	-0.4
PRHZ	**Porangahau**	**0.54**	**198**	⇓P*	Pn	07 58 50.1	-0.5
PRHZ	**Porangahau**	**0.54**	**198**	P*	Pn	07 58 50.1	-0.5
BKZ	**Black Stump Fm**	**0.65**	**335**	P*	Pb	07 58 49.6	-1.6
BKZ				AML	AML	07 58 59.5	
BKZ				AML	AML	07 58 59.6	
BKZ	**Black Stump Fm**	**0.65**	**335**	P*	Pb	07 58 49.6	-1.6
NMHZ	**Naumai**	**0.65**	**357**	⇑P*	Pb	07 58 51.1	-0.3
NMHZ	**Naumai**	**0.65**	**357**	P*	Pb	07 58 51.1	-0.3
BHHZ	**Black Hill Sta**	**0.66**	**293**	⇓P*	Pb	07 58 49.8	-1.7
BHHZ				S*	Sb	07 58 58.3	-2.2
TSZ	**Takapari Road**	**0.75**	**245**	P*	Pb	07 58 51.6	-1.4
TSZ				AML	AML	07 59 03.8	
TSZ				AML	AML	07 59 04.2	
DVHZ	**Dannevirke**	**0.76**	**223**	⇑P*	Pb	07 58 52.5	-0.6
RAHZ	**Arahi**	**0.85**	**13**	PN	Pb	07 58 54.4	-0.4
RAHZ	**Arahi**	**0.85**	**13**	Pn	Pb	07 58 54.4	-0.4
MOVZ	**Moawhango**	**0.91**	**292**	⇓PN	Pn	07 58 54.3	-1.5
MOVZ				AML	AML	07 59 08.4	
MOVZ				AML	AML	07 59 09.1	
KNZ	**Kokohu**	**0.97**	**42**	PN	Pn	07 58 55.5	-0.9
KNZ	**Kokohu**	**0.97**	**42**	Pn	Pn	07 58 55.5	-0.9
MHGZ	**Mahia Peninsul**	**1.01**	**54**	PN	Pn	07 58 56.2	-0.8
BFZ	**Birch Farm**	**1.04**	**206**	PN	Pn	07 58 56.3	-1.1
HATZ	**Hinemaiaia**	**1.04**	**325**	Pn	Pn	07 58 56.7	-0.7
HATZ				AML	AML	07 59 15.4	
HATZ				AML	AML	07 59 15.9	
TUVZ	**Tukino**	**1.04**	**297**	⇓PN	Pn	07 58 56.9	-0.7
TUVZ				AML	AML	07 59 14.4	
TUVZ				AML	AML	07 59 14.9	
TUVZ	**Tukino**	**1.04**	**297**	Pn	Pn	07 58 56.9	-0.7
POWZ	**Post Office Ro**	**1.05**	**232**	PN	Pn	07 58 56.6	-0.9
WNVZ	**Wahianoa**	**1.05**	**293**	PN	Pn	07 58 57.3	-0.5
WNVZ				AML	AML	07 59 13.1	
WNVZ				AML	AML	07 59 17.3	
OTVZ	**Oturere**	**1.09**	**302**	PN	Pn	07 58 57.6	-0.6
OTVZ				AML	AML	07 59 15.2	
OTVZ				AML	AML	07 59 18.3	
RITZ	**Rihia Road**	**1.09**	**315**	⇑PN	Pn	07 58 57.7	-0.3
RITZ				AML	AML	07 59 19.1	
RITZ				AML	AML	07 59 27.0	
DRZ	**Dome Shelter**	**1.10**	**295**	AML	AML	07 59 16.4	
DRZ				AML	AML	07 59 18.5	
TRVZ	**Turoa**	**1.10**	**294**	PN	Pn	07 58 57.9	-0.6
TRVZ				AML	AML	07 59 14.1	
TRVZ				AML	AML	07 59 14.5	
FWVZ	**Far West T-bar**	**1.12**	**296**	⇓PN	Pn	07 58 58.1	-0.6
FWVZ				AML	AML	07 59 14.9	
FWVZ				AML	AML	07 59 15.9	
NGZ	**Ngauruhoe**	**1.12**	**300**	⇓PN	Pn	07 58 58.3	-0.4
NGZ				AML	AML	07 59 16.5	
NGZ				AML	AML	07 59 17.4	
MTVZ	**Mangateitei**	**1.13**	**288**	PN	Pn	07 58 58.4	-0.2
MTVZ				AML	AML	07 59 18.0	
MTVZ				AML	AML	07 59 21.0	
KRVZ	**Karewarewa**	**1.14**	**305**	⇓PN	Pn	07 58 58.5	-0.4
KRVZ				AML	AML	07 59 17.5	
KRVZ				AML	AML	07 59 19.2	
WPVZ	**Whakapapa**	**1.15**	**298**	⇓PN	Pn	07 58 58.7	-0.3
WPVZ				AML	AML	07 59 17.0	
WPVZ				AML	AML	07 59 17.9	
PRGZ	**Paritu Road**	**1.15**	**45**	PN	Pn	07 58 58.2	-0.8
WTVZ	**West Tongariro**	**1.16**	**303**	⇓PN	Pn	07 58 58.9	-0.3
WTVZ				AML	AML	07 59 18.9	
WTVZ				AML	AML	07 59 24.3	
KATZ	**Kakaramea**	**1.18**	**311**	⇓PN	Pn	07 58 59.3	-0.2
KATZ				AML	AML	07 59 17.4	
KATZ				AML	AML	07 59 17.7	
RATZ	**Rangitukua**	**1.22**	**316**	⇓PN	Pn	07 58 60.0	+0.1
RATZ				AML	AML	07 59 21.6	
RATZ				AML	AML	07 59 27.0	
PKVZ	**Pokaka**	**1.25**	**291**	PN	Pn	07 59 00.1	-0.3
PKVZ				AML	AML	07 59 20.2	
PKVZ				AML	AML	07 59 20.7	
TIWZ	**Tintock**	**1.26**	**215**	PN	Pn	07 58 59.5	-1.0
TWVZ	**Taurewa**	**1.29**	**301**	AML	AML	07 59 20.0	
TWVZ				AML	AML	07 59 21.6	
MRZ	**Mangatainoka R**	**1.33**	**226**	PN	Pn	07 58 59.6	-1.8
MRZ				AML	AML	07 59 24.6	
MRZ				AML	AML	07 59 25.6	
MRZ	**Mangatainoka R**	**1.33**	**226**	Pn	Pn	07 58 59.5	-1.9
WATZ	**Wairara**	**1.35**	**320**	AML	AML	07 59 42.6	
HRRZ	**Handcock Road**	**1.43**	**342**	Pn	Pn	07 59 02.5	-0.2
WAZ	**Wanganui**	**1.44**	**269**	PN	Pn	07 59 03.1	+0.2
WAZ				AML	AML	07 59 32.0	
WAZ				AML	AML	07 59 34.7	
WAZ	**Wanganui**	**1.44**	**269**	Pn	Pn	07 59 03.2	+0.3
URZ	**Urewera**	**1.50**	**8**	⇓PN	Pn	07 59 02.6	-1.2
URZ				AML	AML	07 59 29.3	
URZ				AML	AML	07 59 33.6	
URZ	**Urewera**	**1.50**	**8**	*e*Pn	Pn	07 59 02.5	-1.2
MWZ	**Matawai**	**1.51**	**21**	⇓PN	Pn	07 59 02.6	-1.3
MWZ				AML	AML	07 59 29.5	
MWZ				AML	AML	07 59 38.0	
HOWZ	**Holdsworth Sta**	**1.53**	**221**	PN	Pn	07 59 02.5	-1.7
TARZ	**Mount Tarawera**	**1.54**	**350**	PN	Pn	07 59 03.7	-0.7
TARZ	**Mount Tarawera**	**1.54**	**350**	Pn	Pn	07 59 03.7	-0.7
TMWZ	**Te Maipa**	**1.54**	**208**	PN	Pn	07 59 02.4	-1.9
OGWZ	**Otaki Gorge**	**1.67**	**230**	PN	Pn	07 59 04.4	-1.7
VRZ	**Vera Road**	**1.73**	**290**	*e*PN	Pn	07 59 06.5	-0.4
VRZ				AML	AML	07 59 35.5	
VRZ				AML	AML	07 59 36.7	
MTW	**Mount Morrison**	**1.74**	**216**	PN	Pn	07 59 05.1	-2.0
MTW				AML	AML	07 59 49.2	
MTW				AML	AML	08 00 01.4	
KIW	**Kapiti Island**	**1.85**	**233**	PN	Pn	07 59 06.9	-1.6
KIW				AML	AML	07 59 30.5	
KIW				AML	AML	07 59 44.2	
TRWZ	**Traveller**	**1.87**	**208**	PN	Pn	07 59 06.6	-2.2
TRWZ				AML	AML	07 59 52.2	
TRWZ				AML	AML	07 59 52.5	
CAW	**Cannon Point**	**1.92**	**224**	PN	Pn	07 59 07.2	-2.3
CAW				AML	AML	07 59 48.4	
CAW				AML	AML	07 59 53.8	
PAWZ	**Paruwai Farm**	**1.96**	**213**	PN	Pn	07 59 07.9	-2.1
PAWZ				AML	AML	07 59 52.1	
PAWZ				AML	AML	07 59 55.8	
HIZ	**Hauiti**	**1.98**	**308**	PN	Pn	07 59 09.6	-0.7
PUZ	**Puketiti**	**2.00**	**34**	PN	Pn	07 59 08.8	-1.9
PUZ	**Puketiti**	**2.00**	**34**	Pn	Pn	07 59 08.8	-1.9
MSWZ	**Moikau Station**	**2.06**	**216**	PN	Pn	07 59 08.8	-2.6
MSWZ				AML	AML	07 59 35.1	
MSWZ				AML	AML	08 00 03.0	
PLWZ	**Palliser**	**2.18**	**213**	PN	Pn	07 59 10.5	-2.7
PKE	**Pukeiti**	**2.28**	**283**	*e*PN	Pn	07 59 16.5	+2.0
PKE				AML	AML	08 00 08.4	
TUWZ	**Tuamarina**	**2.78**	**232**	PN	Pn	07 59 18.1	-3.2
TUWZ				AML	AML	08 00 12.6	
TUWZ				AML	AML	08 00 15.2	
NNZ	**Nelson**	**3.02**	**240**	*e*PN	Pn	07 59 21.9	-2.7
NNZ	**Nelson**	**3.02**	**240**	Pn	Pn	07 59 22.6	-2.0
QRZ	**Quartz Range**	**3.47**	**251**	AML	AML	08 00 32.3	
QRZ				AML	AML	08 00 34.6	
QRZ	**Quartz Range**	**3.47**	**251**	Pn	Pn	07 59 28.1	-2.7
THZ	**Tophouse**	**3.61**	**235**	AML	AML	08 00 58.0	

*ISCJB **26** 08:32:40.0±0.6, 15°.07N±0°.05×61°.3W±0°.2, h164km±4km, mb3.2/4, Error ellipse: s-maj=25.1km s-min=4.4km az=164.4*
*TRN **26** 08:32:40.1, 15°.11N×61°.23W, h159km, MD3.7, M2.7(FDF)*
*IDC **26** 08:32:40.5±0.7, 15°.12N×61°.29W, h157km±13km, mb3.0/4, mb1 3.4/4, mb1mx3.1/26, mbtmp3.0/4, Error ellipse: s-maj=61.2km s-min=8.5km az=84.0*
ISC 26 08:32:40.6±0.9, 15°.10N±0°.06×61°.2W±0°.2, h161km±6km, n33, σ0s59/44, mb3.3/4, 9C-7D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DSHT	**Scott's Head**	**0.17**	**311**	*e*P	**Pn**	**08 33 02.1**	**-0.1**
DPMT	**Pointe Michel**	**0.20**	**321**	*e*P	**Pn**	**08 33 03.4**	**+1.2**
MDN	**Morne-Daniel**	**0.26**	**326**	⇓*i*P	**Pn**	**08 33 03.0**	**+0.6**
MDN				*e*S	**Sn**	**08 33 18.4**	**-0.7**
FDF	**Fort de France**	**0.38**	**166**	⇓*e*P	**Pn**	**08 33 03.0**	**+0.2**
FDF				⇓*e*S	**Sn**	**08 33 19.7**	**-0.1**
DWS	**Wesley**	**0.47**	**352**	*e*P	**Pn**	**08 33 03.4**	**+0.3**
DWS				*e*S	**Sn**	**08 33 20.9**	**+0.5**
DVCT	**Vielle Casse P**	**0.53**	**343**	*e*P	**Pn**	**08 33 02.8**	**-0.5**
DVCT				*e*S	**Sn**	**08 33 20.9**	**0.0**
MVM	**Montagne Vaucl**	**0.64**	**148**	⇑*i*P	**Pn**	**08 33 04.2**	**+0.2**
MGG	**Marie-Galante**	**0.81**	**355**	⇑*i*P	**Pn**	**08 33 05.2**	**+0.2**
TBG	**Guadaloupe-3**	**0.84**	**333**	*e*P	**Pn**	**08 33 04.4**	**-0.8**
HMG	**Houelmont**	**0.98**	**333**	⇑*i*P	**Pn**	**08 33 06.6**	**+0.3**
PHG	**Guadaloupe-2**	**0.98**	**337**	⇑*i*P	**Pn**	**08 33 06.9**	**+0.5**
DOG	**Dongo Capester**	**0.99**	**339**	⇑*i*P	**Pn**	**08 33 06.8**	**+0.3**
SCG	**Saint Claude**	**1.01**	**335**	⇑*i*P	**Pn**	**08 33 07.1**	**+0.4**
BCG	**Bois Riant Cap**	**1.04**	**340**	⇑*e*P	**Pn**	**08 33 07.0**	**+0.2**
SLW	**Petit Monier**	**1.12**	**165**	⇓*i*P	**Pn**	**08 33 07.3**	**-0.1**
SLW	**Petit Monier**	**1.12**	**165**	⇓*e*P	**Pn**	**08 33 07.4**	**-0.1**
SLW	**Petit Monier**	**1.12**	**165**	⇓*i*P	**Pn**	**08 33 08.4**	**+0.8**
SLW				⇓*e*S	**Sn**	**08 33 27.3**	**-0.8**
SLW	**Petit Monier**	**1.12**	**165**	*e*S	**Sn**	**08 33 27.5**	**-0.6**
LZG	**Guadaloupe-1**	**1.15**	**334**	*e*P	**Pn**	**08 33 08.0**	**+0.3**
DEG	**La Desirade**	**1.22**	**8**	⇑*i*P	**Pn**	**08 33 08.6**	**+0.2**
SLB	**Belfond**	**1.28**	**171**	*e*P	**Pn**	**08 33 09.9**	**+0.9**
SLB				*e*S	**Sn**	**08 33 30.8**	**0.0**
SEG	**Port Louis**	**1.32**	**349**	⇑*i*P	**Pn**	**08 33 09.6**	**+0.4**
MCLT	**Moule a Chique**	**1.42**	**168**	*e*P	**Pn**	**08 33 10.4**	**+0.2**
MCLT				*e*S	**Sn**	**08 33 32.5**	**-0.5**
SVB	**Belmont**	**1.82**	**180**	*e*P	**Pn**	**08 33 14.5**	**0.0**
SVB				*e*S	**Sn**	**08 33 39.9**	**-0.7**
FCV	**Fort Charlotte**	**1.93**	**180**	*e*S	**Sn**	**08 33 43.0**	**+0.2**
BPA	**Boggy Peak**	**2.02**	**343**	*e*S	**Sn**	**08 33 43.5**	**-1.1**
NEV	**Hard Times**	**2.39**	**328**	*e*P	**Pn**	**08 33 21.9**	**+1.0**
NEV				*e*S	**Sn**	**08 33 51.2**	**-1.0**
SKI	**Saint Kitts**	**2.64**	**327**	*e*P	**Pn**	**08 33 23.9**	**-0.1**
SKI				*e*S	**Sn**	**08 33 57.8**	**+0.1**
TOSP	**Speyside**	**3.84**	**170**	*e*P	**Pn**	**08 33 39.4**	**+0.2**
TOSP				*e*S	**Sn**	**08 34 23.5**	**-1.3**
SIV	**San Ignacio**	**30.90**	**180**	P	**P**	**08 38 42.9**	**+0.8**
	0.4nm,0.4s,baz=8.0,slow=12,SNR=3.6						
TXAR	**Lajitas Array**	**41.52**	**297**	P	**P**	**08 40 11.9**	**-0.4**
	0.1nm,0.4s,baz=102,slow=8.4,SNR=5.4						
PDAR	**Pinedale Array**	**49.59**	**314**	P	**P**	**08 41 16.0**	**+0.3**
	0.6nm,0.6s,baz=120,slow=8.4,SNR=5.0						
ILAR	**Eielson Array**	**74.61**	**334**	P	**P**	**08 44 01.2**	**-0.4**
	0.2nm,0.5s,baz=101,slow=4.1,SNR=6.1						

*NEIC **26** 08:56:18.8, 16°.96N×95°.51W, h116km, MD4.1(MEX), After MEX.*
MEX 26 08:56:18.8±0.5, 16°.96N×95°.51W, h116km±15km, MD4.1, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.32**	**206**	*i* P	Pn	08 56 42.4	-1.5
HUIG				*i* S	Sn	08 57 01.4	-1.6
HUIG	**Huatulco**	**1.32**	**206**	*i* P	Pn	08 56 42.4	-1.5
HUIG				*i* S	Sn	08 57 01.4	-1.6
TGIG		**2.29**	**94**	*i* P	Pn	08 56 54.4	-1.5
TGIG				*i* S	Sn	08 57 21.9	-2.4
TGIG		**2.29**	**94**	*i* P	Pn	08 56 54.4	-1.5
TGIG				*i* S	Sn	08 57 21.9	-2.4
UTMO	**Huajuapan**	**2.35**	**292**	*i* P	Pn	08 56 55.5	-1.3
UTMO				*i* S	Sn	08 57 24.9	-1.2
UTMO	**Huajuapan**	**2.35**	**292**	*i* P	Pn	08 56 55.5	-1.3
UTMO				*i* S	Sn	08 57 24.9	-1.2
PCIG		**2.53**	**119**	*i* P	Pn	08 56 57.8	-1.0
PCIG				*i* S	Sn	08 57 28.4	-1.1
PCIG		**2.53**	**119**	*i* P	Pn	08 56 57.8	-1.0
PCIG				*i* S	Sn	08 57 28.4	-1.1
PNIG	**Pinotepa**	**2.57**	**258**	*i* P	Pn	08 56 58.2	-1.2
PNIG				*i* S	Sn	08 57 28.9	-1.8
PNIG	**Pinotepa**	**2.57**	**258**	*i* P	Pn	08 56 58.2	-1.2
PNIG				*i* S	Sn	08 57 28.9	-1.8
CCIG	**Comitan**	**3.30**	**101**	*i* P	Pn	08 57 08.6	-0.6
CCIG				*i* S	Sn	08 57 46.2	-1.9
CCIG	**Comitan**	**3.30**	**101**	*i* P	Pn	08 57 08.6	-0.6
CCIG				*i* S	Sn	08 57 46.2	-1.9

*ISK **26** 08:56:54.5, 37°.30N×28°.20E, h8km, MD2.7*
*ISCJB **26** 08:56:55.3±0.4, 37°.25N±0°.03×28°.20E±0°.03, h0km, Error ellipse: s-maj=4.4km s-min=2.9km az=44.0*
*DDA **26** 08:56:55.4, 37°.22N×28°.18E, h7km, MD2.7*
*CSEM **26** 08:56:55.4±0.2, 37°.26N×28°.22E, h1km, MD2.7, Error ellipse: s-maj=5.2km s-min=4.2km az=43.0*
ISC 26 08:56:55.1±0.8, 37°.30N±0°.03×28°.20E±0°.02, h0km, n30, σ0s69/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.17**	**159**	*e*PG	**Pg**	**08 56 58.7**	**+0.3**
YER				*e*SG	**Sg**	**08 57 01.5**	**+0.9**
YER	**Yerkesik**	**0.17**	**159**	*e*Pg	**Pg**	**08 56 58.7**	**+0.3**
YER				*e*Sg	**Sg**	**08 57 01.5**	**+0.9**
MLSB	**Milas**	**0.34**	**270**	*e*PG	**Pg**	**08 57 01.5**	**-0.1**
MLSB				*e*SG	**Sg**	**08 57 06.9**	**+0.9**
MLSB	**Milas**	**0.34**	**270**	*e*Pg	**Pg**	**08 57 01.5**	**-0.1**
MLSB				*e*Sg	**Sg**	**08 57 06.9**	**+0.9**
AYDN	**Tasoluk**	**0.45**	**325**	*i* P	**Pb**	**08 57 05.5**	**-0.4**
AYDN				*i* S	**Sb**	**08 57 12.5**	**-0.7**
AYDN	**Tasoluk**	**0.45**	**325**	*i* P	**Pb**	**08 57 05.5**	**-0.4**
AYDN				*i* S	**Sb**	**08 57 12.5**	**-0.7**
TURN	**Turunc**	**0.53**	**143**	*i* P	**Pg**	**08 57 04.5**	**-0.7**
TURN				*i* S	**Sg**	**08 57 11.2**	**-0.8**
TURN	**Turunc**	**0.53**	**143**	*i* P	**Pg**	**08 57 04.5**	**-0.7**
TURN				*i* S	**Sg**	**08 57 11.2**	**-0.8**
DALY	**Dalyan (Mu¨la**	**0.60**	**143**	*e*PG	**Pg**	**08 57 06.6**	**+0.1**
DALY				*e*SG	**Sg**	**08 57 15.1**	**+0.9**
DALY	**Dalyan (Mu¨la**	**0.60**	**143**	*e*Pg	**Pg**	**08 57 06.6**	**+0.1**
DALY				*e*Sg	**Sg**	**08 57 15.1**	**+0.9**
BODT	**Bodrum**	**0.75**	**252**	*e*PG	**Pg**	**08 57 09.3**	**-0.2**
BODT	**Bodrum**	**0.75**	**252**	*e*Pg	**Pg**	**08 57 09.3**	**-0.2**
DAT	**Datca**	**0.76**	**222**	*e*PG	**Pg**	**08 57 09.7**	**+0.1**
DAT	**Datca**	**0.76**	**222**	*e*Pg	**Pg**	**08 57 09.7**	**+0.1**
DNZL	**Cakiroluk**	**0.78**	**59**	*i* P	**Pb**	**08 57 11.6**	**0.0**
DNZL				*i* S	**Sb**	**08 57 24.1**	**+1.3**
DNZL	**Cakiroluk**	**0.78**	**59**	*i* P	**Pb**	**08 57 11.6**	**0.0**
DNZL				*i* S	**Sb**	**08 57 24.1**	**+1.3**
DENT	**Denizli**	**0.80**	**55**	*e*PG	**Pg**	**08 57 10.5**	**0.0**
DENT	**Denizli**	**0.80**	**55**	*e*Pg	**Pg**	**08 57 10.5**	**0.0**
GCAM	**G?zelcaml?**	**0.87**	**298**	*e*P	**Pb**	**08 57 13.5**	**+0.4**
GCAM				*e*S	**Sb**	**08 57 25.6**	**+0.3**
GCAM	**G?zelcaml?**	**0.87**	**298**	*e*P	**Pb**	**08 57 13.5**	**+0.4**
GCAM				*e*S	**Sb**	**08 57 25.6**	**+0.3**
FETY	**Fethiye**	**0.96**	**133**	*e*PG	**Pg**	**08 57 13.5**	**0.0**
FETY	**Fethiye**	**0.96**	**133**	*e*Pg	**Pg**	**08 57 13.5**	**0.0**
MANT	**Manisa**	**1.23**	**13**	*i* P	**Pg**	**08 57 19.5**	**+0.9**
MANT				*i* S	**Sn**	**08 57 37.8**	**+0.7**
MANT	**Manisa**	**1.23**	**13**	*i* P	**Pg**	**08 57 19.5**	**+0.9**
MANT				*i* S	**Sn**	**08 57 37.8**	**+0.7**
KULA	**Kula-Manisa**	**1.27**	**16**	*e*PN	**Pg**	**08 57 18.6**	**-0.8**
KULA	**Kula-Manisa**	**1.27**	**16**	*e*Pn	**Pg**	**08 57 18.6**	**-0.8**
KHL	**Karahalli**	**1.46**	**45**	*e*PN	**Pn**	**08 57 22.0**	**-0.9**
KHL	**Karahalli**	**1.46**	**45**	*e*Pn	**Pn**	**08 57 22.0**	**-0.9**
ELL	**Elmali**	**1.47**	**111**	*e*PN	**Pn**	**08 57 21.8**	**-1.2**
ELL	**Elmali**	**1.47**	**111**	*e*Pn	**Pn**	**08 57 21.8**	**-1.2**

*HEL **26** 09:00:19.7±0.4, 64°.70N×30°.78E, h0km, ML1.9, Explosion*
*NAO **26** 09:00:20.4±1.5, 64°.71N×30°.50E, ML2.3*
*BER **26** 09:00:20.2±3.0, 64°.70N×30°.65E, h0km, ML2.3(NAO), Suspected explosion*
*CSEM **26** 09:00:21.4±0.3, 64°.81N×30°.40E, h2km, ML1.9, Error ellipse: s-maj=8.4km s-min=3.9km az=101.0, Mining explosion.*
*IDC **26** 09:00:22.6±2.0, 64°.64N×30°.29E, h0km, mb1 3.0/4, mb1mx2.9/29, mbtmp3.0/4, ML2.6/4, Error ellipse: s-maj=26.7km s-min=9.0km az=107.0*
ISC 26 09:00:19.1±0.9, 64°.73N±0°.03×30°.70E±0°.05, h0km, n36, σ1s48/58, Finland-Karelia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KU6	**Riekki**	**1.35**	**346**	PG	**Pg**	**09 00 44.9**	**+0.1**
KU6				SG	**Sg**	**09 01 02.5**	**+0.2**
KU6				MSG		09 01 02.5	
	comp=Z,9.3nm,0.4s						
KU6	**Riekki**	**1.35**	**346**	Pg	**Pg**	**09 00 44.9**	**+0.1**
KU6				Sg	**Sg**	**09 01 02.5**	**+0.2**
MSF	**Maaselka**	**1.38**	**330**	PG	**Pn**	**09 00 45.4**	**-0.1**
MSF				SG	**Sg**	**09 01 03.3**	**0.0**
MSF				MSG		09 01 03.3	
	comp=Z,5.1nm,0.4s						
MSF	**Maaselka**	**1.38**	**330**	Pg	**Pn**	**09 00 45.4**	**-0.1**
MSF				Sg	**Sg**	**09 01 03.3**	**0.0**
JOF	**Joensuu**	**1.84**	**171**	PN	**Pn**	**09 00 50.9**	**-0.9**
JOF				SG	**Sn**	**09 01 14.6**	**-1.1**
JOF				MSG		09 01 14.6	
	comp=Z,6.0nm,0.2s						
OUL	**Oulu**	**2.08**	**282**	PN	**Pn**	**09 00 56.9**	**+1.8**
OUL				SG	**Sn**	**09 01 22.6**	**+0.9**
OUL				MSG		09 01 22.6	
	comp=Z,5.8nm,0.4s						
OUL	**Oulu**	**2.08**	**282**	Pn	**Pn**	**09 00 56.9**	**+1.8**
OUL				Sg	**Sn**	**09 01 22.6**	**+0.9**
RNF	**Rovaniemi**	**2.71**	**316**	PN	**Pb**	**09 01 07.4**	**-0.9**
	baz=137						
RNF				SG	**Sb**	**09 01 42.5**	**+0.4**
RNF				MSG		09 01 42.5	
	comp=Z,5.9nm,0.4s						
SUF	**Sumiainen**	**2.86**	**227**	PN	**Pn**	**09 01 07.8**	**+2.0**
SUF				SG	**Sb**	**09 01 44.7**	**-1.6**
SUF				MSG		09 01 44.7	
	comp=Z,4.3nm,0.4s						
SUF	**Sumiainen**	**2.86**	**227**	Pn	**Pn**	**09 01 07.8**	**+2.0**
APA0	**Apatity Array**	**3.04**	**17**	Pn	**Pn**	**09 01 09.9**	**+1.6**
	baz=189,slow=18						
APA0				Pg	**Pb**	**09 01 14.9**	**+1.0**
	baz=192,slow=16						
APA0				Lg	Lg	09 01 53.8	
	baz=188,slow=37						
APA0	**Apatity Array**	**3.04**	**17**	Pn	**Pn**	**09 01 09.9**	**+1.6**
	baz=189,slow=18						
APA0				Pg	**Pb**	**09 01 14.9**	**+1.0**
	baz=192,slow=16						
APA0				Lg	Lg	09 01 53.8	
	baz=188,slow=37						
APA0	**Apatity Array**	**3.04**	**17**	Pn	**Pn**	**09 01 09.9**	**+1.6**
	baz=189,slow=18,SNR=4.6						
APA0	**Apatity Array**	**3.04**	**17**	Pg	**Pb**	**09 01 14.9**	**+1.0**
	baz=192,slow=15,SNR=3.4						
APA0				Lg	Lg	09 01 53.8	
	baz=188,slow=29,SNR=8.4						
VRF	**Varrio**	**3.07**	**352**	PN	**Pn**	**09 01 10.5**	**+1.8**
	baz=176						
VRF				SG	**Sb**	**09 01 54.6**	**+2.3**
VRF				MSG		09 01 54.6	
	comp=Z,3.4nm,0.4s						
VRF	**Varrio**	**3.07**	**352**	Pn	**Pn**	**09 01 10.5**	**+1.8**
VRF

NOA				Lg		Lg		09 05 14.4		
	comp=Z,0.3nm,0.3s,baz=133,slow=20,SNR=3.2									

NAO ***26*** *09:14:37.9±1.3, 67.59N×34.00E, ML2.5*
HEL ***26*** *09:14:38.7±0.3, 67.67N×33.85E, h0km, ML2.0, Explosion*
CSEM ***26*** *09:14:39.7±0.3, 67.60N×33.59E, h1km, ML2.5, Error ellipse: s-maj=6.1km s-min=5.2km az=90.0, Mining explosion.*

ISC 26 09:14:36.3±1.7, 67.64N±0.04×34.06E±0.09, h0km, n25, σ1s80/44, Baltic States - Belarus - Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA0	**Apatity Array**	**0.41**	**266**	Pg	**Pg**	**09 14 45.3**	**+1.2**
	baz=92,slow=18						
APA0				Lg	Lg	09 14 50.9	
	baz=84,slow=37						
APA0				Rg	Rg	09 14 53.4	
	baz=84,slow=37						
APA0	**Apatity Array**	**0.41**	**266**	Pg	**Pg**	**09 14 45.3**	**+1.2**
	baz=92,slow=18						
APA0				Lg	Lg	09 14 50.9	
	baz=84,slow=37						
APA0				Rg	Rg	09 14 53.4	
	baz=84,slow=37						
APA0	**Apatity Array**	**0.41**	**266**	Pg	**Pg**	**09 14 45.3**	**+1.2**
	baz=92,slow=16,SNR=90						
APA0				Lg	Lg	09 14 50.8	
	baz=84,slow=37,SNR=121						
VRF	**Varrio**	**1.70**	**276**	*e*PN	**Pb**	**09 15 08.3**	**-0.1**
VRF				MSG	**Sn**	**09 15 30.2**	**+0.6**
	comp=Z,6.5nm,0.2s						
VRF				*e*SN	**Sn**	**09 15 30.2**	**+0.6**
VRF	**Varrio**	**1.70**	**276**	Pn	**Pb**	**09 15 08.3**	**-0.1**
MSF	**Maaselka**	**2.64**	**231**	*e*SG	**Sb**	**09 15 58.5**	**+1.3**
MSF				MSG		09 15 58.5	
	comp=Z,3.4nm,0.4s						
MSF	**Maaselka**	**2.64**	**231**	Sg	**Sb**	**09 15 58.5**	**+1.3**
SGF	**Sodankyl**	**2.90**	**270**	*e*P	**Pn**	**09 15 24.8**	**+1.2**
SGF				*e*SG	**Sb**	**09 16 05.4**	**+0.7**
SGF				MSG		09 16 05.4	
	comp=Z,5.8nm,0.4s						
SGF	**Sodankyl**	**2.90**	**270**	P	**Pn**	**09 15 24.8**	**+1.2**
SGF				Sg	**Sb**	**09 16 05.4**	**+0.7**
RNF	**Rovaniemi**	**3.31**	**256**	*e*P	**Pn**	**09 15 30.6**	**+1.4**
RNF	**Rovaniemi**	**3.31**	**256**	P	**Pn**	**09 15 30.6**	**+1.4**
KEV	**Kevo**	**3.34**	**313**	*e*P	**Pn**	**09 15 31.8**	**+2.1**
KEV				MSG	**Sg**	**09 16 18.9**	**-4.5**
	comp=Z,4.2nm,0.2s						
KEV				*e*SG	**Sg**	**09 16 18.9**	**-4.5**
KEV	**Kevo**	**3.34**	**313**	P	**Pn**	**09 15 31.7**	**+2.1**
ARA0	**ARCESS Array S**	**3.67**	**305**	Pn	**Pn**	**09 15 35.5**	**+1.3**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**09 15 43.2**	**+1.3**
	baz=117,slow=16						
ARA0				Sn	**Sn**	**09 16 17.9**	**-0.3**
	baz=118,slow=28						
ARA0				Lg	Lg	09 16 27.9	
	baz=108,slow=37						
ARA0	**ARCESS Array S**	**3.67**	**305**	Pn	**Pn**	**09 15 35.5**	**+1.3**
	baz=122,slow=16						
ARA0				Pg	**Pb**	**09 15 43.2**	**+1.3**
	baz=117,slow=16						
ARA0				Sn	**Sn**	**09 16 17.9**	**-0.3**
	baz=118,slow=28						
ARA0				Lg	Lg	09 16 27.9	
	baz=108,slow=37						
ARA0	**ARCESS Array S**	**3.67**	**305**	*e*P	**Pn**	**09 15 35.0**	**+0.8**
ARA0				*e*SB	**Sb**	**09 16 27.9**	**+1.0**
ARA0				*e*SG	**Sb**	**09 16 27.9**	**+1.0**
ARA0				MSG		09 16 27.9	
	comp=Z,5.6nm,0.4s						
ARA0	**ARCESS Array S**	**3.67**	**305**	P	**Pn**	**09 15 35.0**	**+0.8**
ARA0	**ARCESS Array S**	**3.67**	**305**	Pn	**Pn**	**09 15 35.5**	**+1.3**
	baz=122,slow=15,SNR=50						
ARA0				Sn	**Sn**	**09 16 17.9**	**-0.3**
	baz=118,slow=25,SNR=50						
ARA0				Sb	**Sb**	**09 16 27.9**	**+1.0**
HEF	**Hetta**	**3.98**	**286**	*e*P	**Pn**	**09 15 40.2**	**+1.7**
HEF				MSG		09 16 41.6	
	comp=Z,4.8nm,0.4s						
HEF				*e*	**Sg**	**09 16 41.6**	**-2.5**
HEF				*e*SG	**Sg**	**09 16 41.6**	**-2.5**
HEF	**Hetta**	**3.98**	**286**	P	**Pn**	**09 15 40.2**	**+1.7**
HEF				Sg	**Sg**	**09 16 41.6**	**-2.5**
FIA0	**FINESS Array S**	**7.10**	**213**	Pn	**Pn**	**09 16 22.4**	**+1.2**
	baz=32,slow=14						
FIA0				Sn	**Sn**	**09 17 39.4**	**-3.1**
	baz=25,slow=28						
FIA0				Lg	Lg	09 18 14.7	
	baz=29,slow=28						
FIA0	**FINESS Array S**	**7.10**	**213**	Pn	**Pn**	**09 16 22.4**	**+1.2**
	baz=32,slow=14						
FIA0				Sn	**Sn**	**09 17 39.4**	**-3.1**
	baz=25,slow=28						
FIA0				Lg	Lg	09 18 14.7	
	baz=29,slow=28						
FIA0	**FINESS Array S**	**7.10**	**213**	Pn	**Pn**	**09 16 22.4**	**+1.2**
	baz=32,slow=13,SNR=50						
FIA0				Lg	Lg	09 18 14.7	
	baz=29,slow=25						
SPA0	**Spitsbergen Ar**	**11.70**	**342**	Pn	**Pn**	**09 17 22.4**	**-1.9**
	baz=144,slow=12						
SPA0	**Spitsbergen Ar**	**11.70**	**342**	P	**Pn**	**09 17 22.4**	**-1.9**
	baz=144,slow=12						

CSEM ***26*** *09:20:07.4±0.2, 37.39N×28.14E, h35km±1km, MD2.4, Error ellipse: s-maj=5.7km s-min=3.7km az=53.0*
DDA ***26*** *09:20:11.2, 37.76N×27.85E, h28km, MD2.8*

ISK 26 09:20:08.8, 37.25N×28.06E, h28km, MD2.4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.22**	**123**	*e*PG	Pb	09 20 15.3	+0.2
YER				*e*SG	Sb	09 20 20.4	+1.0
YER	**Yerkesik**	**0.22**	**123**	*e*Pg	Pb	09 20 15.3	+0.2
YER				*e*Sg	Sb	09 20 20.4	+1.0
MLSB	**Milas**	**0.23**	**281**	*e*PG	Pb	09 20 15.7	+0.5
MLSB				*e*SG	Sb	09 20 20.4	+0.9
MLSB	**Milas**	**0.23**	**281**	*e*Pg	Pb	09 20 15.7	+0.5
MLSB				*e*Sg	Sb	09 20 20.4	+0.9
AYDN	**Tasoluk**	**0.43**	**341**	*i* P	Pb	09 20 16.1	-2.0
AYDN				*i* S	Sb	09 20 22.0	-2.5
AYDN	**Tasoluk**	**0.43**	**341**	*i* P	Pb	09 20 16.1	-2.0
AYDN				*i* S	Sb	09 20 22.0	-2.5
BODT	**Bodrum**	**0.62**	**252**	*e*PG	Pn	09 20 21.9	+0.1
BODT				*e*SG	Sn	09 20 31.7	+0.7
BODT	**Bodrum**	**0.62**	**252**	*e*Pg	Pn	09 20 21.9	+0.1
BODT				*e*Sg	Sn	09 20 31.7	+0.8
DAT	**Datca**	**0.65**	**216**	*e*PG	Pn	09 20 22.3	0.0
DAT	**Datca**	**0.65**	**216**	*e*Pg	Pn	09 20 22.3	0.0

IDC 26 09:27:45.6±3.5, 31.44N×70.37E, h0km, mb3.4/4, mb1 3.6/6, mb1mx3.4/31, mbtmp3.5/6, ML3.5/2, MS3.2/2, Ms1 3.2/2, ms1mx2.4/32, Error ellipse: s-maj=115.8km s-min=22.7km az=84.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAK	**Ala-Archa**	**11.65**	**15**	Pn	Pn	09 30 33.8	+0.4
	0.6nm,0.3s,baz=181,slow=4.8,SNR=6.2						
AAK				Sn	Sn	09 32 43.9	-0.5
	0.4nm,0.3s,baz=276,slow=18,SNR=2.7						
AAK				LR	LR	09 35 41.9	
	comp=Z,44nm,19.7s,baz=214,slow=41						
MKAR	**Makanchi Array**	**17.88**	**28**	P	P	09 31 57.0	+0.5
	0.1nm,0.3s,baz=206,slow=9.9,SNR=4.4						
BVAR	**Borovoye Array**	**21.57**	**0**	P	P	09 32 36.9	+0.2
	0.8nm,0.7s,baz=160,slow=9.3,SNR=4.7						
ZALV	**Zalesovo Beam**	**24.78**	**21**	P	P	09 33 08.6	-0.4
	1.0nm,0.6s,baz=206,slow=9.0,SNR=2.5						
JNU	**Nakatsue**	**50.55**	**71**	LR	LR	10 02 25.4	
	comp=Z,66nm,18.4s,baz=228,slow=41						
WRA	**Warramunga Arr**	**79.81**	**121**	P	P	09 39 55.7	-0.4
	0.2nm,0.7s,baz=323,slow=5.2,SNR=3.2						
ASAR	**Alice Springs**	**81.83**	**124**	P	P	09 40 07.5	+0.6
	0.2nm,0.7s,baz=310,slow=5.4,SNR=3.5						

IGQ 26 09:35:31.1, 2.37S×80.20W, h10km±140km, Mb4.2, Ms4.0, 3C-17D, Error ellipse: s-maj=2.5km s-min=2.0km az=3.5,

Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHIS	**Cerro-Chispas-**	**1.41**	**338**	P	Pn	09 35 55.8	-1.2
RIOE	**Riobamba**	**1.68**	**69**	S	Sb	09 36 24.4	+0.2
RIOE	**Riobamba**	**1.68**	**69**	P	Pn	09 36 01.1	+0.1
IGUA	**Igualata**	**1.78**	**61**	⇓P	Pb	09 36 04.0	-0.7
CATE	**Catamayo**	**1.79**	**153**	P	Pb	09 36 04.5	+0.2
BMAS	**Trigal station**	**1.92**	**63**	S	Sb	09 36 30.9	-0.2
BMAS	**Trigal station**	**1.92**	**63**	P	Pb	09 36 05.8	-0.9
BIL2	**Estacion Bilba**	**1.92**	**62**	S	Sb	09 36 31.6	+0.6
BIL2	**Estacion Bilba**	**1.92**	**62**	P	Pb	09 36 06.2	-0.4
BBIL	**Ulba Tungurahu**	**1.93**	**62**	⇓S	Sb	09 36 31.8	+0.3
BBIL	**Ulba Tungurahu**	**1.93**	**62**	⇓P	Pb	09 36 06.6	-0.4
ARRY	**Arrayan**	**1.94**	**64**	P	Pn	09 36 05.6	+0.9
PAT1	**Patacocha**	**1.95**	**64**	P	Pb	09 36 06.5	-0.9
BPAT	**Tungurahua Vol**	**1.96**	**64**	P	Pb	09 36 06.6	-1.0
JUI6	**Juive**	**1.96**	**62**	⇓P	Pb	09 36 06.8	-0.7
RETU	**Refugio**	**1.97**	**63**	⇑P	Pb	09 36 07.4	-0.5
RETU	**Refugio**	**1.97**	**63**	⇑S	Sb	09 36 33.2	+0.2
MACE	**Macas**	**2.00**	**87**	P	Pb	09 36 07.3	-0.6
RUN5	**Runtun**	**2.01**	**62**	S	Sb	09 36 34.1	+0.5
RUN5	**Runtun**	**2.01**	**62**	P	Pb	09 36 07.6	-0.6
BULB	**Ulba Tungurahu**	**2.01**	**63**	⇓S	Sb	09 36 34.0	+0.3
BULB	**Ulba Tungurahu**	**2.01**	**63**	⇓P	Pb	09 36 07.7	-0.6
BRUN	**Tungurahua Vol**	**2.01**	**62**	⇓P	Pb	09 36 07.6	-0.8
BRUN	**Tungurahua Vol**	**2.01**	**62**	⇓S	Sb	09 36 33.9	+0.1
PISA	**Pisayambo**	**2.23**	**54**	⇑P	Pb	09 36 11.4	-0.8
MAG1	**Magdalena**	**2.32**	**10**	S	Sn	09 36 36.0	-2.1
MAG1	**Magdalena**	**2.32**	**10**	P	Pn	09 36 08.7	-0.8
BMOR	**Cotopaxi Volca**	**2.38**	**47**	⇓S	Sb	09 36 46.0	+1.3
BMOR	**Cotopaxi Volca**	**2.38**	**47**	⇓P	Pb	09 36 13.4	-1.4
CAMI	**Rancho Maria**	**2.38**	**45**	⇓P	Pb	09 36 14.0	-0.8
CAMI	**Rancho Maria**	**2.38**	**45**	⇓S	Sb	09 36 46.0	+1.3
BNAS	**Cotopaxi Volca**	**2.40**	**46**	⇓P	Pb	09 36 14.0	-1.2
MOV1	**Cotopaxi Vol s**	**2.40**	**47**	P	Pb	09 36 13.8	-1.5
NAS2	**Nasa**	**2.43**	**45**	S	Sb	09 36 47.1	+0.9
NAS2	**Nasa**	**2.43**	**45**	P	Pb	09 36 14.9	-0.7
BREF	**Cotopaxi Volca**	**2.43**	**46**	⇓P	Pb	09 36 14.6	-1.2
BTAM	**Cotopaxi Volca**	**2.46**	**47**	⇓P	Pb	09 36 14.8	-1.4
BTAM	**Cotopaxi Volca**	**2.46**	**47**	⇓S	Sb	09 36 47.1	0.0
TAMB	**Tambo**	**2.47**	**48**	P	Pb	09 36 14.9	-1.4
VC1	**Cotopaxi 1**	**2.48**	**46**	P	Pb	09 36 15.1	-1.4
COV1	**Cotopaxi Volc**	**2.51**	**48**	P	Pn	09 36 14.8	+2.0
PITA	**Cotopaxi Volc**	**2.52**	**44**	P	Pb	09 36 15.7	-1.4
JUA2	**San Juan 2**	**2.66**	**37**	P	Pn	09 36 17.2	+2.4
TERV	**Terraza Guagua**	**2.70**	**36**	S	Sb	09 36 52.6	-1.3
TERV	**Terraza Guagua**	**2.70**	**36**	P	Pn	09 36 17.4	+2.1
GGP	**Refugio Guagua**	**2.70**	**36**	⇓P	Pn	09 36 16.3	+0.9
PINO	**Pino**	**2.71**	**36**	P	Pn	09 36 16.3	+0.8
GOLV	**Golondrinas**	**2.77**	**22**	P	Pn	09 36 17.4	+1.7
ANTI	**Antisana**	**2.79**	**47**	P	Pb	09 36 19.6	-2.3
OTAV	**Otavalo**	**3.12**	**34**	P	Pn	09 36 22.0	+1.0
CAYR	**Refugio Cayamb**	**3.22**	**43**	P	Pb	09 36 27.6	-1.7
COTA	**Cotacachi**	**3.26**	**35**	P	Pn	09 36 25.0	+1.9
COTA	**Cotacachi**	**3.26**	**35**	S	Sb	09 37 08.3	-1.9
CAYA	**Cayambe**	**3.27**	**42**	P	Pb	09 36 27.4	-2.8
LITE	**Lita**	**3.65**	**30**	P	Pn	09 36 28.9	+1.1

IDC 26 09:43:40.3±6.1, 10.64S×161.52E, h72km±45km, mb3.4/4, mb1 3.6/4, mb1mx3.3/19, mbtmp3.4/4, MS3.4/1, Ms1 3.4/1, ms1mx2.6/18, Error ellipse: s-maj=49.0km s-min=27.0km az=115.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.96**	**308**	P	Pn	09 44 11.3	-0.2
	97nm,0.3s,baz=164,slow=10,SNR=19						
HNR				S	Sn	09 44 35.7	+0.5
	253nm,0.3s,baz=158,slow=19,SNR=11						
WRA	**Warramunga Arr**	**27.76**	**247**	P	P	09 49 22.6	0.0
	1.0nm,0.9s,baz=74,slow=9.2,SNR=16						
ASAR	**Alice Springs**	**29.32**	**240**	P	P	09 49 36.1	-0.3
	0.3nm,0.8s,baz=68,slow=10,SNR=3.5						
ASAR				LR	LR	09 59 10.6	
	comp=Z,75nm,21.3s,baz=186,slow=32						
SONM	**Songino Array**	**75.93**	**325**	P	P	09 55 19.8	+0.4
	1.1nm,0.8s,baz=137,slow=5.4,SNR=6.1						
SONM				pP	PcP	09 55 34.6	+3.0
	1.0nm,0.7s,baz=138,slow=5.6,SNR=5.9						
ILAR	**Eielson Array**	**84.50**	**20**	P	P	09 56 04.7	-0.3
	0.5nm,0.8s,baz=245,slow=4.0,SNR=5.7						
DIB	**Dawson Inlet,**	**84.61**	**34**	T	T	11 29 03.4	
	SNR=4.5						

IDC ***26*** *09:45:00.0±34.0, 0.96S×100.27E, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.5/23, mbtmp3.9/3, Error ellipse: s-maj=628.0km s-min=241.5km az=141.0*
ISCJB ***26*** *09:46:05.7±0.9, 5.1S±0.3×104.7E±0.2, h100km, mb3.8/3, Error ellipse: s-maj=41.6km s-min=9.1km az=30.7*
DJA ***26*** *09:46:06.6±0.5, 5.5S×105E±1.0, h88km±13km, M3.7/7, MLv3.7/7*

ISC 26 09:46:06.2±1.7, 5.1S±0.2×104.6E±0.1, h100km, n11, σ0s34/9, mb4.0/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**0.43**	**197**	P	**Pn**	**09 46 21.9**	**+0.3**
LWLI	**Liwa**	**0.57**	**279**	P	**Pn**	**09 46 22.8**	**+0.1**
BLSI	**Bandar Lampung**	**0.67**	**113**	P	**Pn**	**09 46 23.8**	**+0.4**
SBJI	**Serang**	**1.81**	**124**	P	**Pn**	**09 46 36.4**	**+0.1**
MNAI	**Manna**	**1.82**	**294**	P	**Pn**	**09 46 36.6**	**0.0**
MNAI				S	**Pn**	**09 46 36.5**	**0.0**
KSI	**Kapahiang**	**2.49**	**305**	P	**Pn**	**09 46 45.1**	**-0.2**
DBJI	**Dramaga**	**2.56**	**124**	P	**Pn**	**09 46 46.3**	**+0.2**
CNJI	**Cibinong**	**3.32**	**131**	P	**Pn**	**09 46 55.6**	**-0.6**
WRA	**Warramunga Arr**	**32.45**	**120**	P	P	09 52 22.5	-4.8
	0.4nm,0.3s,baz=297,slow=9.6,SNR=5.0						
ASAR	**Alice Springs**	**33.71**	**126**	P	P	09 52 34.0	-4.2
	0.8nm,0.4s,baz=301,slow=7.8,SNR=29						
ASAR				pP	pP	09 52 37.5	-23
	0.2nm,0.4s,baz=311,slow=8.5,SNR=4.3						
STKA	**Stephens Creek**	**43.66**	**132**	P	P	09 53 53.4	-7.8
	1.1nm,0.4s,baz=318,slow=7.9,SNR=3.3						
STKA				pP	pP	09 53 57.4	-27
	0.8nm,0.5s,baz=318,slow=9.6,SNR=2.9						

IDC ***26*** *09:52:12.6±0.9, 31.38N×70.11E, h0km, mb4.0/13, mb1 4.2/15, mb1mx3.9/33, mbtmp4.1/15, ML4.3/2, MS3.3/6, Ms1 3.3/6, ms1mx3.0/36, Error ellipse: s-maj=20.3km s-min=18.5km az=67.0*
NNC ***26*** *09:52:12.4±12.0, 31.37N×70.39E, h0km, mb4.1, Error ellipse: s-maj=163.1km s-min=46.6km az=170.0*
ISCJB ***26*** *09:52:15.3±0.6, 31.44N±0.05×70.10E±0.06, h33km, mb3.9/14, MS3.3/4, Error ellipse: s-maj=8.4km s-min=5.0km az=43.6*

ISC 26 09:52:17.6±0.8, 31.38N±0.07×70.00E±0.05, h35km, n52, σ1s74/50, mb4.0/14, MS3.3/4, 6C-2D, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THW	**Thamme Wali**	**2.04**	**46**	P	**Pn**	**09 52 49.6**	**+0.1**
CEP	**Cherat**	**2.92**	**33**	P	**Pn**	**09 53 02.1**	**+0.4**
CHCP	**Chirah Chowk**	**3.57**	**50**	P	**Pn**	**09 53 11.3**	**+0.8**
THN	**Thein Dam**	**4.97**	**76**	*e*PKP	**Pn**	**09 53 27.5**	**-2.2**
THN				*e*4	**Sn**	**09 54 26.5**	**+0.5**
PONG	**Pong**	**5.10**	**82**	*e*S	**Sn**	**09 54 30.0**	**+0.8**
BHK	**Bhakra**	**5.48**	**88**	*e*S	**Sn**	**09 54 41.9**	**+3.2**
SMLA	**Simla**	**6.14**	**90**	⇑*i*P	**Pn**	**09 53 47.3**	**+1.5**
SMLA				*i* S	**Sn**	**09 54 57.5**	**+2.8**
SMLA				*i* S	Sn	09 55 00.3	+5.6
SMLA				AML	AML	09 55 04.6	
	comp=E,1μm,0.4s						
SMLA				AML	AML	09 55 34.9	
	comp=N,1μm,0.7s						
NDI	**New Delhi**	**6.81**	**111**	*e*4	**Pn**	**09 53 52.5**	**-2.4**
NDI				*e*4	x	09 55 50.0	
DDI	**Dehra Dun**	**7.00**	**97**	*e*4	**Sn**	**09 55 15.0**	**-1.1**
LGTI	**Lohaghat**	**9.05**	**100**	*e*S	**Sn**	**09 56 10.0**	**+3.6**
AML	**Almayashu**	**11.13**	**14**	P	**Pn**	**09 54 53.2**	**-1.4**
	SNR=52						
UCH	**Uchtor**	**11.41**	**17**	P	**Pn**	**09 54 57.6**	**-0.8**
	SNR=12						
KZA	**Kyzart**	**11.47**	**20**	P	**Pn**	**09 54 57.3**	**-2.0**
	SNR=16						
EKS2	**Erkin-Say**	**11.66**	**14**	P	**Pn**	**09 54 59.5**	**-2.0**
	SNR=18						

KK31	**Karatay Array**	**11.71**	**2**	P	**Pn**	**09 55 00.1**	**-2.0**			
	comp=N,8.9nm,0.6s,baz=194,slow=17,SNR=136									
AAK	**Ala-Archa**	**11.79**	**16**	P	**Pn**	**09 55 02.3**	**-1.0**			
	SNR=22									
AAK	**Ala-Archa**	**11.79**	**16**	Pn	**Pn**	**09 55 02.1**	**-1.3**			
	comp=N,3.3nm,0.3s,baz=183,slow=12,SNR=40									
AAK				Sn	**Sn**	**09 57 11.0**	**-2.8**			
	comp=N,1.2nm,0.3s,baz=322,slow=22,SNR=7.1									
AAK				LR	LR	10 00 21.4				
	comp=N,135nm,19.0s,baz=51,slow=42									
KBK	**Karagaybulak**	**11.93**	**18**	P	**Pn**	**09 55 06.2**	**+1.0**			
	SNR=7.9									
JBP	**Jabalpur**	**12.06**	**130**	⇑*i*P	**Pn**	**09 55 04.4**	**-2.6**			
JBP				*e*S	**Sn**	**09 57 21.9**	**+1.6**			
CHMS	**Chumysh**	**12.20**	**17**	P	**Pn**	**09 55 07.2**	**-1.6**			
	SNR=16									
DANN	**Dangsing**	**12.32**	**101**	*e*P	**Pn**	**09 55 08.6**	**-2.1**			
	comp=N,46nm,0.7s									
TKM2	**Tokmak 2**	**12.35**	**20**	⇑P	**Pn**	**09 55 10.1**	**-1.0**			
	comp=N,8.7nm,0.6s									
TKM2	**Tokmak 2**	**12.35**	**20**	P	**Pn**	**09 55 10.7**	**-0.3**			
	SNR=12									
KOLN	**Koldanda**	**12.37**	**103**	*e*P	**Pn**	**09 55 09.2**	**-2.2**			
	comp=N,31nm,0.4s									
DMN	**Daman**	**13.68**	**102**	*e*P	Pn	09 55 25.7	-3.6			
	comp=N,24nm,0.6s									
KKN	**Kakani**	**13.77**	**101**	*e*P	Pn	09 55 27.0	-3.5			
	comp=N,59nm,0.6s									
PKIN	**Phulchoki**	**13.93**	**102**	*e*P	Pn	09 55 29.0	-3.8			
	comp=N,39nm,0.8s									
PKI	**Pulchoki**	**13.95**	**102**	*e*P	Pn	09 55 29.0	-4.0			
	comp=N,37nm,0.7s									
GUN	**Gumba**	**14.23**	**100**	*e*P	Pn	09 55 33.0	-3.9			
	comp=N,65nm,0.5s									
TAPN	**Taplejung**	**15.95**	**100**	*e*P	**Pn**	**09 55 54.9**	**-4.7**			
	comp=N,21nm,0.7s									
MK31	**Makanchi Array**	**18.07**	**28**	P	**Pn**	**09 56 23.9**	**-1.9**			
	comp=N,3.5nm,0.6s,baz=211,slow=12,SNR=34									
MKAR	**Makanchi Array**	**18.07**	**28**	P	**Pn**	**09 56 24.8**	**-1.0**			
	comp=N,0.6nm,0.3s,baz=213,slow=10,SNR=28									
MKAR				LR	LR	10 04 49.3				
	comp=N,62nm,20.3s,baz=345,slow=42									
AB31	**Akbulak array**	**19.40**	**340**	⇓P	**P**	**09 56 39.9**	**-0.6**			
	comp=N,0.8nm,0.5s,baz=157,slow=12,SNR=21									
KURBB	**Kurchatov Array**	**20.25**	**16**	⇑P	**P**	**09 56 47.9**	**-1.7**			
	comp=N,6.8nm,0.7s									
KURBB	**Kurchatov Arra**	**20.25**	**16**	P	**P**	**09 56 48.6**	**-1.1**			
	comp=N,6.9nm,0.7s,baz=207,slow=10.0,SNR=12									
AKTO	**Aktyubinsk**	**21.03**	**338**	⇓P	**P**	**09 57 00.6**	**+2.4**			
	comp=N,4.2nm,0.8s									
AKTO	**Aktyubinsk**	**21.03**	**338**	P	**P**	**09 56 58.9**	**+0.7**			
	comp=N,2.4nm,0.6s,baz=150,slow=9.0,SNR=9.9									
VOSK	**Vostochnaya**	**21.34**	**2**	⇑P	**P**	**09 57 01.4**	**-0.1**			
	comp=N,7.7nm,1.1s									
BVA0	**Borovoye Array**	**21.64**	**1**	⇑P	**P**	**09 57 03.3**	**-1.3**			
	comp=N,5.0nm,0.8s,baz=170,slow=12,SNR=32									
BVAR	**Borovoye Array**	**21.64**	**1**	P	**P**	**09 57 04.2**	**-0.4**			
	comp=N,5.3nm,0.7s,baz=172,slow=10.0,SNR=28									
BVAR				LR	LR	10 06 32.4				
	comp=N,86nm,18.6s,baz=334,slow=40									
ZALV	**Zalesovo Beam**	**24.95**	**21**	P	**P**	**09 57 37.0**	**-0.4**			
	comp=N,4.5nm,0.6s,baz=216,slow=9.4,SNR=20									
ZALV				LR	LR	10 08 25.6				
	comp=N,66nm,20.3s,baz=248,slow=39									
BRTR	**Keskin Array B**	**30.57**	**296**	P	**P**	**09 58 30.2**	**+2.1**			
	comp=N,0.4nm,0.5s,baz=101,slow=7.5,SNR=3.2									
SONM	**Songino Array**	**32.14**	**49**	P	**P**	**09 58 41.8**	**0.0**			
	comp=N,1.4nm,0.7s,baz=249,slow=10.0,SNR=7.0									
FINES	**FINESS Array B**	**41.38**	**330**	P	**P**	**10 00 00.6**	**+0.6**			
	comp=N,3.5nm,1.1s,baz=92,slow=8.3,SNR=3.2									
ARCES	**ARCESS Array B**	**45.61**	**340**	P	**P**	**10 00 34.5**	**+0.5**			
	comp=N,2.3nm,0.7s,baz=117,slow=6.9,SNR=9.1									
NB2	**NORSAR Subarra**	**48.06**	**326**	P	**P**	**10 00 54.6**	**+1.3**			
	comp=Z,0.6nm,0.5s,baz=104,slow=7.9									
NOA	**NORSAR Array B**	**48.06**	**326**	P	**P**	**10 00 54.2**	**+0.9**			
	comp=Z,0.7nm,0.7s,baz=104,slow=7.7,SNR=3.8									
NOA				LR	LR	10 22 59.4				
	comp=Z,40nm,19.7s,baz=275,slow=38									
PETK	**Petropavlovsk-**	**64.27**	**42**	LR	LR	10 32 52.4				
	comp=Z,31nm,18.1s,baz=47,slow=38									
**TORD

DAT				*e*SN	**Sn**	**10 19 11.5**	**+0.9**
DAT	**Datca**	**1.67**	**0**	*e*Pn	**Pn**	**10 18 50.1**	**+0.9**
DAT				*e*Sn	**Sn**	**10 19 11.5**	**+0.9**
DALY	**Dalyan (Mu˘la**	**1.96**	**26**	*e*PN	**Pn**	**10 18 53.8**	**+0.7**
DALY	**Dalyan (Mu˘la**	**1.96**	**26**	*e*Pn	**Pn**	**10 18 53.8**	**+0.7**
TURN	**Turunc**	**2.00**	**25**	*e*P	**Pn**	**10 18 53.5**	**-0.1**
TURN				*e*S	Sn	10 19 09.6	-8.8
TURN	**Turunc**	**2.00**	**25**	*e*P	**Pn**	**10 18 53.5**	**-0.1**
FETY	**Fethiye**	**2.00**	**38**	*e*PN	**Pn**	**10 18 54.4**	**+0.8**
FETY	**Fethiye**	**2.00**	**38**	*e*Pn	**Pn**	**10 18 54.4**	**+0.8**
BODT	**Bodrum**	**2.01**	**354**	*e*PN	**Pn**	**10 18 54.9**	**+1.1**
BODT	**Bodrum**	**2.01**	**354**	*e*Pn	**Pn**	**10 18 54.9**	**+1.1**
AKAS	**Kas**	**2.03**	**54**	*i* P	**Pn**	**10 18 56.1**	**+1.9**
AKAS				*e*S	**Sn**	**10 19 16.1**	**-3.5**
AKAS	**Kas**	**2.03**	**54**	*i* P	**Pn**	**10 18 56.1**	**+1.9**
AKAS				*e*S	**Sn**	**10 19 16.1**	**-3.5**
YER	**Yerkesik**	**2.15**	**15**	*e*PN	**Pn**	**10 18 56.4**	**+0.6**
YER				*e*SN	**Sn**	**10 19 23.2**	**+0.8**
YER	**Yerkesik**	**2.15**	**15**	*e*Pn	**Pn**	**10 18 56.4**	**+0.6**
YER				*e*Sn	**Sn**	**10 19 23.2**	**+0.8**
ELL	**Elmali**	**2.54**	**48**	*e*PN	**Pn**	**10 19 02.2**	**+1.0**
ELL	**Elmali**	**2.54**	**48**	*e*Pn	**Pn**	**10 19 02.2**	**+1.0**
DNZL	**Cakiroluk**	**2.88**	**24**	*e*P	**Pn**	**10 19 09.1**	**+3.1**
DNZL				*e*S	**Sb**	**10 19 45.2**	**-1.7**
DNZL	**Cakiroluk**	**2.88**	**24**	*e*P	**Pn**	**10 19 09.1**	**+3.1**
DNZL				*e*S	**Sb**	**10 19 45.2**	**-1.7**
SUTC	**Sutluce-Ispart**	**3.68**	**48**	*e*PN	**Pn**	**10 19 18.4**	**+1.6**
SUTC	**Sutluce-Ispart**	**3.68**	**48**	*e*Pn	**Pn**	**10 19 18.4**	**+1.6**

OTT 26 10:42:19.1±0.6, 75°00N×68°30W, h18km, ML3.6/7, Baffin Bay Seismic Zone. Offshore western Greenland. 377km east from Craig Harbour, Nu, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUNU	**Eureka**	**6.38**	**331**	PN	Pn	10 43 50.6	-1.5
EUNU				SN	Sn	10 44 59.4	-4.9
EUNU				Trac		10 45 03.7	
	comp=Z,6.6nm,0.2s						
GIFN	**Gifford Fjord,**	**6.42**	**225**	PN	Pn	10 43 52.2	-0.3
GIFN				SN	Sn	10 45 00.1	-5.0
GIFN				Trac		10 45 03.1	
	comp=Z,4.7nm,0.3s						
RES	**Resolute Bay**	**6.95**	**280**	PN	Pn	10 43 59.8	0.0
RES				SN	Sn	10 45 14.0	-4.2
RES				Trac		10 45 15.8	
	comp=Z,15nm,0.7s						
ILON	**Igloolik, Nuna**	**6.99**	**223**	PN	Pn	10 43 59.9	-0.5
ILON				SN	Sn	10 45 13.3	-5.8
ILON				Trac		10 45 16.1	
	comp=Z,8.4nm,0.5s						
AP3N	**Apex site 3 Nu**	**7.41**	**230**	PN	Pn	10 44 05.8	-0.3
AP3N				SN	Sn	10 45 25.6	-4.1
AP3N				Trac		10 45 27.4	
	comp=Z,6.8nm,0.5s						
LAIN	**Lailor River,**	**7.53**	**226**	PN	Pn	10 44 06.8	-0.9
LAIN				SN	Sn	10 45 26.7	-5.8
LAIN				Trac		10 45 29.4	
	comp=Z,3.3nm,0.3s						
SRLN	**Sarcpa Lake, N**	**7.97**	**223**	PN	Pn	10 44 13.0	-0.8
SRLN				SN	Sn	10 45 37.8	-5.6
KUGN	**Kugaaruk Camp,**	**9.70**	**236**	PN	Pn	10 44 34.4	-3.1
KUGN				SN	Sn	10 46 15.2	-11
QILN	**Qililugaq Expl**	**10.20**	**224**	PN	Pn	10 44 42.5	-1.8
QILN				SN	Sn	10 46 25.5	-13
QILN				Trac		10 46 31.8	
	comp=Z,3.9nm,0.5s						
NUNN	**Nunuq Camp, NU**	**12.38**	**230**	PN	Pn	10 45 12.5	-1.6
NUNN				SN	Sn	10 47 18.5	-13
SEDN	**First Sedna Si**	**14.17**	**226**	PN	Pn	10 45 34.0	-4.6
SEDN				SN	Sn	10 48 00.4	-15

NNC 26 10:46:38.3±3.1, 54°76N×61°66E, h0km, mb3.5, mpv3.0, 7C-5D, Error ellipse: s-maj=32.2km s-min=13.9km az=160.0, Ural Mountains region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZRNK	**Zerenda**	**4.71**	**110**	⇓Pn	Pn	10 47 52.7	+2.1
	1.5nm,0.8s						
ZRNK				⇑Pg	Pb	10 48 04.9	+3.2
	1.5nm,0.5s						
ZRNK				⇓Sn	Sn	10 48 48.0	+2.1
	3.0nm,0.7s						
ZRNK				⇑Lg	Lg	10 49 07.7	
	5.3nm,0.6s						
AKTO	**Aktyubinsk**	**4.87**	**209**	⇓Lg	Lg	10 49 13.3	
	6.0nm,0.6s						
BRVK	**Borovoye**	**5.38**	**105**	⇑Pn	Pn	10 47 58.0	-1.7
	3.5nm,0.9s						
BRVK				⇑Lg	Lg	10 49 26.0	
	19nm,0.9s						
BVA0	**Borovoye Array**	**5.45**	**105**	⇓Pn	Pn	10 47 59.4	-1.3
	1.1nm,0.5s,baz=281,slow=14,SNR=9.4						
BVA0				⇑Pg	Pb	10 48 15.8	+1.5
	1.1nm,0.5s						
BVA0				⇓Lg	Lg	10 49 30.8	
	4.8nm,0.7s,baz=280,slow=30,SNR=3.6						
AB31	**Akbulak array**	**5.62**	**192**	Pn	Pn	10 48 02.8	-0.2
	0.1nm,0.1s,baz=19,slow=6.0,SNR=10						
AB31				⇑Lg	Lg	10 49 35.3	
	6.9nm,0.7s,baz=17,slow=26,SNR=5.1						
VOSK	**Vostochnaya**	**5.89**	**106**	⇑Lg	Lg	10 49 42.1	
	6.5nm,1.0s						

DJA 26 10:50:47.5±1.7, 9°S±5°×111°0E±°, h34km±18km, M3.7/9, MLv3.7/9, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UGM	**Wanagama**	**1.13**	**20**	P	Pn	10 51 07.0	0.0
UGM				S	Sn	10 51 22.1	+0.7
YOGI	**Yogyakarta**	**1.17**	**8**	P	Pn	10 51 07.9	+0.4
YOGI				S	Sb	10 51 23.6	-0.5
PCJI	**Pacitan**	**1.30**	**53**	P	Pn	10 51 08.4	-0.8
PCJI				S	Sn	10 51 24.8	-0.6
CLJI	**Cilicap**	**1.67**	**319**	P	Pn	10 51 14.1	-0.3
CLJI				S	Sn	10 51 35.3	+0.7
PWJI	**Pagerwojo**	**1.91**	**60**	P	Pn	10 51 17.9	+0.2
SMRI	**Semarang**	**1.94**	**9**	P	Pn	10 51 18.1	-0.1
SJI	**Sawahan**	**2.04**	**53**	P	Pn	10 51 20.5	+0.9
TGJI	**Tegal**	**2.32**	**334**	P	Pn	10 51 24.1	+0.7
CISI	**Cisompet, Garu**	**2.69**	**302**	P	Pn	10 51 29.1	+0.6
CISI				S	Sn	10 52 01.2	+1.2
GMJI	**Gumukmas**	**3.35**	**78**	P	Pn	10 51 38.4	+0.9
CNJI	**Cibinong**	**3.40**	**299**	P	Pn	10 51 38.7	+0.5

IDC 26 10:56:17.9±3.4, 7°72S×68°40E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/26, mbtmp3.5/4, MS3.6/5, Ms1 3.6/5, ms1mx3.1/28, Error ellipse: s-maj=115.9km s-min=32.3km az=61.0, Chagos Archipelago region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMBO	**Kilima Mbogo**	**31.72**	**280**	LR	LR	11 13 06.3	
	comp=Z,90nm,20.3s,baz=93,slow=32						
PSI	**Prapat**	**32.19**	**72**	LR		11 13 58.6	
	comp=Z,230nm,18.8s,baz=108,slow=33						
AAK	**Ala-Archa**	**50.41**	**6**	LR	LR	11 24 44.3	
	comp=Z,52nm,18.8s,baz=184,slow=34						
MKAR	**Makanchi Array**	**55.66**	**12**	P	P	11 05 55.3	-0.4
	0.3nm,0.6s,baz=198,slow=9.1,SNR=3.5						
ASAR	**Alice Springs**	**64.53**	**112**	P	P	11 06 57.2	0.0
	0.2nm,0.6s,baz=278,slow=6.1,SNR=6.3						
SONM	**Songino Array**	**64.68**	**27**	P	P	11 06 58.3	+0.5
	0.3nm,0.4s,baz=224,slow=4.0,SNR=2.6						
SONM				LR	LR	11 32 27.8	
	comp=Z,34nm,21.7s,baz=72,slow=34						
WRA	**Warramunga Arr**	**64.82**	**108**	P	P	11 06 59.1	-0.1
	0.8nm,1.0s,baz=277,slow=5.8,SNR=5.2						
KSRS	**Korea Array**	**71.38**	**46**	LR	LR	11 39 05.8	
	comp=Z,40nm,18.0s,baz=216,slow=36						
PDAR	**Pinedale Array**	**145.04**	**357**	PKPbc	PKPbc	11 15 56.4	-0.7
	0.3nm,0.4s,baz=64,slow=2.1,SNR=2.9						

DDA 26 10:57:11.0, 40°90N×43°74E, h27km, MD3.0, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DIGO	**Kars**	**0.55**	**210**	*i* P	Pb	10 57 22.0	-0.7
DIGO				*e*S	Sn	10 57 33.3	+1.3
KARS	**Kars**	**0.57**	**242**	*e*PG	Pb	10 57 20.2	-2.5
KARS				*e*SG	Sb	10 57 28.1	-2.5
DAGI	**Agillar**	**1.39**	**278**	*i* P	Pb	10 57 36.4	-0.2
DAGI				*i* S	Sb	10 57 53.9	-0.2
ARTV	**Artvin**	**1.40**	**283**	*e*P	Pb	10 57 37.0	+0.1
ARTV				*e*S	Sn	10 57 53.5	+0.6
DDEM	**Demirkent**	**1.51**	**271**	*i* P	Pn	10 57 37.1	+0.7
DDEM				*i* S	Sn	10 57 53.0	-2.2
BCA	**Borcka**	**1.69**	**290**	*e*PN	Pb	10 57 42.7	+1.2

DDA 26 11:06:10.2, 40°52N×35°05E, h7km, MD2.8
CSEM 26 11:06:10.2, 40°52N×35°05E, h7km, MD2.8, After DDA
ISCJB 26 11:06:11.3±0.8, 40°56N±0°04×35°02E±0°05, h10km±6km, Error ellipse: s-maj=7.3km s-min=5.9km az=138.9
ISC 26 11:06:10.4±1.2, 40°53N±0°04×35°04E±0°04, h9km±12km, n12, σ0°59/23, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTKT	**Corum**	**0.22**	**297**	*i* P	**Pg**	**11 06 14.7**	**-0.2**
CTKT				*i* S	**Sg**	**11 06 18.7**	**+0.7**
CTKT	**Corum**	**0.22**	**297**	*i* P	**Pg**	**11 06 14.7**	**-0.2**
CTKT				*i* S	**Sg**	**11 06 18.7**	**+0.7**
CORM	**Corum**	**0.47**	**222**	*e*PG	**Pb**	**11 06 20.5**	**-0.5**
CORM				*e*SG	**Sb**	**11 06 28.8**	**+0.8**
HAVZ	**Havza**	**0.75**	**43**	*e*P	**Pg**	**11 06 24.4**	**-0.5**
HAVZ				*i* S	**Sb**	**11 06 36.1**	**0.0**
HAVZ	**Havza**	**0.75**	**43**	*e*P	**Pg**	**11 06 24.4**	**-0.5**
HAVZ				*i* S	**Sb**	**11 06 36.1**	**0.0**
CDAG	**Cicekdag**	**1.04**	**210**	*i* P	**Pg**	**11 06 29.9**	**-0.5**
CDAG				*i* S	**Sb**	**11 06 44.9**	**+0.5**
CDAG	**Cicekdag**	**1.04**	**210**	*i* P	**Pg**	**11 06 29.9**	**-0.5**
CDAG				*i* S	**Sb**	**11 06 44.9**	**+0.5**
ILGA	**Ilgaz**	**1.14**	**298**	*i* P	**Pg**	**11 06 32.2**	**-0.1**
ILGA				*i* S	**Sg**	**11 06 46.8**	**-0.3**
ILGA	**Ilgaz**	**1.14**	**298**	*i* P	**Pg**	**11 06 32.2**	**-0.1**
ILGA				*i* S	**Sg**	**11 06 46.8**	**-0.3**
ELDT	**Eldivan**	**1.23**	**269**	*i* P	**Pb**	**11 06 34.5**	**+0.5**
ELDT				*i* S	**Sg**	**11 06 49.1**	**-1.0**
ELDT	**Eldivan**	**1.23**	**269**	*i* P	**Pb**	**11 06 34.5**	**+0.5**
ELDT				*i* S	**Sg**	**11 06 49.1**	**-1.0**
SVSK	**Karacayir**	**1.62**	**111**	*e*PN	**Pg**	**11 06 42.0**	**+0.5**

ISCJB 26 11:06:59.2±0.6, 38°09N±0°04×106°59E±0°06, h10km, mb3.4/4, Error ellipse: s-maj=7.7km s-min=5.5km az=29.7
IDC 26 11:07:00.9±1.2, 38°09N×106°39E, h0km, mb3.4/4, mb1 3.5/6, mb1mx3.3/28, mbtmp3.4/6, ML3.2/2, MS2.9/1, Ms1 2.9/1, ms1mx2.1/27, Error ellipse: s-maj=67.2km s-min=19.3km az=56.0
BJI 26 11:07:03.2, 38°26N×106°57E, h6km, ML3.4/12, Ms3.2/3, Ms7 2.9/3
ISC 26 11:07:01.0±0.7, 38°14N±0°05×106°55E±0°05, h10km, n11, σ1°95/16, mb3.6/4, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**2.98**	**227**	Pg	**Pg**	**11 07 58.0**	**0.0**
LZH				Sg	**Sg**	**11 08 37.5**	**+0.9**
LZH				smax	smax		
	comp=N,63nm,0.6s						
LZH				smax	smax		
	comp=E,74nm,0.7s						
LZH				LR	LR		
	comp=N,220nm,5.6s						
LZH				LR	LR		
	comp=E,250nm,4.8s						
LZH				LR	LR		
	comp=Z,330nm,6.4s						
BTO	**Baotou**	**3.65**	**46**	*e*Pn	**Pn**	**11 07 57.5**	**-0.1**
BTO				Sn	**Sn**	**11 08 39.0**	**-1.8**
BTO				smax	smax		
	comp=N,32nm,0.4s						
BTO				smax	smax		
	comp=E,23nm,0.3s						
XAN	**Xi'an**	**4.52**	**154**	Pn	Pn	11 08 13.5	+4.0
XAN				Pg	**Pg**	**11 08 26.5**	**-1.0**
XAN				Sn	**Sn**	**11 09 02.5**	**+0.4**
XAN				Sg	**Sg**	**11 09 24.3**	**-1.8**
XAN				smax	smax		
	comp=N,65nm,0.7s						
XAN				smax	smax		
	comp=E,14nm,0.7s						
HHC	**Hu-ho-hao-te**	**4.73**	**54**	*e*Pg	**Pb**	**11 08 23.8**	**-0.3**
HHC				Sg	**Sb**	**11 09 21.5**	**+0.3**
HHC				smax	smax		
	comp=N,240nm,0.4s						
HHC				smax	smax		
	comp=E,250nm,0.4s						
GTA	**Gaotai**	**5.41**	**286**	Pg	Pg	11 08 40.5	-4.1
GTA				Sg	**Sg**	**11 09 49.5**	**-5.2**
GTA				smax	smax		
	comp=N,67nm,0.7s						
GTA				smax	smax		
	comp=E,60nm,0.7s						
GTA				LR	LR		
	comp=N,80nm,6.9s						
GTA				LR	LR		
	comp=E,98nm,5.7s						
GTA				LR	LR		
	comp=Z,68nm,6.4s						
SONM	**Songino Array**	**9.69**	**359**	Pn	**Pn**	**11 09 23.1**	**+2.5**
	comp=Z,0.2nm,0.3s,baz=180,slow=13,SNR=3.2						
SONM				Lg	Lg	11 12 02.9	
	comp=Z,0.4nm,0.3s,baz=187,slow=27,SNR=8.3						
SONM				LR	LR	11 13 28.1	
	comp=Z,60nm,18.4s,baz=269,slow=40						
MKAR	**Makanchi Array**	**19.82**	**304**	P	**P**	**11 11 32.3**	**+0.7**
	comp=Z,0.1nm,0.3s,baz=104,slow=12,SNR=5.4						
ZALV	**Zalesovo Beam**	**21.72**	**324**	P	**P**	**11 11 52.6**	**+0.6**
	comp=Z,1.4nm,0.5s,baz=119,slow=8.9,SNR=6.4						
KURBB	**Kurchatov Arra**	**23.44**	**311**	P	**P**	**11 12 10.9**	**+0.7**
	comp=Z,0.5nm,0.6s,baz=112,slow=10,SNR=5.3						
WRA	**Warramunga Arr**	**63.40**	**151**	P	**P**	**11 17 32.7**	**+1.9**
	comp=Z,0.3nm,0.5s,baz=348,slow=7.0,SNR=7.2						
ASAR	**Alice Springs**	**66.63**	**153**	P	**P**	**11 17 53.0**	**+1.3**
	comp=Z,0.2nm,0.5s,baz=339,slow=6.6,SNR=7.2						

ISK 26 11:18:06.8, 41°10N×40°39E, h13km, MD2.5
ISCJB 26 11:18:08.5±0.5, 40°89N±0°04×40°65E±0°05, h0km, Error ellipse: s-maj=6.7km s-min=3.5km az=142.0
DDA 26 11:18:08.9, 40°89N×40°63E, h8km, MD2.9
CSEM 26 11:18:09.1±0.3, 40°89N×40°68E, h2km, MD2.5, Error ellipse: s-maj=9.1km s-min=4.7km az=143.0
ISC 26 11:18:07.0±0.8, 41°01N±0°04×40°53E±0°03, h0km, n25, σ0°83/32, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PZAR	**Pazar-Rize**	**0.32**	**58**	*e*PG	**Pb**	**11 18 15.8**	**+0.2**
PZAR				*e*SG	**Sb**	**11 18 21.2**	**-0.2**
PZAR	**Pazar-Rize**	**0.32**	**58**	*e*Pg	**Pb**	**11 18 15.9**	**+0.2**
PZAR				*e*Sg	**Sb**	**11 18 21.2**	**-0.2**
MACK	**Trabzon**	**0.58**	**264**	*i* P	**Pn**	**11 18 22.8**	**+0.2**
MACK	**Trabzon**	**0.58**	**264**	*i* P	**Pn**	**11 18 22.8**	**+0.2**
DBOC	**Borcka**	**0.92**	**68**	*i* P	**Pb**	**11 18 25.9**	**0.0**
DBOC	**Borcka**	**0.92**	**68**	*i* P	**Pb**	**11 18 25.9**	**0.0**
DDEM	**Demirkent**	**0.93**	**97**	*i* P	**Pg**	**11 18 25.0**	**+0.2**
DDEM				*i* S	Sg	11 18 32.8	-4.1
DDEM	**Demirkent**	**0.93**	**97**	*i* P	**Pg**	**11 18 25.0**	**+0.2**
BCA	**Borcka**	**0.93**	**62**	*e*PG	**Pg**	**11 18 25.5**	**+0.7**
BCA	**Borcka**	**0.93**	**62**	*e*Pg	**Pg**	**11 18 25.5**	**+0.7**
GUMT	**Gumushane**	**0.97**	**236**	*e*PG	**Pg**	**11 18 26.1**	**+0.5**
GUMT				*e*SG	**Sg**	**11 18 38.1**	**-0.1**
KOPT	**Kop Dagi**	**0.99**	**182**	*i* P	**Pg**	**11 18 27.2**	**+1.3**
KOPT				*e*S	**Sg**	**11 18 37.7**	**-1.1**
KOPT	**Kop Dagi**	**0.99**	**182**	*i* P	**Pg**	**11 18 27.2**	**+1.3**
KOPT				*e*S	**Sg**	**11 18 37.7**	**-1.1**
DAGI	**Agillar**	**1.05**	**86**	*i* P	**Pg**	**11 18 27.3**	**+0.2**
ARTV	**Artvin**	**1.07**	**80**	*i* P	**Pg**	**11 18 27.9**	**+0.4**
ARTV	**Artvin**	**1.07**	**80**	*i* P	**Pg**	**11 18 27.9**	**+0.4**
EZM	**Erzurum**	**1.27**	**150**	*e*PN	**Pn**	**11 18 32.3**	**0.0**
KELT	**Kelkit**	**1.30**	**229**	*i* P	**Pn**	**11 18 33.3**	**+0.7**
KELT				*i* S	**Sn**	**11 18 50.0**	**-0.8**
KELT	**Kelkit**	**1.30**	**229**	*i* P	**Pn**	**11 18 33.3**	**+0.7**
KELT				*i* S	**Sn**	**11 18 50.0**	**-0.8**
ESPY	**Espiye-Giresun**	**1.37**	**267**	*e*PN	**Pn**	**11 18 31.0**	**-2.4**
HOMI	**Horasan**	**1.42**	**132**	*i* P	**Pn**	**11 18 34.7**	**+0.4**
EZC	**Erzincan**	**1.54**	**216**	*e*Pn	**Pb**	**11 18 35.8**	**-0.8**
ERZN	**Erzincan**	**1.55**	**204**	*e*PN	**Pn**	**11 18 35.8**	**-0.2**
SUSE	**Susehri**	**1.95**	**247**	*i* P	Pg	11 18 45.6	+1.3
SUSE				*i* S	**Sg**	**11 19 10.9**	**+1.4**
SUSE	**Susehri**	**1.95**	**247**	*i* P	Pg	11 18 45.6	+1.3
SUSE				*i* S	**Sg**	**11 19 10.9**	**+1.4**

ISCJB 26 11:53:27.6±0.6, 31°92N±0°07×104°61E±0°08, h10km, mb3.2/4, Error ellipse: s-maj=13.8km s-min=4.2km az=44.8
BJI 26 11:53:31.9, 31°85N×104°33E, h16km, ML3.2/11, Ms3.0/2, Ms7 3.0/2
IDC 26 11:53:31.4±1.2, 31°64N×104°91E, h0km, mb3.2/4, mb1 3.4/6, mb1mx3.3/29, mbtmp3.3/6, ML2.2/1, Error ellipse: s-maj=44.1km s-min=22.0km az=55.0
ISC 26 11:53:30.7±0.7, 31°75N±0°05×104°68E±0°06, h10km, n10, σ1°75/15, mb3.3/4, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**1.15**	**224**	Pn	**Pb**	**11 53 50.5**	**-2.1**
CD2				Pg	**Pg**	**11 53 52.5**	**-0.2**
CD2				Sn	**Sb**	**11 54 06.5**	**-1.1**
CD2				Sg	**Sn**	**11 54 09.5**	**+0.9**
CD2				smax	smax		
	comp=N,840nm,0.6s						
CD2				smax	smax		
	comp=E,1μm,0.7s						
XAN	**Xi'an**	**4.24**	**56**	Pn	**Pn**	**11 54 36.5**	**+1.1**
XAN				Pg	**Pg**	**11 54 50.5**	**-1.4**
XAN				Sn	**Sn**	**11 55 23.5**	**-1.5**
XAN				Sg	**Sg**	**11 55 46.3**	**-0.5**
XAN				smax	smax		
	comp=N,62nm,0.8s						
XAN				smax	smax		
	comp=E,30nm,0.7s						
XAN				LR	LR		
	comp=N,73nm,8.8s						
XAN				LR	LR		
	comp=E,59nm,10.1s						
XAN				LR	LR		
	comp=Z,60nm,7.5s						
LZH	**Lanzhou**	**4.38**	**351**	*e*Pg	**Pg**	**11 54 51.8**	**-2.9**
LZH				Sg	**Sb**	**11 55 44.5**	**+3.6**
LZH				smax	smax		
	comp=N,54nm,1.0s						
LZH				smax	smax		
	comp=E,65nm,0.7s						
LZH				LR	LR		
	comp=N,190nm,5.5s						
LZH				LR	LR		
	comp=E,150nm,5.0s						
LZH				LR	LR		
	comp=Z,260nm,6.3s						
CMAR	**Chiang Mai Arr**	**14.21**	**203**	Pn	**P**	**11 56 59.8**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=9.5,slow=9.3,SNR=11						
SONM	**Songino Array**	**16.12**	**4**	Pn	**Pn**	**11 57 18.7**	**+1.2**
	comp=Z,0.0nm,0.3s,baz=186,slow=10,SNR=2.5						
KSRS	**Korea Array**	**19.94**	**67**	P	**P**	**11 58 03.6**	**+0.8**
	baz=255,slow=11,SNR=5.7						
MKAR	**Makanchi Array**	**22.83**	**318**	P	P	11 58 38.2	+4.4
	comp=Z,0.2nm,0.7s,baz=119,slow=12,SNR=3.6						
KURBB	**Kurchatov Arra**	**27.03**	**322**	P	P	11 59 17.4	+4.5
	comp=Z,0.2nm,0.4s,baz=130,slow=10.0,SNR=4.2						
WRA	**Warramunga Arr**	**58.74**	**147**	P	**P**	**12 03 29.8**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=339,slow=7.6,SNR=5.9						
ASAR	**Alice Springs**	**61.79**	**149**	P	**P**	**12 03 50.5**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=328,slow=6.5,SNR=5.2						

ISK 26 12:07:30.9, 39°76N×36°24E, h10km, MD2.7
CSEM 26 12:07:33.2±0.3, 39°76N×36°33E, h2km, MD2.7, Error ellipse: s-maj=8.2km s-min=6.0km az=155.0
DDA 26 12:07:34.0, 39°80N×36°36E, h11km, MD3.1
ISC 26 12:07:33.5±1.1, 39°73N±0°03×36°36E±0°03, h7km±13km, n19, σ1°76/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVSK	**Karacayir**	**0.52**	**69**	*e*PG	**Pg**	**12 07 43.2**	**-0.4**
SVSK				*e*SG	**Sb**	**12 07 51.9**	**-0.8**
SVSK	**Karacayir**	**0.52**	**69**	*e*Pg	**Pg**	**12 07 43.2**	**-0.4**
SVSK				*e*Sg	**Sb**	**12 07 51.9**	**-0.8**
SCER	**sogukcermik**	**0.60**	**77**	*i* P	**Pg**	**12 07 44.8**	**-0.4**
SCER				*i* S	**Sb**	**12 07 55.1**	**-0.2**
SCER	**sogukcermik**	**0.60**	**77**	*i* P	**Pg**	**12 07 44.8**	**-0.4**
SCER				*i* S	**Sb**	**12 07 55.1**	**-0.2**
TOKT	**Tokat**	**0.60**	**13**	*e*PG	**Pg**	**12 07 43.1**	**-2.0**
TOKT				*e*SG	**Sg**	**12 07 51.8**	**-1.3**
TOKT	**Tokat**	**0.60**	**13**	*e*Pg	**Pg**	**12 07 43.2**	**-2.0**
TOKT				*e*Sg	**Sg**	**12 07 51.8**	**-1.3**
BNN	**Bunyan**	**0.97**	**205**	*e*PG	**Pg**	**12 07 49.6**	**-2.5**
BNN				*e*SG	**Sg**	**12 08 03.5**	**-1.1**
HAVZ	**Havza**	**1.43**	**340**	*i* P	**Pn**	**12 07 60.0**	**+0.1**
HAVZ				*i* S	**Sg**	**12 08 22.4**	**+3.0**
HAVZ	**Havza**	**1.43**	**340**	*i* P	**Pn**	**12 08 00.0**	**+0.1**
HAVZ				*i* S	**Sg**	**12 08 22.4**	**+3.0**
DARE	**Darende-Malaty**	**1.45**	**143**	*e*PN	**Pn**	**12 07 59.0**	**-1.3**
DARE	**Darende-Malaty**	**1.45**	**143**	*e*Pn	**Pn**	**12 07 59.0**	**-1.3**
SUSE	**Susehri**	**1.49**	**71**	*i* P	**Pb**	**12 08 01.5**	**-0.2**
SUSE				*i* S	**Sg**	**12 08 23.3**	**+1.9**
SUSE	**Susehri**	**1.49**	**71**	*i* P	**Pb**	**12 08 01.5**	**-0.2**
SUSE				*i* S	**Sg**	**12 08 23.3**	**+1.9**
AVNT	**Avonos**	**1.51**	**231**	*i* P	**Pn**	**12 08 00.9**	**-0.3**
AVNT				*i* S	**Sg**	**12 08 25.5**	**+3.4**
AVNT	**Avonos**	**1.51**	**231**	*i* P	**Pn**	**12 08 00.9**	**-0.3**
CDAG	**Cicekdag**	**1.54**	**267**	*i* P	**Pn**	**12 08 02.4**	**+0.9**
CDAG				*i* S	**Sg**	**12 08 25.5**	**+2.4**
CDAG	**Cicekdag**	**1.54**	**267**	*i* P	**Pn**	**12 08 02.4**	**+0.9**
CDAG				*i* S	**Sg**	**12 08 25.5**	**+2.4**
KEMA	**Kemaliye**	**1.71**	**105**	*i* P	**Pb**	**12 08 05.7**

1.8nm,0.9s,baz=346,slow=8.3,SNR=3.3
MKAR Makanchi Array 54.99 326 P P 12 57 00.7 0.0
0.5nm,0.4s,baz=126,slow=8.8,SNR=6.6

*IDC **26** 12:51:45.2±2.0,23˝.11N×90˝.41E,h0km,mb3.8/6, mb1 4.0/7,mb1mx3.6/29,mbtmp3.9/7,ML4.5/1,MS2.9/1, Ms1 2.9/1,ms1mx1.8/34,Error ellipse: s-maj=79.0km s-min=19.7km az=61.0*
*DMN **26** 12:51:53.7±0.3,23˝.23N×90˝.54E,h50km,Ml4.6/10,Error ellipse: s-maj=14.6km s-min=6.3km az=44.0*
ISC 26 12:51:52.8±2.5,23˝4N±0˝2×90˝57E±0˝07,h35km,n20, σ1§72/27,mb3.7/6,1D,Bangladesh

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.43**	**29**	⇓*i*PN		**Pn**	**12 52 29.5**	**-0.7**
SHL				*e*SN		**Sn**	**12 52 58.0**	**-0.9**
ODAN	**Odare**	**4.46**	**320**	*e*Pn		**Pn**	**12 52 59.8**	**+1.6**
ODAN				*e*Sn		**Sn**	**12 53 49.9**	**+0.8**
	457nm,0.4s							
TAPN	**Taplejung**	**4.68**	**327**	*e*Pn		**Pn**	**12 53 03.5**	**+2.3**
TAPN				*e*Sn		**Sn**	**12 53 54.8**	**+0.4**
	154nm,0.4s							
RAMN	**Ramite**	**5.02**	**315**	*e*Pn		**Pn**	**12 53 07.9**	**+2.1**
GUN	**Gumba**	**6.15**	**317**	*e*Pn		**Pn**	**12 53 23.3**	**+1.9**
GUN				*e*Sn		**Sn**	**12 54 29.9**	**-0.8**
	146nm,0.4s							
PKI	**Pulchoki**	**6.22**	**312**	*e*Pn		**Pn**	**12 53 23.8**	**+1.4**
PKI				*e*Sn		**Sn**	**12 54 30.4**	**-2.1**
	126nm,0.6s							
PKIN	**Phulchoki**	**6.23**	**312**	*e*Pn		**Pn**	**12 53 23.9**	**+1.3**
PKIN				*e*Sn		**Sn**	**12 54 31.1**	**-1.6**
	78nm,0.4s							
KKN	**Kakani**	**6.45**	**313**	*e*Pn		**Pn**	**12 53 27.1**	**+1.6**
KKN				*e*Sn		**Sn**	**12 54 37.4**	**-0.6**
	32nm,0.2s							
DMN	**Daman**	**6.45**	**311**	*e*Pn		**Pn**	**12 53 26.7**	**+1.1**
DMN				*e*Sn		**Sn**	**12 54 36.8**	**-1.3**
	72nm,0.4s							
KOLN	**Koldanda**	**7.63**	**306**	*e*Pn		**Pn**	**12 53 42.7**	**+1.0**
KOLN				*e*Sn		**Sn**	**12 55 04.5**	**-2.5**
	123nm,0.5s							
DANN	**Dangsing**	**7.85**	**310**	*e*Pn		**Pn**	**12 53 44.9**	**+0.2**
DANN				*e*Sn		**Sn**	**12 55 08.7**	**-3.8**
	84nm,0.6s							
PYUN	**Piuthan**	**8.26**	**306**	*e*Pn		**Pn**	**12 53 50.7**	**+0.3**
PYUN				*e*Sn		**Sn**	**12 55 18.9**	**-3.7**
	59nm,0.4s							
CMAR	**Chiang Mai Arr**	**9.26**	**121**	Pn		Pn	12 54 00.2	-3.6
	1.5nm,0.3s,baz=301,slow=14,SNR=49							
AAK	**Ala-Archa**	**23.34**	**329**	LR		LR	13 06 46.7	
	comp=Z,33nm,20.4s,baz=196,slow=38							
MKAR	**Makanchi Array**	**24.24**	**346**	P		**P**	**12 57 06.7**	**+0.3**
	2.0nm,0.5s,baz=168,slow=9.0,SNR=23							
SONM	**Songino Array**	**27.42**	**24**	P		**P**	**12 57 35.9**	**+0.6**
	0.4nm,0.4s,baz=206,slow=9.6,SNR=2.2							
KURBB	**Kurchatov Arra**	**28.71**	**344**	P		**P**	**12 57 46.6**	**+0.1**
	0.5nm,0.2s,baz=158,slow=9.4,SNR=4.3							
ZALV	**Zalesovo Beam**	**30.78**	**353**	P		**P**	**12 58 04.7**	**-0.1**
	1.2nm,0.5s,baz=167,slow=7.3,SNR=5.9							
WRA	**Warramunga Arr**	**60.66**	**132**	P		P	13 01 57.6	-3.2
	0.5nm,1.0s,baz=322,slow=7.0,SNR=5.0							
ASAR	**Alice Springs**	**62.95**	**135**	P		P	13 02 13.2	-2.9
	0.3nm,0.8s,baz=312,slow=6.1,SNR=3.1							

*IDC **26** 12:58:53.3±1.1,2˝.52S×128˝.52E,h0km,mb3.8/5, mb1 3.9/7,mb1mx3.7/23,mbtmp3.8/7,ML3.5/2,MS3.6/1, Ms1 3.5/1,ms1mx1.8/34,Error ellipse: s-maj=94.9km s-min=18.0km az=69.0*
*DJA **26** 12:58:58.6±0.5,3˝S±6˝×12˝8E±˝,h15km,M4.1/5,mb4.6/1, mB4.6/1,MLv3.8/5,Mw(mB)3.9/1*
ISC 26 12:58:57.7±0.8,2˝73S±0˝09×128˝1E±0˝2,h32km,n11, σ1§21/13,mb3.9/5,Ceram Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
MSAI	**Masohi**	**1.07**	**125**	P		**Pb**	12 59 21.9	+4.2
LBMI	**Labuha**	**2.15**	**345**	P		**Pb**	**12 59 34.7**	**-1.3**
LBMI				S		**Sb**	**13 00 02.3**	**0.0**
BNDI	**Bandanaira**	**2.57**	**134**	P		**Pb**	**12 59 41.9**	**-1.2**
MRSI	**Marisa**	**6.89**	**297**	P		**Pn**	**13 00 35.5**	**-1.0**
FITZ	**Fitzroy Crossi**	**15.46**	**189**	Pn		**P**	**13 02 38.0**	**+0.3**
	0.1nm,0.3s,baz=13,slow=14,SNR=2.8							
WRA	**Warramunga Arr**	**18.18**	**161**	P		**P**	**13 03 06.9**	**-0.9**
	0.3nm,0.3s,baz=341,slow=12,SNR=22							
ASAR	**Alice Springs**	**21.57**	**165**	P		**P**	**13 03 44.3**	**-0.5**
	3.2nm,0.9s,baz=346,slow=10,SNR=34							
ASAR				S		**S**	**13 07 40.8**	**-1.5**
	0.3nm,0.7s,baz=352,slow=21,SNR=3.6							
ASAR				PcP		**PcP**	**13 07 47.1**	**+0.7**
	0.4nm,0.7s,baz=358,slow=2.1,SNR=5.9							
STKA	**Stephens Creek**	**31.68**	**158**	P		**P**	**13 05 20.0**	**+1.7**
	2.1nm,0.9s,baz=346,slow=12,SNR=3.9							
STKA				LR		LR	13 18 48.3	
	comp=Z,95nm,19.2s,baz=28,slow=38							
MKAR	**Makanchi Array**	**63.61**	**327**	P		**P**	**13 09 26.5**	**+0.9**
	0.7nm,0.7s,baz=124,slow=8.5,SNR=9.2							
ZALV	**Zalesovo Beam**	**66.92**	**334**	P		**P**	**13 09 48.3**	**+1.5**
	0.4nm,0.5s,baz=130,slow=13,SNR=2.4							
KURBB	**Kurchatov Arra**	**67.88**	**328**	P		**P**	**13 09 53.7**	**+0.7**
	1.1nm,0.7s,baz=131,slow=5.5,SNR=18							

*NEIC **26** 13:01:56.6,38˝.96S×175˝.74E,h3km,mb4.0/1, ML4.3(WEL),After WEL.*
NEIC Felt [V] at Pukawa and [IV] at Motuoapa and Turangi.
WEL 26 13:01:56.8±0.1,38˝98S×175˝76E,h5km,ML4.4/50, 25C-18D,Error ellipse: s-maj=1.3km s-min=0.9km az=90.0,North Island

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
KATZ	**Kakaramea**	**0.05**	**273**	⇓P*		Pg	13 01 58.0	-0.2
KATZ				S*		Sg	13 01 59.4	0.0
KATZ				AML		AML	13 02 00.6	
KATZ	**Kakaramea**	**0.05**	**273**	P*		Pg	13 01 58.0	-0.2
RITZ	**Rihia Road**	**0.07**	**90**	⇑PG		Pg	13 01 58.5	0.0
RITZ				AML		AML	13 02 01.0	
RITZ				AML		AML	13 02 03.7	
RITZ	**Rihia Road**	**0.07**	**90**	P*		Pg	13 01 58.5	0.0
RATZ	**Rangitukua**	**0.11**	**4**	⇓PG		Pg	13 01 58.8	-0.3
RATZ				AML		AML	13 02 03.5	
RATZ				AML		AML	13 02 04.5	
RATZ	**Rangitukua**	**0.11**	**4**	⇓P*		Pg	13 01 58.9	-0.3
KRVZ	**Karewarewa**	**0.15**	**219**	⇓PG		Pg	13 02 00.0	+0.1
KRVZ				AML		AML	13 02 03.9	
KRVZ				AML		AML	13 02 05.1	
KRVZ	**Karewarewa**	**0.15**	**219**	P*		Pg	13 02 00.0	+0.1
WTVZ	**West Tongariro**	**0.19**	**224**	⇓PG		Pg	13 02 00.8	+0.1
WTVZ				AML		AML	13 02 05.0	
WTVZ				AML		AML	13 02 06.9	
WTVZ	**West Tongariro**	**0.19**	**224**	P*		Pg	13 02 00.8	+0.1
OTVZ	**Oturere**	**0.20**	**202**	⇓PG		Pg	13 02 01.1	+0.2
OTVZ				AML		AML	13 02 05.3	
OTVZ				AML		AML	13 02 05.9	
OTVZ	**Oturere**	**0.20**	**202**	Pg		Pg	13 02 01.1	+0.2
NGZ	**Ngauruhoe**	**0.23**	**212**	⇓PG		Pg	13 02 01.7	+0.1
NGZ				AML		AML	13 02 08.1	
NGZ				AML		AML	13 02 11.0	
NGZ	**Ngauruhoe**	**0.23**	**212**	Pg		Pg	13 02 01.7	+0.1
TWVZ	**Taurewa**	**0.27**	**250**	⇑PG		Pg	13 02 02.1	-0.1
TWVZ				AML		AML	13 02 06.8	
TWVZ				AML		AML	13 02 08.9	
TWVZ	**Taurewa**	**0.27**	**250**	Pg		Pg	13 02 02.1	-0.1
WATZ	**Wairara**	**0.27**	**355**	⇑PG		Pg	13 02 01.9	-0.2
WATZ				AML		AML	13 02 06.7	
WATZ				AML		AML	13 02 06.7	
WATZ	**Wairara**	**0.27**	**355**	Pg		Pg	13 02 01.9	-0.1
HATZ	**Hinemaiaia**	**0.27**	**71**	⇑PG		Pg	13 02 01.7	-0.4
HATZ				AML		AML	13 02 06.2	
HATZ				AML		AML	13 02 06.3	
HATZ	**Hinemaiaia**	**0.27**	**71**	Pg		Pg	13 02 01.7	-0.4
WPVZ	**Whakapapa**	**0.28**	**217**	⇓PG		Pg	13 02 02.5	+0.1
WPVZ				AML		AML	13 02 07.7	
WPVZ				AML		AML	13 02 09.7	
WPVZ	**Whakapapa**	**0.28**	**217**	Pg		Pg	13 02 02.4	-0.1
TUVZ	**Tukino**	**0.30**	**196**	PG		Pg	13 02 03.1	+0.2
TUVZ				AML		AML	13 02 09.1	
TUVZ				AML		AML	13 02 12.4	
TUVZ	**Tukino**	**0.30**	**196**	Pg		Pg	13 02 03.1	+0.2
FWVZ	**Far West T-bar**	**0.32**	**210**	⇓PG		Pg	13 02 03.3	-0.1
FWVZ				AML		AML	13 02 09.0	
FWVZ				AML		AML	13 02 12.9	
FWVZ	**Far West T-bar**	**0.32**	**210**	Pg		Pg	13 02 03.2	-0.1
DRZ	**Dome Shelter**	**0.33**	**207**	⇑PG		Pg	13 02 03.7	0.0
DRZ				AML		AML	13 02 10.3	
DRZ				AML		AML	13 02 16.1	
DRZ	**Dome Shelter**	**0.33**	**207**	Pg		Pg	13 02 03.7	0.0
WHTZ	**Whakaora**	**0.35**	**26**	⇓PG		Pg	13 02 03.9	+0.4
WHTZ	**Whakaora**	**0.35**	**26**	Pg		Pg	13 02 03.9	+0.4
TRVZ	**Turoa**	**0.36**	**207**	PG		Pg	13 02 03.9	-0.2
TRVZ				AML		AML	13 02 10.1	
TRVZ				AML		AML	13 02 15.1	
TRVZ	**Turoa**	**0.36**	**207**	Pg		Pg	13 02 03.9	-0.2
WNVZ	**Wahianoa**	**0.37**	**200**	⇑PG		Pg	13 02 04.3	+0.1
WNVZ				AML		AML	13 02 10.9	
WNVZ				AML		AML	13 02 11.1	
WNVZ	**Wahianoa**	**0.37**	**200**	Pg		Pg	13 02 04.3	+0.1
MOVZ	**Moawhango**	**0.43**	**181**	⇑PG		Pg	13 02 05.0	-0.2
MOVZ				AML		AML	13 02 11.1	
MOVZ				AML		AML	13 02 12.3	
MOVZ	**Moawhango**	**0.43**	**181**	Pg		Pg	13 02 05.0	-0.1
PKVZ	**Pokaka**	**0.45**	**226**	⇑PG		Pg	13 02 05.5	-0.1
PKVZ				AML		AML	13 02 15.4	
PKVZ				AML		AML	13 02 22.0	
PKVZ	**Pokaka**	**0.45**	**226**	Pg		Pg	13 02 05.5	0.0
MTVZ	**Mangateitei**	**0.47**	**209**	⇓PG		Pg	13 02 05.8	-0.1
MTVZ				AML		AML	13 02 14.8	
MTVZ				AML		AML	13 02 14.8	
MTVZ	**Mangateitei**	**0.47**	**209**	Pg		Pg	13 02 05.8	-0.1
BHHZ	**Black Hill Sta**	**0.56**	**155**	⇑PG		Pg	13 02 07.7	0.0
BHHZ	**Black Hill Sta**	**0.56**	**155**	Pg		Pg	13 02 07.7	0.0
BKZ	**Black Stump Fm**	**0.60**	**109**	⇑PG		Pg	13 02 08.4	0.0
BKZ				AML		AML	13 02 19.4	
BKZ				AML		AML	13 02 20.3	
BKZ	**Black Stump Fm**	**0.60**	**109**	⇑Pg		Pg	13 02 08.4	0.0
ALRZ	**Allen Road**	**0.61**	**48**	⇓P*		Pg	13 02 08.0	-0.6
ALRZ	**Allen Road**	**0.61**	**48**	Pg		Pg	13 02 08.0	-0.6
PRRZ	**Plateau Road**	**0.69**	**46**	⇓P*		Pg	13 02 09.4	-0.6
PRRZ	**Plateau Road**	**0.69**	**46**	P*		Pg	13 02 09.5	-0.6
HRRZ	**Handcock Road**	**0.71**	**35**	⇓P*		Pg	13 02 10.5	-0.1
HRRZ	**Handcock Road**	**0.71**	**35**	P*		Pg	13 02 10.6	+0.1
VRZ	**Vera Road**	**0.80**	**259**	⇑P*		Pg	13 02 11.8	-0.3
VRZ				AML		AML	13 02 27.3	
VRZ				AML		AML	13 02 32.9	
VRZ	**Vera Road**	**0.80**	**259**	P*		Pg	13 02 11.5	-0.5
NMHZ	**Naumai**	**0.82**	**99**	⇑P*		Pb	13 02 13.3	-0.4
NMHZ	**Naumai**	**0.82**	**99**	P*		Pb	13 02 13.3	-0.4
HIZ	**Hauiti**	**0.85**	**303**	⇑P*		Pg	13 02 12.5	-0.5
HIZ				AML		AML	13 02 27.3	
HIZ				AML		AML	13 02 28.1	
HIZ	**Hauiti**	**0.85**	**303**	⇑P*		Pg	13 02 12.5	-0.5
MCHZ	**McNeill Hill**	**0.86**	**123**	⇑P*		Pb	13 02 14.8	+0.5
MCHZ	**McNeill Hill**	**0.86**	**123**	P*		Pb	13 02 14.8	+0.5
RRRZ	**Republican Roa**	**0.87**	**43**	P*		Pg	13 02 13.0	-0.5
RRRZ	**Republican Roa**	**0.87**	**43**	P*		Pg	13 02 13.0	-0.5
UTU	**Utuhina**	**0.87**	**23**	P*		Pg	13 02 13.3	-0.1
UTU				AML		AML	13 02 33.7	
UTU				AML		AML	13 02 36.6	
UTU	**Utuhina**	**0.87**	**23**	P*		Pg	13 02 13.3	-0.1
WAZ	**Wanganui**	**0.98**	**218**	P*		Pg	13 02 15.3	-0.3
WAZ				AML		AML	13 02 32.5	
WAZ				AML		AML	13 02 33.5	
WAZ	**Wanganui**	**0.98**	**218**	P*		Pg	13 02 15.3	-0.3
PNHZ	**Pukenui**	**0.99**	**160**	⇑P*		Pg	13 02 16.0	+0.1
PNHZ				S*		Sg	13 02 29.3	+0.4
PNHZ	**Pukenui**	**0.99**	**160**	P*		Pg	13 02 16.0	+0.1
PNHZ				S*		Sg	13 02 29.3	+0.4
MKRZ	**Makatiti**	**1.00**	**34**	P*		Pg	13 02 15.9	-0.1
MKRZ				AML		AML	13 02 24.0	
MKRZ				AML		AML	13 02 34.1	
MKRZ	**Makatiti**	**1.00**	**34**	P*		Pg	13 02 15.9	-0.1
RAHZ	**Arahi**	**1.03**	**87**	⇑P*		Pb	13 02 17.0	-0.2
RAHZ	**Arahi**	**1.03**	**87**	P*		Pb	13 02 17.0	-0.2
TSZ	**Takapari Road**	**1.09**	**172**	⇑P*		Pg	13 02 17.7	0.0
TSZ				AML		AML	13 02 36.3	
TSZ				AML		AML	13 02 37.2	
TSZ	**Takapari Road**	**1.09**	**172**	P*		Pg	13 02 17.5	-0.3
RAEZ	**Rainy Point**	**1.11**	**253**	P*		Pg	13 02 18.2	+0.1
RAEZ	**Rainy Point**	**1.11**	**253**	P*		Pg	13 02 18.2	+0.1
MHEZ	**Mangahewa**	**1.12**	**265**	⇓P*		Pb	13 02 18.8	+0.1
MHEZ	**Mangahewa**	**1.12**	**265**	P*		Pb	13 02 18.9	+0.1
EDRZ	**Edgecumbe**	**1.16**	**42**	P*		Pg	13 02 18.4	-0.7
EDRZ				AML		AML	13 02 27.7	
EDRZ				AML		AML	13 02 37.0	
EDRZ	**Edgecumbe**	**1.16**	**42**	P*		Pg	13 02 18.4	-0.7
KAHZ	**Kahuranaki**	**1.19**	**134**	⇑P*		Pn	13 02 20.8	+0.6
KAHZ	**Kahuranaki**	**1.19**	**134**	P*		Pn	13 02 20.8	+0.7
WPHZ	**Waipukurau**	**1.21**	**154**	⇑P*		Pn	13 02 20.7	+0.4
WPHZ	**Waipukurau**	**1.21**	**154**	P*		Pn	13 02 20.7	+0.4
CKHZ	**Cape Kidnapper**	**1.23**	**124**	⇑P*		Pn	13 02 21.9	+1.4
CKHZ	**Cape Kidnapper**	**1.23**	**124**	P*		Pn	13 02 21.9	+1.4
TOZ	**Tahuroa Road**	**1.26**	**351**	⇓P*		Pg	13 02 18.6	-2.4
TOZ	**Tahuroa Road**	**1.26**	**351**	P*		Pg	13 02 18.7	-2.3
URZ	**Urewera**	**1.28**	**56**	⇓P*		Pn	13 02 19.6	-1.6
URZ				AML		AML	13 02 40.3	
URZ				AML		AML	13 02 44.0	
URZ	**Urewera**	**1.28**	**56**	P*		Pn	13 02 19.4	-1.8
OPRZ	**Ohinepanea**	**1.29**	**29**	P*		Pn	13 02 19.4	-2.0
TGRZ	**Tauranga**	**1.31**	**18**	⇓P*		Pn	13 02 19.5	-2.1
TGRZ				AML		AML	13 02 47.8	
TGRZ				AML		AML	13 02 50.2	
TGRZ	**Tauranga**	**1.31**	**18**	P*		Pn	13 02 19.5	-2.1
NEZ	**North Egmont**	**1.33**	**257**	P*		Pn	13 02 22.0	-0.1
NEZ	**North Egmont**	**1.33**	**257**	P*		Pn	13 02 22.0	-0.1
DFE	**Dawson Falls**	**1.33**	**254**	P*		Pn	13 02 22.2	0.0
DFE	**Dawson Falls**	**1.33**	**254**	P*		Pn	13 02 22.2	0.0
PXZ	**Pawanui**	**1.35**	**141**	PN		Pg	13 02 23.6	+0.9
PXZ				AML		AML	13 02 46.8	
PXZ				AML		AML	13 02 46.8	
PXZ				AML		AML	13 02 53.8	
PXZ				AML		AML	13 02 53.8	
PXZ	**Pawanui**	**1.35**	**141**	Pn		Pg	13 02 23.6	+0.9
DVHZ	**Dannevirke**	**1.36**	**167**	PN		Pg	13 02 23.0	+0.2
DVHZ	**Dannevirke**	**1.36**	**167**	Pn		Pg	13 02 23.1	+0.2
PKE	**Pukeiti**	**1.40**	**261**	PN		Pg	13 02 22.9	-0.1
PKE				AML		AML	13 02 46.5	
PKE				AML		AML	13 02 47.5	
PKE	**Pukeiti**	**1.40**	**261**	Pn		Pn	13 02 22.9	-0.1
POWZ	**Post Office Ro**	**1.41**	**180**	⇑PN		Pb	13 02 23.5	-0.1
POWZ	**Post Office Ro**	**1.41**	**180**	Pn		Pb	13 02 23.5	-0.1
PRHZ	**Porangahau**	**1.45**	**153**	⇑PN		Pg	13 02 25.3	+0.7
PRHZ	**Porangahau**	**1.45**	**153**	Pn		Pg	13 02 25.5	+0.8
KNZ	**Kokohu**	**1.49**	**92**	PN		Pb	13 02 24.7	-0.2
KNZ	**Kokohu**	**1.49**	**92**	Pn		Pb	13 02 24.7	-0.2
NWEZ	**Newall Road**	**1.50**	**258**	PN		Pb	13 02 24.8	-0.4
NWEZ	**Newall Road**	**1.50**	**258**	Pn		Pb	13 02 24.8	-0.4
MWZ	**Matawai**	**1.52**	**66**	P*		Pn	13 02 23.2	-1.5
MWZ				AML		AML	13 02 50.6	
MWZ				AML		AML	13 02 51.3	
MWZ	**Matawai**	**1.52**	**66**	P*		Pn	13 02 23.2	-1.5
PRGZ	**Paritu Road**	**1.66**	**89**	⇑PN		Pn	13 02 27.1	+0.5
PRGZ	**Paritu Road**	**1.66**	**89**	Pn		Pn	13 02 27.1	+0.6
MHGZ	**Mahia Peninsul**	**1.68**	**97**	Pn		Pb	13 02 27.6	-0.6
MRZ	**Mangatainoka R**	**1.69**	**185**	PN		Pb	13 02 27.9	-0.4
MRZ				AML		AML	13 02 55.8	
MRZ				AML		AML	13 03 00.3	
MRZ	**Mangatainoka R**	**1.69**	**185**	Pn		Pb	13 02 27.9	-0.4
BFZ	**Birch Farm**	**1.74**	**168**	PN		Pb	13 02 28.5	-0.7
BFZ	**Birch Farm**	**1.74**	**168**	Pn		Pb	13 02 28.5	-0.7
TIWZ	**Tintock**	**1.80**	**177**	PN		Pb	13 02 29.8	-0.5
TIWZ	**Tintock**	**1.80**	**177**	Pn		Pb	13 02 29.8	-0.5
MKAZ	**Moumakai**	**1.92**	**346**	AML		AML	13 03 03.9	
MKAZ				AML		AML	13 03 04.9	
MKAZ	**Moumakai**	**1.92**	**346**	Pn		Pn	13 02 28.3	-1.8
HOWZ	**Holdsworth Sta**	**1.93**	**186**	PN		Pb	13 02 31.6	-0.9
HOWZ	**Holdsworth Sta**	**1.93**	**186**	Pn		Pb	13 02 31.6	-0.8
KIW	**Kapiti Island**	**1.99**	**199**	PN		Pb	13 02 32.5	-1.0
KIW				AML		AML	13 03 05.8	
KIW				AML		AML	13 03 05.9	
KIW	**Kapiti Island**	**1.99**	**199**	Pn		Pb	13 02 32.5	-1.0
PUZ	**Puketiti**	**2.16**	**66**	PN		Pn	13 02 33.4	0.0
PUZ				AML		AML	13 03 13.4	
PUZ				AML		AML	13 03 14.2	
MTW	**Mount Morrison**	**2.19**	**185**	AML		AML	13 03 14.6	
CAW	**Cannon Point**	**2.19**	**194**	PN		Pn	13 02 34.9	+1.0
CAW				AML		AML	13 03 11.1	
CAW				AML		AML	13 03 13.0	
CAW	**Cannon Point**	**2.19**	**194**	Pn		Pn	13 02 35.0	+1.1
KUZ	**Kuaotunu**	**2.23**	**359**	*e*PN		Pn	13 02 32.6	-1.7
WTAZ	**Waiatarua**	**2.25**	**335**	Pn		Pn	13 02 34.0	-0.6
MTAZ	**Motutapu**	**2.29**	**343**	Pn		Pn	13 02 33.5	-1.6
PAWZ	**Paruwai Farm**	**2.41**	**186**	AML		AML	13 03 23.2	
PAWZ				AML		AML	13 03 23.8	
PAWZ	**Paruwai Farm**	**2.41**	**186**	*e*Pn		Pn	13 02 37.4	+0.4
TRWZ	**Traveller**	**2.42**	**181**	AML		AML	13 03 30.6	
TRWZ				AML		AML	13 03 32.2	
MSWZ	**Moikau Station**	**2.46**	**189**	AML		AML	13 03 21.6	
MSWZ				AML		AML	13 03 21.7	
MSWZ	**Moikau Station**	**2.46**	**189**	Pn		Pn	13 02 38.1	+0.5
SNZO	**South Karori**	**2.46**	**199**	AML		AML	13 03 17.0	
SNZO				AML		AML	13 03 22.4	
SNZO	**South Karori**	**2.46**	**199**	*e*Pn		Pn	13 02 38.1	+0.5
SNZO				*e*Sn		Sn	13 03 09.3	+1.2
ABAZ	**Army Bay**	**2.48**	**342**	PN		Pn	13 02 36.4	-1.4
BHW	**Baring Head**	**2.52**	**195**	AML		AML	13 03 25.3	
BHW				AML		AML	13 03 27.6	
BHW	**Baring Head**	**2.52**	**195**	Pn		Pn	13 02 39.8	+1.5
PLWZ	**Palliser**	**2.62**	**188**	Pn		Pn	13 02 40.0	+0.3
TUWZ	**Tuamarina**	**2.82**	**209**	AML		AML	13 03 33.1	
TUWZ				AML		AML	13 03 33.2	
TUWZ	**Tuamarina**	**2.82**	**209**	Pn		Pn	13 02 44.4	+1.9
NNZ	**Nelson**	**2.89**	**218**	AML		AML	13 03 41.0	
BSWZ	**Blackbirch Sta**	**3.09**	**207**	AML		AML	13 02 58.8	
BSWZ				AML		AML	13 03 44.7	
BSWZ	**Blackbirch Sta**	**3.09**	**207**	*e*Pn		Pn	13 02 48.5	+2.3
QRZ	**Quartz Range**	**3.10**	**232**	AML		AML	13 02 57.0	
WCZ	**Waipu Caves**	**3.24**	**339**	*e*PN		Pn	13 02 47.1	-1.1
WCZ				AML		AML	13 03 05.0	
WCZ				AML		AML	13 03 52.9	
THZ	**Tophouse**	**3.54**	**217**	AML		AML	13 04 00.9	
KHZ	**Kahutara**	**3.83**	**205**	*e*Pn		Pn	13 02 56.5	+0.2
KHZ				*e*Sn		Sn	13 03 42.6	+1.0
OUZ	**Omahuta**	**4.13**	**335**	*e*Pn		Pn	13 02 60.0	-0.5
OUZ				*e*Sn		Sn	13 03 47.0	-2.2
LTZ	**Lake Taylor**	**4.63**	**214**	AML		AML	13 03 19.2	
LTZ				AML		AML	13 03 22.6	
RPZ	**Rata Peaks**	**5.91**	**215**	*e*Pn		Pn	13 03 24.1	-0.9
WRAB	**Tennant Creek**	**40.33**	**286**	*e*P		P	13 09 35.2	-0.2
	3.9nm,1.0s							

*ISCJB **26** 13:05:32.9±0.4,31˝.71S±0˝.03×71˝.49W±0˝.07,h54km±4km, mb4.4/22,MS3.5/4,Error ellipse: s-maj=10.6km s-min=4.3km az=177.8*
*GUC **26** 13:05:33.5±0.8,31˝.74S×71˝.40W,h42km±1km,ML4.9*
*NEIC **26** 13:05:33.0,31˝.74S×71˝.39W,h42km,mb4.4/11,After GUC.*
NEIC Felt [III] at Canela, Illapel, La Ligua, Los Vilos, Punitaqui and Salamanca; [II] at Cabildo, Los Andes, San Felipe, Santiago and Zapallar.
*IDC **26** 13:05:33.4±0.5,31˝.72S×71˝.29W,h44km±3km,mb4.2/13, mb1 4.3/17,mb1mx4.2/21,mbtmp4.2/17,ML4.5/4,MS3.5/6, Ms1 3.5/6,ms1mx3.3/19,Error ellipse: s-maj=19.0km s-min=12.3km az=84.0*
ISC 26 13:05:33.1±0.4,31˝74S±0˝03×71˝38W±0˝05,h42km±3km, h41km:pP-P,n259,σ1§16/304,mb4.5/22,MS3.5/4, 103C-85D,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	Op	ID ISC	Time h m s	Res ISC
CHNG	**Los Chungos**	**0.18**	**215**	⇑*i*P		**Pn**	**13 05 41.1**	**+0.7**
CHNG

comp=E,18nm,0.7s,baz=232,slow=7.7,SNR=22
BDFB LR LR 13 22 52.9
comp=E,197nm,19.8s,baz=30,slow=39
SNAA Sanae 53.47 159 *e*P **P 13 14 47.9 -0.8**
comp=E,4.6nm,0.8s
SNAA *e*pP **pP 13 14 59.7 -1.1**
SNAA Sanae 53.47 159 P **P 13 14 49.1 +0.3**
comp=E,2.1nm,0.6s
SNAA pP **pP 13 15 01.1 +0.4**
baz=243,slow=2.5
QSPA South Pole Qui 58.49 180 P **P 13 15 25.4 +0.7**
QSPA pP **pP 13 15 37.2 +0.3**
QSPA South Pole Qui 58.49 180 P **P 13 15 25.4 +0.7**
comp=E,1.1nm,0.6s,baz=167,slow=5.0,SNR=5.6
QSPA pP **pP 13 15 37.2 +0.3**
comp=E,3.4nm,0.8s,baz=124,slow=3.1,SNR=5.6
732A Laxson Ranch, 66.00 333 ⇑P **P 13 16 16.4 +1.2**
baz=66
632A Uvalde 66.62 333 ⇓P **P 13 16 20.7 +1.5**
baz=67
532A Rocksprings 67.22 333 ⇑P **P 13 16 24.5 +1.4**
baz=68,SNR=5.8
JCT Junction City 67.50 334 ⇑P **P 13 16 26.2 +1.4**
baz=68
531A Rocksprings 67.50 333 ⇑P **P 13 16 26.3 +1.4**
baz=68
530A J-C Ranch, Com 67.80 332 ⇓P **P 13 16 27.9 +1.2**
baz=68,SNR=5.5
432A Menard 67.85 334 ⇓P **P 13 16 28.2 +1.2**
baz=68
628A Black Gap, Mar 67.85 331 ⇑P **P 13 16 28.0 +1.0**
baz=68,SNR=6.0
CPCT Cooper Cave 67.96 348 *e*P **P 13 16 27.9 +0.4**
431A Sonora 67.99 333 ⇑P **P 13 16 29.1 +1.2**
baz=68
627A Terlingua Ranc 68.03 330 ⇑P **P 13 16 29.5 +1.2**
baz=68
TXAR Lajitas Array 68.05 330 P **P 13 16 29.2 +0.8**
TXAR pP **pP 13 16 41.0 +0.3**
TXAR Lajitas Array 68.05 330 P **P 13 16 29.2 +0.8**
comp=E,0.9nm,0.6s,baz=154,slow=7.7,SNR=12
TXAR pP **pP 13 16 41.0 +0.3**
comp=E,0.3nm,0.5s,baz=124,slow=9.3,SNR=2.8
529A Stev Forest Ra 68.13 331 ⇑P **P 13 16 29.8 +1.0**
baz=68,SNR=12
332A Millersview 68.28 334 ⇓P **P 13 16 30.6 +0.9**
baz=69
430A Baggett Ranch, 68.33 333 ⇓P **P 13 16 31.1 +1.1**
baz=69
528A Cox Ranch, San 68.40 331 ⇓P **P 13 16 31.1 +0.5**
baz=69,SNR=5.5
626A Big Bend Ranch 68.44 330 ⇑P **P 13 16 32.1 +1.3**
baz=69
429A Davenport Ranc 68.44 332 ⇓P **P 13 16 31.9 +1.1**
baz=69
527A Woodward Ranch 68.73 330 ⇓P **P 13 16 33.4 +0.8**
baz=69,SNR=6.2
330A Mertzon 68.85 333 ⇓P **P 13 16 34.1 +0.9**
baz=69
428A Kincaid Ranch, 68.85 331 ⇑P **P 13 16 34.1 +0.8**
baz=69
526A Mary Lane Ranc 68.86 330 ⇓P **P 13 16 35.0 +1.6**
baz=69
231A Bronte 69.00 334 ⇑P **P 13 16 34.7 +0.6**
baz=69
329A Wagon Wheel Ra 69.24 332 ⇓P **P 13 16 36.8 +1.1**
baz=70
WVT Waverly 69.25 346 *e*P **P 13 16 35.0 -0.6**
comp=E,17nm,1.0s
WVT *e*pP **pP 13 16 47.6 -0.3**
427A Hayter Ranch, 69.26 331 ⇑P **P 13 16 36.7 +0.8**
baz=70
426A McDonald Obser 69.36 330 ⇑P **P 13 16 37.4 +0.7**
baz=70
ABTX Abilene, Hawle 69.36 335 ⇓P **P 13 16 37.4 +1.1**
baz=70
131A Roby 69.68 334 ⇑P **P 13 16 39.3 +1.0**
baz=70
425A Indio Mountain 69.87 330 ⇑P **P 13 16 40.1 +0.4**
baz=70
326A Caldwell Ranch 69.90 331 ⇑P **P 13 16 40.6 +0.8**
baz=70
Z32A Haskell 69.92 335 ⇓P **P 13 16 40.6 +0.8**
baz=70
228A UT Block 9, Go 70.04 332 ⇑P **P 13 16 41.4 +0.8**
baz=70
Z31A Sharp Cattle R 70.17 335 ⇓P **P 13 16 42.1 +0.7**
baz=70
325A Bean Ranch, Si 70.37 330 ⇓P **P 13 16 43.1 +0.3**
baz=71,SNR=6.7
128A Castleberry Fa 70.44 332 ⇑P **P 13 16 43.6 +0.6**
baz=71
Z30A Sanderson Ranc 70.51 334 ⇓P **P 13 16 44.2 +0.7**
baz=71
226B Tecolote Peak, 70.64 331 ⇓P **P 13 16 45.5 +1.1**
baz=71
324A Moseley Ranch, 70.65 329 ⇓P **P 13 16 44.7 +0.2**
baz=71
Z29A Hungry Hill Ra 70.70 333 ⇓P **P 13 16 45.2 +0.5**
baz=71
Y31A Rekieta Farm, 70.79 335 ⇑P **P 13 16 46.3 +1.2**
baz=71
MNTX Cornudas Mount 70.83 330 *e*P **P 13 16 44.5 -0.8**
comp=E,1.4nm,1.0s
MNTX *e*pP **pP 13 16 57.3 -0.5**
MNTX *es*P **sP 13 17 01.7 -0.9**
225A Deer Hill, Car 70.95 330 ⇑P **P 13 16 46.4 +0.1**
baz=71
Y29A Porterfield Fa 71.22 334 ⇑P **P 13 16 48.8 +1.0**
baz=72
X31A McDonald Ranch 71.29 335 ⇑P **P 13 16 49.4 +1.3**
baz=72
Z27A Tatum 71.34 332 ⇑P **P 13 16 49.0 +0.4**
baz=72
125A Gardner Draw, 71.35 331 ⇓P **P 13 16 49.1 +0.4**
baz=72
Z26A Caprock 71.61 332 ⇑P **P 13 16 50.8 +0.6**
baz=72,SNR=14
124A Stringfield Ra 71.72 330 ⇑P **P 13 16 52.4 +1.3**
baz=72
Z24A Sheeppen Canyo 72.23 331 ⇑P **P 13 16 54.9 +0.9**
baz=72
W29A Amraillo 72.33 334 ⇑P **P 13 16 55.6 +1.1**
baz=73
220A Playas Peak, P 72.40 327 ⇓P **P 13 16 56.1 +1.1**
baz=73
ACSO Alum Creek Sta 72.41 351 *e*P **P 13 16 55.0 +0.3**
comp=E,10.0nm,0.8s
Z23A Rita Site, Whi 72.54 330 ⇑P **P 13 16 57.5 +1.8**
baz=73
121A Cookes Peak, D 72.59 328 ⇓P **P 13 16 57.4 +1.2**
baz=73
X26A CR and CF Fran 72.66 332 ⇓P **P 13 16 57.8 +1.3**
baz=73
Y24A Capitan 72.77 331 ⇑P **P 13 16 58.4 +1.1**
baz=73
W27A Bowe Ranch, En 72.82 333 ⇓P **P 13 16 58.7 +1.3**
baz=73
Z22A Elephant Butte 72.85 329 ⇓P **P 13 16 58.9 +1.3**
baz=73
Y23A Lovelace Mesa, 73.04 330 ⇑P **P 13 17 00.1 +1.3**
baz=73
W26A Owens Ranch, T 73.11 333 ⇑P **P 13 17 00.9 +1.7**
baz=73
Z21A St. Cloud Mine 73.20 329 ⇑P **P 13 17 01.5 +1.7**
baz=74
Z20A Nine Sixteen R 73.45 328 ⇓P **P 13 17 03.0 +1.8**
baz=74
W25A X Bar L Ranch, 73.50 332 ⇑P **P 13 17 02.6 +1.2**
baz=74
Y21A Point of Rocks 73.80 329 ⇓P **P 13 17 05.0 +1.6**
baz=74
W24A Lazy 6 Ranch, 73.87 332 ⇑P **P 13 17 04.8 +1.1**
baz=74
DBIC Dimbokro 73.93 71 P **P 13 17 03.6 -0.7**
DBIC pP **pP 13 17 17.2 +0.4**
DBIC Dimbokro 73.93 71 P **P 13 17 03.6 -0.7**
comp=E,9.0nm,0.7s,baz=190,slow=8.0,SNR=8.6
DBIC pP **pP 13 17 17.2 +0.4**
comp=E,9.2nm,0.8s,baz=213,slow=10,SNR=3.3
V25A Rancho No Teng 74.10 332 ⇑P **P 13 17 05.6 +0.6**
baz=74
X21A Alamocita Cree 74.22 329 ⇓P **P 13 17 07.4 +1.6**
baz=74
U26A Atchley Ranch, 74.25 333 ⇓P **P 13 17 07.0 +1.2**
baz=75
X20A Quemado 74.61 329 ⇓P **P 13 17 09.5 +1.5**
baz=75
S28A Manter 74.63 335 ⇑P **P 13 17 09.9 +2.0**
baz=75
V23A Ortiz Mt. (NFS 74.65 331 ⇓P **P 13 17 09.5 +1.3**
baz=75
T26A Comanche Natio 74.88 334 ⇑P **P 13 17 11.2 +1.7**
baz=75
Q31A Ellis 75.05 338 ⇓P **P 13 17 11.6 +1.4**
baz=75
V22A San Miguel Ran 75.10 331 ⇑P **P 13 17 12.5 +1.7**
baz=75
W20A Ramah 75.10 329 ⇑P **P 13 17 12.3 +1.4**
baz=75
T25A Trinidad 75.16 333 ⇓P **P 13 17 11.6 +0.5**
baz=76
MAW Mawson 75.19 164 P **P 13 17 11.2 +0.5**
MAW Mawson 75.19 164 P **P 13 17 11.2 +0.5**
comp=E,1.2nm,0.3s,baz=237,slow=9.1,SNR=4.3
S26A Kim 75.23 334 ⇓P **P 13 17 12.8 +1.4**
baz=76
R28A Tribune 75.27 336 ⇓P **P 13 17 12.6 +1.0**
baz=76
V20A Brimhall 75.66 330 ⇑P **P 13 17 15.5 +1.5**
baz=76
R26A Arlington 75.82 334 ⇑P **P 13 17 16.2 +1.4**
baz=76
X16A Lo Mia Camp, P 75.84 327 ⇑P **P 13 17 16.9 +1.8**
baz=76
S24A Houchin Ranch, 75.91 333 ⇑P **P 13 17 16.8 +1.3**
baz=76,SNR=5.5
Q28A Sharon Springs 75.92 336 ⇑P **P 13 17 16.6 +1.3**
baz=76
T22A Edith 76.04 331 ⇑P **P 13 17 17.3 +1.1**
baz=76
U20A Newcomb 76.17 330 ⇑P **P 13 17 17.8 +0.9**
baz=76
R24A Sanders Place, 76.38 333 ⇓P **P 13 17 19.7 +1.6**
baz=77
R23A Moffat 76.62 333 ⇓P **P 13 17 20.8 +1.2**
baz=77
R22A Saguache, Gunn 77.02 332 ⇓P **P 13 17 23.5 +1.6**
baz=77
Q24A Divide 77.03 334 ⇓P **P 13 17 23.5 +1.6**
baz=77
P25A Willow Gulch B 77.15 335 ⇓P **P 13 17 24.1 +1.8**
baz=78
BC3 Big Chuckawall 77.18 323 ⇑P **P 13 17 23.7 +1.1**
baz=78
S20A Disappointment 77.33 331 ⇑P **P 13 17 25.2 +1.7**
baz=78
P23A Jefferson 77.65 333 ⇑P **P 13 17 26.9 +1.6**
baz=78
PFO Pinyon Flat Ob 77.66 323 ⇑P **P 13 17 27.2 +1.9**
baz=78
U15A North Rim 77.89 327 ⇑P **P 13 17 28.2 +1.5**
baz=78
SMCO Snowmass 77.92 332 *e*P **P 13 17 25.5 -1.5**
comp=E,5.8nm,1.1s
O23A Lake Granby, G 78.41 334 ⇑P **P 13 17 30.1 +0.6**
baz=79,SNR=5.2
CIS Catalina Islan 78.52 321 ⇓P **P 13 17 29.4 -0.5**
baz=79
ECSD EROS Data Cent 78.57 342 *e*P **P 13 17 28.8 -1.1**
comp=E,8.9nm,0.8s
ECSD *ep*P **pP 13 17 41.8 -0.8**
ECSD *es*P **sP 13 17 47.0 -0.2**
O22A Kremmling 78.61 333 ⇑P **P 13 17 31.7 +1.0**
baz=79
P20A De Beque 78.77 332 ⇑P **P 13 17 32.7 +1.3**
baz=79
M24A Cheyenne 79.11 335 ⇓P **P 13 17 34.8 +1.6**
baz=79
P19A Cripple Cowboy 79.12 331 ⇑P **P 13 17 34.3 +1.0**
baz=79
N22A Wattenberg Ran 79.13 334 ⇑P **P 13 17 34.6 +1.2**
baz=79
CCUT Cedar City 79.30 327 *e*P **P 13 17 36.5 +2.2**
comp=E,3.9nm,1.1s
J28A Allard Ranch, 79.64 338 ⇑P **P 13 17 37.2 +1.3**
baz=80
O19A Miners Draw (B 79.74 332 ⇑P **P 13 17 37.8 +1.2**
baz=80
N20A Spence Gulch, 79.85 332 ⇑P **P 13 17 37.9 +0.6**
baz=80
L23A Garrett 79.99 335 ⇑P **P 13 17 38.9 +0.9**
baz=80
M21A Separation Pea 80.17 333 ⇑P **P 13 17 39.9 +0.9**
baz=80
M20A Sweetwater, Wa 80.38 333 ⇑P **P 13 17 41.2 +1.0**
baz=81
L21A Rawlins 80.48 334 ⇓P **P 13 17 41.2 +0.6**
baz=81
BOSA Boshof 80.63 118 P **P 13 17 41.3 -0.6**
BOSA Boshof 80.63 118 P **P 13 17 41.3 -0.6**
comp=E,5.7nm,1.0s,baz=297,slow=12,SNR=3.6
J24A Dixon Ranch, L 80.69 336 ⇓P **P 13 17 43.2 +1.6**
baz=81
K22A Casper 80.75 335 ⇓P **P 13 17 43.4 +1.4**
baz=81
L20A Wamsutter 80.89 333 ⇓P **P 13 17 43.7 +0.9**
baz=81
I24A Kuemmerle Ranc 81.14 336 ⇑P **P 13 17 44.7 +0.7**
baz=82
DUG Dugway 81.21 329 ⇓P **P 13 17 45.5 +1.0**
baz=82
EYMN Ely 81.35 346 *e*P **P 13 17 44.1 -0.8**
comp=E,5.3nm,1.1s
EYMN *ep*P **pP 13 17 57.1 -0.4**
EYMN *es*P **sP 13 18 02.3 +0.1**
M17A Scullys Gap (B 81.36 331 ⇑P **P 13 17 46.3 +1.0**
baz=82
L19A Farson 81.36 332 ⇑P **P 13 17 46.2 +0.8**
baz=82
J22A Midwest 81.40 335 ⇓P **P 13 17 46.2 +0.8**
baz=82
K20A Yellowstone Ra 81.44 333 ⇓P **P 13 17 46.0 +0.4**
baz=82
K19A Absolon Red Bu 81.78 333 ⇑P **P 13 17 48.0 +0.5**
baz=82
I22A 9 Mile Ranch, 81.82 335 ⇓P **P 13 17 48.3 +0.7**
baz=82
J20A Shoshoni 81.94 334 ⇓P **P 13 17 49.7 +1.4**
baz=82
PDAR Pinedale Array 82.00 333 P **P 13 17 48.8 +0.1**
PDAR Pinedale Array 82.00 333 P **P 13 17 48.8 +0.1**
comp=E,0.6nm,0.7s,baz=145,slow=5.4,SNR=4.7
PDAR LR LR 13 51 13.5
comp=E,67nm,19.4s,baz=214,slow=33
I21A Big Trails, Te 82.04 335 ⇓P **P 13 17 49.9 +1.1**
baz=82
NVAR Mina Array Bea 82.36 325 P **P 13 17 52.0 +1.3**
NVAR pP **pP 13 18 04.3 +1.0**
NVAR Mina Array Bea 82.36 325 P **P 13 17 52.0 +1.3**
comp=E,2.1nm,0.8s,baz=156,slow=6.0,SNR=14
NVAR pP **pP 13 18 04.3 +1.0**
comp=E,1.4nm,0.8s,baz=167,slow=5.9,SNR=6.5
I20A Worland 82.47 334 ⇓P **P 13 17 51.6 +0.6**
baz=83
ELK Elko 82.73 328 *e*P **P 13 17 54.0 +1.4**
comp=E,2.6nm,1.0s
E26A Carlson Angus 82.76 339 ⇓P **P 13 17 53.5 +1.1**
baz=83
I19A Meeteetse 82.87 334 ⇑P **P 13 17 53.9 +0.8**
baz=83
H20A Greybull 82.88 335 ⇓P **P 13 17 54.1 +1.0**
baz=83
TORD Torodi Ar. Bea 82.92 70 P **P 13 17 53.7 -0.1**
TORD pP **pP 13 18 07.2 +0.7**
TORD Torodi Ar. Bea 82.92 70 P **P 13 17 53.7 -0.1**
comp=E,7.7nm,0.8s,baz=249,slow=4.7,SNR=38
TORD pP **pP 13 18 07.2 +0.7**
comp=E,4.0nm,0.7s,baz=262,slow=4.7,SNR=9.5
E25A Miller Ranch, 83.08 338 ⇑P **P 13 17 55.2 +1.2**
baz=83
G21A Lodge Grass 83.23 335 ⇑P **P 13 17 55.3 +0.4**
baz=84
E24A Baker 83.42 338 ⇑P **P 13 17 57.0 +1.2**
baz=84
H18A Shoshone NF, C 83.66 334 ⇑P **P 13 17 58.0 +0.7**
baz=84
F19A Roth Farm, Mol 84.40 335 ⇑P **P 13 18 01.3 +0.4**
baz=85
ULM Lac du Bonnet 84.47 344 P **P 13 18 00.5 -0.4**
ULM Lac du Bonnet 84.47 344 P **P 13 18 00.5 -0.4**
comp=E,2.4nm,0.4s,baz=114,slow=3.6,SNR=3.5
E20A Meyer Farm, Mu 84.66 335 ⇑P **P 13 18 03.0 +0.9**
baz=85
F18A Big Timber 84.72 334 ⇓P **P 13 18 02.9 +0.4**
baz=85
C23A Lambert 84.80 338 ⇑P **P 13 18 03.0 +0.3**
baz=85
E19A Rath Farm, Rou 84.86 335 ⇓P **P 13 18 03.8 +0.7**
baz=85
MCMT McKenzie Canyo 85.03 332 *e*P **P 13 18 03.3 -0.9**
comp=E,1.9nm,1.1s
MCMT *ep*P **pP 13 18 16.1 -0.8**
DGMT Dagmar 85.08 339 ⇑P **P 13 18 04.9 +0.8**
baz=85
F17A Fitzpatrick Pl 85.08 334 ⇑P **P 13 18 04.8 +0.5**
baz=85
C21A Desert Coulee 85.44 337 ⇓P **P 13 18 06.8 +0.8**
baz=86
D19A Cripps Ranch, 85.49 335 ⇑P **P 13 18 07.0 +0.8**
baz=86
B22A Reddig Ranch S 85.50 338 ⇓P **P 13 18 07.0 +0.8**
baz=86
LRM Limekiln Ridge 85.70 333 *e*P **P 13 18 06.5 -1.1**
LRM *ep*P **pP 13 18 19.1 -1.2**
F15A Butte 85.73 333 ⇓P **P 13 18 08.2 +0.6**
baz=86,SNR=5.2
D18A Linhart Farms, 85.85 335 ⇓P **P 13 18 08.9 +0.8**
baz=86
B21A Ellsworth Farm 85.94 337 ⇑P **P 13 18 09.1 +0.7**
baz=86
C19A Slack Wire Ran 86.04 336 ⇓P **P 13 18 09.3 +0.4**
baz=86
F14A Wisdom 86.05 332 ⇓P **P 13 18 10.5 +1.3**
baz=86
A22A Carney Farms, 86.08 338 ⇓P **P 13 18 10.0 +0.9**
baz=86
D17A Six Diamond Ra 86.14 334 ⇓P **P 13 18 09.8 +0.3**
baz=86,SNR=7.5
B20A Solberg Farm, 86.29 337 ⇓P **P 13 18 10.7 +0.6**
baz=87
G12A Big Creek, Yel 86.30 331 ⇑P **P 13 18 10.9 +0.4**
baz=87
SCHQ Schefferville 86.30 3 P **P 13 18 08.6 -1.4**
SCHQ Schefferville 86.30 3 P **P 13 18 08.6 -1.4**
comp=E,3.6nm,1.0s,baz=198,slow=13,SNR=3.4
D16A Dana Ranch, Ca 86.36 334 ⇑P **P 13 18 11.5 +0.9**
baz=87
EGMT Eagleton 86.53 335 ⇑P **P 13 18 11.7 +0.3**
baz=87
C17A Wharram Farm, 86.57 335 ⇑P **P 13 18 11.6 0.0**
baz=87
B19A Brinkman Farms 86.62 336 ⇓P **P 13 18 12.3 +0.6**
baz=87
A20A Cobblestone Ra 86.64 337 ⇓P **P 13 18 12.0 +0.1**
baz=87
D15A Lincoln 86.73 333 ⇑P **P 13 18 13.4 +0.9**
baz=87
B18A Beardsley Farm 86.86 336 ⇑P **P 13 18 13.1 +0.1**
baz=87,SNR=5.2
C16A Fuhringer Ranc 87.07 334 ⇓P **P 13 18 14.7 +0.7**
baz=87
B17A L&G Farms, Che 87.14 335 ⇓P **P 13 18 14.8 +0.5**
baz=87
D14A Greenough 87.15 333 ⇓P **P 13 18 15.2 +0.8**
baz=88
A18A Metzger Ranch, 87.33 336 ⇓P **P 13 18 16.1 +0.9**
baz=88
C15A Salmond Ranch, 87.38 334 ⇑P **P 13 18 16.3 +0.7**
baz=88
E12A Beaver Dam Sad 87.44 331 ⇑P **P 13 18 16.3 +0.4**
baz=88
D13A Huson 87.54 332 ⇑P **P 13 18 16.9 +0.7**
baz=88
B16A M & M Farms, S 87.57 334 ⇓P **P 13 18 16.9 +0.5**
baz=88
A17A Triple J Farms 87.65 335 ⇑P **P 13 18 16.8 0.0**
baz=88,SNR=6.2
B15A Bradely Ranch, 87.80 334 ⇑P **P 13 18 17.8 +0.3**
baz=88
ASAR Alice Springs 119.83 207 PKP **PKPdf 13 24 18.1 -1.2**
ASAR Alice Springs 119.83 207 PKP **PKPdf 13 24 18.2 -1.2**
comp=E,0.8nm,0.7s,baz=144,slow=1.6,SNR=10.0
WRA Warramunga Arr 123.00 209 PKP **PKPdf 13 24 24.8 -0.7**
WRA pPKP **pPKPdf 13 24 37.7 -0.9**
WRA Warramunga Arr 123.00 209 PKP **PKPdf 13 24 24.8 -0.7**
comp=E,1.8nm,0.5s,baz=158,slow=1.7,SNR=42
WRA pPKP **pPKPdf 13 24 37.7 -0.9**
comp=E,0.4nm,0.4s,baz=152,slow=1.8,SNR=3.7
FITZ Fitzroy Crossi 127.83 201 PKP **PKPdf 13 24 33.7 -1.0**
FITZ Fitzroy Crossi 127.83 201 PKP **PKPdf 13 24 33.7 -1.0**
comp=E,2.9nm,1.0s,baz=159,slow=5.0,SNR=4.7
FX1 Attu Island--F 129.67 315 PKP **PKPdf 13 24 36.2 -0.9**
FX1 Attu Island--F 129.67 315 PKP **PKPdf 13 24 36.2 -0.9**
comp=E,4.0nm,0.7s,baz=90,slow=2.0,SNR=2.2
PSI Prapat 149.80 160 PKPbc **PKPbc 13 25 18.5 -0.9**
PSI Prapat 149.80 160 PKPbc **PKPbc 13 25 18.5 -0.9**
comp=E,9.4nm,0.7s,baz=264,slow=1.0,SNR=8.3
ZALV Zalesovo Beam 152.01 31 PKPbc **PKPbc 13 25 23.1 0.0**
ZALV pPKPbc **pPKPbc 13 25 36.7 +0.4**
ZALV Zalesovo Beam 152.01 31 PKPbc **PKPbc 13 25 23.1 0.0**
comp=E,6.1nm,0.4s,baz=311,slow=3.0,SNR=32
ZALV pPKPbc **pPKPbc 13 25 36.7 +0.4**
comp=E,12nm,0.6s,baz=306,slow=3.1,SNR=20
MK31 Makanchi Array 154.83 46 *e*PKPdf **PKPdf 13 25 20.9 0.0**
MK31 *e*PKPbc **PKPbc 13 25 29.0 -0.6**
MKAR Makanchi Array 154.83 46 PKPbc **PKPbc 13 25 29.2 -0.4**
MKAR pPKPbc **pPKPbc 13 25 42.6 -0.1**
MKAR pPKPab **pPKPab 13 25 58.1 +0.4**
MKAR Makanchi Array 154.83 46 PKPbc **PKPbc 13 25 29.2 -0.4**
comp=E,0.7nm,0.5s,baz=286,slow=2.0,SNR=8.9
MKAR pPKPbc **pPKPbc 13 25 42.6 -0.1**
comp=E,2.2nm,0.7s,baz=292,slow=3.6,SNR=13
MKAR pPKPab **pPKPab 13 25 58.1 +0.4**
comp=E,1.8nm,0.8s,baz=297,slow=4.0,SNR=6.4
CMAR Chiang Mai Arr 164.15 144 PKPab **PKPab 13 26 25.6 -0.4**
CMAR Chiang Mai Arr 164.15 144 PKPab **PKPab 13 26 25.6 -0.4**
comp=E,0.4nm,0.3s,baz=260,slow=5.3,SNR=3.0

*IDC **26** 13:13:21.2±1.2,39.°11N×140.°99E,h0km,mb3.3/4, mb1 3.5/6,mb1mx3.4/26,mbtmp3.3/6,ML2.6/3,Error ellipse: s-maj=33.8km s-min=16.4km az=122.0*
*ISCJB **26** 13:13:22.7±0.5,39.°08N±0.°03×140.°94E±0.°06,h23km±5km, mb3.4/4,Error ellipse: s-maj=7.6km s-min=5.5km az=173.0*
*JMA **26** 13:13:23.2,39.°06N×140.°90E,h7km±1km,M3.2 Broadband fault plane solution: P waves. NP1: φs24.00000°,δ47.00000°,λ102.00000°. NP2: φs186.00000°,δ45.00000°,λ77.00000°. Principal axes: T Plg81.0000°, Azm9.0000°; N Plg9.0000°, Azm195.0000°; P Plg1.0000°, Azm105.0000°;*
ISC 26 13:13:23.1±1.0,39.°08N±0.°03×140.°95E±0.°04,h12km±8km, n13,σ0s91/19,mb3.5/4,1C-3D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	**Ichinoseki**	**0.25**	**122**	P	**Pg**	**13 13 28.4**	**+0.1**
JMK				S	**Sg**	**13 13 32.1**	**+0.3**
JRG	**Rokugo**	**0.40**	**322**	⇓P	**Pg**	**13 13 31.0**	**-0.1**
JRG				S	**Sg**	**13 13 36.8**	**+0.3**
JOM	**Ohasama**	**0.47**	**34**	P	**Pb**	**13 13 32.9**	**-0.5**
JOM				S	**Sb**	**13 13 39.8**	**-0.5**
JYK	**Kaneyama**	**0.49**	**251**	⇓P	**Pg**	**13 13 32.0**	**-0.8**
JIO	**Ouri**	**0.70**	**153**	⇓P	**Pg**	**13 13 36.2**	**-0.5**
JIO				S	**Sg**	**13 13 45.9**	**0.0**
JOU	**Okura**	**0.75**	**198**	⇑P	**Pg**	**13 13 37.0**	**-0.7**
JOU				S	**Sg**	**13 13 46.7**	**-0.8**
MJAR	**Matsushiro Arr**	**3.34**	**221**	Pn	**Pn**	**13 14 17.2**	**+2.1**
MJAR	0.3nm,0.3s,baz=27,slow=13,SNR=4.6			Pg	**Pb**	**13 14 22.0**	**-0.3**
MJAR	0.7nm,0.3s,baz=25,slow=15,SNR=9.2			Lg	Lg	13 15 08.8	
	0.3nm,0.3s,baz=22,slow=26,SNR=6.7						
ASAJ	**Asahikawa**	**5.18**	**13**	Pn	**Pn**	**13 14 40.9**	**+0.5**
	0.1nm,0.3s,baz=270,slow=20,SNR=1.7						
KSRS	**Korea Array**	**10.37**	**265**	Pn	**Pn**	**13 15 53.5**	**+1.9**
	0.1nm,0.3s,baz=77,slow=14,SNR=3.0						
MKAR	**Makanchi Array**	**42.75**	**300**	P	**P**	**13 21 19.0**	**-1.1**
	0.2nm,0.6s,baz=85,slow=8.8,SNR=3.1						
ILAR	**Eielson Array**	**47.97**	**33**	P	**P**	**13 22 01.1**	**-0.2**
	0.3nm,0.9s,baz=271,slow=6.4,SNR=4.0						
WRA	**Farramunga Arr**	**59.04**	**187**	P	**P**	**13 23 22.7**	**-0.2**
	0.4nm,0.5s,baz=4.5,slow=7.2,SNR=13						
ASAR	**Alice Springs**	**62.77**	**187**	P	**P**	**13 23 48.8**	**+0.5**
	0.3nm,0.7s,baz=10.0,slow=4.6,SNR=3.4						

IDC 26 13:21:53.9±1.7,1.°43N×126.°41E,h0km,mb3.5/4, mb1 3.7/5,mb1mx3.5/22,mbtmp3.5/5,ML3.3/1,Error

ellipse: s-maj=117.4km s-min=23.2km az=68.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.42**	**182**	P	P	13 26 21.6	-0.4
	0.1nm,0.3s,baz=8.7,slow=13,SNR=3.2						
WRA	**Warramunga Arr**	**22.62**	**160**	P	P	13 26 56.2	-0.3
	0.9nm,0.5s,baz=339,slow=11,SNR=32						
ASAR	**Alice Springs**	**25.99**	**164**	P	P	13 27 28.8	+0.1
	0.4nm,0.3s,baz=345,slow=12,SNR=14						
MKAR	**Makanchi Array**	**59.26**	**326**	P	P	13 31 57.2	-0.2
	0.3nm,0.4s,baz=117,slow=7.5,SNR=7.9						
VNDA	**Vanda**	**81.20**	**173**	P	P	13 34 11.6	+0.4
	0.2nm,0.5s,baz=307,slow=4.6,SNR=3.0						

MAN 26 13:48:50.7±1.5N×126.2±8.2E, h27km, mb3.8, ML2.6, MS2.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	**Mati**	**0.56**	**182**	*e*P	Pn	13 49 02.5	+0.3
MATI				*e*S	Sn	13 49 11.1	+0.6
BUKP	**Musuan**	**1.26**	**287**	*e*P	Pn	13 49 11.7	-0.2
BUKP				*e*S	Sn	13 49 25.7	-2.4
CTBH	**Cotabato--PC H**	**2.04**	**262**	↑*i*P	Pn	13 49 24.1	+1.5

CASC 26 14:12:05.0±1.3, 12.70N×90.02W, h20km±7km, MD3.8, 2C, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SBLS	**San Blas**	**1.20**	**19**	↑*e*P	Pn	14 12 26.6	-0.4
SBLS				*e*S	Sg	14 12 43.7	-0.8
SNJE	**San Jose**	**1.23**	**19**	↑*e*P	Pn	14 12 27.0	-0.4
SNJE				*e*S	Sn	14 12 43.8	+0.2
BOQS	**Boqueron**	**1.26**	**35**	*e*P	Pn	14 12 27.2	-0.5
LFRS	**El Faro**	**1.31**	**45**	*e*P	Pn	14 12 28.3	-0.1
LBRS	**Las Brisas**	**1.40**	**43**	*e*P	Pn	14 12 29.7	+0.1
RBDL	**Robledal**	**1.44**	**13**	*e*P	Pn	14 12 30.6	+0.3
NBG	**Las Nubes**	**1.90**	**350**	*e*P	Pn	14 12 38.1	+1.3
FUG	**Fuego 3**	**1.91**	**335**	*e*P	Pn	14 12 36.4	-0.3
CNCH	**Conchagua**	**2.21**	**75**	*e*P	Pn	14 12 40.1	-0.7
JAT	**Jato**	**2.25**	**316**	*e*P	Pn	14 12 41.1	0.0
VCR	**Vista de Mar**	**5.01**	**120**	*e*P	Pn	14 13 18.7	-0.5
VCR				*e*S	Sn	14 14 10.9	-5.8
COLC	**Colonia**	**5.13**	**113**	*i* P	Pn	14 13 21.4	+0.5
CUI	**Cuipilapa**	**5.17**	**113**	*i* P	Pn	14 13 21.7	+0.3
AMAS	**Alto Masis**	**5.34**	**112**	*i* P	Pn	14 13 23.9	0.0
AMAS				*i* S	Sn	14 14 21.1	-3.9
JCR	**Jicaral**	**5.59**	**120**	*e*P	Pn	14 13 27.3	+0.2
QCR	**Quepos**	**6.61**	**119**	*e*P	Pn	14 13 41.9	+0.8
BUS	**Buena Vista**	**6.89**	**116**	*e*P	Pn	14 13 47.1	+1.5
BUS				*e*S	Sn	14 14 56.2	-7.8
ACR	**Cerro Adams**	**7.84**	**120**	*e*P	Pn	14 14 00.1	+1.9

IDC 26 14:41:18.5±1.6, 2.90S×127.66E, h0km, mb3.7/3, mb1 3.9/5, mb1mx3.6/23, mbtmp3.7/5, ML3.3/2, Error ellipse: s-maj=110.6km s-min=22.7km az=68.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.24**	**187**	Pn	Pn	14 44 56.1	+1.0
	0.0nm,0.3s,baz=9.5,slow=16,SNR=2.0						
WRA	**Warramunga Arr**	**18.15**	**159**	P	Pn	14 45 31.4	-0.9
	0.2nm,0.3s,baz=341,slow=13,SNR=14						
ASAR	**Alice Springs**	**21.51**	**164**	P	P	14 46 08.8	-0.5
	1.4nm,0.7s,baz=343,slow=9.9,SNR=20						
ASAR				S	S	14 50 05.0	-3.9
	0.3nm,0.8s,baz=347,slow=25,SNR=3.4						
STKA	**Stephens Creek**	**31.67**	**157**	P	P	14 47 44.6	+0.9
	1.2nm,0.8s,baz=345,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**63.54**	**327**	P	P	14 51 50.6	-0.2
	0.7nm,0.7s,baz=128,slow=7.4,SNR=9.0						

DJA 26 14:43:56.4±0.9, 9°S±11°×11°0E±°, h43km±19km, M3.7/7, MLv3.7/7, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOGI	**Yogyakarta**	**0.87**	**34**	P	Pn	14 44 12.9	+0.6
YOGI				S	Sn	14 44 24.0	+0.2
UGM	**Wanagama**	**0.95**	**49**	P	Pn	14 44 13.1	-0.3
UGM				S	Sn	14 44 26.6	+0.8
BJII	**Banjamegara**	**1.20**	**356**	P	Pn	14 44 16.0	-0.9
PCJI	**Pacitan**	**1.41**	**76**	P	Pn	14 44 19.5	0.0
PCJI				S	Sn	14 44 37.2	+0.3
SMRI	**Semarang**	**1.61**	**23**	P	Pn	14 44 23.4	+1.0
PWJI	**Pagerwojo**	**2.05**	**76**	P	Pn	14 44 28.2	-0.2
PWJI				S	Sn	14 44 53.3	+0.6
SJI	**Sawahan**	**2.10**	**68**	P	Pn	14 44 29.9	+0.6
CISI	**Cisompet, Garu**	**2.19**	**296**	P	Pn	14 44 29.5	-1.0

MEX 26 14:47:45.1±0.6, 14.69N×93.34W, h48km±23km, MD3.6, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.01**	**6**	*e*P	Pn	14 48 01.4	-1.6
PCIG				*i* S	Sn	14 48 14.2	-2.0
CCIG	**Comitan**	**1.96**	**36**	*i* P	Pn	14 48 13.9	-2.2
CCIG				*i* S	Sn	14 48 37.8	-1.9
TGIG		**2.08**	**6**	*i* P	Pn	14 48 16.7	-1.0
TGIG				*i* S	Sn	14 48 40.3	-2.3

*MAN **26** 14:59:01, 15.47N×119.82E, h18km, mb4.9, ML3.8, MS3.8*
*IDC **26** 14:59:02.5±2.3, 15.41N×120.02E, h34km±18km, mb3.7/8, mb1 3.8/8, mb1mx3.5/24, mbtmp3.7/8, Error ellipse: s-maj=45.1km s-min=13.4km az=66.0*
*ISCJB **26** 14:59:03.2±0.5, 15.47N±0.04×119.89E±0.07, h53km, mb3.9/9, Error ellipse: s-maj=9.4km s-min=5.1km az=179.0*

ISC 26 14:59:04.7±0.7, 15.50N±0.04×119.91E±0.08, h53km, n28, σ1.9 21/32, mb4.0/9, 1C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.27**	**1**	*e*P	Pn	14 59 09.1	-4.8
BOLP	**Bolinao**	**0.88**	**0**	*e*P	**Pn**	**14 59 18.4**	**-2.5**
BOLP				*e*S	**Sn**	**14 59 32.6**	**-0.1**
BCPH	**Baguio City Da**	**1.09**	**37**	↑*i*P	**Pn**	**14 59 21.3**	**-2.6**
BCPH				*e*S	**Sn**	**14 59 36.9**	**-1.1**
BALP	**Baler**	**1.63**	**81**	*e*P	**Pn**	**14 59 28.9**	**-2.1**
TGY	**Tagaytay City**	**1.71**	**144**	⇓*i*P	**Pn**	**14 59 32.0**	**-0.2**
TGY	**Tagaytay City**	**1.71**	**144**	Pg	**Pn**	**14 59 32.0**	**-0.2**
	460nm,0.3s,baz=302,slow=2.0,SNR=24						
TGY				Lg	Lg	14 59 54.4	
	629nm,0.3s,baz=346,slow=18,SNR=15						
LQP	**Lukban**	**2.10**	**131**	*e*P	**Pn**	**14 59 37.9**	**+0.3**
ABRA	**Dolores**	**2.27**	**20**	*e*P	**Pn**	**14 59 39.2**	**-0.6**
CAUP	**Cauayan**	**2.33**	**52**	*e*P	**Pn**	**14 59 41.0**	**+0.4**
APYP	**Conner**	**2.67**	**28**	*e*P	**Pn**	**14 59 45.4**	**0.0**
PALP	**Palanan**	**2.88**	**57**	*e*P	**Pn**	**14 59 49.2**	**+1.1**
PIP	**Pasuquin**	**2.89**	**14**	*i* P	**Pn**	**14 59 47.9**	**-0.4**
PIP				*e*S	**Sn**	**15 00 24.3**	**+2.5**
GQP	**Guinayangan**	**2.93**	**123**	⇓*e*P	**Pn**	**14 59 48.4**	**-0.4**
SJMP	**San Jose**	**3.24**	**159**	*e*P	**Pn**	**14 59 52.9**	**-0.3**
SGCP	**Mt. Cagua**	**3.41**	**37**	*e*P	**Pn**	**14 59 56.7**	**+1.3**
AUQP	**San Andres**	**3.45**	**129**	*e*P	Pn	14 59 59.3	+3.4
ENPP	**El Nido**	**4.29**	**186**	*e*P	**Pn**	**15 00 07.0**	**-0.5**
CMAR	**Chiang Mai Arr**	**20.26**	**281**	P	Pn	15 03 40.9	+2.6
	1.4nm,0.6s,baz=96,slow=8.4,SNR=8.8						
SONM	**Songino Array**	**34.12**	**344**	P	**P**	**15 05 44.8**	**+0.2**
	0.7nm,0.5s,baz=162,slow=10,SNR=3.6						
WRA	**Warramunga Arr**	**37.97**	**158**	P	**P**	**15 06 15.1**	**-2.5**
	0.4nm,0.4s,baz=338,slow=9.3,SNR=11						
WRA				PcP	**PcP**	**15 08 32.9**	**+0.3**
	0.2nm,0.5s,baz=338,slow=3.1,SNR=4.5						
WRA				ScP	**ScP**	**15 12 16.1**	**+0.2**
	0.5nm,1.1s,baz=347,slow=4.2,SNR=5.6						
ASAR	**Alice Springs**	**41.26**	**160**	P	**P**	**15 06 43.5**	**-1.5**
	0.3nm,0.4s,baz=335,slow=7.6,SNR=9.8						
ASAR				PcP	**PcP**	**15 08 43.0**	**-0.1**
	0.1nm,0.4s,baz=345,slow=3.2,SNR=3.2						
MKAR	**Makanchi Array**	**44.14**	**323**	P	**P**	**15 07 09.6**	**+1.5**
	0.2nm,0.4s,baz=127,slow=8.1,SNR=6.4						
MKAR				PcP	**PcP**	**15 08 52.4**	**+0.1**
	0.4nm,0.7s,baz=114,slow=3.6,SNR=4.2						
PETK	**Petropavlovsk-**	**47.84**	**30**	P	**P**	**15 07 36.7**	**-0.3**
	1.2nm,0.5s,baz=207,slow=6.9,SNR=10						
KURBB	**Kurchatov Arra**	**48.27**	**326**	P	**P**	**15 07 41.9**	**+1.5**
	0.6nm,0.2s,baz=120,slow=8.7,SNR=3.7						
ARCES	**ARCESS Array B**	**77.14**	**339**	P	**P**	**15 10 52.9**	**+0.6**
	4.2nm,0.9s,baz=78,slow=6.3,SNR=11						
FINES	**FINESS Array B**	**78.35**	**331**	P	**P**	**15 10 59.4**	**+0.3**
	1.4nm,0.8s,baz=72,slow=6.2,SNR=4.7						
NB2	**NORSAR Subarra**	**85.32**	**332**	P	**P**	**15 11 35.9**	**0.0**
	comp=Z,0.9nm,0.6s,baz=65,slow=4.6						
NOA	**NORSAR Array B**	**85.32**	**332**	P	**P**	**15 11 36.0**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=68,slow=4.8,SNR=5.7						

*IDC **26** 15:30:10.2±0.4, 15.40S×172.10W, h0km, mb4.9/31, mb1 5.0/31, mb1mx5.0/34, mbtmp4.8/31, MS4.2/21, Ms1 4.2/21, ms1mx4.1/30, Error ellipse: s-maj=15.9km s-min=10.9km az=134.0*
*DJA **26** 15:30:13.3±0.4, 16°S±7°×17°2W±°, h15km, M5.4/11, mb5.1/11, MLv5.5/1*
*SZGRF **26** 15:30:15.7, 15.79S×171.91W, h33km, Samoa Islands region*
*ISCJB **26** 15:30:15.3±0.2, 15.24S±0.05×171.97W±0.05, h45km, mb5.1/143, MS4.5/123, Error ellipse: s-maj=8.3km s-min=4.8km az=138.3*
*BJI **26** 15:30:16.1, 15.45S×172.36W, h47km, mB5.4/20, mb5.0/28, Ms5.3/17, Ms7 4.8/18*
*NEIC **26** 15:30:17.0±0.2, 15.20S×172.18W, mb5.3/101, MS4.5/93, Error ellipse: s-maj=9.8km s-min=5.3km az=146.0*
*GCMT **26** 15:30:17.2±0.2, 15.36S×171.83W, h17km, MW5.2, Moment Tensor Solution. s57,c86; s91,c144; Moment tensor: Scale 10^16Nm; Mrr-7.54±.25; Mθθ1.71±.18; Mφφ5.83±.19; Mrθ1.37±.47; Mrφ-4.16±.12; Mθφ1.14±.43; Best double couple: M0 8.20000×10^16 NP1:φs315.00000°, δ46.00000°, λ-110.00000°. NP2:φs162.00000°, δ48.00000°, λ-71.00000°. Principal axes: T 8.4200, Plg1.0000°, Azm238.0000°; N -0.4300, Plg14.0000°, Azm329.0000°; P -7.9800, Plg76.0000°, Azm145.0000°; Data Used: lI lU IC G CN.*
*MOS **26** 15:30:21.4±1.2, 14.51S×171.79W, h68km, mb5.5/35, MS4.3/20 Error ellipse: s-maj=14.4km s-min=8.4km az=71.1*

ISC 26 15:30:16.7±0.3, 15.32S±0.06×172.11W±0.05, h45km±2km, h45km:pP-P, n1151, σ1.9 02/1110, mb5.2/143, MS4.5/125, 227C-226D, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.44**	**13**	Pn	Pn	15 30 32.6	-7.9
	774nm,0.3s,baz=172,slow=0.2,SNR=850						
AFI				Sn	Sn	15 30 48.6	-10
	3μm,0.3s,baz=162,slow=20,SNR=22						
AFI				LR	LR	15 30 54.4	
	comp=Z,5μm,21.9s,baz=358,slow=29						
MSVF	**Nonsavu**	**9.73**	**254**	Pn	**Pn**	**15 32 37.0**	**+2.7**
	684nm,1.1s,SNR=13						
MSVF	**Nonsavu**	**9.73**	**254**	*e*Pn	**Pn**	**15 32 32.0**	**-2.2**
FUNA	**Funafuti**	**10.86**	**307**	*e*Pn	**Pn**	**15 32 46.4**	**-3.2**
RAR	**Rarotonga**	**13.10**	**118**	Pn	Pn	15 33 10.7	-9.5
	3.6nm,0.3s,baz=270,slow=9.1,SNR=11						
RAR				Sn	Sn	15 35 24.4	-20
	1.4nm,0.3s,baz=270,slow=17,SNR=4.1						
RAR				LR	LR	15 37 25.5	
	comp=Z,912nm,19.4s,baz=271,slow=33						
RAO	**Raoul Island**	**14.86**	**200**	*e*Pn	Pn	15 33 37.5	-6.5
DZM	**Mont Dzumac**	**21.38**	**248**	*e*LR	LR	15 40 13.7	
	3μm,29.4s						
PPT	**Papeete**	**21.73**	**99**	LR	LR	15 41 52.5	
	comp=Z,545nm,20.0s,baz=274,slow=32						
PPT2	**Papeete2**	**21.73**	**99**	*e*LQ	LQ	15 39 11.4	
	5μm,26.5s						
PPT2				*e*LR	LR	15 39 59.1	
	1μm,38.2s						
XMAS	**Kiritimati**	**22.55**	**41**	*e*P	**P**	**15 35 09.2**	**-3.9**
	60nm,0.8s						
TBI	**Tubuai**	**22.80**	**114**	*e*LQ	LQ	15 39 40.1	
	3μm,28.8s						
TBI				*e*LR	LR	15 40 16.8	
	642nm,38.5s						
OUZ	**Omahuta**	**23.60**	**210**	*e*P	**P**	**15 35 24.7**	**+1.2**
	222nm,1.7s						
OTAZ	**Otara**	**24.43**	**206**	*e*PN	**P**	**15 35 31.8**	**+0.7**
URZ	**Urewera**	**24.75**	**201**	P	**P**	**15 35 34.3**	**+0.3**
	20nm,1.2s						
URZ				S	S	15 40 02.0	+8.8
URZ	**Urewera**	**24.75**	**201**	P	**P**	**15 35 34.3**	**+0.3**
	35nm,0.8s,baz=356,slow=3.5,SNR=23						
URZ				S	S	15 40 02.0	+8.8
	11nm,0.9s,baz=308,slow=19,SNR=4.1						
TOZ	**Tahuroa Road**	**24.87**	**204**	*e*PN	**P**	**15 35 37.6**	**+2.5**
TLZ	**Tolley Road**	**25.38**	**203**	*e*PN	P	15 35 46.2	+6.4
BKZ	**Black Stump Fm**	**25.78**	**201**	*e*PN	**P**	**15 35 45.9**	**+2.5**
HIZ	**Hauiti**	**25.80**	**204**	*e*PN	**P**	**15 35 48.2**	**+4.7**
HNR	**Honiara**	**27.89**	**279**	PFAKE		15 36 10.0	+7.3
HNR				LR	LR		
	comp=Z,515nm,22.0s						
QRZ	**Quartz Range**	**28.71**	**205**	*e*PN	**P**	**15 36 11.5**	**+1.9**
LTZ	**Lake Taylor**	**30.48**	**203**	*e*PN	**P**	**15 36 27.7**	**+2.4**
RPZ	**Rata Peaks**	**31.73**	**204**	P	P	15 36 33.3	-3.1
RPZ	**Rata Peaks**	**31.73**	**204**	P	P	15 36 33.3	-3.1
	comp=Z,7.1nm,1.0s,baz=30,slow=20,SNR=2.0						
RKT	**Rikitea**	**35.84**	**108**	*e*LQ	LQ	15 45 16.9	
	comp=Z,428nm,32.5s						
RKT				*e*LR	LR	15 46 15.7	
	comp=Z,389nm,33.2s						
KIP	**Kipapa**	**39.05**	**21**	↑*i*P	**P**	**15 37 40.5**	**+1.2**
KIP				pmax	pmax		
	comp=Z,200nm,2.5s						
CTA	**Charters Tower**	**39.87**	**257**	P	**P**	**15 37 45.0**	**-1.3**
CTA	**Charters Tower**	**39.87**	**257**	P	**P**	**15 37 45.0**	**-1.3**
	comp=Z,5.4nm,0.8s,baz=76,slow=4.2,SNR=2.1						
CTAO	**Charters Tower**	**39.87**	**257**	PFAKE		15 38 00.0	+14
CTAO				LR	LR		
	comp=Z,334nm,21.0s						
PMG	**Port Moresby**	**40.17**	**274**	P	**P**	**15 37 47.8**	**-1.1**
PMG				LR	LR		
	comp=Z,288nm,19.0s						
PMG	**Port Moresby**	**40.17**	**274**	P	**P**	**15 37 47.8**	**-1.1**
	comp=Z,11nm,0.9s,baz=217,slow=12,SNR=4.0						
COEN	**Coen**	**43.23**	**266**	*e*P	**P**	**15 38 11.5**	**-2.4**
	comp=Z,62nm,0.8s						
STKA	**Stephens Creek**	**45.15**	**240**	P	**P**	**15 38 27.3**	**-1.8**
	comp=Z,46nm,1.0s						
STKA	**Stephens Creek**	**45.15**	**240**	P	**P**	**15 38 27.3**	**-1.8**
	comp=Z,18nm,0.8s,baz=80,slow=8.0,SNR=39						
STKA				LR	LR	15 56 14.3	
	comp=Z,317nm,18.1s,baz=272,slow=35						
WRAB	**Tennant Creek**	**51.06**	**257**	P	**P**	**15 39 12.9**	**-2.0**
	comp=Z,103nm,1.4s,SNR=9.3						
WRAB	**Tennant Creek**	**51.06**	**257**	*e*P	P	15 39 11.3	-3.7
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**51.07**	**257**	P	**P**	**15 39 13.1**	**-2.0**
WRA	**Warramunga Arr**	**51.07**	**257**	P	**P**	**15 39 13.1**	**-2.0**
	comp=Z,11nm,0.9s,baz=90,slow=7.1,SNR=45						
AS31	**Alice Springs**	**51.31**	**252**	*e*P	P	15 39 13.4	-3.4
ASAR	**Alice Springs**	**51.31**	**252**	P	**P**	**15 39 14.8**	**-2.0**
ASAR				S	**S**	**15 46 32.6**	**-0.5**
ASAR	**Alice Springs**	**51.31**	**252**	P	**P**	**15 39 14.8**	**-2.0**
	comp=Z,40nm,0.8s,baz=89,slow=7.6,SNR=427						
ASAR				S	**S**	**15 46 32.6**	**-0.5**
	comp=Z,1.1nm,1.1s,baz=88,slow=15,SNR=6.8						
ASAR				LR	LR	16 00 10.4	
	comp=Z,337nm,19.0s,baz=87,slow=35						
FITZ	**Fitzroy Crossi**	**59.44**	**258**	P	**P**	**15 40 14.1**	**-1.2**
FITZ	**Fitzroy Crossi**	**59.44**	**258**	P	**P**	**15 40 14.1**	**-1.2**
	baz=104,slow=7.1,SNR=5.7						
FITZ				LR	LR	16 03 33.0	
	comp=Z,179nm,20.0s,baz=103,slow=34						
DRV	**Dumont d'Urvil**	**60.09**	**200**	P	P	15 40 15.0	-3.9
DRV	**Dumont d'Urvil**	**60.09**	**200**	PP	PP	15 42 30.0	-1.7
DRV				S	**S**	**15 48 28.0**	**-0.5**
DRV				SS	SS	15 52 44.0	+18
DRV				L	L	15 55 00.0	
DRV				R		15 56 00.0	
SBA	**Scott Base**	**63.43**	**185**	*e*P	**P**	**15 40 39.6**	**-1.7**
SBA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SBA				MLR	MLR		
	comp=Z,188nm,19.0s						
SBA	**Scott Base**	**63.43**	**185**	*e*P	**P**	**15 40 39.6**	**-1.7**
	comp=Z,7.8nm,0.8s						
SBA				LR	LR		
	comp=Z,188nm,19.0s						
VNDA	**Vanda**	**63.58**	**186**	P	**P**	**15 40 42.6**	**+0.3**
	comp=Z,3.0nm,1.1s						
VNDA	**Vanda**	**63.58**	**186**	P	**P**	**15 40 42.6**	**+0.3**
	comp=Z,2.3nm,0.7s,baz=9.2,slow=6.3,SNR=20						
VNDA				LR	LR	16 03 18.6	
	comp=Z,106nm,18.0s,baz=19,slow=31						
MBWA	**Marble Bar**	**64.57**	**254**	*e*P	P	15 40 46.7	-3.1
	comp=Z,38nm,1.1s						
KAPI	**Kappang**	**67.62**	**271**	PFAKE		15 41 20.0	+11
KAPI				LR	LR		
	comp=Z,171nm,21.0s						
UNV	**Unalaska Valle**	**69.06**	**4**	*e*P	**P**	**15 41 16.8**	**-0.7**
	comp=Z,22nm,0.9s						
FX1	**Attu Island--F**	**69.10**	**351**	LR	LR	16 04 47.0	
	comp=Z,138nm,21.2s,baz=269,slow=30						
MJAR	**Matsushiro Arr**	**69.69**	**319**	P	**P**	**15 41 22.3**	**+0.4**
MJAR	**Matsushiro Arr**	**69.69**	**319**	P	**P**	**15 41 22.3**	**+0.4**
	comp=Z,4.4nm,0.6s,baz=155,slow=6.6,SNR=20						
MJAR				LR	LR	16 06 25.5	
	comp=Z,139nm,20.4s,baz=70,slow=31						
MAJO	**Matsushiro**	**69.69**	**319**	*e*P	**P**	**15 41 20.5**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,45nm,1.7s						
MAJO				MLR	MLR		
	comp=Z,203nm,20.0s						
MAJO	**Matsushiro**	**69.69**	**319**	*e*P	**P**	**15 41 20.5**	**-1.4**
	comp=Z,45nm,1.7s						
MAJO				LR	LR		
	comp=Z,203nm,20.0s						
MAT	**Matsushiro**	**69.69**	**319**	P	**P**	**15 41 22.2**	**+0.3**
MAT				S	**S**	**15 50 24.8**	**-2.6**
SCI	**San Clemente I**	**70.16**	**46**	⇓P	**P**	**15 41 25.5**	**+0.7**
	baz=70						
FALS	**False Pass**	**70.29**	**5**	*e*P	**P**	**15 41 24.0**	**-1.1**
ERM	**Erimo**	**70.38**	**326**	PFAKE		15 41 40.0	+14
ERM				LR	LR		
	comp=Z,223nm,20.0s						
PKM	**Peak Mountain**	**70.39**	**44**	⇓P	**P**	**15 41 27.2**	**+0.7**
	baz=70,SNR=5.3						
CIS	**Catalina Islan**	**70.50**	**46**	⇓P	**P**	**15 41 27.5**	**+0.6**
	baz=71						
SMMC	**Simmler**	**70.52**	**43**	↑P	**P**	**15 41 28.1**	**+1.1**
	baz=71,SNR=5.8						
PTRM	**Twissleman Ran**	**70.58**	**43**	*e*P	**P**	**15 41 27.2**	**-0.2**
OSI	**Osito Adit**	**70.97**	**44**	↑P	**P**	**15 41 30.7**	**+0.9**
	baz=71						
CASY	**Casey**	**71.00**	**205**	PFAKE		15 41 40.0	+11
CASY				LR	LR		
	comp=Z,201nm,19.0s						
DECC	**Green Verdugo**	**71.03**	**45**	⇓P	**P**	**15 41 30.9**	**+0.8**
	baz=71						
SDPT	**Sand Point**	**71.08**	**7**	*e*P	**P**	**15 41 27.1**	**-2.7**
	comp=Z,83nm,1.3s						
ARVC	**Arvin**	**71.19**	**44**	↑P	**P**	**15 41 31.6**	**+0.5**
	baz=71						
MWC	**Mount Wilson**	**71.20**	**45**	*e*P	**P**	**15 41 28.6**	**-2.7**
MWC				pmax	pmax		
	comp=Z,27nm,0.9s						
MWC	**Mount Wilson**	**71.20**	**45**	*e*P	**P**	**15 41 28.6**	**-2.7**
	comp=Z,28nm,0.9s						
VES	**Vestal, Richgr**	**71.43**	**43**	⇓P	**P**	**15 41 32.8**	**+0.3**
	baz=72,SNR=13						
MURC	**Murrieta**	**71.44**	**46**	↑P	**P**	**15 41 32.8**	**+0.2**
	baz=72						
BFSC	**Mount Baldy Ra**	**71.48**	**45**	↑P	**P**	**15 41 32.9**	**-0.1**
	baz=72,SNR=7.3						
MONP	**Monument Peak**	**71.60**	**47**	⇓P	**P**	**15 41 34.1**	**+0.2**
	baz=72,SNR=12						
RCTC	**Rector, Farmer**	**71.60**	**43**	⇓P	**P**	**15 41 34.0**	**+0.5**
	baz=72						
EDW2	**Edwards Air Fo**	**71.61**	**45**	⇓P	**P**	**15 41 34.2**	**+0.5**
	baz=72,SNR=21						
KHMM	**Horse Mountain**	**71.65**	**37**	*e*P	**P**	**15 41 31.9**	**-2.0**
	comp=Z,40nm,1.0s						
MYLDM	**Lahad Datu**	**71.65**	**281**	P	P	15 41 39.4	+5.1
MYLDM	**Lahad Datu**	**71.65**	**281**	P	**P**	**15 41 36.1**	**+1.8**
	comp=Z,22nm,1.3s						
DVTC	**Desert V Tower**	**71.70**	**47**	⇓P	**P**	**15 41 34.9**	**+0.6**
	baz=72,SNR=5.7						
ISA	**Isabella**	**71.73**	**44**	*e*P	**P**	**15 41 33.4**	**-1.0**
ISA				pmax	pmax		
	comp=Z,35nm,1.0s						
ISA	**Isabella**	**71.73**	**44**	*e*P	**P**	**15 41 33.4**	**-1.0**
	comp=Z,35nm,1.0s						
ISA	**Isabella**	**71.73**	**44**	↑P	**P**	**15 41 34.9**	**+0.5**
	baz=72,SNR=27						
CMB	**Columbia Colle**	**71.89**	**41**	*e*P	**P**	**15 41 34.2**	**-1.1**
CMB				pmax	pmax		
	comp=Z,34nm,0.9s						
CMB	**Columbia Colle**	**71.89**	**41**	*e*P	**P**	**15 41 34.2**	**-1.1**
	comp=Z,34nm,0.9s						
PFO	**Pinyon Flat Ob**	**71.97**	**46**	P	**P**	**15 41 36.0**	**+0.1**
	comp=Z,70nm,1.1s,SNR=5.9						
PFO	**Pinyon Flat Ob**	**71.97**	**46**	P	**P**	**15 41 35.0**	**-1.0**
	comp=Z,5.8nm,1.2s						
PFO	**Pinyon Flat Ob**	**71.97**	**46**	P	**P**	**15 41 35.0**	**-1.0**
	comp=Z,11nm,1.0s,baz=244,slow=6.0,SNR=10						
PFO	**Pinyon Flat Ob**	**71.97**	**46**	↑P	**P**	**15 41 36.0**	**+0.1**
	baz=72,SNR=8.1						
KRMB	**Red Mountain**	**71.97**	**36**	*e*P	**P**	**15 41 36.0**	**+0.2**
	comp=Z,225nm,3.0s						
BBRC	**Big Bear Solar**	**72.00**	**46**	↑P	**P**	**15 41 36.5**	**+0.2**
	baz=72						
OHCM

SHOC Shoshone 73.34 45 ⇓P P 15 41 44.2 +0.3
baz=74,SNR=8.0
Y12C Blythe 73.40 47 ⇑P P 15 41 44.8 +0.5
baz=74,SNR=5.2
113A Mohawk Valley, 73.43 48 ⇓P P 15 41 44.7 +0.3
baz=74,SNR=7.7
NVAR Mina Array Bea 73.44 41 P P 15 41 45.4 +0.7
NVAR Mina Array Bea 73.44 41 P P 15 41 45.4 +0.7
comp=Z,34nm,0.7s,baz=228,slow=10,SNR=191
NVAR LR LR 16 10 28.5
comp=Z,201nm,18.1s,baz=132,slow=33
LDFC Landfair 73.69 46 *e*P P 15 41 44.5 -1.6
comp=Z,53nm,1.1s
NEE2 Needles Airpor 73.87 46 ⇑P P 15 41 47.4 +0.3
baz=74
TPH Tonopah 73.94 42 PFAKE 15 42 00.0 +12
TPH LR LR
comp=Z,422nm,21.0s
OHAK Old Harbor 73.95 11 *e*P P 15 41 47.3 +0.4
comp=Z,31nm,1.0s
PDMCI Parker Dam,Lak 73.96 47 ⇓P P 15 41 48.0 +0.4
baz=74,SNR=9.1
YSS Yuzh-Sakhalins 74.04 330 ⇓*i*P P 15 41 50.0 +2.3
KKM Kota Kinabalu 74.08 281 PFAKE 15 42 00.0 +11
KKM LR LR
comp=Z,121nm,20.0s
KKM Kota Kinabalu 74.08 281 P P 15 41 50.7 +1.9
MPOR Mary's Peak 74.13 34 P P 15 41 50.0 +1.6
MOD Modoc 74.30 38 *e*P P 15 41 48.1 -1.5
comp=Z,46nm,0.8s
Z14A Wintersburg 74.33 48 ⇑P P 15 41 50.2 +0.4
baz=74
LKVW Lakeview 74.46 37 P P 15 41 51.6 +1.1
W13A Hualapai Mount 74.56 46 ⇓P P 15 41 51.7 +0.4
baz=75,SNR=14
Y14A Wickenburg 74.58 48 ⇑P P 15 41 51.7 +0.5
baz=75,SNR=13
KDAK Kodiak Island 74.61 11 P P 15 41 51.9 +1.2
comp=Z,273nm,0.7s,SNR=8.2
KDAK Kodiak Island 74.61 11 *e*P P 15 41 49.2 -1.5
comp=Z,34nm,0.8s
KDAK LR LR
comp=Z,245nm,19.0s
KDAK Kodiak Island 74.61 11 P P 15 41 50.6 -0.1
comp=Z,27nm,0.7s,baz=199,slow=3.9,SNR=25
BMN Battle Mountai 75.29 40 *e*P P 15 41 54.1 -1.2
BMN pmax pmax
comp=Z,38nm,0.8s
BMN MLR MLR
comp=Z,265nm,21.0s
BMN Battle Mountai 75.29 40 *e*P P 15 41 54.1 -1.2
comp=Z,38nm,0.8s
BMN LR LR
comp=Z,265nm,21.0s
TUC Tucson 75.38 50 *e*P P 15 41 54.0 -2.0
TUC pmax pmax
comp=Z,65nm,0.9s
TUC Tucson 75.38 50 *e*P P 15 41 54.0 -2.0
comp=Z,65nm,0.9s
WVOR Wild Horse Val 75.61 38 *e*P P 15 41 56.4 -0.7
WVOR pmax pmax
comp=Z,50nm,1.0s
WVOR Wild Horse Val 75.61 38 *e*P P 15 41 56.4 -0.7
comp=Z,50nm,1.0s
VLL Laurance Lake 75.76 34 P P 15 41 58.9 +1.1
LVP Lakeview Peak 75.76 33 P P 15 41 59.0 +1.1
VFP Flag Point 75.78 34 P P 15 41 59.0 +0.9
NLWA Neilton Lookou 75.88 32 *e*P P 15 41 58.3 -0.1
comp=Z,38nm,0.9s
X16A Lo Mia Camp, P 75.94 48 ⇓P P 15 42 00.1 +0.9
baz=76,SNR=20
YHNB Yeheng 76.06 301 *e*P P 15 41 58.1 -1.9
comp=Z,49nm,1.3s
CCUT Cedar City 76.20 44 *e*P P 15 42 00.1 -0.6
comp=Z,26nm,1.0s
OSD Olympics--Snow 76.25 31 P P 15 42 02.3 +1.6
ARUT Antelope Range 76.28 44 *e*P P 15 41 59.5 -1.5
ARUT pmax pmax
comp=Z,33nm,1.0s
ARUT Antelope Range 76.28 44 *e*P P 15 41 59.5 -1.5
comp=Z,33nm,1.0s
U15A North Rim 76.35 46 ⇓P P 15 42 02.5 +0.8
baz=76,SNR=36
LON Longmire 76.52 33 *e*P P 15 42 00.0 -2.1
LON pmax pmax
comp=Z,18nm,0.9s
LON Longmire 76.52 33 *e*P P 15 42 00.0 -2.1
comp=Z,18nm,0.9s
WUAZ Wupatki 76.53 47 *e*P P 15 42 02.4 -0.2
comp=Z,48nm,1.0s
320A Kipp Ranch, An 76.62 52 ⇑P P 15 42 04.0 +0.9
baz=77,SNR=7.8
WPW White Pass 76.62 33 P P 15 42 03.7 +1.0
ELK Elko 76.71 41 *e*P P 15 42 02.8 -0.8
comp=Z,27nm,1.0s
SBUM Sibu 76.85 276 P P 15 42 07.1 +2.5
220A Playas Peak, P 76.88 51 ⇓P P 15 42 05.4 +0.8
baz=77,SNR=13
PGC Sidney 76.93 31 *e*P P 15 42 02.8 -1.5
comp=Z,3.1nm,0.9s
PGC *e*PcP PcP 15 42 13.8 -1.4
KSRS Korea Array 76.98 315 P P 15 42 07.0 +2.3
comp=Z,6.2nm,1.0s,baz=126,slow=6.1,SNR=21
KSRS LR LR 16 15 36.3
comp=Z,56nm,18.8s,baz=14,slow=35
KSAR Wonju Array Be 77.00 315 P P 15 42 07.0 +2.1
X18A Snowflake 77.07 49 ⇑P P 15 42 06.2 +0.5
baz=77
120A U Bar Ranch, L 77.10 51 ⇑P P 15 42 06.6 +0.8
baz=77,SNR=8.6
RSO Redoubt South 77.11 10 *e*P P 15 42 03.5 -1.8
BBB Bella Bella 77.27 26 P P 15 42 07.0 +0.9
BBB Bella Bella 77.27 26 P P 15 42 07.0 +0.9
comp=Z,4.2nm,0.7s,baz=183,slow=1.3,SNR=4.1
SVW2 Sparrevohn 77.30 8 *e*P P 15 42 06.1 0.0
comp=Z,13nm,1.0s
Z20A Nine Sixteen R 77.39 50 ⇓P P 15 42 08.4 +1.0
baz=78,SNR=20
MVU Marysvale 77.47 44 *e*P P 15 42 07.6 -0.3
comp=Z,51nm,0.8s
MVU LR LR
comp=Z,231nm,20.0s
MSU Marysvale 77.50 44 *e*P P 15 42 07.8 -0.2
MSU Marysvale 77.50 44 *e*P P 15 42 07.8 -0.2
W18A Petrified Fore 77.50 48 ⇑P P 15 42 08.8 +0.7
baz=78
HAWA Hanford 77.51 34 *e*P P 15 42 05.4 -2.2
comp=Z,45nm,1.0s
HAWA LR LR
comp=Z,360nm,19.0s
121A Cookes Peak, D 77.73 51 ⇓P P 15 42 10.2 +0.9
baz=78,SNR=12
BMO Blue Mountains 77.82 36 *e*P P 15 42 09.0 -0.5
comp=Z,34nm,1.0s
BMO LR LR
comp=Z,260nm,20.0s
MFID Camas Ranch 77.85 38 *e*P P 15 42 08.4 -1.3
comp=Z,34nm,0.9s
MFID *e*PcP PcP 15 42 18.7 -0.8
MFID Camas Ranch 77.85 38 ⇑P P 15 42 10.0 +0.3
baz=78,SNR=18
INCN Inchon 77.88 314 PFAKE 15 42 20.0 +10
INCN LR LR
comp=Z,126nm,19.0s
SPU Mount Spurr 77.91 10 *e*P P 15 42 09.2 -0.3
Y20A Horse Springs, 77.92 50 ⇑P P 15 42 11.5 +1.0
baz=78,SNR=24
DUG Dugway 77.96 42 *e*P P 15 42 10.3 -0.2
DUG pmax pmax
comp=Z,35nm,0.9s
DUG MLR MLR
comp=Z,235nm,19.0s
DUG Dugway 77.96 42 *e*P P 15 42 10.3 -0.2
comp=Z,35nm,0.9s
DUG LR LR
comp=Z,235nm,19.0s
DUG Dugway 77.96 42 ⇓P P 15 42 10.8 +0.4
baz=78,SNR=40
222A Williams Famil 78.05 52 ⇑P P 15 42 11.6 +0.5
baz=78
USRK Ussuriysk Arra 78.07 323 P P 15 42 12.0 +1.3
comp=Z,3.7nm,0.9s,baz=108,slow=4.2,SNR=10
USRK LR LR 16 12 17.6
comp=Z,76nm,19.2s,baz=292,slow=32
Z21A St. Cloud Mine 78.17 51 ⇑P P 15 42 13.0 +1.2
baz=78,SNR=6.4
BGU Big Grassy Mou 78.21 42 *e*P P 15 42 12.5 +0.7
comp=Z,14nm,0.9s
NLU North Lily Min 78.32 43 *e*P P 15 42 13.6 +1.1
comp=Z,16nm,0.9s
Q16A Castle Valley 78.39 44 ⇑P P 15 42 14.1 +1.2
baz=78,SNR=25
SAW Saint Andrews 78.39 33 P P 15 42 13.2 +0.8
122A Conniff Cattle 78.39 51 ⇓P P 15 42 14.0 +1.0
baz=78
W20A Ramah 78.40 49 ⇑P P 15 42 14.1 +1.1
baz=78,SNR=24
KSM Kuching 78.42 275 *e*P P 15 42 12.6 -0.8
comp=Z,55nm,1.3s
KSM *e*pP pP 15 42 26.2 -0.5
KSM LR LR
comp=Z,152nm,20.0s
KSM Kuching 78.42 275 P P 15 42 17.4 +4.0
KSM Kuching 78.42 275 P P 15 42 15.3 +1.9
comp=Z,32nm,1.4s
Y21A Point of Rocks 78.48 50 ⇑P P 15 42 14.7 +1.1
baz=79,SNR=11
TMUT Trail Mountain 78.55 44 *e*P P 15 42 13.5 -0.4
comp=Z,110nm,0.8s
X21A Alamocita Cree 78.60 49 ⇑P P 15 42 15.2 +1.0
baz=79,SNR=9.4
MPU Maple Canyon 78.64 43 *e*P P 15 42 12.9 -1.4
comp=Z,41nm,0.9s
NOQ North Oquirrh 78.65 42 *e*P P 15 42 15.3 +1.0
comp=Z,50nm,0.9s
Z22A Elephant Butte 78.67 51 ⇓P P 15 42 15.3 +0.8
baz=79,SNR=20
V20A Brimhall 78.74 48 ⇑P P 15 42 15.2 +0.3
baz=79,SNR=6.2
PMR Palmer 78.80 11 *e*P P 15 42 12.8 -1.6
PMR pmax pmax
comp=Z,66nm,1.4s
PMR Palmer 78.80 11 *e*P P 15 42 12.8 -1.6
comp=Z,66nm,1.4s
HVU Hansel Valley 78.83 41 *e*P P 15 42 14.3 -0.9
HVU pmax pmax
comp=Z,40nm,0.8s
HVU Hansel Valley 78.83 41 *e*P P 15 42 14.3 -0.9
comp=Z,40nm,0.8s
CTU Camp Tracy 78.92 42 *e*P P 15 42 16.9 +1.2
comp=Z,31nm,0.9s
SRU San Rafael 78.92 44 *e*P P 15 42 15.6 -0.2
SRU pmax pmax
comp=Z,42nm,0.8s
SRU San Rafael 78.92 44 *e*P P 15 42 15.6 -0.2
comp=Z,42nm,0.8s
SRU San Rafael 78.92 44 ⇓P P 15 42 16.4 +0.6
baz=79,SNR=48
HABR Khabarovsk 78.94 327 *e*P P 15 42 15.5 +0.1
HABR 15 42 22.6
HABR *e* 15 45 13.4
HABR S S 15 52 08.2 -2.3
HABR *e* 15 52 28.7
HABR *e*SS SS 15 57 15.5 -1.4
HABR pmax pmax
comp=N,18nm,2.1s
HABR pmax pmax
comp=Z,102nm,2.1s
HABR pmax pmax
comp=E,65nm,3.1s
HABR MLR MLR
comp=Z,75nm,19.0s
U20A Newcomb 78.97 47 ⇓P P 15 42 16.8 +0.7
baz=79,SNR=7.3
Y22A Socorro 78.98 50 ⇓P P 15 42 16.7 +0.5
baz=79,SNR=6.3
324A Moseley Ranch, 79.00 53 ⇑P P 15 42 16.5 +0.2
baz=79,SNR=13
DIV Divide 79.04 13 *e*P P 15 42 14.1 -1.7
comp=Z,80nm,0.7s
JLU Jordanelle 79.06 43 *e*P P 15 42 16.3 -0.4
comp=Z,45nm,0.9s
H12A Diamond D Ranc 79.07 38 ⇑P P 15 42 16.8 +0.3
baz=79,SNR=22
DAU Daniels Canyon 79.09 43 *e*P P 15 42 16.1 -0.8
DAU Daniels Canyon 79.09 43 *e*P P 15 42 16.1 -0.8
425A Indio Mountain 79.10 54 ⇑P P 15 42 17.6 +0.6
baz=79,SNR=17
SML Sawmill 79.15 11 *e*P P 15 42 14.3 -2.0
SML pmax pmax
comp=Z,17nm,1.7s
SML Sawmill 79.15 11 *e*P P 15 42 14.3 -2.0
comp=Z,17nm,1.7s
MNTX Cornudas Mount 79.19 53 *e*P P 15 42 15.8 -1.4
comp=Z,10nm,1.0s
X22A Bernardo 79.20 50 ⇓P P 15 42 18.6 +1.2
baz=79
Z23A Rita Site, Whi 79.22 51 ⇑P P 15 42 18.0 +0.5
baz=79
626A Big Bend Ranch 79.26 55 ⇓P P 15 42 18.3 +0.6
baz=79,SNR=15
PNL Peninsula 79.29 16 *e*P P 15 42 16.9 -0.3
comp=Z,30nm,1.0s
BNM Barren Site 79.32 50 *e*P P 15 42 17.5 -0.7
comp=Z,9.4nm,1.2s
V21A Milan 79.34 48 ⇓P P 15 42 19.0 +0.8
baz=80,SNR=7.1
325A Bean Ranch, Si 79.36 53 ⇓P P 15 42 18.6 +0.2
baz=80,SNR=32
LPM Los Pinos Moun 79.39 50 *e*P P 15 42 18.4 -0.1
526A Mary Lane Ranc 79.50 55 ⇑P P 15 42 19.5 +0.4
baz=80,SNR=23
HWUT Hardware Ranch 79.51 42 *e*P P 15 42 18.4 -0.6
comp=Z,60nm,1.4s
HWUT LR LR
comp=Z,348nm,19.0s
TXAR Lajitas Array 79.54 56 P P 15 42 19.6 +0.3
TXAR Lajitas Array 79.54 56 P P 15 42 19.6 +0.3
comp=Z,7.4nm,1.0s,baz=224,slow=7.0,SNR=42
TXAR LR LR 16 11 06.3
comp=Z,121nm,18.8s,baz=10.0,slow=31
W22A Albuquerque 79.56 49 ⇑P P 15 42 20.1 +0.7
baz=80
124A Stringfield Ra 79.56 52 ⇑P P 15 42 20.2 +0.7
baz=80,SNR=9.1
I14A Mackay 79.57 39 ⇓P P 15 42 20.1 +0.8
baz=80,SNR=17
U21A Nageezi 79.61 48 ⇑P P 15 42 20.8 +1.1
baz=80,SNR=43
Y23A Lovelace Mesa, 79.65 51 ⇑P P 15 42 20.3 +0.4
baz=80,SNR=10
E12A Beaver Dam Sad 79.72 36 ⇓P P 15 42 19.8 -0.2
baz=80,SNR=14
MDJ Mudanjiang 79.73 322 P P 15 42 21.0 +1.2
MDJ pP pP 15 42 33.3 +0.2
MDJ sP sP 15 42 38.0 -0.2
MDJ PP PP 15 45 26.0 +4.4
MDJ S S 15 52 21.5 +2.4
MDJ pmax pmax
comp=Z,3.0nm,0.6s
MDJ pmax pmax
comp=Z,100nm,6.9s
MDJ LR LR
comp=N,70nm,18.1s
MDJ LR LR
comp=E,85nm,18.9s
MDJ LR LR
comp=Z,120nm,16.4s
MDJ Mudanjiang 79.73 322 PFAKE 15 42 30.0 +10
MDJ LR LR
comp=Z,126nm,20.0s
S20A Disappointment 79.78 46 ⇑P P 15 42 21.3 +0.7
baz=80,SNR=41
225A Deer Hill, Car 79.79 53 ⇑P P 15 42 21.3 +0.6
baz=80,SNR=19
426A McDonald Obser 79.80 54 ⇓P P 15 42 21.3 +0.4
baz=80,SNR=27
ANMO Albuquerque 79.80 50 *e*P P 15 42 19.7 -1.0
comp=Z,12nm,0.9s
ANMO LR LR
comp=Z,208nm,20.0s
627A Terlingua Ranc 79.81 56 ⇑P P 15 42 21.5 +0.7
baz=80,SNR=37
X23A Hourglass Bar 79.84 50 ⇓P P 15 42 21.4 +0.4
baz=80,SNR=6.3
Z24A Sheeppen Canyo 79.90 51 ⇑P P 15 42 21.6 +0.3
baz=80
V22A San Miguel Ran 79.91 48 ⇑P P 15 42 22.0 +0.6
baz=80
527A Woodward Ranch 79.92 55 ⇓P P 15 42 21.7 +0.3
baz=80,SNR=37
NEW Newport 79.95 34 *e*P P 15 42 18.8 -2.2
comp=Z,13nm,0.8s
NEW LR LR
comp=Z,273nm,20.0s
NEW Newport 79.95 34 P P 15 42 21.0 0.0
comp=Z,10nm,0.7s,baz=226,slow=3.7,SNR=19
NEW Newport 79.95 34 ⇑P P 15 42 21.0 0.0
baz=80,SNR=13
T21A Navajo Lake 79.96 47 ⇑P P 15 42 22.4 +0.8
baz=80,SNR=8.3
M17A Scullys Gap (B 80.02 42 ⇑P P 15 42 21.9 +0.1
baz=80,SNR=20
S21A Coal Bank Pass 80.09 47 ⇑P P 15 42 23.2 +0.8
baz=80,SNR=30
Y24A Capitan 80.11 51 ⇓P P 15 42 22.9 +0.5
baz=80,SNR=21
326A Caldwell Ranch 80.11 54 ⇓P P 15 42 22.4 +0.1
baz=80,SNR=8.9
W23A Werner Place, 80.12 49 ⇑P P 15 42 23.1 +0.6
baz=80,SNR=14
125A Gardner Draw, 80.15 52 ⇓P P 15 42 22.9 +0.3
baz=80,SNR=8.4
U22A Llaves 80.16 48 ⇓P P 15 42 23.3 +0.6
baz=80,SNR=6.2
C11A Tepee Creek (N 80.17 34 ⇑P P 15 42 22.7 +0.5
baz=80,SNR=31
D12A Red Ives Fores 80.21 35 ⇑P P 15 42 22.8 +0.3
baz=80
P19A Cripple Cowboy 80.22 44 ⇑P P 15 42 23.5 +0.6
baz=80,SNR=30
628A Black Gap, Mar 80.22 56 ⇑P P 15 42 23.6 +0.7
baz=80,SNR=23
226B Tecolote Peak, 80.28 53 ⇑P P 15 42 23.8 +0.5
baz=80,SNR=33
Q20A Ridgley Place, 80.36 45 ⇑P P 15 42 24.1 +0.5
baz=80,SNR=29
V23A Ortiz Mt. (NFS 80.36 49 ⇑P P 15 42 24.9 +1.1
baz=80
427A Hayter Ranch, 80.37 54 ⇓P P 15 42 24.5 +0.7
baz=80,SNR=26
Z25A Roswell 80.37 52 ⇑P P 15 42 24.5 +0.8
baz=80,SNR=9.1
MCMT McKenzie Canyo 80.42 38 *e*P P 15 42 22.8 -1.1
comp=Z,21nm,1.0s
T22A Edith 80.42 47 ⇓P P 15 42 24.7 +0.6
baz=80,SNR=12
O19A Miners Draw (B 80.44 44 ⇑P P 15 42 24.2 +0.2
baz=81,SNR=11
C12B Naegeli Ranch, 80.52 35 ⇑P P 15 42 24.5 +0.4
baz=81
P20A De Beque 80.55 45 ⇑P P 15 42 25.5 +0.9
baz=81
RRI2 Red Ridge 80.57 40 *e*P P 15 42 23.8 -1.0
comp=Z,51nm,0.9s
528A Cox Ranch, San 80.57 55 ⇑P P 15 42 25.5 +0.6
baz=81,SNR=38
R21A Cimarron 80.59 46 ⇑P P 15 42 25.8 +0.8
baz=81,SNR=16
U23A El Rito 80.62 48 ⇓P P 15 42 25.9 +0.8
baz=81,SNR=5.8
126A Clayton Basin, 80.63 52 ⇓P P 15 42 25.5 +0.4
baz=81,SNR=5.6
F14A Wisdom 80.65 37 ⇓P P 15 42 25.1 +0.1
baz=81,SNR=18
L18A Fontenelle, Gr 80.65 42 ⇑P P 15 42 25.2 0.0
baz=81
Y25A Mesa, Roswell 80.67 51 ⇓P P 15 42 25.7 +0.4
baz=81,SNR=19
W24A Lazy 6 Ranch, 80.69 50 ⇓P P 15 42 25.8 +0.2
baz=81,SNR=15
D13A Huson 80.74 36 ⇓P P 15 42 25.1 -0.2
baz=81,SNR=66
I16A Newdale 80.74 40 ⇓P P 15 42 26.7 +1.2
baz=81,SNR=32
PAX Paxson 80.77 12 *e*P P 15 42 23.3 -1.8
PAX pmax pmax
comp=Z,18nm,1.0s
PAX Paxson 80.77 12 *e*P P 15 42 23.3 -1.8
comp=Z,18nm,1.0s
Q21A Lamborn Mesa, 80.80 46 ⇓P P 15 42 26.8 +0.8
baz=81,SNR=14
S22A 4UR Ranch, Cre 80.81 47 ⇑P P 15 42 27.2 +1.0
baz=81,SNR=38
DLMT Dillon 80.86 38 *e*P P 15 42 25.6 -0.5
comp=Z,28nm,0.9s
TPAW Teton Pass 80.87 40 *e*P P 15 42 25.5 -0.9
comp=Z,50nm,0.8s
MSO Missoula 80.88 36 *e*P P 15 42 24.3 -1.8
comp=Z,32nm,1.1s
MSO LR LR
comp=Z,197nm,21.0s
MSO Missoula 80.88 36 ⇓P P 15 42 26.0 -0.1
baz=81,SNR=20
428A Kincaid Ranch, 80.88 55 ⇓P P 15 42 27.4 +1.0
baz=81,SNR=26
B12A Libby 80.90 34 ⇑P P 15 42 26.8 +0.7
baz=81
Z26A Caprock 80.93 52 ⇓P P 15 42 27.0 +0.3
baz=81,SNR=28
227A Bennet, Jal 80.93 53 ⇑P P 15 42 26.8 +0.1
baz=81
X25A Clemmons Ranch 80.95 51 ⇑P P 15 42 27.0 +0.2
baz=81
O20A White River Ci 80.96 44 ⇑P P 15 42 27.3 +0.5
baz=81,SNR=15
SNOW Snow King Moun 80.98 40 *e*P P 15 42 26.1 -0.9
comp=Z,47nm,0.8s
BSMT Bassoo Peak 80.98 35 *e*P P 15 42 25.9 -0.8
C13A Hot Springs 81.00 35 ⇓P P 15 42 26.5 -0.2
baz=81,SNR=26
529A Stev Forest Ra 81.01 55 ⇓P P 15 42 27.4 +0.3
baz=81,SNR=30
M19A Rock Springs 81.02 43 ⇓P P 15 42 27.0 -0.1
baz=81,SNR=5.3
V24A Rampart Ranch, 81.02 49 ⇑P P 15 42 27.7 +0.4
baz=81,SNR=7.1
T23A Casias Ranch, 81.05 48 ⇓P P 15 42 28.1 +0.7
baz=81
328A Wristen Ranch, 81.05 54 ⇑P P 15 42 27.4 +0.1
baz=81,SNR=18
R22A Saguache, Gunn 81.08 46 ⇓P P 15 42 28.8 +1.1
baz=81,SNR=21
IMW Indian Meadow 81.09 40 *e*P P 15 42 27.8 +0.3
comp=Z,41nm,0.8s
MENT Mentasta 81.10 13 *e*P P 15 42 25.5 -1.3
A12A Yaak River Ran 81.13 34 ⇓P P 15 42 27.7 +0.3
baz=81
KLR Kul'dur 81.13 327 *e*P P 15 42 24.6 -2.6
MOOW Moose Ponds 81.13 40 *e*P P 15 42 26.0 -1.7
comp=Z,23nm,1.3s
LOHW Long Hollow 81.15 40 *e*P P 15 42 26.9 -0.9
comp=Z,27nm,0.9s
127A Arkansas Junct 81.15 53 ⇑P P 15 42 27.8 -0.2
baz=81
F15A Butte 81.18 38 ⇓P P 15 42 28.0 +0.2
baz=81,SNR=19
DLBC Dease Lake 81.18 21 P P 15 42 27.4 0.0
DLBC Dease Lake 81.18 21 P P 15 42 27.4 0.0
comp=Z,6.8nm,0.7s,baz=225,slow=3.5,SNR=7.7
L19A Farson 81.18 42 ⇑P P 15 42 28.3 +0.3
baz=81,SNR=21
LRM Limekiln Ridge 81.19 38 *e*P P 15 42 27.8 -0.2
JTMT Jette 81.20 35 *e*P P 15 42 26.2 -1.6
P21A Newcastle 81.20 45 ⇑P P 15 42 29.0 +0.8
baz=81
SWMT Swartz Lake 81.23 36 *e*P P 15 42 26.2 -1.7
Q22A Crested Butte, 81.27 46 ⇓P P 15 42 29.3 +0.7
baz=81,SNR=15
D14A Greenough 81.27 36 ⇓P P 15 42 27.8 -0.4
baz=81,SNR=42
N20A Spence Gulch, 81.28 44 ⇓P P 15 42 28.9 +0.3
baz=81,SNR=29
U24A Moreno Valley 81.31 49 ⇓P P 15 42 29.8 +0.9
baz=81
Y26A Elida 81.32 51 ⇓P P 15 42 29.1 +0.3
baz=81
H16A Russell Place, 81.32 39 ⇑P P 15 42 29.7 +1.1
baz=81,SNR=31
CHMT Chamberlain Mo 81.32 36 *e*P P 15 42 27.9 -0.7
I17A Pilgrim Ck. 81.33 40 ⇓P P 15 42 29.8 +1.1
baz=81
SLMT Seeley Lake 81.36 36 *e*P P 15 42 27.1 -1.7
SMCO Snowmass 81.37 46 *e*P P 15 42 28.3 -1.0
comp=Z,30nm,1.0s
S23A Nye Farm, Mont 81.37 47 ⇓P P 15 42 30.0 +0.8
baz=82
BW06 Boulder Array 81.38 41 *e*P P 15 42 28.4 -0.7
comp=Z,20nm,0.9s
BW06 LR LR
comp=Z,309nm,20.0s
PDAR Pinedale Array 81.38 41 P P 15 42 29.2 +0.1

PDAR	**Pinedale Array**	81.38	41	P	P	15 42 29.2	+0.1	
	comp=Z,18nm,0.8s,baz=214,slow=3.5,SNR=109							
PDAR				LR	LR	16 15 56.7		
	comp=Z,193nm,18.7s,baz=264,slow=34							
W25A	**X Bar L Ranch,**	81.39	50	⇑P	P	15 42 29.1	0.0	
	baz=82							
YFT	**Old Faithful**	81.44	39	*e*P	P	15 42 27.2	-2.1	
	comp=Z,16nm,0.8s							
B13A	**Whitefish**	81.45	35	⇓P	P	15 42 28.7	-0.3	
	baz=82,SNR=12							
429A	**Davenport Ranc**	81.47	55	⇓P	P	15 42 29.7	+0.1	
	baz=82,SNR=78							
O21A	**Pagoda**	81.51	44	⇓P	P	15 42 30.0	+0.2	
	baz=82,SNR=8.4							
228A	**UT Block 9, Go**	81.52	53	⇑P	P	15 42 29.9	+0.1	
	baz=82,SNR=5.3							
Z27A	**Tatum**	81.53	52	⇓P	P	15 42 29.5	-0.3	
	baz=82,SNR=11							
V25A	**Rancho No Teng**	81.55	49	⇑P	P	15 42 30.3	+0.2	
	baz=82,SNR=24							
H17A	**Grant Village**	81.57	40	⇑P	P	15 42 31.7	+1.7	
	baz=82							
BOZ	**Bozeman (W)**	81.59	38	*e*P	P	15 42 29.7	-0.3	
BOZ				pmax	pmax			
	comp=Z,21nm,0.9s							
BOZ				MLR	MLR			
	comp=Z,184nm,19.0s							
BOZ	**Bozeman (W)**	81.59	38	*e*P	P	15 42 29.7	-0.3	
	comp=Z,21nm,0.9s							
BOZ				LR	LR			
	comp=Z,184nm,19.0s							
X26A	**CR and CF Fran**	81.59	51	⇑P	P	15 42 30.1	-0.2	
	baz=82							
M20A	**Sweetwater, Wa**	81.64	43	⇑P	P	15 42 30.9	+0.4	
	baz=82,SNR=16							
DOT	**Dot Lake**	81.66	12	*e*P	P	15 42 28.6	-1.2	
	comp=Z,37nm,0.9s							
F16A	**Kennard Place,**	81.66	38	⇑P	P	15 42 30.8	+0.5	
	baz=82,SNR=12							
I18A	**Diamond G Ranc**	81.69	40	⇑P	P	15 42 31.0	+0.4	
	baz=82,SNR=14							
P22A	**Eagle**	81.71	45	⇓P	P	15 42 31.4	+0.5	
	baz=82,SNR=9.8							
R23A	**Moffat**	81.72	47	⇑P	P	15 42 31.7	+0.7	
	baz=82,SNR=17							
530A	**J-C Ranch, Com**	81.72	56	⇑P	P	15 42 31.0	+0.1	
	baz=82,SNR=13							
N21A	**Black Mountain**	81.74	44	⇓P	P	15 42 31.6	+0.6	
	baz=82,SNR=34							
329A	**Wagon Wheel Ra**	81.74	54	⇑P	P	15 42 31.1	+0.1	
	baz=82,SNR=22							
LKWY	**Lake**	81.77	39	PFAKE		15 42 40.0	+8.9	
LKWY				LR	LR			
	comp=Z,332nm,19.0s							
L20A	**Wamsutter**	81.80	42	⇑P	P	15 42 31.8	+0.5	
	baz=82,SNR=24							
A13A	**Flathead Natio**	81.80	34	⇓P	P	15 42 31.2	+0.3	
	baz=82,SNR=17							
Y27A	**Causey**	81.80	52	⇑P	P	15 42 31.3	-0.1	
	baz=82,SNR=8.2							
128A	**Castleberry Fa**	81.80	53	⇑P	P	15 42 31.5	+0.2	
	baz=82,SNR=31							
D15A	**Lincoln**	81.81	37	⇑P	P	15 42 31.5	+0.4	
	baz=82,SNR=51							
CN2	**Changchun**	81.83	320	*e*P	P	15 42 32.3	+1.2	
CN2				*e*pP	pP	15 42 45.0	+0.6	
CN2				pmax	pmax			
	comp=Z,10.0nm,0.8s							
W26A	**Owens Ranch, T**	81.85	50	⇓P	P	15 42 31.3	-0.2	
	baz=82							
K19A	**Absolon Red Bu**	81.87	42	⇑P	P	15 42 31.2	-0.4	
	baz=82,SNR=12							
S24A	**Houchin Ranch,**	81.90	48	⇓P	P	15 42 32.9	+0.9	
	baz=82,SNR=15							
U25A	**Circle Dot Ran**	81.94	49	⇓P	P	15 42 32.4	+0.3	
	baz=82,SNR=11							
G17A	**Pierce Place,**	81.95	39	⇑P	P	15 42 32.8	+0.9	
	baz=82,SNR=6.6							
J19A	**Crowheart**	81.95	41	⇑P	P	15 42 32.1	+0.2	
	baz=82,SNR=19							
E16A	**East Helena**	82.03	37	⇓P	P	15 42 32.6	+0.4	
	baz=82,SNR=5.1							
Q23A	**Hartsel**	82.03	46	⇑P	P	15 42 33.0	+0.4	
	baz=82							
631A	**Perdido Creek**	82.05	57	⇓P	P	15 42 32.7	+0.1	
	baz=82,SNR=30							
430A	**Baggett Ranch,**	82.05	55	⇑P	P	15 42 32.8	+0.1	
	baz=82,SNR=13							
COLA	**College**	82.06	10	*e*P	P	15 42 30.9	-0.8	
COLA				pmax	pmax			
	comp=Z,88nm,0.9s							
COLA				MLR	MLR			
	comp=Z,125nm,19.0s							
COLA	**College**	82.06	10	*e*P	P	15 42 30.9	-0.8	
	comp=Z,88nm,0.9s							
COLA				LR	LR			
	comp=Z,125nm,19.0s							
229A	**Bryant Ranch,**	82.06	54	⇑P	P	15 42 32.7	0.0	
	baz=82,SNR=10							
B14A	**Marquette Ranc**	82.11	35	⇑P	P	15 42 32.4	-0.2	
	baz=82,SNR=7.0							
K20A	**Yellowstone Ra**	82.11	42	⇑P	P	15 42 32.5	-0.3	
	baz=82,SNR=22							
O22A	**Kremmling**	82.11	45	⇓P	P	15 42 33.5	+0.4	
	baz=82,SNR=52							
MSTX	**Muleshoe**	82.13	52	⇓P	P	15 42 33.2	+0.2	
	baz=82,SNR=14							
ILAR	**Eielson Array**	82.14	11	P	P	15 42 31.9	-0.3	
ILAR	**Eielson Array**	82.14	11	P	P	15 42 31.9	-0.3	
	comp=Z,14nm,0.7s,baz=215,slow=5.8,SNR=121							
ILAR				LR	LR	16 15 44.7		
	comp=Z,132nm,18.1s,baz=240,slow=33							
V26A	**Tequesquite Ra**	82.14	50	⇓P	P	15 42 33.0	-0.1	
	baz=82,SNR=12							
WALA	**Waterton Lakes**	82.14	34	*e*P	P	15 42 31.1	-1.7	
	comp=Z,0.9nm,0.9s							
Z28A	**Tucker Farm, M**	82.15	52	⇓P	P	15 42 33.1	-0.1	
	baz=82							
C15A	**Salmond Ranch,**	82.16	36	⇓P	P	15 42 33.0	+0.1	
	baz=82,SNR=44							
X27A	**F and S Farms,**	82.17	51	⇑P	P	15 42 33.4	+0.2	
	baz=82							
R24A	**Sanders Place,**	82.24	47	⇓P	P	15 42 34.4	+0.7	
	baz=82,SNR=22							
P23A	**Jefferson**	82.24	46	⇑P	P	15 42 35.0	+1.2	
	baz=82,SNR=20							
M21A	**Separation Pea**	82.24	43	⇓P	P	15 42 34.0	+0.4	
	baz=82,SNR=40							
T25A	**Trinidad**	82.26	48	⇑P	P	15 42 34.1	+0.3	
	baz=82,SNR=5.8							
H18A	**Shoshone NF, C**	82.28	40	⇓P	P	15 42 34.4	+0.7	
	baz=82,SNR=13							
732A	**Laxson Ranch,**	82.28	58	⇑P	P	15 42 33.7	-0.1	
	baz=82,SNR=12							
129A	**Stewart Farms,**	82.28	53	⇓P	P	15 42 34.2	+0.3	
	baz=82,SNR=6.8							
F17A	**Fitzpatrick Pl**	82.30	38	⇓P	P	15 42 34.7	+1.0	
	baz=82,SNR=20							
330A	**Mertzon**	82.34	55	⇓P	P	15 42 33.9	-0.2	
	baz=82,SNR=9.0							
531A	**Rocksprings**	82.36	56	⇓P	P	15 42 34.4	+0.1	
	baz=82,SNR=51							
A14A	**Double T Ranch**	82.36	35	⇓P	P	15 42 34.1	+0.2	
	baz=82,SNR=51							
D16A	**Dana Ranch, Ca**	82.37	37	⇓P	P	15 42 34.5	+0.6	
	baz=82,SNR=46							
W27A	**Bowe Ranch, En**	82.37	51	⇑P	P	15 42 34.3	0.0	
	baz=82,SNR=17							
I19A	**Meeteetse**	82.37	40	⇑P	P	15 42 34.8	+0.6	
	baz=82,SNR=12							
L21A	**Rawlins**	82.41	43	⇑P	P	15 42 34.5	0.0	
	baz=82,SNR=13							
U26A	**Atchley Ranch,**	82.42	49	⇓P	P	15 42 34.9	+0.3	
	baz=82,SNR=18							
E17A	**Martinsdale**	82.47	38	⇑P	P	15 42 35.0	+0.4	
	baz=83,SNR=15							
N22A	**Wattenberg Ran**	82.47	44	⇑P	P	15 42 35.3	+0.4	
	baz=83,SNR=48							
Y28A	**McKinney Farm,**	82.51	52	⇑P	P	15 42 34.8	-0.2	
	baz=83							
431A	**Sonora**	82.51	55	⇑P	P	15 42 34.5	-0.5	
	baz=83,SNR=5.6							
Q24A	**Divide**	82.54	46	⇑P	P	15 42 35.9	+0.6	
	baz=83,SNR=18							
O23A	**Lake Granby, G**	82.57	45	⇑P	P	15 42 36.1	+0.7	
	baz=83,SNR=12							
230A	**Sterling City**	82.58	54	⇓P	P	15 42 35.2	-0.1	
	baz=83,SNR=9.9							
J20A	**Shoshoni**	82.61	41	⇑P	P	15 42 35.8	+0.4	
	baz=83,SNR=8.4							
M22A	**Cedar Creek Ra**	82.66	44	⇓P	P	15 42 35.8	0.0	
	baz=83,SNR=8.0							
Z29A	**Hungry Hill Ra**	82.66	53	⇓P	P	15 42 35.5	-0.3	
	baz=83,SNR=7.0							
G18A	**Lazy EL Ranch,**	82.66	39	⇓P	P	15 42 36.2	+0.6	
	baz=83,SNR=18							
C16A	**Fuhringer Ranc**	82.66	36	⇓P	P	15 42 35.4	-0.1	
	baz=83,SNR=7.7							
H19A	**Powell**	82.69	40	⇑P	P	15 42 36.6	+0.8	
	baz=83,SNR=16							
632A	**Uvalde**	82.72	57	⇑P	P	15 42 36.5	+0.4	
	baz=83,SNR=15							
RLMT	**Red Lodge**	82.74	39	*e*P	P	15 42 34.9	-1.2	
	comp=Z,30nm,1.0s							
A15A	**Johnson Ranch,**	82.75	35	⇑P	P	15 42 35.8	-0.1	
	baz=83,SNR=38							
R25A	**Fountain Ranch**	82.79	47	⇑P	P	15 42 36.6	+0.2	
	baz=83,SNR=18							
X28A	**Dimmitt**	82.79	51	⇑P	P	15 42 36.3	-0.2	
	baz=83							
V27A	**Dan Oppiter Fa**	82.82	50	⇓P	P	15 42 36.3	-0.3	
	baz=83							
532A	**Rocksprings**	82.86	56	⇑P	P	15 42 36.9	0.0	
	baz=83,SNR=24							
N23A	**Red Feather La**	82.86	44	⇓P	P	15 42 37.5	+0.7	
	baz=83,SNR=21							
T26A	**Comanche Natio**	82.86	49	⇑P	P	15 42 36.7	-0.2	
	baz=83,SNR=7.0							
F18A	**Big Timber**	82.86	39	⇓P	P	15 42 37.3	+0.7	
	baz=83,SNR=29							
I20A	**Worland**	82.87	41	⇑P	P	15 42 37.0	+0.3	
	baz=83,SNR=36							
331A	**San Angelo**	82.89	55	⇓P	P	15 42 36.7	-0.2	
	baz=83,SNR=6.4							
Y29A	**Porterfield Fa**	82.93	52	⇑P	P	15 42 37.3	+0.1	
	baz=83							
D17A	**Six Diamond Ra**	82.93	37	⇑P	P	15 42 38.1	+1.1	
	baz=83							
P24A	**Kohler Place,**	82.95	46	⇓P	P	15 42 38.1	+0.8	
	baz=83							
130A	**Snyder**	82.97	54	⇓P	P	15 42 37.2	-0.2	
	baz=83,SNR=6.1							
B16A	**M & M Farms, S**	83.01	36	⇓P	P	15 42 37.0	-0.3	
	baz=83,SNR=37							
J21A	**Lysite**	83.02	42	⇑P	P	15 42 38.0	+0.5	
	baz=83,SNR=97							
L22A	**Ellis Ranch, M**	83.06	43	⇓P	P	15 42 38.5	+0.7	
	baz=83,SNR=16							
JCT	**Junction City**	83.08	56	*e*P	P	15 42 37.0	-0.9	
JCT				pmax	pmax			
	comp=Z,22nm,1.0s							
JCT				MLR	MLR			
	comp=Z,96nm,19.0s							
JCT	**Junction City**	83.08	56	*e*P	P	15 42 37.0	-0.9	
	comp=Z,22nm,1.0s							
JCT				LR	LR			
	comp=Z,96nm,19.0s							
JCT	**Junction City**	83.08	56	⇑P	P	15 42 37.7	-0.3	
	baz=83,SNR=6.9							
W28A	**Vega**	83.09	51	⇑P	P	15 42 37.6	-0.3	
	baz=83							
O24A	**Longmont**	83.10	45	⇑P	P	15 42 38.9	+0.9	
	baz=83							
U27A	**Thompson Grove**	83.11	49	⇑P	P	15 42 37.9	-0.1	
	baz=83,SNR=6.9							
Z30A	**Sanderson Ranc**	83.11	53	⇑P	P	15 42 37.8	-0.3	
	baz=83,SNR=26							
X29A	**Tulia**	83.14	52	⇓P	P	15 42 38.3	0.0	
	baz=83							
C17A	**Wharram Farm,**	83.14	37	⇓P	P	15 42 38.4	+0.4	
	baz=83,SNR=100							
S26A	**Kim**	83.14	48	⇓P	P	15 42 37.8	-0.4	
	baz=83,SNR=20							
Q25A	**Bedland, Calha**	83.15	47	⇓P	P	15 42 38.3	-0.1	
	baz=83,SNR=12							
H20A	**Greybull**	83.22	40	⇑P	P	15 42 38.3	-0.1	
	baz=83,SNR=6.8							
231A	**Bronte**	83.22	54	⇑P	P	15 42 38.0	-0.6	
	baz=83,SNR=22							
432A	**Menard**	83.23	56	⇓P	P	15 42 38.2	-0.6	
	baz=83,SNR=17							
EGAK	**Eagle**	83.26	13	*e*P	P	15 42 37.2	-0.9	
EGAK				LR	LR			
	comp=Z,24nm,0.9s							
	comp=Z,279nm,19.0s							
V28A	**Channing**	83.27	50	⇓P	P	15 42 38.9	0.0	
	baz=83							
K22A	**Casper**	83.28	43	⇑P	P	15 42 39.0	+0.1	
	baz=83							
F19A	**Roth Farm, Mol**	83.31	39	⇓P	P	15 42 39.0	+0.2	
	baz=83,SNR=37							
AMTX	**Amarillo**	83.33	51	*e*P	P	15 42 36.8	-2.4	
AMTX				LR	LR			
	comp=Z,28nm,0.9s							
	comp=Z,338nm,19.0s							
I21A	**Big Trails, Te**	83.34	41	⇑P	P	15 42 38.9	-0.2	
	baz=84,SNR=60							
A16A	**West Butte Ran**	83.36	35	⇑P	P	15 42 39.4	+0.3	
	baz=84							
PHWY	**Pilot Hill**	83.37	44	*e*P	P	15 42 39.0	-0.6	
	comp=Z,25nm,0.8s							
G20A	**Bridger**	83.44	40	⇑P	P	15 42 39.9	+0.3	
	baz=84							
131A	**Roby**	83.45	54	⇓P	P	15 42 39.6	-0.2	
	baz=84,SNR=9.6							
R26A	**Arlington**	83.45	48	⇑P	P	15 42 39.9	+0.1	
	baz=84,SNR=39							
T27A	**Campo**	83.45	49	⇑P	P	15 42 40.0	+0.1	
	baz=84							
W29A	**Amraillo**	83.45	51	⇓P	P	15 42 39.9	0.0	
	baz=84,SNR=9.7							
P25A	**Willow Gulch B**	83.46	46	⇓P	P	15 42 40.5	+0.5	
	baz=84,SNR=35							
B17A	**L&G Farms, Che**	83.46	36	⇑P	P	15 42 39.5	0.0	
	baz=84,SNR=22							
332A	**Millersview**	83.46	55	⇑P	P	15 42 39.5	-0.4	
	baz=84,SNR=36							
D18A	**Linhart Farms,**	83.47	37	⇑P	P	15 42 40.5	+0.8	
	baz=84,SNR=13							
Y30A	**Stafford Cattl**	83.52	52	⇑P	P	15 42 40.2	0.0	
	baz=84							
U28A	**Mallet**	83.53	50	⇑P	P	15 42 39.9	-0.4	
	baz=84							
N24A	**Carr**	83.55	45	⇑P	P	15 42 41.0	+0.7	
	baz=84,SNR=15							
L23A	**Garrett**	83.58	43	⇑P	P	15 42 40.6	+0.1	
	baz=84,SNR=30							
S27A	**Las Animas**	83.58	48	⇓P	P	15 42 40.3	-0.2	
	baz=84							
Q26A	**Hugo**	83.66	47	⇑P	P	15 42 41.0	+0.1	
	baz=84							
J22A	**Midwest**	83.67	42	⇓P	P	15 42 40.8	0.0	
	baz=84,SNR=35							
E19A	**Rath Farm, Rou**	83.70	38	⇑P	P	15 42 41.6	+0.7	
	baz=84,SNR=58							
232A	**Coleman**	83.73	55	⇓P	P	15 42 41.2	-0.1	
	baz=84,SNR=25							
O25A	**Wiggins**	83.76	46	⇓P	P	15 42 41.5	+0.1	
	baz=84							
F20A	**Billings**	83.76	39	⇓P	P	15 42 41.5	+0.3	
	baz=84,SNR=6.9							
X30A	**Coker Ranch, T**	83.76	52	⇓P	P	15 42 41.4	0.0	
	baz=84							
V29A	**Stinnett**	83.85	50	⇓P	P	15 42 41.7	-0.2	
	baz=84							
A17A	**Triple J Farms**	83.86	36	⇑P	P	15 42 41.8	+0.2	
	baz=84,SNR=66							
M24A	**Cheyenne**	83.87	44	⇓P	P	15 42 42.4	+0.4	
	baz=84,SNR=11							
COLD	**Coldfoot**	83.88	8	*e*P	P	15 42 40.5	-0.6	
	comp=Z,23nm,1.0s							
H21A	**Big Horn, Sher**	83.88	41	⇑P	P	15 42 42.1	+0.2	
	baz=84,SNR=20							
Z31A	**Sharp Cattle R**	83.89	53	⇑P	P	15 42 41.8	-0.2	
	baz=84,SNR=19							
I22A	**9 Mile Ranch,**	83.89	41	⇑P	P	15 42 42.3	+0.3	
	baz=84,SNR=37							
R27A	**Eads**	83.90	48	⇓P	P	15 42 41.9	-0.3	
	baz=84,SNR=5.0							
T28A	**Walsh**	83.92	49	⇑P	P	15 42 42.1	-0.1	
	baz=84							
K23A	**Bowen Ranch, D**	83.92	43	⇑P	P	15 42 42.2	0.0	
	baz=84,SNR=17							
EGMT	**Eagleton**	83.92	37	*e*P	P	15 42 41.7	-0.2	
EGMT				LR	LR			
	comp=Z,40nm,0.8s							
	comp=Z,334nm,20.0s							
EGMT	**Eagleton**	83.92	37	⇑P	P	15 42 42.3	+0.4	
	baz=84,SNR=26							
D19A	**Cripps Ranch,**	84.00	38	⇑P	P	15 42 43.1	+0.7	
	baz=84,SNR=26							
ABTX	**Abilene, Hawle**	84.01	54	⇓P	P	15 42 42.8	+0.1	
	baz=84,SNR=32							
QIZ	**Qiongzhong**	84.03	291	P	P	15 42 43.3	+0.3	
QIZ				pP	pP	15 42 54.5	-1.9	
QIZ				sP	sP	15 43 00.0	-1.5	
QIZ				S	S	15 53 04.8	+0.4	
QIZ				pmax	pmax			
	comp=Z,18nm,1.4s							
Y31A	**Rekieta Farm,**	84.04	53	⇓P	P	15 42 42.9	0.0	
	baz=84,SNR=8.1							
P26A	**Davis Ranch, A**	84.06	46	⇑P	P	15 42 43.1	+0.2	
	baz=84,SNR=7.5							
L24A	**Wheatland**	84.06	44	⇓P	P	15 42 43.4	+0.6	
	baz=84,SNR=6.9							
G21A	**Lodge Grass**	84.06	40	⇓P	P	15 42 43.1	+0.3	
	baz=84,SNR=7.0							
N25A	**Grover**	84.08	45	⇓P	P	15 42 43.5	+0.4	
	baz=84							
B18A	**Beardsley Farm**	84.10	36	⇓P	P	15 42 43.0	+0.2	
	baz=84,SNR=35							
E20A	**Meyer Farm, Mu**	84.12	39	⇑P	P	15 42 43.6	+0.7	
	baz=84,SNR=31							
C19A	**Slack Wire Ran**	84.19	37	⇓P	P	15 42 44.0	+0.7	
	baz=84,SNR=98							
U29A	**Oasis Ranch, S**	84.26	50	⇓P	P	15 42 44.1	+0.2	
	baz=84							
J23A	**Dilts Ranch, B**	84.26	42	⇑P	P	15 42 43.9	+0.1	
	baz=84							
S28A	**Manter**	84.26	49	⇑P	P	15 42 44.0	+0.1	
	baz=84							
W30A	**Crocket Farms**	84.28	51	⇓P	P	15 42 44.3	+0.2	
	baz=84							
H22A	**Clearmont**	84.30	41	⇑P	P	15 42 44.4	+0.4	
	baz=84,SNR=13							
A18A	**Metzger Ranch,**	84.33	36	⇑P	P	15 42 44.2	+0.2	
	baz=84,SNR=18							
KSCO	**Kaye Shedlock'**	84.33	47	⇓P	P	15 42 44.6	+0.3	
	baz=84,SNR=5.3							
O26A	**Horse Wrangler**	84.37	46	⇓P	P	15 42 44.7	+0.3	
	baz=84,SNR=5.5							
M25A	**Palm-Egli Farm**	84.38	44	⇑P	P	15 42 44.8	+0.3	
	baz=84							
Z32A	**Haskell**	84.40	53	⇓P	P	15 42 45.0	+0.4	
	baz=84,SNR=45							
F21A	**Absaloka Mine,**	84.40	40	⇓P	P	15 42 45.1	+0.6	
	baz=84							
D20A	**Manuel Ranch,**	84.40	38	⇑P	P	15 42 45.0	+0.6	
	baz=84,SNR=58							
V30A	**Spur Ranch, Mi**	84.42	51	⇑P	P	15 42 45.2	+0.4	
	baz=84,SNR=6.6							
K24A	**Anderson Ranch**	84.44	43	⇓P	P	15 42 44.8	0.0	
	baz=84							
X31A	**McDonald Ranch**	84.52	52	⇑P	P	15 42 44.8	-0.4	
	baz=85							
T29A	**Hugoton**	84.53	49	⇓P	P	15 42 44.8	-0.5	
	baz=85							
I23A	**Meade Ranch, G**	84.58	42	⇑P	P	15 42 45.6	+0.1	
	baz=85							
P27A	**Ficken Ranch,**	84.59	47	⇑P	P	15 42 45.6	0.0	
	baz=85							
BILL	**Bilibino**	84.60	352	*e*P	P	15 42 45.2	+0.4	
BILL				*e**SP	sP	15 43 05.6	+2.3	
BILL				pmax	pmax			
	comp=Z,10.0nm,1.2s							
BILL	**Bilibino**	84.60	352	*e*P	P	15 42 43.9	-0.9	
	comp=Z,75nm,1.9s							
BILL				LR	LR			
	comp=Z,180nm,20.0s							
B19A	**Brinkman Farms**	84.61	37	⇑P	P	15 42 45.9	+0.5	
	baz=85,SNR=17							
G22A	**Birney**	84.63	40	⇓P	P	15 42 45.7	+0.1	
	baz=85,SNR=9.4							
R28A	**Tribune**	84.63	48	⇓P	P	15 42 45.9	+0.1	
	baz=85,SNR=15							
N26A	**Koester Ranch,**	84.68	45	⇑P	P	15 42 45.9	-0.2	
	baz=85,SNR=7.8							
Y32A	**R-V Farms, Ver**	84.69	53	⇑P	P	15 42 46.1	0.0	
	baz=85,SNR=15							
MYKOM	**Kota Tinggi**	84.72	273	P	P	15 42 49.5	+2.9	
MYKOM	**Kota Tinggi**	84.72	273	P	P	15 42 48.5	+1.9	
	comp=Z,22nm,1.3s							
L25A	**Engebretsen Ra**	84.75	44	⇓P	P	15 42 46.9	+0.5	
	baz=85,SNR=10							
U30A	**WK&E Inc. Balk**	84.75	50	⇓P	P	15 42 46.1	-0.4	
	baz=85							
W31A	**Holland Ranch,**	84.76	52	⇓P	P	15 42 46.4	0.0	
	baz=85,SNR=15							
E21A	**Keefer Ranch,**	84.77	39	⇓P	P	15 42 47.1	+0.9	
	baz=85,SNR=20							
C20A	**Veseth Ranch,**	84.79	38	⇑P	P	15 42 47.0	+0.7	
	baz=85,SNR=33							
J24A	**Dixon Ranch, L**	84.81	43	⇑P	P	15 42 46.7	+0.1	
	baz=85,SNR=9.5							
S29A	**Ulysses**	84.84	49	⇓P	P	15 42 46.6	-0.3	
	baz=85							
H23A	**Clabaugh Cattl**	84.89	41	⇑P	P	15 42 46.5	-0.4	
	baz=85							
Q28A	**Sharon Springs**	84.91	47	⇑P	P	15 42 47.2	0.0	
	baz=85							
F22A	**Rosebud**	84.92	40	⇓P	P	15 42 47.4	+0.4	
	baz=85							
O27A	**Beecher Island**	84.93	46	⇑P	P	15 42 47.3	+0.1	
	baz=85							
A19A	**Klindworth Far**	84.96	36	⇑P	P	15 42 47.7	+0.5	
	baz=85,SNR=16							
M26A	**McRoberts Ranc**	85.01	45	⇑P	P	15 42 47.5	-0.1	
	baz=85							
K25A	**Mack Ranch, Ha**	85.02	43	⇑P	P	15 42 48.0	+0.4	
	baz=85,SNR=8.3							
T30A	**Plains**	85.05	50	⇓P	P	15 42 47.4	-0.5	
	baz

comp=Z,36nm,0.9s
D22A Cohagen 85.60 39 ⇑P **P 15 42 51.1 +0.8**
baz=86,SNR=6.9
T31A Randall Ranch, 85.69 50 ⇓P **P 15 42 50.9 -0.1**
baz=86,SNR=6.4
B21A Ellsworth Farm 85.71 37 ⇑P **P 15 42 51.4 +0.5**
baz=86,SNR=10
R30A Dighton 85.72 49 ⇓P **P 15 42 51.2 0.0**
baz=86,SNR=7.8
P29A Atwood 85.77 47 ⇑P **P 15 42 51.6 +0.2**
baz=86
N28A Pribbeno Ranch 85.78 46 ⇓P **P 15 42 51.5 +0.1**
baz=86
E23A Ismay 85.83 40 ⇓P **P 15 42 52.0 +0.5**
baz=86,SNR=7.1
G24A Alzada 85.86 41 ⇑P **P 15 42 51.7 -0.1**
baz=86
Q30A Quinter 86.03 48 ⇓P **P 15 42 52.9 +0.2**
baz=86,SNR=9.4
S31A Mullinville 86.03 49 ⇓P **P 15 42 53.0 +0.2**
baz=86
A21A Bergtoll Ranch 86.04 37 ⇑P **P 15 42 52.8 +0.3**
baz=86,SNR=9.5
C22A Vida 86.06 38 ⇑P **P 15 42 52.9 +0.3**
baz=86
F24A Ekalaka 86.07 40 ⇑P **P 15 42 53.0 +0.2**
baz=86
O29A 4D Ranch, Culb 86.08 47 ⇓P **P 15 42 52.9 0.0**
baz=86
M28A Bar X Bar Ranc 86.19 45 ⇓P **P 15 42 53.7 +0.2**
baz=86
P30A Selden 86.23 47 ⇑P **P 15 42 54.3 +0.6**
baz=86,SNR=7.8
B22A Reddig Ranch S 86.25 38 ⇓P **P 15 42 53.8 +0.2**
baz=86,SNR=15
R31A Burdett 86.26 49 ⇓P **P 15 42 53.7 -0.1**
baz=86
BJT Baijiatuau 86.32 313 PFAKE 15 43 00.0 +6.0
BJT LR LR
comp=Z,85nm,20.0s
BJI Beijing 86.32 313 P **P 15 42 54.8 +0.8**
BJI pP **pP 15 43 07.0 -0.5**
BJI sP **sP 15 43 12.0 -0.5**
BJI S **S 15 53 27.0 +0.8**
BJI sS **sS 15 53 48.0 -0.8**
BJI SS **SS 15 59 09.8 +2.9**
BJI pmax pmax
comp=Z,17nm,1.3s
N29A Votaw Ranch, W 86.47 46 ⇓P **P 15 42 54.9 0.0**
baz=87
E24A Baker 86.48 40 ⇑P **P 15 42 55.1 +0.3**
baz=87
C23A Lambert 86.50 38 ⇓P **P 15 42 55.4 +0.6**
baz=87,SNR=7.9
A22A Carney Farms, 86.62 37 ⇑P **P 15 42 55.4 0.0**
baz=87
D24A Glendive 86.71 39 ⇓P **P 15 42 56.1 +0.3**
baz=87,SNR=8.8
B23A Brockton 86.92 38 ⇑P **P 15 42 57.3 +0.5**
baz=87,SNR=6.2
E25A Miller Ranch, 87.01 40 ⇑P **P 15 42 57.6 +0.2**
baz=87
A23A Redstone 87.21 37 ⇓P **P 15 42 58.5 +0.3**
baz=87
DGMT Dagmar 87.40 38 *e*P **P 15 42 58.8 -0.4**
DGMT comp=Z,25nm,0.8s
LR LR
comp=Z,211nm,19.0s
DGMT Dagmar 87.40 38 ⇑P **P 15 42 59.4 +0.2**
baz=88
K29A Lazy Trails An 87.46 44 ⇑P **P 15 42 59.6 0.0**
baz=88
E26A Carlson Angus 87.59 40 ⇓P **P 15 43 00.0 -0.1**
baz=88,SNR=5.4
HIA Hailar 87.89 323 PFAKE 15 43 10.0 +8.6
HIA LR LR
comp=Z,100nm,20.0s
INK Inuvik 87.90 13 P **P 15 43 01.4 +0.4**
INK Inuvik 87.90 13 P **P 15 43 01.4 +0.4**
comp=Z,14nm,0.9s,baz=213,slow=4.5,SNR=34
IPM Ipoh 88.15 275 *e*P **P 15 43 01.7 -1.8**
comp=Z,53nm,1.4s
IPM *e*pP **pP 15 43 16.6 -0.5**
IPM Ipoh 88.15 275 P **P 15 43 06.7 +3.2**
IPM Ipoh 88.15 275 P **P 15 43 04.9 +1.4**
comp=Z,28nm,1.2s
TUL1 Tulsa 88.17 52 ⇑P **P 15 43 02.9 -0.1**
baz=88
MAW Mawson 88.26 198 *e*P **P 15 43 02.1 -0.8**
comp=Z,2.4nm,0.9s
MAW *e*pP **pP 15 43 15.1 -1.3**
MAW Mawson 88.26 198 P **P 15 43 03.4 +0.5**
comp=Z,5.7nm,0.8s,baz=131,slow=6.9,SNR=12
MAW LR LR 16 19 15.1
comp=Z,175nm,19.1s,baz=249,slow=33
PLCA Paso Flores 88.64 132 P **P 15 43 05.5 0.0**
PLCA Paso Flores 88.64 132 P **P 15 43 05.5 0.0**
comp=Z,8.5nm,1.0s,baz=263,slow=4.1,SNR=8.5
PLCA LR LR 16 16 16.4
comp=Z,148nm,18.2s,baz=179,slow=31
KSU1 Kansas State U 88.68 49 PFAKE 15 43 20.0 +15
KSU1 LR LR
comp=Z,197nm,19.0s
KULM Kulim 88.72 276 *e*P **P 15 43 05.2 -0.9**
KULM *e*pP **pP 15 43 20.1 +0.5**
KULM LR LR
comp=Z,258nm,20.0s
KULM Kulim 88.72 276 P P 15 43 10.7 +4.5
KULM Kulim 88.72 276 P **P 15 43 08.4 +2.2**
comp=Z,15nm,1.4s
CLNS Chul'man 88.77 331 *e*P P 15 43 00.7 -4.8
CLNS pmax pmax
comp=Z,11nm,1.0s
CLNS pmax pmax
comp=N,7.0nm,1.2s
GYA Guiyang 89.11 298 P **P 15 43 08.0 +0.2**
GYA pP **pP 15 43 22.5 +1.1**
GYA sP **sP 15 43 27.8 +1.4**
GYA PP **PP 15 46 40.0 +1.4**
GYA S **S 15 53 52.3 -1.4**
GYA sS **sS 15 54 15.0 -1.4**
GYA SS **SS 15 59 49.5 +1.1**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,130nm,6.1s
GYA LR LR
comp=N,520nm,19.9s
GYA LR LR
comp=E,480nm,20.0s
GYA LR LR
comp=Z,550nm,19.6s
MIAR Mount Ida 89.43 54 *e*P P 15 43 05.5 -3.5
MIAR pmax pmax
comp=Z,77nm,2.2s
MIAR MLR MLR
comp=Z,58nm,19.0s
MIAR Mount Ida 89.43 54 *e*P P 15 43 05.5 -3.5
comp=Z,77nm,2.2s
MIAR LR LR
comp=Z,58nm,19.0s
YAK Yakutsk 89.54 336 *e*P **P 15 43 07.9 -0.9**
YAK pmax pmax
comp=Z,14nm,1.1s
YAK pmax pmax
comp=E,5.0nm,1.4s
YAK pmax pmax
comp=N,2.0nm,1.1s
YKA Yellowknife Ar 89.54 23 P **P 15 43 09.2 +0.3**
YKA Yellowknife Ar 89.54 23 P **P 15 43 09.1 +0.3**
comp=N,11nm,0.8s,baz=238,slow=4.3,SNR=39
XAN Xi'an 89.60 305 P **P 15 43 12.0 +2.1**
XAN pP **pP 15 43 25.5 +2.1**
XAN S **S 15 53 58.8 +1.0**
XAN pmax pmax
comp=Z,4.0nm,1.5s
XAN pmax pmax
comp=Z,32nm,4.8s
TEIG Tepich 89.60 69 *e*P **P 15 43 09.2 -0.9**
comp=Z,88nm,1.4s
PSI Prapat 89.73 273 P **P 15 43 12.0 +1.0**
PSI Prapat 89.73 273 P **P 15 43 12.0 +1.0**
comp=Z,5.0nm,0.5s,baz=198,slow=5.6,SNR=18
HHC Hu-ho-hao-te 89.89 313 *e*P **P 15 43 12.3 +1.1**
HHC pP **pP 15 43 25.3 +0.6**
HHC sP **sP 15 43 31.0 +1.3**
HHC PP **PP 15 46 47.8 +3.3**
HHC SKS **SKSac 15 53 35.8 -2.7**
HHC S **S 15 53 58.0 -2.4**
HHC sS **sS 15 54 22.0 -1.1**
HHC SS **SS 15 59 59.3 +0.1**
HHC pmax pmax
comp=Z,49nm,0.8s
HHC pmax pmax
comp=Z,230nm,6.4s
HHC LR LR
comp=N,340nm,13.1s
HHC LR LR
comp=E,450nm,14.3s
HHC LR LR
comp=Z,250nm,14.3s
ECSD EROS Data Cent 90.33 45 *e*P P 15 43 08.0 -5.0
comp=Z,9.2nm,1.0s
UALR University of 90.46 54 *e*P **P 15 43 15.1 +1.3**
comp=Z,18nm,0.8s
FFC Flin Flon 91.36 33 *e*P **P 15 43 17.5 0.0**
FFC pmax pmax
comp=Z,13nm,1.1s
FFC MLR MLR
comp=Z,223nm,20.0s
FFC Flin Flon 91.36 33 *e*P **P 15 43 17.4 0.0**
comp=Z,13nm,1.1s
FFC LR LR
comp=Z,223nm,20.0s
PBKT Sadao Pong 91.41 287 P **P 15 43 20.3 +1.7**
comp=Z,6.4nm,0.9s
KMI Kunming 92.11 295 P **P 15 43 22.8 +0.8**
KMI pP **pP 15 43 36.5 +0.9**
KMI S **S 15 54 18.8 -2.8**
KMI pmax pmax
comp=Z,5.0nm,0.8s
KMI pmax pmax
comp=Z,82nm,3.3s
KMI LR LR
comp=Z,74nm,29.6s
AGMN Agassiz Nation 92.43 40 PFAKE 15 43 30.0 +7.4
AGMN LR LR
comp=Z,314nm,20.0s
CD2 Chengdu 92.83 301 *e*P **P 15 43 25.8 +0.8**
CD2 pP **pP 15 43 39.3 +0.8**
CD2 sP **sP 15 43 44.5 +0.9**
CD2 PP **PP 15 47 11.0 +3.0**
CD2 SKS **SKSac 15 53 54.3 -1.2**
CD2 S **S 15 54 25.0 -2.4**
CD2 sS **sS 15 54 47.8 -2.4**
CD2 SS **SS 16 00 43.0 +1.1**
CD2 pmax pmax
comp=Z,10.0nm,0.8s
CD2 pmax pmax
comp=Z,30nm,5.8s
CD2 LR LR
comp=N,240nm,13.2s
CD2 LR LR
comp=Z,110nm,13.4s
SNAA Sanae 92.92 177 *e*P **P 15 43 25.0 +0.3**
comp=Z,9.7nm,1.3s
ULM Lac du Bonnet 93.09 39 LR LR 16 20 00.5
comp=Z,199nm,18.7s,baz=280,slow=32
SPMN St. Paul 93.40 44 ⇓P **P 15 43 27.3 +0.1**
baz=94
CMAR Chiang Mai Arr 93.77 288 P **P 15 43 31.1 +1.6**
CMAR PKKPbc **PKKPbc 16 00 34.4 +0.8**
CMAR Chiang Mai Arr 93.77 288 P **P 15 43 31.1 +1.6**
comp=Z,1.3nm,1.0s,baz=93,slow=3.4,SNR=4.9
CMAR PKKPbc **PKKPbc 16 00 34.4 +0.8**
comp=Z,0.7nm,0.7s,baz=280,slow=5.0,SNR=5.1
CMAR LR LR 16 20 39.9
comp=Z,77nm,20.1s,baz=155,slow=32
CHTO Chiang Mai 93.86 288 PFAKE 15 43 40.0 +10
CHTO LR LR
comp=Z,81nm,19.0s
LZH Lanzhou 94.18 306 *e*P **P 15 43 33.8 +2.6**
LZH pP **pP 15 43 47.5 +2.7**
LZH sP **sP 15 43 52.3 +2.5**
LZH PP PP 15 47 24.3 +5.8
LZH SKS **SKSac 15 54 03.5 +0.6**
LZH *e*S **S 15 54 37.5 -1.8**
LZH sS **sS 15 55 01.3 -0.8**
LZH SS **SS 16 01 04.0 +2.8**
LZH pmax pmax
comp=Z,42nm,1.4s
LZH pmax pmax
comp=Z,96nm,4.6s
LZH LR LR
comp=N,370nm,17.2s
LZH LR LR
comp=E,280nm,16.8s
LZH LR LR
comp=Z,410nm,18.6s
WVT Waverly 94.38 54 *e*P P 15 43 27.7 -4.2
WVT pmax pmax
comp=Z,5.0nm,0.7s
WVT Waverly 94.38 54 *e*P P 15 43 27.7 -4.2
comp=Z,4.9nm,0.7s
JFWS Jewell Farm 94.47 47 *e*P **P 15 43 31.9 -0.3**
JFWS pmax pmax
comp=Z,21nm,0.8s
JFWS Jewell Farm 94.47 47 *e*P **P 15 43 31.9 -0.3**
comp=Z,21nm,0.8s
HDIL Hopedale 94.48 49 PFAKE 15 43 40.0 +7.7
HDIL LR LR
comp=Z,209nm,22.0s
BCIP Isla Barro Col 94.55 82 PFAKE 15 43 40.0 +6.8
BCIP LR LR
comp=Z,163nm,20.0s
EYMN Ely 95.08 42 PFAKE 15 43 50.0 +15
EYMN LR LR
comp=Z,101nm,19.0s
ULN Ulaanbaatar 95.20 318 *e*P **P 15 43 36.8 +1.2**
comp=Z,2.5nm,0.9s
ULN Ulaanbaatar 95.20 318 P **P 15 43 35.9 +0.3**
TIXI Tiksi 95.26 344*c i*P **P 15 43 35.5 +0.4**
TIXI pmax pmax
comp=Z,4.0nm,1.3s
SONM Songino Array 95.62 318 P **P 15 43 38.1 +0.6**
SONM Songino Array 95.62 318 P **P 15 43 38.1 +0.6**
comp=Z,1.0nm,0.8s,baz=117,slow=5.4,SNR=5.3
SFIN Scholer Farm 96.05 50 ⇓P **P 15 43 39.2 -0.3**
baz=96
COWI Conover 96.11 44 *e*P **P 15 43 37.2 -2.4**
comp=Z,16nm,1.0s
COWI LR LR
comp=Z,226nm,19.0s
CPCT Cooper Cave 96.81 55 *e*P **P 15 43 42.9 -0.1**
GTA Gaotai 98.10 309 *e*P Pdif 15 43 50.5 +1.5
GTA pP pP 15 44 04.0 +1.5
GTA sP sP 15 44 09.5 +2.0
GTA S **S 15 55 12.8 -0.1**
GTA sS sS 15 55 35.5 -0.3
GTA pmax pmax
comp=Z,3.0nm,1.7s
GTA pmax pmax
comp=Z,90nm,5.2s
GTA LR LR
comp=N,110nm,14.5s
GTA LR LR
comp=E,78nm,16.9s
GTA LR LR
comp=Z,68nm,16.6s
LPAZ La Paz 98.67 109 P Pdif 15 43 53.2 +0.6
LPAZ La Paz 98.67 109 P Pdif 15 43 53.2 +0.6
comp=Z,1.1nm,0.8s,baz=233,slow=5.1,SNR=3.9
LPAZ LR LR 16 23 13.8
comp=Z,59nm,18.3s,baz=126,slow=32
GLMI Grayling 98.89 46 PFAKE 15 44 00.0 +7.8
GLMI LR LR
comp=Z,316nm,20.0s
ACSO Alum Creek Sta 99.08 51 PFAKE 15 44 00.0 +6.9
ACSO LR LR
comp=Z,1μm,19.0s
NHSC New Hope 99.79 58 PFAKE 15 44 10.0 +14
NHSC LR LR
comp=Z,196nm,19.0s
BLA Blacksburg 100.42 54 PFAKE 15 44 10.0 +11
BLA LR LR
comp=Z,135nm,19.0s
ERPA Erie 101.66 49 PFAKE 15 44 20.0 +15
ERPA LR LR
comp=Z,268nm,19.0s
CNNC Cliffs of the 102.06 57 PFAKE 15 44 20.0 +14
CNNC LR LR
comp=Z,590nm,22.0s
CBN Corbin 102.98 54 PFAKE 15 44 20.0 +10
CBN LR LR
comp=Z,189nm,19.0s
LSA Lhasa 103.17 297 PFAKE 15 44 20.0 +7.8
LSA LR LR
comp=Z,93nm,20.0s
BINY Binghamton 104.61 50 PFAKE 15 44 30.0 +12
BINY LR LR
comp=Z,244nm,21.0s
SDDR Presa de Saban 104.86 74 PFAKE 15 44 30.0 +11
SDDR LR LR
comp=Z,163nm,21.0s
SAML Samuel 105.59 104 PFAKE 15 48 50.0
SAML LR LR
comp=Z,169nm,21.0s
NCB Newcomb 106.10 48 PFAKE 15 48 50.0
NCB LR LR
comp=Z,477nm,19.0s
LBNH Lisbon 107.77 48 PFAKE 15 48 50.0
LBNH LR LR
comp=Z,115nm,19.0s
ZALV Zalesovo Beam 109.92 322 PKiKP **PKiKP 15 48 42.2 -0.7**
ZALV Zalesovo Beam 109.92 322 PKiKP **PKiKP 15 48 42.2 -0.7**
comp=Z,1.9nm,0.6s,baz=119,slow=1.6,SNR=12
MK31 Makanchi Array 111.66 315 *e*PKiKP **PKiKP 15 48 45.3 -1.2**
MK31 Makanchi Array 111.66 315 *e*PKPdf **PKiKP 15 48 45.3 -1.2**
MKAR Makanchi Array 111.66 315 PKiKP **PKiKP 15 48 46.3 -0.1**
MKAR Makanchi Array 111.66 315 PKiKP **PKiKP 15 48 46.3 -0.1**
MKAR Makanchi Array 111.66 315 PKiKP **PKiKP 15 48 46.3 -0.1**
comp=Z,2.1nm,0.7s,baz=66,slow=0.7,SNR=29
GRGR Grenville 112.62 83 PFAKE 15 49 00.0
GRGR LR LR
comp=Z,341nm,19.0s
ANWB Willy Bob 113.50 77 PFAKE 15 49 00.0
ANWB LR LR
comp=Z,207nm,19.0s
KURK Kurchatov 113.90 319 *e*PKiKP **PKiKP 15 48 49.0 -1.5**
KURK MLR MLR
comp=Z,92nm,20.0s
KURK Kurchatov 113.90 319 *e*PKPdf **PKiKP 15 48 49.0 -1.5**
KURK PKKPbc **PKKPbc 15 59 32.9 -1.3**
KURK LR LR
comp=Z,92nm,20.0s
KURBB Kurchatov Arra 113.96 319 PKKPbc PKKPbc 15 59 32.9 -1.1
comp=Z,0.5nm,0.6s,baz=273,slow=3.8,SNR=6.9
KSH Kashi 116.42 307 *e*PKP **PKPdf 15 48 57.5 +1.6**
KSH *es*PKP 15 49 11.5
KSH *e*SKS **SKSdf 15 56 04.5 -0.1**
KSH *e*SKKS **SKKSac 15 56 57.0 -3.4**
KSH AMB AMB
comp=Z,220nm,4.9s
KSH LR LR
comp=N,210nm,4.8s
KSH LR LR
comp=E,230nm,6.2s
KSH LR LR
comp=Z,150nm,4.6s
TKM2 Tokmak 2 116.55 311 PFAKE 15 49 10.0 +14
TKM2 LR LR
comp=Z,73nm,19.0s
AAK Ala-Archa 117.38 310 *i* PKiKP **PKPdf 15 48 56.9 -0.8**
AAK pmax pmax
comp=Z,12nm,1.7s
AAK Ala-Archa 117.38 310 PFAKE 15 49 10.0 +12
AAK LR LR
comp=Z,82nm,21.0s
EKS2 Erkin-Say 117.91 310 PFAKE 15 49 10.0 +11
EKS2 LR LR
comp=Z,56nm,20.0s
BVAR Borovoye Array 118.58 322 PKiKP **PKPdf 15 48 59.4 -0.1**
BVAR Borovoye Array 118.58 322 PKP **PKPdf 15 48 59.4 -0.1**
BVAR Borovoye Array 118.58 322 PKP **PKPdf 15 48 59.4 -0.1**
comp=Z,6.6nm,0.6s,baz=108,slow=3.3,SNR=38
BRVK Borovoye 118.64 322*d i*PKiKP **PKPdf 15 48 59.5 -0.1**
BRVK pmax pmax
comp=Z,3.0nm,0.7s
BRVK Borovoye 118.64 322 PFAKE 15 49 10.0 +10
BRVK LR LR
comp=Z,81nm,20.0s
RER Riviere de l'E 120.67 234 PFAKE 15 49 20.0 +15
RER LR LR
comp=Z,1μm,21.0s
KBL Kabul 122.17 301 *e*PKiKP **PKPdf 15 49 06.9 -0.4**
KBL Kabul 122.17 301 *e*PKPdf **PKPdf 15 49 06.9 -0.4**
SVE Sverdlovsk 122.71 329 *e*PKiKP **PKPdf 15 49 07.9 +0.6**
SVE pmax pmax
comp=Z,16nm,1.2s
SOKR Solikamsk 123.28 333*c i*PKiKP **PKPdf 15 49 08.1 -0.1**
SOKR pmax pmax
comp=Z,10.0nm,0.7s
ARU Arti 123.92 329 *i* PKiKP **PKPdf 15 49 09.7 +0.1**
ARU 15 50 53.6
ARCES ARCESS Array B 124.70 353 PKP **PKPdf 15 49 10.6 -0.2**
ARCES ARCESS Array B 124.70 353 PKP **PKPdf 15 49 10.6 -0.2**
comp=Z,19nm,0.7s,baz=23,slow=1.6,SNR=43
APA Apatity 125.22 348 ⇓*i* PKiKP **PKPdf 15 49 12.0 +0.2**
APA 15 49 30.0
APA pmax pmax
comp=Z,13nm,0.9s
APA MLR MLR
comp=Z,300nm,19.0s
ABKAR Akbulak array 125.95 320 *e*PKPdf **PKPdf 15 49 13.9 +0.1**
AKTO Aktyubinsk 126.69 322 PKiKP **PKPdf 15 49 15.3 +0.2**
AKTO Aktyubinsk 126.69 322 PKP **PKPdf 15 49 15.3 +0.2**
AKTO Aktyubinsk 126.69 322 PKP **PKPdf 15 49 15.3 +0.2**
comp=Z,3.4nm,0.7s,baz=79,slow=3.0,SNR=11
FINES FINESS Array B 132.13 348 PKP **PKPdf 15 49 25.1 -0.1**
FINES FINESS Array B 132.13 348 PKP **PKPdf 15 49 25.1 -0.1**
comp=Z,9.6nm,0.7s,baz=82,slow=2.9,SNR=26
NB2 NORSAR Subarra134.28 358 PKPdf PKPdf 15 49 19.1 -10
comp=Z,4.8nm,1.2s,baz=14,slow=1.8
NOA NORSAR Array B 134.28 358 PKP **PKPdf 15 49 29.9 +0.6**
NOA NORSAR Array B 134.28 358 PKP **PKPdf 15 49 29.9 +0.6**
comp=Z,3.7nm,0.8s,baz=14,slow=3.7,SNR=10
OBN Obninsk 134.53 337 *i* PKiKP **PKPdf 15 49 30.0 +0.2**
OBN pmax pmax
comp=Z,7.0nm,0.6s
KONO Kongsberg 135.72 359 PFAKE 15 49 40.0 +8.1
KONO LR LR
comp=Z,91nm,22.0s
ESK Eskdalemuir 139.18 10 PFAKE 15 49 50.0 +12
ESK LR LR
comp=Z,115nm,20.0s
GNI Garni 139.50 315 PFAKE 15 49 50.0 +10
GNI LR LR
comp=Z,46nm,20.0s
AKASG Malin Array Be 140.73 339 PKhKP PKPpre 15 49 35.0
comp=Z,3.7nm,0.7s,baz=37,slow=4.0,SNR=6.7
KIEV Kiev 140.74 339 PFAKE 15 49 50.0 +8.6
KIEV LR LR
comp=Z,58nm,19.0s
LVV L'vov 143.17 343 *e*PKHKP PKPab 15 49 41.9 +0.5
WTSB Winterswijk 143.43 1 *e*PKP PKPbc 15 49 43.5 +0.1
comp=Z,21nm,1.0s
KWP Kalwaria Pacla 143.71 344 PFAKE 15 50 00.0 +13
KWP LR LR
comp=Z,109nm,19.0s
CLL Collm 143.87 355 *e*PKPbc PKPbc 15 49 44.8 +0.1
CLL Collm 143.87 355 ⇓*i* PKiKP PKPbc 15 49 45.5 +0.8
CLL pmax pmax
comp=Z,27nm,0.8s
CLL Collm 143.87 355 ⇓*i* PKPdf PKPbc 15 49 45.5 +0.8
comp=Z,27nm,0.8s
CLL *e*PKSdf **PKSdf 15 53 19.0 -3.4**
OJC Ojcow 143.88 347 *e*PKiKP PKPbc 15 49 44.7 -0.1
OJC Ojcow 143.88 347 *e*PKP PKPbc 15 49 45.1 +0.3
KSP Ksiaz 143.93 351 *e*PKiKP PKPbc 15 49 45.2 +0.3
KSP Ksiaz 143.93 351 *e*PKP PKPbc 15 49 45.9 +1.0
NEUB Neuenburg 144.07 356 *e*PKPbc PKPbc 15 49 45.8 +0.5
KEMA Kemaliye 144.12 318 *i* P PKPbc 15 49 46.8 +0.7
BRG Berggiesshubel 144.20 353 *e*PKP PKPbc 15 49 46.1 +0.4
comp=Z,12nm,0.9s
BRG Berggiesshubel 144.20 353 *e*PKPbc PKPbc 15 49 46.0 +0.2
BRG Berggiesshubel 144.20 353 *e*PKiKP PKPbc 15 49 46.1 +0.3
BRG pmax pmax
comp=Z,12nm,0.9s
STHS Stebnicka Huta 144.29 345 *e*PKiKP PKPbc 15 49 46.9 +0.8
STHS Stebnicka Huta 144.29 345 *e*PKP PKPbc 15 49 46.9 +0.8
UPC Upice 144.29 351 *e*PKiKP **PKPdf 15 49 47.2 -0.6**
UPC Upice 144.29 351 *e*PKP **PKPdf 15 49 47.2 -0.6**
TSUM Tsumeb 144.39 196 *e*PKPdf PKPbc 15 49 48.4 +0.9
DPC Dobruska-Polom 144.40 351 *e*PKiKP **PKPdf 15 49 47.3 -0.7**
DPC *e* 15 50 07.7
DPC Dobruska-Polom 144.40 351 *e*PKP **PKPdf 15 49 47.3 -0.7**

DPC ex x 15 49 52.4
DPC esPKP 15 50 07.7
KOLS Kolonicke sedl 144.46 344 *e*PKIKP **PKPdf 15 49 47.7 -0.4**
KOLS Kolonicke sedl 144.46 344 *e*PKP **PKPdf 15 49 47.7 -0.4**
PVCC Panska Ves 144.47 353 *e*PKIKP **PKPdf 15 49 48.2 +0.1**
PVCC Panska Ves 144.47 353 *e*PKP **PKPdf 15 49 48.2 +0.1**
PVCC ex x 15 49 53.1
NIE Niedzica 144.51 346 *e*PKIKP **PKPdf 15 49 48.8 +0.6**
NIE Niedzica 144.51 346 *e*PKP **PKPdf 15 49 48.8 +0.6**
MENF Mencas 144.55 6 PKP PKPbc 15 49 47.0 +0.2
MENF Mencas 144.55 6 PKP PKPbc 15 49 47.0 +0.2
UBBA Unterbreizbach 144.55 358 *e*PKPbc PKPbc 15 49 47.1 +0.4
BEBN Eben Emael 144.57 2 PKP **PKPdf 15 49 47.8 -0.4**
OKC Ostrava-Krasne 144.58 349 *e*PKIKP PKPbc 15 49 47.3 +0.3
OKC Ostrava-Krasne 144.58 349 *e*PKP PKPbc 15 49 47.3 +0.3
OKC ex x 15 49 52.5
OKC ep PKP pPKPdf 15 49 59.1 -3.1
HGN Heimansgroeve 144.61 2 *e*PKP PKPbc 15 49 47.5 +0.4
comp=Z,37nm,1.2s
MOX Moxa 144.64 356 *e*PKPbc PKPbc 15 49 47.8 +0.6
MOX Moxa 144.64 356 *e*PKIKP PKPbc 15 49 47.8 +0.6
SCER sogukcermik 144.66 319 *i* P **PKPdf 15 49 49.6 +0.7**
MALT Malatya 144.67 316 ⇑PKIKP PKPdf 15 49 57.5 +8.6
MALT Malatya 144.67 316 PFAKE 15 50 00.0 +11
MALT LR LR
comp=Z,95nm,19.0s
MALT Malatya 144.67 316 ⇑*i*P PKPdf 15 49 57.5 +8.6
CRVS Cervenica-Dubn 144.71 344 *e*PKP **PKPab 15 49 45.4 -1.9**
BUR08 Bucovina Ar. S 144.72 340 *e*PKPdf **PKPdf 15 49 48.8 +0.1**
UZH Uzhgorod 144.73 343 ⇓*i*PKIKP **PKPdf 15 49 48.4 -0.1**
BURAR Bucovina Array 144.74 340 ⇓*i*P **PKPab 15 49 45.6 -2.0**
MORC Moravsky Berou 144.75 349 *e*PKIKP PKPbc 15 49 47.7 +0.1
MORC Moravsky Berou 144.75 349 *e*PKPdf PKPbc 15 49 47.7 +0.1
PLN Plauen 144.76 355 *e*PKPbc **PKPdf 15 49 48.2 -0.4**
MEM Membach 144.77 2 PKP **PKPdf 15 49 48.4 -0.1**
WERD Werda 144.78 355 *e*PKPbc **PKPdf 15 49 48.4 -0.2**
TANN Tannenbergstha 144.80 355 *e*PKPbc **PKPdf 15 49 48.5 -0.2**
GUNZ Gunzen 144.86 355 *e*PKPbc **PKPdf 15 49 48.9 +0.1**
BCLA Clavier 144.93 3 PKP **PKPdf 15 49 48.8 -0.1**
WERN Wernitzgruen 144.94 355 *e*PKPbc **PKPdf 15 49 49.2 +0.3**
PRA Prague 144.94 353 PKP **PKPdf 15 49 49.0 +0.1**
PRU Pruhonice 145.00 353 *e*PKIKP **PKPdf 15 49 49.2 +0.2**
PRU Pruhonice 145.00 353 *e*PKP **PKPdf 15 49 49.2 +0.2**
AKCD Akcadag 145.02 317 *i* P **PKPdf 15 49 50.5 +0.9**
TRPA Tarpa 145.12 343 ⇑*i*P **PKPbc 15 49 46.8 -1.9**
TRPA Tarpa 145.12 343 ⇓*e*PKPbc **PKPdf 15 49 49.5 +0.3**
TESR Tescani 145.17 337 ⇓*i*P **PKPbc 15 49 48.9 -0.1**
TNS Taunus Mts 145.19 359 *e*PKPbc **PKPdf 15 49 49.8 +0.4**
TNS Taunus Mts 145.19 359 *e*PKIKP **PKPdf 15 49 49.8 +0.4**
ATAB Bozova 145.20 315 *i* P **PKPdf 15 49 50.8 +1.1**
DOU Dourbes 145.21 4 PKP **PKPdf 15 49 49.5 +0.2**
BMR Baia Mare 145.25 341 ⇓*i*P **PKPbc 15 49 47.2 -2.0**
MANZ Manzenberg 145.26 355 *e*PKPbc **PKPdf 15 49 50.1 +0.6**
KECS Kecovo 145.34 345 *e*PKIKP **PKPdf 15 49 50.4 +0.8**
KECS Kecovo 145.34 345 *e*PKP **PKPdf 15 49 50.4 +0.8**
TLCR 145.39 334 ⇑PKIKP **PKPbc 15 49 49.6 -0.1**
TLCR 145.39 334 ⇑*i*P **PKPbc 15 49 49.6 -0.1**
ROTZ Rotzenmuhle 145.47 355 *e*PKPbc **PKPab 15 49 51.1 +1.0**
ABH Alteburg 145.53 0 PKP **PKPab 15 49 51.0 +0.7**
TREC Trest 145.55 351 *e*PKIKP **PKPbc 15 49 50.2 0.0**
TREC Trest 145.55 351 *e*PKP **PKPbc 15 49 50.2 0.0**
TREC ex x 15 49 55.1
TREC ep PKP **pPKPdf 15 50 01.5 -2.5**
GRF Grafenberg Arr 145.61 356 *e*PKPbc **PKPab 15 49 51.5 +0.9**
GRF Grafenberg Arr 145.61 356 *e*PKIKP **PKPab 15 49 51.5 +0.9**
GRFO Grafenberg 145.62 356 *e*PKIKP **PKPdf 15 49 50.1 0.0**
GRFO Grafenberg 145.62 356 *e*PKPdf **PKPdf 15 49 50.1 0.0**
CTKT Corum 145.62 322 *i* P **PKPab 15 49 52.4 +1.2**
BST Brest 145.67 14 PKP **PKPab 15 49 51.1 +0.2**
BST Brest 145.67 14 PKP **PKPab 15 49 51.1 +0.2**
CFR Carcaliu 145.68 334 ⇑PKIKP **PKPab 15 49 51.3 +0.3**
CFR Carcaliu 145.68 334 ⇑*i*P **PKPab 15 49 51.3 +0.3**
VRI Vrincioaia 145.68 336 ⇓PKIKP **PKPab 15 49 51.8 +0.8**
VRI Vrincioaia 145.68 336 ⇓*i*P **PKPab 15 49 51.8 +0.8**
RUP Ruppelstein 145.71 1 PKIKP **PKPab 15 49 51.7 +0.7**
RUP Ruppelstein 145.71 1 PKP **PKPab 15 49 51.7 +0.7**
VYHS Vyhne 145.71 347 *e*PKIKP **PKPab 15 49 51.7 +0.6**
VYHS Vyhne 145.71 347 *e*PKP **PKPab 15 49 51.7 +0.6**
WLF Walferdange 145.72 2 PKP **PKPab 15 49 51.6 +0.6**
WLF Walferdange 145.72 2 *e*PKPbc **PKPab 15 49 52.2 +1.2**
WLF Walferdange 145.72 2 *e*PKIKP **PKPab 15 49 50.2 0.0**
WLF Walferdange 145.72 2 *e*PKPdf **PKPdf 15 49 50.2 0.0**
PLOR Plostina 145.73 336 ⇓PKIKP **PKPab 15 49 51.7 +0.5**
PLOR Plostina 145.73 336 ⇓*i*P **PKPab 15 49 51.7 +0.5**
GZT Gaziantep 145.76 315 *i* P **PKPab 15 49 52.7 +0.9**
TOD Tromm 145.80 359 PKIKP **PKPab 15 49 51.8 +0.4**
TOD Tromm 145.80 359 PKP **PKPab 15 49 51.8 +0.4**
ATD Arta Tunnel 145.81 268 PKPbc **PKPbc 15 49 52.5 +0.4**
ATD Arta Tunnel 145.81 268 PKPbc **PKPbc 15 49 52.5 +0.4**
comp=Z,21nm,0.8s,baz=102,slow=8.7,SNR=6.7
BALT Daday 145.82 325 *i* P **PKPab 15 49 53.9 +2.0**
SMOL Smolenice 145.98 349 *e*PKIKP **PKPab 15 49 53.3 +1.3**
SMOL Smolenice 145.98 349 *e*PKP **PKPab 15 49 53.3 +1.3**
GRER 145.99 336 ⇓*i*P **PKPab 15 49 54.1 +1.9**
PSZ Piszkesteto 146.01 346 ⇑PKIKP **PKPab 15 49 52.0 -0.3**
PSZ Piszkesteto 146.01 346 *e*PKPdf **PKPdf 15 49 50.3 -0.6**
PSZ LR LR
comp=Z,84nm,21.0s
PSZ Piszkesteto 146.01 346 ⇑*i*P **PKPab 15 49 52.0 -0.3**
PSZ Piszkesteto 146.01 346 ⇓*e*PKPdf **PKPab 15 49 52.6 +0.3**
WET Wettzell 146.02 354 *e*PKPbc **PKPab 15 49 52.6 +0.4**
WET Wettzell 146.02 354 *e*PKIKP **PKPab 15 49 52.6 +0.4**
KTD Kalmit 146.09 360 PKIKP **PKPab 15 49 52.7 +0.2**
KTD Kalmit 146.09 360 PKP **PKPab 15 49 52.7 +0.2**
TIRR Tirgusor 146.14 333 ⇓PKP2 **PKPab 15 49 53.1 +0.4**
TIRR Tirgusor 146.14 333 *e*PKPdf **PKPdf 15 49 51.2 +0.1**
TIRR Tirgusor 146.14 333 ⇓*i*P **PKPab 15 49 53.1 +0.4**
GEC2 GERESS Array S 146.23 353 *e*PKPbc **PKPab 15 49 53.0 -0.1**
GEC2 GERESS Array S 146.23 353 *e*PKIKP **PKPab 15 49 53.0 -0.1**
GERES GERESS Array B 146.23 353 PKPbc **PKPbc 15 49 52.5 +0.1**
GERES GERESS Array B 146.23 353 PKPbc **PKPbc 15 49 52.5 +0.1**
comp=Z,16nm,0.7s,baz=29,slow=3.0,SNR=106
DRGR 146.27 342 ⇑PKIKP **PKPdf 15 49 51.5 +0.1**
DRGR 146.27 342 ⇑*i*P **PKPdf 15 49 51.5 +0.1**
MLR Muntele Rosu 146.30 337 PKPbc **PKPbc 15 49 52.4 -0.4**
MLR Muntele Rosu 146.30 337 ⇓*i*P **PKPbc 15 49 52.6 -0.1**
MLR Muntele Rosu 146.30 337 PKPbc **PKPbc 15 49 52.4 -0.4**
baz=27,slow=1.4
ZST Bratislava 146.35 349 *e*PKP2 **PKPab 15 49 53.5 +0.1**
ZST Bratislava 146.35 349 *e*PKP **PKPab 15 49 53.5 +0.1**
KUZU Kuzuini 146.40 315 *i* P **PKPab 15 49 54.1 0.0**
LANF Langenberg 146.43 0 PKP2 **PKPab 15 49 53.8 0.0**
LANF Langenberg 146.43 0 PKP **PKPab 15 49 53.8 0.0**
LANF Langenberg 146.43 0 PKP **PKPab 15 49 53.8 0.0**
MANR Mangalia 146.57 332 ⇑*i*P **PKPab 15 49 54.6 +0.2**
STU Stuttgart 146.62 358 *e*PKPbc **PKPab 15 49 54.3 -0.2**
STU Stuttgart 146.62 358 *e*PKIKP **PKPab 15 49 50.6 -1.2**
STU Stuttgart 146.62 358 *e*PKPdf **PKPdf 15 49 50.6 -1.2**
BUD Budapest 146.63 346 ⇓*e*PKPdf **PKPab 15 49 54.4 -0.1**
VOIR 146.68 338 ⇑PKP2 **PKPbc 15 49 54.0 +0.2**
VOIR 146.68 338 ⇑*i*P **PKPbc 15 49 54.0 +0.2**
KMBO Kilima Mbogo 146.68 243 PKPbc **PKPab 15 49 56.3 +0.2**
KMBO Kilima Mbogo 146.68 243 PKPbc **PKPab 15 49 56.3 +0.2**
comp=Z,6.1nm,0.8s,baz=71,slow=4.4,SNR=14
AVNT Avonos 146.72 320 *i* P **PKPab 15 49 55.0 -0.4**
PAGF Fort de Pagny 146.81 3 *e*PKIKP **PKPbc 15 49 53.4 -0.5**
PAGF Fort de Pagny 146.81 3 *e*PKPdf **PKPbc 15 49 53.4 -0.5**
CONA Conrad Observa 146.82 350 ⇓*i*PKIKP **PKPab 15 49 55.2 -0.2**
comp=Z,43nm,0.8s,SNR=29
PSN Preselentsi 146.85 333 P **PKPab 15 49 55.2 -0.3**
BR131 Keskin Array S 146.87 322 *e*PKPbc **PKPbc 15 49 55.0 +0.5**
BRTR Keskin Array B 146.87 322 *e*PKPbc **PKPbc 15 49 55.1 +0.5**
BRTR Keskin Array B 146.87 322 PKPbc **PKPbc 15 49 55.1 +0.5**
comp=Z,17nm,0.7s,baz=119,slow=2.1,SNR=82
CSKK Cs˙ákako 146.91 347 ⇓*e*PKPdf **PKPbc 15 49 54.3 0.0**
DEV Deva 147.03 341 ⇑PKP2 **PKPab 15 49 55.4 -0.7**
DEV Deva 147.03 341 ⇑*i*P **PKPbc 15 49 55.3 +0.7**
PKST T˜'s 147.06 347 ⇓*e* **PKPbc 15 49 55.1 +0.4**
BFO Black Forest 147.08 359 *e*PKPbc **PKPab 15 49 55.7 -0.6**
BFO Black Forest 147.08 359 *e*PKIKP **PKPdf 15 49 53.2 +0.6**
BFO MLR MLR
comp=Z,76nm,19.0s
BFO Black Forest 147.08 359 *e*PKPdf **PKPdf 15 49 53.2 +0.6**
BFO LR LR
comp=Z,76nm,19.0s
SFTF Sexfontaines 147.13 4 *e*PKIKP **PKPdf 15 49 53.8 +1.1**
SFTF Sexfontaines 147.13 4 *e*PKPdf **PKPdf 15 49 53.8 +1.1**
FUR Furstenfeldbru 147.13 356 *e*PKPbc **PKPab 15 49 55.9 -0.6**
FUR Furstenfeldbru 147.13 356 *e*PKP2 **PKPab 15 49 55.9 -0.6**
MOA Molln 147.14 352 ⇓*i*PKPab **PKPbc 15 49 55.7 +0.8**
comp=Z,45nm,1.1s,SNR=25
THEF They Montfort 147.15 2 PKP2 **PKPab 15 49 55.9 -0.7**
THEF They Montfort 147.15 2 PKP **PKPab 15 49 55.9 -0.7**
THEF They Montfort 147.15 2 PKP **PKPab 15 49 55.9 -0.7**
ECH Echery 147.19 1 *e*PKP2 **PKPbc 15 49 55.5 +0.4**
ECH MLR MLR
comp=Z,101nm,19.0s
ECH Echery 147.19 1 *e*PKPbc **PKPbc 15 49 55.5 +0.4**
ECH LR LR
comp=Z,101nm,19.0s
ECH Echery 147.19 1 PKP **PKPbc 15 49 55.7 +0.6**
LIBD Limburg 147.26 0 PKP2 **PKPab 15 49 56.1 -0.9**
LIBD Limburg 147.26 0 PKP **PKPab 15 49 56.1 -0.9**
ANTO Ankara 147.27 323 *e*PKP2 **PKPbc 15 49 55.8 +0.2**
ANTO MLR MLR
comp=Z,62nm,20.0s
ANTO Ankara 147.27 323 *e*PKPbc **PKPbc 15 49 55.8 +0.2**
ANTO LR LR
comp=Z,62nm,20.0s
BBAL Bala 147.29 322 *i* P **PKPbc 15 49 56.3 +0.5**
SPAK Spaichingen-Ko 147.30 359 PKP **PKPbc 15 49 56.2 +0.8**
RJOB Jochberg 147.42 354 *e*PKPbc **PKPbc 15 49 56.5 +0.7**
VAYL Yayladag 147.45 315 *i* P **PKPbc 15 49 57.2 +0.9**
GZR Gura Zlata 147.50 340 ⇑PKIKP **PKPbc 15 49 56.9 +0.8**
GZR Gura Zlata 147.50 340 ⇑*i*P **PKPbc 15 49 56.8 +0.7**
ARSA Arzberg 147.54 350 ⇓*i*PKPab **PKPbc 15 49 56.4 +0.4**
comp=Z,23nm,0.9s,SNR=13
FELD Feldberg im Sc 147.54 360 PKP **PKPbc 15 49 56.9 +0.7**
MOF Molkenrain 147.56 1 PKP2 **PKPbc 15 49 56.7 +0.5**
MOF Molkenrain 147.56 1 PKP **PKPbc 15 49 56.7 +0.5**
MOF Molkenrain 147.56 1 PKP **PKPbc 15 49 56.7 +0.5**
PKS9 Tamasi 147.64 347 ⇓*e*PKPdf **PKPbc 15 49 56.7 +0.4**
BZS Buzias 147.66 342 ⇓PKP2 **PKPbc 15 49 57.0 +0.6**
BZS Buzias 147.66 342 ⇓*i*P **PKPbc 15 49 57.0 +0.6**
RETA Reute 147.84 356 ⇓*e*PKPab **PKPbc 15 49 57.6 +0.7**
comp=Z,36nm,0.7s,SNR=17
PKSM Moragy 147.91 346 ⇑PKP2 **PKPbc 15 49 57.7 +0.7**
PKSM Moragy 147.91 346 ⇑*i*P **PKPbc 15 49 57.7 +0.7**
PKSM Moragy 147.91 346 ⇓*e*PKPdf **PKPdf 15 49 54.3 +0.3**
BBS Basel-Blauen 147.95 0 PKP2 **PKPbc 15 49 58.1 +0.9**
BBS Basel-Blauen 147.95 0 PKP **PKPbc 15 49 58.1 +0.9**
MOTA Moosalm 147.96 356 ⇓*e*PKPab **PKPbc 15 49 57.9 +0.5**
comp=Z,42nm,0.9s,SNR=14
LOR Lormes 147.97 5 *e*PKIKP **PKPdf 15 49 55.1 +1.0**
comp=Z,12nm,0.8s
LOR *e*R
comp=Z,132nm,19.8s
LOR Lormes 147.97 5 *e*PKPdf **PKPdf 15 49 55.1 +1.0**
WTTA Wattenberg 148.00 355 ⇓*i*PKIKP **PKPbc 15 49 57.8 +0.3**
comp=Z,58nm,0.6s,SNR=28
KBA Koelnbreinsper 148.01 353 ⇓*i*PKIKP **PKPbc 15 49 57.4 -0.1**
comp=Z,29nm,0.7s,SNR=9.9
LOMF Lomont 148.05 1 PKP2 **PKPbc 15 49 58.3 +0.8**
LOMF Lomont 148.05 1 PKP **PKPbc 15 49 58.3 +0.8**
LOMF Lomont 148.05 1 PKP **PKPbc 15 49 58.3 +0.8**
BEHE Becsehely 148.07 348 ⇓*e*PKPdf **PKPbc 15 49 58.1 +0.6**
ZALF Zalf 148.08 309 *e*P **PKPdf 15 49 56.2 +1.4**
DAVA Damuels 148.09 357 ⇓*i*PKIKP **PKPbc 15 49 58.6 +0.9**
comp=Z,52nm,0.8s,SNR=17
MFF Saint Martin d 148.10 11 *e*PKIKP **PKPdf 15 49 55.2 +0.9**
comp=Z,36nm,1.4s
MFF Saint Martin d 148.10 11 *e*PKIKP **PKPdf 15 49 55.2 +0.9**
MFF Saint Martin d 148.10 11 *e*PKPdf **PKPdf 15 49 55.2 +0.9**
SSF Saint Saulge 148.14 6 *e*PKIKP **PKPdf 15 49 55.1 +1.1**
comp=Z,9.2nm,0.7s
SSF Saint Saulge 148.14 6 *e*PKIKP **PKPdf 15 49 55.1 +1.1**
SSF Saint Saulge 148.14 6 *e*PKPdf **PKPdf 15 49 55.1 +1.1**
SOKA Soboth 148.17 351 ⇓*e*PKIKP **PKPbc 15 49 58.0 +0.1**
comp=Z,46nm,1.4s
PERS Pernice 148.20 351 *i* PKPdf **PKPdf 15 49 54.3 -0.2**
PERS *i* PKPbc **PKPbc 15 49 58.0 +0.1**
FETA Feichten 148.31 356 ⇓*e*PKIKP **PKPbc 15 49 59.1 +0.8**
comp=Z,30nm,0.9s,SNR=19
AVF Avril sur Loir 148.40 6 *e*PKIKP **PKPdf 15 49 55.5 +0.7**
AVF Avril sur Loir 148.40 6 *e*PKIKP **PKPdf 15 49 55.5 +0.7**
AVF Avril sur Loir 148.40 6 *e*PKPdf **PKPdf 15 49 55.5 +0.7**
OBKA Obir 148.41 351 ⇓*i*PKIKP **PKPbc 15 49 58.4 -0.1**
comp=Z,17nm,0.7s,SNR=14
MYKA Terra Mystica 148.42 352 ⇓*e*PKIKP **PKPbc 15 49 58.3 -0.2**
comp=Z,18nm,0.6s
ABTA Abfaltersbach 148.43 354 ⇓*i*PKIKP **PKPbc 15 49 58.7 +0.1**
comp=Z,43nm,0.6s,SNR=25
PVL Pavlikeni 148.44 335 P **PKPbc 15 49 59.7 +1.2**
TOTH TOTAH 148.55 310 *e*P **PKPdf 15 49 56.8 +1.2**
BUY Buyukada 148.58 328 *i* P **PKPbc 15 49 59.1 +0.1**
SMF Signal de Mont 148.59 5 *e*PKIKP **PKPdf 15 49 55.8 +0.6**
SMF Signal de Mont 148.59 5 *e*PKIKP **PKPdf 15 49 55.8 +0.6**
SMF Signal de Mont 148.59 5 *e*PKPdf **PKPdf 15 49 55.8 +0.6**
SALA Sala 148.62 309 *e*P **PKPbc 15 50 00.7 +1.1**
ASF Jabal al Asfar 148.74 308 PKPbc **PKPbc 15 50 00.9 +1.1**
ASF Jabal al Asfar 148.74 308 PKPbc **PKPbc 15 50 00.9 +1.1**
TCF Toulx Ste Croi 148.76 8 *e*PKIKP **PKPdf 15 49 56.2 +0.7**
TCF Toulx Ste Croi 148.76 8 *e*PKIKP **PKPdf 15 49 56.2 +0.7**
TCF Toulx Ste Croi 148.76 8 *e*PKPdf **PKPdf 15 49 56.2 +0.7**
CABF La Chapelle 148.77 2 *e*PKIKP **PKPdf 15 49 56.7 +1.1**
CABF La Chapelle 148.77 2 *e*PKIKP **PKPdf 15 49 56.7 +1.1**
CABF La Chapelle 148.77 2 *e*PKPdf **PKPdf 15 49 56.7 +1.1**
BRBR Barbar 148.88 310 *e*P **PKPbc 15 50 01.2 +0.9**
TUE Stuetta 148.92 358 *e*PKPbc **PKPbc 15 50 00.0 +0.1**
TUE LR LR
comp=Z,114nm,19.0s
MPEP Malo Peshtene 148.94 337 P **PKPbc 15 50 00.9 +1.1**
VOY Vojsko 148.97 352 *e*PKPdf **PKPdf 15 49 56.3 +0.4**
VOY *e* 15 49 59.7
JAVS Javornik 149.08 352 *i* PKPdf **PKPdf 15 49 55.6 -0.5**
JAVS *i* PKPbc **PKPbc 15 50 00.3 +0.1**
BOLV Bolvadin 149.10 323 *i* P **PKPbc 15 50 00.8 +0.2**
AGO Saint Agoulin 149.10 6 PKP **PKPbc 15 50 00.9 +0.7**
ERMK Ermenek 149.23 318 *i* P **PKPbc 15 50 01.9 +0.8**
BOJS Bojanci 149.28 350 *i* PKPdf **PKPdf 15 49 56.8 +0.6**
BOJS *i* PKPbc **PKiKP 15 50 01.3 -0.5**
TRI Trieste 149.31 352 *e*PKP2 **PKPbc 15 50 00.9 +0.2**
TRI Trieste 149.31 352 *e*PKPbc **PKPbc 15 50 00.9 +0.2**
PYM Petit Puy Mans 149.39 7 PKP **PKPbc 15 50 02.1 +1.1**
PGB Panagyurishte 149.47 336 P **PKPbc 15 50 02.1 +0.8**
MMAI Mount Meron Ar 149.47 310 PKPbc **PKPbc 15 50 03.0 +1.5**
MMAI Mount Meron Ar 149.47 310 PKPbc **PKPbc 15 50 03.0 +1.5**
comp=Z,20nm,0.8s,baz=46,slow=4.8,SNR=20
DIVS Divibare 149.52 343 P **PKPbc 15 50 02.0 +0.6**
SACV Santiago Islan 149.61 86 PFAKE 15 50 10.0 +2.5
SACV LR LR
comp=Z,201nm,19.0s
RJF Les Rejaudoux 149.63 9 *e*PKIKP **PKPdf 15 49 57.9 +1.0**
RJF *e*R
comp=Z,140nm,19.8s
RJF Les Rejaudoux 149.63 9 *e*PKIKP **PKPdf 15 49 57.9 +1.0**
RJF Les Rejaudoux 149.63 9 *e*PKPdf **PKPdf 15 49 57.9 +1.0**
GDZ Gediz 149.67 325 *i* P **PKPbc 15 50 02.0 0.0**
FRNF Fournols 149.69 7 PKP **PKPbc 15 50 02.9 +1.2**
VTS Vitosha 149.80 337 P **PKPbc 15 50 02.8 +0.6**
VTS Vitosha 149.80 337 ⇓PKIKP **PKPbc 15 50 01.3 -0.9**
VTS Vitosha 149.80 337 P **PKPbc 15 50 02.8 +0.6**
VTS Vitosha 149.80 337 ⇓*i*P **PKPbc 15 50 01.3 -0.9**
DURS Dursunbey 149.84 327 *i* P **PKPbc 15 50 02.3 0.0**
LPL La Plagne 149.88 2 *e*PKIKP **PKPdf 15 49 59.2 +1.7**
LPL La Plagne 149.88 2 *e*PKIKP **PKPdf 15 49 59.2 +1.7**
LPL La Plagne 149.88 2 *e*PKPdf **PKPdf 15 49 59.2 +1.7**
LPG La Plagne 149.90 2 *e*PKIKP **PKPdf 15 49 58.7 +1.0**
LPG La Plagne 149.90 2 *e*PKIKP **PKPdf 15 49 58.7 +1.0**
LPG La Plagne 149.90 2 *e*PKPdf **PKPdf 15 49 58.7 +1.0**
LBL Lubilhac 149.93 7 PKP **PKPbc 15 50 03.9 +1.6**
CSS Prodhromos 149.93 315 PFAKE 15 50 10.0 +1.7
CSS LR LR
comp=Z,72nm,19.0s
ISP Isparta 149.95 323 PFAKE 15 50 10.0 +1.7
ISP LR LR
comp=Z,76nm,19.0s
SSB Saint Sauveur 150.00 5 *e*PKPbc **PKPbc 15 50 02.9 +0.4**
SSB LR LR
comp=Z,140nm,20.0s
SSB Saint Sauveur 150.00 5 PKP **PKPbc 15 50 03.6 +1.1**
PGAV Gavieira, Arco 150.01 25 *e*PKPdf **PKPdf 15 49 58.5 +0.8**
PGAV Gavieira, Arco 150.01 25 *e*PKPbc **PKPbc 15 50 03.6 +0.9**
CAF Calviac 150.08 8 *e*PKIKP **PKPdf 15 49 58.8 +1.2**
CAF Calviac 150.08 8 *e*PKHKP **PKPdf 15 49 58.8 +1.2**
CAF Calviac 150.08 8 *e*PKPdf **PKPdf 15 49 58.8 +1.2**
GRN Grenoble 150.12 3 PKP **PKPbc 15 50 04.3 +1.5**
KHAL Karahalli 150.17 324 *i* P **PKPbc 15 50 02.6 -0.6**
BALY Balya 150.17 328 *i* P **PKPbc 15 50 01.6 -1.4**
GDM Grand'Maison 150.18 3 PKP **PKPbc 15 50 04.5 +1.5**
PCAB Cabril 150.32 24 *e*PKPdf **PKPdf 15 50 00.0 +1.9**
PCAB Cabril 150.32 24 *e*PKPbc **PKPbc 15 50 04.4 +1.1**
ORIF Oris-en-Rattie 150.45 3 *e*PKIKP **PKPdf 15 49 59.3 +1.0**
ORIF *e*R
comp=Z,130nm,19.8s
ORIF Oris-en-Rattie 150.45 3 *e*PKHKP **PKPdf 15 49 59.3 +1.0**
ORIF Oris-en-Rattie 150.45 3 *e*PKPdf **PKPdf 15 49 59.3 +1.0**
MMB Musomiste 150.46 335 P **PKPbc 15 50 04.2 +0.6**
KKB Krupnik 150.47 337 P **PKPbc 15 50 04.6 +1.0**
NVR Nevrokopi 150.60 335 P **PKPbc 15 50 04.3 +0.3**
KAVA Kavala 150.62 334 P **PKPbc 15 50 03.8 -0.2**
MBDF Montbardon 150.67 2 *e*PKIKP **PKPdf 15 49 59.9 +1.2**
MBDF Montbardon 150.67 2 *e*PKPdf **PKPdf 15 49 59.9 +1.2**
POLO Lamas de Olo 150.70 25 *e*PKPdf **PKPdf 15 50 00.5 +1.7**
POLO Lamas de Olo 150.70 25 *e*PKPbc **PKPbc 15 50 05.3 +1.0**
PBRG Braganca 150.74 23 *e*PKPbc **PKPbc 15 50 04.9 +0.6**
OG26 St.-Nazaire-De 150.76 4 PKP **PKPbc 15 50 06.0 +1.7**
PVRL Vila Real 150.81 25 *e*PKPbc **PKPbc 15 50 05.5 +1.0**
DNZL Cakiroluk 150.90 324 *i* P **PKPbc 15 50 06.0 +1.0**
SURF Saint Ours 150.92 2 PKP **PKPbc 15 50 06.6 +1.7**
AYVA Ayvalik 150.97 329 *i* P **PKPbc 15 50 05.1 +0.2**
SKO Skopje 150.98 339 *i* P **PKPbc 15 50 06.2 +1.3**
OG25 Le Caire 151.00 3 PKP **PKPbc 15 50 06.1 +1.2**
OSSF Osses 151.08 14 PKP **PKPbc 15 50 05.6 +0.6**
LASF Ste Croix 151.13 6 *e*PKIKP **PKPdf 15 50 00.0 +0.7**
LASF Ste Croix 151.13 6 *e*PKPdf **PKPdf 15 50 00.0 +0.7**
VAY Valandovo 151.14 337 *i* P **PKPbc 15 50 04.7 -0.5**
VLC Villacollemand 151.18 356 PFAKE 15 50 10.0 -3.0
VLC LR LR
comp=Z,104nm,19.0s
MVO Moncorvo 151.18 24 *e*PKPdf **PKPbc 15 50 01.8 +2.3**
MVO Moncorvo 151.18 24 *e*PKPbc **PKPbc 15 50 06.5 +1.1**
ORDF Ordiarp 151.19 13 PKP **PKPbc 15 50 05.7 +0.4**
PVIS Viseu 151.21 25 *e*PKPbc **PKPbc 15 50 06.5 +1.0**
LIA Limnos Island 151.22 332 P **PKPbc 15 50 05.7 +0.3**
SJPF Ste Jean 151.22 14 *e*PKIKP **PKPdf 15 50 01.0 +1.6**
SJPF Ste Jean 151.22 14 *e*PKIKP **PKPdf 15 50 01.0 +1.6**
SJPF Ste Jean 151.22 14 *e*PKPdf **PKPdf 15 50 01.0 +1.6**
EIL Elat 151.30 304 PKPbc **PKPbc 15 50 06.8 +0.9**
EIL Elat 151.30 304 PKPbc **PKPbc 15 50 06.8 +0.9**
comp=Z,23nm,0.8s,baz=343,slow=4.5,SNR=32
LARF Larrau 151.35 14 PKP **PKPbc 15 50 07.3 +1.6**
SMRF Simiane la Rot 151.37 3 *e*PKIKP **PKPdf 15 50 01.3 +1.6**
SMRF Simiane la Rot 151.37 3 *e*PKPdf **PKPdf 15 50 01.3 +1.6**
TOUF Mont Tournerai 151.40 1 PKP **PKPbc 15 50 06.4 +0.4**
AUTN L'Aution 151.42 1 PKP **PKPbc 15 50 06.9 +0.8**
SAOF Saorge 151.43 0 PKP **PKPbc 15 50 06.7 +0.3**
REYF Montagne du Re 151.45 13 PKP **PKPbc 15 50 06.8 +0.8**
LABF Labassere 151.57 12 PKP **PKPbc 15 50 07.0 +0.8**
ETSF Etsaut 151.58 13 *e*PKIKP **PKPdf 15 50 01.6 +1.5**
ETSF Etsaut 151.58 13 *e*PKIKP **PKPdf 15 50 01.6 +1.5**
ETSF Etsaut 151.58 13 *e*PKPdf **PKPdf 15 50 01.6 +1.5**
PMAR Madeira 151.60 48 PKPbc **PKPbc 15 50 08.3 +1.5**
MTE Manteigas 151.62 25 *e*PKPdf **PKPdf 15 50 02.5 +2.3**
MTE Manteigas 151.62 25 PKPbc **PKPbc 15 50 07.1 +0.6**
MTE Manteigas 151.62 25 *e*PKPbc **PKPbc 15 50 06.7 +0.2**
MTE LR LR
comp=Z,102nm,20.0s
EPF Esparros 151.64 12 *e*PKIKP **PKPdf 15 50 01.5 +1.4**
EPF Esparros 151.64 12 *e*PKIKP **PKPdf 15 50 01.5 +1.4**
EPF Esparros 151.64 12 *e*PKPdf **PKPdf 15 50 01.5 +1.4**
CALN Calern 151.65 2 PKP **PKPbc 15 50 07.6 +1.1**
MTLF Montolieu 151.66 9 *e*PKIKP **PKPdf 15 50 01.3 +1.2**
MTLF Montolieu 151.66 9 *e*PKIKP **PKPdf 15 50 01.3 +1.2**
MTLF Montolieu 151.66 9 *e*PKPdf **PKPdf 15 50 01.3 +1.2**
REVF Revere 151.67 1 PKP **PKPbc 15 50 07.3 +0.9**
VIEF Viey 151.72 12 PKP **PKPbc 15 50 07.9 +1.3**
PMPST Porto Santo, M 151.82 47 PKPbc **PKPbc 15 50 08.3 +1.3**
MLS Moulis 151.85 11 PKP **PKPbc 15 50 07.9 +1.1**
RESF Ens 151.85 12 PKP **PKPbc 15 50 08.6 +1.6**
BIA Bitola 151.86 338 *i* P **PKPbc 15 50 06.5 -0.5**
PTOM Tomar 151.90 27 *e*PKPdf **PKPdf 15 50 00.4 -0.1**
PTOM Tomar 151.90 27 *e*PKPbc **PKPbc 15 50 08.2 +1.2**
FNA Florina 152.05 338 P **PKPbc 15 50 07.5 +0.1**
LMR La Mourre 152.06 2 *e*PKIKP **PKPdf 15 50 01.4 +0.8**
comp=Z,38nm,1.1s
LMR La Mourre 152.06 2 *e*PKIKP **PKPdf 15 50 01.4 +0.8**
LMR La Mourre 152.06 2 *e*PKPdf **PKPdf 15 50 01.4 +0.8**
SALF Salau 152.06 11 PKP **PKPbc 15 50 08.6 +1.2**
TIR Tirane 152.07 341 PFAKE 15 50 10.0 +2.7
TIR LR LR
comp=Z,121nm,19.0s
LRDF Laroque-de-Fa 152.10 8 PKP **PKPbc 15 50 08.6 +1.2**
PCBR Castelo Branco 152.12 26 *e*PKPdf **PKPdf 15 50 02.6 +1.8**
PCBR Castelo Branco 152.12 26 *e*PKPbc **PKPbc 15 50 08.3 +0.8**
CARF Carcanieres 152.25 9 PKP **PKPbc 15 50 08.3 +0.4**
LIS Lisbon 152.29 30 *e*P **PKPdf 15 50 02.6 +1.4**
LIS AMS AMS 16

comp=Z,117nm,19.0s
CEL **Celeste** **156.08 344** PFAKE 15 50 20.0 +13
CEL LR LR
comp=Z,89nm,21.0s
RTC **Rabat Centre** **157.14 33** PFAKE 15 50 20.0 +12
RTC LR LR
comp=Z,142nm,19.0s
WDD **Wield Dalam** **158.69 345** PFAKE 15 50 20.0 +10
WDD LR LR
comp=Z,112nm,20.0s
KEST **Kesra** **159.63 357** PKP **PKPdf** **15 50 12.1 +1.0**
KEST PKPab **PKPab** **15 50 49.4 0.0**
KEST **Kesra** **159.63 357** PKP **PKPdf** **15 50 12.1 +1.0**
comp=Z,1.8nm,0.9s,baz=266,slow=4.8,SNR=4.5
KEST PKPab **PKPab** **15 50 49.4 0.0**
comp=Z,2.3nm,0.9s,baz=283,slow=7.0,SNR=4.8
DBIC **Dimbokro** **164.83 123** PKP **PKPdf** **15 50 16.3 -0.5**
DBIC PKPab **PKPab** **15 51 12.3 -0.5**
DBIC **Dimbokro** **164.83 123** PKP **PKPdf** **15 50 16.3 -0.5**
comp=Z,4.4nm,0.8s,baz=270,slow=23,SNR=3.7
DBIC PKPab **PKPab** **15 51 12.3 -0.5**
comp=Z,5.4nm,0.8s,baz=239,slow=3.1,SNR=4.4
TAM **Tamanrasset** **172.24 16** PFAKE 15 50 30.0 +8.4
TAM LR LR
comp=Z,130nm,19.0s
TOA0 **Torodi Ar. Sit** **173.62 109** *e*PKPdf **PKPdf** **15 50 21.7 -0.5**
TORD **Torodi Ar. Bea** **173.62 109** PKP **PKPdf** **15 50 21.1 -1.1**
TORD PKPab **PKPab** **15 51 50.4 -1.4**
TORD PP **PP** **15 55 41.3 -2.5**
TORD **Torodi Ar. Bea** **173.62 109** PKP **PKPdf** **15 50 21.1 -1.1**
comp=Z,4.2nm,0.9s,baz=331,slow=0.8,SNR=16
TORD PKPab **PKPab** **15 51 50.4 -1.4**
comp=Z,3.2nm,0.9s,baz=266,slow=4.3,SNR=8.0
TORD PP **PP** **15 55 41.3 -2.5**
comp=Z,0.8nm,0.9s,baz=229,slow=6.8,SNR=3.7

IDC 26 15:43:58.9±1.2, 9°34S×108°76E, h0km, mb3.9/10, mb1 3.9/11, mb1mx3.8/23, mbtmpb3.9/11, ML3.3/1, Error ellipse: s-maj=62.2km s-min=15.1km az=51.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**18.56**	**120**	P	Pn	15 48 18.0	+0.5
	0.1nm,0.3s,baz=307,slow=13,SNR=3.4						
WRA	**Warramunga Arr**	**26.86**	**116**	P	P	15 49 41.8	+0.2
	1.5nm,0.9s,baz=287,slow=11,SNR=8.9						
WRA				PcP	PcP	15 53 04.1	-0.2
	0.2nm,0.6s,baz=307,slow=2.1,SNR=4.3						
ASAR	**Alice Springs**	**27.94**	**124**	P	P	15 49 51.0	-0.2
	0.3nm,0.8s,baz=294,slow=8.4,SNR=7.7						
ASAR				PcP	PcP	15 53 06.8	-0.1
	0.4nm,0.7s,baz=304,slow=1.9,SNR=7.1						
CMAR	**Chiang Mai Arr**	**29.27**	**341**	P	P	15 50 04.0	+1.0
	0.3nm,0.5s,baz=173,slow=8.6,SNR=5.0						
STKA	**Stephens Creek**	**37.80**	**131**	P	P	15 51 16.8	-0.3
	1.6nm,0.8s,baz=329,slow=7.0,SNR=10						
SONM	**Songino Array**	**56.96**	**358**	P	P	15 53 46.7	+0.5
	0.4nm,0.5s,baz=179,slow=8.4,SNR=4.5						
MKAR	**Makanchi Array**	**60.67**	**339**	P	P	15 54 11.8	-0.1
	1.2nm,0.6s,baz=152,slow=7.5,SNR=19						
KURBB	**Kurchatov Arra**	**65.24**	**339**	P	P	15 54 42.0	-0.2
	1.1nm,0.8s,baz=157,slow=5.1,SNR=12						
ZALV	**Zalesovo Beam**	**66.23**	**345**	P	P	15 54 47.6	-0.9
	0.8nm,0.6s,baz=130,slow=4.6,SNR=4.0						
PETK	**Petropavlovsk-**	**74.80**	**28**	P	P	15 55 40.6	-0.4
	1.3nm,0.7s,baz=198,slow=2.1,SNR=4.5						
BRTR	**Keskin Array B**	**84.67**	**312**	P	P	15 56 35.2	+0.2
	1.7nm,1.0s,baz=114,slow=5.2,SNR=3.7						

ROM 26 15:47:52.8±0.1, 42°58N×13°22E, h10km, MI1.2/3, Error ellipse: s-maj=1.7km s-min=0.6km az=146.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.14**	**279**	Pg	Pg	15 47 56.6	+0.5
LNSS				Sg	Sg	15 47 59.0	+0.6
	181nm,0.2s						
NRCA	**Norcia**	**0.26**	**342**	Pg	Pb	15 47 59.2	-0.6
NRCA				Sg	Sb	15 48 03.3	-1.2
	28nm,0.1s						
TERO	**Teramo**	**0.28**	**82**	Pg	Pg	15 47 59.3	+0.7
TERO				Sg	Sb	15 48 03.9	-1.1
	12nm,0.2s						

IDC ***26*** *15:49:43.9±1.1, 30°84N×56°87E, h0km, mb3.6/10, mb1 3.8/11, mb1mx3.6/30, mbtmpb3.7/11, ML3.5/1, MS3.3/7, Ms1 3.3/7, ms1mx2.8/41, Error ellipse: s-maj=28.1km s-min=17.9km az=170.0*
THR ***26*** *15:49:46.4±0.4, 31°14N×56°84E, h15km±3km, ML4.2*
CSEM ***26*** *15:49:46.5±0.2, 31°12N×56°80E, h2km, ML4.3, Error ellipse: s-maj=5.8km s-min=4.5km az=144.0*
TEH ***26*** *15:49:47.3, 31°14N×56°83E, h5km, ML4.3*
ISC 26 15:49:47.4±0.8, 31°07N±0°04×56°85E±0°03, h15km±5km, n89, σ1°39/100, mb3.6/10, MS3.0/4, 1C-2D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBAF	**Bafgh**	**1.21**	**295**	*e*Sg	**Sg**	**15 50 23.8**	**-2.9**
IBAF				⇑*e*Pg	Pg	15 50 07.1	-3.7
IBAF				*e*		15 50 30.1	
	comp=Z,65μm,0.1s						
IMEH	**Mehriz**	**1.94**	**280**	⇓*e*Pn	**Pn**	**15 50 20.4**	**+0.4**
IMEH				*e*Sg	**Sn**	**15 50 46.5**	**+2.2**
IMEH				*e*		15 50 48.6	
	comp=Z,36μm,0.3s						
IMEH	**Mehriz**	**1.94**	**280**	⇓*e*Pn	**Pn**	**15 50 20.4**	**+0.4**
IMEH				*e*Sg	**Sn**	**15 50 46.5**	**+2.2**
ICHK	**Chekchek**	**2.39**	**300**	*e*Pn	**Pn**	**15 50 26.4**	**+0.3**
ICHK				*e*Sg	**Sb**	**15 51 00.6**	**+1.1**
ICHK				*e*		15 51 06.8	
	comp=Z,37μm,0.2s						
ICHK	**Chekchek**	**2.39**	**300**	*e*Pn	**Pn**	**15 50 26.4**	**+0.3**
ICHK				*e*Sg	**Sb**	**15 51 00.6**	**+1.1**
ITEG	**Tejag**	**2.43**	**41**	*e*Pn	**Pn**	**15 50 26.8**	**+0.1**
ITEG				*e*Sg	**Sb**	**15 51 01.5**	**+0.8**
ITEG				*e*		15 51 05.3	
	comp=Z,18μm,0.3s						
ITEG	**Tejag**	**2.43**	**41**	*e*Pn	**Pn**	**15 50 26.8**	**+0.1**
TABS	**Tabas**	**2.58**	**5**	*e*Pn	**Pn**	**15 50 28.7**	**0.0**
TABS				*e*Sg	**Sb**	**15 51 04.8**	**-0.1**
TABS				AML	AML	15 51 15.4	
	comp=N,1μm,0.8s						
TABS	**Tabas**	**2.58**	**5**	*e*Pn	**Pn**	**15 50 28.7**	**0.0**
TABS				*e*Sg	**Sb**	**15 51 04.8**	**-0.1**
ISAD	**Sadrabad**	**2.83**	**288**	*e*Pn	**Pn**	**15 50 33.1**	**+0.8**
ISAD				*e*		15 51 20.6	
	comp=Z,14μm,0.2s						
ISAD	**Sadrabad**	**2.83**	**288**	*e*Pn	**Pn**	**15 50 33.1**	**+0.8**
IDAH	**Dahanechah**	**3.06**	**56**	*e*Pn	**Pn**	**15 50 34.9**	**-0.5**
IDAH				*e*Sg	**Sg**	**15 51 22.5**	**-3.2**
IDAH				*e*		15 51 45.3	
	comp=Z,8μm,0.3s						
IDAH	**Dahanechah**	**3.06**	**56**	*e*Pn	**Pn**	**15 50 34.9**	**-0.5**
IBND	**Bandar-abas**	**3.62**	**184**	*e*Pn	**Pn**	**15 50 43.9**	**+1.0**
IBND				*e*Sg	**Sg**	**15 51 42.9**	**-0.8**
IBND				*e*		15 52 09.2	
	comp=Z,9μm,0.3s						
IBND	**Bandar-abas**	**3.62**	**184**	*e*Pn	**Pn**	**15 50 43.9**	**+1.0**
IBND				*e*Sg	**Sg**	**15 51 42.9**	**-0.8**
ISRV	**Sarvestan**	**3.65**	**243**	*e*Pn	**Pn**	**15 50 43.9**	**+0.3**
ISRV				*e*		15 51 56.1	
	comp=Z,7μm,0.5s						
ISRV	**Sarvestan**	**3.65**	**243**	*e*Pn	**Pn**	**15 50 43.9**	**+0.3**
BNDS	**Bandar-Abbas**	**3.71**	**189**	*e*Pn	**Pn**	**15 50 46.1**	**+1.8**
BNDS	**Bandar-Abbas**	**3.71**	**189**	*e*Pn	**Pn**	**15 50 46.1**	**+1.8**
NASN	**Na'in**	**3.84**	**298**	*e*Pn	**Pn**	**15 50 46.9**	**+0.7**
NASN				AML	AML	15 51 52.5	
	comp=N,344nm,0.5s						
NASN	**Na'in**	**3.84**	**298**	*e*Pn	**Pn**	**15 50 46.9**	**+0.7**
SHRT	**Shahrakht**	**3.88**	**48**	*e*Pn	**Pn**	**15 50 47.4**	**+0.9**
SHRT	**Shahrakht**	**3.88**	**48**	*e*Pn	**Pn**	**15 50 47.4**	**+0.9**
IZEF	**Zefreh**	**4.25**	**296**	*e*Pn	**Pn**	**15 50 52.0**	**+0.2**
IZEF	**Zefreh**	**4.25**	**296**	*e*Pn	**Pn**	**15 50 52.0**	**+0.2**
GHIR	**Ghir-Karzin**	**4.36**	**231**	*e*Pn	**Pn**	**15 50 54.8**	**+1.6**
GHIR				*e*Sg	**Sg**	**15 52 02.8**	**-4.7**
GHIR	**Ghir-Karzin**	**4.36**	**231**	*e*Pn	**Pn**	**15 50 54.8**	**+1.6**
GHIR				*e*Sg	**Sg**	**15 52 02.8**	**-4.7**
IANJ	**Anjilo**	**5.02**	**331**	*e*Pn	**Pn**	**15 51 01.5**	**-0.9**
IANJ				*e*		15 52 40.0	
	comp=Z,2μm,0.4s						
IANJ	**Anjilo**	**5.02**	**331**	*e*Pn	**Pn**	**15 51 01.5**	**-0.9**
IMOG	**Moghan**	**5.43**	**22**	*e*Pn	**Pn**	**15 51 09.0**	**+0.9**
IMOG	**Moghan**	**5.43**	**22**	*e*Pn	**Pn**	**15 51 09.0**	**+0.9**
ISHM	**Shahmirzad**	**5.58**	**329**	*e*		15 51 40.6	
	comp=Z,2μm,0.2s						
ISHM				*e*Pn	**Pn**	**15 51 08.7**	**-1.4**
IPAY	**Payeh**	**5.65**	**18**	*e*Pn	**Pn**	**15 51 12.3**	**+1.3**
IPAY				*e*		15 52 58.8	
	comp=Z,1μm,0.4s						
IPAY	**Payeh**	**5.65**	**18**	*e*Pn	**Pn**	**15 51 12.3**	**+1.3**
ISRO	**Mashad**	**5.66**	**22**	*e*Pn	**Pn**	**15 51 10.1**	**-0.9**
ISRO	**Mashad**	**5.66**	**22**	*e*Pn	**Pn**	**15 51 10.1**	**-0.9**
IFIR	**Firoozkooh**	**5.70**	**324**	*e*Pn	**Pn**	**15 51 11.6**	**-0.1**
IFIR				*e*		15 51 45.5	
	comp=Z,874nm,0.2s						
IFIR	**Firoozkooh**	**5.70**	**324**	*e*Pn	**Pn**	**15 51 11.6**	**-0.1**
IAKL	**Akhelmad**	**5.74**	**16**	*e*Pn	**Pn**	**15 51 12.2**	**-0.1**
GHVR	**GHOM**	**5.78**	**307**	*e*Pn	**Pn**	**15 51 13.7**	**+1.1**
GHVR	**GHOM**	**5.78**	**307**	*e*Pn	**Pn**	**15 51 13.7**	**+1.1**
IVRN	**Varamin**	**5.81**	**314**	*e*Pn	**Pn**	**15 51 14.0**	**+0.9**
IVRN	**Varamin**	**5.81**	**314**	*e*Pn	**Pn**	**15 51 14.0**	**+0.9**
IKRD	**Kardeh**	**5.85**	**13**	*e*Pn	**Pn**	**15 51 16.3**	**+2.5**
IKRD				*e*		15 53 12.3	
	comp=Z,620nm,0.2s						
IKRD	**Kardeh**	**5.85**	**13**	*e*Pn	**Pn**	**15 51 16.3**	**+2.5**
IMYA	**Miami**	**5.91**	**26**	*e*Pn	**Pn**	**15 51 15.1**	**+0.6**
IMYA	**Miami**	**5.91**	**26**	*e*Pn	**Pn**	**15 51 15.1**	**+0.6**
IDMV	**Damavand**	**6.04**	**319**	*e*Pn	**Pn**	**15 51 15.9**	**-0.4**
IDMV	**Damavand**	**6.04**	**319**	*e*Pn	**Pn**	**15 51 15.9**	**-0.4**
ISFR	**Sfrayin**	**6.04**	**9**	*e*Pn	**Pn**	**15 51 15.8**	**-0.6**
ISFR				*e*		15 51 46.8	
	comp=Z,1μm,0.2s						
ISFR	**Sfrayin**	**6.04**	**9**	*e*Pn	**Pn**	**15 51 15.8**	**-0.6**
DAMV	**Damavand**	**6.11**	**319**	*e*Pn	**Pn**	**15 51 17.6**	**+0.3**
DAMV	**Damavand**	**6.11**	**319**	*e*Pn	**Pn**	**15 51 17.6**	**+0.3**
IR3	**Iran Long-Peri**	**6.56**	**314**	*e*Pn	**Pn**	**15 51 22.2**	**-1.2**
IR3	**Iran Long-Peri**	**6.56**	**314**	*e*Pn	**Pn**	**15 51 22.2**	**-1.2**
IR5	**Iran Long-Peri**	**6.68**	**310**	*e*Pn	**Pn**	**15 51 26.2**	**+1.1**
IR5	**Iran Long-Peri**	**6.68**	**310**	*e*Pn	**Pn**	**15 51 26.2**	**+1.1**
ASAO	**Ashtian**	**6.71**	**303**	*e*Pn	**Pn**	**15 51 26.4**	**+0.9**
ASAO	**Ashtian**	**6.71**	**303**	*e*Pn	**Pn**	**15 51 26.4**	**+0.9**
IMHD	**Mahdasht**	**6.92**	**313**	*e*Pn	**Pn**	**15 51 26.9**	**-1.4**
IMHD				*e*		15 53 45.5	
	comp=Z,385nm,0.3s						
IMHD	**Mahdasht**	**6.92**	**313**	*e*Pn	**Pn**	**15 51 26.9**	**-1.4**
THKV	**Tehran--Karaj**	**6.94**	**316**	*e*Pn	**Pn**	**15 51 29.3**	**+0.6**
THKV	**Tehran--Karaj**	**6.94**	**316**	*e*Pn	**Pn**	**15 51 29.3**	**+0.6**
KBD	**Kabd**	**8.15**	**259**	*e*P	**Pn**	**15 51 45.1**	**0.0**
KBD	**Kabd**	**8.15**	**259**	*e*P	**Pn**	**15 51 45.1**	**0.0**
RDF	**Al-Radifah**	**8.34**	**257**	*e*P	**Pn**	**15 51 48.4**	**+0.6**
RDF				AML	AML	15 53 19.1	
	comp=Z,7.5nm,0.6s						
RDF	**Al-Radifah**	**8.34**	**257**	*e*P	**Pn**	**15 51 48.4**	**+0.6**
NAY	**Al-Naaiem**	**8.51**	**260**	*e*P	**Pn**	**15 51 50.3**	**+0.2**
NAY				AML	AML	15 53 23.2	
	comp=Z,4.4nm,0.6s						
NAY	**Al-Naaiem**	**8.51**	**260**	*e*P	**Pn**	**15 51 50.3**	**+0.2**
IBDR	**Badra**	**9.48**	**285**	*e*Pn	**Pn**	**15 52 05.8**	**+2.4**
IBDR				*e*Sn	**Sn**	**15 53 53.6**	**+3.9**
BHD	**Baghdad**	**10.79**	**285**	*e*Pn	Pn	15 52 26.8	+5.5
BHD				*e*Sn	Sn	15 54 30.0	+8.2
ASF	**Jabal al Asfar**	**17.03**	**279**	P	**Pn**	**15 53 43.1**	**-2.0**
MMAI	**Mount Meron Ar**	**18.28**	**282**	P	**P**	**15 54 03.5**	**+2.9**
	comp=Z,0.3nm,0.3s,baz=116,slow=13,SNR=2.4						
MMAI				LR	LR	16 02 23.6	
	comp=Z,96nm,18.4s,baz=100,slow=41						
EIL	**Elat**	**18.95**	**271**	P	**P**	**15 54 08.5**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=65,slow=12,SNR=5.3						
EIL				LR	LR	16 02 50.2	
	comp=Z,123nm,20.0s,baz=269,slow=41						
AKTO	**Aktyubinsk**	**19.36**	**2**	P	**P**	**15 54 10.7**	**-1.6**
	comp=Z,0.3nm,0.3s,baz=174,slow=11,SNR=7.4						
AKTO				LR	LR	16 03 00.2	
	comp=Z,118nm,18.9s,baz=275,slow=41						
BRTR	**Keskin Array B**	**20.75**	**301**	P	**P**	**15 54 28.4**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=125,slow=11,SNR=7.7						
ATD	**Arta Tunnel**	**23.37**	**217**	LR	LR	16 04 53.7	
	comp=Z,47nm,18.9s,baz=28,slow=39						
BVAR	**Borovoye Array**	**24.05**	**20**	P	**P**	**15 55 02.4**	**+0.7**
	comp=Z,0.8nm,0.6s,baz=193,slow=6.1,SNR=4.3						
BVAR				LR	LR	16 05 42.9	
	comp=Z,63nm,19.0s,baz=243,slow=40						
MKAR	**Makanchi Array**	**25.10**	**44**	P	**P**	**15 55 12.4**	**+1.0**
	comp=Z,0.3nm,0.5s,baz=226,slow=7.9,SNR=2.9						
KURBB	**Kurchatov Arra**	**25.34**	**33**	P	**P**	**15 55 14.3**	**+0.8**
	comp=Z,1.0nm,0.7s,baz=235,slow=8.9,SNR=8.0						
ZALV	**Zalesovo Beam**	**30.43**	**33**	P	**P**	**15 55 59.2**	**+0.2**
	comp=Z,1.1nm,0.6s,baz=231,slow=9.4,SNR=5.7						
GTA	**Gaotai**	**35.79**	**65**	*e*P	**P**	**15 56 47.3**	**+1.2**
GTA				pP	**pP**	**15 56 52.0**	**+1.2**
GTA				sP	**sP**	**15 56 54.3**	**+1.5**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.6s						
FINES	**FINESS Array B**	**36.42**	**336**	P	**P**	**15 56 51.0**	**-0.1**
	comp=Z,1.4nm,0.8s,baz=136,slow=12,SNR=3.9						
GERES	**GERESS Array B**	**36.95**	**311**	P	**P**	**15 56 56.1**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=112,slow=10,SNR=7.9						
NOA	**NORSAR Array B**	**42.21**	**329**	LR	LR	16 17 05.0	
	comp=Z,18nm,18.8s,baz=285,slow=39						
ARCES	**ARCESS Array B**	**42.40**	**344**	LR	LR	16 17 08.8	
	comp=Z,31nm,21.7s,baz=316,slow=39						
TORD	**Torodi Ar. Bea**	**53.58**	**263**	P	**P**	**15 59 06.7**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=61,slow=8.6,SNR=7.0						
WRA	**Warramunga Arr**	**89.96**	**113**	P	**P**	**16 02 44.8**	**-1.7**
	comp=Z,0.2nm,0.7s,baz=316,slow=4.1,SNR=3.3						
ASAR	**Alice Springs**	**91.65**	**117**	P	**P**	**16 02 52.6**	**-1.6**
	comp=Z,0.2nm,0.7s,baz=312,slow=4.8,SNR=4.5						

MAN 26 15:53:44.1, 11°07N×125°51E, h14km, mb4.5, ML3.4, MS3.2, 1C-1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	**Palo**	**0.53**	**281**	⇓*e*P	Pg	15 53 54.5	0.0
OCLP	**Ormoc**	**0.89**	**269**	*e*P	Pn	15 54 01.8	-0.3
OCLP				*e*S	Sg	15 54 08.8	-4.1
MSLP	**Maasin**	**1.13**	**215**	*e*P	Pb	15 54 03.3	-2.0
MSLP				*e*S	Sb	15 54 15.0	-4.9
TBP	**Tagbilaran**	**2.12**	**230**	*e*P	Pn	15 54 20.3	+1.2
RCP	**Roxas**	**2.76**	**280**	⇓*e*P	Pn	15 54 28.5	+0.7

WEL 26 16:10:59.3±0.8, 35°69S×179°65E, h33km, ML3.6/6, 1D, Error ellipse: s-maj=8.0km s-min=5.3km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	**2.16**	**210**	P*	Pn	16 11 32.6	-0.3
MXZ				S*	Sn	16 11 59.6	+1.0
PUZ	**Puketiti**	**2.63**	**205**	PN	Pn	16 11 39.2	-0.2
PUZ				SN	Sn	16 12 08.7	-1.5
PUZ				AML	AML	16 12 26.0	
CNGZ	**Carnagh Statio**	**3.02**	**202**	PN	Pn	16 11 44.8	0.0
MWZ	**Matawai**	**3.14**	**212**	P*	Pn	16 11 46.3	-0.1
MWZ				AML	AML	16 12 42.3	
URZ	**Urewera**	**3.27**	**218**	⇓P*	Pn	16 11 48.0	-0.3
URZ				S*	Sn	16 12 25.9	-0.2
OPRZ	**Ohinepanea**	**3.29**	**228**	P*	Pn	16 11 49.0	+0.6
PRGZ	**Paritu Road**	**3.52**	**203**	*e*PN	Pn	16 11 50.4	-1.3
KNZ	**Kokohu**	**3.68**	**205**	*e*PN	Pn	16 11 52.6	-1.2
RAHZ	**Arahi**	**3.81**	**212**	PN	Pn	16 11 55.6	-0.2
MKAZ	**Moumakai**	**3.88**	**247**	PN	Pn	16 11 58.4	+1.8
TOZ	**Tahuroa Road**	**3.90**	**237**	P*	Pn	16 11 57.4	+0.5
NMHZ	**Naumai**	**4.08**	**213**	*e*PN	Pn	16 11 59.0	-0.5
BKZ	**Black Stump Fm**	**4.28**	**215**	*e*P*	Pn	16 12 00.5	-1.8
KAHZ	**Kahuranaki**	**4.65**	**207**	*e*PN	Pn	16 12 04.4	-2.9
TSZ	**Takapari Road**	**5.25**	**213**	*e*PN	Pn	16 12 12.1	-3.4
BFZ	**Birch Farm**	**5.66**	**207**	*e*PN	Pn	16 12 17.0	-4.1
MRZ	**Mangatainoka R**	**5.91**	**212**	*e*PN	Pn	16 12 20.9	-3.6

IDC 26 16:12:51.9±7.7, 6°70S×128°07E, h417km±108km, mb2.9/3, mb1 3.0/6, mb1mx2.7/20, mbtmpb2.8/6, Error ellipse: s-maj=85.9km s-min=43.1km az=53.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.58**	**192**	P	P	16 15 26.3	-0.3
	0.4nm,0.3s,baz=27,slow=9.4,SNR=19						
FITZ				S	S	16 17 42.1	+7.7
	0.1nm,0.3s,baz=288,slow=20,SNR=2.2						
WRA	**Warramunga Arr**	**14.50**	**156**	P	P	16 15 57.9	-0.7
	0.3nm,0.3s,baz=333,slow=13,SNR=26						
WRA				S	S	16 18 34.0	+1.0
	0.1nm,0.3s,baz=339,slow=20,SNR=7.4						
ASAR	**Alice Springs**	**17.78**	**162**	P	P	16 16 33.9	+0.3
	0.5nm,0.3s,baz=336,slow=8.2,SNR=57						
ASAR				S	S	16 19 40.7	+4.0
	0.1nm,0.3s,baz=342,slow=23,SNR=11						
SONM	**Songino Array**	**57.57**	**343**	P	P	16 22 00.7	+0.6
	0.2nm,0.5s,baz=152,slow=6.5,SNR=3.0						
MKAR	**Makanchi Array**	**66.94**	**328**	P	P	16 23 01.4	+0.1
	0.5nm,0.5s,baz=123,slow=7.7,SNR=13						
ZALV	**Zalesovo Beam**	**70.48**	**335**	P	P	16 23 22.0	-0.7
	0.4nm,0.5s,baz=118,slow=5.7,SNR=3.1						

IDC 26 16:26:23.7±1.7, 0°57N×125°80E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/22, mbtmpb3.6/4, Error ellipse: s-maj=160.7km s-min=23.9km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.04**	**158**	P	P	16 31 19.8	-0.4
	1.0nm,0.4s,baz=337,slow=11,SNR=42						
ASAR	**Alice Springs**	**25.35**	**162**	P	P	16 31 52.4	-0.2
	0.7nm,0.4s,baz=341,slow=10,SNR=59						
STKA	**Stephens Creek**	**35.57**	**157**	P	P	16 33 23.4	+0.5
	0.5nm,0.4s,baz=350,slow=11,SNR=5.2						
MKAR	**Makanchi Array**	**59.63**	**327**	P	P	16 36 29.6	-0.1
	0.1nm,0.3s,baz=119,slow=8.4,SNR=6.0						

ISCJB ***26*** *16:36:09.4±0.5, 8°88S±0°09×124°2E±0°1, h74km, mb3.8/9, Error ellipse: s-maj=22.3km s-min=7.9km az=153.3*
IDC ***26*** *16:36:14.3±3.3, 8°87S×124°17E, h100km±31km, mb3.6/6/9, mb1 3.7/11, mb1mx3.6/21, mbtmpb3.6/11, Error ellipse: s-maj=34.1km s-min=13.7km az=75.0*
ISC 26 16:36:11.3±0.6, 8°9S±0°1×124°2E±0°2, h74km, n23, σ0°79/22, mb3.9/9, Timor region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**5.87**	**311**	P	Pn	16 37 39.7	+4.0
	1.0nm,0.3s,baz=178,slow=5.7,SNR=5.0						
FITZ	**Fitzroy Crossi**	**9.26**	**172**	P	**Pn**	**16 38 21.1**	**-1.0**
	2.2nm,0.3s,baz=3.2,slow=9.9,SNR=59						
FITZ				S	Sn	16 39 56.2	-8.5
	baz=246,slow=20						
WRA	**Warramunga Arr**	**14.72**	**139**	P	**Pn**	**16 39 34.5**	**-1.2**
	0.6nm,0.3s,baz=323,slow=14,SNR=41						
WRA				S	Sn	16 42 06.1	-12
	1.7nm,0.3s,baz=308,slow=24,SNR=15						
ASAR	**Alice Springs**	**17.38**	**149**	P	**P**	**16 40 09.7**	**+0.3**
	0.7nm,0.3s,baz=327,slow=11,SNR=42						
ASAR				S	Sn	16 43 08.6	-14
	0.2nm,0.3s,baz=311,slow=21,SNR=7.6						
NWAO	**Narrogin (SRO)**	**24.77**	**194**	P	**P**	**16 41 25.6**	**-0.6**
	19nm,1.1s,baz=34,slow=9.2,SNR=8.2						
STKA	**Stephens Creek**	**28.00**	**147**	P	**P**	**16 41 56.9**	**+1.6**
	1.5nm,0.7s,baz=330,slow=8.1,SNR=3.6						
CMAR	**Chiang Mai Arr**	**36.88**	**318**	P	**P**	**16 43 13.7**	**+0.7**
	0.8nm,0.8s,baz=144,slow=6.7,SNR=5.6						
MJAR	**Matsushiro Arr**	**47.07**	**15**	P	**P**	**16 44 35.5**	**-0.3**
	1.3nm,0.8s,baz=190,slow=8.7,SNR=6.5						
ODAN	**Odare**	**50.38**	**316**	*e*P	**P**	**16 45 01.4**	**-0.2**
	12nm,0.9s						
TAPN	**Taplejung**	**50.48**	**317**	*e*P	**P**	**16 45 02.3**	**-0.1**
	7.2nm,0.6s						
RAMN	**Ramite**	**50.98**	**315**	*e*P	**P**	**16 45 06.3**	**+0.1**
	17nm,0.6s						
GUN	**Gumba**	**52.08**	**316**	*e*P	**P**	**16 45 14.2**	**-0.3**
	16nm,0.6s						
PKI	**Pulchoki**	**52.20**	**315**	*e*P	**P**	**16 45 14.8**	**-0.5**
	9.1nm,0.4s						
USRK	**Ussuriysk Arra**	**53.31**	**7**	P	**P**	**16 45 23.3**	**+0.6**
	0.5nm,0.4s,baz=181,slow=8.1,SNR=5.1						
KOLN	**Koldanda**	**53.59**	**314**	*e*P	**P**	**16 45 24.8**	**-0.6**
	9.6nm,0.7s						
DANN	**Dangsing**	**53.83**	**315**	*e*P	**P**	**16 45 26.9**	**-0.3**
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Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKT	**Skwentna**	**0.43**	**277**	P	**Pn**	**16 48 31.3**	**-0.7**
SUA	**Susitna One**	**0.47**	**186**	P	**Pn**	**16 48 32.0**	**-0.5**
STLK	**Strandline Lak**	**0.72**	**233**	P	**Pn**	**16 48 34.4**	**-0.6**
PMR	**Palmer**	**0.79**	**115**	P	**Pn**	**16 48 35.3**	**-0.4**
PMR				S	**Sn**	**16 48 47.2**	**-0.2**
PMR	**Palmer**	**0.79**	**115**	P	**Pn**	**16 48 35.3**	**-0.4**
PMR				S	**Sn**	**16 48 47.2**	**-0.2**
SPU	**Mount Spurr**	**1.01**	**223**	P	**Pn**	**16 48 38.0**	**-0.5**
BGL	**Barrier Glacie**	**1.07**	**232**	P	**Pn**	**16 48 39.0**	**-0.3**
SML	**Sawmill**	**1.10**	**95**	*eP*	**Pn**	**16 48 39.5**	**-0.1**
SML				S	**Sn**	**16 48 54.7**	**+0.5**
SML	**Sawmill**	**1.10**	**95**	*ePn*	**Pn**	**16 48 39.5**	**-0.1**
SML				*eSn*	**Sn**	**16 48 53.4**	**-0.8**
SML				S	**Sn**	**16 48 54.7**	**+0.5**
HUR	**Hurricane**	**1.15**	**23**	P	**Pn**	**16 48 40.9**	**+0.7**
PPLA	**Purkeypile**	**1.21**	**324**	P	**Pn**	**16 48 41.0**	**-0.1**
PPLA				S	**Sn**	**16 48 57.0**	**0.0**
NKA	**Nikishka**	**1.23**	**194**	P	**Pn**	**16 48 42.7**	**+1.5**
PTE	**Portage**	**1.32**	**143**	P	**Pn**	**16 48 42.0**	**-0.3**
SLKM	**Skilak Lake**	**1.44**	**172**	P	**Pn**	**16 48 43.4**	**-0.7**
SLKM	**Skilak Lake**	**1.44**	**172**	P	**Pn**	**16 48 43.4**	**-0.7**
BGRM	**Barrier Glacie**	**1.46**	**217**	P	**Pn**	**16 48 43.9**	**-0.5**
CAST	**Castle Rocks**	**1.64**	**337**	P	**Pn**	**16 48 46.8**	**+0.1**
CAST				S	**Sn**	**16 49 05.8**	**-1.1**
DFR	**Drift River**	**1.67**	**217**	P	**Pn**	**16 48 47.1**	**-0.1**
RND	**Reindeer**	**1.69**	**28**	P	**Pn**	**16 48 48.0**	**+0.5**
RND	**Reindeer**	**1.69**	**28**	P	**Pn**	**16 48 48.0**	**+0.5**
RDJH	**Redoubt Jeurge**	**1.71**	**219**	P	**Pn**	**16 48 47.7**	**+0.1**
RDJH				S	**Sn**	**16 49 08.4**	**-0.2**
NCT	**North Crescent**	**1.77**	**220**	P	**Pn**	**16 48 48.5**	**+0.1**
RSO	**Redoubt South**	**1.80**	**216**	*ePg*	**Pn**	**16 48 49.1**	**+0.2**
RDWB	**Redoubt West**	**1.80**	**217**	P	**Pn**	**16 48 48.9**	**-0.1**
RDWB				S	**Sn**	**16 49 11.2**	**+0.3**
DHY	**Denali Highway**	**1.90**	**51**	P	**Pn**	**16 48 50.6**	**+0.3**
CHUM	**Lake Minchumin**	**2.11**	**339**	P	**Pn**	**16 48 53.2**	**+0.3**
ILIM	**Iliamna**	**2.17**	**212**	P	**Pn**	**16 48 53.8**	**-0.1**
BRLK	**Bradley Lake**	**2.18**	**183**	P	**Pn**	**16 48 53.2**	**-0.7**
VLZ	**Valdez**	**2.21**	**109**	P	**Pn**	**16 48 53.4**	**-0.9**
ILW	**Iliamna West**	**2.24**	**214**	P	**Pn**	**16 48 55.1**	**+0.2**
KLU	**Klutina**	**2.29**	**99**	P	**Pn**	**16 48 55.1**	**-0.4**
BWN	**Browne**	**2.31**	**13**	P	**Pn**	**16 48 56.6**	**+0.9**
CNPM	**China Poot**	**2.43**	**187**	P	**Pn**	**16 48 57.6**	**+0.3**
DIV	**Divide**	**2.46**	**107**	P	**Pn**	**16 48 57.1**	**-0.7**
SVW2	**Sparrevohn**	**2.52**	**253**	P	**Pn**	**16 48 57.9**	**-0.6**
HARP	**HAARP**	**2.61**	**77**	P	**Pn**	**16 49 00.8**	**+1.0**
OPT	**Oil Point**	**2.62**	**210**	P	**Pn**	**16 49 00.2**	**+0.4**
PAX	**Paxson**	**2.62**	**64**	P	**Pn**	**16 49 00.8**	**+0.8**
PAX	**Paxson**	**2.62**	**64**	P	**Pn**	**16 49 00.8**	**+0.8**
TT01	**Tatalina**	**2.69**	**294**	P	**Pn**	**16 49 00.2**	**-0.6**
EYAK	**Cordova Ski Ar**	**2.74**	**118**	P	**Pn**	**16 49 02.1**	**+0.6**
NEA	**Nenana**	**2.75**	**14**	P	**Pn**	**16 49 01.5**	**-0.1**
WRH	**Wood River Hil**	**2.80**	**23**	P	**Pn**	**16 49 02.6**	**+0.3**
AUNW	**Augustine NWes**	**2.92**	**210**	P	**Pn**	**16 49 04.6**	**+0.6**
AUW	**Augustine West**	**2.92**	**210**	P	**Pn**	**16 49 04.7**	**+0.7**
SGAM	**Sherman Glacie**	**2.99**	**116**	P	**Pn**	**16 49 03.4**	**-1.5**
HDA	**Harding Lake**	**2.99**	**32**	P	**Pn**	**16 49 05.6**	**+0.6**
CCB	**Clear Creek Bu**	**3.01**	**24**	P	**Pn**	**16 49 05.3**	**+0.1**
MLY	**Manley**	**3.11**	**359**	P	**Pn**	**16 49 06.5**	**-0.2**
COLA	**College**	**3.21**	**22**	P	**Pn**	**16 49 08.2**	**+0.4**
COLA	**College**	**3.21**	**22**	P	**Pn**	**16 49 08.2**	**+0.4**
MDM	**Murphy Dome**	**3.23**	**18**	P	**Pn**	**16 49 08.4**	**+0.3**
MID	**Middleton Isla**	**3.28**	**138**	P	**Pn**	**16 49 08.7**	**-0.1**
MID	**Middleton Isla**	**3.28**	**138**	P	**Pn**	**16 49 08.7**	**-0.1**
GLB	**Gilahina Butte**	**3.29**	**96**	P	**Pn**	**16 49 08.7**	**-0.4**
MCNL	**McNeil River**	**3.31**	**215**	P	**Pn**	**16 49 08.2**	**-1.0**
ILAR	**Eielson Array**	**3.31**	**29**	P	**Pn**	**16 49 09.4**	**+0.1**
ILAR				S	**Sn**	**16 49 46.6**	**-0.9**
ILAR	**Eielson Array**	**3.31**	**29**	P	**Pn**	**16 49 09.4**	**+0.1**
	34nm,0.3s,baz=214,slow=14,SNR=677						
ILAR				S	**Sn**	**16 49 46.6**	**-0.9**
	75nm,0.3s,baz=216,slow=23,SNR=7.5						
IL1	**Eielson Array**	**3.31**	**29**	P	**Pn**	**16 49 09.4**	**+0.1**
MENT	**Mentasta**	**3.37**	**69**	*ePn*	**Pn**	**16 49 10.3**	**+0.2**
GLM	**Gilmore Dome**	**3.40**	**24**	P	**Pn**	**16 49 11.0**	**+0.5**
DOT	**Dot Lake**	**3.48**	**57**	P	**Pn**	**16 49 12.3**	**+0.7**
VRDI	**Verde Repeater**	**3.50**	**98**	P	**Pn**	**16 49 11.1**	**-1.0**
NICHA	**Nichawak Mount**	**3.66**	**115**	P	**Pn**	**16 49 14.4**	**+0.4**
MCARA	**McCarthy VSAT**	**3.67**	**95**	P	**Pn**	**16 49 14.4**	**+0.2**
BERG	**Berg Lake**	**3.69**	**112**	P	**Pn**	**16 49 12.9**	**-1.6**
KHIT	**Khitrov Hills**	**3.87**	**109**	P	**Pn**	**16 49 16.0**	**-1.1**
GRIN	**Grindle Hills**	**3.92**	**112**	P	**Pn**	**16 49 16.8**	**-0.8**
PTPK	**Patty Peak**	**3.98**	**97**	P	**Pn**	**16 49 18.4**	**-0.1**
GCSA	**Galena City Sc**	**3.99**	**318**	P	**Pn**	**16 49 18.8**	**+0.3**
BALM	**Baldy**	**4.07**	**99**	P	**Pn**	**16 49 18.8**	**-1.0**
BALM	**Baldy**	**4.07**	**99**	P	**Pn**	**16 49 18.8**	**-1.0**
KIAG	**Kiagna River**	**4.10**	**101**	P	**Pn**	**16 49 19.4**	**-0.8**
KULT	**Kultieth River**	**4.20**	**110**	P	**Pn**	**16 49 20.8**	**-0.7**
BARK	**Barkley Ridge**	**4.23**	**108**	P	**Pn**	**16 49 21.6**	**-0.3**
BCA3	**Beaver Creek A**	**4.26**	**71**	P	**Pn**	**16 49 22.4**	**+0.1**
KAKN	**Katmai Knife C**	**4.26**	**213**	P	**Pn**	**16 49 22.2**	**-0.2**
KDAK	**Kodiak Island**	**4.28**	**194**	P	**Pn**	**16 49 22.6**	**+0.2**
KDAK	**Kodiak Island**	**4.28**	**194**	P	**Pn**	**16 49 21.4**	**-1.0**
	6.3nm,0.3s,baz=22,slow=9.5,SNR=46						
KDAK				S	**Sn**	**16 50 07.7**	**-3.3**
	25nm,0.3s,baz=359,slow=11,SNR=4						
IM3	**Indian Mountai**	**4.29**	**343**	P	**Pn**	**16 49 22.8**	**+0.1**
KABU	**Katmai Buttres**	**4.35**	**214**	P	**Pn**	**16 49 23.4**	**-0.1**
BARN	**Barnard Glacie**	**4.39**	**98**	P	**Pn**	**16 49 24.0**	**-0.1**
GRNC	**Granite Creek**	**4.44**	**102**	P	**Pn**	**16 49 24.7**	**-0.3**
MESA	**MESA**	**4.57**	**109**	P	**Pn**	**16 49 26.4**	**-0.2**
OHAK	**Old Harbor**	**4.91**	**197**	P	**Pn**	**16 49 29.9**	**-1.2**
EGAK	**Eagle**	**5.13**	**52**	*ePn*	**Pn**	**16 49 34.0**	**-0.1**
	161nm,0.5s						
COLD	**Coldfoot**	**5.32**	**2**	P	**Pn**	**16 49 37.5**	**+0.8**
DAWY	**Dawson**	**5.55**	**62**	P	**Pn**	**16 49 40.1**	**+0.2**
PNL	**Peninsula**	**5.95**	**107**	P	**Pn**	**16 49 44.9**	**-0.4**
PNL				*ePn*	Pn	16 49 45.9	+0.5
PNL				*eSn*	**Sn**	**16 50 51.3**	**-0.7**
BM3	**Burnt Mountain**	**6.08**	**22**	P	**Pn**	**16 49 47.4**	**+0.2**
ANNW	**Aniakchak Nort**	**6.30**	**221**	P	**Pn**	**16 49 50.3**	**+0.2**
HYT	**Haines Junctio**	**6.41**	**94**	P	**Pn**	**16 49 51.0**	**-0.6**
CHGN	**Chignik**	**6.92**	**219**	*ePn*	**Pn**	**16 49 58.7**	**+0.2**
WHY	**Whitehorse**	**7.69**	**93**	P	**Pn**	**16 50 08.5**	**-0.7**
SKAG	**Skagway**	**7.90**	**101**	*ePn*	**Pn**	**16 50 11.5**	**-0.5**
	16nm,0.4s						
SDPT	**Sand Point**	**8.35**	**222**	*ePn*	**Pn**	**16 50 17.3**	**-0.8**
	35nm,0.7s						
TNA	**Tin City**	**8.47**	**303**	P	**Pn**	**16 50 20.1**	**+0.4**
BESE	**Bessie Mountai**	**8.53**	**106**	P	**Pn**	**16 50 19.6**	**-1.0**
INK	**Inuvik**	**9.61**	**41**	P	**Pn**	**16 50 34.4**	**-0.8**
INK	**Inuvik**	**9.61**	**41**	P	**Pn**	**16 50 35.1**	**0.0**
	0.8nm,0.3s,baz=228,slow=16,SNR=12						
INK				S	**Sn**	**16 52 18.6**	**-2.6**
	0.2nm,0.3s,baz=240,slow=16,SNR=2.4						
INK				LR	LR	16 54 17.1	
	comp=Z,123nm,19.1s,baz=220,slow=37						
FALS	**False Pass**	**9.75**	**229**	*ePn*	**Pn**	**16 50 37.6**	**+0.5**
	34nm,0.5s						
GAMB	**Gambell**	**9.79**	**290**	*ePn*	**Pn**	**16 50 38.7**	**+1.0**
DLBC	**Dease Lake**	**10.82**	**100**	P	**Pn**	**16 50 51.2**	**-0.7**
DLBC	**Dease Lake**	**10.82**	**100**	P	**Pn**	**16 50 51.2**	**-0.7**
	0.6nm,0.3s,baz=290,slow=13,SNR=5.5						
DLBC				LR	LR	16 55 14.0	
	comp=Z,154nm,21.2s,baz=135,slow=38						
AKUT	**Akutan**	**11.17**	**232**	*ePn*	**Pn**	**16 50 57.1**	**+0.5**
UNV	**Unalaska Valle**	**11.67**	**233**	*ePn*	**Pn**	**16 51 03.6**	**+0.2**
YKW3	**Yellowknife Ar**	**16.65**	**72**	*ePn*	**Pn**	**16 52 08.9**	**+0.3**
YKA	**Yellowknife Ar**	**16.68**	**72**	P	**Pn**	**16 52 08.5**	**-0.3**
YKA	**Yellowknife Ar**	**16.68**	**72**	P	**Pn**	**16 52 08.5**	**-0.3**
	0.3nm,0.3s,baz=284,slow=10.0,SNR=5.4						
BILL	**Bilibino**	**18.87**	**307**	P	**P**	**16 52 34.0**	**-0.2**
BILL				pmax	pmax		
	comp=Z,32nm,2.3s						
FX1	**Attu Island--F**	**21.23**	**261**	P	**P**	**16 52 59.2**	**-0.7**
FX1	**Attu Island--F**	**21.23**	**261**	P	**P**	**16 52 59.2**	**-0.7**
	comp=Z,1.8nm,0.3s,baz=229,slow=13,SNR=6.0						
RES	**Resolute Bay**	**23.05**	**34**	P	**P**	**16 53 19.1**	**+0.1**
RES	**Resolute Bay**	**23.05**	**34**	P	**P**	**16 53 19.1**	**+0.1**
	comp=Z,3.4nm,0.7s,baz=88,slow=16,SNR=10						
EGMT	**Eagleton**	**26.73**	**102**	*eP*	**P**	**16 53 51.8**	**-1.0**
	comp=Z,3.8nm,0.7s						
PETK	**Petropavlovsk-**	**28.38**	**276**	P	P	16 54 10.6	+3.3
PETK	**Petropavlovsk-**	**28.38**	**276**	P	P	16 54 10.6	+3.3
PETK	**Petropavlovsk-**	**28.38**	**276**	P	P	16 54 10.6	+3.3
	comp=Z,1.7nm,0.9s,baz=70,slow=12,SNR=2.8						
PETK				LR	LR	17 04 29.8	
	comp=Z,34nm,18.2s,baz=243,slow=34						
NVAR	**Mina Array Bea**	**30.76**	**125**	P	**P**	**16 54 30.7**	**+1.9**
NVAR				pP	**pP**	**16 54 46.9**	**+1.7**
NVAR				PcP	**PcP**	**16 57 25.2**	**+0.6**
NVAR	**Mina Array Bea**	**30.76**	**125**	P	**P**	**16 54 30.7**	**+1.9**
	comp=Z,2.2nm,0.7s,baz=312,slow=9.3,SNR=15						
NVAR				pP	**pP**	**16 54 46.9**	**+1.7**
	comp=Z,1.0nm,0.7s,baz=326,slow=8.4,SNR=2.4						
NVAR				PcP	**PcP**	**16 57 25.2**	**+0.6**
	comp=Z,0.4nm,0.5s,baz=306,slow=2.7,SNR=3.5						
PDAR	**Pinedale Array**	**30.83**	**109**	P	**P**	**16 54 30.6**	**+1.3**
PDAR	**Pinedale Array**	**30.83**	**109**	P	**P**	**16 54 30.6**	**+1.3**
	comp=Z,0.8nm,0.6s,baz=317,slow=4.8,SNR=7.0						
ULM	**Lac du Bonnet**	**31.71**	**86**	LR	LR	17 07 56.3	
	comp=Z,56nm,19.6s,baz=287,slow=37						
SCHQ	**Schefferville**	**41.57**	**60**	P	**P**	**16 56 00.6**	**+0.3**
SCHQ	**Schefferville**	**41.57**	**60**	P	**P**	**16 56 00.6**	**+0.3**
	comp=Z,3.4nm,0.4s,baz=322,slow=8.4,SNR=11						
TXAR	**Lajitas Array**	**44.66**	**115**	P	**P**	**16 56 26.7**	**+1.0**
TXAR				pP	**pP**	**16 56 44.4**	**+1.6**
TXAR				PcP	**PcP**	**16 58 07.3**	**+0.2**
TXAR	**Lajitas Array**	**44.66**	**115**	P	**P**	**16 56 26.7**	**+1.0**
	comp=Z,0.6nm,0.8s,baz=312,slow=6.2,SNR=5.5						
TXAR				pP	**pP**	**16 56 44.4**	**+1.6**
	comp=Z,0.1nm,0.5s,baz=325,slow=6.3,SNR=3.0						
TXAR				PcP	**PcP**	**16 58 07.3**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=31,slow=2.2,SNR=4.3						
KEV	**Kevo**	**48.59**	**1**	*eP*	**P**	**16 56 57.2**	**+1.5**
KEV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KEV	**Kevo**	**48.59**	**1**	*ep*	**P**	**16 56 57.2**	**+1.5**
	comp=Z,4.6nm,0.7s						
ARCES	**ARCESS Array B**	**48.79**	**2**	P	**P**	**16 56 55.9**	**-1.4**
ARCES	**ARCESS Array B**	**48.79**	**2**	P	**P**	**16 56 55.9**	**-1.4**
	comp=Z,2.4nm,0.6s,baz=1.1,slow=7.2,SNR=11						
ARCES				PcP	**PcP**	**16 58 20.6**	**-0.4**
	comp=Z,2.9nm,0.8s,baz=359,slow=5.3,SNR=3.6						
CN2	**Changchun**	**49.91**	**290**	*eP*	P	16 57 10.5	+4.3
KSRS	**Korea Array**	**53.88**	**283**	P	**P**	**16 57 36.2**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=39,slow=6.5,SNR=3.5						
KSRS				pP	**pP**	**16 57 54.0**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=33,slow=6.6,SNR=5.0						
KSAR	**Wonju Array Be**	**53.91**	**283**	P	**P**	**16 57 36.2**	**+0.3**
KSAR				pP	**pP**	**16 57 54.0**	**+0.5**
SONM	**Songino Array**	**54.58**	**306**	P	**P**	**16 57 41.3**	**+0.4**
SONM				pP	**pP**	**16 57 59.3**	**+0.9**
SONM	**Songino Array**	**54.58**	**306**	P	**P**	**16 57 41.3**	**+0.4**
	comp=Z,3.9nm,0.6s,baz=44,slow=7.7,SNR=20						
SONM				pP	**pP**	**16 57 59.3**	**+0.9**
	comp=Z,1.5nm,0.6s,baz=38,slow=7.5,SNR=4.2						
JOF	**Joensuu**	**55.46**	**359**	*eP*	**P**	**16 57 46.5**	**-0.3**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
JOF	**Joensuu**	**55.46**	**359**	*ep*	**P**	**16 57 46.5**	**-0.3**
	comp=Z,1.1nm,0.4s						
NVS	**Novosibirsk**	**56.13**	**326**	*eP*	**P**	**16 57 49.9**	**-1.8**
NVS				pmax	pmax		
	comp=Z,31nm,0.8s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.9s						
KAF	**Kangasniemi**	**56.26**	**2**	*eP*	**P**	**16 57 51.6**	**-0.9**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KAF	**Kangasniemi**	**56.26**	**2**	*ep*	**P**	**16 57 51.6**	**-0.9**
	comp=Z,0.5nm,0.3s						
ZALV	**Zalesovo Beam**	**56.49**	**324**	*i* P	**P**	**16 57 53.2**	**-1.1**
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
ZALV	**Zalesovo Beam**	**56.49**	**324**	P	**P**	**16 57 53.0**	**-1.3**
ZALV	**Zalesovo Beam**	**56.49**	**324**	P	**P**	**16 57 53.0**	**-1.3**
	comp=Z,3.2nm,0.3s,baz=33,slow=6.8,SNR=23						
ZALV				pP	**pP**	**16 58 12.2**	**+0.2**
	comp=Z,1.2nm,0.5s,baz=32,slow=7.4,SNR=3.3						
NB2	**NORSAR Subarra**	**56.57**	**10**	P	**P**	**16 57 53.2**	**-1.6**
	comp=Z,2.4nm,0.6s,baz=350,slow=7.4						
NOA	**NORSAR Array B**	**56.57**	**10**	P	**P**	**16 57 53.8**	**-1.0**
NOA	**NORSAR Array B**	**56.57**	**10**	P	**P**	**16 57 53.8**	**-1.0**
	comp=Z,2.4nm,0.7s,baz=350,slow=7.1,SNR=10						
FINES	**FINESS Array B**	**56.92**	**2**	P	**P**	**16 57 56.0**	**-1.2**
FINES	**FINESS Array B**	**56.92**	**2**	P	**P**	**16 57 56.0**	**-1.2**
	comp=Z,1.5nm,0.4s,baz=3.0,slow=8.0,SNR=12						
HHC	**Hu-ho-hao-te**	**58.31**	**298**	*eP*	**P**	**16 58 10.3**	**+2.9**
HHC				pP	**pP**	**16 58 24.3**	**-0.9**
HHC				sP	**sP**	**16 58 30.8**	**-2.0**
HHC				PP	PP	17 00 22.3	+5.6
HHC				S	**S**	**17 06 07.0**	**+2.6**
HHC				sS	sS	17 06 28.5	-5.9
HHC				SS	**SS**	**17 10 00.3**	**+3.9**
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
SVE	**Sverdlovsk**	**59.09**	**341⇑**	*eP*	**P**	**16 58 11.8**	**-0.6**
SVE				pmax	pmax		
	comp=Z,11nm,1.1s						
ARU	**Arti**	**59.79**	**342**	*d iP*	**P**	**16 58 16.1**	**-1.2**
ARU				*PP	pP	16 58 40.6	+5.5
ARU				S	S	17 06 16.5	-6.3
ARU				pmax	pmax		
	comp=Z,11nm,1.0s						
BRVK	**Borovoye**	**60.88**	**333**	*eP*	**P**	**16 58 22.6**	**-2.1**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
BRVK				MLR	MLR		
	comp=Z,132nm,24.0s						
BVAR	**Borovoye Array**	**60.88**	**333**	P	**P**	**16 58 23.5**	**-1.3**
BVAR	**Borovoye Array**	**60.88**	**333**	P	**P**	**16 58 23.5**	**-1.3**
BVAR	**Borovoye Array**	**60.88**	**333**	P	**P**	**16 58 23.5**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=34,slow=9.1,SNR=7.1						
BVAR				pP	**pP**	**16 58 42.3**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=53,slow=9.8,SNR=3.5						
BVAR				LR	LR	17 28 11.0	
	comp=Z,28nm,18.9s,baz=81,slow=39						
KURK	**Kurchatov**	**61.06**	**327**	*i* iP	**P**	**16 58 24.0**	**-2.0**
KURK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KURK	**Kurchatov**	**61.06**	**327**	P	**P**	**16 58 25.7**	**-0.3**
KURK				pP	**pP**	**16 58 45.5**	**+1.6**
KURK				PcP	**PcP**	**16 59 08.2**	**-0.3**
KURBB	**Kurchatov Arra**	**61.17**	**327**	P	**P**	**16 58 25.7**	**-1.1**
	comp=Z,1.0nm,0.5s,baz=26,slow=6.7,SNR=8.9						
KURBB				pP	**pP**	**16 58 45.5**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=29,slow=7.0,SNR=2.8						
KURBB				PcP	**PcP**	**16 59 08.2**	**-0.7**
	comp=Z,2.3nm,0.6s,baz=26,slow=4.1,SNR=8.9						
OBN	**Obninsk**	**63.16**	**355**	P	**P**	**16 58 39.0**	**-0.9**
OBN				*e*		16 59 05.5	
OBN				pmax	pmax		
	comp=Z,18nm,1.7s						
MK31	**Makanchi Array**	**63.63**	**322**	*i* P	**P**	**16 58 41.2**	**-2.1**
MK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MKAR	**Makanchi Array**	**63.63**	**322**	*ce* P	**P**	**16 58 42.0**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MKAR	**Makanchi Array**	**63.63**	**322**	P	**P**	**16 58 41.5**	**-1.8**
MKAR	**Makanchi Array**	**63.63**	**322**	P	**P**	**16 58 41.5**	**-1.8**
	comp=Z,0.6nm,0.3s,baz=33,slow=6.9,SNR=25						
MKAR				pP	**pP**	**16 59 01.1**	**-0.1**
	comp=Z,0.5nm,0.4s,baz=24,slow=6.2,SNR=5.1						
GTA	**Gaotai**	**64.25**	**306**	*eP*	**P**	**16 58 47.5**	**-0.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
WMQ	**Urumqi**	**64.65**	**317**	*eP*	P	16 58 56.5	+6.4
LZH	**Lanzhou**	**65.54**	**301**	*eP*	P	16 59 01.3	+5.3
LZH				pP	pP	16 59 14.3	+0.2
LZH				sP	sP	16 59 19.5	-2.2
LZH				pmax	pmax		
	comp=Z,14nm,1.0s						
AKTO	**Aktyubinsk**	**65.68**	**340**	P	**P**	**16 58 54.9**	**-1.6**
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.5s						
CLL	**Collm**	**66.36**	**11**	*i* P	**P**	**16 58 59.9**	**-0.9**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CLL	**Collm**	**66.36**	**11**	*i* P	**P**	**16 58 59.9**	**-0.9**
	comp=Z,5.0nm,0.9s						
AB31	**Akbulak array**	**66.50**	**339**	*i* P	**P**	**16 59 00.4**	**-1.4**
AB31				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BAIF	**Baives**	**66.57**	**17**	*eP*	**P**	**16 59 01.8**	**-0.4**
BAIF	**Baives**	**66.57**	**17**	*eP*	**P**	**16 59 01.8**	**-0.4**
BAIF	**Baives**	**66.57**	**17**	*eP*	**P**	**16 59 01.8**	**-0.4**
GIVF	**Givet**	**66.61**	**17**	*eP*	**P**	**16 59 02.1**	**-0.4**
GIVF	**Givet**	**66.61**	**17**	*eP*	**P**	**16 59 02.1**	**-0.4**
GIVF	**Givet**	**66.61**	**17**	*eP*	**P**	**16 59 02.1**	**-0.4**
BRG	**Berggiesshubel**	**66.88**	**11**	*eP*	**P**	**16 59 04.2**	**0.0**
	comp=Z,6.9nm,1.1s						
BRG							
	comp=N,73nm,11.6s						
BRG							
	comp=E,51nm,10.4s						
BRG							
	comp=Z,91nm,18.1s						
BRG	**Berggiesshubel**	**66.88**	**11**	*eP*	**P**	**16 59 04.2**	**0.0**
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,73nm,11.6s						
BRG				MLR	MLR		
	comp=E,51nm,10.4s						
BRG				MLR	MLR		
	comp=Z,91nm,18.1s						
ROSF	**Rostrenen**	**67.02**	**23**	*eP*	**P**	**16 59 04.7**	**-0.4**
	comp=Z,4.1nm,0.6s						
ROSF	**Rostrenen**	**67.02**	**23**	*eP*	**P**	**16 59 04.7**	**-0.4**
ROSF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ROSF	**Rostrenen**	**67.02**	**23**	*eP*	**P**	**16 59 04.7**	**-0.4**
	comp=Z,4.1nm,0.6s						
FLN	**La Foliniere**	**67.10**	**21**	*eP*	**P**	**16 59 05.2**	**-0.4**
FLN				*eR*			
	comp=Z,71nm,19.8s						
FLN	**La Foliniere**	**67.10**	**21**	*eP*	**P**	**16 59 05.2**	**-0.4**
FLN	**La Foliniere**	**67.10**	**21**	*eP*	**P**	**16 59 05.2**	**-0.4**
SGMF	**Saint Gilles**	**67.23**	**23**	*eP*	**P**	**16 59 06.2**	**-0.2**
SGMF	**Saint Gilles**	**67.23**	**23**	*eP*	**P**	**16 59 06.2**	**-0.2**
SGMF	**Saint Gilles**	**67.23**	**23**	*eP*	**P**	**16 59 06.2**	**-0.2**
PVCC	**Panska Ves**	**67.27**	**10**	*eP*	**P**	**16 59 06.9**	**+0.2**
PVCC	**Panska Ves**	**67.27**	**10**	*eP*	**P**	**16 59 06.9**	**+0.2**
LDF	**La Druitiere**	**67.32**	**21**	*eP*	**P**	**16 59 06.4**	**-0.6**
	comp=Z,4.5nm,0.5s						
LDF	**La Druitiere**	**67.32**	**21**	*eP*	**P**	**16 59 06.4**	**-0.6**
LDF				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LDF	**La Druitiere**	**67.32**	**21**	*eP*	**P**	**16 59 06.4**	**-0.6**
	comp=Z,4.5nm,0.5s						
GRR	**Gorron**	**67.40**	**21**	*eP*	**P**	**16 59 07.2**	**-0.3**
	comp=Z,14nm,0.8s						
GRR	**Gorron**	**67.40**	**21**	*eP*	**P**	**16 59 07.2**	**-0.3**
GRR				pmax	pmax		
	comp=Z,14nm,0.8s						
GRR	**Gorron**	**67.40**	**21**	*eP*	**P**	**16 59 07.2**	**-0.3**
	comp=Z,14nm,0.8s						
UPC	**Upice**	**67.41**	**9**	*eP*	**P**	**16 59 07.2**	**-0.3**
UPC	**Upice**	**67.41**	**9**	*eP*	**P**	**16 59 07.2**	**-0.3**
QUIF	**Quistinic**	**67.44**	**23**	*eP*	**P**	**16 59 07.6**	**-0.1**
QUIF	**Quistinic**	**67.44**	**23**	*eP*	**P**	**16 59 07.6**	**-0.1**
QUIF	**Quistinic**	**67.44**	**23**	*e

	comp=Z,3.6nm,0.7s							
CAF	**Calviac**	**71.25**	**20**	*eP*		**P**	**16 59 30.9**	**-0.5**
CAF				pmax		pmax		
	comp=Z,4.0nm,0.7s							
CAF	**Calviac**	**71.25**	**20**	*eP*		**P**	**16 59 30.9**	**-0.5**
	comp=Z,3.6nm,0.7s							
OBKA	**Obir**	**71.26**	**11**	⫝̸*eP*		**P**	**16 59 31.5**	**0.0**
	comp=Z,21nm,0.9s							
LPL	**La Plagne**	**71.36**	**17**	*eP*		**P**	**16 59 32.7**	**+0.4**
	comp=Z,12nm,1.0s							
LPL	**La Plagne**	**71.36**	**17**	*eP*		**P**	**16 59 32.7**	**+0.4**
LPL				pmax		pmax		
	comp=Z,12nm,1.0s							
LPL	**La Plagne**	**71.36**	**17**	*eP*		**P**	**16 59 32.7**	**+0.4**
	comp=Z,12nm,1.0s							
LPG	**La Plagne**	**71.39**	**17**	*eP*		**P**	**16 59 33.1**	**+0.6**
	comp=Z,20nm,1.1s							
LPG	**La Plagne**	**71.39**	**17**	*eP*		**P**	**16 59 33.1**	**+0.6**
LPG				pmax		pmax		
	comp=Z,20nm,1.1s							
LPG	**La Plagne**	**71.39**	**17**	*eP*		**P**	**16 59 33.1**	**+0.6**
	comp=Z,20nm,1.1s							
VIVF	**Saint-Julien-l**	**71.72**	**18**	*eP*		**P**	**16 59 34.0**	**-0.2**
	comp=Z,19nm,0.9s							
VIVF	**Saint-Julien-l**	**71.72**	**18**	*eP*		**P**	**16 59 34.0**	**-0.2**
VIVF				pmax		pmax		
	comp=Z,19nm,0.9s							
VIVF	**Saint-Julien-l**	**71.72**	**18**	*eP*		**P**	**16 59 34.0**	**-0.2**
	comp=Z,19nm,0.9s							
ORIF	**Oris-en-Rattie**	**71.83**	**17**	*eP*		**P**	**16 59 34.9**	**-0.1**
	comp=Z,5.0nm,0.6s							
ORIF				*eR*				
	comp=Z,81nm,18.5s							
ORIF	**Oris-en-Rattie**	**71.83**	**17**	*eP*		**P**	**16 59 34.9**	**-0.1**
ORIF				pmax		pmax		
	comp=Z,5.0nm,0.6s							
ORIF	**Oris-en-Rattie**	**71.83**	**17**	*eP*		**P**	**16 59 34.9**	**-0.1**
	comp=Z,5.0nm,0.6s							
MBDF	**Montbardon**	**72.14**	**17**	*eP*		**P**	**16 59 37.5**	**+0.6**
	comp=Z,10nm,0.6s							
MBDF	**Montbardon**	**72.14**	**17**	*eP*		**P**	**16 59 37.5**	**+0.6**
MBDF				pmax		pmax		
	comp=Z,11nm,0.6s							
MBDF	**Montbardon**	**72.14**	**17**	*eP*		**P**	**16 59 37.5**	**+0.6**
	comp=Z,10nm,0.6s							
LASF	**Ste Croix**	**72.36**	**19**	*eP*		**P**	**16 59 38.1**	**+0.1**
LASF	**Ste Croix**	**72.36**	**19**	*eP*		**P**	**16 59 38.1**	**+0.1**
GYA	**Guiyang**	**72.71**	**294**	*eP*		**P**	**16 59 42.8**	**+2.3**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
SMRF	**Simiane la Rot**	**72.71**	**18**	*eP*		**P**	**16 59 40.7**	**+0.6**
	comp=Z,17nm,0.9s							
SMRF	**Simiane la Rot**	**72.71**	**18**	*eP*		**P**	**16 59 40.7**	**+0.6**
	comp=Z,17nm,0.9s							
ETSF	**Etsaut**	**72.76**	**23**	*eP*		**P**	**16 59 40.8**	**+0.3**
	comp=Z,12nm,0.9s							
ETSF	**Etsaut**	**72.76**	**23**	*eP*		**P**	**16 59 40.8**	**+0.3**
ETSF				pmax		pmax		
	comp=Z,13nm,0.9s							
ETSF	**Etsaut**	**72.76**	**23**	*eP*		**P**	**16 59 40.8**	**+0.3**
	comp=Z,12nm,0.9s							
EPF	**Esparros**	**72.80**	**22**	*eP*		**P**	**16 59 39.8**	**-0.9**
EPF	**Esparros**	**72.80**	**22**	*eP*		**P**	**16 59 39.8**	**-0.9**
EPF	**Esparros**	**72.80**	**22**	*eP*		**P**	**16 59 39.8**	**-0.9**
MTLF	**Montolieu**	**72.81**	**20**	*eP*		**P**	**16 59 40.5**	**-0.2**
	comp=Z,15nm,0.9s							
MTLF	**Montolieu**	**72.81**	**20**	*eP*		**P**	**16 59 40.5**	**-0.2**
MTLF				pmax		pmax		
	comp=Z,15nm,0.9s							
MTLF	**Montolieu**	**72.81**	**20**	*eP*		**P**	**16 59 40.5**	**-0.2**
	comp=Z,15nm,0.9s							
SBF	**Sospel**	**73.08**	**16**	*eP*		**P**	**16 59 42.2**	**-0.2**
	comp=Z,26nm,0.8s							
SBF	**Sospel**	**73.08**	**16**	*eP*		**P**	**16 59 42.2**	**-0.2**
SBF				pmax		pmax		
	comp=Z,26nm,0.8s							
SBF	**Sospel**	**73.08**	**16**	*eP*		**P**	**16 59 42.2**	**-0.2**
	comp=Z,26nm,0.8s							
FRF	**La Foret Royal**	**73.27**	**17**	*eP*		**P**	**16 59 43.0**	**-0.4**
FRF	**La Foret Royal**	**73.27**	**17**	*eP*		**P**	**16 59 43.0**	**-0.4**
FRF	**La Foret Royal**	**73.27**	**17**	*eP*		**P**	**16 59 43.0**	**-0.4**
LMR	**La Mourre**	**73.47**	**17**	*eP*		**P**	**16 59 44.6**	**0.0**
	comp=Z,9.0nm,0.8s							
LMR	**La Mourre**	**73.47**	**17**	*eP*		**P**	**16 59 44.6**	**0.0**
LMR				pmax		pmax		
	comp=Z,9.0nm,0.8s							
LMR	**La Mourre**	**73.47**	**17**	*eP*		**P**	**16 59 44.6**	**0.0**
	comp=Z,9.0nm,0.8s							
KBZ	**Khabaz**	**74.13**	**350**	P		**P**	**16 59 47.4**	**-1.0**
KBZ	**Khabaz**	**74.13**	**350**	P		**P**	**16 59 47.4**	**-1.0**
KBZ	**Khabaz**	**74.13**	**350**	P		**P**	**16 59 47.4**	**-1.0**
	comp=Z,3.2nm,1.0s,baz=332,slow=3.5,SNR=4.3							
SOC	**Sochi**	**74.51**	**352**	*eP*		**P**	**16 59 48.4**	**-2.2**
SOC				*e*			17 02 42.2	
SOC				*e*PPP		PPP	17 04 22.4	
SOC				MLR		MLR		
	comp=Z,817nm,27.0s							
ESDC	**Sonseca Array**	**75.21**	**26**	P		**P**	**16 59 54.8**	**0.0**
ESDC	**Sonseca Array**	**75.21**	**26**	P		**P**	**16 59 54.8**	**0.0**
	comp=Z,4.6nm,0.9s,baz=346,slow=5.9,SNR=19							
BRTR	**Keskin Array B**	**78.64**	**357**	P		**P**	**17 00 13.4**	**-0.7**
BRTR	**Keskin Array B**	**78.64**	**357**	P		**P**	**17 00 13.4**	**-0.7**
	comp=Z,2.9nm,0.9s,baz=16,slow=5.6,SNR=8.6							
KEST	**Kesra**	**81.33**	**16**	P		**P**	**17 00 28.6**	**-0.1**
KEST	**Kesra**	**81.33**	**16**	P		**P**	**17 00 28.6**	**-0.1**
	comp=Z,3.8nm,0.6s,baz=262,slow=3.3,SNR=9.8							
CMAR	**Chiang Mai Arr**	**83.08**	**296**	P		**P**	**17 00 36.9**	**-1.0**
CMAR	**Chiang Mai Arr**	**83.08**	**296**	P		**P**	**17 00 36.9**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=18,slow=4.4,SNR=6.5							
BOSA	**Boshof**	**146.57**	**7**	PKPbc		**PKPbc**	**17 07 52.5**	**-0.6**
BOSA				pPKPbc		pPKPbc	17 08 12.3	-0.2
BOSA	**Boshof**	**146.57**	**7**	PKPbc		**PKPbc**	**17 07 52.5**	**-0.6**
	comp=Z,4.1nm,0.6s,baz=346,slow=4.0,SNR=6.9							
BOSA				pPKPbc		pPKPbc	17 08 12.3	-0.2
	comp=Z,6.5nm,1.0s,baz=144,slow=7.1,SNR=2.7							
QSPA	**South Pole Qui**	**151.74**	**180**	PKPbc		**PKPbc**	**17 08 04.4**	**-0.5**
QSPA				pPKPbc		**pPKPbc**	**17 08 24.9**	**+0.4**
QSPA	**South Pole Qui**	**151.74**	**180**	PKPbc		**PKPbc**	**17 08 04.4**	**-0.5**
	comp=Z,3.2nm,0.6s,baz=185,slow=1.6,SNR=15							
QSPA				pPKPbc		**pPKPbc**	**17 08 24.8**	**+0.4**
	comp=Z,1.9nm,0.4s,baz=128,slow=1.5,SNR=5.6							

*IDC **26** 16:49:20.5±2.0, 35°.24S×102°.17W, h0km, mb3.7/5, mb1 4.1/5, mb1mx3.9/17, mbtmp3.7/5, MS4.1/16, Ms1 4.1/16, ms1mx3.9/24, Error ellipse: s-maj=69.5km s-min=28.4km az=41.0*

*GCMT **26** 16:49:21.5±0.3, 36°.00S×102°.10W, h17km±1km, MW5.0, Moment Tensor Solution. s40,c48; s78,c114; Moment tensor: Scale 10¹⁶Nm; Mrr-0.69±.14; Mθθ-0.16±.15; Mφφ0.85±.13; Mrθ-0.11±.34; Mθφ-3.93±.12; Mφr-1.02±.32; Best double couple: M₀4.10000×10¹⁶ NP1:φ₀94.00000°, δ75.00000°, λ-176.00000°. NP2:φ₀3.00000°, δ86.00000°, λ-16.00000°. Principal axes: T 4.4100, Plg8.0000°, Azm49.0000°; N -0.6000, Plg74.0000°, Azm168.0000°; P -3.8000, Plg14.0000°, Azm317.0000°; Data Used: II IU IC G CN.*

*NEIC **26** 16:49:22.2±1.5, 35°.15S×102°.03W, h10km, mb4.3/1 Error ellipse: s-maj=50.2km s-min=25.3km az=37.0*

ISC 26 16:49:23.0±1.7, 35°.1S×101°.9W±0°.3, h10km, n33, σ1°§12/17, mb3.7/6, MS4.0/17, Southeast of Easter Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PLCA	**Paso Flores**	**25.32**	**112**	P		**P**	**16 54 51.1**	**+1.2**
PLCA	**Paso Flores**	**25.32**	**112**	P		**P**	**16 54 51.1**	**+1.2**
	1.7nm,0.9s,baz=271,slow=9.0,SNR=3.4							
PLCA				LR		LR	17 01 50.3	
	comp=Z,353nm,21.7s,baz=7.6,slow=30							
CFAA	**Coronel Fontan**	**28.29**	**93**	LR		LR	17 03 07.2	
	comp=Z,28nm,19.1s,baz=254,slow=29							
USHA	**Ushuaia**	**30.43**	**141**	LR		LR	17 04 22.7	
	comp=Z,814nm,20.7s,baz=308,slow=30							
LVC	**Limon Verde**	**31.33**	**76**	P		P	16 55 50.2	+6.2
LVC	**Limon Verde**	**31.33**	**76**	P		P	16 55 50.2	+6.2
	2.2nm,0.8s,baz=252,slow=13,SNR=2.1							
LVC				LR		LR	17 05 30.3	
	comp=Z,345nm,18.8s,baz=244,slow=31							
LPAZ	**La Paz**	**35.51**	**67**	*eP*		**P**	**16 56 20.8**	**0.0**
	5.6nm,1.2s							
LPAZ	**La Paz**	**35.51**	**67**	P		**P**	**16 56 21.1**	**+0.3**
	4.8nm,1.2s,baz=204,slow=3.3,SNR=6.9							
PMSA	**Palmer Station**	**37.42**	**154**	LR		LR	17 07 23.6	
	comp=Z,376nm,19.5s,baz=262,slow=29							
CPUP	**Villa Florida**	**39.06**	**90**	LR		LR	17 09 23.4	
	comp=Z,138nm,18.9s,baz=57,slow=31							
SAML	**Samuel**	**43.91**	**63**	*eP*		**P**	**16 57 28.9**	**-1.2**
PPT	**Papeete**	**45.67**	**280**	LR		LR	17 10 54.9	
	comp=Z,110nm,20.2s,baz=122,slow=28							
ROSC	**El Rosal**	**47.45**	**39**	LR		LR	17 14 44.7	
	comp=Z,188nm,21.0s,baz=212,slow=32							
BDFB	**Brasilia**	**51.78**	**82**	LR		LR	17 18 07.6	
	comp=Z,114nm,18.4s,baz=208,slow=33							
VNDA	**Vanda**	**57.38**	**195**	LR		LR	17 17 15.9	
	comp=Z,136nm,21.0s,baz=97,slow=29							
TXAR	**Lajitas Array**	**64.08**	**358**	P		**P**	**16 59 58.8**	**+1.6**
TXAR	**Lajitas Array**	**64.08**	**358**	P		**P**	**16 59 58.8**	**+1.6**
	0.1nm,0.7s,baz=148,slow=5.3,SNR=2.2							
TXAR				LR		LR	17 22 10.0	
	comp=Z,81nm,21.4s,baz=180,slow=31							
RPZ	**Rata Peaks**	**64.86**	**233**	LR		LR	17 19 50.0	
	comp=Z,322nm,19.6s,baz=41,slow=28							
NVAR	**Mina Array Bea**	**74.69**	**347**	P		**P**	**17 01 03.0**	**+0.2**
NVAR	**Mina Array Bea**	**74.69**	**347**	P		**P**	**17 01 03.0**	**+0.2**
	0.3nm,0.6s,baz=187,slow=6.2,SNR=2.6							
PDAR	**Pinedale Array**	**77.78**	**354**	P		**P**	**17 01 19.1**	**-1.2**
PDAR	**Pinedale Array**	**77.78**	**354**	P		**P**	**17 01 19.1**	**-1.2**
	0.6nm,0.8s,baz=150,slow=8.0,SNR=2.8							
ULM	**Lac du Bonnet**	**85.12**	**4**	LR		LR	17 35 12.5	
	comp=Z,55nm,19.8s,baz=324,slow=32							
STKA	**Stephens Creek**	**90.60**	**230**	LR		LR	17 36 09.2	
	comp=Z,250nm,18.8s,baz=78,slow=31							
SCHO	**Schefferville**	**94.49**	**19**	LR		LR	17 38 55.6	
	comp=Z,122nm,20.6s,baz=215,slow=31							
BOSA	**Boshof**	**99.40**	**135**	LR		LR	17 42 54.6	
	comp=Z,105nm,18.2s,baz=165,slow=32							
DBIC	**Dimbokro**	**99.58**	**89**	LR		LR	17 44 40.4	
	comp=Z,98nm,18.7s,baz=298,slow=33							
BRTR	**Keskin Array B**	**144.67**	**69**	PKP		**PKPab**	**17 08 57.4**	**-1.4**
BRTR	**Keskin Array B**	**144.67**	**69**	PKP		**PKPab**	**17 08 57.4**	**-1.4**
	1.3nm,1.0s,baz=254,slow=2.3,SNR=3.8							
ASF	**Jabal al Asfar**	**145.77**	**83**	PKPbc		**PKPdf**	**17 09 02.4**	**+0.3**
ASF	**Jabal al Asfar**	**145.77**	**83**	PKPbc		**PKPdf**	**17 09 02.4**	**+0.3**
KBZ	**Khabaz**	**151.65**	**62**	PKPbc		**PKPbc**	**17 09 16.4**	**-0.9**
KBZ	**Khabaz**	**151.65**	**62**	PKPbc		**PKPbc**	**17 09 16.4**	**-0.9**
	1.4nm,0.7s,baz=267,slow=3.3,SNR=2.5							

*IDC **26** 16:52:26.8±1.7, 1°.29N×125°.61E, h0km, mb3.2/3, mb1 3.4/3, mb1mx3.2/22, mbtmp3.2/3, Error ellipse: s-maj=179.8km s-min=26.5km az=65.0*

*ISCJB **26** 16:52:43.2±0.7, 0°.26S±0°.07×123°.82E±0°.05, h117km±11km, mb3.1/3, Error ellipse: s-maj=12.2km s-min=5.3km az=150.9*

*DJA **26** 16:52:43.7±0.5, 0°S±4°×12°4E±°, h109km±7km, M4.1/9, MLv4.1/9*

ISC 26 16:52:44.1±1.0, 0°.19S±0°.07×123°.78E±0°.05, h121km±11km, n12, σ1°§38/20, mb3.0/3, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
KMSI	**Cibinong**	**0.79**	**15**	P		**Pn**	**16 53 04.3**	**+0.1**
KMSI				S		**Sn**	**16 53 19.4**	**0.0**
GTOI	**Gorontalo**	**1.13**	**317**	P		**Pn**	**16 53 07.7**	**+0.3**
GTOI				S		**Sn**	**16 53 26.3**	**+1.2**
LUWI	**Luwuk**	**1.32**	**230**	P		**Pn**	**16 53 09.1**	**-0.4**
LUWI				S		**Sn**	**16 53 28.0**	**-0.8**
MNI	**Manado**	**1.94**	**33**	P		**Pn**	**16 53 16.5**	**-0.3**
MNI				S		**Sn**	**16 53 42.1**	**+0.3**
MRSI	**Marisa**	**1.96**	**290**	P		**Pn**	**16 53 14.6**	**-2.4**
SKSI	**Soroako, Sulaw**	**3.37**	**226**	P		**Pn**	**16 53 35.7**	**+0.3**
SKSI				S		**Sn**	**16 54 14.0**	**-1.0**
TNTI	**Ternate**	**3.71**	**75**	P		**Pn**	**16 53 38.7**	**-1.1**
TNTI				S		**Sn**	**16 54 22.6**	**-0.3**
LBMI	**Labuha**	**3.75**	**97**	P		**Pn**	**16 53 40.2**	**-0.1**
LBMI				S		**Sn**	**16 54 22.3**	**-1.5**
TTSI	**Tana Toraja**	**4.87**	**234**	P		**Pn**	**16 53 56.2**	**+0.9**
TTSI				S		**Sn**	**16 54 50.0**	**-0.8**
WRA	**Warramunga Arr**	**22.19**	**153**	P		**P**	**16 57 30.4**	**-0.3**
	0.3nm,0.5s,baz=335,slow=10,SNR=5.3							
ASAR	**Alice Springs**	**25.32**	**158**	P		**P**	**16 58 03.6**	**+3.9**
	0.1nm,0.3s,baz=349,slow=13,SNR=4.5							
ASAR				PcP		**PcP**	**17 01 28.6**	**-1.2**
	0.2nm,0.4s,baz=356,slow=2.1,SNR=6.8							
MKAR	**Makanchi Array**	**59.19**	**328**	P		P	17 02 28.6	-3.9
	0.3nm,0.4s,baz=124,slow=8.0,SNR=5.3							

*NIED **26** 17:05:00, 34°.40N×136°.10E, h5km, Mw3.6 Best double couple: M₀2.98000×10¹⁴ NP1:φ₀100.00000°, δ88.00000°, λ-2.00000°. NP2:φ₀190.00000°, δ88.00000°, λ-178.00000°.*

*ISCJB **26** 17:05:13.8±0.5, 34°.34N±0°.03×136°.11E±0°.03, h6km±4km, mb3.5/4, Error ellipse: s-maj=5.9km s-min=4.3km az=11.2*

*JMA **26** 17:05:13.9, 34°.35N×136°.11E, h8km, M3.9 Broadband fault plane solution: P waves. NP1:φ₀271.00000°, δ75.00000°, λ-19.00000°. NP2:φ₀6.00000°, δ72.00000°, λ-164.00000°. Principal axes: T Plg2.0000°, Azm319.0000°; N Plg66.0000°, Azm53.0000°; P Plg24.0000°, Azm228.0000°;*

JMA Felt III J1.

*IDC **26** 17:05:14.7±0.9, 34°.42N×136°.26E, h0km, mb3.5/4, mb1 3.5/7, mb1mx3.4/29, mbtmp3.5/7, ML3.2/3, MS2.8/1, Ms1 2.8/1, ms1mx2.1/29 Error ellipse: s-maj=19.4km s-min=14.8km az=121.0*

ISC 26 17:05:13.9±1.2, 34°.35N±0°.04×136°.12E±0°.03, h4km±9km, n17, σ1°§30/22, mb3.6/4, 3C-3D, Western Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
JKN2	**Miekihoku**	**0.17**	**130**	⇑P		**Pg**	**17 05 17.8**	**+0.6**
JKN2				S		**Sg**	**17 05 20.3**	**+1.0**
TSUJ	**Tsu 2**	**0.44**	**34**	⇓P		**Pb**	**17 05 22.7**	**-1.5**
TSUJ				S		**Sg**	**17 05 28.5**	**+0.4**
JWY	**Kouya**	**0.46**	**254**	⇓P		**Pb**	**17 05 22.8**	**-1.7**
JWY				S		**Sg**	**17 05 28.7**	**+0.1**
JHE	**Heguri**	**0.47**	**311**	⇑P		**Pb**	**17 05 23.0**	**-1.8**
JHE				S		**Sg**	**17 05 29.3**	**+0.1**
JIE	**Ise**	**0.49**	**84**	⇓P		**Pb**	**17 05 23.6**	**-1.4**
JIE				S		**Sb**	**17 05 30.3**	**-2.2**
TTO1	**TONANKAI O.B.S**	**0.91**	**142**	⇑P		**Pn**	**17 05 32.5**	**-0.7**
TTO2	**TONANKAI O.B.S**	**0.97**	**129**	P		**Pn**	**17 05 33.6**	**-0.4**
MAT	**Matsushiro**	**2.78**	**37**	P		**Pn**	**17 05 59.8**	**+0.6**
MAT				S		**Sb**	**17 06 36.2**	**-2.3**
MJAR	**Matsushiro Arr**	**2.78**	**37**	Pn		**Pn**	**17 05 59.7**	**+0.5**
	3.4nm,0.3s,baz=216,slow=15,SNR=54							
MJAR				Pg		**Pb**	**17 06 03.8**	**-0.3**
	5.8nm,0.3s,baz=210,slow=14,SNR=56							
MJAR				Lg		Lg	17 06 37.8	
	4.9nm,0.3s,baz=227,slow=27,SNR=6.2							
JHJ	**Hachijo jima 2**	**3.29**	**111**	Pn		**Pn**	**17 06 05.8**	**-0.4**
	14nm,0.3s,baz=42,slow=20,SNR=12							
JHJ				Sn		**Sn**	**17 06 45.7**	**0.0**
	6.0nm,0.3s,baz=38,slow=23,SNR=3.6							
JNU	**Nakatsue**	**4.54**	**256**	LR		LR	17 08 21.6	
	comp=Z,103nm,18.1s,baz=59,slow=40							
KSRS	**Korea Array**	**7.34**	**297**	Pn		**Pn**	**17 07 03.4**	**+1.5**
	0.2nm,0.3s,baz=112,slow=14,SNR=4.2							
SONM	**Songino Array**	**25.96**	**310**	P		**P**	**17 10 47.7**	**+0.2**
	0.3nm,0.3s,baz=121,slow=10,SNR=2.6							
WRA	**Warramunga Arr**	**54.01**	**182**	P		**P**	**17 14 40.5**	**+1.2**
	0.4nm,0.5s,baz=359,slow=7.7,SNR=15							
ASAR	**Alice Springs**	**57.73**	**182**	P		P	17 15 08.2	+2.3
	0.2nm,0.7s,baz=11,slow=13,SNR=6.7							
BRTR	**Keskin Array B**	**77.31**	**309**	P		P	17 17 13.0	+3.1
	0.6nm,0.8s,baz=60,slow=8.5,SNR=2.5							
LPAZ	**La Paz**	**151.77**	**56**	PKPbc		**PKPbc**	**17 25 12.9**	**+1.8**
	1.6nm,0.3s,baz=300,slow=6.0,SNR=5.3							

IDC 26 17:09:07.7±7.4, 17°.44S×166°.65E, h0km, mb3.5/4, mb1 3.8/4, mb1mx3.5/18, mbtmp3.5/4, Error ellipse: s-maj=167.1km s-min=55.8km az=112.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
STKA	**Stephens Creek**	**26.84**	**233**	P		P	17 14 50.2	+0.1
	0.6nm,0.7s,baz=74,slow=17,SNR=2.9							
WRA	**Warramunga Arr**	**30.69**	**260**	P		P	17 15 24.2	-0.3
	0.3nm,0.6s,baz=90,slow=8.9,SNR=5.2							
ASAR	**Alice Springs**	**31.24**	**253**	P		P	17 15 29.4	+0.1
	0.7nm,0.7s,baz=79,slow=8.4,SNR=22							
CMAR	**Chiang Mai Arr**	**75.53**	**295**	P		P	17 20 54.7	+0.1
	0.4nm,0.6s,baz=136,slow=6.9,SNR=3.4							

MEX 26 17:13:43.0±0.8, 14°.89N×93°.29W, h38km±33km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PCIG		**0.81**	**5**	*eP*		Pn	17 13 56.4	-1.6
PCIG				*i* S		Sn	17 14 06.6	-2.3
THIG		**0.99**	**89**	*i* P		Pn	17 13 58.4	-1.9
THIG				*i* S		Sn	17 14 10.7	-2.4
CCIG	**Comitan**	**1.77**	**38**	*i* P		Pn	17 14 10.2	-1.2
CCIG				*i* S		Sn	17 14 31.0	-1.9
TGIG		**1.89**	**5**	*i* P		Pn	17 14 10.6	-2.2
TGIG				*i* S		Sn	17 14 33.0	-2.4
HUIG	**Huatulco**	**2.86**	**288**	*i* P		Pn	17 14 25.7	-0.4
HUIG				*i* S		Sn	17 14 56.9	-2.4
PNIG	**Pinotepa**	**4.90**	**288**	*i* P		Pn	17 14 53.4	-0.8
PNIG				*i* S		Sn	17 15 47.8	-1.8

IDC 26 17:18:28.1±2.9, 5°.14S×151°.77E, h125km±20km, mb3.4/8, mb1 3.5/9, mb1mx3.3/20, mbtmp3.4/9, MS3.4/1, Ms1 3.4/1, ms1mx2.1/12, Error ellipse: s-maj=50.2km s-min=16.1km az=112.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
PMG	**Port Moresby**	**6.23**	**227**	P		Pn	17 19 59.0	+1.2
	4.6nm,0.3s,baz=72,slow=6.3,SNR=16							
PMG				S		Sn	17 21 04.6	-3.2
	3.1nm,0.3s,baz=37,slow=9.1,SNR=4.2							
WRA	**Warramunga Arr**	**22.45**	**228**	P		P	17 23 16.8	-0.3
	0.4nm,0.3s,baz=53,slow=9.9,SNR=26							
WRA				pP		pP	17 23 39.0	-1.6
	1.2nm,0.7s,baz=52,slow=11,SNR=6.0							
WRA				ScP		ScP	17 30 33.2	-0.2
	0.5nm,0.8s,baz=54,slow=2.7,SNR=4.9							
ASAR	**Alice Springs**	**25.21**	**221**	P		P	17 23 42.5	0.0
	0.2nm,0.3s,baz=54,slow=8.8,SNR=22							
ASAR				pP		pP	17 24 08.6	-0.6
	0.9nm,0.8s,baz=51,slow=8.8,SNR=6.2							
ASAR				ScP		ScP	17 30 41.0	+0.1
	1.0nm,1.0s,baz=36,slow=3.3,SNR=4.5							
STKA	**Stephens Creek**	**28.26**	**198**	P		P	17 24 09.9	+0.3
	1.0nm,0.6s,baz=64,slow=5.8,SNR=4.3							
FITZ	**Fitzroy Crossi**	**28.60**	**241**	P		P	17 24 12.0	-0.8
	1.0nm,0.7s,baz=67,slow=11,SNR=5.3							
PETK	**Petropavlovsk-**	**58.24**	**4**	P		P	17 28 09.4	+0.1
	0.7nm,0.7s,baz=161,slow=8.4,SNR=6.2							
PETK				LR		LR	17 50 41.1	
	comp=Z,36nm,20.2s,baz=293,slow=33							
SONM	**Songino Array**	**66.06**	**328**	P		P	17 29 02.7	+0.9
	0.7nm,0.5s,baz=151,slow=6.8,SNR=5.2							
ZALV	**Zalesovo Beam**	**80.86**	**327**	P		P	17 30 27.5	-0.6
	0.5nm,0.3s,baz=111,slow=7.2,SNR=3.5							
ILAR	**Eielson Array**	**82.86**	**22**	P		P	17 30 37.9	-0.5
	0.4nm,0.5s,baz=265,slow=4.8,SNR=5.3							
TORD	**Torodi Ar. Bea**	**149.43**	**287**	PKPbc		PKPbc	17 38 03.4	-0.3
	0.8nm,0.7s,baz=85,slow=2.5,SNR=5.3							

*IDC **26** 17:21:21.0±0.8, 38°.75S×175°.76E, h0km, mb4.1/3, mb1 4.3/4, mb1mx3.8/17, mbtmp4.0/4, ML3.5/1, MS3.9/6, Ms1 3.9/6, ms1mx3.3/25, Error ellipse: s-maj=28.0km s-min=16.5km az=160.0*

*ISCJB **26** 17:21:21.5±0.3, 38°.93S±0°.02×175°.73E±0°.03, h5km±3km, mb4.0/3, MS3.9/6, Error ellipse: s-maj=3.7km s-min=2.3km az=29.1*

*NEIC **26** 17:21:21.9±0.2, 38°.92S×175°.74E, h3km±2km, ML4.4(WEL), Error ellipse: s-maj=2.9km s-min=1.9km az=116.0*

NEIC Felt at Turangi and Lake Taupo.

*WEL **26** 17:21:21.7±0.1, 38°.98S×175°.75E, h3km±1km, ML4.4/49, Error ellipse: s-maj=0.9km s-min=0.6km az=90.0*

WEL Felt from Taupo to King Country, maximum reported intensity MM 5.

ISC 26 17:21:21.8±0.8, 38°.92S±0°.02×175°.76E±0°.02, h8km±4km, n191, σ1°§00/182, mb4.1/3, MS3.9/6, 26C-31D, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
				Op			h m s	ISC
RATZ	**Rangitukua**	**0.05**	**8**	⇓P*		**Pg**	**17 21 24.3**	**+0.7**
RATZ	**Rangitukua**	**0.05**	**8**	⇓Pg		**Pg**	**17 21 24.2**	**

BKZ					AML	AML	17 21 44.9	
BKZ					AML	AML	17 21 45.8	
BKZ	**Black Stump Fm**	**0.62**	**114**	⇑P*	**Pg**	**17 21 33.7**	**-0.1**
PRRZ	**Plateau Road**	**0.65**	**50**	⇓P*	**Pb**	**17 21 34.8**	**-0.5**
PRRZ	**Plateau Road**	**0.65**	**50**	P*	**Pb**	**17 21 34.8**	**-0.5**
PRRZ				S*	**Sg**	**17 21 39.3**	**-3.4**
HRRZ	**Handcock Road**	**0.66**	**38**	⇓P*	**Pb**	**17 21 35.9**	**+0.3**
HRRZ	**Handcock Road**	**0.66**	**38**	P*	**Pb**	**17 21 35.9**	**+0.3**
VRZ	**Vera Road**	**0.81**	**255**	⇑P*	**Pg**	**17 21 37.0**	**-0.4**
VRZ				AML	AML	17 21 53.9	
VRZ				AML	AML	17 21 59.0	
VRZ	**Vera Road**	**0.81**	**255**	P*	**Pg**	**17 21 36.7**	**-0.7**
UTU	**Utuhina**	**0.81**	**25**	⇓P*	**Pb**	**17 21 38.5**	**+0.3**
UTU				AML	AML	17 22 02.3	
UTU				AML	AML	17 22 04.8	
UTU	**Utuhina**	**0.81**	**25**	P*	**Pb**	**17 21 38.7**	**+0.6**
HIZ	**Hauiti**	**0.81**	**299**	⇑P*	**Pb**	**17 21 37.8**	**-0.4**
HIZ				AML	AML	17 21 53.1	
HIZ				AML	AML	17 21 53.2	
HIZ	**Hauiti**	**0.81**	**299**	⇑P*	**Pb**	**17 21 37.8**	**-0.4**
RRRZ	**Republican Roa**	**0.82**	**46**	⇑P*	**Pb**	**17 21 38.3**	**0.0**
RRRZ	**Republican Roa**	**0.82**	**46**	P*	**Pb**	**17 21 38.3**	**0.0**
NMHZ	**Naumai**	**0.83**	**103**	⇑P*	**Pb**	**17 21 38.6**	**0.0**
NMHZ	**Naumai**	**0.83**	**103**	P*	**Pb**	**17 21 38.6**	**0.0**
TARZ	**Mount Tarawera**	**0.90**	**41**	⇓*eP*	**Pb**	**17 21 40.2**	**+0.6**
TARZ	**Mount Tarawera**	**0.90**	**41**	*eP*	**Pb**	**17 21 40.2**	**+0.6**
MCHZ	**McNeill Hill**	**0.90**	**126**	⇑P*	**Pb**	**17 21 40.1**	**+0.5**
MCHZ	**McNeill Hill**	**0.90**	**126**	P*	**Pb**	**17 21 40.1**	**+0.5**
OMRZ	**Omania**	**0.94**	**31**	⇓*eP*	**Pb**	**17 21 40.6**	**+0.3**
OMRZ	**Omania**	**0.94**	**31**	*eP*	**Pb**	**17 21 40.6**	**+0.3**
MKRZ	**Makatiti**	**0.95**	**36**	⇓*eP*	**Pn**	**17 21 41.2**	**-0.2**
MKRZ				AML	AML	17 22 00.1	
MKRZ				AML	AML	17 22 05.1	
MKRZ	**Makatiti**	**0.95**	**36**	*eP**	**Pn**	**17 21 41.2**	**-0.2**
KARZ	**Kaharoa**	**0.97**	**23**	⇓*eP**	**Pb**	**17 21 40.9**	**0.0**
KARZ	**Kaharoa**	**0.97**	**23**	*eP**	**Pb**	**17 21 40.9**	**0.0**
LIRZ	**Lichensteins R**	**1.03**	**28**	P*	**Pb**	**17 21 42.2**	**+0.3**
LIRZ	**Lichensteins R**	**1.03**	**28**	P*	**Pn**	**17 21 42.7**	**+0.1**
RAHZ	**Arahi**	**1.03**	**91**	⇑P*	**Pb**	**17 21 42.4**	**+0.4**
RAHZ	**Arahi**	**1.03**	**91**	P*	**Pb**	**17 21 42.4**	**+0.4**
WAZ	**Wanganui**	**1.03**	**215**	⇓P*	**Pg**	**17 21 40.5**	**-1.2**
WAZ				AML	AML	17 22 00.5	
WAZ				AML	AML	17 22 01.1	
WAZ	**Wanganui**	**1.03**	**215**	P*	**Pg**	**17 21 40.5**	**-1.2**
PNHZ	**Pukenui**	**1.05**	**161**	⇑P*	**Pg**	**17 21 41.3**	**-0.7**
PNHZ	**Pukenui**	**1.05**	**161**	P*	**Pg**	**17 21 41.3**	**-0.7**
EDRZ	**Edgecumbe**	**1.11**	**44**	⇓*eP**	**Pb**	**17 21 43.2**	**-0.1**
EDRZ				AML	AML	17 22 06.9	
EDRZ				AML	AML	17 22 10.5	
EDRZ	**Edgecumbe**	**1.11**	**44**	*eP**	**Pb**	**17 21 43.4**	**+0.1**
RAEZ	**Rainy Point**	**1.13**	**250**	P*	**Pg**	**17 21 43.1**	**-0.4**
MHEZ	**Mangahewa**	**1.13**	**261**	P*	**Pb**	**17 21 43.8**	**+0.2**
MHEZ	**Mangahewa**	**1.13**	**261**	P*	**Pb**	**17 21 43.8**	**+0.2**
TSZ	**Takapari Road**	**1.15**	**172**	⇑P*	**Pg**	**17 21 42.9**	**-1.0**
TSZ				AML	AML	17 22 04.3	
TSZ				AML	AML	17 22 08.1	
TSZ	**Takapari Road**	**1.15**	**172**	P*	**Pg**	**17 21 42.7**	**-1.2**
MARZ	**Manawahe**	**1.17**	**38**	P*	**Pb**	**17 21 44.2**	**-0.1**
MARZ	**Manawahe**	**1.17**	**38**	P*	**Pb**	**17 21 44.4**	**+0.1**
TOZ	**Tahuroa Road**	**1.20**	**350**	⇓P*	**Pg**	**17 21 43.9**	**-0.9**
TOZ	**Tahuroa Road**	**1.20**	**350**	P*	**Pg**	**17 21 44.0**	**-0.8**
KAHZ	**Kahuranaki**	**1.23**	**136**	P*	**Pn**	**17 21 46.1**	**+0.7**
KAHZ	**Kahuranaki**	**1.23**	**136**	P*	**Pn**	**17 21 46.1**	**+0.7**
OPRZ	**Ohinepanea**	**1.24**	**30**	P*	**Pn**	**17 21 45.5**	**+0.2**
URZ	**Urewera**	**1.24**	**59**	⇓P*	**Pg**	**17 21 44.9**	**-0.7**
URZ				AML	AML	17 22 05.7	
URZ				AML	AML	17 22 09.4	
URZ	**Urewera**	**1.24**	**59**	Pg	**Pg**	**17 21 44.7**	**-0.9**
URZ				P*	**Pg**	**17 21 44.9**	**-0.7**
URZ				Lg	Lg	17 22 03.5	
URZ	**Urewera**	**1.24**	**59**	Pg	**Pg**	**17 21 44.7**	**-0.9**
	82nm,0.3s,baz=245,slow=8.9,SNR=137						
URZ				Lg	Lg	17 22 03.5	
	117nm,0.3s,baz=106,slow=22,SNR=17						
DREZ	**Durham Road**	**1.25**	**257**	P*	**Pg**	**17 21 45.1**	**-0.6**
DREZ	**Durham Road**	**1.25**	**257**	P*	**Pg**	**17 21 45.3**	**-0.4**
TGRZ	**Tauranga**	**1.25**	**18**	⇓P*	**Pg**	**17 21 44.9**	**-0.9**
TGRZ				AML	AML	17 22 10.3	
TGRZ				AML	AML	17 22 10.9	
TGRZ	**Tauranga**	**1.25**	**18**	P*	**Pg**	**17 21 44.9**	**-0.9**
CKHZ	**Cape Kidnapper**	**1.26**	**126**	⇑P*	**Pn**	**17 21 47.3**	**+1.5**
CKHZ	**Cape Kidnapper**	**1.26**	**126**	P*	**Pn**	**17 21 47.3**	**+1.5**
WPHZ	**Waipukurau**	**1.26**	**156**	⇑P*	**Pb**	**17 21 46.0**	**+0.1**
WPHZ	**Waipukurau**	**1.26**	**156**	P*	**Pb**	**17 21 46.0**	**+0.1**
PXZ	**Pawanui**	**1.40**	**143**	⇑P*	**Pg**	**17 21 48.9**	**+0.2**
PXZ				AML	AML	17 22 14.6	
PXZ				AML	AML	17 22 14.6	
PXZ				AML	AML	17 22 30.7	
PXZ				AML	AML	17 22 30.8	
PXZ	**Pawanui**	**1.40**	**143**	Pn	**Pg**	**17 21 48.9**	**+0.2**
PKE	**Pukeiti**	**1.41**	**258**	⇑PN	**Pn**	**17 21 48.1**	**+0.3**
PKE				AML	AML	17 22 10.2	
PKE				AML	AML	17 22 11.4	
DVHZ	**Dannevirke**	**1.42**	**167**	⇓P*	**Pn**	**17 21 48.2**	**+0.4**
DVHZ	**Dannevirke**	**1.42**	**167**	Pn	**Pn**	**17 21 48.2**	**+0.4**
POWZ	**Post Office Ro**	**1.48**	**180**	⇑PN	**Pn**	**17 21 48.7**	**+0.1**
POWZ				SN	**Sb**	**17 22 08.1**	**-0.3**
POWZ	**Post Office Ro**	**1.48**	**180**	Pn	**Pn**	**17 21 48.8**	**+0.1**
POWZ				Sn	**Sb**	**17 22 08.2**	**-0.3**
KNZ	**Kokohu**	**1.49**	**95**	Pn	**Pg**	**17 21 50.6**	**+0.2**
MWZ	**Matawai**	**1.50**	**68**	⇓P*	**Pn**	**17 21 48.8**	**-0.2**
MWZ				AML	AML	17 22 16.0	
MWZ				AML	AML	17 22 16.0	
MWZ				AML	AML	17 22 16.7	
MWZ				AML	AML	17 22 16.7	
MWZ	**Matawai**	**1.50**	**68**	P*	**Pn**	**17 21 48.6**	**-0.5**
PRHZ	**Porangahau**	**1.51**	**154**	⇑PN	**Pg**	**17 21 50.7**	**0.0**
PRHZ	**Porangahau**	**1.51**	**154**	Pn	**Pg**	**17 21 50.7**	**0.0**
PRGZ	**Paritu Road**	**1.65**	**91**	⇑PN	**Pb**	**17 21 52.4**	**-0.1**
PRGZ	**Paritu Road**	**1.65**	**91**	Pn	**Pb**	**17 21 52.4**	**-0.1**
MHGZ	**Mahia Peninsul**	**1.69**	**99**	Pn	**Pb**	**17 21 52.9**	**-0.2**
MRZ	**Mangatainoka R**	**1.75**	**185**	PN	**Pn**	**17 21 53.1**	**+0.7**
MRZ				AML	AML	17 22 25.2	
MRZ				AML	AML	17 22 27.1	
MRZ	**Mangatainoka R**	**1.75**	**185**	Pn	**Pn**	**17 21 53.1**	**+0.7**
BFZ	**Birch Farm**	**1.80**	**168**	Pn	**Pn**	**17 21 53.8**	**+0.6**
MKAZ	**Moumakai**	**1.86**	**345**	PN	**Pn**	**17 21 53.5**	**-0.5**
MKAZ				AML	AML	17 22 29.3	
MKAZ				AML	AML	17 22 30.3	
MKAZ	**Moumakai**	**1.86**	**345**	Pn	**Pn**	**17 21 53.7**	**-0.3**
OGWZ	**Otaki Gorge**	**1.95**	**193**	PN	**Pn**	**17 21 56.3**	**+1.0**
OGWZ	**Otaki Gorge**	**1.95**	**193**	Pn	**Pn**	**17 21 56.6**	**+1.3**
HOWZ	**Holdsworth Sta**	**1.99**	**185**	Pn	**Pn**	**17 21 56.4**	**+0.7**
PUZ	**Puketiti**	**2.13**	**68**	PN	**Pn**	**17 21 58.7**	**+1.0**
PUZ				AML	AML	17 22 43.0	
PUZ				AML	AML	17 22 48.8	
PUZ	**Puketiti**	**2.13**	**68**	Pn	**Pn**	**17 21 59.0**	**+1.3**
KUZ	**Kuaotunu**	**2.17**	**359**	*ePN*	**Pn**	**17 21 56.8**	**-1.3**
KUZ				AML	AML	17 22 05.4	
KUZ				AML	AML	17 22 35.9	
KUZ	**Kuaotunu**	**2.17**	**359**	Pn	**Pn**	**17 21 57.5**	**-0.6**
WTAZ	**Waiatarua**	**2.19**	**334**	Pn	**Pn**	**17 21 59.8**	**+1.3**
MTAZ	**Motutapu**	**2.23**	**342**	Pn	**Pn**	**17 21 59.0**	**0.0**
MTW	**Mount Morrison**	**2.25**	**185**	PN	**Pn**	**17 21 59.6**	**+0.3**
MTW				AML	AML	17 22 41.4	
MTW				AML	AML	17 22 47.7	
MTW	**Mount Morrison**	**2.25**	**185**	Pn	**Pn**	**17 21 59.6**	**+0.3**
KAAZ	**Kauri Point**	**2.25**	**338**	Pn	**Pn**	**17 22 00.4**	**+1.1**
CAW	**Cannon Point**	**2.25**	**193**	*ePN*	**Pn**	**17 22 00.0**	**+0.7**
CAW				AML	AML	17 22 40.1	
CAW				AML	AML	17 22 40.6	
CAW	**Cannon Point**	**2.25**	**193**	Pn	**Pn**	**17 22 00.6**	**+1.2**
PAWZ	**Paruwai Farm**	**2.48**	**186**	AML	AML	17 22 19.6	
PAWZ				AML	AML	17 22 58.9	
PAWZ	**Paruwai Farm**	**2.48**	**186**	*ePn*	**Pn**	**17 22 03.2**	**+0.8**
WEL	**Wellington**	**2.49**	**198**	Pn	**Pn**	**17 22 04.7**	**+2.2**
SNZO	**South Karori**	**2.52**	**198**	AML	AML	17 22 47.6	
SNZO				AML	AML	17 22 52.0	
SNZO	**South Karori**	**2.52**	**198**	Pn	**Pn**	**17 22 05.1**	**+2.0**
MSWZ	**Moikau Station**	**2.53**	**189**	AML	AML	17 22 47.7	
MSWZ				AML	AML	17 22 54.1	
MSWZ	**Moikau Station**	**2.53**	**189**	Pn	**Pn**	**17 22 04.1**	**+1.0**
PLWZ	**Palliser**	**2.68**	**188**	Pn	**Pn**	**17 22 05.5**	**+0.2**
TUWZ	**Tuamarina**	**2.87**	**208**	AML	AML	17 22 22.8	
TUWZ				AML	AML	17 23 03.5	
TUWZ	**Tuamarina**	**2.87**	**208**	*ePn*	**Pn**	**17 22 10.0**	**+2.1**
NNZ	**Nelson**	**2.94**	**218**	AML	AML	17 22 29.0	
NNZ				AML	AML	17 23 05.4	
NNZ	**Nelson**	**2.94**	**218**	Pn	**Pn**	**17 22 11.1**	**+2.4**
CMWZ	**Cape Campbell**	**3.07**	**202**	AML	AML	17 22 29.4	
CMWZ				AML	AML	17 23 18.3	
QRZ	**Quartz Range**	**3.14**	**231**	AML	AML	17 22 26.3	
QRZ				AML	AML	17 23 16.9	
QRZ	**Quartz Range**	**3.14**	**231**	Pn	**Pn**	**17 22 12.4**	**+0.9**
BSWZ	**Blackbirch Sta**	**3.15**	**207**	AML	AML	17 23 18.9	
BSWZ				AML	AML	17 23 22.2	
BSWZ	**Blackbirch Sta**	**3.15**	**207**	Pn	**Pb**	**17 22 15.9**	**-2.0**
WCZ	**Waipu Caves**	**3.18**	**339**	AML	AML	17 22 28.8	
WCZ				AML	AML	17 23 23.8	
WCZ	**Waipu Caves**	**3.18**	**339**	Pn	**Pn**	**17 22 12.6**	**+0.6**
THZ	**Tophouse**	**3.59**	**217**	AML	AML	17 23 22.1	
THZ				AML	AML	17 23 36.3	
THZ	**Tophouse**	**3.59**	**217**	Pn	**Pn**	**17 22 19.9**	**+2.2**
KHZ	**Kahutara**	**3.88**	**205**	AML	AML	17 23 44.4	
KHZ				AML	AML	17 23 49.0	
KHZ	**Kahutara**	**3.88**	**205**	Pn	**Pn**	**17 22 23.6**	**+1.8**
OUZ	**Omahuta**	**4.07**	**334**	*ePn*	**Pn**	**17 22 24.9**	**+0.6**
DSZ	**Denniston Nort**	**4.14**	**226**	AML	AML	17 23 59.3	
DSZ				AML	AML	17 24 00.6	
DSZ	**Denniston Nort**	**4.14**	**226**	Pn	**Pn**	**17 22 27.1**	**+1.7**
WVZ	**Waitaha Valley**	**5.63**	**221**	Pn	**Pn**	**17 22 48.6**	**+2.9**
RPZ	**Rata Peaks**	**5.96**	**215**	Pn	**Pn**	**17 22 53.1**	**+2.7**
RPZ				Sn	**Sn**	**17 24 00.5**	**+1.7**
RPZ	**Rata Peaks**	**5.96**	**215**	Pn	**Pn**	**17 22 53.1**	**+2.7**
	1.2nm,0.3s,baz=305,slow=7.9,SNR=9.7						
RPZ				Sn	**Sn**	**17 24 00.5**	**+1.7**
	2.4nm,0.3s,baz=163,slow=14,SNR=2.2						
JCZ	**Jackson Bay**	**7.36**	**223**	Pn	**Pn**	**17 23 11.3**	**+1.7**
HNR	**Honiara**	**32.60**	**330**	LR	LR	17 39 07.2	
	comp=Z,122nm,19.0s,baz=124,slow=33						
PPT	**Papeete**	**36.89**	**65**	LR	LR	17 41 42.9	
	comp=Z,130nm,18.3s,baz=139,slow=33						
AS31	**Alice Springs**	**38.51**	**281**	*eP*	**P**	**17 28 44.4**	**-0.3**
ASAR	**Alice Springs**	**38.51**	**281**	P	**P**	**17 28 45.8**	**+1.1**
ASAR	**Alice Springs**	**38.51**	**281**	P	**P**	**17 28 45.8**	**+1.1**
	4.2nm,1.0s,baz=123,slow=7.8,SNR=24						
WRA	**Warramunga Arr**	**40.32**	**286**	P	**P**	**17 29 01.1**	**+1.3**
WRA	**Warramunga Arr**	**40.32**	**286**	P	**P**	**17 29 01.1**	**+1.3**
	3.5nm,0.9s,baz=130,slow=7.4,SNR=24						
QSPA	**South Pole Qui**	**51.21**	**180**	P	**P**	**17 30 28.3**	**+2.9**
QSPA	**South Pole Qui**	**51.21**	**180**	P	**P**	**17 30 28.3**	**+2.9**
	1.0nm,0.9s,baz=79,slow=2.2,SNR=4.1						
KAPI	**Kappang**	**60.74**	**289**	LR	LR	17 56 16.9	
	comp=Z,142nm,18.8s,baz=342,slow=34						
PLCA	**Paso Flores**	**80.30**	**135**	LR	LR	18 04 15.2	
	comp=Z,73nm,18.6s,baz=178,slow=32						
KSRS	**Korea Array**	**87.83**	**324**	LR	LR	18 07 19.2	
	comp=Z,51nm,21.1s,baz=341,slow=31						
CPUP	**Villa Florida**	**98.31**	**134**	LR	LR	18 09 44.7	
	comp=Z,40nm,19.6s,baz=178,slow=30						
TUC	**Tucson**	**98.32**	**55**	*eP*	**P**	**17 34 59.4**	**-0.6**
KBZ	**Khabaz**	**144.65**	**293**	PKP	**PKPab**	**17 40 56.9**	**-0.4**
KBZ	**Khabaz**	**144.65**	**293**	PKP	**PKPab**	**17 40 56.9**	**-0.4**
	2.0nm,0.8s,baz=180,slow=7.1,SNR=3.3						
ARCES	**ARCESS Array B**	**145.47**	**342**	PKPbc	**PKPdf**	**17 40 58.8**	**-0.5**
ARCES	**ARCESS Array B**	**145.47**	**342**	PKPbc	**PKPdf**	**17 40 58.8**	**-0.5**
	2.5nm,0.8s,baz=45,slow=4.0,SNR=5.2						
FINES	**FINESS Array B**	**150.72**	**330**	PKPbc	**PKPbc**	**17 41 11.7**	**-1.8**
FINES	**FINESS Array B**	**150.72**	**330**	PKPbc	**PKPbc**	**17 41 11.7**	**-1.8**
	2.6nm,0.9s,baz=68,slow=6.6,SNR=4.2						
BRTR	**Keskin Array B**	**150.83**	**284**	PKPbc	**PKPbc**	**17 41 13.5**	**-1.3**
BRTR				PKPab	**PKPab**	**17 41 21.2**	**-0.8**
BRTR	**Keskin Array B**	**150.83**	**284**	PKPbc	**PKPbc**	**17 41 13.5**	**-1.3**
	0.8nm,1.0s,baz=93,slow=3.2,SNR=2.8						
BRTR				PKPab	**PKPab**	**17 41 21.2**	**-0.8**
	1.4nm,0.9s,baz=122,slow=4.7,SNR=6.4						
TORD	**Torodi Ar. Bea**	**153.80**	**193**	PKPab	**PKPab**	**17 41 34.2**	**-0.5**
TORD	**Torodi Ar. Bea**	**153.80**	**193**	PKPab	**PKPab**	**17 41 34.2**	**-0.5**
	3.3nm,1.1s,baz=162,slow=3.7,SNR=7.9						

WEL 26 17:21:44.7±0.2, 39°01'S×175°76'E, h5km, ML3.6/6, Error ellipse: s-maj=1.9km s-min=1.8km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KATZ	**Kakaramea**	**0.06**	**302**	P*	Pg	17 21 46.1	-0.2
KATZ				AML	AML	17 21 47.6	
KATZ				S*	Sg	17 21 48.1	+0.6
RITZ	**Rihia Road**	**0.08**	**68**	PG	Pg	17 21 46.8	+0.3
RITZ				AML	AML	17 21 51.0	
RITZ				AML	AML	17 21 52.0	
KRVZ	**Karewarewa**	**0.13**	**228**	PG	Pg	17 21 48.2	+0.7
KRVZ				AML	AML	17 21 52.7	
KRVZ				AML	AML	17 21 53.1	
RATZ	**Rangitukua**	**0.14**	**3**	PG	Pg	17 21 48.9	+1.3
WTVZ	**West Tongariro**	**0.17**	**231**	PG	Pg	17 21 48.9	+0.6
WTVZ				AML	AML	17 21 52.6	
WTVZ				AML	AML	17 21 52.6	
WPVZ	**Whakapapa**	**0.26**	**221**	AML	AML	17 21 53.6	
WPVZ				SG	Sg	17 21 54.6	+1.2
TWVZ	**Taurewa**	**0.26**	**256**	SG	Sg	17 21 53.9	+0.4
TWVZ				AML	AML	17 21 54.6	

IDC 26 17:36:20.4±18.0, 21°36S×176°00W, h0km, mb3.8/5, mb1 3.9/5, mb1mx3.6/20, mbtmp3.8/5, Error ellipse: s-maj=335.1km s-min=147.4km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**35.27**	**265**	P	P	17 43 18.4	+1.2
	1.8nm,0.3s,baz=97,slow=13,SNR=3.1						
STKA	**Stephens Creek**	**39.11**	**245**	P	P	17 43 49.0	-0.7
	1.5nm,1.0s,baz=94,slow=13,SNR=3.6						
ASAR	**Alice Springs**	**46.14**	**257**	P	P	17 44 46.0	-1.0
	0.1nm,0.3s,baz=92,slow=7.2,SNR=18						
WRA	**Warramunga Arr**	**46.33**	**262**	P	P	17 44 47.8	-0.8
	0.4nm,0.2s,baz=96,slow=8.4,SNR=47						
FITZ	**Fitzroy Crossi**	**54.76**	**262**	P	P	17 45 53.0	+0.8
	0.8nm,0.8s,baz=112,slow=5.4,SNR=3.4						

IDC 26 17:53:02.4±2.8, 1°83S×137°67E, h0km, mb3.3/2, mb1 3.6/3, mb1mx3.3/18, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=104.3km s-min=27.3km az=82.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**18.30**	**190**	P	Pn	17 57 17.6	-0.3
	0.2nm,0.3s,baz=10,slow=12,SNR=15						
ASAR	**Alice Springs**	**22.02**	**189**	P	P	17 57 58.4	-0.2
	0.9nm,0.6s,baz=26,slow=11,SNR=20						
MKAR	**Makanchi Array**	**68.46**	**323**	P	P	18 04 06.7	+0.2
	0.1nm,0.5s,baz=135,slow=5.3,SNR=3.3						

IDC 26 18:50:11.8±1.0, 5°70S×131°17E, h0km, mb4.0/8, mb1 4.2/11, mb1mx4.0/21, mbtmp4.1/11, ML4.4/3, MS3.6/1, Ms1 3.6/1, ms1mx2.6/30, Error ellipse: s-maj=65.3km s-min=15.7km az=71.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.46**	**203**	Pn	Pn	18 53 23.2	-1.0
	3.8nm,0.3s,baz=34,slow=11,SNR=169						
FITZ				Sn	Sn	18 55 36.2	-18
	0.7nm,0.3s,baz=150,slow=20,SNR=3.3						
WRA	**Warramunga Arr**	**14.48**	**168**	Pn	Pn	18 53 39.0	+0.7
	1.2nm,0.3s,baz=338,slow=12,SNR=46						
WRA				Sn	Sn	18 56 07.2	-13
	3.2nm,0.3s,baz=334,slow=22,SNR=9.3						
ASAR	**Alice Springs**	**18.05**	**172**	P	P	18 54 26.0	+1.2
	0.7nm,0.3s,baz=345,slow=10,SNR=62						
ASAR				S	Sn	18 57 32.4	-14
	0.5nm,0.3s,baz=350,slow=26,SNR=5.9						
STKA	**Stephens Creek**	**27.81**	**161**	P	P	18 56 03.6	+0.8
	0.6nm,0.3s,baz=328,slow=11,SNR=14						
CMAR	**Chiang Mai Arr**	**39.83**	**308**	P	P	18 57 47.5	+0.3
	0.7nm,0.5s,baz=136,slow=6.8,SNR=12						
ASAJ	**Asahikawa**	**50.65**	**11**	LR	LR	19 17 25.2	
	comp=Z,59nm,20.3s,baz=28,slow=32						
SONM	**Songino Array**	**57.60**	**340**	P	P	19 00 03.9	+0.2
	1.1nm,0.6s,baz=180,slow=5.8,SNR=4.3						
MKAR	**Makanchi Array**	**67.80**	**326**	P	P	19 01 12.5	+0.8
	4.2nm,0.4s,baz=113,slow=8.3,SNR=102						
ZALV	**Zalesovo Beam**	**70.95**	**333**	P	P	19 01 30.6	-0.4
	0.4nm,0.3s,baz=104,slow=6.1,SNR=2.5						
KURBB	**Kurchatov Arra**	**72.03**	**328**	P	P	19 01 37.5	0.0
	1.2nm,0.6s,baz=128,slow=5.0,SNR=24						
VNDA	**Vanda**	**73.59**	**173**	P	P	19 01 45.1	-1.3
	0.2nm,0.5s,baz=333,slow=4.5,SNR=3.8						
BVAR	**Borovoye Array**	**77.60**	**327**	P	P	19 02 08.9	-0.9
	0.6nm,0.5s,baz=111,slow=8.1,SNR=5.2						

*ISCJB **26** 18:54:46.9±0.6, 21°.19S±0°.05×68°.5W±0°.1, h117km, mb4.3/5, Error ellipse: s-maj=13.8km s-min=6.8km az=171.0*

*NEIC **26** 18:54:48.3±0.7, 21°.22S×68°.56W, h118km±7km, mb4.5/3, Error ellipse: s-maj=15.2km s-min=8.3km az=90.0*

*IDC **26** 18:54:48.6±1.3, 21°.27S×68°.38W, h114km±11km, mb3.8/4, mb1 3.8/5, mb1mx3.5/19, mbtmp3.8/5, Error ellipse: s-maj=41.0km s-min=15.8km az=111.0*

ISC 26 18:54:48.4±0.6, 21°.21S±0°.05×68°.6W±0°.1, h117km, n25, σ1s10/27, mb4.6/5, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**1.43**	**193**	P	**Pn**	**18 55 14.8**	**-0.3**
LVC				S	**Sn**	**18 55 35.0**	**-0.4**
LVC	**Limon Verde**	**1.43**	**193**	P	**Pn**	**18 55 14.8**	**-0.3**
	baz=12,slow=10						
LVC				S	**Sn**	**18 55 35.0**	**-0.4**
	105nm,0.3s,baz=270,slow=20,SNR=38						
LPAZ	**La Paz**	**4.92**	**5**	P	**Pn**	**18 56 02.5**	**+1.7**
LPAZ	**La Paz**	**4.92**	**5**	P	**Pn**	**18 56 02.5**	**+1.7**
	9.2nm,0.3s,baz=166,slow=6.4,SNR=93						
ARE	**Arequipa**	**5.47**	**329**	*eP*	**Pn**	**18 56 07.0**	**-1.0**
ARE				eS	**Sn**	**18 57 09.0**	**-1.0**
SAML	**Samuel**	**13.25**	**24**	*ePn*	**Pn**	**18 57 52.1**	**0.0**
	3.7nm,1.1s						
TRQA	**Tornquist**	**17.73**	**163**	*eP*	**P**	**18 58 46.7**	**-0.3**
BDFB	**Brasilia**	**20.27**	**78**	P	**P**	**18 59 14.0**	**-1.0**
BDFB	**Brasilia**	**20.27**	**78**	P	**P**	**18 59 14.0**	**-1.0**
	3.4nm,0.4s,baz=239,slow=9.7,SNR=6.0						
PMSA	**Palmer Station**	**43.65**	**177**	P	**P**	**19 02 41.7**	**+0.8**
PMSA	**Palmer Station**	**43.65**	**177**	P	**P**	**19 02 41.7**	**+0.8**
	5.2nm,0.5s,baz=333,slow=16,SNR=3.2						
QSPA	**South Pole Qui**	**68.98**	**180**	P	**P**	**19 05 41.5**	**+0.6**
QSPA	**South Pole Qui**	**68.98**	**180**	P	**P**	**19 05 41.5**	**+0.6**
	0.7nm,0.6s,baz=53,slow=6.9,SNR=5.8						
GSC	**Goldstone**	**72.45**	**320**	*eP*	**P**	**19 06 02.9**	**+0.6**
	11nm,0.3s						
BW06	**Boulder Array**	**74.02**	**330**	*eP*	**P**	**19 06 11.0**	**-0.5**
	7.8nm,0.7s						
TORD	**Torodi Ar. Bea**	**76.97**	**70**	P	**P**	**19 06 27.7**	**-1.0**
TORD	**Torodi Ar. Bea**	**76.97**	**70**	P	**P**	**19 06 27.7**	**-1.0**
	0.5nm,0.5s,baz=263,slow=5.2,SNR=9.3						
KEV	**Kevo**	**111.64**	**22**	*ep*	**Pdif**	**19 09 15.1**	**+3.7**
	11nm,0.9s						
JOF	**Joensuu**	**113.15**	**29**	*ep*	pPdif	19 09 49.7	+1.0
	0.6nm,0.3s						
ASAR	**Alice Springs**	**130.31**	**207**	PKP	**PKPdf**	**19 13 45.0**	**-0.7**
ASAR	**Alice Springs**	**130.31**	**207**	PKP	**PKPdf**	**19 13 45.

KARP	Karpathos	1.67	124	P	Pn	19 04 53.5	+0.2
KARP				eSn	Sn	19 05 14.9	+0.6
DAT	Datca	1.71	82	ePN	Pn	19 04 52.6	-1.3
DAT	Datca	1.71	82	ePn	Pn	19 04 52.6	-1.3
GCAM	G?zelcaml?	1.84	49	i P	Pn	19 04 55.4	-0.3
GCAM				i S	Sg	19 05 23.5	-0.8
GCAM	G?zelcaml?	1.84	49	i P	Pn	19 04 55.4	-0.3
ANKY	Antikythira Is	1.87	251	P	Pn	19 04 56.1	0.0
ANKY	Antikythira Is	1.87	251	ePN	Pn	19 04 55.7	-0.4
ANKY				eSN	Sn	19 05 19.7	+0.4
ANKY	Antikythira Is	1.87	251	ePn	Pn	19 04 55.7	-0.4
ANKY	Antikythira Is	1.87	251	P	Pn	19 04 56.1	0.0
ANKY				eSn	Sn	19 05 19.7	+0.4
CHOS	Chios island	1.94	14	P	Pn	19 04 55.8	-1.3
CHOS				S	Sn	19 05 20.8	-0.3
CHOS	Chios island	1.94	14	ePB	Pn	19 04 56.1	-1.0
CHOS				eSN	Sn	19 05 20.9	-0.2
CHOS	Chios island	1.94	14	P	Pn	19 04 55.8	-1.3
CHOS	Chios island	1.94	14	ePb	Pn	19 04 56.1	-1.0
CHOS				S	Sn	19 05 20.8	-0.3
KYTH	Kithira	1.98	264	P	Pn	19 04 57.5	-0.2
KYTH	Kithira	1.98	264	ePN	Pn	19 04 57.5	-0.2
KYTH	Kithira	1.98	264	P	Pn	19 04 57.5	-0.2
ATHU	Athens Univers	1.99	318	P	Pn	19 04 57.4	-0.4
ATHU	Athens Univers	1.99	318	P	Pn	19 04 57.4	-0.4
MLSB	Milas	2.01	66	ePN	Pn	19 04 56.8	-1.2
MLSB	Milas	2.01	66	ePn	Pn	19 04 56.8	-1.2
GVD	Gavdhos	2.01	215	ePB	Pn	19 04 57.4	-0.6
GVD	Gavdhos	2.01	215	ePb	Pn	19 04 57.4	-0.6
PTL	Penteli	2.01	321	P	Pn	19 04 57.7	-0.4
PTL	Penteli	2.01	321	ePB	Pn	19 04 57.3	-0.8
PTL	Penteli	2.01	321	ePb	Pn	19 04 57.3	-0.8
PTL	Penteli	2.01	321	P	Pn	19 04 57.7	-0.4
NAIG	Nisos Aigina	2.02	309	ePB	Pn	19 04 57.4	-0.8
NAIG	Nisos Aigina	2.02	309	ePb	Pn	19 04 57.4	-0.8
ATH	Athens Observa	2.03	317	P	Pn	19 04 58.2	-0.1
ATH	Athens Observa	2.03	317	ePN	Pn	19 04 57.9	-0.4
ATH				eSN	Sn	19 05 22.8	-0.5
ATH	Athens Observa	2.03	317	ePn	Pn	19 04 57.9	-0.4
ATH	Athens Observa	2.03	317	P	Pn	19 04 58.2	-0.1
ATH				eSn	Sn	19 05 22.8	-0.5
DID	Didima	2.05	300	P	Pn	19 04 58.1	-0.6
DID	Didima	2.05	300	ePN	Pn	19 04 58.1	-0.6
DID				eSN	Sn	19 05 23.8	-0.1
DID	Didima	2.05	300	P	Pn	19 04 58.1	-0.6
DID				eSn	Sn	19 05 23.8	-0.1
VLI	Veliai	2.06	277	ePN	Pn	19 04 58.4	-0.3
VLI				eSN	Sn	19 05 23.8	-0.1
VLI	Veliai	2.06	277	ePn	Pn	19 04 58.4	-0.3
VLI				eSn	Sn	19 05 23.8	-0.1
URLA	Izmir	2.06	25	i P	Pn	19 04 57.3	-1.4
URLA				i S	Sb	19 05 27.5	+0.4
URLA	Izmir	2.06	25	i P	Pn	19 04 57.3	-1.4
URLA				i S	Sb	19 05 27.5	+0.4
DIDY	Didyma	2.06	299	P	Pn	19 04 57.9	-0.9
DIDY	Didyma	2.06	299	P	Pn	19 04 57.9	-0.9
ARG	Arkhangelos	2.16	97	P	Pn	19 05 00.2	+0.1
ARG	Arkhangelos	2.16	97	ePN	Pn	19 05 00.2	+0.1
ARG				eSN	Sn	19 05 26.4	0.0
ARG	Arkhangelos	2.16	97	P	Pn	19 05 00.2	+0.1
ARG				eSn	Sn	19 05 26.4	0.0
AYDN	Tasoluk	2.24	58	i P	Pn	19 05 01.1	-0.2
AYDN	Tasoluk	2.24	58	i P	Pn	19 05 01.1	-0.2
BLCB	Balcova	2.25	33	ePN	Pn	19 05 00.5	-0.9
BLCB	Balcova	2.25	33	ePn	Pn	19 05 00.5	-0.9
YER	Yerkesik	2.34	74	ePN	Pn	19 05 01.2	-1.4
YER	Yerkesik	2.34	74	ePn	Pn	19 05 01.2	-1.4
IZM	Izmir	2.37	36	ePN	Pn	19 05 02.8	+0.2
IZM	Izmir	2.37	36	ePn	Pn	19 05 02.8	+0.2
LTK	Loutraki	2.51	308	P	Pn	19 05 05.1	+0.1
LTK	Loutraki	2.51	308	ePN	Pn	19 05 04.7	-0.3
LTK				eSN	Sn	19 05 35.5	+0.3
LTK	Loutraki	2.51	308	ePn	Pn	19 05 04.7	-0.3
LTK	Loutraki	2.51	308	P	Pn	19 05 05.1	+0.1
LTK				eSn	Sn	19 05 35.5	+0.3
DYR	Agios Nikonas	2.54	277	ePN	Pn	19 05 05.1	-0.3
DYR				eSN	Sn	19 05 36.2	+0.3
DYR	Agios Nikonas	2.54	277	ePn	Pn	19 05 05.1	-0.3
DYR				eSn	Sn	19 05 36.2	+0.3
DALY	Dalyan (Mu¨la	2.57	82	ePN	Pn	19 05 04.5	-1.2
DALY	Dalyan (Mu¨la	2.57	82	ePn	Pn	19 05 04.5	-1.2
VLX	Vlachokerasia	2.63	290	P	Pn	19 05 07.0	+0.4
VLX	Vlachokerasia	2.63	290	ePN	Pn	19 05 06.8	+0.2
VLX				eSN	Sn	19 05 38.0	-0.2
VLX	Vlachokerasia	2.63	290	ePn	Pn	19 05 06.8	+0.2
VLX				eSn	Sn	19 05 38.0	-0.2
MRKA	Markates	2.66	326	P	Pn	19 05 06.8	-0.2
MRKA	Markates	2.66	326	P	Pn	19 05 06.8	-0.2
SIGR	SIGRI	2.72	6	P	Pn	19 05 06.5	-1.3
SIGR	SIGRI	2.72	6	P	Pn	19 05 06.5	-1.3
PRK	Paraskevi	2.81	13	P	Pn	19 05 07.8	-1.2
PRK	Paraskevi	2.81	13	ePN	Pn	19 05 07.9	-1.1
PRK				eSN	Sn	19 05 42.2	-0.3
PRK	Paraskevi	2.81	13	ePn	Pn	19 05 07.9	-1.1
PRK				eSn	Sn	19 05 42.2	-0.3
GUR	Goura	2.88	301	P	Pn	19 05 10.4	+0.3
GUR	Goura	2.88	301	ePN	Pn	19 05 10.3	+0.2
GUR	Goura	2.88	301	ePn	Pn	19 05 10.3	+0.2
FETY	Fethiye	2.91	86	ePN	Pn	19 05 09.0	-1.4
FETY	Fethiye	2.91	86	ePn	Pn	19 05 09.0	-1.4
LKR	Lokris	2.91	318	ePN	Pn	19 05 10.2	-0.2
LKR				eSN	Sn	19 05 44.9	-0.1
LKR	Lokris	2.91	318	ePn	Pn	19 05 10.2	-0.2
LKR				eSn	Sn	19 05 44.9	-0.1
ITM	Ithomi	2.93	284	ePN	Pn	19 05 10.8	+0.1
ITM	Ithomi	2.93	284	ePn	Pn	19 05 10.8	+0.1
ATAL	Atalanti	2.93	319	P	Pn	19 05 10.4	-0.3
ATAL	Atalanti	2.93	319	P	Pn	19 05 10.4	-0.3
AOS	Alonnisos	2.95	335	P	Pn	19 05 11.1	+0.2
AOS	Alonnisos	2.95	335	ePN	Pn	19 05 10.7	-0.2
AOS	Alonnisos	2.95	335	ePn	Pn	19 05 10.7	-0.2
AOS	Alonnisos	2.95	335	P	Pn	19 05 11.1	+0.2
SMIA	Simia	2.98	324	P	Pn	19 05 11.7	+0.3
SMIA	Simia	2.98	324	P	Pn	19 05 11.7	+0.3
PYL	PYLOS	3.03	279	ePN	Pn	19 05 12.1	+0.1
PYL	PYLOS	3.03	279	ePn	Pn	19 05 12.1	+0.1
KLV	Kalavryta, Ach	3.07	301	P	Pn	19 05 13.0	+0.4
KLV	Kalavryta, Ach	3.07	301	ePN	Pn	19 05 12.7	+0.1
KLV				eSN	Sn	19 05 48.6	-0.4
KLV	Kalavryta, Ach	3.07	301	ePn	Pn	19 05 12.7	+0.1
KLV	Kalavryta, Ach	3.07	301	P	Pn	19 05 13.0	+0.4
KLV				eSn	Sn	19 05 48.6	-0.4
DNZL	Cakiroluk	3.09	66	i P	Pn	19 05 14.1	+1.1
DNZL	Cakiroluk	3.09	66	i P	Pn	19 05 14.1	+1.1
SKIA	Skiathos	3.10	330	P	Pn	19 05 12.9	-0.1
SKIA	Skiathos	3.10	330	P	Pn	19 05 12.9	-0.1
DENT	Denizli	3.10	65	ePN	Pn	19 05 12.1	-1.0
DENT	Denizli	3.10	65	ePn	Pn	19 05 12.1	-1.0
AMT	Artemida-Makis	3.19	290	ePN	Pn	19 05 14.0	-0.2
AMT				eSN	Sn	19 05 52.0	+0.2
AMT	Artemida-Makis	3.19	290	ePn	Pn	19 05 14.0	-0.2
AMT				eSn	Sn	19 05 52.0	+0.2
KULA	Kula-Manisa	3.23	51	ePN	Pn	19 05 14.4	-0.5
KULA	Kula-Manisa	3.23	51	ePn	Pn	19 05 14.4	-0.5
KALE	Kalithea	3.26	306	ePN	Pn	19 05 15.3	+0.1
KALE	Kalithea	3.26	306	ePn	Pn	19 05 15.3	+0.1
LAKA	Lakka	3.28	303	P	Pn	19 05 15.9	+0.3
LAKA	Lakka	3.28	303	ePN	Pn	19 05 15.2	-0.4
LAKA				eSN	Sn	19 05 54.0	-0.2
LAKA	Lakka	3.28	303	ePn	Pn	19 05 15.2	-0.4
LAKA	Lakka	3.28	303	P	Pn	19 05 15.9	+0.3
LAKA				eSn	Sn	19 05 54.0	-0.2
TRIZ	Trizonia	3.29	305	ePN	Pn	19 05 15.8	+0.2
TRIZ	Trizonia	3.29	305	ePn	Pn	19 05 15.8	+0.2
NEO	Neokhori	3.32	328	P	Pn	19 05 16.1	0.0
NEO	Neokhori	3.32	328	ePN	Pn	19 05 15.9	-0.2
NEO	Neokhori	3.32	328	P	Pn	19 05 16.1	0.0
AKAS	Kas	3.34	93	i P	Pn	19 05 17.6	+1.1
AKAS	Kas	3.34	93	i P	Pn	19 05 17.6	+1.1
XOR	Xorichti	3.38	328	P	Pn	19 05 16.7	-0.2
XOR	Xorichti	3.38	328	P	Pn	19 05 16.7	-0.2
LIA	Limnos Island	3.40	356	ePN	Pn	19 05 16.4	-0.7
LIA				eSN	Sn	19 05 56.1	-0.9
LIA	Limnos Island	3.40	356	ePn	Pn	19 05 16.4	-0.7
LIA				eSn	Sn	19 05 56.1	-0.9
EFP	Efpalio	3.43	305	ePN	Pn	19 05 18.0	+0.5
EFP	Efpalio	3.43	305	ePn	Pn	19 05 18.0	+0.5
AGG	Agios Georgios	3.54	316	P	Pn	19 05 19.8	+0.7
AGG	Agios Georgios	3.54	316	ePN	Pn	19 05 19.4	+0.3
AGG	Agios Georgios	3.54	316	ePn	Pn	19 05 19.4	+0.3
AGG	Agios Georgios	3.54	316	P	Pn	19 05 19.8	+0.7
RLS	Riolos of Patr	3.56	297	ePN	Pn	19 05 18.9	-0.4
RLS	Riolos of Patr	3.56	297	ePn	Pn	19 05 18.9	-0.4
ELL	Elmali	3.57	85	ePN	Pn	19 05 18.9	-0.7
ELL	Elmali	3.57	85	ePn	Pn	19 05 19.0	-0.7
BALY	Balya	3.65	27	i P	Pn	19 05 19.8	-0.8
BALY	Balya	3.65	27	i P	Pn	19 05 19.8	-0.8
BALB	Balikesir	3.66	30	ePN	Pn	19 05 20.5	-0.2
BALB	Balikesir	3.66	30	ePn	Pn	19 05 20.5	-0.2
KHAL	Karahalli	3.70	59	i P	Pn	19 05 23.0	+1.6
KHAL	Karahalli	3.70	59	i P	Pn	19 05 23.0	+1.6
EVR	Evrytania	3.78	311	P	Pn	19 05 23.5	+1.1
EVR	Evrytania	3.78	311	ePN	Pn	19 05 22.0	-0.4
EVR	Evrytania	3.78	311	ePn	Pn	19 05 22.0	-0.4
EVR	Evrytania	3.78	311	P	Pn	19 05 23.5	+1.1
GONE	Gonen-Balikesi	3.94	25	ePN	Pn	19 05 24.5	-0.1
GONE	Gonen-Balikesi	3.94	25	ePn	Pn	19 05 24.5	-0.1
GELI	Tayfur-Gelibol	3.97	11	ePN	Pn	19 05 24.6	-0.3
GELI	Tayfur-Gelibol	3.97	11	ePn	Pn	19 05 24.6	-0.3
LPK	Lapseki	3.99	14	ePN	Pn	19 05 24.9	-0.4
LPK	Lapseki	3.99	14	ePn	Pn	19 05 24.9	-0.4
THL	Klokotos Trika	4.10	319	P	Pn	19 05 27.3	+0.5
THL	Klokotos Trika	4.10	319	ePN	Pn	19 05 27.4	+0.6
THL	Klokotos Trika	4.10	319	P	Pn	19 05 27.3	+0.5
KRBG	Karabiga-Canak	4.14	20	ePN	Pn	19 05 26.4	-0.9
KRBG	Karabiga-Canak	4.14	20	ePn	Pn	19 05 26.4	-0.9
PLG	Polygyros	4.18	338	ePN	Pn	19 05 27.3	-0.6
PLG	Polygyros	4.18	338	ePn	Pn	19 05 27.3	-0.6
VLS	Valsamata	4.24	295	ePN	Pn	19 05 29.2	+0.5
VLS	Valsamata	4.24	295	ePn	Pn	19 05 29.2	+0.5
TVSB	Tavsanli	4.31	46	ePN	Pn	19 05 28.9	-0.8
TVSB	Tavsanli	4.31	46	ePn	Pn	19 05 28.9	-0.8
KCTX	Karacabey (Bur	4.39	30	ePN	Pn	19 05 30.4	-0.3
KCTX	Karacabey (Bur	4.39	30	ePn	Pn	19 05 30.4	-0.3
ALN	Alexandroupoli	4.41	6	ePN	Pn	19 05 30.7	-0.3
ALN	Alexandroupoli	4.41	6	ePn	Pn	19 05 30.7	-0.3
LKD2	Lefkada island	4.45	302	ePN	Pn	19 05 31.9	+0.2
LKD2	Lefkada island	4.45	302	ePn	Pn	19 05 31.9	+0.2
ALT	Altintas	4.47	54	ePN	Pn	19 05 31.7	-0.2
ALT	Altintas	4.47	54	ePn	Pn	19 05 31.7	-0.2
SHUT	Suhut-Afyon	4.52	62	ePN	Pn	19 05 31.9	-0.7
SHUT	Suhut-Afyon	4.52	62	ePn	Pn	19 05 32.0	-0.7
SUTC	Sutluce-Ispart	4.53	76	ePN	Pn	19 05 32.6	-0.2
SUTC	Sutluce-Ispart	4.53	76	ePn	Pn	19 05 32.6	-0.2
NVR	Nevrokopi	5.00	346	ePN	Pn	19 05 39.3	+0.1
NVR	Nevrokopi	5.00	346	ePn	Pn	19 05 39.3	+0.1
GRG	Griva	5.06	333	ePN	Pn	19 05 40.2	+0.3
GRG	Griva	5.06	333	ePn	Pn	19 05 40.2	+0.3
FNA	Florina	5.35	324	ePN	Pn	19 05 44.7	+0.8
FNA	Florina	5.35	324	ePn	Pn	19 05 44.7	+0.8
GULT	Gulveren	5.57	44	ePN	Pn	19 05 47.1	+0.1
GULT	Gulveren	5.57	44	ePn	Pn	19 05 47.1	+0.1
KIZT	Kizilcal	5.61	63	ePN	Pn	19 05 47.6	0.0
KIZT	Kizilcal	5.61	63	ePn	Pn	19 05 47.6	0.0
HDMB	Hadim	5.65	83	ePN	Pn	19 05 48.1	-0.2
HDMB	Hadim	5.65	83	ePn	Pn	19 05 48.1	-0.2
KONT	Konya--Tatoy	5.68	73	ePN	Pn	19 05 48.8	+0.3
KONT	Konya--Tatoy	5.68	73	ePn	Pn	19 05 48.8	+0.3
VTS	Vitosha	6.33	345	ePn	Pn	19 05 58.5	+1.0
VTS	Vitosha	6.33	345	i P	Pn	19 05 58.5	+1.0
VTS	Vitosha	6.33	345	i P	Pn	19 05 58.5	+1.0
BARS	Barje	6.91	337	ePn	Pn	19 06 06.6	+1.2
BARS	Barje	6.91	337	ePn	Pn	19 06 06.6	+1.2
ZAPS	Zavoj	7.11	343	ePn	Pn	19 06 09.2	+1.1
BRTR	Keskin Array B	7.19	61	Pn	Pn	19 06 11.4	+2.0
	0.5nm,0.3s,baz=240,slow=16,SNR=16						
PDG	Podgorica	7.63	323	ePn	Pn	19 06 16.3	+1.1
PDG	Podgorica	7.63	323	ePn	Pn	19 06 16.3	+1.1
SJES	Sjenica	7.96	330	ePn	Pn	19 06 21.5	+1.6
GRUS	Gruza	8.23	335	ePn	Pn	19 06 25.3	+1.9
GRUS	Gruza	8.23	335	ePn	Pn	19 06 25.3	+1.9
BBLS	Lazići	8.70	330	ePn	Pn	19 06 31.1	+1.2
BBLS	Lazići	8.70	330	ePn	Pn	19 06 31.1	+1.2
MMAI	Mount Meron Ar	8.88	110	Pn	Pn	19 06 30.1	-2.3
	2.1nm,0.3s,baz=322,slow=12,SNR=9.8						
MMAI				Sn	Sn	19 08 09.1	-2.9
	1.1nm,0.3s,baz=298,slow=21,SNR=4.2						
MLR	Muntele Rosu	8.99	2	i P	Pn	19 06 35.2	+1.2
MLR	Muntele Rosu	8.99		Pn	Pn	19 06 34.9	+0.9
	0.0nm,0.3s,baz=176,slow=9.8,SNR=4.7						
MLR	Muntele Rosu	8.99	2	i P	Pn	19 06 35.2	+1.2
VRI	Vrincioaia	9.40	5	i P	Pn	19 06 40.9	+1.3
VRI	Vrincioaia	9.40	5	i P	Pn	19 06 40.9	+1.3
EIL	Elat	10.46	128	Pn	Pn	19 06 52.1	-2.0
	0.6nm,0.3s,baz=342,slow=14,SNR=7.1						
EIL				Sn	Sn	19 08 42.7	-8.2
	0.3nm,0.3s,baz=15,slow=17,SNR=4.0						
CRVS	Cervenica-Dubn	12.74	348	ePN	P	19 07 30.9	-5.3
VYHS	Vyhne	12.94	340	e	P	19 07 44.6	+6.1
STHS	Stebnicka Huta	13.27	348	e	P	19 07 47.1	+4.9
MOA	Molln	14.04	327	eP	P	19 07 52.1	+1.4
	comp=Z,5.0nm,1.0s						
PGF	Pioggiola	14.07	300	eP	Pn	19 07 41.5	-2.0
VRAC	Vranov	14.34	336	Pn	P	19 07 55.4	+1.4
	comp=Z,0.4nm,0.3s,baz=146,slow=8.9,SNR=13						
VRAC	Vranov	14.34	336	eP	P	19 07 55.5	+1.4
AKASG	Malin Array Be	14.45	10	Pn	P	19 07 56.7	+1.5
	comp=Z,0.9nm,0.3s,baz=200,slow=11,SNR=8.2						
TREC	Trest	14.71	333	eP	P	19 07 59.7	+1.5
TREC	Trest	14.71	333	P	P	19 07 59.7	+1.5
GEC2	GERESS Array S	15.05	329	eP	P	19 08 03.4	+1.4
	comp=Z,8.0nm,0.7s						
GERES	GERESS Array B	15.05	329	Pn	P	19 08 03.3	+1.4
	comp=Z,0.3nm,0.3s,baz=145,slow=12,SNR=51						
KBZ	Khabaz	15.14	56	Pn	P	19 08 06.4	+3.5
	comp=Z,0.1nm,0.3s,baz=259,slow=7.7,SNR=7.6						
DPC	Dobruska-Polom	15.34	337	eP	P	19 08 06.7	+1.5
DPC				epP	pP	19 08 10.0	0.0
DPC				esP	sP	19 08 15.2	+2.9
DPC	Dobruska-Polom	15.34	337	P	P	19 08 06.7	+1.5
UPC	Upice	15.57	337	eP	P	19 08 08.3	+0.6
UPC				ex	x	19 08 10.6	
UPC	Upice	15.57	337	P	P	19 08 08.3	+0.6
SBF	Sospel	15.61	304	eP	Pn	19 08 04.5	+0.4
	comp=Z,31nm,0.8s						
WET	Wettzell	15.63	328	eP	P	19 08 09.1	+0.8
	comp=Z,6.0nm,1.1s						
PRU	Pruhonice	15.63	333	eP	P	19 08 09.3	+0.9
PRU	Pruhonice	15.63	333	P	P	19 08 09.3	+0.9
FRF	La Foret Royal	16.04	302	eP	Pn	19 08 09.1	-0.4
LMR	La Mourre	16.06	301	eP	Pn	19 08 09.4	-0.4
PVCC	Panska Ves	16.07	334	eP	P	19 08 15.1	+1.9
PVCC				epP	pP	19 08 17.7	-0.4
PVCC	Panska Ves	16.07	334	P	P	19 08 15.1	+1.9
MBDF	Montbardon	16.38	306	eP	Pn	19 08 11.7	-2.4
ROTZ	Rotzenmuhle	16.38	328	eP	P	19 08 17.5	+0.8
	comp=Z,4.0nm,1.1s						
BRG	Berggiesshubel	16.58	334	eP	P	19 08 20.1	+1.3
	comp=Z,4.0nm,0.9s						
BRG	Berggiesshubel	16.58	334	eP	P	19 08 20.4	+1.5
	comp=Z,6.0nm,1.0s						
MANZ	Manzenberg	16.59	328	eP	P	19 08 18.4	-0.6
	comp=Z,5.0nm,0.8s						
LPG	La Plagne	16.72	308	eP	P	19 08 21.2	+0.4
	comp=Z,10nm,0.9s						
LPG	La Plagne	16.72	308	eP	P	19 08 21.2	+0.4
	comp=Z,5.1nm,0.9s						
LPL	La Plagne	16.74	308	eP	P	19 08 21.4	+0.5
	comp=Z,10nm,1.0s						
LPL	La Plagne	16.74	308	eP	P	19 08 21.4	+0.5
	comp=Z,5.2nm,1.0s						
GRF	Grafenberg Arr	16.76	326	eP	P	19 08 23.0	+2.1
	comp=Z,20nm,1.1s						
TANN	Tannenbergstha	16.78	330	eP	P	19 08 22.6	+1.5
	comp=Z,12nm,1.4s						
GUNZ	Gunzen	16.79	330	eP	P	19 08 22.7	+1.5
FBE	Freiberg	16.83	333	eP	P	19 08 23.4	+1.7
WERD	Werda	16.86	330	eP	P	19 08 23.4	+1.4
SMRF	Simiane la Rot	16.91	302	eP	Pn	19 08 19.4	-1.2
	comp=Z,37nm,1.3s						
PLN	Plauen	16.95	330	eP	P	19 08 24.1	+1.1
MOX	Moxa	17.30	329	eP	P	19 08 28.7	+1.9
	comp=Z,8.0nm,1.4s						
CABF	La Chapelle	17.64	311	eP	Pn	19 08 28.8	-1.0
	comp=Z,18nm,1.1s						
CABF	La Chapelle	17.64	311	eP	Pn	19 08 28.8	-1.0
	comp=Z,9.2nm,1.1s						
HINF	Hinteralfeld	17.80	315	eP	Pn	19 08 30.6	-1.1
HINF	Hinteralfeld	17.80	315	eP	Pn	19 08 30.6	-1.1
VIVF	Saint-Julien-l	17.82	304	eP	Pn	19 08 30.9	-1.1
VIVF	Saint-Julien-l	17.82	304	eP	Pn	19 08 30.9	-1.1
LASF	Ste Croix	18.11	301	eP	Pn	19 08 34.0	-1.6
LASF	Ste Croix	18.11	301	eP	Pn	19 08 34.0	-1.6
SFTF	Sexfontaines	19.04	314	eP	Pn	19 08 47.0	+0.2
	comp=Z,8.2nm,0.7s						
SFTF	Sexfontaines	19.04	314	eP	Pn	19 08 47.0	+0.2
	comp=Z,4.1nm,0.7s						
SMF	Signal de Mont	19.04	309	eP	P	19 08 45.3	-0.8
	comp=Z,3.8nm,0.6s						
SMF	Signal de Mont	19.04	309	eP	P	19 08 45.3	-0.8
	comp=Z,1.9nm,0.6s						
MTLF	Montolieu	19.07	298	eP	P	19 08 46.0	-0.4
MTLF	Montolieu	19.07	298	eP	P	19 08 46.0	-0.4
LOR	Lormes	19.30	311	eP	P	19 08 49.1	+0.2
	comp=Z,3.2nm,0.6s						
LOR	Lormes	19.30	311	eP	P	19 08 49.1	+0.2
	comp=Z,1.6nm,0.6s						
NRDL	Niedersach Rie	19.32	331	eP	Pn	19 08 51.9	+1.9
	comp=Z,8.0nm,1.3s						
AVF	Avril sur Loir	19.41	309	eP	P	19 08 49.8	-0.2
	comp=Z,8.4nm,1.0s						
AVF	Avril sur Loir	19.41	309	eP	P	19 08 49.8	-0.2
	comp=Z,4.2nm,1.0s						
SSF	Saint Saulge	19.42	310	eP	P	19 08 50.5	+0.3
	comp=Z,12nm,0.7s						
SSF	Saint Saulge	19.42	310	eP	P	19 08 50.5	+0.3
	comp=Z,5.8nm,0.7s						
BGF	Bois d'Agland	19.64	308	eP	P	19 08 53.3	+0.7
	comp=Z,5.1nm,0.5s						
BGF	Bois d'Agland	19.64	308	eP	P	19 08 53.3	+0.7
	comp=Z,2.9nm,0.5s						
TCF	Toulx Ste Croi	19.94	307	eP	P	19 08 56.5	+0.6
	comp=Z,3.5nm,0.8s						
TCF	Toulx Ste Croi	19.94	307	eP	P	19 08 56.5	+0.6
	comp=Z,1.8nm,0.8s						
RJF	Les Rejaudoux	20.07	303	eP	Pn	19 08 58.8	-0.4
	comp=Z,8.7nm,1.0s						
RJF	Les Rejaudoux	20.07	303	eP	Pn	19 08 58.8	-0.4
	comp=Z,4.3nm,1.0s						
EPF	Esparros	20.35	296	eP	P	19 09 00.8	+0.4
EPF	Esparros	20.35	296	eP	P	19 09 00.8	+0.4
BAIF	Baives	20.48	318	eP	P	19 09 01.8	+0.1
	comp=Z,27nm,0.7s						
BAIF	Baives	20.48	318	eP	P	19 09 01.8	+0.1
	comp=Z,13nm,0.7s						
ETSF	Etsaut	20.98	296	eP	P	19 09 07.3	0.0
	comp=Z,6.5nm,0.9s						
ETSF	Etsaut	20.98	296	eP	P	19 09 07.3	0.0
	comp=Z,3.2nm,0.9s						
SJPF	Ste Jean	21.50	296	eP	P	19 09 13.0	+0.2
	comp=Z,8.7nm,0.8s						
SJPF	Ste Jean	21.50	296	eP	P	19 09 13.0	+0.2
	comp=Z,4.3nm,0.8s						
MFF	Saint Martin d	21.58	306	eP	P	19 09 13.5	-0.1
	comp=Z,16nm,1.1s						
MFF	Saint Martin d	21.58	306	eP	P	19 09 13.5	-0.1
	comp=Z,8.1nm,1.1s						
LDF	La Druitiere	22.28	311

s-min=4.9km az=141.8
*JMA **26** 19:11:59.4±0.3, 32.°49N×137.°49E, h413km±3km, M3.4*
*IDC **26** 19:12:00.3±0.8, 32.°46N×137.°39E, h398km±8km, mb3.7/28, mb1 3.8/33, mb1mx3.7/39, mbtmp3.6/33, Error ellipse: s-maj=10.5km s-min=7.6km az=94.0*

ISC 26 19:12:00.6±0.6, 32.°50N±0.°05×137.°41E±0.°05, h402km±4km, n119, σ1⁄91⁄4/150, mb4.1/51, 6C-1D, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
TTO1	**TONANKAI O.B.S**	**1.24**	**335**	P	**P**				
TK01	**Tokai 1**	**1.28**	**7**	P	**P**	**19**	**12**	**53.6**	**+1.1**
TK01				*e*S	**S**	**19**	**13**	**34.7**	**+0.3**
TTO3	**TONANKAI O.B.S**	**1.36**	**360**	P	**P**	**19**	**12**	**54.2**	**+1.1**
TK02	**Tokai 2**	**1.48**	**11**	P	**P**	**19**	**12**	**54.1**	**+0.6**
TK02				*e*S	**S**	**19**	**13**	**37.9**	**+1.6**
TTO4	**TONANKAI O.B.S**	**1.51**	**4**	P	**P**	**19**	**12**	**54.6**	**+1.0**
TK03	**Tokai 3**	**1.73**	**15**	S	**S**	**19**	**13**	**40.9**	**+2.1**
JWZ	**Kozaga**	**1.76**	**306**	P	**P**	**19**	**12**	**55.1**	**-0.1**
JWZ				S	**S**	**19**	**13**	**39.0**	**-0.4**
JIE	**Ise**	**1.98**	**343**	P	**P**	**19**	**12**	**57.0**	**+0.5**
JIE				S	**S**	**19**	**13**	**40.3**	**-1.5**
JHJ	**Hachijo jima 2**	**2.09**	**72**	P	**P**	**19**	**12**	**56.5**	**-0.8**
	11nm,0.3s,baz=45,slow=1.0,SNR=24								
JHJ				S	**S**	**19**	**13**	**42.0**	**-1.0**
	13nm,0.3s,baz=56,slow=20,SNR=11								
JHJ2	**Mitsune**	**2.12**	**72**	P	**P**	**19**	**12**	**56.8**	**-0.6**
JHJ2				S	**S**	**19**	**13**	**42.5**	**-0.8**
JWY	**Kouya**	**2.29**	**319**	P	**P**	**19**	**12**	**59.1**	**+0.5**
JWY				S	**S**	**19**	**13**	**45.3**	**-0.3**
JAI	**Aioi**	**2.80**	**298**	P	**P**	**19**	**13**	**02.7**	**+0.5**
JAI				S	**S**	**19**	**13**	**52.4**	**+0.2**
JOD2	**Odawara 2**	**3.09**	**26**	P	**P**	**19**	**13**	**03.8**	**-0.7**
JOD2				S	**S**	**19**	**13**	**55.1**	**-1.5**
JYN	**Shimob**	**3.14**	**17**	P	**P**	**19**	**13**	**05.0**	**+0.1**
JYN				*e*S	**S**	**19**	**13**	**56.9**	**-0.5**
JWT	**Wachi**	**3.24**	**330**	P	**P**	**19**	**13**	**06.2**	**+0.5**
JWT				S	**S**	**19**	**13**	**58.1**	**-0.7**
JGM	**Miyama**	**3.25**	**350**	P	**P**	**19**	**13**	**06.6**	**+0.8**
JGM				*e*S	**S**	**19**	**13**	**59.1**	**+0.2**
BSO1	**Boso 1**	**3.67**	**53**	P	**P**	**19**	**13**	**06.2**	**-2.7**
BSO1				S	**S**	**19**	**14**	**00.2**	**-4.5**
JRY	**Ryogami san**	**3.72**	**19**	P	**P**	**19**	**13**	**09.6**	**-0.4**
JRY				S	**S**	**19**	**14**	**04.5**	**-2.1**
JTO	**Tosashimizu**	**3.90**	**277**	P	**P**	**19**	**13**	**12.4**	**+0.7**
JTO				S	**S**	**19**	**14**	**09.0**	**-0.6**
MJAR	**Matsushiro Arr**	**4.09**	**9**	P	**P**	**19**	**13**	**12.8**	**-0.6**
	5.1nm,0.3s,baz=181,slow=9.7,SNR=241								
MJAR				S	**S**	**19**	**14**	**10.6**	**-2.3**
	baz=191,slow=15,SNR=3.5								
MAT	**Matsushiro**	**4.09**	**9**	P	**P**	**19**	**13**	**12.9**	**-0.5**
MAT				S	**S**	**19**	**14**	**10.2**	**-2.6**
MAT	**Matsushiro**	**4.09**	**9**	P	**P**	**19**	**13**	**12.9**	**-0.5**
MAT				S	**S**	**19**	**14**	**10.1**	**-2.7**
JNU	**Nakatsue**	**5.53**	**278**	P	**P**	**19**	**13**	**25.5**	**-2.5**
JNU	**Nakatsue**	**5.53**	**278**	P	**P**	**19**	**13**	**25.3**	**-2.7**
	2.3nm,0.3s,baz=246,slow=21,SNR=42								
JNU				S	**S**	**19**	**14**	**40.8**	**+1.1**
	1.0nm,0.3s,baz=106,slow=12,SNR=8.2								
JFA	**Akaike**	**5.68**	**284**	P	**P**	**19**	**13**	**27.5**	**-2.0**
JTA	**Tamana**	**5.81**	**276**	P	**P**	**19**	**13**	**30.2**	**-0.8**
KSRS	**Korea Array**	**9.22**	**305**	P	**P**	**19**	**14**	**10.6**	**+1.2**
	1.2nm,0.3s,baz=120,slow=10,SNR=37								
KSRS				S	**S**	**19**	**15**	**56.5**	**+1.2**
	baz=115,slow=22,SNR=4.6								
ERM	**Erimo**	**10.54**	**24**	*e*P	**P**	**19**	**14**	**23.9**	**-0.1**
ASAJ	**Asahikawa**	**12.29**	**18**	P	**P**	**19**	**14**	**43.4**	**+0.1**
	1.8nm,0.3s,baz=233,slow=12,SNR=17								
ASAJ				S	**S**	**19**	**16**	**55.1**	**-2.6**
	0.4nm,0.3s,baz=37,slow=24,SNR=9.0								
USRK	**Ussuriysk Arra**	**12.43**	**342**	P	**P**	**19**	**14**	**44.7**	**0.0**
	0.3nm,0.3s,baz=150,slow=12,SNR=5.9								
YSS	**Yuzh-Sakhalins**	**15.01**	**14**	*e*P	**P**	**19**	**15**	**14.7**	**+1.8**
YSS				*e*S	**S**	**19**	**17**	**53.4**	**+1.4**
YSS				pmax	pmax				
	comp=Z,20nm,1.0s								
YSS				smax	smax				
	comp=E,50nm,1.0s								
HABR	**Khabarovsk**	**16.06**	**354**	*e*P	**P**	**19**	**15**	**23.5**	**-0.7**
HABR				*e*S	**S**	**19**	**18**	**13.7**	**+1.0**
HABR				pmax	pmax				
	comp=N,5.0nm,0.6s								
HABR				pmax	pmax				
	comp=E,11nm,0.8s								
HABR				pmax	pmax				
	comp=Z,7.0nm,0.8s								
HABR				MLR	MLR				
	comp=Z,51nm,15.0s								
KLR	**Kul'dur**	**17.25**	**347**	*e*P	**P**	**19**	**15**	**33.0**	**-3.9**
WHN	**Wuhan**	**19.75**	**270**	⇑P	**P**	**19**	**16**	**01.0**	**-1.6**
BTO	**Baotou**	**23.38**	**298**	*e*P	**P**	**19**	**16**	**35.5**	**-0.1**
XAN	**Xi'an**	**23.84**	**282**	P	**P**	**19**	**16**	**39.5**	**-0.3**
XAN				pmax	pmax				
	comp=Z,19nm,0.7s								
PETK	**Petropavlovsk-**	**25.25**	**29**	P	**P**	**19**	**16**	**53.2**	**+1.1**
PETK				pmax	pmax				
	comp=Z,4.0nm,0.9s								
PETK	**Petropavlovsk-**	**25.25**	**29**	P	**P**	**19**	**16**	**53.2**	**+1.1**
	comp=Z,4.3nm,0.9s,baz=220,slow=6.6,SNR=8.3								
SONM	**Songino Array**	**27.99**	**312**	P	**P**	**19**	**17**	**17.6**	**+1.1**
	comp=Z,0.8nm,0.4s,baz=120,slow=8.0,SNR=5.0								
SONM				ScP	**ScP**	**19**	**23**	**21.5**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=120,slow=2.4,SNR=4.0								
YAK	**Yakutsk**	**29.97**	**353**	*c* *i*P	**P**	**19**	**17**	**33.4**	**-0.1**
YAK				*e**PP	**pP**	**19**	**18**	**46.0**	**-0.5**
YAK				*e*		19	20	24.2	
YAK				*e*S	**S**	**19**	**21**	**59.5**	**-1.6**
YAK				*e*		19	27	24.9	
YAK				pmax	pmax				
	comp=Z,10.0nm,0.8s								
YAK				pmax	pmax				
	comp=N,4.0nm,1.0s								
YAK				smax	smax				
	comp=N,67nm,2.9s								
GTA	**Gaotai**	**31.04**	**294**	P	**P**	**19**	**17**	**43.5**	**+0.1**
GTA				ScP	**ScP**	**19**	**23**	**32.5**	**+0.8**
GTA				pmax	pmax				
	comp=Z,6.0nm,1.0s								
MYLDM	**Lahad Datu**	**32.41**	**217**	P	**P**	**19**	**17**	**56.1**	**+0.8**
	comp=Z,28nm,0.9s								
PBKT	**Sadao Pong**	**36.53**	**253**	P	**P**	**19**	**18**	**30.4**	**+0.3**
	comp=Z,18nm,0.9s								
CMMT	**Chiang Mai**	**37.04**	**258**	P	**P**	**19**	**18**	**34.4**	**0.0**
	comp=Z,14nm,1.1s,comp=Z,747nm								
CHTO	**Chiang Mai**	**37.05**	**258**	P	**P**	**19**	**18**	**34.0**	**-0.4**
	comp=Z,15nm,1.1s								
CMAR	**Chiang Mai Arr**	**37.22**	**257**	P	**P**	**19**	**18**	**35.9**	**0.0**
	comp=Z,2.8nm,0.7s,baz=51,slow=7.3,SNR=28								
SBUM	**Sibu**	**38.12**	**224**	P	**P**	**19**	**18**	**42.7**	**-0.6**
	comp=Z,12nm,1.1s								
BILL	**Bilibino**	**39.31**	**17**	*α* *i*P	**P**	**19**	**18**	**53.1**	**+0.8**
BILL				pmax	pmax				
	comp=Z,30nm,1.0s								
BILL				MLR	MLR				
	comp=Z,100nm,22.0s								
TIXI	**Tiksi**	**39.48**	**356**	*c* *i*P	**P**	**19**	**18**	**53.5**	**-0.2**
TIXI				pmax	pmax				
	comp=Z,7.0nm,0.9s								
KSM	**Kuching**	**40.03**	**225**	P	P	19	18	55.6	-3.3
	comp=Z,29nm,0.8s,comp=Z,313nm								
KAPI	**Kappang**	**40.91**	**207**	P	P	19	18	57.2	-8.7
KAPI	**Kappang**	**40.91**	**207**	P	**P**	**19**	**19**	**05.1**	**-0.9**
	comp=Z,21nm,0.8s,baz=356,slow=8.0,SNR=9.2								
PMG	**Port Moresby**	**42.69**	**166**	P	**P**	**19**	**19**	**20.1**	**-0.1**
	comp=Z,6.9nm,1.0s,baz=11,slow=10,SNR=3.1								
ZALV	**Zalesovo Beam**	**42.72**	**316**	P	**P**	**19**	**19**	**19.9**	**0.0**
ZALV						19	21	02.9	
ZALV				pmax	pmax				
	comp=Z,2.0nm,0.4s								
ZALV				pmax	pmax				
	comp=Z,2.0nm,0.6s								
ZALV				pmax	pmax				
	comp=N,1.0nm,0.6s								
ZALV	**Zalesovo Beam**	**42.72**	**316**	P	**P**	**19**	**19**	**19.9**	**0.0**
	comp=N,2.2nm,0.4s,baz=91,slow=7.7,SNR=16								
ZALV				PcP	**PcP**	**19**	**21**	**02.9**	**-0.1**
	comp=N,2.3nm,0.6s,baz=100,slow=3.2,SNR=11								
ZALV				ScP	**ScP**	**19**	**24**	**14.6**	**-0.3**
	comp=N,1.0nm,0.6s,baz=126,slow=4.8,SNR=5.5								
TAPN	**Taplejung**	**43.07**	**277**	*e*P	**P**	**19**	**19**	**23.6**	**+0.1**
	comp=N,29nm,0.9s								
ODAN	**Odare**	**43.50**	**276**	*e*P	**P**	**19**	**19**	**26.9**	**0.0**
	comp=N,24nm,0.7s								
MK31	**Makanchi Array**	**43.90**	**306**	*e*P	**P**	**19**	**19**	**29.7**	**+0.2**
MK31				pmax	pmax				
	comp=Z,1.0nm,0.3s								
MKAR	**Makanchi Array**	**43.90**	**306**	*c**e*P	**P**	**19**	**19**	**29.7**	**+0.3**
MKAR				pmax	pmax				
	comp=Z,1.0nm,0.4s								
MKAR	**Makanchi Array**	**43.90**	**306**	P	**P**	**19**	**19**	**29.8**	**+0.3**
	comp=Z,1.4nm,0.4s,baz=87,slow=9.4,SNR=45								
MKAR				PcP	**PcP**	**19**	**21**	**07.2**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=96,slow=4.9,SNR=3.7								
MKAR				ScP	**ScP**	**19**	**24**	**19.6**	**-0.3**
	comp=Z,0.7nm,0.4s,baz=76,slow=4.6,SNR=12								
IPM	**Ipoh**	**43.97**	**238**	P	**P**	**19**	**19**	**28.3**	**-2.0**
	comp=Z,28nm,0.8s								
RAMN	**Ramite**	**44.14**	**277**	*e*P	**P**	**19**	**19**	**31.9**	**+0.1**
	comp=Z,52nm,0.8s								
GUN	**Gumba**	**44.42**	**278**	*e*P	**P**	**19**	**19**	**34.4**	**+0.2**
	comp=Z,50nm,0.8s								
PKI	**Pulchoki**	**44.93**	**278**	*e*P	**P**	**19**	**19**	**38.0**	**-0.1**
	comp=Z,24nm,0.9s								
PKIN	**Phulchoki**	**44.94**	**278**	*e*P	**P**	**19**	**19**	**38.2**	**+0.1**
	comp=Z,9.9nm,0.8s								
KKN	**Kakani**	**44.96**	**278**	*e*P	**P**	**19**	**19**	**38.3**	**+0.1**
	comp=Z,34nm,0.9s								
DMN	**Daman**	**45.17**	**278**	*e*P	**P**	**19**	**19**	**40.1**	**+0.2**
	comp=Z,25nm,0.9s								
DANN	**Dangsing**	**46.05**	**280**	*e*P	**P**	**19**	**19**	**47.3**	**+0.6**
	comp=Z,39nm,0.7s								
KURK	**Kurchatov**	**46.28**	**311**	*d* *i*P	**P**	**19**	**19**	**47.6**	**-0.2**
KURK				pmax	pmax				
	comp=Z,2.0nm,1.2s								
KOLN	**Koldanda**	**46.37**	**279**	*e*P	**P**	**19**	**19**	**49.4**	**+0.3**
	comp=Z,19nm,0.9s								
PSI	**Prapat**	**46.63**	**239**	P	**P**	**19**	**19**	**50.5**	**-0.6**
	comp=Z,5.7nm,0.5s,baz=15,slow=1.8,SNR=7.6								
PYUN	**Piuthan**	**46.77**	**280**	*e*P	**P**	**19**	**19**	**52.7**	**+0.5**
	comp=Z,30nm,0.5s								
FITZ	**Fitzroy Crossi**	**51.56**	**194**	P	**P**	**19**	**20**	**27.4**	**-0.1**
	comp=Z,1.4nm,0.5s,baz=11,slow=5.2,SNR=6.5								
WRA	**Warramunga Arr**	**52.22**	**184**	P	**P**	**19**	**20**	**31.6**	**-0.9**
	comp=Z,2.3nm,0.3s,baz=0.3,slow=7.7,SNR=99								
WRA				ScP	**ScP**	**19**	**24**	**54.8**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=0.3,slow=5.0,SNR=4.9								
KK31	**Karatay Array**	**52.63**	**302**	*i* P	**P**	**19**	**20**	**35.5**	**+0.2**
KK31				pmax	pmax				
	comp=Z,1.0nm,0.4s								
KDAK	**Kodiak Island**	**52.68**	**39**	P	**P**	**19**	**20**	**35.2**	**-0.1**
	comp=Z,7.4nm,0.5s,baz=343,slow=1.1,SNR=7.5								
ILAR	**Eielson Array**	**55.08**	**30**	P	**P**	**19**	**20**	**52.0**	**-0.3**
	comp=Z,2.6nm,0.8s,baz=283,slow=5.6,SNR=28								
ILAR				PcP	**PcP**	**19**	**21**	**47.5**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=269,slow=3.7,SNR=5.3								
ASAR	**Alice Springs**	**55.95**	**184**	P	**P**	**19**	**20**	**58.5**	**-0.4**
	comp=Z,1.5nm,0.5s,baz=13,slow=12,SNR=44								
ASAR				ScP	**ScP**	**19**	**25**	**12.2**	**+0.6**
	comp=Z,0.8nm,1.0s,baz=355,slow=5.1,SNR=5.3								
AB31	**Akbulak array**	**58.39**	**311**	*i* P	**P**	**19**	**21**	**15.6**	**0.0**
AB31				pmax	pmax				
	comp=Z,3.0nm,0.4s								
AKTO	**Aktyubinsk**	**59.30**	**313**	P	**P**	**19**	**21**	**22.1**	**+0.4**
AKTO				pmax	pmax				
	comp=Z,2.0nm,0.7s								
AKTO	**Aktyubinsk**	**59.30**	**313**	P	**P**	**19**	**21**	**22.1**	**+0.4**
	comp=Z,2.4nm,0.7s,baz=74,slow=14,SNR=9.5								
STKA	**Stephens Creek**	**64.15**	**176**	P	**P**	**19**	**21**	**54.9**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=345,slow=15,SNR=4.4								
KEV	**Kevo**	**66.50**	**339**	*e*P	**P**	**19**	**22**	**08.6**	**+0.4**
KEV				pmax	pmax				
	comp=Z,6.0nm,0.8s								
KEV	**Kevo**	**66.50**	**339**	*ep*	**P**	**19**	**22**	**08.6**	**+0.4**
	comp=Z,6.3nm,0.8s								
ARCES	**ARCESS Array B**	**67.07**	**339**	P	**P**	**19**	**22**	**12.3**	**+0.5**
	comp=Z,6.1nm,0.6s,baz=63,slow=8.6,SNR=31								
JOF	**Joensuu**	**68.40**	**332**	*e*P	**P**	**19**	**22**	**20.3**	**+0.3**
JOF				pmax	pmax				
	comp=Z,6.0nm,0.6s								
JOF	**Joensuu**	**68.40**	**332**	*ep*	**P**	**19**	**22**	**20.3**	**+0.3**
	comp=Z,6.0nm,0.6s								
YKA	**Yellowknife Ar**	**69.37**	**28**	P	**P**	**19**	**22**	**26.1**	**+0.2**
	comp=Z,3.5nm,0.8s,baz=293,slow=6.1,SNR=9.6								
KAF	**Kangasniemi**	**70.80**	**332**	*e*P	**P**	**19**	**22**	**34.5**	**0.0**
KAF				pmax	pmax				
	comp=Z,4.0nm,0.5s								
KAF	**Kangasniemi**	**70.80**	**332**	*ep*	**P**	**19**	**22**	**34.5**	**0.0**
	comp=Z,4.2nm,0.5s								
FINES	**FINESS Array B**	**71.27**	**332**	P	**P**	**19**	**22**	**37.4**	**+0.1**
	comp=Z,5.4nm,0.5s,baz=62,slow=5.5,SNR=95								
KBZ	**Khabaz**	**71.33**	**310**	P	**P**	**19**	**22**	**38.2**	**+0.2**
KBZ				pmax	pmax				
	comp=Z,2.0nm,0.7s								
KBZ	**Khabaz**	**71.33**	**310**	P	**P**	**19**	**22**	**38.2**	**+0.2**
	comp=Z,2.1nm,0.7s,baz=105,slow=4.1,SNR=4.9								
KIV	**Kislovodsk**	**71.36**	**311**	P	**P**	**19**	**22**	**39.2**	**+0.8**
KIV						19	22	53.4	
KIV				pmax	pmax				
	comp=Z,7.0nm,1.3s								
ANN	**Anapa**	**74.26**	**313**	*e*P	P	19	22	51.5	-3.5
ANN				pmax	pmax				
	comp=Z,22nm,1.0s								
AKASG	**Malin Array Be**	**75.82**	**321**	P	**P**	**19**	**23**	**03.5**	**-0.2**
AKASG				pmax	pmax				
	comp=Z,3.0nm,0.4s								
AKASG	**Malin Array Be**	**75.82**	**321**	P	**P**	**19**	**23**	**03.5**	**-0.2**
	comp=Z,2.9nm,0.4s,baz=52,slow=5.7,SNR=12								
HFS	**Hagfors**	**76.81**	**335**	P	**P**	**19**	**23**	**08.9**	**-0.1**
	comp=Z,6.0nm,0.6s,baz=68,slow=4.0,SNR=19								
NB2	**NORSAR Subarra**	**77.05**	**336**	P	**P**	**19**	**23**	**10.0**	**-0.4**
	comp=Z,4.7nm,0.6s,baz=43,slow=5.6								
NOA	**NORSAR Array B**	**77.05**	**336**	P	**P**	**19**	**23**	**10.3**	**-0.1**
	comp=Z,4.6nm,0.7s,baz=45,slow=5.6,SNR=24								
FFC	**Flin Flon**	**79.29**	**31**	*i* P	**P**	**19**	**23**	**23.4**	**+0.8**
BRTR	**Keskin Array B**	**79.33**	**310**	P	**P**	**19**	**23**	**23.7**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=107,slow=4.1,SNR=6.6								
NVAR	**Mina Array Bea**	**80.38**	**51**	P	**P**	**19**	**23**	**30.0**	**+1.0**
	comp=Z,3.8nm,0.9s,baz=288,slow=5.6,SNR=15								
UZH	**Uzhgorod**	**80.67**	**323**	*e*P	**P**	**19**	**23**	**31.1**	**+1.1**
DPC	**Dobruska-Polom**	**82.47**	**326**	*e*P	**P**	**19**	**23**	**40.3**	**+0.9**
DPC	**Dobruska-Polom**	**82.47**	**326**	*e*P	**P**	**19**	**23**	**40.3**	**+0.9**
UPC	**Upice**	**82.51**	**327**	*e*P	**P**	**19**	**23**	**40.1**	**+0.6**
UPC	**Upice**	**82.51**	**327**	*e*P	**P**	**19**	**23**	**40.1**	**+0.6**
BRG	**Berggiesshubel**	**83.20**	**328**	*e*P	**P**	**19**	**23**	**43.4**	**+0.3**
	comp=Z,3.4nm,0.7s								
BRG	**Berggiesshubel**	**83.20**	**328**	*e*P	**P**	**19**	**23**	**43.3**	**+0.3**
BRG				pmax	pmax				
	comp=Z,3.0nm,0.7s								
PDAR	**Pinedale Array**	**83.21**	**43**	P	**P**	**19**	**23**	**44.1**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=273,slow=2.4,SNR=20								
CLL	**Collm**	**83.31**	**329**	*i* P	**P**	**19**	**23**	**43.6**	**+0.1**
CLL				pmax	pmax				
	comp=Z,6.0nm,1.0s								
GERES	**GERESS Array B**	**84.75**	**327**	P	**P**	**19**	**23**	**50.1**	**-0.7**
	comp=Z,0.5nm,0.5s,baz=38,slow=5.0,SNR=6.7								
EKA	**Eskdalemuir Ar**	**86.22**	**339**	P	**P**	**19**	**23**	**58.3**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=43,slow=5.2,SNR=5.7								
TXAR	**Lajitas Array**	**95.53**	**50**	P	**P**	**19**	**24**	**42.0**	**+0.5**
	comp=Z,1.9nm,0.7s,baz=300,slow=3.5,SNR=14								
TORD	**Torodi Ar. Bea**	**117.93**	**310**	PKP	**PKPdf**	**19**	**29**	**59.9**	**-1.1**
	comp=Z,0.3nm,0.5s,baz=172,slow=2.7,SNR=8.8								
QSPA	**South Pole Qui**	**122.25**	**180**	PKP	**PKPdf**	**19**	**30**	**07.0**	**-0.7**
	comp=Z,1.5nm,1.0s,baz=263,slow=5.8,SNR=6.0								
LPAZ	**La Paz**	**151.80**	**61**	PKPbc	**PKPbc**	**19**	**31**	**10.4**	**+0.5**
	comp=Z,1.0nm,0.5s,baz=311,slow=4.1,SNR=3.5								
BDFB	**Brasilia**	**162.51**	**18**	PKPab	**PKPab**	**19**	**32**	**06.3**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=300,slow=8.1,SNR=3.6								

*NIED **26** 19:16:00, 26.°50N×124.°20E, h140km, Mw4.3 Best double couple: M0 3.35000×10^15 NP1:φs 238.00000°, δ 71.00000°, λ -151.00000°. NP2:φs 138.00000°, δ 63.00000°, λ -21.00000°.*

JMA 26 19:16:47.2±0.5, 26.°51N×124.°25E, h194km, M4.1, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
JTJ	**Tarama**	**1.91**	**168**	P	Pn	19	17	24.8	+0.5
JTJ				S	Sn	19	17	52.0	-1.2
JMJ	**Miyako jima 2**	**1.93**	**151**	P	Pn	19	17	25.5	+0.9
JMJ				S	Sn	19	17	53.1	-0.6
JOGS	**Gusukube**	**2.03**	**149**	P	Pn	19	17	26.5	+0.9
JOGS				S	Sn	19	17	55.1	-0.4
JIJ	**Ishigaki jima**	**2.14**	**183**	P	Pn	19	17	26.3	-0.5
JIJ				S	Sn	19	17	55.1	-2.5
IRIF	**Iriomote-Funau**	**2.22**	**192**	P	Pn	19	17	27.3	-0.3
IRIF				S	Sn	19	17	58.5	-0.6
JKRS	**Kuro-shima**	**2.27**	**186**	P	Pn	19	17	27.9	-0.3
JKRS				*e*S	Sn	19	17	58.7	-1.5
JKE	**Kume jima 2**	**2.28**	**94**	P	Pn	19	17	28.9	+0.6
JKE				*e*S	Sn	19	17	59.7	-0.5
YOJ	**Yonaguni jima**	**2.33**	**209**	P	Pn	19	17	29.5	+0.7
YOJ				*e*S	Sn	19	18	02.3	+1.1
HATJ	**Hateruma jima**	**2.48**	**189**	P	Pn	19	17	30.0	-0.5
HATJ				*e*S	Sn	19	18	02.2	-2.0
JAGN	**Aguni-jima**	**2.68**	**88**	P	Pn	19	17	32.7	-0.1
JAGN				S	Sn	19	18	06.5	-1.8
JJT2	**Tamagusuku 2**	**3.16**	**96**	P	Pn	19	17	38.3	-0.1
JJT2				*e*S	Sn	19	18	16.2	-2.3
JIH	**Iheya**	**3.36**	**80**	P	Pn	19	17	40.5	-0.4
JIH				S	Sn	19	18	19.4	-3.5
JOW	**Kunigami**	**3.62**	**84**	P	Pn	19	17	43.1	-0.9
JOW				S	Sn	19	18	23.9	-4.6
JTK	**Tokunoshima**	**4.38**	**72**	P	Pn	19	17	51.9	-1.6
JTK				S	Sn	19	18	40.1	-5.5
JAMN	**Amaminishikomi**	**4.71**	**67**	S	Sn	19	18	47.9	-5.2
JAM	**Amami Oshima**	**5.12**	**67**	S	Sn	19	18	56.7	-6.0
JZK	**Kikaishima**	**5.39**	**69**	*e*S	Sn	19	19	04.6	-4.5
JMZ	**Minamidaito 2**	**6.30**	**95**	P	Pn	19	18	16.1	-2.2
JMZ				S	Sn	19	19	22.0	-8.3

*IDC **26** 19:17:09.9±1.0, 0.°87N×125.°81E, h0km, mb4.0/6, mb1 4.1/7, mb1mx3.7/24, mbtmp3.9/7, ML3.3/1, MS5.1/1, Ms1 5.1/1, ms1mx2.6/36, Error ellipse: s-maj=34.7km s-min=17.9km az=69.0*
*ISCJB **26** 19:17:15.6±0.6, 0.°93N±0.°09×126.°11E±0.°05, h44km, mb4.0/6, MS5.0/1, Error ellipse: s-maj=12.8km s-min=6.3km az=11.3*
*DJA **26** 19:17:15.9±1.3, 1.°1N±6.°×12.°6E±.°, h13km±12km, M4.0/8, MLv4.0/8*

ISC 26 19:17:16.3±0.8, 0.°95N±0.°08×126.°06E±0.°05, h44km, n16, σ1⁄978/16, mb4.1/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
MNI	**Manado**	**1.31**	**292**	P	**Pn**	**19**	**17**	**38.6**	**+0.4**
MNI				S	**Sn**	**19**	**17**	**55.3**	**+0.7**
TNTI	**Ternate**	**1.32**	**98**	P	**Pn**	**19**	**17**	**38.1**	**-0.2**
GAMI	**Galela, Maluku**	**1.94**	**63**	P	**Pn**	**19**	**17**	**49.2**	**+2.4**
KMSI	**Cibinong**	**2.11**	**260**	P	**Pn**	**19**	**17**	**50.3**	**+1.2**
KMSI				S	**Sn**	**19**	**18**	**17.6**	**+3.4**
LBMI	**Labuha**	**2.14**	**138**	P	**Pn**	**19**	**17**	**51.3**	**+1.8**
GTOI	**Gorontalo**	**3.06**	**264**	P	Pn	19	18	05.5	+3.3
LUWI	**Luwuk**	**3.84**	**239**	P	**Pn**	**19**	**18**	**14.8**	**+1.9**
MRSI	**Marisa**	**4.14**	**264**	P	**Pn**	**19**	**18**	**17.3**	**+0.2**
FITZ	**Fitzroy Crossi**	**18.94**	**181**	P	**P**	**19**	**21**	**31.7**	**-2.1**
	0.1nm,0.3s,baz=6.3,slow=9.2,SNR=1.9								
WRA	**Warramunga Arr**	**22.29**	**159**	P	**P**	**19**	**22**	**08.8**	**-1.3**
	5.3nm,0.5s,baz=337,slow=11,SN

VNDA					pP		**pP**	19 43 54.0	+0.4
VNDA	**Vanda**		**71.21**	**178**	P		**P**	19 43 40.0	+0.3
	1.1nm,0.9s,baz=324,slow=6.6,SNR=5.4								
VNDA					pP		**pP**	19 43 54.0	+0.4
	1.0nm,0.7s,baz=323,slow=7.0,SNR=4.4								
KDAK	**Kodiak Island**		**76.93**	**26**	LR		LR	20 17 50.5	
	comp=Z,90nm,18.1s,baz=19,slow=35								
MK31	**Makanchi Array**		**82.48**	**319**	*eP*		**P**	19 44 43.9	+0.2
MKAR	**Makanchi Array**		**82.48**	**319**	P		**P**	19 44 44.4	+0.6
MKAR					pP		**pP**	19 44 59.3	+1.5
MKAR	**Makanchi Array**		**82.48**	**319**	P		**P**	19 44 44.4	+0.6
	1.8nm,0.8s,baz=105,slow=4.8,SNR=17								
MKAR					pP		**pP**	19 44 59.3	+1.5
	1.9nm,0.7s,baz=107,slow=4.2,SNR=5.8								
ILAR	**Eielson Array**		**83.07**	**22**	P		**P**	19 44 43.5	-2.9
ILAR	**Eielson Array**		**83.07**	**22**	P		**P**	19 44 43.5	-2.9
	1.2nm,0.8s,baz=242,slow=5.3,SNR=11								
ILAR					LR		LR	20 21 56.0	
	comp=Z,49nm,18.8s,baz=146,slow=36								
ZALV	**Zalesovo Beam**		**83.28**	**326**	P		**P**	19 44 46.3	-1.4
ZALV	**Zalesovo Beam**		**83.28**	**326**	P		**P**	19 44 46.3	-1.4
	0.6nm,0.5s,baz=113,slow=4.1,SNR=4.1								
MAW	**Mawson**		**84.68**	**203**	P		**P**	19 44 55.0	+0.4
MAW	**Mawson**		**84.68**	**203**	P		**P**	19 44 55.0	+0.4
	1.7nm,0.7s,baz=90,slow=7.1,SNR=3.4								
YBH	**Yreka Blue Hor**		**89.01**	**48**	LR		LR	20 19 03.6	
	comp=Z,72nm,19.1s,baz=85,slow=31								
INK	**Inuvik**		**89.40**	**21**	LR		LR	20 20 45.4	
	comp=Z,44nm,19.8s,baz=117,slow=32								
NVAR	**Mina Array Bea**		**91.91**	**52**	P		**P**	19 45 29.3	-0.8
NVAR	**Mina Array Bea**		**91.91**	**52**	P		**P**	19 45 29.3	-0.8
	2.5nm,0.8s,baz=258,slow=7.3,SNR=14								
NEW	**Newport**		**93.78**	**42**	LR		LR	20 21 37.3	
	comp=Z,87nm,18.5s,baz=176,slow=31								
PDAR	**Pinedale Array**		**98.82**	**48**	P		**P**	19 45 59.7	-1.8
PDAR	**Pinedale Array**		**98.82**	**48**	P		**P**	19 45 59.7	-1.8
	0.5nm,0.6s,baz=315,slow=3.2,SNR=4.1								
PDAR					LR		LR	20 21 31.1	
	comp=Z,35nm,20.9s,baz=262,slow=30								
BDFB	**Brasilia**		**148.91**	**135**	PKPbc		**PKPab**	19 52 12.8	-1.2
BDFB	**Brasilia**		**148.91**	**135**	PKPbc		**PKPab**	19 52 12.8	-1.2
	3.0nm,0.6s,baz=262,slow=6.4,SNR=4.0								
TORD	**Torodi Ar. Bea**		**152.17**	**286**	PKP		**PKPdf**	19 52 09.6	-1.3
TORD					PKPbc		**PKPbc**	19 52 17.2	-0.5
TORD					PKPab		**PKPab**	19 52 28.3	+0.9
TORD	**Torodi Ar. Bea**		**152.17**	**286**	PKP		**PKPdf**	19 52 09.6	-1.3
	0.5nm,0.7s,baz=27,slow=1.6,SNR=2.3								
TORD					PKPbc		**PKPbc**	19 52 17.2	-0.5
	4.4nm,0.7s,baz=36,slow=2.3,SNR=33								
TORD					PKPab		**PKPab**	19 52 28.3	+0.9
	1.7nm,0.4s,baz=86,slow=2.1,SNR=19								

GUC 26 19:55:39.5±0.6,29°22S×71°21W,h56km±10km, MD3.6, ML3.2,4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCO	**Las Campanas**	**0.49**	**65**	*eP*	Pn	19 55 52.2	+0.8
LCO				*i* S	Sn	19 56 01.2	+1.2
LCO				AML	AML	19 56 01.6	
	comp=E,1μm,0.4s						
TLL	**Tololo Astrono**	**1.01**	**160**	*eP*	Pn	19 55 59.0	+1.1
TLL				*i* S	Sn	19 56 13.0	+1.5
TLL				AML	AML	19 56 14.2	
	comp=E,1μm,0.3s						
CMCH	**Combarbala**	**1.96**	**175**	*iP*	Pn	19 56 11.1	+0.6
CMCH				*i* S	Sn	19 56 34.8	+0.8
CPCH	**Copiapo**	**2.00**	**22**	*iP*	Pn	19 56 11.2	+0.3
CPCH				*i* S	Sn	19 56 35.7	+0.9
CDCH	**Caldera**	**2.17**	**9**	*i* P	Pn	19 56 13.5	+0.3
CDCH				*i* S	Sn	19 56 39.5	+0.6
CDCH				AML	AML	19 56 48.7	
	comp=E,142nm,0.4s						
CHNG	**Los Chungos**	**2.67**	**185**	*iP*	Pn	19 56 20.6	+0.5
CHNG				*i* S	Sn	19 56 51.6	+0.4
CHNG				AML	AML	19 57 01.4	
	comp=E,128nm,0.4s						

IDC 26 20:00:40.6±0.8,25°42S×70°84W,h24km±4km, mb3.9/3, mb1 3.9/6,mb1mx3.6/21,mbtmp3.8/6,ML4.1/3,MS3.1/3, Ms1 3.1/3,ms1mx2.9/26, Error ellipse: s-maj=40.5km s-min=19.7km az=107.0, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**3.30**	**33**	Pn	Pn	20 01 31.7	+0.6
	46nm,0.3s,baz=228,slow=11,SNR=58						
LVC				Sn	Sb	20 02 18.1	-0.8
	199nm,0.3s,baz=20,slow=16,SNR=14						
LVC				LR	LR	20 02 57.2	
	comp=Z,326nm,19.0s,baz=14,slow=41						
CFAA	**Coronel Fontan**	**6.57**	**160**	Pn	Pn	20 02 18.4	+2.6
	0.4nm,0.3s,baz=345,slow=14,SNR=20						
CFAA				Sn	Sn	20 03 26.9	-3.1
	0.4nm,0.3s,baz=176,slow=22,SNR=3.3						
LPAZ	**La Paz**	**9.43**	**16**	Pn	Pn	20 02 55.5	-0.4
	0.4nm,0.3s,baz=190,slow=4.5,SNR=9.3						
LPAZ				Sn	Sn	20 04 33.9	-7.8
	baz=196,slow=10,SNR=1.6						
LPAZ				LR	LR	20 06 45.6	
	comp=Z,66nm,20.8s,baz=220,slow=39						
CPUP	**Villa Florida**	**12.20**	**97**	Pn	Pn	20 03 34.0	+1.1
	0.4nm,0.3s,baz=213,slow=15,SNR=2.5						
CPUP				LR	LR	20 08 37.9	
	comp=Z,109nm,21.3s,baz=180,slow=39						
SNAA	**Sanae**	**59.19**	**160**	P	P	20 10 38.9	-0.5
	0.4nm,1.0s,baz=283,slow=8.9,SNR=14						
QSPA	**South Pole Qui**	**64.79**	**180**	P	P	20 11 17.7	+0.6
	1.0nm,0.4s,baz=130,slow=5.7,SNR=6.2						
QSPA				pP	pP	20 11 25.2	+0.4
	1.6nm,0.8s,baz=177,slow=4.2,SNR=3.2						
TORD	**Torodi Ar. Bea**	**80.33**	**70**	P	P	20 12 49.5	-0.7
	2.5nm,0.5s,baz=263,slow=5.2,SNR=74						
EKA	**Eskdalemuir Ar**	**98.86**	**32**	LR	LR	20 55 56.7	
	comp=Z,208nm,18.0s,baz=165,slow=34						
ASAR	**Alice Springs**	**125.64**	**208**	PKP	PKPdf	20 19 40.1	-0.6
	0.4nm,0.5s,baz=129,slow=1.5,SNR=11						
ASAR				pPKP	pPKPdf	20 19 48.2	-0.7
	0.7nm,0.7s,baz=134,slow=1.6,SNR=5.3						
WRA	**Warramunga Arr**	**128.70**	**211**	PKP	PKPdf	20 19 46.2	-0.4
	0.4nm,0.4s,baz=161,slow=1.7,SNR=10						
WRA				pPKP	pPKPdf	20 19 54.3	-0.5
	1.0nm,0.7s,baz=159,slow=1.8,SNR=7.8						
ZALV	**Zalesovo Beam**	**146.23**	**26**	PKPbc	PKPbc	20 20 18.1	-0.5
	5.2nm,0.7s,baz=309,slow=4.2,SNR=21						
ZALV				pPKP	pPKPdf	20 20 25.9	+0.1
	1.6nm,0.6s,baz=295,slow=4.9,SNR=5.1						
MKAR	**Makanchi Array**	**149.81**	**38**	PKPbc	PKPbc	20 20 28.3	-0.2
	2.3nm,0.8s,baz=321,slow=2.5,SNR=12						
MKAR				pPKPbc	pPKPbc	20 20 36.0	-0.7
	1.8nm,0.8s,baz=326,slow=2.8,SNR=7.6						

*CSEM **26** 20:09:03.8±0.7,49.°85N×18.°46E,h10km, Error ellipse: s-maj=12.5km s-min=10.7km az=36.0*

PRU 26 20:09:04.9,49.°82N×18.°42E,h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.18**	**276**	*ePG*	Pg	20 09 08.4	+0.1
OKC				*eSG*	Sg	20 09 10.5	-0.2
	comp=Z,5.8nm,0.3s						
OKC	**Ostrava-Krasne**	**0.18**	**276**	Pg	Pg	20 09 08.4	+0.1
OKC				Sg	Sg	20 09 10.5	-0.2
	5.8nm,0.3s						
MORC	**Moravsky Berou**	**0.57**	**266**	*eSg*	Sg	20 09 23.2	-0.2
DPC	**Dobruska-Polom**	**1.45**	**292**	*ePG*	Pn	20 09 31.7	-0.8
DPC				*eSG*	Sg	20 09 51.2	-0.5
DPC	**Dobruska-Polom**	**1.45**	**292**	Pg	Pn	20 09 31.7	-0.8
DPC				Sg	Sg	20 09 51.2	-0.5
UPC	**Upice**	**1.69**	**295**	*eSG*	Sb	20 09 59.1	+0.2
UPC	**Upice**	**1.69**	**295**	Sg	Sb	20 09 59.1	+0.2

*ISK **26** 20:10:24.9,36.°41N×25.°28E,h13km, ML3.7*
*IDC **26** 20:10:26.7±0.8,36.°45N×25.°55E,h0km,mb3.9/9, mb1 3.9/13,mb1mx3.8/32,mbtmp3.8/13,ML3.3/4, MS2.8/1, Ms1 2.8/1,ms1mx2.2/37, Error ellipse: s-maj=19.5km s-min=16.1km az=1.0*
*ATH **26** 20:10:27.9,36.°52N×25.°50E,h25km,ML3.7*
*CSEM **26** 20:10:28.6±0.1,36.°49N×25.°49E,h10km,ML3.5/9,Ms2.6, Error ellipse: s-maj=2.5km s-min=2.1km az=11.0*

*ISCJB **26** 20:10:28.2±0.4,36.°54N±0.°01×25.°49E±0.°02,h14km±2km, mb3.8/12, Error ellipse: s-maj=2.2km s-min=2.1km az=42.7*
*THE **26** 20:10:29.1,36.°52N×25.°52E,h6km±1km,ML3.5/9, Error ellipse: s-maj=1.0km s-min=0.5km az=259.0*
*DDA **26** 20:10:48.6,37.°13N×25.°71E,h5km,MD4.0*

ISC 26 20:10:28.9±0.7,36.°51N±0.°02×25.°50E±0.°02,h12km±4km, n325,σ0.°92/406,mb3.9/12,5C-1D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THR2	**Thira island,**	**0.08**	**217**	P	**Pg**	20 10 31.1	-0.5
THR2	**Thira island,**	**0.08**	**217**	P	**Pg**	20 10 31.1	-0.5
THR1	**Thera Island**	**0.15**	**192**	P	**Pg**	20 10 32.5	+0.1
THR1				S	**Sg**	20 10 34.9	-0.1
THR1	**Thera Island**	**0.15**	**192**	P	**Pg**	20 10 32.5	+0.1
THR1				S	**Sg**	20 10 34.9	-0.1
APE	**Apeiranthos**	**0.55**	**3**	*ePG*	**Pg**	20 10 39.4	-0.4
APE				*eSG*	**Sb**	20 10 48.6	+0.1
APE	**Apeiranthos**	**0.55**	**3**	P	**Pg**	20 10 39.3	-0.5
APE				S	**Sg**	20 10 48.1	+0.9
APE	**Apeiranthos**	**0.55**	**3**	*ePN*	**Pg**	20 10 39.1	-0.7
APE				*eSN*	**Sg**	20 10 47.0	-0.2
APE	**Apeiranthos**	**0.55**	**3**	*ePg*	**Pg**	20 10 39.4	-0.4
APE				*eSn*	**Sg**	20 10 47.0	-0.2
APE				S	**Sg**	20 10 48.1	+0.9
NPS	**Neapolis**	**1.25**	**176**	P	**Pn**	20 10 51.2	-1.1
NPS				S	**Sg**	20 11 10.2	+0.9
NPS	**Neapolis**	**1.25**	**176**	*ePN*	**Pn**	20 10 51.0	-1.3
NPS				*eSN*	**Sn**	20 11 08.9	-0.1
NPS	**Neapolis**	**1.25**	**176**	P	**Pn**	20 10 51.2	-1.1
NPS				*eSn*	**Sn**	20 11 08.9	-0.1
NPS				S	**Sg**	20 11 10.2	+0.9
IDI	**Anoyia**	**1.32**	**202**	P	**Pn**	20 10 52.6	-0.6
IDI				S	**Sn**	20 11 10.9	+0.1
IDI	**Anoyia**	**1.32**	**202**	*ePN*	**Pn**	20 10 52.7	-0.5
IDI				*eSN*	**Sb**	20 11 10.3	-0.2
IDI	**Anoyia**	**1.32**	**202**	*ePn*	**Pn**	20 10 52.7	-0.5
IDI				*eSn*	**Sb**	20 11 10.3	-0.2
LAST	**Lasithi**	**1.35**	**181**	P	**Pn**	20 10 52.4	-1.3
LAST				S	**Sn**	20 11 11.5	0.0
LAST	**Lasithi**	**1.35**	**181**	*ePN*	**Pn**	20 10 52.6	-1.1
LAST				*eSN*	**Sn**	20 11 11.7	+0.2
LAST	**Lasithi**	**1.35**	**181**	*ePn*	**Pn**	20 10 52.6	-1.1
LAST				S	**Sn**	20 11 11.5	0.0
NIS1	**Nisyros Isl.**	**1.36**	**86**	P	**Pn**	20 10 53.6	-0.1
NIS1	**Nisyros Isl.**	**1.36**	**86**	*ePN*	**Pn**	20 10 53.8	+0.1
NIS1				*eSN*	**Sb**	20 11 11.5	-0.1
NIS1	**Nisyros Isl.**	**1.36**	**86**	P	**Pn**	20 10 53.6	-0.1
NIS1				*eSn*	**Sb**	20 11 11.5	-0.1
ZKR	**Zakros**	**1.51**	**157**	P	**Pn**	20 10 55.6	-0.2
ZKR	**Zakros**	**1.51**	**157**	*ePN*	**Pn**	20 10 55.6	-0.2
ZKR				*eSN*	**Sb**	20 11 15.8	-0.3
ZKR	**Zakros**	**1.51**	**157**	P	**Pn**	20 10 55.6	-0.2
ZKR				*eSn*	**Sb**	20 11 15.8	-0.3
VAM	**Vamos**	**1.53**	**224**	P	**Pn**	20 10 55.4	-0.6
VAM				S	**Sb**	20 11 16.9	+0.5
VAM	**Vamos**	**1.53**	**224**	*ePN*	**Pn**	20 10 55.6	-0.4
VAM				*eSN*	**Sn**	20 11 15.9	+0.1
VAM	**Vamos**	**1.53**	**224**	*ePn*	**Pn**	20 10 55.6	-0.4
VAM				*eSn*	**Sn**	20 11 15.9	+0.1
VAM				S	**Sb**	20 11 16.9	+0.5
BODT	**Bodrum**	**1.56**	**69**	*ePN*	**Pn**	20 10 55.7	-0.7
BODT				*eSN*	**Sg**	20 11 18.5	-0.5
BODT	**Bodrum**	**1.56**	**69**	*ePn*	**Pn**	20 10 55.7	-0.7
BODT				*eSn*	**Sg**	20 11 18.5	-0.5
SIVA	**Sivas**	**1.59**	**201**	P	**Pn**	20 10 57.1	+0.2
SIVA				S	**Sb**	20 11 18.0	-0.4
SIVA	**Sivas**	**1.59**	**201**	*ePN*	**Pn**	20 10 56.8	-0.1
SIVA				*eSN*	**Sn**	20 11 17.5	+0.1
SIVA	**Sivas**	**1.59**	**201**	*ePn*	**Pn**	20 10 56.8	-0.1
SIVA	**Sivas**	**1.59**	**201**	P	**Pn**	20 10 57.1	+0.2
SIVA				*eSn*	**Sn**	20 11 17.5	+0.1
SIVA				S	**Sb**	20 11 18.0	-0.4
SMG	**Samos**	**1.60**	**42**	P	**Pn**	20 10 56.2	-0.9
SMG				S	**Sn**	20 11 17.2	-0.5
SMG	**Samos**	**1.60**	**42**	*ePN*	**Pn**	20 10 56.4	-0.7
SMG				*eSN*	**Sn**	20 11 17.4	-0.3
SMG	**Samos**	**1.60**	**42**	*ePn*	**Pn**	20 10 56.4	-0.7
SMG				S	**Sn**	20 11 17.2	-0.5
KARP	**Karpathos**	**1.66**	**125**	P	**Pn**	20 10 57.8	-0.1
KARP				S	**Sn**	20 11 19.1	0.0
KARP	**Karpathos**	**1.66**	**125**	*ePN*	**Pn**	20 10 57.9	0.0
KARP				*eSN*	**Sn**	20 11 18.7	-0.4
KARP	**Karpathos**	**1.66**	**125**	*ePn*	**Pn**	20 10 57.9	0.0
KARP				*eSn*	**Sn**	20 11 18.7	-0.4
KARP				S	**Sn**	20 11 19.1	0.0
DAT	**Datca**	**1.69**	**82**	*ePN*	**Pn**	20 10 57.8	-0.5
DAT	**Datca**	**1.69**	**82**	*ePn*	**Pn**	20 10 57.8	-0.5
MRMA	**Marmari**	**1.78**	**330**	P	**Pn**	20 10 59.1	-0.4
MRMA	**Marmari**	**1.78**	**330**	P	**Pn**	20 10 59.1	-0.4
GCAM	**G?zelcaml?**	**1.82**	**49**	*eP*	**Pn**	20 10 59.7	-0.4
GCAM				*i* S	**Sg**	20 11 30.3	+2.7
GCAM	**G?zelcaml?**	**1.82**	**49**	*eP*	**Pn**	20 10 59.7	-0.4
ANKY	**Antikythira Is**	**1.89**	**251**	P	**Pn**	20 11 01.4	+0.4
ANKY				S	**Sn**	20 11 25.0	+0.3
ANKY	**Antikythira Is**	**1.89**	**251**	*ePN*	**Pn**	20 11 01.2	+0.2
ANKY	**Antikythira Is**	**1.89**	**251**	*ePn*	**Pn**	20 11 01.2	+0.2
ANKY				S	**Sn**	20 11 25.0	+0.3
CHOS	**Chios island**	**1.92**	**13**	P	**Pn**	20 11 01.0	-0.5
CHOS				S	**Sn**	20 11 25.8	+0.1
CHOS	**Chios island**	**1.92**	**13**	*ePN*	**Pn**	20 11 01.0	-0.5
CHOS				*eSN*	**Sn**	20 11 25.4	-0.3
CHOS	**Chios island**	**1.92**	**13**	*ePn*	**Pn**	20 11 01.1	-0.5
CHOS				*eSn*	**Sn**	20 11 25.4	-0.3
MLSB	**Milas**	**1.99**	**66**	*ePN*	**Pn**	20 11 01.7	-0.7
MLSB	**Milas**	**1.99**	**66**	*ePn*	**Pn**	20 11 01.7	-0.7
ATHU	**Athens Univers**	**1.99**	**317**	P	**Pn**	20 11 02.1	-0.3
ATHU				S	**Sn**	20 11 28.3	+1.0
ATHU	**Athens Univers**	**1.99**	**317**	P	**Pn**	20 11 02.1	-0.3
ATHU				S	**Sn**	20 11 28.3	+1.0
KYTH	**Kithira**	**2.00**	**264**	P	**Pn**	20 11 02.4	-0.1
KYTH	**Kithira**	**2.00**	**264**	*ePN*	**Pn**	20 11 02.8	+0.3
KYTH	**Kithira**	**2.00**	**264**	P	**Pn**	20 11 02.4	-0.1
KYTH	**Kithira**	**2.00**	**264**	*ePn*	**Pn**	20 11 02.8	+0.3
PTL	**Penteli**	**2.01**	**320**	P	**Pn**	20 11 02.5	-0.2
PTL				S	**Sn**	20 11 27.8	0.0
PTL	**Penteli**	**2.01**	**320**	*ePB*	**Pn**	20 11 02.4	-0.2
PTL				*eSN*	**Sn**	20 11 27.0	-0.8
PTL	**Penteli**	**2.01**	**320**	P	**Pn**	20 11 02.5	-0.2
PTL				*eSn*	**Sn**	20 11 27.0	-0.8
GVD	**Gavdhos**	**2.03**	**215**	*ePB*	**Pn**	20 11 02.4	-0.5
GVD				*eSN*	**Sn**	20 11 28.2	+0.1
GVD	**Gavdhos**	**2.03**	**215**	*ePb*	**Pn**	20 11 02.4	-0.5
GVD				*eSn*	**Sn**	20 11 28.2	+0.1
NAIG	**Nisos Aigina**	**2.03**	**308**	*ePB*	**Pn**	20 11 02.5	-0.4
NAIG	**Nisos Aigina**	**2.03**	**308**	*ePb*	**Pn**	20 11 02.5	-0.4
ATH	**Athens Observa**	**2.03**	**316**	P	**Pn**	20 11 02.9	-0.1
ATH	**Athens Observa**	**2.03**	**316**	*ePB*	**Pn**	20 11 03.1	+0.1
ATH				*eSN*	**Sn**	20 11 27.5	-0.8
ATH	**Athens Observa**	**2.03**	**316**	*ePb*	**Pn**	20 11 03.1	+0.1
ATH				*eSn*	**Sn**	20 11 27.5	-0.8
DID	**Didima**	**2.06**	**299**	P	**Pn**	20 11 02.9	-0.5
DID				S	**Sn**	20 11 30.4	+1.3
DID	**Didima**	**2.06**	**299**	*ePN*	**Pn**	20 11 02.9	-0.5
DID				*eSN*	**Sn**	20 11 28.9	-0.2
DID	**Didima**	**2.06**	**299**	P	**Pn**	20 11 02.9	-0.5
DID				*eSn*	**Sn**	20 11 28.9	-0.2
DID				S	**Sn**	20 11 30.4	+1.3
DIDY	**Didyma**	**2.07**	**298**	P	**Pn**	20 11 02.9	-0.6
DIDY	**Didyma**	**2.07**	**298**	P	**Pn**	20 11 02.9	-0.6
VLI	**Velíai**	**2.07**	**276**	P	**Pn**	20 11 03.2	-0.2
VLI	**Veliai**	**2.07**	**276**	*ePB*	**Pn**	20 11 03.3	-0.2
VLI				*eSN*	**Sn**	20 11 28.8	-0.4
VLI	**Veliai**	**2.07**	**276**	*ePb*	**Pn**	20 11 03.3	-0.2
VLI				*eSn*	**Sn**	20 11 28.8	-0.4
ARG	**Arkhangelos**	**2.14**	**97**	P	**Pn**	20 11 04.9	+0.4
ARG	**Arkhangelos**	**2.14**	**97**	*ePB*	**Pn**	20 11 04.9	+0.4
ARG				*eSN*	**Sn**	20 11 30.5	-0.5
ARG	**Arkhangelos**	**2.14**	**97**	P	**Pn**	20 11 04.9	+0.4
ARG				*eSn*	**Sn**	20 11 30.5	-0.5
AYDN	**Tasoluk**	**2.22**	**58**	*eP*	**Pn**	20 11 06.3	+0.7
AYDN				*i* S	**Sg**	20 11 42.1	+1.8
AYDN	**Tasoluk**	**2.22**	**58**	*eP*	**Pn**	20 11 06.3	+0.7
BLCB	**Balcova**	**2.24**	**33**	*ePN*	**Pn**	20 11 05.4	-0.4
BLCB	**Balcova**	**2.24**	**33**	*ePn*	**Pn**	20 11 05.4	-0.4
YER	**Yerkesik**	**2.32**	**74**	*ePN*	**Pn**	20 11 06.9	-0.1
YER	**Yerkesik**	**2.32**	**74**	*ePn*	**Pn**	20 11 06.9	-0.1
IZM	**Izmir**	**2.35**	**36**	*ePN*	**Pn**	20 11 06.9	-0.4
IZM	**Izmir**	**2.35**	**36**	*ePn*	**Pn**	20 11 06.9	-0.4
LTK	**Loutraki**	**2.52**	**307**	P	**Pn**	20 11 09.7	+0.1
LTK	**Loutraki**	**2.52**	**307**	*ePN*	**Pn**	20 11 09.8	+0.1
LTK				*eSN*	**Sn**	20 11 39.8	-0.5
LTK	**Loutraki**	**2.52**	**307**	*ePn*	**Pn**	20 11 09.8	+0.1
LTK				*eSn*	**Sn**	20 11 39.8	-0.5
TURN	**Turunc**	**2.52**	**81**	*iP*	**Pn**	20 11 07.3	-2.4
TURN	**Turunc**	**2.52**	**81**	*i* P	**Pn**	20 11 07.3	-2.4
DALY	**Dalyan (Mu˘la**	**2.56**	**82**	*ePN*	**Pn**	20 11 10.0	-0.1
DALY	**Dalyan (Mu˘la**	**2.56**	**82**	*ePn*	**Pn**	20 11 10.0	-0.1
DYR	**Agios Nikonas**	**2.56**	**276**	P	**Pn**	20 11 10.4	+0.2
DYR	**Agios Nikonas**	**2.56**	**276**	*ePN*	**Pn**	20 11 10.4	+0.2
DYR	**Agios Nikonas**	**2.56**	**276**	P	**Pn**	20 11 10.4	+0.2
VLX	**Vlachokerasia**	**2.64**	**290**	P	**Pn**	20 11 12.2	+0.8
VLX	**Vlachokerasia**	**2.64**	**290**	*ePN*	**Pn**	20 11 11.3	-0.1
VLX				*eSN*	**Sn**	20 11 42.8	-0.6
VLX	**Vlachokerasia**	**2.64**	**290**	*ePn*	**Pn**	20 11 11.3	-0.1
VLX	**Vlachokerasia**	**2.64**	**290**	P	**Pn**	20 11 12.2	+0.8
VLX				*eSn*	**Sn**	20 11 42.8	-0.6
MRKA	**Markates**	**2.66**	**326**	P	**Pn**	20 11 11.8	+0.2
MRKA	**Markates**	**2.66**	**326**	P	**Pn**	20 11 11.8	+0.2
SIGR	**SIGRI**	**2.71**	**6**	P	**Pn**	20 11 11.5	-0.7
SIGR	**SIGRI**	**2.71**	**6**	P	**Pn**	20 11 11.5	-0.7
PRK	**Paraskevi**	**2.79**	**12**	P	**Pn**	20 11 12.8	-0.6
PRK	**Paraskevi**	**2.79**	**12**	*ePN*	**Pn**	20 11 13.3	-0.1
PRK	**Paraskevi**	**2.79**	**12**	P	**Pn**	20 11 12.8	-0.6
PRK	**Paraskevi**	**2.79**	**12**	*ePn*	**Pn**	20 11 13.3	-0.1
FETY	**Fethiye**	**2.89**	**87**	*ePN*	**Pn**	20 11 14.3	-0.5
FETY	**Fethiye**	**2.89**	**87**	*ePn*	**Pn**	20 11 14.3	-0.5
GUR	**Goura**	**2.89**	**300**	P	**Pn**	20 11 15.4	+0.5
GUR	**Goura**	**2.89**	**300**	*ePN*	**Pn**	20 11 15.0	+0.1
GUR				*eSN*	**Sn**	20 11 49.3	-0.3
GUR	**Goura**	**2.89**	**300**	*ePn*	**Pn**	20 11 15.0	+0.1
GUR	**Goura**	**2.89**	**300**	P	**Pn**	20 11 15.4	+0.5
GUR				*eSn*	**Sn**	20 11 49.3	-0.3
LKR	**Lokris**	**2.91**	**318**	*ePN*	**Pn**	20 11 15.0	-0.1
LKR				*eSN*	**Sn**	20 11 49.6	-0.4
LKR	**Lokris**	**2.91**	**318**	*ePn*	**Pn**	20 11 15.0	-0.1
LKR				*eSn*	**Sn**	20 11 49.6	-0.4
ATAL	**Atalanti**	**2.93**	**319**	P	**Pn**	20 11 15.4	+0.1
ATAL	**Atalanti**	**2.93**	**319**	P	**Pn**	20 11 15.4	+0.1
ITM	**Ithomi**	**2.94**	**284**	P	**Pn**	20 11 15.0	-0.5
ITM	**Ithomi**	**2.94**	**284**	*ePN*	**Pn**	20 11 15.9	+0.4
ITM				*eSN*	**Sn**	20 11 50.8	+0.1
ITM	**Ithomi**	**2.94**	**284**	P	**Pn**	20 11 15.0	-0.5
ITM	**Ithomi**	**2.94**	**284**	*ePn*	**Pn**	20 11 15.9	+0.4
ITM				*eSn*	**Sn**	20 11 50.8	+0.1
AOS	**Alonnisos**	**2.94**	**335**	P	**Pn**	20 11 16.2	+0.7
AOS	**Alonnisos**	**2.94**	**335**	*ePN*	**Pn**	20 11 15.7	+0.2
AOS	**Alonnisos**	**2.94**	**335**	*ePn*	**Pn**	20 11 15.7	+0.2
AOS	**Al

KEK	Kerkira	5.51	307	P	Pn	20 11 52.1	+1.3
KEK	Kerkira	5.51	307	*e*PN	Pn	20 11 51.7	+0.9
KEK	Kerkira	5.51	307	*e*Pn	Pn	20 11 51.7	+0.9
KEK	Kerkira	5.51	307	P	Pn	20 11 52.1	+1.3
GULT	Gulveren	5.55	44	*e*PN	Pn	20 11 52.9	+1.5
KIZT	Kizilcal	5.58	63	*e*PN	Pn	20 11 53.4	+1.5
KIZT	Kizilcal	5.58	63	*e*Pn	Pn	20 11 53.4	+1.5
HDMB	Hadim	5.63	83	*e*PN	Pn	20 11 53.7	+1.1
HDMB	Hadim	5.63	83	*e*Pn	Pn	20 11 53.7	+1.1
KONT	Konya--Tatoy	5.66	73	*e*PN	Pn	20 11 54.4	+1.5
KONT	Konya--Tatoy	5.66	73	*e*Pn	Pn	20 11 54.4	+1.5
MDUB	Mudurnu	5.97	47	*e*PN	Pn	20 11 58.7	+1.6
VTS	Vitosha	6.32	344	i*i*P	Pn	20 12 01.5	-0.5
VTS	Vitosha	6.32	344	i*i*P	Pn	20 12 01.5	-0.5
CSS	Prodhromos	6.56	101	*e*PN	Pn	20 12 05.5	+0.3
CSS	Prodhromos	6.56	101	*e*Pn	Pn	20 12 05.5	+0.3
IKL	Isikli	6.61	90	*e*PN	Pn	20 12 07.2	+1.3
IKL	Isikli	6.61	90	*e*Pn	Pn	20 12 07.2	+1.3
BARS	Barje	6.90	337	*e*Pn	Pn	20 12 11.4	+1.5
BRTR	Keskin Array B	7.17	61	Pn	Pn	20 12 15.7	+1.9
	0.4nm,0.3s,baz=239,slow=14,SNR=21						
PDG	Podgorica	7.63	323	*e*Pn	Pn	20 12 21.3	+1.5
BBLS	Lazići	8.70	329	*e*Pn	Pn	20 12 36.3	+1.8
MMAI	Mount Meron Ar	8.87	110	Pn	Pn	20 12 35.0	-1.9
	2.4nm,0.3s,baz=314,slow=11,SNR=16						
MMAI				Sn	Sn	20 14 12.0	-4.8
	0.8nm,0.3s,baz=315,slow=32,SNR=2.9						
MLR	Muntele Rosu	8.97	2	i*i*P	Pn	20 12 41.4	+3.0
MLR	Muntele Rosu	8.97	2	Pn	Pn	20 12 40.1	+1.7
	0.0nm,0.3s,baz=185,slow=11,SNR=3.6						
PLOR	Plostina	9.37	5	i*i*P	Pn	20 12 46.3	+2.6
VRI	Vrincioaia	9.39	5	i*i*P	Pn	20 12 46.3	+2.3
VRI	Vrincioaia	9.39	5	i*i*P	Pn	20 12 46.3	+2.3
ASF	Jabal al Asfar	10.37	111	Pn	Pn	20 12 57.4	-0.1
EIL	Elat	10.46	128	Pn	Pn	20 12 56.4	-2.3
	1.0nm,0.3s,baz=324,slow=12,SNR=13						
EIL				Sn	Sn	20 14 47.0	-8.8
	0.6nm,0.3s,baz=358,slow=13,SNR=4.9						
KECS	Kecovo	12.52	344	*e*	P	20 13 39.0	+0.5
KOLS	Kolonicke sedl	12.63	350	*e*	P	20 13 49.9	+10
CRVS	Cervenica-Dubn	12.73	348	*e*PN	P	20 13 38.0	-2.9
KEST	Kesra	13.08	271	Pn	Pn	20 13 36.3	+1.6
	0.1nm,0.3s,baz=16,slow=7.9,SNR=3.6						
STHS	Stebnicka Huta	13.26	348	*e*PN	P	20 13 46.0	-0.8
VRAC	Vranov	14.34	336	Pn	P	20 14 00.5	+1.8
	baz=147,slow=10,SNR=9.1						
VRAC	Vranov	14.34	336	*e*P	P	20 14 00.5	+1.8
AKASG	Malin Array Be	14.43	10	Pn	P	20 14 02.8	+3.0
	0.7nm,0.3s,baz=199,slow=10,SNR=8.0						
TREC	Trest	14.71	333	*e*P	P	20 14 05.0	+2.1
TREC	Trest	14.71	333	*e*P	P	20 14 05.0	+2.1
GERES	GERESS Array B	15.05	329	Pn	P	20 14 08.5	+1.8
	0.2nm,0.3s,baz=144,slow=12,SNR=30						
GERES				LR	LR	20 20 23.5	
	comp=Z,32nm,18.5s,baz=95,slow=40						
KBZ	Khabaz	15.12	56	Pn	P	20 14 10.1	+2.7
	0.1nm,0.3s,baz=265,slow=7.9,SNR=13						
DPC	Dobruska-Polom	15.33	337	*e*P	P	20 14 08.0	-1.8
DPC				*e*pP	pP	20 14 12.0	-1.2
DPC				*ex*	x	20 14 17.0	
DPC	Dobruska-Polom	15.33	337	P	P	20 14 08.0	-1.8
UPC	Upice	15.57	337	*e*P	P	20 14 13.2	+0.8
UPC				*e*pP	pP	20 14 15.8	0.0
UPC	Upice	15.57	337	P	P	20 14 13.2	+0.8
PRU	Pruhonice	15.63	333	*e*P	P	20 14 14.8	+1.7
PRU	Pruhonice	15.63	333	P	P	20 14 14.8	+1.7
FRF	La Foret Royal	16.04	302	*e*P	Pn	20 14 12.9	-1.4
	27nm,1.2s						
BRG	Berggiesshubel	16.58	334	*e*P	P	20 14 26.2	+2.6
	3.1nm,1.0s						
SMRF	Simiane la Rot	16.91	302	*e*P	Pn	20 14 24.2	-1.2
	24nm,1.2s						
CLL	Collm	17.27	333	*es*P	sP	20 14 33.0	-3.2
	comp=Z,4.0nm,1.0s						
CABF	La Chapelle	17.64	311	*e*P	Pn	20 14 34.1	-0.4
	comp=Z,11nm,0.9s						
CABF	La Chapelle	17.64	311	*e*P	Pn	20 14 34.1	-0.4
	comp=Z,5.3nm,0.9s						
VIVF	Saint-Julien-l	17.82	304	*e*P	Pn	20 14 35.2	-1.5
VIVF	Saint-Julien-l	17.82	304	*e*P	Pn	20 14 35.2	-1.5
SMF	Signal de Mont	19.05	309	*e*P	P	20 14 50.5	-0.3
	comp=Z,4.7nm,0.7s						
SMF	Signal de Mont	19.05	309	*e*P	P	20 14 50.5	-0.3
	comp=Z,2.3nm,0.7s						
MTLF	Montolieu	19.08	298	*e*P	P	20 14 50.9	-0.3
	comp=Z,3.8nm,0.8s						
MTLF	Montolieu	19.08	298	*e*P	P	20 14 50.9	-0.3
	comp=Z,1.9nm,0.8s						
AVF	Avril sur Loir	19.41	309	*e*P	P	20 14 54.7	-0.1
AVF	Avril sur Loir	19.41	309	*e*P	P	20 14 54.7	-0.1
SSF	Saint Saulge	19.43	310	*e*P	P	20 14 55.6	+0.6
	comp=Z,7.1nm,0.9s						
SSF	Saint Saulge	19.43	310	*e*P	P	20 14 55.6	+0.6
	comp=Z,3.5nm,0.9s						
BGF	Bois d'Agland	19.64	308	*e*P	P	20 14 57.2	-0.1
BGF	Bois d'Agland	19.64	308	*e*P	P	20 14 57.2	-0.1
BAIF	Baives	20.48	318	*e*P	P	20 15 06.9	+0.4
	comp=Z,18nm,0.8s						
BAIF	Baives	20.48	318	*e*P	P	20 15 06.9	+0.4
	comp=Z,9.0nm,0.8s						
SJPF	Ste Jean	21.50	296	*e*P	P	20 15 17.5	-0.1
SJPF	Ste Jean	21.50	296	*e*P	P	20 15 17.5	-0.1
MFF	Saint Martin d	21.59	306	*e*P	P	20 15 18.3	-0.1
MFF	Saint Martin d	21.59	306	*e*P	P	20 15 18.3	-0.1
LDF	La Druitiere	22.29	311	*e*P	P	20 15 25.3	-0.6
LDF	La Druitiere	22.29	311	*e*P	P	20 15 25.3	-0.6
FLN	La Foliniere	22.57	311	*e*P	P	20 15 27.7	-1.2
	comp=Z,6.7nm,0.6s						
FLN				*e*R			
	comp=Z,42nm,19.5s						
FLN	La Foliniere	22.57	311	*e*P	P	20 15 27.7	-1.2
	comp=Z,3.3nm,0.6s						
GRR	Gorron	22.66	310	*e*P	P	20 15 28.7	-1.2
	comp=Z,12nm,1.0s						
GRR	Gorron	22.66	310	*e*P	P	20 15 28.7	-1.2
	comp=Z,6.2nm,1.0s						
ESDC	Sonseca Array	23.35	287	P	P	20 15 36.4	-0.8
	comp=Z,0.9nm,0.5s,baz=85,slow=10.0,SNR=8.5						
SGMF	Saint Gilles	23.67	308	*e*P	P	20 15 38.9	-1.3
SGMF	Saint Gilles	23.67	308	*e*P	P	20 15 38.9	-1.3
QUIF	Quistinic	23.95	307	*e*P	P	20 15 41.8	-1.1
QUIF	Quistinic	23.95	307	*e*P	P	20 15 41.8	-1.1
ROSF	Rostrenen	24.15	308	*e*P	P	20 15 43.5	-1.2
ROSF	Rostrenen	24.15	308	*e*P	P	20 15 43.5	-1.2
FINES	FINESS Array B	24.95	1	P	P	20 15 51.6	-0.3
	comp=Z,2.8nm,0.8s,baz=144,slow=13,SNR=7.8						
EKA	Eskdalemuir Ar	27.11	323	P	P	20 16 12.7	+1.3
	comp=Z,1.0nm,0.5s,baz=125,slow=10,SNR=3.0						
AKTO	Aktyubinsk	27.14	49	P	P	20 16 11.6	-0.2
	comp=Z,0.8nm,0.6s,baz=321,slow=5.4,SNR=3.6						
TORD	Torodi Ar. Bea	31.58	229	P	P	20 16 51.4	-0.1
	comp=Z,1.0nm,0.6s,baz=37,slow=8.4,SNR=12						
TORD				PcP	PcP	20 19 43.3	-0.6
	comp=Z,0.6nm,0.8s,baz=68,slow=1.4,SNR=3.9						
LIC	Lamto	41.09	230	*e*P	P	20 18 12.1	-0.6
	comp=Z,6.0nm,0.5s						
LIC	Lamto	41.09	230	*e*P	P	20 18 12.1	-0.6
	comp=Z,3.0nm,0.5s						
MKAR	Makanchi Array	42.81	58	P	P	20 18 26.7	+0.2
	comp=Z,1.3nm,0.6s,baz=283,slow=6.6,SNR=22						
MKAR				PcP	PcP	20 20 17.0	-0.6
	comp=Z,0.7nm,0.7s,baz=285,slow=4.7,SNR=5.0						
ZALV	Zalesovo Beam	43.88	47	P	P	20 18 34.8	-0.2
	comp=Z,0.4nm,0.3s,baz=273,slow=8.6,SNR=4.3						
CMAR	Chiang Mai Arr	66.15	84	P	P	20 21 16.0	-0.5
	comp=Z,0.8nm,0.9s,baz=302,slow=8.2,SNR=4.4						
USRK	Ussuriysk Arra	75.70	45	P	P	20 22 13.3	-0.8
	comp=Z,1.2nm,0.7s,baz=285,slow=4.0,SNR=4.3						
ASAR	Alice Springs	118.02	100	PKP	PKPdf	20 29 15.1	-0.9
	comp=Z,0.2nm,0.5s,baz=316,slow=1.8,SNR=7.1						

BEO **26** *20:36:58.6±1.0, 33.73N×26.83E, h0km, ML4.9/3*
DDA **26** *20:37:28.5, 36.35N×25.03E, h3km, ML5.3*
HLW **26** *20:37:34.4, 36.93N×25.58E, h26km±10km, Md4.1, Ml4.1*
BJI **26** *20:37:35.7, 36.44N×24.76E, h36km, mB5.0/21, mb4.8/36, Ms4.7/18, Ms7 4.5/16*
BGS **26** *20:37:35.1±1.8, 36.05N×25.03E, h10km, mb5.0*
ISK **26** *20:37:35.9, 36.56N×25.22E, h26km, ML4.9*
IDC **26** *20:37:35.7±0.4, 36.58N×25.51E, h0km, mb4.7/26, mb1 4.7/36, mb1mx4.7/40, mbtmp4.6/36, ML3.8/8, MS3.8/28, Ms1 3.8/28, ms1mx3.6/43, Error ellipse: s-maj=11.3km s-min=10.7km az=160.0*

ATH **26** *20:37:37.5, 36.53N×25.49E, h28km±1km, MD3.9/55, ML5.0*
ISCJB **26** *20:37:37.5±0.3, 36.54N±0.01×25.46E±0.01, h22km±2km, mb4.8/144, MS4.0/35, Error ellipse: s-maj=2.0km s-min=1.6km az=17.0*
PDG **26** *20:37:37.3±0.7, 36.53N×25.48E, h16km±1km, ML4.6/9, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0*
CSEM **26** *20:37:37.5±0.1, 36.47N×25.53E, h15km, mb5.0/27, Ms3.6, Error ellipse: s-maj=2.2km s-min=1.6km az=33.0*
NEIC **26** *20:37:38.1, 36.53N×25.43E, h10km, mb4.9/98, ML4.9(THE), ML4.8(ISK), After THE.*
NEIC Felt [IV] at Thira and [III] at Naxos and Oia. Also felt at Aiyira, Ano Siros, Chania, Ios, Naousa, Paros, Skala and Vari.
THE **26** *20:37:38.1, 36.53N×25.43E, h10km, ML4.9/3, Error ellipse: s-maj=0.8km s-min=0.5km az=211.0*
MOS **26** *20:37:39.2±1.0, 36.58N×25.41E, h33km, mb5.0/70, Error ellipse: s-maj=4.3km s-min=2.4km az=110.5*
SFS **26** *20:37:40.0, 36.57N×25.39E, h37km, ML4.8*
NIC **26** *20:37:40.3±0.2, 36.00N×25.42E, h36km, mb4.5, ML4.0, MW4.0*
PDA **26** *20:37:40.9, 36.57N×25.40E, h37km, mb4.8*
SZGRF **26** *20:37:58.0, 37.68N×23.74E, h33km, Southern Greece*

ISC 26 20:37:38.3±0.5, 36.51N±0.02×25.48E±0.02, h18km±2km, n1501, σ1.22/1597, mb4.9/154, MS4.0/37, 110C-92D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THR2	Thira island,	0.07	211	P	Pg	20 37 40.3	-1.4
THR2	Thira island,	0.07	211	P	Pg	20 37 40.3	-1.4
THR2	Thira island,	0.07	211	P	Pg	20 37 40.3	-1.4
THR3	Thira Island,	0.12	213	P	Pg	20 37 41.3	-0.8
THR3	Thira Island,	0.12	213	P	Pg	20 37 41.3	-0.8
THR3	Thira Island,	0.12	213	P	Pg	20 37 41.3	-0.8
THR1	Thera Island	0.14	187	P	Pg	20 37 41.5	-0.9
THR1	Thera Island	0.14	187	P	Pg	20 37 41.5	-0.9
APE	Apeiranthos	0.56	4	PG	Pg	20 37 48.4	-1.1
APE				*e*SG	Sg	20 37 56.6	-0.5
APE	Apeiranthos	0.56	4	P	Pg	20 37 48.4	-1.1
APE				S	Sb	20 37 57.1	-0.3
APE	Apeiranthos	0.56	4	P	Pg	20 37 48.4	-1.1
APE				S	Sb	20 37 57.1	-0.3
APE	Apeiranthos	0.56	4	*e*PN	Pg	20 37 48.4	-1.1
APE				*e*SN	Sg	20 37 56.9	-0.2
APE	Apeiranthos	0.56	4	P	Pg	20 37 48.4	-1.1
APE				S	Sb	20 37 57.1	-0.8
APE	Apeiranthos	0.56	4	P	Pg	20 37 48.4	-1.1
APE				*e*Sn	Sg	20 37 56.9	-0.2
NPS	Neapolis	1.25	175	P	Pn	20 38 00.1	-0.8
NPS	Neapolis	1.25	175	P	Pn	20 38 00.1	-0.8
NPS	Neapolis	1.25	175	*e*PN	Pn	20 38 00.5	-0.4
NPS				*e*SN	Sn	20 38 17.9	+0.7
NPS	Neapolis	1.25	175	P	Pn	20 38 00.1	-0.8
NPS	Neapolis	1.25	175	P	Pn	20 38 00.1	-0.8
NPS	Neapolis	1.25	175	*e*Pn	Pn	20 38 00.5	-0.4
NPS				*e*Sn	Sn	20 38 17.9	+0.7
IDI	Anoyia	1.31	202	P	Pn	20 38 01.3	-0.5
IDI				S	Sn	20 38 19.2	+0.4
IDI	Anoyia	1.31	202	*e*PN	Pn	20 38 01.8	0.0
IDI				*e*SN	Sn	20 38 19.5	+0.7
IDI	Anoyia	1.31	202	*e*Pn	Pn	20 38 01.1	-0.7
IDI				*e*Sn	Sn	20 38 19.1	+0.4
IDI	Anoyia	1.31	202	*e*Pn	Pn	20 38 01.1	-0.7
IDI				*e*Sn	Sb	20 38 19.1	+0.2
LAST	Lasithi	1.34	180	P	Pn	20 38 01.4	-0.9
LAST	Lasithi	1.34	180	*e*PB	Pn	20 38 01.7	-0.6
LAST				*e*SN	Sg	20 38 22.2	+0.4
LAST	Lasithi	1.34	180	P	Pn	20 38 01.4	-0.9
LAST	Lasithi	1.34	180	P	Pn	20 38 01.4	-0.9
LAST	Lasithi	1.34	180	*e*Pb	Pn	20 38 01.7	-0.6
LAST				*e*Sn	Sg	20 38 22.2	+0.4
NIS1	Nisyros Isl.	1.37	86	P	Pn	20 38 02.9	+0.3
NIS1	Nisyros Isl.	1.37	86	*e*PN	Pb	20 38 03.2	-0.2
NIS1	Nisyros Isl.	1.37	86	P	Pn	20 38 02.9	+0.3
NIS1	Nisyros Isl.	1.37	86	*e*Pn	Pb	20 38 03.2	-0.2
VAM	Vamos	1.51	224	P	Pn	20 38 04.3	-0.2
VAM	Vamos	1.51	224	P	Pn	20 38 04.3	-0.2
VAM	Vamos	1.51	224	*e*PB	Pn	20 38 04.6	+0.1
VAM				*e*SN	Sb	20 38 25.0	+0.3
VAM	Vamos	1.51	224	P	Pn	20 38 04.3	-0.2
VAM	Vamos	1.51	224	P	Pn	20 38 04.3	-0.2
VAM	Vamos	1.51	224	*e*Pb	Pn	20 38 04.6	+0.1
VAM				*e*Sn	Sb	20 38 25.0	+0.3
ZKR	Zakros	1.51	156	P	Pn	20 38 04.5	0.0
ZKR	Zakros	1.51	156	*e*PN	Pn	20 38 04.8	+0.3
ZKR	Zakros	1.51	156	P	Pn	20 38 04.5	0.0
ZKR	Zakros	1.51	156	*e*Pn	Pn	20 38 04.8	+0.3
BODT	Bodrum	1.57	69	*e*PN	Pn	20 38 04.9	-0.4
BODT	Bodrum	1.57	69	Pn	Pn	20 38 05.1	-0.2
BODT	Bodrum	1.57	69	*e*Pn	Pn	20 38 04.9	-0.4
SIVA	Sivas	1.58	200	P	Pn	20 38 05.6	+0.1
SIVA	Sivas	1.58	200	*e*PN	Pb	20 38 06.3	-0.7
SIVA	Sivas	1.58	200	P	Pn	20 38 05.6	+0.1
SIVA	Sivas	1.58	200	*e*Pn	Pb	20 38 06.3	-0.7
SMG	Samos	1.62	42	P	Pn	20 38 05.2	-0.8
SMG				S	Sn	20 38 27.1	+0.7
SMG	Samos	1.62	42	*e*PN	Pn	20 38 05.6	-0.4
SMG				*e*SN	Sn	20 38 26.1	-0.3
SMG	Samos	1.62	42	P	Pn	20 38 05.2	-0.8
SMG				S	Sn	20 38 27.1	+0.7
SMG	Samos	1.62	42	P	Pn	20 38 05.2	-0.8
SMG	Samos	1.62	42	*e*Pn	Pn	20 38 05.6	-0.4
SMG				*e*Sn	Sn	20 38 26.1	-0.3
SMG				S	Sn	20 38 27.1	+0.7
KARP	Karpathos	1.67	125	P	Pn	20 38 06.8	+0.1
KARP				S	Sb	20 38 29.4	+0.2
KARP	Karpathos	1.67	125	*e*PN	Pn	20 38 06.9	+0.2
KARP				*e*SN	Sn	20 38 28.4	+0.8
KARP	Karpathos	1.67	125	P	Pn	20 38 06.8	+0.1
KARP				*e*Sn	Sn	20 38 28.4	+0.8
DAT	Datca	1.70	82	*e*PN	Pn	20 38 07.0	-0.2
DAT	Datca	1.70	82	*e*Pn	Pn	20 38 07.0	-0.2
MRMA	Marmari	1.78	331	P	Pn	20 38 08.5	+0.3
MRMA	Marmari	1.78	331	P	Pn	20 38 08.5	+0.3
GCAM	G?zelcaml?	1.84	49	*i*P	Pn	20 38 08.3	-0.2
GCAM				*i*S	Sg	20 38 39.0	+1.4
GCAM	G?zelcaml?	1.84	49	*i*P	Pn	20 38 08.8	-0.2
ANKY	Antikythira Is	1.88	251	P	Pn	20 38 09.5	0.0
ANKY	Antikythira Is	1.88	251	*e*PN	Pn	20 38 10.2	+0.7
ANKY	Antikythira Is	1.88	251	P	Pn	20 38 09.5	0.0
ANKY	Antikythira Is	1.88	251	*e*Pn	Pn	20 38 10.2	+0.7
CHOS	Chios island	1.93	14	P	Pn	20 38 09.7	-0.6
CHOS				S	Sn	20 38 34.0	-0.2
CHOS	Chios island	1.93	14	*e*PN	Pn	20 38 09.9	-0.4
CHOS	Chios island	1.93	14	P	Pn	20 38 09.7	-0.6
CHOS				S	Sn	20 38 34.0	-0.2
CHOS	Chios island	1.93	14	*e*Pn	Pn	20 38 09.9	-0.4
CHOS				S	Sn	20 38 34.0	-0.2
KYTH	Kithira	1.98	264	P	Pn	20 38 11.2	+0.2
KYTH	Kithira	1.98	264	*e*PB	Pn	20 38 11.8	+0.8
KYTH	Kithira	1.98	264	P	Pn	20 38 11.2	+0.2
KYTH	Kithira	1.98	264	*e*Pb	Pn	20 38 11.8	+0.8
ATHU	Athens Univers	1.99	318	P	Pn	20 38 11.2	+0.1
ATHU	Athens Univers	1.99	318	P	Pn	20 38 11.2	+0.1
MLSB	Milas	2.00	66	*e*PN	Pn	20 38 11.3	0.0
MLSB	Milas	2.00	66	*e*Pn	Pn	20 38 11.3	0.0
PTL	Penteli	2.01	321	P	Pn	20 38 11.4	+0.1
PTL	Penteli	2.01	321	*e*PB	Pn	20 38 11.6	+0.3
PTL	Penteli	2.01	321	P	Pn	20 38 11.4	+0.1
GVD	Gavdhos	2.01	215	P	Pn	20 38 11.1	-0.3
GVD	Gavdhos	2.01	215	*e*PB	Pb	20 38 13.3	-1.1
GVD	Gavdhos	2.01	215	*e*Pn	Pb	20 38 12.9	-1.5
GVD	Gavdhos	2.01	215	P	Pn	20 38 11.1	-0.3
GVD	Gavdhos	2.01	215	*e*Pn	Pb	20 38 12.9	-1.5
GVD	Gavdhos	2.01	215	*e*Pb	Pb	20 38 13.3	-1.1
NAIG	Nisos Aigina	2.02	309	*e*PN	Pn	20 38 11.8	+0.3
NAIG	Nisos Aigina	2.02	309	*e*Pn	Pn	20 38 11.8	+0.3
ATH	Athens Observa	2.03	317	P	Pn	20 38 11.9	+0.3
ATH	Athens Observa	2.03	317	P	Pn	20 38 11.9	+0.3
ATH	Athens Observa	2.03	317	*e*PB	Pn	20 38 12.3	+0.7
ATH	Athens Observa	2.03	317	P	Pn	20 38 11.9	+0.3
ATH	Athens Observa	2.03	317	P	Pn	20 38 11.9	+0.3
ATH	Athens Observa	2.03	317	*e*Pb	Pn	20 38 12.3	+0.7
URLA	Izmir	2.05	25	*i*P	Pn	20 38 11.1	-0.9
URLA				*i*S	Sg	20 38 43.5	-0.8
URLA	Izmir	2.05	25	*i*P	Pn	20 38 11.1	-0.9
DID	Didima	2.05	300	P	Pn	20 38 11.9	-0.1
DID	Didima	2.05	300	*e*PN	Pn	20 38 12.1	+0.1
DID	Didima	2.05	300	*e*Pn	Pn	20 38 12.1	+0.1
DIDY	Didyma	2.06	299	P	Pn	20 38 11.9	-0.2
DIDY	Didyma	2.06	299	P	Pn	20 38 11.9	-0.2
VLI	Veliai	2.06	277	P	Pn	20 38 11.1	-0.9
VLI				S	Sn	20 38 36.5	-0.7
VLI	Veliai	2.06	277	*e*PN	Pn	20 38 12.3	+0.3
VLI	Veliai	2.06	277	P	Pn	20 38 11.1	-0.9
VLI	Veliai	2.06	277	*e*Pn	Pn	20 38 12.3	+0.3
VLI				S	Sn	20 38 36.5	-0.7
ARG	Arkhangelos	2.15	97	P	Pn	20 38 13.9	+0.6
ARG	Arkhangelos	2.15	97	*e*PB	Pn	20 38 14.2	+0.9
ARG	Arkhangelos	2.15	97	P	Pn	20 38 13.9	+0.6
ARG	Arkhangelos	2.15	97	*e*Pb	Pn	20 38 14.2	+0.9
AYDN	Tasoluk	2.24	58	*i*P	Pn	20 38 15.0	+0.4
AYDN				*i*S	Sg	20 38 50.1	-0.2
AYDN	Tasoluk	2.24	58	*i*P	Pn	20 38 15.0	+0.4
BLCB	Balcova	2.25	33	*e*PN	Pn	20 38 13.7	-0.9
BLCB	Balcova	2.25	33	*e*Pn	Pn	20 38 13.7	-0.9
YER	Yerkesik	2.33	74	*e*PN	Pn	20 38 16.4	+0.5
YER	Yerkesik	2.33	74	P	Pn	20 38 17.1	+1.2
YER	Yerkesik	2.33	74	Pn	Pn	20 38 17.1	+1.2
YER	Yerkesik	2.33	74	*e*Pn	Pn	20 38 16.4	+0.5
YER	Yerkesik	2.33	74	P	Pn	20 38 17.1	+1.2
IZM	Izmir	2.36	36	*e*PN	Pn	20 38 15.3	-0.9
IZM	Izmir	2.36	36	P	Pn	20 38 15.7	-0.5
IZM	Izmir	2.36	36	P	Pn	20 38 15.7	-0.5
IZM	Izmir	2.36	36	*e*Pn	Pn	20 38 15.3	-0.9
IZM	Izmir	2.36	36	P	Pn	20 38 15.7	-0.5
LTK	Loutraki	2.51	308	P	Pn	20 38 17.4	-0.9
LTK	Loutraki	2.51	308	*e*PN	Pn	20 38 18.9	+0.6
LTK	Loutraki	2.51	308	P	Pn	20 38 17.4	-0.9
LTK	Loutraki	2.51	308	*e*Pn	Pn	20 38 18.9	+0.6
TURN	Turunc	2.54	81	*i*P	Pn	20 38 14.8	-3.8
TURN	Turunc	2.54	81	*i*P	Pn	20 38 14.8	-3.8
DYR	Agios Nikonas	2.54	277	*e*PB	Pn	20 38 20.1	+1.4
DYR	Agios Nikonas	2.54	277	*e*Pb	Pn	20 38 20.1	+1.4
DALY	Dalyan (Mu˘la	2.57	82	*e*PN	Pn	20 38 20.2	+1.2
DALY	Dalyan (Mu˘la	2.57	82	*e*Pn	Pn	20 38 20.2	+1.2
VLX	Vlachokerasia	2.63	290	P	Pn	20 38 19.2	-0.8
VLX	Vlachokerasia	2.63	290	*e*PN	Pn	20 38 20.9	+0.9
VLX	Vlachokerasia	2.63	290	P	Pn	20 38 19.2	-0.8
VLX	Vlachokerasia	2.63	290	*e*Pn	Pn	20 38 20.9	+0.9
MRKA	Markates	2.66	326	P	Pn	20 38 20.4	+0.1
MRKA	Markates	2.66	326	P	Pn	20 38 20.4	+0.1
SIGR	SIGRI	2.72	6	P	Pn	20 38 20.3	-0.7
SIGR	SIGRI	2.72	6	P	Pn	20 38 20.3	-0.7
THAL	Thalero	2.72	305	P	Pn	20 38 21.8	+0.7
THAL	Thalero	2.72	305	P	Pn	20 38 21.8	+0.7
PRK	Paraskevi	2.81	13	P	Pn	20 38 21.9	-0.4
PRK	Paraskevi	2.81	13	*e*PN	Pn	20 38 21.9	-0.4
PRK	Paraskevi	2.81	13	P	Pn	20 38 21.9	-0.4
GUR	Goura	2.88	301	P	Pn	20 38 24.1	+0.7
GUR	Goura	2.88	301	*e*PN	Pn	20 38 24.3	+0.9
GUR	Goura	2.88	301	P	Pn	20 38 24.1	+0.7
FETY	Fethiye	2.90	86	*e*PN	Pn	20 38 25.0	+1.3
FETY	Fethiye	2.90	86	*e*Pn

KRBG	Karabiga-Canak	4.13	20	ePN	Pn	20 38 39.8	-0.8
KRBG	Karabiga-Canak	4.13	20	ePn	Pn	20 38 39.8	-0.8
PLG	Polygyros	4.18	338	P	Pn	20 38 41.0	-0.2
PLG	Polygyros	4.18	338	ePN	Pn	20 38 41.3	+0.1
PLG	Polygyros	4.18	338	P	Pn	20 38 41.0	-0.2
PLG	Polygyros	4.18	338	ePn	Pn	20 38 41.3	+0.1
VLS	Valsamata	4.24	295	P	Pn	20 38 43.7	+1.7
VLS	Valsamata	4.24	295	ePN	Pn	20 38 44.1	+2.1
VLS	Valsamata	4.24	295	P	Pn	20 38 43.7	+1.7
VLS	Valsamata	4.24	295	ePn	Pn	20 38 44.1	+2.1
ENEZ	Enez	4.25	7	ePN	Pn	20 38 40.9	-1.3
ENEZ	Enez	4.25	7	ePn	Pn	20 38 40.9	-1.3
LIT	Litokhoron	4.29	328	ePN	Pn	20 38 43.4	+0.7
LIT	Litokhoron	4.29	328	ePn	Pn	20 38 43.4	+0.7
BNT	Bandirma	4.29	26	ePN	Pn	20 38 42.2	-0.6
BNT	Bandirma	4.29	26	ePn	Pn	20 38 42.2	-0.6
TVSB	Tavsanli	4.30	46	ePN	Pn	20 38 43.7	+0.7
TVSB	Tavsanli	4.30	46	ePn	Pn	20 38 43.7	+0.7
KCTX	Karacabey (Bur	4.38	30	ePN	Pn	20 38 43.4	-0.5
KCTX	Karacabey (Bur	4.38	30	ePn	Pn	20 38 43.4	-0.5
RKY	Sarkoy-Tekirda	4.38	17	ePN	Pn	20 38 43.3	-0.7
RKY	Sarkoy-Tekirda	4.38	17	ePn	Pn	20 38 43.3	-0.7
SART	Tekirdag	4.38	17	*i* P	Pn	20 38 43.5	-0.5
SART	Tekirdag	4.38	17	*i* P	Pn	20 38 43.5	-0.5
ALN	Alexandroupoli	4.41	6	P	Pn	20 38 44.3	0.0
ALN	Alexandroupoli	4.41	6	ePN	Pn	20 38 43.6	-0.7
ALN	Alexandroupoli	4.41	6	ePn	Pn	20 38 43.6	-0.7
ALN	Alexandroupoli	4.41	6	P	Pn	20 38 44.3	0.0
LKD2	Lefkada island	4.45	302	ePN	Pn	20 38 48.0	+3.0
LKD2	Lefkada island	4.45	302	ePn	Pn	20 38 48.0	+3.0
ALT	Altintas	4.46	54	ePN	Pn	20 38 45.4	+0.2
ALT	Altintas	4.46	54	ePn	Pn	20 38 45.4	+0.2
MFT	Murefte	4.50	18	ePN	Pn	20 38 45.1	-0.6
MFT	Murefte	4.50	18	ePn	Pn	20 38 45.1	-0.6
SHUT	Suhut-Afyon	4.52	62	ePN	Pn	20 38 47.9	+1.9
SHUT	Suhut-Afyon	4.52	62	ePn	Pn	20 38 47.9	+1.9
SUTC	Sutluce-Ispart	4.52	76	ePN	Pn	20 38 48.7	+2.6
SUTC	Sutluce-Ispart	4.52	76	ePn	Pn	20 38 48.7	+2.6
KAVA	Kavala	4.55	351	P	Pn	20 38 45.9	-0.3
KAVA	Kavala	4.55	351	P	Pn	20 38 45.9	-0.3
LTBQ	Tobruq	4.62	197	*i* P	Pn	20 38 48.6	+1.3
	SNR=35						
MDNY	Mudanya-Bursa	4.69	34	ePN	Pn	20 38 48.8	+0.6
MDNY	Mudanya-Bursa	4.69	34	ePn	Pn	20 38 48.8	+0.6
KZN	Kozani	4.78	324	ePN	Pn	20 38 51.2	+1.7
KZN	Kozani	4.78	324	ePn	Pn	20 38 51.2	+1.7
JAN	Janina	4.82	312	ePN	Pn	20 38 53.3	+3.3
JAN	Janina	4.82	312	ePn	Pn	20 38 53.3	+3.3
SRS	Serrai	4.83	343	P	Pn	20 38 50.5	+0.3
SRS	Serrai	4.83	343	P	Pn	20 38 50.5	+0.3
ARMT	Armutlu	4.84	32	ePN	Pn	20 38 50.6	+0.3
ARMT	Armutlu	4.84	32	ePn	Pn	20 38 50.6	+0.3
GEMT	Gemlik	4.88	35	ePN	Pn	20 38 50.6	-0.2
GEMT	Gemlik	4.88	35	ePn	Pn	20 38 50.6	-0.2
NVR	Nevrokopi	5.00	346	P	Pn	20 38 52.6	+0.1
NVR	Nevrokopi	5.00	346	ePN	Pn	20 38 52.5	+0.1
NVR	Nevrokopi	5.00	346	P	Pn	20 38 52.6	+0.1
SLUM		5.01	183	S	Sn	20 39 48.4	-1.6
	baz=184						
SLUM				AMP		20 39 00.0	
	comp=E,220µm,0.8s,logA/T=5.5,baz=184						
SLUM		5.01	183	P	Pn	20 38 52.2	-0.4
SLUM				S	Sn	20 39 48.4	-1.6
GRG	Griva	5.05	332	P	Pn	20 38 54.0	+0.8
GRG	Griva	5.05	332	ePN	Pn	20 38 54.2	+1.0
GRG	Griva	5.05	332	P	Pn	20 38 54.0	+0.8
IGT	Igoumenitsa	5.06	308	P	Pn	20 38 55.8	+2.5
IGT	Igoumenitsa	5.06	308	P	Pn	20 38 55.8	+2.5
KNT	Kendrikon	5.07	337	P	Pn	20 38 54.4	+1.0
KNT	Kendrikon	5.07	337	P	Pn	20 38 54.4	+1.0
YLV	Yalova	5.07	36	ePN	Pn	20 38 54.0	+0.5
YLV	Yalova	5.07	36	ePn	Pn	20 38 54.0	+0.5
KDZ	Kurdzhali	5.13	359	P	Pn	20 38 54.0	-0.3
KDZ	Kurdzhali	5.13	359	P	Pn	20 38 54.0	-0.3
ADVT	Abdulvahap	5.15	39	ePN	Pn	20 38 55.7	+1.2
ADVT	Abdulvahap	5.15	39	ePn	Pn	20 38 55.7	+1.2
BORA	Eskisehir	5.17	48	*i* P	Pn	20 38 55.6	+0.8
BORA	Eskisehir	5.17	48	*i* P	Pn	20 38 55.6	+0.8
SLVT	Silivri	5.17	23	ePN	Pn	20 38 54.6	-0.2
SLVT	Silivri	5.17	23	ePn	Pn	20 38 54.6	-0.2
BUY	Buyukada	5.19	32	ePN	Pn	20 38 55.8	+0.8
BUY	Buyukada	5.19	32	ePn	Pn	20 38 55.8	+0.8
ESKT	Eskisehir	5.20	53	ePN	Pn	20 38 56.7	+1.4
ESKT	Eskisehir	5.20	53	ePn	Pn	20 38 56.7	+1.4
RZN	Rozhen	5.21	354	*i* P	Pn	20 38 55.8	+0.3
RZN	Rozhen	5.21	354	*i* P	Pn	20 38 55.8	+0.3
MMB	Musomiste	5.25	345	*i* P	Pn	20 38 55.9	-0.1
MMB	Musomiste	5.25	345	*i* P	Pn	20 38 55.9	-0.1
CTKS	Kestanelik-??a	5.28	26	ePN	Pn	20 38 56.3	0.0
CTKS	Kestanelik-??a	5.28	26	ePn	Pn	20 38 56.3	0.0
VAY	Valandovo	5.32	336	*e*Sn	Sg	20 40 28.6	-0.2
VAY	Valandovo	5.32	336	*i* Pn	Pn	20 38 57.9	+1.1
VAY				*e*Sn	Pg	20 39 21.2	+1.2
VAY	Valandovo	5.32	336	*e*Sn	Sg	20 40 28.6	-0.2
BGKT	Bogazkoy	5.33	28	ePN	Pn	20 38 57.6	+0.7
BGKT	Bogazkoy	5.33	28	ePn	Pn	20 38 57.6	+0.7
ISK	Istanbul-Kandi	5.34	30	ePN	Pn	20 38 57.5	+0.4
ISK	Istanbul-Kandi	5.34	30	ePn	Pn	20 38 57.5	+0.4
FNA	Florina	5.34	324	ePN	Pn	20 38 59.0	+1.8
HRT	Hereke	5.41	36	ePN	Pn	20 38 58.6	+0.4
CTYL	Yal??k??y-??at	5.42	23	ePN	Pn	20 38 58.1	-0.1
EDRB	Edirne	5.42	10	ePN	Pn	20 38 57.5	-0.7
SRN	Sarande	5.47	310	ePN	Pn	20 39 01.2	+2.3
SRN				*i* SN	Pg	20 39 25.8	+2.7
KLYT	Kilyos	5.49	29	ePN	Pn	20 38 59.9	+0.7
KEK	Kerkira	5.50	307	ePN	Pn	20 39 01.6	+2.2
KBN	Korca	5.51	320	ePN	Pn	20 39 01.5	+1.9
KBN				*i* SN	Sg	20 40 49.8	+14
DIM	Dimitrovgrad	5.54	0	P	Pn	20 38 59.4	-0.4
BIA	Bitola	5.55	325	*i* Pn	Pn	20 39 02.9	+2.8
GULT	Gulveren	5.56	44	ePN	Pn	20 39 01.6	+1.3
HMAT	Matruh	5.56	166	P	Pn	20 38 59.5	-0.7
	baz=167						
KIZT	Kizilcal	5.60	63	ePN	Pn	20 39 03.2	+2.4
SVRH	Sivrihisar-ESK	5.60	57	ePN	Pn	20 39 02.8	+2.0
PLD	Plovdiv	5.62	354	P	Pn	20 39 01.9	+0.9
PLD	Plovdiv	5.62	354	ePn	Pn	20 39 01.7	+0.7
PLD				*e*Sn	Sg	20 40 35.9	-2.8
PLD	Plovdiv	5.62	354	ePn	Pn	20 39 01.7	+0.7
PLD				*e*Sn	Sg	20 40 35.9	-2.8
HDMB	Hadim	5.64	83	ePN	Pn	20 39 04.5	+3.0
SILT	Sile	5.66	34	ePN	Pn	20 39 02.3	+0.8
KKB	Krupnik	5.67	342	P	Pn	20 39 02.2	+0.6
KONT	Konya--Tatoy	5.67	73	ePN	Pn	20 39 04.8	+3.0
LADK	Ladik-KONYA	5.74	71	ePN	Pn	20 39 04.9	+2.2
AKMC	Akamas	5.76	103	P	Pn	20 39 02.5	-0.5
PPCY	Paphos	5.82	104	P	Pn	20 39 03.3	-0.4
ALFC	Alevga	5.94	101	⇑P	Pn	20 39 05.5	+0.1
	comp=E,4.3nm,0.6s						
ALFC				S	Sn	20 40 12.2	-0.8
ALFC	Alevga	5.94	101	⇑P	Pn	20 39 05.5	+0.1
	comp=E,4.3nm,0.6s						
ALFC				S	Sn	20 40 12.2	-0.8
MDUB	Mudurnu	5.98	47	ePN	Pn	20 39 07.3	+1.3
MDUB	Mudurnu	5.98	47	ePn	Pn	20 39 07.3	+1.3
JMB	Yambol	6.01	8	ePn	Pn	20 39 05.9	-0.4
JMB				*e*Sn	Sb	20 40 39.5	+5.4
JMB	Yambol	6.01	8	ePn	Pn	20 39 05.9	-0.4
JMB				*e*Sn	Sb	20 40 39.5	+5.4
PGB	Panagyurishte	6.12	351	*i* P	Pn	20 39 08.0	+0.1
VLO	Vlora	6.14	312	ePN	Pb	20 39 23.1	-1.5
SZAC	Souni-Zanaja	6.28	104	P	Pn	20 39 09.4	-0.6
SZAC	Souni-Zanaja	6.28	104	P	Pn	20 39 09.4	-0.6
SKO	Skopje	6.29	331	ePn	Pn	20 39 11.4	+1.2
SKO	Skopje	6.29	331	*i* Pn	Pn	20 39 12.9	+2.6
SKO	Skopje	6.29	331	ePn	Pn	20 39 11.4	+1.2
VTS	Vitosha	6.32	345	⇑P	Pn	20 39 12.1	+1.3
VTS	Vitosha	6.32	345	P	Pn	20 39 12.1	+1.3
VTS	Vitosha	6.32	345	ePn	Pn	20 39 12.1	+1.3
VTS				*e*Sn	Sg	20 40 53.6	-7.6
VTS	Vitosha	6.32	345	⇑*i*P	Pn	20 39 12.1	+1.3
VTS	Vitosha	6.32	345	P	Pn	20 39 12.1	+1.3
VTS				*e*Sn	Sg	20 40 53.6	-7.6
MAMC	Mammari	6.42	100	P	Pn	20 39 12.0	0.0
MAMC	Mammari	6.42	100	P	Pn	20 39 12.0	0.0
CSS	Prodhromos	6.57	101	P	Pn	20 39 14.0	0.0
	comp=E,5.9nm,1.4s						
CSS				S	Sn	20 40 28.2	-0.3
CSS	Prodhromos	6.57	101	P	Pn	20 39 15.5	+1.5
CSS	Prodhromos	6.57	101	*e*Pn	Pn	20 39 13.6	-0.5
	comp=E,59nm,0.5s						
CSS				*e*Sn	Sn	20 40 27.2	-1.3
CSS	Prodhromos	6.57	101	*e*Pn	Pn	20 39 13.6	-0.5
	comp=E,59nm,0.5s						
CSS	Prodhromos	6.57	101	P	Pn	20 39 14.0	0.0
	comp=E,5.9nm,1.4s						
CSS				*e*Sn	Sn	20 40 27.2	-1.3
CSS				S	Sn	20 40 28.2	-0.3
SULT	Sultanhani-AKS	6.62	73	ePN	Pn	20 39 16.9	+2.1
IKL	Isikli	6.63	90	ePN	Pn	20 39 16.4	+1.6
LFK	Lefkose	6.65	98	ePN	Pn	20 39 16.9	+1.7
ANTO	Ankara	6.67	58	ePN	Pn	20 39 17.5	+2.1
ANTO	Ankara	6.67	58	*e*P	Pn	20 39 17.9	+2.5
ANTO				pmax	pmax		
	comp=Z,81nm,1.0s						
ANTO	Ankara	6.67	58	*e*Pn	Pn	20 39 17.9	+2.5
	comp=Z,81nm,1.0s						
ANTO	Ankara	6.67	58	⇑*i*P	Pn	20 39 18.0	+2.5
AFSR	Af'ar-Bala (A	6.67	62	*e*PN	Pn	20 39 17.1	+1.5
PVL	Pavlikeni	6.70	359	P	Pn	20 39 15.0	-0.8
SZH	Strazhica	6.76	3	P	Pn	20 39 16.2	-0.4
PRD	Provadia	6.84	12	P	Pn	20 39 17.2	-0.6
MPEP	Malo Peshtene	6.97	349	P	Pn	20 39 20.1	+0.6
ZAPS	Zavoj	7.10	343	ePn	Pn	20 39 23.2	+1.8
BR131	Keskin Array S	7.19	61	ePn	Pn	20 39 25.1	+2.5
	comp=Z,31nm,0.7s						
BRTR	Keskin Array B	7.19	61	Pn	Pn	20 39 25.4	+2.7
BRTR	Keskin Array B	7.19	61	Pn	Pn	20 39 25.4	+2.7
	comp=Z,3.2nm,0.3s,baz=241,slow=15,SNR=85						
BRTR				LR	LR	20 42 13.6	
	comp=Z,340nm,20.7s,baz=277,slow=39						
SWA2		7.24	180	P	Pn	20 39 22.7	-0.6
	baz=181						
SWA2				S	Sn	20 40 40.6	-4.5
	baz=181						
SWA2		7.24	180	P	Pn	20 39 22.7	-0.6
ULC	Ulcinj	7.29	320	⇑*i*Pn	Pn	20 39 24.5	+0.6
ULC				*e*Sn	Sn	20 40 45.3	-0.8
ULC	Ulcinj	7.29	320	⇑*i*Pn	Pn	20 39 24.5	+0.6
ULC				*e*Sn	Sn	20 40 45.3	-0.8
TIP	Timpagrande	7.40	294	*e*Pn	Pn	20 39 25.4	0.0
	comp=Z,242nm,0.6s						
TIP	Timpagrande	7.40	294	*e*Pn	Pn	20 39 25.4	0.0
	comp=Z,242nm,0.6s						
PVY	Plav	7.42	327	⇓*i*Pn	Pn	20 39 26.6	+0.7
PVY				*e*Sn	Sn	20 40 48.3	-1.4
PVY	Plav	7.42	327	⇓*i*Pn	Pn	20 39 26.6	+0.7
NIG	Nigde	7.45	75	ePN	Pn	20 39 28.3	+1.9
SELS	Selova	7.49	335	ePn	Pn	20 39 28.0	+1.3
CANT	Cankiri	7.58	55	ePN	Pn	20 39 29.4	+1.5
PDG	Podgorica	7.62	323	ePn	Pn	20 39 29.8	+1.3
PDG	Podgorica	7.62	323	ePn	Pn	20 39 29.8	+1.3
PDG				*e*Sn	Sn	20 40 53.3	-1.1
PE1	Pezze di Greco	7.62	307	*e*P	Pn	20 39 28.9	+0.4
TTG	Podgorica	7.62	323	⇑*i*Pn	Pn	20 39 30.0	+1.5
TTG				*e*Sn	Sn	20 40 53.3	-1.1
BEY	Berane	7.68	328	⇑*i*Pn	Pn	20 39 30.6	+1.3
BEY				*e*Sn	Sn	20 40 54.7	-1.1
IVA	Berane	7.68	328	⇑*i*Pn	Pn	20 39 30.6	+1.3
IVA				*e*Sn	Sn	20 40 54.7	-1.1
MANR	Mangalia	7.68	17	⇑*i*P	Pn	20 39 29.6	+0.4
BUM	Brajici-Budva	7.71	321	⇑*i*Pn	Pn	20 39 29.9	+0.2
BUM				*e*Sn	Sn	20 40 55.9	-0.7
BUM	Brajici-Budva	7.71	321	⇑*i*Pn	Pn	20 39 29.9	+0.2
BUM				*e*Sn	Sn	20 40 55.9	-0.7
KARA	Karaisali	7.71	82	ePN	Pn	20 39 31.2	+1.5
BOLS	Boljevac	7.79	341	ePn	Pn	20 39 30.4	-0.4
BOLS	Boljevac	7.79	341	ePn	Pn	20 39 30.4	-0.4
CEL	Celeste	7.83	286	ePn	Pn	20 39 30.8	-0.5
	comp=Z,168nm,0.8s						
CEL	Celeste	7.83	286	ePn	Pn	20 39 30.8	-0.5
	comp=Z,168nm,0.8s						
EFOR	EFORIE	7.94	17	⇓*i*P	Pn	20 39 33.5	+0.8
SJES	Sjenica	7.96	330	*e*Pn	Pn	20 39 35.4	+2.2
HCY	Herceg Novi	8.02	320	⇑*i*Pn	Pn	20 39 34.0	+0.1
HCY				*e*Sn	Sn	20 41 02.5	-1.7
HCY	Herceg Novi	8.02	320	⇑*i*Pn	Pn	20 39 34.0	+0.1
HUMR	Humele	8.02	357	⇓*i*P	Pn	20 39 34.0	+0.1
NKY	Niksic	8.04	324	⇑*i*Pn	Pn	20 39 35.3	+1.0
NKY				*e*Sn	Sn	20 41 03.8	-1.0
NKY	Niksic	8.04	324	⇑*i*Pn	Pn	20 39 35.3	+1.0
NKY				*e*Sn	Sn	20 41 03.8	-1.0
BAI	Bari	8.13	307	*e*P	Pn	20 39 36.0	+0.6
GRUS	Gruza	8.22	335	ePn	Pn	20 39 38.0	+1.3
GRUS	Gruza	8.22	335	ePn	Pn	20 39 38.0	+1.3
TIRR	Tirgusor	8.25	15	⇑P	Pn	20 39 36.5	-0.5
TIRR	Tirgusor	8.25	15	⇑*i*P	Pn	20 39 36.5	-0.5
TIRR	Tirgusor	8.25	15	P	Pn	20 39 36.5	-0.5
PLE	Pljevlja	8.26	327	*e*Pn	Pn	20 39 38.8	+1.4
PLE				*e*Sn	Sn	20 41 08.4	-1.9
PLE	Pljevlja	8.26	327	*e*Pn	Pn	20 39 38.8	+1.4
BRY	Bratogost	8.33	322	⇑*i*Pn	Pn	20 39 38.4	+0.1
BRY				*e*Sn	Sn	20 41 10.6	-1.3
BRY	Bratogost	8.33	322	⇑*i*Pn	Pn	20 39 38.4	+0.1
CUC	Castrocucco	8.36	298	ePn	Pn	20 39 39.4	+0.7
	comp=Z,244nm,0.8s						
CUC	Castrocucco	8.36	298	*e*Pn	Pn	20 39 39.4	+0.7
	comp=Z,244nm,0.8s						
UPM	Unac-Piva	8.38	325	*e*Pn	Pn	20 39 40.6	+1.6
UPM				*e*Sn	Sn	20 41 11.1	-2.2
UPM	Unac-Piva	8.38	325	*e*Pn	Pn	20 39 40.6	+1.6
HARR	Harsova	8.38	12	⇓P	Pn	20 39 39.5	+0.6
HARR	Harsova	8.38	12	⇓*i*P	Pn	20 39 39.5	+0.6
HARR	Harsova	8.38	12	P	Pn	20 39 39.5	+0.6
SVIS	Svilajnac	8.40	339	*e*Pn	Pn	20 39 39.1	0.0
CDT	Castel del Mon	8.51	305	⇑*i*P	Pn	20 39 41.1	+0.4
ISR	Istrita	8.64	5	⇑*i*P	Pn	20 39 44.0	+1.5
AWBH		8.66	160	P	Pn	20 39 41.2	-1.5
	baz=161						
AWBH		8.66	160	P	Pn	20 39 41.2	-1.5
DIVS	Divibare	8.66	333	*e*Pn	Pn	20 39 44.6	+1.8
DIVS	Divibare	8.66	333	*e*Pn	Pn	20 39 44.6	+1.8
HNTI	Hanita	8.67	110	Pn	Pn	20 39 42.2	-0.7
BBLS	Lazići	8.69	330	*e*Pn	Pn	20 39 44.7	+1.5
BBLS	Lazići	8.69	330	*e*Pn	Pn	20 39 44.7	+1.5
BHL	Bhannes	8.72	104	*e*P	Pn	20 39 41.5	-2.2
STON	Ston	8.73	319	P	Pn	20 39 42.7	-1.0
OFRI	'Ofer	8.74	114	Pn	Pn	20 39 42.3	-1.6
RSH		8.81	127	P	Pn	20 39 41.7	-3.1
	baz=129						
RSH		8.81	127	P	Pn	20 39 41.7	-3.1
HWQ	Hawqa	8.83	102	*e*P	Pn	20 39 44.2	-0.9
ARR	Arges	8.87	356	⇑*i*P	Pn	20 39 45.4	-0.3
MMA0	Mount Meron ar	8.88	110	Pn	Pn	20 39 44.1	-1.7
MMAI	Mount Meron Ar	8.88	110	Pn	Pn	20 39 43.3	-2.5
MMAI				Sn	Sn	20 41 21.1	-4.2
MMAI	Mount Meron Ar	8.88	110	Pn	Pn	20 39 43.3	-2.5
	comp=Z,14nm,0.3s,baz=312,slow=12,SNR=63						
MMAI				Sn	Sn	20 41 21.1	-4.2
	comp=Z,3.5nm,0.3s,baz=344,slow=41,SNR=3.2						
MMAI				LR	LR	20 44 24.4	
	comp=Z,263nm,18.9s,baz=280,slow=46						
MMAI	Mount Meron Ar	8.88	110	Pn	Pn	20 39 43.3	-2.5
MMAI				Sn	Sn	20 41 21.1	-4.2
CFR	Carcaliu	8.89	12	⇓*i*P	Pn	20 39 44.7	-1.1
VOIR		8.93	358	⇑P	Pn	20 39 46.2	-0.2
VOIR		8.93	358	⇑*i*P	Pn	20 39 46.2	-0.2
VOIR		8.93	358	P	Pn	20 39 46.2	-0.2
SLTI	Sal'it	8.97	116	Pn	Pn	20 39 45.0	-2.0
MLR	Muntele Rosu	8.98	2	Pn	Pn	20 39 47.9	+0.7
MLR	Muntele Rosu	8.98	2	⇑*i*P	Pn	20 39 47.9	+0.7
MLR	Muntele Rosu	8.98	2	Pn	Pn	20 39 47.9	+0.7
	comp=Z,0.2nm,0.3s,baz=204,slow=3.7,SNR=60						
MLR	Muntele Rosu	8.98	2	P	Pn	20 39 47.9	+0.7
KSDI	Kefar Szold	8.99	109	Pn	Pn	20 39 45.1	-2.2
RCY	Rachaya	9.01	106	*e*P	Pn	20 39 46.6	-1.0
LOT	Lotru	9.03	352	⇓*i*P	Pn	20 39 47.4	-0.4
TLCR		9.03	15	⇑P	Pn	20 39 48.3	+0.6
TLCR		9.03	15	⇑*i*P	Pn	20 39 48.3	+0.6
TLCR		9.03	15	P	Pn	20 39 48.3	+0.6
MSJ	Monte Sant'Ang	9.05	308	⇑*i*P	Pn	20 39 47.9	+0.2
SUZ		9.06	135	P	Pn	20 39 45.6	-2.6
	baz=137						
SUZ		9.06	135	P	Pn	20 39 45.6	-2.6
GZR	Gura Zlata	9.11	348	⇓P	Pn	20 39 49.0	+0.1
GZR	Gura Zlata	9.11	348	⇓*i*P	Pn	20 39 49.0	+0.1
GZR	Gura Zlata	9.11	348	P	Pn	20 39 49.0	+0.1
BEO	Beograd	9.12	337	*e*Pn	Pn	20 39 51.6	+2.6
MMLI	Mount Malkishu	9.15	113	Pn	Pn	20 39 48.6	-0.9
KSHT	Keshet	9.20	109	Pn	Pn	20 39 48.9	-1.3
TEKS	Tekeris	9.22	332	*e*Pn	Pn	20 39 52.8	+2.4
TEKS	Tekeris	9.22	332	*e*Pn	Pn	20 39 52.8	+2.4
KZIT	Kziot	9.29	124	Pn	Pn	20 39 49.1	-2.3
PETR	Petresti	9.30	8	⇓*i*P	Pn	20 39 52.0	+0.6
HMDT	Nahal Hemdat	9.32	114	Pn	Pn	20 39 50.0	-1.8
ZAF		9.34	138	P	Pn	20 39 50.0	-2.0
	baz=140						
ZAF		9.34	138	P	Pn	20 39 50.0	-2.0
PLOR	Plostina	9.38	5	⇑P	Pn	20 39 53.1	+0.6
PLOR	Plostina	9.38	5	⇑*i*P	Pn	20 39 53.1	+0.6
PLOR	Plostina	9.38	5	P	Pn	20 39 53.1	+0.6
RTMI	Retamim	9.40	123	Pn	Pn	20 39 51.1	-1.7
VRI	Vrincioaia	9.40	5	⇑P	Pn	20 39 53.2	+0.4
VRI	Vrincioaia	9.40	5	⇑*i*P	Pn	20 39 53.2	+0.4
VRI	Vrincioaia	9.40	5	P	Pn	20 39 53.2	+0.4
YTIR	Yattir	9.51	120	Pn	Pn	20 39 52.5	-1.9
BZS	Buzias	9.55	343	⇓P	Pn	20 39 54.4	-0.5
BZS	Buzias	9.55	343	⇓*i*P	Pn	20 39 54.4	-0.5
BZS	Buzias	9.55	343	P	Pn	20 39 54.4	-0.5
DEV	Deva	9.56	349	⇑P	Pn	20 39 56.4	+1.3
DEV	Deva	9.56	349	⇑*i*P	Pn	20 39 56.4	+1.3
DEV	Deva	9.56	349	P	Pn	20 39 56.4	+1.3
DSI	Dead Sea	9.57	118	Pn	Pn	20 39 52.9	-2.4
FGSL	Fruska Gora	9.65	335	*e*Pn	Pn	20 39 57.2	+1.0
FRGS	Fruska Gora	9.65	335	*e*Pn	Pn	20 39 57.2	+1.0
HNKL	Nakhl	9.68	130	P	Pn	20 39 53.8	-2.9
	baz=132						
HNKL	Nakhl	9.68	130	P	Pn	20 39 53.8	-2.9
MZDA	Masada	9.71	119	Pn	Pn	20 39 55.3	-1.8
RMNI	Mount Ramon	9.73	125	Pn	Pn	20 39 55.4	-2.1
KRMI	Paran Flat	10.02	127	Pn	Pn	20 39 59.3	-2.1
TESR	Tescani	10.03	5	⇑*i*P	Pn	20 40 02.2	+0.7
ZFRI	Zfri	10.04	123	Pn	Pn	20 39 58.6	-2.9
PRNI	Paran	10.05	125	Pn	Pn	20 39 59.2	-2.6
HRFI	Mount Harif	10.27	126	Pn	Pn	20 40 02.6	-2.3
MBRI	Mt Berech	10.36	128	Pn	Pn	20 40 04.6	-1.5
ASF	Jabal al Asfar	10.38	111	Pn	Pn	20 40 06.1	-0.3
ASF	Jabal al Asfar	10.38	111	Pn	Pn	20 40 06.1	-0.3
EIL	Elat	10.46	128	Pn	Pn	20 40 05.8	-1.7
EIL				Sn	Sn	20 41 57.3	-7.0
EIL	Elat	10.46	128	Pn	Pn	20 40 05.8	-1.7
	comp=Z,3.2nm,0.3s,baz=337,slow

ZST	**Bratislava**	**13.21**	**335**	*e*P		**Pn**	**20 40 45.2**	**+0.3**
STHS	**Stebnicka Huta**	**13.27**	**348**	*e*P		**Pn**	**20 40 46.6**	**+0.9**
STHS	**Stebnicka Huta**	**13.27**	**348**	*e*PN		**Pn**	**20 40 46.6**	**+0.9**
STHS				*e*			20 40 59.8	
STHS	**Stebnicka Huta**	**13.27**	**348**	*e*P		**Pn**	**20 40 46.6**	**+0.9**
KWP	**Kalwaria Pacla**	**13.27**	**352**	*e*P		**Pn**	**20 40 47.9**	**+2.1**
LVV	**L'vov**	**13.35**	**356**	*e*P		**Pn**	**20 40 48.3**	**+1.5**
LVV				*e*S		**Sn**	**20 43 14.1**	**-0.5**
LVV					MLR	MLR		
	comp=N,2μm,11.0s							
LVV					MLR	MLR		
	comp=E,600nm,11.0s							
LVV					MLR	MLR		
	comp=Z,2μm,11.0s							
LVV	**L'vov**	**13.35**	**356**	*e*P		**Pn**	**20 40 48.3**	**+1.5**
SMOL	**Smolenice**	**13.38**	**336**	*e*P		**Pn**	**20 40 47.4**	**+0.2**
SMOL	**Smolenice**	**13.38**	**336**	*e*PN		**Pn**	**20 40 47.4**	**+0.2**
SMOL				*e*			20 40 57.1	
SMOL	**Smolenice**	**13.38**	**336**	*e*P		**Pn**	**20 40 47.4**	**+0.2**
CONA	**Conrad Observa**	**13.44**	**331**	⇑*e*Pn		**Pn**	**20 40 48.8**	**+0.7**
	comp=Z,12nm,1.4s,SNR=9.3							
CONA	**Conrad Observa**	**13.44**	**331**	Pn		**Pn**	**20 40 48.8**	**+0.7**
	comp=Z,12nm,1.4s,SNR=9.3							
NIE	**Niedzica**	**13.44**	**345**	*e*P		Pn	20 40 52.4	+4.3
NIE	**Niedzica**	**13.44**	**345**	*e*P		Pn	20 40 52.4	+4.3
VLC	**Villacollemand**	**13.81**	**308**	P		**Pn**	**20 40 50.9**	**-2.2**
KBA	**Koelnbreinsper**	**13.89**	**323**	⇓*e*Pn		**Pn**	**20 40 53.2**	**-1.2**
	comp=Z,35nm,1.1s,SNR=11							
KBA	**Koelnbreinsper**	**13.89**	**323**	Pn		**Pn**	**20 40 53.2**	**-1.2**
	comp=Z,35nm,1.1s,SNR=11							
MOA	**Molln**	**14.04**	**327**	⇓*e*Pn		**Pn**	**20 40 55.8**	**-0.5**
	comp=Z,0.8nm,0.0s,SNR=8.2							
MOA				⇓*e*P		**P**	**20 41 05.7**	**+1.7**
	comp=Z,50nm,0.9s							
MOA	**Molln**	**14.04**	**327**	Pn		**Pn**	**20 40 55.8**	**-0.5**
	comp=Z,0.8nm,0.0s,SNR=8.2							
PGF	**Pioggiola**	**14.07**	**300**	*e*P		**Pn**	**20 40 56.9**	**+0.1**
	comp=Z,124nm,1.2s							
PGF	**Pioggiola**	**14.07**	**300**	*e*P		**Pn**	**20 40 56.9**	**+0.1**
PGF					pmax	pmax		
	comp=Z,124nm,1.2s							
PGF	**Pioggiola**	**14.07**	**300**	*e*P		**Pn**	**20 40 56.9**	**+0.1**
	comp=Z,124nm,1.2s							
ABTA	**Abfaltersbach**	**14.08**	**321**	⇓*e*Pn		**Pn**	**20 40 55.4**	**-1.5**
	comp=Z,10.0nm,0.5s,SNR=17							
ABTA	**Abfaltersbach**	**14.08**	**321**	Pn		**Pn**	**20 40 55.4**	**-1.5**
	comp=Z,10.0nm,0.5s,SNR=17							
OJC	**Ojcow**	**14.31**	**345**	*e*P		**Pn**	**20 41 02.2**	**+2.3**
OJC	**Ojcow**	**14.31**	**345**	*e*P		**Pn**	**20 41 02.2**	**+2.3**
VRAC	**Vranov**	**14.34**	**336**	Pn		**Pn**	**20 41 00.5**	**+0.1**
VRAC	**Vranov**	**14.34**	**336**	Pn		**Pn**	**20 41 00.5**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=171,slow=13,SNR=12							
VRAC	**Vranov**	**14.34**	**336**	Pn		**Pn**	**20 41 00.5**	**+0.1**
VRAC	**Vranov**	**14.34**	**336**	*e*P		**P**	**20 41 09.4**	**+2.0**
OKC	**Ostrava-Krasne**	**14.35**	**341**	*e*P		**Pn**	**20 41 01.5**	**+1.1**
OKC					MLR	MLR		
	comp=Z,1μm,11.6s							
OKC	**Ostrava-Krasne**	**14.35**	**341**	*e*P		**Pn**	**20 41 01.5**	**+1.1**
OKC				*ex*		x	20 41 05.2	
OKC				*ep*P		**P**	**20 41 09.1**	**+1.7**
OKC				*ex*		x	20 43 51.4	
OKC					AMS	AMS	20 47 30.0	
	comp=Z,1μm,11.6s							
AK02	**Malin Array Si**	**14.40**	**10**	*e*Pn		**Pn**	**20 41 02.2**	**+1.1**
AK02	**Malin Array Si**	**14.40**	**10**	*e*Pn		**Pn**	**20 41 02.2**	**+1.1**
AK01	**Malin Array Si**	**14.43**	**10**	*e*Pn		**Pn**	**20 41 02.6**	**+1.0**
AK01	**Malin Array Si**	**14.43**	**10**	*e*Pn		**Pn**	**20 41 02.6**	**+1.0**
KIEV	**Kiev**	**14.43**	**10**	*e*P		**Pn**	**20 40 59.1**	**-2.5**
KIEV					pmax	pmax		
	comp=Z,63nm,0.7s							
KIEV	**Kiev**	**14.43**	**10**	*e*Pn		**Pn**	**20 40 59.1**	**-2.5**
	comp=Z,63nm,0.7s							
KIEV	**Kiev**	**14.43**	**10**	*e*Pn		**Pn**	**20 40 59.1**	**-2.5**
	comp=Z,63nm,0.7s							
AKASG	**Malin Array Be**	**14.44**	**10**	P		**Pn**	**20 40 58.7**	**-3.0**
AKASG					pmax	pmax		
	comp=Z,1.0nm,0.3s							
AKASG	**Malin Array Be**	**14.44**	**10**	Pn		**Pn**	**20 40 58.6**	**-3.0**
AKASG	**Malin Array Be**	**14.44**	**10**	Pn		**Pn**	**20 40 58.6**	**-3.0**
	comp=Z,0.7nm,0.3s,baz=198,slow=13,SNR=11							
MORC	**Moravsky Berou**	**14.46**	**339**	*e*P		**Pn**	**20 41 02.4**	**+0.4**
MORC					pmax	pmax		
	comp=Z,102nm,1.2s							
MORC	**Moravsky Berou**	**14.46**	**339**	*e*Pn		**Pn**	**20 41 02.4**	**+0.4**
	comp=Z,102nm,1.2s							
MORC	**Moravsky Berou**	**14.46**	**339**	*e*Pn		**Pn**	**20 41 02.4**	**+0.4**
	comp=Z,102nm,1.2s							
MORC	**Moravsky Berou**	**14.46**	**339**	*e*P		**P**	**20 41 10.9**	**+2.2**
ABSA	**Djebel Ababsia**	**14.51**	**274**	P		**P**	**20 41 12.0**	**+2.6**
ABSA	**Djebel Ababsia**	**14.51**	**274**	P		**P**	**20 41 12.0**	**+2.6**
CMAH	**Djebel Manchou**	**14.52**	**276**	P		**P**	**20 41 11.4**	**+1.9**
CMAH	**Djebel Manchou**	**14.52**	**276**	P		**P**	**20 41 11.4**	**+1.9**
TREC	**Trest**	**14.71**	**333**	*e*P		**Pn**	**20 41 06.1**	**+0.7**
TREC					MLR	MLR		
	comp=Z,1μm,9.5s							
TREC	**Trest**	**14.71**	**333**	*e*P		**Pn**	**20 41 06.1**	**+0.7**
TREC				*ex*		x	20 41 09.6	
TREC				*ep*P		**P**	**20 41 13.8**	**+2.3**
TREC				*e*S		**S**	**20 44 01.5**	**-5.1**
TREC					AMS	AMS	20 47 30.0	
	comp=Z,1μm,9.5s							
AKH	**Akhalkalaki**	**14.84**	**65**	P		**P**	**20 41 11.2**	**-1.9**
WTTA	**Wattenberg**	**14.87**	**321**	⇓*i*Pn		**Pn**	**20 41 07.0**	**-0.7**
	comp=Z,125nm,1.3s,SNR=16							
WTTA	**Wattenberg**	**14.87**	**321**	Pn		**Pn**	**20 41 07.0**	**-0.7**
	comp=Z,125nm,1.3s,SNR=16							
CAEH	**'Ain El Ouahch**	**14.96**	**277**	P		**P**	**20 41 17.2**	**+2.9**
GEC2	**GERESS Array S**	**15.04**	**329**	*e*P		**P**	**20 41 14.5**	**-0.8**
GEC2	**GERESS Array S**	**15.04**	**329**	*e*P		**P**	**20 41 14.5**	**-0.8**
GEC2	**GERESS Array S**	**15.04**	**329**	*e*P		**P**	**20 41 14.5**	**-0.8**
GERES	**GERESS Array B**	**15.04**	**329**	Pn		**Pn**	**20 41 09.6**	**-0.4**
GERES	**GERESS Array B**	**15.04**	**329**	Pn		**Pn**	**20 41 09.6**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=139,slow=11,SNR=22							
GERES	**GERESS Array B**	**15.04**	**329**	Pn		**Pn**	**20 41 09.6**	**-0.4**
KIV	**Kislovodsk**	**15.09**	**55**	*d*P		**Pn**	**20 41 13.0**	**+2.4**
KIV					pmax	pmax		
	comp=Z,167nm,1.3s							
KIV					MLR	MLR		
	comp=Z,200nm,13.0s							
KIV	**Kislovodsk**	**15.09**	**55**	*i* P		**Pn**	**20 41 13.0**	**+2.4**
	comp=Z,200nm,13.0s							
CKFL	**Kef-Lekhel**	**15.10**	**275**	P		**P**	**20 41 15.9**	**-0.1**
CKFL	**Kef-Lekhel**	**15.10**	**275**	P		**P**	**20 41 15.9**	**-0.1**
ONI	**Oni**	**15.13**	**61**	P		**Pn**	**20 41 13.5**	**+2.4**
KBZ	**Khabaz**	**15.14**	**56**	P		**P**	**20 41 14.3**	**-1.9**
KBZ					pmax	pmax		
	comp=Z,1.0nm,0.3s							
KBZ					MLR	MLR		
	comp=Z,301nm,19.4s							
KBZ	**Khabaz**	**15.14**	**56**	Pn		**P**	**20 41 14.3**	**-1.9**
KBZ	**Khabaz**	**15.14**	**56**	Pn		**P**	**20 41 14.3**	**-1.9**
	comp=Z,0.9nm,0.3s,baz=264,slow=7.7,SNR=30							
KBZ					LR	LR	20 48 43.3	
	comp=Z,300nm,19.4s,baz=250,slow=44							
KBZ	**Khabaz**	**15.14**	**56**	P		**P**	**20 41 14.3**	**-1.9**
	comp=Z,301nm,19.4s							
FETA	**Feichten**	**15.19**	**318**	⇓*i*Pn		**Pn**	**20 41 10.7**	**-1.3**
	comp=Z,55nm,1.0s,SNR=15							
FETA	**Feichten**	**15.19**	**318**	Pn		**Pn**	**20 41 10.7**	**-1.3**
	comp=Z,55nm,1.0s,SNR=15							
MOTA	**Moosalm**	**15.20**	**320**	⇓*e*Pn		**Pn**	**20 41 11.0**	**-1.1**
	comp=Z,40nm,0.8s,SNR=28							
MOTA	**Moosalm**	**15.20**	**320**	Pn		**Pn**	**20 41 11.0**	**-1.1**
	comp=Z,40nm,0.8s,SNR=28							
CASM	**Ain Smara**	**15.30**	**275**	P		**P**	**20 41 18.0**	**-0.1**
CASM	**Ain Smara**	**15.30**	**275**	P		**P**	**20 41 18.0**	**-0.1**
DPC	**Dobruska-Polom**	**15.33**	**337**	*e*P		**Pn**	**20 41 15.7**	**+1.9**
DPC				*ex*		x	20 41 17.5	
DPC				*ep*P		**P**	**20 41 20.2**	**+1.8**
CTEI	**Djebel Teioual**	**15.39**	**274**	P		**P**	**20 41 20.6**	**+1.4**
CTEI	**Djebel Teioual**	**15.39**	**274**	P		**P**	**20 41 20.6**	**+1.4**
GOR	**Gori**	**15.43**	**64**	P		**P**	**20 41 20.8**	**+1.3**
RETA	**Reutte**	**15.46**	**320**	⇓*i*Pn		**Pn**	**20 41 14.3**	**-1.2**
	comp=Z,37nm,0.9s,SNR=21							
RETA	**Reutte**	**15.46**	**320**	Pn		**Pn**	**20 41 14.3**	**-1.2**
	comp=Z,37nm,0.9s,SNR=21							
DAVOX	**Davos/Dischmat**	**15.51**	**316**	Pn		**Pn**	**20 41 16.0**	**-0.2**
DAVOX	**Davos/Dischmat**	**15.51**	**316**	Pn		**Pn**	**20 41 16.0**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=135,slow=18,SNR=13							
DAVOX					LR	LR	20 48 09.1	
	comp=Z,175nm,19.7s,baz=115,slow=41							
DAVOX	**Davos/Dischmat**	**15.51**	**316**	Pn		**Pn**	**20 41 16.0**	**-0.2**
KZR	**Kazreti**	**15.51**	**66**	P		**P**	**20 41 23.3**	**+2.9**
GNI	**Garni**	**15.54**	**71**	*e*Pn		**P**	**20 41 19.9**	**-1.1**
	comp=Z,64nm,1.3s							
GNI	**Garni**	**15.54**	**71**	Pn		**P**	**20 41 19.9**	**-1.1**
	comp=Z,0.6nm,0.3s,baz=2.7,slow=6.8,SNR=13							
GNI					LR	LR	20 48 13.7	
	comp=Z,442nm,20.9s,baz=263,slow=41							
GNI	**Garni**	**15.54**	**71**	*i* P		**P**	**20 41 19.7**	**-1.3**
	comp=Z,35nm,1.3s							
UPC	**Upice**	**15.57**	**337**	*e*P		**Pn**	**20 41 18.6**	**+1.8**
UPC	**Upice**	**15.57**	**337**	*e*P		**Pn**	**20 41 18.6**	**+1.8**
UPC				*ep*P		**P**	**20 41 22.9**	**+1.9**
SAOF	**Saorge**	**15.57**	**304**	*e*P		**Pn**	**20 41 17.1**	**+0.2**
SAOF	**Saorge**	**15.57**	**304**	*e*P		**Pn**	**20 41 17.1**	**+0.2**
SAOF	**Saorge**	**15.57**	**304**	*e*P		**Pn**	**20 41 17.1**	**+0.2**
SBF	**Sospel**	**15.61**	**304**	*e*P		**Pn**	**20 41 17.1**	**-0.3**
	comp=Z,130nm,0.7s							
SBF	**Sospel**	**15.61**	**304**	*e*P		**Pn**	**20 41 17.1**	**-0.3**
SBF					pmax	pmax		
	comp=Z,130nm,0.7s							
SBF	**Sospel**	**15.61**	**304**	*e*P		**Pn**	**20 41 17.1**	**-0.3**
	comp=Z,130nm,0.7s							
WET	**Wettzell**	**15.62**	**328**	*e*P		**P**	**20 41 20.8**	**-0.8**
WET	**Wettzell**	**15.62**	**328**	*e*P		**P**	**20 41 20.8**	**-0.8**
WET	**Wettzell**	**15.62**	**328**	*e*P		**P**	**20 41 20.8**	**-0.8**
PRU	**Pruhonice**	**15.63**	**333**	*e*P		**Pn**	**20 41 17.9**	**+0.3**
PRU					MLR	MLR		
	comp=Z,900nm,12.0s							
PRU	**Pruhonice**	**15.63**	**333**	*e*P		**Pn**	**20 41 17.9**	**+0.3**
PRU				*ex*		x	20 41 19.8	
PRU				*ep*P		**P**	**20 41 23.2**	**+1.6**
PRU				*e*S		**S**	**20 44 25.3**	**0.0**
PRU					AMS	AMS	20 48 40.0	
	comp=Z,900nm,12.0s							
TUE	**Stuetta**	**15.63**	**315**	*e*Pn		**Pn**	**20 41 16.7**	**-1.2**
	comp=Z,44nm,0.9s							
TUE	**Stuetta**	**15.63**	**315**	*e*Pn		**Pn**	**20 41 16.7**	**-1.2**
	comp=Z,44nm,0.9s							
FUR	**Furstenfeldbru**	**15.65**	**322**	*e*P		**Pn**	**20 41 19.4**	**+1.5**
FUR	**Furstenfeldbru**	**15.65**	**322**	*e*P		**Pn**	**20 41 19.4**	**+1.5**
AUTN	**L'Aution**	**15.66**	**304**	*e*P		**Pn**	**20 41 18.9**	**+0.6**
AUTN	**L'Aution**	**15.66**	**304**	*e*P		**Pn**	**20 41 18.9**	**+0.6**
AUTN	**L'Aution**	**15.66**	**304**	*e*P		**Pn**	**20 41 18.9**	**+0.6**
BEL	**Belsk**	**15.69**	**349**	*e*P		**Pn**	**20 41 19.2**	**+1.0**
DFRA	**Djebel Bou Aff**	**15.76**	**276**	P		**P**	**20 41 26.4**	**+3.1**
KSP	**Ksiaz**	**15.78**	**338**	*e*P		**Pn**	**20 41 21.3**	**+1.8**
KSP	**Ksiaz**	**15.78**	**338**	*e*P		**Pn**	**20 41 21.3**	**+1.8**
KSP				*e*			20 41 25.3	
KSP				*e*S		**S**	**20 44 35.2**	**+6.9**
KSP	**Ksiaz**	**15.78**	**338**	*e*P		**Pn**	**20 41 21.3**	**+1.8**
TOUF	**Mont Tournerai**	**15.79**	**304**	*e*P		**Pn**	**20 41 20.5**	**+0.6**
TOUF	**Mont Tournerai**	**15.79**	**304**	*e*P		**Pn**	**20 41 20.5**	**+0.6**
TOUF	**Mont Tournerai**	**15.79**	**304**	*e*P		**Pn**	**20 41 20.5**	**+0.6**
DAVA	**Damuels**	**15.81**	**318**	⇓*e*Pn		**Pn**	**20 41 19.1**	**-0.9**
	comp=Z,0.7nm,0.5s,SNR=23							
DAVA				⇑*i*Pn		**P**	**20 41 21.2**	**-2.6**
	comp=Z,59nm,1.3s							
DAVA	**Damuels**	**15.81**	**318**	Pn		**Pn**	**20 41 19.1**	**-0.9**
	comp=Z,0.7nm,0.5s,SNR=23							
MVIF	**Mont Vial**	**15.81**	**303**	*e*P		**Pn**	**20 41 20.4**	**+0.3**
MVIF	**Mont Vial**	**15.81**	**303**	*e*P		**Pn**	**20 41 20.4**	**+0.3**
MVIF	**Mont Vial**	**15.81**	**303**	*e*P		**Pn**	**20 41 20.4**	**+0.3**
TBLG	**Delisi**	**15.82**	**65**	*e*P		**P**	**20 41 23.8**	**-0.1**
TBLG	**Delisi**	**15.82**	**65**	P		**P**	**20 41 23.8**	**-0.1**
TBLG	**Delisi**	**15.82**	**65**	*e*P		**P**	**20 41 23.8**	**-0.1**
SEAG	**Tbilisi Sea**	**15.88**	**65**	P		**P**	**20 41 29.0**	**+4.5**
DUS	**Dusheti**	**15.88**	**64**	P		**P**	**20 41 25.7**	**+1.2**
CALN	**Calern**	**15.94**	**303**	*e*P		**Pn**	**20 41 21.8**	**+0.1**
CALN	**Calern**	**15.94**	**303**	*e*P		**Pn**	**20 41 21.8**	**+0.1**
CALN	**Calern**	**15.94**	**303**	*e*P		**Pn**	**20 41 21.8**	**+0.1**
FRF	**La Foret Royal**	**16.04**	**302**	*e*P		**Pn**	**20 41 22.5**	**-0.3**
	comp=Z,85nm,1.0s							
FRF	**La Foret Royal**	**16.04**	**302**	*e*P		**Pn**	**20 41 22.5**	**-0.3**
FRF					pmax	pmax		
	comp=Z,85nm,1.0s							
FRF	**La Foret Royal**	**16.04**	**302**	*e*P		**Pn**	**20 41 22.5**	**-0.3**
	comp=Z,85nm,1.0s							
LMR	**La Mourre**	**16.05**	**301**	*e*P		**Pn**	**20 41 22.4**	**-0.7**
	comp=Z,55nm,1.2s							
LMR	**La Mourre**	**16.05**	**301**	*e*P		**Pn**	**20 41 22.4**	**-0.7**
LMR					pmax	pmax		
	comp=Z,55nm,1.2s							
LMR	**La Mourre**	**16.05**	**301**	*e*P		**Pn**	**20 41 22.4**	**-0.7**
	comp=Z,55nm,1.2s							
PVCC	**Panska Ves**	**16.07**	**334**	*e*P		**Pn**	**20 41 23.4**	**+0.2**
PVCC					MLR	MLR		
	comp=Z,900nm,9.1s							
PVCC	**Panska Ves**	**16.07**	**334**	*e*P		**Pn**	**20 41 23.4**	**+0.2**
PVCC				*ex*		x	20 41 26.1	
PVCC				*ep*P		**pP**	**20 41 28.7**	**-2.8**
PVCC					AMS	AMS	20 48 20.0	
	comp=Z,900nm,9.1s							
CKHR	**Kef el Ahmar**	**16.12**	**274**	P		**P**	**20 41 27.5**	**+0.2**
CKHR	**Kef el Ahmar**	**16.12**	**274**	P		**P**	**20 41 27.5**	**+0.2**
SET	**Setif**	**16.18**	**275**	P		**P**	**20 41 30.0**	**+2.0**
SET	**Setif**	**16.18**	**275**	P		**P**	**20 41 30.0**	**+2.0**
DGRG	**David-gareji**	**16.23**	**66**	P		**P**	**20 41 28.6**	**+0.2**
SURF	**Saint Ours**	**16.26**	**305**	*e*P		**Pn**	**20 41 26.8**	**+0.9**
SURF	**Saint Ours**	**16.26**	**305**	*e*P		**Pn**	**20 41 26.8**	**+0.9**
SURF	**Saint Ours**	**16.26**	**305**	*e*P		**Pn**	**20 41 26.8**	**+0.9**
ROTZ	**Rotzenmuhle**	**16.38**	**328**	*e*P		**P**	**20 41 28.9**	**-1.1**
MBDF	**Montbardon**	**16.38**	**306**	*e*P		**Pn**	**20 41 24.7**	**-2.7**
	comp=Z,105nm,1.1s							
MBDF	**Montbardon**	**16.38**	**306**	*e*P		**Pn**	**20 41 24.7**	**-2.7**
MBDF					pmax	pmax		
	comp=Z,105nm,1.1s							
MBDF	**Montbardon**	**16.38**	**306**	*e*P		**Pn**	**20 41 24.7**	**-2.7**
	comp=Z,105nm,1.1s							
BRG	**Berggiesshubel**	**16.58**	**334**	*e*P		**Pn**	**20 41 29.9**	**+0.2**
	comp=Z,9.2nm,1.2s							
BRG				*e*			20 41 33.7	
	comp=Z,85nm,1.1s							
BRG					SS	**S**	**20 44 45.0**	**+0.4**
BRG								
	comp=N,605nm,16.0s							
BRG								
	comp=E,425nm,9.9s							
BRG								
	comp=Z,605nm,16.0s							
BRG	**Berggiesshubel**	**16.58**	**334**	*e*P		**Pn**	**20 41 29.8**	**+0.1**
BRG	**Berggiesshubel**	**16.58**	**334**	*e*P		**Pn**	**20 41 29.9**	**+0.2**
BRG					pmax	pmax		
	comp=Z,9.0nm,1.2s							
BRG					MLR	MLR		
	comp=N,605nm,16.0s							
BRG					MLR	MLR		
	comp=E,425nm,9.9s							
BRG					MLR	MLR		
	comp=Z,605nm,16.0s							
BRG	**Berggiesshubel**	**16.58**	**334**	*e*P		**Pn**	**20 41 29.9**	**+0.2**
	comp=Z,605nm,16.0s							
MANZ	**Manzenberg**	**16.59**	**328**	*e*P		**P**	**20 41 31.6**	**-0.7**
OG25	**Le Caire**	**16.71**	**304**	*e*P		**Pn**	**20 41 31.6**	**+0.1**
OG25	**Le Caire**	**16.71**	**304**	*e*P		**Pn**	**20 41 31.6**	**+0.1**
OG25	**Le Caire**	**16.71**	**304**	*e*P		**Pn**	**20 41 31.6**	**+0.1**
WERN	**Wernitzgruen**	**16.71**	**330**	*e*P		**Pn**	**20 41 31.4**	**0.0**
LPG	**La Plagne**	**16.72**	**308**	*e*P		**P**	**20 41 33.8**	**-0.3**
	comp=Z,61nm,0.9s							
LPG	**La Plagne**	**16.72**	**308**	*e*P		**P**	**20 41 33.8**	**-0.3**
LPG					pmax	pmax		
	comp=Z,61nm,0.9s							
LPG	**La Plagne**	**16.72**	**308**	*e*P		**P**	**20 41 33.8**	**-0.3**
	comp=Z,61nm,0.9s							
LPG	**La Plagne**	**16.72**	**308**	*e*P		**P**	**20 41 33.8**	**-0.3**
	comp=Z,31nm,0.9s							
LPL	**La Plagne**	**16.74**	**308**	*e*P		**P**	**20 41 34.6**	**+0.4**
	comp=Z,88nm,1.0s							
LPL	**La Plagne**	**16.74**	**308**	*e*P		**P**	**20 41 34.6**	**+0.4**
LPL					pmax	pmax		
	comp=Z,88nm,1.0s							
LPL	**La Plagne**	**16.74**	**308**	*e*P		**P**	**20 41 34.6**	**+0.4**
	comp=Z,88nm,1.0s							
LPL	**La Plagne**	**16.74**	**308**	*e*P		**P**	**20 41 34.6**	**+0.4**
	comp=Z,44nm,1.0s							
GRA1	**Grafenberg Arr**	**16.75**	**326**	*e*P		**P**	**20 41 33.1**	**-1.0**
GRF	**Grafenberg Arr**	**16.75**	**326**	*e*P		**P**	**20 41 33.1**	**-1.0**
GRF	**Grafenberg Arr**	**16.75**	**326**	*e*P		**P**	**20 41 33.1**	**-1.0**
GRFO	**Grafenberg**	**16.75**	**326**	*e*P		**Pn**	**20 41 32.6**	**+0.7**
GRFO					pmax	pmax		
	comp=Z,141nm,0.9s							
GRFO	**Grafenberg**	**16.75**	**326**	*e*Pn		**Pn**	**20 41 32.6**	**+0.7**
	comp=Z,141nm,0.9s							
GRFO	**Grafenberg**	**16.75**	**326**	*e*P		**Pn**	**20 41 32.6**	**+0.7**
	comp=Z,141nm,0.9s							
TANN	**Tannenbergstha**	**16.77**	**330**	*e*P		**Pn**	**20 41 32.8**	**+0.6**
GUNZ	**Gunzen**	**16.79**	**330**	*e*P		**Pn**	**20 41 33.0**	**+0.6**
FBE	**Freiberg**	**16.83**	**333**	*e*P		**P**	**20 41 35.7**	**+0.8**
WERD	**Werda**	**16.86**	**330**	*e*P		**Pn**	**20 41 34.0**	**+0.7**
RSL	**Roselend**	**16.88**	**309**	*e*P		**P**	**20 41 35.4**	**-0.3**
RSL	**Roselend**	**16.88**	**309**	*e*P		**P**	**20 41 35.4**	**-0.3**
RSL	**Roselend**	**16.88**	**309**	*e*P		**P**	**20 41 35.4**	**-0.3**
RSL	**Roselend**	**16.88**	**309**	*e*P		**P**	**20 41 35.4**	**-0.3**
SPAK	**Spaichingen-Ko**	**16.89**	**318**	*e*P		**Pn**	**20 41 33.3**	**-0.5**
SMRF	**Simiane la Rot**	**16.91**	**302**	*e*P		**Pn**	**20 41 32.6**	**-1.3**
	comp=Z,36nm,1.0s							
SMRF	**Simiane la Rot**	**16.91**	**302**	*e*P		**Pn**	**20 41 32.6**	**-1.3**
	comp=Z,36nm,1.0s							
PLN	**Plauen**	**16.95**	**330**	*e*P		**P**	**20 41 35.7**	**-0.6**
GDM	**Grand'Maison**	**17.00**	**307**	*e*P		**P**	**20 41 37.1**	**+0.1**
GDM	**Grand'Maison**	**17.00**	**307**	*e*P		**P**	**20 41 37.1**	**+0.1**
GDM	**Grand'Maison**	**17.00**	**307**	*e*P		**P**	**20 41 37.1**	**+0.1**
ORIF	**Oris-en-Rattie**	**17.04**	**306**	*e*P		**Pn**	**20 41 33.9**	**-1.8**
	comp=Z,41nm,0.9s							
ORIF				*e*R				
	comp=Z,669nm,19.2s							
ORIF	**Oris-en-Rattie**	**17.04**	**306**	*e*P		**Pn**	**20 41 33.9**	**-1.8**
ORIF					pmax	pmax		
	comp=Z,41nm,0.9s							
ORIF	**Oris-en-Rattie**	**17.04**	**306**	*e*P		**Pn**	**20 41 33.9**	**-1.8**
	comp=Z,41nm,0.9s							
STU	**Stuttgart**	**17.09**	**321**	*e*P		**Pn**	**20 41 36.1**	**-0.1**
STU	**Stuttgart**	**17.09**	**321**	*e*P		**Pn**	**20 41 35.8**	**-0.4**
STU					pmax	pmax		
	comp=Z,42nm,0.8s							
STU	**Stuttgart**	**17.09**	**321**	*e*Pn		**Pn**	**20 41 35.8**	**-0.4**
	comp=Z,42nm,0.8s							
STU	**Stuttgart**	**17.09**	**321**	*e*P		**Pn**	**20 41 35.8**	**-0.4**
	comp=Z,42nm,0.8s							
OG01	**Vacheresse**	**17.14**	**311**	*e*P		**Pn**	**20 41 36.2**	**-0.7**
OG01	**Vacheresse**	**17.14**	**311**	*e*P		**Pn**	**20 41 36.2**	**-0.7**
FELD	**Feldberg im Sc**	**17.18**	**317**	*e*P		**Pn**	**20 41 37.1**	**-0.4**
FELD	**Feldberg im Sc**	**17.18**	**317**	*e*P		**Pn**	**20 41 37.1**	**-0.4**
BBS	**Basel-Blauen**	**17.23**	**315**	*e*P		**Pn**	**20 41 37.8**	**-0.2**
BBS	**Basel-Blauen**	**17.23**	**315**	*e*P		**Pn**	**20 41 37.8**	**-0.2**
BBS	**Basel-Blauen**	**17.23**	**315**	*e*P		**Pn**	**20 41 37.8**	**-0.2**
GRN	**Grenoble**	**17.25**	**306**	*e*P		**P**	**20 41 39.7**	**-0.1**
GRN	**Grenoble**	**17.25**	**306**	*e*P		**P**	**20 41 39.7**	**-0.1**
GRN	**Grenoble**	**17.25**	**306**	*e*P		**P**	**20 41 39.7**	**-0.1**
**

LANF Langenberg 17.94 320 *e*P P 20 41 48.0 +0.7
LANF Langenberg 17.94 320 *e*P P 20 41 48.0 +0.7
LANF Langenberg 17.94 320 *e*P P 20 41 48.0 +0.7
LANF Langenberg 17.94 320 *e*P P 20 41 48.0 +0.7
RUE Ruedersdorf 17.98 336 *e*P P 20 41 48.4 +0.8
RUE Ruedersdorf 17.98 336 *e*Pn P 20 41 48.4 +0.8
comp=Z,110nm,1.1s
RUE Ruedersdorf 17.98 336 *e*Pn P 20 41 48.4 +0.8
comp=Z,110nm,1.1s
KTD Kalmit 18.01 321 *e*P P 20 41 49.0 +1.0
KTD Kalmit 18.01 321 *e*P P 20 41 49.0 +1.0
KTD Kalmit 18.01 321 *e*P P 20 41 49.0 +1.0
SSB Saint Sauveur 18.05 305 *e*P Pn 20 41 45.2 -3.0
SSB pmax pmax
comp=Z,12nm,0.8s
SSB Saint Sauveur 18.05 305 *e*Pn Pn 20 41 45.2 -3.0
comp=Z,12nm,0.8s
MNK Minsk 18.07 4 *e*P Pn 20 41 42.0 -6.2
MICGM Minsk 18.07 5 *e*P Pn 20 41 42.0 -6.3
MAK Makhachkala 18.10 62 *e*P P 20 41 49.7 +0.7
MAK *e*S S 20 45 15.5 -0.2
MAK pmax pmax
comp=Z,28nm,0.7s
MAK MLR MLR
comp=Z,293nm,18.0s
MAK Makhachkala 18.10 62 *e*P P 20 41 49.7 +0.7
comp=Z,28nm,0.7s
UBBA Unterbreizbach 18.11 327 *e*P P 20 41 49.7 +0.7
LASF Ste Croix 18.11 301 *e*P Pn 20 41 47.3 -1.6
comp=Z,54nm,1.1s
LASF Ste Croix 18.11 301 *e*P Pn 20 41 47.3 -1.6
comp=Z,54nm,1.1s
LASF Ste Croix 18.11 301 *e*P Pn 20 41 47.3 -1.6
comp=Z,27nm,1.1s
EMHD Djebel Mahouad 18.15 276 P P 20 41 50.0 +0.3
EMHD Djebel Mahouad 18.15 276 P P 20 41 50.0 +0.3
HAU Haudompre 18.18 315 *e*P Pn 20 41 49.8 +0.1
comp=Z,56nm,0.9s
HAU *e*R
comp=Z,524nm,18.2s
HAU Haudompre 18.18 315 *e*P Pn 20 41 49.8 +0.1
HAU pmax pmax
comp=Z,56nm,0.9s
HAU Haudompre 18.18 315 *e*P Pn 20 41 49.8 +0.1
comp=Z,56nm,0.9s
HAU Haudompre 18.18 315 *e*P Pn 20 41 49.8 +0.1
comp=Z,28nm,0.9s
TNS Taunus Mts 18.41 323 *e*P Pn 20 41 53.6 +1.0
TNS Taunus Mts 18.41 323 *e*P Pn 20 41 53.6 +1.0
TNS Taunus Mts 18.41 323 *e*P Pn 20 41 53.6 +1.0
NACGM Naroch 18.42 2 *e*P P 20 41 47.0 -5.4
THEF They Montfort 18.50 315 *e*P Pn 20 41 54.0 +0.3
THEF They Montfort 18.50 315 *e*P Pn 20 41 54.0 +0.3
THEF They Montfort 18.50 315 *e*P Pn 20 41 54.0 +0.3
THEF They Montfort 18.50 315 *e*P Pn 20 41 54.0 +0.3
ABH Alteburg 18.63 321 *e*P Pn 20 41 55.7 +0.5
ABH Alteburg 18.63 321 *e*P Pn 20 41 55.7 +0.5
FILF Fillols 18.66 296 *e*P Pn 20 41 56.0 +0.4
FILF Fillols 18.66 296 *e*P Pn 20 41 56.0 +0.4
FILF Fillols 18.66 296 *e*P Pn 20 41 56.0 +0.4
CLZ Clausthal 18.71 330 *e*P Pn 20 41 56.9 +0.7
CLZ Clausthal 18.71 330 *e*P Pn 20 41 56.9 +0.7
CLZ Clausthal 18.71 330 *e*P Pn 20 41 56.9 +0.7
LRDF Laroque-de-Fa 18.75 297 *e*P P 20 41 56.0 -0.2
LRDF Laroque-de-Fa 18.75 297 *e*P P 20 41 56.0 -0.2
LRDF Laroque-de-Fa 18.75 297 *e*P P 20 41 56.0 -0.2
RUP Ruppelstein 18.77 320 *e*P Pn 20 41 57.3 +0.4
RUP Ruppelstein 18.77 320 *e*P Pn 20 41 57.3 +0.4
RUP Ruppelstein 18.77 320 *e*P Pn 20 41 57.3 +0.4
PAGF Fort de Pagny 18.83 316 *e*P Pn 20 41 57.5 -0.1
comp=Z,16nm,1.1s
PAGF Fort de Pagny 18.83 316 *e*P Pn 20 41 57.5 -0.1
comp=Z,16nm,1.0s
PAGF Fort de Pagny 18.83 316 *e*P Pn 20 41 57.5 -0.1
comp=Z,7,8nm,1.1s
LBL Lubilhac 18.89 304 *e*P P 20 41 57.7 -0.1
LBL Lubilhac 18.89 304 *e*P P 20 41 57.7 -0.1
LBL Lubilhac 18.89 304 *e*P P 20 41 57.7 -0.1
LBL Lubilhac 18.89 304 *e*P P 20 41 57.7 -0.1
VALF Valcebollere 19.02 295 *e*P P 20 41 59.5 +0.1
VALF Valcebollere 19.02 295 *e*P P 20 41 59.5 +0.1
VALF Valcebollere 19.02 295 *e*P P 20 41 59.5 +0.1
SFTF Sexfontaines 19.04 314 *e*P Pn 20 41 59.9 -0.2
comp=Z,70nm,0.9s
SFTF Sexfontaines 19.04 314 *e*P Pn 20 41 59.9 -0.2
comp=Z,70nm,0.9s
SFTF Sexfontaines 19.04 314 *e*P Pn 20 41 59.9 -0.2
comp=Z,35nm,0.9s
SMF Signal de Mont 19.04 309 *e*P P 20 41 58.6 -0.8
comp=Z,55nm,0.8s
SMF Signal de Mont 19.04 309 *e*P P 20 41 58.6 -0.8
SMF pmax pmax
comp=Z,55nm,0.8s
SMF Signal de Mont 19.04 309 *e*P P 20 41 58.6 -0.8
comp=Z,55nm,0.8s
SMF Signal de Mont 19.04 309 *e*P P 20 41 58.6 -0.8
comp=Z,28nm,0.8s
MTLF Montolieu 19.07 298 *e*P P 20 41 59.5 -0.2
comp=Z,73nm,1.2s
MTLF Montolieu 19.07 298 *e*P P 20 41 59.5 -0.2
MTLF pmax pmax
comp=Z,73nm,1.2s
MTLF Montolieu 19.07 298 *e*P P 20 41 59.5 -0.2
comp=Z,73nm,1.2s
MTLF Montolieu 19.07 298 *e*P P 20 41 59.5 -0.2
comp=Z,36nm,1.2s
MEZF Maizieres J'vi 19.18 315 *e*P Pn 20 42 01.7 -0.1
comp=Z,80nm,1.0s
MEZF Maizieres J'vi 19.18 315 *e*P Pn 20 42 01.7 -0.1
comp=Z,80nm,1.0s
MEZF Maizieres J'vi 19.18 315 *e*P Pn 20 42 01.7 -0.1
comp=Z,40nm,1.0s
WLF Walferdange 19.22 319 P Pn 20 42 02.3 +0.1
comp=Z,64nm,1.3s
WLF Walferdange 19.22 319 *e*P P 20 42 01.3 0.0
WLF Walferdange 19.22 319 *e*P P 20 42 01.7 +0.4
WLF pmax pmax
comp=Z,106nm,1.1s
WLF Walferdange 19.22 319 *e*P P 20 42 01.7 +0.4
comp=Z,106nm,1.1s
WLF Walferdange 19.22 319 *e*P P 20 42 01.7 +0.4
comp=Z,106nm,1.1s
PYM Petit Puy Mans 19.23 306 *e*P P 20 42 02.0 +0.5
PYM Petit Puy Mans 19.23 306 *e*P P 20 42 02.0 +0.5
PYM Petit Puy Mans 19.23 306 *e*P P 20 42 02.0 +0.5
PYM Petit Puy Mans 19.23 306 *e*P P 20 42 02.0 +0.5
AGO Saint Agoulin 19.26 307 *e*P P 20 42 01.7 -0.1
AGO Saint Agoulin 19.26 307 *e*P P 20 42 01.7 -0.1
AGO Saint Agoulin 19.26 307 *e*P P 20 42 01.7 -0.1
EBNR Beni Rached 19.27 277 P P 20 41 55.0 -7.0
LOR Lormes 19.29 311 *e*P P 20 42 02.3 +0.2
comp=Z,31nm,0.9s
LOR *e*R
comp=Z,565nm,19.0s
LOR Lormes 19.29 311 *e*P P 20 42 02.3 +0.2
comp=Z,31nm,0.9s
LOR Lormes 19.29 311 *e*P P 20 42 02.3 +0.2
comp=Z,16nm,0.9s
NRDL Niedersach Rie 19.32 331 *e*P Pn 20 42 03.3 0.0
AVF Avril sur Loir 19.41 309 *e*P P 20 42 03.3 0.0
comp=Z,54nm,0.9s
AVF Avril sur Loir 19.41 309 *e*P P 20 42 03.3 0.0
AVF pmax pmax
comp=Z,54nm,0.9s
AVF Avril sur Loir 19.41 309 *e*P P 20 42 03.3 0.0
comp=Z,54nm,0.9s
AVF Avril sur Loir 19.41 309 *e*P P 20 42 03.3 0.0
comp=Z,27nm,0.9s
SSF Saint Saulge 19.42 310 *e*P P 20 42 03.5 0.0
comp=Z,139nm,0.9s
SSF Saint Saulge 19.42 310 *e*P P 20 42 03.5 0.0
SSF pmax pmax
comp=Z,139nm,0.9s
SSF Saint Saulge 19.42 310 *e*P P 20 42 03.5 0.0
comp=Z,139nm,0.9s
SSF Saint Saulge 19.42 310 *e*P P 20 42 03.5 0.0
comp=Z,69nm,0.9s
ECHA Ech Chlef 19.43 276 P P 20 41 59.0 -4.6
MIB Mutribah 19.46 104 *e*P Pn 20 42 05.3 -0.1
MIB AMb AMB 20 42 12.9
comp=Z,114nm,1.6s
CAF Calviac 19.59 303 *e*P P 20 42 05.2 -0.2
comp=Z,45nm,1.0s
CAF Calviac 19.59 303 *e*P P 20 42 05.2 -0.2
CAF pmax pmax
comp=Z,45nm,1.0s
CAF Calviac 19.59 303 *e*P P 20 42 05.2 -0.2
comp=Z,45nm,1.0s
CAF Calviac 19.59 303 *e*P P 20 42 05.2 -0.2
comp=Z,22nm,1.0s
ETRT Tiaret 19.60 274 P P 20 42 06.2 +0.5
ETRT Tiaret 19.60 274 P P 20 42 06.2 +0.5
BGF Bois d'Agland 19.63 308 *e*P P 20 42 06.0 +0.2
comp=Z,88nm,0.9s
BGF Bois d'Agland 19.63 308 *e*P P 20 42 06.0 +0.2
BGF pmax pmax
comp=Z,88nm,0.9s
BGF Bois d'Agland 19.63 308 *e*P P 20 42 06.0 +0.2
comp=Z,88nm,0.9s
BGF Bois d'Agland 19.63 308 *e*P P 20 42 06.0 +0.2
comp=Z,44nm,0.9s
NAY Al-Naaiem 19.64 105 *e*P Pn 20 42 07.5 +0.1
NAY AMb AMB 20 42 15.8
comp=Z,23nm,1.0s
EANR 'Ain N'Sour 19.67 276 P Pn 20 42 08.5 +0.7
EANR 'Ain N'Sour 19.67 276 P Pn 20 42 08.5 +0.7
SALF Salau 19.69 296 *e*P Pn 20 42 08.4 +0.4
SALF Salau 19.69 296 *e*P Pn 20 42 08.4 +0.4
SALF Salau 19.69 296 *e*P Pn 20 42 08.4 +0.4
BUG Bochum--Univer 19.78 325 *e*P Pn 20 42 08.4 -0.5
MLS Moulis 19.79 296 *e*P Pn 20 42 08.6 -0.6
MLS Moulis 19.79 296 *e*P Pn 20 42 08.6 -0.6
MLS Moulis 19.79 296 *e*P Pn 20 42 08.6 -0.6
MEM Membach 19.86 321 P Pn 20 42 09.8 -0.1
comp=Z,39nm,1.0s
UMR Umm Al-Rimmam 19.87 104 *e*P Pn 20 42 09.7 -0.4
UMR AMb AMB 20 42 18.9
comp=Z,103nm,1.0s
TCF Toulx Ste Croi 19.94 307 *e*P P 20 42 09.3 +0.1
comp=Z,30nm,0.9s
TCF Toulx Ste Croi 19.94 307 *e*P P 20 42 09.3 +0.1
TCF pmax pmax
comp=Z,31nm,0.9s
TCF Toulx Ste Croi 19.94 307 *e*P P 20 42 09.3 +0.1
comp=Z,30nm,0.9s
TCF Toulx Ste Croi 19.94 307 *e*P P 20 42 09.3 +0.1
comp=Z,15nm,0.9s
HGN Heimansgroeve 19.99 322 *e*P Pn 20 42 11.2 -0.3
comp=Z,76nm,1.2s
HGN *e*S S 20 45 44.7 -9.0
HGN *e*L L 20 50 42.4
comp=Z,397nm,20.2s
MELF Melles 20.02 296 *e*P Pn 20 42 11.5 -0.5
MELF Melles 20.02 296 *e*P Pn 20 42 11.5 -0.5
MELF Melles 20.02 296 *e*P Pn 20 42 11.5 -0.5
RDF Al-Radifah 20.02 106 *e*P P 20 42 10.8 +0.6
RDF AMb AMB 20 42 19.1
comp=Z,73nm,1.3s
RDF Al-Radifah 20.02 106 *e*P P 20 42 10.8 +0.6
comp=Z,73nm,1.3s
HYF Humbligny 20.05 310 *e*P P 20 42 11.1 +0.8
HYF Humbligny 20.05 310 *e*P P 20 42 11.1 +0.8
HYF Humbligny 20.05 310 *e*P P 20 42 11.1 +0.8
RJF Les Rejaudoux 20.07 303 *e*P Pn 20 42 11.7 -0.8
comp=Z,124nm,1.3s
RJF *e*R
comp=Z,352nm,20.0s
RJF Les Rejaudoux 20.07 303 *e*P Pn 20 42 11.7 -0.8
RJF pmax pmax
comp=Z,124nm,1.3s
RJF Les Rejaudoux 20.07 303 *e*P Pn 20 42 11.7 -0.8
comp=Z,124nm,1.3s
RJF Les Rejaudoux 20.07 303 *e*P Pn 20 42 11.7 -0.8
comp=Z,62nm,1.3s
OBN Obninsk 20.10 19 *α*e P P 20 42 11.0 +0.2
OBN 20 42 24.2
OBN pmax pmax
comp=Z,125nm,1.3s
OBN MLR MLR
comp=Z,200nm,12.0s
OBN Obninsk 20.10 19 *e*P P 20 42 11.0 +0.2
comp=Z,125nm,1.3s
BCLA Clavier 20.11 320 P P 20 42 11.4 +0.5
comp=Z,40nm,1.3s
BEBN Eben Emael 20.14 321 P P 20 42 11.0 -0.3
comp=Z,17nm,1.2s
IBBN Ibbenburen 20.16 327 *e*P Pn 20 42 12.5 -0.9
GIVF Givet 20.17 319 *e*P P 20 42 12.0 +0.3
comp=Z,126nm,1.0s
GIVF Givet 20.17 319 *e*P P 20 42 12.0 +0.3
GIVF pmax pmax
comp=Z,126nm,1.0s
GIVF Givet 20.17 319 *e*P P 20 42 12.0 +0.3
comp=Z,126nm,1.0s
GIVF Givet 20.17 319 *e*P P 20 42 12.0 +0.3
comp=Z,63nm,1.0s
DOU Dourbes 20.29 319 P P 20 42 13.9 +0.9
comp=Z,31nm,1.1s
RESF Ens 20.31 296 *e*P P 20 42 13.6 +0.2
RESF Ens 20.31 296 *e*P P 20 42 13.6 +0.2
RESF Ens 20.31 296 *e*P P 20 42 13.6 +0.2
EPF Esparros 20.35 296 *e*P P 20 42 13.6 -0.1
comp=Z,50nm,1.2s
EPF Esparros 20.35 296 *e*P P 20 42 13.6 -0.1
EPF pmax pmax
comp=Z,50nm,1.2s
EPF Esparros 20.35 296 *e*P P 20 42 13.6 -0.1
comp=Z,50nm,1.2s
EPF Esparros 20.35 296 *e*P P 20 42 13.6 -0.1
comp=Z,25nm,1.2s
WTSB Winterswijk 20.35 325 *e*P Pn 20 42 14.6 -1.0
comp=Z,112nm,1.1s
WTSB Winterswijk 20.35 325 *e*P P 20 42 14.6 +1.0
comp=Z,112nm,1.1s
BSEG Bad Segeberg 20.36 334 *e*P P 20 42 13.3 -0.4
BSEG Bad Segeberg 20.36 334 *e*P P 20 42 13.3 -0.4
BSEG Bad Segeberg 20.36 334 *e*P P 20 42 13.3 -0.4
BAIF Baives 20.48 318 *e*P P 20 42 15.5 +0.5
comp=Z,298nm,0.8s
BAIF Baives 20.48 318 *e*P P 20 42 15.5 +0.5
BAIF pmax pmax
comp=Z,298nm,0.8s
BAIF Baives 20.48 318 *e*P P 20 42 15.5 +0.5
comp=Z,298nm,0.8s
BAIF Baives 20.48 318 *e*P P 20 42 15.5 +0.5
comp=Z,149nm,0.8s
LFF La Frestale 20.50 302 *e*P P 20 42 15.7 +0.5
comp=Z,31nm,0.7s
LFF La Frestale 20.50 302 *e*P P 20 42 15.7 +0.5
LFF pmax pmax
comp=Z,31nm,0.7s
LFF La Frestale 20.50 302 *e*P P 20 42 15.7 +0.5
comp=Z,31nm,0.7s
LFF La Frestale 20.50 302 *e*P P 20 42 15.7 +0.5
comp=Z,15nm,0.7s
LABF Labassere 20.55 296 *e*P P 20 42 15.8 -0.1
LABF Labassere 20.55 296 *e*P P 20 42 15.8 -0.1
LABF Labassere 20.55 296 *e*P P 20 42 15.8 -0.1
VIEF Viey 20.55 296 *e*P P 20 42 15.8 -0.2
VIEF Viey 20.55 296 *e*P P 20 42 15.8 -0.2
VIEF Viey 20.55 296 *e*P P 20 42 15.8 -0.2
MOS Moscow 20.94 19 *e*P P 20 42 16.4 -3.5
MOS *e* 20 42 28.4
MOS *e*S S 20 46 13.0 +0.7
MOS pmax pmax
comp=Z,169nm,1.5s
MOS pmax pmax
comp=Z,200nm,1.5s
MOS MLR MLR
comp=Z,800nm,15.0s
ETSF Etsaut 20.98 296 *e*P P 20 42 20.4 -0.2
comp=Z,30nm,0.8s
ETSF Etsaut 20.98 296 *e*P P 20 42 20.4 -0.2
ETSF pmax pmax
comp=Z,30nm,0.8s
ETSF Etsaut 20.98 296 *e*P P 20 42 20.4 -0.2
comp=Z,30nm,0.8s
ETSF Etsaut 20.98 296 *e*P P 20 42 20.4 -0.2
comp=Z,15nm,0.8s
ORDF Ordiarp 21.30 296 *e*P P 20 42 22.9 -1.1
ORDF Ordiarp 21.30 296 *e*P P 20 42 22.9 -1.1
ORDF Ordiarp 21.30 296 *e*P P 20 42 22.9 -1.1
LARF Larrau 21.31 296 *e*P P 20 42 23.9 -0.2
LARF Larrau 21.31 296 *e*P P 20 42 23.9 -0.2
LARF Larrau 21.31 296 *e*P P 20 42 23.9 -0.2
SJPF Ste Jean 21.50 296 *e*P P 20 42 26.2 +0.1
comp=Z,183nm,1.3s
SJPF Ste Jean 21.50 296 *e*P P 20 42 26.2 +0.1
SJPF pmax pmax
comp=Z,183nm,1.3s
SJPF Ste Jean 21.50 296 *e*P P 20 42 26.2 +0.1
comp=Z,183nm,1.3s
MFF Saint Martin d 21.58 306 *e*P P 20 42 27.2 +0.3
comp=Z,144nm,1.1s
MFF Saint Martin d 21.58 306 *e*P P 20 42 27.2 +0.3
MFF pmax pmax
comp=Z,144nm,1.1s
MFF Saint Martin d 21.58 306 *e*P P 20 42 27.2 +0.3
comp=Z,144nm,1.1s
MENF Mencas 21.86 317 *e*P P 20 42 29.5 -0.3
MENF Mencas 21.86 317 *e*P P 20 42 29.5 -0.3
TAM Tamanrasset 22.02 237 *e*P P 20 42 33.4 +1.4
TAM pmax pmax
comp=Z,20nm,1.0s
TAM Tamanrasset 22.02 237 *e*P P 20 42 33.4 +1.4
comp=Z,20nm,1.0s
LDF La Druitiere 22.28 311 *e*P P 20 42 33.7 -0.7
comp=Z,106nm,1.2s
LDF La Druitiere 22.28 311 *e*P P 20 42 33.7 -0.7
LDF pmax pmax
comp=Z,106nm,1.2s
LDF La Druitiere 22.28 311 *e*P P 20 42 33.7 -0.7
comp=Z,106nm,1.2s
FLN La Foliniere 22.57 311 *e*P P 20 42 36.4 -1.0
comp=Z,72nm,0.7s
FLN *e*R
comp=Z,462nm,19.5s
FLN La Foliniere 22.57 311 *e*P P 20 42 36.4 -1.0
FLN pmax pmax
comp=Z,72nm,0.7s
FLN La Foliniere 22.57 311 *e*P P 20 42 36.4 -1.0
comp=Z,72nm,0.7s
GRR Gorron 22.65 310 *e*P P 20 42 37.4 -1.0
comp=Z,119nm,0.8s
GRR Gorron 22.65 310 *e*P P 20 42 37.4 -1.0
GRR pmax pmax
comp=Z,119nm,0.8s
GRR Gorron 22.65 310 *e*P P 20 42 37.4 -1.0
comp=Z,119nm,0.8s
ELSH Elham, Standar 22.72 318 *e*P P 20 42 37.8 -1.2
ELSH AMB AMB 20 42 44.7
comp=Z,140nm,1.0s
ELSH Elham, Standar 22.72 318 P P 20 42 37.8 -1.2
ELSH AMB AMB 20 42 44.7
comp=Z,140nm,1.0s
ELSH Elham, Standar 22.72 318 *e*P P 20 42 37.8 -1.2
MUD Monsted U'grnd 22.78 336 *i* P P 20 42 39.8 +0.2
MUD pmax pmax
comp=Z,21nm,0.9s
MUD Monsted U'grnd 22.78 336 *i* P P 20 42 39.8 +0.2
comp=Z,21nm,0.9s
ESDC Sonseca Array 23.34 287 P P 20 42 45.4 -0.3
ESDC Sonseca Array 23.34 287 P P 20 42 45.4 -0.3
comp=Z,26nm,0.8s,baz=80,slow=9.5,SNR=76
ESDC LR LR 20 52 51.7
comp=Z,187nm,18.6s,baz=105,slow=39
ESLA Sonseca Array 23.34 287 *e*Pn P 20 42 44.5 -1.1
comp=Z,20nm,1.1s
PUL Pulkovo 23.48 6 *e*P P 20 42 46.7 0.0
PUL pmax pmax
comp=Z,189nm,1.0s
PUL MLR MLR
comp=Z,333nm,15.0s
PAB San Pablo 23.64 286 *e*P P 20 42 47.6 -1.0
PAB pmax pmax
comp=Z,69nm,1.3s
PAB San Pablo 23.64 286 *e*P P 20 42 47.6 -1.0
comp=Z,70nm,1.3s
SGMF Saint Gilles 23.67 309 *e*P P 20 42 47.5 -1.2
comp=Z,83nm,1.1s
SGMF Saint Gilles 23.67 309 *e*P P 20 42 47.5 -1.2
SGMF pmax pmax
comp=Z,83nm,1.1s
SGMF Saint Gilles 23.67 309 *e*P P 20 42 47.5 -1.2
comp=Z,83nm,1.1s
JSA Saint Aubin 23.76 311 *e*P P 20 42 47.9 -1.6
JSA AMB AMB 20 42 49.9
comp=Z,41nm,1.7s
JSA Saint Aubin 23.76 311 P P 20 42 47.9 -1.6
JSA AMB AMB 20 42 49.9
comp=Z,41nm,1.7s
JSA Saint Aubin 23.76 311 *e*P P 20 42 47.9 -1.6
QUIF Quistinic 23.95 307 *e*P P 20 42 50.7 -0.6
comp=Z,70nm,0.8s
QUIF Quistinic 23.95 307 *e*P P 20 42 50.7 -0.6
QUIF pmax pmax
comp=Z,71nm,0.8s
QUIF Quistinic 23.95 307 *e*P P 20 42 50.7 -0.6
comp=Z,70nm,0.8s
SKP1 Kophill 24.06 317 *e*P P 20 42 51.6 -0.7
SKP1 Kophill 24.06 317 P P 20 42 51.6 -0.7
SKP1 Kophill 24.06 317 *e*P P 20 42 51.6 -0.7
ROSF Rostrenen 24.15 308 *e*P P 20 42 52.0 -1.2
comp=Z,45nm,0.8s
ROSF Rostrenen 24.15 308 *e*P P 20 42 52.0 -1.2
ROSF pmax pmax
comp=Z,45nm,0.8s
ROSF Rostrenen 24.15 308 *e*P P 20 42 52.0 -1.2
comp=Z,45nm,0.8s
LIJA Lijar 24.71 280 *i* P P 20 42 57.5 -1.1
SSW Stow on the Wo 24.74 317 *e*P P 20 42 57.5 -1.1
SSW Stow on the Wo 24.74 317 P P 20 42 57.5 -1.1
SSW Stow on the Wo 24.74 317 *e*P P 20 42 57.5 -1.1
HFS Hagfors 24.83 346 P P 20 42 59.2 -0.1
HFS Hagfors 24.83 346 P P 20 42 59.2 -0.1
comp=Z,16nm,0.7s,baz=160,slow=9.5,SNR=24
HFS LR LR 20 53 50.7
comp=Z,391nm,18.6s,baz=154,slow=39
FINES FINESS Array B 24.96 1 P P 20 43 00.7 +0.2
FINES PcP PcP 20 46 35.1 -0.1
FINES FINESS Array B 24.96 1 P P 20 43 00.7 +0.2
comp=Z,52nm,0.8s,baz=155,slow=10,SNR=98
FINES PcP PcP 20 46 35.1 -0.1
comp=Z,2.2nm,0.7s,baz=219,slow=2.4,SNR=4.2
FINES LR LR 20 53 11.6
comp=Z,232nm,20.2s,baz=182,slow=38
FIA1 FINESS Array S 24.96 1 *e*P P 20 43 00.1 -0.3
MDT Midelt 24.98 270 P P 20 43 02.3 +1.2
MDT Midelt 24.98 270 P P 20 43 02.3 +1.2
comp=Z,22nm,1.0s,baz=84,slow=11,SNR=26
MDT LR LR 20 54 30.2
comp=Z,126nm,19.7s,baz=165,slow=41
KBI1 Birley Grange 25.20 320 *e*P P 20 43 01.9 -0.8
KBI1 Birley Grange 25.20 320 P P 20 43 01.9 -0.8
KBI1 Birley Grange 25.20 320 *e*P P 20 43 01.9 -0.8
DYA Yadsworthy 25.28 313 *e*P P 20 43 01.6 -1.9
DYA AMB AMB 20 43 04.7
comp=Z,30nm,1.7s
DYA Yadsworthy 25.28 313 P P 20 43 01.6 -1.9
DYA AMB AMB 20 43 04.7
comp=Z,30nm,1.7s
DYA Yadsworthy 25.28 313 *e*P P 20 43 01.6 -1.9
KONO Kongsberg 25.34 341 *e*P P 20 43 02.7 -1.1
KONO pmax pmax
comp=Z,28nm,1.0s
KONO Kongsberg 25.34 341 *e*P P 20 43 02.7 -1.1
comp=Z,28nm,1.0s
MCH1 Michaelchurch 25.39 317 *e*P P 20 43 03.4 -1.1
MCH1 AMB AMB 20 43 10.3
comp=Z,36nm,1.1s
MCH1 Michaelchurch 25.39 317 P P 20 43 03.4 -1.1
MCH1 AMB AMB 20 43 10.3
comp=Z,36nm,1.1s
MCH1 Michaelchurch 25.39 317 *e*P P 20 43 03.3 -1.1
PBRG Braganca 25.45 292 *e*P P 20 43 05.2 +0.1
comp=Z,36nm,1.3s
PBRG Braganca 25.45 292 *e*P P 20 43 05.2 +0.1
comp=Z,36nm,1.3s
HLM1 Long Mynd 25.56 318 *e*P P 20 43 04.8 -1.2
HLM1 AMB AMB 20 43 10.9
comp=Z,33nm,0.9s
HLM1 Long Mynd 25.56 318 P P 20 43 04.8 -1.2
HLM1 AMB AMB 20 43 10.9
comp=Z,33nm,0.9s
HLM1 Long Mynd 25.56 318 *e*P P 20 43 04.8 -1.2
KAF Kangasniemi 25.64 1 *e*P P 20 43 06.7 +0.2
KAF pmax pmax
comp=Z,15nm,0.7s
KAF Kangasniemi 25.64 1 *e*p P 20 43 06.7 +0.2
comp=Z,15nm,0.7s
MVO Moncorvo 25.66 290 *e*P P 20 43 07.9 +0.8
comp=Z,46nm,0.7s
MVO *e*S S 20 47 37.2 +2.5
MVO Moncorvo 25.66 290 *e*P P 20 43 07.9 +0.8
comp=Z,46nm,0.7s
MVO *e*S S 20 47 37.2 +2.5

HTL **Hartland** 25.82 314 *e*P **P** **20 43 06.6 -1.7**
HTL AMB AMB 20 43 14.2
comp=Z,42nm,1.0s
HTL **Hartland** 25.82 314 P **P** **20 43 06.6 -1.7**
HTL AMB AMB 20 43 14.2
comp=Z,42nm,1.0s
HTL **Hartland** 25.82 314 *e*P **P** **20 43 06.6 -1.7**
PBAR **Barrancos** 25.84 284 *e*P **P** **20 43 08.6 -0.1**
comp=Z,56nm,1.3s
PBAR *e*S S 20 47 45.9 +8.4
PBAR **Barrancos** 25.84 284 *e*P **P** **20 43 08.6 -0.1**
comp=Z,56nm,1.3s
PBAR *e*S S 20 47 45.9 +8.4
FOEL **Foel Wylfa** 25.91 318 *e*P **P** **20 43 08.2 -0.9**
FOEL AMB AMB 20 43 13.7
comp=Z,41nm,2.2s
FOEL **Foel Wylfa** 25.91 318 P **P** **20 43 08.2 -0.9**
FOEL AMB AMB 20 43 13.7
comp=Z,41nm,2.2s
FOEL **Foel Wylfa** 25.91 318 *e*P **P** **20 43 08.2 -0.9**
PMRV **Marv??o** 26.00 286 *e*P **P** **20 43 10.3 +0.1**
comp=Z,48nm,1.3s
PMRV *e*S **S** **20 47 46.7 +6.7**
PMRV **Marv??o** 26.00 286 *e*P **P** **20 43 10.3 +0.1**
comp=Z,48nm,1.3s
PMRV *e*S **S** **20 47 46.7 +6.7**
PCBR **Castelo Branco** 26.04 287 *e*P **P** **20 43 10.4 -0.1**
comp=Z,23nm,1.1s
PCBR **Castelo Branco** 26.04 287 *e*P **P** **20 43 10.4 -0.1**
comp=Z,23nm,1.1s
MTE **Manteigas** 26.07 289 *e*P **P** **20 43 10.9 +0.1**
comp=Z,29nm,0.9s
MTE *e*S S 20 47 52.6 +11
MTE **Manteigas** 26.07 289 *e*P **P** **20 43 10.8 0.0**
comp=Z,17nm,0.8s
MTE **Manteigas** 26.07 289 *e*P **P** **20 43 10.9 +0.1**
comp=Z,29nm,0.9s
MTE *e*S S 20 47 52.6 +11
NAO01 **NORSAR Array S** 26.07 344 *e*P **P** **20 43 10.0 -0.5**
comp=Z,38nm,1.1s
NB2 **NORSAR Subarra** 26.17 344 P **P** **20 43 10.9 -0.6**
comp=Z,26nm,1.2s,baz=153,slow=9.3
NB2 **NORSAR Subarra** 26.17 344 P **P** **20 43 10.9 -0.6**
comp=Z,26nm,1.2s,baz=153,slow=9.0,SNR=0.1
NOA **NORSAR Array B** 26.17 344 P **P** **20 43 11.2 -0.3**
NOA **NORSAR Array B** 26.17 344 P **P** **20 43 11.2 -0.3**
comp=Z,8.1nm,0.8s,baz=147,slow=9.6,SNR=15
NOA LR LR 20 54 46.7
comp=Z,124nm,19.5s,baz=155,slow=40
PVRL **Vila Real** 26.18 291 *e*P **P** **20 43 12.9 +1.1**
comp=Z,26nm,1.6s
PVRL **Vila Real** 26.18 291 *e*P **P** **20 43 12.9 +1.1**
comp=Z,26nm,1.6s
PESTR **Estremoz** 26.20 285 *e*P **P** **20 43 12.0 0.0**
comp=Z,45nm,1.2s
PESTR *e*S S 20 47 52.0 +8.8
PESTR **Estremoz** 26.20 285 *e*P **P** **20 43 12.0 0.0**
comp=Z,45nm,1.2s
PESTR *e*S S 20 47 52.0 +8.8
POLO **Lamas de Olo** 26.23 291 *e*P **P** **20 43 12.8 +0.5**
comp=Z,17nm,1.2s
POLO *e*S S 20 47 53.2 +9.3
POLO **Lamas de Olo** 26.23 291 *e*P **P** **20 43 12.8 +0.5**
comp=Z,17nm,1.2s
POLO *e*S S 20 47 53.2 +9.3
PVIS **Viseu** 26.32 289 *e*P **P** **20 43 13.7 +0.6**
comp=Z,51nm,1.0s
PVIS **Viseu** 26.32 289 *e*P **P** **20 43 13.7 +0.6**
comp=Z,51nm,1.0s
PCAB **Cabril** 26.41 292 *e*P **P** **20 43 14.6 +0.8**
comp=Z,50nm,1.4s
PCAB **Cabril** 26.41 292 *e*P **P** **20 43 14.6 +0.8**
comp=Z,50nm,1.4s
PVAQ **Vaqueiros** 26.47 282 *e*P **P** **20 43 14.2 -0.2**
comp=Z,80nm,1.6s
PVAQ *e*S S 20 47 57.3 +10
PVAQ **Vaqueiros** 26.47 282 *e*P **P** **20 43 14.2 -0.2**
comp=Z,80nm,1.6s
PVAQ *e*S S 20 47 57.3 +10
PBEJ **Beja** 26.50 283 *e*P **P** **20 43 15.1 +0.4**
comp=Z,54nm,1.3s
PBEJ **Beja** 26.50 283 *e*P **P** **20 43 15.1 +0.4**
comp=Z,54nm,1.3s
EVO **Evora** 26.56 285 *e*P **P** **20 43 15.7 +0.5**
comp=Z,24nm,1.2s
EVO **Evora** 26.56 285 *e*P **P** **20 43 15.4 +0.2**
comp=Z,25nm,1.0s
EVO *e*R
comp=Z,137nm,19.0s
EVO **Evora** 26.56 285 *e*P **P** **20 43 15.7 +0.5**
comp=Z,24nm,1.2s
PGAV **Gavieira, Arco** 26.59 292 *e*S S 20 48 00.0 +10
PGAV **Gavieira, Arco** 26.59 292 *e*S S 20 48 00.0 +10
EVOP **Sao Brissos** 26.65 285 *e*P **P** **20 43 15.4 -0.6**
EVOP pmax pmax
comp=Z,25nm,1.0s
EVOP **Sao Brissos** 26.65 285 *e*P **P** **20 43 15.4 -0.6**
comp=Z,25nm,1.0s
PBDV **Barranco-do-Ve** 26.66 282 *e*P **P** **20 43 16.6 +0.4**
comp=Z,91nm,1.3s
PBDV **Barranco-do-Ve** 26.66 282 *e*P **P** **20 43 16.6 +0.4**
comp=Z,91nm,1.3s
PMTG **Montargil** 26.67 286 *e*P **P** **20 43 16.2 0.0**
comp=Z,37nm,1.2s
PMTG *e*S S 20 48 05.3 +15
PMTG **Montargil** 26.67 286 *e*P **P** **20 43 16.2 0.0**
comp=Z,37nm,1.2s
PMTG *e*S S 20 48 05.3 +15
JOF **Joensuu** 26.68 6 *e*P **P** **20 43 16.6 +0.6**
JOF pmax pmax
comp=Z,16nm,0.8s
JOF **Joensuu** 26.68 6 *e*p **P** **20 43 16.6 +0.6**
comp=Z,16nm,0.8s
KESW **Keswick, Cumbr** 26.69 322 *e*P **P** **20 43 15.5 -0.7**
KESW AMB AMB 20 43 23.7
comp=Z,40nm,0.9s
KESW **Keswick, Cumbr** 26.69 322 P **P** **20 43 15.5 -0.7**
KESW AMB AMB 20 43 23.7
comp=Z,40nm,0.9s
KESW **Keswick, Cumbr** 26.69 322 *e*P **P** **20 43 15.5 -0.7**
PCVE **Castro Verde** 26.69 283 *e*P **P** **20 43 16.4 0.0**
comp=Z,50nm,1.5s
PCVE *e*S S 20 48 10.2 +19
PCVE **Castro Verde** 26.69 283 *e*P **P** **20 43 16.4 0.0**
comp=Z,50nm,1.5s
PCVE *e*S S 20 48 10.2 +19
PTOM **Tomar** 26.77 287 *e*P **P** **20 43 17.4 +0.3**
comp=Z,45nm,1.3s
PTOM **Tomar** 26.77 287 *e*P **P** **20 43 17.4 +0.3**
comp=Z,45nm,1.3s
ECK **Cauldkaine Hil** 27.01 323 *e*P **P** **20 43 18.3 -0.8**
ECK **Cauldkaine Hil** 27.01 323 P **P** **20 43 18.3 -0.8**
ECK **Cauldkaine Hil** 27.01 323 *e*P **P** **20 43 18.3 -0.8**
PNCL **Nicolau / Gran** 27.01 284 *e*P **P** **20 43 20.1 +0.8**
comp=Z,45nm,1.7s
PNCL *e*S S 20 48 13.3 +17
PNCL **Nicolau / Gran** 27.01 284 *e*P **P** **20 43 20.1 +0.8**
comp=Z,45nm,1.7s
PNCL *e*S S 20 48 13.3 +17
EKA **Eskdalemuir Ar** 27.11 323 P **P** **20 43 19.8 -0.1**
EKA **Eskdalemuir Ar** 27.11 323 P **P** **20 43 19.8 -0.1**
comp=Z,18nm,0.7s,baz=124,slow=10.0,SNR=30
ESK **Eskdalemuir** 27.12 323 *e*P **P** **20 43 19.5 -0.6**
ESK AMB AMB 20 43 26.4
comp=Z,45nm,1.1s
ESK **Eskdalemuir** 27.12 323 P **P** **20 43 19.5 -0.6**
ESK AMB AMB 20 43 26.4
comp=Z,45nm,1.1s
ESK **Eskdalemuir** 27.12 323 *e*P **P** **20 43 19.3 -0.7**
ESK pmax pmax
comp=Z,26nm,0.8s
ESK **Eskdalemuir** 27.12 323 *e*P **P** **20 43 19.3 -0.7**
comp=Z,26nm,0.8s
ESK **Eskdalemuir** 27.12 323 *e*P **P** **20 43 19.5 -0.6**
AKTO **Aktyubinsk** 27.16 49 P **P** **20 43 21.2 +0.7**
AKTO pmax pmax
comp=Z,6.0nm,0.8s
AKTO MLR MLR
comp=Z,97nm,19.6s
AKTO **Aktyubinsk** 27.16 49 P **P** **20 43 21.2 +0.7**
AKTO **Aktyubinsk** 27.16 49 P **P** **20 43 21.2 +0.7**
comp=Z,5.7nm,0.8s,baz=250,slow=8.4,SNR=24
AKTO LR LR 20 57 29.7
comp=Z,97nm,19.6s,baz=68,slow=44
PTEO **Sao Teotonio** 27.24 283 *e*P **P** **20 43 21.9 +0.6**
comp=Z,63nm,1.3s
PTEO **Sao Teotonio** 27.24 283 *e*P **P** **20 43 21.9 +0.6**
comp=Z,63nm,1.3s
PMAFR **Mafra** 27.50 286 *e*S S 20 48 24.8 +21
PMAFR **Mafra** 27.50 286 *e*S S 20 48 24.8 +21
GAL1 **Galloway** 27.64 321 *e*P **P** **20 43 23.6 -1.0**
GAL1 AMB AMB 20 43 25.2
comp=Z,22nm,1.0s
GAL1 **Galloway** 27.64 321 P **P** **20 43 23.6 -1.0**
GAL1 AMB AMB 20 43 25.2
comp=Z,22nm,1.0s
GAL1 **Galloway** 27.64 321 *e*P **P** **20 43 23.6 -1.0**
AB31 **Akbulak array** 28.03 52 *i* P **P** **20 43 28.4 +0.2**
AB31 pmax pmax
comp=Z,7.0nm,0.6s
ABKAR **Akbulak array** 28.03 52 *e*P **P** **20 43 28.9 +0.6**
comp=Z,5.7nm,0.6s
ABKAR *e*PcP **PcP** **20 46 41.9 -0.8**
EAB **Aberfoyle** 28.13 324 *e*P **P** **20 43 28.0 -1.0**
EAB **Aberfoyle** 28.13 324 P **P** **20 43 28.0 -1.0**
EAB **Aberfoyle** 28.13 324 *e*P **P** **20 43 28.0 -1.0**
ATD **Arta Tunnel** 29.39 143 LR LR 20 56 41.2
comp=Z,96nm,21.5s,baz=356,slow=39
ARU **Arti** 29.82 38*c* *i*P **P** **20 43 43.9 -0.2**
ARU 20 44 38.5
ARU PPP PPP 20 44 50.2
ARU S **S** **20 48 43.6 +3.8**
ARU SS **SnSn** **20 50 18.9 +8.6**
ARU pmax pmax
comp=Z,49nm,1.7s
ARU MLR MLR
comp=Z,178nm,14.0s
SOKR **Solikamsk** 30.67 31*c* *i*P **P** **20 43 52.1 +0.6**
SOKR pmax pmax
comp=Z,70nm,0.9s
SVE **Sverdlovsk** 31.03 38⇑ *i*P **P** **20 43 55.7 +1.0**
SVE pmax pmax
comp=Z,32nm,1.1s
SVE MLR MLR
comp=Z,241nm,13.0s
APA **Apatity** 31.43 6⇑ *i*P **P** **20 43 58.5 +0.3**
APA pmax pmax
comp=Z,37nm,0.9s
APA MLR MLR
comp=Z,500nm,10.0s
TOA0 **Torodi Ar. Sit** 31.56 229 *e*P **P** **20 43 59.8 0.0**
TORD **Torodi Ar. Bea** 31.56 229 P **P** **20 44 00.1 +0.2**
TORD PcP **PcP** **20 46 53.1 +0.8**
TORD ScP **ScP** **20 50 35.9 +1.3**
TORD **Torodi Ar. Bea** 31.56 229 P **P** **20 44 00.1 +0.2**
comp=Z,5.8nm,0.6s,baz=34,slow=8.8,SNR=116
TORD PcP **PcP** **20 46 53.1 +0.8**
comp=Z,1.8nm,0.8s,baz=30,slow=2.6,SNR=7.0
TORD ScP **ScP** **20 50 35.9 +1.3**
comp=Z,1.4nm,1.1s,baz=263,slow=5.8,SNR=3.5
ARCES **ARCESS Array B** 33.09 0 P **P** **20 44 12.5 -0.2**
ARCES **ARCESS Array B** 33.09 0 P **P** **20 44 12.5 -0.2**
comp=Z,26nm,1.0s,baz=183,slow=8.5,SNR=34
ARCES LR LR 20 59 10.4
comp=Z,99nm,18.4s,baz=176,slow=39
ARE0 **ARCESS Array S** 33.09 0 *e*P **P** **20 44 11.6 -1.1**
KEV **Kevo** 33.32 1 *e*P **P** **20 44 14.8 +0.2**
KEV pmax pmax
comp=Z,19nm,0.9s
KEV **Kevo** 33.32 1 *e*p **P** **20 44 14.8 +0.2**
comp=Z,19nm,0.9s
KEV **Kevo** 33.32 1 *e*P **P** **20 44 14.8 +0.2**
comp=Z,19nm,0.9s
PMPST **Porto Santo, M** 34.32 277 *e*P **P** **20 44 25.4 +1.6**
comp=Z,119nm,1.3s
PMPST **Porto Santo, M** 34.32 277 *e*P **P** **20 44 25.4 +1.6**
comp=Z,119nm,1.3s
PMPS **Porto Santo** 34.32 277 *e*P **P** **20 44 25.4 +1.6**
comp=Z,134nm,1.4s
KK31 **Karatay Array** 34.88 65 *i* P **P** **20 44 29.4 +0.8**
KK31 pmax pmax
comp=Z,4.0nm,0.6s
KKAR **Karatay Array** 34.88 65 *e*P **P** **20 44 29.0 +0.4**
KKAR pmax pmax
comp=Z,2.0nm,0.6s
KKAR **Karatay Array** 34.88 65 *e*P **P** **20 44 29.0 +0.4**
comp=Z,2.4nm,0.6s
PMAR **Madeira** 34.89 276 *e*P **P** **20 44 30.8 +1.8**
comp=Z,95nm,1.2s
PMAR **Madeira** 34.89 276 *e*P **P** **20 44 30.8 +1.8**
comp=Z,95nm,1.2s
FUL **Funchal** 34.90 276 *e*P **P** **20 44 27.6 -1.2**
FUL **Funchal** 34.90 276 *e*P **P** **20 44 27.6 -1.2**
BRVK **Borovoye** 35.18 48 *e*P **P** **20 44 31.1 +0.1**
BRVK pmax pmax
comp=Z,10.0nm,1.2s
BRVK **Borovoye** 35.18 48 *e*P **P** **20 44 31.1 +0.1**
comp=Z,9.5nm,1.2s
KBL **Kabul** 35.29 80 *e*P **P** **20 44 33.2 +0.7**
KBL pmax pmax
comp=Z,2.0nm,0.6s
KBL **Kabul** 35.29 80 *e*P **P** **20 44 33.2 +0.7**
comp=Z,2.2nm,0.6s
EKS2 **Erkin-Say** 37.31 65 *e*P **P** **20 44 49.7 +0.1**
EKS2 pmax pmax
comp=Z,15nm,1.1s
EKS2 **Erkin-Say** 37.31 65 *e*P **P** **20 44 49.7 +0.1**
comp=Z,15nm,1.1s
EKS2 **Erkin-Say** 37.31 65 P **P** **20 44 51.6 +2.0**
SNR=6.2
AAK **Ala-Archa** 37.84 65*c* *i*P **P** **20 44 55.7 +1.6**
AAK pmax pmax
comp=Z,31nm,1.0s
AAK **Ala-Archa** 37.84 65 *e*P **P** **20 44 55.2 +1.1**
comp=Z,9.5nm,0.9s
AAK *e*PP **PP** **20 46 20.9 +0.5**
AAK **Ala-Archa** 37.84 65 P **P** **20 44 55.7 +1.6**
SNR=5.3
CHMS **Chumysh** 37.98 65 *i* P **P** **20 44 56.7 +1.6**
CHMS **Chumysh** 37.98 65 P **P** **20 44 56.7 +1.6**
SNR=7.0
KZA **Kyzart** 38.48 66 *i* P **P** **20 45 01.6 +1.9**
KZA **Kyzart** 38.48 66 P **P** **20 45 01.6 +1.9**
SNR=9.7
TKM2 **Tokmak 2** 38.61 65 *e*P **P** **20 45 01.2 +0.6**
TKM2 *e* 20 47 13.3
TKM2 pmax pmax
comp=Z,6.0nm,0.9s
TKM2 **Tokmak 2** 38.61 65 *i* P **P** **20 45 01.3 +0.6**
TKM2 pmax pmax
comp=Z,10.0nm,1.4s
TKM2 **Tokmak 2** 38.61 65 *e*P **P** **20 45 01.2 +0.6**
comp=Z,5.6nm,0.9s
TKM2 *e*PcP **PcP** **20 47 13.3 +0.5**
TKM2 **Tokmak 2** 38.61 65 P **P** **20 45 02.0 +1.4**
SNR=5.3
KMBO **Kilima Mbogo** 39.01 161 LR LR 21 00 50.1
comp=Z,211nm,21.7s,baz=98,slow=36
ULHL **Ulahol** 39.18 66 *i* P **P** **20 45 06.9 +1.6**
ULHL **Ulahol** 39.18 66 P **P** **20 45 07.0 +1.6**
SNR=6.8
KSH **Kashi** 39.48 70 P **P** **20 45 07.5 -0.3**
KSH *e*pP **pP** **20 45 17.0 +3.7**
KSH *e*sP sP 20 45 21.0 +5.5
KSH *e*PP **PnPn** **20 46 42.0 +0.7**
KSH *e*PcP **PcP** **20 47 17.0 +1.6**
KSH *e*S **ScP** **20 51 04.0 +0.8**
KSH pmax pmax
comp=Z,21nm,1.2s
KSH pmax pmax
comp=Z,89nm,3.1s
KSH LR LR
comp=N,450nm,7.3s
KSH LR LR
comp=E,270nm,6.0s
KSH LR LR
comp=Z,320nm,5.4s
BORG **Borgarnes** 39.50 331 *e*P **P** **20 45 09.6 +2.2**
comp=Z,54nm,1.2s
KURK **Kurchatov** 40.14 52*c* *i*P **P** **20 45 13.2 +0.2**
KURK pmax pmax
comp=Z,16nm,1.2s
KURK **Kurchatov** 40.14 52 *e*P **P** **20 45 13.0 +0.1**
comp=Z,23nm,1.1s
DBIC **Dimbokro** 40.62 230 *e*P **P** **20 45 17.1 -0.2**
comp=Z,21nm,1.0s
DBIC **Dimbokro** 40.62 230 P **P** **20 45 17.6 +0.3**
comp=Z,7.4nm,0.6s,baz=5.0,slow=6.8,SNR=15
DBIC LR LR 21 02 39.8
comp=Z,84nm,18.3s,baz=29,slow=37
LIC **Lamto** 41.07 230 *e*P **P** **20 45 20.3 -0.7**
comp=Z,20nm,0.6s
LIC **Lamto** 41.07 230 *e*P **P** **20 45 20.3 -0.7**
comp=Z,20nm,0.6s
MK31 **Makanchi Array** 42.83 58 *i* P **P** **20 45 35.7 +0.6**
MK31 pmax pmax
comp=Z,13nm,0.6s
MK31 **Makanchi Array** 42.83 58 *e*P **P** **20 45 35.3 +0.2**
MK31 *e*PP **PP** **20 47 12.4 -2.0**
MK31 *e*PcP **PcP** **20 47 25.6 -0.4**
MKAR **Makanchi Array** 42.83 58 P **P** **20 45 35.6 +0.5**
MKAR 20 47 26.2
MKAR pmax pmax
comp=Z,12nm,0.6s
MKAR pmax pmax
comp=Z,4.0nm,0.7s
MKAR MLR MLR
comp=Z,51nm,18.2s
MKAR **Makanchi Array** 42.83 58 P **P** **20 45 35.6 +0.5**
MKAR PcP **PcP** **20 47 26.2 +0.1**
MKAR **Makanchi Array** 42.83 58 P **P** **20 45 35.6 +0.5**
comp=Z,12nm,0.6s,baz=280,slow=6.7,SNR=156
MKAR PcP **PcP** **20 47 26.2 +0.1**
comp=Z,4.1nm,0.7s,baz=278,slow=4.3,SNR=4.7
MKAR LR LR 21 07 33.1
comp=Z,50nm,18.1s,baz=112,slow=42
KBS **Kingsbay** 42.90 356 *e*P **P** **20 45 34.1 -1.1**
KBS pmax pmax
comp=Z,19nm,0.9s
KBS **Kingsbay** 42.90 356 *e*P **P** **20 45 35.8 +0.5**
comp=Z,32nm,1.1s
NVS **Novosibirsk** 42.96 46⇑ *i*P **P** **20 45 36.9 +0.9**
NVS *i* 20 47 16.1
NVS *e*PPP PPP 20 47 50.6
NVS *e*S **S** **20 52 00.9 +0.7**
NVS pmax pmax
comp=Z,31nm,0.9s
NVS pmax pmax
comp=N,6.0nm,0.1s
NVS pmax pmax
comp=E,13nm,0.1s
NVS pmax pmax
comp=Z,37nm,1.4s
NVS pmax pmax
comp=N,12nm,1.3s
NVS pmax pmax
comp=E,21nm,1.3s
NVS smax smax
comp=N,14nm,2.0s
NVS smax smax
comp=E,12nm,2.2s
ZAA0 **Zalesovo Array** 43.89 47 *e*P **P** **20 45 43.1 -0.5**
ZAA0 *e*PP **PP** **20 47 25.4 -0.3**
ZALV **Zalesovo Beam** 43.89 47 P **P** **20 45 43.6 0.0**
ZALV 20 47 22.8
ZALV pmax pmax
comp=Z,11nm,0.8s
ZALV pmax pmax
comp=Z,4.0nm,0.7s
ZALV MLR MLR
comp=Z,89nm,18.7s
ZALV **Zalesovo Beam** 43.89 47 P **P** **20 45 43.6 0.0**
ZALV PP **PP** **20 47 22.8 -2.9**
ZALV **Zalesovo Beam** 43.89 47 P **P** **20 45 43.6 0.0**
comp=Z,11nm,0.8s,baz=269,slow=9.1,SNR=43
ZALV PP **PP** **20 47 22.8 -2.9**
comp=Z,4.0nm,0.7s,baz=282,slow=11,SNR=4.1
ZALV LR LR 21 07 53.9
comp=Z,89nm,18.7s,baz=70,slow=42
DAG **Danmarks Havn** 44.80 347⇑ *i*P **P** **20 45 50.0 -0.5**
DAG pmax pmax
comp=Z,4.0nm,0.8s
DAG **Danmarks Havn** 44.80 347⇑ *i*P **P** **20 45 50.0 -0.5**
comp=Z,5.7nm,0.8s
WMQ **Urumqi** 47.11 61 *e*P **P** **20 46 11.0 +1.7**
WMQ pP pP 20 46 21.0 +6.1
WMQ sP sP 20 46 25.0 +7.9
WMQ PcP **PcP** **20 47 43.0 +2.0**
WMQ *e*S **S** **20 53 00.0 -0.8**
WMQ ScS **ScS** **20 55 59.0 -3.8**
WMQ pmax pmax
comp=Z,12nm,0.7s
WMQ pmax pmax
comp=Z,98nm,5.6s
WMQ LR LR
comp=N,260nm,12.9s
WMQ LR LR
comp=E,260nm,18.1s
WMQ LR LR
comp=Z,200nm,18.0s
SUMG **Summit** 47.82 339 *e*P **P** **20 46 14.3 -0.5**
SUMG *e* 20 47 43.0
SUMG pmax pmax
comp=Z,14nm,0.9s
SUMG **Summit** 47.82 339 *e*P **P** **20 46 14.3 -0.5**
comp=Z,14nm,0.9s
SUMG *e*PcP **PcP** **20 47 43.0 -0.4**
SUMG **Summit** 47.82 339 *i* P **P** **20 46 14.4 -0.4**
comp=Z,13nm,1.0s
SUMG **Summit** 47.82 339 *i* P **P** **20 46 14.4 -0.4**
comp=Z,13nm,1.0s
SACV **Santiago Islan** 48.55 257 P **P** **20 46 19.4 -1.3**
PYUN **Piuthan** 48.71 83 *e*P **P** **20 46 23.5 +1.4**
comp=Z,133nm,0.6s
DANN **Dangsing** 49.22 82 *e*P **P** **20 46 27.7 +1.6**
comp=Z,271nm,0.7s
KOLN **Koldanda** 49.34 83 *e*P **P** **20 46 27.9 +1.0**
comp=Z,48nm,0.6s
HYB **Hyderabad** 50.33 97 *i* P **P** **20 46 34.0 -0.3**
DMN **Daman** 50.61 82 *e*P **P** **20 46 37.8 +1.2**
comp=Z,82nm,0.6s
KKN **Kakani** 50.67 82 *e*P **P** **20 46 37.8 +0.8**
comp=Z,55nm,0.6s
PKIN **Phulchoki** 50.86 82 *e*P **P** **20 46 39.2 +0.7**
comp=Z,47nm,1.0s
PKI **Pulchoki** 50.87 82 *e*P **P** **20 46 39.4 +0.7**
comp=Z,72nm,1.0s
GUN **Gumba** 51.10 81 *e*P **P** **20 46 41.1 +0.7**
comp=Z,69nm,0.8s
LSZ **Lusaka** 51.57 177 *e*P **P** **20 46 45.2 +1.6**
comp=Z,3.5nm,0.6s
RAMN **Ramite** 52.09 82 *e*P **P** **20 46 48.0 +0.3**
comp=Z,103nm,0.8s
ODAN **Odare** 52.76 82 *e*P **P** **20 46 53.1 +0.4**
comp=Z,27nm,0.7s
TAPN **Taplejung** 52.80 81 *e*P **P** **20 46 53.6 +0.6**
comp=Z,49nm,0.8s
LSA **Lhasa** 54.49 77 *e*P **P** **20 47 06.1 +0.5**
LSA pmax pmax
comp=Z,12nm,0.7s
LSA **Lhasa** 54.49 77 *e*P **P** **20 47 06.1 +0.5**
comp=Z,12nm,0.7s
TLY **Talaya** 55.50 48 *e*P **P** **20 47 15.1 +3.1**
TLY *e*S **S** **20 54 56.5 +0.2**
TLY pmax pmax
comp=Z,10.0nm,1.2s
TLY MLR MLR
comp=Z,104nm,20.0s
ZAK **Zakamensk** 55.66 49 *e*P **P** **20 47 13.4 +0.1**
ZAK pmax pmax
comp=Z,5.0nm,1.4s
IRK **Irkutsk** 55.71 47⇑ *i*P **P** **20 47 12.2 -1.3**
IRK pmax pmax
comp=Z,22nm,1.6s
TSUM **Tsumeb** 55.91 189 *e*P **P** **20 47 16.0 +0.7**
comp=Z,6.7nm,0.9s
SHL **Shillong** 56.94 81 *e*PKP **P** **20 47 23.0 +0.1**
GTA **Gaotai** 57.10 63 *e*P **P** **20 47 26.0 +2.2**
GTA pP pP 20 47 36.3 +6.8
GTA sP sP 20 47 40.0 +8.3
GTA S **S** **20 55 17.0 -1.2**
GTA sS sS 20 55 33.5 +6.0
GTA SS **SS** **20 59 07.0 +0.4**
GTA pmax pmax
comp=Z,4.0nm,1.6s
GTA pmax pmax
comp=Z,69nm,5.5s
GTA LR LR
comp=N,67nm,15.7s
GTA LR LR
comp=E,79nm,15.2s
GTA LR LR
comp=Z,81nm,16.6s
ULN **Ulaanbaatar** 58.84 51 *e*P **P** **20 47 35.7 -0.1**
comp=Z,7.0nm,0.9s
TIXI **Tiksi** 59.82 21⇑ *i*P **P** **20 47 41.5 -0.5**
TIXI pmax pmax
comp=Z,10.0nm,1.5s

LBTB	**Lobatse**	**61.19**	**180**	*e*P		**P**		**20 47 53.4**	**+1.4**
	comp=Z,13nm,0.8s								
LZH	**Lanzhou**	**61.38**	**65**	*e*P		**P**		**20 47 55.0**	**+1.5**
LZH				pP		pP		20 48 07.3	+8.1
LZH				sP		sP		20 48 11.8	+10
LZH				PP		PP		20 50 14.0	+5.6
LZH				*e*S		**S**		**20 56 10.0**	**-3.6**
LZH				pmax		pmax			
	comp=Z,14nm,1.0s								
LZH				pmax		pmax			
	comp=Z,81nm,4.9s								
LZH				LR		LR			
	comp=N,250nm,15.2s								
LZH				LR		LR			
	comp=E,230nm,16.1s								
LZH				LR		LR			
	comp=Z,370nm,18.6s								
SCHQ	**Schefferville**	**62.33**	**319**	*e*P		**P**		**20 47 58.5**	**-0.9**
	comp=Z,10nm,0.7s								
SCHQ	**Schefferville**	**62.33**	**319**	P		**P**		**20 47 59.0**	**-0.4**
	comp=Z,10nm,0.6s,baz=58,slow=5.8,SNR=17								
CD2	**Chengdu**	**63.67**	**70**	*e*P		**P**		**20 48 09.0**	**+0.2**
CD2				pP		pP		20 48 19.8	+5.3
CD2				sP		sP		20 48 24.0	+7.4
CD2				pmax		pmax			
	comp=Z,10.0nm,0.7s								
YAK	**Yakutsk**	**64.58**	**30**	*e*P		**P**		**20 48 11.9**	**-2.2**
YAK				*e*				20 48 25.6	
YAK				pmax		pmax			
	comp=Z,11nm,1.1s								
YAK				pmax		pmax			
	comp=E,6.0nm,1.4s								
YAK				MLR		MLR			
	comp=Z,127nm,21.0s								
YAK				MLR		MLR			
	comp=E,45nm,16.0s								
YAK				MLR		MLR			
	comp=N,72nm,18.0s								
HHC	**Hu-ho-hao-te**	**64.68**	**57**	*e*P		**P**		**20 48 14.3**	**-1.0**
HHC				pP		**pP**		**20 48 24.3**	**+3.3**
HHC				sP		sP		20 48 28.5	+5.3
HHC				PP		**PP**		**20 50 38.0**	**+0.7**
HHC				S		**S**		**20 56 49.8**	**-4.9**
HHC				pmax		pmax			
	comp=Z,30nm,0.7s								
HHC				pmax		pmax			
	comp=Z,200nm,5.1s								
HHC				LR		LR			
	comp=N,180nm,17.2s								
HHC				LR		LR			
	comp=E,120nm,15.5s								
HHC				LR		LR			
	comp=Z,170nm,15.5s								
BOSA	**Boshof**	**64.78**	**180**	*e*P		**P**		**20 48 16.1**	**+0.3**
	comp=Z,16nm,1.0s								
BOSA	**Boshof**	**64.78**	**180**	P		**P**		**20 48 17.5**	**+1.6**
	comp=Z,5.0nm,0.4s,baz=356,slow=6.1,SNR=14								
BOSA				LR		LR		21 21 32.0	
	comp=Z,160nm,18.5s,baz=227,slow=41								
KMI	**Kunming**	**65.72**	**76**	P		**P**		**20 48 22.8**	**+0.4**
KMI				pP		pP		20 48 34.0	+5.8
KMI				S		**S**		**20 57 04.0**	**-4.1**
KMI				pmax		pmax			
	comp=Z,10.0nm,0.8s								
KMI				pmax		pmax			
	comp=Z,120nm,3.2s								
KMI				LR		LR			
	comp=N,170nm,8.9s								
KMI				LR		LR			
	comp=E,120nm,13.1s								
KMI				LR		LR			
	comp=Z,110nm,21.2s								
CHTO	**Chiang Mai**	**65.98**	**84**	*e*P		**P**		**20 48 23.7**	**-0.2**
CHTO				pmax		pmax			
	comp=Z,7.0nm,1.0s								
CHTO	**Chiang Mai**	**65.98**	**84**	*e*P		**P**		**20 48 23.7**	**-0.2**
	comp=Z,6.9nm,1.0s								
XAN	**Xi'an**	**66.02**	**65**	P		P		20 48 31.0	+7.0
XAN				pP		pP		20 48 41.0	+11
XAN				pmax		pmax			
	comp=Z,1.0nm,1.4s								
XAN				pmax		pmax			
	comp=Z,18nm,4.3s								
CMAR	**Chiang Mai Arr**	**66.17**	**84**	P		**P**		**20 48 25.5**	**+0.4**
CMAR	**Chiang Mai Arr**	**66.17**	**84**	P		**P**		**20 48 25.5**	**+0.4**
	comp=Z,7.4nm,0.8s,baz=301,slow=7.9,SNR=47								
CMAR				LR		LR		21 20 14.1	
	comp=Z,48nm,20.0s,baz=220,slow=39								
GYA	**Guiyang**	**68.09**	**73**	*e*P		**P**		**20 48 38.0**	**+0.7**
GYA				pP		pP		20 48 48.3	+5.2
GYA				sP		sP		20 48 54.5	+9.3
GYA				PP		**PP**		**20 51 10.0**	**+2.6**
GYA				ScP				20 53 03.0	
GYA				S		**S**		**20 57 33.8**	**-2.7**
GYA				SKS		**SKiKP**		**20 58 29.5**	**-2.6**
GYA				pmax		pmax			
	comp=Z,10.0nm,1.0s								
GYA				pmax		pmax			
	comp=Z,90nm,5.2s								
BJI	**Beijing**	**68.16**	**56**	P		**P**		**20 48 36.5**	**-0.9**
BJI				S		S		20 57 29.3	-7.3
BJI				pmax		pmax			
	comp=Z,7.0nm,0.8s								
BJI				LR		LR			
	comp=N,110nm,13.4s								
BJI				LR		LR			
	comp=E,100nm,12.2s								
ENH	**Enshi**	**68.29**	**68**	P		P		20 48 35.5	-3.0
	comp=E,5.3nm,0.4s								
SUR	**Sutherland**	**68.67**	**184**	*e*P		**P**		**20 48 42.6**	**+1.9**
	comp=E,24nm,1.1s								
LONY	**Lake Ozonia**	**71.69**	**312**	*e*P		**P**		**20 48 56.6**	**-2.5**
	comp=E,14nm,1.0s								
BILL	**Bilibino**	**71.70**	**15**k	*e*P		**P**		**20 48 58.0**	**-0.7**
BILL				*e*				20 49 05.7	
BILL				*i*				20 49 21.7	
BILL				pmax		pmax			
	comp=Z,9.0nm,1.3s								
ACCN	**Adirondack Com**	**71.82**	**311**	*e*P		**P**		**20 49 00.4**	**+0.5**
	comp=Z,9.8nm,0.9s								
CN2	**Changchun**	**72.09**	**49**	*e*P		**P**		**20 49 02.0**	**+0.6**
KLR	**Kul'dur**	**72.58**	**41**	*e*P		P		20 49 00.0	-4.3
BINY	**Binghamton**	**73.89**	**311**	*e*P		**P**		**20 49 13.2**	**+0.9**
	comp=Z,10nm,0.9s								
MDJ	**Mudanjiang**	**74.08**	**46**	P		**P**		**20 49 12.8**	**-0.4**
MDJ				pmax		pmax			
	comp=Z,3.0nm,0.5s								
MDJ				pmax		pmax			
	comp=Z,34nm,3.2s								
NJ2	**Nanjing**	**74.18**	**62**	*e*P		**P**		**20 49 14.8**	**+0.8**
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.9s								
QIZ	**Qiongzhong**	**74.52**	**78**	P		**P**		**20 49 17.0**	**+0.8**
QIZ				S		**S**		**20 58 49.8**	**-1.1**
HABR	**Khabarovsk**	**74.78**	**41**	*e*P		**P**		**20 49 15.5**	**-1.7**
HABR								20 49 29.0	
HABR				*e*PPP		PPP		20 53 48.6	
HABR				S		**S**		**20 58 53.7**	**+0.9**
HABR								20 59 27.6	
HABR				*e*SS		**SS**		**21 03 42.9**	**+3.2**
HABR				pmax		pmax			
	comp=N,13nm,2.0s								
HABR				pmax		pmax			
	comp=Z,27nm,2.0s								
HABR				pmax		pmax			
	comp=E,22nm,2.0s								
HABR				MLR		MLR			
	comp=Z,97nm,18.0s								
USRK	**Ussuriysk Arra**	**75.71**	**45**	P		**P**		**20 49 21.8**	**-0.8**
	comp=Z,9.0nm,0.7s,baz=296,slow=5.0,SNR=47								
YKA	**Yellowknife Ar**	**76.25**	**342**	P		**P**		**20 49 24.1**	**-1.3**
YKA	**Yellowknife Ar**	**76.25**	**342**	P		**P**		**20 49 24.0**	**-1.3**
	comp=Z,2.2nm,0.8s,baz=34,slow=5.4,SNR=7.9								
KSAR	**Wonju Array Be**	**77.24**	**53**	P		**P**		**20 49 31.4**	**-0.1**
KSRS	**Korea Array**	**77.26**	**53**	P		**P**		**20 49 31.4**	**-0.2**
	comp=Z,4.8nm,0.7s,baz=303,slow=4.9,SNR=17								
KSRS				LR		LR		21 28 03.0	
	comp=Z,55nm,18.5s,baz=170,slow=39								
ILAR	**Eielson Array**	**78.88**	**357**	P		**P**		**20 49 39.6**	**-0.4**
ILAR	**Eielson Array**	**78.88**	**357**	P		**P**		**20 49 39.6**	**-0.4**
	comp=Z,0.8nm,0.7s,baz=341,slow=3.7,SNR=7.9								
ILAR				LR		LR		21 24 05.6	
	comp=Z,80nm,20.9s,baz=129,slow=35								
EYMN	**Ely**	**78.88**	**322**	*e*P		**P**		**20 49 39.2**	**-1.2**
	comp=Z,9.3nm,1.2s								
COWI	**Conover**	**78.94**	**320**	*e*P		**P**		**20 49 40.4**	**-0.3**
	comp=Z,21nm,1.0s								
ULM	**Lac du Bonnet**	**79.34**	**326**	P		**P**		**20 49 41.5**	**-1.3**
ULM	**Lac du Bonnet**	**79.34**	**326**	P		**P**		**20 49 41.5**	**-1.3**
	comp=Z,8.2nm,0.8s,baz=35,slow=2.9,SNR=7.1								
ULM				LR		LR		21 23 45.9	
	comp=Z,141nm,19.7s,baz=83,slow=35								
YSS	**Yuzh-Sakhalins**	**79.71**	**38**	*e*P		**P**		**20 49 45.2**	**+0.3**
AGMN	**Agassiz Nation**	**80.73**	**325**	*e*P		**P**		**20 49 49.2**	**-1.1**
	comp=Z,8.0nm,0.9s								
KMSC	**Kings Mountain**	**81.46**	**308**	⇓P		**P**		**20 49 53.7**	**-0.9**
	baz=81								
PETK	**Petropavlovsk-**	**81.59**	**27**	P		**P**		**20 49 53.3**	**-1.6**
PETK				pmax		pmax			
	comp=Z,1.0nm,0.7s								
PETK				MLR		MLR			
	comp=Z,124nm,21.3s								
PETK	**Petropavlovsk-**	**81.59**	**27**	P		**P**		**20 49 53.3**	**-1.6**
PETK	**Petropavlovsk-**	**81.59**	**27**	P		**P**		**20 49 53.3**	**-1.6**
	comp=Z,1.4nm,0.7s,baz=0.0,slow=3.0,SNR=3.9								
PETK				LR		LR		21 25 58.9	
	comp=Z,124nm,21.3s,baz=280,slow=36								
SFIN	**Scholer Farm**	**81.61**	**315**	⇓P		**P**		**20 49 54.5**	**-0.6**
	baz=81								
BLO	**Bloomington**	**82.07**	**313**	*e*P		**P**		**20 49 57.4**	**-0.2**
BLO				pmax		pmax			
	comp=Z,17nm,0.8s								
BLO	**Bloomington**	**82.07**	**313**	*e*P		**P**		**20 49 57.4**	**-0.2**
	comp=Z,17nm,0.8s								
HDIL	**Hopedale**	**82.74**	**316**	P		**P**		**20 50 00.9**	**-0.2**
OLIL	**Olney**	**83.28**	**314**	P		**P**		**20 50 02.7**	**-1.2**
A24A	**Westby**	**83.84**	**329**	⇑P		**P**		**20 50 05.7**	**-1.0**
	baz=84								
MAJO	**Matsushiro**	**84.23**	**48**	*e*P		**P**		**20 50 07.8**	**-1.1**
MAJO				pmax		pmax			
	comp=Z,6.0nm,0.9s								
MAJO	**Matsushiro**	**84.23**	**48**	*e*P		**P**		**20 50 07.8**	**-1.1**
	comp=Z,5.7nm,0.9s								
MAT	**Matsushiro**	**84.23**	**48**	P		**P**		**20 50 08.4**	**-0.5**
MJAR	**Matsushiro Arr**	**84.23**	**48**	P		**P**		**20 50 08.7**	**-0.2**
MJAR	**Matsushiro Arr**	**84.23**	**48**	P		**P**		**20 50 08.7**	**-0.2**
	comp=Z,3.6nm,0.8s,baz=307,slow=4.0,SNR=18								
DGMT	**Dagmar**	**84.27**	**329**	⇑P		**P**		**20 50 07.8**	**-1.2**
	baz=84								
ECSD	**EROS Data Cent**	**84.39**	**322**	*e*P		**P**		**20 50 08.9**	**-0.7**
	comp=Z,9.2nm,0.9s								
A22A	**Carney Farms,**	**84.56**	**330**	⇓P		**P**		**20 50 10.2**	**-0.2**
	baz=84								
B23A	**Brockton**	**84.61**	**329**	⇓P		**P**		**20 50 10.3**	**-0.3**
	baz=84								
BRSD	**Miller**	**85.01**	**324**	⇓P		**P**		**20 50 12.1**	**-0.6**
	baz=85								
E26A	**Carlson Angus**	**85.08**	**327**	⇓P		**P**		**20 50 12.7**	**-0.3**
	baz=85								
C24A	**Savage**	**85.11**	**329**	⇓P		**P**		**20 50 12.6**	**-0.6**
	baz=85								
B22A	**Reddig Ranch S**	**85.14**	**330**	⇓P		**P**		**20 50 12.9**	**-0.5**
	baz=85								
C23A	**Lambert**	**85.21**	**329**	⇓P		**P**		**20 50 13.1**	**-0.6**
	baz=85								
D24A	**Glendive**	**85.39**	**328**	⇑P		**P**		**20 50 13.9**	**-0.7**
	baz=85								
A20A	**Cobblestone Ra**	**85.44**	**331**	⇓P		**P**		**20 50 14.4**	**-0.5**
	baz=85								
E25A	**Miller Ranch,**	**85.47**	**327**	⇑P		**P**		**20 50 14.4**	**-0.6**
	baz=85								
C22A	**Vida**	**85.54**	**329**	⇓P		**P**		**20 50 14.6**	**-0.7**
	baz=85								
A19A	**Klindworth Far**	**85.72**	**332**	⇓P		**P**		**20 50 15.4**	**-0.9**
	baz=85								
B20A	**Solberg Farm,**	**85.84**	**331**	⇑P		**P**		**20 50 16.5**	**-0.3**
	baz=86								
C21A	**Desert Coulee**	**85.97**	**330**	⇑P		**P**		**20 50 16.9**	**-0.6**
	baz=86								
D22A	**Cohagen**	**86.14**	**329**	⇓P		**P**		**20 50 18.1**	**-0.2**
	baz=86,SNR=6.5								
A18A	**Metzger Ranch,**	**86.14**	**332**	⇑P		**P**		**20 50 17.8**	**-0.5**
	baz=86								
B19A	**Brinkman Farms**	**86.18**	**332**	⇑P		**P**		**20 50 18.4**	**-0.1**
	baz=86								
E23A	**Ismay**	**86.29**	**328**	⇑P		**P**		**20 50 18.9**	**-0.2**
	baz=86								
LRAL	**Lakeview Retre**	**86.41**	**309**	*e*P		**P**		**20 50 19.9**	**+0.1**
	comp=Z,20nm,0.9s								
C20A	**Veseth Ranch,**	**86.42**	**331**	⇓P		**P**		**20 50 19.6**	**-0.1**
	baz=86,SNR=10								
A17A	**Trie J Farms**	**86.44**	**333**	⇓P		**P**		**20 50 19.2**	**-0.6**
	baz=86								
BDFB	**Brasilia**	**86.46**	**248**	P		**P**		**20 50 22.0**	**+1.7**
BDFB	**Brasilia**	**86.46**	**248**	P		**P**		**20 50 22.0**	**+1.7**
	comp=Z,9.3nm,0.7s,baz=56,slow=6.2,SNR=17								
D21A	**La Casta Ranch**	**86.54**	**330**	⇓P		**P**		**20 50 19.9**	**-0.4**
	baz=86								
B18A	**Beardsley Farm**	**86.55**	**332**	⇓P		**P**		**20 50 19.7**	**-0.6**
	baz=86								
E22A	**Miles City**	**86.61**	**329**	⇓P		**P**		**20 50 19.5**	**-1.1**
	baz=86								
FX1	**Attu Island--F**	**86.64**	**19**	LR		LR		21 30 31.6	
	comp=Z,64nm,19.5s,baz=253,slow=37								
C19A	**Slack Wire Ran**	**86.81**	**331**	⇑P		**P**		**20 50 21.1**	**-0.5**
	baz=86								
G24A	**Alzada**	**86.83**	**327**	⇑P		**P**		**20 50 21.4**	**-0.4**
	baz=86								
EGMT	**Eagleton**	**86.84**	**332**	*e*P		**P**		**20 50 21.5**	**-0.3**
	comp=Z,22nm,0.9s								
EGMT	**Eagleton**	**86.84**	**332**	⇓P		**P**		**20 50 22.4**	**+0.6**
	baz=86,SNR=12								
J28A	**Allard Ranch,**	**86.86**	**324**	⇑P		**P**		**20 50 22.0**	**0.0**
	baz=86								
BGNE	**Belgrade**	**86.87**	**321**	⇑P		**P**		**20 50 22.0**	**+0.1**
	baz=86								
K29A	**Lazy Trails An**	**86.92**	**323**	⇓P		**P**		**20 50 22.4**	**+0.2**
	baz=87								
F23A	**Volborg**	**86.95**	**328**	⇑P		**P**		**20 50 22.0**	**-0.4**
	baz=87,SNR=14								
D20A	**Manuel Ranch,**	**86.98**	**330**	⇑P		**P**		**20 50 21.7**	**-0.7**
	baz=87								
E21A	**Keefer Ranch,**	**86.99**	**329**	⇓P		**P**		**20 50 22.2**	**-0.3**
	baz=87								
B17A	**L&G Farms, Che**	**87.02**	**332**	⇑P		**P**		**20 50 22.0**	**-0.6**
	baz=87								
A15A	**Johnson Ranch,**	**87.14**	**334**	⇓P		**P**		**20 50 22.6**	**-0.7**
	baz=87,SNR=11								
D19A	**Cripps Ranch,**	**87.21**	**331**	⇓P		**P**		**20 50 22.8**	**-0.8**
	baz=87								
B16A	**M & M Farms, S**	**87.25**	**333**	⇓P		**P**		**20 50 23.4**	**-0.4**
	baz=87								
H24A	**Dirks Ranch, A**	**87.35**	**327**	⇑P		**P**		**20 50 24.3**	**0.0**
	baz=87								
G23A	**Biddle**	**87.35**	**328**	⇑P		**P**		**20 50 24.2**	**-0.1**
	baz=87								
A14A	**Double T Ranch**	**87.39**	**334**	⇑P		**P**		**20 50 23.9**	**-0.6**
	baz=87,SNR=14								
C17A	**Wharram Farm,**	**87.55**	**332**	⇑P		**P**		**20 50 24.6**	**-0.6**
	baz=87								
E19A	**Rath Farm, Rou**	**87.75**	**330**	⇑P		**P**		**20 50 25.3**	**-0.9**
	baz=87,SNR=8.1								
C16A	**Fuhringer Ranc**	**87.78**	**333**	⇓P		**P**		**20 50 25.2**	**-1.2**
	baz=87								
B14A	**Marquette Ranc**	**87.86**	**334**	⇑P		**P**		**20 50 25.8**	**-1.0**
	baz=88,SNR=5.6								
D17A	**Six Diamond Ra**	**87.92**	**332**	⇑P		**P**		**20 50 26.1**	**-1.0**
	baz=88								
C15A	**Salmond Ranch,**	**88.11**	**333**	⇓P		**P**		**20 50 26.9**	**-1.1**
	baz=88								
B13A	**Whitefish**	**88.27**	**335**	⇑P		**P**		**20 50 28.1**	**-0.5**
	baz=88								
F19A	**Roth Farm, Mol**	**88.31**	**330**	⇓P		**P**		**20 50 27.4**	**-1.5**
	baz=88								
D16A	**Dana Ranch, Ca**	**88.35**	**332**	⇑P		**P**		**20 50 28.3**	**-0.8**
	baz=88								
SDPT	**Sand Point**	**88.36**	**3**	*e*P		**P**		**20 50 26.8**	**-2.0**
	comp=Z,13nm,0.6s								
H21A	**Big Horn, Sher**	**88.52**	**328**	⇑P		**P**		**20 50 28.7**	**-1.2**
	baz=88								
C14A	**Swan Lake**	**88.53**	**334**	⇓P		**P**		**20 50 29.0**	**-0.9**
	baz=88								
YBMT	**Yellow Bay**	**88.54**	**334**	*e*P		**P**		**20 50 29.8**	**-0.2**
	comp=Z,8.8nm,0.9s								
E17A	**Martinsdale**	**88.56**	**331**	⇓P		**P**		**20 50 29.1**	**-1.0**
	baz=88								
F18A	**Big Timber**	**88.58**	**331**	⇓P		**P**		**20 50 29.4**	**-0.8**
	baz=88								
D15A	**Lincoln**	**88.70**	**333**	⇓P		**P**		**20 50 30.0**	**-0.7**
	baz=88								
K25A	**Mack Ranch, Ha**	**88.71**	**325**	⇓P		**P**		**20 50 30.3**	**-0.6**
	baz=88								
JTMT	**Jette**	**88.74**	**334**	*e*P		**P**		**20 50 30.2**	**-0.8**
	comp=Z,14nm,1.0s								
BSMT	**Bassoo Peak**	**88.82**	**334**	*e*P		**P**		**20 50 30.9**	**-0.5**
	comp=Z,5.0nm,1.0s								
SWMT	**Swartz Lake**	**88.84**	**334**	*e*P		**P**		**20 50 31.3**	**-0.1**
	comp=Z,9.4nm,0.9s								
C13A	**Hot Springs**	**88.90**	**334**	⇑P		**P**		**20 50 30.8**	**-0.8**
	baz=88								
D14A	**Greenough**	**89.03**	**333**	⇓P		**P**		**20 50 31.7**	**-0.6**
	baz=89								
H20A	**Greybull**	**89.03**	**329**	⇑P		**P**		**20 50 31.5**	**-0.8**
	baz=89								
CHMT	**Chamberlain Mo**	**89.08**	**333**	*e*P		**P**		**20 50 32.0**	**-0.6**
	comp=Z,2.7nm,0.9s								
C12B	**Naegeli Ranch,**	**89.18**	**335**	⇓P		**P**		**20 50 32.7**	**-0.2**
	baz=89								
NEW	**Newport**	**89.25**	**336**	⇑P		**P**		**20 50 32.5**	**-0.7**
	baz=89								
MSO	**Missoula**	**89.40**	**333**	⇑P		**P**		**20 50 33.3**	**-0.7**
	baz=89								
I20A	**Worland**	**89.52**	**328**	⇓P		**P**		**20 50 34.7**	**0.0**
	baz=89								
TUL1	**Tulsa**	**89.64**	**316**	⇑P		**P**		**20 50 35.1**	**-0.1**
	baz=89								
F15A	**Butte**	**89.70**	**332**	⇓P		**P**		**20 50 35.0**	**-0.6**
	baz=89								
D12A	**Red Ives Fores**	**89.71**	**334**	⇑P		**P**		**20 50 35.1**	**-0.3**
	baz=89								
I19A	**Meeteetse**	**89.82**	**329**	⇑P		**P**		**20 50 35.8**	**-0.3**
	baz=90								
O27A	**Beecher Island**	**89.94**	**323**	⇓P		**P**		**20 50 35.4**	**-1.3**
	baz=90								
J20A	**Shoshoni**	**89.99**	**328**	⇑P		**P**		**20 50 35.7**	**-1.2**
	baz=90								
H16A	**Russell Place,**	**90.17**	**331**	⇓P		**P**		**20 50 35.4**	**-2.5**
	baz=90								
N25A	**Grover**	**90.22**	**324**	⇑P		**P**		**20 50 37.9**	**-0.1**
	baz=90								
E12A	**Beaver Dam Sad**	**90.33**	**334**	⇑P		**P**		**20 50 37.9**	**-0.5**
	baz=90								
N24A	**Carr**	**90.58**	**325**	⇑P		**P**		**20 50 39.2**	**-0.5**
	baz=90								
K19A	**Absolon Red Bu**	**90.74**	**328**	⇓P		**P**		**20 50 39.4**	**-1.1**
	baz=90								
L21A	**Rawlins**	**90.80**	**327**	⇓P		**P**		**20 50 39.5**	**-1.3**
	baz=90								
M21A	**Separation Pea**	**91.09**	**327**	⇓P		**P**		**20 50 41.2**	**-1.0**
	baz=91								
BW06	**Boulder Array**	**91.09**	**329**	P		**P**		**20 50 39.5**	**-2.6**
	comp=Z,4.2nm,1.1s								
PDAR	**Pinedale Array**	**91.09**	**329**	P		**P**		**20 50 41.8**	**-0.4**
PDAR	**Pinedale Array**	**91.09**	**329**	P		**P**		**20 50 41.8**	**-0.4**
	comp=Z,1.9nm,0.9s,baz=54,slow=3.8,SNR=11								
PDAR				LR		LR		21 30 03.5	
	comp=Z,117nm,21.3s,baz=58,slow=35								
N22A	**Wattenberg Ran**	**91.33**	**326**	⇑P		**P**		**20 50 42.4**	**-0.9**
	baz=91								
H12A	**Diamond D Ranc**	**91.68**	**333**	⇑P		**P**		**20 50 43.7**	**-1.1**
	baz=91								
N21A	**Black Mountain**	**91.84**	**326**	⇓P		**P**		**20 50 44.9**	**-0.8**
	baz=92								
R26A	**Arlington**	**91.87**	**322**	⇓P		**P**		**20 50 44.6**	**-1.1**
	baz=92								
O22A	**Kremmling**	**91.88**	**325**	⇓P		**P**		**20 50 45.0**	**-1.0**
	baz=92								
P23A	**Jefferson**	**92.18**	**324**	⇓P		**P**		**20 50 46.2**	**-1.2**
	baz=92								
O20A	**White River Ci**	**92.67**	**326**	⇑P		**P**		**20 50 49.1**	**-0.4**
	baz=92								
R24A	**Sanders Place,**	**92.74**	**323**	⇑P		**P**		**20 50 49.3**	**-0.5**
	baz=92								
MFID	**Camas Ranch**	**93.01**	**333**	⇑P		**P**		**20 50 50.3**	**-0.5**
	baz=93								
Q22A	**Crested Butte,**	**93.09**	**325**	⇑P		**P**		**20 50 51.3**	**-0.3**
	baz=93								
R23A	**Moffat**	**93.11**	**324**	⇓P		**P**		**20 50 51.3**	**-0.3**
	baz=93								
S24A	**Houchin Ranch,**	**93.25**	**323**	⇑P		**P**		**20 50 51.5**	**-0.9**
	baz=93								
T25A	**Trinidad**	**93.26**	**322**	⇓P		**P**		**20 50 51.2**	**-1.0**
	baz=93								
U26A	**Atchley Ranch,**	**93.50**	**321**	⇓P		**P**		**20 50 52.5**	**-0.9**
	baz=93								
Z32A	**Haskell**	**93.60**	**317**	⇑P		**P**		**20 50 53.3**	**-0.3**
	baz=93								
Q20A	**Ridgley Place,**	**93.65**	**326**	⇓P		**P**		**20 50 53.3**	**-0.7**
	baz=93								
R21A	**Cimarron**	**93.78**	**325**	⇓P		**P**		**20 50 53.6**	**-1.1**
	baz=93								
U25A	**Circle Dot Ran**	**93.83**	**322**	⇓P		**P**		**20 50 54.3**	**-0.6**
	baz=94								
Z31A	**Sharp Cattle R**	**93.96**	**317**	⇑P		**P**		**20 50 54.6**	**-0.7**
	baz=94								
PV01	**Paradox Valley**	**94.44**	**325**	*e*P		**P**		**20 50 56.3**	**-1.4**
DUG	**Dugway**	**94.58**	**329**	⇑P		**P**		**20 50 57.7**	**-0.5**
	baz=94								
Z26A	**Caprock**	**96.06**	**319**	⇓P		**P**		**20 51 04.3**	**-0.7**
	baz=96								
125A	**Gardner Draw,**	**96.89**	**319**	⇓P		**P**		**20 51 07.6**	**-1.2**
	baz=97								
530A	**J-C Ranch, Com**	**97.02**	**316**	⇑P		**P**		**20 51 09.2**	**-0.1**
	baz=97								
631A	**Perdido Creek**	**97.14**	**315**

THR2	**Thira island,**	**0.12**	**224**	P	**Pg**	**20 48 17.6**	**-0.2**
THR2				S	**Sg**	**20 48 20.3**	**+0.6**
THR2	**Thira island,**	**0.12**	**224**	P	**Pg**	**20 48 17.6**	**-0.2**
THR2				S	**Sg**	**20 48 20.3**	**+0.6**
THR1	**Thera Island**	**0.17**	**201**	P	**Pg**	**20 48 18.8**	**+0.1**
THR1				S	**Sg**	**20 48 21.3**	**+0.1**
THR1	**Thera Island**	**0.17**	**201**	P	**Pg**	**20 48 18.8**	**+0.1**
THR1				S	**Sg**	**20 48 21.3**	**+0.1**
APE	**Apeiranthos**	**0.53**	**359**	P	**Pg**	**20 48 25.0**	**-0.3**
APE				S	**Sb**	**20 48 33.7**	**-0.6**
APE	**Apeiranthos**	**0.53**	**359**	*e*PN	**Pg**	**20 48 25.2**	**-0.1**
APE				*e*SN	**Sb**	**20 48 34.2**	**-0.1**
APE	**Apeiranthos**	**0.53**	**359**	P	**Pg**	**20 48 25.0**	**-0.3**
APE				S	**Sb**	**20 48 33.7**	**-0.6**
APE				*e*Sn	**Sb**	**20 48 34.2**	**-0.1**
NPS	**Neapolis**	**1.27**	**177**	P	**Pn**	**20 48 37.9**	**-0.9**
NPS				S	**Sg**	**20 48 56.0**	**+0.3**
NPS	**Neapolis**	**1.27**	**177**	*e*PN	**Pn**	**20 48 38.3**	**-0.5**
NPS				*e*SN	**Sg**	**20 48 56.1**	**+0.3**
NPS	**Neapolis**	**1.27**	**177**	P	**Pn**	**20 48 37.9**	**-0.9**
NPS	**Neapolis**	**1.27**	**177**	*e*Pn	**Pn**	**20 48 38.3**	**-0.5**
NPS				*e*Sn	**Sg**	**20 48 56.1**	**+0.3**
NIS1	**Nisyros Isl.**	**1.32**	**87**	P	**Pn**	**20 48 37.7**	**-1.9**
NIS1	**Nisyros Isl.**	**1.32**	**87**	*e*PN	**Pg**	**20 48 40.5**	**+0.2**
NIS1	**Nisyros Isl.**	**1.32**	**87**	P	**Pn**	**20 48 37.7**	**-1.9**
NIS1	**Nisyros Isl.**	**1.32**	**87**	*e*Pn	**Pg**	**20 48 40.5**	**+0.2**
IDI	**Anoyia**	**1.35**	**203**	P	**Pn**	**20 48 38.9**	**-1.1**
IDI				S	**Sb**	**20 48 57.4**	**-0.4**
IDI	**Anoyia**	**1.35**	**203**	P	**Pn**	**20 48 38.9**	**-1.1**
IDI				S	**Sb**	**20 48 57.4**	**-0.4**
LAST	**Lasithi**	**1.37**	**182**	P	**Pn**	**20 48 38.9**	**-1.4**
LAST				S	**Sg**	**20 48 58.9**	**-0.1**
LAST	**Lasithi**	**1.37**	**182**	P	**Pn**	**20 48 38.9**	**-1.4**
LAST				S	**Sg**	**20 48 58.9**	**-0.1**
ZKR	**Zakros**	**1.52**	**159**	P	**Pn**	**20 48 41.6**	**-0.7**
ZKR				S	**Sb**	**20 49 02.7**	**+0.1**
ZKR	**Zakros**	**1.52**	**159**	P	**Pn**	**20 48 41.6**	**-0.7**
ZKR				S	**Sb**	**20 49 02.7**	**+0.1**
VAM	**Vamos**	**1.56**	**224**	P	**Pn**	**20 48 41.3**	**-1.6**
VAM				S	**Sb**	**20 49 03.3**	**-0.6**
VAM	**Vamos**	**1.56**	**224**	*e*PB	**Pn**	**20 48 42.0**	**-0.9**
VAM	**Vamos**	**1.56**	**224**	P	**Pn**	**20 48 41.3**	**-1.6**
VAM	**Vamos**	**1.56**	**224**	*e*Pb	**Pn**	**20 48 42.0**	**-0.9**
VAM				S	**Sb**	**20 49 03.3**	**-0.6**
SMG	**Samos**	**1.57**	**41**	*e*PN	**Pb**	**20 48 43.3**	**-0.8**
SMG	**Samos**	**1.57**	**41**	*e*Pn	**Pb**	**20 48 43.3**	**-0.8**
SIVA	**Sivas**	**1.62**	**202**	P	**Pn**	**20 48 43.7**	**0.0**
SIVA	**Sivas**	**1.62**	**202**	P	**Pn**	**20 48 43.7**	**0.0**
KARP	**Karpathos**	**1.64**	**126**	P	**Pn**	**20 48 43.8**	**-0.2**
KARP				S	**Sb**	**20 49 05.3**	**-0.9**
KARP	**Karpathos**	**1.64**	**126**	P	**Pn**	**20 48 43.8**	**-0.2**
KARP				S	**Sb**	**20 49 05.3**	**-0.9**
MRMA	**Marmari**	**1.78**	**329**	P	**Pn**	**20 48 44.8**	**-1.1**
MRMA	**Marmari**	**1.78**	**329**	P	**Pn**	**20 48 44.8**	**-1.1**
CHOS	**Chios island**	**1.90**	**12**	P	**Pn**	**20 48 46.9**	**-0.6**
CHOS	**Chios island**	**1.90**	**12**	*e*PB	**Pn**	**20 48 46.9**	**-0.6**
CHOS	**Chios island**	**1.90**	**12**	*e*Pb	**Pn**	**20 48 46.9**	**-0.6**
ANKY	**Antikythira Is**	**1.93**	**250**	P	**Pn**	**20 48 47.6**	**-0.3**
ANKY				S	**Sn**	**20 49 12.0**	**-0.2**
ANKY	**Antikythira Is**	**1.93**	**250**	*e*PN	**Pn**	**20 48 47.7**	**-0.2**
ANKY	**Antikythira Is**	**1.93**	**250**	P	**Pn**	**20 48 47.6**	**-0.3**
ANKY				S	**Sn**	**20 49 12.0**	**-0.2**
ATHU	**Athens Univers**	**2.00**	**316**	P	**Pn**	**20 48 48.0**	**-0.9**
ATHU	**Athens Univers**	**2.00**	**316**	P	**Pn**	**20 48 48.0**	**-0.9**
PTL	**Penteli**	**2.02**	**319**	P	**Pn**	**20 48 48.5**	**-0.6**
PTL	**Penteli**	**2.02**	**319**	P	**Pn**	**20 48 48.5**	**-0.6**
KYTH	**Kithira**	**2.03**	**264**	P	**Pn**	**20 48 49.3**	**-0.1**
KYTH	**Kithira**	**2.03**	**264**	P	**Pn**	**20 48 49.3**	**-0.1**
ATH	**Athens Observa**	**2.04**	**315**	P	**Pn**	**20 48 48.1**	**-1.4**
ATH				S	**Sn**	**20 49 15.2**	**+0.2**
ATH	**Athens Observa**	**2.04**	**315**	P	**Pn**	**20 48 48.1**	**-1.4**
ATH				S	**Sn**	**20 49 15.2**	**+0.2**
DID	**Didima**	**2.08**	**298**	P	**Pn**	**20 48 49.2**	**-0.8**
DID	**Didima**	**2.08**	**298**	*e*PN	**Pn**	**20 48 49.2**	**-0.8**
DID	**Didima**	**2.08**	**298**	P	**Pn**	**20 48 49.2**	**-0.8**
DIDY	**Didyma**	**2.09**	**297**	P	**Pn**	**20 48 48.9**	**-1.3**
DIDY	**Didyma**	**2.09**	**297**	P	**Pn**	**20 48 48.9**	**-1.3**
VLI	**Veliai**	**2.10**	**276**	P	**Pn**	**20 48 49.6**	**-0.7**
VLI	**Veliai**	**2.10**	**276**	*e*PN	**Pn**	**20 48 49.5**	**-0.7**
VLI	**Veliai**	**2.10**	**276**	P	**Pn**	**20 48 49.6**	**-0.7**
ARG	**Arkhangelos**	**2.11**	**98**	*e*PN	**Pn**	**20 48 51.1**	**+0.7**
ARG	**Arkhangelos**	**2.11**	**98**	*e*Pn	**Pn**	**20 48 51.1**	**+0.7**
LTK	**Loutraki**	**2.53**	**307**	P	**Pn**	**20 48 55.7**	**-0.5**
LTK	**Loutraki**	**2.53**	**307**	P	**Pn**	**20 48 55.7**	**-0.5**
MRKA	**Markates**	**2.66**	**325**	P	**Pn**	**20 48 57.4**	**-0.6**
MRKA	**Markates**	**2.66**	**325**	P	**Pn**	**20 48 57.4**	**-0.6**
SIGR	**SIGRI**	**2.69**	**5**	P	**Pn**	**20 48 57.3**	**-1.0**
SIGR	**SIGRI**	**2.69**	**5**	P	**Pn**	**20 48 57.3**	**-1.0**
PRK	**Paraskevi**	**2.77**	**12**	P	**Pn**	**20 48 58.9**	**-0.5**
PRK	**Paraskevi**	**2.77**	**12**	*e*PN	**Pn**	**20 48 59.2**	**-0.2**
PRK	**Paraskevi**	**2.77**	**12**	P	**Pn**	**20 48 58.9**	**-0.5**
PRK	**Paraskevi**	**2.77**	**12**	*e*Pn	**Pn**	**20 48 59.2**	**-0.2**
GUR	**Goura**	**2.91**	**300**	P	**Pn**	**20 49 01.1**	**-0.4**
GUR	**Goura**	**2.91**	**300**	P	**Pn**	**20 49 01.1**	**-0.4**
ATAL	**Atalanti**	**2.94**	**318**	P	**Pn**	**20 49 01.2**	**-0.6**
ATAL	**Atalanti**	**2.94**	**318**	P	**Pn**	**20 49 01.2**	**-0.6**
AOS	**Alonnisos**	**2.94**	**334**	P	**Pn**	**20 49 01.8**	**0.0**
AOS	**Alonnisos**	**2.94**	**334**	P	**Pn**	**20 49 01.8**	**0.0**
ITM	**Ithomi**	**2.97**	**284**	*e*PN	**Pn**	**20 49 02.2**	**0.0**
ITM	**Ithomi**	**2.97**	**284**	*e*Pn	**Pn**	**20 49 02.2**	**0.0**
SMIA	**Simia**	**2.98**	**322**	P	**Pn**	**20 49 02.4**	**0.0**
SMIA	**Simia**	**2.98**	**322**	P	**Pn**	**20 49 02.4**	**0.0**
DSF	**Desfina**	**3.04**	**309**	P	**Pn**	**20 49 02.9**	**-0.3**
DSF	**Desfina**	**3.04**	**309**	P	**Pn**	**20 49 02.9**	**-0.3**
KLV	**Kalavryta, Ach**	**3.09**	**300**	P	**Pn**	**20 49 03.7**	**-0.3**
KLV	**Kalavryta, Ach**	**3.09**	**300**	P	**Pn**	**20 49 03.7**	**-0.3**
SKIA	**Skiathos**	**3.10**	**329**	P	**Pn**	**20 49 04.1**	**+0.1**
SKIA	**Skiathos**	**3.10**	**329**	P	**Pn**	**20 49 04.1**	**+0.1**
AXAR	**Agios Charalam**	**3.19**	**315**	P	**Pn**	**20 49 04.6**	**-0.7**
AXAR	**Agios Charalam**	**3.19**	**315**	P	**Pn**	**20 49 04.6**	**-0.7**
KALE	**Kalithea**	**3.28**	**305**	P	**Pn**	**20 49 05.3**	**-1.2**
KALE	**Kalithea**	**3.28**	**305**	P	**Pn**	**20 49 05.3**	**-1.2**
LAKA	**Lakka**	**3.31**	**302**	P	**Pn**	**20 49 07.2**	**+0.3**
LAKA	**Lakka**	**3.31**	**302**	P	**Pn**	**20 49 07.2**	**+0.3**
NEO	**Neokhori**	**3.32**	**327**	P	**Pn**	**20 49 06.1**	**-0.9**
NEO	**Neokhori**	**3.32**	**327**	P	**Pn**	**20 49 06.1**	**-0.9**
LIA	**Limnos Island**	**3.37**	**355**	P	**Pn**	**20 49 07.3**	**-0.4**
LIA	**Limnos Island**	**3.37**	**355**	*e*PN	**Pn**	**20 49 07.3**	**-0.4**
LIA	**Limnos Island**	**3.37**	**355**	P	**Pn**	**20 49 07.3**	**-0.4**
XOR	**Xorichti**	**3.38**	**327**	P	**Pn**	**20 49 07.7**	**-0.2**
XOR	**Xorichti**	**3.38**	**327**	P	**Pn**	**20 49 07.7**	**-0.2**
AGG	**Agios Georgios**	**3.55**	**315**	P	**Pn**	**20 49 10.8**	**+0.5**
AGG	**Agios Georgios**	**3.55**	**315**	P	**Pn**	**20 49 10.8**	**+0.5**
THL	**Klokotos Trika**	**4.11**	**318**	P	**Pn**	**20 49 18.3**	**+0.4**
THL	**Klokotos Trika**	**4.11**	**318**	P	**Pn**	**20 49 18.3**	**+0.4**
BRTR	**Keskin Array B**	**7.13**	**61**	Pn	**Pn**	**20 50 02.1**	**+2.5**
	0.1nm,0.3s,baz=246,slow=15,SNR=3.8						
MMAI	**Mount Meron Ar**	**8.84**	**111**	Pn	**Pn**	**20 50 21.9**	**-1.1**
	0.9nm,0.3s,baz=310,slow=14,SNR=7.1						
GERES	**GERESS Array B**	**15.05**	**329**	Pn	**P**	**20 51 53.4**	**+0.3**
	0.1nm,0.3s,baz=150,slow=14,SNR=4.4						
EKA	**Eskdalemuir Ar**	**27.11**	**325**	P	**P**	**20 54 01.4**	**+3.5**
	1.7nm,0.9s,baz=115,slow=10,SNR=3.0						
TORD	**Torodi Ar. Bea**	**31.62**	**229**	P	**P**	**20 54 37.5**	**-0.7**
	0.4nm,0.7s,baz=30,slow=8.6,SNR=4.3						
MKAR	**Makanchi Array**	**42.77**	**58**	P	**P**	**20 56 12.7**	**+0.1**
	0.2nm,0.6s,baz=264,slow=9.4,SNR=5.1						

*IDC **26** 20:51:03.3±1.1,36°37m×25°47E,h0km,mb3.6/6, mb1 3.7/11,mb1mx3.6/32,mbtmp3.6/11,ML3.2/5,MS3.0/2, Ms1 3.0/2,ms1mx2.5/38,Error ellipse: s-maj=22.6km s-min=17.6km az=156.0*

*ATH **26** 20:51:04.2,36°53N×25°44E,h26km±1km,MD3.2/10*

*ISCJB **26** 20:51:04.3±0.4,36°56N±0°01×25°46E±0°02,h10km±3km, mb3.6/6,Error ellipse: s-maj=3.3km s-min=2.5km az=0.3*

*ISK **26** 20:51:04.3,36°67N×25°24E,h48km,ML3.5*

*CSEM **26** 20:51:04.0±0.1,36°53N×25°47E,h5km,ML3.4/8,Error ellipse: s-maj=2.7km s-min=2.5km az=82.0*

*THE **26** 20:51:05.2,36°53N×25°46E,h6km±1km,ML3.4/8,Error ellipse: s-maj=1.1km s-min=0.5km az=109.0*

*DDA **26** 20:51:25.0,37°04N×25°81E,h5km,MD3.6*

ISC 26 20:51:05.1±0.8,36°53N±0°02×25°46E±0°02,h10km±5km, n142,σ0§93/181,mb3.6/6,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR2	**Thira island,**	**0.09**	**192**	P	**Pg**	**20 51 07.4**	**-0.1**
THR2				S	**Sg**	**20 51 08.8**	**-0.4**
THR1	**Thera Island**	**0.16**	**180**	P	**Pg**	**20 51 08.7**	**0.0**
THR1				S	**Sg**	**20 51 11.3**	**+0.2**
APE	**Apeiranthos**	**0.54**	**6**	*e*PG	**Pg**	**20 51 15.5**	**-0.1**
APE				*e*SG	**Sb**	**20 51 23.5**	**-1.1**
APE	**Apeiranthos**	**0.54**	**6**	P	**Pg**	**20 51 15.3**	**-0.3**
APE				S	**Sb**	**20 51 23.4**	**-1.1**
APE	**Apeiranthos**	**0.54**	**6**	*e*PN	**Pg**	**20 51 15.4**	**-0.1**
APE				*e*SN	**Sb**	**20 51 23.7**	**-0.8**
APE	**Apeiranthos**	**0.54**	**6**	*e*Pg	**Pg**	**20 51 15.5**	**-0.1**
APE				*e*Sn	**Sb**	**20 51 23.7**	**-0.8**
NPS	**Neapolis**	**1.27**	**174**	P	**Pn**	**20 51 27.3**	**-1.8**
NPS				S	**Sn**	**20 51 45.6**	**-0.6**
NPS	**Neapolis**	**1.27**	**174**	*e*PB	**Pn**	**20 51 27.2**	**-1.8**
NPS				*e*SN	**Sb**	**20 51 45.2**	**-0.5**
NPS	**Neapolis**	**1.27**	**174**	P	**Pn**	**20 51 27.3**	**-1.8**
NPS				*e*Sn	**Sb**	**20 51 45.2**	**-0.5**
IDI	**Anoyia**	**1.33**	**201**	P	**Pn**	**20 51 28.5**	**-1.3**
IDI				S	**Sb**	**20 51 46.8**	**-0.4**
IDI	**Anoyia**	**1.33**	**201**	P	**Pn**	**20 51 28.5**	**-1.3**
IDI				S	**Sb**	**20 51 46.8**	**-0.4**
LAST	**Lasithi**	**1.37**	**179**	P	**Pn**	**20 51 28.7**	**-1.7**
LAST				S	**Sg**	**20 51 49.2**	**0.0**
LAST	**Lasithi**	**1.37**	**179**	P	**Pn**	**20 51 28.7**	**-1.7**
LAST				S	**Sg**	**20 51 49.2**	**0.0**
NIS1	**Nisyros Isl.**	**1.39**	**87**	P	**Pn**	**20 51 30.2**	**-0.3**
NIS1	**Nisyros Isl.**	**1.39**	**87**	*e*PN	**Pn**	**20 51 30.3**	**-0.3**
NIS1	**Nisyros Isl.**	**1.39**	**87**	*e*Pn	**Pn**	**20 51 30.3**	**-0.3**
VAM	**Vamos**	**1.52**	**223**	P	**Pn**	**20 51 31.3**	**-1.1**
VAM				S	**Sb**	**20 51 52.7**	**0.0**
VAM	**Vamos**	**1.52**	**223**	*e*PN	**Pn**	**20 51 31.3**	**-1.1**
VAM				*e*SN	**Sn**	**20 51 51.5**	**-0.7**
VAM	**Vamos**	**1.52**	**223**	P	**Pn**	**20 51 31.3**	**-1.1**
VAM				*e*Sn	**Sn**	**20 51 51.5**	**-0.7**
VAM				S	**Sb**	**20 51 52.7**	**0.0**
ZKR	**Zakros**	**1.54**	**156**	P	**Pn**	**20 51 32.2**	**-0.5**
ZKR				S	**Sb**	**20 51 53.5**	**+0.1**
ZKR	**Zakros**	**1.54**	**156**	P	**Pn**	**20 51 32.2**	**-0.5**
ZKR				S	**Sb**	**20 51 53.5**	**+0.1**
BODT	**Bodrum**	**1.58**	**70**	*e*PN	**Pn**	**20 51 32.6**	**-0.5**
BODT				*e*SN	**Sn**	**20 51 53.3**	**-0.4**
BODT	**Bodrum**	**1.58**	**70**	*e*Pn	**Pn**	**20 51 32.7**	**-0.5**
BODT				*e*Sn	**Sn**	**20 51 53.3**	**-0.4**
SIVA	**Sivas**	**1.60**	**199**	P	**Pn**	**20 51 33.0**	**-0.5**
SIVA				S	**Sn**	**20 51 54.3**	**+0.1**
SIVA	**Sivas**	**1.60**	**199**	P	**Pn**	**20 51 33.0**	**-0.5**
SIVA				S	**Sn**	**20 51 54.3**	**+0.1**
SMG	**Samos**	**1.61**	**43**	P	**Pn**	**20 51 32.3**	**-1.3**
SMG	**Samos**	**1.61**	**43**	*e*PB	**Pn**	**20 51 32.4**	**-1.2**
SMG	**Samos**	**1.61**	**43**	*e*Pb	**Pn**	**20 51 32.4**	**-1.2**
KARP	**Karpathos**	**1.69**	**125**	P	**Pn**	**20 51 34.7**	**-0.1**
KARP				S	**Sb**	**20 51 57.0**	**-0.8**
KARP	**Karpathos**	**1.69**	**125**	*e*PN	**Pn**	**20 51 34.6**	**-0.2**
KARP	**Karpathos**	**1.69**	**125**	*e*Pn	**Pn**	**20 51 34.6**	**-0.2**
KARP				S	**Sb**	**20 51 57.0**	**-0.8**
DAT	**Datca**	**1.72**	**83**	*e*PN	**Pn**	**20 51 35.2**	**0.0**
DAT	**Datca**	**1.72**	**83**	*e*Pn	**Pn**	**20 51 35.2**	**0.0**
MRMA	**Marmari**	**1.75**	**331**	P	**Pn**	**20 51 35.5**	**0.0**
MRMA	**Marmari**	**1.75**	**331**	P	**Pn**	**20 51 35.5**	**0.0**
GCAM	**G?zelcaml?**	**1.84**	**50**	*i* P	**Pb**	**20 51 39.0**	**+0.2**
GCAM				*i* S	**Sg**	**20 52 06.7**	**+2.5**
GCAM	**G?zelcaml?**	**1.84**	**50**	*i* P	**Pb**	**20 51 39.0**	**+0.2**
ANKY	**Antikythira Is**	**1.87**	**250**	P	**Pn**	**20 51 37.2**	**+0.1**
ANKY	**Antikythira Is**	**1.87**	**250**	*e*PN	**Pn**	**20 51 36.9**	**-0.2**
ANKY	**Antikythira Is**	**1.87**	**250**	*e*Pn	**Pn**	**20 51 36.9**	**-0.2**
ANKY	**Antikythira Is**	**1.87**	**250**	P	**Pn**	**20 51 37.2**	**+0.1**
CHOS	**Chios island**	**1.91**	**14**	P	**Pn**	**20 51 36.9**	**-0.9**
CHOS				S	**Sn**	**20 52 02.5**	**+0.5**
CHOS	**Chios island**	**1.91**	**14**	*e*PB	**Pn**	**20 51 36.8**	**-1.0**
CHOS	**Chios island**	**1.91**	**14**	P	**Pn**	**20 51 36.9**	**-0.9**
CHOS				S	**Sn**	**20 52 02.5**	**+0.5**
ATHU	**Athens Univers**	**1.96**	**317**	P	**Pn**	**20 51 38.3**	**-0.1**
ATHU				S	**Sn**	**20 52 03.4**	**+0.3**
ATHU	**Athens Univers**	**1.96**	**317**	P	**Pn**	**20 51 38.3**	**-0.1**
ATHU				S	**Sn**	**20 52 03.4**	**+0.3**
PTL	**Penteli**	**1.98**	**320**	P	**Pn**	**20 51 38.5**	**-0.2**
PTL				S	**Sn**	**20 52 03.7**	**+0.1**
PTL	**Penteli**	**1.98**	**320**	P	**Pn**	**20 51 38.5**	**-0.2**
PTL				S	**Sn**	**20 52 03.7**	**+0.1**
ATH	**Athens Observa**	**2.00**	**316**	P	**Pn**	**20 51 39.0**	**0.0**
ATH				S	**Sn**	**20 52 03.9**	**-0.1**
ATH	**Athens Observa**	**2.00**	**316**	P	**Pn**	**20 51 39.0**	**0.0**
ATH				S	**Sn**	**20 52 03.9**	**-0.1**
MLSB	**Milas**	**2.01**	**67**	*e*PN	**Pn**	**20 51 38.5**	**-0.6**
MLSB	**Milas**	**2.01**	**67**	*e*Pn	**Pn**	**20 51 38.5**	**-0.6**
DID	**Didima**	**2.03**	**299**	P	**Pn**	**20 51 38.5**	**-0.6**
DID				S	**Sn**	**20 52 04.3**	**-0.5**
DID	**Didima**	**2.03**	**299**	*e*PB	**Pn**	**20 51 39.2**	**-0.2**
DID	**Didima**	**2.03**	**299**	P	**Pn**	**20 51 38.8**	**-0.6**
DID	**Didima**	**2.03**	**299**	*e*Pb	**Pn**	**20 51 39.2**	**-0.2**
DID				S	**Sn**	**20 52 04.3**	**-0.5**
DIDY	**Didyma**	**2.03**	**298**	P	**Pn**	**20 51 39.1**	**-0.4**
DIDY	**Didyma**	**2.03**	**298**	P	**Pn**	**20 51 39.1**	**-0.4**
URLA	**Izmir**	**2.04**	**26**	*i* P	**Pn**	**20 51 38.2**	**-1.3**
URLA	**Izmir**	**2.04**	**26**	*i* P	**Pn**	**20 51 38.2**	**-1.3**
VLI	**Veliai**	**2.04**	**276**	P	**Pn**	**20 51 39.3**	**-0.2**
VLI	**Veliai**	**2.04**	**276**	*e*PB	**Pn**	**20 51 39.3**	**-0.2**
VLI				*e*SN	**Sn**	**20 52 03.7**	**-1.3**
VLI	**Veliai**	**2.04**	**276**	P	**Pn**	**20 51 39.3**	**-0.2**
VLI				*e*Sn	**Sn**	**20 52 03.7**	**-1.3**
ARG	**Arkhangelos**	**2.18**	**98**	P	**Pn**	**20 51 41.0**	**-0.4**
ARG	**Arkhangelos**	**2.18**	**98**	P	**Pn**	**20 51 41.0**	**-0.4**
BLCB	**Balcova**	**2.24**	**34**	*e*PN	**Pn**	**20 51 40.4**	**-1.9**
BLCB	**Balcova**	**2.24**	**34**	*e*Pn	**Pn**	**20 51 40.4**	**-1.9**
AYDN	**Tasoluk**	**2.24**	**59**	*e*P	**Pn**	**20 51 42.9**	**+0.6**
AYDN				*i* S	**Sg**	**20 52 19.7**	**+2.7**
AYDN	**Tasoluk**	**2.24**	**59**	*e*P	**Pn**	**20 51 42.9**	**+0.6**
YER	**Yerkesik**	**2.34**	**74**	*e*PN	**Pn**	**20 51 43.7**	**-0.1**
YER	**Yerkesik**	**2.34**	**74**	*e*Pn	**Pn**	**20 51 43.7**	**-0.1**
IZM	**Izmir**	**2.35**	**37**	*e*PN	**Pn**	**20 51 41.5**	**-2.4**
IZM	**Izmir**	**2.35**	**37**	*e*Pn	**Pn**	**20 51 41.5**	**-2.4**
DALY	**Dalyan (Mu˘la**	**2.58**	**83**	*e*PN	**Pn**	**20 51 47.4**	**+0.4**
DALY	**Dalyan (Mu˘la**	**2.58**	**83**	*e*Pn	**Pn**	**20 51 47.4**	**+0.4**
VLX	**Vlachokerasia**	**2.60**	**290**	P	**Pn**	**20 51 46.5**	**-0.9**
VLX	**Vlachokerasia**	**2.60**	**290**	P	**Pn**	**20 51 46.5**	**-0.9**
MRKA	**Markates**	**2.63**	**326**	P	**Pn**	**20 51 46.6**	**-1.1**
MRKA	**Markates**	**2.63**	**326**	P	**Pn**	**20 51 46.6**	**-1.1**
SIGR	**SIGRI**	**2.69**	**7**	P	**Pn**	**20 51 47.5**	**-1.0**
SIGR	**SIGRI**	**2.69**	**7**	P	**Pn**	**20 51 47.5**	**-1.0**
PRK	**Paraskevi**	**2.78**	**13**	P	**Pn**	**20 51 48.7**	**-1.1**
PRK	**Paraskevi**	**2.78**	**13**	*e*PN	**Pn**	**20 51 49.5**	**-0.3**
PRK	**Paraskevi**	**2.78**	**13**	P	**Pn**	**20 51 48.7**	**-1.1**
PRK	**Paraskevi**	**2.78**	**13**	*e*Pn	**Pn**	**20 51 49.5**	**-0.3**
GUR	**Goura**	**2.85**	**300**	P	**Pn**	**20 51 50.4**	**-0.4**
GUR	**Goura**	**2.85**	**300**	P	**Pn**	**20 51 50.4**	**-0.4**
ATAL	**Atalanti**	**2.90**	**319**	P	**Pn**	**20 51 51.3**	**0.0**
ATAL	**Atalanti**	**2.90**	**319**	P	**Pn**	**20 51 51.3**	**0.0**
ITM	**Ithomi**	**2.91**	**284**	*e*PN	**Pn**	**20 51 51.1**	**-0.3**
ITM	**Ithomi**	**2.91**	**284**	*e*Pn	**Pn**	**20 51 51.1**	**-0.3**
AOS	**Alonnisos**	**2.91**	**335**	P	**Pn**	**20 51 52.1**	**+0.6**
AOS	**Alonnisos**	**2.91**	**335**	P	**Pn**	**20 51 52.1**	**+0.6**
SMIA	**Simia**	**2.94**	**323**	P	**Pn**	**20 51 52.3**	**+0.3**
SMIA	**Simia**	**2.94**	**323**	P	**Pn**	**20 51 52.3**	**+0.3**
DSF	**Desfina**	**2.99**	**310**	P	**Pn**	**20 51 51.9**	**-0.8**
DSF	**Desfina**	**2.99**	**310**	P	**Pn**	**20 51 51.9**	**-0.8**
AKHS	**Akhisar**	**3.00**	**38**	*i* P	**Pg**	**20 52 01.0**	**-1.5**
AKHS				*i* S	**Sg**	**20 52 41.9**	**+0.5**
SKIA	**Skiathos**	**3.06**	**330**	P	**Pn**	**20 51 53.9**	**+0.3**
SKIA	**Skiathos**	**3.06**	**330**	P	**Pn**	**20 51 53.9**	**+0.3**
MANT	**Manisa**	**3.15**	**51**	*i* P	**Pg**	**20 52 04.6**	**-0.8**
KULA	**Kula-Manisa**	**3.22**	**51**	*e*PN	**Pn**	**20 51 54.8**	**-1.1**
KULA	**Kula-Manisa**	**3.22**	**51**	*e*Pn	**Pn**	**20 51 54.8**	**-1.1**
LAKA	**Lakka**	**3.25**	**303**	P	**Pn**	**20 51 56.7**	**+0.5**
LAKA	**Lakka**	**3.25**	**303**	P	**Pn**	**20 51 56.7**	**+0.5**
NEO	**Neokhori**	**3.28**	**328**	P	**Pn**	**20 51 56.7**	**0.0**
NEO	**Neokhori**	**3.28**	**328**	P	**Pn**	**20 51 56.7**	**0.0**
XOR	**Xorichti**	**3.35**	**328**	P	**Pn**	**20 51 57.9**	**+0.4**
XOR	**Xorichti**	**3.35**	**328**	P	**Pn**	**20 51 57.9**	**+0.4**
LIA	**Limnos Island**	**3.37**	**356**	P	**Pn**	**20 51 57.0**	**-0.8**
LIA	**Limnos Island**	**3.37**	**356**	*e*PN	**Pn**	**20 51 57.5**	**-0.3**
LIA	**Limnos Island**	**3.37**	**356**	P	**Pn**	**20 51 57.0**	**-0.8**
LIA	**Limnos Island**	**3.37**	**356**	*e*Pn	**Pn**	**20 51 57.5**	**-0.3**
EFP	**Efpalio**	**3.40**	**305**	P	**Pn**	**20 51 59.0**	**+0.8**
EFP	**Efpalio**	**3.40**	**305**	P	**Pn**	**20 51 59.0**	**+0.8**
BALB	**Balikesir**	**3.64**	**31**	*e*PN	**Pn**	**20 52 00.0**	**-1.6**
BALB	**Balikesir**	**3.64**	**31**	*e*Pn	**Pn**	**20 52 00.0**	**-1.6**
GONE	**Gonen-Balikesi**	**3.92**	**26**	*e*PN	**Pn**	**20 52 03.6**	**-1.8**
GONE	**Gonen-Balikesi**	**3.92**	**26**	*e*Pn	**Pn**	**20 52 03.6**	**-1.8**
SMTH	**Samothraki Isl**	**3.93**	**1**	P	**Pn**	**20 52 04.7**	**-0.9**
SMTH	**Samothraki Isl**	**3.93**	**1**	P	**Pn**	**20 52 04.7**	**-0.9**
OUR	**Ouranopolis**	**3.97**	**343**	P	**Pn**	**20 52 06.0**	**0.0**
OUR	**Ouranopolis**	**3.97**	**343**	P	**Pn**	**20 52 06.0**	**0.0**
PLG	**Polygyros**	**4.15**	**338**	P	**Pn**	**20 52 08.4**	**-0.1**
PLG	**Polygyros**	**4.15**	**338**	P	**Pn**	**20 52 08.4**	**-0.1**
BRTR	**Keskin Array B**	**7.19**	**61**	Pn	**Pn**	**20 52 52.4**	**+1.9**
	0.3nm,0.3s,baz=243,slow=16,SNR=9.0						
MMAI	**Mount Meron Ar**	**8.90**	**110**	Pn	**Pn**	**20 53 11.3**	**-2.6**
	1.3nm,0.3s,baz=301,slow=11,SNR=7.9						
MLR	**Muntele Rosu**	**8.96**	**2**	Pn	**Pn**	**20 53 17.0**	**+2.4**
	0.0nm,0.3s,baz=243,slow=18,SNR=2.4						
EIL	**Elat**	**10.49**	**128**	Pn	**Pn**	**20 53 33.6**	**-2.0**
	0.4nm,0.3s,baz=336,slow=12,SNR=5.1						
VRAC	**Vranov**	**14.31**	**336**	Pn	**P**	**20 54 35.1**	**+0.1**
	0.2nm,0.3s,baz=151,slow=6.3,SNR=3.8						
AKASG	**Malin Array Be**	**14.42**	**10**	Pn	**P**	**20 54 36.4**	**+0.3**
	1.3nm,0.3s,

ATH	Athens Observa	2.02	316	P		Pn	21 02 07.0	-0.6
ATH	Athens Observa	2.02	316	P		Pn	21 02 07.0	-0.6
DID	Didima	2.05	299	P		Pn	21 02 07.0	-1.1
DID				S		Sn	21 02 34.1	+0.2
DID	Didima	2.05	299	*e*PN		Pn	21 02 06.8	-1.3
DID	Didima	2.05	299	P		Pn	21 02 07.0	-1.1
DID				S		Sn	21 02 34.1	+0.2
DIDY	Didyma	2.06	298	P		Pn	21 02 07.3	-0.9
DIDY				S		Sn	21 02 35.1	+1.0
DIDY	Didyma	2.06	298	P		Pn	21 02 07.3	-0.9
DIDY				S		Sn	21 02 35.1	+1.0
VLI	Veliai	2.07	276	P		Pn	21 02 07.5	-0.8
VLI				S		Sn	21 02 35.0	+0.8
VLI	Veliai	2.07	276	*e*PN		Pn	21 02 07.6	-0.8
VLI	Veliai	2.07	276	*e*Pn		Pn	21 02 07.6	-0.8
VLI				S		Sn	21 02 35.0	+0.8
ARG	Arkhangelos	2.14	98	P		Pn	21 02 08.8	-0.5
ARG	Arkhangelos	2.14	98	*e*PN		Pn	21 02 08.2	-1.1
ARG	Arkhangelos	2.14	98	*e*Pn		Pn	21 02 08.2	-1.1
ARG	Arkhangelos	2.14	98	P		Pn	21 02 08.8	-0.5
AYDN	Tasoluk	2.21	59	*i* P		Pb	21 02 14.4	+0.9
AYDN				*i* S		Sg	21 02 45.2	+0.9
AYDN	Tasoluk	2.21	59	*i* P		Pb	21 02 14.4	+0.9
AYDN				*i* S		Sg	21 02 45.2	+0.9
BLCB	Balcova	2.21	33	*e*PN		Pn	21 02 09.5	-0.8
BLCB	Balcova	2.21	33	*e*Pn		Pn	21 02 09.5	-0.8
YER	Yerkesik	2.31	74	*e*PN		Pn	21 02 12.7	+1.0
YER	Yerkesik	2.31	74	*e*Pn		Pn	21 02 12.7	+1.0
IZM	Izmir	2.33	37	*e*PN		Pn	21 02 10.8	-1.1
IZM	Izmir	2.33	37	*e*Pn		Pn	21 02 10.8	-1.1
LTK	Loutraki	2.50	307	P		Pn	21 02 13.6	-0.7
LTK	Loutraki	2.50	307	P		Pn	21 02 13.6	-0.7
DALY	Dalyan (Mu¨la	2.55	83	*e*PN		Pn	21 02 16.1	+1.2
DALY	Dalyan (Mu¨la	2.55	83	*e*Pn		Pn	21 02 16.1	+1.2
VLX	Vlachokerasia	2.63	289	P		Pn	21 02 16.0	-0.2
VLX	Vlachokerasia	2.63	289	P		Pn	21 02 16.0	-0.2
MRKA	Markates	2.64	325	P		Pn	21 02 15.6	-0.6
MRKA	Markates	2.64	325	P		Pn	21 02 15.6	-0.6
SIGR	SIGRI	2.68	6	P		Pn	21 02 15.2	-1.5
SIGR	SIGRI	2.68	6	P		Pn	21 02 15.2	-1.5
THAL	Thalero	2.71	304	P		Pn	21 02 16.7	-0.4
THAL	Thalero	2.71	304	P		Pn	21 02 16.7	-0.4
PRK	Paraskevi	2.77	12	P		Pn	21 02 16.6	-1.3
PRK	Paraskevi	2.77	12	*e*PN		Pn	21 02 16.4	-1.5
PRK	Paraskevi	2.77	12	P		Pn	21 02 16.6	-1.3
GUR	Goura	2.88	300	P		Pn	21 02 19.3	-0.3
GUR	Goura	2.88	300	P		Pn	21 02 19.3	-0.3
FETY	Fethiye	2.89	87	*e*PN		Pn	21 02 20.8	+1.2
FETY	Fethiye	2.89	87	*e*Pn		Pn	21 02 20.8	+1.2
ATAL	Atalanti	2.91	318	P		Pn	21 02 19.4	-0.5
ATAL	Atalanti	2.91	318	P		Pn	21 02 19.4	-0.5
AOS	Alonnisos	2.92	334	P		Pn	21 02 19.9	-0.2
AOS	Alonnisos	2.92	334	P		Pn	21 02 19.9	-0.2
ITM	Ithomi	2.94	284	P		Pn	21 02 19.5	-0.8
ITM	Ithomi	2.94	284	*e*PN		Pn	21 02 20.5	+0.2
ITM	Ithomi	2.94	284	P		Pn	21 02 19.5	-0.8
ITM	Ithomi	2.94	284	*e*Pn		Pn	21 02 20.5	+0.2
SMIA	Simia	2.96	323	P		Pn	21 02 20.4	-0.2
SMIA	Simia	2.96	323	P		Pn	21 02 20.4	-0.2
AKHS	Akhisar	2.97	37	*e*P		Pb	21 02 26.3	-0.2
AKHS				*i* S		Sg	21 03 10.3	+1.5
AKHS	Akhisar	2.97	37	*e*P		Pb	21 02 26.3	-0.2
AKHS				*i* S		Sg	21 03 10.3	+1.5
DSF	Desfina	3.01	309	P		Pn	21 02 20.9	-0.5
DSF	Desfina	3.01	309	P		Pn	21 02 20.9	-0.5
KLV	Kalavryta, Ach	3.06	300	P		Pn	21 02 21.9	-0.2
KLV	Kalavryta, Ach	3.06	300	P		Pn	21 02 21.9	-0.2
SKIA	Skiathos	3.08	329	P		Pn	21 02 21.4	-0.8
SKIA	Skiathos	3.08	329	P		Pn	21 02 21.4	-0.8
MANT	Manisa	3.12	50	*i* P		Pg	21 02 31.5	-1.6
MANT	Manisa	3.12	50	*i* P		Pg	21 02 31.5	-1.6
AXAR	Agios Charalam	3.17	315	P		Pn	21 02 23.6	+0.2
AXAR	Agios Charalam	3.17	315	P		Pn	21 02 23.6	+0.2
AMT	Artemida-Makis	3.19	289	P		Pn	21 02 23.2	-0.6
AMT	Artemida-Makis	3.19	289	P		Pn	21 02 23.2	-0.6
KULA	Kula-Manisa	3.19	51	*e*PN		Pn	21 02 24.6	+0.7
KULA	Kula-Manisa	3.19	51	*e*Pn		Pn	21 02 24.6	+0.7
KALE	Kalithea	3.25	306	P		Pn	21 02 24.6	0.0
KALE	Kalithea	3.25	306	P		Pn	21 02 24.6	0.0
LAKA	Lakka	3.28	302	P		Pn	21 02 24.5	-0.5
LAKA	Lakka	3.28	302	P		Pn	21 02 24.5	-0.5
TRIZ	Trizonia	3.28	305	P		Pn	21 02 25.3	+0.4
TRIZ	Trizonia	3.28	305	P		Pn	21 02 25.3	+0.4
NEO	Neokhori	3.30	328	P		Pn	21 02 24.9	-0.3
NEO	Neokhori	3.30	328	P		Pn	21 02 24.9	-0.3
XOR	Xorichti	3.36	328	P		Pn	21 02 25.6	-0.5
XOR	Xorichti	3.36	328	P		Pn	21 02 25.6	-0.5
LIA	Limnos Island	3.36	356	P		Pn	21 02 24.8	-1.3
LIA	Limnos Island	3.36	356	*e*PN		Pn	21 02 25.0	-1.1
LIA	Limnos Island	3.36	356	*e*Pn		Pn	21 02 25.0	-1.1
EFP	Efpalio	3.42	304	P		Pn	21 02 27.3	+0.4
EFP	Efpalio	3.42	304	P		Pn	21 02 27.3	+0.4
AGG	Agios Georgios	3.53	316	P		Pn	21 02 28.7	+0.3
AGG	Agios Georgios	3.53	316	P		Pn	21 02 28.7	+0.3
ELL	Elmali	3.55	85	*e*PN		Pn	21 02 29.5	+0.7
ELL	Elmali	3.55	85	*e*Pn		Pn	21 02 29.5	+0.7
MAKR	Makrakomi, Fth	3.64	314	P		Pn	21 02 30.6	+0.7
MAKR	Makrakomi, Fth	3.64	314	P		Pn	21 02 30.6	+0.7
EVR	Evrytania	3.77	310	P		Pn	21 02 32.2	+0.4
EVR	Evrytania	3.77	310	P		Pn	21 02 32.2	+0.4
SMTH	Samothraki Isl	3.92	0	P		Pn	21 02 32.5	-1.4
SMTH	Samothraki Isl	3.92	0	P		Pn	21 02 32.5	-1.4
THL	Klokotos Trika	4.08	319	P		Pn	21 02 35.9	-0.1
THL	Klokotos Trika	4.08	319	P		Pn	21 02 35.9	-0.1
PLG	Polygyros	4.15	338	P		Pn	21 02 36.6	-0.4
PLG	Polygyros	4.15	338	P		Pn	21 02 36.6	-0.4
TVSB	Tavsanli	4.27	46	*e*PN		Pn	21 02 39.6	+0.9
TVSB	Tavsanli	4.27	46	*e*Pn		Pn	21 02 39.6	+0.9
ALN	Alexandroupoli	4.37	5	P		Pn	21 02 38.6	-1.4
ALN	Alexandroupoli	4.37	5	P		Pn	21 02 38.6	-1.4
SRS	Serrai	4.81	343	P		Pn	21 02 45.1	-0.9
SRS	Serrai	4.81	343	P		Pn	21 02 45.1	-0.9
KNT	Kendrikon	5.04	337	P		Pn	21 02 49.7	+0.5
KNT	Kendrikon	5.04	337	P		Pn	21 02 49.7	+0.5
BRTR	Keskin Array B	7.16	61	Pn		Pn	21 03 20.0	+1.6
	0.1nm,0.3s,baz=228,slow=14,SNR=5.2							
BBLS	Lazići	8.67	329	*e*Pn		Pn	21 03 39.1	0.0
MMAI	Mount Meron Ar	8.87	110	Pn		Pn	21 03 39.2	-2.6
	0.8nm,0.3s,baz=306,slow=12,SNR=5.2							
MLR	Muntele Rosu	8.95	2	Pn		Pn	21 03 48.6	+5.7
	0.0nm,0.3s,baz=181,slow=9.2,SNR=3.6							
EIL	Elat	10.47	128	Pn		Pn	21 04 01.2	-2.5
	0.1nm,0.3s,baz=351,slow=18,SNR=4.0							
VRAC	Vranov	14.32	336	LR		LR	21 10 26.5	
	comp=Z,29nm,18.5s,baz=0.2,slow=37							
AKASG	Malin Array Be	14.41	10	Pn		P	21 05 04.7	+0.3
	0.9nm,0.3s,baz=119,slow=30,SNR=4.1							
GERES	GERESS Array B	15.03	329	Pn		P	21 05 11.6	+0.2
	baz=138,slow=12,SNR=5.1							
KBZ	Khabaz	15.11	56	Pn		P	21 05 14.1	+2.0
	0.1nm,0.3s,baz=263,slow=6.4,SNR=3.9							
ESDC	Sonseca Array	23.35	287	P		P	21 06 40.7	-1.4
	0.3nm,0.4s,baz=77,slow=10,SNR=5.4							
FINES	FINESS Array B	24.93	1	P		P	21 06 58.0	+1.4
	1.3nm,0.9s,baz=184,slow=6.5,SNR=2.8							
EKA	Eskdalemuir Ar	27.09	323	P		P	21 07 18.0	+1.8
	0.2nm,0.4s,baz=119,slow=9.4,SNR=4.3							
TORD	Torodi Ar. Bea	31.60	229	P		P	21 07 55.4	-1.2
	0.4nm,0.6s,baz=38,slow=8.0,SNR=4.1							
KMBO	Kilima Mbogo	39.04	161	LR		LR	21 26 09.6	
	comp=Z,51nm,21.5s,baz=99,slow=38							
MKAR	Makanchi Array	42.80	58	P		P	21 09 30.8	-0.6
	0.4nm,0.6s,baz=301,slow=5.0,SNR=7.0							
ZALV	Zalesovo Beam	43.86	47	P		P	21 09 40.5	+0.7
	0.4nm,0.4s,baz=267,slow=10,SNR=2.6							

WEL 26 21:05:03.5±0.1, 38°.55S×178°.02E, h32km±1km, ML3.5/4, 1C-2D, Error ellipse: s-maj=1.4km s-min=0.7km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CNGZ	Carnagh Statio	0.16	66	⇓P*		Pb	21 05 09.4	-0.1
CNGZ				S*		Sn	21 05 14.3	+0.5
PRGZ	Paritu Road	0.39	196	P*		Pb	21 05 12.4	0.0
MWZ	Matawai	0.44	299	⇑P*		Pb	21 05 12.7	-0.5
MWZ				S*		Sb	21 05 20.1	+0.3
MWZ				AML		AML	21 05 20.5	
MWZ				AML		AML	21 05 20.5	
MWZ				AML		AML	21 05 20.6	
PUZ	Puketiti	0.51	22	⇓P*		Pb	21 05 13.9	-0.4
PUZ				S*		Sn	21 05 22.4	0.0
PUZ				AML		AML	21 05 23.4	
KNZ	Kokohu	0.54	210	P*		Pb	21 05 14.2	-0.4
MHGZ	Mahia Peninsul	0.61	188	PN		Pb	21 05 15.6	-0.2
MHGZ				SN		Sb	21 05 24.4	+0.1
URZ	Urewera	0.77	292	PN		Pn	21 05 17.7	-0.5
URZ				AML		AML	21 05 29.8	
URZ				AML		AML	21 05 32.6	
RAHZ	Arahi	0.81	243	PN		Pn	21 05 18.4	-0.5
MXZ	Matakaoa Point	1.01	13	PN		Pn	21 05 21.2	-0.3
MXZ				AML		AML	21 05 38.2	
MXZ				AML		AML	21 05 38.5	
BKZ	Black Stump Fm	1.34	242	PN		Pn	21 05 26.0	-0.2
MCHZ	McNeill Hill	1.36	229	PN		Pn	21 05 25.6	-0.7
KAHZ	Kahuranaki	1.53	215	PN		Pn	21 05 27.3	-1.4
BHHZ	Black Hill Sta	1.79	238	PN		Pn	21 05 31.6	-0.7
PNHZ	Pukenui	1.96	225	PN		Pn	21 05 32.9	-1.8
THZ	Tophouse	5.06	229	*e*PN		Pn	21 06 12.6	-4.7

*KRSC **26** 21:23:12.0±1.3, 49°.57N×156°.86E, h5km±5km, ML4.6*
*MOS **26** 21:23:12.0±1.3, 49°.59N×155°.81E, h65km, mb4.0/8, Error ellipse: s-maj=25.3km s-min=7.7km az=72.0*
*ISCJB **26** 21:23:13.8±0.9, 49°.58N±0°.07×156°.0E±0°.1, h81km±8km, mb3.7/11, Error ellipse: s-maj=16.2km s-min=6.9km az=42.5*
*IDC **26** 21:23:17.2±2.6, 49°.64N×155°.70E, h90km±24km, mb3.5/10, mb1 3.8/14,mb1mx3.6/30,mbtmp3.5/14, MS3.2/3, Ms1 3.2/3, ms1mx2.8/33, Error ellipse: s-maj=26.6km s-min=13.3km az=138.0*

ISC 26 21:23:12.7±1.9, 49°.5N±0°.1×155°.99E±0°.09, h53km±16km, n50, σ1°.76/59, mb3.8/11, 2C-2D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	Severo-Kuril's	1.22	4	⇓*i* PN		Pn	21 23 31.1	-2.2
SKR				*i* S		Sn	21 23 46.8	-1.9
SKR				pmax	pmax			
	comp=N,290nm,0.4s							
SKR				pmax	pmax			
	comp=E,80nm,0.4s							
SKR				pmax	pmax			
	comp=Z,340nm,0.4s							
SKR				smax	smax			
	comp=N,2μm,0.3s							
SKR				smax	smax			
	comp=E,3μm,0.3s							
SKR				smax	smax			
	comp=N,2μm,0.4s							
SKR				smax	smax			
	comp=E,4μm,0.4s							
SKR	Severo-Kuril's	1.22	4	P		Pn	21 23 34.0	+0.7
SKR				S		Sn	21 23 49.7	+1.0
MIPR	Malaya Ipel'ka	2.85	10	P		Pn	21 23 56.8	+1.1
MIPR				S		Sn	21 24 29.7	+1.0
RUS	Russkaya	3.37	27	PN		Pn	21 24 03.3	+0.6
RUS				S		Sn	21 24 41.4	0.0
RUS	Russkaya	3.37	27	P		Pn	21 24 03.3	+0.6
RUS				S		Sn	21 24 41.4	0.0
PETK	Petropavlovsk-	3.80	16	PN		Pn	21 24 11.3	+2.7
PETK				pmax	pmax			
	comp=Z,6.0nm,0.3s							
PETK	Petropavlovsk-	3.80	16	P		Pn	21 24 11.3	+2.7
	comp=Z,5.6nm,0.3s,baz=172,slow=13,SNR=237							
PETK				S		Sn	21 25 02.9	+11
	comp=Z,3.9nm,0.3s,baz=158,slow=16,SNR=3.5							
PET	Petropavlovsk	3.93	24	*e*PN		Pn	21 24 12.3	+1.9
PET				*e*S		Sn	21 24 58.0	+2.8
PET				pmax	pmax			
	comp=Z,38nm,0.5s							
PET				smax	smax			
	comp=E,284nm,0.6s							
PET				smax	smax			
	comp=N,285nm,0.4s							
PET				MLR	MLR			
	comp=Z,200nm,17.0s							
PET	Petropavlovsk	3.93	24	P		Pn	21 24 11.8	+1.4
PET				S		Sn	21 24 56.1	+0.9
UGLR	Uglovaya	4.14	24	P		Pn	21 24 15.8	+2.4
KOK	Koryaka	4.17	22	P		Pn	21 24 15.9	+2.1
AVH	Avacha	4.17	23	P		Pn	21 24 16.1	+2.3
SMAR	Somma	4.18	24	P		Pn	21 24 16.0	+1.9
SDLR	Sedlovina	4.22	24	P		Pn	21 24 16.2	+1.7
SDLR				S		Sn	21 25 02.7	+0.2
NLC	Nalytchevo	4.26	28	PN		Pn	21 24 14.5	-0.4
NLC				S		Sn	21 25 00.1	-3.2
NLC	Nalytchevo	4.26	28	P		Pn	21 24 14.5	-0.4
NLC				S		Sn	21 25 00.1	-3.2
GNL	Ganaly	4.40	15	P		Pn	21 24 20.2	+3.2
SPN	Mys Shipunski	4.43	33	PN		Pn	21 24 18.1	+0.9
SPN				S		Sn	21 25 05.7	-1.7
SPN	Mys Shipunski	4.43	33	P		Pn	21 24 18.1	+0.9
SPN				S		Sn	21 25 05.7	-1.7
KII	Karymskiy	5.05	24	P		Pn	21 24 27.4	+1.6
MKZ	Mys Kozlova	6.20	33	PN		Pn	21 24 41.1	-0.4
MKZ	Mys Kozlova	6.20	33	P		Pn	21 24 41.1	-0.4
MKZ				S		Sn	21 25 47.5	-3.5
TUMR	Tumrok	6.35	22	P		Pn	21 24 46.7	+3.0
TUMR				S		Sn	21 25 56.0	+1.1
KMNR	Kamenistaya	6.80	21	P		Pn	21 24 51.5	+1.6
KIRR	Kirishev	7.01	20	P		Pn	21 24 54.6	+1.9
BZMR	Bezymyannaya	7.03	21	P		Pn	21 24 55.1	+2.1
BZWR	Bezymyannyi-We	7.05	21	P		Pn	21 24 56.1	+2.7
BZGR	Bezymyannyi-Gr	7.08	22	P		Pn	21 24 56.3	+2.6
SRDR	Sredinnyy	7.22	17	P		Pn	21 24 56.9	+1.4
KBG	Krutoberegovo	7.91	28	S		Sn	21 26 33.4	+0.5
BKI	Bering	8.38	43	S		Sn	21 26 36.5	-7.9
ASAJ	Asahikawa	10.63	245	P		Pn	21 25 46.5	+4.4
	comp=Z,1.0nm,0.3s,baz=65,slow=11,SNR=12							
ASAJ				LR		LR	21 29 14.4	
	comp=Z,125nm,20.6s,baz=346,slow=34							
FX1	Attu Island--F	11.30	66	P		Pn	21 25 51.1	-0.2
	comp=Z,1.1nm,0.3s,baz=323,slow=23,SNR=15							
FX1				S		Sn	21 27 46.2	-10
	comp=Z,11nm,0.3s,baz=35,slow=19,SNR=10							
ERM	Erimo	11.65	235	*e*PN		Pn	21 25 52.6	-3.5
USRK	Ussuriysk Arra	17.21	261	P		Pn	21 27 09.8	+0.7
	comp=Z,0.1nm,0.3s,baz=64,slow=8.8,SNR=7.4							
MJAR	Matsushiro Arr	18.27	232	P		P	21 27 22.3	+0.4
	comp=Z,0.2nm,0.3s,baz=20,slow=11,SNR=4.3							
MJAR				LR		LR	21 34 50.5	
	comp=Z,81nm,19.4s,baz=40,slow=38							
BILL	Bilibino	19.32	12	*e*P		P	21 27 33.4	+0.3
BILL				pmax	pmax			
	comp=Z,3.0nm,1.0s							
TIXI	Tiksi	25.47	340	⇓*i* P		P	21 28 32.4	-2.9
TIXI				pmax	pmax			
	comp=Z,2.0nm,1.0s							
ILAR	Eielson Array	33.22	41	P		P	21 29 44.6	+0.5
	comp=Z,0.8nm,0.5s,baz=254,slow=7.9,SNR=9.5							
INK	Inuvik	38.32	34	P		P	21 30 27.7	+0.1
	comp=Z,1.1nm,0.5s,baz=280,slow=9.2,SNR=3.7							
MKAR	Makanchi Array	47.43	296	P		P	21 31 39.9	-1.8
MKAR	Makanchi Array	47.43	296	P		P	21 31 39.9	-1.8
	comp=Z,0.3nm,0.7s,baz=55,slow=11,SNR=4.0							
CMAR	Chiang Mai Arr	54.88	257	P		P	21 32 38.8	+1.0
	comp=Z,0.8nm,0.8s,baz=23,slow=8.0,SNR=4.5							
ARCES	ARCESS Array B	55.91	341	LR		LR	21 57 36.5	
	comp=Z,29nm,21.8s,baz=200,slow=37							
PDAR	Pinedale Array	61.61	57	P		P	21 33 26.6	+1.8
	comp=Z,2.3nm,0.9s,baz=328,slow=2.3,SNR=8.9							
FINES	FINESS Array B	62.38	335	P		P	21 33 27.9	-1.5
	comp=Z,0.7nm,0.8s,baz=351,slow=9.7,SNR=3.5							
WRA	Warramunga Arr	71.73	201	P		P	21 34 28.6	-0.4
	comp=Z,0.4nm,0.6s,baz=19,slow=6.6,SNR=6.2							
TXAR	Lajitas Array	74.51	63	P		P	21 34 47.1	+1.5
	comp=Z,2.8nm,0.8s,baz=305,slow=4.4,SNR=14							
ASAR	Alice Springs	75.42	201	P		P	21 34 51.6	+0.9
	comp=Z,0.5nm,0.6s,baz=15,slow=5.7,SNR=8.8							
GERES	GERESS Array B	76.82	335	P		P	21 34 57.2	-1.3
	comp=Z,0.6nm,0.6s,baz=67,slow=7.6,SNR=4.1							

NEIC 26 21:23:13.8±0.3, 36°.36N×97°.47W, h5km, MN3.7, 57C-60D, Error ellipse: s-maj=6.2km s-min=4.5km az=179.0, Oklahoma

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SIO	Slick	1.12	123	P		Pn	21 23 36.0	-0.2
SIO				S		Sb	21 23 51.0	+0.4
TUL1	Tulsa	1.43	108	P		Pn	21 23 38.0	-2.3
TUL1				S		Sb	21 23 57.0	-2.4
TUL1	Tulsa	1.43	108	⇓P		Pn	21 23 40.3	-0.1
	baz=1.4							
TUL1				⇓S		Sn	21 23 59.5	0.0
	baz=1.4							
T31A	Randall Ranch,	1.92	293	⇓P		Pn	21 23 48.2	+1.0
	baz=1.9							
T31A				⇑Sb		Sg	21 24 16.1	+0.4
	baz=1.9							
U31A	Nine Bar Ranch	1.92	271	⇓P		Pn	21 23 48.3	+1.0
	baz=1.9,SNR=34							
U31A				⇑S		Sb	21 24 13.6	-0.2
	baz=1.9							
WMOK	Wichita Mounta	1.94	214	*e*Pn		Pn	21 23 47.5	+0.1
WMOK				*e*Sn		Sn	21 24 13.0	+0.8
V31A	Spring Creek L	2.01	254	⇑P		Pn	21 23 49.3	+0.9
	baz=2.0							
V31A				⇑S		Sb	21 24 15.5	-0.8
	baz=2.0							
S31A	Mullinville	2.05	308	⇓P		Pn	21 23 49.3	+0.4
	baz=2.0							
S31A				⇑Sb		Sg	21 24 19.5	-0.2
	baz=2.0							
W31A	Holland Ranch,	2.33	241	⇑P		Pn	21 23 53.2	+0.4
	baz=2.3							
W31A				⇓Sb		Sg	21 24 27.5	-1.3
	baz=2.3							
T30A	Plains	2.55	287	⇓P		Pn	21 23 56.4	+0.5
	baz=2.5,SNR=19							
U30A	WK&E Inc. Balk	2.57	275	⇑P		Pn	21 23 57.1	+0.9
	baz=2.6,SNR=6.4							
V30A	Spur Ranch, Mi	2.68	258	⇑P		Pn	21 23 58.7	+1.1
	baz=2.7							
X31A	McDonald Ranch	2.68	231	⇑P		Pn	21 23 58.6	+1.0
	baz=2.7							
W30A	Crocket Farms	2.79	246	⇑P		Pn	21 23 59.9	+0.8
	baz=2.8							
KSU1	Kansas State U	2.82	14	*e*Pn		Pn	21 23 59.7	+0.2
KSU1				*e*Pg		Pg	21 24 06.7	-1.2
KSU1				*e*Sn		Sb	21 24 37.2	-2.2
KSU1				*e*Sg		Sg	21 24 45.8	+1.4
Y32A	R-V Farms, Ver	2.85	215	⇓P		Pn	21 24 00.6	+0.6
	baz=2.9							
R30A	Dighton	2.95	311	⇑P		Pn	21 24 02.3	+0.9
	baz=2.9							
Q31A	Ellis	3.05	330	⇓P		Pn	21 24 03.1	+0.3
	baz=3.1							
U29A	Oasis Ranch, S	3.07	273	⇑P		Pn	21 24 03.7	+0.7
	baz=3.1							
U29A				⇓S		Sn	21 24 39.9	-0.4
	baz=3.1							
T29A	Hugoton	3.17	286	⇑P		Pn	21 24 05.1	+0.7
	baz=3.2							
T29A				⇑S		Sn	21 24 43.0	+0.2
	baz=3.2							
S29A	Ulysses	3.18	294	⇑P		Pn	21 24 05.8	+1.2
	baz=3.2							
Y31A	Rekieta Farm,	3.31	225	⇑P		Pn	21 24 07.2	+0.9
	baz=3.3							
V29A	Stinnett	3.32	263	P		Pn	21 24 07.5	+1.1
	baz=3.3,SNR=11							
X30A	Coker Ranch, T	3.38	237	⇑P		Pn	21 24 07.8	+0.6
	baz=3.4							
X30A				⇑Sb		Sb	21 24 58.8	+3.2
	baz=3.4							
Q30A	Quinter	3.41	321	⇑P		Pn	21 24 08.0	+0.4
	baz=3.4							
Z32A	Haskell	3.47	209	⇓P		Pn	21 24 08.6	+0.2
	baz=3.5							
Z32A				⇓Sb		Sb	21 25 00.4	+2.3
	baz=3.5							
P31A	Stockton	3.50	335	⇓P		Pn	21 24 09.5	+0.6
	baz=3.5							
R29A	Marienthal	3.58	306	⇑P		Pn	21 24 10.6	+0.6
	baz=3.6							
W29A	Amraillo	3.62	251	⇓P		Pn	21 24 11.1	+0.5
	baz=3.6							
MIAR	Mount Ida	3.66	119	*e*Pn		Pn	21 24 11.6	+0.5
MIAR				*e*Sn		Sn	21 24 47.0	-7.6
MIAR				*e*Sg		Sb	21 25 01.6	-2.0
AMTX	Amarillo	3.74	248	*e*Pn		Pn	21 24 13.0	+0

129A	**Stewart Farms,** baz=5.2	**5.20**	**226**	⇓P		Pn	21 24 32.3	0.0
W26A	**Owens Ranch, T** baz=5.3,SNR=9.6	**5.28**	**258**	⇓P		Pn	21 24 34.4	+1.0
332A	**Millersview** baz=5.3	**5.31**	**202**	⇓P		Pn	21 24 32.7	-1.1
230A	**Sterling City** baz=5.4	**5.39**	**215**	⇑P		Pn	21 24 34.4	-0.5
X26A	**CR and CF Fran** baz=5.5	**5.48**	**253**	⇑P		Pn	21 24 36.6	+0.3
128A	**Castleberry Fa** baz=5.6	**5.58**	**229**	⇓P		Pn	21 24 37.6	+0.1
HBAR	**Harrisburg**	**5.58**	**96**	*e*Pn		Pn	21 24 37.8	+0.4
U25A	**Circle Dot Ran** baz=5.6,SNR=12	**5.60**	**272**	⇓P		Pn	21 24 38.1	+0.1
331A	**San Angelo** baz=5.6	**5.61**	**207**	⇑P		Pn	21 24 37.6	-0.3
Z27A	**Tatum** baz=5.6	**5.62**	**239**	⇑P		Pn	21 24 38.4	+0.3
T25A	**Trinidad** baz=5.6	**5.63**	**280**	⇑P		Pn	21 24 38.5	+0.1
P26A	**Davis Ranch, A** baz=5.6	**5.64**	**306**	⇑P		Pn	21 24 39.2	+0.8
W25A	**X Bar L Ranch,** baz=5.8,SNR=7.5	**5.80**	**261**	⇓P		Pn	21 24 40.8	+0.2
432A	**Menard** baz=5.8	**5.80**	**200**	⇑P		Pn	21 24 40.4	-0.2
OGNE	**Ogallala**	**5.81**	**323**	*e*Pn		Pn	21 24 41.7	+1.0
OGNE				*e*Pg		Pg	21 25 02.4	-2.7
OGNE				*e*Sg		Sg	21 26 17.7	-2.8
V25A	**Rancho No Teng** baz=5.8,SNR=21	**5.81**	**267**	⇑P		Pn	21 24 41.0	+0.1
330A	**Mertzon** baz=5.8	**5.83**	**213**	⇓P		Pn	21 24 40.2	-0.7
M28A	**Bar X Bar Ranc** baz=5.9	**5.88**	**330**	⇓P		Pn	21 24 42.3	+0.7
N27A	**Anderson Farm,** baz=6.0	**5.96**	**320**	⇓P		Pn	21 24 43.4	+0.6
O26A	**Horse Wrangler** baz=6.0	**6.01**	**312**	⇓P		Pn	21 24 44.5	+1.0
GNAR	**Gosnell**	**6.04**	**92**	*e*Pn		Pn	21 24 45.4	+1.7
GNAR				*e*Sn		Sn	21 25 51.5	-1.7
GNAR				*e*Sg		Sg	21 26 25.0	-2.7
127A	**Arkansas Junct** baz=6.1	**6.09**	**235**	⇑P		Pn	21 24 45.1	+0.5
P25A	**Willow Gulch B** baz=6.2	**6.16**	**303**	⇑P		Pn	21 24 46.4	+0.7
Z26A	**Caprock** baz=6.0	**6.18**	**242**	⇑P		Pn	21 24 45.9	+0.1
SLM	**Saint Louis**	**6.18**	**66**	*e*Pn		Pn	21 24 45.2	-0.5
SLM				*e*Sn		Sn	21 25 52.9	-3.9
SLM				*e*Sg		Sg	21 26 25.3	-6.9
JCT	**Junction City**	**6.18**	**199**	*e*Pn		Pn	21 24 44.8	-1.0
JCT				*e*Pg		Pg	21 25 08.0	-4.3
JCT				*e*Sg		Sg	21 26 29.2	-3.2
JCT	**Junction City** baz=6.2	**6.18**	**199**	⇓P		Pn	21 24 45.2	-0.6
PARMO	**Parma**	**6.22**	**85**	*e*Pn		Pn	21 24 48.0	+1.8
PARMO				*e*Sg		Sg	21 26 29.0	-4.5
431A	**Sonora** baz=6.3	**6.24**	**206**	⇑P		Pn	21 24 46.6	0.0
430A	**Baggett Ranch,** baz=6.4	**6.39**	**211**	⇓P		Pn	21 24 48.4	-0.3
SCIA	**State Center**	**6.45**	**30**	*e*Pn		Pn	21 24 49.7	+0.3
SCIA				*e*Pg		Pg	21 25 13.9	-3.4
SCIA				*e*Sn		Sn	21 26 02.8	-0.5
SCIA				*e*Sg		Sb	21 26 30.7	+6.9
532A	**Rocksprings** baz=6.6	**6.54**	**199**	⇓P		Pn	21 24 49.3	-1.5
W24A	**Lazy 6 Ranch,** baz=6.5	**6.55**	**262**	⇓P		Pn	21 24 51.7	+0.6
SDCO	**Great Sand Dun**	**6.57**	**285**	*e*Pn		Pn	21 24 51.7	+0.3
SDCO				*e*Pg		Pb	21 25 13.8	+4.8
SDCO				*e*Sg		Sg	21 26 41.4	-4.1
531A	**Rocksprings** baz=6.7	**6.70**	**204**	⇓P		Pn	21 24 51.5	-1.3
CLNB	**Carlsbad**	**6.70**	**234**	*e*Pn		Pn	21 24 52.1	-0.8
Z25A	**Roswell** baz=6.7	**6.71**	**245**	⇓P		Pn	21 24 53.2	+0.1
SIUC	**Southern Illin**	**6.74**	**76**	*e*Sn		Sn	21 26 04.8	-5.6
SIUC				*e*Sg		Sg	21 26 43.0	-7.0
429A	**Davenport Ranc** baz=6.8	**6.81**	**214**	⇓P		Pn	21 24 52.7	-1.8
R23A	**Moffat** baz=6.9	**6.91**	**288**	⇓P		Pn	21 24 56.3	+0.2
530A	**J-C Ranch, Com** baz=7.0	**6.99**	**209**	⇓P		Pn	21 24 56.5	-0.4
428A	**Kincaid Ranch,** baz=7.1	**7.11**	**219**	⇓P		Pn	21 24 57.6	-0.9
Z24A	**Sheeppen Canyo** baz=7.2	**7.16**	**247**	⇑P		Pn	21 24 59.0	-0.5
326A	**Caldwell Ranch** baz=7.4	**7.39**	**229**	⇑P		Pn	21 25 02.2	-0.2
ECSD	**EROS Data Cent**	**7.39**	**5**	*e*Pn		Pn	21 25 01.5	-0.9
ECSD				*e*Pg		Pg	21 25 30.6	-4.8
ECSD				*e*Sn		Sn	21 26 23.3	-3.3
ECSD				*e*Sg		Sg	21 27 07.2	-3.9
427A	**Hayter Ranch,** baz=7.4	**7.40**	**224**	⇓P		Pn	21 25 02.2	-0.3
631A	**Perdido Creek** baz=7.4	**7.41**	**202**	⇓P		Pn	21 25 01.6	-0.9
225A	**Deer Hill, Car** baz=7.4	**7.42**	**237**	⇑P		Pn	21 25 03.3	+0.3
ANMO	**Albuquerque**	**7.45**	**262**	*e*Pn		Pn	21 25 03.3	-0.1
ANMO				*e*Pg		Pg	21 25 32.3	-4.5
ANMO				*e*Sg		Sg	21 26 56.5	-7.1
528A	**Cox Ranch, San** baz=7.6	**7.62**	**217**	⇑P		Pn	21 25 04.5	-1.1
HDIL	**Hopedale**	**7.66**	**54**	*e*Pn		Pn	21 25 06.4	+0.5
HDIL				*e*Sg		Sb	21 27 08.8	+10
O23A	**Lake Granby, G** baz=7.7	**7.68**	**303**	⇑P		Pn	21 25 07.1	+0.5
LPM	**Los Pinos Moun**	**7.76**	**257**	*e*Pg		Pg	21 25 38.5	-4.2
LPM				*e*Sg		Sg	21 27 16.6	-6.9
WVT	**Waverly**	**7.79**	**89**	*e*Pg		Pg	21 25 42.1	-0.9
WVT				*e*Sn		Sn	21 26 34.7	-1.7
WVT				*e*Sg		Sg	21 27 16.8	-7.1
OLIL	**Olney**	**7.81**	**70**	Pn		Pn	21 25 06.6	-1.4
OLIL				*e*Pg		Pb	21 25 36.4	+6.8
OLIL				*e*Sg		Sg	21 27 15.8	-8.7
BNM	**Barren Site**	**7.81**	**256**	*e*Pg		Pg	21 25 37.9	-5.9
BNM				*e*Sg		Sg	21 27 17.4	-7.7
PHWY	**Pilot Hill**	**7.95**	**311**	*e*Pn		Pn	21 25 10.3	-0.1
PHWY				*e*Pg		Pb	21 25 39.3	+6.9
PHWY				*e*Sn		Sn	21 26 41.1	+0.2
PHWY				*e*Sg		Sg	21 27 24.0	-5.6
325A	**Bean Ranch, Si** baz=8.0	**7.98**	**234**	⇓P		Pn	21 25 11.7	+1.1
SMCO	**Snowmass**	**8.04**	**293**	*e*Pn		Pn	21 25 12.2	+0.5
SMCO				*e*Pg		Pg	21 25 44.0	-4.2
SMCO				*e*Sg		Sg	21 27 31.0	-1.6
MNTX	**Cornudas Mount**	**8.05**	**237**	*e*Pn		Pn	21 25 10.7	-0.7
MNTX				*e*Sg		Sg	21 27 22.9	-9.3
527A	**Woodward Ranch** baz=8.1	**8.05**	**221**	⇑P		Pn	21 25 11.0	-0.7
O22A	**Kremmling** baz=8.1	**8.09**	**301**	⇓P		Pn	21 25 12.9	+0.6
628A	**Black Gap, Mar** baz=8.2	**8.23**	**215**	⇑P		Pn	21 25 13.9	0.0
324A	**Moseley Ranch,** baz=8.3	**8.27**	**236**	⇓P		Pn	21 25 14.6	0.0
JFWS	**Jewell Farm**	**8.59**	**38**	*e*Pn		Pn	21 25 16.6	-2.2
JFWS				*e*Sn		Sn	21 26 58.0	+1.9
JFWS				*e*Lg		Lg	21 27 42.5	
626A	**Big Bend Ranch** baz=8.8	**8.80**	**221**	⇓P		Pn	21 25 20.8	-0.9
RSSD	**Black Hills**	**9.23**	**329**	*e*Pn		Pn	21 25 27.9	0.0
RSSD				*e*Lg		Lg	21 28 04.8	
PV04	**Paradox Valley**	**9.33**	**286**	*e*Pn		Pn	21 25 28.6	-0.5

KRSC 26 21:38:12.8±0.9, 51°04N×157°78E, h25km±24km, ML3.8,
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.11**	**252**	P	Pn	21 38 31.0	-1.7
SKR				S	Sn	21 38 44.0	-3.2
ASAK	**Asacha**	**1.35**	**3**	P	Pb	21 38 36.9	-0.6
ASAK				S	Sb	21 38 54.5	+0.1
MIPR	**Malaya Ipel'ka**	**1.39**	**333**	P	Pn	21 38 36.3	-0.4
MIPR				S	Sn	21 38 53.3	-1.0
MTVR	**Mutnovka**	**1.47**	**10**	P	Pn	21 38 38.6	+0.7
MTVR				S	Sn	21 38 57.1	+0.7
RUS	**Russkaya**	**1.47**	**18**	P	Pn	21 38 38.1	+0.5
RUS				S	Sn	21 38 56.3	+0.3
GRL	**Gorelyy**	**1.52**	**7**	P	Pn	21 38 39.0	+0.4
GRL				S	Sn	21 38 58.1	+0.3
PET	**Petropavlovsk**	**2.06**	**15**	P	Pn	21 38 47.5	+1.7
PET				S	Sb	21 39 12.6	-2.0
UGLR	**Uglovaya**	**2.27**	**16**	P	Pn	21 38 50.4	+1.6
UGLR				S	Sn	21 39 17.5	+1.5
AVH	**Avacha**	**2.31**	**14**	P	Pn	21 38 51.4	+2.1
AVH				S	Sb	21 39 20.2	-1.7
SMAR	**Somma**	**2.31**	**15**	P	Pn	21 38 51.6	+2.0
KOK	**Koryaka**	**2.32**	**13**	P	Pn	21 38 51.6	+2.1
KOK				S	Sn	21 39 19.7	+2.5
NLC	**Nalytchevo**	**2.34**	**24**	S	Sn	21 39 16.3	-1.3
SDLR	**Sedlovina**	**2.34**	**16**	P	Pn	21 38 50.8	+0.9
SDLR				S	Sn	21 39 18.5	+0.6
KRER	**Koryakskii**	**2.34**	**14**	P	Pn	21 38 51.5	+1.5
SPN	**Mys Shipunski**	**2.48**	**33**	P	Pn	21 38 52.8	+1.2
SPN				S	Sn	21 39 22.1	+1.0
GNL	**Ganaly**	**2.66**	**2**	P	Pn	21 38 55.0	+0.8
MKZ	**Mys Kozlova**	**4.26**	**33**	P	Pn	21 39 17.2	+1.2
TUMR	**Tumrok**	**4.48**	**18**	P	Pn	21 39 20.6	+1.4

*CSEM **26** 21:44:42.1, 36°.54N×25°.53E, h2km, ML1.8/1, After THE*
THE 26 21:44:42.1, 36°.54N×25°.53E, h2km±1km, ML1.8/1, Error ellipse: s-maj=1.9km s-min=0.4km az=286.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR2	**Thira island,**	**0.12**	**220**	P	Pg	21 44 44.6	+0.1
THR2				S	Sg	21 44 46.8	+0.7
THR2	**Thira island,**	**0.12**	**220**	P	Pg	21 44 44.6	+0.1
THR2				S	Sg	21 44 46.8	+0.7
THR3	**Thira Island,**	**0.17**	**219**	P	Pg	21 44 45.9	+0.6
THR3				S	Sg	21 44 48.3	+0.8
THR3	**Thira Island,**	**0.17**	**219**	P	Pg	21 44 45.9	+0.6
THR3				S	Sg	21 44 48.3	+0.8
THR1	**Thera Island**	**0.18**	**199**	P	Pg	21 44 45.9	+0.3
THR1				S	Sg	21 44 48.4	+0.4
THR1	**Thera Island**	**0.18**	**199**	P	Pg	21 44 45.9	+0.3
THR1				S	Sg	21 44 48.4	+0.4
APE	**Apeiranthos**	**0.53**	**360**	P	Pg	21 44 52.3	0.0
APE				S	Sg	21 45 00.6	+1.3
APE	**Apeiranthos**	**0.53**	**360**	P	Pg	21 44 52.3	0.0
APE				S	Sg	21 45 00.6	+1.3
IDI	**Anoyia**	**1.35**	**203**	P	Pn	21 45 06.9	-1.2
IDI				S	Sb	21 45 26.1	0.0
IDI	**Anoyia**	**1.35**	**203**	P	Pn	21 45 06.9	-1.2
IDI				S	Sb	21 45 26.1	0.0

*ISK **26** 21:59:16.6, 36°.47N×25°.29E, h30km, ML3.1*
*ATH **26** 21:59:18.9, 36°.55N×25°.49E, h28km±2km, MD3.1/8*
*ISCJB **26** 21:59:18.7±0.4, 36°.55N±0°.02×25°.53E±0°.02, h12km±2km, mb3.1/2, Error ellipse: s-maj=3.1km s-min=2.8km az=172.7*
*IDC **26** 21:59:18.5±1.5, 36°.21N×25°.70E, h0km, mb3.2/2, mb1 3.3/5, mb1mx3.2/28, mbtmp3.2/5, ML2.8/2, Error ellipse: s-maj=33.7km s-min=26.1km az=153.0*
*CSEM **26** 21:59:18.9±0.1, 36°.52N×25°.55E, h10km, ML3.1/4, Error ellipse: s-maj=2.3km s-min=2.0km az=32.0*
*THE **26** 21:59:19.5, 36°.53N×25°.54E, h7km, ML3.1/4, Error ellipse: s-maj=0.9km s-min=0.5km az=226.0*
ISC 26 21:59:19.2±0.8, 36°.53N±0°.02×25°.54E±0°.02, h12km±5km, n130, σ0°60/167, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR2	**Thira island,**	**0.11**	**227**	P	**Pg**	**21 59 22.2**	**0.0**
THR2				S	**Sg**	**21 59 23.9**	**-0.5**
THR3	**Thira Island,**	**0.16**	**224**	P	**Pg**	**21 59 23.2**	**+0.3**
THR3	**Thira Island,**	**0.16**	**224**	P	**Pg**	**21 59 23.2**	**+0.3**
THR1	**Thera Island**	**0.17**	**202**	P	**Pg**	**21 59 23.4**	**+0.4**
THR1				S	**Sg**	**21 59 26.2**	**+0.5**
THR1	**Thera Island**	**0.17**	**202**	P	**Pg**	**21 59 23.4**	**+0.4**
APE	**Apeiranthos**	**0.54**	**359**	*e*PG	**Pg**	**21 59 29.8**	**0.0**
APE				*e*SG	**Sb**	**21 59 39.1**	**+0.7**
APE	**Apeiranthos**	**0.54**	**359**	P	**Pg**	**21 59 29.6**	**-0.2**
APE				S	**Sg**	**21 59 37.7**	**+0.7**
APE	**Apeiranthos**	**0.54**	**359**	*e*PN	**Pg**	**21 59 29.6**	**-0.2**
APE				*e*SN	**Sb**	**21 59 38.7**	**+0.3**
APE	**Apeiranthos**	**0.54**	**359**	*e*Pg	**Pg**	**21 59 29.8**	**0.0**
APE				S	**Sg**	**21 59 37.7**	**+0.7**
APE				*e*Sn	**Sb**	**21 59 38.7**	**+0.3**
APE				*e*Sg	**Sb**	**21 59 39.1**	**+0.7**
NPS	**Neapolis**	**1.26**	**177**	P	**Pn**	**21 59 42.0**	**-0.6**
NPS				S	**Sn**	**21 59 59.9**	**+0.4**
NPS	**Neapolis**	**1.26**	**177**	*e*PB	**Pn**	**21 59 41.8**	**-0.8**
NPS				*e*SN	**Sg**	**22 00 00.2**	**+0.4**
NPS	**Neapolis**	**1.26**	**177**	P	**Pn**	**21 59 42.0**	**-0.6**
NPS				S	**Sn**	**21 59 59.9**	**+0.4**
NIS1	**Nisyros Isl.**	**1.32**	**86**	P	**Pn**	**21 59 44.9**	**+0.3**
NIS1	**Nisyros Isl.**	**1.32**	**86**	*e*PN	**Pb**	**21 59 44.3**	**+0.4**
NIS1	**Nisyros Isl.**	**1.32**	**86**	*e*Pn	**Pb**	**21 59 44.3**	**+0.4**
NIS1	**Nisyros Isl.**	**1.32**	**86**	P	**Pg**	**21 59 44.9**	**+0.3**
IDI	**Anoyia**	**1.34**	**203**	P	**Pn**	**21 59 43.2**	**-0.6**
IDI				S	**Sn**	**22 00 01.7**	**+0.1**
IDI	**Anoyia**	**1.34**	**203**	P	**Pn**	**21 59 43.2**	**-0.6**
IDI				S	**Sn**	**22 00 01.7**	**+0.1**
LAST	**Lasithi**	**1.36**	**182**	P	**Pn**	**21 59 43.5**	**-0.6**
LAST				S	**Sg**	**22 00 03.5**	**+0.4**
LAST	**Lasithi**	**1.36**	**182**	P	**Pn**	**21 59 43.5**	**-0.6**
ZKR	**Zakros**	**1.51**	**158**	P	**Pn**	**21 59 46.4**	**+0.4**
ZKR	**Zakros**	**1.51**	**158**	P	**Pn**	**21 59 46.4**	**+0.4**
BODT	**Bodrum**	**1.52**	**69**	*e*PN	**Pn**	**21 59 45.3**	**-0.9**
BODT				*e*SN	**Sn**	**22 00 06.2**	**+0.3**
BODT	**Bodrum**	**1.52**	**69**	*e*Pn	**Pn**	**21 59 45.3**	**-0.9**
BODT				*e*Sn	**Sn**	**22 00 06.2**	**+0.3**
VAM	**Vamos**	**1.56**	**225**	P	**Pn**	**21 59 46.3**	**-0.4**
VAM				S	**Sn**	**22 00 07.1**	**+0.3**
VAM	**Vamos**	**1.56**	**225**	*e*PN	**Pn**	**21 59 46.3**	**-0.4**
VAM	**Vamos**	**1.56**	**225**	*e*Pn	**Pn**	**21 59 46.3**	**-0.4**
VAM				S	**Sn**	**22 00 07.1**	**+0.3**
SMG	**Samos**	**1.57**	**41**	P	**Pn**	**21 59 46.8**	**-0.1**
SMG				S	**Sn**	**22 00 07.5**	**+0.3**
SMG	**Samos**	**1.57**	**41**	*e*PN	**Pn**	**21 59 46.9**	**0.0**
SMG	**Samos**	**1.57**	**41**	P	**Pn**	**21 59 46.8**	**-0.1**
SMG				S	**Sn**	**22 00 07.5**	**+0.3**
SIVA	**Sivas**	**1.62**	**202**	P	**Pn**	**21 59 47.3**	**-0.2**
SIVA	**Sivas**	**1.62**	**202**	P	**Pn**	**21 59 47.3**	**-0.2**
KARP	**Karpathos**	**1.64**	**126**	P	**Pn**	**21 59 47.1**	**-0.7**
KARP				S	**Sn**	**22 00 09.0**	**+0.2**
KARP	**Karpathos**	**1.64**	**126**	*e*PN	**Pn**	**21 59 48.5**	**+0.7**
KARP	**Karpathos**	**1.64**	**126**	P	**Pn**	**21 59 47.1**	**-0.7**
KARP	**Karpathos**	**1.64**	**126**	*e*Pn	**Pn**	**21 59 48.5**	**+0.7**
KARP				S	**Sn**	**22 00 09.0**	**+0.2**
DAT	**Datca**	**1.65**	**82**	*e*PN	**Pn**	**21 59 47.0**	**-1.0**
DAT	**Datca**	**1.65**	**82**	*e*Pn	**Pn**	**21 59 47.1**	**-1.0**
MRMA	**Marmari**	**1.79**	**329**	P	**Pn**	**21 59 49.9**	**+0.1**
MRMA				S	**Sn**	**22 00 12.2**	**-0.3**
MRMA	**Marmari**	**1.79**	**329**	P	**Pn**	**21 59 49.9**	**+0.1**
MRMA				S	**Sn**	**22 00 12.2**	**-0.3**
CHOS	**Chios island**	**1.90**	**12**	P	**Pn**	**21 59 51.2**	**-0.3**
CHOS	**Chios island**	**1.90**	**12**	*e*PN	**Pn**	**21 59 51.1**	**-0.4**
CHOS	**Chios island**	**1.90**	**12**	P	**Pn**	**21 59 51.2**	**-0.3**
ANKY	**Antikythira Is**	**1.93**	**251**	P	**Pn**	**21 59 51.9**	**+0.2**
ANKY				S	**Sn**	**22 00 15.9**	**+0.1**
ANKY	**Antikythira Is**	**1.93**	**251**	*e*PB	**Pn**	**21 59 51.5**	**-0.2**
ANKY	**Antikythira Is**	**1.93**	**251**	*e*Pb	**Pn**	**21 59 51.5**	**-0.2**
ANKY	**Antikythira Is**	**1.93**	**251**	P	**Pn**	**21 59 51.9**	**+0.2**
ANKY				S	**Sn**	**22 00 15.9**	**+0.1**
MLSB	**Milas**	**1.95**	**66**	*e*PN	**Pn**	**21 59 51.8**	**-0.3**
MLSB	**Milas**	**1.95**	**66**	*e*Pn	**Pn**	**21 59 51.8**	**-0.3**
ATHU	**Athens Univers**	**2.01**	**316**	P	**Pn**	**21 59 52.6**	**-0.3**
ATHU				S	**Sn**	**22 00 18.0**	**+0.1**
ATHU	**Athens Univers**	**2.01**	**316**	P	**Pn**	**21 59 52.6**	**-0.3**
ATHU				S	**Sn**	**22 00 18.0**	**+0.1**
PTL	**Penteli**	**2.02**	**319**	P	**Pn**	**21 59 53.0**	**-0.1**
PTL				S	**Sn**	**22 00 19.0**	**+0.7**
PTL	**Penteli**	**2.02**	**319**	P	**Pn**	**21 59 53.0**	**-0.1**
PTL				S	**Sn**	**22 00 19.0**	**+0.7**
KYTH	**Kithira**	**2.03**	**264**	P	**Pn**	**21 59 53.2**	**0.0**
KYTH	**Kithira**	**2.03**	**264**	P	**Pn**	**21 59 53.2**	**0.0**
ATH	**Athens Observa**	**2.05**	**315**	P	**Pn**	**21 59 53.4**	**0.0**
ATH				S	**Sn**	**22 00 20.3**	**+1.4**
ATH	**Athens Observa**	**2.05**	**315**	P	**Pn**	**21 59 53.4**	**0.0**
ATH				S	**Sn**	**22 00 20.3**	**+1.4**
DID	**Didima**	**2.09**	**299**	P	**Pn**	**21 59 53.5**	**-0.5**
DID	**Didima**	**2.09**	**299**	*e*PN	**Pn**	**21 59 53.4**	**-0.5**
DID	**Didima**	**2.09**	**299**	P	**Pn**	**21 59 53.5**	**-0.5**
DIDY	**Didyma**	**2.09**	**298**	P	**Pn**	**21 59 53.6**	**-0.5**
DIDY				S	**Sn**	**22 00 21.0**	**+0.9**
DIDY	**Didyma**	**2.09**	**298**	P	**Pn**	**21 59 53.6**	**-0.5**
DIDY				S	**Sn**	**22 00 21.0**	**+0.9**
VLI	**Veliai**	**2.10**	**276**	P	**Pn**	**21 59 54.0**	**-0.2**
VLI				S	**Sn**	**22 00 20.6**	**+0.4**
VLI	**Veliai**	**2.10**	**276**	*e*PB	**Pn**	**21 59 53.9**	**-0.2**
VLI	**Veliai**	**2.10**	**276**	P	**Pn**	**21 59 54.0**	**-0.2**
VLI				S	**Sn**	**22 00 20.6**	**+0.4**
ARG	**Arkhangelos**	**2.11**	**98**	P	**Pn**	**21 59 55.4**	**+1.1**
ARG	**Arkhangelos**	**2.11**	**98**	*e*PN	**Pn**	**21 59 54.8**	**+0.5**
ARG	**Arkhangelos**	**2.11**	**98**	*e*Pn	**Pn**	**21 59 54.8**	**+0.5**
ARG	**Arkhangelos**	**2.11**	**98**	P	**Pn**	**21 59 55.4**	**+1.1**
BLCB	**Balcova**	**2.21**	**32**	*e*PN	**Pn**	**21 59 53.8**	**-1.8**
BLCB	**Balcova**	**2.21**	**32**	*e*Pn	**Pn**	**21 59 53.8**	**-1.8**
YER	**Yerkesik**	**2.28**	**74**	*e*PN	**Pn**	**21 59 56.1**	**-0.6**
YER	**Yerkesik**	**2.28**	**74**	*e*Pn	**Pn**	**21 59 56.1**	**-0.6**
IZM	**Izmir**	**2.32**	**36**	*e*PN	**Pn**	**21 59 56.4**	**-0.8**
IZM	**Izmir**	**2.32**	**36**	*e*Pn	**Pn**	**21 59 56.4**	**-0.8**
DALY	**Dalyan (Mu˘la**	**2.52**	**82**	*e*PN	**Pn**	**21 59 59.3**	**-0.6**
DALY	**Dalyan (Mu˘la**	**2.52**	**82**	*e*Pn	**Pn**	**21 59 59.3**	**-0.6**
LTK	**Loutraki**	**2.54**	**307**	P	**Pn**	**21 59 59.9**	**-0.3**
LTK	**Loutraki**	**2.54**	**307**	P	**Pn**	**21 59 59.9**	**-0.3**
DYR	**Agios Nikonas**	**2.59**	**276**	P	**Pn**	**22 00 01.3**	**+0.4**
DYR	**Agios Nikonas**	**2.59**	**276**	P	**Pn**	**22 00 01.3**	**+0.4**
MRKA	**Markates**	**2.67**	**325**	P	**Pn**	**22 00 01.5**	**-0.5**
MRKA				S	**Sn**	**22 00 34.4**	**+0.1**
MRKA	**Markates**	**2.67**	**325**	P	**Pn**	**22 00 01.5**	**-0.5**
MRKA				S	**Sn**	**22 00 34.4**	**+0.1**
SIGR	**SIGRI**	**2.69**	**5**	P	**Pn**	**22 00 01.8**	**-0.5**
SIGR	**SIGRI**	**2.69**	**5**	P	**Pn**	**22 00 01.8**	**-0.5**
PRK	**Paraskevi**	**2.78**	**12**	P	**Pn**	**22 00 03.0**	**-0.4**
PRK	**Paraskevi**	**2.78**	**12**	*e*PN	**Pn**	**22 00 03.3**	**-0.1**
PRK	**Paraskevi**	**2.78**	**12**	P	**Pn**	**22 00 03.0**	**-0.4**
PRK	**Paraskevi**	**2.78**	**12**	*e*Pn	**Pn**	**22 00 03.3**	**-0.1**
FETY	**Fethiye**	**2.86**	**87**	*e*PN	**Pn**	**22 00 04.0**	**-0.6**
FETY	**Fethiye**	**2.86**	**87**	*e*Pn	**Pn**	**22 00 04.0**	**-0.6**
GUR	**Goura**	**2.91**	**300**	P	**Pn**	**22 00 05.9**	**+0.5**
GUR	**Goura**	**2.91**	**300**	P	**Pn**	**22 00 05.9**	**+0.5**
ATAL	**Atalanti**	**2.94**	**318**	P	**Pn**	**22 00 05.8**	**0.0**
ATAL	**Atalanti**	**2.94**	**318**	P	**Pn**	**22 00 05.8**	**0.0**
AOS	**Alonnisos**	**2.95**	**334**	P	**Pn**	**22 00 06.1**	**+0.3**
AOS	**Alonnisos**	**2.95**	**334**	P	**Pn**	**22 00 06.1**	**+0.3**
ITM	**Ithomi**	**2.97**	**284**	*e*PN	**Pn**	**22 00 06.9**	**+0.8**
ITM	**Ithomi**	**2.97**	**284**	*e*Pn	**Pn**	**22 00 06.9**	**+0.8**
SMIA	**Simia**	**2.99**	**323**	P	**Pn**	**22 00 06.8**	**+0.4**
SMIA	**Simia**	**2.99**	**323**	P	**Pn**	**22 00 06.8**	**+0.4**
DSF	**Desfina**	**3.05**	**309**	P	**Pn**	**22 00 06.8**	**-0.4**
DSF	**Desfina**	**3.05**	**309**	P	**Pn**	**22 00 06.8**	**-0.4**
KLV	**Kalavryta, Ach**	**3.10**	**300**	P	**Pn**	**22 00 08.4**	**+0.5**
KLV	**Kalavryta, Ach**	**3.10**	**300**	P	**Pn**	**22 00 08.4**	**+0.5**
AXAR	**Agios Charalam**	**3.20**	**315**	P	**Pn**	**22 00 09.2**	**0.0**
AXAR	**Agios Charalam**	**3.20**	**315**	P	**Pn**	**22 00 09.2**	**0.0**
KALE	**Kalithea**	**3.28**	**306**	P	**Pn**	**22 00 10.1**	**-0.4**
KALE	**Kalithea**	**3.28**	**306**	P	**Pn**	**22 00 10.1**	**-0.4**
LAKA	**Lakka**	**3.31**	**302**	P	**Pn**	**22 00 11.6**	**+0.8**
LAKA	**Lakka**	**3.31**	**302**	P	**Pn**	**22 00 11.6**	**+0.8**
TRIZ	**Trizonia**	**3.31**	**305**	P	**Pn**	**22 00 11.3**	**+0.5**
TRIZ	**Trizonia**	**3.31**	**305**	P	**Pn**	**22 00 11.3**	**+0.5**
XOR	**Xorichti**	**3.39**	**328**	P	**Pn**	**22 00 12.2**	**+0.3**
XOR	**Xorichti**	**3.39**	**328**	P	**Pn**	**22 00 12.2**	**+0.3**
AGG	**Agios Georgios**	**3.56**	**315**	P	**Pn**	**22 00 15.2**	**+1.0**
AGG	**Agios Georgios**	**3.56**	**315**	P	**Pn**	**22 00 15.2**	**+1.0**
**MA

WEL 26 22:04:05.7±0.1, 38°.96S × 175°.75E, h5km, ML2.8/20, 11C-5D, Error ellipse: s-maj=0.9km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KATZ	**Kakaramea**	**0.05**	**245**	⇑P*	Pg	22 04 07.5	+0.3
KATZ				S*	Sg	22 04 08.9	+0.6
KATZ				AML	AML	22 04 11.2	
RITZ	**Rihia Road**	**0.09**	**106**	⇑PG	Pg	22 04 07.7	0.0
RITZ				AML	AML	22 04 12.5	
RITZ				AML	AML	22 04 12.8	
RATZ	**Rangitukua**	**0.09**	**10**	⇓PG	Pg	22 04 08.0	+0.3
RATZ				AML	AML	22 04 11.7	
RATZ				AML	AML	22 04 15.8	
KRVZ	**Karewarewa**	**0.16**	**211**	⇓PG	Pg	22 04 09.5	+0.3
KRVZ				SG	Sg	22 04 12.4	+0.9
KRVZ				AML	AML	22 04 13.1	
WTVZ	**West Tongariro**	**0.20**	**218**	⇑PG	Pg	22 04 10.3	+0.4
WTVZ				AML	AML	22 04 14.8	
WTVZ				AML	AML	22 04 17.4	
OTVZ	**Oturere**	**0.22**	**198**	⇓PG	Pg	22 04 10.6	+0.3
OTVZ				AML	AML	22 04 14.3	
OTVZ				AML	AML	22 04 14.8	
WATZ	**Wairara**	**0.25**	**357**	⇓PG	Pg	22 04 11.1	+0.5
WATZ				AML	AML	22 04 15.3	
WATZ				AML	AML	22 04 15.5	
NGZ	**Ngauruhoe**	**0.25**	**208**	⇓PG	Pg	22 04 11.2	+0.3
NGZ				SG	Sg	22 04 14.7	+0.4
NGZ				AML	AML	22 04 18.7	
TWVZ	**Taurewa**	**0.27**	**244**	⇑PG	Pg	22 04 11.5	+0.3
TWVZ				AML	AML	22 04 15.8	
HATZ	**Hinemaiaia**	**0.27**	**77**	⇑PG	Pg	22 04 10.8	-0.3
HATZ				AML	AML	22 04 15.0	
HATZ				AML	AML	22 04 15.3	
WPVZ	**Whakapapa**	**0.30**	**212**	PG	Pg	22 04 11.9	+0.2
WPVZ				AML	AML	22 04 18.4	
WPVZ				AML	AML	22 04 19.4	
TUVZ	**Tukino**	**0.32**	**194**	PG	Pg	22 04 12.5	+0.3
TUVZ				AML	AML	22 04 18.1	
TUVZ				AML	AML	22 04 20.7	
WHTZ	**Whakaora**	**0.33**	**29**	PG	Pg	22 04 13.0	+0.8
FWVZ	**Far West T-bar**	**0.34**	**207**	⇑PG	Pg	22 04 12.8	+0.2
FWVZ				AML	AML	22 04 21.2	
PKVZ	**Pokaka**	**0.46**	**223**	PG	Pg	22 04 14.8	+0.1
PKVZ				AML	AML	22 04 27.0	
PKVZ				AML	AML	22 04 27.8	
MTVZ	**Mangateitei**	**0.48**	**207**	PG	Pg	22 04 15.5	+0.3
MTVZ				AML	AML	22 04 27.2	
MTVZ				AML	AML	22 04 29.4	
BHHZ	**Black Hill Sta**	**0.59**	**156**	⇑PG	Pg	22 04 17.0	-0.1
BKZ	**Black Stump Fm**	**0.61**	**110**	⇑P*	Pg	22 04 17.6	-0.1
BKZ				AML	AML	22 04 28.5	
BKZ				AML	AML	22 04 29.0	
VRZ	**Vera Road**	**0.79**	**257**	P*	Pg	22 04 21.1	+0.2
VRZ				AML	AML	22 04 35.0	
VRZ				AML	AML	22 04 36.4	
HIZ	**Hauiti**	**0.83**	**302**	⇑P*	Pg	22 04 21.8	+0.2
HIZ				AML	AML	22 04 36.7	
HIZ				AML	AML	22 04 36.8	
NMHZ	**Naumai**	**0.83**	**100**	P*	Pb	22 04 22.4	-0.4
PNHZ	**Pukenui**	**1.02**	**160**	⇑P*	Pg	22 04 25.4	0.0
RAHZ	**Arahi**	**1.04**	**88**	P*	Pb	22 04 26.2	-0.1
TSZ	**Takapari Road**	**1.11**	**172**	⇑P*	Pg	22 04 27.1	-0.1
PKE	**Pukeiti**	**1.39**	**260**	AML	AML	22 04 54.7	
MWZ	**Matawai**	**1.52**	**67**	AML	AML	22 04 59.8	

WEL 26 22:04:22.8±0.1, 38°.95S × 175°.77E, h5km, ML2.7/16, 4C, Error ellipse: s-maj=0.5km s-min=0.4km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KATZ	**Kakaramea**	**0.07**	**250**	⇑PG	Pg	22 04 24.7	+0.2
KATZ				SG	Sg	22 04 26.1	+0.4
KATZ				AML	AML	22 04 27.2	
RITZ	**Rihia Road**	**0.07**	**110**	⇑P*	Pg	22 04 25.0	+0.6
RITZ				AML	AML	22 04 28.4	
RITZ				AML	AML	22 04 28.8	
RATZ	**Rangitukua**	**0.09**	**359**	PG	Pg	22 04 25.6	+0.9
RATZ				AML	AML	22 04 28.4	
RATZ				AML	AML	22 04 29.8	
KRVZ	**Karewarewa**	**0.17**	**216**	PG	Pg	22 04 26.9	+0.4
KRVZ				AML	AML	22 04 30.4	
KRVZ				AML	AML	22 04 31.2	
WTVZ	**West Tongariro**	**0.22**	**221**	PG	Pg	22 04 27.6	+0.4
WTVZ				AML	AML	22 04 31.6	
WTVZ				AML	AML	22 04 32.4	
OTVZ	**Oturere**	**0.23**	**202**	PG	Pg	22 04 27.9	+0.5
OTVZ				AML	AML	22 04 33.0	
OTVZ				AML	AML	22 04 34.5	
WATZ	**Wairara**	**0.25**	**353**	PG	Pg	22 04 28.0	+0.3
WATZ				AML	AML	22 04 32.6	
WATZ				AML	AML	22 04 32.8	
HATZ	**Hinemaiaia**	**0.26**	**76**	⇑PG	Pg	22 04 28.2	+0.3
HATZ				AML	AML	22 04 32.2	
HATZ				AML	AML	22 04 32.3	
NGZ	**Ngauruhoe**	**0.26**	**211**	AML	AML	22 04 32.6	
NGZ				AML	AML	22 04 33.3	
TWVZ	**Taurewa**	**0.29**	**246**	⇑PG	Pg	22 04 28.8	+0.3
TWVZ				AML	AML	22 04 33.2	
TWVZ				AML	AML	22 04 34.0	
WPVZ	**Whakapapa**	**0.31**	**215**	PG	Pg	22 04 29.4	+0.5
WPVZ				AML	AML	22 04 34.8	
WPVZ				AML	AML	22 04 35.3	
TUVZ	**Tukino**	**0.33**	**196**	AML	AML	22 04 35.8	
TUVZ				AML	AML	22 04 36.5	
FWVZ	**Far West T-bar**	**0.35**	**210**	AML	AML	22 04 36.5	
FWVZ				AML	AML	22 04 38.2	
BKZ	**Black Stump Fm**	**0.60**	**111**	AML	AML	22 04 43.8	
BKZ				AML	AML	22 04 46.3	
VRZ	**Vera Road**	**0.81**	**257**	AML	AML	22 04 53.8	
HIZ	**Hauiti**	**0.84**	**301**	AML	AML	22 04 53.8	
HIZ				AML	AML	22 04 54.1	

IDC 26 22:09:04.8±1.3, 36°.28N × 68°.05E, h0km, mb3.6/3, mb1 3.6/8, mb1mx3.4/32, mbtmp3.6/8, ML3.3/4, 2C-2D, Error ellipse: s-maj=29.8km s-min=17.6km az=131.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**7.08**	**15**	⇑Pn	Pn	22 10 49.2	-0.4
	0.8nm,0.4s,baz=238,slow=32,SNR=17						
KK31				⇑Sn	Sn	22 12 05.2	-5.6
	1.6nm,0.5s,baz=201,slow=15,SNR=4.2						
KK31				⇓Lg	Lg	22 12 39.9	
	11nm,0.8s,baz=200,slow=28,SNR=4.6						
AAK	**Ala-Archa**	**8.07**	**36**	Pn	Pn	22 11 03.8	+0.3
	0.5nm,0.3s,baz=270,slow=2.0,SNR=2.1						
AAK				Sn	Sn	22 12 36.6	+1.1
	0.5nm,0.3s,baz=198,slow=16,SNR=2.6						
TKM2	**Tokmak 2**	**8.82**	**39**	⇓Pn	Pn	22 11 15.1	+1.2
	2.8nm,0.6s						
MKAR	**Makanchi Array**	**14.95**	**41**	Pn	Pn	22 12 36.6	-0.7
	baz=228,slow=13,SNR=6.7						
AKTO	**Aktyubinsk**	**15.90**	**336**	Pn	Pn	22 12 46.8	-3.0
	0.1nm,0.3s,baz=135,slow=17,SNR=3.2						
KURBB	**Kurchatov Arra**	**16.21**	**25**	Pn	Pn	22 12 48.9	-4.9
	0.0nm,0.3s,baz=213,slow=12,SNR=3.1						
BVAR	**Borovoye Array**	**16.82**	**5**	Pn	Pn	22 12 57.2	-4.5
	0.2nm,0.3s,baz=183,slow=13,SNR=5.1						
ZALV	**Zalesovo Beam**	**21.17**	**28**	P	P	22 13 50.8	-0.6
	1.8nm,0.5s,baz=226,slow=9.2,SNR=11						
TORD	**Torodi Ar. Bea**	**63.33**	**267**	P	P	22 19 35.8	-0.2
	0.4nm,0.6s,baz=49,slow=5.8,SNR=9.6						
WRA	**Warramunga Arr**	**83.92**	**120**	P	P	22 21 37.2	+0.3
	0.3nm,0.7s,baz=321,slow=4.8,SNR=6.4						

CSEM ***26*** *22:14:08.2, 36°.55N × 25°.48E, h4km ± 1km,* **ML2.4/1, After THE**
THE 26 22:14:08.2, 36°.55N × 25°.48E, h4km ± 1km, ML2.4/1, Error ellipse: s-maj=1.7km s-min=0.5km az=273.0, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THR2	**Thira island,**	**0.11**	**200**	P	Pg	22 14 10.7	+0.3
THR2				S	Sg	22 14 12.7	+0.8
THR2	**Thira island,**	**0.11**	**200**	P	Pg	22 14 10.7	+0.3
THR2				S	Sg	22 14 12.7	+0.8
THR3	**Thira Island,**	**0.15**	**205**	P	Pg	22 14 11.7	+0.5
THR3				S	Sg	22 14 14.3	+1.0
THR3	**Thira Island,**	**0.15**	**205**	P	Pg	22 14 11.7	+0.5
THR3				S	Sg	22 14 14.3	+1.0
THR1	**Thera Island**	**0.18**	**185**	P	Pg	22 14 11.9	+0.1
THR1				S	Sg	22 14 14.6	+0.4
THR1	**Thera Island**	**0.18**	**185**	P	Pg	22 14 11.9	+0.1
THR1				S	Sg	22 14 14.6	+0.4
APE	**Apeiranthos**	**0.52**	**4**	P	Pg	22 14 18.2	-0.1
APE				S	Sb	22 14 26.6	-1.3
APE	**Apeiranthos**	**0.52**	**4**	P	Pg	22 14 18.2	-0.1
APE				S	Sb	22 14 26.6	-1.3
NPS	**Neapolis**	**1.29**	**175**	P	Pg	22 14 31.4	-1.6
NPS				S	Sb	22 14 50.3	+0.3
NPS	**Neapolis**	**1.29**	**175**	P	Pg	22 14 31.4	-1.6
NPS				S	Sb	22 14 50.3	+0.3
IDI	**Anoyia**	**1.35**	**201**	P	Pn	22 14 32.0	-1.9
IDI				S	Sg	22 14 51.1	-0.6
IDI	**Anoyia**	**1.35**	**201**	P	Pn	22 14 32.0	-1.9
IDI				S	Sg	22 14 51.1	-0.6
LAST	**Lasithi**	**1.39**	**180**	P	Pn	22 14 32.7	-1.7
LAST				S	Sb	22 14 52.9	0.0
LAST	**Lasithi**	**1.39**	**180**	P	Pn	22 14 32.7	-1.7
LAST				S	Sb	22 14 52.9	0.0
VAM	**Vamos**	**1.54**	**223**	P	Pn	22 14 34.8	-1.7
VAM	**Vamos**	**1.54**	**223**	P	Pn	22 14 34.8	-1.7
ZKR	**Zakros**	**1.55**	**157**	P	Pn	22 14 35.1	-1.5
ZKR	**Zakros**	**1.55**	**157**	P	Pn	22 14 35.1	-1.5
SIVA	**Sivas**	**1.62**	**200**	P	Pn	22 14 37.1	-0.4
SIVA	**Sivas**	**1.62**	**200**	P	Pn	22 14 37.1	-0.4
CHOS	**Chios island**	**1.89**	**14**	P	Pn	22 14 40.3	-1.1
CHOS	**Chios island**	**1.89**	**14**	P	Pn	22 14 40.3	-1.1
PTL	**Penteli**	**1.98**	**320**	P	Pn	22 14 41.5	-1.0
PTL	**Penteli**	**1.98**	**320**	P	Pn	22 14 41.5	-1.0
DID	**Didima**	**2.03**	**299**	P	Pn	22 14 41.6	-1.7
DID	**Didima**	**2.03**	**299**	P	Pn	22 14 41.6	-1.7
VLI	**Veliai**	**2.05**	**275**	P	Pn	22 14 42.6	-0.9
VLI	**Veliai**	**2.05**	**275**	P	Pn	22 14 42.6	-0.9

NSSC ***26*** *22:14:42.4±8.3, 38°.07N × 25°.87E, h5km, ML3.9*
DDA ***26*** *22:14:46.1, 36°.47N × 25°.24E, h5km, MD4.4*
IDC ***26*** *22:14:51.3±0.5, 36°.59N × 25°.51E, h0km, mb4.5/26, mb1 4.5/32, mb1mx4.5/38, mbtmp4.4/32, ML4.2/5, MS3.5/19, Ms1 3.5/19, ms1mx3.3/40, Error ellipse: s-maj=11.8km s-min=11.2km az=143.0*
ISK ***26*** *22:14:51.8, 36°.51N × 25°.21E, h34km, ML4.5*
ISCJB ***26*** *22:14:52.6±0.3, 36°.53N±0°.01 × 25°.45E±0°.01, h18km±2km, mb4.6/107, MS3.7/22, Error ellipse: s-maj=2.3km s-min=1.5km az=10.7*
ATH ***26*** *22:14:52.2, 36°.55N × 25°.42E, h18km±2km, MD3.9/52, ML4.6*
BJI ***26*** *22:14:52.3, 36°.74N × 24°.95E, h34km, mB4.9/15, mb4.6/21, Ms4.7/9, Ms7 4.4/10*
PDG ***26*** *22:14:52.8±0.4, 36°.52N × 25°.50E, h19km, ML4.4/8, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
THE ***26*** *22:14:53.5, 36°.54N × 25°.52E, h4km ± 1km, ML4.7/5, Error ellipse: s-maj=1.1km s-min=0.5km az=243.0*
CSEM ***26*** *22:14:53.6±0.1, 36°.50N × 25°.48E, h15km, mb4.6/85, Ms3.3, Mw3.9, Error ellipse: s-maj=2.2km s-min=1.5km az=18.0*
NEIC ***26*** *22:14:53.5, 36°.54N × 25°.52E, h4km, mb4.7/77, ML4.7(THE), ML4.5(ISK), After THE.*
NEIC Felt [IV] at Oia and Thira. Also felt at Iraklion, Methoni, Mikonos and Paros.
MOS ***26*** *22:14:54.9±1.0, 36°.60N × 25°.42E, h33km, mb4.8/56, Error ellipse: s-maj=4.5km s-min=2.6km az=112.6*
SFS ***26*** *22:14:57.0, 36°.53N × 25°.41E, h41km, ML4.6*
PDA ***26*** *22:14:57.1, 36°.53N × 25°.41E, h40km, mb4.6*
NIC ***26*** *22:14:58.8±0.4, 36°.59N × 25°.95E, h25km, mb4.4, ML3.9, MW3.9*
BEO ***26*** *22:15:02.8, 36°.53N × 25°.77E, h0km*
HLW ***26*** *22:15:02.0, 35°.91N × 26°.05E, h12km ± 13km, Md4.0, Ml3.9*
SZGRF ***26*** *22:15:10.1, 37°.68N × 23°.74E, h33km, Southern Greece*

ISC 26 22:14:53.4±0.6, 36°.52N±0°.02 × 25°.50E±0°.02, h13km±3km, n1396, σ1924/1477, mb4.7/107, MS3.6/22, 47C-53D, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THR2	**Thira island,**	**0.09**	**213**	P	**Pg**	**22 14 56.0**	**-0.3**
THR2	**Thira island,**	**0.09**	**213**	P	**Pg**	**22 14 56.0**	**-0.3**
THR2	**Thira island,**	**0.09**	**213**	P	**Pg**	**22 14 56.0**	**-0.3**
THR3	**Thira Island,**	**0.14**	**214**	P	**Pg**	**22 14 57.0**	**+0.1**
THR3	**Thira Island,**	**0.14**	**214**	P	**Pg**	**22 14 57.0**	**+0.1**
THR3	**Thira Island,**	**0.14**	**214**	P	**Pg**	**22 14 57.0**	**+0.1**
THR1	**Thera Island**	**0.16**	**191**	P	**Pg**	**22 14 57.3**	**+0.1**
THR1	**Thera Island**	**0.16**	**191**	P	**Pg**	**22 14 57.3**	**+0.1**
APE	**Apeiranthos**	**0.55**	**3**	*e*PG	**Pg**	**22 15 03.7**	**-0.4**
APE				*e*SG	**Sb**	**22 15 13.2**	**+0.7**
APE	**Apeiranthos**	**0.55**	**3**	P	**Pg**	**22 15 03.7**	**-0.4**
APE				S	**Sg**	**22 15 11.6**	**+0.2**
APE	**Apeiranthos**	**0.55**	**3**	⇑P	**Pg**	**22 15 03.6**	**-0.5**
APE	**Apeiranthos**	**0.55**	**3**	*e*PN	**Pg**	**22 15 03.8**	**-0.4**
APE	**Apeiranthos**	**0.55**	**3**	P	**Pg**	**22 15 03.7**	**-0.4**
APE				S	**Sg**	**22 15 11.6**	**+0.2**
APE	**Apeiranthos**	**0.55**	**3**	⇑*i*P	**Pg**	**22 15 03.6**	**-0.5**
APE				S	**Sg**	**22 15 12.1**	**+0.7**
APE	**Apeiranthos**	**0.55**	**3**	*e*P*g*	**Pg**	**22 15 03.7**	**-0.4**
APE				S	**Sg**	**22 15 12.1**	**+0.7**
APE				*e*Sg	**Sb**	**22 15 13.2**	**+0.7**
NPS	**Neapolis**	**1.26**	**176**	P	**Pn**	**22 15 15.8**	**-0.9**
NPS	**Neapolis**	**1.26**	**176**	P	**Pn**	**22 15 15.8**	**-0.9**
NPS	**Neapolis**	**1.26**	**176**	*e*PN	**Pn**	**22 15 16.0**	**-0.7**
NPS	**Neapolis**	**1.26**	**176**	P	**Pn**	**22 15 15.8**	**-0.9**
NPS	**Neapolis**	**1.26**	**176**	*e*Pn	**Pn**	**22 15 16.0**	**-0.7**
NIS1	**Nisyros Isl.**	**1.36**	**86**	P	**Pn**	**22 15 17.8**	**-0.2**
NIS1				S	**Sb**	**22 15 36.0**	**+0.2**
NIS1	**Nisyros Isl.**	**1.36**	**86**	*e*PN	**Pn**	**22 15 18.2**	**+0.2**
NIS1				*e*SN	**Sg**	**22 15 40.6**	**+3.5**
NIS1	**Nisyros Isl.**	**1.36**	**86**	P	**Pn**	**22 15 17.8**	**-0.2**
NIS1	**Nisyros Isl.**	**1.36**	**86**	*e*Pn	**Pn**	**22 15 18.2**	**+0.2**
NIS1				S	**Sb**	**22 15 36.0**	**+0.2**
NIS1				*e*Sn	**Sg**	**22 15 40.6**	**+3.5**
LAST	**Lasithi**	**1.36**	**181**	P	**Pn**	**22 15 18.0**	**-0.1**
LAST	**Lasithi**	**1.36**	**181**	*e*PB	**Pn**	**22 15 17.3**	**-0.8**
LAST	**Lasithi**	**1.36**	**181**	P	**Pn**	**22 15 18.0**	**-0.1**
LAST	**Lasithi**	**1.36**	**181**	*e*Pb	**Pn**	**22 15 17.3**	**-0.8**
LAST	**Lasithi**	**1.36**	**181**	P	**Pn**	**22 15 18.0**	**-0.1**
ZKR	**Zakros**	**1.52**	**157**	P	**Pn**	**22 15 20.5**	**+0.2**
ZKR	**Zakros**	**1.52**	**157**	*e*PN	**Pn**	**22 15 20.4**	**+0.2**
ZKR	**Zakros**	**1.52**	**157**	P	**Pn**	**22 15 20.5**	**+0.2**
ZKR	**Zakros**	**1.52**	**157**	P	**Pn**	**22 15 20.5**	**+0.2**
VAM	**Vamos**	**1.53**	**224**	P	**Pn**	**22 15 20.1**	**-0.3**
VAM	**Vamos**	**1.53**	**224**	P	**Pn**	**22 15 20.1**	**-0.3**
VAM	**Vamos**	**1.53**	**224**	*e*PN	**Pn**	**22 15 20.2**	**-0.2**
VAM	**Vamos**	**1.53**	**224**	P	**Pn**	**22 15 20.1**	**-0.3**
VAM	**Vamos**	**1.53**	**224**	*e*Pn	**Pn**	**22 15 20.2**	**-0.2**
BODT	**Bodrum**	**1.55**	**69**	*e*PN	**Pn**	**22 15 20.1**	**-0.6**
BODT				*e*SN	**Sb**	**22 15 42.3**	**+0.8**
BODT	**Bodrum**	**1.55**	**69**	Pn	**Pn**	**22 15 20.6**	**-0.1**
BODT	**Bodrum**	**1.55**	**69**	*e*Pn	**Pn**	**22 15 20.1**	**-0.6**
BODT				*e*Sn	**Sb**	**22 15 42.3**	**+0.8**
SMG	**Samos**	**1.60**	**42**	P	**Pn**	**22 15 20.6**	**-0.7**
SMG				S	**Sb**	**22 15 42.3**	**-0.4**
SMG	**Samos**	**1.60**	**42**	*e*PB	**Pn**	**22 15 20.7**	**-0.6**
SMG	**Samos**	**1.60**	**42**	P	**Pn**	**22 15 20.6**	**-0.7**
SMG				S	**Sb**	**22 15 42.3**	**-0.4**
SMG	**Samos**	**1.60**	**42**	*e*Pb	**Pn**	**22 15 20.7**	**-0.6**
SMG				S	**Sb**	**22 15 42.3**	**-0.4**
SIVA	**Sivas**	**1.60**	**201**	*e*PN	**Pn**	**22 15 21.6**	**+0.3**
SIVA	**Sivas**	**1.60**	**201**	*e*Pn	**Pn**	**22 15 21.6**	**+0.3**
KARP	**Karpathos**	**1.66**	**125**	P	**Pn**	**22 15 22.4**	**+0.3**
KARP				S	**Sb**	**22 15 44.2**	**-0.5**
KARP	**Karpathos**	**1.66**	**125**	*e*PB	**Pn**	**22 15 22.5**	**+0.3**
KARP				*e*SN	**Sg**	**22 15 47.7**	**+0.8**
KARP	**Karpathos**	**1.66**	**125**	*e*Pb	**Pn**	**22 15 22.5**	**+0.3**
KARP				S	**Sb**	**22 15 44.2**	**-0.5**
KARP				*e*Sn	**Sg**	**22 15 47.7**	**+0.8**
DAT	**Datca**	**1.69**	**82**	*e*PN	**Pn**	**22 15 22.5**	**-0.1**
DAT	**Datca**	**1.69**	**82**	*e*Pn	**Pn**	**22 15 22.5**	**-0.1**
MRMA	**Marmari**	**1.77**	**330**	P	**Pn**	**22 15 23.8**	**+0.1**
MRMA	**Marmari**	**1.77**	**330**	P	**Pn**	**22 15 23.8**	**+0.1**
GCAM	**G?zelcami?**	**1.82**	**49**	*i*P	**Pn**	**22 15 24.4**	**+0.1**
GCAM				*i*S	**Sg**	**22 15 52.3**	**+0.4**
GCAM	**G?zelcami?**	**1.82**	**49**	*i*P	**Pn**	**22 15 24.4**	**+0.1**
ANKY	**Antikythira Is**	**1.89**	**250**	P	**Pn**	**22 15 25.4**	**+0.1**
ANKY	**Antikythira Is**	**1.89**	**250**	*e*PN	**Pn**	**22 15 25.3**	**0.0**
ANKY	**Antikythira Is**	**1.89**	**250**	P	**Pn**	**22 15 25.4**	**+0.1**
CHOS	**Chios island**	**1.91**	**13**	P	**Pn**	**22 15 25.1**	**-0.6**
CHOS	**Chios island**	**1.91**	**13**	*e*PB	**Pn**	**22 15 25.2**	**-0.5**
CHOS	**Chios island**	**1.91**	**13**	P	**Pn**	**22 15 25.1**	**-0.6**
CHOS	**Chios island**	**1.91**	**13**	*e*Pb	**Pn**	**22 15 25.2**	**-0.5**
MLSB	**Milas**	**1.98**	**66**	*e*PN	**Pn**	**22 15 26.9**	**+0.3**
MLSB	**Milas**	**1.98**	**66**	*e*Pn	**Pn**	**22 15 26.9**	**+0.3**
ATHU	**Athens Univers**	**1.98**	**317**	P	**Pn**	**22 15 26.5**	**-0.1**
ATHU	**Athens Univers**	**1.98**	**317**	P	**Pn**	**22 15 26.5**	**-0.1**
KYTH	**Kithira**	**2.00**	**264**	P	**Pn**	**22 15 27.1**	**+0.3**
KYTH	**Kithira**	**2.00**	**264**	*e*PN	**Pn**	**22 15 27.4**	**+0.6**
KYTH	**Kithira**	**2.00**	**264**	P	**Pn**	**22 15 27.1**	**+0.3**
KYTH	**Kithira**	**2.00**	**264**	*e*Pn	**Pn**	**22 15 27.4**	**+0.6**
PTL	**Penteli**	**2.00**	**320**	P	**Pn**	**22 15 26.9**	**+0.1**
PTL	**Penteli**	**2.00**	**320**	*e*PN	**Pn**	**22 15 27.0**	**+0.1**
PTL	**Penteli**	**2.00**	**320**	*e*Pn	**Pn**	**22 15 27.0**	**+0.1**
NAIG	**Nisos Aigina**	**2.02**	**308**	*e*PN	**Pn**	**22 15 27.4**	**+0.3**
NAIG	**Nisos Aigina**	**2.02**	**308**	*e*Pn	**Pn**	**22 15 27.4**	**+0.3**
ATH	**Athens Observa**	**2.03**	**316**	P	**Pn**	**22 15 27.1**	**0.0**
ATH	**Athens Observa**	**2.03**	**316**	P	**Pn**	**22 15 27.1**	**0.0**
ATH	**Athens Observa**	**2.03**	**316**	*e*PN	**Pn**	**22 15 27.5**	**+0.4**
ATH				*e*SB	**Sg**	**22 15 58.1**	**-0.4**
ATH	**Athens Observa**	**2.03**	**316**	P	**Pn**	**22 15 27.1**	**0.0**
ATH	**Athens Observa**	**2.03**	**316**	P	**Pn**	**22 15 27.1**	**0.0**
ATH	**Athens Observa**	**2.03**	**316**	*e*Pn	**Pn**	**22 15 27.5**	**+0.4**
ATH				*e*Sb	**Sg**	**22 15 58.1**	**-0.4**
URLA	**Izmir**	**2.03**	**25**	*i*P	**Pn**	**22 15 26.3**	**-0.9**
URLA				*i*S	**Sn**	**22 15 52.8**	**+0.3**
URLA	**Izmir**	**2.03**	**25**	*i*P	**Pn**	**22 15 26.3**	**-0.9**
URLA				*i*S	**Sn**	**22 15 52.8**	**+0.3**
GVD	**Gavdhos**	**2.04**	**215**	*e*PN	**Pn**	**22 15 29.2**	**+0.9**
GVD	**Gavdhos**	**2.04**	**215**	*e*Pn	**Pn**	**22 15 28.8**	**+1.5**
GVD	**Gavdhos**	**2.04**	**215**	*e*Pn	**Pn**	**22 15 28.8**	**+1.5**
DID	**Didima**	**2.06**	**299**	P	**Pn**	**22 15 27.3**	**-0.3**
DID	**Didima**	**2.06**	**299**	*e*PN	**Pn**	**22 15 27.5**	**-0.1**
DID				*e*SB	**Sg**	**22 16 00.3**	**+0.8**
DID	**Didima**	**2.06**	**299**	*e*Pn	**Pn**	**22 15 27.5**	**-0.1**
DID				*e*Sb	**Sg**	**22 16 00.3**	**+0.8**
DIDY	**Didyma**	**2.06**	**298**	P	**Pn**	**22 15 27.4**	**-0.3**
DIDY	**Didyma**	**2.06**	**298**	P	**Pn**	**22 15 27.4**	**-0.3**
VLI	**Veliai**	**2.07**	**276**	P	**Pn**	**22 15 27.6**	**-0.1**
VLI				S	**Sn**	**22 15 55.0**	**+1.7**
VLI	**Veliai**	**2.07**	**276**	*e*PN	**Pn**	**22 15 27.7**	**0.0**
VLI	**Veliai**	**2.07**	**276**	*e*Pn	**Pn**	**22 15 27.7**	**0.0**
VLI				S	**Sn**	**22 15 55.0**	**+1.7**
ARG	**Arkhangelos**	**2.14**	**97**	P	**Pn**	**22 15 29.4**	**+0.6**
ARG	**Arkhangelos**	**2.14**	**97**	*e*PB	**Pn**	**22 15 29.6**	**+0.8**
ARG	**Arkhangelos**	**2.14**	**97**	P	**Pn**	**22 15 29.4**	**+0.6**
AYDN	**Tasoluk**	**2.22**	**59**	*i*P	**Pn**	**22 15 30.2**	**+0.4**
AYDN				*i*S	**Sb**	**22 16 01.6**	**+1.0**
AYDN	**Tasoluk**	**2.22**	**59**	*i*P	**Pn**	**22 15 30.2**	**+0.4**
AYDN				*i*S	**Sb**	**22 16 01.6**	**+1.0**
BLCB	**Balcova**	**2.23**	**33**	*e*PN	**Pn**	**22 15 29.4**	**-0.5**
BLCB	**Balcova**	**2.23**	**33**	*e*Pn	**Pn**	**22 15 29.4**	**-0.5**
YER	**Yerkesik**	**2.32**	**74**	*e*PN	**Pn**	**22 15 32.2**	**+1.0**
YER	**Yerkesik**	**2.32**	**74**	P	**Pn**	**22 15 32.2**	**+1.0**
YER	**Yerkesik**	**2.32**	**74**	Pn	**Pn**	**22 15 32.2**	**+1.0**
YER	**Yerkesik**	**2.32**	**74**	*e*Pn	**Pn**	**22 15 32.2**	**+1.0**
IZM	**Izmir**	**2.34**	**36**	*e*PN	**Pn**	**22 15 31.5**	**0.0**
IZM	**Izmir**	**2.34**	**36**	P	**Pn**	**22 15 31.5**	**0.0**
IZM	**Izmir**	**2.34**	**36**	P	**Pn**	**22 15 31.5**	**0.0**
IZM	**Izmir**	**2.34**	**36**	*e*Pn	**Pn**	**22 15 31.5**	**0.0**
LTK	**Loutraki**	**2.51**	**307**	P	**Pn**	**22 15 34.3**	**+0.4**
LTK	**Loutraki**	**2.51**	**

AGG Agios Georgios 3.54 316 P Pn 22 15 48.9 +0.9
AGG Agios Georgios 3.54 316 ePN Pn 22 15 49.2 +1.2
ELL Elmali 3.56 85 ePN Pn 22 15 49.7 +1.4
ELL Elmali 3.56 85 ePn Pn 22 15 49.7 +1.4
RLS Riolos of Patr 3.56 297 P Pn 22 15 49.5 +1.3
RLS Riolos of Patr 3.56 297 ePB Pn 22 15 50.0 +1.8
RLS Riolos of Patr 3.56 297 P Pn 22 15 49.5 +1.3
RLS Riolos of Patr 3.56 297 ePb Pn 22 15 50.0 +1.8
DEMI Demirci 3.58 44 ePN Pn 22 15 49.0 +0.4
DEMI Demirci 3.58 44 eP Pn 22 15 49.0 +0.4
BALY Balya 3.62 27 iP Pn 22 15 48.9 -0.2
BALY Balya 3.62 27 iP Pn 22 15 48.9 -0.2
BALB Balikesir 3.63 30 ePN Pn 22 15 49.6 +0.3
BALB Balikesir 3.63 30 ePn Pn 22 15 49.6 +0.3
MAKR Makrakomi, Fth 3.65 314 P Pn 22 15 50.8 +1.4
MAKR Makrakomi, Fth 3.65 314 P Pn 22 15 50.8 +1.4
KHL Karahalli 3.67 60 ePN Pn 22 15 51.1 +1.2
KHL Karahalli 3.67 60 ePn Pn 22 15 51.1 +1.2
KHAL Karahalli 3.67 59 iP Pn 22 15 51.0 +1.1
KHAL Karahalli 3.67 59 iP Pn 22 15 51.0 +1.1
AXS Araxos 3.68 298 P Pn 22 15 51.4 +1.5
AXS Araxos 3.68 298 P Pn 22 15 51.4 +1.5
EVR Evrytania 3.77 310 P Pn 22 15 52.8 +1.5
EVR Evrytania 3.77 310 ePN Pn 22 15 52.8 +1.5
EVR Evrytania 3.77 310 P Pn 22 15 52.8 +1.5
DURS Dursunbey 3.87 37 iP Pn 22 15 53.9 +1.4
DURS Dursunbey 3.87 37 iP Pn 22 15 53.9 +1.4
GONE Gonen-Balikesi 3.92 25 ePN Pn 22 15 52.7 -0.4
GONE Gonen-Balikesi 3.92 25 ePn Pn 22 15 52.7 -0.4
KORT Korkueli 3.93 82 iP Pn 22 15 56.8 +3.4
KORT Korkueli 3.93 82 iP Pn 22 15 56.8 +3.4
SMTH Samothraki Isl 3.94 0 P Pn 22 15 52.4 -1.1
SMTH Samothraki Isl 3.94 0 ePN Pn 22 15 52.6 -0.9
SMTH Samothraki Isl 3.94 0 ePn Pn 22 15 52.6 -0.9
GELI Tayfur-Gelibol 3.94 11 ePN Pn 22 15 53.3 -0.2
GELI Tayfur-Gelibol 3.94 11 ePn Pn 22 15 53.3 -0.2
LPK Lapseki 3.97 14 ePN Pn 22 15 53.4 -0.5
LPK Lapseki 3.97 14 ePn Pn 22 15 53.4 -0.5
OUR Ouranopolis 3.99 343 P Pn 22 15 54.1 0.0
OUR Ouranopolis 3.99 343 P Pn 22 15 54.1 0.0
GDZ Gediz 4.06 50 eP Pn 22 15 56.2 +0.9
GDZ Gediz 4.06 50 eP Pn 22 15 56.2 +0.9
THL Klokotos Trika 4.09 319 P Pn 22 15 56.5 +0.9
THL Klokotos Trika 4.09 319 ePN Pn 22 15 56.7 +1.1
THL Klokotos Trika 4.09 319 P Pn 22 15 56.5 +0.9
KRBG Karabiga-Canak 4.11 20 ePN Pn 22 15 55.1 -0.7
KRBG Karabiga-Canak 4.11 20 ePn Pn 22 15 55.2 -0.7
PLG Polygyros 4.17 338 P Pn 22 15 57.0 +0.4
PLG Polygyros 4.17 338 ePN Pn 22 15 56.4 -0.2
PLG Polygyros 4.17 338 ePn Pn 22 15 56.4 -0.2
PLG Polygyros 4.17 338 P Pn 22 15 57.0 +0.4
BCK Bucak 4.18 76 ePN Pn 22 15 58.0 +1.1
BCK Bucak 4.18 76 ePn Pn 22 15 58.0 +1.1
ENEZ Enez 4.24 7 ePN Pn 22 15 57.6 +0.1
ENEZ Enez 4.24 7 ePn Pn 22 15 57.6 +0.1
VLS Valsamata 4.24 294 ePN Pn 22 15 59.2 +1.6
VLS Valsamata 4.24 294 ePn Pn 22 15 59.2 +1.6
BNT Bandirma 4.27 26 ePN Pn 22 15 57.2 -0.8
BNT Bandirma 4.27 26 ePn Pn 22 15 57.2 -0.8
TVSB Tavsanli 4.28 46 ePN Pn 22 15 59.6 +1.3
TVSB Tavsanli 4.28 46 ePn Pn 22 15 59.6 +1.3
KCTX Karacabey (Bur 4.36 30 ePN Pn 22 15 59.1 -0.2
KCTX Karacabey (Bur 4.36 30 ePn Pn 22 15 59.1 -0.2
RKY Sarkoy-Tekirda 4.36 17 ePN Pn 22 15 58.7 -0.6
RKY Sarkoy-Tekirda 4.36 17 ePn Pn 22 15 58.7 -0.6
ALN Alexandroupoli 4.39 5 P Pn 22 15 59.0 -0.6
ALN Alexandroupoli 4.39 5 ePN Pn 22 15 58.8 -0.8
ALN Alexandroupoli 4.39 5 P Pn 22 15 59.0 -0.6
ALT Altintas 4.44 54 ePN Pn 22 16 02.2 +1.7
ALT Altintas 4.44 54 ePn Pn 22 16 02.2 +1.7
LKD2 Lefkada island 4.46 302 ePN Pn 22 16 03.1 +2.5
LKD2 Lefkada island 4.46 302 ePn Pn 22 16 03.1 +2.5
HORT Hortiatis 4.48 336 P Pn 22 16 01.7 +0.7
HORT Hortiatis 4.48 336 P Pn 22 16 01.7 +0.7
MFT Murefte 4.48 18 ePN Pn 22 16 00.5 -0.5
MFT Murefte 4.48 18 ePn Pn 22 16 00.5 -0.5
SHUT Suhut-Afyon 4.50 62 ePN Pn 22 16 03.1 +1.8
SHUT Suhut-Afyon 4.50 62 ePn Pn 22 16 03.1 +1.8
SUTC Sutluce-Ispart 4.51 76 ePN Pn 22 16 02.9 +1.5
SUTC Sutluce-Ispart 4.51 76 ePn Pn 22 16 02.9 +1.5
KAVA Kavala 4.53 351 P Pn 22 16 01.0 -0.6
KAVA Kavala 4.53 351 P Pn 22 16 01.0 -0.6
THE Thessaloniki 4.56 335 P Pn 22 16 03.1 +1.2
THE Thessaloniki 4.56 335 P Pn 22 16 03.1 +1.2
LTBQ Tobruq 4.64 197 iP Pn 22 16 03.1 0.0
SNR=35
MDNY Mudanya-Bursa 4.67 34 ePN Pn 22 16 04.6 +1.1
MDNY Mudanya-Bursa 4.67 34 ePn Pn 22 16 04.6 +1.1
TKR Tekirdag 4.74 19 ePN Pn 22 16 04.1 -0.3
TKR Tekirdag 4.74 19 ePn Pn 22 16 04.1 -0.3
KZN Kozani 4.78 323 P Pn 22 16 06.6 +1.6
KZN Kozani 4.78 323 ePN Pn 22 16 06.3 +1.3
KZN Kozani 4.78 323 ePn Pn 22 16 06.3 +1.3
KZN Kozani 4.78 323 P Pn 22 16 06.6 +1.6
JAN Janina 4.82 312 ePB Pn 22 16 09.7 +4.1
ARMT Armutlu 4.82 32 ePN Pn 22 16 06.9 +1.3
ARMT Armutlu 4.82 32 ePn Pn 22 16 06.9 +1.3
SRS Serrai 4.82 343 P Pn 22 16 05.7 +0.1
SRS Serrai 4.82 343 P Pn 22 16 05.7 +0.1
GEMT Gemlik 4.86 35 ePN Pn 22 16 07.1 +1.0
GEMT Gemlik 4.86 35 ePn Pn 22 16 07.1 +1.0
NVR Nevrokopi 4.99 346 P Pn 22 16 07.9 0.0
NVR Nevrokopi 4.99 346 ePN Pn 22 16 07.8 -0.1
NVR Nevrokopi 4.99 346 P Pn 22 16 07.9 0.0
CAVI Cavuskoy 5.01 42 ePN Pn 22 16 09.7 +1.5
CAVI Cavuskoy 5.01 42 ePn Pn 22 16 09.7 +1.5
SLUM 5.03 183 AMP 22 16 00.0
comp=E,200µm,0.8s,logA/T=5.4,baz=190
SLUM 5.03 183 P Pn 22 16 07.5 -0.9
GRG Griva 5.04 332 P Pn 22 16 09.4 +0.7
GRG Griva 5.04 332 ePN Pn 22 16 09.6 +0.9
GRG Griva 5.04 332 P Pn 22 16 09.4 +0.7
YLV Yalova 5.05 36 ePN Pn 22 16 10.7 +1.9
YLV Yalova 5.05 36 ePn Pn 22 16 10.7 +1.9
KNT Kendrikon 5.06 337 P Pn 22 16 09.7 +0.9
KNT Kendrikon 5.06 337 P Pn 22 16 09.7 +0.9
IGT Igoumenitsa 5.06 308 P Pn 22 16 10.5 +1.6
IGT Igoumenitsa 5.06 308 P Pn 22 16 10.5 +1.6
KDZ Kurdzhali 5.12 359 P Pn 22 16 09.0 -0.7
KDZ Kurdzhali 5.12 359 P Pn 22 16 09.0 -0.7
ADVT Abdulvahap 5.13 39 ePN Pn 22 16 11.1 +1.3
ADVT Abdulvahap 5.13 39 ePn Pn 22 16 11.1 +1.3
SLVT Silivri 5.15 23 ePN Pn 22 16 10.1 0.0
SLVT Silivri 5.15 23 ePn Pn 22 16 10.1 0.0
BUY Buyukada 5.17 32 ePN Pn 22 16 11.5 +1.2
BUY Buyukada 5.17 32 ePn Pn 22 16 11.5 +1.2
ESKT Eskisehir 5.18 53 ePN Pn 22 16 12.2 +1.6
ESKT Eskisehir 5.18 53 ePn Pn 22 16 12.2 +1.6
RZN Rozhen 5.19 354 iP Pn 22 16 10.9 +0.1
RZN Rozhen 5.19 354 iP Pn 22 16 10.9 +0.1
NEST Nestorio 5.22 319 P Pn 22 16 13.5 +2.3
NEST Nestorio 5.22 319 P Pn 22 16 13.5 +2.3
MMB Musomiste 5.24 345 iP Pn 22 16 11.2 -0.2
MMB Musomiste 5.24 345 iP Pn 22 16 11.2 -0.2
CTKS Kestanelik-??a 5.26 26 ePN Pn 22 16 12.2 +0.6
CTKS Kestanelik-??a 5.26 26 ePn Pn 22 16 12.2 +0.6
VAY Valandovo 5.31 335 ePn Pn 22 16 13.2 +1.0
VAY Valandovo 5.31 335 iPn Pn 22 16 12.9 +0.7
VAY Valandovo 5.31 335 ePn Pn 22 16 13.2 +1.0
BGKT Bogazkoy 5.31 28 ePN Pn 22 16 13.4 +1.2
BGKT Bogazkoy 5.31 28 ePn Pn 22 16 13.4 +1.2
ISK Istanbul-Kandi 5.32 30 ePN Pn 22 16 13.6 +1.2
ISK Istanbul-Kandi 5.32 30 ePn Pn 22 16 13.6 +1.2
FNA Florina 5.34 324 P Pn 22 16 14.0 +1.3
FNA Florina 5.34 324 ePN Pn 22 16 14.2 +1.5
FNA Florina 5.34 324 P Pn 22 16 14.0 +1.3
MATC Matruh 5.36 164 P Pn 22 16 10.8 -2.2
baz=167
HRT Hereke 5.39 36 ePN Pn 22 16 15.5 +2.1
HRT Hereke 5.39 36 ePn Pn 22 16 15.5 +2.1
CTYL Yal??k??y-??at 5.40 23 ePN Pn 22 16 13.9 +0.4
CTYL Yal??k??y-??at 5.40 23 ePn Pn 22 16 13.9 +0.4
KLYT Kilyos 5.47 29 ePN Pn 22 16 15.8 +1.3
KLYT Kilyos 5.47 29 ePn Pn 22 16 15.8 +1.3
SRN Sarande 5.47 309 ePn Pn 22 16 16.0 +1.5
SRN iSN Sg 22 18 14.4 +25
SRN Sarande 5.47 309 ePn Pn 22 16 16.0 +1.5
KEK Kerkira 5.51 307 ePn Pn 22 16 16.9 +1.9
KBN Korca 5.51 319 ePN Pn 22 16 16.5 +1.4
KBN iSN Sg 22 18 03.8 +13
KBN Korca 5.51 319 ePn Pn 22 16 16.5 +1.4
GULT Gulveren 5.54 44 ePN Pn 22 16 17.3 +1.8
GULT Gulveren 5.54 44 ePn Pn 22 16 17.3 +1.8
BIA Bitola 5.55 325 iPn Pn 22 16 18.2 +2.6
KIZT Kizilcal 5.58 63 ePN Pn 22 16 17.8 +1.7
KIZT Kizilcal 5.58 63 ePn Pn 22 16 17.8 +1.7
SVRH Sivrihisar-ESK 5.58 57 ePN Pn 22 16 18.2 +2.1
SVRH Sivrihisar-ESK 5.58 57 ePn Pn 22 16 18.3 +2.1
PLD Plovdiv 5.61 354 P Pn 22 16 17.2 +0.8
PLD Plovdiv 5.61 354 ePn Pn 22 16 17.2 +0.8
PLD eSn Pg 22 16 43.6 +2.9
PLD Plovdiv 5.61 354 P Pn 22 16 17.2 +0.8
SPNC Sapanca-Adapaz 5.61 41 ePN Pn 22 16 18.2 +1.8
SPNC Sapanca-Adapaz 5.61 41 ePn Pn 22 16 18.2 +1.8
HDMB Hadim 5.63 83 ePN Pn 22 16 19.5 +2.6
HDMB Hadim 5.63 83 ePn Pn 22 16 19.5 +2.6
SILT Sile 5.64 34 ePN Pn 22 16 18.7 +1.9
SILT Sile 5.64 34 ePn Pn 22 16 18.7 +1.9
KKB Krupnik 5.66 341 iP Pn 22 16 17.4 +0.4
KKB Krupnik 5.66 341 iP Pn 22 16 17.4 +0.4
KONT Konya--Tatoy 5.66 73 ePN Pn 22 16 19.6 +2.5
KONT Konya--Tatoy 5.66 73 ePn Pn 22 16 19.6 +2.5
LADK Ladik-KONYA 5.72 71 ePN Pn 22 16 21.1 +3.0
AKMC Akamas 5.75 103 P Pn 22 16 18.0 -0.4
AKMC Akamas 5.75 103 P Pn 22 16 18.0 -0.4
PPCY Paphos 5.81 104 P Pn 22 16 18.9 -0.2
PPCY Paphos 5.81 104 P Pn 22 16 18.9 -0.2
ALFC Alevga 5.93 101 P Pn 22 16 20.9 +0.1
comp=E,3.3nm,0.6s
ALFC S Sn 22 17 24.2 -4.4
ALFC Alevga 5.93 101 P Pn 22 16 20.9 +0.1
comp=E,3.3nm,0.6s
MDUB Mudurnu 5.96 47 ePN Pn 22 16 23.4 +2.1
MDUB Mudurnu 5.96 47 ePn Pn 22 16 23.4 +2.1
ERMK Ermenek 5.97 87 iP Pn 22 16 22.0 +0.5
ERMK Ermenek 5.97 87 iP Pn 22 16 22.0 +0.5
JMB Yambol 5.99 8 P Pn 22 16 22.1 +0.4
JMB Yambol 5.99 8 ePn Pn 22 16 21.7 0.0
JMB Yambol 5.99 8 ePn Pn 22 16 21.7 0.0
JMB Yambol 5.99 8 P Pn 22 16 22.1 +0.4
PGB Panagyurishte 6.11 351 P Pn 22 16 23.4 +0.1
PGB Panagyurishte 6.11 351 P Pn 22 16 23.4 +0.1
VLO Vlora 6.14 312 ePN Pn 22 16 26.5 +2.9
VLO iSN Sg 22 18 25.8 +16
LEF Lefka 6.17 101 ePN Pn 22 16 26.0 +1.9
LEF Lefka 6.17 101 ePn Pn 22 16 26.0 +1.9
SZAC Souni-Zanaja 6.27 104 P Pn 22 16 25.0 -0.5
SZAC Souni-Zanaja 6.27 104 P Pn 22 16 25.0 -0.5
SKO Skopje 6.29 331 iPn Pn 22 16 27.6 +1.9
VTS Vitosha 6.31 344 ⇑P Pn 22 16 27.4 +1.2
VTS Vitosha 6.31 344 iP Pn 22 16 27.4 +1.2
VTS Vitosha 6.31 344 ePn Pn 22 16 27.7 +1.5
VTS Vitosha 6.31 344⇑iP Pn 22 16 27.4 +1.2
VTS Vitosha 6.31 344 P Pn 22 16 27.4 +1.2
VTS Vitosha 6.31 344 ePn Pn 22 16 27.7 +1.5
MAMC Mammari 6.42 100 P Pn 22 16 26.6 -0.9
MAMC Mammari 6.42 100 P Pn 22 16 26.6 -0.9
PHP Peshkopia 6.48 324 ePN Pn 22 16 30.2 +1.8
PHP iSN Sg 22 18 38.5 +17
PHP Peshkopia 6.48 324 ePn Pn 22 16 30.2 +1.8
TIR Tirane 6.52 319 ePN Pn 22 16 30.0 +1.2
TIR iSN Sg 22 18 43.1 +21
TIR Tirane 6.52 319 eP Pn 22 16 31.0 +2.2
TIR Tirane 6.52 319 ePn Pn 22 16 31.0 +2.2
TIR Tirane 6.52 319 ePn Pn 22 16 30.0 +1.2
TIR Tirane 6.52 319 eP Pn 22 16 31.0 +2.2
CSS Prodhromos 6.56 101 P Pn 22 16 29.3 -0.2
comp=E,1.9nm,1.0s
CSS S Sn 22 17 41.0 -3.1
CSS Prodhromos 6.56 101 ePn Pn 22 16 28.9 -0.5
CSS eSn Sn 22 17 46.2 +2.1
CSS Prodhromos 6.56 101 Pn Pn 22 16 28.7 -0.8
CSS Prodhromos 6.56 101 P Pn 22 16 29.3 -0.2
comp=E,1.9nm,1.0s
CSS eSn Sn 22 17 46.2 +2.1
SULT Sultanhani-AKS 6.60 73 ePN Pn 22 16 32.1 +2.0
SULT Sultanhani-AKS 6.60 73 ePn Pn 22 16 32.1 +2.0
IKL Isikli 6.61 90 ePN Pn 22 16 31.8 +1.6
IKL Isikli 6.61 90 ePn Pn 22 16 31.8 +1.6
LFK Lefkose 6.64 98 ePN Pn 22 16 32.2 +1.7
LFK Lefkose 6.64 98 ePn Pn 22 16 32.3 +1.7
ANTO Ankara 6.65 58 ePN Pn 22 16 33.3 +2.6
ANTO Ankara 6.65 58 eP Pn 22 16 33.7 +3.0
ANTO e 22 17 45.9
ANTO Ankara 6.65 58 ePn Pn 22 16 33.7 +3.0
ANTO eSn Sn 22 17 45.9 -0.4
ANTO Ankara 6.65 58⇓iP Pn 22 16 33.5 +2.8
ANTO Ankara 6.65 58 ePn Pn 22 16 33.3 +2.6
ANTO eS Sn 22 17 45.9 -0.4
AFSR Af‾ar-Bala (A 6.66 62 ePN Pn 22 16 32.3 +1.4
AFSR Af‾ar-Bala (A 6.66 62 ePn Pn 22 16 32.3 +1.4
SZH Strazhica 6.74 3 eP Pn 22 16 31.6 -0.4
SZH Strazhica 6.74 3 eP Pn 22 16 31.6 -0.4
PRD Provadia 6.83 12 P Pn 22 16 32.4 -0.7
PRD Provadia 6.83 12 P Pn 22 16 32.4 -0.7
BARS Barje 6.89 337 ePn Pn 22 16 35.3 +1.2
BARS Barje 6.89 337 ePn Pn 22 16 35.3 +1.2
MPEP Malo Peshtene 6.96 349 P Pn 22 16 35.7 +0.8
PUK Puka 7.02 323 ePN Pn 22 16 38.0 +2.2
PUK iSN Sg 22 18 48.6 +10
PUK Puka 7.02 323 ePn Pn 22 16 38.0 +2.2
ZAPS Zavoj 7.09 343 ePn Pn 22 16 38.7 +1.9
EREN Erenkoy 7.10 95 ePN Pn 22 16 39.5 +2.7
EREN Erenkoy 7.10 95 ePn Pn 22 16 39.5 +2.7
PHNC Paralimni 7.10 100 P Pn 22 16 39.7 +2.8
comp=E,2.3nm,0.6s
PHNC S Sn 22 17 58.3 +0.8
PHNC Paralimni 7.10 100 P Pn 22 16 39.7 +2.8
comp=E,2.3nm,0.6s
PHNC S Sn 22 17 58.3 +0.8
LJBD Adjabya 7.13 220 iP Pn 22 16 37.0 -0.2
SNR=24
BR131 Keskin Array S 7.17 61 ePn Pn 22 16 40.7 +2.8
comp=E,29nm,0.7s
BR131 Keskin Array S 7.17 61 ePn Pn 22 16 40.7 +2.8
comp=E,29nm,0.7s
BRTR Keskin Array B 7.17 61 Pn Pn 22 16 40.5 +2.6
BRTR Keskin Array B 7.17 61 Pn Pn 22 16 40.5 +2.6
comp=E,2.1nm,0.3s,baz=240,slow=16,SNR=80
BRTR Keskin Array B 7.17 61 iP Pn 22 16 40.5 +2.6
comp=E,12nm,0.6s
BCI Bajram Curri 7.19 326 ePN Pn 22 16 40.3 +2.2
BCI iSN Sg 22 18 53.2 +9.2
BCI Bajram Curri 7.19 326 ePn Pn 22 16 40.3 +2.2
SWA2 7.26 180 P Pn 22 16 37.8 -1.3
baz=185
SWA2 7.26 180 P Pn 22 16 37.8 -1.3
ULC Ulcinj 7.28 320⇓iPn Pn 22 16 40.6 +1.2
ULC eSn Sn 22 18 00.8 -1.1
ULC Ulcinj 7.28 320⇓iPn Pn 22 16 40.6 +1.2
ULC eSn Sn 22 18 00.8 -1.1
SAFT Safranbolu 7.32 48 ePN Pn 22 16 41.5 +1.7
SAFT Safranbolu 7.32 48 ePn Pn 22 16 41.6 +1.7
TIP Timpagrande 7.40 294 ePn Pn 22 16 41.2 +0.1
TIP eSn Sn 22 18 02.4 -2.6
TIP Timpagrande 7.40 294 ePn Pn 22 16 41.2 +0.1
TIP eSn Sn 22 18 02.4 -2.6
PVY Plav 7.42 327⇑iPn Pn 22 16 43.0 +1.7
PVY eSn Sn 22 18 03.0 -2.4
PVY Plav 7.42 327⇑iPn Pn 22 16 43.0 +1.7
PVY eSn Sn 22 18 03.0 -2.4
NIG Nigde 7.43 75 ePN Pn 22 16 43.5 +1.8
NIG Nigde 7.43 75 ePn Pn 22 16 43.5 +1.8
PSN Preselentsi 7.44 15 P Pn 22 16 40.6 -0.9
PSN Preselentsi 7.44 15 P Pn 22 16 40.6 -0.9
SELS Selova 7.49 335 ePn Pn 22 16 43.0 +0.8
CANT Cankiri 7.56 55 ePN Pn 22 16 44.8 +1.6
PDG Podgorica 7.62 323 ePn Pn 22 16 45.3 +1.3
PDG Podgorica 7.62 323⇑iPn Pn 22 16 45.0 +1.0
PDG eSn Sn 22 18 08.9 -1.2
TTG Podgorica 7.62 323⇑iPn Pn 22 16 45.0 +1.0
TTG eSn Sn 22 18 08.9 -1.2
PE1 Pezze di Greco 7.62 307 eP Pn 22 16 44.6 +0.6
BEY Berane 7.67 327⇑iPn Pn 22 16 46.5 +1.7
BEY eSn Sn 22 18 09.2 -2.3
IVA Berane 7.67 327⇑iPn Pn 22 16 46.5 +1.7
IVA eSn Sn 22 18 09.2 -2.3
KARA Karaisali 7.70 82 ePN Pn 22 16 47.2 +2.1
KARA Karaisali 7.70 82 ePn Pn 22 16 47.2 +2.1
BUM Brajici-Budva 7.71 320 ePn Pn 22 16 45.2 0.0
BUM eSn Sn 22 18 10.6 -1.8
BUM Brajici-Budva 7.71 320 ePn Pn 22 16 45.2 0.0
BUM eSn Sn 22 18 10.6 -1.8
BOLS Boljevac 7.78 341 ePn Pn 22 16 45.8 -0.4
BOLS Boljevac 7.78 341 ePn Pn 22 16 45.8 -0.4
CEL Celeste 7.84 286 ePn Pn 22 16 46.2 -0.8
CEL eSn Sn 22 18 14.5 -1.1
CEL Celeste 7.84 286 ePn Pn 22 16 46.2 -0.8
CEL eSn Sn 22 18 14.5 -1.1
SJES Sjenica 7.95 329 ePn Pn 22 16 50.5 +1.8
HCY Herceg Novi 8.02 320⇓iPn Pn 22 16 49.5 +0.1
HCY eSn Sn 22 18 17.8 -2.1
HCY Herceg Novi 8.02 320⇓iPn Pn 22 16 49.5 +0.1
HCY eSn Sn 22 18 17.8 -2.1
NKY Niksic 8.04 323⇑iPn Pn 22 16 50.6 +0.8
NKY eSn Sn 22 18 18.6 -1.9
NKY Niksic 8.04 323⇑iPn Pn 22 16 50.6 +0.8
NKY eSn Sn 22 18 18.6 -1.9
BAI Bari 8.13 307 eP Pn 22 16 51.3 +0.3
LUJL Ujela 8.18 207 iP Pn 22 16 50.8 -0.9
SNR=23
GRUS Gruza 8.21 335 ePn Pn 22 16 53.3 +1.2
GRUS Gruza 8.21 335 ePn Pn 22 16 53.3 +1.2
TIRR Tirgusor 8.23 15 ⇑P Pn 22 16 52.0 -0.3
TIRR Tirgusor 8.23 15⇑iP Pn 22 16 52.0 -0.3
TIRR Tirgusor 8.23 15 P Pn 22 16 52.0 -0.3
CEYT Ceyhan 8.24 84 ePN Pn 22 16 54.3 +1.8
CEYT Ceyhan 8.24 84 ePn Pn 22 16 54.3 +1.8
PLE Pljevlja 8.26 327⇑iPn Pn 22 16 53.7 +0.9
PLE eSn Sn 22 18 23.5 -2.5
PLE Pljevlja 8.26 327⇑iPn Pn 22 16 53.7 +0.9
PLE eSn Sn 22 18 23.5 -2.5
KOZT Kozan 8.32 80 ePN Pn 22 16 55.9 +2.3
KOZT Kozan 8.32 80 ePn Pn 22 16 55.9 +2.3
BRY Bratogost 8.32 322⇑iPn Pn 22 16 54.1 +0.3
BRY eSn Sn 22 18 25.6 -2.1
BRY Bratogost 8.32 322⇑iPn Pn 22 16 54.1 +0.3
BRY eSn Sn 22 18 25.6 -2.1
CUC Castrocucco 8.37 297 ePn Pn 22 16 54.7 +0.4
CUC eSn Sn 22 18 27.9 -0.7
CUC Castrocucco 8.37 297 ePn Pn 22 16 54.7 +0.4
CUC eSn Sn 22 18 27.9 -0.7
HARR Harsova 8.37 12 ⇓P Pn 22 16 54.4 +0.2
HARR Harsova 8.37 12⇓iP Pn 22 16 54.4 +0.2
HARR Harsova 8.37 12 P Pn 22 16 54.4 +0.2
UPM Unac-Piva 8.38 325⇓iPn Pn 22 16 55.6 +1.1
UPM eSn Sn 22 18 27.2 -1.8
UPM Unac-Piva 8.38 325⇓iPn Pn 22 16 55.6 +1.1
UPM eSn Sn 22 18 27.2 -1.8
CDT Castel del Mon 8.52 305⇑iP Pn 22 16 56.6 +0.3
BNN Bunyan 8.53 71 ePN Pn 22 16 58.3 +1.7
BNN Bunyan 8.53 71 ePn Pn 22 16 58.3 +1.7
HHAG Hagoal 8.57 138 P Pn 22 16 53.3 -3.8
baz=137
ISR Istrita 8.62 5⇓iP Pn 22 16 59.0 +1.2
ISR Istrita 8.62 5⇓iP Pn 22 16 59.0 +1.2
DIVS Divibare 8.65 333 ePn Pn 22 16 59.8 +1.6
DIVS Divibare 8.65 333 ePn Pn 22 16 59.8 +1.6
AWBH 8.67 160 P Pn 22 16 55.0 -3.4
baz=161
BHL Bhannes 8.71 104 eP Pn 22 16 57.2 -1.9
BHL Bhannes 8.71 104 eP Pn 22 16 57.2 -1.9
STON Ston 8.73 319 iPn Pn 22 16 57.8 -1.4
OFRI 'Ofer 8.74 114 Pn Pn 22 16 58.7 -0.7
HWQ Hawqa 8.82 102 eP Pn 22 16 59.5 -1.1
HWQ Hawqa 8.82 102 eP Pn 22 16 59.5 -1.1
MMC7 Mount Meron ar 8.86 110 Pn Pn 22 16 59.1 -2.0
ARR Arges 8.86 356⇑iP Pn 22 17 00.8 -0.2
ARR Arges 8.86 356⇑iP Pn 22 17 00.8 -0.2
MMAI Mount Meron Ar 8.87 110 Pn Pn 22 16 59.5 -1.7
MMAI Sn Sn 22 18 36.1 -4.9
MMAI Mount Meron Ar 8.87 110 Pn Pn 22 16 59.5 -1.7
comp=E,11nm,0.3s,baz=311,slow=12,SNR=59
MMAI Sn Sn 22 18 36.1 -4.9
comp=E,4.1nm,0.3s,baz=310,slow=25,SNR=3.5
MMAI LR LR 22 21 39.3
comp=E,151nm,18.1s,baz=300,slow=46
MMAI Mount Meron Ar 8.87 110 Pn Pn 22 16 59.5 -1.7
CFR Carcaliu 8.87 12 ⇓P Pn 22 17 00.9 -0.2
CFR Carcaliu 8.87 12⇓iP Pn 22 17 00.9 -0.2
CFR Carcaliu 8.87 12 P Pn 22 17 00.9 -0.2
MMC5 Mount Meron ar 8.88 110 Pn Pn 22 16 59.4 -2.0
WDD Wield Dalam 8.90 269 ePn Pn 22 16 59.9 -1.6
WDD eSn Sn 22 18 31.6 -10
WDD Wield Dalam 8.90 269 ePn Pn 22 16 59.9 -1.6
VOIR 8.91 358 ⇓P Pn 22 17 01.9 +0.1
VOIR 8.91 358⇓iP Pn 22 17 01.9 +0.1
VOIR 8.91 358 P Pn 22 17 01.9 +0.1
MLR Muntele Rosu 8.96 2 Pn Pn 22 17 03.5 +1.0
MLR Muntele Rosu 8.96 2⇓iP Pn 22 17 03.2 +0.6
MLR Muntele Rosu 8.96 2 Pn Pn 22 17 03.5 +1.0
comp=E,0.4nm,0.3s,baz=228,slow=5.5,SNR=28
MLR Muntele Rosu 8.96 2 P Pn 22 17 03.2 +0.6
MLR Muntele Rosu 8.96 2 Pn Pn 22 17 03.5 +1.0
SLTI Sal'it 8.97 116 Pn Pn 22 17 00.7 -1.8
RCY Rachaya 9.00 107 eP Pn 22 17 01.6 -1.5
RCY Rachaya 9.00 107 eP Pn 22 17 01.6 -1.5
TLCR 9.01 15 ⇓P Pn 22 17 03.7 +0.7
TLCR 9.01 15⇓iP Pn 22 17 03.7 +0.7
TLCR 9.01 15 P Pn 22 17 03.7 +0.7
LOT Lotru 9.01 352⇓iP Pn 22 17 03.2 0.0
LOT Lotru 9.01 352⇓iP Pn 22 17 03.2 0.0
MS1 Monte Sant'Ang 9.05 308⇑iP Pn 22 17 03.4 -0.2
SUZ 9.06 135 P Pn 22 17 00.6 -3.3
baz=134
GZR Gura Zlata 9.10 348 ⇑P Pn 22 17 04.6 +0.3
GZR Gura Zlata 9.10 348⇑iP Pn 22 17 04.6 +0.3
GZR Gura Zlata 9.10 348 P Pn 22 17 04.6 +0.3
BRBR Barbar 9.12 107 eP Pn 22 17 03.3 -1.6
BRBR eS Sn 22 18 35.8 -12
BRBR AML AML 22 18 45.1
comp=N,41nm,0.6s
BRBR Barbar 9.12 107 eP Pn 22 17 03.3 -1.6
SNR=47
MMLI Mount Malkishu 9.15 114 Pn Pn 22 17 03.7 -1.3
FKH Fakeheh 9.20 101 eP Pn 22 17 06.1 +0.3
FKH Fakeheh 9.20 101 eP Pn 22 17 06.1 +0.3
TEKS Tekeris 9.21 332 ePn Pn 22 17 07.6 +1.8
TEKS Tekeris 9.21 332 ePn Pn 22 17 07.6 +1.8
HMDT Nahal Hemdat 9.32 114 Pn Pn 22 17 05.4 -1.9
QASN Qassioun 9.33 105 eP Pn 22 16 56.0 -12
QASN AML AML 22 17 00.2
comp=Z,51nm,0.1s
QASN AML AML 22 17 01.9
comp=N,121nm,0.4s
QASN AML AML 22 17 05.3
comp=E,142nm,0.7s
PLOR Plostina 9.36 5 ⇑P Pn 22 17 08.7 +0.8
PLOR Plostina 9.36 5⇑iP Pn 22 17 08.7 +0.8
PLOR Plostina 9.36 5 P Pn 22 17 08.7 +0.8
VRI Vrincioaia 9.38 5 ⇓P Pn 22 17 09.0 +0.8
VRI Vrincioaia 9.38 5⇓iP Pn 22 17 08.9 +0.8
VRI Vrincioaia 9.38 5⇓iP Pn 22 17 08.9 +0.8
YTIR Yattir 9.50 120 Pn Pn 22 17 07.9 -2.0
TOTH TOTAH 9.51 106 eP Pn 22 17 09.6 -0.4
TOTH eS Sn 22 18 52.4 -4.4
TOTH TOTAH 9.51 106 eP Pn 22 17 09.6 -0.4
SNR=47
BZS Buzias 9.54 343 ⇓P Pn 22 17 10.4 +0.1
BZS Buzias 9.54 343⇓iP Pn 22 17 10.4 +0.1
BZS Buzias 9.54 343 P Pn 22 17 10.4 +0.1
DEV Deva 9.55 349 ⇓P Pn 22 17 12.1 +1.6
DEV Deva 9.55 349⇓iP Pn 22 17 12.1 +1.6
DEV Deva 9.55 349 P Pn 22 17 12.1 +1.6
DSI Dead Sea 9.57 118 Pn Pn 22 17 09.0 -1.8
HNKL Nakhl 9.68 130 P Pn 22 17 09.7 -2.6
baz=129
MZDA Masada 9.71 120 Pn Pn 22 17 10.6 -2.0
SALA Sala 10.01 109 eP Pn 22 17 13.6 -3.3
TESR Tescani 10.02 5⇓iP Pn 22 17 17.6 +0.8
TESR Tescani 10.02 5⇓iP Pn 22 17 17.6 +0.8
MBRI Mt Berech 10.36 128 Pn Pn 22 17 19.7 -1.9
ZALF Zalf 10.38 107 eP Pn 22 17 17.0 -5.0
MALT Malatya 10.44 76⇑iP Pn 22 17 41.0 +18
EIL Elat 10.46 128 Pn Pn 22 17 21.4 -1.6
EIL Sn Sn 22 19 12.1 -8.0
EIL Elat 10.46 128 Pn Pn 22 17 21.4 -1.6
comp=E,3.3nm,0.3s,baz=331,slow=9.9,SNR=43
EIL Sn Sn 22 19 12.1 -8.0
comp=E,1.9nm,0.3s,baz=108,slow=20,SNR=3.6

EIL Elat 10.46 128 Pn **Pn** 22 17 21.5 -1.6
DRGR 10.47 349 ⇑P **Pn** 22 17 23.6 +0.5
DRGR 10.47 349 ⇑*i*P **Pn** 22 17 23.6 +0.5
DRGR 10.47 349 P **Pn** 22 17 23.6 +0.5
TR2 10.68 137 P **Pn** 22 17 23.0 -3.0
baz=137
HKAT Jabal Katrina 10.72 136 P **Pn** 22 17 23.8 -3.0
baz=135
KIS Kishinev 10.75 12 *e* Pn 22 17 33.0 +6.1
KIS LRM MLR 22 22 26.0
comp=E,500nm,8.0s
UDBI Udbina 10.89 320 *i* Pn **Pn** 22 17 28.9 0.0
UDBI Udbina 10.89 320 *i* Pn **Pn** 22 17 28.9 0.0
PKSM Moragy 10.96 334 ⇓P **Pn** 22 17 31.2 +1.5
PKSM Moragy 10.96 334 *e*Pn **Pn** 22 17 31.2 +1.5
PKSM Moragy 10.96 334⇓*i*P **Pn** 22 17 31.2 +1.5
PKSM Moragy 10.96 334⇑*e*Pn **Pn** 22 17 30.7 +1.0
PKSM Moragy 10.96 334 P **Pn** 22 17 31.2 +1.5
PKS6 Bocsa 11.00 338⇑*e*Pn Pn 22 17 34.9 +4.6
LJFR Jufra 11.00 230 *i* P **Pn** 22 17 28.6 -1.8
SNR=22
AQU L'Aquila 11.01 306 *e*Pn **Pn** 22 17 30.8 +0.3
AQU L'Aquila 11.01 306 *e*P **Pn** 22 17 30.8 +0.3
PKS2 Kecel 11.01 337 *e*Pn **Pn** 22 17 32.0 +2.6
BURAR Bucovina Array 11.09 359⇑*i*P **Pn** 22 17 32.5 +0.9
BURAR Bucovina Array 11.09 359⇑*i*P **Pn** 22 17 32.5 +0.9
BUR08 Bucovina Ar. S 11.12 359 *e*Pn **Pn** 22 17 32.7 +0.7
BUR08 Bucovina Ar. S 11.12 359 *e*Pn **Pn** 22 17 32.7 +0.7
NVLJ Novalja 11.39 318 *i* Pn **Pn** 22 17 34.3 -1.3
NVLJ Novalja 11.39 318 *i* Pn **Pn** 22 17 34.2 -1.3
PKS9 Tamasi 11.41 334⇓*e*Pn **Pn** 22 17 34.8 -1.1
TRPA Tarpa 11.80 350⇓*ep*Pn Pn 22 17 54.3 +13
BOJS Bojanci 11.84 322 *i* Pn **Pn** 22 17 40.3 -1.4
BOJS Bojanci 11.84 322 *i* Pn **Pn** 22 17 40.3 -1.4
BEHE Becsehely 11.89 329⇑*e*Pn **Pn** 22 17 42.7 +0.3
BUD Budapest 11.96 338⇑*e*Pn Pn 22 17 37.1 -6.3
PKSG 12.07 336⇓*e*Pn **Pn** 22 17 46.6 +1.7
PKST T˜s 12.07 335⇓*e*Pn **Pn** 22 17 46.7 +1.7
CSKK Cs˙tkako 12.09 336⇑*e*Pn **Pn** 22 17 46.9 +1.7
PSZ Piszkesteto 12.12 342 ⇑P **Pn** 22 17 46.9 +1.3
PSZ Piszkesteto 12.12 342 *e*Pn **Pn** 22 17 47.9 +2.3
PSZ Piszkesteto 12.12 342⇑*i*P **Pn** 22 17 46.9 +1.3
PSZ Piszkesteto 12.12 342⇓*e*Pn **Pn** 22 17 50.6 +5.0
PSZ Piszkesteto 12.12 342 P **Pn** 22 17 46.9 +1.3
PSZ Piszkesteto 12.12 342 *e*Pn **Pn** 22 17 47.9 +2.3
ANN Anapa 12.26 44 *e*P **P** 22 17 57.5 -2.3
ANN pmax pmax
comp=Z,12nm,1.0s
UZH Uzhgorod 12.33 350 *e*P **Pn** 22 17 50.0 +1.6
UZH *e*S **Sn** 22 20 06.0 +0.5
UZH MLR MLR
comp=N,600nm,11.0s
UZH MLR MLR
comp=E,400nm,11.0s
UZH MLR MLR
comp=Z,200nm,11.0s
UZH Uzhgorod 12.33 350 *e*P **Pn** 22 17 50.0 +1.6
UZH *e*S **Sn** 22 20 06.0 +0.5
SKDS Skadanscina 12.49 320 *i* Pn **Pn** 22 17 49.4 -1.4
SKDS Skadanscina 12.49 320 *i* Pn **Pn** 22 17 49.4 -1.4
KECS Kecovo 12.51 344 *e*P Pn 22 17 54.9 +4.0
KECS Kecovo 12.51 344 *e*PN Pn 22 17 54.9 +4.0
LJU Ljubljana 12.58 323 *i* Pn **Pn** 22 17 50.5 -1.4
LJU Ljubljana 12.58 323 *i* Pn **Pn** 22 17 50.5 -1.4
KOLS Kolonicke sedl 12.62 350 *e*P **Pn** 22 17 54.7 +2.2
KOLS Kolonicke sedl 12.62 350 *e*PN **Pn** 22 17 54.7 +2.2
KOLS Kolonicke sedl 12.62 350 *e*P **Pn** 22 17 54.7 +2.2
CRVS Cervenica-Dubn 12.72 348 *e*P **Pn** 22 17 51.9 -1.9
CRVS Cervenica-Dubn 12.72 348 *e*PN **Pn** 22 17 51.9 -1.9
CRVS Cervenica-Dubn 12.72 348 *e*P **Pn** 22 17 51.9 -1.9
PERS Pernice 12.73 326 *i* Pn **Pn** 22 17 52.8 -1.2
PERS Pernice 12.73 326 *i* Pn **Pn** 22 17 52.8 -1.2
TRI Trieste 12.73 320 *e*P **Pn** 22 17 51.5 -2.5
TRI Trieste 12.73 320 *e*Pn **Pn** 22 17 51.5 -2.5
SOKA Soboth 12.80 326⇓*e*Pn **Pn** 22 17 54.0 -1.0
comp=Z,9.0nm,0.7s
SOKA Soboth 12.80 326 Pn **Pn** 22 17 54.0 -1.0
comp=Z,9.0nm,0.7s
VOY Vojsko 12.88 321 *e*Pn **Pn** 22 17 56.0 -0.2
VOY *e* 22 18 09.6
VOY Vojsko 12.88 321 *e*Pn **Pn** 22 17 56.0 -0.2
OBKA Obir 12.90 324⇓*e*Pn **Pn** 22 17 56.0 -0.4
comp=Z,8.7nm,0.8s
OBKA Obir 12.90 324 Pn **Pn** 22 17 56.0 -0.4
comp=Z,8.7nm,0.8s
VYHS Vyhne 12.93 340 *e*P **Pn** 22 17 56.5 -0.1
VYHS Vyhne 12.93 340 *e*PN **Pn** 22 17 56.5 -0.1
VYHS Vyhne 12.93 340 *e*P **Pn** 22 17 56.5 -0.1
ARSA Arzberg 13.03 328⇓*e*Pn **Pn** 22 17 57.7 -0.4
comp=Z,7.1nm,0.6s,SNR=8.6
ARSA Arzberg 13.03 328 Pn **Pn** 22 17 57.7 -0.4
comp=Z,7.1nm,0.6s,SNR=8.6
KEST Kesra 13.08 271 Pn **Pn** 22 18 01.1 +2.2
KEST Kesra 13.08 271 Pn **Pn** 22 18 01.1 +2.2
comp=Z,0.1nm,0.3s,baz=38,slow=5.7,SNR=12
KEST LR LR 22 23 10.3
comp=Z,56nm,21.4s,baz=138,slow=38
KEST Kesra 13.08 271 Pn **Pn** 22 18 01.1 +2.2
ZST Bratislava 13.20 335 *e*P **Pn** 22 18 00.5 +0.1
ZST Bratislava 13.20 335 *e*PN **Pn** 22 18 00.5 +0.1
ZST Bratislava 13.20 335 *e*P **Pn** 22 18 00.5 +0.1
KWP Kalwaria Pacla 13.26 352 ⇑P **Pn** 22 18 02.4 +1.3
KWP Kalwaria Pacla 13.26 352 *e*Pn **Pn** 22 18 03.3 +2.2
KWP Kalwaria Pacla 13.26 352⇑*i*P **Pn** 22 18 02.4 +1.3
KWP Kalwaria Pacla 13.26 352 P **Pn** 22 18 02.4 +1.3
KWP Kalwaria Pacla 13.26 352 *e*Pn **Pn** 22 18 03.3 +2.2
MOA Moln 14.03 327⇓*e*Pn **Pn** 22 18 12.4 +0.7
comp=Z,6.2nm,0.8s
MOA Moln 14.03 327 Pn **Pn** 22 18 12.4 +0.7
comp=Z,6.2nm,0.8s
ABTA Abfaltersbach 14.07 321⇓*e*Pn **Pn** 22 18 11.2 -1.2
comp=Z,12nm,0.6s,SNR=20
ABTA Abfaltersbach 14.07 321 Pn **Pn** 22 18 11.2 -1.2
comp=Z,12nm,0.6s,SNR=20
PGF Pioggiola 14.07 300 *e*P **Pn** 22 18 12.6 +0.2
comp=Z,87nm,1.1s
PGF Pioggiola 14.07 300 *e*P **Pn** 22 18 12.6 +0.2
PGF pmax pmax
comp=Z,87nm,1.1s
PGF Pioggiola 14.07 300 *e*P **Pn** 22 18 12.6 +0.2
comp=Z,87nm,1.1s
OJC Ojcow 14.30 345 *e*P **P** 22 18 24.1 +1.6
OJC Ojcow 14.30 345 *e*P **P** 22 18 24.1 +1.6
OJC Ojcow 14.30 345 *e*P **P** 22 18 24.1 +1.6
VRAC Vranov 14.33 336 Pn **Pn** 22 18 15.0 -0.8
VRAC Vranov 14.33 336 Pn **Pn** 22 18 15.0 -0.8
comp=Z,0.3nm,0.3s,baz=169,slow=6.6,SNR=4.2
VRAC Vranov 14.33 336 Pn **Pn** 22 18 15.0 -0.8
VRAC Vranov 14.33 336 *e*P **P** 22 18 24.5 +1.6
OKC Ostrava-Krasne 14.34 340 *e*P **P** 22 18 20.3 -2.6
OKC MLR MLR
comp=Z,400nm,13.0s
OKC Ostrava-Krasne 14.34 340 *e*P **P** 22 18 20.3 -2.6
OKC *ep*P Pn 22 18 23.2 +7.3
OKC *ex* x 22 18 26.9
OKC *e*S S 22 21 05.9 -8.9
OKC AMS AMS 22 24 40.0
comp=Z,400nm,13.0s
AK02 Malin Array Si 14.38 10 *e*P **P** 22 18 24.2 +0.8
AK01 Malin Array Si 14.41 10 *e*P **P** 22 18 25.0 +1.3
KIEV Kiev 14.41 10 *e*P **P** 22 18 24.9 +1.1
KIEV Kiev 14.41 10 *e*P **P** 22 18 24.9 +1.1
KIEV Kiev 14.41 10 *e*P **P** 22 18 24.9 +1.1
AKASG Malin Array Be 14.42 10 P **P** 22 18 24.0 +0.1
AKASG pmax pmax
comp=Z,3.0nm,0.3s
AKASG Malin Array Be 14.42 10 Pn **P** 22 18 24.0 +0.1
AKASG Malin Array Be 14.42 10 Pn **P** 22 18 24.0 +0.1
comp=Z,2.7nm,0.3s,baz=202,slow=11,SNR=34
MORC Moravsky Berou 14.45 339 *e*P **Pn** 22 18 20.1 +2.6
MORC Moravsky Berou 14.45 339 *e*Pn **Pn** 22 18 20.1 +2.6
MORC Moravsky Berou 14.45 339 *e*Pn **Pn** 22 18 20.1 +2.6
ABSA Djebel Ababsia 14.52 274 P **P** 22 18 27.4 +2.2
ABSA Djebel Ababsia 14.52 274 P **P** 22 18 27.4 +2.2
CMAH Djebel Manchou 14.53 276 P **P** 22 18 28.2 +2.9
RJOB Jochberg 14.62 324 *e*P **Pn** 22 18 19.3 -0.5
TREC Trest 14.70 333 *e*P **Pn** 22 18 22.1 +1.2
TREC MLR MLR
comp=Z,300nm,12.7s
TREC Trest 14.70 333 *e*P **Pn** 22 18 22.1 +1.2
TREC *ep*P **P** 22 18 25.7 -1.3
TREC *ex* x 22 18 28.9
TREC AMS AMS 22 25 20.0
comp=Z,300nm,12.7s
AKH Akhalkalaki 14.82 65 P **P** 22 18 29.3 +0.7
WTTA Wattenberg 14.87 321⇓*e*Pn **Pn** 22 18 23.2 -0.1
comp=Z,11nm,0.7s,SNR=6.9
WTTA Wattenberg 14.87 321 Pn **Pn** 22 18 23.2 -0.1
comp=Z,11nm,0.7s,SNR=6.9
GEC2 GERESS Array S 15.04 329 *e*P **P** 22 18 32.2 +1.3
GEC2 GERESS Array S 15.04 329 *e*P **P** 22 18 32.0 +1.2
GEC2 GERESS Array S 15.04 329 *e*P **P** 22 18 32.0 +1.2
GEC2 GERESS Array S 15.04 329 *e*P **P** 22 18 32.0 +1.2
GERES GERESS Array B 15.04 329 Pn **P** 22 18 30.5 -0.4
GERES GERESS Array B 15.04 329 Pn **P** 22 18 30.5 -0.4
comp=Z,2.0nm,0.3s,baz=141,slow=13,SNR=17
GERES GERESS Array B 15.04 329 P **P** 22 18 30.5 -0.4
comp=Z,2.0nm,0.3s
KIV Kislovodsk 15.06 55*x* *i*P **P** 22 18 33.8 +2.6
KIV pmax pmax
comp=Z,75nm,1.2s
KIV Kislovodsk 15.06 55 *i* P **P** 22 18 33.8 +2.6
comp=Z,75nm,1.2s
ONI Oni 15.11 61 P **P** 22 18 32.4 +0.8
CKFL Kef-Lekhel 15.11 275 P **P** 22 18 33.8 +2.0
CKFL Kef-Lekhel 15.11 275 P **P** 22 18 33.8 +2.0
KBZ Khabaz 15.12 56 P **P** 22 18 35.5 +3.9
KBZ Khabaz 15.12 56 Pn **P** 22 18 35.5 +3.9
KBZ Khabaz 15.12 56 Pn **P** 22 18 35.5 +3.9
comp=Z,0.4nm,0.3s,baz=261,slow=7.9,SNR=40
FETA Feichten 15.19 318⇓*i*Pn **Pn** 22 18 27.4 -0.1
comp=Z,30nm,0.8s,SNR=20
FETA Feichten 15.19 318 Pn **Pn** 22 18 27.4 -0.1
comp=Z,30nm,0.8s,SNR=20
MOTA Moosalm 15.19 320⇓*e*Pn **Pn** 22 18 26.4 -1.2
comp=Z,34nm,1.1s,SNR=12
MOTA Moosalm 15.19 320 Pn **Pn** 22 18 26.4 -1.2
comp=Z,34nm,1.1s,SNR=12
FUORN Ofenpass-Fuorn 15.20 316 *e*Pn **Pn** 22 18 27.6 -0.2
comp=Z,20nm,0.8s
FUORN Ofenpass-Fuorn 15.20 316 *e*Pn **Pn** 22 18 27.5 -0.2
comp=Z,20nm,0.8s
CASM Ain Smara 15.31 275 P **P** 22 18 35.6 +1.7
CASM Ain Smara 15.31 275 P **P** 22 18 35.6 +1.7
DPC Dobruska-Polom 15.32 337 *e*P **P** 22 18 33.2 -0.8
DPC Dobruska-Polom 15.32 337 *e*P **P** 22 18 33.2 -0.8
DPC *ep*P **pP** 22 18 35.4 -2.3
DPC *ex* x 22 18 38.9
DPC *e*S **S** 22 21 32.6 -2.6
DPC Dobruska-Polom 15.32 337 *e*P **P** 22 18 33.2 -0.8
CTEI Djebel Teioual 15.40 274 P **P** 22 18 37.1 +2.1
CTEI Djebel Teioual 15.40 274 P **P** 22 18 37.1 +2.1
GOR Gori 15.41 64 P P 22 18 40.6 +5.6
RETA Reutte 15.46 320⇓*e*Pn **Pn** 22 18 30.7 -0.4
comp=Z,22nm,0.8s,SNR=9.9
RETA Reutte 15.46 320 Pn **Pn** 22 18 30.7 -0.4
comp=Z,22nm,0.8s,SNR=9.9
KZR Kazreti 15.49 66 P **P** 22 18 38.3 +2.4
DAVOX Davos/Dischmat 15.51 316 Pn **Pn** 22 18 31.7 -0.1
DAVOX Davos/Dischmat 15.51 316 Pn **Pn** 22 18 31.7 -0.1
comp=Z,0.5nm,0.3s,baz=125,slow=19,SNR=11
DAVOX LR LR 22 24 49.9
comp=Z,170nm,21.1s,baz=118,slow=39
DAVOX Davos/Dischmat 15.51 316 Pn **Pn** 22 18 31.7 -0.1
GNI Garni 15.53 71 *e*Pn **P** 22 18 34.8 -1.6
comp=Z,28nm,1.1s
GNI Garni 15.53 71 Pn **P** 22 18 35.4 -1.0
comp=Z,0.6nm,0.3s,baz=312,slow=4.1,SNR=7.9
GNI LR LR 22 25 38.1
comp=Z,246nm,18.6s,baz=258,slow=42
GNI Garni 15.53 71 *e*P **P** 22 18 34.8 -1.6
comp=Z,28nm,1.1s
UPC Upice 15.56 337 *e*P **P** 22 18 35.9 -0.6
UPC Upice 15.56 337 *e*P **P** 22 18 35.9 -0.6
UPC *ep*P **pP** 22 18 38.6 -1.7
UPC Upice 15.56 337 *e*P **P** 22 18 35.9 -0.6
SAOF Saorge 15.58 304 *e*P **Pn** 22 18 32.3 -0.2
SAOF Saorge 15.58 304 *e*P **Pn** 22 18 32.3 -0.2
SAOF Saorge 15.58 304 *e*P **Pn** 22 18 32.3 -0.2
SBF Sospel 15.61 304 *e*P **Pn** 22 18 32.5 -0.5
comp=Z,102nm,0.8s
SBF Sospel 15.61 304 *e*P **Pn** 22 18 32.5 -0.5
SBF pmax pmax
comp=Z,103nm,0.8s
SBF Sospel 15.61 304 *e*P **Pn** 22 18 32.5 -0.5
comp=Z,102nm,0.8s
WET Wettzell 15.62 328 *e*P **Pn** 22 18 34.1 +1.1
WET Wettzell 15.62 328 *e*P **Pn** 22 18 34.1 +1.1
PRU Pruhonice 15.62 333 *e*P **P** 22 18 35.4 -1.8
PRU MLR MLR
comp=Z,300nm,11.9s
PRU Pruhonice 15.62 333 *e*P **P** 22 18 35.4 -1.8
PRU *ep*P **pP** 22 18 38.8 -2.2
PRU *ex* x 22 18 41.8
PRU *e*S **S** 22 21 42.1 +1.0
PRU AMS AMS 22 26 00.0
comp=Z,300nm,11.9s
PRU Pruhonice 15.62 333 *e*P **P** 22 18 35.4 -1.8
comp=Z,300nm,11.9s
TUE Stuetta 15.63 314 *e*Pn **Pn** 22 18 31.9 -1.5
comp=Z,20nm,0.8s
TUE Stuetta 15.63 314 *e*Pn **Pn** 22 18 31.9 -1.5
comp=Z,20nm,0.8s
AUTN L'Aution 15.66 304 *e*P **Pn** 22 18 32.1 -1.8
AUTN L'Aution 15.66 304 *e*P **Pn** 22 18 32.1 -1.8
AUTN L'Aution 15.66 304 *e*P **Pn** 22 18 32.1 -1.8
KSP Ksiaz 15.77 338 *e*P **P** 22 18 37.1 -1.7
KSP Ksiaz 15.77 338 *e*P **P** 22 18 41.1 +2.3
KSP Ksiaz 15.77 338 *e*P **P** 22 18 37.1 -1.7
DFRA Djebel Bou Aff 15.77 276 P **P** 22 18 38.4 -0.7
DFRA Djebel Bou Aff 15.77 276 P **P** 22 18 38.4 -0.7
TOUF Mont Tournerai 15.79 304 *e*P **Pn** 22 18 33.8 -1.7
TOUF Mont Tournerai 15.79 304 *e*P **Pn** 22 18 33.8 -1.7
TOUF Mont Tournerai 15.79 304 *e*P **Pn** 22 18 33.8 -1.7
TBLG Delisi 15.80 65 *e*P **P** 22 18 39.2 -0.1
TBLG Delisi 15.80 65 P **P** 22 18 39.2 -0.1
TBLG Delisi 15.80 65 *e*P **P** 22 18 39.2 -0.1
DAVA Damuels 15.81 318⇓*e*Pn **Pn** 22 18 36.0 +0.4
comp=Z,27nm,0.8s,SNR=13
DAVA Damuels 15.81 318 Pn **Pn** 22 18 36.0 +0.4
comp=Z,27nm,0.8s,SNR=13
SEAG Tbilisi Sea 15.86 65 P Pn 22 18 29.9 -6.3
DUS Dusheti 15.86 64 P **Pn** 22 18 36.1 -0.2
CALN Calern 15.94 303 *e*P **Pn** 22 18 38.2 +0.9
CALN Calern 15.94 303 *e*P **Pn** 22 18 38.2 +0.9
CALN Calern 15.94 303 *e*P **Pn** 22 18 38.2 +0.9
FRF La Foret Royal 16.04 302 *e*P **Pn** 22 18 37.4 -1.1
comp=Z,30nm,0.8s
FRF La Foret Royal 16.04 302 *e*P **Pn** 22 18 37.4 -1.1
FRF pmax pmax
comp=Z,30nm,0.8s
FRF La Foret Royal 16.04 302 *e*P **Pn** 22 18 37.4 -1.1
comp=Z,30nm,0.8s
LMR La Mourre 16.06 301 *e*P **Pn** 22 18 37.4 -1.3
comp=Z,49nm,1.2s
LMR La Mourre 16.06 301 *e*P **Pn** 22 18 37.4 -1.3
LMR pmax pmax
comp=Z,49nm,1.2s
LMR La Mourre 16.06 301 *e*P **Pn** 22 18 37.4 -1.3
comp=Z,49nm,1.2s
PVCC Panska Ves 16.06 334 *e*P **P** 22 18 41.4 -0.7
PVCC Panska Ves 16.06 334 *e*P **P** 22 18 41.4 -0.7
PVCC *ep*P **pP** 22 18 43.8 -2.0
PVCC *ex* x 22 18 46.6
PVCC Panska Ves 16.06 334 *e*P **P** 22 18 41.4 -0.7
CKHR Kef el Ahmar 16.13 274 P **P** 22 18 45.9 +2.8
SET Setif 16.20 275 P **P** 22 18 46.0 +2.2
SET Setif 16.20 275 P **P** 22 18 46.0 +2.2
DGRG David-gareji 16.21 66 P **P** 22 18 47.0 +3.1
ROTZ Rotzenmuhle 16.37 328 *e*P **P** 22 18 44.7 -0.9
MBDF Montbardon 16.38 306 *e*P **Pn** 22 18 41.0 -2.0
comp=Z,50nm,0.7s
MBDF Montbardon 16.38 306 *e*P **Pn** 22 18 41.0 -2.0
MBDF pmax pmax
comp=Z,50nm,0.7s
MBDF Montbardon 16.38 306 *e*P **Pn** 22 18 41.0 -2.0
comp=Z,50nm,0.7s
BRG Berggiesshubel 16.57 334 *e*P **P** 22 18 49.6 +1.9
comp=Z,33nm,1.3s
BRG MLR MLR
comp=N,345nm,13.3s
BRG MLR MLR
comp=E,129nm,17.2s
BRG MLR MLR
comp=Z,289nm,19.8s
BRG Berggiesshubel 16.57 334 *e*P **P** 22 18 49.6 +1.9
comp=Z,289nm,19.8s
MANZ Manzenberg 16.58 328 *e*P **P** 22 18 46.9 -1.0
WERN Wernitzgruen 16.70 330 *e*P **Pn** 22 18 47.1 +0.2
OG25 Le Caire 16.71 304 *e*P **Pn** 22 18 47.3 +0.2
OG25 Le Caire 16.71 304 *e*P **Pn** 22 18 47.3 +0.2
OG25 Le Caire 16.71 304 *e*P **Pn** 22 18 47.3 +0.2
LPG La Plagne 16.72 308 *e*P **Pn** 22 18 48.5 +1.1
comp=Z,50nm,0.9s
LPG La Plagne 16.72 308 *e*P **Pn** 22 18 48.5 +1.1
LPG pmax pmax
comp=Z,50nm,0.9s
LPG La Plagne 16.72 308 *e*P **Pn** 22 18 48.5 +1.1
comp=Z,50nm,0.9s
LPG La Plagne 16.72 308 *e*P **Pn** 22 18 48.5 +1.1
comp=Z,25nm,0.9s
LPL La Plagne 16.74 308 *e*P **Pn** 22 18 48.7 +1.1
comp=Z,43nm,0.9s
LPL La Plagne 16.74 308 *e*P **Pn** 22 18 48.7 +1.1
LPL pmax pmax
comp=Z,43nm,0.9s
LPL La Plagne 16.74 308 *e*P **Pn** 22 18 48.7 +1.1
comp=Z,43nm,0.9s
LPL La Plagne 16.74 308 *e*P **Pn** 22 18 48.7 +1.1
comp=Z,22nm,0.9s
GRA1 Grafenberg Arr 16.75 326 *e*P **P** 22 18 49.0 -0.7
GRF Grafenberg Arr 16.75 326 *e*P **P** 22 18 49.0 -0.7
GRF Grafenberg Arr 16.75 326 *e*P **P** 22 18 49.0 -0.7
GRFO Grafenberg 16.75 326 *e*P **P** 22 18 49.1 -0.6
GRFO pmax pmax
comp=Z,73nm,0.9s
GRFO Grafenberg 16.75 326 *e*Pn **P** 22 18 49.1 -0.6
comp=Z,73nm,0.9s
GRFO Grafenberg 16.75 326 *e*P **P** 22 18 49.1 -0.6
comp=Z,73nm,0.9s
TANN Tannenbergstha 16.77 330 *e*P **Pn** 22 18 48.5 +0.7
GUNZ Gunzen 16.78 330 *e*P **Pn** 22 18 48.5 +0.6
SENIN Lac Senin/Sane 16.78 311 *e*Pn **Pn** 22 18 49.1 +1.0
comp=Z,32nm,0.8s
SENIN Lac Senin/Sane 16.78 311 *e*Pn **Pn** 22 18 49.1 +1.0
comp=Z,32nm,0.8s
FBE Freiberg 16.82 333 *e*P **P** 22 18 52.1 +1.6
WERD Werda 16.85 330 *e*P **Pn** 22 18 49.5 +0.7
RSL Roselend 16.88 309 *e*P **P** 22 18 50.8 -0.6
RSL Roselend 16.88 309 *e*P **P** 22 18 50.8 -0.6
RSL Roselend 16.88 309 *e*P **P** 22 18 50.8 -0.6
RSL Roselend 16.88 309 *e*P **P** 22 18 50.8 -0.6
SPAK Spaichingen-Ko 16.89 318 *e*P **Pn** 22 18 48.3 -1.0
SMRF Simiane la Rot 16.91 302 *e*P **Pn** 22 18 48.1 -1.5
comp=Z,28nm,0.8s
SMRF Simiane la Rot 16.91 302 *e*P **Pn** 22 18 48.1 -1.5
comp=Z,28nm,0.8s
PLN Plauen 16.94 330 *e*P **P** 22 18 51.4 -0.5
ORIF Oris-en-Rattie 17.04 306 *e*P **Pn** 22 18 48.7 -2.6
comp=Z,47nm,1.3s
ORIF *e*R
comp=Z,351nm,20.0s
ORIF Oris-en-Rattie 17.04 306 *e*P **Pn** 22 18 48.7 -2.6
ORIF pmax pmax
comp=Z,47nm,1.3s
ORIF Oris-en-Rattie 17.04 306 *e*P **Pn** 22 18 48.7 -2.6
comp=Z,47nm,1.3s
STU Stuttgart 17.09 321 *e*P **Pn** 22 18 51.6 -0.2
STU pmax pmax
comp=Z,21nm,0.8s
STU Stuttgart 17.09 321 *e*Pn **Pn** 22 18 51.6 -0.2
comp=Z,21nm,0.8s
STU Stuttgart 17.09 321 *e*P **Pn** 22 18 51.6 -0.2
comp=Z,21nm,0.8s
FELD Feldberg im Sc 17.18 317 *e*P **Pn** 22 18 52.4 -0.7
FELD Feldberg im Sc 17.18 317 *e*P **Pn** 22 18 52.4 -0.7
BBS Basel-Blauen 17.23 315 *e*P **Pn** 22 18 53.2 -0.4
BBS Basel-Blauen 17.23 315 *e*P **Pn** 22 18 53.2 -0.4
BBS Basel-Blauen 17.23 315 *e*P **Pn** 22 18 53.2 -0.4
CLL Collm 17.27 333 *e*P **P** 22 18 56.1 +0.7
CLL Collm 17.27 333 *i* P **P** 22 18 56.1 +0.7
CLL pmax pmax
comp=Z,26nm,0.9s
CLL Collm 17.27 333 *i* P **P** 22 18 56.1 +0.7
comp=Z,26nm,0.9s
CLL *e* 22 19 01.0
CLL *ep*P **PnPn** 22 19 08.0 +4.1
CLL *e*S **S** 22 22 18.0 +3.3
CLL Lmax 22 27 00.0
CLL LmH 22 27 00.0
comp=N,300nm,19.7s
CLL LmH 22 27 00.0
comp=E,100nm,18.8s
CLL Collm 17.27 333 *i* P **P** 22 18 56.1 +0.7
comp=E,26nm,0.9s
BFO Black Forest 17.27 318 *e*P **Pn** 22 18 54.1 0.0
BFO pmax pmax
comp=Z,16nm,1.0s
BFO Black Forest 17.27 318 *e*Pn **Pn** 22 18 54.1 0.0
comp=Z,16nm,1.0s
MOX Moxa 17.29 329 *e*P **P** 22 18 56.3 +0.6
MOX Moxa 17.29 329 *e*P **P** 22 18 56.3 +0.6
MOX Moxa 17.29 329 *e*P **P** 22 18 56.3 +0.6
AKET Djebel Ketaf 17.43 275 P P 22 19 07.3 +10
VORD Divnogorie 17.50 30 *e*P **Pn** 22 18 56.4 -0.4
VORD pmax pmax
comp=N,20nm,0.6s
VORD pmax pmax
comp=Z,8.0nm,0.6s
VORD pmax pmax
comp=E,70nm,1.5s
VORD Divnogorie 17.50 30 *e*P **Pn** 22 18 56.4 -0.4
LOMF Lomont 17.56 314 *e*P **Pn** 22 18 58.3 +0.6
LOMF Lomont 17.56 314 *e*P **Pn** 22 18 58.3 +0.6
LOMF Lomont 17.56 314 *e*P **Pn** 22 18 58.3 +0.6
LOMF Lomont 17.56 314 *e*P **Pn** 22 18 58.3 +0.6
SUW Suwalki 17.56 355 *e*P **P** 22 19 00.0 +1.3
SUW pmax pmax
comp=Z,55nm,0.7s
SUW Suwalki 17.56 355 *e*Pn **P** 22 18 60.0 +1.3
comp=Z,55nm,0.7s
SUW Suwalki 17.56 355 *e*P **P** 22 18 59.8 +1.1
SUW Suwalki 17.56 355 *e*P **P** 22 18 59.8 +1.1
CABF La Chapelle 17.63 311 *e*P **Pn** 22 18 57.4 -1.3
comp=Z,99nm,0.9s
CABF La Chapelle 17.63 311 *e*P **Pn** 22 18 57.4 -1.3
CABF pmax pmax
comp=Z,99nm,0.9s
CABF La Chapelle 17.63 311 *e*P **Pn** 22 18 57.4 -1.3
comp=Z,99nm,0.9s
CABF La Chapelle 17.63 311 *e*P **Pn** 22 18 57.4 -1.3
comp=Z,49nm,0.9s
VSR Storozhevoye 17.64 29 *e*P **P** 22 18 59.2 -0.4
VSR pmax pmax
comp=Z,20nm,1.3s
VSR pmax pmax
comp=N,20nm,1.4s
VSR pmax pmax
comp=E,20nm,1.1s
VSR Storozhevoye 17.64 29 *e*P **P** 22 18 59.2 -0.4
comp=E,20nm,1.4s
MOF Molkenrain 17.65 316 *e*P **Pn** 22 18 58.1 -0.8
MOF Molkenrain 17.65 316 *e*P **Pn** 22 18 58.1 -0.8
MOF Molkenrain 17.65 316 *e*P **Pn** 22 18 58.1 -0.8
ADJB Djebel Djouab 17.77 275 P P 22 19 08.3 +7.0
HINF Hinteralfeld 17.79 315 *e*P **Pn** 22 18 59.3 -1.3
comp=E,12nm,0.7s
HINF Hinteralfeld 17.79 315 *e*P **Pn** 22 18 59.3 -1.3
HINF pmax pmax
comp=Z,12nm,0.7s
HINF Hinteralfeld 17.79 315 *e*P **Pn** 22 18 59.3 -1.3
comp=Z,12nm,0.7s
VIVF Saint-Julien-l 17.82 304 *e*P **Pn** 22 18 59.4 -1.5
comp=Z,17nm,0.8s
VIVF Saint-Julien-l 17.82 304 *e*P **Pn** 22 18 59.4 -1.5
VIVF pmax pmax
comp=Z,17nm,0.8s
VIVF Saint-Julien-l 17.82 304 *e*P **Pn** 22 18 59.4 -1.5
comp=Z,17nm,0.8s
VIVF Saint-Julien-l 17.82 304 *e*P **Pn** 22 18 59.4 -1.5
comp=Z,8.4nm,0.8s

TOD **Tromm** 17.83 322 *e*P P 22 19 02.2 +0.5
TOD **Tromm** 17.83 322 *e*P P 22 19 02.2 +0.5
TOD **Tromm** 17.83 322 *e*P P 22 19 02.2 +0.5
ECH **Echery** 17.84 317 *e*P Pn 22 19 01.4 +0.2
ECH pmax pmax
comp=Z,12nm,1.1s
ECH **Echery** 17.84 317 *e*Pn Pn 22 19 01.4 +0.2
comp=Z,12nm,1.1s
ECH **Echery** 17.84 317 *e*P Pn 22 19 01.4 +0.2
comp=Z,12nm,1.1s
CDF **Champ du Feu** 17.89 317 *e*P Pn 22 19 01.8 0.0
comp=Z,16nm,0.8s
CDF **Champ du Feu** 17.89 317 *e*P Pn 22 19 01.8 0.0
CDF pmax pmax
comp=Z,16nm,0.8s
CDF **Champ du Feu** 17.89 317 *e*P Pn 22 19 01.8 0.0
comp=Z,16nm,0.8s
CDF **Champ du Feu** 17.89 317 *e*P Pn 22 19 01.8 0.0
comp=Z,7.9nm,0.8s
LANF **Langenberg** 17.94 319 *e*P P 22 19 03.3 +0.4
LANF **Langenberg** 17.94 319 *e*P P 22 19 03.3 +0.4
LANF **Langenberg** 17.94 319 *e*P P 22 19 03.3 +0.4
LANF **Langenberg** 17.94 319 *e*P P 22 19 03.3 +0.4
SSB **Saint Sauveur** 18.06 305 *e*P Pn 22 19 02.9 -1.0
SSB pmax pmax
comp=Z,8.0nm,0.8s
SSB **Saint Sauveur** 18.06 305 *e*Pn Pn 22 19 02.9 -1.0
comp=Z,7.9nm,0.8s
SSB **Saint Sauveur** 18.06 305 *e*Pn Pn 22 19 02.8 -1.1
comp=Z,7.9nm,0.8s
MAK **Makhachkala** 18.08 62 *e*P Pn 22 19 02.5 -1.6
MAK pmax pmax
comp=Z,11nm,0.6s
MAK MLR MLR
comp=Z,192nm,15.0s
MAK **Makhachkala** 18.08 62 *e*P Pn 22 19 02.5 -1.6
comp=Z,192nm,15.0s
UBBA **Unterbreizbach** 18.11 327 *e*P P 22 19 05.3 +0.7
LASF **Ste Croix** 18.12 301 *e*P Pn 22 19 03.6 -1.0
comp=Z,39nm,1.0s
LASF **Ste Croix** 18.12 301 *e*P Pn 22 19 03.6 -1.0
comp=Z,39nm,1.0s
LASF **Ste Croix** 18.12 301 *e*P Pn 22 19 03.6 -1.0
comp=Z,20nm,1.0s
EMHD **Djebel Mahouad** 18.16 276 P Pn 22 19 05.5 +0.2
EMHD **Djebel Mahouad** 18.16 276 P Pn 22 19 05.5 +0.2
HAU **Haudompre** 18.18 315 *e*P P 22 19 05.9 +0.3
comp=Z,18nm,0.6s
HAU *e*R
comp=Z,275nm,17.8s
HAU **Haudompre** 18.18 315 *e*P P 22 19 05.9 +0.3
HAU pmax pmax
comp=Z,18nm,0.6s
HAU **Haudompre** 18.18 315 *e*P P 22 19 05.9 +0.3
comp=Z,18nm,0.6s
HAU **Haudompre** 18.18 315 *e*P P 22 19 05.9 +0.3
comp=Z,8.9nm,0.6s
NACGM **Naroch** 18.40 2 *e* P 22 19 03.0 -4.9
TNS **Taunus Mts** 18.41 323 *e*P Pn 22 19 08.5 +0.4
TNS **Taunus Mts** 18.41 323 *e*P Pn 22 19 08.5 +0.4
TNS **Taunus Mts** 18.41 323 *e*P Pn 22 19 08.5 +0.4
SJAF **Saint Jean de** 18.41 296 *e*P P 22 19 07.1 -1.1
SJAF **Saint Jean de** 18.41 296 *e*P P 22 19 07.1 -1.1
SJAF **Saint Jean de** 18.41 296 *e*P P 22 19 07.1 -1.1
THEF **They Montfort** 18.50 315 *e*P Pn 22 19 09.5 +0.2
THEF **They Montfort** 18.50 315 *e*P Pn 22 19 09.5 +0.2
THEF **They Montfort** 18.50 315 *e*P Pn 22 19 09.5 +0.2
THEF **They Montfort** 18.50 315 *e*P Pn 22 19 09.5 +0.2
ABH **Alteburg** 18.63 321 *e*P P 22 19 09.4 -1.1
ABH **Alteburg** 18.63 321 *e*P P 22 19 09.4 -1.1
FILF **Fillols** 18.66 296 *e*P P 22 19 11.1 +0.1
FILF **Fillols** 18.66 296 *e*P P 22 19 11.1 +0.1
FILF **Fillols** 18.66 296 *e*P P 22 19 11.1 +0.1
CLZ **Clausthal** 18.70 330 *e*P Pn 22 19 12.2 +0.5
CLZ **Clausthal** 18.70 330 *e*P Pn 22 19 12.2 +0.5
CLZ **Clausthal** 18.70 330 *e*P Pn 22 19 12.2 +0.5
LRDF **Laroque-de-Fa** 18.75 297 *e*P P 22 19 11.1 -0.8
LRDF **Laroque-de-Fa** 18.75 297 *e*P P 22 19 11.1 -0.8
LRDF **Laroque-de-Fa** 18.75 297 *e*P P 22 19 11.1 -0.8
RUP **Ruppelstein** 18.77 320 *e*P Pn 22 19 12.8 +0.3
RUP **Ruppelstein** 18.77 320 *e*P Pn 22 19 12.8 +0.3
RUP **Ruppelstein** 18.77 320 *e*P Pn 22 19 12.8 +0.3
PAGF **Fort de Pagny** 18.82 316 *e*P Pn 22 19 13.6 +0.4
comp=Z,5.2nm,0.7s
PAGF **Fort de Pagny** 18.82 316 *e*P Pn 22 19 13.6 +0.4
comp=Z,5.2nm,0.6s
PAGF **Fort de Pagny** 18.82 316 *e*P Pn 22 19 13.6 +0.4
comp=Z,2.6nm,0.7s
LBL **Lubilhac** 18.89 304 *e*P Pn 22 19 14.4 +0.3
LBL **Lubilhac** 18.89 304 *e*P Pn 22 19 14.4 +0.3
LBL **Lubilhac** 18.89 304 *e*P Pn 22 19 14.4 +0.3
LBL **Lubilhac** 18.89 304 *e*P Pn 22 19 14.4 +0.3
VALF **Valcebollere** 19.03 295 *e*P P 22 19 15.1 0.0
VALF **Valcebollere** 19.03 295 *e*P P 22 19 15.1 0.0
VALF **Valcebollere** 19.03 295 *e*P P 22 19 15.1 0.0
SFTF **Sexfontaines** 19.03 314 *e*P Pn 22 19 15.5 -0.2
comp=Z,52nm,1.0s
SFTF **Sexfontaines** 19.03 314 *e*P Pn 22 19 15.5 -0.2
comp=Z,52nm,1.0s
SFTF **Sexfontaines** 19.03 314 *e*P Pn 22 19 15.5 -0.2
comp=Z,26nm,1.0s
SMF **Signal de Mont** 19.04 309 *e*P P 22 19 14.3 -0.7
comp=Z,50nm,0.9s
SMF **Signal de Mont** 19.04 309 *e*P P 22 19 14.3 -0.7
SMF pmax pmax
comp=Z,50nm,0.9s
SMF **Signal de Mont** 19.04 309 *e*P P 22 19 14.3 -0.7
comp=Z,50nm,0.9s
SMF **Signal de Mont** 19.04 309 *e*P P 22 19 14.3 -0.7
comp=Z,25nm,0.9s
MTLF **Montolieu** 19.07 298 *e*P P 22 19 15.1 -0.3
comp=Z,38nm,1.2s
MTLF **Montolieu** 19.07 298 *e*P P 22 19 15.1 -0.3
MTLF pmax pmax
comp=Z,38nm,1.2s
MTLF **Montolieu** 19.07 298 *e*P P 22 19 15.1 -0.3
comp=Z,38nm,1.2s
MTLF **Montolieu** 19.07 298 *e*P P 22 19 15.1 -0.3
comp=Z,19nm,1.2s
MEZF **Maizieres J'vi** 19.18 315 *e*P Pn 22 19 17.2 -0.2
comp=Z,34nm,0.6s
MEZF **Maizieres J'vi** 19.18 315 *e*P Pn 22 19 17.2 -0.2
comp=Z,34nm,0.6s
MEZF **Maizieres J'vi** 19.18 315 *e*P Pn 22 19 17.2 -0.2
comp=Z,17nm,0.6s
WLF **Walferdange** 19.21 319 P Pn 22 19 18.9 +1.0
comp=Z,24nm,1.3s
WLF **Walferdange** 19.21 319 *e*P Pn 22 19 18.4 +0.6
WLF **Walferdange** 19.21 319 *e*P Pn 22 19 17.6 -0.3
WLF pmax pmax
comp=Z,32nm,1.0s
WLF **Walferdange** 19.21 319 *e*P Pn 22 19 17.6 -0.3
comp=Z,32nm,1.0s
WLF **Walferdange** 19.21 319 *e*P Pn 22 19 17.6 -0.3
comp=Z,32nm,1.0s
PYM **Petit Puy Mans** 19.23 306 *e*P P 22 19 16.9 -0.3
PYM **Petit Puy Mans** 19.23 306 *e*P P 22 19 16.9 -0.3
PYM **Petit Puy Mans** 19.23 306 *e*P P 22 19 16.9 -0.3
PYM **Petit Puy Mans** 19.23 306 *e*P P 22 19 16.9 -0.3
AGO **Saint Agoulin** 19.26 307 *e*P P 22 19 16.7 -0.8
AGO **Saint Agoulin** 19.26 307 *e*P P 22 19 16.7 -0.8
AGO **Saint Agoulin** 19.26 307 *e*P P 22 19 16.7 -0.8
EBNR **Beni Rached** 19.29 276 P P 22 19 17.0 -0.8
EBNR **Beni Rached** 19.29 276 P P 22 19 17.0 -0.8
LOR **Lormes** 19.29 311 *e*P P 22 19 17.8 0.0
comp=Z,37nm,1.0s
LOR *e*R
comp=Z,289nm,19.8s
LOR **Lormes** 19.29 311 *e*P P 22 19 17.8 0.0
comp=Z,37nm,1.0s
LOR **Lormes** 19.29 311 *e*P P 22 19 17.8 0.0
comp=Z,19nm,1.0s
NRDL **Niedersach Rie** 19.31 331 *e*P Pn 22 19 18.9 +0.1
AVF **Avril sur Loir** 19.41 309 *e*P P 22 19 18.8 -0.2
comp=Z,31nn,0.9s
AVF **Avril sur Loir** 19.41 309 *e*P P 22 19 18.8 -0.2
AVF pmax pmax
comp=Z,31nn,0.9s
AVF **Avril sur Loir** 19.41 309 *e*P P 22 19 18.8 -0.2
comp=Z,31nn,0.9s
SSF **Saint Saulge** 19.42 310 *e*P P 22 19 18.1 -1.1
comp=Z,70nm,0.8s
SSF **Saint Saulge** 19.42 310 *e*P P 22 19 18.1 -1.1
SSF pmax pmax
comp=Z,70nm,0.8s
SSF **Saint Saulge** 19.42 310 *e*P P 22 19 18.1 -1.1
comp=Z,35nm,0.8s
ECHA **Ech Chlef** 19.44 276 P P 22 19 20.0 +0.6
ECHA **Ech Chlef** 19.44 276 P P 22 19 20.0 +0.6
MIB **Mutribah** 19.45 104 *e*P Pn 22 19 20.7 -0.2
MIB AMb AMB 22 19 22.8
comp=Z,83nm,1.1s
MIB **Mutribah** 19.45 104 *e*P Pn 22 19 20.7 -0.2
comp=Z,83nm,1.1s
CAF **Calviac** 19.59 303 *e*P P 22 19 20.2 -0.9
comp=Z,30nm,1.2s
CAF **Calviac** 19.59 303 *e*P P 22 19 20.2 -0.9
CAF pmax pmax
comp=Z,31nm,1.2s
CAF **Calviac** 19.59 303 *e*P P 22 19 20.2 -0.9
comp=Z,30nm,1.2s
CAF **Calviac** 19.59 303 *e*P P 22 19 20.2 -0.9
comp=Z,15nm,1.2s
ETRT **Tiaret** 19.61 274 P P 22 19 22.0 +0.5
ETRT **Tiaret** 19.61 274 P P 22 19 22.0 +0.5
NAY **Al-Naaiem** 19.63 105 *e*P Pn 22 19 22.6 -0.4
NAY AMb AMB 22 19 24.5
comp=Z,28nm,0.8s
NAY **Al-Naaiem** 19.63 105 *e*P Pn 22 19 22.6 -0.4
comp=Z,28nm,0.8s
BGF **Bois d'Agland** 19.63 308 *e*P P 22 19 21.6 +0.1
comp=Z,34nm,0.7s
BGF **Bois d'Agland** 19.63 308 *e*P P 22 19 21.6 +0.1
BGF pmax pmax
comp=Z,34nm,0.7s
BGF **Bois d'Agland** 19.63 308 *e*P P 22 19 21.6 +0.1
comp=Z,34nm,0.7s
EANR **'Ain N'Sour** 19.68 276 P Pn 22 19 25.0 +1.4
BUG **Bochum--Univer** 19.78 325 *e*P Pn 22 19 24.0 -0.5
MLS **Moulis** 19.80 296 *e*P P 22 19 23.6 +0.2
MLS **Moulis** 19.80 296 *e*P P 22 19 23.6 +0.2
MLS **Moulis** 19.80 296 *e*P P 22 19 23.6 +0.2
MEM **Membach** 19.86 321 P Pn 22 19 25.4 -0.1
comp=Z,16nm,0.8s
UMR **Umm Al-Rimmam** 19.86 104 *e*P P 22 19 24.8 +0.7
UMR **Umm Al-Rimmam** 19.86 104 *e*P P 22 19 24.8 +0.7
TCF **Toulx Ste Croi** 19.94 307 *e*P P 22 19 24.9 0.0
comp=Z,15nm,0.8s
TCF **Toulx Ste Croi** 19.94 307 *e*P P 22 19 24.9 0.0
TCF pmax pmax
comp=Z,15nm,0.8s
TCF **Toulx Ste Croi** 19.94 307 *e*P P 22 19 24.9 0.0
comp=Z,15nm,0.8s
HGN **Heimansgroeve** 19.99 322 *e*P Pn 22 19 27.4 +0.4
comp=Z,16nm,0.9s
HGN *e*S Sn 22 23 26.1 +15
HGN *e*L L 22 28 19.8
comp=Z,221nm,18.4s
RDF **Al-Radifah** 20.02 106 *e*P Pn 22 19 26.9 -0.7
RDF AMb AMB 22 19 31.0
comp=Z,59nm,1.2s
RDF **Al-Radifah** 20.02 106 *e*P Pn 22 19 26.9 -0.6
comp=Z,59nm,1.2s
MELF **Melles** 20.02 296 *e*P P 22 19 26.6 +0.7
MELF **Melles** 20.02 296 *e*P P 22 19 26.6 +0.7
MELF **Melles** 20.02 296 *e*P P 22 19 26.6 +0.7
HYF **Humbligny** 20.05 309 *e*P P 22 19 26.3 +0.3
HYF **Humbligny** 20.05 309 *e*P P 22 19 26.3 +0.3
HYF **Humbligny** 20.05 309 *e*P P 22 19 26.3 +0.3
RJF **Les Rejaudoux** 20.08 303 *e*P P 22 19 26.9 +0.5
comp=Z,40nm,1.0s
RJF *e*R
comp=Z,183nm,20.8s
RJF **Les Rejaudoux** 20.08 303 *e*P P 22 19 26.9 +0.5
RJF pmax pmax
comp=Z,40nm,1.0s
RJF **Les Rejaudoux** 20.08 303 *e*P P 22 19 26.9 +0.5
comp=Z,40nm,1.0s
RJF **Les Rejaudoux** 20.08 303 *e*P P 22 19 26.9 +0.5
comp=Z,20nm,1.0s
OBN **Obninsk** 20.08 19 P P 22 19 26.5 +0.2
OBN *i* 22 19 37.7
OBN 22 19 43.0
OBN *e* 22 19 54.1
OBN pmax pmax
comp=Z,32nm,1.1s
OBN MLR MLR
comp=Z,200nm,15.0s
OBN **Obninsk** 20.08 19 P P 22 19 26.5 +0.2
comp=Z,32nm,1.1s
BCLA **Clavier** 20.10 320 P Pn 22 19 27.9 -0.5
comp=Z,12nm,1.2s
IBBN **Ibbenburen** 20.15 327 *e*P P 22 19 27.4 +0.3
GIVF **Givet** 20.17 319 *e*P P 22 19 27.6 +0.3
comp=Z,31nm,0.7s
GIVF **Givet** 20.17 319 *e*P P 22 19 27.6 +0.3
GIVF pmax pmax
comp=Z,31nm,0.7s
GIVF **Givet** 20.17 319 *e*P P 22 19 27.6 +0.3
comp=Z,31nm,0.7s
GIVF **Givet** 20.17 319 *e*P P 22 19 27.6 +0.3
comp=Z,16nm,0.7s
DOU **Dourbes** 20.29 318 P P 22 19 29.4 +0.9
comp=Z,15nm,0.9s
RESF **Ens** 20.32 296 *e*P P 22 19 29.6 +0.5
RESF **Ens** 20.32 296 *e*P P 22 19 29.6 +0.5
RESF **Ens** 20.32 296 *e*P P 22 19 29.6 +0.5
WTSB **Winterswijk** 20.35 325 *e*P P 22 19 29.8 +0.6
comp=Z,33nm,0.7s
WTSB **Winterswijk** 20.35 325 *e*P P 22 19 29.8 +0.6
comp=Z,33nm,0.7s
BSEG **Bad Segeberg** 20.35 334 *e*P P 22 19 29.0 -0.2
BSEG **Bad Segeberg** 20.35 334 *e*P P 22 19 29.0 -0.2
BSEG **Bad Segeberg** 20.35 334 *e*P P 22 19 29.0 -0.2
EPF **Esparros** 20.36 296 *e*P P 22 19 28.6 -0.9
comp=Z,15nm,0.9s
EPF **Esparros** 20.36 296 *e*P P 22 19 28.6 -0.9
EPF pmax pmax
comp=Z,15nm,0.9s
EPF **Esparros** 20.36 296 *e*P P 22 19 28.6 -0.9
comp=Z,15nm,0.9s
EPF **Esparros** 20.36 296 *e*P P 22 19 28.6 -0.9
comp=Z,7.4nm,0.9s
BAIF **Baives** 20.48 318 *e*P P 22 19 31.0 +0.4
comp=Z,147nm,0.7s
BAIF **Baives** 20.48 318 *e*P P 22 19 31.0 +0.4
BAIF pmax pmax
comp=Z,147nm,0.7s
BAIF **Baives** 20.48 318 *e*P P 22 19 31.0 +0.4
comp=Z,147nm,0.7s
BAIF **Baives** 20.48 318 *e*P P 22 19 31.0 +0.4
comp=Z,73nm,0.7s
LFF **La Frestale** 20.50 302 *e*P P 22 19 31.1 +0.2
comp=Z,35nm,0.9s
LFF **La Frestale** 20.50 302 *e*P P 22 19 31.1 +0.2
LFF pmax pmax
comp=Z,35nm,0.9s
LFF **La Frestale** 20.50 302 *e*P P 22 19 31.1 +0.2
comp=Z,35nm,0.9s
LFF **La Frestale** 20.50 302 *e*P P 22 19 31.1 +0.2
comp=Z,17nm,0.9s
LABF **Labassere** 20.55 296 *e*P P 22 19 31.0 -0.6
LABF **Labassere** 20.55 296 *e*P P 22 19 31.0 -0.6
LABF **Labassere** 20.55 296 *e*P P 22 19 31.0 -0.6
REYF **Montagne du Re** 20.89 296 *e*P P 22 19 35.4 +0.1
REYF **Montagne du Re** 20.89 296 *e*P P 22 19 35.4 +0.1
REYF **Montagne du Re** 20.89 296 *e*P P 22 19 35.4 +0.1
MOS **Moscow** 20.92 19 *e*P P 22 19 30.8 -4.5
MOS *e* 22 19 39.3
MOS *e*S S 22 23 24.1 -3.9
MOS pmax pmax
comp=Z,25nm,0.7s
ETSF **Etsaut** 20.98 296 *e*P P 22 19 35.9 -0.4
comp=Z,36nm,1.0s
ETSF **Etsaut** 20.98 296 *e*P P 22 19 35.9 -0.4
ETSF pmax pmax
comp=Z,36nm,1.0s
ETSF **Etsaut** 20.98 296 *e*P P 22 19 35.9 -0.4
comp=Z,36nm,1.0s
ETSF **Etsaut** 20.98 296 *e*P P 22 19 35.9 -0.4
comp=Z,18nm,1.0s
LARF **Larrau** 21.32 296 *e*P P 22 19 39.8 0.0
LARF **Larrau** 21.32 296 *e*P P 22 19 39.8 0.0
LARF **Larrau** 21.32 296 *e*P P 22 19 39.8 0.0
SJPF **Ste Jean** 21.50 296 *e*P P 22 19 41.4 -0.4
comp=Z,50nm,0.9s
SJPF **Ste Jean** 21.50 296 *e*P P 22 19 41.4 -0.4
SJPF pmax pmax
comp=Z,50nm,0.9s
SJPF **Ste Jean** 21.50 296 *e*P P 22 19 41.4 -0.4
comp=Z,50nm,0.9s
SJPF **Ste Jean** 21.50 296 *e*P P 22 19 41.4 -0.4
comp=Z,25nm,0.9s
OSSF **Osses** 21.55 296 *e*P P 22 19 45.5 +3.2
OSSF **Osses** 21.55 296 *e*P P 22 19 45.5 +3.2
RAYN **Ar Rayn** 21.58 121 *e*P P 22 19 45.0 +2.2
comp=Z,20nm,0.8s
RAYN **Ar Rayn** 21.58 121 *e*P P 22 19 45.0 +2.2
comp=Z,20nm,0.8s
MFF **Saint Martin d** 21.58 306 *e*P P 22 19 42.7 +0.1
comp=Z,91nm,1.1s
MFF **Saint Martin d** 21.58 306 *e*P P 22 19 42.7 +0.1
MFF pmax pmax
comp=Z,91nm,1.1s
MFF **Saint Martin d** 21.58 306 *e*P P 22 19 42.7 +0.1
comp=Z,91nm,1.1s
MFF **Saint Martin d** 21.58 306 *e*P P 22 19 42.7 +0.1
comp=Z,46nm,1.1s
MENF **Mencas** 21.86 317 *e*P P 22 19 44.9 -0.6
MENF **Mencas** 21.86 317 *e*P P 22 19 44.9 -0.6
MENF **Mencas** 21.86 317 *e*P P 22 19 44.9 -0.6
TAM **Tamanrasset** 22.04 237 *e*P P 22 19 49.5 +1.6
TAM pmax pmax
comp=Z,14nm,0.8s
TAM **Tamanrasset** 22.04 237 *e*P P 22 19 49.5 +1.6
comp=Z,14nm,0.8s
TAM **Tamanrasset** 22.04 237 *e*P P 22 19 49.5 +1.6
comp=Z,14nm,0.8s
LDF **La Druitiere** 22.28 311 *e*P P 22 19 49.1 -1.0
comp=Z,34nm,0.8s
LDF **La Druitiere** 22.28 311 *e*P P 22 19 49.1 -1.0
LDF pmax pmax
comp=Z,35nm,0.8s
LDF **La Druitiere** 22.28 311 *e*P P 22 19 49.1 -1.0
comp=Z,34nm,0.8s
LDF **La Druitiere** 22.28 311 *e*P P 22 19 49.1 -1.0
comp=Z,17nm,0.8s
FLN **La Foliniere** 22.57 311 *e*P P 22 19 51.7 -1.4
comp=Z,51nm,0.7s
FLN *e*R
comp=Z,245nm,19.5s
FLN **La Foliniere** 22.57 311 *e*P P 22 19 51.7 -1.4
FLN pmax pmax
comp=Z,51nm,0.7s
FLN **La Foliniere** 22.57 311 *e*P P 22 19 51.7 -1.4
comp=Z,51nm,0.7s
FLN **La Foliniere** 22.57 311 *e*P P 22 19 51.7 -1.4
comp=Z,26nm,0.7s
GRR **Gorron** 22.65 310 *e*P P 22 19 53.0 -1.0
comp=Z,59nm,0.7s
GRR **Gorron** 22.65 310 *e*P P 22 19 53.0 -1.0
GRR pmax pmax
comp=Z,59nm,0.7s
GRR **Gorron** 22.65 310 *e*P P 22 19 53.0 -1.0
comp=Z,59nm,0.7s
GRR **Gorron** 22.65 310 *e*P P 22 19 53.0 -1.0
comp=Z,29nm,0.7s
MUD **Monsted U'grnd** 22.77 336 *e*P P 22 19 54.4 -0.8
MUD pmax pmax
comp=Z,9.0nm,0.8s
MUD **Monsted U'grnd** 22.77 336 *i* P P 22 19 54.4 -0.8
comp=Z,8.7nm,0.8s
MUD **Monsted U'grnd** 22.77 336 *e*P P 22 19 54.4 -0.8
comp=Z,8.7nm,0.8s
ESDC **Sonseca Array** 23.35 287 P P 22 20 00.7 -0.7
ESDC **Sonseca Array** 23.35 287 P P 22 20 00.7 -0.7
comp=Z,14nm,0.6s,baz=79,slow=9.9,SNR=87
ESDC LR LR 22 29 45.2
comp=Z,67nm,18.8s,baz=100,slow=38
ESDC **Sonseca Array** 23.35 287 P P 22 20 00.7 -0.7
ESLA **Sonseca Array** 23.35 287 *e*P P 22 20 00.5 -0.9
comp=Z,3.9nm,0.7s
ESLA **Sonseca Array** 23.35 287 *e*P P 22 20 00.5 -0.9
comp=Z,3.9nm,0.7s
PAB **San Pablo** 23.65 286 *e*P P 22 20 04.0 -0.4
PAB pmax pmax
comp=Z,24nm,0.9s
PAB **San Pablo** 23.65 286 *e*P P 22 20 04.0 -0.4
comp=Z,24nm,0.9s
PAB **San Pablo** 23.65 286 *e*P P 22 20 04.0 -0.4
comp=Z,24nm,0.9s
SGMF **Saint Gilles** 23.67 308 *e*P P 22 20 02.6 -1.8
comp=Z,59nm,1.2s
SGMF **Saint Gilles** 23.67 308 *e*P P 22 20 02.6 -1.8
SGMF pmax pmax
comp=Z,59nm,1.2s
SGMF **Saint Gilles** 23.67 308 *e*P P 22 20 02.6 -1.8
comp=Z,59nm,1.2s
SGMF **Saint Gilles** 23.67 308 *e*P P 22 20 02.6 -1.8
comp=Z,29nm,1.2s
QUIF **Quistinic** 23.95 307 *e*P P 22 20 05.9 -1.1
comp=Z,43nm,0.8s
QUIF **Quistinic** 23.95 307 *e*P P 22 20 05.9 -1.1
QUIF pmax pmax
comp=Z,43nm,0.8s
QUIF **Quistinic** 23.95 307 *e*P P 22 20 05.9 -1.1
comp=Z,43nm,0.8s
QUIF **Quistinic** 23.95 307 *e*P P 22 20 05.9 -1.1
comp=Z,22nm,0.8s
ROSF **Rostrenen** 24.15 308 *e*P P 22 20 07.0 -1.9
comp=Z,33nm,0.8s
ROSF **Rostrenen** 24.15 308 *e*P P 22 20 07.0 -1.9
ROSF pmax pmax
comp=Z,33nm,0.8s
ROSF **Rostrenen** 24.15 308 *e*P P 22 20 07.0 -1.9
comp=Z,33nm,0.8s
ROSF **Rostrenen** 24.15 308 *e*P P 22 20 07.0 -1.9
comp=Z,16nm,0.8s
TZK **Tazeka** 24.30 273 *i* P P 22 20 12.0 +1.3
LIJA **Lijar** 24.72 280 *i* P P 22 20 13.5 -0.9
HFS **Hagfors** 24.82 346 P P 22 20 14.1 -0.8
HFS **Hagfors** 24.82 346 P P 22 20 14.1 -0.8
comp=Z,7.0nm,0.8s,baz=143,slow=10,SNR=18
HFS LR LR 22 31 05.5
comp=Z,196nm,18.9s,baz=327,slow=39
HFS **Hagfors** 24.82 346 P P 22 20 14.1 -0.8
comp=Z,196nm,18.9s
FIA1 **FINESS Array S** 24.95 1 *e*P P 22 20 15.7 -0.3
FIA1 **FINESS Array S** 24.95 1 *e*P P 22 20 15.7 -0.3
FINES **FINESS Array B** 24.95 1 P P 22 20 15.9 -0.1
FINES PcP PcP 22 23 50.4 -0.6
FINES **FINESS Array B** 24.95 1 P P 22 20 15.9 -0.1
comp=Z,19nm,0.8s,baz=157,slow=10,SNR=39
FINES PcP PcP 22 23 50.4 -0.6
comp=Z,1.0nm,0.7s,baz=146,slow=4.4,SNR=3.5
FINES LR LR 22 30 26.1
comp=Z,124nm,21.7s,baz=180,slow=38
FINES **FINESS Array B** 24.95 1 P P 22 20 15.9 -0.1
comp=Z,19nm,0.8s
FINES **FINESS Array B** 24.95 1 PcP PcP 22 23 50.4 -0.6
comp=Z,125nm,21.7s
MDT **Midelt** 24.99 270 P P 22 20 18.0 +1.1
MDT **Midelt** 24.99 270 P P 22 20 18.0 +1.1
comp=Z,11nm,0.8s,baz=84,slow=12,SNR=24
MDT **Midelt** 24.99 270 P P 22 20 18.0 +1.1
TGT **Taghat** 25.01 273 *i* P P 22 20 19.0 +2.0
ZFT **Errachidia** 25.02 268 *i* P P 22 20 17.5 +0.3
CZD **Col de Zad** 25.27 271 *i* P P 22 20 21.0 +1.4
MIF **Mishlifen** 25.32 272 *i* P P 22 20 21.0 +1.0
KONO **Kongsberg** 25.32 341 *e*P P 22 20 19.6 +0.1
KONO pmax pmax
comp=Z,14nm,1.1s
KONO **Kongsberg** 25.32 341 *e*P P 22 20 19.6 +0.1
comp=Z,14nm,1.1s
KONO **Kongsberg** 25.32 341 *e*P P 22 20 19.6 +0.1
comp=Z,14nm,1.1s
PBRG **Braganca** 25.45 292 *e*P P 22 20 20.8 -0.1
comp=Z,22nm,1.2s
PBRG **Braganca** 25.45 292 *e*P P 22 20 20.8 -0.1
comp=Z,22nm,1.2s
KAF **Kangasniemi** 25.62 1 *e*P P 22 20 21.9 -0.2
KAF pmax pmax
comp=Z,7.0nm,0.5s
KAF **Kangasniemi** 25.62 1 *e*p P 22 20 21.9 -0.2
comp=Z,6.8nm,0.5s
KAF **Kangasniemi** 25.62 1 *e*P P 22 20 21.9 -0.2
comp=Z,6.8nm,0.5s
MVO **Moncorvo** 25.66 290 *e*P P 22 20 23.2 +0.3
comp=Z,32nm,0.7s
MVO *e*S S 22 24 56.8 +5.8
MVO **Moncorvo** 25.66 290 *e*P P 22 20 23.2 +0.3
comp=Z,32nm,0.7s
PBAR **Barrancos** 25.85 284 *e*P P 22 20 24.4 -0.1
comp=Z,22nm,1.6s
PBAR *e*S S 22 24 54.4 +0.6

PBAR	**Barrancos**		**25.85**	**284**	*e*P		**P**	**22 20 24.4**	**-0.1**
	comp=Z,22nm,1.6s									
PBAR					*e*S		**S**	**22 24 54.4**	**+0.6**
PMRV	**Marv??o**		**26.01**	**286**	*e*P		**P**	**22 20 25.2**	**-0.7**
	comp=Z,26nm,1.0s									
PMRV					*e*S		S	22 25 05.3	+9.0
PMRV	**Marv??o**		**26.01**	**286**	*e*P		**P**	**22 20 25.2**	**-0.7**
	comp=Z,26nm,1.0s									
PCBR	**Castelo Branco**		**26.05**	**287**	*e*P		**P**	**22 20 26.4**	**+0.1**
	comp=Z,16nm,1.0s									
PCBR	**Castelo Branco**		**26.05**	**287**	*e*P		**P**	**22 20 26.4**	**+0.1**
	comp=Z,16nm,1.0s									
NAO01	**NORSAR Array S**		**26.06**	**344**	*e*P		**P**	**22 20 25.3**	**-0.8**
	comp=Z,12nm,0.9s									
NAO01	**NORSAR Array S**		**26.06**	**344**	*e*P		**P**	**22 20 25.3**	**-0.8**
	comp=Z,12nm,0.9s									
MTE	**Manteigas**		**26.07**	**289**	*e*P		**P**	**22 20 26.7**	**+0.1**
	comp=Z,20nm,0.9s									
MTE					*e*S		**S**	**22 25 03.5**	**+6.1**
MTE	**Manteigas**		**26.07**	**289**	*e*P		**P**	**22 20 25.9**	**-0.6**
	comp=Z,15nm,0.7s									
MTE	**Manteigas**		**26.07**	**289**	*e*P		**P**	**22 20 25.9**	**-0.6**
	comp=Z,15nm,0.7s									
NB2	**NORSAR Subarra**		**26.16**	**344**	P		**P**	**22 20 26.6**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=156,slow=9.3									
NB2	**NORSAR Subarra**		**26.16**	**344**	P		**P**	**22 20 26.6**	**-0.5**
	comp=Z,4.7nm,0.9s,baz=156,slow=9.0,SNR=9.2									
NOA	**NORSAR Array B**		**26.16**	**344**	P		**P**	**22 20 27.4**	**+0.4**
NOA	**NORSAR Array B**		**26.16**	**344**	P		**P**	**22 20 27.4**	**+0.4**
	comp=Z,4.5nm,0.8s,baz=132,slow=7.3,SNR=13									
NOA					LR		LR	22 31 36.9		
	comp=Z,69nm,18.1s,baz=165,slow=38									
NOA	**NORSAR Array B**		**26.16**	**344**	P		**P**	**22 20 27.5**	**+0.4**
	comp=Z,69nm,18.1s									
PVRL	**Vila Real**		**26.18**	**291**	*e*P		**P**	**22 20 28.7**	**+1.2**
PVRL	**Vila Real**		**26.18**	**291**	*e*P		**P**	**22 20 28.7**	**+1.2**
KIB	**El Ksiba**		**26.21**	**271**	*i* P		**P**	**22 20 30.0**	**+2.1**
PESTR	**Estremoz**		**26.21**	**285**	*e*P		**P**	**22 20 27.4**	**-0.3**
	comp=Z,26nm,1.1s									
PESTR					*e*S		**S**	**22 24 56.0**	**-3.5**
PESTR	**Estremoz**		**26.21**	**285**	*e*P		**P**	**22 20 27.4**	**-0.3**
	comp=Z,26nm,1.1s									
POLO	**Lamas de Olo**		**26.24**	**291**	*e*P		**P**	**22 20 28.3**	**+0.2**
	comp=Z,10nm,1.2s									
POLO					*e*S		**S**	**22 25 02.2**	**+2.1**
POLO	**Lamas de Olo**		**26.24**	**291**	*e*P		**P**	**22 20 28.3**	**+0.2**
	comp=Z,10nm,1.2s									
PVIS	**Viseu**		**26.33**	**289**	*e*P		**P**	**22 20 29.2**	**+0.3**
	comp=Z,29nm,1.0s									
PVIS	**Viseu**		**26.33**	**289**	*e*P		**P**	**22 20 29.2**	**+0.3**
	comp=Z,29nm,1.0s									
PCAB	**Cabril**		**26.41**	**292**	*e*P		**P**	**22 20 29.9**	**+0.3**
PCAB	**Cabril**		**26.41**	**292**	*e*P		**P**	**22 20 29.9**	**+0.3**
PVAQ	**Vaqueiros**		**26.48**	**282**	*e*P		**P**	**22 20 30.1**	**-0.1**
	comp=Z,47nm,0.8s									
PVAQ	**Vaqueiros**		**26.48**	**282**	*e*P		**P**	**22 20 30.1**	**-0.1**
	comp=Z,47nm,0.8s									
PBEJ	**Beja**		**26.51**	**283**	*e*P		**P**	**22 20 30.5**	**0.0**
	comp=Z,19nm,1.4s									
PBEJ	**Beja**		**26.51**	**283**	*e*P		**P**	**22 20 30.5**	**0.0**
	comp=Z,19nm,1.4s									
EVO	**Evora**		**26.57**	**285**	*e*P		**P**	**22 20 31.0**	**0.0**
	comp=Z,12nm,1.6s									
EVO	**Evora**		**26.57**	**285**	*e*P		**P**	**22 20 30.9**	**0.0**
	comp=Z,11nm,0.9s									
EVO					*e*R					
	comp=Z,58nm,18.5s									
EVO	**Evora**		**26.57**	**285**	*e*P		**P**	**22 20 31.0**	**0.0**
	comp=Z,12nm,1.6s									
PGAV	**Gavieira, Arco**		**26.60**	**292**	*e*S		S	22 25 22.4	+17
EVOP	**Sao Brissos**		**26.66**	**285**	*e*P		**P**	**22 20 30.9**	**-0.9**
EVOP					pmax		pmax			
	comp=Z,11nm,0.9s									
EVOP	**Sao Brissos**		**26.66**	**285**	*e*P		**P**	**22 20 30.9**	**-0.9**
	comp=Z,11nm,0.9s									
EVOP	**Sao Brissos**		**26.66**	**285**	*e*P		**P**	**22 20 30.9**	**-0.9**
	comp=Z,5.6nm,0.9s									
JOF	**Joensuu**		**26.66**	**6**	*e*P		**P**	**22 20 31.9**	**+0.3**
JOF					pmax		pmax			
	comp=Z,9.0nm,0.7s									
JOF	**Joensuu**		**26.66**	**6**	*ep*		**P**	**22 20 31.9**	**+0.3**
	comp=Z,8.6nm,0.7s									
JOF	**Joensuu**		**26.66**	**6**	*e*P		**P**	**22 20 31.9**	**+0.3**
	comp=Z,8.6nm,0.7s									
PBDV	**Barranco-do-Ve**		**26.67**	**282**	*e*P		**P**	**22 20 32.2**	**+0.2**
	comp=Z,47nm,0.9s									
PBDV	**Barranco-do-Ve**		**26.67**	**282**	*e*P		**P**	**22 20 32.2**	**+0.2**
	comp=Z,47nm,0.9s									
PMTG	**Montargil**		**26.68**	**286**	*e*P		**P**	**22 20 31.4**	**-0.6**
	comp=Z,19nm,1.8s									
PMTG					*e*S		**S**	**22 25 11.6**	**+4.7**
PMTG	**Montargil**		**26.68**	**286**	*e*P		**P**	**22 20 31.4**	**-0.6**
	comp=Z,19nm,1.8s									
PCVE	**Castro Verde**		**26.70**	**283**	*e*P		**P**	**22 20 31.8**	**-0.4**
	comp=Z,23nm,1.2s									
PCVE					*e*S		S	22 25 14.7	+7.5
PCVE	**Castro Verde**		**26.70**	**283**	*e*P		**P**	**22 20 31.8**	**-0.4**
	comp=Z,23nm,1.2s									
PTOM	**Tomar**		**26.78**	**287**	*e*P		**P**	**22 20 32.8**	**-0.1**
	comp=Z,28nm,1.4s									
PTOM	**Tomar**		**26.78**	**287**	*e*P		**P**	**22 20 32.8**	**-0.1**
	comp=Z,28nm,1.4s									
PNCL	**Nicolau / Gran**		**27.02**	**284**	*e*P		**P**	**22 20 35.6**	**+0.5**
	comp=Z,22nm,1.7s									
PNCL					*e*S		S	22 25 32.5	+20
PNCL	**Nicolau / Gran**		**27.02**	**284**	*e*P		**P**	**22 20 35.6**	**+0.5**
	comp=Z,22nm,1.7s									
EKA	**Eskdalemuir Ar**		**27.10**	**323**	P		**P**	**22 20 35.0**	**-0.6**
EKA					PcP		**PcP**	**22 23 56.4**	**+0.3**
EKA	**Eskdalemuir Ar**		**27.10**	**323**	P		**P**	**22 20 35.0**	**-0.6**
	comp=Z,7.2nm,0.6s,baz=118,slow=9.3,SNR=25									
EKA					PcP		**PcP**	**22 23 56.4**	**+0.3**
	comp=Z,2.7nm,0.8s,baz=106,slow=4.8,SNR=3.6									
EKA	**Eskdalemuir Ar**		**27.10**	**323**	P		**P**	**22 20 35.0**	**-0.6**
	comp=Z,7.0nm,0.6s									
ESK	**Eskdalemuir**		**27.11**	**323**	*e*P		**P**	**22 20 35.8**	**+0.1**
ESK					pmax		pmax			
	comp=Z,19nm,0.7s									
ESK	**Eskdalemuir**		**27.11**	**323**	*e*P		**P**	**22 20 35.8**	**+0.1**
	comp=Z,19nm,0.7s									
ESK	**Eskdalemuir**		**27.11**	**323**	*e*P		**P**	**22 20 35.8**	**+0.1**
	comp=Z,19nm,0.7s									
AKTK	**Aktyubinsk**		**27.14**	**49**	P		**P**	**22 20 36.2**	**+0.2**
	comp=Z,49nm,18.7s									
AKTO	**Aktyubinsk**		**27.14**	**49**	P		**P**	**22 20 36.2**	**+0.2**
AKTO					pmax		pmax			
	comp=Z,3.0nm,0.6s									
AKTO					MLR		MLR			
	comp=Z,49nm,18.7s									
AKTO	**Aktyubinsk**		**27.14**	**49**	P		**P**	**22 20 36.1**	**+0.2**
AKTO	**Aktyubinsk**		**27.14**	**49**	P		**P**	**22 20 36.1**	**+0.2**
	comp=Z,2.7nm,0.6s,baz=271,slow=4.1,SNR=3.9									
AKTO					LR		LR	22 35 50.4		
	comp=Z,49nm,18.7s,baz=44,slow=46									
AKTO	**Aktyubinsk**		**27.14**	**49**	P		**P**	**22 20 36.2**	**+0.2**
PTEO	**Sao Teotonio**		**27.25**	**283**	*e*P		**P**	**22 20 39.6**	**+2.5**
	comp=Z,44nm,1.1s									
PTEO	**Sao Teotonio**		**27.25**	**283**	*e*P		**P**	**22 20 39.6**	**+2.5**
	comp=Z,44nm,1.1s									
PMAFR	**Mafra**		**27.51**	**286**	*e*S		S	22 25 36.5	+16
AB31	**Akbulak array**		**28.01**	**52**	*ce*P		**P**	**22 20 44.5**	**+0.7**
AB31					pmax		pmax			
	comp=Z,3.0nm,0.5s									
AB31	**Akbulak array**		**28.01**	**52**	*e*P		**P**	**22 20 44.5**	**+0.7**
	comp=Z,3.0nm,0.5s									
ABKAR	**Akbulak array**		**28.01**	**52**	*e*P		**P**	**22 20 42.9**	**-0.8**
ABKAR	**Akbulak array**		**28.01**	**52**	*e*P		**P**	**22 20 42.9**	**-0.8**
ATD	**Arta Tunnel**		**29.40**	**143**	LR		LR	22 32 53.1		
	comp=Z,77nm,19.7s,baz=287,slow=37									
ARU	**Arti**		**29.80**	**38**	*d* iP		**P**	**22 20 59.8**	**+0.2**
ARU								22 21 55.4		
ARU					S		**S**	**22 25 56.3**	**+0.6**
ARU					pmax		pmax			
	comp=Z,17nm,1.7s									
ARU	**Arti**		**29.80**	**38**	*i* P		**P**	**22 20 59.8**	**+0.2**
	comp=Z,17nm,1.7s									
ARU					S		**S**	**22 25 56.3**	**+0.6**
FURI	**Furi**		**30.00**	**153**	*e*P		P	22 21 06.1	+4.0
	comp=Z,13nm,0.7s									
SOKR	**Solikamsk**		**30.64**	**31**	*c* iP		**P**	**22 21 07.5**	**+0.6**
SOKR					pmax		pmax			
	comp=Z,20nm,1.0s									
SOKR	**Solikamsk**		**30.64**	**31**	*i* P		**P**	**22 21 07.5**	**+0.6**
	comp=Z,20nm,1.0s									
SVE	**Sverdlovsk**		**31.01**	**38**	⇓*e*P		**P**	**22 21 11.4**	**+1.1**
SVE					*e*S		**S**	**22 26 16.5**	**+2.0**
SVE					pmax		pmax			
	comp=Z,21nm,1.1s									
SVE					MLR		MLR			
	comp=Z,131nm,16.0s									
SVE	**Sverdlovsk**		**31.01**	**38**	*e*P		**P**	**22 21 11.4**	**+1.1**
	comp=Z,21nm,1.1s									
SVE					*e*S		**S**	**22 26 16.5**	**+2.0**
	comp=Z,131nm,16.0s									
APA	**Apatity**		**31.42**	**6**	⇑*i*P		**P**	**22 21 14.0**	**+0.2**
APA					*i*			22 21 30.6		
APA					pmax		pmax			
	comp=Z,29nm,1.0s									
APA					MLR		MLR			
	comp=Z,300nm,12.0s									
APA	**Apatity**		**31.42**	**6**	*i* P		**P**	**22 21 14.0**	**+0.2**
	comp=Z,29nm,1.0s									
TOA0	**Torodi Ar. Sit**		**31.59**	**229**	*e*P		**P**	**22 21 15.6**	**-0.1**
TOA0	**Torodi Ar. Sit**		**31.59**	**229**	*e*P		**P**	**22 21 15.6**	**-0.1**
TORD	**Torodi Ar. Bea**		**31.59**	**229**	P		**P**	**22 21 15.7**	**-0.1**
TORD					PcP		**PcP**	**22 24 08.9**	**+0.7**
TORD	**Torodi Ar. Bea**		**31.59**	**229**	P		**P**	**22 21 15.7**	**-0.1**
	comp=Z,6.1nm,0.7s,baz=33,slow=9.0,SNR=59									
TORD					PcP		**PcP**	**22 24 08.9**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=27,slow=3.2,SNR=4.2									
TORD	**Torodi Ar. Bea**		**31.59**	**229**	P		**P**	**22 21 15.7**	**-0.1**
TORD	**Torodi Ar. Bea**		**31.59**	**229**	PcP		**PcP**	**22 24 08.9**	**+0.7**
ARCES	**ARCESS Array B**		**33.07**	**0**	P		**P**	**22 21 27.6**	**-0.6**
ARCES	**ARCESS Array B**		**33.07**	**0**	P		**P**	**22 21 27.6**	**-0.6**
	comp=Z,10nm,0.8s,baz=171,slow=8.9,SNR=22									
ARCES	**ARCESS Array B**		**33.07**	**0**	P		**P**	**22 21 27.6**	**-0.6**
	comp=Z,11nm,0.8s									
PMPST	**Porto Santo, M**		**34.33**	**277**	*e*P		**P**	**22 21 40.7**	**+1.1**
	comp=Z,134nm,1.4s									
PMPST	**Porto Santo, M**		**34.33**	**277**	*e*P		**P**	**22 21 40.7**	**+1.1**
	comp=Z,134nm,1.4s									
PMPS	**Porto Santo**		**34.33**	**277**	*e*P		**P**	**22 21 40.1**	**+0.5**
	comp=Z,137nm,1.5s									
PMPS	**Porto Santo**		**34.33**	**277**	*e*P		**P**	**22 21 40.1**	**+0.5**
	comp=Z,137nm,1.5s									
ZRNK	**Zerenda**		**34.38**	**48**	*i* P		**P**	**22 21 40.5**	**+0.6**
ZRNK					pmax		pmax			
	comp=Z,8.0nm,1.0s									
ZRNK	**Zerenda**		**34.38**	**48**	*i* P		**P**	**22 21 40.5**	**+0.6**
	comp=Z,8.0nm,1.0s									
KK31	**Karatay Array**		**34.86**	**65**	*ce*P		**P**	**22 21 44.6**	**+0.4**
KK31					pmax		pmax			
	comp=Z,11nm,1.3s									
KK31	**Karatay Array**		**34.86**	**65**	*e*P		**P**	**22 21 44.6**	**+0.4**
	comp=Z,11nm,1.3s									
KKAR	**Karatay Array**		**34.86**	**65**	*e*P		**P**	**22 21 44.5**	**+0.3**
KKAR	**Karatay Array**		**34.86**	**65**	*e*P		**P**	**22 21 44.5**	**+0.3**
KKAR	**Karatay Array**		**34.86**	**65**	*e*P		**P**	**22 21 44.5**	**+0.3**
PMAR	**Madeira**		**34.90**	**276**	*e*P		**P**	**22 21 46.6**	**+1.8**
	comp=Z,103nm,1.4s									
PMAR	**Madeira**		**34.90**	**276**	*e*P		**P**	**22 21 46.6**	**+1.8**
	comp=Z,103nm,1.4s									
BRVK	**Borovoye**		**35.16**	**48**	*d* iP		**P**	**22 21 47.4**	**+0.8**
BRVK					pmax		pmax			
	comp=Z,4.0nm,1.3s									
BRVK	**Borovoye**		**35.16**	**48**	*e*P		**P**	**22 21 47.8**	**+1.2**
	comp=Z,12nm,1.6s									
BRVK	**Borovoye**		**35.16**	**48**	*i* P		**P**	**22 21 47.4**	**+0.8**
	comp=Z,4.0nm,1.3s									
BVAR	**Borovoye Array**		**35.22**	**48**	P		**P**	**22 21 47.5**	**+0.4**
BVAR					pmax		pmax			
	comp=Z,2.0nm,0.9s									
BVAR	**Borovoye Array**		**35.22**	**48**	P		**P**	**22 21 47.5**	**+0.4**
BVAR	**Borovoye Array**		**35.22**	**48**	P		**P**	**22 21 47.5**	**+0.4**
	comp=Z,1.5nm,0.8s,baz=251,slow=4.5,SNR=8.8									
BVAR	**Borovoye Array**		**35.22**	**48**	P		**P**	**22 21 47.5**	**+0.4**
	comp=Z,2.0nm,0.9s									
KBL	**Kabul**		**35.27**	**80**	*e*P		**P**	**22 21 48.2**	**+0.2**
KBL					pmax		pmax			
	comp=Z,5.0nm,1.1s									
KBL	**Kabul**		**35.27**	**80**	*e*P		**P**	**22 21 48.2**	**+0.2**
	comp=Z,4.7nm,1.1s									
KBL	**Kabul**		**35.27**	**80**	*e*P		**P**	**22 21 48.2**	**+0.2**
	comp=Z,5.0nm,1.1s									
EKS2	**Erkin-Say**		**37.30**	**65**	*e*P		**P**	**22 22 06.4**	**+1.3**
EKS2					pmax		pmax			
	comp=Z,8.0nm,0.9s									
EKS2	**Erkin-Say**		**37.30**	**65**	*e*P		**P**	**22 22 06.4**	**+1.3**
	comp=Z,7.6nm,0.9s									
EKS2	**Erkin-Say**		**37.30**	**65**	*e*P		**P**	**22 22 06.4**	**+1.3**
	comp=Z,8.0nm,0.9s									
AAK	**Ala-Archa**		**37.82**	**65**	*c* iP		**P**	**22 22 10.9**	**+1.2**
AAK					pmax		pmax			
	comp=Z,17nm,1.0s									
AAK	**Ala-Archa**		**37.82**	**65**	*e*P		**P**	**22 22 11.3**	**+1.7**
	comp=Z,8.1nm,0.9s									
AAK	**Ala-Archa**		**37.82**	**65**	*i* P		**P**	**22 22 10.9**	**+1.2**
	comp=Z,17nm,1.0s									
TKM2	**Tokmak 2**		**38.59**	**65**	*e*P		**P**	**22 22 17.2**	**+1.0**
TKM2					pmax		pmax			
	comp=Z,5.0nm,0.8s									
TKM2	**Tokmak 2**		**38.59**	**65**	*e*P		**P**	**22 22 17.1**	**+1.0**
	comp=Z,4.6nm,0.8s									
TKM2	**Tokmak 2**		**38.59**	**65**	*e*P		**P**	**22 22 17.1**	**+0.9**
	comp=Z,4.6nm,0.8s									
KMBO	**Kilima Mbogo**		**39.02**	**161**	P		**P**	**22 22 22.1**	**+2.1**
KMBO	**Kilima Mbogo**		**39.02**	**161**	P		**P**	**22 22 22.1**	**+2.1**
	comp=Z,0.7nm,0.3s,baz=64,slow=22,SNR=4.2									
KMBO					LR		LR	22 40 18.3		
	comp=Z,84nm,19.0s,baz=183,slow=39									
KMBO	**Kilima Mbogo**		**39.02**	**161**	P		**P**	**22 22 22.1**	**+2.1**
	comp=Z,84nm,19.0s									
KSH	**Kashi**		**39.46**	**70**	*e*P		**P**	**22 22 23.0**	**-0.4**
KSH					*ep*P		pP	22 22 34.0	+6.5
KSH					*es*P		sP	22 22 40.5	+11
KSH					*e*PP		**PnPn**	**22 23 57.0**	**+0.3**
KSH					*e*PcP		**PcP**	**22 24 30.0**	**-1.1**
KSH					*e*S		**ScP**	**22 28 19.0**	**-0.4**
KSH					*es*S		sS	22 28 39.5	+7.6
KSH					pmax		pmax			
	comp=Z,6.0nm,0.7s									
KSH					pmax		pmax			
	comp=Z,160nm,5.2s									
KSH					LR		LR			
	comp=N,170nm,4.8s									
KSH					LR		LR			
	comp=E,180nm,6.2s									
KSH					LR		LR			
	comp=Z,140nm,4.6s									
KURBB	**Kurchatov Arra**		**40.06**	**52**	P		**P**	**22 22 28.4**	**+0.3**
	comp=Z,4.6nm,0.5s,baz=274,slow=8.6,SNR=68									
KURBB					PcP		**PcP**	**22 24 32.9**	**+0.2**
	comp=Z,1.9nm,0.9s,baz=272,slow=4.5,SNR=4.5									
KURK	**Kurchatov**		**40.12**	**52**	*d* iP		**P**	**22 22 29.0**	**+0.5**
KURK					pmax		pmax			
	comp=Z,6.0nm,1.0s									
KURK	**Kurchatov**		**40.12**	**52**	*e*P		**P**	**22 22 28.1**	**-0.4**
	comp=Z,7.4nm,0.9s									
KURK					PcP		**PcP**	**22 24 32.9**	**+0.1**
KURK	**Kurchatov**		**40.12**	**52**	*e*P		**P**	**22 22 28.1**	**-0.4**
	comp=Z,7.4nm,0.9s									
DBIC	**Dimbokro**		**40.64**	**230**	P		**P**	**22 22 33.2**	**+0.1**
DBIC	**Dimbokro**		**40.64**	**230**	P		**P**	**22 22 33.2**	**+0.1**
	comp=Z,6.0nm,0.6s,baz=332,slow=12,SNR=8.7									
DBIC	**Dimbokro**		**40.64**	**230**	P		**P**	**22 22 33.2**	**+0.1**
LIC	**Lamto**		**41.09**	**230**	*e*P		**P**	**22 22 35.4**	**-1.5**
	comp=Z,23nm,0.7s									
LIC	**Lamto**		**41.09**	**230**	*e*P		**P**	**22 22 35.4**	**-1.5**
	comp=Z,23nm,0.7s									
LIC	**Lamto**		**41.09**	**230**	*e*P		**P**	**22 22 35.4**	**-1.5**
	comp=Z,12nm,0.7s									
MK31	**Makanchi Array**		**42.81**	**58**	*e*P		**P**	**22 22 50.9**	**+0.2**
MK31					*e*			22 24 40.9		
MK31	**Makanchi Array**		**42.81**	**58**	*e*P		**P**	**22 22 50.9**	**+0.2**
MK31					*e*PcP		**PcP**	**22 24 40.9**	**-0.8**
MK31	**Makanchi Array**		**42.81**	**58**	*e*P		**P**	**22 22 50.9**	**+0.2**
MKAR	**Makanchi Array**		**42.81**	**58**	P		**P**	**22 22 51.1**	**+0.4**
MKAR								22 24 41.6		
MKAR					pmax		pmax			
	comp=Z,5.0nm,0.6s									
MKAR					pmax		pmax			
	comp=Z,2.0nm,0.7s									
MKAR					MLR		MLR			
	comp=Z,32nm,20.0s									
MKAR	**Makanchi Array**		**42.81**	**58**	*e*P		**P**	**22 22 51.2**	**+0.4**
MKAR								22 24 41.6		
MKAR	**Makanchi Array**		**42.81**	**58**	*e*P		**P**	**22 22 51.2**	**+0.4**
MKAR					PcP		**PcP**	**22 24 41.6**	**-0.2**
MKAR	**Makanchi Array**		**42.81**	**58**	P		**P**	**22 22 51.0**	**+0.4**
	comp=Z,5.3nm,0.6s,baz=279,slow=7.1,SNR=88									
MKAR					PcP		**PcP**	**22 24 41.6**	**-0.2**
	comp=Z,1.8nm,0.7s,baz=274,slow=4.9,SNR=3.0									
MKAR					LR		LR	22 43 32.6		
	comp=Z,32nm,20.0s,baz=166,slow=40									
MKAR	**Makanchi Array**		**42.81**	**58**	P		**P**	**22 22 51.1**	**+0.4**
	comp=Z,5.0nm,0.6s									
NVS	**Novosibirsk**		**42.94**	**46**	⇑*i*P		**P**	**22 22 52.6**	**+1.0**
NVS					*i*			22 24 30.6		
NVS					*e*S		**S**	**22 29 15.7**	**-0.3**
NVS					pmax		pmax			
	comp=Z,13nm,0.8s									
NVS					pmax		pmax			
	comp=N,4.0nm,0.7s									
NVS					pmax		pmax			
	comp=E,7.0nm,0.7s									
NVS					pmax		pmax			
	comp=N,6.0nm,1.7s									
NVS					pmax		pmax			
	comp=E,11nm,1.7s									
NVS					pmax		pmax			
	comp=Z,24nm,1.7s									
NVS					smax		smax			
	comp=N,4.0nm,1.4s									
NVS					smax		smax			
	comp=E,6.0nm,1.4s									
NVS	**Novosibirsk**		**42.94**	**46**	*i* P		**P**	**22 22 52.6**	**+1.0**
	comp=E,13nm,0.8s									
NVS					*e*S		**S**	**22 29 15.7**	**-0.3**
ZAA0	**Zalesovo Array**		**43.87**	**47**	*e*P		**P**	**22 22 58.5**	**-0.7**
ZAA0	**Zalesovo Array**		**43.87**	**47**	*e*P		**P**	**22 22 58.5**	**-0.7**
ZALV	**Zalesovo Beam**		**43.87**	**47**	P		**P**	**22 22 59.0**	**-0.1**
ZALV					pmax		pmax			
	comp=Z,4.0nm,0.4s									
ZALV					MLR		MLR			
	comp=Z,28nm,19.0s									
ZALV	**Zalesovo Beam**		**43.87**	**47**	P		**P**	**22 22 59.0**	**-0.1**
ZALV	**Zalesovo Beam**		**43.87**	**47**	P		**P**	**22 22 59.0**	**-0.1**
	comp=Z,3.9nm,0.4s,baz=271,slow=9.0,SNR=18									
ZALV					LR		LR	22 47 13.0		
	comp=Z,28nm,19.0s,baz=250,slow=44									
ZALV	**Zalesovo Beam**		**43.87**	**47**	P		**P**	**22 22 59.0**	**-0.1**
	comp=Z,28nm,19.0s									
DAG	**Danmarks Havn**		**44.79**	**347**	*i* P		**P**	**22 23 04.8**	**-1.3**
DAG	**Danmarks Havn**		**44.79**	**347**	*i* P		**P**	**22 23 04.8**	**-1.3**
WMQ	**Urumqi**		**47.09**	**61**	*e*P		**P**	**22 23 27.3**	**+2.4**
WMQ					pP		pP	22 23 39.0	+10
WMQ					pmax		pmax			
	comp=Z,9.0nm,1.1s									
WMQ					pmax		pmax			
	comp=Z,120nm,5.1s									
WMQ					LR		LR			
	comp=Z,120nm,19.0s									
SUMG	**Summit**		**47.81**	**339**	*e*P		**P**	**22 23 29.0**	**-1.5**
SUMG					*e*			22 24 58.3		
SUMG	**Summit**		**47.81**	**339**	*e*P		**P**	**22 23 28.9**	**-1.5**
SUMG					*e*PcP		**PcP**	**22 24 58.3**	**-0.9**
SUMG	**Summit**		**47.81**	**339**	*i* P		**P**	**22 23 30.5**	**+0.1**
	comp=Z,7.6nm,0.8s									
SUMG	**Summit**		**47.81**	**339**	*e*P		**P**	**22 23 29.0**	**-1.5**
LSA	**Lhasa**		**54.48**	**77**	*e*P		**P**	**22 24 22.2**	**+1.0**
LSA					pmax		pmax			
	comp=Z,9.0nm,0.7s									
LSA	**Lhasa**		**54.48**	**77**	*e*P		**P**	**22 24 22.2**	**+1.0**
	comp=Z,8.6nm,0.7s									
LSA	**Lhasa**		**54.48**	**77**	*e*P		**P**	**22 24 22.2**	**+1.0**
	comp=Z,9.0nm,0.7s									
TLY	**Talaya**		**55.48**	**48**	*e*P		**P**	**22 24 29.8**	**+2.2**
TLY					pmax		pmax			

GYA					pmax	pmax			
	comp=Z,10.0nm,1.0s								
BILL	**Bilibino**	**71.68**	**15**	⇑*i*	P	**P**	**22 26 13.6**	**-0.7**	
BILL					pmax	pmax			
	comp=Z,29nm,1.6s								
BILL	**Bilibino**	**71.68**	**15**	*i*	P	**P**	**22 26 13.6**	**-0.7**	
	comp=Z,29nm,1.6s								
USRK	**Ussuriysk Arra**	**75.69**	**45**		P	**P**	**22 26 37.2**	**-1.1**	
	comp=Z,2.8nm,0.7s,baz=295,slow=3.6,SNR=8.9								
YKA	**Yellowknife Ar**	**76.24**	**342**		P	**P**	**22 26 39.7**	**-1.4**	
YKA	**Yellowknife Ar**	**76.24**	**342**		P	**P**	**22 26 39.7**	**-1.4**	
	comp=Z,1.5nm,0.8s,baz=35,slow=5.7,SNR=5.0								
YKA	**Yellowknife Ar**	**76.24**	**342**		P	**P**	**22 26 39.7**	**-1.4**	
	comp=Z,2.0nm,0.9s								
KSAR	**Wonju Array Be**	**77.22**	**53**		P	**P**	**22 26 46.4**	**-0.8**	
KSAR	**Wonju Array Be**	**77.22**	**53**		P	**P**	**22 26 46.3**	**-0.8**	
KSRS	**Korea Array**	**77.24**	**53**		P	**P**	**22 26 46.4**	**-0.8**	
	comp=Z,2.3nm,0.7s,baz=308,slow=4.8,SNR=5.6								
KSRS					LR	LR	23 08 15.6		
	comp=Z,33nm,20.3s,baz=292,slow=42								
KSRS	**Korea Array**	**77.24**	**53**		P	**P**	**22 26 46.4**	**-0.8**	
	comp=Z,33nm,20.3s								
ILAR	**Eielson Array**	**78.86**	**357**		P	**P**	**22 26 54.9**	**-0.9**	
ILAR	**Eielson Array**	**78.86**	**357**		P	**P**	**22 26 54.9**	**-0.9**	
	comp=Z,0.5nm,0.9s,baz=36,slow=7.9,SNR=4.4								
ILAR					LR	LR	23 03 12.1		
	comp=Z,40nm,18.9s,baz=22,slow=37								
ILAR	**Eielson Array**	**78.86**	**357**		P	**P**	**22 26 54.8**	**-0.9**	
COWI	**Conover**	**78.93**	**320**	*e*	P	**P**	**22 26 56.4**	**-0.1**	
	comp=Z,9.9nm,1.0s								
COWI	**Conover**	**78.93**	**320**	*e*	P	**P**	**22 26 56.4**	**-0.1**	
	comp=Z,9.9nm,1.0s								
ULM	**Lac du Bonnet**	**79.33**	**326**		P	**P**	**22 26 57.4**	**-1.1**	
ULM	**Lac du Bonnet**	**79.33**	**326**		P	**P**	**22 26 57.4**	**-1.1**	
	comp=Z,3.9nm,0.6s,baz=54,slow=5.3,SNR=3.0								
ULM					LR	LR	23 00 38.1		
	comp=Z,75nm,21.4s,baz=14,slow=35								
ULM	**Lac du Bonnet**	**79.33**	**326**		P	**P**	**22 26 57.4**	**-1.1**	
	comp=Z,75nm,21.4s								
PETK	**Petropavlovsk-**	**81.57**	**27**		LR	LR	23 06 28.9		
	comp=Z,34nm,19.8s,baz=326,slow=38								
CPCT	**Cooper Cave**	**83.28**	**309**	*e*	P	**P**	**22 27 19.6**	**-0.2**	
CPCT	**Cooper Cave**	**83.28**	**309**	*e*	P	**P**	**22 27 19.6**	**-0.2**	
MJAR	**Matsushiro Arr**	**84.21**	**48**		P	**P**	**22 27 23.3**	**-1.3**	
MJAR	**Matsushiro Arr**	**84.21**	**48**		P	**P**	**22 27 23.3**	**-1.3**	
	comp=Z,1.3nm,0.7s,baz=295,slow=4.6,SNR=4.4								
MJAR	**Matsushiro Arr**	**84.21**	**48**		P	**P**	**22 27 23.3**	**-1.3**	
	comp=Z,1.0nm,0.7s								
ECSD	**EROS Data Cent**	**84.39**	**322**	*e*	P	**P**	**22 27 25.0**	**-0.3**	
	comp=Z,6.9nm,1.2s								
ECSD	**EROS Data Cent**	**84.39**	**322**	*e*	P	**P**	**22 27 25.0**	**-0.3**	
	comp=Z,6.9nm,1.2s								
LRAL	**Lakeview Retre**	**86.41**	**309**	*e*	P	**P**	**22 27 35.6**	**0.0**	
	comp=Z,15nm,1.0s								
LRAL	**Lakeview Retre**	**86.41**	**309**	*e*	P	**P**	**22 27 35.6**	**0.0**	
	comp=Z,15nm,1.0s								
BDFB	**Brasilia**	**86.47**	**248**		P	**P**	**22 27 38.0**	**+1.8**	
BDFB	**Brasilia**	**86.47**	**248**		P	**P**	**22 27 38.0**	**+1.8**	
	comp=Z,5.9nm,0.7s,baz=77,slow=4.0,SNR=9.7								
BDFB	**Brasilia**	**86.47**	**248**		P	**P**	**22 27 38.0**	**+1.8**	
	comp=Z,6.0nm,0.7s								
EGMT	**Eagleton**	**86.84**	**332**	*e*	P	**P**	**22 27 37.1**	**-0.4**	
	comp=Z,12nm,1.0s								
EGMT	**Eagleton**	**86.84**	**332**	*e*	P	**P**	**22 27 37.1**	**-0.4**	
	comp=Z,12nm,1.0s								
WALA	**Waterton Lakes**	**87.48**	**335**	*e*	P	**P**	**22 27 39.0**	**-1.7**	
	comp=Z,0.2nm,1.0s								
WALA	**Waterton Lakes**	**87.48**	**335**	*e*	P	**P**	**22 27 39.0**	**-1.7**	
	comp=Z,0.2nm,1.0s								
SWMT	**Swartz Lake**	**88.83**	**334**	*e*	P	**P**	**22 27 45.6**	**-1.5**	
SWMT	**Swartz Lake**	**88.83**	**334**	*e*	P	**P**	**22 27 45.6**	**-1.5**	
SDV	**Santo Domingo**	**89.66**	**281**	*e*	P	**P**	**22 27 52.0**	**+0.4**	
	comp=Z,18nm,1.7s								
SDV	**Santo Domingo**	**89.66**	**281**	*e*	P	**P**	**22 27 52.0**	**+0.4**	
	comp=Z,18nm,1.7s								
PHWY	**Pilot Hill**	**90.47**	**325**	*e*	P	**P**	**22 27 54.7**	**-0.5**	
	comp=Z,12nm,1.1s								
PHWY	**Pilot Hill**	**90.47**	**325**	*e*	P	**P**	**22 27 54.7**	**-0.5**	
	comp=Z,12nm,1.1s								
PDAR	**Pinedale Array**	**91.08**	**329**		P	**P**	**22 27 56.9**	**-1.0**	
PDAR	**Pinedale Array**	**91.08**	**329**		P	**P**	**22 27 56.9**	**-1.0**	
	comp=Z,0.7nm,0.9s,baz=219,slow=1.2,SNR=4.2								
PDAR					LR	LR	23 06 28.7		
	comp=Z,68nm,19.4s,baz=74,slow=34								
PDAR	**Pinedale Array**	**91.08**	**329**		P	**P**	**22 27 56.9**	**-1.0**	
WMOK	**Wichita Mounta**	**92.15**	**317**	*e*	P	**P**	**22 28 02.7**	**0.0**	
WMOK					pmax	pmax			
	comp=Z,10.0nm,1.6s								
WMOK	**Wichita Mounta**	**92.15**	**317**	*e*	P	**P**	**22 28 02.7**	**0.0**	
	comp=Z,9.8nm,1.6s								
WMOK	**Wichita Mounta**	**92.15**	**317**	*e*	P	**P**	**22 28 02.7**	**0.0**	
	comp=Z,10.0nm,1.6s								
WRA	**Warramunga Arr**	**116.47**	**96**		PKP	**PKPdf**	**22 33 36.2**	**-1.0**	
WRA	**Warramunga Arr**	**116.47**	**96**		PKP	**PKPdf**	**22 33 36.2**	**-1.0**	
	comp=Z,0.5nm,0.8s,baz=318,slow=1.8,SNR=6.2								
ASAR	**Alice Springs**	**118.02**	**100**		PKP	**PKPdf**	**22 33 39.2**	**-0.9**	
ASAR	**Alice Springs**	**118.02**	**100**		PKP	**PKPdf**	**22 33 39.2**	**-0.9**	
	comp=Z,0.7nm,0.7s,baz=306,slow=1.4,SNR=8.7								
STKA	**Stephens Creek**	**127.80**	**105**		PKP	**PKPdf**	**22 33 58.5**	**-0.1**	
STKA	**Stephens Creek**	**127.80**	**105**		PKP	**PKPdf**	**22 33 58.5**	**-0.1**	
	comp=Z,0.5nm,0.4s,baz=57,slow=6.9,SNR=3.5								

*ATH **26** 22:28:40.5,36.97N×26.67E,h45km,MD2.6/3*
*ISCJB **26** 22:28:48.2±0.7,36.55N±0.03×25.4E±0.1,h10km±3km, Error ellipse: s-maj=16.7km s-min=4.6km az=4.1*
*THE **26** 22:28:48.6,36.53N×25.40E,h6km,ML2.4/2, Error ellipse: s-maj=2.0km s-min=0.5km az=90.0*
*CSEM **26** 22:28:48.6,36.53N×25.40E,h6km,ML2.4/2, After THE*
ISC 26 22:28:48.0±1.0,36.54N±0.03×25.38E±0.08,h11km±6km, n23,σ0°36/40,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THR2	**Thira island,**	**0.10**	**155**	P	**Pg**	**22 28 51.1**	**+0.3**
THR2				S	**Sg**	**22 28 52.7**	**-0.1**
THR2	**Thira island,**	**0.10**	**155**	P	**Pg**	**22 28 51.1**	**+0.3**
THR2				S	**Sg**	**22 28 52.7**	**-0.1**
THR3	**Thira Island,**	**0.13**	**173**	P	**Pb**	**22 28 52.0**	**-0.4**
THR3	**Thira Island,**	**0.13**	**173**	P	**Pb**	**22 28 52.0**	**-0.4**
SANT	**Santorini**	**0.18**	**160**	P	**Pg**	**22 28 51.8**	**-0.2**
SANT				S	**Sg**	**22 28 54.8**	**+0.1**
SANT	**Santorini**	**0.18**	**160**	P	**Pg**	**22 28 51.8**	**-0.2**
SANT				S	**Sg**	**22 28 54.8**	**+0.1**
THR1	**Thera Island**	**0.18**	**159**	P	**Pg**	**22 28 52.4**	**+0.4**
THR1				S	**Sg**	**22 28 54.7**	**0.0**
THR1	**Thera Island**	**0.18**	**159**	P	**Pg**	**22 28 52.4**	**+0.4**
THR1				S	**Sg**	**22 28 54.7**	**0.0**
APE	**Apeiranthos**	**0.54**	**13**	P	**Pg**	**22 28 59.0**	**+0.3**
APE				S	**Sb**	**22 29 07.7**	**+0.3**
APE	**Apeiranthos**	**0.54**	**13**	*e*P	**Pg**	**22 28 58.6**	**-0.1**
APE				*e*S	**Sn**	**22 29 10.8**	**0.0**
APE	**Apeiranthos**	**0.54**	**13**	P	**Pg**	**22 28 59.0**	**+0.3**
APE				S	**Sb**	**22 29 07.7**	**+0.3**
NPS	**Neapolis**	**1.29**	**172**	P	**Pn**	**22 29 11.2**	**-0.7**
NPS				S	**Sg**	**22 29 29.9**	**+0.5**
NPS	**Neapolis**	**1.29**	**172**	P	**Pn**	**22 29 11.2**	**-0.7**
NPS				S	**Sg**	**22 29 29.9**	**+0.5**
IDI	**Anoyia**	**1.31**	**198**	P	**Pn**	**22 29 12.1**	**-0.1**
IDI				S	**Sg**	**22 29 30.6**	**+0.4**
IDI	**Anoyia**	**1.31**	**198**	P	**Pn**	**22 29 12.1**	**-0.1**
IDI				S	**Sg**	**22 29 30.6**	**+0.4**
LAST	**Lasithi**	**1.38**	**177**	P	**Pn**	**22 29 12.6**	**-0.6**
LAST				S	**Sb**	**22 29 31.9**	**+0.5**
LAST	**Lasithi**	**1.38**	**177**	P	**Pn**	**22 29 12.6**	**-0.6**
LAST				S	**Sb**	**22 29 31.9**	**+0.5**
ZKR	**Zakros**	**1.57**	**154**	P	**Pn**	**22 29 16.0**	**+0.2**
ZKR				S	**Sb**	**22 29 37.1**	**+0.1**
ZKR	**Zakros**	**1.57**	**154**	P	**Pn**	**22 29 16.0**	**+0.2**
ZKR				S	**Sb**	**22 29 37.1**	**+0.1**
SMG	**Samos**	**1.65**	**44**	P	**Pn**	**22 29 16.8**	**-0.1**
SMG	**Samos**	**1.65**	**44**	P	**Pn**	**22 29 16.8**	**-0.1**
CHOS	**Chios island**	**1.92**	**16**	P	**Pn**	**22 29 20.4**	**-0.3**
CHOS	**Chios island**	**1.92**	**16**	P	**Pn**	**22 29 20.4**	**-0.3**

IDC 26 22:33:41.9±2.7,37.58S×71.85W,h130km±26km,mb3.6/6, mb1 3.7/8,mb1mx3.6/17,mbtmp3.6/8,MS3.0/3,Ms1 3.0/3, ms1mx2.6/28,Error ellipse: s-maj=37.9km s-min=22.9km az=76.0,Southern Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**3.31**	**163**	P	Pn	22 34 32.1	-0.5
	6.0nm,0.3s,baz=336,slow=14,SNR=134						
PLCA				S	Sn	22 35 23.6	+12
	1.6nm,0.3s,baz=74,slow=19,SNR=2.2						
CFAA	**Coronel Fontan**	**6.66**	**28**	P	Pn	22 35 08.2	-9.2
	0.2nm,0.3s,baz=205,slow=13,SNR=23						
CFAA				S	Sn	22 36 20.2	-12
	0.4nm,0.3s,baz=297,slow=11,SNR=5.8						
LVC	**Limon Verde**	**15.13**	**10**	LR	LR	22 41 56.5	
	comp=Z,22nm,21.5s,baz=77,slow=33						
CPUP	**Villa Florida**	**16.64**	**52**	P	P	22 37 30.2	+2.7
	0.3nm,0.3s,baz=220,slow=9.5,SNR=3.1						
CPUP				LR	LR	22 44 35.6	
	comp=Z,22nm,19.1s,baz=174,slow=39						
USHA	**Ushuaia**	**17.42**	**173**	P	Pn	22 37 36.7	+0.1
	0.3nm,0.3s,baz=334,slow=7.6,SNR=6.4						
LPAZ	**La Paz**	**21.46**	**10**	P	P	22 38 21.7	+1.0
	1.3nm,0.7s,baz=189,slow=10,SNR=7.2						
BDFB	**Brasilia**	**30.36**	**50**	P	P	22 39 40.6	-1.0
	1.9nm,0.7s,baz=211,slow=8.9,SNR=3.0						
MAW	**Mawson**	**69.72**	**163**	LR	LR	23 16 30.9	
	comp=Z,82nm,18.8s,baz=204,slow=37						
TXAR	**Lajitas Array**	**72.93**	**331**	P	P	22 44 56.5	-0.4
	0.4nm,0.6s,baz=148,slow=8.6,SNR=6.4						
DBIC	**Dimbokro**	**76.21**	**70**	P	P	22 45 16.1	0.0
	4.8nm,1.0s,baz=337,slow=12,SNR=6.2						
BOSA	**Boshof**	**78.30**	**117**	P	P	22 45 28.4	+0.5
	2.7nm,0.8s,baz=214,slow=4.8,SNR=3.1						
TORD	**Torodi Ar. Bea**	**85.30**	**70**	P	P	22 46 04.5	+0.1
	0.4nm,0.7s,baz=227,slow=4.9,SNR=6.3						
TORD				pP	pP	22 46 28.0	-10
	0.6nm,1.0s,baz=209,slow=7.0,SNR=2.1						
MKAR	**Makanchi Array**	**158.82**	**56**	PKPab	PKPab	22 53 60.0	-0.4
	0.3nm,0.7s,baz=280,slow=5.0,SNR=3.0						

*IDC **26** 22:44:20.9±7.7,34.84S×178.99E,h171km±78km,mb3.8/2, mb1 3.9/3,mb1mx3.4/17,mbtmp3.6/3, Error ellipse: s-maj=89.9km s-min=44.9km az=2.0*
*WEL **26** 22:44:23.7±0.3,35.27S×179.01E,h237km±8km,ML3.9/7, Error ellipse: s-maj=14.1km s-min=7.5km az=90.0*
*ISCJB **26** 22:44:26.8±1.3,35.28S±0.07×178.1E±0.2,h200km, mb3.9/2,Error ellipse: s-maj=21.4km s-min=10.2km az=172.9*
ISC 26 22:44:28.0±1.7,35.3S±0.1×178.2E±0.2,h200km,n22, σ1°61/26,1D,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**2.26**	**177**	PN	**Pn**	**22 45 08.6**	**-0.6**
PUZ	**Puketiti**	**2.77**	**178**	⇓PN	**Pn**	**22 45 13.9**	**-1.1**
PUZ				SN	**Sn**	**22 45 52.5**	**+0.8**
PUZ				AML	AML	22 46 13.8	
MWZ	**Matawai**	**3.07**	**189**	PN	**Pn**	**22 45 18.8**	**+0.4**
MWZ				AML	AML	22 46 12.0	
MWZ				AML	AML	22 46 12.0	
URZ	**Urewera**	**3.07**	**196**	PN	**Pn**	**22 45 19.4**	**+1.0**
URZ				AML	AML	22 46 13.9	
URZ	**Urewera**	**3.07**	**196**	P	**Pn**	**22 45 19.5**	**+1.1**
	1.1nm,0.3s,baz=353,slow=17,SNR=24						
URZ				S	**Sn**	**22 46 02.9**	**+4.9**
	3.2nm,0.3s,baz=265,slow=22,SNR=12						
RAHZ	**Arahi**	**3.71**	**193**	PN	**Pn**	**22 45 26.7**	**+0.5**
KNZ	**Kokohu**	**3.73**	**186**	PN	**Pn**	**22 45 25.5**	**-0.9**
BKZ	**Black Stump Fm**	**4.08**	**198**	PN	**Pn**	**22 45 31.8**	**+1.0**
BHHZ	**Black Hill Sta**	**4.50**	**201**	PN	**Pn**	**22 45 36.4**	**+0.3**
KAHZ	**Kahuranaki**	**4.60**	**192**	PN	**Pn**	**22 45 36.8**	**-0.5**
PXZ	**Pawanui**	**4.83**	**192**	PN	**Pn**	**22 45 39.0**	**-1.2**
PXZ				SN	**Sn**	**22 46 37.8**	**+0.6**
PNHZ	**Pukenui**	**4.86**	**198**	PN	**Pn**	**22 45 39.9**	**-0.7**
BFZ	**Birch Farm**	**5.58**	**195**	*e*PN	**Pn**	**22 45 48.6**	**-1.1**
BFZ				SN	**Sn**	**22 46 55.0**	**+0.6**
OGWZ	**Otaki Gorge**	**5.99**	**202**	*e*PN	**Pn**	**22 45 53.3**	**-1.7**
KIW	**Kapiti Island**	**6.11**	**204**	*e*PN	**Pn**	**22 45 55.8**	**-0.9**
CAW	**Cannon Point**	**6.29**	**202**	*e*PN	**Pn**	**22 45 56.9**	**-1.9**
PLWZ	**Palliser**	**6.66**	**199**	*e*PN	**Pn**	**22 46 01.4**	**-2.3**
NNZ	**Nelson**	**7.00**	**211**	*e*PN	**Pn**	**22 46 06.5**	**-1.6**
MQZ	**McQueen's Vall**	**9.41**	**205**	SN	**Sn**	**22 48 22.1**	**-2.5**
ASAR	**Alice Springs**	**39.93**	**275**	P	**P**	**22 51 44.0**	**+1.1**
	2.3nm,0.4s,baz=115,slow=8.0,SNR=60						
WRA	**Warramunga Arr**	**41.38**	**280**	P	**P**	**22 51 55.1**	**+0.4**
	2.1nm,0.5s,baz=117,slow=7.9,SNR=89						
FINES	**FINESS Array B**	**148.41**	**335**	PKPbc	**PKPdf**	**23 03 45.1**	**-1.1**
	1.4nm,0.9s,baz=54,slow=3.3,SNR=8.3						

*ISCJB **26** 22:52:28.5±0.4,24.01S±0.02×70.08W±0.05,h52km±3km, mb4.6/28,MS3.6/5,Error ellipse: s-maj=7.8km s-min=3.7km az=1.3*
*GUC **26** 22:52:29.3±0.6,23.94S×70.29W,h65km±3km,ML4.7*
*NEIC **26** 22:52:29.8±0.2,23.99S×70.02W,mb4.5/12,Error ellipse: s-maj=7.6km s-min=4.7km az=83.0*
NEIC Felt [II] at Antofagasta.
*IDC **26** 22:52:30.2±0.4,24.06S×70.11W,h52km±3km,mb4.2/14, mb1 4.2/17,mb1mx4.1/23,mbtmp4.1/17,MS3.7/6, Ms1 3.6/6,ms1mx3.3/24,Error ellipse: s-maj=12.5km s-min=7.1km az=117.0*
*BJI **26** 22:52:31.9,24.00S×70.00W,h50km,mB5.0/8,Ms5.1/5, Ms7 4.9/5*
ISC 26 22:52:30.1±0.3,23.99S±0.03×70.15W±0.04,h50km±1km, h50km:pP-P,n349,σ1°26/495,mb4.6/28,MS3.9/5, 106C-98D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANCH	**Antofagasta**	**0.39**	**322**	⇑*i*P	**Pn**	**22 52 40.1**	**0.0**
ANCH				*i* S	**Sn**	**22 52 47.8**	**+0.5**
ANCH	**Antofagasta**	**0.39**	**322**	⇑*i*P	**Pn**	**22 52 40.1**	**0.0**
ANCH				*i* S	**Sn**	**22 52 47.8**	**+0.5**
ANCH				AML	AML	22 52 49.1	
	comp=E,103μm,0.5s						
CEN1	**Los Morros**	**0.60**	**355**	*i* P	**Pn**	**22 52 40.5**	**-2.2**
CEN1				*i* S	**Sn**	**22 52 48.8**	**-3.1**
CEN1	**Los Morros**	**0.60**	**355**	*i* P	**Pn**	**22 52 40.5**	**-2.2**
CEN1				*i* S	**Sn**	**22 52 48.8**	**-3.1**
CEN1				AML	AML	22 52 50.1	
	comp=E,41μm,0.6s						
LVC	**Limon Verde**	**1.78**	**40**	*e*Pn	**Pn**	**22 53 00.2**	**+1.5**
LVC				*e*Sn	**Sn**	**22 53 18.6**	**-1.7**
LVC	**Limon Verde**	**1.78**	**40**	*e*P	**Pn**	**22 52 59.9**	**+1.2**
LVC				*i* S	**Sn**	**22 53 23.3**	**+3.0**
LVC	**Limon Verde**	**1.78**	**40**	P	**Pn**	**22 53 00.3**	**+1.5**
	comp=E,635nm,0.3s,baz=214,slow=11,SNR=4584						
LVC				S	**Sn**	**22 53 22.2**	**+1.9**
	comp=E,2μm,0.3s,baz=248,slow=12,SNR=9.1						
LVC				LR	LR	22 53 52.2	
	comp=E,2μm,21.7s,baz=246,slow=45						
PB04	**Plate Boundary**	**1.82**	**20**	*i* P	**Pn**	**22 52 57.0**	**-2.0**
PB04				*i* S	**Sn**	**22 53 17.7**	**-3.2**
PB04	**Plate Boundary**	**1.82**	**20**	*i* P	**Pn**	**22 52 57.0**	**-2.0**
PB04				*i* S	**Sn**	**22 53 17.7**	**-3.2**
PB04				AML	AML	22 53 30.3	
	comp=E,8μm,0.9s						
SPCH	**San Pedro de A**	**2.09**	**59**	P	**Pn**	**22 53 00.0**	**-2.9**
SPCH				*i* S	**Sn**	**22 53 31.7**	**+3.8**
SPCH	**San Pedro de A**	**2.09**	**59**	*i* S	**Sn**	**22 53 31.7**	**+3.8**
SPCH				AML	AML	22 53 50.4	
	comp=N,10μm,0.8s						
PB07	**Plate Boundary**	**2.27**	**6**	*i* P	**Pn**	**22 53 05.2**	**-0.1**
PB07				*i* S	**Sn**	**22 53 32.8**	**+0.6**
PB07	**Plate Boundary**	**2.27**	**6**	*i* P	**Pn**	**22 53 05.2**	**-0.1**
PB07				*i* S	**Sn**	**22 53 32.8**	**+0.6**
PB07				AML	AML	22 53 52.3	
	comp=E,7μm,0.7s						
PB09	**Plate Boundary**	**2.34**	**21**	*e*P	**Pn**	**22 53 06.8**	**+0.5**
PB09				*i* S	**Sn**	**22 53 35.2**	**+1.4**
PB09	**Plate Boundary**	**2.34**	**21**	*e*P	**Pn**	**22 53 06.8**	**+0.5**
PB09				*i* S	**Sn**	**22 53 35.2**	**+1.4**
PB01	**Plate Boundary**	**3.00**	**12**	⇑*i*P	**Pn**	**22 53 15.2**	**0.0**
PB01				*i* S	**Sn**	**22 53 50.8**	**+0.8**
PB01	**Plate Boundary**	**3.00**	**12**	⇑*i*P	**Pn**	**22 53 15.2**	**0.0**
PB01				*i* S	**Sn**	**22 53 50.8**	**+0.8**
PB01				AML	AML	22 54 11.0	
	comp=E,3μm,0.8s						
CDCH	**Caldera**	**3.12**	**191**	⇓*i*P	**Pn**	**22 53 15.6**	**-1.3**
CDCH				*i* S	**Sn**	**22 53 52.1**	**-0.7**
CDCH	**Caldera**	**3.12**	**191**	⇓*i*P	**Pn**	**22 53 15.6**	**-1.3**
CDCH				*i* S	**Sn**	**22 53 52.1**	**-0.7**
CDCH				AML	AML	22 54 04.4	
	comp=N,2μm,0.3s						
CPCH	**Copiapo**	**3.36**	**183**	⇑*i*P	**Pn**	**22 53 20.2**	**+0.2**
CPCH				*i* S	**Sn**	**22 53 59.7**	**+1.1**
CPCH	**Copiapo**	**3.36**	**183**	⇑*i*P	**Pn**	**22 53 20.2**	**+0.2**
CPCH				*i* S	**Sn**	**22 53 59.7**	**+1.1**
LCO	**Las Campanas**	**5.02**	**186**	*e*Pn	**Pn**	**22 53 41.2**	**-2.0**
ARE	**Arequipa**	**7.60**	**350**	*e*P	**Pn**	**22 54 17.0**	**-1.5**
ARE				*e*S	**Sn**	**22 55 41.0**	**-2.5**
CFAA	**Coronel Fontan**	**7.77**	**168**	P	**Pn**	**22 54 21.5**	**+0.9**
CFAA				S	**Sn**	**22 55 47.3**	**+0.1**
CFAA	**Coronel Fontan**	**7.77**	**168**	P	**Pn**	**22 54 21.5**	**+0.9**
	comp=N,0.6nm,0.3s,baz=352,slow=14,SNR=15						
CFAA				S	**Sn**	**22 55 47.3**	**+0.1**
	comp=N,1.1nm,0.3s,baz=144,slow=19,SNR=2.1						
LPAZ	**La Paz**	**7.89**	**14**	*e*Pn	**Pn**	**22 54 23.7**	**+0.8**
LPAZ	**La Paz**	**7.89**	**14**	P	**Pn**	**22 54 23.2**	**+0.3**
	comp=N,1.0nm,0.3s,baz=191,slow=7.7,SNR=31						
CPUP	**Villa Florida**	**11.84**	**104**	*e*P	**Pn**	**22 55 13.8**	**-2.5**
CPUP	**Villa Florida**	**11.84**	**104**	P	**Pn**	**22 55 16.5**	**+0.2**
	comp=N,0.4nm,0.3s,baz=262,slow=12,SNR=7.9						
TRQA	**Tornquist**	**15.66**	**155**	*e*Pn	**Pn**	**22 56 06.9**	**-0.5**
	comp=N,240nm,0.8s						
TRQA				*e*pP	**pP**	**22 56 22.2**	**+0.1**
TRQA				*e*sP	**sP**	**22 56 28.2**	**-0.3**
SAML	**Samuel**	**16.37**	**25**	*e*P	**P**	**22 56 17.9**	**-0.8**
	comp=N,13nm,0.8s						
SAML				*e*pP	**pP**	**22 56 30.2**	**0.0**
SAML				*e*sP	**sP**	**22 56 37.5**	**+1.0**
PLCA	**Paso Flores**	**16.70**	**181**	*e*Pn	**Pn**	**22 56 21.0**	**+0.4**
	comp=N,14nm,0.8s						
PLCA				*e*pP	**pP**	**22 56 34.9**	**+1.2**
PLCA				*e*sP	**sP**	**22 56 40.8**	**+0.7**
PLCA	**Paso Flores**	**16.70**	**181**	P	**P**	**22 56 22.8**	**+0.6**
	comp=N,0.2nm,0.3s,baz=16,slow=18,SNR=4.4						
PLCA				LR	LR	23 03 05.5	
	comp=N,253nm,18.5s,baz=350,slow=38						
BDFB	**Brasilia**	**22.39**	**72**	P	**P**	**22 57 22.1**	**-2.5**
BDFB	**Brasilia**	**22.39**	**72**	P	**P**	**22 57 22.1**	**-2.5**
	comp=N,14nm,0.9s,baz=248,slow=9.6,SNR=14						
BDFB				LR	LR	23 06 56.5	
	comp=N,84nm,19.7s,baz=35,slow=39						
OTAV	**Otavalo**	**25.40**	**340**	*e*P	**P**	**22 57 51.8**	**-1.6**
OTAV				*e*pP	**pP**	**22 58 08.2**	**+1.8**
ROSC	**El Rosal**	**28.96**	**351**	LR	LR	23 10 58.0	
	comp=N,32nm,19.1s,baz=164,slow=38						
USHA	**Ushuaia**	**30.83**	**178**	LR	LR	23 10 17.5	
	comp=N,269nm,21.4s,baz=7.7,slow=35						
RCBR	**Riachuelo**	**37.53**	**67**	*e*P	**P**	**22 59 38.7**	**-1.0**
	comp=N,25nm,0.8s						
RCBR				pP	**pP**	**22 59 53.0**	**+0.2**
RCBR				*e*pP	**pwP**	**22 59 53.2**	**+0.3**
RCBR				*e*sP	**sP**	**22 59 57.8**	**-1.0**
RCBR	**Riachuelo**	**37.53**	**67**	P	**P**	**22 59 38.8**	**-0.9**
	comp=N,25nm,0.9s,baz=238,slow=9.4,SNR=14						
RCBR				pP	**pP**	**22 59 53.0**	**+0.2**
	comp=N,9.8nm,0.8s,baz=242,slow=7.0,SNR=3.7						
OBIP	**Obispado Ponce**	**41.92**	**5**	*e*P	P	23 00 12.4	-3.5
OBIP				*e*pP	pP	23 00 32.7	+3.4
CELP	**Cerrillos**	**41.96**	**5**	*e*P	**P**	**23 00 14.5**	**-1.7**
CELP				*e*pP	**pP**	**23 00 30.7**	**+1.2**
CELP				*e*sP	**sP**	**23 00 35.1**	**-0.4**
SJG	**San Juan**	**42.03**	**6**	*e*P	P	23 00 13.8	-3.0
SJG				*e*pP	pP	23 00 32.6	+2.5
TEIG	**Tepich**	**47.37**	**337**	pP	pP	23 01 12.5	-0.4
TEIG	**Tepich**	**47.37**	**337**	pP	pP	23 01 12.5	-0.4
	comp=N,6.1nm,0.5s,baz

baz=64
325A **Bean Ranch, Si** 64.36 327 ⇓P P 23 03 01.5 +0.5
baz=65,SNR=12
Y31A **Rekieta Farm,** 64.36 332 ⇑P P 23 03 01.4 +0.7
baz=65
Z29A **Hungry Hill Ra** 64.39 331 ⇑P P 23 03 01.8 +0.8
baz=65
226B **Tecolote Peak,** 64.54 328 ⇑P P 23 03 03.1 +1.0
baz=65
Y30A **Stafford Cattl** 64.56 332 ⇓P P 23 03 03.3 +1.2
baz=65
127A **Arkansas Junct** 64.65 329 ⇓P P 23 03 03.6 +0.8
baz=65
324A **Moseley Ranch,** 64.67 327 ⇓P P 23 03 03.2 +0.2
baz=65
X31A **McDonald Ranch** 64.82 333 ⇓P P 23 03 04.1 +0.4
baz=65
MNTX **Cornudas Mount** 64.83 327 eP P 23 03 03.5 -0.3
comp=N,1.5nm,0.7s
MNTX epP pP 23 03 17.3 -0.7
MNTX esP sP 23 03 23.9 +0.2
Y29A **Porterfield Fa** 64.88 331 ⇓P P 23 03 04.7 +0.5
baz=65
225A **Deer Hill, Car** 64.89 328 ⇑P P 23 03 05.3 +0.9
baz=65
126A **Clayton Basin,** 64.94 329 ⇓P P 23 03 05.4 +0.8
baz=65
ACSO **Alum Creek Sta** 65.00 349 eP P 23 03 04.1 -0.7
comp=N,12nm,0.9s
ACSO epP pP 23 03 17.6 -1.3
Z27A **Tatum** 65.12 330 ⇑P P 23 03 06.1 +0.3
baz=65
125A **Gardner Draw,** 65.25 328 ⇓P P 23 03 06.6 -0.1
baz=66,SNR=5.8
Z26A **Caprock** 65.44 329 ⇓P P 23 03 08.3 +0.4
baz=66,SNR=9.8
MSTX **Muleshoe** 65.46 330 ⇑P P 23 03 08.2 +0.2
baz=66,SNR=5.3
Y27A **Causey** 65.57 330 ⇓P P 23 03 09.2 +0.5
baz=66
124A **Stringfield Ra** 65.68 328 ⇑P P 23 03 10.4 +0.8
baz=66
Z25A **Roswell** 65.79 329 ⇑P P 23 03 10.7 +0.5
baz=66,SNR=5.0
Y26A **Elida** 65.91 330 ⇑P P 23 03 11.9 +1.0
baz=66
222A **Williams Famil** 66.02 326 ⇓P P 23 03 13.0 +1.3
baz=66
Z24A **Sheeppen Canyo** 66.14 328 ⇓P P 23 03 13.2 +0.6
baz=66,SNR=5.9
QSPA **South Pole Qui** 66.21 180 P P 23 03 12.9 +0.4
QSPA pP pP 23 03 27.1 +0.5
QSPA **South Pole Qui** 66.21 180 P P 23 03 12.9 +0.4
comp=N,6.4nm,0.8s,baz=148,slow=2.3,SNR=16
QSPA pP pP 23 03 27.1 +0.5
comp=N,22nm,1.0s,baz=144,slow=3.8,SNR=14
Y25A **Mesa, Roswell** 66.31 329 ⇑P P 23 03 14.0 +0.5
baz=67
X26A **CR and CF Fran** 66.42 330 ⇓P P 23 03 15.1 +0.9
baz=67
W27A **Bowe Ranch, En** 66.51 331 ⇑P P 23 03 15.8 +1.0
baz=67
Z23A **Rita Site, Whi** 66.51 327 ⇑P P 23 03 16.3 +1.5
baz=67
220A **Playas Peak, P** 66.60 325 ⇑P P 23 03 16.9 +1.5
baz=67
Y24A **Capitan** 66.67 328 ⇓P P 23 03 17.1 +1.3
baz=67
121A **Cookes Peak, D** 66.71 326 ⇓P P 23 03 17.6 +1.5
baz=67
W26A **Owens Ranch, T** 66.85 330 ⇓P P 23 03 18.2 +1.3
baz=67
Z22A **Elephant Butte** 66.87 327 ⇑P P 23 03 18.9 +1.8
baz=67
Y23A **Lovelace Mesa,** 66.97 328 ⇑P P 23 03 19.3 +1.5
baz=67
U28A **Mallet** 67.26 332 ⇓P P 23 03 20.3 +0.8
baz=68
Z21A **St. Cloud Mine** 67.27 326 ⇓P P 23 03 21.4 +1.7
baz=68
W25A **X Bar L Ranch,** 67.27 330 ⇑P P 23 03 20.1 +0.5
baz=68,SNR=7.8
V26A **Tequesquite Ra** 67.44 331 ⇓P P 23 03 21.3 +0.6
baz=68,SNR=5.2
T29A **Hugoton** 67.53 333 ⇓P P 23 03 22.8 +1.6
baz=68
U27A **Thompson Grove** 67.55 332 ⇑P P 23 03 22.0 +0.7
baz=68
LPM **Los Pinos Moun** 67.56 328 eP P 23 03 22.7 +1.2
comp=N,4.9nm,0.8s
LPM epP pP 23 03 36.9 +1.2
LPM esP sP 23 03 43.6 +2.3
Z20A **Nine Sixteen R** 67.58 326 ⇑P P 23 03 22.8 +1.1
baz=68
W24A **Lazy 6 Ranch,** 67.70 329 ⇓P P 23 03 23.1 +0.7
baz=68
Y21A **Point of Rocks** 67.83 327 ⇓P P 23 03 24.8 +1.6
baz=68,SNR=5.1
V25A **Rancho No Teng** 67.85 330 ⇑P P 23 03 24.2 +0.8
baz=68,SNR=8.1
LAZ **Ladron** 67.88 328 eP P 23 03 24.2 +0.7
comp=N,1.6nm,0.9s
LAZ epP pP 23 03 37.2 -0.5
LAZ esP sP 23 03 45.2 +1.8
U26A **Atchley Ranch,** 67.93 331 ⇑P P 23 03 24.5 +0.7
baz=68,SNR=5.7
W23A **Werner Place,** 68.01 329 ⇑P P 23 03 26.1 +1.7
baz=68
T27A **Campo** 68.05 332 ⇓P P 23 03 25.5 +1.0
baz=68
V24A **Rampart Ranch,** 68.06 330 ⇓P P 23 03 25.8 +1.1
baz=68
Y20A **Horse Springs,** 68.10 326 ⇓P P 23 03 26.3 +1.3
baz=68,SNR=5.3
TUC **Tucson** 68.12 324 eP P 23 03 25.3 +0.3
TUC epP pP 23 03 40.5 +1.3
U25A **Circle Dot Ran** 68.23 331 ⇑P P 23 03 26.5 +0.8
baz=69,SNR=7.3
X21A **Alamocita Cree** 68.23 327 ⇓P P 23 03 27.1 +1.3
baz=69
V23A **Ortiz Mt. (NFS** 68.50 329 ⇑P P 23 03 28.8 +1.4
baz=69
T26A **Comanche Natio** 68.51 332 ⇓P P 23 03 28.8 +1.3
baz=69
FRNY **Flat Rock** 68.56 357 eP P 23 03 27.3 0.0
FRNY epP pP 23 03 46.7 +5.1
X20A **Quemado** 68.66 327 ⇓P P 23 03 29.9 +1.4
baz=69
W21A **San Fidel** 68.70 328 ⇓P P 23 03 30.3 +1.6
baz=69
P31A **Stockton** 68.83 336 ⇑P P 23 03 31.2 +2.0
baz=69
S26A **Kim** 68.84 332 ⇓P P 23 03 30.8 +1.4
baz=69
T25A **Trinidad** 68.84 331 ⇑P P 23 03 30.7 +1.2
baz=69
Q29A **Oakley** 68.90 335 ⇑P P 23 03 30.0 +0.4
baz=69
V22A **San Miguel Ran** 68.98 329 ⇑P P 23 03 31.8 +1.3
baz=69
JFWS **Jewell Farm** 69.11 344 eP P 23 03 30.1 -0.7
JFWS epP pP 23 03 44.5 -0.5
JFWS esP sP 23 03 49.8 -0.9
R27A **Eads** 69.11 333 ⇓P P 23 03 32.8 +1.7
baz=70
W20A **Ramah** 69.13 327 ⇑P P 23 03 32.9 +1.6
baz=70
S25A **Robets Cordova** 69.29 331 ⇑P P 23 03 33.4 +1.2
baz=70
R26A **Arlington** 69.40 333 ⇑P P 23 03 34.1 +1.3
baz=70
S24A **Houchin Ranch,** 69.61 331 ⇓P P 23 03 35.8 +1.4
baz=70,SNR=5.4
R25A **Fountain Ranch** 69.63 332 ⇑P P 23 03 35.3 +1.0
baz=70
V20A **Brimhall** 69.64 327 ⇓P P 23 03 36.1 +1.6
baz=70
O30A **MW Ranch, Wils** 69.66 336 ⇑P P 23 03 36.6 +2.3
baz=70
U21A **Nageezi** 69.75 328 ⇓P P 23 03 36.9 +1.7
baz=70
SDCO **Great Sand Dun** 69.83 331 eP P 23 03 36.7 +1.0
comp=N,4.7nm,1.0s
SDCO epP pP 23 03 50.8 +0.8
SDCO ePcP PcP 23 03 56.7 -1.3
T22A **Edith** 69.87 329 ⇓P P 23 03 37.4 +1.5
baz=70

R24A **Sanders Place,** 70.06 331 ⇑P P 23 03 38.3 +1.3
baz=70
T21A **Navajo Lake** 70.15 329 ⇑P P 23 03 39.3 +1.8
baz=70
R23A **Moffat** 70.34 331 ⇓P P 23 03 40.0 +1.2
baz=71
DBIC **Dimbokro** 70.54 73 P P 23 03 38.7 -1.5
DBIC **Dimbokro** 70.54 73 P P 23 03 38.7 -1.5
comp=N,5.5nm,0.7s,baz=233,slow=6.2,SNR=9.0
DBIC LR LR 23 30 36.7
comp=N,63nm,20.5s,baz=128,slow=32
O27A **Beecher Island** 70.61 334 ⇓P P 23 03 41.5 +1.3
baz=71
Q24A **Divide** 70.68 332 ⇑P P 23 03 42.1 +1.2
baz=71
P25A **Willow Gulch B** 70.72 333 ⇓P P 23 03 41.8 +0.9
baz=71
S21A **Coal Bank Pass** 70.81 329 ⇑P P 23 03 43.4 +1.6
baz=71
S20A **Disappointment** 71.21 329 ⇓P P 23 03 45.8 +1.7
baz=72
R21A **Cimarron** 71.27 330 ⇑P P 23 03 46.1 +1.7
baz=72
Y12C **Blythe** 71.27 322 ⇑P P 23 03 45.6 +1.4
baz=72
Q22A **Crested Butte,** 71.38 330 ⇓P P 23 03 46.7 +1.5
baz=72
R20A **Redvale** 71.51 329 ⇑P P 23 03 47.3 +1.5
baz=72,SNR=5.2
PV01 **Paradox Valley** 71.56 329 eP P 23 03 45.5 -0.6
PV01 epP pP 23 04 02.1 +1.6
PV01 esP sP 23 04 07.7 +1.6
ECSD **EROS Data Cent** 71.64 340 eP P 23 03 45.9 -0.3
ECSD epP pP 23 04 00.3 -0.3
SMCO **Snowmass** 71.66 331 eP P 23 03 48.8 +1.8
SMCO epP pP 23 04 02.8 +1.6
SMCO esP sP 23 04 08.8 +1.8
COWI **Conover** 71.86 346 eP P 23 03 45.8 -1.7
COWI epP pP 23 04 01.4 -0.5
P22A **Eagle** 71.91 331 ⇑P P 23 03 49.2 +1.0
baz=72
PV10 **Paradox Valley** 71.97 329 eP P 23 03 50.4 +1.8
PV10 epP pP 23 04 04.0 +1.0
PV10 ePcP PcP 23 04 10.2 +3.2
O23A **Lake Granby, G** 72.05 332 ⇑P P 23 03 50.4 +1.3
baz=72
U15A **North Rim** 72.07 325 ⇑P P 23 03 50.8 +1.5
baz=72
P21A **Newcastle** 72.16 330 ⇑P P 23 03 51.6 +1.9
baz=72
O22A **Kremmling** 72.28 331 ⇑P P 23 03 51.8 +1.3
baz=73
BELC **Belle Mtn. Jos** 72.29 321 ⇑P P 23 03 51.8 +1.3
baz=73
P20A **De Beque** 72.57 330 ⇓P P 23 03 53.0 +0.9
baz=73
N23A **Red Feather La** 72.62 332 ⇓P P 23 03 53.5 +1.0
baz=73
M24A **Cheyenne** 72.63 333 ⇓P P 23 03 54.2 +1.7
baz=73
GMRC **Granite Mounta** 72.67 322 ⇓P P 23 03 54.5 +1.7
baz=73
N22A **Wattenberg Ran** 72.76 332 ⇓P P 23 03 54.7 +1.3
baz=73
J28A **Allard Ranch,** 72.92 337 ⇓P P 23 03 54.9 +0.9
baz=73
P19A **Cripple Cowboy** 72.94 330 ⇓P P 23 03 55.6 +1.2
baz=73,SNR=7.9
O20A **White River Ci** 73.01 330 ⇓P P 23 03 56.3 +1.5
baz=73
SRU **San Rafael** 73.26 328 ⇓P P 23 03 57.6 +1.4
baz=74
CCUT **Cedar City** 73.48 325 eP P 23 03 59.0 +1.5
CCUT ePcP PcP 23 04 13.9 +0.4
CCUT esP sP 23 04 19.8 +2.2
O19A **Miners Draw (B** 73.54 330 ⇑P P 23 03 59.4 +1.6
baz=74
N20A **Spence Gulch,** 73.58 331 ⇑P P 23 03 59.0 +0.9
baz=74
MSU **Marysvale** 73.61 327 eP P 23 04 00.3 +2.0
MSU epP pP 23 04 13.4 +0.7
MSU esP sP 23 04 20.2 +1.9
MVU **Marysvale** 73.62 327 eP P 23 04 00.4 +2.0
MVU epP pP 23 04 13.3 +0.5
MVU ePcP pwP 23 04 14.0 +1.2
MVU esP sP 23 04 20.1 +1.6
PPT **Papeete** 73.66 258 LR LR 23 29 29.9
comp=N,142nm,19.8s,baz=118,slow=30
ARUT **Antelope Range** 73.70 326 eP P 23 03 59.5 +0.7
ARUT epP pP 23 04 13.7 +0.5
ARUT ePcP PcP 23 04 15.5 +1.1
ARUT esP sP 23 04 20.8 +2.0
M21A **Separation Pea** 73.82 332 ⇓P P 23 04 00.7 +1.2
baz=74
J25A **Sunshine Ranch** 73.85 335 ⇓P P 23 04 01.4 +2.0
baz=74
K23A **Bowen Ranch, D** 74.03 334 ⇑P P 23 04 02.6 +2.0
baz=74
EDW2 **Edwards Air Fo** 74.07 321 ⇓P P 23 04 02.5 +1.6
baz=74
L21A **Rawlins** 74.11 332 ⇓P P 23 04 02.5 +1.3
baz=74
J24A **Dixon Ranch, L** 74.13 335 ⇑P P 23 04 03.0 +1.8
baz=74
EYMN **Ely** 74.14 345 eP P 23 04 00.2 -0.7
EYMN epP pP 23 04 12.4 -2.9
L20A **Wamsutter** 74.57 331 ⇓P P 23 04 05.2 +1.4
baz=75
MPMC **Manual Prospec** 74.62 322 ⇓P P 23 04 05.5 +1.2
baz=75
ISA **Isabella** 74.90 321 ⇑P P 23 04 07.1 +1.4
baz=75
L19A **Farson** 75.09 331 ⇓P P 23 04 08.1 +1.3
baz=75
K20A **Yellowstone Ra** 75.09 332 ⇑P P 23 04 08.0 +1.2
baz=75
DUG **Dugway** 75.22 328 eP P 23 04 08.9 +1.4
DUG epP pP 23 04 22.8 +0.9
DUG esP sP 23 04 29.1 +1.5
DUG **Dugway** 75.22 328 ⇓P P 23 04 09.1 +1.5
baz=76
R11A **Troy Canyon, C** 75.24 325 ⇓P P 23 04 09.2 +1.4
baz=76
J21A **Lysite** 75.27 333 ⇑P P 23 04 09.2 +1.3
baz=76
H24A **Dirks Ranch, A** 75.28 335 ⇑P P 23 04 08.7 +1.0
baz=76
I22A **9 Mile Ranch,** 75.33 334 ⇑P P 23 04 09.2 +1.2
baz=76
VES **Vestal, Richgr** 75.38 321 ⇑P P 23 04 09.5 +1.1
baz=76
K19A **Absolon Red Bu** 75.45 332 ⇑P P 23 04 10.3 +1.4
baz=76
AGMN **Agassiz Nation** 75.57 343 eP P 23 04 08.0 -1.1
AGMN ePcP PcP 23 04 22.7 +0.8
AGMN esP sP 23 04 29.4 +0.2
I21A **Big Trails, Te** 75.59 333 ⇓P P 23 04 10.6 +1.0
baz=76
HWUT **Hardware Ranch** 75.71 329 eP P 23 04 11.0 +0.6
comp=N,3.6nm,0.8s
HWUT epP pP 23 04 25.1 +0.3
HWUT esP sP 23 04 30.9 +0.4
PDAR **Pinedale Array** 75.71 331 P P 23 04 12.8 +2.4
PDAR pP pP 23 04 25.9 +1.1
PDAR **Pinedale Array** 75.71 331 P P 23 04 12.8 +2.4
comp=N,0.4nm,0.5s,baz=90,slow=10,SNR=4.6
PDAR pP pP 23 04 25.9 +1.1
comp=N,0.9nm,0.6s,baz=147,slow=7.5,SNR=5.1
J19A **Crowheart** 75.89 332 ⇓P P 23 04 12.2 +0.8
baz=76
G23A **Biddle** 75.99 335 ⇑P P 23 04 12.6 +0.9
baz=76
HVU **Hansel Valley** 76.41 329 eP P 23 04 15.2 +0.8
HVU epP pP 23 04 29.7 +0.9
HVU esP sP 23 04 35.4 +0.9
F23A **Volborg** 76.43 335 ⇑P P 23 04 15.1 +0.9
baz=77
H20A **Greybull** 76.44 333 ⇑P P 23 04 15.1 +0.8
baz=77
I19A **Meeteetse** 76.49 332 ⇑P P 23 04 15.8 +1.0
baz=77
I18A **Diamond G Ranc** 76.57 332 ⇓P P 23 04 16.8 +1.5
baz=77
G21A **Lodge Grass** 76.72 334 ⇑P P 23 04 17.4 +1.4
baz=77
E24A **Baker** 76.73 337 ⇑P P 23 04 17.7 +1.8
baz=77
NVAR **Mina Array Bea** 76.77 323 P P 23 04 17.8 +1.2
NVAR pP pP 23 04 31.6 +0.6
NVAR **Mina Array Bea** 76.77 323 P P 23 04 17.8 +1.2
comp=N,1.1nm,0.8s,baz=148,slow=5.9,SNR=8.9
NVAR pP pP 23 04 31.6 +0.6
comp=N,1.6nm,0.8s,baz=130,slow=4.8,SNR=8.3
SNOW **Snow King Moun** 76.80 331 eP P 23 04 17.4 +0.8
SNOW ePcP pP 23 04 31.9 +0.8
F22A **Rosebud** 76.81 335 ⇓P P 23 04 17.6 +1.3
baz=77
ELK **Elko** 76.84 326 eP P 23 04 18.3 +1.4
ELK epP pP 23 04 32.5 +1.2
LOHW **Long Hollow** 76.85 331 eP P 23 04 16.9 +0.1
LOHW epP pP 23 04 31.2 0.0
LOHW esP sP 23 04 38.0 +1.0
E23A **Ismay** 77.05 336 ⇑P P 23 04 18.8 +1.2
baz=77
G20A **Bridger** 77.12 333 ⇑P P 23 04 19.4 +1.1
baz=78
H18A **Shoshone NF, C** 77.29 332 ⇓P P 23 04 20.5 +1.2
baz=78
I16A **Newdale** 77.45 331 ⇓P P 23 04 20.6 +0.4
baz=78
RLMT **Red Lodge** 77.48 333 eP P 23 04 21.3 +1.0
comp=N,6.0nm,0.8s
RLMT epP pP 23 04 35.5 +0.7
RLMT esP sP 23 04 41.2 +0.8
G18A **Lazy EL Ranch,** 77.76 333 ⇓P P 23 04 22.7 +0.8
baz=78
F19A **Roth Farm, Mol** 77.94 333 ⇑P P 23 04 23.4 +0.7
baz=78
E20A **Meyer Farm, Mu** 78.14 334 ⇑P P 23 04 24.9 +1.1
baz=78
D21A **La Casta Ranch** 78.16 335 ⇓P P 23 04 25.0 +1.1
baz=78
GCMT **Greycliff** 78.19 333 eP P 23 04 24.0 -0.1
GCMT epP pP 23 04 39.0 +0.3
GCMT esP sP 23 04 45.0 +0.7
F18A **Big Timber** 78.30 333 ⇓P P 23 04 25.9 +1.1
baz=79
DGMT **Dagmar** 78.32 338 ⇑P P 23 04 25.6 +0.9
baz=79
E19A **Rath Farm, Rou** 78.37 334 ⇑P P 23 04 25.9 +0.8
baz=79,SNR=9.4
I14A **Mackay** 78.38 330 ⇓P P 23 04 26.8 +1.5
baz=79
B23A **Brockton** 78.59 337 ⇑P P 23 04 27.1 +0.9
baz=79
F17A **Fitzpatrick Pl** 78.69 332 ⇓P P 23 04 28.3 +1.3
baz=79
MCMT **McKenzie Canyo** 78.80 331 eP P 23 04 27.0 -0.7
MCMT epP pP 23 04 43.1 +0.9
MCMT esP sP 23 04 49.8 +2.0
B22A **Reddig Ranch S** 78.81 337 ⇑P P 23 04 29.1 +1.6
baz=79
E18A **Harlowton** 78.91 333 ⇑P P 23 04 29.6 +1.5
baz=79
D19A **Cripps Ranch,** 78.97 334 ⇓P P 23 04 29.4 +1.1
baz=79
E17A **Martinsdale** 79.22 333 ⇑P P 23 04 30.9 +1.0
baz=80
TOA0 **Torodi Ar. Sit** 79.26 70 eP P 23 04 29.3 -1.3
TOA0 epP pP 23 04 44.4 -0.7
TOA0 esP sP 23 04 50.0 -0.7
TORD **Torodi Ar. Bea** 79.26 70 P P 23 04 29.5 -1.1
TORD pP pP 23 04 44.4 -0.7
TORD **Torodi Ar. Bea** 79.26 70 P P 23 04 29.5 -1.1
comp=N,17nm,0.8s,baz=255,slow=5.2,SNR=211
TORD pP pP 23 04 44.4 -0.7
comp=N,11nm,0.7s,baz=253,slow=5.3,SNR=13
A22A **Carney Farms,** 79.36 337 ⇓P P 23 04 31.6 +1.1
baz=80
LRM **Limekiln Ridge** 79.40 331 eP P 23 04 31.9 +1.0
LRM epP pP 23 04 46.7 +1.2
LRM esP sP 23 04 52.5 +1.4
F15A **Butte** 79.43 331 ⇓P P 23 04 32.0 +1.0
baz=80
C19A **Slack Wire Ran** 79.50 334 ⇑P P 23 04 32.6 +1.3
baz=80
H12A **Diamond D Ranc** 79.51 329 ⇑P P 23 04 32.7 +1.2
baz=80
D17A **Six Diamond Ra** 79.70 333 ⇓P P 23 04 33.2 +0.8
baz=80
D16A **Dana Ranch, Ca** 79.96 333 ⇓P P 23 04 34.6 +0.8
baz=80
A20A **Cobblestone Ra** 80.01 336 ⇓P P 23 04 34.8 +0.8
baz=80
B19A **Brinkman Farms** 80.05 335 ⇓P P 23 04 35.0 +0.8
baz=80
C17A **Wharram Farm,** 80.11 333 ⇓P P 23 04 35.6 +1.0
baz=80
TSUM **Tsumeb** 80.42 107 eP P 23 04 36.7 -0.4
TSUM esP sP 23 04 56.4 -0.8
MSO **Missoula** 80.83 331 ⇓P P 23 04 40.2 +1.7
baz=81
SLMT **Seeley Lake** 80.95 332 eP P 23 04 39.3 +0.1
SLMT epP pP 23 04 54.8 +1.0
SLMT esP sP 23 05 00.8 +1.4
C15A **Salmond Ranch,** 80.99 333 ⇑P P 23 04 39.9 +0.5
baz=81,SNR=5.4
A17A **Triple J Farms** 81.13 334 ⇑P P 23 04 40.6 +0.7
baz=82
E12A **Beaver Dam Sad** 81.25 330 ⇑P P 23 04 41.4 +0.6
baz=82
D13A **Huson** 81.26 331 ⇑P P 23 04 41.7 +1.0
baz=82,SNR=5.6
SWMT **Swartz Lake** 81.38 332 eP P 23 04 41.8 +0.4
SWMT epP pP 23 04 57.2 +1.2
SWMT esP sP 23 05 03.5 +1.9
C13A **Hot Springs** 81.76 331 ⇑P P 23 04 44.2 +0.8
baz=82
BSMT **Bassoo Peak** 81.98 331 eP P 23 04 42.5 -2.2
BSMT epP pP 23 05 00.4 +1.2
A14A **Double T Ranch** 82.26 333 ⇑P P 23 04 46.3 +0.3
baz=83
MAW **Mawson** 82.28 164 eP P 23 04 45.9 +0.2
MAW pP pP 23 05 00.3 -0.1
MAW **Mawson** 82.28 164 P P 23 04 45.9 +0.2
comp=N,6.9nm,0.8s,baz=247,slow=6.5,SNR=11
MAW pP pP 23 05 00.3 -0.1
comp=N,8.6nm,0.9s,baz=208,slow=6.2,SNR=7.2
WALA **Waterton Lakes** 82.53 333 eP P 23 04 47.8 +0.4
WALA epP pP 23 05 02.4 +0.3
WALA esP sP 23 05 08.7 +1.1
BOSA **Boshof** 83.28 118 P P 23 04 51.0 -1.0
BOSA **Boshof** 83.28 118 P P 23 04 51.0 -1.0
comp=N,6.7nm,1.1s,baz=241,slow=10,SNR=5.2
MDT **Midelt** 84.21 50 P P 23 04 55.9 -0.5
MDT pP pP 23 05 11.3 +0.2
MDT **Midelt** 84.21 50 P P 23 04 55.9 -0.5
comp=N,4.3nm,1.0s,baz=229,slow=6.0,SNR=8.6
MDT pP pP 23 05 11.3 +0.2
comp=N,2.7nm,0.9s,baz=275,slow=6.5,SNR=3.7
PCVE **Castro Verde** 84.61 45 eP P 23 04 59.1 +0.9
comp=N,20nm,1.5s
PCVE pP pP 23 05 14.8 +2.0
PBEJ **Beja** 84.95 45 eP P 23 05 00.9 +1.0
comp=N,22nm,1.4s
PBEJ pP pP 23 05 16.5 +1.9
PMTG **Montargil** 85.34 44 eP P 23 05 02.1 +0.3
comp=N,33nm,1.7s
PMTG pP pP 23 05 18.0 +1.6
PTOM **Tomar** 85.54 43 eP P 23 05 03.2 +0.4
comp=N,47nm,1.5s
PTOM pP pP 23 05 17.8 +0.4
PBAR **Barrancos** 85.57 45 eP P 23 05 03.4 +0.4
comp=N,24nm,1.7s
PBAR pP pP 23 05 17.4 -0.2
MVO **Moncorvo** 87.30 42 eP P 23 05 12.5 +1.0
comp=N,10nm,1.6s
ESDC **Sonseca Array** 88.40 45 P P 23 05 16.2 -0.5
ESDC pP pP 23 05 32.0 +0.5
ESDC **Sonseca Array** 88.40 45 P P 23 05 16.2 -0.5
comp=N,0.2nm,0.3s,baz=242,slow=3.7,SNR=6.5
ESDC pP pP 23 05 32.0 +0.5
comp=N,0.1nm,0.3s,baz=268,slow=4.5,SNR=1.6
YKA **Yellowknife Ar** 93.15 341 P P 23 05 38.1 -0.1
YKA pP pP 23 05 52.5 -0.4
YKA **Yellowknife Ar** 93.15 341 P P 23 05 38.1 -0.1
comp=N,1.1nm,0.7s,baz=145,slow=5.0,SNR=4.4
YKA pP pP 23 05 52.5 -0.4
comp=N,2.0nm,0.7s,baz=141,slow=4.3,SNR=7.4
KBZ **Khabaz** 122.55 52 PKP PKPdf 23 11 20.0 +0.1
KBZ pPKP pPKPdf 23 11 35.4 +0.2

KBZ	**Khabaz**	**122.55**	**52**	PKP	**PKPdf**	**23 11 20.0**	**+0.1**
	comp=N,2.1nm,0.9s,baz=117,slow=5.4,SNR=3.7						
KBZ				pPKP	**pPKPdf**	**23 11 35.4**	**+0.2**
	comp=N,3.7nm,1.0s,baz=274,slow=2.9,SNR=4.1						
ASAR	**Alice Springs**	**127.19**	**208**	PKP	**PKPdf**	**23 11 29.2**	**-0.4**
ASAR				pPKP	**pPKPdf**	**23 11 44.4**	**-0.5**
ASAR	**Alice Springs**	**127.19**	**208**	PKP	**PKPdf**	**23 11 29.2**	**-0.4**
	comp=N,1.4nm,0.8s,baz=136,slow=1.6,SNR=15						
ASAR				pPKP	**pPKPdf**	**23 11 44.4**	**-0.5**
	comp=N,4.4nm,0.8s,baz=144,slow=2.2,SNR=24						
WRA	**Warramunga Arr**	**130.24**	**211**	PKP	**PKPdf**	**23 11 35.3**	**-0.2**
WRA				pPKP	**pPKPdf**	**23 11 50.3**	**-0.4**
WRA	**Warramunga Arr**	**130.24**	**211**	PKP	**PKPdf**	**23 11 35.3**	**-0.2**
	comp=N,1.2nm,0.7s,baz=152,slow=1.6,SNR=18						
WRA				pPKP	**pPKPdf**	**23 11 50.3**	**-0.4**
	comp=N,4.9nm,0.9s,baz=156,slow=1.6,SNR=25						
ABKAR	**Akbulak array**	**133.74**	**44**	*e*PKPpre	PKPpre	23 11 29.2	
ABKAR				*e*PKPdf	**PKPdf**	**23 11 40.9**	**-0.2**
ABKAR				*e*pPKPdf	pPKPdf	23 11 56.3	0.0
KURK	**Kurchatov**	**144.03**	**34**	*e*PKPdf	PKPab	23 11 57.8	+0.5
KURK				*e*pPKPdf	pPKPdf	23 12 13.2	-1.9
ZAA0	**Zalesovo Array**	**144.68**	**26**	*e*PKPdf	**PKPab**	**23 11 59.5**	**-0.1**
ZAA0				*e*pPKPdf	**pPKPdf**	**23 12 15.1**	**-1.0**
ZALV	**Zalesovo Beam**	**144.68**	**26**	PKP	**PKPab**	**23 11 59.7**	**+0.1**
ZALV				pPKP	**pPKPdf**	**23 12 15.2**	**-0.9**
ZALV	**Zalesovo Beam**	**144.68**	**26**	PKP	**PKPab**	**23 11 59.7**	**+0.1**
	comp=N,11nm,0.8s,baz=311,slow=4.5,SNR=45						
ZALV				pPKP	**pPKPdf**	**23 12 15.2**	**-0.9**
	comp=N,19nm,0.9s,baz=309,slow=5.0,SNR=20						
EKS2	**Erkin-Say**	**144.91**	**49**	*e*PKPdf	PKPbc	23 12 01.6	+0.6
EKS2				*ep*PKPdf	pPKPdf	23 12 16.7	-0.4
EKS2				*es*PKPdf	sPKPdf	23 12 23.0	+0.4
EKS2	**Erkin-Say**	**144.91**	**49**	P	**PKPdf**	**23 12 02.0**	**+0.3**
	SNR=7.3						
AML	**Almayashu**	**145.04**	**50**	P	**PKPdf**	**23 12 02.6**	**+0.2**
	SNR=10						
USP	**Ospenovka**	**145.19**	**48**	P	**PKPdf**	**23 12 02.5**	**+0.4**
	SNR=5.2						
AAK	**Ala-Archa**	**145.42**	**49**	*e*PKPdf	**PKPab**	**23 12 03.7**	**+0.7**
AAK				*ep*PKPdf	**pPKPdf**	**23 12 19.2**	**+1.2**
AAK	**Ala-Archa**	**145.42**	**49**	P	**PKPab**	**23 12 03.9**	**+0.9**
	SNR=10						
CHMS	**Chumysh**	**145.46**	**48**	P	**PKPab**	**23 12 03.3**	**+0.4**
	SNR=10						
KBK	**Karagaybulak**	**145.72**	**49**	P	**PKPab**	**23 12 04.7**	**+0.6**
	SNR=12						
TKM2	**Tokmak 2**	**146.06**	**48**	*e*PKPbc	**PKPbc**	**23 12 04.7**	**-0.1**
TKM2				*ep*PKPdf	**pPKPdf**	**23 12 19.8**	**+0.6**
TKM2				*es*PKPdf	**sPKPdf**	**23 12 25.7**	**+1.1**
TKM2	**Tokmak 2**	**146.06**	**48**	P	**PKPbc**	**23 12 04.9**	**+0.1**
	SNR=8.6						
KZA	**Kyzart**	**146.14**	**49**	P	**PKPab**	**23 12 06.4**	**+0.4**
	SNR=5.9						
ULHL	**Ulahol**	**146.76**	**49**	P	**PKPbc**	**23 12 06.6**	**-0.3**
	SNR=12						
KSH	**Kashi**	**147.52**	**53**	PKPbc	**PKPdf**	**23 12 07.0**	**+0.7**
KSH				*ep*PKP	**pPKPdf**	**23 12 17.0**	**-4.6**
KSH				*e*SKS	**SKSdf**	**23 19 10.0**	**-0.9**
KSH				*e*SKKS	**SKKSac**	**23 22 22.3**	**-0.8**
KSH				AMB	AMB		
	comp=Z,160nm,4.0s						
KSH				LR	LR		
	comp=N,160nm,4.7s						
KSH				LR	LR		
	comp=E,200nm,5.2s						
KSH				LR	LR		
	comp=Z,200nm,4.5s						
MK31	**Makanchi Array**	**148.31**	**37**	*e*PKPdf	**PKPdf**	**23 12 07.3**	**0.0**
MK31				*e*PKPbc	**PKPbc**	**23 12 10.4**	**-0.2**
MK31				*es*PKPdf	**sPKPdf**	**23 12 26.2**	**-1.8**
MKAR	**Makanchi Array**	**148.31**	**37**	PKPbc	**PKPbc**	**23 12 10.4**	**-0.2**
MKAR				pPKPbc	**pPKPbc**	**23 12 26.1**	**+0.2**
MKAR	**Makanchi Array**	**148.31**	**37**	PKPbc	**PKPbc**	**23 12 10.4**	**-0.2**
	comp=Z,7.4nm,0.8s,baz=321,slow=2.3,SNR=55						
MKAR				pPKPbc	**pPKPbc**	**23 12 26.1**	**+0.2**
	comp=Z,15nm,0.8s,baz=327,slow=2.0,SNR=25						
HYB	**Hyderabad**	**150.04**	**97**	*i* PKP	**PKPbc**	**23 12 14.0**	**-1.9**
WMQ	**Urumqi**	**153.14**	**37**	*e*PKPbc	**PKPdf**	**23 12 15.0**	**+0.1**
ULN	**Ulaanbaatar**	**156.07**	**5**	*ep*PKPdf	**pPKPdf**	**23 12 34.6**	**+0.4**
ULN				*e*PKPab	**PKPab**	**23 12 46.6**	**+0.2**
GTA	**Gaotai**	**162.44**	**27**	*e*PKPbc	PKPdf	23 12 43.3	+17
GTA				pPKP	pPKPdf	23 12 54.0	+12
GTA				sPKP		23 12 57.8	
GTA				PKPab	PKPab	23 13 29.5	+15
HHC	**Hu-ho-hao-te**	**163.13**	**356**	*e*PKP	**PKPdf**	**23 12 27.8**	**+0.7**
HHC				PKS	**PKSdf**	**23 16 00.0**	**-0.2**
HHC				PP	**PP**	**23 17 04.8**	**+3.6**
HHC				SKS	**SKSdf**	**23 19 27.3**	**-0.4**
HHC				SKKS	**SKKSac**	**23 23 48.5**	**+2.5**
HHC				SS	**SS**	**23 37 25.8**	**+4.0**
HHC				AMB	AMB		
	comp=Z,130nm,8.1s						
HHC				LR	LR		
	comp=N,110nm,20.5s						
HHC				LR	LR		
	comp=E,170nm,19.4s						
HHC				LR	LR		
	comp=Z,140nm,19.4s						
LZH	**Lanzhou**	**166.88**	**22**	*e*PKP	**PKPdf**	**23 12 26.8**	**-3.8**
LZH				pPKP	**pPKPdf**	**23 12 41.3**	**-4.6**
LZH				sPKP		23 12 49.5	
LZH				LR	LR		
	comp=N,100nm,18.6s						
LZH				LR	LR		
	comp=E,120nm,19.2s						
LZH				LR	LR		
	comp=Z,170nm,20.0s						
CD2	**Chengdu**	**171.24**	**37**	*e*PKP	**PKPdf**	**23 12 31.0**	**-2.3**
KMI	**Kunming**	**173.43**	**79**	PKP	**PKPdf**	**23 12 34.8**	**+0.1**

*CSEM **26** 23:21:11.1±0.4,34.64N×25.19E,h15km,MD3.2,Error ellipse: s-maj=8.4km s-min=3.8km az=160.0*
*ATH **26** 23:21:12.3,34.75N×25.17E,h30km±1km,MD3.2/6*
*THE **26** 23:21:12.7,34.69N×25.16E,h14km±1km,Error ellipse: s-maj=2.6km s-min=0.8km az=353.0*
*IDC **26** 23:21:12.3±1.5,35.62N×23.46E,h0km,mb3.4/3, mb1 3.5/3,mb1mx3.3/26,mbtmp3.4/3,Error ellipse: s-maj=66.6km s-min=26.3km az=131.0*

ISC 26 23:21:11.9±1.4,34.68N±0.06×25.17E±0.03,h17km±8km, n53,σ0.48/66,mb3.5/3,Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	**0.45**	**319**	P	**Pb**	**23 21 21.5**	**+0.2**
SIVA				S	**Sb**	**23 21 28.3**	**+0.5**
SIVA	**Sivas**	**0.45**	**319**	*e*PB	**Pb**	**23 21 21.5**	**+0.2**
SIVA				*e*SB	**Sb**	**23 21 28.2**	**+0.5**
SIVA	**Sivas**	**0.45**	**319**	P	**Pb**	**23 21 21.5**	**+0.2**
SIVA				*e*Sb	**Sb**	**23 21 28.2**	**+0.5**
LAST	**Lasithi**	**0.54**	**28**	P	**Pg**	**23 21 22.9**	**+0.1**
LAST				S	**Sb**	**23 21 31.5**	**+1.0**
LAST	**Lasithi**	**0.54**	**28**	*e*PB	**Pg**	**23 21 22.8**	**0.0**
LAST				*e*SB	**Sg**	**23 21 30.1**	**0.0**
LAST	**Lasithi**	**0.54**	**28**	P	**Pg**	**23 21 22.9**	**+0.1**
LAST				*e*Sb	**Sg**	**23 21 30.1**	**0.0**
LAST				S	**Sb**	**23 21 31.5**	**+1.0**
IDI	**Anoyia**	**0.65**	**339**	P	**Pg**	**23 21 24.6**	**-0.1**
IDI				S	**Sb**	**23 21 34.2**	**+0.6**
IDI	**Anoyia**	**0.65**	**339**	P	**Pg**	**23 21 24.6**	**-0.1**
IDI				S	**Sb**	**23 21 34.2**	**+0.6**
NPS	**Neapolis**	**0.69**	**32**	P	**Pg**	**23 21 25.4**	**0.0**
NPS				S	**Sn**	**23 21 36.3**	**-0.8**
NPS	**Neapolis**	**0.69**	**32**	*e*PN	**Pg**	**23 21 25.1**	**-0.3**
NPS				*e*SN	**Sg**	**23 21 34.1**	**-0.4**
NPS	**Neapolis**	**0.69**	**32**	*e*Pn	**Pg**	**23 21 25.1**	**-0.3**
NPS	**Neapolis**	**0.69**	**32**	P	**Pg**	**23 21 25.4**	**0.0**
NPS				*e*Sn	**Sg**	**23 21 34.1**	**-0.4**
NPS				S	**Sn**	**23 21 36.3**	**-0.8**
GVD	**Gavdhos**	**0.91**	**280**	P	**Pb**	**23 21 29.3**	**+0.2**
GVD	**Gavdhos**	**0.91**	**280**	*e*PN	**Pg**	**23 21 29.6**	**+0.1**
GVD	**Gavdhos**	**0.91**	**280**	P	**Pb**	**23 21 29.3**	**+0.2**
GVD	**Gavdhos**	**0.91**	**280**	*e*Pn	**Pg**	**23 21 29.6**	**+0.1**
ZKR	**Zakros**	**0.96**	**63**	P	**Pb**	**23 21 30.3**	**+0.2**
ZKR				S	**Sn**	**23 21 44.0**	**+0.1**
ZKR	**Zakros**	**0.96**	**63**	*e*PN	**Pb**	**23 21 30.5**	**+0.4**
ZKR	**Zakros**	**0.96**	**63**	*e*Pn	**Pb**	**23 21 30.5**	**+0.4**
ZKR				S	**Sn**	**23 21 44.0**	**+0.1**
VAM	**Vamos**	**1.08**	**313**	P	**Pb**	**23 21 32.3**	**+0.2**
VAM	**Vamos**	**1.08**	**313**	*e*PN	**Pb**	**23 21 32.3**	**+0.2**
VAM	**Vamos**	**1.08**	**313**	P	**Pb**	**23 21 32.3**	**+0.2**
KYTH	**Kithira**	**2.36**	**313**	P	**Pn**	**23 21 50.0**	**+0.1**
KYTH	**Kithira**	**2.36**	**313**	P	**Pn**	**23 21 50.0**	**+0.1**
APE	**Apeiranthos**	**2.40**	**7**	*e*PN	**Pn**	**23 21 50.7**	**+0.2**
APE	**Apeiranthos**	**2.40**	**7**	*e*Pn	**Pn**	**23 21 50.7**	**+0.2**
VLI	**Veliai**	**2.73**	**319**	P	**Pn**	**23 21 54.9**	**0.0**
VLI	**Veliai**	**2.73**	**319**	P	**Pn**	**23 21 54.9**	**0.0**
DYR	**Agios Nikonas**	**3.10**	**313**	P	**Pn**	**23 22 00.2**	**+0.1**
DYR	**Agios Nikonas**	**3.10**	**313**	P	**Pn**	**23 22 00.2**	**+0.1**
DIDY	**Didyma**	**3.21**	**331**	P	**Pn**	**23 22 00.9**	**-0.7**
DIDY	**Didyma**	**3.21**	**331**	P	**Pn**	**23 22 00.9**	**-0.7**
DID	**Didima**	**3.23**	**332**	P	**Pn**	**23 22 01.0**	**-0.8**
DID	**Didima**	**3.23**	**332**	P	**Pn**	**23 22 01.0**	**-0.8**
MRMA	**Marmari**	**3.43**	**350**	P	**Pn**	**23 22 04.8**	**+0.2**
MRMA	**Marmari**	**3.43**	**350**	P	**Pn**	**23 22 04.8**	**+0.2**
PTL	**Penteli**	**3.52**	**343**	P	**Pn**	**23 22 05.5**	**-0.4**
PTL	**Penteli**	**3.52**	**343**	P	**Pn**	**23 22 05.5**	**-0.4**
ITM	**Ithomi**	**3.62**	**314**	P	**Pn**	**23 22 07.0**	**-0.3**
ITM	**Ithomi**	**3.62**	**314**	P	**Pn**	**23 22 07.0**	**-0.3**
GUR	**Goura**	**3.97**	**326**	P	**Pn**	**23 22 11.8**	**-0.3**
GUR	**Goura**	**3.97**	**326**	P	**Pn**	**23 22 11.8**	**-0.3**
AMT	**Artemida-Makis**	**3.99**	**316**	P	**Pn**	**23 22 13.2**	**+0.9**
AMT	**Artemida-Makis**	**3.99**	**316**	P	**Pn**	**23 22 13.2**	**+0.9**
KLV	**Kalavryta, Ach**	**4.15**	**325**	P	**Pn**	**23 22 14.1**	**-0.4**
KLV	**Kalavryta, Ach**	**4.15**	**325**	P	**Pn**	**23 22 14.1**	**-0.4**
RLS	**Riolos of Patr**	**4.50**	**320**	P	**Pn**	**23 22 20.0**	**+0.7**
RLS	**Riolos of Patr**	**4.50**	**320**	P	**Pn**	**23 22 20.0**	**+0.7**
VLS	**Valsamata**	**5.08**	**315**	P	**Pn**	**23 22 28.3**	**+1.1**
VLS	**Valsamata**	**5.08**	**315**	P	**Pn**	**23 22 28.3**	**+1.1**
FINES	**FINESS Array B**	**26.79**	**1**	P	P	23 26 45.7	-5.0
	1.0nm,0.8s,baz=165,slow=12,SNR=4.3						
TORD	**Torodi Ar. Bea**	**30.19**	**231**	P	**P**	**23 27 20.6**	**-0.8**
	0.3nm,0.4s,baz=34,slow=8.7,SNR=12						
MKAR	**Makanchi Array**	**44.03**	**56**	P	P	23 29 26.8	+8.2
	0.2nm,0.6s,baz=269,slow=6.9,SNR=3.0						

SKHL 26 23:25:53.2±2.5,52.47N×142.50E,h9km±2km,mb3.6/4, Sakhalin Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKH	**Okha**	**1.11**	**13**	*e*Pg	Pn	23 26 16.3	+1.4
OKH				pP	Pb	23 26 20.0	+5.4
OKH				*e*Sg	Sn	23 26 32.5	+2.1
OKH				A	A	23 26 33.0	
	430nm,0.6s						
NKL	**Nikolayevsk**	**1.30**	**302**	*i* Pg	Pg	23 26 18.5	+0.4
NKL				AMB	AMB	23 26 19.0	
	40nm,0.2s						
NKL				pP	Pb	23 26 20.5	+2.8
NKL				*e*Sg	Sg	23 26 37.3	+2.4
NKL				A	A	23 26 41.2	
	130nm,0.3s						
NKL				A	A	23 26 41.2	
	230nm,0.3s						
TYV	**Tymovskoe**	**1.61**	**176**	*e*Pg	Pg	23 26 24.8	+0.7
TYV				AMB	AMB	23 26 25.0	
	11nm,0.3s						
TYV				AMB	AMB	23 26 25.0	
	13nm,0.3s						
TYV				pP	Pb	23 26 28.0	+4.9
TYV				sP	Sn	23 26 30.2	-12
TYV				*e*Sg	Sg	23 26 48.0	+3.0
TYV				A	A	23 26 55.5	
	26nm,0.6s						
GRNR	**Gornyy**	**4.15**	**248**	*e*Pg	Pg	23 27 15.3	+2.5
GRNR				AMB	AMB	23 27 17.0	
	6.0nm,0.6s						
GRNR				*e*Sg	Sg	23 28 13.0	+6.4
GRNR				A	A	23 28 22.5	
	20nm,0.5s						
EKMR	**Ekimchan**	**5.83**	**280**	*e*Pg	Pg	23 27 48.4	+3.6
EKMR				AMB	AMB	23 27 53.3	
	3.0nm,0.6s						
EKMR				*e*Sg	Sg	23 29 08.9	+8.6
EKMR				A	A	23 29 10.0	
	10.0nm,0.6s						
EKMR				A	A	23 29 10.0	
	5.0nm,0.6s						

IDC 26 23:30:29.6±5.2,21.94S×177.43W,h312km±49km, mb3.7/10,mb1 3.9/11,mb1mx3.6/21,mbtmp3.7/11, 10C-8D,Error ellipse: s-maj=23.2km s-min=19.7km az=162.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**16.93**	**195**	P	P	23 34 06.3	-0.7
	2.6nm,0.3s,baz=28,slow=16,SNR=14						
URZ				S	S	23 37 05.5	-2.0
	1.2nm,0.3s,baz=119,slow=19,SNR=6.9						
RPZ	**Rata Peaks**	**23.73**	**201**	P	P	23 35 14.0	-0.3
	4.7nm,0.7s,baz=57,slow=3.4,SNR=7.3						
PMG	**Port Moresby**	**36.20**	**285**	P	P	23 37 02.8	-0.9
	9.8nm,0.6s,baz=90,slow=2.3,SNR=7.5						
STKA	**Stephens Creek**	**37.67**	**246**	P	P	23 37 16.2	+0.5
	1.7nm,0.5s,baz=93,slow=9.6,SNR=15						
ASAR	**Alice Springs**	**44.73**	**258**	P	P	23 38 13.5	+0.5
	8.2nm,0.7s,baz=92,slow=8.1,SNR=87						
ASAR				PcP	PcP	23 39 49.5	+0.1
	0.9nm,0.6s,baz=107,slow=3.6,SNR=6.4						
WRA	**Warramunga Arr**	**44.95**	**263**	P	P	23 38 14.2	-0.5
	3.2nm,0.7s,baz=90,slow=5.9,SNR=64						
NVAR	**Mina Array Bea**	**81.71**	**43**	P	P	23 42 14.6	+0.5
	1.2nm,0.8s,baz=223,slow=8.7,SNR=5.3						
TXAR	**Lajitas Array**	**87.39**	**57**	P	P	23 42 43.5	+1.2
	0.9nm,0.8s,baz=216,slow=4.0,SNR=12						
ILAR	**Eielson Array**	**89.59**	**13**	P	P	23 42 50.4	-1.3
	1.0nm,0.5s,baz=217,slow=5.0,SNR=8.8						
PDAR	**Pinedale Array**	**89.64**	**43**	P	P	23 42 52.1	-0.6
	0.8nm,0.9s,baz=169,slow=2.4,SNR=4.7						
CMAR	**Chiang Mai Arr**	**91.09**	**289**	P	P	23 43 00.9	+1.2
	1.1nm,0.3s,baz=138,slow=2.6,SNR=5.1						
KURBB	**Kurchatov Arra**	**115.46**	**317**	PKP	PKPdf	23 48 33.5	-0.8
	0.3nm,0.4s,baz=92,slow=2.2,SNR=6.6						
AKTO	**Aktyubinsk**	**128.49**	**318**	PKP	PKPdf	23 48 59.4	0.0
	0.9nm,0.6s,baz=345,slow=9.6,SNR=3.8						
ARCES	**ARCESS Array B**	**130.43**	**350**	PKP	PKPdf	23 49 02.0	-0.5
	2.2nm,0.6s,baz=91,slow=0.9,SNR=12						
FINES	**FINESS Array B**	**137.30**	**344**	PKP	PKPdf	23 49 15.8	+0.3
	0.8nm,0.5s,baz=44,slow=5.8,SNR=7.0						
AKASG	**Malin Array Be**	**144.52**	**331**	PKP	PKPab	23 49 26.9	-1.4
	4.6nm,0.5s,baz=43,slow=4.3,SNR=21						
MBAR	**Mbarara**	**144.54**	**234**	PKP	PKPdf	23 49 30.0	-0.2
	2.9nm,0.5s,baz=124,slow=8.2,SNR=6.9						
KWP	**Kalwaria Pacla**	**148.10**	**335**	⇑*i*P	PKPbc	23 49 38.7	+0.1
BRTR	**Keskin Array B**	**148.19**	**311**	PKPbc	PKPbc	23 49 38.5	-0.8
	1.6nm,0.6s,baz=140,slow=4.5,SNR=13						
BURAR	**Bucovina Array**	**148.57**	**330**	‖*i*P	PKPbc	23 49 40.7	+0.8
TESR	**Tescani**	**148.66**	**327**	⇑*i*P	PKPbc	23 49 39.6	-0.5
CFR	**Carcaliu**	**148.76**	**324**	‖*i*P	PKPbc	23 49 39.6	-0.7
TIRR	**Tirgusor**	**149.06**	**323**	⇑*i*P	PKPbc	23 49 40.3	-0.8
VRI	**Vrincioaia**	**149.06**	**326**	⇑*i*P	PKPbc	23 49 39.2	-1.9
PLOR	**Plostina**	**149.11**	**326**	‖*i*P	PKPbc	23 49 40.7	-0.6
MANR	**Mangalia**	**149.35**	**321**	⇑*i*P	PKPbc	23 49 42.2	+0.4
CLL	**Collm**	**149.58**	**347**	*i* PKPbc	PKPbc	23 49 41.6	-0.5
	comp=Z,8.0nm,1.0s						
CLL				*i* PKPab	PKiKP	23 49 44.0	+1.0
	comp=Z,5.0nm,0.8s						
CLL				*i*		23 49 47.5	
CLL				*e*SKPbc		23 52 55.0	
UPC	**Upice**	**149.60**	**343**	*e*P	PKPbc	23 49 42.4	+0.2
DPC	**Dobruska-Polom**	**149.65**	**342**	*e*P	PKPbc	23 49 42.7	+0.3
DPC				*ex*	x	23 49 48.7	
DPC				*ex*	x	23 49 50.3	
MLR	**Muntele Rosu**	**149.71**	**326**	‖*i*P	PKPbc	23 49 43.1	+0.2
BRG	**Berggiesshubel**	**149.78**	**346**	*e*P	PKPbc	23 49 42.7	0.0
	comp=Z,2.3nm,0.7s						
BRG				*e*		23 54 08.7	
	comp=Z,2.7nm,0.9s						
PVCC	**Panska Ves**	**149.95**	**345**	*e*P	PKPbc	23 49 43.6	+0.5
VOIR		**150.21**	**327**	‖*i*P	PKPbc	23 49 43.8	-0.2
DRGR		**150.32**	**331**	⇑*i*P	PKPbc	23 49 43.9	-0.3
PRU	**Pruhonice**	**150.46**	**344**	*e*P	PKPbc	23 49 44.3	0.0
ARR	**Arges**	**150.46**	**328**	⇑*i*P	PKPbc	23 49 45.3	+0.7
LOT	**Lotru**	**150.83**	**329**	⇑*i*P	PKPbc	23 49 44.5	-1.0
TREC	**Trest**	**150.84**	**343**	*e*P	PKPbc	23 49 45.2	0.0
TREC				*ex*	x	23 49 47.4	
GZR	**Gura Zlata**	**151.35**	**330**	⇑*i*P	PKPbc	23 49 46.1	-0.5
BZS	**Buzias**	**151.71**	**331**	‖*i*P	PKPbc	23 49 47.0	-0.3
GERES	**GERESS Array B**	**151.72**	**344**	PKPbc	PKPbc	23 49 47.0	-0.3
	comp=Z,1.7nm,0.6s,baz=34,slow=2.4,SNR=20						
CONA	**Conrad Observa**	**151.96**	**341**	‖*e*PKPbc	PKPbc	23 49 47.9	0.0
	comp=Z,3.9nm,0.6s						
PKSM	**Moragy**	**152.48**	**335**	⇑*i*P	PKPbc	23 49 48.9	-0.1
WTTA	**Wattenberg**	**153.69**	**346**	‖*e*PKPbc	PKPbc	23 49 51.3	-0.6
	comp=Z,1.8nm,0.5s						

*ISCJB **26** 23:42:18.8±0.5,10.33N±0.07×93.80E±0.09,h100km, mb4.0/19,Error ellipse: s-maj=13.5km s-min=8.1km az=148.5*
*IDC **26** 23:42:20.7±3.1,10.27N×93.86E,h101km±28km,mb3.7/16, mb1 3.8/18,mb1mx3.7/31,mbtmp3.7/18,MS3.7/22, Ms1 3.7/22,ms1mx3.5/38,Error ellipse: s-maj=20.2km s-min=12.1km az=59.0*

ISC 26 23:42:20.6±0.6,10.31N±0.09×93.9E±0.1,h100km,n53, σ1.07/39,mb4.0/19,5C-2D,Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**9.00**	**146**	P	**Pn**	**23 44 28.5**	**+0.7**
	0.9nm,0.3s,baz=325,slow=9.2,SNR=15						
PSI				LR	LR	23 48 10.1	
	comp=Z,536nm,20.0s,baz=314,slow=39						
CMAR	**Chiang Mai Arr**	**9.48**	**31**	P	**Pn**	**23 44 34.5**	**+0.2**
	0.4nm,0.3s,baz=222,slow=15,SNR=9.1						
VIS	**Vishakhapatnam**	**12.59**	**307**	*i* x	P	23 45 18.7	-5.0
VIS				*i* x	x	23 47 18.1	
SHL	**Shillong**	**15.29**	**353**	*ex*	x	23 45 51.0	
ODAN	**Odare**	**17.56**	**341**	*eP*	**P**	**23 46 17.8**	**-1.1**
RAMN	**Ramite**	**17.91**	**338**	*eP*	**P**	**23 46 22.6**	**-0.3**
TAPN	**Taplejung**	**17.91**	**342**	*eP*	**P**	**23 46 21.0**	**-1.9**
	42nm,1.1s						
PKI	**Pulchoki**	**18.93**	**336**	*eP*	**P**	**23 46 33.5**	**-0.5**
PKIN	**Phulchoki**	**18.94**	**336**	*eP*	**P**	**23 46 33.5**	**-0.6**
	12nm,0.6s						
GUN	**Gumba**	**19.05**	**338**	*eP*	**P**	**23 46 34.4**	**-1.0**
	42nm,0.9s						
DMN	**Daman**	**19.08**	**336**	*eP*	**P**	**23 46 35.0**	**-0.6**
	18nm,0.7s						
KOLN	**Koldanda**	**19.87**	**332**	*eP*	**P**	**23 46 44.7**	**+0.5**
KAPI	**Kappang**	**29.95**	**119**	LR	LR	00 00 23.9	
	comp=Z,166nm,21.6s,baz=294,slow=36						
DAV	**Davao City (W)**	**31.51**	**93**	LR	LR	00 00 26.3	
	comp=Z,123nm,18.9s,baz=216,slow=40						
AAK	**Ala-Archa**	**36.38**	**336**	P	**P**	**23 49 16.6**	**+1.2**
	2.2nm,0.3s,baz=252,slow=2.3,SNR=6.3						
MKAR	**Makanchi Array**	**37.67**	**347**	P	**P**	**23 49 25.8**	**-0.3**
	1.1nm,0.6s,baz=161,slow=7.7,SNR=8.5						
MKAR				LR	LR	00 08 01.8	
	comp=Z,40nm,18.4s,baz=275,slow=41						
KSRS	**Korea Array**	**40.85**	**43**	P	**P**	**23 49 54.1**	**+1.5**
	0.5nm,0.4s,baz=256,slow=10,SNR=4.8						
KSRS				LR	LR	00 07 51.9	
	comp=Z,84nm,18.1s,baz=50,slow=38						
KURBB	**Kurchatov Arra**	**42.13**	**345**	P	**P**	**23 50 02.2**	**-0.7**
	2.1nm,1.0s,baz=165,slow=7.5,SNR=8.9						
FITZ	**Fitzroy Crossi**	**42.21**	**132**	LR	LR	00 06 52.4	
	comp=Z,60nm,20.7s,baz=303,slow=35						
ZALV	**Zalesovo Beam**	**44.12**	**352**	P	**P**	**23 50 19.0**	**+0.2**
	6.4nm,1.0s,baz=173,slow=8.0,SNR=11						
ZALV				LR	LR	00 13 44.8	
	comp=Z,47nm,20.0s,baz=248,slow=43						
BVAR	**Borovoye Array**	**46.61**	**341**	LR	LR	00 14 03.4	
	comp=Z,49nm,18.2s,baz=14,slow=41						
MJAR	**Matsushiro Arr**	**47.77**	**49**	P	**P**	**23 50 48.9**	**+1.0**
	0.3nm,0.3s,baz=256,slow=15,SNR=4.7						
MJAR				LR	LR	00 13 32.6	
	comp=Z,87nm,18.2s,baz=250,slow=39						
AKTO	**Aktyubinsk**	**49.70**	**331**	P	**P**	**23 51 03.8**	**+1.4**
	1.1nm,0.3s,baz=90,slow=11,SNR=5.3						
AKTO				LR	LR	00 12 31.0	
	comp=Z,42nm,21.8s,baz=110,slow=36						
WRA	**Warramunga Arr**	**49.92**	**127**	P	**P**	**23 51 04.3**	**-0.2**

KSRS	Korea Array	41.02	43	P	P	23 55 48.2	+0.6	
	0.4nm,0.3s,baz=271,slow=25,SNR=5.4							
KURBB	Kurchatov Arra	42.19	346	P	P	23 55 55.9	-0.4	
	1.7nm,0.7s,baz=167,slow=7.5,SNR=16							
KURBB				PcP	PcP	23 57 50.2	+1.0	
	0.5nm,0.6s,baz=153,slow=2.7,SNR=6.1							
KURK	Kurchatov	42.25	346	*e*P	P	23 55 56.7	-0.6	
	1.7nm,0.8s							
KURK				PcP	PcP	23 57 50.2	+0.8	
ZAA0	Zalesovo Array	44.19	352	*e*P	P	23 56 12.5	-0.4	
ZALV	Zalesovo Beam	44.19	352	P	P	23 56 13.0	+0.1	
ZALV	Zalesovo Beam	44.19	352	P	P	23 56 13.0	+0.1	
	3.7nm,0.3s,baz=173,slow=8.8,SNR=25							
ABKAR	Akbulak array	47.99	331	*e*P	P	23 56 42.8	+0.1	
	1.4nm,0.5s							
AKTO	Aktyubinsk	49.70	331	P	P	23 56 55.5	-0.3	
AKTO	Aktyubinsk	49.70	331	P	P	23 56 55.5	-0.3	
	0.7nm,0.3s,baz=120,slow=7.2,SNR=3.5							
WRA	Warramunga Arr	49.98	127	P	P	23 56 57.9	-0.5	
WRA	Warramunga Arr	49.98	127	P	P	23 56 57.9	-0.5	
	0.6nm,0.6s,baz=305,slow=8.6,SNR=9.5							
ASAR	Alice Springs	51.76	131	P	P	23 57 10.9	-0.8	
ASAR	Alice Springs	51.76	131	P	P	23 57 10.9	-0.8	
	0.8nm,0.8s,baz=309,slow=7.9,SNR=6.6							
BRTR	Keskin Array B	60.59	310	P	P	23 58 13.6	-1.0	
BRTR	Keskin Array B	60.59	310	P	P	23 58 13.6	-1.0	
	1.7nm,0.8s,baz=123,slow=7.3,SNR=10							
STKA	Stephens Creek	62.03	134	P	P	23 58 23.6	-0.6	
STKA	Stephens Creek	62.03	134	P	P	23 58 23.6	-0.6	
	1.1nm,0.7s,baz=335,slow=6.1,SNR=3.2							
VRI	Vrincioaia	66.73	316	⇑*i*P	P	23 58 54.9	+0.3	
PLOR	Plostina	66.78	316	⇑*i*P	P	23 58 55.3	+0.3	
MLR	Muntele Rosu	67.21	315	⇓*i*P	P	23 58 57.8	-0.1	
LOT	Lotru	68.72	315	⇓*i*P	P	23 59 06.4	-0.9	
DRGR		69.62	316	⇑*i*P	P	23 59 12.9	+0.2	
FINES	FINESS Array B	70.45	332	P	P	23 59 17.2	-0.3	
FINES	FINESS Array B	70.45	332	P	P	23 59 17.2	-0.3	
	0.7nm,0.7s,baz=95,slow=5.9,SNR=7.5							
ARCES	ARCESS Array B	72.93	340	P	P	23 59 32.9	+0.7	
ARCES	ARCESS Array B	72.93	340	P	P	23 59 32.9	+0.7	
	2.6nm,0.9s,baz=94,slow=6.3,SNR=12							
GERES	GERESS Array B	75.81	318	P	P	23 59 49.4	0.0	
GERES	GERESS Array B	75.81	318	P	P	23 59 49.4	0.0	
	0.7nm,0.5s,baz=90,slow=6.7,SNR=9.4							
BOSA	Boshof	76.47	237	P	P	23 59 53.8	+0.3	
BOSA	Boshof	76.47	237	P	P	23 59 53.8	+0.3	
	5.6nm,0.9s,baz=111,slow=15,SNR=3.9							
PGF	Pioggiola	79.29	312	*e*P	P	00 00 07.6	-1.3	
	25nm,0.9s							
PGF	Pioggiola	79.29	312	*e*P	P	00 00 07.6	-1.3	
	25nm,0.9s							
KEST	Kesra	79.56	305	P	P	00 00 10.9	+0.4	
KEST	Kesra	79.56	305	P	P	00 00 10.9	+0.4	
	0.6nm,0.7s,baz=89,slow=14,SNR=8.2							
LPG	La Plagne	80.67	315	*e*P	P	00 00 16.1	-0.4	
	4.2nm,0.6s							
LPG	La Plagne	80.67	315	*e*P	P	00 00 16.1	-0.4	
	4.2nm,0.6s							
LPL	La Plagne	80.69	315	*e*P	P	00 00 16.2	-0.3	
	5.5nm,0.6s							
LPL	La Plagne	80.69	315	*e*P	P	00 00 16.2	-0.3	
	5.5nm,0.6s							
HAU	Haudompre	80.73	317	*e*P	P	00 00 15.5	-1.0	
HAU				*e*R				
	49nm,21.2s							
HAU	Haudompre	80.73	317	*e*P	P	00 00 15.5	-1.0	
FRF	La Foret Royal	80.92	313	*e*P	P	00 00 17.1	-0.5	
	17nm,1.1s							
FRF	La Foret Royal	80.92	313	*e*P	P	00 00 17.1	-0.5	
	17nm,1.0s							
CABF	La Chapelle	81.03	316	*e*P	P	00 00 17.7	-0.5	
CABF	La Chapelle	81.03	316	*e*P	P	00 00 17.7	-0.5	
LMR	La Mourre	81.05	312	*e*P	P	00 00 17.6	-0.6	
LMR	La Mourre	81.05	312	*e*P	P	00 00 17.6	-0.6	
SFTF	Sexfontaines	81.59	317	*e*P	P	00 00 20.1	-0.9	
SFTF	Sexfontaines	81.59	317	*e*P	P	00 00 20.1	-0.9	
SMRF	Simiane la Rot	81.66	313	*e*P	P	00 00 20.3	-1.2	
SMRF	Simiane la Rot	81.66	313	*e*P	P	00 00 20.3	-1.2	
BAIF	Baives	81.93	319	*e*P	P	00 00 22.5	-0.2	
BAIF	Baives	81.93	319	*e*P	P	00 00 22.5	-0.2	
LOR	Lormes	82.48	317	*e*P	P	00 00 24.8	-0.9	
LOR				*e*R				
	43nm,20.8s							
LOR	Lormes	82.48	317	*e*P	P	00 00 24.8	-0.9	
SMF	Signal de Mont	82.57	316	*e*P	P	00 00 25.3	-0.8	
	3.1nm,0.6s							
SMF	Signal de Mont	82.57	316	*e*P	P	00 00 25.3	-0.8	
	3.1nm,0.6s							
AVF	Avril sur Loir	82.88	316	*e*P	P	00 00 26.9	-0.8	
	0.8nm,0.5s							
AVF	Avril sur Loir	82.88	316	*e*P	P	00 00 26.9	-0.8	
	0.8nm,0.4s							
BGF	Bois d'Agland	83.26	316	*e*P	P	00 00 29.0	-0.7	
BGF	Bois d'Agland	83.26	316	*e*P	P	00 00 29.0	-0.7	
TCF	Toulx Ste Croi	83.73	316	*e*P	P	00 00 31.8	-0.4	
TCF	Toulx Ste Croi	83.73	316	*e*P	P	00 00 31.8	-0.4	
CAF	Calviac	84.03	314	*e*P	P	00 00 32.4	-1.3	
CAF	Calviac	84.03	314	*e*P	P	00 00 32.4	-1.3	
NVAR	Mina Array Bea	123.13	30	PKP	PKPdf	00 07 01.3	+1.5	
NVAR	Mina Array Bea	123.13	30	PKP	PKPdf	00 07 01.3	+1.5	
	0.5nm,0.6s,baz=320,slow=2.1,SNR=4.3							
TXAR	Lajitas Array	137.26	23	PKP	PKPdf	00 07 27.8	+1.2	
TXAR	Lajitas Array	137.26	23	PKP	PKPdf	00 07 27.8	+1.2	
	0.3nm,0.4s,baz=163,slow=2.1,SNR=6.2							

ATH ***27*** *00:07:06.6,41°.33N×22°.70E,h19km±4km, MD2.8/4*
SKO ***27*** *00:07:06.9,41°.32N×22°.71E,h10km, M1.3,ML1.6*
ISCJB ***27*** *00:07:06.6±0.4,41°.32N±0°.02×22°.71E±0°.03,h10km±4km, Error ellipse: s-maj=4.3km s-min=3.6km az=26.8*
CSEM ***27*** *00:07:07.2±0.2,41°.27N×22°.71E,h5km,ML1.6, Error ellipse: s-maj=5.1km s-min=3.9km az=76.0*
THE ***27*** *00:07:07.2,41°.32N×22°.71E,h3km±6km,ML2.0/4, Error ellipse: s-maj=6.1km s-min=0.4km az=305.0*
BEO ***27*** *00:07:08.7±0.7,41°.30N×22°.67E,h0km,ML1.6/5*

ISC 27 00:07:07.4±0.9,41°.30N±0°.02×22°.70E±0°.02,h5km±9km, n32,σ0s65/53,1D,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VAY	Valandovo	0.10	283	P	Pg	00 07 09.1	-0.5
VAY				S	Sg	00 07 11.1	+0.1
VAY	Valandovo	0.10	283	⇓*i*Pg	Pg	00 07 09.4	-0.2
VAY				*i* Sg	Sg	00 07 11.5	+0.5
VAY				eLg	Lg	00 07 11.5	
	comp=E,293nm,0.2s						
VAY				eLg	Lg	00 07 11.5	
	comp=N,278nm,0.2s						
VAY	Valandovo	0.10	283	P	Pg	00 07 09.1	-0.5
VAY				S	Sg	00 07 11.1	+0.1
KNT	Kendrikon	0.20	133	P	Pg	00 07 11.5	+0.1
KNT				S	Sg	00 07 14.4	+0.4
KNT	Kendrikon	0.20	133	P	Pg	00 07 11.5	+0.1
KNT				S	Sg	00 07 14.4	+0.4
GRG	Griva	0.41	214	P	Pg	00 07 15.6	+0.2
GRG				S	Sg	00 07 21.6	+0.9
GRG	Griva	0.41	214	*e*PB	Pg	00 07 15.5	+0.2
GRG				*e*SB	Sg	00 07 21.8	+1.1
GRG	Griva	0.41	214	*e*Pb	Pg	00 07 15.5	+0.2
GRG				S	Sg	00 07 21.6	+0.9
SRS	Serrai	0.69	105	P	Pg	00 07 20.1	-0.7
SRS				S	Sg	00 07 30.6	+0.8
SRS	Serrai	0.69	105	P	Pg	00 07 20.1	-0.7
SRS				S	Sg	00 07 30.6	+0.8
THE	Thessaloniki	0.69	163	P	Pg	00 07 19.7	-1.1
THE	Thessaloniki	0.69	163	P	Pg	00 07 19.7	-1.1
HORT	Hortiatis	0.76	157	P	Pg	00 07 21.9	-0.1
HORT				S	Sg	00 07 33.2	+1.3
HORT	Hortiatis	0.76	157	P	Pg	00 07 21.9	-0.1
HORT				S	Sg	00 07 33.2	+1.3
NVR	Nevrokopi	0.88	86	P	Pg	00 07 23.5	-0.7
NVR	Nevrokopi	0.88	86	*e*PN	Pg	00 07 23.4	-0.7
NVR	Nevrokopi	0.88	86	P	Pg	00 07 23.5	-0.7
BIA	Bitola	1.08	255	*i* Pg	Pg	00 07 28.1	0.0
BIA				*i* Sg	Sb	00 07 42.9	-0.1
BIA				eLg	Lg	00 07 43.2	
	comp=N,4.2nm,0.2s						
BIA				eLg	Lg	00 07 43.6	
	comp=E,6.0nm,0.2s						
PLG	Polygyros	1.08	148	P	Pg	00 07 27.6	-0.6
PLG	Polygyros	1.08	148	*e*PN	Pg	00 07 27.0	-1.2
PLG				*e*SN	Sg	00 07 42.9	+0.7
PLG	Polygyros	1.08	148	*e*Pn	Pg	00 07 27.0	-1.2
PLG	Polygyros	1.08	148	P	Pg	00 07 27.6	-0.6
PLG				*e*Sn	Sg	00 07 42.9	+0.7
FNA	Florina	1.13	243	*e*PN	Pg	00 07 28.6	-0.4
FNA	Florina	1.13	243	*e*Pn	Pg	00 07 28.6	-0.4
VTS	Vitosha	1.35	16	*e*Pg	Pg	00 07 33.6	+0.3
VTS				*e*Sg	Sb	00 07 51.2	+0.3
VTS	Vitosha	1.35	16	*e*Pg	Pg	00 07 33.6	+0.3
VTS				*e*Sg	Sb	00 07 51.2	+0.3
BARS	Barje	1.66	337	*e*Pn	Pb	00 07 38.2	-0.2
BARS				*e*Sg	Sg	00 08 00.6	0.0
BARS	Barje	1.66	337	*e*Pn	Pb	00 07 38.2	-0.2
BARS				*e*Sg	Sg	00 08 00.6	0.0
PLD	Plovdiv	1.70	61	*e*Pn	Pg	00 07 40.3	+0.3
PLD				*e*Sg	Sg	00 08 02.8	+0.7
ZAPS	Zavoj	1.98	359	*e*Pn	Pb	00 07 43.7	-0.2
ZAPS				*e*Sg	Sg	00 08 11.9	+1.0
RDO	Rodhopi	2.14	93	*e*PB	Pn	00 07 43.5	-0.3
RDO	Rodhopi	2.14	93	*e*Pb	Pn	00 07 43.5	-0.3

NIED ***27*** *00:12:00,38°.90N×142°.50E,h53km,Mw4.1 Best double couple: M0 1.82000×10^15 NP1:ϕs317.00000°,δ87.00000°, λ-70.00000°. NP2:ϕs55.00000°,δ20.00000°, λ-171.00000°.*
ISCJB ***27*** *00:12:21.3±1.2,38°.88N±0°.05×142°.5E±0°.1,h51km±11km, mb3.5/4, Error ellipse: s-maj=15.9km s-min=7.1km az=15.2*
JMA ***27*** *00:12:21.8±0.1,38°.90N×142°.50E,h41km±2km,M3.8*
JMA Felt I J1.
IDC ***27*** *00:12:24.6±4.9,38°.82N×142°.45E,h67km±45km,mb3.3/4, mb1 3.5/5,mb1mx3.2/25,mbtmp3.2/5,ML3.2/1, Error ellipse: s-maj=38.6km s-min=25.1km az=86.0*

ISC 27 00:12:22.2±1.3,38°.93N±0°.05×142°.53E±0°.10,h42km±12km, n17,σ1s35/27,mb3.5/4,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.69	283	P	Pn	00 12 35.1	-0.4
OFUJ				S	Sn	00 12 44.4	-0.7
MIYJ	Miyakonagasawa	0.85	320	P	Pn	00 12 37.5	-0.3
MIYJ				S	Sn	00 12 48.6	-0.5
JMK	Ichinoseki	1.02	272	P	Pn	00 12 39.7	-0.4
JMK				S	Sn	00 12 52.6	-0.6
JIO	Ouri	1.04	243	P	Pn	00 12 39.3	-1.0
JIO				S	Sn	00 12 51.6	-2.0
JOM	Ohasama	1.11	300	P	Pn	00 12 41.3	+0.1
JOM				S	Sn	00 12 55.7	+0.4
JTH	Tanohata	1.14	333	P	Pn	00 12 41.6	0.0
JTH				*e*S	Sn	00 12 56.2	+0.2
JRG	Rokugo	1.55	288	P	Pn	00 12 47.6	+0.3
JRG				*e*S	Sn	00 13 06.7	+0.5
JOU	Okura	1.57	250	P	Pn	00 12 47.1	-0.4
JANG	Nango	1.65	332	P	Pn	00 12 48.5	-0.1
JYK	Kaneyama	1.70	270	P	Pn	00 12 49.4	+0.1
JMM	Marumori	1.73	233	P	Pn	00 12 48.8	-0.9
JMM				*e*S	Sn	00 13 09.0	-1.6
MJAR	Matsushiro Arr	4.17	237	P	Pn	00 13 24.0	+0.7
	1.5nm,0.3s,baz=34,slow=14,SNR=9.8						
MAT	Matsushiro	4.17	237	P	Pn	00 13 25.0	+1.6
MAT				*e*S	Sn	00 14 15.9	+5.0
ZALV	Zalesovo Beam	41.32	311	P	P	00 20 03.7	+0.2
	0.6nm,0.5s,baz=91,slow=12,SNR=3.7						
MKAR	Makanchi Array	43.89	301	P	P	00 20 24.2	-0.3
	0.4nm,0.7s,baz=81,slow=12,SNR=4.6						
ILAR	Eielson Array	47.43	33	P	P	00 20 52.7	+0.6
	0.2nm,0.4s,baz=270,slow=6.3,SNR=4.6						
WRA	Warramunga Arr	59.06	189	P	P	00 22 16.8	-1.3
	0.3nm,0.3s,baz=7.8,slow=7.7,SNR=17						
WRA				pP	pP	00 22 30.9	+0.8
	0.3nm,0.3s,baz=6.5,slow=7.0,SNR=7.7						

MAN 27 00:26:17,18°.37N×120°.85E,h5km,mb3.7,ML2.4,MS2.0, 1D,Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PIP	Pasuquin	0.23	259	⇓*i*P	Pg	00 26 22.3	+0.8
APYP	Conner	0.63	144	*e*P	Pb	00 26 30.4	-0.1
APYP				*e*S	Sb	00 26 39.6	+0.1
ABRA	Dolores	0.73	191	*e*P	Pg	00 26 31.4	+0.4
CAUP	Cauayan	1.69	147	*e*P	Pb	00 26 48.0	-0.6

ISCJB ***27*** *00:34:23.7±0.6,36°.59N±0°.03×25°.40E±0°.09,h10km±5km, Error ellipse: s-maj=11.8km s-min=4.1km az=8.2*
CSEM ***27*** *00:34:23.9±0.1,36°.54N×25°.44E,h8km, ML2.4/2, Error ellipse: s-maj=8.0km s-min=2.7km az=99.0*
ATH ***27*** *00:34:24.2,36°.55N×25°.42E,h27km±2km, MD2.9/6*
THE ***27*** *00:34:24.0,36°.57N×25°.44E,h4km, ML2.4/2, Error ellipse: s-maj=2.1km s-min=0.3km az=277.0*

ISC 27 00:34:24.1±0.9,36°.55N±0°.02×25°.50E±0°.06,h10km±8km, n28,σ0s47/38,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THR2	Thira island,	0.11	205	P	Pg	00 34 26.6	-0.2
THR2	Thira island,	0.11	205	P	Pg	00 34 26.6	-0.2
THR3	Thira Island,	0.16	209	P	Pg	00 34 27.7	+0.2
THR3	Thira Island,	0.16	209	P	Pg	00 34 27.7	+0.2
THR1	Thera Island	0.18	189	P	Pg	00 34 27.9	0.0
THR1	Thera Island	0.18	189	P	Pg	00 34 27.9	0.0
APE	Apeiranthos	0.52	3	P	Pg	00 34 34.1	-0.1
APE				S	Sg	00 34 41.5	+0.4
APE	Apeiranthos	0.52	3	*e*PN	Pb	00 34 34.9	-0.5
APE				*e*SN	Sb	00 34 43.6	+0.6
APE	Apeiranthos	0.52	3	P	Pg	00 34 34.1	-0.1
APE	Apeiranthos	0.52	3	*e*Pn	Pb	00 34 34.9	-0.5
APE				S	Sg	00 34 41.5	+0.4
APE				*e*Sn	Sb	00 34 43.6	+0.6
NPS	Neapolis	1.29	176	P	Pn	00 34 47.8	-0.3
NPS				S	Sg	00 35 06.5	+1.0
NPS	Neapolis	1.29	176	*e*PN	Pb	00 34 48.2	-0.2
NPS	Neapolis	1.29	176	P	Pn	00 34 47.8	-0.3
NPS	Neapolis	1.29	176	*e*Pn	Pb	00 34 48.2	-0.2
NPS				S	Sg	00 35 06.5	+1.0
IDI	Anoyia	1.35	202	P	Pn	00 34 48.4	-0.6
IDI				S	Sg	00 35 07.4	-0.1
IDI	Anoyia	1.35	202	P	Pn	00 34 48.4	-0.6
IDI				S	Sg	00 35 07.4	-0.1
LAST	Lasithi	1.38	181	P	Pn	00 34 49.0	-0.5
LAST	Lasithi	1.38	181	P	Pn	00 34 49.0	-0.5
VAM	Vamos	1.55	223	*e*PN	Pn	00 34 51.2	-0.5
VAM	Vamos	1.55	223	*e*Pn	Pn	00 34 51.2	-0.5
SMG	Samos	1.58	42	*e*PN	Pb	00 34 52.9	-0.5
SMG	Samos	1.58	42	*e*Pn	Pb	00 34 52.9	-0.5
CHOS	Chios island	1.89	13	P	Pn	00 34 56.0	-0.5
CHOS				S	Sn	00 35 20.8	+0.4
CHOS	Chios island	1.89	13	P	Pn	00 34 56.0	-0.5
CHOS				S	Sn	00 35 20.8	+0.4
DID	Didima	2.04	299	*e*PB	Pn	00 34 58.7	+0.1
DID	Didima	2.04	299	*e*Pb	Pn	00 34 58.7	+0.1
VLI	Veliai	2.06	275	*e*PN	Pn	00 34 58.3	-0.5
VLI	Veliai	2.06	275	*e*Pn	Pn	00 34 58.3	-0.5

ISCJB ***27*** *00:34:33.4±0.7,8°.0S±0°.1×111°.7E±0°.1,h132km, mb3.6/4, Error ellipse: s-maj=20.9km s-min=9.8km az=34.9*
DJA ***27*** *00:34:34.7±1.1,8°.5S±12°×11°.2E±°,h118km±8km,M3.4/4, MLv3.4/4*
IDC ***27*** *00:34:49.5±11.0,7°.68S×112°.25E,h275km±122km, mb3.1/4,mb1 3.3/5,mb1mx3.0/22,mbtmp3.1/5,Error ellipse: s-maj=122.9km s-min=26.0km az=50.0*

ISC 27 00:34:34.3±1.0,7°.9S±0°.2×111°.60E±0°.09,h132km,n10, σ0s61/11,mb3.6/4,Jawa

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PWJI	Pagerwojo	0.22	114	S	Sn	00 35 05.3	-0.8
SJI	Sawahan	0.26	39	P	Pn	00 34 52.3	-0.3
SJI				S	Sn	00 35 06.3	-0.2
PCJI	Pacitan	0.49	239	P	Pn	00 34 52.9	-0.6
UGM	Wanagama	1.07	271	P	Pn	00 34 58.1	0.0
BLJI	Banyuglugur	1.98	85	P	Pn	00 35 07.9	-0.2
FITZ	Fitzroy Crossi	16.99	128	P	Pn	00 38 25.1	+1.0
	0.1nm,0.3s,baz=322,slow=12,SNR=3.6						
FITZ				S	Sn	00 41 23.8	-10
	0.1nm,0.3s,baz=265,slow=11,SNR=4.6						

WRA	Warramunga Arr	25.05	121	P	P	00 39 45.7	-0.8	
	1.6nm,0.6s,baz=295,slow=11,SNR=22							
ASAR	Alice Springs	26.49	129	P	P	00 39 59.4	0.0	
	0.8nm,0.5s,baz=305,slow=8.8,SNR=11							
STKA	Stephens Creek	36.68	135	P	P	00 41 28.8	+0.3	
	1.9nm,0.8s,baz=299,slow=10,SNR=3.8							
MKAR	Makanchi Array	60.41	337	P	P	00 44 30.1	+0.3	
	0.2nm,0.3s,baz=148,slow=7.4,SNR=4.1							

THE ***27*** *00:45:11.9,41°.20N×20°.21E,h11km±1km,ML2.4/2,Error ellipse: s-maj=1.8km s-min=0.4km az=347.0*
TIR ***27*** *00:45:11.8,41°.19N×20°.23E,h7km,ML3.4*
CSEM ***27*** *00:45:11.9±0.3,41°.15N×20°.15E,h2km,ML2.4/2,Error ellipse: s-maj=6.5km s-min=3.5km az=39.0*
SKO ***27*** *00:45:11.2,41°.14N×20°.09E,h0km,M1.9,ML2.4*
PDG ***27*** *00:45:13.5±0.2,41°.27N×20°.08E,h11km,ML2.4/7,Error ellipse: s-maj=0.9km s-min=0.5km az=90.0*
BEO ***27*** *00:45:13.3±0.6,41°.15N×20°.22E,h0km*

ISC 27 00:45:11.7±1.2,41°.17N±0°.02×20°.18E±0°.02,h0km±10km, n63,σ1s06/124,8C-2D,Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TIR	Tirane	0.29	307	*e*PG	Pg	00 45 17.5	+0.3
TIR				*i* SG	Sb	00 45 24.4	-0.9
TIR	Tirane	0.29	307	P	Pg	00 45 17.6	+0.3
TIR				S	Sg	00 45 22.4	+1.3
TIR	Tirane	0.29	307	*e*Pg	Pg	00 45 17.6	+0.3
TIR				*e*Sg	Sb	00 45 23.9	-1.4
TIR	Tirane	0.29	307	P	Pg	00 45 17.6	+0.3
TIR				S	Sg	00 45 22.4	+1.3
TIR				*e*Sg	Sb	00 45 23.9	-1.4
PHP	Peshkopia	0.55	21	*e*PG	Pg	00 45 21.6	-0.6
PHP				*i* SG	Sg	00 45 30.2	+0.8
PHP	Peshkopia	0.55	21	P	Pg	00 45 21.7	-0.5
PHP				S	Sg	00 45 29.5	+0.1
PHP	Peshkopia	0.55	21	P	Pg	00 45 21.7	-0.5
PHP				S	Sg	00 45 29.5	+0.1
PHP				*i* Sg	Sg	00 45 30.2	+0.8
KBN	Korca	0.71	140	*e*PG	Pg	00 45 14.7	-11
KBN				*i* SG	Sb	00 45 38.0	+0.6
KBN	Korca	0.71	140	P	Pg	00 45 25.6	+0.2
KBN	Korca	0.71	140	P	Pg	00 45 25.6	+0.2
KBN				*i* Sg	Sb	00 45 38.0	+0.6
BIA	Bitola	0.88	100	P	Pg	00 45 28.2	-0.3
BIA	Bitola	0.88	100	*i* Pg	Pg	00 45 27.3	-1.2
BIA				*i* Sg	Sg	00 45 40.6	+0.7
BIA	Bitola	0.88	100	P	Pg	00 45 28.2	-0.3
PUK	Puka	0.90	346	*e*PG	Pg	00 45 28.6	-0.3
PUK				*i* SG	Sb	00 45 43.1	+0.4
PUK	Puka	0.90	346	*e*Pg	Pg	00 45 28.6	-0.3
PUK				*i* Sg	Sb	00 45 43.1	+0.4
FNA	Florina	0.99	113	P	Pg	00 45 30.1	-0.4
FNA				S	Sb	00 45 44.7	-0.5
FNA	Florina	0.99	113	P	Pg	00 45 30.1	-0.4
FNA				S	Sb	00 45 44.7	-0.5
NEST	Nestorio	1.00	139	P	Pg	00 45 31.2	+0.3
NEST				S	Sb	00 45 45.9	+0.2
NEST	Nestorio	1.00	139	P	Pg	00 45 31.2	+0.3
NEST				S	Sb	00 45 45.9	+0.2
ULC	Ulcinj	1.06	319	*e*Pg	Pg	00 45 30.6	-1.3
ULC				*e*Sg	Sg	00 45 45.9	+0.3
ULC	Ulcinj	1.06	319	*e*Pg	Pg	00 45 30.6	-1.3
ULC				*e*Sg	Sg	00 45 45.9	+0.3
BCI	Bajram Curri	1.20	356	*e*PG	Pg	00 45 33.6	-1.0
BCI				*i* SG	Sn	00 45 53.6	+0.9
BCI	Bajram Curri	1.20	356	*e*Pg	Pg	00 45 33.6	-1.0
BCI				*i* Sg	Sn	00 45 53.6	+0.9
SKO	Skopje	1.24	49	*e*Pg	Pn	00 45 36.3	+0.1
SKO				*e*Sg	Sb	00 45 52.4	-0.1
SKO	Skopje	1.24	49	*i* Pn	Pn	00 45 37.0	+0.7
SKO				*i* Sg	Sn	00 45 53.0	-0.6
SKO	Skopje	1.24	49	*e*Pg	Pn	00 45 36.3	+0.1
SKO				*e*Sg	Sb	00 45 52.4	-0.1
PVY	Plav	1.43	354	⇑*i*Pg	Pn	00 45 37.6	-1.4
PVY				*e*Sg	Sg	00 45 59.4	+1.7
PVY	Plav	1.43	354	⇑*i*Pg	Pn	00 45 37.6	-1.4
PVY				*e*Sg	Sg	00 45 59.4	+1.7
PDG	Podgorica	1.44	332	*e*Pn	Pg	00 45 40.6	+1.4
PDG				*e*Sn	Sg	00 46 01.4	+3.6
PDG	Podgorica	1.44	332	⇑*i*Pg	Pn	00 45 37.6	-1.3
PDG	Podgorica	1.44	332	*e*Pn	Pg	00 45 40.6	+1.4
PDG				*e*Sg	Sg	00 45 58.9	+1.1
PDG				*e*Sn	Sg	00 46 01.4	+3.6
TTG	Podgorica	1.44	332	⇑*i*Pg	Pn	00 45 37.6	-1.3
TTG				*e*Sg	Sg	00 45 58.9	+1.1
BUM	Brajici-Budva	1.48	320	*e*Pg	Pn	00 45 38.5	-1.1
BUM				*e*Sg	Sg	00 46 00.1	+0.8
BUM	Brajici-Budva

PCIG		**0.15**	**38**	*e*P	Pn	00 58 26.7	-1.1
PCIG				*i* S	Sn	00 58 36.1	-1.4
TGIG		**1.20**	**9**	*e*P	Pn	00 58 36.0	-1.1
TGIG				*i* S	Sn	00 58 51.9	-1.9
THIG		**1.22**	**123**	*i* P	Pn	00 58 35.2	-2.0
THIG				*i* S	Sn	00 58 52.3	-1.7
CCIG	**Comitan**	**1.33**	**58**	*i* P	Pn	00 58 37.4	-1.4
CCIG				*i* S	Sn	00 58 55.0	-1.9
HUIG	**Huatulco**	**2.69**	**274**	*e*P	Pn	00 58 55.3	-1.0
HUIG				*i* S	Sn	00 59 25.9	-2.3
PNIG	**Pinotepa**	**4.70**	**280**	*i* P	Pn	00 59 23.1	-0.3
PNIG				*i* S	Sn	01 00 15.4	-1.3

AUST ***27*** *01:02:38.9±0.0, 3°.40S×129°.69E, h35km, Error ellipse: s-maj=1.4km s-min=1.1km az=14.0*
IDC ***27*** *01:02:40.4±15.0, 3°.61S×130°.93E, h0km, mb3.9/2, mb1 4.1/4, mb1mx3.7/20, mbtmp3.9/4, ML3.6/2, Error ellipse: s-maj=225.2km s-min=103.9km az=149.0*

ISC 27 01:02:36.9±1.3, 3°.3S±0°.1×129°.88E±0°.10, h25km, n11, σ1§92/10, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.23**	**179**	P	**Pn**	**01 02 59.0**	**+0.4**
	baz=1.1,SNR=9.3						
FAKI	**Fak Fak**	**2.40**	**81**	P	**Pb**	**01 03 17.9**	**-1.5**
	baz=2.6,SNR=6.0						
LUWI	**Luwuk**	**7.44**	**287**	P	**Pn**	**01 04 23.8**	**-0.2**
	baz=7.3,SNR=4.3						
MTN	**Manton Dam**	**9.58**	**173**	P	Pn	01 04 57.0	+3.6
	baz=9.5,SNR=5.6						
KDU	**Kakadu**	**9.69**	**165**	P	**Pn**	**01 04 52.6**	**-2.2**
	baz=9.7,SNR=4.7						
WSI	**Waingapu**	**11.44**	**236**	P	**Pn**	**01 05 16.0**	**-2.8**
	baz=11,SNR=4.2						
WSI				S	Sn	01 06 54.3	-32
	baz=11,SNR=7.4						
FITZ	**Fitzroy Crossi**	**15.30**	**195**	Pn	**P**	**01 06 18.3**	**+2.3**
	0.1nm,0.3s,baz=31,slow=12,SNR=5.5						
COEN	**Coen**	**16.88**	**130**	P	**P**	**01 06 35.0**	**+1.5**
	baz=17,SNR=5.2						
WRA	**Warramunga Arr**	**17.12**	**166**	Pn	**Pn**	**01 06 34.8**	**+0.1**
	0.3nm,0.3s,baz=349,slow=11,SNR=7.1						
ASAR	**Alice Springs**	**20.64**	**169**	P	**P**	**01 07 15.7**	**+0.9**
	2.6nm,0.4s,baz=350,slow=11,SNR=54						
STKA	**Stephens Creek**	**30.51**	**160**	P	**P**	**01 08 49.7**	**+1.5**
	0.9nm,0.5s,baz=348,slow=11,SNR=4.9						

IDC ***27*** *01:07:20.4±2.1, 5°.43S×130°.45E, h0km, mb4.2/1, mb1 4.2/4, mb1mx3.8/19, mbtmp4.1/4, ML4.0/3, MS3.6/3, Ms1 3.6/3, ms1mx2.6/36, Error ellipse: s-maj=95.9km s-min=26.7km az=77.0*
ISCJB ***27*** *01:07:36.7±1.0, 6°.09S±0°.05×130°.5E±0°.1, h124km, mb4.0/1, Error ellipse: s-maj=16.5km s-min=5.9km az=15.0*
AUST ***27*** *01:07:37.8, 5°.98S×130°.53E, h200km*

ISC 27 01:07:35.8±1.7, 5°.99S±0°.09×130°.3E±0°.2, h124km, n15, σ1§56/12, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.52**	**344**	P	Pn	01 08 11.5	+7.7
	baz=1.6,SNR=3.2						
BNDI				S	Sn	01 08 36.0	+11
	baz=1.6,SNR=4.7						
FAKI	**Fak Fak**	**3.60**	**32**	P	Pn	01 08 33.7	+3.5
	baz=3.5,SNR=32						
FAKI				S	**Sn**	**01 09 13.0**	**+0.7**
	baz=3.5,SNR=17						
MTN	**Manton Dam**	**6.85**	**173**	P	**Pn**	**01 09 16.7**	**+2.9**
	baz=6.9,SNR=115						
MTN				S	**Sn**	**01 10 30.7**	**+0.3**
	baz=6.9,SNR=6.2						
KDU	**Kakadu**	**6.98**	**163**	P	**Pn**	**01 09 17.7**	**+2.2**
	baz=7.0,SNR=109						
KDU				S	**Sn**	**01 10 32.2**	**-1.3**
	baz=7.0,SNR=7.7						
KNRA	**Kununurra**	**9.74**	**189**	P	**Pn**	**01 09 53.9**	**+1.1**
	baz=9.9,SNR=15						
KNRA				S	Sn	01 11 36.1	-4.4
	baz=9.9,SNR=11						
FITZ	**Fitzroy Crossi**	**12.88**	**200**	Pn	**Pn**	**01 10 33.8**	**-0.6**
	0.5nm,0.3s,baz=32,slow=10,SNR=11						
FITZ				Sn	Sn	01 12 47.3	-9.1
	0.3nm,0.3s,baz=151,slow=19,SNR=2.3						
FITZ	**Fitzroy Crossi**	**12.88**	**200**	P	**Pn**	**01 10 34.2**	**-0.2**
	baz=13,SNR=9.9						
FITZ				S	Sn	01 12 50.0	-6.3
	baz=13,SNR=3.8						
WRA	**Warramunga Arr**	**14.40**	**165**	Pn	**Pn**	**01 10 52.7**	**-1.3**
	0.8nm,0.3s,baz=348,slow=12,SNR=29						
WRA				Sn	Sn	01 13 24.6	-8.7
	0.9nm,0.3s,baz=338,slow=22,SNR=5.7						
COEN	**Coen**	**14.91**	**123**	P	**P**	**01 11 01.5**	**-1.5**
	baz=15,SNR=22						
MANU	**Manus Island**	**17.44**	**78**	S	Sn	01 14 35.2	-11
	baz=17,SNR=4.3						
ASAR	**Alice Springs**	**17.91**	**169**	P	**P**	**01 11 36.8**	**+0.8**
	0.7nm,0.3s,baz=349,slow=11,SNR=52						
ASAR				S	S	01 14 48.7	-6.8
	0.2nm,0.3s,baz=330,slow=14,SNR=6.2						
ASAR				LR	LR	01 18 40.2	
	comp=Z,64nm,21.6s,baz=155,slow=37						
MTSU	**Mount Surprise**	**18.22**	**133**	P	**Pn**	**01 11 40.5**	**-0.4**
	baz=18,SNR=15						
RAO	**Raoul Island**	**53.95**	**122**	LR	LR	01 37 14.2	
	comp=Z,115nm,19.3s,baz=27,slow=33						
AFI	**Afiamalu**	**57.44**	**103**	LR	LR	01 38 40.9	
	comp=Z,84nm,19.8s,baz=101,slow=33						
MKAR	**Makanchi Array**	**67.57**	**326**	P	P	01 18 16.3	-2.7
	1.1nm,0.4s,baz=120,slow=8.1,SNR=28						

IDC 27 01:14:32.3±0.8, 86°.85N×60°.65E, h0km, mb3.7/11, mb1 3.9/13, mb1mx3.8/29, mbtmp3.7/13, ML3.8/2, MS3.1/15, Ms1 3.1/15, ms1mx2.9/42, Error ellipse: s-maj=26.3km s-min=15.2km az=111.0, North of Franz Josef Land

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPITS	**Spitsbergen Ar**	**9.88**	**237**	Pn	Pn	01 16 53.6	-1.7
	baz=33,slow=14,SNR=32						
SPITS				Sn	Sn	01 18 37.6	-9.0
	baz=54,slow=27,SNR=3.3						
SPITS				LR	LR	01 20 00.8	
	comp=Z,128nm,19.4s,baz=110,slow=33						
ARCES	**ARCESS Array B**	**18.09**	**221**	P	P	01 18 44.9	0.0
	0.3nm,0.3s,baz=356,slow=11,SNR=8.3						
ARCES				LR	LR	01 25 10.6	
	comp=Z,64nm,21.5s,baz=13,slow=35						
RES	**Resolute Bay**	**18.34**	**340**	LR	LR	01 25 34.6	
	comp=Z,51nm,19.8s,baz=33,slow=36						
INK	**Inuvik**	**24.91**	**12**	LR	LR	01 27 59.0	
	comp=Z,73nm,19.3s,baz=61,slow=32						
FINES	**FINESS Array B**	**26.16**	**218**	P	P	01 20 08.9	+1.2
	1.0nm,0.8s,baz=4.1,slow=5.9,SNR=3.3						
NOA	**NORSAR Array B**	**27.16**	**234**	P	P	01 20 18.1	+1.4
	1.0nm,0.9s,baz=5.6,slow=8.5,SNR=3.0						
NOA				LR	LR	01 29 29.9	
	comp=Z,17nm,21.8s,baz=350,slow=33						
HFS	**Hagfors**	**27.96**	**231**	LR	LR	01 30 54.2	
	comp=Z,24nm,18.6s,baz=59,slow=35						
ILAR	**Eielson Array**	**28.22**	**25**	P	P	01 20 27.6	+1.4
	0.5nm,0.9s,baz=356,slow=8.6,SNR=6.7						
ILAR				LR	LR	01 31 24.4	
	comp=Z,33nm,19.7s,baz=162,slow=36						
ZALV	**Zalesovo Beam**	**33.37**	**154**	LR	LR	01 36 14.3	
	comp=Z,24nm,20.4s,baz=70,slow=39						
BVAR	**Borovoye Array**	**34.04**	**169**	LR	LR	01 37 51.4	
	comp=Z,36nm,20.3s,baz=82,slow=41						
AKTO	**Aktyubinsk**	**36.59**	**183**	LR	LR	01 37 51.3	
	comp=Z,40nm,21.0s,baz=354,slow=38						
MKAR	**Makanchi Array**	**40.47**	**157**	P	P	01 22 11.9	-0.1
	1.9nm,1.1s,baz=350,slow=5.9,SNR=7.2						
MKAR				LR	LR	01 39 57.1	
	comp=Z,23nm,21.5s,baz=235,slow=38						
ULM	**Lac du Bonnet**	**42.86**	**338**	LR	LR	01 38 38.4	
	comp=Z,52nm,19.2s,baz=13,slow=34						
AAK	**Ala-Archa**	**44.48**	**165**	LR	LR	01 44 07.2	
	comp=Z,45nm,18.1s,baz=183,slow=40						
BRTR	**Keskin Array B**	**47.66**	**208**	P	P	01 23 08.8	-1.1
	0.6nm,1.0s,baz=350,slow=3.2,SNR=2.6						
ESDC	**Sonseca Array**	**49.22**	**247**	P	P	01 23 22.0	+0.2
	0.1nm,0.3s,baz=5.7,slow=7.1,SNR=3.2						
PDAR	**Pinedale Array**	**50.55**	**351**	P	P	01 23 31.4	-0.7
	0.9nm,0.8s,baz=45,slow=6.5,SNR=5.3						
PDAR				LR	LR	01 44 13.1	
	comp=Z,51nm,20.9s,baz=189,slow=35						
KSRS	**Korea Array**	**51.56**	**110**	LR	LR	01 47 34.5	
	comp=Z,5.5nm,21.1s,baz=200,slow=38						
NVAR	**Mina Array Bea**	**54.93**	**359**	P	P	01 24 05.0	+0.4
	0.5nm,0.8s,baz=356,slow=5.7,SNR=3.9						
TXAR	**Lajitas Array**	**63.89**	**345**	P	P	01 25 05.5	-0.9
	0.8nm,0.8s,baz=342,slow=2.3,SNR=11						
CMAR	**Chiang Mai Arr**	**69.18**	**141**	P	P	01 25 39.7	-0.5
	0.6nm,0.5s,baz=344,slow=5.7,SNR=4.4						
TORD	**Torodi Ar. Bea**	**75.32**	**240**	P	P	01 26 16.4	-0.5
	0.9nm,1.0s,baz=230,slow=9.2,SNR=4.4						

IDC 27 01:26:36.1±4.7, 10°.06N×93°.37E, h0km, mb3.9/12, mb1 4.0/13, mb1mx3.8/32, mbtmp3.9/13, Error ellipse: s-maj=104.7km s-min=39.6km az=135.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**9.07**	**142**	Pn	Pn	01 28 55.4	+6.7
	baz=320,slow=19,SNR=3.9						
CMAR	**Chiang Mai Arr**	**9.94**	**32**	Pn	Pn	01 29 00.5	+0.1
	baz=225,slow=14,SNR=3.1						
AAK	**Ala-Archa**	**36.41**	**336**	P	P	01 33 43.8	+1.1
	1.7nm,0.5s,baz=120,slow=1.7,SNR=2.2						
MKAR	**Makanchi Array**	**37.81**	**348**	P	P	01 33 54.3	0.0
	1.3nm,0.8s,baz=168,slow=8.9,SNR=12						
KURBB	**Kurchatov Arra**	**42.26**	**346**	P	P	01 34 31.0	-0.2
	1.0nm,0.7s,baz=165,slow=7.4,SNR=8.7						
ZALV	**Zalesovo Beam**	**44.31**	**353**	P	P	01 34 47.5	-0.2
	2.1nm,0.4s,baz=188,slow=9.1,SNR=12						
BVAR	**Borovoye Array**	**46.69**	**341**	P	P	01 35 06.0	-0.6
	0.5nm,0.5s,baz=138,slow=11,SNR=4.0						
AKTO	**Aktyubinsk**	**49.68**	**331**	P	P	01 35 29.1	-0.7
	0.5nm,0.3s,baz=167,slow=3.7,SNR=4.4						
BRTR	**Keskin Array B**	**60.45**	**310**	P	P	01 36 47.7	-0.3
	0.9nm,0.8s,baz=134,slow=6.7,SNR=7.4						
FINES	**FINESS Array B**	**70.44**	**332**	P	P	01 37 52.0	-0.1
	2.3nm,1.0s,baz=108,slow=6.2,SNR=5.2						
ARCES	**ARCESS Array B**	**72.97**	**340**	P	P	01 38 07.5	+0.3
	1.7nm,0.7s,baz=91,slow=6.6,SNR=7.0						
GERES	**GERESS Array B**	**75.71**	**318**	P	P	01 38 24.3	+0.5
	0.4nm,0.5s,baz=91,slow=4.9,SNR=4.1						
HFS	**Hagfors**	**76.20**	**330**	P	P	01 38 25.7	-0.5
	1.3nm,0.9s,baz=122,slow=14,SNR=4.2						
KEST	**Kesra**	**79.38**	**305**	P	P	01 38 44.9	+0.3
	0.5nm,0.5s,baz=168,slow=9.9,SNR=5.0						

IDC ***27*** *01:30:36.5±0.8, 0°.69S×133°.11E, h0km, mb4.1/8, mb1 4.3/10, mb1mx4.0/25, mbtmp4.2/10, ML4.5/2, Error ellipse: s-maj=43.3km s-min=11.7km az=78.0*
ISCJB ***27*** *01:30:39.6±0.4, 0°.61S±0°.05×133°.27E±0°.05, h32km, mb4.2/10, Error ellipse: s-maj=7.1km s-min=6.8km az=153.2*
NEIC ***27*** *01:30:43.3±2.4, 0°.69S×133°.27E, h51km±23km, mb4.3/5, Error ellipse: s-maj=16.4km s-min=8.4km az=49.0*
DJA ***27*** *01:30:46.0±0.6, 1°.5S×13°.3E±°, h112km±6km, M4.6/5, mb5.0/3, mB5.2/3, MLv4.4/5, Mw(mB)4.6/3*

ISC 27 01:30:41.6±0.7, 0°.60S±0°.07×133°.22E±0°.06, h32km, n39, σ1§39/45, mb4.2/10, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**1.32**	**133**	P	**Pb**	**01 31 05.4**	**-0.4**
RKPI				S	**Sb**	**01 31 25.5**	**+3.2**
FAKI	**Fak Fak**	**2.50**	**203**	P	**Pn**	**01 31 19.5**	**-0.6**
FAKI				S	**Sn**	**01 31 49.0**	**-0.5**
BAKI	**Biak**	**2.95**	**102**	P	**Pn**	**01 31 27.9**	**+1.7**
BAKI				S	**Sn**	**01 31 59.4**	**-1.1**
MSAI	**Masohi**	**5.08**	**237**	P	**Pn**	**01 31 57.7**	**+2.1**
	159nm,0.5s,3µm0.6nm						
BNDI	**Bandanaira**	**5.11**	**220**	P	**Pn**	**01 31 56.4**	**+0.4**
NLAI	**Namlea**	**6.65**	**247**	P	**Pn**	**01 32 17.6**	**+0.4**
BKSI	**Bulukumba**	**13.89**	**250**	P	**Pn**	**01 33 59.4**	**+3.0**
KAPI	**Kappang**	**14.14**	**252**	Pn	**Pn**	**01 34 02.1**	**+2.2**
KAPI	**Kappang**	**14.14**	**252**	Pn	**Pn**	**01 34 02.1**	**+2.2**
	1.4nm,0.3s,baz=64,slow=8.7,SNR=6.8						
COEN	**Coen**	**16.53**	**144**	*e*Pn	**Pn**	**01 34 30.2**	**-1.0**
FITZ	**Fitzroy Crossi**	**18.92**	**203**	*e*P	**P**	**01 34 57.5**	**-2.3**
	9.8nm,0.8s						
FITZ				S	Sn	01 38 14.3	-17
FITZ	**Fitzroy Crossi**	**18.92**	**203**	P	**P**	**01 34 56.5**	**-3.3**
	1.2nm,0.3s,baz=38,slow=13,SNR=22						
FITZ				S	Sn	01 38 14.3	-17
	0.3nm,0.3s,baz=197,slow=17,SNR=2.9						
WRAB	**Tennant Creek**	**19.25**	**177**	*e*P	**P**	**01 35 02.5**	**-0.9**
	15nm,0.9s						
WRAB				*e*Sn	Sn	01 38 26.4	-13
WRA	**Warramunga Arr**	**19.25**	**177**	P	**P**	**01 35 01.8**	**-1.7**
WRA				S	Sn	01 38 24.1	-16
WRA	**Warramunga Arr**	**19.25**	**177**	P	**P**	**01 35 01.8**	**-1.7**
	1.3nm,0.3s,baz=355,slow=13,SNR=64						
WRA				S	Sn	01 38 24.1	-16
	0.4nm,0.3s,baz=358,slow=23,SNR=5.5						
AS31	**Alice Springs**	**22.94**	**178**	*e*P	**P**	**01 35 42.9**	**-0.3**
ASAR	**Alice Springs**	**22.94**	**178**	P	**P**	**01 35 42.4**	**-0.9**
ASAR				S	**S**	**01 39 53.0**	**+1.6**
ASAR	**Alice Springs**	**22.94**	**178**	P	**P**	**01 35 42.4**	**-0.9**
	8.0nm,0.3s,baz=357,slow=11,SNR=97						
ASAR				S	**S**	**01 39 53.0**	**+1.6**
	4.7nm,1.0s,baz=0.2,slow=23,SNR=15						
CTA	**Charters Tower**	**23.19**	**147**	P	**P**	**01 35 46.4**	**+0.6**
CTA	**Charters Tower**	**23.19**	**147**	P	**P**	**01 35 46.4**	**+0.6**
	2.4nm,0.5s,baz=320,slow=11,SNR=6.5						
CTAO	**Charters Tower**	**23.19**	**147**	*e*P	**P**	**01 35 44.4**	**-1.4**
	12nm,1.0s						
MBWA	**Marble Bar**	**24.31**	**212**	*e*P	**P**	**01 35 56.4**	**-0.1**
	18nm,1.0s						
STKA	**Stephens Creek**	**32.10**	**167**	P	**P**	**01 37 04.9**	**-1.0**
STKA	**Stephens Creek**	**32.10**	**167**	P	**P**	**01 37 04.9**	**-1.0**
	2.9nm,0.4s,baz=327,slow=12,SNR=13						
MK31	**Makanchi Array**	**64.82**	**324**	*e*P	**P**	**01 41 17.8**	**+0.3**
MKAR	**Makanchi Array**	**64.82**	**324**	P	**P**	**01 41 18.0**	**+0.6**
MKAR	**Makanchi Array**	**64.82**	**324**	P	**P**	**01 41 18.0**	**+0.6**
	0.9nm,0.5s,baz=113,slow=8.2,SNR=17						
ZALV	**Zalesovo Beam**	**67.42**	**331**	P	**P**	**01 41 34.2**	**+0.4**
ZALV	**Zalesovo Beam**	**67.42**	**331**	P	**P**	**01 41 34.2**	**+0.4**
	0.6nm,0.3s,baz=169,slow=1.5,SNR=4.0						
KURK	**Kurchatov**	**68.89**	**326**	P	**P**	**01 41 42.9**	**-0.3**
KURBB	**Kurchatov Arra**	**68.89**	**326**	P	**P**	**01 41 42.9**	**-0.3**
	1.8nm,0.7s,baz=121,slow=5.7,SNR=18						
BVAR	**Borovoye Array**	**74.48**	**326**	P	**P**	**01 42 16.8**	**0.0**
BVAR	**Borovoye Array**	**74.48**	**326**	P	**P**	**01 42 16.8**	**0.0**
	1.0nm,0.7s,baz=120,slow=5.5,SNR=6.5						
BRVK	**Borovoye**	**74.56**	**326**	*e*P	**P**	**01 42 17.2**	**0.0**
	2.3nm,0.7s						
BRVK				*e*pP	**pP**	**01 42 25.9**	**-1.4**
ABKAR	**Akbulak array**	**79.59**	**320**	*e*P	**P**	**01 42 45.2**	**-0.4**
ILAR	**Eielson Array**	**86.23**	**25**	P	**P**	**01 43 18.6**	**-1.1**
ILAR	**Eielson Array**	**86.23**	**25**	P	**P**	**01 43 18.6**	**-1.1**
	0.5nm,0.6s,baz=242,slow=5.7,SNR=6.3						
CPUP	**Villa Florida**	**151.36**	**160**	PKPbc	**PKPbc**	**01 50 33.1**	**+0.2**
CPUP	**Villa Florida**	**151.36**	**160**	PKPbc	**PKPbc**	**01 50 33.1**	**+0.2**
	0.2nm,0.3s,baz=172,slow=7.1,SNR=2.4						

IDC 27 01:35:38.0±4.9, 29°.32S×178°.27W, h0km, mb3.8/2, mb1 4.1/2, mb1mx3.7/17, mbtmp3.8/2, Error ellipse: s-maj=202.1km s-min=80.7km az=164.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	**42.95**	**266**	P	P	01 43 37.9	-1.0
	0.8nm,0.6s,baz=108,slow=7.7,SNR=7.6						
WRA	**Warramunga Arr**	**43.84**	**271**	P	P	01 43 46.8	+0.7
	0.5nm,0.3s,baz=111,slow=8.0,SNR=16						
FINES	**FINESS Array B**	**144.06**	**340**	PKP	PKPdf	01 55 14.0	-0.9
	1.1nm,0.7s,baz=44,slow=4.2,SNR=8.5						

KRSC 27 01:53:53.0±1.0, 52°.52N×160°.00E, h30km±30km, ML3.6, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	**0.58**	**1**	P	Pn	01 54 05.0	-0.2
SPN				*i* S	Sn	01 54 14.0	+0.3
RUS	**Russkaya**	**0.91**	**265**	P	Pn	01 54 09.9	+0.1
RUS				*i* S	Sb	01 54 22.5	+0.4
PET	**Petropavlovsk**	**0.96**	**302**	P	Pn	01 54 10.5	+0.1
PET				*i* S	Sb	01 54 23.3	-0.1
UGLR	**Uglovaya**	**0.99**	**315**	P	Pb	01 54 11.5	-0.3
UGLR				*i* S	Sb	01 54 25.0	+0.4
SDLR	**Sedlovina**	**1.02**	**319**	P	Pn	01 54 11.5	+0.1
SMAR	**Somma**	**1.04**	**316**	P	Pn	01 54 12.2	+0.4
AVH	**Avacha**	**1.07**	**315**	P	Pb	01 54 12.7	-0.3
KRER	**Koryakskii**	**1.09**	**317**	P	Pn	01 54 12.4	-0.1
MTVR	**Mutnovka**	**1.11**	**269**	P	Pn	01 54 13.2	+0.5
MTVR				*i* S	Sb	01 54 28.0	-0.1
KOK	**Koryaka**	**1.13**	**314**	P	Pn	01 54 13.5	+0.6
GRL	**Gorelyy**	**1.18**	**272**	P	Pb	01 54 14.5	-0.4
GRL				*i* S	Sb	01 54 30.1	+0.2
ASAK	**Asacha**	**1.29**	**265**	P	Pb	01 54 16.2	-0.6
ASAK				*i* S	Sb	01 54 33.2	+0.1
KII	**Karymskiy**	**1.55**	**348**	P	Pb	01 54 20.3	-0.9
KII				*i* S	Sb	01 54 40.4	-0.2
GNL	**Ganaly**	**1.71**	**314**	P	Pn	01 54 22.3	+1.4
GNL				*i* S	Sb	01 54 43.6	-1.5
APC	**Apacha**	**1.77**	**284**	P	Pb	01 54 23.5	-1.3
APC				*i* S	Sb	01 54 45.7	-1.0
MIPR	**Malaya Ipel'ka**	**2.00**	**264**	P	Pb	01 54 26.9	-1.8
MIPR				*i* S	Sb	01 54 51.7	-1.5
MKZ	**Mys Kozlova**	**2.29**	**26**	P	Pn	01 54 29.5	+0.9
MKZ				*i* S	Sn	01 54 56.3	+0.6

IDC ***27*** *01:58:23.9±1.1, 48°.64N×155°.31E, h0km, mb4.0/21, mb1 4.1/24, mb1mx4.0/36, mbtmp4.0/24, ML3.1/3, MS3.5/11, Ms1 3.6/11, ms1mx3.2/47, Error ellipse: s-maj=30.2km s-min=14.8km az=149.0*
KRSC ***27*** *01:58:23.3±1.6, 48°.39N×156°.15E, h5km±5km, ML4.4*
ISCJB ***27*** *01:58:26.6±1.3, 48°.63N±0°.06×155°.4E±0°.1, h30km±9km, mb4.1/32, MS3.7/8, Error ellipse: s-maj=15.3km s-min=3.8km az=40.9*
MOS ***27*** *01:58:27.8±1.3, 48°.60N×155°.44E, h44km, mb4.4/23, Error ellipse: s-maj=11.0km s-min=6.4km az=81.6*
NEIC ***27*** *01:58:29.4±1.2, 48°.58N×155°.36E, h43km±9km, mb4.4/9, Error ellipse: s-maj=16.9km s-min=7.0km az=140.0*

ISC 27 01:58:28.0±2.6, 48°.59N±0°.09×155°.50E±0°.09, h31km±17km, n140, σ1§12/145, mb4.2/32, MS3.8/8, 17C-7D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.13**	**11**	*e*PN	**Pn**	**01 58 59.8**	**-1.6**
SKR				*e*S	**Sn**	**01 59 28.5**	**+1.7**
SKR				pmax	pmax		
	comp=Z,90nm,0.7s						
SKR				smax	smax		
	comp=N,1µm,6.0s						
SKR				smax	smax		
	comp=E,1µm,10.0s						
SKR				smax	smax		
	comp=N,310nm,0.5s						
SKR				smax	smax		
	comp=E,180nm,0.5s						
SKR				MLR	MLR		
	comp=N,2µm,12.0s						
SKR				MLR	MLR		
	comp=Z,1µm,12.0s						
SKR				MLR	MLR		
	comp=E,2µm,14.0s						
SKR	**Severo-Kuril's**	**2.13**	**11**	P	**Pn**	**01 59 02.3**	**+0.9**
SKR				*i* S	**Sb**	**01 59 30.6**	**-1.2**
MIPR	**Malaya Ipel'ka**	**3.77**	**12**	P	**Pn**	**01 59 25.6**	**-1.6**
ASAK	**Asacha**	**4.09**	**21**	P	**Pn**	**01 59 29.1**	**+0.7**
ASAK				*i* S	**Sn**	**02 00 16.8**	**+1.5**
MTVR	**Mutnovka**	**4.25**	**23**	P	**Pn**	**01 59 31.1**	**+0.4**
MTVR				*i* S	**Sn**	**02 00 20.2**	**+0.9**
RUS	**Russkaya**	**4.30**	**25**	PN	**Pn**	**01 59 30.5**	**-0.7**
RUS	**Russkaya**	**4.30**	**25**	P	**Pn**	**01 59 30.5**	**-0.7**
RUS				*i* S	**Sn**	**02 00 19.3**	**-0.9**
APC	**Apacha**	**4.46**	**13**	P	**Pn**	**01 59 34.8**	**+1.4**
PEA0B	**Petropavlovsk-**	**4.73**	**16**	*e*Pn	**Pn**	**01 59 38.7**	**+1.5**
PETK	**Petropavlovsk-**	**4.73**	**16**	PN	**Pn**	**01 59 38.3**	**+1.2**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,357nm,19.7s						
PETK	**Petropavlovsk-**	**4.73**	**16**	Pn	**Pn**	**01 59 38.3**	**+1.2**
PETK	**Petropavlovsk-**	**4.73**	**16**	Pn	**Pn**	**01 59 38.3**	**+1.2**
	comp=Z,1.8nm,0.3s,baz=177,slow=14,SNR=11						
PETK				LR	LR	02 01 49.4	
	comp=Z,357nm,19.7s,baz=60,slow=44						
PET	**Petropavlovsk**	**4.87**	**23**	*e*PN	**Pn**	**01 59 41.3**	**+2.3**
PET				*e*S	**Sn**	**02 00 35.1**	**+0.9**
PET				smax	smax		
	comp=E,300nm,1.8s						
PET				smax	smax		
	comp=E,60nm,0.7s						
PET				smax	smax		
	comp=N,56nm,0.6s						
PET				MLR	MLR		
	comp=Z,300nm,11.0s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
PET	**Petropavlovsk**	**4.87**	**23**	P	**Pn**	**01 59 39.6**	**+0.6**
PET				*i* S	**Sn**	**02 00 34.9**	**+0.7**
UGLR	**Uglovaya**	**5.08**	**23**	P	**Pn**	**01 59 42.2**	**+0.2**
AVH	**Avacha**	**5.11**	**22**	P	**Pn**	**01 59 42.

ERM	**Erimo**	**10.89**	**237**	*e*PN	**Pn**	**02 01 02.8**	**+1.1**
FX1	**Attu Island--F**	**11.98**	**62**	LR	LR	02 05 37.1	
	comp=Z,96nm,18.7s,baz=38,slow=36						
KLR	**Kul'dur**	**15.62**	**281**	*e*P	**Pn**	**02 02 05.7**	**0.0**
KLR				MLR	MLR		
	comp=Z,1μm,12.0s						
USRK	**Ussuriysk Arra**	**16.77**	**264**	Pn	**Pn**	**02 02 19.6**	**-0.8**
	comp=Z,0.2nm,0.3s,baz=75,slow=13,SNR=4.6						
USRK				LR	LR	02 08 34.2	
	comp=Z,52nm,18.2s,baz=340,slow=37						
MJAR	**Matsushiro Arr**	**17.48**	**233**	P	**Pn**	**02 02 27.1**	**-2.3**
MJAR	**Matsushiro Arr**	**17.48**	**233**	P	Pn	**02 02 27.1**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=30,slow=12,SNR=6.8						
CLNS	**Chul'man**	**20.15**	**306**	*e*P	Pn	02 03 08.6	+7.1
CLNS				pmax	pmax		
	comp=E,6.0nm,1.6s						
CLNS				pmax	pmax		
	comp=Z,13nm,1.6s						
CLNS				pmax	pmax		
	comp=N,11nm,1.6s						
BILL	**Bilibino**	**20.24**	**12**	*e*P	**P**	**02 03 00.1**	**-0.2**
BILL				pmax	pmax		
	comp=Z,28nm,1.0s						
BILL	**Bilibino**	**20.24**	**12**	*e*P	**P**	**02 03 01.0**	**+0.7**
	comp=Z,6.1nm,1.0s						
KSRS	**Korea Array**	**22.91**	**251**	P	**P**	**02 03 28.4**	**-0.6**
	comp=Z,1.6nm,0.5s,baz=48,slow=10,SNR=9.8						
KSAR	**Wonju Array Be**	**22.94**	**251**	P	**P**	**02 03 28.4**	**-1.0**
JNU	**Nakatsue**	**24.05**	**239**	P	**P**	**02 03 40.6**	**+0.2**
JNU	**Nakatsue**	**24.05**	**239**	P	**P**	**02 03 40.6**	**+0.2**
	comp=Z,2.5nm,0.3s,baz=327,slow=10,SNR=4.3						
TIXI	**Tiksi**	**26.20**	**341**	*e*P	**P**	**02 03 57.4**	**-2.0**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY	**Talaya**	**32.81**	**295**	*e*P	**P**	**02 04 59.0**	**+0.7**
TLY				*e*		02 06 02.5	
TLY				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TLY				MLR	MLR		
	comp=Z,193nm,16.0s						
ILAR	**Eielson Array**	**34.10**	**40**	P	**P**	**02 05 11.2**	**+1.9**
ILAR	**Eielson Array**	**34.10**	**40**	P	**P**	**02 05 11.2**	**+1.9**
	comp=Z,0.2nm,0.7s,baz=246,slow=6.8,SNR=3.0						
ZALV	**Zalesovo Beam**	**42.86**	**305**	LR	LR	02 25 46.5	
	comp=Z,68nm,18.6s,baz=70,slow=38						
MK31	**Makanchi Array**	**47.54**	**297**	*e*P	**P**	**02 06 59.3**	**-1.0**
MK31				*e*		02 08 33.0	
MK31	**Makanchi Array**	**47.54**	**297**	*e*P	**P**	**02 06 59.3**	**-1.0**
MK31				*e*PcP	**PcP**	**02 08 33.0**	**+3.2**
MKAR	**Makanchi Array**	**47.54**	**297**	P	**P**	**02 06 59.5**	**-0.7**
MKAR				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MKAR				MLR	MLR		
	comp=Z,96nm,18.3s						
MKAR	**Makanchi Array**	**47.54**	**297**	P	**P**	**02 06 59.5**	**-0.7**
MKAR	**Makanchi Array**	**47.54**	**297**	P	**P**	**02 06 59.5**	**-0.7**
	comp=Z,3.8nm,1.0s,baz=67,slow=8.9,SNR=22						
MKAR				LR	LR	02 28 35.3	
	comp=Z,96nm,18.3s,baz=27,slow=38						
KURK	**Kurchatov**	**47.70**	**303**	P	**P**	**02 07 00.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURK	**Kurchatov**	**47.70**	**303**	P	**P**	**02 07 00.8**	**-0.5**
KURBB	**Kurchatov Arra**	**47.79**	**303**	P	**P**	**02 07 00.8**	**-1.3**
	comp=Z,1.0nm,0.8s,baz=65,slow=8.0,SNR=8.1						
YKW3	**Yellowknife Ar**	**48.44**	**38**	*e*P	**P**	**02 07 08.2**	**+1.3**
YKA	**Yellowknife Ar**	**48.48**	**38**	P	**P**	**02 07 08.2**	**+1.0**
YKA	**Yellowknife Ar**	**48.48**	**38**	P	**P**	**02 07 08.2**	**+1.0**
	comp=Z,0.7nm,0.8s,baz=303,slow=8.6,SNR=3.5						
RES	**Resolute Bay**	**48.57**	**20**	P	**P**	**02 07 08.9**	**+1.2**
RES	**Resolute Bay**	**48.57**	**20**	P	**P**	**02 07 08.9**	**+1.2**
	comp=Z,1.1nm,0.8s,baz=308,slow=8.7,SNR=3.7						
BVAR	**Borovoye Array**	**50.94**	**309**	LR	LR	02 30 58.2	
	comp=Z,85nm,18.3s,baz=66,slow=38						
TKM2	**Tokmak 2**	**53.64**	**296**	*e*P	**P**	**02 07 46.5**	**-0.1**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TKM2	**Tokmak 2**	**53.64**	**296**	*e*P	**P**	**02 07 46.5**	**-0.1**
	comp=Z,1.6nm,0.7s						
CHTO	**Chiang Mai**	**54.11**	**257**	*e*P	**P**	**02 07 49.8**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CHTO	**Chiang Mai**	**54.11**	**257**	*e*P	**P**	**02 07 49.8**	**-0.2**
	comp=Z,8.2nm,1.0s						
CMAR	**Chiang Mai Arr**	**54.37**	**257**	P	**P**	**02 07 51.9**	**0.0**
CMAR	**Chiang Mai Arr**	**54.37**	**257**	P	**P**	**02 07 51.9**	**0.0**
	comp=Z,1.0nm,0.3s,baz=35,slow=7.2,SNR=9.5						
CMAR				LR	LR	02 34 53.2	
	comp=Z,47nm,18.5s,baz=35,slow=40						
NEW	**Newport**	**54.78**	**55**	LR	LR	02 29 49.0	
	comp=Z,40nm,18.9s,baz=238,slow=34						
EKS2	**Erkin-Say**	**54.87**	**297**	*e*P	**P**	**02 07 54.8**	**-0.7**
EKS2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
EKS2	**Erkin-Say**	**54.87**	**297**	*e*P	**P**	**02 07 54.8**	**-0.7**
	comp=Z,4.0nm,1.1s						
ARCES	**ARCESS Array B**	**56.63**	**341**	P	**P**	**02 08 05.8**	**-1.7**
ARCES	**ARCESS Array B**	**56.63**	**341**	P	**P**	**02 08 05.8**	**-1.7**
	comp=Z,3.7nm,1.0s,baz=2.1,slow=7.2,SNR=3.7						
ARCES				LR	LR	02 36 39.2	
	comp=Z,81nm,19.0s,baz=136,slow=41						
ABKAR	**Akbulak array**	**58.48**	**310**	*e*P	**P**	**02 08 19.5**	**-1.3**
DUG	**Dugway**	**62.24**	**60**	*e*P	**P**	**02 08 45.2**	**-1.6**
DUG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
DUG	**Dugway**	**62.24**	**60**	*e*P	**P**	**02 08 45.2**	**-1.6**
	comp=Z,3.5nm,1.0s						
PDAR	**Pinedale Array**	**62.37**	**56**	P	**P**	**02 08 49.3**	**+1.6**
PDAR	**Pinedale Array**	**62.37**	**56**	P	**P**	**02 08 49.3**	**+1.6**
	comp=Z,0.6nm,0.8s,baz=272,slow=4.3,SNR=3.4						
FINES	**FINESS Array B**	**63.05**	**335**	P	**P**	**02 08 50.8**	**-0.9**
FINES	**FINESS Array B**	**63.05**	**335**	P	**P**	**02 08 50.8**	**-0.9**
	comp=Z,1.4nm,0.8s,baz=18,slow=6.6,SNR=3.5						
KULM	**Kulim**	**63.31**	**246**	*e*P	**P**	**02 08 52.3**	**-1.7**
	comp=Z,9.0nm,1.0s						
NOA	**NORSAR Array B**	**66.99**	**342**	LR	LR	02 43 26.9	
	comp=Z,42nm,18.1s,baz=15,slow=40						
HFS	**Hagfors**	**67.28**	**340**	P	**P**	**02 09 18.4**	**-0.7**
HFS	**Hagfors**	**67.28**	**340**	P	**P**	**02 09 18.4**	**-0.7**
	comp=Z,1.6nm,0.8s,baz=344,slow=4.8,SNR=3.9						
AKASG	**Malin Array Be**	**70.89**	**327**	P	**P**	**02 09 40.5**	**-1.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG	**Malin Array Be**	**70.89**	**327**	P	**P**	**02 09 40.5**	**-1.1**
AKASG	**Malin Array Be**	**70.89**	**327**	P	**P**	**02 09 40.5**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=33,slow=6.5,SNR=4.9						
KIEV	**Kiev**	**70.90**	**327**	*e*P	**P**	**02 09 38.6**	**-3.1**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KIEV	**Kiev**	**70.90**	**327**	*e*P	**P**	**02 09 38.6**	**-3.1**
	comp=Z,3.2nm,0.7s						
KWP	**Kalwaria Pacla**	**74.05**	**330**	⇑P	**P**	**02 10 01.9**	**+1.4**
KWP	**Kalwaria Pacla**	**74.05**	**330**	⇑*i*P	**P**	**02 10 01.9**	**+1.4**
PRAR	**RASCA**	**74.77**	**327**	⇑*i*P	**P**	**02 10 03.9**	**-0.8**
BUR08	**Bucovina Ar. S**	**74.90**	**328**	*e*P	**P**	**02 10 05.5**	**-0.1**
EKA	**Eskdalemuir Ar**	**74.91**	**348**	P	**P**	**02 10 05.0**	**-0.4**
EKA	**Eskdalemuir Ar**	**74.91**	**348**	P	**P**	**02 10 05.0**	**-0.4**
	comp=Z,0.3nm,0.3s,baz=19,slow=5.2,SNR=9.2						
BURAR	**Bucovina Array**	**74.92**	**328**	⇑*i*P	**P**	**02 10 06.5**	**+0.8**
TXAR	**Lajitas Array**	**75.19**	**63**	P	**P**	**02 10 07.5**	**-0.1**
TXAR	**Lajitas Array**	**75.19**	**63**	P	**P**	**02 10 07.5**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=288,slow=3.5,SNR=9.1						
OKC	**Ostrava-Krasne**	**75.30**	**333**	*i* P	**P**	**02 10 08.3**	**+0.5**
OKC	**Ostrava-Krasne**	**75.30**	**333**	*i* P	**P**	**02 10 08.3**	**+0.5**
UPC	**Upice**	**75.33**	**335**	*i* P	**P**	**02 10 08.8**	**+0.9**
UPC	**Upice**	**75.33**	**335**	*i* P	**P**	**02 10 08.8**	**+0.9**
TESR	**Tescani**	**75.33**	**326**	⇑*i*P	**P**	**02 10 07.9**	**-0.1**
DPC	**Dobruska-Polom**	**75.38**	**334**	*i* P	**P**	**02 10 09.0**	**+0.7**
DPC	**Dobruska-Polom**	**75.38**	**334**	*i* P	**P**	**02 10 09.0**	**+0.7**
CLL	**Collm**	**75.43**	**337**	*i* P	**P**	**02 10 08.5**	**0.0**
CLL				*i*		02 10 22.3	
CLL				pmax	pmax		
	comp=Z,10.0nm,1.3s						
CLL	**Collm**	**75.43**	**337**	*i* P	**P**	**02 10 08.5**	**0.0**
	comp=Z,10.0nm,1.3s						
CLL				*i* pP	**PcP**	**02 10 22.3**	**+0.8**
MORC	**Moravsky Berou**	**75.54**	**333**	*e*P	**P**	**02 10 09.4**	**+0.2**
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MORC	**Moravsky Berou**	**75.54**	**333**	*e*P	**P**	**02 10 09.4**	**+0.2**
	comp=Z,5.0nm,1.0s						
TLCR		**75.63**	**324**	⇑P	**P**	**02 10 09.2**	**-0.5**
TLCR		**75.63**	**324**	⇑*i*P	**P**	**02 10 09.2**	**-0.5**
PVCC	**Panska Ves**	**75.72**	**335**	*i* P	P	02 10 14.6	+4.5
CFR	**Carcaliu**	**75.90**	**325**	⇑P	**P**	**02 10 11.2**	**0.0**
CFR	**Carcaliu**	**75.90**	**325**	⇑*i*P	**P**	**02 10 11.2**	**0.0**
PRU	**Pruhonice**	**76.21**	**335**	*i* P	**P**	**02 10 13.9**	**+1.0**
PRU	**Pruhonice**	**76.21**	**335**	*i* P	**P**	**02 10 13.9**	**+1.0**
VRAC	**Vranov**	**76.24**	**334**	P	**P**	**02 10 13.8**	**+0.7**
VRAC	**Vranov**	**76.24**	**334**	P	**P**	**02 10 13.8**	**+0.7**
	comp=Z,3.2nm,0.7s,baz=18,slow=5.3,SNR=6.7						
TIRR	**Tirgusor**	**76.39**	**324**	⇑P	**P**	**02 10 14.3**	**+0.3**
TIRR	**Tirgusor**	**76.39**	**324**	⇑*i*P	**P**	**02 10 14.3**	**+0.3**
MLR	**Muntele Rosu**	**76.46**	**326**	P	**P**	**02 10 15.4**	**+0.8**
MLR	**Muntele Rosu**	**76.46**	**326**	⇑*i*P	**P**	**02 10 16.1**	**+1.5**
MLR	**Muntele Rosu**	**76.46**	**326**	P	**P**	**02 10 15.4**	**+0.8**
	comp=Z,0.4nm,0.5s,baz=142,slow=2.6,SNR=7.2						
DRGR		**76.50**	**329**	⇓P	**P**	**02 10 15.9**	**+1.2**
DRGR		**76.50**	**329**	⇓*i*P	**P**	**02 10 15.9**	**+1.2**
VOIR		**76.83**	**327**	⇑P	**P**	**02 10 17.6**	**+0.9**
VOIR		**76.83**	**327**	⇑*i*P	**P**	**02 10 17.6**	**+0.9**
ARR	**Arges**	**77.05**	**327**	⇑*i*P	**P**	**02 10 19.5**	**+1.7**
GERES	**GERESS Array B**	**77.48**	**335**	P	**P**	**02 10 20.8**	**+0.6**
GERES	**GERESS Array B**	**77.48**	**335**	P	**P**	**02 10 20.8**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=46,slow=3.9,SNR=9.0						
BZS	**Buzias**	**77.90**	**329**	⇑P	**P**	**02 10 22.6**	**+0.1**
BZS	**Buzias**	**77.90**	**329**	⇑*i*P	**P**	**02 10 22.6**	**+0.1**
BR131	**Keskin Array S**	**78.13**	**318**	*e*P	**P**	**02 10 24.4**	**+0.4**
	comp=Z,4.0nm,1.0s						
BRTR	**Keskin Array B**	**78.13**	**318**	P	**P**	**02 10 24.7**	**+0.6**
BRTR	**Keskin Array B**	**78.13**	**318**	P	**P**	**02 10 24.7**	**+0.6**
	comp=Z,3.7nm,1.0s,baz=63,slow=2.9,SNR=16						
VTS	**Vitosha**	**79.96**	**326**	⇓P	**P**	**02 10 34.9**	**+0.8**
VTS	**Vitosha**	**79.96**	**326**	⇓*i*P	**P**	**02 10 34.9**	**+0.8**
DAVOX	**Davos/Dischmat**	**80.41**	**337**	P	**P**	**02 10 38.2**	**+1.8**
DAVOX	**Davos/Dischmat**	**80.41**	**337**	P	**P**	**02 10 38.2**	**+1.8**
	comp=Z,1.4nm,0.8s,baz=322,slow=18,SNR=2.7						
MMAI	**Mount Meron Ar**	**82.77**	**313**	P	**P**	**02 10 49.4**	**+0.3**
MMAI	**Mount Meron Ar**	**82.77**	**313**	P	**P**	**02 10 49.4**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=49,slow=6.7,SNR=7.6						

THE **27** *02:01:21.8, 45°.94N×26°.82E, h32km±28km, ML3.7/2, Error ellipse: s-maj=28.4km s-min=2.5km az=16.0*

ISCJB **27** *02:01:23.1±0.2, 45°.79N±0°.02×26°.77E±0°.03, h100km±3km, mb3.7/6, Error ellipse: s-maj=3.3km s-min=2.5km az=145.6*

CSEM **27** *02:01:24.6±0.1, 45°.80N×26°.76E, h89km±2km, MD4.3/2, Error ellipse: s-maj=2.6km s-min=2.0km az=53.0*

IDC **27** *02:01:24.3±0.6, 46°.02N×26°.47E, h76km±9km, mb3.5/6, mb1 3.4/9, mb1mx3.2/28, mbtmp3.4/9, MS2.9/2, Ms1 2.9/2, ms1mx2.2/36, Error ellipse: s-maj=25.5km s-min=11.4km az=117.0*

BUC **27** *02:01:24.3±0.9, 45°.80N×26°.75E, h90km±13km, MD4.3/2, Error ellipse: s-maj=7.2km s-min=4.9km az=110.0*

SOF **27** *02:01:25.0, 45°.70N×26°.58E, h71km, MD3.2*

BEO **27** *02:01:27.3±1.9, 45°.66N×26°.58E, h41km±2km, ML3.3/6*

ISC 27 02:01:24.3±0.7, **45°.80N**±0°.02×**26°.74E**±0°.02, **h91**km±4km, **n242**,σ1$**06**/301, **mb3.6**/6, **53C-59D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRI	**Vrincioaia**	**0.07**	**354**	⇑*i*P	**Pn**	**02 01 37.1**	**-0.1**
VRI	**Vrincioaia**	**0.07**	**354**	⇑*i*P	**Pn**	**02 01 37.1**	**-0.1**
VRI				*i* S	**Sn**	**02 01 46.3**	**-0.5**
VRI	**Vrincioaia**	**0.07**	**354**	⇑*i*P	**Pn**	**02 01 37.1**	**-0.1**
VRI				*i* S	**Sn**	**02 01 46.3**	**-0.5**
PLOR	**Plostina**	**0.08**	**309**	⇑*i*P	**Pn**	**02 01 37.0**	**-0.3**
PLOR	**Plostina**	**0.08**	**309**	⇑*i*P	**Pn**	**02 01 37.0**	**-0.3**
PLOR				*i* S	**Sn**	**02 01 47.0**	**+0.1**
PLOR	**Plostina**	**0.08**	**309**	⇑*i*P	**Pn**	**02 01 37.0**	**-0.3**
PLOR				*i* S	**Sn**	**02 01 47.0**	**+0.1**
PETR	**Petresti**	**0.35**	**103**	⇑*i*P	**Pn**	**02 01 38.7**	**+0.5**
PETR	**Petresti**	**0.35**	**103**	⇑*i*P	**Pn**	**02 01 38.7**	**+0.5**
PETR	**Petresti**	**0.35**	**103**	⇑*i*P	**Pn**	**02 01 38.7**	**+0.5**
MLR	**Muntele Rosu**	**0.64**	**241**	⇑*i*P	**Pn**	**02 01 40.7**	**+0.2**
MLR	**Muntele Rosu**	**0.64**	**241**	⇑*i*P	**Pn**	**02 01 40.7**	**+0.2**
MLR				*i* S	**Sn**	**02 01 51.8**	**-0.8**
MLR	**Muntele Rosu**	**0.64**	**241**	P	**Pn**	**02 01 40.8**	**+0.2**
	baz=16,slow=18						
MLR				S	**Sn**	**02 01 51.8**	**-0.8**
	baz=204,slow=19						
MLR	**Muntele Rosu**	**0.64**	**241**	⇑*i*P	**Pn**	**02 01 40.7**	**+0.2**
MLR				*i* S	**Sn**	**02 01 51.8**	**-0.8**
ISR	**Istrita**	**0.70**	**191**	⇑*i*P	**Pn**	**02 01 41.8**	**+0.8**
ISR	**Istrita**	**0.70**	**191**	⇑*i*P	**Pn**	**02 01 41.8**	**+0.8**
ISR	**Istrita**	**0.70**	**191**	⇑*i*P	**Pn**	**02 01 41.8**	**+0.8**
TESR	**Tescani**	**0.71**	**355**	⇓*i*P	**Pn**	**02 01 41.0**	**-0.1**
TESR	**Tescani**	**0.71**	**355**	⇓*i*P	**Pn**	**02 01 41.0**	**-0.1**
TESR	**Tescani**	**0.71**	**355**	⇓*i*P	**Pn**	**02 01 41.0**	**-0.1**
SECR		**0.90**	**212**	⇑*i*P	**Pn**	**02 01 44.1**	**+1.1**
SECR		**0.90**	**212**	⇑*i*P	**Pn**	**02 01 44.1**	**+1.1**
SECR		**0.90**	**212**	⇑*i*P	**Pn**	**02 01 44.1**	**+1.1**
PGOR	**Pogoanele**	**0.91**	**169**	⇓*i*P	**Pn**	**02 01 43.7**	**+0.6**
PGOR	**Pogoanele**	**0.91**	**169**	⇓*i*P	**Pn**	**02 01 43.7**	**+0.6**
PGOR	**Pogoanele**	**0.91**	**169**	⇓*i*P	**Pn**	**02 01 43.7**	**+0.6**
CFR	**Carcaliu**	**1.17**	**122**	⇓*i*P	**Pn**	**02 01 45.8**	**-0.2**
CFR	**Carcaliu**	**1.17**	**122**	⇓*i*P	**Pn**	**02 01 45.8**	**-0.2**
CFR				*i* S	**Sn**	**02 02 01.3**	**-1.0**
CFR	**Carcaliu**	**1.17**	**122**	⇓*i*P	**Pn**	**02 01 45.8**	**-0.2**
CFR				*i* S	**Sn**	**02 02 01.3**	**-1.0**
SULR		**1.17**	**197**	⇓*i*P	**Pn**	**02 01 46.9**	**+0.8**
SULR		**1.17**	**197**	⇓*i*P	**Pn**	**02 01 46.9**	**+0.8**
SULR				*i* S	**Sn**	**02 02 03.3**	**+0.8**
SULR		**1.17**	**197**	⇓*i*P	**Pn**	**02 01 46.9**	**+0.8**
SULR				*i* S	**Sn**	**02 02 03.3**	**+0.8**
VOIR		**1.24**	**254**	⇑*i*P	**Pn**	**02 01 47.0**	**0.0**
VOIR		**1.24**	**254**	⇑*i*P	**Pn**	**02 01 47.0**	**0.0**
VOIR		**1.24**	**254**	⇑*i*P	**Pn**	**02 01 47.0**	**0.0**
LEOM	**Leova**	**1.25**	**57**	⇑*i*P	**Pn**	**02 01 47.5**	**+0.5**
LEOM	**Leova**	**1.25**	**57**	⇑*i*P	**Pn**	**02 01 47.5**	**+0.5**
LEOM				*i* S	**Sn**	**02 02 04.4**	**+0.4**
LEOM	**Leova**	**1.25**	**57**	⇑*i*P	**Pn**	**02 01 47.5**	**+0.5**
LEOM				*i* S	**Sn**	**02 02 04.4**	**+0.4**
AMRR	**Amara**	**1.26**	**160**	⇓*i*P	**Pn**	**02 01 47.6**	**+0.4**
AMRR	**Amara**	**1.26**	**160**	⇓*i*P	**Pn**	**02 01 47.6**	**+0.4**
AMRR				*i* S	**Sn**	**02 02 04.6**	**+0.2**
AMRR	**Amara**	**1.26**	**160**	⇓*i*P	**Pn**	**02 01 47.6**	**+0.4**
AMRR				*i* S	**Sn**	**02 02 04.6**	**+0.2**
HARR	**Harsova**	**1.40**	**142**	⇑*i*P	**Pn**	**02 01 48.9**	**+0.1**
HARR	**Harsova**	**1.40**	**142**	⇑*i*P	**Pn**	**02 01 48.9**	**+0.1**
HARR	**Harsova**	**1.40**	**142**	⇑*i*P	**Pn**	**02 01 48.9**	**+0.1**
INCR	**INCERC-Sediu C**	**1.42**	**197**	⇑*i*P	**Pn**	**02 01 49.6**	**+0.5**
INCR	**INCERC-Sediu C**	**1.42**	**197**	⇑*i*P	**Pn**	**02 01 49.6**	**+0.5**
INCR				*i* S	**Sn**	**02 02 07.8**	**0.0**
INCR	**INCERC-Sediu C**	**1.42**	**197**	⇑*i*P	**Pn**	**02 01 49.6**	**+0.5**
INCR				*i* S	**Sn**	**02 02 07.8**	**0.0**
CIOR	**Ciorogarla**	**1.48**	**204**	⇓*i*P	**Pn**	**02 01 50.3**	**+0.4**
CIOR	**Ciorogarla**	**1.48**	**204**	⇓*i*P	**Pn**	**02 01 50.3**	**+0.4**
CIOR				*i* S	**Sn**	**02 02 09.3**	**+0.1**
CIOR	**Ciorogarla**	**1.48**	**204**	⇓*i*P	**Pn**	**02 01 50.3**	**+0.4**
CIOR				*i* S	**Sn**	**02 02 09.3**	**+0.1**
IAS	**Iasi**	**1.50**	**22**	⇓*i*P	**Pn**	**02 01 50.5**	**+0.3**
IAS	**Iasi**	**1.50**	**22**	⇓*i*P	**Pn**	**02 01 50.5**	**+0.3**
IAS				*i* S	**Sn**	**02 02 08.7**	**-1.0**
IAS	**Iasi**	**1.50**	**22**	⇓*i*P	**Pn**	**02 01 50.5**	**+0.3**
IAS				*i* S	**Sn**	**02 02 08.7**	**-1.0**
BUC1	**Bucharest**	**1.54**	**199**	⇓*i*P	**Pn**	**02 01 51.0**	**+0.4**
BUC1	**Bucharest**	**1.54**	**199**	⇓*i*P	**Pn**	**02 01 51.0**	**+0.4**
BUC1	**Bucharest**	**1.54**	**199**	⇓*i*P	**Pn**	**02 01 51.0**	**+0.4**
ARR	**Arges**	**1.54**	**254**	⇑*i*P	**Pn**	**02 01 51.2**	**+0.5**
ARR	**Arges**	**1.54**	**254**	⇑*i*P	**Pn**	**02 01 51.2**	**+0.5**
ARR				*i* S	**Sn**	**02 02 10.2**	**-0.5**
ARR	**Arges**	**1.54**	**254**	⇑*i*P	**Pn**	**02 01 51.2**	**+0.5**
ARR				*i* S	**Sn**	**02 02 10.2**	**-0.5**
TLCR		**1.59**	**112**	⇓*i*P	**Pn**	**02 01 51.5**	**+0.3**
TLCR		**1.59**	**112**	⇓*i*P	**Pn**	**02 01 51.5**	**+0.3**
TLCR				*i* S	**Sn**	**02 02 11.4**	**-0.2**
TLCR		**1.59**	**112**	⇓*i*P	**Pn**	**02 01 51.5**	**+0.3**
TLCR				*i* S	**Sn**	**02 02 11.4**	**-0.2**
PRAR	**RASCA**	**1.60**	**348**	⇓*i*P	**Pn**	**02 01 51.9**	**+0.5**
PRAR	**RASCA**	**1.60**	**348**	⇓*i*P	**Pn**	**02 01 51.9**	**+0.5**
PRAR	**RASCA**	**1.60**	**348**	⇓*i*P	**Pn**	**02 01 51.9**	**+0.5**
MDB	**Medias**	**1.68**	**283**	⇑*i*P	**Pn**	**02 01 53.1**	**+0.7**
MDB	**Medias**	**1.68**	**283**	⇑*i*P	**Pn**	**02 01 53.1**	**+0.7**
MDB	**Medias**	**1.68**	**283**	⇑*i*P	**Pn**	**02 01 53.1**	**+0.7**
CVD	**Cernavoda**	**1.75**	**148**	⇓*i*P	**Pn**	**02 01 53.2**	**-0.1**
CVD	**Cernavoda**	**1.75**	**148**	⇓*i*P	**Pn**	**02 01 53.2**	**-0.1**
CVD	**Cernavoda**	**1.75**	**148**	⇓*i*P	**Pn**	**02 01 53.2**	**-0.1**
HUMR	**Humele**	**1.78**	**225**	⇑*i*P	**Pn**	**02 01 53.8**	**+0.1**
HUMR	**Humele**	**1.78**	**225**	⇑*i*P	**Pn**	**02 01 53.8**	**+0.1**
HUMR	**Humele**	**1.78**	**225**	⇑*i*P	**Pn**	**02 01 53.8**	**+0.1**
TIRR	**Tirgusor**	**1.79**	**138**	⇓*i*P	**Pn**	**02 01 53.9**	**+0.1**
TIRR				S	**Sn**	**02 02 14.7**	**-1.6**
TIRR	**Tirgusor**	**1.79**	**138**	⇓*i*P	**Pn**	**02 01 53.9**	**+0.1**
TIRR				*i* S	**Sn**	**02 02 14.7**	**-1.6**
KIS	**Kishinev**	**1.87**	**50**	*i* P	**Pn**	**02 01 55.0**	**+0.1**
KIS				*i* S	**Sn**	**02 02 16.5**	**-1.7**
	400nm,0.5s						
KIS	**Kishinev**	**1.87**	**50**	⇑*i*P	**Pn**	**02 01 55.7**	**+0.8**
KIS				S	**Sn**	**02 02 17.6**	**-0.6**
KIS	**Kishinev**	**1.87**	**50**	⇑*i*P	**Pn**	**02 01 55.7**	**+0.8**
KIS				*i* S	**Sn**	**02 02 17.6**	**-0.6**
KIS	**Kishinev**	**1.87**	**50**	⇑*i*P	**Pn**	**02 01 55.7**	**+0.8**
KIS				*i* S	**Sn**	**02 02 17.6**	**-0.6**
BURAR	**Bucovina Array**	**2.09**	**331**	⇓*i*P	**Pn**	**02 01 58.8**	**+0.9**
BURAR	**Bucovina Array**	**2.09**	**331**	⇓*i*P	**Pn**	**02 01 58.8**	**+0.9**
BURAR				*i* S	**Sn**	**02 02 24.1**	**+0.6**
BURAR	**Bucovina Array**	**2.09**	**331**	⇓*i*P	**Pn**	**02 01 58.8**	**+0.9**
BURAR				*i* S	**Sn**	**02 02 24.1**	**+0.6**
EFOR	**EFORIE**	**2.19**	**141**	⇓*i*P	**Pn**	**02 01 59.3**	**+0.3**
EFOR	**EFORIE**	**2.19**	**141**	⇓*i*P	**Pn**	**02 01 59.3**	**+0.3**
EFOR				*i* S	**Sn**	**02 02 24.4**	**-1.1**
EFOR	**EFORIE**	**2.19**	**141**	⇓*i*P	**Pn**	**02 01 59.3**	**+0.3**
EFOR				*i* S	**Sn**	**02 02 24.4**	**-1.1**
PSN	**Preselentsi**	**2.36**	**154**	*i* P	**Pn**	**02 02 02.0**	**+0.7**
PSN	**Preselentsi**	**2.36**	**154**	*i* P	**Pn**	**02 02 02.0**	**+0.7**
CJR	**Cluj-Napoca**	**2.36**	**294**	⇓*i*P	**Pn**	**02 02 01.6**	**+0.2**
MANR	**Mangalia**	**2.38**	**146**	⇓*i*P	**Pn**	**02 02 01.9**	**+0.3**
MANR	**Mangalia**	**2.38**	**146**	⇓*i*P	**Pn**	**02 02 01.9**	**+0.3**
MANR				*i* S	**Sn**	**02 02 29.3**	**-0.8**
MANR	**Mangalia**	**2.38**	**146**	⇓*i*P	**Pn**	**02 02 01.

KRBG	Karabiga-Canak	5.42	175	ePN		Pn	02 02 41.8	-0.9
LPK	Lapseki	5.43	180	ePN		Pn	02 02 42.1	-0.7
ARMT	Armutlu	5.46	163	ePN		Pn	02 02 42.7	-0.5
BNT	Bandirma	5.51	171	ePN		Pn	02 02 43.5	-0.4
YLV	Yalova	5.58	159	ePN		Pn	02 02 44.9	0.0
KDZE	Karadeniz Ereo	5.64	141	ePN		Pn	02 02 44.4	-1.2
MDNY	Mudanya-Bursa	5.65	163	ePN		Pn	02 02 44.4	-1.5
GEMT	Gemlik	5.66	161	ePN		Pn	02 02 44.7	-1.2
PKSM	Moragy	5.66	277	epn		Pn	02 02 44.9	-0.9
PKSM				esn		x	02 03 05.9	
KCTX	Karacabey (Bur	5.66	167	ePN		Pn	02 02 44.9	-1.0
GONE	Gonen-Balikesi	5.79	173	ePN		Pn	02 02 46.8	-0.9
ADVT	Abdulvahap	5.80	157	ePN		Pn	02 02 47.2	-0.5
BOZC	Bozcaada	5.98	185	iP		Pn	02 02 51.8	+1.6
EZN	Ezine	5.98	183	ePN		Pn	02 02 49.4	-0.8
GULT	Gulveren	6.04	151	ePN		Pn	02 02 49.7	-1.4
BALY	Balya	6.09	174	iP		Pn	02 02 52.0	+0.2
BALY	Balya	6.09	174	iP		Pn	02 02 52.0	+0.2
GPA	Golpazari	6.10	153	ePN		Pn	02 02 51.0	-0.9
MDUB	Mudurnu	6.25	147	ePN		Pn	02 02 52.6	-1.4
DURS	Dursunbey	6.33	168	iP		Pn	02 02 54.1	-1.0
DURS	Dursunbey	6.33	168	iP		Pn	02 02 54.1	-1.0
BALT	Daday	6.44	129	iP		Pn	02 02 55.3	-1.3
BALT	Daday	6.44	129	iP		Pn	02 02 55.3	-1.3
BORA	Eskisehir	6.52	154	iP		Pn	02 02 58.3	+0.6
BORA	Eskisehir	6.52	154	iP		Pn	02 02 58.3	+0.6
TVSB	Tavsanli	6.66	161	ePN		Pn	02 02 58.5	-1.1
ILGA	Ilgaz	6.95	131	iP		Pn	02 03 03.5	-0.2
ILGA	Ilgaz	6.95	131	iP		Pn	02 03 03.5	-0.2
SEYT	Eskypehyr	6.97	153	iP		Pn	02 03 05.3	+1.4
SEYT	Eskypehyr	6.97	153	iP		Pn	02 03 05.3	+1.4
SVRH	Sivrihisar-ESK	7.26	149	ePN		Pn	02 03 06.5	-1.3
BOLV	Bolvadin	7.74	155	iP		Pn	02 03 15.1	+0.8
BOLV	Bolvadin	7.74	155	iP		Pn	02 03 15.1	+0.8
KIZT	Kizilcal	7.89	149	ePN		Pn	02 03 14.7	-1.8
BRTR	Keskin Array B	7.91	138	P		Pn	02 03 15.5	-1.2
	0.5nm,0.3s,baz=330,slow=10,SNR=21							
SUW	Suwalki	8.53	346	eP		Pn	02 03 23.5	-1.4
SUW	Suwalki	8.53	346	eP		Pn	02 03 23.5	-1.4
FINES	FINESS Array B	15.68	359	P		Pn	02 04 53.7	-6.0
	0.2nm,0.3s,baz=168,slow=14,SNR=10							
FINES				S		Sn	02 07 38.8	-14
	0.2nm,0.3s,baz=166,slow=23,SNR=3.5							
HFS	Hagfors	16.32	336	P		Pn	02 05 05.0	-2.6
	0.2nm,0.3s,baz=142,slow=14,SNR=11							
HFS				LR		LR	02 12 26.2	
	comp=Z,17nm,18.1s,baz=238,slow=41							
NOA	NORSAR Array B	17.77	335	P		P	02 05 23.5	-1.5
	0.3nm,0.3s,baz=148,slow=13,SNR=5.0							
AKTO	Aktyubinsk	21.30	66	P		P	02 06 04.2	+0.8
	1.0nm,0.4s,baz=269,slow=11,SNR=7.1							
ARCES	ARCESS Array B	23.81	359	P		P	02 06 28.3	-0.1
	1.6nm,0.8s,baz=189,slow=11,SNR=2.3							
KURBB	Kurchatov Arra	34.26	63	P		P	02 08 03.5	+2.1
	0.5nm,0.5s,baz=286,slow=9.7,SNR=5.0							
ZALV	Zalesovo Beam	37.34	56	P		P	02 08 29.6	+2.0
	1.2nm,0.3s,baz=272,slow=8.5,SNR=4.6							
MKAR	Makanchi Array	37.71	68	P		P	02 08 33.4	+2.5
	0.7nm,0.4s,baz=273,slow=8.0,SNR=13							
TORD	Torodi Ar. Bea	38.84	221	P		P	02 08 41.5	+1.0
	0.5nm,0.7s,baz=20,slow=8.1,SNR=13							
TORD				LR		LR	02 26 07.1	
	comp=Z,38nm,20.7s,baz=120,slow=38							

GUC 27 02:02:15.3±0.8, 22°.13S×67°.69W, h198km±9km, ML3.6, 6C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	Limon Verde	1.23	247	iP		Pn	02 02 47.6	+0.8
LVC				iS		Sn	02 03 12.6	+1.3
PB09	Plate Boundary	1.48	283	iP		Pn	02 02 50.1	+1.3
PB09				iS		Sn	02 03 18.9	+4.2
PB09				AML	AML		02 03 21.2	
	comp=N,296nm,0.2s							
PB04	Plate Boundary	1.67	265	iP		Pn	02 02 58.3	+8.0
PB04				iS		Sn	02 03 31.1	+14
PB04				AML	AML		02 03 33.2	
	comp=N,157nm,0.1s							
PB01	Plate Boundary	1.99	303	iP		Pn	02 02 54.4	+0.7
PB01				iS		Sn	02 03 24.8	+1.4
PB01				AML	AML		02 03 25.9	
	comp=E,421nm,0.2s							
PB07	Plate Boundary	2.08	281	iP		Pn	02 02 55.8	+1.2
PB07				iS		Sn	02 03 27.0	+1.7
PB07				AML	AML		02 03 27.5	
	comp=N,204nm,0.2s							
CEN1	Los Morros	2.63	241	iP		Pn	02 03 05.3	+4.6
CEN1				iS		Sn	02 03 42.5	+6.4
CEN1				AML	AML		02 03 43.6	
	comp=N,113nm,0.6s							
ANCH	Antofagasta	2.94	238	iP		Pn	02 03 05.8	+1.7
ANCH				iS		Sn	02 03 43.6	+1.2
PSCC	Pisagua	3.39	318	iP		Pn	02 03 09.0	-0.8
PSGC				iS		Sn	02 03 51.0	-1.3
PSGC				AML	AML		02 03 52.8	
	comp=E,89nm,0.4s							

ISCJB 27 02:02:25.2±0.5, 49°.89N×0°.04×18°.44E±0°.03, h0km, Error ellipse: s-maj=5.2km s-min=3.0km az=3.3
IPEC 27 02:02:25.3±0.4, 49°.83N×18°.63E, h2km,2km, ML1.5/4, Error ellipse: s-maj=2.6km s-min=2.1km az=118.0
CSEM 27 02:02:25.2±0.6, 49°.91N×18°.54E, h1km, ML2.3/7, Error ellipse: s-maj=9.4km s-min=6.2km az=47.0
PRU 27 02:02:26.7, 49°.90N×18°.48E, h0km

ISC 27 02:02:25.2±0.9, 49°.89N±0°.04×18°.55E±0°.03, h0km, n22, σ0s65/38, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.26	260	ePG	Pb	02 02 31.7	-1.1
OKC				eSG	Sg	02 02 34.3	+0.7
	comp=Z,60nm,0.5s						
OKC	Ostrava-Krasne	0.26	260	Pg	Pb	02 02 31.7	-1.1
OKC				Sg	Sg	02 02 34.3	+0.7
	60nm,0.5s						
MORC	Moravsky Berou	0.66	261	ePg	Pb	02 02 39.0	-0.6
	baz=85						
MORC				eSg	Sg	02 02 47.3	+0.9
	11nm,0.3s,baz=85						
OJC	Ojcow	0.87	67	ePg	Pb	02 02 43.5	+0.2
OJC				eSg	Sn	02 02 57.4	-0.8
NIE	Niedzica	1.24	111	ePg	Pg	02 02 48.1	-0.8
NIE				eSg	Sn	02 03 09.1	+1.8
VRAC	Vranov	1.40	246	ePg	Pn	02 02 51.5	-0.5
	baz=68						
VRAC				eSg	Sb	02 03 10.2	-0.3
	6.0nm,0.2s,baz=68						
VYHS	Vyhne	1.41	172	ePN	Pg	02 02 52.1	0.0
VYHS				eSN	Sn	02 03 11.1	-0.2
VYHS	Vyhne	1.41	172	ePn	Pg	02 02 52.1	0.0
DPC	Dobruska-Polom	1.51	289	ePG	Pb	02 02 53.7	-0.4
DPC				eSG	Sn	02 03 14.2	+0.3
	comp=Z,20nm,0.4s						
DPC	Dobruska-Polom	1.51	289	Pg	Pb	02 02 53.7	-0.4
DPC				Sg	Sn	02 03 14.2	+0.3
	20nm,0.4s						
SMOL	Smolenice	1.56	209	ePN	Pn	02 02 54.1	0.0
SMOL				eSN	Sg	02 03 15.3	+0.1
SMOL	Smolenice	1.56	209	ePn	Pn	02 02 54.1	0.0
SMOL				eSn	Sg	02 03 15.3	+0.1
KRUC	Moravsky	1.63	240	ePn	Pn	02 02 55.1	0.0
	baz=61						
KRUC				eSg	Sb	02 03 16.9	-0.3
	4.4nm,0.3s,baz=61						
UPC	Upice	1.74	292	ePG	Pb	02 02 57.4	-0.7
UPC				eSG	Sg	02 03 21.7	+0.5
UPC	Upice	1.74	292	Pg	Pg	02 02 57.4	-0.7
UPC				Sg	Sg	02 03 21.7	+0.5
TREC	Trest	2.08	255	eSG	Sb	02 03 29.9	-0.2
	comp=Z,3.4nm,0.5s						
TREC	Trest	2.08	255	Sg	Sb	02 03 29.9	-0.2
	3.4nm,0.5s						
PRU	Pruhonice	2.59	274	eSG	Sb	02 03 45.3	+0.4
	comp=Z,1.1nm,0.4s						
PRU	Pruhonice	2.59	274	Sg	Sb	02 03 45.3	+0.4
	1.1nm,0.4s						
BRG	Berggiesshubel	3.11	290	PG	Pg	02 03 25.0	+0.2
BRG				SG	Sg	02 04 04.7	-0.3
	2.8nm,0.6s						
KHC	Kasperske Hory	3.33	259	ePG	Pb	02 03 26.5	+1.4
KHC				eSG	Sg	02 04 12.0	0.0
KHC	Kasperske Hory	3.33	259	Sg	Sg	02 04 12.0	0.0

IDC 27 02:03:14.0±2.2, 1°.04S×130°.65E, h0km, mb3.2/3, mb1 3.4/5, mb1mx3.3/22, mbtmp3.3/5, ML3.3/2, Error ellipse: s-maj=127.2km s-min=21.1km az=75.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	17.66	196	P	Pn	02 07 21.3	-0.3
	0.0nm,0.3s,baz=25,slow=17,SNR=2.1						
WRA	Warramunga Arr	19.13	169	P	Pn	02 07 39.4	-0.4
	0.2nm,0.3s,baz=351,slow=11,SNR=13						
WRA				S	Sn	02 11 08.5	-6.4
	0.1nm,0.3s,baz=356,slow=23,SNR=4.2						
ASAR	Alice Springs	22.72	172	P	P	02 08 17.5	-0.2
	0.2nm,0.4s,baz=357,slow=12,SNR=3.6						
MKAR	Makanchi Array	63.68	325	P	P	02 13 46.9	-0.4
	0.1nm,0.5s,baz=126,slow=7.3,SNR=3.2						
KURBB	Kurchatov Arra	67.84	327	P	P	02 14 14.5	+0.4
	0.3nm,0.5s,baz=122,slow=5.5,SNR=2.8						

IDC 27 02:05:17.8±6.2, 4°.57S×101°.83E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.5/23, mbtmp3.7/4, Error ellipse: s-maj=229.7km s-min=28.2km az=62.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	23.06	353	P	P	02 10 25.0	0.0
	0.6nm,0.4s,baz=176,slow=6.3,SNR=4.7						
WRA	Warramunga Arr	35.15	119	P	P	02 12 13.6	0.0
	0.5nm,0.8s,baz=293,slow=9.6,SNR=3.1						
ASAR	Alice Springs	36.29	125	P	P	02 12 23.7	+0.3
	0.7nm,0.9s,baz=301,slow=7.9,SNR=4.7						
STKA	Stephens Creek	46.09	131	P	P	02 13 43.4	-0.6
	2.3nm,0.8s,baz=300,slow=7.9,SNR=5.7						

CSEM 27 02:08:10.4, 42°.26N×13°.49E, h12km, MD1.8/8, After ROM
ROM 27 02:08:10.4±0.2, 42°.26N×13°.49E, h12km±3km, Md1.8/8, Ml0.9/4, Error ellipse: s-maj=2.1km s-min=1.6km az=4.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AQU	L'Aquila	0.11	326	Pg	Pb	02 08 14.1	-0.5
AQU				Sg	Sg	02 08 16.5	+0.8
	29nm,0.2s						
AQU	L'Aquila	0.11	326	Pg	Pb	02 08 14.1	-0.5
AQU				Sg	Sg	02 08 16.5	+0.8
	29nm,0.2s						
PTQR	Pietraquaria	0.25	195	Pg	Pg	02 08 15.9	+0.2
PTQR				Sg	Sg	02 08 19.7	+0.4
	1.0nm,0.2s						
PTQR	Pietraquaria	0.25	195	Pg	Pg	02 08 15.9	+0.2
PTQR				Sg	Sg	02 08 19.7	+0.4
	1.0nm,0.2s						
FIAM	Fiamignano	0.27	271	Pg	Pg	02 08 16.7	+0.5
FIAM				Sg	Sg	02 08 20.5	+0.4
FIAM	Fiamignano	0.27	271	Pg	Pg	02 08 16.7	+0.5
FIAM				Sg	Sg	02 08 20.5	+0.4
VCEL	Villa Celiera	0.29	63	Pg	Pb	02 08 17.4	-0.4
VCEL				Sg	Sg	02 08 21.3	+0.5
	33nm,1.0s						
VCEL	Villa Celiera	0.29	63	Pg	Pb	02 08 17.4	-0.4
VCEL				Sg	Sg	02 08 21.3	+0.5
	33nm,1.0s						
TERO	Teramo	0.37	14	Pg	Pg	02 08 18.2	+0.3
TERO				Sg	Sg	02 08 23.1	+0.1
	5.0nm,0.3s						
TERO	Teramo	0.37	14	Pg	Pg	02 08 18.2	+0.3
TERO				Sg	Sg	02 08 23.1	+0.1
	5.0nm,0.3s						
INTR	Introdacqua	0.40	129	Pg	Pb	02 08 19.3	-0.3
INTR				Sg	Sg	02 08 24.5	+0.6
INTR	Introdacqua	0.40	129	Pg	Pb	02 08 19.3	-0.3
INTR				Sg	Sg	02 08 24.5	+0.6

CSEM 27 02:08:29.0, 39°.61N×27°.06E, h5km, MD2.5, After ISK
ISK 27 02:08:29.0, 39°.61N×27°.06E, h5km, MD2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BALB	Balikesir	0.64	87	ePg	Pb	02 08 42.5	-0.1
BALB				eSG	Sg	02 08 50.4	+0.9
BALB	Balikesir	0.64	87	ePg	Pb	02 08 42.5	-0.1
BALB				eSg	Sg	02 08 50.4	+0.9
GONE	Gonen-Balikesi	0.65	48	ePG	Pg	02 08 42.1	+0.6
GONE				eSG	Sb	02 08 51.3	-0.9
GONE	Gonen-Balikesi	0.65	48	ePg	Pg	02 08 42.1	+0.6
GONE				eSg	Sb	02 08 51.3	-0.9
LPK	Lapseki	0.79	343	ePG	Pg	02 08 44.2	0.0
LPK	Lapseki	0.79	343	ePg	Pg	02 08 44.2	-0.1
KRBG	Karabiga-Canak	0.80	13	ePG	Pb	02 08 45.0	-0.4
KRBG	Karabiga-Canak	0.80	13	ePg	Pb	02 08 45.0	-0.4
GELI	Tayfur-Gelibol	0.90	330	ePG	Pg	02 08 46.7	+0.3
GELI	Tayfur-Gelibol	0.90	330	ePg	Pg	02 08 46.7	+0.3
RKY	Sarkoy-Tekirda	1.08	5	ePG	Pb	02 08 50.3	+0.1
RKY	Sarkoy-Tekirda	1.08	5	ePg	Pb	02 08 50.3	+0.1
MFT	Murefte	1.19	8	ePN	Pn	02 08 52.5	+0.1
MFT	Murefte	1.19	8	ePn	Pn	02 08 52.5	+0.1
KCTX	Karacabey (Bur	1.19	56	ePN	Pn	02 08 52.8	+0.4
KCTX	Karacabey (Bur	1.19	56	ePn	Pn	02 08 52.8	+0.4
BLCB	Balcova	1.23	181	ePN	Pg	02 08 52.5	0.0
BLCB	Balcova	1.23	181	ePn	Pg	02 08 52.5	0.0
ENEZ	Enez	1.32	329	ePN	Pg	02 08 54.6	+0.3
ENEZ	Enez	1.32	329	ePn	Pg	02 08 54.6	+0.3
MDNY	Mudanya-Bursa	1.59	61	ePN	Pb	02 08 59.1	+0.2
MDNY	Mudanya-Bursa	1.59	61	ePn	Pb	02 08 59.1	+0.2
ARMT	Armutlu	1.68	55	ePN	Pb	02 08 59.9	-0.6
ARMT	Armutlu	1.68	55	ePn	Pb	02 08 59.9	-0.5

WEL 27 02:09:57.5±0.4, 38°.08S×176°.35E, h155km±3km, ML4.2/13, 26C-1D, Error ellipse: s-maj=1.8km s-min=1.7km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OMRZ	Omania	0.03	157	⇑PN	Pn	02 10 18.2	0.0
KARZ	Kaharoa	0.10	302	⇑PN	Pn	02 10 18.2	0.0
TARZ	Mount Tarawera	0.20	143	PN	Pn	02 10 18.5	0.0
MARZ	Manawahe	0.27	71	⇑PN	Pn	02 10 18.5	0.0
OPRZ	Ohinepanea	0.28	35	⇑PN	Pn	02 10 18.3	-0.2
OPRZ				SN	Sn	02 10 34.1	-0.4
RRRZ	Republican Roa	0.29	154	⇑PN	Pn	02 10 18.4	-0.2
EDRZ	Edgecumbe	0.30	96	⇑PN	Pn	02 10 18.4	-0.2
HRRZ	Handcock Road	0.32	190	⇑PN	Pn	02 10 18.7	0.0
TGRZ	Tauranga	0.35	348	⇑PN	Pn	02 10 18.7	-0.1
TGRZ				SN	Sn	02 10 34.7	-0.2
PRRZ	Plateau Road	0.42	176	⇑PN	Pn	02 10 18.9	-0.1
ALRZ	Allen Road	0.49	181	PN	Pn	02 10 19.3	-0.1
URZ	Urewera	0.62	107	PN	Pn	02 10 19.5	-0.5
TOZ	Tahuroa Road	0.76	297	PN	Pn	02 10 21.2	+0.3
MWZ	Matawai	0.96	106	PN	Pn	02 10 22.4	-0.1
MWZ				AML	AML	02 10 41.1	
MWZ				AML	AML	02 10 41.1	
MWZ				AML	AML	02 10 41.5	
MWZ				AML	AML	02 10 41.5	
RAHZ	Arahi	1.02	146	PN	Pn	02 10 23.1	+0.2
NMHZ	Naumai	1.08	161	PN	Pn	02 10 24.2	+0.7
BKZ	Black Stump Fm	1.09	174	⇑PN	Pn	02 10 23.3	-0.3
BKZ				AML	AML	02 10 44.0	
BKZ				AML	AML	02 10 45.5	
WTVZ	West Tongariro	1.20	210	⇑PN	Pn	02 10 24.5	-0.1
OTVZ	Oturere	1.21	206	⇑PN	Pn	02 10 25.0	+0.3
TWVZ	Taurewa	1.23	216	PN	Pn	02 10 24.8	0.0
NGZ	Ngauruhoe	1.25	208	PN	Pn	02 10 25.3	+0.2
WPVZ	Whakapapa	1.29	209	⇑PN	Pn	02 10 25.5	+0.1
TUVZ	Tukino	1.31	205	⇑PN	Pn	02 10 25.7	0.0
FWVZ	Far West T-bar	1.33	208	PN	Pn	02 10 25.6	-0.4
MKAZ	Moumakai	1.35	315	PN	Pn	02 10 26.0	+0.1
MKAZ				SN	Sn	02 10 47.5	-0.1
WNVZ	Wahianoa	1.38	205	⇑PN	Pn	02 10 26.3	-0.1
MCHZ	McNeill Hill	1.39	169	PN	Pn	02 10 26.6	+0.3
KNZ	Kokohu	1.40	133	PN	Pn	02 10 26.4	+0.1
MOVZ	Moawhango	1.41	199	⇑PN	Pn	02 10 26.0	-0.6
BHHZ	Black Hill Sta	1.43	189	⇑PN	Pn	02 10 26.3	-0.5
PKVZ	Pokaka	1.45	213	PN	Pn	02 10 26.8	-0.1
MTVZ	Mangateitei	1.48	208	PN	Pn	02 10 27.2	-0.1
PUZ	Puketiti	1.50	90	⇓PN	Pn	02 10 26.9	-0.5
PUZ				AML	AML	02 10 50.5	
PUZ				AML	AML	02 10 51.1	
CNGZ	Carnagh Statio	1.51	106	PN	Pn	02 10 28.0	+0.5
MHGZ	Mahia Peninsul	1.62	132	PN	Pn	02 10 28.8	+0.2
MXZ	Matakaoa Point	1.63	72	PN	Pn	02 10 28.7	0.0
CKHZ	Cape Kidnapper	1.68	161	⇑PN	Pn	02 10 29.3	0.0
KAHZ	Kahuranaki	1.76	167	⇑PN	Pn	02 10 30.2	-0.1
PNHZ	Pukenui	1.84	184	PN	Pn	02 10 30.4	-0.7
WPHZ	Waipukurau	1.99	178	⇑PN	Pn	02 10 32.0	-0.8
PXZ	Pawanui	1.99	169	PN	Pn	02 10 32.2	-0.6
PXZ				AML	AML	02 10 58.4	
PXZ				AML	AML	02 10 58.6	
PXZ				AML	AML	02 10 59.2	
PXZ				AML	AML	02 10 59.3	
PRHZ	Porangahau	2.20	174	PN	Pn	02 10 34.4	-0.8
DVHZ	Dannevirke	2.23	184	PN	Pn	02 10 34.3	-1.3
POWZ	Post Office Ro	2.36	191	PN	Pn	02 10 35.8	-1.3
BFZ	Birch Farm	2.60	182	PN	Pn	02 10 38.6	-1.5
MRZ	Mangatainoka R	2.65	193	PN	Pn	02 10 38.9	-1.8
MRZ				AML	AML	02 11 12.2	
MRZ				AML	AML	02 11 13.2	
TIWZ	Tintock	2.72	188	⇑PN	Pn	02 10 40.0	-1.6
OGWZ	Otaki Gorge	2.89	198	⇑PN	Pn	02 10 41.7	-1.9
OGWZ				SN	Sn	02 11 15.1	-4.3
HOWZ	Holdsworth Sta	2.89	193	⇑PN	Pn	02 10 41.6	-2.1
KIW	Kapiti Island	3.00	201	PN	Pn	02 10 42.6	-2.4
KIW				AML	AML	02 11 19.5	
KIW				AML	AML	02 11 20.9	
TMWZ	Te Maipa	3.05	187	PN	Pn	02 10 43.0	-2.2
MTW	Mount Morrison	3.15	192	⇑PN	Pn	02 10 44.4	-2.5
MTW				AML	AML	02 11 22.6	
MTW				AML	AML	02 11 22.7	
CAW	Cannon Point	3.19	198	PN	Pn	02 10 44.8	-2.5
CAW				AML	AML	02 11 24.1	
CAW				AML	AML	02 11 24.4	
TRWZ	Traveller	3.36	189	PN	Pn	02 10 47.0	-2.6
TRWZ				AML	AML	02 11 27.7	
TRWZ				AML	AML	02 11 27.9	
PAWZ	Paruwai Farm	3.38	192	⇑PN	Pn	02 10 47.0	-2.8
PAWZ				AML	AML	02 11 27.3	
PAWZ				AML	AML	02 11 27.7	
MSWZ	Moikau Station	3.44	194	PN	Pn	02 10 47.7	-2.9
MSWZ				AML	AML	02 11 28.1	
MSWZ				AML	AML	02 11 28.6	
SNZO	South Karori	3.47	201	PN	Pn	02 10 47.9	-3.0
SNZO				AML	AML	02 11 30.2	
SNZO				AML	AML	02 11 31.8	
PLWZ	Palliser	3.59	193	⇑PN	Pn	02 10 49.5	-3.1
TUWZ	Tuamarina	3.83	208	PN	Pn	02 10 52.5	-3.1
TUWZ				AML	AML	02 11 38.4	
TUWZ				AML	AML	02 11 38.9	
NNZ	Nelson	3.89	215	PN	Pn	02 10 53.6	-2.7
NNZ				SN	Sn	02 11 38.3	-3.8
QRZ	Quartz Range	4.04	226	PN	Pn	02 10 55.1	-3.2
BSWZ	Blackbirch Sta	4.10	207	PN	Pn	02 10 56.1	-3.0
THZ	Tophouse	4.54	215	PN	Pn	02 11 01.8	-3.2
KHZ	Kahutara	4.84	206	PN	Pn	02 11 05.3	-3.5
DSZ	Denniston Nort	5.07	222	ePN	Pn	02 11 08.2	-3.7
LTZ	Lake Taylor	5.64	212	PN	Pn	02 11 15.0	-4.5
MQZ	McQueen's Vall	6.29	205	PN	Pn	02 11 22.4	-5.5
LBZ	Lake Benmore	7.83	214	ePN	Pn	02 11 43.7	-4.8
ODZ	Otahua Downs	8.17	210	PN	Pn	02 11 48.6	-4.4
JCZ	Jackson Bay	8.29	221	ePN	Pn	02 11 51.3	-3.5
JCZ				SN	Sn	02 13 15.6	-12

IDC 27 02:16:05.3±2.1, 8°.20N×104°.31W, h0km, mb3.8/7, mb1 4.2/7, mb1mx3.9/20, mbtmp3.8/7, MS3.8/5, Ms1 3.8/5, ms1mx3.2/28, Error ellipse: s-maj=100.5km s-min=20.4km az=61.0
NEIC 27 02:16:07.5±0.9, 8°.31N×103°.99W, h10km, mb4.3/16, Error ellipse: s-maj=28.0km s-min=8.4km az=60.0
ISCJB 27 02:16:09.2±1.2, 8°.3N±0°.2×103°.9W±0°.2, h33km, mb4.1/21, MS3.8/4, Error ellipse: s-maj=38.9km s-min=11.6km az=149.4

ISC 27 02:16:11.0±1.3, 8°.3N±0°.2×104°.1W±0°.3, h35km, n57, σ0s78/54, mb4.2/21, MS3.7/4, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEIG	Tepich	19.34	51	LR	LR	02 27 15.0	
	comp=Z,137nm,18.8s,baz=151,slow=34						
TXAR	Lajitas Array	20.93	1	P	P	02 20 51.6	+0.8
TXAR				PcP	PcP	02 24 58.9	+1.0
TXAR	Lajitas Array	20.93	1	P	P	02 20 51.6	+0.8
	3.1nm,0.9s,baz=181,slow=12,SNR=32						
TXAR				PcP	PcP	02 24 58.9	+1.0
	1.0nm,0.9s,baz=180,slow=0.3,SNR=10						
TXAR				LR	LR	02 28 21.8	
	comp=Z,268nm,18.1s,baz=0.0,slow=35						
627A	Terlingua Ranc	21.05	2	P	P	02 20 52.9	+0.8
	baz=21,SNR=12						
626A	Big Bend Ranch	21.14	360	P	P	02 20 54.1	+1.1
	baz=21,SNR=7.0						
526A	Mary Lane Ranc	21.65	360	P	P	02

12nm,0.8s
EYMN **Ely** 40.92 13 *e*P P 02 23 49.5 -0.5
4.0nm,0.9s
NEW **Newport** 41.33 347 *e*P P 02 23 53.5 +0.2
3.5nm,0.8s
NEW **Newport** 41.33 347 P P 02 23 53.4 +0.1
3.3nm,0.8s,baz=134,slow=9.7,SNR=5.9
ULM **Lac du Bonnet** 42.37 8 LR LR 02 41 37.3
comp=Z,89nm,19.8s,baz=311,slow=36
LPAZ **La Paz** 43.15 125 *e*P P 02 24 10.1 +0.8
5.3nm,1.2s
LPAZ **La Paz** 43.15 125 P P 02 24 09.6 +0.4
1.9nm,0.9s,baz=334,slow=8.5,SNR=7.4
SAML **Samuel** 44.19 112 *e*P P 02 24 15.6 -1.4
5.3nm,1.3s
FFC **Flin Flon** 46.33 2 *e*P P 02 24 32.1 -1.2
10.0nm,1.4s
YKA **Yellowknife Ar** 54.63 354 P P 02 25 35.2 -0.7
YKA **Yellowknife Ar** 54.63 354 P P 02 25 35.2 -0.7
0.3nm,0.7s,baz=157,slow=8.1,SNR=3.8
YKW3 **Yellowknife Ar** 54.70 354 *e*P P 02 25 36.1 -0.3
CPUP **Villa Florida** 56.95 129 P P 02 25 53.5 +0.4
CPUP **Villa Florida** 56.95 129 P P 02 25 53.5 +0.4
0.4nm,0.4s,baz=266,slow=20,SNR=3.2
ILAR **Eielson Array** 63.85 341 P P 02 26 38.9 -0.8
ILAR **Eielson Array** 63.85 341 P P 02 26 38.9 -0.8
0.5nm,0.7s,baz=155,slow=5.2,SNR=5.5
AFI **Afiamalu** 70.72 252 LR LR 02 50 54.5
comp=Z,405nm,18.2s,baz=107,slow=30

IDC 27 02:19:29.2±3.5, 4°97′S×152°09′E, h0km, mb3.1/2, mb1 3.4/2, mb1mx3.2/18, mbtmp3.2/2, MS4.1/1, Ms1 4.1/1, ms1mx2.3/16, Error ellipse: s-maj=154.9km s-min=46.0km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.81**	**228**	P	P	02 24 33.6	-0.2
	0.4nm,0.6s,baz=54,slow=10,SNR=6.9						
ASAR	**Alice Springs**	**25.56**	**222**	P	P	02 25 00.2	+0.2
	0.3nm,0.4s,baz=58,slow=8.7,SNR=7.4						
RAO	**Raoul Island**	**37.26**	**134**	LR	LR	02 39 10.7	
	comp=Z,318nm,21.2s,baz=357,slow=32						
TORD	**Torodi Ar. Bea**	**149.69**	**288**	PKPbc	PKPbc	02 39 21.5	-0.6
	0.3nm,0.6s,baz=75,slow=1.8,SNR=3.1						

IDC 27 02:22:35.1±4.4, 4°00S×102°14E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/23, mbtmp3.5/4, Error ellipse: s-maj=237.4km s-min=28.1km az=53.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**35.15**	**119**	P	P	02 29 31.9	+0.9
	0.4nm,0.8s,baz=298,slow=8.6,SNR=3.1						
ASAR	**Alice Springs**	**36.35**	**125**	P	P	02 29 41.0	-0.2
	0.2nm,0.7s,baz=297,slow=7.8,SNR=4.1						
STKA	**Stephens Creek**	**46.23**	**132**	P	P	02 31 01.3	-1.0
	0.8nm,0.5s,baz=306,slow=8.7,SNR=3.9						
MKAR	**Makanchi Array**	**53.54**	**343**	P	P	02 31 57.6	0.0
	0.4nm,0.7s,baz=145,slow=5.3,SNR=5.1						

IDC 27 02:28:23.6±4.0, 25°53N×141°09E, h114km±37km, mb3.7/14, mb1 3.9/16, mb1mx3.7/27, mbtmp3.7/16, MS3.2/6, Ms1 3.2/6, ms1mx2.7/37, Error ellipse: s-maj=23.9km s-min=11.6km az=88.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**11.25**	**348**	P	Pn	02 31 01.6	+0.5
	0.3nm,0.3s,baz=163,slow=8.9,SNR=4.3						
MJAR				LR	LR	02 34 54.5	
	comp=Z,103nm,19.1s,baz=185,slow=35						
JNU	**Nakatsue**	**11.68**	**313**	LR	LR	02 34 56.7	
	comp=Z,78nm,18.4s,baz=60,slow=34						
KSRS	**Korea Array**	**16.33**	**320**	P	P	02 32 07.4	+0.4
	0.4nm,0.3s,baz=133,slow=12,SNR=45						
KSRS				LR	LR	02 37 50.5	
	comp=Z,63nm,18.6s,baz=163,slow=35						
ASAJ	**Asahikawa**	**18.58**	**3**	LR	LR	02 39 26.2	
	comp=Z,39nm,21.9s,baz=140,slow=36						
HNR	**Honiara**	**39.30**	**150**	LR	LR	02 48 58.0	
	comp=Z,93nm,21.3s,baz=305,slow=31						
CTA	**Charters Tower**	**45.62**	**173**	P	P	02 36 31.8	-0.9
	1.4nm,0.3s,baz=27,slow=4.5,SNR=2.9						
WRA	**Warramunga Arr**	**45.68**	**189**	P	P	02 36 32.8	-0.4
	8.7nm,0.8s,baz=9.0,slow=8.5,SNR=48						
FITZ	**Fitzroy Crossi**	**45.90**	**201**	P	P	02 36 36.3	+1.4
	1.8nm,0.8s,baz=51,slow=13,SNR=3.7						
ASAR	**Alice Springs**	**49.40**	**189**	P	P	02 37 01.2	-0.7
	1.1nm,0.8s,baz=13,slow=12,SNR=12						
ZALV	**Zalesovo Beam**	**50.04**	**320**	P	P	02 37 06.8	+0.4
	0.3nm,0.5s,baz=107,slow=8.3,SNR=2.3						
MKAR	**Makanchi Array**	**50.73**	**311**	P	P	02 37 12.2	+0.4
	1.1nm,0.6s,baz=92,slow=8.7,SNR=17						
STKA	**Stephens Creek**	**57.09**	**179**	P	P	02 37 58.1	+0.1
	2.7nm,0.8s,baz=343,slow=11,SNR=5.0						
BVAR	**Borovoye Array**	**58.54**	**318**	LR	LR	03 03 41.6	
	comp=Z,42nm,18.3s,baz=259,slow=36						
ILAR	**Eielson Array**	**59.55**	**28**	P	P	02 38 13.2	-1.5
	2.2nm,1.0s,baz=261,slow=3.6,SNR=16						
YKA	**Yellowknife Ar**	**73.98**	**28**	P	P	02 39 47.0	+0.8
	1.8nm,0.8s,baz=292,slow=5.8,SNR=7.4						
FINES	**FINESS Array B**	**76.91**	**334**	P	P	02 40 12.8	-1.3
	1.2nm,0.5s,baz=72,slow=6.0,SNR=25						
NVAR	**Mina Array Bea**	**82.25**	**51**	P	P	02 40 34.7	+1.9
	1.2nm,1.0s,baz=298,slow=6.1,SNR=4.9						
AKASG	**Malin Array Be**	**83.29**	**324**	P	P	02 40 37.0	-0.5
	0.4nm,0.3s,baz=48,slow=5.0,SNR=3.8						
NOA	**NORSAR Array B**	**84.69**	**338**	P	P	02 40 44.5	0.0
	0.9nm,0.8s,baz=47,slow=4.5,SNR=3.5						
PDAR	**Pinedale Array**	**86.01**	**44**	P	P	02 40 52.7	+1.0
	1.3nm,0.9s,baz=252,slow=4.4,SNR=5.2						
TXAR	**Lajitas Array**	**97.32**	**53**	pP	pP	02 42 16.0	+1.8
	0.5nm,0.8s,baz=266,slow=1.4,SNR=7.2						
TORD	**Torodi Ar. Bea**	**124.84**	**309**	PKP	PKPdf	02 47 11.2	+0.3
	0.9nm,1.1s,baz=25,slow=2.5,SNR=3.3						

IDC 27 02:34:02.4±1.4, 25°56N×141°39E, h0km, mb3.6/3, mb1 3.9/4, mb1mx3.5/25, mbtmp3.7/4, ML3.8/1, Error ellipse: s-maj=49.8km s-min=28.3km az=89.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**16.49**	**319**	Pn	P	02 37 57.3	-0.6
	0.3nm,0.3s,baz=133,slow=14,SNR=2.5						
WRA	**Warramunga Arr**	**45.74**	**189**	P	P	02 42 25.7	0.0
	2.2nm,0.7s,baz=9.1,slow=8.6,SNR=24						
MKAR	**Makanchi Array**	**50.91**	**311**	P	P	02 43 04.7	-0.8
	0.3nm,0.8s,baz=96,slow=7.8,SNR=2						
ILAR	**Eielson Array**	**59.40**	**28**	P	P	02 44 06.3	-0.1
	0.8nm,1.1s,baz=243,slow=6.0,SNR=4.8						

*AUST **27** 02:34:34.0±18.0, 23°09S×174°37W, h0km, Error ellipse: s-maj=3.5km s-min=1.4km az=349.0*
*IDC **27** 02:34:35.9±0.6, 22°93S×175°22W, h0km, mb4.4/19, mb1 4.6/20, mb1mx4.5/26, mbtmp4.4/20, ML3.9/1, MS3.8/3, Ms1 3.7/3, ms1mx3.2/28, Error ellipse: s-maj=20.8km s-min=15.2km az=139.0*
*ISCJB **27** 02:34:39.3±0.3, 22°94S±0°08×175°29W±0°07, h30km, mb4.7/44, MS3.8/3, Error ellipse: s-maj=12.2km s-min=7.3km az=144.2*
*NEIC **27** 02:34:41.3±0.2, 22°89S×175°30W, h35km, mb4.7/23, Error ellipse: s-maj=10.0km s-min=6.1km az=141.0*
*BJI **27** 02:34:51.2, 22°99S×175°58W, h118km, mB5.0/8, mb4.9/16*

ISC 27 02:34:40.8±0.5, 22°94S±0°08×175°2W±0°1, h30km, n112, σ1§21/109, mb4.7/44, MS3.7/3, 5C-2D, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue**	**6.28**	**53**	P	Pn	02 36 02.3	-9.1
	baz=5.8,SNR=12						
MSVF	**Nonsavu**	**8.15**	**308**	*e*Pn	Pn	02 36 44.5	+7.2
AFI	**Afiamalu**	**9.56**	**21**	Pn	Pn	02 36 48.5	-8.1
AFI				Sn	Sn	02 38 28.1	-15
AFI	**Afiamalu**	**9.56**	**21**	Pn	Pn	02 36 48.5	-8.1
	7.6nm,0.3s,baz=307,slow=10,SNR=4.4						
AFI				Sn	Sn	02 38 28.1	-15
	2.9nm,0.3s,baz=210,slow=20,SNR=1.8						
RAR	**Rarotonga**	**14.44**	**86**	Pn	Pn	02 37 52.9	-10
RAR	**Rarotonga**	**14.44**	**86**	Pn	Pn	02 37 52.8	-10
	3.4nm,0.3s,baz=270,slow=9.8,SNR=6.6						
URZ	**Urewera**	**16.62**	**202**	Pn	**Pn**	**02 38 31.5**	**-0.1**
URZ				Sn	Sn	02 41 23.2	-12
URZ	**Urewera**	**16.62**	**202**	Pn	**Pn**	**02 38 31.5**	**-0.1**
	0.5nm,0.3s,baz=90,slow=3.0,SNR=4.3						
URZ				Sn	Sn	02 41 23.2	-12
	0.3nm,0.3s,baz=150,slow=20,SNR=3.0						
DZM	**Mont Dzumac**	**16.95**	**269**	*e*LR	LR	02 42 33.5	
	164nm,22.7s						
RPZ	**Rata Peaks**	**23.61**	**205**	P	**P**	**02 39 49.5**	**+0.3**
RPZ	**Rata Peaks**	**23.61**	**205**	P	**P**	**02 39 49.5**	**+0.3**
	7.2nm,0.8s,baz=166,slow=4.2,SNR=4.7						
TBI	**Tubuai**	**23.70**	**96**	*e*LR	LR	02 45 34.7	
	107nm,22.8s						
PPT2	**Papeete2**	**24.64**	**82**	*e*LR	LR	02 45 57.0	
	112nm,21.0s						
PPT	**Papeete**	**24.64**	**82**	LR	LR	02 48 32.3	
	comp=Z,174nm,18.2s,baz=248,slow=34						
RMQ	**Roma**	**32.83**	**256**	P	**P**	**02 41 13.6**	**+1.6**
	baz=34,SNR=4.7						
CMSA	**Cobar Meteorol**	**35.63**	**248**	P	**P**	**02 41 36.0**	**-0.1**
	baz=36,SNR=8.8						
CTA	**Charters Tower**	**35.87**	**267**	P	**P**	**02 41 38.4**	**0.0**
CTA	**Charters Tower**	**35.87**	**267**	P	**P**	**02 41 38.4**	**0.0**
	4.8nm,0.7s,baz=87,slow=12,SNR=4.2						
CTAO	**Charters Tower**	**35.87**	**267**	*e*P	**P**	**02 41 38.2**	**-0.1**
	8.6nm,0.7s						
MTSU	**Mount Surprise**	**38.09**	**270**	P	**P**	**02 41 57.3**	**0.0**
	baz=39,SNR=4.1						
MTSU				S	S	02 48 03.2	+15
	baz=39,SNR=6.7						
PMG	**Port Moresby**	**38.41**	**284**	*e*P	**P**	**02 41 58.7**	**-1.2**
	22nm,9s						
PMG	**Port Moresby**	**38.41**	**284**	P	**P**	**02 41 58.8**	**-1.2**
	6.4nm,0.4s,baz=132,slow=1.2,SNR=7.3						
STKA	**Stephens Creek**	**39.13**	**247**	P	**P**	**02 42 05.4**	**-0.4**
STKA	**Stephens Creek**	**39.13**	**247**	P	**P**	**02 42 05.4**	**-0.4**
	2.7nm,0.7s,baz=98,slow=10.0,SNR=6.7						
STKA				LR	LR	02 56 53.6	
	comp=Z,98nm,18.4s,baz=181,slow=34						
STKA	**Stephens Creek**	**39.13**	**247**	P	**P**	**02 42 06.2**	**+0.4**
	baz=40,SNR=4.3						
AS31	**Alice Springs**	**46.51**	**259**	*e*P	**P**	**02 43 04.8**	**-1.0**
ASAR	**Alice Springs**	**46.51**	**259**	P	**P**	**02 43 04.5**	**-1.3**
ASAR	**Alice Springs**	**46.51**	**259**	P	**P**	**02 43 04.5**	**-1.3**
	6.3nm,0.9s,baz=91,slow=8.4,SNR=50						
WRAB	**Tennant Creek**	**46.84**	**264**	*e*P	**P**	**02 43 06.7**	**-1.7**
	6.7nm,0.9s						
WRA	**Warramunga Arr**	**46.85**	**264**	P	**P**	**02 43 06.6**	**-1.9**
WRA	**Warramunga Arr**	**46.85**	**264**	P	**P**	**02 43 06.6**	**-1.9**
	5.6nm,0.9s,baz=102,slow=8.3,SNR=32						
KNRA	**Kununurra**	**53.09**	**267**	P	P	02 44 04.4	+8.5
	baz=54,SNR=4.0						
FITZ	**Fitzroy Crossi**	**55.27**	**263**	P	**P**	**02 44 10.8**	**-1.0**
FITZ	**Fitzroy Crossi**	**55.27**	**263**	P	**P**	**02 44 10.8**	**-1.0**
	3.8nm,0.9s,baz=108,slow=8.3,SNR=7.2						
FITZ	**Fitzroy Crossi**	**55.27**	**263**	P	**P**	**02 44 11.2**	**-0.6**
	baz=56,SNR=5.3						
VNDA	**Vanda**	**55.74**	**186**	*e*P	**P**	**02 44 16.0**	**+1.8**
	6.8nm,1.4s						
VNDA	**Vanda**	**55.74**	**186**	P	**P**	**02 44 14.3**	**+0.1**
	1.7nm,0.9s,baz=355,slow=6.0,SNR=6.2						
MBWA	**Marble Bar**	**59.85**	**258**	*e*P	**P**	**02 44 42.6**	**-1.4**
	14nm,1.0s						
MORW	**Morawa**	**61.30**	**248**	P	**P**	**02 44 54.1**	**+0.3**
	baz=62,SNR=3.1						
CASY	**Casey**	**62.88**	**206**	*e*P	**P**	**02 45 04.2**	**+0.5**
	14nm,0.5s						
QSPA	**South Pole Qui**	**67.14**	**180**	*e*P	**P**	**02 45 32.3**	**+0.7**
	16nm,1.5s						
MJAR	**Matsushiro Arr**	**73.69**	**322**	P	**P**	**02 46 11.6**	**-0.3**
MJAR	**Matsushiro Arr**	**73.69**	**322**	P	**P**	**02 46 11.6**	**-0.3**
	2.6nm,0.8s,baz=156,slow=5.8,SNR=8.7						
JNU	**Nakatsue**	**75.81**	**316**	P	**P**	**02 46 25.6**	**+1.4**
JNU	**Nakatsue**	**75.81**	**316**	P	**P**	**02 46 25.6**	**+1.4**
	5.4nm,0.7s,baz=207,slow=23,SNR=3.7						
ISA	**Isabella**	**79.25**	**44**	*e*P	**P**	**02 46 43.7**	**+0.2**
	27nm,1.8s						
PETK	**Petropavlovsk-**	**79.30**	**344**	P	**P**	**02 46 43.1**	**-0.1**
PETK	**Petropavlovsk-**	**79.30**	**344**	P	**P**	**02 46 43.1**	**-0.1**
	5.3nm,0.8s,baz=131,slow=6.5,SNR=6.7						
MAW	**Mawson**	**80.13**	**199**	*e*P	**P**	**02 46 48.0**	**+0.3**
	3.9nm,1.2s						
MAW	**Mawson**	**80.13**	**199**	P	**P**	**02 46 47.9**	**+0.3**
	5.5nm,0.8s,baz=116,slow=7.7,SNR=8.5						
MAW				LR	LR	03 22 37.1	
	comp=Z,76nm,18.9s,baz=289,slow=36						
MAW	**Mawson**	**80.13**	**199**	P	**P**	**02 46 50.0**	**+2.4**
	baz=80,SNR=5.1						
NVAR	**Mina Array Bea**	**81.08**	**42**	P	**P**	**02 46 53.1**	**-0.3**
NVAR	**Mina Array Bea**	**81.08**	**42**	P	**P**	**02 46 53.1**	**-0.3**
	2.7nm,0.7s,baz=222,slow=8.0,SNR=21						
USRK	**Ussuriysk Arra**	**82.42**	**325**	P	**P**	**02 47 01.2**	**+1.2**
	4.2nm,0.8s,baz=106,slow=4.1,SNR=9.2						
TUC	**Tucson**	**82.50**	**50**	*e*P	**P**	**02 47 01.0**	**+0.1**
	34nm,1.5s						
WVOR	**Wild Horse Val**	**83.39**	**38**	*e*P	**P**	**02 47 05.2**	**-0.1**
	32nm,1.9s						
NJ2	**Nanjing**	**83.41**	**309**	*e*P	**P**	**02 47 06.0**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CCUT	**Cedar City**	**83.67**	**45**	*e*P	**P**	**02 47 07.8**	**+0.8**
	comp=Z,6.7nm,1.0s						
ARUT	**Antelope Range**	**83.76**	**45**	*e*P	**P**	**02 47 07.7**	**+0.4**
	comp=Z,0.9nm,0.3s						
QIZ	**Qiongzhong**	**84.19**	**293**	P	**P**	**02 47 09.0**	**-0.7**
QIZ				pP	pP	02 47 37.5	+18
QIZ				sP	sP	02 47 49.8	+27
QIZ				S	**SKSac**	**02 57 25.3**	**-6.2**
QIZ				pmax	pmax		
	comp=Z,17nm,2.1s						
ELK	**Elko**	**84.36**	**41**	*e*P	**P**	**02 47 09.2**	**-1.3**
	comp=Z,5.1nm,1.1s						
MSU	**Marysvale**	**84.99**	**45**	*e*P	**P**	**02 47 14.2**	**+0.5**
SNAA	**Sanae**	**85.49**	**178**	*e*P	**P**	**02 47 14.7**	**-0.8**
	comp=Z,6.2nm,1.1s						
WHN	**Wuhan**	**85.95**	**305**	*e*P	**P**	**02 47 20.5**	**+2.2**
MNTX	**Cornudas Mount**	**86.10**	**53**	*e*P	**P**	**02 47 18.7**	**-0.4**
	comp=Z,6.9nm,1.5s						
TXAR	**Lajitas Array**	**86.24**	**56**	P	**P**	**02 47 19.0**	**-1.0**
TXAR	**Lajitas Array**	**86.24**	**56**	P	**P**	**02 47 19.0**	**-1.0**
	comp=Z,2.0nm,1.0s,baz=213,slow=8.3,SNR=14						
SRU	**San Rafael**	**86.40**	**45**	*e*P	**P**	**02 47 20.7**	**+0.1**
	comp=Z,4.8nm,0.8s						
BNM	**Barren Site**	**86.43**	**51**	*e*P	**P**	**02 47 21.1**	**+0.1**
	comp=Z,2.3nm,1.0s						
ANMO	**Albuquerque**	**86.96**	**50**	*e*P	**P**	**02 47 23.0**	**-0.5**
	comp=Z,2.6nm,1.1s						
ANMO	**Albuquerque**	**86.96**	**50**	P	**P**	**02 47 23.2**	**-0.3**
	comp=Z,2.1nm,0.9s,baz=214,slow=4.7,SNR=6.2						
HWUT	**Hardware Ranch**	**87.12**	**42**	*e*P	**P**	**02 47 22.7**	**-1.4**
	comp=Z,7.8nm,1.3s						
PSI	**Prapat**	**87.25**	**274**	P	**P**	**02 47 26.1**	**+0.8**
	baz=88,SNR=4.1						
NEW	**Newport**	**87.88**	**35**	*e*P	**P**	**02 47 26.7**	**-0.7**
	comp=Z,1.8nm,0.7s						
PDAR	**Pinedale Array**	**89.00**	**42**	P	**P**	**02 47 32.1**	**-0.9**
PDAR	**Pinedale Array**	**89.00**	**42**	P	**P**	**02 47 32.1**	**-0.9**
	comp=Z,1.0nm,0.7s,baz=225,slow=3.8,SNR=5.6						
BOZ	**Bozeman (W)**	**89.36**	**39**	*e*P	**P**	**02 47 34.2**	**-0.4**
	comp=Z,4.6nm,1.3s						
GYA	**Guiyang**	**90.08**	**299**	*e*P	**P**	**02 47 38.0**	**-0.3**
GYA				pP	pP	02 48 09.3	+21
GYA				sP	sP	02 48 22.0	+31
GYA				SKS	SKSac	02 57 54.3	-13
GYA				S	**SKKSac**	**02 58 18.8**	**-2.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	**Kunming**	**92.73**	**296**	P	**P**	**02 47 52.5**	**+1.7**
KMI				pmax	pmax		
	comp=Z,11nm,0.7s						
HHC	**Hu-ho-hao-te**	**92.89**	**313**	*e*P	**P**	**02 47 51.3**	**+0.3**
HHC				pP	pP	02 48 20.5	+20
HHC				sP	sP	02 48 32.3	+28
HHC				PP	**PP**	**02 51 37.5**	**+3.4**
HHC				SKS	SKSac	02 58 13.8	-9.1
HHC				S	**SKKSac**	**02 58 44.3**	**+3.0**
HHC				sS	sS	02 59 36.3	+25
HHC				pmax	pmax		
	comp=Z,36nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.9s						
RSSD	**Black Hills**	**93.15**	**43**	*e*P	**P**	**02 47 51.3**	**-1.0**
	comp=Z,11nm,1.3s						
CMAR	**Chiang Mai Arr**	**93.34**	**289**	P	**P**	**02 47 55.1**	**+1.6**
CMAR	**Chiang Mai Arr**	**93.34**	**289**	P	**P**	**02 47 55.1**	**+1.6**
	comp=Z,2.0nm,0.6s,baz=124,slow=2.9,SNR=16						
CD2	**Chengdu**	**94.26**	**302**	*e*P	**P**	**02 47 56.3**	**-1.2**
CD2				pP	pP	02 48 27.0	+20
CD2				sP	sP	02 48 40.0	+29
CD2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2				pmax	pmax		
	comp=Z,30nm,8.2s						
LZH	**Lanzhou**	**96.28**	**306**	*e*P	P	02 48 10.5	+3.7
LZH				pP	pP	02 48 40.3	+24
LZH				sP	sP	02 48 51.5	+32
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
YKA	**Yellowknife Ar**	**97.66**	**24**	P	**P**	**02 48 11.7**	**-0.5**
YKA	**Yellowknife Ar**	**97.66**	**24**	P	**P**	**02 48 11.6**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=236,slow=4.5,SNR=4.0						
WMQ	**Urumqi**	**110.46**	**310**	*e*PKP	**PKiKP**	**02 53 10.0**	**-0.3**
ABKAR	**Akbulak array**	**129.62**	**316**	*e*PKPdf	**PKPdf**	**02 53 43.6**	**-3.1**
SUW	**Suwalki**	**146.00**	**341**	*e*PKPbc	**PKPbc**	**02 54 17.3**	**0.0**
AKASG	**Malin Array Be**	**146.38**	**332**	PKPbc	**PKPbc**	**02 54 18.0**	**-0.5**
AKASG	**Malin Array Be**	**146.38**	**332**	PKPbc	**PKPbc**	**02 54 18.0**	**-0.5**
	comp=Z,1.2nm,0.5s,baz=39,slow=4.7,SNR=5.4						
KIEV	**Kiev**	**146.39**	**332**	*e*PKPbc	**PKPdf**	**02 54 17.8**	**+0.5**
AK02	**Malin Array Si**	**146.42**	**332**	*e*PKPbc	**PKPbc**	**02 54 18.5**	**-0.2**
KWP	**Kalwaria Pacla**	**149.85**	**336**	*e*PKPbc	**PKPbc**	**02 54 28.0**	**+0.1**
KWP	**Kalwaria Pacla**	**149.85**	**336**	||*i*P	**PKPbc**	**02 54 28.0**	**+0.1**
BR131	**Keskin Array S**	**150.37**	**311**	*e*PKPbc	**PKPbc**	**02 54 29.3**	**-0.3**
BRTR	**Keskin Array B**	**150.37**	**311**	PKPbc	**PKPbc**	**02 54 29.0**	**-0.6**
BRTR	**Keskin Array B**	**150.37**	**311**	PKPbc	**PKPbc**	**02 54 29.0**	**-0.6**
	comp=Z,1.8nm,0.9s,baz=126,slow=2.1,SNR=7.7						
BUR08	**Bucovina Ar. S**	**150.42**	**331**	*e*PKPbc	**PKPbc**	**02 54 28.4**	**-1.0**
CLL	**Collm**	**150.97**	**349**	||*i*PKPbc	**PKPbc**	**02 54 30.3**	**-0.2**
	comp=Z,10.0nm,1.2s						
CLL				*e*pPKPbc	**pPKPbc**	**02 54 41.0**	**+0.6**
UPC	**Upice**	**151.11**	**345**	||*e*PKP	**PKPbc**	**02 54 31.1**	**+0.2**
UPC				*e*PKPAB	**PKPab**	**02 54 40.7**	**+2.2**
OKC	**Ostrava-Krasne**	**151.17**	**342**	||*e*PKP	**PKPbc**	**02 54 31.7**	**+0.7**
OKC				*e*PKPAB	**PKPab**	**02 54 40.3**	**+1.5**
DPC	**Dobruska-Polom**	**151.19**	**345**	||*e*PKP	**PKPbc**	**02 54 31.6**	**+0.5**
DPC				*e*PKPAB	**PKPab**	**02 54 39.9**	**+1.0**
BRG	**Berggiesshubel**	**151.22**	**348**	*e*PKP	**PKPbc**	**02 54 31.4**	**+0.4**
	comp=Z,6.5nm,1.1s						
MORC	**Moravsky Berou**	**151.39**	**343**	*e*PKPbc	**PKPbc**	**02 54 31.1**	**-0.5**
PVCC	**Panska Ves**	**151.42**	**347**	||*e*PKP	**PKPbc**	**02 54 32.0**	**+0.5**
PRU	**Pruhonice**	**151.93**	**347**	||*e*PKP	**PKPbc**	**02 54 32.8**	**+0.1**
PRU				*e*PKPAB	**PKPab**	**02 54 42.3**	**+0.4**
GERES	**GERESS Array B**	**153.19**	**347**	PKPbc	**PKPbc**	**02 54 35.4**	**-0.3**
GERES	**GERESS Array B**	**153.19**	**347**	PKPbc	**PKPbc**	**02 54 35.4**	**-0.3**
	comp=Z,0.5nm,0.7s,baz=327,slow=1.6,SNR=5.1						
TORD	**Torodi Ar. Bea**	**169.83**	**163**	PKPab	**PKPab**	**02 55 59.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**169.83**	**163**	PKPab	**PKPab**	**02 55 59.8**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=197,slow=4.5,SNR=3.7						

IDC 27 02:39:06.6±3.3, 8°11N×104°45W, h0km, mb3.6/4, mb1 4.1/4, mb1mx3.8/19, mbtmp3.7/4, MS3.7/5, Ms1 3.7/5, ms1mx3.2/21, Error ellipse: s-maj=128.0km s-min=28.8km az=61.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**19.75**	**51**	LR	LR	02 49 57.3	
	comp=Z,147nm,20.6s,baz=331,slow=33						
TXAR	**Lajitas Array**	**21.13**	**2**	P	P	02 43 53.2	-0.1
	2.3nm,0.9s,baz=175,slow=12,SNR=20						
TXAR				LR	LR	02 51 24.7	
	comp=Z,304nm,19.4s,baz=105,slow=35						
ANMO	**Albuquerque**	**26.77**	**356**	LR	LR	02 55 27.3	
	comp=Z,70nm,20.6s,baz=305,slow=37						
PDAR	**Pinedale Array**	**34.81**	**353**	P	P	02 45 59.5	0.0
	1.7nm,0.9s,baz=162,slow=9.3,SNR=8.0						
ULM	**Lac du Bonnet**	**42.61**	**8**	LR	LR	03 04 40.3	
	comp=Z,106nm,19.9s,baz=342,slow=36						
RKT	**Rikitea**	**43.07**	**223**	*e*T	T	03 33 22.6	
	2.5nm,0.3s						
LPAZ	**La Paz**	**43.36**	**124**	P	P	02 47 11.7	-0.2
	1.1nm,0.9s,baz=313,slow=8.7,SNR=4.2						
PPT	**Papeete**	**51.36**	**240**	LR	LR	03 04 37.6	
	comp=Z,99nm,18.4s,baz=73,slow=30						
PPT2	**Papeete2**	**51.37**	**240**	*e*LR	LR	03 02 59.4	
	90nm,24.5s					

ellipse: s-maj=61.0km s-min=30.9km az=120.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.29**	**29**	Pn	Pn	02 42 12.1	-0.1
	2.7nm,0.3s,baz=185,slow=13,SNR=2.8						
AFI				Sn	Sn	02 42 48.6	-3.7
	19nm,0.3s,baz=248,slow=24,SNR=9.7						
URZ	**Urewera**	**22.93**	**199**	P	P	02 46 25.0	0.0
	4.6nm,0.6s,baz=0.7,slow=6.1,SNR=6.0						
STKA	**Stephens Creek**	**43.33**	**241**	P	P	02 49 23.3	-0.1
	0.3nm,0.3s,baz=95,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**49.52**	**258**	P	P	02 50 11.5	-0.7
	0.3nm,0.6s,baz=96,slow=7.2,SNR=9.5						
ASAR	**Alice Springs**	**49.67**	**253**	P	P	02 50 13.7	+0.3
	1.5nm,0.8s,baz=89,slow=8.5,SNR=17						

*IDC **27** 03:05:18.0±1.2, 41˚.07N×88˚.27E, h0km, mb3.6/6, mb1 3.7/10, mb1mx3.5/32, mbtmp3.7/10, ML3.6/4, MS3.0/1, Ms1 3.0/1, ms1mx1.9/39, Error ellipse: s-maj=45.2km s-min=17.9km az=56.0*

*BJI **27** 03:05:23.0, 41˚.16N×88˚.10E, h10km, ML3.4/9*

*NNC **27** 03:05:24.0±10.0, 41˚.56N×87˚.96E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=77.8km s-min=53.9km az=129.0*

ISC 27 03:05:24.2±1.1, **41.00N**±0.09×**87.95E**±0.10, **h35km, n18, σ1s58/19, mb3.9/9, 6C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**2.83**	**356**	Pn	Pn	**03 06 07.5**	**+0.6**
WMQ				Sn	Sn	**03 06 43.5**	**+3.7**
WMQ				smax	smax		
	comp=N,1μm,0.8s						
WMQ				smax	smax		
	comp=E,1μm,0.6s						
MK31	**Makanchi Array**	**7.09**	**327**	⇑Pn	Pn	**03 07 05.3**	**0.0**
	comp=E,0.7nm,0.2s,baz=139,slow=14,SNR=160						
MK31				⇑Sn	Sn	**03 08 22.0**	**-2.7**
	comp=E,2.6nm,0.5s,baz=144,slow=24,SNR=4.8						
MK31				⇑Lg	Lg	03 08 57.0	
	comp=E,6.1nm,0.6s,baz=134,slow=29,SNR=4.7						
MKAR	**Makanchi Array**	**7.09**	**327**	Pn	Pn	**03 07 04.3**	**-1.1**
	comp=E,1.4nm,0.3s,baz=145,slow=14,SNR=103						
MKAR				Sn	Sn	**03 08 22.3**	**-2.3**
	comp=E,2.1nm,0.3s,baz=142,slow=18,SNR=4.6						
MKAR				Lg	Lg	03 09 05.1	
	comp=E,1.3nm,0.3s,baz=146,slow=26,SNR=4.9						
TKM2	**Tokmak 2**	**9.40**	**286**	⇓Pn	Pn	**03 07 37.7**	**+0.4**
	comp=E,0.6nm,0.3s						
TKM2				⇑Sn	Sn	**03 09 23.7**	**+1.9**
	comp=E,2.9nm,0.6s						
TKM2				⇑Lg	Lg	03 10 18.1	
	comp=E,2.8nm,0.7s						
KURBB	**Kurchatov Arra**	**11.64**	**329**	⇓Pn	Pn	03 08 04.3	-3.4
	comp=E,1.1nm,0.5s						
KURBB				⇑Sn	Sn	03 10 06.2	-10
	comp=E,3.1nm,0.7s						
KURBB	**Kurchatov Arra**	**11.64**	**329**	Pn	Pn	03 08 04.3	-3.4
	comp=E,0.1nm,0.3s,baz=141,slow=12,SNR=6.0						
ZALV	**Zalesovo Beam**	**13.13**	**352**	Pn	Pn	03 08 24.3	-3.6
	comp=E,0.3nm,0.3s,baz=164,slow=12,SNR=3.2						
BVAR	**Borovoye Array**	**16.92**	**321**	P	**Pn**	**03 09 17.3**	**-0.7**
	comp=E,0.2nm,0.3s,baz=123,slow=11,SNR=2.6						
AKTO	**Aktyubinsk**	**22.79**	**305**	P	**P**	**03 10 24.5**	**+0.9**
	comp=E,0.2nm,0.3s,baz=74,slow=15,SNR=1.7						
BRTR	**Keskin Array B**	**40.84**	**287**	P	**P**	**03 13 03.9**	**+1.3**
	comp=E,0.4nm,0.5s,baz=90,slow=10,SNR=3.9						
FINES	**FINESS Array B**	**41.88**	**321**	P	**P**	**03 13 09.2**	**-1.3**
	comp=E,1.0nm,0.9s,baz=66,slow=11,SNR=4.6						
ARCES	**ARCESS Array B**	**42.70**	**333**	P	**P**	**03 13 16.4**	**-0.8**
	comp=E,3.1nm,1.0s,baz=93,slow=8.2,SNR=8.3						
ARCES				LR	LR	03 31 46.8	
	comp=E,19nm,20.0s,baz=237,slow=37						
LPG	**La Plagne**	**56.90**	**304**	*e*P	**P**	**03 15 06.7**	**+0.9**
	comp=E,5.2nm,0.7s						
LPL	**La Plagne**	**56.91**	**304**	*e*P	**P**	**03 15 06.7**	**+0.9**
	comp=E,5.2nm,0.6s						
AVF	**Avril sur Loir**	**58.41**	**307**	*e*P	**P**	**03 15 15.6**	**-0.4**
TCF	**Toulx Ste Croi**	**59.34**	**306**	*e*P	**P**	**03 15 22.3**	**-0.3**
	comp=E,1.2nm,0.5s						
WRA	**Warramunga Arr**	**74.36**	**135**	P	**P**	**03 16 57.3**	**-1.0**
	comp=E,0.3nm,0.8s,baz=331,slow=5.6,SNR=6.1						
TORD	**Torodi Ar. Bea**	**78.70**	**278**	P	**P**	**03 17 22.9**	**-0.2**
	comp=E,0.6nm,0.5s,baz=43,slow=5.1,SNR=30						

*IDC **27** 03:14:52.0±0.6, 48˚.48N×155˚.41E, h0km, mb3.9/20, mb1 4.1/24, mb1mx4.0/32, mbtmp3.9/24, ML3.4/4, MS3.4/5, Ms1 3.5/5, ms1mx2.9/41, Error ellipse: s-maj=18.8km s-min=11.8km az=154.0*

*ISCJB **27** 03:14:55.5±0.5, 48˚.54N×0˚.06×155˚.54E±0˚.09, h36km, mb4.0/31, MS3.6/5, Error ellipse: s-maj=11.1km s-min=4.6km az=43.7*

*MOS **27** 03:14:55.4±1.1, 48˚.50N×155˚.60E, h39km, mb4.3/23, Error ellipse: s-maj=11.0km s-min=7.1km az=79.0*

*NEIC **27** 03:14:56.4±2.2, 48˚.46N×155˚.52E, h31km±16km, mb4.3/5, Error ellipse: s-maj=12.7km s-min=6.5km az=140.0*

ISC 27 03:14:57.3±0.6, **48.53N**±0.08×**155.57E**±0.08, **h36km, n107, σ1s15/109, mb4.2/31, MS3.5/5, 8C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.18**	**9**	*e*PN	**Pn**	**03 15 28.5**	**-2.5**
SKR				*e*S	**Sn**	**03 15 55.6**	**-1.1**
SKR				pmax	pmax		
	comp=N,80nm,0.5s						
SKR				pmax	pmax		
	comp=Z,150nm,0.5s						
SKR				smax	smax		
	comp=N,500nm,0.4s						
SKR				smax	smax		
	comp=E,410nm,0.4s						
SKR				MLR	MLR		
	comp=N,1μm,12.0s						
SKR				MLR	MLR		
	comp=Z,1μm,12.0s						
SKR				MLR	MLR		
	comp=E,1μm,16.0s						
PEA0B	**Petropavlovsk-**	**4.78**	**16**	*e*Pn	**Pn**	**03 16 08.3**	**+1.6**
PETK	**Petropavlovsk-**	**4.78**	**16**	PN	**Pn**	**03 16 07.7**	**+1.1**
PETK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PETK				MLR	MLR		
	comp=Z,164nm,19.9s						
PETK	**Petropavlovsk-**	**4.78**	**16**	Pn	**Pn**	**03 16 07.7**	**+1.1**
PETK	**Petropavlovsk-**	**4.78**	**16**	Pn	**Pn**	**03 16 07.7**	**+1.1**
	comp=Z,3.3nm,0.3s,baz=180,slow=14,SNR=63						
PETK				LR	LR	03 18 18.0	
	comp=Z,164nm,19.9s,baz=202,slow=42						
PET	**Petropavlovsk**	**4.91**	**22**	*e*PN	**Pn**	**03 16 08.7**	**+0.3**
PET				pmax	pmax		
	comp=E,38nm,0.6s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
KUR	**Kuril'sk**	**6.22**	**241**	*d i*PN	**Pn**	**03 16 27.5**	**+1.0**
KUR				*i* S	**Sn**	**03 17 38.7**	**+2.4**
KUR				pmax	pmax		
	comp=Z,52nm,0.5s						
KUR				pmax	pmax		
	comp=E,32nm,0.2s						
KUR				pmax	pmax		
	comp=N,35nm,0.7s						
KUR				smax	smax		
	comp=N,35nm,0.7s						
KUR				smax	smax		
	comp=E,29nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**8.09**	**240**	*e*PN	Pn	03 16 56.7	+4.7
YUK				*i*		03 18 30.5	
YUK				pmax	pmax		
	comp=Z,43nm,0.2s						
YUK				pmax	pmax		
	comp=N,37nm,0.6s						
YUK				pmax	pmax		
	comp=E,39nm,0.3s						
YUK				pmax	pmax		
	comp=N,56nm,2.2s						
YUK				pmax	pmax		
	comp=Z,116nm,2.2s						
YUK				pmax	pmax		
	comp=E,203nm,2.5s						
YUK				pmax	pmax		
	comp=N,99nm,2.7s						
YUK				pmax	pmax		
	comp=E,224nm,2.7s						
YUK				MLR	MLR		
	comp=Z,272nm,18.0s						
YUK				MLR	MLR		
	comp=E,497nm,18.0s						
YSS	**Yuzh-Sakhalins**	**8.78**	**264**	*e*PN	**Pn**	**03 17 04.0**	**+2.5**
ASAJ	**Asahikawa**	**10.00**	**249**	*e*Pn	**Pn**	**03 17 19.9**	**+1.6**
	comp=E,8.0nm,0.8s						
ASAJ	**Asahikawa**	**10.00**	**249**	Pn	**Pn**	**03 17 19.2**	**+1.0**
	comp=E,1.2nm,0.3s,baz=53,slow=14,SNR=11						
ERM	**Erimo**	**10.90**	**238**	*e*PN	**Pn**	**03 17 30.1**	**-0.4**
FX1	**Attu Island--F**	**11.97**	**62**	Pn	**Pn**	**03 17 44.2**	**-1.0**
FX1				Sn	Sn	03 19 45.4	-12
FX1	**Attu Island--F**	**11.97**	**62**	Pn	**Pn**	**03 17 44.2**	**-1.0**
	comp=E,1.2nm,0.3s,baz=215,slow=23,SNR=9.5						
FX1				Sn	Sn	03 19 45.4	-12
	comp=E,3.0nm,0.3s,baz=76,slow=22,SNR=7.1						
USRK	**Ussuriysk Arra**	**16.81**	**264**	Pn	**Pn**	**03 18 47.9**	**-1.7**
	comp=E,0.3nm,0.3s,baz=148,slow=39,SNR=5.0						
MAJO	**Matsushiro**	**17.48**	**233**	*e*P	**Pn**	**03 18 56.6**	**-1.4**
MAJO	**Matsushiro**	**17.48**	**233**	*e*Pn	**Pn**	**03 18 56.6**	**-1.4**
MJAR	**Matsushiro Arr**	**17.48**	**233**	P	**Pn**	**03 18 54.1**	**-4.0**
MJAR	**Matsushiro Arr**	**17.48**	**233**	P	**Pn**	**03 18 54.1**	**-4.0**
	comp=E,0.1nm,0.3s,baz=29,slow=13,SNR=9.9						
BILL	**Bilibino**	**20.30**	**12**	*e*P	**P**	**03 19 28.9**	**-0.7**
BILL				*e**PP	**pP**	**03 19 40.8**	**+1.8**
BILL				*e*		03 19 45.0	
BILL				*e*S	**S**	**03 23 14.7**	**-0.1**
BILL				*e*SS	**SnSn**	**03 23 35.4**	**+1.9**
BILL				*e*		03 23 45.0	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL	**Bilibino**	**20.30**	**12**	*e*P	**P**	**03 19 29.1**	**-0.4**
	comp=Z,6.2nm,0.9s						
KSRS	**Korea Array**	**22.93**	**251**	P	**P**	**03 19 57.5**	**-0.4**
	comp=Z,2.9nm,0.5s,baz=50,slow=9.9,SNR=10						
KSAR	**Wonju Array Be**	**22.96**	**251**	P	**P**	**03 19 57.5**	**-0.7**
TIXI	**Tiksi**	**26.27**	**341**	*e*P	**P**	**03 20 25.8**	**-2.8**
TIXI				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TLY	**Talaya**	**32.87**	**295**	*e*P	**P**	**03 21 28.1**	**+0.6**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.3s						
TLY				MLR	MLR		
	comp=Z,81nm,14.0s						
ILAR	**Eielson Array**	**34.12**	**40**	P	**P**	**03 21 38.2**	**+0.1**
ILAR	**Eielson Array**	**34.12**	**40**	P	**P**	**03 21 38.3**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=250,slow=6.6,SNR=3.4						
MK31	**Makanchi Array**	**47.60**	**297**	*e*P	**P**	**03 23 28.7**	**-0.7**
MK31	**Makanchi Array**	**47.60**	**297**	*e*P	**P**	**03 23 28.6**	**-0.7**
MKAR	**Makanchi Array**	**47.60**	**297**	P	**P**	**03 23 28.8**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MKAR				MLR	MLR		
	comp=Z,42nm,20.5s						
MKAR	**Makanchi Array**	**47.60**	**297**	P	**P**	**03 23 28.8**	**-0.6**
MKAR	**Makanchi Array**	**47.60**	**297**	P	**P**	**03 23 28.8**	**-0.6**
	comp=Z,1.9nm,0.5s,baz=70,slow=9.2,SNR=32						
MKAR				LR	LR	03 44 55.4	
	comp=Z,42nm,20.5s,baz=354,slow=38						
KURK	**Kurchatov**	**47.77**	**303**	P	**P**	**03 23 30.8**	**+0.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURK	**Kurchatov**	**47.77**	**303**	P	**P**	**03 23 30.8**	**+0.3**
KURBB	**Kurchatov Arra**	**47.86**	**303**	P	**P**	**03 23 30.8**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=67,slow=8.2,SNR=5.8						
YKA	**Yellowknife Ar**	**48.50**	**38**	P	**P**	**03 23 36.6**	**+0.6**
YKA	**Yellowknife Ar**	**48.50**	**38**	P	**P**	**03 23 36.6**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=296,slow=7.0,SNR=2.9						
RES	**Resolute Bay**	**48.61**	**20**	P	**P**	**03 23 37.9**	**+1.2**
RES	**Resolute Bay**	**48.61**	**20**	P	**P**	**03 23 37.9**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=290,slow=7.2,SNR=4.2						
BVAR	**Borovoye Array**	**51.01**	**309**	P	**P**	**03 23 54.2**	**-1.0**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**51.01**	**309**	P	**P**	**03 23 54.2**	**-1.0**
BVAR	**Borovoye Array**	**51.01**	**309**	P	**P**	**03 23 54.2**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=62,slow=8.0,SNR=6.1						
TKM2	**Tokmak 2**	**53.70**	**296**	*e*P	**P**	**03 24 15.0**	**-0.6**
TKM2				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TKM2	**Tokmak 2**	**53.70**	**296**	*e*P	**P**	**03 24 15.0**	**-0.6**
	comp=Z,5.6nm,1.2s						
CMAR	**Chiang Mai Arr**	**54.39**	**257**	P	**P**	**03 24 20.6**	**0.0**
CMAR	**Chiang Mai Arr**	**54.39**	**257**	P	**P**	**03 24 20.6**	**0.0**
	comp=Z,1.9nm,0.3s,baz=24,slow=7.6,SNR=7.0						
AAK	**Ala-Archa**	**54.53**	**296**	*e*P	**P**	**03 24 20.6**	**-1.0**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AAK	**Ala-Archa**	**54.53**	**296**	*e*P	**P**	**03 24 20.6**	**-1.0**
	comp=Z,2.5nm,0.6s						
EKS2	**Erkin-Say**	**54.94**	**297**	*e*P	**P**	**03 24 24.3**	**-0.2**
EKS2	**Erkin-Say**	**54.94**	**297**	*e*P	**P**	**03 24 24.3**	**-0.2**
ARCES	**ARCESS Array B**	**56.71**	**341**	P	**P**	**03 24 35.2**	**-1.4**
ARCES	**ARCESS Array B**	**56.71**	**341**	P	**P**	**03 24 35.2**	**-1.4**
	comp=Z,3.9nm,0.9s,baz=40,slow=8.0,SNR=13						
ARCES				LR	LR	03 54 38.5	
	comp=Z,40nm,19.4s,baz=258,slow=42						
ABKAR	**Akbulak array**	**58.55**	**310**	*e*P	**P**	**03 24 48.5**	**-1.3**
NVAR	**Mina Array Bea**	**60.15**	**65**	P	**P**	**03 25 02.1**	**+0.8**
NVAR	**Mina Array Bea**	**60.15**	**65**	P	**P**	**03 25 02.1**	**+0.8**
	comp=Z,0.1nm,0.3s,baz=255,slow=10.0,SNR=3.3						
JOF	**Joensuu**	**60.46**	**334**	*e*P	**P**	**03 25 02.6**	**-0.2**
JOF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
JOF	**Joensuu**	**60.46**	**334**	*e*p	**P**	**03 25 02.6**	**-0.2**
	comp=Z,1.1nm,0.4s						
PDAR	**Pinedale Array**	**62.36**	**56**	P	**P**	**03 25 16.7**	**+0.4**
PDAR	**Pinedale Array**	**62.36**	**56**	P	**P**	**03 25 16.7**	**+0.4**
	comp=Z,0.5nm,0.9s,baz=0.8,slow=6.6,SNR=3.2						
KAF	**Kangasniemi**	**62.51**	**336**	*e*P	**P**	**03 25 15.9**	**-0.7**
KAF				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KAF	**Kangasniemi**	**62.51**	**336**	*e*p	**P**	**03 25 15.9**	**-0.7**
	comp=Z,0.5nm,0.4s						
FINES	**FINESS Array B**	**63.12**	**335**	P	**P**	**03 25 20.4**	**-0.3**
FINES	**FINESS Array B**	**63.12**	**335**	P	**P**	**03 25 20.4**	**-0.3**
	comp=Z,1.1nm,0.6s,baz=38,slow=8.1,SNR=14						
OBN	**Obninsk**	**64.76**	**326**	*e*P	**P**	**03 25 32.3**	**+0.8**
OBN				*e*SS	SS	03 38 21.7	+2.0
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NB2	**NORSAR Subarra**	**67.06**	**342**	P	**P**	**03 25 45.8**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**67.06**	**342**	P	**P**	**03 25 46.1**	**-0.2**
NOA	**NORSAR Array B**	**67.06**	**342**	P	**P**	**03 25 46.1**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=25,slow=6.5,SNR=4.9						
NOA				LR	LR	03 59 04.8	
	comp=Z,15nm,18.8s,baz=300,slow=40						
AFI	**Afiamalu**	**68.59**	**146**	LR	LR	03 47 40.1	
	comp=Z,146nm,21.8s,baz=88,slow=29						
KIV	**Kislovodsk**	**70.72**	**315**	*e*P	**P**	**03 26 10.5**	**+1.1**
KIV				*e*		03 26 28.6	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.2s						
WRA	**Warramunga Arr**	**70.76**	**201**	P	**P**	**03 26 08.7**	**-1.0**
WRA	**Warramunga Arr**	**70.76**	**201**	P	**P**	**03 26 08.7**	**-1.0**
	comp=Z,0.5nm,0.7s,baz=18,slow=6.3,SNR=3.7						
AKASG	**Malin Array Be**	**70.97**	**327**	*e*P	**P**	**03 26 10.3**	**-0.3**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKASG	**Malin Array Be**	**70.97**	**327**	P	**P**	**03 26 10.4**	**-0.3**
AKASG	**Malin Array Be**	**70.97**	**327**	P	**P**	**03 26 10.4**	**-0.3**
	comp=Z,1.7nm,0.5s,baz=31,slow=6.0,SNR=5.1						
AK02	**Malin Array Si**	**71.01**	**327**	*e*P	**P**	**03 26 10.2**	**-0.7**
KWP	**Kalwaria Pacla**	**74.12**	**330**	*e*P	**P**	**03 26 30.4**	**+0.9**
KWP				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KWP	**Kalwaria Pacla**	**74.12**	**330**	*e*P	**P**	**03 26 30.4**	**+0.9**
	comp=Z,4.1nm,0.4s						
ASAR	**Alice Springs**	**74.44**	**201**	P	**P**	**03 26 31.6**	**+0.1**
ASAR	**Alice Springs**	**74.44**	**201**	P	**P**	**03 26 31.6**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=17,slow=6.8,SNR=4.0						
BUR08	**Bucovina Ar. S**	**74.97**	**328**	*e*P	**P**	**03 26 34.7**	**+0.2**
BURAR	**Bucovina Array**	**74.99**	**328**	⇓*i*P	**P**	**03 26 35.2**	**+0.5**
TXAR	**Lajitas Array**	**75.18**	**63**	P	**P**	**03 26 36.7**	**+0.6**
TXAR	**Lajitas Array**	**75.18**	**63**	P	**P**	**03 26 36.7**	**+0.6**
	comp=Z,1.0nm,0.8s,baz=294,slow=4.0,SNR=14						
TESR	**Tescani**	**75.41**	**326**	⇑*i*P	**P**	**03 26 37.4**	**+0.4**
CLL	**Collm**	**75.50**	**337**	*i* P	**P**	**03 26 37.8**	**+0.4**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CLL	**Collm**	**75.50**	**337**	*i* P	**P**	**03 26 37.8**	**+0.4**
	comp=Z,6.0nm,1.0s						
CLL				*es*P	**sP**	**03 26 51.0**	**-1.7**
CFR	**Carcaliu**	**75.97**	**325**	⇓P	**P**	**03 26 40.5**	**+0.3**
CFR	**Carcaliu**	**75.97**	**325**	⇓*i*P	**P**	**03 26 40.5**	**+0.3**
MLR	**Muntele Rosu**	**76.53**	**326**	⇑*i*P	**P**	**03 26 44.4**	**+0.8**
DRGR		**76.57**	**329**	⇑P	**P**	**03 26 43.7**	**0.0**
DRGR		**76.57**	**329**	⇑*i*P	**P**	**03 26 43.7**	**0.0**
VOIR		**76.91**	**327**	⇑P	**P**	**03 26 47.2**	**+1.6**
VOIR		**76.91**	**327**	⇑*i*P	**P**	**03 26 47.2**	**+1.6**
ARR	**Arges**	**77.12**	**327**	⇓*i*P	**P**	**03 26 48.8**	**+2.0**
MALT	**Malatya**	**77.13**	**314**	⇑P	P	03 27 01.6	+15
MALT	**Malatya**	**77.13**	**314**	⇑*i*P	P	03 27 01.6	+15
KHC	**Kasperske Hory**	**77.33**	**336**	*e*P	**P**	**03 26 48.5**	**+0.6**
KHC	**Kasperske Hory**	**77.33**	**336**	*e*P	**P**	**03 26 48.5**	**+0.6**
GERES	**GERESS Array B**	**77.56**	**335**	P	**P**	**03 26 50.1**	**+0.9**
GERES	**GERESS Array B**	**77.56**	**335**	P	**P**	**03 26 50.1**	**+0.9**
	comp=Z,0.6nm,0.6s,baz=29,slow=5.0,SNR=7.6						
BR131	**Keskin Array S**	**78.20**	**318**	*e*P	**P**	**03 26 53.7**	**+0.7**
	comp=Z,1.1nm,0.6s						
BRTR	**Keskin Array B**	**78.20**	**318**	P	**P**	**03 26 54.0**	**+1.0**
BRTR	**Keskin Array B**	**78.20**	**318**	P	**P**	**03 26 54.0**	**+1.0**
	comp=Z,3.4nm,1.0s,baz=56,slow=4.6,SNR=12						
VTS	**Vitosha**	**80.03**	**326**	⇓P	**P**	**03 27 03.6**	**+0.6**
VTS	**Vitosha**	**80.03**	**326**	⇓*i*P	**P**	**03 27 03.6**	**+0.6**
ESDC	**Sonseca Array**	**90.32**	**344**	P	**P**	**03 27 56.2**	**+1.8**
ESDC	**Sonseca Array**	**90.32**	**344**	P	**P**	**03 27 56.2**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=346,slow=5.4,SNR=3.0						

*IDC **27** 03:16:46.4±0.6, 1˚.89N×122˚.59E, h0km, mb4.3/13, mb1 4.3/14, mb1mx4.1/29, mbtmp4.3/14, ML3.8/1, MS2.7/1, Ms1 2.7/1, ms1mx1.8/35, Error ellipse: s-maj=27.8km s-min=13.1km az=70.0*

*NEIC **27** 03:16:48.4±5.7, 1˚.86N×122˚.54E, h12km±36km, mb4.6/9, Error ellipse: s-maj=16.3km s-min=6.3km az=58.0*

*ISCJB **27** 03:16:49.7±0.3, 1˚.90N±0˚.04×122˚.53E±0˚.04, h33km, mb4.4/21, MS2.7/1, Error ellipse: s-maj=7.3km s-min=4.2km az=143.3*

*DJA **27** 03:16:50.0±0.7, 2˚N±5˚×12˚3E±˚, h10km, M4.5/5, mb4.8/2, mB5.0/2, MLv4.3/5, Mw(mB)4.3/2*

*AUST **27** 03:16:56.0±1.4, 1˚.53N×121˚.93E, h71km, Error ellipse: s-maj=2.5km s-min=1.3km az=233.0*

ISC 27 03:16:51.6±0.5, **1.90N**±0.06×**122.58E**±0.06, **h35km, n61, σ1s17/64, mb4.4/21, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GTOI	**Gorontalo**	**1.32**	**161**	P	**Pn**	**03 17 11.4**	**-2.2**
GTOI				S	**Sn**	**03 17 27.1**	**-2.9**
MRSI	**Marisa**	**1.55**	**205**	P	**Pn**	**03 17 15.6**	**-1.1**
KMSI	**Cibinong**	**1.92**	**133**	P	**Pn**	**03 17 22.0**	**+0.2**
KMSI				S	**Sn**	**03 17 46.0**	**+1.3**
MNI	**Manado**	**2.30**	**101**	P	**Pn**	**03 17 27.2**	**+0.1**
MNI				S	**Sn**	**03 17 53.7**	**-0.5**
LUWI	**Luwuk**	**2.92**	**176**	P	**Pn**	**03 17 32.7**	**+1.6**
LUWI	**Luwuk**	**2.92**	**176**	P	**Pn**	**03 17 37.4**	**+1.7**
	baz=2.7,SNR=66						
MYLDM	**Lahad Datu**	**5.22**	**309**	P	**Pn**	**03 18 07.6**	**+0.4**
TTSI	**Tana Toraja**	**5.63**	**209**	P	**Pn**	**03 18 14.2**	**+1.3**
	66nm,0.7s,2μm						
SPSI	**Sidrap Palu**	**6.46**	**206**	P	**Pn**	**03 18 26.3**	**+2.0**
KAPI	**Kappang**	**7.42**	**202**	Pn	**Pn**	**03 18 36.5**	**-1.0**
KAPI	**Kappang**	**7.42**	**202**	Pn	**Pn**	**03 18 36.5**	**-1.0**
	1.4nm,0.3s,baz=132,slow=12,SNR=2.6						
KKM	**Kota Kinabalu**	**7.57**	**303**	*e*Pn	**Pn**	**03 18 38.3**	**-1.4**
KKM	**Kota Kinabalu**	**7.57**	**303**	P	**Pn**	**03 18 39.0**	**-0.6**
	baz=7.3,SNR=4.3						
KNRA	**Kununurra**	**18.50**	**161**	P	**Pn**	**03 21 06.3**	**+1.1**
	baz=18,SNR=8.9						
FITZ	**Fitzroy Crossi**	**20.10**	**172**	P	**P**	**03 21 21.0**	**-1.4**
FITZ	**Fitzroy Crossi**	**20.10**	**172**	P	**P**	**03 21 21.0**	**-1.4**
	8.1nm,0.7s,baz=11,slow=8.1,SNR=23						
MBWA	**Marble Bar**	**23.08**	**187**	*e*P	**P**	**03 21 52.4**	**-1.9**
	7.5nm,0.8s						
PSI	**Prapat**	**23.66**	**273**	P	**P**	**03 22 00.6**	**+0.4**
PSI	**Prapat**	**23.66**	**273**	P	**P**	**03 22 00.6**	**+0.4**
	2.4nm,0.4s,baz=158,slow=22,SNR=4.7						
WRAB	**Tennant Creek**	**24.57**	**153**	*e*P	**P**	**03 22 08.5**	**0.0**
	7.7nm,0.8s						
WRA	**Warramunga Arr**	**24.58**	**153**	P	**P**	**03 22 08.4**	**-0.1**
WRA	**Warramunga Arr**	**24.58**	**153**	P	**P**	**03 22 08.4**	**-0.1**
	7.7nm,0.6s,baz=329,slow=11,SNR=88						
COEN	**Coen**	**25.78**	**128**	*e*P	**P**	**03 22 21.0**	**+1.4**
	38nm,0.8s						
COEN	**Coen**	**25.78**	**128**	P	**P**	**03 22 21.9**	**+2.4**
	baz=26,SNR=7.9						
AS31	**Alice

4.5nm,0.6s,baz=84,slow=8.9,SNR=49
FITZ Fitzroy Crossi 41.21 264 P P 03 38 56.5 0.0
1.8nm,0.7s,baz=118,slow=7.9,SNR=6.1
GERES GERESS Array B 144.09 332 PKP PKPdf 03 50 46.8 -0.7
0.6nm,0.8s,baz=36,slow=5.1,SNR=4.8

DHMR 27 03:35:21.4±1.6, 12°.08N×44°.11E, h5km±10km, ML2.6, 2C, Western Arabian Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ADEN	**Aden**	**1.10**	**51**	*i* P	Pn	03 35 43.7	+0.2
ADEN				AML	AML	03 35 46.2	
	comp=Z,215nm,0.2s						
ADEN				*i* S	Sn	03 35 58.8	-0.4
ADEN	**Aden**	**1.10**	**51**	*i* P	Pg	03 35 41.8	-0.8
ADEN				*i* S	Sb	03 35 57.9	+0.2
ADEN				AML	AML	03 36 03.9	
	comp=E,143nm,0.4s						
TRBA	**At Turbah**	**1.15**	**0**	⇑*i* P	Pb	03 35 44.0	0.0
TRBA				*i* S	Sb	03 35 59.7	+0.2
TRBA				AML	AML	03 36 00.8	
	comp=N,98nm,0.2s						
TRBA	**At Turbah**	**1.15**	**0**	*i* P	Pg	03 35 43.7	0.0
TRBA				*i* S	Sg	03 35 59.1	+0.3
TRBA				AML	AML	03 36 00.8	
	comp=N,98nm,0.2s						
LBOS		**2.10**	**32**	⇑*i* P	Pb	03 36 00.2	-0.3
LBOS				*i* S	Sg	03 36 28.4	-1.2
LBOS		**2.10**	**32**	*i* P	Pn	03 35 58.2	+0.5
LBOS				*i* S	Sg	03 36 28.6	-1.0

MEX 27 04:02:37.6±0.9, 18°.56N×101°.17W, h50km±23km, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARIG	**Puente Sto Nin**	**0.83**	**109**	*eP*	Pn	04 02 50.9	-2.2
ARIG				*i* S	Sn	04 03 02.5	-1.9
ZIIG	**Zihuatanejo**	**0.99**	**197**	*eP*	Pn	04 02 53.0	-2.2
ZIIG				*i* S	Sn	04 03 06.8	-1.2
PLIG	**Platanillo**	**1.59**	**96**	*eP*	Pn	04 03 02.2	-1.2
PLIG				*i* S	Sn	04 03 20.9	-2.0
CAIG	**El Cayaco**	**1.73**	**150**	*eP*	Pn	04 03 04.2	-1.0
CAIG				*i* S	Sn	04 03 23.7	-2.5
YAIG	**Yautepec**	**2.01**	**81**	*eP*	Pn	04 03 08.1	-1.3
YAIG				*i* S	Sn	04 03 31.7	-1.8
MMIG	**Aquila**	**2.08**	**263**	*eP*	Pn	04 03 08.4	-1.7
MMIG				*i* S	Sn	04 03 33.4	-1.5

NIED ***27*** *04:07:00, 37°.40N×141°.50E, h62km, Mw3.8 Best double couple: M₀5.19000×10¹⁴ NP1:φ₀=202.00000°, δ60.00000°, λ131.00000°. NP2:φ₀=322.00000°, δ49.00000°, λ41.00000°.*
ISCJB ***27*** *04:07:17.8±0.8, 37°.38N±0°.04×141°.51E±0°.08, h65km±6km, mb3.6/5, Error ellipse: s-maj=11.7km s-min=6.3km az=23.1*
IDC ***27*** *04:07:19.6±4.3, 37°.38N×141°.58E, h71km±36km, mb3.4/5, mb1 3.7/7, mb1mx3.4/24, mbtmp3.5/7, ML3.9/2, MS2.5/1, Ms1 2.5/1, ms1mx2.0/21, Error ellipse: s-maj=34.0km s-min=20.1km az=61.0*
JMA ***27*** *04:07:19.3±0.1, 37°.40N×141°.41E, h63km±1km, M4.0*
JMA Felt II J1.
ISC 27 04:07:18.8±1.0, 37°.38N±0°.04×141°.52E±0°.07, h61km±8km, n21, σ1°19/31, mb3.5/5, 6C-3D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.52**	**269**	⇑P	**Pn**	**04 07 30.7**	**-0.3**
JFK				S	**Sn**	**04 07 38.7**	**-1.2**
ONAJ	**Iwakimizuishiy**	**0.64**	**245**	⇓P	**Pn**	**04 07 32.2**	**-0.2**
ONAJ				S	**Sn**	**04 07 41.5**	**-0.8**
JMM	**Marumori**	**0.76**	**311**	⇑P	**Pn**	**04 07 33.6**	**-0.1**
JMM				S	**Sn**	**04 07 44.1**	**-0.6**
JFT	**Otama**	**0.95**	**279**	⇓P	**Pn**	**04 07 36.4**	**+0.2**
JFT				S	**Sn**	**04 07 48.5**	**-0.7**
JIO	**Ouri**	**1.09**	**353**	⇑P	**Pn**	**04 07 38.1**	**+0.1**
JIO				S	**Sn**	**04 07 51.6**	**-0.6**
JOU	**Okura**	**1.20**	**326**	⇑P	**Pn**	**04 07 39.0**	**-0.5**
JOU				S	**Sn**	**04 07 54.0**	**-0.9**
JYS	**Shirataka**	**1.43**	**307**	⇑P	**Pn**	**04 07 42.4**	**-0.1**
JYS				*eS*	**Sn**	**04 07 59.2**	**-1.2**
JFY	**Yanaizu**	**1.45**	**272**	⇓P	**Pn**	**04 07 42.5**	**-0.3**
JFY				S	**Sn**	**04 07 59.4**	**-1.4**
JMK	**Ichinoseki**	**1.59**	**352**	⇑P	**Pn**	**04 07 44.7**	**0.0**
JMK				*eS*	**Sn**	**04 08 04.0**	**-0.3**
JNS	**Sasagawa**	**1.81**	**285**	P	**Pn**	**04 07 47.1**	**-0.5**
MJAR	**Matsushiro Arr**	**2.78**	**254**	P	**Pn**	**04 08 01.0**	**+0.1**
	9.7nm,0.3s,baz=44,slow=11,SNR=78						
MJAR				S	**Sn**	**04 08 36.2**	**+2.9**
	7.8nm,0.3s,baz=49,slow=26,SNR=6.1						
MAT	**Matsushiro**	**2.78**	**254**	P	**Pn**	**04 08 01.7**	**+0.8**
MAT				S	**Sn**	**04 08 34.6**	**+1.3**
JHJ	**Hachijo jima 2**	**4.48**	**199**	P	**Pn**	**04 08 24.7**	**+0.6**
	27nm,0.3s,baz=45,slow=19,SNR=4.5						
JHJ				S	**Sn**	**04 09 11.3**	**-3.6**
	46nm,0.3s,baz=221,slow=23,SNR=10.0						
USRK	**Ussuriysk Arra**	**9.93**	**316**	LR	LR	04 13 17.8	
	comp=Z,24nm,18.3s,baz=95,slow=36						
ZALV	**Zalesovo Beam**	**41.75**	**312**	P	**P**	**04 15 01.7**	**-0.1**
	0.8nm,0.4s,baz=101,slow=7.5,SNR=2.8						
MKAR	**Makanchi Array**	**44.01**	**302**	P	**P**	**04 15 19.5**	**-0.7**
	0.6nm,0.7s,baz=86,slow=9.9,SNR=7.1						
WRA	**Warramunga Arr**	**57.41**	**188**	P	**P**	**04 17 00.8**	**-0.4**
	1.4nm,0.7s,baz=6.2,slow=7.4,SNR=32						
ASAR	**Alice Springs**	**61.14**	**188**	P	**P**	**04 17 26.6**	**-0.2**
	0.2nm,0.5s,baz=11,slow=6.7,SNR=7.5						
FINES	**FINESS Array B**	**68.55**	**332**	pP	pP	04 18 30.4	-0.7
	0.6nm,0.7s,baz=32,slow=8.2,SNR=3.8						
NOA	**NORSAR Array B**	**73.91**	**337**	pP	pP	04 19 03.7	+0.1
	0.6nm,0.7s,baz=40,slow=5.9,SNR=4.6						
TXAR	**Lajitas Array**	**89.85**	**52**	P	**P**	**04 20 11.7**	**+0.4**
	0.1nm,0.6s,baz=310,slow=3.4,SNR=2.6						
TXAR				pP	**pP**	**04 20 30.6**	**+2.2**
	0.3nm,0.6s,baz=297,slow=2.9,SNR=8.5						

TAP 27 04:16:34.8, 21°.30N×121°.26E, h77km±1km, ML3.7, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TSEB	**Hengchuen, Pin**	**0.68**	**331**	P	Pn	04 16 50.0	0.0
	baz=322						
TSEB				S	Sn	04 17 02.9	+1.6
	baz=322						
TWK1	**Hengchun**	**0.76**	**327**	*i* P	Pn	04 16 51.4	+0.5
	baz=322						
TWK1				*i* S	Sn	04 17 03.4	+0.5
	baz=322						
LAY	**Lan-yu**	**0.78**	**21**	P	Pn	04 16 51.3	+0.1
	baz=21						
LAY				*eS*	Sn	04 17 04.0	+0.7
	baz=21						
HEN	**Hengchun**	**0.85**	**326**	*eP*	Pn	04 16 52.1	+0.2
	baz=318						
HEN				*eS*	Sn	04 17 05.6	+1.0
	baz=318						
SCZT	**Fangliau**	**1.22**	**331**	*eP*	Pn	04 16 56.9	+0.5
	baz=325						
SCZT				*eS*	Sn	04 17 13.3	+0.7
	baz=325						
ECL	**Taimali**	**1.32**	**348**	*eP*	Pn	04 16 56.6	-1.1
	baz=354						
TWG	**Pinlang**	**1.52**	**354**	*eP*	Pn	04 17 00.7	+0.4
	baz=354						
CHKT	**Chengkung**	**1.79**	**3**	*eP*	Pn	04 17 06.4	+2.6
	baz=355						
CHKT				*eS*	Sn	04 17 26.4	+0.6
	baz=355						
ELDTW	**Lidau**	**1.89**	**353**	*eP*	Pn	04 17 08.5	+3.2
	baz=357						
CHN1	**Nanshi**	**1.99**	**340**	*eP*	Pn	04 17 07.0	+0.4
	baz=351						
WTP	**Ta-pu**	**2.02**	**343**	*eP*	Pn	04 17 08.9	+1.9
	baz=343						
TWF1	**Yuli**	**2.04**	**1**	*eP*	Pn	04 17 09.8	+2.6
	baz=355						
TWK	**Hsinying**	**2.08**	**340**	*eP*	Pn	04 17 10.9	+3.1
	baz=350						
EHY	**Hungye**	**2.19**	**2**	*eP*	Pn	04 17 10.7	+1.5
	baz=2.0						
YUS	**Yu-Shan**	**2.19**	**353**	*eP*	Pn	04 17 11.4	+1.5
	baz=343						
ALS	**Alishan**	**2.23**	**349**	*eP*	Pn	04 17 11.2	+1.0
	baz=349						
CHN5	**Tsauling**	**2.34**	**347**	*eP*	Pn	04 17 12.8	+1.4
	baz=347						
ESL	**Shilin**	**2.50**	**4**	*eP*	Pn	04 17 14.0	+0.6
	baz=4.0						
SMLT	**Sun Moon Lake**	**2.59**	**353**	*eP*	Pn	04 17 17.1	+2.5
	baz=353						
TYC	**Yuchr**	**2.61**	**352**	*eP*	Pn	04 17 16.9	+2.1
	baz=352						
WHF	**Hehuan Shan**	**2.83**	**0**	*eP*	Pn	04 17 20.7	+2.4
	baz=350						
WHF				*eS*	Sn	04 17 53.8	+2.0
	baz=350						
TWT	**Tachien**	**2.94**	**359**	*eP*	Pn	04 17 20.9	+1.5
	baz=349						
NSK	**Sanguang**	**3.36**	**2**	*eP*	Pn	04 17 27.0	+1.9
	baz=352						

IDC ***27*** *05:04:43.4±1.8, 52°.79N×168°.36W, h0km, mb3.3/2, mb1 3.8/5, mb1mx3.4/31, mbtmp3.6/5, ML3.5/3, Error ellipse: s-maj=48.7km s-min=16.6km az=170.0*
ISCJB ***27*** *05:04:49.8±0.8, 53°.0N±0°.2×168°.6W±0°.1, h72km±5km, mb3.5/1, Error ellipse: s-maj=28.3km s-min=6.1km az=156.1*
NEIC ***27*** *05:04:51.5, 52°.80N×168°.38W, h47km, ML3.5(AEIC), After AEIC.*
ISC 27 05:04:50.9±1.2, 53°.0N±0°.2×168°.57W±0°.10, h62km±9km, n30, σ0°.86/36, Fox Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NIKH	**Nikolski High**	**0.17**	**273**	P	**Pn**	**05 04 59.8**	**-0.6**
NIKH				S	**Sn**	**05 05 06.9**	**-0.4**
OKSP	**Okmok Steeple**	**0.34**	**30**	P	**Pn**	**05 05 01.6**	**+0.1**
OKSO	**Okmok South**	**0.47**	**32**	P	**Pn**	**05 05 02.4**	**-0.2**
OKSO				S	**Sn**	**05 05 12.1**	**+0.8**
OKCE	**Okmok Cone E**	**0.52**	**28**	P	**Pn**	**05 05 03.1**	**-0.2**
OKTU	**Okmok Mt. Tuli**	**0.53**	**37**	P	**Pn**	**05 05 04.0**	**+0.6**
OKFG	**Magazine Ridge**	**0.60**	**41**	P	**Pn**	**05 05 03.9**	**-0.1**
OKFG				S	**Sn**	**05 05 14.9**	**+1.2**
MREP	**Makushin Rep't**	**1.38**	**51**	P	**Pn**	**05 05 14.3**	**+0.2**
MREP				S	**Sn**	**05 05 31.3**	**-0.2**
MCIR	**Makushin Cirqu**	**1.41**	**45**	P	**Pn**	**05 05 14.2**	**-0.2**
MTBL	**Makushin Table**	**1.51**	**48**	P	**Pn**	**05 05 15.7**	**-0.2**
UNV	**Unalaska Valle**	**1.52**	**54**	P	**Pn**	**05 05 15.6**	**-0.3**
UNV				S	**Sn**	**05 05 34.7**	**+0.1**
AKRB	**Akutan Reef Bi**	**1.90**	**51**	P	**Pn**	**05 05 21.2**	**+0.3**
ZRO	**Akutan Zero**	**1.92**	**53**	P	**Pn**	**05 05 21.5**	**+0.3**
LVA	**Lava Point**	**1.93**	**51**	P	**Pn**	**05 05 21.8**	**+0.4**
AKLV	**Akutan Long Va**	**1.97**	**51**	P	**Pn**	**05 05 22.0**	**+0.1**
AKGG	**Akutan Green G**	**1.97**	**50**	P	**Pn**	**05 05 22.3**	**+0.3**
AKGG				S	**Sn**	**05 05 47.0**	**+1.4**
AKUT	**Akutan**	**2.04**	**54**	P	**Pn**	**05 05 23.4**	**+0.5**
WESN	**West Dahl Nort**	**2.86**	**54**	P	**Pn**	**05 05 34.4**	**+0.3**
SSBA	**Shishaldin**	**3.19**	**54**	P	**Pn**	**05 05 38.6**	**-0.1**
SSLW	**Shishaldin Wes**	**3.20**	**54**	P	**Pn**	**05 05 38.7**	**0.0**
KOSE	**Korovin Southe**	**3.40**	**262**	P	**Pn**	**05 05 44.0**	**+2.6**
KOFP	**Korovin Flat P**	**3.44**	**261**	P	**Pn**	**05 05 43.6**	**+1.5**
FALS	**False Pass**	**3.59**	**56**	P	**Pn**	**05 05 44.8**	**+0.8**
DTNA	**Dutton South F**	**4.32**	**57**	P	**Pn**	**05 05 54.4**	**+0.4**
SDPT	**Sand Point**	**5.32**	**60**	*e*Pn	**Pn**	**05 06 08.9**	**+1.2**
	66nm,0.4s						
CHGN	**Chignik**	**6.78**	**56**	*e*Pn	**Pn**	**05 06 28.6**	**+1.1**
KDAK	**Kodiak Island**	**10.29**	**56**	Pn	**Pn**	**05 07 14.3**	**-1.2**
	1.3nm,0.3s,baz=286,slow=13,SNR=7.8						
FX1	**Attu Island--F**	**11.03**	**277**	Pn	**Pn**	**05 07 26.1**	**+0.4**
	0.5nm,0.3s,baz=129,slow=22,SNR=5.9						
ILAR	**Eielson Array**	**16.18**	**35**	Pn	**Pn**	**05 08 32.1**	**-1.9**
	0.1nm,0.3s,baz=227,slow=9.5,SNR=10						
PETK	**Petropavlovsk-**	**20.18**	**284**	P	**P**	**05 09 19.7**	**-0.5**
	0.6nm,0.4s,baz=88,slow=14,SNR=5.0						
TXAR	**Lajitas Array**	**52.26**	**90**	P	**P**	**05 13 55.6**	**-0.2**
	0.2nm,0.4s,baz=295,slow=5.5,SNR=5.9						

IDC ***27*** *05:15:32.4±2.2, 7°.05S×128°.87E, h0km, mb3.7/1, mb1 4.1/4, mb1mx3.7/20, mbtmp3.9/4, ML3.9/3, Error ellipse: s-maj=102.5km s-min=27.3km az=75.0*
AUST ***27*** *05:15:46.0±0.0, 7°.48S×129°.13E, h195km, Error ellipse: s-maj=1.4km s-min=0.9km az=272.0*
ISC 27 05:15:45.3±1.4, 7°.50S±0°.08×128°.9E±0°.1, h200km, n15, σ1°63/13, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**5.64**	**36**	P	**Pn**	**05 17 08.6**	**+0.6**
	baz=8.4,SNR=6.0						
FAKI	**Fak Fak**	**5.64**	**36**	P	**Pn**	**05 17 08.4**	**+0.4**
	baz=5.5,SNR=15						
MTN	**Manton Dam**	**5.74**	**158**	P	**Pn**	**05 17 11.2**	**+1.9**
	baz=5.7,SNR=35						
MTN				S	**Sn**	**05 18 13.4**	**-2.3**
	baz=5.7,SNR=12						
KDU	**Kakadu**	**6.23**	**146**	P	**Pn**	**05 17 17.7**	**+2.1**
	baz=6.2,SNR=63						
KDU				S	**Sn**	**05 18 25.3**	**-1.8**
	baz=6.2,SNR=8.2						
KNRA	**Kununurra**	**8.13**	**181**	P	**Pn**	**05 17 41.7**	**+1.5**
	baz=8.2,SNR=22						
KNRA				S	Sn	05 19 05.9	-5.9
	baz=8.2,SNR=16						
LUWI	**Luwuk**	**8.87**	**316**	P	Pn	05 17 57.3	+7.3
	baz=9.0,SNR=4.7						
LUWI				S	Sx	05 19 04.3	
	baz=9.0,SNR=3.4						
FITZ	**Fitzroy Crossi**	**11.01**	**197**	Pn	**Pn**	**05 18 17.5**	**-0.1**
	2.0nm,0.3s,baz=26,slow=10,SNR=62						
FITZ				Sn	Sn	05 20 14.4	-6.0
	2.1nm,0.3s,baz=112,slow=21,SNR=8.8						
FITZ	**Fitzroy Crossi**	**11.01**	**197**	P	**Pn**	**05 18 17.6**	**0.0**
	baz=11,SNR=23						
FITZ				S	**Sn**	**05 20 20.4**	**-0.1**
	baz=11,SNR=4.8						
WRA	**Warramunga Arr**	**13.44**	**157**	Pn	**P**	**05 18 50.6**	**-0.4**
	0.4nm,0.3s,baz=333,slow=13,SNR=18						
WRA				Sn	S	05 21 11.4	-6.9
	1.1nm,0.3s,baz=331,slow=25,SNR=68						
ASAR	**Alice Springs**	**16.77**	**164**	P	Pn	05 19 34.0	+5.0
	0.2nm,0.3s,baz=338,slow=11,SNR=17						
ASAR				S	**S**	**05 22 34.6**	**+1.8**
	0.4nm,0.3s,baz=348,slow=24,SNR=6.7						
MTSU	**Mount Surprise**	**18.35**	**127**	P	Pn	05 19 56.6	+9.0
	baz=18,SNR=5.1						
MANU	**Manus Island**	**19.17**	**74**	P	**P**	**05 19 52.0**	**-2.0**
	baz=19,SNR=3.6						
MEEK	**Meekatharra**	**21.40**	**206**	P	P	05 20 39.5	+22
	baz=22,SNR=3.7						
PMBI	**Palembang**	**24.46**	**279**	S	S	05 25 12.6	+21
	baz=25,SNR=5.0						
MKAR	**Makanchi Array**	**68.06**	**327**	P	P	05 26 31.4	+8.1
	0.3nm,0.3s,baz=115,slow=9.0,SNR=3.4						

ATH ***27*** *05:29:53.5, 36°.54N×25°.33E, h4km, MD2.7/4*
THE ***27*** *05:29:53.7, 36°.54N×25°.48E, h5km±9km, ML2.1/1, Error ellipse: s-maj=9.6km s-min=0.3km az=245.0*
CSEM ***27*** *05:29:53.4±0.2, 36°.53N×25°.35E, h5km, ML2.1/1, Error ellipse: s-maj=9.1km s-min=2.6km az=96.0*
ISC 27 05:29:53.9±1.1, 36°.53N±0°.02×25°.4E±0°.1, h8km±7km, n18, σ0°.41/34, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
THR2	**Thira island,**	**0.09**	**159**	P	**Pg**	**05 29 55.9**	**-0.3**
THR2	**Thira island,**	**0.09**	**159**	P	**Pg**	**05 29 55.9**	**-0.3**
THR3	**Thira Island,**	**0.12**	**178**	P	**Pg**	**05 29 56.9**	**+0.2**
THR3				S	**Sg**	**05 29 59.0**	**+0.5**
THR3	**Thira Island,**	**0.12**	**178**	P	**Pg**	**05 29 56.9**	**+0.2**
THR3				S	**Sg**	**05 29 59.0**	**+0.5**
SANT	**Santorini**	**0.17**	**162**	P	**Pg**	**05 29 57.0**	**-0.5**
SANT				S	**Sg**	**05 29 59.9**	**0.0**
SANT	**Santorini**	**0.17**	**162**	*e*PG	**Pg**	**05 29 57.2**	**-0.3**
SANT				*e*SG	**Sg**	**05 29 59.9**	**0.0**
SANT	**Santorini**	**0.17**	**162**	*e*Pg	**Pg**	**05 29 57.2**	**-0.3**
SANT				S	**Sg**	**05 29 59.9**	**0.0**
THR1	**Thera Island**	**0.17**	**162**	P	**Pg**	**05 29 57.2**	**-0.3**
THR1				S	**Sg**	**05 29 59.7**	**-0.2**
THR1	**Thera Island**	**0.17**	**162**	P	**Pg**	**05 29 57.2**	**-0.3**
THR1				S	**Sg**	**05 29 59.7**	**-0.2**
APE	**Apeiranthos**	**0.55**	**11**	P	**Pg**	**05 30 04.2**	**-0.3**
APE				S	**Sg**	**05 30 12.1**	**+0.3**
APE	**Apeiranthos**	**0.55**	**11**	*e*PG	**Pg**	**05 30 04.2**	**-0.3**
APE				*e*SG	**Sg**	**05 30 12.0**	**+0.3**
APE	**Apeiranthos**	**0.55**	**11**	P	**Pg**	**05 30 04.2**	**-0.3**
APE				*e*Sg	**Sg**	**05 30 12.0**	**+0.3**
NPS	**Neapolis**	**1.28**	**172**	*e*PG	**Pn**	**05 30 17.5**	**-0.6**
NPS				*e*SB	**Sg**	**05 30 35.2**	**+0.1**
NPS	**Neapolis**	**1.28**	**172**	*e*Pg	**Pn**	**05 30 17.5**	**-0.6**
NPS				*e*Sb	**Sg**	**05 30 35.2**	**+0.1**
IDI	**Anoyia**	**1.31**	**198**	*e*PB	**Pn**	**05 30 18.0**	**-0.5**
IDI				*e*SB	**Sg**	**05 30 35.5**	**-0.5**
IDI	**Anoyia**	**1.31**	**198**	*e*Pn	**Pn**	**05 30 18.0**	**-0.5**
IDI				*e*Sb	**Sg**	**05 30 35.5**	**-0.5**
LAST	**Lasithi**	**1.37**	**177**	*e*PN	**Pn**	**05 30 19.8**	**+0.4**
LAST				*e*SB	**Sn**	**05 30 38.5**	**+0.8**
LAST	**Lasithi**	**1.37**	**177**	*e*Pn	**Pn**	**05 30 19.8**	**+0.4**
LAST				*e*Sb	**Sn**	**05 30 38.5**	**+0.8**

IDC ***27*** *06:18:35.7±1.5, 0°.56N×127°.11E, h0km, mb4.0/4, mb1 4.1/6, mb1mx3.8/23, mbtmp4.0/6, ML3.6/2, Error ellipse: s-maj=50.9km s-min=21.9km az=67.0*
ISCJB ***27*** *06:18:43.7±0.6, 0°.40N±0°.06×126°.64E±0°.05, h33km, mb4.0/4, Error ellipse: s-maj=9.5km s-min=6.6km az=159.5*
DJA ***27*** *06:18:44.9±0.4, 0°.N±4°×12°.7E±°, h46km±16km, M4.2/6, mb4.8/3, mB4.9/3, MLv4.0/6, Mw(mB)4.2/3*
ISC 27 06:18:43.4±1.0, 0°.42N±0°.07×126°.71E±0°.06, h35km, n13, σ2°18/14, mb4.1/4, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**0.74**	**62**	P	**Pn**	**06 18 58.9**	**+1.5**
TNTI				S	**Sn**	**06 19 09.8**	**+2.3**
LBMI	**Labuha**	**1.31**	**143**	P	**Pn**	**06 19 06.7**	**+1.4**
LBMI				S	**Sn**	**06 19 23.9**	**+2.3**
GAMI	**Galela, Maluku**	**1.77**	**37**	P	**Pn**	**06 19 12.0**	**+0.4**
MNI	**Manado**	**2.13**	**299**	P	**Pn**	**06 19 18.3**	**+1.8**
SKSI	**Soroako, Sulaw**	**6.12**	**241**	P	**Pn**	**06 20 13.3**	**+1.8**
	25nm,0.6s,340nm0.1nm						
TTSI	**Tana Toraja**	**7.70**	**243**	P	**Pn**	**06 20 35.0**	**+1.9**
	34nm,0.6s,877nm0.1nm						
SPSI	**Sidrap Palu**	**8.19**	**238**	P	**Pn**	**06 20 41.8**	**+1.9**
KAPI	**Kappang**	**8.80**	**232**	Pn	**Pn**	**06 20 50.2**	**+2.0**
	1.8nm,0.3s,baz=54,slow=17,SNR=5.8						
FITZ	**Fitzroy Crossi**	**18.43**	**183**	P	**P**	**06 22 54.5**	**-1.5**
	0.1nm,0.3s,baz=0.0,slow=16,SNR=2.7						
WRA	**Warramunga Arr**	**21.57**	**160**	P	**P**	**06 23 27.3**	**-2.8**
	5.1nm,0.5s,baz=340,slow=10,SNR=84						
ASAR	**Alice Springs**	**24.94**	**164**	P	**P**	**06 24 01.1**	**-2.6**
	3.1nm,0.6s,baz=348,slow=12,SNR=35						
STKA	**Stephens Creek**	**35.08**	**158**	P	P	06 25 30.6	-2.7
	2.1nm,0.7s,baz=322,slow=12,SNR=5.3						
MKAR	**Makanchi Array**	**60.27**	**326**	P	**P**	**06 28 46.7**	**-1.7**
	0.3nm,0.4s,baz=116,slow=7.6,SNR=10						

GUC ***27*** *06:27:51.4±0.7, 20°.50S×70°.51W, h32km±3km, ML4.5*
NEIC ***27*** *06:27:51.4, 20°.50S×70°.51W, h32km, mb4.4/11, ML4.5(GUC), After GUC.*
IDC ***27*** *06:27:56.2±2.0, 20°.42S×70°.31W, h66km±19km, mb3.8/10, mb1 4.0/12, mb1mx3.9/20, mbtmp3.8/12, MS3.7/6, Ms1 3.7/6, ms1mx3.3/28, Error ellipse: s-maj=20.5km s-min=14.4km az=73.0*
BJI ***27*** *06:27:59.4, 20°.40S×70°.10W, h65km, Ms5.1/1, Ms7 4.7/1*
ISC 27 06:27:50.5±1.7, 20°.46S±0°.02×70°.46W±0°.05, h18km±8km, n81, σ1°23/96, mb4.4/20, MS3.9/5, 4C-12D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HMBC	**Humberstone**	**0.57**	**71**	⇓*i* P	**Pn**	**06 28 03.7**	**0.0**
HMBC				*eS*	**Sn**	**06 28 12.4**	**-0.3**
HMBC	**Humberstone**	**0.57**	**71**	⇓*i* P	**Pn**	**06 28 03.7**	**0.0**
HMBC				*eS*	**Sn**	**06 28 12.4**	**-0.3**
HMBC				AML	AML	06 28 18.5	
	comp=N,30μm,0.6s						
PSGC	**Pisagua**	**0.92**	**20**	⇓*i* P	**Pn**	**06 28 08.9**	**+0.4**
PSGC				*i* S	**Sn**	**06 28 21.8**	**+0.4**
PSGC	**Pisagua**	**0.92**	**20**	⇓*i* P	**Pn**	**06 28 08.9**	**+0.4**
PSGC				*i* S	**Sn**	**06 28 21.8**	**+0.4**
PSGC				AML	AML	06 28 23.7	
	comp=N,14μm,0.3s						
PB01	**Plate Boundary**	**1.08**	**123**	⇓*i* P	**Pb**	**06 28 10.9**	**+0.2**
PB01				*i* S	**Sb**	**06 28 25.2**	**+0.7**
PB01	**Plate Boundary**	**1.08**	**123**	⇓*i* P	**Pb**	**06 28 10.9**	**+0.2**
PB01				*i* S	**Sb**	**06 28 25.2**	**+0.7**
PB01				AML	AML	06 28 25.9	
	comp=N,19μm,0.4s						
PB07	**Plate Boundary**	**1.37**	**157**	⇓*i* P	**Pn**	**06 28 14.9**	**+0.1**
PB07				*i* S	**Sn**	**06 28 32.8**	**+0.1**
PB07	**Plate Boundary**	**1.37**	**157**	⇓*i* P	**Pn**	**06 28 14.9**	**+0.1**
PB07				*i* S	**Sn**	**06 28 32.8**	**+0.1**
PB07				AML	AML	06 28 43.4	
	comp=E,11μm,0.5s						
MNMC	**Minimini**	**1.55**	**32**	⇓*i* P	**Pb**	**06 28 19.4**	**+0.5**
MNMC				*i* S	**Sg**	**06 28 40.6**	**-0.2**
MNMC	**Minimini**	**1.55**	**32**	⇓*i* P	**Pb**	**06 28 19.4**	**+0.5**
MNMC				*i* S	**Sg**	**06 28 40.6**	**-0.2**
MNMC				AML	AML	06 28 44.4	
	comp=E,15μm,0.7s						
PB09	**Plate Boundary**	**1.75

RCBR	**Riachuelo**	**36.55**	**71**	P	**P**		**06 34 55.2**	**-0.4**
RCBR	**Riachuelo**	**36.55**	**71**	P	**P**		**06 34 55.2**	**-0.4**
	comp=E,5.4nm,0.7s,baz=230,slow=6.2,SNR=5.3							
MIAR	**Mount Ida**	**58.95**	**338**	*e*P	**P**		**06 37 48.8**	**-0.1**
	comp=E,5.0nm,0.7s							
TXAR	**Lajitas Array**	**58.96**	**326**	P	**P**		**06 37 47.9**	**-1.1**
TXAR	**Lajitas Array**	**58.96**	**326**	P	**P**		**06 37 47.9**	**-1.1**
	comp=E,0.1nm,0.5s,baz=111,slow=15,SNR=4.4							
SIUC	**Southern Illin**	**60.50**	**343**	*e*P	**P**		**06 37 58.5**	**-0.9**
	comp=E,8.2nm,0.9s							
BBTS	**Babate**	**63.45**	**61**	LR	LR		07 03 44.1	
	comp=E,77nm,18.0s,baz=150,slow=34							
SNAA	**Sanae**	**63.73**	**161**	*e*P	**P**		**06 38 20.7**	**-0.1**
	comp=E,6.0nm,0.9s							
SADO	**Sadowa**	**65.39**	**353**	LR	LR		07 07 31.1	
	comp=E,51nm,19.0s,baz=170,slow=36							
JFWS	**Jewell Farm**	**65.64**	**344**	*e*P	**P**		**06 38 32.7**	**-0.8**
	comp=E,2.0nm,0.5s							
SDCO	**Great Sand Dun**	**66.62**	**330**	*e*P	**P**		**06 38 40.9**	**+0.7**
	comp=E,2.4nm,1.0s							
PV01	**Paradox Valley**	**68.40**	**328**	*e*P	**P**		**06 38 52.6**	**+1.2**
QSPA	**South Pole Qui**	**69.72**	**180**	*e*P	**P**		**06 38 59.6**	**+0.4**
	comp=E,3.5nm,1.0s							
DBIC	**Dimbokro**	**69.84**	**75**	P	**P**		**06 38 58.1**	**-2.5**
DBIC	**Dimbokro**	**69.84**	**75**	P	**P**		**06 38 58.1**	**-2.5**
	comp=E,4.0nm,1.0s,baz=193,slow=14,SNR=2.6							
MVU	**Marysvale**	**70.52**	**326**	*e*P	**P**		**06 39 05.7**	**+1.1**
	comp=E,2.6nm,1.0s							
NOQ	**North Oguirrh**	**72.09**	**328**	*e*P	P		06 39 17.1	+3.2
	comp=E,13nm,0.7s							
DUG	**Dugway**	**72.10**	**327**	*e*P	**P**		**06 39 15.5**	**+1.6**
	comp=E,3.3nm,1.2s							
PDAR	**Pinedale Array**	**72.50**	**331**	P	**P**		**06 39 15.9**	**-0.5**
PDAR	**Pinedale Array**	**72.50**	**331**	P	**P**		**06 39 15.9**	**-0.5**
	comp=E,0.5nm,0.6s,baz=148,slow=8.7,SNR=4.0							
HWUT	**Hardware Ranch**	**72.54**	**329**	*e*P	**P**		**06 39 16.5**	**-0.1**
	comp=E,1.7nm,0.7s							
NVAR	**Mina Array Bea**	**73.79**	**323**	P	**P**		**06 39 24.8**	**+0.7**
NVAR	**Mina Array Bea**	**73.79**	**323**	P	**P**		**06 39 24.8**	**+0.7**
	comp=E,0.2nm,0.5s,baz=119,slow=4.6,SNR=3.1							
RLMT	**Red Lodge**	**74.22**	**333**	*e*P	**P**		**06 39 27.3**	**+0.8**
	comp=E,2.5nm,0.7s							
TOA0	**Torodi Ar. Sit**	**78.38**	**71**	*e*P	**P**		**06 39 49.1**	**-1.4**
TORD	**Torodi Ar. Bea**	**78.38**	**71**	P	**P**		**06 39 49.1**	**-1.3**
TORD	**Torodi Ar. Bea**	**78.38**	**71**	P	**P**		**06 39 49.1**	**-1.3**
	comp=E,4.1nm,0.5s,baz=250,slow=5.6,SNR=41							
YKA	**Yellowknife Ar**	**89.73**	**341**	P	**P**		**06 40 47.0**	**-0.2**
YKA	**Yellowknife Ar**	**89.73**	**341**	P	**P**		**06 40 47.0**	**-0.2**
	comp=E,3.3nm,1.1s,baz=136,slow=4.6,SNR=13							
URZ	**Urewera**	**93.86**	**227**	LR	LR		07 14 20.9	
	comp=E,103nm,19.1s,baz=27,slow=30							
ASAR	**Alice Springs**	**130.13**	**210**	PKP	**PKPdf**		**06 46 59.6**	**-0.6**
ASAR	**Alice Springs**	**130.13**	**210**	PKP	**PKPdf**		**06 46 59.6**	**-0.6**
	comp=E,0.6nm,0.8s,baz=141,slow=3.1,SNR=4.9							
WRA	**Warramunga Arr**	**133.08**	**213**	PKP	**PKPdf**		**06 47 04.9**	**-1.0**
WRA	**Warramunga Arr**	**133.08**	**213**	PKP	**PKPdf**		**06 47 04.9**	**-1.0**
	comp=E,0.7nm,0.7s,baz=150,slow=1.8,SNR=8.8							
ZAA0	**Zalesovo Array**	**141.61**	**23**	*e*PKPdf	**PKPdf**		**06 47 20.6**	**+0.1**
ZALV	**Zalesovo Beam**	**141.61**	**23**	PKP	**PKPdf**		**06 47 20.9**	**+0.4**
ZALV	**Zalesovo Beam**	**141.61**	**23**	PKP	**PKPdf**		**06 47 20.9**	**+0.4**
	comp=E,3.7nm,0.6s,baz=295,slow=2.2,SNR=11							
KSH	**Kashi**	**145.55**	**49**	PKPbc	**PKPab**		**06 47 28.5**	**+0.1**
MK31	**Makanchi Array**	**145.61**	**34**	*e*PKPdf	**PKPdf**		**06 47 27.5**	**-0.3**
MKAR	**Makanchi Array**	**145.61**	**34**	PKPbc	**PKPbc**		**06 47 27.9**	**-0.1**
MKAR	**Makanchi Array**	**145.61**	**34**	PKPbc	**PKPbc**		**06 47 27.9**	**-0.1**
	comp=E,7.0nm,0.8s,baz=326,slow=3.5,SNR=34							
USRK	**Ussuriysk Arra**	**149.85**	**327**	PKPbc	**PKPbc**		**06 47 40.0**	**+0.5**
	comp=E,3.2nm,0.7s,baz=19,slow=2.7,SNR=6.8							
MJAR	**Matsushiro Arr**	**150.29**	**309**	PKPbc	**PKPbc**		**06 47 40.0**	**-0.9**
MJAR	**Matsushiro Arr**	**150.29**	**309**	PKPbc	**PKPbc**		**06 47 40.0**	**-0.9**
	comp=E,2.0nm,0.5s,baz=106,slow=1.5,SNR=6.5							
MAT	**Matsushiro**	**150.29**	**309**	*e*PKP	**PKPbc**		**06 47 41.1**	**+0.2**
WMQ	**Urumqi**	**150.43**	**33**	*e*PKPbc	**PKPdf**		**06 47 37.0**	**+1.2**
HHC	**Hu-ho-hao-te**	**159.60**	**356**	*e*PKP	**PKPdf**		**06 47 51.3**	**+2.8**
HHC				PKS	**PKSdf**		**06 51 23.8**	**+1.8**
HHC				PP	PP		06 52 13.5	+6.5
HHC				SS	SS		07 12 12.3	-0.4
HHC				LR	LR			
	comp=N,96nm,19.8s							
HHC				LR	LR			
	comp=E,160nm,20.8s							
HHC				LR	LR			
	comp=Z,92nm,19.2s							

IDC ***27*** *06:33:47.0±0.4, 19˚04N×121˚12E, h0km, mb4.6/27, mb1 4.8/29, mb1mx4.7/33, mbtmp4.7/29, ML5.2/2, MS4.2/25, Ms1 4.2/25, ms1mx4.0/43, Error ellipse: s-maj=14.9km s-min=10.8km az=88.0*

BJI ***27*** *06:33:47.5, 19˚21N×121˚22E, h7km, mB4.8/34, mb4.7/50, ML4.5/4, Ms4.5/55, Ms7 4.3/51*

NEIC ***27*** *06:33:48.8±0.2, 19˚09N×121˚11E, h10km, mb5.0/56, Error ellipse: s-maj=4.9km s-min=3.7km az=100.0*

NEIC Felt [II PIVS] at Laoag and Pasuquin, Luzon.

MOS ***27*** *06:33:50.7±1.0, 19˚.10N×121˚.15E, h33km, mb5.1/55, MS4.1/9, Error ellipse: s-maj=8.7km s-min=4.9km az=108.6*

ISCJB ***27*** *06:33:51.3±0.1, 19˚.19N±0˚.02×121˚.09E±0˚.03, h33km, mb4.8/131, MS4.3/42, Error ellipse: s-maj=4.0km s-min=2.1km az=6.2*

MAN ***27*** *06:33:52, 19˚.03N×120˚.94E, h10km, mb5.6, ML4.6, MS5.0*

MAN INTENSITY II - PASUQUIN ILOCOS NORTE; LAOAG CITY.

DJA ***27*** *06:34:06.8±1.3, 19˚N±5˚×12˚1E±˚, h130km±13km, M4.7/9, mB5.2/4, mb4.8/9, Mw(mB)4.6/4*

ISC 27 06:33:52.3±0.5, 19˚12N±0˚.03×121˚20E±0˚.04, h31km±3km, h31km;pP-P, n396, σ1≧50/434, mb4.9/130, MS4.2/43, 15C-21D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
PIP	**Pasuquin**	**0.96**	**215**	∥*i*P	P	**Pn**	06 34 06.0	-3.7
APYP	**Conner**	**1.25**	**178**	*e*P	**P**	**Pn**	**06 34 13.8**	**+0.1**
APYP				*e*S	**S**	**Sb**	**06 34 31.7**	**+0.7**
CVP	**Callao Caves**	**1.52**	**157**	∥*i*P	**P**	**Pn**	**06 34 19.1**	**+1.6**
ABRA	**Dolores**	**1.53**	**198**	*e*P	**P**	**Pn**	**06 34 17.4**	**-0.1**
ABRA				*e*S	**S**	**Sn**	**06 34 37.1**	**+0.7**
CAUP	**Cauayan**	**2.24**	**165**	*e*P	**P**	**Pb**	**06 34 31.4**	**-0.7**
BOLP	**Bolinao**	**2.98**	**204**	*e*P	**P**	**Pn**	**06 34 38.5**	**+1.0**
BALP	**Baler**	**3.38**	**174**	*e*P	**P**	**Pn**	**06 34 45.1**	**+2.2**
SCZP	**Santa Cruz**	**3.54**	**200**	*e*P	**P**	**Pn**	**06 34 45.4**	**+0.2**
TWG	**Pinlang**	**3.69**	**358**	*e*Pn	**P**	**Pn**	**06 34 44.9**	**-2.4**
TWG				*e*Sn	**S**	**Sn**	**06 35 27.7**	**-2.0**
TPUB	**Ta-pu**	**4.20**	**353**	*e*Pn	**P**	**Pn**	**06 34 52.6**	**-1.7**
TPUB				*e*Sn	**S**	**Sn**	**06 35 39.2**	**-3.1**
YULB	**Yu-li**	**4.26**	**1**	*e*Pn	P	Pn	06 34 52.1	-2.9
YULB				*e*Sn	**S**	**Sn**	**06 35 44.0**	**+0.2**
SSLB	**Suanglung**	**4.65**	**357**	*e*Pn	**P**	**Pn**	**06 34 59.4**	**-1.2**
SSLB				*e*Sn	**S**	**Sn**	**06 35 50.5**	**-3.1**
LQP	**Lukban**	**4.99**	**176**	*e*P	P	Pn	06 35 09.7	+4.4
TGY	**Tagaytay City**	**4.99**	**183**	∥*i*P	P	Pn	06 35 02.8	-2.4
TGY	**Tagaytay City**	**4.99**	**183**	Pn	**P**	**Pn**	**06 35 06.1**	**+0.8**
TGY	**Tagaytay City**	**4.99**	**183**	Pn	**P**	**Pn**	**06 35 06.1**	**+0.8**
	27nm,0.3s,baz=105,slow=8.8,SNR=19							
NACB	**Ninganchiao**	**5.05**	**4**	*e*Pn	**P**	**Pn**	**06 35 04.7**	**-1.3**
NACB				*e*Sn	**S**	**Sn**	**06 36 01.6**	**-1.6**
GQP	**Guinayangan**	**5.32**	**167**	∥*e*P	**P**	**Pn**	**06 35 12.2**	**+2.5**
YHNB	**Yeheng**	**5.53**	**2**	*e*Pn	**P**	**Pn**	**06 35 11.8**	**-0.8**
YHNB				*e*Sn	**S**	**Sn**	**06 36 15.3**	**+0.1**
QZH	**Quanzhou**	**6.28**	**338**	Pn	P	Pn	06 35 19.8	-3.1
QZH				Sn	S	Sn	06 36 26.0	-7.6
QZH				smax	smax			
	comp=N,780nm,1.2s							
QZH				smax	smax			
	comp=E,780nm,0.9s							
QZH				LR	LR			
	comp=N,4μm,15.0s							
QZH				LR	LR			
	comp=E,4μm,13.2s							
QZH				LR	LR			
	comp=Z,4μm,14.3s							
JOW	**Kunigami**	**10.07**	**39**	*e*Pn	**P**	**Pn**	**06 36 14.6**	**-0.2**
QIZ	**Qiongzhong**	**10.74**	**271**	P	**P**	**Pn**	**06 36 21.5**	**-2.6**
QIZ				S	**S**	**Sn**	**06 38 22.3**	**-1.0**
QIZ				pmax	pmax			
	comp=Z,28nm,1.4s							
QIZ				LR	LR			
	comp=N,2μm,15.4s							
QIZ				LR	LR			
	comp=E,780nm,17.5s							
QIZ				LR	LR			
	comp=Z,2μm,16.6s							
QIZ	**Qiongzhong**	**10.74**	**271**	*e*Pn	P		06 36 19.7	-4.4
	comp=Z,28nm,0.6s							
QIZ				*e*Sn	Sn		06 38 12.8	-10
SSE	**Sheshan**	**11.93**	**360**	P	**Pn**		**06 36 41.0**	**+0.7**
SSE				S	**Sn**		**06 38 56.8**	**+4.5**
SSE				pmax	pmax			
	comp=Z,48nm,0.6s							
SSE				pmax	pmax			
	comp=Z,100nm,4.8s							
SSE				LR	LR			
	comp=N,830nm,22.9s							
SSE				LR	LR			
	comp=E,620nm,22.9s							
SSE				LR	LR			
	comp=Z,1μm,21.3s							
DAV	**Davao City (W)**	**12.71**	**160**	LR	LR		06 42 21.0	
	comp=Z,666nm,19.6s,baz=333,slow=41							
WHN	**Wuhan**	**12.96**	**333**	P	Pn		06 36 58.0	+3.6
WHN				S	Sn		06 39 25.0	+7.4
WHN				LR	LR			
	comp=N,2μm,15.0s							
WHN				LR	LR			
	comp=E,4μm,14.2s							
WHN				LR	LR			
	comp=Z,3μm,14.0s							
NJ2	**Nanjing**	**13.05**	**351**	*e*P	**Pn**		**06 36 55.3**	**-0.4**
NJ2				pP	P		06 36 58.3	-7.3
NJ2				sP			06 37 01.0	
NJ2				PP	**PnPn**		**06 37 05.0**	**+1.2**
NJ2				S	**Sn**		**06 39 21.0**	**+1.2**
NJ2				sS	S		06 39 28.0	-16
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.5s							
NJ2				pmax	pmax			
	comp=Z,150nm,3.8s							
NJ2				LR	LR			
	comp=N,1μm,17.6s							
NJ2				LR	LR			
	comp=E,1μm,13.7s							
NJ2				LR	LR			
	comp=Z,1μm,15.9s							
KKM	**Kota Kinabalu**	**13.87**	**201**	P	**P**		**06 37 14.0**	**-0.9**
KKM	**Kota Kinabalu**	**13.87**	**201**	P	**P**		**06 37 14.4**	**-0.5**
SDKM	**Sandakan**	**13.95**	**197**	P	**Pn**		**06 37 09.1**	**+1.0**
MYLDM	**Lahad Datu**	**14.10**	**191**	P	**Pn**		**06 37 12.0**	**+2.0**
MYLDM	**Lahad Datu**	**14.10**	**191**	P	**P**		**06 37 15.8**	**-1.5**
TSM	**Tawau**	**15.09**	**193**	P	**Pn**		**06 37 24.5**	**+1.2**
GYA	**Guiyang**	**15.26**	**301**	P	**Pn**		**06 37 24.3**	**-1.4**
GYA				PP	**PnPn**		**06 37 36.5**	**+2.5**
GYA				S	**Sn**		**06 40 15.0**	**+1.1**
GYA				SS	**S**		**06 40 33.8**	**+3.9**
GYA				pmax	pmax			
	comp=Z,20nm,0.8s							
GYA				pmax	pmax			
	comp=Z,120nm,4.5s							
GYA				LR	LR			
	comp=N,520nm,15.9s							
GYA				LR	LR			
	comp=E,480nm,16.0s							
GYA				LR	LR			
	comp=Z,550nm,15.6s							
ENH	**Enshi**	**15.37**	**319**	*e*P	**Pn**		**06 37 25.4**	**-1.6**
	comp=Z,26nm,0.9s							
JNU	**Nakatsue**	**16.42**	**30**	*e*P	**Pn**		**06 37 41.2**	**+0.6**
	comp=Z,116nm,0.9s							
JNU	**Nakatsue**	**16.42**	**30**	Pn	**Pn**		**06 37 41.3**	**+0.8**
	comp=Z,6.2nm,0.3s,baz=195,slow=6.9,SNR=40							
JNU				LR	LR		06 43 55.4	
	comp=Z,882nm,21.7s,baz=15,slow=37							
BTM	**Bintulu**	**17.70**	**208**	P	**Pn**		**06 37 56.8**	**+0.2**
MNI	**Manado**	**17.92**	**168**	P	P		06 38 05.9	+6.1
KMI	**Kunming**	**18.11**	**293**	P	**P**		**06 38 03.0**	**+1.0**
KMI				pP	**pP**		**06 38 08.8**	**-1.4**
KMI				sP	**sP**		**06 38 11.8**	**-2.3**
KMI				PP	**PnPn**		**06 38 19.5**	**+6.2**
KMI				S	**Sn**		**06 41 20.8**	**-2.4**
KMI				sS	**S**		**06 41 29.0**	**+0.8**
KMI				SS	**SnSn**		**06 41 44.0**	**+7.0**
KMI				pmax	pmax			
	comp=Z,11nm,1.5s							
KMI				pmax	pmax			
	comp=Z,150nm,5.7s							
KMI				LR	LR			
	comp=N,3μm,16.0s							
KMI				LR	LR			
	comp=E,2μm,17.9s							
KMI				LR	LR			
	comp=Z,1μm,15.7s							
GAMI	**Galela, Maluku**	**18.34**	**159**	P	Pn		06 38 17.3	+13
	comp=Z,105nm,1.0s,comp=Z,3μm							
XAN	**Xi'an**	**18.45**	**326**	P	**Pn**		**06 38 08.0**	**+2.2**
XAN				pP	**pP**		**06 38 14.8**	**+1.1**
XAN				sP	**sP**		**06 38 18.0**	**+0.3**
XAN				S	Sn		06 41 21.0	-10
XAN				pmax	pmax			
	comp=Z,3.0nm,0.8s							
XAN				pmax	pmax			
	comp=Z,29nm,3.9s							
XAN				LR	LR			
	comp=N,710nm,16.3s							
XAN				LR	LR			
	comp=E,210nm,16.3s							
XAN				LR	LR			
	comp=Z,180nm,17.3s							
MRSI	**Marisa**	**18.54**	**178**	P	**Pn**		**06 38 09.3**	**+2.4**
SBUM	**Sibu**	**18.75**	**209**	P	**P**		**06 38 08.6**	**-0.2**
SBUM	**Sibu**	**18.75**	**209**	P	**P**		**06 38 09.0**	**+0.1**
KSAR	**Wonju Array Be**	**19.17**	**16**	P	**P**		**06 38 13.2**	**-0.2**
KSAR				PcP	**PcP**		**06 42 37.0**	**+0.6**
KSRS	**Korea Array**	**19.20**	**16**	P	**P**		**06 38 13.2**	**-0.4**
	comp=Z,8.4nm,0.3s,baz=196,slow=11,SNR=104							
KSRS				PcP	**PcP**		**06 42 37.0**	**+0.6**
	comp=Z,0.3nm,0.3s,baz=211,slow=2.2,SNR=4.4							
KSRS				LR	LR		06 46 52.8	
	comp=Z,736nm,18.1s,baz=194,slow=41							
CHBT	**CHBT**	**19.21**	**254**	P	**Pn**		**06 38 15.8**	**+0.8**
PBKT	**Sadao Pong**	**19.42**	**266**	P	**P**		**06 38 16.2**	**0.0**
CD2	**Chengdu**	**19.66**	**310**	*e*P	**P**		**06 38 19.0**	**+0.2**
CD2				pP	**Pn**		**06 38 23.3**	**+2.9**
CD2				sP	sP		06 38 26.8	-4.2
CD2				PP	**PnPn**		**06 38 37.3**	**+3.0**
CD2				S	**S**		**06 41 55.5**	**-3.5**
CD2				sS	**Sn**		**06 42 00.3**	**-0.1**
CD2				SS	**SnSn**		**06 42 22.0**	**+7.1**
CD2				pmax	pmax			
	comp=Z,30nm,0.8s							
CD2				pmax	pmax			
	comp=Z,140nm,5.4s							
CD2				LR	LR			
	comp=N,2μm,16.7s							
CD2				LR	LR			
	comp=E,2μm,14.3s							
CD2				LR	LR			
	comp=Z,800nm,13.2s							
DL2	**Dalian**	**19.73**	**1**	*e*P	**P**		**06 38 15.3**	**-4.1**
DL2				*e*S	**S**		**06 41 56.5**	**-3.6**
DL2				LR	LR			
	comp=E,640nm,12.8s							
DL2				LR	LR			
	comp=Z,410nm,16.6s							
LUWI	**Luwuk**	**20.09**	**175**	P	Pn		06 38 34.2	+8.7
KSM	**Kuching**	**20.52**	**213**	*e*P	**P**		**06 38 27.6**	**-0.6**
	comp=Z,49nm,1.1s							
KSM	**Kuching**	**20.52**	**213**	P	**P**		**06 38 27.8**	**-0.5**
KSM	**Kuching**	**20.52**	**213**	P	**P**		**06 38 27.9**	**-0.4**
MTKI	**Muara Teweh, K**	**20.87**	**198**	P	Pn		06 38 35.9	+1.3
CMMT	**Chiang Mai**	**21.05**	**273**	P	**P**		**06 38 33.8**	**-0.1**
CHTO	**Chiang Mai**	**21.05**	**273**	*e*P	**P**		**06 38 32.7**	**-1.2**
CHTO				pmax	pmax			
	comp=Z,28nm,1.1s							
CHTO	**Chiang Mai**	**21.05**	**273**	*e*P	**P**		**06 38 32.7**	**-1.2**
	comp=Z,28nm,1.1s							
CHTO	**Chiang Mai**	**21.05**	**273**	P	**P**		**06 38 33.3**	**-0.7**
	comp=Z,28nm,1.6s,comp=Z,456nm							
CMAR	**Chiang Mai Arr**	**21.08**	**272**	P	**P**		**06 38 33.9**	**-0.4**
CMAR				PcP	**PcP**		**06 42 41.5**	**+1.2**
CMAR	**Chiang Mai Arr**	**21.08**	**272**	P	**P**		**06 38 33.9**	**-0.4**
	comp=Z,10.0nm,0.9s,baz=76,slow=9.3,SNR=32							
CMAR				PcP	**PcP**		**06 42 41.5**	**+1.2**
	comp=Z,0.8nm,0.3s,baz=47,slow=1.0,SNR=4.3							
CMAR				LR	LR		06 46 56.7	
	comp=Z,371nm,19.5s,baz=317,slow=38							
STKI	**Sintang**	**21.20**	**208**	P	**P**		**06 38 35.3**	**-0.2**
BJT	**Baijiatuao**	**21.28**	**349**	*e*P	**P**		**06 38 36.3**	**+0.1**
	comp=Z,72nm,0.8s							
BJI	**Beijing**	**21.30**	**349**	P	**P**		**06 38 36.5**	**+0.1**
BJI				S	**S**		**06 42 32.0**	**+0.6**
BJI				sS	Sn		06 42 38.5	-1.0
BJI				pmax	pmax			
	comp=Z,29nm,1.1s							
BJI				pmax	pmax			
	comp=Z,270nm,3.1s							
BJI				LR	LR			
	comp=N,270nm,22.3s							
BJI				LR	LR			
	comp=E,940nm,18.7s							
BJI				LR	LR			
	comp=Z,530nm,19.7s							
SKSI	**Soroako, Sulaw**	**21.51**	**180**	P	**P**		**06 38 39.4**	**+0.5**
	comp=Z,41nm,0.9s,comp=Z,390nm							
JHJ	**Hachijo jima 2**	**21.70**	**46**	P	**P**		**06 38 39.8**	**-1.0**
	comp=Z,155nm,0.7s,baz=197,slow=8.9,SNR=11							
JHJ				LR	LR		06 45 43.0	
	comp=Z,661nm,20.5s,baz=83,slow=33							
TTSI	**Tana Toraja**	**22.06**	**184**	P	**P**		**06 38 47.3**	**+2.5**
KTGM	**Kuala Trenggan**	**22.31**	**234**	P	**P**		**06 38 47.0**	**-0.5**
SNY	**Shenyang**	**22.73**	**5**	∥P	**P**		**06 38 51.8**	**+0.1**
SNY				S	**S**		**06 42 56.0**	**-2.3**
SNY				pmax	pmax			
	comp=Z,57nm,0.6s							
SNY				pmax	pmax			
	comp=Z,250nm,3.5s							
SNY				LR	LR			
	comp=N,400nm,15.3s							
SNY				LR	LR			
	comp=E,910nm,14.7s							
SNY				LR	LR			
	comp=Z,640nm,17.7s							
LZH	**Lanzhou**	**22.79**	**321**	*e*P	**P**		**06 38 53.0**	**+0.3**
LZH				pP	pP		06 38 56.5	-4.5
LZH				sP	sP		06 39 00.0	-4.9
LZH				PP	**PnPn**		**06 39 23.5**	**+6.2**
LZH				*e*S	**S**		**06 42 58.5**	**-1.4**
LZH				sS	Sn		06 43 01.3	-14
LZH				SS	**SnSn**		**06 43 36.5**	**+4.7**
LZH				pmax	pmax			
	comp=Z,57nm,1.4s							
LZH				pmax	pmax			
	comp=Z,230nm,4.8s							
LZH				LR	LR			
	comp=N,860nm,14.9s							
LZH				LR	LR			
	comp=E,670nm,17.1s							
LZH				LR	LR			
	comp=Z,1μm,17.8s							
KBKI	**Kotabaru**	**22.82**	**193**	P	**P**		**06 38 54.8**	**+2.0**
MAJO	**Matsushiro**	**22.91**	**37**	*e*P	**P**		**06 38 54.3**	**+0.6**
MAJO				pmax	pmax			
	comp=Z,31nm,0.9s							
MAJO	**Matsushiro**	**22.91**	**37**	*e*P	**P**		**06 38 54.3**	**+0.6**
	comp=Z,32nm,0.9s							
MAT	**Matsushiro**	**22.91**	**37**	P	**P**		**06 38 53.4**	**-0.3**
MAT				S	**S**		**06 43 04.4**	**+2.8**
MJAR	**Matsushiro Arr**	**22.91**	**37**	P	**P**		**06 38 53.6**	**-0.1**
MJAR				PcP	**PcP**		**06 42 44.0**	**+0.3**
MJAR				ScP	**ScP**		**06 46 21.2**	**+1.9**
MJAR	**Matsushiro Arr**	**22.91**	**37**	P	**P**		**06 38 53.6**	**-0.1**
	comp=Z,9.1nm,0.6s,baz=223,slow=10,SNR=34							
MJAR				PcP	**PcP**		**06 42 44.0**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=222,slow=1.6,SNR=4.7							
MJAR				ScP	**ScP**		**06 46 21.2**	**+1.9**
	comp=Z,1.4nm,0.9s,baz=147,slow=2.9,SNR=5.1							
MJAR				LR	LR		06 47 18.7	
	comp=Z,316nm,21.7s,baz=225,slow=35							
SPSI	**Sidrap Palu**	**22.98**	**184**	P	**P**		**06 38 57.0**	**+2.5**
HHC	**Hu-ho-hao-te**	**23.18**	**341**	*e*P	**P**		**06 38 56.8**	**+0.3**
HHC				PP	**PnPn**		**06 39 26.0**	**+3.4**
HHC				PcP	**PcP**		**06 42 44.3**	**+0.1**
HHC				S	**S**		**06 43 05.0**	**-1.3**
HHC				SS	**SnSn**		**06 43 49.0**	**+7.8**
HHC				pmax	pmax			
	comp=Z,70nm,1.1s							
HHC				pmax	pmax			
	comp=Z,330nm,5.4s							
HHC				LR	LR			
	comp=N,2μm,12.2s							
HHC				LR	LR			
	comp=E,1μm,12.2s							
HHC				LR	LR			
	comp=Z,2μm,12.9s							
BBKI	**Banjar Baru**	**23.29**	**196**	P	**P**		**06 38 57.9**	**+0.2**
BTO	**Baotou**	**23.47**	**338**	*e*P	**P**		**06 38 57.3**	**-2.0**
KAPI	**Kappang**	**24.02**	**184**	P	**P**		**06 39 02.1**	**-2.5**
KAPI	**Kappang**	**24.02**	**184**	P	**P**		**06 39 02.1**	**-2.5**
	comp=Z,12nm,0.5s,baz=13,slow=7.1,SNR=4.1							
KAPI				LR	LR		06 48 54.3	
	comp=Z,607nm,19.6s,baz=359,slow=38							
MYKOM	**Kota Tinggi**	**24.19**	**227**	P	**P**		**06 39 05.1**	**-1.2**
MYKOM	**Kota Tinggi**	**24.19**	**227**	P	**P**		**06 39 06.5**	**+0.3**
KULM	**Kulim**	**24.29**	**238**	*e*P	**P**		**06 39 06.1**	**-1.1**
	comp=Z,70nm,1.1s							
KULM	**Kulim**	**24.29**	**238**	P	**P**		**06 39 06.3**	**-0.9**
KULM	**Kulim**	**24.29**	**238**	P	**P**		**06 39 07.7**	**+0.5**
BKSI	**Bulukumba**	**24.31**	**183**	P	**P**		**06 39 07.9**	**+0.6**
KGM	**Kluang**	**24.40**	**228**	P	**P**		**06 39 07.2**	**-0.9**
IPM	**Ipoh**	**24.48**	**236**	*e*P	**P**		**06 39 07.3**	**-1.6**
	comp=Z,102nm,1.2s							
IPM	**Ipoh**	**24.48**	**236**	P	**P**		**06 39 07.5**	**-1.4**
IPM	**Ipoh**	**24.48**	**236**	P	**P**		**06 39 08.8**	**-0.1**
FRIM	**Kepong**	**24.80**	**233**	P	**P**		**06 39 11.0**	**-0.8**
CN2	**Changchun**	**24.87**	**7**	*e*P	**P**		**06 39 12.3**	**+0.1**
CN2				*e*PP	**PnPn**		**06 39 49.8**	**+4.3**
CN2			

SHL	**Shillong**	**27.83**	**289**	*e*PKP	**P**		**06 39 40.0**	**+0.7**
KHKI	**Kahang-Kahang**	**27.86**	**192**	P	**P**		**06 39 41.7**	**+2.4**
PPI	**Padang Panjang**	**28.20**	**229**	P	**P**		**06 39 42.9**	**+0.4**
PWJI	**Pagerwojo**	**28.51**	**200**	P	**P**		**06 39 44.7**	**-0.5**
	comp=Z,50nm,0.9s							
BJII	**Banjamegara**	**28.62**	**204**	P	P		06 39 52.0	+5.8
	comp=Z,33nm,1.4s							
LSA	**Lhasa**	**29.24**	**297**	*e*P	P		06 39 45.0	-7.2
ERM	**Erimo**	**29.48**	**34**	P	P		06 39 58.8	+5.3
	comp=Z,190nm,0.9s,SNR=5.1							
ERM	**Erimo**	**29.48**	**34**	⇓*e*P	P		06 39 58.2	+4.7
ERM	**Erimo**	**29.48**	**34**	*e*P	P		06 39 57.7	+4.1
	comp=Z,33nm,1.0s							
HIA	**Hailar**	**30.10**	**358**	*e*P	**P**		**06 39 58.0**	**-1.0**
	comp=Z,17nm,0.8s							
ASAJ	**Asahikawa**	**30.70**	**31**	*e*P	**P**		**06 40 04.6**	**+0.3**
	comp=Z,26nm,0.9s							
ULN	**Ulaanbaatar**	**30.90**	**341**	*e*P	**P**		**06 40 06.9**	**+0.6**
	comp=Z,15nm,1.2s							
ULN	**Ulaanbaatar**	**30.90**	**341**	P	**P**		**06 40 07.2**	**+0.9**
	comp=Z,11nm,0.8s							
SONM	**Songino Array**	**31.08**	**341**	P	**P**		**06 40 07.9**	**0.0**
SONM	**Songino Array**	**31.08**	**341**	P	**P**		**06 40 07.9**	**0.0**
	comp=Z,6.9nm,0.7s,baz=156,slow=9.4,SNR=8.9							
SONM				LR	LR		06 54 48.0	
	comp=Z,751nm,18.0s,baz=234,slow=40							
KLR	**Kul'dur**	**31.22**	**13**	*e*P	P		06 40 05.0	-3.9
KLR				pmax	pmax			
	comp=Z,45nm,1.6s							
KLR				MLR	MLR			
	comp=E,500nm,13.0s							
KLR				MLR	MLR			
	comp=Z,2µm,13.0s							
HABR	**Khabarovsk**	**31.36**	**18**	*e*P	**P**		**06 40 08.0**	**-2.1**
HABR							06 41 10.7	
HABR							06 43 00.8	
HABR				*e*S	**S**		**06 45 16.8**	**+1.5**
HABR							06 50 40.7	
HABR				MLR	MLR			
	comp=Z,335nm,18.0s							
HABR				pmax	pmax			
	comp=Z,16nm,2.0s							
HABR				pmax	pmax			
	comp=N,8.0nm,1.3s							
HABR				pmax	pmax			
	comp=E,14nm,1.0s							
TAPN	**Taplejung**	**31.77**	**291**	*e*P	**P**		**06 40 14.1**	**-0.3**
	comp=E,84nm,1.1s							
ODAN	**Odare**	**31.99**	**290**	*e*P	**P**		**06 40 15.8**	**-0.4**
	comp=E,36nm,0.8s							
RAMN	**Ramite**	**32.70**	**290**	*e*P	**P**		**06 40 22.2**	**-0.3**
	comp=E,137nm,1.1s							
YSS	**Yuzh-Sakhalins**	**32.91**	**28**	⇑*i*P	**P**		**06 40 24.9**	**+1.2**
YSS				*e*			06 40 40.2	
YSS				pmax	pmax			
	comp=E,20nm,0.8s							
YSS				pmax	pmax			
	comp=Z,30nm,0.8s							
YSS				MLR	MLR			
	comp=Z,200nm,15.0s							
YSS				MLR	MLR			
	comp=N,200nm,16.0s							
GUN	**Gumba**	**33.45**	**292**	*e*P	**P**		**06 40 28.6**	**-0.6**
	comp=N,54nm,0.8s							
PKI	**Pulchoki**	**33.83**	**291**	*e*P	**P**		**06 40 31.4**	**-1.0**
PKIN	**Phulchoki**	**33.84**	**291**	*e*P	**P**		**06 40 31.4**	**-1.0**
KKN	**Kakani**	**33.97**	**292**	*e*P	**P**		**06 40 32.5**	**-1.0**
	comp=N,37nm,0.9s							
DMN	**Daman**	**34.10**	**291**	*e*P	**P**		**06 40 33.7**	**-1.0**
	comp=N,89nm,1.3s							
ZAK	**Zakamensk**	**34.31**	**340**	*e*P	**P**		**06 40 34.9**	**-1.1**
ZAK				pmax	pmax			
	comp=Z,5.0nm,1.2s							
TLY	**Talaya**	**35.31**	**341**	*e*P	**P**		**06 40 45.3**	**+0.7**
TLY				*e*S	S		06 46 09.7	-7.0
TLY				pmax	pmax			
	comp=Z,8.0nm,0.6s							
TLY				MLR	MLR			
	comp=Z,591nm,21.0s							
DANN	**Dangsing**	**35.37**	**292**	*e*P	**P**		**06 40 43.7**	**-2.0**
	comp=Z,104nm,1.4s							
KOLN	**Koldamda**	**35.44**	**291**	*e*P	**P**		**06 40 45.4**	**-0.8**
	comp=Z,33nm,0.8s							
IRK	**Irkutsk**	**35.62**	**342**	*e*P	**P**		**06 40 44.4**	**-2.8**
IRK				pmax	pmax			
	comp=Z,34nm,1.7s							
MOY	**Mondy**	**36.16**	**339**	*e*P	**P**		**06 40 52.5**	**+0.5**
FITZ	**Fitzroy Crossi**	**37.24**	**173**	*e*P	**P**		**06 40 59.2**	**-2.1**
	comp=Z,4.4nm,0.5s							
WMQ	**Urumqi**	**37.32**	**319**	*e*P	**P**		**06 41 02.0**	**+0.1**
WMQ				pP	pP		06 41 06.0	-4.9
WMQ				sP	sP		06 41 09.0	-5.7
WMQ				PP	**PnPn**		**06 42 28.0**	**0.0**
WMQ				*e*S	**S**		**06 46 49.0**	**+1.4**
WMQ				SS	**SnSn**		**06 49 21.0**	**-4.0**
WMQ				pmax	pmax			
	comp=Z,15nm,1.1s							
WMQ				pmax	pmax			
	comp=Z,96nm,3.8s							
WMQ				LR	LR			
	comp=N,1µm,16.6s							
WMQ				LR	LR			
	comp=E,660nm,17.4s							
WMQ				LR	LR			
	comp=Z,910nm,21.0s							
CLNS	**Chul'man**	**37.77**	**3**	*e*P	**P**		**06 41 05.8**	**+0.4**
CLNS				*e*			06 42 27.8	
CLNS				*e*S	**S**		**06 46 54.5**	**+0.5**
CLNS				*e*			06 51 14.4	
CLNS				pmax	pmax			
	comp=Z,18nm,1.0s							
CLNS				pmax	pmax			
	comp=N,11nm,0.9s							
CLNS				pmax	pmax			
	comp=E,7.0nm,0.9s							
CLNS				pmax	pmax			
	comp=E,6.0nm,1.2s							
CLNS				pmax	pmax			
	comp=N,8.0nm,1.3s							
CLNS				pmax	pmax			
	comp=Z,7.0nm,1.3s							
CLNS				smax	smax			
	comp=E,199nm,17.4s							
CLNS				smax	smax			
	comp=N,36nm,17.4s							
COEN	**Coen**	**39.35**	**145**	*e*P	**P**		**06 41 19.0**	**-0.2**
	comp=N,22nm,0.6s							
MBWA	**Marble Bar**	**40.05**	**182**	*e*P	**P**		**06 41 23.8**	**-1.1**
	comp=N,7.0nm,0.5s							
HYB	**Hyderabad**	**40.46**	**275**	*i* P	**P**		**06 41 27.0**	**-1.5**
WRAB	**Tennant Creek**	**40.89**	**161**	P	**P**		**06 41 30.0**	**-1.9**
	comp=N,64nm,0.6s,SNR=10							
WRAB	**Tennant Creek**	**40.89**	**161**	*e*P	P		06 41 28.9	-3.0
WRAB				pmax	pmax			
	comp=Z,12nm,1.0s							
WRAB	**Tennant Creek**	**40.89**	**161**	*e*P	P		06 41 28.9	-3.0
	comp=Z,12nm,1.0s							
WRA	**Warramunga Arr**	**40.90**	**161**	P	**P**		**06 41 29.3**	**-2.7**
WRA				PcP	**PcP**		**06 43 32.4**	**+0.1**
WRA				ScP	**ScP**		**06 47 20.8**	**+1.0**
WRA	**Warramunga Arr**	**40.90**	**161**	P	**P**		**06 41 29.3**	**-2.7**
	comp=Z,3.5nm,0.5s,baz=342,slow=9.1,SNR=72							
WRA				PcP	**PcP**		**06 43 32.4**	**+0.1**
	comp=Z,2.6nm,0.7s,baz=339,slow=3.3,SNR=6.0							
WRA				ScP	**ScP**		**06 47 20.8**	**+1.0**
	comp=Z,2.1nm,0.8s,baz=344,slow=3.9,SNR=10.0							
MK31	**Makanchi Array**	**42.09**	**320**	P	**P**		**06 41 41.7**	**+0.2**
MK31				pmax	pmax			
	comp=Z,18nm,1.0s							
MK31	**Makanchi Array**	**42.09**	**320**	*e*P	**P**		**06 41 41.8**	**+0.2**
MKAR	**Makanchi Array**	**42.09**	**320**	P	**P**		**06 41 41.8**	**+0.3**
MKAR				pmax	pmax			
	comp=Z,4.0nm,0.6s							
MKAR				MLR	MLR			
	comp=Z,177nm,18.9s							
MKAR	**Makanchi Array**	**42.09**	**320**	*e*P	**P**		**06 41 42.0**	**+0.4**
MKAR				*e*ScP	**ScP**		**06 47 25.0**	**+0.7**
MKAR	**Makanchi Array**	**42.09**	**320**	P	**P**		**06 41 41.8**	**+0.3**
	comp=Z,4.0nm,0.6s,baz=114,slow=9.8,SNR=49							
MKAR				LR	LR		07 01 49.4	
	comp=Z,177nm,18.9s,baz=336,slow=40							
YAK	**Yakutsk**	**43.28**	**6**	*e*P	**P**		**06 41 48.8**	**-2.1**
YAK				pmax	pmax			
	comp=Z,24nm,0.9s							
YAK				pmax	pmax			
	comp=N,17nm,1.4s							
YAK				pmax	pmax			
	comp=E,6.0nm,1.0s							
YAK				MLR	MLR			
	comp=N,321nm,16.0s							
YAK				MLR	MLR			
	comp=E,471nm,17.0s							
YAK				MLR	MLR			
	comp=E,83nm,15.0s							
KSH	**Kashi**	**43.83**	**308**	P	P		06 41 58.8	+3.0
KSH				*e*pP	pP		06 42 03.3	-1.7
KSH				*e*sP	sP		06 42 05.8	-2.9
KSH				*e*PP	**PcP**		**06 43 42.3**	**+0.3**
KSH				*e*PcP	PP		06 43 43.5	+5.4
KSH				*e*S	S		06 48 30.3	+5.4
KSH				*e*sS	sS		06 48 38.5	-1.5
KSH				pmax	pmax			
	comp=Z,10.0nm,0.5s							
KSH				pmax	pmax			
	comp=Z,160nm,4.1s							
KSH				LR	LR			
	comp=N,940nm,10.1s							
KSH				LR	LR			
	comp=E,510nm,10.0s							
KSH				LR	LR			
	comp=Z,510nm,9.4s							
PEA0B	**Petropavlovsk-**	**44.12**	**31**	*e*P	**P**		**06 41 57.5**	**-0.3**
PETK	**Petropavlovsk-**	**44.12**	**31**	P	**P**		**06 41 57.8**	**+0.1**
PETK	**Petropavlovsk-**	**44.12**	**31**	P	**P**		**06 41 57.8**	**+0.1**
PETK	**Petropavlovsk-**	**44.12**	**31**	P	**P**		**06 41 57.8**	**+0.1**
	comp=Z,18nm,0.8s,baz=201,slow=5.4,SNR=43							
PETK				LR	LR		07 01 59.6	
	comp=Z,160nm,19.1s,baz=327,slow=38							
AS31	**Alice Springs**	**44.29**	**163**	*e*P	**P**		**06 41 58.8**	**-0.7**
ASAR	**Alice Springs**	**44.29**	**163**	P	**P**		**06 41 57.9**	**-1.6**
ASAR				ScP	**ScP**		**06 47 34.1**	**+0.7**
ASAR	**Alice Springs**	**44.29**	**163**	P	**P**		**06 41 57.9**	**-1.6**
	comp=Z,3.4nm,0.3s,baz=338,slow=6.8,SNR=56							
ASAR				ScP	**ScP**		**06 47 34.1**	**+0.7**
	comp=Z,1.6nm,0.8s,baz=349,slow=4.5,SNR=9.0							
PET	**Petropavlovsk**	**44.53**	**32**	⇑*i*P	**P**		**06 42 01.3**	**+0.3**
PET				*e*S	**S**		**06 48 36.3**	**+1.8**
PET				pmax	pmax			
	comp=Z,50nm,1.2s							
PET				MLR	MLR			
	comp=Z,200nm,18.0s							
ZAA0	**Zalesovo Array**	**44.56**	**330**	*e*P	**P**		**06 42 00.6**	**-0.6**
ZALV	**Zalesovo Beam**	**44.56**	**330**	P	**P**		**06 42 00.8**	**-0.4**
ZALV	**Zalesovo Beam**	**44.56**	**330**	P	**P**		**06 42 00.8**	**-0.4**
ZALV	**Zalesovo Beam**	**44.56**	**330**	P	**P**		**06 42 00.8**	**-0.4**
	comp=Z,7.9nm,0.7s,baz=116,slow=8.1,SNR=28							
ZALV				LR	LR		07 03 05.4	
	comp=Z,163nm,18.1s,baz=250,slow=39							
TKM2	**Tokmak 2**	**45.02**	**312**	*e*P	**P**		**06 42 06.1**	**+0.7**
TKM2				pmax	pmax			
	comp=Z,31nm,2.0s							
TKM2	**Tokmak 2**	**45.02**	**312**	*e*P	**P**		**06 42 06.0**	**+0.7**
	comp=Z,31nm,2.0s							
AAK	**Ala-Archa**	**45.72**	**311**	*i* P	**P**		**06 42 12.7**	**+1.8**
AAK				pmax	pmax			
	comp=Z,5.0nm,0.8s							
AAK	**Ala-Archa**	**45.72**	**311**	LR	LR		07 01 12.0	
	comp=Z,365nm,20.0s,baz=82,slow=36							
NVS	**Novosibirsk**	**45.83**	**330**	⇑*i*P	**P**		**06 42 10.6**	**-0.7**
NVS				pmax	pmax			
	comp=Z,33nm,2.0s							
NVS				pmax	pmax			
	comp=N,19nm,1.9s							
NVS				pmax	pmax			
	comp=E,17nm,1.9s							
CTA	**Charters Tower**	**46.06**	**146**	P	**P**		**06 42 13.5**	**0.0**
CTA	**Charters Tower**	**46.06**	**146**	P	**P**		**06 42 13.5**	**0.0**
	comp=E,1.3nm,0.2s,baz=58,slow=13,SNR=3.4							
KURK	**Kurchatov**	**46.06**	**323**	P	**P**		**06 42 12.2**	**-1.0**
	comp=E,71nm,1.0s,SNR=8.0							
EKS2	**Erkin-Say**	**46.24**	**311**	*e*P	**P**		**06 42 15.5**	**+0.6**
EKS2				pmax	pmax			
	comp=Z,6.0nm,1.0s							
EKS2	**Erkin-Say**	**46.24**	**311**	*e*P	**P**		**06 42 15.5**	**+0.6**
	comp=Z,5.6nm,1.0s							
HNR	**Honiara**	**47.58**	**123**	LR	LR		07 00 29.4	
	comp=Z,149nm,19.4s,baz=297,slow=34							
KBL	**Kabul**	**48.50**	**300**	*e*P	**P**		**06 42 33.1**	**+0.4**
KBL				pmax	pmax			
	comp=Z,16nm,0.8s							
KBL	**Kabul**	**48.50**	**300**	*e*P	**P**		**06 42 33.1**	**+0.4**
	comp=Z,16nm,0.8s							
KK31	**Karatay Array**	**48.67**	**311**	*i* P	**P**		**06 42 33.9**	**+0.2**
KK31				pmax	pmax			
	comp=Z,5.0nm,0.6s							
KKAR	**Karatay Array**	**48.67**	**311**	*e*P	**P**		**06 42 34.2**	**+0.5**
KKAR				pmax	pmax			
	comp=Z,8.0nm,0.8s							
KKAR	**Karatay Array**	**48.67**	**311**	*e*P	**P**		**06 42 34.2**	**+0.5**
	comp=Z,8.2nm,0.8s							
VOSK	**Vostochnaya**	**51.22**	**323**	P	**P**		**06 42 52.2**	**-0.7**
VOSK				pmax	pmax			
	comp=Z,8.0nm,0.9s							
BRVK	**Borovoye**	**51.73**	**323**	⇓*e*P	**P**		**06 42 57.7**	**+1.0**
BRVK				pmax	pmax			
	comp=Z,17nm,1.7s							
BRVK	**Borovoye**	**51.73**	**323**	*e*P	**P**		**06 42 57.6**	**+1.0**
	comp=Z,12nm,0.8s							
FX1	**Attu Island--F**	**52.27**	**37**	P	**P**		**06 43 01.0**	**+0.4**
FX1	**Attu Island--F**	**52.27**	**37**	P	**P**		**06 43 01.0**	**+0.4**
	comp=Z,4.5nm,0.4s,baz=272,slow=8.4,SNR=13							
TIXI	**Tiksi**	**52.73**	**3**	*d i*P	**P**		**06 43 02.7**	**-1.1**
TIXI				pmax	pmax			
	comp=Z,96nm,1.6s							
BBOO	**Buckleboo**	**53.55**	**164**	*e*P	**P**		**06 43 10.3**	**0.0**
	comp=Z,141nm,0.9s							
STKA	**Stephens Creek**	**54.34**	**159**	*e*P	**P**		**06 43 16.3**	**+0.1**
	comp=Z,16nm,2.3s							
STKA	**Stephens Creek**	**54.34**	**159**	P	**P**		**06 43 14.8**	**-1.3**
	comp=Z,3.8nm,0.6s,baz=322,slow=5.9,SNR=17							
BILL	**Bilibino**	**56.44**	**19**	*d i*P	**P**		**06 43 30.3**	**-0.5**
BILL				*e*SS	**SS**		**06 55 04.2**	**-2.4**
BILL				pmax	pmax			
	comp=Z,41nm,1.1s							
AB31	**Akbulak array**	**57.05**	**317**	*i* P	**P**		**06 43 35.3**	**-0.1**
AB31				pmax	pmax			
	comp=Z,5.0nm,0.4s							
ABKAR	**Akbulak array**	**57.05**	**317**	*e*P	**P**		**06 43 35.5**	**+0.1**
	comp=Z,5.2nm,0.4s							
SVE	**Sverdlovsk**	**58.17**	**326**	⇓*i*P	**P**		**06 43 43.7**	**+0.5**
SVE				pmax	pmax			
	comp=Z,27nm,0.7s							
AKTO	**Aktyubinsk**	**58.46**	**318**	P	**P**		**06 43 45.2**	**-0.1**
AKTO				pmax	pmax			
	comp=Z,6.0nm,0.6s							
ARU	**Arti**	**59.20**	**325**	*c i*P	**P**		**06 43 49.8**	**-0.5**
ARU							06 44 38.5	
ARU							06 45 59.3	
ARU				S	S		06 52 00.6	+4.7
ARU				SS	**SS**		**06 55 48.4**	**-1.9**
ARU				pmax	pmax			
	comp=Z,23nm,0.6s							
UNV	**Unalaska Valle**	**64.37**	**39**	*e*P	**P**		**06 44 23.7**	**-1.5**
	comp=Z,22nm,0.7s							
RDF	**Al-Radifah**	**67.05**	**294**	*e*P	**P**		**06 44 41.5**	**-1.5**
RDF				AMb	AMB		06 44 42.7	
	comp=Z,35nm,1.1s							
MIB	**Mutribah**	**67.08**	**295**	*e*P	**P**		**06 44 41.2**	**-1.9**
MIB				AMb	AMB		06 44 42.0	
	comp=Z,15nm,0.5s							
NAY	**Al-Naaiem**	**67.26**	**294**	*e*P	**P**		**06 44 42.2**	**-2.1**
NAY				AMb	AMB		06 44 43.1	
	comp=Z,12nm,0.7s							
SDPT	**Sand Point**	**67.88**	**37**	*e*P	**P**		**06 44 46.2**	**-1.5**
	comp=Z,52nm,0.6s							
KBZ	**Khabaz**	**68.70**	**310**	LR	LR		07 20 44.1	
	comp=Z,109nm,19.3s,baz=260,slow=41							
KIV	**Kislovodsk**	**68.83**	**311**	⇑*e*P	**P**		**06 44 54.3**	**+0.3**
KIV				*e*			06 45 13.1	
KIV				pmax	pmax			
	comp=Z,9.0nm,0.6s							
KIV				MLR	MLR			
	comp=Z,100nm,21.0s							
CHGN	**Chignik**	**69.01**	**36**	*e*P	**P**		**06 44 53.2**	**-1.5**
RAYN	**Ar Rayn**	**69.90**	**289**	*e*P	**P**		**06 45 00.3**	**-0.6**
	comp=Z,7.7nm,0.8s							
SVW2	**Sparrevohn**	**70.20**	**31**	*e*P	**P**		**06 45 02.5**	**+0.4**
	comp=Z,17nm,0.7s							
OBN	**Obninsk**	**71.50**	**323**	*i* P	**P**		**06 45 09.1**	**-0.9**
OBN				*e*			06 45 24.2	
OBN				*e*			06 47 50.4	
OBN				pmax	pmax			
	comp=Z,8.0nm,0.6s							
OBN				MLR	MLR			
	comp=Z,100nm,17.0s							
RSO	**Redoubt South**	**71.64**	**31**	*e*P	**P**		**06 45 11.3**	**+0.3**
APA	**Apatity**	**71.67**	**336**	⇓*e*P	**P**		**06 45 12.6**	**+1.8**
APA				pmax	pmax			
	comp=Z,16nm,1.0s							
APA				MLR	MLR			
	comp=Z,300nm,18.0s							
OHAK	**Old Harbor**	**71.74**	**35**	*e*P	**P**		**06 45 10.7**	**-0.7**
	comp=Z,141nm,1.7s							
SPU	**Mount Spurr**	**71.90**	**31**	*e*P	**P**		**06 45 12.2**	**-0.1**
COLD	**Coldfoot**	**72.01**	**24**	*e*P	**P**		**06 45 13.6**	**+0.7**
	comp=Z,14nm,1.0s							
KDAK	**Kodiak Island**	**72.04**	**34**	P	**P**		**06 45 13.0**	**-0.2**
	comp=Z,326nm,0.6s,SNR=18							
KDAK	**Kodiak Island**	**72.04**	**34**	*e*P	**P**		**06 45 13.1**	**-0.2**
	comp=Z,225nm,1.8s							
ANN	**Anapa**	**72.44**	**312**	*e*P	P		06 45 06.6	-9.2
ANN				pmax	pmax			
	comp=Z,24nm,1.0s							
MALT	**Malatya**	**72.87**	**305**	⇑*i*P	sP		06 45 33.4	+1.5
JOF	**Joensuu**	**73.12**	**331**	*e*P	**P**		**06 45 18.7**	**-0.8**
JOF				pmax	pmax			
	comp=Z,6.0nm,0.6s							
JOF	**Joensuu**	**73.12**	**331**	*e*p	**P**		**06 45 18.7**	**-0.8**
	comp=Z,6.0nm,0.6s							
PMR	**Palmer**	**73.23**	**30**	*e*P	**P**		**06 45 19.3**	**-0.9**
PMR				pmax	pmax			
	comp=Z,28nm,0.7s							
PMR	**Palmer**	**73.23**	**30**	*e*P	**P**		**06 45 19.3**	**-0.9**
	comp=Z,28nm,0.7s							
COLA	**College**	**73.28**	**26**	*e*P	**P**		**06 45 20.1**	**-0.3**
COLA				pmax	pmax			
	comp=Z,9.0nm,0.9s							
COLA	**College**	**73.28**	**26**	*e*P	**P**		**06 45 20.1**	**-0.3**
	comp=Z,9.3nm,0.9s							
SML	**Sawmill**	**73.57**	**30**	*e*P	**P**		**06 45 22.0**	**-0.3**
SML				pmax	pmax			
	comp=Z,10.0nm,1.1s							
SML	**Sawmill**	**73.57**	**30**	*e*P	**P**		**06 45 22.0**	**-0.3**
	comp=Z,10nm,1.1s							
KEV	**Kevo**	**73.67**	**339**	*e*P	**P**		**06 45 22.5**	**-0.2**
KEV				pmax	pmax			
	comp=Z,4.0nm,0.5s							
KEV	**Kevo**	**73.67**	**339**	*e*p	**P**		**06 45 22.5**	**-0.2**
	comp=Z,3.8nm,0.5s							
ILAR	**Eielson Array**	**73.71**	**27**	P	**P**		**06 45 21.7**	**-1.3**
ILAR	**Eielson Array**	**73.71**	**27**	P	**P**		**06 45 21.7**	**-1.3**
	comp=Z,4.6nm,0.6s,baz=267,slow=4.8,SNR=65							
ILAR				LR	LR		07 18 22.8	
	comp=Z,72nm,18.9s,baz=299,slow=36							
ARCES	**ARCESS Array B**	**74.23**	**339**	P	**P**		**06 45 24.9**	**-1.1**
ARCES	**ARCESS Array B**	**74.23**	**339**	P	**P**		**06 45 24.9**	**-1.1**
	comp=Z,3.5nm,0.6s,baz=70,slow=8.2,SNR=42							
ARCES				LR	LR		07 22 03.7	
	comp=Z,212nm,20.0s,baz=267,slow=39							
ARE0	**ARCESS Array S**	**74.23**	**339**	*e*P	**P**		**06 45 25.8**	**-0.2**
PAX	**Paxson**	**74.67**	**28**	*e*P	**P**		**06 45 28.7**	**0.0**
PAX				pmax	pmax			
	comp=Z,17nm,1.0s							
PAX	**Paxson**	**74.67**	**28**	*e*P	**P**		**06 45 28.7**	**0.0**
	comp=Z,17nm,1.0s							
DIV	**Divide**	**74.91**	**30**	*e*P	**P**		**06 45 30.7**	**+0.6**
	comp=Z,29nm,0.8s							
DOT	**Dot Lake**	**75.14**	**27**	*e*P	**P**		**06 45 31.3**	**-0.1**
	comp=Z,19nm,1.0s							
MENT	**Mentasta**	**75.45**	**28**	*e*P	**P**		**06 45 33.6**	**+0.5**
KAF	**Kangasniemi**	**75.56**	**331**	*e*P	**P**		**06 45 33.2**	**-0.5**
KAF				pmax	pmax			
	comp=Z,4.0nm,0.7s							
KAF	**Kangasniemi**	**75.56**	**331**	*e*p	**P**		**06 45 33.2**	**-0.5**
	comp=Z,4.2nm,0.7s							
FIA1	**FINESS Array S**	**75.82**	**330**	*e*P	**P**		**06 45 34.5**	**-0.8**
FINES	**FINESS Array B**	**75.82**	**330**	P	**P**		**06 45 34.4**	**-0.9**
FINES	**FINESS Array B**	**75.82**	**330**	P	**P**		**06 45 34.4**	**-0.9**
	comp=Z,3.1nm,0.6s,baz=61,slow=6.3,SNR=27							
EGAK	**Eagle**	**76.10**	**26**	*e*P	**P**		**06 45 37.1**	**+0.3**
	comp=Z,19nm,0.8s							
BRTR	**Keskin Array B**	**76.22**	**307**	P	**P**		**06 45 37.0**	**-1.1**
BRTR	**Keskin Array B**	**76.22**	**307**	P	**P**		**06 45 37.0**	**-1.1**
	comp=Z,9.9nm,0.5s,baz=132,slow=2.6,SNR=5.8							
AKASG	**Malin Array Be**	**76.67**	**319**	P	**P**		**06 45 38.7**	**-1.6**
AKASG	**Malin Array Be**	**76.67**	**319**	P	**P**		**06 45 38.7**	**-1.6**
AKASG	**Malin Array Be**	**76.67**	**319**	P	**P**		**06 45 38.7**	**-1.6**
	comp=Z,4.1nm,0.6s,baz=63,slow=5.8,SNR=10.0							
AK01	**Malin Array Si**	**76.68**	**319**	*e*P	**P**		**06 45 38.6**	**-1.7**
KIEV	**Kiev**	**76.68**	**319**	*e*P	**P**		**06 45 38.8**	**-1.6**
KIEV				pmax	pmax			
	comp=Z,5.0nm,0.8s							
KIEV	**Kiev**	**76.68**	**319**	*e*P	**P**		**06 45 38.8**	**-1.6**
	comp=Z,5.0nm,0.8s							
AK02	**Malin Array Si**	**76.69**	**319**	*e*P	**P**		**06 45 38.8**	**-1.6**
RPZ	**Rata Peaks**	**77.42**	**145**	LR	LR		07 20 15.1	
	comp=Z,164nm,18.7s,baz=157,slow=36							
INK	**Inuvik**	**77.91**	**22**	LR	LR		07 24 03.5	
	comp=Z,117nm,19.4s,baz=72,slow=39							
CFR	**Carcaliu**	**78.79**	**314**	⇓P	**P**		**06 45 51.6**	**-0.6**
CFR	**Carcaliu**	**78.79**	**314**	⇓*i*P	**P**		**06 45 51.6**	**-0.6**
SUW	**Suwalki**	**79.34**	**324**	*e*P	**P**		**06 45 54.2**	**-0.8**
TESR	**Tescani**	**79.42**	**316**	⇑*i*P	**P**		**06 45 54.9**	**-0.8**
VRI	**Vrincioaia**	**79.55**	**315**	⇓P	**P**		**06 45 57.0**	**+0.6**
VRI	**Vrincioaia**	**79.55**	**315**	⇓*i*P	**P**		**06 45 57.0**	**+0.6**
PLOR	**Plostina**	**79.61**	**315**	⇓P	**P**		**06 45 56.9**	**+0.2**
PLOR	**Plostina**	**79.61**	**315**	⇓*i*P	**P**		**06 45 56.9**	**+0.2**
BURAR	**Bucovina

DPC	**Dobruska-Polom**	**84.58**	**322**	*i* P		**P**	**06 46 22.6**	**-0.2**
DPC				*ex*		x	06 46 34.0	
KMBO	**Kilima Mbogo**	**84.64**	**267**	P		**P**	**06 46 23.0**	**-1.0**
KMBO	**Kilima Mbogo**	**84.64**	**267**	P		**P**	**06 46 23.0**	**-1.0**
	comp=Z,1.1nm,0.3s,baz=44,slow=22,SNR=3.5							
KMBO				LR		LR	07 21 22.0	
	comp=Z,148nm,18.1s,baz=276,slow=34							
UPC	**Upice**	**84.70**	**322**	*i* P		**P**	**06 46 22.5**	**-0.8**
UPC				*e*			06 46 33.6	
UPC	**Upice**	**84.70**	**322**	*i* P		**P**	**06 46 22.5**	**-0.8**
UPC				*ex*		x	06 46 33.6	
TREC	**Trest**	**85.50**	**321**	AMS		AMS	07 31 50.0	
	comp=Z,100nm,18.9s							
BRG	**Berggiesshubel**	**85.75**	**323**	*e*P		**P**	**06 46 28.1**	**-0.4**
	comp=Z,3.1nm,0.8s							
BRG				*e*			06 46 39.9	
	comp=Z,12nm,1.4s							
BRG	**Berggiesshubel**	**85.75**	**323**	*e*P		**P**	**06 46 28.1**	**-0.4**
BRG				*e*			06 46 39.9	
BRG				pmax		pmax		
	comp=Z,3.0nm,0.8s							
BRG				pmax		pmax		
	comp=Z,12nm,1.4s							
PRU	**Pruhonice**	**85.77**	**322**	*i* P		**P**	**06 46 28.5**	**-0.2**
PRU				*e*			06 46 40.1	
PRU				MLR		MLR		
	comp=Z,100nm,17.6s							
PRU	**Pruhonice**	**85.77**	**322**	*i* P		**P**	**06 46 28.5**	**-0.2**
PRU				*ex*		x	06 46 40.1	
PRU				AMS		AMS	07 32 00.0	
	comp=Z,100nm,17.6s							
CLL	**Collm**	**86.10**	**323**	*i* P		**P**	**06 46 29.2**	**-1.0**
CLL				*i*			06 46 41.6	
CLL				pmax		pmax		
	comp=Z,5.0nm,0.6s							
CLL	**Collm**	**86.10**	**323**	*i* P		**P**	**06 46 29.2**	**-1.0**
	comp=Z,5.0nm,0.6s							
CLL				*i*			06 46 41.6	
CLL				*e*			06 50 07.0	
CLL				Lm		MLR	07 32 00.0	
	comp=N,200nm,21.2s							
CLL				Lm		MLR	07 32 00.0	
	comp=E,100nm,18.2s							
GERES	**GERESS Array B**	**86.76**	**321**	P		**P**	**06 46 33.6**	**0.0**
GERES	**GERESS Array B**	**86.76**	**321**	P		**P**	**06 46 33.6**	**0.0**
	comp=E,1.3nm,0.7s,baz=64,slow=6.1,SNR=13							
GERES				LR		LR	07 30 01.2	
	comp=E,123nm,19.7s,baz=248,slow=39							
SUMG	**Summit**	**87.52**	**354**	*i* P		**P**	**06 46 37.4**	**+0.2**
SUMG				pmax		pmax		
	comp=Z,7.0nm,0.9s							
SUMG	**Summit**	**87.52**	**354**	*e*P		**P**	**06 46 37.5**	**+0.2**
	comp=Z,8.6nm,0.9s							
SUMG	**Summit**	**87.52**	**354**	*i* P		**P**	**06 46 37.4**	**+0.2**
	comp=Z,7.4nm,0.9s							
YKW3	**Yellowknife Ar**	**87.57**	**23**	*e*P		**P**	**06 46 37.2**	**0.0**
	comp=Z,0.8nm,1.0s							
YKA	**Yellowknife Ar**	**87.62**	**23**	P		**P**	**06 46 37.5**	**+0.1**
YKA	**Yellowknife Ar**	**87.62**	**23**	P		**P**	**06 46 37.4**	**+0.1**
	comp=Z,26nm,0.8s,baz=311,slow=4.6,SNR=175							
DAVOX	**Davos/Dischmat**	**89.99**	**320**	P		**P**	**06 46 48.2**	**-0.9**
DAVOX	**Davos/Dischmat**	**89.99**	**320**	P		**P**	**06 46 48.2**	**-0.9**
	comp=Z,2.9nm,0.6s,baz=21,slow=8.6							
CDF	**Champ du Feu**	**90.73**	**322**	*e*P		**P**	**06 46 51.6**	**-0.9**
CDF	**Champ du Feu**	**90.73**	**322**	*e*P		**P**	**06 46 51.6**	**-0.9**
CDF	**Champ du Feu**	**90.73**	**322**	*e*P		**P**	**06 46 51.6**	**-0.9**
PAGF	**Fort de Pagny**	**91.54**	**323**	*e*P		**P**	**06 46 55.4**	**-0.7**
PAGF	**Fort de Pagny**	**91.54**	**323**	*e*P		**P**	**06 46 55.4**	**-0.7**
BAIF	**Baives**	**91.59**	**325**	*e*P		**P**	**06 46 55.5**	**-0.8**
BAIF	**Baives**	**91.59**	**325**	*e*P		**P**	**06 46 55.5**	**-0.8**
BAIF	**Baives**	**91.59**	**325**	*e*P		**P**	**06 46 55.5**	**-0.8**
NLWA	**Neilton Lookou**	**91.83**	**38**	*e*P		**P**	**06 46 59.0**	**+1.5**
	comp=Z,17nm,1.2s							
LPG	**La Plagne**	**92.51**	**320**	*e*P		**P**	**06 47 00.5**	**-0.5**
	comp=Z,16nm,1.1s							
LPG	**La Plagne**	**92.51**	**320**	*e*P		**P**	**06 47 00.5**	**-0.5**
LPG				pmax		pmax		
	comp=Z,16nm,1.1s							
LPG	**La Plagne**	**92.51**	**320**	*e*P		**P**	**06 47 00.5**	**-0.5**
	comp=Z,16nm,1.1s							
LPL	**La Plagne**	**92.51**	**320**	*e*P		**P**	**06 47 00.4**	**-0.6**
	comp=Z,10nm,1.0s							
LPL	**La Plagne**	**92.51**	**320**	*e*P		**P**	**06 47 00.4**	**-0.6**
LPL				pmax		pmax		
	comp=Z,10.0nm,1.0s							
LPL	**La Plagne**	**92.51**	**320**	*e*P		**P**	**06 47 00.4**	**-0.6**
	comp=Z,10nm,1.0s							
JCW	**Jim Creek**	**92.52**	**37**	P		**P**	**06 47 02.0**	**+1.3**
PGF	**Pioggiola**	**92.56**	**317**	*e*P		**P**	**06 47 00.4**	**-0.7**
	comp=Z,126nm,1.6s							
PGF	**Pioggiola**	**92.56**	**317**	*e*P		**P**	**06 47 00.4**	**-0.7**
PGF				pmax		pmax		
	comp=Z,126nm,1.6s							
PGF	**Pioggiola**	**92.56**	**317**	*e*P		**P**	**06 47 00.4**	**-0.7**
	comp=Z,126nm,1.6s							
ORIF	**Oris-en-Rattie**	**93.34**	**320**	*e*P		**P**	**06 47 03.6**	**-1.0**
ORIF	**Oris-en-Rattie**	**93.34**	**320**	*e*P		**P**	**06 47 03.6**	**-1.0**
ORIF	**Oris-en-Rattie**	**93.34**	**320**	*e*P		**P**	**06 47 03.6**	**-1.0**
TDL	**Tradedollar La**	**93.34**	**38**	P		**P**	**06 47 06.0**	**+1.3**
LON	**Longmire**	**93.37**	**38**	*e*P		**P**	**06 47 05.6**	**+0.9**
LON				pmax		pmax		
	comp=Z,10.0nm,1.2s							
LON	**Longmire**	**93.37**	**38**	*e*P		**P**	**06 47 05.6**	**+0.9**
	comp=Z,10nm,1.2s							
ETW	**Entiat**	**93.75**	**37**	P		**P**	**06 47 07.4**	**+0.9**
LMR	**La Mourre**	**93.76**	**318**	*e*P		**P**	**06 47 05.8**	**-0.6**
	comp=Z,52nm,1.3s							
LMR	**La Mourre**	**93.76**	**318**	*e*P		**P**	**06 47 05.8**	**-0.6**
LMR				pmax		pmax		
	comp=Z,52nm,1.3s							
LMR	**La Mourre**	**93.76**	**318**	*e*P		**P**	**06 47 05.8**	**-0.6**
	comp=Z,52nm,1.3s							
TBM	**Table Mountain**	**93.84**	**37**	P		**P**	**06 47 07.9**	**+1.0**
AVF	**Avril sur Loir**	**93.84**	**322**	*e*P		**P**	**06 47 05.5**	**-1.2**
	comp=Z,7.5nm,1.0s							
AVF	**Avril sur Loir**	**93.84**	**322**	*e*P		**P**	**06 47 05.5**	**-1.2**
AVF				pmax		pmax		
	comp=Z,8.0nm,1.0s							
AVF	**Avril sur Loir**	**93.84**	**322**	*e*P		**P**	**06 47 05.5**	**-1.2**
	comp=Z,7.5nm,1.0s							
VIVF	**Saint-Julien-l**	**94.10**	**320**	*e*P		**P**	**06 47 06.8**	**-1.2**
VIVF	**Saint-Julien-l**	**94.10**	**320**	*e*P		**P**	**06 47 06.8**	**-1.2**
VIVF	**Saint-Julien-l**	**94.10**	**320**	*e*P		**P**	**06 47 06.8**	**-1.2**
TCF	**Toulx Ste Croi**	**94.77**	**323**	*e*P		**P**	**06 47 10.2**	**-0.9**
TCF	**Toulx Ste Croi**	**94.77**	**323**	*e*P		**P**	**06 47 10.2**	**-0.9**
TCF	**Toulx Ste Croi**	**94.77**	**323**	*e*P		**P**	**06 47 10.2**	**-0.9**
OD2	**Odessa Site #2**	**94.78**	**36**	P		**P**	**06 47 11.8**	**+0.7**
HAWA	**Hanford**	**94.88**	**37**	*e*P		**P**	**06 47 12.1**	**+0.6**
	comp=Z,8.0nm,0.8s							
PPT	**Papeete**	**94.90**	**107**	LR		LR	07 20 21.4	
	comp=Z,160nm,21.8s,baz=356,slow=29							
NEW	**Newport**	**95.14**	**35**	*e*P		**P**	**06 47 13.4**	**+0.7**
	comp=Z,12nm,0.9s							
NEW	**Newport**	**95.14**	**35**	P		**P**	**06 47 13.8**	**+1.0**
	comp=Z,8.3nm,0.8s,baz=303,slow=4.6,SNR=19							
VIPM	**Ingram Point**	**95.28**	**39**	P		**P**	**06 47 14.7**	**+1.0**
VIPM	**Ingram Point**	**95.28**	**39**	P		**P**	**06 47 14.7**	**+1.0**
MAW	**Mawson**	**96.34**	**199**	LR		LR	07 21 58.3	
	comp=Z,104nm,21.3s,baz=282,slow=30							
WALA	**Waterton Lakes**	**96.35**	**33**	*e*P		**P**	**06 47 19.2**	**+0.8**
	comp=Z,0.5nm,1.3s							
BSMT	**Bassoo Peak**	**96.64**	**34**	*e*P		**P**	**06 47 21.0**	**+1.2**
MOD	**Modoc**	**96.90**	**41**	*e*P		**P**	**06 47 21.7**	**+0.6**
	comp=Z,9.6nm,1.1s							
BMO	**Blue Mountains**	**97.04**	**38**	*e*P		Pdif	06 47 21.8	+0.2
BMO				pmax		pmax		
	comp=Z,5.0nm,1.1s							
BMO	**Blue Mountains**	**97.04**	**38**	*e*P		Pdif	06 47 21.8	+0.1
	comp=Z,4.8nm,1.1s							
SWMT	**Swartz Lake**	**97.27**	**34**	*e*P		Pdif	06 47 23.2	+0.6
SLMT	**Seeley Lake**	**97.71**	**34**	*e*P		Pdif	06 47 25.0	+0.4
FFC	**Flin Flon**	**97.75**	**24**	*e*P		**P**	**06 47 24.2**	**-0.1**
FFC				pmax		pmax		
	comp=Z,4.0nm,0.9s							
FFC	**Flin Flon**	**97.75**	**24**	*e*P		**P**	**06 47 24.2**	**-0.1**
	comp=Z,3.6nm,0.9s							
BEKR	**Beckworth**	**97.98**	**43**	*e*P		Pdif	06 47 26.1	+0.1
	comp=Z,2.3nm,1.0s							
VNDA	**Vanda**	**99.30**	**172**	P		**Pdif**	**06 47 31.4**	**+0.8**
VNDA	**Vanda**	**99.30**	**172**	P		**Pdif**	**06 47 31.4**	**+0.8**
	comp=Z,1.3nm,0.7s,baz=320,slow=8.7,SNR=6.1							
DLMT	**Dillon**	**99.38**	**35**	*e*P		**Pdif**	**06 47 32.7**	**+0.7**
	comp=Z,5.3nm,1.0s							
NVAR	**Mina Array Bea**	**100.10**	**43**	P		**Pdif**	**06 47 36.8**	**+1.3**
NVAR	**Mina Array Bea**	**100.10**	**43**	P		**Pdif**	**06 47 36.8**	**+1.3**
	comp=Z,1.5nm,0.7s,baz=285,slow=5.2,SNR=13							
TXAR	**Lajitas Array**	**115.25**	**43**	PKP		**PKPdf**	**06 52 31.9**	**+0.4**
TXAR	**Lajitas Array**	**115.25**	**43**	PKP		**PKPdf**	**06 52 31.9**	**+0.4**
	comp=Z,2.0nm,0.7s,baz=220,slow=0.9,SNR=8.2							
OLIL	**Olney**	**116.24**	**25**	*e*Pdif		**Pdif**	**06 48 46.2**	**-0.8**
JCT	**Junction City**	**116.86**	**39**	*e*PKIKP		**PKPdf**	**06 52 34.4**	**-0.1**
JCT	**Junction City**	**116.86**	**39**	*e*PKPdf		**PKPdf**	**06 52 34.4**	**-0.1**
TKL	**Tuckaleechee C**	**120.60**	**24**	PKP		**PKPdf**	**06 52 41.2**	**-0.3**
TKL	**Tuckaleechee C**	**120.60**	**24**	PKP		**PKPdf**	**06 52 41.2**	**-0.3**
	comp=Z,2.3nm,0.8s,baz=165,slow=7.5,SNR=4.0							
BCIP	**Isla Barro Col**	**145.07**	**38**	*e*PKPdf		**PKPbc**	**06 53 26.4**	**-0.6**
SDV	**Santo Domingo**	**149.83**	**24**	*e*PKPdf		**PKPdf**	**06 53 36.2**	**+0.4**
SDV				*e*PKPbc		**PKPbc**	**06 53 40.7**	**+0.1**
ROSC	**El Rosal**	**151.69**	**34**	PKP		**PKPdf**	**06 53 39.4**	**+0.4**
ROSC				*e*PKPdf		PKPbc	06 53 40.0	-5.2
ROSC				PKPbc		**PKPbc**	**06 53 45.3**	**0.0**
ROSC				*e*PKPbc		PKPab	06 53 45.8	-8.0
ROSC	**El Rosal**	**151.69**	**34**	PKP		**PKPdf**	**06 53 39.4**	**+0.4**
	comp=Z,2.6nm,0.5s,baz=270,slow=20,SNR=4.0							
ROSC				PKPbc		**PKPbc**	**06 53 45.3**	**0.0**
	comp=Z,12nm,0.7s,baz=110,slow=18,SNR=18							
OTAV	**Otavalo**	**152.76**	**47**	*e*PKPbc		**PKPbc**	**06 53 48.1**	**+0.3**
LPAZ	**La Paz**	**170.68**	**74**	PKP		**PKPdf**	**06 53 59.8**	**+0.8**
LPAZ	**La Paz**	**170.68**	**74**	PKP		**PKPdf**	**06 53 59.8**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=93,slow=1.0,SNR=3.6							

IDC ***27*** *06:44:38.9±1.3, 36.96°N×105.00°W, h0km, mb3.1/1, mb1 3.3/4, mb1mx3.2/29, mbtmp2.9/4, ML3.4/2, Error ellipse: s-maj=28.3km s-min=9.8km az=81.0*
NEIC ***27*** *06:44:39.9±0.7, 36.89°N×104.91°W, h5km, ML3.0, Error ellipse: s-maj=12.3km s-min=7.6km az=94.0*

ISC 27 06:44:38.1±0.6, 36.97°N±0.02×104.90°W±0.02, h10km, n75, σ1°52/98, New Mexico

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
T25A	**Trinidad**	**0.43**	**66**	P		**Pb**		**06 44 47.3**	**-0.6**
	baz=0.5,SNR=1000								
T25A				S		**Sg**		**06 44 53.1**	**+0.8**
	baz=0.5								
U24A	**Moreno Valley**	**0.63**	**209**	P		**Pg**		**06 44 50.5**	**+0.1**
	baz=0.6,SNR=830								
U24A				S		**Sg**		**06 44 58.3**	**-0.4**
	baz=0.6								
U25A	**Circle Dot Ran**	**0.69**	**145**	P		**Pg**		**06 44 50.8**	**-0.7**
	baz=0.6,SNR=1000								
U25A				S		**Sg**		**06 44 59.0**	**-1.6**
	baz=0.6								
S24A	**Houchin Ranch,**	**0.72**	**340**	P		**Pb**		**06 44 53.9**	**+1.0**
	baz=0.8,SNR=88								
S24A				S		**Sb**		**06 45 04.4**	**+1.4**
	baz=0.8								
S25A	**Robets Cordova**	**0.79**	**28**	P		**Pb**		**06 44 54.4**	**+0.3**
	baz=0.9,SNR=691								
S25A				S		**Sb**		**06 45 04.9**	**0.0**
	baz=0.9								
T23A	**Casias Ranch,**	**0.91**	**275**	P		**Pn**		**06 44 57.0**	**-0.3**
	baz=0.9,SNR=282								
SDCO	**Great Sand Dun**	**0.91**	**329**	*e*Pg		**Pn**		**06 44 57.1**	**-0.3**
SDCO				*e*Sg		**Sb**		**06 45 09.1**	**+0.5**
T26A	**Comanche Natio**	**1.07**	**78**	P		**Pg**		**06 44 58.7**	**0.0**
	baz=1.1,SNR=1000								
T26A				S		**Sg**		**06 45 12.2**	**-0.4**
	baz=1.1								
U26A	**Atchley Ranch,**	**1.09**	**121**	P		**Pb**		**06 44 58.3**	**-0.9**
	baz=1.1,SNR=1000								
U26A				S		**Sg**		**06 45 11.8**	**-1.6**
	baz=1.1								
S23A	**Nye Farm, Mont**	**1.15**	**311**	P		**Pn**		**06 45 01.8**	**+1.3**
	baz=1.2,SNR=63								
S23A				S		**Sn**		**06 45 18.2**	**+1.8**
	baz=1.2								
V25A	**Rancho No Teng**	**1.15**	**168**	P		**Pb**		**06 44 59.2**	**-1.0**
	baz=1.1,SNR=897								
V25A				S		**Sb**		**06 45 12.7**	**-2.5**
	baz=1.1								
U23A	**El Rito**	**1.22**	**239**	P		**Pg**		**06 45 01.8**	**+0.3**
	baz=1.2,SNR=1000								
V24A	**Rampart Ranch,**	**1.27**	**194**	P		**Pn**		**06 45 01.6**	**-0.5**
	baz=1.2,SNR=153								
R24A	**Sanders Place,**	**1.27**	**353**	P		**Pg**		**06 45 03.8**	**+1.2**
	baz=1.4,SNR=137								
R25A	**Fountain Ranch**	**1.28**	**22**	P		**Pg**		**06 45 03.7**	**+0.9**
	baz=1.4,SNR=329								
S26A	**Kim**	**1.32**	**60**	P		**Pg**		**06 45 03.4**	**0.0**
	baz=1.4,SNR=610								
R23A	**Moffat**	**1.43**	**329**	Pb		**Pg**		**06 45 06.8**	**+1.3**
	baz=1.5,SNR=433								
V26A	**Tequesquite Ra**	**1.47**	**142**	P		**Pn**		**06 45 04.7**	**-0.1**
	baz=1.4,SNR=124								
V23A	**Ortiz Mt. (NFS**	**1.60**	**221**	Pb		**Pb**		**06 45 08.2**	**+0.3**
	baz=1.5,SNR=72								
T22A	**Edith**	**1.60**	**272**	Pb		**Pg**		**06 45 09.2**	**+0.4**
	baz=1.6,SNR=190								
U22A	**Llaves**	**1.67**	**250**	Pg		**Pg**		**06 45 10.5**	**+0.3**
	baz=1.6,SNR=48								
S22A	**4UR Ranch, Cre**	**1.72**	**298**	Pb		**Pg**		**06 45 11.9**	**+0.7**
	baz=1.8,SNR=69								
T27A	**Campo**	**1.75**	**86**	Pb		**Pb**		**06 45 10.8**	**+0.4**
	baz=1.8,SNR=91								
S27A	**Las Animas**	**1.75**	**65**	Pb		**Pg**		**06 45 11.0**	**-0.7**
	baz=1.8,SNR=144								
U27A	**Thompson Grove**	**1.76**	**107**	Pb		**Pb**		**06 45 10.6**	**0.0**
	baz=1.7,SNR=1000								
R26A	**Arlington**	**1.77**	**40**	Pb		**Pg**		**06 45 11.8**	**-0.2**
	baz=1.8,SNR=601								
W25A	**X Bar L Ranch,**	**1.78**	**168**	Pb		**Pb**		**06 45 10.5**	**-0.4**
	baz=1.7,SNR=261								
W24A	**Lazy 6 Ranch,**	**1.80**	**193**	Pb		**Pb**		**06 45 11.1**	**-0.2**
	baz=1.7,SNR=216								
V22A	**San Miguel Ran**	**1.93**	**238**	Pb		**Pb**		**06 45 14.1**	**+0.6**
	baz=1.9,SNR=180								
V22A				Sb		**Sg**		**06 45 40.0**	**-0.2**
	baz=1.9								
R22A	**Saguache, Gunn**	**1.94**	**311**	Pb		**Pg**		**06 45 15.8**	**+0.5**
	baz=2.0								
Q24A	**Divide**	**2.01**	**355**	Pb		**Pg**		**06 45 16.8**	**+0.1**
	baz=2.1,SNR=58								
Q25A	**Bedland, Calha**	**2.02**	**15**	Pb		**Pg**		**06 45 17.2**	**+0.5**
	baz=2.1,SNR=26								
Q25A				Sb		**Sg**		**06 45 44.5**	**+1.5**
	baz=2.1								
V27A	**Dan Oppiter Fa**	**2.06**	**125**	Pb		**Pb**		**06 45 14.8**	**-0.9**
	baz=2.0,SNR=496								
V27A				Sb		**Sb**		**06 45 42.1**	**+0.7**
	baz=2.0								
W23A	**Werner Place,**	**2.06**	**210**	Pb		**Pb**		**06 45 15.8**	**-0.1**
	baz=2.0,SNR=218								
Q23A	**Hartsel**	**2.07**	**339**	Pb		**Pg**		**06 45 17.7**	**-0.2**
	baz=2.1,SNR=10								
W26A	**Owens Ranch, T**	**2.09**	**153**	Pb		**Pb**		**06 45 15.8**	**-0.3**
	baz=2.0,SNR=417								
U28A	**Mallet**	**2.23**	**104**	Pb		**Pb**		**06 45 18.6**	**0.0**
	baz=2.2,SNR=185								
Q26A	**Hugo**	**2.24**	**29**	Pb		**Pg**		**06 45 20.0**	**-1.1**
	baz=2.3,SNR=52								
ANMO	**Albuquerque**	**2.38**	**212**	*e*Pn		**Pb**		**06 45 19.7**	**-1.4**
ANMO				*e*Sg		**Sb**		**06 45 51.4**	**+0.8**
ANMO				Lg		Lg		06 45 51.9	
ANMO	**Albuquerque**	**2.38**	**212**	Pn		**Pb**		**06 45 20.4**	**-0.8**
	3.3nm,0.3s,baz=39,slow=13,SNR=35								
ANMO				Lg		Lg		06 45 51.9	
	7.3nm,0.3s,baz=136,slow=23,SNR=15								
W27A	**Bowe Ranch, En**	**2.41**	**141**	Pb		**Pb**		**06 45 21.3**	**-0.5**
	baz=2.4								
X24A	**Lazy VL Ranch,**	**2.43**	**190**	Pb		**Pb**		**06 45 22.1**	**0.0**
	baz=2.4								
X25A	**Clemmons Ranch**	**2.44**	**175**	Pb		**Pb**		**06 45 22.0**	**-0.2**
	baz=2.4								
V28A	**Channing**	**2.48**	**118**	Pb		**Pb**		**06 45 22.6**	**-0.2**
	baz=2.4								
SMCO	**Snowmass**	**2.75**	**324**	*e*Pn		**Pb**		**06 45 26.9**	**-0.6**
SMCO				*e*Sg		**Sg**		**06 46 08.4**	**+2.0**
LPM	**Los Pinos Moun**	**3.00**	**209**	*e*Pg		**Pg**		**06 45 34.1**	**-1.4**
LPM				*e*Sg		**Sb**		**06 46 11.3**	**+2.9**
LAZ	**Ladron**	**3.14**	**216**	*e*Pn		**Pn**		**06 45 29.3**	**+1.5**
PV01	**Paradox Valley**	**3.14**	**293**	*e*Pn		**Pb**		**06 45 31.8**	**-2.3**
PV01				*e*Pg		**Pg**		**06 45 37.8**	**-0.5**
PV01				*e*Sg		**Sg**		**06 46 20.5**	**+1.5**
BNM	**Barren Site**	**3.14**	**207**	*e*Pn		**Pn**		**06 45 30.2**	**+2.4**
BNM				*e*Sg		**Sb**		**06 46 14.8**	**+2.2**
AMTX	**Amarillo**	**3.34**	**127**	*e*Pg		**Pb**		**06 45 36.4**	**-1.1**
AMTX				*e*Sg		**Sb**		**06 46 21.6**	**+3.3**
PV04	**Paradox Valley**	**3.48**	**295**	*e*Pn		**Pb**		**06 45 37.3**	**-2.7**
PV04				*e*Pg		**Pg**		**06 45 44.6**	**-0.2**
PHWY	**Pilot Hill**	**4.35**	**354**	*e*Pg		**Pg**		**06 45 58.7**	**-2.8**
PHWY				*e*Sg		**Sg**		**06 46 54.7**	**-3.2**
OGNE	**Ogallala**	**4.56**	**28**	*e*Pn		Pn		06 45 51.0	+3.7
OGNE				*e*Pg		**Pg**		**06 46 05.4**	**-0.1**
OGNE				*e*Sg		**Sg**		**06 47 03.4**	**-1.2**
GDL2	**Guadalupe Moun**	**4.77**	**174**	*e*Pg		**Pb**		**06 46 04.5**	**+2.5**
GDL2				*e*Sg		**Sb**		**06 47 03.6**	**+4.1**
SRU	**San Rafael**	**4.93**	**297**	*e*Pg		**Pg**		**06 46 09.7**	**-2.8**
SRU				*e*Sg		**Sg**		**06 47 14.9**	**-1.4**
MNTX	**Cornudas Mount**	**5.27**	**184**	*e*Pg		**Pb**		**06 46 12.0**	**+1.7**
	6.6nm,0.6s								
MNTX				*e*Sg		Sb		06 47 20.2	+6.6
WMOK	**Wichita Mounta**	**5.45**	**112**	*e*Pn		**Pn**		**06 46 01.5**	**+2.1**
WMOK				*e*Sg		**Sg**		**06 47 32.4**	**-0.6**
TMUT	**Trail Mountain**	**5.49**	**297**	*e*Pg		Pg		06 46 19.7	-3.6
	28nm,0.7s								
TMUT				*e*Sg		**Sg**		**06 47 35.9**	**+1.6**
MVU	**Marysvale**	**5.99**	**287**	*e*Pg		**Pg**		**06 46 30.0**	**-2.9**
	6.7nm,0.5s								
DAU	**Daniels Canyon**	**6.04**	**307**	*e*Pg		Pg		06 46 30.4	-3.4
	5.0nm,0.6s								
JLU	**Jordanelle**	**6.27**	**307**	*e*Pg		**Pg**		**06 46 36.5**	**-1.7**
JLU				*e*Sg		Sb		06 47 50.1	+7.4
TUC	**Tucson**	**6.71**	**228**	*e*Pg		**Pg**		**06 46 44.4**	**-2.3**
	2.5nm,0.6s								
CCUT	**Cedar City**	**6.77**	**277**	*e*Pg		Pg		06 46 44.5	-3.3
	7.0nm,0.8s								
PDAR	**Pinedale Array**	**6.81**	**330**	Pn		Pn		06 46 22.2	+3.9
PDAR				Pg		**Pg**		**06 46 46.2**	**-2.3**
PDAR				Lg		Lg		06 48 15.1	
PDAR	**Pinedale Array**	**6.81**	**330**	Pn		Pn		06 46 22.2	+3.9
	0.1nm,0.3s,baz=142,slow=13,SNR=3.2								
PDAR				Pg		**Pg**		**06 46 46.2**	**-2.3**
	0.3nm,0.3s,baz=144,slow=14,SNR=11								
PDAR				Lg		Lg		06 48 15.1	
	0.4nm,0.3s,baz=135,slow=30,SNR=7.9								
ARUT	**Antelope Range**	**6.85**	**279**	*e*Pg		Pg		06 46 45.6	-3.6
	12nm,0.5s								
KSU1	**Kansas State U**	**6.88**	**69**	*e*Pg		**Pg**		**06 46 48.1**	**-1.9**
KSU1				*e*Sg		**Sg**		**06 48 17.1**	**-2.0**
DUG	**Dugway**	**6.98**	**300**	*e*Pg		**Pg**		**06 46 49.9**	**-1.9**
	4.5nm,0.8s								
TXAR	**Lajitas Array**	**7.68**	**172**	Pn		Pn		06 46 33.9	+3.7
TXAR				Pg		Pg		06 46 59.5	-5.7
TXAR				Lg		Lg		06 48 36.4	
TXAR	**Lajitas Array**	**7.68**	**172**	Pn		Pn		06 46 33.9	+3.7
	0.1nm,0.3s,baz=358,slow=11,SNR=10.0								
TXAR				Pg		Pg		06 46 59.5	-5.7
	0.5nm,0.3s,baz=0.3,slow=16,SNR=7.9								
TXAR				Lg		Lg		06 48 36.4	
	1.1nm,0.3s,baz=1.2,slow=11,SNR=6.1								
JCT	**Junction City**	**7.74**	**145**	*e*Pg		**Pg**		**06 47 03.4**	**-2.9**
JCT				*e*Sg		**Sg**		**06 48 44.6**	**-1.9**
ECSD	**EROS Data Cent**	**9.26**	**41**	*e*Pn		**Pn**		**06 46 54.2**	**+2.6**
MIAR	**Mount Ida**	**9.52**	**101**	*e*Pn		**Pn**		**06 46 54.5**	**-0.8**
YKA	**Yellowknife Ar**

	0.6nm,0.5s,baz=102,slow=4.0,SNR=7.2							
ASAR				S	S	07 25 42.1	-0.6	
	0.5nm,0.8s,baz=86,slow=16,SNR=5.0							
FITZ	**Fitzroy Crossi**	**53.24**	**261**	P	P	07 20 45.5	+0.2	
	0.4nm,0.3s,baz=106,slow=9.1,SNR=5.2							
MJAR	**Matsushiro Arr**	**68.14**	**323**	P	P	07 22 22.8	-0.2	
	1.2nm,0.5s,baz=156,slow=6.2,SNR=6.0							
PETK	**Petropavlovsk-**	**73.85**	**345**	P	P	07 22 56.0	0.0	
	2.2nm,0.8s,baz=145,slow=11,SNR=4.7							
ILAR	**Eielson Array**	**85.95**	**13**	P	P	07 23 58.1	-0.9	
	0.2nm,0.3s,baz=218,slow=4.9,SNR=7.9							
ARCES	**ARCESS Array B**	**126.47**	**350**	PKP	PKPdf	07 30 16.9	-0.5	
	1.7nm,0.8s,baz=104,slow=1.2,SNR=8.7							
BRTR	**Keskin Array B**	**145.03**	**315**	PKPbc	PKPbc	07 30 53.1	-0.3	
	1.0nm,0.6s,baz=141,slow=4.1,SNR=5.7							
CLL	**Collm**	**145.63**	**348**	*i* PKP	PKPbc	07 30 54.5	0.0	
	comp=Z,5.0nm,0.7s							
BRG	**Berggiesshubel**	**145.84**	**346**	*e*P	PKPbc	07 30 55.5	+0.4	
	comp=Z,2.8nm,0.8s							
GERES	**GERESS Array B**	**147.78**	**345**	PKPbc	PKPbc	07 31 00.7	+0.1	
	comp=Z,0.8nm,0.5s,baz=48,slow=2.0,SNR=9.0							

NIED **27** *07:26:00,26.˚50N×141.˚20E,h460km,Mw4.3 Best double couple: M₀2.93000×10¹⁵ NP1:φ₀58.00000°, δ85.00000°, λ-33.00000°. NP2:φ₀151.00000°, δ57.00000°, λ-174.00000°.*

MOS **27** *07:26:20.3±0.9,26.˚16N×140.˚59E,h438km, mb4.1/27, Error ellipse: s-maj=16.6km s-min=7.8km az=105.5*

ISCJB **27** *07:26:22.1±0.4,26.˚37N±0.˚04×140.˚73E±0.˚08,h450km, mb4.0/38,Error ellipse: s-maj=9.5km s-min=4.8km az=177.7*

IDC **27** *07:26:23.1±1.4,26.˚23N×140.˚67E,h454km±15km, mb3.6/23,mb1 3.7/29,mb1mx3.7/33,mbtmp3.6/29,Error ellipse: s-maj=13.5km s-min=9.7km az=85.0*

JMA **27** *07:26:23.2±0.3,26.˚52N×141.˚21E,h446km±3km,M4.5*

BJI **27** *07:26:23.7,26.˚15N×140.˚82E,h496km,mB4.8/5,mb4.7/8*

ISC 27 07:26:22.8±0.6,26.˚32N±0.˚07×140.˚7E±0.˚1,h450km,n74,
σ1ᵍ75/88,mb4.1/37,4D,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**1.33**	**76**	P	**P**	**07 27 19.2**	**-0.9**
JHHJ				S	**S**	**07 28 02.8**	**-3.8**
CBIJ	**Chichi jima**	**1.51**	**59**	P	**P**	**07 27 19.3**	**-1.5**
JHCJ	**Hachijojimakas**	**6.78**	**353**	P	**P**	**07 28 06.5**	**+1.4**
JHJ2	**Mitsune**	**6.82**	**354**	P	**P**	**07 28 06.3**	**+0.8**
JHJ2				*e*S	**S**	**07 29 25.4**	**-4.2**
JHJ	**Hachijo jima 2**	**6.83**	**353**	P	**P**	**07 28 05.5**	**-0.1**
	81nm,0.3s,baz=73,slow=21,SNR=32						
JHJ				S	**S**	**07 29 24.3**	**-5.5**
	32nm,0.3s,baz=66,slow=20,SNR=4.2						
BSO1	**Boso 1**	**8.31**	**1**	P	**P**	**07 28 21.3**	**+0.4**
BSO1				*e*S	**S**	**07 29 56.2**	**-1.8**
BSO3	**Boso 3**	**8.46**	**359**	P	**P**	**07 28 23.9**	**+1.1**
BSO3				*e*S	**S**	**07 29 58.1**	**-3.3**
BSO4	**Boso 4**	**8.65**	**358**	P	**P**	**07 28 26.1**	**+1.1**
BSO4				*e*S	**S**	**07 30 01.6**	**-3.9**
JIE	**Ise**	**8.77**	**338**	P	**P**	**07 28 28.4**	**+2.0**
JKN2	**Miekihoku**	**8.79**	**335**	P	**P**	**07 28 28.5**	**+1.9**
HMMJ	**Hamamatsu 2**	**8.90**	**344**	P	**P**	**07 28 28.8**	**+1.0**
HMMJ				*e*S	**S**	**07 30 07.2**	**-3.4**
JOD2	**Odawara 2**	**9.03**	**351**	*e*S	**S**	**07 30 11.3**	**-2.0**
JNY	**Yasuok**	**9.35**	**345**	P	**P**	**07 28 33.5**	**+0.8**
JNY				*e*S	**S**	**07 30 17.4**	**-2.2**
JRY	**Ryogami san**	**9.80**	**351**	P	**P**	**07 28 37.8**	**+0.2**
JRY				*e*S	**S**	**07 30 24.9**	**-3.7**
JAG	**Ashikaga**	**10.14**	**354**	P	**P**	**07 28 40.5**	**-0.8**
JAG				*e*S	**S**	**07 30 29.6**	**-5.7**
JHO	**Hitachi**	**10.27**	**359**	P	**P**	**07 28 42.6**	**-0.1**
JHO				S	**S**	**07 30 34.3**	**-3.6**
MJAR	**Matsushiro Arr**	**10.42**	**349**	P	**P**	**07 28 44.5**	**+0.2**
	0.9nm,0.3s,baz=171,slow=11,SNR=11						
MJAR				S	S	07 30 34.0	-7.0
	0.9nm,0.3s,baz=150,slow=14,SNR=4.5						
MAT	**Matsushiro**	**10.42**	**349**	P	**P**	**07 28 44.7**	**+0.3**
MAT				S	**S**	**07 30 36.1**	**-4.9**
JNU	**Nakatsue**	**10.92**	**311**	P	**P**	**07 28 50.6**	**+0.7**
	1.0nm,0.3s,baz=105,slow=6.4,SNR=8.3						
KSRS	**Korea Array**	**15.53**	**319**	P	**P**	**07 29 41.1**	**+1.7**
	1.8nm,0.3s,baz=144,slow=8.8,SNR=37						
ERM	**Erimo**	**15.79**	**7**	*i* P	**P**	**07 29 43.5**	**+1.4**
ASAJ	**Asahikawa**	**17.83**	**4**	P	**P**	**07 30 05.0**	**+1.5**
	2.0nm,0.3s,baz=228,slow=17,SNR=13						
USRK	**Ussuriysk Arra**	**19.20**	**341**	P	**P**	**07 30 18.1**	**+1.5**
	1.3nm,0.3s,baz=162,slow=9.6,SNR=37						
YSS	**Yuzh-Sakhalins**	**20.66**	**4**	*e*P	**P**	**07 30 32.0**	**+2.1**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
PETK	**Petropavlovsk-**	**29.62**	**21**	P	**P**	**07 31 51.4**	**+1.8**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
PETK	**Petropavlovsk-**	**29.62**	**21**	P	**P**	**07 31 51.4**	**+1.8**
	comp=Z,1.4nm,0.5s,baz=214,slow=6.3,SNR=5.8						
SONM	**Songino Array**	**34.40**	**318**	P	**P**	**07 32 30.9**	**0.0**
	comp=Z,2.4nm,0.5s,baz=128,slow=8.5,SNR=4.4						
ZAK	**Zakamensk**	**37.36**	**320**	*e*P	**P**	**07 32 53.9**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BILL	**Bilibino**	**44.51**	**13**	*d* iP	**P**	**07 33 53.4**	**+1.1**
BILL				pmax	pmax		
	comp=Z,17nm,1.1s						
TIXI	**Tiksi**	**45.86**	**355**	ǁ*e*P	**P**	**07 34 02.9**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	**Warramunga Arr**	**46.40**	**188**	P	**P**	**07 34 06.8**	**-0.7**
	comp=Z,12nm,0.4s,baz=5.6,slow=7.6,SNR=337						
WRA				ScP	**ScP**	**07 38 43.1**	**-0.4**
	comp=Z,0.7nm,0.8s,baz=2.5,slow=4.7,SNR=4.6						
ZALV	**Zalesovo Beam**	**49.23**	**320**	P	**P**	**07 34 28.4**	**0.0**
ZALV						07 35 43.1	
ZALV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV	**Zalesovo Beam**	**49.23**	**320**	P	**P**	**07 34 28.4**	**0.0**
	comp=Z,2.5nm,0.5s,baz=106,slow=7.6,SNR=9.7						
ZALV				PcP	**PcP**	**07 35 43.1**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=104,slow=3.9,SNR=4.2						
MK31	**Makanchi Array**	**49.98**	**310**	*i* P	**P**	**07 34 34.5**	**+0.4**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR	**Makanchi Array**	**49.98**	**310**	P	**P**	**07 34 33.8**	**-0.3**
MKAR						07 35 46.4	
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**49.98**	**310**	P	**P**	**07 34 33.8**	**-0.3**
	comp=Z,3.1nm,0.6s,baz=94,slow=9.2,SNR=30						
MKAR				PcP	**PcP**	**07 35 46.4**	**0.0**
	comp=Z,0.6nm,0.6s,baz=74,slow=5.0,SNR=4.0						
ASAR	**Alice Springs**	**50.12**	**188**	P	**P**	**07 34 34.6**	**-0.8**
	comp=Z,1.0nm,0.6s,baz=22,slow=9.1,SNR=20						
KURK	**Kurchatov**	**52.61**	**315**	P	**P**	**07 34 53.8**	**+0.6**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KURBB	**Kurchatov Arra**	**52.66**	**315**	P	**P**	**07 34 53.8**	**+0.2**
	comp=Z,9.9nm,0.5s,baz=93,slow=7.9,SNR=86						
KSH	**Kashi**	**54.87**	**301**	P	P	07 35 13.5	+3.8
KSH				pmax	pmax		
	comp=Z,94nm,3.7s						
AAK	**Ala-Archa**	**55.64**	**305**	*i* P	**P**	**07 35 15.6**	**+0.5**
AAK				pmax	pmax		
	comp=Z,20nm,2.8s						
KDAK	**Kodiak Island**	**55.76**	**37**	P	**P**	**07 35 15.3**	**-0.1**
	comp=Z,6.7nm,0.7s,baz=304,slow=6.5,SNR=5.4						
BVA0	**Borovoye Array**	**57.74**	**318**	*i* P	**P**	**07 35 29.6**	**+0.4**
BVA0				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BVAR	**Borovoye Array**	**57.74**	**318**	P	**P**	**07 35 29.4**	**+0.2**
BVAR				pmax	pmax		
	comp=Z,13nm,0.4s						
BVAR	**Borovoye Array**	**57.74**	**318**	P	**P**	**07 35 29.4**	**+0.2**
	comp=Z,13nm,0.4s,baz=85,slow=7.0,SNR=27						
BRVK	**Borovoye**	**57.80**	**318**	*d* iP	**P**	**07 35 30.1**	**+0.5**
BRVK				pmax	pmax		
	comp=Z,12nm,0.9s						
STKA	**Stephens Creek**	**57.87**	**179**	P	**P**	**07 35 29.4**	**-0.9**
	comp=Z,3.0nm,0.7s,baz=326,slow=4.0,SNR=5.4						
KK31	**Karatay Array**	**58.49**	**306**	P	**P**	**07 35 35.0**	**+0.5**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ILAR	**Eielson Array**	**59.02**	**28**	P	**P**	**07 35 37.7**	**0.0**
	comp=Z,2.2nm,0.5s,baz=242,slow=6.1,SNR=42						
ARU	**Arti**	**64.25**	**322**	*d iP*	**P**	**07 36 12.3**	**+0.2**
ARU						07 36 40.7	
ARU						07 38 40.3	
ARU				S	**S**	**07 44 15.1**	**+1.6**
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
AB31	**Akbulak array**	**64.71**	**314**	*i* P	**P**	**07 36 15.3**	**+0.1**
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKTO	**Aktyubinsk**	**65.69**	**316**	P	**P**	**07 36 21.1**	**-0.3**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKTO	**Aktyubinsk**	**65.69**	**316**	P	**P**	**07 36 21.1**	**-0.3**
	comp=Z,2.0nm,0.5s,baz=73,slow=12,SNR=6.6						
YKA	**Yellowknife Ar**	**73.44**	**28**	P	**P**	**07 37 08.4**	**+0.7**
	comp=Z,2.9nm,0.7s,baz=295,slow=5.7,SNR=21						
ARCES	**ARCESS Array B**	**73.85**	**341**	P	**P**	**07 37 10.8**	**+0.8**
	comp=Z,3.3nm,0.5s,baz=72,slow=8.5,SNR=37						
OBN	**Obninsk**	**76.43**	**325**	*i* P	**P**	**07 37 25.5**	**+0.8**
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	**Khabaz**	**77.58**	**313**	P	**P**	**07 37 32.1**	**+0.8**
KBZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KBZ	**Khabaz**	**77.58**	**313**	P	**P**	**07 37 32.0**	**+0.8**
	comp=Z,6.2nm,0.8s,baz=111,slow=3.3,SNR=12						
KIV	**Kislovodsk**	**77.63**	**313**	*i* P	**P**	**07 37 34.1**	**+2.4**
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
FINES	**FINESS Array B**	**78.07**	**333**	P	**P**	**07 37 33.5**	**-0.1**
	comp=Z,2.4nm,0.3s,baz=72,slow=4.7,SNR=70						
MIB	**Mutribah**	**80.11**	**298**	*e*P	**P**	**07 37 45.1**	**0.0**
MIB				AMb	AMB	07 37 45.7	
	comp=Z,16nm,0.7s						
RDF	**Al-Radifah**	**80.30**	**297**	*e*P	**P**	**07 37 46.3**	**+0.2**
NAY	**Al-Naaiem**	**80.41**	**298**	*e*P	**P**	**07 37 46.4**	**-0.3**
NAY				AMb	AMB	07 37 47.3	
	comp=Z,8.4nm,0.6s						
NVAR	**Mina Array Bea**	**82.02**	**51**	P	**P**	**07 37 55.5**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=272,slow=6.0,SNR=8.6						
AKASG	**Malin Array Be**	**82.47**	**323**	P	**P**	**07 37 56.3**	**-0.6**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKASG	**Malin Array Be**	**82.47**	**323**	P	**P**	**07 37 56.2**	**-0.6**
	comp=Z,2.6nm,0.5s,baz=51,slow=5.3,SNR=16						
FFC	**Flin Flon**	**83.08**	**31**	*i* P	**P**	**07 38 01.4**	**+1.5**
NB2	**NORSAR Subarra**	**83.85**	**338**	P	**P**	**07 38 02.9**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=48,slow=4.8						
NOA	**NORSAR Array B**	**83.85**	**338**	P	**P**	**07 38 03.1**	**-0.6**
	comp=Z,2.0nm,0.7s,baz=48,slow=4.7,SNR=8.8						
BRTR	**Keskin Array B**	**85.57**	**312**	P	**P**	**07 38 12.2**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=98,slow=5.2,SNR=4.8						
PDAR	**Pinedale Array**	**85.67**	**44**	P	**P**	**07 38 14.6**	**+1.2**
	comp=Z,0.5nm,0.5s,baz=307,slow=5.2,SNR=4.2						
GERES	**GERESS Array B**	**91.50**	**328**	P	**P**	**07 38 39.8**	**-0.5**
	comp=Z,0.6nm,0.7s,baz=58,slow=5.0,SNR=5.7						
TXAR	**Lajitas Array**	**97.11**	**53**	P	Pdif	07 39 07.0	+0.8
	comp=Z,0.2nm,0.7s,baz=340,slow=4.8,SNR=3.3						
TORD	**Torodi Ar. Bea**	**124.10**	**310**	PKP	**PKPdf**	**07 44 29.5**	**-0.5**
	comp=Z,3.8nm,1.4s,baz=307,slow=1.9,SNR=5.2						

ISCJB **27** *07:31:10.6±0.3,37.˚32N±0.˚02×27.˚97E±0.˚02,h0km, Error ellipse: s-maj=3.5km s-min=2.7km az=19.5*

ATH **27** *07:31:10.4,37.˚32N×28.˚01E,h21km±2km, MD3.3/4*

CSEM **27** *07:31:10.7±0.2,37.˚30N×27.˚98E,h1km, MD2.5, Error ellipse: s-maj=5.6km s-min=4.5km az=22.0*

DDA **27** *07:31:11.5,37.˚32N×27.˚97E,h7km, MD2.8*

ISK **27** *07:31:11.0,37.˚27N×27.˚97E,h11km, MD2.5*

ISC 27 07:31:10.2±0.7,37.33N±0.02×28.00E±0.02,h0km,n46,
σ1ᵍ39/77,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MLSB	**Milas**	**0.18**	**259**	*e*PG	**Pg**	**07 31 15.0**	**+1.3**
MLSB				*e*SG	**Sg**	**07 31 17.6**	**+1.6**
MLSB	**Milas**	**0.18**	**259**	*e*Pg	**Pg**	**07 31 15.0**	**+1.3**
MLSB				*e*Sg	**Sg**	**07 31 17.7**	**+1.6**
YER	**Yerkesik**	**0.30**	**131**	*e*PG	**Pg**	**07 31 17.4**	**+1.5**
YER				*e*SG	**Sg**	**07 31 21.6**	**+1.8**
YER	**Yerkesik**	**0.30**	**131**	*e*Pg	**Pg**	**07 31 17.4**	**+1.5**
YER				*e*Sg	**Sg**	**07 31 21.6**	**+1.8**
AYDN	**Tasoluk**	**0.34**	**344**	*i* P	**Pb**	**07 31 19.5**	**+0.2**
AYDN				*i* S	**Sb**	**07 31 24.9**	**-0.5**
AYDN	**Tasoluk**	**0.34**	**344**	*i* P	**Pb**	**07 31 19.5**	**+0.2**
AYDN				*i* S	**Sb**	**07 31 24.9**	**-0.5**
BODT	**Bodrum**	**0.61**	**244**	*e*PG	**Pg**	**07 31 22.5**	**+0.6**
BODT				*e*SG	**Sg**	**07 31 30.8**	**+0.9**
BODT	**Bodrum**	**0.61**	**244**	*e*Pg	**Pg**	**07 31 22.5**	**+0.6**
BODT				*e*Sg	**Sg**	**07 31 30.8**	**+0.9**
TURN	**Turunc**	**0.66**	**133**	*i* P	**Pg**	**07 31 21.6**	**-1.4**
TURN				*e*S	**Sg**	**07 31 27.4**	**-4.1**
TURN	**Turunc**	**0.66**	**133**	*i* P	**Pg**	**07 31 21.6**	**-1.4**
TURN				*e*S	**Sg**	**07 31 27.4**	**-4.1**
DAT	**Datca**	**0.69**	**210**	*e*PG	**Pg**	**07 31 23.5**	**+0.1**
DAT	**Datca**	**0.69**	**210**	*e*Pg	**Pg**	**07 31 23.5**	**+0.1**
GCAM	**G?zelcaml?**	**0.71**	**302**	*i* P	**Pb**	**07 31 25.4**	**-0.1**
GCAM				*i* S	**Sg**	**07 31 33.7**	**+0.6**
GCAM	**G?zelcaml?**	**0.71**	**302**	*i* P	**Pb**	**07 31 25.4**	**-0.1**
GCAM				*i* S	**Sg**	**07 31 33.7**	**+0.6**
DALY	**Dalyan (Mu˘la**	**0.73**	**134**	*e*PG	**Pg**	**07 31 25.4**	**+1.1**
DALY	**Dalyan (Mu˘la**	**0.73**	**134**	*e*Pg	**Pg**	**07 31 25.4**	**+1.1**
DNZL	**Cakiroluk**	**0.91**	**66**	*i* P	**Pb**	**07 31 29.8**	**+0.8**
DNZL				*i* S	**Sb**	**07 31 41.8**	**+0.1**
DNZL	**Cakiroluk**	**0.91**	**66**	*i* P	**Pb**	**07 31 29.8**	**+0.8**
DNZL				*i* S	**Sb**	**07 31 41.8**	**+0.1**
DENT	**Denizli**	**0.93**	**62**	*e*PG	**Pn**	**07 31 30.1**	**-0.4**
DENT	**Denizli**	**0.93**	**62**	*e*Pg	**Pn**	**07 31 30.2**	**-0.4**
SMG	**Samos**	**1.00**	**293**	*e*PN	**Pb**	**07 31 30.0**	**-0.4**
SMG				*e*SN	**Sb**	**07 31 43.5**	**-0.6**
SMG	**Samos**	**1.00**	**293**	*e*Pn	**Pb**	**07 31 30.0**	**-0.4**
SMG				*e*Sn	**Sb**	**07 31 43.5**	**-0.6**
ARG	**Arkhangelos**	**1.11**	**175**	*e*PN	**Pg**	**07 31 31.5**	**-0.1**
ARG				*e*SN	**Sb**	**07 31 47.2**	**-0.3**
ARG	**Arkhangelos**	**1.11**	**175**	*e*Pn	**Pg**	**07 31 31.5**	**-0.1**
ARG				*e*Sn	**Sb**	**07 31 47.2**	**-0.3**
IZM	**Izmir**	**1.22**	**332**	*e*PN	**Pn**	**07 31 35.2**	**+0.7**
IZM	**Izmir**	**1.22**	**332**	*e*Pn	**Pn**	**07 31 35.2**	**+0.7**
GOLH	**Golhisar**	**1.25**	**94**	*i* P	**Pn**	**07 31 35.6**	**+0.6**
GOLH				*i* S	**Sn**	**07 31 55.0**	**+2.3**
GOLH	**Golhisar**	**1.25**	**94**	*i* P	**Pn**	**07 31 35.6**	**+0.6**
GOLH				*i* S	**Sn**	**07 31 55.0**	**+2.3**
KULA	**Kula-Manisa**	**1.29**	**24**	*e*PN	**Pn**	**07 31 36.5**	**+0.8**
KULA	**Kula-Manisa**	**1.29**	**24**	*e*Pn	**Pn**	**07 31 36.5**	**+0.8**
BLCB	**Balcova**	**1.30**	**325**	*e*PN	**Pn**	**07 31 35.6**	**-0.1**
BLCB	**Balcova**	**1.30**	**325**	*e*Pn	**Pn**	**07 31 35.6**	**-0.1**
URLA	**Izmir**	**1.52**	**313**	*i* P	**Pg**	**07 31 40.9**	**+1.6**
URLA				*i* S	**Sg**	**07 31 58.6**	**-0.3**
URLA	**Izmir**	**1.52**	**313**	*i* P	**Pg**	**07 31 40.9**	**+1.6**
URLA				*i* S	**Sg**	**07 31 58.6**	**-0.3**
AKHS	**Akhisar**	**1.55**	**355**	*e*P	**Pn**	**07 31 57.4**	**-2.7**
AKHS				*e*S	**Sn**	**07 31 57.4**	**-2.7**
AKHS	**Akhisar**	**1.55**	**355**	*e*P	**Pn**	**07 31 39.4**	**+0.2**
AKHS				*e*S	**Sn**	**07 31 57.4**	**-2.7**
KHAL	**Karahalli**	**1.57**	**48**	*e*P	**Pn**	**07 31 38.3**	**-1.2**
KHAL				*e*S	**Sn**	**07 31 59.2**	**-1.5**
KHAL	**Karahalli**	**1.57**	**48**	*e*P	**Pn**	**07 31 38.3**	**-1.2**
KHAL				*e*S	**Sn**	**07 31 59.2**	**-1.5**
AKAS	**Kas**	**1.69**	**130**	*i* P	**Pg**	**07 31 43.8**	**+1.2**
AKAS				*i* S	**Sg**	**07 32 07.2**	**+2.7**
AKAS	**Kas**	**1.69**	**130**	*i* P	**Pg**	**07 31 43.8**	**+1.2**
CHOS	**Chios island**	**1.87**	**305**	*e*PN	**Pn**	**07 31 43.7**	**+0.2**
CHOS				*e*SN	**Sn**	**07 32 07.8**	**0.0**
CHOS	**Chios island**	**1.87**	**305**	*e*Pn	**Pn**	**07 31 43.7**	**+0.2**
CHOS				*e*Sn	**Sn**	**07 32 07.8**	**0.0**
KARP	**Karpathos**	**1.90**	**201**	*e*PB	**Pn**	**07 31 43.3**	**-0.7**
KARP	**Karpathos**	**1.90**	**201**	*e*Pb	**Pn**	**07 31 43.3**	**-0.7**
BALY	**Balya**	**2.43**	**353**	*i* P	**Pn**	**07 31 51.2**	**0.0**
BALY				*e*S	**Sn**	**07 32 18.1**	**-3.5**
BALY	**Balya**	**2.43**	**353**	*i* P	**Pn**	**07 31 51.2**	**0.0**
BALY				*e*S	**Sn**	**07 32 18.1**	**-3.5**

IDC **27** *07:34:01.4±2.0,35.˚32N×140.˚17E,h0km,mb3.3/2, mb1 3.5/3,mb1mx3.2/26,mbtmp3.4/3,Error ellipse: s-maj=41.2km s-min=18.7km az=73.0*

ISCJB **27** *07:34:04.5±0.8,35.˚41N±0.˚05×140.˚22E±0.˚09,h50km±6km, mb3.3/2,Error ellipse: s-maj=13.3km s-min=6.0km az=151.3*

JMA **27** *07:34:04.8±0.1,35.˚50N×140.˚21E,h42km±1km,M2.7 JMA Felt I J1.*

ISC 27 07:34:05.3±1.2,35.43N±0.˚05×140.˚21E±0.˚07,h45km±8km,
n17,σ0ᵍ71/21,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JCN	**Nagara**	**0.02**	**205**	P	**Pn**	**07 34 11.8**	**-0.5**
JCN				*e*S	**Sn**	**07 34 17.0**	**-0.2**
KTR	**Katsuura**	**0.30**	**163**	P	**Pn**	**07 34 13.9**	**0.0**
KTR				*e*S	**Sn**	**07 34 20.5**	**+0.5**
BSO4	**Boso 4**	**0.45**	**167**	P	**Pn**	**07 34 16.0**	**+0.4**
BSO3	**Boso 3**	**0.68**	**159**	P	**Pn**	**07 34 18.3**	**0.0**
JYT	**Yasato**	**0.79**	**359**	P	**Pn**	**07 34 19.3**	**-0.8**
JOD2	**Odawara 2**	**0.93**	**260**	P	**Pn**	**07 34 21.4**	**-0.6**
JIM2	**Oshima 3**	**0.96**	**222**	P	**Pn**	**07 34 21.7**	**-0.7**
BSO1	**Boso 1**	**1.00**	**141**	P	**Pn**	**07 34 21.6**	**-0.8**
JAG	**Ashikaga**	**1.17**	**328**	P	**Pn**	**07 34 24.3**	**-0.9**
JRY	**Ryogami san**	**1.21**	**299**	P	**Pn**	**07 34 25.5**	**-0.3**
JIZS	**Izushimoda**	**1.30**	**237**	P	**Pn**	**07 34 25.8**	**-1.2**
JYN	**Shimob**	**1.36**	**273**	P	**Pn**	**07 34 27.5**	**-0.4**
MJAR	**Matsushiro Arr**	**1.96**	**305**	Pn	**Pn**	**07 34 36.0**	**-0.1**
	1.9nm,0.3s,baz=128,slow=13,SNR=13						
MJAR				Sn	**Sn**	**07 35 00.7**	**+1.2**
	3.9nm,0.3s,baz=126,slow=27,SNR=8.9						
MAT	**Matsushiro**	**1.97**	**305**	P	**Pn**	**07 34 36.1**	**0.0**
MAT				S	**Sn**	**07 35 00.8**	**+1.2**
JHJ	**Hachijo jima 2**	**2.33**	**189**	P	**Pn**	**07 34 41.2**	**0.0**
	21nm,0.3s,baz=84,slow=23,SNR=14						
JHJ				Sn	**Sn**	**07 35 08.0**	**-0.6**
	24nm,0.3s,baz=220,slow=23,SNR=6.6						
MKAR	**Makanchi Array**	**44.16**	**303**	P	P	07 42 13.0	+3.5
	0.1nm,0.4s,baz=83,slow=12,SNR=2.2						
WRA	**Warramunga Arr**	**55.35**	**187**	P	**P**	**07 43 34.9**	**+0.2**
	0.6nm,0.9s,baz=1.9,slow=7.8,SNR=5.6						

CSEM **27** *07:35:02.6,42.˚56N×13.˚21E,h10km, MD2.0/6, After ROM*

ROM 27 07:35:02.6±0.1,42.56N×13.21E,h10km,Md2.0/6,Ml1.4/5,
Error ellipse: s-maj=1.2km s-min=0.8km az=21.0,
Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.13**	**291**	Pg	Pg	07 35 06.2	+0.3
LNSS				Sg	Sg	07 35 08.6	+0.4
	185nm,0.3s						
LNSS	**Leonessa**	**0.13**	**291**	Pg	Pg	07 35 06.2	+0.3
LNSS				Sg	Sg	07 35 08.6	+0.4
	185nm,0.3s						
CAMP	**Campotosto**	**0.15**	**97**	Pg	Pg	07 35 06.7	+0.5
CAMP				Sg	Sg	07 35 09.5	+0.9
	75nm,0.3s						
CAMP	**Campotosto**	**0.15**	**97**	Pg	Pg	07 35 06.7	+0.5
CAMP				Sg	Sg	07 35 09.5	+0.9
	75nm,0.3s						
FIAM	**Fiamignano**	**0.29**	**193**	Pg	Pg	07 35 09.2	+0.5
FIAM				Sg	Sb	07 35 14.1	-1.1
	38nm,0.5s						
FIAM	**Fiamignano**	**0.29**	**193**	Pg	Pg	07 35 09.2	+0.5
FIAM				Sg	Sb	07 35 14.1	-1.1
	38nm,0.5s						
TERO	**Teramo**	**0.30**	**77**	Pg	Pg	07 35 09.1	+0.4
TERO				Sg	Sg	07 35 13.7	+0.8
	35nm,0.2s						
TERO	**Teramo**	**0.30**	**77**	Pg	Pg	07 35 09.1	+0.4
TERO				Sg	Sg	07 35 13.7	+0.8
	35nm,0.2s						
FDMO	**Fiordimonte**	**0.49**	**350**	Pg	Pg	07 35 12.

ISC 27 07:53:38.9±0.3,18°31N±0˝.03×145°28E±0˝.04,h495km±2km, h495km:pP-P,n790,σ1°16/941,mb5.0/252,13C-30D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.71**	**185**	*e*Pn	**P**	**07 55 01.4**	**-1.7**
GUMO				*e*Sn	**S**	**07 56 07.3**	**-4.4**
JHJ	**Hachijo jima 2**	**15.55**	**343**	P	**P**	**07 56 54.9**	**0.0**
	85nm,0.3s,baz=68,slow=21,SNR=32						
JHJ				S	**S**	**07 59 30.2**	**-6.4**
	18nm,0.3s,baz=75,slow=21,SNR=3.9						
JOW	**Kunigami**	**17.83**	**301**	*e*P	**P**	**07 57 18.3**	**+0.3**
	21nm,0.9s						
MJAR	**Matsushiro Arr**	**19.20**	**342**	P	**P**	**07 57 29.1**	**-1.3**
MJAR				S	**S**	**08 00 33.5**	**-5.6**
MJAR	**Matsushiro Arr**	**19.20**	**342**	P	**P**	**07 57 29.1**	**-1.3**
	8.7nm,0.3s,baz=168,slow=9.9,SNR=132						
MJAR				S	**S**	**08 00 33.5**	**-5.6**
	baz=152,slow=12,SNR=4.3						
MAJO	**Matsushiro**	**19.20**	**342**	*e*P	**P**	**07 57 30.7**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,76nm,0.6s						
MAJO	**Matsushiro**	**19.20**	**342**	*e*P	**P**	**07 57 30.6**	**+0.2**
	comp=Z,76nm,0.6s						
MAT	**Matsushiro**	**19.20**	**342**	P	**P**	**07 57 29.4**	**-1.1**
MAT				S	**S**	**08 00 40.0**	**+0.9**
JNU	**Nakatsue**	**19.61**	**322**	*e*P	**P**	**07 57 34.2**	**-0.1**
	comp=Z,14nm,0.8s						
JNU	**Nakatsue**	**19.61**	**322**	P	**P**	**07 57 34.5**	**+0.2**
	comp=Z,2.3nm,0.3s,baz=101,slow=2.7,SNR=4.2						
RCP	**Roxas**	**22.77**	**256**	*e*P	**P**	**07 58 02.9**	**-0.1**
NACB	**Ninganchiao**	**22.82**	**289**	*e*P	**P**	**07 58 04.3**	**+0.9**
	comp=Z,32nm,0.4s						
YULB	**Yu-li**	**22.96**	**287**	*e*P	**P**	**07 58 05.1**	**+0.4**
	comp=Z,28nm,0.5s						
TWG	**Pinlang**	**23.09**	**285**	*e*P	**P**	**07 58 05.8**	**0.0**
	comp=Z,227nm,0.4s						
YHNB	**Yeheng**	**23.11**	**290**	*e*P	**P**	**07 58 06.6**	**+0.5**
	comp=Z,60nm,0.8s						
CTBH	**Cotabato--PC H**	**23.25**	**244**	⇓*i*P	**P**	**07 58 08.2**	**+0.8**
SSLB	**Suanglung**	**23.33**	**288**	*e*P	**P**	**07 58 08.2**	**+0.2**
	comp=Z,62nm,0.5s						
TPUB	**Ta-pu**	**23.56**	**286**	*e*P	**P**	**07 58 10.6**	**+0.6**
	comp=Z,155nm,1.5s						
ERM	**Erimo**	**23.70**	**356**	*i* P	**P**	**07 58 12.1**	**+1.2**
GAMI	**Galela, Maluku**	**23.71**	**228**	P	**P**	**07 58 09.5**	**-2.0**
	comp=Z,106nm,1.1s,comp=Z,10μm						
TGY	**Tagaytay City**	**23.74**	**263**	P	**P**	**07 58 11.9**	**+0.2**
TGY	**Tagaytay City**	**23.74**	**263**	P	**P**	**07 58 11.9**	**+0.2**
	comp=Z,319nm,0.4s,baz=239,slow=10.0,SNR=3.6						
KSRS	**Korea Array**	**24.40**	**325**	P	**P**	**07 58 16.2**	**-1.1**
	comp=Z,38nm,0.9s,baz=145,slow=9.2,SNR=62						
KSRS				PcP	**PcP**	**08 01 40.8**	**+1.0**
	comp=Z,2.8nm,0.8s,baz=114,slow=0.8,SNR=7.2						
KSRS				ScP	**ScP**	**08 04 31.2**	**-0.3**
	comp=Z,3.1nm,0.8s,baz=149,slow=2.9,SNR=9.3						
KSAR	**Wonju Array Be**	**24.41**	**325**	P	**P**	**07 58 16.2**	**-1.2**
KSAR				PcP	**PcP**	**08 01 40.8**	**+0.9**
KSAR				ScP	**ScP**	**08 04 31.2**	**-0.3**
FAKI	**Fak Fak**	**24.69**	**213**	P	**P**	**07 58 18.8**	**-1.4**
	comp=Z,112nm,0.8s,comp=Z,946nm						
ASAJ	**Asahikawa**	**25.83**	**356**	*e*P	**P**	**07 58 30.6**	**+0.7**
	comp=Z,9.2nm,0.6s						
ASAJ				PcP	**PcP**	**08 01 43.8**	**+0.8**
ASAJ	**Asahikawa**	**25.83**	**356**	P	**P**	**07 58 29.7**	**-0.1**
	comp=Z,22nm,0.7s,baz=205,slow=11,SNR=32						
ASAJ				PcP	**PcP**	**08 01 43.8**	**+0.8**
	comp=Z,10.0nm,0.7s,baz=220,slow=8.7,SNR=4.7						
MNI	**Manado**	**26.14**	**232**	P	**P**	**07 58 32.1**	**-0.9**
	comp=Z,503nm,0.9s,comp=Z,4μm						
MSAI	**Masohi**	**26.88**	**218**	P	**P**	**07 58 39.3**	**-0.2**
	comp=Z,35nm,0.6s,comp=Z,3μm						
VLA	**Vladivostok**	**27.21**	**338**	*i* P	**P**	**07 58 41.7**	**-0.3**
VLA				pmax	pmax		
	comp=Z,74nm,1.2s						
NJ2	**Nanjing**	**27.46**	**305**	*e*P	**P**	**07 58 45.5**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
AAI	**Ambon**	**27.59**	**219**	P	**P**	**07 58 45.5**	**-0.2**
PMG	**Port Moresby**	**27.60**	**176**	*e*P	**P**	**07 58 45.1**	**-0.7**
	comp=Z,44nm,0.8s						
PMG				*e*ScP	**ScP**	**08 04 43.1**	**+1.8**
PMG	**Port Moresby**	**27.60**	**176**	P	**P**	**07 58 45.1**	**-0.7**
	comp=Z,60nm,0.9s						
PMG	**Port Moresby**	**27.60**	**176**	P	**P**	**07 58 45.4**	**-0.4**
	comp=Z,39nm,0.8s,baz=4.0,slow=6.6,SNR=30						
PMG				ScP	**ScP**	**08 04 42.1**	**+0.8**
	comp=Z,20nm,0.9s,baz=37,slow=5.5,SNR=9.7						
NLAI	**Namlea**	**27.91**	**222**	P	**P**	**07 58 48.5**	**-0.1**
	comp=Z,83nm,0.7s,comp=Z,2μm						
GTOI	**Gorontalo**	**28.05**	**234**	P	**P**	**07 58 49.4**	**-0.4**
	comp=Z,67nm,0.8s,comp=Z,243μm						
USRK	**Ussuriysk Arra**	**28.12**	**339**	P	**P**	**07 58 50.3**	**+0.3**
	comp=Z,28nm,0.6s,baz=156,slow=8.8,SNR=103						
USRK				ScP	**ScP**	**08 04 41.0**	**-1.4**
	comp=Z,1.5nm,0.6s,baz=103,slow=6.2,SNR=4.6						
YSS	**Yuzh-Sakhalins**	**28.64**	**356**	⇓*e*P	**P**	**07 58 55.2**	**+0.7**
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
MRSI	**Marisa**	**28.97**	**235**	P	**P**	**07 58 57.5**	**-0.4**
	comp=Z,171nm,1.0s,comp=Z,1μm						
MYLDM	**Lahad Datu**	**29.22**	**247**	P	**P**	**07 59 02.2**	**+2.1**
MYLDM	**Lahad Datu**	**29.22**	**247**	P	**P**	**07 59 01.4**	**+1.3**
	comp=Z,104nm,0.9s,comp=Z,1μm						
LUWI	**Luwuk**	**29.32**	**231**	P	**P**	**07 58 59.9**	**-1.0**
	comp=Z,290nm,0.8s,comp=Z,3μm						
MDJ	**Mudanjiang**	**29.34**	**337**	P	**P**	**07 59 01.0**	**+0.4**
MDJ				sP	**sP**	**08 01 19.0**	**-3.8**
MDJ				PcP	**PcP**	**08 01 52.0**	**+0.3**
MDJ				S	**S**	**08 03 20.8**	**+2.3**
MDJ				ScP	**ScP**	**08 04 47.3**	**+1.0**
MDJ				PcS	**PcS**	**08 05 36.8**	**+1.6**
MDJ				ScS	**ScS**	**08 08 42.5**	**+0.7**
MDJ				pmax	pmax		
	comp=Z,16nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,34nm,5.3s						
MDJ	**Mudanjiang**	**29.34**	**337**	*e*P	**P**	**07 59 01.1**	**+0.4**
	comp=Z,8.5nm,0.4s						
SNY	**Shenyang**	**29.87**	**326**	⇑P	**P**	**07 59 05.5**	**+0.2**
SNY				pmax	pmax		
	comp=Z,17nm,0.8s						
KDM	**Kudat**	**29.93**	**251**	P	**P**	**07 59 07.2**	**+1.1**
SDKM	**Sandakan**	**30.16**	**249**	P	**P**	**07 59 08.1**	**-0.2**
TSM	**Tawau**	**30.20**	**246**	P	**P**	**07 59 08.6**	**0.0**
CN2	**Changchun**	**30.41**	**331**	*e*P	**P**	**07 59 09.8**	**-0.1**
CN2				*e*pP	**pP**	**08 00 33.5**	**-1.2**
CN2				*e*sP	**sP**	**08 01 28.0**	**-4.4**
CN2				PcP	**PcP**	**08 01 54.5**	**0.0**
CN2				*e*S	**S**	**08 03 37.3**	**+2.2**
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
KKM	**Kota Kinabalu**	**30.85**	**250**	*e*P	**P**	**07 59 15.0**	**+0.7**
	comp=Z,192nm,0.6s						
KKM	**Kota Kinabalu**	**30.85**	**250**	P	**P**	**07 59 15.5**	**+1.3**
KKM	**Kota Kinabalu**	**30.85**	**250**	P	**P**	**07 59 15.0**	**+0.7**
	comp=Z,264nm,0.8s,comp=Z,2μm						
HABR	**Khabarovsk**	**31.22**	**347**	*e*P	**P**	**07 59 16.5**	**-0.3**
HABR				*e**PP	**pP**	**08 00 41.1**	**-0.8**
HABR				*SP	**sP**	**08 01 39.5**	**0.0**
HABR				*e*		08 01 55.1	
HABR				*e*S	**S**	**08 03 47.4**	**0.0**
HABR				*e**SS	**sS**	**08 06 26.3**	**+0.8**
HABR				*e*		08 08 48.9	
HABR				pmax	pmax		
	comp=E,17nm,1.2s						
HABR				pmax	pmax		
	comp=N,30nm,1.2s						
HABR				pmax	pmax		
	comp=Z,78nm,1.2s						
SKSI	**Soroako, Sulaw**	**31.38**	**231**	P	**P**	**07 59 19.8**	**+1.0**
	comp=Z,378nm,0.9s,comp=Z,3μm						
COEN	**Coen**	**32.13**	**184**	*e*P	**P**	**07 59 25.4**	**+0.3**
COEN				*e*ScP	**ScP**	**08 04 57.6**	**+1.4**
BBSI	**Bau Bau**	**32.57**	**226**	P	P	07 59 33.7	+4.8
	comp=Z,166nm,0.9s,comp=Z,1μm						
KLR	**Kul'dur**	**32.73**	**344**	⇑*i*P	P	07 59 26.3	-3.4
KLR				*e*		08 01 57.7	
KLR				pmax	pmax		
	comp=E,48nm,0.9s						
KLR				pmax	pmax		
	comp=Z,100nm,0.9s						
TTSI	**Tana Toraja**	**32.85**	**232**	P	**P**	**07 59 32.3**	**+1.0**
	comp=Z,494nm,0.7s,comp=Z,4μm						
SGKI	**Sangatta, Kali**	**33.02**	**238**	P	P	07 59 29.5	-3.3
	comp=Z,233nm,0.9s,comp=Z,5μm						
BJI	**Beijing**	**33.14**	**317**	P	**P**	**07 59 33.8**	**+0.4**
BJI				S	**S**	**08 04 17.5**	**+0.4**
BJI				sS	**sS**	**08 06 56.3**	**+0.2**
BJI				pmax	pmax		
	comp=Z,29nm,0.7s						
SKR	**Severo-Kuril's**	**33.44**	**13**	*e*P	P	07 59 32.0	-3.7
SPSI	**Sidrap Palu**	**33.49**	**231**	P	**P**	**07 59 36.7**	**0.0**
	comp=Z,223nm,0.7s,comp=Z,3μm						
QIZ	**Qiongzhong**	**33.54**	**277**	P	**P**	**07 59 37.3**	**+0.2**
QIZ				pP	**pP**	**08 01 02.0**	**-1.3**
QIZ				S	**S**	**08 04 25.5**	**+1.7**
QIZ				ScS	**ScS**	**08 09 05.5**	**+1.4**
QIZ				pmax	pmax		
	comp=Z,14nm,1.3s						
BKSI	**Bulukumba**	**34.16**	**229**	P	**P**	**07 59 42.8**	**+0.5**
	comp=Z,94nm,0.6s,comp=Z,1μm						
KAPI	**Kappang**	**34.22**	**230**	*e*P	**P**	**07 59 42.6**	**-0.1**
	comp=Z,118nm,0.6s						
KAPI	**Kappang**	**34.22**	**230**	P	**P**	**07 59 42.3**	**-0.5**
	comp=Z,184nm,0.8s,comp=Z,1μm						
BSSI	**Bau Bau, Buton**	**34.47**	**227**	P	**P**	**07 59 45.5**	**+0.5**
	comp=Z,438nm,0.6s,comp=Z,4μm						
ENH	**Enshi**	**34.59**	**297**	*e*P	**P**	**07 59 46.7**	**+0.9**
	comp=Z,10nm,0.4s						
BTM	**Bintulu**	**34.91**	**248**	P	**P**	**07 59 50.1**	**+1.4**
MMRI	**Maumere**	**35.13**	**222**	P	**P**	**07 59 49.9**	**-0.5**
	comp=Z,169nm,0.8s,comp=Z,2μm						
MTKI	**Muara Teweh, K**	**35.48**	**241**	P	**P**	**07 59 54.2**	**+0.8**
	comp=Z,185nm,1.0s						
XAN	**Xi'an**	**35.97**	**303**	P	**P**	**07 59 58.0**	**+0.7**
XAN				S	**S**	**08 04 59.0**	**-1.2**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,24nm,5.8s						
SBUM	**Sibu**	**36.02**	**248**	P	**P**	**07 59 59.4**	**+1.5**
SBUM	**Sibu**	**36.02**	**248**	P	**P**	**07 59 58.7**	**+0.7**
	comp=Z,262nm,1.1s,comp=Z,3μm						
PEA0B	**Petropavlovsk-**	**36.06**	**13**	*e*P	**P**	**07 59 58.2**	**+0.5**
PETK	**Petropavlovsk-**	**36.06**	**13**	P	**P**	**07 59 58.3**	**+0.6**
PETK				*PP	**pP**	**08 01 27.8**	**+2.7**
PETK						08 02 09.7	
PETK						08 05 08.5	
PETK	**Petropavlovsk-**	**36.06**	**13**	P	**P**	**07 59 58.3**	**+0.6**
PETK				pP	**pP**	**08 01 27.8**	**+2.7**
PETK				PcP	**PcP**	**08 02 09.7**	**-0.9**
PETK				ScP	**ScP**	**08 05 08.5**	**-1.1**
PETK	**Petropavlovsk-**	**36.06**	**13**	P	**P**	**07 59 58.3**	**+0.6**
	comp=Z,8.4nm,0.5s,baz=153,slow=7.8,SNR=51						
PETK				pP	**pP**	**08 01 27.8**	**+2.7**
	comp=Z,4.5nm,0.8s,baz=180,slow=7.4,SNR=3.4						
PETK				PcP	**PcP**	**08 02 09.7**	**-0.9**
	comp=Z,5.7nm,0.6s,baz=161,slow=4.8,SNR=6.8						
PETK				ScP	**ScP**	**08 05 08.5**	**-1.1**
	comp=Z,3.2nm,0.7s,baz=184,slow=5.8,SNR=5.7						
PET	**Petropavlovsk**	**36.18**	**14**	*e*P	**P**	**07 59 59.5**	**+0.8**
PET				*e**PP	**pP**	**08 01 29.0**	**+2.9**
PET				*e**SP	**sP**	**08 02 25.8**	**+2.7**
PET				*e*S	**S**	**08 05 05.2**	**+2.6**
PET				pmax	pmax		
	comp=Z,43nm,1.3s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
GYA	**Guiyang**	**36.50**	**290**	P	**P**	**08 00 02.5**	**+0.6**
GYA				pP	**pP**	**08 01 31.3**	**+1.7**
GYA				sP	**sP**	**08 02 25.5**	**-0.9**
GYA				S	**S**	**08 05 09.0**	**+0.5**
GYA				ScP	**ScP**	**08 05 14.5**	**+2.5**
GYA				PcS	**PcS**	**08 06 01.5**	**-0.1**
GYA				ScS	**ScS**	**08 09 20.0**	**-0.5**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
HHC	**Hu-ho-hao-te**	**36.59**	**315**	*e*P	**P**	**08 00 02.8**	**+0.4**
HHC				pP	**pP**	**08 01 29.5**	**-0.6**
HHC				PP	**PP**	**08 01 42.5**	**+1.6**
HHC				sP	**sP**	**08 02 23.0**	**-4.0**
HHC				S	**ScP**	**08 05 12.3**	**+0.3**
HHC				pmax	pmax		
	comp=Z,56nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,6.2s						
BBKI	**Banjar Baru**	**36.98**	**237**	P	**P**	**08 00 05.1**	**-0.7**
	comp=Z,70nm,0.9s						
HIA	**Hailar**	**37.11**	**332**	*e*P	**P**	**08 00 06.7**	**+0.2**
	comp=Z,57nm,0.7s						
STKI	**Sintang**	**37.83**	**245**	P	**P**	**08 00 12.9**	**0.0**
	comp=Z,100nm,0.8s						
KSM	**Kuching**	**38.17**	**248**	*e*P	**P**	**08 00 15.7**	**+0.1**
	comp=Z,55nm,1.0s						
KSM	**Kuching**	**38.17**	**248**	P	**P**	**08 00 15.9**	**+0.3**
KSM	**Kuching**	**38.17**	**248**	P	**P**	**08 00 15.4**	**-0.2**
	comp=Z,70nm,0.9s,comp=Z,718nm						
CTA	**Charters Tower**	**38.17**	**179**	P	**P**	**08 00 16.1**	**+0.7**
CTA				ScP	**ScP**	**08 05 18.6**	**+0.5**
CTA	**Charters Tower**	**38.17**	**179**	P	**P**	**08 00 16.1**	**+0.7**
	comp=Z,24nm,0.8s,baz=356,slow=8.3,SNR=29						
CTA				ScP	**ScP**	**08 05 18.6**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=96,slow=11,SNR=3.7						
CTAO	**Charters Tower**	**38.17**	**179**	*e*P	**P**	**08 00 15.6**	**+0.1**
CTAO				pmax	pmax		
	comp=Z,26nm,0.8s						
CTAO	**Charters Tower**	**38.17**	**179**	*e*P	**P**	**08 00 15.6**	**+0.1**
	comp=Z,26nm,0.8s						
PBKI	**Pangkalan Bun**	**39.13**	**241**	P	**P**	**08 00 23.1**	**-0.3**
WRAB	**Tennant Creek**	**39.49**	**196**	*e*P	**P**	**08 00 26.5**	**+0.3**
WRAB				pmax	pmax		
	comp=Z,42nm,0.8s						
WRAB	**Tennant Creek**	**39.49**	**196**	*e*P	**P**	**08 00 26.4**	**+0.3**
	comp=Z,42nm,0.8s						
WRAB				*e*ScP	**ScP**	**08 05 23.4**	**+0.2**
KHKI	**Kahang-Kahang**	**39.50**	**230**	P	**P**	**08 00 26.5**	**+0.2**
	comp=Z,262nm,1.1s,comp=Z,3μm						
WRA	**Warramunga Arr**	**39.50**	**196**	P	**P**	**08 00 26.6**	**+0.3**
WRA				PcP	**PcP**	**08 02 22.5**	**+0.6**
WRA				ScP	**ScP**	**08 05 23.7**	**+0.4**
WRA				S	**S**	**08 05 52.1**	**-0.4**
WRA	**Warramunga Arr**	**39.50**	**196**	P	**P**	**08 00 26.6**	**+0.3**
	comp=Z,30nm,0.7s,baz=18,slow=8.8,SNR=231						
WRA				PcP	**PcP**	**08 02 22.5**	**+0.6**
	comp=Z,4.9nm,0.6s,baz=12,slow=3.4,SNR=6.2						
WRA				ScP	**ScP**	**08 05 23.7**	**+0.4**
	comp=Z,13nm,0.8s,baz=14,slow=4.1,SNR=26						
WRA				S	**S**	**08 05 52.1**	**-0.4**
	comp=Z,5.5nm,0.9s,baz=14,slow=14,SNR=7.6						
CD2	**Chengdu**	**39.56**	**297**	*e*P	**P**	**08 00 27.3**	**+0.5**
CD2				pP	**pP**	**08 01 56.8**	**+0.7**
CD2				PP	**PP**	**08 02 12.5**	**+0.3**
CD2				sP	**sP**	**08 02 50.3**	**-2.1**
CD2				S	**S**	**08 05 55.8**	**+2.3**
CD2				sS	**sS**	**08 08 34.5**	**-2.2**
CD2				SS	**SS**	**08 09 05.5**	**-8.7**
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
SRBI	**Singaraja**	**39.60**	**231**	P	**P**	**08 00 28.2**	**+1.0**
	comp=Z,129nm,0.8s						
KMI	**Kunming**	**39.97**	**287**	P	**P**	**08 00 32.0**	**+1.6**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
IGBI	**Denpasar**	**40.14**	**230**	P	**P**	**08 00 30.8**	**-0.7**
	comp=Z,195nm,0.5s,comp=Z,4μm						
LZH	**Lanzhou**	**40.53**	**304**	*e*P	**P**	**08 00 36.0**	**+1.3**
LZH				pP	**pP**	**08 02 06.5**	**+2.0**
LZH				PP	**PP**	**08 02 21.3**	**-1.0**
LZH				PcP	**PcP**	**08 02 27.5**	**+2.2**
LZH				sP	**sP**	**08 03 01.0**	**+0.3**
LZH				*e*S	**S**	**08 06 11.5**	**+3.7**
LZH				sS	**sS**	**08 08 50.0**	**-1.7**
LZH				SS	**SS**	**08 09 25.3**	**-5.1**
LZH				ScS	**ScS**	**08 09 44.5**	**+0.5**
LZH				pmax	pmax		
	comp=Z,38nm,1.0s						
LZH				pmax	pmax		
	comp=Z,150nm,4.7s						
BLJI	**Banyuglugur**	**40.59**	**233**	P	**P**	**08 00 35.2**	**0.0**
	comp=Z,232nm,0.7s						
JAGI	**Jajag, Banyuwa**	**40.64**	**232**	P	**P**	**08 00 34.3**	**-1.3**
	comp=Z,128nm,0.8s						
FX1	**Attu Island--F**	**40.78**	**26**	*e*P	**P**	**08 00 37.6**	**+1.4**
FX1				*e*PcP	**PcP**	**08 02 25.3**	**-0.3**
FX1	**Attu Island--F**	**40.78**	**26**	P	**P**	**08 00 37.5**	**+1.3**
	comp=Z,89nm,0.6s,baz=233,slow=2.7,SNR=58						
FITZ	**Fitzroy Crossi**	**41.01**	**209**	*e*P	**P**	**08 00 38.9**	**+0.5**
	comp=Z,66nm,0.7s						
FITZ	**Fitzroy Crossi**	**41.01**	**209**	P	**P**	**08 00 39.2**	**+0.8**
	comp=Z,31nm,0.3s,baz=37,slow=10.0,SNR=344						
SMY	**Shemya**	**41.06**	**27**	*e*P	**P**	**08 00 39.8**	**+1.5**
SMY				pmax	pmax		
	comp=Z,143nm,0.6s						
SMY	**Shemya**	**41.06**	**27**	*e*P	**P**	**08 00 39.8**	**+1.5**
	comp=Z,143nm,0.6s						
CHBT	**CHBT**	**41.67**	**269**	P	**P**	**08 00 45.2**	**+1.4**
	comp=Z,58nm,0.6s,comp=Z,4μm						
SJI	**Sawahan**	**41.99**	**235**	P	**P**	**08 00 46.5**	**+0.1**
	comp=Z,345nm,0.6s						
PWJI	**Pagerwojo**	**42.14**	**234**	P	**P**	**08 00 47.1**	**-0.4**
	comp=Z,182nm,0.7s,comp=Z,2μm						
AMKA	**Amchitka**	**42.54**	**31**	*e*P	**P**	**08 00 51.0**	**+0.8**
	comp=Z,70nm,0.8s						
PCJI	**Pacitan**	**42.73**	**235**	P	**P**	**08 00 51.7**	**-0.4**
	comp=Z,221nm,0.8s,comp=Z,3μm						
ULN	**Ulaanbaatar**	**42.83**	**322**	*e*P	**P**	**08 00 53.4**	**+0.7**
	comp=Z,22nm,1.1s						
ULN				*e*PcP	**PcP**	**08 02 33.3**	**+0.5**
ULN				*e*ScP	**ScP**	**08 05 36.0**	**-0.4**
ULN	**Ulaanbaatar**	**42.83**	**322**	P	**P**	**08 00 53.3**	**+0.7**
	comp=Z,19nm,1.0s						
KTGM	**Kuala Trenggan**	**43.10**	**258**	P	**P**	**08 00 57.3**	**+2.3**
AS31	**Alice Springs**	**43.17**	**195**	*e*P	**P**	**08 00 55.3**	**-0.1**
ASAR	**Alice Springs**	**43.17**	**195**	P	**P**	**08 00 55.6**	**+0.1**
ASAR				PcP	**PcP**	**08 02 35.0**	**+0.9**
ASAR				ScP	**ScP**	**08 05 38.4**	**+0.4**
ASAR				S	**S**	**08 06 46.1**	**+0.4**
ASAR				*e*		08 29 55.2	
ASAR				P'P'		08 32 22.3	
ASAR	**Alice Springs**	**43.17**	**195**	P	**P**	**08 00 55.6**	**+0.1**
	comp=Z,20nm,0.6s,baz=16,slow=7.3,SNR=343						
ASAR				PcP	**PcP**	**08 02 35.0**	**+0.9**
	comp=Z,3.4nm,0.8s,baz=23,slow=5.5,SNR=5.7						
ASAR				ScP	**ScP**	**08 05 38.4**	**+0.4**
	comp=Z,3.9nm,0.8s,baz=18,slow=3.8,SNR=11						
ASAR				S	**S**	**08 06 46.1**	**+0.4**
	comp=Z,4.7nm,1.0s,baz=19,slow=22,SNR=13						
ASAR				P3KPbc		08 29 55.2	
	comp=Z,0.5nm,0.7s,baz=186,slow=4.4,SNR=8.4						
ASAR				PKPPKP	P'P'df	08 32 22.3	-14
	comp=Z,0.2nm,0.6s,baz=159,slow=3.2,SNR=4.9						
SONM	**Songino Array**	**43.20**	**322**	P	**P**	**08 00 56.2**	**+0.7**
SONM				PcP	**PcP**	**08 02 34.6**	**+0.6**
SONM	**Songino Array**	**43.20**	**322**	P	**P**	**08 00 56.2**	**+0.7**
	comp=Z,15nm,0.9s,baz=128,slow=9.0,SNR=18						
SONM				PcP	**PcP**	**08 02 34.6**	**+0.6**
	comp=Z,7.6nm,0.6s,baz=133,slow=4.2,SNR=7.1						
BJII	**Banjamegara**	**43.37**	**237**	P	**P**	**08 00 58.7**	**+1.5**
	comp=Z,54nm,0.9s						
MYKOM	**Kota Tinggi**	**43.81**	**253**	P	**P**	**08 01 02.6**	**+2.0**
MYKOM	**Kota Tinggi**	**43.81**	**253**	P	**P**	**08 01 02.2**	**+1.6**
	comp=Z,64nm,0.8s,comp=Z,726nm						
CMMT	**Chiang Mai**	**43.82**	**278**	P	**P**	**08 01 02.0**	**+1.3**
	comp=Z,21nm,0.9s						
CHTO	**Chiang Mai**	**43.83**	**278**	*e*P	**P**	**08 01 01.7**	**+1.0**
CHTO				pmax	pmax		
	comp=Z,12nm,0.6s						
CHTO	**Chiang Mai**	**43.83**	**278**	*e*P	**P**	**08 01 01.7**	**+1.0**
	comp=Z,12nm,0.6s						
CHTO	**Chiang Mai**	**43.83**	**278**	P	**P**	**08 01 01.5**	**+0.8**
	comp=Z,23nm,1.0s						
CM31	**Chiang Mai Arr**	**43.87**	**278**	*e*P	**P**	**08 01 02.4**	**+1.3**
	comp=Z,22nm,0.5s						
CMAR	**Chiang Mai Arr**	**43.87**	**278**	P	**P**	**08 01 02.6**	**+1.6**
CMAR				PcP	**PcP**	**08 02 37.5**	**+0.8**
CMAR	**Chiang Mai Arr**	**43.87**	**278**	P	**P**	**08 01 02.6**	**+1.6**
	comp=Z,35nm,0.7s,baz=70,slow=6.8,SNR=132						
CMAR				PcP	**PcP**	**08 02 37.5**	**+0.8**
	comp=Z,2.2nm,0.7s,baz=70,slow=2.0,SNR=4.6						
KGM	**Kluang**	**44.20**	**253**	P	**P**	**08 01 05.8**	**+2.1**
GTA	**Gaotai**	**44.47**	**308**	⇓P	**P**	**08 01 06.8**	**+1.2**
GTA				PcP	**PcP**	**08 02 39.5**	**+0.9**
GTA				pP	**pP**	**08 02 41.8**	**+4.2**
GTA				sP	**sP**	**08 03 31.5**	**-1.7**
GTA				ScP	**ScP**	**08 05 43.3**	**0.0**
GTA				S	**S**	**08 07 04.8**	**+0.7**
GTA				ScS	**ScS**	**08 10 07.5**	**-1.1**
GTA				pmax	pmax		
	comp=Z,16nm,0.8s						
LEM	**Lembang**	**44.77**	**239**	P	**P**	**08 01 08.4**	**+0.2**
	comp=Z,124nm,0.8s						
SKLT	**Songkhla**	**44.83**	**262**	P	**P**

AKUT **Akutan** 51.72 34 *e*P P 08 01 59.5 +0.2
comp=Z,102nm,0.6s
KIP **Kipapa** 53.19 77 *e*P P 08 02 11.5 +1.0
KIP pmax pmax
comp=Z,88nm,0.6s
KIP **Kipapa** 53.19 77 *e*P P 08 02 11.5 +1.0
comp=Z,88nm,0.6s
FALS **False Pass** 53.26 34 *e*P P 08 02 10.7 +0.3
comp=Z,236nm,0.6s
TAPN **Taplejung** 53.42 291 *e*P P 08 02 13.6 +1.1
comp=Z,16nm,0.5s
CAN **Canberra** 53.45 176 *e*P P 08 02 12.7 +0.6
CAN pmax pmax
comp=Z,11nm,0.8s
CAN **Canberra** 53.45 176 *e*P P 08 02 12.7 +0.6
comp=Z,11nm,0.8s
ODAN **Odare** 53.74 290 *e*P P 08 02 15.6 +0.9
comp=Z,20nm,0.5s
TIXI **Tiksi** 54.21 354*d* *i*P P 08 02 16.0 -0.9
TIXI pmax pmax
comp=Z,19nm,0.9s
WMQ **Urumqi** 54.26 311⇓ *i*P P 08 02 19.5 +1.6
WMQ PP PP 08 04 31.0 +4.5
WMQ S S 08 09 20.0 +2.4
WMQ pmax pmax
comp=Z,55nm,0.6s
WMQ pmax pmax
comp=Z,81nm,4.8s
RAMN **Ramite** 54.44 290 *e*P P 08 02 20.6 +1.0
GUN **Gumba** 55.01 292 *e*P P 08 02 24.9 +1.1
comp=Z,48nm,0.4s
SDPT **Sand Point** 55.02 34 *e*P P 08 02 22.8 -0.1
comp=Z,200nm,0.6s
PKI **Pulchoki** 55.45 291 *e*P P 08 02 27.3 +0.5
comp=Z,42nm,0.4s
PKIN **Phulchoki** 55.46 291 *e*P P 08 02 27.3 +0.5
comp=Z,36nm,0.4s
KKN **Kakani** 55.55 292 *e*P P 08 02 28.0 +0.6
comp=Z,20nm,0.3s
DMN **Daman** 55.72 291 *e*P P 08 02 29.3 +0.7
comp=Z,44nm,0.4s
CHGN **Chignik** 56.43 34 *e*P P 08 02 31.6 -1.0
DANN **Dangsing** 56.85 292 *e*P P 08 02 37.3 +0.8
comp=Z,124nm,0.6s
KOLN **Koldanda** 57.04 292 *e*P P 08 02 37.5 -0.1
comp=Z,37nm,0.7s
PYUN **Piuthan** 57.55 292 *e*P P 08 02 41.8 +0.6
comp=Z,98nm,0.9s
ZAA0 **Zalesovo Array** 58.08 323 *e*P P 08 02 43.7 -0.3
ZALV **Zalesovo Beam** 58.08 323 P P 08 02 43.9 -0.1
ZALV 08 03 28.4
ZALV S S 08 10 05.4 -1.1
ZALV **Zalesovo Beam** 58.08 323 P P 08 02 43.9 -0.1
ZALV PcP PcP 08 03 28.4 -0.8
ZALV S S 08 10 05.3 -1.1
ZALV **Zalesovo Beam** 58.08 323 P P 08 02 43.9 -0.1
comp=Z,12nm,0.3s,baz=115,slow=8.7,SNR=61
ZALV PcP PcP 08 03 28.4 -0.8
comp=Z,7.2nm,0.7s,baz=120,slow=3.7,SNR=6.2
ZALV S S 08 10 05.3 -1.1
comp=Z,0.5nm,0.4s,baz=94,slow=12,SNR=3.8
MK31 **Makanchi Array** 58.44 314 *e*P P 08 02 47.5 +0.8
MK31 **Makanchi Array** 58.44 314 *e*P P 08 02 47.5 +0.8
MKAR **Makanchi Array** 58.44 314 *e*P P 08 02 47.5 +0.8
MKAR 08 03 30.8
MKAR 08 06 42.6
MKAR **Makanchi Array** 58.44 314 *e*P P 08 02 47.5 +0.8
MKAR PcP PcP 08 03 30.8 -0.2
MKAR ScP ScP 08 06 42.5 -0.9
MKAR ⇑*e* 08 32 23.0
MKAR **Makanchi Array** 58.44 314 P P 08 02 47.5 +0.8
comp=Z,22nm,0.7s,baz=91,slow=8.3,SNR=175
MKAR PcP PcP 08 03 30.8 -0.2
comp=Z,8.2nm,0.7s,baz=87,slow=6.2,SNR=7.7
MKAR ScP ScP 08 06 42.5 -0.9
comp=Z,2.4nm,0.7s,baz=90,slow=5.8,SNR=4.8
MKAR PKP2bc 08 32 23.0
comp=Z,1.4nm,0.9s,baz=336,slow=2.7,SNR=4.0
NVS **Novosibirsk** 59.18 323⇓ *i*P P 08 02 51.6 +0.2
NVS *e* 08 04 28.6
NVS pmax pmax
comp=Z,34nm,1.2s
NVS pmax pmax
comp=N,11nm,1.4s
NVS pmax pmax
comp=E,20nm,1.2s
SVW2 **Sparrevohn** 59.36 29 *e*P P 08 02 53.4 +0.8
comp=E,33nm,1.2s
OHAK **Old Harbor** 59.40 34 *e*P P 08 02 53.1 +0.3
comp=E,54nm,0.8s
KDAK **Kodiak Island** 59.90 33 *e*P P 08 02 56.6 +0.4
comp=E,38nm,0.8s
KDAK **Kodiak Island** 59.90 33 P P 08 02 56.5 +0.4
comp=E,17nm,0.4s,baz=255,slow=2.6,SNR=21
SPU **Mount Spurr** 61.02 29 *e*P P 08 03 03.8 +0.1
KURK **Kurchatov** 61.29 318 P P 08 03 06.3 +0.8
KURK S S 08 10 46.6 -0.4
KURK **Kurchatov** 61.29 318 P P 08 03 06.3 +0.8
KURK S S 08 10 46.6 -0.4
KURK ⇑*e* 08 32 17.8
KURBB **Kurchatov Arra** 61.34 318 P P 08 03 06.3 +0.4
comp=E,113nm,0.6s,baz=97,slow=7.0,SNR=696
KURBB S S 08 10 46.6 -1.0
comp=E,1.4nm,0.8s,baz=99,slow=11,SNR=7.5
KURBB PKP2bc 08 32 17.8
comp=E,1.3nm,0.9s,baz=281,slow=3.1,SNR=5.6
PMR **Palmer** 62.49 29 *e*P P 08 03 12.6 -0.5
PMR pmax pmax
comp=Z,33nm,0.6s
PMR **Palmer** 62.49 29 *e*P P 08 03 12.6 -0.5
comp=Z,32nm,0.6s
ULHL **Ulahol** 62.51 309 *i*P P 08 03 15.4 +1.4
ULHL **Ulahol** 62.51 309 P P 08 03 15.4 +1.4
SNR=8.1
KSH **Kashi** 62.77 306 P P 08 03 19.0 +3.4
KSH *e*PcP PcP 08 03 51.3 +2.5
KSH *e*pP pP 08 04 58.5 +1.9
KSH *e*PP PP 08 05 46.5 +5.0
KSH *es*P sP 08 05 48.0 -1.6
KSH *e*S S 08 11 04.3 -1.5
KSH pmax pmax
comp=Z,41nm,0.5s
SML **Sawmill** 62.91 29 *e*P P 08 03 15.9 0.0
SML pmax pmax
comp=Z,20nm,1.0s
SML **Sawmill** 62.91 29 *e*P P 08 03 15.9 0.0
comp=Z,20nm,1.0s
TKM2 **Tokmak 2** 62.99 309 *e*P P 08 03 18.1 +1.1
TKM2 pmax pmax
comp=Z,31nm,1.1s
TKM2 **Tokmak 2** 62.99 309 *e*P P 08 03 18.1 +1.1
comp=Z,31nm,1.1s
TKM2 **Tokmak 2** 62.99 309 P P 08 03 18.2 +1.1
SNR=30
KZA **Kyzart** 63.25 308 *i*P P 08 03 20.5 +1.5
KZA **Kyzart** 63.25 308 P P 08 03 20.5 +1.5
SNR=60
KBK **Karagaybulak** 63.47 309 *i*P P 08 03 21.1 +1.0
KBK **Karagaybulak** 63.47 309 P P 08 03 21.1 +1.0
SNR=6.7
COLD **Coldfoot** 63.47 23 *e*P P 08 03 20.4 +1.0
comp=Z,37nm,1.0s
USP **Ospenovka** 63.79 310 *i*P P 08 03 22.7 +0.8
USP **Ospenovka** 63.79 310 P P 08 03 22.7 +0.8
SNR=14
COLA **College** 63.79 26 *e*P P 08 03 21.3 -0.1
COLA pmax pmax
comp=Z,23nm,0.6s
COLA **College** 63.79 26 *e*P P 08 03 21.3 -0.1
comp=Z,23nm,0.6s
AAK **Ala-Archa** 63.80 309⇓ *e*P P 08 03 22.9 +0.7
AAK pmax pmax
comp=Z,24nm,0.9s
AAK **Ala-Archa** 63.80 309 *e*P P 08 03 23.1 +0.9
comp=Z,26nm,1.4s
AAK **Ala-Archa** 63.80 309 P P 08 03 23.1 +0.9
SNR=6.7
DIV **Divide** 63.99 30 *e*P P 08 03 23.4 +0.5
comp=Z,74nm,1.4s
ILAR **Eielson Array** 64.17 26 P P 08 03 22.6 -1.3
ILAR **Eielson Array** 64.17 26 P P 08 03 22.6 -1.3
comp=Z,23nm,0.6s,baz=247,slow=6.2,SNR=355
EKS2 **Erkin-Say** 64.33 309 *e*P P 08 03 26.5 +0.9
EKS2 pmax pmax
comp=Z,7.0nm,0.8s
EKS2 **Erkin-Say** 64.33 309 *e*P P 08 03 26.5 +0.9
comp=Z,6.7nm,0.8s
EKS2 **Erkin-Say** 64.33 309 P P 08 03 26.3 +0.8
SNR=7.1
AML **Almayashu** 64.41 309 *i*P P 08 03 27.7 +1.3
AML **Almayashu** 64.41 309 P P 08 03 27.7 +1.3
SNR=10.0
PAX **Paxson** 64.44 28 *e*P P 08 03 26.0 +0.2
PAX pmax pmax
comp=Z,42nm,0.5s
PAX **Paxson** 64.44 28 *e*P P 08 03 25.9 +0.2
comp=Z,42nm,0.5s
DOT **Dot Lake** 65.18 28 *e*P P 08 03 30.3 0.0
comp=Z,46nm,0.7s
VOSK **Vostochnaya** 66.16 320 P P 08 03 36.4 -0.3
VOSK pmax pmax
comp=Z,16nm,0.5s
BVA0 **Borovoye Array** 66.52 321 *i*P P 08 03 39.1 +0.2
BVA0 pmax pmax
comp=Z,43nm,0.6s
BVAR **Borovoye Array** 66.52 321 P P 08 03 39.3 +0.4
BVAR *PP pP 08 05 22.6 +1.1
BVAR S S 08 11 49.0 -1.2
BVAR **Borovoye Array** 66.52 321 P P 08 03 39.3 +0.4
BVAR pP pP 08 05 22.6 +1.1
BVAR S S 08 11 49.0 -1.2
BVAR **Borovoye Array** 66.52 321 P P 08 03 39.3 +0.4
comp=Z,51nm,0.5s,baz=98,slow=7.2,SNR=187
BVAR pP pP 08 05 22.6 +1.1
comp=Z,6.8nm,0.7s,baz=93,slow=7.6,SNR=4.0
BVAR S S 08 11 49.0 -1.2
comp=Z,3.6nm,0.8s,baz=91,slow=9.5,SNR=12
BRVK **Borovoye** 66.58 321*d* *i*P P 08 03 39.6 +0.3
BRVK pmax pmax
comp=Z,52nm,0.8s
BRVK **Borovoye** 66.58 321 *e*P P 08 03 39.7 +0.4
comp=Z,49nm,0.5s
EGAK **Eagle** 66.59 27 *e*P P 08 03 39.1 0.0
comp=Z,40nm,1.4s
KK31 **Karatay Array** 66.71 310 *i*P P 08 03 40.8 +0.5
KK31 pmax pmax
comp=Z,10.0nm,0.4s
KKAR **Karatay Array** 66.71 310 *e*P P 08 03 41.0 +0.7
KKAR **Karatay Array** 66.71 310 *e*P P 08 03 41.0 +0.7
ZRNK **Zerenda** 67.36 320 P P 08 03 44.1 0.0
ZRNK pmax pmax
comp=Z,41nm,1.1s
KBL **Kabul** 68.72 301 *e*P P 08 03 53.8 +0.7
KBL pmax pmax
comp=Z,20nm,0.6s
KBL **Kabul** 68.72 301 *e*P P 08 03 53.8 +0.7
comp=Z,20nm,0.6s
SKAG **Skagway** 69.04 33 *e*P P 08 03 55.1 +1.0
comp=Z,26nm,1.0s
INK **Inuvik** 69.89 23 P P 08 03 59.0 0.0
INK **Inuvik** 69.89 23 P P 08 03 59.0 0.0
comp=Z,39nm,0.8s,baz=276,slow=6.4,SNR=47
DLBC **Dease Lake** 71.84 33 P P 08 04 12.1 +1.2
DLBC **Dease Lake** 71.84 33 P P 08 04 12.1 +1.2
comp=Z,27nm,0.6s,baz=283,slow=5.1,SNR=67
SVE **Sverdlovsk** 71.96 325⇑ *e*P P 08 04 11.9 +0.3
SVE pmax pmax
comp=Z,57nm,1.0s
ARU **Arti** 73.15 325*d* *i*P P 08 04 18.6 +0.1
ARU *PP pP 08 06 02.6 -1.0
ARU 08 07 06.5
ARU PPP PPP 08 08 56.3
ARU S S 08 13 06.7 +0.8
ARU pmax pmax
comp=Z,105nm,1.2s
AB31 **Akbulak array** 73.35 317 *i*P P 08 04 19.5 -0.2
AB31 pmax pmax
comp=Z,18nm,0.4s
ABKAR **Akbulak array** 73.35 317 *e*P P 08 04 19.6 -0.1
comp=Z,24nm,0.4s
SOKR **Solikamsk** 73.64 328*c* *i*P P 08 04 21.5 +0.3
SOKR pmax pmax
comp=Z,20nm,0.7s
AKTO **Aktyubinsk** 74.39 318 P P 08 04 25.4 -0.3
AKTO **Aktyubinsk** 74.39 318 P P 08 04 25.4 -0.3
AKTO **Aktyubinsk** 74.39 318 P P 08 04 25.4 -0.3
comp=Z,11nm,0.5s,baz=94,slow=8.6,SNR=48
NLWA **Neilton Lookou** 77.32 44 *e*P P 08 04 43.6 +1.5
comp=Z,44nm,0.7s
OSD **Olympics--Snow** 77.33 44 P P 08 04 43.7 +1.3
HDW **Hoodsport** 77.80 44 P P 08 04 46.3 +1.6
BMW **Boistfort Moun** 77.96 45 P P 08 04 46.7 +1.1
BMW **Boistfort Moun** 77.96 45 P P 08 04 46.6 +1.1
KEBM **Edson Butte** 78.06 49 *e*P P 08 04 47.0 +0.9
comp=Z,103nm,1.0s
CMW **Cultus Mountai** 78.22 43 P P 08 04 48.2 +1.2
MBW **Mount Baker** 78.27 42 P P 08 04 48.0 +0.7
JCW **Jim Creek** 78.40 43 P P 08 04 48.9 +1.1
YKW3 **Yellowknife Ar** 78.49 28 *e*P P 08 04 47.9 -0.1
comp=Z,0.7nm,0.8s
YKA **Yellowknife Ar** 78.52 28 P P 08 04 48.0 -0.1
YKA pP pP 08 06 37.6 +2.5
YKA **Yellowknife Ar** 78.52 28 P P 08 04 48.0 -0.1
comp=Z,16nm,0.4s,baz=287,slow=5.1,SNR=202
YKA pP pP 08 06 37.6 +2.5
comp=Z,3.4nm,0.8s,baz=289,slow=5.8,SNR=3.2
TDL **Tradedollar La** 78.67 45 P P 08 04 50.6 +1.1
LON **Longmire** 78.84 44 *e*P P 08 04 50.7 +0.4
LON pmax pmax
comp=Z,29nm,1.5s
LON **Longmire** 78.84 44 *e*P P 08 04 50.7 +0.4
comp=Z,29nm,1.5s
KHMM **Horse Mountain** 78.98 51 *e*P P 08 04 52.8 +1.5
comp=Z,46nm,0.9s
WPW **White Pass** 79.03 44 P P 08 04 51.9 +0.6
HUMO **Hull Mountain** 79.11 49 *e*P P 08 04 53.1 +1.4
comp=Z,23nm,0.9s
VLL **Laurance Lake** 79.26 46 P P 08 04 53.5 +0.9
SPITS **Spitsbergen Ar** 79.48 351 P P 08 04 53.0 0.0
SPITS **Spitsbergen Ar** 79.48 351 P P 08 04 53.0 0.0
comp=Z,7.2nm,0.4s,baz=81,slow=5.2,SNR=42
NAC **Naches** 79.50 44 P P 08 04 54.7 +1.0
YBH **Yreka Blue Hor** 79.51 50 *e*P P 08 04 54.8 +0.9
comp=Z,18nm,0.7s
YBH **Yreka Blue Hor** 79.51 50 P P 08 04 55.1 +1.1
comp=Z,28nm,0.7s,baz=316,slow=2.9,SNR=84
TBM **Table Mountain** 79.53 44 P P 08 04 54.6 +0.7
ETW **Entiat** 79.59 43 P P 08 04 54.8 +0.5
KBS **Kingsbay** 79.61 352*d* *i*P P 08 04 53.7 0.0
KBS pmax pmax
comp=Z,48nm,0.9s
KBS **Kingsbay** 79.61 352 *e*P P 08 04 54.0 +0.3
comp=Z,35nm,0.6s
RES **Resolute Bay** 79.89 14 P P 08 04 55.4 +0.2
RES **Resolute Bay** 79.89 14 P P 08 04 55.4 +0.2
comp=Z,46nm,0.7s,baz=314,slow=4.8,SNR=161
WDC **Whiskeytown Da** 79.94 51 *e*P P 08 04 56.3 +0.2
WDC pmax pmax
comp=Z,64nm,1.6s
WDC **Whiskeytown Da** 79.94 51 *e*P P 08 04 56.3 +0.2
comp=Z,64nm,1.6s
HAWA **Hanford** 80.45 44 *e*P P 08 04 59.4 +0.7
comp=Z,15nm,0.7s
OD2 **Odessa Site #2** 80.71 43 P P 08 05 00.2 +0.2
OHCM **Honcut** 81.06 52 *e*P P 08 05 02.2 +0.3
MOD **Modoc** 81.19 49 *e*P P 08 05 03.4 +0.6
comp=Z,45nm,1.4s
APA **Apatity** 81.23 339⇑ *e*P P 08 05 01.8 -0.5
APA *e*PP pP 08 06 47.0 -3.2
APA pmax pmax
comp=Z,50nm,1.2s
APA MLR MLR
comp=Z,300nm,20.0s
NEW **Newport** 81.47 42 *e*P P 08 05 04.2 +0.2
comp=Z,33nm,1.0s
NEW **Newport** 81.47 42 P P 08 05 04.4 +0.4
baz=81,SNR=43
BEKR **Beckworth** 81.74 51 *e*P P 08 05 05.9 +0.1
comp=Z,30nm,0.9s
C11A **Tepee Creek (N** 82.15 42 P P 08 05 07.9 +0.4
baz=82
KEV **Kevo** 82.18 342 *e*P P 08 05 06.5 -0.6
KEV pmax pmax
comp=Z,16nm,0.5s
KEV **Kevo** 82.18 342 *e*p P 08 05 06.5 -0.6
comp=Z,16nm,0.5s
KEV **Kevo** 82.18 342 *e*P P 08 05 06.2 -0.9
comp=Z,28nm,0.9s
A12A **Yaak River Ran** 82.19 41 P P 08 05 08.9 +1.2
baz=82,SNR=6.1
WVOR **Wild Horse Val** 82.22 48 *e*P P 08 05 08.3 +0.2
WVOR pmax pmax
comp=Z,20nm,0.9s
WVOR **Wild Horse Val** 82.22 48 *e*P P 08 05 08.2 +0.2
comp=Z,20nm,0.9s
CMB **Columbia Colle** 82.25 53 *e*P P 08 05 08.8 +0.6
CMB pmax pmax
comp=Z,33nm,0.8s
CMB **Columbia Colle** 82.25 53 *e*P P 08 05 08.8 +0.6
comp=Z,33nm,0.8s
BMO **Blue Mountains** 82.40 45 *e*P P 08 05 09.1 +0.2
BMO pmax pmax
comp=Z,20nm,0.6s
BMO **Blue Mountains** 82.40 45 *e*P P 08 05 09.1 +0.2
comp=Z,20nm,0.6s
PAHR **Pah Rah Range** 82.50 51 *e*P P 08 05 10.2 +0.6
comp=Z,27nm,0.9s
C12B **Naegeli Ranch,** 82.69 42 P P 08 05 10.8 +0.5
baz=83,SNR=10
ARCES **ARCESS Array B** 82.74 342 P P 08 05 09.6 -0.4
ARCES **ARCESS Array B** 82.74 342 P P 08 05 09.6 -0.4
comp=Z,31nm,0.7s,baz=70,slow=7.2,SNR=117
ARE0 **ARCESS Array S** 82.74 342 *e*P P 08 05 09.6 -0.4
A13A **Flathead Natio** 82.96 41 P P 08 05 12.4 +0.8
baz=83
D12A **Red Ives Fores** 82.99 43 P P 08 05 12.1 +0.3
baz=83
E12A **Beaver Dam Sad** 83.06 43 P P 08 05 12.7 +0.4
baz=83,SNR=78
BSMT **Bassoo Peak** 83.09 42 *e*P P 08 05 13.1 +0.6
PTRM **Twissleman Ran** 83.09 55 *e*P P 08 05 13.4 +0.9
B13A **Whitefish** 83.11 41 P P 08 05 13.3 +0.9
baz=83,SNR=30
WALA **Waterton Lakes** 83.23 41 *e*P P 08 05 13.6 +0.6
comp=Z,1.1nm,1.1s
C13A **Hot Springs** 83.28 42 P P 08 05 13.7 +0.4
baz=83,SNR=43
BLMT **Blacktail Moun** 83.30 42 *e*P P 08 05 14.0 +0.5
comp=Z,68nm,1.0s
SMMC **Simmler** 83.36 55 P P 08 05 14.4 +0.6
baz=83
JTMT **Jette** 83.44 42 *e*P P 08 05 14.4 +0.3
D13A **Huson** 83.55 43 P P 08 05 14.5 -0.1
baz=83,SNR=40
A14A **Double T Ranch** 83.56 41 P P 08 05 15.7 +1.0
baz=83,SNR=38
YBMT **Yellow Bay** 83.57 42 *e*P P 08 05 14.8 +0.1
comp=Z,40nm,1.0s
PKM **Peak Mountain** 83.62 55 P P 08 05 16.1 +0.8
baz=84
RCTC **Rector, Farmer** 83.64 54 P P 08 05 15.4 +0.2
baz=84
G12A **Big Creek, Yel** 83.64 45 P P 08 05 15.3 +0.1
baz=84
NVAR **Mina Array Bea** 83.69 52 P P 08 05 16.4 +0.8
NVAR **Mina Array Bea** 83.69 52 P P 08 05 16.4 +0.8
comp=Z,41nm,0.6s,baz=268,slow=5.8,SNR=400
SWMT **Swartz Lake** 83.70 42 *e*P P 08 05 15.3 -0.1
C14A **Swan Lake** 83.77 42 P P 08 05 15.9 +0.2
baz=84
NV11 **Mina Array Sit** 83.80 52 *e*P P 08 05 16.5 +0.3
MTUM **Tungsten Hills** 83.83 53 *e*P P 08 05 16.9 +0.6
BMN **Battle Mountai** 83.86 50 *e*P P 08 05 17.1 +0.7
BMN **Battle Mountai** 83.86 50 *e*P P 08 05 17.1 +0.7
B14A **Marquette Ranc** 83.86 41 P P 08 05 17.1 +0.8
baz=84,SNR=59
MFID **Camas Ranch** 83.87 46 *e*P P 08 05 17.1 +0.7
comp=Z,62nm,0.9s
MFID **Camas Ranch** 83.87 46 P P 08 05 17.1 +0.7
baz=84,SNR=74
VES **Vestal, Richgr** 83.91 54 P P 08 05 16.3 -0.1
baz=84
MSO **Missoula** 83.97 43 *e*P P 08 05 16.2 -0.5
comp=Z,6.5nm,0.9s
MSO **Missoula** 83.97 43 P P 08 05 16.4 -0.4
baz=84,SNR=13
A15A **Johnson Ranch,** 83.98 40 P P 08 05 17.3 +0.5
baz=84,SNR=65
SLMT **Seeley Lake** 84.12 42 *e*P P 08 05 17.1 -0.5
H12A **Diamond D Ranc** 84.15 45 P P 08 05 18.1 +0.3
baz=84,SNR=20
D14A **Greenough** 84.17 42 P P 08 05 17.2 -0.5
baz=84,SNR=19
TIN **Tinemaha** 84.18 53 P P 08 05 19.0 +1.0
baz=84
JOF **Joensuu** 84.20 335 *e*P P 08 05 16.3 -1.1
JOF pmax pmax
comp=Z,10.0nm,0.4s
JOF **Joensuu** 84.20 335 *ep* P 08 05 16.3 -1.1
comp=Z,10nm,0.4s
I12A **Atlanta** 84.22 46 P P 08 05 18.5 +0.4
baz=84,SNR=46
ARVC **Arvin** 84.32 55 P P 08 05 18.9 +0.3
baz=84
B15A **Bradely Ranch,** 84.33 41 P P 08 05 18.8 +0.3
baz=84,SNR=91
CHMT **Chamberlain Mo** 84.39 42 *e*P P 08 05 18.4 -0.5
ISA **Isabella** 84.43 54 *e*P P 08 05 18.6 -0.6
ISA pmax pmax
comp=Z,3.0nm,0.7s
ISA **Isabella** 84.43 54 *e*P P 08 05 18.6 -0.6
comp=Z,2.7nm,0.7s
ISA **Isabella** 84.43 54 P P 08 05 18.9 -0.3
baz=84
C15A **Salmond Ranch,** 84.49 41 P P 08 05 19.6 +0.2
baz=84,SNR=54
DAG **Danmarks Havn** 84.63 356⇓ *i*P P 08 05 18.8 -0.4
DAG pmax pmax
comp=Z,31nm,0.8s
DAG **Danmarks Havn** 84.63 356⇓ *i*P P 08 05 18.8 -0.4
comp=Z,42nm,0.8s
A16A **West Butte Ran** 84.69 40 P P 08 05 20.5 +0.2
baz=84
F14A **Wisdom** 84.70 44 P P 08 05 20.4 0.0
baz=85,SNR=8.9
D15A **Lincoln** 84.81 42 P P 08 05 20.9 0.0
baz=85,SNR=20
B16A **M & M Farms, S** 84.82 41 P P 08 05 21.1 +0.2
baz=85,SNR=58
GRAC **Grapevine Rang** 84.85 53 P P 08 05 22.1 +0.9
baz=85,SNR=6.6
C16A **Fuhringer Ranc** 85.02 41 P P 08 05 21.9 0.0
baz=85,SNR=31
EDW2 **Edwards Air Fo** 85.06 55 P P 08 05 22.8 +0.6
baz=85,SNR=7.7
MPMC **Manual Prospec** 85.06 54 P P 08 05 23.1 +0.6
baz=85,SNR=28
LRMC **Laurel Mountai** 85.10 54 P P 08 05 23.1 +0.6
baz=85,SNR=22
ELK **Elko** 85.18 49 *e*P P 08 05 23.8 +0.8
comp=Z,40nm,1.0s
MWC **Mount Wilson** 85.21 56 *e*P P 08 05 23.1 -0.1
MWC pmax pmax
comp=Z,7.0nm,0.6s
MWC **Mount Wilson** 85.21 56 *e*P P 08 05 23.1 -0.1
comp=Z,6.9nm,0.6s
A17A **Triple J Farms** 85.24 40 P P 08 05 23.3 +0.4
baz=85,SNR=11
F15A **Butte** 85.26 43 P P 08 05 23.5 +0.3
baz=85,SNR=95
LRM **Limekiln Ridge** 85.30 43 *e*P P 08 05 23.6 +0.1
comp=Z,250nm,0.6s
I14A **Mackay** 85.31 45 P P 08 05 24.6 +1.0
baz=85,SNR=25
DLMT **Dillon** 85.37 44 *e*P P 08 05 23.9 +0.3
comp=Z,36nm,1.4s
HRY **Holter Researc** 85.37 42 *e*P P 08 05 24.4 +0.8
OBN **Obninsk** 85.38 327⇑ *e*P P 08 05 22.6 -0.7
OBN *e*PP pP 08 07 15.2 +2.7
OBN pmax pmax
comp=Z,10.0nm,0.6s
MCMT **McKenzie Canyo** 85.40 44 *e*P P 08 05 23.6 -0.3
comp=Z,4.5nm,0.7s
FURC **Furnace Creek,** 85.41 53 P P 08 05 24.7 +0.9
baz=85,SNR=18
B17A **L&Q Farms, Che** 85.43 41 P P 08 05 24.2 +0.4
baz=85,SNR=32
D16A **Dana Ranch, Ca** 85.43 42 P P 08 05 24.4 +0.5
baz=85,SNR=40
E16A **East Helena** 85.54 42 P P 08 05 24.9 +0.5
baz=85,SNR=6.7
C17A **Wharram Farm,** 85.70 41 P P 08 05 24.8 -0.4
baz=86,SNR=25
R11A **Troy Canyon, C** 85.74 51 P P 08 05 26.4 +0.7
baz=86,SNR=40
A18A **Metzger Ranch,** 85.77 40 P P 08 05 25.5 +0.1
baz=86,SNR=66
GSC **Goldstone** 85.84 54 *e*P P 08 05 26.6 +0.5

GSC pmax pmax
comp=Z,26nm,1.1s
GSC Goldstone 85.84 54 *eP* **P** 08 05 26.6 +0.5
comp=Z,26nm,1.1s
GSC Goldstone 85.84 54 P **P** 08 05 26.6 +0.5
baz=86,SNR=22
F16A Kennard Place, 85.85 43 P **P** 08 05 26.3 +0.4
baz=86,SNR=25
BOZ Bozeman (W) 85.90 43 *eP* **P** 08 05 26.4 +0.2
BOZ pmax pmax
comp=Z,7.0nm,0.8s
BOZ Bozeman (W) 85.90 43 *eP* **P** 08 05 26.4 +0.2
comp=Z,7.1nm,0.8s
D17A Six Diamond Ra 85.93 42 P **P** 08 05 26.7 +0.3
baz=86,SNR=33
B18A Beardsley Farm 86.02 40 P **P** 08 05 26.8 +0.2
baz=86,SNR=27
SHOC Shoshone 86.04 54 P **P** 08 05 27.7 +0.7
baz=86,SNR=13
E17A Martinsdale 86.09 42 P **P** 08 05 27.7 +0.5
baz=86,SNR=12
MURC Murrieta 86.09 56 P **P** 08 05 27.3 0.0
baz=86
BBRC Big Bear Solar 86.09 55 P **P** 08 05 27.6 +0.1
baz=86
EGMT Eagleton 86.17 41 *eP* **P** 08 05 27.3 0.0
comp=Z,34nm,1.3s
EGMT Eagleton 86.17 41 P **P** 08 05 27.4 0.0
baz=86,SNR=13
KIV Kislovodsk 86.19 315⇑ *eP* **P** 08 05 27.3 -0.3
KIV *e*PP **pP** 08 07 21.5 +4.4
KIV pmax pmax
comp=Z,22nm,1.0s
QLMT Earthquake Lak 86.33 44 *eP* **P** 08 05 29.6 +1.2
HEC Hector,Ludlow 86.36 55 P **P** 08 05 29.2 +0.6
baz=86,SNR=12
F17A Fitzpatrick Pl 86.43 43 P **P** 08 05 29.2 +0.5
baz=86,SNR=6.6
A19A Klindworth Far 86.43 39 P **P** 08 05 29.1 +0.5
baz=86,SNR=29
D18A Linhart Farms, 86.47 41 P **P** 08 05 29.1 +0.3
baz=86,SNR=5.5
TUQ Turquoise Moun 86.47 54 P **P** 08 05 30.0 +0.8
baz=86,SNR=22
B19A Brinkman Farms 86.50 40 P **P** 08 05 29.2 +0.3
baz=86,SNR=20
H16A Russell Place, 86.50 44 P **P** 08 05 30.4 +1.2
baz=86,SNR=16
HVU Hansel Valley 86.55 47 *eP* **P** 08 05 30.3 +0.9
HVU pmax pmax
comp=Z,51nm,1.3s
HVU Hansel Valley 86.55 47 *eP* **P** 08 05 30.3 +0.9
comp=Z,51nm,1.3s
G17A Pierce Place, 86.60 43 P **P** 08 05 30.6 +1.0
baz=86
KAF Kangasniemi 86.61 336 *eP* **P** 08 05 27.4 -1.6
KAF pmax pmax
comp=Z,12nm,0.7s
KAF Kangasniemi 86.61 336 *ep* **P** 08 05 27.4 -1.6
comp=Z,12nm,0.7s
E18A Harlowton 86.65 42 P **P** 08 05 30.3 +0.5
baz=86
I16A Newdale 86.66 45 P **P** 08 05 31.1 +1.3
baz=86,SNR=18
PFO Pinyon Flat Ob 86.67 56 *eP* **P** 08 05 30.4 +0.3
comp=Z,19nm,1.0s
PFO Pinyon Flat Ob 86.67 56 P **P** 08 05 30.5 +0.3
baz=87,SNR=11
BGU Big Grassy Mou 86.68 48 *eP* **P** 08 05 30.5 +0.4
comp=Z,8.2nm,0.7s
YMR Madison River 86.70 44 *eP* **P** 08 05 30.9 +0.8
comp=Z,49nm,1.1s
C19A Slack Wire Ran 86.73 41 P **P** 08 05 30.5 +0.5
baz=87,SNR=14
BAR Barrett 86.81 57 *eP* **P** 08 05 31.2 +0.5
comp=Z,29nm,1.4s
YFT Old Faithful 86.87 44 *eP* **P** 08 05 33.3 +2.3
comp=Z,16nm,0.9s
GMRC Granite Mounta 86.90 54 P **P** 08 05 31.9 +0.7
baz=87,SNR=27
BELC Belle Mtn. Jos 86.90 55 P **P** 08 05 31.5 +0.3
baz=87,SNR=16
MONP Monument Peak 86.94 56 P **P** 08 05 31.8 +0.3
baz=87,SNR=8.5
A20A Cobblestone Ra 86.94 39 P **P** 08 05 31.1 +0.1
baz=87,SNR=16
DCID1 Drake Creek 86.96 45 *eP* **P** 08 05 33.2 +1.9
comp=Z,18nm,1.0s
IMW Indian Meadow 87.01 45 *eP* **P** 08 05 32.8 +1.1
comp=Z,24nm,1.3s
F18A Big Timber 87.03 42 P **P** 08 05 32.1 +0.5
baz=87,SNR=14
D19A Cripps Ranch, 87.06 41 P **P** 08 05 31.9 +0.3
baz=87,SNR=24
H17A Grant Village 87.06 44 P **P** 08 05 34.3 +2.4
baz=87,SNR=9.2
FIA1 FINESS Array S 87.07 335 *eP* **P** 08 05 29.3 -1.9
FINES FINESS Array B 87.07 335 P **P** 08 05 29.6 -1.5
FINES pP **pP** 08 07 22.8 +1.8
FINES FINESS Array B 87.07 335 P **P** 08 05 29.6 -1.5
comp=Z,9.9nm,0.7s,baz=72,slow=6.2,SNR=46
FINES pP **pP** 08 07 22.8 +1.8
comp=Z,3.2nm,0.7s,baz=76,slow=8.0,SNR=4.5
B20A Solberg Farm, 87.07 40 P **P** 08 05 32.0 +0.4
baz=87
DUG Dugway 87.10 49 *eP* **P** 08 05 32.6 +0.5
DUG pmax pmax
comp=Z,55nm,1.2s
DUG Dugway 87.10 49 *eP* **P** 08 05 32.6 +0.5
comp=Z,55nm,1.2s
DUG Dugway 87.10 49 P **P** 08 05 32.7 +0.7
baz=87,SNR=43
TPAW Teton Pass 87.16 45 *eP* **P** 08 05 33.5 +1.1
comp=Z,6.4nm,0.9s
MOOW Moose Ponds 87.20 45 *eP* **P** 08 05 33.5 +1.0
comp=Z,8.2nm,1.0s
LDFC Landfair 87.22 54 *eP* **P** 08 05 33.3 +0.6
comp=Z,73nm,0.8s
DVTC Desert V Tower 87.28 57 P **P** 08 05 33.2 +0.3
baz=87
SNOW Snow King Moun 87.30 45 *eP* **P** 08 05 34.1 +1.0
comp=Z,14nm,1.4s
LOHW Long Hollow 87.35 45 *eP* **P** 08 05 34.0 +0.7
comp=Z,12nm,1.4s
C20A Veseth Ranch, 87.38 40 P **P** 08 05 33.7 +0.7
baz=87,SNR=24
E19A Rath Farm, Rou 87.40 42 P **P** 08 05 33.6 +0.3
baz=87,SNR=9.4
SWSC Sam W. Stewart 87.42 56 P **P** 08 05 33.7 +0.2
baz=87
BC3 Big Chuckawall 87.44 55 P **P** 08 05 34.4 +0.7
baz=87,SNR=16
HWUT Hardware Ranch 87.46 47 *eP* **P** 08 05 34.0 +0.3
comp=Z,27nm,1.0s
A21A Bergtoll Ranch 87.50 39 P **P** 08 05 33.8 +0.3
baz=87
IRM Iron Mountain 87.51 55 P **P** 08 05 34.7 +0.8
baz=87,SNR=15
ARUT Antelope Range 87.52 51 *eP* **P** 08 05 34.7 +0.6
ARUT pmax pmax
comp=Z,39nm,1.0s
ARUT Antelope Range 87.52 51 *eP* **P** 08 05 34.7 +0.6
comp=Z,39nm,1.0s
F19A Roth Farm, Mol 87.55 42 P **P** 08 05 34.2 +0.2
baz=87
FFC Flin Flon 87.64 32 *eP* **P** 08 05 34.0 0.0
FFC pmax pmax
comp=Z,50nm,0.9s
FFC Flin Flon 87.64 32 *eP* **P** 08 05 34.0 0.0
comp=Z,50nm,0.9s
RLMT Red Lodge 87.64 43 *eP* **P** 08 05 35.3 +0.8
comp=Z,12nm,0.6s
CCUT Cedar City 87.66 51 *eP* **P** 08 05 35.8 +1.0
comp=Z,45nm,1.4s
CTU Camp Tracy 87.67 48 *eP* **P** 08 05 35.3 +0.5
comp=Z,4.2nm,0.5s
B21A Ellsworth Farm 87.68 39 P **P** 08 05 34.8 +0.3
baz=88,SNR=21
MIB Mutribah 87.69 301 *eP* **P** 08 05 33.4 -1.4
MIB AMb AMB 08 05 34.2
comp=Z,38nm,0.5s
NLU North Lily Min 87.72 49 *eP* **P** 08 05 35.9 +0.9
comp=Z,21nm,0.9s
E20A Meyer Farm, Mu 87.80 41 P **P** 08 05 35.2 +0.1
baz=88,SNR=6.1
RDF Al-Radifah 87.81 300 *eP* **P** 08 05 34.4 -1.0
RDF AMb AMB 08 05 38.1
comp=Z,23nm,0.4s

C21A Desert Coulee 87.89 40 P **P** 08 05 36.0 +0.5
baz=88,SNR=9.0
JLU Jordanelle 87.92 48 *eP* **P** 08 05 36.5 +0.5
comp=Z,19nm,0.9s
NAY Al-Naaiem 87.95 300 *eP* **P** 08 05 34.6 -1.5
NAY AMb AMB 08 05 35.6
comp=Z,24nm,0.5s
H19A Powell 88.00 43 P **P** 08 05 36.9 +0.7
baz=88,SNR=5.3
MPU Maple Canyon 88.01 48 *eP* **P** 08 05 37.0 +0.6
comp=Z,21nm,1.0s
F20A Billings 88.08 42 P **P** 08 05 36.8 +0.4
baz=88,SNR=6.1
A22A Carney Farms, 88.10 39 P **P** 08 05 36.2 -0.2
baz=88,SNR=7.3
DAU Daniels Canyon 88.13 48 *eP* **P** 08 05 37.6 +0.5
DAU Daniels Canyon 88.13 48 *eP* **P** 08 05 37.5 +0.5
M17A Scullys Gap (B 88.13 47 P **P** 08 05 37.0 +0.1
baz=88,SNR=17
Y12C Blythe 88.14 55 P **P** 08 05 37.7 +0.9
baz=88,SNR=10
GLA Glamis 88.14 56 *eP* **P** 08 05 37.8 +0.9
GLA pmax pmax
comp=Z,24nm,0.7s
GLA Glamis 88.14 56 *eP* **P** 08 05 37.8 +0.9
comp=Z,24nm,0.7s
GLA Glamis 88.14 56 P **P** 08 05 38.0 +1.0
baz=88,SNR=9.3
W13A Hualapai Mount 88.15 54 P **P** 08 05 38.1 +0.9
baz=88,SNR=17
MVU Marysvale 88.16 50 *eP* **P** 08 05 38.1 +1.0
comp=Z,18nm,0.8s
MSU Marysvale 88.18 50 *eP* **P** 08 05 38.2 +0.9
MSU Marysvale 88.18 50 *eP* **P** 08 05 38.2 +0.9
PDMCI Parker Dam,Lak 88.24 55 P **P** 08 05 38.2 +0.9
baz=88,SNR=28
I19A Meeteetse 88.25 44 P **P** 08 05 38.1 +0.7
baz=88,SNR=8.3
D21A La Casta Ranch 88.27 41 P **P** 08 05 37.6 +0.3
baz=88,SNR=11
B22A Reddig Ranch S 88.35 39 P **P** 08 05 37.9 +0.3
baz=88
BW06 Boulder Array 88.38 45 *eP* **P** 08 05 37.7 -0.4
comp=Z,6.0nm,1.0s
PDAR Pinedale Array 88.38 45 P **P** 08 05 37.8 -0.3
PDAR Pinedale Array 88.38 45 P **P** 08 05 37.8 -0.3
comp=Z,3.5nm,0.7s,baz=216,slow=1.2,SNR=22
J19A Crowheart 88.52 45 P **P** 08 05 39.4 +0.7
baz=88,SNR=16
TMUT Trail Mountain 88.59 49 *eP* **P** 08 05 40.2 +0.9
comp=Z,12nm,0.8s
H20A Greybull 88.72 43 P **P** 08 05 39.7 +0.2
baz=89,SNR=7.4
A23A Redstone 88.72 38 P **P** 08 05 39.3 +0.1
baz=89
D22A Cohagen 88.74 40 P **P** 08 05 40.1 +0.7
baz=89,SNR=11
Q16A Castle Valley 88.76 49 P **P** 08 05 40.9 +1.0
baz=89,SNR=24
L19A Farson 88.78 46 P **P** 08 05 40.5 +0.6
baz=89,SNR=6.6
K19A Absolon Red Bu 88.84 45 P **P** 08 05 40.0 -0.2
baz=89,SNR=17
I20A Worland 88.86 44 P **P** 08 05 40.7 +0.6
baz=89,SNR=11
U15A North Rim 88.87 52 P **P** 08 05 41.7 +1.1
baz=89,SNR=39
B23A Brockton 88.88 39 P **P** 08 05 40.1 +0.1
baz=89,SNR=16
G21A Lodge Grass 88.92 42 P **P** 08 05 40.8 +0.4
baz=89,SNR=7.9
C23A Lambert 89.06 39 P **P** 08 05 41.4 +0.5
baz=89,SNR=28
113A Mohawk Valley, 89.08 56 P **P** 08 05 42.0 +0.8
baz=89
J20A Shoshoni 89.13 44 P **P** 08 05 41.8 +0.3
baz=89
SRU San Rafael 89.15 49 *eP* **P** 08 05 42.1 +0.5
SRU pmax pmax
comp=Z,46nm,0.6s
SRU San Rafael 89.15 49 *eP* **P** 08 05 42.1 +0.5
comp=Z,46nm,0.6s
SRU San Rafael 89.15 49 P **P** 08 05 42.2 +0.5
baz=89
E22A Miles City 89.19 41 P **P** 08 05 41.3 -0.2
baz=89
K20A Yellowstone Ra 89.25 45 P **P** 08 05 42.2 +0.2
baz=89,SNR=20
Y14A Wickenburg 89.25 54 P **P** 08 05 43.1 +1.0
baz=89,SNR=47
A24A Westby 89.26 38 P **P** 08 05 41.8 +0.1
baz=89
H21A Big Horn, Sher 89.28 43 P **P** 08 05 42.7 +0.6
baz=89
F22A Rosebud 89.29 42 P **P** 08 05 42.0 0.0
baz=89,SNR=7.9
SUMG Summit 89.31 1⇓ *i*P **P** 08 05 42.1 +0.1
SUMG pmax pmax
comp=Z,13nm,0.8s
SUMG Summit 89.31 1 *eP* **P** 08 05 42.1 +0.1
comp=Z,14nm,0.9s
SUMG Summit 89.31 1⇓ *i*P **P** 08 05 42.1 +0.1
comp=Z,13nm,0.8s
ANN Anapa 89.31 317 *eP* P 08 05 38.3 -3.7
ANN pmax pmax
comp=Z,26nm,0.9s
D23A Lindsay 89.33 40 P **P** 08 05 43.0 +0.8
baz=89,SNR=16
DGMT Dagmar 89.35 39 *eP* **P** 08 05 42.3 +0.1
comp=Z,22nm,0.8s
I21A Big Trails, Te 89.46 44 P **P** 08 05 43.1 +0.1
baz=89,SNR=12
Z14A Wintersburg 89.51 55 P **P** 08 05 44.4 +1.2
baz=89,SNR=7.1
G22A Birney 89.51 42 P **P** 08 05 43.4 +0.3
baz=89,SNR=6.6
L20A Wamsutter 89.52 46 P **P** 08 05 43.9 +0.6
baz=89,SNR=9.0
J21A Lysite 89.56 44 P **P** 08 05 43.8 +0.3
baz=89,SNR=19
E23A Ismay 89.57 41 P **P** 08 05 43.6 +0.3
baz=89,SNR=14
C24A Savage 89.64 39 P **P** 08 05 44.0 +0.4
baz=90,SNR=8.2
O19A Miners Draw (B 89.67 47 P **P** 08 05 43.9 -0.1
baz=90
H22A Clearmont 89.74 43 P **P** 08 05 44.7 +0.5
baz=90,SNR=11
M20A Sweetwater, Wa 89.83 46 P **P** 08 05 45.6 +0.8
baz=90,SNR=20
F23A Volborg 89.85 41 P **P** 08 05 44.7 +0.1
baz=90,SNR=10
D24A Glendive 89.89 40 P **P** 08 05 45.4 +0.6
baz=90
I22A 9 Mile Ranch, 89.96 43 P **P** 08 05 45.4 +0.2
baz=90,SNR=9.4
P19A Cripple Cowboy 90.04 48 P **P** 08 05 46.4 +0.6
baz=90,SNR=70
N20A Spence Gulch, 90.05 47 P **P** 08 05 46.4 +0.5
baz=90,SNR=18
G23A Biddle 90.09 42 P **P** 08 05 45.8 0.0
baz=90,SNR=11
214A Organ Pipe Nat 90.13 56 P **P** 08 05 47.2 +1.0
baz=90
E24A Baker 90.15 40 P **P** 08 05 46.4 +0.4
baz=90,SNR=5.5
J22A Midwest 90.17 44 P **P** 08 05 46.5 +0.2
baz=90
L21A Rawlins 90.19 45 P **P** 08 05 46.8 +0.3
baz=90,SNR=28
X16A Lolia Camp, P 90.27 54 P **P** 08 05 48.2 +1.2
baz=90
M21A Separation Pea 90.34 46 P **P** 08 05 47.3 +0.1
baz=90,SNR=16
O20A White River Ci 90.35 47 P **P** 08 05 47.6 +0.3
baz=90,SNR=18
H23A Clabaugh Cattl 90.36 42 P **P** 08 05 46.6 -0.4
baz=90
F24A Ekalaka 90.39 41 P **P** 08 05 47.5 +0.3
baz=90,SNR=10.0
K22A Casper 90.47 44 P **P** 08 05 48.2 +0.5
baz=90,SNR=11
P20A De Beque 90.51 48 P **P** 08 05 48.4 +0.4
baz=90,SNR=11
N21A Black Mountain 90.59 47 P **P** 08 05 48.7 +0.3
baz=90,SNR=42
PV04 Paradox Valley 90.59 49 *eP* **P** 08 05 48.9 +0.5
E25A Miller Ranch, 90.74 40 P **P** 08 05 49.1 +0.4
baz=91,SNR=12
L22A Ellis Ranch, M 90.79 45 P **P** 08 05 50.1 +0.8
baz=91,SNR=7.5
Q20A Ridgley Place, 90.80 48 P **P** 08 05 50.0 +0.7
baz=91,SNR=83
H24A Dirks Ranch, A 90.82 42 P **P** 08 05 49.0 -0.2
baz=91,SNR=12
PV01 Paradox Valley 90.94 49 *eP* **P** 08 05 50.0 0.0
comp=Z,3µm,0.8s
M22A Cedar Creek Ra 90.95 46 P **P** 08 05 50.6 +0.5
baz=91,SNR=11
K23A Bowen Ranch, D 91.02 44 P **P** 08 05 50.2 0.0
baz=91,SNR=12
R20A Redvale 91.06 49 P **P** 08 05 50.9 +0.3
baz=91,SNR=38
P21A Newcastle 91.16 48 P **P** 08 05 51.5 +0.4
baz=91,SNR=12
I24A Kuemmerle Ranc 91.18 43 P **P** 08 05 50.9 0.0
baz=91,SNR=7.3
S20A Disappointment 91.22 49 P **P** 08 05 51.4 0.0
baz=91,SNR=16
L23A Garrett 91.25 45 P **P** 08 05 51.4 0.0
baz=91,SNR=21
N22A Wattenberg Ran 91.31 46 P **P** 08 05 52.5 +0.8
baz=91,SNR=15
E26A Carlson Angus 91.32 40 P **P** 08 05 51.8 +0.4
baz=91
Q21A Lamborn Mesa, 91.36 48 P **P** 08 05 52.8 +0.9
baz=91,SNR=22
X18A Snowflake 91.36 53 P **P** 08 05 53.0 +1.0
baz=91,SNR=9.8
RAYN Ar Rayn 91.38 295 *eP* **P** 08 05 51.2 -0.9
comp=Z,6.2nm,0.6s
AKASG Malin Array Be 91.40 325 P **P** 08 05 49.7 -1.8
AKASG Malin Array Be 91.40 325 P **P** 08 05 49.7 -1.8
AKASG Malin Array Be 91.40 325 P **P** 08 05 49.7 -1.8
comp=Z,7nm,0.4s,baz=53,slow=4.8,SNR=5.3
RSSD Black Hills 91.44 42 *eP* **P** 08 05 51.1 -1.1
RSSD pmax pmax
comp=Z,21nm,1.3s
RSSD Black Hills 91.44 42 *eP* **P** 08 05 51.1 -1.1
comp=Z,21nm,1.3s
O22A Kremmling 91.52 47 P **P** 08 05 53.1 +0.3
baz=91,SNR=34
R21A Cimarron 91.58 49 P **P** 08 05 53.9 +0.9
baz=91,SNR=48
TUC Tucson 91.59 55 *eP* **P** 08 05 53.9 +0.9
TUC pmax pmax
comp=Z,69nm,1.1s
TUC Tucson 91.59 55 *eP* **P** 08 05 53.9 +0.9
comp=Z,69nm,1.1s
P22A Eagle 91.61 47 P **P** 08 05 53.9 +0.7
baz=92,SNR=22
N23A Red Feather La 91.62 46 P **P** 08 05 54.1 +1.0
baz=92,SNR=38
SMCO Snowmass 91.64 48 *eP* **P** 08 05 54.1 +0.6
comp=Z,28nm,0.9s
U20A Newcomb 91.69 51 P **P** 08 05 54.2 +0.7
baz=92,SNR=5.7
S21A Coal Bank Pass 91.70 49 P **P** 08 05 54.4 +0.7
baz=92,SNR=10
Q22A Crested Butte, 91.82 48 P **P** 08 05 55.1 +0.9
baz=92,SNR=28
O23A Lake Granby, G 91.93 46 P **P** 08 05 55.5 +0.9
baz=92,SNR=21
V20A Brimhall 91.97 51 P **P** 08 05 55.5 +0.7
baz=92,SNR=12
M24A Cheyenne 92.12 45 P **P** 08 05 55.5 +0.1
baz=92,SNR=8.9
T21A Navajo Lake 92.16 50 P **P** 08 05 56.5 +0.8
baz=92
W20A Ramah 92.22 52 P **P** 08 05 56.5 +0.5
baz=92,SNR=16
U21A Nageezi 92.31 50 P **P** 08 05 56.9 +0.5
baz=92,SNR=23
P23A Jefferson 92.35 47 P **P** 08 05 58.0 +1.3
baz=92,SNR=23
S22A 4UR Ranch, Cre 92.35 49 P **P** 08 05 57.2 +0.6
baz=92,SNR=20
N24A Carr 92.37 46 P **P** 08 05 57.6 +1.2
baz=92,SNR=9.7
X20A Quemado 92.46 52 P **P** 08 05 58.5 +1.4
baz=92,SNR=20
O24A Longmont 92.55 46 P **P** 08 05 58.5 +1.1
baz=92,SNR=13
V21A Milan 92.58 51 P **P** 08 05 58.0 +0.4
baz=92,SNR=8.5
HFS Hagfors 92.59 338 P **P** 08 05 55.1 -1.7
HFS PP **PP** 08 09 42.8 -3.3
HFS Hagfors 92.59 338 P **P** 08 05 55.1 -1.7
comp=Z,3.6nm,0.5s,baz=83,slow=4.8,SNR=17
HFS PP **PP** 08 09 42.8 -3.3
comp=Z,2.0nm,0.7s,baz=116,slow=3.4,SNR=4.4
T22A Edith 92.61 50 P **P** 08 05 58.4 +0.6
baz=92,SNR=12
K26A Motz Farm, Whi 92.65 43 P **P** 08 05 57.6 0.0
baz=92,SNR=7.6
NB2 NORSAR Subarra 92.80 340 P **P** 08 05 55.7 -2.1
comp=Z,2.8nm,0.7s,baz=54,slow=5.1
NOA NORSAR Array B 92.80 340 P **P** 08 05 56.5 -1.4
NOA pP **pP** 08 07 49.9 +1.4
NOA PP **PP** 08 09 44.9 -2.8
NOA NORSAR Array B 92.80 340 P **P** 08 05 56.5 -1.4
comp=Z,2.4nm,0.7s,baz=45,slow=4.4,SNR=13
NOA pP **pP** 08 07 49.9 +1.4
comp=Z,1.1nm,0.7s,baz=49,slow=4.8,SNR=4.8
NOA PP **PP** 08 09 44.9 -2.8
comp=Z,1.0nm,0.6s,baz=43,slow=8.0,SNR=3.9
Y20A Horse Springs, 92.81 53 P **P** 08 05 59.9 +1.2
baz=93,SNR=24
U22A Llaves 92.92 50 P **P** 08 05 59.8 +0.6
baz=93,SNR=9.3
Z20A Nine Sixteen R 92.97 54 P **P** 08 06 00.7 +1.3
baz=93,SNR=31
Q24A Divide 93.01 47 P **P** 08 06 00.2 +0.5
baz=93,SNR=5.5
X21A Alamocita Cree 93.03 52 P **P** 08 06 00.6 +0.8
baz=93,SNR=7.0
V22A San Miguel Ran 93.07 51 P **P** 08 06 00.1 +0.2
baz=93
ULM Lac du Bonnet 93.14 34 *eP* **P** 08 05 59.2 -0.4
ULM Lac du Bonnet 93.14 34 P **P** 08 05 59.1 -0.4
comp=Z,7.6nm,0.8s,baz=256,slow=3.4,SNR=6.3
O25A Wiggins 93.21 46 P **P** 08 06 01.1 +0.8
baz=93,SNR=5.4
T23A Casias Ranch, 93.23 49 P **P** 08 06 01.2 +0.5
baz=93,SNR=5.6
K27A Flueckinger Fa 93.26 43 P **P** 08 06 00.1 -0.3
baz=93,SNR=6.3
Y21A Point of Rocks 93.30 53 P **P** 08 06 02.2 +1.2
baz=93,SNR=14
SDCO Great Sand Dun 93.30 49 *eP* **P** 08 06 01.2 +0.2
comp=Z,8.4nm,1.4s
R24A Sanders Place, 93.37 48 P **P** 08 06 01.9 +0.7
baz=93,SNR=11
U23A El Rito 93.42 50 P **P** 08 06 01.9 +0.5
baz=93,SNR=10
P25A Willow Gulch B 93.45 47 P **P** 08 06 02.2 +0.7
baz=93,SNR=12
220A Playas Peak, P 93.51 55 P **P** 08 06 02.7 +0.9
baz=93,SNR=7.3
J28A Allard Ranch, 93.55 42 P **P** 08 06 01.5 -0.2
baz=93,SNR=6.6
S24A Houchin Ranch, 93.55 49 P **P** 08 06 02.9 +0.8
baz=93,SNR=5.4
Z21A St. Cloud Mine 93.59 53 P **P** 08 06 03.5 +1.2
baz=94,SNR=17
Q25A Bedland, Calha 93.67 47 P **P** 08 06 02.8 +0.3
baz=94,SNR=16
O26A Horse Wrangler 93.70 46 P **P** 08 06 02.6 0.0
baz=94,SNR=6.4
ANMO Albuquerque 93.82 51 *eP* **P** 08 06 03.7 +0.4
comp=Z,7.7nm,1.2s
121A Cookes Peak, D 93.82 54 P **P** 08 06 04.6 +1.2
baz=94,SNR=5.9
Y22A Socorro 93.86 53 P **P** 08 06 04.2 +0.7
baz=94,SNR=7.9
W23A Werner Place, 93.95 51 P **P** 08 06 04.6 +0.7
baz=94,SNR=6.6
N27A Anderson Farm, 93.96 45 P **P** 08 06 04.0 +0.3
baz=94
P26A Davis Ranch, A 93.99 46 P **P** 08 06 04.4 +0.5
baz=94,SNR=11
BNM Barren Site 94.03 52 *eP* **P** 08 06 04.7 +0.4
comp=Z,4.3nm,1.2s
U24A Moreno Valley 94.05 50 P **P** 08 06 05.5 +1.1
baz=94,SNR=7.0
BR131 Keskin Array S 94.09 314 *eP* **P** 08 06 02.8 -1.6

comp=Z,4.0nm,0.8s
BRTR Keskin Array B 94.09 314 P P 08 06 02.8 -1.6
BRTR Keskin Array B 94.09 314 P P 08 06 02.8 -1.6
comp=Z,6.0nm,0.8s,baz=99,slow=3.9,SNR=30
S25A Robets Cordova 94.10 48 P P 08 06 04.5 0.0
baz=94,SNR=5.9
Z22A Elephant Butte 94.15 53 P P 08 06 05.7 +0.9
baz=94,SNR=11
Q26A Hugo 94.17 47 P P 08 06 05.2 +0.4
baz=94,SNR=11
AGMN Agassiz Nation 94.23 36 eP P 08 06 03.9 -0.7
comp=Z,4.9nm,0.8s
O27A Beecher Island 94.29 45 P P 08 06 04.9 -0.3
baz=94
V24A Rampart Ranch, 94.35 50 P P 08 06 06.5 +0.8
baz=94,SNR=6.9
122A Conniff Cattle 94.36 54 P P 08 06 07.0 +1.3
baz=94,SNR=5.7
M28A Bar X Bar Ranc 94.45 44 P P 08 06 05.6 -0.3
baz=94
K29A Lazy Trails An 94.47 42 P P 08 06 05.3 -0.6
baz=94
BRSD Miller 94.47 40 P P 08 06 05.2 -0.6
baz=94
W24A Lazy 6 Ranch, 94.48 51 P P 08 06 07.1 +0.8
baz=94,SNR=13
R26A Arlington 94.50 47 P P 08 06 06.2 0.0
baz=94,SNR=12
P27A Ficken Ranch, 94.52 46 P P 08 06 06.1 -0.2
baz=94
Y23A Lovelace Mesa, 94.55 52 P P 08 06 06.9 +0.2
baz=94,SNR=9.0
U25A Circle Dot Ran 94.68 49 P P 08 06 07.5 +0.3
baz=94,SNR=9.8
L29A Maesberg Ranch 94.71 43 P P 08 06 06.7 -0.4
baz=94
KSCO Kaye Shedlock' 94.74 46 P P 08 06 07.5 +0.2
baz=95,SNR=8.0
V25A Rancho No Teng 94.78 50 P P 08 06 08.4 +0.7
baz=95,SNR=5.8
O28A Krutsinger Ran 94.80 45 P P 08 06 07.2 -0.2
baz=95
S26A Kim 94.80 48 P P 08 06 07.5 -0.1
baz=95,SNR=10.0
T26A Comanche Natio 94.92 48 P P 08 06 08.2 0.0
baz=95,SNR=13
R27A Eads 94.96 47 P P 08 06 08.4 +0.1
baz=95
Y24A Capitan 95.02 52 P P 08 06 08.8 0.0
baz=95
P28A Saint Francis 95.07 46 P P 08 06 08.4 -0.3
baz=95,SNR=5.9
Z24A Sheeppen Canyo 95.33 52 P P 08 06 10.6 +0.4
baz=95,SNR=6.0
124A Stringfield Ra 95.53 53 P P 08 06 11.4 +0.2
baz=95,SNR=5.9
Y25A Mesa, Roswell 95.57 52 P P 08 06 11.4 +0.2
baz=95,SNR=9.0
R28A Tribune 95.62 47 P P 08 06 11.5 +0.3
baz=96,SNR=6.7
Z25A Roswell 95.84 52 P P 08 06 12.9 +0.5
baz=96,SNR=7.0
S28A Manter 95.92 47 P P 08 06 12.9 +0.3
baz=96,SNR=8.0
X26A CR and CF Fran 95.95 51 P P 08 06 13.1 +0.2
baz=96,SNR=8.5
T28A Walsh 95.99 48 P P 08 06 13.2 +0.2
baz=96
MNTX Cornudas Mount 96.02 54 eP P 08 06 13.5 +0.4
comp=Z,4.7nm,0.9s
R29A Marienthal 96.05 46 P P 08 06 13.4 +0.2
baz=96
324A Moseley Ranch, 96.06 54 P P 08 06 13.8 +0.3
baz=96
125A Gardner Draw, 96.16 53 P P 08 06 14.3 +0.5
baz=96
U28A Mallet 96.26 49 P P 08 06 14.3 +0.1
baz=96
W27A Bowe Ranch, En 96.26 50 P P 08 06 14.6 +0.3
baz=96
ECSD EROS Data Cent 96.28 40 eP P 08 06 13.3 -0.7
comp=Z,3.1nm,0.8s
Z26A Caprock 96.40 52 P P 08 06 14.9 0.0
baz=96,SNR=8.9
X27A F and S Farms, 96.43 50 P P 08 06 15.2 +0.2
baz=96
S29A Ulysses 96.45 47 P P 08 06 15.4 +0.4
baz=96
325A Bean Ranch, Si 96.48 54 P P 08 06 16.1 +0.7
baz=96,SNR=9.3
CRVS Cervenica-Dubn 96.56 327 eP P 08 06 12.0 -3.1
CRVS pmax pmax
comp=Z,4.0nm,1.1s
CRVS Cervenica-Dubn 96.56 327 eP P 08 06 12.0 -3.1
R30A Dighton 96.70 46 P P 08 06 15.9 -0.2
baz=96
425A Indio Mountain 96.72 55 P P 08 06 17.2 +0.8
baz=97,SNR=7.8
Y27A Causey 96.73 51 P P 08 06 16.5 +0.2
baz=97,SNR=7.2
Z27A Tatum 96.95 52 P P 08 06 17.4 +0.1
baz=97,SNR=5.1
KECS Kecovo 97.33 327 eP P 08 06 17.6 -1.0
KECS Kecovo 97.33 327 PDIF P 08 06 17.6 -1.0
426A McDonald Obser 97.52 54 P P 08 06 20.4 +0.4
baz=97,SNR=7.0
X29A Tulia 97.54 50 P P 08 06 20.5 +0.5
baz=97,SNR=8.2
Z28A Tucker Farm, M 97.58 51 P Pdif 08 06 20.2 +0.1
baz=97
427A Hayter Ranch, 97.92 54 P P 08 06 22.4 +0.6
baz=98,SNR=5.1
527A Woodward Ranch 98.07 55 P Pdif 08 06 22.8 +0.3
baz=98
Z29A Hungry Hill Ra 98.09 51 P P 08 06 22.8 +0.3
baz=98
VYHS Vyhne 98.18 327 eP Pdif 08 06 21.9 -0.5
VYHS Vyhne 98.18 327 PDIF Pdif 08 06 21.9 -0.5
TXAR Lajitas Array 98.39 55 P P 08 06 24.4 +0.5
TXAR PP PP 08 10 28.6 -2.9
TXAR PKiKP PKiKP 08 10 54.2 +1.2
TXAR PKKPbc PKKPbc 08 22 53.1 +0.6
TXAR Lajitas Array 98.39 55 P P 08 06 24.4 +0.5
comp=Z,1.1nm,0.8s,baz=289,slow=3.8,SNR=8.7
TXAR PP PP 08 10 28.6 -2.9
comp=Z,0.6nm,0.9s,baz=282,slow=6.3,SNR=5.3
TXAR PKiKP PKiKP 08 10 54.2 +1.2
comp=Z,0.3nm,0.5s,baz=224,slow=1.1,SNR=6.4
TXAR PKKPbc PKKPbc 08 22 53.1 +0.6
comp=Z,0.2nm,0.6s,baz=124,slow=6.1,SNR=4.7
428A Kincaid Ranch, 98.52 54 P P 08 06 25.5 +1.0
baz=98
627A Terlingua Ranc 98.55 55 P P 08 06 25.1 +0.5
baz=98
X31A McDonald Ranch 98.70 49 P P 08 06 25.4 +0.4
baz=99
329A Wagon Wheel Ra 98.71 53 P P 08 06 25.7 +0.4
baz=99
Y31A Rekieta Farm, 98.82 50 P P 08 06 26.1 +0.4
baz=99
628A Black Gap, Mar 98.93 55 P P 08 06 26.8 +0.5
baz=99
CLL Collm 99.09 332 eP Pdif 08 06 25.0 -1.3
CLL pmax pmax
comp=Z,4.0nm,1.1s
CLL Collm 99.09 332 ePdif Pdif 08 06 25.0 -1.3
429A Davenport Ranc 99.18 54 P Pdif 08 06 27.5 +0.2
baz=99
230A Sterling City 99.18 52 P Pdif 08 06 27.5 +0.2
baz=99
330A Mertzon 99.36 53 P Pdif 08 06 28.3 +0.3
baz=99
Z32A Haskell 99.71 50 P Pdif 08 06 30.1 +0.6
baz=100
531A Rocksprings 100.42 53 P Pdif 08 06 33.0 +0.3
baz=100
332A Millersview 100.45 52 P Pdif 08 06 33.1 +0.2
baz=100
GERES GERESS Array B 100.49 330 P Pdif 08 06 30.8 -2.0
GERES PP PP 08 10 45.2 -1.2
GERES PKKPbc PKKPbc 08 22 46.7 -0.8
GERES GERESS Array B 100.49 330 P Pdif 08 06 30.7 -2.0
comp=Z,0.9nm,0.7s,baz=48,slow=4.3,SNR=5.2
GERES PP PP 08 10 45.2 -1.2
comp=Z,0.3nm,0.6s,baz=199,slow=32,SNR=4.1
GERES PKKPbc PKKPbc 08 22 46.7 -0.8
comp=Z,0.2nm,0.6s,baz=251,slow=4.1,SNR=4.3
EKA Eskdalemuir Ar 101.90 342 P Pdif 08 06 37.0 -1.7
EKA PP PP 08 10 56.3 -0.1
EKA Eskdalemuir Ar 101.90 342 P Pdif 08 06 37.0 -1.7
comp=Z,2.5nm,1.1s,baz=102,slow=16,SNR=3.5
EKA PP PP 08 10 56.3 -0.1
comp=Z,4.4nm,0.9s,baz=34,slow=6.1,SNR=7.1
SCHQ Schefferville 102.17 18 P Pdif 08 06 39.7 -0.3
SCHQ Schefferville 102.17 18 P Pdif 08 06 39.7 -0.3
comp=Z,2.2nm,0.6s,baz=8.1,slow=6.1,SNR=4.0
LPL La Plagne 106.17 331 eP Pdif 08 06 57.3 -1.0
LPL La Plagne 106.17 331 eP Pdif 08 06 57.3 -1.0
LPL La Plagne 106.17 331 eP Pdif 08 06 57.3 -1.0
LPG La Plagne 106.18 331 eP Pdif 08 06 58.3 -0.1
comp=Z,11nm,1.0s
LPG La Plagne 106.18 331 eP Pdif 08 06 58.3 -0.1
LPG pmax pmax
comp=Z,11nm,1.0s
LPG La Plagne 106.18 331 eP Pdif 08 06 58.3 -0.1
comp=Z,11nm,1.0s
SYO Syowa Base 112.57 202 eX Pdif 08 07 31.0 +5.3
MVO Moncorvo 115.49 337 ePKPdf PKPdf 08 11 24.9 +0.4
ESDC Sonseca Array 115.56 334 PKP PKPdf 08 11 23.8 -0.9
ESDC PP PP 08 12 30.0 -4.6
ESDC PKKPbc PKKPab 08 22 07.1 -1.2
ESDC Sonseca Array 115.56 334 PKP PKPdf 08 11 23.8 -0.9
comp=Z,0.3nm,0.4s,baz=33,slow=2.2,SNR=5.0
ESDC PP PP 08 12 30.0 -4.6
comp=Z,0.2nm,0.3s,baz=28,slow=6.7,SNR=4.2
ESDC PKKPbc PKKPab 08 22 07.1 -1.2
comp=Z,0.2nm,0.4s,baz=213,slow=4.5,SNR=5.2
POLO Lamas de Olo 115.59 338 ePKPdf PKPdf 08 11 24.7 -0.1
MTE Manteigas 116.35 337 ePKPdf PKPdf 08 11 26.6 +0.4
PCBR Castelo Branco 116.81 337 ePKPdf PKPdf 08 11 27.3 +0.3
PMRV Marv??o 117.14 336 ePKPdf PKPdf 08 11 28.0 +0.3
PMTG Montargil 117.77 337 ePKPdf PKPdf 08 11 28.9 0.0
PBAR Barrancos 118.09 335 ePKPdf PKPdf 08 11 29.8 +0.3
EVO Evora 118.16 336 ePKPdf PKPdf 08 11 29.5 -0.1
EVO Evora 118.16 336 ePKIKP PKPdf 08 11 29.2 -0.4
comp=Z,7.1nm,0.7s
EVOP Sao Brissos 118.20 337 ePKIKP PKPdf 08 11 29.2 -0.5
EVOP Sao Brissos 118.20 337 ePKPdf PKPdf 08 11 29.2 -0.5
PBEJ Beja 118.54 336 ePKPdf PKPdf 08 11 30.9 +0.5
PNCL Nicolau / Gran 118.72 337 ePKPdf PKPdf 08 11 30.8 +0.1
PCVE Castro Verde 118.95 336 ePKPdf PKPdf 08 11 31.7 +0.5
MDT Midelt 121.57 330 PKP PKPdf 08 11 36.9 +0.3
MDT Midelt 121.57 330 PKP PKPdf 08 11 36.9 +0.3
comp=Z,5.2nm,0.8s,baz=91,slow=2.9,SNR=16
SNAA Sanae 123.46 192 ePKPdf PKPdf 08 11 37.8 -1.0
TORD Torodi Ar. Bea 132.39 308 PKP PKPdf 08 11 55.4 -2.0
TORD PP PP 08 14 26.8 -0.2
TORD SKPbc SKPbc 08 14 36.6 -1.1
comp=Z,6.8nm,0.6s,baz=37,slow=3.0,SNR=22
STVI Saint Thomas 132.99 41 ePKPdf PKPdf 08 11 57.6 -0.8
ROSC El Rosal 134.67 63 PKP PKPdf 08 12 01.7 -0.5
ROSC ePKPdf PKiKP 08 12 02.8 -1.0
ROSC El Rosal 134.67 63 PKP PKPdf 08 12 01.7 -0.5
comp=Z,7.5nm,0.6s,baz=92,slow=17,SNR=5.3
DBIC Dimbokro 141.47 307 PKPpre PKPpre 08 12 08.8
DBIC SKPbc SKPbc 08 15 04.8 +0.4
DBIC Dimbokro 141.47 307 PKhKP PKPpre 08 12 08.8
comp=Z,5.6nm,0.5s,baz=5.7,slow=4.9,SNR=15
DBIC SKPbc SKPbc 08 15 04.8 +0.4
comp=Z,4.1nm,0.6s,baz=19,slow=7.1,SNR=6.4
LIC Lamto 141.89 307 ePKIKP PKPdf 08 12 10.5 -4.4
comp=Z,17nm,0.5s
LIC Lamto 141.89 307 ePKPdf PKPdf 08 12 10.5 -4.4
PLCA Paso Flores 142.03 134 PKPpre PKPpre 08 12 11.0
PLCA ePKPdf PKPdf 08 12 11.2 -3.3
PLCA Paso Flores 142.03 134 PKhKP PKPpre 08 12 11.0
comp=Z,4.6nm,0.4s,baz=240,slow=3.8,SNR=26
BBTS Babate 142.65 330 PKP PKPdf 08 12 13.7 -2.5
BBTS Babate 142.65 330 PKP PKPdf 08 12 13.7 -2.5
comp=Z,24nm,0.4s,baz=146,slow=11
LMEL Las Melosas 144.78 123 eP PKPbc 08 12 20.4 +0.5
LMEL Las Melosas 144.78 123 eP PKPbc 08 12 20.4 +0.5
CMCH Combarbala 144.81 118 iP PKPdf 08 12 19.8 +0.2
CMCH Combarbala 144.81 118 iP PKPdf 08 12 19.8 +0.2
TLL Tololo Astrono 145.19 117 iPKP2 PKPbc 08 12 22.1 +0.7
TLL Tololo Astrono 145.19 117 iP PKPbc 08 12 22.1 +0.7
TLL Tololo Astrono 145.19 117 iP PKPbc 08 12 22.1 +0.7
LCO Las Campanas 145.49 115 ePKPdf PKPbc 08 12 22.8 +0.4
PSGC Pisagua 146.53 98 iP PKPbc 08 12 25.9 +0.6
PSGC Pisagua 146.53 98 iP PKPbc 08 12 25.9 +0.6
HMBC Humberstone 146.79 99 iP PKPbc 08 12 26.7 +0.7
HMBC Humberstone 146.79 99 iP PKPbc 08 12 26.7 +0.7
PB07 Plate Boundary 146.83 102 iP PKPbc 08 12 27.0 +0.8
PB07 Plate Boundary 146.83 102 iP PKPbc 08 12 27.0 +0.8
MNMC Minimini 146.99 97 iP PKPbc 08 12 27.3 +0.5
MNMC Minimini 146.99 97 iP PKPbc 08 12 27.3 +0.5
CFAA Coronel Fontan 147.00 120 PKPbc PKPbc 08 12 26.1 0.0
CFAA Coronel Fontan 147.00 120 PKPbc PKPbc 08 12 26.1 0.0
baz=183,slow=5.1
PB01 Plate Boundary 147.19 101 iP PKPbc 08 12 27.8 +0.8
PB01 Plate Boundary 147.19 101 iP PKPbc 08 12 27.8 +0.8
LVC Limon Verde 147.73 103 iP PKPbc 08 12 28.9 +0.3
LVC Limon Verde 147.73 103 iP PKPbc 08 12 28.9 +0.3
LPAZ La Paz 148.06 92 ePKPdf PKPdf 08 12 26.9 +0.8
LPAZ PKP PKPdf 08 12 27.1 +0.9
LPAZ PKPbc PKPbc 08 12 30.9 +0.9
LPAZ ePKPbc PKPab 08 12 31.1 -3.6
LPAZ La Paz 148.06 92 PKP PKPdf 08 12 27.1 +0.9
comp=Z,53nm,0.5s,baz=278,slow=1.7,SNR=54
LPAZ PKPbc PKPbc 08 12 30.9 +0.9
comp=Z,52nm,0.5s,baz=310,slow=2.5,SNR=161
TRQA Tornquist 149.13 135 ePKPbc PKPbc 08 12 31.4 +0.1
SAML Samuel 150.86 75 ePKPdf PKPdf 08 12 30.2 +0.3
SAML ePKPbc PKPbc 08 12 36.1 0.0
SAML ePKPab PKPab 08 12 44.8 -0.7
BDFB Brasilia 167.01 80 PKP PKPdf 08 12 48.7 +0.2
BDFB Brasilia 167.01 80 PKP PKPdf 08 12 48.7 +0.2
comp=Z,5.4nm,0.7s,baz=350,slow=2.1,SNR=8.0

*ISK **27** 07:53:43.4, 36°.58N×25°.14E, h32km, ML3.6*
*ATH **27** 07:53:44.7, 36°.53N×25°.51E, h24km± 1km, MD3.6/41, ML3.4*
*ISCJB **27** 07:53:44.8± 0.4, 36°.56N± 0°.02× 25°.47E± 0°.03, h12km± 3km, mb3.3/3, MS2.5/1, Error ellipse: s-maj=3.5km s-min=3.0km az=172.8*
*CSEM **27** 07:53:44.5± 0.1, 36°.54N× 25°.54E, h5km, ML3.6/5, Error ellipse: s-maj=4.1km s-min=3.5km az=85.0*
*THE **27** 07:53:45.7, 36°.55N× 25°.48E, h5km, ML3.6/5, Error ellipse: s-maj=0.9km s-min=0.4km az=198.0*
*IDC **27** 07:53:49.8± 4.2, 36°.40N× 25°.46E, h49km± 49km, mb3.1/3, mb1 3.4/6, mb1mx3.2/28, mbtmp3.2/6, ML3.4/3, MS2.7/3, Ms1 2.7/3, ms1mx2.3/25, Error ellipse: s-maj=46.3km s-min=24.8km az=162.0*

ISC 27 07:53:44.8± 0.9, 36°.55N± 0°.02× 25°.45E± 0°.02, h13km± 7km, n156, σ1°17/175, mb3.4/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
THR2	Thira island,	0.10	189	P		Pg	07 53 48.2	+0.5
THR3	Thira Island,	0.14	198	P		Pb	07 53 49.2	-0.2
SANT	Santorini	0.17	179	P		Pb	07 53 49.4	-0.5
SANT	Santorini	0.17	179	ePB		Pb	07 53 49.5	-0.5
SANT	Santorini	0.17	179	ePb		Pb	07 53 49.5	-0.5
THR1	Thera Island	0.17	179	P		Pb	07 53 49.4	-0.6
APE	Apeiranthos	0.53	7	ePG		Pb	07 53 55.5	-0.5
APE				eSG		Sb	07 54 04.2	+0.6
APE	Apeiranthos	0.53	7	P		Pb	07 53 55.7	-0.3
APE				S		Sb	07 54 09.9	+0.4
APE	Apeiranthos	0.53	7	ePN		Pb	07 53 55.7	-0.3
APE				eSN		Sb	07 54 04.0	+0.4
APE	Apeiranthos	0.53	7	P		Pb	07 53 55.7	-0.3
APE				eSn		Sb	07 54 04.0	+0.4
NPS	Neapolis	1.29	174	P		Pg	07 54 09.1	-0.4
NPS	Neapolis	1.29	174	ePN		Pg	07 54 08.8	-0.7
NPS	Neapolis	1.29	174	ePn		Pg	07 54 08.8	-0.7
NPS	Neapolis	1.29	174	P		Pg	07 54 09.1	-0.4
IDI	Anoyia	1.33	200	P		Pg	07 54 09.7	-0.8
IDI	Anoyia	1.33	200	ePN		Pg	07 54 09.7	-0.8
IDI				eSN		Sg	07 54 28.1	+0.3
IDI	Anoyia	1.33	200	P		Pg	07 54 09.7	-0.8
IDI				eSn		Sg	07 54 28.1	+0.3
LAST	Lasithi	1.38	179	ePB		Pn	07 54 09.5	-0.4
LAST	Lasithi	1.38	179	ePb		Pn	07 54 09.5	-0.4
VAM	Vamos	1.52	222	P		Pb	07 54 12.8	-0.2
VAM	Vamos	1.52	222	ePN		Pb	07 54 12.8	-0.2
VAM	Vamos	1.52	222	P		Pb	07 54 12.8	-0.2
ZKR	Zakros	1.56	156	ePN		Pb	07 54 12.8	-0.7
ZKR				eSN		Sb	07 54 32.8	-0.3
ZKR	Zakros	1.56	156	ePn		Pb	07 54 12.8	-0.7
BODT	Bodrum	1.58	70	ePN		Pn	07 54 12.9	+0.4
BODT				eSN		Sg	07 54 35.1	-0.4
BODT	Bodrum	1.58	70	ePn		Pn	07 54 12.9	+0.4
BODT				eSn		Sg	07 54 35.2	-0.4
SMG	Samos	1.60	43	P		Pn	07 54 12.9	0.0
SMG				S		Sb	07 54 34.8	+0.3
SMG	Samos	1.60	43	ePN		Pn	07 54 12.9	0.0
SMG	Samos	1.60	43	P		Pn	07 54 12.9	0.0
SMG				S		Sb	07 54 34.8	+0.3
SIVA	Sivas	1.61	199	P		Pb	07 54 14.2	-0.2
SIVA	Sivas	1.61	199	ePN		Pb	07 54 14.4	0.0
SIVA	Sivas	1.61	199	P		Pb	07 54 14.2	-0.2
XRY	Khrisi	1.68	173	ePN		Pb	07 54 14.9	-0.7
XRY	Khrisi	1.68	173	ePn		Pb	07 54 14.9	-0.7
KARP	Karpathos	1.70	125	P		Pn	07 54 14.7	+0.4
KARP				S		Sb	07 54 37.5	+0.1
KARP	Karpathos	1.70	125	ePN		Pn	07 54 14.7	+0.4
KARP	Karpathos	1.70	125	P		Pn	07 54 14.7	+0.4
KARP				S		Sb	07 54 37.5	+0.1
DAT	Datca	1.72	83	ePN		Pn	07 54 15.0	+0.4
MRMA	Marmari	1.74	331	P		Pb	07 54 15.9	-0.7
MRMA	Marmari	1.74	331	P		Pb	07 54 15.9	-0.7
GCAM	G?zelcaml?	1.83	50	iP		Pg	07 54 19.6	-0.3
GCAM				iS		Sg	07 54 43.6	-0.1
GCAM	G?zelcaml?	1.83	50	iP		Pg	07 54 19.6	-0.3
ANKY	Antikythira Is	1.87	249	P		Pn	07 54 17.3	+0.8
ANKY	Antikythira Is	1.87	249	ePB		Pn	07 54 17.1	+0.6
ANKY	Antikythira Is	1.87	249	P		Pn	07 54 17.3	+0.8
CHOS	Chios island	1.90	14	P		Pn	07 54 17.3	+0.2
CHOS				S		Sn	07 54 41.7	+0.8
CHOS	Chios island	1.90	14	ePB		Pn	07 54 17.4	+0.3
CHOS	Chios island	1.90	14	ePb		Pn	07 54 17.4	+0.3
CHOS				S		Sn	07 54 41.7	+0.8
ATHU	Athens Univers	1.95	317	P		Pn	07 54 18.6	+1.0
ATHU	Athens Univers	1.95	317	P		Pn	07 54 18.6	+1.0
PTL	Penteli	1.96	320	P		Pb	07 54 19.0	-1.5
PTL	Penteli	1.96	320	ePB		Pb	07 54 19.4	-1.1
PTL	Penteli	1.96	320	P		Pb	07 54 19.0	-1.5
PTL	Penteli	1.96	320	ePb		Pb	07 54 19.4	-1.1
KYTH	Kithira	1.97	263	P		Pn	07 54 18.5	+0.5
KYTH	Kithira	1.97	263	ePN		Pb	07 54 19.7	-0.9
KYTH	Kithira	1.97	263	P		Pn	07 54 18.5	+0.5
KYTH	Kithira	1.97	263	ePn		Pb	07 54 19.7	-0.9
NAIG	Nisos Aigina	1.98	308	ePN		Pb	07 54 21.3	+0.5
NAIG	Nisos Aigina	1.98	308	ePn		Pb	07 54 21.3	+0.5
ATH	Athens Observa	1.99	316	P		Pn	07 54 18.9	+0.7
ATH				S		Sb	07 54 44.8	-0.8
ATH	Athens Observa	1.99	316	ePN		Pb	07 54 19.8	-1.1
ATH	Athens Observa	1.99	316	P		Pn	07 54 18.9	+0.7
ATH	Athens Observa	1.99	316	ePn		Pb	07 54 19.8	-1.1
ATH				S		Sb	07 54 44.8	-0.8
DID	Didima	2.02	299	P		Pn	07 54 19.1	+0.5
DID				S		Sb	07 54 46.1	-0.4
DID	Didima	2.02	299	ePB		Pb	07 54 19.9	-1.5
DID	Didima	2.02	299	P		Pn	07 54 19.1	+0.5
DID	Didima	2.02	299	ePb		Pb	07 54 19.9	-1.5
DID				S		Sb	07 54 46.1	-0.4
URLA	Izmir	2.03	26	iP		Pn	07 54 18.2	-0.6
URLA				iS		Sn	07 54 44.0	0.0
URLA	Izmir	2.03	26	iP		Pn	07 54 18.2	-0.6
URLA				iS		Sn	07 54 44.0	0.0
VLI	Veliai	2.03	276	P		Pn	07 54 19.4	+0.6
VLI	Veliai	2.03	276	ePN		Pb	07 54 20.2	-1.4
VLI	Veliai	2.03	276	P		Pn	07 54 19.4	+0.6
VLI	Veliai	2.03	276	ePn		Pb	07 54 20.2	-1.4
GVD	Gavdhos	2.03	214	ePN		Pn	07 54 17.7	-1.1
GVD	Gavdhos	2.03	214	ePn		Pn	07 54 17.7	-1.1
ARG	Arkhangelos	2.18	98	P		Pn	07 54 21.4	+0.6
ARG	Arkhangelos	2.18	98	ePB		Pn	07 54 21.7	+0.9
ARG	Arkhangelos	2.18	98	P		Pn	07 54 21.4	+0.6
ARG	Arkhangelos	2.18	98	ePb		Pn	07 54 21.7	+0.9
BLCB	Balcova	2.23	34	ePN		Pn	07 54 21.0	-0.5
BLCB	Balcova	2.23	34	ePn		Pn	07 54 21.0	-0.5
AYDN	Tasoluk	2.24	59	eP		Pn	07 54 22.1	+0.4
AYDN				eS		Sb	07 54 52.7	-0.1
AYDN	Tasoluk	2.24	59	eP		Pn	07 54 22.1	+0.4
AYDN				eS		Sb	07 54 52.7	-0.1
IZM	Izmir	2.34	37	ePN		Pn	07 54 23.6	+0.5
IZM	Izmir	2.34	37	ePn		Pn	07 54 23.6	+0.5
LTK	Loutraki	2.47	307	P		Pn	07 54 26.0	+1.2
LTK	Loutraki	2.47	307	ePN		Pn	07 54 26.1	+1.2
LTK	Loutraki	2.47	307	ePn		Pn	07 54 26.1	+1.2
DYR	Agios Nikonas	2.52	276	ePB		Pb	07 54 27.8	-2.1
DYR	Agios Nikonas	2.52	276	ePb		Pb	07 54 27.8	-2.1
VLX	Vlachokerasia	2.60	289	P		Pn	07 54 27.5	+0.8
VLX	Vlachokerasia	2.60	289	ePN		Pb	07 54 28.8	-2.5
VLX	Vlachokerasia	2.60	289	P		Pn	07 54 27.5	+0.8
VLX	Vlachokerasia	2.60	289	ePn		Pb	07 54 28.8	-2.5
SIGR	SIGRI	2.68	7	P		Pn	07 54 27.9	+0.2
SIGR	SIGRI	2.68	7	P		Pn	07 54 27.9	+0.2
PRK	Paraskevi	2.77	13	P		Pn	07 54 29.3	+0.3
PRK	Paraskevi	2.77	13	ePN		Pn	07 54 29.3	+0.3
PRK	Paraskevi	2.77	13	P		Pn	07 54 29.3	+0.3
GUR	Goura	2.84	300	ePN		Pn	07 54 32.3	+2.2
GUR	Goura	2.84	300	ePn		Pn	07 54 32.3	+2.2
LKR	Lokris	2.87	318	ePN		Pn	07 54 30.9	+0.6
LKR	Lokris	2.87	318	ePn		Pn	07 54 30.9	+0.6
ATAL	Atalanti	2.89	319	P		Pn	07 54 32.2	+1.6
ATAL	Atalanti	2.89	319	P		Pn	07 54 32.2	+1.6
ITM	Ithomi	2.90	284	ePB		Pb	07 54 33.9	-2.5
ITM	Ithomi	2.90	284	ePb		Pb	07 54 33.9	-2.5
AOS	Alonnisos	2.90	335	P		Pn	07 54 32.5	+1.7
AOS	Alonnisos	2.90	335	P		Pn	07 54 32.5	+1.7
DSF	Desfina	2.98	310	P		Pn	07 54 32.9	+1.0
DSF	Desfina	2.98	310	P		Pn	07 54 32.9	+1.0
PYL	PYLOS	3.00	278	ePB		Pb	07 54 35.9	-2.3
PYL	PYLOS	3.00	278	ePb		Pb	07 54 35.9	-2.3
KLV	Kalavryta, Ach	3.03	301	ePN		Pn	07 54 34.5	+1.9
KLV	Kalavryta, Ach	3.03	301	ePn		Pn	07 54 34.5	+1.9
KALE	Kalithea	3.22	306	ePN		Pn	07 54 37.4	+2.2
KALE	Kalithea	3.22	306	ePn		Pn	07 54 37.4	+2.2
LAKA	Lakka	3.24	302	ePN		Pn	07 54 37.7	+2.2
LAKA	Lakka	3.24	302	ePn		Pn	07 54 37.7	+2.2
TRIZ	Trizonia	3.25	305	ePN		Pn	07 54 37.4	+1.9
TRIZ	Trizonia	3.25	305	ePn		Pn	07 54 37.4	+1.9
EZN	Ezine	3.35	12	ePN		Pn	07 54 36.1	-0.8
EZN	Ezine	3.35	12	ePn		Pn	07 54 36.1	-0.8
AGG	Agios Georgios	3.50	316	ePN		Pn	07 54 41.6	+2.6
AGG	Agios Georgios	3.50	316	ePn		Pn	07 54 41.6	+2.6
RLS	Riolos of Patr	3.52	297	ePN		Pn	07 54 41.9	+2.7
RLS	Riolos of Patr	3.52	297	ePn		Pn	07 54 41.9	+2.7
EVR	Evrytania	3.74	310	ePN		Pn	07 54 45.1	+2.8
EVR	Evrytania	3.74	310	ePn		Pn	07 54 45.1	+2.8
GONE	Gonen-Balikesi	3.91	26	ePN		Pn	07 54 44.2	-0.4
GONE	Gonen-Balikesi	3.91	26	ePn		Pn	07 54 44.2	-0.4
LPK	Lapseki	3.96	15	ePN		Pn	07 54 44.4	-0.9
LPK	Lapseki	3.96	15	ePn		Pn	07 54 44.4	-0.9
THL	Klokotos Trika	4.06	319	ePN		Pn	07 54 47.2	+0.6
THL	Klokotos Trika	4.06	319	ePn		Pn	07 54 47.2	+0.6
ALN	Alexandroupoli	4.37	6	ePN		Pn	07 54 50.2	-0.7
ALN	Alexandroupoli	4.37	6	ePn		Pn	07 54 50.2	-0.7
RDO	Rodhopi	4.59	1	ePN		Pn	07 54 54.7	+0.7
RDO	Rodhopi	4.59	1	ePn		Pn	07 54 54.7	+0.7
GRG	Griva	5.01	332	ePN		Pn	07 55 01.7	+1.9
GRG	Griva	5.01	332	ePn		Pn	07 55 01.7	+1.9
FNA	Florina	5.30	324	ePN		Pn	07 55 06.8	+3.0
FNA	Florina	5.30	324	ePn		Pn	07 55 06.8	+3.0
BARS	Barje	6.86	337	eP		Pn	07 55 27.2	+2.0
BRTR	Keskin Array B	7.19	61	P	

TORD	**Torodi Ar. Bea**	**31.57**	**229**	P		**P**	**08 00 07.6**	**+0.3**
	0.3nm,0.5s,baz=34,slow=9.3,SNR=4.8							
MKAR	**Makanchi Array**	**42.82**	**58**	P		**P**	**08 01 43.1**	**+0.7**
	0.3nm,0.6s,baz=267,slow=7.7,SNR=4.5							

MEX 27 07:55:26.5±0.6, 18°80N×107°32W, h10km, MD4.0, Off coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	**Chamela**	**2.26**	**72**	*e*P	Pn	07 56 00.5	-3.5
CJM				*i* S	Sn	07 56 27.1	-4.9
R15V		**3.18**	**83**	*e*P	Pn	07 56 13.8	-2.9
R15V				*i* S	Sn	07 56 51.3	-3.5
ANIG	**Ahuacatlan**	**3.46**	**49**	*e*P	Pn	07 56 18.7	-1.9
ANIG				*i* S	Sn	07 56 59.2	-2.6
EZ5V		**3.58**	**79**	*e*P	Pn	07 56 20.1	-2.4
EZ5V				*i* S	Sn	07 57 01.2	-3.9
MMIG	**Aquila**	**3.81**	**97**	*e*P	Pn	07 56 22.6	-2.6
MMIG				*i* S	Sn	07 57 07.2	-2.8

ISCJB ***27*** *08:04:54.5±0.9, 25°.1N±0°.1×98°.11E±0°.07, h10km, mb3.5/3, MS3.7/1, Error ellipse: s-maj=14.8km s-min=8.7km az=4.7*
IDC ***27*** *08:04:54.9±1.3, 25°.09N×98°.10E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.4/28, mbtmp3.5/4, ML4.1/1, MS3.7/1, Ms1 3.7/1, ms1mx2.2/36, Error ellipse: s-maj=57.4km s-min=17.5km az=73.0*
BJI ***27*** *08:04:58.1, 24°.99N×97°.91E, h8km, ML4.0/8, Ms7 3.1/1*
ISC 27 08:04:55.9±0.9, 25°.1N±0°.1×97°.97E±0°.05, h10km, n8, σ1°29/8, mb3.7/3, Myanmar-China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMP	**Imphal**	**3.68**	**266**	*e*PKP	**Pb**	**08 05 59.0**	**-2.0**
IMP				*e*S	**Pg**	**08 06 07.0**	**+0.7**
KMI	**Kunming**	**4.33**	**88**	Pg	**Pg**	**08 06 19.0**	**+0.2**
KMI				Sg	**Sg**	**08 07 13.8**	**-1.1**
KMI				smax	smax		
	comp=N,210nm,1.2s						
KMI				smax	smax		
	comp=E,120nm,1.0s						
KMI				LR	LR		
	comp=Z,140nm,5.8s						
CMAR	**Chiang Mai Arr**	**6.65**	**172**	Pn	**Pn**	**08 06 34.5**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=352,slow=12,SNR=4.1						
CMAR				Pg	Pb	08 06 57.1	+5.5
	comp=Z,1.1nm,0.3s,baz=343,slow=15,SNR=5.2						
CMAR				Lg	Lg	08 08 23.8	
	comp=Z,2.1nm,0.3s,baz=352,slow=30,SNR=8.3						
LZH	**Lanzhou**	**12.08**	**23**	*e*P	Pn	08 07 40.0	-8.3
LZH				pP		08 07 49.5	
LZH				sP		08 07 52.0	
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
MKAR	**Makanchi Array**	**25.02**	**334**	P	**P**	**08 10 20.0**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=158,slow=8.6,SNR=6.5						
ZALV	**Zalesovo Beam**	**30.46**	**345**	P	**P**	**08 11 10.1**	**+1.5**
	comp=Z,0.7nm,0.5s,baz=165,slow=13,SNR=3.3						
WRA	**Warramunga Arr**	**57.04**	**138**	P	**P**	**08 14 42.4**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=331,slow=7.3,SNR=3.0						
FINES	**FINESS Array B**	**59.66**	**328**	LR	LR	08 45 26.0	
	comp=Z,65nm,21.5s,baz=352,slow=41						

ISCJB ***27*** *08:27:40.6±0.3, 50°.58N±0°.05×150°.12E±0°.09, h500km, mb3.8/29, Error ellipse: s-maj=8.4km s-min=5.9km az=35.6*
MOS ***27*** *08:27:40.1±1.1, 50°.57N×150°.14E, h497km, mb3.8/25, Error ellipse: s-maj=12.5km s-min=8.4km az=89.3*
IDC ***27*** *08:27:41.7±1.2, 50°.59N×150°.01E, h499km±14km, mb3.3/21, mb1 3.5/25, mb1mx3.4/32, mbtmp3.3/25, Error ellipse: s-maj=11.9km s-min=8.5km az=158.0*
ISC 27 08:27:41.3±0.5, 50°.53N±0°.08×150°.14E±0°.07, h500km, n50, σ1°10/58, mb3.9/29, 5C-4D, Northwest of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**3.81**	**85**	*e*PN	**P**	**08 28 55.3**	**-2.8**
PETK	**Petropavlovsk-**	**5.35**	**58**	PN	**P**	**08 29 11.8**	**+0.5**
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**5.35**	**58**	P	**P**	**08 29 11.8**	**+0.5**
	comp=Z,0.9nm,0.3s,baz=208,slow=9.6,SNR=27						
KUR	**Kuril'sk**	**5.51**	**197**	ǁ *i* PN	**P**	**08 29 13.3**	**+0.3**
KUR				S	**S**	**08 30 26.3**	**-1.6**
KUR				pmax	pmax		
	comp=Z,35nm,0.7s						
KUR				smax	smax		
	comp=N,15nm,0.5s						
KUR				smax	smax		
	comp=E,6.0nm,0.5s						
YSS	**Yuzh-Sakhalins**	**6.05**	**237**	⇑ *i* PN	**P**	**08 29 20.2**	**+2.1**
YSS				*e*S	**S**	**08 30 38.8**	**+1.6**
YSS				pmax	pmax		
	comp=N,20nm,0.8s						
YSS				pmax	pmax		
	comp=E,30nm,0.8s						
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				smax	smax		
	comp=E,20nm,1.1s						
ASAJ	**Asahikawa**	**8.21**	**221**	P	**P**	**08 29 38.8**	**-1.0**
	comp=E,0.5nm,0.3s,baz=36,slow=7.2,SNR=9.4						
ERM	**Erimo**	**9.79**	**212**	⇑ *e*PN	**P**	**08 29 54.6**	**-1.8**
ERM				pmax	pmax		
	comp=Z,85nm,2.5s						
FX1	**Attu Island--F**	**14.46**	**72**	P	**P**	**08 30 46.3**	**+0.8**
	comp=Z,6.0nm,0.3s,baz=292,slow=5.8,SNR=19						
YAK	**Yakutsk**	**16.09**	**324**	*e*P	**P**	**08 31 00.2**	**-2.2**
YAK				pmax	pmax		
	comp=Z,19nm,0.8s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
MAT	**Matsushiro**	**16.41**	**216**	P	**P**	**08 31 05.7**	**-0.5**
MJAR	**Matsushiro Arr**	**16.41**	**216**	P	**P**	**08 31 05.8**	**-0.4**
	comp=N,0.7nm,0.3s,baz=16,slow=8.7,SNR=16						
BILL	**Bilibino**	**19.28**	**18**	*e*P	**P**	**08 31 32.0**	**-0.9**
BILL				pmax	pmax		
	comp=Z,11nm,1.1s						
KSRS	**Korea Array**	**20.55**	**239**	P	**P**	**08 31 45.6**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=42,slow=10.0,SNR=5.6						
TIXI	**Tiksi**	**23.28**	**343**	ǁ *e*P	**P**	**08 32 08.7**	**-0.2**
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ILAR	**Eielson Array**	**34.93**	**42**	P	**P**	**08 33 50.2**	**+0.1**
	comp=Z,1.8nm,0.5s,baz=259,slow=6.6,SNR=45						
ZALV	**Zalesovo Beam**	**38.88**	**301**	P	**P**	**08 34 22.3**	**-0.4**
ZALV						08 36 20.4	
ZALV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ZALV	**Zalesovo Beam**	**38.88**	**301**	P	**P**	**08 34 22.2**	**-0.4**
	comp=Z,2.3nm,0.5s,baz=60,slow=6.2,SNR=11						
ZALV				PcP	**PcP**	**08 36 20.4**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=46,slow=4.3,SNR=5.3						
MKAR	**Makanchi Array**	**43.55**	**293**	P	**P**	**08 35 00.1**	**+0.1**
MKAR						08 36 35.4	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
MKAR	**Makanchi Array**	**43.55**	**293**	P	**P**	**08 35 00.1**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=70,slow=8.8,SNR=33						
MKAR				PcP	**PcP**	**08 36 35.4**	**-1.3**
	comp=Z,0.5nm,0.7s,baz=31,slow=4.6,SNR=4.3						
KURK	**Kurchatov**	**43.71**	**299**	P	**P**	**08 35 01.7**	**+0.6**
KURK						08 36 37.0	
KURK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**43.80**	**299**	P	**P**	**08 35 01.7**	**-0.1**
	comp=Z,5.7nm,0.6s,baz=66,slow=8.4,SNR=50						
KURBB				PcP	**PcP**	**08 36 37.0**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=62,slow=2.9,SNR=10						
BRVK	**Borovoye**	**47.03**	**306**	*d* P	**P**	**08 35 26.6**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
YKA	**Yellowknife Ar**	**49.10**	**38**	P	**P**	**08 35 41.8**	**0.0**
	comp=Z,1.0nm,0.5s,baz=303,slow=7.1,SNR=9.5						
YKA				ScP	**ScP**	**08 40 01.4**	**-1.5**
	comp=Z,0.5nm,0.8s,baz=299,slow=5.8,SNR=4.1						
AAK	**Ala-Archa**	**50.48**	**292**	⇑ *e*P	**P**	**08 35 53.2**	**+0.6**
AAK				pmax	pmax		
	comp=Z,14nm,1.8s						
ARU	**Arti**	**50.92**	**314**	*d* iP	**P**	**08 35 55.1**	**-0.2**
ARU						08 37 01.9	
ARU				*PP	**pP**	**08 37 28.8**	**-2.5**
ARU						08 37 55.6	
ARU				S	**S**	**08 42 34.6**	**+0.8**
ARU				pmax	pmax		
	comp=Z,20nm,1.7s						
CMAR	**Chiang Mai Arr**	**51.54**	**251**	P	**P**	**08 36 00.4**	**0.0**
	comp=Z,0.7nm,0.3s,baz=25,slow=7.9,SNR=4.2						
ARCES	**ARCESS Array B**	**53.62**	**339**	P	**P**	**08 36 14.8**	**+0.3**
	comp=Z,1.0nm,0.4s,baz=32,slow=7.0,SNR=23						
NEW	**Newport**	**56.47**	**53**	P	**P**	**08 36 35.0**	**+0.1**
	comp=Z,0.9nm,0.4s,baz=274,slow=7.1,SNR=4.1						
YBH	**Yreka Blue Hor**	**57.71**	**62**	P	**P**	**08 36 44.7**	**+1.1**
	comp=Z,1.1nm,0.6s,baz=352,slow=3.4,SNR=5.8						
FFC	**Flin Flon**	**59.11**	**40**	*i* P	**P**	**08 36 52.0**	**-0.7**
FINES	**FINESS Array B**	**59.77**	**333**	P	**P**	**08 36 56.7**	**-0.3**
	comp=Z,7.0nm,0.3s,baz=35,slow=7.5,SNR=142						
OBN	**Obninsk**	**61.09**	**323**	*e*P	**P**	**08 37 04.2**	**-1.5**
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NVAR	**Mina Array Bea**	**62.43**	**62**	P	**P**	**08 37 16.6**	**+1.5**
	comp=Z,1.3nm,0.6s,baz=298,slow=6.8,SNR=15						
NB2	**NORSAR Subarra**	**64.00**	**339**	P	**P**	**08 37 24.4**	**-0.2**
	comp=Z,2.5nm,0.6s,baz=26,slow=6.5						
NOA	**NORSAR Array B**	**64.00**	**339**	P	**P**	**08 37 24.6**	**0.0**
	comp=Z,2.4nm,0.6s,baz=27,slow=6.3,SNR=17						
PDAR	**Pinedale Array**	**64.10**	**54**	P	**P**	**08 37 26.6**	**+0.7**
	comp=Z,2.5nm,0.8s,baz=343,slow=1.6,SNR=14						
KIV	**Kislovodsk**	**66.78**	**311**	*e*P	**P**	**08 37 43.0**	**+0.6**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	**Khabaz**	**66.85**	**311**	P	**P**	**08 37 43.7**	**+1.0**
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	**Khabaz**	**66.85**	**311**	P	**P**	**08 37 43.6**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=91,slow=5.2,SNR=6.3						
AKASG	**Malin Array Be**	**67.32**	**324**	P	**P**	**08 37 44.7**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.4s						
AKASG	**Malin Array Be**	**67.32**	**324**	P	**P**	**08 37 44.7**	**-0.8**
	comp=Z,2.5nm,0.4s,baz=34,slow=6.1,SNR=9.7						
WRA	**Warramunga Arr**	**71.54**	**196**	P	**P**	**08 38 11.4**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=12,slow=5.7,SNR=4.2						
CLL	**Collm**	**72.20**	**333**	⇑ *i* P	**P**	**08 38 14.5**	**-0.2**
CLL				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CLL	**Collm**	**72.20**	**333**	⇑ *i* P	**P**	**08 38 14.5**	**-0.2**
	comp=Z,7.0nm,1.1s						
BRG	**Berggiesshubel**	**72.31**	**333**	*e*P	**P**	**08 38 17.6**	**+2.3**
	comp=Z,2.8nm,0.9s						
BRG	**Berggiesshubel**	**72.31**	**333**	*e*P	**P**	**08 38 17.6**	**+2.3**
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	**GERESS Array B**	**74.19**	**332**	P	**P**	**08 38 25.2**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=32,slow=5.2,SNR=3.7						
BRTR	**Keskin Array B**	**74.31**	**314**	P	**P**	**08 38 27.2**	**+0.1**
	comp=Z,1.9nm,0.9s,baz=72,slow=4.0,SNR=7.4						
ASAR	**Alice Springs**	**75.25**	**195**	P	**P**	**08 38 33.6**	**+1.3**
	comp=Z,1.1nm,0.6s,baz=6.7,slow=5.5,SNR=22						
TXAR	**Lajitas Array**	**77.30**	**59**	P	**P**	**08 38 45.0**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=299,slow=4.2,SNR=19						

ISCJB ***27*** *08:33:54.5±0.5, 37°.7S±0°.1×78°.1E±0°.1, h13km, mb4.4/13, MS4.0/17, Error ellipse: s-maj=21.5km s-min=12.5km az=0.9*
IDC ***27*** *08:33:54.0±0.7, 37°.70S×78°.07E, h0km, mb4.2/11, mb1 4.3/11, mb1mx4.1/24, mbtmp4.2/11, MS4.0/17, Ms1 4.0/17, ms1mx3.8/30, Error ellipse: s-maj=27.4km s-min=17.8km az=0.0*
NEIC ***27*** *08:33:55.9±0.4, 37°.68S×78°.07E, h10km, mb4.7/6, Error ellipse: s-maj=17.9km s-min=10.5km az=1.0*
ISC 27 08:33:56.3±0.6, 37°.7S±0°.2×78°.1E±0°.1, h13km, n40, σ0°86/29, mb4.3/13, MS4.0/17, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAW	**Mawson**	**31.17**	**191**	LR	LR	08 50 50.9	
	comp=Z,262nm,18.0s,baz=185,slow=33						
NWAO	**Narrogin (SRO)**	**32.15**	**93**	LR	LR	08 50 09.2	
	comp=Z,414nm,21.9s,baz=195,slow=30						
BOSA	**Boshof**	**44.63**	**266**	*e*P	**P**	**08 42 08.7**	**0.0**
	22nm,1.4s						
BOSA	**Boshof**	**44.63**	**266**	P	**P**	**08 42 08.1**	**-0.6**
	3.0nm,0.7s,baz=154,slow=12,SNR=5.4						
BOSA				LR	LR	08 57 21.3	
	comp=Z,114nm,21.6s,baz=110,slow=32						
SUR	**Sutherland**	**46.57**	**259**	*e*P	**P**	**08 42 24.2**	**+0.2**
	62nm,1.4s						
SUR	**Sutherland**	**46.57**	**259**	P	**P**	**08 42 23.3**	**-0.7**
	7.0nm,0.8s,baz=106,slow=10,SNR=5.2						
LSZ	**Lusaka**	**49.25**	**283**	*e*P	**P**	**08 42 45.2**	**+0.4**
	5.0nm,0.8s						
ASAR	**Alice Springs**	**49.35**	**90**	P	**P**	**08 42 45.5**	**0.0**
ASAR	**Alice Springs**	**49.35**	**90**	P	**P**	**08 42 45.5**	**0.0**
	1.6nm,0.9s,baz=234,slow=6.3,SNR=9.4						
ASAR				LR	LR	09 01 39.0	
	comp=Z,124nm,20.8s,baz=294,slow=34						
WRA	**Warramunga Arr**	**51.62**	**86**	P	**P**	**08 43 02.1**	**-0.6**
WRA	**Warramunga Arr**	**51.62**	**86**	P	**P**	**08 43 02.1**	**-0.6**
	3.4nm,0.9s,baz=236,slow=6.9,SNR=11						
STKA	**Stephens Creek**	**51.62**	**104**	*e*P	**P**	**08 43 03.3**	**+0.7**
	1.2nm,0.8s						
STKA	**Stephens Creek**	**51.62**	**104**	P	**P**	**08 43 02.0**	**-0.6**
	5.4nm,0.9s,baz=249,slow=3.1,SNR=8.1						
STKA				LR	LR	09 00 29.0	
	comp=Z,217nm,20.7s,baz=206,slow=31						
WRAB	**Tennant Creek**	**51.64**	**86**	*e*P	**P**	**08 43 03.2**	**+0.4**
	23nm,1.8s						
SNAA	**Sanae**	**51.90**	**203**	LR	LR	08 59 43.9	
	comp=Z,49nm,21.7s,baz=180,slow=30						
VNDA	**Vanda**	**52.21**	**164**	LR	LR	09 03 22.9	
	comp=Z,127nm,18.8s,baz=260,slow=34						
KMBO	**Kilima Mbogo**	**52.25**	**304**	LR	LR	09 00 21.2	
	comp=Z,134nm,19.1s,baz=96,slow=30						
QSPA	**South Pole Qui**	**52.48**	**180**	*e*P	**P**	**08 43 09.4**	**+0.8**
	6.4nm,1.1s						
QSPA	**South Pole Qui**	**52.48**	**180**	P	**P**	**08 43 09.3**	**+0.7**
	3.7nm,1.1s,baz=90,slow=15,SNR=5.4						
CMAR	**Chiang Mai Arr**	**59.20**	**23**	P	**P**	**08 43 57.5**	**+0.5**
CMAR	**Chiang Mai Arr**	**59.20**	**23**	P	**P**	**08 43 57.5**	**+0.5**
	1.0nm,0.4s,baz=222,slow=6.0,SNR=4.4						
CMAR				LR	LR	09 04 44.9	
	comp=Z,74nm,18.7s,baz=23,slow=31						
PMG	**Port Moresby**	**67.78**	**85**	P	**P**	**08 44 52.6**	**-1.4**
PMG	**Port Moresby**	**67.78**	**85**	P	**P**	**08 44 52.6**	**-1.4**
	2.7nm,0.6s,baz=240,slow=8.1,SNR=2.6						
URZ	**Urewera**	**73.91**	**126**	LR	LR	09 09 34.2	
	comp=Z,399nm,19.3s,baz=6.8,slow=29						
HNR	**Honiara**	**77.90**	**93**	LR	LR	09 15 27.0	
	comp=Z,110nm,21.4s,baz=239,slow=32						
MK31	**Makanchi Array**	**84.18**	**3**	*e*P	**P**	**08 46 27.4**	**+0.6**
MKAR	**Makanchi Array**	**84.18**	**3**	P	**P**	**08 46 27.5**	**+0.7**
MKAR	**Makanchi Array**	**84.18**	**3**	P	**P**	**08 46 27.5**	**+0.7**
	3.2nm,0.9s,baz=166,slow=6.2,SNR=15						
MKAR				LR	LR	09 20 22.3	
	comp=Z,44nm,19.6s,baz=175,slow=33						
BRTR	**Keskin Array B**	**87.16**	**327**	P	**P**	**08 46 41.5**	**-0.4**
BRTR	**Keskin Array B**	**87.16**	**327**	P	**P**	**08 46 41.5**	**-0.4**
	1.1nm,0.8s,baz=147,slow=7.3,SNR=5.1						
TORD	**Torodi Ar. Bea**	**87.45**	**289**	P	**P**	**08 46 42.5**	**-1.3**
TORD	**Torodi Ar. Bea**	**87.45**	**289**	P	**P**	**08 46 42.5**	**-1.3**
	0.5nm,0.9s,baz=120,slow=5.2,SNR=3.1						
TORD				LR	LR	09 24 18.2	
	comp=Z,213nm,18.9s,baz=115,slow=35						
DBIC	**Dimbokro**	**88.46**	**280**	LR	LR	09 19 54.6	
	comp=Z,85nm,21.9s,baz=110,slow=31						
ZALV	**Zalesovo Beam**	**91.45**	**4**	LR	LR	09 26 02.5	
	comp=Z,37nm,18.1s,baz=160,slow=34						
USRK	**Ussuriysk Arra**	**94.99**	**36**	LR	LR	09 30 59.2	
	comp=Z,46nm,18.5s,baz=213,slow=36						
KEST	**Kesra**	**96.87**	**310**	LR	LR	09 33 40.0	
	comp=Z,35nm,18.5s,baz=218,slow=37						
INK	**Inuvik**	**144.72**	**20**	PKP	**PKPdf**	**08 53 31.7**	**+0.1**
INK	**Inuvik**	**144.72**	**20**	PKP	**PKPdf**	**08 53 31.7**	**+0.1**
	5.2nm,0.9s,baz=248,slow=2.9,SNR=4.9						
YKA	**Yellowknife Ar**	**153.96**	**13**	PKPbc	**PKPbc**	**08 53 56.2**	**+1.7**
YKA	**Yellowknife Ar**	**153.96**	**13**	PKPbc	**PKPbc**	**08 53 56.2**	**+1.7**
	1.5nm,1.0s,baz=346,slow=3.0,SNR=8.0						

IDC ***27*** *08:41:06.0±1.3, 22°.59S×66°.11W, h254km±21km, mb3.3/2, mb1 3.3/6, mb1mx3.1/19, mbtmp3.2/6, Error ellipse: s-maj=29.0km s-min=25.2km az=91.0*
ISCJB ***27*** *08:41:06.8±0.8, 22°.50S±0°.06×66°.5W±0°.2, h303km±16km, mb3.4/2, Error ellipse: s-maj=24.6km s-min=9.6km az=169.7*
GUC ***27*** *08:41:07.5±0.6, 22°.47S×66°.73W, h290km±11km, ML4.5*
NEIC ***27*** *08:41:10.2±4.1, 22°.29S×66°.50W, h271km±35km, MG4.5(GUC), Error ellipse: s-maj=58.4km s-min=19.4km az=105.0*
ISC 27 08:41:07.1±1.1, 22°.40S±0°.06×66°.4W±0°.1, h288km±16km, n26, σ1°36/43, 10C-4D, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.30**	**264**	⇑ *i* P	**Pn**	**08 41 56.1**	**+0.5**
LVC				*i* S	**S**	**08 42 33.1**	**-1.1**
LVC	**Limon Verde**	**2.30**	**264**	⇑ *i* P	**Pn**	**08 41 56.1**	**+0.5**
LVC				*i* S	**S**	**08 42 33.1**	**-1.1**
LVC	**Limon Verde**	**2.30**	**264**	P	**Pn**	**08 41 56.2**	**+0.5**
	8.6nm,0.3s,baz=88,slow=6.1,SNR=106						
LVC				S	**S**	**08 42 33.2**	**-1.1**
	7.1nm,0.3s,baz=209,slow=24,SNR=31						
PB09	**Plate Boundary**	**2.67**	**282**	⇑ *i* P	**Pn**	**08 42 00.4**	**+1.3**
PB09				*i* S	**S**	**08 42 40.3**	**-0.1**
PB09	**Plate Boundary**	**2.67**	**282**	⇑ *i* P	**Pn**	**08 42 00.4**	**+1.3**
PB09				*i* S	**S**	**08 42 40.3**	**-0.1**
PB09				AML	AML	08 42 43.4	
	comp=N,529nm,0.3s						
PB01	**Plate Boundary**	**3.14**	**295**	⇑ *i* P	**Pn**	**08 42 04.6**	**+1.0**
PB01				*i* S	**S**	**08 42 48.4**	**-0.3**
PB01	**Plate Boundary**	**3.14**	**295**	⇑ *i* P	**Pn**	**08 42 04.6**	**+1.0**
PB01				*i* S	**S**	**08 42 48.4**	**-0.3**
PB01				AML	AML	08 42 50.5	
	comp=N,371nm,0.4s						
PB07	**Plate Boundary**	**3.27**	**281**	⇑ *i* P	**Pn**	**08 42 06.2**	**+1.2**
PB07				*i* S	**S**	**08 42 50.0**	**-1.2**
PB07	**Plate Boundary**	**3.27**	**281**	⇑ *i* P	**Pn**	**08 42 06.2**	**+1.2**
PB07				*i* S	**S**	**08 42 50.0**	**-1.2**
PB07				AML	AML	08 42 50.8	
	comp=N,410nm,0.4s						
CEN1	**Los Morros**	**3.61**	**253**	*e*P	Pn	08 42 12.1	+3.6
CEN1				*i* S	**S**	**08 43 00.6**	**+3.0**
CEN1	**Los Morros**	**3.61**	**253**	*e*P	Pn	08 42 12.1	+3.6
CEN1				*i* S	**S**	**08 43 00.6**	**+3.0**
CEN1				AML	AML	08 43 04.4	
	comp=N,136nm,0.2s						
HMBC	**Humberstone**	**3.85**	**303**	⇑ *i* P	**Pn**	**08 42 11.9**	**+0.7**
HMBC				*i* S	**S**	**08 43 01.2**	**-1.3**
HMBC	**Humberstone**	**3.85**	**303**	⇑ *i* P	**Pn**	**08 42 11.9**	**+0.7**
HMBC				*i* S	**S**	**08 43 01.2**	**-1.3**
ANCH	**Antofagasta**	**3.88**	**250**	ǁ *i* P	**Pn**	**08 42 12.2**	**+0.9**
ANCH				*i* S	**S**	**08 43 00.7**	**-2.0**
ANCH	**Antofagasta**	**3.88**	**250**	ǁ *i* P	**Pn**	**08 42 12.2**	**+0.9**
ANCH				*i* S	**S**	**08 43 00.7**	**-2.0**
MNMC	**Minimini**	**4.40**	**317**	ǁ *i* P	**Pn**	**08 42 19.1**	**+1.6**
MNMC				*i* S	**S**	**08 43 14.2**	**+0.3**
MNMC	**Minimini**	**4.40**	**317**	ǁ *i* P	**Pn**	**08 42 19.1**	**+1.6**
MNMC				*i* S	**S**	**08 43 14.2**	**+0.3**
PSGC	**Pisagua**	**4.43**	**308**	*e*P	**Pn**	**08 42 18.2**	**+0.5**
PSGC				*i* S	**S**	**08 43 13.0**	**-1.3**
PSGC	**Pisagua**	**4.43**	**308**	*e*P	**Pn**	**08 42 18.2**	**+0.5**
PSGC				*i* S	**S**	**08 43 13.0**	**-1.3**
LPAZ	**La Paz**	**6.29**	**345**	*e*Pn	**Pn**	**08 42 41.5**	**+1.2**
LPAZ	**La Paz**	**6.29**	**345**	P	**Pn**	**08 42 42.0**	**+1.7**
	comp=N,1.3nm,0.3s,baz=168,slow=7.9,SNR=52						
ARE	**Arequipa**	**7.59**	**320**	*e*P	**Pn**	**08 42 57.0**	**+1.1**
ARE				*e*S	**S**	**08 44 22.0**	**-1.9**
CFAA	**Coronel Fontan**	**9.31**	**190**	P	**Pn**	**08 43 14.7**	**-2.0**
	comp=N,0.2nm,0.3s,baz=23,slow=13,SNR=39						
CFAA				S	S	08 44 51.8	-10
	comp=N,0.4nm,0.3s,baz=149,slow=12,SNR=18						
BDFB	**Brasilia**	**18.66**	**72**	P	**P**	**08 45 03.7**	**-1.1**
	comp=N,0.2nm,0.3s,baz=244,slow=12,SNR=5.2						
TORD	**Torodi Ar. Bea**	**75.51**	**69**	P	**P**	**08 52 21.2**	**+0.6**
	comp=N,0.5nm,0.5s,baz=251,slow=5.5,SNR=13						
YKA	**Yellowknife Ar**	**92.81**	**340**	P	P	08 53 51.1	+4.5
	comp=N,0.3nm,0.5s,baz=133,slow=4.5,SNR=5.3						

JMA ***27*** *09:00:57.9±0.1, 32°.12N×132°.05E, h9km±3km, M4.0*
JMA Felt I J1.
IDC ***27*** *09:00:57.9±2.8, 32°.00N×131°.83E, h35km±20km, mb3.2/10, mb1 3.4/12, mb1mx3.3/29, mbtmp3.2/12, ML3.4/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/9, Error ellipse: s-maj=25.8km s-min=19.3km az=60.0*
NIED ***27*** *09:01:00, 32°.10N×132°.10E, h20km, Mw3.9 Best double couple: M0 9.31000×10^14 NP1: φ

BALY					*i* S		**Sg**	09 13 52.9	+1.7
AKHS	**Akhisar**	**0.50**	**170**		*i* P		**Pg**	09 13 49.7	+0.9
AKHS					*i* P		**Sg**	09 13 56.8	+1.6
AKHS	**Akhisar**	**0.50**	**170**		*i* P		**Pg**	09 13 49.7	+0.9
AKHS					*i* P		**Sg**	09 13 56.8	+1.6
DURS	**Dursunbey**	**0.64**	**69**		*i* P		**Pg**	09 13 52.1	+0.7
DURS					*i* S		**Sg**	09 13 59.5	-0.2
DURS	**Dursunbey**	**0.64**	**69**		*i* P		**Pg**	09 13 52.1	+0.7
DURS					*i* S		**Sg**	09 13 59.5	-0.2
GONE	**Gonen-Balikesi**	**0.67**	**359**		*e*PG		**Pb**	09 13 53.5	-0.3
GONE					*e*SG		**Sb**	09 14 03.7	0.0
GONE	**Gonen-Balikesi**	**0.67**	**359**		*e*Pg		**Pb**	09 13 53.5	-0.3
GONE					*e*Sg		**Sb**	09 14 03.7	0.0
AYVA	**Ayvalik**	**0.79**	**266**		*i* P		**Pb**	09 13 56.2	+0.4
AYVA					*i* S		**Sb**	09 14 06.4	-0.6
AYVA	**Ayvalik**	**0.79**	**266**		*i* P		**Pb**	09 13 56.2	+0.4
AYVA					*i* S		**Sb**	09 14 06.4	-0.6
DEMI	**Demirci**	**0.85**	**112**		*i* P		**Pb**	09 13 56.1	-0.8
DEMI					*i* S		**Sg**	09 14 06.2	-0.3
DEMI	**Demirci**	**0.85**	**112**		*i* P		**Pb**	09 13 56.1	-0.8
DEMI					*i* S		**Sg**	09 14 06.2	-0.3
BNT	**Bandirma**	**1.00**	**10**		*e*PG		**Pb**	09 13 59.4	+0.1
BNT	**Bandirma**	**1.00**	**10**		*e*Pg		**Pb**	09 13 59.4	+0.1
KCTX	**Karacabey (Bur**	**1.02**	**29**		*e*PG		**Pb**	09 13 59.5	-0.3
KCTX					*e*SG		**Sb**	09 14 13.9	+0.2
KCTX	**Karacabey (Bur**	**1.02**	**29**		*e*Pg		**Pb**	09 13 59.5	-0.3
KCTX					*e*Sg		**Sb**	09 14 14.0	+0.2
IZM	**Izmir**	**1.03**	**200**		*e*PG		**Pb**	09 13 59.5	-0.4
IZM	**Izmir**	**1.03**	**200**		*e*Pg		**Pb**	09 13 59.5	-0.4
KRBG	**Karabiga-Canak**	**1.07**	**343**		*e*PN		**Pn**	09 14 00.9	-0.5
KRBG	**Karabiga-Canak**	**1.07**	**343**		*e*Pn		**Pn**	09 14 00.9	-0.5
BLCB	**Balcova**	**1.11**	**208**		*e*PN		**Pb**	09 14 01.1	-0.2
BLCB	**Balcova**	**1.11**	**208**		*e*Pn		**Pb**	09 14 01.1	-0.2
KULA	**Kula-Manisa**	**1.14**	**139**		*e*PN		**Pg**	09 14 01.0	+0.1
KULA	**Kula-Manisa**	**1.14**	**139**		*e*Pn		**Pg**	09 14 01.0	+0.1
ORLT	**Orhaneli**	**1.14**	**53**		*e*PN		**Pb**	09 14 01.8	0.0
ORLT	**Orhaneli**	**1.14**	**53**		*e*Pn		**Pb**	09 14 01.8	0.0
EZN	**Ezine**	**1.16**	**293**		*e*PN		**Pn**	09 14 03.2	+0.7
EZN	**Ezine**	**1.16**	**293**		*e*Pn		**Pn**	09 14 03.3	+0.7
LPK	**Lapseki**	**1.23**	**324**		*e*PN		**Pn**	09 14 04.0	+0.4
LPK	**Lapseki**	**1.23**	**324**		*e*Pn		**Pn**	09 14 04.1	+0.4
URLA	**Izmir**	**1.33**	**221**		*i* P		**Pg**	09 14 03.5	-1.2
URLA					*i* S		**Sg**	09 14 21.9	-0.1
URLA	**Izmir**	**1.33**	**221**		*i* P		**Pg**	09 14 03.5	-1.2
URLA					*i* S		**Sg**	09 14 21.9	-0.1
MDNY	**Mudanya-Bursa**	**1.35**	**42**		*e*PN		**Pb**	09 14 06.0	+0.7
MDNY	**Mudanya-Bursa**	**1.35**	**42**		*e*Pn		**Pb**	09 14 06.0	+0.7
BOZC	**Bozcaada**	**1.36**	**291**		*i* P		**Pb**	09 14 06.1	+0.6
BOZC					*i* S		**Sn**	09 14 24.0	-0.1
TVSB	**Tavsanli**	**1.36**	**86**		*e*PN		**Pb**	09 14 06.0	+0.4
TVSB	**Tavsanli**	**1.36**	**86**		*e*Pn		**Pb**	09 14 06.0	+0.4
RKY	**Sarkoy-Tekirda**	**1.37**	**343**		*e*PN		**Pb**	09 14 06.4	+0.6
RKY	**Sarkoy-Tekirda**	**1.37**	**343**		*e*Pn		**Pb**	09 14 06.4	+0.6
SART	**Tekirdag**	**1.38**	**343**		*i* P		**Pg**	09 14 05.5	0.0
SART					*i* S		**Sg**	09 14 22.2	-1.2
SART	**Tekirdag**	**1.38**	**343**		*i* P		**Pg**	09 14 05.5	0.0
SART					*i* S		**Sg**	09 14 22.2	-1.2
GDZ	**Gediz**	**1.41**	**101**		*i* P		**Pn**	09 14 06.0	-0.2
GDZ					*i* S		**Sg**	09 14 24.3	-0.1
GDZ	**Gediz**	**1.41**	**101**		*i* P		**Pn**	09 14 06.0	-0.2
GDZ					*i* S		**Sg**	09 14 24.3	-0.1
ARMT	**Armutlu**	**1.49**	**36**		*e*PN		**Pb**	09 14 07.8	+0.1
ARMT	**Armutlu**	**1.49**	**36**		*e*Pn		**Pb**	09 14 07.8	+0.1
YLV	**Yalova**	**1.75**	**47**		*e*PN		**Pb**	09 14 11.6	-0.6
YLV	**Yalova**	**1.75**	**47**		*e*Pn		**Pb**	09 14 11.6	-0.6
ENEZ	**Enez**	**1.81**	**319**		*e*PN		**Pb**	09 14 12.9	-0.3
ENEZ	**Enez**	**1.81**	**319**		*e*Pn		**Pb**	09 14 12.9	-0.3
HRT	**Hereke**	**2.09**	**46**		*e*PN		**Pn**	09 14 16.3	+0.8
HRT	**Hereke**	**2.09**	**46**		*e*Pn		**Pn**	09 14 16.3	+0.8

IDC 27 09:19:28.4±2.0, 15°.63S×176°.28W, h0km, mb3.7/5, mb1 4.1/5, mb1mx3.7/19, mbtmp3.7/5, Error ellipse: s-maj=124.4km s-min=23.5km az=151.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**47.09**	**257**	P	P	09 28 02.4	-0.2
	0.6nm,0.5s,baz=98,slow=6.1,SNR=28						
ASAR	**Alice Springs**	**47.40**	**252**	P	P	09 28 05.0	0.0
	2.0nm,0.4s,baz=89,slow=7.7,SNR=71						
NVAR	**Mina Array Bea**	**76.38**	**43**	P	P	09 31 20.9	+0.9
	0.3nm,0.7s,baz=230,slow=8.1,SNR=3.3						
TXAR	**Lajitas Array**	**83.06**	**57**	P	P	09 31 56.7	+0.3
	0.5nm,1.0s,baz=205,slow=5.8,SNR=3.4						
ILAR	**Eielson Array**	**83.23**	**12**	P	P	09 31 55.0	-1.4
	0.1nm,0.4s,baz=211,slow=5.2,SNR=6.8						

*DDA **27** 09:33:01.1, 38°.73N×26°.53E, h7km, MD2.8*
*THE **27** 09:33:01.7, 38°.73N×26°.51E, h3km±10km, ML2.0/2, Error ellipse: s-maj=10.9km s-min=0.6km az=272.0*
*CSEM **27** 09:33:01.4±0.2, 38°.73N×26°.53E, h10km, ML2.0/2, Error ellipse: s-maj=5.9km s-min=3.2km az=82.0*

ISC 27 09:33:01.5±1.0, 38°.72N±0°.03×26°.52E±0°.06, h13km±10km, n13, σ0s35/22, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.37**	**171**	*i* P	**Pg**	09 33 08.5	-0.4
URLA				*i* S	**Sg**	09 33 14.4	+0.5
URLA	**Izmir**	**0.37**	**171**	*i* P	**Pg**	09 33 08.5	-0.4
URLA				*i* S	**Sg**	09 33 14.4	+0.5
CHOS	**Chios island**	**0.50**	**228**	P	**Pg**	09 33 11.0	-0.3
CHOS	**Chios island**	**0.50**	**228**	P	**Pg**	09 33 11.0	-0.3
PRK	**Paraskevi**	**0.56**	**340**	P	**Pg**	09 33 12.0	-0.4
PRK				S	**Sb**	09 33 20.6	-0.4
PRK	**Paraskevi**	**0.56**	**340**	P	**Pg**	09 33 12.0	-0.4
PRK				S	**Sb**	09 33 20.6	-0.4
SIGR	**SIGRI**	**0.71**	**313**	P	**Pg**	09 33 15.5	+0.2
SIGR	**SIGRI**	**0.71**	**313**	P	**Pg**	09 33 15.5	+0.2
SMG	**Samos**	**1.04**	**166**	P	**Pb**	09 33 21.5	+0.1
SMG				S	**Sn**	09 33 36.6	+0.3
SMG	**Samos**	**1.04**	**166**	P	**Pb**	09 33 21.5	+0.1
SMG				S	**Sn**	09 33 36.6	+0.3
BOZC	**Bozcaada**	**1.17**	**342**	*i* P	**Pg**	09 33 24.4	+0.3
BOZC				*i* S	**Sg**	09 33 39.5	+0.1
BALY	**Balya**	**1.33**	**40**	*i* P	**Pn**	09 33 25.6	-0.2
BALY				*i* S	**Sb**	09 33 43.3	+0.1
BALY	**Balya**	**1.33**	**40**	*i* P	**Pn**	09 33 25.6	-0.2
BALY				*i* S	**Sb**	09 33 43.3	+0.1

IDC 27 09:39:37.2±0.8, 2°.80N×126°.34E, h0km, mb3.8/9, mb1 3.9/9, mb1mx3.7/24, mbtmp3.8/9, Error ellipse: s-maj=67.4km s-min=15.3km az=73.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.78**	**182**	P	Pn	09 44 21.6	-0.8
	2.8nm,0.8s,baz=4.5,slow=15,SNR=5.2						
WRA	**Warramunga Arr**	**23.92**	**161**	P	P	09 44 52.4	-0.8
	0.8nm,0.4s,baz=340,slow=10,SNR=26						
ASAR	**Alice Springs**	**27.31**	**165**	P	P	09 45 23.9	-0.1
	0.3nm,0.5s,baz=343,slow=12,SNR=7.2						
STKA	**Stephens Creek**	**37.40**	**158**	P	P	09 46 52.0	-0.1
	1.1nm,0.7s,baz=328,slow=9.5,SNR=5.4						
USRK	**Ussuriysk Arra**	**41.53**	**6**	P	P	09 47 26.3	-0.1
	1.1nm,0.7s,baz=184,slow=8.5,SNR=5.6						
SONM	**Songino Array**	**48.06**	**342**	P	P	09 48 19.0	+0.4
	1.1nm,0.8s,baz=164,slow=7.5,SNR=3.3						
MKAR	**Makanchi Array**	**58.10**	**326**	P	P	09 49 32.5	-0.1
	0.9nm,0.5s,baz=122,slow=8.5,SNR=15						
KURBB	**Kurchatov Arra**	**62.31**	**328**	P	P	09 50 00.4	-0.9
	0.7nm,0.6s,baz=124,slow=6.8,SNR=9.2						
ARCES	**ARCESS Array B**	**91.19**	**340**	P	P	09 52 45.6	+1.6
	1.8nm,1.0s,baz=76,slow=5.7,SNR=3.6						
TORD	**Torodi Ar. Bea**	**122.83**	**287**	PKP	PKPdf	09 58 35.3	-1.1
	0.3nm,0.9s,baz=62,slow=2.9,SNR=2.7						

CASC 27 09:47:21.1±2.3, 8°.36N×82°.88W, h6km±14km, MD4.1, 2C-1D, Panama-Costa Rica border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACR	**Cerro Adams**	**0.41**	**315**	*i* P	Pb	09 47 30.5	-0.4
ACR				*e*S	Sb	09 47 36.9	-0.6
BUS	**Buena Vista**	**1.47**	**324**	*e*P	Pn	09 47 46.7	-2.2
BUS				*e*S	Sn	09 48 07.8	-1.1
QCR	**Quepos**	**1.66**	**310**	*e*P	Pn	09 47 49.1	-1.6
QCR				*e*S	Sn	09 48 11.4	-1.0
URSC	**Urasca**	**1.72**	**329**	*e*P	Pn	09 47 50.5	-1.4
URSC				*e*S	Sb	09 48 15.2	-0.2
SJS	**Escuela Geolog**	**1.95**	**324**	*e*P	Pn	09 47 55.1	+0.1
SJS				*e*S	Sb	09 48 21.9	-0.2
CGA2	**Cerro Gallo 2**	**2.27**	**317**	*e*P	Pn	09 47 59.0	-0.4
CGA2				*e*S	Sn	09 48 28.9	+0.8
JCR	**Jicaral**	**2.66**	**304**	*e*P	Pn	09 48 04.2	-0.5
PTEN	**Parque Tenorio**	**3.13**	**319**	*i* P	Pn	09 48 12.2	+1.0
PTEN				*i* S	Sn	09 48 51.2	+2.1
MESS	**Mesas**	**3.29**	**316**	*i* P	Pn	09 48 13.4	0.0
LAPC	**Finca la Perla**	**3.48**	**314**	*i* P	Pn	09 48 16.2	+0.4
BUEV	**Buena Vista**	**3.48**	**314**	*i* P	Pn	09 48 16.1	+0.1
GB1A	**Borinquen Arri**	**3.49**	**315**	*i* P	Pn	09 48 16.0	-0.1

*DDA **27** 09:49:47.0, 38°.69N×26°.50E, h7km, MD3.0*
*ISCJB **27** 09:49:47.5±0.6, 38°.72N±0°.02×26°.54E±0°.04, h0km±6km, Error ellipse: s-maj=4.9km s-min=3.3km az=165.4*
*CSEM **27** 09:49:47.8±0.2, 38°.69N×26°.54E, h2km, MD3.0, Error ellipse: s-maj=6.3km s-min=4.2km az=82.0*
*ATH **27** 09:49:48.4, 38°.71N×26°.46E, h6km±3km, MD3.2/8*
*THE **27** 09:49:48.0, 38°.72N×26°.49E, h3km±4km, ML2.4/2, Error ellipse: s-maj=4.4km s-min=0.3km az=281.0*

ISC 27 09:49:47.7±1.0, 38°.71N±0°.02×26°.57E±0°.03, h7km±10km, n32, σ0s51/56, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URLA	**Izmir**	**0.35**	**177**	*i* P	**Pg**	09 49 54.6	0.0
URLA				*i* S	**Sg**	09 50 00.6	+1.4
URLA	**Izmir**	**0.35**	**177**	*i* P	**Pg**	09 49 54.6	0.0
URLA				*i* S	**Sg**	09 50 00.6	+1.4
CHOS	**Chios island**	**0.52**	**231**	P	**Pg**	09 49 57.2	-0.5
CHOS	**Chios island**	**0.52**	**231**	*e*PB	**Pg**	09 49 57.2	-0.5
CHOS				*e*SB	**Sg**	09 50 03.7	-0.8
CHOS	**Chios island**	**0.52**	**231**	P	**Pg**	09 49 57.2	-0.5
CHOS				*e*Sb	**Sg**	09 50 03.7	-0.8
PRK	**Paraskevi**	**0.58**	**337**	P	**Pg**	09 49 58.7	-0.2
PRK				S	**Sg**	09 50 07.0	+0.5
PRK	**Paraskevi**	**0.58**	**337**	*e*PB	**Pg**	09 49 58.8	-0.2
PRK	**Paraskevi**	**0.58**	**337**	*e*Pb	**Pg**	09 49 58.8	-0.2
PRK				S	**Sg**	09 50 07.0	+0.5
AYVA	**Ayvalik**	**0.60**	**9**	*i* P	**Pg**	09 49 59.2	-0.1
AYVA				*i* S	**Sg**	09 50 07.5	+0.3
AYVA	**Ayvalik**	**0.60**	**9**	*i* P	**Pg**	09 49 59.2	-0.1
AYVA				*i* S	**Sg**	09 50 07.5	+0.3
SIGR	**SIGRI**	**0.75**	**312**	P	**Pg**	09 50 01.5	-0.6
SIGR				S	**Sg**	09 50 11.9	+0.1
AKHS	**Akhisar**	**0.99**	**80**	*i* P	**Pn**	09 50 07.9	-0.1
AKHS				*i* S	**Sn**	09 50 21.9	-0.3
AKHS	**Akhisar**	**0.99**	**80**	*i* P	**Pn**	09 50 07.9	-0.1
AKHS				*i* S	**Sn**	09 50 21.9	-0.3
SMG	**Samos**	**1.02**	**168**	P	**Pb**	09 50 07.7	-0.1
SMG				S	**Sn**	09 50 22.8	-0.3
SMG	**Samos**	**1.02**	**168**	*e*PB	**Pg**	09 50 07.2	-0.2
SMG				*e*SB	**Sn**	09 50 23.2	+0.1
SMG	**Samos**	**1.02**	**168**	*e*Pb	**Pg**	09 50 07.2	-0.2
SMG	**Samos**	**1.02**	**168**	P	**Pb**	09 50 07.7	-0.1
SMG				S	**Sn**	09 50 22.8	-0.3
SMG				*e*Sb	**Sn**	09 50 23.2	+0.1
BOZC	**Bozcaada**	**1.20**	**341**	*i* P	**Pg**	09 50 10.4	-0.3
BOZC				*i* S	**Sg**	09 50 25.7	-0.6
BALY	**Balya**	**1.31**	**38**	*i* P	**Pn**	09 50 12.3	-0.2
BALY				*i* S	**Sg**	09 50 29.3	-0.6
BALY	**Balya**	**1.31**	**38**	*i* P	**Pn**	09 50 12.3	-0.2
BALY				*i* S	**Sg**	09 50 29.3	-0.6
AYDN	**Tasoluk**	**1.47**	**135**	*e*P	**Pn**	09 50 14.0	-0.7
AYDN				*e*S	**Sn**	09 50 34.8	+0.6
AYDN	**Tasoluk**	**1.47**	**135**	*e*P	**Pn**	09 50 14.0	-0.7
AYDN				*e*S	**Sn**	09 50 34.8	+0.6
LIA	**Limnos Island**	**1.60**	**318**	*e*PB	**Pb**	09 50 17.4	-0.2
LIA				*e*SB	**Sg**	09 50 39.3	+0.2
LIA	**Limnos Island**	**1.60**	**318**	*e*Pb	**Pb**	09 50 17.4	-0.2
LIA				*e*Sb	**Sg**	09 50 39.3	+0.2
APE	**Apeiranthos**	**1.83**	**207**	*e*PB	**Pn**	09 50 19.9	+0.2
APE				*e*SN	**Sg**	09 50 46.8	+0.1
APE	**Apeiranthos**	**1.83**	**207**	*e*Pb	**Pn**	09 50 19.9	+0.2
APE				*e*Sn	**Sg**	09 50 46.8	+0.1
SMTH	**Samothraki Isl**	**1.93**	**336**	*e*PN	**Pb**	09 50 23.4	+0.2
SMTH	**Samothraki Isl**	**1.93**	**336**	*e*Pn	**Pb**	09 50 23.4	+0.2
ALN	**Alexandroupoli**	**2.22**	**350**	*e*PN	**Pb**	09 50 28.1	0.0
ALN	**Alexandroupoli**	**2.22**	**350**	*e*Pn	**Pb**	09 50 28.1	0.0
RDO	**Rodhopi**	**2.56**	**342**	*e*PB	**Pn**	09 50 30.8	+1.3
RDO	**Rodhopi**	**2.56**	**342**	*e*Pb	**Pn**	09 50 30.8	+1.3

*IDC **27** 09:54:15.0±1.4, 37°.30N×21°.43E, h0km, mb3.7/9, mb1 3.8/10, mb1mx3.6/31, mbtmp3.7/10, ML4.1/1, Error ellipse: s-maj=26.0km s-min=24.6km az=21.0*
*CSEM **27** 09:54:17.8±0.3, 37°.20N×21°.30E, h5km, ML3.9/3, Error ellipse: s-maj=6.7km s-min=3.6km az=53.0*
*ATH **27** 09:54:18.1, 37°.16N×21°.32E, h21km±1km, MD3.7/43, ML3.3*
*THE **27** 09:54:19.6, 37°.18N×21°.42E, h22km±1km, ML3.8/10, Error ellipse: s-maj=2.0km s-min=1.0km az=179.0*

ISC 27 09:54:18.7±1.0, 37°.17N±0°.03×21°.37E±0°.03, h32km±8km, n185, σ1s44/204, mb3.7/11, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.40**	**132**	P	**Pn**	09 54 27.6	-0.6
PYL				S	**Sn**	09 54 33.7	-1.0
PYL	**PYLOS**	**0.40**	**132**	P	**Pn**	09 54 27.6	-0.6
PYL				S	**Sn**	09 54 33.7	-1.0
PYL	**PYLOS**	**0.40**	**132**	*e*PB	**Pn**	09 54 27.6	-0.6
PYL				*e*SB	**Sn**	09 54 34.4	-0.3
PYL	**PYLOS**	**0.40**	**132**	P	**Pn**	09 54 27.6	-0.6
PYL				S	**Sn**	09 54 33.7	-1.0
PYL				*e*Sb	**Sn**	09 54 34.4	-0.3
ITM	**Ithomi**	**0.44**	**88**	P	**Pn**	09 54 27.8	-1.1
ITM				S	**Sb**	09 54 34.4	-0.5
ITM	**Ithomi**	**0.44**	**88**	P	**Pn**	09 54 27.8	-1.1
ITM				S	**Sb**	09 54 34.4	-0.5
ITM	**Ithomi**	**0.44**	**88**	*e*PB	**Pn**	09 54 28.0	-0.9
ITM				*e*SB	**Sn**	09 54 35.3	-0.5
ITM	**Ithomi**	**0.44**	**88**	*e*Pb	**Pn**	09 54 28.0	-0.9
ITM				S	**Sb**	09 54 34.4	-0.5
ITM				*e*Sb	**Sn**	09 54 35.3	-0.5
AMT	**Artemida-Makis**	**0.45**	**36**	P	**Pn**	09 54 28.3	-0.7
AMT				S	**Sn**	09 54 35.4	-0.7
AMT	**Artemida-Makis**	**0.45**	**36**	P	**Pn**	09 54 28.3	-0.7
AMT				S	**Sn**	09 54 35.4	-0.7
AMT	**Artemida-Makis**	**0.45**	**36**	*e*PB	**Pn**	09 54 28.0	-1.0
AMT				*e*SB	**Sn**	09 54 35.3	-0.8
AMT	**Artemida-Makis**	**0.45**	**36**	*e*Pb	**Pn**	09 54 28.0	-1.0
AMT	**Artemida-Makis**	**0.45**	**36**	P	**Pn**	09 54 28.3	-0.7
AMT				S	**Sn**	09 54 35.4	-0.7
VLX	**Vlachokerasia**	**0.83**	**75**	P	**Pn**	09 54 34.1	-0.1
VLX				S	**Sn**	09 54 46.0	+0.6
VLX	**Vlachokerasia**	**0.83**	**75**	P	**Pn**	09 54 34.1	-0.1
VLX				S	**Sn**	09 54 46.0	+0.6
VLX	**Vlachokerasia**	**0.83**	**75**	*e*PB	**Pn**	09 54 34.4	+0.2
VLX	**Vlachokerasia**	**0.83**	**75**	P	**Pn**	09 54 34.1	-0.1
VLX	**Vlachokerasia**	**0.83**	**75**	*e*Pb	**Pn**	09 54 34.4	+0.2
VLX				S	**Sn**	09 54 46.0	+0.6
DYR	**Agios Nikonas**	**0.87**	**117**	P	**Pn**	09 54 35.1	+0.4
DYR				S	**Sn**	09 54 47.1	+0.8
DYR	**Agios Nikonas**	**0.87**	**117**	P	**Pn**	09 54 35.1	+0.4
DYR				S	**Sn**	09 54 47.1	+0.8
DYR	**Agios Nikonas**	**0.87**	**117**	*e*PN	**Pn**	09 54 35.5	+0.8
DYR				*e*SN	**Sn**	09 54 48.2	+1.9
DYR	**Agios Nikonas**	**0.87**	**117**	P	**Pn**	09 54 35.1	+0.4
DYR	**Agios Nikonas**	**0.87**	**117**	*e*Pn	**Pn**	09 54 35.5	+0.8
DYR				S	**Sn**	09 54 47.1	+0.8
DYR				*e*Sn	**Sn**	09 54 48.2	+1.9
RLS	**Riolos of Patr**	**0.89**	**5**	P	**Pn**	09 54 35.0	0.0
RLS	**Riolos of Patr**	**0.89**	**5**	P	**Pn**	09 54 35.0	0.0
RLS	**Riolos of Patr**	**0.89**	**5**	*e*PN	**Pn**	09 54 35.0	0.0
RLS				*e*SN	**Sn**	09 54 49.0	+2.1
RLS	**Riolos of Patr**	**0.89**	**5**	P	**Pn**	09 54 35.0	0.0
RLS				*e*Sn	**Sn**	09 54 49.0	+2.1
AXS	**Araxos**	**1.03**	**0**	P	**Pb**	09 54 37.3	-0.7
AXS	**Araxos**	**1.03**	**0**	P	**Pb**	09 54 37.3	-0.7
AXS	**Araxos**	**1.03**	**0**	P	**Pb**	09 54 37.3	-0.7
KLV	**Kalavryta, Ach**	**1.07**	**35**	P	**Pb**	09 54 37.4	-1.3
KLV				S	**Sn**	09 54 52.1	+0.7
KLV	**Kalavryta, Ach**	**1.07**	**35**	P	**Pb**	09 54 37.4	-1.3
KLV	**Kalavryta, Ach**	**1.07**	**35**	*e*PB	**Pb**	09 54 38.0	-0.7
KLV				*e*SN	**Sn**	09 54 54.5	+3.1
KLV	**Kalavryta, Ach**	**1.07**	**35**	P	**Pb**	09 54 37.4	-1.3
KLV	**Kalavryta, Ach**	**1.07**	**35**	*e*Pb	**Pb**	09 54 38.0	-0.7
KLV				*e*Sn	**Sn**	09 54 54.5	+3.1
GUR	**Goura**	**1.09**	**45**	P	**Pb**	09 54 37.8	-1.2
GUR				S	**Sb**	09 54 52.3	-0.7
GUR	**Goura**	**1.09**	**45**	P	**Pb**	09 54 37.8	-1.2
GUR				S	**Sb**	09 54 52.3	-0.7
GUR	**Goura**	**1.09**	**45**	*e*PB	**Pb**	09 54 38.0	-1.1
GUR				*e*SN	**Sb**	09 54 55.3	+2.3
GUR	**Goura**	**1.09**	**45**	P	**Pb**	09 54 37.8	-1.2
GUR				S	**Sb**	09 54 52.3	-0.7
GUR				*e*Sn	**Sb**	09 54 55.3	+2.3
LAKA	**Lakka**	**1.18**	**24**	P	**Pb**	09 54 39.5	-1.0
LAKA				S	**Sb**	09 54 55.3	-0.1
LAKA	**Lakka**	**1.18**	**24**	P	**Pb**	09 54 39.5	-1.0
LAKA	**Lakka**	**1.18**	**24**	*e*PB	**Pb**	09 54 40.0	-0.5
LAKA				*e*SN	**Sb**	09 54 58.1	+2.7
LAKA	**Lakka**	**1.18**	**24**	P	**Pb**	09 54 39.5	-1.0
LAKA	**Lakka**	**1.18**	**24**	*e*Pb	**Pb**	09 54 40.0	-0.5
LAKA				*e*Sn	**Sb**	09 54 58.1	+2.7
VLS	**Valsamata**	**1.19**	**329**	P	**Pb**	09 54 39.5	-1.1
VLS	**Valsamata**	**1.19**	**329**	P	**Pb**	09 54 39.5	-1.1
VLS	**Valsamata**	**1.19**	**329**	*e*PB	**Pb**	09 54 39.3	-1.3
VLS				*e*SN	**Sb**	09 54 57.5	+1.8
VLS	**Valsamata**	**1.19**	**329**	P	**Pb**	09 54 39.5	-1.1
VLS				*e*Sn	**Sb**	09 54 57.5	+1.8
TRIZ	**Trizonia**	**1.32**	**25**	P	**Pb**	09 54 42.7	-0.2
TRIZ	**Trizonia**	**1.32**	**25**	P	**Pb**	09 54 42.7	-0.2
TRIZ	**Trizonia**	**1.32**	**25**	*e*PN	**Pb**	09 54 42.7	-0.2
TRIZ	**Trizonia**	**1.32**	**25**	P	**Pb**	09 54 42.7	-0.2
EFP	**Efpalio**	**1.33**	**18**	P	**Pb**	09 54 43.1	+0.1
EFP	**Efpalio**	**1.33**	**18**	P	**Pb**	09 54 43.1	+0.1
EFP	**Efpalio**	**1.33**	**18**	*e*PN	**Pb**	09 54 43.2	+0.2
EFP	**Efpalio**	**1.33**	**18**	P	**Pb**	09 54 43.1	+0.1
VLI	**Veliai**	**1.33**	**109**	P	**Pb**	09 54 43.7	+0.7
VLI				S	**Sb**	09 54 58.9	-0.8
VLI	**Veliai**	**1.33**	**109**	P	**Pb**	09 54 43.9	+0.9
VLI	**Veliai**	**1.33**	**109**	P	**Pb**	09 54 43.9	+0.9
KALE	**Kalithea**	**1.37**	**26**	P	**Pb**	09 54 43.0	-0.7
KALE	**Kalithea**	**1.37**	**26**	P	**Pb**	09 54 43.0	-0.7
KALE	**Kalithea**	**1.37**	**26**	*e*PB	**Pb**	09 54 43.3	-0.4
KALE				*e*SN	**Sb**	09 55 04.3	+3.5
KALE	**Kalithea**	**1.37**	**26**	P	**Pb**	09 54 43.0	-0.7
KALE	**Kalithea**	**1.37**	**26**	*e*Pb	**Pb**	09 54 43.3	-0.4
KALE				*e*Sn	**Sb**	09 55 04.3	+3.5
DID	**Didima**	**1.52**	**77**	*e*PN

NVLJ	**Novalja**	**8.88**	**328**	*e*Pn	**Pn**	**09 56 24.9**	**+0.2**
NVLJ				Sn	**Sn**	**09 57 59.5**	**-4.1**
NVLJ	**Novalja**	**8.88**	**328**	*e*Pn	**Pn**	**09 56 24.8**	**+0.2**
MLR	**Muntele Rosu**	**9.00**	**21**	Pn	Pn	09 56 29.6	+3.1
	0.0nm,0.3s,baz=175,slow=12,SNR=2.5						
GERES	**GERESS Array B**	**12.94**	**337**	Pn	**Pn**	**09 57 19.9**	**-0.5**
	0.4nm,0.3s,baz=151,slow=14,SNR=4.3						
HFS	**Hagfors**	**23.51**	**350**	P	**P**	**09 59 24.7**	**-0.8**
	1.0nm,0.4s,baz=146,slow=12,SNR=12						
FINES	**FINESS Array B**	**24.48**	**5**	P	**P**	**09 59 34.3**	**-0.3**
	0.5nm,0.3s,baz=173,slow=9.8,SNR=9.1						
EKA	**Eskdalemuir Ar**	**24.64**	**325**	P	**P**	**09 59 37.1**	**+0.9**
	1.4nm,0.6s,baz=127,slow=9.1,SNR=10.0						
NB2	**NORSAR Subarra**	**24.74**	**348**	P	**P**	**09 59 37.5**	**+0.4**
	comp=Z,0.5nm,0.5s,baz=156,slow=9.3						
NB2	**NORSAR Subarra**	**24.74**	**348**	P	**P**	**09 59 37.5**	**+0.4**
	comp=Z,0.5nm,0.5s,SNR=4.1						
NOA	**NORSAR Array B**	**24.74**	**348**	P	**P**	**09 59 36.7**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=158,slow=8.7,SNR=4.8						
KAF	**Kangasniemi**	**25.16**	**5**	*ep*	P	09 59 50.4	+10
	comp=Z,1.4nm,0.5s						
JOF	**Joensuu**	**26.50**	**10**	*ep*	**P**	**09 59 52.8**	**0.0**
	comp=Z,0.7nm,0.4s						
TORD	**Torodi Ar. Bea**	**29.70**	**221**	P	P	10 00 23.7	+1.9
	comp=Z,0.8nm,0.9s,baz=22,slow=7.6,SNR=3.6						
ARCES	**ARCESS Array B**	**32.51**	**3**	P	**P**	**10 00 45.5**	**-0.6**
	comp=Z,0.4nm,0.4s,baz=185,slow=12,SNR=3.5						
KURBB	**Kurchatov Arra**	**42.30**	**53**	P	**P**	**10 02 09.1**	**0.0**
	comp=Z,0.9nm,0.4s,baz=275,slow=8.7,SNR=7.9						
MKAR	**Makanchi Array**	**45.26**	**58**	P	**P**	**10 02 33.1**	**+0.1**
	comp=Z,0.6nm,0.3s,baz=271,slow=8.1,SNR=17						
ZALV	**Zalesovo Beam**	**45.87**	**47**	P	**P**	**10 02 37.7**	**-0.1**
	comp=Z,0.7nm,0.4s,baz=267,slow=10,SNR=2.9						

MAN 27 10:09:31, 10.09N×126.40E, h29km, mb4.4, ML3.2, MS3.1, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	**1.35**	**215**	*e*P	Pn	10 09 54.4	+0.5
MSLP	**Maasin**	**1.52**	**272**	*e*P	Pb	10 09 57.7	-0.9
PLP	**Palo**	**1.76**	**308**	*e*P	Pn	10 10 00.2	+0.6
PLP				*e*S	Sn	10 10 18.3	-2.8
TBP	**Tagbilaran**	**2.53**	**261**	*e*P	Pn	10 10 12.3	+2.1
BUKP	**Musuan**	**2.56**	**211**	*e*P	Pn	10 10 13.0	+2.3
BUKP				*e*S	Sn	10 10 42.6	+1.6

ISCJB ***27*** *10:14:14.5±0.6, 50.97S±0.10×116.7E±0.2, h10km, mb4.1/12, MS3.3/1, Error ellipse: s-maj=23.7km s-min=10.3km az=26.7*

IDC ***27*** *10:14:14.9±0.7, 50.96S×116.62E, h0km, mb4.2/10, mb1 4.3/10, mb1mx4.2/17, mbtmp4.2/10, MS3.5/2, Ms1 3.5/2, ms1mx3.1/17, Error ellipse: s-maj=33.1km s-min=14.9km az=112.0*

NEIC ***27*** *10:14:16.6±0.3, 50.96S×116.58E, h10km, mb4.5/2, Error ellipse: s-maj=17.6km s-min=8.3km az=116.0*

ISC 27 10:14:16.5±0.5, 51.0S±0.1×116.7E±0.2, h10km, n219, σ0s74/217, mb4.1/12, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NWAO	**Narrogin (SRO)**	**18.04**	**2**	LR	LR	10 23 12.5	
	comp=Z,155nm,19.6s,baz=12,slow=30						
STKA	**Stephens Creek**	**26.50**	**53**	*e*P	**P**	**10 19 54.3**	**+0.4**
STKA	**Stephens Creek**	**26.50**	**53**	P	**P**	**10 19 54.0**	**+0.1**
	3.4nm,0.9s,baz=218,slow=10,SNR=4.4						
ASAR	**Alice Springs**	**30.36**	**33**	P	**P**	**10 20 28.6**	**+0.2**
ASAR	**Alice Springs**	**30.36**	**33**	P	**P**	**10 20 28.6**	**+0.2**
	2.6nm,0.8s,baz=202,slow=8.3,SNR=20						
AS31	**Alice Springs**	**30.36**	**33**	*e*P	**P**	**10 20 28.5**	**+0.1**
MAW	**Mawson**	**30.82**	**217**	P	**P**	**10 20 32.2**	**+0.2**
MAW	**Mawson**	**30.82**	**217**	P	**P**	**10 20 32.2**	**+0.2**
	2.7nm,0.9s,baz=78,slow=15,SNR=3.3						
VNDA	**Vanda**	**31.44**	**163**	P	**P**	**10 20 36.8**	**-0.7**
VNDA	**Vanda**	**31.44**	**163**	P	**P**	**10 20 36.8**	**-0.7**
	1.2nm,0.8s,baz=298,slow=7.8,SNR=6.7						
VNDA				LR	LR	10 33 20.6	
	comp=Z,67nm,18.9s,baz=90,slow=36						
ARMA	**Armidale**	**33.08**	**65**	*e*P	**P**	**10 20 52.7**	**+0.3**
	24nm,1.6s						
FITZ	**Fitzroy Crossi**	**33.57**	**16**	P	**P**	**10 20 57.0**	**+0.5**
FITZ	**Fitzroy Crossi**	**33.57**	**16**	P	**P**	**10 20 57.0**	**+0.5**
	2.5nm,1.0s,baz=220,slow=7.9,SNR=2.9						
WRA	**Warramunga Arr**	**33.96**	**31**	P	**P**	**10 20 59.2**	**-0.8**
WRA				PcP	**PcP**	**10 23 36.7**	**-1.4**
WRA	**Warramunga Arr**	**33.96**	**31**	P	**P**	**10 20 59.2**	**-0.8**
	2.9nm,0.8s,baz=199,slow=11,SNR=23						
WRA				PcP	**PcP**	**10 23 36.7**	**-1.4**
	0.5nm,0.7s,baz=219,slow=2.5,SNR=7.9						
WRAB	**Tennant Creek**	**33.98**	**31**	*e*P	**P**	**10 21 00.0**	**-0.1**
	1.6nm,0.7s						
QSPA	**South Pole Qui**	**39.15**	**180**	P	**P**	**10 21 44.0**	**0.0**
QSPA	**South Pole Qui**	**39.15**	**180**	P	**P**	**10 21 44.0**	**0.0**
	2.3nm,0.8s,baz=335,slow=3.2,SNR=8.0						
SNAA	**Sanae**	**50.47**	**201**	P	**P**	**10 23 13.9**	**0.0**
SNAA	**Sanae**	**50.47**	**201**	P	**P**	**10 23 13.9**	**0.0**
	2.5nm,1.0s,baz=131,slow=10,SNR=16						
BOSA	**Boshof**	**69.18**	**250**	P	**P**	**10 25 23.4**	**+0.1**
BOSA	**Boshof**	**69.18**	**250**	P	**P**	**10 25 23.4**	**+0.1**
	3.9nm,0.9s,baz=91,slow=5.1,SNR=3.3						
CMAR	**Chiang Mai Arr**	**70.87**	**342**	P	**P**	**10 25 33.1**	**-0.3**
CMAR	**Chiang Mai Arr**	**70.87**	**342**	P	**P**	**10 25 33.1**	**-0.3**
	0.8nm,0.4s,baz=193,slow=6.7,SNR=4.6						
ILAR	**Eielson Array**	**136.93**	**39**	PKP	**PKPdf**	**10 33 37.5**	**-0.5**
ILAR	**Eielson Array**	**136.93**	**39**	PKP	**PKPdf**	**10 33 37.5**	**-0.5**
	0.2nm,0.9s,baz=258,slow=2.8,SNR=4.3						
WCN	**Washoe City**	**139.47**	**84**	*e*PKPdf	**PKPdf**	**10 33 41.9**	**-1.8**
NVAR	**Mina Array Bea**	**139.87**	**86**	PKP	**PKPdf**	**10 33 46.2**	**+1.7**
NVAR	**Mina Array Bea**	**139.87**	**86**	PKP	**PKPdf**	**10 33 46.2**	**+1.7**
	0.4nm,0.9s,baz=227,slow=3.6,SNR=2.2						
TXAR	**Lajitas Array**	**142.98**	**110**	PKP	**PKPdf**	**10 33 47.5**	**-2.7**
TXAR	**Lajitas Array**	**142.98**	**110**	PKP	**PKPdf**	**10 33 47.5**	**-2.7**
	1.1nm,1.0s,baz=187,slow=6.4,SNR=7.0						
427A	**Hayter Ranch,**	**144.24**	**109**	P	**PKPdf**	**10 33 53.0**	**+0.6**
	baz=144						
DUG	**Dugway**	**144.36**	**88**	P	**PKPdf**	**10 33 52.2**	**-0.1**
	baz=144						
428A	**Kincaid Ranch,**	**144.58**	**110**	P	**PKPdf**	**10 33 53.2**	**+0.2**
	baz=145,SNR=5.6						
226B	**Tecolote Peak,**	**144.64**	**106**	P	**PKPab**	**10 33 50.9**	**-0.8**
	baz=145						
Q16A	**Castle Valley**	**144.67**	**91**	P	**PKPdf**	**10 33 53.4**	**+0.4**
	baz=145,SNR=8.1						
125A	**Gardner Draw,**	**144.75**	**105**	P	PKPbc	10 33 52.5	+0.2
	baz=145						
Z24A	**Sheeppen Canyo**	**144.77**	**104**	P	**PKPdf**	**10 33 53.2**	**-0.2**
	baz=145						
I12A	**Atlanta**	**144.83**	**81**	P	**PKPdf**	**10 33 53.1**	**0.0**
	baz=145						
530A	**J-C Ranch, Com**	**144.95**	**112**	P	**PKPdf**	**10 33 53.7**	**+0.1**
	baz=145,SNR=8.9						
328A	**Wristen Ranch,**	**144.97**	**109**	P	PKPbc	10 33 53.4	+0.5
	baz=145						
429A	**Davenport Ranc**	**144.97**	**111**	P	PKPbc	10 33 53.3	+0.4
	baz=145						
Y24A	**Capitan**	**145.13**	**103**	P	**PKPdf**	**10 33 54.1**	**+0.2**
	baz=145,SNR=7.1						
Z25A	**Roswell**	**145.14**	**104**	P	**PKPdf**	**10 33 54.5**	**+0.6**
	baz=145,SNR=7.6						
ANMO	**Albuquerque**	**145.17**	**100**	PKPbc	**PKPdf**	**10 33 54.0**	**0.0**
ANMO	**Albuquerque**	**145.17**	**100**	PKPbc	**PKPdf**	**10 33 54.0**	**0.0**
	4.0nm,1.0s,baz=198,slow=5.1,SNR=14						
SRU	**San Rafael**	**145.19**	**91**	*e*PKPbc	**PKPdf**	**10 33 54.2**	**+0.3**
SRU	**San Rafael**	**145.19**	**91**	P	**PKPdf**	**10 33 54.3**	**+0.4**
	baz=145,SNR=12						
HVU	**Hansel Valley**	**145.26**	**86**	*e*PKPbc	**PKPdf**	**10 33 55.1**	**+1.2**
G12A	**Big Creek, Yel**	**145.37**	**79**	P	**PKPdf**	**10 33 54.9**	**+0.9**
	baz=146,SNR=9.9						
U21A	**Nageezi**	**145.37**	**97**	P	**PKPdf**	**10 33 55.1**	**+0.7**
	baz=146,SNR=17						
632A	**Uvalde**	**145.38**	**114**	P	**PKPdf**	**10 33 55.3**	**+1.0**
	baz=146						
H12A	**Diamond D Ranc**	**145.38**	**80**	P	**PKPab**	**10 33 55.1**	**+1.0**
	baz=146,SNR=8.6						
531A	**Rocksprings**	**145.43**	**113**	P	**PKPab**	**10 33 55.3**	**+0.7**
	baz=146,SNR=29						
DAU	**Daniels Canyon**	**145.47**	**89**	*e*PKPbc	**PKPab**	**10 33 55.8**	**+1.0**
430A	**Baggett Ranch,**	**145.48**	**111**	P	**PKPab**	**10 33 55.2**	**+0.4**
	baz=146,SNR=5.2						
W23A	**Werner Place,**	**145.50**	**101**	P	**PKPab**	**10 33 55.1**	**+0.1**
	baz=146						
V22A	**San Miguel Ran**	**145.51**	**99**	P	**PKPab**	**10 33 55.5**	**+0.5**
	baz=146,SNR=7.5						
329A	**Wagon Wheel Ra**	**145.54**	**109**	P	**PKPab**	**10 33 55.3**	**+0.3**
	baz=146						
127A	**Arkansas Junct**	**145.55**	**107**	P	**PKPbc**	**10 33 54.9**	**+0.2**
	baz=146						
Z26A	**Caprock**	**145.58**	**105**	P	**PKPbc**	**10 33 55.0**	**+0.1**
	baz=146,SNR=5.8						
Y25A	**Mesa, Roswell**	**145.59**	**104**	P	**PKPab**	**10 33 55.4**	**+0.2**
	baz=146,SNR=12						
228A	**UT Block 9, Go**	**145.62**	**108**	P	**PKPbc**	**10 33 55.1**	**+0.1**
	baz=146						
NEW	**Newport**	**145.69**	**73**	*e*PKPbc	**PKPab**	**10 33 55.3**	**+0.3**
NEW	**Newport**	**145.69**	**73**	P	**PKPab**	**10 33 55.4**	**+0.3**
	baz=146						
431A	**Sonora**	**145.77**	**112**	P	**PKPab**	**10 33 56.0**	**+0.1**
	baz=146,SNR=11						
532A	**Rocksprings**	**145.77**	**113**	P	**PKPab**	**10 33 56.1**	**+0.3**
	baz=146,SNR=9.8						
PV04	**Paradox Valley**	**145.79**	**94**	*e*PKPbc	**PKPab**	**10 33 56.4**	**+0.5**
S20A	**Disappointment**	**145.79**	**95**	P	**PKPab**	**10 33 56.3**	**+0.3**
	baz=146,SNR=25						
T21A	**Navajo Lake**	**145.80**	**97**	P	**PKPab**	**10 33 56.4**	**+0.4**
	baz=146,SNR=5.4						
E12A	**Beaver Dam Sad**	**145.82**	**77**	P	**PKPbc**	**10 33 55.6**	**+0.3**
	baz=146,SNR=16						
U22A	**Llaves**	**145.84**	**98**	P	**PKPab**	**10 33 56.6**	**+0.4**
	baz=146,SNR=25						
PV01	**Paradox Valley**	**145.84**	**94**	*e*PKPbc	**PKPab**	**10 33 56.6**	**+0.4**
V23A	**Ortiz Mt. (NFS**	**145.86**	**100**	P	**PKPab**	**10 33 56.9**	**+0.6**
	baz=146,SNR=8.6						
HWUT	**Hardware Ranch**	**145.93**	**87**	*e*PKPbc	**PKPab**	**10 33 56.4**	**+0.1**
I14A	**Mackay**	**145.95**	**82**	P	**PKPab**	**10 33 57.0**	**+0.7**
	baz=146,SNR=12						
330A	**Mertzon**	**145.96**	**110**	P	**PKPbc**	**10 33 55.8**	**-0.2**
	baz=146,SNR=6.9						
229A	**Bryant Ranch,**	**145.98**	**109**	P	**PKPab**	**10 33 56.5**	**-0.1**
	baz=146						
W24A	**Lazy 6 Ranch,**	**146.00**	**101**	P	**PKPab**	**10 33 56.7**	**-0.1**
	baz=146,SNR=11						
R20A	**Redvale**	**146.00**	**94**	P	**PKPab**	**10 33 56.6**	**-0.1**
	baz=146,SNR=9.9						
C11A	**Tepee Creek (N**	**146.03**	**74**	P	**PKPab**	**10 33 56.3**	**-0.1**
	baz=146						
128A	**Castleberry Fa**	**146.04**	**107**	P	**PKPab**	**10 33 57.0**	**+0.2**
	baz=146,SNR=19						
S21A	**Coal Bank Pass**	**146.05**	**96**	P	**PKPab**	**10 33 57.2**	**+0.2**
	baz=146,SNR=8.3						
Z27A	**Tatum**	**146.08**	**106**	P	**PKPbc**	**10 33 56.3**	**-0.1**
	baz=146,SNR=6.6						
JCT	**Junction City**	**146.09**	**113**	*e*PKPbc	**PKPbc**	**10 33 56.7**	**+0.2**
JCT	**Junction City**	**146.09**	**113**	P	**PKPbc**	**10 33 56.7**	**+0.2**
	baz=146,SNR=11						
Y26A	**Elida**	**146.12**	**104**	P	**PKPbc**	**10 33 56.8**	**+0.2**
	baz=146						
T22A	**Edith**	**146.21**	**97**	P	**PKPab**	**10 33 57.4**	**-0.2**
	baz=146,SNR=6.2						
U23A	**El Rito**	**146.23**	**99**	P	**PKPab**	**10 33 57.5**	**-0.1**
	baz=146						
D12A	**Red Ives Fores**	**146.24**	**76**	P	**PKPab**	**10 33 57.0**	**-0.2**
	baz=146						
331A	**San Angelo**	**146.33**	**111**	P	**PKPbc**	**10 33 57.1**	**-0.1**
	baz=146						
230A	**Sterling City**	**146.34**	**110**	P	**PKPbc**	**10 33 57.6**	**+0.4**
	baz=146,SNR=10						
432A	**Menard**	**146.39**	**113**	P	**PKPbc**	**10 33 57.5**	**+0.2**
	baz=146,SNR=7.6						
V24A	**Rampart Ranch,**	**146.41**	**101**	P	**PKPab**	**10 33 58.5**	**+0.1**
	baz=147,SNR=13						
129A	**Stewart Farms,**	**146.42**	**108**	P	**PKPbc**	**10 33 57.9**	**+0.5**
	baz=146						
M17A	**Scullys Gap (B**	**146.43**	**88**	P	**PKPab**	**10 33 58.1**	**-0.2**
	baz=147,SNR=6.1						
P19A	**Cripple Cowboy**	**146.47**	**92**	P	**PKPab**	**10 33 58.4**	**-0.1**
	baz=147,SNR=8.0						
Y27A	**Causey**	**146.50**	**105**	P	**PKPbc**	**10 33 58.2**	**+0.5**
	baz=147,SNR=14						
Q20A	**Ridgley Place,**	**146.50**	**93**	P	**PKPab**	**10 33 58.5**	**-0.1**
	baz=147,SNR=6.0						
X26A	**CR and CF Fran**	**146.55**	**104**	P	**PKPbc**	**10 33 58.2**	**+0.4**
	baz=147						
Z28A	**Tucker Farm, M**	**146.56**	**107**	P	**PKPbc**	**10 33 58.2**	**+0.4**
	baz=147						
W25A	**X Bar L Ranch,**	**146.59**	**102**	P	**PKPab**	**10 33 58.7**	**-0.3**
	baz=147,SNR=22						
R21A	**Cimarron**	**146.63**	**95**	P	**PKPab**	**10 33 59.1**	**-0.1**
	baz=147						
S22A	**4UR Ranch, Cre**	**146.71**	**96**	P	**PKPab**	**10 33 59.4**	**-0.2**
	baz=147						
O19A	**Miners Draw (B**	**146.75**	**91**	P	**PKPab**	**10 33 59.0**	**-0.5**
	baz=147						
P20A	**De Beque**	**146.76**	**92**	P	**PKPab**	**10 33 59.2**	**-0.3**
	baz=147,SNR=7.3						
MCMT	**McKenzie Canyo**	**146.77**	**81**	*e*PKPbc	**PKPbc**	**10 33 58.0**	**-0.2**
332A	**Millersview**	**146.79**	**112**	P	**PKPbc**	**10 33 59.1**	**+0.6**
	baz=147,SNR=6.1						
MSTX	**Muleshoe**	**146.79**	**105**	P	**PKPbc**	**10 33 58.9**	**+0.4**
	baz=147,SNR=13						
231A	**Bronte**	**146.85**	**111**	P	**PKPbc**	**10 33 58.8**	**+0.2**
	baz=147,SNR=12						
V25A	**Rancho No Teng**	**146.89**	**101**	P	**PKPbc**	**10 33 59.4**	**+0.5**
	baz=147,SNR=7.0						
W26A	**Owens Ranch, T**	**146.93**	**103**	P	**PKPbc**	**10 33 59.4**	**+0.5**
	baz=147,SNR=9.8						
Z29A	**Hungry Hill Ra**	**146.95**	**107**	P	**PKPbc**	**10 33 59.4**	**+0.4**
	baz=147,SNR=13						
R22A	**Saguache, Gunn**	**147.04**	**96**	P	**PKPab**	**10 34 00.5**	**-0.4**
	baz=147						
Y28A	**McKinney Farm,**	**147.07**	**106**	P	**PKPbc**	**10 33 60.0**	**+0.7**
	baz=147						
I16A	**Newdale**	**147.16**	**83**	P	**PKPab**	**10 34 00.9**	**-0.1**
	baz=147						
DLMT	**Dillon**	**147.18**	**80**	*e*PKPbc	**PKPab**	**10 34 00.5**	**-0.5**
232A	**Coleman**	**147.21**	**112**	P	**PKPbc**	**10 34 00.0**	**+0.4**
	baz=147,SNR=7.6						
O20A	**White River Ci**	**147.22**	**92**	P	**PKPbc**	**10 34 00.4**	**+0.8**
	baz=147,SNR=10						
SWMT	**Swartz Lake**	**147.27**	**76**	*e*PKPbc	**PKPbc**	**10 33 59.6**	**+0.2**
Z30A	**Sanderson Ranc**	**147.32**	**108**	P	**PKPbc**	**10 33 59.7**	**-0.2**
	baz=147,SNR=8.3						
Q22A	**Crested Butte,**	**147.32**	**95**	P	**PKPbc**	**10 34 01.1**	**+1.0**
	baz=148,SNR=7.7						
131A	**Roby**	**147.33**	**110**	P	**PKPbc**	**10 34 00.2**	**+0.2**
	baz=148,SNR=8.9						
B13A	**Whitefish**	**147.35**	**74**	P	**PKPbc**	**10 34 00.3**	**+0.7**
	baz=148,SNR=6.9						
W27A	**Bowe Ranch, En**	**147.35**	**104**	P	**PKPbc**	**10 34 00.2**	**+0.2**
	baz=148,SNR=5.7						
V26A	**Tequesquite Ra**	**147.38**	**102**	P	**PKPbc**	**10 34 00.2**	**+0.1**
	baz=148,SNR=8.0						
U25A	**Circle Dot Ran**	**147.38**	**100**	P	**PKPbc**	**10 34 00.5**	**+0.3**
	baz=148,SNR=11						
Y29A	**Porterfield Fa**	**147.39**	**107**	P	**PKPbc**	**10 34 00.6**	**+0.4**
	baz=148,SNR=11						
D14A	**Greenough**	**147.39**	**77**	P	**PKPbc**	**10 33 59.6**	**-0.2**
	baz=148						
SLMT	**Seeley Lake**	**147.47**	**77**	*e*PKPbc	**PKPbc**	**10 34 00.8**	**+0.7**
SMCO	**Snowmass**	**147.47**	**94**	*e*PKPbc	**PKPbc**	**10 34 01.7**	**+1.1**
CHMT	**Chamberlain Mo**	**147.47**	**77**	*e*PKPbc	**PKPbc**	**10 34 00.8**	**+0.7**
IMW	**Indian Meadow**	**147.51**	**84**	*e*PKPbc	**PKPbc**	**10 34 01.6**	**+1.2**
C14A	**Swan Lake**	**147.54**	**76**	P	**PKPbc**	**10 34 00.8**	**+0.7**
	baz=148,SNR=8.8						
N20A	**Spence Gulch,**	**147.60**	**90**	P	**PKPbc**	**10 34 00.7**	**0.0**
	baz=148,SNR=6.4						
R23A	**Moffat**	**147.61**	**97**	P	**PKPbc**	**10 34 01.8**	**+0.9**
	baz=148,SNR=6.9						
X29A	**Tulia**	**147.77**	**106**	P	**PKPbc**	**10 34 01.0**	**-0.1**
	baz=148						
U26A	**Atchley Ranch,**	**147.79**	**101**	P	**PKPbc**	**10 34 01.7**	**+0.4**
	baz=148,SNR=7.2						
PDAR	**Pinedale Array**	**147.81**	**86**	PKPbc	**PKPbc**	**10 34 01.6**	**+0.4**
PDAR	**Pinedale Array**	**147.81**	**86**	PKPbc	**PKPbc**	**10 34 01.6**	**+0.4**
	1.4nm,0.9s,baz=222,slow=2.0,SNR=8.9						
P22A	**Eagle**	**147.85**	**94**	P	**PKPbc**	**10 34 02.5**	**+1.1**
	baz=148						
T25A	**Trinidad**	**147.85**	**99**	P	**PKPbc**	**10 34 02.4**	**+0.9**
	baz=148						
Z31A	**Sharp Cattle R**	**147.93**	**109**	P	**PKPbc**	**10 34 02.2**	**+0.7**
	baz=148,SNR=7.4						
D15A	**Lincoln**	**147.98**	**77**	P	**PKPbc**	**10 34 02.7**	**+1.3**
	baz=148						
M20A	**Sweetwater, Wa**	**148.00**	**90**	P	**PKPbc**	**10 34 03.1**	**+1.3**
	baz=148						
N21A	**Black Mountain**	**148.03**	**91**	P	**PKPab**	**10 34 03.6**	**-1.0**
	baz=148,SNR=6.0						
B14A	**Marquette Ranc**	**148.07**	**75**	P	**PKPbc**	**10 34 02.4**	**+0.8**
	baz=148						
S25A	**Robets Cordova**	**148.16**	**99**	P	**PKPbc**	**10 34 03.5**	**+1.3**
	baz=148,SNR=21						
A14A	**Double T Ranch**	**148.22**	**74**	P	**PKPbc**	**10 34 02.9**	**+0.9**
	baz=148						
C15A	**Salmond Ranch,**	**148.24**	**76**	P	**PKPbc**	**10 34 02.8**	**+0.8**
	baz=148,SNR=7.0						
W29A	**Amraillo**	**148.25**	**105**	P	**PKPbc**	**10 34 02.7**	**+0.3**
	baz=148						
X30A	**Coker Ranch, T**	**148.27**	**107**	P	**PKPbc**	**10 34 03.1**	**+0.7**
	baz=148,SNR=5.3						
P23A	**Jefferson**	**148.30**	**95**	P	**PKPbc**	**10 34 03.7**	**+0.9**
	baz=148,SNR=9.0						
O22A	**Kremmling**	**148.30**	**93**	P	**PKPbc**	**10 34 03.3**	**+0.7**
	baz=148						
Y31A	**Rekieta Farm,**	**148.31**	**108**	P	**PKPbc**	**10 34 03.2**	**+0.7**
	baz=148,SNR=9.3						
Z32A	**Haskell**	**148.32**	**110**	P	**PKPbc**	**10 34 03.0**	**+0.5**
	baz=148						
T26A	**Comanche Natio**	**148.38**	**100**	P	**PKPbc**	**10 34 03.8**	**+1.0**
	baz=148,SNR=9.5						
U27A	**Thompson Grove**	**148.38**	**102**	P	**PKPbc**	**10 34 03.1**	**+0.3**
	baz=148						
B15A	**Bradely Ranch,**	**148.48**	**75**	P	**PKPbc**	**10 34 02.8**	**+0.2**
	baz=149						
K20A	**Yellowstone Ra**	**148.52**	**88**	P	**PKPbc**	**10 34 03.4**	**+0.4**
	baz=149						
R25A	**Fountain Ranch**	**148.55**	**98**	P	**PKPbc**	**10 34 03.9**	**+0.8**
	baz=149						
D16A	**Dana Ranch, Ca**	**148.58**	**78**	P	**PKPbc**	**10 34 03.9**	**+0.9**
	baz=149						
F17A	**Fitzpatrick Pl**	**148.63**	**81**	P	**PKPbc**	**10 34 04.7**	**+1.6**
	baz=149,SNR=8.3						
A15A	**Johnson Ranch,**	**148.64**	**74**	P	**PKPbc**	**10 34 03.2**	**+0.2**
	baz=149						
N22A	**Wattenberg Ran**	**148.72**	**92**	P	**PKPbc**	**10 34 05.5**	**+1.8**
	baz=149,SNR=5.5						
U28A	**Mallet**	**148.72**	**103**	P	**PKPbc**	**10 34 04.1**	**+0.4**
	baz=149						
O23A	**Lake Granby, G**	**148.73**	**93**	P	**PKPbc**	**10 34 05.7**	**+1.9**
	baz=149,SNR=7.1						
S26A	**Kim**	**148.73**	**100**	P	**PKPbc**	**10 34 04.3**	**+0.6**
	baz=149,SNR=8.8						
L21A	**Rawlins**	**148.77**	**89**	P	**PKPbc**	**10 34 03.9**	**+0.2**
	baz=149						
C16A	**Fuhringer Ranc**	**148.78**	**77**	P	**PKPbc**	**10 34 03.4**	**0.0**
	baz=149,SNR=5.5						
Q25A	**Bedland, Calha**	**149.03**	**97**	P	**PKPbc**	**10 34 05.1**	**+0.7**
	baz=149,SNR=7.3						
J20A	**Shoshoni**	**149.04**	**87**	P	**PKPbc**	**10 34 05.1**	**+0.8**
	baz=149						
N23A	**Red Feather La**	**149.09**	**92**	P	**PKPbc**	**10 34 04.8**	**+0.2**
	baz=149,SNR=8.8						
R26A	**Arlington**	**149.16**	**99**	P	**PKPbc**	**10 34 05.7**	**+1.0**
	baz=149,SNR=6.0						
F18A	**Big Timber**	**149.22**	**81**	P	**PKPbc**	**10 34 05.8**	**+1.2**
	baz=149						
I20A	**Worland**	**149.31**	**85**	P	**PKPbc**	**10 34 05.7**	**+0.8**
	baz=150						
C17A	**Wharram Farm,**	**149.31**	**77**	P	**PKPbc**	**10 34 05.0**	**+0.3**
	baz=150,SNR=6.6						
A16A	**West Butte Ran**	**149.32**	**75**	P	**PKPbc**	**10 34 05.3**	**+0.5**
	baz=150						
E18A	**Harlowton**	**149.39**	**80**	P	**PKPbc**	**10 34 06.7**	**+1.7**
	baz=150,SNR=7.5						
J21A	**Lysite**	**149.44**	**87**	P	**PKPbc**	**10 34 06.5**	**+1.2**
	baz=150						
Q26A	**Hugo**	**149.49**	**97**	P	**PKPbc**	**10 34 07.0**	**+1.5**
	baz=150,SNR=8.7						
R27A	**Eads**	**149.56**	**99**	P	**PKPbc**	**10 34 06.2**	**+0.6**
	baz=150						
K22A	**Casper**	**149.67**	**89**	P	**PKPbc**	**10 34 06.4**	**+0.6**
	baz=150,

APYP	**Conner**	**0.43**	**28**	*eP*	Pn	10 22 29.4 +1.4
CAUP	**Cauayan**	**0.93**	**125**	*eP*	Pb	10 22 47.1 +12
PIP	**Pasuquin**	**0.93**	**335**	⇑*iP*	Pn	10 22 31.6 -3.2

IDC 27 10:41:33.9±2.6, 31°.49N × 70°.26E, h0 km, mb3.3/6, mb1 3.6/8, mb1mx3.4/32, mbtmp3.4/8, ML3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.2/26, Error ellipse: s-maj=92.2km s-min=25.5km az=82.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NDI	**New Delhi**	**6.64**	**113**	*e*PKP	Pg	10 43 48.0	+6.8
NDI				*e*S	Sn	10 44 29.0	-0.2
AAK	**Ala-Archa**	**11.62**	**16**	Pn	Pn	10 44 22.2	+1.0
	0.5nm,0.3s,baz=201,slow=8.6,SNR=5.4						
MKAR	**Makanchi Array**	**17.87**	**28**	P	P	10 45 44.8	+0.2
	0.1nm,0.3s,baz=206,slow=12,SNR=5.6						
KURBB	**Kurchatov Arra**	**20.08**	**15**	P	P	10 46 08.6	-0.1
	0.6nm,0.6s,baz=206,slow=10,SNR=5.6						
BVAR	**Borovoye Array**	**21.52**	**0**	P	P	10 46 24.0	-0.3
	0.3nm,0.4s,baz=171,slow=10,SNR=3.0						
ZALV	**Zalesovo Beam**	**24.76**	**21**	P	P	10 46 57.0	-0.1
	0.5nm,0.4s,baz=221,slow=8.8,SNR=3.8						
FINES	**FINESS Array B**	**41.39**	**330**	LR	LR	11 08 10.1	
	comp=Z,19nm,18.7s,baz=248,slow=39						
WRA	**Warramunga Arr**	**79.92**	**121**	P	P	10 53 45.0	+0.1
	0.3nm,0.8s,baz=322,slow=5.2,SNR=2.8						
ASAR	**Alice Springs**	**81.94**	**124**	P	P	10 53 55.6	-0.1
	0.2nm,0.6s,baz=310,slow=5.3,SNR=4.2						
YKA	**Yellowknife Ar**	**86.26**	**2**	P	P	10 54 17.2	+0.1
	0.2nm,0.6s,baz=352,slow=5.0,SNR=2.8						

*ISCJB **27** 10:59:58.6±0.6, 21°.37S±0°.06 × 69°.0W±0°.1, h97 km±7 km, mb3.5/4, Error ellipse: s-maj=17.0km s-min=7.9km az=159.3*
*GUC **27** 10:59:59.3±0.6, 21°.40S × 69°.16W, h95 km±5 km, ML4.2*
*IDC **27** 11:00:01.1±1.1, 21°.48S × 68°.89W, h107 km±13 km, mb3.4/5, mb1 3.6/7, mb1mx3.5/18, mbtmp3.3/7, Error ellipse: s-maj=24.6km s-min=21.0km az=92.0*
ISC 27 10:59:59.8±0.8, 21°.40S±0°.05 × 69°.15W±0°.10, h95 km±6 km, n21, σ1°.09/22, mb3.4/4, 3C-1D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB01	**Plate Boundary**	**0.47**	**319**	⇑*iP*	**Pn**	**11 00 14.8**	**-0.2**
PB01				*i*S	**Sn**	**11 00 26.4**	**0.0**
PB01				AML	AML	11 00 27.3	
	comp=E,29µm,0.2s						
PB07	**Plate Boundary**	**0.76**	**245**	⇑*iP*	**Pn**	**11 00 17.7**	**+0.2**
PB07				*i*S	**Sn**	**11 00 31.1**	**+0.3**
PB07				AML	AML	11 00 31.9	
	comp=N,9µm,0.3s						
PB04	**Plate Boundary**	**0.92**	**200**	⇑*iP*	Pn	11 00 23.9	+5.0
PB04				*i*S	Sn	11 00 42.1	+8.8
PB04				AML	AML	11 00 48.2	
	comp=N,4µm,0.1s						
LVC	**Limon Verde**	**1.23**	**170**	⇓*iP*	**Pn**	**11 00 23.1**	**+0.3**
LVC				*i*S	**Sn**	**11 00 40.9**	**+0.9**
LVC	**Limon Verde**	**1.23**	**170**	P	**Pn**	**11 00 23.1**	**+0.3**
	comp=N,99nm,0.3s,baz=19,slow=11,SNR=1047						
LVC				S	**Sn**	**11 00 41.0**	**+0.9**
	comp=N,490nm,0.3s,baz=107,slow=19,SNR=134						
PSGC	**Pisagua**	**2.01**	**333**	*i*P	**Pn**	**11 00 32.0**	**-0.5**
PSGC				*i*S	**Sn**	**11 00 57.4**	**0.0**
PSGC				AML	AML	11 00 58.6	
	comp=N,1µm,0.5s						
CEN1	**Los Morros**	**2.20**	**206**	AML	AML	11 01 16.9	
	comp=E,695nm,0.3s						
MNMC	**Minimini**	**2.30**	**349**	*e*P	**Pn**	**11 00 36.6**	**+0.2**
MNMC				AML	AML	11 01 16.8	
	comp=E,2µm,0.4s						
ARCH	**Arica**	**3.09**	**339**	AML	AML	11 01 34.5	
	comp=N,1µm,0.4s						
LPAZ	**La Paz**	**5.18**	**11**	P	**Pn**	**11 01 17.6**	**+2.1**
	comp=N,3.1nm,0.3s,baz=216,slow=4.9,SNR=82						
CFAA	**Coronel Fontan**	**10.20**	**176**	P	Pn	11 02 19.6	-3.6
	comp=N,0.0nm,0.3s,baz=10,slow=19,SNR=5.0						
CFAA				S	Sn	11 04 05.9	-10
	comp=N,0.1nm,0.3s,baz=95,slow=18,SNR=3.3						
CPUP	**Villa Florida**	**11.88**	**117**	P	Pn	11 02 42.0	-3.9
	comp=N,0.4nm,0.3s,baz=278,slow=8.7,SNR=4.4						
BDFB	**Brasilia**	**20.84**	**78**	P	**P**	**11 04 31.8**	**-2.3**
	comp=N,2.5nm,0.5s,baz=230,slow=7.9,SNR=3.7						
TXAR	**Lajitas Array**	**60.42**	**325**	P	**P**	**11 10 00.4**	**+0.9**
	comp=N,0.1nm,0.5s,baz=153,slow=10,SNR=2.4						
NVAR	**Mina Array Bea**	**75.28**	**322**	P	**P**	**11 11 34.6**	**+1.9**
	comp=N,0.3nm,0.7s,baz=144,slow=7.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**77.53**	**70**	P	**P**	**11 11 45.2**	**-0.5**
	comp=N,0.3nm,0.4s,baz=254,slow=5.0,SNR=7.5						
TORD				pP	**pP**	**11 12 10.2**	**-0.2**
	comp=N,2.8nm,0.8s,baz=249,slow=5.3,SNR=12						
YKA	**Yellowknife Ar**	**91.02**	**341**	P	**P**	**11 12 53.0**	**+0.2**
	comp=N,1.3nm,0.6s,baz=136,slow=4.4,SNR=20						
ASAR	**Alice Springs**	**129.89**	**208**	PKP	**PKPdf**	**11 18 58.0**	**-1.0**
	comp=N,0.3nm,0.9s,baz=127,slow=1.5,SNR=3.7						
WRA	**Warramunga Arr**	**132.92**	**211**	PKP	**PKPdf**	**11 19 04.0**	**-0.8**
	comp=N,0.7nm,1.1s,baz=154,slow=1.5,SNR=6.0						
BVAR	**Borovoye Array**	**135.84**	**34**	PKP	**PKPdf**	**11 19 07.5**	**-1.7**
	comp=N,0.3nm,0.4s,baz=315,slow=2.0,SNR=2.5						
MKAR	**Makanchi Array**	**145.69**	**36**	PKPbc	**PKPab**	**11 19 27.9**	**-0.1**
	comp=N,0.4nm,0.7s,baz=308,slow=6.0,SNR=4.7						
MKAR				pPKPbc	pPKPbc	11 19 55.3	+1.7
	comp=N,0.6nm,0.8s,baz=291,slow=3.8,SNR=3.8						

*ISCJB **27** 11:16:19.9±0.3, 50°.90N±0°.02 × 6°.11E±0°.03, h24 km±2 km, Error ellipse: s-maj=3.4km s-min=2.8km az=40.2*
*CSEM **27** 11:16:19.8±0.1, 50°.90N × 6°.13E, h19 km, ML2.8/17, Error ellipse: s-maj=1.8km s-min=1.7km az=159.0*
*LDG **27** 11:16:20.4±0.1, 50°.89N × 6°.11E, h15 km, Md2.8/3, Ml2.6/19, Error ellipse: s-maj=1.0km s-min=0.9km az=141.0*
*BGR **27** 11:16:20.4±0.3, 50°.91N × 6°.15E, h10 km, ML2.0/3, Error ellipse: s-maj=5.6km s-min=2.2km az=118.0*
*BNS **27** 11:16:20.6±0.7, 50°.91N × 6°.13E, h15 km±5 km, ML2.0*
*UCC **27** 11:16:20.6±0.3, 50°.90N × 6°.12E, h16 km, ML1.8*
ISC 27 11:16:18.8±0.8, 50°.90N±0°.01 × 6°.09E±0°.01, h19 km±1 km, n102, σ1°.37/187, 7C-1D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RDC	**Rolduc**	**0.03**	**182**	*e*Pg	**Pg**	**11 16 23.3**	**+1.2**
RDC				*e*Sg	**Sg**	**11 16 25.3**	**+1.0**
RDC	**Rolduc**	**0.03**	**182**	*e*Pg	**Pg**	**11 16 23.3**	**+1.2**
RDC				*e*Sg	**Sg**	**11 16 25.3**	**+1.0**
HGN	**Heimansgroeve**	**0.17**	**216**	*e*Pg	**Pg**	**11 16 24.8**	**+1.4**
HGN				*e*Sg	**Sg**	**11 16 27.7**	**+1.3**
HGN	**Heimansgroeve**	**0.17**	**216**	*e*Pg	**Pg**	**11 16 24.8**	**+1.4**
	206nm,0.1s						
HGN				*e*Sg	**Sg**	**11 16 27.6**	**+1.3**
HGN	**Heimansgroeve**	**0.17**	**216**	Pg	**Pg**	**11 16 24.8**	**+1.4**
HGN				Sg	**Sg**	**11 16 27.7**	**+1.3**
DREG	**Dreilaegerbach**	**0.25**	**158**	⇑*iP*g	**Pb**	**11 16 26.0**	**+1.4**
DREG				*i* Sg	**Sb**	**11 16 29.9**	**+1.5**
	322nm,0.2s						
DREG	**Dreilaegerbach**	**0.25**	**158**	Pg	**Pb**	**11 16 26.0**	**+1.4**
DREG				Sg	**Sb**	**11 16 29.9**	**+1.5**
	322nm,0.2s						
RODG	**Roetgen-Dahlhe**	**0.25**	**14**	⇑*iP*g	**Pb**	**11 16 25.8**	**+1.2**
RODG				*e*Sg	**Sg**	**11 16 29.7**	**+1.1**
	692nm,0.2s						
RODG	**Roetgen-Dahlhe**	**0.25**	**14**	Pg	**Pb**	**11 16 25.8**	**+1.2**
RODG				Sg	**Sg**	**11 16 29.7**	**+1.1**
	692nm,0.2s						
BEBN	**Eben Emael**	**0.28**	**249**	⇑P	**Pb**	**11 16 26.6**	**+1.5**
BEBN				S	**Sb**	**11 16 30.7**	**+1.3**
	comp=E,85nm,0.2s						
BEBN	**Eben Emael**	**0.28**	**249**	P	**Pb**	**11 16 26.6**	**+1.5**
BEBN				S	**Sb**	**11 16 30.6**	**+1.3**
	comp=E,85nm,0.2s						
BD11	**Borschemich**	**0.28**	**50**	*e*Pg	**Pb**	**11 16 26.3**	**+1.0**
KLL	**Kalltalsperre**	**0.29**	**150**	⇑*iP*g	**Pb**	**11 16 26.5**	**+1.1**
KLL				*e*Sg	**Sb**	**11 16 30.7**	**+1.0**
	comp=E,138nm,0.1s						
KLL	**Kalltalsperre**	**0.29**	**150**	Pg	**Pb**	**11 16 26.5**	**+1.1**
KLL				Sg	**Sb**	**11 16 30.7**	**+1.0**
	comp=E,138nm,0.1s						
MEM	**Membach**	**0.29**	**190**	⇑P	**Pb**	**11 16 26.8**	**+1.3**
MEM				S	**Sb**	**11 16 31.1**	**+1.2**
MEM	**Membach**	**0.29**	**190**	*e*Pg	**Pb**	**11 16 26.7**	**+1.3**
MEM				*e*Sg	**Sb**	**11 16 31.0**	**+1.2**
MEM	**Membach**	**0.29**	**190**	P	**Pb**	**11 16 26.7**	**+1.3**
MEM				S	**Sb**	**11 16 31.0**	**+1.2**
HKB	**Herkenbosch**	**0.30**	**10**	P	**Pb**	**11 16 26.5**	**+1.0**
HKB				S	**Sb**	**11 16 31.1**	**+1.1**
	comp=E,84nm,0.2s						
BD09	**Hochneukirch**	**0.31**	**50**	*e*Pg	**Pb**	**11 16 26.8**	**+1.0**
BD03	**Millendorf**	**0.31**	**72**	*e*Pg	**Pb**	**11 16 26.9**	**+1.1**
BOPT	**Opiter**	**0.36**	**307**	P	**Pn**	**11 16 28.3**	**-0.7**
BLCH	**La Chartreuse**	**0.40**	**230**	P	**Pb**	**11 16 28.8**	**+1.4**
BLCH				S	**Sb**	**11 16 34.4**	**+1.2**
	comp=E,24nm,0.2s						
BSTI	**Sart Tilman**	**0.46**	**227**	P	**Pb**	**11 16 29.7**	**+1.4**
STB	**Steinbach**	**0.57**	**122**	⇓*iP*g	**Pg**	**11 16 31.4**	**+1.3**
STB				*e*Sg	**Sg**	**11 16 38.5**	**+0.7**
	comp=E,45nm,0.2s						
STB	**Steinbach**	**0.57**	**122**	Pg	**Pg**	**11 16 31.4**	**+1.3**
STB				Sg	**Sg**	**11 16 38.5**	**+0.7**
	comp=E,45nm,0.2s						
BMOL	**Mol**	**0.71**	**297**	P	**Pn**	**11 16 34.6**	**+0.8**
BMOL				S	**Sn**	**11 16 44.3**	**+0.2**
LAUG	**Laupendahl**	**0.71**	**50**	*e*Pg	**Pg**	**11 16 33.0**	**+0.3**
LAUG	**Laupendahl**	**0.71**	**50**	Pg	**Pg**	**11 16 33.0**	**+0.3**
HILG	**Hillesheim**	**0.71**	**148**	*e*Pg	**Pn**	**11 16 34.1**	**+0.2**
HILG				*i* Sg	**Sg**	**11 16 43.5**	**+1.1**
	comp=E,53nm,0.3s						
HILG	**Hillesheim**	**0.71**	**148**	Pg	**Pn**	**11 16 34.2**	**+0.2**
HILG				Sg	**Sg**	**11 16 43.5**	**+1.1**
	comp=E,53nm,0.3s						
HOBG	**Hohbusch**	**0.79**	**83**	*e*Pg	**Pn**	**11 16 35.5**	**+0.5**
HOBG				*e*Sg	**Sb**	**11 16 44.7**	**+0.4**
	comp=E,89nm,0.4s						
HOBG	**Hohbusch**	**0.79**	**83**	Pg	**Pn**	**11 16 35.5**	**+0.5**
HOBG				Sg	**Sb**	**11 16 44.7**	**+0.4**
	comp=E,89nm,0.4s						
LKLB	**Kalborn**	**0.80**	**179**	P	**Pn**	**11 16 35.7**	**+0.6**
LKLB				S	**Sb**	**11 16 45.8**	**+1.3**
	comp=E,17nm,0.2s						
BGES	**Gesves**	**0.82**	**231**	P	**Pn**	**11 16 36.3**	**+1.0**
BGES				S	**Sn**	**11 16 47.6**	**+0.7**
BUG	**Bochum--Univer**	**0.92**	**53**	*e*Pg	**Pn**	**11 16 37.3**	**+0.5**
BUG				*e*Sg	**Sg**	**11 16 48.6**	**-0.3**
RCHB	**Rochefort**	**0.92**	**217**	P	**Pg**	**11 16 37.8**	**+1.0**
LVIA	**Vianden**	**0.97**	**176**	P	**Pg**	**11 16 38.9**	**+1.3**
LVIA				S	**Sg**	**11 16 51.2**	**+0.9**
	comp=E,39nm,0.2s						
BGG	**Burgeitz**	**1.06**	**130**	*e*Pg	**Pn**	**11 16 39.3**	**+0.7**
BGG				*e*Sg	**Sb**	**11 16 52.6**	**+0.8**
	comp=E,24nm,0.2s						
BGG	**Burgeitz**	**1.06**	**130**	Pg	**Pn**	**11 16 39.3**	**+0.7**
BGG				Sg	**Sb**	**11 16 52.7**	**+0.8**
	comp=E,24nm,0.2s						
GIVF	**Givet**	**1.13**	**226**	*e*Pn	**Pb**	**11 16 40.5**	**+0.7**
	SNR=1.0						
GIVF	**Givet**	**1.13**	**226**	*e*Pg	**Pg**	**11 16 41.5**	**+0.7**
	SNR=1.0						
GIVF				*e*Sn	**Sb**	**11 16 54.9**	**+0.8**
GIVF				*e*Sg	**Sg**	**11 16 56.9**	**+1.3**
	comp=E,80nm,0.2s						
GIVF	**Givet**	**1.13**	**226**	*e*Pn	**Pb**	**11 16 40.5**	**+0.7**
	SNR=1.0						
GIVF	**Givet**	**1.13**	**226**	*e*Pg	**Pg**	**11 16 41.5**	**+0.7**
	SNR=1.0						
GIVF				*e*Sn	**Sb**	**11 16 54.9**	**+0.8**
GIVF				*e*Sg	**Sg**	**11 16 56.9**	**+1.3**
	comp=E,40nm,0.2s						
KOE	**Koeppel**	**1.15**	**114**	*e*Pg	**Pb**	**11 16 40.6**	**+0.5**
KOE	**Koeppel**	**1.15**	**114**	Pg	**Pb**	**11 16 40.6**	**+0.5**
WTSB	**Winterswijk**	**1.16**	**22**	*e*Pg	**Pg**	**11 16 41.3**	**0.0**
WTSB				*e*Sg	**Sg**	**11 16 56.2**	**-0.2**
WTSB	**Winterswijk**	**1.16**	**22**	*e*Pg	**Pg**	**11 16 41.2**	**0.0**
	comp=E,5.8nm,0.2s						
WTSB				*e*Sg	**Sg**	**11 16 56.6**	**+0.2**
WTSB	**Winterswijk**	**1.16**	**22**	Pg	**Pg**	**11 16 41.3**	**0.0**
WTSB				Sg	**Sg**	**11 16 56.2**	**-0.2**
BRQR	**Ronquières**	**1.22**	**257**	P	**Pg**	**11 16 43.0**	**+0.7**
WLF	**Walferdange**	**1.24**	**178**	⇑P	**Pg**	**11 16 43.4**	**+0.6**
WLF	**Walferdange**	**1.24**	**178**	*e*Pg	**Pg**	**11 16 44.4**	**+1.7**
WLF				*e*Sg	**Sg**	**11 16 59.3**	**+0.4**
WLF	**Walferdange**	**1.24**	**178**	P	**Pg**	**11 16 43.3**	**+0.6**
WLF	**Walferdange**	**1.24**	**178**	Pg	**Pg**	**11 16 44.4**	**+1.7**
WLF				Sg	**Sg**	**11 16 59.3**	**+0.4**
DOU	**Dourbes**	**1.25**	**230**	⇑P	**Pg**	**11 16 43.2**	**+0.3**
DOU				S	**Sg**	**11 16 59.6**	**+0.5**
	comp=N,15nm,0.1s						
DOU	**Dourbes**	**1.25**	**230**	P	**Pg**	**11 16 43.1**	**+0.3**
DOU				S	**Sg**	**11 16 59.6**	**+0.5**
	comp=N,15nm,0.1s						
BBOU	**Bougnies**	**1.46**	**250**	P	**Pb**	**11 16 46.3**	**+1.0**
BAIF	**Baives**	**1.47**	**236**	*e*P	**Pb**	**11 16 46.3**	**+0.9**
	SNR=1.0						
BAIF	**Baives**	**1.47**	**236**	*e*Pg	**Pg**	**11 16 48.4**	**+1.4**
BAIF				*e*Sn	**Sn**	**11 17 03.1**	**+0.2**
	comp=N,26nm,0.3s						
BAIF	**Baives**	**1.47**	**236**	*e*P	**Pb**	**11 16 46.3**	**+0.9**
	SNR=1.0						
BAIF	**Baives**	**1.47**	**236**	*e*Pg	**Pg**	**11 16 48.4**	**+1.4**
BAIF				*e*Sn	**Sn**	**11 17 03.1**	**+0.2**
	comp=N,13nm,0.3s						
PAGF	**Fort de Pagny**	**2.36**	**186**	*e*Pn	**Pn**	**11 16 56.7**	**+0.2**
	baz=9.1						
PAGF	**Fort de Pagny**	**2.36**	**186**	*e*Pg	**Pg**	**11 17 04.3**	**+0.3**
	baz=12						
PAGF				*e*Sg	**Sg**	**11 17 35.0**	**+0.4**
	comp=N,1.8nm,0.3s						
PAGF	**Fort de Pagny**	**2.36**	**186**	*e*Pn	**Pn**	**11 16 56.7**	**+0.2**
	baz=9.1						
PAGF	**Fort de Pagny**	**2.36**	**186**	*e*Pg	**Pg**	**11 17 04.3**	**+0.3**
	baz=12						
PAGF				*e*Sg	**Sg**	**11 17 35.0**	**+0.4**
	comp=N,0.9nm,0.3s						
MEZF	**Maizieres J'vi**	**2.49**	**196**	*e*Pg	**Pg**	**11 17 06.6**	**0.0**
	baz=25,SNR=1.0						
MEZF				*e*Sn	**Sn**	**11 17 26.8**	**-1.4**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**11 17 38.8**	**-0.1**
	comp=N,7.3nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**2.49**	**196**	*e*Pg	**Pg**	**11 17 06.6**	**0.0**
	baz=25,SNR=1.0						
MEZF				*e*Sn	**Sn**	**11 17 26.8**	**-1.4**
	SNR=1.0						
MEZF				*e*Sg	**Sg**	**11 17 38.8**	**-0.1**
	comp=N,3.7nm,0.3s,SNR=1.0						
CDF	**Champ du Feu**	**2.61**	**162**	*e*Pn	**Pn**	**11 17 00.5**	**+0.5**
CDF	**Champ du Feu**	**2.61**	**162**	*e*Pg	**Pg**	**11 17 08.8**	**0.0**
CDF				*e*Sn	**Sn**	**11 17 29.3**	**-1.9**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**11 17 42.3**	**-0.3**
	comp=N,5.2nm,0.5s,SNR=1.0						
CDF	**Champ du Feu**	**2.61**	**162**	*e*Pn	**Pn**	**11 17 00.5**	**+0.5**
CDF	**Champ du Feu**	**2.61**	**162**	*e*Pg	**Pg**	**11 17 08.8**	**0.0**
CDF				*e*Sn	**Sn**	**11 17 29.3**	**-1.9**
	SNR=1.0						
CDF				*e*Sg	**Sg**	**11 17 42.3**	**-0.3**
	comp=N,2.6nm,0.5s,SNR=1.0						
SFTF	**Sexfontaines**	**2.78**	**195**	*e*Pg	**Pg**	**11 17 12.3**	**+0.2**
SFTF				*e*Sg	**Sg**	**11 17 47.8**	**-0.3**
	comp=N,6.1nm,0.2s						
SFTF	**Sexfontaines**	**2.78**	**195**	*e*Pg	**Pg**	**11 17 12.3**	**+0.2**
SFTF				*e*Sg	**Sg**	**11 17 47.8**	**-0.3**
	comp=N,3.0nm,0.2s						
HAU	**Haudompre**	**2.90**	**177**	*e*Pg	**Pg**	**11 17 14.0**	**-0.4**
HAU				*e*Sn	**Sn**	**11 17 36.4**	**-1.9**
HAU				*e*Sg	**Sg**	**11 17 51.8**	**-0.2**
	comp=N,3.6nm,0.2s,SNR=1.0						
HAU	**Haudompre**	**2.90**	**177**	*e*Pg	**Pg**	**11 17 14.0**	**-0.4**
HAU				*e*Sn	**Sn**	**11 17 36.4**	**-1.9**
HAU				*e*Sg	**Sg**	**11 17 51.8**	**-0.2**
	comp=N,1.8nm,0.2s,SNR=1.0						
HINF	**Hinteralfeld**	**3.12**	**170**	*e*Pg	**Pg**	**11 17 18.2**	**-0.5**
HINF				*e*Sg	**Sg**	**11 17 58.2**	**-1.0**
	comp=N,1.9nm,0.2s						
HINF	**Hinteralfeld**	**3.12**	**170**	*e*Pg	**Pg**	**11 17 18.2**	**-0.5**
HINF				*e*Sg	**Sg**	**11 17 58.2**	**-1.0**
	comp=N,0.9nm,0.2s						
LOR	**Lormes**	**3.92**	**203**	*e*Pn	**Pn**	**11 17 18.6**	**+0.7**
	baz=17						
LOR	**Lormes**	**3.92**	**203**	*e*Pg	**Pg**	**11 17 33.0**	**-0.8**
	baz=20						
LOR				*e*Sn	**Sn**	**11 18 01.0**	**-2.4**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**11 18 22.0**	**-2.5**
	comp=N,2.7nm,0.3s,SNR=1.0						
LOR	**Lormes**	**3.92**	**203**	*e*Pn	**Pn**	**11 17 18.6**	**+0.7**
	baz=17						
LOR	**Lormes**	**3.92**	**203**	*e*Pg	**Pg**	**11 17 33.0**	**-0.8**
	baz=20						
LOR				*e*Sn	**Sn**	**11 18 01.0**	**-2.4**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**11 18 22.0**	**-2.5**
	comp=N,1.4nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**4.20**	**205**	*e*Pn	**Pn**	**11 17 21.8**	**0.0**
	SNR=1.0						
SSF	**Saint Saulge**	**4.20**	**205**	*e*Pg	**Pg**	**11 17 37.8**	**-1.4**
SSF				*e*Sn	**Sn**	**11 18 07.7**	**-2.6**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**11 18 32.0**	**-1.5**
	comp=N,3.5nm,0.4s,SNR=1.0						
SSF	**Saint Saulge**	**4.20**	**205**	*e*Pn	**Pn**	**11 17 21.8**	**0.0**
	SNR=1.0						
SSF	**Saint Saulge**	**4.20**	**205**	*e*Pg	**Pg**	**11 17 37.8**	**-1.4**
SSF				*e*Sn	**Sn**	**11 18 07.7**	**-2.6**
	SNR=1.0						
SSF				*e*Sg	**Sg**	**11 18 32.0**	**-1.5**
	comp=N,1.8nm,0.4s,SNR=1.0						
HYF	**Humbligny**	**4.28**	**213**	*e*Pn	**Pn**	**11 17 23.8**	**+0.9**
HYF	**Humbligny**	**4.28**	**213**	*e*Pn	**Pn**	**11 17 23.8**	**+0.9**
CABF	**La Chapelle**	**4.29**	**180**	*e*Pn	**Pn**	**11 17 24.1**	**+0.9**
CABF	**La Chapelle**	**4.29**	**180**	*e*Pn	**Pn**	**11 17 24.1**	**+0.9**
AVF	**Avril sur Loir**	**4.49**	**205**	*e*Pn	**Pn**	**11 17 26.8**	**+1.0**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**11 18 14.2**	**-3.3**
	comp=N,0.5nm,0.2s						
AVF	**Avril sur Loir**	**4.49**	**205**	*e*Pn	**Pn**	**11 17 26.8**	**+1.0**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**11 18 14.2**	**-3.3**
	comp=N,0.2nm,0.2s						
SMF	**Signal de Mont**	**4.51**	**200**	*e*Pn	**Pn**	**11 17 26.5**	**+0.4**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**11 18 15.0**	**-2.9**
SMF				*e*Sg	**Sg**	**11 18 40.6**	**-2.8**
	comp=N,1.6nm,0.2s,SNR=1.0						
SMF	**Signal de Mont**	**4.51**	**200**	*e*Pn	**Pn**	**11 17 26.5**	**+0.4**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**11 18 15.0**	**-2.9**
SMF				*e*Sg	**Sg**	**11 18 40.6**	**-2.8**
	comp=N,0.8nm,0.2s,SNR=1.0						
FLN	**La Foliniere**	**4.76**	**246**	*e*Pn	**Pn**	**11 17 30.3**	**+0.8**
	baz=60,SNR=1.0						
FLN				*e*Sn	**Sn**	**11 18 21.5**	**-2.6**
FLN				*e*Sg	**Sg**	**11 18 50.1**	**-1.3**
	comp=N,1.9nm,0.3s,SNR=1.0						
FLN	**La Foliniere**	**4.76**	**246**	*e*Pn	**Pn**	**11 17 30.3**	**+0.8**
	baz=60,SNR=1.0						
FLN				*e*Sn	**Sn**	**11 18 21.5**	**-2.6**
FLN				*e*Sg	**Sg**	**11 18 50.1**	**-1.3**
	comp=N,0.9nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**4.84**	**208**	*e*Pn	**Pn**	**11 17 31.8**	**+1.1**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**11 18 23.1**	**-3.1**
	comp=N,2.5nm,0.4s,SNR=1.0						
BGF	**Bois d'Agland**	**4.84**	**208**	*e*Pn	**Pn**	**11 17 31.8**	**+1.1**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**11 18 23.1**	**-3.1**
	comp=N,1.2nm,0.4s,SNR=1.0						
GRR	**Gorron**	**5.16**	**244**	*e*Pn	**Pn**	**11 17 36.2**	**+1.2**
GRR				*e*Sn	**Sn**	**11 18 31.2**	**-2.9**
	comp=N,1.5nm,0.2s,SNR=1.0						
GRR	**Gorron**	**5.16**	**244**	*e*Pn	**Pn**	**11 17 36.2**	**+1.2**
GRR				*e*Sn	**Sn**	**11 18 31.2**	**-2.9**
	comp=N,0.8nm,0.2s,SNR=1.0						
SGMF	**Saint Gilles**	**6.21**	**248**	*e*Pn	**Pn**	**11 17 49.9**	**+0.5**
	SNR=1.0						
SGMF				*e*Sn	**Sn**	**11 18 56.3**	**-3.6**
	comp=N,0.6nm,0.3s						
SGMF	**Saint Gilles**	**6.21**	**248**	*e*Pn	**Pn**	**11 17 49.9**	**+0.5**
	SNR=1.0						
ROSF	**Rostrenen**	**6.60**	**251**	*e*Sn	**Sn**	**11 19 05.3**	**-4.1**
	comp=N,0.7nm,0.3s						
QUIF	**Quistinic**	**6.73**	**247**	*e*Sn	**Sn**	**11 19 08.3**	**-4.4**
	comp=N,0.3nm,0.3s						

*ISCJB **27** 11:20:04.9±0.6, 40°.44N±0°.03 ×

TWG	**Pinlang** baz=322	**0.31**	**320**	⇓*i*	P	**Pn**	**11 25 48.2**	**-0.6**
TWG				*i*	S	**Sn**	**11 25 53.5**	**-0.3**
TAW	**Tawu** baz=226	**0.42**	**238**	*i*	P	**Pb**	**11 25 49.6**	**-0.5**
TAW					S	**Sb**	**11 25 56.0**	**-0.5**
EAST	**Anshuo** baz=236	**0.45**	**244**	⇓*i*	P	**Pb**	**11 25 50.0**	**-0.5**
EAST					*e*S	**Sb**	**11 25 56.4**	**-0.8**
CHKT	**Chengkung** baz=15	**0.52**	**8**	*i*	P	**Pn**	**11 25 51.3**	**-0.4**
CHKT					S	**Sn**	**11 25 59.2**	**-0.2**
LAY	**Lan-yu** baz=152	**0.59**	**155**	*e*	P	**Pn**	**11 25 52.5**	**-0.2**
LAY					*e*S	**Sn**	**11 26 01.7**	**+0.5**
SCZT	**Fangliau** baz=247	**0.65**	**251**	*e*	P	**Pn**	**11 25 53.5**	**0.0**
SCZT					*e*S	**Sn**	**11 26 02.5**	**-0.1**
ELDTW	**Lidau** baz=344	**0.65**	**338**	*e*	P	**Pn**	**11 25 52.1**	**-1.5**
ELDTW					*e*S	**Sn**	**11 26 00.5**	**-2.3**
SGLT	**Jiouru** baz=280	**0.75**	**281**	*e*	P	**Pn**	**11 25 55.1**	**+0.3**
HEN	**Hengchun** baz=209	**0.77**	**221**	*e*	P	**Pn**	**11 25 55.6**	**+0.6**
HEN					*e*S	**Sn**	**11 26 05.2**	**-0.3**
TWF1	**Yuli** baz=360	**0.77**	**1**	*e*	P	**Pn**	**11 25 53.5**	**-1.6**
TWF1					*e*S	**Sn**	**11 26 02.8**	**-2.8**
TSEB	**Hengchuen, Pin** baz=200	**0.77**	**208**	*e*	P	**Pn**	**11 25 55.2**	**+0.1**
TSEB					*e*S	**Sn**	**11 26 06.2**	**+0.7**
TWK1	**Hengchun** baz=203	**0.78**	**215**	*e*	P	**Pn**	**11 25 54.6**	**-0.7**
TWK1					*e*S	**Sn**	**11 26 05.2**	**-0.5**
TWM1	**Shoushan** baz=287	**0.83**	**287**	*e*	P	**Pn**	**11 25 56.9**	**+0.9**
WTP	**Ta-pu** baz=318	**0.91**	**317**		P	**Pn**	**11 25 57.5**	**+0.4**
WTP					*e*S	**Sn**	**11 26 10.0**	**+1.0**
CHN1	**Nanshi** baz=312	**0.92**	**311**	*e*	P	**Pn**	**11 25 57.8**	**+0.6**
CHN1					*e*S	**Sn**	**11 26 10.3**	**+1.0**
EHY	**Hungye** baz=6.0	**0.92**	**2**	*e*	P	**Pn**	**11 25 55.7**	**-1.5**
EHY					*e*S	**Sn**	**11 26 06.5**	**-2.8**
YUS	**Yu-Shan** baz=352	**0.95**	**341**	*e*	P	**Pn**	**11 25 57.8**	**-0.3**
YUS					*e*S	**Sn**	**11 26 09.6**	**-1.2**
CHN3	**Shinhua** baz=301	**0.98**	**300**	*e*	P	**Pn**	**11 25 57.4**	**-0.7**
TWK	**Hsinying** baz=314	**1.00**	**313**	*e*	P	**Pn**	**11 25 59.2**	**+0.8**
TWK					*e*S	**Sn**	**11 26 11.8**	**+0.4**
ALS	**Alishan** baz=337	**1.02**	**335**		P	**Pn**	**11 25 59.1**	**+0.2**
ALS					*e*S	**Sn**	**11 26 12.4**	**+0.1**
CHN5	**Tsauling** baz=332	**1.15**	**331**	*e*	P	**Pn**	**11 26 01.2**	**+0.7**
CHN5					*e*S	**Sn**	**11 26 16.1**	**+0.9**
SCLT	**Jiali** baz=301	**1.17**	**301**	*e*	P	**Pn**	**11 25 59.5**	**-1.1**
CHY	**Chiayi** baz=320	**1.21**	**319**	*e*	P	**Pn**	**11 26 00.5**	**-0.7**
ESL	**Shilin** baz=9.0	**1.23**	**6**	*e*	P	**Pn**	**11 25 59.9**	**-1.6**
ESL					*e*S	**Sn**	**11 26 13.9**	**-3.1**
CHN8	**Yiju** baz=308	**1.25**	**308**	*e*	P	**Pn**	**11 26 02.1**	**+0.4**
SMLT	**Sun Moon Lake** baz=347	**1.34**	**345**	*e*	P	**Pn**	**11 26 04.0**	**+0.8**
SMLT					*e*S	**Sn**	**11 26 21.3**	**+1.4**
TYC	**Yuchr** baz=346	**1.37**	**343**		P	**Pn**	**11 26 04.1**	**+0.7**
TYC					*e*S	**Sn**	**11 26 21.3**	**+0.8**
TWD	**Chiawan** baz=13	**1.52**	**11**	*e*	P	**Pn**	**11 26 03.5**	**-1.9**
TWT	**Tachien** baz=7.0	**1.67**	**357**	*e*	P	**Pn**	**11 26 08.1**	**+0.4**
TWT					*e*S	**Sn**	**11 26 28.5**	**+0.5**
TWQ1	**Liyutan** baz=346	**1.82**	**345**	*e*	P	**Pn**	**11 26 11.4**	**+1.8**
TWQ1					*e*S	**Sn**	**11 26 32.3**	**+0.8**
NNS	**Nan Shan** baz=12	**1.85**	**2**	*e*	P	**Pn**	**11 26 12.2**	**+2.1**
NNS					*e*S	**Sn**	**11 26 32.7**	**+0.2**
ENA	**Nanau** baz=15	**1.88**	**13**	*e*	P	**Pn**	**11 26 10.6**	**+0.1**
NSY	**Sanyi** baz=348	**1.89**	**345**	*e*	P	**Pn**	**11 26 10.8**	**+0.2**
NSTT	**Nanjuang** baz=340	**2.06**	**353**	*e*	P	**Pn**	**11 26 15.9**	**+3.0**
NSTT					*e*S	**Sn**	**11 26 37.0**	**-0.3**
TWC	**Suao** baz=16	**2.08**	**14**	*e*	P	**Pn**	**11 26 14.7**	**+1.5**
NSK	**Sanguang** baz=14	**2.08**	**2**	*e*	P	**Pn**	**11 26 14.1**	**+0.8**
NSK					*e*S	**Sn**	**11 26 38.2**	**+0.1**
TWE	**Neicheng** baz=11	**2.16**	**9**	*e*	P	**Pn**	**11 26 14.3**	**+0.1**
TWE					*e*S	**Sn**	**11 26 40.6**	**+0.7**
YOJ	**Yonaguni jima**	**2.45**	**40**		P	**Pn**	**11 26 18.5**	**+0.2**
YOJ					*e*S	**Sn**	**11 26 46.9**	**-0.2**
HATJ	**Hateruma jima**	**2.74**	**57**		P	**Pn**	**11 26 22.4**	**+0.1**
HATJ					*e*S	**Sn**	**11 26 54.4**	**+0.1**
IRIF	**Iriomote-Funau**	**2.84**	**52**		P	**Pn**	**11 26 24.3**	**+0.6**
IRIF					*e*S	**Sn**	**11 26 57.9**	**+1.1**
JKRS	**Kuro-shima**	**3.00**	**56**		P	**Pn**	**11 26 26.3**	**+0.5**
JKRS					*e*S	**Sn**	**11 27 01.6**	**+1.0**
JIJ	**Ishigaki jima**	**3.17**	**55**		P	**Pn**	**11 26 28.6**	**+0.5**
JIJ					*e*S	**Sn**	**11 27 04.8**	**0.0**
JTJ	**Tarama**	**3.74**	**56**		P	**Pn**	**11 26 36.3**	**+0.2**
JTJ					*e*S	**Sn**	**11 27 19.6**	**+0.6**

IDC 27 11:29:52.8±1.3, 42°.86S×72°.36W, h0km, mb3.6/5, mb1 3.9/6, mb1mx3.8/18, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=42.0km s-min=16.7km az=120.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
PLCA	**Paso Flores** 3.3nm,0.3s,baz=214,slow=17,SNR=47	**2.52**	**33**	Pn		Pn	11 30 36.3	+1.2
PLCA	11nm,0.3s,baz=216,slow=16,SNR=102			Pg		Pb	11 30 39.1	+0.1
PLCA	10nm,0.3s,baz=121,slow=19,SNR=8.4			Lg		Lg	11 31 13.3	
LVC	**Limon Verde** 2.8nm,0.7s,baz=192,slow=14,SNR=2.8	**20.39**	**9**	P		P	11 34 31.2	-0.3
CPUP	**Villa Florida** 0.5nm,0.4s,baz=225,slow=13	**20.56**	**41**	P		P	11 34 32.0	-1.0
VNDA	**Vanda** 1.4nm,1.1s,baz=133,slow=7.8,SNR=3.0	**55.39**	**192**	P		P	11 39 28.6	+0.5
TXAR	**Lajitas Array** 0.3nm,0.8s,baz=153,slow=8.0,SNR=5.2	**77.39**	**332**	P		P	11 41 49.8	+0.2
TORD	**Torodi Ar. Bea** 0.6nm,1.0s,baz=242,slow=3.1,SNR=2.3	**87.50**	**70**	P		P	11 42 42.0	-0.6

JMA 27 11:40:21.4±0.1, 37°.39N×138°.61E, h17km±2km, M2.0, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JIZZ	**Izumozaki**	**0.16**	**29**	P		Pb	11 40 25.9	-0.1
JIZZ				S		Sb	11 40 29.9	+0.9
JHK	**Hiroka**	**0.35**	**113**	P		Pg	11 40 28.4	-0.4
JHK				S		Sg	11 40 33.6	-0.2
JJN	**Nakama**	**0.46**	**231**	P		Pg	11 40 30.7	+0.1
JJN				S		Sb	11 40 37.5	0.0
JKT	**Katashina**	**0.81**	**140**	P		Pb	11 40 36.3	-0.8
JKT				S		Sb	11 40 47.1	-0.7
MAT	**Matsushiro**	**0.91**	**201**	P		Pb	11 40 37.5	-1.2
MAT				S		Sb	11 40 49.6	-0.9
MAT	**Matsushiro**	**0.91**	**201**	P		Pb	11 40 37.7	-1.0
MAT				S		Sb	11 40 49.6	-0.9
JSZ	**Suzu**	**0.99**	**274**	P		Pb	11 40 38.9	-1.3
JSZ				S		Sb	11 40 52.3	-0.7

NIED ***27*** *11:42:00, 39°.20N×141°.00E, h5km, Mw4.1 Best double couple: Mo1.55000×10¹⁵ NP1:φs186.00000°, δ53.00000°, λ96.00000°. NP2:φs186.00000°, δ38.00000°, λ82.00000°.*
IDC ***27*** *11:42:09.9±0.6, 39°.16N×140°.96E, h0km, mb4.1/23, mb1 4.2/26, mb1mx4.2/33, mbtmp4.0/26, ML3.1/4, MS3.2/9, Ms1 3.3/9, ms1mx3.0/42, Error ellipse: s-maj=14.9km s-min=11.7km az=121.0*
JMA ***27*** *11:42:11.1, 39°.19N×140°.95E, h7km, M4.2 Broadband fault plane solution: P waves. NP1:φs240.00000°, δ86.00000°, λ-142.00000°. NP2:φs147.00000°, δ52.00000°, λ-5.00000°. Principal axes: T Plg23.0000°, Azm7.0000°; N Plg51.0000°, Azm245.0000°; P Plg29.0000°, Azm111.0000°;*
JMA Felt II J1.
ISCJB ***27*** *11:42:11.1±0.4, 39°.19N±0°.02×140°.95E±0°.04, h18km±3km, mb4.3/44, MS3.3/4 Error ellipse: s-maj=5.0km s-min=3.9km az=6.9*
MOS ***27*** *11:42:13.4±1.1, 39°.19N×140°.82E, h33km, mb4.6/25, Error ellipse: s-maj=9.7km s-min=6.2km az=93.6*
NEIC ***27*** *11:42:16.0±0.6, 39°.16N×140°.93E, h44km±5km, mb4.4/9, Error ellipse: s-maj=7.4km s-min=4.9km az=127.0*
ISC 27 11:42:11.7±0.9, 39°.18N±0°.03×140°.94E±0°.03, h11km±6km, n134, σ1§12/142, mb4.4/44, MS3.4/4, 7C-7D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
JMK	**Ichinoseki**	**0.31**	**135**	⇓P		**Pg**	**11 42 17.2**	**-0.8**
JMK				*e*S		**Sg**	**11 42 21.7**	**-0.5**
JRG	**Rokugo**	**0.32**	**314**	⇓P		**Pg**	**11 42 17.7**	**-0.5**
JRG				S		**Sg**	**11 42 22.6**	**+0.1**
JOM	**Ohasama**	**0.41**	**43**	⇓P		**Pg**	**11 42 18.8**	**-0.9**
JOM				*e*S		**Sg**	**11 42 24.4**	**-0.7**
JYK	**Kaneyama**	**0.52**	**240**	⇑P		**Pg**	**11 42 21.3**	**-0.4**
JYK				*e*S		**Sg**	**11 42 28.5**	**-0.1**
JIO	**Ouri**	**0.79**	**156**	⇓P		**Pg**	**11 42 25.9**	**-1.0**
JIO				*e*S		**Sb**	**11 42 37.5**	**-0.5**
JOU	**Okura**	**0.83**	**195**	⇑P		**Pg**	**11 42 27.1**	**-0.7**
JOU				*e*S		**Sg**	**11 42 38.9**	**+0.2**
ERM	**Erimo**	**3.30**	**30**	*c*	*i* P	**Pn**	**11 43 05.6**	**+2.4**
ERM	comp=Z,69nm,1.2s				pmax	pmax		
ERM	**Erimo**	**3.30**	**30**	*e*	Pn	**Pn**	**11 43 04.7**	**+1.5**
ERM				*e*	Sn	**Sb**	**11 43 47.6**	**-2.8**
MJAR	**Matsushiro Arr**	**3.40**	**220**		Pn	**Pn**	**11 43 06.1**	**+1.5**
MJAR					Lg	Lg	11 43 59.0	
MJAR	**Matsushiro Arr**	**3.40**	**220**		Pn	**Pn**	**11 43 06.1**	**+1.5**
MJAR	comp=Z,0.9nm,0.3s,baz=23,slow=13,SNR=26				Pg	**Pb**	**11 43 12.2**	**+0.3**
MJAR	comp=Z,1.6nm,0.3s,baz=28,slow=13,SNR=58				Lg	Lg	11 43 59.0	
MJAR	comp=Z,1.0nm,0.3s,baz=96,slow=22,SNR=4.2				LR	LR	11 44 34.3	
MAJO	comp=Z,237nm,18.6s,baz=70,slow=42 **Matsushiro**	**3.40**	**220**	*e*	P	**Pn**	**11 43 06.6**	**+2.0**
MAJO	**Matsushiro**	**3.40**	**220**	*e*	Pn	**Pn**	**11 43 06.6**	**+2.0**
MAT	**Matsushiro**	**3.40**	**220**		P	**Pn**	**11 43 06.4**	**+1.8**
MAT					S	**Sb**	**11 43 50.5**	**-2.8**
ASAJ	**Asahikawa** comp=Z,2.5nm,0.6s	**5.09**	**14**		Pn	**Pn**	**11 43 29.7**	**+1.9**
ASAJ					Sn	**Sn**	**11 44 30.6**	**+4.0**
ASAJ	**Asahikawa** comp=Z,1.0nm,0.3s,baz=221,slow=16,SNR=14	**5.09**	**14**		Pn	**Pn**	**11 43 29.7**	**+1.9**
YUK	**Yuzh-Kuril'sk**	**6.10**	**36**	*d*	*i* P	Pn	11 43 47.3	+5.6
YUK					*i* S	Sn	11 44 59.4	+8.0
YUK	comp=E,31nm,0.4s				pmax	pmax		
YUK	comp=N,28nm,0.4s				pmax	pmax		
YUK	comp=Z,32nm,0.4s				pmax	pmax		
YUK	comp=N,47μm,0.6s				smax	smax		
YUK	comp=E,52μm,0.6s				smax	smax		
YUK	comp=Z,231nm,20.0s				MLR	MLR		
JHJ	**Hachijo jima 2** comp=Z,3.1nm,0.3s,baz=279,slow=0.5,SNR=4.9	**6.11**	**189**		Pn	**Pn**	**11 43 44.0**	**+2.1**
JHJ	comp=Z,2.1nm,0.3s,baz=73,slow=19,SNR=2.8				Sn	**Sn**	**11 44 53.0**	**+1.2**
YSS	**Yuzh-Sakhalins** comp=Z,40nm,1.0s	**7.89**	**9**	⇓	*e* P	**Pn**	**11 44 08.8**	**+2.6**
YSS					pmax	pmax		
USRK	**Ussuriysk Arra** comp=Z,0.4nm,0.3s,baz=115,slow=15,SNR=6.5	**8.36**	**310**		Pn	**Pn**	**11 44 14.8**	**+2.1**
USRK	comp=Z,227nm,18.1s,baz=176,slow=37				LR	LR	11 47 16.8	
MDJ	**Mudanjiang**	**10.05**	**306**		Pn	Pn	11 44 42.4	+6.5
JNU	**Nakatsue**	**10.12**	**236**		Pn	Pn	11 44 40.5	+3.5
JNU	**Nakatsue** comp=Z,0.1nm,0.3s,baz=58,slow=7.1,SNR=5.7	**10.12**	**236**		Pn	Pn	11 44 40.5	+3.5
JNU	comp=Z,151nm,20.0s,baz=59,slow=38				LR	LR	11 48 34.3	
HABR	**Khabarovsk**	**10.22**	**337**		P	**Pn**	**11 44 37.8**	**-0.3**
HABR					*e*		11 46 31.5	
HABR	comp=E,20nm,1.1s				pmax	pmax		
HABR	comp=Z,30nm,1.5s				pmax	pmax		
HABR	comp=N,19nm,1.5s				pmax	pmax		
HABR	comp=Z,139nm,15.0s				MLR	MLR		
KSRS	**Korea Array** comp=Z,0.8nm,0.3s,baz=78,slow=14,SNR=44	**10.37**	**265**		Pn	**Pn**	**11 44 41.9**	**+1.7**
KSRS	comp=Z,156nm,19.2s,baz=354,slow=35				LR	LR	11 48 16.2	
KSAR	**Wonju Array Be**	**10.40**	**265**		Pn	**Pn**	**11 44 41.9**	**+1.2**
KLR	**Kul'dur**	**12.01**	**330**	*e*	P	**Pn**	**11 45 02.7**	**0.0**
JOW	**Kunigami** comp=Z,18nm,1.2s	**16.23**	**224**		Pn	**Pn**	**11 45 59.3**	**-0.3**
PETK	**Petropavlovsk-** comp=Z,27nm,18.0s,baz=60,slow=41	**18.08**	**34**		LR	LR	11 54 26.5	
YAK	**Yakutsk**	**23.90**	**347**	*e*	P	**P**	**11 47 22.2**	**-2.9**
YAK	comp=Z,18nm,1.1s				pmax	pmax		
YAK	comp=N,12nm,1.1s				pmax	pmax		
YAK	comp=E,5.0nm,1.1s				pmax	pmax		
SONM	**Songino Array**	**26.32**	**301**		P	**P**	**11 47 48.0**	**+0.5**
SONM	**Songino Array** comp=E,0.6nm,0.6s,baz=106,slow=9.2,SNR=2.5	**26.32**	**301**		P	**P**	**11 47 48.0**	**+0.5**
SONM	comp=E,64nm,18.1s,baz=55,slow=37				LR	LR	11 58 33.4	
ENH	**Enshi** comp=E,5.6nm,0.4s	**27.22**	**261**	*e*	P	**P**	**11 47 56.4**	**+0.8**
BILL	**Bilibino**	**32.09**	**18**	*i*	P	**P**	**11 48 40.5**	**+2.2**
BILL				*e*			11 48 54.2	
BILL	comp=Z,4.0nm,1.0s				pmax	pmax		
BILL	**Bilibino** comp=Z,2.7nm,0.8s	**32.09**	**18**	*e*	P	**P**	**11 48 38.6**	**+0.2**
TIXI	**Tiksi**	**33.12**	**353**	⇑	*e* P	**P**	**11 48 46.4**	**-0.9**
TIXI	comp=Z,3.0nm,1.2s				pmax	pmax		
ZAA0	**Zalesovo Array**	**40.22**	**311**	*e*	P	**P**	**11 49 47.9**	**-0.1**
ZALV	**Zalesovo Beam**	**40.22**	**311**		P	**P**	**11 49 47.7**	**-0.2**
ZALV	comp=Z,3.0nm,0.7s				pmax	pmax		
ZALV	comp=Z,52nm,19.4s				MLR	MLR		
ZALV	**Zalesovo Beam**	**40.22**	**311**		P	**P**	**11 49 47.7**	**-0.2**
ZALV	**Zalesovo Beam** comp=Z,3.2nm,0.7s,baz=89,slow=7.6,SNR=14	**40.22**	**311**		P	**P**	**11 49 47.7**	**-0.2**
ZALV	comp=Z,52nm,19.4s,baz=69,slow=37				LR	LR	12 06 59.0	
CMAR	**Chiang Mai Arr**	**41.73**	**253**		P	**P**	**11 49 59.8**	**-0.9**
CMAR	**Chiang Mai Arr** comp=Z,0.4nm,0.3s,baz=45,slow=9.1,SNR=2.7	**41.73**	**253**		P	**P**	**11 49 59.8**	**-0.9**
MK31	**Makanchi Array**	**42.69**	**300**	*e*	P	**P**	**11 50 08.2**	**-0.2**
MK31	**Makanchi Array**	**42.69**	**300**	*e*	P	**P**	**11 50 08.2**	**-0.2**
MKAR	**Makanchi Array**	**42.69**	**300**		P	**P**	**11 50 08.3**	**-0.1**
MKAR	comp=Z,3.0nm,0.8s				pmax	pmax		
MKAR	comp=Z,39nm,18.3s				MLR	MLR		
MKAR	**Makanchi Array**	**42.69**	**300**		P	**P**	**11 50 08.3**	**-0.1**
MKAR	**Makanchi Array** comp=Z,3.0nm,0.8s,baz=83,slow=9.9,SNR=18	**42.69**	**300**		P	**P**	**11 50 08.3**	**-0.1**
MKAR	comp=Z,39nm,18.3s,baz=269,slow=37				LR	LR	12 08 22.7	
KURK	**Kurchatov**	**44.34**	**306**		P	**P**	**11 50 22.0**	**+0.4**
KURK	comp=Z,4.0nm,0.7s				pmax	pmax		
KURK	**Kurchatov**	**44.34**	**306**		P	**P**	**11 50 21.9**	**+0.4**
KURBB	**Kurchatov Arra** comp=Z,3.8nm,0.7s,baz=82,slow=8.3,SNR=29	**44.41**	**306**		P	**P**	**11 50 21.9**	**-0.2**
ILAR	**Eielson Array**	**47.90**	**33**		P	**P**	**11 50 50.0**	**+0.6**
ILAR	**Eielson Array** comp=Z,1.9nm,0.9s,baz=269,slow=5.6,SNR=16	**47.90**	**33**		P	**P**	**11 50 50.0**	**+0.6**
TKM2	**Tokmak 2**	**48.31**	**297**	*e*	P	**P**	**11 50 54.1**	**+0.9**
TKM2	comp=Z,10.0nm,0.8s				pmax	pmax		
TKM2	**Tokmak 2** comp=Z,9.9nm,0.8s	**48.31**	**297**	*e*	P	**P**	**11 50 54.1**	**+0.9**
PMG	**Port Moresby**	**48.68**	**172**		P	**P**	**11 50 55.0**	**-0.9**
PMG	**Port Moresby** comp=Z,3.4nm,0.6s,baz=270,slow=9.1,SNR=2.3	**48.68**	**172**		P	**P**	**11 50 55.0**	**-0.9**
BVAR	**Borovoye Array**	**48.87**	**311**		P	**P**	**11 50 57.5**	**+0.4**
BVAR							11 52 21.8	
BVAR	comp=Z,1.0nm,0.5s				pmax	pmax		
BVAR	comp=Z,1.0nm,0.7s				pmax	pmax		
BVAR	**Borovoye Array**	**48.87**	**311**		P	**P**	**11 50 57.5**	**+0.4**
BVAR					PcP	**PcP**	**11 52 21.8**	**+0.4**
BVAR	**Borovoye Array** comp=Z,0.6nm,0.5s,baz=74,slow=6.8,SNR=6.4	**48.87**	**311**		P	**P**	**11 50 57.5**	**+0.4**
BVAR	comp=Z,1.1nm,0.7s,baz=85,slow=3.4,SNR=4.0				PcP	**PcP**	**11 52 21.8**	**+0.4**
BRVK	**Borovoye**	**48.92**	**311**	⇑	*e* P	**P**	**11 50 58.7**	**+1.2**
BRVK	comp=Z,4.0nm,1.7s				pmax	pmax		
BRVK	**Borovoye** comp=Z,3.8nm,1.2s	**48.92**	**311**	*e*	P	**P**	**11 50 57.5**	**+0.1**
AAK	**Ala-Archa**	**49.17**	**297**	⇑	*e* P	**P**	**11 51 00.4**	**+0.7**
AAK	comp=Z,14nm,1.7s				pmax	pmax		
AAK	**Ala-Archa**	**49.17**	**297**		P	**P**	**11 51 00.8**	**+1.1**
AAK	**Ala-Archa** comp=Z,1.3nm,0.3s,baz=185,slow=7.7,SNR=4.1	**49.17**	**297**		P	**P**	**11 51 00.8**	**+1.1**
MENT	**Mentasta**	**49.50**	**36**	*e*	P	**P**	**11 51 03.5**	**+1.7**
KKAR	**Karatay Array**	**51.75**	**299**		P	**P**	**11 51 18.9**	**-0.1**
KKAR	**Karatay Array** comp=Z,0.4nm,0.4s	**51.75**	**299**		P	**P**	**11 51 18.9**	**-0.1**
INK	**Inuvik**	**52.66**	**28**		P	**P**	**11 51 24.9**	**-0.5**
INK	**Inuvik** comp=Z,4.0nm,1.0s,baz=293,slow=8.5,SNR=4.3	**52.66**	**28**		P	**P**	**11 51 24.9**	**-0.5**
ARU	**Arti**	**54.52**	**317**	*d*	*i* P	**P**	**11 51 39.3**	**+0.1**
ARU					*PP	pP	11 51 51.5	+8.8
ARU							11 53 40.0	
ARU					S	**S**	**11 59 16.8**	**-1.1**
ARU	comp=Z,7.0nm,1.0s				pmax	pmax		
ABKAR	**Akbulak array** comp=Z,2.1nm,0.6s	**56.29**	**309**	*e*	P	**P**	**11 51 51.9**	**-0.1**
KBL	**Kabul**	**56.32**	**289**	*e*	P	**P**	**11 51 52.8**	**0.0**
KBL	comp=Z,7.0nm,0.9s				pmax	pmax		
KBL	**Kabul** comp=Z,7.2nm,0.9s	**56.32**	**289**	*e*	P	**P**	**11 51 52.8**	**0.0**
AKTO	**Aktyubinsk**	**56.98**	**311**		P	**P**	**11 51 57.1**	**+0.1**
AKTO	comp=Z,2.0nm,0.7s				pmax	pmax		
AKTO	**Aktyubinsk**	**56.98**	**311**		P	**P**	**11 51 57.1**	**+0.1**
AKTO	**Aktyubinsk** comp=Z,1.9nm,0.7s,baz=61,slow=8.2,SNR=7.3	**56.98**	**311**		P	**P**	**11 51 57.1**	**+0.1**
WRAB	**Tennant Creek**	**59.12**	**187**	*e*	P	**P**	**11 52 12.2**	**0.0**
WRAB	comp=Z,8.0nm,1.3s				pmax	pmax		
WRAB	**Tennant Creek** comp=Z,8.2nm,1.3s	**59.12**	**187**	*e*	P	**P**	**11 52 12.2**	**0.0**
WRA	**Warramunga Arr**	**59.13**	**187**		P	**P**	**11 52 12.1**	**-0.2**
WRA	**Warramunga Arr** comp=Z,3.2nm,0.9s,baz=4.9,slow=6.9,SNR=21	**59.13**	**187**		P	**P**	**11 52 12.1**	**-0.2**
YKA	**Yellowknife Ar**	**62.15**	**31**		P	**P**	**11 52 32.6**	**+0.2**
YKA	**Yellowknife Ar** comp=Z,1.0nm,0.9s,baz=298,slow=6.7,SNR=4.2	**62.15**	**31**		P	**P**	**11 52 32.6**	**+0.2**
ASAR	**Alice Springs**	**62.86**	**187**		P	**P**	**11 52 37.2**	**-0.3**
ASAR	**Alice Springs** comp=Z,1.2nm,0.7s,baz=12,slow=7.1,SNR=13	**62.86**	**187**		P	**P**	**11 52 37.2**	**-0.3**
OBN	**Obninsk**	**66.16**	**323**	*e*	P	**P**	**11 52 59.4**	**+0.6**
OBN				*e*			11 53 14.3	
OBN				*e*			11 55 24.6	
OBN				*e*	S	**S**	**12 01 45.0**	**-2.1**
OBN	comp=Z,3.0nm,0.8s				pmax	pmax		
FINES	**FINESS Array B**	**66.75**	**332**		P	**P**	**11 53 02.3**	**-0.2**
FINES	**FINESS Array B** comp=Z,2.5nm,0.7s,baz=35,slow=7.0,SNR=6.8	**66.75**	**332**		P	**P**	**11 53 02.3**	**-0.2**
KIV	**Kislovodsk**	**69.23**	**310**	⇑	*e* P	**P**	**11 53 19.6**	**+1.1**
KIV				*e*	*PP	pP	11 53 27.1	+4.9
KIV				*e*			11 55 53.0	
KIV				*e*	SS	SS	12 06 45.3	-5.0
KIV	comp=Z,12nm,1.0s				pmax	pmax		
KBZ	**Khabaz**	**69.23**	**310**		P	**P**	**11 53 19.0**	**+0.6**
KBZ	comp=Z,3.0nm,1.0s				pmax	pmax		
KBZ	**Khabaz**	**69.23**	**310**		P	**P**	**11 53 18.9**	**+0.6**
KBZ	**Khabaz** comp=Z,3.3nm,1.0s,baz=0.0,slow=8.1,SNR=4.1	**69.23**	**310**		P	**P**	**11 53 18.9**	**+0.6**
ANN	**Anapa**	**71.78**	**313**	*e*	P		11 53 22.2	-12
ANN				*e*	*PP	pP	11 53 32.4	-5.2
ANN	comp=Z,51nm,1.2s				pmax	pmax		
NB2	**NORSAR Subarra** comp=Z,0.8nm,0.6s,baz=39,slow=6.5	**72.07**	**337**		P	**P**	**11 53 35.1**	**-0.4**
NOA	**NORSAR Array B**	**72.07**	**337**		P	**P**	**11 53 35.0**	**-0.4**
NOA	**NORSAR Array B** comp=Z,3.9nm,1.1s,baz=38,slow=6.1,SNR=5.1	**72.07**	**337**		P	**P**	**11 53 35.0**	**-0.4**
NOA	comp=Z,18nm,19.1s,baz=100,slow=38				LR	LR	12 28 14.1	
AKASG	**Malin Array Be**	**72.38**	**322**	*i*	P	**P**	**11 53 37.2**	**-0.2**
AKASG	comp=Z,1.0nm,0.5s				pmax	pmax		
AKASG	**Malin Array Be**	**72.38**	**322**		P	**P**	**11 53 37.2**	**-0.2**
AKASG	**Malin Array Be** comp=Z,0.7nm,0.5s,baz=48,slow=5.8,SNR=4.2	**72.38**	**322**		P	**P**	**11 53 37.2**	**-0.2**
NVAR	**Mina Array Bea**	**74.01**	**53**		P	**P**	**11 53 49.0**	**+1.4**
NVAR	**Mina Array Bea** comp=Z,3.1nm,1.0s,baz=280,slow=6.0,SNR=10	**74.01**	**53**		P	**P**	**11 53 49.0**	**+1.4**
BUR08	**Bucovina Ar. S**	**76.39**	**321**	*e*	P	**P**	**11 54 01.2**	**+0.2**
PDAR	**Pinedale Array**	**76.44**	**46**		P	**P**	**11 53 59.9**	**-1.6**
PDAR	**Pinedale Array** comp=Z,0.7nm,0.6s,baz=299,slow=3.1,SNR=5.2	**76.44**	**46**		P	**P**	**11 53 59.9**	**-1.6**
BRTR	**Keskin Array B**	**77.16**	**311**		P	**P**	**11 54 06.0**	**+0.5**
BRTR	**Keskin Array B** comp=Z,0.8nm,0.8s,baz=60,slow=5.7,SNR=4.4	**77.16**	**311**		P	**P**	**11 54 06.0**	**+0.5**
CRVS	**Cervenica-Dubn**	**77.27**	**324**	*e*	P	**P**	**11 54 03.5**	**-2.3**
CRVS	**Cervenica-Dubn**	**77.27**	**324**	*e*	P

LPL	La Plagne	86.20	330	*e*P		P	11 54 52.3	-0.9
LPL	La Plagne	86.20	330	*e*P		P	11 54 52.3	-0.9
LPL	La Plagne	86.20	330	*e*P		P	11 54 52.3	-0.9
LPG	La Plagne	86.20	330	*e*P		P	11 54 52.4	-1.0
	comp=Z,5.8nm,0.9s							
LPG	La Plagne	86.20	330	*e*P		P	11 54 52.4	-1.0
LPG				pmax	pmax			
	comp=Z,6.0nm,0.9s							
LPG	La Plagne	86.20	330	*e*P		P	11 54 52.4	-1.0
	comp=Z,5.8nm,0.9s							
SMF	Signal de Mont	86.34	332	*e*P		P	11 54 52.7	-1.0
	comp=Z,16nm,1.3s							
SMF	Signal de Mont	86.34	332	*e*P		P	11 54 52.7	-1.0
SMF				pmax	pmax			
	comp=Z,16nm,1.3s							
SMF	Signal de Mont	86.34	332	*e*P		P	11 54 52.7	-1.0
	comp=Z,16nm,1.3s							
AVF	Avril sur Loir	86.40	332	*e*P		P	11 54 53.0	-0.9
	comp=Z,11nm,0.9s							
AVF	Avril sur Loir	86.40	332	*e*P		P	11 54 53.0	-0.9
AVF				pmax	pmax			
	comp=Z,11nm,0.9s							
AVF	Avril sur Loir	86.40	332	*e*P		P	11 54 53.0	-0.9
	comp=Z,11nm,0.9s							
MFF	Saint Martin d	87.78	334	*e*P		P	11 54 59.1	-1.5
	comp=Z,7.3nm,0.9s							
MFF	Saint Martin d	87.78	334	*e*P		P	11 54 59.1	-1.5
MFF				pmax	pmax			
	comp=Z,7.0nm,0.9s							
MFF	Saint Martin d	87.78	334	*e*P		P	11 54 59.1	-1.5
	comp=Z,7.3nm,0.9s							
TXAR	Lajitas Array	89.11	52	P		P	11 55 07.9	+0.6
TXAR	Lajitas Array	89.11	52	P		P	11 55 07.9	+0.6
	comp=Z,0.3nm,0.7s,baz=317,slow=2.0,SNR=4.3							
LPAZ	La Paz	145.88	56	PKPbc		PKPab	12 01 52.9	+0.3
LPAZ	La Paz	145.88	56	PKPbc		PKPab	12 01 52.9	+0.3
	comp=Z,0.9nm,0.6s,baz=304,slow=3.1,SNR=4.5							

ISCJB ***27*** *12:27:36.4±1.2, 6°.33S±0°.08×147°.0E±0°.1, h78km, mb3.3/4, Error ellipse: s-maj=21.6km s-min=10.6km az=167.4*
IDC ***27*** *12:27:38.4±4.7, 6°.41S×147°.04E, h88km±51km, mb3.2/4, mb1 3.4/7, mb1mx3.2/20, mbtmp3.2/7, ML3.1/3, Error ellipse: s-maj=47.8km s-min=18.3km az=140.0*
AUST ***27*** *12:28:25.9±2.8, 9°.20S×144°.33E, h61km, Error ellipse: s-maj=1.4km s-min=1.0km az=304.0*

ISC 27 12:27:37.1±1.3, 6°.3S±0°.1×146°.9E±0°.1, h78km, n13, σ1§03/13, mb3.6/4, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.12**	**175**	P	**Pn**	**12 28 25.1**	**+1.0**
	9.3nm,0.3s,baz=355,slow=11,SNR=13						
PMG				S	**Sn**	**12 28 58.7**	**-1.7**
	5.1nm,0.3s,baz=348,slow=20,SNR=6.2						
COEN	**Coen**	**8.47**	**205**	P	**Pn**	**12 29 37.3**	**+0.2**
	baz=4.9,SNR=81						
MTSU	**Mount Surprise**	**12.06**	**192**	P	**Pn**	**12 30 26.9**	**+0.8**
	baz=9.0,SNR=6.1						
CTA	**Charters Tower**	**13.75**	**183**	P	**Pn**	**12 30 48.0**	**-0.6**
	0.2nm,0.3s,baz=355,slow=15,SNR=2.6						
KDU	**Kakadu**	**15.59**	**245**	P	**P**	**12 31 14.1**	**-1.0**
	baz=12,SNR=3.7						
QIS	**Mount Isa**	**15.87**	**206**	P	**P**	**12 31 18.6**	**+0.4**
	baz=12,SNR=5.0						
WRA	**Warramunga Arr**	**18.27**	**221**	P	**P**	**12 31 43.5**	**-1.2**
	0.1nm,0.3s,baz=48,slow=12,SNR=5.0						
WRA				S	**Sn**	**12 35 10.8**	**+1.5**
	0.0nm,0.3s,baz=38,slow=22,SNR=3.2						
ASAR	**Alice Springs**	**21.34**	**215**	P	**P**	**12 32 17.4**	**-0.7**
	0.2nm,0.5s,baz=33,slow=12,SNR=7.4						
FITZ	**Fitzroy Crossi**	**23.85**	**239**	P	**P**	**12 32 42.9**	**-0.5**
	1.6nm,0.6s,baz=70,slow=9.1,SNR=4.7						
PMBI	**Palembang**	**42.12**	**273**	S	S	12 42 13.1	+37
	baz=40,SNR=3.4						
CMAR	**Chiang Mai Arr**	**53.30**	**298**	P	P	12 36 51.0	+2.5
	0.2nm,0.3s,baz=120,slow=5.6,SNR=4.7						
ILAR	**Eielson Array**	**85.77**	**23**	P	**P**	**12 40 07.5**	**+0.1**
	0.5nm,0.7s,baz=253,slow=4.9,SNR=7.8						
TORD	**Torodi Ar. Bea**	**145.07**	**284**	PKPbc	**PKPdf**	**12 47 06.6**	**0.0**
	1.3nm,0.7s,baz=79,slow=4.2,SNR=7.7						

ISCJB ***27*** *12:39:36.7±0.3, 35°.26N±0°.03×28°.69E±0°.03, h64km±7km, mb3.4/5, Error ellipse: s-maj=4.5km s-min=3.3km az=25.1*
DDA ***27*** *12:39:36.9, 35°.39N×28°.46E, h27km, MD3.2*
IDC ***27*** *12:39:37.2±2.4, 35°.21N×28°.63E, h47km±30km, mb3.4/5, mb1 3.5/9, mb1mx3.3/28, mbtmp3.4/9, ML3.5/4, Error ellipse: s-maj=22.5km s-min=16.9km az=66.0*
CSEM ***27*** *12:39:38.2±0.1, 35°.30N×28°.65E, h60km, Mw3.3, Error ellipse: s-maj=4.0km s-min=2.6km az=26.0*
HLW ***27*** *12:39:38.5, 35°.33N×28°.65E, h31km±13km, Md3.5, Ml3.2*
ATH ***27*** *12:39:40.4, 35°.58N×28°.33E, h59km±4km, MD3.5/12*
NIC ***27*** *12:39:41.7±0.2, 35°.38N×28°.96E, h55km, ML3.0, MW3.3*

ISC 27 12:39:36.9±1.0, 35°.29N±0°.03×28°.60E±0°.03, h41km±16km, n102, σ1§67/121, mb3.5/5, 2C, Eastern Mediterranean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARG	**Arkhangelos**	**1.00**	**337**	*e*P	**Pn**	**12 39 54.9**	**+0.5**
ARG	**Arkhangelos**	**1.00**	**337**	*e*P	**Pn**	**12 39 54.9**	**+0.5**
KSL	**Kastelli\orizon**	**1.17**	**43**	*e*P	Pn	12 40 01.6	+4.8
KARP	**Karpathos**	**1.20**	**283**	*e*P	**Pn**	**12 39 58.9**	**+1.6**
KARP	**Karpathos**	**1.20**	**283**	*e*P	**Pn**	**12 39 58.9**	**+1.6**
AKAS	**Kas**	**1.24**	**41**	*i* P	**Pn**	**12 39 59.7**	**+1.8**
AKAS				*i* S	**Sn**	**12 40 13.6**	**0.0**
AKAS	**Kas**	**1.24**	**41**	*i* P	**Pn**	**12 39 59.7**	**+1.8**
AKAS				*i* S	**Sn**	**12 40 13.6**	**0.0**
TURN	**Turunc**	**1.58**	**0**	*i* P	**Pn**	**12 40 02.2**	**-0.2**
TURN				*e*S	**Sn**	**12 40 19.5**	**-2.0**
TURN	**Turunc**	**1.58**	**0**	*i* P	**Pn**	**12 40 02.2**	**-0.2**
TURN				*e*S	**Sn**	**12 40 19.5**	**-2.0**
ZKR	**Zakros**	**1.96**	**265**	*e*P	**Pn**	**12 40 10.0**	**+2.3**
ZKR	**Zakros**	**1.96**	**265**	*e*P	**Pn**	**12 40 10.0**	**+2.3**
GOLH	**Golhisar**	**2.09**	**22**	*i* P	**Pn**	**12 40 11.2**	**+1.7**
GOLH				*e*S	**Sn**	**12 40 31.8**	**-2.5**
GOLH	**Golhisar**	**2.09**	**22**	*i* P	**Pn**	**12 40 11.2**	**+1.7**
GOLH				*e*S	**Sn**	**12 40 31.8**	**-2.5**
KORT	**Korkueli**	**2.21**	**39**	*e*P	**Pn**	**12 40 14.1**	**+2.8**
KORT				*e*S	**Sn**	**12 40 40.0**	**+2.5**
KORT	**Korkueli**	**2.21**	**39**	*e*P	**Pn**	**12 40 14.1**	**+2.8**
KORT				*e*S	**Sn**	**12 40 40.0**	**+2.5**
DNZL	**Cakiroluk**	**2.42**	**8**	*i* P	**Pn**	**12 40 14.9**	**+0.8**
DNZL				*e*S	**Sn**	**12 40 39.7**	**-2.9**
DNZL	**Cakiroluk**	**2.42**	**8**	*i* P	**Pn**	**12 40 14.9**	**+0.8**
DNZL				*e*S	**Sn**	**12 40 39.7**	**-2.9**
XRY	**Khrisi**	**2.42**	**261**	*e*P	**Pn**	**12 40 16.3**	**+2.4**
XRY	**Khrisi**	**2.42**	**261**	*e*P	**Pn**	**12 40 16.3**	**+2.4**
AYDN	**Tasoluk**	**2.43**	**346**	*i* P	**Pn**	**12 40 15.2**	**+1.0**
AYDN				*e*S	Sn	12 40 34.2	-8.6
AYDN	**Tasoluk**	**2.43**	**346**	*i* P	**Pn**	**12 40 15.2**	**+1.0**
NPS	**Neapolis**	**2.44**	**270**	*e*P	**Pn**	**12 40 17.0**	**+2.7**
NPS	**Neapolis**	**2.44**	**270**	*e*P	**Pn**	**12 40 17.0**	**+2.7**
LAST	**Lasithi**	**2.56**	**268**	*e*P	**Pn**	**12 40 18.5**	**+2.5**
LAST	**Lasithi**	**2.56**	**268**	*e*P	**Pn**	**12 40 18.5**	**+2.5**
SANT	**Santorini**	**2.77**	**294**	*e*P	**Pn**	**12 40 19.5**	**+0.7**
SANT	**Santorini**	**2.77**	**294**	*e*P	**Pn**	**12 40 19.5**	**+0.7**
SMG	**Samos**	**2.80**	**330**	*e*P	**Pn**	**12 40 19.3**	**+0.1**
SMG	**Samos**	**2.80**	**330**	*e*P	**Pn**	**12 40 19.3**	**+0.1**
IDI	**Anoyia**	**3.04**	**271**	*e*P	**Pn**	**12 40 24.4**	**+1.9**
IDI	**Anoyia**	**3.04**	**271**	*e*P	**Pn**	**12 40 24.4**	**+1.9**
APE	**Apeiranthos**	**3.05**	**306**	*e*P	**Pn**	**12 40 23.2**	**+0.5**
APE	**Apeiranthos**	**3.05**	**306**	*e*P	**Pn**	**12 40 23.2**	**+0.5**
AKMC	**Akamas**	**3.07**	**94**	P	**Pn**	**12 40 24.3**	**+1.4**
AKMC	**Akamas**	**3.07**	**94**	P	**Pn**	**12 40 24.3**	**+1.4**
PPCY	**Paphos**	**3.10**	**96**	P	**Pn**	**12 40 25.0**	**+1.7**
PPCY	**Paphos**	**3.10**	**96**	P	**Pn**	**12 40 25.0**	**+1.7**
SIVA	**Sivas**	**3.12**	**266**	*e*P	**Pn**	**12 40 26.3**	**+2.8**
SIVA	**Sivas**	**3.12**	**266**	*e*P	**Pn**	**12 40 26.3**	**+2.8**
GAZI	**Gazipasa**	**3.16**	**72**	*e*P	**Pn**	**12 40 25.0**	**+0.8**
GAZI				*e*S	**Sn**	**12 40 55.4**	**-5.3**
GAZI	**Gazipasa**	**3.16**	**72**	*e*P	**Pn**	**12 40 25.0**	**+0.8**
ALFC	**Alevga**	**3.28**	**91**	⇑P	**Pn**	**12 40 27.2**	**+1.4**
	3.6nm,0.4s						
ALFC				S	**Sn**	**12 41 02.8**	**-0.7**
ALFC	**Alevga**	**3.28**	**91**	⇑*i*P	**Pn**	**12 40 27.2**	**+1.4**
	3.6nm,0.4s						
ALFC				S	**Sn**	**12 41 02.8**	**-0.7**
VAM	**Vamos**	**3.60**	**273**	*e*P	**Pn**	**12 40 32.9**	**+2.7**
VAM	**Vamos**	**3.60**	**273**	*e*P	**Pn**	**12 40 32.9**	**+2.7**
CHOS	**Chios island**	**3.70**	**327**	*e*P	**Pn**	**12 40 32.9**	**+1.3**
CHOS	**Chios island**	**3.70**	**327**	*e*P	**Pn**	**12 40 32.9**	**+1.3**
GVD	**Gavdhos**	**3.73**	**264**	*e*P	**Pn**	12 40 35.5	+3.5
GVD	**Gavdhos**	**3.73**	**264**	*e*P	**Pn**	12 40 35.5	+3.5
MAMC	**Mammari**	**3.78**	**91**	P	**Pn**	**12 40 34.6**	**+1.9**
MAMC	**Mammari**	**3.78**	**91**	P	**Pn**	**12 40 34.6**	**+1.9**
CSS	**Prodhromos**	**3.89**	**94**	P	**Pn**	**12 40 35.6**	**+1.4**
	1.6nm,0.2s						
CSS				S	**Sn**	**12 41 18.3**	**-0.3**
CSS	**Prodhromos**	**3.89**	**94**	Pn	**Pn**	**12 40 35.3**	**+1.1**
CSS	**Prodhromos**	**3.89**	**94**	P	**Pn**	**12 40 35.6**	**+1.4**
	1.6nm,0.2s						
CSS				S	**Sn**	**12 41 18.3**	**-0.3**
HMAT	**Matruh**	**4.37**	**197**	AMP		12 41 00.0	
	comp=E,30μm,0.6s,logA/T=4.7,baz=198						
HMAT	**Matruh**	**4.37**	**197**	P	**Pn**	**12 40 42.4**	**+1.6**
SLUM		**4.73**	**218**	P	**Pn**	**12 40 47.3**	**+1.5**
	baz=218						
SLUM				AMP		12 41 00.0	
	comp=E,30μm,0.5s,logA/T=4.8,baz=218						
SLUM				S	**Sn**	**12 41 36.6**	**-2.8**
	baz=218						
SLUM		**4.73**	**218**	P	**Pn**	**12 40 47.3**	**+1.5**
SLUM				S	**Sn**	**12 41 36.6**	**-2.8**
HNTI	**Hanita**	**5.88**	**110**	Sn	**Sn**	**12 42 06.5**	**-1.1**
HNAT	**Natroun**	**5.90**	**163**	P	**Pn**	**12 41 02.5**	**+0.8**
	baz=163						
HNAT	**Natroun**	**5.90**	**163**	P	**Pn**	**12 41 02.5**	**+0.8**
BRTR	**Keskin Array B**	**5.97**	**41**	P	**Pn**	**12 41 05.6**	**+2.8**
	comp=E,0.2nm,0.3s,baz=227,slow=10,SNR=3.3						
BRTR				S	**Sn**	**12 42 11.3**	**+1.4**
	comp=E,0.3nm,0.3s,baz=208,slow=26,SNR=5.2						
KOT	**Kottamia**	**6.00**	**152**	P	**Pn**	**12 41 04.1**	**+0.8**
	baz=152						
KOT	**Kottamia**	**6.00**	**152**	P	**Pn**	**12 41 04.1**	**+0.8**
AMAG	**Maghara**	**6.04**	**139**	P	**Pn**	**12 41 04.5**	**+0.7**
	baz=139						
AMAG	**Maghara**	**6.04**	**139**	P	**Pn**	**12 41 04.5**	**+0.7**
MMC7	**Mount Meron ar**	**6.07**	**110**	Pn	**Pn**	**12 41 05.1**	**+0.9**
MMAI	**Mount Meron Ar**	**6.08**	**110**	P	**Pn**	**12 41 04.6**	**+0.3**
	comp=E,4.1nm,0.3s,baz=289,slow=14,SNR=17						
MMAI				S	**Sn**	**12 42 11.4**	**-1.3**
	comp=E,8.4nm,0.3s,baz=311,slow=24,SNR=9.2						
HHAG	**Hagoal**	**6.09**	**150**	P	**Pn**	**12 41 05.6**	**+1.2**
	baz=150						
HHAG	**Hagoal**	**6.09**	**150**	P	**Pn**	**12 41 05.6**	**+1.2**
RSH		**6.09**	**134**	P	**Pn**	**12 41 05.1**	**+0.6**
	baz=134						
RSH		**6.09**	**134**	P	**Pn**	**12 41 05.1**	**+0.6**
SLTI	**Sal'it**	**6.17**	**118**	Pn	**Pn**	**12 41 07.4**	**+2.0**
SLTI				Sn	**Sn**	**12 42 12.5**	**-2.2**
KSDI	**Kefar Szold**	**6.21**	**108**	Pn	**Pn**	**12 41 06.6**	**+0.6**
KSDI				Sn	**Sn**	**12 42 13.8**	**-1.9**
MMLI	**Mount Malkishu**	**6.35**	**115**	Pn	**Pn**	**12 41 08.8**	**+0.8**
SUZ		**6.50**	**146**	P	**Pn**	**12 41 10.7**	**+0.6**
	baz=146						
SUZ		**6.50**	**146**	P	**Pn**	**12 41 10.7**	**+0.6**
HMDT	**Nahal Hemdat**	**6.51**	**116**	Pn	**Pn**	**12 41 11.8**	**+1.6**
KZIT	**Kziot**	**6.54**	**130**	Pn	**Pn**	**12 41 11.8**	**+1.2**
SWA2		**6.59**	**205**	P	**Pn**	**12 41 12.3**	**+1.0**
	baz=205						
SWA2		**6.59**	**205**	P	**Pn**	**12 41 12.3**	**+1.0**
RTMI	**Retamim**	**6.63**	**128**	Pn	**Pn**	**12 41 12.6**	**+0.8**
YTIR	**Yattir**	**6.71**	**124**	Pn	**Pn**	**12 41 14.1**	**+1.0**
DSI	**Dead Sea**	**6.77**	**121**	Pn	**Pn**	**12 41 14.9**	**+1.1**
MZDA	**Masada**	**6.92**	**123**	Pn	**Pn**	**12 41 16.9**	**+1.2**
MZDA				Sn	**Sn**	**12 42 30.9**	**-2.1**
HNKL	**Nakhl**	**7.01**	**138**	P	**Pn**	**12 41 17.4**	**+0.3**
	baz=138						
HNKL	**Nakhl**	**7.01**	**138**	P	**Pn**	**12 41 17.4**	**+0.3**
ZFRI	**Zfri**	**7.27**	**129**	Pn	**Pn**	**12 41 20.8**	**+0.2**
KRMI	**Paran Flat**	**7.30**	**133**	Pn	**Pn**	**12 41 21.5**	**+0.5**
PRNI	**Paran**	**7.30**	**131**	Pn	**Pn**	**12 41 21.4**	**+0.3**
HRFI	**Mount Harif**	**7.54**	**132**	Pn	**Pn**	**12 41 25.0**	**+0.6**
MBRI	**Mt Berech**	**7.64**	**134**	Pn	**Pn**	**12 41 26.2**	**+0.4**
EIL	**Elat**	**7.76**	**135**	P	**Pn**	**12 41 28.2**	**+0.9**
	comp=E,1.4nm,0.3s,baz=320,slow=4.1,SNR=20						
EIL				S	**Sn**	**12 42 50.5**	**-3.4**
	comp=E,2.4nm,0.3s,baz=350,slow=18,SNR=9.3						
EIL	**Elat**	**7.76**	**135**	Pn	**Pn**	**12 41 28.2**	**+0.9**
HKAT	**Jabal Katrina**	**8.16**	**144**	P	**Pn**	**12 41 33.8**	**+0.8**
	baz=144						
HKAT	**Jabal Katrina**	**8.16**	**144**	P	**Pn**	**12 41 33.8**	**+0.8**
GERES	**GERESS Array B**	**17.44**	**325**	P	**Pn**	**12 43 36.7**	**-0.4**
	comp=E,0.1nm,0.3s,baz=139,slow=9.1,SNR=2.6						
ESDC	**Sonseca Array**	**26.12**	**289**	P	**P**	**12 45 07.5**	**+0.4**
	comp=E,1.0nm,0.5s,baz=84,slow=10,SNR=8.7						
FINES	**FINESS Array B**	**26.22**	**357**	P	**P**	**12 45 07.7**	**+0.1**
	comp=E,0.9nm,0.7s,baz=163,slow=11,SNR=4.5						
HFS	**Hagfors**	**26.67**	**343**	P	**P**	**12 45 11.7**	**-0.1**
	comp=E,0.5nm,0.4s,baz=157,slow=7.7,SNR=4.5						
ARCES	**ARCESS Array B**	**34.34**	**358**	P	**P**	**12 46 18.9**	**-0.4**
	comp=E,0.5nm,0.6s,baz=173,slow=8.0,SNR=3.2						
MKAR	**Makanchi Array**	**41.34**	**57**	P	**P**	**12 47 19.4**	**+0.7**
	comp=E,0.2nm,0.7s,baz=273,slow=8.0,SNR=2.7						

NIED ***27*** *12:39:00, 46°.10N×151°.90E, h44km, Mw3.8 Best double couple: M0≤5.64000×10^14 NP1:φ0≤68.00000°, δ90.00000°, λ107.00000°. NP2:φ0≤159.00000°, δ17.00000°, λ1.00000°.*

JMA 27 12:39:55.5±0.5, 46°.06N×151°.94E, h30km, M4.3, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**5.17**	**241**	P	Pn	12 41 09.7	-1.1
NEM2				*e*S	Sn	12 42 04.1	-5.3
JRA	**Rausu**	**5.28**	**249**	P	Pn	12 41 14.2	+1.9
JRA				*e*S	Sn	12 42 13.3	+1.2
JNK	**Nakash**	**5.70**	**247**	*e*S	Sn	12 42 23.0	+0.5
JAK	**Akkeshi**	**6.01**	**242**	P	Pn	12 41 21.4	-1.0
JAK				*e*S	Sn	12 42 25.2	-5.0
JTKR	**Abashiri--Toko**	**6.07**	**253**	P	Pn	12 41 25.3	+2.3
JMP	**Maruseppu**	**6.42**	**254**	P	Pn	12 41 30.7	+2.7
JAR	**Ashorobuto**	**6.45**	**248**	P	Pn	12 41 28.9	+0.6
JAR				*e*S	Sn	12 42 40.3	-0.5
JOB	**Onbets**	**6.60**	**244**	P	Pn	12 41 30.8	+0.4
JOB				*e*S	Sn	12 42 41.9	-2.7
JKK2	**Kamakawa 2**	**6.88**	**255**	P	Pn	12 41 37.3	+3.0
JCH	**Churui**	**7.05**	**244**	P	Pn	12 41 36.8	-0.8
JCH				*e*S	Sn	12 42 51.3	-4.3
JEM	**Erimo**	**7.51**	**241**	P	Pn	12 41 43.0	+0.1
JEM				*e*S	Sn	12 43 02.6	-4.3
JBT2	**Biratori 2**	**7.60**	**248**	P	Pn	12 41 44.1	0.0
JBT2				*e*S	Sn	12 43 05.1	-4.1
JNBK	**Urakawa-nobuka**	**7.61**	**243**	P	Pn	12 41 43.5	-0.8
JNBK				*e*S	Sn	12 43 05.0	-4.4
JNB	**Noboribetsu**	**8.61**	**249**	P	Pn	12 41 58.6	+0.7
JKB	**Kayabe**	**8.90**	**246**	P	Pn	12 42 01.2	-0.8
JKB				*e*S	Sn	12 43 34.3	-6.8
JANG	**Nango**	**9.49**	**237**	P	Pn	12 42 06.5	-3.6
JANG				*e*S	Sn	12 43 44.7	-11
JTM	**Tenmabayashi**	**9.50**	**240**	P	Pn	12 42 08.2	-2.0
JTM				*e*S	Sn	12 43 46.8	-9.1
JTH	**Tanohata**	**9.58**	**234**	*e*S	Sn	12 43 47.8	-10
JOSM	**Okushiri--Mats**	**9.81**	**251**	P	Pn	12 42 14.0	-0.4
JRG	**Rokugo**	**10.65**	**235**	P	Pn	12 42 23.7	-2.2
JRG				*e*S	Sn	12 44 12.9	-11
JIO	**Ouri**	**10.92**	**230**	P	Pn	12 42 26.5	-3.1
JIO				*e*S	Sn	12 44 19.3	-11

NIED ***27*** *12:48:00, 47°.00N×152°.90E, h32km, Mw3.7 Best double couple: M0≤3.65000×10^14 NP1:φ0≤224.00000°, δ79.00000°, λ-161.00000°. NP2:φ0≤130.00000°, δ72.00000°, λ-12.00000°.*
JMA ***27*** *12:48:27.6±0.8, 47°.04N×152°.90E, h30km, M4.2*
MOS ***27*** *12:48:28.8±1.5, 47°.00N×153°.07E, h57km, mb4.1/8, Error ellipse: s-maj=17.7km s-min=10.5km az=52.3*
IDC ***27*** *12:48:35.5±2.2, 46°.85N×152°.78E, h104km±20km, mb3.4/14, mb1 3.6/18, mb1mx3.5/31, mbtmp3.4/18, MS3.2/2, Ms1 3.3/2, ms1mx2.6/28, Error ellipse: s-maj=18.7km s-min=11.9km az=136.0*

ISC 27 12:48:27.7±0.6, 46°.5N±0°.1×153°.15E±0°.08, h40km, n49, σ2§08/48, mb3.7/15, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.91**	**253**	*d i* PN	**Pn**	**12 49 27.2**	**+2.0**
KUR				*i* S	**Sn**	**12 50 11.4**	**+1.7**
KUR				pmax	pmax		
	comp=N,11nm,0.3s						
KUR				pmax	pmax		
	comp=E,7.0nm,0.3s						
KUR				pmax	pmax		
	comp=Z,31nm,0.3s						
KUR				smax	smax		
	comp=E,170nm,0.4s						
KUR				smax	smax		
	comp=N,57nm,0.4s						
SKR	**Severo-Kuril's**	**4.60**	**24**	*e*PN	Pn	12 49 31.7	-3.0
SKR				*e*S	Sn	12 50 19.0	-7.9
SKR				pmax	pmax		
	comp=Z,30nm,0.4s						
SKR				smax	smax		
	comp=N,140nm,0.3s						
SKR				smax	smax		
	comp=E,300nm,0.3s						
NEM2	**Nemuro 2**	**6.13**	**242**	P	**Pn**	**12 49 56.4**	**+0.7**
NEM2				*e*S	**Sn**	**12 51 02.7**	**-1.8**
JRA	**Rausu**	**6.23**	**248**	P	Pn	12 50 00.0	+3.0
JRA				*e*S	**Sn**	**12 51 10.5**	**+3.6**
JNK	**Nakash**	**6.65**	**247**	P	**Pn**	**12 50 05.2**	**+2.3**
JNK				*e*S	**Sn**	**12 51 18.2**	**+0.8**
JAK	**Akkeshi**	**6.97**	**243**	P	**Pn**	**12 50 08.0**	**+0.8**
JAK				*e*S	**Sn**	**12 51 20.5**	**-4.7**
JTKR	**Abashiri--Toko**	**7.00**	**252**	P	Pn	12 50 10.7	+3.0
YSS	**Yuzh-Sakhalins**	**7.16**	**277**	*e*PN	Pn	12 50 13.4	+3.7
PETK	**Petropavlovsk-**	**7.22**	**22**	*e*PN	Pn	12 50 16.5	+5.9
PETK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
PETK	**Petropavlovsk-**	**7.22**	**22**	P	Pn	12 50 15.8	+5.2
	comp=Z,0.7nm,0.3s,baz=191,slow=15,SNR=7.3						
PETK				S	**Sn**	**12 51 36.7**	**+5.6**
	comp=Z,0.1nm,0.3s,baz=216,slow=14,SNR=1.8						
JMP	**Maruseppu**	**7.35**	**253**	P	Pn	12 50 15.9	+3.4
JAR	**Ashorobuto**	**7.40**	**248**	P	**Pn**	**12 50 15.3**	**+2.2**
JAR				*e*S	**Sn**	**12 51 36.4**	**+0.7**
JOB	**Onbets**	**7.56**	**245**	P	**Pn**	**12 50 16.9**	**+1.7**
JOB				*e*S	**Sn**	**12 51 38.5**	**-1.1**
JKK2	**Kamakawa 2**	**7.81**	**254**	P	Pn	12 50 22.2	+3.5
ASAJ	**Asahikawa**	**7.82**	**256**	P	Pn	12 50 22.2	+3.4
ASAJ	**Asahikawa**	**7.82**	**256**	P	Pn	12 50 22.8	+3.9
	comp=Z,0.8nm,0.3s,baz=95,slow=17,SNR=15						
ASAJ				LR	LR	12 53 11.2	
	comp=Z,52nm,20.0s,baz=70,slow=36						
JCH	**Churui**	**8.00**	**244**	P	**Pn**	**12 50 22.2**	**+0.8**
JCH				*e*S	**Sn**	**12 51 47.6**	**-3.0**
JEM	**Erimo**	**8.46**	**241**	P	**Pn**	**12 50 29.9**	**+2.2**
JEM				*e*S	**Sn**	**12 51 59.2**	**-2.7**
JBT2	**Biratori 2**	**8.55**	**248**	P	**Pn**	**12 50 30.3**	**+1.4**
JBT2				*e*S	**Sn**	**12 52 01.8**	**-2.2**
JNBK	**Urakawa-nobuka**	**8.56**	**244**	P	**Pn**	**12 50 30.4**	**+1.3**
JNBK				*e*S	**Sn**	**12 52 02.0**	**-2.3**
JKB	**Kayabe**	**9.85**	**246**	P	**Pn**	**12 50 46.6**	**-0.1**
JKB				*e*S	Sn	12 52 30.4	-5.6
JANG	**Nango**	**10.45**	**238**	P	**Pn**	**12 50 53.5**	**-1.4**
JANG				*e*S	Sn	12 52 43.7	-6.9
JTM	**Tenmabayashi**	**10.46**	**241**	P	**Pn**	**12 50 54.4**	**-0.6**
JTH	**Tanohata**	**10.53**	**235**	*e*S	Sn	12 52 44.2	-8.5
JOSM	**Okushiri--Mats**	**10.76**	**251**	P	**Pn**	**12 50 59.5**	**+0.4**
JRG	**Rokugo**	**11.60**	**237**	P	**Pn**	**12 51 09.8**	**-0.9**
FX1	**Attu Island--F**	**14.41**	**56**	P	**Pn**	**12 51 47.2**	**-1.6**
	comp=Z,0.9nm,0.3s,baz=325,slow=7,0,SNR=9.5						
FX1				S	Sn	12 54 18.3	-8.7
	comp=Z,1.1nm,0.3s,baz=360,slow=18,SNR=5.8						
MJA0	**Matsu Arr-Jizo**	**14.94**	**233**	*e*P	**P**	**12 52 03.8**	**+2.7**
MJAR	**Matsushiro Arr**	**14.96**	**234**	P	**P**	**12 52 01.1**	**-0.2**
	comp=Z

baz=297
IRIF Iriomote-Funau 1.13 103 P **Pn** **12 58 50.9 -0.1**
IRIF *e*S **Sn** **12 59 07.3 +0.4**
TWS1 Kuangyinshan 1.13 297 *e*P **Pn** **12 58 50.5 -0.6**
baz=293
TWS1 *e*S **Sn** **12 59 05.8 -1.2**
baz=293
WHF Hehuan Shan 1.23 249 P **Pn** **12 58 52.8 +0.1**
baz=247
WHF *e*S **Sn** **12 59 09.9 0.0**
baz=247
ESL Shilin 1.26 233 P **Pn** **12 58 51.9 -0.7**
baz=225
ESL *e*S **Sn** **12 59 09.3 -0.5**
baz=225
TWT Tachien 1.27 255 P **Pn** **12 58 53.7 +0.8**
baz=253
TWT *e*S **Sn** **12 59 11.3 +0.9**
baz=253
HATJ Hateruma jima 1.28 114 *e*S **Sn** **12 59 10.9 +0.7**
NSTT Nanjuang 1.39 272 *e*P **Pn** **12 58 53.8 -0.4**
baz=269
NSTT *e*S **Sn** **12 59 12.6 0.0**
baz=269
JKRS Kuro-shima 1.40 104 P **Pn** **12 58 54.6 +0.3**
JKRS *e*S **Sn** **12 59 13.5 +0.7**
JIJ Ishigaki jima 1.49 98 P **Pn** **12 58 55.2 -0.2**
JIJ *e*S **Sn** **12 59 14.6 -0.3**
EHY Hungye 1.54 226 *e*P **Pn** **12 58 55.0 -1.1**
baz=225
EHY *e*S **Sn** **12 59 14.5 -1.5**
baz=225
TWQ1 Liyutan 1.61 262 *e*P **Pn** **12 58 56.8 -0.2**
baz=260
TWQ1 *e*S **Sn** **12 59 17.6 -0.1**
baz=260
NSY Sanyi 1.62 264 *e*P **Pn** **12 58 56.4 -0.7**
baz=262
NSY *e*S **Sn** **12 59 18.6 +0.9**
baz=262
SMLT Sun Moon Lake 1.64 245 *e*P **Pn** **12 58 58.2 +0.8**
baz=237
SMLT *e*S **Sn** **12 59 19.2 +0.8**
baz=237
TWF1 Yuli 1.66 223 *e*P **Pn** **12 58 57.2 -0.5**
baz=229
TWF1 *e*S **Sn** **12 59 17.8 -1.0**
baz=229
TYC Yuchr 1.67 246 *e*P **Pn** **12 58 58.5 +0.8**
baz=239
TYC *e*S **Sn** **12 59 20.1 +1.2**
baz=239
YUS Yu-Shan 1.81 233 *e*P **Pn** **12 59 00.3 +0.3**
baz=227
YUS *e*S **Sn** **12 59 22.6 -0.3**
baz=227
CHKT Chengkung 1.82 216 *e*P **Pn** **12 58 58.9 -0.8**
baz=210
CHKT *e*S **Sn** **12 59 21.4 -1.0**
baz=210
ALS Alishan 1.90 236 *e*P **Pn** **12 59 01.8 +0.8**
baz=229
ALS *e*S **Sn** **12 59 24.8 +0.1**
baz=229
CHN5 Tsauling 1.95 240 *e*P **Pn** **12 59 02.1 +0.6**
baz=249
CHN5 *e*S **Sn** **12 59 26.5 +0.8**
baz=249
ELDTW Lidau 1.96 225 *e*P **Pn** **12 59 01.1 -0.5**
baz=223
ELDTW *e*S **Sn** **12 59 25.9 +0.1**
baz=223
JTJ Tarama 1.98 88 P **Pn** **12 59 01.7 -0.1**
JTJ *e*S **Sn** **12 59 25.9 -0.3**
WGK Gukeng 2.00 244 *e*P **Pn** **12 59 02.4 +0.4**
baz=242
WGK *e*S **Sn** **12 59 29.4 +2.8**
baz=242
WTP Ta-pu 2.20 233 *e*P **Pn** **12 59 06.0 +1.3**
baz=232
WTP *e*S **Sn** **12 59 32.4 +1.0**
baz=232
TWG Pinlang 2.20 217 *e*P **Pn** **12 59 03.9 -0.8**
baz=222
TWG *e*S **Sn** **12 59 31.1 -0.4**
baz=222
TWK Hsinying 2.28 235 *e*P **Pn** **12 59 06.0 +0.3**
baz=234
TWK *e*S **Sn** **12 59 33.5 +0.3**
baz=234
CHN1 Nanshi 2.30 233 *e*P **Pn** **12 59 06.8 +0.9**
baz=232
CHN1 *e*S **Sn** **12 59 34.2 +0.5**
baz=232
LAY Lan-yu 2.69 200 *e*P **Pn** **12 59 09.6 -1.6**
baz=200

ISCJB ***27*** *13:02:15.1±0.8, 18°.33N±0°.02×122°.55E±0°.03, h23km±5km, mb4.3/48, MS3.7/15, Error ellipse: s-maj=5.4km s-min=3.7km az=175.0*
BJI ***27*** *13:02:16.0±1.3, 18°.63N×122°.47E, h4km, mB4.6/18, mb4.5/28, Ms4.1/25, Ms7 3.9/25*
MOS ***27*** *13:02:16.0±1.3, 18°.18N×122°.47E, h33km, mb4.6/10, Error ellipse: s-maj=13.6km s-min=7.9km az=109.0*
NEIC ***27*** *13:02:17.6±0.3, 18°.19N×122°.29E, h35km, mb4.5/7, Error ellipse: s-maj=9.8km s-min=6.2km az=86.0*
MAN ***27*** *13:02:18, 18°.07N×122°.30E, h4km, mb5.3, ML4.3, MS4.6*
IDC ***27*** *13:02:21.1±2.6, 18°.17N×122°.51E, h59km±24km, mb3.8/23, mb1 4.0/25, mb1mx3.9/32, mbtmp3.9/25, ML4.0/3, MS3.6/9, Ms1 3.6/9, ms1mx3.3/33, Error ellipse: s-maj=17.8km s-min=9.9km az=79.0*
DJA ***27*** *13:02:47.5±1.5, 18°N±8°×12°2E±°, h370km±22km, M4.4/14, mB5.2/3, mb4.3/14, Mw(mB)4.5/3*

ISC 27 13:02:15.5±0.4, 18°.24N±0°.03×122°.47E±0°.04, h15km±2km, n133, σ1§99/175, mb4.3/48, MS3.7/16, 6C-2D, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
SGCP	**Mt. Cagua**	**0.40**	**270**	*e*P		**Pb**		**13 02 24.8**	**+0.5**
SGCP				*e*S		**Sb**		**13 02 31.7**	**+1.5**
CVP	**Callao Caves**	**0.82**	**229**	‖ *i*P		**Pn**		**13 02 31.9**	**-0.5**
PALP	**Palanan**	**1.17**	**182**	*e*P		**Pg**		**13 02 38.8**	**+0.7**
APYP	**Conner**	**1.23**	**252**	*e*P		**Pb**		**13 02 38.5**	**+0.2**
APYP				*e*S		**Sg**		**13 02 55.3**	**+0.2**
CAUP	**Cauayan**	**1.43**	**206**	*e*P		**Pg**		**13 02 43.1**	**+0.1**
PIP	**Pasuquin**	**1.76**	**273**	‖ *i*P		**Pb**		**13 02 47.4**	**-0.1**
ABRA	**Dolores**	**1.77**	**251**	*e*P		**Pb**		**13 02 47.0**	**-0.7**
BALP	**Baler**	**2.63**	**199**	*e*P		**Pn**		**13 02 59.2**	**+1.8**
SCZP	**Santa Cruz**	**3.46**	**225**	*e*P		**Pn**		**13 03 10.8**	**+2.0**
GQP	**Guinayangan**	**4.31**	**180**	‖ *e*P		**Pn**		**13 03 23.0**	**+2.4**
TGY	**Tagaytay City**	**4.37**	**200**	P		Pn		13 03 26.3	+4.9
TGY	**Tagaytay City**	**4.37**	**200**	P		Pn		13 03 26.3	+4.9
	58nm,0.3s,baz=349,slow=16,SNR=2.7								
TWG	**Pinlang**	**4.74**	**344**	*e*P		**Pn**		**13 03 24.6**	**-1.8**
TWG				*e*S		**Sn**		**13 04 21.3**	**+0.2**
YULB	**Yu-li**	**5.24**	**348**	*e*P		**Pn**		**13 03 32.3**	**-1.0**
	23nm,0.6s								
YULB				*e*S		**Sn**		**13 04 32.1**	**-1.4**
TPUB	**Ta-pu**	**5.32**	**341**	*e*P		**Pn**		**13 03 33.7**	**-0.7**
SSLB	**Suanglung**	**5.70**	**346**	*e*P		**Pn**		**13 03 38.6**	**-1.0**
SSLB				*e*S		**Sn**		**13 04 43.7**	**-1.0**
YHNB	**Yeheng**	**6.48**	**351**	*e*P		**Pn**		**13 03 50.0**	**-0.3**
	30nm,0.6s								
YHNB				*e*S		**Sn**		**13 05 01.5**	**-2.6**
JOW	**Kunigami**	**10.09**	**31**	*e*P		**Pn**		**13 04 40.5**	**+0.6**
JOW				*e*S		**Sn**		**13 06 32.7**	**-0.1**
DAV	**Davao City (W)**	**11.51**	**164**	*e*P		Pn		13 04 55.7	-3.7
DAV	**Davao City (W)**	**11.51**	**164**	P		Pn		13 05 16.6	+17
	438nm,0.5s								
DAV	**Davao City (W)**	**11.51**	**164**	LR		LR		13 10 11.1	
	comp=Z,342nm,18.4s,baz=320,slow=41								
QIZ	**Qiongzhong**	**12.00**	**276**	P		Pn		13 05 02.3	-3.7
QIZ				S		**Sn**		**13 07 16.8**	**-2.8**
QIZ				pmax		pmax			
	comp=Z,20nm,1.1s								
QIZ				LR		LR			
	comp=N,280nm,14.7s								
QIZ				LR		LR			
	comp=E,250nm,16.7s								
QIZ				LR		LR			
	comp=Z,450nm,15.1s								
MYLDM	**Lahad Datu**	**13.55**	**197**	P		**P**		**13 05 37.3**	**+1.0**
	comp=Z,26nm,1.6s								
NJ2	**Nanjing**	**14.13**	**347**	*e*P		**Pn**		**13 05 32.5**	**-2.6**
NJ2				pP		P		13 05 35.5	-7.2
NJ2				sP				13 05 38.5	
NJ2				PP		**PnPn**		**13 05 42.5**	**-0.8**
NJ2				S		**Sn**		**13 08 13.0**	**+1.3**
NJ2				sS		S		13 08 18.0	-15
NJ2				pmax		pmax			
	comp=Z,10.0nm,0.7s								
NJ2				LR		LR			
	comp=N,190nm,15.0s								
NJ2				LR		LR			
	comp=E,760nm,24.7s								
WHN	**Wuhan**	**14.30**	**330**	P		Pn		13 05 32.0	-5.4
WHN				*e*S		**Sn**		**13 08 18.0**	**+2.2**
WHN				LR		LR			
	comp=Z,580nm,12.4s								
JNU	**Nakatsue**	**16.63**	**25**	P		**P**		**13 06 12.4**	**+1.9**
JNU	**Nakatsue**	**16.63**	**25**	P		**P**		**13 06 12.4**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=195,slow=6.5,SNR=8.5								
GYA	**Guiyang**	**16.74**	**302**	*e*P		**Pn**		**13 06 07.5**	**-2.1**
GYA				pP		**P**		**13 06 10.8**	**-1.0**
GYA				PP		**PnPn**		**13 06 21.3**	**+2.2**
GYA				S		**Sn**		**13 09 14.0**	**-1.4**
GYA				SS		**SnSn**		**13 09 34.5**	**+5.8**
GYA				pmax		pmax			
	comp=Z,10.0nm,0.8s								
GYA				LR		LR			
	comp=N,320nm,15.5s								
GYA				LR		LR			
	comp=E,280nm,16.2s								
GYA				LR		LR			
	comp=Z,350nm,15.8s								
GTOI	**Gorontalo**	**17.50**	**178**	P		**P**		**13 06 20.9**	**+0.7**
	comp=Z,54nm,0.9s,comp=Z,1μm								
KMSI	**Cibinong**	**17.62**	**175**	P		**P**		**13 06 24.2**	**+2.7**
	comp=Z,113nm,1.2s								
MRSI	**Marisa**	**17.66**	**182**	P		**P**		**13 06 24.4**	**+2.5**
	comp=Z,32nm,1.2s,comp=Z,834nm								
SBUM	**Sibu**	**18.64**	**214**	P		**Pn**		**13 06 33.4**	**+0.4**
	comp=Z,13nm,0.9s								
LUWI	**Luwuk**	**19.16**	**179**	P		**Pn**		**13 06 39.4**	**0.0**
	comp=Z,58nm,1.0s								
LBMI	**Labuha**	**19.40**	**165**	P		**Pn**		**13 06 42.8**	**+0.5**
	comp=Z,45nm,0.9s								
KMI	**Kunming**	**19.56**	**294**	P		**Pn**		**13 06 44.5**	**+0.1**
KMI				pP		**pP**		**13 06 47.5**	**+0.1**
KMI				sP		**sP**		**13 06 49.5**	**+0.1**
KMI				PP		**PnPn**		**13 06 59.8**	**+1.9**
KMI				S		**S**		**13 10 17.5**	**-6.2**
KMI				SS		**SnSn**		**13 10 42.3**	**+4.1**
KMI				pmax		pmax			
	comp=Z,6.0nm,0.7s								
KMI				pmax		pmax			
	comp=Z,92nm,3.5s								
KMI				LR		LR			
	comp=N,310nm,13.8s								
KMI				LR		LR			
	comp=E,380nm,13.8s								
KMI				LR		LR			
	comp=Z,440nm,13.2s								
KSAR	**Wonju Array Be**	**19.71**	**13**	P		**Pn**		**13 06 46.3**	**+0.5**
KSRS	**Korea Array**	**19.73**	**13**	P		**Pn**		**13 06 46.3**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=194,slow=11,SNR=16								
KSRS				LR		LR		13 15 37.1	
	comp=Z,114nm,18.7s,baz=0.0,slow=40								
XAN	**Xi'an**	**19.85**	**325**	P		**Pn**		**13 06 48.8**	**+1.2**
XAN				pP		pP		13 06 56.0	+5.7
XAN				pmax		pmax			
	comp=Z,4.0nm,1.4s								
XAN				pmax		pmax			
	comp=Z,21nm,5.1s								
XAN				LR		LR			
	comp=N,170nm,18.4s								
XAN				LR		LR			
	comp=E,81nm,21.4s								
XAN				LR		LR			
	comp=Z,50nm,16.3s								
KSM	**Kuching**	**20.50**	**217**	*e*P		**P**		**13 06 50.0**	**-3.1**
	comp=Z,29nm,1.1s								
KSM	**Kuching**	**20.50**	**217**	P		**P**		**13 06 52.0**	**-1.1**
	comp=Z,24nm,1.2s								
PBKT	**Sadao Pong**	**20.58**	**269**	P		Pn		13 06 56.8	+0.5
	comp=Z,19nm,1.0s								
CD2	**Chengdu**	**21.14**	**310**	*e*P		**P**		**13 07 01.8**	**+1.8**
CD2				pP		**pP**		**13 07 05.0**	**+0.6**
CD2				sP		**sP**		**13 07 08.3**	**+1.9**
CD2				PP		**PnPn**		**13 07 24.5**	**+5.2**
CD2				S		**S**		**13 10 52.3**	**-2.5**
CD2				sS		Sn		13 10 58.5	-3.1
CD2				SS		**SnSn**		**13 11 25.8**	**+9.1**
CD2				pmax		pmax			
	comp=Z,60nm,1.1s								
CD2				pmax		pmax			
	comp=Z,120nm,5.2s								
CD2				LR		LR			
	comp=N,330nm,17.8s								
CD2				LR		LR			
	comp=E,370nm,13.0s								
CD2				LR		LR			
	comp=Z,330nm,16.7s								
TTSI	**Tana Toraja**	**21.31**	**187**	P		**P**		**13 07 00.2**	**-1.7**
	comp=Z,21nm,1.0s								
GUMO	**Guam**	**22.02**	**99**	*e*P		**P**		**13 07 09.7**	**+0.1**
	comp=Z,84nm,1.2s								
CMMT	**Chiang Mai**	**22.31**	**275**	P		**P**		**13 07 15.3**	**+2.7**
	comp=Z,20nm,1.1s,comp=Z,8μm								
CHTO	**Chiang Mai**	**22.31**	**275**	*e*P		**P**		**13 07 10.2**	**-2.5**
CHTO				pmax		pmax			
	comp=Z,15nm,1.0s								
CHTO	**Chiang Mai**	**22.31**	**275**	*e*P		**P**		**13 07 10.2**	**-2.5**
	comp=Z,15nm,1.0s								
CHTO	**Chiang Mai**	**22.31**	**275**	P		**P**		**13 07 14.7**	**+2.0**
CM31	**Chiang Mai Arr**	**22.33**	**274**	*e*P		**P**		**13 07 09.4**	**-3.5**
	comp=Z,1.5nm,0.4s								
CMAR	**Chiang Mai Arr**	**22.33**	**274**	P		**P**		**13 07 15.1**	**+2.2**
CMAR				PcP		**PcP**		**13 11 09.4**	**+1.1**
CMAR	**Chiang Mai Arr**	**22.33**	**274**	P		**P**		**13 07 15.1**	**+2.2**
	comp=Z,4.4nm,0.9s,baz=75,slow=8.9,SNR=35								
CMAR				PcP		**PcP**		**13 11 09.4**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=103,slow=1.9,SNR=8.5								
CMAR				LR		LR		13 16 34.2	
	comp=Z,96nm,18.3s,baz=70,slow=38								
BJI	**Beijing**	**22.39**	**347**	P		**P**		**13 07 12.0**	**-1.3**
BJI				pmax		pmax			
	comp=Z,7.0nm,0.6s								
BJI				LR		LR			
	comp=N,92nm,15.7s								
BJI				LR		LR			
	comp=E,170nm,15.7s								
BJI				LR		LR			
	comp=Z,66nm,19.3s								
MAJO	**Matsushiro**	**22.91**	**34**	*e*P		**P**		**13 07 16.5**	**-2.3**
MAJO				pmax		pmax			
	comp=Z,30nm,1.8s								
MAJO	**Matsushiro**	**22.91**	**34**	*e*P		**P**		**13 07 16.5**	**-2.3**
	comp=Z,30nm,1.8s								
MAT	**Matsushiro**	**22.91**	**34**	P		**P**		**13 07 19.8**	**+1.0**
MAT				S		**S**		**13 11 31.0**	**+2.7**
MJAR	**Matsushiro Arr**	**22.91**	**34**	P		**P**		**13 07 19.9**	**+1.0**
MJAR	**Matsushiro Arr**	**22.91**	**34**	P		**P**		**13 07 19.9**	**+1.0**
	comp=Z,2.1nm,0.7s,baz=209,slow=8.5,SNR=17								
KAPI	**Kappang**	**23.26**	**187**	*e*P		**P**		**13 07 20.7**	**-1.9**
LZH	**Lanzhou**	**24.23**	**321**	*e*P		**P**		**13 07 34.8**	**+2.9**
LZH				pP		**pP**		**13 07 37.8**	**+1.2**
LZH				sP		**sP**		**13 07 40.5**	**+2.0**
LZH				PP		PnPn		13 08 10.0	+8.4
LZH				PcP		**PcP**		**13 11 13.0**	**+0.8**
LZH				*e*S		**S**		**13 11 50.5**	**+0.5**
LZH				sS		**sS**		**13 11 59.3**	**+1.7**
LZH				SS		**SnSn**		**13 12 39.3**	**+6.9**
LZH				pmax		pmax			
	comp=Z,17nm,1.0s								
LZH				pmax		pmax			
	comp=Z,110nm,5.6s								
LZH				LR		LR			
	comp=N,270nm,14.5s								
LZH				LR		LR			
	comp=E,150nm,11.0s								
LZH				LR		LR			
	comp=Z,400nm,14.7s								
HHC	**Hu-ho-hao-te**	**24.40**	**340**	*e*P		**P**		**13 07 30.8**	**-2.6**
HHC				pP		**pP**		**13 07 35.3**	**-2.8**
HHC				sP		**sP**		**13 07 38.5**	**-1.5**
HHC				PP		**PnPn**		**13 08 07.3**	**+3.3**
HHC				S		**S**		**13 11 48.0**	**-4.7**
HHC				sS		**sS**		**13 11 56.0**	**-4.3**
HHC				pmax		pmax			
	comp=Z,28nm,1.0s								
HHC				pmax		pmax			
	comp=Z,150nm,5.2s								
HHC				LR		LR			
	comp=N,400nm,12.6s								
HHC				LR		LR			
	comp=E,720nm,13.3s								
HHC				LR		LR			
	comp=Z,250nm,14.1s								
IPM	**Ipoh**	**25.04**	**239**	*e*P		**P**		**13 07 36.6**	**-2.7**
	comp=Z,15nm,1.0s								
CN2	**Changchun**	**25.60**	**5**	*e*P		**P**		**13 07 41.3**	**-2.8**
USRK	**Ussuriysk Arra**	**27.09**	**15**	P		**P**		**13 07 59.1**	**+1.6**
	comp=Z,2.5nm,0.9s,baz=193,slow=8.1,SNR=5.1								
PSI	**Prapat**	**27.71**	**239**	LR		LR		13 19 33.9	
	comp=Z,210nm,18.2s,baz=181,slow=37								
GTA	**Gaotai**	**28.82**	**322**	*e*P		**P**		**13 08 13.5**	**+0.3**
GTA				pP		**pP**		**13 08 17.5**	**-0.4**
GTA				sP		**sP**		**13 08 20.3**	**+0.5**
GTA				pmax		pmax			
	comp=Z,2.0nm,0.4s								
KLR	**Kul'dur**	**31.81**	**12**	*e*P		P		13 08 34.8	-4.6
SONM	**Songino Array**	**32.31**	**340**	P		**P**		**13 08 44.7**	**+0.8**
SONM				PcP		**PcP**		**13 11 32.6**	**+0.8**
SONM	**Songino Array**	**32.31**	**340**	P		**P**		**13 08 44.7**	**+0.8**
	comp=Z,1.7nm,0.8s,baz=161,slow=9.6,SNR=5.2								
SONM				PcP		**PcP**		**13 11 32.6**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=172,slow=4.5,SNR=3.5								
ZAK	**Zakamensk**	**35.55**	**339**	*e*P		**P**		**13 09 11.9**	**-0.1**
ZAK				pmax		pmax			
	comp=Z,3.0nm,1.0s								
FITZ	**Fitzroy Crossi**	**36.25**	**175**	P		**P**		**13 09 16.8**	**-1.3**
FITZ				PcP		**PcP**		**13 11 44.0**	**+0.7**
FITZ	**Fitzroy Crossi**	**36.25**	**175**	P		**P**		**13 09 16.8**	**-1.3**
	comp=Z,2.0nm,0.9s,baz=0.0,slow=8.1,SNR=4.4								
FITZ				PcP		**PcP**		**13 11 44.0**	**+0.7**
	comp=Z,2.8nm,0.8s,baz=49,slow=2.8,SNR=5.5								
TLY	**Talaya**	**36.53**	**340**	*e*P		**P**		**13 09 22.0**	**+1.7**
TLY				pmax		pmax			
	comp=Z,4.0nm,0.8s								
TLY				MLR		MLR			
	comp=Z,41nm,13.0s								
MOY	**Mondy**	**37.42**	**338**	*e*P		**P**		**13 09 29.7**	**+1.7**
WMQ	**Urumqi**	**38.77**	**319**	*e*P		**P**		**13 09 39.5**	**+0.1**
WMQ				pP		**pP**		**13 09 44.0**	**-0.2**
WMQ				sP		**sP**		**13 09 47.0**	**+0.9**
WMQ				PP		**PnPn**		**13 11 13.0**	**+2.6**
WMQ				*e*S		**S**		**13 15 37.0**	**+0.7**
WMQ				SS		**SnSn**		**13 18 19.0**	**-6.5**
WMQ				pmax		pmax			
	comp=Z,9.0nm,0.6s								
WMQ				pmax		pmax			
	comp=Z,130nm,5.0s								
WMQ				LR		LR			
	comp=N,280nm,10.0s								
WMQ				LR		LR			
	comp=E,410nm,16.0s								
WMQ				LR		LR			
	comp=Z,230nm,15.1s								
WRA	**Warramunga Arr**	**39.70**	**162**	P		**P**		**13 09 46.3**	**-1.0**
WRA	**Warramunga Arr**	**39.70**	**162**	P		**P**		**13 09 46.3**	**-1.0**
	comp=Z,1.9nm,0.8s,baz=342,slow=9.2,SNR=22								
ASAR	**Alice Springs**	**43.12**	**165**	P		**P**		**13 10 14.8**	**-0.6**
ASAR	**Alice Springs**	**43.12**	**165**	P		**P**		**13 10 14.8**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=344,slow=7.3,SNR=27								
MK31	**Makanchi Array**	**43.53**	**320**	*e*P		**P**		**13 10 17.0**	**-1.5**
MK31	**Makanchi Array**	**43.53**	**320**	*e*P		**P**		**13 10 17.0**	**-1.5**
MKAR	**Makanchi Array**	**43.53**	**320**	*ce*P		**P**		**13 10 19.8**	**+1.3**
MKAR				pmax		pmax			
	comp=Z,5.0nm,0.7s								
MKAR	**Makanchi Array**	**43.53**	**320**	*e*P		**P**		**13 10 16.8**	**-1.8**
MKAR				PcP		**PcP**		**13 12 07.2**	**+1.0**
MKAR	**Makanchi Array**	**43.53**	**320**	P		**P**		**13 10 19.9**	**+1.3**
	comp=Z,5.0nm,0.8s,baz=111,slow=8.0,SNR=49								
MKAR				PcP		**PcP**		**13 12 07.2**	**+1.0**
	comp=Z,1.6nm,1.0s,baz=116,slow=5.6,SNR=4.2								
MKAR				LR		LR		13 31 09.8	
	comp=Z,55nm,18.3s,baz=227,slow=40								
PETK	**Petropavlovsk-**	**44.25**	**30**	P		**P**		**13 10 25.3**	**+1.1**
PETK	**Petropavlovsk-**	**44.25**	**30**	P		**P**		**13 10 25.3**	**+1.1**
PETK	**Petropavlovsk-**	**44.25**	**30**	P		**P**		**13 10 25.3**	**+1.1**
	comp=Z,1.3nm,0.6s,baz=194,slow=5.5,SNR=3.6								
PETK				LR		LR		13 26 45.3	
	comp=Z,29nm,21.8s,baz=64,slow=33								
CTA	**Charters Tower**	**44.67**	**147**	P		**P**		**13 10 28.5**	**+0.6**
CTA	**Charters Tower**	**44.67**	**147**	P		**P**		**13 10 28.5**	**+0.6**
	comp=Z,1.6nm,0.4s,baz=307,slow=5.1,SNR=3.8								
ZALV	**Zalesovo Beam**	**45.91**	**330**	P		**P**		**13 10 37.8**	**+0.4**
ZALV	**Zalesovo Beam**	**45.91**	**330**	P		**P**		**13 10 37.8**	**+0.4**
ZALV	**Zalesovo Beam**	**45.91**	**330**	P		**P**		**13 10 37.8**	**+0.4**
	comp=Z,0.8nm,0.4s,baz=112,slow=6.8,SNR=4.7								
ZALV				LR		LR		13 31 23.1	
	comp=Z,73nm,18.1s,baz=70,slow=38								
HNR	**Honiara**	**46.09**	**124**	LR		LR		13 28 30.3	
	comp=Z,59nm,18.2s,baz=227,slow=34								
KURK	**Kurchatov**	**47.48**	**323**	P		**P**		**13 10 50.5**	**+0.8**
KURK	**Kurchatov**	**47.48**	**323**	P		**P**		**13 10 50.5**	**+0.8**
KURBB	**Kurchatov Arra**	**47.49**	**323**	P		**P**		**13 10 50.5**	**+0.8**
	comp=Z,5.5nm,0.7s,baz=122,slow=7.6,SNR=35								
NWAO	**Narrogin (SRO)**	**51.13**	**186**	P		**P**		**13 11 16.4**	**-1.3**
NWAO	**Narrogin (SRO)**	**51.13**	**186**	P		**P**		**13 11 16.4**	**-1.3**
	comp=Z,21nm,1.0s,baz=353,slow=8.1								
BVAR	**Borovoye Array**	**53.08**	**323**	P		**P**		**13 11 32.6**	**+0.5**
BVAR								13 12 40.2	
BVAR	**Borovoye Array**	**53.08**	**323**	P		**P**		**13 11 32.6**	**+0.5**
BVAR				PcP		**PcP**		**13 12 40.2**	**-0.2**
BVAR	**Borovoye Array**	**53.08**	**323**	P		**P**		**13 11 32.6**	**+0.5**
	comp=Z,0.9nm,0.5s,baz=112,slow=7.0,SNR=4.4								
BVAR				PcP		**PcP**		**13 12 40.2**	**-0.2**
	comp=Z,1.6nm,0.6s,baz=116,slow=3.4,SNR=6.9								
STKA	**Stephens Creek**	**53.10**	**160**	P		**P**		**13 11 31.8**	**-0.7**
STKA	**Stephens Creek**	**53.10**	**160**	P		**P**		**13 11 31.8**	**-0.7**
	comp=Z,1.8nm,0.7s,baz=98,slow=5.8,SNR=4.7								
BRVK	**Borovoye**	**53.15**	**323**	*ce*P		**P**		**13 11 33.6**	**+1.0**
BRVK				MLR		MLR			
	comp=Z,56nm,18.0s								
TIXI	**Tiksi**	**53.54**	**3**	‖ *e*P		**P**		**13 11 34.1**	**-1.0**
TIXI				pmax		pmax			
	comp=Z,7.0nm,1.7s								
TIXI				MLR		MLR			
	comp=Z,80nm,16.0s								
BILL	**Bilibino**	**56.89**	**18**	‖ *e*P		**P**		**13 11 58.7**	**-0.7**
BILL				*e*				13 12 55.6	
BILL				pmax		pmax			
	comp=Z,3.0nm,0.9s								
BILL				MLR		MLR			
	comp=Z,100nm,20.0s								
ARU	**Arti**	**60.60**	**325**	*c i*P		**P**		**13 12 24.9**	**-0.5**
ARU								13 14 35.3	
ARU				S		**S**		**13 20 39.4**	**-1.5**
ARU				pmax		pmax			
	comp=Z,4.0nm,0.6s								
RDF	**Al-Radifah**	**68.50**	**295**	*e*P		**P**		**13 13 17.3**	**-0.3**
RDF				AMb		AMB		13 13 24.3	
	comp=Z,27nm,1.3s								
MIB	**Mutribah**	**68.54**	**295**	*e*P		**P**		**13 13 17.7**	**-0.1**
MIB				AMb		AMB		13 13 18.3	
	comp=Z,12nm,0.7s						

HFS	**Hagfors**	**83.32**	**332**	P		**P**	**13 14 40.9**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=100,slow=6.3,SNR=6.5							
CRVS	**Cervenica-Dubn**	**83.45**	**319**	*e*P		P	13 14 38.0	-4.5
CRVS				pmax		pmax		
	comp=Z,14nm,2.3s							
CRVS	**Cervenica-Dubn**	**83.45**	**319**	*e*P		P	13 14 38.0	-4.5
NB2	**NORSAR Subarra**	**84.02**	**333**	P		**P**	**13 14 44.3**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=66,slow=5.3							
NOA	**NORSAR Array B**	**84.02**	**333**	P		**P**	**13 14 44.7**	**-0.5**
NOA	**NORSAR Array B**	**84.02**	**333**	P		**P**	**13 14 44.7**	**-0.5**
	comp=Z,1.5nm,0.8s,baz=64,slow=5.1,SNR=6.2							
NOA				LR		LR	13 56 01.6	
	comp=Z,83nm,18.6s,baz=245,slow=38							
YKA	**Yellowknife Ar**	**87.95**	**23**	P		**P**	**13 15 05.5**	**+1.0**
YKA	**Yellowknife Ar**	**87.95**	**23**	P		**P**	**13 15 05.5**	**+1.0**
	comp=Z,2.5nm,0.8s,baz=307,slow=4.5,SNR=16							
GERES	**GERESS Array B**	**88.19**	**321**	P		**P**	**13 15 06.5**	**+0.4**
GERES	**GERESS Array B**	**88.19**	**321**	P		**P**	**13 15 06.5**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=66,slow=7.5,SNR=3.9							

TIR ***27*** *13:11:14.2±2.9, 40.°54N×19.°71E, h25km±19km, ML3.7*
CSEM ***27*** *13:11:14.8±0.1, 40.°54N×19.°66E, h2km, ML3.7, Error ellipse: s-maj=3.3km s-min=2.7km az=72.0*
BEO ***27*** *13:11:15.6±0.8, 40.°46N×19.°72E, h10km±3km, ML2.9/1*
PDG ***27*** *13:11:15.2±0.3, 40.°61N×19.°73E, h6km, ML2.9/9, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
THE ***27*** *13:11:15.2, 40.°52N×19.°79E, h2km±23km, ML3.2/3, Error ellipse: s-maj=23.3km s-min=0.4km az=0.0*
ATH ***27*** *13:11:16.5, 40.°57N×19.°84E, h18km±1km, MD3.3/9*
ROM ***27*** *13:11:16.7±0.2, 40.°55N×19.°63E, h26km±3km, Ml3.1/17, Error ellipse: s-maj=3.6km s-min=1.9km az=111.0*

ISC 27 13:11:15.2±0.8, 40.°54N±0.°01×19.°69E±0.°02, h13km±6km, n158, σ1°33/237, 5C-10D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
VLO	**Vlora**	**0.16**	**244**	*e*PG		**Pg**	**13 11 18.3**	**-0.7**
VLO				*i* SG		**Sg**	**13 11 23.0**	**+1.3**
VLO	**Vlora**	**0.16**	**244**	P		**Pg**	**13 11 18.5**	**-0.5**
VLO	**Vlora**	**0.16**	**244**	P		**Pg**	**13 11 18.5**	**-0.5**
VLO				*i* Sg		**Sg**	**13 11 23.0**	**+1.3**
	SNR=14							
SRN	**Sarande**	**0.70**	**160**	*e*PG		**Pg**	**13 11 28.4**	**-0.4**
SRN				*i* SG		**Sn**	**13 11 40.4**	**-1.1**
SRN	**Sarande**	**0.70**	**160**	P		**Pg**	**13 11 27.9**	**-0.9**
SRN				S		**Sg**	**13 11 36.9**	**-1.2**
SRN	**Sarande**	**0.70**	**160**	P		**Pg**	**13 11 27.9**	**-0.9**
SRN	**Sarande**	**0.70**	**160**	*e*Pg		**Pg**	**13 11 28.4**	**-0.4**
	SNR=9.0							
SRN				S		**Sg**	**13 11 36.9**	**-1.2**
SRN				*i* Sg		**Sn**	**13 11 40.4**	**-1.1**
	SNR=9.0							
TIR	**Tirane**	**0.82**	**9**	*e*PG		**Pg**	**13 11 30.4**	**-0.7**
TIR				*i* SG		**Sn**	**13 11 43.6**	**-0.9**
TIR	**Tirane**	**0.82**	**9**	P		**Pg**	**13 11 30.6**	**-0.5**
TIR				S		**Sb**	**13 11 42.5**	**+0.2**
TIR	**Tirane**	**0.82**	**9**	*e*Sg		**Sn**	**13 11 44.6**	**+0.1**
TIR	**Tirane**	**0.82**	**9**	Pn		**Pb**	**13 11 31.5**	**+0.2**
TIR				Sn		**Sn**	**13 11 44.4**	**-0.1**
	593nm,0.6s							
TIR	**Tirane**	**0.82**	**9**	P		**Pg**	**13 11 30.6**	**-0.5**
TIR	**Tirane**	**0.82**	**9**	Pn		**Pb**	**13 11 31.5**	**+0.2**
TIR				S		**Sb**	**13 11 42.5**	**+0.2**
TIR				Sn		**Sn**	**13 11 44.4**	**-0.1**
	593nm,0.6s							
KEK	**Kerkira**	**0.83**	**174**	P		**Pg**	**13 11 30.2**	**-1.1**
KEK				S		**Sb**	**13 11 42.4**	**-0.2**
KEK	**Kerkira**	**0.83**	**174**	*e*PN		**Pn**	**13 11 32.8**	**+0.2**
KEK				*e*SN		**Sn**	**13 11 44.9**	**+0.2**
KEK	**Kerkira**	**0.83**	**174**	Pn		**Pn**	**13 11 32.7**	**+0.2**
KEK				Sn		**Sn**	**13 11 44.9**	**+0.2**
	477nm,0.2s							
KEK	**Kerkira**	**0.83**	**174**	P		**Pg**	**13 11 30.2**	**-1.1**
KEK	**Kerkira**	**0.83**	**174**	*e*Pn		**Pn**	**13 11 32.8**	**+0.2**
KEK				S		**Sb**	**13 11 42.4**	**-0.2**
KEK				Sn		**Sn**	**13 11 44.9**	**+0.2**
	477nm,0.2s							
KBN	**Korca**	**0.84**	**84**	*e*PG		**Pg**	**13 11 29.6**	**-2.0**
KBN				*i* SG		**Sg**	**13 11 42.2**	**-0.4**
KBN	**Korca**	**0.84**	**84**	P		**Pg**	**13 11 29.7**	**-1.9**
KBN				S		**Sg**	**13 11 40.5**	**-2.1**
KBN	**Korca**	**0.84**	**84**	P		**Pg**	**13 11 29.7**	**-1.9**
KBN				S		**Sg**	**13 11 40.5**	**-2.1**
SCTE	**Santa Cesarea**	**1.04**	**244**	Pn		**Pb**	**13 11 35.0**	**-0.1**
SCTE				Sn		**Sb**	**13 11 49.6**	**+1.0**
	1µm,0.6s							
SCTE	**Santa Cesarea**	**1.04**	**244**	Pn		**Pb**	**13 11 35.0**	**-0.1**
SCTE				Sn		**Sb**	**13 11 49.6**	**+1.0**
	1um,0.6s							
NEST	**Nestorio**	**1.05**	**96**	P		**Pb**	**13 11 34.0**	**-1.3**
NEST	**Nestorio**	**1.05**	**96**	P		**Pb**	**13 11 34.0**	**-1.3**
IGT	**Igoumenitsa**	**1.12**	**154**	P		**Pb**	**13 11 34.9**	**-1.6**
IGT				S		**Sb**	**13 11 50.9**	**-0.1**
IGT	**Igoumenitsa**	**1.12**	**154**	P		**Pb**	**13 11 34.9**	**-1.6**
IGT				S		**Sb**	**13 11 50.9**	**-0.1**
JAN	**Janina**	**1.26**	**134**	P		**Pb**	**13 11 38.8**	**0.0**
JAN	**Janina**	**1.26**	**134**	*e*PN		**Pb**	**13 11 38.9**	**+0.1**
JAN				*e*SN		**Sg**	**13 11 56.1**	**+0.4**
JAN	**Janina**	**1.26**	**134**	*e*Pn		**Pb**	**13 11 38.9**	**+0.1**
JAN				*e*Sn		**Sg**	**13 11 56.1**	**+0.4**
PHP	**Peshkopia**	**1.28**	**26**	*e*PG		**Pg**	**13 11 39.6**	**-0.2**
PHP				*i* SG		**Sg**	**13 11 59.2**	**+2.7**
PHP	**Peshkopia**	**1.28**	**26**	Pn		**Pn**	**13 11 38.8**	**0.0**
PHP	**Peshkopia**	**1.28**	**26**	P		**Pn**	**13 11 38.8**	**0.0**
PHP	**Peshkopia**	**1.28**	**26**	*e*Pg		**Pg**	**13 11 39.6**	**-0.2**
	SNR=9.0							
PHP				*i* Sg		**Sg**	**13 11 59.2**	**+2.7**
	SNR=9.0							
FNA	**Florina**	**1.31**	**79**	P		**Pn**	**13 11 38.0**	**-1.3**
FNA				S		**Sb**	**13 11 56.3**	**-0.1**
FNA	**Florina**	**1.31**	**79**	*e*PN		**Pn**	**13 11 38.5**	**-0.8**
FNA				*e*SN		**Sb**	**13 11 55.5**	**-0.9**
FNA	**Florina**	**1.31**	**79**	P		**Pn**	**13 11 38.0**	**-1.3**
FNA	**Florina**	**1.31**	**79**	*e*Pn		**Pn**	**13 11 38.5**	**-0.8**
FNA				*e*Sn		**Sb**	**13 11 55.5**	**-0.9**
FNA				S		**Sb**	**13 11 56.3**	**-0.1**
BIA	**Bitola**	**1.33**	**68**	P		**Pn**	**13 11 39.0**	**-0.6**
BIA	**Bitola**	**1.33**	**68**	*i* Pn		**Pn**	**13 11 39.0**	**-0.6**
BIA	**Bitola**	**1.33**	**68**	P		**Pn**	**13 11 39.0**	**-0.6**
ULC	**Ulcinj**	**1.46**	**347**	⇓*i* Pn		**Pn**	**13 11 40.7**	**-0.6**
ULC				*e*Sg		**Sg**	**13 12 02.5**	**+0.2**
ULC	**Ulcinj**	**1.46**	**347**	⇓*i* Pg		**Pn**	**13 11 40.7**	**-0.6**
ULC				*e*Sg		**Sg**	**13 12 02.5**	**+0.2**
PUK	**Puka**	**1.51**	**6**	*e*PG		**Pb**	**13 11 43.0**	**-0.1**
PUK				*i* SG		**Sg**	**13 12 05.2**	**+1.3**
PUK	**Puka**	**1.51**	**6**	*e*Pg		**Pb**	**13 11 43.0**	**-0.1**
	SNR=9.0							
PUK				*i* Sg		**Sg**	**13 12 05.2**	**+1.3**
	SNR=9.0							
KZN	**Kozani**	**1.61**	**98**	*e*PN		**Pb**	**13 11 45.1**	**+0.3**
KZN				*e*SN		**Sb**	**13 12 05.1**	**0.0**
KZN	**Kozani**	**1.61**	**98**	*e*Pn		**Pb**	**13 11 45.1**	**+0.3**
KZN				*e*Sn		**Sb**	**13 12 05.1**	**0.0**
TAR1	**Taranto**	**1.83**	**270**	*e*Pn		**Pb**	**13 11 49.1**	**+0.6**
BCI	**Bajram Curri**	**1.85**	**9**	*e*PG		**Pb**	**13 11 47.9**	**-1.0**
BCI				*i* SG		**Sg**	**13 12 13.8**	**-0.9**
BCI	**Bajram Curri**	**1.85**	**9**	*e*Pg		**Pb**	**13 11 47.9**	**-1.0**
	SNR=9.0							
BCI				*i* Sg		**Sg**	**13 12 13.8**	**-0.9**
	SNR=9.0							
BUM	**Brajici-Budva**	**1.86**	**342**	⇑*i* Pn		**Pn**	**13 11 47.5**	**+0.7**
BUM				*e*Sn		**Sg**	**13 12 14.2**	**-0.8**
BUM	**Brajici-Budva**	**1.86**	**342**	⇑*i* Pn		**Pn**	**13 11 47.5**	**+0.7**
BUM				*e*Sn		**Sg**	**13 12 14.2**	**-0.8**
LKD2	**Lefkada island**	**1.90**	**156**	*e*PN		**Pb**	**13 11 50.0**	**+0.2**
LKD2				*e*SN		**Sb**	**13 12 14.5**	**+1.0**
LKD2	**Lefkada island**	**1.90**	**156**	*e*Pn		**Pb**	**13 11 50.0**	**+0.2**
LKD2				*e*Sn		**Sb**	**13 12 14.5**	**+1.0**
PDG	**Podgorica**	**1.92**	**350**	*e*Pn		**Pb**	**13 11 48.7**	**-1.3**
PDG				*e*Sn		**Sb**	**13 12 14.4**	**+0.6**
PDG	**Podgorica**	**1.92**	**350**	*e*Pn		**Pb**	**13 11 48.7**	**-1.3**
PDG				*e*Sn		**Sb**	**13 12 14.4**	**+0.6**
TTG	**Podgorica**	**1.92**	**350**	⇑*i* Pn		**Pb**	**13 11 48.8**	**-1.3**
TTG				*e*Sn		**Sg**	**13 12 15.3**	**-1.6**
SKO	**Skopje**	**1.95**	**42**	*e*Pn		**Pb**	**13 11 49.6**	**-1.0**
SKO				*e*Sn		**Sb**	**13 12 14.4**	**-0.4**
SKO	**Skopje**	**1.95**	**42**	*i* Pn		**Pb**	**13 11 50.5**	**0.0**
SKO				*i* Sn		**Sg**	**13 12 16.6**	**-1.3**
SKO	**Skopje**	**1.95**	**42**	*e*Pn		**Pb**	**13 11 49.6**	**-1.0**
SKO				*e*Sn		**Sb**	**13 12 14.4**	**-0.4**
NOCI	**Noci**	**2.01**	**278**	Pn		**Pn**	**13 11 48.5**	**-0.3**
	305nm,0.6s							
NOCI	**Noci**	**2.01**	**278**	Pn		**Pn**	**13 11 48.5**	**-0.3**
	305nm,0.6s							
THL	**Klokotos Trika**	**2.04**	**118**	*e*PN		**Pb**	**13 11 51.5**	**-0.5**
THL	**Klokotos Trika**	**2.04**	**118**	*e*Pn		**Pb**	**13 11 51.5**	**-0.5**
PVY	**Plav**	**2.06**	**6**	*e*Pn		**Pn**	**13 11 51.0**	**+1.3**
PVY				*e*Sn		**Sb**	**13 12 18.6**	**+0.4**
PVY	**Plav**	**2.06**	**6**	*e*Pn		**Pn**	**13 11 51.0**	**+1.3**
PVY				*e*Sn		**Sb**	**13 12 18.6**	**+0.4**
GRG	**Griva**	**2.10**	**78**	*e*PN		**Pb**	**13 11 51.8**	**-1.5**
GRG				*e*SN		**Sn**	**13 12 16.4**	**+0.2**
GRG	**Griva**	**2.10**	**78**	*e*Pn		**Pb**	**13 11 51.8**	**-1.5**
GRG				*e*Sn		**Sn**	**13 12 16.4**	**+0.2**
HCY	**Herceg Novi**	**2.11**	**335**	⇓*i* Pn		**Pn**	**13 11 50.9**	**+0.7**
HCY				*e*Sn		**Sb**	**13 12 19.8**	**+0.5**
HCY	**Herceg Novi**	**2.11**	**335**	⇓*i* Pn		**Pn**	**13 11 50.9**	**+0.7**
HCY				*e*Sn		**Sb**	**13 12 19.8**	**+0.5**
BAI	**Bari**	**2.20**	**286**	*e*Pn		**Pn**	**13 11 50.7**	**-0.8**
EVR	**Evrytania**	**2.30**	**134**	*e*PN		**Pb**	**13 11 55.3**	**-1.4**
EVR				*e*SN		**Sn**	**13 12 23.2**	**+2.0**
EVR	**Evrytania**	**2.30**	**134**	*e*Pn		**Pb**	**13 11 55.3**	**-1.4**
EVR				*e*Sn		**Sn**	**13 12 23.2**	**+2.0**
VAY	**Valandovo**	**2.32**	**69**	*e*Pn		**Pn**	**13 11 53.1**	**0.0**
VAY				*e*Sn		**Sn**	**13 12 22.5**	**+1.0**
VAY	**Valandovo**	**2.32**	**69**	*i* Pn		**Pb**	**13 11 56.0**	**-0.9**
VAY	**Valandovo**	**2.32**	**69**	*e*Pn		**Pn**	**13 11 53.1**	**0.0**
VAY				*e*Sn		**Sn**	**13 12 22.5**	**+1.0**
NKY	**Niksic**	**2.33**	**347**	⇓*i* Pn		**Pn**	**13 11 55.0**	**+1.7**
NKY				*e*Sn		**Sb**	**13 12 25.4**	**-0.5**
NKY	**Niksic**	**2.33**	**347**	⇓*i* Pn		**Pn**	**13 11 55.0**	**+1.7**
NKY				*e*Sn		**Sb**	**13 12 25.4**	**-0.5**
BEY	**Berane**	**2.34**	**4**	⇓*i* Pn		**Pn**	**13 11 55.0**	**+1.6**
BEY				*e*Sn		**Sb**	**13 12 25.1**	**-0.9**
IVA	**Berane**	**2.34**	**4**	⇓*i* Pn		**Pn**	**13 11 55.0**	**+1.6**
IVA				*e*Sn		**Sb**	**13 12 25.1**	**-0.9**
VLS	**Valsamata**	**2.46**	**163**	*e*PB		**Pb**	**13 11 57.5**	**-1.8**
VLS	**Valsamata**	**2.46**	**163**	*e*Pb		**Pb**	**13 11 57.5**	**-1.8**
BRY	**Bratogost**	**2.51**	**340**	⇓*i* Pn		**Pn**	**13 11 57.6**	**+1.7**
BRY				*e*Sn		**Sb**	**13 12 29.6**	**-1.5**
BRY	**Bratogost**	**2.51**	**340**	⇓*i* Pn		**Pn**	**13 11 57.6**	**+1.7**
BRY				*e*Sn		**Sb**	**13 12 29.6**	**-1.5**
AGG	**Agios Georgios**	**2.54**	**126**	*e*PN		**Pn**	**13 11 58.2**	**+2.1**
AGG	**Agios Georgios**	**2.54**	**126**	*e*Pb		**Pn**	**13 11 58.2**	**+2.1**
TIP	**Timpagrande** 71nm,1.3s	**2.63**	**240**	Pn		**Pn**	**13 11 57.4**	**0.0**
TIP	**Timpagrande** 71nm,1.3s	**2.63**	**240**	Pn		**Pn**	**13 11 57.4**	**0.0**
MRVN	**Minervino Murg** 62nm,0.6s	**2.70**	**282**	Pn		**Pn**	**13 11 57.7**	**-0.7**
MRVN	**Minervino Murg** 62nm,0.6s	**2.70**	**282**	Pn		**Pn**	**13 11 57.7**	**-0.7**
UPM	**Unac-Piva**	**2.73**	**348**	⇑*i* Pn		**Pn**	**13 12 00.1**	**+1.3**
UPM				*e*Sn		**Sn**	**13 12 33.9**	**+2.2**
UPM	**Unac-Piva**	**2.73**	**348**	⇑*i* Pn		**Pn**	**13 12 00.1**	**+1.3**
UPM				*e*Sn		**Sn**	**13 12 33.9**	**+2.2**
SJES	**Sjenica**	**2.73**	**4**	*e*Pn		**Pn**	**13 12 00.4**	**+1.6**
SJES	**Sjenica**	**2.73**	**4**	*e*Pn		**Pn**	**13 12 00.4**	**+1.6**
SERS	**Sersale**	**2.75**	**238**	Pn		**Pn**	**13 11 59.0**	**-0.2**
SERS	**Sersale**	**2.75**	**238**	Pn		**Pn**	**13 11 59.0**	**-0.2**
STON	**Ston**	**2.76**	**328**	*i* Pn		**Pn**	**13 11 57.5**	**-1.7**
STON				Sn		**Sn**	**13 12 31.3**	**-1.2**
STON	**Ston**	**2.76**	**328**	*i* Pn		**Pn**	**13 11 57.5**	**-1.7**
STON				Sn		**Sn**	**13 12 31.2**	**-1.2**
BARS	**Barje**	**2.78**	**34**	*e*Pn		**Pn**	**13 12 00.7**	**+1.3**
BARS				*e*Sn		**Sn**	**13 12 35.2**	**+2.4**
BARS	**Barje**	**2.78**	**34**	*e*Pn		**Pn**	**13 12 00.7**	**+1.3**
BARS				*e*Sn		**Sn**	**13 12 35.2**	**+2.4**
KALE	**Kalithea**	**2.87**	**138**	*e*PN		**Pn**	**13 12 03.1**	**+2.4**
KALE	**Kalithea**	**2.87**	**138**	*e*Pn		**Pn**	**13 12 03.1**	**+2.4**
PLG	**Polygyros**	**2.87**	**92**	*e*PN		**Pn**	**13 12 02.4**	**+1.7**
PLG	**Polygyros**	**2.87**	**92**	*e*Pb		**Pn**	**13 12 02.4**	**+1.7**
SELS	**Selova**	**2.88**	**21**	*e*Pn		**Pn**	**13 12 03.1**	**+2.2**
SELS				*e*Sn		**Sn**	**13 12 38.5**	**+3.1**
LAKA	**Lakka**	**2.90**	**142**	*e*PN		**Pn**	**13 12 03.3**	**+2.2**
LAKA	**Lakka**	**2.90**	**142**	*e*Pn		**Pn**	**13 12 03.3**	**+2.2**
MCEL	**Monticello** 41nm,0.5s	**2.97**	**267**	Pn		**Pn**	**13 12 02.3**	**+0.2**
MCEL	**Monticello** 41nm,0.5s	**2.97**	**267**	Pn		**Pn**	**13 12 02.3**	**+0.2**
NEO	**Neokhori**	**2.99**	**113**	*e*PN		**Pn**	**13 12 04.6**	**+2.3**
NEO	**Neokhori**	**2.99**	**113**	*e*Pn		**Pn**	**13 12 04.6**	**+2.3**
CUC	**Castrocucco** 57nm,0.7s	**3.01**	**261**	Pn		**Pn**	**13 12 03.2**	**+0.6**
CUC	**Castrocucco** 57nm,0.7s	**3.01**	**261**	Pn		**Pn**	**13 12 03.2**	**+0.6**
MTSN	**Montesano sul** 63nm,0.5s	**3.02**	**266**	Pn		**Pn**	**13 12 02.6**	**-0.2**
MTSN	**Montesano sul** 63nm,0.5s	**3.02**	**266**	Pn		**Pn**	**13 12 02.6**	**-0.2**
KLV	**Kalavryta, Ach**	**3.14**	**142**	*e*PN		**Pn**	**13 12 07.3**	**+2.8**
KLV	**Kalavryta, Ach**	**3.14**	**142**	*e*Pn		**Pn**	**13 12 07.3**	**+2.8**
LKR	**Lokris**	**3.18**	**125**	*e*PN		**Pn**	**13 12 06.6**	**+1.7**
LKR	**Lokris**	**3.18**	**125**	*e*Pn		**Pn**	**13 12 06.6**	**+1.7**
MGR	**Morigerati** 52nm,0.6s	**3.18**	**264**	Pn		**Pn**	**13 12 05.7**	**+0.7**
MGR	**Morigerati** 52nm,0.6s	**3.18**	**264**	Pn		**Pn**	**13 12 05.7**	**+0.7**
MRLC	**Muro Lucano** 30nm,0.5s	**3.20**	**275**	Pn		**Pn**	**13 12 07.5**	**+2.3**
MRLC	**Muro Lucano** 30nm,0.5s	**3.20**	**275**	Pn		**Pn**	**13 12 07.5**	**+2.3**
SGRT	**San Giovanni R** 74nm,0.7s	**3.21**	**293**	Pn		**Pn**	**13 12 04.1**	**-1.4**
SGRT	**San Giovanni R** 74nm,0.7s	**3.21**	**293**	Pn		**Pn**	**13 12 04.1**	**-1.4**
GUR	**Goura**	**3.32**	**141**	*e*PN		**Pn**	**13 12 09.3**	**+2.4**
GUR	**Goura**	**3.32**	**141**	*e*Pn		**Pn**	**13 12 09.3**	**+2.4**
BBLS	**Lazići**	**3.33**	**357**	*e*PN		Pn	13 12 10.3	+3.2
BBLS	**Lazići**	**3.33**	**357**	*e*Pn		Pn	13 12 10.3	+3.2
SGO	**Sicignano** 20nm,0.4s	**3.34**	**272**	Pn		**Pn**	**13 12 08.3**	**+1.2**
SGO	**Sicignano** 20nm,0.4s	**3.34**	**272**	Pn		**Pn**	**13 12 08.3**	**+1.2**
CDRU	**Civita di Ruta** 28nm,0.8s	**3.34**	**271**	Pn		**Pn**	**13 12 08.4**	**+1.2**
CDRU	**Civita di Ruta** 28nm,0.8s	**3.34**	**271**	Pn		**Pn**	**13 12 08.4**	**+1.2**
VTS	**Vitosha**	**3.34**	**51**	*e*Pn		**Pn**	**13 12 09.0**	**+1.7**
VTS				*e*Sn		**Sn**	**13 12 48.3**	**+1.3**
VTS	**Vitosha**	**3.34**	**51**	*e*Pn		**Pn**	**13 12 09.0**	**+1.7**
VTS				*e*Sn		**Sn**	**13 12 48.3**	**+1.3**
CMPR	**Campora** 34nm,0.6s	**3.35**	**268**	Pn		**Pn**	**13 12 07.8**	**+0.5**
CMPR	**Campora** 34nm,0.6s	**3.35**	**268**	Pn		**Pn**	**13 12 07.8**	**+0.5**
AMT	**Artemida-Makis**	**3.39**	**152**	*e*PN		**Pn**	**13 12 10.7**	**+2.8**
AMT	**Artemida-Makis**	**3.39**	**152**	*e*Pn		**Pn**	**13 12 10.7**	**+2.8**
GRUS	**Gruza**	**3.43**	**13**	*e*Pn		**Pn**	**13 12 09.2**	**+0.8**
GRUS				*e*Sn		**Sn**	**13 12 51.4**	**+2.5**
GRUS	**Gruza**	**3.43**	**13**	*e*Pn		**Pn**	**13 12 09.2**	**+0.8**
GRUS				*e*Sn		**Sn**	**13 12 51.4**	**+2.5**
ZAPS	**Zavoj**	**3.51**	**38**	*e*Pn		**Pn**	**13 12 11.4**	**+1.9**
ZAPS				*e*Sn		**Sn**	**13 12 51.3**	**+0.5**
DIVS	**Divibare**	**3.56**	**4**	*e*Pn		**Pn**	**13 12 12.2**	**+1.9**
DIVS				*e*Sn		**Sn**	**13 12 54.3**	**+2.0**
DIVS	**Divibare**	**3.56**	**4**	*e*Pn		**Pn**	**13 12 12.2**	**+1.9**
DIVS				*e*Sn		**Sn**	**13 12 54.3**	**+2.0**
ITM	**Ithomi**	**3.78**	**152**	*e*PN		Pn	13 12 16.5	+3.3
ITM	**Ithomi**	**3.78**	**152**	*e*Pn		Pn	13 12 16.5	+3.3
DID	**Didima**	**4.10**	**136**	*e*PN		**Pn**	**13 12 20.3**	**+2.7**
DID	**Didima**	**4.10**	**136**	*e*Pn		**Pn**	**13 12 20.3**	**+2.7**
VAGA	**Valle Agricola** 29nm,0.6s	**4.22**	**284**	Pn		**Pn**	**13 12 21.4**	**+2.1**
VAGA	**Valle Agricola** 29nm,0.6s	**4.22**	**284**	Pn		**Pn**	**13 12 21.4**	**+2.1**
LPEL	**Lama dei Pelig** 21nm,0.4s	**4.41**	**292**	Pn		**Pn**	**13 12 22.8**	**+0.9**
LPEL	**Lama dei Pelig** 21nm,0.4s	**4.41**	**292**	Pn		**Pn**	**13 12 22.8**	**+0.9**
CERA	**Filignano** 27nm,0.5s	**4.41**	**286**	Pn		**Pn**	**13 12 23.0**	**+1.1**
CERA	**Filignano** 27nm,0.5s	**4.41**	**286**	Pn		**Pn**	**13 12 23.0**	**+1.1**
UDBI	**Udbina**	**4.93**	**325**	*e*Pn		**Pn**	**13 12 29.1**	**+0.1**
UDBI				Sn		**Sn**	**13 13 25.2**	**-0.6**
UDBI	**Udbina**	**4.93**	**325**	*e*Pn		**Pn**	**13 12 29.1**	**+0.1**
UDBI				Sn		**Sn**	**13 13 25.2**	**-0.6**
NVLJ	**Novalja**	**5.37**	**320**	*e*Pn		**Pn**	**13 12 33.4**	**-1.6**
NVLJ				Sn		**Sn**	**13 13 33.8**	**-2.8**
NVLJ	**Novalja**	**5.37**	**320**	*e*Pn		**Pn**	**13 12 33.3**	**-1.6**
NVLJ				Sn		**Sn**	**13 13 33.7**	**-2.8**

MEX 27 13:15:26.7±0.5, 16.°98N×99.°48W, h37km±10km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.38**	**253**	*e*P		Pn	13 15 34.7	-0.8
ACX				*i* S		Sn	13 15 41.5	-0.7
CAIG	**El Cayaco**	**0.76**	**275**	*e*P		Pn	13 15 38.9	-1.9
CAIG				*i* S		Sn	13 15 49.0	-2.0
MEIG	**Mezcala**	**0.95**	**352**	*e*P		Pn	13 15 41.6	-2.0
MEIG				*i* S		Sn	13 15 53.7	-2.4
PNIG	**Pinotepa**	**1.42**	**114**	*i* P		Pn	13 15 48.7	-1.3
PNIG				*i* S		Sn	13 16 05.3	-2.2
ARIG	**Puente Sto Nin**	**1.54**	**328**	*i* P		Pn	13 15 50.4	-1.2
ARIG				*i* S		Sn	13 16 08.0	-2.4
YAIG	**Yautepec**	**1.91**	**12**	*i* P		Pn	13 15 56.0	-1.0
YAIG				*i* S		Sn	13 16 18.1	-1.9
ZIIG	**Zihuatanejo**	**2.00**	**289**	*i* P		Pn	13 15 55.9	-2.0
ZIIG				*i* S		Sn	13 16 19.6	-2.0

IDC 27 13:23:39.1±2.0, 5.°09N×75.°38W, h144km±13km, mb3.6/4, mb1 3.7/4, mb1mx3.2/21, mbtmp3.6/4, Error ellipse: s-maj=36.9km s-min=35.0km az=109.0, Colombia

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
ROSC	**El Rosal**	**1.07**	**103**	P		Pn	13 24 04.4	0.0
	24nm,0.3s,baz=287,slow=20,SNR=18							
ROSC				S		Sn	13 24 30.3	+6.7
	38nm,0.3s,baz=308,slow=12,SNR=7.1							
BDFB	**Brasilia**	**34.03**	**128**	P		P	13 30 10.9	+0.9
	1.5nm,0.4s,baz=321,slow=9.1,SNR=3.9							
CPUP	**Villa Florida**	**35.80**	**152**	P		P	13 30 23.3	-1.4
	0.2nm,0.3s,baz=340,slow=7.8,SNR=2.9							
TORD	**Torodi Ar. Bea**	**76.29**	**78**	P		P	13 35 13.0	+0.2
	0.6nm,0.5s,baz=286,slow=6.0,SNR=11							
GERES	**GERESS Array B**	**85.60**	**41**	P		P	13 36 00.8	-0.8
	0.2nm,0.3s,baz=237,slow=3.4,SNR=4.2							
ASAR	**Alice Springs**	**146.28**	**234**	PKPbc		PKPbc	13 43 03.8	-0.1
	0.5nm,0.8s,baz=144,slow=4.5,SNR=4.3							
WRA	**Warramunga Arr**	**147.54**	**240**	PKPbc		PKPbc	13 43 06.6	-0.8
	0.4nm,0.9s,baz=107,slow=2.9,SNR=5.7							

CSEM ***27*** *13:25:52.5±0.5, 36.°47N×25.°66E, h2km, ML2.5/1, Error ellipse: s-maj=13.7km s-min=5.4km az=87.0*
THE ***27*** *13:25:53.0, 36

NIED ***27*** *13:54:00.47″.00N×153″.70E, h17km, Mw4.1 Best double couple: M₀1.35000×10¹⁵ NP1:ϕ₀329.00000°, δ88.00000°, λ-84.00000°. NP2:ϕ₀75.00000°, δ6.00000°, λ-164.00000°.*
ISCJB ***27*** *13:54:06.7±0.4, 46°.91N±0″.05×153°.57E±0″.06, h27km, mb3.9/21, MS3.2/4, Error ellipse: s-maj=8.7km s-min=3.4km az=141.4*
JMA ***27*** *13:54:08.8±0.7, 47°.05N×153°.67E, h30km, M4.5*
MOS ***27*** *13:54:09.9±1.0, 47°.10N×153°.58E, h47km, mb4.3/14, Error ellipse: s-maj=14.9km s-min=8.2km az=61.3*
SKHL ***27*** *13:54:10.1±1.0, 46°.94N×153°.92E, h55km±14km, mb4.8/6, msh4.8/1*
IDC ***27*** *13:54:13.9±2.4, 47°.16N×153°.36E, h64km±21km, mb3.7/17, mb1 3.9/21, mb1mx3.8/31, mbtmp3.7/21, MS3.1/8, Ms1 3.1/8, ms1mx2.9/36, Error ellipse: s-maj=18.0km s-min=10.9km az=139.0*

ISC 27 13:54:08.5±0.6, 46°.79N±0″.07×153°.80E±0″.06, h27km, n76, σ2.9 11/82, mb3.9/21, MS3.3/4, 4D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**4.19**	**21**	*e*PN	**Pn**	**13 55 07.9**	**-2.6**
SKR				*e*		13 55 52.0	
SKR	comp=Z,80nm,0.5s			pmax	pmax		
SKR	comp=N,310nm,0.3s			pmax	pmax		
SKR	comp=E,290nm,0.3s			pmax	pmax		
SKR	**Severo-Kuril's**	**4.19**	**21**	*e*P	**Pn**	**13 55 07.9**	**-2.6**
SKR	comp=E,80nm,0.5s			AMB	AMB	13 55 09.0	
SKR				*e*S	Sn	13 55 52.0	-6.5
SKR	comp=E,80nm,0.5s			A	A	13 55 54.5	
SKR	comp=E,310nm,0.2s			A	A	13 55 54.5	
SKR	comp=E,290nm,0.2s			A	A	13 55 54.5	
KUR	**Kuril'sk**	**4.42**	**252**	*d* iPN	**Pn**	**13 55 16.5**	**+2.8**
KUR				*e*S	**Sn**	**13 56 06.4**	**+2.2**
KUR	comp=E,23nm,0.7s			pmax	pmax		
KUR	comp=Z,136nm,0.7s			pmax	pmax		
KUR	comp=N,47nm,0.4s			pmax	pmax		
KUR	comp=E,680nm,0.3s			smax	smax		
KUR	comp=N,115nm,0.6s			smax	smax		
KUR	**Kuril'sk**	**4.42**	**252**	↓*i*P	**Pn**	**13 55 16.5**	**+2.8**
KUR	comp=N,230nm,0.5s			AMB	AMB	13 55 18.5	
KUR				*e*S	**Sn**	**13 56 06.4**	**+2.2**
KUR	comp=N,280nm,0.7s			A	A	13 56 13.5	
KUR	comp=N,240nm,0.7s			A	A	13 56 13.5	
YUK	**Yuzh-Kuril'sk**	**6.23**	**247**	*i* PN	**Pn**	**13 55 41.0**	**+2.4**
YUK	comp=N,35nm,0.2s			pmax	pmax		
YUK	comp=Z,106nm,0.4s			pmax	pmax		
YUK	comp=E,49nm,0.1s			pmax	pmax		
YUK	comp=N,249nm,2.8s			pmax	pmax		
YUK	comp=E,320nm,2.7s			MLR	MLR		
YUK	comp=E,230nm,14.0s			MLR	MLR		
YUK	**Yuzh-Kuril'sk**	**6.23**	**247**	↓*i*P	**Pn**	**13 55 41.0**	**+2.4**
YUK	comp=Z,40nm,0.2s			AMB	AMB	13 55 42.3	
YUK	comp=Z,50nm,0.2s			AMB	AMB	13 55 42.3	
YUK	comp=Z,110nm,0.2s			AMB	AMB	13 55 42.3	
YUK				*e*S	**Sn**	**13 56 49.4**	**+0.5**
YUK	comp=Z,30nm,0.3s			A	A	13 57 04.0	
YUK	comp=Z,100nm,0.3s			A	A	13 57 04.0	
YUK	comp=Z,249nm,2.7s			A	A	13 57 20.8	
YUK	comp=Z,320nm,2.7s			A	A	13 57 20.8	
NEM2	**Nemuro 2**	**6.65**	**242**	P	**Pn**	**13 55 44.2**	**-0.2**
NEM2				*e*S	**Sn**	**13 56 54.9**	**-4.4**
JRA	**Rausu**	**6.75**	**248**	P	**Pn**	**13 55 47.8**	**+2.1**
PETK	**Petropavlovsk-**	**6.81**	**20**	PN	**Pn**	**13 55 47.4**	**+0.9**
PETK				S	**Sn**	**13 57 01.5**	**-1.5**
PETK	comp=Z,1.0nm,0.3s			pmax	pmax		
PETK	comp=Z,96nm,20.5s			MLR	MLR		
PETK	**Petropavlovsk-**	**6.81**	**20**	P	**Pn**	**13 55 47.4**	**+0.9**
PETK	comp=Z,1.2nm,0.3s,baz=181,slow=13,SNR=61 baz=207,slow=18,SNR=1.9			S	**Sn**	**13 57 01.5**	**-1.5**
PETK	comp=Z,96nm,20.5s,baz=301,slow=38			LR	LR	13 58 24.6	
PET	**Petropavlovsk**	**6.98**	**25**	*e*PN	**Pn**	**13 55 48.8**	**-0.1**
PET	comp=Z,17nm,0.9s			pmax	pmax		
JNK	**Nakash**	**7.17**	**247**	P	**Pn**	**13 55 53.0**	**+1.4**
JNK				*e*S	**Sn**	**13 57 11.8**	**-0.3**
JAK	**Akkeshi**	**7.49**	**243**	P	**Pn**	**13 55 55.7**	**-0.3**
JAK				*e*S	**Sn**	**13 57 14.8**	**-5.2**
JTKR	**Abashiri--Toko**	**7.51**	**252**	P	**Pn**	**13 55 58.5**	**+2.3**
YSS	**Yuzh-Sakhalins**	**7.58**	**275**	*e*PN	**Pn**	**13 56 00.0**	**+2.9**
YSS				*e*S	**Sn**	**13 57 22.7**	**+0.7**
YSS	comp=Z,30nm,1.0s			pmax	pmax		
YSS	comp=Z,200nm,16.0s			MLR	MLR		
YSS	**Yuzh-Sakhalins**	**7.58**	**275**	*e*P	**Pn**	**13 56 00.0**	**+2.9**
YSS	comp=Z,30nm,1.0s			AMB	AMB	13 56 03.0	
YSS				*e*S	**Sn**	**13 57 22.7**	**+0.7**
YSS	comp=Z,200nm,16.0s			AMS	AMS	13 58 50.0	
JMP	**Maruseppu**	**7.86**	**253**	P	**Pn**	**13 56 03.3**	**+2.3**
JAR	**Ashorobuto**	**7.92**	**247**	P	**Pn**	**13 56 03.5**	**+1.7**
JAR				*e*S	**Sn**	**13 57 28.5**	**-1.9**
JOB	**Onbets**	**8.08**	**245**	P	**Pn**	**13 56 04.4**	**+0.5**
JOB				*e*S	**Sn**	**13 57 30.6**	**-3.7**
UGL	**Uglegorsk**	**8.21**	**290**	*e*P	Pn	13 56 09.0	+3.3
UGL	comp=Z,78nm,1.0s			AMB	AMB	13 56 10.0	
JKK2	**Kamakawa 2**	**8.32**	**253**	P	**Pn**	**13 56 09.8**	**+2.5**
ASAJ	**Asahikawa**	**8.32**	**255**	P	**Pn**	**13 56 10.4**	**+3.1**
ASAJ	**Asahikawa**	**8.32**	**255**	P	**Pn**	**13 56 10.4**	**+3.1**
ASAJ	comp=Z,2.0nm,0.3s,baz=71,slow=12,SNR=35			LR	LR	13 59 13.4	
TYV	**Tymovskoe**	**8.41**	**303**	*e*P	**Pn**	**13 56 10.5**	**+2.0**
TYV	comp=Z,88nm,20.4s,baz=350,slow=37 comp=Z,5.0nm,0.6s			AMB	AMB	13 56 11.5	
TYV	comp=Z,8.0nm,0.6s			AMB	AMB	13 56 11.5	
TYV				*e*S	**Sn**	**13 57 39.5**	**-2.9**
TYV	comp=Z,11nm,0.8s			A	A	13 57 43.5	
TYV	comp=Z,15nm,0.8s			A	A	13 57 43.5	
JWK2	**Keihoku**	**8.41**	**264**	P	Pn	13 56 14.5	+6.0
JCH	**Churui**	**8.53**	**244**	P	**Pn**	**13 56 10.2**	**+0.1**
JCH				*e*S	**Sn**	**13 57 40.2**	**-5.1**
JFR	**Furan**	**8.73**	**250**	P	**Pn**	**13 56 14.8**	**+1.8**
ERM	**Erimo**	**8.99**	**242**	*d* iPN	**Pn**	**13 56 17.8**	**+1.4**
JEM	**Erimo**	**8.99**	**242**	*e*S	Sn	13 57 51.1	-5.6
JBT2	**Biratori 2**	**9.07**	**248**	P	**Pn**	**13 56 18.6**	**+1.1**
JBT2				*e*S	**Sn**	**13 57 56.1**	**-2.6**
JNBK	**Urakawa-nobuka**	**9.09**	**244**	P	**Pn**	**13 56 17.2**	**-0.6**
JNBK				*e*S	Sn	13 57 53.0	-6.1
JEW	**Eniwo**	**9.62**	**250**	P	**Pn**	**13 56 27.2**	**+2.0**
JNB	**Noboribetsu**	**10.07**	**249**	P	**Pn**	**13 56 31.4**	**+0.1**
JNB				*e*S	Sn	13 58 16.5	-6.7
JKB	**Kayabe**	**10.37**	**246**	P	**Pn**	**13 56 34.6**	**-0.8**
JKB				*e*S	Sn	13 58 22.3	-8.4
JSH	**Shimam**	**10.63**	**252**	P	**Pn**	**13 56 40.1**	**+1.2**
JYM2	**Yakumo 2**	**10.68**	**249**	P	**Pn**	**13 56 39.6**	**+0.1**
JANG	**Nango**	**10.97**	**239**	P	Pn	13 56 41.0	-2.6
JANG				*e*S	Sn	13 58 33.0	-12
JTM	**Tenmabayashi**	**10.98**	**241**	P	**Pn**	**13 56 41.9**	**-1.8**
JTM				*e*S	Sn	13 58 34.9	-11
JTH	**Tanohata**	**11.06**	**236**	P	Pn	13 56 42.3	-2.5
JTH				*e*S	Sn	13 58 35.2	-12
JOSM	**Okushiri--Mats**	**11.27**	**251**	P	**Pn**	**13 56 47.6**	**-0.1**
OFUJ	**Ofunato**	**11.76**	**233**	P	**Pn**	**13 56 51.9**	**-2.4**
OFUJ				*e*S	Sn	13 58 53.2	-11
JRG	**Rokugo**	**12.12**	**237**	P	**Pn**	**13 56 56.9**	**-2.5**
JRG				*e*S	Sn	13 59 00.7	-13
JIO	**Ouri**	**12.38**	**232**	P	Pn	13 56 59.4	-3.4
JIO				*e*S	Sn	13 59 08.0	-12
JYA	**Atsumi**	**13.19**	**237**	P	**Pn**	**13 57 11.7**	**-2.3**
FX1	**Attu Island--F**	**13.88**	**57**	P	**Pn**	**13 57 24.3**	**+1.0**
FX1	comp=Z,1.7nm,0.3s,baz=58,slow=15,SNR=7.8			S	Sn	13 59 46.5	-10
FX1	comp=Z,0.9nm,0.3s,baz=232,slow=17,SNR=12			LR	LR	14 01 46.3	
FX1	comp=Z,51nm,19.9s,baz=86,slow=32			LR	LR	14 01 46.3	
JFY	**Yanaizu**	**14.03**	**233**	P	**Pn**	**13 57 23.5**	**-1.9**
KLR	**Kul'dur**	**14.95**	**287**	*e*P	**P**	**13 57 45.3**	**+2.1**
MJAR	**Matsushiro Arr**	**15.48**	**234**	P	**Pn**	**13 57 43.3**	**-1.6**
USRK	**Ussuriysk Arra**	**15.50**	**268**	P	**Pn**	**13 57 43.4**	**-1.7**
USRK	comp=Z,0.4nm,0.3s,baz=69,slow=11,SNR=6.2 comp=Z,77nm,20.9s,baz=327,slow=37			LR	LR	14 03 42.8	
JHJ	**Hachijo jima 2**	**17.34**	**223**	P	**P**	**13 58 12.2**	**+2.5**
KSRS	**Korea Array**	**21.26**	**253**	P	**P**	**13 58 54.0**	**+1.5**
KSRS	comp=Z,1.8nm,0.3s,baz=55,slow=19,SNR=3.9 comp=Z,1.8nm,0.6s,baz=59,slow=10,SNR=14			LR	LR	14 08 36.4	
BILL	**Bilibino**	**22.25**	**12**	*i* P	**P**	**13 59 01.9**	**-1.0**
BILL	comp=Z,33nm,18.4s,baz=40,slow=41 comp=Z,3.0nm,1.2s			pmax	pmax		
ILAR	**Eielson Array**	**36.22**	**39**	P	**P**	**14 01 09.3**	**+0.7**
INK	**Inuvik**	**41.37**	**32**	P	**P**	**14 01 52.0**	**+0.3**
ZALV	**Zalesovo Beam**	**42.97**	**306**	LR	LR	14 20 31.5	
MKAR	**Makanchi Array**	**47.34**	**298**	*e*P	P	14 02 43.2	+3.4
MKAR	**Makanchi Array**	**47.34**	**298**	P	**P**	**14 02 37.5**	**-2.4**
KURK	**Kurchatov**	**47.74**	**304**	P	**P**	**14 02 41.4**	**-1.3**
KURK	comp=Z,1.0nm,0.7s			pmax	pmax		
KURBB	**Kurchatov Arra**	**47.83**	**304**	P	**P**	**14 02 41.4**	**-2.0**
YKA	**Yellowknife Ar**	**50.61**	**37**	P	**P**	**14 03 05.5**	**+1.0**
BVAR	**Borovoye Array**	**51.20**	**310**	P	**P**	**14 03 06.5**	**-2.6**
BVAR	**Borovoye Array**	**51.20**	**310**	P	**P**	**14 03 06.5**	**-2.6**
CMAR	**Chiang Mai Arr**	**52.84**	**257**	P	**P**	**14 03 21.9**	**+0.1**
CMAR	comp=Z,0.5nm,0.3s,baz=37,slow=9.1,SNR=5.7 comp=Z,35nm,18.1s,baz=205,slow=40			LR	LR	14 29 13.8	
ARCES	**ARCESS Array B**	**57.97**	**341**	P	P	14 03 55.0	-3.0
NVAR	**Mina Array Bea**	**61.99**	**63**	P	**P**	**14 04 28.7**	**+2.3**
FINES	**FINESS Array B**	**64.21**	**335**	P	**P**	**14 04 38.5**	**-1.9**
FINES	comp=Z,2.6nm,0.6s,baz=35,slow=7.4,SNR=17 comp=Z,33nm,18.6s,baz=13,slow=41			LR	LR	14 37 34.6	
PDAR	**Pinedale Array**	**64.34**	**54**	P	**P**	**14 04 42.9**	**+1.0**
OBN	**Obninsk**	**65.55**	**326**	*e*P	**P**	**14 04 48.5**	**-0.6**
OBN	comp=Z,0.5nm,0.8s,baz=291,slow=2.5,SNR=5.1 comp=Z,3.0nm,0.7s			pmax	pmax		
NB2	**NORSAR Subarra**	**68.34**	**341**	P	**P**	**14 05 05.6**	**-1.4**
NOA	**NORSAR Array B**	**68.34**	**341**	P	**P**	**14 05 05.4**	**-1.6**
WRA	**Warramunga Arr**	**68.70**	**200**	P	**P**	**14 05 11.3**	**+1.7**
AKASG	**Malin Array Be**	**71.78**	**327**	P	**P**	**14 05 26.1**	**-2.0**
AKASG	comp=Z,0.3nm,0.6s,baz=19,slow=6.6,SNR=2.4 comp=Z,2.0nm,0.4s			pmax	pmax		
AKASG	**Malin Array Be**	**71.78**	**327**	P	**P**	**14 05 26.1**	**-2.0**
ASAR	**Alice Springs**	**72.40**	**199**	P	**P**	**14 05 34.8**	**+2.8**
TXAR	**Lajitas Array**	**77.06**	**61**	P	**P**	**14 06 00.9**	**+1.6**
BRTR	**Keskin Array B**	**78.69**	**317**	P	**P**	**14 06 07.4**	**-0.8**

comp=Z,1.6nm,0.8s,baz=234,slow=6.1,SNR=9.0 comp=Z,0.5nm,0.6s,baz=12,slow=5.9,SNR=9.4 comp=Z,2.1nm,0.7s,baz=303,slow=4.8,SNR=22 comp=Z,1.2nm,0.9s,baz=62,slow=3.4,SNR=5.4

MAN 27 14:08:54, 9°.01N×122°.37E, h25km, mb4.2, ML3.1, MS2.8, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.92**	**69**	↓*i*P	Pb	14 08 54.4	-17
SNPH				*i* S	Sb	14 09 05.6	-18
IPIL	**Ipil**	**1.23**	**171**	*e*P	Pn	14 09 15.8	+0.2
GUIM	**Jordan**	**1.62**	**8**	*e*P	Pn	14 09 21.2	+0.1
GUIM				*e*S	Sn	14 09 37.7	-3.5
CUYO	**Cuyo Island**	**2.26**	**324**	*e*P	Pn	14 09 31.2	+1.3

DDA ***27*** *14:12:39.0, 38°.74N×35°.56E, h20km, MD2.9*
ISK ***27*** *14:12:39.5, 38°.76N×35°.58E, h6km, MD3.2*
CSEM ***27*** *14:12:39.6±0.1, 38°.74N×35°.57E, h2km, MD3.2, Error ellipse: s-maj=3.7km s-min=2.8km az=16.0*

ISC 27 14:12:39.9±0.9, 38°.77N±0″.02×35°.58E±0″.02, h10km±8km, n40, σ0°75/63, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNN	**Bunyan**	**0.23**	**68**	*e*PG	**Pg**	**14 12 44.5**	**-0.2**
BNN				*e*SG	**Sg**	**14 12 48.4**	**+0.5**
BNN	**Bunyan**	**0.23**	**68**	*e*Pg	**Pg**	**14 12 44.5**	**-0.2**
BNN				*e*Sg	**Sg**	**14 12 48.4**	**+0.5**
AVNT	**Avonos**	**0.56**	**271**	*i* P	**Pg**	**14 12 50.5**	**-0.4**
AVNT				*i* S	**Sg**	**14 12 58.2**	**-0.1**
AVNT	**Avonos**	**0.56**	**271**	*i* P	**Pg**	**14 12 50.5**	**-0.4**
AVNT				*i* S	**Sg**	**14 12 58.2**	**-0.1**
PINB	**Pinarbasi**	**0.65**	**98**	*i* P	**Pg**	**14 12 52.0**	**-0.6**
PINB				*i* S	**Sg**	**14 13 01.7**	**+0.5**
PINB	**Pinarbasi**	**0.65**	**98**	*i* P	**Pg**	**14 12 52.0**	**-0.6**
PINB				*i* S	**Sg**	**14 13 01.7**	**+0.5**
YOZ	**Yozgat**	**0.89**	**347**	*e*PG	**Pg**	**14 12 56.9**	**-0.2**
YOZ				*e*SG	**Sb**	**14 13 10.3**	**+0.7**
YOZ	**Yozgat**	**0.89**	**347**	*e*Pg	**Pg**	**14 12 56.9**	**-0.2**
YOZ				*e*Sg	**Sb**	**14 13 10.3**	**+0.7**
NIG	**Nigde**	**1.00**	**229**	*e*PG	**Pb**	**14 12 59.2**	**-0.4**
NIG	**Nigde**	**1.00**	**229**	*e*Pg	**Pb**	**14 12 59.2**	**-0.4**
CDAG	**Cicekdag**	**1.27**	**313**	*i* P	Pn	**14 13 03.3**	**-0.5**
CDAG				*i* S	Sn	**14 13 20.9**	**0.0**
CDAG	**Cicekdag**	**1.27**	**313**	*i* P	**Pn**	**14 13 03.3**	**-0.5**
CDAG				*i* S	**Sn**	**14 13 20.9**	**0.0**
KOZT	**Kozan**	**1.30**	**171**	*e*PN	**Pg**	**14 13 05.0**	**+0.1**
KOZT				*e*SN	**Sn**	**14 13 22.6**	**+1.0**
KOZT	**Kozan**	**1.30**	**171**	*e*Pn	**Pg**	**14 13 05.0**	**+0.1**
KOZT				*e*Sn	**Sn**	**14 13 22.6**	**+1.0**
DARE	**Darende-Malaty**	**1.51**	**97**	*e*PN	**Pb**	**14 13 08.1**	**+0.1**
CORM	**Corum**	**1.59**	**333**	*e*PN	**Pb**	**14 13 09.2**	**-0.2**
CORM	**Corum**	**1.59**	**333**	*e*Pn	**Pb**	**14 13 09.2**	**-0.2**
GULE	**Gulek**	**1.61**	**203**	*i* P	**Pn**	**14 13 07.9**	**-0.7**
GULE				*i* S	**Sg**	**14 13 31.4**	**-0.3**
GULE	**Gulek**	**1.61**	**203**	*i* P	**Pn**	**14 13 07.9**	**-0.7**
GULE				*i* S	**Sg**	**14 13 31.4**	**-0.3**
KMRS	**Kahramanmaras**	**1.64**	**140**	*e*PN	**Pn**	**14 13 08.9**	**+0.1**
KMRS	**Kahramanmaras**	**1.64**	**140**	*e*Pn	**Pn**	**14 13 08.9**	**+0.1**
AYKD	**Aykdinkavak**	**1.67**	**144**	*i* P	**Pg**	**14 13 11.0**	**-0.8**
AYKD				*i* S	**Sn**	**14 13 30.7**	**+0.1**
TOKT	**Tokat**	**1.72**	**26**	*e*PN	**Pb**	**14 13 11.8**	**+0.1**
TOKT	**Tokat**	**1.72**	**26**	*e*Pn	**Pb**	**14 13 11.8**	**+0.1**
AKCD	**Akcadag**	**1.90**	**104**	*e*P	**Pn**	**14 13 12.2**	**-0.3**
AKCD				*e*S	**Sg**	**14 13 40.0**	**-1.0**
AKCD	**Akcadag**	**1.90**	**104**	*e*P	**Pn**	**14 13 12.2**	**-0.3**
AKCD				*e*S	**Sg**	**14 13 40.0**	**-1.0**
CTKT	**Corum**	**1.95**	**342**	*i* P	**Pb**	**14 13 15.5**	**-0.1**
CTKT				*e*S	**Sn**	**14 13 36.0**	**-1.8**
CTKT	**Corum**	**1.95**	**342**	*i* P	**Pb**	**14 13 15.5**	**-0.1**
CTKT				*e*S	**Sn**	**14 13 36.0**	**-1.8**
BBAL	**Bala**	**2.06**	**293**	*e*P	**Pn**	**14 13 16.0**	**+1.4**
BBAL				*e*S	**Sn**	**14 13 41.2**	**+0.7**
BBAL	**Bala**	**2.06**	**293**	*e*P	**Pn**	**14 13 16.0**	**+1.4**
BBAL				*e*S	**Sn**	**14 13 41.2**	**+0.7**
AFSR	**Af˙ar-Bala (A**	**2.06**	**290**	*e*PN	**Pn**	**14 13 15.8**	**+1.1**
AFSR	**Af˙ar-Bala (A**	**2.06**	**290**	*e*Pn	**Pn**	**14 13 15.8**	**+1.1**
MYA	**Malataya**	**2.28**	**100**	*e*PN	**Pn**	**14 13 18.7**	**+1.0**
MYA	**Malataya**	**2.28**	**100**	*e*Pn	**Pn**	**14 13 18.7**	**+1.0**
KEMA	**Kemaliye**	**2.33**	**77**	*i* P	**Pb**	**14 13 22.2**	**+0.2**
KEMA				*i* S	**Sg**	**14 13 53.1**	**-1.6**
KEMA	**Kemaliye**	**2.33**	**77**	*i* P	**Pb**	**14 13 22.2**	**+0.2**
KEMA				*i* S	**Sg**	**14 13 53.1**	**-1.6**
ANTO	**Ankara**	**2.42**	**298**	*e*PN	**Pn**	**14 13 20.1**	**+0.5**
ANTO	**Ankara**	**2.42**	**298**	*e*Pn	**Pn**	**14 13 20.1**	**+0.5**
EZC	**Erzincan**	**3.09**	**70**	*e*PN	**Pn**	**14 13 29.9**	**+1.0**
EZC	**Erzincan**	**3.09**	**70**	*e*Pn	**Pn**	**14 13 29.9**	**+1.0**

MAN 27 14:12:46, 9°.00N×122°.46E, h29km, mb4.6, ML3.5, MS3.4, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.83**	**66**	↓*i*P	Pn	14 12 47.2	-15
SNPH				*i* S	Sb	14 12 58.5	-15
IPIL	**Ipil**	**1.21**	**175**	*e*P	Pb	14 13 08.0	-0.4
IPIL				*e*S	Sn	14 13 17.1	-5.3
GUIM	**Jordan**	**1.62**	**4**	*e*P	Pb	14 13 13.9	-1.3
CUYO	**Cuyo Island**	**2.32**	**322**	*e*P	Pn	14 13 23.8	+1.5

ISCJB ***27*** *14:19:19.4±0.5, 24°.77N±0°.04×122°.42E±0°.02, h7km±5km, Error ellipse: s-maj=7.4km s-min=3.1km az=7.1*
JMA ***27*** *14:19:20.5±0.3, 24°.04N×122°.53E, h0km, M2.3*
TAP ***27*** *14:19:20.8, 24°.80N×122°.33E, h17km, ML2.8, C*

ISC 27 14:19:19.3±1.1, 24°.77N±0°.05×122°.43E±0°.03, h11km±11km, n20, σ0°63/34, 1D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao** baz=304	**0.46**	**301**	↓*i*P	**Pg**	**14 19 28.9**	**+0.6**
TWB1				*i* S	**Sg**	**14 19 34.2**	**-0.2**
TWC	**Suao** baz=252	**0.55**	**253**	*e*P	**Pg**	**14 19 30.1**	**+0.1**
TWC				*e*S	**Sg**	**14 19 36.0**	**-1.2**
YOJ	**Yonaguni jima**	**0.61**	**120**	P	**Pb**	**14 19 32.9**	**+0.9**
YOJ				*e*S	**Sb**	**14 19 41.3**	**+0.6**
ILA	**Ilan** baz=266	**0.62**	**270**	*e*P	**Pb**	**14 19 32.0**	**-0.1**
NWF	**Wu-fen Shan** baz=310	**0.66**	**297**	P	**Pb**	**14 19 33.0**	**+0.2**
NWF				*e*S	**Sg**	**14 19 40.9**	**+0.2**
TWE	**Neicheng** baz=262	**0.69**	**266**	*i* P	**Pg**	**14 19 32.8**	**+0.1**
TWE				*e*S	**Sg**	**14 19 41.0**	**-0.7**
ENA	**Nanau** baz=235	**0.71**	**241**	*e*P	**Pg**	**14 19 33.0**	**0.0**
ENA				*e*S	**Sg**	**14 19 42.3**	**-0.1**
TWA	**Mucha** baz=285	**0.79**	**285**	*e*P	**Pg**	**14 19 34.2**	**-0.3**
TWY	**Chenhua** baz=306	**0.90**	**304**	*e*P	**Pg**	**14 19 36.8**	**+0.1**
TWS1	**Kuangyinshan** baz=290	**0.97**	**290**	*e*P	**Pn**	**14 19 39.8**	**+0.9**
NSK	**Sanguang** baz=270	**0.97**	**265**	P	**Pb**	**14 19 37.8**	**-0.4**
NSK				*e*S	**Sg**	**14 19 49.5**	**-1.3**
NNS	**Nan Shan** baz=236	**1.01**	**251**	*e*P	**Pb**	**14 19 38.8**	**-0.1**
NNS				*e*S	**Sg**	**14 19 52.0**	**0.0**
TWD	**Chiawan** baz=229	**1.02**	**228**	*e*P	**Pn**	**14 19 40.7**	**+1.2**
WHF	**Hehuan Shan** baz=236	**1.23**	**240**	P	**Pb**	**14 19 42.6**	**-0.1**
WHF				*e*S	**Sb**	**14 19 58.2**	**-0.5**
TWT	**Tachien** baz=234	**1.25**	**246**	*e*P	**Pg**	**14 19 44.2**	**+0.9**
TWT				*e*S	**Sg**	**14 19 59.7**	**+0.1**
IRIF	**Iriomote-Funau**	**1.27**	**110**	P	**Pn**	**14 19 42.1**	**-0.8**
IRIF				*e*S	**Sb**	**14 19 59.1**	**-0.3**
NSTT	**Nanjuang** baz=262	**1.30**	**264**	*e*P	**Pg**	**14 19 45.1**	**+0.8**
NSTT				*e*S	**Sb**	**14 20 00.3**	**-0.2**
ESL	**Shilin** baz=203	**1.31**	**224**	*e*P	**Pb**	**14 19 43.9**	**-0.1**
JKRS	**Kuro-shima**	**1.54**	**110**	P	**Pn**	**14 19 46.5**	**-0.1**
JKRS				*e*S	**Sn**	**14 20 05.6**	**-1.0**
JIJ	**Ishigaki jima**	**1.61**	**104**	P	**Pb**	**14 19 48.9**	**-0.2**
JIJ				*e*S	**Sb**	**14 20 10.2**	**+0.7**

IDC 27 14:55:52.6±3.0, 30°.80S×177°.88W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.5/19, mbtmp3.6/3, ML3.4/1, Error ellipse: s-maj=70.9km s-min=45.2km az=123.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera** 0.4nm,0.3s,baz=254,slow=4.0,SNR=3.7	**8.51**	**208**	Pn	Pn	14 57 56.8	-0.3
URZ	0.3nm,0.3s,baz=264,slow=18,SNR=2.9			Sn	Sn	14 59 19.3	-15
ASAR	**Alice Springs** 0.5nm,0.7s,baz=105,slow=7.3,SNR=14	**43.19**	**267**	P	P	15 03 55.6	+0.1
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=113,slow=7.9,SNR=11	**44.21**	**272**	P	P	15 04 03.5	-0.2
FINES	**FINESS Array B** 0.8nm,0.5s,baz=49,slow=4.2,SNR=9.4	**145.55**	**340**	PKPbc	PKPdf	15 15 31.3	-0.8

ATH ***27*** *15:25:38.7, 40°.61N×23°.38E, h14km±2km, MD3.0/5*
CSEM ***27*** *15:25:38.7±0.1, 40°.61N×23°.36E, h5km, ML1.9/3, Error ellipse: s-maj=3.0km s-min=2.7km az=152.0*
THE ***27*** *15:25:39.2, 40°.61N×23°.39E, h2km±14km, ML1.9/3, Error ellipse: s-maj=14.6km s-min=0.3km az=213.0*
SKO ***27*** *15:25:40.2, 40°.66N×23°.37E, h6km, M2.0, ML2.3*

ISC 27 15:25:39.1±0.9, 40°.61N±0°.02×23°.38E±0°.02, h12km±8km, n32, σ0°40/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HORT	**Hortiatis**	**0.21**	**266**	P	**Pg**	**15 25 43.7**	**0.0**
HORT				S	**Sg**	**15 25 46.9**	**0.0**
HORT	**Hortiatis**	**0.21**	**266**	P	**Pg**	**15 25 43.7**	**0.0**
HORT				S	**Sg**	**15 25 46.9**	**0.0**
PLG	**Polygyros**	**0.24**	**168**	P	**Pg**	**15 25 44.1**	**-0.2**
PLG				S	**Sg**	**15 25 47.5**	**-0.2**
PLG	**Polygyros**	**0.24**	**168**	*e*PG	**Pg**	**15 25 44.1**	**-0.2**
PLG				*e*SG	**Sg**	**15 25 47.5**	**-0.2**
PLG	**Polygyros**	**0.24**	**168**	P	**Pg**	**15 25 44.1**	**-0.2**
PLG				S	**Sg**	**15 25 47.5**	**-0.2**
THE	**Thessaloniki**	**0.32**	**274**	P	**Pg**	**15 25 45.2**	**-0.3**
THE				S	**Sg**	**15 25 50.3**	**+0.5**
THE	**Thessaloniki**	**

VAY				*i* Sg	**Sg**	15 26 09.1	**-0.3**
VAY				*i* Lg	Lg	15 26 09.9	
	comp=N,87nm,0.4s						
VAY				*i* Lg	Lg	15 26 10.1	
	comp=E,76nm,0.6s						
KAVA	**Kavala**	**0.94**	**66**	P	**Pg**	15 25 56.7	**-0.6**
KAVA	**Kavala**	**0.94**	**66**	P	**Pg**	15 25 56.7	**-0.6**
NEO	**Neokhori**	**1.31**	**185**	*e*PG	**Pn**	15 26 02.8	**-0.6**
NEO				*e*SB	**Sb**	15 26 20.6	**+0.1**
NEO	**Neokhori**	**1.31**	**185**	*e*Pg	**Pn**	15 26 02.8	**-0.6**
NEO				*e*Sb	**Sb**	15 26 20.6	**+0.1**
THL	**Klokotos Trika**	**1.48**	**225**	*e*PG	**Pn**	15 26 06.0	**+0.4**
THL				*e*SB	**Sg**	15 26 26.8	**0.0**
THL	**Klokotos Trika**	**1.48**	**225**	*e*Pg	**Pn**	15 26 06.0	**+0.4**
THL				*e*Sb	**Sg**	15 26 26.8	**0.0**
FNA	**Florina**	**1.53**	**277**	*e*PG	**Pb**	15 26 07.3	**-0.2**
FNA				*e*SB	**Sg**	15 26 28.7	**+0.3**
FNA	**Florina**	**1.53**	**277**	*e*Pg	**Pb**	15 26 07.3	**-0.2**
LIA	**Limnos Island**	**1.56**	**117**	*e*PB	**Pb**	15 26 07.8	**-0.1**
LIA				*e*SB	**Sg**	15 26 29.1	**-0.1**
LIA	**Limnos Island**	**1.56**	**117**	*e*Pb	**Pb**	15 26 07.8	**-0.1**
LIA				*e*Sb	**Sg**	15 26 29.1	**-0.1**
SMTH	**Samothraki Isl**	**1.65**	**94**	*e*PB	**Pb**	15 26 10.1	**+0.6**
SMTH				*e*SB	**Sg**	15 26 32.0	**-0.1**
SMTH	**Samothraki Isl**	**1.65**	**94**	*e*Pb	**Pb**	15 26 10.1	**+0.6**
SMTH				*e*Sb	**Sg**	15 26 32.0	**-0.1**
ALN	**Alexandroupoli**	**2.05**	**81**	*e*PN	**Pn**	15 26 14.4	**+1.0**
ALN	**Alexandroupoli**	**2.05**	**81**	*e*Pn	**Pn**	15 26 14.4	**+1.0**

*AUST **27** 15:30:29.1,9˚.97S×116˚.43E,h20km*
*ISCJB **27** 15:30:31.0±0.6,9˚.60S±0˚.06×116˚.28E±0˚.03,h66km±5km, mb4.1/11,Error ellipse: s-maj=9.4km s-min=4.9km az=7.6*
*DJA **27** 15:30:34.3±0.5,9˚S±6˚×11˚6E±˚,h57km±11km,M4.7/14, mb4.8/6,mB5.1/4,MLv4.8/14,Mw(mB)4.4/4*
*IDC **27** 15:30:34.2±3.4,9˚.48S×116˚.48E,h75km±30km,mb3.9/12, mb1 4.1/13,mb1mx3.9/22,mbtmp3.9/13,MS3.2/4, Ms1 3.2/4,ms1mx2.5/34,Error ellipse: s-maj=24.5km s-min=10.6km az=56.0*
ISC 27 15:30:30.0±0.7,**9˚.65S**±0˚.07×**116˚.33E**±0˚.04,**h38**km±1km, **n62,σ1°61/60,mb4.3/11,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IGBI	**Denpasar**	**1.43**	**305**	P	**Pn**	**15 30 54.1**	**+0.7**
IGBI				S	**Sn**	**15 31 10.8**	**-0.2**
KHKI	**Kahang-Kahang**	**1.46**	**331**	P	**Pn**	**15 30 55.8**	**+2.0**
DNP	**Denpasar**	**1.47**	**311**	P	**Pn**	**15 30 55.5**	**+1.6**
JAGI	**Jajag, Banyuwa**	**2.45**	**298**	P	**Pn**	**15 31 08.5**	**+1.1**
JAGI				S	**Sn**	**15 31 36.3**	**+0.1**
JAGI	**Jajag, Banyuwa** baz=2.7,SNR=291	**2.45**	**298**	P	**Pn**	**15 31 08.2**	**+0.8**
JAGI	baz=2.7,SNR=12			S	**Sn**	**15 31 36.0**	**-0.2**
GMJI	**Gumukmas**	**3.17**	**295**	P	**Pn**	**15 31 18.4**	**+1.2**
GMJI				S	**Sn**	**15 31 53.9**	**+0.1**
BLJI	**Banyuglugur**	**3.30**	**305**	P	**Pn**	**15 31 21.9**	**+2.8**
WSI	**Waingapu**	**3.91**	**91**	P	Pn	15 31 32.3	+4.8
WSI	**Waingapu** baz=3.8,SNR=6.7	**3.91**	**91**	P	Pn	15 31 32.6	+5.2
PWJI	**Pagerwojo**	**4.76**	**289**	P	**Pn**	**15 31 40.8**	**+1.6**
PWJI				S	**Sn**	**15 32 33.2**	**+0.1**
SJI	**Sawahan**	**4.90**	**292**	P	Pn	15 31 44.8	+3.6
PCJI	**Pacitan** 139nm,0.8s,1.0nm	**5.30**	**285**	P	**Pn**	**15 31 48.4**	**+1.9**
BSSI	**Bau Bau, Buton** 117nm,0.7s,3µm0.8nm	**5.39**	**50**	P	**Pn**	**15 31 51.0**	**+3.1**
BKSI	**Bulukumba** 75nm,0.5s,1µm0.5nm	**5.71**	**41**	P	**Pn**	**15 31 55.3**	**+3.1**
BKSI	75nm,0.5s,1µm0.5nm			S	**Sn**	**15 32 58.1**	**+1.6**
KAPI	**Kappang** 14nm,0.3s,baz=224,slow=4.5,SNR=66	**5.72**	**37**	P	**Pn**	**15 31 54.4**	**+2.1**
KAPI	15nm,0.3s,baz=234,slow=23,SNR=29			S	**Sn**	**15 32 57.0**	**+0.3**
KAPI	comp=Z,183nm,18.8s,baz=218,slow=43			LR	LR	15 34 29.1	
MMRI	**Maumere** 198nm,0.8s,3µm0.8nm	**5.92**	**81**	P	Pn	15 31 58.4	+3.3
UGM	**Wanagama** baz=6.2,SNR=8.1	**6.00**	**286**	P	**Pn**	**15 31 58.9**	**+2.6**
UGM	baz=6.2,SNR=3.4			S	**Sn**	**15 32 59.3**	**-4.4**
TTSI	**Tana Toraja** 13nm,1.0s,0.1nm	**7.42**	**28**	P	Pn	15 32 20.5	+4.8
BBSI	**Bau Bau**	**7.44**	**57**	P	Pn	15 32 20.7	+4.7
CISI	**Cisompet, Garu** baz=8.8,SNR=8.7	**8.68**	**283**	P	**Pn**	**15 32 34.1**	**+1.0**
FITZ	**Fitzroy Crossi** 0.9nm,0.3s,baz=328,slow=8.2,SNR=17	**12.33**	**134**	P	**Pn**	**15 33 21.6**	**-1.5**
FITZ	1.0nm,0.3s,baz=176,slow=19,SNR=5.1			S	Sn	15 35 30.6	-8.7
FITZ	comp=Z,114nm,21.0s,baz=336,slow=38			LR	LR	15 38 21.8	
FITZ	**Fitzroy Crossi** baz=12,SNR=9.1	**12.33**	**134**	P	**Pn**	**15 33 21.8**	**-1.2**
FITZ	baz=12,SNR=4.2			S	Sn	15 35 30.8	-8.5
SBUM	**Sibu**	**12.70**	**341**	P	P	15 33 42.3	+3.6
KNRA	**Kunununra** baz=13,SNR=28	**13.52**	**118**	P	**Pn**	**15 33 37.2**	**-2.1**
BNDI	**Bandanaira** baz=14,SNR=4.0	**14.39**	**70**	P	P	15 34 06.7	+9.1
MTN	**Manton Dam** baz=15,SNR=12	**14.86**	**104**	P	Pn	15 33 53.8	-3.6
MYLDM	**Lahad Datu**	**14.89**	**8**	P	P	15 34 09.9	+6.8
KDU	**Kakadu** baz=16,SNR=6.8	**16.12**	**102**	P	**Pn**	**15 34 11.3**	**-2.5**
MEEK	**Meekatharra** baz=17,SNR=12	**17.04**	**173**	P	**Pn**	**15 34 23.7**	**-1.7**
MEEK	baz=17,SNR=6.8			S	Sn	15 37 19.0	-15
FAKI	**Fak Fak** baz=17,SNR=5.3	**17.17**	**68**	P	**Pn**	**15 34 25.0**	**-2.1**
WRA	**Warramunga Arr** 2.6nm,0.6s,baz=299,slow=11,SNR=44	**20.17**	**123**	P	**P**	**15 35 02.1**	**+0.7**
WRA	1.0nm,0.7s,baz=293,slow=21,SNR=4.7			S	S	15 38 34.7	-11
IPM	**Ipoh**	**20.73**	**312**	P	Pn	15 35 12.8	+2.8
ASAR	**Alice Springs** 2.4nm,0.4s,baz=306,slow=8.9,SNR=89	**21.82**	**132**	P	**P**	**15 35 20.0**	**+0.9**
ASAR	0.7nm,0.7s,baz=311,slow=23,SNR=5.1			S	**S**	**15 39 18.2**	**-0.2**
ASAR	comp=Z,54nm,21.4s,baz=334,slow=35			LR	LR	15 43 21.9	
LHMI	**Lhok Sumawe** baz=25,SNR=3.1	**24.32**	**307**	P	**P**	**15 35 45.4**	**+1.0**
QIS	**Mount Isa** baz=25,SNR=5.9	**24.91**	**118**	P	**P**	**15 35 51.0**	**+1.4**
COEN	**Coen** baz=26,SNR=15	**26.61**	**102**	P	P	15 36 11.9	+6.8
STKA	**Stephens Creek** 4.1nm,0.6s,baz=311,slow=10,SNR=15	**32.20**	**137**	P	**P**	**15 36 56.0**	**+1.4**
STKA	comp=Z,96nm,21.1s,baz=26,slow=37			LR	LR	15 50 25.6	
STKA	**Stephens Creek** baz=32,SNR=12	**32.20**	**137**	P	**P**	**15 36 56.3**	**+1.7**
CMAR	**Chiang Mai Arr** 3.0nm,0.9s,baz=158,slow=7.0,SNR=15	**32.78**	**328**	P	**P**	**15 37 00.5**	**+0.7**
CMAR	0.8nm,0.8s,baz=160,slow=2.9,SNR=5.2			PcP	**PcP**	**15 39 44.2**	**-0.4**
TOO	**Toolangi** baz=38,SNR=5.7	**38.25**	**141**	P	**P**	**15 37 49.8**	**+3.2**
ODAN	**Odare** 24nm,0.9s	**45.89**	**323**	*e*P	**P**	**15 38 48.4**	**-0.9**
TAPN	**Taplejung** 33nm,0.9s	**46.07**	**324**	*e*P	**P**	**15 38 50.6**	**-0.2**
RAMN	**Ramite** 22nm,0.9s	**46.43**	**322**	*e*P	**P**	**15 38 53.1**	**-0.4**
GUN	**Gumba** 38nm,0.8s	**47.57**	**323**	*e*P	**P**	**15 39 01.9**	**-0.6**
PKI	**Pulchoki**	**47.61**	**322**	*e*P	**P**	**15 39 01.6**	**-1.2**
PKIN	**Phulchoki** 8.4nm,0.6s	**47.62**	**322**	*e*P	**P**	**15 39 01.6**	**-1.2**
DMN	**Daman** 27nm,0.8s	**47.82**	**322**	*e*P	**P**	**15 39 03.5**	**-0.9**
KKN	**Kakani** 18nm,0.8s	**47.84**	**322**	*e*P	**P**	**15 39 03.6**	**-0.9**
KOLN	**Koldanda** 22nm,0.7s	**48.87**	**320**	*e*P	**P**	**15 39 11.4**	**-1.0**
DANN	**Dangsing** 37nm,0.7s	**49.18**	**321**	*e*P	**P**	**15 39 13.9**	**-1.0**
PYUN	**Piuthan** 27nm,0.9s	**49.48**	**320**	*e*P	**P**	**15 39 15.9**	**-1.2**
MJAR	**Matsushiro Arr**	**50.34**	**23**	P	**P**	**15 39 21.4**	**-1.8**
	1.2nm,0.7s,baz=202,slow=8.7,SNR=10						
SONM	**Songino Array** 2.5nm,0.7s,baz=172,slow=8.0,SNR=19	**57.91**	**352**	P	**P**	**15 40 17.1**	**-1.3**
MKAR	**Makanchi Array** 1.4nm,0.5s,baz=151,slow=7.1,SNR=29	**63.87**	**335**	P	**P**	**15 40 57.6**	**-1.2**
ZALV	**Zalesovo Beam** 2.8nm,0.6s,baz=148,slow=5.0,SNR=16	**68.74**	**341**	P	**P**	**15 41 27.7**	**-2.1**
VNDA	**Vanda** 0.4nm,0.3s,baz=260,slow=6.1,SNR=6.5	**71.77**	**171**	P	**P**	**15 41 47.6**	**-0.4**
KBZ	**Khabaz** 4.3nm,1.0s,baz=318,slow=2.2,SNR=5.9	**84.89**	**316**	P	**P**	**15 43 01.6**	**+0.6**
BOSA	**Boshof** 4.4nm,1.0s,baz=90,slow=2.0,SNR=3.6	**86.39**	**242**	P	**P**	**15 43 10.5**	**+1.5**
BRTR	**Keskin Array B** 1.0nm,0.9s,baz=118,slow=5.7,SNR=4.7	**90.53**	**310**	P	**P**	**15 43 28.5**	**0.0**
YKA	**Yellowknife Ar** 0.2nm,0.4s,baz=307,slow=1.9,SNR=4.6	**115.85**	**24**	PKP	**PKPdf**	**15 49 08.3**	**+0.1**
NVAR	**Mina Array Bea** 0.4nm,0.6s,baz=245,slow=1.5,SNR=4.4	**123.45**	**50**	PKP	**PKPdf**	**15 49 24.8**	**+0.9**
BDFB	**Brasilia** 1.1nm,0.4s,baz=117,slow=6.8,SNR=4.1	**150.47**	**212**	PKPbc	**PKPbc**	**15 50 20.5**	**+1.8**

*THE **27** 15:31:39.9,39˚.51N×19˚.96E,h13km±3km,ML2.4/3,Error ellipse: s-maj=4.7km s-min=0.5km az=26.0*
*ATH **27** 15:31:39.4,39˚.44N×19˚.83E,h9km±1km,MD3.1/9*
*CSEM **27** 15:31:40.3±0.4,39˚.49N×19˚.94E,h2km,ML2.4/3,Error ellipse: s-maj=10.1km s-min=5.7km az=67.0*
ISC 27 15:31:39.7±1.4,**39˚.45N**±0˚.04×**19˚.87E**±0˚.04,**h1**km±13km, **n31,σ0°84/50,Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KEK	**Kerkira**	**0.27**	**348**	P	**Pg**	**15 31 44.6**	**-0.2**
KEK				S	**Sg**	**15 31 49.0**	**+0.6**
KEK	**Kerkira**	**0.27**	**348**	*e*PG	**Pg**	**15 31 44.7**	**-0.1**
KEK				*e*SG	**Sg**	**15 31 49.3**	**+0.9**
KEK	**Kerkira**	**0.27**	**348**	P	**Pg**	**15 31 44.6**	**-0.2**
KEK				S	**Sg**	**15 31 49.0**	**+0.6**
IGT	**Igoumenitsa**	**0.37**	**77**	P	**Pg**	**15 31 45.6**	**-1.1**
IGT				S	**Sg**	**15 31 50.2**	**-1.3**
IGT	**Igoumenitsa**	**0.37**	**77**	P	**Pg**	**15 31 45.6**	**-1.1**
IGT				S	**Sg**	**15 31 50.2**	**-1.3**
SRN	**Sarande**	**0.44**	**13**	P	**Pg**	**15 31 47.2**	**-0.9**
SRN	**Sarande**	**0.44**	**13**	P	**Pg**	**15 31 47.2**	**-0.9**
JAN	**Janina**	**0.79**	**74**	*e*PB	**Pg**	**15 31 54.2**	**-0.5**
JAN				*e*SB	**Sg**	**15 32 05.6**	**+0.9**
JAN	**Janina**	**0.79**	**74**	*e*Pb	**Pg**	**15 31 54.2**	**-0.5**
JAN				*e*Sb	**Sg**	**15 32 05.8**	**+0.9**
LKD2	**Lefkada island**	**0.90**	**137**	P	**Pg**	**15 31 57.2**	**+0.3**
LKD2				S	**Sb**	**15 32 09.9**	**-0.7**
LKD2	**Lefkada island**	**0.90**	**137**	P	**Pg**	**15 31 57.2**	**+0.3**
LKD2				S	**Sb**	**15 32 09.9**	**-0.7**
VLS	**Valsamata**	**1.39**	**156**	*e*PB	**Pn**	**15 32 05.8**	**-0.4**
VLS				*e*SB	**Sn**	**15 32 25.5**	**+0.3**
VLS	**Valsamata**	**1.39**	**156**	*e*Pb	**Pn**	**15 32 05.8**	**-0.4**
VLS				*e*Sb	**Sn**	**15 32 25.5**	**+0.3**
EVR	**Evrytania**	**1.60**	**109**	*e*PB	**Pg**	**15 32 10.4**	**+0.1**
EVR				*e*SB	**Sg**	**15 32 31.8**	**+0.8**
EVR	**Evrytania**	**1.60**	**109**	*e*Pb	**Pg**	**15 32 10.4**	**+0.1**
EVR				*e*Sb	**Sg**	**15 32 31.8**	**+0.8**
THL	**Klokotos Trika**	**1.66**	**85**	*e*PN	**Pg**	**15 32 11.6**	**+0.1**
THL				*e*SB	**Sg**	**15 32 34.8**	**+1.7**
THL	**Klokotos Trika**	**1.66**	**85**	*e*Pn	**Pg**	**15 32 11.6**	**+0.1**
THL				*e*Sb	**Sg**	**15 32 34.8**	**+1.7**
KZN	**Kozani**	**1.69**	**59**	*e*PG	**Pb**	**15 32 11.4**	**-0.3**
KZN				*e*SN	**Sg**	**15 32 35.2**	**+1.1**
KZN	**Kozani**	**1.69**	**59**	*e*Pg	**Pb**	**15 32 11.4**	**-0.3**
KZN				*e*Sn	**Sg**	**15 32 35.2**	**+1.1**
FNA	**Florina**	**1.76**	**40**	*e*PN	**Pb**	**15 32 12.5**	**-0.3**
FNA				*e*SN	**Sg**	**15 32 37.0**	**+0.7**
FNA	**Florina**	**1.76**	**40**	*e*Pn	**Pb**	**15 32 12.5**	**-0.3**
FNA				*e*Sn	**Sg**	**15 32 37.0**	**+0.7**
RLS	**Riolos of Patr**	**1.87**	**138**	*e*PN	**Pb**	**15 32 13.6**	**-1.0**
RLS	**Riolos of Patr**	**1.87**	**138**	*e*Pn	**Pb**	**15 32 13.6**	**-1.0**
AGG	**Agios Georgios**	**1.96**	**102**	*e*PG	**Pb**	**15 32 15.9**	**-0.2**
AGG	**Agios Georgios**	**1.96**	**102**	*e*Pg	**Pb**	**15 32 15.9**	**-0.2**
LAKA	**Lakka**	**2.04**	**126**	*e*PN	**Pb**	**15 32 16.4**	**-1.2**
LAKA	**Lakka**	**2.04**	**126**	*e*Pn	**Pb**	**15 32 16.4**	**-1.2**
KLV	**Kalavryta, Ach**	**2.27**	**128**	*e*PN	**Pn**	**15 32 19.6**	**+1.3**
KLV	**Kalavryta, Ach**	**2.27**	**128**	*e*Pn	**Pn**	**15 32 19.6**	**+1.3**
GUR	**Goura**	**2.45**	**127**	*e*PB	**Pn**	**15 32 21.5**	**+0.6**
GUR	**Goura**	**2.45**	**127**	*e*Pb	**Pn**	**15 32 21.5**	**+0.6**

*ISCJB **27** 15:35:19.7±0.7,5˚.88N±0˚.03×124˚.5E±0˚.1,h54km,Error ellipse: s-maj=16.3km s-min=4.4km az=2.1*
*MAN **27** 15:35:20,5˚.98N×124˚.38E,h57km,mb4.1,ML3.0,MS2.7*
*DJA **27** 15:35:29.5±1.2,5˚N±6˚×12˚4E±˚,h10km,M4.4/4,mb4.5/3, mB4.9/2,MLv4.4/4,Mw(mB)4.2/2*
ISC 27 15:35:20.8±1.3,**5˚.91N**±0˚.04×**124˚.5E**±0˚.1,**h54**km,**n11, σ2°16/15,1C-1D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**1.32**	**350**	*i* P	**Pn**	**15 35 43.0**	**-0.1**
CTBH				*i* S	**Sn**	**15 35 59.3**	**-0.3**
BUKP	**Musuan**	**2.04**	**17**	*e*P	**Pn**	**15 35 53.3**	**+0.4**
BUKP				*e*S	Sn	15 36 03.2	-14
PAGZ	**Pagadian**	**2.21**	**331**	*e*P	**Pn**	**15 35 54.5**	**-0.4**
PAGZ				*e*S	Sn	15 35 59.0	-22
CGP	**Cagayan de Oro**	**2.54**	**5**	*e*P	**Pn**	**15 35 59.9**	**+0.3**
CGP				*e*S	**Sn**	**15 36 29.9**	**+0.5**
IPIL	**Ipil**	**2.65**	**315**	*e*P	**Pn**	**15 36 00.7**	**-0.4**
MNI	**Manado**	**4.45**	**175**	S	**Sn**	**15 37 15.6**	**-0.8**
KMSI	**Cibinong**	**5.32**	**185**	S	**Sn**	**15 37 40.4**	**+2.6**
GTOI	**Gorontalo**	**5.44**	**196**	P	**Pn**	**15 36 39.8**	**+0.4**
GTOI				S	**Sn**	**15 37 36.4**	**-4.2**
MRSI	**Marisa** 46nm,0.7s,1µm0.3nm	**5.96**	**205**	P	**Pn**	**15 36 48.4**	**+1.9**
MRSI	46nm,0.7s,1µm0.3nm			S	**Sn**	**15 37 49.3**	**-4.1**
MYLDM	**Lahad Datu** 12nm,1.0s,0.1nm	**5.99**	**263**	P	**Pn**	**15 36 49.7**	**+2.8**
LUWI	**Luwuk**	**7.11**	**194**	P	Pn	15 37 06.2	+3.9
LUWI				S	**Sn**	**15 38 20.7**	**-1.1**

*ISCJB **27** 15:43:21.6±0.5,24˚.80N±0˚.03×122˚.42E±0˚.02,h7km±3km, mb3.8/2,Error ellipse: s-maj=4.9km s-min=2.5km az=9.3*
*JMA **27** 15:43:23.2±0.2,24˚.85N×122˚.43E,h35km,M2.9*
*TAP **27** 15:43:23.2,24˚.81N×122˚.29E,h10km,ML3.4,C*
*IDC **27** 15:43:27.6±7.3,24˚.03N×123˚.21E,h0km,mb3.7/2, mb1 3.9/3,mb1mx3.3/26,mbtmp3.6/3,ML3.0/1,Error ellipse: s-maj=392.1km s-min=41.4km az=95.0*
ISC 27 15:43:21.7±1.1,**24˚.78N**±0˚.03×**122˚.42E**±0˚.02,**h7**km±9km, **n44,σ0°69/74,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWB1	**Santiao Chiao** baz=307	**0.45**	**301**	*i* P	**Pg**	**15 43 30.7**	**+0.3**
TWB1	baz=307			*i* S	**Sg**	**15 43 35.7**	**-0.7**
TWC	**Suao** baz=253	**0.54**	**252**	*e*P	**Pg**	**15 43 31.9**	**-0.3**
TWC	baz=253			*e*S	**Sg**	**15 43 38.7**	**-0.6**
ILA	**Ilan** baz=266	**0.61**	**269**	*e*P	**Pb**	**15 43 35.3**	**+0.7**
YOJ	**Yonaguni jima**	**0.62**	**120**	P	**Pb**	**15 43 35.9**	**+1.0**
YOJ				S	**Sb**	**15 43 44.9**	**+1.1**
NWF	**Wu-fen Shan** baz=299	**0.65**	**297**	*i* P	**Pb**	**15 43 35.1**	**-0.2**
NWF	baz=299			*i* S	**Sg**	**15 43 43.3**	**+0.6**
TWE	**Neicheng** baz=254	**0.68**	**265**	P	**Pg**	**15 43 34.6**	**-0.3**
TWE	baz=254			*e*S	**Sg**	**15 43 43.9**	**+0.1**
ENA	**Nanau** baz=232	**0.71**	**241**	P	**Pg**	**15 43 34.9**	**-0.4**
TWA	**Mucha** baz=274	**0.78**	**285**	P	**Pg**	**15 43 37.2**	**+0.4**
TWA	baz=274			*e*S	**Sg**	**15 43 47.3**	**+0.3**
TAP1	**Taipei** baz=288	**0.85**	**288**	*e*P	**Pb**	**15 43 39.2**	**+0.4**
TAP1	baz=288			S	**Sg**	**15 43 49.5**	**+0.3**
TAP	**Taipei** baz=288	**0.87**	**288**	*e*P	**Pg**	**15 43 38.5**	**+0.1**
TAP	baz=288			*e*S	**Sg**	**15 43 50.0**	**+0.4**
TWY	**Chenhua** baz=307	**0.89**	**304**	P	**Pb**	**15 43 39.2**	**-0.3**
TWY	baz=307			*e*S	**Sb**	**15 43 51.2**	**-0.3**
PCYT	**Pengchaiyu** baz=359	**0.90**	**340**	*e*P	**Pb**	**15 43 39.2**	**-0.4**
TWS1	**Kuangyinshan** baz=290	**0.96**	**290**	*e*P	**Pn**	**15 43 41.8**	**+0.2**
TWS1	baz=290			*e*S	**Sg**	**15 43 52.9**	**+0.2**
NSK	**Sanguang** baz=255	**0.97**	**264**	*e*P	**Pg**	**15 43 40.3**	**0.0**
NSK	baz=255			*e*S	**Sg**	**15 43 51.9**	**-1.0**
NNS	**Nan Shan** baz=236	**1.01**	**251**	P	**Pg**	**15 43 41.3**	**+0.3**
NNS	baz=236			*e*S	**Sg**	**15 43 53.7**	**-0.5**
TWD	**Chiawan** baz=230	**1.02**	**227**	*e*P	**Pg**	**15 43 41.2**	**-0.1**
TWD	baz=230			*e*S	**Sb**	**15 43 56.0**	**+0.8**
WHF	**Hehuan Shan** baz=235	**1.22**	**239**	*i* P	**Pn**	**15 43 45.1**	**-0.4**
WHF	baz=235			*e*S	**Sb**	**15 44 00.5**	**-1.1**
TWT	**Tachien** baz=242	**1.25**	**245**	P	**Pn**	**15 43 45.8**	**+0.2**
TWT	baz=242			*e*S	**Sb**	**15 44 00.4**	**-1.5**
ESL	**Shilin** baz=225	**1.31**	**223**	*e*P	**Pn**	**15 43 45.9**	**-0.5**
ESL	baz=225			*e*S	**Sg**	**15 44 05.0**	**+1.1**
HATJ	**Hateruma jima**	**1.46**	**119**	P	**Pn**	**15 43 48.4**	**+0.1**
HATJ				*e*S	**Sn**	**15 44 07.1**	**-0.5**
JKRS	**Kuro-shima**	**1.55**	**110**	P	**Pn**	**15 43 49.6**	**0.0**
JKRS				*e*S	**Sn**	**15 44 09.0**	**-0.9**
NSY	**Sanyi** baz=255	**1.55**	**257**	*e*P	**Pn**	**15 43 49.4**	**-0.3**
NSY	baz=255			*e*S	**Sn**	**15 44 09.9**	**-0.1**
TWQ1	**Liyutan** baz=253	**1.56**	**254**	*e*P	**Pg**	**15 43 51.9**	**+0.3**
TWQ1	baz=253			*e*S	**Sb**	**15 44 10.9**	**+0.2**
EHY	**Hungye** baz=212	**1.61**	**219**	*e*P	**Pb**	**15 43 51.8**	**+0.1**
JIJ	**Ishigaki jima**	**1.62**	**104**	P	**Pn**	**15 43 50.2**	**-0.5**
JIJ				*e*S	**Sn**	**15 44 10.8**	**-1.0**
SMLT	**Sun Moon Lake** baz=235	**1.65**	**238**	*e*P	**Pn**	**15 43 51.7**	**+0.6**
SMLT	baz=235			*e*S	**Sn**	**15 44 13.2**	**+0.7**
TYC	**Yuchr** baz=237	**1.67**	**239**	*e*P	**Pb**	**15 43 52.8**	**+0.1**
TYC	baz=237			*e*S	**Sn**	**15 44 13.1**	**+0.3**
TCU	**Taichung** baz=234	**1.71**	**249**	*e*P	**Pg**	**15 43 55.0**	**+0.6**
TWF1	**Yuli** baz=231	**1.75**	**216**	*e*P	**Pn**	**15 43 52.1**	**-0.3**
TWF1	baz=231			*e*S	**Sn**	**15 44 15.2**	**+0.3**
YUS	**Yu-Shan** baz=203	**1.85**	**227**	*e*P	**Pn**	**15 43 54.8**	**+0.6**
YUS	baz=203			*e*S	**Sn**	**15 44 18.7**	**+0.5**
CHKT	**Chengkung** baz=188	**1.93**	**210**	*e*P	**Pn**	**15 43 53.0**	**-1.8**
ALS	**Alishan** baz=206	**1.94**	**230**	*e*P	**Pn**	**15 43 55.8**	**+0.5**
CHN5	**Tsauling** baz=233	**1.98**	**234**	*e*P	**Pb**	**15 43 57.5**	**-0.5**
CHN5	baz=233			*e*S	**Sb**	**15 44 23.4**	**+0.6**
WGK	**Gukeng** baz=236	**2.01**	**238**	*e*P	**Pn**	**15 43 56.8**	**+0.8**
WGK	baz=236			*e*S	**Sb**	**15 44 24.0**	**+0.2**
ELDTW	**Lidau** baz=199	**2.04**	**219**	*e*P	**Pn**	**15 43 55.5**	**-0.9**
JTJ	**Tarama**	**2.08**	**93**	P	**Pn**	**15 43 57.8**	**+0.8**
WTP	**Ta-pu** baz=205	**2.25**	**228**	*e*P	**Pn**	**15 44 01.0**	**+1.7**
WTP	baz=205			*e*S	**Sn**	**15 44 28.2**	**+1.0**
TWK	**Hsinying** baz=226	**2.32**	**230**	*e*P	**Pb**	**15 44 02.6**	**-1.2**
CHN1	**Nanshi** baz=227	**2.34**	**228**	*e*P	**Pn**	**15 44 01.8**	**+1.2**
CHN1	baz=227			*e*S	**Sb**	**15 44 32.3**	**-1.1**
KSRS	**Korea Array** 0.1nm,0.3s,baz=195,slow=11,SNR=4.3	**13.48**	**19**	Pn	P	15 46 46.6	+3.9
WRA	**Warramunga Arr** 1.6nm,0.8s,baz=347,slow=8.6,SNR=6.6	**45.94**	**164**	P	**P**	**15 51 44.8**	**-0.5**
ASAR	**Alice Springs** 0.6nm,0.8s,baz=341,slow=9.2,SNR=6.6	**49.43**	**166**	P	**P**	**15 52 12.7**	**+0.3**

IDC 27 15:43:31.1±0.9,**2˚.68S**×**141˚.95E**,**h0**km,**mb3.7/7, mb1 3.9/9,mb1mx3.7/21,mbtmp3.8/9,ML3.9/2,MS3.6/1, Ms1 3.6/1,ms1mx2.8/26,Error ellipse: s-maj=34.5km s-min=21.1km az=86.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=25,slow=11,SNR=24	**18.70**	**203**	P	P	15 47 49.7	-1.5
HNR	**Honiara** 2.0nm,0.3s,baz=50,slow=0.5,SNR=4.6	**19.11**	**111**	P	Pn	15 47 56.2	-0.3
ASAR	**Alice Springs** 1.3nm,0.8s,baz=27,slow=12,SNR=23	**22.27**	**200**	P	P	15 48 30.1	+0.1
MJAR	**Matsushiro Arr** 0.6nm,0.8s,baz=164,slow=9.9,SNR=3.6	**39.18**	**355**	P	P	15 51 01.1	+0.2
KSRS	**Korea Array** comp=Z,66nm,19.1s,baz=176,slow=32	**42.00**	**343**	LR	LR	16 06 08.6	
MKAR	**Makanchi Array** 0.9nm,0.7s,baz=119,slow=7.8,SNR=11	**71.76**	**321**	P	P	15 54 55.7	+0.3
ZALV	**Zalesovo Beam** 0.5nm,0.6s,baz=108,slow=4.7,SNR=3.2	**73.56**	**329**	P	P	15 55 05.6	-0.4
KURBB	**Kurchatov Arra** 1.1nm,0.9s,baz=111,slow=7.9,SNR=6.4	**75.59**	**324**	P	P	15 55 17.7	-0.1
BVAR	**Borovoye Array** 0.4nm,0.7s,baz=245,slow=5.8,SNR=5.0	**81.15**	**325**	P	P

mB5.8/4,mb5.0/11,Mw(mB)5.4/4
BJI ***27*** *15:45:52.0,33.00S×16.00W,h30km,mB5.5/32,Ms5.7/33, Ms7 5.5/36*
GCMT ***27*** *15:45:55.0±0.1,33.09S×15.78W,h12km,MW5.5, Moment Tensor Solution. s78,c123; s62,c68; Moment tensor: Scale 10¹⁷Nm; Mrr2.71±.03; Mθθ-0.69±.03; Mφφ-2.03±.03; Mrθ-0.24±.07; Mθφ-0.44±.02; Mφr-0.69±.07; Best double couple: Mo2.50000×10¹⁷ NP1:φs16.00000°, δ37.00000°,λ,89.00000°. NP2:φs197.00000°,δ53.00000°, λ91.00000°. Principal axes: T 2.8200, Plg82.0000°, Azm110.0000°; N -0.5600, Plg0.0000°, Azm17.0000°; P -2.2700, Plg8.0000°, Azm287.0000°; Data Used: II IU IC G CN. Surface waves: sta=106, comp=211, per= 50.*
SZGRF ***27*** *15:45:57.3,32.50S×14.24W,h33km,mb5.5,MS5.1, Southern Mid-Atlantic Ridge*
ISC 27 15:45:49.0±0.2,33.00S±0.05×15.92W±0.05,h10km,n889,
σ1§61/877,mb5.5/196,MS5.3/208,188C-27D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SHEL	**Horse Pasture**	**19.31**	**31**	*eP*		**P**	**15 50 14.0**	**-0.3**
SHEL				pmax		pmax		
	comp=Z,295nm,1.1s							
SHEL	**Horse Pasture**	**19.31**	**31**	*ePn*		**P**	**15 50 14.0**	**-0.3**
	comp=Z,295nm,1.1s							
ASCN	**Ascension**	**24.99**	**4**	*eP*		**P**	**15 51 11.7**	**-1.3**
ASCN	comp=Z,386nm,1.3s			LR		LR		
	comp=Z,2μm,22.0s							
CAM4	**Nova Friburgo**	**25.80**	**287**	*i/P*		**P**	**15 51 21.9**	**+1.3**
CAM4				*i*			15 51 24.0	
CAM4				*i*			15 51 26.1	
CAM4				*i*			15 51 28.5	
CAM4				*i*			15 51 32.1	
CAM4				*i*			15 51 35.8	
CAM4				*i*			15 51 40.7	
CAM4				*i*			15 51 42.9	
CAM4				*i*			15 51 53.5	
SPB	**Sao Paulo**	**29.19**	**281**	PFAKE			15 52 00.0	+9.2
SPB				LR		LR		
	comp=Z,9μm,20.0s							
CVNA	**Calvinia**	**30.14**	**97**	*eP*		**P**	**15 52 00.2**	**+1.0**
CVNA				AMB		AMB	15 52 03.5	
	comp=Z,106nm,4.9s							
SUR	**Sutherland**	**30.82**	**99**	*eP*		**P**	**15 52 06.7**	**+1.3**
SUR				AMB		AMB	15 52 09.6	
	comp=Z,70nm,2.8s							
SUR	**Sutherland**	**30.82**	**99**	*eP*		**P**	**15 52 04.8**	**-0.6**
	comp=Z,180nm,1.5s							
SUR	**Sutherland**	**30.82**	**99**	P		**P**	**15 52 05.5**	**+0.1**
	baz=240,slow=9.9							
SUR				LR		LR	16 02 12.4	
	comp=Z,7μm,18.0s,baz=211,slow=32							
RCBR	**Riachuelo**	**32.82**	**321**	P		**P**	**15 52 24.4**	**+1.6**
	comp=Z,2.9nm,0.9s							
RCBR	**Riachuelo**	**32.82**	**321**	P		**P**	**15 52 24.4**	**+1.6**
	comp=Z,43nm,1.0s,baz=135,slow=9.5,SNR=18							
RCBR				LR		LR	16 02 24.0	
	comp=Z,4μm,20.8s,baz=30,slow=30							
TSUM	**Tsumeb**	**32.92**	**74**	*i/P*		**P**	**15 52 23.5**	**-0.3**
TSUM	**Tsumeb**	**32.92**	**74**	*eP*		**P**	**15 52 23.1**	**-0.8**
	comp=Z,40nm,0.9s							
TSUM	**Tsumeb**	**32.92**	**74**	LR		LR	16 03 08.9	
	comp=Z,8μm,19.6s,baz=250,slow=32							
BUFB	**Buffelsbos**	**33.74**	**103**	*eP*		**P**	**15 52 30.9**	**+0.2**
BUFB				AMB		AMB	15 52 31.9	
	comp=Z,83nm,4.1s							
BDFB	**Brasilia**	**33.78**	**293**	P		**P**	**15 52 31.8**	**+0.4**
BDFB	**Brasilia**	**33.78**	**293**	P		**P**	**15 52 31.8**	**+0.4**
	comp=Z,70nm,0.9s,baz=120,slow=8.8,SNR=44							
BDFB				LR		LR	16 04 19.2	
	comp=Z,10μm,18.5s,baz=81,slow=33							
SOE	**Somerset East**	**34.69**	**101**	*eP*		**P**	**15 52 39.6**	**+0.6**
SOE				AMB		AMB	15 52 42.7	
	comp=Z,120nm,1.7s							
LPA	**La Plata**	**34.71**	**255**	*ceP*		**P**	**15 52 41.0**	**+1.9**
LPA				PPP		PPP	15 54 05.0	
LPA				PS		S	15 58 16.0	+6.8
LPA				SSS		SSS	16 00 36.0	
GRM	**Grahamstown**	**35.34**	**102**	*eP*		**P**	**15 52 44.5**	**-0.2**
GRM				AMB		AMB	15 52 46.2	
	comp=Z,108nm,3.6s							
BOSA	**Boshof**	**35.48**	**94**	*eP*		**P**	**15 52 45.0**	**-1.0**
BOSA				AMB		AMB	15 52 47.7	
	comp=Z,52nm,1.9s							
BOSA	**Boshof**	**35.48**	**94**	P		**P**	**15 52 44.6**	**-1.4**
BOSA	**Boshof**	**35.48**	**94**	P		**P**	**15 52 44.6**	**-1.4**
	comp=Z,25nm,0.7s,baz=256,slow=7.9,SNR=60							
BOSA				LR		LR	16 04 45.6	
	comp=Z,10μm,18.4s,baz=243,slow=32							
EFI	**East Falkland**	**35.69**	**226**	PFAKE			15 53 00.0	+13
EFI				LR		LR		
	comp=Z,3μm,22.0s							
SWZ	**Schweizer**	**35.99**	**92**	*i/P*		**P**	**15 52 50.2**	**-0.2**
SWZ				AMB		AMB	15 52 50.7	
	comp=Z,74nm,1.5s							
CPUP	**Villa Florida**	**36.41**	**269**	P		**P**	**15 52 54.0**	**+0.2**
CPUP	**Villa Florida**	**36.41**	**269**	P		**P**	**15 52 54.0**	**+0.2**
	comp=Z,4.4nm,0.8s,baz=100,slow=9.6,SNR=11							
CPUP				LR		LR	16 05 53.2	
	comp=Z,9μm,19.2s,baz=109,slow=33							
LBTB	**Lobatse**	**36.99**	**89**	*i/P*		**P**	**15 52 58.8**	**0.0**
LBTB				AMB		AMB	15 53 00.1	
	comp=Z,91nm,3.5s							
LBTB	**Lobatse**	**36.99**	**89**	*eP*		**P**	**15 52 58.3**	**-0.5**
	comp=Z,55nm,1.1s							
TRQA	**Tornquist**	**37.52**	**249**	*eP*		**P**	**15 53 02.6**	**-0.5**
	comp=Z,2μm,2.3s							
TRQA				LR		LR		
	comp=Z,6μm,22.0s							
SEK	**Senekal**	**37.55**	**95**	*i/P*		**P**	**15 53 03.9**	**+0.2**
SEK				AMB		AMB	15 53 05.9	
	comp=Z,88nm,1.4s							
KSR	**Koster**	**37.77**	**91**	*eP*		**P**	**15 53 05.6**	**0.0**
KSR				AMB		AMB	15 53 07.7	
	comp=Z,27nm,1.1s							
PRYS	**Parys**	**37.78**	**92**	*i/P*		**P**	**15 53 05.5**	**-0.2**
PRYS				AMB		AMB	15 53 08.2	
	comp=Z,62nm,4.9s							
VNA1	**Neumayer--Stat**	**37.94**	**176**	*eP*		**P**	**15 53 07.2**	**+1.0**
SLR	**Silverton**	**38.98**	**91**	*i/P*		**P**	**15 53 15.3**	**-0.4**
SLR				AMB		AMB	15 53 20.9	
	comp=Z,102nm,3.0s							
SNAA	**Sanae**	**39.35**	**174**	*eP*		**P**	**15 53 17.6**	**-0.6**
SNAA	**Sanae**	**39.35**	**174**	*i/P*		**P**	**15 53 18.3**	**+0.1**
SNAA	**Sanae**	**39.35**	**174**	P		**P**	**15 53 17.6**	**-0.6**
SNAA	**Sanae**	**39.35**	**174**	P		**P**	**15 53 17.6**	**-0.6**
	comp=Z,8.4nm,1.1s,baz=341,slow=7.6,SNR=25							
SNAA				LR		LR	16 05 24.1	
	comp=Z,1μm,21.8s,baz=353,slow=30							
LIC	**Lamto**	**40.36**	**17**	*i/P*		**P**	**15 53 27.7**	**+0.6**
	comp=Z,202nm,1.0s,baz=201							
LIC				*eR*				
	comp=Z,3μm,20.0s							
LIC	**Lamto**	**40.36**	**17**	*i/P*		**P**	**15 53 27.7**	**+0.6**
	comp=Z,202nm,1.0s							
DBIC	**Dimbokro**	**40.83**	**17**	*i/P*		**P**	**15 53 31.2**	**+0.3**
DBIC	**Dimbokro**	**40.83**	**17**	*eP*		**P**	**15 53 30.8**	**-0.2**
	comp=Z,115nm,0.9s							
DBIC	**Dimbokro**	**40.83**	**17**	P		**P**	**15 53 31.7**	**+0.8**
	comp=Z,113nm,0.9s,baz=180,slow=9.1,SNR=31							
DBIC				LR		LR	16 06 40.2	
	comp=Z,2μm,18.9s,baz=176,slow=31							
POGA	**Pongola**	**41.20**	**95**	*eP*		**P**	**15 53 35.1**	**+1.2**
POGA				AMB		AMB	15 53 36.1	
	comp=Z,95nm,3.3s							
MSKU	**Masuku**	**41.72**	**48**	PFAKE			15 53 50.0	+12
MSKU				LR		LR		
	comp=Z,2.0nm,22.0s							
USHA	**Ushuaia**	**42.43**	**223**	P		**P**	**15 53 44.2**	**+0.5**
USHA	**Ushuaia**	**42.43**	**223**	P		**P**	**15 53 44.2**	**+0.5**
	comp=Z,12nm,1.0s,baz=75,slow=9.7,SNR=4.2							
USHA				LR		LR	16 08 49.2	
	comp=Z,3μm,21.4s,baz=38,slow=33							
PMSA	**Palmer Station**	**43.10**	**208**	*eP*		**P**	**15 53 46.7**	**-2.2**
	comp=Z,82nm,1.2s							
PMSA	**Palmer Station**	**43.10**	**208**	P		**P**	**15 53 48.9**	**0.0**
	comp=Z,24nm,0.9s,baz=60,slow=9.3,SNR=12							
PMSA				LR		LR	16 08 34.4	
	comp=Z,1μm,18.7s,baz=59,slow=32							
LSZ	**Lusaka**	**43.60**	**77**	*i/P*		**P**	**15 53 54.5**	**+0.8**
LSZ	**Lusaka**	**43.60**	**77**	P		**P**	**15 53 55.5**	**+1.7**
	SNR=9.0							
LSZ	**Lusaka**	**43.60**	**77**	*eP*		**P**	**15 53 53.2**	**-0.6**
	comp=Z,83nm,1.5s							
LSZ				LR		LR		
	comp=Z,5μm,22.0s							
PLCA	**Paso Flores**	**43.78**	**244**	*eP*		**P**	**15 53 54.2**	**-0.7**
	comp=Z,80nm,1.3s							
PLCA	**Paso Flores**	**43.78**	**244**	P		**P**	**15 53 55.6**	**+0.7**
	comp=Z,18nm,0.9s,baz=100,slow=7.8,SNR=18							
PLCA				LR		LR	16 10 54.8	
	comp=Z,3μm,19.8s,baz=99,slow=34							
CFAA	**Coronel Fontan**	**43.86**	**257**	P		**P**	**15 53 55.2**	**-0.4**
CFAA	**Coronel Fontan**	**43.86**	**257**	P		**P**	**15 53 55.2**	**-0.4**
	comp=Z,3.6nm,0.7s,baz=92,slow=9.8,SNR=41							
LCO	**Las Campanas**	**46.68**	**260**	*eP*		**P**	**15 54 17.2**	**-1.2**
	comp=Z,445nm,2.2s							
LCO				LR		LR		
	comp=Z,4μm,21.0s							
SYO	**Syowa Base**	**47.38**	**156**	*i/eP*			15 54 18.4	-4.5
SYO	**Syowa Base**	**47.38**	**156**	*i/eP*		**P**	**15 54 21.0**	**-1.9**
SYO	**Syowa Base**	**47.38**	**156**	*i/iP*		**P**	**15 54 24.2**	**+1.3**
LVC	**Limon Verde**	**47.57**	**268**	*eP*		**P**	**15 54 24.4**	**-0.9**
	comp=Z,153nm,2.3s							
LVC				LR		LR		
	comp=Z,3μm,20.0s							
LVC	**Limon Verde**	**47.57**	**268**	P		**P**	**15 54 25.2**	**-0.1**
	comp=Z,7.2nm,0.8s,baz=112,slow=9.6,SNR=12							
SACV	**Santiago Islan**	**48.27**	**350**	*eP*		**P**	**15 54 28.6**	**-1.7**
	comp=Z,69nm,0.9s							
SACV				LR		LR		
	comp=Z,1μm,20.0s							
TOA0	**Torodi Ar. Sit**	**48.88**	**23**	*eP*		**P**	**15 54 34.7**	**-0.4**
TORD	**Torodi Ar. Bea**	**48.88**	**23**	P		**P**	**15 54 35.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**48.88**	**23**	P		**P**	**15 54 35.4**	**+0.3**
	comp=Z,167nm,1.0s,baz=202,slow=6.2,SNR=192							
TORD				LR		LR	16 11 20.5	
	comp=Z,1μm,18.1s,baz=195,slow=31							
SAML	**Samuel**	**49.67**	**288**	*eP*		**P**	**15 54 40.3**	**-0.9**
	comp=Z,42nm,0.8s							
SAML				LR		LR		
	comp=Z,3μm,19.0s							
LPAZ	**La Paz**	**49.79**	**276**	*eP*		**P**	**15 54 41.6**	**-1.2**
	comp=Z,25nm,1.0s							
LPAZ	**La Paz**	**49.79**	**276**	P		**P**	**15 54 42.8**	**-0.1**
	comp=Z,14nm,0.8s,baz=118,slow=5.9,SNR=29							
LPAZ				LR		LR	16 14 48.6	
	comp=Z,5μm,20.5s,baz=125,slow=35							
MBAR	**Mbarara**	**54.39**	**63**	*eP*		**P**	**15 55 18.1**	**+1.5**
MAW	**Mawson**	**55.72**	**153**	*eP*		**P**	**15 55 24.6**	**-0.6**
	comp=Z,13nm,1.1s							
MAW				P		P	**15 55 25.0**	**-0.2**
MAW	**Mawson**	**55.72**	**153**	P		**P**	**15 55 25.0**	**-0.2**
	comp=Z,23nm,0.9s,baz=271,slow=7.4,SNR=27							
MAW				LR		LR	16 14 01.0	
	comp=Z,2μm,21.1s,baz=281,slow=30							
QSPA	**South Pole Qui**	**57.24**	**180**	PFAKE			15 55 50.0	+14
QSPA				LR		LR		
	comp=Z,1μm,22.0s							
ABPO	**Ambohimpanom**	**57.68**	**93**	*eP*		**P**	**15 55 37.3**	**-2.9**
ABPO				pmax		pmax		
	comp=Z,23nm,1.0s							
ABPO				MLR		MLR		
	comp=Z,4μm,19.0s							
ABPO	**Ambohimpanom**	**57.68**	**93**	*eP*		**P**	**15 55 37.3**	**-2.9**
	comp=Z,23nm,1.0s							
ABPO				LR		LR		
	comp=Z,4μm,19.0s							
KMBO	**Kilima Mbogo**	**59.06**	**69**	*eP*		**P**	**15 55 51.4**	**+1.5**
KMBO	**Kilima Mbogo**	**59.06**	**69**	*eP*		**P**	**15 55 48.0**	**-1.9**
	comp=Z,109nm,2.7s							
KMBO				P		P	**15 55 52.2**	**+2.3**
KMBO	**Kilima Mbogo**	**59.06**	**69**	P		**P**	**15 55 52.2**	**+2.3**
	comp=Z,4.2nm,0.9s,baz=240,slow=10,SNR=7.3							
KMBO				LR		LR	16 19 33.5	
	comp=Z,2μm,19.6s,baz=272,slow=34							
TAM	**Tamanrasset**	**59.14**	**23**	*eP*		**P**	**15 55 49.0**	**-1.1**
TAM				pmax		pmax		
	comp=Z,74nm,1.0s							
TAM				MLR		MLR		
	comp=Z,1μm,20.0s							
TAM	**Tamanrasset**	**59.14**	**23**	*eP*		**P**	**15 55 49.0**	**-1.1**
	comp=Z,74nm,1.0s							
TAM				LR		LR		
	comp=Z,1μm,20.0s							
NNA	**Nana**	**59.23**	**276**	*eP*		**P**	**15 55 49.9**	**-1.0**
	comp=Z,54nm,1.3s							
NNA				LR		LR		
	comp=Z,2μm,20.0s							
BBGH	**Gun Hill**	**61.97**	**310**	PFAKE			15 56 20.0	+11
BBGH				LR		LR		
	comp=Z,4μm,20.0s							
GRGR	**Grenville**	**62.59**	**308**	PFAKE			15 56 30.0	+16
GRGR				LR		LR		
	comp=Z,1μm,21.0s							
MDT	**Midelt**	**66.33**	**10**	LR		LR	16 24 05.1	
	comp=Z,2μm,18.0s,baz=177,slow=35							
SDV	**Santo Domingo**	**66.64**	**299**	*eP*		**P**	**15 56 39.4**	**-0.9**
	comp=Z,55nm,1.0s							
ROSC	**El Rosal**	**66.85**	**293**	P		**P**	**15 56 42.7**	**+0.8**
ROSC	**El Rosal**	**66.85**	**293**	P		**P**	**15 56 42.7**	**+0.8**
	comp=Z,6.3nm,0.3s,baz=252,slow=19,SNR=3.8							
ROSC				LR		LR	16 25 22.4	
	comp=Z,3μm,18.3s,baz=24,slow=36							
RTC	**Rabat Centre**	**67.18**	**8**	PFAKE			15 57 00.0	+17
RTC				LR		LR		
	comp=Z,1μm,20.0s							
MIR	**Mirnyy**	**67.19**	**156**	*i/P*		**P**	**15 56 43.5**	**+0.7**
MIR				*i*			15 57 12.5	
MIR				pmax		pmax		
	comp=Z,182nm,2.0s							
OTAV	**Otavalo**	**67.33**	**286**	*eP*		**P**	**15 56 43.8**	**-1.3**
	comp=Z,37nm,1.2s							
OTAV				LR		LR		
	comp=Z,6μm,21.0s							
STVI	**Saint Thomas**	**69.29**	**310**	*eP*		**P**	**15 56 56.2**	**-0.4**
	comp=Z,62nm,1.1s							
SBA	**Scott Base**	**69.39**	**181**	*eP*		**P**	**15 56 56.5**	**0.0**
SBA				pmax		pmax		
	comp=Z,672nm,2.6s							
SBA				MLR		MLR		
	comp=Z,733nm,19.0s							
SBA	**Scott Base**	**69.39**	**181**	*eP*		**P**	**15 56 56.5**	**0.0**
	comp=Z,672nm,2.6s							
SBA				LR		LR		
	comp=Z,733nm,19.0s							
HUMP	**Col San Antoni**	**69.72**	**309**	*eP*		**P**	**15 56 58.8**	**-0.4**
	comp=Z,59nm,0.9s							
VNDA	**Vanda**	**69.73**	**179**	*eP*		**P**	**15 56 59.0**	**+0.5**
	comp=Z,265nm,2.4s							
VNDA	**Vanda**	**69.73**	**179**	P		**P**	**15 56 59.1**	**+0.5**
	comp=Z,8.7nm,1.1s,baz=196,slow=6.5,SNR=28							
VNDA				LR		LR	16 26 41.0	
	comp=Z,598nm,18.1s,baz=182,slow=35							
SJG	**San Juan**	**69.89**	**309**	PFAKE			15 57 10.0	+10
SJG				LR		LR		
	comp=Z,1μm,20.0s							
PFVI	**Vila Bisbo**	**70.09**	**6**	*eP*		**P**	**15 57 03.3**	**+2.2**
	comp=Z,111nm,1.2s							
OBIP	**Obispado Ponce**	**70.14**	**308**	*eP*		**P**	**15 57 01.6**	**-0.3**
	comp=Z,32nm,0.9s							
CELP	**Cerrillos**	**70.15**	**309**	*eP*		**P**	**15 57 01.6**	**-0.3**
MORF	**Marmelete**	**70.28**	**6**	*eP*		**P**	**15 57 03.8**	**+1.4**
	comp=Z,79nm,1.3s							
MORF	**Marmelete**	**70.28**	**6**	*eP*		**P**	**15 57 02.4**	**0.0**
MORF				*eS*		**S**	**16 06 15.4**	**+1.1**
PBDV	**Barranco-do-Ve**	**70.28**	**7**	*eP*		**P**	**15 57 03.5**	**+1.1**
	comp=Z,144nm,1.2s							
AOPR	**Arecibo Observ**	**70.46**	**309**	*eP*		**P**	**15 57 02.3**	**-1.5**
	comp=Z,79nm,1.4s							
PVAQ	**Vaqueiros**	**70.46**	**7**	*eP*		**P**	**15 57 04.8**	**+1.4**
	comp=Z,105nm,1.2s							
PVAQ				*eLQ*		LQ	16 16 51.5	
PVAQ				*eLR*		LR	16 19 35.3	
	comp=Z,816nm,22.0s							
PTEO	**Sao Teotonio**	**70.51**	**6**	*eP*		**P**	**15 57 06.5**	**+2.8**
	comp=Z,104nm,1.1s							
PCVE	**Castro Verde**	**70.66**	**7**	*eP*		**P**	**15 57 06.4**	**+1.8**
	comp=Z,46nm,1.4s							
CMLA	**Cha da Macela**	**70.97**	**352**	PFAKE			15 57 20.0	+13
CMLA				LR		LR		
	comp=Z,2μm,21.0s							
PBEJ	**Beja**	**71.06**	**7**	*eP*		**P**	**15 57 09.2**	**+2.1**
	comp=Z,62nm,1.3s							
PNCL	**Nicolau / Gran**	**71.09**	**6**	*eP*		**P**	**15 57 08.8**	**+1.6**
	comp=Z,57nm,1.2s							
PBAR	**Barrancos**	**71.30**	**7**	*eP*		**P**	**15 57 10.1**	**+1.6**
	comp=Z,94nm,1.3s							
EVOP	**Sao Brissos**	**71.54**	**6**	*i/P*		**P**	**15 57 11.4**	**+1.5**
EVOP				pmax		pmax		
	comp=Z,118nm,1.2s							
EVOP	**Sao Brissos**	**71.54**	**6**	*i/P*		**P**	**15 57 11.4**	**+1.5**
	comp=Z,118nm,1.2s							
EVO	**Evora**	**71.55**	**7**	*eP*		**P**	**15 57 10.0**	**0.0**
	comp=Z,64nm,1.2s							
EVO	**Evora**	**71.55**	**7**	*i/P*		**P**	**15 57 11.4**	**+1.4**
	comp=Z,118nm,1.2s							
EVO				*eR*				
	comp=Z,954nm,20.2s							
LIS	**Lisbon**	**71.64**	**6**	*eP*		**P**	**15 57 10.9**	**+0.4**
LIS				AMb		AMB	15 57 23.6	
	comp=Z,140nm,0.9s							
LIS				*eS*		**S**	**16 06 30.7**	**+0.9**
LIS	**Lisbon**	**71.64**	**6**	*eP*		**P**	**15 57 10.9**	**+0.4**
	comp=Z,140nm,0.9s							
LIS				*eS*		**S**	**16 06 30.7**	**+0.9**
LIS	**Lisbon**	**71.64**	**6**	*eP*		**P**	**15 57 10.8**	**+0.4**
LIS				*eS*		**S**	**16 06 30.7**	**+0.9**
SET	**Setif**	**71.68**	**18**	P		**P**	**15 57 12.0**	**+1.0**
MSEY	**Mahe Island**	**71.88**	**84**	PFAKE			15 57 20.0	+7.3
MSEY				LR		LR		
	comp=Z,2μm,19.0s							
PESTR	**Estremoz**	**71.93**	**7**	*eP*		**P**	**15 57 14.4**	**+2.1**
	comp=Z,80nm,1.2s							
CASM	**Ain Smara**	**72.03**	**19**	P		**P**	**15 57 13.9**	**+0.9**
PMTG	**Montargil**	**72.06**	**6**	*eP*		**P**	**15 57 15.8**	**+2.7**
	comp=Z,54nm,1.3s							
DFRA	**Djebel Bou Aff**	**72.13**	**18**	P		**P**	**15 57 15.4**	**+1.7**
CKFL	**Kef-Lekhel**	**72.22**	**19**	P		**P**	**15 57 15.2**	**+1.0**
ABSA	**Djebel Ababsia**	**72.31**	**20**	P		**P**	**15 57 15.9**	**+1.1**
KEST	**Kesra**	**72.36**	**21**	*eP*		**P**	**15 57 15.0**	**0.0**
KEST				P		P	**15 57 16.7**	**+1.7**
KEST	**Kesra**	**72.36**	**21**	P		**P**	**15 57 16.7**	**+1.7**
	comp=Z,31nm,1.0s,baz=211,slow=4.8,SNR=41							
KEST				LR		LR	16 26 22.6	
	comp=Z,521nm,18.8s,baz=358,slow=34							
PMRV	**Marv??o**	**72.50**	**7**	*eP*		**P**	**15 57 17.9**	**+2.2**
	comp=Z,71nm,1.3s							
PMRV				*eLR*		LR	16 21 17.3	
	comp=Z,625nm,20.0s							
PTOM	**Tomar**	**72.59**	**6**	*eP*		**P**	**15 57 18.3**	**+2.1**
	comp=Z,71nm,1.1s							
CMAH	**Djebel Manchou**	**72.62**	**20**	P		**P**	**15 57 17.3**	**+0.7**
PCBR	**Castelo Branco**	**72.90**	**7**	*eP*		**P**	**15 57 19.7**	**+1.7**
	comp=Z,31nm,1.2s							
CASY	**Casey**	**72.92**	**160**	PFAKE			15 57 30.0	+12
CASY				LR		LR		
	comp=Z,2μm,22.0s							
PAB	**San Pablo**	**72.98**	**9**	*eP*		**P**	**15 57 16.2**	**-2.4**
PAB				pmax		pmax		
	comp=Z,13nm,1.1s							
PAB				MLR		MLR		
	comp=Z,809nm,19.0s							
PAB	**San Pablo**	**72.98**	**9**	*eP*		**P**	**15 57 16.2**	**-2.4**
	comp=Z,13nm,1.1s							
PAB				LR		LR		
	comp=Z,809nm,19.0s							
ESDC	**Sonseca Array**	**73.16**	**10**	P		**P**	**15 57 20.5**	**+0.8**
ESDC	**Sonseca Array**	**73.16**	**10**	P		**P**	**15 57 20.5**	**+0.8**
	comp=Z,23nm,1.0s,baz=186,slow=6.4,SNR=51							
ESDC				LR		LR	16 28 50.5	
	comp=Z,485nm,18.0s,baz=190,slow=35							
ESLA	**Sonseca Array**	**73.16**	**10**	*eP*		**P**	**15 57 18.8**	**-0.8**
	comp=Z,5.8nm,1.0s							
MTE	**Manteigas**	**73.45**	**7**	*eP*		**P**	**15 57 23.4**	**+2.0**
	comp=Z,50nm,1.9s							
MTE				*eLQ*		LQ	16 18 53.0	
MTE				*eLR*		LR	16 21 33.5	
	comp=Z,769nm,18.0s							
MTE	**Manteigas**	**73.45**	**7**	PFAKE			15 57 30.0	+8.6
MTE				LR		LR		
	comp=Z,773nm,19.0s							
BCIP	**Isla Barro Col**	**73.80**	**293**	PFAKE			15 57 40.0	+16
BCIP				LR		LR		
	comp=Z,5μm,20.0s							
SDDR	**Presa de Saban**	**73.94**	**306**	*eP*		P	15 57 20.3	-4.4
	comp=Z,16nm,0.7s							
SDDR				LR		LR		
	comp=Z,942nm,19.0s							
WDD	**Wield Dalam**	**74.21**	**25**	PFAKE			15 57 40.0	+14
WDD				LR		LR		
	comp=Z,575nm,19.0s							
MVO	**Moncorvo**	**74.26**	**7**	*eP*		**P**	**15 57 28.0**	**+1.9**
	comp=Z,61nm,1.3s							
MVO				*eLQ*		LQ	16 18 23.9	
MVO				*eLR*		LR	16 21 27.6	
	comp=Z,540nm,22.0s							
POLO	**Lamas de Olo**	**74.39**	**6**	*eP*		**P**	**15 57 28.0**	**+1.1**
	comp=Z,15nm,1.5s							
PCAB	**Cabril**	**74.70**	**6**	*eP*		**P**	**15 57 30.4**	**+1.8**
	comp=Z,59nm,1.3s							
PBRG	**Braganca**	**74.92**	**7**	*eP*		**P**	**15 57 31.5**	**+1.6**
	comp=Z,59nm,1.2s							
PGAV	**Gavieira, Arco**	**74.93**	**6**	*eP*		**P**	**15 57 31.8**	**+1.8**
	comp=Z,57nm,1.6s							
PGAV				*eLR*		LR	16 21 47.4	
	comp=Z,547nm,22.0s							
GRTK	**Grand Turk**	**75.59**	**308**	PFAKE			15 57 50.0	+16
GRTK				LR		LR		
	comp=Z,974nm,19.0s							
VSL	**Villasalto**	**75.85**	**20**	PFAKE			15 57 50.0	+15
VSL				LR		LR		
	comp=Z,1μm,19.0s							
PAYG	**Puerto Ayora**	**76.54**	**278**	PFAKE			15 57 50.0	+10
PAYG				LR

comp=Z,2µm,21.0s
TIP Timpagrande 77.96 25 *e*P **P 15 57 47.6 +0.4**
TIP LR LR

comp=Z,729nm,22.0s
IDI Anoyia 77.97 33 P **P 15 57 48.8 +1.4**
IDI Anoyia 77.97 33 *e*P **P 15 57 49.3 +1.9**
IDI Anoyia 77.97 33 *e*P **P 15 57 47.4 +0.1**
LAST Lasithi 78.13 34 P **P 15 57 50.0 +1.7**
LAST Lasithi 78.13 34 *e*P **P 15 57 49.7 +1.4**
NPS Neapolis 78.28 34 P **P 15 57 51.0 +1.9**
NPS Neapolis 78.28 34 *e*P **P 15 57 50.9 +1.9**
CUC Castrocucco 78.35 24 *e*P **P 15 57 47.6 -1.8**
comp=Z,9.8nm,0.8s
CUC LR LR

comp=Z,404nm,20.0s
ZKR Zakros 78.44 34 *e*P **P 15 57 51.5 +1.6**
VLS Valsamata 78.55 29 *e*P **P 15 57 51.4 +1.0**
PGF Pioggiola 78.59 19⇑*i*P **P 15 57 51.1 +0.4**
comp=Z,70nm,1.1s
PGF Pioggiola 78.59 19⇑*i*P **P 15 57 51.1 +0.4**
PGF pmax pmax

comp=Z,71nm,1.1s
PGF Pioggiola 78.59 19⇑*i*P **P 15 57 51.1 +0.4**
comp=Z,70nm,1.1s
VLX Vlachokerasia 78.60 30 P **P 15 57 53.0 +2.1**
VLX Vlachokerasia 78.60 30 *e*P **P 15 57 53.2 +2.3**
LMR La Mourre 78.69 16⇑*i*P **P 15 57 52.1 +1.0**
comp=Z,68nm,1.0s
LMR La Mourre 78.69 16⇑*i*P **P 15 57 52.1 +1.0**
LMR pmax pmax

comp=Z,68nm,1.0s
LMR La Mourre 78.69 16⇑*i*P **P 15 57 52.1 +1.0**
comp=Z,68nm,1.0s
RLS Riolos of Patr 78.80 29 *e*P **P 15 57 54.1 +2.3**
LASF Ste Croix 78.81 14⇑*i*P **P 15 57 53.0 +1.2**
comp=Z,70nm,1.0s
LASF Ste Croix 78.81 14⇑*i*P **P 15 57 53.0 +1.2**
comp=Z,70nm,1.0s
FRF La Foret Royal 78.94 17⇑*i*P **P 15 57 53.4 +0.9**
comp=Z,113nm,1.2s
FRF La Foret Royal 78.94 17⇑*i*P **P 15 57 53.4 +0.9**
FRF pmax pmax

comp=Z,113nm,1.2s
FRF La Foret Royal 78.94 17⇑*i*P **P 15 57 53.4 +0.9**
comp=Z,113nm,1.2s
LFF La Frestale 79.04 12⇑*i*P **P 15 57 54.4 +1.4**
comp=Z,98nm,1.2s
LFF La Frestale 79.04 12⇑*i*P **P 15 57 54.4 +1.4**
LFF pmax pmax

comp=Z,98nm,1.2s
LFF La Frestale 79.04 12⇑*i*P **P 15 57 54.4 +1.4**
comp=Z,98nm,1.2s
GUR Goura 79.06 30 *e*P **P 15 57 55.1 +1.7**
KLV Kalavryta, Ach 79.07 30 *e*P **P 15 57 55.7 +2.3**
SMRF Simiane la Rot 79.09 16⇑*i*P **P 15 57 55.0 +1.7**
comp=Z,82nm,1.2s
SMRF Simiane la Rot 79.09 16⇑*i*P **P 15 57 55.0 +1.7**
comp=Z,82nm,1.2s
LKD2 Lefkada island 79.10 28 *e*P **P 15 57 55.1 +1.6**
SANT Santorini 79.12 33 PFAKE 15 58 10.0 +16
SANT LR LR

comp=Z,214nm,20.0s
LAKA Lakka 79.17 30 P **P 15 57 55.9 +2.0**
LAKA Lakka 79.17 30 *e*P **P 15 57 56.2 +2.3**
CALN Calern 79.18 17 *e*P **P 15 57 55.1 +1.1**
CALN Calern 79.18 17 *e*P **P 15 57 55.1 +1.1**
CALN Calern 79.18 17 *e*P **P 15 57 55.1 +1.1**
KARP Karpathos 79.24 35 P **P 15 57 55.7 +1.3**
KARP Karpathos 79.24 35 *e*P **P 15 57 56.0 +1.6**
CAF Calviac 79.27 13⇑*i*P **P 15 57 55.4 +1.1**
comp=Z,54nm,1.1s
CAF Calviac 79.27 13⇑*i*P **P 15 57 55.4 +1.1**
CAF pmax pmax

comp=Z,54nm,1.1s
CAF Calviac 79.27 13⇑*i*P **P 15 57 55.4 +1.1**
comp=Z,54nm,1.1s
MVIF Mont Vial 79.38 17 *e*P **P 15 57 55.8 +0.7**
MVIF Mont Vial 79.38 17 *e*P **P 15 57 55.8 +0.7**
MVIF Mont Vial 79.38 17 *e*P **P 15 57 55.8 +0.7**
SBF Sospel 79.42 17⇑*i*P **P 15 57 56.2 +1.0**
comp=Z,86nm,1.0s
SBF Sospel 79.42 17⇑*i*P **P 15 57 56.2 +1.0**
SBF pmax pmax

comp=Z,86nm,1.0s
SBF Sospel 79.42 17⇑*i*P **P 15 57 56.2 +1.0**
comp=Z,86nm,1.0s
TOUF Mont Tournerai 79.51 17 *e*P **P 15 57 57.2 +1.4**
TOUF Mont Tournerai 79.51 17 *e*P **P 15 57 57.2 +1.4**
TOUF Mont Tournerai 79.51 17 *e*P **P 15 57 57.2 +1.4**
RJF Les Rejaudoux 79.53 12⇑*i*P **P 15 57 57.0 +1.3**
comp=Z,83nm,1.2s
RJF *e*R

comp=Z,2µm,20.5s
RJF Les Rejaudoux 79.53 12⇑*i*P **P 15 57 57.0 +1.3**
RJF pmax pmax

comp=Z,83nm,1.2s
RJF Les Rejaudoux 79.53 12⇑*i*P **P 15 57 57.0 +1.3**
comp=Z,83nm,1.2s
AUTN L'Aution 79.54 17 *e*P **P 15 57 57.5 +1.5**
AUTN L'Aution 79.54 17 *e*P **P 15 57 57.5 +1.5**
AUTN L'Aution 79.54 17 *e*P **P 15 57 57.5 +1.5**
KEK Kerkira 79.56 27 *e*P **P 15 57 57.0 +1.1**
SAOF Saorge 79.56 17 *e*P **P 15 57 57.4 +1.5**
SAOF Saorge 79.56 17 *e*P **P 15 57 57.4 +1.5**
SAOF Saorge 79.56 17 *e*P **P 15 57 57.4 +1.5**
OG25 Le Caire 79.57 16 *e*P **P 15 57 57.6 +1.6**
OG25 Le Caire 79.57 16 *e*P **P 15 57 57.6 +1.6**
OCF Saint Nazaire 79.60 15 *e*P **P 15 57 57.9 +1.8**
OG26 St.-Nazaire-De 79.60 15 *e*P **P 15 57 57.9 +1.8**
BBSR BB Station 79.64 320 PFAKE 15 58 10.0 +13
BBSR LR LR

comp=Z,850nm,22.0s
EVR Evrytania 79.67 29 *e*P **P 15 57 58.8 +2.1**
AQU L'Aquila 79.68 22 *e*P **P 15 57 56.9 +0.3**
comp=Z,63nm,1.1s
AQU LR LR

comp=Z,2µm,21.0s
VIVF Saint-Julien-l 79.72 15⇑*i*P **P 15 57 58.2 +1.4**
comp=Z,93nm,1.0s
VIVF Saint-Julien-l 79.72 15⇑*i*P **P 15 57 58.2 +1.4**
VIVF pmax pmax

comp=Z,93nm,1.0s
VIVF Saint-Julien-l 79.72 15⇑*i*P **P 15 57 58.2 +1.4**
comp=Z,93nm,1.0s
APE Apeiranthos 79.73 33 ⇑P **P 15 57 58.2 +1.2**
APE Apeiranthos 79.73 33 *e*P **P 15 57 58.2 +1.2**
APE Apeiranthos 79.73 33⇑*i*P **P 15 57 58.2 +1.2**
LBL Lubilhac 79.79 14 *e*P **P 15 58 00.0 +2.8**
LBL Lubilhac 79.79 14 *e*P **P 15 58 00.0 +2.8**
LBL Lubilhac 79.79 14 *e*P **P 15 58 00.0 +2.8**
PTL Penteli 79.80 31 P **P 15 57 58.7 +1.4**
PTL Penteli 79.80 31 *e*P **P 15 57 58.9 +1.6**
FRNF Fournols 79.81 13 *e*P **P 15 57 58.9 +1.7**
FRNF Fournols 79.81 13 *e*P **P 15 57 58.9 +1.7**
JAN Janina 79.92 28 *e*P **P 15 58 00.0 +2.0**
LKR Lokris 79.94 30 *e*P **P 15 57 59.2 +1.2**
AGG Agios Georgios 79.98 29 P **P 15 57 59.5 +1.2**
AGG Agios Georgios 79.98 29 *e*P **P 15 57 59.8 +1.5**
ATAL Atalanti 79.98 30 P **P 15 57 59.2 +0.9**
ORIF Oris-en-Rattie 80.05 16⇑*i*P **P 15 58 00.2 +1.6**
comp=Z,119nm,1.1s
ORIF *e*R

comp=Z,2µm,18.5s
ORIF Oris-en-Rattie 80.05 16⇑*i*P **P 15 58 00.2 +1.6**
ORIF pmax pmax

comp=Z,119nm,1.1s
ORIF Oris-en-Rattie 80.05 16⇑*i*P **P 15 58 00.2 +1.6**
comp=Z,119nm,1.1s
MBDF Montbardon 80.07 16⇑*i*P **P 15 58 00.3 +1.5**
comp=Z,109nm,1.0s
MBDF Montbardon 80.07 16⇑*i*P **P 15 58 00.3 +1.5**
MBDF pmax pmax

comp=Z,109nm,1.0s
MBDF Montbardon 80.07 16⇑*i*P **P 15 58 00.3 +1.5**
comp=Z,109nm,1.0s
SSB Saint Sauveur 80.10 15 *e*P **P 15 57 56.6 -2.2**
SSB *e* 15 58 00.1
SSB MLR MLR

comp=Z,672nm,20.0s
SSB Saint Sauveur 80.10 15 *e*P **P 15 57 56.6 -2.2**
SSB *e*P **P 15 58 00.1 +1.3**
SSB LR LR

comp=Z,672nm,20.0s
SSB Saint Sauveur 80.10 15 *e*P **P 15 58 00.1 +1.3**

VERF Verneugheol 80.14 13 *e*P **P 15 58 00.6 +1.6**
VERF Verneugheol 80.14 13 *e*P **P 15 58 00.6 +1.6**
SMIA Simia 80.22 30 P **P 15 58 00.8 +1.2**
MRKA Markates 80.23 30 P **P 15 58 00.7 +1.0**
ARG Arkhangelos 80.24 35 *e*P **P 15 58 01.7 +2.0**
PYM Petit Puy Mans 80.24 13 *e*P **P 15 58 02.2 +2.6**
PYM Petit Puy Mans 80.24 13 *e*P **P 15 58 02.2 +2.6**
PYM Petit Puy Mans 80.24 13 *e*P **P 15 58 02.2 +2.6**
THL Klokotos Trika 80.31 29 P **P 15 58 01.1 +1.1**
THL Klokotos Trika 80.31 29 *e*P **P 15 58 02.2 +2.2**
VLC Villacollemand 80.46 19 PFAKE 15 58 10.0 +9.3
VLC LR LR

comp=Z,710nm,19.0s
MFF Saint Martin d 80.51 11⇑*i*P **P 15 58 02.4 +1.5**
comp=Z,80nm,1.2s
MFF Saint Martin d 80.51 11⇑*i*P **P 15 58 02.4 +1.5**
MFF pmax pmax

comp=Z,80nm,1.2s
MFF Saint Martin d 80.51 11⇑*i*P **P 15 58 02.4 +1.5**
comp=Z,80nm,1.2s
AGO Saint Agoulin 80.56 13 *e*P **P 15 58 03.8 +2.6**
AGO Saint Agoulin 80.56 13 *e*P **P 15 58 03.8 +2.6**
NEO Neokhori 80.59 30 *e*P **P 15 58 02.9 +1.4**
TCF Toulx Ste Croi 80.61 13⇑*i*P **P 15 58 03.1 +1.6**
comp=Z,81nm,1.2s
TCF Toulx Ste Croi 80.61 13⇑*i*P **P 15 58 03.1 +1.6**
TCF pmax pmax

comp=Z,81nm,1.2s
TCF Toulx Ste Croi 80.61 13⇑*i*P **P 15 58 03.1 +1.6**
comp=Z,81nm,1.2s
XOR Xorichti 80.62 30 P **P 15 58 02.6 +0.9**
KBN Korca 80.73 27 *e*P **P 15 58 04.4 +2.1**
LPG La Plagne 80.80 16⇑*i*P **P 15 58 04.4 +1.6**
comp=Z,157nm,1.0s
LPG La Plagne 80.80 16⇑*i*P **P 15 58 04.4 +1.6**
LPG pmax pmax

comp=Z,157nm,1.0s
LPG La Plagne 80.80 16⇑*i*P **P 15 58 04.4 +1.6**
comp=Z,157nm,1.0s
LPL La Plagne 80.81 16⇑*i*P **P 15 58 04.3 +1.5**
comp=Z,180nm,1.0s
LPL La Plagne 80.81 16⇑*i*P **P 15 58 04.3 +1.5**
LPL pmax pmax

comp=Z,180nm,1.0s
LPL La Plagne 80.81 16⇑*i*P **P 15 58 04.3 +1.5**
comp=Z,180nm,1.0s
KZN Kozani 80.84 28 *e*P **P 15 58 04.0 +1.0**
SMG Samos 80.84 33 *e*P **P 15 58 04.3 +1.4**
RSL Roselend 80.95 16 *e*P **P 15 58 04.6 +1.1**
RSL Roselend 80.95 16 *e*P **P 15 58 04.6 +1.1**
RSL Roselend 80.95 16 *e*P **P 15 58 04.6 +1.1**
LIT Litokhoron 80.96 29 P **P 15 58 04.0 +0.5**
TIR Tirane 81.00 26 *e*P **P 15 58 05.2 +1.5**
TIR Tirane 81.00 26 *e*P **P 15 58 03.9 +0.2**
TIR pmax pmax

comp=Z,131nm,0.9s
TIR MLR MLR

comp=Z,373nm,19.0s
TIR Tirane 81.00 26 *e*P **P 15 58 03.9 +0.2**
comp=Z,131nm,0.9s
TIR LR LR

comp=Z,373nm,19.0s
CHOS Chios island 81.05 32 P **P 15 58 05.2 +1.1**
CHOS Chios island 81.05 32 *e*P **P 15 58 05.7 +1.6**
OG35 Corcelles 81.05 15 *e*P **P 15 58 05.0 +1.1**
FNA Florina 81.09 28 P **P 15 58 05.3 +1.0**
FNA Florina 81.09 28 *e*P **P 15 58 05.1 +0.8**
RAYN Ar Rayn 81.16 55 *e*P **P 15 58 05.1 +0.1**
comp=Z,26nm,0.9s
SMF Signal de Mont 81.26 14⇑*i*P **P 15 58 06.3 +1.3**
comp=Z,130nm,1.0s
SMF Signal de Mont 81.26 14⇑*i*P **P 15 58 06.3 +1.3**
SMF pmax pmax

comp=Z,130nm,1.0s
SMF Signal de Mont 81.26 14⇑*i*P **P 15 58 06.3 +1.3**
comp=Z,130nm,1.0s
AVF Avril sur Loir 81.31 13⇑*i*P **P 15 58 06.7 +1.6**
comp=Z,161nm,1.0s
AVF Avril sur Loir 81.31 13⇑*i*P **P 15 58 06.7 +1.6**
AVF pmax pmax

comp=Z,161nm,1.0s
AVF Avril sur Loir 81.31 13⇑*i*P **P 15 58 06.7 +1.6**
comp=Z,161nm,1.0s
QUIF Quistinic 81.36 9⇑*i*P **P 15 58 07.0 +1.6**
comp=Z,103nm,1.2s
QUIF Quistinic 81.36 9⇑*i*P **P 15 58 07.0 +1.6**
QUIF pmax pmax

comp=Z,103nm,1.2s
QUIF Quistinic 81.36 9⇑*i*P **P 15 58 07.0 +1.6**
comp=Z,103nm,1.2s
PHP Peshkopia 81.51 27 *e*P **P 15 58 08.0 +1.6**
PHP Peshkopia 81.51 27 P **P 15 58 08.0 +1.6**
OG01 Vacheresse 81.57 16 *e*P **P 15 58 07.8 +1.1**
OG01 Vacheresse 81.57 16 *e*P **P 15 58 07.8 +1.1**
PLG Polygyros 81.58 29 *e*P **P 15 58 08.0 +1.2**
SSF Saint Saulge 81.60 13⇑*i*P **P 15 58 08.0 +1.3**
comp=Z,79nm,1.0s
SSF Saint Saulge 81.60 13⇑*i*P **P 15 58 08.0 +1.3**
SSF pmax pmax

comp=Z,79nm,1.0s
SSF Saint Saulge 81.60 13⇑*i*P **P 15 58 08.0 +1.3**
comp=Z,79nm,1.0s
PUK Puka 81.61 26 *e*P **P 15 58 08.4 +1.4**
HYF Humbligny 81.63 13 *e*P **P 15 58 08.6 +1.7**
HYF Humbligny 81.63 13 *e*P **P 15 58 08.6 +1.7**
SIGR SIGRI 81.64 32 P **P 15 58 08.6 +1.5**
CABF La Chapelle 81.70 15⇑*i*P **P 15 58 08.3 +0.9**
comp=Z,95nm,1.1s
CABF La Chapelle 81.70 15⇑*i*P **P 15 58 08.3 +0.9**
CABF pmax pmax

comp=Z,95nm,1.1s
CABF La Chapelle 81.70 15⇑*i*P **P 15 58 08.3 +0.9**
comp=Z,95nm,1.1s
SENIN Lac Senin/Sane 81.74 16 *e*P **P 15 58 06.7 -1.1**
comp=Z,10nm,0.9s
ROSF Rostrenen 81.76 8⇑*i*P **P 15 58 09.2 +1.7**
comp=Z,93nm,1.2s
ROSF Rostrenen 81.76 8⇑*i*P **P 15 58 09.2 +1.7**
ROSF pmax pmax

comp=Z,93nm,1.2s
ROSF Rostrenen 81.76 8⇑*i*P **P 15 58 09.2 +1.7**
comp=Z,93nm,1.2s
SGMF Saint Gilles 81.77 9⇑*i*P **P 15 58 08.9 +1.3**
comp=Z,84nm,1.1s
SGMF Saint Gilles 81.77 9⇑*i*P **P 15 58 08.9 +1.3**
SGMF pmax pmax

comp=Z,84nm,1.1s
SGMF Saint Gilles 81.77 9⇑*i*P **P 15 58 08.9 +1.3**
comp=Z,84nm,1.1s
LOR Lormes 81.86 13⇑*i*P **P 15 58 09.4 +1.3**
comp=Z,63nm,1.1s
LOR *e*R

comp=Z,1µm,22.5s
LOR Lormes 81.86 13⇑*i*P **P 15 58 09.4 +1.3**
comp=Z,63nm,1.1s
CSS Prodhromos 81.88 39 *e*P **P 15 58 07.4 -1.2**
comp=Z,48nm,1.1s
CSS LR LR

comp=Z,411nm,21.0s
LIA Limnos Island 81.91 31 *e*P **P 15 58 09.4 +0.9**
BCI Bajram Curri 81.96 26 *e*P **P 15 58 10.9 +2.1**
KNT Kendrikon 82.02 29 P **P 15 58 10.3 +1.2**
VAY Valandovo 82.02 28 *i*P **P 15 58 09.5 +0.5**
SKO Skopje 82.14 27 *i*P **P 15 58 11.1 +1.4**
GRR Gorron 82.14 10⇑*i*P **P 15 58 10.8 +1.3**
comp=Z,33nm,0.9s
GRR Gorron 82.14 10⇑*i*P **P 15 58 10.8 +1.3**
GRR pmax pmax

comp=Z,33nm,0.9s
GRR Gorron 82.14 10⇑*i*P **P 15 58 10.8 +1.3**
comp=Z,33nm,0.9s
SRS Serrai 82.26 29 P **P 15 58 11.2 +0.8**
TUE Stuetta 82.34 17 *e*P **P 15 58 07.8 -3.1**
comp=Z,25nm,1.0s
TUE LR LR

comp=Z,1µm,19.0s
SMTH Samothraki Isl 82.53 31 P **P 15 58 12.6 +0.8**
SMTH Samothraki Isl 82.53 31 *e*P **P 15 58 13.0 +1.2**
TGUH Tegucigalpa,Un 82.53 292 PFAKE 15 58 20.0 +7.7
TGUH LR LR

comp=Z,2µm,21.0s
KAVA Kavala 82.54 30 P **P 15 58 12.8 +1.0**
FLN La Foliniere 82.56 10⇑*i*P **P 15 58 13.1 +1.4**
comp=Z,77nm,1.0s
FLN *e*R

comp=Z,1µm,19.8s
FLN La Foliniere 82.56 10⇑*i*P **P 15 58 13.1 +1.4**
FLN pmax pmax

comp=Z,77nm,1.0s
FLN La Foliniere 82.56 10⇑*i*P **P 15 58 13.1 +1.4**
comp=Z,77nm,1.0s
LOMF Lomont 82.56 15 *e*P **P 15 58 12.8 +0.9**
LOMF Lomont 82.56 15 *e*P **P 15 58 12.8 +0.9**
LOMF Lomont 82.56 15 *e*P **P 15 58 12.8 +0.9**
NVR Nevrokopi 82.57 29 P **P 15 58 12.8 +0.8**
NVR Nevrokopi 82.57 29 *e*P **P 15 58 12.9 +0.9**
ISP Isparta 82.68 35 PFAKE 15 58 20.0 +7.3
ISP LR LR

comp=Z,311nm,20.0s
KKB Krupnik 82.69 28 *i*P **P 15 58 13.4 +0.8**
FUORN Ofenpass-Fuorn 82.71 18 *e*P **P 15 58 12.4 -0.4**
comp=Z,63nm,1.1s
MMB Musomiste 82.71 29 *i*P **P 15 58 12.6 -0.1**
DAVOX Davos/Dischmat 82.76 18 P **P 15 58 13.8 +0.8**
DAVOX Davos/Dischmat 82.76 18 P **P 15 58 13.8 +0.8**
comp=Z,62nm,0.9s,baz=203,slow=4.3,SNR=46
BBS Basel-Blauen 82.83 16 *e*P **P 15 58 13.9 +0.7**
BBS Basel-Blauen 82.83 16 *e*P **P 15 58 13.9 +0.7**
KNDS Knezji Dol 82.85 21 *i*P **P 15 58 14.4 +1.0**
SFTF Sexfontaines 83.00 14⇑*i*P **P 15 58 15.3 +1.3**
comp=Z,83nm,1.3s
SFTF Sexfontaines 83.00 14⇑*i*P **P 15 58 15.3 +1.3**
comp=Z,83nm,1.3s
HINF Hinteralfeld 83.01 15⇑*i*P **P 15 58 14.8 +0.7**
comp=Z,34nm,1.1s
HINF Hinteralfeld 83.01 15⇑*i*P **P 15 58 14.8 +0.7**
HINF pmax pmax

comp=Z,34nm,1.1s
HINF Hinteralfeld 83.01 15⇑*i*P **P 15 58 14.8 +0.7**
comp=Z,34nm,1.1s
CEY Cerknica 83.06 21 *i*P **P 15 58 15.6 +1.2**
HAU Haudompre 83.08 15⇑*i*P **P 15 58 15.4 +0.9**
comp=Z,58nm,1.2s
HAU *e*R

comp=Z,882nm,21.0s
HAU Haudompre 83.08 15⇑*i*P **P 15 58 15.4 +0.9**
HAU pmax pmax

comp=Z,58nm,1.2s
HAU Haudompre 83.08 15⇑*i*P **P 15 58 15.4 +0.9**
comp=Z,58nm,1.2s
BOJS Bojanci 83.10 22 *i*P **P 15 58 15.8 +1.2**
BOJS *e*S **S 16 08 35.3 +1.2**
ALN Alexandroupoli 83.11 31 P **P 15 58 15.7 +1.0**
ALN Alexandroupoli 83.11 31 *e*P **P 15 58 15.9 +1.2**
MOF Molkenrain 83.11 15 *e*P **P 15 58 15.4 +0.7**
MOF Molkenrain 83.11 15 *e*P **P 15 58 15.4 +0.7**
MOF Molkenrain 83.11 15 *e*P **P 15 58 15.4 +0.7**
VOY Vojsko 83.17 20 *e*P **P 15 58 16.2 +1.2**
VOY *e* 15 58 20.8
FETA Feichten 83.20 18⇑*i*P **P 15 58 15.6 +0.3**
comp=Z,42nm,1.0s,SNR=30
RZN Rozhen 83.20 29 *i*P **P 15 58 16.3 +0.8**
DAVA Damuels 83.23 17⇑*i*P **P 15 58 16.0 +0.6**
comp=Z,86nm,1.1s,SNR=34
MEZF Maizieres J'vi 83.28 14⇑*i*P **P 15 58 17.0 +1.6**
comp=Z,97nm,1.2s
MEZF Maizieres J'vi 83.28 14⇑*i*P **P 15 58 17.0 +1.6**
comp=Z,97nm,1.2s
FELD Feldberg im Sc 83.33 16 *e*P **P 15 58 16.5 +0.6**
VTS Vitosha 83.35 28 P **P 15 58 17.4 +1.3**
VTS Vitosha 83.35 28 ⇑P **P 15 58 17.5 +1.3**
VTS Vitosha 83.35 28 *i*P **P 15 58 17.3 +1.1**
VTS Vitosha 83.35 28⇑*i*P **P 15 58 17.5 +1.3**
LJU Ljubljana 83.36 21 *i*P **P 15 58 17.2 +1.3**
LJU *e*S **S 16 08 38.8 +2.1**
ABTA Abfaltersbach 83.42 19⇑*i*P **P 15 58 17.6 +1.2**
comp=Z,68nm,0.9s,SNR=40
DIVS Divibare 83.43 25 P **P 15 58 17.7 +1.2**
ECH Echery 83.45 15 *e*P P 15 58 12.2 -4.2
ECH *e* 15 58 17.2
ECH MLR MLR

comp=Z,486nm,19.0s
ECH Echery 83.45 15 *e*P P 15 58 12.2 -4.2
ECH *e*P **P 15 58 17.2 +0.8**
ECH LR LR

comp=Z,486nm,19.0s
ECH Echery 83.45 15 *e*P **P 15 58 17.2 +0.8**
KDZ Kurdzhali 83.46 30 *i*P **P 15 58 16.8 +0.2**
PAGF Fort de Pagny 83.47 14⇑*i*P **P 15 58 18.1 +1.7**
comp=Z,25nm,1.2s
PAGF Fort de Pagny 83.47 14⇑*i*P **P 15 58 18.1 +1.7**
comp=Z,25nm,1.2s
PLD Plovdiv 83.54 29 *i*P **P 15 58 17.8 +0.8**
MOTA Moosalm 83.59 18⇑*i*P **P 15 58 17.4 +0.1**
comp=Z,18nm,0.8s,SNR=17
MOTA ⇑*i*PP **PP 16 01 29.2 -1.2**
comp=Z,32nm,1.0s
MYKA Terra Mystica 83.64 20⇑*e*P **P 15 58 18.8 +1.4**
comp=Z,30nm,1.1s
MYKA ⇑*i*PP **PP 16 01 30.0 -0.7**
comp=Z,36nm,1.2s
RETA Reutte 83.64 18⇑*i*P **P 15 58 17.8 +0.4**
comp=Z,22nm,0.9s,SNR=14
RETA ⇓*i*PP **PP 16 01 29.3 -1.3**
comp=Z,30nm,1.2s
WTTA Wattenberg 83.66 18⇑*i*P **P 15 58 18.4 +0.7**
comp=Z,72nm,1.1s,SNR=35
CDF Champ du Feu 83.67 15⇑*i*P **P 15 58 18.4 +0.8**
comp=Z,22nm,1.1s
CDF Champ du Feu 83.67 15⇑*i*P **P 15 58 18.4 +0.8**
CDF pmax pmax

comp=Z,22nm,1.1s
CDF Champ du Feu 83.67 15⇑*i*P **P 15 58 18.4 +0.8**
comp=Z,22nm,1.1s
PGB Panagyurishte 83.70 29 *i*P **P 15 58 18.6 +0.8**
SPAK Spaichingen-Ko 83.72 16 *e*P **P 15 58 20.5 +2.7**
OBKA Obir 83.79 21⇑*i*P **P 15 58 19.5 +1.3**
comp=Z,22nm,1.1s,SNR=13
BFO Black Forest 83.83 16 *e*P **P 15 58 19.0 +0.8**
comp=Z,48nm,1.0s
BFO *e*SS SS 16 14 00.4 -9.4
BFO Black Forest 83.83 16 *e*P **P 15 58 19.1 +0.8**
BFO pmax pmax

comp=Z,47nm,1.0s
BFO MLR MLR

comp=Z,542nm,22.0s
BFO Black Forest 83.83 16 *e*P **P 15 58 19.1 +0.8**
comp=Z,47nm,1.0s
BFO LR LR

comp=Z,542nm,22.0s
KBA Koelnbreinsper 83.96 20⇑*i*P **P 15 58 20.0 +0.8**
comp=Z,30nm,0.9s,SNR=14
KBA ⇑*i*PP **PP 16 01 34.2 +0.8**
comp=Z,34nm,1.3s
PERS Pernice 84.08 21 *i*P **P 15 58 20.9 +1.2**
SOKA Soboth 84.09 21⇑*i*P **P 15 58 21.2 +1.4**
comp=Z,67nm,1.1s
MPEP Malo Peshtene 84.21 28 *i*P **P 15 58 20.9 +0.6**
KOGS Kog 84.25 22 *i*P **P 15 58 22.1 +1.6**
LANF Langenberg 84.32 15 *e*P **P 15 58 22.1 +1.3**
LANF Langenberg 84.32 15 *e*P **P 15 58 22.1 +1.3**
LANF Langenberg 84.32 15 *e*P **P 15 58 22.1 +1.3**
FUR Furstenfeldbru 84.40 18 *e*P **P 15 58 22.1 +0.9**
comp=Z,105nm,1.2s
FUR *e*SS SS 16 14 06.9 -11
FUR Furstenfeldbru 84.40 18 *e*P **P 15 58 22.1 +0.9**
FUR pmax pmax

comp=Z,16nm,1.2s
RJOB Jochberg 84.41 19 *e*P **P 15 58 21.5 +0.2**
comp=Z,42nm,0.9s
RJOB *e*PP **PP 16 01 35.9 -1.0**
RJOB *e*SS SS 16 14 07.8 -11
BEHE Becsehely 84.44 22⇑*e*P **P 15 58 23.4 +2.0**
STU Stuttgart 84.44 16 *e*P **P 15 58 22.3 +0.9**
comp=Z,52nm,0.9s
STU *e*SS SS 16 14 09.6 -9.2
STU Stuttgart 84.44 16 *e*P **P 15 58 20.4 -1.0**
STU Stuttgart 84.44 16 *e*P **P 15 58 20.4 -1.0**
BAIF Baives 84.61 13⇑*i*P **P 15 58 23.7 +1.5**
comp=Z,85nm,1.1s
BAIF Baives 84.61 13⇑*i*P **P 15 58 23.7 +1.5**
BAIF pmax pmax

comp=Z,85nm,1.1s
BAIF Baives 84.61 13⇑*i*P **P 15 58 23.7 +1.5**
comp=Z,85nm,1.1s
WLF Walferdange 84.61 14 *e*P **P 15 58 23.6 +1.4**
comp=Z,58nm,1.2s
WLF *e*SS SS 16 14 12.8 -8.4
WLF Walferdange 84.61 14 *e*P **P 15 58 20.3 -1.9**
WLF pmax pmax

comp=Z,61nm,1.1s
WLF MLR MLR
comp=Z,395nm,19.0s
WLF Walferdange 84.61 14 *e*P **P 15 58 20.3 -1.9**
comp=Z,61nm,1.1s
WLF LR LR
comp=Z,395nm,19.0s
DGAR Diego Garcia 84.66 95 PFAKE 15 58 30.0 +6.6
DGAR LR LR
comp=Z,4µm,22.0s
KTD Kalmit 84.70 16 *e*P **P 15 58 24.3 +1.6**
KTD Kalmit 84.70 16 *e*P **P 15 58 24.3 +1.6**
ARSA Arzberg 84.75 21⇑*i*P **P 15 58 24.5 +1.5**
comp=Z,54nm,1.0s,SNR=38
GIVF Givet 84.76 13⇑*i*P **P 15 58 24.4 +1.4**
comp=Z,66nm,1.1s
GIVF Givet 84.76 13⇑*i*P **P 15 58 24.4 +1.4**
GIVF pmax pmax
comp=Z,66nm,1.1s
GIVF Givet 84.76 13⇑*i*P **P 15 58 24.4 +1.4**
comp=Z,66nm,1.1s
PKSM Moragy 84.81 23⇑P **P 15 58 24.3 +1.0**
PKSM Moragy 84.81 23⇑*i*P **P 15 58 24.3 +1.0**
PKSM Moragy 84.81 23⇑*e*P **P 15 58 24.4 +1.1**
RUP Ruppelstein 84.84 15 *e*P **P 15 58 24.7 +1.3**
RUP Ruppelstein 84.84 15 *e*P **P 15 58 24.7 +1.3**
MOA Molln 84.92 20⇓*i*P **P 15 58 24.8 +0.9**
comp=Z,34nm,0.9s,SNR=21
SZH Strazhica 85.01 29 *i* P **P 15 58 24.6 +0.2**
PKS9 Tamasi 85.02 23⇓*e*P **P 15 58 26.2 +1.8**
ABH Alteburg 85.11 15 *e*P **P 15 58 26.0 +1.2**
TOD Tromm 85.13 16 *e*P **P 15 58 26.3 +1.4**
TOD Tromm 85.13 16 *e*P **P 15 58 26.3 +1.4**
PKS2 Kecel 85.25 24⇑*e*P **P 15 58 27.2 +1.7**
BZS Buzias 85.33 25⇑P **P 15 58 27.2 +1.3**
BZS Buzias 85.33 25⇑*i*P **P 15 58 27.2 +1.3**
ANTO Ankara 85.38 35⇑P **P 15 58 29.3 +2.9**
ANTO Ankara 85.38 35 P **P 15 58 27.9 +1.4**
SNR=7.0
ANTO Ankara 85.38 35 *e*P **P 15 58 28.9 +2.4**
comp=Z,22nm,1.1s
ANTO LR LR
comp=Z,275nm,19.0s
ANTO Ankara 85.38 35⇑*i*P **P 15 58 29.3 +2.9**
CONA Conrad Observa 85.46 21⇑*i*P **P 15 58 28.1 +1.5**
comp=Z,47nm,1.1s,SNR=31
CONA ⇓*e*PP **PP 16 01 46.1 +0.6**
comp=Z,17nm,1.3s
PKST T''s 85.54 22⇓*e*P **P 15 58 28.6 +1.7**
GZR Gura Zlata 85.56 26⇑P **P 15 58 28.3 +1.1**
GZR Gura Zlata 85.56 26⇑*i*P **P 15 58 28.3 +1.1**
PRD Provadia 85.57 30 *i* P **P 15 58 27.5 +0.3**
HGN Heimansgroeve 85.61 14 *e*P **P 15 58 28.8 +1.6**
comp=Z,26nm,1.0s
HGN Heimansgroeve 85.61 14 *e*S S 16 09 07.0 +8.1
TNS Taunus Mts 85.63 15 *e*P **P 15 58 28.8 +1.4**
comp=Z,26nm,1.1s
TNS *e*PP **PP 16 01 46.4 -0.4**
TNS *e*SS SS 16 14 27.8 -8.6
TNS Taunus Mts 85.63 15 *e*P **P 15 58 28.8 +1.4**
TNS *e* 16 01 46.4
TNS pmax pmax
comp=Z,42nm,1.1s
GEC2 GERESS Array S 85.67 19 *e*P **P 15 58 28.4 +0.7**
comp=Z,26nm,1.1s
GEC2 *e*PP **PP 16 01 46.9 -0.3**
GEC2 *e*SS SS 16 14 27.2 -10
GEC2 GERESS Array S 85.67 19 *e*P **P 15 58 28.4 +0.7**
GEC2 *e* 16 01 46.9
GEC2 pmax pmax
comp=Z,8.0nm,1.1s
GERES GERESS Array B 85.67 19 P **P 15 58 28.0 +0.3**
GERES PP **PP 16 01 46.1 -1.0**
GERES GERESS Array B 85.67 19 P **P 15 58 28.0 +0.3**
comp=Z,19nm,1.0s,baz=195,slow=4.1,SNR=73
GERES PP **PP 16 01 46.1 -1.0**
comp=Z,20nm,1.1s,baz=187,slow=9.4,SNR=8.4
GERES LR LR 16 35 52.7
comp=Z,596nm,18.2s,baz=218,slow=35
HUMR Humele 85.68 28⇓*i*P **P 15 58 29.6 +1.9**
BR131 Keskin Array S 85.69 36 *e*P **P 15 58 26.9 -1.2**
comp=Z,11nm,0.9s
BRTR Keskin Array B 85.69 36 P **P 15 58 28.8 +0.8**
BRTR Keskin Array B 85.69 36 P **P 15 58 28.8 +0.8**
comp=Z,9.6nm,0.9s,baz=191,slow=6.9,SNR=26
CSKK Cs˘‡kako 85.70 23⇑*e*P **P 15 58 29.2 +1.5**
WET Wettzell 85.72 18 *e*P **P 15 58 28.6 +0.8**
comp=Z,65nm,1.2s
WET *e*SS SS 16 14 28.0 -10
WET Wettzell 85.72 18 *e*P **P 15 58 28.6 +0.8**
WET pmax pmax
comp=Z,6.0nm,1.2s
PKSG 85.77 23⇓*e*P **P 15 58 29.6 +1.6**
GRFO Grafenberg 85.79 17 *e*P **P 15 58 28.6 +0.4**
GRFO Grafenberg 85.79 17 *e*P **P 15 58 28.6 +0.4**
GRF Grafenberg Arr 85.79 17 *e*P **P 15 58 29.4 +1.2**
comp=Z,76nm,1.0s
GRF *e*SS SS 16 14 29.3 -9.4
GRF *e*L L 16 34 47.6
comp=Z,886nm,19.0s
GRF Grafenberg Arr 85.79 17 *e*P **P 15 58 29.4 +1.2**
GRF pmax pmax
comp=Z,20nm,1.0s
KHC Kasperske Hory 85.89 19 *e*P **P 15 58 29.6 +0.9**
KHC *e* 15 58 34.0
KHC Kasperske Hory 85.89 19⇑*e*P **P 15 58 29.6 +0.9**
KHC *e*pP **pP 15 58 34.0 +2.0**
KHC Kasperske Hory 85.89 19 *e*P **PP 16 01 49.0 +0.1**
LOT Lotru 85.98 27⇑*i*P **P 15 58 31.2 +1.9**
DEV Deva 86.02 26⇑P **P 15 58 30.9 +1.5**
DEV Deva 86.02 26⇑*i*P **P 15 58 30.9 +1.5**
BUD Budapest 86.06 23⇑*e*P **P 15 58 30.6 +1.1**
ZST Bratislava 86.07 21 *e*P **P 15 58 30.3 +0.7**
ZST *e*S **S 16 08 58.2 -5.4**
ZST Bratislava 86.07 21 *e*P **P 15 58 30.2 +0.7**
ZST Bratislava 86.07 21 *e*S S **16 08 58.2 -5.4**
ZST *e*SS **SS 16 14 37.2 -5.6**
RDF Al-Radifah 86.09 52 *e*P **P 15 58 29.9 -0.3**
RDF AMb AMB 15 58 34.8
comp=Z,26nm,1.2s
NAY Al-Naaiem 86.10 51 *e*P **P 15 58 30.0 -0.2**
NAY AMb AMB 15 58 38.4
comp=Z,10nm,1.1s
ROTZ Rotzenmuhle 86.11 18 *e*P **P 15 58 30.9 +1.2**
comp=Z,52nm,1.2s
ROTZ *e*PP **PP 16 01 50.1 -0.5**
ROTZ *e*SS SS 16 14 34.2 -9.1
MANZ Manzenberg 86.29 18 *e*P **P 15 58 31.6 +1.0**
comp=Z,24nm,1.1s
PSN Preselentsi 86.29 30 *i* P P 15 58 21.4 -9.3
VOIR 86.46 28⇑P **P 15 58 32.8 +1.1**
VOIR 86.46 28⇑*i*P **P 15 58 32.8 +1.1**
BUG Bochum--Univer 86.53 14 *e*P **P 15 58 33.7 +2.0**
comp=Z,44nm,1.2s
BUG *e*SS SS 16 14 43.3 -5.9
MIB Mutribah 86.53 51 *e*P **P 15 58 31.6 -0.6**
MIB AMb AMB 15 58 38.2
comp=Z,25nm,1.0s
UBBA Unterbreizbach 86.54 16 *e*P **P 15 58 33.2 +1.5**
comp=Z,22nm,1.5s
UBBA *e*SS SS 16 14 41.8 -7.6
TREC Trest 86.58 20 *e*P **P 15 58 33.4 +1.4**
TREC *e* 16 01 54.7
TREC MLR MLR
comp=Z,1µm,20.9s
TREC Trest 86.58 20⇑*e*P **P 15 58 33.4 +1.4**
TREC *e*PP **PP 16 01 54.7 +0.3**
TREC AMS AMS 16 34 20.0
comp=Z,1µm,20.9s
WERN Wernitzgruen 86.63 18 *e*P **P 15 58 33.5 +1.2**
comp=Z,23nm,1.0s
GUNZ Gunzen 86.69 18 *e*P **P 15 58 33.9 +1.3**
comp=Z,33nm,1.0s
GUNZ *e*PP **PP 16 01 52.9 -2.5**
PSZ Piszkesteto 86.72 23⇑P **P 15 58 34.1 +1.2**
PSZ Piszkesteto 86.72 23 *e*P **P 15 58 34.0 +1.2**
comp=Z,90nm,1.0s
PSZ LR LR
comp=Z,588nm,19.0s
PSZ Piszkesteto 86.72 23⇑*i*P **P 15 58 34.1 +1.2**
PSZ Piszkesteto 86.72 23⇑*e*P **P 15 58 34.1 +1.2**
DRGR 86.73 25⇓P **P 15 58 34.4 +1.5**
DRGR 86.73 25⇓*i*P **P 15 58 34.3 +1.4**
PLN Plauen 86.76 18 *e*P **P 15 58 33.8 +0.9**
comp=Z,124nm,1.4s
WERD Werda 86.76 18 *e*P **P 15 58 34.0 +1.1**
comp=Z,28nm,1.0s
MOX Moxa 86.77 17 *e*P **P 15 58 34.0 +1.1**
comp=Z,16nm,1.3s
MOX *e*PP **PP 16 01 54.7 -1.3**
MOX *e*SS SS 16 14 45.0 -8.0
MOX *e*L L 16 35 15.0
comp=Z,707nm,19.5s
MOX Moxa 86.77 17 *e*P **P 15 58 34.0 +1.1**
MOX *e* 16 01 54.7
MOX pmax pmax
comp=Z,8.0nm,1.3s
TANN Tannenbergstha 86.77 18 *e*P **P 15 58 34.0 +1.0**
comp=Z,33nm,1.1s
TANN *e*PP **PP 16 01 53.3 -2.7**
TANN *e*SS SS 16 14 45.0 -8.1
ISR Istrita 86.79 29⇑P **P 15 58 35.1 +1.9**
ISR Istrita 86.79 29⇑*i*P **P 15 58 35.1 +1.9**
MLR Muntele Rosu 86.86 28 P **P 15 58 34.5 +0.8**
MLR Muntele Rosu 86.86 28⇓*i*P **P 15 58 34.5 +0.8**
MLR Muntele Rosu 86.86 28 P **P 15 58 34.5 +0.8**
comp=Z,25nm,1.1s,baz=198,slow=3.1,SNR=79
VYHS Vyhne 86.88 22 *e*P **P 15 58 34.6 +1.1**
VYHS pmax pmax
comp=Z,24nm,1.2s
VYHS Vyhne 86.88 22 *e*P **P 15 58 34.6 +1.1**
VYHS *e*PP **PP 16 01 54.6 -2.3**
VYHS *e*S **S 16 09 13.8 +2.3**
VYHS *e*SS **SS 16 14 52.8 -1.9**
VRAC Vranov 86.91 21 P **P 15 58 34.5 +0.8**
VRAC Vranov 86.91 21 P **P 15 58 34.5 +0.8**
comp=Z,19nm,1.1s,baz=194,slow=4.2,SNR=19
WTSB Winterswijk 86.93 14 *e*P **P 15 58 35.5 +1.9**
comp=Z,31nm,1.0s
PRU Pruhonice 86.94 19⇑*i*P **P 15 58 34.8 +1.1**
PRU *e* 15 58 39.9
PRU *e* 16 01 56.1
PRU *e* 16 09 04.3
PRU *e*S **PnS 16 10 11.6 -0.3**
PRU MLR MLR
comp=Z,700nm,21.9s
PRU Pruhonice 86.94 19⇑*i*P **P 15 58 34.8 +1.1**
PRU *e*pP **pP 15 58 39.9 +2.8**
PRU *e*PP **PP 16 01 56.1 -1.2**
PRU *e*SKS S 16 09 04.3 -7.6
PRU *e*PS **PnS 16 10 11.6 -0.3**
PRU *e*SS **SS 16 14 50.0 -5.4**
PRU AMS AMS 16 33 50.0
comp=Z,700nm,21.9s
TEIG Tepich 86.97 296 *e*P **P 15 58 33.4 -1.2**
comp=Z,63nm,1.0s
TEIG LR LR
comp=Z,2µm,19.0s
PRA Prague 86.98 19⇑P **P 15 58 35.0 +1.1**
PRA AMS AMS 16 34 00.0
CJR Cluj-Napoca 86.98 26⇓*i*P **P 15 58 36.2 +2.1**
TIRR Tirgusor 87.02 30⇓P **P 15 58 35.9 +1.6**
TIRR Tirgusor 87.02 30⇓*i*P **P 15 58 35.9 +1.6**
MALT Malatya 87.10 40⇓P P 15 58 39.3 +4.3
MALT Malatya 87.10 40 PFAKE 15 58 50.0 +15
MALT LR LR
comp=Z,958nm,20.0s
MALT Malatya 87.10 40⇓*i*P P 15 58 39.3 +4.3
NEUB Neuenburg 87.33 17 *e*P **P 15 58 37.1 +1.5**
comp=Z,58nm,1.2s
NEUB *e*PP **PP 16 01 59.2 -1.2**
KECS Kecovo 87.41 23 *e*P **P 15 58 37.5 +1.4**
KECS pmax pmax
comp=Z,24nm,0.9s
KECS Kecovo 87.41 23 *e*P **P 15 58 37.5 +1.4**
KECS *e*PP **PP 16 02 00.2 -0.9**
PVCC Panska Ves 87.43 19 *e*P **P 15 58 37.9 +1.8**
PVCC MLR MLR
comp=Z,600nm,18.9s
PVCC Panska Ves 87.43 19⇑*e*P **P 15 58 37.9 +1.8**
PVCC AMS AMS 16 36 00.0
comp=Z,600nm,18.9s
PLOR Plostina 87.43 28⇓P **P 15 58 37.1 +0.8**
PLOR Plostina 87.43 28⇓*i*P **P 15 58 37.1 +0.8**
IBBN Ibbenburen 87.44 14 *e*P **P 15 58 38.4 +2.3**
comp=Z,49nm,1.3s
FBE Freiberg 87.47 18 *e*P **P 15 58 37.9 +1.6**
comp=Z,40nm,1.3s
VRI Vrincioaia 87.48 28⇑P **P 15 58 37.8 +1.3**
VRI Vrincioaia 87.48 28⇑*i*P **P 15 58 37.8 +1.3**
CFR Carcaliu 87.49 29⇓P **P 15 58 37.8 +1.3**
CFR Carcaliu 87.49 29⇓*i*P **P 15 58 37.8 +1.3**
BRG Berggiesshubel 87.58 18 *e*P **P 15 58 38.2 +1.4**
comp=Z,22nm,1.2s
BRG PP **PP 16 01 58.8 -3.7**
comp=Z,17nm,1.2s
BRG S **S 16 09 15.0 -3.0**
BRG SS SS 16 14 45.0 -20
BRG
comp=N,711nm,17.5s
BRG
comp=E,476nm,17.5s
BRG
comp=Z,1µm,17.9s
BRG Berggiesshubel 87.58 18 *e*P **PP 16 02 01.1 -1.3**
comp=Z,15nm,1.2s
BRG Berggiesshubel 87.58 18 *e*P **P 15 58 38.1 +1.3**
comp=Z,24nm,1.2s
BRG *e*PP **PP 16 02 02.1 -0.3**
BRG *e*SS SS 16 14 56.5 -8.2
BRG Berggiesshubel 87.58 18 *e*P **P 15 58 38.2 +1.4**
BRG 16 01 58.8
BRG S **S 16 09 15.0 -3.0**
BRG pmax pmax
comp=Z,22nm,1.2s
BRG pmax pmax
comp=Z,17nm,1.2s
BRG MLR MLR
comp=E,711nm,17.5s
BRG MLR MLR
comp=Z,476nm,17.9s
CLZ Clausthal 87.58 16 *e*P **P 15 58 38.5 +1.6**
comp=Z,25nm,1.5s
CLZ *e*SS SS 16 14 57.8 -7.1
CLZ Clausthal 87.58 16 *e*P **P 15 58 38.5 +1.6**
CLZ pmax pmax
comp=Z,65nm,1.5s
MORC Moravsky Berou 87.61 21 *e*P **P 15 58 38.1 +1.0**
MORC pmax pmax
comp=Z,26nm,1.1s
MORC Moravsky Berou 87.61 21 *e*P **P 15 58 38.0 +1.0**
comp=Z,26nm,1.1s
CLL Collm 87.73 18 *e*P **P 15 58 39.0 +1.5**
comp=Z,30nm,1.1s
CLL *e*PP **PP 16 02 01.5 -2.1**
CLL *e*SS SS 16 14 59.7 -7.2
CLL Collm 87.73 18 *i* P **P 15 58 39.1 +1.5**
CLL *e* 15 58 44.0
CLL *e*S **SKKSac 16 09 16.0 +1.0**
CLL pmax pmax
comp=Z,30nm,1.1s
CLL MLR MLR
comp=Z,600nm,18.5s
CLL Collm 87.73 18 *i* P **P 15 58 39.1 +1.5**
comp=Z,30nm,1.1s
CLL *e*sP **sP 15 58 44.0 +1.9**
CLL *e*PP **PP 16 02 02.0 -1.6**
CLL *e* 16 02 13.0
CLL *e*S **SKKSac 16 09 16.0 +1.0**
CLL *e*PS **PnS 16 10 19.0 -2.3**
CLL *e*SS **SS 16 15 05.0 -1.9**
CLL *e*SSS SSS 16 18 42.0
CLL *e* 16 22 00.0
CLL Lm MLR 16 36 00.0
comp=N,400nm,19.0s
CLL Lm MLR 16 36 00.0
comp=E,400nm,18.7s
CLL Lm MLR 16 36 00.0
comp=Z,600nm,18.5s
BMR Baia Mare 87.76 25⇑P **P 15 58 39.9 +2.1**
BMR Baia Mare 87.76 25⇑*i*P **P 15 58 39.9 +2.1**
DPC Dobruska-Polom 87.76 20⇑*i*P **P 15 58 39.2 +1.4**
DPC *e* 16 02 04.3
DPC Dobruska-Polom 87.76 20⇑*i*P **P 15 58 39.2 +1.4**
DPC *e*PP **PP 16 02 04.3 +0.3**
DPC *ex* x 16 14 55.2
TRPA Tarpa 87.81 25⇓*i*P **P 15 58 39.5 +1.5**
UPC Upice 87.82 20⇑*i*P **P 15 58 39.5 +1.5**
UPC *e* 16 02 05.7
UPC Upice 87.82 20⇑*i*P **P 15 58 39.5 +1.5**
UPC *e*PP **PP 16 02 05.7 +1.3**
OKC Ostrava-Krasne 87.85 21 *e*P **P 15 58 38.8 +0.7**
OKC *e* 15 58 45.6
OKC *e* 16 02 02.3
OKC *e* 16 09 11.4
OKC *e*S **PnS 16 10 32.3 +10**
OKC *e* 16 15 04.8
OKC MLR MLR
comp=Z,800nm,16.7s
OKC Ostrava-Krasne 87.85 21⇑*e*P **P 15 58 38.8 +0.7**
OKC *e*pP **pP 15 58 45.6 +4.1**
OKC *e*PP **PP 16 02 02.3 -2.3**
OKC *e*SKS S 16 09 11.4 -9.3
OKC *e*PS **PnS 16 10 32.3 +10**
OKC *e*SS **SS 16 15 04.8 -3.9**
OKC AMS AMS 16 37 20.0
comp=Z,800nm,16.7s
TESR Tescani 87.98 28⇑*i*P **P 15 58 40.0 +1.1**
CRVS Cervenica-Dubn 88.10 24 *e*P **P 15 58 38.2 -1.2**
CRVS pmax pmax
comp=Z,32nm,1.1s
CRVS Cervenica-Dubn 88.10 24 *e*P **P 15 58 38.2 -1.2**
CRVS *e*PP **PP 16 02 03.6 -3.1**
UZH Uzhgorod 88.15 24⇓*i*P **P 15 58 40.7 +1.1**
UZH *e* 16 02 05.0
UZH *i* 16 09 06.4
UZH *e*S **S 16 09 21.4 -2.1**
UZH MLR MLR
comp=N,250nm,20.0s
UZH MLR MLR
comp=E,200nm,20.0s
UZH MLR MLR
comp=Z,100nm,20.0s
NIE Niedzica 88.16 23⇑*i*P **P 15 58 42.2 +2.5**
NIE Niedzica 88.16 23 *i* P **P 15 58 42.2 +2.5**
KSP Ksiaz 88.20 20 *e*P **P 15 58 41.6 +1.8**
KSP *e* 16 09 13.0
KSP MLR MLR
comp=Z,1µm,22.9s
BURAR Bucovina Array 88.34 26⇑*i*P **P 15 58 42.2 +1.5**
BUR08 Bucovina Ar. S 88.36 26 *e*P **P 15 58 39.2 -1.6**
KOLS Kolonicke sedl 88.40 24 *e*P **P 15 58 42.8 +2.0**
KOLS pmax pmax
comp=Z,17nm,1.3s
KOLS Kolonicke sedl 88.40 24 *e*P **P 15 58 42.8 +2.0**
KOLS Kolonicke sedl 88.40 24 *e*S **S 16 09 22.7 -3.3**
KOLS *e*SS SS 16 15 08.9 -7.9
STHS Stebnicka Huta 88.47 23 *e*P **P 15 58 43.5 +2.4**
STHS pmax pmax
comp=Z,8.0nm,1.1s
STHS Stebnicka Huta 88.47 23 *e*P **P 15 58 43.5 +2.4**
STHS *e*PP **PP 16 02 11.2 +1.5**
ESK Eskdalemuir 88.64 7 *e*P **P 15 58 44.0 +2.3**
ESK pmax pmax
comp=Z,40nm,1.2s
ESK MLR MLR
comp=Z,428nm,21.0s
ESK Eskdalemuir 88.64 7 *e*P **P 15 58 44.0 +2.3**
comp=Z,40nm,1.2s
ESK LR LR
comp=Z,428nm,21.0s
EKA Eskdalemuir Ar 88.66 7 P **P 15 58 43.4 +1.6**
EKA PP **PP 16 02 12.0 +1.0**
EKA Eskdalemuir Ar 88.66 7 P **P 15 58 43.4 +1.6**
comp=Z,20nm,1.0s,baz=184,slow=4.3,SNR=29
EKA PP **PP 16 02 12.0 +1.0**
comp=Z,3.8nm,1.0s,baz=180,slow=6.7,SNR=3.9
OJC Ojcow 88.70 22 *e*P **P 15 58 43.2 +1.0**
OJC *e* 15 58 45.1
OJC *e**PP **pP 15 58 46.6 +1.1**
OJC Ojcow 88.70 22 *e*P **P 15 58 43.2 +1.0**
OJC *e*PcP **pP 15 58 45.1 -0.4**
OJC *e*pP **pP 15 58 46.6 +1.1**
ARQ Araqi 88.89 61 P **P 15 58 45.9 +2.1**
SNR=5.3
RUE Ruedersdorf 89.00 18 *e*P **P 15 58 45.1 +1.6**
comp=Z,57nm,1.3s
RUE *e*PP **PP 16 02 12.6 -1.1**
KWP Kalwaria Pacla 89.14 24 PFAKE 15 59 00.0 +16
KWP LR LR
comp=Z,1µm,19.0s
KIS Kishinev 89.24 29 *e*P **P 15 58 45.0 +0.2**
KIS *e* 16 02 19.0
KIS *e* 16 09 38.0
KIS MLR MLR
comp=Z,500nm,20.0s
KIS MLR MLR
comp=Z,300nm,22.0s
KIS Kishinev 89.24 29 *e*P **P 15 58 45.0 +0.2**
KIS LRM MLR 16 41 02.0
comp=Z,300nm,22.0s
CNNC Cliffs of the 89.32 314 PFAKE 15 59 00.0 +15
CNNC LR LR
comp=Z,802nm,22.0s
NHSC New Hope 89.33 311 PFAKE 15 59 00.0 +14
NHSC LR LR
comp=Z,983nm,20.0s
ASHO Ashiyiah 89.35 60 P **P 15 58 47.9 +2.0**
SNR=7.6
BSEG Bad Segeberg 89.52 15 *e*P **P 15 58 48.3 +2.4**
comp=Z,83nm,1.2s
BSEG *e*SS SS 16 15 25.1 -7.7
BSEG Bad Segeberg 89.52 15 *e*P **P 15 58 48.3 +2.4**
BSEG pmax pmax
comp=Z,60nm,1.2s
HOQ Hoqain 89.61 61 P **P 15 58 48.7 +1.6**
SNR=9.7
LVV L'vov 89.76 25 *e*P **P 15 58 47.2 0.0**
LVV MLR MLR
comp=N,200nm,19.0s
LVV MLR MLR
comp=E,600nm,19.0s
LVV MLR MLR
comp=Z,600nm,19.0s
WES Weston 90.61 322 *e*P P 15 58 47.6 -3.7
WES pmax pmax
comp=Z,30nm,1.1s
WES Weston 90.61 322 *e*P P 15 58 47.5 -3.7
comp=Z,30nm,1.1s
IPIR Pirpir 90.71 51 *e*P **P 15 58 53.7 +1.3**
HRV Adam Dziewonsk 90.81 322 *e*P **P 15 58 49.4 -2.9**
HRV pmax pmax
comp=Z,36nm,1.2s
HRV Adam Dziewonsk 90.81 322 *e*P **P 15 58 49.4 -2.9**
comp=Z,36nm,1.2s
CBN Corbin 91.00 316 PFAKE 15 59 00.0 +6.8
CBN LR LR
comp=Z,856nm,21.0s
ANN Anapa 91.36 35 *e*P **P 15 58 54.2 -0.5**
ANN *e**PP **pP 15 58 57.3 -0.7**
ANN *e* 16 02 30.1
ANN *e*S **SKSac 16 09 25.8 -1.0**
ANN *e*SS **SS 16 16 01.2 +1.4**
ANN pmax pmax
comp=Z,124nm,1.7s
IKLH Kolahrood 91.56 51 *e*P **P 15 58 55.4 -0.9**
SOC Sochi 91.59 37 *e*P P 15 58 52.2 -3.7
SOC *e*S **SKSac 16 09 25.1 -3.2**
COP Copenhagen 91.61 16 *e*P P 15 58 59.0 +3.4
COP MLR MLR
comp=Z,170nm,18.0s
COP Copenhagen 91.61 16 *i* P P 15 58 59.0 +3.4
COP
comp=Z,170nm,18.0s
MUD Monsted U'grnd 91.63 14⇓*e*P **P 15 58 58.0 +2.4**
MUD pmax pmax
comp=Z,31nm,1.1s
MUD MLR MLR
comp=Z,420nm,20.0s
MUD Monsted U'grnd 91.63 14⇓*i*P **P 15 58 58.0 +2.4**
comp=Z,31nm,1.1s
MUD
comp=Z,420nm,20.0s
GOGA Godfrey 91.64 309 *e*P **P 15 58 58.7 +2.4**
GOGA pmax pmax
comp=Z,14nm,1.1s
GOGA Godfrey 91.64 309 *e*P **P 15 58 58.7 +2.4**
comp=Z,14nm,1.1s
BSD Bornholm Skovb 91.67 17 *e*P **P 15 58 58.6 +2.7**
BSD pmax pmax
comp=Z,20nm,0.9s
BSD MLR MLR

comp=Z,310nm,19.0s
BSD Bornholm Skovb 91.67 17 *i* P **P 15 58 58.6 +2.7**
comp=Z,20nm,0.9s
BSD
comp=Z,300nm,19.0s
IZEF Zefreh 91.78 51 *e*P **P 15 58 57.8 +0.4**
GNI Garni 91.87 42 P **P 15 58 59.8 +2.3**
SNR=16
GNI Garni 91.87 42 *e*P **P 15 58 54.9 -2.5**
comp=Z,70nm,1.1s
GNI LR LR
comp=Z,760nm,19.0s
AKH Akhalkalaki 92.04 40 P P 15 59 02.0 +3.7
ISAD Sadrabad 92.08 53 *e*P **P 15 58 58.6 -0.2**
BLA Blacksburg 92.16 314 PFAKE 15 59 10.0 +11
BLA LR LR
comp=Z,723nm,20.0s
CHVG Ch'k'valeri 92.20 39 P P 15 59 06.5 +7.8
LBNH Lisbon 92.25 323 PFAKE 15 59 10.0 +11
LBNH LR LR
comp=Z,1μm,19.0s
AK02 Malin Array Si 92.34 27 *e*P **P 15 58 57.6 -1.5**
AK01 Malin Array Si 92.37 27 *e*P **P 15 58 58.2 -1.0**
KIEV Kiev 92.37 27 *e*P **P 15 59 00.0 +0.7**
KIEV pmax pmax
comp=Z,27nm,1.1s
KIEV MLR MLR
comp=Z,365nm,21.0s
KIEV Kiev 92.37 27 *e*P **P 15 58 60.0 +0.7**
comp=Z,27nm,1.1s
KIEV LR LR
comp=Z,365nm,21.0s
AKASG Malin Array Be 92.38 27 P **P 15 59 00.3 +1.0**
AKASG pmax pmax
comp=Z,27nm,1.0s
AKASG MLR MLR
comp=Z,377nm,21.6s
AKASG Malin Array Be 92.38 27 P **P 15 59 00.3 +1.0**
AKASG Malin Array Be 92.38 27 P **P 15 59 00.3 +1.0**
comp=Z,27nm,1.0s,baz=219,slow=4.8,SNR=45
AKASG LR LR 16 39 28.2
comp=Z,377nm,21.6s,baz=175,slow=35
IMEH Mehriz 92.38 54 *e*P P 15 58 56.4 -3.8
BRAL Brewton 92.56 306 PFAKE 15 59 10.0 +9.4
BRAL LR LR
comp=Z,1μm,20.0s
IR3 Iran Long-Peri 92.56 49 *e*P **P 15 59 02.4 +1.7**
IVRN Varamin 92.70 49 *e*P **P 15 58 58.3 -3.0**
IVRN *e*P **PcP 15 59 01.8 -0.2**
ONI Oni 92.83 40 P **P 15 59 03.8 +2.1**
BINY Binghamton 92.94 320 PFAKE 15 59 10.0 +7.8
BINY LR LR
comp=Z,776nm,21.0s
TBLG Delisi 92.94 41 *e*P P 15 59 06.5 +4.3
TBLG Delisi 92.94 41 P P 15 59 06.5 +4.3
SUW Suwalki 93.03 22 *e*P **P 15 59 03.6 +1.4**
SUW pmax pmax
comp=Z,77nm,1.0s
SUW Suwalki 93.03 22 *e*P **P 15 59 03.6 +1.4**
comp=Z,77nm,1.0s
DGRG David-gareji 93.10 41 P **P 15 59 05.8 +2.8**
DUS Dusheti 93.17 41 P P 15 59 08.7 +5.4
NCB Newcomb 93.23 322 PFAKE 15 59 10.0 +6.6
NCB LR LR
comp=Z,848nm,19.0s
TKL Tuckaleechee C 93.25 311 LR LR 16 39 39.6
comp=Z,726nm,21.9s,baz=146,slow=35
IDMV Damavand 93.26 49 *e*P **P 15 59 06.1 +1.9**
KBZ Khabaz 93.33 38 P **P 15 59 06.1 +2.2**
KBZ pmax pmax
comp=Z,19nm,1.0s
KBZ MLR MLR
comp=Z,549nm,19.7s
KBZ Khabaz 93.33 38 P **P 15 59 06.0 +2.2**
KBZ Khabaz 93.33 38 P **P 15 59 06.0 +2.2**
comp=Z,19nm,1.0s,baz=276,slow=1.4,SNR=19
KBZ LR LR 16 42 52.3
comp=Z,549nm,19.7s,baz=201,slow=37
KIV Kislovodsk 93.38 38 P **P 15 59 05.2 +1.0**
comp=Z,139nm,1.2s,SNR=5.0
ILAS Lasjerd 93.73 50 *e*P **P 15 59 07.5 +1.2**
LRAL Lakeview Retre 93.74 307 *e*P P 15 59 02.8 -3.2
comp=Z,12nm,1.0s
LRAL LR LR
comp=Z,1μm,19.0s
IFIR Firoozkooh 93.76 50 *e*P **P 15 59 07.8 +1.3**
LONY Lake Ozonia 93.86 322 PFAKE 15 59 20.0 +14
LONY LR LR
comp=Z,839nm,21.0s
IPRN Peran 93.87 49 *e*P **P 15 59 06.3 -0.5**
KONO Kongsberg 94.70 13 PFAKE 15 59 20.0 +10
KONO LR LR
comp=Z,409nm,21.0s
ERPA Erie 95.09 318 PFAKE 15 59 20.0 +7.9
ERPA LR LR
comp=Z,681nm,21.0s
ACSO Alum Creek Sta 95.62 315 PFAKE 15 59 30.0 +15
ACSO LR LR
comp=Z,586nm,19.0s
VBMS Vicksburg 95.65 305 PFAKE 15 59 30.0 +15
VBMS LR LR
comp=Z,2μm,21.0s
HFS Hagfors 95.95 14 P **P 15 59 17.6 +2.1**
HFS PP **PP 16 03 05.6 -2.8**
HFS Hagfors 95.95 14 P **P 15 59 17.6 +2.1**
comp=Z,7.9nm,1.0s,baz=204,slow=3.3,SNR=9.1
HFS PP **PP 16 03 05.6 -2.8**
comp=Z,6.7nm,1.0s,baz=205,slow=6.4,SNR=6.3
NB2 NORSAR Subarra 96.30 13 P P 15 59 21.1 +4.0
comp=Z,11nm,1.1s,baz=200,slow=4.8
NB2 NORSAR Subarra 96.30 13 P P 15 59 21.1 +4.0
baz=200,slow=4.8
NOA NORSAR Array B 96.30 13 P P 15 59 21.1 +4.0
NOA NORSAR Array B 96.30 13 P P 15 59 21.1 +4.0
comp=Z,8.7nm,1.0s,baz=200,slow=4.9,SNR=12
NOA PP **PP 16 03 08.0 -3.0**
comp=Z,3.7nm,1.0s,baz=92,slow=3.0,SNR=4.7
NOA LR LR 16 42 13.7
comp=Z,222nm,20.6s,baz=200,slow=35
VORD Divnogorie 96.71 32 *e*P **P 15 59 18.7 -0.4**
VORD pmax pmax
comp=Z,5.0nm,0.5s
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,1.5s
VSR Storozhevoye 96.84 31 *e*P **P 15 59 19.6 -0.1**
VSR pmax pmax
comp=N,8.0nm,1.0s
VSR pmax pmax
comp=Z,6.0nm,1.0s
VSR pmax pmax
comp=E,6.0nm,0.9s
BORG Borgarnes 97.52 358 PFAKE 15 59 30.0 +7.5
BORG LR LR
comp=Z,367nm,19.0s
SCHQ Schefferville 97.80 333 LR LR 16 36 28.9
comp=Z,759nm,21.1s,baz=93,slow=31
KVTX Kingsville 98.35 297 PFAKE 15 59 40.0 +13
KVTX LR LR
comp=Z,2μm,22.0s
OBN Obninsk 98.61 27 *e*P Pdif 15 59 28.4 +0.8
OBN *e* 16 03 29.4
OBN *e* 16 10 06.0
OBN *e*PS **PS 16 12 24.5 +1.4**
OBN *e*SS SS 16 17 42.7 +0.1
OBN pmax pmax
comp=Z,2.0nm,0.9s
OBN MLR MLR
comp=Z,300nm,15.0s
MIAR Mount Ida 99.07 305 PFAKE 15 59 40.0 +10
MIAR LR LR
comp=Z,1μm,22.0s
GLMI Grayling 99.42 318 PFAKE 15 59 40.0 +8.5
GLMI LR LR
comp=Z,585nm,21.0s
RKT Rikitea 99.44 235 *e*LR LR 16 31 57.1
comp=Z,830nm,35.2s
HDIL Hopedale 99.67 312 PFAKE 15 59 40.0 +7.3
HDIL LR LR
comp=Z,873nm,22.0s
FINES FINESS Array B 100.10 19 P **Pdif 15 59 36.7 +2.6**
FINES PP **PP 16 03 35.7 -4.5**
FINES FINESS Array B 100.10 19 P **Pdif 15 59 36.7 +2.6**
comp=Z,1.2nm,0.9s,baz=251,slow=4.3,SNR=2.8
FINES PP **PP 16 03 35.7 -4.5**
comp=Z,4.6nm,1.0s,baz=206,slow=9.3,SNR=5.7
NWAO Narrogin (SRO) 100.96 141 PFAKE 15 59 50.0 +11
NWAO LR LR
comp=Z,1μm,19.0s
JCT Junction City 101.32 299 PFAKE 15 59 50.0 +10
JCT LR LR
comp=Z,385nm,20.0s
JFWS Jewell Farm 101.60 314 PFAKE 15 59 50.0 +8.7
JFWS LR LR
comp=Z,894nm,19.0s
COCO West Island 101.78 113 PFAKE 15 59 50.0 +7.2
COCO LR LR
comp=Z,1μm,21.0s
COWI Conover 102.74 317 PFAKE 16 00 00.0 +14
COWI LR LR
comp=Z,817nm,19.0s
WMOK Wichita Mounta 102.80 303 PFAKE 16 00 00.0 +13
WMOK LR LR
comp=Z,615nm,19.0s
SCIA State Center 102.87 312 PFAKE 16 00 00.0 +13
SCIA LR LR
comp=Z,760nm,21.0s
TAU Tasmania Unive 102.91 167 PFAKE 16 00 00.0 +13
TAU LR LR
comp=Z,1μm,21.0s
SFJD Kangerlussuaq 103.12 347 PFAKE 16 00 00.0 +13
SFJD LR LR
comp=Z,904nm,22.0s
KSU1 Kansas State U 103.57 308 PFAKE 16 00 00.0 +10
KSU1 LR LR
comp=Z,1μm,19.0s
TXAR Lajitas Array 103.61 296 Pdif **Pdif 15 59 51.4 +0.7**
TXAR PP **PKiKP 16 04 09.9 +0.7**
TXAR Lajitas Array 103.61 296 Pdiff **Pdif 15 59 51.4 +0.7**
comp=Z,0.5nm,0.9s,baz=142,slow=4.6,SNR=4.0
TXAR PP **PKiKP 16 04 09.9 +0.7**
comp=Z,1.8nm,0.9s,baz=123,slow=9.1,SNR=8.4
AMTX Amarillo 104.92 302 PFAKE 16 04 20.0
AMTX LR LR
comp=Z,783nm,22.0s
EYMN Ely 105.10 318 PFAKE 16 04 20.0
EYMN LR LR
comp=Z,716nm,19.0s
SNZO South Karori 105.41 188 PFAKE 16 04 20.0
SNZO LR LR
comp=Z,880nm,20.0s
GDL2 Guadalupe Moun 105.55 298 *e*Pdif **Pdif 16 00 01.3 +2.0**
ECSD EROS Data Cent 105.96 312 PFAKE 16 04 20.0
ECSD LR LR
comp=Z,599nm,21.0s
MNTX Cornudas Mount 106.06 298 *e*PKPdf **PKiKP 16 04 09.9 -3.6**
MNTX LR LR
comp=Z,584nm,21.0s
ARCES ARCESS Array B 106.61 14 PP PP 16 04 24.1 -4.6
comp=Z,8.4nm,1.0s,baz=197,slow=3.8,SNR=8.4
APA Apatity 106.89 18 *e*P **Pdif 16 00 00.0 -4.2**
APA MLR MLR
comp=Z,600nm,20.0s
KEV Kevo 107.10 14 PFAKE 16 04 30.0
KEV LR LR
comp=Z,436nm,22.0s
AGMN Agassiz Nation 107.79 316 PFAKE 16 04 30.0
AGMN LR LR
comp=Z,817nm,19.0s
OGNE Ogallala 108.10 307 PFAKE 16 04 30.0
OGNE LR LR
comp=Z,1μm,22.0s
ANMO Albuquerque 108.39 300 PFAKE 16 04 30.0
ANMO LR LR
comp=Z,790nm,22.0s
TBI Tubuai 108.56 225 *e*SS SS 16 20 00.7 +1.9
comp=Z,269nm,30.2s
TBI *e*LR LR 16 36 06.4
comp=Z,708nm,25.5s
SDCO Great Sand Dun 109.00 303 PFAKE 16 04 30.0
SDCO LR LR
comp=Z,796nm,22.0s
TUC Tucson 110.41 296 PFAKE 16 04 30.0
TUC LR LR
comp=Z,1μm,22.0s
CAN Canberra 110.58 167 PFAKE 16 04 30.0
CAN LR LR
comp=Z,2μm,22.0s
EKS2 Erkin-Say 111.27 52 PFAKE 16 04 30.0
EKS2 LR LR
comp=Z,1μm,22.0s
KSH Kashi 111.41 56 P PP 16 05 18.0 +14
KSH pmax pmax
comp=Z,130nm,3.0s
MBWA Marble Bar 111.49 135 PFAKE 16 04 30.0
MBWA LR LR
comp=Z,2μm,20.0s
AAK Ala-Archa 111.74 53 *i* PKIKP **PKiKP 16 04 24.4 +0.4**
AAK Ala-Archa 111.74 53 PFAKE 16 04 40.0
AAK LR LR
comp=Z,852nm,20.0s
WUAZ Wupatki 112.25 299 PFAKE 16 04 40.0
WUAZ LR LR
comp=Z,1μm,22.0s
TKM2 Tokmak 2 112.60 53 PFAKE 16 04 40.0
TKM2 LR LR
comp=Z,1μm,19.0s
DGMT Dagmar 112.82 314 PFAKE 16 04 40.0
DGMT LR LR
comp=Z,729nm,22.0s
KBS Kingsbay 112.85 6 PFAKE 16 04 40.0
KBS LR LR
comp=Z,295nm,21.0s
PPT2 Papeete2 112.98 229 *e*SS SS 16 20 56.2 -2.3
comp=Z,345nm,25.5s
PPT2 *e*LR LR 16 38 05.0
comp=Z,1μm,31.2s
BRVK Borovoye 113.50 41 PFAKE 16 04 40.0
BRVK LR LR
comp=Z,1μm,19.0s
BVAR Borovoye Array 113.54 41 *i* PKIKP **PKiKP 16 04 28.1 +1.2**
BVAR pmax pmax
comp=Z,1.0nm,0.7s
BVAR Borovoye Array 113.54 41 PKiKP **PKiKP 16 04 28.1 +1.2**
BVAR Borovoye Array 113.54 41 PKiKP **PKiKP 16 04 28.1 +1.2**
comp=Z,1.2nm,0.7s,baz=264,slow=2.6,SNR=7.0
PDAR Pinedale Array 113.95 306 PKP **PKiKP 16 04 27.9 -0.4**
PDAR PP **PP 16 05 25.6 +3.0**
PDAR Pinedale Array 113.95 306 PKP **PKiKP 16 04 27.9 -0.4**
comp=Z,1.2nm,0.8s,baz=122,slow=3.3,SNR=6.8
PDAR PP **PP 16 05 25.6 +3.0**
comp=Z,1.8nm,1.0s,baz=108,slow=9.5,SNR=5.1
BW06 Boulder Array 113.95 306 PFAKE 16 04 40.0
BW06 LR LR
comp=Z,1μm,22.0s
FFC Flin Flon 114.08 321 PFAKE 16 04 40.0 +12
FFC LR LR
comp=Z,726nm,20.0s
MVU Marysvale 114.10 301 PFAKE 16 04 40.0 +11
MVU LR LR
comp=Z,796nm,19.0s
RLMT Red Lodge 114.68 309 PFAKE 16 04 40.0 +10
RLMT LR LR
comp=Z,859nm,19.0s
HWUT Hardware Ranch 114.87 305 *e*PKPdf PKPdf 16 04 26.4 -3.6
HWUT LR LR
comp=Z,1μm,22.0s
KULM Kulim 115.09 100 PFAKE 16 04 40.0 +8.9
KULM LR LR
comp=Z,2μm,20.0s
DUG Dugway 115.20 303 *e*PKIKP **PKPdf 16 04 28.7 -2.0**
DUG MLR MLR
comp=Z,516nm,20.0s
DUG Dugway 115.20 303 *e*PKPdf **PKPdf 16 04 28.7 -2.0**
DUG LR LR
comp=Z,516nm,20.0s
LKWY Lake 115.21 308 PFAKE 16 04 40.0 +9.3
LKWY LR LR
comp=Z,2μm,22.0s
PFO Pinyon Flat Ob 115.27 295 PFAKE 16 04 40.0 +9.0
PFO LR LR
comp=Z,893nm,22.0s
EGMT Eagleton 116.07 312 PFAKE 16 04 40.0 +8.0
EGMT LR LR
comp=Z,1μm,22.0s
BOZ Bozeman (W) 116.42 309 PFAKE 16 04 40.0 +7.1
BOZ LR LR
comp=Z,915nm,19.0s
ASAR Alice Springs 116.72 149 PKP **PKPdf 16 04 33.3 -0.8**
ASAR PKKPbc **PKKPbc 16 15 01.6 +1.4**
ASAR Alice Springs 116.72 149 PKP **PKPdf 16 04 33.3 -0.8**
comp=Z,1.4nm,0.6s,baz=203,slow=1.5,SNR=37
ASAR PKKPbc **PKKPbc 16 15 01.6 +1.4**
comp=Z,0.8nm,1.0s,baz=24,slow=3.4,SNR=4.3
DLMT Dillon 116.96 308 *e*PKPdf **PKPdf 16 04 31.5 -2.4**
ELK Elko 117.12 303 *e*PKPdf **PKPdf 16 04 33.0 -1.5**
TPH Tonopah 117.57 299 PFAKE 16 04 50.0 +15
TPH LR LR
comp=Z,710nm,20.0s
MSO Missoula 118.33 309 PFAKE 16 04 50.0 +14
MSO LR LR
comp=Z,632nm,19.0s
BMN Battle Mountai 118.42 302 PFAKE 16 04 50.0 +13
BMN LR LR
comp=Z,793nm,19.0s
MK31 Makanchi Array 118.45 51 *e*PKIKP **PKPdf 16 04 34.8 -1.8**
MK31 Makanchi Array 118.45 51 *e*PKPdf **PKPdf 16 04 34.8 -1.8**
MKAR Makanchi Array 118.45 51 *c i*PKIKP **PKPdf 16 04 36.7 +0.1**
MKAR pmax pmax
comp=Z,3.0nm,1.0s
MKAR Makanchi Array 118.45 51 PKP **PKPdf 16 04 36.4 -0.2**
MKAR PP **PP 16 05 55.6 +1.8**
MKAR PKKPab **PKKPab 16 14 55.5 +0.6**
MKAR Makanchi Array 118.45 51 PKP **PKPdf 16 04 36.3 -0.2**
comp=Z,3.0nm,1.0s,baz=251,slow=3.4,SNR=14
MKAR PP **PP 16 05 55.6 +1.8**
comp=Z,2.9nm,1.1s,baz=272,slow=3.4,SNR=3.5
MKAR PKKPab **PKKPab 16 14 55.5 +0.6**
comp=Z,2.3nm,0.9s,baz=56,slow=2.2,SNR=14
NVAR Mina Array Bea 118.49 299 PKP **PKPdf 16 04 38.9 +1.7**
NVAR PKKPab **PKKPbc 16 14 54.8 +0.6**
NVAR Mina Array Bea 118.49 299 PKP **PKPdf 16 04 38.8 +1.7**
comp=Z,1.5nm,0.6s,baz=127,slow=2.4,SNR=16
NVAR PKKPab **PKKPbc 16 14 54.8 +0.6**
comp=Z,0.6nm,0.8s,baz=269,slow=5.9,SNR=4.3
LSA Lhasa 118.81 72 *e*PKIKP **PKPdf 16 04 38.0 -0.3**
LSA MLR MLR
comp=Z,1μm,22.0s
LSA Lhasa 118.81 72 *e*PKPdf **PKPdf 16 04 38.0 -0.3**
LSA LR LR
comp=Z,1μm,22.0s
BMO Blue Mountains 119.94 306 *e*PKIKP **PKPdf 16 04 37.8 -1.8**
BMO MLR MLR
comp=Z,1μm,21.0s
BMO Blue Mountains 119.94 306 *e*PKPdf **PKPdf 16 04 37.8 -1.8**
BMO LR LR
comp=Z,1μm,21.0s
WVOR Wild Horse Val 120.09 303 *e*PKIKP **PKPdf 16 04 38.4 -1.6**
WVOR MLR MLR
comp=Z,610nm,19.0s
WVOR Wild Horse Val 120.09 303 *e*PKPdf **PKPdf 16 04 38.4 -1.6**
WVOR LR LR
comp=Z,610nm,19.0s
WRA Warramunga Arr 120.17 147 PKP **PKPdf 16 04 39.6 -1.2**
WRA PP **PP 16 06 06.2 +1.4**
WRA PKKPbc **PKKPbc 16 14 49.5 +1.8**
WRA Warramunga Arr 120.17 147 PKP **PKPdf 16 04 39.6 -1.2**
comp=Z,1.5nm,0.6s,baz=232,slow=1.9,SNR=29
WRA PP **PP 16 06 06.2 +1.4**
comp=Z,5.1nm,1.3s,baz=205,slow=4.1,SNR=5.6
WRA PKKPbc **PKKPbc 16 14 49.5 +1.8**
comp=Z,1.0nm,0.9s,baz=43,slow=4.4,SNR=7.6
WRAB Tennant Creek 120.19 147 PFAKE 16 04 50.0 +9.2
WRAB LR LR
comp=Z,1μm,20.0s
CM31 Chiang Mai Arr 120.40 87 *e*PKPdf **PKPdf 16 04 40.3 -0.8**
CMAR Chiang Mai Arr 120.40 87 PKP **PKPdf 16 04 41.2 +0.1**
CMAR Chiang Mai Arr 120.40 87 PKP **PKPdf 16 04 41.2 +0.1**
comp=Z,5.7nm,0.9s,baz=241,slow=3.4,SNR=27
CHTO Chiang Mai 120.56 86 *e*PKIKP **PKPdf 16 04 40.9 -0.5**
CHTO MLR MLR
comp=Z,676nm,22.0s
CHTO Chiang Mai 120.56 86 *e*PKPdf **PKPdf 16 04 40.9 -0.5**
CHTO LR LR
comp=Z,676nm,22.0s
KSM Kuching 120.69 110 PFAKE 16 04 50.0 +8.1
KSM LR LR
comp=Z,1μm,21.0s
NEW Newport 120.82 310 PFAKE 16 04 50.0 +8.9
NEW LR LR
comp=Z,865nm,19.0s
MOD Modoc 121.10 302 *e*PKPdf **PKPdf 16 04 41.5 -0.5**
WMQ Urumqi 121.15 55 *e*PKP **PKPdf 16 04 38.0 -3.9**
WMQ sPKP 16 04 52.0
WMQ *e*PP **PP 16 06 13.0 +0.4**
WMQ PKS PKSdf 16 08 13.0 -5.5
WMQ SKKS 16 13 01.0
WMQ SS **SS 16 22 41.0 -5.0**
WMQ AMB AMB
comp=Z,140nm,4.5s
WMQ LR LR
comp=N,440nm,20.6s
WMQ LR LR
comp=E,860nm,22.0s
WMQ LR LR
comp=Z,970nm,22.1s
HAWA Hanford 121.88 308 PFAKE 16 04 50.0 +6.9
HAWA LR LR
comp=Z,879nm,22.0s
ZALV Zalesovo Beam 122.00 43 PKIKP **PKPdf 16 04 43.4 +0.3**
ZALV pmax pmax
comp=Z,4.0nm,0.8s
ZALV pmax pmax
comp=Z,2.0nm,0.8s
ZALV pmax pmax
comp=Z,6.0nm,1.0s
ZALV Zalesovo Beam 122.00 43 PKP **PKPdf 16 04 43.4 +0.3**
ZALV PP PP 16 06 10.2 -7.6
ZALV PKKPbc **PKKPbc 16 14 40.8 -0.4**
ZALV Zalesovo Beam 122.00 43 PKP **PKPdf 16 04 43.4 +0.3**
comp=Z,3.6nm,0.8s,baz=242,slow=3.1,SNR=14
ZALV PP PP 16 06 10.2 -7.6
comp=Z,1.9nm,0.8s,baz=280,slow=8.9,SNR=3.8
ZALV PKKPbc **PKKPbc 16 14 40.8 -0.4**
comp=Z,5.5nm,0.9s,baz=69,slow=4.8,SNR=16
YKA Yellowknife Ar 122.62 327 PKP **PKPdf 16 04 43.6 -0.4**
YKA PKKPbc **PKKPbc 16 14 37.8 -1.2**
YKA Yellowknife Ar 122.62 327 PKP **PKPdf 16 04 43.6 -0.4**
comp=Z,4.5nm,0.7s,baz=94,slow=1.9,SNR=26
YKA PKKPbc **PKKPbc 16 14 37.7 -1.2**
comp=Z,0.8nm,0.7s,baz=279,slow=3.7,SNR=5.8
YKW3 Yellowknife Ar 122.63 327 *e*PKPdf **PKPdf 16 04 42.9 -1.1**
KAPI Kappang 123.49 123 PFAKE 16 05 00.0 +13
KAPI LR LR
comp=Z,587nm,22.0s
CTAO Charters Tower 124.53 160 PFAKE 16 05 00.0 +11
CTAO LR LR
comp=Z,779nm,20.0s
NLWA Neilton Lookou 125.01 308 PFAKE 16 05 00.0 +11
NLWA LR LR
comp=Z,627nm,20.0s
KMI Kunming 126.46 81 PKP **PKPdf 16 04 52.5 -0.4**
KMI PP PP 16 06 54.5 +5.6
KMI SS SS 16 23 56.5 +2.3
KMI AMB AMB
comp=Z,110nm,8.2s
KMI LR LR
comp=N,440nm,23.1s
KMI LR LR
comp=E,500nm,21.1s
KMI LR LR
comp=Z,710nm,21.1s
KKM Kota Kinabalu 128.13 110 PFAKE 16 05 10.0 +14
KKM LR LR
comp=Z,855nm,20.0s
GTA Gaotai 128.72 63 PKP **PKPdf 16 04 57.5 +0.9**
GTA PP **PP 16 07 04.3 +0.9**
GTA PKS **PKSdf 16 08 31.8 -1.4**
GTA AMB AMB
comp=Z,140nm,7.6s
GTA LR LR
comp=N,410nm,24.2s
GTA LR LR
comp=E,550nm,22.8s
GTA LR LR
comp=Z,880nm,20.9s
CD2 Chengdu 129.40 75 *e*PKP **PKPdf 16 04 58.0 -0.1**
CD2 sPKP 16 05 12.0
CD2 PP **PP 16 07 12.0 +4.0**
CD2 PKS **PKSdf 16 08 32.8 -1.9**
CD2 SKS **SKSdf 16 12 07.0 -2.9**
CD2 SKKS **SKKSac 16 14 02.5 -2.3**
CD2 SS **SS 16 24 31.5 +1.3**
CD2 AMB AMB

	comp=Z,110nm,10.8s							
CD2					LR	LR		
	comp=N,750nm,19.0s							
CD2					LR	LR		
	comp=E,830nm,19.0s							
CD2					LR	LR		
	comp=Z,620nm,20.2s							
QIZ	**Qiongzhong**	**129.82**	**92**		PKP	**PKPdf**	**16 04 59.0**	**-0.1**
QIZ					PP	**PP**	**16 07 10.5**	**-0.2**
QIZ					SS	SS	16 24 37.3	+1.9
QIZ					LR	LR		
	comp=N,560nm,18.4s							
QIZ					LR	LR		
	comp=E,260nm,17.9s							
QIZ					LR	LR		
	comp=Z,680nm,17.4s							
QIZ	**Qiongzhong**	**129.82**	**92**		PFAKE		16 05 10.0	+11
QIZ					LR	LR		
	comp=Z,685nm,20.0s							
GYA	**Guiyang**	**130.24**	**82**		Pdif	**Pdif**	**16 01 48.8**	**-0.4**
GYA					PKP	**PKiKP**	**16 05 01.3**	**+0.6**
GYA					PP	**PP**	**16 07 16.8**	**+3.3**
GYA					PKS	**PKSdf**	**16 08 34.3**	**-2.3**
GYA					SKKS		16 14 08.0	
GYA					SS	**SS**	**16 24 41.5**	**+0.7**
GYA					AMB	AMB		
	comp=Z,140nm,7.9s							
GYA					LR	LR		
	comp=N,180nm,23.5s							
GYA					LR	LR		
	comp=E,150nm,25.2s							
GYA					LR	LR		
	comp=Z,160nm,24.8s							
LZH	**Lanzhou**	**130.98**	**69**	*e*PKP		**PKPdf**	**16 05 03.5**	**+2.4**
LZH				sPKP			16 05 14.0	
LZH				PP		**PP**	**16 07 19.0**	**+0.7**
LZH				PKS		**PKSdf**	**16 08 37.0**	**-0.7**
LZH				SKS		**SKSdf**	**16 12 09.0**	**-3.8**
LZH				SS		**SS**	**16 24 51.0**	**+1.2**
LZH				AMB	AMB			
	comp=Z,140nm,4.5s							
LZH					LR	LR		
	comp=N,450nm,15.2s							
LZH					LR	LR		
	comp=E,780nm,19.2s							
LZH					LR	LR		
	comp=Z,1μm,19.6s							
WRAK	**Wrangell Islan**	**131.19**	**319**		PFAKE		16 05 10.0	+9.5
WRAK					LR	LR		
	comp=Z,774nm,19.0s							
MOY	**Mondy**	**131.38**	**48**	*e*PKIKP		**PKPdf**	**16 05 03.1**	**+1.8**
ZAK	**Zakamensk**	**132.76**	**50**	*e*PKIKP		**PKPdf**	**16 05 04.3**	**+0.4**
ZAK				*e*			16 07 29.8	
ZAK					pmax	pmax		
	comp=Z,4.0nm,1.0s							
TLY	**Talaya**	**133.03**	**48**	*e*PKHKP		PKPpre	16 04 46.4	
TLY					pmax	pmax		
	comp=Z,9.0nm,0.9s							
IRK	**Irkutsk**	**133.42**	**47**	*e*PKIKP		**PKPdf**	**16 05 04.7**	**-0.3**
IRK					pmax	pmax		
	comp=Z,22nm,1.2s							
ENH	**Enshi**	**133.88**	**78**		PFAKE		16 05 20.0	+13
ENH					LR	LR		
	comp=Z,778nm,20.0s							
EGAK	**Eagle**	**134.23**	**331**		PFAKE		16 05 20.0	+14
EGAK					LR	LR		
	comp=Z,1μm,21.0s							
XAN	**Xi'an**	**134.49**	**73**		PKP	**PKPdf**	**16 05 08.3**	**+0.7**
XAN					PKS	PKSdf	16 08 37.8	-6.2
XAN					LR	LR		
	comp=N,380nm,20.4s							
XAN					LR	LR		
	comp=Z,190nm,21.4s							
SONM	**Songino Array**	**134.69**	**53**		PKP	**PKPdf**	**16 05 09.1**	**+1.4**
SONM					PP	**PP**	**16 07 42.7**	**+1.0**
SONM	**Songino Array**	**134.69**	**53**		PKP	**PKPdf**	**16 05 09.1**	**+1.4**
	comp=Z,3.3nm,1.0s,baz=222,slow=1.9,SNR=9.4							
SONM					PP	**PP**	**16 07 42.7**	**+1.0**
	comp=Z,2.7nm,1.1s,baz=235,slow=5.1,SNR=4.4							
PMG	**Port Moresby**	**134.85**	**156**		PFAKE		16 05 20.0	+11
PMG					LR	LR		
	comp=Z,976nm,20.0s							
ULN	**Ulaanbaatar**	**135.14**	**53**	*e*PKPdf		**PKPdf**	**16 05 06.2**	**-2.4**
ULN					LR	LR		
	comp=Z,834nm,20.0s							
DAV	**Davao City (W)**	**135.97**	**117**		PFAKE		16 05 20.0	+9.1
DAV					LR	LR		
	comp=Z,472nm,21.0s							
FUNA	**Funafuti**	**136.26**	**202**		PFAKE		16 05 20.0	+8.5
FUNA					LR	LR		
	comp=Z,9μm,20.0s							
ILAR	**Eielson Array**	**136.54**	**332**		PKP	**PKPdf**	**16 05 10.8**	**+0.4**
ILAR					PP	**PP**	**16 07 51.0**	**-1.5**
ILAR	**Eielson Array**	**136.54**	**332**		PKhKP	PKPpre	16 04 59.8	
	comp=Z,1.2nm,1.0s,baz=16,slow=3.1,SNR=6.8							
ILAR					PKP	**PKPdf**	**16 05 10.8**	**+0.4**
	comp=Z,8.3nm,0.8s,baz=352,slow=0.9,SNR=44							
ILAR					PP	**PP**	**16 07 51.0**	**-1.5**
	comp=Z,2.2nm,1.0s,baz=53,slow=4.3,SNR=4.9							
BTO	**Baotou**	**136.64**	**64**	*e*PKP		**PKPdf**	**16 05 09.0**	**-2.5**
COLD	**Coldfoot**	**136.70**	**336**	*e*PKPdf		**PKPdf**	**16 05 10.1**	**-0.5**
COLA	**College**	**136.88**	**332**		PFAKE		16 05 20.0	+9.0
COLA					LR	LR		
	comp=Z,903nm,20.0s							
TIXI	**Tiksi**	**137.03**	**16**	*i* PKIKP		**PKPdf**	**16 05 10.9**	**-0.2**
HNR	**Honiara**	**137.62**	**174**		PFAKE		16 05 20.0	+6.0
HNR					LR	LR		
	comp=Z,487nm,21.0s							
GQP	**Guinayangan**	**137.68**	**107**↑	*e*P		PKPpre	16 03 00.6	
HHC	**Hu-ho-hao-te**	**137.83**	**64**	*e*PKP		**PKPdf**	**16 05 09.5**	**-4.2**
HHC				sPKP			16 05 24.0	
HHC				PKS		PKSdf	16 08 43.3	-6.6
HHC				SKS		SKSdf	16 12 14.8	-10
HHC				SKKS		SKKSac	16 14 47.0	-8.8
HHC				SS		**SS**	**16 26 06.5**	**-5.4**
HHC				AMB	AMB			
	comp=Z,260nm,8.1s							
HHC					LR	LR		
	comp=N,940nm,19.2s							
HHC					LR	LR		
	comp=E,1μm,19.9s							
HHC					LR	LR		
	comp=Z,1μm,19.0s							
WHN	**Wuhan**	**137.97**	**79**		PKP	**PKPdf**	**16 05 12.0**	**-2.1**
WHN					LR	LR		
	comp=Z,2μm,20.1s							
SML	**Sawmill**	**138.26**	**328**	*e*PKIKP		**PKPdf**	**16 05 10.0**	**-3.7**
SML	**Sawmill**	**138.26**	**328**	*e*PKPdf		**PKPdf**	**16 05 10.0**	**-3.7**
BJT	**Baijiatuau**	**141.24**	**66**		PFAKE		16 05 30.0	+10
BJT					LR	LR		
	comp=Z,787nm,20.0s							
BJI	**Beijing**	**141.25**	**66**		PKP	**PKPdf**	**16 05 21.0**	**+1.3**
BJI					PP	**PP**	**16 08 22.0**	**-0.5**
BJI					LR	LR		
	comp=N,540nm,19.2s							
BJI					LR	LR		
	comp=E,330nm,21.3s							
BJI					LR	LR		
	comp=Z,590nm,20.1s							
KDAK	**Kodiak Island**	**141.74**	**324**		PFAKE		16 05 30.0	+10
KDAK					LR	LR		
	comp=Z,1μm,20.0s							
YHNB	**Yeheng**	**141.89**	**91**		PFAKE		16 05 30.0	+8.5
YHNB					LR	LR		
	comp=Z,827nm,22.0s							
NJ2	**Nanjing**	**142.08**	**79**	*e*PKP		**PKPdf**	**16 05 20.8**	**-0.7**
NJ2					PP	**PP**	**16 08 28.0**	**+0.2**
NJ2					PKS	**PKSdf**	**16 08 57.0**	**-0.4**
NJ2					SKS	**SKSdf**	**16 12 31.0**	**-0.6**
NJ2					AMB	AMB		
	comp=Z,170nm,7.4s							
NJ2					LR	LR		
	comp=Z,3μm,23.5s							
HIA	**Hailar**	**143.45**	**50**	*e*PKPdf		PKPbc	16 05 21.7	+1.0
HIA					LR	LR		
	comp=Z,1μm,20.0s							
YAK	**Yakutsk**	**143.61**	**27**	*e*PKIKP		PKPbc	16 05 21.0	+0.3
YAK					pmax	pmax		
	comp=Z,18nm,1.0s							
YAK					pmax	pmax		
	comp=E,2.0nm,1.3s							
YAK					pmax	pmax		
	comp=N,5.0nm,1.1s							
SSE	**Sheshan**	**143.78**	**81**		PKP	**PKPdf**	**16 05 25.8**	**+1.3**
SSE					PP	PP	16 08 45.0	+7.0
SSE					AMB	AMB		
	comp=Z,110nm,4.4s							
SSE					LR	LR		
	comp=N,280nm,33.7s							
SSE					LR	LR		
	comp=E,310nm,33.7s							
SSE					LR	LR		
	comp=Z,520nm,32.3s							
CLNS	**Chul'man**	**144.18**	**36**	*e*PKIKP		**PKPdf**	**16 05 23.8**	**-0.7**
CLNS					pmax	pmax		
	comp=Z,28nm,1.0s							
CLNS					pmax	pmax		
	comp=E,7.0nm,1.1s							
CLNS					pmax	pmax		
	comp=N,4.0nm,1.1s							
KIP	**Kipapa**	**144.55**	**261**↑	*i*PKIKP		**PKPdf**	**16 05 28.0**	**+1.9**
KIP					pmax	pmax		
	comp=Z,56nm,1.0s							
KIP	**Kipapa**	**144.55**	**261**		PFAKE		16 05 40.0	+14
KIP					LR	LR		
	comp=Z,619nm,19.0s							
BILL	**Bilibino**	**144.90**	**359**	*i* PKIKP		**PKPdf**	**16 05 25.2**	**-0.2**
BILL				*e*SS		SS	16 27 32.6	+1.1
BILL					pmax	pmax		
	comp=Z,520nm,1.0s							
BILL	**Bilibino**	**144.90**	**359**		PFAKE		16 05 40.0	+15
BILL					LR	LR		
	comp=Z,502nm,20.0s							
GAMB	**Gambell**	**145.70**	**341**	*e*PKPdf		**PKPdf**	**16 05 26.4**	**-0.4**
SDPT	**Sand Point**	**146.72**	**323**	*e*PKPdf		**PKPdf**	**16 05 28.5**	**-0.3**
TARA	**Tarawa**	**147.44**	**197**		PFAKE		16 05 40.0	+4.3
TARA					LR	LR		
	comp=Z,856nm,20.0s							
CN2	**Changchun**	**148.13**	**59**	*e*PKPbc		**PKPdf**	**16 05 32.5**	**+0.9**
CN2				*e*PKPab		**PKPab**	**16 05 40.8**	**+3.1**
CN2				SKS		**SKSdf**	**16 12 39.5**	**-0.5**
CN2				SKKS		**SKKSac**	**16 15 56.3**	**+1.7**
CN2				AMB	AMB			
	comp=Z,200nm,5.0s							
CN2					LR	LR		
	comp=N,200nm,25.0s							
CN2					LR	LR		
	comp=E,200nm,25.0s							
CN2					LR	LR		
	comp=Z,200nm,26.0s							
FALS	**False Pass**	**148.44**	**324**	*e*PKPdf		**PKPdf**	**16 05 29.4**	**-2.2**
JOW	**Kunigami**	**148.47**	**92**	*e*PKPdf		**PKPdf**	**16 05 31.9**	**-0.8**
JOW				*e*PKPab		**PKiKP**	**16 05 38.4**	**+0.6**
INCN	**Inchon**	**149.23**	**71**	PFAKE			16 05 40.0	+2.1
INCN					LR	LR		
	comp=Z,737nm,20.0s							
AKUT	**Akutan**	**149.99**	**324**	*e*PKPdf		**PKPdf**	**16 05 33.2**	**-0.9**
AKUT				*e*PKPbc		**PKPbc**	**16 05 38.8**	**-0.2**
KSAR	**Wonju Array Be**	**150.22**	**71**	PKP		**PKPdf**	**16 05 36.4**	**+1.3**
KSAR				PKPbc		**PKiKP**	**16 05 41.0**	**-0.1**
KSRS	**Korea Array**	**150.25**	**71**	PKP		**PKPdf**	**16 05 36.4**	**+1.3**
	comp=Z,5.0nm,0.9s,baz=281,slow=2.0,SNR=9.7							
KSRS				PKPbc		**PKiKP**	**16 05 41.0**	**-0.2**
	comp=Z,16nm,0.9s,baz=277,slow=2.7,SNR=11							
UNV	**Unalaska Valle**	**150.50**	**324**	*e*PKPdf		**PKPdf**	**16 05 33.6**	**-1.4**
UNV				*e*PKPbc		**PKPbc**	**16 05 39.8**	**-0.6**
UNV				*e*PKPab		**PKPab**	**16 05 46.1**	**-0.9**
MDJ	**Mudanjiang**	**150.94**	**56**	PKPbc		**PKPdf**	**16 05 35.8**	**-0.2**
MDJ				PP		**PP**	**16 09 19.0**	**-0.7**
MDJ				SKS		**SKSdf**	**16 12 43.3**	**-0.3**
MDJ				SS		**SS**	**16 28 42.0**	**+0.3**
MDJ				AMB	AMB			
	comp=Z,190nm,10.6s							
MDJ					LR	LR		
	comp=N,380nm,20.7s							
MDJ					LR	LR		
	comp=E,360nm,22.4s							
MDJ					LR	LR		
	comp=Z,610nm,21.6s							
MDJ	**Mudanjiang**	**150.94**	**56**	*e*PKPbc		**PKPbc**	**16 05 41.9**	**+0.1**
MDJ					LR	LR		
	comp=Z,658nm,21.0s							
KLR	**Kul'dur**	**151.03**	**46**	*e*PKIKP		**PKPdf**	**16 05 32.7**	**-3.3**
KLR				*e*			16 05 38.8	
JNU	**Nakatsue**	**152.24**	**81**	*e*PKPdf		**PKPdf**	**16 05 37.9**	**-0.5**
JNU				*e*PKPbc		**PKPbc**	**16 05 44.7**	**-0.5**
JNU				*e*PKPab		**PKPab**	**16 05 55.6**	**+0.6**
USRK	**Ussuriysk Arra**	**152.72**	**56**	PKPbc		**PKPbc**	**16 05 46.0**	**+0.2**
	comp=Z,5.9nm,0.9s,baz=266,slow=3.7,SNR=12							
VLA	**Vladivostok**	**152.87**	**59**	*i* PKIKP		**PKPbc**	**16 05 46.2**	**+0.1**
HABR	**Khabarovsk**	**153.33**	**46**	*e*PKIKP		**PKPdf**	**16 05 40.9**	**+1.5**
HABR				*e*			16 05 44.3	
HABR				*e*			16 12 48.2	
HABR				SS		SS	16 29 12.8	+5.4
HABR				pmax	pmax			
	comp=E,18nm,1.0s							
HABR					pmax	pmax		
	comp=Z,16nm,1.0s							
HABR					pmax	pmax		
	comp=N,13nm,1.2s							
GUMO	**Guam**	**153.92**	**133**		PFAKE		16 05 50.0	+0.8
GUMO					LR	LR		
	comp=Z,528nm,22.0s							
MAJO	**Matsushiro**	**158.48**	**73**	*e*PKIKP		**PKPdf**	**16 05 46.0**	**-0.7**
MAJO					MLR	MLR		
	comp=Z,682nm,21.0s							
MAJO	**Matsushiro**	**158.48**	**73**	*e*PKPdf		**PKPdf**	**16 05 46.0**	**-0.7**
MAJO					LR	LR		
	comp=Z,682nm,21.0s							
MAT	**Matsushiro**	**158.48**	**73**	PKP		**PKPdf**	**16 05 46.5**	**-0.2**
MJAR	**Matsushiro Arr**	**158.48**	**73**	PKP		**PKPdf**	**16 05 46.7**	**0.0**
MJAR				PKPab		**PKPab**	**16 06 22.1**	**+0.5**
MJAR	**Matsushiro Arr**	**158.48**	**73**	PKP		**PKPdf**	**16 05 46.7**	**0.0**
	comp=Z,2.7nm,1.1s,baz=270,slow=2.7,SNR=11							
MJAR				PKPab		**PKPab**	**16 06 22.1**	**+0.5**
	comp=Z,6.2nm,1.0s,baz=278,slow=3.9,SNR=12							
YSS	**Yuzh-Sakhalins**	**158.62**	**43**	*e*PKIKP		**PKPdf**	**16 05 46.0**	**-0.5**
PEA0B	**Petropavlovsk-**	**159.39**	**11**	*e*PKPdf		**PKPdf**	**16 05 47.3**	**+0.1**
PETK	**Petropavlovsk-**	**159.39**	**11**	PKIKP		**PKPdf**	**16 05 47.8**	**+0.6**
PETK					pmax	pmax		
	comp=Z,26nm,1.1s							
PETK	**Petropavlovsk-**	**159.39**	**11**	PKP		**PKPdf**	**16 05 47.8**	**+0.6**
PETK	**Petropavlovsk-**	**159.39**	**11**	PKP		**PKPdf**	**16 05 47.8**	**+0.6**
	comp=Z,26nm,1.1s,baz=92,slow=4.5,SNR=24							
ASAJ	**Asahikawa**	**159.93**	**50**	PKP		**PKPdf**	**16 05 47.5**	**-0.7**
ASAJ	**Asahikawa**	**159.93**	**50**	PKP		**PKPdf**	**16 05 47.5**	**-0.7**
	comp=Z,8.2nm,1.2s,baz=297,slow=2.3,SNR=3.4							
ERM	**Erimo**	**161.16**	**55**		PFAKE		16 06 00.0	+11
ERM					LR	LR		
	comp=Z,902nm,20.0s							
MIDW	**Midway**	**163.33**	**258**		PFAKE		16 06 00.0	+7.9
MIDW					LR	LR		
	comp=Z,903nm,22.0s							

DDA ***27*** *16:34:16.9, 40°.34N×27°.83E, h7km, MD2.7*
ISCJB ***27*** *16:34:17.1±0.4, 40°.35N±0°.03×27°.85E±0°.03, h7km±5km, Error ellipse: s-maj=5.3km s-min=4.2km az=178.1*
ISK ***27*** *16:34:17.0, 40°.35N×27°.84E, h8km, MD2.6*
CSEM ***27*** *16:34:17.3±0.1, 40°.34N×27°.85E, h8km, MD2.6, Error ellipse: s-maj=2.1km s-min=1.7km az=3.0*
ISC 27 16:34:17.1±0.9, 40°.34N±0°.03×27°.84E±0°.02, h7km±7km, n32, σ0°.49/44, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BNT	**Bandirma**	**0.07**	**73**	*e*PG		**Pg**	**16 34 18.6**	**-0.2**
BNT				*e*SG		**Sg**	**16 34 20.6**	**+0.5**
BNT	**Bandirma**	**0.07**	**73**	*e*Pg		**Pg**	**16 34 18.6**	**-0.2**
BNT				*e*Sg		**Sg**	**16 34 20.6**	**+0.5**
GONE	**Gonen-Balikesi**	**0.31**	**202**	*e*PG		**Pg**	**16 34 23.7**	**+0.5**
GONE				*e*SG		**Sb**	**16 34 29.2**	**-1.1**
GONE	**Gonen-Balikesi**	**0.31**	**202**	*e*Pg		**Pg**	**16 34 23.7**	**+0.5**
GONE				*e*Sg		**Sb**	**16 34 29.2**	**-1.1**
KCTX	**Karacabey (Bur**	**0.40**	**100**	*e*PG		**Pg**	**16 34 25.0**	**+0.1**
KCTX				*e*SG		**Sg**	**16 34 30.7**	**+0.5**
KCTX	**Karacabey (Bur**	**0.40**	**100**	*e*Pg		**Pg**	**16 34 25.0**	**+0.1**
KCTX				*e*Sg		**Sg**	**16 34 30.7**	**+0.5**
KRBG	**Karabiga-Canak**	**0.42**	**278**	*e*PG		**Pg**	**16 34 25.5**	**+0.3**
KRBG				*e*SG		**Sb**	**16 34 32.2**	**-1.1**
KRBG	**Karabiga-Canak**	**0.42**	**278**	*e*Pg		**Pg**	**16 34 25.5**	**+0.3**
KRBG				*e*Sg		**Sb**	**16 34 32.2**	**-1.1**
RKY	**Sarkoy-Tekirda**	**0.61**	**305**	*e*PG		**Pg**	**16 34 29.4**	**+0.5**
RKY	**Sarkoy-Tekirda**	**0.61**	**305**	*e*Pg		**Pg**	**16 34 29.4**	**+0.5**
MFT	**Murefte**	**0.62**	**317**	*e*PG		**Pg**	**16 34 29.2**	**+0.2**
MFT	**Murefte**	**0.62**	**317**	*e*Pg		**Pg**	**16 34 29.2**	**+0.2**
BALY	**Balya**	**0.62**	**196**	*i* P		**Pg**	**16 34 29.0**	**0.0**
BALY				*i* S		**Sg**	**16 34 37.7**	**+0.6**
BALY	**Balya**	**0.62**	**196**	*i* P		**Pg**	**16 34 29.0**	**0.0**
BALY				*i* S		**Sg**	**16 34 37.7**	**+0.6**
MDNY	**Mudanya-Bursa**	**0.80**	**87**	*e*PG		**Pg**	**16 34 32.6**	**+0.2**
MDNY	**Mudanya-Bursa**	**0.80**	**87**	*e*Pg		**Pg**	**16 34 32.6**	**+0.2**
ARMT	**Armutlu**	**0.81**	**73**	*e*PG		**Pb**	**16 34 33.3**	**-0.3**
ARMT	**Armutlu**	**0.81**	**73**	*e*Pg		**Pb**	**16 34 33.3**	**-0.3**
LPK	**Lapseki**	**0.82**	**273**	*e*PG		**Pg**	**16 34 33.1**	**+0.2**
LPK	**Lapseki**	**0.82**	**273**	*e*Pg		**Pg**	**16 34 33.1**	**+0.2**
DURS	**Dursunbey**	**0.88**	**146**	*i* P		**Pg**	**16 34 34.4**	**+0.4**
DURS				*i* S		**Sb**	**16 34 46.8**	**0.0**
DURS	**Dursunbey**	**0.88**	**146**	*i* P		**Pg**	**16 34 34.4**	**+0.4**
DURS				*i* S		**Sb**	**16 34 46.8**	**0.0**
CTKS	**Kestanelik-??a**	**1.03**	**29**	*e*PG		**Pg**	**16 34 37.4**	**+0.5**
CTKS	**Kestanelik-??a**	**1.03**	**29**	*e*Pg		**Pg**	**16 34 37.4**	**+0.5**
GEMT	**Gemlik**	**1.04**	**84**	*e*PG		**Pb**	**16 34 37.1**	**-0.2**
GEMT	**Gemlik**	**1.04**	**84**	*e*Pg		**Pb**	**16 34 37.1**	**-0.2**
CTYL	**Yal??k??y-??at**	**1.19**	**17**	*e*PN		**Pb**	**16 34 39.8**	**-0.1**
CTYL	**Yal??k??y-??at**	**1.19**	**17**	*e*Pn		**Pb**	**16 34 39.8**	**-0.1**
YLV	**Yalova**	**1.19**	**78**	*e*PN		**Pg**	**16 34 40.5**	**+0.5**
YLV	**Yalova**	**1.19**	**78**	*e*Pn		**Pg**	**16 34 40.5**	**+0.5**
ENEZ	**Enez**	**1.34**	**288**	*e*PN		**Pb**	**16 34 42.7**	**+0.1**
ENEZ	**Enez**	**1.34**	**288**	*e*Pn		**Pb**	**16 34 42.7**	**+0.1**

SZGRF ***27*** *16:38:42.3, 21°.94S×178°.14W, h600km, Fiji Islands region*
NEIC ***27*** *16:38:43.7±0.9, 21°.14S×179°.18W, h599km±11km, mb4.5/56, Error ellipse: s-maj=10.7km s-min=7.4km az=149.0*
ISCJB ***27*** *16:38:43.5±0.6, 21°.22S±0°.04×179°.11W±0°.04, h611km±7km, mb4.4/90, Error ellipse: s-maj=7.0km s-min=4.9km az=147.7*
MOS ***27*** *16:38:43.5±1.5, 21°.15S×179°.14W, h603km, mb4.6/22, Error ellipse: s-maj=11.2km s-min=9.4km az=51.6*
BJI ***27*** *16:38:45.1, 21°.20S×179°.10W, h637km, mB4.7/14, mb4.6/25*
AUST ***27*** *16:38:45.8±0.0, 21°.15S×178°.98W, h619km, Error ellipse: s-maj=1.5km s-min=1.1km az=255.0*
IDC ***27*** *16:38:46.9±0.6, 21°.18S×179°.18W, h624km±6km, mb3.9/30, mb1 4.0/30, mb1mx4.0/30, mbtmp3.9/30, Error ellipse: s-maj=10.2km s-min=9.2km az=124.0*
ISC 27 16:38:46.2±0.4, 21°.38S±0°.05×179°.19W±0°.05, h625km±3km, h625km:pP-P, n505, σ1§31/552, mb4.5/89, 43C-25D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
RAO	**Raoul Island**	**7.92**	**172**	P		**P**	**16 40 43.9**	**-1.7**
RAO				S		**S**	**16 42 21.3**	**-2.2**
RAO	**Raoul Island**	**7.92**	**172**	P		**P**	**16 40 43.9**	**-1.7**
	93nm,0.3s,baz=113,slow=21,SNR=5.2							
RAO				S		**S**	**16 42 21.3**	**-2.2**
	116nm,0.3s,baz=90,slow=20,SNR=7.2							
NIUE	**Niue**	**8.99**	**77**	S		S	16 42 48.3	+6.3
	baz=8.7,SNR=3.7							
AFI	**Afiamalu**	**10.25**	**45**	P		P	16 41 03.4	-4.8
AFI				S		S	16 42 55.3	-9.2
AFI	**Afiamalu**	**10.25**	**45**	P		P	16 41 03.4	-4.8
	5.2nm,0.3s,baz=230,slow=7.9,SNR=6.9							
AFI				S		S	16 42 55.3	-9.2
	3.9nm,0.3s,baz=229,slow=20,SNR=5.8							
NOUC	**Port Laguerre**	**13.50**	**264**	*e*P		**P**	**16 41 38.3**	**-1.3**
OUZ	**Omahuta**	**15.18**	**203**	*e*P		**P**	**16 41 55.6**	**+0.8**
	38nm,0.9s							
PUZ	**Puketiti**	**16.79**	**187**	PN		**P**	**16 42 09.7**	**+0.2**
PUZ				SN		**S**	**16 44 53.5**	**-1.3**
URZ	**Urewera**	**17.13**	**190**	*e*P		**P**	**16 42 11.4**	**-1.2**
	91nm,1.7s							
URZ				S		**S**	**16 44 55.7**	**-4.6**
URZ	**Urewera**	**17.13**	**190**	PN		**P**	**16 42 11.8**	**-0.8**
URZ	**Urewera**	**17.13**	**190**	P		**P**	**16 42 12.4**	**-0.2**
	4.5nm,0.3s,baz=49,slow=0.4,SNR=54							
URZ				S		**S**	**16 44 55.7**	**-4.6**
	1.1nm,0.3s,baz=233,slow=20,SNR=8.2							
MWZ	**Matawai**	**17.14**	**189**	PN		**P**	**16 42 12.0**	**-0.8**
MWZ				SN		**S**	**16 44 56.4**	**-4.1**
BKZ	**Black Stump Fm**	**18.12**	**191**	PN		**P**	**16 42 21.0**	**-0.7**
FWVZ	**Far West T-bar**	**18.38**	**193**	PN		**P**	**16 42 24.8**	**+0.5**
MRZ	**Mangatainoka R**	**19.73**	**192**	PN		**P**	**16 42 35.9**	**-0.3**
CAW	**Cannon Point**	**20.27**	**193**	PN		**P**	**16 42 41.4**	**+0.4**
QRZ	**Quartz Range**	**20.63**	**198**	PN		**P**	**16 42 46.0**	**+1.8**
NNZ	**Nelson**	**20.76**	**196**	PN		**P**	**16 42 45.9**	**+0.5**
THZ	**Tophouse**	**21.39**	**196**	PN		**P**	**16 42 51.5**	**+0.3**
DSZ	**Denniston Nort**	**21.68**	**198**	PN		**P**	**16 42 55.1**	**+1.4**
KHZ	**Kahutara**	**21.85**	**195**	PN		**P**	**16 42 55.2**	**0.0**
HNR	**Honiara**	**23.32**	**297**	*e*P		**P**	**16 43 05.5**	**-3.1**
	61nm,0.9s							
HNR	**Honiara**	**23.32**	**297**	P		**P**	**16 43 07.7**	**-0.9**
	47nm,0.6s,baz=190,slow=3.9,SNR=9.9							
RPZ	**Rata Peaks**	**23.71**	**198**	P		**P**	**16 43 13.7**	**+2.0**
RPZ	**Rata Peaks**	**23.71**	**198**	P		**P**	**16 43 13.7**	**+2.0**
	4.2nm,0.5s,baz=169,slow=21,SNR=5.5							
EIDS	**Eidsvold**	**27.55**	**256**	*e*P		**P**	**16 43 44.9**	**-0.7**
	20nm,0.6s							
EIDS	**Eidsvold**	**27.55**	**256**	P		**P**	**16 43 47.1**	**+1.5**
	baz=28,SNR=9.9							
ARMA	**Armidale**	**27.69**	**245**	P		**P**	**16 43 49.5**	**+2.6**
	baz=28,SNR=16							
PPT	**Papeete**	**28.15**	**87**	P		**P**	**16 43 50.8**	**-0.1**
PPT	**Papeete**	**28.15**	**87**	P		**P**	**16 43 50.8**	**-0.1**
	64nm,1.1s,baz=47,slow=18,SNR=4.2

WRA	**Warramunga Arr**	43.39	263	P		**P**		16 45 56.2	+0.3	
	comp=Z,28nm,0.8s,baz=99,slow=8.6,SNR=184									
WRA				PcP		**PcP**		16 47 31.0	+1.1	
	comp=Z,1.9nm,0.4s,baz=98,slow=3.4,SNR=4.0									
WRA				ScP		**ScP**		16 50 25.7	+2.9	
	comp=Z,1.8nm,0.9s,baz=102,slow=4.0,SNR=4.6									
WRA				S		**S**		16 51 38.3	-2.2	
	comp=Z,3.4nm,0.8s,baz=102,slow=15,SNR=9.4									
WRA				PKiKP		**PKiKP**		16 54 28.6	-1.5	
	comp=Z,0.5nm,0.7s,baz=85,slow=0.7,SNR=5.1									
KDU	**Kakadu**	46.87	272	P		**P**		16 46 22.7	+0.3	
	baz=47,SNR=30									
KDU				S		**S**		16 52 29.7	+0.6	
	baz=47,SNR=4.9									
FORT	**Forrest**	47.93	247	P		**P**		16 46 30.9	+0.8	
	baz=48,SNR=13									
MTN	**Manton Dam**	48.07	272	P		**P**		16 46 31.3	0.0	
	baz=48,SNR=22									
KNRA	**Kununurra**	49.50	267	P		**P**		16 46 42.2	+0.4	
	baz=50,SNR=13									
FAKI	**Fak Fak**	50.63	284	P		**P**		16 46 50.3	+0.2	
	baz=51,SNR=5.6									
FITZ	**Fitzroy Crossi**	51.82	263	P		**P**		16 46 59.8	+1.3	
	baz=52,SNR=7.0									
BNDI	**Bandanaira**	52.10	281	P		**P**		16 46 53.8	-6.8	
	baz=52,SNR=3.5									
MEEK	**Meekatharra**	56.59	252	P		**P**		16 47 32.2	+0.4	
	baz=57,SNR=12									
KLBR	**Kellerberrin**	56.68	246	P		**P**		16 47 33.3	+1.0	
	baz=57,SNR=16									
SBA	**Scott Base**	56.93	184	*e*P		**P**		16 47 33.8	+0.6	
SBA				pmax		pmax				
	comp=Z,21nm,1.0s									
SBA	**Scott Base**	56.93	184	*e*P		**P**		16 47 33.8	+0.6	
	comp=Z,21nm,1.0s									
VNDA	**Vanda**	56.94	185	*e*P		**P**		16 47 33.7	+0.4	
	comp=Z,6.1nm,0.8s									
VNDA	**Vanda**	56.94	185	P		P		16 47 36.5	+3.2	
	comp=Z,4.0nm,0.7s,baz=5.7,slow=7.9,SNR=36									
BLDU	**Ballidu**	57.69	247	P		**P**		16 47 40.0	+0.8	
	baz=58,SNR=9.9									
MORW	**Morawa**	58.47	248	P		**P**		16 47 45.5	+1.0	
	baz=59,SNR=5.5									
CASY	**Casey**	62.70	205	*e*P		**P**		16 48 08.9	-2.5	
JHJ	**Hachijo jima 2**	66.86	323	P		**P**		16 48 37.9	-0.1	
	comp=Z,32nm,0.4s									
SDKM	**Sandakan**	67.86	286	P		**P**		16 48 46.5	+1.9	
UGM	**Wanagama**	68.84	270	P		**P**		16 48 51.0	+0.6	
	baz=69,SNR=7.7									
KKM	**Kota Kinabalu**	68.92	286	P		**P**		16 48 51.9	+1.0	
	baz=69,SNR=6.7									
MJAR	**Matsushiro Arr**	70.27	325	P		**P**		16 48 57.9	-0.4	
MJAR	**Matsushiro Arr**	70.27	325	P		**P**		16 48 57.9	-0.4	
	comp=Z,5.7nm,0.5s,baz=156,slow=5.8,SNR=81									
MAJO	**Matsushiro**	70.27	325	*e*P		**P**		16 48 56.8	-1.6	
MAJO				pmax		pmax				
	comp=Z,8.0nm,0.6s									
MAJO	**Matsushiro**	70.27	325	*e*P		**P**		16 48 56.8	-1.6	
	comp=Z,8.2nm,0.6s									
MAT	**Matsushiro**	70.27	325	P		**P**		16 48 57.9	-0.5	
MAT				S		**S**		16 57 26.4	+4.3	
SBUM	**Sibu**	71.06	280	P		P		16 48 59.3	-4.2	
CISI	**Cisompet, Garu**	71.48	269	P		**P**		16 49 05.8	-0.2	
	baz=72,SNR=3.3									
JNU	**Nakatsue**	72.16	318	P		**P**		16 49 09.4	0.0	
JNU	**Nakatsue**	72.16	318	P		**P**		16 49 09.4	0.0	
	comp=Z,11nm,1.0s,baz=173,slow=3.1,SNR=4.8									
KSM	**Kuching**	72.44	279	*e*P		**P**		16 49 09.3	-2.2	
	comp=Z,14nm,0.8s									
KSM	**Kuching**	72.44	279	P		**P**		16 49 12.4	+0.9	
TPUB	**Ta-pu**	73.53	304	*e*P		**P**		16 49 15.4	-2.1	
	comp=Z,41nm,0.8s									
SSLB	**Suanglung**	73.54	304	*e*P		**P**		16 49 14.8	-2.8	
	comp=Z,14nm,0.8s									
ASAJ	**Asahikawa**	73.97	332	*e*P		**P**		16 49 18.1	-1.4	
	comp=Z,4.1nm,0.7s									
ASAJ	**Asahikawa**	73.97	332	P		**P**		16 49 20.9	+1.4	
	comp=Z,12nm,0.8s,baz=212,slow=8.0,SNR=23									
FX1	**Attu Island--F**	74.24	355	*e*P		**P**		16 49 18.4	-2.4	
UNV	**Unalaska Valle**	75.71	8	*e*P		**P**		16 49 27.3	-1.5	
	comp=Z,27nm,1.1s									
YSS	**Yuzh-Sakhalins**	76.19	334⇑	*i*P		**P**		16 49 34.0	+2.3	
KSRS	**Korea Array**	76.82	319	P		**P**		16 49 35.9	+0.6	
	comp=Z,1.1nm,0.6s,baz=132,slow=5.6,SNR=8.7									
KSAR	**Wonju Array Be**	76.83	319	P		**P**		16 49 35.9	+0.5	
PEA0B	**Petropavlovsk-**	76.84	346	*e*P		**P**		16 49 34.0	-1.1	
PETK	**Petropavlovsk-**	76.84	346	P		**P**		16 49 34.7	-0.4	
PETK	**Petropavlovsk-**	76.84	346	P		**P**		16 49 34.7	-0.4	
PETK	**Petropavlovsk-**	76.84	346	P		**P**		16 49 34.7	-0.4	
	comp=Z,8.1nm,0.6s,baz=145,slow=7.9,SNR=59									
USRK	**Ussuriysk Arra**	79.07	327	P		**P**		16 49 48.4	+1.2	
	comp=Z,6.4nm,0.7s,baz=126,slow=3.9,SNR=21									
NJ2	**Nanjing**	79.59	310	*e*P		**P**		16 49 48.3	-1.9	
NJ2				pmax		pmax				
	comp=Z,10.0nm,0.5s									
QIZ	**Qiongzhong**	80.21	295	P		**P**		16 49 52.5	-1.2	
QIZ				S		**S**		16 59 08.3	-0.9	
QIZ				pmax		pmax				
	comp=Z,17nm,1.5s									
MAW	**Mawson**	80.36	200	P		**P**		16 49 55.4	+1.8	
MAW	**Mawson**	80.36	200	P		**P**		16 49 55.4	+1.8	
	comp=Z,6.6nm,0.8s,baz=122,slow=8.0,SNR=7.7									
KHMM	**Horse Mountain**	80.53	39	*e*P		**P**		16 49 53.1	-2.1	
	comp=Z,63nm,1.3s									
MDJ	**Mudanjiang**	80.60	326	P		**P**		16 49 55.0	-0.2	
MDJ				pmax		pmax				
	comp=Z,7.0nm,0.9s									
MDJ				pmax		pmax				
	comp=Z,42nm,3.6s									
EDW2	**Edwards Air Fo**	80.63	47	P		**P**		16 49 56.4	+0.7	
	baz=81,SNR=7.6									
ISA	**Isabella**	80.74	46	*e*P		**P**		16 49 53.6	-2.6	
ISA				pmax		pmax				
	comp=Z,10.0nm,0.9s									
ISA	**Isabella**	80.74	46	*e*P		**P**		16 49 53.6	-2.6	
	comp=Z,9.9nm,0.9s									
ISA	**Isabella**	80.74	46	P		**P**		16 49 57.1	+0.9	
	baz=81,SNR=9.5									
CMB	**Columbia Colle**	80.86	43	*e*P		**P**		16 49 53.7	-3.1	
CMB				pmax		pmax				
	comp=Z,13nm,1.2s									
CMB	**Columbia Colle**	80.86	43	*e*P		**P**		16 49 53.6	-3.1	
	comp=Z,13nm,1.2s									
PMSA	**Palmer Station**	80.92	157	P		**P**		16 49 58.4	+1.8	
PMSA	**Palmer Station**	80.92	157	P		**P**		16 49 58.4	+1.8	
	comp=Z,18nm,0.7s,baz=227,slow=5.6,SNR=9.8									
PFO	**Pinyon Flat Ob**	80.98	49	P		**P**		16 49 57.5	-0.2	
PFO	**Pinyon Flat Ob**	80.98	49	P		**P**		16 49 57.4	-0.2	
	comp=Z,3.6nm,0.9s,baz=138,slow=5.8,SNR=4.3									
WDC	**Whiskeytown Da**	81.06	40	*e*P		**P**		16 49 56.2	-1.4	
WDC				pmax		pmax				
	comp=Z,23nm,1.4s									
WDC	**Whiskeytown Da**	81.06	40	*e*P		**P**		16 49 56.2	-1.4	
	comp=Z,23nm,1.4s									
BELC	**Belle Mtn. Jos**	81.52	49	P		**P**		16 50 01.4	+1.0	
	baz=82,SNR=7.7									
MPMC	**Manual Prospec**	81.62	46	P		**P**		16 50 01.6	+0.7	
	baz=82,SNR=10									
MTUM	**Tungsten Hills**	81.64	45	*e*P		**P**		16 49 58.7	-2.3	
YBH	**Yreka Blue Hor**	81.67	39	*e*P		**P**		16 49 59.7	-1.1	
	comp=Z,10nm,0.8s									
YBH	**Yreka Blue Hor**	81.67	39	P		**P**		16 50 01.5	+0.7	
	comp=Z,12nm,0.8s,baz=205,slow=1.7,SNR=22									
GSC	**Goldstone**	81.67	47	*e*P		**P**		16 50 00.6	-0.4	
GSC				pmax		pmax				
	comp=Z,10.0nm,1.1s									
GSC	**Goldstone**	81.67	47	*e*P		**P**		16 50 00.6	-0.4	
	comp=Z,10.0nm,1.1s									
GSC	**Goldstone**	81.67	47	P		**P**		16 50 01.6	+0.6	
	baz=82,SNR=7.5									
BC3	**Big Chuckawall**	81.71	49	P		**P**		16 50 02.0	+0.7	
	baz=82,SNR=5.4									
HEC	**Hector,Ludlow**	81.73	48	P		**P**		16 50 02.1	+0.8	
	baz=82,SNR=5.8									
WAKR	**Walker**	81.74	43	*e*P		**P**		16 49 59.9	-1.5	
GLA	**Glamis**	81.84	50	*e*P		**P**		16 50 00.4	-1.5	
GLA				pmax		pmax				
	comp=Z,17nm,0.8s									
GLA	**Glamis**	81.84	50	*e*P		**P**		16 50 00.4	-1.5	
	comp=Z,17nm,0.8s									
BEKR	**Beckworth**	81.96	42	*e*P		**P**		16 50 00.7	-1.8	
	comp=Z,4.8nm,1.1s									
WHN	**Wuhan**	82.08	307	P		**P**		16 50 01.0	-2.0	
IPM	**Ipoh**	82.15	278	*e*P		**P**		16 50 02.5	-1.3	
	comp=Z,26nm,0.6s									
IPM	**Ipoh**	82.15	278	P		**P**		16 50 05.2	+1.3	
GMRC	**Granite Mounta**	82.17	48	P		**P**		16 50 04.4	+0.8	
	baz=82,SNR=5.6									
IRM	**Iron Mountain**	82.19	49	P		**P**		16 50 04.7	+1.1	
	baz=82,SNR=8.6									
GRAC	**Grapevine Rang**	82.23	45	P		**P**		16 50 04.8	+1.1	
	baz=82,SNR=13									
CN2	**Changchun**	82.32	323	*e*P		**P**		16 50 04.0	0.0	
CN2				pmax		pmax				
	comp=Z,10.0nm,0.8s									
TUQ	**Turquoise Moun**	82.34	47	P		**P**		16 50 05.8	+1.3	
	baz=82,SNR=5.6									
NVAR	**Mina Array Bea**	82.42	44	P		**P**		16 50 05.3	+0.4	
NVAR				PKKPbc		**PKKPbc**		17 08 28.4	+1.1	
NVAR	**Mina Array Bea**	82.42	44	P		**P**		16 50 05.3	+0.4	
	comp=Z,9.9nm,0.8s,baz=225,slow=8.2,SNR=55									
NVAR				PKKPbc		**PKKPbc**		17 08 28.4	+1.1	
	comp=Z,0.6nm,0.8s,baz=102,slow=3.0,SNR=4.6									
PAHR	**Pah Rah Range**	82.47	42	*e*P		P		16 50 01.2	-3.8	
	comp=Z,13nm,0.8s									
NV11	**Mina Array Sit**	82.52	44	*e*P		P		16 50 01.7	-3.6	
KLR	**Kul'dur**	82.72	330	*e*P		P		16 50 02.2	-3.6	
COR	**Corvallis**	83.11	37	*e*P		P		16 50 03.0	-4.8	
COR	**Corvallis**	83.11	37	*e*P		P		16 50 03.0	-4.8	
MOD	**Modoc**	83.20	40	*e*P		P		16 50 04.2	-4.4	
Z14A	**Wintersburg**	83.34	50	P		**P**		16 50 10.6	+1.3	
	baz=83,SNR=6.7									
SHPR	**Sheep Range**	83.44	47	*e*P		P		16 50 04.7	-5.3	
PSI	**Prapat**	83.47	276	P		**P**		16 50 09.9	-0.6	
PSI	**Prapat**	83.47	276	P		**P**		16 50 09.9	-0.6	
	comp=Z,7.3nm,0.7s,baz=109,slow=2.1,SNR=8.0									
FRIS	**Frissel Point**	83.55	37	P		**P**		16 50 11.0	+0.7	
W13A	**Hualapai Mount**	83.58	49	P		**P**		16 50 11.4	+0.7	
	baz=85,SNR=7.8									
Y14A	**Wickenburg**	83.60	50	P		**P**		16 50 11.6	+0.9	
	baz=84,SNR=7.0									
TUC	**Tucson**	84.39	52	*e*P		**P**		16 50 12.7	-1.9	
TUC				pmax		pmax				
	comp=Z,28nm,0.8s									
TUC	**Tucson**	84.39	52	*e*P		**P**		16 50 12.7	-1.9	
	comp=Z,28nm,0.8s									
WVOR	**Wild Horse Val**	84.51	40	*e*P		**P**		16 50 12.0	-3.0	
WVOR				pmax		pmax				
	comp=Z,18nm,1.4s									
WVOR	**Wild Horse Val**	84.51	40	*e*P		**P**		16 50 12.0	-3.0	
	comp=Z,18nm,1.4s									
VIPM	**Ingram Point**	84.57	38	P		**P**		16 50 16.0	+0.7	
VIPM	**Ingram Point**	84.57	38	P		**P**		16 50 16.0	+0.7	
NLWA	**Neilton Lookou**	84.58	34	*e*P		P		16 50 11.9	-3.2	
	comp=Z,9.4nm,0.9s									
X16A	**Lo Mia Camp, P**	84.96	50	P		**P**		16 50 18.6	+1.2	
	baz=85,SNR=5.6									
319A	**Douglas**	85.06	54	P		**P**		16 50 19.9	+2.0	
	baz=85,SNR=7.4									
SPU	**Mount Spurr**	85.13	13	*e*P		**P**		16 50 14.7	-2.7	
HDW	**Hoodsport**	85.17	34	P		**P**		16 50 19.0	+1.0	
CCUT	**Cedar City**	85.21	47	*e*P		**P**		16 50 16.6	-2.0	
	comp=Z,4.0nm,0.9s									
320A	**Kipp Ranch, An**	85.61	54	P		**P**		16 50 22.5	+2.0	
	baz=86,SNR=10									
ENH	**Enshi**	85.62	305	*e*P		**P**		16 50 18.7	-1.8	
	comp=Z,8.5nm,0.7s									
SYO	**Syowa Base**	85.63	193⇓	*e*P		**P**		16 50 19.0	-0.8	
ELK	**Elko**	85.68	43	*e*P		**P**		16 50 18.4	-2.3	
	comp=Z,2.9nm,0.9s									
BJI	**Beijing**	85.74	316	P		**P**		16 50 21.5	+0.8	
BJI				pP		**pP**		16 52 33.0	-0.3	
BJI				sP		**sP**		16 53 34.0	-1.6	
BJI				pmax		pmax				
	comp=Z,9.0nm,0.7s									
220A	**Playas Peak, P**	85.88	54	P		**P**		16 50 23.6	+1.8	
	baz=86,SNR=8.6									
GYA	**Guiyang**	86.12	300	*e*P		**P**		16 50 21.3	-1.8	
GYA				pP		**pP**		16 52 37.0	+1.2	
GYA				sP		**sP**		16 53 39.5	+1.4	
GYA				PP		**PP**		16 53 57.3	+1.3	
GYA				SKS		**SKSac**		16 59 47.0	-3.8	
GYA				S		**SKKSac**		17 00 03.8	+2.8	
GYA				pmax		pmax				
	comp=Z,10.0nm,1.0s									
PMR	**Palmer**	86.13	14	*e*P		**P**		16 50 19.5	-2.5	
PMR				pmax		pmax				
	comp=Z,18nm,1.2s									
PMR	**Palmer**	86.13	14	*e*P		**P**		16 50 19.5	-2.5	
	comp=Z,18nm,1.2s									
TBM	**Table Mountain**	86.19	36	P		**P**		16 50 23.8	+0.9	
HAWA	**Hanford**	86.31	37	*e*P		P		16 50 18.9	-4.4	
MVU	**Marysvale**	86.48	46	*e*P		**P**		16 50 26.0	+1.4	
	comp=Z,2.5nm,1.0s									
DIV	**Divide**	86.52	16	*e*P		P		16 50 20.1	-3.9	
	comp=Z,13nm,1.0s									
BMO	**Blue Mountains**	86.69	39	*e*P		**P**		16 50 23.7	-1.6	
BMO				pmax		pmax				
	comp=Z,16nm,1.4s									
BMO	**Blue Mountains**	86.69	39	*e*P		**P**		16 50 23.7	-1.6	
	comp=Z,16nm,1.4s									
MFID	**Camas Ranch**	86.77	41	*e*P		**P**		16 50 22.9	-2.8	
	comp=Z,10nm,1.0s									
MFID	**Camas Ranch**	86.77	41	P		**P**		16 50 26.8	+1.1	
	baz=87,SNR=6.7									
SAW	**Saint Andrews**	87.16	36	P		**P**		16 50 28.0	+0.7	
SNAA	**Sanae**	87.16	179	*e*P		**P**		16 50 27.4	+0.3	
SNAA	**Sanae**	87.16	179	*e*pP		pP		16 52 43.1	+3.0	
SNAA	**Sanae**	87.16	179	*e*P		**P**		16 50 26.4	-0.7	
	comp=Z,2.9nm,0.6s									
OD2	**Odessa Site #2**	87.35	36	P		**P**		16 50 28.9	+0.6	
I12A	**Atlanta**	87.40	41	P		**P**		16 50 29.7	+1.0	
	baz=87,SNR=12									
TMUT	**Trail Mountain**	87.56	46	*e*P		**P**		16 50 27.9	-1.9	
	comp=Z,10nm,0.9s									
Z22A	**Elephant Butte**	87.67	53	P		**P**		16 50 31.4	+1.1	
	baz=88,SNR=8.1									
XAN	**Xi'an**	87.78	308	P		**P**		16 50 31.5	+0.9	
XAN				pmax		pmax				
	comp=Z,3.0nm,0.7s									
HVU	**Hansel Valley**	87.80	43	*e*P		**P**		16 50 27.5	-3.2	
HVU				pmax		pmax				
	comp=Z,9.0nm,1.0s									
HVU	**Hansel Valley**	87.80	43	*e*P		**P**		16 50 27.4	-3.2	
	comp=Z,9.2nm,1.0s									
SRU	**San Rafael**	87.93	46	*e*P		**P**		16 50 29.3	-2.1	
SRU				pmax		pmax				
	comp=Z,8.0nm,0.8s									
SRU	**San Rafael**	87.93	46	*e*P		**P**		16 50 29.2	-2.1	
	comp=Z,8.2nm,0.8s									
SRU	**San Rafael**	87.93	46	P		**P**		16 50 32.0	+0.6	
	baz=88,SNR=11									
324A	**Moseley Ranch,**	87.97	55	P		**P**		16 50 32.5	+0.8	
	baz=88,SNR=15									
H12A	**Diamond D Ranc**	87.98	40	P		**P**		16 50 32.0	+0.6	
	baz=88,SNR=16									
Y22A	**Socorro**	87.98	52	P		**P**		16 50 32.6	+1.0	
	baz=88,SNR=5.8									
VNA1	**Neumayer--Stat**	88.00	177	*e*P		**P**		16 50 32.8	+1.9	
425A	**Indio Mountain**	88.06	56	P		**P**		16 50 33.4	+1.3	
	baz=88,SNR=13									
DAU	**Daniels Canyon**	88.09	45	*e*P		**P**		16 50 32.1	-0.1	
DAU	**Daniels Canyon**	88.09	45	*e*P		**P**		16 50 32.1	-0.1	
MNTX	**Cornudas Mount**	88.16	55	*e*P		**P**		16 50 29.8	-2.5	
	comp=Z,6.0nm,0.9s									
626A	**Big Bend Ranch**	88.19	57	P		**P**		16 50 34.0	+1.4	
	baz=88,SNR=14									
325A	**Bean Ranch, Si**	88.33	55	P		**P**		16 50 34.1	+0.8	
	baz=88,SNR=11									
526A	**Mary Lane Ranc**	88.44	57	P		**P**		16 50 35.0	+1.1	
	baz=88,SNR=12									
TXAR	**Lajitas Array**	88.46	58	P		**P**		16 50 35.0	+1.0	
TXAR				pP		**pP**		16 52 48.3	+0.8	
TXAR				PKKPbc		**PKKPbc**		17 08 13.7	+1.3	
TXAR	**Lajitas Array**	88.46	58	P		**P**		16 50 35.0	+1.0	
	comp=Z,6.9nm,0.8s,baz=213,slow=6.5,SNR=79									
TXAR				pP		**pP**		16 52 48.3	+0.8	
	comp=Z,0.5nm,0.9s,baz=280,slow=5.4,SNR=2.7									
TXAR				PKKPbc		**PKKPbc**		17 08 13.7	+1.3	
	comp=Z,0.5nm,0.5s,baz=134,slow=2.6,SNR=11									
HWUT	**Hardware Ranch**	88.49	44	*e*P		**P**		16 50 30.8	-3.1	
	comp=Z,2.2nm,0.6s									
I14A	**Mackay**	88.50	41	P		**P**		16 50 34.9	+1.0	
	baz=88,SNR=13									
124A	**Stringfield Ra**	88.55	54	P		**P**		16 50 35.7	+1.3	
	baz=89,SNR=7.0									
U21A	**Nageezi**	88.63	50	P		**P**		16 50 35.4	+0.7	
	baz=89,SNR=10									
Y23A	**Lovelace Mesa,**	88.65	53	P		**P**		16 50 35.3	+0.4	
	baz=89,SNR=5.5									
627A	**Terlingua Ranc**	88.73	58	P		**P**		16 50 36.3	+1.1	
	baz=89,SNR=13									
NEW	**Newport**	88.73	36	P		**P**		16 50 34.6	-0.1	
	comp=Z,1.6nm,0.6s,baz=214,slow=7.3,SNR=4.6									
426A	**McDonald Obser**	88.75	56	P		**P**		16 50 36.4	+0.9	
	baz=89,SNR=14									
KMI	**Kunming**	88.76	297	P		**P**		16 50 36.0	+0.4	
KMI				pmax		pmax				
	comp=Z,4.0nm,0.9s									
225A	**Deer Hill, Car**	88.77	55	P		**P**		16 50 36.5	+1.1	
	baz=89,SNR=7.7									
PV01	**Paradox Valley**	88.79	48	*e*P		**P**		16 50 32.7	-2.7	
ANMO	**Albuquerque**	88.82	52	*e*P		**P**		16 50 35.3	-0.3	
	comp=Z,8.7nm,1.2s									
ANMO	**Albuquerque**	88.82	52	P		**P**		16 50 35.7	+0.1	
	comp=Z,3.7nm,0.9s,baz=236,slow=4.6,SNR=11									
527A	**Woodward Ranch**	88.85	57	P		**P**		16 50 36.5	+0.7	
	baz=89,SNR=8.5									
Y24A	**Capitan**	89.11	53	P		**P**		16 50 37.7	+0.7	
	baz=89,SNR=23									
628A	**Black Gap, Mar**	89.14	58	P		**P**		16 50 38.2	+1.2	
	baz=89,SNR=6.9									
GDL2	**Guadalupe Moun**	89.16	55	*e*P		**P**		16 50 38.4	+1.3	
HHC	**Hu-ho-hao-te**	89.17	315	*e*P		**P**		16 50 34.0	-3.0	
HHC				pP		**pP**		16 52 54.8	+4.0	
HHC				PP		**PP**		16 54 20.0	+0.3	
HHC				SKS		**SKSac**		17 00 01.8	-6.4	
HHC				S		**SKKSac**		17 00 26.0	+2.8	
HHC				pmax		pmax				
	comp=Z,30nm,1.0s									
HHC				pmax		pmax				
	comp=Z,190nm,6.4s									
P19A	**Cripple Cowboy**	89.23	47	P		**P**		16 50 38.1	+0.7	
	baz=89,SNR=5.2									
226B	**Tecolote Peak,**	89.26	55	P		**P**		16 50 38.4	+0.8	
	baz=89,SNR=10									
DLBC	**Dease Lake**	89.29	23	P		**P**		16 50 37.0	0.0	
DLBC	**Dease Lake**	89.29	23	P		**P**		16 50 37.0	0.0	
	comp=Z,3.5nm,0.7s,baz=172,slow=27,SNR=4.7									
COLA	**College**	89.30	13	*e*P		**P**		16 50 37.2	+0.4	
COLA	**College**	89.30	13	*e*P		**P**		16 50 37.2	+0.4	
427A	**Hayter Ranch,**	89.32	56	P		**P**		16 50 39.0	+1.2	
	baz=89,SNR=19									
MCMT	**McKenzie Canyo**	89.34	41	*e*P		**P**		16 50 36.0	-1.8	
	comp=Z,3.3nm,1.0s									
CM31	**Chiang Mai Arr**	89.36	290	*e*P		**P**		16 50 36.4	-1.9	
	comp=Z,9.2nm,1.0s									
CMAR	**Chiang Mai Arr**	89.36	290	P		**P**		16 50 40.0	+1.7	
CMAR				PP		**PP**		16 54 18.0	-3.4	
CMAR	**Chiang Mai Arr**

DAG pmax pmax
comp=Z,2.0nm,0.7s
DAG Danmarks Havn 123.71 5 *i* P **PKPdf 16 56 31.8 -1.6**
comp=Z,3.5nm,0.7s
SVE Sverdlovsk 124.07 325 *e*PKIKP **PKPdf 16 56 34.7 +0.1**
SVE pmax pmax
comp=Z,10.0nm,0.8s
SUMG Summit 124.26 13 *e*PKIKP **PKPdf 16 56 34.6 -0.5**
SUMG pmax pmax
comp=Z,5.0nm,0.9s
SUMG Summit 124.26 13 *e*PKPdf **PKPdf 16 56 34.9 -0.2**
SUMG Summit 124.26 13 *i* P **PKPdf 16 56 34.6 -0.5**
comp=Z,4.5nm,0.9s
BOSA Boshof 124.98 206 PKP **PKPdf 16 56 38.6 +1.1**
BOSA Boshof 124.98 206 PKP **PKPdf 16 56 38.6 +1.1**
comp=Z,2.8nm,0.9s,baz=244,slow=0.3,SNR=4.0
ARU Arti 125.28 325 *i* PKIKP **PKPdf 16 56 36.9 0.0**
ARU 16 58 35.8
ARU 17 02 40.5
ABKAR Akbulak array 125.95 316 *e*PKPdf **PKPdf 16 56 38.5 +0.1**
LBTB Lobatse 127.98 209 PKP **PKPdf 16 56 44.3 +1.1**
LBTB Lobatse 127.98 209 PKP **PKPdf 16 56 44.3 +1.1**
comp=Z,2.9nm,0.6s,baz=193,slow=1.4,SNR=6.0
KEV Kevo 129.11 349 *e*PKIKP **PKPdf 16 56 43.8 0.0**
KEV pmax pmax
comp=Z,2.0nm,0.4s
KEV Kevo 129.11 349 *ep* **PKPdf 16 56 43.8 0.0**
comp=Z,2.3nm,0.4s
ARCES ARCESS Array B 129.57 349 PKP **PKPdf 16 56 44.3 -0.5**
ARCES SKPbc SKPbc 16 59 10.7 +1.1
ARCES ARCESS Array B 129.57 349 PKhKP PKPpre 16 56 33.4
comp=Z,0.9nm,0.7s,baz=126,slow=1.2,SNR=6.3
ARCES PKP **PKPdf 16 56 44.3 -0.5**
comp=Z,10nm,0.6s,baz=42,slow=1.5,SNR=58
ARCES SKPbc SKPbc 16 59 10.7 +1.1
comp=Z,6.6nm,0.9s,baz=26,slow=5.0,SNR=11
JOF Joensuu 133.61 341 *e*PKIKP **PKPdf 16 56 51.9 -0.6**
JOF pmax pmax
comp=Z,11nm,0.5s
JOF Joensuu 133.61 341 *ep* **PKPdf 16 56 51.9 -0.6**
comp=Z,11nm,0.5s
LSZ Lusaka 134.74 219 PKP **PKPdf 16 56 57.8 +1.5**
LSZ *e*PKPdf **PKiKP 16 56 58.9 +1.0**
LSZ Lusaka 134.74 219 PKP **PKPdf 16 56 57.8 +1.5**
comp=Z,3.8nm,0.5s,baz=15,slow=1.7,SNR=8.9
KAF Kangasniemi 135.68 343 *e*PKIKP **PKPdf 16 56 56.1 -0.3**
KAF pmax pmax
comp=Z,4.0nm,0.4s
KAF Kangasniemi 135.68 343 *ep* **PKPdf 16 56 56.1 -0.3**
comp=Z,3.8nm,0.4s
FINES FINESS Array B 136.29 343 PKP **PKPdf 16 56 58.8 +1.3**
FINES SKPbc **SKPbc 16 59 33.2 +1.1**
FINES FINESS Array B 136.29 343 PKPpre 16 56 44.2
comp=Z,0.7nm,0.5s,baz=64,slow=3.2,SNR=7.2
FINES PKP **PKPdf 16 56 58.8 +1.3**
comp=Z,1.3nm,0.5s,baz=98,slow=2.0,SNR=6.8
FINES SKPbc **SKPbc 16 59 33.2 +1.1**
comp=Z,3.4nm,0.8s,baz=62,slow=3.3,SNR=7.3
TSUM Tsumeb 136.46 203 PKP **PKPdf 16 57 01.8 +2.4**
TSUM Tsumeb 136.46 203 PKP **PKPdf 16 57 01.8 +2.4**
comp=Z,3.2nm,0.7s,baz=152,slow=4.4,SNR=7.6
OBN Obninsk 136.98 331 *i* PKIKP **PKPdf 16 56 59.0 0.0**
OBN *e*PS 17 10 28.8
OBN pmax pmax
comp=Z,5.0nm,0.8s
NB2 NORSAR Subarra139.71 352 PKP PKPdf 16 56 56.0 -7.9
comp=Z,2.2nm,0.5s,baz=10,slow=3.2
NOA NORSAR Array B 139.71 352 PKP **PKPdf 16 57 05.4 +1.5**
NOA NORSAR Array B 139.71 352 PKhKP PKPpre 16 56 56.3
comp=Z,1.4nm,0.5s,baz=7.4,slow=1.2,SNR=17
NOA PKP **PKPdf 16 57 05.4 +1.5**
comp=Z,2.4nm,0.5s,baz=14,slow=4.0,SNR=9.1
ANN Anapa 141.91 316 *i* PKHKP PKPpre 16 57 01.2
ANN pmax pmax
comp=Z,88nm,1.8s
SHEL Horse Pasture 142.34 170 *e*PKIKP **PKPdf 16 57 09.5 -0.5**
SHEL Horse Pasture 142.34 170 *e*PKPdf **PKPdf 16 57 09.5 -0.5**
AKASG Malin Array Be 143.22 330 PKIKP PKPab 16 57 08.1 -0.6
AKASG Malin Array Be 143.22 330 PKP PKPab 16 57 08.1 -0.6
AKASG Malin Array Be 143.22 330 PKP PKPab 16 57 08.1 -0.6
comp=Z,28nm,0.4s,baz=44,slow=4.4,SNR=146
KIEV Kiev 143.24 330 *e*PKIKP PKPab 16 57 07.6 -1.2
KIEV Kiev 143.24 330 *e*PKPdf PKPab 16 57 07.6 -1.2
SUW Suwalki 143.25 338 *e*PKIKP PKPab 16 57 08.1 -0.6
SUW Suwalki 143.25 338 *e*PKPdf PKPab 16 57 08.1 -0.7
SUW Suwalki 143.25 338 *e*PKP PKPab 16 57 08.5 -0.2
AK02 Malin Array Si 143.26 330 *e*PKPdf PKPab 16 57 08.0 -0.9
MBAR Mbarara 143.51 237 PKP PKPbc 16 57 11.6 +0.3
MBAR Mbarara 143.51 237 PKP PKPbc 16 57 11.6 +0.3
comp=Z,19nm,0.7s,baz=90,slow=2.0,SNR=12
MUD Monsted U'grnd 144.42 352 *i* PKIKP **PKPdf 16 57 11.9 -0.3**
MUD pmax pmax
comp=Z,22nm,0.8s
MUD Monsted U'grnd 144.42 352 *i* P **PKPdf 16 57 11.9 -0.3**
comp=Z,22nm,0.8s
COP Copenhagen 144.66 349 *e*PKIKP **PKPdf 16 57 12.7 0.0**
COP pmax pmax
comp=Z,12nm,0.8s
COP Copenhagen 144.66 349 *i* P **PKPdf 16 57 12.7 0.0**
comp=Z,12nm,0.8s
BSD Bornholm Skovb 144.68 346 *i* PKIKP **PKPdf 16 57 12.5 -0.2**
BSD pmax pmax
comp=Z,23nm,0.7s
BSD Bornholm Skovb 144.68 346 *i* P **PKPdf 16 57 12.5 -0.2**
comp=Z,23nm,0.7s
GKP Gorka Klasztor 145.76 342 *e*PKP **PKPbc 16 57 16.6 +0.1**
BEL Belsk 145.86 338 *e*PKP **PKPbc 16 57 17.4 +0.6**
ESK Eskdalemuir 145.98 4 *e*PKP2 **PKPbc 16 57 16.9 -0.2**
ESK Eskdalemuir 145.98 4 *e*PKPdf **PKPbc 16 57 16.9 -0.2**
LVV L'vov 146.19 333 *e*PKIKP **PKPdf 16 57 15.8 +0.3**
LEOM Leova 146.47 325 ||*e*PKP2 **PKPbc 16 57 19.0 +0.3**
LEOM Leova 146.47 325 ||*i*P **PKPbc 16 57 19.0 +0.3**
BR131 Keskin Array S 146.58 311 *e*PKPdf **PKPdf 16 57 15.9 -0.8**
BR131 *e*PKPbc **PKPbc 16 57 18.6 -0.8**
BRTR Keskin Array B 146.59 311 PKPbc PKPbc 16 57 19.5 +0.1
BRTR pPKPbc pPKPbc 16 59 39.9 -0.6
BRTR Keskin Array B 146.59 311 PKPbc **PKPbc 16 57 19.5 +0.1**
comp=Z,9.1nm,0.6s,baz=133,slow=4.1,SNR=62
BRTR pPKPbc pPKPbc 16 59 39.9 -0.6
comp=Z,2.1nm,0.9s,baz=134,slow=4.2,SNR=6.4
BSEG Bad Segeberg 146.70 350 *e*PKPbc **PKPbc 16 57 19.4 +0.4**
BSEG Bad Segeberg 146.70 350 *e*PKP2 **PKPbc 16 57 19.4 +0.4**
KWP Kalwaria Pacla 146.89 334 ||*e*PKP2 **PKPbc 16 57 20.1 +0.3**
KWP Kalwaria Pacla 146.89 334 ||*i*P **PKPbc 16 57 20.1 +0.3**
KWP Kalwaria Pacla 146.89 334 *e*PKP **PKPbc 16 57 20.1 +0.3**
TLCR 146.95 322 ||*i*PKP2 **PKPbc 16 57 20.3 +0.3**
TLCR 146.95 322 ||*i*P **PKPbc 16 57 20.3 +0.3**
ANTO Ankara 147.12 311 ||*i*PKP2 **PKPbc 16 57 21.2 +0.4**
ANTO Ankara 147.12 311 ||*i*P **PKPbc 16 57 21.1 +0.3**
BURAR Bucovina Array 147.26 329 ||*i*P **PKPbc 16 57 21.6 +0.7**
TESR Tescani 147.29 326 ||*i*P **PKPbc 16 57 21.0 +0.1**
CFR Carcaliu 147.34 323 ||*i*PKP2 **PKPbc 16 57 21.2 +0.2**
CFR Carcaliu 147.34 323 ||*i*P **PKPbc 16 57 21.2 +0.2**
RUE Ruedersdorf 147.37 345 *e*PKPbc **PKPbc 16 57 21.3 +0.5**
OJC Ojcow 147.55 337 *i* PKP2 **PKPbc 16 57 21.4 0.0**
OJC Ojcow 147.55 337 *e*PKiKP **PKPbc 16 57 21.4 0.0**
TIRR Tirgusor 147.61 322 ||*i*PKP2 **PKPbc 16 57 21.9 +0.2**
TIRR Tirgusor 147.61 322 ||*i*P **PKPbc 16 57 21.9 +0.2**
KOLS Kolonicke sedl 147.61 333 *e*PKP2 **PKPbc 16 57 22.4 +0.8**
KOLS Kolonicke sedl 147.61 333 *e*EPKP **PKPbc 16 57 22.3 +0.7**
STHS Stebnicka Huta 147.65 335 *e*PKP2 **PKPbc 16 57 22.6 +0.9**
STHS Stebnicka Huta 147.65 335 *e*PKP **PKPbc 16 57 22.6 +0.9**
STHS *e* 16 57 27.8
VRI Vrincioaia 147.67 325 ||*i*PKP2 **PKPbc 16 57 21.5 -0.4**
VRI Vrincioaia 147.67 325 ||*i*P **PKPbc 16 57 21.5 -0.4**
PLOR Plostina 147.72 325 ||*i*PKP2 **PKPbc 16 57 22.0 -0.1**
PLOR Plostina 147.72 325 ||*i*P **PKPbc 16 57 22.0 -0.1**
HARR Harsova 147.75 322 ||*i*PKP2 **PKPbc 16 57 22.5 +0.4**
HARR Harsova 147.75 322 ||*i*P **PKPbc 16 57 22.5 +0.4**
UZH Uzhgorod 147.84 333 ||*i*PKP2 **PKPbc 16 57 21.8 -0.4**
GRER 147.85 324 ||*i*P **PKPdf 16 57 18.4 0.0**
CRVS Cervenica-Dubn 147.97 334 *e*PKIKP **PKPbc 16 57 20.7 -1.9**
CRVS Cervenica-Dubn 147.97 334 *e*PKP **PKPbc 16 57 20.7 -1.9**
NIE Niedzica 148.01 336 *e*PKP2 **PKPbc 16 57 24.3 +1.6**
NIE Niedzica 148.01 336 *e*PKP **PKPbc 16 57 24.3 +1.6**
TRPA Tarpa 148.11 332 ||*i*P **PKPbc 16 57 22.9 +0.1**
TRPA Tarpa 148.11 332 ||*e* **PKPbc 16 57 23.0 +0.1**
KSP Ksiaz 148.18 341 *e*PKP2 **PKPbc 16 57 23.6 +0.6**
KSP Ksiaz 148.18 341 *e*PKP **PKPbc 16 57 23.6 +0.6**
MLR Muntele Rosu 148.33 325 ||*i*P **PKPbc 16 57 23.4 -0.3**
OKC Ostrava-Krasne 148.46 338 *e*PHKKP **PKPbc 16 57 22.9 -0.8**
OKC *e* 16 57 29.2
OKC Ostrava-Krasne 148.46 338 ||*e*PKP **PKPbc 16 57 22.9 -0.8**
OKC *e*PKPAB **PKPab 16 57 29.2 -0.4**
UPC Upice 148.56 341 *e*PKP2 **PKPbc 16 57 24.4 +0.5**
UPC Upice 148.56 341 ||*e*PKP **PKPbc 16 57 24.4 +0.5**
UPC *e*PKPAB **PKPab 16 57 29.7 -0.3**
SECR 148.56 325 ||*i*P **PKPbc 16 57 24.6 +0.5**
DPC Dobruska-Polom 148.60 341 *e*PKP2 **PKPbc 16 57 24.6 +0.5**
DPC Dobruska-Polom 148.60 341 ||*e*PKP **PKPbc 16 57 24.6 +0.5**
DPC *e*PKPAB **PKPab 16 57 29.6 -0.7**
CLL Collm 148.64 345 *e*PKPbc **PKPbc 16 57 24.3 +0.2**
CLL Collm 148.64 345 ||*i*PKP2 **PKPbc 16 57 24.3 +0.2**
CLL pmax pmax
comp=Z,39nm,1.2s
CLL Collm 148.64 345 ||*i*PKPbc **PKPbc 16 57 24.3 +0.2**
comp=Z,39nm,1.2s
CLL *e* 16 57 27.0
CLL *e*PKPab **PKPab 16 57 29.0 -1.3**
CLL *e*(pPKPab) 16 59 47.0
IBBN Ibbenburen 148.66 352 *e*PKPbc **PKPbc 16 57 24.4 +0.3**
CJR Cluj-Napoca 148.67 329 ||*i*P **PKPbc 16 57 25.0 +0.6**
CLZ Clausthal 148.69 349 *e*PKPbc **PKPbc 16 57 24.8 +0.5**
CLZ Clausthal 148.69 349 *e*PKP2 **PKPbc 16 57 24.8 +0.5**
KECS Kecovo 148.70 334 *e*PKP2 **PKPbc 16 57 25.0 +0.7**
KECS Kecovo 148.70 334 *e*PKP **PKPbc 16 57 25.0 +0.7**
BRG Berggiesshubel 148.81 344 *e*PKP **PKPbc 16 57 24.9 +0.4**
comp=Z,18nm,0.7s
BRG *e* 16 59 42.8
comp=Z,4.7nm,1.1s
BRG Berggiesshubel 148.81 344 *e*PKPbc **PKPbc 16 57 25.0 +0.4**
BRG Berggiesshubel 148.81 344 *e*PKP2 **PKPbc 16 57 24.9 +0.4**
BRG pmax pmax
comp=Z,15nm,0.7s
BRG pmax pmax
comp=Z,18nm,1.1s
VOIR 148.84 326 ||PKHKP **PKPbc 16 57 24.6 -0.3**
VOIR 148.84 326 ||*i*P **PKPbc 16 57 24.6 -0.3**
FBE Freiberg 148.91 345 *e*PKPbc **PKPbc 16 57 25.5 +0.7**
PVCC Panska Ves 148.96 343 *e*PKP2 **PKPbc 16 57 25.6 +0.7**
PVCC Panska Ves 148.96 343 ||*e*PKP **PKPbc 16 57 25.6 +0.7**
NEUB Neuenburg 149.01 347 *e*PKPbc **PKPbc 16 57 25.4 +0.4**
ARR Arges 149.10 326 *i*P **PKPbc 16 57 26.7 +1.2**
WTSB Winterswijk 149.11 353 *e*PKP **PKPbc 16 57 25.1 -0.1**
comp=Z,42nm,0.5s
VYHS Vyhne 149.33 336 *e*PKHKP **PKPbc 16 57 26.3 +0.4**
VYHS Vyhne 149.33 336 *e*PKP **PKPbc 16 57 26.3 +0.4**
PSZ Piszkesteto 149.39 334 ||PKHKP **PKPbc 16 57 26.2 +0.1**
PSZ Piszkesteto 149.39 334 ||*i*P **PKPbc 16 57 26.2 +0.1**
PSZ Piszkesteto 149.39 334 ||*e* **PKPbc 16 57 26.3 +0.1**
PRU Pruhonice 149.45 342 *e*PKHKP **PKPbc 16 57 26.1 0.0**
PRU *e* 16 57 31.2
PRU Pruhonice 149.45 342 ||*e*PKP **PKPbc 16 57 26.1 0.0**
PRU *e*PKPAB **PKPab 16 57 31.2 -2.5**
MOX Moxa 149.58 346 *e*PKPbc **PKPbc 16 57 26.7 +0.3**
MOX Moxa 149.58 346 *e*PKHKP **PKPbc 16 57 26.7 +0.3**
TANN Tannenbergstha 149.60 345 *e*PKPbc **PKPbc 16 57 26.9 +0.4**
DEV Deva 149.61 329 ||*i*PKHKP **PKPbc 16 57 27.0 +0.4**
DEV Deva 149.61 329 ||*i*P **PKPbc 16 57 27.0 +0.4**
PLN Plauen 149.61 346 *e*PKPbc **PKPbc 16 57 26.8 +0.3**
WERD Werda 149.61 345 *e*PKPbc **PKPbc 16 57 26.9 +0.4**
GUNZ Gunzen 149.68 345 *e*PKPbc **PKPbc 16 57 27.2 +0.5**
WERN Wernitzgruen 149.74 345 *e*PKPbc **PKPbc 16 57 27.4 +0.6**
UBBA Unterbreizbach 149.74 348 *e*PKPbc **PKPbc 16 57 26.8 +0.2**
TREC Trest 149.79 341 *e*PKHKP **PKPbc 16 57 27.2 +0.2**
TREC Trest 149.79 341 ||*e*PKP **PKPbc 16 57 27.2 +0.2**
GZR Gura Zlata 150.02 328 ||PKIKP **PKPbc 16 57 27.6 -0.1**
GZR Gura Zlata 150.02 328 ||*i*P **PKPbc 16 57 27.6 -0.1**
MANZ Manzenberg 150.08 345 *e*PKPbc **PKPbc 16 57 28.1 +0.5**
ZST Bratislava 150.21 338 *e*PKIKP **PKPbc 16 57 29.0 +1.1**
ZST Bratislava 150.21 338 *e*PKP **PKPbc 16 57 29.0 +1.1**
ROTZ Rotzenmuhle 150.26 345 *e*PKPbc **PKPbc 16 57 28.5 +0.5**
PKS7 Kunszentmiklos 150.38 334 ||*e* **PKPbc 16 57 28.6 +0.3**
HGN Heimansgroeve 150.40 353 *e*PKP **PKPbc 16 57 28.2 -0.1**
comp=Z,20nm,0.9s
PKSG 150.41 335 ||*e* **PKPbc 16 57 28.3 -0.1**
KHC Kasperske Hory 150.50 343 *e*PKIKP **PKPbc 16 57 28.9 +0.3**
KHC *e* 16 57 37.0
KHC Kasperske Hory 150.50 343 ||*e*PKP **PKPbc 16 57 28.9 +0.3**
KHC *ex* x 16 57 33.7
KHC *e*PKPAB **PKPab 16 57 37.0 -1.2**
TNS Taunus Mts 150.59 350 *e*PKPbc **PKPbc 16 57 29.1 +0.3**
TNS Taunus Mts 150.59 350 *e*PKIKP **PKPbc 16 57 29.1 +0.3**
PKST T˜˜s 150.66 336 ||*e* **PKPbc 16 57 28.9 -0.1**
WET Wettzell 150.67 344 *e*PKPbc **PKPbc 16 57 29.3 +0.3**
WET *e*PKPab **PKPab 16 57 39.3 +0.4**
GEC2 GERESS Array S 150.72 342 *e*PKPbc **PKPbc 16 57 29.3 +0.1**
GEC2 GERESS Array S 150.72 342 *e*PKIKP **PKPbc 16 57 29.3 +0.1**
GERES GERESS Array B 150.72 342 PKP **PKPdf 16 57 22.5 -0.4**
GERES PKPbc **PKPbc 16 57 29.1 -0.1**
GERES pPKPbc **pPKPbc 16 59 52.4 +0.6**
comp=Z,1.2nm,0.9s,baz=119,slow=1.2,SNR=5.4
GERES GERESS Array B 150.72 342 PKP **PKPdf 16 57 22.5 -0.4**
comp=Z,0.5nm,0.6s,baz=70,slow=1.1,SNR=6.4
GERES PKPbc **PKPbc 16 57 29.1 -0.1**
comp=Z,8.7nm,0.6s,baz=30,slow=2.4,SNR=78
GERES pPKPbc **pPKPbc 16 59 52.4 +0.6**
comp=Z,1.2nm,0.9s,baz=119,slow=1.2,SNR=5.4
BCLA Clavier 150.80 354 PKPab **PKPab 16 57 38.4 -1.0**
CONA Conrad Observa 150.87 339 ||*i*PKiKP **PKiKP 16 57 29.9 0.0**
comp=Z,20nm,0.6s,SNR=18
PKS9 Tamasi 151.11 335 ||*e* **PKPbc 16 57 29.9 -0.1**
DOU Dourbes 151.18 355 PKPbc **PKPbc 16 57 30.4 +0.3**
DOU E 16 57 35.2
PKSM Moragy 151.27 334 ||PKIKP **PKPbc 16 57 30.3 -0.1**
PKSM Moragy 151.27 334 ||*i*P **PKPbc 16 57 30.3 -0.1**
PKSM Moragy 151.27 334 ||*e* **PKPbc 16 57 30.3 -0.1**
MOA Molln 151.45 341 ||*i*PKiKP **PKPbc 16 57 30.6 -0.2**
comp=Z,6.3nm,0.5s
WLF Walferdange 151.46 353 PKPbc **PKPbc 16 57 31.1 +0.4**
WLF E 16 57 35.4
WLF Walferdange 151.46 353 *e*PKPbc **PKPbc 16 57 31.5 +0.8**
WLF Walferdange 151.46 353 *e*PKIKP **PKPbc 16 57 30.9 +0.2**
WLF Walferdange 151.46 353 *e*PKPbc **PKPbc 16 57 30.9 +0.2**
VTS Vitosha 151.73 324 ||PKIKP **PKPbc 16 57 31.7 0.0**
VTS Vitosha 151.73 324 ||*i*P **PKPbc 16 57 31.7 0.0**
STU Stuttgart 151.85 348 *e*PKPbc **PKPbc 16 57 31.9 +0.3**
FUR Furstenfeldbru 151.98 345 *e*PKPbc **PKPbc 16 57 32.1 +0.1**
FUR *e*PKPab **PKPab 16 57 44.6 +0.2**
FUR Furstenfeldbru 151.98 345 *e*PKP2 **PKPab 16 57 44.6 +0.2**
RJOB Jochberg 151.98 343 *e*PKPbc **PKPbc 16 57 31.8 -0.2**
RJOB *e*PKPab **PKPab 16 57 45.2 +0.7**
SOKA Soboth 152.24 339 ||*i*PKiKP **PKPbc 16 57 32.1 -0.5**
comp=Z,8.2nm,0.9s
PERS Pernice 152.24 339 *i* PKPbc **PKPbc 16 57 32.0 -0.7**
PERS *i* PKPab **PKPab 16 57 45.4 -0.2**
GROS Grobnik 152.26 338 *i* PKPbc **PKPbc 16 57 32.0 -0.7**
GROS *e*pPKPbc **pPKPbc 16 59 58.1 +2.7**
KBA Koelnbreinsper 152.42 341 ||*i*PKPbc **PKPbc 16 57 32.3 -0.9**
comp=Z,9.7nm,0.9s
BFO Black Forest 152.44 349 *e*PKPbc **PKPbc 16 57 32.9 -0.1**
BFO *e*PKPab **PKPab 16 57 46.1 -0.3**
BFO Black Forest 152.44 349 *e*PKP2 **PKPbc 16 57 46.1 -0.3**
BFO Black Forest 152.44 349 *e*PKPbc **PKPbc 16 57 32.2 -0.7**
OBKA Obir 152.54 339 ||*i*PKiKP **PKPbc 16 57 32.7 -0.7**
comp=Z,5.5nm,0.6s
WTTA Wattenberg 152.73 344 ||*i*PKiKP **PKPbc 16 57 33.7 -0.2**
comp=Z,9.1nm,0.4s
MYKA Terra Mystica 152.73 340 ||*i*PKPbc **PKPbc 16 57 32.8 -0.9**
comp=Z,8.0nm,0.6s
RETA Reutte 152.74 345 ||*i*PKiKP **PKPbc 16 57 33.4 -0.3**
comp=Z,4.3nm,0.6s
MOTA Moosalm 152.79 345 ||*i*PKiKP **PKPbc 16 57 33.5 -0.5**
comp=Z,10nm,0.9s
VNDS Vrh nad Dolski 152.85 339 *i* PKPbc **PKPbc 16 57 33.6 -0.3**
LJU Ljubljana 152.96 339 *i* PKPbc **PKPbc 16 57 34.1 0.0**
LJU *i* 16 57 39.1
LJU *i* PKPab **PKPab 16 57 48.2 -0.4**
ABTA Abfaltersbach 152.96 342 ||*i*PKPbc **PKPbc 16 57 33.5 -0.7**
comp=Z,12nm,0.6s,SNR=9.6
BOJS Bojanci 153.17 337 *i* PKPdf **PKPdf 16 57 25.6 -1.0**
BOJS *i* PKPbc **PKiKP 16 57 35.0 +0.4**
BOJS *i* 16 57 39.7
BOJS *i* PKPab **PKPab 16 57 49.5 -0.1**
BOJS *e*pPKPbc **pPKPbc 16 59 59.5 +2.1**
CEY Cerknica 153.26 339 *i* PKPbc **PKPbc 16 57 34.5 -0.3**
CEY *i* PKPab **PKPab 16 57 49.4 -0.6**
ESDC Sonseca Array 161.31 12 PKPab **PKPab 16 58 24.3 -0.8**
ESDC Sonseca Array 161.31 12 PKPab **PKPab 16 58 24.3 -0.8**
comp=Z,0.9nm,0.5s,baz=351,slow=4.9,SNR=5.9
KEST Kesra 163.86 334 PKPab **PKPab 16 58 36.6 +0.1**
KEST Kesra 163.86 334 PKPab **PKPab 16 58 36.6 +0.1**
comp=Z,2.6nm,0.8s,baz=231,slow=3.5,SNR=7.1
DBIC Dimbokro 164.38 159 PKP **PKPdf 16 57 40.1 -0.3**
DBIC Dimbokro 164.38 159 PKP **PKPdf 16 57 40.1 -0.3**
comp=Z,2.6nm,0.6s,baz=259,slow=7.6,SNR=5.5
TORD Torodi Ar. Bea 171.77 186 PKP **PKPdf 16 57 44.8 -0.5**
TORD PKPab **PKPab 16 59 12.6 +0.9**
TORD PP **PP 17 03 04.7 +2.4**
TORD Torodi Ar. Bea 171.77 186 PKP **PKPdf 16 57 44.8 -0.5**
comp=Z,2.7nm,0.8s,baz=185,slow=1.3,SNR=14
TORD PKPab **PKPab 16 59 12.6 +0.9**
comp=Z,2.2nm,0.7s,baz=178,slow=3.5,SNR=8.8
TORD PP **PP 17 03 04.7 +2.4**
comp=Z,1.6nm,1.2s,baz=171,slow=6.4,SNR=3.6

ISK ***27*** *16:40:28.6,39˚.58N×38˚.97E,h21km,MD2.9*
ISCJB ***27*** *16:40:29.5±0.5,39˚.57N±0˚.03×39˚.01E±0˚.04,h8km±5km, Error ellipse: s-maj=5.0km s-min=4.1km az=34.8*
CSEM ***27*** *16:40:29.2±0.2,39˚.59N×38˚.99E,h12km,MD2.9, Error ellipse: s-maj=6.7km s-min=4.8km az=109.0*
DDA ***27*** *16:40:31.1,39˚.57N×38˚.98E,h6km,MD2.9*

ISC 27 16:40:29.5±0.9,39˚.58N±0˚.02×38˚.96E±0˚.03,h17km±8km, n27,σ0°82/42,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
ILIC	**ilic-Erzincan**	**0.33**	**247**	*e*PG	**Pg**			**16 40 36.0**	**-0.6**
ILIC				*e*SG	**Sb**			**16 40 42.4**	**+0.3**
ILIC	**ilic-Erzincan**	**0.33**	**247**	*e*Pg	**Pg**			**16 40 36.0**	**-0.6**
ILIC				*e*Sg	**Sb**			**16 40 42.4**	**+0.3**
EZC	**Erzincan**	**0.34**	**61**	*e*PG	**Pg**			**16 40 36.5**	**-0.3**
EZC	**Erzincan**	**0.34**	**61**	*e*Pg	**Pg**			**16 40 36.6**	**-0.3**
KEMA	**Kemaliye**	**0.48**	**229**	*i* P	**Pg**			**16 40 37.9**	**-1.4**
KEMA				*i* S	**Sb**			**16 40 47.7**	**+1.4**
KEMA	**Kemaliye**	**0.48**	**229**	*i* P	**Pg**			**16 40 37.9**	**-1.4**
KEMA				*i* S	**Sb**			**16 40 47.7**	**+1.4**
ERZN	**Erzincan**	**0.59**	**89**	*e*PG	**Pg**			**16 40 40.6**	**-0.6**
ERZN				*e*SG	**Sg**			**16 40 49.3**	**+0.2**
KELT	**Kelkit**	**0.61**	**22**	*i* P	**Pg**			**16 40 41.2**	**-0.5**
KELT				*i* S	**Sn**			**16 40 52.3**	**-0.8**
KELT	**Kelkit**	**0.61**	**22**	*i* P	**Pg**			**16 40 41.2**	**-0.5**
KELT				*i* S	**Sn**			**16 40 52.3**	**-0.8**
PTK	**Pertek**	**0.77**	**154**	*e*PG	**Pb**			**16 40 44.2**	**-0.3**
PTK	**Pertek**	**0.77**	**154**	*e*Pg	**Pb**			**16 40 44.2**	**-0.3**
SUSE	**Susehri**	**0.86**	**317**	*i* P	**Pb**			**16 40 45.8**	**-0.2**
SUSE				*e*S	**Sn**			**16 40 59.4**	**+0.3**
SUSE	**Susehri**	**0.86**	**317**	*i* P	**Pb**			**16 40 45.8**	**-0.2**
SUSE				*e*S	**Sn**			**16 40 59.4**	**+0.3**
GUMT	**Gumushane**	**0.96**	**24**	*e*PG	**Pb**			**16 40 47.7**	**-0.1**
GUMT	**Gumushane**	**0.96**	**24**	*e*Pg	**Pb**			**16 40 47.7**	**-0.1**
ELZG	**Elazig**	**1.08**	**179**	*i* P	**Pb**			**16 40 49.9**	**0.0**
ELZG				*i* S	**Sg**			**16 41 06.0**	**+1.2**
ELZG	**Elazig**	**1.08**	**179**	*i* P	**Pb**			**16 40 49.9**	**0.0**
ELZG				*i* S	**Sg**			**16 41 06.0**	**+1.2**
MYA	**Malataya**	**1.32**	**199**	*e*PN	**Pn**			**16 40 52.1**	**-1.1**
MYA	**Malataya**	**1.32**	**199**	*e*Pn	**Pn**			**16 40 52.2**	**-1.1**
ESPY	**Espiye-Giresun**	**1.34**	**352**	*e*PN	**Pn**			**16 40 52.6**	**-0.8**
ESPY	**Espiye-Giresun**	**1.34**	**352**	*e*Pn	**Pn**			**16 40 52.7**	**-0.8**
BINT	**Bingol**	**1.38**	**120**	*e*Pn	**Pn**			**16 40 54.4**	**+0.3**
GRSN	**GIRESUNGRSN**	**1.44**	**339**	*e*P	**Pb**			**16 40 56.3**	**+0.4**
GRSN				*e*S	**Sg**			**16 41 17.2**	**+1.1**
GRSN	**GIRESUNGRSN**	**1.44**	**339**	*e*P	**Pb**			**16 40 56.3**	**+0.4**
GRSN				*e*S	**Sg**			**16 41 17.2**	**+1.1**
BNGB	**Bing˜¶l**	**1.46**	**113**	*e*PN	**Pn**			**16 40 54.4**	**-0.7**
AKCD	**Akcadag**	**1.52**	**213**	*e*P	**Pb**			**16 40 57.6**	**+0.3**
AKCD				*e*S	**Sb**			**16 41 17.8**	**+1.5**
AKCD	**Akcadag**	**1.52**	**213**	*e*P	**Pb**			**16 40 57.6**	**+0.3**
AKCD				*e*S	**Sb**			**16 41 17.8**	**+1.5**

IDC 27 16:54:57.4±4.9,4˚.75S×102˚.45E,h0km,mb3.4/4, mb1 3.6/4,mb1mx3.3/23,mbtmp3.4/4,Error ellipse: s-maj=201.2km s-min=26.6km az=55.0,Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**34.52**	**119**	P		P		17 01 47.3	-0.5
	0.5nm,1.0s,baz=302,slow=10,SNR=3.1								
ASAR	**Alice Springs**	**35.67**	**125**	P		P		17 01 57.8	+0.1
	0.3nm,0.9s,baz=302,slow=7.6,SNR=6.2								
SONM	**Songino Arrav**	**52.47**	**3**	P		P		17 04 12.9	+0.7
	0.5nm,0.5s,baz=186,slow=7.8,SNR=3.4								
MKAR	**Makanchi Array**	**54.33**	**343**	P		P		17 04 25.0	-0.8
	0.2nm,0.4s,baz=157,slow=7.8,SNR=3.4								

ISCJB ***27*** *17:01:41.0±0.4,41˚.24N±0˚.02×22˚.67E±0˚.03,h3km±3km, Error ellipse: s-maj=4.5km s-min=2.9km az=38.1*
SKO ***27*** *17:01:40.4,41˚.24N×22˚.68E,h15km,M1.8,ML2.2*
ATH ***27*** *17:01:41.1,41˚.30N×22˚.70E,h21km±1km,MD3.1/4*
THE ***27*** *17:01:41.0,41˚.32N×22˚.68E,h9km±1km,ML2.4/9*
CSEM ***27*** *17:01:41.3±0.7,41˚.19N×22˚.63E,h0km,ML2.4/9*
CSEM ***27*** *17:01:41.3±0.2,41˚.23N×22˚.65E,h2km,ML2.2/2, Error ellipse: s-maj=6.3km s-min=3.8km az=51.0*

ISC 27 17:01:41.2±0.9,41˚.27N±0˚.02×22˚.67E±0˚.02,h5km±7km, n45,σ0°93/73,1C,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.09**	**307**	P			**Pg**	**17 01 43.0**	**-0.1**
VAY				S			**Sg**	**17 01 44.7**	**+0.

BARS	Barje	1.67	338	*e*Pn	Pn	17 02 11.2	0.0
BARS				*e*Sn	Sg	17 02 35.8	+0.8
PLD	Plovdiv	1.74	61	*e*Pn	Pg	17 02 14.1	-0.4
PLD	Plovdiv	1.74	61	*e*Pn	Pg	17 02 14.1	-0.4
ZAPS	Zavoj	2.01	359	*e*Pn	Pb	17 02 18.7	+0.5
ZAPS				*e*Sn	Sb	17 02 44.4	+0.9
RDO	Rodhopi	2.17	92	*e*PB	Pn	17 02 17.9	0.0
RDO	Rodhopi	2.17	92	*e*Pb	Pn	17 02 17.9	0.0
SELS	Selova	2.27	330	*e*Pn	Pn	17 02 20.8	+1.5
SELS				*e*Sn	Sb	17 02 50.7	-0.2
ALN	Alexandroupoli	2.58	97	*e*PN	Pn	17 02 23.8	+0.2
ALN	Alexandroupoli	2.58	97	*e*Pn	Pn	17 02 23.8	+0.2
BOLS	Boljevac	2.62	349	*e*Pn	Pb	17 02 26.6	-1.9
BOLS				*e*Sn	Sb	17 02 59.1	-1.8
BOLS	Boljevac	2.62	349	*e*Pn	Pb	17 02 26.6	-1.9
BOLS				*e*Sn	Sb	17 02 59.1	-1.8
GRUS	Gruza	2.99	332	*e*Pn	Pn	17 02 28.9	-0.3
GRUS				*e*Sn	Sn	17 03 07.6	+2.1
GRUS	Gruza	2.99	332	*e*Pn	Pn	17 02 28.9	-0.3
GRUS				*e*Sn	Sn	17 03 07.6	+2.1
DIVS	Divibare	3.45	326	*e*Sn	Sn	17 03 18.8	+1.9
DIVS	Divibare	3.45	326	*e*Sn	Sn	17 03 18.8	+1.9

JMA 27 17:24:00.1±0.2, 27°46N×141°05E, h394km±3km, M3.7, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.07	110	P	Pn	17 24 51.0	+0.2
CBIJ				*e*S	S	17 25 30.8	-0.9
JHHJ	Haha-jima-NKT	1.30	129	P	Pn	17 24 51.9	+0.1
JHHJ				*e*S	S	17 25 32.7	-0.7
JIE	Ise	7.85	333	P	P	17 25 54.2	+0.5
JYT	Yasato	8.77	355	*e*S	S	17 27 43.3	-1.9
JAG	Ashikaga	9.04	352	P	P	17 26 07.4	+0.3
JAG				*e*S	S	17 27 45.9	-5.1
JHO	Hitachi	9.13	358	P	P	17 26 09.3	+1.2

*IDC **27** 17:24:10.6±3.6, 54°.63N×161°.79W, h0km, mb3.7/8, mb1 3.7/10, mb1mx3.5/31, mbtmp3.7/10, ML3.4/1, Error ellipse: s-maj=93.2km s-min=21.1km az=152.0*

*NEIC **27** 17:24:15.4, 54°.51N×161°.48W, h18km, ML3.4(AEIC), After AEIC.*

ISC 27 17:24:14.8±1.7, 54°.50N±0°.08×161°.50W±0°.04, h27km±11km, n30, σ1§25/31, mb3.8/8, Alaska Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DRIA	Deer Island	0.64	317	P	Pn	17 24 28.2	0.0
DRIA				S	Sb	17 24 37.1	+1.0
DOL	Dolgoi Island	0.68	342	P	Pn	17 24 28.9	+0.2
DT1	Dutton Round H	0.76	324	P	Pn	17 24 29.8	+0.1
DTNA	Dutton South F	0.78	327	P	Pn	17 24 30.4	+0.3
DTNA				S	Sb	17 24 40.0	0.0
PS4A	Pavlof South-4	0.87	347	P	Pn	17 24 32.1	+0.7
PVV	Pavlof Volcano	0.89	349	P	Pn	17 24 32.4	+0.8
PVV				S	Sn	17 24 45.5	+1.9
SDPT	Sand Point	1.04	34	P	Pb	17 24 33.7	-0.3
SDPT				S	Sn	17 24 47.8	+0.7
FALS	False Pass	1.17	289	P	Pb	17 24 35.9	-0.5
FALS				S	Sn	17 24 52.6	+2.2
ISNN	Isanotski Nort	1.36	285	P	Pb	17 24 39.9	+0.2
SSLW	Shishaldin Wes	1.55	281	P	Pb	17 24 42.3	-0.5
SSBA	Shishaldin	1.55	281	P	Pb	17 24 42.1	-0.7
WESN	West Dahl Nort	1.80	273	P	Pb	17 24 45.8	-1.2
VNWF	Veniaminof 8	1.99	33	P	Pb	17 24 49.1	-1.3
CHGN	Chignik	2.52	43	*e*Pn	Pn	17 24 55.2	+1.3
CHGN				*e*S	Sb	17 25 29.2	-0.6
AKUT	Akutan	2.53	263	P	Pn	17 24 55.5	+1.4
ANPB	Aniakchak Plen	2.94	37	P	Pn	17 25 02.0	+2.2
UNV	Unalaska Valle	3.01	259	Pn	Pn	17 25 02.1	+1.5
ANPK	Aniakchak Peak	3.03	38	P	Pn	17 25 02.8	+1.8
ANNW	Aniakchak Nort	3.09	36	P	Pn	17 25 04.6	+2.7
MSOM	Makushin Julie	3.28	260	P	Pn	17 25 05.6	+1.3
KDAK	Kodiak Island	5.97	53	Pn	Pn	17 25 41.0	-0.3
	1.0nm,0.3s,baz=259,slow=9.2,SNR=10						
KDAK				Sn	Sn	17 26 43.8	-4.9
	0.2nm,0.3s,baz=310,slow=18,SNR=2.1						
ILAR	Eielson Array	12.63	30	Pn	Pn	17 27 08.6	-3.9
	baz=222,slow=14,SNR=2.5						
PETK	Petropavlovsk-	23.90	284	P	P	17 29 24.7	-1.3
	1.9nm,0.5s,baz=87,slow=12,SNR=9.5						
KSRS	Korea Array	49.74	280	P	P	17 33 03.7	-0.8
	0.8nm,0.7s,baz=48,slow=7.1,SNR=5.1						
FINES	FINESS Array B	64.24	356	P	P	17 34 45.0	-1.8
	0.7nm,0.6s,baz=3.4,slow=7.1,SNR=4.9						
BVAR	Borovoye Array	64.54	328	P	P	17 34 47.9	-1.0
	1.0nm,0.6s,baz=40,slow=7.7,SNR=6.8						
MKAR	Makanchi Array	65.59	317	P	P	17 34 53.7	-2.2
	0.1nm,0.4s,baz=44,slow=7.0,SNR=4.0						
AKASG	Malin Array Be	74.78	353	P	P	17 35 49.6	-2.4
	0.4nm,0.4s,baz=5.0,slow=5.6,SNR=4.0						
CMAR	Chiang Mai Arr	80.58	288	P	P	17 36 24.9	0.0
	0.3nm,0.7s,baz=18,slow=4.8,SNR=5.6						
BRTR	Keskin Array B	85.25	348	P	P	17 36 47.1	-1.8
	0.4nm,0.7s,baz=28,slow=6.3,SNR=3.1						

*IDC **27** 17:29:32.4±3.0, 40°.09N×123°.16W, h0km, mb1 3.3/3, mb1mx3.1/29, mbtmp2.9/3, ML3.5/3, Error ellipse: s-maj=32.8km s-min=7.8km az=69.0*

*ISCJB **27** 17:29:35.8±0.4, 40°.19N±0°.03×122°.70W±0°.05, h10km, Error ellipse: s-maj=5.8km s-min=4.4km az=140.7*

*NEIC **27** 17:29:35.3, 40°.19N×122°.80W, h8km, MW3.8(BRK), After NCEDC.*

NEIC Felt at Hayfork.

ISC 27 17:29:35.4±0.9, 40°20N±0°.04×122°81W±0°.04, h10km, n34, σ1§19/32, Northern California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WDC	Whiskeytown Da	0.43	28	*e*Pg	Pb	17 29 44.5	-0.6
KIPM	Iron Peak	0.65	233	*e*Pg	Pn	17 29 49.7	-1.1
KCPM	Cahto Peak	0.79	229	*e*Pg	Pn	17 29 52.6	-0.1
KHMM	Horse Mountain	0.97	314	*e*Pg	Pn	17 29 54.9	-0.4
KHMM				*e*Sg	Sn	17 30 12.2	+3.0
HOPS	Hopland	1.23	190	*e*P	Pg	17 29 59.2	+0.2
YBH	Yreka Blue Hor	1.53	3	*e*Pn	Pb	17 30 03.5	-0.4
YBH				Pg	Pb	17 30 03.7	-0.2
YBH				*e*Sn	Sb	17 30 23.9	+0.4
YBH				Lg	Lg	17 30 25.9	
YBH	Yreka Blue Hor	1.53	3	Pg	Pb	17 30 03.7	-0.2
	26nm,0.3s,baz=190,slow=5.4,SNR=192						
YBH				Lg	Lg	17 30 26.0	
	44nm,0.3s,baz=90,slow=16,SNR=8.4						
BEKR	Beckworth	1.91	99	*e*Pn	Pn	17 30 08.9	+0.7
KBO	Bosley Butte	2.27	332	*e*Pn	Pb	17 30 15.9	-0.7
MOD	Modoc	2.54	47	*e*Pn	Pn	17 30 17.5	+0.6
CMB	Columbia Colle	2.87	138	*e*Pn	Pn	17 30 21.9	+0.6
KEBM	Edson Butte	2.90	337	Pn	Pb	17 30 25.9	-1.4
WVOR	Wild Horse Val	3.85	53	*e*Pn	Pn	17 30 35.2	+0.4
NVAR	Mina Array Bea	3.92	115	Pn	Pn	17 30 36.9	+1.1
NVAR				Pg	Pb	17 30 43.8	-0.9
NVAR				Lg	Lg	17 31 40.9	
NVAR	Mina Array Bea	3.92	115	Pn	Pn	17 30 36.9	+1.1
	1.0nm,0.3s,baz=293,slow=14,SNR=22						
NVAR				Pg	Pb	17 30 43.8	-0.9
	3.0nm,0.3s,baz=290,slow=14,SNR=31						
NVAR				Lg	Lg	17 31 40.9	
	3.5nm,0.3s,baz=297,slow=27,SNR=4.4						
NV11	Mina Array Sit	4.02	115	*e*Pn	Pn	17 30 38.4	+1.3
BMN	Battle Mountai	4.28	85	*e*Pg	Pg	17 30 55.7	-1.6
COR	Corvallis	4.39	355	Pg	Pg	17 30 58.4	-1.2
ISA	Isabella	5.68	142	*e*Pn	Pn	17 30 59.1	-0.9
ELK	Elko	5.80	82	*e*Pg	Pg	17 31 24.2	-2.2
MFID	Camas Ranch	6.12	56	Pn	Pn	17 31 12.0	+6.0
BMO	Blue Mountains	6.17	39	Pn	Pn	17 31 02.0	-4.7
LON	Longmire	6.58	6	Pn	Pn	17 31 13.3	+1.0
HAWA	Hanford	6.63	20	Pn	Pn	17 31 14.6	+1.7
DUG	Dugway	7.65	87	Pn	Pn	17 31 25.9	-1.1
MVU	Marysvale	8.38	98	*e*Pn	Pn	17 31 37.7	+0.5
MSU	Marysvale	8.41	98	*e*Pn	Pn	17 31 39.8	+2.3
HWUT	Hardware Ranch	8.63	77	Pn	Pn	17 31 44.7	+4.2
MCMT	McKenzie Canyo	8.68	55	Pn	Pn	17 31 50.0	+8.7
SRU	San Rafael	9.54	93	Pn	Pn	17 31 57.9	+5.0
PDAR	Pinedale Array	10.27	71	Pn	Pn	17 32 08.6	+5.6
PDAR	Pinedale Array	10.27	71	Pn	Pn	17 32 08.6	+5.6
	0.1nm,0.3s,baz=254,slow=17,SNR=2.8						
TXAR	Lajitas Array	19.06	119	Pn	Pn	17 33 59.0	+0.3
TXAR	Lajitas Array	19.06	119	Pn	Pn	17 33 59.1	+0.3
	0.0nm,0.3s,baz=302,slow=5.2,SNR=2.1						

CASC 27 17:35:29.5±2.5, 13°.83N×91°.51W, h26km±19km, MD3.5, 1C, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAT	Jato	0.50	346	⇓*e*P	Pb	17 35 37.9	-1.9
FUG	Fuego 3	0.90	46	*e*P	Pn	17 35 45.3	-1.4
PCG	Pacaya	1.04	57	*e*P	Pn	17 35 48.5	-0.3
PCG				*e*S	Sb	17 36 04.5	+1.7
IXG	Ixpaco	1.08	71	*e*P	Pn	17 35 49.3	+0.1
IXG				*e*S	Sb	17 36 06.2	+2.5
NBG	Las Nubes	1.36	56	*e*P	Pn	17 35 53.7	+0.5
NBG				*e*S	Sb	17 36 15.4	+3.5
RBDL	Robledal	1.79	81	*e*P	Pn	17 35 59.6	+0.6
RTR	El Retiro	1.81	88	*e*P	Pn	17 36 00.6	+1.3
SBLS	San Blas	1.83	89	*e*P	Pn	17 35 59.9	+0.2
SBLS				*e*S	Sn	17 36 22.9	+0.6
SNJE	San Jose	1.85	88	*e*P	Pn	17 36 00.5	+0.6
BOQS	Boqueron	2.17	92	*e*P	Pn	17 36 04.9	+0.6
BOQS				*e*S	Sn	17 36 30.4	-0.1
LFRS	El Faro	2.39	95	*e*P	Pn	17 36 07.6	+0.5
LFRS				*e*S	Sn	17 36 35.6	-0.1

IDC 27 17:45:00.9±4.7, 17°.54S×178°.78W, h617km±62km, mb3.2/8, mb1 3.5/8, mb1mx3.1/20, mbtmp3.2/8, Error ellipse: s-maj=38.7km s-min=19.7km az=167.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	20.96	189	P	P	17 49 02.3	+0.1
	1.8nm,0.5s,baz=281,slow=6.9,SNR=3.9						
STKA	Stephens Creek	38.50	241	P	P	17 51 32.4	0.0
	3.7nm,0.7s,baz=104,slow=8.3,SNR=7.6						
WRA	Warramunga Arr	44.35	259	P	P	17 52 18.2	-0.3
	2.4nm,0.5s,baz=95,slow=7.1,SNR=78						
WRA				PcP	PcP	17 53 48.6	-0.1
	0.2nm,0.4s,baz=88,slow=3.6,SNR=2.8						
ASAR	Alice Springs	44.55	254	P	P	17 52 20.2	+0.1
	15nm,0.6s,baz=88,slow=8.5,SNR=242						
ASAR				PcP	PcP	17 53 49.0	-0.4
	0.5nm,0.6s,baz=105,slow=3.9,SNR=4.2						
NVAR	Mina Array Bea	79.40	44	P	P	17 56 05.0	+0.2
	0.8nm,0.7s,baz=222,slow=9.0,SNR=7.3						
ILAR	Eielson Array	85.61	13	P	P	17 56 35.0	0.0
	0.4nm,0.5s,baz=228,slow=5.1,SNR=7.1						
TXAR	Lajitas Array	86.10	58	P	P	17 56 38.2	-0.1
	0.9nm,0.7s,baz=220,slow=7.6,SNR=8.7						
PDAR	Pinedale Array	87.33	44	P	P	17 56 43.9	-0.1
	0.4nm,0.5s,baz=293,slow=4.7,SNR=3.9						

IDC 27 18:19:55.0±1.6, 3°.57N×127°.47E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.5/24, mbtmp3.7/5, Error ellipse: s-maj=100.2km s-min=21.9km az=69.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.61	185	P	P	18 24 48.5	+1.8
	1.2nm,0.4s,baz=5.5,slow=9.4,SNR=11						
WRA	Warramunga Arr	24.32	164	P	P	18 25 14.5	-0.1
	1.7nm,0.4s,baz=341,slow=11,SNR=14						
ASAR	Alice Springs	27.79	167	P	P	18 25 45.4	-0.6
	0.5nm,0.5s,baz=347,slow=7.5,SNR=27						
STKA	Stephens Creek	37.73	160	P	P	18 27 12.7	+0.1
	1.9nm,0.6s,baz=342,slow=12,SNR=5.6						
MKAR	Makanchi Array	58.11	325	P	P	18 29 50.5	+0.1
	0.2nm,0.4s,baz=117,slow=7.3,SNR=5.9						
TORD	Torodi Ar. Bea	123.67	288	PKP	PKPdf	18 38 54.8	-1.0
	0.7nm,1.1s,baz=72,slow=1.4,SNR=2.7						

*IDC **27** 18:32:16.9±0.9, 42°.43S×169°.93E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/14, mbtmp3.7/4, ML3.6/1, MS3.5/3, Ms1 3.5/3, ms1mx3.0/20, Error ellipse: s-maj=29.5km s-min=17.8km az=38.0*

*AUST **27** 18:32:17.9±99.0, 42°.59S×169°.89E, h0km, Error ellipse: s-maj=2.5km s-min=0.9km az=300.0*

*ISCJB **27** 18:32:19.6±0.5, 42°.53S±0°.04×169°.87E±0°.06, h39km±14km, mb3.8/4, MS3.4/3, Error ellipse: s-maj=8.7km s-min=3.3km az=41.6*

*WEL **27** 18:32:20.6±0.8, 42°.50S×169°.80E, h33km, ML4.8/49, Error ellipse: s-maj=5.9km s-min=5.0km az=90.0*

WEL Felt in the West Coast region, maximum reported intensity MM 5.

*NEIC **27** 18:32:22.0, 42°.60S×169°.91E, h33km, mb4.4/1, ML4.8(WEL), After WEL.*

NEIC Felt [IV] at Greymouth, Hokitika, Runanga and Westport.

ISC 27 18:32:20.5±1.5, 42°.58S±0°.05×169°.87E±0°.05, h27km±13km, n144, σ0§85/141, mb3.9/4, MS3.5/3, 10C-5D, Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WVZ	Waitaha Valley	0.81	128	⇓PN	Pb	18 32 35.8	-0.1
WVZ				SN	Sb	18 32 46.8	+0.3
WVZ				AML	AML	18 32 47.9	
WVZ	Waitaha Valley	0.81	128	⇓Pn	Pb	18 32 35.9	-0.1
WVZ				Sn	Sb	18 32 46.9	+0.3
FOZ	Fox Glacier	0.99	187	⇑PN	Pn	18 32 37.5	-1.1
FOZ				SN	Sn	18 32 51.7	0.0
FOZ				AML	AML	18 32 57.1	
FOZ				AML	AML	18 32 57.2	
FOZ	Fox Glacier	0.99	187	Pn	Pn	18 32 37.3	-1.3
RPZ	Rata Peaks	1.43	143	⇓PN	Pb	18 32 45.8	-0.7
RPZ				SN	Sb	18 33 05.9	+1.6
RPZ				AML	AML	18 33 17.4	
RPZ	Rata Peaks	1.43	143	Pn	Pb	18 32 45.6	-0.9
RPZ	Rata Peaks	1.43	143	Pn	Pb	18 32 45.9	-0.7
	92nm,0.3s,baz=313,slow=7.0,SNR=579						
RPZ				Sn	Sb	18 33 05.1	+0.8
	430nm,0.3s,baz=26,slow=22,SNR=26						
DSZ	Denniston Nort	1.66	61	⇑PN	Pn	18 32 47.4	-0.4
DSZ				AML	AML	18 33 17.3	
DSZ				AML	AML	18 33 27.8	
DSZ	Denniston Nort	1.66	61	Pn	Pn	18 32 47.4	-0.4
JCZ	Jackson Bay	1.70	208	⇑PN	Pn	18 32 47.4	-1.0
JCZ				AML	AML	18 33 22.5	
JCZ				AML	AML	18 33 34.8	
JCZ	Jackson Bay	1.70	208	Pn	Pn	18 32 47.4	-1.0
LTZ	Lake Taylor	1.78	97	PN	Pn	18 32 49.9	+0.4
LTZ				AML	AML	18 33 25.5	
LTZ				AML	AML	18 33 26.3	
LTZ	Lake Taylor	1.78	97	Pn	Pn	18 32 49.9	+0.4
LBZ	Lake Benmore	1.82	173	PN	Pn	18 32 50.9	+0.8
LBZ				AML	AML	18 33 27.6	
LBZ				AML	AML	18 33 28.1	
LBZ	Lake Benmore	1.82	173	Pn	Pn	18 32 50.9	+0.8
CRLZ	Canterbury Las	2.25	117	PN	Pn	18 32 55.9	+0.1
CRLZ				AML	AML	18 33 34.5	
CRLZ				AML	AML	18 33 53.5	
CRLZ	Canterbury Las	2.25	117	Pn	Pn	18 32 55.9	+0.1
MQZ	McQueen's Vall	2.33	120	PN	Pn	18 32 57.1	+0.2
MQZ				AML	AML	18 33 48.7	
MQZ				AML	AML	18 33 52.1	
MQZ	McQueen's Vall	2.33	120	Pn	Pn	18 32 57.1	+0.2
WKZ	Wanaka	2.33	195	PN	Pn	18 32 57.2	+0.1
WKZ				AML	AML	18 33 45.5	
WKZ				AML	AML	18 33 50.8	
WKZ	Wanaka	2.33	195	Pn	Pn	18 32 57.2	+0.1
THZ	Tophouse	2.40	71	⇑PN	Pn	18 32 57.9	-0.1
THZ				AML	AML	18 33 41.1	
THZ				AML	AML	18 33 43.8	
THZ	Tophouse	2.40	71	Pn	Pn	18 32 57.9	-0.1
MSZ	Milford Sound	2.52	213	PN	Pn	18 32 58.8	-0.8
MSZ				AML	AML	18 33 49.8	
MSZ				AML	AML	18 33 55.2	
MSZ	Milford Sound	2.52	213	Pn	Pn	18 32 58.8	-0.8
ODZ	Otahua Downs	2.53	167	PN	Pn	18 32 59.9	+0.2
ODZ	Otahua Downs	2.53	167	Pn	Pn	18 32 59.9	+0.2
QRZ	Quartz Range	2.65	50	⇑PN	Pn	18 33 00.9	-0.6
QRZ				AML	AML	18 33 56.4	
QRZ				AML	AML	18 33 59.0	
QRZ	Quartz Range	2.65	50	Pn	Pn	18 33 00.9	-0.6
EAZ	Earnscleugh	2.69	188	⇑PN	Pn	18 33 01.2	-0.6
EAZ				AML	AML	18 33 52.0	
EAZ				AML	AML	18 33 56.3	
EAZ	Earnscleugh	2.69	188	Pn	Pn	18 33 01.2	-0.6
KHZ	Kahutara	2.72	88	PN	Pn	18 33 03.5	+1.2
KHZ				AML	AML	18 33 56.6	
KHZ				AML	AML	18 33 57.8	
KHZ	Kahutara	2.72	88	Pn	Pn	18 33 03.5	+1.2
NNZ	Nelson	2.95	64	PN	Pn	18 33 05.9	+0.4
NNZ				AML	AML	18 33 58.4	
NNZ				AML	AML	18 34 08.8	
NNZ	Nelson	2.95	64	Pn	Pn	18 33 05.9	+0.4
MLZ	Mavora Lakes	3.03	203	PN	Pn	18 33 07.2	+0.6
MLZ				AML	AML	18 34 12.2	
MLZ				AML	AML	18 34 18.7	
MLZ	Mavora Lakes	3.03	203	Pn	Pn	18 33 07.2	+0.6
BSWZ	Blackbirch Sta	3.10	75	AML	AML	18 34 05.2	
TUWZ	Tuamarina	3.25	71	AML	AML	18 33 50.9	
TUWZ				AML	AML	18 33 15.3	
CMWZ	Cape Campbell	3.34	77	AML	AML	18 34 15.1	
CMWZ				AML	AML	18 34 17.4	
TUZ	Tuapeka	3.38	183	PN	Pn	18 33 10.5	-0.9
TUZ				AML	AML	18 34 16.1	
TUZ				AML	AML	18 34 21.6	
TUZ	Tuapeka	3.38	183	Pn	Pn	18 33 11.4	0.0
DCZ	Deep Cove	3.50	213	PN	Pn	18 33 12.4	-0.6
DCZ				AML	AML	18 34 23.3	
DCZ				AML	AML	18 34 31.7	
WHZ	Wether Hill Ro	3.59	202	PN	Pn	18 33 13.5	-0.8
WHZ				AML	AML	18 34 31.5	
WHZ				AML	AML	18 34 32.2	
WHZ	Wether Hill Ro	3.59	202	Pn	Pn	18 33 13.7	-0.6
SNZO	South Karori	3.83	72	PN	Pn	18 33 18.0	+0.5
SNZO				AML	AML	18 34 33.8	
SNZO				AML	AML	18 34 38.1	
SNZO	South Karori	3.83	72	Pn	Pn	18 33 18.0	+0.5
WEL	Wellington	3.88	72	PN	Pn	18 33 18.8	+0.6
WEL				SN	Sn	18 34 01.5	-1.4
WEL	Wellington	3.88	72	Pn	Pn	18 33 18.8	+0.6
WEL				Sn	Sn	18 34 01.5	-1.4
BHW	Baring Head	3.91	74	PN	Pn	18 33 18.8	+0.2
BHW				SN	Sn	18 34 02.6	-1.0
BHW				AML	AML	18 34 05.0	
BHW	Baring Head	3.91	74	Pn	Pn	18 33 18.8	+0.2
BHW				Sn	Sn	18 34 02.6	-1.0
SYZ	Scrubby Hill	3.99	187	PN	Pn	18 33 19.6	-0.3
SYZ	Scrubby Hill	3.99	187	Pn	Pn	18 33 19.6	-0.3
PLWZ	Palliser	4.13	78	PN	Pn	18 33 21.1	-0.7
PLWZ	Palliser	4.13	78	Pn	Pn	18 33 21.1	-0.7
KIW	Kapiti Island	4.15	67	PN	Pn	18 33 22.8	+0.8
KIW				AML	AML	18 34 11.6	
KIW				AML	AML	18 34 42.5	
KIW	Kapiti Island	4.15	67	Pn	Pn	18 33 22.8	+0.8
CAW	Cannon Point	4.15	71	⇑PN	Pn	18 33 22.1	0.0
CAW				SN	Sn	18 34 08.9	-0.8
CAW				AML	AML	18 34 41.2	
CAW	Cannon Point	4.15	71	Pn	Pn	18 33 22.1	0.0
MSWZ	Moikau Station	4.18	76	⇓PN	Pn	18 33 21.8	-0.5
MSWZ				AML	AML	18 34 09.4	
MSWZ				AML	AML	18 34 54.2	
MSWZ	Moikau Station	4.18	76	Pn	Pn	18 33 21.9	-0.5
PYZ	Puysegur Point	4.25	211	PN	Pn	18 33 24.4	+1.0
PYZ	Puysegur Point	4.25	211	Pn	Pn	18 33 24.6	+1.1
PAWZ	Paruwai Farm	4.31	76	PN	Pn	18 33 23.3	-1.0
PAWZ				AML	AML	18 34 54.5	
PAWZ				AML	AML	18 34 56.5	
PAWZ	Paruwai Farm	4.31	76	Pn	Pn	18 33 23.4	-0.9
OGWZ	Otaki Gorge	4.34	68	⇓PN	Pn	18 33 25.0	+0.3
OGWZ	Otaki Gorge	4.34	68	Pn	Pn	18 33 25.0	+0.3
MTW	Mount Morrison	4.44	73	PN	Pn	18 33 25.0	-1.0
MTW				AML	AML	18 34 54.9	
MTW				AML	AML	18 35 03.8	
MTW	Mount Morrison	4.44	73	Pn	Pn	18 33 25.0	-1.0
APZ	The Paps	4.46	197	PN	Pn	18 33 26.8	+0.5
APZ	The Paps	4.46	197	Pn	Pn	18 33 25.8	-0.5
NWEZ	Newall Road	4.48	44	PN	Pn	18 33 26.2	-0.4
NWEZ	Newall Road	4.48	44	Pn	Pn	18 33 26.2	-0.4
TRWZ	Traveller	4.50	77	PN	Pn	18 33 25.7	-1.1
TRWZ				AML	AML	18 34 58.0	
TRWZ				AML	AML	18 35 23.1	
TRWZ	Traveller	4.50	77	Pn	Pn	18 33 25.7	-1.1
HOWZ	Holdsworth Sta	4.55	70	⇑PN	Pn	18 33 26.7	-0.8
HOWZ	Holdsworth Sta	4.55	70	Pn	Pn	18 33 26.7	-0.8
DFE	Dawson Falls	4.56	46	PN	Pn	18 33 27.8	0.0
DFE	Dawson Falls	4.56	46	Pn	Pn	18 33 27.8	0.0
NEZ	North Egmont	4.60	46	PN	Pn	18 33 28.2	-0.1
NEZ	North Egmont	4.60	46	Pn	Pn	18 33 28.2	-0.1
PKE	Pukeiti	4.60	44	PN	Pn	18 33 28.0	-0.3
PKE				AML	AML	18 34 22.9	
PKE				AML	AML	18 35 35.2	
PKE	Pukeiti	4.60	44	Pn	Pn	18 33 28.0	-0.3
MRZ	Mangatainoka R	4.69	68	⇑PN	Pn	18 33 28.7	-0.7
MRZ				AML	AML	18 34 57.8	
MRZ				AML	AML	18 34 58.7	
MRZ	Mangatainoka R	4.69	68	Pn	Pn	18 33 28.7	-0.7
DREZ	Durham Road	4.72	46	PN	Pn	18 33 30.1	+0.3
DREZ	Durham Road	4.72	46	Pn	Pn	18 33 30.1	+0.3
TMWZ	Te Maipa	4.73

KUZ	**Kuaotunu**	**7.37**	**40**	AML	AML	18 36 23.4		
WCZ	**Waipu Caves**	**7.48**	**29**	PN	**Pn**	**18 34 07.1**	**-0.6**
OUZ	**Omahuta**	**7.90**	**23**	PN	**Pn**	**18 34 13.4**	**0.0**
OUZ	**Omahuta**	**7.90**	**23**	*e*Pn	**Pn**	**18 34 13.0**	**-0.5**
MILA	**Mila**	**16.83**	**282**	P	**Pn**	**18 36 15.0**	**+0.9**
	baz=17,SNR=10							
TOO	**Toolangi**	**19.29**	**277**	P	Pn	18 36 52.6	+8.3
	baz=19,SNR=4.3							
STKA	**Stephens Creek**	**24.81**	**286**	P	**P**	**18 37 40.7**	**+0.5**
	4.3nm,1.2s,baz=138,slow=15,SNR=2.5							
STKA				LR	LR	18 46 55.7		
	comp=Z,70nm,18.8s,baz=43,slow=35							
AS31	**Alice Springs**	**35.19**	**291**	P	P	18 39 18.8	+6.5
ASAR	**Alice Springs**	**35.19**	**291**	P	**P**	**18 39 11.6**	**-0.7**
	1.4nm,1.1s,baz=128,slow=6.6,SNR=6.9							
VNDA	**Vanda**	**35.21**	**183**	LR	LR	18 51 42.2		
	comp=Z,98nm,19.8s,baz=24,slow=33							
WRAB	**Tennant Creek**	**37.43**	**296**	*e*P	P	18 39 36.8	+5.4
	6.9nm,1.3s							
WRA	**Warramunga Arr**	**37.43**	**296**	P	**P**	**18 39 31.6**	**+0.2**
	0.4nm,1.0s,baz=131,slow=7.6,SNR=4.7							
QSPA	**South Pole Qui**	**47.55**	**180**	LR	LR	18 58 54.8		
	comp=Z,46nm,18.5s,baz=127,slow=34							
BRTR	**Keskin Array B**	**147.19**	**280**	PKPbc	**PKPbc**	**18 52 01.9**	**+0.9**
	0.3nm,0.7s,baz=80,slow=1.4,SNR=3.1							
ARCES	**ARCESS Array B**	**147.37**	**338**	PKPbc	**PKPbc**	**18 52 00.9**	**+0.6**
	1.1nm,0.8s,baz=64,slow=2.8,SNR=7.1							
TORD	**Torodi Ar. Bea**	**148.94**	**203**	PKPbc	**PKPbc**	**18 52 06.7**	**+0.7**
	1.0nm,1.0s,baz=148,slow=1.6,SNR=6.1							
FINES	**FINESS Array B**	**151.35**	**324**	PKPbc	**PKPbc**	**18 52 10.8**	**+0.4**
	1.0nm,0.6s,baz=69,slow=2.7,SNR=9.7							

*GUC **27** 18:48:07.6±0.7,34.˚77S×71.˚84W,h40km±4km,ML4.4*
*NEIC **27** 18:48:07.6,34.˚77S×71.˚84W,h40km,mb3.9/4,After GUC. NEIC Felt [II] at Curico, Rancagua, San Fernando, Santiago and Talca.*
*ISCJB **27** 18:48:08.0±0.7,34.˚76S±0.˚04×71.˚89W±0.˚10,h60km±6km, mb3.9/8, Error ellipse: s-maj=14.1km s-min=5.3km az=16.7*
*IDC **27** 18:48:09.1±0.8,34.˚71S×71.˚69W,h45km±7km,mb3.7/6, mb1 3.9/10,mb1mx3.7/19,mbtmp3.7/10,ML4.0/4,MS3.3/1, Ms1 3.3/1,ms1mx2.6/21,Error ellipse: s-maj=27.2km s-min=17.8km az=89.0*
ISC 27 18:48:08.8±0.6,**34.73S**×0.˚04×**71.87W**±0.˚08,**h48**km±5km, **n53**,σ0.8**94**/78,**mb4.0**/8,**12C-4D,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TALC	**Talca**	**0.70**	**164**	*e*P	**Pn**	**18 48 22.6**	**+0.2**
TALC				*i* S	**Sn**	**18 48 32.7**	**+0.4**
TALC	**Talca**	**0.70**	**164**	*e*P	**Pn**	**18 48 22.6**	**+0.2**
TALC				*i* S	**Sn**	**18 48 32.7**	**+0.4**
TALC				AML	AML	18 48 35.8	
	comp=E,39µm,0.1s						
LNV	**Longovilo**	**0.86**	**27**	*e*P	**Pn**	**18 48 23.8**	**-0.8**
LNV	**Longovilo**	**0.86**	**27**	*e*P	**Pn**	**18 48 23.8**	**-0.8**
CACH	**El Canelo**	**1.22**	**60**	⇓*i*P	**Pn**	**18 48 29.4**	**-0.1**
CACH	**El Canelo**	**1.22**	**60**	⇓*i*P	**Pn**	**18 48 29.4**	**-0.1**
CHCH	**Chadas Angostu**	**1.28**	**52**	⇑*i*P	**Pn**	**18 48 30.4**	**0.0**
CHCH	**Chadas Angostu**	**1.28**	**52**	⇑*i*P	**Pn**	**18 48 30.4**	**0.0**
TACH	**Talagante**	**1.32**	**36**	⇑*i*P	**Pn**	**18 48 31.1**	**+0.3**
TACH	**Talagante**	**1.32**	**36**	⇑*i*P	**Pn**	**18 48 31.1**	**+0.3**
ANTU	**Antumapu**	**1.55**	**42**	*e*P	**Pn**	**18 48 34.2**	**+0.2**
ANTU				*i* S	**Sn**	**18 48 54.2**	**+1.3**
ANTU	**Antumapu**	**1.55**	**42**	*e*P	**Pn**	**18 48 34.2**	**+0.2**
ANTU				*i* S	**Sn**	**18 48 54.2**	**+1.3**
PCH	**Pirque**	**1.58**	**46**	⇑*i*P	**Pn**	**18 48 34.4**	**0.0**
PCH	**Pirque**	**1.58**	**46**	⇑*i*P	**Pn**	**18 48 34.4**	**0.0**
SAN	**Santiago**	**1.62**	**39**	⇑*i*P	**Pn**	**18 48 35.3**	**+0.3**
SAN				*i* S	**Sn**	**18 48 55.8**	**+1.1**
SAN	**Santiago**	**1.62**	**39**	⇑*i*P	**Pn**	**18 48 35.3**	**+0.3**
SAN				*i* S	**Sn**	**18 48 55.8**	**+1.1**
LMEL	**Las Melosas**	**1.64**	**58**	⇓*i*P	**Pn**	**18 48 35.5**	**+0.1**
LMEL				*i* S	**Sn**	**18 48 56.3**	**+1.0**
LMEL	**Las Melosas**	**1.64**	**58**	⇓*i*P	**Pn**	**18 48 35.5**	**+0.1**
LMEL				*i* S	**Sn**	**18 48 56.3**	**+1.0**
LMEL				AML	AML	18 48 58.6	
	comp=N,8µm,0.2s						
STL	**Santa Lucia**	**1.64**	**39**	*e*P	**Pn**	**18 48 35.4**	**+0.1**
STL				*i* S	**Sn**	**18 48 56.2**	**+0.9**
SJCH	**San Jose de Ma**	**1.66**	**50**	*e*P	**Pn**	**18 48 35.1**	**-0.5**
SJCH				S	**Sn**	**18 48 55.4**	**-0.3**
SJCH	**San Jose de Ma**	**1.66**	**50**	*e*P	**Pn**	**18 48 35.1**	**-0.5**
SJCH				*i* S	**Sn**	**18 48 55.4**	**-0.3**
LACH	**Col Las Americ**	**1.69**	**42**	*e*P	**Pn**	**18 48 36.1**	**+0.2**
LACH				*i* S	**Sn**	**18 48 57.9**	**+1.5**
LACH	**Col Las Americ**	**1.69**	**42**	*e*P	**Pn**	**18 48 36.1**	**+0.2**
LACH				*i* S	**Sn**	**18 48 57.9**	**+1.5**
CLCH	**Cerro Calan**	**1.73**	**40**	⇑*i*P	**Pn**	**18 48 36.7**	**+0.2**
CLCH				*i* S	**Sn**	**18 48 58.4**	**+1.0**
CLCH				AML	AML	18 49 01.7	
	comp=N,6µm,0.5s						
PEL	**Peldehue**	**1.86**	**32**	⇑*i*P	**Pn**	**18 48 38.3**	**0.0**
PEL				*i* S	**Sn**	**18 49 02.4**	**+1.7**
PEL				AML	AML	18 49 09.2	
	comp=N,5µm,0.4s						
ROCH	**El Roble**	**1.89**	**23**	⇑*i*P	**Pn**	**18 48 39.1**	**+0.2**
ROCH				*i* S	**Sn**	**18 49 03.6**	**+2.0**
ROCH				AML	AML	18 49 07.0	
	comp=N,5µm,0.5s						
FCH	**Farellones**	**1.92**	**44**	⇑*i*P	**Pn**	**18 48 40.7**	**+1.4**
FCH				*i* S	**Sn**	**18 49 05.0**	**+2.6**
FCH				AML	AML	18 49 10.4	
	comp=N,5µm,0.3s						
CFAA	**Coronel Fontan**	**4.36**	**45**	P	**Pn**	**18 49 12.4**	**-0.1**
CFAA				Lg	Lg	18 50 12.1	
CFAA	**Coronel Fontan**	**4.36**	**45**	P	**Pn**	**18 49 12.4**	**-0.1**
	comp=N,1.1nm,0.3s,baz=217,slow=12,SNR=71						
CFAA				Lg	Lg	18 50 12.1	
	comp=N,3.6nm,0.3s,baz=346,slow=21,SNR=7.9						
LCO	**Las Campanas**	**5.79**	**10**	*e*Pn	**Pn**	**18 49 31.2**	**-1.2**
PLCA	**Paso Flores**	**6.09**	**170**	P	**Pn**	**18 49 38.1**	**+1.9**
PLCA				Lg	Lg	18 51 20.6	
PLCA	**Paso Flores**	**6.09**	**170**	P	**Pn**	**18 49 38.1**	**+1.9**
	comp=N,1.1nm,0.3s,baz=331,slow=12,SNR=17						
PLCA				Lg	Lg	18 51 20.6	
	comp=N,0.3nm,0.3s,baz=72,slow=23,SNR=5.3						
TRQA	**Tornquist**	**8.64**	**115**	*e*Pn	**Pn**	**18 50 11.4**	**+0.2**
CPUP	**Villa Florida**	**15.06**	**60**	P	**Pn**	**18 51 38.6**	**+0.2**
CPUP	**Villa Florida**	**15.06**	**60**	P	**Pn**	**18 51 38.6**	**+0.2**
	comp=N,0.2nm,0.3s,baz=230,slow=17,SNR=2.2						
CPUP				LR	LR	18 57 57.3	
	comp=N,111nm,18.6s,baz=44,slow=39						
LPAZ	**La Paz**	**18.67**	**11**	*e*P	**Pn**	**18 52 24.3**	**+0.1**
	comp=N,3.6nm,0.9s						
LPAZ	**La Paz**	**18.67**	**11**	P	**Pn**	**18 52 24.8**	**+0.5**
	comp=N,0.3nm,0.3s,baz=169,slow=9.7,SNR=13						
SAML	**Samuel**	**26.87**	**19**	*e*P	**P**	**18 53 44.2**	**-0.9**
	comp=N,1.2nm,0.7s						
QSPA	**South Pole Qui**	**55.51**	**180**	P	**P**	**18 57 39.3**	**+0.5**
QSPA				pP	**pP**	**18 57 52.6**	**+0.6**
QSPA	**South Pole Qui**	**55.51**	**180**	P	**P**	**18 57 39.3**	**+0.5**
	comp=N,0.9nm,0.8s,baz=120,slow=8.8,SNR=5.9						
QSPA				pP	**pP**	**18 57 52.6**	**+0.6**
	comp=N,2.8nm,0.8s,baz=136,slow=3.0,SNR=5.8						
TXAR	**Lajitas Array**	**70.43**	**331**	P	**P**	**18 59 19.0**	**+0.9**
TXAR				pP	**pP**	**18 59 31.6**	**-0.2**
TXAR	**Lajitas Array**	**70.43**	**331**	P	**P**	**18 59 19.0**	**+0.9**
	comp=N,0.2nm,0.4s,baz=156,slow=8.5,SNR=3.3						
TXAR				pP	**pP**	**18 59 31.6**	**-0.2**
	comp=N,0.3nm,0.5s,baz=151,slow=9.1,SNR=4.2						
DBIC	**Dimbokro**	**75.28**	**71**	P	**P**	**18 59 46.7**	**-0.4**
	comp=N,5.4nm,0.8s						
DBIC	**Dimbokro**	**75.28**	**71**	P	**P**	**18 59 46.3**	**-0.8**
	comp=N,6.3nm,0.9s,baz=230,slow=11,SNR=3.3						
BOSA	**Boshof**	**79.61**	**118**	P	**P**	**19 00 10.3**	**-1.1**
BOSA	**Boshof**	**79.61**	**118**	P	**P**	**19 00 10.3**	**-1.1**
	comp=N,2.1nm,0.6s,baz=239,slow=5.6,SNR=5.2						
ECSD	**EROS Data Cent**	**81.28**	**342**	*e*P	**P**	**19 00 17.2**	**-2.4**
	comp=N,1.7nm,0.8s						
TORD	**Torodi Ar. Bea**	**84.33**	**70**	P	**P**	**19 00 36.0**	**-0.1**
TORD				pP	**pP**	**19 00 48.4**	**-1.7**
TORD	**Torodi Ar. Bea**	**84.33**	**70**	P	**P**	**19 00 36.0**	**-0.1**
	comp=N,1.4nm,0.8s,baz=252,slow=3.7,SNR=6.0						
TORD				pP	**pP**	**19 00 48.4**	**-1.7**
	comp=N,0.6nm,0.7s,baz=244,slow=4.7,SNR=2.8						
NVAR	**Mina Array Bea**	**84.56**	**325**	P	**P**	**19 00 38.5**	**+1.5**
NVAR				pP	**pP**	**19 00 51.3**	**+0.4**
NVAR	**Mina Array Bea**	**84.56**	**325**	P	**P**	**19 00 38.5**	**+1.5**
	comp=N,0.4nm,0.8s,baz=139,slow=7.0,SNR=3.1						
NVAR				pP	**pP**	**19 00 51.3**	**+0.4**
	comp=N,0.3nm,0.6s,baz=160,slow=6.4,SNR=3.1						
MKAR	**Makanchi Array**	**157.13**	**50**	PKPab	**PKPab**	**19 08 29.8**	**+0.1**
MKAR	**Makanchi Array**	**157.13**	**50**	PKPab	**PKPab**	**19 08 29.8**	**+0.1**
	comp=N,0.5nm,0.8s,baz=286,slow=4.9,SNR=5.6						

*NIED **27** 18:48:00,37.˚00N×141.˚20E,h47km,Mw3.2 Best double couple: M0 7.67000×10^13 NP1:φs17.00000°,δ73.00000°, λ-116.00000°. NP2:φs256.00000°,δ31.00000°, λ-35.00000°.*
JMA 27 18:48:11.0±0.1,**37.˚04N×141.˚19E,h70**km±1km,**M3.6, 4C-6D Broadband fault plane solution: P waves. NP1:**φs273.00000°,δ83.00000°,λ-58.00000°. **NP2:** φs14.00000°,δ33.00000°,λ-167.00000°. **Principal axes:** T Plg31.0000°, Azm337.0000°; N Plg32.0000°, Azm89.0000°; P Plg43.0000°, Azm214.0000°; **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.32**	**281**	⇓P	Pn	18 48 22.4	0.0
ONAJ				S	Sn	18 48 30.3	-0.4
JFK	**Kawauchi**	**0.41**	**322**	⇓P	Pn	18 48 23.0	-0.1
JFK				*e*S	Sn	18 48 31.6	-0.4
JHO	**Hitachi**	**0.66**	**230**	⇑P	Pn	18 48 25.4	0.0
JHO				*e*S	Sn	18 48 35.6	-0.5
JFT	**Otama**	**0.83**	**305**	⇑P	Pn	18 48 28.0	+0.5
JFT				S	Sn	18 48 40.4	+0.8
JMM	**Marumori**	**0.88**	**339**	⇓P	Pn	18 48 28.2	+0.2
JMM				S	Sn	18 48 40.8	+0.1
JFY	**Yanaizu**	**1.24**	**288**	⇑P	Pn	18 48 32.9	+0.3
JFY				S	Sn	18 48 49.2	+0.4
JOU	**Okura**	**1.39**	**343**	⇓P	Pn	18 48 34.5	0.0
JOU				*e*S	Sn	18 48 52.3	+0.1
JIO	**Ouri**	**1.42**	**5**	⇓P	Pn	18 48 34.7	-0.2
JIO				S	Sn	18 48 52.6	-0.2
JYS	**Shirataka**	**1.48**	**323**	⇑P	Pn	18 48 36.2	+0.5
JYS				*e*S	Sn	18 48 55.8	+1.5
JAG	**Ashikaga**	**1.52**	**247**	⇓P	Pn	18 48 36.7	+0.4
JAG				S	Sn	18 48 55.3	-0.1
JKT	**Katashina**	**1.58**	**261**	P	Pn	18 48 38.5	+1.4
JKT				*e*S	Sn	18 48 58.5	+1.6
JNS	**Sasagawa**	**1.68**	**298**	P	Pn	18 48 38.2	-0.2
MAT	**Matsushiro**	**2.44**	**259**	P	Pn	18 48 50.1	+1.4
MAT				S	Sn	18 49 19.7	+2.1

*ISK **27** 18:52:07.0,37.˚25N×28.˚35E,h20km, MD2.5*
*CSEM **27** 18:52:07.8±0.2,37.˚22N×28.˚36E,h20km,MD2.5, Error ellipse: s-maj=4.2km s-min=3.9km az=132.0*
*ISCJB **27** 18:52:08.2±0.6,37.˚23N±0.˚03×28.˚34E±0.˚05,h23km±7km, Error ellipse: s-maj=6.6km s-min=5.6km az=159.2*
*DDA **27** 18:52:08.2,37.˚23N×28.˚39E,h7km, MD2.7*
ISC 27 18:52:07.8±0.9,**37.˚22N**±0.˚03×**28.˚35E**±0.˚04,**h18**km±5km, **n21**,σ0.8**61**/32,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.10**	**214**	*e*PG	**Pg**	**18 52 11.3**	**-0.2**
YER				*e*SG	**Sg**	**18 52 14.5**	**+0.5**
YER	**Yerkesik**	**0.10**	**214**	*e*Pg	**Pg**	**18 52 11.3**	**-0.2**
YER				*e*Sg	**Sg**	**18 52 14.5**	**+0.5**
TURN	**Turunc**	**0.40**	**150**	*i* P	**Pb**	**18 52 17.1**	**+0.7**
TURN				*i* S	**Sn**	**18 52 24.9**	**-0.8**
DALY	**Dalyan (Mu¨la**	**0.47**	**149**	*e*PG	**Pb**	**18 52 17.5**	**0.0**
DALY				*e*SG	**Sb**	**18 52 25.1**	**+1.0**
DALY	**Dalyan (Mu¨la**	**0.47**	**149**	*e*Pg	**Pb**	**18 52 17.5**	**0.0**
DALY				*e*Sg	**Sb**	**18 52 25.1**	**+1.0**
AYDN	**Tasoluk**	**0.58**	**320**	*i* P	**Pg**	**18 52 20.2**	**+0.8**
AYDN				*e*S	**Sg**	**18 52 28.0**	**+0.8**
AYDN	**Tasoluk**	**0.58**	**320**	*i* P	**Pg**	**18 52 20.2**	**+0.8**
AYDN				*e*S	**Sg**	**18 52 28.0**	**+0.8**
DNZL	**Cakiroluk**	**0.72**	**49**	*i* P	**Pb**	**18 52 21.8**	**-0.2**
DNZL				*i* S	**Sb**	**18 52 32.1**	**+0.4**
DNZL	**Cakiroluk**	**0.72**	**49**	*i* P	**Pb**	**18 52 21.8**	**-0.2**
DNZL				*i* S	**Sb**	**18 52 32.1**	**+0.4**
DENT	**Denizli**	**0.76**	**45**	*e*PG	**Pb**	**18 52 22.0**	**-0.5**
DENT				*e*SG	**Sb**	**18 52 32.8**	**+0.2**
DENT	**Denizli**	**0.76**	**45**	*e*Pg	**Pb**	**18 52 22.0**	**-0.5**
DENT				*e*Sg	**Sb**	**18 52 32.8**	**+0.2**
DAT	**Datca**	**0.79**	**232**	*e*PG	**Pb**	**18 52 22.4**	**-0.7**
DAT	**Datca**	**0.79**	**232**	*e*Pg	**Pb**	**18 52 22.4**	**-0.7**
FETY	**Fethiye**	**0.83**	**135**	*e*PG	**Pg**	**18 52 24.1**	**+0.2**
FETY	**Fethiye**	**0.83**	**135**	*e*Pg	**Pg**	**18 52 24.1**	**+0.2**
BODT	**Bodrum**	**0.85**	**260**	*e*PG	**Pg**	**18 52 24.6**	**+0.3**
BODT	**Bodrum**	**0.85**	**260**	*e*Pg	**Pg**	**18 52 24.6**	**+0.3**
KULA	**Kula-Manisa**	**1.32**	**11**	*e*PN	**Pn**	**18 52 30.6**	**-0.8**
KULA	**Kula-Manisa**	**1.32**	**11**	*e*Pn	**Pn**	**18 52 30.6**	**-0.8**
ELL	**Elmali**	**1.33**	**110**	*e*PN	**Pn**	**18 52 31.1**	**-0.5**
ELL	**Elmali**	**1.33**	**110**	*e*Pn	**Pn**	**18 52 31.1**	**-0.5**

*CSEM **27** 18:57:25.4±0.1,44.˚38N×7.˚38E,h15km, ML2.5/10,Error ellipse: s-maj=3.1km s-min=2.2km az=73.0*
*ISCJB **27** 18:57:25.7±0.3,44.˚37N±0.˚02×7.˚39E±0.˚03,h21km±3km, Error ellipse: s-maj=3.5km s-min=2.7km az=168.2*
*ROM **27** 18:57:25.9±0.1,44.˚46N×7.˚47E,h10km, Md2.3/5,Ml1.8/3, Error ellipse: s-maj=2.1km s-min=0.9km az=37.0*
*GEN **27** 18:57:26.0,44.˚38N×7.˚38E,h12km,ML1.9*
*LDG **27** 18:57:26.2±0.1,44.˚36N×7.˚32E,h15km,Md2.5/2,Ml2.4/16, Error ellipse: s-maj=1.2km s-min=0.7km az=71.0*
*STR **27** 18:57:27.2±0.4,44.˚32N×7.˚38E,h5km,Ml2.3,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
ISC 27 18:57:25.0±0.9,**44.˚39N**±0.˚01×**7.˚35E**±0.˚02,**h19**km±2km, **n67**,σ1.9**12**/119,**Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.14**	**328**	Pg	**Pg**	**18 57 30.3**	**+1.0**
DOI				Sg	**Sg**	**18 57 33.0**	**+0.8**
	725nm,0.2s						
DOI	**San Damiano**	**0.14**	**328**	Pg	**Pg**	**18 57 30.3**	**+1.0**
DOI				Sg	**Sg**	**18 57 33.0**	**+0.8**
	725nm,0.2s						
ENR	**Entracque**	**0.17**	**163**	P	**Pb**	**18 57 29.5**	**+0.8**
ENR				S	**Sb**	**18 57 32.0**	**+1.0**
TOUF	**Mont Tournerai**	**0.38**	**191**	Pg	**Pg**	**18 57 33.5**	**+0.5**
TOUF				Sg	**Sg**	**18 57 37.8**	**-0.7**
TOUF	**Mont Tournerai**	**0.38**	**191**	Pg	**Pg**	**18 57 33.5**	**+0.5**
TOUF				Sg	**Sg**	**18 57 37.8**	**-0.7**
AUTN	**L'Aution**	**0.39**	**172**	Pg	**Pg**	**18 57 33.7**	**+0.4**
AUTN				Sg	**Sg**	**18 57 38.3**	**-0.6**
AUTN	**L'Aution**	**0.39**	**172**	Pg	**Pg**	**18 57 33.7**	**+0.4**
AUTN				Sg	**Sg**	**18 57 38.3**	**-0.6**
SAOF	**Saorge**	**0.43**	**160**	Pg	**Pg**	**18 57 34.2**	**+0.4**
SAOF				Sg	**Sg**	**18 57 39.4**	**-0.3**
SAOF	**Saorge**	**0.43**	**160**	Pg	**Pg**	**18 57 34.2**	**+0.4**
SAOF				Sg	**Sg**	**18 57 39.4**	**-0.3**
MVIF	**Mont Vial**	**0.51**	**196**	Pg	**Pg**	**18 57 35.8**	**+0.5**
MVIF				Sg	**Sg**	**18 57 42.2**	**-0.1**
MVIF	**Mont Vial**	**0.51**	**196**	Pg	**Pg**	**18 57 35.8**	**+0.5**
MVIF				Sg	**Sg**	**18 57 42.2**	**-0.1**
SBF	**Sospel**	**0.53**	**173**	*e*Pg	**Pb**	**18 57 36.2**	**+0.6**
SBF				*e*Sg	**Sg**	**18 57 42.9**	**+0.2**
	148nm,0.3s						
SBF	**Sospel**	**0.53**	**173**	*e*Pg	**Pb**	**18 57 36.2**	**+0.6**
SBF				*e*Sg	**Sg**	**18 57 42.9**	**+0.2**
	74nm,0.3s						
MBDF	**Montbardon**	**0.54**	**310**	*e*Pg	**Pb**	**18 57 36.8**	**+0.9**
MBDF				*e*Sg	**Sg**	**18 57 43.9**	**+0.8**
	57nm,0.3s						
MBDF	**Montbardon**	**0.54**	**310**	*e*Pg	**Pb**	**18 57 36.8**	**+0.9**
MBDF				*e*Sg	**Sg**	**18 57 43.9**	**+0.8**
	29nm,0.3s						
RORO	**Rocca Rossa**	**0.58**	**118**	Pg	**Pg**	**18 57 36.8**	**+0.2**
RORO				Sg	**Sg**	**18 57 44.7**	**+0.3**
RORO	**Rocca Rossa**	**0.58**	**118**	Pg	**Pg**	**18 57 36.8**	**+0.2**
RORO				Sg	**Sg**	**18 57 44.7**	**+0.3**
NEGI	**Seborga**	**0.59**	**155**	P	**Pb**	**18 57 37.1**	**+0.3**
NEGI				S	**Sg**	**18 57 44.6**	**-0.2**
REVF	**Revere**	**0.65**	**179**	Pg	**Pg**	**18 57 38.7**	**+0.9**
REVF				Sg	**Sg**	**18 57 46.8**	**+0.4**
REVF	**Revere**	**0.65**	**179**	Pg	**Pg**	**18 57 38.7**	**+0.9**
REVF				Sg	**Sg**	**18 57 46.8**	**+0.4**
CALN	**Calern**	**0.72**	**208**	Pg	**Pg**	**18 57 40.1**	**+1.0**
CALN				Sg	**Sg**	**18 57 49.6**	**+1.0**
CALN	**Calern**	**0.72**	**208**	Pg	**Pg**	**18 57 40.1**	**+1.0**
CALN				Sg	**Sg**	**18 57 49.6**	**+1.0**
FINB	**Finale Ligure**	**0.73**	**106**	Pg	**Pb**	**18 57 39.6**	**+0.5**
FINB				Sg	**Sb**	**18 57 48.9**	**+0.2**
FINB	**Finale Ligure**	**0.73**	**106**	Pg	**Pb**	**18 57 39.6**	**+0.5**
FINB				Sg	**Sb**	**18 57 48.9**	**+0.2**
RSP	**Reno Superiore**	**0.77**	**355**	Pg	**Pb**	**18 57 39.5**	**-0.2**
RSP				Sg	**Sb**	**18 57 49.3**	**-0.6**
	12nm,0.1s						
RSP	**Reno Superiore**	**0.77**	**355**	P	**Pb**	**18 57 39.6**	**-0.2**
RSP				S	**Sb**	**18 57 49.4**	**-0.5**
ROTM	**Rocchetta Tana**	**0.85**	**57**	P	**Pg**	**18 57 42.3**	**+0.7**
ROTM				S	**Sb**	**18 57 53.2**	**+0.9**
PCP	**Piancastagn**	**0.87**	**79**	P	**Pb**	**18 57 42.0**	**+0.5**
PCP				S	**Sb**	**18 57 52.6**	**-0.2**
FRF	**La Foret Royal**	**0.97**	**212**	*e*Pg	**Pn**	**18 57 44.0**	**+0.4**
FRF				*e*Sg	**Sb**	**18 57 56.3**	**+0.7**
	24nm,0.2s						
FRF	**La Foret Royal**	**0.97**	**212**	*e*Pg	**Pn**	**18 57 44.0**	**+0.4**
FRF				*e*Sg	**Sb**	**18 57 56.3**	**+0.7**
	12nm,0.2s						
TRAV	**Traversella**	**1.16**	**14**	P	**Pn**	**18 57 45.8**	**-0.6**
ORIF	**Oris-en-Rattie**	**1.18**	**297**	*e*Pg	**Pg**	**18 57 48.6**	**+0.8**
ORIF				*e*Sg	**Sn**	**18 58 03.3**	**+1.1**
	10.0nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.18**	**297**	*e*Pg	**Pg**	**18 57 48.6**	**+0.8**
ORIF				*e*Sg	**Sn**	**18 58 03.3**	**+1.1**
	5.0nm,0.3s						
LPG	**La Plagne**	**1.19**	**339**	*e*Pn	**Pb**	**18 57 47.8**	**+0.6**
LPG	**La Plagne**	**1.19**	**339**	*e*Pg	**Pg**	**18 57 49.3**	**+1.2**
LPG				*e*Sn	**Sb**	**18 58 02.4**	**+0.1**
LPG				*e*Sg	**Sg**	**18 58 05.1**	**+1.4**
	5.2nm,0.3s						
LPG	**La Plagne**	**1.19**	**339**	*e*Pn	**Pb**	**18 57 47.8**	**+0.6**
LPG	**La Plagne**	**1.19**	**339**	*e*Pg	**Pg**	**18 57 49.3**	**+1.2**
LPG				*e*Sn	**Sb**	**18 58 02.4**	**+0.1**
LPG				*e*Sg	**Sg**	**18 58 05.1**	**+1.4**
	2.6nm,0.3s						
LPL	**La Plagne**	**1.21**	**339**	*e*Pn	**Pn**	**18 57 48.0**	**+0.8**
LPL	**La Plagne**	**1.21**	**339**	*e*Pg	**Pg**	**18 57 49.5**	**+1.0**
LPL				*e*Sn	**Sb**	**18 58 02.7**	**-0.2**
LPL				*e*Sg	**Sg**	**18 58 05.7**	**+1.3**
	5.8nm,0.3s						
LPL	**La Plagne**	**1.21**	**339**	*e*Pn	**Pn**	**18 57 48.0**	**+0.8**
LPL	**La Plagne**	**1.21**	**339**	*e*Pg	**Pg**	**18 57 49.5**	**+1.0**
LPL				*e*Sn	**Sb**	**18 58 02.7**	**-0.2**
LPL				*e*Sg	**Sg**	**18 58 05.7**	**+1.3**
	2.9nm,0.3s						
LMR	**La Mourre**	**1.22**	**210**	*e*Pg	**Pb**	**18 57 48.2**	**+0.8**
LMR				*e*Sg	**Sn**	**18 58 03.8**	**+0.9**
	26nm,0.2s						
LMR	**La Mourre**	**1.22**	**210**	*e*Pg	**Pb**	**18 57 48.2**	**+0.8**
LMR				*e*Sg	**Sn**	**18 58 03.8**	**+0.9**
	13nm,0.2s						
SMRF	**Simiane la Rot**	**1.34**	**253**	*e*P	**Pb**	**18 57 50.3**	**+0.7**
SMRF	**Simiane la Rot**	**1.34**	**253**	*e*Pg	**Pg**	**18 57 50.9**	**0.0**
SMRF				*e*Sg	**Sg**	**18 58 08.1**	**-0.3**
	16nm,0.3s						
SMRF	**Simiane la Rot**	**1.34**	**253**	*e*P	**Pb**	**18 57 50.3**	**+0.7**
SMRF	**Simiane la Rot**	**1.34**	**253**	*e*Pg	**Pg**	**18 57 50.9**	**0.0**
SMRF				*e*Sg	**Sg**	**18 58 08.1**	**-0.3**
	8.1nm,0.3s						
VIVF	**Saint-Julien-l**	**1.97**	**285**	*e*P	**Pb**	**18 57 59.9**	**-0.4**
VIVF	**Saint-Julien-l**	**1.97**	**285**	*e*Pg	**Pg**	**18 58 02.6**	**-0.2**
VIVF				*e*Sn	**Sn**	**18 58 20.1**	**-1.

SJG	San Juan	1.95 238	⇑eP	Pn	19 08 30.6	-0.2
SJG	San Juan	1.95 238	⇑eP	Pn	19 08 30.7	-0.1
SJG			eS	Sn	19 08 53.9	-0.2
SJG			eS	Sn	19 08 53.9	-0.2
SJG	San Juan	1.95 238	⇑eP	Pn	19 08 30.7	-0.1
SJG			eS	Sn	19 08 53.9	-0.2
CELP	Cerrillos	2.32 243	⇑eP	Pn	19 08 36.1	+0.2
CELP			eS	Sn	19 09 04.2	+0.9
CELP	Cerrillos	2.32 243	⇑eP	Pn	19 08 36.1	+0.2
CELP			eS	Sn	19 09 04.2	+0.9
CELP	Cerrillos	2.32 243	⇑eP	Pn	19 08 36.1	+0.2
CELP			eS	Sn	19 09 04.2	+0.9
OBIP	Obispado Ponce	2.36 242	⇑eP	Pn	19 08 36.9	+0.4
OBIP	Obispado Ponce	2.36 242	⇑eP	Pn	19 08 36.9	+0.4
OBIP			eS	Sn	19 09 04.5	+0.2
OBIP	Obispado Ponce	2.36 242	⇑eP	Pn	19 08 36.9	+0.4
OBIP			eS	Sn	19 09 04.5	+0.2
AOPR	Arecibo Observ	2.36 250	⇑eP	Pn	19 08 36.9	+0.4
AOPR			eS	Sn	19 09 03.9	-0.4
AOPR	Arecibo Observ	2.36 250	⇑eP	Pn	19 08 36.9	+0.4
AOPR			eS	Sn	19 09 03.9	-0.4
AOPR	Arecibo Observ	2.36 250	⇑eP	Pn	19 08 36.9	+0.4
AOPR			eS	Sn	19 09 03.9	-0.4
LRS	Lares	2.46 250	ePn	Pn	19 08 38.1	+0.2
AGPR	Aguadilla, PR	2.65 255	ePn	Pn	19 08 40.0	-0.4
LSP	Las Mesas	2.72 249	⇑eP	Pn	19 08 42.0	+0.6
LSP			eS	Sn	19 09 13.1	0.0
LSP	Las Mesas	2.72 249	⇑eP	Pn	19 08 42.0	+0.6
LSP			eS	Sn	19 09 13.1	0.0
LSP	Las Mesas	2.72 249	⇑eP	Pn	19 08 42.0	+0.6
LSP			eS	Sn	19 09 13.1	0.0
LZG	Guadaloupe-1	3.92 140	eP	Pn	19 09 00.3	+2.5
SDDR	Presa de Saban	6.51 270	ePn	Pn	19 09 34.5	+1.1
SDDR			eSn	Sn	19 10 45.5	-0.9

*IDC **27** 19:18:30.4±1.5, 6.°35S×130.°16E, h0km, mb3.9/3, mb1 4.0/6, mb1mx3.7/20, mbtmp3.9/6, ML3.8/3, Error ellipse: s-maj=89.3km s-min=21.6km az=73.0*
*ISCJB **27** 19:18:46.1±0.7, 6.°98S±0.°05×129.°67E±0.°08, h146km, mb3.6/3, Error ellipse: s-maj=11.9km s-min=6.6km az=171.0*
*AUST **27** 19:18:47.8, 6.°98S×130.°04E, h100km*

ISC 27 19:18:48.2±1.1, 7.°12S±0.°07×129.°83E±0.°10, h146km, n15, σ2°65/17, mb3.8/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.58**	**2**	P	**Pn**	**19 19 29.8**	**-0.3**
	baz=2.5,SNR=5.9						
FAKI	**Fak Fak**	**4.81**	**30**	P	**Pn**	**19 19 56.3**	**-2.8**
	baz=4.6,SNR=9.4						
FAKI				S	Sn	19 20 45.3	-9.1
	baz=4.6,SNR=4.3						
MTN	**Manton Dam**	**5.83**	**167**	P	Pn	19 20 15.6	+3.0
	baz=6.0,SNR=36						
MTN				S	**Sn**	**19 21 20.7**	**+2.0**
	baz=6.0,SNR=12						
KDU	**Kakadu**	**6.12**	**155**	P	Pn	19 20 19.2	+2.8
	baz=6.2,SNR=121						
KDU				S	**Sn**	**19 21 27.5**	**+2.1**
	baz=6.2,SNR=7.7						
KNRA	**Kununurra**	**8.57**	**187**	P	**Pn**	**19 20 50.3**	**+1.0**
	baz=8.8,SNR=30						
KNRA				S	**Sn**	**19 22 21.6**	**-3.0**
	baz=8.8,SNR=7.3						
FITZ	**Fitzroy Crossi**	**11.66**	**200**	Pn	**Pn**	**19 21 29.0**	**-1.2**
	0.3nm,0.3s,baz=16,slow=13,SNR=19						
FITZ				Sn	Sn	19 23 31.5	-7.5
	0.7nm,0.3s,baz=108,slow=13,SNR=5.2						
FITZ	**Fitzroy Crossi**	**11.66**	**200**	P	**Pn**	**19 21 29.4**	**-0.8**
	baz=12,SNR=7.7						
FITZ				S	**Sn**	**19 23 35.9**	**-3.2**
	baz=12,SNR=3.5						
WRA	**Warramunga Arr**	**13.48**	**162**	Pn	**Pn**	**19 21 53.2**	**-0.5**
	0.5nm,0.3s,baz=342,slow=13,SNR=22						
WRA				Sn	**Sn**	**19 24 18.5**	**-4.4**
	1.0nm,0.3s,baz=335,slow=23,SNR=7.7						
COEN	**Coen**	**14.77**	**118**	P	P	19 22 15.0	+2.8
	baz=15,SNR=14						
COEN				S	**Sn**	**19 24 51.7**	**-2.3**
	baz=15,SNR=5.1						
QIS	**Mount Isa**	**16.38**	**146**	P	**P**	**19 22 33.5**	**+3.5**
	baz=16,SNR=8.8						
ASAR	**Alice Springs**	**16.91**	**167**	P	**Pn**	**19 22 38.7**	**+2.3**
	0.4nm,0.3s,baz=342,slow=9.0,SNR=67						
ASAR				S	**S**	**19 25 42.2**	**-2.6**
	0.2nm,0.3s,baz=356,slow=27,SNR=5.3						
QLP	**Quilpie**	**23.72**	**146**	P	**P**	**19 23 49.4**	**+2.5**
	baz=24,SNR=5.1						
STKA	**Stephens Creek**	**26.97**	**158**	P	**P**	**19 24 18.2**	**+2.0**
	1.7nm,0.8s,baz=346,slow=8.3,SNR=3.6						
MKAR	**Makanchi Array**	**68.23**	**327**	P	P	19 29 30.2	-2.9
	0.7nm,0.3s,baz=115,slow=8.2,SNR=18						
ZALV	**Zalesovo Beam**	**71.61**	**334**	P	P	19 29 50.4	-3.1
	0.2nm,0.3s,baz=116,slow=5.6,SNR=2.3						

*AUST **27** 19:27:58.9±4.2, 8.°11S×118.°10E, h0km, Error ellipse: s-maj=1.1km s-min=1.0km az=11.0*
*IDC **27** 19:28:01.6±1.3, 8.°09S×118.°56E, h0km, mb3.8/4, mb1 3.9/7, mb1mx3.6/24, mbtmp3.8/7, ML3.8/3, Error ellipse: s-maj=46.0km s-min=17.3km az=65.0*

ISC 27 19:28:06.2±1.1, 8.°07S±0.°06×118.°5E±0.°1, h35km, n18, σ1°45/18, mb3.8/4, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	**Waingapu**	**2.40**	**132**	P	**Pn**	**19 28 43.9**	**+1.0**
	baz=2.7,SNR=10						
KAPI	**Kappang**	**3.28**	**23**	Pn	**Pn**	**19 28 54.3**	**-0.8**
	7.7nm,0.3s,baz=205,slow=6.0,SNR=19						
KAPI				Sn	**Sn**	**19 29 34.7**	**+1.8**
	25nm,0.3s,baz=113,slow=22,SNR=15						
JAGI	**Jajag, Banyuwa**	**4.31**	**264**	P	Pn	19 29 01.2	-8.1
	baz=3.9,SNR=8.0						
FITZ	**Fitzroy Crossi**	**12.16**	**146**	Pn	**Pn**	**19 30 55.9**	**-1.2**
	0.4nm,0.3s,baz=331,slow=10,SNR=10						
FITZ				Sn	**Sn**	**19 33 12.2**	**+0.7**
	0.4nm,0.3s,baz=197,slow=19,SNR=4.1						
FITZ	**Fitzroy Crossi**	**12.16**	**146**	P	**Pn**	**19 30 57.8**	**+0.8**
	baz=12,SNR=5.8						
FITZ				S	Sn	19 33 17.6	+6.1
	baz=12,SNR=3.3						
KNRA	**Kununurra**	**12.58**	**128**	P	**Pn**	**19 31 04.6**	**+1.9**
	baz=13,SNR=7.2						
MTN	**Manton Dam**	**13.31**	**112**	P	**Pn**	**19 31 13.1**	**+0.3**
	baz=14,SNR=5.2						
KDU	**Kakadu**	**14.50**	**110**	P	**Pn**	**19 31 28.7**	**-0.3**
	baz=15,SNR=4.1						
MEEK	**Meekatharra**	**18.47**	**180**	P	**P**	**19 32 16.9**	**-2.3**
	baz=18,SNR=3.5						
MEEK				S	Sn	19 35 24.0	-21
	baz=18,SNR=6.8						
WRA	**Warramunga Arr**	**19.37**	**129**	P	**P**	**19 32 28.2**	**-0.8**
	0.4nm,0.3s,baz=303,slow=13,SNR=24						
ASAR	**Alice Springs**	**21.42**	**138**	P	**P**	**19 32 51.0**	**-0.3**
	2.6nm,0.6s,baz=313,slow=9.2,SNR=30						
COEN	**Coen**	**24.92**	**106**	P	**P**	**19 33 26.5**	**+0.2**
	baz=25,SNR=7.1						
MTSU	**Mount Surprise**	**27.04**	**114**	P	**P**	**19 33 46.6**	**+1.2**
	baz=27,SNR=5.2						
MANU	**Manus Island**	**29.37**	**80**	P	P	19 34 11.0	+4.7
	baz=30,SNR=5.2						
MANU				S	**S**	**19 38 54.7**	**-3.2**
	baz=30,SNR=8.1						
STKA	**Stephens Creek**	**31.99**	**141**	P	**P**	**19 34 28.8**	**-0.5**
	0.6nm,0.4s,baz=315,slow=8.6,SNR=5.7						
MILA	**Mila**	**40.09**	**141**	P	P	19 35 29.6	-8.9
	baz=40,SNR=8.9						
MKAR	**Makanchi Array**	**63.40**	**333**	P	**P**	**19 38 33.6**	**+1.4**
	0.3nm,0.7s,baz=147,slow=6.8,SNR=5.0						
ZALV	**Zalesovo Beam**	**67.99**	**339**	P	**P**	**19 39 02.5**	**+0.9**
	0.8nm,0.6s,baz=144,slow=6.0,SNR=4.2						

IDC 27 19:40:44.1±4.0, 29.°37N×67.°68E, h0km, mb3.5/7, mb1 3.7/8, mb1mx3.4/32, mbtmp3.6/8, ML3.8/1, Error ellipse: s-maj=95.3km s-min=27.5km az=140.0, Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	**Ala-Archa**	**14.33**	**21**	Pn	Pn	19 44 07.8	-0.7
	0.4nm,0.3s,baz=187,slow=17,SNR=3.7						
MKAR	**Makanchi Array**	**20.79**	**29**	P	P	19 45 26.8	-0.1
	0.9nm,0.6s,baz=210,slow=10,SNR=14						
KURBB	**Kurchatov Arra**	**22.75**	**18**	P	P	19 45 47.4	-0.4
	0.8nm,0.6s,baz=212,slow=9.3,SNR=9.6						
BVAR	**Borovoye Array**	**23.72**	**4**	P	P	19 45 57.9	+0.2
	0.4nm,0.5s,baz=148,slow=8.5,SNR=2.8						
ZALV	**Zalesovo Beam**	**27.55**	**22**	P	P	19 46 33.3	+0.8
	0.3nm,0.3s,baz=224,slow=10,SNR=2.3						
FINES	**FINESS Array B**	**42.14**	**332**	P	P	19 48 37.5	-0.4
	1.4nm,0.9s,baz=126,slow=14,SNR=3.4						
ARCES	**ARCESS Array B**	**46.82**	**341**	P	P	19 49 15.6	+0.4
	2.7nm,1.1s,baz=122,slow=8.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**62.85**	**270**	P	P	19 51 12.0	-0.2
	0.7nm,1.1s,baz=59,slow=6.3,SNR=4.3						

*ISCJB **27** 19:46:14.9±0.5, 37.°26N±0.°03×71.°60E±0.°10, h109km, mb3.8/3, Error ellipse: s-maj=11.0km s-min=4.5km az=4.5*
*NNC **27** 19:46:16.7±8.9, 37.°36N×71.°24E, h104km±110km, mb3.4, mpv3.8, Error ellipse: s-maj=69.2km s-min=44.1km az=3.0*
*IDC **27** 19:46:17.4±8.0, 37.°33N×71.°78E, h119km±56km, mb3.5/3, mb1 3.5/8, mb1mx3.1/31, mbtmp3.4/8, Error ellipse: s-maj=69.5km s-min=45.2km az=167.0*

ISC 27 19:46:15.9±0.8, 37.°26N±0.°05×71.°6E±0.°1, h109km, n31, σ1°15/34, mb3.8/3, 6C-5D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**3.43**	**176**	P	**Pn**	**19 47 08.5**	**+0.7**
CEP				S	**Sn**	**19 47 47.0**	**-0.8**
CHCP	**Chirah Chowk**	**3.83**	**159**	P	**Pn**	**19 47 14.2**	**+1.2**
THW	**Thamme Wali**	**4.45**	**179**	P	**Pn**	**19 47 21.6**	**+0.2**
AML	**Almayashu**	**5.12**	**17**	P	**Pn**	**19 47 32.0**	**+1.4**
	SNR=41						
SARP	**Sargodha**	**5.39**	**171**	P	**Pn**	**19 47 33.2**	**-0.8**
UCH	**Uchtor**	**5.44**	**23**	P	**Sn**	**19 48 35.2**	**-1.4**
	SNR=12						
KZA	**Kyzart**	**5.56**	**29**	P	**Pn**	**19 47 37.5**	**+0.8**
	SNR=12						
EKS2	**Erkin-Say**	**5.64**	**16**	P	**Pn**	**19 47 39.2**	**+1.7**
	SNR=20						
AAK	**Ala-Archa**	**5.80**	**21**	P	**Pn**	**19 47 41.4**	**+1.7**
	SNR=6.2						
AAK	**Ala-Archa**	**5.80**	**21**	P	**Pn**	**19 47 40.6**	**+0.9**
	3.8nm,0.3s,baz=174,slow=6.9,SNR=9.9						
AAK				S	**Sn**	**19 48 45.0**	**0.0**
	2.0nm,0.3s,baz=117,slow=23,SNR=16						
KK31	**Karatay Array**	**5.90**	**352**	⇑P	**Pn**	**19 47 41.7**	**+0.8**
	3.6nm,0.2s,baz=175,slow=13,SNR=160						
KK31				⇓S	**Sn**	**19 48 45.2**	**-2.0**
	2.4nm,0.2s,baz=182,slow=24,SNR=4.0						
ULHL	**Ulahol**	**6.12**	**34**	P	**Pn**	**19 47 44.8**	**+0.8**
	SNR=6.1						
CHMS	**Chumysh**	**6.21**	**22**	P	**Pn**	**19 47 46.5**	**+1.4**
	SNR=10						
TKM2	**Tokmak 2**	**6.42**	**27**	⇑P	**Pn**	**19 47 48.9**	**+0.8**
	1.8nm,0.3s						
TKM2				⇓S	**Sn**	**19 49 01.6**	**+1.6**
	1.9nm,0.6s						
TKM2	**Tokmak 2**	**6.42**	**27**	P	**Pn**	**19 47 49.2**	**+1.1**
	SNR=5.6						
MK31	**Makanchi Array**	**12.38**	**36**	⇑P	**Pn**	**19 49 06.3**	**-2.0**
	0.4nm,0.6s,baz=225,slow=14,SNR=4.0						
MKAR	**Makanchi Array**	**12.38**	**36**	P	**Pn**	**19 49 07.3**	**-0.9**
	0.1nm,0.3s,baz=220,slow=14,SNR=6.0						
KURBB	**Kurchatov Arra**	**14.25**	**18**	⇑P	**P**	**19 49 35.7**	**-0.7**
	1.4nm,0.5s						
KURBB	**Kurchatov Arra**	**14.25**	**18**	P	**Pn**	**19 49 30.5**	**-1.9**
	0.0nm,0.3s,baz=207,slow=12,SNR=3.3						
AB31	**Akbulak array**	**14.69**	**328**	⇓P	**Pn**	**19 49 36.8**	**-1.3**
	1.5nm,0.5s,baz=137,slow=12,SNR=34						
VOSK	**Vostochnaya**	**15.47**	**359**	⇑P	Pn	19 49 42.7	-5.3
	1.2nm,0.7s						
BVA0	**Borovoye Array**	**15.79**	**357**	⇓P	**Pn**	**19 49 50.9**	**-1.1**
	1.3nm,0.6s,baz=161,slow=11,SNR=11						
BVAR	**Borovoye Array**	**15.79**	**357**	P	**Pn**	**19 49 50.9**	**-1.1**
	0.1nm,0.3s,baz=153,slow=16,SNR=5.5						
ZRNK	**Zerenda**	**15.80**	**354**	⇑P	**P**	**19 49 54.2**	**+0.5**
	1.3nm,0.5s						
AKTO	**Aktyubinsk**	**16.40**	**328**	⇓P	**P**	**19 50 00.8**	**+0.5**
	3.4nm,0.5s						
AKTO	**Aktyubinsk**	**16.40**	**328**	P	**P**	**19 50 00.3**	**0.0**
	1.1nm,0.3s,baz=144,slow=10.0,SNR=17						
ZALV	**Zalesovo Beam**	**19.02**	**24**	P	**P**	**19 50 29.1**	**+0.1**
	0.7nm,0.3s,baz=213,slow=9.6,SNR=12						
FINES	**FINESS Array B**	**37.15**	**325**	P	**P**	**19 53 16.0**	**+0.3**
	0.6nm,0.4s,baz=112,slow=10,SNR=9.3						
ARCES	**ARCESS Array B**	**40.65**	**337**	P	**P**	**19 53 45.1**	**+0.3**
	2.0nm,0.8s,baz=110,slow=8.1,SNR=14						
NB2	**NORSAR Subarra**	**44.09**	**323**	P	**P**	**19 54 13.7**	**+0.9**
	comp=Z,0.6nm,0.5s,baz=92,slow=7.9						
NOA	**NORSAR Array B**	**44.09**	**323**	P	**P**	**19 54 13.8**	**+0.9**
	comp=Z,0.7nm,0.5s,baz=94,slow=7.6,SNR=6.1						

*IDC **27** 19:53:03.9±3.7, 4.°44N×75.°56W, h0km, Error ellipse: s-maj=720.2km s-min=16.1km az=160.0*
*FUNV **27** 19:53:36.5, 6.°49N×72.°62W, h9km, MW2.5*

ISC 27 19:53:30.6±2.0, 6.°5N±0.°4×73.°0W±0.°3, h250km, n10, σ0°86/5, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAPV	**Capacho**	**1.52**	**28**	eP	Pn	19 54 01.6	-7.7
CAPV				eS	S	19 54 21.3	-19
ROSC	**El Rosal**	**2.09**	**218**	Pg	Pn	19 53 30.9	-43
	11nm,0.3s,baz=265,slow=12,SNR=25						
ROSC				Lg	Lg	19 53 44.6	
	25nm,0.3s,baz=286,slow=22,SNR=9.6						
SOCV	**Socops**	**2.79**	**51**	eP	Pn	19 54 16.6	-4.2
SOCV				eS	S	19 54 46.2	-14
VIGV	**El Vigia**	**2.85**	**35**	eP	Pn	19 54 18.8	-2.6
VIGV				eS	S	19 54 49.4	-12
QARV	**Quebrada Arrib**	**4.43**	**34**	eS	S	19 55 26.8	-7.8
CURV	**Curarigua**	**4.62**	**41**	eP	**Pn**	**19 54 41.6**	**-0.2**
BAUV	**El Baul**	**5.50**	**64**	eP	**Pn**	**19 54 52.3**	**-0.2**
MAPV	**Macapo**	**5.60**	**54**	eP	**Pn**	**19 54 54.2**	**+0.4**
ASAR	**Alice Springs**	**149.00**	**234**	PKPbc	**PKPdf**	**20 12 44.9**	**-0.7**
	0.2nm,0.4s,baz=119,slow=8.8						
WRA	**Warramunga Arr**	**150.26**	**241**	PKPbc	**PKPdf**	**20 12 48.5**	**+0.8**
	0.2nm,0.9s,baz=108,slow=2.9,SNR=4.9						

IDC 27 19:59:19.8±1.6, 5.°13S×152.°83E, h0km, mb3.8/8, mb1 4.0/9, mb1mx3.8/20, mbtmp3.8/9, ML2.4/1, Error ellipse: s-maj=58.8km s-min=18.8km az=123.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.05**	**233**	Pn	Pn	20 01 04.9	+0.6
	0.4nm,0.3s,baz=76,slow=14,SNR=2.0						
PMG				Sn	Sn	20 02 22.7	-2.5
	1.8nm,0.3s,baz=151,slow=18,SNR=5.1						
WRA	**Warramunga Arr**	**23.25**	**229**	P	P	20 04 29.1	+0.1
	0.8nm,0.4s,baz=52,slow=9.8,SNR=13						
ASAR	**Alice Springs**	**25.93**	**223**	P	P	20 04 54.3	+0.3
	0.5nm,0.4s,baz=57,slow=8.9,SNR=24						
FITZ	**Fitzroy Crossi**	**29.53**	**242**	P	P	20 05 25.6	-0.7
	1.6nm,0.5s,baz=73,slow=8.4,SNR=8.4						
CMAR	**Chiang Mai Arr**	**58.04**	**295**	P	P	20 09 15.4	+0.2
	1.0nm,0.9s,baz=95,slow=5.0,SNR=6.0						
PETK	**Petropavlovsk-**	**58.17**	**3**	P	P	20 09 16.3	+0.9
	0.8nm,0.6s,baz=172,slow=8.8,SNR=5.3						
MKAR	**Makanchi Array**	**80.59**	**319**	P	P	20 11 34.4	0.0
	0.2nm,0.6s,baz=96,slow=5.8,SNR=2.9						
ZALV	**Zalesovo Beam**	**81.44**	**326**	P	P	20 11 37.7	-1.0
	0.7nm,0.7s,baz=108,slow=8.0,SNR=3.6						
ILAR	**Eielson Array**	**82.45**	**22**	P	P	20 11 43.5	-0.3
	1.6nm,0.7s,baz=250,slow=5.4,SNR=18						
TORD	**Torodi Ar. Bea**	**150.44**	**288**	PKPbc	PKPbc	20 19 14.2	-0.3
	1.2nm,0.7s,baz=83,slow=2.1,SNR=14						

IDC 27 20:06:34.1±1.8, 8.°10N×104.°47W, h0km, mb3.7/5, mb1 4.1/6, mb1mx3.9/20, mbtmp3.8/6, ML3.9/1, MS3.4/9, Ms1 3.3/9, ms1mx3.0/39, Error ellipse: s-maj=53.5km s-min=26.6km az=57.0, Northern East Pacific Rise

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEIG	**Tepich**	**19.77**	**51**	P	P	20 11 05.9	0.0
	0.4nm,0.3s,baz=152,slow=2.1,SNR=3.4						
TEIG				LR	LR	20 17 45.0	
	comp=Z,54nm,21.2s,baz=287,slow=34						
TXAR	**Lajitas Array**	**21.13**	**2**	P	P	20 11 20.6	-0.2
	1.3nm,0.9s,baz=182,slow=13,SNR=7.4						
TXAR				LR	LR	20 20 19.1	
	comp=Z,40nm,18.6s,baz=170,slow=39						
ANMO	**Albuquerque**	**26.78**	**356**	LR	LR	20 21 32.6	
	comp=Z,46nm,19.6s,baz=302,slow=34						
PDAR	**Pinedale Array**	**34.81**	**353**	P	P	20 13 26.9	-0.1
	1.5nm,1.0s,baz=163,slow=9.4,SNR=7.9						
YBH	**Yreka Blue Hor**	**37.18**	**337**	LR	LR	20 26 39.7	
	comp=Z,19nm,20.3s,baz=218,slow=32						
NEW	**Newport**	**41.43**	**347**	P	P	20 14 22.9	+0.4
	1.2nm,0.7s,baz=167,slow=19,SNR=3.6						
ULM	**Lac du Bonnet**	**42.62**	**8**	LR	LR	20 31 25.6	
	comp=Z,53nm,19.5s,baz=337,slow=35						
LPAZ	**La Paz**	**43.37**	**124**	P	P	20 14 39.2	-0.3
	1.0nm,0.7s,baz=296,slow=8.9,SNR=4.7						
PPT	**Papeete**	**51.34**	**240**	LR	LR	20 31 07.1	
	comp=Z,164nm,21.1s,baz=14,slow=29						
YKA	**Yellowknife Ar**	**54.79**	**354**	LR	LR	20 40 38.1	
	comp=Z,3.8nm,18.1s,baz=335,slow=37						
ILAR	**Eielson Array**	**63.91**	**341**	P	P	20 17 07.9	-0.7
	0.2nm,0.6s,baz=159,slow=4.6,SNR=4.8						
RPZ	**Rata Peaks**	**91.56**	**226**	LR	LR	20 52 31.3	
	comp=Z,121nm,18.2s,baz=294,slow=30						
QSPA	**South Pole Qui**	**98.08**	**180**	LR	LR	20 56 02.0	
	comp=Z,51nm,19.8s,baz=346,slow=30						
CMAR	**Chiang Mai Arr**	**144.92**	**319**	PKP	PKPdf	20 26 14.2	-0.1
	0.6nm,0.7s,baz=22,slow=2.1,SNR=5.4						

*IDC **27** 20:33:09.1±1.2, 27.°80S×71.°57W, h0km, mb3.8/1, mb1 3.8/4, mb1mx3.6/19, mbtmp3.7/4, ML3.6/3, Error ellipse: s-maj=46.5km s-min=26.7km az=86.0*
*GUC **27** 20:33:13.5±0.5, 27.°94S×71.°24W, h24km±4km, ML3.8*

ISC 27 20:33:12.7±1.0, 27.°97S±0.°04×71.°2W±0.°2, h22km±5km, n12, σ1°60/16, 1D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPCH	**Copiapo**	**0.93**	**49**	eP	**Pn**	**20 33 30.8**	**+0.3**
CPCH				i S	**Sb**	**20 33 44.0**	**+2.0**
CPCH				AML	AML	20 33 48.9	
	comp=N,10μm,0.1s						
CDCH	**Caldera**	**0.94**	**18**	eP	**Pb**	**20 33 29.8**	**-0.5**
CDCH				i S	**Sb**	**20 33 42.8**	**+0.4**
CDCH				AML	AML	20 33 46.1	
	comp=N,3μm,0.4s						
LCO	**Las Campanas**	**1.11**	**159**	⇓iP	**Pn**	**20 33 34.6**	**+1.4**
LCO				i S	**Sb**	**20 33 50.3**	**+2.8**
LCO				AML	AML	20 33 53.1	
	comp=E,4μm,0.4s						
TLL	**Tololo Astrono**	**2.21**	**172**	eP	**Pb**	**20 33 51.4**	**-0.8**
TLL				i S	**Sb**	**20 34 19.6**	**+0.4**
TLL				AML	AML	20 34 32.2	
	comp=N,744nm,0.6s						
CFAA	**Coronel Fontan**	**4.42**	**146**	Pn	Pn	20 34 23.7	+5.2
	comp=N,0.9nm,0.3s,baz=316,slow=13,SNR=26						
CFAA				Sn	**Sb**	**20 35 19.0**	**-3.5**
	comp=N,0.8nm,0.3s,baz=230,slow=21,SNR=12						
LVC	**Limon Verde**	**5.70**	**21**	Pn	**Pn**	**20 34 36.1**	**-0.3**
	comp=N,2.0nm,0.3s,baz=176,slow=8.8,SNR=11						
LVC				Lg	Lg	20 36 01.4	
	comp=N,6.7nm,0.3s,baz=108,slow=16,SNR=7.2						
LPAZ	**La Paz**	**11.95**	**14**	Pn	**Pn**	**20 36 01.1**	**-1.3**
	comp=N,0.2nm,0.3s,baz=215,slow=3.8,SNR=5.5						
TORD	**Torodi Ar. Bea**	**81.45**	**70**	P	**P**	**20 45 29.1**	**+0.6**
	comp=N,0.6nm,0.6s,baz=253,slow=4.4,SNR=5.1						
ASAR	**Alice Springs**	**123.26**	**208**	PKP	**PKPdf**	**20 52 07.9**	**-0.6**
	comp=N,0.2nm,0.8s,baz=177,slow=3.5,SNR=2.9						
WRA	**Warramunga Arr**	**126.37**	**210**	PKP	**PKPdf**	**20 52 14.7**	**+0.1**
	comp=N,0.1nm,0.5s,baz=155,slow=1.8,SNR=4.6						
ZALV	**Zalesovo Beam**	**148.63**	**28**	PKPbc	**PKPbc**	**20 52 58.4**	**+0.8**
	comp=N,0.3nm,0.4s,baz=300,slow=3.3,SNR=3.5						
MKAR	**Makanchi Array**	**151.95**	**41**	PKPbc	**PKPbc**	**20 53 05.8**	**-0.1**
	comp=N,0.3nm,0.8s,baz=285,slow=2.8,SNR=2.7						

IDC 27 20:35:16.1±28.0, 23.°86S×179.°39E, h581km±264km, mb2.7/4, mb1 2.9/4, mb1mx2.7/17, mbtmp2.7/4, Error ellipse: s-maj=232.2km s-min=53.5km az=113.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**41.49**	**261**	P	P	20 42 13.7	0.0
	0.4nm,0.5s,baz=100,slow=7.2,SNR=12						
WRA	**Warramunga Arr**	**41.85**	**266**	P	P	20 42 16.2	-0.4
	1.2nm,0.8s,baz=96,slow=8.4,SNR=13						
MJAR	**Matsushiro Arr**	**71.55**	**326**	P	P	20 45 39.1	-0.1
	0.3nm,0.5s,baz=156,slow=6.1,SNR=3.5						
PETK	**Petropavlovsk-**	**78.93**	**347**	P	P	20 46 19.9	+0.1
	0.8nm,0.6s,baz=113,slow=9.1,SNR=3.5						
**AR

SART				*e*S		**Sb**	**21 31 08.4**	**+0.3**
BALY	**Balya**	**0.71**	**190**	*i* P		**Pb**	**21 31 04.2**	**+0.2**
BALY				*e*S		**Sg**	**21 31 12.3**	**-1.0**
BALY	**Balya**	**0.71**	**190**	*i* P		**Pb**	**21 31 04.2**	**+0.2**
BALY				*e*S		**Sg**	**21 31 12.3**	**-1.0**
LPK	**Lapseki**	**0.78**	**265**	*e*PG		**Pg**	**21 31 04.8**	**-0.3**
LPK	**Lapseki**	**0.78**	**265**	*e*Pg		**Pg**	**21 31 04.8**	**-0.3**
ARMT	**Armutlu**	**0.83**	**81**	*e*PG		**Pb**	**21 31 06.4**	**+0.3**
ARMT	**Armutlu**	**0.83**	**81**	*e*Pg		**Pb**	**21 31 06.4**	**+0.3**
SLVT	**Silivri**	**0.85**	**22**	*e*PG		**Pg**	**21 31 05.9**	**-0.6**
SLVT	**Silivri**	**0.85**	**22**	*e*Pg		**Pg**	**21 31 05.9**	**-0.6**
DURS	**Dursunbey**	**1.00**	**147**	*i* P		**Pg**	**21 31 09.3**	**+0.1**
DURS				*i* S		**Sg**	**21 31 22.1**	**-0.2**
DURS	**Dursunbey**	**1.00**	**147**	*i* P		**Pg**	**21 31 09.3**	**+0.1**
DURS				*i* S		**Sg**	**21 31 22.1**	**-0.2**

IDC 27 21:45:47.0±0.8, 8°82'S×157°73'E, h0km, mb3.9/9, mb1 4.1/11, mb1mx3.9/20, mbtmp3.9/11, ML3.9/2, MS3.1/5, Ms1 3.1/5, ms1mx2.9/27, Error ellipse: s-maj=24.6km s-min=20.1km az=140.0, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**2.27**	**106**	Pn	Pn	21 46 26.1	+0.2
	66nm,0.3s,baz=216,slow=7.6,SNR=14						
HNR				Sn	Sg	21 47 02.0	+1.8
	100nm,0.3s,baz=227,slow=15,SNR=3.8						
HNR				LR	LR	21 47 21.7	
	comp=Z,378nm,20.8s,baz=287,slow=42						
CTA	**Charters Tower**	**15.77**	**223**	Pn	Pn	21 49 31.8	+1.2
	0.2nm,0.3s,baz=45,slow=18,SNR=2.4						
WRA	**Warramunga Arr**	**25.17**	**241**	P	P	21 51 12.9	-1.5
	2.4nm,0.6s,baz=68,slow=9.7,SNR=17						
WRA				PcP	PcP	21 54 48.5	-0.1
	0.4nm,0.6s,baz=69,slow=2.7,SNR=6.2						
ASAR	**Alice Springs**	**27.16**	**234**	P	P	21 51 32.4	+0.1
	0.9nm,0.9s,baz=67,slow=8.8,SNR=6.4						
ASAR				PcP	PcP	21 54 52.8	-0.3
	0.2nm,0.5s,baz=79,slow=2.3,SNR=4.3						
ASAR				LR	LR	22 00 21.4	
	comp=Z,58nm,20.8s,baz=87,slow=32						
STKA	**Stephens Creek**	**27.41**	**211**	P	P	21 51 35.9	+1.5
	2.0nm,0.7s,baz=31,slow=12,SNR=6.4						
JNU	**Nakatsue**	**48.91**	**330**	LR	LR	22 11 36.7	
	comp=Z,19nm,18.8s,baz=257,slow=32						
ASAJ	**Asahikawa**	**54.44**	**347**	LR	LR	22 16 04.0	
	comp=Z,23nm,18.3s,baz=171,slow=33						
PETK	**Petropavlovsk-**	**61.68**	**360**	LR	LR	22 20 07.1	
	comp=Z,12nm,19.4s,baz=162,slow=33						
CMAR	**Chiang Mai Arr**	**64.01**	**295**	P	P	21 56 23.8	+0.9
	1.0nm,0.9s,baz=136,slow=5.3,SNR=6.2						
VNDA	**Vanda**	**68.71**	**179**	P	P	21 56 51.4	-0.7
	0.7nm,0.6s,baz=262,slow=3.6,SNR=6.7						
SONM	**Songino Array**	**72.33**	**326**	P	P	21 57 15.3	+0.5
	0.7nm,0.8s,baz=109,slow=3.5,SNR=2.9						
ILAR	**Eielson Array**	**84.08**	**21**	P	P	21 58 17.9	-1.4
	0.9nm,0.8s,baz=262,slow=4.3,SNR=3.6						
MKAR	**Makanchi Array**	**86.55**	**318**	P	P	21 58 31.7	-0.5
	0.3nm,0.6s,baz=107,slow=7.3,SNR=3.4						
NVAR	**Mina Array Bea**	**90.73**	**51**	P	P	21 58 54.0	+1.6
	0.8nm,0.8s,baz=251,slow=8.0,SNR=5.3						
BDFB	**Brasilia**	**144.78**	**133**	PKP	PKPab	22 05 25.8	-0.2
	2.3nm,0.7s,baz=174,slow=2.6,SNR=5.2						

*NIED **27** 21:55:00, 41°60N×141°90E, h56km, Mw3.8 Best double couple: M0 5.42000×10^14 NP1:φs19.00000°, δ68.00000°, λ90.00000°. NP2:φs198.00000°, δ22.00000°, λ90.00000°.*
*ISCJB **27** 21:55:19.1±0.4, 41°59N±0°03×141°91E±0°05, h72km±3km, mb3.7/15, Error ellipse: s-maj=6.7km s-min=4.3km az=36.7*
*JMA **27** 21:55:19.8±0.1, 41°59N×141°92E, h64km±2km, M3.7 Broadband fault plane solution: P waves. NP1: φs21.00000°, δ74.00000°, λ91.00000°. NP2:φs196.00000°, δ16.00000°, λ85.00000°. Principal axes: T Plg61.0000°, Azm293.0000°; N Plg1.0000°, Azm201.0000°; P Plg29.0000°, Azm110.0000°;*
JMA Felt II J1.
*IDC **27** 21:55:20.5±1.7, 41°64N×142°02E, h71km±14km, mb3.5/13, mb1 3.6/17, mb1mx3.6/27, mbtmp3.5/17, MS2.4/1, Ms1 2.4/1, ms1mx1.9/30 Error ellipse: s-maj=21.8km s-min=11.9km az=112.0*

ISC 27 21:55:19.9±0.9, 41°58N±0°04×141°91E±0°04, h64km±8km, n35, σ0s79/47, mb3.8/15, 3C-8D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JOT	**Ohata**	**0.68**	**253**	⇓P	**Pn**	**21 55 34.2**	**+0.1**
JOT				*e*S	**Sn**	**21 55 44.8**	**+0.3**
JKB	**Kayabe**	**0.73**	**295**	⇓P	**Pn**	**21 55 34.4**	**-0.2**
JKB				*e*S	**Sn**	**21 55 45.5**	**0.0**
JNBK	**Urakawa-nobuka**	**0.94**	**42**	⇑P	**Pn**	**21 55 36.7**	**-0.6**
JTM	**Tenmabayashi**	**1.02**	**219**	⇓P	**Pn**	**21 55 38.6**	**+0.3**
JTM				*e*S	**Sn**	**21 55 52.0**	**+0.1**
JEM	**Erimo**	**1.03**	**64**	⇑P	**Pn**	**21 55 38.4**	**0.0**
JEM				*e*S	**Sn**	**21 55 51.7**	**-0.4**
JNB	**Noboribetsu**	**1.10**	**324**	⇓P	**Pn**	**21 55 39.1**	**-0.3**
JNB				*e*S	**Sn**	**21 55 53.4**	**-0.5**
JSR	**Shiriuchi**	**1.12**	**268**	⇓P	**Pn**	**21 55 39.8**	**+0.2**
JSR				*e*S	**Sn**	**21 55 54.6**	**+0.2**
JANG	**Nango**	**1.24**	**194**	⇑P	**Pn**	**21 55 41.0**	**-0.2**
JANG				*e*S	**Sn**	**21 55 56.0**	**-1.2**
JBT2	**Biratori 2**	**1.25**	**15**	P	**Pn**	**21 55 41.7**	**+0.5**
JYM2	**Yakumo 2**	**1.27**	**296**	⇓P	**Pn**	**21 55 42.3**	**+0.7**
JEW	**Eniwo**	**1.31**	**345**	⇓P	**Pn**	**21 55 42.4**	**+0.3**
JEW				*e*S	**Sn**	**21 55 58.6**	**-0.1**
JCH	**Churui**	**1.50**	**46**	P	**Pn**	**21 55 45.2**	**+0.7**
JCH				*e*S	**Sn**	**21 56 04.1**	**+1.0**
JFR	**Furan**	**1.66**	**17**	P	**Pn**	**21 55 47.2**	**+0.4**
JFR				*e*S	**Sn**	**21 56 07.3**	**+0.1**
JOSM	**Okushiri--Mats**	**1.89**	**286**	⇓P	**Pn**	**21 55 49.8**	**-0.1**
ASAJ	**Asahikawa**	**2.59**	**11**	P	**Pn**	**21 56 00.6**	**+1.3**
	5.8nm,0.3s,baz=224,slow=9.9,SNR=61						
ASAJ				S	**Sn**	**21 56 28.5**	**-1.1**
	9.6nm,0.3s,baz=196,slow=30,SNR=5.5						
MAT	**Matsushiro**	**5.80**	**211**	P	**Pn**	**21 56 45.5**	**+2.2**
MJAR	**Matsushiro Arr**	**5.80**	**211**	P	**Pn**	**21 56 45.9**	**+2.7**
	0.5nm,0.3s,baz=22,slow=16,SNR=14						
USRK	**Ussuriysk Arra**	**7.74**	**293**	P	**Pn**	**21 57 10.7**	**+1.0**
	0.4nm,0.3s,baz=101,slow=14,SNR=10						
KSRS	**Korea Array**	**11.56**	**254**	P	Pn	21 58 05.9	+3.9
	0.4nm,0.3s,baz=63,slow=14,SNR=8.6						
KSRS				LR	LR	22 01 53.6	
	comp=Z,21nm,21.8s,baz=255,slow=34						
SONM	**Songino Array**	**25.84**	**296**	P	**P**	**22 00 46.1**	**+0.8**
	0.9nm,0.6s,baz=100,slow=8.5,SNR=2.8						
ZALV	**Zalesovo Beam**	**39.27**	**308**	P	**P**	**22 02 42.0**	**+0.1**
	1.3nm,0.3s,baz=84,slow=8.4,SNR=11						
ZALV				PcP	**PcP**	**22 04 49.6**	**0.0**
	0.8nm,0.5s,baz=97,slow=3.3,SNR=4.3						
MKAR	**Makanchi Array**	**42.18**	**298**	P	**P**	**22 03 06.2**	**+0.2**
	0.8nm,0.6s,baz=84,slow=11,SNR=13						
MKAR				PcP	**PcP**	**22 04 59.5**	**+0.2**
	0.2nm,0.5s,baz=75,slow=4.4,SNR=4.6						
CMAR	**Chiang Mai Arr**	**43.19**	**251**	P	**P**	**22 03 15.1**	**+0.6**
	0.8nm,0.8s,baz=46,slow=7.5,SNR=5.7						
ILAR	**Eielson Array**	**45.49**	**35**	P	**P**	**22 03 32.9**	**+0.5**
	1.5nm,0.9s,baz=273,slow=7.0,SNR=8.9						
ARCES	**ARCESS Array B**	**59.90**	**339**	P	**P**	**22 05 18.4**	**-0.1**
	0.7nm,0.7s,baz=52,slow=9.9,SNR=4.9						
WRA	**Warramunga Arr**	**61.61**	**188**	P	**P**	**22 05 29.3**	**-1.4**
	0.6nm,0.7s,baz=4.5,slow=6.8,SNR=5.4						
JOF	**Joensuu**	**62.16**	**331**	*ep*	**P**	**22 05 34.3**	**+0.4**
	1.8nm,0.4s						
KAF	**Kangasniemi**	**64.47**	**332**	*ep*	**P**	**22 05 48.7**	**-0.5**
	1.3nm,0.5s						
FINES	**FINESS Array B**	**64.99**	**331**	P	**P**	**22 05 52.2**	**-0.4**
	2.5nm,0.7s,baz=43,slow=8.7,SNR=25						
ASAR	**Alice Springs**	**65.34**	**188**	P	**P**	**22 05 55.5**	**+0.3**
	0.2nm,0.5s,baz=13,slow=9.1,SNR=4.2						
NB2	**NORSAR Subarra**	**70.16**	**337**	P	**P**	**22 06 24.8**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=35,slow=6.2						
NOA	**NORSAR Array B**	**70.16**	**337**	P	**P**	**22 06 24.9**	**-0.3**
	comp=Z,0.6nm,0.6s,baz=36,slow=6.1,SNR=4.7						
AKASG	**Malin Array Be**	**70.96**	**322**	P	**P**	**22 06 29.0**	**-1.2**
	comp=Z,1.0nm,0.4s,baz=44,slow=7.2,SNR=4.5						
BRTR	**Keskin Array B**	**76.15**	**311**	P	**P**	**22 07 00.6**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=35,slow=5.3,SNR=3.5						
GERES	**GERESS Array B**	**79.06**	**328**	P	**P**	**22 07 17.4**	**+0.3**
	comp=Z,0.1nm,0.2s,baz=32,slow=7.8,SNR=3.8						

IDC 27 22:04:05.4±4.7, 21°42S×179°47W, h0km, mb4.1/3, mb1 4.3/3, mb1mx3.7/18, mbtmp4.1/3, Error ellipse: s-maj=175.0km s-min=56.7km az=141.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.16**	**245**	P	P	22 11 08.7	-1.0
	0.8nm,0.5s,baz=70,slow=7.8,SNR=6.7						
ASAR	**Alice Springs**	**42.98**	**258**	P	P	22 12 06.7	-0.1
	2.0nm,0.8s,baz=93,slow=7.1,SNR=17						
WRA	**Warramunga Arr**	**43.12**	**263**	P	P	22 12 08.5	+0.6
	1.1nm,0.3s,baz=95,slow=8.3,SNR=76						
BRTR	**Keskin Array B**	**146.41**	**310**	PKPbc	PKPdf	22 23 48.0	+0.5
	0.3nm,0.4s,baz=85,slow=4.8,SNR=3.3						

*IDC **27** 22:13:20.5±5.4, 5°09S×133°08E, h0km, mb3.3/1, mb1 3.9/3, mb1mx3.5/17, mbtmp3.6/3, ML3.8/1, Error ellipse: s-maj=328.1km s-min=30.7km az=76.0*
*AUST **27** 22:13:23.4, 4°96S×133°53E, h35km*

ISC 27 22:13:24.3±1.1, 5°00S±0°06×133°1E±0°1, h35km, n12, σ2s69/11, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.23**	**338**	P	**Pn**	**22 13 59.3**	**+0.4**
	baz=2.4,SNR=60						
FAKI				S	**Sn**	**22 14 25.5**	**+0.3**
	baz=2.4,SNR=6.6						
BNDI	**Bandanaira**	**3.21**	**278**	P	Pn	22 14 20.6	+8.2
	baz=3.6,SNR=6.4						
KDU	**Kakadu**	**7.67**	**185**	P	Pn	22 15 16.5	+3.0
	baz=7.8,SNR=156						
KDU				S	**Sn**	**22 16 43.2**	**+4.0**
	baz=7.8,SNR=8.9						
MTN	**Manton Dam**	**8.03**	**194**	P	Pn	22 15 22.5	+3.9
	baz=8.2,SNR=71						
MTN				S	Sn	22 16 54.0	+5.7
	baz=8.2,SNR=8.4						
KNRA	**Kununurra**	**11.44**	**202**	P	Pn	22 16 09.1	+3.8
	baz=12,SNR=32						
KNRA				S	**Sn**	**22 18 15.1**	**+3.3**
	baz=12,SNR=7.8						
COEN	**Coen**	**13.34**	**133**	P	Pn	22 16 24.0	-7.3
	baz=13,SNR=10						
COEN				S	Sn	22 18 39.0	-19
	baz=13,SNR=5.0						
WSI	**Waingapu**	**13.51**	**249**	S	**S**	**22 19 22.3**	**-3.0**
	baz=14,SNR=6.3						
WRA	**Warramunga Arr**	**14.90**	**175**	Pn	**Pn**	**22 16 49.9**	**-2.7**
	0.4nm,0.3s,baz=352,slow=14,SNR=18						
WRA				Sn	Sn	22 19 29.3	-7.4
	0.5nm,0.3s,baz=7.1,slow=22,SNR=7.1						
FITZ	**Fitzroy Crossi**	**14.93**	**209**	P	**P**	**22 16 56.4**	**-1.7**
	baz=15,SNR=15						
FITZ				S	**Sn**	**22 19 39.9**	**+2.8**
	baz=15,SNR=5.5						
MTSU	**Mount Surprise**	**17.05**	**141**	P	**P**	**22 17 20.9**	**-0.8**
	baz=17,SNR=3.9						
ASAR	**Alice Springs**	**18.58**	**178**	P	**Pn**	**22 17 38.7**	**-0.3**
	0.4nm,0.3s,baz=5.3,slow=10,SNR=19						
ASAR				S	Sn	22 20 55.7	-10
	0.1nm,0.3s,baz=3.5,slow=28,SNR=3.4						
MKAR	**Makanchi Array**	**68.30**	**325**	P	**P**	**22 24 24.0**	**+2.0**
	0.2nm,0.7s,baz=142,slow=7.3,SNR=2.8						

MEX 27 22:21:48.5±0.6, 16°79N×99°69W, h36km±8km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACX	**Acapulco**	**0.18**	**296**	*i* P	Pn	22 21 53.7	-4.7
ACX				*i* S	Sn	22 21 59.2	-8.8
CAIG	**El Cayaco**	**0.61**	**295**	*i* P	Pn	22 21 59.0	-1.8
CAIG				*i* S	Sn	22 22 07.2	-2.1
PNIG	**Pinotepa**	**1.55**	**105**	*i* P	Pn	22 22 12.4	-1.2
PNIG				*i* S	Sn	22 22 29.6	-2.9
ARIG	**Puente Sto Nin**	**1.61**	**337**	*e*P	Pn	22 22 12.9	-1.6
ARIG				*i* S	Sn	22 22 31.3	-2.7
YAIG	**Yautepec**	**2.15**	**16**	*i* P	Pn	22 22 20.1	-1.8
YAIG				*i* S	Sn	22 22 45.8	-1.7

*SKO **27** 22:42:52.5, 41°27N×22°68E, h15km, M1.4, ML1.9*
*THE **27** 22:42:53.3, 41°31N×22°67E, h8km±2km, ML1.6/2, Error ellipse: s-maj=2.1km s-min=0.4km az=292.0*
*ATH **27** 22:42:53.6, 41°34N×22°70E, h7km±3km, MD2.9/4*
*CSEM **27** 22:42:53.5±0.2, 41°31N×22°69E, h2km, ML1.7, Error ellipse: s-maj=5.1km s-min=3.9km az=74.0*
*BEO **27** 22:42:55.4±0.5, 41°33N×22°63E, h0km, ML1.7/5*

ISC 27 22:42:53.5±0.8, 41°30N±0°02×22°67E±0°02, h7km±6km, n28, σ0s51/51, 1C, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.08**	**284**	P	**Pg**	**22 42 55.0**	**-0.4**
VAY				S	**Sg**	**22 42 57.1**	**+0.4**
VAY	**Valandovo**	**0.08**	**284**	⇑*i*Pg	**Pg**	**22 42 55.2**	**-0.1**
VAY				*e*Lg	Lg	22 42 57.0	
	comp=E,725nm,0.3s						
VAY				*i* Sg	**Sg**	**22 42 57.1**	**+0.4**
VAY				*e*Lg	Lg	22 42 57.2	
	comp=N,652nm,0.3s						
VAY	**Valandovo**	**0.08**	**284**	P	**Pg**	**22 42 55.0**	**-0.4**
VAY				S	**Sg**	**22 42 57.1**	**+0.4**
KNT	**Kendrikon**	**0.22**	**129**	P	**Pg**	**22 42 58.0**	**+0.1**
KNT				S	**Sg**	**22 42 58.1**	**+0.2**
KNT	**Kendrikon**	**0.22**	**129**	P	**Pg**	**22 42 58.0**	**+0.1**
KNT				S	**Sg**	**22 43 01.1**	**+0.2**
THE	**Thessaloniki**	**0.71**	**161**	P	**Pg**	**22 43 06.8**	**-0.2**
THE	**Thessaloniki**	**0.71**	**161**	P	**Pg**	**22 43 06.8**	**-0.2**
SRS	**Serrai**	**0.72**	**105**	P	**Pg**	**22 43 06.8**	**-0.5**
SRS				S	**Sb**	**22 43 17.6**	**-0.9**
SRS	**Serrai**	**0.72**	**105**	P	**Pg**	**22 43 06.8**	**-0.5**
SRS				S	**Sb**	**22 43 17.6**	**-0.9**
HORT	**Hortiatis**	**0.78**	**155**	P	**Pg**	**22 43 08.1**	**-0.3**
HORT				S	**Sg**	**22 43 19.3**	**+0.8**
HORT	**Hortiatis**	**0.78**	**155**	P	**Pg**	**22 43 08.1**	**-0.3**
HORT				S	**Sg**	**22 43 19.3**	**+0.8**
NVR	**Nevrokopi**	**0.90**	**87**	P	**Pg**	**22 43 10.1**	**-0.6**
NVR	**Nevrokopi**	**0.90**	**87**	*e*PG	**Pg**	**22 43 10.1**	**-0.6**
NVR				*e*SB	**Sg**	**22 43 22.6**	**+0.2**
NVR	**Nevrokopi**	**0.90**	**87**	P	**Pg**	**22 43 10.1**	**-0.6**
NVR				*e*Sb	**Sg**	**22 43 22.6**	**+0.2**
BIA	**Bitola**	**1.05**	**255**	*e*Pg	**Pg**	**22 43 12.7**	**-1.0**
BIA				*e*Sg	**Sb**	**22 43 28.6**	**+0.5**
BIA				*e*Lg	Lg	22 43 29.3	
	comp=E,5.9nm,0.2s						
BIA				*e*Lg	Lg	22 43 29.5	
	comp=N,6.7nm,0.3s						
PLG	**Polygyros**	**1.10**	**147**	P	**Pg**	**22 43 14.0**	**-0.5**
PLG				S	**Sb**	**22 43 29.6**	**+0.2**
PLG	**Polygyros**	**1.10**	**147**	*e*PB	**Pg**	**22 43 14.0**	**-0.5**
PLG				*e*SB	**Sb**	**22 43 29.4**	**0.0**
PLG	**Polygyros**	**1.10**	**147**	P	**Pg**	**22 43 14.0**	**-0.5**
PLG				*e*Sb	**Sb**	**22 43 29.4**	**0.0**
FNA	**Florina**	**1.11**	**242**	*e*PG	**Pg**	**22 43 14.9**	**+0.2**
FNA				*e*SB	**Sn**	**22 43 31.1**	**+0.1**
FNA	**Florina**	**1.11**	**242**	*e*Pg	**Pg**	**22 43 14.9**	**+0.2**
FNA				*e*Sb	**Sn**	**22 43 31.1**	**+0.1**
VTS	**Vitosha**	**1.35**	**17**	*e*Pg	**Pn**	**22 43 18.7**	**-0.2**
VTS				*e*Sg	**Sn**	**22 43 37.4**	**+0.3**
VTS	**Vitosha**	**1.35**	**17**	*e*Pg	**Pn**	**22 43 18.7**	**-0.2**
VTS				*e*Sg	**Sn**	**22 43 37.4**	**+0.3**
BARS	**Barje**	**1.64**	**337**	*e*Pg	**Pb**	**22 43 23.8**	**-0.2**
BARS				*e*Sg	**Sg**	**22 43 46.1**	**-0.1**
BARS	**Barje**	**1.64**	**337**	*e*Pg	**Pb**	**22 43 23.8**	**-0.2**
BARS				*e*Sg	**Sg**	**22 43 46.1**	**-0.1**
PLD	**Plovdiv**	**1.72**	**62**	*e*Pn	**Pg**	**22 43 27.4**	**+0.9**
PLD				*e*Sg	**Sg**	**22 43 50.2**	**+1.4**
THL	**Klokotos Trika**	**1.81**	**196**	*e*PN	**Pg**	**22 43 27.9**	**-0.2**
THL	**Klokotos Trika**	**1.81**	**196**	*e*Pn	**Pg**	**22 43 27.9**	**-0.2**
ZAPS	**Zavoj**	**1.97**	**359**	*e*Pn	**Pb**	**22 43 29.8**	**+0.1**
ZAPS				*e*Sg	**Sg**	**22 43 57.6**	**+0.8**

*IDC **27** 22:44:40.0±1.2, 23°79N×121°98E, h0km, mb3.6/5, mb1 3.7/6, mb1mx3.5/25, mbtmp3.6/6, ML3.7/1, Error ellipse: s-maj=69.4km s-min=20.4km az=66.0*

*ISCJB **27** 22:44:42.7±0.4, 23°92N±0°02×122°54E±0°02, h18km±3km, mb3.5/5, Error ellipse: s-maj=3.6km s-min=2.4km az=167.7*
*TAP **27** 22:44:44.2, 23°99N×122°46E, h29km, ML3.8, C*
*JMA **27** 22:44:44.2±0.3, 24°06N×122°52E, h32km, M3.0*

ISC 27 22:44:42.7±1.1, 23°93N±0°03×122°51E±0°02, h25km±10km, n62, σ0s86/109, mb3.6/5, 2C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.70**	**41**	P	**Pb**	**22 44 56.0**	**-0.3**
YOJ				S	**Sb**	**22 45 04.2**	**-1.3**
HWA	**Hwalien**	**0.83**	**273**	*e*P	**Pn**	**22 44 59.0**	**+0.2**
	baz=257						
HWA				*e*S	**Sb**	**22 45 09.2**	**0.0**
	baz=257						
TWD	**Chiawan**	**0.85**	**280**	P	**Pb**	**22 44 58.8**	**0.0**
	baz=276						
TWD				*e*S	**Sb**	**22 45 10.1**	**+0.3**
	baz=276						
ENA	**Nanau**	**0.86**	**305**	⇑*i*P	**Pb**	**22 44 59.2**	**+0.2**
	baz=311						
ENA				*e*S	**Sb**	**22 45 10.4**	**+0.3**
	baz=311						
TWC	**Suao**	**0.90**	**318**	⇑*i*P	**Pb**	**22 44 59.6**	**-0.2**
	baz=318						
TWC				*i* S	**Sb**	**22 45 11.1**	**-0.3**
	baz=318						
ESL	**Shilin**	**0.99**	**263**	*e*P	**Pn**	**22 45 00.4**	**-0.7**
	baz=250						
ESL				*e*S	**Sb**	**22 45 14.3**	**+0.4**
	baz=250						
ILA	**Ilan**	**1.08**	**320**	*e*P	**Pb**	**22 45 02.9**	**+0.1**
	baz=309						
ILA				*e*S	**Sn**	**22 45 17.8**	**+1.3**
	baz=309						
TWE	**Neicheng**	**1.10**	**316**	*i* P	**Pb**	**22 45 03.3**	**+0.2**
	baz=315						
TWE				*e*S	**Sn**	**22 45 17.6**	**+0.6**
	baz=315						
NNS	**Nan Shan**	**1.15**	**296**	*e*P	**Pb**	**22 45 04.0**	**-0.1**
	baz=294						
NNS				*e*S	**Sb**	**22 45 19.3**	**+0.6**
	baz=294						
WHF	**Hehuan Shan**	**1.16**	**281**	⇓*i*P	**Pn**	**22 45 03.9**	**+0.1**
	baz=278						
WHF				*e*S	**Sn**	**22 45 18.9**	**-0.1**
	baz=278						
EHY	**Hungye**	**1.17**	**249**	*e*P	**Pn**	**22 45 03.6**	**+0.1**
	baz=245						
EHY				*e*S	**Sb**	**22 45 19.3**	**+0.4**
	baz=245						
TWB1	**Santiao Chiao**	**1.17**	**336**	P	**Pn**	**22 45 03.9**	**+0.3**
	baz=353						
TWB1				*e*S	**Sb**	**22 45 19.4**	**+0.3**
	baz=353						
IRIF	**Iriomote-Funau**	**1.19**	**70**	P	**Pb**	**22 45 04.4**	**-0.1**
IRIF				S	**Sb**	**22 45 19.6**	**+0.1**
HATJ	**Hateruma jima**	**1.19**	**84**	P	**Pb**	**22 45 04.7**	**+0.1**
TWF1	**Yuli**	**1.25**	**243**	*e*P	**Pn**	**22 45 05.1**	**+0.4**
	baz=239						
TWF1				*e*S	**Sb**	**22 45 21.5**	**+0.1**
	baz=239						
TWT	**Tachien**	**1.26**	**285**	*e*P	**Pb**	**22 45 06.1**	**+0.2**
	baz=270						
TWT				*e*S	**Sb**	**22 45 22.6**	**+0.9**
	baz=270						
NSK	**Sanguang**	**1.28**	**305**	⇓*i*P	**Pb**	**22 45 05.9**	**-0.4**
	baz=292						
NSK				*e*S	**Sb**	**22 45 23.1**	**+0.6**
	baz=292						
NWF	**Wu-fen Shan**	**1.31**	**330**	*e*P	**Pn**	**22 45 06.2**	**+0.6**
	baz=330						
NWF				*e*S	**Sb**	**22 45 23.9**	**+0.6**
	baz=330						
CHKT	**Chengkung**	**1.34**	**232**	*e*P	**Pn**	**22 45 05.1**	**-0.7**
	baz=228						
TWA	**Mucha**	**1.34**	**321**	*e*P	**Pb**	**22 45 07.4**	**+0.1**
	baz=321						
TWA				*e*S	**Sb**	**22 45 25.4**	**+1.4**
	baz=321						
JKRS	**Kuro-shima**	**1.41**	**77**	P	**Pb**	**22 45 07.8**	**-0.5**
JKRS				S	**Sb**	**22 45 25.9**	**+0.1**
TAP1	**Taipei**	**1.42**	**321**	*e*P	**Pb**	**22 45 08.6**	**+0.1**
	baz=320						
TAP1				*e*S	**Sb**	**22 45 27.3**	**+1.1**
	baz=320						
TAP	**Taipei**	**1.43**	**321**	*e*P	**Pb**	**22 45 08.7**	**-0.1**
	baz=320						
TAP				*e*S	**Sb**	**22 45 26.8**	**+0.3**
	baz=320						
SMLT	**Sun Moon Lake**	**1.47**	**268**	*e*P	**Pn**	**22 45 08.8**	**+1.0**
	baz=265						
SMLT				*e*S	**Sn**	**22 45 26.8**	**+0.4**
	baz=265						
YUS	**Yu-Shan**	**1.49**	**253**	*e*P	**Pn**	**22 45 09.6**	**+1.1**
	baz=250						
YUS				*e*S	**Sn**	**22 45 28.1**	**+0.7**
	baz=250						
TYC	**Yuchr**	**1.51**	**269**	*e*P	**Pn**	**22 45 09.2**	**+1.0**
	baz=266						
TYC				*e*S	**Sb**	**22 45 29.0**	**+0.2**
	baz=266						
TWS1	**Kuangyinshan**	**1.53**	**320**	*e*P	**Pn**	**22 45 09.4**	**+0.9**
	baz=336						
TWS1				*e*S	**Sb**	**22 45 29.8**	**+0.

	baz=279								
LAY	**Lan-yu**	**2.08**	**205**	*e*P		**Pn**	**22 45 15.2**	**-0.9**
	baz=203								
WSF	**Szhu**	**2.12**	**263**	*e*P		**Pn**	**22 45 18.5**	**+1.9**
	baz=259								
WSF				*e*S		**Sb**	**22 45 46.0**	**-0.2**
	baz=259								
JTJ	**Tarama**	**2.12**	**70**	P		**Pn**	**22 45 17.8**	**+1.2**
JTJ				*e*S		**Sn**	**22 45 44.4**	**+2.2**
CHN8	**Yiju**	**2.19**	**255**	*e*P		**Pn**	**22 45 19.5**	**+2.0**
	baz=252								
CHN8				*e*S		**Sb**	**22 45 47.0**	**-1.3**
	baz=252								
SGLT	**Jiouru**	**2.21**	**237**	*e*P		**Pb**	**22 45 21.9**	**0.0**
	baz=230								
TWM1	**Shoushan**	**2.21**	**240**	*e*P		**Pb**	**22 45 21.2**	**-0.8**
	baz=238								
TWM1				*e*S		**Sb**	**22 45 50.1**	**+1.1**
	baz=238								
SCLT	**Jiali**	**2.25**	**251**	*e*P		**Pn**	**22 45 19.9**	**+1.4**
	baz=249								
SCZT	**Fangliau**	**2.33**	**229**	*e*P		**Pn**	**22 45 21.4**	**+1.9**
	baz=220								
SCZT				*e*S		**Sn**	**22 45 50.3**	**+2.9**
	baz=220								
TSEB	**Hengchuen, Pin**	**2.51**	**217**	*e*P		**Pn**	**22 45 23.0**	**+1.1**
	baz=215								
TWK1	**Hengchun**	**2.53**	**219**	*e*P		**Pn**	**22 45 23.8**	**+1.6**
	baz=216								
PNG	**Penghu**	**2.73**	**263**	*e*P		**Pn**	**22 45 26.1**	**+1.1**
	baz=260								
PNG				*e*S		**Sn**	**22 45 59.0**	**+1.8**
	baz=260								
QZH	**Quanzhou**	**3.71**	**287**	⇓*i*Pn		**Pn**	**22 45 39.0**	**+0.5**
QZH				Sn		**Sn**	**22 46 19.3**	**-2.1**
QZH				smax		smax		
	comp=N,100nm,0.7s								
QZH				smax		smax		
	comp=E,80nm,0.5s								
KSRS	**Korea Array**	**14.26**	**18**	Pn		**P**	**22 48 07.9**	**-2.1**
	comp=E,0.3nm,0.3s,baz=198,slow=11,SNR=11								
MKAR	**Makanchi Array**	**39.36**	**316**	P		**P**	**22 52 10.0**	**-0.2**
	comp=E,0.4nm,0.4s,baz=100,slow=10,SNR=12								
WRA	**Warramunga Arr**	**45.11**	**164**	P		**P**	**22 52 57.9**	**+0.7**
	comp=E,0.9nm,0.6s,baz=344,slow=8.6,SNR=12								
ASAR	**Alice Springs**	**48.59**	**166**	P		**P**	**22 53 25.8**	**+1.4**
	comp=E,0.4nm,0.5s,baz=346,slow=7.6,SNR=7.2								
FINES	**FINESS Array B**	**72.27**	**330**	P		**P**	**22 56 05.4**	**-0.3**
	comp=E,0.3nm,0.5s,baz=65,slow=5.3,SNR=8.1								
BRTR	**Keskin Array B**	**74.29**	**307**	P		**P**	**22 56 17.6**	**-0.8**
	comp=E,0.2nm,0.5s,baz=62,slow=6.7,SNR=2.5								

IDC 27 22:52:40.8±1.5, 22.95N×144.96E, h0km, mb3.5/7, mb1 3.6/7, mb1mx3.5/25, mbtmp3.5/7, Error ellipse: s-maj=49.1km s-min=25.8km az=83.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSRS	**Korea Array**	**20.59**	**318**	P	P	22 57 22.4	+1.1
	0.8nm,0.6s,baz=152,slow=10,SNR=4.5						
USRK	**Ussuriysk Arra**	**23.73**	**336**	P	P	22 57 56.5	+2.0
	0.9nm,0.6s,baz=168,slow=10.0,SNR=4.1						
WRA	**Warramunga Arr**	**43.87**	**194**	P	P	23 00 49.4	+0.3
	0.3nm,0.8s,baz=16,slow=8.4,SNR=2.1						
ZALV	**Zalesovo Beam**	**54.27**	**321**	P	P	23 02 07.7	-0.8
	0.3nm,0.3s,baz=104,slow=4.6,SNR=2.3						
MKAR	**Makanchi Array**	**55.08**	**312**	P	P	23 02 13.1	-1.4
	0.3nm,0.7s,baz=80,slow=8.9,SNR=4.2						
ILAR	**Eielson Array**	**60.18**	**27**	P	P	23 02 49.7	-0.4
	0.3nm,0.6s,baz=251,slow=4.7,SNR=3.2						
FINES	**FINESS Array B**	**82.76**	**335**	P	P	23 05 06.6	+0.2
	1.3nm,1.0s,baz=57,slow=7.7,SNR=3.8						

IDC 27 23:11:05.5±1.4, 39.44N×72.95E, h0km, mb3.6/8, mb1 3.6/14, mb1mx3.5/33, mbtmp3.4/14, ML3.0/5, Error ellipse: s-maj=25.7km s-min=13.1km az=146.0
NNC 27 23:11:16.9±4.1, 40.27N×72.86E, h0km, mb3.6, mpv3.2, Error ellipse: s-maj=42.2km s-min=21.7km az=172.0
ISC 27 23:11:11.4±1.3, 39.6N±0.1×72.9E±0.1, h33km, n28, σ1§78/28, mb3.5/8, 3C-3D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AML	**Almayashu**	**2.58**	**14**	P	**Pn**	**23 11 53.7**	**+2.5**
	SNR=42						
KZA	**Kyzart**	**3.05**	**36**	P	**Pn**	**23 11 59.0**	**+1.3**
	SNR=28						
EKS2	**Erkin-Say**	**3.11**	**13**	P	Pn	23 12 02.0	+3.8
	SNR=7.6						
AAK	**Ala-Archa**	**3.25**	**22**	P	**Pn**	**23 12 02.9**	**+2.7**
	SNR=13						
AAK	**Ala-Archa**	**3.25**	**22**	Pn	**Pn**	**23 12 01.9**	**+1.7**
	4.4nm,0.3s,baz=183,slow=7.7,SNR=24						
AAK				Sn	**Sb**	**23 12 46.0**	**-1.8**
	3.5nm,0.3s,baz=127,slow=20,SNR=7.5						
KBK	**Karagaybulak**	**3.42**	**27**	P	**Pn**	**23 12 04.8**	**+2.3**
	SNR=15						
CHMS	**Chumysh**	**3.66**	**22**	P	**Pn**	**23 12 08.0**	**+2.2**
	SNR=25						
ULHL	**Ulahol**	**3.67**	**43**	P	**Pn**	**23 12 08.0**	**+2.0**
	SNR=5.0						
USP	**Ospenovka**	**3.84**	**18**	P	**Pn**	**23 12 10.3**	**+2.1**
	SNR=8.2						
TKM2	**Tokmak 2**	**3.89**	**31**	⇓Pn	**Pn**	**23 12 10.3**	**+1.3**
	5.2nm,0.4s						
TKM2				⇑Lg	Lg	23 13 04.2	
	12nm,0.6s						
TKM2	**Tokmak 2**	**3.89**	**31**	P	**Pn**	**23 12 10.7**	**+1.7**
	SNR=19						
KK31	**Karatay Array**	**3.90**	**334**	⇑Pn	**Pn**	**23 12 11.8**	**+2.9**
	2.2nm,0.3s,baz=152,slow=14,SNR=110						
KK31				⇑Lg	Lg	23 13 01.4	
	13nm,0.5s,baz=146,slow=22,SNR=3.5						
MKAR	**Makanchi Array**	**9.94**	**41**	Pn	**Pn**	**23 13 33.2**	**+1.4**
	0.0nm,0.3s,baz=208,slow=11,SNR=2.6						
KURBB	**Kurchatov Arra**	**11.70**	**18**	Pn	**Pn**	**23 13 54.3**	**-1.5**
	0.0nm,0.3s,baz=206,slow=13,SNR=3.7						
VOSK	**Vostochnaya**	**13.16**	**355**	⇓P	**Pn**	**23 14 15.0**	**-0.9**
	0.8nm,0.7s						
AB31	**Akbulak array**	**13.31**	**321**	P	**Pn**	**23 14 16.5**	**-1.4**
	0.5nm,0.4s,baz=126,slow=14,SNR=20						
BVAR	**Borovoye Array**	**13.51**	**354**	Pn	**Pn**	**23 14 18.4**	**-2.2**
	baz=163,slow=12,SNR=3.0						
AKTO	**Aktyubinsk**	**15.03**	**321**	⇓P	**P**	**23 14 44.3**	**-1.9**
	0.8nm,0.5s						
AKTO	**Aktyubinsk**	**15.03**	**321**	Pn	**Pn**	**23 14 39.5**	**-1.6**
	0.2nm,0.3s,baz=135,slow=16,SNR=2.5						
ZALV	**Zalesovo Beam**	**16.47**	**26**	Pn	**Pn**	**23 15 00.1**	**+0.3**
	0.1nm,0.3s,baz=219,slow=11,SNR=2.4						
SONM	**Songino Array**	**25.43**	**60**	P	**P**	**23 16 35.1**	**-1.0**
	0.6nm,0.6s,baz=256,slow=10,SNR=2.4						
BRTR	**Keskin Array B**	**30.02**	**283**	P	**P**	**23 17 16.4**	**-0.8**
	0.2nm,0.5s,baz=81,slow=8.9,SNR=2.4						
FINES	**FINESS Array B**	**35.78**	**323**	P	**P**	**23 18 07.7**	**+0.6**
	1.4nm,0.8s,baz=115,slow=9.4,SNR=10						
ARCES	**ARCESS Array B**	**38.86**	**336**	P	**P**	**23 18 34.0**	**+1.0**
	2.4nm,1.0s,baz=108,slow=7.8,SNR=3.6						
GERES	**GERESS Array B**	**42.40**	**303**	P	**P**	**23 19 04.1**	**+1.5**
	0.2nm,0.5s,baz=67,slow=7.6,SNR=3.7						
NOA	**NORSAR Array B**	**42.82**	**321**	P	**P**	**23 19 07.2**	**+1.4**
	0.2nm,0.5s,baz=92,slow=7.6,SNR=2.6						
TORD	**Torodi Ar. Bea**	**67.26**	**268**	P	**P**	**23 22 01.6**	**-1.3**
	0.4nm,0.7s,baz=51,slow=5.4,SNR=5.1						
ILAR	**Eielson Array**	**71.38**	**17**	P	**P**	**23 22 27.5**	**-0.1**
	0.5nm,0.9s,baz=300,slow=3.8,SNR=4.4						

CSEM 27 23:26:14.0±0.5, 39.40N×25.89E, h5km, MD2.8, Error ellipse: s-maj=12.9km s-min=5.1km az=88.0
ISCJB 27 23:26:15.5±1.2, 39.40N±0.04×25.9E±0.1, h17km±9km, Error ellipse: s-maj=14.1km s-min=5.8km az=176.0
ISK 27 23:26:15.4, 39.48N×25.94E, h12km, MD2.8
DDA 27 23:26:15.2, 39.35N×26.08E, h6km, MD2.8
ISC 27 23:26:14.5±1.6, 39.39N±0.03×25.93E±0.07, h11km±12km, n19, σ0§53/30, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	**Bozcaada**	**0.47**	**12**	*i* P	**Pb**	**23 26 25.5**	**+0.8**
BOZC				*i* S	**Sb**	**23 26 32.4**	**+0.7**
EZN	**Ezine**	**0.54**	**35**	*e*PG	**Pg**	**23 26 24.8**	**-0.2**
EZN				*e*SG	**Sg**	**23 26 32.0**	**-0.2**
EZN	**Ezine**	**0.54**	**35**	*e*Pg	**Pg**	**23 26 24.8**	**-0.2**
EZN				*e*Sg	**Sg**	**23 26 32.0**	**-0.2**
URLA	**Izmir**	**1.15**	**153**	*i* P	**Pb**	**23 26 35.6**	**-0.9**
URLA				*i* S	**Sb**	**23 26 51.0**	**-0.4**
URLA	**Izmir**	**1.15**	**153**	*i* P	**Pb**	**23 26 35.6**	**-0.9**
URLA				*i* S	**Sb**	**23 26 51.0**	**-0.4**
LPK	**Lapseki**	**1.18**	**33**	*e*PN	**Pn**	**23 26 36.8**	**-0.1**
LPK				*e*SN	**Sg**	**23 26 52.2**	**-0.3**
LPK	**Lapseki**	**1.18**	**33**	*e*Pn	**Pn**	**23 26 36.8**	**-0.1**
LPK				*e*Sn	**Sg**	**23 26 52.2**	**-0.3**
BLCB	**Balcova**	**1.33**	**139**	*e*PN	**Pg**	**23 26 41.1**	**+1.1**
BLCB	**Balcova**	**1.33**	**139**	*e*Pn	**Pg**	**23 26 41.1**	**+1.1**
BALY	**Balya**	**1.36**	**74**	*e*P	**Pb**	**23 26 39.8**	**-0.2**
BALY				*e*S	**Sb**	**23 26 57.4**	**+0.1**
BALY	**Balya**	**1.36**	**74**	*e*P	**Pb**	**23 26 39.8**	**-0.2**
BALY				*e*S	**Sb**	**23 26 57.4**	**+0.1**
ENEZ	**Enez**	**1.36**	**7**	*e*PN	**Pn**	**23 26 39.5**	**+0.1**
ENEZ				*e*SN	**Sb**	**23 26 56.8**	**-0.6**
ENEZ	**Enez**	**1.36**	**7**	*e*Pn	**Pn**	**23 26 39.5**	**+0.1**
ENEZ				*e*Sn	**Sb**	**23 26 56.8**	**-0.6**
KRBG	**Karabiga-Canak**	**1.46**	**46**	*e*PN	**Pn**	**23 26 41.1**	**+0.3**
KRBG	**Karabiga-Canak**	**1.46**	**46**	*e*Pn	**Pn**	**23 26 41.1**	**+0.3**
GONE	**Gonen-Balikesi**	**1.51**	**64**	*e*PN	**Pb**	**23 26 42.2**	**-0.4**
GONE	**Gonen-Balikesi**	**1.51**	**64**	*e*Pn	**Pb**	**23 26 42.2**	**-0.4**
MFT	**Murefte**	**1.74**	**36**	*e*PN	**Pn**	**23 26 45.2**	**+0.4**
MFT	**Murefte**	**1.74**	**36**	*e*Pn	**Pn**	**23 26 45.2**	**+0.4**

IDC 27 23:37:49.7±1.4, 61.61N×150.59W, h43km±18km, mb3.1/4, mb1 3.4/7, mb1mx3.2/28, mbtmp3.2/7, ML3.2/3, Error ellipse: s-maj=26.9km s-min=9.6km az=110.0
ISCJB 27 23:37:50.3±0.3, 61.56N±0.03×149.99W±0.05, h64km±4km, mb3.4/4, Error ellipse: s-maj=4.6km s-min=3.4km az=158.1
NEIC 27 23:37:52.2, 61.55N×149.95W, h46km, ML3.4(AEIC), After AEIC.
NEIC Felt at Anchorage and Willow.
ISC 27 23:37:51.6±0.9, 61.53N±0.03×149.99W±0.03, h51km±8km, n57, σ1§03/70, mb3.4/4, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUA	**Susitna One**	**0.37**	**261**	P	**Pn**	**23 38 01.2**	**-0.3**
SUA				S	**Sn**	**23 38 08.6**	**-0.1**
PMR	**Palmer**	**0.42**	**80**	P	**Pn**	**23 38 01.0**	**-0.9**
PMR				S	**Sn**	**23 38 08.8**	**-0.5**
RC01	**Rabbit Creek A**	**0.45**	**164**	P	**Pn**	**23 38 02.1**	**-0.3**
RC01				S	**Sn**	**23 38 10.6**	**+0.5**
TRAP	**Trapper Creek**	**0.82**	**352**	P	**Pn**	**23 38 06.2**	**-0.7**
TRAP				S	**Sn**	**23 38 17.8**	**-0.3**
SML	**Sawmill**	**0.84**	**70**	P	**Pn**	**23 38 06.6**	**-0.7**
SML				S	**Sn**	**23 38 18.0**	**-0.7**
SKT	**Skwentna**	**0.86**	**303**	P	**Pn**	**23 38 07.0**	**-0.6**
SKT				S	**Sn**	**23 38 18.6**	**-0.5**
STLK	**Strandline Lak**	**0.88**	**269**	P	**Pn**	**23 38 07.9**	**+0.1**
SLKM	**Skilak Lake**	**1.03**	**186**	P	**Pn**	**23 38 09.6**	**-0.2**
SPU	**Mount Spurr**	**1.05**	**252**	P	**Pn**	**23 38 10.4**	**+0.3**
CKL	**Chakachamna La**	**1.18**	**255**	P	**Pn**	**23 38 12.2**	**+0.4**
CKL				S	**Sn**	**23 38 28.0**	**+1.2**
BGL	**Barrier Glacie**	**1.19**	**258**	P	**Pn**	**23 38 12.3**	**+0.4**
DFR	**Drift River**	**1.61**	**236**	P	**Pn**	**23 38 18.1**	**+0.4**
RSO	**Redoubt South**	**1.72**	**233**	*e*Pn	**Pn**	**23 38 19.5**	**+0.3**
RSO				*e*Sn	**Sn**	**23 38 40.5**	**+0.4**
NCT	**North Crescent**	**1.73**	**237**	P	**Pn**	**23 38 19.9**	**+0.6**
RDWB	**Redoubt West**	**1.73**	**234**	P	**Pn**	**23 38 19.7**	**+0.3**
VLZ	**Valdez**	**1.81**	**101**	P	**Pn**	**23 38 19.9**	**-0.4**
VLZ				S	**Sn**	**23 38 42.3**	**+0.4**
BRLK	**Bradley Lake**	**1.82**	**194**	P	**Pn**	**23 38 20.4**	**-0.1**
KLU	**Klutina**	**1.95**	**89**	P	**Pn**	**23 38 21.9**	**-0.4**
KLU				S	**Sn**	**23 38 46.0**	**+0.3**
DIV	**Divide**	**2.07**	**99**	P	**Pn**	**23 38 23.4**	**-0.6**
CNPM	**China Poot**	**2.10**	**198**	P	**Pn**	**23 38 24.2**	**-0.1**
EYAK	**Cordova Ski Ar**	**2.29**	**114**	P	**Pn**	**23 38 26.0**	**-0.8**
HARP	**HAARP**	**2.45**	**67**	P	**Pn**	**23 38 29.8**	**+0.7**
PAX	**Paxson**	**2.56**	**54**	P	**Pn**	**23 38 31.4**	**+0.7**
BWN	**Browne**	**2.67**	**5**	P	**Pn**	**23 38 32.8**	**+0.7**
SVW2	**Sparrevohn**	**2.73**	**263**	P	**Pn**	**23 38 33.1**	**+0.1**
NEA	**Nenana**	**3.09**	**7**	P	**Pn**	**23 38 37.2**	**-0.7**
TT01	**Tatalina**	**3.15**	**299**	P	**Pn**	**23 38 38.0**	**-0.6**
VRDI	**Verde Repeater**	**3.16**	**93**	P	**Pn**	**23 38 37.7**	**-1.3**
MENT	**Mentasta**	**3.26**	**61**	*e*Pn	**Pn**	**23 38 41.1**	**+0.9**
MENT				*e*Sn	**Sn**	**23 39 18.7**	**+1.0**
CCB	**Clear Creek Bu**	**3.29**	**17**	P	**Pn**	**23 38 39.9**	**-0.6**
KHIT	**Khitrov Hills**	**3.46**	**105**	P	**Pn**	**23 38 42.2**	**-0.8**
DOT	**Dot Lake**	**3.47**	**50**	*e*Pn	**Pn**	**23 38 45.3**	**+2.2**
DOT				*e*Sn	**Sn**	**23 39 25.9**	**+2.9**
COLA	**College**	**3.50**	**15**	P	**Pn**	**23 38 43.2**	**-0.1**
MLY	**Manley**	**3.54**	**355**	P	**Pn**	**23 38 43.5**	**-0.4**
MDM	**Murphy Dome**	**3.54**	**12**	P	**Pn**	**23 38 43.6**	**-0.4**
IL1	**Eielson Array**	**3.55**	**22**	P	**Pn**	**23 38 43.9**	**-0.2**
ILAR	**Eielson Array**	**3.55**	**22**	P	**Pn**	**23 38 44.5**	**+0.4**
ILAR				S	**Sn**	**23 39 23.3**	**-1.5**
ILAR	**Eielson Array**	**3.55**	**22**	P	**Pn**	**23 38 44.5**	**+0.4**
	2.1nm,0.3s,baz=208,slow=14,SNR=37						
ILAR				S	**Sn**	**23 39 23.3**	**-1.5**
	6.1nm,0.3s,baz=210,slow=20,SNR=10						
PTPK	**Patty Peak**	**3.64**	**92**	P	**Pn**	**23 38 45.1**	**-0.5**
KIAG	**Kiagna River**	**3.74**	**96**	P	**Pn**	**23 38 45.9**	**-1.0**
BARK	**Barkley Ridge**	**3.83**	**104**	P	**Pn**	**23 38 47.3**	**-0.7**
KDAK	**Kodiak Island**	**3.98**	**200**	*e*Pn	**Pn**	**23 38 48.4**	**-1.5**
KDAK				S	**Sn**	**23 39 32.9**	**-2.4**
KDAK	**Kodiak Island**	**3.98**	**200**	P	**Pn**	**23 38 49.6**	**-0.4**
	1.2nm,0.3s,baz=15,slow=15,SNR=8.7						
KDAK				S	**Sn**	**23 39 32.9**	**-2.4**
	2.4nm,0.3s,baz=5.4,slow=11,SNR=3.6						
GCSA	**Galena City Sc**	**4.50**	**319**	P	**Pn**	**23 38 55.3**	**-1.7**
IM3	**Indian Mountai**	**4.78**	**341**	P	**Pn**	**23 39 00.3**	**-0.6**
EGAK	**Eagle**	**5.16**	**47**	*e*Pn	Pn	23 39 09.5	+3.3
	17nm,0.6s						
COLD	**Coldfoot**	**5.73**	**359**	P	Pn	**23 39 12.2**	**-1.7**
INK	**Inuvik**	**9.72**	**39**	P	**Pn**	**23 40 09.0**	**+0.5**
INK				S	**Sn**	**23 41 58.4**	**+2.3**
INK	**Inuvik**	**9.72**	**39**	P	**Pn**	**23 40 09.0**	**+0.5**
	0.1nm,0.3s,baz=180,slow=15,SNR=2.1						
INK				S	**Sn**	**23 41 58.4**	**+2.3**
	0.4nm,0.3s,baz=239,slow=18,SNR=4.2						
TXAR	**Lajitas Array**	**44.21**	**115**	P	**P**	**23 45 56.4**	**+0.8**
TXAR	**Lajitas Array**	**44.21**	**115**	P	**P**	**23 45 56.4**	**+0.8**
	0.3nm,0.7s,baz=350,slow=7.4,SNR=4.5						
FINES	**FINESS Array B**	**57.32**	**2**	P	**P**	**23 47 32.5**	**-1.1**
FINES	**FINESS Array B**	**57.32**	**2**	P	**P**	**23 47 32.5**	**-1.1**
	0.5nm,0.7s,baz=8.7,slow=14,SNR=3.3						
KURK	**Kurchatov**	**61.57**	**327**	P	P	23 48 00.5	-2.6
KURBB	**Kurchatov Arra**	**61.68**	**327**	P	P	23 48 00.5	-3.4
	0.2nm,0.4s,baz=31,slow=6.7,SNR=3.3						
MKAR	**Makanchi Array**	**64.13**	**323**	P	P	23 48 17.5	-2.7
MKAR	**Makanchi Array**	**64.13**	**323**	P	P	23 48 17.5	-2.7
	0.1nm,0.3s,baz=30,slow=7.8,SNR=3.0						

FUNV 27 23:40:56.4, 10.34N×70.13W, h6km, MW3.6, 4C-3D, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CURV	**Curarigua**	**0.37**	**153**	⇓*i*P	Pg	23 41 03.4	-0.3
CURV				*e*S	Sg	23 41 08.9	+0.3
QARV	**Quebrada Arrib**	**0.41**	**251**	⇑*i*P	Pg	23 41 04.3	-0.1
QARV				*e*S	Sg	23 41 10.1	+0.3
SIQV	**Siquisique**	**0.44**	**46**	⇑*i*P	Pg	23 41 04.7	-0.3
SIQV				*e*S	Sg	23 41 11.7	+0.8
DABV	**Dabajuro**	**0.76**	**319**	⇓*e*P	Pg	23 41 10.1	-0.9
DABV				*e*S	Sg	23 41 21.4	+0.5
TEPV	**Terepaima**	**1.00**	**112**	*e*P	Pg	23 41 14.7	-1.0
TEPV				*e*S	Sg	23 41 28.6	-0.1
SANV	**Sanarito**	**1.02**	**145**	⇓*i*P	Pg	23 41 15.7	-0.5
SANV				*e*S	Sg	23 41 28.8	-0.9
JACV	**Jacura**	**1.48**	**60**	*e*P	Pn	23 41 24.0	+0.3
MONV	**Montecano**	**1.61**	**6**	⇑*e*P	Pn	23 41 24.2	-1.3
MAPV	**Macapo**	**1.73**	**107**	*e*P	Pn	23 41 27.2	+0.1
VIGV	**El Vigia**	**1.93**	**219**	⇑*e*P	Pn	23 41 30.1	+0.3
VIGV				*e*S	Sn	23 41 52.8	-1.6
IMOV	**Isla Los Monje**	**2.14**	**339**	*e*P	Pn	23 41 31.4	-1.3
SOCV	**Socops**	**2.17**	**199**	*e*P	Pn	23 41 33.1	0.0
TURV	**Turiamo**	**2.26**	**87**	*e*P	Pn	23 41 33.5	-0.8
TURV				*e*S	Sn	23 42 00.5	-2.1
BAUV	**El Baul**	**2.49**	**124**	*e*P	Pn	23 41 37.4	-0.2
BAUV				*e*S	Sn	23 42 06.0	-2.3
CAPV	**Capacho**	**3.27**	**221**	*e*P	Pn	23 41 48.0	-0.6
BIRV	**Birongo**	**3.80**	**88**	*e*P	Pn	23 41 55.2	-0.4
MERV	**Las Mercedes**	**3.93**	**106**	*e*P	Pn	23 41 56.0	-1.4
CUPV	**Cœpira**	**4.29**	**93**	*e*P	Pn	23 42 01.1	-1.2

IDC 27 23:58:02.2±2.5, 5.69S×130.96E, h0km, mb3.9/1, mb1 4.1/4, mb1mx3.7/19, mbtmp4.0/4, ML4.0/3, MS4.1/1, Ms1 4.1/1, ms1mx2.6/30, Error ellipse: s-maj=114.2km s-min=27.4km az=78.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**13.39**	**202**	Pn	Pn	00 01 13.1	-0.5
	1.1nm,0.3s,baz=30,slow=10,SNR=42						
FITZ				Sn	Sn	00 03 27.9	-15
	0.6nm,0.3s,baz=120,slow=18,SNR=6.3						
WRA	**Warramunga Arr**	**14.55**	**167**	Pn	Pn	00 01 28.9	-0.7
	0.5nm,0.3s,baz=348,slow=14,SNR=19						
WRA				Sn	Sn	00 04 00.6	-11
	0.8nm,0.3s,baz=358,slow=24,SNR=8.5						
ASAR	**Alice Springs**	**18.10**	**171**	P	P	00 02 15.8	+0.1
	0.5nm,0.3s,baz=349,slow=11,SNR=17						
ASAR				S	Sn	00 05 25.2	-13
	0.1nm,0.3s,baz=359,slow=29,SNR=3.7						
AFI	**Afiamalu**	**56.91**	**103**	LR	LR	00 29 42.3	
	comp=Z,141nm,18.8s,baz=74,slow=33						
MKAR	**Makanchi Array**	**67.66**	**326**	P	P	00 09 01.2	0.0
	0.5nm,0.4s,baz=123,slow=8.1,SNR=11						

BJI 28 00:04:18.6, 31.92S×57.89E, h10km, mB5.1/19, mb5.0/33, Ms5.1/21, Ms7 4.6/21
MOS 28 00:04:21.2±0.7, 31.73S×58.38E, h10km, mb5.3/47, MS4.3/5, Error ellipse: s-maj=12.0km s-min=5.7km az=107.3
IDC 28 00:04:21.1±0.4, 31.69S×58.35E, h0km, mb4.7/28, mb1 4.8/28, mb1mx4.8/30, mbtmp4.7/28, MS4.0/22, Ms1 4.0/22, ms1mx3.8/32, Error ellipse: s-maj=15.0km s-min=11.6km az=20.0
NEIC 28 00:04:22.5±0.1, 31.76S×58.38E, h10km, mb5.2/56, Error ellipse: s-maj=5.6km s-min=4.5km az=216.0
GCMT 28 00:04:23.8±0.3, 31.71S×58.15E, h12km, MW5.0, Moment Tensor Solution. s30,c32; s66,c98; Moment tensor: Scale 10^16Nm; Mrr=3.48±.12; Mθθ3.45±.09; Mφφ0.03±.11; Mrθ0.24±.32; Mrφ0.42±.10; Mθφ1.28±.45; Best double couple: Mo3.70000×10^16 NP1:φs100.00000°, δ44.00000°, λ-64.00000°. NP2:φs246.00000°, δ51.00000°, λ-113.00000°. Principal axes: T 3.5200, Plg3.0000°, Azm352.0000°; N 0.3700, Plg18.0000°, Azm261.0000°; P -3.9000, Plg72.0000°, Azm93.0000°; Data Used: ll IU G IC CN.
ISCJB 28 00:04:23.2±0.2, 31.77S±0.05×58.47E±0.05, h25km, mb5.0/138, MS4.2/34 Error ellipse: s-maj=7.4km s-min=6.2km az=16.3
SZGRF 28 00:04:33.9, 29.10S×59.48E, h29km, mb5.1, MS4.1, Southwest Indian Ridge
DJA 28 00:04:35.4±5.7, 32.2S±5.4×58.6E±10.2, h117km±56km, M4.7/14, mB5.1/1, mb4.7/14, Mw(mB)4.5/1
ISC 28 00:04:24.6±0.4, 31.84S±0.06×58.26E±0.06, h23km±2km, h23km:pP-P, n432, σ1§12/482, mb5.1/138, MS4.2/34, 27C-30D, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOSA	**Boshof**	**28.64**	**268**	P	**P**	**00 10 19.0**	**-0.7**
BOSA	**Boshof**	**28.64**	**268**	P	**P**	**00 10 19.0**	**-0.7**
	7.2nm,0.8s,baz=110,slow=8.6,SNR=9.8						
BOSA				LR	LR	00 20 41.8	
	comp=Z,190nm,18.2s,baz=74,slow=34						
LBTB	**Lobatse**	**29.44**	**275**	*e*P	**P**	**00 10 26.5**	**-0.3**
	36nm,1.3s						
LBTB	**Lobatse**	**29.44**	**275**	P	**P**	**00 10 25.5**	**-1.3**
	12nm,1.0s,baz=144,slow=5.2,SNR=6.8						
LBTB				LR	LR	00 20 12.2	
	comp=Z,168nm,18.9s,baz=335,slow=32						
SUR	**Sutherland**	**31.62**	**259**	P	**P**	**00 10 46.0**	**-0.2**
SUR	**Sutherland**	**31.62**	**259**	P	**P**	**00 10 46.0**	**-0.2**
	13nm,1.0s,baz=121,slow=12,SNR=4.3						
LSZ	**Lusaka**	**31.97**	**294**	*e*P	**P**	**00 10 49.3**	**+0.1**
	14nm,1.0s						
LSZ	**Lusaka**	**31.97**	**294**

ASAR Alice Springs 66.23 104 P **P** **00 15 10.3 -0.8**
ASAR Alice Springs 66.23 104 P **P** **00 15 10.3 -0.8**
comp=Z,12nm,0.8s,baz=238,slow=5.8,SNR=118
AS31 Alice Springs 66.23 104 *e*P **P** **00 15 10.5 -0.7**
KBL Kabul 66.80 10 *e*P **P** **00 15 14.3 -0.2**
KBL pmax pmax
comp=Z,8.0nm,0.8s
KBL Kabul 66.80 10 *e*P **P** **00 15 14.3 -0.2**
comp=Z,7.6nm,0.8s
WRA Warramunga Arr 68.24 101 P **P** **00 15 23.3 -0.6**
WRA Warramunga Arr 68.24 101 P **P** **00 15 23.3 -0.6**
comp=Z,16nm,0.8s,baz=242,slow=5.3,SNR=91
WRAB Tennant Creek 68.26 101 *e*P **P** **00 15 23.6 -0.4**
WRAB pmax pmax
comp=Z,21nm,0.8s
WRAB Tennant Creek 68.26 101 *e*P **P** **00 15 23.6 -0.4**
comp=Z,21nm,0.8s
LSA Lhasa 68.71 30 *e*P **P** **00 15 26.1 -0.9**
LSA pmax pmax
comp=Z,3.0nm,0.6s
LSA Lhasa 68.71 30 *e*P **P** **00 15 26.1 -0.9**
comp=Z,3.1nm,0.6s
STKA Stephens Creek 68.90 115 *e*P **P** **00 15 28.3 +0.5**
comp=Z,17nm,2.0s
STKA Stephens Creek 68.90 115 P **P** **00 15 28.2 +0.5**
comp=Z,8.3nm,0.8s,baz=230,slow=4.9,SNR=8.5
STKA LR LR 00 39 21.4
comp=Z,77nm,19.2s,baz=207,slow=30
TOA0 Torodi Ar. Sit 70.23 300 *e*P **P** **00 15 36.0 -0.1**
TORD Torodi Ar. Bea 70.23 300 P **P** **00 15 36.1 0.0**
TORD Torodi Ar. Bea 70.23 300 P **P** **00 15 36.1 0.0**
comp=Z,7.6nm,0.8s,baz=127,slow=5.5,SNR=33
TORD LR LR 00 46 22.5
comp=Z,298nm,18.1s,baz=120,slow=36
QIZ Qiongzhong 70.72 52 P **P** **00 15 38.8 -0.2**
QIZ S **S** **00 24 54.3 +2.0**
QIZ pmax pmax
comp=Z,16nm,1.8s
KMI Kunming 70.80 42 P **P** **00 15 39.0 -0.7**
KMI pP **pP** **00 15 48.0 +0.9**
KMI sP **sP** **00 15 53.8 +4.0**
KMI S **S** **00 24 54.5 +1.0**
KMI pmax pmax
comp=Z,7.0nm,1.4s
KMI pmax pmax
comp=Z,47nm,3.7s
KMI LR LR
comp=N,170nm,23.2s
KMI LR LR
comp=E,110nm,25.8s
KMI LR LR
comp=Z,150nm,19.3s
LIC Lamto 71.11 290 *e*P **P** **00 15 42.1 +0.6**
comp=Z,24nm,0.7s,baz=138
LIC *e*R
comp=Z,171nm,19.8s
LIC Lamto 71.11 290 *e*P **P** **00 15 42.1 +0.6**
comp=Z,24nm,0.7s
DBIC Dimbokro 71.23 291 P **P** **00 15 43.4 +1.1**
DBIC Dimbokro 71.23 291 P **P** **00 15 43.4 +1.1**
comp=Z,14nm,0.8s,baz=108,slow=6.1,SNR=13
DBIC LR LR 00 42 45.4
comp=Z,138nm,21.7s,baz=110,slow=32
MALT Malatya 72.20 344 *e*PcP **PcP** **00 16 01.8 -4.0**
comp=Z,2.9nm,0.7s
MALT Malatya 72.20 344⇑*i*P **PcP** **00 16 02.4 -3.4**
GNI Garni 72.71 349 *e*P **P** **00 15 50.5 -0.2**
comp=Z,60nm,1.9s
KSH Kashi 72.87 14 P P 00 15 48.0 -3.7
KSH *e*pP pP 00 15 58.3 -0.8
KSH *e*sP sP 00 16 02.0 +0.2
KSH pmax pmax
comp=Z,28nm,1.0s
KSH pmax pmax
comp=Z,200nm,5.4s
KSH LR LR
comp=N,190nm,4.3s
KSH LR LR
comp=E,240nm,5.1s
KSH LR LR
comp=Z,220nm,6.0s
GYA Guiyang 74.10 44 *e*P **P** **00 16 01.0 +1.8**
GYA S **S** **00 25 33.3 +2.3**
GYA SKS **SKSac** **00 26 03.5 -1.9**
GYA SS **SS** **00 30 21.8 +4.9**
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,110nm,5.0s
GYA LR LR
comp=N,480nm,18.5s
GYA LR LR
comp=E,350nm,19.2s
GYA LR LR
comp=Z,460nm,18.8s
TAM Tamanrasset 74.14 310 *e*P **P** **00 16 00.5 +1.0**
TAM pmax pmax
comp=Z,3.0nm,0.8s
TAM Tamanrasset 74.14 310 *e*P **P** **00 16 00.5 +1.0**
comp=Z,3.0nm,0.7s
BR131 Keskin Array S 74.78 341 *e*P **P** **00 16 02.2 -0.7**
comp=Z,7.2nm,0.8s
BRTR Keskin Array B 74.78 341 P **P** **00 16 02.2 -0.7**
BRTR Keskin Array B 74.78 341 P **P** **00 16 02.2 -0.7**
comp=Z,3.7nm,0.7s,baz=165,slow=7.7,SNR=38
BRTR LR LR 00 49 32.1
comp=Z,52nm,18.1s,baz=148,slow=36
AML Almayashu 74.96 12 *i*P **P** **00 16 04.4 +0.2**
AML Almayashu 74.96 12 P **P** **00 16 04.4 +0.2**
SNR=6.7
APE Apeiranthos 75.07 333⇑P **P** **00 16 04.2 -0.3**
APE Apeiranthos 75.07 333⇑*i*P **P** **00 16 04.2 -0.3**
MAK Makhachkala 75.08 352 P **P** **00 16 03.4 -0.9**
MAK *e*PPP PPP 00 20 36.9
MAK *e*S **S** **00 25 43.4 +2.4**
MAK *e* 00 26 10.4
MAK *e*SS **SS** **00 30 25.7 -5.4**
MAK pmax pmax
comp=Z,117nm,1.5s
MAK MLR MLR
comp=Z,156nm,17.0s
ANTO Ankara 75.15 340⇑P **P** **00 16 05.3 +0.4**
ANTO Ankara 75.15 340 *e*P **P** **00 16 04.6 -0.4**
comp=Z,6.8nm,0.8s
ANTO Ankara 75.15 340⇑*i*P **P** **00 16 05.3 +0.4**
KZA Kyzart 75.19 13 *i*P **P** **00 16 06.0 +0.5**
KZA Kyzart 75.19 13 P **P** **00 16 06.0 +0.5**
SNR=6.8
KK31 Karatay Array 75.42 9 P **P** **00 16 06.3 0.0**
KK31 pmax pmax
comp=Z,15nm,1.1s
KKAR Karatay Array 75.42 9 *e*P **P** **00 16 06.6 +0.3**
KKAR Karatay Array 75.42 9 *e*P **P** **00 16 06.6 +0.3**
EKS2 Erkin-Say 75.49 12 *e*P **P** **00 16 07.4 +0.5**
EKS2 pmax pmax
comp=Z,12nm,0.9s
EKS2 Erkin-Say 75.49 12 *e*P **P** **00 16 07.4 +0.5**
comp=Z,12nm,0.9s
EKS2 Erkin-Say 75.49 12 P **P** **00 16 07.3 +0.4**
SNR=11
ULHL Ulahol 75.55 14 *i*P **P** **00 16 07.5 +0.1**
ULHL Ulahol 75.55 14 P **P** **00 16 07.5 +0.1**
SNR=8.6
AAK Ala-Archa 75.59 12⇑*e*P **P** **00 16 07.7 +0.2**
AAK pmax pmax
comp=Z,35nm,1.2s
AAK MLR MLR
comp=Z,183nm,16.0s
AAK Ala-Archa 75.59 12 *e*P **P** **00 16 07.4 -0.1**
comp=Z,18nm,1.3s
CD2 Chengdu 75.85 39 *e*P **P** **00 16 08.0 -1.1**
CD2 pP **pP** **00 16 18.8 +2.2**
CD2 sP **sP** **00 16 21.0 +1.7**
CD2 PP **PP** **00 19 01.0 +1.2**
CD2 S **S** **00 25 48.0 -2.2**
CD2 sS **sS** **00 26 05.0 +2.5**
CD2 SS **SS** **00 30 44.3 +1.1**
CD2 pmax pmax
comp=Z,20nm,1.0s
CD2 pmax pmax
comp=Z,100nm,4.8s
CD2 LR LR
comp=N,150nm,21.4s
CD2 LR LR
comp=Z,110nm,20.1s
TKM2 Tokmak 2 76.08 13 *e*P **P** **00 16 09.9 -0.4**
TKM2 pmax pmax
comp=Z,10.0nm,1.1s
TKM2 Tokmak 2 76.08 13 *e*P **P** **00 16 09.9 -0.4**
comp=Z,10.0nm,1.1s
TKM2 Tokmak 2 76.08 13 P **P** **00 16 10.2 -0.1**
SNR=8.3
USP Ospenovka 76.21 12 *i*P **P** **00 16 10.9 +0.1**
USP Ospenovka 76.21 12 P **P** **00 16 10.9 +0.1**
SNR=12
KBZ Khabaz 76.50 349 P **P** **00 16 12.3 -0.1**
KBZ Khabaz 76.50 349 P **P** **00 16 12.3 -0.1**
KBZ Khabaz 76.50 349 P **P** **00 16 12.3 -0.1**
comp=Z,5.3nm,1.2s,baz=36,slow=8.4,SNR=4.6
KBZ LR LR 00 51 03.9
comp=Z,100nm,18.1s,baz=192,slow=37
ARMA Armidale 77.22 118 *e*P **P** **00 16 16.4 -0.8**
comp=Z,30nm,1.5s
CTA Charters Tower 78.04 106 P **P** **00 16 22.1 +0.3**
CTA Charters Tower 78.04 106 P **P** **00 16 22.1 +0.3**
comp=Z,3.8nm,0.7s,baz=224,slow=7.2,SNR=7.1
CTAO Charters Tower 78.04 106 *e*P **P** **00 16 21.7 -0.1**
CTAO pmax pmax
comp=Z,9.0nm,1.0s
CTAO Charters Tower 78.04 106 *e*P **P** **00 16 21.7 -0.1**
comp=Z,8.8nm,1.0s
ENH Enshi 78.59 43 *e*P **P** **00 16 21.5 -3.0**
comp=Z,7.9nm,0.7s
RZN Rozhen 79.42 335 *e*P **P** **00 16 29.0 0.0**
MMB Musomiste 79.70 334 *e*P **P** **00 16 29.0 -1.3**
LZH Lanzhou 79.94 36 *e*P **P** **00 16 35.0 +3.1**
LZH pP **pP** **00 16 39.0 -0.4**
LZH sP **sP** **00 16 41.5 -0.6**
LZH PP **PP** **00 19 39.0 +4.9**
LZH *e*S **S** **00 26 38.0 +3.7**
LZH sS **SKSac** **00 26 48.3 +0.6**
LZH SS **SS** **00 31 47.0 +2.0**
LZH pmax pmax
comp=Z,17nm,1.0s
LZH pmax pmax
comp=Z,98nm,4.0s
LZH LR LR
comp=N,150nm,11.0s
LZH LR LR
comp=E,220nm,11.1s
LZH LR LR
comp=Z,210nm,11.1s
WMQ Urumqi 79.96 21 *e*P **P** **00 16 31.0 -0.7**
WMQ pP **PcP** **00 16 35.5 -3.6**
WMQ sP **sP** **00 16 39.0 -2.9**
WMQ *e*S **S** **00 26 33.0 -1.0**
WMQ pmax pmax
comp=Z,12nm,0.6s
WMQ pmax pmax
comp=Z,99nm,4.4s
WMQ LR LR
comp=N,240nm,21.2s
WMQ LR LR
comp=E,220nm,23.2s
WMQ LR LR
comp=Z,260nm,22.7s
PSN Preselentsi 80.03 338 *e*P **P** **00 16 31.0 -1.0**
SZH Strazhica 80.39 337 *e*P **P** **00 16 33.0 -1.0**
TIRR Tirgusor 80.66 339⇓P **P** **00 16 34.8 -0.5**
TIRR Tirgusor 80.66 339 *e*P **P** **00 16 35.0 -0.4**
TIRR Tirgusor 80.66 339⇓*i*P **P** **00 16 34.8 -0.5**
GTA Gaotai 80.70 31 P **P** **00 16 35.5 -0.4**
GTA pP **PcP** **00 16 40.5 -2.1**
GTA sP **sP** **00 16 44.0 -2.1**
GTA PP **PP** **00 19 41.8 +1.4**
GTA S **S** **00 26 43.5 +1.3**
GTA sS **SKSac** **00 26 51.8 -1.0**
GTA SS SS 00 32 03.8 +7.5
GTA pmax pmax
comp=Z,9.0nm,1.0s
GTA pmax pmax
comp=Z,70nm,5.2s
GTA LR LR
comp=N,250nm,16.6s
GTA LR LR
comp=E,150nm,11.4s
GTA LR LR
comp=Z,190nm,12.8s
AB31 Akbulak array 80.74 1 *i*P **P** **00 16 35.2 -0.5**
AB31 pmax pmax
comp=Z,4.0nm,0.5s
ABKAR Akbulak array 80.74 1 *e*P **P** **00 16 35.3 -0.3**
VTS Vitosha 80.76 335⇓P **P** **00 16 36.0 -0.1**
VTS Vitosha 80.76 335 *e*P **P** **00 16 34.0 -2.1**
VTS Vitosha 80.76 335⇓*i*P **P** **00 16 36.0 -0.1**
XAN Xi'an 81.05 41 P **P** **00 16 36.3 -1.5**
XAN pP **PcP** **00 16 41.3 -2.8**
XAN pmax pmax
comp=Z,3.0nm,1.2s
XAN pmax pmax
comp=Z,16nm,4.8s
AMRR Amara 81.13 338⇑P **P** **00 16 40.4 +2.6**
AMRR Amara 81.13 338⇑*i*P **P** **00 16 40.4 +2.6**
MK31 Makanchi Array 81.22 16 *e*P **P** **00 16 37.4 -0.9**
MK31 Makanchi Array 81.22 16 *e*P **P** **00 16 37.4 -0.9**
MKAR Makanchi Array 81.22 16 *e*P **P** **00 16 38.0 -0.3**
MKAR Makanchi Array 81.22 16 *e*P **P** **00 16 38.0 -0.3**
MKAR Makanchi Array 81.22 16 P **P** **00 16 37.5 -0.8**
comp=Z,3.4nm,0.8s,baz=212,slow=4.3,SNR=27
MKAR LR LR 00 50 58.4
comp=Z,64nm,20.2s,baz=336,slow=34
MPEP Malo Peshtene 81.23 335 *e*P **P** **00 16 38.0 -0.4**
KEST Kesra 81.38 322 P **P** **00 16 41.3 +1.8**
KEST Kesra 81.38 322 P **P** **00 16 41.3 +1.8**
comp=Z,1.6nm,0.7s,baz=322,slow=1.6,SNR=7.7
KEST LR LR 00 52 36.4
comp=Z,60nm,18.0s,baz=276,slow=36
CFR Carcaliu 81.40 339⇓P **P** **00 16 38.7 -0.5**
CFR Carcaliu 81.40 339⇓*i*P **P** **00 16 38.7 -0.5**
ISR Istrita 81.84 338⇓P **P** **00 16 41.5 -0.2**
ISR Istrita 81.84 338⇓*i*P **P** **00 16 41.5 -0.2**
MLR Muntele Rosu 82.36 338⇑*i*P **P** **00 16 44.4 -0.1**
VRI Vrincioaia 82.45 338⇑P **P** **00 16 45.0 +0.2**
VRI Vrincioaia 82.45 338⇑*i*P **P** **00 16 45.0 +0.2**
PLOR Plostina 82.46 338⇓P **P** **00 16 44.6 -0.3**
PLOR Plostina 82.46 338⇓*i*P **P** **00 16 44.6 -0.3**
VOIR 82.61 337⇑P **P** **00 16 45.1 -0.7**
VOIR 82.61 337⇑*i*P **P** **00 16 45.0 -0.7**
ARR Arges 82.69 337⇓*i*P **P** **00 16 45.2 -0.9**
LOT Lotru 83.05 336⇓*i*P **P** **00 16 47.0 -1.1**
TESR Tescani 83.05 339⇑*i*P **P** **00 16 46.6 -1.3**
GZR Gura Zlata 83.35 336⇓P **P** **00 16 49.3 -0.2**
GZR Gura Zlata 83.35 336⇓*i*P **P** **00 16 49.3 -0.2**
BZS Buzias 83.95 335⇓P **P** **00 16 52.3 -0.2**
BZS Buzias 83.95 335⇓*i*P **P** **00 16 52.3 -0.2**
KURK Kurchatov 84.14 13 P **P** **00 16 52.5 -0.8**
comp=Z,118nm,1.0s,SNR=18
PMG Port Moresby 84.18 97 *e*P **P** **00 16 54.8 +0.2**
PMG Port Moresby 84.18 97 P **P** **00 16 55.0 +0.5**
comp=Z,4.2nm,0.5s,baz=266,slow=11,SNR=6.2
VSR Storozhevoye 84.39 348 *e*P **P** **00 16 54.0 -0.6**
VSR pmax pmax
comp=Z,20nm,1.2s
VSR pmax pmax
comp=N,10.0nm,1.0s
VSR pmax pmax
comp=E,10.0nm,1.3s
BURAR Bucovina Array 84.48 338⇑*i*P **P** **00 16 55.9 +0.6**
BUR08 Bucovina Ar. S 84.51 338 *e*P **P** **00 16 55.4 -0.1**
DRGR 84.58 336⇑P **P** **00 16 55.5 -0.3**
DRGR 84.58 336⇑*i*P **P** **00 16 55.5 -0.3**
VOSK Vostochnaya 84.93 8 P **P** **00 16 56.0 -1.3**
VOSK pmax pmax
comp=Z,15nm,1.5s
BVA0 Borovoye Array 85.16 7 *i*P **P** **00 16 58.2 -0.3**
BVA0 pmax pmax
comp=Z,23nm,1.0s
BVAR Borovoye Array 85.16 7 LR LR 00 53 47.1
comp=Z,84nm,20.0s,baz=188,slow=35
BRVK Borovoye 85.18 7*d*i*P* **P** **00 16 58.1 -0.5**
BRVK pmax pmax
comp=Z,28nm,1.2s
BRVK MLR MLR
comp=Z,98nm,18.0s
BRVK Borovoye 85.18 7 *e*P **P** **00 16 58.4 -0.2**
NJ2 Nanjing 85.55 48 *e*P **P** **00 17 00.5 -0.4**
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
PKSM Moragy 85.55 334⇑P **P** **00 17 00.2 -0.4**
PKSM Moragy 85.55 334⇑*i*P **P** **00 17 00.2 -0.4**
AK02 Malin Array Si 86.06 342 *e*P **P** **00 17 01.9 -1.1**
KIEV Kiev 86.09 342 *e*P **P** **00 17 02.9 -0.2**
KIEV Kiev 86.09 342 *e*P **P** **00 17 02.9 -0.2**
AKASG Malin Array Be 86.09 342*ce*P **P** **00 17 02.9 -0.2**
AKASG pmax pmax
comp=Z,2.0nm,0.5s
AKASG Malin Array Be 86.09 342 P **P** **00 17 02.2 -0.9**
AKASG Malin Array Be 86.09 342 P **P** **00 17 02.2 -0.9**
comp=Z,1.9nm,0.5s,baz=173,slow=4.7,SNR=9.9
UZH Uzhgorod 86.32 337 *e*P **P** **00 17 02.9 -1.4**
KOLS Kolonicke sedl 86.59 337 *e*P **P** **00 17 05.8 +0.1**
KOLS pmax pmax
comp=Z,9.0nm,1.8s
KOLS Kolonicke sedl 86.59 337 *e*P **P** **00 17 05.8 +0.1**
PGF Pioggiola 86.74 326 *e*P **P** **00 17 06.2 -0.5**
comp=Z,54nm,1.1s
PGF Pioggiola 86.74 326 *e*P **P** **00 17 06.2 -0.5**
PGF pmax pmax
comp=Z,54nm,1.1s
PGF Pioggiola 86.74 326 *e*P **P** **00 17 06.2 -0.5**
comp=Z,54nm,1.1s
KECS Kecovo 86.81 336 *e*P **P** **00 17 06.5 -0.2**
KECS pmax pmax
comp=Z,2.0nm,0.7s
KECS Kecovo 86.81 336 *e*P **P** **00 17 06.5 -0.2**
CRVS Cervenica-Dubn 86.83 337 *e*P P 00 17 03.6 -3.3
CRVS pmax pmax
comp=Z,10.0nm,1.6s
CRVS Cervenica-Dubn 86.83 337 *e*P P 00 17 03.6 -3.3
KWP Kalwaria Pacla 87.05 338⇓P **P** **00 17 07.5 -0.4**
KWP Kalwaria Pacla 87.05 338 *e*P **P** **00 17 07.1 -0.8**
KWP Kalwaria Pacla 87.05 338⇓*i*P **P** **00 17 07.5 -0.4**
SOKA Soboth 87.34 332⇓*i*P **P** **00 17 09.4 -0.1**
comp=Z,8.0nm,1.1s
VYHS Vyhne 87.40 335 *e*P **P** **00 17 09.4 -0.2**
VYHS pmax pmax
comp=Z,6.0nm,1.1s
VYHS Vyhne 87.40 335 *e*P **P** **00 17 09.4 -0.2**
OBKA Obir 87.40 331⇓*i*P **P** **00 17 10.0 +0.2**
comp=Z,23nm,1.8s
HHC Hu-ho-hao-te 87.49 38 *e*P **P** **00 17 09.0 -1.4**
HHC pP **PcP** **00 17 13.5 +1.2**
HHC sP **sP** **00 17 16.0 -4.7**
HHC PP **PP** **00 20 37.8 +2.0**
HHC SKS **SKSac** **00 27 34.5 -2.2**
HHC S **S** **00 27 49.8 -0.3**
HHC sS **ScS** **00 27 57.5 +0.5**
HHC SS **SS** **00 33 39.8 +3.3**
HHC pmax pmax
comp=Z,54nm,1.1s
HHC pmax pmax
comp=Z,170nm,5.6s
HHC LR LR
comp=N,360nm,15.2s
HHC LR LR
comp=E,470nm,17.0s
HHC LR LR
comp=Z,320nm,16.3s
ARSA Arzberg 87.62 332⇓*i*P **P** **00 17 10.7 0.0**
comp=Z,8.9nm,1.0s,SNR=7.9
NIE Niedzica 87.66 336 *e*P **P** **00 17 11.8 +0.9**
NIE Niedzica 87.66 336 *e*P **P** **00 17 11.8 +0.9**
MYKA Terra Mystica 87.87 331⇓*i*P **P** **00 17 11.9 -0.1**
comp=Z,8.7nm,1.4s
ARU Arti 87.92 0*d*i*P* **P** **00 17 11.7 -0.2**
ARU 00 20 37.8
ARU S **SKSac** **00 27 36.2 -2.0**
ARU pmax pmax
comp=Z,18nm,1.2s
ARU Arti 87.92 0 P **P** **00 17 11.5 -0.4**
comp=Z,78nm,0.8s,SNR=6.6
SMOL Smolenice 87.93 334 *e*P **P** **00 17 12.0 -0.2**
SMOL Smolenice 87.93 334 *e*P **P** **00 17 12.0 -0.2**
CONA Conrad Observa 88.04 333⇓*i*P **P** **00 17 12.7 -0.1**
comp=Z,25nm,1.4s,SNR=21
SVE Sverdlovsk 88.34 1⇓*i*P **P** **00 17 14.2 +0.3**
SVE pmax pmax
comp=Z,17nm,1.7s
ABTA Abfaltersbach 88.44 330⇓*i*P **P** **00 17 15.3 +0.6**
comp=Z,19nm,1.0s,SNR=16
ZAA0 Zalesovo Array 88.47 15 *e*P **P** **00 17 12.4 -2.1**
ZALV Zalesovo Beam 88.47 15 P **P** **00 17 12.6 -1.9**
ZALV Zalesovo Beam 88.47 15 P **P** **00 17 12.6 -1.9**
ZALV Zalesovo Beam 88.47 15 P **P** **00 17 12.6 -1.9**
comp=Z,4.6nm,1.0s,baz=222,slow=4.0,SNR=18
ZALV LR LR 00 53 56.3
comp=Z,74nm,22.0s,baz=70,slow=34
SBF Sospel 88.49 326 *e*P **P** **00 17 15.2 +0.2**
comp=Z,30nm,0.8s
SBF Sospel 88.49 326 *e*P **P** **00 17 15.2 +0.2**
SBF pmax pmax
comp=Z,30nm,0.8s
SBF Sospel 88.49 326 *e*P **P** **00 17 15.2 +0.2**
comp=Z,30nm,0.8s
OJC Ojcow 88.52 336 *e*P **P** **00 17 14.8 -0.1**
OJC Ojcow 88.52 336 *e*P **P** **00 17 14.8 -0.1**
LMR La Mourre 88.54 325 *e*P **P** **00 17 15.5 +0.4**
comp=Z,7.6nm,0.7s
LMR La Mourre 88.54 325 *e*P **P** **00 17 15.5 +0.4**
LMR pmax pmax
comp=Z,8.0nm,0.7s
LMR La Mourre 88.54 325 *e*P **P** **00 17 15.5 +0.4**
comp=Z,7.6nm,0.7s
OBN Obninsk 88.58 348⇑*i*P **P** **00 17 15.0 0.0**
OBN *e* 00 20 44.8
OBN *i*S **SKSac** **00 27 39.5 -2.7**
OBN *e*PS PS 00 29 24.9 +19
OBN pmax pmax
comp=Z,43nm,2.5s
OBN MLR MLR
comp=Z,100nm,19.0s
MOA Molln 88.60 332⇓*i*P **P** **00 17 15.4 +0.1**
comp=Z,13nm,0.9s,SNR=13
FRF La Foret Royal 88.64 325 *e*P **P** **00 17 16.1 +0.5**
comp=Z,14nm,1.0s
FRF La Foret Royal 88.64 325 *e*P **P** **00 17 16.1 +0.5**
FRF pmax pmax
comp=Z,14nm,1.0s
FRF La Foret Royal 88.64 325 *e*P **P** **00 17 16.1 +0.5**
comp=Z,14nm,1.0s
OKC Ostrava-Krasne 88.77 335 *e*P **P** **00 17 15.7 -0.4**
OKC *e* 00 17 24.0
OKC Ostrava-Krasne 88.77 335 *e*P **P** **00 17 15.7 -0.4**
OKC *ex* x 00 17 24.0
MORC Moravsky Berou 88.94 335 *e*P **P** **00 17 16.1 -0.8**
MORC Moravsky Berou 88.94 335 *e*P **P** **00 17 16.1 -0.8**
RJOB Jochberg 89.10 331 *e*P **P** **00 17 17.6 -0.2**
comp=Z,12nm,1.3s
RJOB *e*PP PP 00 20 42.0 -6.5
WTTA Wattenberg 89.21 330⇑*i*P **P** **00 17 18.6 +0.1**
comp=Z,20nm,0.7s,SNR=15
FUORN Ofenpass-Fuorn 89.30 329 *e*P **P** **00 17 19.8 +0.8**
TREC Trest 89.30 334 *e*P **P** **00 17 18.2 -0.4**
TREC *e* 00 17 26.7
TREC Trest 89.30 334 *e*P **P** **00 17 18.2 -0.4**
TREC *ex* x 00 17 26.7
BJI Beijing 89.38 41 P **P** **00 17 19.0 -0.2**
BJI pmax pmax
comp=Z,8.0nm,0.7s
BJI LR LR
comp=N,560nm,15.0s
BJI LR LR
comp=E,280nm,19.9s
BJI LR LR
comp=Z,85nm,16.0s
FETA Feichten 89.41 330⇑*i*P **P** **00 17 19.5 +0.2**
comp=Z,21nm,1.1s
MBDF Montbardon 89.45 326 *e*P **P** **00 17 20.3 +0.7**
comp=Z,39nm,1.0s
MBDF Montbardon 89.45 326 *e*P **P** **00 17 20.3 +0.7**
MBDF pmax pmax
comp=Z,39nm,1.0s
MBDF Montbardon 89.45 326 *e*P **P** **00 17 20.3 +0.7**
comp=Z,39nm,1.0s
KRLC Kraliky 89.46 335 *e*P **P** **00 17 19.2 -0.2**
KRLC *e* 00 17 28.1
KRLC Kraliky 89.46 335 *e*P **P** **00 17 19.2 -0.2**
KRLC *ex* x 00 17 28.1
SMRF Simiane la Rot 89.47 325 *e*P **P** **00 17 19.3 -0.3**
comp=Z,16nm,0.9s
SMRF Simiane la Rot 89.47 325 *e*P **P** **00 17 19.3 -0.3**
comp=Z,16nm,0.9s
MOTA Moosalm 89.50 330⇓*i*P **P** **00 17 19.7 -0.1**
comp=Z,12nm,0.8s,SNR=14
TUE Stuetta 89.59 329 *e*P **P** **00 17 20.5 +0.2**

GEC2	**GERESS Array S**	**89.62**	**332**	*e*P		**P**	**00 17 19.9**	**-0.4**
	comp=Z,25nm,1.9s							
GEC2				*e*pP		**pP**	**00 17 27.6**	**-0.3**
GEC2	**GERESS Array S**	**89.62**	**332**	*e*P		**P**	**00 17 19.9**	**-0.4**
GEC2				*e**PP		**pP**	**00 17 27.6**	**-0.3**
GEC2				pmax	pmax			
	comp=Z,26nm,1.9s							
GERES	**GERESS Array B**	**89.62**	**332**	P		**P**	**00 17 19.5**	**-0.8**
GERES	**GERESS Array B**	**89.62**	**332**	P		**P**	**00 17 19.5**	**-0.8**
	comp=Z,1.7nm,0.7s,baz=151,slow=5.1,SNR=25							
GERES				LR		LR	00 55 59.9	
	comp=Z,66nm,20.5s,baz=337,slow=35							
RETA	**Reutte**	**89.76**	**330**	⇓ *i*P		**P**	**00 17 21.2**	**+0.3**
	comp=Z,12nm,0.8s,SNR=10							
DPC	**Dobruska-Polom**	**89.86**	**335**	*e*P		**P**	**00 17 21.3**	**+0.1**
DPC				*e*			00 17 30.1	
DPC	**Dobruska-Polom**	**89.86**	**335**	*e*P		**P**	**00 17 21.3**	**+0.1**
DPC				*ex*		x	00 17 30.1	
KHC	**Kasperske Hory**	**89.90**	**332**	*e*P		**P**	**00 17 20.5**	**-1.0**
KHC	**Kasperske Hory**	**89.90**	**332**	*e*P		**P**	**00 17 20.5**	**-1.0**
ORIF	**Oris-en-Rattie**	**90.02**	**326**	*e*P		**P**	**00 17 22.5**	**+0.3**
	comp=Z,6.7nm,0.8s							
ORIF				*e*R				
	comp=Z,94nm,20.8s							
ORIF	**Oris-en-Rattie**	**90.02**	**326**	*e*P		**P**	**00 17 22.5**	**+0.3**
ORIF				pmax	pmax			
	comp=Z,7.0nm,0.8s							
ORIF	**Oris-en-Rattie**	**90.02**	**326**	*e*P		**P**	**00 17 22.5**	**+0.3**
	comp=Z,6.7nm,0.8s							
LPG	**La Plagne**	**90.03**	**327**	*e*P		**P**	**00 17 21.9**	**-0.6**
LPG	**La Plagne**	**90.03**	**327**	*e*P		**P**	**00 17 21.9**	**-0.6**
LPG	**La Plagne**	**90.03**	**327**	*e*P		**P**	**00 17 21.9**	**-0.6**
LPL	**La Plagne**	**90.06**	**327**	*e*P		**P**	**00 17 22.2**	**-0.3**
LPL	**La Plagne**	**90.06**	**327**	*e*P		**P**	**00 17 22.2**	**-0.3**
LPL	**La Plagne**	**90.06**	**327**	*e*P		**P**	**00 17 22.2**	**-0.3**
FUR	**Furstenfeldbru**	**90.07**	**331**	*e*P		**P**	**00 17 23.2**	**+0.9**
	comp=Z,41nm,0.9s							
FUR				*e*pP		**pP**	**00 17 31.9**	**+2.0**
FUR				*e*PP		PP	00 20 50.1	-6.1
FUR	**Furstenfeldbru**	**90.07**	**331**	*e*P		**P**	**00 17 23.2**	**+0.9**
FUR				*e**PP		**pP**	**00 17 31.9**	**+2.0**
FUR				pmax	pmax			
	comp=Z,105nm,0.9s							
UPC	**Upice**	**90.10**	**335**	*e*P		**P**	**00 17 22.9**	**+0.6**
UPC				*e*			00 17 31.4	
UPC	**Upice**	**90.10**	**335**	*e*P		**P**	**00 17 22.9**	**+0.6**
UPC				*ex*		x	00 17 31.4	
WET	**Wettzell**	**90.19**	**332**	*e*P		**P**	**00 17 22.5**	**-0.3**
	comp=Z,20nm,1.7s							
WET				*e*pP		**pP**	**00 17 31.1**	**+0.7**
WET	**Wettzell**	**90.19**	**332**	*e*P		**P**	**00 17 22.5**	**-0.3**
WET				*e**PP		**pP**	**00 17 31.1**	**+0.7**
WET				pmax	pmax			
	comp=Z,65nm,1.7s							
PRU	**Pruhonice**	**90.22**	**334**	*e*P		**P**	**00 17 22.3**	**-0.6**
PRU				*e*			00 17 31.4	
PRU	**Pruhonice**	**90.22**	**334**	*e*P		**P**	**00 17 22.3**	**-0.6**
PRU				*ex*		x	00 17 31.4	
KSP	**Ksiaz**	**90.27**	**335**	*e*P		**P**	**00 17 23.7**	**+0.6**
SONM	**Songino Array**	**90.30**	**30**	P		**P**	**00 17 22.5**	**-0.9**
SONM	**Songino Array**	**90.30**	**30**	P		**P**	**00 17 22.5**	**-0.9**
	comp=Z,2.4nm,0.9s,baz=222,slow=5.8,SNR=6.7							
SONM				LR		LR	00 55 12.6	
	comp=Z,164nm,19.8s,baz=31,slow=34							
PRA	**Prague**	**90.33**	**333**	P		**P**	**00 17 23.0**	**-0.4**
LASF	**Ste Croix**	**90.39**	**324**	*e*P		**P**	**00 17 24.5**	**+0.6**
	comp=Z,19nm,1.2s							
LASF	**Ste Croix**	**90.39**	**324**	*e*P		**P**	**00 17 24.5**	**+0.6**
	comp=Z,19nm,1.2s							
VIVF	**Saint-Julien-l**	**90.55**	**325**	*e*P		**P**	**00 17 24.9**	**+0.3**
VIVF	**Saint-Julien-l**	**90.55**	**325**	*e*P		**P**	**00 17 24.9**	**+0.3**
VIVF	**Saint-Julien-l**	**90.55**	**325**	*e*P		**P**	**00 17 24.9**	**+0.3**
ULN	**Ulaanbaatar**	**90.60**	**30**	*e*P		**P**	**00 17 23.6**	**-1.4**
PVCC	**Panska Ves**	**90.65**	**334**	*e*P		**P**	**00 17 24.7**	**-0.2**
PVCC	**Panska Ves**	**90.65**	**334**	*e*P		**P**	**00 17 24.7**	**-0.2**
MTLF	**Montolieu**	**90.70**	**323**	*e*P		**P**	**00 17 25.9**	**+0.6**
	comp=Z,20nm,1.0s							
MTLF	**Montolieu**	**90.70**	**323**	*e*P		**P**	**00 17 25.9**	**+0.6**
MTLF				pmax	pmax			
	comp=Z,20nm,1.0s							
MTLF	**Montolieu**	**90.70**	**323**	*e*P		**P**	**00 17 25.9**	**+0.6**
	comp=Z,20nm,1.0s							
SUW	**Suwalki**	**90.73**	**340**	*e*P		**P**	**00 17 24.8**	**-0.3**
SUW	**Suwalki**	**90.73**	**340**	*e*P		**P**	**00 17 24.8**	**-0.3**
TRQA	**Tornquist**	**90.93**	**223**	*e*P		**P**	**00 17 26.9**	**+0.1**
ROTZ	**Rotzenmuhle**	**90.95**	**332**	*e*P		**P**	**00 17 26.3**	**0.0**
	comp=Z,16nm,1.8s							
ROTZ				*e*pP		**pP**	**00 17 35.2**	**+1.3**
ZAK	**Zakamensk**	**91.03**	**27**	*e*P		**P**	**00 17 24.6**	**-2.2**
ZAK				pmax	pmax			
	comp=Z,2.0nm,1.0s							
BRG	**Berggiesshubel**	**91.16**	**334**	*e*P		**P**	**00 17 27.8**	**+0.5**
	comp=Z,8.3nm,1.1s							
BRG	**Berggiesshubel**	**91.16**	**334**	*e*P		**P**	**00 17 27.8**	**+0.6**
	comp=Z,8.0nm,1.1s							
MANZ	**Manzenberg**	**91.16**	**332**	*e*pP		pP	00 17 36.9	+2.0
CABF	**La Chapelle**	**91.17**	**327**	*e*P		**P**	**00 17 27.6**	**+0.1**
	comp=Z,26nm,1.3s							
CABF	**La Chapelle**	**91.17**	**327**	*e*P		**P**	**00 17 27.6**	**+0.1**
CABF				pmax	pmax			
	comp=Z,26nm,1.3s							
CABF	**La Chapelle**	**91.17**	**327**	*e*P		**P**	**00 17 27.6**	**+0.1**
	comp=Z,26nm,1.3s							
GRF	**Grafenberg Arr**	**91.29**	**332**	*e*P		**P**	**00 17 28.3**	**+0.4**
	comp=Z,23nm,1.5s							
GRF				*e*pP		**pP**	**00 17 37.4**	**+1.9**
GRF				*e*L		L	00 55 50.5	
	comp=Z,92nm,20.2s							
GRF	**Grafenberg Arr**	**91.29**	**332**	*e*P		**P**	**00 17 28.3**	**+0.4**
GRF				*e**PP		**pP**	**00 17 37.4**	**+1.9**
GRF				pmax	pmax			
	comp=Z,1.0nm,1.5s							
GRFO	**Grafenberg**	**91.29**	**332**	*e*P		**P**	**00 17 28.4**	**+0.5**
GRFO	**Grafenberg**	**91.29**	**332**	*e*P		**P**	**00 17 28.4**	**+0.5**
TANN	**Tannenbergstha**	**91.36**	**333**	*e*P		**P**	**00 17 29.0**	**+0.7**
	comp=Z,22nm,1.9s							
GUNZ	**Gunzen**	**91.38**	**333**	*e*P		**P**	**00 17 28.6**	**+0.3**
	comp=Z,26nm,1.9s							
GUNZ				*e*pP		**pP**	**00 17 36.9**	**+1.0**
STU	**Stuttgart**	**91.42**	**330**	*e*P		**P**	**00 17 28.9**	**+0.4**
FBE	**Freiberg**	**91.42**	**333**	*e*pP		pP	00 17 37.9	+1.9
WERD	**Werda**	**91.45**	**333**	*e*P		**P**	**00 17 29.1**	**+0.5**
	comp=Z,16nm,1.7s							
WERD				*e*pP		**pP**	**00 17 37.3**	**+1.1**
BFO	**Black Forest**	**91.45**	**329**	*e*P		**P**	**00 17 28.7**	**0.0**
BFO	**Black Forest**	**91.45**	**329**	*e*P		**P**	**00 17 28.7**	**0.0**
BFO	**Black Forest**	**91.45**	**329**	*e*P		**P**	**00 17 28.7**	**0.0**
EPF	**Esparros**	**91.46**	**322**	*e*P		**P**	**00 17 29.6**	**+0.7**
	comp=Z,12nm,0.8s							
EPF	**Esparros**	**91.46**	**322**	*e*P		**P**	**00 17 29.6**	**+0.7**
EPF				pmax	pmax			
	comp=Z,12nm,0.8s							
EPF	**Esparros**	**91.46**	**322**	*e*P		**P**	**00 17 29.6**	**+0.7**
	comp=Z,12nm,0.8s							
PLN	**Plauen**	**91.54**	**333**	*e*P		**P**	**00 17 29.6**	**+0.6**
	comp=Z,96nm,1.8s							
ESDC	**Sonseca Array**	**91.59**	**317**	P		**P**	**00 17 30.5**	**+0.9**
ESDC	**Sonseca Array**	**91.59**	**317**	P		**P**	**00 17 30.5**	**+0.9**
	comp=Z,6.6nm,0.9s,baz=124,slow=3.4,SNR=26							
HINF	**Hinteralfeld**	**91.72**	**328**	*e*P		**P**	**00 17 29.3**	**-0.7**
HINF	**Hinteralfeld**	**91.72**	**328**	*e*P		**P**	**00 17 29.3**	**-0.7**
HINF	**Hinteralfeld**	**91.72**	**328**	*e*P		**P**	**00 17 29.3**	**-0.7**
PAB	**San Pablo**	**91.73**	**317**	*e*P		**P**	**00 17 31.8**	**+1.6**
PAB	**San Pablo**	**91.73**	**317**	*e*P		**P**	**00 17 31.8**	**+1.6**
ETSF	**Etsaut**	**91.85**	**321**	*e*P		**P**	**00 17 30.7**	**0.0**
ETSF	**Etsaut**	**91.85**	**321**	*e*P		**P**	**00 17 30.7**	**0.0**
ETSF	**Etsaut**	**91.85**	**321**	*e*P		**P**	**00 17 30.7**	**0.0**
CLL	**Collm**	**91.87**	**334**	*e*pP		pP	00 17 39.9	+1.8
MOX	**Moxa**	**91.88**	**332**	*e*L		L	00 54 33.5	
	comp=Z,47nm,22.0s							
CAF	**Calviac**	**91.89**	**324**	*e*P		**P**	**00 17 31.5**	**+0.7**
	comp=Z,20nm,0.8s							
CAF	**Calviac**	**91.89**	**324**	*e*P		**P**	**00 17 31.5**	**+0.7**
CAF				pmax	pmax			
	comp=Z,20nm,0.8s							
CAF	**Calviac**	**91.89**	**324**	*e*P		**P**	**00 17 31.5**	**+0.7**
	comp=Z,20nm,0.8s							
CDF	**Champ du Feu**	**91.97**	**329**	*e*P		**P**	**00 17 30.4**	**-0.8**
CDF	**Champ du Feu**	**91.97**	**329**	*e*P		**P**	**00 17 30.4**	**-0.8**
CDF	**Champ du Feu**	**91.97**	**329**	*e*P		**P**	**00 17 30.4**	**-0.8**
HAU	**Haudompre**	**92.08**	**328**	*e*P		**P**	**00 17 31.0**	**-0.6**
	comp=Z,9.5nm,0.9s							
HAU				*e*R				
	comp=Z,61nm,20.8s							
HAU	**Haudompre**	**92.08**	**328**	*e*P		**P**	**00 17 31.0**	**-0.6**
HAU				pmax	pmax			
	comp=Z,10.0nm,0.9s							
HAU	**Haudompre**	**92.08**	**328**	*e*P		**P**	**00 17 31.0**	**-0.6**
	comp=Z,9.5nm,0.9s							
SMF	**Signal de Mont**	**92.25**	**326**	*e*P		**P**	**00 17 32.1**	**-0.3**
	comp=Z,5.5nm,0.8s							
SMF	**Signal de Mont**	**92.25**	**326**	*e*P		**P**	**00 17 32.1**	**-0.3**
SMF				pmax	pmax			
	comp=Z,6.0nm,0.8s							
SMF	**Signal de Mont**	**92.25**	**326**	*e*P		**P**	**00 17 32.1**	**-0.3**
	comp=Z,5.5nm,0.8s							
SJPF	**Ste Jean**	**92.35**	**321**	*e*P		**P**	**00 17 33.2**	**+0.2**
	comp=Z,27nm,1.1s							
SJPF	**Ste Jean**	**92.35**	**321**	*e*P		**P**	**00 17 33.2**	**+0.2**
SJPF				pmax	pmax			
	comp=Z,27nm,1.1s							
SJPF	**Ste Jean**	**92.35**	**321**	*e*P		**P**	**00 17 33.2**	**+0.2**
	comp=Z,27nm,1.1s							
RJF	**Les Rejaudoux**	**92.44**	**324**	*e*P		**P**	**00 17 33.7**	**+0.4**
	comp=Z,17nm,0.8s							
RJF				*e*R				
	comp=Z,141nm,22.5s							
RJF	**Les Rejaudoux**	**92.44**	**324**	*e*P		**P**	**00 17 33.7**	**+0.4**
RJF				pmax	pmax			
	comp=Z,17nm,0.8s							
RJF	**Les Rejaudoux**	**92.44**	**324**	*e*P		**P**	**00 17 33.7**	**+0.4**
	comp=Z,17nm,0.8s							
LFF	**La Frestale**	**92.58**	**323**	*e*P		**P**	**00 17 34.6**	**+0.7**
	comp=Z,14nm,1.0s							
LFF	**La Frestale**	**92.58**	**323**	*e*P		**P**	**00 17 34.6**	**+0.7**
LFF				pmax	pmax			
	comp=Z,14nm,1.0s							
LFF	**La Frestale**	**92.58**	**323**	*e*P		**P**	**00 17 34.6**	**+0.7**
	comp=Z,14nm,1.0s							
AVF	**Avril sur Loir**	**92.59**	**326**	*e*P		**P**	**00 17 33.8**	**-0.1**
	comp=Z,9.6nm,1.1s							
AVF	**Avril sur Loir**	**92.59**	**326**	*e*P		**P**	**00 17 33.8**	**-0.1**
AVF				pmax	pmax			
	comp=Z,10.0nm,1.1s							
AVF	**Avril sur Loir**	**92.59**	**326**	*e*P		**P**	**00 17 33.8**	**-0.1**
	comp=Z,9.6nm,1.1s							
BGF	**Bois d'Agland**	**92.67**	**325**	*e*P		**P**	**00 17 34.5**	**+0.2**
	comp=Z,16nm,0.8s							
BGF	**Bois d'Agland**	**92.67**	**325**	*e*P		**P**	**00 17 34.5**	**+0.2**
BGF				pmax	pmax			
	comp=Z,16nm,0.8s							
BGF	**Bois d'Agland**	**92.67**	**325**	*e*P		**P**	**00 17 34.5**	**+0.2**
	comp=Z,16nm,0.8s							
LOR	**Lormes**	**92.69**	**326**	*e*P		**P**	**00 17 34.3**	**-0.2**
	comp=Z,18nm,1.1s							
LOR				*e*R				
	comp=Z,73nm,19.0s							
LOR	**Lormes**	**92.69**	**326**	*e*P		**P**	**00 17 34.3**	**-0.2**
	comp=Z,18nm,1.1s							
SSF	**Saint Saulge**	**92.71**	**326**	*e*P		**P**	**00 17 34.4**	**-0.1**
	comp=Z,9.1nm,1.0s							
SSF	**Saint Saulge**	**92.71**	**326**	*e*P		**P**	**00 17 34.4**	**-0.1**
SSF				pmax	pmax			
	comp=Z,9.0nm,1.0s							
SSF	**Saint Saulge**	**92.71**	**326**	*e*P		**P**	**00 17 34.4**	**-0.1**
	comp=Z,9.1nm,1.0s							
PCVE	**Castro Verde**	**92.73**	**313**	*e*P		**P**	**00 17 34.7**	**-0.1**
	comp=Z,44nm,1.5s							
PAGF	**Fort de Pagny**	**92.77**	**328**	*e*P		**P**	**00 17 34.5**	**-0.3**
	comp=Z,4.3nm,0.9s							
PAGF	**Fort de Pagny**	**92.77**	**328**	*e*P		**P**	**00 17 34.5**	**-0.3**
	comp=Z,4.3nm,0.9s							
TCF	**Toulx Ste Croi**	**92.79**	**325**	*e*P		**P**	**00 17 35.3**	**+0.4**
	comp=Z,8.8nm,0.8s							
TCF	**Toulx Ste Croi**	**92.79**	**325**	*e*P		**P**	**00 17 35.3**	**+0.4**
TCF				pmax	pmax			
	comp=Z,9.0nm,0.8s							
TCF	**Toulx Ste Croi**	**92.79**	**325**	*e*P		**P**	**00 17 35.3**	**+0.4**
	comp=Z,8.8nm,0.8s							
SFTF	**Sexfontaines**	**92.83**	**328**	*e*P		**P**	**00 17 34.9**	**-0.1**
	comp=Z,39nm,1.2s							
SFTF	**Sexfontaines**	**92.83**	**328**	*e*P		**P**	**00 17 34.9**	**-0.1**
	comp=Z,39nm,1.2s							
PBEJ	**Beja**	**92.87**	**314**	*e*P		**P**	**00 17 37.3**	**+1.8**
	comp=Z,28nm,2.0s							
MORF	**Marmelete**	**92.90**	**313**	*e*P		**P**	**00 17 37.6**	**+1.9**
	comp=Z,47nm,1.4s							
MEZF	**Maizieres J'vi**	**93.04**	**328**	*e*P		**P**	**00 17 36.0**	**0.0**
	comp=Z,25nm,1.3s							
MEZF	**Maizieres J'vi**	**93.04**	**328**	*e*P		**P**	**00 17 36.0**	**0.0**
	comp=Z,25nm,1.3s							
EVO	**Evora**	**93.27**	**314**	*e*P		**P**	**00 17 39.3**	**+2.0**
	comp=Z,22nm,1.8s							
EVO	**Evora**	**93.27**	**314**	⇑ *i*P		**P**	**00 17 37.5**	**+0.2**
	comp=Z,27nm,1.1s							
EVO				*e*R				
	comp=Z,128nm,20.8s							
CLZ	**Clausthal**	**93.30**	**333**	*e*P		**P**	**00 17 36.9**	**-0.3**
	comp=Z,4.0nm,0.9s							
CLZ	**Clausthal**	**93.30**	**333**	*e*P		**P**	**00 17 36.9**	**-0.3**
CLZ				pmax	pmax			
	comp=Z,25nm,0.9s							
EVOP	**Sao Brissos**	**93.34**	**314**	⇑ *i*P		**P**	**00 17 37.5**	**-0.1**
EVOP				pmax	pmax			
	comp=Z,27nm,1.1s							
EVOP	**Sao Brissos**	**93.34**	**314**	⇑ *i*P		**P**	**00 17 37.5**	**-0.1**
	comp=Z,27nm,1.1s							
WLF	**Walferdange**	**93.40**	**329**	*e*pP		pP	00 17 47.1	+1.9
PMRV	**Marv??o**	**93.46**	**315**	*e*P		P	00 17 41.9	+3.7
PLCA	**Paso Flores**	**93.68**	**216**	LR		LR	00 52 14.6	
	comp=Z,83nm,19.1s,baz=171,slow=31							
MFF	**Saint Martin d**	**94.17**	**324**	*e*P		**P**	**00 17 41.5**	**+0.2**
	comp=Z,18nm,1.1s							
MFF	**Saint Martin d**	**94.17**	**324**	*e*P		**P**	**00 17 41.5**	**+0.2**
MFF				pmax	pmax			
	comp=Z,18nm,1.1s							
MFF	**Saint Martin d**	**94.17**	**324**	*e*P		**P**	**00 17 41.5**	**+0.2**
	comp=Z,18nm,1.1s							
GIVF	**Givet**	**94.31**	**329**	*e*P		**P**	**00 17 41.6**	**-0.2**
	comp=Z,21nm,1.0s							
GIVF	**Givet**	**94.31**	**329**	*e*P		**P**	**00 17 41.6**	**-0.2**
GIVF				pmax	pmax			
	comp=Z,21nm,1.0s							
GIVF	**Givet**	**94.31**	**329**	*e*P		**P**	**00 17 41.6**	**-0.2**
	comp=Z,21nm,1.0s							
MVO	**Moncorvo**	**94.33**	**317**	*e*P		**P**	**00 17 44.8**	**+2.6**
	comp=Z,38nm,2.0s							
BAIF	**Baives**	**94.55**	**328**	*e*P		**P**	**00 17 42.7**	**-0.2**
	comp=Z,10.0nm,1.0s							
BAIF	**Baives**	**94.55**	**328**	*e*P		**P**	**00 17 42.7**	**-0.2**
BAIF				pmax	pmax			
	comp=Z,10.0nm,1.0s							
BAIF	**Baives**	**94.55**	**328**	*e*P		**P**	**00 17 42.7**	**-0.2**
	comp=Z,10.0nm,1.0s							
KSAR	**Wonju Array Be**	**94.70**	**48**	P		**P**	**00 17 43.0**	**-0.9**
KSRS	**Korea Array**	**94.73**	**48**	P		**P**	**00 17 43.0**	**-1.0**
	comp=Z,1.2nm,0.7s,baz=230,slow=4.5,SNR=5.3							
KSRS				LR		LR	00 58 42.9	
	comp=Z,53nm,19.2s,baz=347,slow=34							
BDFB	**Brasilia**	**95.12**	**248**	P		**P**	**00 17 48.1**	**+1.5**
BDFB	**Brasilia**	**95.12**	**248**	P		**P**	**00 17 48.1**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=168,slow=5.8,SNR=3.5							
BDFB				LR		LR	00 51 56.7	
	comp=Z,111nm,18.3s,baz=227,slow=30							
FLN	**La Foliniere**	**95.82**	**325**	*e*P		**P**	**00 17 49.0**	**+0.3**
	comp=Z,7.0nm,0.7s							
FLN				*e*R				
	comp=Z,72nm,18.8s							
FLN	**La Foliniere**	**95.82**	**325**	*e*P		**P**	**00 17 49.0**	**+0.3**
FLN				pmax	pmax			
	comp=Z,7.0nm,0.7s							
FLN	**La Foliniere**	**95.82**	**325**	*e*P		**P**	**00 17 49.0**	**+0.3**
	comp=Z,7.0nm,0.7s							
FINES	**FINESS Array B**	**96.56**	**345**	P		**P**	**00 17 51.1**	**-0.7**
FINES	**FINESS Array B**	**96.56**	**345**	P		**P**	**00 17 51.1**	**-0.7**
	comp=Z,1.4nm,0.8s,baz=113,slow=15,SNR=5.5							
FINES				LR		LR	01 06 05.4	
	comp=Z,58nm,18.8s,baz=330,slow=38							
CN2	**Changchun**	**97.07**	**42**	*e*P		Pdif	00 17 55.3	+0.7
MDJ	**Mudanjiang**	**99.95**	**43**	P		**Pdif**	**00 18 07.5**	**+0.1**
MDJ				pmax	pmax			
	comp=Z,5.0nm,1.1s							
MDJ				pmax	pmax			
	comp=Z,30nm,3.7s							
ILAR	**Eielson Array**	**143.56**	**18**	PKPpre		PKPpre	00 23 52.2	
ILAR	**Eielson Array**	**143.56**	**18**	PKhKP		PKPpre	00 23 52.2	
	comp=Z,1.3nm,0.8s,baz=301,slow=3.1,SNR=7.4							
ALLY	**Alegheny Colle**	**145.55**	**298**	*e*PKPdf		**PKPdf**	**00 24 00.7**	**-0.2**
BLA	**Blacksburg**	**145.74**	**291**	*e*PKP2		**PKPbc**	**00 24 01.6**	**-0.2**
BLA	**Blacksburg**	**145.74**	**291**	*e*PKPdf		**PKPbc**	**00 24 01.6**	**-0.2**
KIP	**Kipapa**	**146.09**	**99**	*i* PKP2		**PKPab**	**00 24 08.5**	**+4.6**
KDAK	**Kodiak Island**	**146.59**	**30**	PKPbc		**PKPbc**	**00 24 03.6**	**0.0**
KDAK	**Kodiak Island**	**146.59**	**30**	PKPbc		**PKPbc**	**00 24 03.6**	**0.0**
	comp=Z,6.0nm,0.7s,baz=150,slow=18,SNR=3.5							
DIV	**Divide**	**146.74**	**21**	*e*PKPbc		**PKPbc**	**00 24 04.1**	**0.0**
TEIG	**Tepich**	**147.91**	**257**	*e*PKPdf		**PKPdf**	**00 24 05.5**	**+0.1**
TEIG				*e*PKPbc		**PKPbc**	**00 24 08.2**	**-0.3**
YKW3	**Yellowknife Ar**	**148.92**	**354**	*e*PKPbc		**PKPbc**	**00 24 09.0**	**-0.8**
YKW3				*e*PKPab		**PKPab**	**00 24 13.3**	**-0.5**
YKA	**Yellowknife Ar**	**148.99**	**354**	PKPbc		**PKPbc**	**00 24 09.2**	**-0.7**
YKA	**Yellowknife Ar**	**148.99**	**354**	PKPbc		**PKPbc**	**00 24 09.2**	**-0.7**
	comp=Z,10nm,0.8s,baz=359,slow=2.6,SNR=36							
WCI	**Wyandotte Cave**	**150.41**	**292**	*e*PKIKP		**PKPbc**	**00 24 13.0**	**-1.3**
WCI				*e*			00 24 19.8	
WCI	**Wyandotte Cave**	**150.41**	**292**	*e*PKPbc		**PKPbc**	**00 24 13.0**	**-1.3**
WCI				*e*PKPab		**PKPab**	**00 24 19.8**	**-1.0**
LRAL	**Lakeview Retre**	**150.73**	**282**	*e*PKPbc		**PKPbc**	**00 24 14.4**	**-0.7**
LRAL				*e*PKPab		**PKPab**	**00 24 21.6**	**-0.7**
WVT	**Waverly**	**151.65**	**288**	*e*PKIKP		**PKPbc**	**00 24 16.0**	**-1.2**
WVT				*e*			00 24 24.7	
WVT	**Waverly**	**151.65**	**288**	*e*PKPbc		**PKPbc**	**00 24 16.0**	**-1.2**
WVT				*e*PKPab		**PKPab**	**00 24 24.7**	**-1.3**
OLIL	**Olney**	**151.80**	**294**	*e*PKPdf		**PKPdf**	**00 24 10.8**	**-0.2**
OLIL				*e*PKPbc		**PKPbc**	**00 24 16.8**	**-0.6**
EYMN	**Ely**	**152.00**	**314**	*e*PKPdf		**PKPdf**	**00 24 10.8**	**-0.2**
EYMN				*e*PKPbc		**PKPbc**	**00 24 17.6**	**+0.1**
EYMN				*e*PKPab		**PKPab**	**00 24 26.2**	**-0.9**
JFWS	**Jewell Farm**	**152.79**	**303**	*e*PKIKP		**PKPdf**	**00 24 12.1**	**-0.3**
JFWS				*e*			00 24 18.9	
JFWS	**Jewell Farm**	**152.79**	**303**	*e*PKPdf		**PKPdf**	**00 24 12.1**	**-0.3**
JFWS				*e*PKPbc		**PKPbc**	**00 24 18.9**	**-0.6**
FFC	**Flin Flon**	**153.16**	**334**	*i* PKIKP		**PKPbc**	**00 24 20.0**	**+0.1**
ULM	**Lac du Bonnet**	**153.40**	**321**	PKPbc		**PKPbc**	**00 24 20.3**	**-0.3**
ULM	**Lac du Bonnet**	**153.40**	**321**	PKPbc		**PKPbc**	**00 24 20.3**	**-0.3**
	comp=Z,12nm,0.8s,baz=76,slow=3.0,SNR=5.3							
AGMN	**Agassiz Nation**	**154.44**	**318**	*e*PKPab		**PKPab**	**00 24 37.1**	**-0.2**
TXAR	**Lajitas Array**	**164.24**	**266**	PKP		**PKPdf**	**00 24 27.1**	**+0.5**
TXAR				PKPab		**PKPab**	**00 25 21.4**	**+0.8**
TXAR	**Lajitas Array**	**164.24**	**266**	PKP		**PKPdf**	**00 24 27.1**	**+0.5**
	comp=Z,1.4nm,0.9s,baz=155,slow=1.1,SNR=10.0							
TXAR				PKPab		**PKPab**	**00 25 21.4**	**+0.8**
	comp=Z,1.2nm,0.8s,baz=114,slow=6.0,SNR=8.4							
PDAR	**Pinedale Array**	**165.42**	**322**	PKP		**PKPdf**	**00 24 26.4**	**-1.0**
PDAR				PKPab		**PKPab**	**00 25 24.8**	**-0.7**
PDAR	**Pinedale Array**	**165.42**	**322**	PKP		**PKPdf**	**00 24 26.4**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=108,slow=3.3,SNR=4.7							
PDAR				PKPab		**PKPab**	**00 25 24.8**	**-0.7**
	comp=Z,1.1nm,0.8s,baz=75,slow=3.8,SNR=3.2							
NVAR	**Mina Array Bea**	**172.84**	**338**	PKP		**PKPdf**	**00 24 32.4**	**+0.2**
NVAR				PKPab		**PKPab**	**00 25 58.7**	**+0.3**
NVAR	**Mina Array Bea**	**172.84**	**338**	PKP		**PKPdf**	**00 24 32.4**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=185,slow=3.

	288nm,0.9s							
VVLD	**Villa Vallelon**	**0.77**	**155**	Pg	Pb	00 17 56.2	+0.1	
	288nm,0.9s							
INTR	**Introdacqua**	**0.77**	**136**	Pg	Pg	00 17 55.0	-0.5	
	341nm,0.7s							
INTR	**Introdacqua**	**0.77**	**136**	Pg	Pg	00 17 55.0	-0.5	
	341nm,0.7s							
GUAR	**Guarcino**	**0.78**	**173**	Pg	Pb	00 17 56.1	-0.1	
	339nm,0.7s							
GUAR	**Guarcino**	**0.78**	**173**	Pg	Pb	00 17 56.1	-0.1	
	339nm,0.7s							
CING	**Cingoli**	**0.81**	**0**	Pg	Pg	00 17 55.6	-0.6	
	268nm,0.6s							
CING	**Cingoli**	**0.81**	**0**	Pg	Pg	00 17 55.6	-0.6	
	268nm,0.6s							
MURB	**Monte Urbino**	**0.85**	**325**	Pg	Pg	00 17 56.5	-0.5	
	542nm,0.3s							
MURB	**Monte Urbino**	**0.85**	**325**	Pg	Pg	00 17 56.5	-0.5	
	542nm,0.3s							
MGAB	**Montegabbione**	**0.87**	**294**	Pg	Pg	00 17 57.4	+0.1	
MGAB	**Montegabbione**	**0.87**	**294**	Pg	Pg	00 17 57.4	+0.1	
RDP	**Rocca di Papa**	**0.88**	**204**	Pg	Pg	00 17 57.2	-0.4	
	1µm,1.0s							
RDP	**Rocca di Papa**	**0.88**	**204**	Pg	Pg	00 17 57.2	-0.4	
	1µm,1.0s							
LPEL	**Lama dei Pelig**	**0.90**	**125**	Pg	Pg	00 17 57.2	-0.8	
	169nm,0.6s							
LPEL	**Lama dei Pelig**	**0.90**	**125**	Pg	Pg	00 17 57.2	-0.8	
	169nm,0.6s							
ARVD	**Arcevia**	**0.95**	**349**	Pg	Pg	00 17 58.0	-0.8	
	263nm,0.7s							
ARVD	**Arcevia**	**0.95**	**349**	Pg	Pg	00 17 58.0	-0.8	
	263nm,0.7s							
SDI	**San Donato**	**0.97**	**152**	Pg	Pb	00 17 59.9	+0.4	
	49nm,0.3s							
SDI	**San Donato**	**0.97**	**152**	Pg	Pb	00 17 59.9	+0.4	
	49nm,0.3s							
SACS	**San Casciano d**	**0.99**	**287**	Pg	Pg	00 17 59.6	0.0	
	116nm,0.5s							
SACS	**San Casciano d**	**0.99**	**287**	Pg	Pg	00 17 59.6	0.0	
	116nm,0.5s							
TOLF	**Tolfa**	**1.02**	**241**	Pg	Pg	00 17 59.7	-0.4	
TOLF	**Tolfa**	**1.02**	**241**	Pg	Pg	00 17 59.7	-0.4	
AOI	**Ancona**	**1.03**	**17**	Pg	Pg	00 17 59.9	-0.4	
	128nm,0.5s							
AOI	**Ancona**	**1.03**	**17**	Pg	Pg	00 17 59.9	-0.4	
	128nm,0.5s							
NVLJ	**Novalja**	**2.34**	**31**	*i* Pn	Pn	00 18 19.8	+0.9	
NVLJ				Sn	Sn	00 18 49.2	+1.5	
UDBI	**Udbina**	**2.71**	**43**	*i* Pn	Pn	00 18 26.1	+2.0	
UDBI				Sn	Sn	00 18 59.4	+2.4	
UDBI	**Udbina**	**2.71**	**43**	*i* Pn	Pn	00 18 26.1	+2.0	
UDBI				Sn	Sn	00 18 59.3	+2.3	
STON	**Ston**	**3.33**	**83**	*e*Pn	Pn	00 18 34.0	+1.3	
STON				Sn	Sn	00 19 11.6	-0.6	
STON	**Ston**	**3.33**	**83**	*e*Pn	Pn	00 18 33.9	+1.3	
STON				Sn	Sn	00 19 11.6	-0.7	

*ISCJB **28** 00:23:27.3±0.4, 62.°10N±0.°02×79.°78W±0.°06, h10km, mb3.3/3, Error ellipse: s-maj=4.7km s-min=2.8km az=153.7*

*OTT **28** 00:23:32.4±0.1, 62.°07N×79.°56W, h5km, MN3.4/23, 94km southwest from Ivujivik, Qc Boothia Ungava Seismic Zone.*

*IDC **28** 00:23:32.3±1.4, 62.°04N×79.°47W, h0km, mb3.4/3, mb1 3.8/6, mb1mx3.4/30, mbtmp3.5/6, ML2.6/3, Error ellipse: s-maj=26.0km s-min=12.1km az=20.0*

ISC 28 00:23:29.3±0.7, 62.°06N±0.°04×79.°60W±0.°05, h10km, n36, σ2s19/45, mb3.3/3, Hudson Strait region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKVQ	**Akulivik**	**1.42**	**151**	PG	**Pg**	**00 23 58.9**	**+2.3**
AKVQ				SG	**Sg**	**00 24 16.1**	**+1.1**
AKVQ				Trac		00 24 20.8	
	comp=Z,114nm,0.3s						
INUQ	**Inukjuak**	**3.69**	**168**	PN	Pb	00 24 30.2	-4.3
INUQ				SN	**Sn**	**00 25 10.9**	**+1.2**
INUQ				LG	Lg	00 25 23.4	
INUQ				Trac		00 25 27.4	
	comp=Z,189nm,0.8s						
FRB	**Frobisher Bay**	**5.33**	**67**	PN	Pn	00 24 51.9	+3.1
FRB				SN	**Sn**	**00 25 49.5**	**-0.7**
FRB				LG	Lg	00 26 13.5	
FRB				Trac		00 26 18.2	
	comp=Z,9.2nm,0.5s						
QILN	**Qilliugaq Expl**	**5.47**	**330**	PN	**Pn**	**00 24 53.8**	**+3.1**
QILN				SN	**Sn**	**00 25 54.0**	**+0.4**
QILN				LG	Lg	00 26 19.9	
QILN				Trac		00 26 29.8	
	comp=Z,19nm,0.3s						
SEDN	**First Sedna Si**	**5.49**	**288**	PN	Pn	00 24 54.1	+3.2
SEDN				SN	**Sn**	**00 25 53.9**	**0.0**
SEDN				LG	Lg	00 26 21.9	
SEDN				Trac		00 26 35.3	
	comp=Z,22nm,0.4s						
JOSN	**Second Sedna S**	**5.62**	**287**	PN	Pn	00 24 56.2	+3.4
JOSN				SN	**Sn**	**00 25 56.6**	**-0.8**
JOSN				LG	Lg	00 26 26.6	
JOSN				Trac		00 26 30.1	
	comp=Z,32nm,0.5s						
WAGN	**Wager Bay**	**5.79**	**316**	SN	**Sn**	**00 26 01.9**	**+0.6**
WAGN				LG	Lg	00 26 30.4	
WAGN				Trac		00 26 38.6	
	comp=Z,34nm,0.3s						
NUNN	**Nunuq Camp, NU**	**6.01**	**307**	PN	**Pn**	**00 25 01.3**	**+3.1**
NUNN				SN	**Sn**	**00 26 06.7**	**-0.3**
NUNN				LG	Lg	00 26 38.1	
NUNN				Trac		00 26 47.0	
	comp=Z,19nm,0.2s						
SRLN	**Sarcpa Lake, N**	**6.71**	**348**	PN	Pn	00 25 11.2	+3.5
SRLN				SN	**Sn**	**00 26 23.1**	**-0.8**
SRLN				LG	Lg	00 26 57.8	
SRLN				Trac		00 27 01.6	
	comp=Z,22nm,0.3s						
KUQ	**Kuujjuuaa**	**6.85**	**120**	PN	Pn	00 24 59.4	-10
KUQ				SN	**Sn**	**00 26 23.5**	**-4.1**
KUQ				LG	Lg	00 27 00.4	
KUQ				Trac		00 27 03.2	
	comp=Z,11nm,0.3s						
ARVN	**Arviat, NU**	**6.97**	**268**	PN	Pn	00 25 17.3	+6.0
ARVN				SN	**Sn**	**00 26 29.5**	**-1.1**
ARVN				LG	Lg	00 27 08.2	
ARVN				Trac		00 27 17.5	
	comp=Z,36nm,0.7s						
LAIN	**Lailor River,**	**7.27**	**349**	PN	**Pn**	**00 25 18.1**	**+2.7**
LAIN				SN	**Sn**	**00 26 36.1**	**-1.7**
LAIN				LG	Lg	00 27 14.9	
LAIN				Trac		00 27 20.8	
	comp=Z,25nm,0.5s						
BULN	**Bullion Camp,**	**7.32**	**312**	PN	Pn	00 25 19.8	+3.7
BULN				SN	**Sn**	**00 26 37.2**	**-2.0**
BULN				LG	Lg	00 27 18.7	
BULN				Trac		00 27 27.1	
	comp=Z,14nm,0.3s						
ILON	**Igloolik, Nuna**	**7.40**	**354**	PN	**Pn**	**00 25 19.9**	**+2.6**
ILON				SN	**Sn**	**00 26 38.3**	**-2.8**
ILON				LG	Lg	00 27 18.4	
ILON				Trac		00 27 26.1	
	comp=Z,36nm,0.7s						
KUGN	**Kugaaruk Camp,**	**7.49**	**328**	PN	**Pn**	**00 25 20.3**	**+2.0**
KUGN				SN	**Sn**	**00 26 39.6**	**-3.6**
KUGN				LG	Lg	00 27 18.9	
KUGN				Trac		00 27 30.1	
	comp=Z,26nm,0.5s						
AP3N	**Apex site 3 Nu**	**7.70**	**347**	PN	**Pn**	**00 25 24.2**	**+3.0**
AP3N				SN	**Sn**	**00 26 47.0**	**-1.4**
AP3N				LG	Lg	00 27 27.4	
AP3N				Trac		00 27 31.4	
	comp=Z,18nm,0.5s						
YBKN	**Baker Lake, Hu**	**7.75**	**294**	SN	**Sn**	**00 26 47.8**	**-1.9**
YBKN				LG	Lg	00 27 32.4	
YBKN				Trac		00 27 40.0	
	comp=Z,21nm,0.5s						
STLN	**Stellar Camp,**	**7.78**	**318**	SN	**Sn**	**00 26 49.2**	**-1.2**
STLN				LG	Lg	00 27 30.0	
STLN				Trac		00 27 39.8	
	comp=Z,18nm,0.4s						
FCC	**Fort Churchill**	**7.89**	**252**	PN	Pn	00 25 27.5	+3.6
FCC				SN	**Sn**	**00 26 51.8**	**-1.4**
FCC				LG	Lg	00 27 36.2	
FCC				Trac		00 27 47.0	
	comp=Z,17nm,0.6s						

GIFN	**Gifford Fjord,**	**8.02**	**355**	PN	**Pn**	**00 25 27.6**	**+2.0**	
GIFN				SN	**Sn**	**00 26 53.2**	**-3.0**	
GIFN				LG	Lg	00 27 39.2		
GIFN				Trac		00 27 41.5		
	comp=Z,24nm,0.5s							
SILO	**Sutton Inlier**	**8.09**	**203**	PN	**Pn**	**00 25 28.9**	**+2.2**	
SILO				SN	**Sn**	**00 26 59.3**	**+1.1**	
SILO				LG	Lg	00 27 36.9		
SILO				Trac		00 27 52.2		
	comp=Z,8.8nm,0.4s							
WEMQ	**Wemindji, Queb**	**9.07**	**174**	PN	Pn	00 25 43.4	+3.3	
WEMQ				SN	**Sn**	**00 27 19.1**	**-3.0**	
WEMQ				LG	Lg	00 28 03.4		
WEMQ				Trac		00 28 14.3		
	comp=Z,12nm,0.4s							
VIMO	**Victor Mine**	**9.53**	**195**	PN	Pn	00 25 50.0	+3.7	
VIMO				SN	**Sn**	**00 27 32.1**	**-1.2**	
SCHQ	**Schefferville**	**9.84**	**132**	PN	**Pn**	**00 25 51.6**	**+0.9**	
SCHQ				SN	Sn	00 27 34.7	-6.5	
SCHQ				LG	Lg	00 28 33.6		
SCHQ				Trac		00 28 41.0		
	comp=Z,48nm,1.4s							
SCHQ	**Schefferville**	**9.84**	**132**	Pn	**Pn**	**00 25 50.9**	**+0.2**	
	0.3nm,0.3s,baz=307,slow=10,SNR=4.1							
SCHQ				Sn	**Sn**	**00 27 36.9**	**-4.2**	
	0.7nm,0.3s,baz=63,slow=19,SNR=5.4							
SCHQ				Lg	Lg	00 28 34.3		
	1.9nm,0.3s,baz=108,slow=5.0,SNR=11							
YOSQ	**Ashton Mining**	**10.03**	**153**	PN	**Pn**	**00 25 55.6**	**+2.3**	
YOSQ				SN	Sn	00 27 38.2	-7.6	
YOSQ				LG	Lg	00 28 37.8		
YOSQ				Trac		00 28 44.5		
	comp=Z,17nm,0.5s							
MALO	**McAlpine Lake**	**12.06**	**181**	PN	**Pn**	**00 26 22.5**	**+1.5**	
MALO				SN	**Sn**	**00 28 30.8**	**-4.7**	
PKLO	**Pickle Lake**	**12.09**	**214**	PN	**Pn**	**00 26 22.9**	**+1.4**	
GDLN	**Gardenia Lake,**	**12.36**	**282**	PN	**Pn**	**00 26 23.8**	**-1.2**	
GDLN				SN	Sn	00 28 35.4	-7.1	
NANO	**Nakina Ontario**	**12.41**	**202**	PN	**Pn**	**00 26 26.1**	**+0.2**	
NANO				SN	**Sn**	**00 28 41.4**	**-2.7**	
RES	**Resolute Bay**	**13.80**	**343**	Pn	**Pn**	**00 26 44.6**	**0.0**	
	0.2nm,0.3s,baz=126,slow=7.8,SNR=1.7							
RES				Sn	Sn	00 29 06.6	-11	
	0.2nm,0.3s,baz=162,slow=13,SNR=2.0							
RES				Lg	Lg	00 30 41.7		
	0.6nm,0.3s,baz=59,slow=14,SNR=5.2							
ULM	**Lac du Bonnet**	**14.85**	**225**	Pn	**Pn**	**00 26 58.6**	**-0.4**	
	0.3nm,0.3s,baz=48,slow=14,SNR=2.6							
ULM				Sn	Sn	00 29 31.4	-12	
	0.5nm,0.3s,baz=193,slow=3.3,SNR=1.7							
ULM				Lg	Lg	00 31 10.2		
	0.2nm,0.3s,baz=333,slow=13,SNR=1.7							
YKA	**Yellowknife Ar**	**16.18**	**287**	Pn	**Pn**	**00 27 15.3**	**-1.1**	
	0.1nm,0.3s,baz=82,slow=12,SNR=4.5							
YKA				Lg	Lg	00 31 50.1		
	0.1nm,0.3s,baz=279,slow=32,SNR=3.9							
PDAR	**Pinedale Array**	**26.19**	**236**	P	P	00 29 08.7	+4.6	
	0.5nm,0.8s,baz=36,slow=12,SNR=4.2							
TXAR	**Lajitas Array**	**36.34**	**217**	P	P	00 30 37.8	+4.6	
	0.2nm,0.6s,baz=30,slow=7.3,SNR=3.2							
TORD	**Torodi Ar. Bea**	**74.41**	**91**	P	P	00 35 11.9	+4.6	
	0.5nm,1.0s,baz=319,slow=5.7,SNR=2.4							

*NIED **28** 00:35:00, 33.°00N×129.°90E, h5km, Mw4.1 Best double couple: M0 1.74000×10^15 NP1:φs48.00000°, δ65.00000°, λ-142.00000°. NP2:φs300.00000°, δ56.00000°, λ-30.00000°.*

*ISCJB **28** 00:35:27.8±0.5, 32.°99N±0.°03×129.°90E±0.°04, h14km±3km, mb3.8/13, MS2.9/1, Error ellipse: s-maj=5.6km s-min=4.2km az=148.5*

*IDC **28** 00:35:27.0±0.7, 32.°95N×129.°86E, h0km, mb3.8/11, mb1 3.9/14, mb1mx3.8/30, mbtmp3.8/14, ML3.0/3, MS2.9/5, Ms1 2.9/5, ms1mx2.7/34, Error ellipse: s-maj=16.9km s-min=9.4km az=179.0*

*NEIC **28** 00:35:28.4, 32.°98N×129.°90E, h22km, mb4.0/1, After JMA.*

NEIC Felt at Sasebo. Recorded [3 JMA] in Saga; [2 JMA] in Nagasaki; [1 JMA] in Fukuoka and Kumamoto.

*JMA **28** 00:35:28.4, 32.°98N×129.°90E, h12km±1km, M4.0 Broadband fault plane solution: P waves. NP1: φs51.00000°, δ70.00000°, λ-141.00000°. NP2: φs306.00000°, δ54.00000°, λ-25.00000°. Principal axes: T Plg10.0000°, Azm175.0000°; N Plg47.0000°, Azm74.0000°; P Plg41.0000°, Azm274.0000°;*

JMA Felt III J1.

ISC 28 00:35:28.9±0.8, 32.°97N±0.°03×129.°92E±0.°04, h11km±5km, n42, σ0s98/53, mb3.9/13, 4C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JUR	**Ureshino**	**0.13**	**12**	⇑P	**Pg**	**00 35 31.4**	**-0.7**
JUR				S	**Sg**	**00 35 33.6**	**-0.7**
NGSJ	**Nagasakinomoza**	**0.35**	**197**	⇑P	**Pg**	**00 35 35.3**	**-0.6**
NGSJ				*e*S	**Sg**	**00 35 40.5**	**0.0**
JTA	**Tamana**	**0.52**	**90**	⇓P	**Pg**	**00 35 38.5**	**-0.5**
JTA				*e*S	**Sg**	**00 35 45.6**	**-0.3**
JNU	**Nakatsue**	**0.82**	**79**	*e*Pg	**Pg**	**00 35 44.0**	**-0.7**
JNU				*e*Sg	**Sg**	**00 35 54.6**	**-0.9**
JNU				Lg	Lg	00 35 55.3	
JNU	**Nakatsue**	**0.82**	**79**	Pg	**Pg**	**00 35 43.9**	**-0.9**
	303nm,0.3s,baz=264,slow=5.0,SNR=1137						
JNU				Lg	Lg	00 35 55.3	
	1µm,0.3s,baz=222,slow=22,SNR=25						
JII	**Iki**	**0.84**	**349**	⇑P	**Pg**	**00 35 44.1**	**-1.0**
JII				S	**Sg**	**00 35 55.2**	**-0.9**
JIU2	**Izumi 2**	**0.87**	**119**	P	**Pg**	**00 35 45.2**	**-0.4**
JIU2				S	**Sg**	**00 35 56.8**	**-0.1**
JZO	**Okuchi**	**1.01**	**145**	⇑P	**Pg**	**00 35 47.4**	**-0.9**
JZO				S	**Sg**	**00 36 01.2**	**-0.2**
KSAR	**Wonju Array Be**	**4.76**	**340**	Pn	**Pn**	**00 36 41.1**	**+0.5**
KSAR				Pg	**Pb**	**00 36 55.0**	**+2.7**
KSAR				Lg	Lg	00 37 53.1	
KSRS	**Korea Array**	**4.76**	**341**	Pn	**Pn**	**00 36 41.1**	**+0.5**
	2.5nm,0.3s,baz=156,slow=15,SNR=18						
KSRS				Pg	**Pb**	**00 36 55.0**	**+2.7**
	8.0nm,0.3s,baz=147,slow=18,SNR=21						
KSRS				Lg	Lg	00 37 53.1	
	13nm,0.3s,baz=158,slow=30,SNR=5.7						
KSRS				LR	LR	00 38 15.9	
	comp=Z,103nm,20.7s,baz=141,slow=36						
INCN	**Inchon**	**5.25**	**330**	*e*Pn	**Pn**	**00 36 46.9**	**-0.3**
	28nm,0.4s						
INCN				*e*Sn	**Sn**	**00 37 46.9**	**-0.8**
MAT	**Matsushiro**	**7.70**	**60**	P	**Pn**	**00 37 20.2**	**-0.7**
MAT				*e*S	**Sn**	**00 38 47.1**	**-1.0**
MJAR	**Matsushiro Arr**	**7.70**	**60**	Pn	Pn	00 37 24.2	+3.3
MJAR				Lg	Lg	00 39 31.4	
MJAR	**Matsushiro Arr**	**7.70**	**60**	Pn	Pn	00 37 24.2	+3.3
	0.3nm,0.3s,baz=240,slow=13,SNR=16						
MJAR				Lg	Lg	00 39 31.3	
	baz=235,slow=30,SNR=5.2						
MJAR				LR	LR	00 40 03.2	
	comp=Z,83nm,20.6s,baz=260,slow=36						
USRK	**Ussuriysk Arra**	**11.33**	**8**	Pn	**Pn**	**00 38 12.3**	**+1.7**
	0.3nm,0.3s,baz=193,slow=14,SNR=4.7						
USRK				LR	LR	00 42 03.6	
	comp=Z,66nm,21.6s,baz=28,slow=35						
ASAJ	**Asahikawa**	**14.89**	**38**	Pn	**Pn**	**00 39 00.6**	**+1.3**
ASAJ	**Asahikawa**	**14.89**	**38**	Pn	**Pn**	**00 39 00.6**	**+1.3**
	0.1nm,0.3s,baz=250,slow=15,SNR=3.5						
ASAJ				LR	LR	00 44 27.1	
	comp=Z,61nm,18.6s,baz=162,slow=36						

ULN	**Ulaanbaatar**	**22.78**	**317**	P	**P**	**00 40 32.7**	**+1.2**	
	6.1nm,1.0s							
SONM	**Songino Array**	**23.14**	**317**	P	**P**	**00 40 34.7**	**-0.5**	
SONM	**Songino Array**	**23.14**	**317**	P	**P**	**00 40 34.7**	**-0.5**	
	0.6nm,0.5s,baz=134,slow=10,SNR=2.4							
PETK	**Petropavlovsk-**	**28.30**	**36**	LR	LR	00 52 56.7		
	comp=Z,32nm,19.0s,baz=219,slow=37							
BVAR	**Borovoye Array**	**46.44**	**314**	P	**P**	**00 43 54.1**	**-1.4**	
BVAR				PcP	**PcP**	**00 45 29.5**	**-0.5**	
BVAR	**Borovoye Array**	**46.44**	**314**	P	**P**	**00 43 54.1**	**-1.4**	
	0.5nm,0.4s,baz=106,slow=9.1,SNR=3.3							
BVAR				PcP	**PcP**	**00 45 29.5**	**-0.5**	
	0.4nm,0.6s,baz=96,slow=4.3,SNR=3.0							
WRA	**Warramunga Arr**	**52.78**	**175**	P	**P**	**00 44 43.8**	**-0.3**	
WRA	**Warramunga Arr**	**52.78**	**175**	P	**P**	**00 44 43.8**	**-0.3**	
	1.1nm,0.9s,baz=352,slow=8.5,SNR=6.4							
ASAR	**Alice Springs**	**56.45**	**176**	P	**P**	**00 45 11.1**	**+0.4**	
ASAR	**Alice Springs**	**56.45**	**176**	P	**P**	**00 45 11.1**	**+0.4**	
	1.5nm,0.8s,baz=3.0,slow=7.6,SNR=15							
ILAR	**Eielson Array**	**57.86**	**30**	P	**P**	**00 45 21.8**	**+1.6**	
ILAR	**Eielson Array**	**57.86**	**30**	P	**P**	**00 45 21.8**	**+1.6**	
	0.3nm,0.6s,baz=266,slow=7.1,SNR=3.4							
FINES	**FINESS Array B**	**67.77**	**330**	P	**P**	**00 46 25.8**	**-0.5**	
FINES	**FINESS Array B**	**67.77**	**330**	P	**P**	**00 46 25.8**	**-0.5**	
	0.8nm,0.5s,baz=68,slow=6.5,SNR=13							
AKASG	**Malin Array Be**	**71.41**	**319**	P	**P**	**00 46 48.6**	**-0.3**	
AKASG	**Malin Array Be**	**71.41**	**319**	P	**P**	**00 46 48.6**	**-0.3**	
	1.7nm,0.5s,baz=56,slow=6.2,SNR=3.9							
YKA	**Yellowknife Ar**	**71.83**	**26**	P	**P**	**00 46 51.3**	**0.0**	
YKA	**Yellowknife Ar**	**71.83**	**26**	P	**P**	**00 46 51.3**	**0.0**	
	0.4nm,0.7s,baz=215,slow=9.0,SNR=2.5							
NOA	**NORSAR Array B**	**73.94**	**334**	P	**P**	**00 47 03.1**	**-0.8**	
NOA	**NORSAR Array B**	**73.94**	**334**	P	**P**	**00 47 03.1**	**-0.8**	
	0.5nm,0.5s,baz=51,slow=5.8,SNR=3.8							
BRTR	**Keskin Array B**	**74.11**	**307**	P	**P**	**00 47 04.5**	**-0.9**	
BRTR	**Keskin Array B**	**74.11**	**307**	P	**P**	**00 47 04.5**	**-0.9**	
	0.7nm,0.9s,baz=70,slow=8.0,SNR=6.2							
CLL	**Collm**	**79.47**	**325**	*i* P	**P**	**00 47 35.4**	**+0.2**	
	comp=Z,5.0nm,1.1s							
CLL				*i* pP	**pP**	**00 47 39.1**	**+0.2**	
NVAR	**Mina Array Bea**	**84.82**	**47**	P	**P**	**00 48 04.6**	**+0.7**	
NVAR	**Mina Array Bea**	**84.82**	**47**	P	**P**	**00 48 04.6**	**+0.7**	
	comp=Z,0.8nm,0.7s,baz=310,slow=4.6,SNR=3.0							

*ISK **28** 00:41:55.6, 37.°68N×36.°09E, h11km, MD2.5*

*ISCJB **28** 00:41:56.1±0.8, 37.°67N±0.°05×36.°10E±0.°04, h7km±7km, Error ellipse: s-maj=8.7km s-min=5.0km az=5.6*

*DDA **28** 00:41:56.2, 37.°59N×36.°10E, h7km, MD2.9*

*CSEM **28** 00:41:56.3±0.2, 37.°65N×36.°09E, h12km, MD2.5*

ISC 28 00:41:56.5±1.3, 37.°64N±0.°06×36.°10E±0.°02, h13km±11km, n19, σ0s66/32, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KOZT	**Kozan**	**0.26**	**234**	*e*PG	**Pg**	**00 42 02.5**	**+0.5**
KOZT				*e*SG	**Sb**	**00 42 07.1**	**-0.5**
KOZT	**Kozan**	**0.26**	**234**	*e*Pg	**Pg**	**00 42 02.5**	**+0.5**
KOZT				*e*Sg	**Sb**	**00 42 07.1**	**-0.5**
KMRS	**Kahramanmaras**	**0.65**	**101**	*e*PG	**Pg**	**00 42 08.8**	**-0.4**
KMRS				*e*SG	**Sb**	**00 42 18.6**	**-0.2**
KMRS	**Kahramanmaras**	**0.65**	**101**	*e*Pg	**Pg**	**00 42 08.8**	**-0.4**
KMRS				*e*Sg	**Sb**	**00 42 18.6**	**-0.2**
KARA	**Karaisali**	**0.91**	**246**	*e*PG	**Pb**	**00 42 12.9**	**-1.2**
KARA				*e*SG	**Sb**	**00 42 26.5**	**+0.4**
KARA	**Karaisali**	**0.91**	**246**	*e*Pg	**Pb**	**00 42 12.9**	**-1.2**
KARA				*e*Sg	**Sb**	**00 42 26.5**	**+0.4**
GAZ	**Gaziantep**	**1.00**	**117**	*e*PG	**Pb**	**00 42 15.7**	**0.0**
GAZ	**Gaziantep**	**1.00**	**117**	*e*Pg	**Pb**	**00 42 15.7**	**0.0**
PINB	**Pinarbasi**	**1.07**	**13**	*e*P	**Pn**	**00 42 17.6**	**+0.2**
PINB				*e*S	**Sn**	**00 42 33.8**	**+1.5**
PINB	**Pinarbasi**	**1.07**	**13**	*e*P	**Pn**	**00 42 17.6**	**+0.2**
PINB				*e*S	**Sn**	**00 42 33.8**	**+1.5**
KUZU	**Kuzuini**	**1.16**	**137**	*i* P	**Pg**	**00 42 18.8**	**-0.1**
KUZU				*i* S	**Sg**	**00 42 34.3**	**+0.3**
KUZU	**Kuzuini**	**1.16**	**137**	*i* P	**Pg**	**00 42 18.8**	**-0.1**
KUZU				*i* S	**Sg**	**00 42 34.3**	**+0.3**
GZT	**Gaziantep**	**1.20**	**103**	*e*P	**Pn**	**00 42 19.0**	**-0.2**
GZT				*e*S	**Sb**	**00 42 34.3**	**-0.4**
BNN	**Bunyan**	**1.23**	**351**	*e*PN	**Pn**	**00 42 18.5**	**-1.1**
BNN	**Bunyan**	**1.23**	**351**	*e*Pn	**Pn**	**00 42 18.5**	**-1.1**
NIG	**Nigde**	**1.27**	**292**	*e*PN	**Pn**	**00 42 20.3**	**+0.1**
NIG	**Nigde**	**1.27**	**292**	*e*Pn	**Pn**	**00 42 20.3**	**+0.1**
ATAB	**Bozova**	**1.76**	**95**	*e*P	**Pn**	**00 42 26.7**	**+0.1**
ATAB				*e*S	**Sb**	**00 42 50.1**	**-0.4**
ATAB	**Bozova**	**1.76**	**95**	*e*P	**Pn**	**00 42 26.7**	**+0.1**
ATAB				*e*S	**Sb**	**00 42 50.1**	**-0.4**

IDC 28 00:44:28.9±3.7, 21.°60N×143.°05E, h308km±37km, mb3.2/12, mb1 3.4/14, mb1mx3.2/29, mbtmp3.3/14, Error ellipse: s-maj=31.0km s-min=10.8km az=89.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JHJ	**Hachijo jima 2**	**11.83**	**347**	P	Pn	00 47 09.3	+0.1
	11nm,0.3s,baz=53,slow=22,SNR=6.2						
JHJ				S	S	00 49 22.3	+1.2
	3.1nm,0.3s,baz=249,slow=20,SNR=1.4						
MJAR	**Matsushiro Arr**	**15.47**	**345**	P	P	00 47 50.1	-0.6
	1.4nm,0.3s,baz=157,slow=9.6,SNR=16						
MJAR				S	S	00 50 35.4	-2.8
	0.1nm,0.3s,baz=11,slow=18,SNR=1.8						
MAT	**Matsushiro**	**15.47**	**345**	P	P	00 47 51.4	+0.7
KSRS	**Korea Array**	**20.52**	**324**	P	P	00 48 44.0	-0.4
	3.3nm,0.6s,baz=145,slow=9.0,SNR=18						
USRK	**Ussuriysk Arra**	**24.32**	**340**	P	P	00 49 20.4	+1.2
	1.9nm,0.8s,baz=154,slow=8.0,SNR=5.0						
WRA	**Warramunga Arr**	**42.16**	**192**	P	P	00 51 52.1	-0.1
	0.9nm,0.3s,baz=15,slow=9.4,SNR=64						
FITZ	**Fitzroy

Ms1 3.4/6,ms1mx3.0/20,Error ellipse: s-maj=22.2km s-min=15.0km az=69.0

ISC 28 01:26:14.8±0.6,**24°19N**±0.02×**121°76E**±0.02,**h13**km±3km, **n87**,σ1§**08**/136,**mb3.8**/12,**MS3.2**/6,**10C-8D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
EHP	**Heping Village**	**0.12**	**353**	*i* P **Pg**	**01 26 17.8**	**-0.4**
	baz=1.0					
EHP				*i* S **Sg**	**01 26 20.3**	**-0.3**
	baz=1.0					
TWD	**Chiawan**	**0.18**	**234**	⇓*i* P **Pg**	**01 26 18.5**	**-0.5**
	baz=240					
TWD				S **Sg**	**01 26 21.4**	**-0.5**
	baz=240					
ENA	**Nanau**	**0.24**	**357**	⇑*i* P **Pg**	**01 26 19.8**	**-0.3**
	baz=360					
ENA				*e*S **Sg**	**01 26 23.6**	**0.0**
	baz=360					
HWA	**Hwalien**	**0.25**	**214**	*e*P **Pg**	**01 26 20.3**	**+0.2**
	baz=223					
ESF	**Shoufeng Towns**	**0.39**	**216**	*e*P **Pg**	**01 26 22.0**	**-0.6**
	baz=228					
TWC	**Suao**	**0.43**	**11**	⇑*i* P **Pg**	**01 26 23.3**	**-0.1**
	baz=13					
NNS	**Nan Shan**	**0.43**	**306**	⇑*i* P **Pg**	**01 26 23.2**	**-0.3**
	baz=307					
NNS				S **Sg**	**01 26 29.2**	**-0.1**
	baz=307					
WHF	**Hehuan Shan**	**0.45**	**265**	⇑*i* P **Pg**	**01 26 23.5**	**-0.4**
	baz=266					
WHF				*e*S **Sg**	**01 26 29.1**	**-1.0**
	baz=266					
ESL	**Shilin**	**0.47**	**219**	P **Pg**	**01 26 23.6**	**-0.6**
	baz=228					
ESL				*e*S **Sb**	**01 26 31.7**	**-0.2**
	baz=228					
TEGC	**Jichi Village**	**0.51**	**203**	*e*P **Pb**	**01 26 26.3**	**+0.7**
	baz=193					
TWT	**Tachien**	**0.54**	**277**	⇑*i* P **Pg**	**01 26 25.6**	**+0.3**
	baz=278					
TWT				S **Sg**	**01 26 32.6**	**+0.1**
	baz=278					
TWE	**Neicheng**	**0.54**	**351**	⇑*i* P **Pg**	**01 26 25.5**	**0.0**
	baz=353					
TWE				*i* S **Sb**	**01 26 33.4**	**-0.3**
	baz=353					
ILA	**Ilan**	**0.58**	**359**	*e*P **Pg**	**01 26 26.2**	**+0.1**
ILA				*e*S **Sb**	**01 26 34.2**	**-0.6**
NSK	**Sanguang**	**0.61**	**323**	⇑*i* P **Pg**	**01 26 26.7**	**-0.1**
	baz=324					
NSK				S **Sg**	**01 26 34.8**	**-0.1**
	baz=324					
EHY	**Hungye**	**0.79**	**211**	P **Pg**	**01 26 29.1**	**-0.9**
	baz=211					
TWA	**Mucha**	**0.81**	**349**	*e*P **Pb**	**01 26 30.7**	**0.0**
	baz=340					
NSTT	**Nanjuang**	**0.82**	**303**	*e*P **Pg**	**01 26 30.7**	**0.0**
	baz=304					
NSTT				*e*S **Sb**	**01 26 41.7**	**-0.2**
	baz=304					
SMLT	**Sun Moon Lake**	**0.84**	**249**	⇓P **Pg**	**01 26 31.1**	**0.0**
	baz=250					
SMLT				S **Sg**	**01 26 41.9**	**-0.3**
	baz=250					
TWB1	**Santiao Chiao**	**0.85**	**14**	*e*P **Pg**	**01 26 31.0**	**-0.2**
	baz=7.0					
TWB1				S **Sb**	**01 26 42.5**	**-0.1**
	baz=7.0					
TYC	**Yuchr**	**0.87**	**251**	⇑*i* P **Pg**	**01 26 31.3**	**-0.3**
	baz=244					
TYC				*e*S **Sg**	**01 26 42.0**	**-1.1**
	baz=244					
TAP1	**Taipei**	**0.88**	**346**	*e*P **Pb**	**01 26 32.1**	**+0.2**
	baz=345					
TAP1				*e*S **Sb**	**01 26 43.5**	**+0.1**
	baz=345					
TAP	**Taipei**	**0.88**	**345**	*e*P **Pn**	**01 26 32.6**	**-0.2**
	baz=345					
TAP				*e*S **Sb**	**01 26 43.7**	**+0.1**
	baz=345					
NWF	**Wu-fen Shan**	**0.88**	**1**	⇓P **Pb**	**01 26 32.3**	**+0.3**
	baz=353					
NWF				S **Sn**	**01 26 45.4**	**-0.3**
	baz=353					
TWQ1	**Liyutan**	**0.91**	**280**	*e*P **Pn**	**01 26 33.0**	**-0.3**
	baz=281					
TWQ1				*e*S **Sn**	**01 26 46.2**	**-0.1**
	baz=281					
TWF1	**Yuli**	**0.93**	**207**	*e*P **Pb**	**01 26 30.6**	**-2.1**
	baz=220					
NCU	**National Centr**	**0.94**	**327**	*e*P **Pn**	**01 26 33.7**	**0.0**
	baz=327					
NCU				S **Sn**	**01 26 47.4**	**+0.5**
	baz=327					
NSY	**Sanyi**	**0.94**	**284**	⇑*i* P **Pn**	**01 26 33.7**	**+0.1**
	baz=285					
NSY				*e*S **Sn**	**01 26 47.5**	**+0.5**
	baz=285					
HSN	**Hsinchu**	**0.94**	**311**	*e*P **Pn**	**01 26 33.6**	**-0.1**
	baz=314					
HSN				*e*S **Sn**	**01 26 48.4**	**+1.4**
	baz=314					
TWS1	**Kuangyinshan**	**0.96**	**341**	*e*P **Pn**	**01 26 34.0**	**0.0**
	baz=350					
TWS1				*e*S **Sn**	**01 26 48.8**	**+1.3**
	baz=350					
TCU	**Taichung**	**0.99**	**268**	P **Pn**	**01 26 35.2**	**+0.8**
	baz=269					
TCU				S **Sn**	**01 26 49.8**	**+1.6**
	baz=269					
YUS	**Yu-Shan**	**1.01**	**227**	⇓*i* P **Pb**	**01 26 34.4**	**0.0**
	baz=229					
YUS				S **Sb**	**01 26 48.5**	**+0.7**
	baz=229					
WNT	**Mingjian**	**1.03**	**253**	*e*P **Pn**	**01 26 35.4**	**+0.5**
	baz=250					
WNT				S **Sn**	**01 26 50.0**	**+0.9**
	baz=250					
TWY	**Chenhua**	**1.09**	**353**	*e*P **Pg**	**01 26 36.5**	**+0.5**
	baz=353					
ALS	**Alishan**	**1.10**	**233**	⇓P **Pb**	**01 26 35.7**	**-0.2**
	baz=235					
ALS				*e*S **Sg**	**01 26 51.4**	**+0.9**
	baz=235					
CHKT	**Chengkung**	**1.14**	**198**	*e*P **Pb**	**01 26 35.7**	**-0.6**
	baz=192					
CHN5	**Tsauling**	**1.15**	**240**	⇓*e*P **Pg**	**01 26 37.0**	**+0.1**
	baz=242					
CHN5				S **Sn**	**01 26 53.6**	**+1.4**
	baz=242					
YOJ	**Yonaguni jima**	**1.18**	**76**	⇑P **Pn**	**01 26 36.9**	**0.0**
	baz=67					
YOJ				*e*S **Sg**	**01 26 53.7**	**+0.9**
	baz=67					
YOJ	**Yonaguni jima**	**1.18**	**76**	P **Pn**	**01 26 36.9**	**0.0**
YOJ				S **Sg**	**01 26 53.8**	**+0.9**
WGK	**Gukeng**	**1.20**	**246**	*e*P **Pg**	**01 26 38.4**	**+0.4**
	baz=248					
WGK				*e*S **Sg**	**01 26 54.4**	**+0.8**
	baz=248					
ELDTW	**Lidau**	**1.20**	**215**	*e*P **Pn**	**01 26 36.5**	**-0.9**
	baz=205					
ELDTW				*e*S **Sg**	**01 26 54.6**	**+1.0**
	baz=205					
WTCT	**Ta-ch'eng**	**1.39**	**257**	*e*P **Pb**	**01 26 41.1**	**+0.5**
	baz=259					
WTCT				*e*S **Sg**	**01 27 00.7**	**+1.1**
	baz=259					
CHY	**Chiayi**	**1.40**	**241**	*e*P **Pb**	**01 26 41.3**	**+0.5**
	baz=245					
WTP	**Ta-pu**	**1.40**	**228**	⇓*e*P **Pb**	**01 26 40.7**	**-0.2**
	baz=232					
WTP				*e*S **Sg**	**01 27 00.7**	**+0.6**
	baz=232					
PCYT	**Pengchaiyu**	**1.47**	**11**	*e*P **Pb**	**01 26 41.5**	**-0.5**
	baz=10.0					
TWK	**Hsinying**	**1.48**	**232**	P **Pb**	**01 26 42.5**	**+0.3**
	baz=235					
TWK				*e*S **Sg**	**01 27 02.9**	**+0.4**
	baz=235					
TWG	**Pinlang**	**1.50**	**205**	*e*P **Pn**	**01 26 39.4**	**-2.0**
	baz=209					
CHN1	**Nanshi**	**1.50**	**229**	⇓*e*P **Pb**	**01 26 42.5**	**-0.1**
	baz=222					
CHN1				*e*S **Sg**	**01 27 04.5**	**+1.3**
	baz=222					
WSF	**Szhu**	**1.51**	**249**	*e*P **Pb**	**01 26 43.0**	**+0.4**
	baz=252					
WSF				*e*S **Sg**	**01 27 04.1**	**+0.8**
	baz=252					
TTN	**Taitung**	**1.53**	**202**	*e*P **Pn**	**01 26 42.2**	**+0.4**
	baz=199					
CHN8	**Yiju**	**1.65**	**240**	*e*P **Pb**	**01 26 44.6**	**-0.4**
	baz=244					
CHN3	**Shinhua**	**1.69**	**229**	*e*P **Pb**	**01 26 46.5**	**+0.8**
	baz=234					
ECL	**Taimali**	**1.75**	**205**	*e*P **Pn**	**01 26 45.7**	**+1.0**
	baz=195					
SCLT	**Jiali**	**1.75**	**235**	*e*P **Pb**	**01 26 46.7**	**0.0**
	baz=240					
SCLT				*e*S **Sg**	**01 27 10.6**	**-0.6**
	baz=240					
IRIF	**Iriomote-Funau**	**1.81**	**85**	P **Pn**	**01 26 45.8**	**+0.2**
IRIF				S **Sb**	**01 27 09.3**	**-1.0**
TAI1	**Yung-k'ang**	**1.81**	**231**	*e*P **Pb**	**01 26 47.5**	**-0.2**
	baz=236					
TWM1	**Shoushan**	**1.83**	**222**	*e*P **Pb**	**01 26 48.5**	**+0.4**
	baz=225					
SGLT	**Jiouru**	**1.86**	**219**	*e*P **Pb**	**01 26 48.5**	**-0.1**
	baz=223					
HATJ	**Hateruma jima**	**1.88**	**94**	P **Pn**	**01 26 47.1**	**+0.6**
HATJ				*e*S **Sn**	**01 27 11.1**	**+1.1**
JKRS	**Kuro-shima**	**2.06**	**88**	P **Pn**	**01 26 50.1**	**+1.1**
JKRS				S **Sb**	**01 27 16.2**	**-1.3**
SCZT	**Fangliau**	**2.09**	**210**	*e*P **Pn**	**01 26 51.0**	**+1.6**
	baz=213					
SCZT				*e*S **Sb**	**01 27 17.0**	**-1.3**
	baz=213					
PNG	**Penghu**	**2.11**	**253**	*e*P **Pn**	**01 26 49.9**	**+0.1**
	baz=258					
PNG				*e*S **Sn**	**01 27 17.0**	**+1.2**
	baz=258					
JIJ	**Ishigaki jima**	**2.19**	**85**	P **Pn**	**01 26 50.7**	**-0.1**
JIJ				S **Sn**	**01 27 17.0**	**-0.7**
HEN	**Hengchun**	**2.36**	**204**	*e*P **Pn**	**01 26 54.2**	**+0.9**
	baz=198					
TWK1	**Hengchun**	**2.40**	**202**	*e*P **Pn**	**01 26 54.5**	**+0.8**
	baz=194					
TSEB	**Hengchuen, Pin**	**2.41**	**199**	*e*P **Pn**	**01 26 54.9**	**+1.0**
	baz=194					
JTJ	**Tarama**	**2.72**	**80**	P **Pn**	**01 26 59.0**	**+0.8**
JTJ				*e*S **Sn**	**01 27 31.6**	**+0.6**
QZH	**Quanzhou**	**2.98**	**285**	Pn **Pn**	**01 27 01.8**	**+0.1**
QZH				Sn **Sn**	**01 27 35.3**	**-2.0**
QZH				smax smax		
	comp=N,630nm,0.6s					
QZH				smax smax		
	comp=E,380nm,0.8s					
JMJ	**Miyako jima 2**	**3.28**	**78**	*e*S **Sn**	**01 27 44.8**	**0.0**
JOGS	**Gusukube**	**3.37**	**79**	*e*S **Sn**	**01 27 47.4**	**+0.3**
WHN	**Wuhan**	**9.13**	**316**	*e*P **Pn**	**01 28 27.3**	**+1.0**
WHN				S **Sn**	**01 30 05.0**	**-3.9**
WHN				LR LR		
	comp=N,1μm,8.8s					
WHN				LR LR		
	comp=E,1μm,9.6s					
KSRS	**Korea Array**	**14.24**	**20**	P **P**	**01 29 41.2**	**-2.2**
	comp=E,0.3nm,0.3s,baz=198,slow=12,SNR=19					
MJAR	**Matsushiro Arr**	**18.76**	**45**	P **P**	**01 30 33.5**	**-0.1**
	comp=E,0.1nm,0.3s,baz=241,slow=8.2,SNR=2.5					
LZH	**Lanzhou**	**19.48**	**312**	*e*P **Pn**	**01 30 43.5**	**+0.7**
LZH				pP **pP**	**01 30 46.0**	**+0.6**
LZH				sP **sP**	**01 30 48.5**	**+1.4**
LZH				PP **PnPn**	**01 31 02.0**	**+5.9**
LZH				*e*S **Sn**	**01 34 18.3**	**-2.9**
LZH				sS **sS**	**01 34 26.0**	**-1.6**
LZH				SS **SnSn**	**01 34 39.0**	**+3.5**
LZH				pmax pmax		
	comp=Z,23nm,1.3s					
LZH				pmax pmax		
	comp=Z,110nm,4.2s					
LZH				LR LR		
	comp=N,220nm,12.3s					
LZH				LR LR		
	comp=E,270nm,11.9s					
LZH				LR LR		
	comp=Z,390nm,11.9s					
USRK	**Ussuriysk Arra**	**21.65**	**20**	P **P**	**01 31 06.1**	**+1.2**
	comp=Z,1.2nm,0.7s,baz=147,slow=41,SNR=3.6					
USRK				LR LR	01 39 19.5	
	comp=Z,40nm,18.1s,baz=116,slow=36					
CMAR	**Chiang Mai Arr**	**21.99**	**259**	P **P**	**01 31 10.9**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=58,slow=8.7,SNR=5.4					
ASAJ	**Asahikawa**	**26.19**	**35**	LR LR	01 43 10.9	
	comp=Z,70nm,18.2s,baz=167,slow=39					
SONM	**Songino Array**	**26.57**	**336**	P **P**	**01 31 50.9**	**-1.7**
	comp=Z,1.7nm,0.8s,baz=143,slow=11,SNR=5.2					
SONM				LR LR	01 43 31.1	
	comp=Z,121nm,18.6s,baz=59,slow=39					
MKAR	**Makanchi Array**	**38.70**	**316**	P **P**	**01 33 38.6**	**+0.2**
	comp=Z,1.5nm,0.7s,baz=110,slow=9.7,SNR=8.7					
MKAR				LR LR	01 50 54.6	
	comp=Z,26nm,20.3s,baz=355,slow=38					
ZALV	**Zalesovo Beam**	**40.53**	**327**	P **P**	**01 33 52.6**	**-0.8**
	comp=Z,1.6nm,0.8s,baz=108,slow=9.3,SNR=3.6					
ZALV				LR LR	01 51 13.1	
	comp=Z,28nm,20.2s,baz=340,slow=37					
KURBB	**Kurchatov Arra**	**42.44**	**320**	P **P**	**01 34 09.1**	**-0.1**
	comp=Z,0.8nm,0.7s,baz=114,slow=7.7,SNR=5.0					
WRA	**Warramunga Arr**	**45.54**	**163**	P **P**	**01 34 32.2**	**-2.2**
	comp=Z,0.8nm,0.7s,baz=345,slow=8.6,SNR=12					
BVAR	**Borovoye Array**	**48.00**	**321**	P **P**	**01 34 53.4**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=82,slow=7.0,SNR=3.7					
ASAR	**Alice Springs**	**49.01**	**165**	P **P**	**01 35 01.4**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=339,slow=6.8,SNR=6.1					
FINES	**FINESS Array B**	**71.71**	**330**	P **P**	**01 37 35.4**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=76,slow=8.0,SNR=6.2					
BRTR	**Keskin Array B**	**73.59**	**307**	P **P**	**01 37 47.3**	**-0.8**
	comp=Z,0.9nm,0.8s,baz=116,slow=4.9,SNR=6.7					
NOA	**NORSAR Array B**	**78.47**	**332**	LR LR	02 16 14.3	
	comp=Z,43nm,18.1s,baz=185,slow=38					
YKA	**Yellowknife Ar**	**82.76**	**23**	P P	01 38 33.9	-4.3
	comp=Z,0.7nm,0.6s,baz=308,slow=4.7,SNR=4.7					

*ISCJB **28** 01:28:37.7±0.4,36°48N±0.03×70°75E±0.07,h204km, mb3.5/8,Error ellipse: s-maj=8.2km s-min=4.5km az=163.2*

*IDC **28** 01:28:38.8±2.5,36°39N×70°81E,h209km±23km,mb3.5/7, mb1 3.6/12,mb1mx3.2/31,mbtmp3.5/12,Error ellipse: s-maj=18.1km s-min=14.1km az=130.0*

*NNC **28** 01:28:41.6±5.1,36°82N×70°53E,h187km±39km,mb3.5, mpv4.9,Error ellipse: s-maj=49.1km s-min=24.2km az=33.0*

*NDI **28** 01:30:48.5±2.3,31°92N×75°26E,h9km±125km,ML2.9*

ISC 28 01:28:38.6±0.7,**36°54N**±0.06×**70°67E**±0.09,**h204**km,**n43**, σ1§**42**/47,**mb3.6**/8,**7C-7D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
CEP	**Cherat**	**2.89**	**159**	⇓P **Pn**	**01 29 26.7**	**-0.7**
CEP				S **S**	**01 30 02.0**	**-2.9**
CHCP	**Chirah Chowk**	**3.57**	**143**	P **Pn**	**01 29 35.2**	**-0.2**
THW	**Thamme Wali**	**3.84**	**166**	P **Pn**	**01 29 37.8**	**-0.8**
THN	**Thein Dam**	**5.84**	**133**	*e*PKP S	01 31 02.5	-8.5
THN				*e*S S	01 31 09.0	-2.0
AML	**Almayashu**	**6.06**	**22**	P **Pn**	**01 30 07.0**	**0.0**
	SNR=349					
UCH	**Uchtor**	**6.42**	**26**	P **Pn**	**01 30 12.1**	**+0.4**
	SNR=10					
KK31	**Karatay Array**	**6.56**	**359**	⇓P **Pn**	**01 30 13.1**	**0.0**
	19nm,0.3s,baz=175,slow=12,SNR=978					
KK31				⇑S **S**	**01 31 24.3**	**-3.6**
	34nm,0.6s,baz=184,slow=18,SNR=14					
EKS2	**Erkin-Say**	**6.57**	**20**	P **Pn**	**01 30 13.7**	**+0.4**
	SNR=26					
KZA	**Kyzart**	**6.57**	**31**	P **Pn**	**01 30 13.3**	**-0.3**
	SNR=25					
AAK	**Ala-Archa**	**6.77**	**25**	P **Pn**	**01 30 16.5**	**+0.6**
	SNR=32					
AAK	**Ala-Archa**	**6.77**	**25**	P **Pn**	**01 30 16.3**	**+0.4**
	13nm,0.3s,baz=168,slow=4.8,SNR=46					
AAK				S **S**	**01 31 31.3**	**-1.7**
	4.7nm,0.3s,baz=318,slow=21,SNR=21					
KBK	**Karagaybulak**	**6.95**	**27**	P **Pn**	**01 30 18.9**	**+0.7**
	SNR=26					
ULHL	**Ulahol**	**7.15**	**35**	P **Pn**	**01 30 20.6**	**-0.4**
	SNR=6.3					
CHMS	**Chumysh**	**7.18**	**25**	P **Pn**	**01 30 21.5**	**+0.4**
	SNR=28					
SDNR	**Sundarnagar**	**7.25**	**132**	*e*S S	01 31 37.0	-7.4
USP	**Ospenovka**	**7.34**	**22**	P **Pn**	**01 30 22.9**	**-0.3**
	SNR=21					
TKM2	**Tokmak 2**	**7.42**	**29**	⇑P **Pn**	**01 30 24.6**	**+0.2**
	54nm,0.3s					
TKM2	**Tokmak 2**	**7.42**	**29**	P **Pn**	**01 30 24.6**	**+0.2**
	SNR=124					
AYAN	**Aya Nagar**	**9.70**	**144**	*e*S S	01 32 30.3	-12
AYAN				AML AML	01 32 35.3	
	comp=Z,14nm,0.3s					
KUDL	**Kundal**	**9.70**	**148**	*e*S S	01 32 31.9	-11
KUDL				AML AML	01 32 34.0	
	comp=E,24nm,0.5s					
KUDL				AML AML	01 32 35.5	
	comp=N,13nm,0.6s					
AGRA	**Agra**	**11.14**	**144**	*e*S S	01 33 03.9	-13
AGRA				AML AML	01 33 04.7	
	comp=E,53nm,0.8s					
AGRA				AML AML	01 33 06.0	
	comp=N,65nm,0.5s					
MK31	**Makanchi Array**	**13.42**	**37**	⇑P **Pn**	**01 31 41.8**	**+0.7**
	comp=N,4.4nm,0.7s,baz=217,slow=12,SNR=33					
MKAR	**Makanchi Array**	**13.42**	**37**	P **Pn**	**01 31 41.4**	**+0.4**
	comp=N,0.4nm,0.3s,baz=221,slow=9.0,SNR=30					
AB31	**Akbulak array**	**14.93**	**332**	⇑P **Pn**	**01 31 58.5**	**-1.0**
	comp=N,1.1nm,0.3s,baz=298,slow=40,SNR=42					
AB31				⇑S **S**	**01 34 41.4**	**-3.5**
	comp=N,2.4nm,0.7s,baz=155,slow=24,SNR=5.5					
KURBB	**Kurchatov Arra**	**15.18**	**19**	⇓P **Pn**	**01 32 02.7**	**+0.1**
	comp=N,2.6nm,0.3s					
KURBB	**Kurchatov Arra**	**15.18**	**19**	P **P**	**01 32 02.8**	**-0.1**
	comp=N,0.3nm,0.3s,baz=210,slow=10,SNR=19					
VOSK	**Vostochnaya**	**16.19**	**1**	⇓P **Pn**	**01 32 16.0**	**+1.2**
	comp=N,1.7nm,0.3s					
ZRNK	**Zerenda**	**16.45**	**356**	⇓P **Pn**	**01 32 19.2**	**+1.2**
	comp=N,4.0nm,0.5s					
BVA0	**Borovoye Array**	**16.49**	**359**	⇓P **P**	**01 32 16.6**	**-0.8**
	comp=N,1.6nm,0.4s,baz=244,slow=39,SNR=30					
BVAR	**Borovoye Array**	**16.49**	**359**	P **Pn**	**01 32 19.4**	**+1.0**
	comp=N,2.0nm,0.3s,baz=157,slow=9.1,SNR=33					
BRVK	**Borovoye**	**16.52**	**359**	⇑P **Pn**	**01 32 20.0**	**+1.2**
	comp=N,3.1nm,0.4s					
AKTO	**Aktyubinsk**	**16.62**	**331**	⇑P **Pn**	**01 32 20.5**	**+0.6**
	comp=N,6.5nm,0.6s					
AKTO				⇓S **S**	**01 35 21.9**	**-0.1**
	comp=N,3.0nm,0.8s					
AKTO	**Aktyubinsk**	**16.62**	**331**	P **Pn**	**01 32 21.0**	**+1.0**
	comp=N,1.4nm,0.3s,baz=140,slow=9.4,SNR=24					
AKTO				S **S**	**01 35 20.4**	**-1.7**
	comp=N,0.1nm,0.3s,baz=305,slow=22,SNR=1.5					
ZALV	**Zalesovo Beam**	**19.99**	**25**	P **P**	**01 32 56.5**	**+1.1**
	comp=N,8.4nm,0.3s,baz=216,slow=10,SNR=54					
ZALV				S **S**	**01 36 29.5**	**+0.9**
	comp=N,0.6nm,0.7s,baz=222,slow=19,SNR=3.0					
JOF	**Joensuu**	**35.70**	**330**	*ep* **P**	**01 35 20.0**	**+2.8**
	comp=N,1.5nm,0.3s					
FINES	**FINESS Array B**	**37.31**	**326**	P **P**	**01 35 32.5**	**+1.7**
	comp=N,1.1nm,0.5s,baz=118,slow=9.0,SNR=15					
KAF	**Kangasniemi**	**37.45**	**327**	*ep* **P**	**01 35 34.0**	**+2.0**
	comp=N,0.3nm,0.3s					
ARCES	**ARCESS Array B**	**41.01**	**338**	P **P**	**01 36 03.6**	**+2.2**
	comp=N,1.8nm,0.7s,baz=106,slow=7.7,SNR=7.9					
NB2	**NORSAR Subarra**	**44.19**	**323**	P **P**	**01 36 28.2**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=97,slow=7.9					
NOA	**NORSAR Array B**	**44.19**	**323**	P **P**	**01 36 28.5**	**+1.4**
	comp=Z,1.1nm,0.6s,baz=98,slow=7.8,SNR=6.8					
TORD	**Torodi Ar. Bea**	**65.45**	**268**	P **P**	**01 38 59.2**	**-0.8**
	comp=Z,1.0nm,0.5s,baz=50,slow=6.0,SNR=48					
TORD				pP **pP**	**01 39 49.5**	**+2.2**
	comp=Z,0.2nm,0.7s,baz=52,slow=6.2,SNR=1.4					
WRA	**Warramunga Arr**	**82.23**	**122**	P **P**	**01 40 36.3**	**-0.9**
	comp=Z,0.3nm,0.4s,baz=323,slow=4.8,SNR=6.0					
WRA				pP **pP**	**01 41 29.1**	**+2.4**
	comp=Z,0.4nm,0.8s,baz=348,slow=24,SNR=1.8					
ASAR	**Alice Springs**	**84.49**	**125**	P **P**	**01 40 48.0**	**-0.7**
	comp=Z,0.4nm,0.6s,baz=307,slow=4.8,SNR=6.5					

IDC 28 01:41:24.9±1.7,**1°09N**×128°01E,**h0**km,**mb3.4**/3, **mb1 3.6**/3,**mb1mx3.3**/21,**mbtmp3.4**/3,**Error ellipse: s-maj=142.3km s-min=26.6km az=74.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.80**	**164**	P P	**01 46 16.8**	**-2.0**
	0.4nm,0.7s,baz=343,slow=11,SNR=10					
ASAR	**Alice Springs**	**25.27**	**167**	P P	**01 46 54.4**	**+1.3**
	0.5nm,0.4s,baz=346,slow=11,SNR=13					
SONM	**Songino Array**	**50.19**	**341**	P P	**01 50 22.3**	**-0.3**
	0.9nm,0.5s,baz=138,slow=7.1,SNR=4.0					

MAN 28 02:09:37,7°08N×123°46E,h1km,mb3.8,ML2.6,MS2.2, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
PAGZ	**Pagadian**	**0.77**	**354**	*e*P Pb	**02 09 53.8**	**+0.7**
PAGZ				*e*S Sb	**02 10 04.6**	**+0.5**
CTBH	**Cotabato--PC H**	**0.79**	**80**	⇓*i* P Pg	**02 09 52.5**	**+0.4**
CTBH				*i* S Sg	**02 10 03.1**	**+0.6**
IPIL	**Ipil**	**1.13**	**308**	*e*P Pb	**02 09 59.3**	**0.0**
BUKP	**Musuan**	**1.77**	**63**	*e*P Pn	**02 10 09.6**	**+0.7**

*ISK **28** 02:25:53.4,34°76N×31°44E,h3km,ML3.8*

*ISCJB **28** 02:25:56.6±0.8,34°81N±0.03×31°45E±0.03,h25km±9km, Error ellipse: s-maj=5.0km s-min=4.2km az=25.3*

*CSEM **28** 02:25:56.5±0.2,34°86N×31°49E,h10km,Mw3.2, Error ellipse: s-maj=4.5km s-min=3.7km az=29.0*

*NIC **28** 02:25:57.0±0.2,34°97N×31°34E,h25km,ML3.3,MW3.2*

*HLW **28** 02:25:57.2,35°11N×31°50E,h31km±17km,Md3.4,Ml3.1*

*DDA **28** 02:26:02.2,35°57N×31°29E,h16km,MD3.2*

*NSSC **28** 02:26:39.2±4.3,32°57N×36°34E,h141km±36km,ML1.3*

ISC 28 02:25:55.9±1.7,**34°89N**±0.03×**31°45E**±0.02,**h16**km±13km, **n87**,σ1§**63**/103,**2C,Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
AKMC	**Akamas**	**0.74**	**79**	P **Pn**	**02 26 10.8**	**-0.9**
AKMC	**Akamas**	**0.74**	**79**	P **Pn**	**02 26 10.8**	**-0.9**
PPCY	**Paphos**	**0.74**	**90**	P **Pn**	**02 26 11.3**	**-0.4**
PPCY	**Paphos**	**0.74**	**90**	P **Pn**	**02 26 11.3**	**-0.4**
ALFC	**Alevga**	**0.98**	**74**	⇑P **Pb**	**02 26 14.3**	**-0.3**
	25nm,0.3s					
ALFC				S **Sb**	**02 26 28.3**	**+0.9**
ALFC	**Alevga**	**0.98**	**74**	⇑*e*P **Pb**	**02 26 14.3**	**-0.3**
	25nm,0.3s					
ALFC				S **Sb**	**02 26 28.3**	**+0.9**
SZAC	**Souni-Zanaja**	**1.19**	**96**	P **Pn**	**02 26 17.9**	**-0.1**
SZAC	**Souni-Zanaja**	**1.19**	**96**	P **Pn**	**02 26 17.9**	**-0.1**
LEF	**Lefka**	**1.21**	**79**	*e*P

IKL	Isikli	2.27	53	ePn	Pn	02 26 33.2	+0.5
FETY	Fethiye	2.59	313	ePN	Pn	02 26 38.7	+1.5
FETY	Fethiye	2.59	313	ePn	Pn	02 26 38.7	+1.5
SUTC	Sutluce-Ispart	2.61	352	ePN	Pb	02 26 40.4	-1.9
SUTC	Sutluce-Ispart	2.61	352	ePn	Pb	02 26 40.4	-1.9
BCK	Bucak	2.66	345	ePN	Pn	02 26 40.7	+2.5
BCK	Bucak	2.66	345	ePn	Pn	02 26 40.7	+2.5
DALY	Dalyan (Mu˜la	2.97	311	ePN	Pn	02 26 43.8	+1.4
DALY	Dalyan (Mu˜la	2.97	311	ePn	Pn	02 26 43.8	+1.4
TURN	Turunc	3.04	311	i P	Pb	02 26 47.9	-1.7
TURN				i S	Sn	02 27 21.6	+2.2
TURN	Turunc	3.04	311	i P	Pb	02 26 47.9	-1.7
TURN				i S	Sn	02 27 21.6	+2.2
KONT	Konya--Tatoy	3.14	13	ePN	Pn	02 26 47.5	+2.8
KONT	Konya--Tatoy	3.14	13	ePn	Pn	02 26 47.5	+2.8
YER	Yerkesik	3.40	312	ePN	Pn	02 26 50.1	+1.7
YER	Yerkesik	3.40	312	ePn	Pn	02 26 50.1	+1.7
GULE	Gulek	3.60	48	eP	Pn	02 26 53.4	+2.1
GULE				eS	Sn	02 27 35.0	+1.4
GULE	Gulek	3.60	48	eP	Pn	02 26 53.4	+2.1
GULE				eS	Sn	02 27 35.0	+1.4
DAT	Datca	3.64	301	ePN	Pn	02 26 53.1	+1.4
DAT	Datca	3.64	301	ePn	Pn	02 26 53.1	+1.4
SULT	Sultanhani-AKS	3.70	26	ePN	Pn	02 26 55.6	+3.1
SULT	Sultanhani-AKS	3.70	26	ePn	Pn	02 26 55.6	+3.1
KARA	Karaisali	3.76	50	ePN	Pn	02 26 55.0	+1.7
KARA	Karaisali	3.76	50	ePn	Pn	02 26 55.0	+1.7
KHAL	Karahalli	3.81	336	eP	Pn	02 26 54.3	+0.2
KHAL				i S	Sn	02 27 35.8	-2.9
KHAL	Karahalli	3.81	336	eP	Pn	02 26 54.3	+0.2
KHAL				i S	Sn	02 27 35.8	-2.9
MLSB	Milas	3.82	310	ePN	Pn	02 26 56.0	+2.0
MLSB	Milas	3.82	310	ePn	Pn	02 26 56.1	+2.0
AYDN	Tasoluk	3.99	315	i P	Pn	02 26 58.0	+1.5
AYDN				i S	Sn	02 27 37.9	-5.1
AYDN	Tasoluk	3.99	315	i P	Pn	02 26 58.0	+1.5
BODT	Bodrum	3.99	304	ePN	Pn	02 26 57.6	+1.1
BODT	Bodrum	3.99	304	ePn	Pn	02 26 57.6	+1.1
KIZT	Kizilcal	4.00	5	ePN	Pn	02 27 00.3	+3.7
KIZT	Kizilcal	4.00	5	ePn	Pn	02 27 00.3	+3.7
BRBR	Barbar	4.02	110	eP	Pn	02 26 58.7	+1.7
BRBR				AML	Pb	02 26 59.4	-7.1
	comp=E,5.4nm,0.2s						
BRBR				AML	AML	02 27 01.5	
	comp=N,6.1nm,0.1s						
BRBR				eS	Sn	02 27 20.7	-23
BRBR	Barbar	4.02	110	eP	Pn	02 26 58.7	+1.7
	SNR=143						
BRBR				eS	Pb	02 27 20.7	+14
	SNR=143						
KULA	Kula-Manisa	4.25	329	ePN	Pn	02 27 02.8	+2.7
KULA	Kula-Manisa	4.25	329	ePn	Pn	02 27 02.8	+2.7
RSH		4.36	153	P	Pn	02 27 02.5	+1.0
TCHB	Talchebab	4.37	119	eP	Pn	02 27 00.7	-1.0
TCHB				eS	Sn	02 27 12.3	-40
TCHB				AML	AML	02 27 59.5	
	comp=N,18nm,0.3s						
TCHB				AML	AML	02 28 02.4	
	comp=E,24nm,0.7s						
TCHB	Talchebab	4.37	119	eP	Pn	02 27 00.7	-1.0
	SNR=165						
TCHB				eS	Pb	02 27 12.3	0.0
	comp=E,24nm,0.7s,SNR=164						
TOTH	TOTAH	4.41	109	eP	Pn	02 27 02.8	+0.6
TOTH				eS	Pb	02 27 18.1	+5.2
TOTH				AML	AML	02 27 26.6	
	comp=N,11nm,0.6s						
TOTH				AML	AML	02 28 18.4	
	comp=E,8.8nm,0.5s						
TOTH	TOTAH	4.41	109	eP	Pn	02 27 02.8	+0.6
	SNR=146						
TOTH				eS	Pb	02 27 18.1	+5.2
	comp=E,8.8nm,0.5s,SNR=146						
AMAG	Maghara	4.49	160	P	Pn	02 27 04.6	+1.3
	baz=161						
AMAG	Maghara	4.49	160	P	Pn	02 27 04.6	+1.3
SALA	Sala	4.91	115	eP	Pn	02 27 00.6	-8.7
SALA				eS	Pb	02 27 12.3	-9.3
SALA				AML	AML	02 28 22.4	
	comp=N,5.0nm,0.7s						
SALA				AML	AML	02 28 26.3	
	comp=E,0.6nm,0.4s						
SALA	Sala	4.91	115	eP	Pn	02 27 00.6	-8.7
	SNR=164						
SALA				eS	Pb	02 27 12.3	-9.3
	comp=E,0.6nm,0.4s,SNR=164						
HHAG	Hagoal	4.95	173	P	Pn	02 27 11.7	+1.9
	baz=174						
HHAG	Hagoal	4.95	173	P	Pn	02 27 11.6	+1.9
KOT	Kottamia	4.96	176	P	Pn	02 27 11.2	+1.4
	baz=176						
KOT				AMP		02 28 00.0	
	comp=E,20μm,0.3s,logA/T=4.8,baz=176						
KOT	Kottamia	4.96	176	P	Pn	02 27 11.2	+1.4
HMAT	Matruh	5.26	225	P	Pn	02 27 15.0	+1.1
	baz=224						
HMAT				S	Sn	02 28 10.9	-3.3
	baz=224						
HMAT	Matruh	5.26	225	P	Pn	02 27 15.0	+1.1
HMAT				S	Sn	02 28 10.9	-3.3
HNKL	Nakhl	5.39	156	P	Pn	02 27 16.2	+0.5
	baz=157						
HNKL	Nakhl	5.39	156	P	Pn	02 27 16.2	+0.5
HKAT	Jabal Katrina	6.71	160	P	Pn	02 27 35.0	+1.0
	baz=161						
HKAT	Jabal Katrina	6.71	160	P	Pn	02 27 35.0	+1.0
TR2		6.77	163	P	Pn	02 27 35.4	+0.8
	baz=163						
TR2		6.77	163	P	Pn	02 27 35.4	+0.8

*ISK **28** 02:30:17.3, 38°.71N×35°.59E, h10km, MD3.0*
*CSEM **28** 02:30:17.3±0.2, 38°.68N×35°.58E, h2km, MD3.0, Error ellipse: s-maj=4.2km s-min=3.9km az=51.0*
*DDA **28** 02:30:19.2, 38°.99N×35°.72E, h14km, MD3.0*
ISC 28 02:30:17.8±1.0**, 38°.70N**±0°.03×**35°.60E**±0°.03**, h10**km±9km**, n34, σ0s.61**/47**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNN	Bunyan	0.24	52	ePG	Pg	02 30 22.8	-0.1
BNN				eSG	Sg	02 30 27.0	+0.8
BNN	Bunyan	0.24	52	ePg	Pg	02 30 22.8	-0.1
BNN				eSg	Sg	02 30 27.0	+0.8
PINB	Pinarbasi	0.63	92	i P	Pb	02 30 30.9	-0.1
PINB				eS	Sg	02 30 37.3	-1.0
PINB	Pinarbasi	0.63	92	i P	Pb	02 30 30.9	-0.1
PINB				eS	Sg	02 30 37.3	-1.0
YOZ	Yozgat	0.96	347	ePG	Pg	02 30 35.7	-0.7
YOZ				eSG	Sg	02 30 49.2	+0.3
YOZ	Yozgat	0.96	347	ePg	Pg	02 30 35.7	-0.7
YOZ				eSg	Sg	02 30 49.2	+0.3
NIG	Nigde	0.98	233	ePG	Pg	02 30 36.6	-0.1
NIG	Nigde	0.98	233	ePg	Pg	02 30 36.6	-0.1
KOZT	Kozan	1.23	172	ePN	Pb	02 30 41.2	0.0
KOZT	Kozan	1.23	172	ePn	Pb	02 30 41.2	0.0
CDAG	Cicekdag	1.33	314	i P	Pn	02 30 41.6	-0.9
CDAG				i S	Sb	02 30 58.4	-1.6
CDAG	Cicekdag	1.33	314	i P	Pn	02 30 41.6	-0.9
CDAG				i S	Sb	02 30 58.4	-1.6
KARA	Karaisali	1.50	197	ePN	Pn	02 30 45.1	+0.3
KARA	Karaisali	1.50	197	ePn	Pn	02 30 45.1	+0.3
KMRS	Kahramanmaras	1.57	139	ePN	Pn	02 30 45.7	-0.1
KMRS	Kahramanmaras	1.57	139	ePn	Pn	02 30 45.7	-0.1
KAMT	Kaman	1.62	295	ePN	Pn	02 30 46.5	0.0
KAMT	Kaman	1.62	295	ePn	Pn	02 30 46.5	0.0
SVSK	Karacayir	1.62	41	ePN	Pn	02 30 46.6	+0.1
SVSK	Karacayir	1.62	41	ePn	Pn	02 30 46.6	+0.1
CORM	Corum	1.66	333	ePN	Pn	02 30 47.2	+0.2
CORM	Corum	1.66	333	ePn	Pn	02 30 47.2	+0.2
CEYT	Ceyhan	1.69	176	ePN	Pn	02 30 47.3	-0.1
CEYT	Ceyhan	1.69	176	ePn	Pn	02 30 47.3	-0.1
SULT	Sultanhani-AKS	1.71	254	ePN	Pn	02 30 48.1	+0.3
SULT	Sultanhani-AKS	1.71	254	ePn	Pn	02 30 48.1	+0.3
CTKT	Corum	2.02	342	eP	Pb	02 30 54.4	-0.3
CTKT				eS	Sb	02 31 20.5	+0.6
CTKT	Corum	2.02	342	eP	Pb	02 30 54.4	-0.3
CTKT				eS	Sb	02 31 20.5	+0.6
BBAL	Bala	2.10	294	eP	Pb	02 30 56.4	+0.3
BBAL				eS	Sn	02 31 20.4	+0.9
BBAL	Bala	2.10	294	eP	Pb	02 30 56.4	+0.3
BBAL				eS	Sn	02 31 20.4	+0.9
AFSR	Af˜ar-Bala (A	2.11	291	ePN	Pn	02 30 53.6	+0.4
AFSR	Af˜ar-Bala (A	2.11	291	ePn	Pn	02 30 53.6	+0.4
KEMA	Kemaliye	2.32	75	eP	Pb	02 31 00.6	+0.8
KEMA				eS	Sg	02 31 31.7	-0.8
KEMA	Kemaliye	2.32	75	eP	Pb	02 31 00.6	+0.8

*NIED **28** 02:46:00, 43°.60N×147°.40E, h32km, Mw3.6 Best double couple: M0 3.15000×10[14] NP1:φs151.00000°, δ90.00000°, λ46.00000°. NP2:φs60.00000°, δ44.00000°, λ179.00000°.*
*JMA **28** 02:46:26.5±0.2, 43°.56N×147°.38E, h14km±4km, M4.0*
*ISCJB **28** 02:46:27.3±0.9, 43°.67N±0°.06×147°.50E±0°.08, h49km±8km, mb3.7/9, Error ellipse: s-maj=12.7km s-min=6.2km az=143.4*
*MOS **28** 02:46:27.2±1.4, 43°.65N×147°.45E, h57km, mb4.1/5, Error ellipse: s-maj=18.1km s-min=13.3km az=68.5*
*IDC **28** 02:46:29.2±2.9, 43°.69N×147°.39E, h50km±28km, mb3.4/7, mb1 3.6/10, mb1mx3.4/25, mbtmp3.4/10, ML3.4/3, MS2.6/1, Ms1 2.6/1, ms1mx2.1/20, Error ellipse: s-maj=40.6km s-min=21.6km az=169.0*
ISC 28 02:46:28.1±1.5**, 43°.64N**±0°.09×**147°.52E**±0°.08**, h41**km±15km**, n35, σ1s.03**/41**, mb3.8**/10**, 2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YUK	Yuzh-Kuril'sk	1.26	289	i PN	Pn	02 46 48.5	-0.7
YUK				i S	Sn	02 47 03.3	-1.6
YUK				pmax	pmax		
	comp=E,178nm,0.2s						
YUK				pmax	pmax		
	comp=N,82nm,0.2s						
YUK				pmax	pmax		
	comp=Z,655nm,0.2s						
YUK				smax	smax		
	comp=N,2μm,0.4s						
YUK				smax	smax		
	comp=E,2μm,0.4s						
NEM2	Nemuro 2	1.32	258	P	Pn	02 46 48.6	-1.4
NEM2				eS	Sn	02 47 04.8	-1.5
KUR	Kuril'sk	1.61	9	d iPN	Pn	02 46 53.3	-0.7
KUR				i S	Sn	02 47 13.2	-0.3
KUR				pmax	pmax		
	comp=Z,100nm,0.4s						
KUR				pmax	pmax		
	comp=N,36nm,0.1s						
KUR				pmax	pmax		
	comp=E,45nm,0.1s						
KUR				smax	smax		
	comp=E,121nm,0.2s						
KUR				smax	smax		
	comp=N,342nm,0.2s						
JRA	Rausu	1.76	280	P	Pn	02 46 55.8	-0.2
JRA				eS	Sn	02 47 17.2	0.0
JNK	Nakash	2.03	269	P	Pn	02 46 59.2	-0.6
JNK				eS	Sn	02 47 24.0	+0.1
JAK	Akkeshi	2.16	254	P	Pn	02 47 00.9	-0.6
JTKR	Abashiri--Toko	2.63	278	P	Pn	02 47 08.7	+0.7
JTKR				eS	Sn	02 47 40.5	+1.8
JAR	Ashorobuto	2.75	264	P	Pn	02 47 09.8	+0.2
JAR				eS	Sn	02 47 42.3	+0.7
JOB	Onbets	2.79	256	P	Pn	02 47 10.2	0.0
JOB				eS	Sn	02 47 42.6	+0.1
JMP	Maruseppu	3.03	278	P	Pn	02 47 14.4	+0.9
JCH	Churui	3.21	253	P	Pn	02 47 16.1	+0.1
JCH				eS	Sn	02 47 53.4	+0.5
ASAJ	Asahikawa	3.59	279	P	Pn	02 47 23.2	+2.0
ASAJ	Asahikawa	3.59	279	P	Pn	02 47 22.9	+1.8
	comp=N,3.0nm,0.3s,baz=90,slow=16,SNR=13						
JEM	Erimo	3.59	245	P	Pn	02 47 22.9	+1.7
ERM	Erimo	3.59	245	d iPN	Pn	02 47 23.1	+1.8
JFR	Furan	3.62	264	P	Pn	02 47 22.9	+1.3
JNBK	Urakawa-nobuka	3.75	250	P	Pn	02 47 23.9	+0.5
YSS	Yuzh-Sakhalins	4.72	316	ePN	Pn	02 47 51.0	+14
YSS				e		02 48 29.0	
MJAR	Matsushiro Arr	10.05	228	P	Pn	02 48 48.5	-1.4
	comp=N,0.2nm,0.3s,baz=28,slow=12,SNR=3.5						
MJAR				LR	LR	02 53 03.3	
	comp=N,30nm,19.8s,baz=230,slow=39						
PETK	Petropavlovsk-	11.63	32	ePN	Pn	02 49 12.4	+1.0
PETK	Petropavlovsk-	11.63	32	P	Pn	02 49 11.1	-0.2
	comp=N,0.4nm,0.3s,baz=199,slow=13,SNR=4.1						
ILAR	Eielson Array	41.42	36	P	P	02 54 10.3	+0.2
	comp=N,1.4nm,0.6s,baz=274,slow=8.2,SNR=23						
MKAR	Makanchi Array	44.87	298	P	P	02 54 37.7	-0.6
MKAR	Makanchi Array	44.87	298	P	P	02 54 37.7	-0.6
	comp=N,0.2nm,0.4s,baz=75,slow=11,SNR=3.6						
KEV	Kevo	58.91	340	ep	P	02 56 46.1	+24
	comp=N,0.4nm,0.4s						
JOF	Joensuu	62.31	332	eP	P	02 56 45.5	-0.1
JOF	Joensuu	62.31	332	ep	P	02 56 45.5	-0.1
	comp=N,0.3nm,0.3s						
WRA	Warramunga Arr	64.42	194	pP	pP	02 57 10.6	-1.4
	comp=N,0.4nm,0.9s,baz=17,slow=7.2,SNR=2.6						
KAF	Kangasniemi	64.53	334	eP	P	02 56 59.0	-1.3
KAF	Kangasniemi	64.53	334	ep	P	02 56 59.0	-1.3
	comp=N,0.3nm,0.4s						
FINES	FINESS Array B	65.09	333	P	P	02 57 02.9	-1.1
	comp=N,0.8nm,0.5s,baz=39,slow=7.6,SNR=20						
NVAR	Mina Array Bea	67.41	58	P	P	02 57 20.3	+0.7
	comp=N,0.4nm,0.5s,baz=295,slow=6.7,SNR=5.7						
PDAR	Pinedale Array	69.78	50	P	P	02 57 34.6	+0.4
	comp=N,0.3nm,0.5s,baz=316,slow=3.8,SNR=2.8						
NOA	NORSAR Array B	69.80	339	P	P	02 57 33.4	-0.5
	comp=N,0.6nm,0.6s,baz=31,slow=6.4,SNR=6.2						
TXAR	Lajitas Array	82.49	56	P	P	02 58 47.1	+0.5
	comp=N,0.4nm,0.7s,baz=319,slow=3.6,SNR=4.5						

*IDC **28** 02:51:44.1±2.1, 4°.70S×31°.83E, h0km, mb3.8/2, mb1 3.9/3, mb1mx3.4/25, mbtmp3.9/3, ML3.6/1, Error ellipse: s-maj=96.3km s-min=25.8km az=124.0*
BUL 28 02:51:29.5±1.5**, 6°.36S**×**32°.84E, h10**km**, MD3.8, Tanzania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DODT	Dodoma, Tanzan	2.90	87	i P	Pb	02 52 21.0	-0.5
DODT				i S	Sb	02 52 58.0	+0.8
MBAR	Mbarara	6.09	340	i P	Pn	02 52 56.9	-3.1
MBAR				i S	Sn	02 54 02.3	-7.6
KMBO	Kilima Mbogo	6.81	40	Pn	Pb	02 53 22.3	-6.1
	1.2nm,0.3s,baz=182,slow=15,SNR=12						
KMBO				Pg	Pg	02 53 40.6	+0.2
	2.0nm,0.3s,baz=170,slow=18,SNR=9.3						
KMBO				Lg	Lg	02 55 00.8	
	12nm,0.3s,baz=248,slow=24,SNR=10						
KMBO	Kilima Mbogo	6.81	40	i P	Pn	02 53 07.9	-2.0
KMBO				i S	Sn	02 54 20.3	-7.5
LSZ	Lusaka	9.97	207	i P	Pn	02 53 48.0	-5.1
LSZ				i S	Sn	02 55 31.6	-14
BOSA	Boshof	23.27	197	P	PnPn	02 57 06.2	+2.8
	1.8nm,0.5s,baz=34,slow=8.4,SNR=6.5						
MKAR	Makanchi Array	68.66	34	P	P	03 02 44.4	+11
	0.7nm,0.7s,baz=234,slow=5.5,SNR=7.0						

*SKO **28** 03:15:53.7, 40°.75N×22°.99E, h15km, M2.3, ML2.7*
*THE **28** 03:15:56.2, 40°.85N×22°.97E, h2km±2km, ML2.6/4, Error ellipse: s-maj=2.4km s-min=0.4km az=52.0*
*BEO **28** 03:15:56.4±1.1, 40°.76N×22°.74E, h0km, ML2.3/5*
*CSEM **28** 03:15:56.1±0.2, 40°.83N×22°.97E, h2km, ML2.6/4, Error ellipse: s-maj=5.3km s-min=3.5km az=57.0*
ISC 28 03:15:56.1±0.9**, 40°.84N**±0°.02×**22°.95E**±0°.03**, h9**km±9km**, n33, σ0s.59**/48**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THE	Thessaloniki	0.21	177	P	Pg	03 16 00.5	+0.1
THE				S	Sg	03 16 03.5	+0.1
THE	Thessaloniki	0.21	177	P	Pg	03 16 00.5	+0.1
THE				S	Sg	03 16 03.5	+0.1
HORT	Hortiatis	0.27	155	P	Pg	03 16 01.5	-0.1
HORT				S	Sg	03 16 05.5	+0.3
HORT	Hortiatis	0.27	155	P	Pg	03 16 01.5	-0.1
HORT				S	Sg	03 16 05.5	+0.3
KNT	Kendrikon	0.32	353	P	Pg	03 16 02.4	-0.1
KNT				S	Sg	03 16 06.8	0.0
KNT	Kendrikon	0.32	353	P	Pg	03 16 02.4	-0.1
KNT				S	Sg	03 16 06.8	0.0
VAY	Valandovo	0.56	329	P	Pg	03 16 06.6	-0.3
VAY	Valandovo	0.56	329	ePg	Pg	03 16 06.2	-0.7
VAY				eSg	Sg	03 16 14.3	+0.1
VAY	Valandovo	0.56	329	i Pg	Pg	03 16 06.3	-0.6
VAY				i Sg	Sg	03 16 14.3	+0.1
VAY				i Lg	Lg	03 16 15.0	
	comp=E,258nm,0.3s						
VAY				i Lg	Lg	03 16 15.1	
	comp=N,217nm,0.3s						
VAY	Valandovo	0.56	329	ePg	Pg	03 16 06.2	-0.7
VAY	Valandovo	0.56	329	P	Pg	03 16 06.6	-0.3
VAY				eSg	Sg	03 16 14.3	+0.1
SRS	Serrai	0.56	60	P	Pg	03 16 06.4	-0.5
SRS	Serrai	0.56	60	P	Pg	03 16 06.4	-0.5
PLG	Polygyros	0.60	141	P	Pg	03 16 07.1	-0.7
PLG	Polygyros	0.60	141	P	Pg	03 16 07.1	-0.7
NVR	Nevrokopi	0.85	53	P	Pg	03 16 12.0	-0.6
NVR	Nevrokopi	0.85	53	P	Pg	03 16 12.0	-0.6
OUR	Ouranopolis	0.94	123	P	Pg	03 16 13.3	-0.8
OUR				S	Sb	03 16 27.0	0.0
OUR	Ouranopolis	0.94	123	P	Pg	03 16 13.3	-0.8
OUR				S	Sb	03 16 27.0	0.0
KAVA	Kavala	1.20	82	P	Pg	03 16 18.6	-0.5
KAVA	Kavala	1.20	82	P	Pg	03 16 18.6	-0.5
FNA	Florina	1.20	268	P	Pb	03 16 19.0	0.0
FNA	Florina	1.20	268	P	Pb	03 16 19.0	0.0
BIA	Bitola	1.24	279	i Pg	Pg	03 16 19.5	-0.5
BIA				eSg	Sb	03 16 36.6	+0.7
XOR	Xorichti	1.49	173	P	Pn	03 16 23.2	+0.2
XOR	Xorichti	1.49	173	P	Pn	03 16 23.2	+0.2
VTS	Vitosha	1.76	6	ePn	Pb	03 16 28.1	-0.5
VTS				eSn	Sg	03 16 53.6	+1.0
VTS	Vitosha	1.76	6	ePn	Pb	03 16 28.1	-0.5
PLD	Plovdiv	1.82	46	ePn	Pg	03 16 31.2	+0.1
PLD				eSn	Sg	03 16 57.3	+2.6
PLD	Plovdiv	1.82	46	ePn	Pg	03 16 31.2	+0.1
BARS	Barje	2.15	337	eSn	Sb	03 17 01.9	0.0
BARS	Barje	2.15	337	eSn	Sb	03 17 01.9	0.0
ZAPS	Zavoj	2.44	355	ePn	Pb	03 16 39.5	-0.7
ZAPS				eSn	Sb	03 17 10.5	+0.2

IDC 28 03:26:11.8±2.1**, 28°.36S**×**177°.82W, h0**km**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.7**/17**, mbtmp3.9**/3**, MS3.6**/1**, Ms1 3.6**/1**, ms1mx2.6**/27**, Error ellipse: s-maj=47.0km s-min=25.7km az=64.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.89	185	Pn	Pn	03 26 32.0	+0.4
	204nm,0.3s,baz=80,slow=15,SNR=11						
STKA	Stephens Creek	35.14	254	P	P	03 33 06.5	-0.8
	2.1nm,0.5s,baz=102,slow=14,SNR=6.5						
ASAR	Alice Springs	43.41	265	P	P	03 34 16.0	-0.6
	0.6nm,0.7s,baz=105,slow=7.5,SNR=9.7						
ASAR				LR	LR	03 51 59.2	
	comp=Z,66nm,18.1s,baz=12,slow=36						
WRA	Warramunga Arr	44.22	270	P	P	03 34 23.7	+0.6
	1.3nm,0.7s,baz=112,slow=7.8,SNR=17						
FINES	FINESS Array B	143.28	341	PKP	PKPdf	03 45 47.4	+0.1
	1.5nm,0.6s,baz=36,slow=2.6,SNR=15						
BRTR	Keskin Array B	151.71	302	PKPbc	PKPbc	03 46 08.7	+0.1
	0.9nm,1.0s,baz=137,slow=9.5,SNR=3.9						
TORD	Torodi Ar. Bea	164.85	178	PKPab	PKPab	03 47 12.9	-1.3
	0.6nm,0.9s,baz=180,slow=3.8,SNR=4.4						

*IDC **28** 03:32:23.1±5.0, 32°.07S×179°.77E, h359km±46km, mb3.1/2, mb1 3.3/3, mb1mx3.0/18, mbtmp3.1/3, Error ellipse: s-maj=56.1km s-min=31.0km az=30.0*
*ISCJB **28** 03:32:24.8±3.1, 32°.1S±0°.1×179°.4E±0°.5, h363km, mb3.2/2, Error ellipse: s-maj=58.1km s-min=12.9km az=168.3*
ISC 28 03:32:24.9±1.9**, 32°.2S**±0°.1×**179°.5E**±0°.3**, h363**km**, n9, σ1s.08**/12**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PUZ	Puketiti	5.99	189	PN	Pn	03 33 57.4	+1.5
PUZ				SN	S	03 35 08.6	-1.3
URZ	Urewera	6.39	197	PN	P	03 34 01.5	+1.1
URZ				SN	S	03 35 17.6	-0.5
URZ	Urewera	6.39	197	P	P	03 34 01.8	+1.4
	1.6nm,0.3s,baz=306,slow=11,SNR=20						
URZ				S	S	03 35 17.7	-0.5
	1.1nm,0.3s,baz=85,slow=22,SNR=2.5						
BKZ	Black Stump Fm	7.41	198	PN	P	03 34 13.4	0.0
MRZ	Mangatainoka R	9.05	199	PN	Pn	03 34 30.7	-0.8
ASAR	Alice Springs	40.91	270	P	P	03 39 34.0	+0.5
	0.4nm,0.3s,baz=108,slow=7.2,SNR=10						
WRA	Warramunga Arr	42.07	275	P	P	03 39 42.9	+0.2
	0.8nm,0.3s,baz=113,slow=8.0,SNR=60						
FINES	FINESS Array B	146.00	337	PKPbc	PKPdf	03 51 19.3	-0.9
	0.6nm,0.6s,baz=55,slow=5.3,SNR=10						
TORD	Torodi Ar. Bea	160.97	187	PKPab	PKPab	03 52 26.4	-1.1
	0.4nm,1.0s,baz=201,slow=2.1,SNR=4.1						

KRSC 28 03:35:30.6±1.3**, 50°.36N**×**157°.02E, h5**km±5km**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.66	300	i P	Pb	03 35 44.1	-0.5
SKR				eS	Sb	03 35 53.9	-0.2
PAU	Pauzhetka	1.12	353	i P	Pb	03 35 52.3	-0.1
PAU				eS	Sn	03 36 08.5	-0.1
ASAK	Asacha	2.10	15	eP	Pn	03 36 07.8	+1.3
ASAK				eS	Sb	03 36 34.7	-1.0
MTVR	Mutnovka	2.25	18	eP	Pn	03 36 09.9	+1.3
MTVR				eS	Sb	03 36 38.7	-1.4
RUS	Russkaya	2.28	24	i P	Pn	03 36 09.4	+0.6
RUS				eS	Sn	03 36 37.5	+0.3
GRL	Gorelyy	2.29	16	P	Pn	03 36 10.6	+1.4
GRL				S	Sb	03 36 40.0	-1.4
APC	Apacha	2.57	2	P	Pn	03 36 13.6	+0.8
PET	Petropavlovsk	2.85	20	S	Sb	03 36 55.9	-1.3
UGLR	Uglovaya	3.06	21	P	Pn	03 36 21.7	+1.9
AVH	Avacha	3.10	19	eP	Pn	03 36 22.6	+2.4
AVH				S	Sn	03 37 00.5	+2.8
KOK	Koryaka	3.10	18	P	Pn	03 36 22.6	+2.3
SMAR	Somma	3.11	20	eP	Pn	03 36 22.2	+1.6
KRER	Koryakskii	3.14	19	P	Pn	03 36 22.6	+1.7
SDLR	Sedlovina	3.14	21	eP	Pn	03 36 21.9	+1.0
SPN	Mys Shipunski	3.32	33	eP	Pn	03 36 24.4	+1.3
SPN				S	Sn	03 37 04.0	+1.1
GNL	Ganaly	3.39	9	eP	Pn	03 36 24.9	+0.6

*ISK **28** 03:53:37.2, 39°.96N×39°.72E, h13km, MD2.7*
*ISCJB **28** 03:53:38.5±0.5, 39°.94N±0°.02×39°.63E±0°.04, h9km±4km, Error ellipse: s-maj=4.7km s-min=4.1km az=178.6*
*DDA **28** 03:53:38.8, 39°.92N×39°.61E, h7km, MD3.0*
*CSEM **28** 03:53:38.3±0.2, 39°.94N×39°.61E, h5km, MD3.0, Error ellipse: s-maj=5.1km s-min=3.7km az=126.0*
ISC 28 03:53:38.3±0.9**, 39°.94N**±0°.02×**39°.64E**±0°.03**, h10**km±8km**, n28, σ0s.73**/49**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EUZM	Uzumlu	0.24	169	i P	Pg	03 53 43.3	0.0
EUZM				i S	Sg	03 53 46.1	-0.5
EUZM	Uzumlu	0.24	169	i P	Pg	03 53 43.3	0.0
EUZM				i S	Sg	03 53 46.1	-0.5
EZC	Erzincan	0.29	229	ePG	Pg	03 53 44.8	+0.5
EZC				eSG	Sb	03 53 50.4	-0.3
EZC	Erzincan	0.29	229	ePg	Pg	03 53 44.8	+0.5
EZC				eSg	Sb	03 53 50.4	-0.3
KELT	Kelkit	0.36	305	i P	Pg	03 53 45.9	+0.4
KELT				i S	Sg	03 53 50.8	+0.5
KELT	Kelkit	0.36	305	i P	Pg	03 53 45.9	+0.4
KELT				i S	Sg	03 53 50.8	+0.5
ERZN	Erzincan	0.36	170	ePG	Pg	03 53 44.9	-0.7
ERZN				eSG	Sg	03 53 50.8	+0.5
GUMT	Gumushane	0.53	347	ePG	Pg	03 53 48.8	+0.1
GUMT				eSG	Sg	03 53 56.0	+0.2
GUMT	Gumushane	0.53	347	ePg	Pg	03 53 48.8	+0.1
GUMT				eSg	Sg	03 53 56.0	+0.2
ILIC	ilic-Erzincan	0.96	240	ePG	Pg	03 53 56.7	-0.1
ILIC	ilic-Erzincan	0.96	240	ePg	Pg	03 53 56.7	-0.1
MACK	Trabzon	1.00	6	eP	Pg	03 53 57.5	-0.2
MACK				eS	Sg	03 54 09.3	-1.5
MACK	Trabzon	1.00	6	eP	Pg	03 53 57.5	-0.2
MACK				eS	Sg	03 54 09.3	-1.5
PTK	Pertek	1.07	190	ePN	Pb	03 53 59.2	+0.2
PTK	Pertek	1.07	190	ePn	Pb	03 53 59.2	+0.2
KEMA	Kemaliye	1.11	233	i P	Pb	03 53 59.2	-0.5

KEMA				*i* S	**Sg**	**03 54 13.2**	**-1.0**
KEMA	**Kemaliye**	**1.11**	**233**	*i* P	**Pb**	**03 53 59.2**	**-0.5**
KEMA				*i* S	**Sg**	**03 54 13.2**	**-1.0**
SUSE	**Susehri**	**1.13**	**284**	*i* P	**Pb**	**03 53 59.7**	**-0.4**
SUSE				*i* S	**Sb**	**03 54 14.6**	**-0.4**
SUSE	**Susehri**	**1.13**	**284**	*i* P	**Pb**	**03 53 59.7**	**-0.4**
SUSE				*i* S	**Sb**	**03 54 14.6**	**-0.4**
ESPY	**Espiye-Giresun**	**1.20**	**325**	*e*PN	**Pb**	**03 54 00.5**	**-0.6**
ESPY	**Espiye-Giresun**	**1.20**	**325**	*e*Pn	**Pb**	**03 54 00.5**	**-0.6**
DDEM	**Demirkent**	**1.87**	**59**	*e*P	**Pn**	**03 54 11.6**	**+1.1**
DDEM				*e*S	**Sn**	**03 54 32.1**	**-2.2**
DDEM	**Demirkent**	**1.87**	**59**	*e*P	**Pn**	**03 54 11.6**	**+1.1**
DAGI	**Agillar**	**2.07**	**56**	*i* P	**Pb**	**03 54 16.0**	**-0.1**
DAGI				*i* S	**Sb**	**03 54 41.7**	**-0.3**
DBOC	**Borcka**	**2.08**	**47**	*e*P	**Pn**	**03 54 14.3**	**+0.9**
DBOC				*e*S	**Sn**	**03 54 39.4**	**-0.1**
DBOC	**Borcka**	**2.08**	**47**	*e*P	**Pn**	**03 54 14.3**	**+0.9**
DBOC				*e*S	**Sn**	**03 54 39.4**	**-0.1**
ARTV	**Artvin**	**2.14**	**54**	*i* P	**Pb**	**03 54 17.2**	**-0.2**
ARTV				*e*S	**Sn**	**03 54 42.6**	**+1.5**
ARTV	**Artvin**	**2.14**	**54**	*i* P	**Pb**	**03 54 17.2**	**-0.2**
ARTV				*e*S	**Sn**	**03 54 42.6**	**+1.5**

IDC 28 04:02:20.5±2.9, 4°21'S × 133°09'E, h0km, mb3.4/1, mb1 3.6/4, mb1mx3.4/19, mbtmp3.5/4, ML3.5/3, Error ellipse: s-maj=130.5km s-min=28.1km az=80.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**15.62**	**207**	Pn	Pn	04 06 02.0	-0.1
	0.2nm,0.3s,baz=35,slow=16,SNR=10						
FITZ				Sn	Sn	04 08 49.6	-6.3
	0.1nm,0.3s,baz=349,slow=18,SNR=1.1						
WRA	**Warramunga Arr**	**15.69**	**176**	Pn	Pn	04 06 01.0	-2.1
	0.1nm,0.3s,baz=354,slow=14,SNR=14						
WRA				Sn	Sn	04 08 47.9	-10
	0.1nm,0.3s,baz=358,slow=23,SNR=4.4						
ASAR	**Alice Springs**	**19.36**	**178**	P	Pn	04 06 48.9	-0.1
	0.1nm,0.3s,baz=0.7,slow=12,SNR=11						
ASAR				S	Sn	04 10 20.2	-6.6
	0.0nm,0.3s,baz=358,slow=27,SNR=2.5						
MKAR	**Makanchi Array**	**67.66**	**325**	P	P	04 13 19.4	0.0
	0.2nm,0.6s,baz=118,slow=7.8,SNR=2.8						

IDC 28 04:05:09.7±1.2, 22°67'S × 67°41'W, h156km±18km, mb4.2/2, mb1 3.7/5, mb1mx3.4/18, mbtmp3.7/5, Error ellipse: s-maj=31.5km s-min=20.8km az=110.0, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**1.39**	**272**	P	Pn	04 05 39.4	+0.4
	baz=94,slow=6.2						
LVC				S	Sn	04 06 00.9	-0.5
	15nm,0.3s,baz=259,slow=22,SNR=1.9						
LPAZ	**La Paz**	**6.38**	**354**	P	Pn	04 06 42.6	+0.2
	1.6nm,0.3s,baz=155,slow=5.9,SNR=30						
LPAZ				S	Sn	04 07 51.6	-3.4
	0.2nm,0.3s,baz=329,slow=19,SNR=4.4						
CFAA	**Coronel Fontan**	**8.93**	**185**	P	Pn	04 07 15.0	-0.6
	0.0nm,0.3s,baz=3.0,slow=8.3,SNR=9.5						
CFAA				S	Sn	04 08 49.0	-5.9
	0.1nm,0.3s,baz=244,slow=22,SNR=9.1						
PLCA	**Paso Flores**	**18.21**	**188**	P	Pn	04 09 11.9	-0.8
	0.1nm,0.3s,baz=256,slow=3.5,SNR=3.0						
BDFB	**Brasilia**	**19.60**	**73**	P	P	04 09 26.6	+0.4
	0.9nm,0.3s,baz=241,slow=14,SNR=12						
DBIC	**Dimbokro**	**67.75**	**72**	P	P	04 15 50.6	-0.3
	5.9nm,0.9s,baz=214,slow=7.3,SNR=3.7						
TORD	**Torodi Ar. Bea**	**76.45**	**69**	P	P	04 16 42.4	-0.3
	3.6nm,0.4s,baz=255,slow=5.6,SNR=199						
WRA	**Warramunga Arr**	**132.63**	**208**	PKP	PKPdf	04 24 06.5	-0.2
	0.1nm,0.5s,baz=149,slow=1.7,SNR=3.3						
MKAR	**Makanchi Array**	**145.72**	**38**	PKPbc	PKPdf	04 24 29.8	+0.2
	0.3nm,0.5s,baz=341,slow=3.1,SNR=3.1						

*LDG **28** 04:14:46.8±0.1, 44°.35N × 7°.19E, h7km, Md2.9/2, Ml2.7/25, Error ellipse: s-maj=1.6km s-min=1.0km az=70.0*
*ISCJB **28** 04:14:46.0±0.2, 44°.34N±0°.01 × 7°.18E±0°.02, h11km±2km, Error ellipse: s-maj=2.5km s-min=2.1km az=150.9*
*CSEM **28** 04:14:46.5±0.1, 44°.34N × 7°.18E, h2km, ML2.9/18, Error ellipse: s-maj=2.8km s-min=2.2km az=61.0*
*ROM **28** 04:14:47.1±0.5, 44°.36N × 7°.22E, h11km±1km, Md2.3/8, Ml2.3/9, Error ellipse: s-maj=6.4km s-min=2.0km az=54.0*
*STR **28** 04:14:47.3±0.1, 44°.31N × 7°.18E, h5km, Ml2.7, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*GEN **28** 04:14:47.2, 44°.34N × 7°.25E, h10km, ML2.2*

ISC 28 04:14:45.7±0.3, 44°363N±0°.010 × 7°.16E±0°.01, h18km±1km, n113, σ1§22/169, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOI	**San Damiano**	**0.15**	**23**	Pg	**Pb**	**04 14 51.1**	**+1.4**
DOI				Sg	**Sg**	**04 14 53.8**	**+0.7**
	1μm,0.2s						
DOI	**San Damiano**	**0.15**	**23**	Pg	**Pb**	**04 14 51.1**	**+1.4**
DOI				Sg	**Sg**	**04 14 53.8**	**+0.7**
	1μm,0.2s						
ENR	**Entracque**	**0.23**	**126**	P	**Pg**	**04 14 50.7**	**-0.4**
ENR				S	**Sg**	**04 14 53.3**	**-1.6**
SURF	**Saint Ours**	**0.28**	**295**	Pg	**Pb**	**04 14 53.2**	**+1.0**
SURF				Sg	**Sb**	**04 14 58.0**	**+1.4**
SURF	**Saint Ours**	**0.28**	**295**	Pg	**Pb**	**04 14 53.2**	**+1.0**
SURF				Sg	**Sb**	**04 14 58.0**	**+1.4**
TOUF	**Mont Tournerai**	**0.35**	**170**	Pg	**Pg**	**04 14 53.3**	**0.0**
TOUF				Sg	**Sg**	**04 14 57.3**	**-1.1**
TOUF	**Mont Tournerai**	**0.35**	**170**	Pg	**Pg**	**04 14 53.3**	**0.0**
TOUF				Sg	**Sg**	**04 14 57.3**	**-1.1**
AUTN	**L'Aution**	**0.41**	**153**	Pg	**Pg**	**04 14 54.3**	**0.0**
AUTN				Sg	**Sg**	**04 14 59.8**	**-0.3**
AUTN	**L'Aution**	**0.41**	**153**	Pg	**Pg**	**04 14 54.3**	**0.0**
AUTN				Sg	**Sg**	**04 14 59.8**	**-0.3**
MBDF	**Montbardon**	**0.46**	**322**	*e*Pg	**Pg**	**04 14 56.1**	**+1.0**
MBDF				*e*Sg	**Sg**	**04 15 02.3**	**+0.9**
	100nm,0.3s,SNR=1.0						
MBDF	**Montbardon**	**0.46**	**322**	*e*Pg	**Pg**	**04 14 56.1**	**+1.0**
MBDF				*e*Sg	**Sg**	**04 15 02.3**	**+0.9**
	50nm,0.3s,SNR=1.0						
MVIF	**Mont Vial**	**0.47**	**181**	Pg	**Pg**	**04 14 55.4**	**+0.2**
MVIF				Sg	**Sg**	**04 15 01.6**	**0.0**
MVIF	**Mont Vial**	**0.47**	**181**	Pg	**Pg**	**04 14 55.4**	**+0.2**
MVIF				Sg	**Sg**	**04 15 01.6**	**0.0**
SAOF	**Saorge**	**0.47**	**143**	Pg	**Pg**	**04 14 55.3**	**+0.1**
SAOF				Sg	**Sg**	**04 15 01.3**	**-0.3**
SAOF	**Saorge**	**0.47**	**143**	Pg	**Pg**	**04 14 55.3**	**+0.1**
SAOF				Sg	**Sg**	**04 15 01.3**	**-0.3**
SBF	**Sospel**	**0.54**	**159**	*e*Pg	**Pg**	**04 14 56.4**	**-0.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**04 15 03.4**	**-0.3**
	191nm,0.4s						
SBF	**Sospel**	**0.54**	**159**	*e*Pg	**Pg**	**04 14 56.4**	**-0.1**
	SNR=1.0						
SBF				*e*Sg	**Sg**	**04 15 03.4**	**-0.3**
	96nm,0.4s						
REVF	**Revere**	**0.64**	**167**	Pg	**Pb**	**04 14 58.7**	**+0.3**
REVF				Sg	**Sb**	**04 15 07.4**	**+0.5**
REVF	**Revere**	**0.64**	**167**	Pg	**Pb**	**04 14 58.7**	**+0.3**
REVF				Sg	**Sb**	**04 15 07.4**	**+0.5**
CALN	**Calern**	**0.64**	**198**	Pg	**Pb**	**04 14 59.0**	**+0.6**
CALN				Sg	**Sg**	**04 15 06.6**	**-0.4**
CALN	**Calern**	**0.64**	**198**	Pg	**Pb**	**04 14 59.0**	**+0.6**
CALN				Sg	**Sg**	**04 15 06.6**	**-0.4**
NEGI	**Seborga**	**0.65**	**143**	P	**Pg**	**04 14 58.5**	**0.0**
RORO	**Rocca Rossa**	**0.69**	**111**	Pg	**Pg**	**04 14 59.5**	**+0.1**
RORO				Sg	**Sb**	**04 15 09.0**	**+0.5**
	138nm,0.1s						
RORO	**Rocca Rossa**	**0.69**	**111**	P	**Pg**	**04 14 59.5**	**+0.1**
RORO				Sg	**Sb**	**04 15 09.0**	**+0.5**
	138nm,0.1s						
OG25	**Le Caire**	**0.78**	**271**	Pg	**Pb**	**04 15 02.4**	**+1.6**
OG25				Sg	**Sb**	**04 15 13.2**	**+2.1**
OG25	**Le Caire**	**0.78**	**271**	Pg	**Pb**	**04 15 02.4**	**+1.6**
OG25				Sg	**Sb**	**04 15 13.2**	**+2.1**
RSP	**Reno Superiore**	**0.79**	**5**	Pg	**Pg**	**04 15 01.5**	**+0.4**
RSP				Sg	**Sb**	**04 15 13.1**	**+1.7**
	53nm,0.3s						
RSP	**Reno Superiore**	**0.79**	**5**	P	**Pg**	**04 15 01.6**	**+0.4**
RSP				S	**Sg**	**04 15 12.3**	**+0.7**
RSP					**Sg**	**04 15 13.1**	**+1.7**
	53nm,0.3s						
QLNO	**Quiliano**	**0.85**	**92**	Pg	**Pb**	**04 15 02.6**	**+0.7**
QLNO				Sg	**Sb**	**04 15 13.6**	**+0.6**
	81nm,0.3s						
QLNO	**Quiliano**	**0.85**	**92**	Pg	**Pb**	**04 15 02.6**	**+0.7**
QLNO				Sg	**Sb**	**04 15 13.6**	**+0.6**
	81nm,0.3s						
FINB	**Finale Ligure**	**0.85**	**102**	Pg	**Pg**	**04 15 02.5**	**+0.1**
FINB				Sg	**Sb**	**04 15 13.9**	**+0.8**
	186nm,0.3s						
FINB	**Finale Ligure**	**0.85**	**102**	Pg	**Pg**	**04 15 02.5**	**+0.1**
FINB				Sg	**Sb**	**04 15 13.9**	**+0.8**
	186nm,0.3s						
FRF	**La Foret Royal**	**0.89**	**205**	*e*Pg	**Pg**	**04 15 02.9**	**0.0**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**04 15 14.4**	**-0.2**
	105nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**0.89**	**205**	*e*Pg	**Pg**	**04 15 02.9**	**0.0**
	SNR=1.0						
FRF				*e*Sg	**Sg**	**04 15 14.4**	**-0.2**
	53nm,0.2s,SNR=1.0						
MONC	**Moncucco Torin**	**0.90**	**37**	Pg	**Pn**	**04 15 04.9**	**+1.5**
	132nm,0.4s						
MONC	**Moncucco Torin**	**0.90**	**37**	Pg	**Pn**	**04 15 04.9**	**+1.5**
	132nm,0.4s						
ROTM	**Rocchetta Tana**	**0.98**	**60**	P	**Pn**	**04 15 05.8**	**+1.3**
ROTM				S	**Sb**	**04 15 17.6**	**+0.9**
PCP	**Piancastagn**	**1.00**	**79**	Pg	**Pg**	**04 15 05.5**	**+0.3**
	34nm,0.5s						
PCP	**Piancastagn**	**1.00**	**79**	Pg	**Pg**	**04 15 05.5**	**+0.3**
	34nm,0.5s						
PCP				S	**Sb**	**04 15 16.6**	**-0.9**
ORIF	**Oris-en-Rattie**	**1.07**	**302**	*e*Pg	**Pg**	**04 15 07.4**	**+0.9**
ORIF				*e*Sg	**Sg**	**04 15 21.7**	**+1.1**
	32nm,0.3s						
ORIF	**Oris-en-Rattie**	**1.07**	**302**	*e*Pg	**Pg**	**04 15 07.4**	**+0.9**
ORIF				*e*Sg	**Sg**	**04 15 21.7**	**+1.1**
	16nm,0.3s						
GDM	**Grand'Maison**	**1.12**	**319**	Pn	**Pg**	**04 15 09.3**	**+1.8**
GDM	**Grand'Maison**	**1.12**	**319**	Pn	**Pg**	**04 15 09.3**	**+1.8**
LMR	**La Mourre**	**1.13**	**205**	*e*Pg	**Pn**	**04 15 07.6**	**+0.9**
	SNR=1.0						
LMR				*e*Sn	**Sb**	**04 15 21.5**	**+0.4**
	SNR=1.0						
LMR				*e*Sg	**Sn**	**04 15 22.7**	**+1.0**
	136nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**1.13**	**205**	*e*Pg	**Pn**	**04 15 07.6**	**+0.9**
	SNR=1.0						
LMR				*e*Sn	**Sb**	**04 15 21.5**	**+0.4**
	SNR=1.0						
LMR				*e*Sg	**Sn**	**04 15 22.7**	**+1.0**
	68nm,0.3s,SNR=1.0						
LPG	**La Plagne**	**1.17**	**346**	*e*Pg	**Pg**	**04 15 09.5**	**+1.1**
	SNR=1.0						
LPG				*e*Sg	**Sn**	**04 15 24.4**	**+1.2**
	18nm,0.2s						
LPG	**La Plagne**	**1.17**	**346**	*e*Pg	**Pg**	**04 15 09.5**	**+1.1**
	SNR=1.0						
LPG				*e*Sg	**Sn**	**04 15 24.4**	**+1.2**
	9.1nm,0.2s						
LPL	**La Plagne**	**1.19**	**345**	*e*Pg	**Pg**	**04 15 09.7**	**+0.9**
LPL				*e*Sn	**Sb**	**04 15 24.8**	**+1.7**
	19nm,0.3s						
LPL	**La Plagne**	**1.19**	**345**	*e*Pg	**Pg**	**04 15 09.7**	**+0.9**
LPL				*e*Sn	**Sb**	**04 15 24.8**	**+1.7**
	9.4nm,0.3s						
SMRF	**Simiane la Rot**	**1.21**	**252**	*e*P	**Pg**	**04 15 10.7**	**+1.7**
SMRF				*e*Sg	**Sg**	**04 15 25.8**	**+1.0**
	28nm,0.3s,SNR=1.0						
SMRF	**Simiane la Rot**	**1.21**	**252**	*e*P	**Pg**	**04 15 10.7**	**+1.7**
SMRF				*e*Sg	**Sg**	**04 15 25.8**	**+1.0**
	14nm,0.3s,SNR=1.0						
TRAV	**Traversella**	**1.22**	**20**	P	**Pn**	**04 15 08.0**	**0.0**
TRAV				S	**Sb**	**04 15 22.7**	**-1.1**
GRN	**Grenoble**	**1.34**	**312**	Pn	**Pb**	**04 15 12.2**	**+1.9**
GRN	**Grenoble**	**1.34**	**312**	Pn	**Pb**	**04 15 12.2**	**+1.9**
RSL	**Roselend**	**1.38**	**344**	Pg	**Pg**	**04 15 14.3**	**+2.0**
RSL	**Roselend**	**1.38**	**344**	Pg	**Pg**	**04 15 14.3**	**+2.0**
MRGE	**Morge**	**1.41**	**357**	Pg	**Pg**	**04 15 13.8**	**+0.9**
	19nm,0.8s						
MRGE	**Morge**	**1.41**	**357**	Pg	**Pg**	**04 15 13.8**	**+0.9**
	19nm,0.8s						
SC2M	**Scurtabo**	**1.70**	**88**	P	**Pn**	**04 15 14.7**	**+0.2**
SC2M				S	**Sn**	**04 15 33.5**	**-2.3**
VIVF	**Saint-Julien-l**	**1.85**	**286**	*e*Pn	**Pn**	**04 15 17.7**	**+1.2**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**1.85**	**286**	*e*P	**Pb**	**04 15 19.8**	**+0.9**
VIVF	**Saint-Julien-l**	**1.85**	**286**	*e*Pg	**Pb**	**04 15 21.2**	**+2.3**
VIVF				*e*Sn	**Sn**	**04 15 39.2**	**-0.2**
VIVF				*e*Sg	**Sg**	**04 15 45.7**	**+0.5**
	23nm,0.5s,SNR=1.0						
VIVF	**Saint-Julien-l**	**1.85**	**286**	*e*Pn	**Pn**	**04 15 17.7**	**+1.2**
	SNR=1.0						
VIVF	**Saint-Julien-l**	**1.85**	**286**	*e*P	**Pb**	**04 15 19.8**	**+0.9**
VIVF	**Saint-Julien-l**	**1.85**	**286**	*e*Pg	**Pb**	**04 15 21.2**	**+2.3**
VIVF				*e*Sn	**Sn**	**04 15 39.2**	**-0.2**
VIVF				*e*Sg	**Sg**	**04 15 45.7**	**+0.5**
	12nm,0.5s,SNR=1.0						
PGF	**Pioggiola**	**2.25**	**143**	*e*Pn	**Pn**	**04 15 22.9**	**+0.7**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**04 15 49.1**	**-0.5**
	11nm,0.2s,SNR=1.0						
PGF	**Pioggiola**	**2.25**	**143**	*e*Pn	**Pn**	**04 15 22.9**	**+0.7**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**04 15 49.1**	**-0.5**
	5.4nm,0.2s,SNR=1.0						
CABF	**La Chapelle**	**2.37**	**342**	*e*P	**Pb**	**04 15 27.9**	**0.0**
CABF	**La Chapelle**	**2.37**	**342**	*e*Pg	**Pg**	**04 15 31.5**	**+0.3**
CABF				*e*Sn	**Sn**	**04 15 51.2**	**-1.3**
CABF				*e*Sg	**Sb**	**04 16 01.0**	**+4.1**
	5.0nm,0.8s,SNR=1.0						
LASF	**Ste Croix**	**2.40**	**264**	*e*Pn	**Pn**	**04 15 25.4**	**+1.4**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**04 15 52.4**	**-0.5**
	3.7nm,0.4s,SNR=1.0						
LASF	**Ste Croix**	**2.40**	**264**	*e*Pn	**Pn**	**04 15 25.4**	**+1.4**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**04 15 52.4**	**-0.5**
	1.9nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**3.27**	**315**	*e*P	Pn	04 15 40.3	+4.3
SMF				*e*Sn	**Sn**	**04 16 12.7**	**-1.7**
SMF				*e*Sg	**Sg**	**04 16 29.9**	**-0.7**
	3.6nm,0.3s,SNR=1.0						
SMF	**Signal de Mont**	**3.27**	**315**	*e*P	Pn	04 15 40.3	+4.3
SMF				*e*Sg	**Sg**	**04 16 29.9**	**-0.7**
	1.8nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**3.46**	**357**	*e*P	Pn	04 15 42.5	+3.8
HINF				*e*Sn	**Sn**	**04 16 17.5**	**-1.8**
	1.7nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	**3.46**	**357**	*e*P	Pn	04 15 42.5	+3.8
AVF	**Avril sur Loir**	**3.61**	**314**	*e*P	Pn	04 15 45.1	+4.3
AVF				*e*Sn	**Sn**	**04 16 21.9**	**-1.0**
AVF				*e*Sg	**Sg**	**04 16 39.4**	**-2.3**
	4.1nm,0.6s						
AVF	**Avril sur Loir**	**3.61**	**314**	*e*P	Pn	04 15 45.1	+4.3
AVF				*e*Sn	**Sn**	**04 16 21.9**	**-1.0**
AVF				*e*Sg	**Sg**	**04 16 39.4**	**-2.3**
	2.0nm,0.6s						
CAF	**Calviac**	**3.68**	**281**	*e*Pn	**Pn**	**04 15 42.6**	**+0.8**
	SNR=1.0						
CAF	**Calviac**	**3.68**	**281**	*e*P	Pn	04 15 45.2	+3.4
CAF				*e*Sn	**Sn**	**04 16 23.3**	**-1.4**
	1.4nm,0.3s,SNR=1.0						
CAF	**Calviac**	**3.68**	**281**	*e*Pn	**Pn**	**04 15 42.6**	**+0.8**
	SNR=1.0						
CAF	**Calviac**	**3.68**	**281**	*e*P	Pn	04 15 45.2	+3.4
CAF				*e*Sn	**Sn**	**04 16 23.3**	**-1.4**
	0.7nm,0.3s,SNR=1.0						
HAU	**Haudompre**	**3.69**	**351**	*e*P	Pn	04 15 45.9	+4.1
HAU	**Haudompre**	**3.69**	**351**	*e*P	Pn	04 15 45.9	+4.1
LOR	**Lormes**	**3.71**	**323**	*e*P	Pn	04 15 46.3	+4.2
	baz=138						
LOR				*e*Sn	**Sn**	**04 16 23.9**	**-1.5**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**04 16 43.5**	**-1.4**
	2.2nm,0.4s,SNR=1.0						
LOR	**Lormes**	**3.71**	**323**	*e*P	Pn	04 15 46.3	+4.2
	baz=138						
LOR				*e*Sn	**Sn**	**04 16 23.9**	**-1.5**
	SNR=1.0						
LOR				*e*Sg	**Sg**	**04 16 43.5**	**-1.4**
	1.1nm,0.4s,SNR=1.0						
MTLF	**Montolieu**	**3.72**	**256**	*e*Pn	**Pn**	**04 15 43.3**	**+1.0**
	SNR=1.0						
MTLF	**Montolieu**	**3.72**	**256**	*e*P	Pn	04 15 46.5	+4.2
MTLF				*e*Sn	**Sn**	**04 16 24.5**	**-1.1**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**04 16 44.4**	**-0.8**
	0.8nm,0.3s,SNR=1.0						
MTLF	**Montolieu**	**3.72**	**256**	*e*Pn	**Pn**	**04 15 43.3**	**+1.0**
	SNR=1.0						
MTLF	**Montolieu**	**3.72**	**256**	*e*P	Pn	04 15 46.5	+4.2
MTLF				*e*Sn	**Sn**	**04 16 24.5**	**-1.1**
	SNR=1.0						
MTLF				*e*Sg	**Sg**	**04 16 44.4**	**-0.8**
	0.4nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**3.72**	**318**	*e*Pn	**Pn**	**04 15 43.5**	**+1.2**
	SNR=1.0						
SSF	**Saint Saulge**	**3.72**	**318**	*e*P	Pn	04 15 46.5	+4.2
SSF				*e*Sn	**Sn**	**04 16 24.0**	**-1.6**
	1.7nm,0.3s,SNR=1.0						
SSF	**Saint Saulge**	**3.72**	**318**	*e*Pn	**Pn**	**04 15 43.5**	**+1.2**
	SNR=1.0						
SSF	**Saint Saulge**	**3.72**	**318**	*e*P	Pn	04 15 46.5	+4.2
SSF				*e*Sn	**Sn**	**04 16 24.0**	**-1.6**
	0.9nm,0.3s,SNR=1.0						
BGF	**Bois d'Agland**	**3.75**	**307**	*e*P	Pn	04 15 47.0	+4.4
BGF				*e*Sg	**Sg**	**04 16 44.8**	**-1.2**
	9.3nm,0.4s						
BGF	**Bois d'Agland**	**3.75**	**307**	*e*P	Pn	04 15 47.0	+4.4
BGF				*e*Sg	**Sg**	**04 16 44.8**	**-1.2**
	4.7nm,0.4s						
TCF	**Toulx Ste Croi**	**3.99**	**301**	*e*P	Pn	04 15 50.3	+4.3
TCF	**Toulx Ste Croi**	**3.99**	**301**	*e*P	Pn	04 15 50.3	+4.3
CDF	**Champ du Feu**	**4.05**	**1**	*e*P	Pn	04 15 50.4	+3.5
CDF				*e*Sn	**Sn**	**04 16 31.7**	**-2.2**
	1.6nm,0.3s						
CDF	**Champ du Feu**	**4.05**	**1**	*e*P	Pn	04 15 50.4	+3.5
SFTF	**Sexfontaines**	**4.12**	**340**	*e*P	Pn	04 15 51.8	+4.1
	baz=153						
SFTF				*e*Sn	**Sn**	**04 16 32.8**	**-2.5**
	2.1nm,0.2s						
SFTF	**Sexfontaines**	**4.12**	**340**	*e*P	Pn	04 15 51.8	+4.1
	baz=153						
RJF	**Les Rejaudoux**	**4.13**	**285**	*e*Pn	**Pn**	**04 15 48.4**	**+0.6**
RJF	**Les Rejaudoux**	**4.13**	**285**	*e*P	Pn	04 15 51.9	+4.1
RJF	**Les Rejaudoux**	**4.13**	**285**	*e*Pn	**Pn**	**04 15 48.4**	**+0.6**
RJF	**Les Rejaudoux**	**4.13**	**285**	*e*P	Pn	04 15 51.9	+4.1
PAGF	**Fort de Pagny**	**4.31**	**347**	*e*P	Pn	04 15 54.8	+4.5
	baz=169						
PAGF				*e*Sn	**Sn**	**04 16 37.5**	**-2.6**
	0.7nm,0.4s						
PAGF	**Fort de Pagny**	**4.31**	**347**	*e*P	Pn	04 15 54.8	+4.5
	baz=169						
MEZF	**Maizieres J'vi**	**4.39**	**341**	*e*P	Pn	04 15 55.9	+4.5
	baz=163						
MEZF				*e*Sn	**Sn**	**04 16 39.2**	**-2.9**
	2.3nm,0.3s,SNR=1.0						
MEZF	**Maizieres J'vi**	**4.39**	**341**	*e*P	Pn	04 15 55.9	+4.5
	baz=163						
FLN	**La Foliniere**	**6.86**	**313**	*e*P	Pn	04 16 29.9	+4.5
	baz=138						
FLN	**La Foliniere**	**6.86**	**313**	*e*P	Pn	04 16 29.9	+4.5
	baz=138						

MEX 28 04:26:12.4±0.7, 15°.44N × 95°.06W, h4km±288km, MD3.5, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.06**	**288**	*e*P	Pg	04 26 30.0	-2.8
HUIG				*i* S	Sg	04 26 43.8	-2.9
PCIG		**1.79**	**81**	*i* P	Pn	04 26 40.3	-3.8
PCIG				*i* S	Sn	04 27 02.7	-4.5
PNIG	**Pinotepa**	**3.10**	**288**	*i* P	Pn	04 26 60.0	-2.2
PNIG				*i* S	Sn	04 27 35.3	-4.4

KRSC 28 04:27:01.9±0.5, 51°.12N × 157°.96E, h41km±31km, ML3.6, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	**Pauzhetka**	**0.80**	**296**	P	Pn	04 27 15.7	-1.0
PAU				*e*S	Sn	04 27 26.0	-1.5
SKR	**Severo-Kuril's**	**1.25**	**250**	*e*P	Pn	04 27 20.2	-2.6
SKR				*e*S	Sn	04 27 34.2	-4.1
ASAK	**Asacha**	**1.27**	**358**	*e*P	Pn	04 27 23.7	+0.5
ASAK				*e*S	Sn	04 27 39.6	+0.5
RUS	**Russkaya**	**1.36**	**14**	*i* P	Pn	04 27 24.7	+0.3
RUS				*e*S	Sn	04 27 41.4	+0.2
MTVR	**Mutnovka**	**1.37**	**6**	*e*P	Pn	04 27 25.6	+0.8
MTVR				*e*S	Sn	04 27 42.8	+1.0
APC	**Apac

ELL	**Elmali**	**2.27**	**327**	*e*Pn	Pb	04 29 43.9	-4.8
HDMB	**Hadim**	**2.27**	**21**	*e*PN	**Pn**	**04 29 43.7**	**-0.4**
HDMB	**Hadim**	**2.27**	**21**	*e*Pn	**Pn**	**04 29 43.7**	**-0.4**
IKL	**Isikli**	**2.29**	**52**	*e*PN	**Pn**	**04 29 43.3**	**-0.8**
IKL	**Isikli**	**2.29**	**52**	*e*Pn	**Pn**	**04 29 43.3**	**-0.8**
EREN	**Erenkoy**	**2.33**	**72**	*e*PN	**Pn**	**04 29 44.1**	**-0.6**
EREN	**Erenkoy**	**2.33**	**72**	*e*Pn	**Pn**	**04 29 44.1**	**-0.6**
FETY	**Fethiye**	**2.62**	**313**	*e*PN	**Pn**	**04 29 47.6**	**-1.2**
FETY	**Fethiye**	**2.62**	**313**	*e*Pn	**Pn**	**04 29 47.6**	**-1.2**
SUTC	**Sutluce-Ispart**	**2.64**	**352**	*e*PN	Pb	04 29 50.0	-5.1
SUTC	**Sutluce-Ispart**	**2.64**	**352**	*e*Pn	Pb	04 29 50.0	-5.1
BCK	**Bucak**	**2.69**	**345**	*e*PN	Pb	04 29 51.0	-4.9
BCK	**Bucak**	**2.69**	**345**	*e*Pn	Pb	04 29 51.0	-4.9
DALY	**Dalyan (Mu¨la**	**3.00**	**312**	*e*PN	**Pn**	**04 29 52.9**	**-1.1**
DALY	**Dalyan (Mu¨la**	**3.00**	**312**	*e*Pn	**Pn**	**04 29 52.9**	**-1.1**
ISP	**Isparta**	**3.06**	**346**	*e*PN	Pn	04 29 55.8	+0.9
ISP	**Isparta**	**3.06**	**346**	*e*Pn	Pn	04 29 55.8	+0.9
KONT	**Konya--Tatoy**	**3.17**	**13**	*e*PN	Pn	04 29 58.2	+1.8
KONT	**Konya--Tatoy**	**3.17**	**13**	*e*Pn	Pn	04 29 58.2	+1.8
YER	**Yerkesik**	**3.43**	**312**	*e*PN	**Pn**	**04 30 00.0**	**0.0**
YER	**Yerkesik**	**3.43**	**312**	*e*Pn	**Pn**	**04 30 00.0**	**0.0**
KRTS	**Karatas**	**3.62**	**61**	*e*PN	**Pn**	**04 30 03.0**	**+0.5**
KRTS	**Karatas**	**3.62**	**61**	*e*Pn	**Pn**	**04 30 03.1**	**+0.5**
DAT	**Datca**	**3.66**	**302**	*e*PN	**Pn**	**04 30 02.1**	**-1.0**
DAT	**Datca**	**3.66**	**302**	*e*Pn	**Pn**	**04 30 02.2**	**-1.0**
SULT	**Sultanhani-AKS**	**3.73**	**26**	*e*PN	**Pn**	**04 30 05.9**	**+1.8**
SULT	**Sultanhani-AKS**	**3.73**	**26**	*e*Pn	**Pn**	**04 30 05.9**	**+1.8**
SHUT	**Suhut-Afyon**	**3.76**	**349**	*e*PN	Pn	04 30 06.4	+1.8
SHUT	**Suhut-Afyon**	**3.76**	**349**	*e*Pn	Pn	04 30 06.4	+1.8
MMAI	**Mount Meron Ar**	**3.76**	**118**	P	**Pn**	**04 30 04.3**	**-0.3**
	4.0nm,0.3s,baz=302,slow=12,SNR=5.8						
MMAI				S	**Sn**	**04 30 47.1**	**-0.9**
	2.5nm,0.3s,baz=292,slow=13,SNR=2.1						
KARA	**Karaisali**	**3.78**	**50**	*e*PN	**Pn**	**04 30 04.9**	**+0.2**
KARA	**Karaisali**	**3.78**	**50**	*e*Pn	**Pn**	**04 30 04.9**	**+0.2**
KHL	**Karahalli**	**3.79**	**336**	*e*PN	**Pn**	**04 30 05.3**	**+0.4**
KHL	**Karahalli**	**3.79**	**336**	*e*Pn	**Pn**	**04 30 05.3**	**+0.4**
MLSB	**Milas**	**3.84**	**310**	*e*PN	**Pn**	**04 30 04.8**	**-0.8**
MLSB	**Milas**	**3.84**	**310**	*e*Pn	**Pn**	**04 30 04.8**	**-0.8**
BODT	**Bodrum**	**4.02**	**304**	*e*PN	**Pn**	**04 30 07.5**	**-0.5**
BODT	**Bodrum**	**4.02**	**304**	*e*Pn	**Pn**	**04 30 07.5**	**-0.5**
HTY	**Hatay**	**4.03**	**70**	*e*PN	**Pn**	**04 30 08.2**	**+0.1**
HTY	**Hatay**	**4.03**	**70**	*e*Pn	**Pn**	**04 30 08.2**	**+0.1**
KIZT	**Kizilcal**	**4.03**	**5**	*e*PN	Pn	04 30 10.1	+1.8
KIZT	**Kizilcal**	**4.03**	**5**	*e*Pn	Pn	04 30 10.1	+1.8
CEYT	**Ceyhan**	**4.10**	**57**	*e*PN	**Pn**	**04 30 09.9**	**+0.9**
CEYT	**Ceyhan**	**4.10**	**57**	*e*Pn	**Pn**	**04 30 10.0**	**+0.9**
NIG	**Nigde**	**4.13**	**37**	*e*PN	**Pn**	**04 30 10.2**	**+0.5**
NIG	**Nigde**	**4.13**	**37**	*e*Pn	**Pn**	**04 30 10.2**	**+0.5**
KULA	**Kula-Manisa**	**4.29**	**329**	*e*PN	**Pn**	**04 30 11.8**	**+0.1**
KULA	**Kula-Manisa**	**4.29**	**329**	*e*Pn	**Pn**	**04 30 11.8**	**+0.1**
RSH		**4.33**	**153**	P	**Pn**	**04 30 12.4**	**+0.1**
KOZT	**Kozan**	**4.41**	**52**	*e*PN	**Pn**	**04 30 14.2**	**+0.9**
KOZT	**Kozan**	**4.41**	**52**	*e*Pn	**Pn**	**04 30 14.2**	**+0.9**
AMAG	**Maghara**	**4.45**	**160**	P	**Pn**	**04 30 14.5**	**+0.5**
SVRH	**Sivrihisar-ESK**	**4.58**	**1**	*e*PN	Pn	04 30 17.4	+1.5
SVRH	**Sivrihisar-ESK**	**4.58**	**1**	*e*Pn	Pn	04 30 17.4	+1.5
KOT	**Kottamia**	**4.92**	**176**	P	**Pn**	**04 30 20.9**	**+0.4**
SUZ		**5.13**	**166**	P	**Pn**	**04 30 24.3**	**+1.0**
BRTR	**Keskin Array B**	**5.17**	**19**	P	**Pn**	**04 30 24.9**	**+1.1**
	0.2nm,0.3s,baz=193,slow=15,SNR=6.6						
BRTR				S	Sn	04 31 27.1	+4.5
	baz=187,slow=22,SNR=2.2						
HMAT	**Matruh**	**5.24**	**225**	P	**Pn**	**04 30 25.1**	**+0.3**
APE	**Apeiranthos**	**5.29**	**296**	*e*PN	**Pn**	**04 30 24.8**	**-0.6**
APE	**Apeiranthos**	**5.29**	**296**	*e*Pn	**Pn**	**04 30 24.8**	**-0.6**
EIL	**Elat**	**5.96**	**149**	P	**Pn**	**04 30 36.0**	**+1.4**
	0.4nm,0.3s,baz=3.2,slow=18,SNR=3.2						
EIL				S	Sn	04 31 39.1	-2.8
	0.6nm,0.3s,baz=324,slow=22,SNR=1.9						
TR2		**6.73**	**163**	P	**Pn**	**04 30 45.5**	**+0.2**
KOLS	**Kolonicke sedl**	**15.62**	**337**	*e*P	**P**	**04 32 50.9**	**+0.6**
CRVS	**Cervenica-Dubn**	**15.86**	**335**	*e*P	**P**	**04 32 51.8**	**-1.2**
KECS	**Kecovo**	**15.87**	**332**	*e*P	**P**	**04 32 55.1**	**+2.1**
AKASG	**Malin Array Be**	**15.92**	**355**	P	**Pn**	**04 32 49.6**	**-0.6**
	0.9nm,0.3s,baz=180,slow=10,SNR=2.8						
GERES	**GERESS Array B**	**19.18**	**322**	P	**Pn**	**04 33 29.9**	**-0.8**
	0.1nm,0.3s,baz=119,slow=10,SNR=3.1						
FINES	**FINESS Array B**	**26.83**	**354**	P	**P**	**04 34 43.3**	**-2.6**
	0.6nm,0.6s,baz=159,slow=16,SNR=4.1						
MKAR	**Makanchi Array**	**39.63**	**57**	P	**P**	**04 36 36.1**	**-1.3**
	0.3nm,0.5s,baz=268,slow=6.9,SNR=3.9						
SONM	**Songino Array**	**55.65**	**52**	P	**P**	**04 38 41.2**	**-0.6**
	2.0nm,0.8s,baz=282,slow=7.2,SNR=4.3						

IDC 28 05:05:20.4±2.8, 30°.17S×177°.45W, h0km, mb4.0/3, mb1 4.1/4, mb1mx3.7/19, mbtmp4.0/4, ML3.2/1, Error ellipse: s-maj=57.8km s-min=26.8km az=100.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.00**	**336**	Pn	Pn	05 05 41.8	+0.1
	195nm,0.3s,baz=104,slow=11,SNR=10						
RAO				Sn	Sg	05 05 51.9	-0.7
	787nm,0.3s,baz=77,slow=23,SNR=14						
URZ	**Urewera**	**9.24**	**208**	Pn	Pn	05 07 35.1	+0.3
	0.2nm,0.3s,baz=339,slow=8.6,SNR=3.0						
CTA	**Charters Tower**	**34.23**	**278**	P	P	05 12 08.7	+0.6
	0.9nm,0.4s,baz=118,slow=11,SNR=4.0						
ASAR	**Alice Springs**	**43.60**	**266**	P	P	05 13 26.2	-0.4
	0.6nm,0.6s,baz=104,slow=7.7,SNR=8.2						
WRA	**Warramunga Arr**	**44.57**	**272**	P	P	05 13 34.0	-0.4
	1.1nm,0.3s,baz=110,slow=8.1,SNR=24						
FINES	**FINESS Array B**	**145.09**	**340**	PKPbc	PKPbc	05 24 57.6	-0.9
	1.2nm,0.3s,baz=60,slow=4.5,SNR=12						

IDC 28 05:05:38.4±1.8, 0°.77N×126°.97E, h0km, mb4.0/4, mb1 4.3/4, mb1mx3.7/21, mbtmp4.1/4, Error ellipse: s-maj=154.8km s-min=23.8km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**21.81**	**161**	P	P	05 10 31.8	-0.7
	4.5nm,0.7s,baz=341,slow=11,SNR=49						
ASAR	**Alice Springs**	**25.21**	**165**	P	P	05 11 05.2	-0.8
	4.9nm,0.7s,baz=345,slow=11,SNR=36						
STKA	**Stephens Creek**	**35.30**	**158**	P	P	05 12 37.0	+1.7
	2.7nm,0.6s,baz=344,slow=7.4,SNR=4.0						
MKAR	**Makanchi Array**	**60.12**	**326**	P	P	05 15 47.7	-0.1
	0.6nm,0.7s,baz=121,slow=7.1,SNR=6.6						

*IDC **28** 05:17:16.2±0.7, 34°.43N×26°.47E, h0km, mb4.0/19, mb1 4.1/27, mb1mx4.0/36, mbtmp4.0/27, ML4.0/7, MS3.3/7, Ms1 3.3/7, ms1mx2.9/41, Error ellipse: s-maj=15.4km s-min=12.9km az=161.0*

*ISK **28** 05:17:17.2, 34°.20N×26°.54E, h36km, ML4.2*

*CSEM **28** 05:17:19.2±0.1, 34°.38N×26°.51E, h20km, mb4.1/33, Ms3.0, Mw4.5, Error ellipse: s-maj=3.6km s-min=2.5km az=20.0*

*ATH **28** 05:17:19.1, 34°.42N×26°.50E, h25km±2km, MD3.7/18*

*NEIC **28** 05:17:20.7±1.6, 34°.40N×26°.47E, h31km±12km, mb4.3/36, Error ellipse: s-maj=7.0km s-min=4.2km az=188.0*

*MOS **28** 05:17:20.1±1.2, 34°.46N×26°.40E, h33km, mb4.3/32, Error ellipse: s-maj=7.4km s-min=3.9km az=113.6*

*HLW **28** 05:17:22.2, 34°.37N×26°.58E, h33km±9km, Md3.8, Ml3.9*

*THE **28** 05:17:24.4, 34°.68N×26°.38E, h15km±4km, ML3.7/4, Error ellipse: s-maj=5.3km s-min=0.9km az=171.0*

*DDA **28** 05:17:48.4, 36°.37N×28°.32E, h7km, MD3.6*

ISC 28 05:17:19.3±0.4, 34°.36N±0°.03×26°.50E±0°.03, h18km±3km, n490, σ1°.27/517, mb4.1/43, MS3.3/6, 9C-6D, Crete

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ZKR	**Zakros**	**0.79**	**343**	*e*PN	**Pb**	**05 17 33.0**	**-1.6**
ZKR				*e*SN	**Sb**	**05 17 44.5**	**-0.5**
NPS	**Neapolis**	**1.16**	**321**	P	**Pn**	**05 17 40.0**	**-0.8**
NPS				S	**Sb**	**05 17 52.0**	**-3.7**
NPS	**Neapolis**	**1.16**	**321**	P	**Pn**	**05 17 39.8**	**-1.0**
NPS	**Neapolis**	**1.16**	**321**	*e*PN	**Pn**	**05 17 39.9**	**-0.8**
NPS	**Neapolis**	**1.16**	**321**	P	**Pn**	**05 17 39.8**	**-1.0**
NPS	**Neapolis**	**1.16**	**321**	P	**Pn**	**05 17 40.0**	**-0.8**
NPS				S	**Sb**	**05 17 52.0**	**-3.7**
LAST	**Lasithi**	**1.16**	**314**	P	**Pn**	**05 17 39.6**	**-1.2**
LAST				S	**Sb**	**05 17 53.5**	**-2.3**
LAST	**Lasithi**	**1.16**	**314**	*e*PB	**Pn**	**05 17 39.8**	**-1.0**
LAST				*e*SN	**Sg**	**05 17 57.1**	**0.0**
LAST	**Lasithi**	**1.16**	**314**	P	**Pn**	**05 17 39.6**	**-1.2**
LAST	**Lasithi**	**1.16**	**314**	*e*Pb	**Pn**	**05 17 39.8**	**-1.0**
LAST				S	**Sb**	**05 17 53.5**	**-2.3**
LAST				*e*Sn	**Sg**	**05 17 57.1**	**0.0**
KARP	**Karpathos**	**1.30**	**24**	P	**Pn**	**05 17 42.8**	**+0.1**
KARP				S	**Sn**	**05 17 58.6**	**-1.1**
KARP	**Karpathos**	**1.30**	**24**	*e*PN	**Pn**	**05 17 42.8**	**+0.1**
KARP	**Karpathos**	**1.30**	**24**	P	**Pn**	**05 17 42.8**	**+0.1**
KARP				S	**Sn**	**05 17 58.6**	**-1.1**
SIVA	**Sivas**	**1.54**	**296**	*e*PN	**Pb**	**05 17 47.3**	**-0.1**
SIVA	**Sivas**	**1.54**	**296**	*e*Pn	**Pb**	**05 17 47.3**	**-0.1**
IDI	**Anoyia**	**1.62**	**305**	P	**Pn**	**05 17 47.4**	**+0.3**
IDI				S	**Sn**	**05 18 04.6**	**-3.0**
IDI	**Anoyia**	**1.62**	**305**	*e*PN	**Pn**	**05 17 47.5**	**+0.3**
IDI	**Anoyia**	**1.62**	**305**	*e*Pn	**Pn**	**05 17 47.4**	**+0.3**
IDI				*e*SN	Sn	05 18 01.5	-6.0
IDI	**Anoyia**	**1.62**	**305**	P	**Pn**	**05 17 47.4**	**+0.3**
IDI				S	**Sn**	**05 18 04.6**	**-3.0**
GVD	**Gavdhos**	**2.05**	**284**	*e*PB	**Pb**	**05 17 54.8**	**-1.2**
GVD	**Gavdhos**	**2.05**	**284**	*e*Pb	**Pb**	**05 17 54.8**	**-1.2**
VAM	**Vamos**	**2.16**	**300**	P	**Pn**	**05 17 56.1**	**+1.6**
VAM	**Vamos**	**2.16**	**300**	*e*PB	**Pb**	**05 17 56.4**	**-1.6**
VAM	**Vamos**	**2.16**	**300**	P	**Pn**	**05 17 56.1**	**+1.6**
VAM	**Vamos**	**2.16**	**300**	*e*Pb	**Pb**	**05 17 56.4**	**-1.6**
SANT	**Santorini**	**2.18**	**337**	*e*PN	**Pn**	**05 17 54.7**	**-0.1**
SANT	**Santorini**	**2.18**	**337**	*e*Pn	**Pn**	**05 17 54.7**	**-0.1**
ARG	**Arkhangelos**	**2.28**	**35**	P	**Pn**	**05 17 57.5**	**+1.4**
ARG				S	**Sn**	**05 18 22.8**	**-0.9**
ARG	**Arkhangelos**	**2.28**	**35**	*e*PB	**Pn**	**05 17 57.8**	**+1.7**
ARG	**Arkhangelos**	**2.28**	**35**	P	**Pn**	**05 17 57.5**	**+1.4**
ARG	**Arkhangelos**	**2.28**	**35**	*e*Pb	**Pn**	**05 17 57.8**	**+1.7**
ARG				S	**Sn**	**05 18 22.8**	**-0.9**
DAT	**Datca**	**2.52**	**20**	*e*PN	**Pn**	**05 17 59.0**	**-0.5**
DAT	**Datca**	**2.52**	**20**	*e*Pn	**Pn**	**05 17 59.1**	**-0.5**
BODT	**Bodrum**	**2.78**	**13**	*e*PN	**Pn**	**05 18 02.9**	**-0.1**
BODT				*e*SN	**Sn**	**05 18 36.3**	**+0.2**
BODT	**Bodrum**	**2.78**	**13**	*e*Pn	**Pn**	**05 18 02.9**	**-0.1**
BODT				*e*Sn	**Sn**	**05 18 36.3**	**+0.2**
APE	**Apeiranthos**	**2.82**	**344**	*e*PN	**Pn**	**05 18 03.8**	**+0.2**
APE				*e*SN	**Sn**	**05 18 37.3**	**+0.2**
APE	**Apeiranthos**	**2.82**	**344**	P	**Pn**	**05 18 03.3**	**-0.3**
APE				S	**Sn**	**05 18 33.0**	**-4.1**
APE	**Apeiranthos**	**2.82**	**344**	*e*PN	**Pn**	**05 18 03.7**	**+0.2**
APE				*e*SN	**Sn**	**05 18 37.0**	**-0.1**
APE	**Apeiranthos**	**2.82**	**344**	P	**Pn**	**05 18 03.3**	**-0.3**
APE	**Apeiranthos**	**2.82**	**344**	*e*Pn	**Pn**	**05 18 03.7**	**+0.2**
APE				S	**Sn**	**05 18 33.0**	**-4.1**
APE				*e*Sn	**Sn**	**05 18 37.0**	**-0.1**
DALY	**Dalyan (Mu¨la**	**3.01**	**35**	*e*PN	**Pn**	**05 18 05.8**	**-0.4**
DALY	**Dalyan (Mu¨la**	**3.01**	**35**	*e*Pn	**Pn**	**05 18 05.8**	**-0.4**
ANKY	**Antikythira Is**	**3.03**	**301**	P	**Pn**	**05 18 06.6**	**+0.2**
ANKY				S	**Sn**	**05 18 40.8**	**-1.4**
ANKY	**Antikythira Is**	**3.03**	**301**	*e*PN	**Pn**	**05 18 08.1**	**+1.7**
ANKY	**Antikythira Is**	**3.03**	**301**	P	**Pn**	**05 18 06.6**	**+0.2**
ANKY	**Antikythira Is**	**3.03**	**301**	*e*Pn	**Pn**	**05 18 08.1**	**+1.7**
ANKY				S	**Sn**	**05 18 40.8**	**-1.4**
SLUM		**3.06**	**201**	S	**Sn**	**05 18 40.0**	**-3.0**
	baz=203						
SLUM				AMP		05 18 00.0	
	comp=E,330µm,0.6s,logA/T=5.7,baz=203						
SLUM		**3.06**	**201**	P	**Pn**	**05 18 07.7**	**+0.9**
SLUM				S	**Sn**	**05 18 40.0**	**-3.0**
FETY	**Fethiye**	**3.10**	**42**	*e*PN	**Pn**	**05 18 06.7**	**-0.7**
FETY	**Fethiye**	**3.10**	**42**	*e*Pn	**Pn**	**05 18 06.7**	**-0.7**
MLSB	**Milas**	**3.11**	**19**	*e*PN	**Pn**	**05 18 07.4**	**-0.1**
MLSB	**Milas**	**3.11**	**19**	*e*Pn	**Pn**	**05 18 07.4**	**-0.1**
YER	**Yerkesik**	**3.12**	**27**	*e*PN	**Pn**	**05 18 07.6**	**-0.2**
YER	**Yerkesik**	**3.12**	**27**	*e*Pn	**Pn**	**05 18 07.6**	**-0.2**
AKAS	**Kas**	**3.15**	**53**	*i* P	**Pn**	**05 18 08.4**	**+0.2**
AKAS	**Kas**	**3.15**	**53**	*i* Pn	**Pn**	**05 18 08.4**	**+0.2**
LTBQ	**Tobruq**	**3.16**	**224**	*i* Pn	**Pn**	**05 18 09.8**	**+1.6**
	NSR=76						
LTBQ				*e*S	**Sn**	**05 18 45.5**	**+0.1**
	comp=E,78nm,0.5s,SNR=76						
HMAT	**Matruh**	**3.29**	**171**	P	**Pn**	**05 18 10.6**	**+0.5**
	baz=172						
HMAT				AMP		05 18 00.0	
	comp=N,360µm,0.7s,logA/T=5.7,baz=172						
HMAT				S	**Sn**	**05 18 45.1**	**-3.7**
	baz=172						
HMAT	**Matruh**	**3.29**	**171**	P	**Pn**	**05 18 10.6**	**+0.5**
HMAT				S	**Sn**	**05 18 45.1**	**-3.7**
KYTH	**Kithira**	**3.42**	**305**	P	**Pn**	**05 18 12.3**	**+0.5**
KYTH	**Kithira**	**3.42**	**305**	*e*PN	**Pn**	**05 18 12.6**	**+0.8**
KYTH	**Kithira**	**3.42**	**305**	P	**Pn**	**05 18 12.3**	**+0.5**
KYTH	**Kithira**	**3.42**	**305**	*e*Pn	**Pn**	**05 18 12.6**	**+0.8**
AYDN	**Tasoluk**	**3.48**	**18**	*i* P	**Pn**	**05 18 13.2**	**+0.5**
AYDN	**Tasoluk**	**3.48**	**18**	*i* P	**Pn**	**05 18 13.2**	**+0.5**
VLI	**Veliai**	**3.74**	**310**	P	**Pn**	**05 18 16.1**	**-0.1**
VLI				S	**Sn**	**05 18 57.4**	**-2.4**
VLI	**Veliai**	**3.74**	**310**	*e*PN	**Pn**	**05 18 16.2**	**0.0**
VLI				*e*SN	**Sn**	**05 19 00.3**	**+0.5**
VLI	**Veliai**	**3.74**	**310**	*e*Pn	**Pn**	**05 18 16.2**	**0.0**
VLI				S	**Sn**	**05 18 57.4**	**-2.4**
VLI				*e*Sn	**Sn**	**05 19 00.3**	**+0.5**
GOLH	**Golhisar**	**3.80**	**40**	*i* P	**Pn**	**05 18 18.1**	**+1.0**
GOLH	**Golhisar**	**3.80**	**40**	*i* P	**Pn**	**05 18 18.1**	**+1.0**
DNZL	**Cakiroluk**	**3.91**	**31**	*i* P	**Pn**	**05 18 19.2**	**+0.5**
DNZL	**Cakiroluk**	**3.91**	**31**	*i* P	**Pn**	**05 18 19.2**	**+0.5**
URLA	**Izmir**	**3.99**	**1**	*e*P	**Pn**	**05 18 19.7**	**0.0**
URLA	**Izmir**	**3.99**	**1**	*e*P	**Pn**	**05 18 19.7**	**0.0**
CHOS	**Chios island**	**4.04**	**355**	*e*PN	**Pn**	**05 18 20.5**	**+0.2**
CHOS	**Chios island**	**4.04**	**355**	*e*Pn	**Pn**	**05 18 20.5**	**+0.2**
BLCB	**Balcova**	**4.04**	**6**	*e*PN	**Pn**	**05 18 20.5**	**+0.2**
BLCB	**Balcova**	**4.04**	**6**	*e*Pn	**Pn**	**05 18 20.5**	**+0.2**
IZM	**Izmir**	**4.08**	**8**	*e*PN	**Pn**	**05 18 21.5**	**+0.6**
IZM	**Izmir**	**4.08**	**8**	*e*Pn	**Pn**	**05 18 21.5**	**+0.6**
KORT	**Korkueli**	**4.09**	**49**	*i* P	**Pn**	**05 18 22.9**	**+1.8**
KORT	**Korkueli**	**4.09**	**49**	*i* P	**Pn**	**05 18 22.9**	**+1.8**
DIDY	**Didyma**	**4.10**	**320**	P	**Pn**	**05 18 21.5**	**+0.3**
DIDY	**Didyma**	**4.10**	**320**	P	**Pn**	**05 18 21.5**	**+0.3**
DID	**Didima**	**4.11**	**321**	P	**Pn**	**05 18 21.1**	**-0.2**
DID	**Didima**	**4.11**	**321**	*e*PN	**Pn**	**05 18 21.4**	**+0.1**
DID	**Didima**	**4.11**	**321**	P	**Pn**	**05 18 21.1**	**-0.2**
DID	**Didima**	**4.11**	**321**	*e*Pn	**Pn**	**05 18 21.4**	**+0.1**
DYR	**Agios Nikonas**	**4.16**	**306**	*e*PN	**Pn**	**05 18 23.4**	**+1.4**
DYR	**Agios Nikonas**	**4.16**	**306**	*e*Pn	**Pn**	**05 18 23.4**	**+1.4**
ATHU	**Athens Univers**	**4.22**	**329**	P	**Pn**	**05 18 22.4**	**-0.4**
ATHU	**Athens Univers**	**4.22**	**329**	P	**Pn**	**05 18 22.4**	**-0.4**
KULA	**Kula-Manisa**	**4.50**	**22**	*e*PN	**Pn**	**05 18 27.4**	**+0.7**
KULA	**Kula-Manisa**	**4.50**	**22**	*e*Pn	**Pn**	**05 18 27.4**	**+0.7**
VLX	**Vlachokerasia**	**4.50**	**313**	P	**Pn**	**05 18 27.0**	**+0.3**
VLX	**Vlachokerasia**	**4.50**	**313**	*e*PN	**Pn**	**05 18 28.3**	**+1.6**
VLX	**Vlachokerasia**	**4.50**	**313**	P	**Pn**	**05 18 27.0**	**+0.3**
VLX	**Vlachokerasia**	**4.50**	**313**	*e*Pn	**Pn**	**05 18 28.3**	**+1.6**
BCK	**Bucak**	**4.54**	**46**	*e*PN	**Pn**	**05 18 27.1**	**-0.1**
BCK	**Bucak**	**4.54**	**46**	*e*Pn	**Pn**	**05 18 27.1**	**-0.1**
PYL	**PYLOS**	**4.63**	**304**	*e*PN	**Pn**	**05 18 28.1**	**-0.3**
PYL	**PYLOS**	**4.63**	**304**	*e*Pn	**Pn**	**05 18 28.1**	**-0.3**
KHL	**Karahalli**	**4.65**	**31**	*e*PN	**Pn**	**05 18 28.7**	**0.0**
KHL	**Karahalli**	**4.65**	**31**	*e*Pn	**Pn**	**05 18 28.7**	**0.0**
KHAL	**Karahalli**	**4.67**	**30**	*i* P	**Pn**	**05 18 28.6**	**-0.5**
KHAL				*e*S	**Sn**	**05 19 21.5**	**-1.5**
KHAL	**Karahalli**	**4.67**	**30**	*i* P	**Pn**	**05 18 28.6**	**-0.5**
KHAL				*e*S	**Sn**	**05 19 21.5**	**-1.5**
HBRG	**Burj al 'Arab**	**4.71**	**142**	P	**Pn**	**05 18 29.5**	**0.0**
	baz=143						
ISP	**Isparta**	**4.75**	**42**	P	**Pn**	**05 18 32.6**	**+2.5**
ISP	**Isparta**	**4.75**	**42**	Pn	**Pn**	**05 18 32.6**	**+2.5**
ISP	**Isparta**	**4.75**	**42**	P	**Pn**	**05 18 32.6**	**+2.5**
GUR	**Goura**	**4.91**	**318**	*e*PN	**Pn**	**05 18 32.2**	**-0.1**
GUR	**Goura**	**4.91**	**318**	*e*Pn	**Pn**	**05 18 32.2**	**-0.1**
SWA2		**5.18**	**190**	P	**Pn**	**05 18 36.4**	**+0.4**
	baz=191						
SWA2		**5.18**	**190**	P	**Pn**	**05 18 36.4**	**+0.4**
LEF	**Lefka**	**5.31**	**80**	*e*PN	**Pn**	**05 18 36.2**	**-1.6**
LEF	**Lefka**	**5.31**	**80**	*e*Pn	**Pn**	**05 18 36.2**	**-1.6**
BALB	**Balikesir**	**5.38**	**11**	*e*PN	**Pn**	**05 18 40.0**	**+1.2**
BALB	**Balikesir**	**5.38**	**11**	*e*Pn	**Pn**	**05 18 40.0**	**+1.2**
BALY	**Balya**	**5.45**	**9**	*i* P	**Pn**	**05 18 40.4**	**+0.8**
BALY	**Balya**	**5.45**	**9**	*i* P	**Pn**	**05 18 40.4**	**+0.8**
ALT	**Altintas**	**5.51**	**31**	*e*PN	**Pn**	**05 18 41.3**	**+0.7**
ALT	**Altintas**	**5.51**	**31**	*e*Pn	**Pn**	**05 18 41.3**	**+0.7**
HDMB	**Hadim**	**5.52**	**60**	*e*PN	**Pn**	**05 18 40.9**	**0.0**
HDMB	**Hadim**	**5.52**	**60**	*e*Pn	**Pn**	**05 18 40.9**	**0.0**
TVSB	**Tavsanli**	**5.61**	**24**	*e*PN	**Pn**	**05 18 42.9**	**+1.0**
TVSB	**Tavsanli**	**5.61**	**24**	*e*Pn	**Pn**	**05 18 42.9**	**+1.0**
CSS	**Prodhromos**	**5.66**	**82**	*e*PN	**Pn**	**05 18 41.4**	**-1.1**
CSS	**Prodhromos**	**5.66**	**82**	Pn	**Pn**	**05 18 40.2**	**-2.4**
	comp=N,21nm,0.6s						
CSS				*e*Sn	**Sn**	**05 19 44.7**	**-2.4**
CSS	**Prodhromos**	**5.66**	**82**	*e*Pn	**Pn**	**05 18 41.4**	**-1.1**
CSS				*e*Sn	**Sn**	**05 19 44.7**	**-2.4**
ERMK	**Ermenek**	**5.70**	**65**	*i* P	**Pn**	**05 18 45.4**	**+2.1**
ERMK				*i* S	**Sn**	**05 19 50.9**	**+2.4**
ERMK	**Ermenek**	**5.70**	**65**	*i* P	**Pn**	**05 18 45.4**	**+2.1**
ERMK				*i* S	**Sn**	**05 19 50.9**	**+2.4**
LFK	**Lefkose**	**5.85**	**79**	*e*PN	**Pn**	**05 18 44.9**	**-0.4**
LFK	**Lefkose**	**5.85**	**79**	*e*Pn	**Pn**	**05 18 44.9**	**-0.4**
HNAT	**Natroun**	**5.87**	**142**	P	**Pn**	**05 18 44.9**	**-0.5**
	baz=142						
HNAT	**Natroun**	**5.87**	**142**	P	**Pn**	**05 18 44.9**	**-0.5**
KONT	**Konya--Tatoy**	**5.94**	**51**	*e*PN	**Pn**	**05 18 46.9**	**+0.5**
KONT	**Konya--Tatoy**	**5.94**	**51**	*e*Pn	**Pn**	**05 18 46.9**	**+0.5**
LADK	**Ladik-KONYA**	**6.09**	**49**	*e*PN	**Pn**	**05 18 49.1**	**+0.5**
LADK	**Ladik-KONYA**	**6.09**	**49**	*e*Pn	**Pn**	**05 18 49.1**	**+0.5**
KDHN	**Kadinhani**	**6.14**	**46**	*i* P	**Pn**	**05 18 50.7**	**+1.4**
KDHN	**Kadinhani**	**6.14**	**46**	*i* P	**Pn**	**05 18 50.7**	**+1.4**
IKL	**Isikli**	**6.17**	**70**	*e*PN	**Pn**	**05 18 49.1**	**-0.4**
IKL	**Isikli**	**6.17**	**70**	*e*Pn	**Pn**	**05 18 49.1**	**-0.4**
KIZT	**Kizilcal**

SBF pmax pmax
comp=Z,27nm,0.8s
SBF Sospel 17.55 308 *e*P **Pn 05 21 22.1 -0.9**
comp=Z,26nm,0.8s
SBF Sospel 17.55 308 *e*P **Pn 05 21 22.1 -0.9**
comp=Z,13nm,0.8s
KHC Kasperske Hory 17.59 331 *e*P **Pn 05 21 23.5 0.0**
KHC Kasperske Hory 17.59 331 *e*P **Pn 05 21 23.5 0.0**
KHC *ex* x 05 21 39.5
KHC Kasperske Hory 17.59 331 *e*P **Pn 05 21 23.5 0.0**
DPC Dobruska-Polom 17.64 338 *e*P **Pn 05 21 22.3 -1.7**
DPC Dobruska-Polom 17.64 338 *e*P **Pn 05 21 22.3 -1.7**
DPC *ep*P **pP 05 21 30.8 +0.9**
DPC Dobruska-Polom 17.64 338 *e*P **Pn 05 21 22.3 -1.7**
DAVOX Davos/Dischmat 17.66 320 LR LR 05 29 45.9
comp=Z,148nm,18.8s,baz=107,slow=43
UPC Upice 17.87 338 *e*P **Pn 05 21 25.6 -1.3**
UPC Upice 17.87 338 *e*P **Pn 05 21 25.6 -1.3**
UPC *ep*P **pP 05 21 32.1 -0.4**
UPC Upice 17.87 338 *e*P **Pn 05 21 25.6 -1.3**
PRU Pruhonice 17.92 334 *e*P **P 05 21 28.0 -0.1**
PRU MLR MLR
comp=Z,100nm,11.4s
PRU Pruhonice 17.92 334 *e*P **P 05 21 28.0 -0.1**
PRU *ex* x 05 21 35.6
PRU AMS AMS 05 29 20.0
comp=Z,100nm,11.4s
PRU Pruhonice 17.92 334 *e*P **P 05 21 28.0 -0.1**
comp=Z,100nm,11.4s
FRF La Foret Royal 17.93 307 *e*P **Pn 05 21 26.1 -1.6**
comp=Z,56nm,1.6s
FRF La Foret Royal 17.93 307 *e*P **Pn 05 21 26.1 -1.6**
FRF pmax pmax
comp=Z,57nm,1.6s
FRF La Foret Royal 17.93 307 *e*P **Pn 05 21 26.1 -1.6**
comp=Z,56nm,1.6s
FRF La Foret Royal 17.93 307 *e*P **Pn 05 21 26.1 -1.6**
comp=Z,28nm,1.6s
LMR La Mourre 17.93 306 *e*P **Pn 05 21 27.3 -0.4**
LMR La Mourre 17.93 306 *e*P **Pn 05 21 27.3 -0.4**
LMR La Mourre 17.93 306 *e*P **Pn 05 21 27.3 -0.4**
LMR La Mourre 17.93 306 *e*P **Pn 05 21 27.3 -0.4**
MIB Mutribah 18.22 99 *e*P **P 05 21 32.4 +0.9**
MIB AMb AMB 05 21 33.2
comp=Z,11nm,0.6s
MIB Mutribah 18.22 99 *e*P **P 05 21 32.4 +0.9**
NAY Al-Naaiem 18.34 100 *e*P **P 05 21 33.2 +0.4**
NAY AMb AMB 05 21 34.7
comp=Z,12nm,0.8s
NAY Al-Naaiem 18.34 100 *e*P **P 05 21 33.2 +0.4**
comp=Z,12nm,0.8s
MBDF Montbardon 18.36 310 *e*P **P 05 21 32.8 -0.3**
comp=Z,18nm,0.8s
MBDF Montbardon 18.36 310 *e*P **P 05 21 32.8 -0.3**
MBDF pmax pmax
comp=Z,18nm,0.8s
MBDF Montbardon 18.36 310 *e*P **P 05 21 32.8 -0.3**
comp=Z,18nm,0.8s
MBDF Montbardon 18.36 310 *e*P **P 05 21 32.8 -0.3**
comp=Z,9.1nm,0.8s
LPG La Plagne 18.74 312 *e*P **P 05 21 36.0 -1.5**
LPG La Plagne 18.74 312 *e*P **P 05 21 36.0 -1.5**
LPG La Plagne 18.74 312 *e*P **P 05 21 36.0 -1.5**
LPG La Plagne 18.74 312 *e*P **P 05 21 36.0 -1.5**
LPL La Plagne 18.76 312 *e*P **P 05 21 35.8 -1.8**
comp=Z,4.5nm,0.6s
LPL La Plagne 18.76 312 *e*P **P 05 21 35.8 -1.8**
LPL pmax pmax
comp=Z,5.0nm,0.6s
LPL La Plagne 18.76 312 *e*P **P 05 21 35.8 -1.8**
comp=Z,4.5nm,0.6s
LPL La Plagne 18.76 312 *e*P **P 05 21 35.8 -1.8**
comp=Z,2.2nm,0.6s
SMRF Simiane la Rot 18.81 307 *e*P **P 05 21 37.1 -0.9**
comp=Z,91nm,1.8s
SMRF Simiane la Rot 18.81 307 *e*P **P 05 21 37.1 -0.9**
comp=Z,91nm,1.8s
SMRF Simiane la Rot 18.81 307 *e*P **P 05 21 37.1 -0.9**
comp=Z,46nm,1.8s
SENIN Lac Senin/Sane 18.86 315 *e*Pn **P 05 21 38.1 -0.5**
comp=Z,9.7nm,1.1s
SENIN Lac Senin/Sane 18.86 315 *e*Pn **P 05 21 38.2 -0.5**
comp=Z,9.7nm,1.1s
BRG Berggiesshubel 18.87 335 *e*P **P 05 21 37.7 -0.8**
comp=Z,2.3nm,0.7s
BRG
comp=N,113nm,11.6s
BRG
comp=E,108nm,13.0s
BRG
comp=Z,109nm,11.2s
ORIF Oris-en-Rattie 19.01 310 *e*P **P 05 21 40.0 -0.2**
comp=Z,6.3nm,0.8s
ORIF *e*R
comp=Z,65nm,18.8s
ORIF Oris-en-Rattie 19.01 310 *e*P **P 05 21 40.0 -0.2**
ORIF pmax pmax
comp=Z,6.0nm,0.8s
ORIF Oris-en-Rattie 19.01 310 *e*P **P 05 21 40.0 -0.2**
comp=Z,6.3nm,0.8s
ORIF Oris-en-Rattie 19.01 310 *e*P **P 05 21 40.0 -0.2**
comp=Z,3.2nm,0.8s
VORD Divnogorie 19.03 25 *e*P **P 05 21 40.4 +0.2**
VORD pmax pmax
comp=Z,9.0nm,0.9s
VORD pmax pmax
comp=N,10.0nm,0.7s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD Divnogorie 19.03 25 *e*P **P 05 21 40.4 +0.2**
comp=E,10.0nm,0.7s
VSR Storozhevoye 19.19 25 *e*P **P 05 21 40.8 -1.2**
VSR pmax pmax
comp=Z,8.0nm,0.9s
VSR pmax pmax
comp=N,4.0nm,0.5s
VSR pmax pmax
comp=E,6.0nm,0.8s
VSR Storozhevoye 19.19 25 *e*P **P 05 21 40.8 -1.2**
comp=E,4.0nm,0.5s
BFO Black Forest 19.45 321 *e*P **P 05 21 44.1 -0.8**
BFO pmax pmax
comp=Z,3.0nm,0.6s
BFO Black Forest 19.45 321 *e*P **P 05 21 44.1 -0.8**
comp=Z,2.8nm,0.6s
BFO Black Forest 19.45 321 *e*P **P 05 21 44.1 -0.8**
comp=Z,2.8nm,0.6s
CLL Collm 19.57 334↓ *i*P **P 05 21 45.1 -1.0**
CLL pmax pmax
comp=Z,3.0nm,0.8s
CLL Collm 19.57 334 *i* P **P 05 21 45.1 -1.0**
comp=Z,3.0nm,0.8s
CABF La Chapelle 19.70 314 *e*P **P 05 21 45.5 -2.3**
comp=Z,25nm,1.0s
CABF La Chapelle 19.70 314 *e*P **P 05 21 45.5 -2.3**
CABF pmax pmax
comp=Z,25nm,1.0s
CABF La Chapelle 19.70 314 *e*P **P 05 21 45.5 -2.3**
comp=Z,25nm,1.0s
CABF La Chapelle 19.70 314 *e*P **P 05 21 45.5 -2.3**
comp=Z,12nm,1.0s
VIVF Saint-Julien-l 19.76 309 *e*P **P 05 21 48.2 -0.1**
VIVF Saint-Julien-l 19.76 309 *e*P **P 05 21 48.2 -0.1**
VIVF Saint-Julien-l 19.76 309 *e*P **P 05 21 48.2 -0.1**
VIVF Saint-Julien-l 19.76 309 *e*P **P 05 21 48.2 -0.1**
HINF Hinteralfeld 19.93 318 *e*P **P 05 21 49.1 -1.0**
comp=Z,7.1nm,0.7s
HINF Hinteralfeld 19.93 318 *e*P **P 05 21 49.1 -1.0**
HINF pmax pmax
comp=Z,7.0nm,0.7s
HINF Hinteralfeld 19.93 318 *e*P **P 05 21 49.1 -1.0**
comp=Z,7.1nm,0.7s
HINF Hinteralfeld 19.93 318 *e*P **P 05 21 49.1 -1.0**
comp=Z,3.5nm,0.7s
LASF Ste Croix 20.00 306 *e*P **P 05 21 51.3 +0.4**
comp=Z,9.4nm,0.9s
LASF Ste Croix 20.00 306 *e*P **P 05 21 51.3 +0.4**
comp=Z,9.4nm,0.9s
LASF Ste Croix 20.00 306 *e*P **P 05 21 51.3 +0.4**
comp=Z,4.7nm,0.9s
ECH Echery 20.00 320 *e*P **P 05 21 50.2 -0.7**
ECH pmax pmax
comp=Z,3.0nm,0.7s
ECH Echery 20.00 320 *e*P **P 05 21 50.2 -0.7**
comp=Z,2.9nm,0.7s
ECH Echery 20.00 320 *e*P **P 05 21 50.2 -0.7**
comp=Z,2.9nm,0.7s
CDF Champ du Feu 20.05 320 *e*P **P 05 21 51.0 -0.5**
comp=Z,11nm,0.6s
CDF Champ du Feu 20.05 320 *e*P **P 05 21 51.0 -0.5**
CDF pmax pmax
comp=Z,11nm,0.6s
CDF Champ du Feu 20.05 320 *e*P **P 05 21 51.0 -0.5**
comp=Z,11nm,0.6s
CDF Champ du Feu 20.05 320 *e*P **P 05 21 51.0 -0.5**
comp=Z,5.3nm,0.6s
HAU Haudompre 20.32 318 *e*P **P 05 21 53.1 -1.2**
comp=Z,14nm,0.7s
HAU *e*R
comp=Z,116nm,21.0s
HAU Haudompre 20.32 318 *e*P **P 05 21 53.1 -1.2**
HAU pmax pmax
comp=Z,14nm,0.7s
HAU Haudompre 20.32 318 *e*P **P 05 21 53.1 -1.2**
comp=Z,14nm,0.7s
HAU Haudompre 20.32 318 *e*P **P 05 21 53.1 -1.2**
comp=Z,7.1nm,0.7s
MTLF Montolieu 20.88 303 *e*P **P 05 22 00.3 -0.1**
comp=Z,2.9nm,0.6s
MTLF Montolieu 20.88 303 *e*P **P 05 22 00.3 -0.1**
MTLF pmax pmax
comp=Z,3.0nm,0.6s
MTLF Montolieu 20.88 303 *e*P **P 05 22 00.3 -0.1**
comp=Z,3.9nm,0.6s
MTLF Montolieu 20.88 303 *e*P **P 05 22 00.3 -0.1**
comp=Z,1.5nm,0.6s
PAGF Fort de Pagny 20.97 319 *e*P **P 05 22 01.0 -0.4**
comp=Z,5.4nm,1.0s
PAGF Fort de Pagny 20.97 319 *e*P **P 05 22 01.0 -0.4**
comp=Z,5.4nm,1.0s
PAGF Fort de Pagny 20.97 319 *e*P **P 05 22 01.0 -0.4**
comp=Z,2.7nm,1.0s
SFTF Sexfontaines 21.16 317 *e*P **P 05 22 02.9 -0.5**
comp=Z,37nm,0.9s
SFTF Sexfontaines 21.16 317 *e*P **P 05 22 02.9 -0.5**
comp=Z,37nm,0.9s
SFTF Sexfontaines 21.16 317 *e*P **P 05 22 02.9 -0.5**
comp=Z,18nm,0.9s
MEZF Maizieres J'vi 21.31 318 *e*P **P 05 22 03.9 -1.1**
comp=Z,21nm,0.8s
MEZF Maizieres J'vi 21.31 318 *e*P **P 05 22 03.9 -1.1**
comp=Z,21nm,0.8s
MEZF Maizieres J'vi 21.31 318 *e*P **P 05 22 03.9 -1.1**
comp=Z,10nm,0.8s
LOR Lormes 21.36 314 *e*P **P 05 22 03.1 -2.5**
comp=Z,6.1nm,0.6s
LOR *e*R
comp=Z,98nm,20.5s
LOR Lormes 21.36 314 *e*P **P 05 22 03.1 -2.5**
comp=Z,6.1nm,0.6s
LOR Lormes 21.36 314 *e*P **P 05 22 03.1 -2.5**
comp=Z,3.0nm,0.6s
WLF Walferdange 21.41 322 P **P 05 22 05.4 -0.7**
comp=Z,12nm,2.4s
WLF Walferdange 21.41 322 *e*P **P 05 22 05.3 -0.7**
WLF pmax pmax
comp=Z,6.0nm,0.7s
WLF Walferdange 21.41 322 *e*P **P 05 22 05.3 -0.7**
comp=Z,6.0nm,0.7s
WLF Walferdange 21.41 322 *e*P **P 05 22 05.3 -0.7**
comp=Z,6.0nm,0.7s
SSF Saint Saulge 21.47 313 *e*P **P 05 22 04.9 -1.9**
comp=Z,16nm,0.9s
SSF Saint Saulge 21.47 313 *e*P **P 05 22 04.9 -1.9**
SSF pmax pmax
comp=Z,16nm,0.9s
SSF Saint Saulge 21.47 313 *e*P **P 05 22 04.9 -1.9**
comp=Z,16nm,0.9s
SSF Saint Saulge 21.47 313 *e*P **P 05 22 04.9 -1.9**
comp=Z,7.9nm,0.9s
CAF Calviac 21.50 307 *e*P **P 05 22 06.4 -0.7**
CAF Calviac 21.50 307 *e*P **P 05 22 06.4 -0.7**
CAF Calviac 21.50 307 *e*P **P 05 22 06.4 -0.7**
CAF Calviac 21.50 307 *e*P **P 05 22 06.4 -0.7**
TAM Tamanrasset 21.69 243 *e*P **P 05 22 10.7 +1.3**
TAM pmax pmax
comp=Z,5.0nm,0.8s
TAM Tamanrasset 21.69 243 *e*P **P 05 22 10.7 +1.3**
comp=Z,4.8nm,0.8s
TAM Tamanrasset 21.69 243 *e*P **P 05 22 10.7 +1.3**
comp=Z,4.8nm,0.8s
OBN Obninsk 21.91 16↓ *e*P P 05 22 16.1 +4.8
OBN *e*S **S 05 26 11.0 -1.4**
OBN pmax pmax
comp=Z,5.0nm,0.5s
OBN MLR MLR
comp=Z,100nm,17.0s
TCF Toulx Ste Croi 21.93 310 *e*P **P 05 22 10.0 -1.7**
comp=Z,15nm,1.2s
TCF Toulx Ste Croi 21.93 310 *e*P **P 05 22 10.0 -1.7**
TCF pmax pmax
comp=Z,15nm,1.2s
TCF Toulx Ste Croi 21.93 310 *e*P **P 05 22 10.0 -1.7**
comp=Z,15nm,1.2s
TCF Toulx Ste Croi 21.93 310 *e*P **P 05 22 10.0 -1.7**
comp=Z,7.4nm,1.2s
RJF Les Rejaudoux 22.00 307 *e*P **P 05 22 11.9 -0.6**
RJF *e*R
comp=Z,76nm,19.9s
RJF Les Rejaudoux 22.00 307 *e*P **P 05 22 11.9 -0.6**
RJF Les Rejaudoux 22.00 307 *e*P **P 05 22 11.9 -0.6**
RJF Les Rejaudoux 22.00 307 *e*P **P 05 22 11.9 -0.6**
MEM Membach 22.07 324 P **P 05 22 12.7 -0.4**
comp=Z,11nm,1.1s
EPF Esparros 22.11 301 *e*P **P 05 22 13.8 0.0**
EPF Esparros 22.11 301 *e*P **P 05 22 13.8 0.0**
EPF Esparros 22.11 301 *e*P **P 05 22 13.8 0.0**
EPF Esparros 22.11 301 *e*P **P 05 22 13.8 0.0**
BCLA Clavier 22.30 322 P **P 05 22 15.2 -0.5**
GIVF Givet 22.35 321 *e*P **P 05 22 14.9 -1.3**
GIVF Givet 22.35 321 *e*P **P 05 22 14.9 -1.3**
GIVF Givet 22.35 321 *e*P **P 05 22 14.9 -1.3**
GIVF Givet 22.35 321 *e*P **P 05 22 14.9 -1.3**
DOU Dourbes 22.47 321 P **P 05 22 16.4 -1.0**
BAIF Baives 22.65 321 *e*P **P 05 22 17.4 -2.0**
comp=Z,30nm,0.9s
BAIF Baives 22.65 321 *e*P **P 05 22 17.4 -2.0**
BAIF pmax pmax
comp=Z,30nm,0.9s
BAIF Baives 22.65 321 *e*P **P 05 22 17.4 -2.0**
comp=Z,30nm,0.9s
BAIF Baives 22.65 321 *e*P **P 05 22 17.4 -2.0**
comp=Z,15nm,0.9s
ETSF Etsaut 22.72 300 *e*P **P 05 22 20.6 +0.3**
comp=Z,8.7nm,0.9s
ETSF Etsaut 22.72 300 *e*P **P 05 22 20.6 +0.3**
ETSF pmax pmax
comp=Z,9.0nm,0.9s
ETSF Etsaut 22.72 300 *e*P **P 05 22 20.6 +0.3**
comp=Z,8.7nm,0.9s
ETSF Etsaut 22.72 300 *e*P **P 05 22 20.6 +0.3**
comp=Z,4.3nm,0.9s
SJPF Ste Jean 23.25 300 *e*P **P 05 22 25.8 +0.1**
comp=Z,14nm,1.0s
SJPF Ste Jean 23.25 300 *e*P **P 05 22 25.8 +0.1**
SJPF pmax pmax
comp=Z,15nm,1.0s
SJPF Ste Jean 23.25 300 *e*P **P 05 22 25.8 +0.1**
comp=Z,14nm,1.0s
SJPF Ste Jean 23.25 300 *e*P **P 05 22 25.8 +0.1**
comp=Z,7.2nm,1.0s
MFF Saint Martin d 23.55 309 *e*P **P 05 22 28.2 -0.4**
comp=Z,4.9nm,0.6s
MFF Saint Martin d 23.55 309 *e*P **P 05 22 28.2 -0.4**
MFF pmax pmax
comp=Z,5.0nm,0.6s
MFF Saint Martin d 23.55 309 *e*P **P 05 22 28.2 -0.4**
comp=Z,4.9nm,0.6s
MFF Saint Martin d 23.55 309 *e*P **P 05 22 28.2 -0.4**
comp=Z,2.5nm,0.6s
FLN La Foliniere 24.63 314 *e*P **P 05 22 37.9 -0.8**
comp=Z,5.3nm,0.5s
FLN *e*R
comp=Z,94nm,22.0s
FLN La Foliniere 24.63 314 *e*P **P 05 22 37.9 -0.8**
FLN pmax pmax
comp=Z,5.0nm,0.5s
FLN La Foliniere 24.63 314 *e*P **P 05 22 37.9 -0.8**
comp=Z,5.3nm,0.5s
FLN La Foliniere 24.63 314 *e*P **P 05 22 37.9 -0.8**
comp=Z,2.7nm,0.5s
GRR Gorron 24.70 313 *e*P **P 05 22 37.8 -1.5**
GRR Gorron 24.70 313 *e*P **P 05 22 37.8 -1.5**
GRR Gorron 24.70 313 *e*P **P 05 22 37.8 -1.5**
GRR Gorron 24.70 313 *e*P **P 05 22 37.8 -1.5**
ESDC Sonseca Array 24.83 291 P **P 05 22 39.8 -0.9**
ESDC Sonseca Array 24.83 291 P **P 05 22 39.8 -0.9**
comp=Z,0.7nm,0.4s,baz=80,slow=9.4,SNR=11
ESDC Sonseca Array 24.83 291 P **P 05 22 39.8 -0.9**
MDT Midelt 25.92 275 P **P 05 22 49.9 -0.8**
MDT Midelt 25.92 275 P **P 05 22 49.9 -0.8**
comp=Z,1.1nm,0.7s,baz=94,slow=12,SNR=4.4
MDT Midelt 25.92 275 P **P 05 22 49.9 -0.8**
QUIF Quistinic 25.94 310 *e*P **P 05 22 49.0 -1.5**
comp=Z,11nm,0.8s
QUIF Quistinic 25.94 310 *e*P **P 05 22 49.0 -1.5**
QUIF pmax pmax
comp=Z,11nm,0.8s
QUIF Quistinic 25.94 310 *e*P **P 05 22 49.0 -1.5**
comp=Z,11nm,0.8s
QUIF Quistinic 25.94 310 *e*P **P 05 22 49.0 -1.5**
comp=Z,5.3nm,0.8s
ROSF Rostrenen 26.16 311 *e*P **P 05 22 50.7 -1.8**
comp=Z,7.5nm,0.7s
ROSF Rostrenen 26.16 311 *e*P **P 05 22 50.7 -1.8**
ROSF pmax pmax
comp=Z,8.0nm,0.7s
ROSF Rostrenen 26.16 311 *e*P **P 05 22 50.7 -1.8**
comp=Z,7.5nm,0.7s
ROSF Rostrenen 26.16 311 *e*P **P 05 22 50.7 -1.8**
comp=Z,3.8nm,0.7s
FINES FINESS Array B 27.10 360 P **P 05 22 58.6 -2.2**
FINES FINESS Array B 27.10 360 P **P 05 22 58.6 -2.2**
comp=Z,1.0nm,0.5s,baz=167,slow=10,SNR=17
FINES LR LR 05 34 48.3
comp=Z,48nm,18.6s,baz=194,slow=39
FINES FINESS Array B 27.10 360 P **P 05 22 58.6 -2.2**
comp=Z,48nm,18.6s
HFS Hagfors 27.11 346 P **P 05 22 58.1 -2.9**
HFS Hagfors 27.11 346 P **P 05 22 58.1 -2.9**
comp=Z,1.5nm,0.5s,baz=126,slow=9.3,SNR=12
HFS Hagfors 27.11 346 P **P 05 22 58.1 -2.9**
comp=Z,2.0nm,0.5s
KAF Kangasniemi 27.77 360 *e*P **P 05 23 09.2 +2.3**
KAF pmax pmax
comp=Z,2.0nm,0.7s
KAF Kangasniemi 27.77 360 *ep* **P 05 23 09.2 +2.3**
comp=Z,2.1nm,0.7s
EVO Evora 27.98 289 *e*P **P 05 23 10.0 +1.0**
comp=Z,7.4nm,0.8s
AKTK Aktyubinsk 28.00 45 P **P 05 23 10.1 +1.0**
comp=Z,1.0nm,0.3s
AKTO Aktyubinsk 28.00 45 P **P 05 23 10.1 +1.0**
AKTO pmax pmax
comp=Z,1.0nm,0.3s
AKTO Aktyubinsk 28.00 45 P **P 05 23 10.1 +1.0**
AKTO Aktyubinsk 28.00 45 P **P 05 23 10.1 +1.0**
comp=Z,1.0nm,0.3s,baz=251,slow=8.7,SNR=4.7
AKTO Aktyubinsk 28.00 45 P **P 05 23 10.1 +1.0**
EVOP Sao Brissos 28.06 289 *e*P **P 05 23 10.0 +0.3**
EVOP pmax pmax
comp=Z,7.0nm,0.8s
EVOP Sao Brissos 28.06 289 *e*P **P 05 23 10.0 +0.3**
comp=Z,7.4nm,0.8s
EVOP Sao Brissos 28.06 289 *e*P **P 05 23 10.0 +0.3**
comp=Z,3.7nm,0.8s
NB2 NORSAR Subarra 28.46 344 P **P 05 23 10.8 -2.3**
comp=Z,0.6nm,0.7s,baz=156,slow=9.3
NB2 NORSAR Subarra 28.46 344 P **P 05 23 10.8 -2.3**
comp=Z,0.6nm,0.7s,SNR=3.7
NOA NORSAR Array B 28.46 344 P **P 05 23 12.1 -1.0**
NOA NORSAR Array B 28.46 344 P **P 05 23 12.1 -1.0**
comp=Z,0.5nm,0.6s,baz=153,slow=8.7,SNR=4.0
NOA NORSAR Array B 28.46 344 P **P 05 23 12.1 -1.0**
comp=Z,1.0nm,0.6s
JOF Joensuu 28.74 5 *e*P **P 05 23 15.6 +0.1**
JOF pmax pmax
comp=Z,2.0nm,0.5s
JOF Joensuu 28.74 5 *ep* **P 05 23 15.6 +0.1**
comp=Z,1.7nm,0.5s
JOF Joensuu 28.74 5 *e*P **P 05 23 15.6 +0.1**
comp=Z,2.0nm,0.5s
EKA Eskdalemuir Ar 29.33 325 P **P 05 23 20.4 -0.4**
EKA Eskdalemuir Ar 29.33 325 P **P 05 23 20.4 -0.4**
comp=Z,0.5nm,0.4s,baz=124,slow=11,SNR=7.2
EKA Eskdalemuir Ar 29.33 325 P **P 05 23 20.4 -0.4**
comp=Z,1.0nm,0.4s
TORD Torodi Ar. Bea 30.85 233 P **P 05 23 35.0 +0.4**
TORD Torodi Ar. Bea 30.85 233 P **P 05 23 35.0 +0.4**
comp=Z,1.8nm,0.6s,baz=30,slow=9.0,SNR=28
TORD LR LR 05 37 52.7
comp=Z,85nm,20.4s,baz=85,slow=40
TORD Torodi Ar. Bea 30.85 233 P **P 05 23 35.0 +0.4**
KKAR Karatay Array 35.09 62 *e*P **P 05 24 12.2 +0.8**
KKAR pmax pmax
comp=Z,1.0nm,0.5s
KKAR Karatay Array 35.09 62 *e*P **P 05 24 12.2 +0.8**
comp=Z,0.7nm,0.5s
KKAR Karatay Array 35.09 62 *e*P **P 05 24 12.2 +0.8**
comp=Z,0.7nm,0.5s
ARCES ARCESS Array B 35.23 359 P **P 05 24 09.9 -2.4**
ARCES ARCESS Array B 35.23 359 P **P 05 24 09.9 -2.4**
comp=Z,1.1nm,0.5s,baz=175,slow=8.8,SNR=18
ARCES LR LR 05 39 01.1
comp=Z,56nm,19.1s,baz=344,slow=37
ARCES ARCESS Array B 35.23 359 P **P 05 24 09.9 -2.4**
comp=Z,56nm,19.1s
DBIC Dimbokro 39.96 234 P **P 05 24 52.7 -0.2**
DBIC Dimbokro 39.96 234 P **P 05 24 52.7 -0.2**
comp=Z,3.2nm,0.7s,baz=227,slow=20,SNR=5.0
DBIC Dimbokro 39.96 234 P **P 05 24 52.7 -0.2**
comp=Z,3.0nm,0.7s
LIC Lamto 40.40 233 *e*P **P 05 24 56.2 -0.4**
comp=Z,18nm,0.8s
LIC *e*R
comp=Z,136nm,21.8s
LIC Lamto 40.40 233 *e*P **P 05 24 56.2 -0.4**
comp=Z,18nm,0.8s
LIC Lamto 40.40 233 *e*P **P 05 24 56.2 -0.4**
comp=Z,8.8nm,0.8s
MKAR Makanchi Array 43.30 56 *i* P **P 05 25 20.2 +0.2**
MKAR pmax pmax
comp=Z,1.0nm,0.5s
MKAR Makanchi Array 43.30 56 P **P 05 25 20.3 +0.3**
MKAR Makanchi Array 43.30 56 P **P 05 25 20.3 +0.3**
comp=Z,0.9nm,0.5s,baz=273,slow=6.4,SNR=12
MKAR Makanchi Array 43.30 56 *i* P **P 05 25 20.2 +0.2**
comp=Z,1.0nm,0.5s
SPITS Spitsbergen Ar 44.14 357 P **P 05 25 24.9 -1.5**
SPITS Spitsbergen Ar 44.14 357 P **P 05 25 24.9 -1.5**
comp=Z,2.3nm,0.6s,baz=156,slow=9.1,SNR=4.7
SPITS Spitsbergen Ar 44.14 357 P **P 05 25 24.9 -1.5**
comp=Z,2.0nm,0.6s
ZALV Zalesovo Beam 44.77 46 P **P 05 25 31.5 -0.1**
ZALV pmax pmax
comp=Z,1.0nm,0.5s
ZALV Zalesovo Beam 44.77 46 P **P 05 25 31.5 -0.1**
ZALV Zalesovo Beam 44.77 46 P **P 05 25 31.5 -0.1**
comp=Z,1.4nm,0.5s,baz=270,slow=10.0,SNR=6.7
ZALV Zalesovo Beam 44.77 46 P **P 05 25 31.5 -0.1**
comp=Z,1.0nm,0.5s
ZAK Zakamensk 56.45 48 *e*P **P 05 27 00.2 +0.2**
ZAK pmax pmax
comp=Z,2.0nm,1.8s
ZAK Zakamensk 56.45 48 *e*P **P 05 27 00.2 +0.2**
comp=Z,2.0nm,1.8s
SONM Songino Array 59.14 51 P **P 05 27 19.2 +0.2**
SONM Songino Array 59.14 51 P **P 05 27 19.2 +0.2**
comp=Z,1.2nm,0.5s,baz=289,slow=8.3,SNR=4.1
SONM Songino Array 59.14 51 P **P 05 27 19.2 +0.2**
comp=Z,1.0nm,0.5s
SCHQ Schefferville 64.51 320 P **P 05 27 54.1 -0.8**
SCHQ Schefferville 64.51 320 P **P 05 27 54.1 -0.8**
comp=Z,1.9nm,0.4s,baz=74,slow=6.8,SNR=10
SCHQ Schefferville 64.51 320 P **P 05 27 54.1 -0.8**
CMAR Chiang Mai Arr 65.56 84 LR LR 05 58 08.5
comp=Z,41nm,19.1s,baz=285,slow=37
USRK Ussuriysk Arra 76.62 45 P **P 05 29 08.5 -0.4**
comp=Z,1.9nm,0.6s,baz=305,slow=6.6,SNR=5.4
YKA Yellowknife Ar 78.55 343 LR LR 06 01 39.9
comp=Z,8.3nm,20.3s,baz=150,slow=34
ILAR Eielson Array 81.06 357 P **P 05 29 32.1 -0.7**
ILAR Eielson Array 81.06 357 P **P 05 29 32.1 -0.7**
comp=Z,0.4nm,0.8s,baz=352,slow=3.9,SNR=4.6
ILAR Eielson Array 81.06 357 P **P 05 29 32.2 -0.7**
MJAR Matsushiro Arr 85.03 49 P **P 05 29 53.6 -0.4**
MJAR Matsushiro Arr 85.03 49 P **P 05 29 53.6 -0.4**
comp=Z,1.1nm,0.8s,baz=296,slow=5.2,SNR=6.3
MJAR Matsushiro Arr 85.03 49 P **P 05 29 53.6 -0.4**

comp=Z,1.0nm,0.8s
BDFB Brasilia 86.43 248 P **P** **05 30 01.7 +0.4**
BDFB Brasilia 86.43 248 P **P** **05 30 01.7 +0.4**
comp=Z,1.2nm,0.6s,baz=28,slow=8.4,SNR=3.6
BDFB Brasilia 86.43 248 P **P** **05 30 01.7 +0.4**
comp=Z,1.0nm,0.6s
WRA Warramunga Arr 115.39 98 PKP **PKPdf** **05 35 59.5 -0.9**
WRA Warramunga Arr 115.39 98 PKP **PKPdf** **05 35 59.5 -0.9**
comp=Z,0.5nm,1.1s,baz=316,slow=1.9,SNR=3.2
ASAR Alice Springs 116.81 101 PKP **PKPdf** **05 36 02.3 -0.8**
ASAR Alice Springs 116.81 101 PKP **PKPdf** **05 36 02.3 -0.8**
comp=Z,0.2nm,0.8s,baz=306,slow=2.2,SNR=2.9

IDC 28 05:22:38.6±2.0, 0.93N×127.28E, h0km, mb3.5/3, mb1 3.7/3, mb1mx3.4/21, mbtmp3.5/3, Error ellipse: s-maj=164.2km s-min=24.7km az=66.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**21.86**	**162**	P	P	05 27 32.0	-1.1
	0.9nm,0.6s,baz=340,slow=11,SNR=16						
ASAR	**Alice Springs**	**25.28**	**166**	P	P	05 28 07.6	+0.8
	0.9nm,0.7s,baz=347,slow=10.0,SNR=12						
MKAR	**Makanchi Array**	**60.17**	**326**	P	P	05 32 48.1	-0.1
	0.5nm,0.9s,baz=110,slow=8.3,SNR=3.3						

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*NEIC **28** 05:26:15.5, 50.99N×178.09W, h8km, ML3.6(AEIC), After AEIC.*
*IDC **28** 05:26:21.0±3.5, 51.23N×178.18W, h65km±31km, mb3.2/6, mb1 3.5/8, mb1mx3.3/30, mbtmp3.3/8, ML3.5/2, Error ellipse: s-maj=35.9km s-min=17.9km az=3.0*
ISC 28 05:26:17.9±1.0, 51.1N±0.2×178.09W±0.04, h34km, n17, σ1§51/21, mb3.5/6, Andreanof Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CERAA	**Semis' Rag'd T**	**1.59**	**300**	P	**Pn**	**05 26 44.3**	**+0.6**
AMKA	**Amchitka**	**1.66**	**280**	P	**Pn**	**05 26 44.7**	**+0.2**
AMKA				S	**Sn**	**05 27 06.5**	**+1.9**
CESW	**Semis' Southwe**	**1.66**	**299**	P	**Pn**	**05 26 44.6**	**0.0**
CEAP	**Semis' Anvil P**	**1.70**	**302**	P	**Pn**	**05 26 46.5**	**+1.4**
CETU	**Semis' Tuman**	**1.73**	**300**	P	**Pn**	**05 26 46.5**	**+1.0**
LSPA	**Little Sitkin**	**2.24**	**293**	P	**Pn**	**05 26 54.0**	**+1.4**
LSPA				S	**Sb**	**05 27 24.7**	**-0.4**
KOKL	**Mount Kliuchef**	**2.70**	**62**	P	**Pn**	**05 27 01.4**	**+2.5**
KOKV	**Korovin Volcan**	**2.74**	**62**	P	**Pn**	**05 27 01.4**	**+2.0**
KOKV				S	**Sb**	**05 27 36.5**	**-2.7**
FX1	**Attu Island--F**	**5.68**	**291**	P	**Pn**	**05 27 41.5**	**+1.7**
FX1	**Attu Island--F**	**5.68**	**291**	P	**Pn**	**05 27 41.6**	**+1.8**
	1.8nm,0.3s,baz=350,slow=15,SNR=14						
FX1				S	**Sn**	**05 28 44.9**	**+1.1**
	0.8nm,0.3s,baz=274,slow=19,SNR=2.1						
KDAK	**Kodiak Island**	**16.19**	**56**	P	**Pn**	**05 30 03.8**	**+1.2**
	1.3nm,0.3s,baz=200,slow=7.3,SNR=11						
PDAR	**Pinedale Array**	**45.96**	**72**	P	**P**	**05 34 38.4**	**+0.7**
	0.8nm,0.7s,baz=302,slow=3.1,SNR=7.5						
TXAR	**Lajitas Array**	**58.25**	**82**	P	**P**	**05 36 08.2**	**-0.8**
	0.1nm,0.5s,baz=45,slow=15,SNR=2.3						
MKAR	**Makanchi Array**	**60.54**	**309**	P	**P**	**05 36 22.8**	**-1.7**
	0.1nm,0.5s,baz=36,slow=7.0,SNR=3.1						
FINES	**FINESS Array B**	**66.13**	**348**	P	**P**	**05 37 00.4**	**-0.7**
	0.7nm,0.7s,baz=45,slow=6.1,SNR=3.2						
WRA	**Warramunga Arr**	**82.14**	**225**	P	**P**	**05 38 35.0**	**0.0**
	0.1nm,0.4s,baz=32,slow=6.0,SNR=4.3						
BRTR	**Keskin Array B**	**85.36**	**336**	P	**P**	**05 38 50.8**	**-0.8**
	0.2nm,0.4s,baz=34,slow=3.6,SNR=3.5						

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*NIED **28** 05:44:00.24.10N×121.60E, h23km, Mw4.2 Best double couple: Mo2.65000×10^15 NP1:φs358.00000°, δ63.00000°, λ-126.00000°. NP2:φs236.00000°, δ44.00000°, λ-41.00000°.*
*BJI **28** 05:44:34.3, 24.16N×121.83E, h6km, mB4.5/11, mb4.4/14, ML4.6/7, Ms4.3/15, Ms7 4.1/14*
*NEIC **28** 05:44:35.7±0.6, 24.13N×121.82E, h10km, mb4.4/4, ML4.7(TAP), Error ellipse: s-maj=9.3km s-min=6.5km az=118.0*
NEIC Recorded [4 TAP] in Hua-lien; [3 TAP] in I-lan and Nan-t'ou; [2 TAP] in T'ai-chung; [1 TAP] in Chang-hua, Miao-li, T'ao-yuan and Yun-lin.
*TAP **28** 05:44:36.9, 24.18N×121.75E, h12km, ML4.7, B*
*ISCJB **28** 05:44:36.4±0.3, 24.17N±0.01×121.82E±0.02, h5km±2km, mb4.0/23, MS3.5/9, Error ellipse: s-maj=2.6km s-min=1.8km az=37.2*
*JMA **28** 05:44:37.1±0.3, 24.07N×121.64E, h53km, M4.1*
*IDC **28** 05:44:45.8±4.0, 24.13N×121.75E, h97km±38km, mb3.7/18, mb1 3.9/20, mb1mx3.8/30, mbtmp3.7/20, MS3.5/8, Ms1 3.5/8, ms1mx3.1/39, Error ellipse: s-maj=17.7km s-min=13.4km az=79.0*
ISC 28 05:44:36.7±0.6, 24.16N±0.02×121.76E±0.02, h12km±3km, n116, σ1§49/170, mb4.1/23, MS3.4/9, 16C-12D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.15**	**353**	⇓*iP*	**Pg**	**05 44 40.4**	**0.0**
	baz=358						
EHP				*i* S	**Sg**	**05 44 43.0**	**+0.1**
	baz=358						
NACB	**Ninganchiao**	**0.15**	**276**	*e*Pg	**Pg**	**05 44 40.1**	**-0.2**
NACB				*e*Sg	**Sg**	**05 44 42.8**	**-0.1**
TWD	**Chiawan**	**0.17**	**243**	⇑*iP*	**Pg**	**05 44 41.0**	**+0.4**
	baz=243						
TWD				*i* S	**Sg**	**05 44 44.0**	**+0.7**
	baz=243						
HWA	**Hwalien**	**0.23**	**219**	⇑P	**Pb**	**05 44 42.8**	**0.0**
	baz=225						
ENA	**Nanau**	**0.27**	**356**	⇑*iP*	**Pg**	**05 44 42.4**	**0.0**
	baz=359						
ENA				*e*S	**Sg**	**05 44 46.2**	**+0.1**
	baz=359						
ESF	**Shoufeng Towns**	**0.37**	**219**	*e*P	**Pg**	**05 44 44.7**	**+0.6**
	baz=225						
ESF				*e*S	**Sb**	**05 44 50.3**	**-0.6**
	baz=225						
NNS	**Nan Shan**	**0.45**	**308**	⇑*iP*	**Pg**	**05 44 45.7**	**0.0**
	baz=308						
NNS				*e*S	**Sg**	**05 44 51.4**	**-0.4**
	baz=308						
WHF	**Hehuan Shan**	**0.45**	**268**	⇑*iP*	**Pg**	**05 44 45.9**	**+0.1**
	baz=268						
ESL	**Shilin**	**0.46**	**221**	⇑*iP*	**Pg**	**05 44 46.1**	**+0.4**
	baz=227						
ESL				*e*S	**Sg**	**05 44 52.4**	**+0.6**
	baz=227						
TWC	**Suao**	**0.46**	**10**	⇑*iP*	**Pg**	**05 44 45.9**	**+0.2**
	baz=9.0						
TEGC	**Jichi Village**	**0.49**	**204**	*e*P	**Pn**	**05 44 48.9**	**-0.6**
	baz=193						
TWT	**Tachien**	**0.54**	**280**	⇑*iP*	**Pb**	**05 44 48.1**	**-0.2**
	baz=279						
TWT				*e*S	**Sb**	**05 44 55.3**	**-0.8**
	baz=279						
TWE	**Neicheng**	**0.57**	**351**	⇑*iP*	**Pg**	**05 44 48.1**	**+0.2**
	baz=353						
TWE				*i* S	**Sg**	**05 44 55.6**	**+0.3**
	baz=353						
ILA	**Ilan**	**0.60**	**359**	*e*P	**Pg**	**05 44 48.5**	**-0.1**
	baz=354						
ILA				*e*S	**Sg**	**05 44 57.2**	**+0.7**
	baz=354						
YHNB	**Yeheng**	**0.62**	**325**	*e*Pg	**Pg**	**05 44 48.7**	**-0.1**
YHNB				*e*Sg	**Sg**	**05 44 57.3**	**+0.3**
NSK	**Sanguang**	**0.63**	**325**	⇑*iP*	**Pg**	**05 44 49.2**	**+0.1**
	baz=324						
NSK				S	**Sg**	**05 44 57.5**	**+0.1**
	baz=324						
EHY	**Hungye**	**0.76**	**212**	⇓*iP*	**Pg**	**05 44 51.2**	**-0.3**
	baz=224						
SSLB	**Suanglung**	**0.83**	**244**	*e*Pg	**Pg**	**05 44 52.7**	**0.0**
SSLB				*e*Sg	**Sg**	**05 45 03.4**	**-0.1**
SMLT	**Sun Moon Lake**	**0.83**	**251**	⇑*iP*	**Pg**	**05 44 53.2**	**+0.3**
	baz=251						
SMLT				S	**Sb**	**05 45 04.4**	**-0.1**
	baz=251						
TWA	**Mucha**	**0.83**	**349**	⇓*eP*	**Pb**	**05 44 53.3**	**+0.1**
	baz=340						
NSTT	**Nanjuang**	**0.84**	**304**	⇑*iP*	**Pb**	**05 44 53.3**	**+0.1**
	baz=304						
NSTT				*e*S	**Sg**	**05 45 04.0**	**0.0**
	baz=304						
TYC	**Yuchr**	**0.86**	**253**	⇑*iP*	**Pg**	**05 44 53.7**	**+0.2**
	baz=246						
TYC				*e*S	**Sg**	**05 45 04.7**	**-0.1**
	baz=246						
TWB1	**Santiao Chiao**	**0.87**	**14**	*e*P	**Pg**	**05 44 53.5**	**0.0**
	baz=7.0						
YULB	**Yu-li**	**0.87**	**209**	*e*Pg	**Pg**	**05 44 52.8**	**-0.8**
YULB				*e*Sg	**Sn**	**05 45 07.5**	**0.0**
TAP1	**Taipei**	**0.90**	**346**	*e*P	**Pg**	**05 44 54.4**	**+0.2**
	baz=345						
TAP1				*e*S	**Sb**	**05 45 06.3**	**-0.1**
	baz=345						
TAP	**Taipei**	**0.91**	**345**	*e*P	**Pn**	**05 44 55.1**	**-0.3**
	baz=345						
TWF1	**Yuli**	**0.91**	**208**	*e*P	**Pb**	**05 44 53.3**	**-1.2**
	baz=221						
TWF1				*e*S	**Sn**	**05 45 09.0**	**+0.6**
	baz=221						
NWF	**Wu-fen Shan**	**0.91**	**1**	⇑*iP*	**Pg**	**05 44 54.6**	**+0.3**
	baz=354						
NWF				*e*S	**Sg**	**05 45 05.1**	**-1.1**
	baz=354						
TWQ1	**Liyutan**	**0.92**	**282**	⇑*eP*	**Pn**	**05 44 55.4**	**-0.1**
	baz=282						
NSY	**Sanyi**	**0.95**	**286**	⇑P	**Pn**	**05 44 56.3**	**+0.4**
	baz=286						
NSY				*e*S	**Sn**	**05 45 09.0**	**-0.4**
	baz=286						
NCU	**National Centr**	**0.96**	**327**	*e*P	**Pn**	**05 44 56.3**	**+0.2**
	baz=327						
NCU				S	**Sn**	**05 45 09.8**	**0.0**
	baz=327						
HSN	**Hsinchu**	**0.97**	**312**	*e*P	**Pn**	**05 44 56.1**	**0.0**
	baz=304						
HSN				*e*S	**Sn**	**05 45 10.9**	**+1.1**
	baz=304						
TWS1	**Kuangyinshan**	**0.99**	**342**	*e*P	**Pn**	**05 44 56.7**	**+0.2**
	baz=349						
TWS1				*e*S	**Sn**	**05 45 11.4**	**+1.0**
	baz=349						
TCU	**Taichung**	**0.99**	**270**	⇓*iP*	**Pn**	**05 44 57.4**	**+0.9**
	baz=270						
TCU				*e*S	**Sn**	**05 45 11.4**	**+1.0**
	baz=270						
YUS	**Yu-Shan**	**1.00**	**228**	⇓*iP*	**Pg**	**05 44 56.5**	**+0.5**
	baz=229						
YUS				S	**Sn**	**05 45 10.6**	**-0.6**
	baz=229						
WNT	**Mingjian**	**1.02**	**254**	⇓*eP*	**Pn**	**05 44 57.6**	**+0.7**
	baz=250						
WNT				S	**Sn**	**05 45 12.5**	**+1.3**
	baz=250						
ALS	**Alishan**	**1.09**	**234**	⇓*iP*	**Pn**	**05 44 58.1**	**+0.1**
	baz=235						
ALS				*e*S	**Sn**	**05 45 14.7**	**+1.5**
	baz=235						
CHKT	**Chengkung**	**1.11**	**199**	*e*P	**Pb**	**05 44 57.6**	**-0.4**
	baz=193						
CHKT				*e*S	**Sn**	**05 45 14.7**	**+1.3**
	baz=193						
TWY	**Chenhua**	**1.12**	**352**	*e*P	**Pg**	**05 44 59.2**	**+0.9**
	baz=338						
CHN5	**Tsauling**	**1.14**	**241**	⇓*iP*	**Pg**	**05 44 59.2**	**+0.6**
	baz=243						
YOJ	**Yonaguni jima**	**1.18**	**75**	⇓*iP*	**Pn**	**05 44 59.3**	**+0.3**
	baz=66						
YOJ				*e*S	**Sg**	**05 45 16.0**	**+1.2**
	baz=66						
YOJ	**Yonaguni jima**	**1.18**	**75**	P	**Pb**	**05 44 59.5**	**+0.5**
YOJ				S	**Sg**	**05 45 16.2**	**+1.4**
ELDTW	**Lidau**	**1.18**	**215**	*e*P	**Pn**	**05 44 57.6**	**-1.6**
	baz=217						
WGK	**Gukeng**	**1.19**	**247**	*e*P	**Pg**	**05 44 60.0**	**+0.3**
	baz=248						
WGK				*e*S	**Sg**	**05 45 17.8**	**+2.6**
	baz=248						
TPUB	**Ta-pu**	**1.34**	**231**	Pn	**Pn**	**05 45 01.3**	**0.0**
TPUB				*e*Sn	**Sg**	**05 45 22.2**	**+2.1**
WTCT	**Ta-ch'eng**	**1.39**	**258**	*e*P	**Pb**	**05 45 02.9**	**+0.3**
	baz=259						
WTCT				*e*S	**Sg**	**05 45 22.4**	**+1.0**
	baz=259						
CHY	**Chiayi**	**1.39**	**242**	*e*P	**Pg**	**05 45 03.6**	**+0.2**
	baz=244						
CHY				*e*S	**Sg**	**05 45 23.4**	**+1.9**
	baz=244						
WTP	**Ta-pu**	**1.39**	**229**	⇓*iP*	**Pb**	**05 45 03.0**	**+0.4**
	baz=231						
WTP				*e*S	**Sg**	**05 45 23.1**	**+1.5**
	baz=231						
TWK	**Hsinying**	**1.47**	**233**	P	**Pb**	**05 45 04.4**	**+0.4**
	baz=235						
TWK				*e*S	**Sg**	**05 45 25.0**	**+1.0**
	baz=235						
TWG	**Pinlang**	**1.47**	**206**	*e*P	**Pn**	**05 45 01.4**	**-1.7**
	baz=208						
TWG	**Pinlang**	**1.47**	**206**	*e*Pn	**Pn**	**05 45 01.3**	**-1.8**
CHN1	**Nanshi**	**1.49**	**230**	*e*P	**Pb**	**05 45 04.6**	**+0.3**
	baz=222						
CHN1				*e*S	**Sg**	**05 45 26.0**	**+1.3**
	baz=222						
WSF	**Szhu**	**1.50**	**250**	*e*P	**Pb**	**05 45 04.8**	**+0.2**
	baz=252						
WSF				*e*S	**Sg**	**05 45 27.0**	**+1.9**
	baz=252						
TTN	**Taitung**	**1.51**	**202**	*e*P	**Pn**	**05 45 02.2**	**-1.4**
	baz=204						
SGST	**Jiashian**	**1.52**	**226**	⇓*eP*	**Pb**	**05 45 05.3**	**+0.4**
	baz=228						
CHN8	**Yiju**	**1.64**	**241**	*e*P	**Pb**	**05 45 06.5**	**-0.3**
	baz=243						
CHN8				*e*S	**Sg**	**05 45 30.4**	**+1.1**
	baz=243						
CHN3	**Shinhua**	**1.67**	**230**	*e*P	**Pb**	**05 45 07.8**	**+0.3**
	baz=231						
CHN3				*e*S	**Sg**	**05 45 33.0**	**+2.4**
	baz=231						
ECL	**Taimali**	**1.72**	**206**	*e*P	**Pn**	**05 45 07.5**	**+1.0**
	baz=194						
SCLT	**Jiali**	**1.74**	**236**	*e*P	**Pb**	**05 45 08.4**	**-0.1**
	baz=238						
SCLT				*e*S	**Sg**	**05 45 32.7**	**0.0**
	baz=238						
TAI1	**Yung-k'ang**	**1.79**	**232**	*e*P	**Pb**	**05 45 09.4**	**-0.1**
	baz=234						
IRIF	**Iriomote-Funau**	**1.81**	**84**	P	**Pn**	**05 45 08.1**	**+0.5**
IRIF				*e*S	**Sn**	**05 45 31.0**	**+0.5**
TWM1	**Shoushan**	**1.81**	**223**	*e*P	**Pb**	**05 45 10.3**	**+0.5**
	baz=225						
SGLT	**Jiouru**	**1.84**	**220**	⇓*eP*	**Pb**	**05 45 11.3**	**+0.9**
	baz=205						
HATJ	**Hateruma jima**	**1.87**	**93**	P	**Pn**	**05 45 09.2**	**+0.7**
HATJ				*e*S	**Sn**	**05 45 33.1**	**+1.0**
EAST	**Anshuo**	**1.96**	**206**	*e*P	**Pn**	**05 45 08.6**	**-1.2**
	baz=196						
TAW	**Tawu**	**1.96**	**204**	*e*P	**Pn**	**05 45 10.4**	**+0.6**
	baz=194						
JKRS	**Kuro-shima**	**2.05**	**87**	P	**Pn**	**05 45 11.9**	**+0.8**
JKRS				*e*S	**Sn**	**05 45 36.4**	**-0.2**
SCZT	**Fangliau**	**2.06**	**211**	*e*P	**Pn**	**05 45 11.9**	**+0.7**
	baz=196						
PNG	**Penghu**	**2.10**	**254**	*e*P	**Pn**	**05 45 11.9**	**+0.2**
	baz=259						
PNG				*e*S	**Sb**	**05 45 40.1**	**-0.8**
	baz=259						
JIJ	**Ishigaki jima**	**2.18**	**84**	P	**Pn**	**05 45 13.3**	**+0.4**
JIJ				S	**Sn**	**05 45 40.3**	**+0.5**
TWP	**Hsiaoliuchiu**	**2.22**	**216**	*e*P	**Pb**	**05 45 15.9**	**-0.8**
	baz=237						
HEN	**Hengchun**	**2.34**	**204**	*e*P	**Pb**	**05 45 18.1**	**-0.8**
	baz=197						
TWK1	**Hengchun**	**2.37**	**202**	*e*P	**Pn**	**05 45 16.4**	**+0.9**
	baz=192						
TSEB	**Hengchuen, Pin**	**2.38**	**200**	*e*P	**Pn**	**05 45 16.2**	**+0.6**
	baz=192						
JTJ	**Tarama**	**2.72**	**79**	P	**Pn**	**05 45 21.3**	**+1.0**
JTJ				*e*S	**Sn**	**05 45 54.2**	**+1.0**
QZH	**Quanzhou**	**2.99**	**286**	Pn	**Pn**	**05 45 24.0**	**0.0**
QZH				Sn	**Sn**	**05 45 57.5**	**-2.2**
QZH				smax	smax		
	comp=N,3μm,1.2s						
QZH				smax	smax		
	comp=E,980nm,0.6s						
QZH				LR	LR		
	comp=Z,4μm,11.9s						
KNM	**Kinmen**	**3.05**	**276**	*e*P	**Pn**	**05 45 26.5**	**+1.7**
	baz=276						
JMJ	**Miyako jima 2**	**3.28**	**78**	*e*S	**Sn**	**05 46 09.2**	**+2.2**
JOGS	**Gusukube**	**3.38**	**79**	*e*S	**Sn**	**05 46 11.5**	**+2.3**
JOW	**Kunigami**	**6.46**	**64**	*e*P	**Pn**	**05 46 11.7**	**0.0**
	baz=63						
JOW	**Kunigami**	**6.46**	**64**	*e*Pn	**Pn**	**05 46 10.8**	**-0.8**
NJ2	**Nanjing**	**8.27**	**343**	*e*P	**Pn**	**05 46 37.3**	**+0.8**
NJ2				pP	Pb	05 46 41.8	-18
NJ2				sP		05 46 44.5	
NJ2				S	**Sn**	**05 48 07.0**	**-2.9**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				smax	smax		
	comp=N,190nm,1.0s						
NJ2				smax	smax		
	comp=E,170nm,1.0s						
NJ2				LR	LR		
	comp=N,560nm,9.2s						
NJ2				LR	LR		
	comp=E,2μm,7.4s						
WHN	**Wuhan**	**9.16**	**316**	P	Pn	05 46 52.5	+3.8
WHN				LR	LR		
	comp=N,2μm,12.6s						
WHN				LR	LR		
	comp=E,2μm,10.1s						
WHN				LR	LR		
	comp=Z,3μm,10.6s						
KSRS	**Korea Array**	**14.27**	**20**	P	**P**	**05 48 03.7**	**-2.1**
	comp=Z,0.4nm,0.3s,baz=199,slow=12,SNR=22						
HHC	**Hu-ho-hao-te**	**18.71**	**335**	*e*P	**Pn**	**05 48 56.0**	**+0.4**
HHC				PP	**PnPn**	**05 49 12.5**	**+4.8**
HHC				S	**Sn**	**05 52 24.3**	**-0.5**
HHC				SS	**SnSn**	**05 52 48.5**	**+10**
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.2s						
HHC				LR	LR		
	comp=N,620nm,12.4s						
HHC				LR	LR		
	comp=E,400nm,13.1s						
HHC				LR	LR		
	comp=Z,540nm,12.8s						
MJAR	**Matsushiro Arr**	**18.78**	**45**	P	**Pn**	**05 48 59.0**	**+2.7**
	comp=Z,0.1nm,0.3s,baz=191,slow=5.9,SNR=4.1						
LZH	**Lanzhou**	**19.50**	**312**	*e*P	**P**	**05 49 02.8**	**-1.1**
LZH				PP	**PnPn**	**05 49 19.5**	**+1.0**
LZH				*e*S	Sn	05 52 31.3	-13
LZH				SS	**SnSn**	**05 53 05.5**	**+7.3**
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,80nm,4.5s						
LZH				LR	LR		
	comp=N,410nm,13.2s						
LZH				LR	LR		
	comp=E,460nm,11.6s						
LZH				LR	LR		
	comp=Z,650nm,12.3s						
USRK	**Ussuriysk Arra**	**21.68**	**20**	P	**P**	**05 49 28.9**	**+1.7**
	comp=Z,2.9nm,0.8s,baz=211,slow=14,SNR=6.3						
CMAR	**Chiang Mai Arr**	**21.99**	**259**	P	**P**	**05 49 32.5**	**+1.6**
	comp=Z,1.7nm,0.5s,baz=54,slow=8.4,SNR=10						
GTA	**Gaotai**	**23.98**	**315**	*e*P	**P**	**05 49 48.8**	**-2.5**
GTA				pP	**pP**	**05 49 51.8**	**-3.1**
GTA				sP	**sP**	**05 49 55.3**	**-1.1**
GTA				S	**S**	**05 54 10.0**	**+2.0**
GTA				sS	**sS**	**05 54 17.5**	**+3.5**
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,67nm,5.2s						
GTA				LR	LR		
	comp=N,170nm,11.4s						
GTA				LR	LR		
	comp=E,400nm,11.4s						
GTA				LR	LR		
	comp=Z,370nm,11.9s						
ASAJ	**Asahikawa**	**26.21**	**35**	LR	LR	06 01 22.7	
	comp=Z,82nm,18.8s,baz=161,slow=38						
ULN	**Ulaanbaatar**	**26.39**	**337**	*e*P	**P**	**05 50 12.8**	**-0.4**
	comp=Z,4.3nm,0.8s						
SONM	**Songino Array**	**26.60**	**336**	P	**P**	**05 50 14.6**	**-0.4**
	comp=Z,1.4nm,0.5s,baz=148,slow=14,SNR=6.5						
SONM				LR	LR	06 02 09.6	
	comp=Z,189nm,18.0s,baz=57,slow=39						
LSA	**Lhasa**	**27.80**	**288**	*e*P	**P**	**05 50 29.9**	**+3.5**
	comp=Z,11nm,0.9s						
PSI	**Prapat**	**30.62**	**230**	P	**P**	**05 50 51.6**	**+0.6**
	comp=Z,2.3nm,0.4s,baz=106,slow=17,SNR=3.9						
MKAR	**Makanchi Array**	**38.72**	**316**	P	**P**	**05 52 00.8**	**+0.1**
	comp=Z,2.8nm,0.7s,baz=110,slow=10,SNR=20						
MKAR				LR	LR	06 08 17.0	
	comp=Z,32nm,18.3s,baz=167,slow=36						
ZAA0	**Zalesovo Array**	**40.55**	**327**	*e*P	**P**	**05 52 14.5**	**-1.3**
ZALV	**Zalesovo Beam**	**40.55**	**327**	P	**P**	**05 52 14.5**	**-1.3**
	comp=Z,2.4nm,0.7s,baz=117,slow=8.5,SNR=8.6						
ZALV				LR	LR	06 10 28.0	
	comp=Z,46nm,21.2s,baz=70,slow=38						
TKM2	**Tokmak 2**	**42.20**	**308**	*e*P	**P**	**05 52 30.2**	**+0.5**
	comp=Z,4.0nm,0.9s						
KURBB	**Kurchatov Arra**	**42.47**	**320**	P	**P**	**05 52 31.1**	**-0.5**
	comp=Z,1.2nm,0.4s,baz=111,slow=8.0,SNR=10						
AAK	**Ala-Archa**	**42.94**	**307**	LR	LR	06 13 04.5	
	comp=Z,54nm,19.0s,baz=310,slow=40						
WRA	**Warramunga Arr**	**45.52**	**163**	P	**P**	**05 52 54.8**	**-1.5**
	comp=Z,2.0nm,0.7s,baz=345,slow=8.7,SNR=24						
BVAR	**Borovoye Array**	**48.03**	**321**	P	**P**	**05 53 15.7**	**0.0**
	comp=Z,0.8nm,0.4s,baz=87,slow=8.4,SNR=4.8						
ASAR	**Alice Springs**	**48.98**	**165**	P	**P**	**05 53 22.4**	**-0.8**
	comp=Z,0.9nm,0.6s,baz=347,slow=6.6,SNR=13						
HNR	**Honiara**	**50.05**	**127**	LR	LR	06 11 14.4	
	comp=Z,40nm,18.9s,baz=300,slow=32						
ABKAR	**Akbulak array**	**53.84**	**314**	*e*P	**P**	**05 53 59.0**	**-0.4**
	comp=Z,7.1nm,1.0s						
AKTO	**Aktyubinsk**	**55.16**	**316**	LR	LR	06 19 14.0	
	comp=Z,37nm,21.9s,baz=1.3,slow=38						
ILAR	**Eielson Array**	**68.99**	**27**	P	**P**	**05 55 40.2**	**-1.5**
	comp=Z,0.2nm,0.5s,baz=267,slow=4.8,SNR=5.3						
FINES	**FINESS Array B**	**71.73**	**330**	P	**P**	**05 55 56.9**	**-1.6**
	comp=Z,3.7nm,0.9s,baz=77,slow=10.0,SNR=8.2						
AKASG	**Malin Array Be**	**73.24**	**318**	P	**P**	**05 56 06.8**	**-0.9**
	comp=Z,1.5nm,0.5s,baz=57,slow=6.8,SNR=3.0						
BRTR	**Keskin Array B**	**73.61**	**307**	P	**P**	**05 56 09.4**	**-0.9**
	comp=Z,1.9nm,0.8s,baz=107,slow=6.6,SNR=10						
NB2	**NORSAR Subarra**	**78.49**	**332**	P	**P**	**05 56 35.9**	**-1.7**
	comp=Z,0.7nm,0.6s,baz=57,slow=5.3						
NOA	**NORSAR Array B**	**78.49**	**332**	P	**P**	**05 56 35.9**	**-1.7**
	comp=Z,1.0nm,0.8s,baz=60,slow=5.5,SNR=5.0						
NOA				LR	LR	06 34 03.6	
	comp=Z,33nm,18.3s,baz=75,slow=38						
YKA	**Yellowknife Ar**	**82.79**	**23**	P	**P**	**05 56 58.9**	**-1.6**
	comp=Z,1.6nm,0.7s,baz=311,slow=5.1,SNR=6.1						
GERES	**GERESS Array B**	**83.20**	**321**	P	**P**	**05 57 01.8**	**-

KHZ	**Kahutara**	**0.28**	**15**	⇓P*	Pb	05 57 53.8	-0.3
KHZ				S*	Sn	05 57 58.9	-0.3
KHZ				AML	AML	05 57 59.1	
KHZ	**Kahutara**	**0.28**	**15**	*eP*	Pb	05 57 53.9	-0.3
KHZ				*eS*	Sn	05 57 58.4	-0.8
LTZ	**Lake Taylor**	**0.87**	**264**	⇓PN	Pn	05 58 02.1	-0.4
LTZ				SN	Sn	05 58 13.0	-1.1
LTZ				AML	AML	06 00 33.0	
LTZ	**Lake Taylor**	**0.87**	**264**	Pn	Pn	05 58 02.1	-0.4
THZ	**Tophouse**	**1.01**	**337**	⇑PN	Pn	05 58 03.6	-1.0
THZ				SN	Sn	05 58 16.8	-1.0
THZ				AML	AML	05 58 18.5	
THZ	**Tophouse**	**1.01**	**337**	Pn	Pn	05 58 03.6	-1.0
BSWZ	**Blackbirch Sta**	**1.03**	**19**	⇑PN	Pn	05 58 04.8	0.0
BSWZ				SN	Sn	05 58 18.3	+0.2
BSWZ				AML	AML	05 58 19.4	
BSWZ	**Blackbirch Sta**	**1.03**	**19**	Pn	Pn	05 58 04.8	0.0
BSWZ				Sn	Sn	05 58 18.3	+0.2
CRLZ	**Canterbury Las**	**1.07**	**214**	PN	Pn	05 58 04.9	-0.3
CRLZ				AML	AML	05 58 19.3	
CRLZ				AML	AML	05 58 19.5	
CRLZ	**Canterbury Las**	**1.07**	**214**	Pn	Pn	05 58 04.9	-0.4
MQZ	**McQueen's Vall**	**1.17**	**209**	PN	Pn	05 58 06.0	-0.7
MQZ				SN	Sn	05 58 20.1	-1.3
MQZ				AML	AML	05 58 21.5	
MQZ	**McQueen's Vall**	**1.17**	**209**	Pn	Pn	05 58 06.0	-0.7
TUWZ	**Tuamarina**	**1.32**	**17**	⇑PN	Pn	05 58 08.3	-0.4
TUWZ				SN	Sn	05 58 25.0	0.0
TUWZ				AML	AML	05 58 26.0	
TUWZ	**Tuamarina**	**1.32**	**17**	Pn	Pn	05 58 08.3	-0.4
NNZ	**Nelson**	**1.47**	**358**	⇑PN	Pn	05 58 10.6	-0.3
NNZ				AML	AML	05 58 29.6	
NNZ				AML	AML	05 58 30.3	
NNZ	**Nelson**	**1.47**	**358**	Pn	Pn	05 58 10.6	-0.3
DSZ	**Denniston Nort**	**1.54**	**307**	PN	Pn	05 58 11.4	-0.5
DSZ				AML	AML	05 58 31.7	
DSZ				AML	AML	05 58 32.0	
DSZ	**Denniston Nort**	**1.54**	**307**	Pn	Pn	05 58 11.4	-0.5
SNZO	**South Karori**	**1.67**	**35**	PN	Pn	05 58 13.0	-0.6
SNZO				AML	AML	05 58 32.6	
SNZO				AML	AML	05 58 32.6	
SNZO	**South Karori**	**1.67**	**35**	*e*Pn	Pn	05 58 13.0	-0.6
SNZO				*e*Sn	Sn	05 58 32.1	-1.7
WEL	**Wellington**	**1.72**	**36**	PN	Pn	05 58 13.8	-0.4
WEL	**Wellington**	**1.72**	**36**	Pn	Pn	05 58 13.8	-0.4
PLWZ	**Palliser**	**1.76**	**51**	PN	Pn	05 58 13.9	-1.0
PLWZ	**Palliser**	**1.76**	**51**	Pn	Pn	05 58 13.9	-1.0
MSWZ	**Moikau Station**	**1.86**	**47**	PN	Pn	05 58 15.2	-1.0
MSWZ				AML	AML	05 58 38.0	
MSWZ				AML	AML	05 58 38.6	
PAWZ	**Paruwai Farm**	**1.98**	**49**	Pn	Pn	05 58 16.7	-1.1
PAWZ				AML	AML	05 58 39.9	
QRZ	**Quartz Range**	**1.98**	**340**	⇑PN	Pn	05 58 18.0	+0.1
QRZ				AML	AML	05 58 45.7	
QRZ				AML	AML	05 58 50.6	
CAW	**Cannon Point**	**2.00**	**38**	⇓PN	Pn	05 58 17.3	-0.8
CAW				AML	AML	05 58 40.5	
CAW				AML	AML	05 58 40.8	
RPZ	**Rata Peaks**	**2.02**	**239**	PN	Pn	05 58 17.7	-0.7
RPZ				AML	AML	05 58 41.4	
RPZ				AML	AML	05 58 41.9	
RPZ	**Rata Peaks**	**2.02**	**239**	*e*Pn	Pn	05 58 17.8	-0.7
RPZ				*e*Sn	Sn	05 58 40.1	-2.5
WVZ	**Waitaha Valley**	**2.02**	**258**	⇓PN	Pn	05 58 18.3	-0.1
WVZ				AML	AML	05 58 42.0	
WVZ				AML	AML	05 58 42.3	
KIW	**Kapiti Island**	**2.13**	**32**	PN	Pn	05 58 19.4	-0.6
KIW				AML	AML	05 58 44.9	
KIW				AML	AML	05 58 45.9	
MTW	**Mount Morrison**	**2.17**	**46**	AML	AML	05 58 47.4	
MTW				AML	AML	05 58 47.7	
MRZ	**Mangatainoka R**	**2.59**	**39**	PN	Pn	05 58 24.9	-1.2
MRZ				AML	AML	05 58 53.8	
MRZ				AML	AML	05 58 55.1	
FOZ	**Fox Glacier**	**2.88**	**251**	PN	Pn	05 58 29.1	-1.1
LBZ	**Lake Benmore**	**2.91**	**233**	PN	Pn	05 58 30.3	-0.3
ODZ	**Otahua Downs**	**3.10**	**220**	PN	Pn	05 58 32.5	-0.8
ODZ	**Otahua Downs**	**3.10**	**220**	*e*Pn	Pn	05 58 32.4	-0.9
WAZ	**Wanganui**	**3.16**	**22**	AML	AML	05 59 13.5	
WAZ				AML	AML	05 59 21.1	
VRZ	**Vera Road**	**3.70**	**16**	PN	Pn	05 58 42.2	+0.7
VRZ				AML	AML	05 59 29.5	
VRZ				AML	AML	05 59 31.8	
EAZ	**Earnscleugh**	**3.92**	**228**	PN	Pn	05 58 43.8	-0.6
TUZ	**Tuapeka**	**4.25**	**219**	PN	Pn	05 58 47.2	-0.3
HIZ	**Hauiti**	**4.31**	**15**	AML	AML	05 59 48.2	
HIZ	**Hauiti**	**4.31**	**15**	Pn	Pn	05 58 50.2	+0.3

*IDC **28** 06:04:21.2±0.9, 32°.40N × 105°.21E, h0km, mb3.6/5, mb1 3.7/8, mb1mx3.5/30, mbtmp3.5/8, ML3.7/3, Error ellipse: s-maj=37.9km s-min=18.0km az=56.0*
*BJI **28** 06:04:23.7, 32°.38N × 105°.06E, h5km, ML3.4/13, Ms3.1/2, Ms7 2.8/2*

ISC 28 06:04:22.9±0.6, 32°.46N±0°.03 × 104°.90E±0°.05, h15km, n13, σ1§84/22, mb3.7/5, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	**Chengdu**	**1.83**	**213**	Pn	**Pb**	**06 04 56.0**	**-0.2**
CD2				Pg	**Pg**	**06 04 58.5**	**+0.4**
CD2				Sn	**Sb**	**06 05 19.5**	**+0.6**
CD2				Sg	**Sg**	**06 05 22.8**	**+0.9**
CD2				smax	smax		
	comp=N,570nm,0.6s						
CD2				smax	smax		
	comp=E,680nm,0.6s						
XAN	**Xi'an**	**3.71**	**64**	Pn	**Pn**	**06 05 19.5**	**-0.3**
XAN				Pg	**Pb**	**06 05 29.8**	**+1.5**
XAN				Sg	**Sb**	**06 06 13.0**	**-0.2**
XAN				smax	smax		
	comp=N,130nm,0.8s						
XAN				smax	smax		
	comp=E,52nm,0.7s						
XAN				LR	LR		
	comp=N,130nm,9.0s						
XAN				LR	LR		
	comp=E,45nm,7.6s						
XAN				LR	LR		
	comp=Z,61nm,9.0s						
LZH	**Lanzhou**	**3.72**	**347**	*e*Pn	**Pb**	**06 05 26.0**	**-2.4**
LZH				Pg	**Pg**	**06 05 35.0**	**+0.8**
LZH				Sn	**Sb**	**06 06 12.8**	**-0.6**
LZH				Sg	**Sg**	**06 06 22.5**	**+0.1**
LZH				smax	smax		
	comp=N,210nm,0.5s						
LZH				smax	smax		
	comp=E,380nm,0.6s						
LZH				LR	LR		
	comp=N,200nm,5.7s						
LZH				LR	LR		
	comp=E,310nm,7.5s						
LZH				LR	LR		
	comp=Z,180nm,8.7s						
GYA	**Guiyang**	**6.18**	**165**	*e*Pn	**Pn**	**06 05 52.0**	**-1.8**
GYA				Sn	**Sn**	**06 07 00.3**	**-3.9**
GYA				Sg	Sb	06 07 29.8	+5.7
GYA				smax	smax		
	comp=N,30nm,0.6s						
GYA				smax	smax		
	comp=E,30nm,0.8s						
WHN	**Wuhan**	**8.29**	**101**	*e*P	**Pn**	**06 06 23.5**	**+0.9**
CMAR	**Chiang Mai Arr**	**14.94**	**202**	Pn	**Pn**	**06 07 55.5**	**+1.8**
	comp=E,0.2nm,0.3s,baz=18,slow=12,SNR=2.9						
SONM	**Songino Array**	**15.39**	**4**	Pn	**P**	**06 08 01.8**	**-2.5**
	comp=E,0.1nm,0.3s,baz=164,slow=16,SNR=2.7						
KSRS	**Korea Array**	**19.50**	**69**	P	**P**	**06 08 47.4**	**-2.0**
	comp=E,0.4nm,0.3s,baz=264,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**22.43**	**316**	P	**P**	**06 09 24.2**	**+3.0**
	comp=E,1.0nm,0.8s,baz=113,slow=12,SNR=8.9						
KURBB	**Kurchatov Arra**	**26.59**	**321**	P	**P**	**06 10 03.5**	**+3.1**
	comp=E,0.6nm,0.8s,baz=121,slow=11,SNR=4.6						
FINES	**FINESS Array B**	**56.82**	**326**	P	**P**	**06 14 07.6**	**+1.2**
	comp=E,1.7nm,1.0s,baz=83,slow=11,SNR=2.9						
WRA	**Warramunga Arr**	**59.24**	**147**	P	**P**	**06 14 23.1**	**-0.7**
	comp=E,0.7nm,0.5s,baz=340,slow=7.7,SNR=17						
ASAR	**Alice Springs**	**62.31**	**150**	P	**P**	**06 14 44.1**	**-0.6**
	comp=E,0.3nm,0.5s,baz=332,slow=6.4,SNR=7.6						

*ISCJB **28** 06:13:05.6±0.5, 5°.13S±0°.05 × 143°.59E±0°.08, h101km, mb4.1/13, Error ellipse: s-maj=12.1km s-min=7.2km az=163.0*
*IDC **28** 06:13:09.4±3.0, 5°.07S × 143°.54E, h119km±30km, mb3.8/14, mb1 3.9/17, mb1mx3.9/21, mbtmp3.8/17, Error ellipse: s-maj=23.7km s-min=14.5km az=91.0*

ISC 28 06:13:07.7±0.6, 5°.07S±0°.09 × 143°.5E±0°.1, h101km, n29, σ0§90/29, mb4.1/13, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.61**	**140**	P	**Pn**	**06 14 31.2**	**+2.5**
	8.3nm,0.3s,baz=354,slow=5.7,SNR=17						
PMG				S	**Sn**	**06 15 30.1**	**-1.9**
	6.0nm,0.3s,baz=316,slow=6.2,SNR=4.8						
CTA	**Charters Tower**	**15.16**	**170**	P	**P**	**06 16 39.2**	**0.0**
	0.3nm,0.3s,baz=9.5,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**17.29**	**210**	P	**P**	**06 17 01.6**	**-1.2**
	1.5nm,0.3s,baz=32,slow=12,SNR=68						
WRA				S	Sn	06 20 06.1	-9.2
	0.4nm,0.3s,baz=28,slow=22,SNR=3.8						
ASAR	**Alice Springs**	**20.69**	**206**	P	**P**	**06 17 39.4**	**-0.5**
	1.6nm,0.5s,baz=30,slow=12,SNR=30						
KAPI	**Kappang**	**23.69**	**269**	P	**P**	**06 18 10.5**	**-0.1**
	3.3nm,0.5s,baz=154,slow=5.3,SNR=4.5						
STKA	**Stephens Creek**	**26.73**	**184**	P	**P**	**06 18 36.8**	**-1.0**
	5.9nm,1.2s,baz=340,slow=9.7,SNR=2.8						
MJAR	**Matsushiro Arr**	**41.69**	**354**	P	**P**	**06 20 45.5**	**-1.0**
	0.9nm,0.5s,baz=174,slow=7.6,SNR=7.1						
KSRS	**Korea Array**	**44.74**	**342**	P	**P**	**06 21 10.9**	**0.0**
	2.8nm,0.9s,baz=163,slow=9.3,SNR=11						
CMAR	**Chiang Mai Arr**	**49.78**	**299**	P	**P**	**06 21 51.3**	**+0.8**
	2.4nm,0.5s,baz=113,slow=6.1,SNR=9.5						
USRK	**Ussuriysk Arra**	**50.13**	**349**	P	**P**	**06 21 52.6**	**0.0**
	2.8nm,0.6s,baz=185,slow=7.5,SNR=8.0						
PETK	**Petropavlovsk-**	**59.18**	**10**	P	**P**	**06 22 57.9**	**0.0**
	4.1nm,0.6s,baz=169,slow=8.6,SNR=8.9						
SONM	**Songino Array**	**61.95**	**333**	P	**P**	**06 23 16.9**	**-0.1**
	1.2nm,0.5s,baz=159,slow=7.3,SNR=5.1						
TAPN	**Taplejung**	**62.77**	**304**	*e*P	**P**	**06 23 24.0**	**+0.9**
	10nm,0.5s						
ODAN	**Odare**	**62.85**	**304**	*e*P	**P**	**06 23 24.2**	**+0.6**
	8.5nm,0.4s						
RAMN	**Ramite**	**63.54**	**303**	*e*P	**P**	**06 23 28.8**	**+0.7**
	9.6nm,0.6s						
GUN	**Gumba**	**64.48**	**304**	*e*P	**P**	**06 23 35.3**	**+0.9**
	30nm,0.8s						
PKI	**Pulchoki**	**64.75**	**304**	*e*P	**P**	**06 23 36.4**	**+0.3**
PKIN	**Phulchoki**	**64.77**	**304**	*e*P	**P**	**06 23 36.3**	**+0.2**
	4.0nm,0.4s						
KKN	**Kakani**	**64.94**	**304**	*e*P	**P**	**06 23 38.1**	**+0.9**
	20nm,0.8s						
DMN	**Daman**	**65.02**	**303**	*e*P	**P**	**06 23 38.5**	**+0.7**
	27nm,0.9s						
KOLN	**Koldanda**	**66.33**	**303**	*e*P	**P**	**06 23 46.9**	**+0.8**
	15nm,0.8s						
DANN	**Dangsing**	**66.39**	**304**	*e*P	**P**	**06 23 46.7**	**+0.1**
	25nm,0.8s						
VNDA	**Vanda**	**73.06**	**176**	P	**P**	**06 24 26.7**	**+0.4**
	0.4nm,0.6s,baz=331,slow=7.6,SNR=3.9						
MKAR	**Makanchi Array**	**74.60**	**321**	P	**P**	**06 24 36.2**	**+0.3**
	2.8nm,0.6s,baz=95,slow=8.8,SNR=52						
ZALV	**Zalesovo Beam**	**76.41**	**329**	P	**P**	**06 24 45.2**	**-0.7**
	2.5nm,0.6s,baz=108,slow=5.8,SNR=11						
KURBB	**Kurchatov Arra**	**78.44**	**324**	P	**P**	**06 24 57.0**	**-0.4**
	0.8nm,0.5s,baz=132,slow=3.3,SNR=7.0						
ILAR	**Eielson Array**	**86.00**	**24**	P	**P**	**06 25 35.4**	**-1.1**
	2.3nm,0.6s,baz=259,slow=4.9,SNR=40						
GERES	**GERESS Array B**	**119.17**	**324**	PKP	**PKPdf**	**06 31 45.2**	**0.0**
	0.3nm,0.6s,baz=108,slow=3.2,SNR=2.8						
TORD	**Torodi Ar. Bea**	**141.52**	**285**	PKhKP	PKPpre	06 32 23.2	
	0.3nm,0.5s,baz=56,slow=4.3,SNR=3.2						

IDC 28 06:15:36.9±15.0, 24°.22S × 179°.22E, h638km±201km, mb3.1/5, mb1 3.3/5, mb1mx3.0/18, mbtmp3.1/5, Error ellipse: s-maj=88.6km s-min=74.4km az=142.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**30.76**	**271**	P	P	06 21 04.1	+0.8
	8.3nm,0.4s,baz=94,slow=11,SNR=15						
STKA	**Stephens Creek**	**33.94**	**248**	P	P	06 21 29.0	-0.8
	1.0nm,0.4s,baz=90,slow=12,SNR=3.1						
ASAR	**Alice Springs**	**41.28**	**261**	P	P	06 22 29.6	+0.3
	0.8nm,0.4s,baz=87,slow=6.5,SNR=8.0						
WRA	**Warramunga Arr**	**41.67**	**267**	P	P	06 22 32.3	-0.1
	3.0nm,0.4s,baz=100,slow=8.4,SNR=17						
TXAR	**Lajitas Array**	**91.21**	**58**	P	P	06 27 36.1	+0.1
	0.3nm,0.7s,baz=208,slow=6.5,SNR=4.6						

*MAN **28** 06:58:09, 12°.81N × 124°.10E, h6km, mb5.2, ML4.1, MS4.3*
MAN INTENSITY IV - SORSOGON CITY; INTENSITY III - LEGASPI CITY; INTENSITY II - SAN JACINTO TICAO IS MASBATE.
*ISCJB **28** 06:58:10.1±1.0, 12°.87N±0°.05 × 124°.17E±0°.05, h33km±8km, mb4.0/14, MS3.4/9, Error ellipse: s-maj=8.2km s-min=7.5km az=41.9*
*IDC **28** 06:58:17.4±2.4, 12°.78N × 124°.08E, h95km±23km, mb3.7/14, mb1 3.8/15, mb1mx3.7/26, mbtmp3.8/15, MS3.4/10, Ms1 3.4/10, ms1mx3.1/46, Error ellipse: s-maj=21.3km s-min=12.1km az=73.0*

ISC 28 06:58:10.5±1.3, 12°.83N±0°.04 × 124°.10E±0°.05, h28km±10km, n38, σ1§39/35, mb4.1/14, MS3.3/9, 3D, Samar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNP	**Catarman**	**0.63**	**120**	*e*P	**Pb**	**06 58 22.1**	**-0.9**
MMPH	**Masbate**	**0.66**	**225**	*e*P	**Pb**	**06 58 22.7**	**-0.7**
MMPH				*i* S	**Sn**	**06 58 32.9**	**-0.5**
AUQP	**San Andres**	**1.47**	**290**	*e*P	**Pb**	**06 58 36.8**	**-0.4**
RCP	**Roxas**	**1.83**	**227**	⇓*i*P	**Pn**	**06 58 41.2**	**+1.1**
RCP				*e*S	**Sb**	**06 59 05.2**	**-0.5**
OCLP	**Ormoc**	**1.83**	**164**	*e*P	**Pb**	**06 58 41.4**	**-2.0**
GQP	**Guinayangan**	**1.93**	**304**	⇓*e*P	**Pn**	**06 58 42.7**	**+1.2**
GQP				*e*S	**Sb**	**06 59 09.8**	**+1.0**
OTRP	**Odiongan**	**2.08**	**257**	*e*P	**Pb**	**06 58 46.5**	**-1.0**
LLP	**Lapu-Lapu**	**2.50**	**183**	*e*P	**Pn**	**06 58 51.0**	**+1.7**
LLP				*e*S	**Sb**	**06 59 29.2**	**+4.2**
MSLP	**Maasin**	**2.78**	**164**	*e*P	**Pb**	**06 58 56.6**	**-2.8**
LQP	**Lukban**	**2.80**	**297**	⇓*e*P	**Pb**	**06 58 59.6**	**-0.4**
SJMP	**San Jose**	**2.93**	**263**	*e*P	**Pn**	**06 58 57.2**	**+2.0**
TBP	**Tagbilaran**	**3.12**	**184**	*e*P	**Pn**	**06 58 59.0**	**+1.0**
TGY	**Tagaytay City**	**3.33**	**293**	P	**Pb**	**06 59 06.5**	**-2.3**
	70nm,0.3s,baz=146,slow=4.9,SNR=22						
TGY				S	**Sb**	**06 59 47.7**	**-1.3**
	16nm,0.3s,baz=115,slow=6.0,SNR=4.1						
CUYO	**Cuyo Island**	**3.60**	**237**	*e*P	**Pn**	**06 59 04.8**	**+0.4**
ENPP	**El Nido**	**4.85**	**251**	*e*P	**Pn**	**06 59 23.3**	**+1.7**
BUKP	**Musuan**	**5.01**	**169**	*e*P	Pn	06 59 27.2	+3.4
KAPI	**Kappang**	**18.24**	**194**	LR	LR	07 09 22.3	
	comp=Z,116nm,19.1s,baz=319,slow=36						
BBKI	**Banjar Baru**	**18.61**	**210**	P	**Pn**	**07 02 26.6**	**+0.3**
JNU	**Nakatsue**	**21.13**	**16**	P	**P**	**07 02 54.0**	**+0.8**
	10nm,1.0s,baz=95,slow=5.9,SNR=3.6						
KSRS	**Korea Array**	**24.76**	**7**	P	**P**	**07 03 30.1**	**+0.3**
	2.9nm,0.6s,baz=184,slow=9.6,SNR=13						
KSRS				LR	LR	07 13 04.3	
	comp=Z,60nm,19.0s,baz=185,slow=36						
CMAR	**Chiang Mai Arr**	**24.85**	**286**	P	**P**	**07 03 30.6**	**-0.3**
	0.9nm,0.3s,baz=99,slow=7.3,SNR=8.4						
MJAR	**Matsushiro Arr**	**26.80**	**26**	LR	LR	07 12 26.4	
	comp=Z,59nm,20.0s,baz=195,slow=32						
USRK	**Ussuriysk Arra**	**31.99**	**11**	P	**P**	**07 04 35.1**	**+0.8**
	2.7nm,0.7s,baz=192,slow=10,SNR=7.8						
WRA	**Warramunga Arr**	**34.09**	**163**	P	**P**	**07 04 51.9**	**-0.9**
	1.1nm,0.5s,baz=339,slow=9.5,SNR=23						
ASAJ	**Asahikawa**	**34.99**	**23**	LR	LR	07 18 47.9	
	comp=Z,24nm,18.6s,baz=336,slow=35						
ASAR	**Alice Springs**	**37.52**	**165**	P	**P**	**07 05 22.1**	**-0.1**
	1.6nm,0.5s,baz=336,slow=7.0,SNR=28						
SONM	**Songino Array**	**37.91**	**341**	P	**P**	**07 05 25.2**	**-0.2**
	1.7nm,0.7s,baz=163,slow=10,SNR=7.2						
SONM				LR	LR	07 22 09.9	
	comp=Z,48nm,21.4s,baz=41,slow=38						
HNR	**Honiara**	**41.91**	**120**	LR	LR	07 21 11.5	
	comp=Z,36nm,18.5s,baz=306,slow=33						
STKA	**Stephens Creek**	**47.51**	**160**	P	**P**	**07 06 43.0**	**-0.3**
	1.9nm,0.7s,baz=330,slow=11,SNR=5.7						
PETK	**Petropavlovsk-**	**48.26**	**27**	P	**P**	**07 06 50.2**	**+1.3**
	2.0nm,0.6s,baz=206,slow=5.5,SNR=7.4						
MKAR	**Makanchi Array**	**48.72**	**322**	P	**P**	**07 06 52.3**	**-0.3**
	4.1nm,0.8s,baz=119,slow=8.6,SNR=37						
MKAR				PcP	**PcP**	**07 08 17.2**	**-0.3**
	0.5nm,0.6s,baz=115,slow=4.4,SNR=2.7						
ZALV	**Zalesovo Beam**	**51.38**	**331**	P	**P**	**07 07 11.9**	**-0.7**
	1.9nm,0.8s,baz=111,slow=8.1,SNR=7.7						
ZALV				LR	LR	07 30 57.7	
	comp=Z,40nm,18.6s,baz=69,slow=38						
AKTO	**Aktyubinsk**	**65.01**	**320**	LR	LR	07 37 06.6	
	comp=Z,47nm,18.6s,baz=111,slow=36						
ILAR	**Eielson Array**	**78.08**	**26**	P	**P**	**07 10 06.1**	**-0.5**
	0.3nm,0.8s,baz=256,slow=6.4,SNR=5.1						
ARCES	**ARCESS Array B**	**81.07**	**339**	P	**P**	**07 10 22.0**	**-0.7**
	1.6nm,0.9s,baz=57,slow=8.8,SNR=3.6						
FINES	**FINESS Array B**	**82.64**	**331**	P	P	07 10 29.9	-1.3
	0.8nm,0.5s,baz=88,slow=6.1,SNR=5.5						
NOA	**NORSAR Array B**	**89.54**	**333**	LR	LR	07 54 37.2	
	comp=Z,31nm,19.4s,baz=35,slow=38						
GERES	**GERESS Array B**	**93.38**	**322**	LR	LR	07 58 16.4	
	comp=Z,25nm,19.5s,baz=264,slow=38						

IDC 28 06:58:40.9±2.1, 7°.58S × 146°.10E, h0km, mb3.6/1, mb1 3.3/4, mb1mx3.3/17, mbtmp3.2/4, ML3.3/1, Error ellipse: s-maj=52.2km s-min=30.9km az=70.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**2.10**	**150**	Pn	Pn	06 59 17.6	+0.3
	1.7nm,0.3s,baz=315,slow=8.6,SNR=4.3						
PMG				Sn	Sg	06 59 53.4	+5.1
	4.4nm,0.3s,baz=338,slow=5.2,SNR=8.2						
WRA	**Warramunga Arr**	**16.76**	**222**	Pn	P	07 02 38.8	-0.9
	0.1nm,0.3s,baz=47,slow=12,SNR=5.7						
ASAR	**Alice Springs**	**19.82**	**215**	P	P	07 03 12.4	-1.0
	0.1nm,0.3s,baz=49,slow=9.0,SNR=5.6						
MKAR	**Makanchi Array**	**78.15**	**321**	P	P	07 10 42.2	0.0
	0.4nm,0.6s,baz=122,slow=7.5,SNR=4.1						

DJA 28 07:01:12.3±0.4, 3°.5S±4°.5 × 12°.0E±°, h20km±4km, M4.7/9, mb5.3/4, mB6.1/3, MLv4.3/9, Mw(mB)5.7/3, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TTSI	**Tana Toraja**	**0.01**	**184**	P	Pb	07 01 16.0	+0.2
TTSI				S	Sb	07 01 18.4	+0.3
SPSI	**Sidrap Palu**	**0.93**	**183**	P	Pb	07 01 29.0	-0.8
BKSI	**Bulukumba**	**2.30**	**172**	P	Pb	07 01 54.2	+1.1
SGKI	**Sangatta, Kali**	**3.33**	**318**	S	Sn	07 02 39.6	-2.7
BKB	**Balikpapan**	**3.41**	**301**	P	Pn	07 02 04.6	+0.2
BKB				S	Sn	07 02 45.2	+0.9
LUWI	**Luwuk**	**3.55**	**56**	P	Pn	07 02 06.5	+0.2
LUWI				S	Sn	07 02 41.8	-5.9
MTKI	**Muara Teweh, K**	**5.34**	**293**	P	Pn	07 02 31.5	+0.5
	77nm,0.5s,6µm0.5nm						
KMSI	**Cibinong**	**5.49**	**49**	P	Pn	07 02 33.8	+0.8
BMNI	**Bima**	**5.59**	**192**	P	Pn	07 02 34.4	0.0
	264nm,0.7s,23µm1.1nm						
WSI	**Waingapu**	**6.61**	**176**	P	Pn	07 02 48.1	-0.3
	2µm,0.5s,21µm7.0nm						
MNI	**Manado**	**6.70**	**49**	P	Pn	07 02 49.3	-0.4

*ISK **28** 07:03:51.3, 37°.29N × 28°.23E, h14km, MD2.4*
*CSEM **28** 07:03:51.9±0.2, 37°.25N × 28°.24E, h15km, MD2.4, Error ellipse: s-maj=4.6km s-min=3.3km az=33.0*
*ISCJB **28** 07:03:52.5±0.6, 37°.24N±0°.04 × 28°.21E±0°.04, h10km±9km, Error ellipse: s-maj=7.7km s-min=4.3km az=34.3*
*DDA **28** 07:03:52.0, 37°.23N × 28°.19E, h7km, MD2.8*

ISC 28 07:03:52.4±0.9, 37°.23N±0°.03 × 28°.21E±0°.03, h13km±7km, n16, σ0§69/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.11**	**147**	*e*PG	**Pg**	**07 03 54.9**	**-0.7**
YER				*e*SG	**Sg**	**07 03 58.7**	**+0.9**
YER	**Yerkesik**	**0.11**	**147**	*e*Pg	**Pg**	**07 03 54.9**	**-0.7**
YER				*e*Sg	**Sg**	**07 03 58.7**	**+0.9**
MLSB	**Milas**	**0.35**	**281**	*e*PG	**Pg**	**07 03 59.1**	**-0.3**
MLSB				*e*SG	**Sb**	**07 04 05.1**	**-0.8**
MLSB	**Milas**	**0.35**	**281**	*e*Pg	**Pg**	**07 03 59.1**	**-0.3**
MLSB				*e*Sg	**Sb**	**07 04 05.1**	**-0.8**
TURN	**Turunc**	**0.48**	**138**	*e*P	**Pg**	**07 04 01.0**	**-0.8**
TURN				*e*S	**Sg**	**07 04 08.0**	**-0.1**
TURN	**Turunc**	**0.48**	**138**	*e*P	**Pg**	**07 04 01.0**	**-0.8**
TURN				*e*S	**Sg**	**07 04 08.0**	**-0.1**
AYDN	**Tasoluk**	**0.50**	**329**	*e*P	**Pg**	**07 04 02.4**	**+0.2**
AYDN				*e*S	**Sg**	**07 04 09.3**	**+0.3**
AYDN	**Tasoluk**	**0.50**	**329**	*e*P	**Pg**	**07 04 02.4**	**+0.2**
AYDN				*e*S	**Sg**	**07 04 09.

	baz=324								
NSK				*i* S		**Sg**	07 10 14.2	-0.3	
	baz=324								
EHY	**Hungye**	**0.77**	**214**	*e*P		**Pb**	07 10 08.0	-0.7	
	baz=222								
TWA	**Mucha**	**0.84**	**347**	*e*P		**Pb**	07 10 09.8	0.0	
	baz=349								
TWA				*e*S		**Sb**	07 10 20.9	-0.3	
	baz=349								
SMLT	**Sun Moon Lake**	**0.86**	**252**	P		**Pb**	07 10 10.1	0.0	
	baz=250								
SMLT				S		**Sb**	07 10 20.9	-0.7	
	baz=250								
NSTT	**Nanjuang**	**0.86**	**304**	*e*P		**Pb**	07 10 10.0	-0.2	
	baz=303								
NSTT				S		**Sb**	07 10 20.9	-0.7	
	baz=303								
TWB1	**Santiao Chiao**	**0.87**	**12**⇑	*i*P		**Pb**	07 10 10.4	+0.1	
	baz=6.0								
TWB1				S		**Sb**	07 10 22.0	+0.1	
	baz=6.0								
TYC	**Yuchr**	**0.89**	**254**	*i* P		**Pn**	07 10 10.5	-1.0	
	baz=245								
TYC				*e*S		**Sg**	07 10 21.3	-0.6	
	baz=245								
NWF	**Wu-fen Shan**	**0.91**	**360**	*e*P		**Pn**	07 10 11.5	-0.5	
	baz=1.0								
TAP1	**Taipei**	**0.91**	**345**	P		**Pn**	07 10 11.5	-0.4	
	baz=345								
TAP1				S		**Sb**	07 10 23.2	0.0	
	baz=345								
TWF1	**Yuli**	**0.92**	**209**	*e*P		**Pg**	07 10 10.0	-0.9	
	baz=220								
TAP	**Taipei**	**0.92**	**344**	*e*P		**Pb**	07 10 11.2	+0.1	
	baz=345								
TAP				*e*S		**Sb**	07 10 23.1	-0.2	
	baz=345								
TWQ1	**Liyutan**	**0.95**	**282**	*e*P		**Pn**	07 10 12.8	+0.5	
	baz=281								
NSY	**Sanyi**	**0.97**	**286**	⇑P		**Pn**	07 10 13.1	+0.3	
	baz=285								
NSY				*e*S		**Sn**	07 10 27.1	+0.6	
	baz=285								
NCU	**National Centr**	**0.98**	**326**	*e*P		**Pn**	07 10 12.9	+0.1	
	baz=327								
NCU				S		**Sn**	07 10 27.6	+0.9	
	baz=327								
HSN	**Hsinchu**	**0.99**	**311**	*e*P		**Pn**	07 10 13.6	+0.7	
	baz=314								
TWS1	**Kuangyinshan**	**1.00**	**340**	*e*P		**Pn**	07 10 13.4	+0.2	
	baz=349								
TWS1				*e*S		**Sn**	07 10 27.9	+0.7	
	baz=349								
YUS	**Yu-Shan**	**1.01**	**229**⇓	*i*P		**Pn**	07 10 13.2	-0.5	
	baz=228								
TCU	**Taichung**	**1.02**	**270**	P		**Pn**	07 10 14.3	+1.0	
	baz=269								
TCU				S		**Sn**	07 10 28.8	+1.2	
	baz=269								
WNT	**Mingjian**	**1.05**	**255**	*e*P		**Pn**	07 10 14.6	+0.9	
	baz=250								
WNT				*e*S		**Sn**	07 10 29.6	+1.3	
	baz=250								
ALS	**Alishan**	**1.10**	**235**	P		**Pn**	07 10 14.8	0.0	
	baz=234								
ALS				*e*S		**Sn**	07 10 30.4	+0.2	
	baz=234								
CHKT	**Chengkung**	**1.12**	**200**	*e*P		**Pn**	07 10 14.4	-0.3	
	baz=185								
TWY	**Chenhua**	**1.13**	**351**	*e*P		**Pn**	07 10 15.9	+1.0	
	baz=352								
CHN5	**Tsauling**	**1.16**	**242**	*e*P		**Pn**	07 10 16.0	+0.7	
	baz=241								
CHN5				*e*S		**Sn**	07 10 33.1	+1.9	
	baz=241								
YOJ	**Yonaguni jima**	**1.16**	**74**	*e*P		**Pg**	07 10 16.0	+0.5	
	baz=67								
YOJ				*e*S		**Sn**	07 10 32.8	+1.7	
	baz=67								
ELDTW	**Lidau**	**1.19**	**216**	*e*P		**Pg**	07 10 15.6	-0.6	
	baz=216								
WGK	**Gukeng**	**1.22**	**248**	*e*P		**Pg**	07 10 17.1	+0.5	
	baz=247								
WTP	**Ta-pu**	**1.41**	**230**	*e*P		**Pg**	07 10 19.8	-0.4	
	baz=219								
WTP				*e*S		**Sg**	07 10 40.3	+1.8	
	baz=219								
WTCT	**Ta-ch'eng**	**1.41**	**258**	*e*P		**Pn**	07 10 18.1	-0.7	
	baz=259								
WTCT				*e*S		**Sg**	07 10 39.7	+1.1	
	baz=259								
CHY	**Chiayi**	**1.41**	**243**	*e*P		**Pg**	07 10 20.5	+0.2	
	baz=243								
CHY				*e*S		**Sg**	07 10 41.5	+2.9	
	baz=243								
TWG	**Pinlang**	**1.48**	**206**	*e*P		**Pg**	07 10 21.3	-0.4	
	baz=207								
TWK	**Hsinying**	**1.48**	**234**	*e*P		**Pg**	07 10 21.4	-0.3	
	baz=234								
TWK				*e*S		**Sg**	07 10 42.2	+1.3	
	baz=234								
PCYT	**Pengchaiyu**	**1.49**	**10**	*e*P		**Pb**	07 10 20.2	-0.6	
	baz=8.0								
CHN1	**Nanshi**	**1.50**	**230**	*e*P		**Pg**	07 10 21.7	-0.4	
	baz=222								
CHN1				*e*S		**Sg**	07 10 43.0	+1.4	
	baz=222								
WSF	**Szhu**	**1.52**	**251**	*e*P		**Pb**	07 10 20.7	-0.7	
	baz=251								
SCLT	**Jiali**	**1.76**	**237**	*e*P		**Pg**	07 10 26.7	-0.2	
	baz=238								
TWM1	**Shoushan**	**1.82**	**224**	*e*P		**Pg**	07 10 27.6	-0.6	
	baz=224								
EAST	**Anshuo**	**1.96**	**206**	*e*P		**Pb**	07 10 27.8	-1.1	
	baz=194								
SCZT	**Fangliau**	**2.07**	**211**	*e*P		**Pb**	07 10 29.2	-1.6	
	baz=195								
PNG	**Penghu**	**2.13**	**254**	*e*P		**Pn**	07 10 29.3	+0.7	
	baz=256								
TWK1	**Hengchun**	**2.38**	**203**	*e*P		**Pb**	07 10 33.7	-2.3	
	baz=190								
QZH	**Quanzhou**	**3.01**	**286**⇑	*i*Pn		**Pn**	07 10 40.3	-0.5	
QZH				Sn		**Sn**	07 11 15.0	-1.9	
QZH				smax		smax			
	comp=N,320nm,0.7s								
QZH				smax		smax			
	comp=E,210nm,0.6s								
KNM	**Kinmen**	**3.07**	**276**	*e*P		**Pn**	07 10 43.0	+1.4	
	baz=275								
KSRS	**Korea Array**	**14.26**	**20**	Pn		**P**	07 13 22.9	+0.7	
	comp=E,0.2nm,0.3s,baz=199,slow=12,SNR=7.6								
MJAR	**Matsushiro Arr**	**18.76**	**45**	LR		LR	07 21 15.5		
	comp=E,36nm,20.7s,baz=290,slow=35								
MKAR	**Makanchi Array**	**38.74**	**316**	P		**P**	07 17 17.3	-0.1	
	comp=E,0.3nm,0.5s,baz=118,slow=10,SNR=4.4								
WRA	**Warramunga Arr**	**45.50**	**163**	P		**P**	07 18 11.3	-1.4	
	comp=E,0.3nm,0.5s,baz=345,slow=8.7,SNR=9.0								
ASAR	**Alice Springs**	**48.97**	**165**	P		**P**	07 18 39.8	0.0	
	comp=E,0.1nm,0.4s,baz=340,slow=7.1,SNR=3.6								

*ISCJB **28** 07:13:29.6±0.9,51°53.N±0.05′×16°12.E±0.04′,h0km, Error ellipse: s-maj=6.7km s-min=3.7km az=12.8*
*CSEM **28** 07:13:31.2±0.6,51°51.N×16°10.E,h2km,ML2.9/4, Error ellipse: s-maj=10.0km s-min=5.9km az=173.0*
*PRU **28** 07:13:32.0,51°50.N×16°13.E,h0km*
*WAR **28** 07:13:32.1,51°51.N×16°12.E*

ISC 28 07:13:31.7±1.3,51°51.N±0.07′×16°12.E±0.03′,h0km,n16, σ0s50/32,Poland

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time		Res
				Op			h m s		ISC
KSP	**Ksiaz**	**0.68**	**171**	*e*Pg		**Pg**	**07 13 44.8**		**+0.1**
KSP				*e*Sg		**Sg**	**07 13 54.3**		**+0.8**
UPC	**Upice**	**1.01**	**184**	*e*PG		**Pg**	**07 13 50.9**		**-0.2**
UPC				*e*SG		**Sg**	**07 14 04.0**		**-0.1**
	comp=Z,5.4nm,0.3s								
UPC	**Upice**	**1.01**	**184**	Pg		**Pg**	**07 13 50.9**		**-0.2**
UPC				Sg		**Sg**	**07 14 04.0**		**-0.1**
	5.4nm,0.3s								
DPC	**Dobruska-Polom**	**1.17**	**174**	*e*PG		**Pg**	**07 13 53.7**		**-0.5**
DPC				*e*SG		**Sg**	**07 14 09.1**		**-0.2**
DPC	**Dobruska-Polom**	**1.17**	**174**	Pg		**Pg**	**07 13 53.7**		**-0.5**
DPC				Sg		**Sg**	**07 14 09.1**		**-0.2**
PVCC	**Panska Ves**	**1.39**	**225**	*e*PG		**Pn**	**07 13 57.7**		**-0.7**
PVCC				*e*SG		**Sg**	**07 14 16.2**		**-0.2**
	comp=Z,45nm,0.2s								
PVCC	**Panska Ves**	**1.39**	**225**	Pg		**Pn**	**07 13 57.7**		**-0.7**
PVCC				Sg		**Sg**	**07 14 16.2**		**-0.2**
	45nm,0.2s								
BRG	**Berggiesshubel**	**1.51**	**246**	PG		**Pn**	**07 14 00.0**		**-0.1**
BRG				SG		**Sn**	**07 14 20.8**		**+0.4**
	35nm,0.3s								
PRU	**Pruhonice**	**1.83**	**214**	*e*PG		**Pn**	**07 14 05.2**		**+0.8**
PRU				*e*SG		**Sb**	**07 14 29.9**		**+0.5**
	comp=Z,7.8nm,0.2s								
PRU	**Pruhonice**	**1.83**	**214**	Pg		**Pn**	**07 14 05.2**		**+0.8**
PRU				Sg		**Sb**	**07 14 29.9**		**+0.5**
	7.8nm,0.2s								
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn		**Pn**	**07 14 05.1**		**-1.2**
MORC				*e*Sg		**Sn**	**07 14 31.7**		**+0.1**
CLL	**Collm**	**1.96**	**265**	*e*Pg		**Pb**	**07 14 08.0**		**-0.3**
CLL				*i* Sg		**Sb**	**07 14 33.9**		**+0.6**
	comp=Z,4.0nm,0.3s								
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*PN		**Pn**	**07 14 08.8**		**+0.5**
OKC				*e*PG		**Pb**	**07 14 11.0**		**+0.1**
OKC				*e*SG		**Sg**	**07 14 39.4**		**-0.3**
	comp=Z,2.9nm,0.3s								
OKC	**Ostrava-Krasne**	**2.12**	**142**	Pn		**Pn**	**07 14 08.8**		**+0.5**
VRAC	**Vranov**	**2.23**	**172**	*e*Pn		**Pn**	**07 14 09.7**		**-0.2**
VRAC				*e*Sg		**Sg**	**07 14 42.5**		**-0.8**
OJC	**Ojcow**	**2.67**	**118**	*e*Pg		**Pg**	**07 14 22.6**		**-0.2**
OJC				*e*Sg		**Sg**	**07 14 57.5**		**+0.2**

*ISK **28** 07:31:25.5,37°31.N×28°25.E,h4km,MD2.6*
*CSEM **28** 07:31:26.9±0.3,37°26.N×28°23.E,h10km,MD2.6, Error ellipse: s-maj=6.8km s-min=5.3km az=32.0*
*ISCJB **28** 07:31:27.1±0.6,37°22.N±0.05′×28°19.E±0.05′,h12km±8km, Error ellipse: s-maj=10.6km s-min=4.6km az=36.0*
*DDA **28** 07:31:27.2,37°22.N×28°20.E,h7km,MD2.7*

ISC 28 07:31:26.5±1.0,37°29.N±0.04′×28°27.E±0.03′,h8km±10km, n18,σ0s41/28,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time		Res
				Op			h m s		ISC
YER	**Yerkesik**	**0.16**	**175**	*e*PG		**Pg**	**07 31 29.3**		**-0.5**
YER				*e*SG		**Sg**	**07 31 32.7**		**+0.6**
YER	**Yerkesik**	**0.16**	**175**	*e*Pg		**Pg**	**07 31 29.3**		**-0.5**
YER				*e*Sg		**Sg**	**07 31 32.7**		**+0.6**
MLSB	**Milas**	**0.39**	**270**	*e*PG		**Pg**	**07 31 33.7**		**-0.4**
MLSB				*e*SG		**Sg**	**07 31 39.4**		**+0.2**
MLSB	**Milas**	**0.39**	**270**	*e*Pg		**Pg**	**07 31 33.7**		**-0.4**
MLSB				*e*Sg		**Sg**	**07 31 39.4**		**+0.2**
AYDN	**Tasoluk**	**0.48**	**320**	*i* P		**Pb**	**07 31 37.3**		**+0.1**
AYDN				*i* S		**Sb**	**07 31 44.9**		**+0.5**
AYDN	**Tasoluk**	**0.48**	**320**	*i* P		**Pb**	**07 31 37.3**		**+0.1**
AYDN				*i* S		**Sb**	**07 31 44.9**		**+0.5**
TURN	**Turunc**	**0.50**	**147**	*i* P		**Pg**	**07 31 36.2**		**+0.1**
TURN				*i* S		**Sb**	**07 31 45.0**		**+0.1**
TURN	**Turunc**	**0.50**	**147**	*i* P		**Pg**	**07 31 36.2**		**+0.1**
TURN				*i* S		**Sb**	**07 31 45.0**		**+0.1**
DALY	**Dalyan (Mu¨la**	**0.57**	**147**	*e*PG		**Pg**	**07 31 37.6**		**+0.2**
DALY				*e*SG		**Sb**	**07 31 46.2**		**-0.7**
DALY	**Dalyan (Mu¨la**	**0.57**	**147**	*e*Pg		**Pg**	**07 31 37.6**		**+0.2**
DALY				*e*Sg		**Sb**	**07 31 46.2**		**-0.7**
DNZL	**Cakiroluk**	**0.74**	**57**	*i* P		**Pn**	**07 31 43.3**		**-0.1**
DNZL	**Cakiroluk**	**0.74**	**57**	*i* P		**Pn**	**07 31 43.3**		**-0.1**
DENT	**Denizli**	**0.77**	**53**	*e*PG		**Pg**	**07 31 40.7**		**-0.5**
DENT	**Denizli**	**0.77**	**53**	*e*Pg		**Pg**	**07 31 40.7**		**-0.5**
DAT	**Datca**	**0.79**	**224**	*e*PG		**Pg**	**07 31 41.2**		**-0.4**
DAT	**Datca**	**0.79**	**224**	*e*Pg		**Pg**	**07 31 41.2**		**-0.4**
BODT	**Bodrum**	**0.80**	**253**	*e*PG		**Pg**	**07 31 41.5**		**-0.3**
BODT	**Bodrum**	**0.80**	**253**	*e*Pg		**Pg**	**07 31 41.5**		**-0.3**

*NEIC **28** 07:32:55.9, 19°.35N×67°.72W,h100km,MD3.3(RSPR), After RSPR.*

RSPR 28 07:32:55.9,19°.35N×67°.72W,h100km±8km,MD3.3/11, 18C-6D,Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time		Res
				Op			h m s		ISC
AGPR	**Aguadilla, PR**	**1.05**	**147**	*e*Pn		**Pn**	**07 33 13.3**		**-3.7**
AGPR				*e*Sn		**Sn**	**07 33 26.4**		**-6.3**
LSP	**Las Mesas**	**1.31**	**153**⇑	*e*P		**Pn**	**07 33 18.4**		**-1.6**
LSP	**Las Mesas**	**1.31**	**153**⇑	*e*P		**Pn**	**07 33 18.4**		**-1.6**
LRS	**Lares**	**1.34**	**142**⇑	*e*P		**Pn**	**07 33 18.4**		**-1.9**
LRS	**Lares**	**1.34**	**142**⇑	*e*P		**Pn**	**07 33 18.4**		**-1.9**
AOPR	**Arecibo Observ**	**1.35**	**137**⇑	*e*P		**Pn**	**07 33 19.5**		**-1.0**
AOPR	**Arecibo Observ**	**1.35**	**137**	*e*S		**Sn**	**07 33 38.8**		**-0.2**
AOPR	**Arecibo Observ**	**1.35**	**137**⇑	*e*P		**Pn**	**07 33 19.5**		**-1.0**
AOPR				*e*S		**Sn**	**07 33 38.8**		**-0.2**
CRPR	**Cabo Rojo, PR**	**1.45**	**156**⇑	*e*P		**Pn**	**07 33 20.5**		**-1.2**
CRPR	**Cabo Rojo, PR**	**1.45**	**156**	*e*S		**Sn**	**07 33 41.5**		**+0.4**
CRPR	**Cabo Rojo, PR**	**1.45**	**156**⇑	*e*P		**Pn**	**07 33 20.5**		**-1.2**
CRPR				*e*S		**Sn**	**07 33 41.5**		**+0.4**
SMN1	**Samana, DR**	**1.48**	**264**⇑	*e*P		**Pn**	**07 33 21.1**		**-0.9**
SMN1				*e*S		**Sn**	**07 33 41.4**		**-0.3**
CELP	**Cerrillos**	**1.66**	**139**⇓	*e*P		**Pn**	**07 33 24.0**		**-0.2**
CELP				*e*S		**Sn**	**07 33 46.4**		**+0.6**
CELP	**Cerrillos**	**1.66**	**139**⇓	*e*P		**Pn**	**07 33 24.0**		**-0.2**
CELP				*e*S		**Sn**	**07 33 46.4**		**+0.6**
DR12	**Loma Pena Alta**	**1.67**	**251**⇑	*e*P		**Pn**	**07 33 24.3**		**-0.1**
DR12				*e*S		**Sn**	**07 33 46.6**		**+0.6**
DR12	**Loma Pena Alta**	**1.67**	**251**⇑	*e*P		**Pn**	**07 33 24.3**		**-0.1**
DR12				*e*S		**Sn**	**07 33 46.6**		**+0.6**
OBIP	**Obispado Ponce**	**1.67**	**141**⇑	*e*P		**Pn**	**07 33 23.8**		**-0.5**
OBIP	**Obispado Ponce**	**1.67**	**141**	*e*S		**Sn**	**07 33 46.0**		**0.0**
OBIP	**Obispado Ponce**	**1.67**	**141**⇑	*e*P		**Pn**	**07 33 23.8**		**-0.5**
OBIP				*e*S		**Sn**	**07 33 46.0**		**0.0**
SJG	**San Juan**	**1.93**	**129**⇑	*e*P		**Pn**	**07 33 27.9**		**+0.3**
SJG	**San Juan**	**1.93**	**129**⇓	*e*P		**Pn**	**07 33 27.8**		**+0.2**
SJG				*e*S		**Sn**	**07 33 51.3**		**-0.5**
SJG	**San Juan**	**1.93**	**129**⇓	*e*P		**Pn**	**07 33 27.8**		**+0.2**
SJG				*e*S		**Sn**	**07 33 51.0**		**-0.8**
SJG				*e*S		**Sn**	**07 33 51.3**		**-0.5**
CBYP	**Canovanas**	**2.06**	**121**⇑	*e*P		**Pn**	**07 33 29.6**		**+0.2**
CBYP	**Canovanas**	**2.06**	**121**	*e*S		**Sn**	**07 33 55.2**		**+0.2**
CBYP	**Canovanas**	**2.06**	**121**⇑	*e*P		**Pn**	**07 33 29.6**		**+0.2**
CBYP				*e*S		**Sn**	**07 33 55.2**		**+0.2**
MTP	**Monte Pirata**	**2.40**	**121**⇓	*e*P		**Pn**	**07 33 33.9**		**+0.1**
MTP	**Monte Pirata**	**2.40**	**121**	*e*S		**Sn**	**07 34 03.2**		**+0.4**
MTP	**Monte Pirata**	**2.40**	**121**⇓	*e*P		**Pn**	**07 33 33.9**		**+0.1**
MTP				*e*S		**Sn**	**07 34 03.2**		**+0.4**
STVI	**Saint Thomas**	**2.80**	**110**⇑	*e*P		**Pn**	**07 33 39.6**		**+0.6**
STVI	**Saint Thomas**	**2.80**	**110**	*e*S		**Sn**	**07 34 12.5**		**+0.3**
STVI	**Saint Thomas**	**2.80**	**110**⇑	*e*P		**Pn**	**07 33 39.6**		**+0.6**
STVI				*e*S		**Sn**	**07 34 12.5**		**+0.3**
SDDR	**Presa de Saban**	**3.39**	**264**	Pn		**Pn**	**07 33 51.3**		**+4.3**

*BJI **28** 07:47:02.3,25°.70S×179°.38E,h491km,mB4.7/6,mb4.5/10*
*ISCJB **28** 07:47:03.3±0.3,25°.46S±0.03′×179°.53E±0.06′,h507km, mb4.2/34, Error ellipse: s-maj=7.5km s-min=4.5km az=9.1*
*NEIC **28** 07:47:03.3±0.6,25°.41S×179°.57E,h498km±7km, mb4.5/22, Error ellipse: s-maj=9.1km s-min=7.9km az=136.0*
*IDC **28** 07:47:03.7±1.1,25°.31S×179°.59E,h502km±11km, mb3.6/13,mb1 3.7/14,mb1mx3.6/21,mbtmp3.6/14, Error ellipse: s-maj=13.4km s-min=10.9km az=177.0*

ISC 28 07:47:03.8±0.4,25°.44S±0.06′×179°.60E±0.08′,h507km, n170,σ1s20/187,mb4.3/34,2C,South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		ISC	Time		Res
				Op			h m s		ISC
RAO	**Raoul Island**	**4.39**	**150**	P		**P**	**07 48 25.8**		**0.0**
RAO	**Raoul Island**	**4.39**	**150**	P		**P**	**07 48 27.4**		**+1.6**
	600nm,0.3s,baz=69,slow=13,SNR=27								
MSVF	**Nonsavu**	**7.80**	**349**	*e*P		**P**	**07 48 56.7**		**-1.9**
MKAZ	**Moumakai**	**12.24**	**197**	PN		**P**	**07 49 46.7**		**+2.0**
PUZ	**Puketiti**	**12.65**	**185**	PN		**P**	**07 49 48.8**		**-0.3**
PUZ				SN		**S**	**07 52 01.3**		**-4.0**
URZ	**Urewera**	**12.96**	**189**	*e*P		**P**	**07 49 51.5**		**-0.8**
URZ	**Urewera**	**12.96**	**189**	PN		**P**	**07 49 51.5**		**-0.8**
URZ				SN		**S**	**07 52 09.9**		**-1.3**
URZ	**Urewera**	**12.96**	**189**	P		**P**	**07 49 51.1**		**-1.1**
	25nm,0.3s,baz=34,slow=2.2,SNR=98								
URZ				S		**S**	**07 52 11.4**		**+0.3**
	7.1nm,0.3s,baz=74,slow=21,SNR=10								
MWZ	**Matawai**	**12.98**	**187**	PN		**P**	**07 49 51.8**		**-0.7**
MWZ				SN		**S**	**07 52 07.6**		**-4.0**
CNGZ	**Carnagh Statio**	**13.06**	**185**	PN		**P**	**07 49 54.1**		**+0.8**
RAHZ	**Arahi**	**13.61**	**188**	PN		**P**	**07 49 58.0**		**-1.2**
BKZ	**Black Stump Fm**	**13.94**	**190**	PN		**P**	**07 50 00.8**		**-1.9**
AFI	**Afiamalu**	**14.04**	**37**	P		P	07 49 57.6		-6.4
AFI				*e*S		S	07 52 19.3		-13
WHVZ	**Whangaehu Hut**	**14.21**	**193**	PN		**P**	**07 50 04.6**		**-1.2**
MRZ	**Mangatainoka R**	**15.55**	**191**	PN		**P**	**07 50 16.1**		**-3.4**
KIW	**Kapiti Island**	**15.88**	**193**	PN		**P**	**07 50 20.3**		**-2.5**
MTW	**Mount Morrison**	**16.05**	**191**	PN		**P**	**07 50 20.7**		**-3.9**
CAW	**Cannon Point**	**16.08**	**192**	PN		**P**	**07 50 23.1**		**-1.9**
SNZO	**South Karori**	**16.35**	**193**	*e*P		**P**	**07 50 26.9**		**-0.8**
	33nm,0.5s								
SNZO				*e*S		**S**	**07 53 13.0**		**-2.3**
QRZ	**Quartz Range**	**16.44**	**199**	PN		**P**	**07 50 28.7**		**0.0**
THZ	**Tophouse**	**17.20**	**197**	*e*PN		**P**	**07 50 35.3**		**-1.0**
KHZ	**Kahutara**	**17.66**	**195**	*e*P		**P**	**07 50 39.6**		**-0.9**
	53nm,1.1s								
KHZ				*e*S		**S**	**07 53 37.4**		**+0.1**
KHZ	**Kahutara**	**17.66**	**195**	PN		**P**	**07 50 39.6**		**-0.9**
RPZ	**Rata Peaks**	**19.53**	**199**	*e*P		**P**	**07 50 57.5**		**0.0**
	94nm,1.6s								
RPZ	**Rata Peaks**	**19.53**	**199**	P		**P**	**07 50 57.0**		**-0.5**
	2.4nm,0.3s,baz=64,slow=7.3,SNR=13								
HNR	**Honiara**	**24.54**	**307**	*e*P		**P**	**07 51 41.8**		**-1.2**
	56nm,0.7s								
HNR	**Honiara**	**24.54**	**307**	P		**P**	**07 51 41.6**		**-1.4**
	69nm,0.5s,baz=348,slow=1.8,SNR=6.5								
CTA	**Charters Tower**	**31.16**	**273**	P		**P**	**07 52 42.1**		**+1.3**
	26nm,0.5s,baz=97,slow=11,SNR=60								
CTAO	**Charters Tower**	**31.16**	**273**	*e*P		**P**	**07 52 42.1**		**+1.3**
	23nm,0.6s								
STKA	**Stephens Creek**	**33.84**	**250**	*e*P		**P**	**07 53 05.4**		**+1.9**
STKA	**Stephens Creek**	**33.84**	**250**	P		**P**	**07 53 04.7**		**+1.2**
	1.8nm,0.5s,baz=145,slow=19,SNR=8.8								
PMG	**Port Moresby**	**34.69**	**292**	*e*P		**P**	**07 53 10.8**		**0.0**
	20nm,0.7s								
PMG	**Port Moresby**	**34.69**	**292**	P		**P**	**07 53 11.1**		**+0.3**
	17nm,0.7s,baz=95,slow=5.2,SNR=12								
COEN	**Coen**	**36.03**	**281**	*e*P		**P**	**07 53 22.7**		**+0.7**
	76nm,0.8s								
AS31	**Alice Springs**	**41.45**	**262**	*e*P		**P**	**07 54 06.0**		**-0.1**
ASAR	**Alice Springs**	**41.45**	**262**	P		**P**	**07 54 06.5**		**+0.5**
	3.8nm,0.4s,baz=91,slow=7.2,SNR=72								
ASAR				S		**S**	**07 59 45.2**		**+0.8**
	1.0nm,0.6s,baz=93,slow=17,SNR=8.5								
WRAB	**Tennant Creek**	**41.96**	**268**	*e*P		**P**	**07 54 09.3**		**-0.7**
	9.1nm,0.9s								
WRA	**Warraninga Arr**	**41.97**	**268**	P		**P**	**07 54 09.9**		**-0.2**
	5.5nm,0.6s,baz=102,slow=8.0,SNR=123								
WRA				ScP		**ScP**	**07 58 58.0**		**+2.2**
	1.3nm,0.9s,baz=100,slow=3.9,SNR=7.2								
WRA				S		**S**	**07 59 50.9**		**-1.0**
	1.7nm,0.8s,baz=99,slow=14,SNR=11								
FITZ	**Fitzroy Crossi**	**50.37**	**267**	P		**P**	**07 55 14.6**		**+0.5**
	3.1nm,0.5s,baz=134,slow=7.2,SNR=19								
VNDA	**Vanda**	**52.83**	**185**	P		**P**	**07 55 32.8**		**+1.9**
	0.5nm,0.8s,baz=324,slow=5.0,SNR=5.2								
MBWA	**Marble Bar**	**54.77**	**261**	*e*P		**P**	**07 55 45.3**		**-0.3**
QSPA	**South Pole Qui**	**64.65**	**180**	*e*P		**P**	**07 56 52.2**		**+1.3**
MJAR	**Matsushiro Arr**	**72.96**	**326**	P		**P**	**07 57 40.8**		**-0.6**
	3.6nm,0.8s,baz=167,slow=5.3,SNR=13								
MAW	**Mawson**	**76.19**	**201**	P		**P**	**07 58 00.6**		**+1.6**
	1.0nm,0.5s,baz=199,slow=4.6,SNR=8.2								
KSRS	**Korea Array**	**79.19**	**321**	P		**P**	**07 58 15.7**		**0.0**
	1.8nm,0.7s,baz=133,slow=5.1,SNR=8.5								
QIZ	**Qiongzhong**	**80.94**	**296**	P		**P**	**07 58 25.8**		**+0.5**
QIZ				pP		**pP**	**08 00 12.5**		**-2.8**
QIZ				sP		**sP**	**08 01 03.5**		**-3.9**
QIZ				S		**SKSac**	**08 07 54.8**		**-1.0**
QIZ				pmax		pmax			
	comp=Z,18nm,2.1s								
NJ2	**Nanjing**	**81.40**	**311**	*e*P		**P**	**07 58 29.5**

MVU	**Marysvale**	**90.07**	**47**	*e*P	**P**	07 59 10.7	+1.1
	comp=Z,3.8nm,1.0s						
MSU	**Marysvale**	**90.10**	**47**	*e*P	**P**	07 59 10.7	+1.1
Y20A	**Horse Springs,**	**90.29**	**52**	P	**P**	07 59 11.9	+1.3
	baz=90,SNR=6.3						
222A	**Williams Famil**	**90.31**	**54**	P	**P**	07 59 12.0	+1.4
	baz=90						
Z21A	**St. Cloud Mine**	**90.50**	**53**	P	**P**	07 59 12.8	+1.2
	baz=91						
X20A	**Quemado**	**90.53**	**52**	P	**P**	07 59 12.8	+1.1
	baz=91						
MFID	**Camas Ranch**	**90.55**	**41**	*e*P	**P**	07 59 12.1	+0.6
MFID	**Camas Ranch**	**90.55**	**41**	P	**P**	07 59 12.1	+0.6
	baz=91						
W20A	**Ramah**	**90.82**	**51**	P	**P**	07 59 13.9	+0.9
	baz=91						
Y21A	**Point of Rocks**	**90.85**	**52**	P	**P**	07 59 14.7	+1.4
	baz=91,SNR=5.1						
Q16A	**Castle Valley**	**90.98**	**47**	P	**P**	07 59 14.9	+1.2
	baz=91						
Z22A	**Elephant Butte**	**90.98**	**53**	P	**P**	07 59 14.8	+1.0
	baz=91,SNR=6.3						
X21A	**Alamocita Cree**	**90.99**	**52**	P	**P**	07 59 15.0	+1.1
	baz=91						
TMUT	**Trail Mountain**	**91.16**	**47**	*e*P	**P**	07 59 15.6	+1.0
	comp=Z,5.9nm,0.6s						
324A	**Moseley Ranch,**	**91.18**	**56**	P	**P**	07 59 15.2	+0.5
	baz=91						
I12A	**Atlanta**	**91.18**	**41**	P	**P**	07 59 15.1	+0.7
	baz=91						
425A	**Indio Mountain**	**91.24**	**56**	P	**P**	07 59 15.5	+0.5
	baz=91						
626A	**Big Bend Ranch**	**91.29**	**58**	P	**P**	07 59 16.2	+1.0
	baz=92,SNR=5.1						
HVU	**Hansel Valley**	**91.49**	**44**	*e*P	**P**	07 59 16.6	+0.7
	comp=Z,4.6nm,0.7s						
SRU	**San Rafael**	**91.51**	**47**	*e*P	**P**	07 59 16.3	+0.2
	comp=Z,8.0nm,1.0s						
SRU	**San Rafael**	**91.51**	**47**	P	**P**	07 59 16.4	+0.4
	baz=92						
TXAR	**Lajitas Array**	**91.55**	**58**	P	**P**	07 59 17.0	+0.7
	comp=Z,2.8nm,0.8s,baz=213,slow=6.4,SNR=38						
526A	**Mary Lane Ranc**	**91.57**	**57**	P	**P**	07 59 17.0	+0.5
	baz=92						
JLU	**Jordanelle**	**91.70**	**45**	*e*P	**P**	07 59 17.6	+0.7
	comp=Z,5.2nm,1.0s						
H12A	**Diamond D Ranc**	**91.78**	**41**	P	**P**	07 59 17.3	+0.2
	baz=92						
627A	**Terlingua Ranc**	**91.82**	**58**	P	**P**	07 59 18.1	+0.5
	baz=92						
426A	**McDonald Obser**	**91.90**	**57**	P	**P**	07 59 18.5	+0.4
	baz=92						
527A	**Woodward Ranch**	**91.97**	**58**	P	**P**	07 59 18.8	+0.4
	baz=92						
U21A	**Nageezi**	**92.07**	**50**	P	**P**	07 59 19.5	+0.7
	baz=92						
Z24A	**Sheeppen Canyo**	**92.18**	**54**	P	**P**	07 59 20.0	+0.7
	baz=92						
X23A	**Hourglass Bar**	**92.20**	**53**	P	**P**	07 59 20.2	+0.8
	baz=92						
628A	**Black Gap, Mar**	**92.22**	**58**	P	**P**	07 59 20.0	+0.6
	baz=92,SNR=5.4						
125A	**Gardner Draw,**	**92.38**	**55**	P	**P**	07 59 20.7	+0.5
	baz=93						
Y24A	**Capitan**	**92.42**	**53**	P	**P**	07 59 21.2	+0.8
	baz=93						
427A	**Hayter Ranch,**	**92.46**	**57**	P	**P**	07 59 21.2	+0.7
	baz=93,SNR=8.6						
226B	**Tecolote Peak,**	**92.47**	**56**	P	**P**	07 59 20.9	+0.3
	baz=93						
528A	**Cox Ranch, San**	**92.61**	**58**	P	**P**	07 59 21.7	+0.5
	baz=93						
M17A	**Scullys Gap (B**	**92.66**	**45**	P	**P**	07 59 21.3	0.0
	baz=93						
P19A	**Cripple Cowboy**	**92.80**	**47**	P	**P**	07 59 22.3	+0.2
	baz=93						
529A	**Stev Forest Ra**	**93.03**	**58**	P	**P**	07 59 23.3	+0.2
	baz=93						
O19A	**Miners Draw (B**	**93.05**	**46**	P	**P**	07 59 23.9	+0.8
	baz=93						
R21A	**Cimarron**	**93.12**	**49**	P	**P**	07 59 24.0	+0.4
	baz=93						
P20A	**De Beque**	**93.12**	**47**	P	**P**	07 59 23.8	+0.3
	baz=93						
S22A	**4UR Ranch, Cre**	**93.30**	**50**	P	**P**	07 59 24.9	+0.4
	baz=94						
V24A	**Rampart Ranch,**	**93.41**	**52**	P	**P**	07 59 25.3	+0.4
	baz=94						
429A	**Davenport Ranc**	**93.51**	**58**	P	**P**	07 59 25.4	+0.1
	baz=94,SNR=11						
R22A	**Saguache, Gunn**	**93.59**	**49**	P	**P**	07 59 26.5	+0.7
	baz=94						
ILAR	**Eielson Array**	**93.60**	**14**	P	**P**	07 59 23.2	-1.6
	comp=Z,0.2nm,0.6s,baz=226,slow=4.9,SNR=7.7						
N20A	**Spence Gulch,**	**93.89**	**46**	P	**P**	07 59 27.0	0.0
	baz=94						
SMCO	**Snowmass**	**93.91**	**48**	*e*P	**P**	07 59 27.7	+0.3
	comp=Z,2.1nm,0.8s						
631A	**Perdido Creek**	**93.97**	**59**	P	**P**	07 59 27.7	+0.3
	baz=94						
531A	**Rocksprings**	**94.33**	**59**	P	**P**	07 59 29.2	+0.2
	baz=94						
O22A	**Kremmling**	**94.69**	**48**	P	**P**	07 59 30.8	+0.1
	baz=95						
R24A	**Sanders Place,**	**94.73**	**50**	P	**P**	07 59 31.5	+0.7
	baz=95						
P23A	**Jefferson**	**94.78**	**49**	P	**P**	07 59 31.9	+0.6
	baz=95						
532A	**Rocksprings**	**94.81**	**59**	P	**P**	07 59 31.2	-0.1
	baz=95						
N22A	**Wattenberg Ran**	**95.06**	**47**	P	**P**	07 59 32.8	+0.4
	baz=95						
332A	**Millersview**	**95.50**	**58**	P	**P**	07 59 34.3	0.0
	baz=96						
WMQ	**Urumqi**	**108.45 310**		*e*PKP	**PKiKP**	08 04 37.0	+2.6
MKAR	**Makanchi Array**	**112.92 312**		PKiKP	**PKiKP**	08 04 41.8	-0.9
	comp=Z,0.1nm,0.5s,baz=193,slow=5.2,SNR=3.1						
MKAR				PKKPbc	**PKKPbc**	08 15 31.9	-0.2
	comp=Z,0.3nm,0.5s,baz=272,slow=4.1,SNR=6.5						
KURBB	**Kurchatov Arra**	**116.10 316**		PKP	**PKPdf**	08 04 47.1	-1.5
	comp=Z,0.6nm,0.7s,baz=100,slow=1.8,SNR=5.7						
BVAR	**Borovoye Array**	**121.34 318**		PKP	**PKPdf**	08 04 58.1	-0.6
	comp=Z,1.0nm,0.4s,baz=186,slow=0.3,SNR=6.1						
ARCES	**ARCESS Array B**	**133.31 348**		PKhKP	PKPpre	08 05 13.6	
	comp=Z,1.3nm,0.7s,baz=5.2,slow=2.7,SNR=5.4						
ARCES				PKP	**PKPdf**	08 05 20.2	-0.8
	comp=Z,0.6nm,0.3s,baz=66,slow=2.7,SNR=9.1						
ARCES				SKPbc	**SKPbc**	08 08 02.4	+0.8
	comp=Z,2.3nm,0.5s,baz=37,slow=3.5,SNR=29						
JOF	**Joensuu**	**137.04 339**		*e*p	**SKPbc**	08 08 14.0	+0.7
	comp=Z,1.8nm,0.4s						
KAF	**Kangasniemi**	**139.18 341**		*e*p	**SKPbc**	08 08 19.7	+0.4
	comp=Z,1.9nm,0.4s						
FINES	**FINESS Array B**	**139.77 341**		PKhKP	PKPpre	08 05 25.1	
	comp=Z,0.5nm,0.4s,baz=46,slow=5.0,SNR=9.8						
FINES				PKP	**PKiKP**	08 05 34.6	-1.0
	comp=Z,0.3nm,0.4s,baz=76,slow=2.4,SNR=3.5						
FINES				SKPbc	**SKPbc**	08 08 21.6	+0.7
	comp=Z,2.9nm,0.5s,baz=46,slow=3.9,SNR=20						
NB2	**NORSAR Subarra**	**143.53 351**		PKP	PKPab	08 05 37.4	-0.9
	comp=Z,3.4nm,0.6s,baz=16,slow=3.3						
NOA	**NORSAR Array B**	**143.53 351**		PKP	PKPab	08 05 37.5	-0.8
	comp=Z,2.8nm,0.5s,baz=22,slow=3.8,SNR=22						
NAO01	**NORSAR Array S**	**143.77 351**		*e*PKPdf	PKPbc	08 05 38.4	-0.8
KONO	**Kongsberg**	**145.10 351**		*e*PKPbc	**PKPdf**	08 05 42.7	+0.1
AKASG	**Malin Array Be**	**146.05 326**		PKPbc	**PKPdf**	08 05 45.1	+0.7
	comp=Z,0.6nm,0.3s,baz=45,slow=4.6,SNR=4.3						
BRTR	**Keskin Array B**	**148.19 305**		PKPbc	**PKPbc**	08 05 52.4	-0.3
	comp=Z,0.7nm,0.4s,baz=136,slow=4.6,SNR=5.4						
DPC	**Dobruska-Polom**	**151.97 337**↑		*e*PKP	**PKPbc**	08 06 01.4	+0.4
CLL	**Collm**	**152.20 342**		*i* PKPbc	**PKPbc**	08 06 01.1	-0.3
	comp=Z,5.0nm,0.7s						
BRG	**Berggiesshubel**	**152.31 340**		*e*P	**PKPbc**	08 06 01.5	-0.1
	comp=Z,2.6nm,0.5s						
TORD	**Torodi Ar. Bea**	**167.62 190**		PKP	**PKPdf**	08 06 11.2	-1.1
	comp=Z,0.5nm,0.7s,baz=96,slow=1.4,SNR=2.8						
TORD				PKPab	**PKPab**	08 07 21.9	+0.3
	comp=Z,1.0nm,0.6s,baz=160,slow=3.9,SNR=7.3						

NIED ***28*** *07:55:00,24.°40N×121.°50E,h11km,Mw4.1 Best double couple: M0 1.73000×10^15 NP1:φs56.00000°,δ66.00000°, λ98.00000°. NP2:φs218.00000°,δ26.00000°,λ74.00000°.*
IDC ***28*** *07:55:56.9±1.2,23.°94N×121.°31E,h0km,mb3.7/5, mb1 3.8/6,mb1mx3.5/26,mbtmp3.7/6,ML3.4/1,MS3.2/3, Ms1 3.3/3,ms1mx2.4/44,Error ellipse: s-maj=71.6km s-min=20.3km az=68.0*

BJI ***28*** *07:55:56.2,24.°16N×121.°77E,h4km,mb4.4/1,ML4.0/5, Ms3.6/2,Ms7 3.6/2*
JMA ***28*** *07:55:57.4±0.4,24.°37N×121.°53E,h57km,M3.5*
ISCJB ***28*** *07:55:58.7±0.4,24.°17N±0.°02×121.°81E±0.°02,h5km±2km, mb3.5/5,MS3.2/3,Error ellipse: s-maj=3.1km s-min=2.1km az=40.6*
TAP ***28*** *07:55:59.0,24.°18N×121.°75E,h10km,ML4.1,B*

ISC 28 07:55:58.5±0.8,24.°16N±0.°02×121.°77E±0.°02,h14km±5km, n71,σ0°81/106,mb3.6/5,MS3.2/3,4C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.15**	**349**	*e*P		**Pg**	**07 56 02.3**	**-0.1**
	baz=1.0							
EHP				S		**Sg**	**07 56 05.1**	**+0.1**
	baz=1.0							
TWD	**Chiawan**	**0.18**	**244**	*i* P		**Pg**	**07 56 02.9**	**+0.2**
	baz=242							
TWD				*i* S		**Sg**	**07 56 05.7**	**+0.1**
	baz=242							
HWA	**Hwalien**	**0.24**	**220**	⇑P		**Pb**	**07 56 04.8**	**+0.2**
	baz=223							
HWA				*e*S		**Sb**	**07 56 09.2**	**+0.5**
	baz=223							
ENA	**Nanau**	**0.27**	**354**	⇑P		**Pg**	**07 56 04.3**	**+0.1**
ENA				*e*S		**Sg**	**07 56 08.3**	**+0.3**
ESF	**Shoufeng Towns**	**0.38**	**220**	*e*P		**Pb**	**07 56 06.8**	**-0.2**
	baz=229							
TWC	**Suao**	**0.45**	**9**	P		**Pg**	**07 56 07.8**	**+0.3**
	baz=9.0							
TWC				S		**Sg**	**07 56 14.3**	**+0.7**
	baz=9.0							
NNS	**Nan Shan**	**0.46**	**307**	⇑P		**Pg**	**07 56 07.7**	**0.0**
	baz=308							
NNS				*e*S		**Sg**	**07 56 13.9**	**0.0**
	baz=308							
ESL	**Shilin**	**0.46**	**222**	*e*P		**Pb**	**07 56 08.8**	**+0.3**
	baz=229							
ESL				*e*S		**Sb**	**07 56 14.7**	**-0.5**
	baz=229							
WHF	**Hehuan Shan**	**0.47**	**268**	*e*P		**Pg**	**07 56 08.1**	**+0.2**
	baz=267							
WHF				*e*S		**Sg**	**07 56 14.1**	**-0.2**
	baz=267							
TWT	**Tachien**	**0.55**	**280**	*e*P		**Pb**	**07 56 10.0**	**-0.1**
	baz=279							
TWT				*i* S		**Sg**	**07 56 17.4**	**+0.6**
	baz=279							
TWE	**Neicheng**	**0.57**	**350**	*e*P		**Pb**	**07 56 10.0**	**-0.2**
	baz=353							
ILA	**Ilan**	**0.60**	**358**	P		**Pb**	**07 56 11.1**	**+0.3**
ILA				S		**Sb**	**07 56 19.6**	**+0.4**
NSK	**Sanguang**	**0.64**	**324**	⇓P		**Pg**	**07 56 11.4**	**+0.4**
	baz=325							
NSK				S		**Sg**	**07 56 19.9**	**+0.4**
	baz=325							
EHY	**Hungye**	**0.77**	**213**	*e*P		**Pg**	**07 56 12.3**	**-1.1**
	baz=213							
TWA	**Mucha**	**0.83**	**348**	*e*P		**Pg**	**07 56 14.4**	**-0.3**
	baz=349							
SMLT	**Sun Moon Lake**	**0.84**	**251**	*e*P		**Pn**	**07 56 15.6**	**-0.5**
	baz=251							
SMLT				S		**Sg**	**07 56 26.0**	**0.0**
	baz=251							
NSTT	**Nanjuang**	**0.85**	**304**	*e*P		**Pb**	**07 56 15.4**	**+0.4**
	baz=304							
NSTT				*e*S		**Sg**	**07 56 25.7**	**-0.3**
	baz=304							
TWB1	**Santiao Chiao**	**0.87**	**13**	*e*P		**Pb**	**07 56 15.5**	**+0.2**
	baz=7.0							
TYC	**Yuchr**	**0.88**	**253**	*e*P		**Pb**	**07 56 15.3**	**-0.2**
	baz=244							
TYC				S		**Sg**	**07 56 26.4**	**-0.6**
	baz=244							
TAP1	**Taipei**	**0.91**	**345**	*e*P		**Pg**	**07 56 16.3**	**+0.3**
	baz=346							
TAP1				*e*S		**Sb**	**07 56 27.6**	**-0.3**
	baz=346							
NWF	**Wu-fen Shan**	**0.91**	**0**	*e*P		**Pg**	**07 56 16.3**	**+0.2**
	baz=353							
NWF				*e*S		**Sn**	**07 56 29.6**	**-0.3**
	baz=353							
TAP	**Taipei**	**0.91**	**345**	*e*P		**Pb**	**07 56 14.7**	**-1.4**
	baz=346							
TWF1	**Yuli**	**0.92**	**209**	*e*P		**Pb**	**07 56 15.3**	**-0.9**
	baz=220							
TWQ1	**Liyutan**	**0.93**	**282**	*e*P		**Pn**	**07 56 17.9**	**+0.7**
	baz=283							
NSY	**Sanyi**	**0.96**	**286**	*e*P		**Pn**	**07 56 17.9**	**+0.4**
	baz=286							
NSY				*e*S		**Sn**	**07 56 31.3**	**+0.2**
	baz=286							
NCU	**National Centr**	**0.97**	**327**	*e*P		**Pn**	**07 56 18.6**	**+0.9**
	baz=327							
NCU				*e*S		**Sn**	**07 56 31.2**	**-0.1**
	baz=327							
HSN	**Hsinchu**	**0.97**	**311**	*e*P		**Pn**	**07 56 18.2**	**+0.5**
	baz=315							
TWS1	**Kuangyinshan**	**0.99**	**341**	*e*P		**Pn**	**07 56 18.5**	**+0.5**
	baz=350							
TWS1				*e*S		**Sn**	**07 56 32.3**	**+0.5**
	baz=350							
TCU	**Taichung**	**1.00**	**270**	*e*P		**Pn**	**07 56 19.1**	**+1.0**
	baz=270							
TCU				*e*S		**Sn**	**07 56 33.5**	**+1.4**
	baz=270							
YUS	**Yu-Shan**	**1.01**	**229**	*e*P		**Pb**	**07 56 18.2**	**+0.2**
	baz=229							
YUS				*e*S		**Sg**	**07 56 32.2**	**+1.0**
	baz=229							
WNT	**Mingjian**	**1.03**	**254**	⇑P		**Pn**	**07 56 19.8**	**+1.2**
	baz=250							
WNT				S		**Sn**	**07 56 34.2**	**+1.3**
	baz=250							
ALS	**Alishan**	**1.10**	**234**	*e*P		**Pb**	**07 56 19.5**	**+0.1**
	baz=235							
ALS				*e*S		**Sn**	**07 56 35.4**	**+0.6**
	baz=235							
CHKT	**Chengkung**	**1.12**	**200**	*e*P		**Pb**	**07 56 18.9**	**-0.7**
	baz=186							
TWY	**Chenhua**	**1.12**	**352**	*e*P		**Pg**	**07 56 20.6**	**+0.4**
	baz=353							
CHN5	**Tsauling**	**1.15**	**241**	*e*P		**Pg**	**07 56 21.6**	**+0.9**
	baz=242							
CHN5				S		**Sn**	**07 56 38.0**	**+2.2**
	baz=242							
YOJ	**Yonaguni jima**	**1.17**	**75**	*i* P		**Pg**	**07 56 21.3**	**+0.3**
	baz=66							
YOJ				*e*S		**Sg**	**07 56 38.0**	**+1.7**
	baz=66							
YOJ	**Yonaguni jima**	**1.17**	**75**	P		**Pn**	**07 56 20.4**	**0.0**
YOJ				S		**Sg**	**07 56 37.8**	**+1.5**
ELDTW	**Lidau**	**1.19**	**216**	*e*P		**Pn**	**07 56 20.8**	**-0.1**
	baz=218							
WGK	**Gukeng**	**1.21**	**247**	*e*P		**Pg**	**07 56 22.8**	**+1.1**
	baz=249							
WTCT	**Ta-ch'eng**	**1.40**	**258**	*e*P		**Pg**	**07 56 26.0**	**+0.6**
	baz=259							
WTCT				*e*S		**Sg**	**07 56 44.5**	**+1.0**
	baz=259							
WTP	**Ta-pu**	**1.40**	**230**	*e*P		**Pb**	**07 56 24.5**	**+0.1**
	baz=232							
WTP				*e*S		**Sg**	**07 56 44.8**	**+1.2**
	baz=232							
CHY	**Chiayi**	**1.40**	**242**	*e*P		**Pg**	**07 56 25.8**	**+0.4**
	baz=244							
CHY				*e*S		**Sg**	**07 56 45.1**	**+1.5**
	baz=244							
TWK	**Hsinying**	**1.48**	**233**	*e*P		**Pb**	**07 56 26.2**	**+0.5**
	baz=236							
TWK				*e*S		**Sg**	**07 56 47.2**	**+1.1**
	baz=236							
TWG	**Pinlang**	**1.48**	**206**	*e*P		**Pn**	**07 56 22.8**	**-1.9**
	baz=210							
CHN1	**Nanshi**	**1.50**	**230**	*e*P		**Pb**	**07 56 26.5**	**+0.4**
	baz=223							
CHN1				*e*S		**Sg**	**07 56 47.9**	**+1.1**
	baz=223							
WSF	**Szhu**	**1.51**	**250**	*e*P		**Pb**	**07 56 26.6**	**+0.2**
	baz=252							
WSF				*e*S		**Sg**	**07 56 47.7**	**+0.5**
	baz=252							
CHN3	**Shinhua**	**1.68**	**230**	*e*P		**Pg**	**07 56 30.2**	**-0.6**
	baz=233							
CHN3				*e*S		**Sg**	**07 56 54.4**	**+1.7**
	baz=233							
ECL	**Taimali**	**1.73**	**206**	*e*P		**Pb**	**07 56 30.2**	**+0.2**
	baz=196							
IRIF	**Iriomote-Funau**	**1.79**	**84**	P		**Pn**	**07 56 29.6**	**+0.6**
IRIF				S		**Sb**	**07 56 53.2**	**-0.3**
TWM1	**Shoushan**	**1.82**	**223**	*e*P		**Pg**	**07 56 32.6**	**-0.8**
	baz=226							
SGLT	**Jiouru**	**1.85**	**220**	*e*P		**Pb**	**07 56 32.4**	**+0.3**
	baz=224							
HATJ	**Hateruma jima**	**1.86**	**93**	P		**Pn**	**07 56 30.9**	**+1.0**
HATJ				*e*S		**Sb**	**07 56 55.4**	**0.0**
TAW	**Tawu**	**1.97**	**204**	*e*P		**Pb**	**07 56 35.0**	**+0.9**
	baz=196							
JKRS	**Kuro-shima**	**2.04**	**87**	P		**Pn**	**07 56 33.8**	**+1.4**
SCZT	**Fangliau**	**2.07**	**211**	*e*P		**Pb**	**07 56 35.2**	**-0.7**
	baz=198							
PNG	**Penghu**	**2.12**	**254**	*e*P		**Pn**	**07 56 34.9**	**+1.4**
	baz=258							
JIJ	**Ishigaki jima**	**2.17**	**84**	P		**Pn**	**07 56 35.0**	**+0.8**
JIJ				S		**Sn**	**07 57 01.7**	**+0.7**
TWP	**Hsiaoliuchiu**	**2.22**	**216**	*e*P		**Pg**	**07 56 41.1**	**-0.1**
	baz=240							
TWK1	**Hengchun**	**2.38**	**202**	*e*P		**Pb**	**07 56 39.0**	**-2.1**
	baz=195							
JTJ	**Tarama**	**2.71**	**79**	*e*S		**Sn**	**07 57 15.3**	**+1.0**
QZH	**Quanzhou**	**3.00**	**286**	Pn		**Pn**	**07 56 46.0**	**+0.4**
QZH				Sn		**Sn**	**07 57 21.0**	**-0.4**
QZH				smax		smax		
	comp=N,770nm,0.9s							
QZH				smax		smax		
	comp=E,540nm,1.2s							
NJ2	**Nanjing**	**8.27**	**343**	*e*P		**Pn**	**07 57 57.0**	**-1.1**
NJ2				S		**Sn**	**07 59 32.0**	**+0.7**
NJ2				pmax		pmax		
	comp=Z,20nm,1.0s							
NJ2				smax		smax		
	comp=N,80nm,1.0s							
NJ2				smax		smax		
	comp=E,60nm,1.0s							
NJ2				LR		LR		
	comp=N,650nm,13.8s							
NJ2				LR		LR		
	comp=E,310nm,11.5s							
NJ2				LR		LR		
	comp=Z,440nm,10.1s							
KSRS	**Korea Array**	**14.26**	**20**	Pn		**P**	**07 59 24.9**	**-2.3**
	comp=Z,0.2nm,0.3s,baz=197,slow=13,SNR=7.2							
ASAJ	**Asahikawa**	**26.20**	**35**	LR		LR	08 12 43.6	
	comp=Z,46nm,18.9s,baz=162,slow=38							
SONM	**Songino Array**	**26.60**	**336**	P		**P**	**08 01 37.0**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=164,slow=5.7,SNR=3.8							
MKAR	**Makanchi Array**	**38.73**	**316**	P		**P**	**08 03 21.6**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=102,slow=9.2,SNR=6.5							
ZALV	**Zalesovo Beam**	**40.56**	**327**	P		**P**	**08 03 37.4**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=128,slow=9.6,SNR=4.1							
ZALV				LR		LR	08 22 07.6	
	comp=Z,31nm,18.2s,baz=70,slow=39							
POO	**Poona**	**44.82**	**272**	*e*x		x	08 04 05.0	
WRA	**Warramunga Arr**	**45.51**	**163**	P		**P**	**08 04 17.4**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=345,slow=8.7,SNR=7.5							
ASAR	**Alice Springs**	**48.98**	**165**	P		**P**	**08 04 44.7**	**-0.1**
	comp=Z,0.4nm,0.7s,baz=339,slow=7.0,SNR=4.0							
NOA	**NORSAR Array B**	**78.50**	**332**	LR		LR	08 45 24.6	
	comp=Z,17nm,19.3s,baz=215,slow=38							

TAP 28 07:58:26.2,24.°18N×121.°73E,h11km,ML3.6,7C-2D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.13**	**4**	*i* P		Pg	07 58 29.6	+0.1
	baz=7.0							
EHP				*i* S		Sg	07 58 32.2	+0.5
	baz=7.0							
TWD	**Chiawan**	**0.16**	**231**	⇓*i* P		Pg	07 58 30.0	+0.2
	baz=238							
TWD				*i* S		Sg	07 58 32.6	+0.4
	baz=238							
HWA	**Hwalien**	**0.23**	**210**	*e*P		Pb	07 58 32.1	-0.3
	baz=220							
ENA	**Nanau**	**0.25**	**2**	⇑*i* P		Pg	07 58 31.6	+0.2
	baz=3.0							
ENA				S		Sg	07 58 35.3	+0.4
	baz=3.0							
ESF	**Shoufeng Towns**	**0.37**	**214**	*e*P		Pg	07 58 32.5	-1.0
	baz=223							
ESF				*e*S		Sb	07 58 40.1	-0.4
	baz=223							
NNS	**Nan Shan**	**0.42**	**309**	⇑*i* P		Pg	07 58 34.8	+0.2
	baz=309							
NNS				S		Sg	07 58 40.5	+0.2
	baz=309							
WHF	**Hehuan Shan**	**0.43**	**266**	⇑*i* P		Pg	07 58 35.0	-0.2
	baz=266							
WHF				S		Sg	07 58 40.9	-0.3
	baz=266							
TWC	**Suao**	**0.44**	**14**	⇑*i* P		Pg	07 58 35.1	+0.2
	baz=8.0							
TWC				*e*S		Sg	07 58 41.4	+0.6
	baz=8.0							
ESL	**Shilin**	**0.45**	**217**	⇑P		Pg	07 58 35.1	-0.1
	baz=224							
ESL				*e*S		Sg	07 58 42.0	+0.8
	baz=224							
TWT	**Tachien**	**0.51**	**278**	*i* P		Pb	07 58 37.1	-0.3
	baz=278							
TWT				*i* S		Sb	07 58 44.5	-0.6
	baz=278							
TWE	**Neicheng**	**0.54**	**354**	⇑*i* P		Pg	07 58 37.3	+0.4
	baz=354							
TWE				S		Sg	07 58 44.5	+0.5
	baz=354							
ILA	**Ilan**	**0.58**	**2**	*e*P		Pb	07 58 38.1	-0.3
	baz=2.0							
ILA				*e*S		Sb	07 58 46.5	-0.2
	baz=2.0							
NSK	**Sanguang**	**0.60**	**326**	⇑*i* P		Pg	07 58 38.3	+0.3
	baz=325							
NSK				*i* S		Sg	07 58 46.4	+0.4
	baz=325							
EHY	**Hungye**	**0.77**	**209**	*e*P		Pg	07 58 40.2	-0.8
	baz=210							
NSTT	**Nanjuang**	**0.80**	**304**	*e*P		Pb	07 58 42.4	+0.2
	baz=304					

baz=269
YUS Yu-Shan 0.99 226 ⇓*i* P Pg 07 58 45.5 -0.5
baz=228
YUS *e*S Sg 07 58 59.1 -0.2
baz=228
WNT Mingjian 1.00 253 *e*P Pn 07 58 46.4 +0.2
baz=249
WNT *e*S Sn 07 59 01.6 +1.2
baz=249
ALS Alishan 1.08 232 P Pb 07 58 47.0 -0.3
baz=234
TWY Chenhua 1.10 354 *e*P Pn 07 58 49.0 +1.4
baz=338
CHN5 Tsauling 1.12 239 *i* P Pn 07 58 48.5 +0.4
baz=241
CHN5 S Sn 07 59 05.6 +2.0
baz=241
CHKT Chengkung 1.13 197 *e*P Pb 07 58 46.8 -0.9
baz=185
ELDTW Lidau 1.18 214 *e*P Pb 07 58 46.9 -2.0
baz=217
YOJ Yonaguni jima 1.20 76 *e*P Pn 07 58 48.5 -0.5
baz=67
YOJ *e*S Sn 07 59 05.2 0.0
baz=67
CHY Chiayi 1.38 241 *e*P Pg 07 58 53.0 +0.3
baz=244
WTP Ta-pu 1.38 228 *e*P Pb 07 58 51.9 -0.2
baz=232
WTP *e*S Sg 07 59 11.8 +1.0
baz=232
TWK Hsinying 1.46 232 *e*P Pb 07 58 53.2 -0.2
baz=235
CHN1 Nanshi 1.48 228 *e*P Pb 07 58 54.2 +0.4
baz=222
CHN1 *e*S Sg 07 59 15.9 +1.9
baz=222
TWG Pinlang 1.48 204 *e*P Pn 07 58 51.9 -0.9
baz=191
TWM1 Shoushan 1.81 222 *e*P Pb 07 58 59.5 +0.2
baz=227
SCZT Fangliau 2.07 210 *e*P Pb 07 59 02.7 -1.1
baz=215

IDC 28 07:59:47.7±44.0, 18°20S×174°44W, h0km, mb3.9/3, mb1 4.0/3, mb1mx3.6/20, mbtmp3.9/3, Error ellipse: s-maj=843.0km s-min=161.1km az=81.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**41.82**	**242**	P	P	08 07 39.5	+0.1
	1.2nm,0.8s,baz=94,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**48.29**	**259**	P	P	08 08 30.7	-0.5
	0.5nm,0.8s,baz=97,slow=7.0,SNR=17						
ASAR	**Alice Springs**	**48.35**	**254**	P	P	08 08 31.6	0.0
	2.6nm,0.6s,baz=91,slow=8.5,SNR=56						

MAN 28 08:12:22, 10°11N×124°85E, h5km, mb4.5, ML3.3, MS3.2, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.03**	**25**	*e*P	Pg	08 12 24.8	+1.8
MSLP				*e*S	Sg	08 12 30.7	+6.9
LLP	**Lapu-Lapu**	**0.89**	**283**	*e*P	Pb	08 12 40.0	0.0
LLP				*i* S	Sn	08 12 54.9	+0.3
OCLP	**Ormoc**	**0.96**	**346**	*e*P	Pg	08 12 40.4	-0.1
OCLP				*e*S	Sn	08 12 57.8	+1.4
TBP	**Tagbilaran**	**1.06**	**247**	*e*P	Pb	08 12 43.2	+0.3

*CSEM **28** 08:15:50.9, 42°27N×13°58E, h11km, MD1.9/9, After ROM*
ROM 28 08:15:50.9±0.1, 42°27N×13°58E, h11km±5km, Md1.9/9, Ml1.1/6, Error ellipse: s-maj=1.5km s-min=1.1km az=36.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.15**	**301**	Pg	Pb	08 15 55.4	-0.5
AQU				Sg	Sg	08 15 57.9	+0.8
	67nm,0.3s						
AQU	**L'Aquila**	**0.15**	**301**	Pg	Pb	08 15 55.4	-0.5
AQU				Sg	Sg	08 15 57.9	+0.8
	67nm,0.3s						
VCEL	**Villa Celiera**	**0.23**	**58**	Pg	Pb	08 15 56.9	-0.3
VCEL				Sg	Sg	08 16 00.5	+1.3
	43nm,0.5s						
VCEL	**Villa Celiera**	**0.23**	**58**	Pg	Pb	08 15 56.9	-0.3
VCEL				Sg	Sg	08 16 00.5	+1.3
	43nm,0.5s						
PTQR	**Pietraquaria**	**0.28**	**208**	Pg	Pb	08 15 57.7	-0.5
PTQR				Sg	Sg	08 16 01.5	+0.7
	5.0nm,0.2s						
PTQR	**Pietraquaria**	**0.28**	**208**	Pg	Pb	08 15 57.7	-0.5
PTQR				Sg	Sg	08 16 01.5	+0.7
	5.0nm,0.2s						
CAMP	**Campotosto**	**0.29**	**334**	Pg	Pg	08 15 57.1	0.0
CAMP				Sg	Sg	08 16 02.0	+0.8
	9.0nm,0.6s						
CAMP	**Campotosto**	**0.29**	**334**	Pg	Pg	08 15 57.1	0.0
CAMP				Sg	Sg	08 16 02.0	+0.8
	9.0nm,0.6s						
FIAM	**Fiamignano**	**0.34**	**269**	Pg	Pg	08 15 58.4	+0.4
FIAM				Sg	Sg	08 16 03.6	+0.9
	20nm,0.6s						
FIAM	**Fiamignano**	**0.34**	**269**	Pg	Pg	08 15 58.4	+0.4
FIAM				Sg	Sg	08 16 03.6	+0.9
	20nm,0.6s						
TERO	**Teramo**	**0.35**	**3**	Pg	Pg	08 15 57.9	-0.1
TERO				Sg	Sg	08 16 03.4	+0.6
	13nm,0.3s						
TERO	**Teramo**	**0.35**	**3**	Pg	Pg	08 15 57.9	-0.1
TERO				Sg	Sg	08 16 03.4	+0.6
	13nm,0.3s						
INTR	**Introdacqua**	**0.35**	**137**	Pg	Pg	08 15 58.2	+0.1
INTR				Sg	Sg	08 16 03.8	+0.8
	17nm,0.4s						
INTR	**Introdacqua**	**0.35**	**137**	Pg	Pg	08 15 58.2	+0.1
INTR				Sg	Sg	08 16 03.8	+0.8
	17nm,0.4s						
NRCA	**Norcia**	**0.66**	**329**	Pg	Pg	08 16 03.4	-0.4
	1.0nm,0.2s						
NRCA	**Norcia**	**0.66**	**329**	Pg	Pg	08 16 03.4	-0.4
	1.0nm,0.2s						

CSEM 28 08:16:43.6±0.1, 42°56N×13°19E, h12km, ML2.8/6, Error ellipse: s-maj=2.0km s-min=1.6km az=64.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.12**	**293**	Pg	Pg	08 16 47.1	+0.3
LNSS				Sg	Sg	08 16 49.6	+0.4
	4µm,0.3s						
LNSS	**Leonessa**	**0.12**	**293**	Pg	Pg	08 16 47.1	+0.3
LNSS				Sg	Sg	08 16 49.6	+0.4
	4µm,0.3s						
CAMP	**Campotosto**	**0.17**	**98**	Pg	Pg	08 16 47.5	-0.1
CAMP				Sg	Sg	08 16 50.1	-0.3
	276nm,0.5s						
CAMP	**Campotosto**	**0.17**	**98**	Pg	Pg	08 16 47.5	-0.1
CAMP				Sg	Sg	08 16 50.1	-0.3
	276nm,0.5s						
AQU	**L'Aquila**	**0.26**	**142**	Pg	Pg	08 16 49.6	+0.5
	212nm,0.4s						
AQU	**L'Aquila**	**0.26**	**142**	Pg	Pg	08 16 49.6	+0.5
	212nm,0.4s						
NRCA	**Norcia**	**0.28**	**349**	Pg	Pg	08 16 49.4	-0.1
NRCA				Sg	Sg	08 16 53.9	+0.4
	772nm,0.1s						
NRCA	**Norcia**	**0.28**	**349**	Pg	Pg	08 16 49.4	-0.1
NRCA				Sg	Sg	08 16 53.9	+0.4
	772nm,0.1s						
FIAM	**Fiamignano**	**0.29**	**190**	Pg	Pg	08 16 50.1	+0.3
FIAM				Sg	Sb	08 16 55.0	-0.9
FIAM	**Fiamignano**	**0.29**	**190**	Pg	Pg	08 16 50.1	+0.3
FIAM				Sg	Sb	08 16 55.0	-0.9
TERO	**Teramo**	**0.32**	**78**	Pg	Pg	08 16 49.7	-0.4
TERO				Sg	Sg	08 16 54.2	-0.3
	398nm,0.2s						
TERO	**Teramo**	**0.32**	**78**	Pg	Pg	08 16 49.7	-0.4
TERO				Sg	Sg	08 16 54.2	-0.3
	398nm,0.2s						
CESX	**Cesi**	**0.45**	**277**	Pg	Pg	08 16 52.7	+0.2
	134nm,0.4s						
CESX	**Cesi**	**0.45**	**277**	Pg	Pg	08 16 52.7	+0.2
	134nm,0.4s						
FDMO	**Fiordimonte**	**0.48**	**352**	Pg	Pg	08 16 52.9	-0.3
FDMO				Sg	Sb	08 17 00.6	-0.6
	98nm,0.2s						
FDMO	**Fiordimonte**	**0.48**	**352**	Pg	Pg	08 16 52.9	-0.3
FDMO				Sg	Sb	08 17 00.6	-0.6
	98nm,0.2s						
CESI	**CESI - Serrava**	**0.49**	**335**	Pg	Pg	08 16 53.4	0.0
CESI				Sg	Sb	08 17 01.1	-0.5
	42nm,0.3s						
CESI	**CESI - Serrava**	**0.49**	**335**	Pg	Pg	08 16 53.4	0.0
CESI				Sg	Sb	08 17 01.1	-0.5
	42nm,0.3s						
VCEL	**Villa Celiera**	**0.51**	**108**	Pg	Pg	08 16 53.9	+0.1
	183nm,0.2s						
VCEL	**Villa Celiera**	**0.51**	**108**	Pg	Pg	08 16 53.9	+0.1
	183nm,0.2s						
PTQR	**Pietraquaria**	**0.56**	**163**	Pg	Pg	08 16 54.9	+0.2
	5.0nm,0.3s						
PTQR	**Pietraquaria**	**0.56**	**163**	Pg	Pg	08 16 54.9	+0.2
	5.0nm,0.3s						
TRTR	**Tortoreto Alta**	**0.59**	**65**	Pg	Pb	08 16 56.0	+0.1
TRTR	**Tortoreto Alta**	**0.59**	**65**	Pg	Pb	08 16 56.0	+0.1
ASSB	**Assisi San Ben**	**0.62**	**322**	Pg	Pg	08 16 55.7	-0.1
	108nm,0.2s						
ASSB	**Assisi San Ben**	**0.62**	**322**	Pg	Pg	08 16 55.7	-0.1
	108nm,0.2s						
CERT	**Cerreto**	**0.63**	**194**	Pg	Pg	08 16 55.5	-0.4
	144nm,0.3s						
CERT	**Cerreto**	**0.63**	**194**	Pg	Pg	08 16 55.5	-0.4
	144nm,0.3s						
MTCE	**Montecelio**	**0.63**	**212**	Pg	Pg	08 16 55.7	-0.2
	52nm,0.5s						
MTCE	**Montecelio**	**0.63**	**212**	Pg	Pg	08 16 55.7	-0.2
	52nm,0.5s						
SNTG	**Esanatoglia**	**0.72**	**346**	Pg	Pg	08 16 57.4	-0.2
	18nm,0.2s						
SNTG	**Esanatoglia**	**0.72**	**346**	Pg	Pg	08 16 57.4	-0.2
	18nm,0.2s						
GUMA	**Gualdo di Mace**	**0.75**	**47**	Pg	Pg	08 16 53.9	-4.3
	457nm,0.2s						
INTR	**Introdacqua**	**0.76**	**135**	Pg	Pg	08 16 58.1	-0.4
	74nm,0.8s						
INTR	**Introdacqua**	**0.76**	**135**	Pg	Pg	08 16 58.1	-0.4
	74nm,0.8s						
CING	**Cingoli**	**0.82**	**1**	Pg	Pg	08 16 58.9	-0.6
	65nm,0.6s						
CING	**Cingoli**	**0.82**	**1**	Pg	Pg	08 16 58.9	-0.6
	65nm,0.6s						
SACS	**San Casciano d**	**0.98**	**288**	Pg	Pg	08 17 02.6	-0.1
NVLJ	**Novalja**	**2.35**	**31**	*e*Pn	Pn	08 17 22.5	+0.5
NVLJ				Sn	Sn	08 17 50.9	+0.2
NVLJ	**Novalja**	**2.35**	**31**	*e*Pn	Pn	08 17 22.5	+0.5
NVLJ				Sn	Sn	08 17 50.8	+0.1

TAP 28 08:51:48.8, 24°19N×121°74E, h11km, ML3.6, 8C-6D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.12**	**1**	*i* P	Pg	08 51 52.0	+0.1
	baz=4.0						
EHP				*i* S	Sg	08 51 54.5	+0.4
	baz=4.0						
TWD	**Chiawan**	**0.17**	**230**	⇑*i* P	Pg	08 51 52.8	+0.1
	baz=236						
TWD				*i* S	Sg	08 51 55.8	+0.5
	baz=236						
ENA	**Nanau**	**0.24**	**1**	⇓*i* P	Pg	08 51 54.0	+0.2
	baz=2.0						
ENA				S	Sg	08 51 57.5	+0.3
	baz=2.0						
HWA	**Hwalien**	**0.24**	**210**	*e*P	Pg	08 51 54.5	+0.6
	baz=220						
ESF	**Shoufeng Towns**	**0.38**	**214**	*e*P	Pg	08 51 56.3	-0.1
	baz=226						
NNS	**Nan Shan**	**0.41**	**307**	⇑*i* P	Pg	08 51 57.4	+0.2
	baz=307						
NNS				*i* S	Sg	08 52 03.0	+0.1
	baz=307						
TWC	**Suao**	**0.43**	**14**	⇓*i* P	Pg	08 51 57.5	+0.2
	baz=7.0						
TWC				*i* S	Sg	08 52 03.7	+0.7
	baz=7.0						
WHF	**Hehuan Shan**	**0.43**	**264**	⇑*i* P	Pg	08 51 57.7	-0.2
	baz=265						
WHF				S	Sg	08 52 04.2	0.0
	baz=265						
ESL	**Shilin**	**0.47**	**217**	⇑*i* P	Pg	08 51 57.9	-0.1
	baz=224						
ESL				*e*S	Sb	08 52 05.1	-0.8
	baz=224						
TWT	**Tachien**	**0.52**	**277**	⇑*i* P	Pb	08 51 59.9	-0.3
	baz=277						
TWT				*i* S	Sb	08 52 07.1	-0.7
	baz=277						
TWE	**Neicheng**	**0.53**	**353**	⇑*i* P	Pb	08 51 59.7	-0.5
	baz=354						
TWE				*i* S	Sg	08 52 06.8	+0.5
	baz=354						
ILA	**Ilan**	**0.57**	**1**	*e*P	Pb	08 52 01.5	+0.7
	baz=1.0						
ILA				*e*S	Sb	08 52 09.1	+0.2
	baz=1.0						
NSK	**Sanguang**	**0.59**	**324**	⇑*i* P	Pg	08 52 00.8	+0.3
	baz=324						
NSK				*i* S	Sg	08 52 08.9	+0.4
	baz=324						
EHY	**Hungye**	**0.78**	**209**	*e*P	Pg	08 52 02.9	-1.0
	baz=220						
EHY				*e*S	Sb	08 52 15.0	0.0
	baz=220						
TWA	**Mucha**	**0.80**	**350**	*e*P	Pg	08 52 04.5	+0.2
	baz=349						
TWA				*e*S	Sn	08 52 17.4	-0.5
	baz=349						
NSTT	**Nanjuang**	**0.80**	**303**	*e*P	Pb	08 52 04.8	+0.1
	baz=303						
NSTT				*e*S	Sg	08 52 15.2	+0.3
	baz=303						
SMLT	**Sun Moon Lake**	**0.82**	**248**	⇑*e*P	Pg	08 52 05.0	0.0
	baz=249						
SMLT				*e*S	Sg	08 52 15.2	-0.7
	baz=249						
TWB1	**Santiao Chiao**	**0.84**	**16**	P	Pg	08 52 05.1	0.0
	baz=8.0						
TWB1				S	Sg	08 52 16.4	+0.2
	baz=8.0						
TYC	**Yuchr**	**0.85**	**251**	⇓*i* P	Pg	08 52 05.2	-0.1
	baz=244						
TYC				S	Sg	08 52 16.3	-0.2
	baz=244						
TAP1	**Taipei**	**0.87**	**347**	*e*P	Pb	08 52 06.2	+0.3
	baz=346						
TAP	**Taipei**	**0.87**	**346**	*e*P	Pb	08 52 06.2	+0.3
	baz=346						
NWF	**Wu-fen Shan**	**0.88**	**3**	P	Pb	08 52 06.0	-0.1
	baz=353						
NWF				*i* S	Sg	08 52 17.4	-0.1
	baz=353						
TWQ1	**Liyutan**	**0.89**	**280**	*e*P	Pn	08 52 07.1	-0.2
	baz=281						
NSY	**Sanyi**	**0.92**	**284**	*e*P	Pn	08 52 07.3	-0.4
	baz=285						
NCU	**National Centr**	**0.92**	**327**	*e*P	Pn	08 52 08.1	+0.5
	baz=327						
NCU				*e*S	Sn	08 52 21.9	+1.0
	baz=327						
HSN	**Hsinchu**	**0.93**	**311**	*e*P	Pn	08 52 08.0	+0.3
	baz=304						
HSN				*e*S	Sn	08 52 22.1	+1.1
	baz=304						
TWF1	**Yuli**	**0.93**	**206**	*e*P	Pg	08 52 05.2	-1.6
	baz=217						
TWS1	**Kuangyinshan**	**0.95**	**342**	*e*P	Pn	08 52 08.5	+0.5
	baz=350						
TWS1				*e*S	Sn	08 52 21.8	+0.2
	baz=350						
TCU	**Taichung**	**0.97**	**268**	⇓*e*P	Pn	08 52 09.2	+0.9
	baz=268						
TCU				*e*S	Sn	08 52 24.1	+2.0
	baz=268						
YUS	**Yu-Shan**	**1.00**	**226**	⇓*i* P	Pg	08 52 08.2	-0.6
	baz=228						
YUS				S	Sb	08 52 22.6	+0.1
	baz=228						
WNT	**Mingjian**	**1.01**	**252**	*e*P	Pn	08 52 09.7	+0.8
	baz=249						
WNT				*e*S	Sn	08 52 24.3	+1.2
	baz=249						
TWY	**Chenhua**	**1.09**	**353**	*e*P	Pn	08 52 11.2	+1.3
	baz=4.0						
ALS	**Alishan**	**1.09**	**232**	⇓*i* P	Pb	08 52 09.9	-0.1
	baz=234						
ALS				*e*S	Sn	08 52 26.5	+0.8
	baz=234						
CHN5	**Tsauling**	**1.14**	**239**	*e*P	Pg	08 52 11.1	+0.3
	baz=241						
CHN5				S	Sn	08 52 28.0	+1.7
	baz=241						
CHKT	**Chengkung**	**1.14**	**198**	*e*P	Pb	08 52 09.0	-1.5
	baz=185						
WGK	**Gukeng**	**1.19**	**245**	*e*P	Pn	08 52 11.3	0.0
	baz=247						
YOJ	**Yonaguni jima**	**1.19**	**77**	*e*P	Pn	08 52 11.0	-0.3
	baz=68						
YOJ				*e*S	Sn	08 52 27.7	+0.2
	baz=68						
ELDTW	**Lidau**	**1.20**	**214**	*e*P	Pn	08 52 10.5	-1.0
	baz=216						
CHY	**Chiayi**	**1.39**	**240**	*e*P	Pg	08 52 15.5	0.0
	baz=243						
CHY				*e*S	Sg	08 52 34.4	+0.9
	baz=243						
WTP	**Ta-pu**	**1.40**	**228**	*e*P	Pb	08 52 14.8	-0.1
	baz=220						
WTP				*e*S	Sg	08 52 36.2	+2.3
	baz=220						
PCYT	**Pengchaiyu**	**1.46**	**12**	*e*P	Pb	08 52 16.3	+0.2
	baz=10.0						
TWK	**Hsinying**	**1.47**	**231**	*e*P	Pn	08 52 15.6	+0.3
	baz=235						
WSF	**Szhu**	**1.49**	**249**	*e*P	Pb	08 52 16.3	-0.2
	baz=261						
WSF				*e*S	Sg	08 52 38.2	+1.3
	baz=261						
CHN1	**Nanshi**	**1.49**	**228**	*e*P	Pb	08 52 16.7	+0.1
	baz=226						
CHN1				*e*S	Sg	08 52 39.4	+2.4
	baz=226						
TWG	**Pinlang**	**1.50**	**204**	*e*P	Pn	08 52 13.3	-2.2
	baz=191						
ECL	**Taimali**	**1.74**	**205**	*e*P	Pn	08 52 19.5	+0.6
	baz=193						
TWM1	**Shoushan**	**1.82**	**222**	*e*P	Pb	08 52 22.2	0.0
	baz=225						
SCZT	**Fangliau**	**2.08**	**210**	*e*P	Pn	08 52 23.9	+0.3
	baz=196						
PNG	**Penghu**	**2.09**	**253**	*e*P	Pb	08 52 25.9	-0.8
	baz=256						

IDC 28 08:54:21.2±1.7, 4°04S×139°34E, h0km, mb3.1/2, mb1 3.6/4, mb1mx3.3/17, mbtmp3.3/4, ML3.5/2, Error ellipse: s-maj=100.3km s-min=28.6km az=115.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.54**	**197**	Pn	Pn	08 58 16.0	+1.3
	0.2nm,0.3s,baz=17,slow=12,SNR=12						
FITZ	**Fitzroy Crossi**	**19.37**	**223**	P	P	08 58 48.4	-0.2
	0.1nm,0.3s,baz=58,slow=9.5,SNR=6.1						
ASAR	**Alice Springs**	**20.20**	**195**	P	P	08 58 57.3	-0.5
	0.6nm,0.7s,baz=27,slow=9.7,SNR=12						
BOK	**Bokaro**	**58.94**	**301**	*i* P	P	09 03 39.5	-43
BOK				*i* S	S	09 03 40.5	-530
ILAR	**Eielson Array**	**86.78**	**24**	P	P	09 07 07.1	0.0
	0.2nm,1.0s,baz=245,slow=3.9,SNR=2.8						

*NIED **28** 08:54:00, 32°30N×137°90E, h400km, Mw4.0 Best double couple: M0 1.21000×10^15 NP1:φ=3.00000°, δ=87.00000°, λ=-103.00000°. NP2:φ=261.00000°, δ=13.00000°, λ=-13.00000°.*
*ISCJB **28** 08:54:47.7±0.4, 32°23N±0°06×137°90E±0°06, h401km±3km, mb3.4/13, Error ellipse: s-maj=9.1km s-min=7.2km az=159.0*
*JMA **28** 08:54:47.1±0.4, 32°29N×137°94E, h416km±4km, M3.5*
*IDC **28** 08:54:47.8±0.8, 32°14N×137°68E, h380km±7km, mb3.2/13, mb1 3.4/18, mb1mx3.3/31, mbtmp3.2/18, Error ellipse: s-maj=16.4km s-min=14.6km az=13.0*
ISC 28 08:54:49.2±0.8, 32°31N±0°08×137°83E±0°06, h396km±6km, n49, σ1s16/65, mb3.5/13, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TK01	**Tokai 1**	**1.47**	**352**	*e*S	**S**	**08 56 25.1**	**+1.5**
TTO2	**TONANKAI O.B.S**	**1.58**	**335**	P	**Pn**	**08 55 42.9**	**+1.0**
TTO2				*e*S	**S**	**08 56 26.7**	**+2.0**
TTO1	**TONANKAI O.B.S**	**1.58**	**326**	P	**Pn**	**08 55 42.7**	**+0.7**
TTO3	**TONANKAI O.B.S**	**1.59**	**347**	P	**Pn**	**08 55 43.4**	**+1.2**
TTO3				S	**S**	**08 56 27.4**	**+2.3**
TTO4	**TONANKAI O.B.S**	**1.71**	**352**	P	**Pn**	**08 55 43.7**	**+1.0**
TTO4				*e*S	**S**	**08 56 27.6**	**+1.5**
JHJ	**Hachijo jima 2**	**1.83**	**63**	P	**Pn**	**08 55 43.8**	**0.0**
	29nm,0.3s,baz=74,slow=22,SNR=13						
JHJ				S	**S**	**08 56 25.7**	**-2.1**
	18nm,0.3s,baz=92,slow=23,SNR=2.9						
JHJ2	**Mitsune**	**1.85**	**64**	P	**Pn**	**08 55 43.8**	**-0.1**
JHJ2				*e*S	**S**	**08 56 28.0**	**0.0**
JWZ	**Kozaga**	**2.16**	**305**	P	**Pn**	**08 55 45.4**	**-0.4**
JWZ				*e*S	**S**	**08 56 30.2**	**-1.4**
JIE	**Ise**	**2.28**	**336**	P	**Pn**	**08 55 47.0**	**+0.4**
JIE				*e*S	**S**	**08 56 32.4**	**-0.6**
JWY	**Kouya**	**2.68**	**316**	P	**Pn**	**08 55 49.8**	**+0.2**
JWY				*e*S	**S**	**08 56 38.7**	**+0.3**
JOD2	**Odawara 2**	**3.13**	**19**	P	**Pn**	**08 55 52.9**	**-0.2**
JOD2				*e*S	**S**	**08 56 43.0**	**-1.9**
JAI	**Aioi**	**3.20**	**298**	P	**Pn**	**08 55 53.5**	**-0.3**
JYN	**Shimob**	**3.24**	**10**	P	**Pn**	**08 55 54.8**	**+0.7**
JGM	**Miyama**	**3.51**	**345**	P	**Pn**	**08 55 57.0**	**+0.6**
JGM				*e*S	**S**	**08 56 50.9**	**-0.1**
BSO1	**Boso 1**	**3.52**	**47**	P	**Pn**	**08 55 54.3**	**-1.6**
BSO1				*e*S	**S**	**08 56 47.4**	**-2.6**
JRY	**Ryogami san**	**3.81**	**13**	P	**Pn**	**08 55 59.2**	**+0.1**
JRY				S	**S**	**08 56 54.4**	**-1.5**
MAT	**Matsushiro**	**4.24**	**4**	P	**Pn**	**08 56 02.9**	**-0.3**
MAT				S	**S**	**08 57 00.8**	**-2.6**
MAT	**Matsushiro**	**4.24**	**4**	P	**Pn**	**08 56 03.2**	**0.0**
MAT				*e*S	**S**	**08 57 01.2**	**-2.2**
MJAR	**Matsushiro Arr**	**4.24**	**4**	P	**Pn**	**08 56 02.8**	**-0.4**
	2.6nm,0.3s,baz=186,slow=10,SNR=76						
MJAR				S	**S**	**08 57 00.9**	**-2.5**
	0.9nm,0.3s,baz=149,slow=6.1,SNR=4.7						
JTO	**Tosashimizu**	**4.28**	**279**	P	**Pn**	**08 56 03.3**	**-0.5**
JHS	**Saijyo**	**4.76**	**306**	P	**Pn**	**08 56 08.7**	**+0.1**
JHS				*e*S	**S**	**08 57 13.1**	**+0.1**
JNU	**Nakatsue**	**5.92**	**280**	P	**Pn**	**08 56 20.7**	**-0.1**
	0.8nm,0.3s,baz=78,slow=7.5,SNR=16						
CBIJ	**Chichi jima**	**6.42**	**143**	P	Pn	08 56 22.0	-4.4
CBIJ				*e*S	S	08 57 36.5	-9.2
KSRS	**Korea Array**	**9.62**	**305**	P	**Pn**	**08 57 03.2**	**+0.5**
	0.4nm,0.3s,baz=120,slow=10,SNR=13						
ASAJ	**Asahikawa**	**12.37**	**16**	P	**Pn**	**08 57 35.2**	**+0.8**
	0.9nm,0.3s,baz=208,slow=7.6,SNR=4.9						
ASAJ				S	**S**	**08 59 48.4**	**+0.1**
	0.2nm,0.3s,baz=52,slow=32,SNR=6.1						
USRK	**Ussuriysk Arra**	**12.72**	**341**	P	**Pn**	**08 57 38.5**	**-0.1**
	0.3nm,0.3s,baz=157,slow=11,SNR=9.6						
SONM	**Songino Array**	**28.38**	**312**	P	**P**	**09 00 09.0**	**+0.1**
	1.1nm,0.7s,baz=108,slow=7.2,SNR=5.1						
CMAR	**Chiang Mai Arr**	**37.53**	**258**	P	**P**	**09 01 25.4**	**-2.1**
	1.4nm,0.6s,baz=51,slow=7.7,SNR=8.4						
ZALV	**Zalesovo Beam**	**43.10**	**316**	P	**P**	**09 02 10.7**	**-1.3**
	0.4nm,0.3s,baz=76,slow=6.3,SNR=3.5						
TAPN	**Taplejung**	**43.45**	**277**	*e*P	**P**	**09 02 14.7**	**-0.8**
	12nm,0.5s						
ODAN	**Odare**	**43.88**	**276**	*e*P	**P**	**09 02 18.1**	**-0.8**
	37nm,0.6s						
MKAR	**Makanchi Array**	**44.30**	**306**	P	**P**	**09 02 21.6**	**0.0**
	2.7nm,0.7s,baz=90,slow=9.7,SNR=36						
RAMN	**Ramite**	**44.52**	**277**	*e*P

	15nm,0.7s							
KKN	**Kakani**	**45.34**	**279**	*e*P	**P**	**09 02 30.2**	**0.0**	
	30nm,0.7s							
DMN	**Daman**	**45.55**	**278**	*e*P	**P**	**09 02 31.3**	**-0.6**	
	15nm,0.8s							
DANN	**Dangsing**	**46.43**	**280**	*e*P	**P**	**09 02 38.9**	**+0.2**	
	28nm,0.6s							
KOLN	**Koldanda**	**46.76**	**279**	*e*P	**P**	**09 02 40.9**	**-0.2**	
	14nm,0.5s							
WRA	**Warramunga Arr**	**52.06**	**184**	P	**P**	**09 03 19.1**	**-1.3**	
	0.3nm,0.3s,baz=0.4,slow=7.7,SNR=7.7							
ILAR	**Eielson Array**	**55.06**	**30**	P	**P**	**09 03 42.1**	**+0.9**	
	0.4nm,0.9s,baz=297,slow=6.7,SNR=4.9							
AKTO	**Aktyubinsk**	**59.69**	**313**	P	**P**	**09 04 13.5**	**+0.1**	
	2.3nm,0.7s,baz=72,slow=13,SNR=9.6							
FINES	**FINESS Array B**	**71.60**	**332**	P	**P**	**09 05 28.7**	**+0.3**	
	1.1nm,0.5s,baz=65,slow=5.2,SNR=16							
KBZ	**Khabaz**	**71.73**	**310**	P	**P**	**09 05 30.3**	**+0.9**	
	2.3nm,0.9s,baz=5.1,slow=2.8,SNR=5.8							
BRTR	**Keskin Array B**	**79.72**	**311**	P	**P**	**09 06 14.9**	**+0.4**	
	1.2nm,0.8s,baz=110,slow=4.7,SNR=6.1							
NVAR	**Mina Array Bea**	**80.22**	**51**	P	**P**	**09 06 19.2**	**+1.9**	
	0.6nm,0.7s,baz=287,slow=6.0,SNR=6.1							
PDAR	**Pinedale Array**	**83.10**	**43**	P	**P**	**09 06 33.3**	**+1.2**	
	0.4nm,0.8s,baz=325,slow=1.8,SNR=3.9							
TXAR	**Lajitas Array**	**95.37**	**50**	P	**P**	**09 07 32.0**	**+2.0**	
	0.4nm,0.7s,baz=294,slow=3.6,SNR=6.7							

*ISCJB **28** 09:00:13.8±0.5, 33.°34N±0.°02×35.°43E±0.°04, h8km±4km, Error ellipse: s-maj=5.7km s-min=3.1km az=36.6*
*CSEM **28** 09:00:13.9±0.2, 33.°34N×35.°43E, h10km, ML3.0, Error ellipse: s-maj=3.7km s-min=2.1km az=127.0*
*NSSC **28** 09:00:14.4±1.6, 33.°31N×35.°46E, h6km±7km, MD1.6, ML1.7*
*GRAL **28** 09:00:14.8±0.3, 33.°33N×35.°43E, h0km±53km, MD3.0*

ISC 28 09:00:13.8±0.9, 33.°33N±0.°02×35.°43E±0.°03, h14km±8km, n27, σ0°44/48, Jordan - Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSDI	**Kefar Szold**	**0.24**	**126**	Pg	**Pg**	**09 00 18.9**	**0.0**
KSDI				Sg	**Sb**	**09 00 23.5**	**-0.5**
MMC7	**Mount Meron ar**	**0.31**	**186**	Pg	**Pg**	**09 00 20.3**	**0.0**
MMA0	**Mount Meron ar**	**0.32**	**184**	Pg	**Pg**	**09 00 19.8**	**-0.6**
MMA0				Sg	**Sg**	**09 00 25.0**	**+0.2**
MMC6	**Mount Meron ar**	**0.32**	**186**	Pg	**Pg**	**09 00 20.4**	**0.0**
NAQL	**Naqoura**	**0.33**	**229**	*e*P	**Pg**	**09 00 20.5**	**+0.1**
NAQL				*e*S	**Sg**	**09 00 24.7**	**-0.2**
HNTI	**Hanita**	**0.33**	**221**	Pg	**Pg**	**09 00 21.2**	**+0.7**
HNTI				Sg	**Sb**	**09 00 27.0**	**+0.3**
RCY	**Rachaya**	**0.38**	**64**	*e*P	**Pg**	**09 00 21.5**	**0.0**
RCY				*e*S	**Sg**	**09 00 26.6**	**0.0**
BRBR	**Barbar**	**0.44**	**80**	*e*P	**Pg**	**09 00 22.8**	**+0.2**
BRBR				*e*S	**Sg**	**09 00 29.0**	**+0.3**
BRBR				AML	AML	09 00 31.6	
	comp=N,97nm,0.6s						
BRBR				AML	AML	09 00 31.7	
	comp=E,47nm,0.6s						
BRBR				AML	AML	09 00 33.9	
	comp=Z,100nm,0.9s						
BRBR	**Barbar**	**0.44**	**80**	*e*P	**Pg**	**09 00 22.8**	**+0.2**
	SNR=94						
BRBR				*e*S	**Sg**	**09 00 29.0**	**+0.3**
	comp=Z,100nm,0.9s,SNR=93						
BHL	**Bhannes**	**0.60**	**18**	*e*P	**Pg**	**09 00 25.6**	**0.0**
BHL				*e*S	**Sg**	**09 00 33.7**	**+0.1**
BHL	**Bhannes**	**0.60**	**18**	*e*P	**Pg**	**09 00 25.6**	**0.0**
BHL				*e*S	**Sg**	**09 00 33.7**	**+0.1**
BLGI	**Bet Lehem HaGe**	**0.63**	**199**	Sg	**Sb**	**09 00 35.5**	**+0.2**
TCHB	**Talchebab**	**0.80**	**146**	*e*P	**Pg**	**09 00 29.6**	**+0.3**
TCHB				*e*S	**Sg**	**09 00 40.2**	**+0.4**
TCHB				AML	AML	09 00 41.4	
	comp=E,68nm,0.3s						
TCHB				AML	AML	09 00 43.8	
	comp=Z,29nm,0.5s						
TCHB				AML	AML	09 00 44.6	
	comp=N,71nm,0.4s						
TCHB	**Talchebab**	**0.80**	**146**	*e*P	**Pg**	**09 00 29.6**	**+0.3**
	SNR=72						
TCHB				*e*S	**Sg**	**09 00 40.2**	**+0.4**
	comp=N,71nm,0.4s,SNR=91						
OFRI	**'Ofer**	**0.80**	**208**	Pg	**Pg**	**09 00 29.5**	**+0.1**
TOTH	**TOTAH**	**0.83**	**88**	*e*P	**Pb**	**09 00 30.5**	**+0.3**
TOTH				*e*S	**Sg**	**09 00 40.9**	**-0.1**
TOTH				AML	AML	09 00 47.6	
	comp=N,26nm,0.5s						
TOTH				AML	AML	09 00 48.1	
	comp=E,25nm,0.8s						
TOTH				AML	AML	09 00 55.0	
	comp=Z,18nm,0.5s						
TOTH	**TOTAH**	**0.83**	**88**	*e*P	**Pb**	**09 00 30.5**	**+0.3**
	SNR=72						
TOTH				*e*S	**Sg**	**09 00 40.9**	**-0.1**
	comp=Z,18nm,0.5s,SNR=91						
MMLI	**Mount Malkishu**	**0.89**	**181**	Pg	**Pg**	**09 00 30.9**	**-0.2**
MMLI				Sg	**Sg**	**09 00 43.1**	**+0.3**
HWQ	**Hawqa**	**1.03**	**24**	*e*P	**Pb**	**09 00 33.5**	**-0.1**
HWQ	**Hawqa**	**1.03**	**24**	*e*P	**Pb**	**09 00 33.5**	**-0.1**
HMDT	**Nahal Hemdat**	**1.08**	**176**	Pg	**Pb**	**09 00 34.4**	**+0.1**
HMDT				Sg	**Sn**	**09 00 50.0**	**+0.7**
SLTI	**Sal'it**	**1.14**	**197**	Pg	**Pb**	**09 00 35.3**	**0.0**
SLTI				Sg	**Sn**	**09 00 51.2**	**+0.4**
SALA	**Sala**	**1.26**	**119**	*e*P	**Pn**	**09 00 36.4**	**-0.8**
SALA				*e*S	**Sb**	**09 00 52.7**	**-0.9**
SALA				AML	AML	09 00 56.2	
	comp=E,7.1nm,0.4s						
SALA				AML	AML	09 00 56.4	
	comp=N,63nm,0.3s						
SALA				AML	AML	09 00 56.9	
	comp=Z,43nm,0.3s						
SALA	**Sala**	**1.26**	**119**	*e*P	**Pn**	**09 00 36.4**	**-0.8**
	SNR=61						
SALA				*e*S	**Sb**	**09 00 52.7**	**-0.9**
	comp=Z,43nm,0.3s,SNR=62						
ZALF	**Zalf**	**1.65**	**104**	*e*P	**Pb**	**09 00 44.0**	**0.0**
ZALF				*e*S	**Sb**	**09 01 05.7**	**+1.0**
ZALF				AML	AML	09 01 07.4	
	comp=N,18nm,0.2s						
ZALF				AML	AML	09 01 08.0	
	comp=E,16nm,0.4s						
ZALF				AML	AML	09 01 09.0	
	comp=Z,9.3nm,0.5s						
ZALF	**Zalf**	**1.65**	**104**	*e*P	**Pb**	**09 00 44.0**	**0.0**
	SNR=47						
ZALF				*e*S	**Sb**	**09 01 05.7**	**+1.0**
	comp=Z,9.3nm,0.5s,SNR=49						
DSI	**Dead Sea**	**1.76**	**181**	Pn	**Pb**	**09 00 45.2**	**-0.7**
DSI				Sn	**Sb**	**09 01 08.5**	**+0.7**

IDC 28 09:06:36.0±2.0, 17.°82S×178.°65W, h548km±24km, mb3.3/12, mb1 3.5/13, mb1mx3.4/21, mbtmp3.3/13, Error ellipse: s-maj=22.1km s-min=11.6km az=146.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.67**	**61**	P	P	09 08 30.3	-0.3
	10nm,0.3s,baz=243,slow=23,SNR=9.2						
CTA	**Charters Tower**	**33.23**	**260**	P	P	09 12 28.3	0.0
	3.0nm,0.5s,baz=86,slow=12,SNR=8.1						
STKA	**Stephens Creek**	**38.47**	**241**	P	P	09 13 12.2	+0.7
	11nm,0.5s,baz=90,slow=9.2,SNR=23						
WRA	**Warramunga Arr**	**44.42**	**259**	P	P	09 13 58.0	-0.7
	3.1nm,0.5s,baz=91,slow=7.0,SNR=89						
ASAR	**Alice Springs**	**44.59**	**254**	P	P	09 14 00.1	+0.1
	42nm,0.5s,baz=89,slow=8.2,SNR=836						
FITZ	**Fitzroy Crossi**	**52.81**	**261**	P	P	09 15 00.8	-0.1
	0.9nm,0.3s,baz=85,slow=5.7,SNR=12						
VNDA	**Vanda**	**60.51**	**185**	P	P	09 15 51.6	-1.2
	0.2nm,0.4s,baz=23,slow=7.7,SNR=5.4						
MJAR	**Matsushiro Arr**	**67.70**	**323**	P	P	09 16 38.6	-0.4
	0.7nm,0.9s,baz=147,slow=6.3,SNR=4.7						
PETK	**Petropavlovsk-**	**73.54**	**345**	P	P	09 17 12.8	-0.3
	1.7nm,0.6s,baz=132,slow=8.5,SNR=7.6						
NVAR	**Mina Array Bea**	**79.52**	**44**	P	P	09 17 47.0	+0.5
	0.9nm,0.7s,baz=224,slow=9.1,SNR=10						
MAW	**Mawson**	**83.86**	**200**	P	P	09 18 07.6	-0.2
	1.3nm,0.6s,baz=176,slow=10,SNR=7.3						
ILAR	**Eielson Array**	**85.86**	**13**	P	P	09 18 16.2	-1.2
	0.6nm,0.4s,baz=222,slow=5.3,SNR=20						
TXAR	**Lajitas Array**	**86.15**	**58**	P	P	09 18 21.0	+1.2
	0.7nm,0.7s,baz=220,slow=6.3,SNR=11						
PDAR	**Pinedale Array**	**87.45**	**44**	P	P	09 18 25.6	-0.2
	0.7nm,0.5s,baz=228,slow=5.3,SNR=7.3						

GERES	**GERESS Array B**	**147.47**	**345**	PKPbc	PKPbc	09 25 18.4	-0.3	
	0.1nm,0.3s,baz=0.0,slow=2.9,SNR=4.7							

TAP 28 09:34:22.8, 24.°19N×121.°72E, h11km±1km, ML2.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.12**	**9**	*e*P	Pb	09 34 27.2	0.0
	baz=12						
EHP				*e*S	Sg	09 34 29.8	+1.7
	baz=12						
TWD	**Chiawan**	**0.16**	**226**	*i* P	Pg	09 34 27.1	+0.7
	baz=224						
TWD				*i* S	Sg	09 34 29.9	+1.0
	baz=224						
ENA	**Nanau**	**0.24**	**5**	*i* P	Pb	09 34 28.7	-0.5
	baz=6.0						
ENA				*i* S	Sg	09 34 32.4	+1.2
	baz=6.0						
NNS	**Nan Shan**	**0.40**	**308**	*i* P	Pb	09 34 31.9	-0.3
	baz=308						
NNS				*i* S	Sb	09 34 38.0	-0.5
	baz=308						
WHF	**Hehuan Shan**	**0.42**	**264**	*i* P	Pg	09 34 31.9	+0.3
	baz=263						
WHF				S	Sg	09 34 38.0	+0.4
	baz=263						
TWC	**Suao**	**0.43**	**16**	P	Pb	09 34 32.2	-0.3
	baz=16						
TWC				S	Sb	09 34 38.5	-0.5
	baz=16						
ESL	**Shilin**	**0.46**	**215**	*e*P	Pg	09 34 32.1	+0.3
	baz=214						
TWT	**Tachien**	**0.50**	**277**	*e*P	Pb	09 34 33.9	0.0
	baz=276						
TWT				S	Sb	09 34 41.6	+0.2
	baz=276						
TWE	**Neicheng**	**0.53**	**355**	*e*P	Pb	09 34 34.2	0.0
	baz=356						
NSK	**Sanguang**	**0.59**	**326**	P	Pb	09 34 35.2	0.0
	baz=326						
NSK				*i* S	Sb	09 34 43.7	0.0
	baz=326						
SMLT	**Sun Moon Lake**	**0.81**	**248**	*e*P	Pb	09 34 39.2	+0.1
	baz=247						

*NIED **28** 09:34:00, 24.°00N×121.°60E, h38km, Mw5.1 Best double couple: M0±4.75000×10^16 NP1:φ±63.00000°, δ84.00000°, λ114.00000°. NP2:φ±167.00000°, δ25.00000°, λ15.00000°.*
*IDC **28** 09:34:53.5±0.4, 24.°22N×121.°73E, h0km, mb4.6/28, mb1 4.7/29, mb1mx4.6/33, mbtmp4.5/29, ML3.6/1, MS4.4/36, Ms1 4.4/36, ms1mx4.3/52, Error ellipse: s-maj=15.7km s-min=10.1km az=68.0*
*BJI **28** 09:34:53.6, 24.°16N×121.°88E, h10km, mB5.3/42, mb4.8/53, ML5.5/10, Ms5.3/72, Ms7 5.2/67*
*JMA **28** 09:34:54.7±0.4, 23.°96N×121.°61E, h33km, M5.5*
*NEIC **28** 09:34:56.5±0.8, 24.°17N×121.°72E, h14km±4km, mb5.1/69, ML5.3(TAP), Error ellipse: s-maj=6.0km s-min=4.7km az=93.0*
NEIC Felt [III] at Taipei. Also felt at Hua-lien, I-lan, T'ai-chung and Wu-ch'i. Recorded [5 TAP] in Hua-lien and I-lan; [3 TAP] in Nan-t'ou and T'ai-chung; [2 TAP] at Tou-liu and in Chia-i, T'ao-yuan and Yun-lin; [1 TAP] in Chang-hua, Hsin-chu, Miao-li, T'ai-nan, T'ai-pei and T'ai-tung.
*ISCJB **28** 09:34:56.6±0.2, 24.°21N±0.°01×121.°78E±0.°01, h24km±1km, mb4.9/144, MS4.7/62, Error ellipse: s-maj=2.5km s-min=1.8km az=35.6*
*TAP **28** 09:34:56.2, 24.°18N×121.°75E, h13km, ML5.3, B*
*GCMT **28** 09:34:57.2±0.2, 24.°13N×121.°75E, h15km±1km, MW5.1, Moment Tensor Solution. s44,c62; s67,c108; Moment tensor: Scale 10^16 Nm; Mrr 2.86±.17; Mθθ -1.63±.11; Mφφ -1.23±.13; Mrθ 4.03±.36; Mrφ -2.38±.09; Mθφ 2.67±.31; Best double couple: M0 5.90000×10^16 NP1:φ±214.00000°, δ18.00000°, λ69.00000°. NP2:φ±56.00000°, δ73.00000°, λ97.00000°. Principal axes: T 5.4500, Plg62.0000°, Azm336.0000°; N 0.8700, Plg6.0000°, Azm234.0000°; P -6.3200, Plg28.0000°, Azm141.0000°; Data Used: ll IU IC G CN.*
*MOS **28** 09:34:57.6±1.2, 24.°20N×121.°74E, h33km, mb5.2/60, MS4.9/17 Error ellipse: s-maj=8.2km s-min=4.6km az=115.6*
*DJA **28** 09:35:04.3±2.3, 24.°N±5.°×12.°2E±.°, h63km±23km, M4.9/25, mB5.5/16, mb4.9/25, Mw(mB)4.9/16*

ISC 28 09:34:57.1±0.3, 24.°17N±0.°02×121.°78E±0.°02, h17km±1km, n517, σ1°53/606, mb5.0/153, MS4.8/62, 39C-36D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.14**	**346**	*i* P	**Pg**	**09 34 59.6**	**-1.5**
	baz=357						
EHP				S	**Sg**	**09 35 02.3**	**-1.5**
	baz=357						
NACB	**Ninganchiao**	**0.17**	**270**	*e*Pg	**Pg**	**09 34 59.6**	**-1.9**
NACB				*e*Sg	**Sg**	**09 35 02.4**	**-2.0**
TWD	**Chiawan**	**0.19**	**241**	⇑*i*P	**Pg**	**09 35 00.4**	**-1.4**
	baz=241						
TWD				*i* S	**Sg**	**09 35 03.6**	**-1.4**
	baz=241						
HWA	**Hwalien**	**0.25**	**219**	⇑*i*P	**Pg**	**09 35 02.1**	**-0.6**
	baz=223						
ENA	**Nanau**	**0.26**	**352**	⇑*i*P	**Pg**	**09 35 01.6**	**-1.2**
	baz=358						
ENA				*e*S	**Sg**	**09 35 05.5**	**-1.3**
	baz=358						
ESF	**Shoufeng Towns**	**0.39**	**220**	*i* P	**Pg**	**09 35 04.2**	**-0.9**
	baz=225						
ESF				*e*S	**Sg**	**09 35 09.9**	**-0.7**
	baz=225						
TWC	**Suao**	**0.44**	**8**	⇑*i*P	**Pg**	**09 35 05.2**	**-0.9**
	baz=9.0						
NNS	**Nan Shan**	**0.46**	**306**	⇑*i*P	**Pg**	**09 35 05.0**	**-1.4**
	baz=307						
NNS				*e*S	**Sg**	**09 35 11.3**	**-1.3**
	baz=307						
WHF	**Hehuan Shan**	**0.47**	**267**	⇑*i*P	**Pg**	**09 35 05.3**	**-1.4**
	baz=267						
ESL	**Shilin**	**0.48**	**222**	⇑P	**Pg**	**09 35 05.5**	**-1.2**
	baz=229						
TEGC	**Jichi Village**	**0.51**	**205**	*e*P	**Pg**	**09 35 07.1**	**-0.2**
	baz=196						
TEGC				*e*S	**Sb**	**09 35 15.8**	**+1.0**
	baz=196						
TWE	**Neicheng**	**0.56**	**349**	⇑*i*P	**Pg**	**09 35 07.2**	**-0.9**
	baz=352						
TWT	**Tachien**	**0.56**	**278**	⇑*i*P	**Pg**	**09 35 07.4**	**-0.8**
	baz=281						
ILA	**Ilan**	**0.59**	**357**	⇑P	**Pg**	**09 35 08.2**	**-0.6**
	baz=354						
ILA				*e*S	**Sg**	**09 35 16.7**	**0.0**
	baz=354						
YHNB	**Yeheng**	**0.62**	**324**	*e*Pg	**Pg**	**09 35 07.8**	**-1.6**
YHNB				*e*Sg	**Sg**	**09 35 16.4**	**-1.2**
NSK	**Sanguang**	**0.63**	**323**	⇑*i*P	**Pg**	**09 35 08.4**	**-1.2**
	baz=324						
EHY	**Hungye**	**0.78**	**212**	⇓*e*P	**Pb**	**09 35 10.4**	**-1.9**
	baz=223						
TWA	**Mucha**	**0.82**	**348**	*e*P	**Pb**	**09 35 12.4**	**-0.6**
	baz=349						
NSTT	**Nanjuang**	**0.84**	**303**	⇑*i*P	**Pb**	**09 35 12.4**	**-1.0**
	baz=304						
SSLB	**Suanglung**	**0.85**	**243**	*e*Pg	**Pb**	**09 35 12.0**	**-1.4**
SSLB				*e*Sg	**Sb**	**09 35 22.2**	**-2.3**
SMLT	**Sun Moon Lake**	**0.85**	**250**	⇑P	**Pb**	**09 35 12.6**	**-1.0**
	baz=250						
SMLT				*e*S	**Sb**	**09 35 24.1**	**-0.7**
	baz=250						
TWB1	**Santiao Chiao**	**0.85**	**13**	*e*P	**Pb**	**09 35 12.6**	**-0.9**
	baz=14						
TWB1				*e*S	**Sb**	**09 35 23.8**	**-0.9**
	baz=14						
TYC	**Yuchr**	**0.88**	**253**	⇑P	**Pb**	**09 35 12.8**	**-1.2**
	baz=253						
TAP1	**Taipei**	**0.89**	**345**	⇑P	**Pb**	**09 35 13.6**	**-0.6**
	baz=345						
YULB	**Yu-li**	**0.89**	**210**	*e*Pg	**Pb**	**09 35 12.9**	**-1.3**
YULB				*e*Sn	**Sn**	**09 35 28.5**	**+1.0**
NWF	**Wu-fen Shan**	**0.89**	**0**	*e*P	**Pb**	**09 35 13.7**	**-0.6**
TAP	**Taipei**	**0.90**	**344**	*e*P	**Pb**	**09 35 14.0**	**-0.3**
	baz=345						
TAP				S	**Sb**	**09 35 25.5**	**-0.5**
	baz=345						
TWF1	**Yuli**	**0.93**	**208**	*e*P	**Pb**	**09 35 12.5**	**-2.3**
	baz=223						
TWQ1	**Liyutan**	**0.93**	**281**	P	**Pb**	**09 35 14.5**	**-0.4**
	baz=281						
TWQ1				*e*S	**Sn**	**09 35 28.5**	**0.0**
	baz=281						
NCU	**National Centr**	**0.96**	**326**	*e*P	**Pb**	**09 35 15.5**	**+0.2**
	baz=326						
NCU				S	**Sn**	**09 35 29.4**	**+0.3**
	baz=326						
NSY	**Sanyi**	**0.96**	**285**	*e*P	**Pb**	**09 35 15.4**	**+0.1**
	baz=285						
NSY				*e*S	**Sn**	**09 35 29.1**	**-0.1**
	baz=285						
HSN	**Hsinchu**	**0.97**	**311**	*e*P	**Pb**	**09 35 15.2**	**-0.2**
	baz=313						
HSN				*e*S	**Sn**	**09 35 29.5**	**+0.2**
	baz=313						
TWS1	**Kuangyinshan**	**0.98**	**341**	⇓*e*P	**Pb**	**09 35 15.5**	**-0.1**
	baz=349						
TWS1				*e*S	**Sn**	**09 35 30.4**	**+0.7**
	baz=349						
TCU	**Taichung**	**1.01**	**269**	⇓*i*P	**Pn**	**09 35 16.4**	**0.0**
	baz=269						
YUS	**Yu-Shan**	**1.02**	**228**	⇓*i*P	**Pb**	**09 35 15.7**	**-0.9**
	baz=229						
YUS				*e*S	**Sb**	**09 35 30.4**	**+0.5**
	baz=229						
WNT	**Mingjian**	**1.04**	**254**	⇓*e*P	**Pb**	**09 35 16.7**	**0.0**
	baz=251						
WNT				*e*S	**Sn**	**09 35 31.9**	**+0.8**
	baz=251						
ALS	**Alishan**	**1.11**	**234**	⇓*i*P	**Pb**	**09 35 17.3**	**-0.7**
	baz=234						
ALS				*e*S	**Sg**	**09 35 33.7**	**+0.5**
	baz=234						
TWY	**Chenhua**	**1.11**	**352**	*e*P	**Pb**	**09 35 17.5**	**-0.4**
	baz=352						
TWY				*e*S	**Sg**	**09 35 33.6**	**+0.4**
	baz=352						
CHKT	**Chengkung**	**1.13**	**200**	*e*P	**Pn**	**09 35 16.6**	**-1.6**
	baz=192						
CHN5	**Tsauling**	**1.16**	**241**	⇓*i*P	**Pn**	**09 35 18.3**	**-0.3**
	baz=242						
YOJ	**Yonaguni jima**	**1.16**	**75**	⇓*i*P	**Pn**	**09 35 18.4**	**-0.2**
	baz=67						
YOJ				*e*S	**Sg**	**09 35 35.5**	**+0.8**
	baz=67						
YOJ	**Yonaguni jima**	**1.16**	**75**	P	**Pn**	**09 35 18.3**	**-0.3**
YOJ				S	**Sg**	**09 35 35.8**	**+1.1**
ELDTW	**Lidau**	**1.20**	**216**	*e*P	**Pn**	**09 35 16.9**	**-2.3**
	baz=205						
ELDTW				*e*S	**Sn**	**09 35 35.8**	**+0.5**
	baz=205						
WGK	**Gukeng**	**1.21**	**247**	*e*P	**Pn**	**09 35 19.3**	**0.0**
	baz=248						
WGK				*e*S	**Sg**	**09 35 38.4**	**+2.0**
	baz=248						
TPUB	**Ta-pu**	**1.36**	**231**	*e*Pn	**Pn**	**09 35 21.5**	**+0.1**
TPUB				*e*Sn	**Sg**	**09 35 41.2**	**0.0**
WTCT	**Ta-ch'eng**	**1.40**	**258**	*e*P	**Pn**	**09 35 21.9**	**-0.1**
	baz=259						
WTCT				*e*S	**Sg**	**09 35 42.2**	**-0.3**
	baz=259						
CHY	**Chiayi**	**1.41**	**242**	⇓*i*P	**Pn**	**09 35 22.3**	**+0.3**
	baz=243						
CHY				*e*S	**Sg**	**09 35 43.1**	**+0.4**
	baz=243						
WTP	**Ta-pu**	**1.41**	**229**	⇓P	**Pn**	**09 35 22.2**	**+0.1**
	baz=220						
WTP				*e*S	**Sg**	**09 35 42.4**	**-0.3**
	baz=220						
PCYT	**Pengchaiyu**	**1.48**	**10**	⇓*i*P	**Pn**	**09 35 22.8**	**-0.1**
	baz=8.0						
TWK	**Hsinying**	**1.49**	**233**	⇓*e*P	**Pn**	**09 35 23.6**	**+0.5**
	baz=234						
TWK				*e*S	**Sg**	**09 35 44.7**	**-0.4**
	baz=234						
TWG	**Pinlang**	**1.49**	**206**	*e*P	**Pn**	**09 35 20.5**	**-2.7**
	baz=191						
TWG	**Pinlang**	**1.49**	**206**	*e*Pn	**Pn**	**09 35 20.2**	**-3.0**
CHN1	**Nanshi**	**1.51**	**230**	*e*P	**Pn**	**09 35 23.7**	**+0.3**
	baz=222						
CHN1				S	**Sg**	**09 35 46.8**	**+0.9**
	baz=222						
WSF	**Szhu**	**1.52**	**250**	*e*P	**Pn**	**09 35 23.6**	**0.0**
	baz=252						
WSF				*e*S	**Sg**	**09 35 45.9**	**-0.3**
	baz=252						
TTN	**Taitung**	**1.53**	**202**	*e*P	**Pn**	**09 35 22.3**	**-1.3**
	baz=203						
CHN8	**Yiju**	**1.66**	**241**	*e*P	**Pn**	**09 35 25.8**	**+0.4**
	baz=242						
CHN8				*e*S	**Sg**	**09 35 49.2**	**-1.3**
	baz=242						
CHN3	**Shinhua**	**1.69**	**230**	*e*P	**Pb**	**09 35 27.5**	**-0.3**
	baz=231						
CHN3				*e*S	**Sg**	**09 35 52.5**	**+0.8**
	baz=231						
ECL	**Taimali**	**1.74**	**206**	*e*P	**Pn**	**09 35 26.3**	**-0.3**
	baz=193						
SCLT	**Jiali**	**1.76**	**236**	*e*P	**Pn**	**09 35 27.7**	**+0.9**
	baz=237						
IRIF	**Iriomote-Funau**	**1.79**	**84**	P	**Pn**	**09 35 26.8**	**-0.4**
IRIF				*e*S	**Sb**	**09 35 50.9**	**-0.7**
TAI1	**Yung-k'ang**	**1.81**	**232**	*e*P	**Pn**	**09 35 28.4**	**+0.8**
	baz=232						
TAI1				*e*S	**Sb**	**09 35 52.1**	**-0.2**
	baz=232						
TWM1	**Shoushan**	**1.83**	**223**	*e*P	**Pb**	**09 35 29.5**	**-0.7**
	baz=224						
HATJ	**Hateruma jima**	**1.85**	**93**	P	**Pn**	**09 35 27.9**	**-0.2**
HATJ				*e*S	**Sn**	**09 35 50.1**	**-1.1**
SGLT	**Jiouru**	**1.86**	**220**	*e*P	**Pb**	**09 35 30.2**	**-0.5**
	baz=204						
EAST	**Anshuo**	**1.98**	**206**	*e*P	**Pn**	**09 35 28.2**	**-1.7**
	baz=195						
TAW	**Tawu**	**1.98**	**204**	*e*P	**Pn**	**09 35 30.2**	**+0.3**
	baz=193						
JKRS	**Kuro-shima**	**2.04**	**88**	P	**Pn**	**09 35 30.8**	**+0.1**
JKRS				*e*S	**Sb**	**09 35 57.8**	**-1.0**
SCZT	**Fangliau**	**2.08**	**211**	*e*P	**Pn**	**09 35 31.6**	**+0.3**
	baz=195						
KAU	**Kaohsiung**	**2.09**	**221**	*e*P	**Pb**	**09 35 33.5**	**-1.2**
	baz=240						
PNG	**Penghu**	**2.12**	**254**	*e*P	**Pn**	**09 35 31.2**	**-0.6**
	baz=258						
PNG				*e*S	**Sn**	**09 35 59.4**	**+1.6**
	baz=258						
LAY	**Lan-yu**	**2.13**	**

JOW	**Kunigami**	**6.44**	**64**	P	**Pn**	**09 36 30.1**	**-1.1**
SSE	**Sheshan**	**6.92**	**356**	*e*P	**Pn**	**09 36 39.0**	**+1.3**
SSE				S	**Sn**	**09 37 56.8**	**+0.8**
SSE				pmax	pmax		
	comp=Z,49nm,0.7s						
SSE				smax	smax		
	comp=N,460nm,1.4s						
SSE				smax	smax		
	comp=E,510nm,1.2s						
SSE				LR	LR		
	comp=N,2μm,20.1s						
SSE				LR	LR		
	comp=E,10μm,20.1s						
SSE				LR	LR		
	comp=Z,15μm,11.6s						
HKC	**Hong Kong Obse**	**7.24**	**257**	P	Pn	09 36 50.0	+7.8
JTK	**Tokunoshima**	**7.39**	**59**	P	**Pn**	**09 36 43.4**	**-0.8**
JAMN	**Amaminishikomi**	**7.78**	**57**	P	**Pn**	**09 36 48.7**	**-0.9**
GZH	**Guangzhou**	**7.81**	**264**	P	Pn	09 36 45.8	-4.2
GZH				S	Sn	09 38 07.5	-11
GZH				smax	smax		
	comp=N,2μm,1.2s						
GZH				smax	smax		
	comp=E,2.0nm,1.4s						
BCPH	**Baguio City Da**	**7.83**	**188**	⇑*i*P	Pn	09 36 45.9	-4.6
BCPH				*e*S	**Sn**	**09 38 19.7**	**+0.7**
JAM	**Amami Oshima**	**8.19**	**57**	P	**Pn**	**09 36 54.3**	**-1.0**
NJ2	**Nanjing**	**8.26**	**342**	*e*P	**Pn**	**09 36 55.0**	**-1.2**
NJ2				pP	**Pn**	**09 36 59.0**	**+2.8**
NJ2				sP		09 37 01.0	
NJ2				S	**Sn**	**09 38 28.0**	**-1.2**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				smax	smax		
	comp=N,1μm,1.2s						
NJ2				smax	smax		
	comp=E,780nm,1.0s						
NJ2				LR	LR		
	comp=N,13μm,10.4s						
NJ2				LR	LR		
	comp=E,6μm,9.8s						
NJ2				LR	LR		
	comp=Z,8μm,12.6s						
WHN	**Wuhan**	**9.16**	**315**	⇓P	**Pn**	**09 37 06.8**	**-1.7**
WHN				S	**Sn**	**09 38 45.3**	**-5.8**
WHN				LR	LR		
	comp=N,46μm,8.8s						
WHN				LR	LR		
	comp=E,43μm,9.4s						
WHN				LR	LR		
	comp=Z,68μm,9.5s						
TGY	**Tagaytay City**	**10.05**	**185**	Pn	Pn	09 37 28.6	+7.8
TGY	**Tagaytay City**	**10.05**	**185**	Pn	Pn	09 37 28.6	+7.8
	comp=Z,38nm,0.3s,baz=262,slow=1.5,SNR=6.7						
JNU	**Nakatsue**	**11.97**	**40**	*e*Pn	Pn	09 37 52.4	+5.4
JNU	**Nakatsue**	**11.97**	**40**	Pn	Pn	09 37 50.5	+3.4
	comp=Z,0.3nm,0.3s,baz=178,slow=9.8,SNR=9.7						
QIZ	**Qiongzhong**	**12.22**	**248**	P	**Pn**	**09 37 51.0**	**+0.5**
QIZ				S	**Sn**	**09 40 08.5**	**+2.0**
QIZ				LR	LR		
	comp=N,4μm,13.2s						
QIZ				LR	LR		
	comp=E,930nm,12.9s						
QIZ				LR	LR		
	comp=Z,3μm,12.9s						
ENH	**Enshi**	**12.51**	**302**	*e*Pn	**Pn**	**09 37 55.1**	**+0.7**
	comp=Z,30nm,0.9s						
TIA	**Tai'an**	**12.65**	**343**	P	Pn	09 38 02.0	+5.7
TIA				pmax	pmax		
	comp=Z,520nm,8.4s						
TIA				LR	LR		
	comp=N,10μm,10.3s						
TIA				LR	LR		
	comp=E,6μm,8.3s						
TIA				LR	LR		
	comp=Z,13μm,12.7s						
GYA	**Guiyang**	**13.86**	**283**	⇑*i*P	**Pn**	**09 38 13.3**	**+0.3**
GYA				PP	P	09 38 25.0	+3.8
GYA				S	Sn	09 40 40.5	-6.1
GYA				SS	**S**	**09 41 05.5**	**-3.1**
GYA				pmax	pmax		
	comp=Z,40nm,0.8s						
GYA				pmax	pmax		
	comp=Z,460nm,4.7s						
GYA				LR	LR		
	comp=N,3μm,10.2s						
GYA				LR	LR		
	comp=E,10μm,9.9s						
GYA				LR	LR		
	comp=Z,14μm,11.1s						
INCN	**Inchon**	**13.90**	**16**	*e*Pn	**Pn**	**09 38 14.7**	**+1.2**
KSAR	**Wonju Array Be**	**14.22**	**20**	Pn	**Pn**	**09 38 19.9**	**+2.1**
KSAR				Lg	Lg	09 42 26.9	
KSRS	**Korea Array**	**14.25**	**20**	Pn	**Pn**	**09 38 19.9**	**+1.8**
	comp=Z,0.8nm,0.3s,baz=200,slow=13,SNR=29						
KSRS				Lg	Lg	09 42 26.9	
	comp=Z,0.2nm,0.3s,baz=204,slow=29,SNR=4.3						
KSRS				LR	LR	09 44 23.9	
	comp=Z,812nm,21.5s,baz=205,slow=40						
DL2	**Dalian**	**14.69**	**360**	P	**Pn**	**09 38 26.8**	**+2.7**
DL2				pmax	pmax		
	comp=Z,42nm,1.3s						
DL2				pmax	pmax		
	comp=Z,320nm,5.1s						
DL2				LR	LR		
	comp=N,4μm,13.5s						
DL2				LR	LR		
	comp=E,2μm,5.6s						
DL2				LR	LR		
	comp=Z,5μm,12.9s						
XAN	**Xi'an**	**14.92**	**314**	P	**Pn**	**09 38 26.3**	**-1.0**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
XAN				pmax	pmax		
	comp=Z,120nm,5.8s						
XAN				LR	LR		
	comp=N,3μm,8.6s						
XAN				LR	LR		
	comp=E,4μm,11.3s						
XAN				LR	LR		
	comp=Z,4μm,10.9s						
TIY	**Taiyuan**	**15.68**	**332**	*e*P	**P**	**09 38 40.0**	**-1.4**
TIY				S	**Sn**	**09 41 38.0**	**+7.1**
TIY				pmax	pmax		
	comp=Z,910nm,4.5s						
TIY				LR	LR		
	comp=N,8μm,11.5s						
TIY				LR	LR		
	comp=E,3μm,7.5s						
TIY				LR	LR		
	comp=Z,8μm,12.9s						
BJT	**Baijiatuau**	**16.49**	**345**	*e*P	**P**	**09 38 49.2**	**-1.0**
	comp=Z,122nm,1.4s						
BJI	**Beijing**	**16.51**	**345**	P	**Pn**	**09 38 48.0**	**+0.1**
BJI				S	**Sn**	**09 41 55.0**	**+4.2**
BJI				pmax	pmax		
	comp=Z,9.0nm,1.4s						
BJI				pmax	pmax		
	comp=Z,1μm,9.4s						
BJI				LR	LR		
	comp=N,6μm,13.2s						
BJI				LR	LR		
	comp=E,3μm,11.3s						
BJI				LR	LR		
	comp=Z,2μm,14.8s						
CD2	**Chengdu**	**17.32**	**297**	P	**P**	**09 38 59.3**	**-0.3**
CD2				pP	**pP**	**09 39 02.8**	**-1.6**
CD2				sP	**sP**	**09 39 06.3**	**-0.3**
CD2				PP	**PnPn**	**09 39 13.8**	**+5.4**
CD2				S	**Sn**	**09 42 10.5**	**-0.2**
CD2				sS	**S**	**09 42 15.5**	**-3.8**
CD2				SS	**SnSn**	**09 42 32.0**	**+7.8**
CD2				pmax	pmax		
	comp=Z,120nm,1.2s						
CD2				pmax	pmax		
	comp=Z,1μm,9.4s						
CD2				LR	LR		
	comp=N,10μm,9.4s						
CD2				LR	LR		
	comp=E,9μm,8.2s						
CD2				LR	LR		
	comp=Z,14μm,9.6s						
KMI	**Kunming**	**17.34**	**277**	P	**Pn**	**09 38 58.8**	**+0.2**
KMI				pP	**pP**	**09 39 03.3**	**-1.4**
KMI				sP	**sP**	**09 39 06.0**	**-0.9**
KMI				PP	**PnPn**	**09 39 12.5**	**+3.8**
KMI				S	**Sn**	**09 42 09.3**	**-2.1**
KMI				sS	**S**	**09 42 16.5**	**-3.5**
KMI				SS	**SnSn**	**09 42 30.8**	**+6.1**
KMI				pmax	pmax		
	comp=Z,12nm,1.1s						
KMI				pmax	pmax		
	comp=Z,230nm,4.2s						
KMI				LR	LR		
	comp=N,3μm,9.2s						
KMI				LR	LR		
	comp=E,17μm,9.9s						
KMI				LR	LR		
	comp=Z,19μm,10.5s						
DAV	**Davao City (W)**	**17.39**	**167**	LR	LR	09 47 10.9	
	comp=Z,1μm,18.2s,baz=128,slow=42						
SNY	**Shenyang**	**17.67**	**4**	⇓P	**P**	**09 39 05.0**	**+1.7**
SNY				S	**S**	**09 42 25.5**	**-0.6**
SNY				pmax	pmax		
	comp=Z,33nm,2.2s						
SNY				LR	LR		
	comp=N,8μm,11.4s						
SNY				LR	LR		
	comp=E,3μm,10.5s						
SNY				LR	LR		
	comp=Z,9μm,12.0s						
UBPT	**Khong Chiam**	**17.70**	**243**	P	P	09 39 09.0	+5.2
	comp=Z,28nm,1.9s,comp=Z,995nm						
JHJ	**Hachijo jima 2**	**18.12**	**57**	LR	LR	09 46 25.0	
	comp=Z,1μm,18.8s,baz=19,slow=38						
HHC	**Hu-ho-hao-te**	**18.70**	**335**	*e*P	**Pn**	**09 39 16.5**	**+1.3**
HHC				sP	**sP**	**09 39 23.3**	**+1.5**
HHC				PP	**PnPn**	**09 39 28.3**	**+0.9**
HHC				pmax	pmax		
	comp=Z,150nm,1.5s						
HHC				pmax	pmax		
	comp=Z,2μm,6.1s						
HHC				LR	LR		
	comp=N,12μm,12.2s						
HHC				LR	LR		
	comp=E,5μm,13.5s						
HHC				LR	LR		
	comp=Z,11μm,13.7s						
MAJO	**Matsushiro**	**18.75**	**45**	*e*P	**Pn**	**09 39 18.8**	**+3.0**
MAJO				pmax	pmax		
	comp=Z,15nm,1.1s						
MAJO	**Matsushiro**	**18.75**	**45**	*e*P	**Pn**	**09 39 18.8**	**+3.0**
	comp=Z,15nm,1.1s						
MAT	**Matsushiro**	**18.75**	**45**	P	**P**	**09 39 12.9**	**-2.4**
MAT				S	**Sn**	**09 42 42.8**	**-2.5**
MJAR	**Matsushiro Arr**	**18.75**	**45**	P	**P**	**09 39 14.3**	**-1.0**
MJAR	**Matsushiro Arr**	**18.75**	**45**	P	**P**	**09 39 14.3**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=241,slow=7.7,SNR=10.0						
KKM	**Kota Kinabalu**	**18.80**	**197**	*e*P	**P**	**09 39 16.2**	**+0.2**
	comp=Z,24nm,0.8s						
BTO	**Baotou**	**19.13**	**332**	*e*P	**Pn**	**09 39 23.3**	**+3.0**
MYLDM	**Lahad Datu**	**19.15**	**190**	P	**Pn**	**09 39 23.4**	**+2.8**
	comp=Z,74nm,1.5s,comp=Z,1μm						
LZH	**Lanzhou**	**19.50**	**312**	*e*P	**Pn**	**09 39 25.8**	**+0.9**
LZH				pP	**pP**	**09 39 29.0**	**+0.6**
LZH				sP	**sP**	**09 39 31.0**	**+0.4**
LZH				PP	**PnPn**	**09 39 43.5**	**+5.2**
LZH				*e*S	**Sn**	**09 43 01.5**	**-1.9**
LZH				sS	**S**	**09 43 05.3**	**+1.8**
LZH				pmax	pmax		
	comp=Z,240nm,1.1s						
LZH				pmax	pmax		
	comp=Z,1μm,4.4s						
LZH				LR	LR		
	comp=N,7μm,12.2s						
LZH				LR	LR		
	comp=E,10μm,11.7s						
LZH				LR	LR		
	comp=Z,14μm,11.2s						
CN2	**Changchun**	**19.81**	**8**	*e*P	**P**	**09 39 27.0**	**+0.2**
CN2				*e*sP	**sP**	**09 39 34.0**	**+0.3**
CN2				*e*S	**S**	**09 43 04.0**	**-5.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,6μm,14.0s						
CN2				LR	LR		
	comp=E,2μm,14.0s						
CN2				LR	LR		
	comp=Z,6μm,13.0s						
MDJ	**Mudanjiang**	**21.37**	**15**	P	**P**	**09 39 43.5**	**-0.2**
MDJ				pP	**pP**	**09 39 45.0**	**-3.5**
MDJ				S	**S**	**09 43 39.3**	**-0.9**
MDJ				pmax	pmax		
	comp=Z,26nm,1.3s						
MDJ				pmax	pmax		
	comp=Z,150nm,6.8s						
MDJ				LR	LR		
	comp=N,2μm,17.3s						
MDJ				LR	LR		
	comp=E,3μm,16.3s						
MDJ				LR	LR		
	comp=Z,4μm,14.8s						
MDJ	**Mudanjiang**	**21.37**	**15**	*e*P	**P**	**09 39 43.5**	**-0.2**
	comp=Z,98nm,1.4s						
CHBT	**CHBT**	**21.63**	**242**	P	P	09 39 59.4	+13
USRK	**Ussuriysk Arra**	**21.66**	**20**	P	**P**	**09 39 46.6**	**-0.1**
	comp=Z,9.4nm,0.9s,baz=216,slow=10,SNR=22						
USRK				LR	LR	09 49 04.0	
	comp=Z,750nm,18.7s,baz=191,slow=39						
CMMT	**Chiang Mai**	**21.89**	**260**	P	**P**	**09 39 51.5**	**+2.0**
	comp=Z,30nm,1.2s,comp=Z,501nm						
CHTO	**Chiang Mai**	**21.89**	**260**	*e*P	**P**	**09 39 51.6**	**+2.0**
CHTO				pmax	pmax		
	comp=Z,33nm,1.0s						
CHTO	**Chiang Mai**	**21.89**	**260**	*e*P	**P**	**09 39 51.6**	**+2.0**
	comp=Z,33nm,1.0s						
CHTO	**Chiang Mai**	**21.89**	**260**	P	**P**	**09 39 51.7**	**+2.2**
	comp=Z,19nm,1.4s,comp=Z,535nm						
CMAR	**Chiang Mai Arr**	**22.01**	**259**	P	**P**	**09 39 51.0**	**+0.2**
CMAR				PcP	**PcP**	**09 43 48.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**22.01**	**259**	P	**P**	**09 39 51.0**	**+0.2**
	comp=Z,6.1nm,0.9s,baz=57,slow=8.2,SNR=26						
CMAR				PcP	**PcP**	**09 43 48.0**	**-1.0**
	comp=Z,2.0nm,0.5s,baz=135,slow=0.6,SNR=7.7						
CMAR				LR	LR	09 48 52.8	
	comp=Z,1μm,19.5s,baz=75,slow=38						
SBUM	**Sibu**	**23.49**	**205**	P	**P**	**09 40 05.6**	**-0.6**
	comp=Z,41nm,1.4s,comp=Z,477nm						
MRSI	**Marisa**	**23.56**	**180**	P	P	09 40 14.8	+8.0
GTA	**Gaotai**	**23.98**	**315**	⇑P	**P**	**09 40 10.5**	**-0.4**
GTA				pP	**pP**	**09 40 13.5**	**-2.5**
GTA				sP	**sP**	**09 40 15.8**	**-2.4**
GTA				PP	PnPn	09 40 47.8	+8.2
GTA				S	**S**	**09 44 29.5**	**+2.4**
GTA				sS	**sS**	**09 44 35.5**	**-0.1**
GTA				pmax	pmax		
	comp=Z,25nm,1.2s						
GTA				pmax	pmax		
	comp=Z,820nm,4.3s						
GTA				LR	LR		
	comp=N,3μm,10.0s						
GTA				LR	LR		
	comp=E,8μm,11.9s						
GTA				LR	LR		
	comp=Z,9μm,11.4s						
GUMO	**Guam**	**24.21**	**112**	*e*P	**P**	**09 40 13.7**	**+0.6**
	comp=Z,212nm,1.2s						
HIA	**Hailar**	**25.10**	**357**	*e*P	**P**	**09 40 20.4**	**-0.4**
	comp=Z,64nm,1.3s						
ERM	**Erimo**	**25.13**	**40**	*e*P	**P**	**09 40 20.3**	**-0.9**
ERM				pmax	pmax		
	comp=Z,11nm,1.0s						
KSM	**Kuching**	**25.15**	**208**	*e*P	**P**	**09 40 21.2**	**-0.4**
	comp=Z,121nm,1.4s						
KSM	**Kuching**	**25.15**	**208**	P	**P**	**09 40 22.2**	**+0.6**
	comp=Z,59nm,1.5s,comp=Z,946nm						
STKI	**Sintang**	**25.96**	**204**	P	**P**	**09 40 31.7**	**+2.7**
	comp=Z,37nm,1.5s,comp=Z,7μm						
ASAJ	**Asahikawa**	**26.19**	**35**	*e*P	**P**	**09 40 29.3**	**-1.5**
	comp=Z,5.8nm,1.0s						
ASAJ	**Asahikawa**	**26.19**	**35**	P	**P**	**09 40 30.8**	**+0.1**
	comp=Z,6.9nm,0.7s,baz=232,slow=9.9,SNR=4.2						
KLR	**Kul'dur**	**26.21**	**15**	*e*P	**P**	**09 40 27.1**	**-3.8**
KLR				*e*S	**S**	**09 44 58.5**	**-3.8**
KLR				pmax	pmax		
	comp=Z,50nm,1.2s						
KLR				MLR	MLR		
	comp=Z,20μm,12.0s						
ULN	**Ulaanbaatar**	**26.38**	**337**	*e*P	**P**	**09 40 31.7**	**-1.0**
	comp=Z,45nm,1.3s						
ULN	**Ulaanbaatar**	**26.38**	**337**	P	**P**	**09 40 32.3**	**-0.4**
	comp=Z,37nm,1.2s,comp=Z,442nm						
HABR	**Khabarovsk**	**26.43**	**20**	*e*P	P	09 40 43.9	+11
HABR				*e*S	**S**	**09 45 01.6**	**-4.1**
HABR				*e**SS	sS	09 45 17.6	+3.5
HABR				*e*		09 51 22.3	
HABR				pmax	pmax		
	comp=N,24nm,1.4s						
HABR				pmax	pmax		
	comp=E,32nm,1.6s						
HABR				pmax	pmax		
	comp=Z,35nm,1.4s						
HABR				MLR	MLR		
	comp=Z,2μm,15.0s						
SONM	**Songino Array**	**26.59**	**336**	P	**P**	**09 40 33.5**	**-1.1**
SONM	**Songino Array**	**26.59**	**336**	P	**P**	**09 40 33.5**	**-1.1**
	comp=Z,14nm,1.0s,baz=152,slow=8.7,SNR=33						
SONM				LR	LR	09 52 31.1	
	comp=Z,3μm,18.1s,baz=144,slow=40						
TTSI	**Tana Toraja**	**27.12**	**184**	P	P	09 40 45.5	+6.1
	comp=Z,22nm,1.2s,comp=Z,2μm						
LSA	**Lhasa**	**27.81**	**288**	P	**P**	**09 40 46.5**	**+0.4**
LSA				pP	**pP**	**09 40 55.0**	**+3.8**
LSA				sP	sP	09 41 00.0	+6.7
LSA				S	**S**	**09 45 32.5**	**+3.7**
LSA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
LSA				pmax	pmax		
	comp=Z,290nm,5.0s						
LSA				LR	LR		
	comp=N,820nm,14.0s						
LSA				LR	LR		
	comp=E,3μm,14.0s						
LSA				LR	LR		
	comp=Z,4μm,14.0s						
LSA	**Lhasa**	**27.81**	**288**	*e*P	**P**	**09 40 47.7**	**+1.6**
LSA				pmax	pmax		
	comp=Z,22nm,0.8s						
LSA	**Lhasa**	**27.81**	**288**	*e*P	**P**	**09 40 47.7**	**+1.6**
	comp=Z,22nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**27.94**	**39**	*d*iP	**P**	**09 40 42.4**	**-4.1**
YUK				*i* PPP	PPP	09 41 35.3	
YUK				*i* S	S	09 45 21.8	-7.8
YUK				*i* SSS	SSS	09 47 09.5	
YUK				MLR	MLR		
	comp=N,391nm,21.0s						
YUK				MLR	MLR		
	comp=E,548nm,21.0s						
YUK				MLR	MLR		
	comp=Z,988nm,21.0s						
IPM	**Ipoh**	**27.98**	**229**	*e*P	**P**	**09 40 47.7**	**+0.5**
	comp=Z,9.0nm,0.7s						
IPM	**Ipoh**	**27.98**	**229**	P	**P**	**09 40 49.0**	**+1.8**
	comp=Z,26nm,1.9s						
MYKOM	**Kota Tinggi**	**28.21**	**221**	P	**P**	**09 40 52.0**	**+2.8**
	comp=Z,17nm,1.1s						
YSS	**Yuzh-Sakhalins**	**28.25**	**31**	*e*P	**P**	**09 40 48.8**	**-0.5**
YSS				*e*		09 47 10.0	
YSS				MLR	MLR		
	comp=N,2μm,14.0s						
YSS				MLR	MLR		
	comp=E,1μm,14.0s						
YSS				MLR	MLR		
	comp=Z,2μm,14.0s						
BBKI	**Banjar Baru**	**28.29**	**195**	P	P	09 40 53.3	+3.4
	comp=Z,71nm,1.4s,comp=Z,4μm						
KAPI	**Kappang**	**29.08**	**184**	LR	LR	09 53 17.2	
	comp=Z,338nm,19.7s,baz=5.0,slow=38						
ZAK	**Zakamensk**	**29.85**	**336**	*e*P	**P**	**09 41 01.8**	**-1.8**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
TLY	**Talaya**	**30.79**	**338**	*e*P	**P**	**09 41 10.8**	**-1.0**
TLY				*e*		09 42 23.8	
TLY				*e*S	**S**	**09 46 18.2**	**+3.9**
TLY				pmax	pmax		
	comp=Z,21nm,1.5s						
TLY				MLR	MLR		
	comp=Z,3μm,13.0s						
TAPN	**Taplejung**	**30.79**	**283**	*e*P	**P**	**09 41 13.8**	**+1.4**
	comp=Z,108nm,1.1s						
IRK	**Irkutsk**	**31.05**	**339**	*e*P	**P**	**09 41 13.3**	**-0.8**
IRK				pmax	pmax		
	comp=Z,52nm,1.3s						
ODAN	**Odare**	**31.09**	**282**	*e*P	**P**	**09 41 16.1**	**+1.1**
	comp=Z,122nm,1.1s						
MOY	**Mondy**	**31.75**	**335**	*e*P	**P**	**09 41 19.8**	**-0.5**
MOY				pmax	pmax		
	comp=Z,28nm,2.1s						
RAMN	**Ramite**	**31.80**	**283**	*e*P	**P**	**09 41 22.4**	**+1.2**
	comp=Z,91nm,1.1s						
PPI	**Padang Panjang**	**32.09**	**223**	P	**P**	**09 41 26.5**	**+3.0**
	comp=Z,33nm,1.9s						
GUN	**Gumba**	**32.40**	**284**	*e*P	**P**	**09 41 27.4**	**+0.8**
	comp=Z,104nm,1.3s						
CLNS	**Chul'man**	**32.71**	**3**	*e*P	**P**	**09 41 27.4**	**-1.2**
CLNS				*e*		09 42 40.6	
CLNS				*e*S	S	09 46 50.4	+6.2
CLNS				*e*SS	**SS**	**09 49 08.7**	**+3.6**
CLNS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CLNS				pmax	pmax		
	comp=N,2.0nm,1.1s						
CLNS				pmax	pmax		
	comp=E,1.0nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CLNS				pmax	pmax		
	comp=E,2.0nm,1.1s						
CLNS				pmax	pmax		
	comp=N,2.0nm,1.0s						
CLNS				smax	smax		
	comp=N,81nm,17.1s						
CLNS				smax	smax		
	comp=E,173nm,12.9s						
CLNS				MLR	MLR		
	comp=N,2μm,13.0s						
CLNS				MLR	MLR		
	comp=N,3μm,15.0s						
CLNS				MLR	MLR		
	comp=E,775nm,11.0s						
PKI	**Pulchoki**	**32.83**	**284**	*e*P	**P**	**09 41 31.0**	**+0.7**
	comp=E,149nm,1.7s						
PKIN	**Phulchoki**	**32.84**	**284**	*e*P	**P**	**09 41 31.0**	**+0.6**
	comp=E,46nm,1.1s						
KKN	**Kakani**	**32.93**	**284**	*e*P	**P**	**09 41 31.9**	**+0.8**
	comp=E,57nm,1.0s						
DMN	**Daman**	**33.09**	**284**	*e*P	**P**	**09 41 33.3**	**+0.7**
	comp=E,53nm,0.9s						
SJI	**Sawahan**	**33.19**	**198**	P	P	09 41 40.6	+7.4
	comp=E,54nm,1.6s						
TGJI	**Tegal**	**33.23**	**203**	P	P	09 41 38.3	+4.8
	comp=E,45nm,1.3s,comp=E,2μm						
PWJI	**Pagerwojo**	**33.45**	**198**	P	P	09 41 42.5	+7.1
	comp=E,68nm,1.0s						
WMQ	**Urumqi**	**34.05**	**314**	⇓*i*P	**P**	**09 41 41.5**	**+0.9**
WMQ				pP	**pP**	**09 41 46.0**	**+0.3**
WMQ				sP	**sP**	**09 41 48.5**	**+0.7**
WMQ				PP	**PnPn**	**09 42 55.0**	**+1.0**
WMQ				S	**S**	**09 47 06.0**	**+0.5**
WMQ				sS	**sS**	**09 47 14.0**	**0.0**
WMQ				SS	**SnSn**	**09 49 13.0**	**+0.2**
WMQ				pmax	pmax		
	comp=Z,33nm,1.4s						
WMQ				pmax	pmax		
	comp=Z,300nm,4.9s						
WMQ				LR	LR		
	comp=N,3μm,10.8s						
WMQ				LR	LR		
	comp=E,5μm,10.6s						
WMQ				LR	LR		
	comp=Z,3μm,12.4s						
DANN	**Dangsing**	**34.25**	**285**	*e*P	**P**	**09 41 43.7**	**+1.0**
	comp=Z,86nm,1.0s						
KOLN	**Koldanda**	**34.42**	**284**	*e*P	**P**	**09 41 44.6**	**+0.5**
	comp=Z,35nm,0.5s						
YAK	**Yakutsk**	**38.22**	**6**	*e*P	**P**	**09 42 18.6**	**+2.8**
YAK				*e*		09 43 50.8	
YAK				*e*PPP	PPP	09 44 06.9	
YAK				*e*		09 44 28.4	
YAK				*e*S	S	09 48 14.8	+6.2
YAK				*e*SS	**SnSn**	**09 50 53.1**	**+0.1**
YAK				*e*SSS	SSS	09 51 19.8	
YAK				*e*		09 52 20.3	
YAK				pmax	pmax		
	comp=Z,14nm,1.3s						

YAK pmax pmax
comp=N,10.0nm,1.3s
YAK pmax pmax
comp=Z,31nm,1.3s
YAK pmax pmax
comp=N,44nm,2.0s
YAK pmax pmax
comp=E,24nm,2.2s
YAK smax smax
comp=N,36nm,2.1s
YAK MLR MLR
comp=Z,2µm,13.0s
YAK MLR MLR
comp=N,2µm,11.0s
YAK MLR MLR
comp=E,643nm,11.0s
MK31 Makanchi Array 38.72 316 *eP* **P 09 42 19.5 -0.9**
MK31 Makanchi Array 38.72 316 *eP* **P 09 42 19.4 -0.9**
MKAR Makanchi Array 38.72 316 P P **09 42 19.4 -0.9**
MKAR Makanchi Array 38.72 316 P P **09 42 19.4 -0.9**
MKAR Makanchi Array 38.72 316 P P **09 42 19.4 -0.9**
comp=E,12nm,0.8s,baz=107,slow=8.9,SNR=96
MKAR LR LR 09 59 29.5
comp=E,1µm,18.0s,baz=99,slow=38
PETK Petropavlovsk- 39.57 34 P P **09 42 25.9 -1.4**
PETK Petropavlovsk- 39.57 34 P P **09 42 25.9 -1.4**
PETK Petropavlovsk- 39.57 34 P P **09 42 25.9 -1.4**
comp=E,1.5nm,0.8s,baz=251,slow=8.6,SNR=3.0
PETK LR LR 10 00 04.6
comp=E,715nm,18.2s,baz=226,slow=38
ZAA0 Zalesovo Array 40.55 327 *eP* P **09 42 34.2 -1.2**
ZALV Zalesovo Beam 40.55 327 P P **09 42 33.7 -1.7**
ZALV Zalesovo Beam 40.55 327 P P **09 42 33.7 -1.7**
ZALV Zalesovo Beam 40.55 327 P P **09 42 33.7 -1.7**
comp=E,10nm,0.8s,baz=113,slow=8.3,SNR=16
ZALV LR LR 10 00 22.4
comp=E,1µm,19.1s,baz=70,slow=38
AAA Alma-Ata 41.30 309 *i* P P 09 42 45.6 +3.7
AAA pmax pmax
comp=Z,400nm,6.3s
AAA MLR MLR
comp=Z,3µm,13.0s
KSH Kashi 41.36 303 P P **09 42 45.3 +2.8**
KSH *ep* P **pP 09 42 49.5 +1.8**
KSH *es* P **sP 09 42 52.5 +2.7**
KSH *eP* P **PnPn 09 44 24.5 +1.9**
KSH *eP* cP **PcP 09 44 42.5 +1.9**
KSH *eS* S **S 09 49 00.0 +3.5**
KSH *es* S **sS 09 49 08.0 +2.8**
KSH pmax pmax
comp=Z,19nm,0.9s
KSH LR LR
comp=N,3µm,12.6s
KSH LR LR
comp=E,3µm,11.3s
KSH LR LR
comp=Z,5µm,16.1s
PMG Port Moresby 41.57 140 *eP* P **09 42 44.9 +0.7**
comp=Z,32nm,1.1s
PMG Port Moresby 41.57 140 P P **09 42 47.3 +3.1**
comp=Z,27nm,1.1s,comp=Z,510nm
PMG Port Moresby 41.57 140 P P **09 42 44.2 -0.1**
comp=Z,31nm,1.1s,baz=348,slow=4.2,SNR=7.8
NVS Novosibirsk 41.81 327⇓ *i* P P **09 42 44.5 -1.2**
NVS *i* 09 44 28.5
NVS *eS* S 09 48 50.5 -12
NVS pmax pmax
comp=N,25nm,2.0s
NVS pmax pmax
comp=E,28nm,2.0s
NVS pmax pmax
comp=Z,57nm,2.0s
NVS pmax pmax
comp=Z,45nm,2.6s
NVS pmax pmax
comp=N,32nm,3.3s
NVS pmax pmax
comp=E,44nm,2.7s
NVS smax smax
comp=N,36nm,3.2s
NVS smax smax
comp=E,17nm,1.9s
FITZ Fitzroy Crossi 42.19 175 P P **09 42 49.2 +0.1**
FITZ Fitzroy Crossi 42.19 175 P P **09 42 49.2 +0.1**
comp=E,3.1nm,0.6s,baz=356,slow=5.1,SNR=6.7
TKM2 Tokmak 2 42.20 308 *eP* P **09 42 50.9 +1.5**
TKM2 pmax pmax
comp=Z,23nm,1.0s
TKM2 Tokmak 2 42.20 308 *eP* P **09 42 50.9 +1.5**
comp=Z,23nm,1.0s
KURK Kurchatov 42.45 320 P P **09 42 49.9 -1.1**
KURK Kurchatov 42.45 320 P P **09 42 49.9 -1.1**
KURK Kurchatov 42.45 320 P P **09 42 49.9 -1.1**
comp=Z,119nm,1.1s,SNR=7.5
KURBB Kurchatov Arra 42.47 320 P P **09 42 49.9 -1.3**
comp=Z,5.0nm,0.8s,baz=114,slow=7.8,SNR=28
FRU Bishkek 42.89 308 *eP* P **09 42 55.0 +0.2**
FRU *e* 09 44 43.0
FRU pmax pmax
comp=Z,40nm,1.8s
FRU MLR MLR
comp=Z,1µm,18.0s
AAK Ala-Archa 42.94 307 *eP* P **09 42 56.7 +1.3**
AAK pmax pmax
comp=Z,9.0nm,0.8s
AAK Ala-Archa 42.94 307 LR LR 10 03 06.7
comp=Z,997nm,18.2s,baz=72,slow=40
COEN Coen 43.28 149 *eP* P **09 42 58.0 -0.1**
comp=Z,294nm,1.1s
MBWA Marble Bar 45.10 183 *eP* P **09 43 11.6 -1.0**
comp=Z,177nm,2.5s
WRAB Tennant Creek 45.52 163 P P **09 43 14.0 -1.9**
comp=Z,77nm,1.3s,SNR=10
WRAB Tennant Creek 45.52 163 *eP* P **09 43 14.4 -1.6**
WRAB pmax pmax
comp=Z,32nm,1.3s
WRAB Tennant Creek 45.52 163 *eP* P **09 43 14.3 -1.6**
comp=Z,32nm,1.3s
WRA Warramunga Arr 45.52 163 P P **09 43 14.1 -1.9**
WRA Warramunga Arr 45.52 163 P P **09 43 14.1 -1.9**
comp=Z,7.0nm,0.7s,baz=345,slow=8.7,SNR=40
KBL Kabul 46.66 295 *eP* P **09 43 26.9 +1.7**
KBL pmax pmax
comp=Z,25nm,1.0s
KBL Kabul 46.66 295 *eP* P **09 43 26.9 +1.7**
comp=Z,25nm,1.0s
TIXI Tiksi 47.68 3 *d iP* P **09 43 30.8 -1.4**
TIXI pmax pmax
comp=Z,59nm,2.0s
FX1 Attu Island--F 47.98 40 LR LR 10 03 16.3
comp=Z,264nm,19.9s,baz=260,slow=36
BVAR Borovoye Array 48.03 321 P P **09 43 33.8 -1.5**
BVAR 09 45 02.1
BVAR Borovoye Array 48.03 321 P P **09 43 33.8 -1.5**
BVAR PcP **PcP 09 45 02.1 -1.0**
BVAR Borovoye Array 48.03 321 P P **09 43 33.8 -1.5**
comp=Z,4.8nm,0.6s,baz=106,slow=8.7,SNR=15
BVAR PcP **PcP 09 45 02.1 -1.0**
comp=Z,3.2nm,0.7s,baz=139,slow=7.0,SNR=4.4
BVAR LR LR 10 05 03.7
comp=Z,267nm,18.6s,baz=300,slow=38
BRVK Borovoye 48.10 321 P P **09 43 36.3 +0.5**
comp=Z,1.0nm,1.0s,SNR=5.5
BRVK Borovoye 48.10 321 *c iP* P **09 43 34.9 -0.9**
BRVK pmax pmax
comp=Z,40nm,2.5s
BRVK Borovoye 48.10 321 *eP* P **09 43 35.4 -0.4**
comp=Z,19nm,1.0s
AS31 Alice Springs 48.99 165 *eP* P **09 43 43.4 +0.4**
ASAR Alice Springs 48.99 165 P P **09 43 42.2 -0.7**
ASAR Alice Springs 48.99 165 P P **09 43 42.2 -0.7**
comp=Z,4.2nm,0.7s,baz=342,slow=5.6,SNR=44
ASAR LR LR 10 04 45.9
comp=Z,182nm,22.0s,baz=334,slow=37
CTA Charters Tower 50.04 149 P P **09 43 51.3 +0.3**
CTA Charters Tower 50.04 149 P P **09 43 51.3 +0.3**
comp=Z,12nm,1.0s,baz=324,slow=11,SNR=7.2
CTAO Charters Tower 50.04 149 *eP* P **09 43 50.9 -0.1**
CTAO pmax pmax
comp=Z,21nm,1.1s
CTAO Charters Tower 50.04 149 *eP* P **09 43 50.9 -0.1**
comp=Z,20nm,1.1s
HNR Honiara 50.05 127 LR LR 10 01 35.0
comp=Z,208nm,21.3s,baz=151,slow=32
BILL Bilibino 51.51 20⇑ *eP* P **09 44 01.3 -0.3**
BILL *e* 09 46 01.7
BILL *eS* S **09 51 23.8 +2.9**
BILL pmax pmax
comp=Z,8.0nm,1.0s
BILL MLR MLR
comp=Z,300nm,16.0s
ABKAR Akbulak array 53.84 314 *eP* P **09 44 18.5 -0.6**
comp=Z,11nm,0.8s
SVE Sverdlovsk 54.37 324 *eP* P **09 44 22.3 -0.6**
SVE *eS* S **09 51 59.3 -0.9**
SVE *eSS* SS **09 55 45.8 +3.6**
SVE pmax pmax
comp=Z,34nm,1.4s
SVE MLR MLR
comp=Z,2µm,14.0s
AKTO Aktyubinsk 55.16 316 P P **09 44 28.6 -0.1**
AKTO Aktyubinsk 55.16 316 P P **09 44 28.6 -0.1**
AKTO Aktyubinsk 55.16 316 P P **09 44 28.6 -0.1**
comp=Z,5.9nm,0.9s,baz=86,slow=7.0,SNR=19
AKTO LR LR 10 11 08.0
comp=Z,372nm,18.1s,baz=149,slow=40
ABKT Ailbek 55.27 300 P P **09 44 30.5 +0.8**
comp=Z,116nm,1.1s,SNR=5.3
ARU Arti 55.44 323 *d iP* P **09 44 30.0 -0.6**
ARU 09 45 28.5
ARU 09 46 31.6
ARU S S **09 52 14.2 -0.4**
ARU pmax pmax
comp=Z,35nm,1.7s
ARU MLR MLR
comp=Z,503nm,20.0s
ARU Arti 55.44 323 P P **09 44 29.7 -0.9**
comp=Z,97nm,0.6s,SNR=6.7
SOKR Solikamsk 56.84 327 *c iP* P **09 44 40.4 0.0**
SOKR pmax pmax
comp=Z,30nm,1.4s
SOKR MLR MLR
comp=Z,2µm,18.0s
NWAO Narrogin (SRO) 56.95 185 P P **09 44 40.6 -0.9**
NWAO Narrogin (SRO) 56.95 185 P P **09 44 40.6 -0.9**
comp=Z,8.5nm,0.8s,baz=51,slow=6.5,SNR=3.3
STKA Stephens Creek 58.87 160 *eP* P **09 44 56.3 +1.3**
comp=Z,2.5nm,0.8s
STKA Stephens Creek 58.87 160 P P **09 44 54.5 -0.6**
comp=Z,4.5nm,0.6s,baz=359,slow=5.9,SNR=13
STKA LR LR 10 13 01.8
comp=Z,254nm,18.2s,baz=21,slow=39
ARMA Armidale 61.37 151 *eP* P **09 45 13.2 +0.8**
comp=Z,14nm,1.1s
MAK Makhachkala 62.73 307 *eP* P **09 45 20.2 -1.1**
MAK MLR MLR
comp=Z,1µm,16.0s
DZM Mont Dzumac 63.23 133 *eS* S 09 53 47.7 -8.6
comp=Z,304nm,27.9s
DZM *e* LR LR 10 04 11.8
comp=Z,1µm,25.2s
MIB Mutribah 65.52 293 *eP* P **09 45 38.5 -1.4**
MIB AMb AMB 09 45 40.5
comp=Z,31nm,0.7s
RDF Al-Radifah 65.57 292 *eP* P **09 45 38.9 -1.3**
RDF AMb AMB 09 45 43.6
comp=Z,54nm,1.4s
NAY Al-Naaiem 65.75 293 *eP* P **09 45 39.4 -2.0**
NAY AMb AMB 09 45 41.9
comp=Z,19nm,0.7s
KBZ Khabaz 65.91 309 P P **09 45 40.9 -1.3**
KBZ Khabaz 65.91 309 P P **09 45 40.9 -1.3**
KBZ Khabaz 65.91 309 P P **09 45 40.9 -1.3**
comp=Z,12nm,0.8s,baz=86,slow=5.0,SNR=18
KBZ LR LR 10 17 56.8
comp=Z,389nm,18.9s,baz=355,slow=39
VORD Divnogorie 66.98 317 *eP* P **09 45 47.9 -1.0**
VORD pmax pmax
comp=Z,10.0nm,0.9s
VORD pmax pmax
comp=N,10.0nm,1.0s
VORD pmax pmax
comp=E,10.0nm,0.6s
VORD MLR MLR
comp=Z,350nm,14.0s
VORD MLR MLR
comp=N,270nm,13.0s
VORD MLR MLR
comp=E,130nm,13.0s
VSR Storozhevoye 67.02 317 *eP* P **09 45 48.1 -1.0**
VSR pmax pmax
comp=Z,30nm,0.9s
VSR pmax pmax
comp=N,10.0nm,0.7s
VSR pmax pmax
comp=E,40nm,1.0s
VSR MLR MLR
comp=Z,410nm,13.0s
VSR MLR MLR
comp=N,470nm,15.0s
VSR MLR MLR
comp=E,820nm,19.0s
MOS Moscow 67.14 322 *eP* P 09 45 44.1 -5.7
MOS *e* 09 46 13.1
MOS *eS* S 09 54 37.1 -6.2
MOS pmax pmax
comp=Z,40nm,0.9s
COLD Coldfoot 67.21 25 *eP* P **09 45 50.4 +0.3**
comp=Z,25nm,1.4s
APA Apatity 67.30 335⇓ *i iP* P **09 45 50.0 -0.6**
APA *i* 09 46 06.4
APA pmax pmax
comp=Z,38nm,1.4s
APA MLR MLR
comp=Z,1µm,14.0s
KDAK Kodiak Island 67.60 35 *eP* P **09 45 53.5 +0.8**
comp=Z,79nm,1.5s
OBN Obninsk 67.84 322⇓ *eP* P **09 45 53.5 -0.7**
OBN *e* 09 48 19.7
OBN *eS* S **09 54 53.1 +1.4**
OBN pmax pmax
comp=Z,57nm,1.6s
OBN MLR MLR
comp=Z,600nm,21.0s
SOC Sochi 68.20 309 *eP* P **09 45 55.6 -1.1**
SOC *e* 09 48 28.0
SOC *eS* S **09 54 51.8 -4.6**
SOC pmax pmax
comp=Z,8.0nm,0.3s
SOC MLR MLR
comp=Z,691nm,15.0s
COLA College 68.55 27 *eP* P **09 45 58.1 -0.4**
COLA pmax pmax
comp=Z,29nm,1.6s
COLA College 68.55 27 *eP* P **09 45 58.1 -0.4**
comp=Z,29nm,1.6s
PMR Palmer 68.62 31 *eP* P **09 45 57.0 -2.0**
PMR pmax pmax
comp=Z,15nm,1.0s
PMR Palmer 68.62 31 *eP* P **09 45 57.0 -2.0**
comp=Z,15nm,1.0s
MSVF Nonsavu 68.90 122 *eP* P **09 46 02.2 +0.7**
MSVF pmax pmax
comp=Z,28nm,1.1s
MSVF Nonsavu 68.90 122 *eP* P **09 46 02.2 +0.7**
comp=Z,28nm,1.1s
SML Sawmill 68.95 31 *eP* P **09 46 03.5 +2.4**
SML pmax pmax
comp=Z,17nm,1.5s
SML Sawmill 68.95 31 *eP* P **09 46 03.5 +2.4**
comp=Z,17nm,1.5s
ILAR Eielson Array 68.97 27 P P **09 45 59.8 -1.5**
ILAR Eielson Array 68.97 27 P P **09 45 59.8 -1.5**
comp=Z,1.4nm,0.7s,baz=267,slow=5.5,SNR=24
ILAR LR LR 10 17 47.8
comp=Z,223nm,18.6s,baz=286,slow=37
JOF Joensuu 68.98 331 *eP* P **09 46 00.7 -0.6**
JOF pmax pmax
comp=Z,10.0nm,0.8s
JOF Joensuu 68.98 331 *ep* P **09 46 00.7 -0.6**
comp=Z,9.9nm,0.8s
ANN Anapa 69.51 311 *eP* P **09 46 03.6 -1.2**
ANN *eS* S **09 55 09.6 -2.3**
ANN pmax pmax
comp=Z,57nm,1.0s
SPITS Spitsbergen Ar 69.61 348 LR LR 10 16 59.1
comp=Z,320nm,21.6s,baz=40,slow=36
ARCES ARCESS Array B 69.75 338 P P **09 46 05.8 -0.1**
ARCES ARCESS Array B 69.75 338 P P **09 46 05.8 -0.1**
comp=Z,2.9nm,0.9s,baz=61,slow=10,SNR=6.5
ARCES LR LR 10 20 03.4
comp=Z,445nm,18.1s,baz=302,slow=39
DIV Divide 70.30 31 *eP* P **09 46 11.4 +1.8**
comp=Z,45nm,1.4s
DOT Dot Lake 70.44 28 *eP* P **09 46 12.1 +1.8**
comp=Z,20nm,1.4s
MENT Mentasta 70.77 29 *eP* P **09 46 11.8 -0.6**
EGAK Eagle 71.35 27 *eP* P **09 46 14.4 -1.3**
comp=Z,12nm,1.0s
KAF Kangasniemi 71.43 330 *eP* P **09 46 14.6 -1.7**
KAF pmax pmax
comp=Z,8.0nm,0.9s
KAF Kangasniemi 71.43 330 *ep* P **09 46 14.6 -1.7**
comp=Z,7.7nm,0.9s
FIA1 FINESS Array S 71.73 330 *eP* P **09 46 16.6 -1.5**
FINES FINESS Array B 71.73 330 P P **09 46 16.6 -1.4**
FINES FINESS Array B 71.73 330 P P **09 46 16.6 -1.4**
comp=Z,10nm,0.8s,baz=72,slow=6.2,SNR=34
FINES LR LR 10 20 37.5
comp=Z,1µm,18.9s,baz=75,slow=38
MICGM Minsk 72.87 322⇑ *eP* P **09 46 23.0 -2.0**
MNK Minsk 72.90 322⇑ *eP* P **09 46 23.0 -2.2**
MNK pmax pmax
comp=Z,50nm,1.0s
INK Inuvik 73.03 22 LR LR 10 21 52.9
comp=Z,252nm,18.5s,baz=59,slow=39
AKASG Malin Array Be 73.24 318 P P **09 46 25.1 -2.2**
AKASG Malin Array Be 73.24 318 P P **09 46 25.1 -2.2**
AKASG Malin Array Be 73.24 318 P P **09 46 25.1 -2.2**
comp=Z,9.3nm,0.8s,baz=60,slow=5.9,SNR=14
AKASG LR LR 10 24 46.8
comp=Z,222nm,19.1s,baz=60,slow=41
AK01 Malin Array Si 73.25 318 *eP* P **09 46 25.6 -1.7**
KIEV Kiev 73.25 318 *eP* P **09 46 26.5 -0.9**
KIEV pmax pmax
comp=Z,5.0nm,0.6s
KIEV Kiev 73.25 318 *eP* P **09 46 26.5 -0.9**
comp=Z,5.3nm,0.6s
AK02 Malin Array Si 73.26 318 *eP* P **09 46 26.4 -1.1**
BR131 Keskin Array S 73.62 307 *eP* P **09 46 29.5 -0.4**
comp=Z,10nm,0.9s
BRTR Keskin Array B 73.62 307 P P **09 46 28.3 -1.7**
BRTR Keskin Array B 73.62 307 P P **09 46 28.3 -1.7**
comp=Z,9.6nm,0.9s,baz=104,slow=5.2,SNR=42
BRTR LR LR 10 25 02.8
comp=Z,126nm,18.2s,baz=216,slow=41
ANTO Ankara 74.19 307 *eP* P **09 46 32.6 -0.6**
ANTO pmax pmax
comp=Z,10.0nm,0.8s
ANTO Ankara 74.19 307 *eP* P **09 46 32.6 -0.6**
comp=Z,10.0nm,0.8s
TLCR 75.25 313⇓ P P **09 46 38.9 -0.2**
TLCR 75.25 313⇓ *i P* P **09 46 38.9 -0.2**
SUW Suwalki 75.63 323 *eP* P **09 46 39.8 -1.3**
SUW pmax pmax
comp=Z,77nm,0.9s
SUW Suwalki 75.63 323 *eP* P **09 46 39.8 -1.3**
comp=Z,77nm,0.9s
SUW Suwalki 75.63 323 *eP* P **09 46 40.7 -0.4**
CFR Carcaliu 75.71 313⇑ P P **09 46 40.9 -0.8**
CFR Carcaliu 75.71 313⇑ *i P* P **09 46 40.9 -0.8**
SKAG Skagway 75.76 31 *eP* P **09 46 42.6 +0.9**
comp=Z,24nm,1.0s
TIRR Tirgusor 75.77 312⇑ P P **09 46 42.4 +0.3**
TIRR Tirgusor 75.77 312⇑ *i P* P **09 46 42.4 +0.3**
TESR Tescani 76.23 315⇓ *i P* P **09 46 44.3 -0.4**
VRI Vrincioaia 76.40 314⇑ P P **09 46 45.0 -0.7**
VRI Vrincioaia 76.40 314⇑ *i P* P **09 46 45.0 -0.7**
PLOR Plostina 76.46 314⇓ P P **09 46 45.6 -0.5**
PLOR Plostina 76.46 314⇓ *i P* P **09 46 45.6 -0.5**
ISP Isparta 76.54 306⇓ P P **09 46 45.5 -1.3**
ISP Isparta 76.54 306 *eP* P **09 46 45.8 -1.0**
comp=Z,31nm,1.4s
ISP Isparta 76.54 306⇓ *i P* P **09 46 45.5 -1.3**
BUR08 Bucovina Ar. S 76.75 316 *eP* P **09 46 46.9 -0.9**
MLR Muntele Rosu 77.05 314⇑ *i P* P **09 46 49.9 +0.4**
VOIR 77.65 314⇓ P P **09 46 53.1 +0.2**
VOIR 77.65 314⇓ *i P* P **09 46 53.1 +0.2**
ARR Arges 77.95 314⇑ *i P* P **09 46 54.4 -0.1**
KOLS Kolonicke sedl 78.07 318 *eP* P **09 46 54.8 -0.3**
KOLS pmax pmax
comp=Z,5.0nm,1.4s
KOLS Kolonicke sedl 78.07 318 *eP* P **09 46 54.8 -0.3**
UZH Uzhgorod 78.18 318 *eP* P **09 46 55.0 -0.6**
TRPA Tarpa 78.22 318‖ *eP* P **09 46 55.8 0.0**
LOT Lotru 78.48 315⇓ *i P* P **09 46 56.9 -0.6**
NB2 NORSAR Subarra 78.49 332 P P **09 46 55.0 -2.1**
comp=Z,12nm,1.1s,baz=62,slow=5.6
NOA NORSAR Array B 78.49 332 P P **09 46 54.9 -2.3**
NOA NORSAR Array B 78.49 332 P P **09 46 54.9 -2.3**
comp=Z,3.8nm,0.9s,baz=57,slow=5.5,SNR=14
NOA LR LR 10 24 48.7
comp=Z,868nm,20.4s,baz=65,slow=38
STHS Stebnicka Huta 78.50 319 *eP* P **09 46 57.8 +0.4**
STHS pmax pmax
comp=Z,5.0nm,1.2s
STHS Stebnicka Huta 78.50 319 *eP* P **09 46 57.8 +0.4**
CRVS Cervenica-Dubn 78.58 319 *eP* P **09 46 55.5 -2.3**
CRVS pmax pmax
comp=Z,21nm,1.9s
CRVS Cervenica-Dubn 78.58 319 *eP* P **09 46 55.5 -2.3**
RES Resolute Bay 78.59 9 LR LR 10 22 34.1
comp=Z,247nm,21.0s,baz=354,slow=36
DRGR 78.64 316⇑ P P **09 46 58.2 -0.1**
DRGR 78.64 316⇑ *i P* P **09 46 58.2 -0.1**
DLBC Dease Lake 78.68 31 LR LR 10 24 06.0
comp=Z,237nm,18.4s,baz=303,slow=38
DEV Deva 78.88 315⇑ P P **09 46 59.4 -0.1**
DEV Deva 78.88 315⇑ *i P* P **09 46 59.4 -0.1**
OJC Ojcow 79.03 320 *eP* P **09 46 59.1 -1.2**
OJC Ojcow 79.03 320 *eP* P **09 46 59.1 -1.2**
MPEP Malo Peshtene 79.31 313 *eP* P **09 46 59.2 -2.8**
KECS Kecovo 79.34 318 *eP* P **09 47 02.1 +0.1**
KECS pmax pmax
comp=Z,4.0nm,1.2s
KECS Kecovo 79.34 318 *eP* P **09 47 02.1 +0.1**
PSZ Piszkesteto 79.93 318‖ *eP* P **09 47 05.3 -0.1**
VTS Vitosha 79.97 312⇑ P P **09 47 04.6 -1.2**
VTS Vitosha 79.97 312 *eP* P **09 47 04.3 -1.5**
VTS Vitosha 79.97 312⇑ *i P* P **09 47 04.6 -1.2**
MMB Musomiste 80.02 311 *eP* P **09 47 03.6 -2.3**
OKC Ostrava-Krasne 80.16 320 *eP* P **09 47 05.9 -0.5**
OKC *e* 09 47 14.4
OKC *eS* S **09 57 11.3 +0.8**
OKC MLR MLR
comp=Z,500nm,14.7s
OKC Ostrava-Krasne 80.16 320 *eP* P **09 47 05.9 -0.5**
OKC *ep* P *cP* **09 47 14.4 +0.7**
OKC *eS* S **09 57 11.3 +0.8**
OKC AMS AMS 10 25 20.0
comp=Z,500nm,14.7s
VYHS Vyhne 80.33 319 *eP* P **09 47 07.7 +0.3**
VYHS pmax pmax
comp=Z,10.0nm,1.2s
VYHS Vyhne 80.33 319 *eP* P **09 47 07.6 +0.2**
KKB Krupnik 80.35 312 *eP* P **09 47 05.0 -2.6**
MORC Moravsky Berou 80.54 320 *eP* P **09 47 08.3 -0.2**
MORC pmax pmax
comp=Z,7.0nm,1.2s
MORC Moravsky Berou 80.54 320 *eP* P **09 47 08.3 -0.2**
comp=Z,6.9nm,1.2s
KSP Ksiaz 80.78 322 *eP* P **09 47 09.3 -0.4**
KSP *eS* S **09 57 12.0 -5.0**
KSP MLR MLR
comp=Z,1µm,19.0s
DPC Dobruska-Polom 80.98 321 *eP* P **09 47 10.0 -0.9**
DPC *e* 09 47 19.7
DPC *eS* S **09 57 20.3 +1.0**
DPC Dobruska-Polom 80.98 321 *eP* P **09 47 10.0 -0.9**
DPC *ex* x 09 47 19.7
DPC *eS* S **09 57 20.3 +1.0**
UPC Upice 81.09 322 *eP* P **09 47 11.8 +0.4**
UPC Upice 81.09 322 *eP* P **09 47 11.8 +0.4**
PKSM Moragy 81.44 317‖ *eP* P **09 47 13.2 -0.1**
PVCC Panska Ves 81.89 322 *eP* P **09 47 14.3 -1.4**
PVCC *e* 09 47 23.6
PVCC MLR MLR
comp=Z,600nm,13.6s
PVCC Panska Ves 81.89 322 *eP* P **09 47 14.3 -1.4**
PVCC *ep* P *cP* **09 47 23.6 +2.3**
PVCC AMS AMS 10 26 50.0
comp=Z,600nm,13.6s
TREC Trest 81.95 321 AMS AMS 10 26 50.0
comp=Z,700nm,14.6s
BRG Berggiesshubel 82.08 322 *eP* P **09 47 16.0 -0.6**
comp=Z,24nm,2.0s

BRG				PP	**PP**	**09 50 25.0**	**+0.9**
BRG				S	**S**	**09 57 33.0**	**+2.5**
BRG				SS	**SS**	**10 02 49.0**	**0.0**
BRG							
	comp=N,422nm,14.7s						
BRG							
	comp=E,569nm,12.5s						
BRG							
	comp=Z,1µm,13.9s						
PRU	**Pruhonice**	**82.17**	**322**	*e*P	**P**	**09 47 17.4**	**+0.3**
PRU				*e*		09 47 26.0	
PRU				*e*S	**S**	**09 57 29.4**	**-2.0**
PRU				MLR	MLR		
	comp=Z,700nm,15.6s						
PRU	**Pruhonice**	**82.17**	**322**	*e*P	**P**	**09 47 17.4**	**+0.3**
PRU				*ex*	x	09 47 26.0	
PRU				*e*S	**S**	**09 57 29.4**	**-2.0**
PRU				AMS	AMS	10 28 20.0	
	comp=Z,700nm,15.6s						
PRA	**Prague**	**82.19**	**322**	P	**P**	**09 47 18.0**	**+0.8**
PRA				AMS	AMS	10 28 30.0	
CLL	**Collm**	**82.39**	**323**	⇓*i*P	**P**	**09 47 16.8**	**-1.4**
CLL				*i*		09 47 25.8	
CLL				pmax	pmax		
	comp=Z,12nm,1.3s						
CLL	**Collm**	**82.39**	**323**	⇓*i*P	**P**	**09 47 16.8**	**-1.4**
	comp=Z,12nm,1.3s						
CLL				*i* pP	**PcP**	**09 47 22.0**	**-1.4**
CLL				*i*		09 47 25.8	
CLL				*e*		09 47 39.0	
CLL				*e*S	**S**	**09 57 30.0**	**-3.6**
CLL				*e*SS	SS	10 03 06.0	+12
CLL				*e*		10 07 12.0	
SUMG	**Summit**	**82.57**	**354**	*e*P	**P**	**09 47 18.5**	**-0.8**
SUMG				pmax	pmax		
	comp=Z,26nm,1.7s						
SUMG	**Summit**	**82.57**	**354**	*e*P	**P**	**09 47 18.5**	**-0.8**
	comp=Z,26nm,1.7s						
YKW3	**Yellowknife Ar**	**82.72**	**23**	*e*P	**P**	**09 47 17.7**	**-2.1**
	comp=Z,0.3nm,0.9s						
YKA	**Yellowknife Ar**	**82.77**	**23**	P	**P**	**09 47 17.6**	**-2.4**
YKA	**Yellowknife Ar**	**82.77**	**23**	P	**P**	**09 47 17.6**	**-2.4**
	comp=Z,6.7nm,0.7s,baz=314,slow=5.2,SNR=18						
YKA				LR	LR	10 27 39.7	
	comp=Z,28nm,19.3s,baz=330,slow=38						
GERES	**GERESS Array B**	**83.19**	**321**	P	**P**	**09 47 20.8**	**-1.8**
GERES	**GERESS Array B**	**83.19**	**321**	P	**P**	**09 47 20.8**	**-1.8**
	comp=Z,3.0nm,0.9s,baz=57,slow=4.9,SNR=24						
GERES				LR	LR	10 30 19.5	
	comp=Z,450nm,19.1s,baz=58,slow=40						
PERS	**Pernice**	**83.42**	**318**	*i* P	**P**	**09 47 23.3**	**-0.4**
JAVS	**Javornik**	**84.41**	**318**	*i* P	**P**	**09 47 27.9**	**-1.0**
KMBO	**Kilima Mbogo**	**85.46**	**267**	*e*P	**P**	**09 47 35.8**	**+0.9**
	comp=Z,9.1nm,1.0s						
KMBO	**Kilima Mbogo**	**85.46**	**267**	P	**P**	**09 47 33.2**	**-1.7**
	comp=Z,4.0nm,0.8s,baz=45,slow=9.5,SNR=10						
KMBO				LR	LR	10 27 02.5	
	comp=Z,116nm,19.3s,baz=94,slow=37						
CEL	**Celeste**	**86.89**	**311**	*e*P	**P**	**09 47 41.4**	**+0.1**
	comp=Z,44nm,1.4s						
WLF	**Walferdange**	**86.97**	**324**	P	**P**	**09 47 41.3**	**-0.1**
	comp=Z,16nm,1.9s						
CDF	**Champ du Feu**	**87.06**	**323**	*e*P	**P**	**09 47 41.0**	**-1.0**
	comp=Z,31nm,1.4s						
CDF	**Champ du Feu**	**87.06**	**323**	*e*P	**P**	**09 47 41.0**	**-1.0**
CDF				pmax	pmax		
	comp=Z,31nm,1.4s						
CDF	**Champ du Feu**	**87.06**	**323**	*e*P	**P**	**09 47 41.0**	**-1.0**
	comp=Z,31nm,1.4s						
HINF	**Hinteralfeld**	**87.63**	**322**	*e*P	**P**	**09 47 43.4**	**-1.3**
	comp=Z,8.0nm,1.1s						
HINF	**Hinteralfeld**	**87.63**	**322**	*e*P	**P**	**09 47 43.4**	**-1.3**
HINF				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HINF	**Hinteralfeld**	**87.63**	**322**	*e*P	**P**	**09 47 43.4**	**-1.3**
	comp=Z,8.0nm,1.1s						
PAGF	**Fort de Pagny**	**87.83**	**323**	*e*P	**P**	**09 47 44.8**	**-0.8**
PAGF	**Fort de Pagny**	**87.83**	**323**	*e*P	**P**	**09 47 44.8**	**-0.8**
SFTF	**Sexfontaines**	**88.41**	**323**	*e*P	**P**	**09 47 47.1**	**-1.2**
SFTF	**Sexfontaines**	**88.41**	**323**	*e*P	**P**	**09 47 47.1**	**-1.2**
SFJD	**Kangerlussuaq**	**88.93**	**357**	LR	LR	10 30 38.7	
	comp=Z,283nm,18.5s,baz=5.9,slow=38						
LPG	**La Plagne**	**88.98**	**320**	*e*P	**P**	**09 47 50.7**	**-0.8**
LPG	**La Plagne**	**88.98**	**320**	*e*P	**P**	**09 47 50.7**	**-0.8**
LPG	**La Plagne**	**88.98**	**320**	*e*P	**P**	**09 47 50.7**	**-0.8**
LPL	**La Plagne**	**88.99**	**320**	*e*P	**P**	**09 47 50.6**	**-0.8**
	comp=Z,5.0nm,0.6s						
LPL	**La Plagne**	**88.99**	**320**	*e*P	**P**	**09 47 50.6**	**-0.8**
LPL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
LPL	**La Plagne**	**88.99**	**320**	*e*P	**P**	**09 47 50.6**	**-0.8**
	comp=Z,5.0nm,0.6s						
LON	**Longmire**	**89.07**	**38**	*e*P	**P**	**09 47 51.3**	**-0.3**
LON				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LON	**Longmire**	**89.07**	**38**	*e*P	**P**	**09 47 51.3**	**-0.3**
	comp=Z,9.2nm,0.9s						
ORIF	**Oris-en-Rattie**	**89.82**	**320**	*e*P	**P**	**09 47 54.1**	**-1.1**
ORIF				*e*R			
	comp=Z,635nm,17.5s						
ORIF	**Oris-en-Rattie**	**89.82**	**320**	*e*P	**P**	**09 47 54.1**	**-1.1**
ORIF	**Oris-en-Rattie**	**89.82**	**320**	*e*P	**P**	**09 47 54.1**	**-1.1**
SMF	**Signal de Mont**	**89.98**	**323**	*e*P	**P**	**09 47 54.5**	**-1.3**
	comp=Z,23nm,1.1s						
SMF	**Signal de Mont**	**89.98**	**323**	*e*P	**P**	**09 47 54.5**	**-1.3**
SMF				pmax	pmax		
	comp=Z,23nm,1.1s						
SMF	**Signal de Mont**	**89.98**	**323**	*e*P	**P**	**09 47 54.5**	**-1.3**
	comp=Z,23nm,1.1s						
AVF	**Avril sur Loir**	**90.17**	**323**	*e*P	**P**	**09 47 55.3**	**-1.3**
	comp=Z,14nm,0.9s						
AVF	**Avril sur Loir**	**90.17**	**323**	*e*P	**P**	**09 47 55.3**	**-1.3**
AVF				pmax	pmax		
	comp=Z,14nm,0.9s						
AVF	**Avril sur Loir**	**90.17**	**323**	*e*P	**P**	**09 47 55.3**	**-1.3**
	comp=Z,14nm,0.9s						
NEW	**Newport**	**90.70**	**35**	*e*P	**P**	**09 47 59.3**	**+0.2**
	comp=Z,16nm,1.1s						
NEW	**Newport**	**90.70**	**35**	P	**P**	**09 47 59.2**	**0.0**
	baz=90,SNR=17						
TCF	**Toulx Ste Croi**	**91.10**	**323**	*e*P	**P**	**09 48 00.1**	**-0.9**
TCF	**Toulx Ste Croi**	**91.10**	**323**	*e*P	**P**	**09 48 00.1**	**-0.9**
TCF	**Toulx Ste Croi**	**91.10**	**323**	*e*P	**P**	**09 48 00.1**	**-0.9**
YBH	**Yreka Blue Hor**	**91.40**	**43**	*e*P	**P**	**09 48 04.3**	**+1.8**
	comp=Z,16nm,1.3s						
YBH	**Yreka Blue Hor**	**91.40**	**43**	LR	LR	10 25 30.3	
	comp=Z,88nm,20.9s,baz=311,slow=33						
C11A	**Tepee Creek (N**	**91.42**	**35**	P	**P**	**09 48 02.9**	**+0.4**
	baz=91						
A13A	**Flathead Natio**	**91.66**	**33**	P	**P**	**09 48 04.0**	**+0.4**
	baz=91						
WALA	**Waterton Lakes**	**91.83**	**33**	*e*P	**P**	**09 48 05.2**	**+0.8**
	comp=Z,0.6nm,1.1s						
B13A	**Whitefish**	**92.00**	**34**	P	**P**	**09 48 06.4**	**+1.2**
	baz=92,SNR=18						
CAF	**Calviac**	**92.01**	**322**	*e*P	**P**	**09 48 04.7**	**-0.5**
	comp=Z,15nm,1.0s						
CAF	**Calviac**	**92.01**	**322**	*e*P	**P**	**09 48 04.7**	**-0.5**
CAF				pmax	pmax		
	comp=Z,15nm,1.0s						
CAF	**Calviac**	**92.01**	**322**	*e*P	**P**	**09 48 04.7**	**-0.5**
	comp=Z,15nm,1.0s						
A14A	**Double T Ranch**	**92.13**	**33**	P	**P**	**09 48 06.4**	**+0.5**
	baz=92,SNR=11						
BSMT	**Bassoo Peak**	**92.17**	**34**	*e*P	**P**	**09 48 06.2**	**0.0**
	comp=Z,12nm,1.1s						
D12A	**Red Ives Fores**	**92.40**	**35**	P	**P**	**09 48 08.0**	**+0.9**
	baz=92						
A15A	**Johnson Ranch,**	**92.47**	**32**	P	**P**	**09 48 07.6**	**+0.2**
	baz=92						
JTMT	**Jette**	**92.50**	**34**	*e*P	**P**	**09 48 08.1**	**+0.4**
	comp=Z,7.3nm,1.0s						
YBMT	**Yellow Bay**	**92.56**	**34**	*e*P	**P**	**09 48 08.8**	**+1.0**
	comp=Z,5.9nm,1.0s						
B14A	**Marquette Ranc**	**92.61**	**33**	P	**P**	**09 48 08.4**	**+0.3**
	baz=92,SNR=14						
KEST	**Kesra**	**92.68**	**311**	LR	LR	10 36 58.4	
	comp=Z,60nm,19.2s,baz=239,slow=40						
E12A	**Beaver Dam Sad**	**92.69**	**36**	P	**P**	**09 48 09.1**	**+0.6**
	baz=92,SNR=9.1						
BMO	**Blue Mountains**	**92.72**	**38**	*e*P	**P**	**09 48 09.3**	**+0.7**
BMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BMO	**Blue Mountains**	**92.72**	**38**	*e*P	**P**	**09 48 09.3**	**+0.7**
	comp=Z,7.2nm,1.0s						
C14A	**Swan Lake**	**92.76**	**34**	P	**P**	**09 48 08.6**	**-0.1**
	baz=92,SNR=6.6						
MOD	**Modoc**	**92.77**	**41**	*e*P	**P**	**09 48 10.3**	**+1.3**
	comp=Z,13nm,1.0s						
SWMT	**Swartz Lake**	**92.80**	**34**	*e*P	**P**	**09 48 09.5**	**+0.6**
	comp=Z,6.0nm,1.0s						
FFC	**Flin Flon**	**92.92**	**24**	*ce*P	**P**	**09 48 10.4**	**+1.2**
FFC	**Flin Flon**	**92.92**	**24**	*e*P	**P**	**09 48 09.6**	**+0.4**
	comp=Z,8.9nm,1.0s						
B15A	**Bradely Ranch,**	**93.00**	**33**	P	**P**	**09 48 10.1**	**+0.3**
	baz=93,SNR=7.1						
A16A	**West Butte Ran**	**93.04**	**32**	P	**P**	**09 48 09.3**	**-0.7**
	baz=93						
SLMT	**Seeley Lake**	**93.24**	**34**	*e*P	**P**	**09 48 10.8**	**-0.2**
	comp=Z,24nm,1.4s						
MSO	**Missoula**	**93.28**	**35**	*e*P	**P**	**09 48 11.6**	**+0.4**
	comp=Z,13nm,1.6s						
MSO	**Missoula**	**93.28**	**35**	P	**P**	**09 48 11.2**	**0.0**
	baz=93,SNR=5.4						
C15A	**Salmond Ranch,**	**93.33**	**33**	P	**P**	**09 48 12.5**	**+1.0**
	baz=93,SNR=7.8						
D14A	**Greenough**	**93.34**	**34**	P	**P**	**09 48 11.7**	**+0.2**
	baz=93,SNR=8.1						
WVOR	**Wild Horse Val**	**93.44**	**40**	*e*P	**P**	**09 48 13.0**	**+0.9**
WVOR				pmax	pmax		
	comp=Z,10.0nm,1.3s						
WVOR	**Wild Horse Val**	**93.44**	**40**	*e*P	**P**	**09 48 13.0**	**+0.9**
	comp=Z,10nm,1.3s						
A17A	**Triple J Farms**	**93.47**	**32**	P	**P**	**09 48 12.6**	**+0.6**
	baz=93,SNR=11						
CHMT	**Chamberlain Mo**	**93.58**	**34**	*e*P	**P**	**09 48 12.8**	**+0.1**
	comp=Z,4.2nm,1.3s						
G12A	**Big Creek, Yel**	**93.64**	**37**	P	**P**	**09 48 12.6**	**-0.4**
	baz=93						
C16A	**Fuhringer Ranc**	**93.74**	**33**	P	**P**	**09 48 13.5**	**+0.2**
	baz=94,SNR=6.1						
D15A	**Lincoln**	**93.87**	**34**	P	**P**	**09 48 14.6**	**+0.7**
	baz=94						
B17A	**L&G Farms, Che**	**93.87**	**32**	P	**P**	**09 48 14.6**	**+0.7**
	baz=94,SNR=9.0						
A18A	**Metzger Ranch,**	**93.90**	**31**	P	**P**	**09 48 14.3**	**+0.4**
	baz=94,SNR=8.7						
BEKR	**Beckworth**	**93.93**	**43**	*e*P	**P**	**09 48 14.8**	**+0.4**
	comp=Z,4.7nm,1.0s						
H12A	**Diamond D Ranc**	**94.27**	**37**	P	**P**	**09 48 15.8**	**-0.1**
	baz=94						
D16A	**Dana Ranch, Ca**	**94.36**	**33**	P	**P**	**09 48 16.3**	**+0.1**
	baz=94						
A19A	**Klindworth Far**	**94.41**	**31**	P	**P**	**09 48 16.4**	**+0.2**
	baz=94						
MFID	**Camas Ranch**	**94.46**	**38**	*e*P	**P**	**09 48 18.9**	**+2.2**
	comp=Z,4.7nm,1.0s						
MFID	**Camas Ranch**	**94.46**	**38**	P	**P**	**09 48 16.6**	**-0.1**
	baz=94						
EGMT	**Eagleton**	**94.56**	**32**	*e*P	**P**	**09 48 17.6**	**+0.5**
	comp=Z,7.9nm,1.0s						
EGMT	**Eagleton**	**94.56**	**32**	P	**P**	**09 48 16.5**	**-0.5**
	baz=94,SNR=5.3						
B19A	**Brinkman Farms**	**94.65**	**31**	P	**P**	**09 48 17.6**	**+0.2**
	baz=94,SNR=6.2						
F15A	**Butte**	**94.68**	**35**	P	**P**	**09 48 17.5**	**-0.2**
	baz=94						
LRM	**Limekiln Ridge**	**94.72**	**35**	*e*P	**P**	**09 48 19.9**	**+2.0**
	comp=Z,42nm,1.0s						
A20A	**Cobblestone Ra**	**94.82**	**30**	P	**P**	**09 48 18.0**	**-0.1**
	baz=95						
DLMT	**Dillon**	**94.95**	**35**	*e*P	**P**	**09 48 19.6**	**+0.7**
	comp=Z,13nm,1.3s						
CMB	**Columbia Colle**	**94.99**	**45**	*e*P	**P**	**09 48 20.2**	**+1.1**
CMB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CMB	**Columbia Colle**	**94.99**	**45**	*e*P	**P**	**09 48 20.2**	**+1.1**
	comp=Z,9.9nm,1.1s						
B20A	**Solberg Farm,**	**95.09**	**31**	P	**P**	**09 48 18.4**	**-1.0**
	baz=95						
E17A	**Martinsdale**	**95.10**	**33**	P	**P**	**09 48 19.5**	**-0.2**
	baz=95						
C19A	**Slack Wire Ran**	**95.11**	**32**	P	**P**	**09 48 19.3**	**-0.2**
	baz=95,SNR=6.3						
I14A	**Mackay**	**95.44**	**37**	P	**P**	**09 48 21.5**	**+0.3**
	baz=95						
E18A	**Harlowton**	**95.50**	**33**	P	**P**	**09 48 21.7**	**+0.3**
	baz=95						
D19A	**Cripps Ranch,**	**95.59**	**32**	P	**P**	**09 48 22.1**	**+0.4**
	baz=95,SNR=8.4						
PPT	**Papeete**	**95.83**	**107**	LR	LR	10 22 33.8	
	comp=Z,287nm,21.4s,baz=195,slow=30						
PPT2	**Papeete2**	**95.84**	**107**	*e*LR	LR	10 19 11.9	
	comp=Z,379nm,23.8s						
NVAR	**Mina Array Bea**	**96.07**	**43**	P	**P**	**09 48 24.3**	**0.0**
NVAR	**Mina Array Bea**	**96.07**	**43**	P	**P**	**09 48 24.3**	**0.0**
	comp=Z,2.6nm,0.9s,baz=282,slow=4.8,SNR=18						
E19A	**Rath Farm, Rou**	**96.13**	**32**	P	**P**	**09 48 24.6**	**+0.4**
	baz=96						
D21A	**La Casta Ranch**	**96.56**	**31**	P	**P**	**09 48 25.6**	**-0.5**
	baz=96						
ISA	**Isabella**	**97.62**	**46**	*e*P	Pdif	09 48 31.4	+0.1
ISA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ISA	**Isabella**	**97.62**	**46**	*e*P	Pdif	09 48 31.4	+0.1
	comp=Z,2.8nm,1.1s						
TBI	**Tubuai**	**98.18**	**112**	*e*LR	LR	10 20 20.3	
	comp=Z,182nm,34.0s						
PDAR	**Pinedale Array**	**98.32**	**36**	P	Pdif	09 48 37.0	+2.5
PDAR	**Pinedale Array**	**98.32**	**36**	P	Pdif	09 48 37.0	+2.5
	comp=Z,0.3nm,0.6s,baz=347,slow=2.8,SNR=3.1						
ULM	**Lac du Bonnet**	**98.74**	**23**	LR	LR	10 36 09.6	
	comp=Z,160nm,19.1s,baz=23,slow=37						
PV10	**Paradox Valley**	**101.64**	**38**	*e*Pdif	**Pdif**	**09 48 51.9**	**+2.6**
	comp=Z,94nm,0.9s						
TORD	**Torodi Ar. Bea**	**110.73**	**296**	PKiKP	**PKiKP**	**09 53 28.4**	**-1.5**
TORD				PP	**PP**	**09 54 03.5**	**-2.9**
TORD				PKKP	**PKKPab**	**10 04 41.2**	**+1.5**
TORD	**Torodi Ar. Bea**	**110.73**	**296**	PKiKP	**PKiKP**	**09 53 28.4**	**-1.5**
	comp=Z,0.3nm,0.6s,baz=70,slow=3.0,SNR=4.5						
TORD				PP	**PP**	**09 54 03.5**	**-2.9**
	comp=Z,0.6nm,0.9s,baz=28,slow=6.5,SNR=3.5						
TORD				PKKP	**PKKPab**	**10 04 41.2**	**+1.5**
	comp=Z,1.2nm,1.0s,baz=268,slow=3.6,SNR=3.9						
TXAR	**Lajitas Array**	**111.17**	**42**	PKiKP	**PKiKP**	**09 53 30.2**	**-0.4**
TXAR	**Lajitas Array**	**111.17**	**42**	PKiKP	**PKiKP**	**09 53 30.2**	**-0.4**
	comp=Z,0.2nm,0.7s,baz=245,slow=1.9,SNR=2.9						
SDV	**Santo Domingo**	**144.98**	**22**	*e*PKPdf	**PKPab**	**09 54 32.2**	**-1.6**
ROSC	**El Rosal**	**147.15**	**31**	*e*PKPbc	**PKPbc**	**09 54 41.2**	**+0.5**
OTAV	**Otavalo**	**148.79**	**42**	*e*PKPdf	**PKPdf**	**09 54 42.9**	**+1.5**
LPAZ	**La Paz**	**167.84**	**52**	*e*PKPdf	**PKPdf**	**09 55 04.8**	**+0.6**
LPAZ				PKPab	**PKPab**	**09 56 10.2**	**-0.7**
LPAZ	**La Paz**	**167.84**	**52**	PKPab	**PKPab**	**09 56 10.2**	**-0.7**
	comp=Z,4.0nm,1.0s,baz=357,slow=5.5,SNR=5.0						

TAP 28 09:35:15.8,24°.22N×121°.74E,h12km±2km, ML4.5, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**1**	*i* P		Pg	09 35 19.1	+0.4
	baz=5.0							
EHP				*i* S		Sg	09 35 21.6	+0.9
	baz=5.0							
TWD	**Chiawan**	**0.19**	**224**	*e*P		Pg	09 35 20.4	+0.5
	baz=222							
ENA	**Nanau**	**0.21**	**0**	*e*P		Pb	09 35 21.6	0.0
	baz=2.0							
ENA				S		Sg	09 35 24.8	+1.2
	baz=2.0							
NNS	**Nan Shan**	**0.40**	**304**	*e*P		Pb	09 35 24.6	-0.4
	baz=304							
NNS				S		Sb	09 35 30.7	-0.5
	baz=304							

TAP 28 09:38:05.5,24°.19N×121°.75E,h12km,ML3.6,4C,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.12**	**355**	*i* P		Pg	09 38 08.8	+0.1
	baz=357							
EHP				*i* S		Sg	09 38 11.3	+0.3
	baz=357							
TWD	**Chiawan**	**0.18**	**232**	⇑*i*P		Pg	09 38 09.8	+0.2
TWD				*i* S		Sg	09 38 13.0	+0.5
	baz=239							
ENA	**Nanau**	**0.23**	**357**	*i* P		Pg	09 38 10.7	+0.1
	baz=358							
ENA				*i* S		Sg	09 38 14.5	+0.5
	baz=358							
HWA	**Hwalien**	**0.25**	**212**	*e*P		Pb	09 38 11.7	-0.3
	baz=222							
ESF	**Shoufeng Towns**	**0.39**	**215**	*e*P		Pg	09 38 13.5	+0.1
	baz=224							
ESF				*e*S		Sb	09 38 19.5	-0.8
	baz=224							
TWC	**Suao**	**0.42**	**12**	P		Pg	09 38 14.2	+0.3
	baz=6.0							
TWC				S		Sg	09 38 20.2	+0.6
	baz=6.0							
NNS	**Nan Shan**	**0.43**	**306**	⇑*i*P		Pg	09 38 14.3	+0.1
	baz=306							
NNS				S		Sg	09 38 20.3	+0.2
	baz=306							
WHF	**Hehuan Shan**	**0.45**	**264**	⇑*i*P		Pg	09 38 14.7	-0.3
	baz=265							
WHF				S		Sg	09 38 20.9	-0.4
	baz=265							
ESL	**Shilin**	**0.48**	**218**	P		Pg	09 38 14.9	0.0
	baz=225							
ESL				*e*S		Sg	09 38 21.5	+0.1
	baz=225							
TWT	**Tachien**	**0.53**	**277**	*i* P		Pb	09 38 16.8	-0.3
	baz=277							
TWT				*i* S		Sg	09 38 24.1	+0.7
	baz=277							
TWE	**Neicheng**	**0.53**	**352**	⇑*i*P		Pg	09 38 16.4	+0.3
	baz=352							
TWE				S		Sg	09 38 23.4	+0.3
	baz=352							
NSK	**Sanguang**	**0.60**	**323**	*i* P		Pg	09 38 17.5	+0.1
	baz=323							
NSK				*i* S		Sg	09 38 25.7	+0.2
	baz=323							
EHY	**Hungye**	**0.79**	**210**	*e*P		Pg	09 38 20.6	-0.3
	baz=223							
NSTT	**Nanjuang**	**0.81**	**303**	*e*P		Pb	09 38 22.1	+0.5
	baz=303							
NSTT				*e*S		Sg	09 38 31.8	-0.3
	baz=303							
SMLT	**Sun Moon Lake**	**0.84**	**249**	*e*P		Pb	09 38 22.2	0.0
	baz=250							
SMLT				S		Sg	09 38 33.1	0.0
	baz=250							
TWB1	**Santiao Chiao**	**0.84**	**15**	*e*P		Pb	09 38 22.0	-0.1
	baz=7.0							
TYC	**Yuchr**	**0.87**	**251**	*e*P		Pg	09 38 22.4	+0.1
	baz=245							
TYC				*e*S		Sg	09 38 33.4	-0.3
	baz=245							
NWF	**Wu-fen Shan**	**0.88**	**2**	*e*P		Pb	09 38 22.9	+0.1
	baz=348							
TWQ1	**Liyutan**	**0.91**	**280**	*e*P		Pn	09 38 24.6	+0.5
	baz=280							
TWQ1				*e*S		Sn	09 38 37.7	+0.5
	baz=280							
NCU	**National Centr**	**0.93**	**326**	*e*P		Pn	09 38 27.2	+2.8
	baz=326							
NCU				*e*S		Sn	09 38 39.4	+1.7
	baz=326							
NSY	**Sanyi**	**0.93**	**284**	P		Pn	09 38 24.7	+0.2
	baz=284							
NSY				*e*S		Sn	09 38 38.2	+0.4
	baz=284							
TWF1	**Yuli**	**0.94**	**207**	*e*P		Pg	09 38 23.2	-0.4
	baz=222							
TCU	**Taichung**	**0.98**	**268**	*e*P		Pn	09 38 26.4	+1.2
	baz=269							
YUS	**Yu-Shan**	**1.01**	**227**	*e*P		Pb	09 38 25.2	-0.5
	baz=228							
YUS				*e*S		Sg	09 38 40.1	+0.6
	baz=228							
WNT	**Mingjian**	**1.03**	**252**	*e*P		Pn	09 38 26.4	+0.6
	baz=250							
WNT				*e*S		Sn	09 38 41.3	+1.3
	baz=250							
ALS	**Alishan**	**1.10**	**232**	*e*P		Pb	09 38 26.6	-0.3
	baz=234							
CHKT	**Chengkung**	**1.14**	**198**	*e*P		Pg	09 38 27.6	0.0
	baz=186							
CHN5	**Tsauling**	**1.15**	**239**	*e*P		Pg	09 38 28.0	+0.1
	baz=242							
CHN5				*e*S		Sn	09 38 45.2	+2.0
	baz=242							
ELDTW	**Lidau**	**1.21**	**214**	*e*P		Pn	09 38 27.5	-0.9
	baz=216							
CHY	**Chiayi**	**1.40**	**241**	*e*P		Pg	09 38 32.6	+0.1
	baz=243							
TWK	**Hsinying**	**1.48**	**232**	*e*P		Pb	09 38 33.4	+0.3
	baz=234							
CHN1	**Nanshi**	**1.50**	**228**	*e*P		Pb	09 38 34.0	+0.5
	baz=221							
CHN1				*e*S		Sg	09 38 55.2	+1.0
	baz=221							

*ISCJB **28** 09:46:21.5±0.4, 24°.18N±0°.02×121°.81E±0°.02, h3km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=38.7*
*JMA **28** 09:46:21.7±0.4, 24°.20N×121°.61E, h58km, M2.9*
*TAP **28** 09:46:22.0, 24°.20N×121°.75E, h12km, ML3.6, B*
ISC 28 09:46:22.0±0.8, 24°.20N±0°.02×121°.75E±0°.02, h14km±5km, n51, σ0°.78/87, 6C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**354**	*i* P		Pg	**09 46 25.2**	**-0.1**
	baz=358							
EHP				*i* S		Sg	**09 46 27.6**	**+0.1**
	baz=358							
TWD	**Chiawan**	**0.19**	**230**	⇓*i*P		Pg	**09 46 26.3**	**0.0**
	baz=236							
TWD				S		Sg	**09 46 29.6**	**+0.4**
	baz=236							
ENA	**Nanau**	**0.23**	**357**	⇑*i*P		Pb	**09 46 27.0**	**-0.9**
	baz=359							
ENA				S		Sg	**09 46 30.5**	**+0.1**
	baz=359							
HWA	**Hwalien**	**0.26**	**211**	*e*P		Pb	**09 46 28.1**	**-0.4**
	baz=220							
ESF	**Shoufeng Towns**	**0.40**	**215**	*e*P		Pg	**09 46 29.3**	**-0.6**

	baz=249						
SMLT				S	Sb	09 46 49.5	-0.1
	baz=249						
TAP1	**Taipei**	**0.86**	**346**	*e*P	Pn	09 46 39.2	-0.4
	baz=345						
TAP1				*e*S	Sn	09 46 51.7	-0.4
	baz=345						
TAP	**Taipei**	**0.87**	**345**	*e*P	Pb	09 46 38.8	0.0
	baz=335						
NWF	**Wu-fen Shan**	**0.87**	**2**	P	Pn	09 46 39.3	-0.5
	baz=354						
NWF				*e*S	Sb	09 46 50.8	+0.4
	baz=354						
TYC	**Yuchr**	**0.87**	**250**	⇓*i*P	Pn	09 46 39.0	-0.8
	baz=244						
TYC				*e*S	Sb	09 46 49.7	-0.6
	baz=244						
TWQ1	**Liyutan**	**0.91**	**280**	*e*P	Pn	09 46 40.5	+0.1
	baz=280						
TWQ1				*e*S	Sn	09 46 52.7	-0.5
	baz=280						
NCU	**National Centr**	**0.92**	**326**	*e*P	Pn	09 46 40.4	-0.1
	baz=326						
NCU				*e*S	Sn	09 46 54.3	+0.6
	baz=326						
NSY	**Sanyi**	**0.93**	**284**	*e*P	Pn	09 46 41.1	+0.5
	baz=284						
NSY				*e*S	Sn	09 46 53.9	+0.1
	baz=284						
HSN	**Hsinchu**	**0.93**	**310**	*e*P	Pn	09 46 41.0	+0.4
	baz=303						
HSN				*e*S	Sn	09 46 54.3	+0.5
	baz=303						
TWF1	**Yuli**	**0.94**	**206**	*e*P	Pg	09 46 38.5	-1.7
	baz=220						
TWS1	**Kuangyinshan**	**0.95**	**341**	*e*P	Pn	09 46 41.0	+0.2
	baz=349						
TWS1				*e*S	Sn	09 46 54.5	+0.3
	baz=349						
TCU	**Taichung**	**0.98**	**267**	*e*P	Pn	09 46 42.6	+1.3
	baz=268						
TCU				*e*S	Sn	09 46 56.4	+1.3
	baz=268						
YUS	**Yu-Shan**	**1.02**	**226**	⇓*i*P	Pg	09 46 41.7	0.0
	baz=228						
YUS				*e*S	Sn	09 46 56.4	-0.2
	baz=228						
WNT	**Mingjian**	**1.03**	**252**	*e*P	Pn	09 46 42.9	+1.0
	baz=250						
WNT				*e*S	Sn	09 46 57.8	+1.6
	baz=250						
TWY	**Chenhua**	**1.08**	**353**	*e*P	Pn	09 46 43.4	+0.7
	baz=352						
ALS	**Alishan**	**1.11**	**232**	*e*P	Pn	09 46 43.2	-0.1
	baz=233						
ALS				*e*S	Sn	09 46 58.9	+0.4
	baz=233						
CHKT	**Chengkung**	**1.15**	**198**	*e*P	Pb	09 46 42.5	-1.1
	baz=185						
CHN5	**Tsauling**	**1.15**	**239**	P	Pg	09 46 44.7	+0.5
	baz=241						
CHN5				S	Sn	09 47 01.3	+2.0
	baz=241						
YOJ	**Yonaguni jima**	**1.18**	**77**	*e*P	Pn	09 46 44.0	0.0
	baz=68						
YOJ				*e*S	Sg	09 47 00.5	+0.5
	baz=68						
YOJ	**Yonaguni jima**	**1.18**	**77**	P	Pn	09 46 44.0	0.0
YOJ				S	Sn	09 47 00.8	+1.0
ELDTW	**Lidau**	**1.21**	**214**	*e*P	Pn	09 46 43.2	-1.4
	baz=216						
CHY	**Chiayi**	**1.40**	**240**	*e*P	Pg	09 46 48.7	-0.3
	baz=243						
PCYT	**Pengchaiyu**	**1.45**	**11**	*e*P	Pn	09 46 47.9	+0.1
	baz=9.0						
TWK	**Hsinying**	**1.48**	**232**	*e*P	Pb	09 46 49.2	-0.2
	baz=234						
TWK				*e*S	Sg	09 47 11.7	+1.9
	baz=234						
TWG	**Pinlang**	**1.51**	**205**	*e*P	Pn	09 46 46.5	-2.0
	baz=191						
CHN1	**Nanshi**	**1.51**	**228**	P	Pg	09 46 50.3	-0.7
	baz=221						
CHN1				*e*S	Sg	09 47 11.2	+0.5
	baz=221						
IRIF	**Iriomote-Funau**	**1.81**	**85**	P	Pn	09 46 53.4	+0.7
IRIF				S	Sn	09 47 16.1	+0.7
TWM1	**Shoushan**	**1.83**	**222**	*e*P	Pg	09 46 56.3	-0.9
	baz=223						
HATJ	**Hateruma jima**	**1.88**	**94**	P	Pn	09 46 53.9	+0.2
HATJ				*e*S	Sn	09 47 17.8	+0.6
JKRS	**Kuro-shima**	**2.06**	**88**	P	Pn	09 46 56.9	+0.8
JKRS				*e*S	Sn	09 47 22.7	+1.1
SCZT	**Fangliau**	**2.10**	**210**	*e*P	Pn	09 46 58.1	+1.4
	baz=196						
PNG	**Penghu**	**2.11**	**253**	*e*P	Pn	09 46 57.5	+0.7
	baz=256						
JIJ	**Ishigaki jima**	**2.19**	**85**	P	Pn	09 46 57.9	0.0
JIJ				S	Sn	09 47 24.6	-0.2
TWK1	**Hengchun**	**2.41**	**201**	*e*P	Pn	09 47 02.9	+1.9
	baz=191						

IDC ***28*** *09:50:30.8±1.7,23.˙73N×121.˙14E,h0km,mb3.3/2, mb1 3.5/3,mb1mx3.2/26,mbtmp3.4/3,ML2.9/1,Error ellipse: s-maj=74.0km s-min=29.9km az=68.0*

JMA ***28*** *09:50:32.2±0.4,24.˙13N×121.˙61E,h68km,M2.8*

TAP ***28*** *09:50:32.5,24.˙18N×121.˙73E,h10km,ML3.8,B*

ISC 28 09:50:32.2±0.9,24.˙16N±0.˙02×121.˙76E±0.˙02,h11km±6km, n60,σ0s68/98,7C-2D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
EHP	**Heping Village**	**0.15**	**353**	*i* P		**Pg**	**09 50 35.9**	**+0.1**
	baz=8.0							
EHP				*i* S		**Sg**	**09 50 38.4**	**+0.1**
	baz=8.0							
TWD	**Chiawan**	**0.17**	**244**	⇓*i*P		**Pg**	**09 50 36.2**	**+0.3**
	baz=230							
TWD				*i* S		**Sg**	**09 50 38.8**	**+0.3**
	baz=230							
HWA	**Hwalien**	**0.23**	**219**	*e*P		**Pb**	**09 50 38.0**	**-0.4**
	baz=221							
ENA	**Nanau**	**0.27**	**356**	⇑*i*P		**Pg**	**09 50 37.9**	**+0.1**
	baz=4.0							
ENA				S		**Sg**	**09 50 41.4**	**-0.1**
	baz=4.0							
ESF	**Shoufeng Towns**	**0.37**	**220**	*e*P		**Pg**	**09 50 39.6**	**+0.1**
	baz=227							
ESL	**Shilin**	**0.45**	**222**	⇑P		**Pg**	**09 50 41.4**	**+0.3**
	baz=227							
ESL				*e*S		**Sb**	**09 50 49.0**	**+0.1**
	baz=227							
NNS	**Nan Shan**	**0.45**	**309**	⇑*i*P		**Pg**	**09 50 41.1**	**0.0**
	baz=309							
NNS				*i* S		**Sg**	**09 50 46.9**	**-0.3**
	baz=309							
WHF	**Hehuan Shan**	**0.45**	**269**	*e*P		**Pg**	**09 50 40.5**	**-0.7**
	baz=266							
WHF				*i* S		**Sg**	**09 50 47.1**	**-0.3**
	baz=266							
TWC	**Suao**	**0.46**	**10**	*i* P		**Pg**	**09 50 41.4**	**+0.2**
	baz=8.0							
TWC				*e*S		**Sg**	**09 50 46.5**	**-0.8**
	baz=8.0							
TWT	**Tachien**	**0.54**	**280**	⇑*i*P		**Pb**	**09 50 43.4**	**-0.4**
	baz=278							
TWT				S		**Sb**	**09 50 50.6**	**-1.2**
	baz=278							
TWE	**Neicheng**	**0.57**	**351**	⇑*i*P		**Pg**	**09 50 43.6**	**+0.2**
	baz=2.0							
TWE				*i* S		**Sg**	**09 50 50.8**	**-0.1**
	baz=2.0							
ILA	**Ilan**	**0.61**	**359**	*e*P		**Pg**	**09 50 44.3**	**+0.3**
	baz=2.0							
ILA				*e*S		**Sg**	**09 50 52.4**	**+0.3**
	baz=2.0							
NSK	**Sanguang**	**0.64**	**325**	⇑*i*P		**Pg**	**09 50 44.6**	**0.0**
	baz=326							
NSK				*i* S		**Sg**	**09 50 52.8**	**-0.2**
	baz=326							
EHY	**Hungye**	**0.76**	**212**	*e*P		**Pg**	**09 50 46.7**	**-0.2**
	baz=217							
SMLT	**Sun Moon Lake**	**0.83**	**251**	*i* P		**Pb**	**09 50 48.5**	**-0.3**
	baz=250							
SMLT				S		**Sg**	**09 50 59.1**	**-0.1**
	baz=250							
TWA	**Mucha**	**0.84**	**349**	P		**Pb**	**09 50 48.7**	**-0.1**
	baz=350							
TWA				S		**Sb**	**09 51 00.3**	**+0.2**
	baz=350							
NSTT	**Nanjuang**	**0.84**	**304**	⇓*i*P		**Pb**	**09 50 48.8**	**0.0**
	baz=304							
NSTT				S		**Sb**	**09 50 59.4**	**-0.8**
	baz=304							
TYC	**Yuchr**	**0.86**	**253**	*i* P		**Pg**	**09 50 48.8**	**-0.1**
	baz=243							
TYC				S		**Sg**	**09 50 59.5**	**-0.6**
	baz=243							
TWB1	**Santiao Chiao**	**0.87**	**14**	P		**Pg**	**09 50 49.2**	**+0.1**
	baz=15							
TWB1				S		**Sg**	**09 51 00.4**	**-0.1**
	baz=15							
TAP1	**Taipei**	**0.91**	**346**	*e*P		**Pb**	**09 50 50.2**	**+0.3**
	baz=346							
TWF1	**Yuli**	**0.91**	**208**	*e*P		**Pg**	**09 50 48.9**	**-0.7**
	baz=219							
TAP	**Taipei**	**0.91**	**345**	*e*P		**Pb**	**09 50 50.3**	**+0.3**
	baz=346							
NWF	**Wu-fen Shan**	**0.91**	**1**	⇑*e*P		**Pb**	**09 50 50.1**	**0.0**
	baz=353							
NWF				*e*S		**Sg**	**09 51 01.5**	**-0.3**
	baz=353							
TWQ1	**Liyutan**	**0.92**	**282**	*e*P		**Pn**	**09 50 50.7**	**-0.4**
	baz=281							
TWQ1				*e*S		**Sn**	**09 51 04.8**	**+0.4**
	baz=281							
NSY	**Sanyi**	**0.95**	**286**	*e*P		**Pn**	**09 50 51.4**	**-0.1**
	baz=285							
NSY				*e*S		**Sn**	**09 51 05.7**	**+0.6**
	baz=285							
NCU	**National Centr**	**0.97**	**327**	*e*P		**Pn**	**09 50 52.0**	**+0.3**
	baz=328							
NCU				*e*S		**Sn**	**09 51 06.2**	**+0.7**
	baz=328							
HSN	**Hsinchu**	**0.97**	**312**	*e*P		**Pn**	**09 50 52.0**	**+0.3**
	baz=314							
HSN				*e*S		**Sn**	**09 51 06.4**	**+0.9**
	baz=314							
TCU	**Taichung**	**0.99**	**270**	*e*P		**Pn**	**09 50 53.0**	**+0.9**
	baz=269							
TCU				*e*S		**Sn**	**09 51 06.5**	**+0.5**
	baz=269							
TWS1	**Kuangyinshan**	**0.99**	**342**	*e*P		**Pn**	**09 50 52.1**	**0.0**
	baz=350							
TWS1				*e*S		**Sn**	**09 51 07.0**	**+0.9**
	baz=350							
YUS	**Yu-Shan**	**0.99**	**228**	P		**Pg**	**09 50 51.7**	**+0.3**
	baz=228							
YUS				*e*S		**Sb**	**09 51 06.0**	**+0.9**
	baz=228							
WNT	**Mingjian**	**1.02**	**255**	*e*P		**Pn**	**09 50 53.0**	**+0.5**
	baz=249							
WNT				*e*S		**Sn**	**09 51 07.9**	**+1.1**
	baz=249							
ALS	**Alishan**	**1.09**	**234**	P		**Pn**	**09 50 53.6**	**0.0**
	baz=234							
ALS				*e*S		**Sn**	**09 51 09.1**	**+0.2**
	baz=234							
CHKT	**Chengkung**	**1.11**	**199**	*e*P		**Pb**	**09 50 53.1**	**-0.4**
	baz=186							
TWY	**Chenhua**	**1.12**	**352**	*e*P		**Pn**	**09 50 54.5**	**+0.6**
	baz=5.0							
CHN5	**Tsauling**	**1.14**	**241**	*i* P		**Pn**	**09 50 54.9**	**+0.8**
	baz=241							
CHN5				S		**Sn**	**09 51 11.2**	**+1.4**
	baz=241							
YOJ	**Yonaguni jima**	**1.18**	**75**	*e*P		**Pn**	**09 50 54.9**	**+0.3**
	baz=66							
YOJ				*e*S		**Sn**	**09 51 11.8**	**+1.2**
	baz=66							
YOJ	**Yonaguni jima**	**1.18**	**75**	P		**Pn**	**09 50 55.0**	**+0.3**
YOJ				*e*S		**Sn**	**09 51 12.0**	**+1.3**
ELDTW	**Lidau**	**1.18**	**216**	*e*P		**Pb**	**09 50 53.7**	**-1.0**
	baz=217							
WGK	**Gukeng**	**1.19**	**247**	*e*P		**Pg**	**09 50 55.7**	**+0.6**
	baz=248							
WTCT	**Ta-ch'eng**	**1.39**	**258**	*e*P		**Pg**	**09 50 58.4**	**-0.4**
	baz=258							
WTCT				*e*S		**Sg**	**09 51 17.7**	**+0.9**
	baz=258							
WTP	**Ta-pu**	**1.39**	**230**	*e*P		**Pb**	**09 50 58.5**	**+0.3**
	baz=230							
WTP				*e*S		**Sg**	**09 51 18.5**	**+1.6**
	baz=230							
CHY	**Chiayi**	**1.39**	**242**	*e*P		**Pg**	**09 50 59.4**	**+0.5**
	baz=243							
CHY				*e*S		**Sg**	**09 51 19.0**	**+2.1**
	baz=243							
TWK	**Hsinying**	**1.47**	**233**	*e*P		**Pg**	**09 51 00.1**	**-0.3**
	baz=235							
TWK				*e*S		**Sg**	**09 51 20.2**	**+0.8**
	baz=235							
TWG	**Pinlang**	**1.47**	**206**	*e*P		**Pn**	**09 50 58.4**	**-0.3**
	baz=218							
CHN1	**Nanshi**	**1.49**	**230**	*e*P		**Pg**	**09 51 00.4**	**-0.4**
	baz=225							
CHN1				*e*S		**Sg**	**09 51 21.6**	**+1.5**
	baz=225							
PCYT	**Pengchaiyu**	**1.49**	**11**	*e*P		**Pn**	**09 50 58.9**	**-0.1**
	baz=10.0							
WSF	**Szhu**	**1.50**	**250**	*e*P		**Pg**	**09 51 00.5**	**-0.5**
	baz=240							
WSF				*e*S		**Sg**	**09 51 21.0**	**+0.5**
	baz=240							
SCLT	**Jiali**	**1.74**	**236**	*e*P		**Pb**	**09 51 03.3**	**-0.8**
	baz=239							
SCLT				*e*S		**Sg**	**09 51 28.3**	**+0.2**
	baz=239							
IRIF	**Iriomote-Funau**	**1.81**	**84**	P		**Pn**	**09 51 03.7**	**+0.5**
IRIF				*e*S		**Sn**	**09 51 26.6**	**+0.5**
TWM1	**Shoushan**	**1.81**	**223**	*e*P		**Pb**	**09 51 05.8**	**+0.5**
	baz=228							
HATJ	**Hateruma jima**	**1.87**	**93**	*e*S		**Sn**	**09 51 28.2**	**+0.5**
JKRS	**Kuro-shima**	**2.05**	**87**	*e*S		**Sb**	**09 51 35.0**	**-0.1**
SCZT	**Fangliau**	**2.06**	**211**	*e*P		**Pb**	**09 51 08.8**	**-0.9**
	baz=216							
PNG	**Penghu**	**2.10**	**254**	*e*P		**Pn**	**09 51 08.7**	**+1.3**
	baz=256							
JIJ	**Ishigaki jima**	**2.18**	**84**	P		**Pn**	**09 51 08.8**	**+0.4**
JIJ				*e*S		**Sn**	**09 51 35.5**	**0.0**
TWK1	**Hengchun**	**2.37**	**202**	*e*P		**Pb**	**09 51 13.7**	**-1.3**
	baz=194							
JTJ	**Tarama**	**2.72**	**79**	*e*S		**Sn**	**09 51 50.3**	**+1.5**
KSRS	**Korea Array**	**14.27**	**20**	Pn		**P**	**09 54 02.2**	**+0.8**
	0.1nm,0.3s,baz=200,slow=12,SNR=6.8							
MKAR	**Makanchi Array**	**38.73**	**316**	P		**P**	**09 57 55.8**	**-0.6**
	0.3nm,0.6s,baz=111,slow=9.2,SNR=4.3							
WRA	**Warrungna Arr**	**45.51**	**163**	P		**P**	**09 58 50.2**	**-1.7**
	0.4nm,0.8s,baz=344,slow=8.7,SNR=3.4							

NIED ***28*** *09:52:00,24.˙10N×121.˙70E,h35km,Mw4.8 Best double couple: M0 1.89000×10^16 NP1:φ=65.00000°,δ79.00000°, λ.107.00000°. NP2:φ=186.00000°,δ20.00000°,λ.33.00000°.*

IDC ***28*** *09:52:43.2±0.5,24.˙18N×121.˙79E,h0km,mb4.2/28, mb1 4.3/30,mb1mx4.2/37,mbtmp4.2/30,ML3.3/1,MS4.1/14, Ms1 4.2/14,ms1mx3.8/41,Error ellipse: s-maj=14.9km s-min=12.7km az=72.0*

BJI ***28*** *09:52:43.0,24.˙21N×121.˙83E,h4km,mB5.0/32,mb4.4/42, ML4.8/9,Ms4.9/50,Ms7 4.8/45*

JMA ***28*** *09:52:44.4±0.4,24.˙05N×121.˙68E,h17km,M5.0*

TAP ***28*** *09:52:45.3,24.˙18N×121.˙77E,h14km,ML4.8,B*

NEIC ***28*** *09:52:45.6±0.9,24.˙15N×121.˙76E,h12km±5km,mb4.7/23, ML4.8(TAP),Error ellipse: s-maj=6.8km s-min=5.9km az=98.0*

NEIC Felt at Chang-hua, Hsin-chu and Taipei. Recorded [4 TAP] in Hua-lien and I-lan; [3 TAP] in Nan-t'ou; [2 TAP] in T'ai-chung and T'ao-yuan; [1 TAP] at Tou-liu and in Chang-hua, Hsin-chu, T'ai-pei and Yun-lin.

ISCJB ***28*** *09:52:46.1±0.2,24.˙20N±0.˙01×121.˙80E±0.˙02,h21km±1km, mb4.4/66,MS4.4/21,Error ellipse: s-maj=2.5km s-min=1.9km az=35.9*

MOS ***28*** *09:52:47.0±1.0,24.˙27N×121.˙83E,h33km,mb4.9/16, MS4.7/4,Error ellipse: s-maj=12.5km s-min=7.0km az=120.0*

DJA ***28*** *09:52:53.9±6.9,24°N±9'×12°2E±°,h61km±78km,M4.5/8, mb4.5/8*

ISC 28 09:52:46.6±0.4,24.˙18N±0.˙02×121.˙78E±0.˙02,h16km±1km, n259,σ1s72/343,mb4.5/66,MS4.5/21,9C-8D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ID	Time	Res
						ISC	h m s	ISC
EHP	**Heping Village**	**0.13**	**343**	*i* P		**Pg**	**09 52 48.9**	**-1.5**
	baz=351							
EHP				S		**Sg**	**09 52 51.7**	**-1.2**
	baz=351							
NACB	**Ninganchiao**	**0.17**	**267**	*e*Pg		**Pg**	**09 52 49.3**	**-1.6**
NACB				*e*Sg		**Sg**	**09 52 52.4**	**-1.4**
TWD	**Chiawan**	**0.20**	**239**	*i* P		**Pg**	**09 52 49.8**	**-1.5**
	baz=244							
TWD				S		**Sg**	**09 52 53.6**	**-0.9**
	baz=244							
ENA	**Nanau**	**0.25**	**351**	⇑*i*P		**Pg**	**09 52 50.7**	**-1.4**
	baz=355							
ENA				*e*S		**Sg**	**09 52 54.8**	**-0.9**
	baz=355							
HWA	**Hwalien**	**0.26**	**218**	*e*P		**Pg**	**09 52 51.6**	**-0.7**
	baz=225							
ESF	**Shoufeng Towns**	**0.40**	**219**	*e*P		**Pg**	**09 52 53.7**	**-1.0**
	baz=226							
TWC	**Suao**	**0.43**	**8**	⇑*i*P		**Pg**	**09 52 54.2**	**-1.0**
	baz=10.0							
NNS	**Nan Shan**	**0.45**	**304**	⇑*i*P		**Pg**	**09 52 54.2**	**-1.5**
	baz=306							
NNS				*e*S		**Sg**	**09 53 00.9**	**-1.1**
	baz=306							
WHF	**Hehuan Shan**	**0.48**	**265**	⇑*i*P		**Pg**	**09 52 54.7**	**-1.6**
	baz=266							
ESL	**Shilin**	**0.49**	**221**	⇑*e*P		**Pg**	**09 52 54.9**	**-1.4**
	baz=229							
TEGC	**Jichi Village**	**0.52**	**205**	*e*P		**Pg**	**09 52 56.9**	**-0.1**
	baz=197							
TEGC				*e*S		**Sb**	**09 53 06.3**	**+1.6**
	baz=197							
TWE	**Neicheng**	**0.55**	**349**	⇑*i*P		**Pg**	**09 52 56.4**	**-1.0**
	baz=350							
TWE				*e*S		**Sg**	**09 53 03.7**	**-1.0**
	baz=350							
TWT	**Tachien**	**0.56**	**277**	⇑*i*P		**Pg**	**09 52 56.7**	**-1.0**
	baz=278							
TWT				S		**Sg**	**09 53 04.3**	**-1.0**
	baz=278							
ILA	**Ilan**	**0.58**	**357**	P		**Pg**	**09 52 57.3**	**-0.8**
	baz=353							
ILA				*i* S		**Sb**	**09 53 06.1**	**-0.3**
	baz=353							
YHNB	**Yeheng**	**0.61**	**322**	*e*Pg		**Pg**	**09 52 57.1**	**-1.5**
YHNB				*e*Sg		**Sg**	**09 53 05.3**	**-1.5**
NSK	**Sanguang**	**0.62**	**322**	⇑*i*P		**Pg**	**09 52 57.6**	**-1.4**
	baz=323							
NSK				S		**Sg**	**09 53 06.4**	**-0.9**
	baz=323							
EHY	**Hungye**	**0.80**	**212**	*e*P		**Pg**	**09 53 00.2**	**-2.0**
	baz=223							
TWA	**Mucha**	**0.81**	**347**	*e*P		**Pg**	**09 53 01.8**	**-0.7**
	baz=347							
NSTT	**Nanjuang**	**0.84**	**302**	*e*P		**Pg**	**09 53 01.8**	**-1.1**
	baz=303							
NSTT				S		**Sg**	**09 53 13.6**	**-0.4**
	baz=303							
TWB1	**Santiao Chiao**	**0.84**	**13**	*e*P		**Pg**	**09 53 01.9**	**-1.1**
	baz=7.0							
TWB1				S		**Sg**	**09 53 13.1**	**-1.0**
	baz=7.0							
SSLB	**Suanglung**	**0.86**	**243**	*e*Pg		**Pg**	**09 53 01.9**	**-1.4**
SSLB				*e*Sg		**Sg**	**09 53 13.1**	**-1.4**
SMLT	**Sun Moon Lake**	**0.86**	**250**	*e*P		**Pg**	**09 53 01.9**	**-1.5**
	baz=250							
SMLT				*e*S		**Sg**	**09 53 13.9**	**-0.8**
	baz=250							
NWF	**Wu-fen Shan**	**0.88**	**360**	P		**Pg**	**09 53 03.1**	**-0.7**
	baz=352							
NWF				S		**Sb**	**09 53 15.3**	**0.0**
	baz=352							
TAP1	**Taipei**	**0.88**	**344**	⇓*e*P		**Pg**	**09 53 03.1**	**-0.6**
	baz=343							
TAP1				*e*S		**Sg**	**09 53 14.8**	**-0.7**
	baz=343							
TAP	**Taipei**	**0.89**	**344**	*e*P		**Pb**	**09 53 03.5**	**-0.2**
	baz=335							
TYC	**Yuchr**	**0.89**	**252**	⇓*e*P		**Pg**	**09 53 02.3**	**-1.6**
	baz=253							
TYC				*e*S		**Sg**	**09 53 14.8**	**-0.8**
	baz=253							
YULB	**Yu-li**	**0.91**	**210**	*e*Pg		**Pb**	**09 53 01.5**	**-2.5**
YULB				*e*Sn		**Sn**	**09 53 17.7**	**+0.1**
TWQ1	**Liyutan**	**0.94**	**280**	*e*P		**Pb**	**09 53 04.2**	**-0.3**
	baz=281							
TWQ1				*e*S		**Sg**	**09 53 17.3**	**+0.2**
	baz=281							
TWF1	**Yuli**	**0.94**	**208**	⇓*e*P		**Pb**	**09 53 02.0**	**-2.6**
	baz=220							
TWF1				*e*S		**Sn**	**09 53 17.8**	**-0.6**
	baz=220							
NCU	**National Centr**	**0.95**	**325**	*e*P		**Pb**	**09 53 04.5**	**-0.3**
	baz=325							
NCU				*e*S		**Sn**	**09 53 18.6**	**-0.1**
	baz=325							
NSY	**Sanyi**	**0.96**	**284**	*e*P		**Pg**	**09 53 04.9**	**-0.4**
	baz=285							
HSN	**Hsinchu**	**0.96**	**310**	*e*P		**Pg**	**09 53 05.1**	**-0.2**
	baz=305							
HSN				*e*S		**Sg**	**09 53 17.9**	**-0.1**
	baz=305							
TWS1	**Kuangyinshan**	**0.97**	**340**	*e*P		**Pg**	**09 53 05.0**	**-0.4**
	baz=340							
TWS1				*e*S		**Sn**	**09 53 18.6**	**-0.5**
	baz=340							
TCU	**Taichung**	**1.01**	**268**	*e*P		**Pn**	**09 53 06.1**	**-0.1**
	baz=269							
TCU				*e*S		**Sn**	**09 53 21.3**	**+1.2**
	baz=269							
YUS	**Yu-Shan**	**1.03**	**228**	⇓*e*P		**Pb**	**09 53 05.0**	**-1.4**
	baz=217							
YUS				*e*S		**Sb**	**09 53 20.1**	**+0.3**
	baz=217							
WNT	**Mingjian**	**1.05**	**253**	*e*P		**Pg**	**09 53 06.4**	**-0.6**
	baz=251							
WNT				*e*S		**Sn**	**09 53 21.4**	**+0.3**
	baz=251							
TWY	**Chenhua**	**1.10**	**351**	*e*P		**Pn**	**09 53 07.3**	**-0.1**
	baz=351							
ALS	**Alishan**	**1.12**	**233**	*e*P		**Pb**	**09 53 06.6**	**-1.2**
	baz=225							
ALS				*e*S		**Sg**	**09 53 23.0**	**0.0**
	baz=225							
CHKT	**Chengkung**	**1.15**	**200**	*e*P		**Pb**	**09 53 06.8**	**-1.3**
	baz=200							
CHKT				*e*S		**Sn**	**09 53 25.9**	**+2.4**
	baz=200							
YOJ	**Yonaguni jima**	**1.15**	**76**	⇓P		**Pb**	**09 53 07.4**	**-0.7**
	baz=84							
YOJ				*e*S		**Sn**	**09 53 24.9**	**+1.3**
	baz=84							
YOJ	**Yonaguni jima**	**1.15**	**76**	P		**Pb**	**09 53 07.5**	**-0.7**
YOJ				S		**Sn**	**09 53 24.4**	**+0.8**
CHN5	**Tsauling**	**1.17**	**240**	*e*P		**Pn**	**09 53 07.7**	**-0.8**
	baz=241							
ELDTW	**Lidau**	**1.22**	**216**	*e*P		**Pn**	**09 53 06.8**	**-2.3**
	baz=202							
WGK	**Gukeng**	**1.22**	**246**	*e*P		**Pg**	**09 53 09.6**	**-0.6**
	baz=247							
WGK				*e*S		**Sg**	**09 53 26.8**	**+0.6**
	baz=247							
TPUB	**Ta-pu**	**1.38**	**230**	*e*Pn		**Pn**	**09 53 11.1**	**-0.1**
TPUB				*e*Sn		**Sg**	**09 53 30.2**	**-0.9**
WTCT	**Ta-ch'eng**	**1.41**	**257**	*e*P		**Pb**	**09 53 12.0**	**-0.6**
	baz=259							
WTCT				*e*S		**

baz=221
WSF Szhu 1.53 249 *e*P **Pn 09 53 13.5 +0.2**
baz=251
WSF *e*S **Sg 09 53 35.4 -0.5**
baz=251
TTN Taitung 1.54 202 *e*P **Pn 09 53 12.8 -0.6**
baz=203
CHN8 Yiju 1.67 240 *e*P **Pb 09 53 16.4 -0.5**
baz=241
CHN3 Shinhua 1.71 230 *e*P **Pb 09 53 17.8 +0.2**
baz=229
CHN3 *e*S **Sg 09 53 42.6 +1.0**
baz=229
ECL Taimali 1.75 206 *e*P **Pn 09 53 14.6 -1.8**
baz=194
SCLT Jiali 1.77 236 *e*P **Pn 09 53 17.2 +0.6**
baz=235
SCLT *e*S **Sg 09 53 42.2 -1.5**
baz=235
IRIF Iriomote-Funau 1.78 85 P **Pn 09 53 17.0 +0.2**
IRIF *e*S **Sn 09 53 39.2 0.0**
TAI1 Yung-k'ang 1.83 232 *e*P **Pb 09 53 18.8 -0.9**
baz=231
TWM1 Shoushan 1.84 223 *e*P **Pb 09 53 19.8 -0.2**
baz=223
HATJ Hateruma jima 1.85 94 P **Pn 09 53 17.4 -0.3**
HATJ *e*S **Sn 09 53 41.3 +0.4**
SGLT Jiouru 1.88 220 *e*P **Pb 09 53 19.8 -0.7**
baz=204
JKRS Kuro-shima 2.03 88 P **Pn 09 53 20.4 +0.2**
JKRS S **Sb 09 53 48.0 -0.3**
SCZT Fangliau 2.10 211 *e*P **Pn 09 53 22.2 +1.1**
baz=195
KAU Kaohsiung 2.10 220 *e*P **Pn 09 53 21.2 -0.1**
baz=238
PNG Penghu 2.13 254 *e*P **Pn 09 53 20.6 -1.0**
baz=255
LAY Lan-yu 2.15 186 *e*P **Pn 09 53 19.8 -2.1**
baz=188
JIJ Ishigaki jima 2.16 85 P **Pn 09 53 21.5 -0.5**
JIJ S **Sn 09 53 48.7 +0.2**
TWP Hsiaoliuchiu 2.25 216 *e*P **Pn 09 53 24.6 +1.4**
baz=214
HEN Hengchun 2.37 204 *e*P **Pn 09 53 26.0 +1.1**
baz=195
TWK1 Hengchun 2.41 202 *e*P **Pn 09 53 25.1 -0.2**
baz=192
TSEB Hengchuen, Pin 2.42 200 *e*P **Pn 09 53 25.3 -0.2**
baz=201
JTJ Tarama 2.70 80 P **Pn 09 53 29.8 +0.4**
JTJ S **Sn 09 54 02.9 +1.1**
QZH Quanzhou 3.00 285 Pn **Pn 09 53 32.8 -0.8**
QZH Sn **Sn 09 54 08.0 -1.3**
QZH smax smax
comp=N,3μm,0.8s
QZH smax smax
comp=E,2μm,1.1s
QZH LR LR
comp=N,9μm,4.3s
QZH LR LR
comp=E,24μm,9.8s
QZH LR LR
comp=Z,30μm,9.2s
KNM Kinmen 3.07 275 *e*P **Pn 09 53 35.1 +0.7**
baz=275
JMJ Miyako jima 2 3.26 78 S **Sn 09 54 17.7 +2.1**
JOGS Gusukube 3.35 79 P **Pn 09 53 40.2 +1.8**
JOGS S **Sn 09 54 20.9 +3.0**
JKE Kume jima 2 5.01 64 P **Pn 09 54 01.9 +0.8**
JAGN Aguni-jima 5.49 63 P **Pn 09 54 10.2 +2.5**
JIH Iheya 6.26 62 P Pn 09 54 25.6 +7.2
JOW Kunigami 6.43 64 *e*P **Pn 09 54 20.1 -0.7**
baz=64
JOW Kunigami 6.43 64 *e*Pn **Pn 09 54 20.2 -0.6**
JOW Kunigami 6.43 64 P **Pn 09 54 20.0 -0.7**
SSE Sheshan 6.91 356 *e*P **Pn 09 54 25.8 -1.4**
SSE S **Sn 09 55 44.5 -1.0**
SSE pmax pmax
comp=Z,25nm,0.9s
SSE pmax pmax
comp=Z,90nm,4.3s
SSE smax smax
comp=N,460nm,1.4s
SSE smax smax
comp=E,510nm,1.2s
SSE LR LR
comp=N,5μm,12.1s
SSE LR LR
comp=E,940nm,12.1s
SSE LR LR
comp=Z,6μm,13.0s
JTK Tokunoshima 7.38 59 P **Pn 09 54 33.5 -0.2**
JAMN Amaminishikomi 7.77 57 P **Pn 09 54 37.8 -1.3**
NJ2 Nanjing 8.25 342 *e*P **Pn 09 54 44.5 -1.2**
NJ2 pP **Pn 09 54 47.5 +1.8**
NJ2 sP 09 54 51.0
NJ2 S **Sn 09 56 21.0 +2.3**
NJ2 sS Sn 09 56 26.3 +7.6
NJ2 pmax pmax
comp=Z,20nm,0.6s
NJ2 smax smax
comp=N,310nm,1.0s
NJ2 smax smax
comp=E,560nm,1.3s
NJ2 LR LR
comp=N,4μm,12.3s
NJ2 LR LR
comp=E,5μm,9.7s
NJ2 LR LR
comp=Z,6μm,10.0s
WHN Wuhan 9.15 315 P **Pn 09 54 56.8 -1.3**
WHN S **Sn 09 56 35.0 -5.8**
WHN LR LR
comp=N,15μm,8.3s
WHN LR LR
comp=E,14μm,9.3s
WHN LR LR
comp=Z,22μm,9.8s
JNU Nakatsue 11.96 40 *e*Pn **Pn 09 55 38.7 +2.2**
JNU Nakatsue 11.96 40 Pn **Pn 09 55 37.0 +0.5**
comp=Z,0.2nm,0.3s,baz=225,slow=8.6,SNR=2.1
QIZ Qiongzhong 12.23 248 P **Pn 09 55 40.8 +0.5**
QIZ S **Sn 09 57 58.8 +2.4**
QIZ LR LR
comp=N,1μm,14.2s
QIZ LR LR
comp=E,530nm,13.8s
QIZ LR LR
comp=Z,1μm,12.7s
ENH Enshi 12.51 302 *e*Pn **Pn 09 55 45.3 +1.3**
comp=Z,8.8nm,0.8s
GYA Guiyang 13.86 283 P **Pn 09 56 04.3 +1.6**
GYA PP P 09 56 14.3 +3.4
GYA S **Sn 09 58 39.5 +3.1**
GYA SS **S 09 58 54.8 -3.7**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,90nm,4.7s
GYA LR LR
comp=N,4μm,10.8s
GYA LR LR
comp=E,3μm,9.4s
GYA LR LR
comp=Z,4μm,11.4s
KSAR Wonju Array Be 14.21 20 Pn P 09 56 11.3 -3.3
KSAR Lg Lg 10 00 16.9
KSRS Korea Array 14.23 20 Pn P 09 56 11.3 -3.6
comp=Z,0.3nm,0.3s,baz=207,slow=14,SNR=19
KSRS Lg Lg 10 00 16.9
comp=Z,0.1nm,0.3s,baz=204,slow=26,SNR=2.8
XAN Xi'an 14.91 314 P **Pn 09 56 17.0 +0.1**
XAN pmax pmax
comp=Z,2.0nm,1.4s
XAN pmax pmax
comp=Z,100nm,10.4s
XAN LR LR
comp=N,1μm,8.6s
XAN LR LR
comp=E,1μm,11.3s
XAN LR LR
comp=Z,1μm,11.3s
BJI Beijing 16.50 345 P **P 09 56 40.0 0.0**
BJI S **S 09 59 46.3 -5.8**
BJI pmax pmax
comp=Z,14nm,1.4s
BJI pmax pmax
comp=Z,240nm,7.0s
BJI LR LR
comp=N,2μm,13.5s
BJI LR LR
comp=E,1μm,13.7s
BJI LR LR
comp=Z,750nm,14.8s
CD2 Chengdu 17.32 297 *e*P **Pn 09 56 48.0 +0.1**
CD2 pP **pP 09 56 52.3 -1.4**
CD2 sP **sP 09 56 55.8 +0.1**
CD2 PP **PnPn 09 57 03.3 +5.3**
CD2 S **Sn 10 00 00.5 0.0**
CD2 sS **S 10 00 05.5 -3.6**
CD2 SS **SnSn 10 00 22.0 +8.1**
CD2 pmax pmax
comp=Z,20nm,1.2s
CD2 pmax pmax
comp=Z,120nm,4.8s
CD2 LR LR
comp=N,3μm,8.2s
CD2 LR LR
comp=E,3μm,7.2s
CD2 LR LR
comp=Z,5μm,10.8s
KMI Kunming 17.34 277 P **Pn 09 56 48.0 -0.3**
KMI pP **P 09 56 51.5 +1.8**
KMI sP **sP 09 56 52.8 -3.3**
KMI PP **PnPn 09 57 02.5 +4.1**
KMI S **Sn 10 00 00.5 -0.7**
KMI SS **SnSn 10 00 22.0 +7.4**
KMI pmax pmax
comp=Z,11nm,0.8s
KMI pmax pmax
comp=Z,490nm,5.6s
KMI LR LR
comp=N,1μm,10.0s
KMI LR LR
comp=E,5μm,11.0s
KMI LR LR
comp=Z,6μm,11.0s
DAV Davao City (W) 17.40 167 LR LR 10 03 59.4
comp=Z,420nm,20.2s,baz=6.1,slow=39
SNY Shenyang 17.66 4 ||P **P 09 56 54.5 +1.7**
SNY S **Sn 10 00 11.8 +3.5**
SNY pmax pmax
comp=Z,28nm,1.8s
SNY LR LR
comp=N,2μm,12.0s
SNY LR LR
comp=E,1μm,17.4s
SNY LR LR
comp=Z,3μm,12.0s
JHJ Hachijo jima 2 18.11 57 LR LR 10 03 24.0
comp=Z,804nm,19.7s,baz=87,slow=35
HHC Hu-ho-hao-te 18.70 335 *e*P **P 09 57 03.3 -1.1**
HHC pP **pP 09 57 06.8 -2.0**
HHC sP **sP 09 57 10.3 -0.5**
HHC PP **PnPn 09 57 19.5 +2.6**
HHC S **Sn 10 00 29.5 -4.1**
HHC sS **S 10 00 35.8 -1.1**
HHC SS **SnSn 10 00 54.5 +6.8**
HHC pmax pmax
comp=Z,47nm,0.9s
HHC pmax pmax
comp=Z,1μm,5.0s
HHC LR LR
comp=N,3μm,14.9s
HHC LR LR
comp=E,2μm,12.4s
HHC LR LR
comp=Z,3μm,14.5s
MJAR Matsushiro Arr 18.74 45 P **P 09 57 04.0 -0.8**
MJAR Matsushiro Arr 18.74 45 P **P 09 57 04.0 -0.8**
baz=238,slow=8.8,SNR=2.5
MJAR LR LR 10 05 01.1
comp=Z,649nm,20.3s,baz=195,slow=39
LZH Lanzhou 19.49 312 *e*P **Pn 09 57 16.5 +2.0**
LZH pP **pP 09 57 20.8 +3.1**
LZH sP **sP 09 57 22.5 +2.8**
LZH PP **PnPn 09 57 34.0 +6.1**
LZH *e*S **Sn 10 00 51.0 -2.1**
LZH sS **sS 10 00 57.5 -2.7**
LZH SS **SnSn 10 01 14.5 +7.1**
LZH pmax pmax
comp=Z,120nm,1.1s
LZH pmax pmax
comp=Z,530nm,4.1s
LZH LR LR
comp=N,3μm,11.6s
LZH LR LR
comp=E,3μm,11.2s
LZH LR LR
comp=Z,5μm,12.2s
CN2 Changchun 19.80 8 *e*P **Pn 09 57 17.3 -0.6**
CN2 *e*sP **sP 09 57 24.3 +1.5**
CN2 *e*S **S 10 00 56.5 -2.4**
CN2 pmax pmax
comp=Z,10.0nm,1.1s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,2μm,13.0s
CN2 LR LR
comp=E,700nm,13.0s
CN2 LR LR
comp=Z,1μm,14.0s
PBKT Sadao Pong 20.91 253 P Pn 09 57 31.8 +0.6
comp=Z,10nm,1.0s
MDJ Mudanjiang 21.36 15 P **P 09 57 35.3 +2.1**
MDJ sS Sn 10 01 38.0 +0.5
MDJ pmax pmax
comp=Z,15nm,1.6s
MDJ pmax pmax
comp=Z,430nm,13.9s
MDJ LR LR
comp=N,620nm,17.9s
MDJ LR LR
comp=E,1μm,17.0s
MDJ LR LR
comp=Z,2μm,15.2s
MDJ Mudanjiang 21.36 15 *e*P **P 09 57 35.1 +1.9**
comp=Z,3.9nm,0.8s
CHBT CHBT 21.64 242 P P 09 57 45.0 +8.5
comp=Z,22nm,1.3s
USRK Ussuriysk Arra 21.65 20 P **P 09 57 36.9 +0.6**
comp=Z,3.0nm,0.8s,baz=211,slow=12,SNR=7.7
USRK LR LR 10 05 50.8
comp=Z,233nm,20.4s,baz=194,slow=36
CMMT Chiang Mai 21.90 260 P **P 09 57 42.3 +3.0**
comp=Z,47nm,1.3s
CHTO Chiang Mai 21.90 260 *e*P **P 09 57 40.1 +0.8**
CHTO pmax pmax
comp=Z,85nm,2.4s
CHTO Chiang Mai 21.90 260 *e*P **P 09 57 40.1 +0.8**
comp=Z,85nm,2.4s
CHTO Chiang Mai 21.90 260 P **P 09 57 41.7 +2.4**
comp=Z,9.8nm,1.1s
CMAR Chiang Mai Arr 22.02 259 P **P 09 57 41.3 +0.8**
CMAR Chiang Mai Arr 22.02 259 P **P 09 57 41.3 +0.8**
comp=Z,3.3nm,0.9s,baz=59,slow=8.1,SNR=14
CMAR LR LR 10 06 33.2
comp=Z,532nm,19.3s,baz=70,slow=38
SBUM Sibu 23.50 205 P **P 09 57 59.0 +3.0**
comp=Z,27nm,1.5s
GTA Gaotai 23.98 314 ⇑P **P 09 58 00.3 -0.3**
GTA pP **pP 09 58 04.0 -1.3**
GTA sP **sP 09 58 06.3 -0.9**
GTA S **S 10 02 19.5 +2.6**
GTA sS **sS 10 02 23.5 -1.2**
GTA pmax pmax
comp=Z,12nm,1.3s
GTA LR LR
comp=N,980nm,11.9s
GTA LR LR
comp=E,2μm,10.9s
GTA LR LR
comp=Z,3μm,11.4s
GUMO Guam 24.21 112 *e*P **P 09 58 02.5 -0.3**
comp=Z,132nm,1.3s
ASAJ Asahikawa 26.17 35 *e*P **P 09 58 20.4 0.0**
comp=Z,2.3nm,0.9s
ASAJ Asahikawa 26.17 35 P **P 09 58 21.0 +0.7**
comp=Z,2.0nm,0.4s,baz=244,slow=10,SNR=3.0
KLR Kul'dur 26.20 15 *e*P **P 09 58 18.0 -2.5**
ULN Ulaanbaatar 26.37 337 P **P 09 58 22.6 +0.3**
SONM Songino Array 26.58 336 P **P 09 58 23.7 -0.5**
SONM Songino Array 26.58 336 P **P 09 58 23.7 -0.5**
comp=Z,11nm,1.1s,baz=154,slow=9.0,SNR=31
SONM LR LR 10 10 03.7
comp=Z,1μm,18.1s,baz=328,slow=39
SHL Shillong 27.14 279 *e*PKP **P 09 58 30.0 +0.5**
LSA Lhasa 27.81 288 P **P 09 58 34.5 -1.3**
LSA LR LR
comp=N,300nm,16.0s
LSA LR LR
comp=E,1μm,13.0s
LSA LR LR
comp=Z,2μm,12.0s
YSS Yuzh-Sakhalins 28.24 31 *e*P P 09 58 45.0 +6.1
KAPI Kappang 29.09 184 LR LR 10 10 56.8
comp=Z,256nm,20.3s,baz=9.7,slow=38
ZAK Zakamensk 29.84 336 *e*P **P 09 58 52.4 -0.8**
ZAK pmax pmax
comp=Z,3.0nm,1.3s
PSI Prapat 30.65 230 LR LR 10 10 44.9
comp=Z,315nm,21.7s,baz=54,slow=35
TLY Talaya 30.78 338 *e*P **P 09 59 01.6 +0.2**
TLY pmax pmax
comp=Z,9.0nm,1.5s
TLY MLR MLR
comp=Z,1μm,15.0s
WMQ Urumqi 34.05 314 *e*P **P 09 59 31.3 +1.1**
WMQ pP **pP 09 59 35.5 +0.5**
WMQ sP **sP 09 59 38.0 +1.1**
WMQ PP **PnPn 10 00 44.0 +0.4**
WMQ *e*S **S 10 04 55.0 -0.3**
WMQ SS **SnSn 10 07 03.0 +0.5**
WMQ pmax pmax
comp=Z,7.0nm,0.9s
WMQ pmax pmax
comp=Z,160nm,7.4s
WMQ LR LR
comp=N,1μm,11.2s
WMQ LR LR
comp=E,2μm,10.6s
WMQ LR LR
comp=Z,1μm,13.0s
MK31 Makanchi Array 38.72 316 *e*P **P 10 00 09.6 -0.4**
MK31 Makanchi Array 38.72 316 *e*P **P 10 00 09.6 -0.4**
MKAR Makanchi Array 38.72 316 *e*P **P 10 00 09.6 -0.4**
MKAR 10 02 20.3
MKAR Makanchi Array 38.72 316 *e*P **P 10 00 09.6 -0.4**
MKAR PcP **PcP 10 02 20.3 -1.4**
MKAR Makanchi Array 38.72 316 P **P 10 00 08.2 -1.8**
comp=Z,2.9nm,0.8s,baz=108,slow=10,SNR=29
MKAR PcP **PcP 10 02 20.3 -1.4**
comp=Z,0.6nm,0.8s,baz=113,slow=3.3,SNR=3.0
MKAR LR LR 10 17 19.4
comp=Z,538nm,18.0s,baz=268,slow=38
PETK Petropavlovsk- 39.56 34 LR LR 10 17 53.4
comp=Z,303nm,18.4s,baz=230,slow=38
ZAA0 Zalesovo Array 40.54 327 *e*P **P 10 00 24.9 -0.2**
ZALV Zalesovo Beam 40.54 327 P **P 10 00 23.9 -1.1**
ZALV Zalesovo Beam 40.54 327 P **P 10 00 23.9 -1.1**
ZALV Zalesovo Beam 40.54 327 P **P 10 00 23.9 -1.1**
comp=Z,3.7nm,0.7s,baz=117,slow=8.5,SNR=16
ZALV LR LR 10 18 12.2
comp=Z,474nm,19.1s,baz=249,slow=38
KSH Kashi 41.36 303 *e*P **P 10 00 35.0 +2.8**
KSH *e*pP **pP 10 00 39.5 +2.5**
KSH *e*sP **sP 10 00 42.3 +3.4**
KSH *e*PP **PnPn 10 02 14.5 +2.2**
KSH *e*PcP **PcP 10 02 32.8 +2.5**
KSH *e*S **S 10 06 50.0 +3.6**
KSH *e*sS **sS 10 06 58.0 +3.7**
KSH pmax pmax
comp=Z,5.0nm,0.5s
KSH pmax pmax
comp=Z,110nm,4.9s
KSH LR LR
comp=N,1μm,12.4s
KSH LR LR
comp=E,750nm,9.2s
KSH LR LR
comp=Z,2μm,16.2s
NVS Novosibirsk 41.80 327 *e*P **P 10 00 34.9 -0.5**
TKM2 Tokmak 2 42.20 308 *e*P **P 10 00 39.1 +0.1**
TKM2 pmax pmax
comp=Z,7.0nm,1.0s
TKM2 Tokmak 2 42.20 308 *e*P **P 10 00 39.1 +0.1**
comp=Z,7.4nm,1.0s
FITZ Fitzroy Crossi 42.20 175 P **P 10 00 38.4 -0.5**
FITZ Fitzroy Crossi 42.20 175 P **P 10 00 38.4 -0.5**
comp=Z,1.3nm,0.8s,baz=0.0,slow=9.1,SNR=2.7
KURK Kurchatov 42.44 320 P **P 10 00 39.8 -0.9**
KURK Kurchatov 42.44 320 P **P 10 00 39.8 -0.9**
KURBB Kurchatov Arra 42.46 320 P **P 10 00 39.8 -1.1**
comp=Z,7.2nm,1.1s,baz=116,slow=7.5,SNR=27
AAK Ala-Archa 42.94 307 P **P 10 00 44.7 -0.3**
AAK Ala-Archa 42.94 307 P **P 10 00 44.7 -0.3**
AAK Ala-Archa 42.94 307 P **P 10 00 44.7 -0.3**
comp=Z,1.1nm,0.3s,baz=193,slow=9.5,SNR=4.5
COEN Coen 43.29 149 *e*P **P 10 00 47.6 -0.3**
comp=Z,83nm,0.9s
WRAB Tennant Creek 45.53 163 *e*P **P 10 01 04.5 -1.2**
WRAB pmax pmax
comp=Z,4.0nm,0.8s
WRAB Tennant Creek 45.53 163 *e*P **P 10 01 04.5 -1.2**
comp=Z,3.5nm,0.8s
WRA Warramunga Arr 45.53 163 P **P 10 01 02.9 -2.9**
WRA Warramunga Arr 45.53 163 P **P 10 01 02.9 -2.9**
comp=Z,2.4nm,0.8s,baz=344,slow=8.7,SNR=27
FX1 Attu Island--F 47.97 40 P **P 10 01 23.4 -1.2**
FX1 Attu Island--F 47.97 40 P **P 10 01 23.4 -1.2**
comp=Z,2.5nm,0.5s,baz=287,slow=14,SNR=3.5
BVAR Borovoye Array 48.02 321 P **P 10 01 23.0 -1.9**
BVAR Borovoye Array 48.02 321 P **P 10 01 23.0 -1.9**
BVAR Borovoye Array 48.02 321 P **P 10 01 23.0 -1.9**
comp=Z,2.0nm,0.7s,baz=101,slow=7.7,SNR=12
BRVK Borovoye 48.09 321 *e*P **P 10 01 25.8 +0.3**
BRVK pmax pmax
comp=Z,8.0nm,0.9s
BRVK Borovoye 48.09 321 *e*P **P 10 01 25.8 +0.3**
comp=Z,8.2nm,0.9s
ASAR Alice Springs 49.00 165 P **P 10 01 31.5 -1.3**
ASAR Alice Springs 49.00 165 P **P 10 01 31.5 -1.3**
comp=Z,1.0nm,0.6s,baz=338,slow=6.7,SNR=11
CTAO Charters Tower 50.05 149 *e*P **P 10 01 41.9 +1.1**
CTAO pmax pmax
comp=Z,76nm,2.3s
CTAO Charters Tower 50.05 149 *e*P **P 10 01 41.9 +1.1**
comp=Z,76nm,2.3s
ABKAR Akbulak array 53.83 314 *e*P **P 10 02 08.7 0.0**
comp=Z,6.5nm,0.8s
AKTO Aktyubinsk 55.16 316 P **P 10 02 17.6 -0.7**
AKTO Aktyubinsk 55.16 316 P **P 10 02 17.6 -0.7**
AKTO Aktyubinsk 55.16 316 P **P 10 02 17.6 -0.7**
comp=Z,2.0nm,0.7s,baz=82,slow=5.1,SNR=10
ARU Arti 55.44 323 P **P 10 02 19.4 -0.8**
STKA Stephens Creek 58.88 160 P **P 10 02 45.4 +0.6**
STKA Stephens Creek 58.88 160 P **P 10 02 45.4 +0.6**
comp=Z,1.2nm,0.6s,baz=355,slow=11,SNR=3.0
STKA LR LR 10 29 17.2
comp=Z,103nm,21.8s,baz=28,slow=37
MIB Mutribah 65.52 293 *e*P **P 10 03 28.1 -1.6**
MIB AMb AMB 10 03 32.2
comp=Z,9.0nm,1.3s
RDF Al-Radifah 65.57 292 *e*P **P 10 03 28.6 -1.3**
RDF AMb AMB 10 03 31.3
comp=Z,17nm,1.5s
NAY Al-Naaiem 65.75 293 *e*P **P 10 03 29.2 -1.9**
NAY AMb AMB 10 03 31.8
comp=Z,8.3nm,1.6s
KBZ Khabaz 65.91 309 P **P 10 03 31.0 -0.8**
KBZ Khabaz 65.91 309 P **P 10 03 31.0 -0.8**
KBZ Khabaz 65.91 309 P **P 10 03 31.0 -0.8**
comp=Z,4.7nm,0.9s,baz=134,slow=3.7,SNR=8.3
APA Apatity 67.29 335|| *e*P P 10 03 45.0 +4.7
APA *i* 10 04 06.0
APA pmax pmax
comp=Z,38nm,1.4s
APA MLR MLR
comp=Z,400nm,14.0s
KDAK Kodiak Island 67.59 35 P **P 10 03 42.1 -0.2**
KDAK Kodiak Island 67.59 35 P **P 10 03 42.1 -0.2**
comp=Z,4.7nm,0.7s,baz=248,slow=8.4,SNR=2.8
PMR Palmer 68.61 31 *e*P **P 10 03 48.5 -0.1**
PMR pmax pmax
comp=Z,12nm,1.3s
PMR Palmer 68.61 31 *e*P **P 10 03 48.5 -0.1**

	comp=Z,12nm,1.3s							
ILAR	**Eielson Array**	**68.96**	**27**	P		**P**	**10 03 48.0**	**-2.8**
ILAR	**Eielson Array**	**68.96**	**27**	P		**P**	**10 03 48.0**	**-2.8**
	comp=Z,0.6nm,0.6s,baz=287,slow=7.8,SNR=14							
SPITS	**Spitsbergen Ar**	**69.60**	**348**	P		**P**	**10 03 55.0**	**+0.4**
SPITS	**Spitsbergen Ar**	**69.60**	**348**	P		**P**	**10 03 55.0**	**+0.4**
	comp=Z,4.7nm,1.0s,baz=42,slow=3.2,SNR=3.4							
MENT	**Mentasta**	**70.76**	**29**	*eP*		**P**	**10 04 01.1**	**-0.8**
EGAK	**Eagle**	**71.34**	**27**	*eP*		**P**	**10 04 05.0**	**-0.4**
	comp=Z,113nm,2.8s							
FINES	**FINESS Array B**	**71.72**	**330**	P		**P**	**10 04 05.5**	**-2.2**
FINES	**FINESS Array B**	**71.72**	**330**	P		**P**	**10 04 05.5**	**-2.2**
	comp=Z,5.0nm,0.9s,baz=104,slow=8.0,SNR=9.7							
INK	**Inuvik**	**73.02**	**22**	P		**P**	**10 04 13.7**	**-1.7**
INK	**Inuvik**	**73.02**	**22**	P		**P**	**10 04 13.7**	**-1.7**
	comp=Z,5.2nm,1.0s,baz=235,slow=6.6,SNR=4.3							
AKASG	**Malin Array Be**	**73.23**	**318**	P		**P**	**10 04 15.2**	**-1.8**
AKASG	**Malin Array Be**	**73.23**	**318**	P		**P**	**10 04 15.2**	**-1.8**
AKASG	**Malin Array Be**	**73.23**	**318**	P		**P**	**10 04 15.2**	**-1.8**
	comp=Z,1.4nm,0.5s,baz=67,slow=4.9,SNR=7.6							
KIEV	**Kiev**	**73.25**	**318**	*eP*		**P**	**10 04 15.5**	**-1.5**
KIEV				pmax		pmax		
	comp=Z,12nm,1.3s							
KIEV	**Kiev**	**73.25**	**318**	*eP*		**P**	**10 04 15.5**	**-1.5**
	comp=Z,12nm,1.3s							
BR131	**Keskin Array S**	**73.61**	**307**	*eP*		**P**	**10 04 19.4**	**-0.3**
	comp=Z,4.1nm,0.9s							
BRTR	**Keskin Array B**	**73.61**	**307**	P		**P**	**10 04 19.3**	**-0.3**
BRTR	**Keskin Array B**	**73.61**	**307**	P		**P**	**10 04 19.3**	**-0.3**
	comp=Z,4.3nm,1.0s,baz=109,slow=6.7,SNR=16							
SUW	**Suwalki**	**75.63**	**323**	*eP*		**P**	**10 04 30.2**	**-0.6**
SUW				pmax		pmax		
	comp=Z,54nm,1.2s							
SUW	**Suwalki**	**75.63**	**323**	*eP*		**P**	**10 04 30.2**	**-0.6**
	comp=Z,54nm,1.2s							
NB2	**NORSAR Subarra**	**78.48**	**332**	P		**P**	**10 04 44.6**	**-2.2**
	comp=Z,1.2nm,0.7s,baz=58,slow=5.6							
NOA	**NORSAR Array B**	**78.48**	**332**	P		**P**	**10 04 45.0**	**-1.8**
NOA	**NORSAR Array B**	**78.48**	**332**	P		**P**	**10 04 45.0**	**-1.8**
	comp=Z,1.7nm,0.7s,baz=59,slow=5.5,SNR=7.3							
STHS	**Stebnicka Huta**	**78.50**	**319**	*eP*		**P**	**10 04 46.0**	**-1.1**
STHS				pmax		pmax		
	comp=Z,4.0nm,1.4s							
STHS	**Stebnicka Huta**	**78.50**	**319**	*eP*		**P**	**10 04 46.0**	**-1.1**
CRVS	**Cervenica-Dubn**	**78.57**	**319**	*eP*		**P**	**10 04 45.1**	**-2.4**
CRVS				pmax		pmax		
	comp=Z,19nm,2.4s							
CRVS	**Cervenica-Dubn**	**78.57**	**319**	*eP*		**P**	**10 04 45.1**	**-2.4**
JMIC	**Jan Mayen**	**78.97**	**345**	LR		LR	10 40 35.4	
	comp=Z,102nm,21.0s,baz=66,slow=36							
OJC	**Ojcow**	**79.03**	**320**	*eP*		**P**	**10 04 49.5**	**-0.5**
OJC	**Ojcow**	**79.03**	**320**	*eP*		**P**	**10 04 49.5**	**-0.5**
KECS	**Kecovo**	**79.33**	**318**	*eP*		**P**	**10 04 52.3**	**+0.6**
KECS	**Kecovo**	**79.33**	**318**	*eP*		**P**	**10 04 52.3**	**+0.6**
OKC	**Ostrava-Krasne**	**80.15**	**320**	AMS		AMS	10 45 40.0	
	comp=Z,300nm,13.9s							
VYHS	**Vyhne**	**80.33**	**319**	*eP*		**P**	**10 04 56.6**	**-0.5**
VYHS				pmax		pmax		
	comp=Z,8.0nm,1.5s							
VYHS	**Vyhne**	**80.33**	**319**	*eP*		**P**	**10 04 56.6**	**-0.5**
KRLC	**Kraliky**	**80.84**	**321**	*eP*		**P**	**10 04 59.8**	**-0.1**
KRLC	**Kraliky**	**80.84**	**321**	*eP*		**P**	**10 04 59.8**	**-0.1**
DPC	**Dobruska-Polom**	**80.98**	**321**	*eP*		**P**	**10 04 59.1**	**-1.5**
DPC				*e*			10 05 09.0	
DPC	**Dobruska-Polom**	**80.98**	**321**	*eP*		**P**	**10 04 59.1**	**-1.5**
DPC				*ex*		x	10 05 09.0	
UPC	**Upice**	**81.08**	**322**	*eP*		**P**	**10 05 01.0**	**-0.1**
UPC	**Upice**	**81.08**	**322**	*eP*		**P**	**10 05 01.0**	**-0.1**
TREC	**Trest**	**81.94**	**321**	*eP*		**P**	**10 05 05.7**	**0.0**
TREC				MLR		MLR		
	comp=Z,400nm,14.9s							
TREC	**Trest**	**81.94**	**321**	*eP*		**P**	**10 05 05.7**	**0.0**
TREC				AMS		AMS	10 43 00.0	
	comp=Z,400nm,14.9s							
PRU	**Pruhonice**	**82.16**	**322**	*eP*		**P**	**10 05 06.2**	**-0.6**
PRU				MLR		MLR		
	comp=Z,300nm,13.8s							
PRU	**Pruhonice**	**82.16**	**322**	*eP*		**P**	**10 05 06.2**	**-0.6**
PRU				AMS		AMS	10 45 50.0	
	comp=Z,300nm,13.8s							
CLL	**Collm**	**82.38**	**323**	*eP*		**P**	**10 05 06.0**	**-1.9**
CLL				pmax		pmax		
	comp=Z,6.0nm,1.3s							
CLL	**Collm**	**82.38**	**323**	*eP*		**P**	**10 05 06.0**	**-1.9**
	comp=Z,6.0nm,1.3s							
CLL				*e*			10 05 21.0	
YKA	**Yellowknife Ar**	**82.76**	**23**	P		**P**	**10 05 08.4**	**-1.2**
YKA	**Yellowknife Ar**	**82.76**	**23**	P		**P**	**10 05 08.4**	**-1.2**
	comp=Z,3.3nm,0.8s,baz=315,slow=4.9,SNR=7.9							
GERES	**GERESS Array B**	**83.19**	**321**	P		**P**	**10 05 11.6**	**-0.7**
GERES	**GERESS Array B**	**83.19**	**321**	P		**P**	**10 05 11.6**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=64,slow=3.1,SNR=12							
KMBO	**Kilima Mbogo**	**85.47**	**267**	P		**P**	**10 05 25.0**	**+0.4**
KMBO	**Kilima Mbogo**	**85.47**	**267**	P		**P**	**10 05 25.0**	**+0.4**
	comp=Z,2.7nm,0.9s,baz=12,slow=12,SNR=4.0							
LON	**Longmire**	**89.05**	**38**	*eP*		**P**	**10 05 42.0**	**+0.8**
LON				pmax		pmax		
	comp=Z,3.0nm,0.9s							
LON	**Longmire**	**89.05**	**38**	*eP*		**P**	**10 05 42.0**	**+0.8**
	comp=Z,3.1nm,0.9s							
NEW	**Newport**	**90.69**	**35**	*eP*		**P**	**10 05 48.9**	**+0.1**
	comp=Z,5.7nm,1.0s							
WALA	**Waterton Lakes**	**91.82**	**33**	*eP*		**P**	**10 05 56.1**	**+2.0**
	comp=Z,0.2nm,1.1s							
BSMT	**Bassoo Peak**	**92.16**	**34**	*eP*		**P**	**10 05 55.2**	**-0.6**
	comp=Z,1.8nm,0.8s							
JTMT	**Jette**	**92.49**	**34**	*eP*		**P**	**10 05 58.3**	**+1.0**
	comp=Z,2.3nm,1.0s							
MOD	**Modoc**	**92.76**	**41**	*eP*		**P**	**10 05 59.9**	**+1.2**
	comp=Z,4.3nm,1.1s							
SWMT	**Swartz Lake**	**92.79**	**34**	*eP*		**P**	**10 05 59.9**	**+1.2**
	comp=Z,2.7nm,1.1s							
SLMT	**Seeley Lake**	**93.22**	**34**	*eP*		**P**	**10 06 00.8**	**+0.1**
	comp=Z,5.3nm,1.1s							
CMB	**Columbia Colle**	**94.97**	**45**	*eP*		**P**	**10 06 11.1**	**+2.3**
CMB				pmax		pmax		
	comp=Z,2.0nm,1.1s							
CMB	**Columbia Colle**	**94.97**	**45**	*eP*		**P**	**10 06 11.1**	**+2.3**
	comp=Z,2.2nm,1.1s							
PPT	**Papeete**	**95.83**	**107**	LR		LR	10 46 03.7	
	comp=Z,110nm,19.7s,baz=327,slow=33							
NVAR	**Mina Array Bea**	**96.06**	**43**	P		**P**	**10 06 13.7**	**-0.3**
NVAR	**Mina Array Bea**	**96.06**	**43**	P		**P**	**10 06 13.7**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=288,slow=4.6,SNR=6.0							

TAP 28 09:55:12.8, 24.20N×121.76E, h14km, ML3.8, 8C-1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**353**	*i* P	Pg	09 55 16.0	0.0
	baz=356						
EHP				*i* S	Sg	09 55 18.7	+0.4
	baz=356						
TWD	**Chiawan**	**0.19**	**230**	⇑P	Pg	09 55 17.3	+0.1
	baz=236						
TWD				*i* S	Sg	09 55 20.6	+0.5
	baz=236						
ENA	**Nanau**	**0.22**	**357**	⇑*i* P	Pg	09 55 17.9	+0.1
	baz=358						
ENA				*e* S	Sg	09 55 21.5	+0.3
	baz=358						
HWA	**Hwalien**	**0.26**	**211**	*eP*	Pb	09 55 19.6	+0.3
	baz=220						
ESF	**Shoufeng Towns**	**0.40**	**215**	*eP*	Pg	09 55 21.0	+0.1
	baz=226						
TWC	**Suao**	**0.41**	**12**	⇑*i* P	Pg	09 55 21.3	+0.2
	baz=5.0						
TWC				*i* S	Sg	09 55 27.1	+0.4
	baz=5.0						
NNS	**Nan Shan**	**0.42**	**304**	⇑*i* P	Pg	09 55 21.6	+0.1
	baz=304						
NNS				*i* S	Sg	09 55 27.4	+0.1
	baz=304						
WHF	**Hehuan Shan**	**0.45**	**263**	⇑*i* P	Pg	09 55 22.1	-0.2
	baz=263						
WHF				*i* S	Sg	09 55 28.5	-0.4
	baz=263						
ESL	**Shilin**	**0.49**	**217**	⇓*i* P	Pg	09 55 22.5	0.0
	baz=224						
ESL				*e* S	Sb	09 55 30.0	-0.2
	baz=224						
TWE	**Neicheng**	**0.52**	**351**	⇑*i* P	Pb	09 55 23.6	-0.3
	baz=352						
TWE				*e* S	Sg	09 55 30.4	+0.2
	baz=352						
TWT	**Tachien**	**0.53**	**276**	⇑*i* P	Pb	09 55 24.1	-0.1
	baz=276						
TWT				*i* S	Sb	09 55 31.6	-0.4
	baz=276						
ILA	**Ilan**	**0.56**	**359**	P	Pb	09 55 24.4	-0.1
	baz=354						
ILA				S	Sb	09 55 32.6	+0.3
	baz=354						
NSK	**Sanguang**	**0.59**	**323**	⇑*i* P	Pg	09 55 24.8	+0.2
	baz=322						
NSK				S	Sg	09 55 32.9	+0.3
	baz=322						
TWA	**Mucha**	**0.79**	**349**	*eP*	Pn	09 55 29.2	-0.4
	baz=348						
TWA				*e* S	Sb	09 55 39.2	+0.1
	baz=348						
EHY	**Hungye**	**0.80**	**210**	*eP*	Pg	09 55 27.9	-0.5
	baz=224						
NSTT	**Nanjuang**	**0.81**	**302**	P	Pb	09 55 29.1	+0.4
	baz=302						
NSTT				*i* S	Sb	09 55 39.5	0.0
	baz=302						
TWB1	**Santiao Chiao**	**0.83**	**15**	P	Pb	09 55 29.0	0.0
	baz=14						
TWB1				S	Sg	09 55 39.5	-0.3
	baz=14						
SMLT	**Sun Moon Lake**	**0.84**	**248**	*eP*	Pb	09 55 29.4	0.0
	baz=249						
SMLT				*e* S	Sb	09 55 40.8	0.0
	baz=249						
TAP1	**Taipei**	**0.86**	**346**	*eP*	Pn	09 55 30.4	-0.1
	baz=336						
TAP	**Taipei**	**0.86**	**345**	*eP*	Pb	09 55 30.1	+0.4
	baz=344						
TAP				*e* S	Sb	09 55 41.6	+0.6
	baz=344						
NWF	**Wu-fen Shan**	**0.86**	**2**	P	Pb	09 55 30.2	+0.4
	baz=353						
NWF				S	Sb	09 55 41.6	+0.3
	baz=353						
TYC	**Yuchr**	**0.87**	**250**	P	Pg	09 55 29.8	0.0
	baz=244						
TYC				*e* S	Sg	09 55 40.8	-0.4
	baz=244						
TWQ1	**Liyutan**	**0.91**	**279**	*eP*	Pn	09 55 31.5	+0.3
	baz=280						
NCU	**National Centr**	**0.92**	**326**	*eP*	Pn	09 55 31.6	+0.2
	baz=325						
NCU				*e* S	Sn	09 55 45.4	+0.8
	baz=325						
NSY	**Sanyi**	**0.93**	**283**	*eP*	Pn	09 55 32.1	+0.5
	baz=283						
HSN	**Hsinchu**	**0.93**	**310**	*eP*	Pn	09 55 31.6	0.0
	baz=304						
HSN				*e* S	Sn	09 55 45.6	+0.9
	baz=304						
TWF1	**Yuli**	**0.94**	**206**	*eP*	Pb	09 55 30.2	-0.8
	baz=219						
TWF1				*e* S	Sn	09 55 46.2	+1.1
	baz=219						
TWS1	**Kuangyinshan**	**0.94**	**341**	*eP*	Pn	09 55 31.8	0.0
	baz=348						
TWS1				*e* S	Sn	09 55 45.0	-0.1
	baz=348						
TCU	**Taichung**	**0.99**	**267**	P	Pn	09 55 33.6	+1.3
	baz=268						
TCU				*e* S	Sn	09 55 48.3	+2.2
	baz=268						
YUS	**Yu-Shan**	**1.02**	**226**	*eP*	Pb	09 55 32.4	-0.6
	baz=228						
YUS				*e* S	Sg	09 55 47.4	+0.4
	baz=228						
WNT	**Mingjian**	**1.03**	**252**	*eP*	Pn	09 55 33.7	+0.8
	baz=250						
WNT				*e* S	Sn	09 55 48.9	+1.7
	baz=250						
TWY	**Chenhua**	**1.08**	**352**	*eP*	Pg	09 55 34.5	+0.9
	baz=336						
ALS	**Alishan**	**1.11**	**232**	*eP*	Pb	09 55 34.1	-0.1
	baz=233						
CHKT	**Chengkung**	**1.16**	**198**	*eP*	Pb	09 55 33.9	-0.7
	baz=193						
CHKT				*e* S	Sn	09 55 51.5	+1.3
	baz=193						
CHN5	**Tsauling**	**1.16**	**239**	*eP*	Pg	09 55 35.2	-0.1
	baz=241						
CHN5				*e* S	Sn	09 55 52.6	+2.1
	baz=241						
YOJ	**Yonaguni jima**	**1.17**	**77**	*eP*	Pn	09 55 34.5	-0.3
	baz=66						
WGK	**Gukeng**	**1.21**	**245**	*eP*	Pg	09 55 36.8	+0.7
	baz=246						
ELDTW	**Lidau**	**1.22**	**214**	*eP*	Pn	09 55 35.0	-0.6
	baz=215						
CHY	**Chiayi**	**1.41**	**240**	*eP*	Pg	09 55 39.5	-0.4
	baz=243						
CHY				*e* S	Sg	09 56 01.4	+3.2
	baz=243						
WTP	**Ta-pu**	**1.42**	**228**	*eP*	Pb	09 55 39.4	+0.3
	baz=230						
WTP				*e* S	Sg	09 56 00.4	+1.8
	baz=230						
TWK	**Hsinying**	**1.49**	**232**	*eP*	Pb	09 55 40.5	+0.1
	baz=234						
TWK				*e* S	Sg	09 56 02.8	+1.8
	baz=234						
WSF	**Szhu**	**1.51**	**248**	*eP*	Pb	09 55 40.5	-0.1
	baz=250						
TWG	**Pinlang**	**1.51**	**205**	*eP*	Pn	09 55 39.9	+0.3
	baz=191						
CHN1	**Nanshi**	**1.51**	**228**	*eP*	Pb	09 55 41.3	+0.5
	baz=221						
CHN1				*e* S	Sg	09 56 03.0	+1.3
	baz=221						
TWM1	**Shoushan**	**1.84**	**222**	*eP*	Pg	09 55 47.3	-0.9
	baz=223						
SCZT	**Fangliau**	**2.10**	**210**	*eP*	Pb	09 55 49.5	-1.2
	baz=196						
PNG	**Penghu**	**2.11**	**253**	*eP*	Pn	09 55 48.9	+1.1
	baz=256						

*IDC **28** 10:06:22.6, 1.7, 23.77N×121.34E, h0km, mb3.3/2, mb1 3.5/3, mb1mx3.2/26, mbtmp3.4/3, ML3.3/1, Error ellipse: s-maj=73.8km s-min=30.0km az=67.0*
*TAP **28** 10:06:24.9, 24.19N×121.76E, h14km, ML3.8, B*
*JMA **28** 10:06:25.3, 0.4, 24.33N×121.67E, h67km, M3.1*

ISC 28 10:06:24.6, 0.8, 24.17N, 0.02×121.79E, 0.02, h14km, 5km, n58, σ0.84/99, 2C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.14**	**341**	*i* P	**Pg**	**10 06 28.3**	**0.0**
	baz=356						
EHP				*i* S	**Sg**	**10 06 31.1**	**+0.2**
	baz=356						
TWD	**Chiawan**	**0.20**	**243**	*i* P	**Pg**	**10 06 29.3**	**+0.1**
	baz=240						
TWD				*i* S	**Sg**	**10 06 32.5**	**+0.3**
	baz=240						
ENA	**Nanau**	**0.26**	**350**	*i* P	**Pg**	**10 06 30.2**	**+0.1**
	baz=357						
ENA				S	**Sg**	**10 06 34.1**	**+0.3**
	baz=357						
HWA	**Hwalien**	**0.26**	**221**	*eP*	**Pb**	**10 06 31.3**	**+0.2**
	baz=222						
ESF	**Shoufeng Towns**	**0.40**	**221**	*eP*	**Pg**	**10 06 32.4**	**-0.2**
	baz=224						
TWC	**Suao**	**0.44**	**7**	P	**Pg**	**10 06 33.6**	**+0.3**
	baz=5.0						
TWC				*i* S	**Sg**	**10 06 39.6**	**+0.4**
	baz=5.0						
NNS	**Nan Shan**	**0.47**	**305**	*i* P	**Pg**	**10 06 33.6**	**-0.3**
	baz=306						
NNS				*i* S	**Sg**	**10 06 39.8**	**-0.4**
	baz=306						
WHF	**Hehuan Shan**	**0.48**	**267**	*i* P	**Pg**	**10 06 34.2**	**-0.1**
	baz=265						
WHF				*i* S	**Sg**	**10 06 40.6**	**-0.3**
	baz=265						
ESL	**Shilin**	**0.49**	**223**	P	**Pg**	**10 06 34.4**	**+0.2**
	baz=225						
ESL				*e* S	**Sg**	**10 06 41.3**	**+0.5**
	baz=225						
TWE	**Neicheng**	**0.56**	**348**	*i* P	**Pg**	**10 06 35.8**	**+0.2**
	baz=352						
TWE				S	**Sg**	**10 06 43.4**	**+0.3**
	baz=352						
TWT	**Tachien**	**0.57**	**278**	*i* P	**Pg**	**10 06 36.1**	**+0.3**
	baz=277						
TWT				*i* S	**Sg**	**10 06 43.8**	**+0.4**
	baz=277						
ILA	**Ilan**	**0.59**	**356**	*i* P	**Pb**	**10 06 36.8**	**+0.1**
	baz=354						
ILA				*e* S	**Sb**	**10 06 44.8**	**-0.2**
	baz=354						
NSK	**Sanguang**	**0.64**	**322**	*i* P	**Pg**	**10 06 37.0**	**-0.1**
	baz=323						
NSK				*i* S	**Sg**	**10 06 45.4**	**-0.3**
	baz=323						
EHY	**Hungye**	**0.79**	**213**	P	**Pb**	**10 06 40.2**	**0.0**
	baz=223						
EHY				*e* S	**Sn**	**10 06 52.9**	**-0.2**
	baz=223						
TWA	**Mucha**	**0.83**	**347**	*eP*	**Pb**	**10 06 41.0**	**+0.2**
	baz=348						
TWB1	**Santiao Chiao**	**0.85**	**12**	*eP*	**Pb**	**10 06 41.5**	**+0.3**
	baz=13						
TWB1				*e* S	**Sg**	**10 06 52.1**	**-0.2**
	baz=13						
NSTT	**Nanjuang**	**0.85**	**302**	*eP*	**Pb**	**10 06 41.2**	**0.0**
	baz=303						
NSTT				*e* S	**Sg**	**10 06 52.2**	**-0.2**
	baz=303						
SMLT	**Sun Moon Lake**	**0.87**	**251**	*i* P	**Pg**	**10 06 41.5**	**0.0**
	baz=250						
SMLT				*i* S	**Sg**	**10 06 52.7**	**-0.1**
	baz=250						
NWF	**Wu-fen Shan**	**0.89**	**359**	*eP*	**Pb**	**10 06 42.6**	**+0.6**
	baz=353						
NWF				S	**Sb**	**10 06 54.1**	**+0.3**
	baz=353						
TAP1	**Taipei**	**0.90**	**344**	*eP*	**Pn**	**10 06 42.6**	**-0.2**
	baz=344						
TAP1				*e* S	**Sg**	**10 06 53.7**	**0.0**
	baz=344						
TYC	**Yuchr**	**0.90**	**253**	*i* P	**Pg**	**10 06 41.9**	**-0.1**
	baz=245						
TYC				*i* S	**Sg**	**10 06 53.0**	**-0.7**
	baz=245						
TAP	**Taipei**	**0.90**	**343**	*eP*	**Pn**	**10 06 42.6**	**-0.3**
	baz=336						
TWF1	**Yuli**	**0.94**	**209**	*eP*	**Pb**	**10 06 42.6**	**-0.1**
	baz=222						
TWQ1	**Liyutan**	**0.95**	**281**	*eP*	**Pn**	**10 06 44.1**	**+0.6**
	baz=281						
TWQ1				*e* S	**Sn**	**10 06 56.1**	**-0.8**
	baz=281						
NCU	**National Centr**	**0.97**	**325**	*eP*	**Pn**	**10 06 44.1**	**+0.3**
	baz=326						
NCU				*e* S	**Sn**	**10 06 58.8**	**+1.4**
	baz=326						
NSY	**Sanyi**	**0.97**	**285**	⇑*i* P	**Pn**	**10 06 44.4**	**+0.5**
	baz=284						
NSY				*e* S	**Sn**	**10 06 57.2**	**-0.3**
	baz=284						
HSN	**Hsinchu**	**0.98**	**310**	*eP*	**Pn**	**10 06 44.2**	**+0.3**
	baz=305						
HSN				*e* S	**Sn**	**10 06 59.0**	**+1.4**
	baz=305						
TWS1	**Kuangyinshan**	**0.98**	**340**	*eP*	**Pn**	**10 06 44.2**	**+0.1**
	baz=348						
TWS1				*e* S	**Sn**	**10 06 57.8**	**0.0**
	baz=348						
TCU	**Taichung**	**1.02**	**269**	*i* P	**Pn**	**10 06 45.5**	**+1.0**
	baz=269						
TCU				S	**Sn**	**10 06 59.8**	**+1.1**
	baz=269						
YUS	**Yu-Shan**	**1.03**	**229**	*eP*	**Pb**	**10 06 44.3**	**-0.2**
	baz=217						
YUS				*e* S	**Sg**	**10 06 58.9**	**+0.9**
	baz=217						
WNT	**Mingjian**	**1.05**	**254**	⇑P	**Pn**	**10 06 45.8**	**+0.8**
	baz=251						
WNT				S	**Sn**	**10 07 00.9**	**+1.3**
	baz=251						
TWY	**Chenhua**	**1.11**	**351**	*eP*	**Pg**	**10 06 47.1**	**+1.0**
	baz=351						
ALS	**Alishan**	**1.12**	**234**	*eP*	**Pb**	**10 06 46.1**	**+0.1**
	baz=220						
ALS				*e* S	**Sn**	**10 07 02.8**	**+1.2**
	baz=220						
CHKT	**Chengkung**	**1.14**	**200**	*eP*	**Pb**	**10 06 45.0**	**-1.1**
	baz=191						
YOJ	**Yonaguni jima**	**1.15**	**75**	*eP*	**Pn**	**10 06 46.6**	**+0.3**
	baz=64						
YOJ				*e* S	**Sn**	**10 07 03.0**	**+1.2**
	baz=64						
YOJ	**Yonaguni jima**	**1.15**	**75**	P	**Pb**	**10 06 46.8**	**+0.5**
YOJ				S	**Sn**	**10 07 03.0**	**+1.2**
CHN5	**Tsauling**	**1.17**	**241**	P	**Pg**	**10 06 47.5**	**+0.3**
	baz=241						
CHN5				S	**Sn**	**10 07 04.5**	**+2.0**
	baz=241						
ELDTW	**Lidau**	**1.21**	**216**	*eP*	**Pn**	**10 06 46.8**	**-0.4**
	baz=216						
WGK	**Gukeng**	**1.23**	**247**	*eP*	**Pg**	**10 06 48.4**	**+0.2**
	baz=247						
WGK				*e* S	**Sg**	**10 07 07.2**	**+3.0**
	baz=247						
WTCT	**Ta-ch'eng**	**1.42**	**258**	*eP*	**Pg**	**10 06 51.8**	**0.0**
	baz=259						
WTCT				*e* S	**Sg**	**10 07 11.0**	**+0.7**
	baz=259						
WTP	**Ta-pu**	**1.42**	**230**	P	**Pb**	**10 06 50.9**	**0.0**
	baz=230						
WTP				*e* S	**Sg**	**10 07 13.2**	**+2.7**
	baz=230						
CHY	**Chiayi**	**1.42**	**242**	*eP*	**Pg**	**10 06 52.5**	**+0.5**
	baz=243						
CHY				*e* S	**Sg**	**10 07 12.4**	**+2.0**
	baz=243						
PCYT	**Pengchaiyu**	**1.47**	**10**	*eP*	**Pb**	**10 06 51.6**	**-0.2**
	baz=8.0						
TWK	**Hsinying**	**1.50**	**233**	P	**Pb**	**10 06 52.6**	**+0.3**
	baz=233						
TWK				*e* S	**Sg**	**10 07 13.6**	**+0.7**
	baz=233						
TWG	**Pinlang**	**1.50**	**206**	*eP*	**Pn**	**10 06 49.7**	**-1.5**
	baz=191						
CHN1	**Nanshi**	**1.52**	**230**	*eP*	**Pb**	**10 06 52.9**	**+0.2**
	baz=221						
CHN1				*e* S	**Sg**	**10 07 15.3**	**+1.7**
	baz=221						
CHN3	**Shinhua**	**1.71**	**230**	*eP*	**Pb**	**10 06 56.5**	**+0.7**
	baz=230						
ECL	**Taimali**	**1.75**	**206**	*eP*	**Pn**	**10 06 54.1**	**-0.4**
	baz=193						
IRIF	**Iriomote-Funau**	**1.78**	**84**	P	**Pn**	**10 06 56.3**	**+1.4**
IRIF				S	**Sn**	**10 07 18.6**	**+1.3**
TWM1	**Shoushan**	**1.84**	**223**	*eP*	**Pb**	**10 06 57.9**	**-0.2**
	baz=223						
HATJ	**Hateruma jima**	**1.84**	**93**	P	**Pn**	**10 06 56.9**	**+1.1**
HATJ				*e* S	**Sb**	**10 07 20.6**	**-0.4**
JKRS	**Kuro-shima**	**2.02**	**88**	P	**Pn**	**10 06 59.4**	**+1.1**
JKRS				*e* S	**Sb**	**10 07 25.5**	**-0.8**
SCZT	**Fangliau**

WRA	**Warramunga Arr**	**47.08**	**123**	P	P	10 18 09.5	-0.9
	0.5nm,0.3s,baz=302,slow=9.5,SNR=23						
ASAR	**Alice Springs**	**48.53**	**128**	P	P	10 18 21.6	0.0
	0.4nm,0.4s,baz=300,slow=8.1,SNR=7.3						

TAP 28 10:11:36.7,24.20N×121.75E,h13km,ML3.0,5C,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.11**	**356**	*i* P	Pg	10 11 39.8	0.0
	baz=359						
EHP				*i* S	Sg	10 11 42.5	+0.4
	baz=359						
TWD	**Chiawan**	**0.18**	**230**	⇑*i* P	Pg	10 11 41.0	+0.1
	baz=237						
TWD				S	Sg	10 11 44.3	+0.6
	baz=237						
ENA	**Nanau**	**0.23**	**358**	⇑*i* P	Pg	10 11 41.8	+0.1
	baz=359						
ENA				S	Sg	10 11 45.3	+0.3
	baz=359						
HWA	**Hwalien**	**0.26**	**211**	*e*P	Pb	10 11 42.7	-0.5
	baz=220						
NNS	**Nan Shan**	**0.42**	**305**	⇑*i* P	Pg	10 11 45.4	+0.1
	baz=305						
NNS				S	Sg	10 11 51.2	+0.2
	baz=305						
TWC	**Suao**	**0.42**	**12**	*i* P	Pg	10 11 45.3	+0.2
	baz=6.0						
TWC				S	Sg	10 11 51.4	+0.7
	baz=6.0						
WHF	**Hehuan Shan**	**0.45**	**263**	⇑*i* P	Pg	10 11 45.9	-0.2
	baz=264						
WHF				*i* S	Sg	10 11 52.0	-0.4
	baz=264						
ESL	**Shilin**	**0.48**	**217**	P	Pg	10 11 46.1	0.0
	baz=224						
ESL				*e*S	Sg	10 11 53.2	+0.7
	baz=224						
TWE	**Neicheng**	**0.53**	**352**	*e*P	Pg	10 11 47.4	+0.3
	baz=353						
TWE				*e*S	Sg	10 11 54.7	+0.6
	baz=353						
TWT	**Tachien**	**0.53**	**276**	⇑*i* P	Pb	10 11 47.9	-0.2
	baz=276						
TWT				*i* S	Sb	10 11 55.2	-0.6
	baz=276						
NSK	**Sanguang**	**0.60**	**323**	P	Pg	10 11 48.7	+0.2
	baz=323						
NSK				S	Sg	10 11 56.7	+0.2
	baz=323						
NSTT	**Nanjuang**	**0.81**	**302**	*e*P	Pn	10 11 53.8	-0.1
	baz=302						
NSTT				*e*S	Sb	10 12 03.4	-0.1
	baz=302						
SMLT	**Sun Moon Lake**	**0.84**	**248**	*e*P	Pg	10 11 53.0	-0.1
	baz=249						
SMLT				*e*S	Sg	10 12 04.4	+0.2
	baz=249						
TYC	**Yuchr**	**0.87**	**251**	*e*P	Pg	10 11 53.4	-0.1
	baz=252						
TWF1	**Yuli**	**0.94**	**206**	*e*P	Pg	10 11 54.1	-0.8
	baz=220						

*NIED **28** 10:11:00,24.20N×121.60E,h20km,Mw4.0 Best double couple: M₀1.20000×10¹⁵ NP1:φ=44.00000°,δ64.00000°, λ89.00000°. NP2:φ=227.00000°,δ26.00000°,λ92.00000°.*
*IDC **28** 10:11:47.4±0.9,24.27N×122.06E,h0km,mb3.7/11, mb1 3.8/11,mb1mx3.7/27,mbtmp3.7/11,Error ellipse: s-maj=33.0km s-min=18.3km az=65.0*
*JMA **28** 10:11:50.2±0.3,24.18N×121.60E,h63km,M3.7*
*ISCJB **28** 10:11:51.6±0.3,24.20N±0.01×121.82E±0.02,h16km±3km, mb3.6/11,Error ellipse: s-maj=3.1km s-min=2.0km az=35.3*
*TAP **28** 10:11:51.2,24.20N×121.76E,h14km,ML4.2,B*
ISC 28 10:11:51.0±0.8,24.21N±0.02×121.77E±0.02,h17km±5km, n81,σ0.89/126,mb3.8/11,8C-6D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.10**	**346**	⇓*i* P	**Pg**	**10 11 54.5**	**-0.2**
	baz=353						
EHP				*i* S	**Sb**	**10 11 57.1**	**+0.2**
	baz=353						
TWD	**Chiawan**	**0.20**	**231**	⇑*i* P	**Pg**	**10 11 55.8**	**-0.2**
	baz=238						
TWD				*i* S	**Sg**	**10 11 59.1**	**-0.2**
	baz=238						
ENA	**Nanau**	**0.22**	**353**	⇑*i* P	**Pg**	**10 11 56.3**	**0.0**
	baz=356						
ENA				S	**Sb**	**10 12 00.1**	**-0.2**
	baz=356						
HWA	**Hwalien**	**0.28**	**213**	P	**Pb**	**10 11 57.5**	**0.0**
	baz=222						
HWA				*e*S	**Sb**	**10 12 02.8**	**+1.0**
	baz=222						
TWC	**Suao**	**0.41**	**10**	⇑*i* P	**Pb**	**10 11 59.8**	**0.0**
	baz=15						
ESF	**Shoufeng Towns**	**0.41**	**215**	*e*P	**Pg**	**10 11 59.3**	**-0.2**
	baz=224						
ESF				*e*S	**Sb**	**10 12 06.0**	**+0.2**
	baz=224						
NNS	**Nan Shan**	**0.43**	**303**	⇑*i* P	**Pb**	**10 12 00.0**	**-0.2**
	baz=304						
NNS				S	**Sg**	**10 12 05.9**	**+0.1**
	baz=304						
WHF	**Hehuan Shan**	**0.46**	**262**	⇑*i* P	**Pg**	**10 12 00.6**	**0.0**
	baz=264						
ESL	**Shilin**	**0.50**	**218**	*e*P	**Pg**	**10 12 00.9**	**-0.2**
	baz=225						
ESL				*e*S	**Sb**	**10 12 08.4**	**+0.1**
	baz=225						
TWE	**Neicheng**	**0.52**	**350**	⇑*i* P	**Pb**	**10 12 01.9**	**+0.3**
	baz=351						
TWE				*i* S	**Sb**	**10 12 09.0**	**+0.2**
	baz=351						
TEGC	**Jichi Village**	**0.54**	**203**	*e*P	**Pb**	**10 12 02.3**	**+0.3**
	baz=196						
TWT	**Tachien**	**0.54**	**275**	⇑*i* P	**Pb**	**10 12 02.6**	**+0.4**
	baz=276						
TWT				*i* S	**Sb**	**10 12 10.0**	**+0.2**
	baz=276						
ILA	**Ilan**	**0.56**	**358**	*i* P	**Pb**	**10 12 02.7**	**+0.4**
	baz=353						
ILA				*i* S	**Sb**	**10 12 11.0**	**+1.1**
	baz=353						
NSK	**Sanguang**	**0.60**	**321**	⇑*i* P	**Pb**	**10 12 03.2**	**+0.2**
	baz=322						
NSK				S	**Sb**	**10 12 11.2**	**0.0**
	baz=322						
TWA	**Mucha**	**0.79**	**348**	*e*P	**Pn**	**10 12 07.3**	**0.0**
	baz=347						
TWA				S	**Sn**	**10 12 18.0**	**-0.7**
	baz=347						
EHY	**Hungye**	**0.81**	**210**	*e*P	**Pg**	**10 12 06.5**	**-0.3**
	baz=222						
EHY				*e*S	**Sb**	**10 12 18.5**	**+1.2**
	baz=222						
NSTT	**Nanjuang**	**0.82**	**301**	*i* P	**Pn**	**10 12 07.6**	**-0.2**
	baz=302						
NSTT				S	**Sb**	**10 12 18.2**	**+0.8**
	baz=302						
TWB1	**Santiao Chiao**	**0.82**	**14**	P	**Pg**	**10 12 07.4**	**+0.4**
	baz=13						
TWB1				*e*S	**Sg**	**10 12 17.7**	**-0.2**
	baz=13						
TAP1	**Taipei**	**0.86**	**345**	P	**Pn**	**10 12 08.3**	**0.0**
	baz=343						
TAP1				*e*S	**Sg**	**10 12 19.6**	**+0.6**
	baz=343						
SMLT	**Sun Moon Lake**	**0.86**	**248**	P	**Pg**	**10 12 07.8**	**0.0**
	baz=249						
SMLT				S	**Sg**	**10 12 18.9**	**-0.2**
	baz=249						
NWF	**Wu-fen Shan**	**0.86**	**1**	*i* P	**Pn**	**10 12 08.5**	**+0.1**
	baz=353						
NWF				*i* S	**Sg**	**10 12 19.8**	**+0.6**
	baz=353						
TAP	**Taipei**	**0.86**	**344**	*e*P	**Pn**	**10 12 08.7**	**+0.3**
	baz=343						
TAP				*e*S	**Sg**	**10 12 19.5**	**+0.3**
	baz=343						
TYC	**Yuchr**	**0.89**	**250**	P	**Pb**	**10 12 08.0**	**0.0**
	baz=244						
TYC				S	**Sb**	**10 12 19.3**	**-0.1**
	baz=244						
TWQ1	**Liyutan**	**0.92**	**279**	P	**Pn**	**10 12 09.8**	**+0.7**
	baz=280						
TWQ1				*e*S	**Sn**	**10 12 22.5**	**+0.5**
	baz=280						
NCU	**National Centr**	**0.93**	**325**	P	**Pn**	**10 12 10.2**	**+1.0**
	baz=324						
NCU				S	**Sn**	**10 12 23.4**	**+1.4**
	baz=324						
HSN	**Hsinchu**	**0.94**	**309**	P	**Pn**	**10 12 10.1**	**+0.8**
	baz=304						
HSN				*e*S	**Sn**	**10 12 23.4**	**+1.0**
	baz=304						
NSY	**Sanyi**	**0.94**	**283**	P	**Pn**	**10 12 10.4**	**+1.0**
	baz=284						
NSY				*e*S	**Sn**	**10 12 23.1**	**+0.6**
	baz=284						
TWS1	**Kuangyinshan**	**0.94**	**340**	*e*P	**Pn**	**10 12 10.3**	**+0.8**
	baz=340						
TWS1				*e*S	**Sn**	**10 12 23.7**	**+1.2**
	baz=340						
TWF1	**Yuli**	**0.96**	**207**	*e*P	**Pb**	**10 12 08.8**	**-0.4**
	baz=222						
TCU	**Taichung**	**1.00**	**267**	P	**Pn**	**10 12 11.6**	**+1.4**
	baz=268						
TCU				S	**Sn**	**10 12 26.3**	**+2.4**
	baz=268						
YUS	**Yu-Shan**	**1.03**	**226**	⇓P	**Pb**	**10 12 10.8**	**+0.1**
	baz=216						
YUS				*e*S	**Sn**	**10 12 25.9**	**+0.4**
	baz=216						
WNT	**Mingjian**	**1.04**	**252**	P	**Pg**	**10 12 12.0**	**+0.7**
	baz=250						
WNT				*e*S	**Sn**	**10 12 27.1**	**+2.1**
	baz=250						
TWY	**Chenhua**	**1.07**	**352**	*e*P	**Pg**	**10 12 12.1**	**+0.2**
	baz=336						
ALS	**Alishan**	**1.12**	**232**	⇓*i* P	**Pg**	**10 12 12.5**	**-0.3**
	baz=233						
YOJ	**Yonaguni jima**	**1.16**	**77**	⇓*i* P	**Pb**	**10 12 12.9**	**+0.2**
	baz=64						
YOJ				*e*S	**Sg**	**10 12 29.4**	**+0.7**
	baz=64						
YOJ	**Yonaguni jima**	**1.16**	**77**	P	**Pb**	**10 12 12.8**	**+0.2**
YOJ				S	**Sg**	**10 12 29.6**	**+0.9**
CHKT	**Chengkung**	**1.16**	**199**	*e*P	**Pn**	**10 12 12.0**	**-0.5**
	baz=187						
CHN5	**Tsauling**	**1.17**	**239**	*i* P	**Pg**	**10 12 13.8**	**+0.1**
	baz=241						
CHN5				S	**Sg**	**10 12 30.9**	**+1.9**
	baz=241						
WGK	**Gukeng**	**1.22**	**245**	*e*P	**Pg**	**10 12 15.0**	**+0.4**
	baz=247						
ELDTW	**Lidau**	**1.23**	**214**	*e*P	**Pn**	**10 12 12.8**	**-0.7**
	baz=201						
WTCT	**Ta-ch'eng**	**1.40**	**256**	*e*P	**Pb**	**10 12 17.2**	**+0.5**
	baz=258						
WTCT				*e*S	**Sg**	**10 12 36.9**	**+0.5**
	baz=258						
CHY	**Chiayi**	**1.42**	**240**	⇓P	**Pg**	**10 12 17.9**	**-0.5**
	baz=243						
CHY				*e*S	**Sg**	**10 12 37.9**	**+1.0**
	baz=243						
WTP	**Ta-pu**	**1.43**	**228**	P	**Pb**	**10 12 17.5**	**+0.3**
	baz=230						
WTP				*e*S	**Sg**	**10 12 38.0**	**+0.8**
	baz=230						
PCYT	**Pengchaiyu**	**1.44**	**11**	*e*P	**Pb**	**10 12 17.1**	**-0.3**
	baz=8.0						
TWK	**Hsinying**	**1.50**	**232**	P	**Pb**	**10 12 18.9**	**+0.5**
	baz=233						
TWK				*e*S	**Sg**	**10 12 40.0**	**+0.5**
	baz=233						
TWG	**Pinlang**	**1.52**	**205**	*e*P	**Pn**	**10 12 16.4**	**-1.1**
	baz=191						
WSF	**Szhu**	**1.52**	**248**	*e*P	**Pb**	**10 12 19.3**	**+0.5**
	baz=261						
WSF				*e*S	**Sg**	**10 12 40.5**	**+0.2**
	baz=261						
CHN1	**Nanshi**	**1.53**	**228**	*e*P	**Pb**	**10 12 19.0**	**+0.1**
	baz=221						
CHN1				*e*S	**Sg**	**10 12 41.3**	**+0.9**
	baz=221						
CHN8	**Yiju**	**1.67**	**239**	*e*P	**Pb**	**10 12 21.1**	**-0.2**
	baz=226						
CHN8				*e*S	**Sg**	**10 12 45.0**	**+0.3**
	baz=226						
CHN3	**Shinhua**	**1.71**	**229**	*e*P	**Pb**	**10 12 21.9**	**-0.1**
	baz=230						
SCLT	**Jiali**	**1.77**	**235**	*e*P	**Pb**	**10 12 22.4**	**-0.6**
	baz=238						
SCLT				*e*S	**Sg**	**10 12 46.8**	**-1.4**
	baz=238						
IRIF	**Iriomote-Funau**	**1.79**	**86**	P	**Pn**	**10 12 21.4**	**+0.3**
IRIF				S	**Sb**	**10 12 45.9**	**+0.3**
TAI1	**Yung-k'ang**	**1.83**	**231**	*e*P	**Pb**	**10 12 24.2**	**+0.2**
	baz=232						
TWM1	**Shoushan**	**1.85**	**222**	*e*P	**Pb**	**10 12 25.1**	**+0.7**
	baz=223						
HATJ	**Hateruma jima**	**1.87**	**94**	P	**Pn**	**10 12 22.8**	**+0.7**
HATJ				S	**Sn**	**10 12 46.7**	**+1.4**
SGLT	**Jiouru**	**1.89**	**219**	*e*P	**Pb**	**10 12 25.4**	**+0.4**
	baz=204						
JKRS	**Kuro-shima**	**2.05**	**89**	P	**Pn**	**10 12 25.0**	**+0.4**
JKRS				S	**Sn**	**10 12 51.3**	**+1.6**
SCZT	**Fangliau**	**2.11**	**210**	*e*P	**Pn**	**10 12 27.0**	**+1.4**
	baz=195						
PNG	**Penghu**	**2.12**	**253**	*e*P	**Pn**	**10 12 24.8**	**-0.9**
	baz=255						
LAY	**Lan-yu**	**2.17**	**185**	*e*P	**Pn**	**10 12 24.6**	**-1.7**
	baz=188						
JIJ	**Ishigaki jima**	**2.17**	**85**	P	**Pn**	**10 12 26.7**	**+0.3**
JIJ				S	**Sn**	**10 12 53.4**	**+0.6**
TWP	**Hsiaoliuchiu**	**2.26**	**215**	*e*P	**Pn**	**10 12 29.6**	**+2.0**
	baz=235						
HEN	**Hengchun**	**2.39**	**204**	*e*P	**Pn**	**10 12 31.4**	**+2.1**
	baz=195						
TWK1	**Hengchun**	**2.42**	**202**	*e*P	**Pn**	**10 12 29.2**	**-0.6**
	baz=190						
JTJ	**Tarama**	**2.71**	**80**	P	**Pn**	**10 12 34.6**	**+0.9**
JTJ				*e*S	**Sn**	**10 13 06.9**	**+0.8**
QZH	**Quanzhou**	**2.98**	**285**	⇓*i* Pn	**Pn**	**10 12 38.0**	**+0.5**
QZH				Sn	**Sn**	**10 13 13.0**	**+0.1**
QZH				smax	smax		
	comp=N,600nm,0.8s						
QZH				smax	smax		
	comp=E,310nm,0.6s						
KNM	**Kinmen**	**3.05**	**275**	*e*P	**Pn**	**10 12 40.0**	**+1.6**
	baz=275						
JOGS	**Gusukube**	**3.36**	**80**	P	**Pn**	**10 12 45.0**	**+2.3**
WHN	**Wuhan**	**9.12**	**315**	*e*P	**Pn**	**10 13 59.5**	**-2.4**
WHN				S	Sn	10 15 38.3	-5.9
KSRS	**Korea Array**	**14.22**	**20**	Pn	**P**	**10 15 16.9**	**-2.0**
	comp=E,0.2nm,0.3s,baz=200,slow=12,SNR=18						
CMAR	**Chiang Mai Arr**	**22.01**	**259**	P	**P**	**10 16 46.8**	**+2.3**
	comp=E,0.5nm,0.3s,baz=53,slow=8.3,SNR=4.3						
SONM	**Songino Array**	**26.55**	**336**	P	**P**	**10 17 28.3**	**+0.2**
	comp=E,1.9nm,0.9s,baz=141,slow=9.6,SNR=7.2						
MKAR	**Makanchi Array**	**38.69**	**316**	P	**P**	**10 19 14.4**	**+0.5**
	comp=E,0.9nm,0.6s,baz=106,slow=10,SNR=13						
ZALV	**Zalesovo Beam**	**40.52**	**327**	P	**P**	**10 19 27.2**	**-1.7**
	comp=E,1.4nm,0.7s,baz=111,slow=7.1,SNR=6.9						
KURBB	**Kurchatov Arra**	**42.43**	**320**	P	**P**	**10 19 44.8**	**+0.1**
	comp=E,0.6nm,0.7s,baz=110,slow=8.0,SNR=8.1						
WRA	**Warramunga Arr**	**45.56**	**163**	P	**P**	**10 20 08.2**	**-1.9**
	comp=E,1.0nm,0.7s,baz=346,slow=8.8,SNR=8.3						
BVAR	**Borovoye Array**	**47.99**	**321**	P	**P**	**10 20 29.2**	**+0.3**
	comp=E,0.4nm,0.5s,baz=96,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**49.03**	**165**	P	**P**	**10 20 36.9**	**-0.2**
	comp=E,0.3nm,0.5s,baz=341,slow=6.3,SNR=4.4						
ILAR	**Eielson Array**	**68.95**	**27**	P	**P**	**10 22 53.3**	**-1.6**
	comp=E,0.1nm,0.5s,baz=281,slow=6.1,SNR=3.4						
FINES	**FINESS Array B**	**71.69**	**330**	P	**P**	**10 23 11.4**	**-0.3**
	comp=E,0.9nm,0.6s,baz=79,slow=4.1,SNR=5.3						
BRTR	**Keskin Array B**	**73.59**	**307**	P	**P**	**10 23 23.8**	**+0.2**
	comp=E,1.2nm,0.9s,baz=77,slow=5.5,SNR=5.5						

TAP 28 10:12:30.8,24.20N×121.73E,h10km,ML3.8,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.11**	**4**	*i* P	Pg	10 12 33.7	+0.2
	baz=8.0						
EHP				*i* S	Sg	10 12 36.0	+0.6
	baz=8.0						
TWD	**Chiawan**	**0.17**	**226**	*i* P	Pg	10 12 34.7	+0.2
	baz=225						
TWD				*i* S	Sg	10 12 37.6	+0.5
	baz=225						
ENA	**Nanau**	**0.23**	**2**	*i* P	Pg	10 12 35.8	+0.3
	baz=4.0						
ENA				*i* S	Sg	10 12 39.1	+0.5
	baz=4.0						
HWA	**Hwalien**	**0.25**	**207**	*e*P	Pb	10 12 37.3	-0.2
	baz=217						
ESF	**Shoufeng Towns**	**0.39**	**212**	*e*P	Pg	10 12 37.5	-1.0
	baz=224						
NNS	**Nan Shan**	**0.40**	**306**	P	Pg	10 12 39.3	+0.4
	baz=306						
NNS				S	Sg	10 12 45.0	+0.6
	baz=306						
TWC	**Suao**	**0.42**	**15**	*i* P	Pg	10 12 39.2	+0.1
	baz=9.0						
TWC				*i* S	Sg	10 12 45.1	+0.5
	baz=9.0						
WHF	**Hehuan Shan**	**0.43**	**263**	*i* P	Pg	10 12 39.7	-0.1
	baz=263						
WHF				S	Sg	10 12 45.6	-0.4
	baz=263						
ESL	**Shilin**	**0.47**	**215**	*e*P	Pg	10 12 40.2	+0.1
	baz=225						
ESL				*e*S	Sg	10 12 46.5	+0.2
	baz=225						
TWT	**Tachien**	**0.51**	**276**	P	Pb	10 12 41.6	-0.5
	baz=276						
TWT				S	Sg	10 12 48.6	+0.7
	baz=276						
TWE	**Neicheng**	**0.52**	**353**	*i* P	Pg	10 12 41.5	+0.5
	baz=3.0						
TWE				S	Sg	10 12 48.6	+0.7
	baz=3.0						
ILA	**Ilan**	**0.56**	**1**	*e*P	Pb	10 12 42.3	-0.5
	baz=2.0						
ILA				*e*S	Sg	10 12 49.6	+0.4
	baz=2.0						
NSK	**Sanguang**	**0.58**	**324**	*i* P	Pb	10 12 42.8	-0.4
	baz=324						
NSK				S	Sg	10 12 50.4	+0.4
	baz=324						
NSTT	**Nanjuang**	**0.79**	**303**	*e*P	Pn	10 12 47.9	-0.2
	baz=303						
NSTT				*e*S	Sb	10 12 57.4	-0.2
	baz=303						
SMLT	**Sun Moon Lake**	**0.82**	**248**	*e*P	Pb	10 12 47.7	+0.3
	baz=248						
TWB1	**Santiao Chiao**	**0.84**	**16**	*e*P	Pg	10 12 47.0	+0.1
	baz=9.0						
TYC	**Yuchr**	**0.85**	**250**	*e*P	Pn	10 12 48.4	-0.5
	baz=251						
NWF	**Wu-fen Shan**	**0.87**	**3**	*e*P	Pb	10 12 48.0	-0.1
	baz=2.0						
TWQ1	**Liyutan**	**0.89**	**280**	*e*P	Pn	10 12 49.8	+0.4
	baz=280						
NSY	**Sanyi**	**0.91**	**284**	*e*P	Pn	10 12 50.8	+1.0
	baz=284						
TWF1	**Yuli**	**0.94**	**205**	*e*P	Pg	10 12 49.0	+0.1
	baz=219						
TWS1	**Kuangyinshan**	**0.94**	**342**	*e*P	Pn	10 12 49.8	-0.4
	baz=342						
YUS	**Yu-Shan**	**1.01**	**225**	*e*P	Pg	10 12 50.8	0.0
	baz=237						
CHN5	**Tsauling**	**1.14**	**238**	*e*P	Pn	10 12 53.6	+0.6
	baz=235						

TAP 28 10:14:20.6,24.20N×121.75E,h13km,ML3.6,9C-1D,B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.11**	**355**	*i* P	Pg	10 14 23.8	0.0
	baz=358						
EHP				S	Sg	10 14 26.3	+0.3
	baz=358						
TWD	**Chiawan**	**0.19**	**229**	⇑*i* P	Pg	10 14 24.9	+0.1
	baz=236						
TWD				*i* S	Sg	10 14 28.2	+0.5
	baz=236						
ENA	**Nanau**	**0.23**	**358**	⇑*i* P	Pg	10 14 25.6	+0.1
	baz=359						
ENA				S	Sg	10 14 29.3	+0.5
	baz=359						
HWA	**Hwalien**	**0.26**	**211**	*e*P	Pb	10 14 26.7	-0.4
	baz=220						
HWA				*e*S	Sb	10 14 31.8	+0.3
	baz=220						
ESF	**Shoufeng Towns**	**0.40**	**214**	*e*P	Pg	10 14 27.9	-0.6
	baz=225						
TWC	**Suao**	**0.41**	**12**	⇑*i* P	Pg	10 14 29.1	+0.2
	baz=6.0						
TWC				S	Sg	10 14 34.9	+0.4
	baz=6.0						
NNS	**Nan Shan**	**0.42**	**305**	⇑*i* P	Pg	10 14 29.3	+0.1
	baz=305						
NNS				S	Sg	10 14 35.3	+0.4
	baz=305						
WHF	**Hehuan Shan**	**0.45**	**263**	⇑*i* P	Pg	10 14 29.8	-0.2
	baz=263						
WHF				*i* S	Sg	10 14 36.3	-0.2
	baz=263						
ESL	**Shilin**	**0.48**	**217**	⇑*i* P	Pg	10 14 30.1	-0.1
	baz=224						
ESL				*e*S	Sb	10 14 37.9	0.0
	baz=224						
TWE	**Neicheng**	**0.52**	**352**	⇑*i* P	Pg	10 14 31.2	+0.3
	baz=352						
TWE				*i* S	Sb	10 14 38.5	-0.5
	baz=352						
TWT	**Tachien**	**0.53**	**276**	⇑*i* P	Pb	10 14 31.8	-0.1
	baz=276						
TWT				*i* S	Sb	10 14 39.0	-0.6
	baz=276						
ILA	**Ilan**	**0.56**	**360**	*e*P	Pg	10 14 31.9	+0.3
	baz=354						
ILA				*e*S	Sb	10 14 40.0	-0.2
	baz=354						
NSK	**Sanguang**	**0.59**	**323**	⇑*i* P	Pg	10 14 32.4	+0.1
	baz=323						
NSK				S	Sg	10 14 40.4	+0.1
	baz=323						
TWA	**Mucha**	**0.79**	**349**	*i* P	Pb	10 14 36.6	+0.4
	baz=348						
TWA				*e*S	Sb	10 14 47.1	+0.3
	baz=348						
EHY	**Hungye**	**0.80**	**210**	*e*P	Pg	10 14 35.9	-0.2
	baz=223						
NSTT	**Nanjuang**	**0.81**	**302**	*e*P	Pb	10 14 36.6	+0.2
	baz=302						
NSTT				S	Sb	10 14 47.1	-0.2
	baz=302						
TWB1	**Santiao Chiao**	**0.83**	**15**	*e*P	Pg	10 14 36.2	-0.5
	baz=14						
TWB1				S	Sg	10 14 47.6	0.0
	baz=14						
SMLT	**Sun Moon Lake**	**0.84**	**248**	P	Pg	10 14 36.9	-0.1
	baz=249						
SMLT				S	Sb	10 14 48.7	+0.2
	baz=249						
TAP1	**Taipei**	**0.86**	**346**	*e*P	Pn	10 14 39.7	+1.4
	baz=345						
TAP	**Taipei**	**0.86**	**345**	*e*P	Pn	10 14 39.2	+0.8
	baz=345						
NWF	**Wu-fen Shan**	**0.87**	**2**	*e*P	Pg	10 14 37.4	-0.1
	baz=354						
NWF				*e*S	Sg	10 14 48.9	-0.1
	baz=354						
TYC	**Yuchr**	**0.87**	**250**	*i* P	Pg	10 14 37.2	-0.1
	baz=244						
TYC				*e*S	Sb	10 14 49.1	+0.1
	baz=244						
TWQ1	**Liyutan**	**0.90**	**279**	*e*P	Pn	10 14 38.9	-0.1
	baz=280						
NCU	**National Centr**	**0.92**	**326**	*e*P	Pn	10 14 39.3	+0.1
	baz=326						
NCU				*e*S	Sn	10 14 51.9	-0.4
	baz=326						
NSY	**Sanyi**	**0.93**	**283**	*e*P	Pn	10 14 39.2	-0.1
	baz=284						
NSY				*e*S	Sn	10 14 52.6	+0.1
	baz=284						
HSN	**Hsinchu**	**0.93**	**310**	*e*P	Pn	10 14 39.4	+0.1
	baz=304						
HSN				*e*S	Sn	10 14 53.9	+1.5
	baz=304						
TWF1	**Yuli**	**0.94**	**206**	*e*P	Pb	10 14 37.4	-1.4

	baz=219							
TWF1				*e*S	Sg	10 14 52.0	+0.8	
	baz=219							
TWS1	**Kuangyinshan**	**0.94**	**341**	*e*P	Pn	10 14 39.6	+0.1	
	baz=349							
TWS1				*e*S	Sn	10 14 53.6	+0.8	
	baz=349							
TCU	**Taichung**	**0.98**	**267**	*e*P	Pn	10 14 40.4	+0.4	
	baz=268							
TCU				*e*S	Sn	10 14 54.9	+1.1	
	baz=268							
YUS	**Yu-Shan**	**1.02**	**226**	⇓*i*P	Pb	10 14 39.9	-0.8	
	baz=228							
YUS				*e*S	Sb	10 14 54.5	+0.1	
	baz=228							
WNT	**Mingjian**	**1.03**	**252**	*e*P	Pn	10 14 40.9	+0.3	
	baz=250							
WNT				*e*S	Sn	10 14 56.0	+1.2	
	baz=250							
TWY	**Chenhua**	**1.08**	**353**	*e*P	Pg	10 14 41.9	+0.5	
	baz=337							
ALS	**Alishan**	**1.11**	**232**	*e*P	Pb	10 14 41.5	-0.4	
	baz=240							
CHN5	**Tsauling**	**1.15**	**239**	*e*P	Pn	10 14 42.6	+0.2	
	baz=241							
CHN5				*e*S	Sn	10 14 58.7	+0.5	
	baz=241							
CHKT	**Chengkung**	**1.15**	**198**	*e*P	Pb	10 14 42.2	-0.1	
	baz=191							
CHKT				*e*S	Sn	10 14 58.7	+0.7	
	baz=191							
YOJ	**Yonaguni jima**	**1.18**	**77**	*e*P	Pn	10 14 42.4	-0.3	
	baz=66							
WGK	**Gukeng**	**1.20**	**245**	*e*P	Pn	10 14 43.0	-0.1	
	baz=247							
WGK				*e*S	Sg	10 15 00.4	+1.0	
	baz=247							
ELDTW	**Lidau**	**1.21**	**214**	*e*P	Pn	10 14 41.8	-1.5	
	baz=203							
ELDTW				*e*S	Sn	10 14 59.7	0.0	
	baz=203							
CHY	**Chiayi**	**1.40**	**240**	*e*P	Pb	10 14 46.9	+0.3	
	baz=242							
WTP	**Ta-pu**	**1.41**	**228**	*e*P	Pb	10 14 46.6	-0.2	
	baz=230							
WTP				*e*S	Sg	10 15 06.1	-0.1	
	baz=230							
PCYT	**Pengchaiyu**	**1.45**	**11**	*e*P	Pn	10 14 46.6	+0.2	
	baz=8.0							
TWK	**Hsinying**	**1.48**	**231**	*e*P	Pb	10 14 47.6	-0.5	
	baz=233							
WSF	**Szhu**	**1.51**	**248**	*e*P	Pb	10 14 48.0	-0.4	
	baz=260							
WSF				*e*S	Sg	10 15 09.4	+0.3	
	baz=260							
TWG	**Pinlang**	**1.51**	**205**	*e*P	Pn	10 14 46.6	-0.7	
	baz=206							
CHN1	**Nanshi**	**1.51**	**228**	*e*P	Pn	10 14 47.8	+0.5	
	baz=230							
CHN8	**Yiju**	**1.65**	**239**	*e*P	Pn	10 14 49.7	+0.5	
	baz=242							
ECL	**Taimali**	**1.76**	**205**	*e*P	Pn	10 14 50.5	-0.1	
	baz=193							
TWM1	**Shoushan**	**1.84**	**222**	*e*P	Pn	10 14 52.8	+1.0	
	baz=223							
SCZT	**Fangliau**	**2.10**	**210**	*e*P	Pn	10 14 56.2	+0.9	
	baz=196							
PNG	**Penghu**	**2.11**	**253**	*e*P	Pb	10 14 57.2	-1.4	
	baz=256							

*ISCJB **28** 10:19:14.8±0.5,24°.17N×121°.83E±0°.02,h2km±3km, Error ellipse: s-maj=3.7km s-min=2.3km az=140.7*
*JMA **28** 10:19:14.8±0.3,24°.14N×121°.63E,h65km,M2.7*
*TAP **28** 10:19:15.5,24°.19N×121°.76E,h13km,ML3.6,B*
ISC 28 10:19:15.5±0.8,24°.20N±0°.02×121°.78E±0°.02,h13km±6km, n50,σ0s57/80,7C-1D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.12**	**344**	*i* P		**Pg**	**10 19 18.8**	**0.0**
	baz=356							
EHP				*i* S		**Sg**	**10 19 21.4**	**+0.4**
	baz=356							
TWD	**Chiawan**	**0.20**	**235**	*i* P		**Pg**	**10 19 19.8**	**-0.2**
	baz=239							
TWD				*i* S		**Sg**	**10 19 23.0**	**-0.1**
	baz=239							
ENA	**Nanau**	**0.23**	**352**	*i* P		**Pg**	**10 19 20.7**	**+0.2**
	baz=358							
ENA				S		**Sg**	**10 19 24.2**	**+0.3**
	baz=358							
HWA	**Hwalien**	**0.27**	**216**	*e*P		**Pg**	**10 19 21.6**	**+0.5**
	baz=222							
TWC	**Suao**	**0.42**	**9**	⇑*i*P		**Pb**	**10 19 24.2**	**-0.5**
	baz=5.0							
TWC				S		**Sb**	**10 19 30.1**	**-0.9**
	baz=5.0							
NNS	**Nan Shan**	**0.44**	**303**	⇑*i*P		**Pg**	**10 19 24.3**	**-0.1**
	baz=306							
NNS				*i* S		**Sg**	**10 19 30.3**	**0.0**
	baz=306							
WHF	**Hehuan Shan**	**0.47**	**264**	⇑*i*P		**Pg**	**10 19 24.8**	**-0.1**
	baz=265							
WHF				*i* S		**Sg**	**10 19 31.1**	**-0.2**
	baz=265							
ESL	**Shilin**	**0.49**	**220**	⇑*i*P		**Pg**	**10 19 24.9**	**-0.4**
	baz=225							
ESL				S		**Sg**	**10 19 32.2**	**+0.3**
	baz=225							
TWE	**Neicheng**	**0.53**	**349**	⇑*i*P		**Pb**	**10 19 26.3**	**-0.4**
	baz=352							
TWE				*i* S		**Sb**	**10 19 33.7**	**-0.6**
	baz=352							
TWT	**Tachien**	**0.55**	**276**	⇑*i*P		**Pb**	**10 19 26.8**	**-0.4**
	baz=277							
TWT				*i* S		**Sg**	**10 19 34.2**	**+0.4**
	baz=277							
ILA	**Ilan**	**0.57**	**357**	*e*P		**Pn**	**10 19 28.3**	**-1.0**
	baz=354							
ILA				*e*S		**Sb**	**10 19 35.6**	**+0.3**
	baz=354							
NSK	**Sanguang**	**0.61**	**321**	⇑*i*P		**Pg**	**10 19 27.6**	**+0.1**
	baz=323							
NSK				*i* S		**Sg**	**10 19 35.5**	**-0.1**
	baz=323							
TWA	**Mucha**	**0.80**	**347**	P		**Pn**	**10 19 31.8**	**-0.7**
	baz=349							
NSTT	**Nanjuang**	**0.83**	**302**	P		**Pb**	**10 19 31.7**	**-0.1**
	baz=303							
NSTT				S		**Sb**	**10 19 42.3**	**-0.6**
	baz=303							
TWB1	**Santiao Chiao**	**0.83**	**13**	*e*P		**Pb**	**10 19 31.8**	**0.0**
	baz=14							
TWB1				*e*S		**Sb**	**10 19 42.5**	**-0.4**
	baz=14							
SMLT	**Sun Moon Lake**	**0.86**	**249**	*e*P		**Pg**	**10 19 31.7**	**-0.5**
	baz=250							
SMLT				S		**Sg**	**10 19 43.2**	**-0.3**
	baz=250							
NWF	**Wu-fen Shan**	**0.87**	**0**	*e*P		**Pn**	**10 19 33.0**	**-0.6**
TAP1	**Taipei**	**0.87**	**345**	*e*P		**Pn**	**10 19 33.1**	**-0.3**
	baz=336							
TYC	**Yuchr**	**0.89**	**251**	*i* P		**Pb**	**10 19 32.2**	**-0.7**
	baz=245							
TYC				S		**Sg**	**10 19 44.1**	**-0.3**
	baz=245							
TWQ1	**Liyutan**	**0.93**	**280**	*e*P		**Pn**	**10 19 34.2**	**-0.1**
	baz=281							
TWQ1				*e*S		**Sn**	**10 19 48.0**	**+0.5**
	baz=281							
NCU	**National Centr**	**0.94**	**325**	*e*P		**Pn**	**10 19 34.7**	**+0.3**
	baz=322							
TWF1	**Yuli**	**0.95**	**208**	*e*P		**Pb**	**10 19 33.1**	**-0.7**
	baz=222							
HSN	**Hsinchu**	**0.95**	**309**	*e*P		**Pn**	**10 19 34.8**	**+0.2**
	baz=313							
NSY	**Sanyi**	**0.95**	**283**	*e*P		**Pn**	**10 19 34.7**	**+0.1**
	baz=284							
TWS1	**Kuangyinshan**	**0.96**	**340**	*e*P		**Pn**	**10 19 34.8**	**+0.1**
	baz=349							
TWS1				*e*S		**Sn**	**10 19 48.4**	**+0.2**
	baz=349							
TCU	**Taichung**	**1.01**	**267**	P		**Pn**	**10 19 36.4**	**+1.0**
	baz=268							
TCU				*e*S		**Sn**	**10 19 50.0**	**+0.6**
	baz=268							
YUS	**Yu-Shan**	**1.03**	**227**	P		**Pb**	**10 19 35.0**	**-0.6**
	baz=228							
YUS				*e*S		**Sb**	**10 19 49.8**	**+0.5**
	baz=228							
WNT	**Mingjian**	**1.05**	**253**	*e*P		**Pn**	**10 19 35.9**	**0.0**
	baz=251							
WNT				*e*S		**Sn**	**10 19 51.5**	**+1.0**
	baz=251							
TWY	**Chenhua**	**1.09**	**351**	*e*P		**Pg**	**10 19 37.2**	**+0.7**
	baz=352							
ALS	**Alishan**	**1.12**	**233**	⇓*i*P		**Pb**	**10 19 36.7**	**-0.3**
	baz=234							
CHKT	**Chengkung**	**1.16**	**199**	*e*P		**Pg**	**10 19 38.0**	**+0.2**
	baz=191							
YOJ	**Yonaguni jima**	**1.16**	**77**	P		**Pn**	**10 19 37.1**	**-0.3**
	baz=65							
YOJ	**Yonaguni jima**	**1.16**	**77**	P		**Pn**	**10 19 37.3**	**-0.1**
YOJ				S		**Sg**	**10 19 54.1**	**+1.2**
CHN5	**Tsauling**	**1.17**	**240**	*e*P		**Pb**	**10 19 37.7**	**+0.1**
	baz=241							
CHN5				S		**Sg**	**10 19 55.2**	**+1.9**
	baz=241							
ELDTW	**Lidau**	**1.22**	**215**	*e*P		**Pn**	**10 19 37.2**	**-1.2**
	baz=216							
WTCT	**Ta-ch'eng**	**1.41**	**257**	*e*P		**Pb**	**10 19 41.8**	**+0.1**
	baz=259							
WTCT				*e*S		**Sg**	**10 20 01.4**	**+0.5**
	baz=259							
CHY	**Chiayi**	**1.42**	**241**	*e*P		**Pb**	**10 19 42.0**	**+0.1**
	baz=243							
WTP	**Ta-pu**	**1.43**	**229**	*e*P		**Pb**	**10 19 41.8**	**-0.2**
	baz=231							
WTP				*e*S		**Sg**	**10 20 02.2**	**+0.7**
	baz=231							
TWK	**Hsinying**	**1.50**	**232**	*e*P		**Pn**	**10 19 42.4**	**+0.2**
	baz=234							
TWG	**Pinlang**	**1.52**	**205**	*e*P		**Pn**	**10 19 40.9**	**-1.5**
	baz=191							
CHN1	**Nanshi**	**1.52**	**229**	*e*P		**Pb**	**10 19 43.6**	**-0.1**
	baz=226							
CHN1				*e*S		**Sg**	**10 20 05.6**	**+0.9**
	baz=226							
WSF	**Szhu**	**1.53**	**249**	*e*P		**Pb**	**10 19 43.2**	**-0.5**
	baz=251							
WSF				*e*S		**Sg**	**10 20 05.0**	**+0.2**
	baz=251							
CHN8	**Yiju**	**1.67**	**240**	*e*P		**Pb**	**10 19 45.3**	**-0.7**
	baz=227							
CHN8				*e*S		**Sg**	**10 20 08.6**	**-0.6**
	baz=227							
IRIF	**Iriomote-Funau**	**1.79**	**85**	P		**Pn**	**10 19 45.9**	**-0.2**
IRIF				S		**Sn**	**10 20 09.2**	**+0.5**
TWM1	**Shoushan**	**1.85**	**223**	*e*P		**Pb**	**10 19 49.0**	**-0.2**
	baz=223							
HATJ	**Hateruma jima**	**1.86**	**94**	P		**Pn**	**10 19 46.7**	**-0.4**
JKRS	**Kuro-shima**	**2.04**	**88**	P		**Pn**	**10 19 49.9**	**+0.4**
JKRS				*e*S		**Sn**	**10 20 15.3**	**+0.4**
SCZT	**Fangliau**	**2.10**	**211**	*e*P		**Pn**	**10 19 50.9**	**+0.4**
	baz=195							
JIJ	**Ishigaki jima**	**2.17**	**85**	P		**Pn**	**10 19 51.1**	**-0.2**
JIJ				S		**Sn**	**10 20 17.6**	**-0.4**
JTJ	**Tarama**	**2.70**	**80**	*e*S		**Sn**	**10 20 31.6**	**+0.3**

IDC 28 10:24:30.8±1.0,16°.53N×46°.52W,h0km,mb3.5/7, mb1 3.8/7,mb1mx3.7/25,mbtmp3.5/7,Error ellipse: s-maj=32.4km s-min=24.3km az=177.0,Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**38.96**	**214**	P		P	10 31 59.6	-0.1
	0.3nm,0.3s,baz=62,slow=7.7,SNR=2.7							
TORD	**Torodi Ar. Bea**	**46.65**	**87**	P		P	10 33 00.7	-0.8
	0.8nm,0.9s,baz=278,slow=6.9,SNR=4.1							
TXAR	**Lajitas Array**	**53.69**	**294**	P		P	10 33 53.8	-1.1
	0.1nm,0.6s,baz=96,slow=9.2,SNR=3.5							
PDAR	**Pinedale Array**	**59.23**	**310**	P		P	10 34 34.5	0.0
	0.8nm,0.9s,baz=115,slow=8.0,SNR=3.4							
NVAR	**Mina Array Bea**	**65.76**	**305**	P		P	10 35 19.3	+1.1
	0.2nm,0.7s,baz=108,slow=7.8,SNR=2.5							
BRTR	**Keskin Array B**	**72.16**	**53**	P		P	10 35 58.5	+0.7
	0.5nm,0.6s,baz=285,slow=3.9,SNR=3.5							
ILAR	**Eielson Array**	**79.54**	**335**	P		P	10 36 38.8	-0.6
	1.0nm,0.8s,baz=76,slow=4.6,SNR=16							

TAP 28 10:40:48.6,24°.17N×121°.74E,h12km,ML2.8,3C,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.14**	**1**	*e*P		Pg	10 40 51.9	-0.2
	baz=4.0							
EHP				S		Sg	10 40 55.0	+0.5
	baz=4.0							
TWD	**Chiawan**	**0.16**	**236**	*i* P		Pg	10 40 52.4	+0.2
	baz=243							
TWD				*i* S		Sg	10 40 55.2	+0.5
	baz=243							
ENA	**Nanau**	**0.26**	**1**	*i* P		Pg	10 40 54.3	+0.2
	baz=1.0							
ENA				S		Sg	10 40 58.1	+0.4
	baz=1.0							
NNS	**Nan Shan**	**0.43**	**309**	⇑*i*P		Pg	10 40 57.4	+0.1
	baz=309							
NNS				S		Sg	10 41 03.5	+0.4
	baz=309							
WHF	**Hehuan Shan**	**0.43**	**267**	⇑*i*P		Pg	10 40 57.5	-0.2
	baz=268							
WHF				S		Sg	10 41 03.8	-0.1
	baz=268							
ESL	**Shilin**	**0.45**	**218**	*e*P		Pg	10 40 57.5	0.0
	baz=229							
TWC	**Suao**	**0.45**	**13**	P		Pg	10 40 57.8	+0.2
	baz=7.0							
TWT	**Tachien**	**0.52**	**280**	⇑*i*P		Pb	10 40 59.6	-0.4
	baz=279							
TWE	**Neicheng**	**0.55**	**353**	*i* P		Pb	10 40 59.9	-0.4
	baz=353							
NSK	**Sanguang**	**0.61**	**326**	*e*P		Pg	10 41 00.9	+0.2
	baz=326							
NSK				*e*S		Sg	10 41 09.2	+0.3
	baz=326							
NSTT	**Nanjuang**	**0.81**	**305**	*e*P		Pg	10 41 03.3	-1.1
	baz=305							
SMLT	**Sun Moon Lake**	**0.82**	**250**	*e*P		Pg	10 41 04.5	0.0
	baz=252							
TYC	**Yuchr**	**0.85**	**252**	*e*P		Pg	10 41 04.8	-0.2
	baz=254							
TWQ1	**Liyutan**	**0.90**	**282**	*e*P		Pn	10 41 07.4	+0.3
	baz=283							

TAP 28 10:40:55.9,24°.21N×121°.76E,h13km,ML2.9,C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.10**	**353**	P		Pg	10 40 58.9	0.0
	baz=357							
EHP				*i* S		Sg	10 41 01.4	+0.3
	baz=357							
TWD	**Chiawan**	**0.19**	**229**	*e*P		Pg	10 41 00.4	+0.2
	baz=235							
TWD				S		Sg	10 41 03.6	+0.5
	baz=235							
ENA	**Nanau**	**0.22**	**357**	*e*P		Pg	10 41 00.9	+0.2
	baz=358							
ENA				*i* S		Sg	10 41 04.4	+0.4
	baz=358							
TWC	**Suao**	**0.41**	**12**	P		Pg	10 41 04.3	+0.2
	baz=6.0							
TWC				S		Sg	10 41 10.3	+0.7
	baz=6.0							
NNS	**Nan Shan**	**0.42**	**304**	*e*P		Pg	10 41 04.4	-0.1
	baz=304							
NNS				S		Sg	10 41 10.4	+0.2
	baz=304							
WHF	**Hehuan Shan**	**0.45**	**262**	P		Pg	10 41 04.8	-0.6
	baz=263							
WHF				S		Sg	10 41 11.5	-0.3
	baz=263							
ESL	**Shilin**	**0.49**	**217**	*e*P		Pb	10 41 06.2	-0.2
	baz=224							
ESL				*e*S		Sg	10 41 12.6	+0.5
	baz=224							
TWE	**Neicheng**	**0.52**	**351**	*i* P		Pg	10 41 06.4	+0.3
	baz=352							
TWE				S		Sb	10 41 13.7	-0.6
	baz=352							
TWT	**Tachien**	**0.53**	**275**	*e*P		Pb	10 41 07.1	-0.3
	baz=275							
TWT				*e*S		Sb	10 41 14.7	-0.4
	baz=275							
NSK	**Sanguang**	**0.59**	**322**	*e*P		Pg	10 41 07.4	-0.1
	baz=323							
NSK				*e*S		Sg	10 41 15.8	+0.3
	baz=323							
NSTT	**Nanjuang**	**0.81**	**302**	*e*P		Pb	10 41 12.4	+0.6
	baz=302							
TYC	**Yuchr**	**0.87**	**250**	*e*P		Pg	10 41 12.2	-0.6
	baz=251							

*IDC **28** 10:41:47.6±1.6,24°.27N×122°.03E,h0km,mb3.7/7, mb1 3.8/7,mb1mx3.6/25,mbtmp3.7/7,Error ellipse: s-maj=130.1km s-min=18.7km az=65.0*
*ISCJB **28** 10:41:50.9±0.3,24°.18N±0°.01×121°.83E±0°.02,h8km±2km, mb3.6/7,Error ellipse: s-maj=2.8km s-min=1.9km az=29.5*
*JMA **28** 10:41:50.7±0.3,24°.35N×121°.66E,h78km,M3.3*
*TAP **28** 10:41:51.3,24°.20N×121°.76E,h14km,ML4.0,B*
ISC 28 10:41:51.0±0.8,24°.20N±0°.02×121°.78E±0°.02,h17km±5km, n74,σ0s73/123,mb3.7/7,11C-7D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**340**	*i* P		**Pg**	**10 41 54.6**	**-0.1**
	baz=353							
EHP				*i* S		**Sb**	**10 41 57.3**	**-0.1**
	baz=353							
TWD	**Chiawan**	**0.21**	**235**	⇑*i*P		**Pg**	**10 41 55.9**	**-0.1**
	baz=238							
TWD				*i* S		**Sg**	**10 41 59.3**	**0.0**
	baz=238							
ENA	**Nanau**	**0.23**	**350**	⇑*i*P		**Pb**	**10 41 56.5**	**-0.3**
	baz=356							
ENA				*e*S		**Sb**	**10 42 00.3**	**-0.4**
	baz=356							
HWA	**Hwalien**	**0.28**	**216**	P		**Pb**	**10 41 57.6**	**0.0**
	baz=222							
HWA				*e*S		**Sb**	**10 42 02.4**	**+0.3**
	baz=222							
TWC	**Suao**	**0.41**	**8**	⇑*i*P		**Pb**	**10 41 59.9**	**0.0**
	baz=8.0							
TWC				S		**Sb**	**10 42 05.2**	**-0.6**
	baz=8.0							
ESF	**Shoufeng Towns**	**0.42**	**218**	*e*P		**Pg**	**10 41 59.4**	**-0.1**
	baz=224							
ESF				*e*S		**Sg**	**10 42 05.3**	**+0.1**
	baz=224							
NNS	**Nan Shan**	**0.44**	**302**	⇑*i*P		**Pg**	**10 42 00.1**	**+0.1**
	baz=304							
NNS				*i* S		**Sg**	**10 42 06.2**	**0.0**
	baz=304							
WHF	**Hehuan Shan**	**0.48**	**263**	⇑*i*P		**Pg**	**10 42 00.8**	**0.0**
	baz=264							
WHF				S		**Sg**	**10 42 07.4**	**+0.1**
	baz=264							
ESL	**Shilin**	**0.50**	**220**	⇑*i*P		**Pg**	**10 42 01.0**	**-0.1**
	baz=225							
ESL				*e*S		**Sg**	**10 42 08.2**	**+0.3**
	baz=225							
TWE	**Neicheng**	**0.53**	**348**	⇑*i*P		**Pb**	**10 42 01.9**	**0.0**
	baz=350							
TWE				*i* S		**Sb**	**10 42 09.2**	**0.0**
	baz=350							
TEGC	**Jichi Village**	**0.54**	**204**	*e*P		**Pb**	**10 42 02.7**	**+0.7**
	baz=196							
TWT	**Tachien**	**0.56**	**275**	⇑*i*P		**Pb**	**10 42 02.7**	**+0.2**
	baz=276							
TWT				*i* S		**Sg**	**10 42 10.1**	**+0.4**
	baz=276							
ILA	**Ilan**	**0.56**	**357**	P		**Pb**	**10 42 02.9**	**+0.4**
	baz=353							
ILA				S		**Sb**	**10 42 10.7**	**+0.5**
	baz=353							
NSK	**Sanguang**	**0.61**	**321**	⇑*i*P		**Pb**	**10 42 03.3**	**0.0**
	baz=322							
NSK				S		**Sb**	**10 42 11.6**	**-0.1**
	baz=322							
TWA	**Mucha**	**0.80**	**347**	*e*P		**Pn**	**10 42 07.4**	**-0.2**
	baz=347							
TWA				*e*S		**Sn**	**10 42 17.9**	**-1.1**
	baz=347							
EHY	**Hungye**	**0.81**	**211**	*e*P		**Pb**	**10 42 06.2**	**-0.5**
	baz=224							
TWB1	**Santiao Chiao**	**0.82**	**13**	*i* P		**Pg**	**10 42 07.4**	**+0.3**
	baz=13							
TWB1				S		**Sg**	**10 42 18.3**	**+0.3**
	baz=13							
NSTT	**Nanjuang**	**0.83**	**301**	⇑*e*P		**Pg**	**10 42 07.5**	**+0.2**
	baz=302							
NSTT				S		**Sg**	**10 42 18.1**	**-0.2**
	baz=302							
NWF	**Wu-fen Shan**	**0.86**	**360**	*e*P		**Pn**	**10 42 08.4**	**-0.2**
	baz=352							
NWF				S		**Sn**	**10 42 20.0**	**-0.9**
	baz=352							
TAP1	**Taipei**	**0.87**	**344**	⇓P		**Pn**	**10 42 08.7**	**+0.2**
	baz=343							
TAP1				*e*S		**Sn**	**10 42 20.3**	**-0.5**
	baz=343							
SMLT	**Sun Moon Lake**	**0.87**	**249**	⇓*i*P		**Pb**	**10 42 07.8**	**0.0**
	baz=249							
SMLT				S		**Sb**	**10 42 19.2**	**+0.1**
	baz=249							
TAP	**Taipei**	**0.87**	**343**	*e*P		**Pn**	**10 42 08.6**	**0.0**
	baz=343							
TAP				*e*S		**Sg**	**10 42 19.6**	**+0.1**
	baz=343							
TYC	**Yuchr**	**0.90**	**251**	⇓*i*P		**Pb**	**10 42 08.1**	**-0.1**
	baz=251							
TYC				S		**Sb**	**10 42 20.0**	**+0.1**
	baz=251							
TWQ1	**Liyutan**	**0.93**	**279**	*e*P		**Pn**	**10 42 09.7**	**+0.3**
	baz=280							
TWQ1				*e*S		**Sn**	**10 42 22.2**	**-0.2**
	baz=280							
NCU	**National Centr**	**0.94**	**325**	P		**Pn**	**10 42 10.1**	**+0.6**
	baz=325							
NCU				*e*S		**Sn**	**10 42 23.7**	**+1.1**
	baz=325							
HSN	**Hsinchu**	**0.95**	**309**	*e*P		**Pn**	**10 42 10.2**	**+0.5**
	baz=304							
HSN				*e*S		**Sn**	**10 42 23.9**	**+1.0**
	baz=304							
TWS1	**Kuangyinshan**	**0.95**	**340**	P		**Pn**	**10 42 10.4**	**+0.7**
	baz=339							
TWS1				S		**Sn**	**10 42 23.7**	**+0.8**
	baz=339							
NSY	**Sanyi**	**0.96**	**283**	⇑*i*P		**Pn**	**10 42 10.5**	**+0.8**
	baz=284							
NSY				*e*S		**Sn**	**10 42 23.3**	**+0.2**
	baz=284							
TWF1	**Yuli**	**0.96**	**208**	*e*P		**Pb**	**10 42 08.7**	**-0.5**
	baz=219							
TWF1				*e*S		**Sn**	**10 42 23.1**	**+0.1**
	baz=219							
TCU	**Taichung**	**1.01**	**267**	*e*P		**Pg**	**10 42 11.6**	**+0.9**
	baz=268							
TCU				S		**Sn**	**10 42 26.1**	**+1.7**
	baz=268							
YUS	**Yu-Shan**	**1.04**	**227**	⇓*i*P		**Pb**	**10 42 10.9**	**0.0**
	baz=216							
YUS				*e*S		**Sb**	**10 42 25.3**	**+0.8**
	baz=216							
WNT	**Mingjian**	**1.06**	**252**	P		**Pg**	**10 42 12.1**	**+0.6**
	baz=250							
WNT				*e*S		**Sn**	**10 42 27.0**	**+1.5**
	baz=250							
TWY	**Chenhua**	**1.08**	**351**	P		**Pg**	**10 42 12.6**	**+0.6**
	baz=351							
ALS	**Alishan**	**1.13**	**233**	⇓*i*P		**Pn**	**10 42 12.6**	**+0.2**
	baz=233							
YOJ	**Yonaguni jima**	**1.15**	**77**	⇓*i*P		**Pb**	**10 42 12.9**	**+0.4**
	baz=64							
YOJ				*e*S		**Sg**	**10 42 29.6**	**+1.2**
	baz=64							
YOJ	**Yonaguni jima**	**1.15**	**77**	P		**Pb**	**10 42 12.9**	**+0.4**
YOJ				S		**Sg**	**10 42 29.5**	**+1.2**
CHKT	**Chengkung**	**1.16**	**199**	*e*P		**Pn**	**10 42 12.

ELDTW	**Lidau** baz=201	1.23	215	*e*P		Pn	10 42 12.2	-1.5
WGK	**Gukeng** baz=246	1.23	246	*e*P		Pg	10 42 14.7	-0.1
WTCT	**Ta-ch'eng** baz=258	1.42	257	*e*P		Pn	10 42 16.5	+0.5
WTCT	baz=258			*e*S		Sg	10 42 37.0	+0.2
CHY	**Chiayi** baz=242	1.43	241	P		Pb	10 42 17.8	+0.6
CHY	baz=242			*e*S		Sg	10 42 38.2	+1.0
WTP	**Ta-pu** baz=230	1.43	229	P		Pb	10 42 17.5	+0.2
WTP	baz=230			*e*S		Sg	10 42 37.7	+0.3
PCYT	**Pengchaiyu** baz=7.0	1.45	10	*e*P		Pb	10 42 17.4	-0.1
TWK	**Hsinying** baz=233	1.51	232	*e*P		Pb	10 42 18.9	+0.2
TWK	baz=233			*e*S		Sb	10 42 38.5	+0.9
TWG	**Pinlang** baz=191	1.52	206	*e*P		Pn	10 42 15.9	-1.7
CHN1	**Nanshi** baz=221	1.53	229	P		Pb	10 42 19.4	+0.4
CHN1	baz=221			*e*S		Sg	10 42 41.1	+0.6
WSF	**Szhu** baz=261	1.54	249	*e*P		Pb	10 42 19.0	0.0
WSF	baz=261			*e*S		Sg	10 42 40.5	-0.1
TTN	**Taitung** baz=203	1.56	202	*e*P		Pn	10 42 15.4	-2.6
CHN3	**Shinhua** baz=231	1.72	230	*e*P		Pb	10 42 22.2	0.0
CHN3	baz=231			*e*S		Sg	10 42 47.1	+0.7
ECL	**Taimali** baz=194	1.77	206	*e*P		Pn	10 42 20.5	-0.5
SCLT	**Jiali** baz=237	1.78	235	*e*P		Pb	10 42 23.5	+0.3
SCLT	baz=237			*e*S		Sb	10 42 46.1	+0.8
IRIF	**Iriomote-Funau**	1.78	85	P		Pn	10 42 21.5	+0.4
IRIF				*e*S		Sn	10 42 44.2	+0.8
HATJ	**Hateruma jima**	1.85	94	P		Pn	10 42 22.8	+0.7
HATJ				*e*S		Sb	10 42 46.9	-0.5
TWM1	**Shoushan** baz=223	1.86	223	P		Pb	10 42 24.9	+0.3
SGLT	**Jiouru** baz=210	1.89	219	*e*P		Pb	10 42 24.9	-0.2
EAST	**Anshuo** baz=195	2.00	206	*e*P		Pn	10 42 23.8	-0.4
TAW	**Tawu** baz=193	2.01	204	*e*P		Pn	10 42 25.3	+1.0
JKRS	**Kuro-shima**	2.03	89	P		Pn	10 42 25.5	+1.0
JKRS				*e*S		Sb	10 42 52.0	-0.6
SCZT	**Fangliau** baz=209	2.11	211	*e*P		Pn	10 42 27.0	+1.3
SCZT	baz=209			*e*S		Sb	10 42 53.8	-1.1
PNG	**Penghu** baz=257	2.14	253	*e*P		Pn	10 42 26.9	+1.0
PNG	baz=257			*e*S		Sb	10 42 54.4	-1.2
JIJ	**Ishigaki jima**	2.16	85	P		Pn	10 42 26.8	+0.5
JIJ				S		Sn	10 42 53.4	+0.7
TWK1	**Hengchun** baz=202	2.42	202	*e*P		Pn	10 42 29.9	-0.1
TWK1	baz=202			*e*S		Sn	10 43 00.8	+1.6
TSEB	**Hengchuen, Pin** baz=190	2.43	200	*e*P		Pn	10 42 31.3	+1.2
QZH	**Quanzhou**	3.00	285	⇓*i* Pn		Pn	10 42 38.0	+0.2
QZH				Sn		Sn	10 43 12.0	-1.4
QZH	comp=N,260nm,0.8s			smax		smax		
QZH	comp=E,240nm,0.8s			smax		smax		
KNM	**Kinmen** baz=275	3.06	275	*e*P		Pn	10 42 40.9	+2.2
KSRS	**Korea Array** comp=E,0.1nm,0.3s,baz=198,slow=12,SNR=11	14.22	20	Pn		P	10 45 18.6	-0.3
SONM	**Songino Array** comp=E,0.9nm,0.7s,baz=169,slow=8.5,SNR=4.1	26.57	336	P		P	10 47 27.8	-0.5
MKAR	**Makanchi Array** comp=E,0.6nm,0.6s,baz=104,slow=10,SNR=10	38.71	316	P		P	10 49 14.1	-0.1
ZALV	**Zalesovo Beam** comp=E,1.0nm,0.6s,baz=122,slow=7.2,SNR=5.6	40.53	327	P		P	10 49 28.9	-0.2
WRA	**Warramunga Arr** comp=E,0.8nm,0.7s,baz=345,slow=8.8,SNR=8.7	45.55	163	P		P	10 50 08.3	-1.9
ASAR	**Alice Springs** comp=E,0.2nm,0.6s,baz=337,slow=6.3,SNR=7.9	49.02	165	P		P	10 50 37.3	+0.1
FINES	**FINESS Array B** comp=E,0.9nm,0.9s,baz=75,slow=7.4,SNR=3.1	71.71	330	P		P	10 53 11.5	-0.4
BRTR	**Keskin Array B** comp=E,1.6nm,1.1s,baz=116,slow=9.8,SNR=3.6	73.60	307	P		P	10 53 23.9	+0.1

IDC 28 10:51:48.7±2.5, 15°69N×86°06W, h0km, mb3.8/6, mb1 4.2/7, mb1mx3.9/23, mbtmpg3.9/7, ML4.5/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/34, Error ellipse: s-maj=85.2km s-min=44.8km az=46.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich** 20nm,0.3s,baz=211,slow=20,SNR=223	4.98	335	Pn	Pn	10 53 04.1	-0.7
TEIG	12nm,0.3s,baz=265,slow=22,SNR=11			Sn	Sn	10 53 59.6	-3.6
TEIG	comp=Z,212nm,19.8s,baz=250,slow=39			LR	LR	10 55 03.1	
TKL	**Tuckaleechee C** 0.3nm,0.3s,baz=191,slow=16,SNR=4.9	19.99	5	P	Pn	10 56 31.7	+7.2
TKL	0.1nm,0.3s,baz=98,slow=18,SNR=2.9			S	S	10 59 60.0	-8.6
TXAR	**Lajitas Array** 6.3nm,0.9s,baz=135,slow=11,SNR=59	21.15	313	P	P	10 56 35.4	-0.3
TXAR	0.3nm,0.9s,baz=127,slow=30,SNR=2.5			S	S	11 00 17.0	-15
ANMO	**Albuquerque** 0.4nm,0.6s,baz=143,slow=10,SNR=3.6	26.50	320	P	P	10 57 29.7	+1.4
PDAR	**Pinedale Array** 0.5nm,0.8s,baz=108,slow=13,SNR=4.0	33.66	328	P	P	10 58 31.1	-0.5
NVAR	**Mina Array Bea** 0.7nm,0.9s,baz=119,slow=8.7,SNR=5.8	36.27	315	P	P	10 58 54.0	-0.2
YKA	**Yellowknife Ar** 2.0nm,0.7s,baz=138,slow=7.8,SNR=7.6	50.88	343	P	P	11 00 51.3	+0.1
ILAR	**Eielson Array** 0.7nm,0.7s,baz=121,slow=4.8,SNR=9.4	63.64	335	P	P	11 02 20.9	-0.5
WRA	**Warramunga Arr** 0.3nm,0.7s,baz=92,slow=2.7,SNR=7.7	141.38	258	PKP	PKPdf	11 11 20.6	-2.0
ASAR	**Alice Springs** 0.5nm,0.7s,baz=91,slow=2.1,SNR=8.0	141.65	252	PKP	PKPdf	11 11 21.6	-1.4
CMAR	**Chiang Mai Arr** 2.5nm,0.6s,baz=335,slow=3.2,SNR=12	145.71	352	PKPbc	PKPdf	11 11 30.1	-0.1

WEL 28 10:57:14.9±0.1, 39°27S×174°84E, h24km±1km, ML3.5/27, 9C-5D, Error ellipse: s-maj=1.0km s-min=0.6km az=0.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VRZ	**Vera Road**	0.16	335	P*	Pb	10 57 20.0	+0.1
VRZ				S*	Sb	10 57 24.3	+1.0
VRZ				AML	AML	10 57 24.8	
RAEZ	**Rainy Point**	0.35	267	⇓P*	Pb	10 57 22.6	-0.1
RAEZ				S*	Sb	10 57 28.9	+1.0
PKVZ	**Pokaka**	0.39	94	P*	Pb	10 57 22.9	-0.4
PKVZ				S*	Sb	10 57 29.4	+0.3
PKVZ				AML	AML	10 57 29.9	
MHEZ	**Mangahewa**	0.45	295	⇑P*	Pb	10 57 24.1	-0.1
MHEZ				S*	Sb	10 57 31.5	+1.0
MTVZ	**Mangateitei**	0.50	104	P*	Pb	10 57 24.5	-0.7
MTVZ				S*	Sb	10 57 33.3	+1.1
MTVZ				AML	AML	10 57 37.7	
WAZ	**Wanganui**	0.50	167	⇑P*	Pb	10 57 24.5	-0.7
WAZ				S*	Sb	10 57 32.4	+0.3
WAZ				AML	AML	10 57 36.7	
TWVZ	**Taurewa**	0.50	67	P*	Pb	10 57 24.6	-0.6
TWVZ				AML	AML	10 57 32.2	
TWVZ				AML	AML	10 57 33.6	
DREZ	**Durham Road**	0.51	279	P*	Pb	10 57 24.9	-0.3
DREZ				S*	Sn	10 57 33.6	-1.1
TRVZ	**Turoa**	0.55	94	⇑P*	Pb	10 57 25.4	-0.8
TRVZ				S*	Sb	10 57 34.4	+0.5
TRVZ				AML	AML	10 57 35.7	
WPVZ	**Whakapapa**	0.55	84	P*	Pb	10 57 25.5	-0.6
WPVZ				S*	Sn	10 57 34.9	-1.1
WPVZ				AML	AML	10 57 35.6	
FWVZ	**Far West T-bar**	0.55	89	⇑P*	Pb	10 57 25.5	-0.8
FWVZ				AML	AML	10 57 34.8	
FWVZ				AML	AML	10 57 35.2	
DRZ	**Dome Shelter**	0.56	91	⇓P*	Pb	10 57 25.7	-0.8
DRZ				AML	AML	10 57 35.6	
DRZ				AML	AML	10 57 36.6	
DFE	**Dawson Falls**	0.58	264	P*	Pb	10 57 25.4	-1.1
NEZ	**North Egmont**	0.58	269	P*	Pb	10 57 26.1	-0.5
WNVZ	**Wahianoa**	0.59	96	⇑P*	Pb	10 57 26.1	-0.7
WNVZ				AML	AML	10 57 36.3	
WNVZ				AML	AML	10 57 36.6	
NGZ	**Ngauruhoe**	0.59	81	P*	Pb	10 57 26.6	-0.3
NGZ				AML	AML	10 57 36.3	
NGZ				AML	AML	10 57 37.4	
TUVZ	**Tukino**	0.63	90	P*	Pb	10 57 27.0	-0.5
TUVZ				AML	AML	10 57 37.4	
TUVZ				AML	AML	10 57 37.5	
OTVZ	**Oturere**	0.65	81	⇑P*	Pb	10 57 27.2	-0.6
OTVZ				S*	Sb	10 57 36.9	+0.3
OTVZ				AML	AML	10 57 37.6	
PKE	**Pukeiti**	0.67	276	P*	Pb	10 57 27.6	-0.4
PKE				AML	AML	10 57 38.1	
PKE				AML	AML	10 57 39.3	
MOVZ	**Moawhango**	0.72	102	⇑P*	Pb	10 57 28.2	-0.7
MOVZ				AML	AML	10 57 38.1	
MOVZ				AML	AML	10 57 38.2	
KATZ	**Kakaramea**	0.72	67	⇓P*	Pb	10 57 28.6	-0.4
KATZ				AML	AML	10 57 39.5	
KATZ				AML	AML	10 57 42.9	
HIZ	**Hauiti**	0.75	1	⇑P*	Pb	10 57 28.8	-0.6
HIZ				AML	AML	10 57 42.0	
HIZ				AML	AML	10 57 42.1	
RATZ	**Rangitukua**	0.82	61	P*	Pb	10 57 30.2	-0.5
RATZ				AML	AML	10 57 45.8	
RATZ				AML	AML	10 57 46.4	
RITZ	**Rihia Road**	0.84	70	P*	Pb	10 57 30.9	0.0
RITZ				AML	AML	10 57 45.2	
RITZ				AML	AML	10 57 50.5	
WATZ	**Wairara**	0.89	51	⇓P*	Pb	10 57 31.2	-0.6
WATZ				AML	AML	10 57 43.9	
WATZ				AML	AML	10 57 44.1	
BHHZ	**Black Hill Sta**	0.97	104	PN	Pb	10 57 32.3	-0.9
TSZ	**Takapari Road**	1.17	133	PN	Pn	10 57 35.6	-0.4
TSZ				AML	AML	10 57 51.4	
TSZ				AML	AML	10 57 51.5	
POWZ	**Post Office Ro**	1.33	148	PN	Pn	10 57 38.3	+0.2
MRZ	**Mangatainoka R**	1.50	158	PN	Pn	10 57 40.4	-0.1
MRZ				AML	AML	10 58 01.6	
MRZ				AML	AML	10 58 02.9	
OGWZ	**Otaki Gorge**	1.57	171	PN	Pn	10 57 41.6	+0.3
KIW	**Kapiti Island**	1.59	178	PN	Pn	10 57 41.3	-0.4
KIW				AML	AML	10 58 02.2	
KIW				AML	AML	10 58 03.4	
TOZ	**Tahuroa Road**	1.62	19	⇓PN	Pn	10 57 41.2	-0.7
HOWZ	**Holdsworth Sta**	1.71	163	PN	Pn	10 57 44.3	+1.0
CAW	**Cannon Point**	1.85	175	PN	Pn	10 57 45.6	+0.5
CAW				AML	AML	10 58 12.0	
CAW				AML	AML	10 58 16.6	
MTW	**Mount Morrison**	1.96	165	AML	AML	10 58 19.3	
MTW				AML	AML	10 58 32.4	
URZ	**Urewera**	2.04	61	PN	Pn	10 57 49.0	+1.2
SNZO	**South Karori**	2.04	183	PN	Pn	10 57 48.1	+0.2
SNZO				AML	AML	10 58 17.0	
SNZO				AML	AML	10 58 19.5	
MKAZ	**Moumakai**	2.17	7	⇑PN	Pn	10 57 49.2	-0.4
MKAZ				AML	AML	10 58 27.5	
MKAZ				AML	AML	10 58 31.2	

*ISCJB **28** 11:08:01.5±0.4, 24°.18N±0°.01×121°.82E±0°.02, h6km±2km, Error ellipse: s-maj=2.9km s-min=2.1km az=41.4*
*TAP **28** 11:08:01.9, 24°.19N×121°.75E, h13km, ML3.8, B*
*JMA **28** 11:08:02.1±0.6, 24°.06N×121°.76E, h21km, M3.2*

ISC 28 11:08:01.6±0.9, 24°.17N±0°.02×121°.78E±0°.02, h12km±6km, n54, σ0s66/92, 9C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=357	0.15	344	*i* P	Pg	11 08 05.2	+0.1
EHP	baz=357			*i* S	Sg	11 08 07.9	+0.3
TWD	**Chiawan** baz=238	0.19	243	*i* P	Pb	11 08 06.3	-0.8
TWD	baz=238			*i* S	Sg	11 08 09.4	+0.6
HWA	**Hwalien** baz=221	0.25	221	*e*P	Pb	11 08 07.9	-0.2
ENA	**Nanau** baz=358	0.26	351	⇑*i* P	Pg	11 08 07.0	0.0
ENA	baz=358			S	Sg	11 08 10.6	-0.1
ESF	**Shoufeng Towns** baz=216	0.39	221	*e*P	Pb	11 08 11.1	+0.5
TWC	**Suao** baz=6.0	0.44	8	⇑*i* P	Pg	11 08 10.5	+0.2
TWC	baz=6.0			*i* S	Sg	11 08 16.7	+0.5
NNS	**Nan Shan** baz=306	0.46	306	⇑*i* P	Pg	11 08 10.6	-0.2
NNS	baz=306			*i* S	Sg	11 08 16.6	-0.4
WHF	**Hehuan Shan** baz=265	0.47	267	⇑*i* P	Pg	11 08 11.1	+0.1
WHF	baz=265			S	Sg	11 08 17.2	-0.3
ESL	**Shilin** baz=225	0.48	222	⇓*e*P	Pb	11 08 11.4	-0.6
ESL	baz=225			*e*S	Sb	11 08 18.6	-0.5
TWE	**Neicheng** baz=352	0.56	349	⇑*i* P	Pg	11 08 12.7	+0.1
TWE	baz=352			*i* S	Sg	11 08 20.1	0.0
TWT	**Tachien** baz=277	0.56	279	⇑*i* P	Pb	11 08 13.1	-0.4
TWT	baz=277			*i* S	Sg	11 08 20.6	+0.4
ILA	**Ilan** baz=354	0.59	357	*e*P	Pg	11 08 13.3	0.0
ILA	baz=354			S	Sb	11 08 21.9	-0.5
NSK	**Sanguang** baz=323	0.64	323	⇑*i* P	Pg	11 08 13.9	-0.1
NSK	baz=323			S	Sg	11 08 22.0	-0.5
EHY	**Hungye** baz=222	0.78	213	*e*P	Pg	11 08 16.2	-0.6
EHY	baz=222			*e*S	Sn	11 08 30.2	-0.1
TWA	**Mucha** baz=348	0.83	347	*e*P	Pg	11 08 17.5	-0.2
NSTT	**Nanjuang** baz=303	0.85	303	⇑*i* P	Pg	11 08 18.0	-0.1
NSTT	baz=303			S	Sg	11 08 28.6	-0.6
TWB1	**Santiao Chiao** baz=14	0.86	12	⇑P	Pg	11 08 18.1	-0.1
TWB1	baz=14			*i* S	Sg	11 08 29.1	-0.3
SMLT	**Sun Moon Lake** baz=249	0.86	251	*e*P	Pg	11 08 18.2	0.0
SMLT	baz=249			S	Sg	11 08 29.4	-0.1
TYC	**Yuchr** baz=245	0.89	253	⇓*i* P	Pg	11 08 18.6	-0.1
TYC	baz=245			S	Sg	11 08 29.8	-0.6
NWF	**Wu-fen Shan** baz=353	0.90	360	P	Pb	11 08 19.3	0.0
NWF	baz=353			*e*S	Sg	11 08 29.4	-1.3
TAP1	**Taipei** baz=344	0.90	345	*e*P	Pb	11 08 19.2	0.0
TAP1	baz=344			*e*S	Sb	11 08 31.0	-0.2
TAP	**Taipei** baz=336	0.90	344	*e*P	Pb	11 08 19.4	+0.1
TWF1	**Yuli** baz=222	0.93	209	*e*P	Pg	11 08 18.1	-1.4
TWQ1	**Liyutan** baz=280	0.94	281	*e*P	Pn	11 08 20.3	-0.4
TWQ1	baz=280			S	Sn	11 08 33.3	-0.8
NCU	**National Centr** baz=326	0.97	326	P	Pn	11 08 21.2	+0.1
NCU	baz=326			*e*S	Sn	11 08 34.5	-0.3
NSY	**Sanyi** baz=284	0.97	285	*e*P	Pn	11 08 20.6	-0.4
NSY	baz=284			*e*S	Sn	11 08 33.9	-0.9
HSN	**Hsinchu** baz=305	0.97	311	*e*P	Pb	11 08 20.6	+0.1
HSN	baz=305			*e*S	Sn	11 08 34.1	-0.8
TWS1	**Kuangyinshan** baz=348	0.99	340	*e*P	Pn	11 08 21.2	-0.2
TWS1	baz=348			*e*S	Sn	11 08 35.8	+0.6
TCU	**Taichung** baz=268	1.01	269	P	Pn	11 08 22.4	+0.7
TCU	baz=268			*e*S	Sn	11 08 36.4	+0.5
YUS	**Yu-Shan** baz=228	1.02	229	⇓*i* P	Pb	11 08 21.4	-0.1
YUS	baz=228			S	Sb	11 08 35.9	+0.8
WNT	**Mingjian** baz=250	1.05	254	*i* P	Pn	11 08 22.6	+0.4
WNT	baz=250			S	Sn	11 08 37.6	+0.8
ALS	**Alishan** baz=241	1.11	234	*e*P	Pb	11 08 22.9	0.0
TWY	**Chenhua** baz=352	1.11	351	*e*P	Pg	11 08 23.6	+0.5
CHKT	**Chengkung** baz=191	1.13	200	*e*P	Pb	11 08 21.9	-1.3
YOJ	**Yonaguni jima** baz=68	1.16	75	*e*P	Pn	11 08 23.9	+0.1
YOJ	baz=68			*e*S	Sn	11 08 40.4	+0.9
YOJ	**Yonaguni jima**	1.16	75	P	Pn	11 08 23.8	+0.1
YOJ				S	Sn	11 08 39.5	0.0
CHN5	**Tsauling** baz=241	1.16	241	⇓*e*P	Pg	11 08 24.0	0.0
CHN5	baz=241			S	Sn	11 08 42.0	+2.3
ELDTW	**Lidau** baz=216	1.20	216	*e*P	Pn	11 08 23.0	-1.4
WGK	**Gukeng** baz=247	1.22	247	*e*P	Pg	11 08 25.4	+0.3
WTCT	**Ta-ch'eng** baz=258	1.41	258	*e*P	Pn	11 08 27.0	-0.2
WTCT	baz=258			*e*S	Sg	11 08 47.9	+0.9
WTP	**Ta-pu** baz=219	1.41	230	*e*P	Pb	11 08 27.7	-0.3
WTP	baz=219			*e*S	Sg	11 08 48.3	+1.2
CHY	**Chiayi** baz=243	1.41	242	*e*P	Pb	11 08 28.4	-0.4
TWK	**Hsinying** baz=234	1.49	233	*e*P	Pb	11 08 29.4	+0.1
TWK	baz=234			*e*S	Sg	11 08 50.5	+0.9
TWG	**Pinlang** baz=191	1.49	206	*e*P	Pn	11 08 26.6	-1.8
CHN1	**Nanshi** baz=226	1.51	230	P	Pb	11 08 29.7	0.0
CHN1	baz=226			*e*S	Sg	11 08 51.9	+1.6
CHN8	**Yiju** baz=242	1.66	241	*e*P	Pn	11 08 30.5	-0.1
IRIF	**Iriomote-Funau**	1.78	84	P	Pn	11 08 33.0	+0.7
IRIF				S	Sn	11 08 55.5	+0.6
TWM1	**Shoushan** baz=223	1.83	223	*e*P	Pb	11 08 35.4	+0.2
HATJ	**Hateruma jima**	1.85	93	P	Pn	11 08 33.4	+0.2
HATJ				*e*S	Sn	11 08 57.1	+0.5
JKRS	**Kuro-shima**	2.03	88	P	Pb	11 08 37.6	-0.9
JKRS				*e*S	Sn	11 09 02.3	+1.2
SCZT	**Fangliau** baz=195	2.08	211	*e*P	Pn	11 08 37.5	+1.1
PNG	**Penghu** baz=258	2.13	254	*e*P	Pn	11 08 36.7	-0.4
PNG	baz=258			*e*S	Sb	11 09 07.1	+0.5
JIJ	**Ishigaki jima**	2.16	84	P	Pn	11 08 37.5	0.0
JIJ				S	Sn	11 09 03.8	-0.5
JTJ	**Tarama**	2.70	79	*e*S	Sn	11 09 18.3	+0.7

*ISCJB **28** 11:21:36.1±0.5, 50°.32N±0°.04×18°.71E±0°.03, h0km, Error ellipse: s-maj=5.6km s-min=2.3km az=10.2*
*WAR **28** 11:21:36.9, 50°.28N×18°.83E*
*CSEM **28** 11:21:37.2±0.2, 50°.33N×18°.72E, h2km, ML2.7/8, Error ellipse: s-maj=6.6km s-min=2.6km az=10.0*
*IPEC **28** 11:21:37.3±0.5, 50°.32N×18°.78E, h1km±1km, ML1.8/3, Error ellipse: s-maj=2.5km s-min=2.4km az=63.0*
*PRU **28** 11:21:38.2, 50°.29N×18°.72E, h0km*

ISC 28 11:21:37.4±0.8, 50°.29N±0°.04×18°.78E±0°.02, h0km, n35, σ0s88/67, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne** comp=Z,14nm,0.5s	0.61	222	*e*PG	Pg	11 21 49.1	0.0
OKC				*e*SG	Sg	11 21 55.8	-1.1
OKC	**Ostrava-Krasne** 14nm,0.5s	0.61	222	Pg	Pg	11 21 49.1	0.0
OKC				Sg	Sg	11 21 55.8	-1.1
OJC	**Ojcow**	0.66	96	*i* Pg	Pg	11 21 49.9	-0.2
OJC				*e*Sg	Sg	11 21 58.5	-0.1
OJC	**Ojcow**	0.66	96	*i* Pg	Pg	11 21 49.9	-0.2
OJC				*e*Sg	Sg	11 21 58.5	-0.1
MORC	**Moravsky Berou** 14nm,0.3s,baz=55	0.95	238	*e*Pg	Pg	11 21 55.6	0.0
MORC				*e*Sg	Sg	11 22 07.4	-0.4
KRLC	**Kraliky**	1.30	261	*e*PG	Pg	11 22 01.6	-0.7
KRLC				*e*SG	Sg	11 22 18.3	-0.9
KRLC	**Kraliky**	1.30	261	Pg	Pg	11 22 01.6	-0.7
KRLC				Sg	Sg	11 22 18.3	-0.9
NIE	**Niedzica**	1.32	131	*e*Pg	Pn	11 22 03.4	+0.2
NIE				*e*Sg	Sb	11 22 21.3	+0.6
NIE	**Niedzica**	1.32	131	*e*Pg	Pn	11 22 03.4	+0.2
NIE				*e*Sg	Sb	11 22 21.3	+0.6
DPC	**Dobruska-Polom**	1.57	273	*e*PG	Pn	11 22 06.4	-0.3
DPC				*e*SG	Sn	11 22 27.3	-0.5
DPC	**Dobruska-Polom**	1.57	273	Pg	Pn	11 22 06.4	-0.3
DPC				Sg	Sn	11 22 27.3	-0.5
KSP	**Ksiaz** 8.5nm,0.3s,baz=54	1.68	290	*e*Pg	Pg	11 22 09.7	+0.2
KSP				*e*Sg	Sg	11 22 31.6	+0.3
KSP	**Ksiaz**	1.68	290	*e*Pg	Pg	11 22 09.7	+0.2
KSP				*e*Sg	Sg	11 22 31.6	+0.3
VRAC	**Vranov**	1.72	236	*e*Pn	Pn	11 22 08.7	0.0
VRAC				*e*Sg	Sn	11 22 31.7	+0.3
UPC	**Upice** comp=Z,3.5nm,0.4s	1.78	278	*e*PG	Pb	11 22 10.5	-0.5
UPC				*e*SG	Sb	11 22 34.0	+0.2
UPC	**Upice** 3.5nm,0.4s	1.78	278	Pg	Pb	11 22 10.5	-0.5
UPC				Sg	Sb	11 22 34.0	+0.2
VYHS	**Vyhne**	1.80	179	*e*PN	Pn	11 22 09.3	-0.4
VYHS				*e*SN	Sn	11 22 33.9	+0.6
VYHS	**Vyhne**	1.80	179	*e*Pn	Pn	11 22 09.3	-0.4
VYHS				*e*Sn	Sn	11 22 33.9	+0.6
STHS	**Stebnicka Huta**	1.82	118	*e*PN	Pb	11 22 11.7	+0.1
STHS				*e*SN	Sb	11 22 35.5	+0.5
STHS	**Stebnicka Huta**	1.82	118	*e*Pn	Pb	11 22 11.7	+0.1
STHS				*e*Sn	Sb	11 22 35.5	+0.5
KRUC	**Moravsky** baz=50	1.98	232	*e*Pn	Pn	11 22 12.0	-0.1
KRUC	8.3nm,0.5s,baz=50			*e*Sn	Sn	11 22 38.6	+1.0
KECS	**Kecovo**	2.13	148	*e*PN	Pn	11 22 15.8	+1.6
KECS				*e*SN	Sn	11 22 38.9	-2.4
KECS	**Kecovo**	2.13	148	*e*Pn	Pn	11 22 15.8	+1.6
KECS				*e*Sn	Sn	11 22 38.9	-2.4
CRVS	**Cervenica-Dubn**	2.23	127	*e*PN	Pn	11 22 16.5	+0.8
CRVS				*e*SN	Sn	11 22 44.7	+0.7

CRVS	**Cervenica-Dubn**	**2.23**	**127**	*e*Pn	**Pn**	**11 22 16.5**	**+0.8**
CRVS				*e*Sn	**Sn**	**11 22 44.7**	**+0.7**
TREC	**Trest**	**2.35**	**246**	*e*SG	**Sb**	**11 22 51.2**	**+0.9**
	comp=Z,7.4nm,0.4s						
TREC	**Trest**	**2.35**	**246**	Sg	**Sb**	**11 22 51.2**	**+0.9**
	7.4nm,0.4s						
KOLS	**Kolonicke sedl**	**2.65**	**120**	*e*PN	**Pn**	**11 22 21.0**	**-0.4**
KOLS				*e*SN	**Sn**	**11 22 53.1**	**-1.1**
KOLS	**Kolonicke sedl**	**2.65**	**120**	*e*Pn	**Pn**	**11 22 21.0**	**-0.4**
KOLS				*e*Sn	**Sn**	**11 22 53.1**	**-1.1**
PVCC	**Panska Ves**	**2.70**	**277**	*e*PG	**Pb**	**11 22 26.9**	**+0.3**
PVCC				*e*SG	**Sg**	**11 23 03.2**	**-1.0**
	comp=Z,11nm,0.4s						
PVCC	**Panska Ves**	**2.70**	**277**	Pg	**Pb**	**11 22 26.9**	**+0.3**
PVCC				Sg	**Sg**	**11 23 03.2**	**-1.0**
	11nm,0.4s						
PRU	**Pruhonice**	**2.74**	**265**	*e*PG	**Pb**	**11 22 27.2**	**-0.1**
PRU				*e*SG	**Sb**	**11 23 02.6**	**+1.2**
	comp=Z,6.1nm,0.6s						
PRU	**Pruhonice**	**2.74**	**265**	Pg	**Pb**	**11 22 27.2**	**-0.1**
PRU				Sg	**Sb**	**11 23 02.6**	**+1.2**
	6.1nm,0.6s						
KHC	**Kasperske Hory**	**3.57**	**253**	*e*PG	**Pg**	**11 22 45.5**	**-0.3**
KHC				*e*SG	**Sb**	**11 23 28.5**	**+3.3**
KHC	**Kasperske Hory**	**3.57**	**253**	Pg	**Pg**	**11 22 45.5**	**-0.3**

*ISCJB **28** 11:28:52.3±0.6,34°.08N±0°.06×103°.77E±0°.07,h10km, mb3.6/9,Error ellipse: s-maj=9.3km s-min=7.0km az=139.5*
*IDC **28** 11:28:52.2±0.9,34°.04N×103°.86E,h0km,mb3.5/10, mb1 3.7/11,mb1mx3.6/27,mbtmp3.5/11,ML3.3/1,Error ellipse: s-maj=43.1km s-min=17.6km az=55.0*
*BJI **28** 11:28:53.2,33°.98N×103°.62E,h11km,ML3.3/9,Ms3.3/1, Ms7 3.1/3*

ISC 28 11:28:54.6±0.8,34°.08N±0°.07×103°.69E±0°.06,h10km,n16, σ1§52/19,mb3.6/9,Gansu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LZH	**Lanzhou**	**2.00**	**4**	*e*Pg	**Pb**	**11 29 30.5**	**-0.7**
LZH				Sg	**Sg**	**11 29 58.3**	**-0.8**
LZH				smax	smax		
	comp=N,540nm,0.8s						
LZH				smax	smax		
	comp=E,340nm,0.6s						
XAN	**Xi'an**	**4.34**	**89**	Pn	**Pn**	**11 29 59.3**	**-1.4**
XAN				Pg	**Pb**	**11 30 10.8**	**-0.3**
XAN				Sn	**Sn**	**11 30 49.8**	**-1.7**
XAN				Sg	**Sb**	**11 31 07.5**	**+3.9**
XAN				smax	smax		
	comp=N,50nm,0.5s						
XAN				smax	smax		
	comp=E,26nm,0.6s						
GTA	**Gaotai**	**6.16**	**331**	Pn	**Pn**	**11 30 27.8**	**+2.1**
GTA				Pg	Pg	11 30 47.8	-4.8
GTA				Sg	Sb	11 32 04.0	+8.1
GTA				smax	smax		
	comp=N,5.0nm,1.3s						
GTA				smax	smax		
	comp=E,7.0nm,1.2s						
SONM	**Songino Array**	**13.89**	**8**	Pn	**Pn**	**11 32 12.3**	**+0.8**
	comp=E,0.1nm,0.3s,baz=184,slow=17,SNR=3.1						
CMAR	**Chiang Mai Arr**	**16.13**	**196**	Pn	**P**	**11 32 46.5**	**+1.8**
	baz=10,slow=11,SNR=7.3						
KSRS	**Korea Array**	**19.94**	**73**	P	**Pn**	**11 33 29.1**	**+0.8**
	comp=E,0.1nm,0.3s,baz=270,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	**20.57**	**314**	P	Pn	11 33 34.3	-1.4
	comp=E,0.8nm,0.6s,baz=107,slow=13,SNR=9.4						
ZALV	**Zalesovo Beam**	**23.91**	**332**	P	**P**	**11 34 08.6**	**+0.2**
	comp=E,0.5nm,0.4s,baz=133,slow=10,SNR=4.8						
KURBB	**Kurchatov Arra**	**24.70**	**320**	P	**P**	**11 34 15.8**	**+0.1**
	comp=E,0.5nm,0.6s,baz=120,slow=11,SNR=6.1						
ARCES	**ARCESS Array B**	**54.41**	**335**	P	**P**	**11 38 21.4**	**0.0**
	comp=E,1.6nm,0.8s,baz=79,slow=5.7,SNR=4.4						
FINES	**FINESS Array B**	**54.92**	**325**	P	**P**	**11 38 24.9**	**-0.3**
	comp=E,0.5nm,0.4s,baz=92,slow=6.6,SNR=9.1						
BRTR	**Keskin Array B**	**55.01**	**298**	P	**P**	**11 38 26.1**	**-0.3**
	comp=E,0.2nm,0.4s,baz=78,slow=6.0,SNR=4.0						
WRA	**Warramunga Arr**	**61.14**	**147**	P	**P**	**11 39 07.8**	**-1.4**
	comp=E,0.5nm,0.6s,baz=342,slow=7.1,SNR=6.6						
ASAR	**Alice Springs**	**64.22**	**149**	P	**P**	**11 39 28.4**	**-1.4**
	comp=E,0.3nm,0.6s,baz=333,slow=6.8,SNR=6.5						
GERES	**GERESS Array B**	**65.24**	**313**	P	**P**	**11 39 36.7**	**+0.4**
	comp=E,0.3nm,0.6s,baz=58,slow=12,SNR=3.6						
ILAR	**Eielson Array**	**67.32**	**26**	P	**P**	**11 39 47.8**	**-1.5**
	comp=E,0.3nm,0.9s,baz=282,slow=6.3,SNR=4.3						

*NIED **28** 11:36:00,24°.30N×121°.60E,h56km,Mw4.3 Best double couple: M0 2.86000×10^15 NP1:φ=61.00000°,δ=79.00000°, λ=134.00000°. NP2:φ=163.00000°,δ=45.00000°,λ=15.00000°.*
*IDC **28** 11:36:08.6±0.9,24°.22N×121°.89E,h0km,mb3.7/10, mb1 3.9/10,mb1mx3.7/26,mbtmp3.7/10,MS3.5/8, Ms1 3.5/8,ms1mx3.1/47,Error ellipse: s-maj=32.5km s-min=18.4km az=66.0*
*BJI **28** 11:36:09.2,24°.17N×121°.83E,h4km,mB4.4/7,mb4.3/11, ML4.5/6,Ms4.3/10,Ms7 4.2/10*
*ISCJB **28** 11:36:11.3±0.3,24°.16N±0°.01×121°.80E±0°.02,h6km±2km, mb3.7/11,MS3.5/7,Error ellipse: s-maj=2.6km s-min=1.9km az=35.1*
*TAP **28** 11:36:11.7,24°.17N×121°.73E,h11km,ML4.4,B*
*JMA **28** 11:36:11.7±0.2,24°.30N×121°.65E,h80km,M3.6*

ISC 28 11:36:11.4±0.6,24°.15N±0°.02×121°.82E±0°.02,h13km±3km, n93,σ1§40/141,mb3.8/11,MS3.5/7,13C-7D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.17**	**335**	*i* P	**Pg**	**11 36 15.3**	**-0.1**
	baz=6.0						
EHP				S	**Sg**	**11 36 17.8**	**-0.4**
	baz=6.0						
TWD	**Chiawan**	**0.22**	**251**	⇑*i*P	**Pg**	**11 36 15.4**	**-0.7**
	baz=242						
TWD				*i* S	**Sg**	**11 36 18.1**	**-1.2**
	baz=242						
HWA	**Hwalien**	**0.26**	**229**	*e*P	**Pg**	**11 36 17.3**	**+0.4**
	baz=222						
ENA	**Nanau**	**0.28**	**345**	⇑*i*P	**Pg**	**11 36 17.2**	**-0.1**
	baz=2.0						
ENA				S	**Sg**	**11 36 21.4**	**+0.1**
	baz=2.0						
ESF	**Shoufeng Towns**	**0.40**	**226**	*e*P	**Pg**	**11 36 19.2**	**-0.1**
	baz=224						
ESF				*e*S	**Sg**	**11 36 24.8**	**0.0**
	baz=224						
TWC	**Suao**	**0.46**	**3**	⇑*i*P	**Pb**	**11 36 20.8**	**-0.5**
	baz=10.0						
ESL	**Shilin**	**0.49**	**227**	*i* P	**Pg**	**11 36 20.5**	**-0.5**
	baz=225						
ESL				*e*S	**Sg**	**11 36 27.3**	**-0.3**
	baz=225						
NNS	**Nan Shan**	**0.50**	**305**	⇑*i*P	**Pg**	**11 36 20.4**	**-0.9**
	baz=310						
NNS				S	**Sg**	**11 36 26.5**	**-1.5**
	baz=310						
WHF	**Hehuan Shan**	**0.51**	**269**	⇑*i*P	**Pg**	**11 36 20.4**	**-1.1**
	baz=268						
WHF				*e*S	**Sg**	**11 36 26.4**	**-1.9**
	baz=268						
TEGC	**Jichi Village**	**0.51**	**210**	*e*P	**Pn**	**11 36 24.0**	**-0.4**
	baz=192						
TWE	**Neicheng**	**0.58**	**346**	⇑*i*P	**Pb**	**11 36 23.0**	**-0.5**
	baz=354						
TWE				S	**Sg**	**11 36 30.3**	**-0.3**
	baz=354						
TWT	**Tachien**	**0.60**	**280**	⇑*i*P	**Pg**	**11 36 22.6**	**-0.5**
	baz=279						
TWT				S	**Sg**	**11 36 29.9**	**-1.2**
	baz=279						
ILA	**Ilan**	**0.61**	**354**	P	**Pb**	**11 36 23.9**	**-0.1**
	baz=1.0						
ILA				S	**Sb**	**11 36 31.9**	**-0.7**
	baz=1.0						
NSK	**Sanguang**	**0.67**	**321**	⇑*i*P	**Pg**	**11 36 23.9**	**-0.6**
	baz=326						
NSK				*i* S	**Sg**	**11 36 32.1**	**-1.3**
	baz=326						
EHY	**Hungye**	**0.79**	**216**	⇑*e*P	**Pg**	**11 36 25.7**	**-0.9**
	baz=212						
TWA	**Mucha**	**0.85**	**345**	*e*P	**Pb**	**11 36 28.1**	**0.0**
	baz=350						
TWB1	**Santiao Chiao**	**0.87**	**10**	P	**Pb**	**11 36 28.5**	**+0.2**
	baz=8.0						
TWB1				S	**Sb**	**11 36 40.0**	**+0.1**
	baz=8.0						
SMLT	**Sun Moon Lake**	**0.88**	**253**	P	**Pg**	**11 36 27.7**	**-0.9**
	baz=251						
SMLT				S	**Sg**	**11 36 38.4**	**-1.8**
	baz=251						
NSTT	**Nanjuang**	**0.89**	**303**	⇑P	**Pg**	**11 36 27.8**	**-0.7**
	baz=305						
NSTT				*e*S	**Sg**	**11 36 38.4**	**-1.8**
	baz=305						
NWF	**Wu-fen Shan**	**0.92**	**358**	*e*P	**Pn**	**11 36 29.7**	**-0.4**
	baz=353						
NWF				*e*S	**Sb**	**11 36 40.9**	**-0.4**
	baz=353						
TYC	**Yuchr**	**0.92**	**255**	⇓*i*P	**Pg**	**11 36 28.1**	**-0.9**
	baz=246						
TYC				*e*S	**Sg**	**11 36 38.4**	**-2.7**
	baz=246						
TAP1	**Taipei**	**0.92**	**343**	P	**Pb**	**11 36 29.6**	**+0.4**
	baz=346						
TAP1				*e*S	**Sg**	**11 36 40.6**	**-0.7**
	baz=346						
TAP	**Taipei**	**0.93**	**342**	*e*P	**Pb**	**11 36 29.5**	**+0.1**
	baz=346						
TAP				*e*S	**Sg**	**11 36 41.2**	**-0.3**
	baz=346						
TWF1	**Yuli**	**0.93**	**211**	*e*P	**Pg**	**11 36 27.8**	**-1.6**
	baz=218						
TWQ1	**Liyutan**	**0.98**	**282**	⇑P	**Pg**	**11 36 30.0**	**-0.2**
	baz=292						
TWQ1				*e*S	**Sg**	**11 36 42.4**	**-0.6**
	baz=292						
NCU	**National Centr**	**1.00**	**325**	*e*P	**Pn**	**11 36 31.2**	**+0.1**
	baz=328						
NCU				*e*S	**Sn**	**11 36 45.0**	**-0.1**
	baz=328						
NSY	**Sanyi**	**1.00**	**285**	*e*P	**Pg**	**11 36 30.7**	**0.0**
	baz=286						
NSY				*e*S	**Sg**	**11 36 43.6**	**-0.3**
	baz=286						
HSN	**Hsinchu**	**1.01**	**310**	*e*P	**Pb**	**11 36 31.2**	**+0.4**
	baz=314						
HSN				*e*S	**Sb**	**11 36 45.2**	**+1.2**
	baz=314						
TWS1	**Kuangyinshan**	**1.01**	**339**	*e*P	**Pn**	**11 36 31.4**	**0.0**
	baz=350						
TWS1				*e*S	**Sn**	**11 36 45.9**	**+0.4**
	baz=350						
YUS	**Yu-Shan**	**1.03**	**231**	⇓*i*P	**Pg**	**11 36 30.9**	**-0.5**
	baz=229						
YUS				S	**Sg**	**11 36 44.1**	**-0.8**
	baz=229						
TCU	**Taichung**	**1.05**	**270**	⇑*i*P	**Pb**	**11 36 32.0**	**+0.6**
	baz=270						
TCU				*e*S	**Sg**	**11 36 45.6**	**+0.4**
	baz=270						
WNT	**Mingjian**	**1.07**	**256**	*e*P	**Pg**	**11 36 32.4**	**+0.2**
	baz=250						
WNT				*e*S	**Sb**	**11 36 47.3**	**+1.4**
	baz=250						
CHKT	**Chengkung**	**1.13**	**202**	*e*P	**Pb**	**11 36 32.1**	**-0.7**
	baz=191						
YOJ	**Yonaguni jima**	**1.13**	**74**	⇑*e*P	**Pn**	**11 36 33.9**	**+1.0**
	baz=66						
YOJ				*e*S	**Sn**	**11 36 51.2**	**+3.0**
	baz=66						
YOJ	**Yonaguni jima**	**1.13**	**74**	P	**Pn**	**11 36 34.1**	**+1.2**
YOJ				S	**Sn**	**11 36 50.9**	**+2.6**
ALS	**Alishan**	**1.13**	**236**	⇓*i*P	**Pb**	**11 36 32.6**	**-0.4**
	baz=225						
ALS				*e*S	**Sg**	**11 36 48.3**	**+0.4**
	baz=225						
TWY	**Chenhua**	**1.14**	**350**	*e*P	**Pn**	**11 36 33.8**	**+0.7**
	baz=3.0						
CHN5	**Tsauling**	**1.18**	**242**	⇓*e*P	**Pb**	**11 36 33.6**	**-0.1**
	baz=242						
CHN5				*e*S	**Sn**	**11 36 50.9**	**+1.1**
	baz=242						
ELDTW	**Lidau**	**1.21**	**218**	*e*P	**Pn**	**11 36 33.0**	**-1.1**
	baz=217						
WGK	**Gukeng**	**1.24**	**248**	*e*P	**Pn**	**11 36 35.0**	**+0.5**
	baz=249						
WTP	**Ta-pu**	**1.43**	**231**	⇓*e*P	**Pn**	**11 36 37.2**	**+0.2**
	baz=232						
WTP				S	**Sb**	**11 36 57.6**	**+1.6**
	baz=232						
CHY	**Chiayi**	**1.44**	**243**	*e*P	**Pn**	**11 36 38.1**	**+1.0**
	baz=244						
CHY				*e*S	**Sn**	**11 36 56.8**	**+0.9**
	baz=244						
WTCT	**Ta-ch'eng**	**1.44**	**259**	*e*P	**Pn**	**11 36 37.2**	**0.0**
	baz=259						
WTCT				*e*S	**Sn**	**11 36 57.0**	**+1.0**
	baz=259						
PCYT	**Pengchaiyu**	**1.49**	**9**	*e*P	**Pn**	**11 36 38.2**	**+0.3**
	baz=9.0						
TWG	**Pinlang**	**1.49**	**208**	*e*P	**Pn**	**11 36 35.7**	**-2.2**
	baz=192						
TWK	**Hsinying**	**1.51**	**234**	*e*P	**Pn**	**11 36 39.2**	**+1.0**
	baz=236						
TWK				*e*S	**Sb**	**11 36 59.8**	**+1.4**
	baz=236						
CHN1	**Nanshi**	**1.53**	**231**	*e*P	**Pn**	**11 36 39.1**	**+0.7**
	baz=232						
CHN1				*e*S	**Sg**	**11 37 00.7**	**+0.1**
	baz=232						
WSF	**Szhu**	**1.55**	**251**	*e*P	**Pn**	**11 36 39.1**	**+0.4**
	baz=252						
WSF				*e*S	**Sb**	**11 37 00.6**	**+1.0**
	baz=252						
SGST	**Jiashian**	**1.56**	**227**	⇓*e*P	**Pn**	**11 36 40.0**	**+1.1**
	baz=228						
CHN8	**Yiju**	**1.68**	**242**	*e*P	**Pn**	**11 36 41.4**	**+0.9**
	baz=229						
CHN8				*e*S	**Sb**	**11 37 04.6**	**+1.4**
	baz=229						
CHN3	**Shinhua**	**1.71**	**232**	*e*P	**Pn**	**11 36 42.4**	**+1.5**
	baz=234						
ECL	**Taimali**	**1.74**	**207**	*e*P	**Pn**	**11 36 40.6**	**-0.7**
	baz=194						
IRIF	**Iriomote-Funau**	**1.75**	**84**	P	**Pb**	**11 36 42.4**	**-1.0**
IRIF				*e*S	**Sg**	**11 37 05.9**	**-1.9**
SCLT	**Jiali**	**1.78**	**237**	*e*P	**Pn**	**11 36 42.2**	**+0.3**
	baz=240						
HATJ	**Hateruma jima**	**1.81**	**93**	P	**Pb**	**11 36 44.0**	**-0.5**
HATJ				*e*S	**Sg**	**11 37 08.0**	**-1.8**
TAI1	**Yung-k'ang**	**1.83**	**233**	*e*P	**Pn**	**11 36 42.4**	**-0.2**
	baz=235						
TWM1	**Shoushan**	**1.84**	**224**	P	**Pb**	**11 36 45.2**	**+0.2**
	baz=226						
SGLT	**Jiouru**	**1.87**	**221**	*e*P	**Pb**	**11 36 45.7**	**+0.2**
	baz=212						
EAST	**Anshuo**	**1.98**	**207**	*e*P	**Pn**	**11 36 43.4**	**-1.2**
	baz=196						
TAW	**Tawu**	**1.98**	**206**	*e*P	**Pn**	**11 36 46.4**	**+1.8**
	baz=195						
JKRS	**Kuro-shima**	**2.00**	**87**	P	**Pb**	**11 36 46.5**	**-1.1**
JKRS				*e*S	**Sb**	**11 37 12.4**	**-0.1**
SCZT	**Fangliau**	**2.09**	**212**	*e*P	**Pn**	**11 36 47.7**	**+1.6**
	baz=197						
LAY	**Lan-yu**	**2.12**	**187**	*e*P	**Pn**	**11 36 46.0**	**-0.6**
	baz=189						
JIJ	**Ishigaki jima**	**2.13**	**84**	P	**Pn**	**11 36 47.8**	**+1.1**
JIJ				S	**Sb**	**11 37 15.1**	**-1.1**
PNG	**Penghu**	**2.15**	**255**	*e*P	**Pn**	**11 36 46.1**	**-0.9**
	baz=258						
PNG				*e*S	**Sn**	**11 37 14.3**	**+0.6**
	baz=258						
TWP	**Hsiaoliuchiu**	**2.24**	**217**	*e*P	**Pb**	**11 36 50.8**	**-1.0**
	baz=239						
HEN	**Hengchun**	**2.36**	**205**	*e*P	**Pn**	**11 36 51.6**	**+1.8**
	baz=197						
TWK1	**Hengchun**	**2.39**	**203**	*e*P	**Pn**	**11 36 50.2**	**0.0**
	baz=195						
TSEB	**Hengchuen, Pin**	**2.40**	**201**	*e*P	**Pn**	**11 36 52.8**	**+2.5**
	baz=193						
JTJ	**Tarama**	**2.67**	**79**	P	**Pn**	**11 36 55.6**	**+1.5**
JTJ				*e*S	**Sn**	**11 37 28.1**	**+1.7**
QZH	**Quanzhou**	**3.04**	**286**	⇓*i*Pn	**Pn**	**11 36 58.5**	**-0.8**
QZH				Sn	**Sn**	**11 37 33.5**	**-2.1**
QZH				smax	smax		
	comp=N,3μm,1.4s						
QZH				smax	smax		
	comp=E,1μm,1.2s						
QZH				LR	LR		
	comp=N,2μm,9.9s						
QZH				LR	LR		
	comp=E,3μm,8.8s						
QZH				LR	LR		
	comp=Z,4μm,11.7s						
KNM	**Kinmen**	**3.10**	**276**	*e*P	**Pn**	**11 37 01.4**	**+1.3**
	baz=275						
NJ2	**Nanjing**	**8.29**	**342**	*e*P	**Pn**	**11 38 14.0**	**+2.6**
NJ2				S	**Sn**	**11 39 44.0**	**-1.0**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				smax	smax		
	comp=N,170nm,1.1s						
NJ2				smax	smax		
	comp=E,100nm,0.9s						
NJ2				LR	LR		
	comp=N,890nm,12.6s						
NJ2				LR	LR		
	comp=E,1μm,8.2s						
NJ2				LR	LR		
	comp=Z,740nm,13.2s						
WHN	**Wuhan**	**9.20**	**315**	*e*P	Pn	11 38 38.8	+15
WHN				S	Sn	11 40 01.3	-5.9
WHN				LR	LR		
	comp=N,2μm,9.7s						
WHN				LR	LR		
	comp=E,2μm,10.2s						
KSRS	**Korea Array**	**14.25**	**20**	Pn	P	11 39 36.9	-3.3
	comp=E,0.1nm,0.3s,baz=207,slow=13,SNR=5.0						
HHC	**Hu-ho-hao-te**	**18.74**	**335**	*e*P	**P**	**11 40 29.8**	**-0.3**
HHC				sP	**sP**	**11 40 37.0**	**+1.7**
HHC				PP	**PnPn**	**11 40 46.5**	**+3.9**
HHC				S	**Sn**	**11 43 58.8**	**-1.2**
HHC				sS	**S**	**11 44 04.0**	**+0.8**
HHC				SS	**SnSn**	**11 44 23.3**	**+9.2**
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,210nm,6.5s						
HHC				LR	LR		
	comp=N,610nm,12.1s						
HHC				LR	LR		
	comp=E,350nm,12.9s						
HHC				LR	LR		
	comp=Z,590nm,12.6s						
MJAR	**Matsushiro Arr**	**18.74**	**45**	LR	LR	11 47 53.7	
	comp=Z,87nm,20.0s,baz=225,slow=38						
LZH	**Lanzhou**	**19.54**	**312**	*e*P	**P**	**11 40 39.5**	**+0.5**
LZH				pP	**pP**	**11 40 42.3**	**-0.3**
LZH				sP	**sP**	**11 40 44.5**	**+0.3**
LZH				PP	**PnPn**	**11 40 56.3**	**+2.6**
LZH				*e*S	**Sn**	**11 44 16.3**	**-3.2**
LZH				sS	**sS**	**11 44 24.5**	**-0.8**
LZH				SS	SnSn	11 44 44.5	+11
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,95nm,5.2s						
LZH				LR	LR		
	comp=N,420nm,13.2s						
LZH				LR	LR		
	comp=E,490nm,12.5s						
LZH				LR	LR		
	comp=Z,750nm,11.1s						
CMAR	**Chiang Mai Arr**	**22.04**	**260**	P	**P**	**11 41 06.3**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=69,slow=9.4,SNR=6.3						
GTA	**Gaotai**	**24.02**	**315**	*e*P	**P**	**11 41 26.8**	**+0.6**
GTA				pP	pP	11 41 36.3	+6.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ASAJ	**Asahikawa**	**26.18**	**35**	LR	LR	11 52 29.2	
	comp=Z,95nm,18.6s,baz=340,slow=38						
SONM	**Songino Array**	**26.63**	**336**	P	**P**	**11 41 48.6**	**-1.1**
	comp=Z,2.4nm,1.1s,baz=152,slow=10,SNR=10.0						
SONM				LR	LR	11 53 27.2	
	comp=Z,179nm,18.8s,baz=246,slow=39						
MKAR	**Makanchi Array**	**38.77**	**316**	P	**P**	**11 43 35.0**	**-0.6**
	comp=Z,1.2nm,0.8s,baz=109,slow=9.8,SNR=14						
MKAR				LR	LR	12 00 42.5	
	comp=Z,62nm,18.5s,baz=354,slow=38						
PETK	**Petropavlovsk-**	**39.57**	**34**	LR	LR	12 00 22.4	
	comp=Z,27nm,20.6s,baz=307,slow=37						
ZALV	**Zalesovo Beam**	**40.59**	**327**	P	**P**	**11 43 48.5**	**-2.1**
	comp=Z,0.9nm,0.8s,baz=95,slow=7.8,SNR=5.1						
ZALV				LR	LR	12 01 52.8	
	comp=Z,68nm,18.0s,baz=70,slow=38						
KURBB	**Kurchatov Arra**	**42.51**	**320**	P	**P**	**11 44 05.5**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=117,slow=7.6,SNR=5.3						
WRA	**Warramunga Arr**	**45.49**	**163**	P	**P**	**11 44 29.6**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=345,slow=8.6,SNR=6.6						
ASAR	**Alice Springs**	**48.96**	**165**	P	**P**	**11 44 57.5**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=344,slow=8.0,SNR=6.1						
KBZ	**Khabaz**	**65.95**	**309**	LR	LR	12 20 28.1	
	comp=Z,48nm,20.3s,baz=28,slow=40						
ILAR	**Eielson Array**	**68.97**	**27**	P	**P**	**11 47 15.3**	**-0.8**
	comp=Z,0.3nm,1.0s,baz=275,slow=12,SNR=3.5						
FINES	**FINESS Array B**	**71.77**	**330**	P	**P**	**11 47 32.2**	**-1.0**
	comp=Z,2.8nm,1.0s,baz=65,slow=9.8,SNR=6.3						
BRTR	**Keskin Array B**	**73.66**	**307**	P	**P**	**11 47 44.8**	**-0.4**
	comp=Z,0.9nm,0.7s,baz=97,slow=5.1,SNR=6.2						
NOA	**NORSAR Array B**	**78.52**	**332**	LR	LR	12 26 01.9	
	comp=Z,35nm,19.2s,baz=70,slow=38						

KRSC 28 11:45:35.2±2.3,53°.09N×167°.62E,h41km±41km,ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**2.33**	**336**	*e*S	Sn	11 46 38.2	-0.1
MKZ	**Mys Kozlova**	**3.79**	**295**	*e*P	Pn	11 46 33.6	+2.7
MKZ				S	Sn	11 47 16.1	+1.9
SPN	**Mys Shipunski**	**4.58**	**273**	S	Sn	11 47 36.4	+2.6
SDLR	**Sedlovina**	**5.26**	**276**	P	Pn	11 46 55.5	+4.2
UGLR	**Uglovaya**	**5.30**	**275**	P	Pn	11 46 55.9	+4.0
KRER	**Koryakskii**	**5.34**	**276**	P	Pn	11 46 56.6	+4.0
AVH	**Avacha**	**5.35**	**275**	P	Pn	11 46 56.8	+4.3
RUS	**Russkaya**	**5.57**	**267**	P	Pn	11 46 59.2	+3.8
MTVR	**Mutnovka**	**5.76**	**268**	P	Pn	11 47 01.8	+3.5
MTVR				S	Sn	11 48 05.8	+2.6
GNL	**Ganaly**	**5.82**	**280**	P	Pn	11 47 03.5	+4.4
ASAK	**Asacha**	**5.95**	**267**	P	Pn	11 47 04.4	+3.6
ASAK				S	Sn	11 48 10.0	+2.4

*IDC **28** 11:56:04.7±6.3,35°.97S×177°.97E,h164km±36km,mb3.8/3, mb1 4.1/4,mb1mx3.6/17,mbtmp3.9/4,MS3.7/1,Ms1 3.7/1, ms1mx2.6/22,Error ellipse: s-maj=80.3km s-min=20.5km az=49.0*
*WEL **28** 11:56:08.5±0.3,36°.32S×177°.98E,h181km±3km,ML4.3/13, Error ellipse: s-maj=4.4km s-min=3.4km az=90.0*
*NEIC **28** 11:56:08.5,36°.32S×177°.98E,h181km,mb4.2/3,After WEL.*

ISC 28 11:56:09.2±1.2,36°.62S±0°.10×177°.9E±0°.1,h218km±8km, n87,σ1§27/97,mb4.0/5,3D,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**1.01**	**160**	PN	**Pn**	**11 56 38.5**	**-2.3**
MXZ				SN	**S**	**11 57 01.2**	**-4.4**
MXZ				AML	AML	11 57 03.2	
MXZ				AML	AML	11 57 03.9	
MXZ				AML	AML	11 57 03.9	
MXZ	**

ALRZ	**Allen Road**	**2.29 211**	⇓PN	**Pn**	**11 56 52.8 +0.8**
ALRZ	**Allen Road**	**2.29 211**	Pn	**Pn**	**11 56 52.8 +0.8**
RAHZ	**Arahi**	**2.38 195**	PN	**Pn**	**11 56 53.3 +0.4**
RAHZ	**Arahi**	**2.38 195**	Pn	**Pn**	**11 56 53.3 +0.4**
MHGZ	**Mahia Peninsul**	**2.53 179**	PN	**Pn**	**11 56 54.9 +0.4**
MHGZ	**Mahia Peninsul**	**2.53 179**	Pn	**Pn**	**11 56 54.9 +0.4**
NMHZ	**Naumai**	**2.62 198**	PN	**Pn**	**11 56 56.4 +0.9**
NMHZ	**Naumai**	**2.62 198**	Pn	**Pn**	**11 56 56.4 +0.9**
NMHZ			Sn	S	11 57 36.7 +5.0
BKZ	**Black Stump Fm**	**2.77 203**	PN	**Pn**	**11 56 57.1 -0.1**
BKZ			AML	AML	11 57 40.6
BKZ			AML	AML	11 59 28.2
BKZ	**Black Stump Fm**	**2.77 203**	Pn	**Pn**	**11 56 57.1 -0.1**
MCHZ	**McNeill Hill**	**2.97 198**	PN	**Pn**	**11 57 00.2 +0.8**
MCHZ	**McNeill Hill**	**2.97 198**	Pn	**Pn**	**11 57 00.2 +0.8**
MCHZ			Sn	**S**	**11 57 43.1 +4.4**
TUVZ	**Tukino**	**3.17 213**	⇓PN	**Pn**	**11 57 02.6 +0.7**
TUVZ	**Tukino**	**3.17 213**	Pn	**Pn**	**11 57 02.6 +0.7**
BHHZ	**Black Hill Sta**	**3.20 206**	PN	**Pn**	**11 57 02.2 +0.1**
BHHZ	**Black Hill Sta**	**3.20 206**	Pn	**Pn**	**11 57 02.2 +0.1**
FWVZ	**Far West T-bar**	**3.21 214**	PN	**Pn**	**11 57 03.1 +0.8**
FWVZ	**Far West T-bar**	**3.21 214**	Pn	**Pn**	**11 57 03.1 +0.8**
WNVZ	**Wahianoa**	**3.25 213**	PN	**Pn**	**11 57 03.3 +0.6**
WNVZ	**Wahianoa**	**3.25 213**	Pn	**Pn**	**11 57 03.3 +0.6**
MOVZ	**Moawhango**	**3.25 210**	PN	**Pn**	**11 57 02.7 0.0**
MOVZ	**Moawhango**	**3.25 210**	Pn	**Pn**	**11 57 02.7 0.0**
KAHZ	**Kahuranaki**	**3.27 193**	PN	**Pn**	**11 57 03.3 +0.5**
KAHZ	**Kahuranaki**	**3.27 193**	Pn	**Pn**	**11 57 03.3 +0.5**
PXZ	**Pawanui**	**3.50 193**	PN	**Pn**	**11 57 05.5 0.0**
PXZ			AML	AML	11 57 56.0
PXZ			AML	AML	11 57 56.0
PXZ			AML	AML	11 57 56.6
PXZ	**Pawanui**	**3.50 193**	Pn	**Pn**	**11 57 05.5 0.0**
PNHZ	**Pukenui**	**3.54 201**	⇓PN	**Pn**	**11 57 05.7 -0.4**
PNHZ	**Pukenui**	**3.54 201**	Pn	**Pn**	**11 57 05.7 -0.4**
WPHZ	**Waipukurau**	**3.62 198**	PN	**Pn**	**11 57 07.0 0.0**
WPHZ	**Waipukurau**	**3.62 198**	Pn	**Pn**	**11 57 07.0 0.0**
TSZ	**Takapari Road**	**3.75 203**	PN	**Pn**	**11 57 08.1 -0.5**
TSZ			AML	AML	11 58 00.3
TSZ			AML	AML	11 58 02.7
TSZ	**Takapari Road**	**3.75 203**	Pn	**Pn**	**11 57 08.1 -0.5**
PRHZ	**Porangahau**	**3.77 194**	PN	**Pn**	**11 57 08.4 -0.4**
PRHZ	**Porangahau**	**3.77 194**	Pn	**Pn**	**11 57 08.4 -0.4**
DVHZ	**Dannevirke**	**3.91 199**	PN	**Pn**	**11 57 09.7 -0.8**
DVHZ	**Dannevirke**	**3.91 199**	Pn	**Pn**	**11 57 09.8 -0.8**
POWZ	**Post Office Ro**	**4.11 203**	PN	**Pn**	**11 57 12.6 -0.3**
POWZ	**Post Office Ro**	**4.11 203**	Pn	**Pn**	**11 57 12.6 -0.3**
BFZ	**Birch Farm**	**4.25 197**	PN	**Pn**	**11 57 14.3 -0.3**
BFZ	**Birch Farm**	**4.25 197**	Pn	**Pn**	**11 57 14.3 -0.3**
MRZ	**Mangatainoka R**	**4.42 203**	PN	**Pn**	**11 57 15.8 -0.9**
MRZ			AML	AML	11 58 11.7
MRZ			AML	AML	11 58 11.8
MRZ	**Mangatainoka R**	**4.42 203**	Pn	**Pn**	**11 57 15.8 -0.9**
HOWZ	**Holdsworth Sta**	**4.65 203**	PN	**Pn**	**11 57 18.4 -1.2**
HOWZ			SN	**S**	**11 58 16.1 +0.9**
HOWZ	**Holdsworth Sta**	**4.65 203**	Pn	**Pn**	**11 57 18.4 -1.2**
HOWZ			Sn	**S**	**11 58 16.1 +0.9**
OGWZ	**Otaki Gorge**	**4.70 206**	PN	**Pn**	**11 57 19.2 -0.9**
KIW	**Kapiti Island**	**4.83 208**	PN	**Pn**	**11 57 20.7 -1.1**
KIW			AML	AML	11 58 19.1
KIW	**Kapiti Island**	**4.83 208**	Pn	**Pn**	**11 57 20.7 -1.1**
MTW	**Mount Morrison**	**4.90 201**	PN	**Pn**	**11 57 21.4 -1.2**
MTW	**Mount Morrison**	**4.90 201**	Pn	**Pn**	**11 57 21.4 -1.2**
CAW	**Cannon Point**	**4.99 205**	PN	**Pn**	**11 57 22.5 -1.3**
CAW			AML	AML	11 58 29.5
CAW	**Cannon Point**	**4.99 205**	Pn	**Pn**	**11 57 22.5 -1.3**
TRWZ	**Traveller**	**5.07 199**	PN	**Pn**	**11 57 23.9 -0.9**
TRWZ			AML	AML	11 58 36.9
TRWZ	**Traveller**	**5.07 199**	Pn	**Pn**	**11 57 23.9 -0.9**
PAWZ	**Paruwai Farm**	**5.12 201**	PN	**Pn**	**11 57 24.1 -1.4**
PAWZ	**Paruwai Farm**	**5.12 201**	Pn	**Pn**	**11 57 24.1 -1.4**
MSWZ	**Moikau Station**	**5.21 202**	PN	**Pn**	**11 57 25.3 -1.2**
MSWZ			AML	AML	11 58 29.6
MSWZ	**Moikau Station**	**5.21 202**	Pn	**Pn**	**11 57 25.3 -1.2**
SNZO	**South Karori**	**5.29 207**	PN	**Pn**	**11 57 26.1 -1.4**
SNZO			AML	AML	11 58 32.5
SNZO			AML	AML	11 58 33.1
SNZO	**South Karori**	**5.29 207**	*e*Pn	**Pn**	**11 57 26.2 -1.4**
SNZO			*e*Sn	**S**	**11 58 31.1 +1.5**
KHZ	**Kahutara**	**6.69 209**	*e*Pn	**Pn**	**11 57 43.6 -1.7**
KHZ			*e*Sn	**S**	**11 59 02.3 +0.3**
MQZ	**McQueen's Vall**	**8.13 208**	Pn	**Pn**	**11 58 01.2 -2.7**
RAO	**Raoul Island**	**8.15 27**	LR	LR	12 00 04.0
	comp=Z,552nm,21.7s,baz=356,slow=32				
RPZ	**Rata Peaks**	**8.80 214**	*e*Pn	**Pn**	**11 58 12.9 +0.3**
RPZ			*e*Sn	**S**	**11 59 48.8 -2.9**
RPZ	**Rata Peaks**	**8.80 214**	P	**Pn**	**11 58 11.5 -1.1**
	0.7nm,0.3s,baz=350,slow=17,SNR=10				
RPZ			S	**S**	**11 59 48.4 -3.3**
	1.2nm,0.3s,baz=37,slow=19,SNR=8.1				
ODZ	**Otahua Downs**	**10.04 211**	*e*Pn	**Pn**	**11 58 27.8 -0.7**
ODZ			*e*Sn	**S**	**12 00 19.0 -2.0**
COEN	**Coen**	**38.32 297**	*e*P	**P**	**12 03 08.5 -0.6**
	8.9nm,0.6s				
ASAR	**Alice Springs**	**39.82 276**	P	**P**	**12 03 22.4 +0.9**
ASAR	**Alice Springs**	**39.82 276**	P	**P**	**12 03 22.4 +0.9**
	2.9nm,0.5s,baz=117,slow=7.9,SNR=72				
WRAB	**Tennant Creek**	**41.39 282**	*e*P	**P**	**12 03 34.4 +0.1**
	3.5nm,0.6s				
WRA	**Warramunga Arr**	**41.40 282**	P	**P**	**12 03 34.4 0.0**
WRA	**Warramunga Arr**	**41.40 282**	P	**P**	**12 03 34.4 0.0**
	2.3nm,0.5s,baz=120,slow=7.7,SNR=72				
QSPA	**South Pole Qui**	**53.51 180**	*e*P	P	12 05 13.1 +6.1
	2.6nm,0.7s				
QSPA	**South Pole Qui**	**53.51 180**	P	P	12 05 13.3 +6.4
	2.4nm,0.6s,baz=14,slow=1.0,SNR=21				
TORD	**Torodi Ar. Bea**	**156.38 189**	PKPab	**PKPab**	**12 16 09.7 +2.2**
TORD	**Torodi Ar. Bea**	**156.38 189**	PKPab	**PKPab**	**12 16 09.7 +2.2**
	0.3nm,0.7s,baz=174,slow=2.6,SNR=2.6				

*IGIL **28** 11:56:25.3, 37.°04N × 13.°37W, h1km, ML2.3*
*MDD **28** 11:56:26.6±2.0, 37.°00N × 13.°28W, h0km, mb3.9/2, Error ellipse: s-maj=21.0km s-min=17.5km az=165.0*
*INMG **28** 11:56:28.0±1.4, 36.°90N × 13.°67W, h5km±5.97km, ML2.4, Error ellipse: s-maj=80.1km s-min=9.3km az=70.0*
*PDA **28** 11:56:28.0±1.4, 36.°90N × 13.°67W, h5km±5.97km, ML2.4, Error ellipse: s-maj=80.1km s-min=9.3km az=70.0*
*CSEM **28** 11:56:29.2±0.5, 37.°14N × 13.°02W, h5km, mb3.9/2, Error ellipse: s-maj=9.9km s-min=8.0km az=172.0*

ISC 28 11:56:25.2±3.7, 37.°12N±0.°10 × 13.°3W±0.°2, h10km, n64, σ1.°48/112, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**3.60**	**88**	*e*Pn	**Pn**	**11 57 21.9**	**+0.9**
PFVI				*e*Sn	**Sn**	**11 58 02.3**	**-1.2**
PFVI	**Vila Bisbo**	**3.60**	**88**	P	**Pn**	**11 57 21.8**	**+0.8**
	2.0nm,0.1s,SNR=9.5						
PFVI				S	**Sn**	**11 58 02.9**	**-0.6**
	14nm,0.1s,SNR=6.3						
PFVI	**Vila Bisbo**	**3.60**	**88**	*e*Pn	**Pn**	**11 57 21.9**	**+0.9**
PFVI				*e*Sn	**Sn**	**11 58 02.3**	**-1.2**
PFVI				S	**Sn**	**11 58 02.9**	**-0.6**
	14nm,0.1s,SNR=6.3						
PMAFR	**Mafra**	**3.68**	**59**	*e*Pn	**Pn**	**11 57 24.3**	**+2.2**
PMAFR				*e*Sn	**Sn**	**11 58 06.9**	**+1.3**
PMAFR				A	A	11 58 09.5	
	13nm,0.8s						
PMAFR	**Mafra**	**3.68**	**59**	P	**Pn**	**11 57 24.3**	**+2.2**
	1.5nm,0.1s,SNR=7.9						
PMAFR				S	**Sn**	**11 58 07.1**	**+1.5**
	8.9nm,0.1s,SNR=39						
PMAFR	**Mafra**	**3.68**	**59**	P	**Pn**	**11 57 24.3**	**+2.2**
	1.5nm,0.1s,SNR=7.9						
PMAFR				*e*Sn	**Sn**	**11 58 06.9**	**+1.3**
	13nm,0.8s						
PTEO	**Sao Teotonio**	**3.69**	**82**	*e*Pn	**Pn**	**11 57 23.4**	**+1.1**
PTEO				*e*Sn	**Sn**	**11 58 04.8**	**-1.1**
PTEO	**Sao Teotonio**	**3.69**	**82**	P	**Pn**	**11 57 23.4**	**+1.1**
PTEO				S	**Sn**	**11 58 04.8**	**-1.1**
PTEO	**Sao Teotonio**	**3.69**	**82**	P	**Pn**	**11 57 23.4**	**+1.1**
PTEO				S	**Sn**	**11 58 04.8**	**-1.1**
MORF	**Marmelete**	**3.74**	**86**	*e*Pn	**Pn**	**11 57 24.0**	**+1.0**
MORF				*e*Sn	**Sn**	**11 58 06.0**	**-1.1**
MORF				A	A	11 58 10.9	
	4.9nm,0.2s						
MORF	**Marmelete**	**3.74**	**86**	P	**Pn**	**11 57 22.7**	**-0.2**
MORF				S	**Sn**	**11 58 04.9**	**-2.2**
MORF	**Marmelete**	**3.74**	**86**	P	**Pn**	**11 57 22.7**	**-0.2**
MORF	**Marmelete**	**3.74**	**86**	*e*Pn	**Pn**	**11 57 24.0**	**+1.0**
MORF				S	**Sn**	**11 58 04.9**	**-2.2**
MORF				*e*Sn	**Sn**	**11 58 06.0**	**-1.1**
	4.9nm,0.2s						
PNCL	**Nicolau / Gran**	**3.94**	**74**	*e*Pn	**Pn**	**11 57 26.5**	**+0.9**
PNCL				*e*Sn	**Sn**	**11 58 11.3**	**-0.6**
PNCL	**Nicolau / Gran**	**3.94**	**74**	*e*Pn	**Pn**	**11 57 26.5**	**+0.9**
PNCL				*e*Sn	**Sn**	**11 58 11.3**	**-0.6**
MESJ	**Messejana**	**4.13**	**78**	*e*P	**Pn**	**11 57 28.4**	**+0.1**
MESJ				AML	AML	11 58 18.8	
	comp=N,3.7nm,0.1s						
MESJ	**Messejana**	**4.13**	**78**	*e*P	**Pn**	**11 57 28.4**	**+0.1**
MESJ	**Messejana**	**4.13**	**78**	P	**Pn**	**11 57 28.4**	**+0.1**
MESJ	**Messejana**	**4.13**	**78**	P	**Pn**	**11 57 28.4**	**+0.1**
MOE	**Montemor**	**4.18**	**69**	*e*Sn	**Sn**	**11 58 17.9**	**-0.1**
MOE	**Montemor**	**4.18**	**69**	S	**Sn**	**11 58 17.9**	**-0.1**
MOE	**Montemor**	**4.18**	**69**	S	**Sn**	**11 58 17.9**	**-0.1**
PCVE	**Castro Verde**	**4.24**	**81**	*e*Pn	**Pn**	**11 57 30.7**	**+0.8**
PCVE				*e*Sn	**Sn**	**11 58 17.8**	**-1.7**
PCVE				A	A	11 58 23.6	
	comp=N,1.4nm,0.2s						
PCVE	**Castro Verde**	**4.24**	**81**	P	**Pn**	**11 57 30.7**	**+0.8**
PCVE				S	**Sn**	**11 58 17.8**	**-1.7**
	comp=N,1.4nm,0.2s						
PCVE	**Castro Verde**	**4.24**	**81**	P	**Pn**	**11 57 30.7**	**+0.8**
PCVE				S	**Sn**	**11 58 17.8**	**-1.7**
	comp=N,1.4nm,0.2s						
PBDV	**Barranco-do-Ve**	**4.31**	**87**	*e*Pn	**Pn**	**11 57 32.2**	**+1.4**
PBDV				*e*Sn	**Sn**	**11 58 20.5**	**-0.7**
PBDV	**Barranco-do-Ve**	**4.31**	**87**	P	**Pn**	**11 57 32.2**	**+1.4**
PBDV				S	**Sn**	**11 58 20.5**	**-0.7**
PBDV	**Barranco-do-Ve**	**4.31**	**87**	P	**Pn**	**11 57 32.2**	**+1.4**
PBDV				S	**Sn**	**11 58 20.5**	**-0.7**
PBEJ	**Beja**	**4.43**	**77**	*e*Sn	**Sn**	**11 58 23.0**	**-1.1**
PBEJ				A	A	11 58 27.3	
	comp=N,2.3nm,0.2s						
PBEJ	**Beja**	**4.43**	**77**	S	**Sn**	**11 58 23.0**	**-1.1**
	comp=N,1.2nm,0.2s						
PBEJ	**Beja**	**4.43**	**77**	S	**Sn**	**11 58 23.0**	**-1.1**
	comp=N,1.2nm,0.2s						
EVO	**Evora**	**4.44**	**70**	*e*Pn	**Pn**	**11 57 34.0**	**+1.5**
EVO				*e*Sn	**Sn**	**11 58 23.4**	**-0.9**
EVO				A	A	11 58 26.5	
	comp=N,3.7nm,0.1s						
EVO	**Evora**	**4.44**	**70**	P	**Pn**	**11 57 34.0**	**+1.5**
EVO				S	**Sn**	**11 58 23.4**	**-0.9**
	comp=N,3.7nm,0.1s						
EVO	**Evora**	**4.44**	**70**	P	**Pn**	**11 57 34.0**	**+1.5**
EVO				S	**Sn**	**11 58 23.4**	**-0.9**
	comp=N,3.7nm,0.1s						
PMTG	**Montargil**	**4.47**	**63**	*e*Pn	**Pn**	**11 57 34.7**	**+1.7**
PMTG				*e*Sn	**Sn**	**11 58 26.6**	**+1.5**
PMTG	**Montargil**	**4.47**	**63**	*e*Pn	**Pn**	**11 57 34.7**	**+1.7**
PMTG				*e*Sn	**Sn**	**11 58 26.6**	**+1.5**
PVAQ	**Vaqueiros**	**4.49**	**85**	*e*Pn	**Pn**	**11 57 34.4**	**+1.2**
PVAQ				*e*Sn	**Sn**	**11 58 23.4**	**-2.0**
PVAQ				A	A	11 58 28.2	
	comp=N,3.8nm,0.1s						
PVAQ	**Vaqueiros**	**4.49**	**85**	P	**Pn**	**11 57 34.4**	**+1.2**
PVAQ				S	**Sn**	**11 58 23.4**	**-2.0**
	comp=N,3.8nm,0.1s						
PVAQ	**Vaqueiros**	**4.49**	**85**	P	**Pn**	**11 57 34.4**	**+1.2**
PVAQ				S	**Sn**	**11 58 23.4**	**-2.0**
	comp=N,3.8nm,0.1s						
EGRO	**El Granado**	**4.68**	**83**	P	**Pn**	**11 57 37.2**	**+1.4**
	comp=N,0.6nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**11 58 29.6**	**-0.5**
	comp=N,3.6nm,0.1s,SNR=5.0						
EGRO	**El Granado**	**4.68**	**83**	P	**Pn**	**11 57 37.2**	**+1.4**
	comp=N,0.6nm,0.2s,SNR=7.9						
EGRO				S	**Sn**	**11 58 29.6**	**-0.5**
	comp=N,3.6nm,0.1s,SNR=5.0						
PESTR	**Estremoz**	**4.86**	**67**	*e*Pn	Pn	11 57 42.0	+3.7
PESTR				*e*Sn	**Sn**	**11 58 33.8**	**-0.8**
PESTR	**Estremoz**	**4.86**	**67**	P	Pn	11 57 42.0	+3.7
PESTR				S	**Sn**	**11 58 33.8**	**-0.8**
PESTR	**Estremoz**	**4.86**	**67**	P	Pn	11 57 42.0	+3.7
PESTR				S	**Sn**	**11 58 33.8**	**-0.8**
PBAR	**Barrancos**	**5.10**	**76**	*e*Pn	**Pn**	**11 57 43.3**	**+1.7**
PBAR				*e*Sn	**Sn**	**11 58 39.0**	**-1.6**
PBAR				A	A	11 58 43.6	
	comp=N,1.1nm,0.1s						
PBAR	**Barrancos**	**5.10**	**76**	P	**Pn**	**11 57 43.3**	**+1.7**
PBAR				S	**Sn**	**11 58 39.0**	**-1.6**
	comp=N,1.1nm,0.1s						
PBAR	**Barrancos**	**5.10**	**76**	P	**Pn**	**11 57 43.3**	**+1.7**
PBAR				S	**Sn**	**11 58 39.0**	**-1.6**
	comp=N,1.1nm,0.1s						
PMRV	**Marv??o**	**5.21**	**62**	*e*Pn	**Pn**	**11 57 45.0**	**+1.9**
PMRV				*e*Sn	**Sn**	**11 58 41.9**	**-1.4**
PMRV	**Marv??o**	**5.21**	**62**	P	**Pn**	**11 57 45.0**	**+1.9**
PMRV				S	**Sn**	**11 58 41.9**	**-1.4**
PMRV	**Marv??o**	**5.21**	**62**	P	**Pn**	**11 57 45.0**	**+1.9**
PMRV				S	**Sn**	**11 58 41.9**	**-1.4**
EBAD	**Badajoz**	**5.25**	**70**	P	**Pn**	**11 57 46.0**	**+2.3**
	comp=N,0.6nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**11 58 42.3**	**-2.0**
	comp=N,2.1nm,0.2s,SNR=6.2						
EBAD	**Badajoz**	**5.25**	**70**	P	**Pn**	**11 57 46.0**	**+2.3**
	comp=N,0.6nm,0.2s,SNR=7.9						
EBAD				S	**Sn**	**11 58 42.3**	**-2.0**
	comp=N,2.1nm,0.2s,SNR=6.2						
EMIN	**Mina Concepcio**	**5.33**	**81**	P	**Pn**	**11 57 46.3**	**+1.4**
	comp=N,0.3nm,0.1s,SNR=6.7						
EMIN				S	**Sn**	**11 58 45.1**	**-1.3**
	comp=N,0.7nm,0.1s,SNR=8.8						
EMIN	**Mina Concepcio**	**5.33**	**81**	P	**Pn**	**11 57 46.3**	**+1.4**
	comp=N,0.3nm,0.1s,SNR=6.7						
EMIN				S	**Sn**	**11 58 45.1**	**-1.3**
	comp=N,0.7nm,0.1s,SNR=8.8						
MVO	**Moncorvo**	**6.35**	**49**	P	**Pn**	**11 58 00.3**	**+1.5**
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**11 59 09.5**	**-1.9**
	comp=N,1.2nm,0.1s,SNR=5.9						
MVO	**Moncorvo**	**6.35**	**49**	P	**Pn**	**11 58 00.3**	**+1.5**
	comp=N,0.4nm,0.1s,SNR=7.9						
MVO				S	**Sn**	**11 59 09.5**	**-1.9**
	comp=N,1.2nm,0.1s,SNR=5.9						
EPLA	**Plasencia**	**6.39**	**60**	S	**Sn**	**11 59 11.8**	**-0.7**
	comp=N,0.9nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**6.39**	**60**	S	**Sn**	**11 59 11.8**	**-0.7**
	comp=N,0.9nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.71**	**28**	S	**Sn**	**11 59 15.2**	**-5.1**
	comp=N,4.7nm,0.2s,SNR=5.2						
ECAL	**Calabor**	**7.01**	**45**	P	**Pn**	**11 58 09.0**	**+1.1**
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAL				S	**Sn**	**11 59 25.9**	**-1.8**
	comp=N,1.1nm,0.2s,SNR=7.9						
ECAL	**Calabor**	**7.01**	**45**	P	**Pn**	**11 58 09.0**	**+1.1**
	comp=N,0.3nm,0.1s,SNR=7.9						
ECAL				S	**Sn**	**11 59 25.9**	**-1.8**
	comp=N,1.1nm,0.2s,SNR=7.9						
EADA	**Adamuz**	**7.02**	**79**	P	**Pn**	**11 58 09.2**	**+1.2**
	comp=N,0.2nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**11 59 25.7**	**-2.3**
	comp=N,1.0nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**7.02**	**79**	P	**Pn**	**11 58 09.2**	**+1.2**
	comp=N,0.2nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**11 59 25.7**	**-2.3**
	comp=N,1.0nm,0.1s,SNR=7.9						
EPON	**Pontenova**	**7.80**	**35**	S	**Sn**	**11 59 43.8**	**-3.2**
	comp=N,1.4nm,0.3s,SNR=7.9						

NNC 28 12:00:34.3±3.5, 53.°52N × 86.°48E, h0km, mb3.6, mpv3.0, 5C-5D, Error ellipse: s-maj=30.3km s-min=18.8km az=51.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KURBB	**Kurchatov Arra**	**5.70**	**243**	⇑Pn	Pn	12 02 02.3	+2.3
	1.8nm,0.5s						
KURBB				⇑Sn	Sn	12 03 08.8	+2.6
	4.2nm,0.6s						
KURBB				⇓Lg	Lg	12 03 36.9	
	5.5nm,0.6s						
MK31	**Makanchi Array**	**7.25**	**203**	⇓Pn	Pn	12 02 24.5	+3.0
	0.2nm,0.5s,baz=26,slow=14,SNR=9.7						
MK31				⇓Sn	Sn	12 03 49.6	+5.1
	0.3nm,0.3s,baz=73,slow=17,SNR=5.1						
MK31				⇓Lg	Lg	12 04 21.1	
	2.7nm,0.8s,baz=28,slow=24,SNR=4.4						
VOSK	**Vostochnaya**	**9.36**	**271**	⇓Pn	Pn	12 02 47.0	-3.3
	1.3nm,0.5s						
VOSK				⇑Sn	Sn	12 04 36.0	-0.2
	3.2nm,1.1s						
ZRNK	**Zerenda**	**10.49**	**274**	⇑Pn	Pn	12 03 05.9	+0.1
	0.7nm,0.5s						
ZRNK				⇑Sn	Sn	12 05 03.8	-0.2
	0.9nm,0.7s						

IDC 28 12:04:02.3±7.3, 18.°96S × 67.°23W, h238km±76km, mb3.4/1, mb1 3.4/2, mb1mx3.0/18, mbtmp3.3/2, Error ellipse: s-maj=125.7km s-min=70.9km az=147.0, Central Bolivia

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPAZ	**La Paz**	**2.80**	**342**	P	Pn	12 04 52.5	-0.2
	4.8nm,0.3s,baz=158,slow=6.1,SNR=96						
LPAZ				S	S	12 05 32.5	+0.3
	2.2nm,0.3s,baz=303,slow=9.5,SNR=14						
TORD	**Torodi Ar. Bea**	**75.02**	**70**	P	P	12 15 18.4	+0.1
	0.6nm,0.4s,baz=258,slow=5.4,SNR=9.7						
WRA	**Warramunga Arr**	**135.93**	**210**	PKP	PKPdf	12 22 55.3	-0.5
	0.3nm,1.1s,baz=139,slow=1.6,SNR=3.4						

IDC 28 12:05:04.2±4.3, 0.°58N × 30.°63W, h0km, mb3.6/5, mb1 3.9/5, mb1mx3.6/24, mbtmp3.6/5, MS3.5/4, Ms1 3.5/4, ms1mx2.8/36, Error ellipse: s-maj=164.2km s-min=31.0km az=174.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BDFB	**Brasilia**	**23.55**	**226**	LR	LR	12 19 14.1	
	comp=Z,89nm,19.1s,baz=170,slow=36						
TORD	**Torodi Ar. Bea**	**34.37**	**67**	P	P	12 11 53.6	+0.3
	0.4nm,0.5s,baz=256,slow=7.8,SNR=3.4						
TORD				LR	LR	12 23 38.9	
	comp=Z,75nm,18.1s,baz=195,slow=32						
LPAZ	**La Paz**	**40.62**	**244**	LR	LR	12 29 13.9	
	comp=Z,58nm,18.4s,baz=281,slow=36						
PLCA	**Paso Flores**	**54.81**	**217**	LR	LR	12 39 07.9	
	comp=Z,58nm,18.1s,baz=7.6,slow=37						
GERES	**GERESS Array B**	**61.31**	**32**	P	P	12 15 22.0	+0.2
	0.3nm,0.7s,baz=247,slow=9.5,SNR=4.2						
BRTR	**Keskin Array B**	**70.05**	**48**	P	P	12 16 17.9	-0.6
	0.8nm,0.9s,baz=255,slow=4.3,SNR=5.1						
TXAR	**Lajitas Array**	**74.95**	**300**	P	P	12 16 48.1	+0.2
	0.5nm,0.8s,baz=118,slow=7.4,SNR=3.9						
NVAR	**Mina Array Bea**	**87.82**	**308**	P	P	12 17 56.0	-0.1
	0.5nm,0.9s,baz=114,slow=4.4,SNR=4.5						

MEX 28 12:07:58.2±0.6, 17.°21N × 95.°07W, h89km±23km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.75**	**215**	*e*P	Pn	12 08 25.2	-1.9
HUIG				*i* S	Sn	12 08 47.7	-1.4
TGIG		**1.91**	**103**	*i* P	Pn	12 08 28.2	-1.1
TGIG				*i* S	Sn	12 08 50.9	-2.0
PCIG		**2.32**	**130**	*i* P	Pn	12 08 33.0	-1.6
PCIG				*i* S	Sn	12 09 01.1	-1.4
UTMO	**Huajuapan**	**2.69**	**284**	*i* P	Pn	12 08 38.8	-1.0
UTMO				*i* S	Sn	12 09 10.5	-1.2
CCIG	**Comitan**	**2.95**	**108**	*i* P	Pn	12 08 42.0	-1.3
CCIG				*i* S	Sn	12 09 17.1	-1.0
PNIG	**Pinotepa**	**3.04**	**255**	*e*P	Pn	12 08 43.7	-0.6
PNIG				*i* S	Sn	12 09 19.4	-0.5

TAP 28 12:20:49.4, 24.°19N × 121.°76E, h14km, ML2.6, 2C, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.12**	**353**	P	Pg	12 20 52.7	0.0
	baz=356						
EHP				S	Sg	12 20 55.4	+0.4
	baz=356						
TWD	**Chiawan**	**0.18**	**233**	*i* P	Pg	12 20 53.8	+0.2
	baz=239						
TWD				*i* S	Sg	12 20 56.9	+0.5
	baz=239						
ENA	**Nanau**	**0.23**	**357**	*e*P	Pg	12 20 54.5	+0.1
	baz=358				

TWC				S	Sb	12 21 21.7	-0.1	
	baz=14							
WHF	**Hehuan Shan**	**0.44**	**262**	*i* P	Pg	12 21 15.9	+0.2	
	baz=261							
WHF				*i* S	Sg	12 21 22.4	+0.5	
	baz=261							
ESL	**Shilin**	**0.48**	**216**	*e*P	Pb	12 21 16.4	-0.3	
	baz=215							
ESL				*e*S	Sb	12 21 23.9	+0.1	
	baz=215							
TWE	**Neicheng**	**0.52**	**352**	*e*P	Pb	12 21 16.9	-0.4	
	baz=353							
TWE				*e*S	Sb	12 21 24.8	0.0	
	baz=353							
TWT	**Tachien**	**0.52**	**275**	P	Pb	12 21 17.7	+0.1	
	baz=274							
TWT				S	Sb	12 21 25.4	+0.1	
	baz=274							
NSK	**Sanguang**	**0.59**	**323**	*e*P	Pb	12 21 19.0	+0.4	
	baz=323							
NSK				S	Sb	12 21 26.9	0.0	
	baz=323							
EHY	**Hungye**	**0.80**	**209**	*e*P	Pg	12 21 21.4	-0.4	
	baz=208							
TYC	**Yuchr**	**0.87**	**250**	*e*P	Pg	12 21 23.0	-0.1	
	baz=249							
TYC				*e*S	Sb	12 21 35.1	+0.3	
	baz=249							
CHN5	**Tsauling**	**1.15**	**238**	*e*P	Pn	12 21 28.3	0.0	
	baz=238							
CHN5				*e*S	Sn	12 21 44.9	+0.9	
	baz=238							

*ISCJB **28** 12:29:23.9±0.4, 51°.47N±0°.02×16°.15E±0°.02, h0km, Error ellipse: s-maj=3.7km s-min=1.7km az=16.6*
*IPEC **28** 12:29:24.2±0.4, 51°.59N×16°.27E, h0km±1km, ML2.5/3, Error ellipse: s-maj=2.4km s-min=1.6km az=18.0*
*CSEM **28** 12:29:24.9±0.2, 51°.53N×16°.19E, h2km, ML3.5/11, Error ellipse: s-maj=3.4km s-min=1.8km az=15.0*
*PRU **28** 12:29:25.8, 51°.52N×16°.15E, h0km*
*IDC **28** 12:29:25.5±0.7, 51°.53N×16°.04E, h0km, mb1 3.3/6, mb1mx3.2/28, mbtmp3.2/6, ML2.9/6, Error ellipse: s-maj=15.7km s-min=6.7km az=103.0*
*WAR **28** 12:29:26.3, 51°.52N×16°.11E*
*BGR **28** 12:29:27.2±0.4, 51°.49N×16°.12E, h1km, ML3.1/13, Error ellipse: s-maj=7.8km s-min=4.4km az=5.0*
*VIE **28** 12:29:28.5±0.9, 51°.30N×16°.01E, h0km, mb2.6/5, ML3.1/5, Error ellipse: s-maj=6.7km s-min=6.0km az=32.0 73 km WNW of Wroclaw Suspected Mining induced.*

ISC 28 12:29:25.7±0.9, 51°.52N±0°.04×16°.14E±0°.02, h0km, n92, σ0s87/166, 5C-1D, Poland

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.69**	**172**	*e*Pg		**Pg**	**12 29 39.2**	**+0.3**
KSP				*e*Sg		**Sg**	**12 29 48.4**	**+0.6**
KSP	**Ksiaz**	**0.69**	**172**	*e*Pg		**Pg**	**12 29 39.1**	**+0.3**
KSP				*e*Sg		**Sg**	**12 29 48.3**	**+0.6**
KSP	**Ksiaz**	**0.69**	**172**	Pg		**Pg**	**12 29 39.2**	**+0.3**
KSP				Sg		**Sg**	**12 29 48.4**	**+0.6**
UPC	**Upice**	**1.02**	**184**	*e*PG		**Pg**	**12 29 45.3**	**+0.1**
UPC				*e*SG		**Sg**	**12 29 58.6**	**+0.2**
	comp=Z,48nm,0.4s							
UPC	**Upice**	**1.02**	**184**	Pg		**Pg**	**12 29 45.3**	**+0.1**
UPC				Sg		**Sg**	**12 29 58.6**	**+0.2**
	48nm,0.4s							
DPC	**Dobruska-Polom**	**1.18**	**174**	*e*PG		**Pg**	**12 29 47.9**	**-0.4**
DPC				*e*SG		**Sg**	**12 30 03.3**	**-0.3**
DPC	**Dobruska-Polom**	**1.18**	**174**	Pg		**Pg**	**12 29 47.9**	**-0.4**
DPC				Sg		**Sg**	**12 30 03.3**	**-0.3**
PVCC	**Panska Ves**	**1.40**	**225**	*e*PG		**Pn**	**12 29 52.2**	**-0.3**
PVCC				*e*SG		**Sn**	**12 30 11.6**	**-0.2**
	comp=Z,174nm,0.2s							
PVCC	**Panska Ves**	**1.40**	**225**	Pg		**Pn**	**12 29 52.2**	**-0.3**
PVCC				Sg		**Sn**	**12 30 11.6**	**-0.2**
	174nm,0.2s							
BRG	**Berggiesshubel**	**1.53**	**246**	PN		**Pn**	**12 29 52.7**	**-1.5**
BRG				PG		**Pb**	**12 29 54.7**	**-0.2**
BRG				SG		**Sn**	**12 30 15.4**	**+0.6**
	158nm,0.4s							
BRG	**Berggiesshubel**	**1.53**	**246**	*e*Pn		**Pn**	**12 29 52.7**	**-1.5**
BRG				*e*Sg		**Sn**	**12 30 15.7**	**+1.0**
BRG	**Berggiesshubel**	**1.53**	**246**	Pn		**Pn**	**12 29 52.7**	**-1.5**
BRG				Sg		**Sn**	**12 30 15.7**	**+1.0**
PRU	**Pruhonice**	**1.84**	**214**	*e*PG		**Pb**	**12 30 00.0**	**-0.2**
PRU				*e*SG		**Sg**	**12 30 25.4**	**+0.6**
	comp=Z,65nm,0.6s							
PRU	**Pruhonice**	**1.84**	**214**	Pg		**Pb**	**12 30 00.0**	**-0.2**
PRU				Sg		**Sg**	**12 30 25.4**	**+0.6**
	65nm,0.6s							
FBE	**Freiberg**	**1.85**	**252**	*e*Pn		**Pb**	**12 30 00.7**	**+0.3**
FBE				*e*Sg		**Sg**	**12 30 25.3**	**+0.2**
RAC	**Raciborz**	**1.94**	**137**	*e*Pg		**Pb**	**12 30 01.5**	**-0.5**
RAC				*e*Sg		**Sn**	**12 30 25.0**	**-0.1**
MORC	**Moravsky Berou**	**1.96**	**152**	*e*Pn		**Pn**	**12 29 59.0**	**-1.3**
MORC				*e*Sg		**Sn**	**12 30 26.5**	**+0.9**
	25nm,0.3s,baz=336							
CLL	**Collm**	**1.97**	**265**	*e*Pn		**Pn**	**12 29 59.2**	**-1.2**
CLL				*e*Sg		**Sg**	**12 30 30.0**	**+0.9**
CLL	**Collm**	**1.97**	**265**	*i* Pn		**Pn**	**12 29 59.4**	**-1.0**
CLL				*e*Pg		**Pg**	**12 30 03.0**	**-0.5**
CLL				*i*			12 30 05.5	
CLL				*i*			12 30 06.5	
CLL				*i* Sg		**Sg**	**12 30 29.3**	**+0.2**
	comp=Z,54nm,0.7s							
CLL	**Collm**	**1.97**	**265**	Pn		**Pn**	**12 29 59.2**	**-1.2**
CLL				Sg		**Sg**	**12 30 30.0**	**+0.9**
OKC	**Ostrava-Krasne**	**2.12**	**142**	*e*PG		**Pn**	**12 30 03.6**	**+1.3**
OKC				*e*SG		**Sb**	**12 30 31.6**	**-0.1**
	comp=Z,40nm,0.5s							
OKC	**Ostrava-Krasne**	**2.12**	**142**	Pg		**Pn**	**12 30 03.6**	**+1.3**
OKC				Sg		**Sb**	**12 30 31.6**	**-0.1**
	comp=Z,40nm,0.5s							
VRAC	**Vranov**	**2.24**	**172**	Pn		**Pn**	**12 30 03.5**	**-0.5**
	comp=Z,3.4nm,0.3s,baz=353,slow=13,SNR=20							
VRAC				Pg		**Pb**	**12 30 07.1**	**+0.2**
	comp=Z,7.2nm,0.3s,baz=358,slow=15,SNR=22							
VRAC				Sn		**Sn**	**12 30 34.0**	**+1.7**
	comp=Z,4.5nm,0.3s,baz=253,slow=17,SNR=6.3							
VRAC	**Vranov**	**2.24**	**172**	*e*Pn		**Pn**	**12 30 03.4**	**-0.6**
	baz=355							
VRAC				*e*Sg		**Sb**	**12 30 36.0**	**+0.8**
	comp=Z,39nm,0.4s,baz=355							
TREC	**Trest**	**2.27**	**191**	*e*PN		**Pn**	**12 30 05.3**	**+0.8**
TREC				*e*PG		**Pb**	**12 30 07.5**	**0.0**
TREC				*e*SG		**Sg**	**12 30 38.0**	**-0.6**
	comp=Z,25nm,0.2s							
TREC	**Trest**	**2.27**	**191**	Pn		**Pn**	**12 30 05.3**	**+0.8**
KRUC	**Moravsky**	**2.47**	**176**	*e*Pn		**Pn**	**12 30 06.8**	**-0.4**
	baz=358							
KRUC				*e*Sg		**Sb**	**12 30 43.6**	**+1.7**
	comp=Z,18nm,0.3s,baz=358							
SCHF	**Schoenfels**	**2.50**	**252**	*e*Pg		**Pg**	**12 30 14.5**	**+0.9**
SCHF				*e*Sg		**Sg**	**12 30 47.5**	**+1.5**
SCHF	**Schoenfels**	**2.50**	**252**	Pg		**Pg**	**12 30 14.5**	**+0.9**
SCHF				Sg		**Sg**	**12 30 47.5**	**+1.5**
TANN	**Tannenbergstha**	**2.58**	**246**	*e*Pn		**Pn**	**12 30 08.5**	**-0.2**
TANN				*e*Sg		**Sg**	**12 30 47.7**	**-0.7**
TANN	**Tannenbergstha**	**2.58**	**246**	Pn		**Pn**	**12 30 08.5**	**-0.2**
TANN				Sg		**Sg**	**12 30 47.7**	**-0.7**
MULD	**Muldenberg**	**2.61**	**246**	*e*Pn		**Pn**	**12 30 08.8**	**-0.3**
MULD				*e*Pg		**Pg**	**12 30 15.1**	**-0.6**
MULD				*e*Sg		**Sg**	**12 30 49.0**	**-0.5**
MULD	**Muldenberg**	**2.61**	**246**	Pn		**Pn**	**12 30 08.8**	**-0.3**
WERD	**Werda**	**2.65**	**248**	*e*Pn		**Pn**	**12 30 09.3**	**-0.4**
WERD				*e*Pg		**Pg**	**12 30 15.4**	**-1.0**
WERD				*e*Sg		**Sg**	**12 30 50.9**	**+0.1**
WERD	**Werda**	**2.65**	**248**	Pn		**Pn**	**12 30 09.3**	**-0.4**
OJC	**Ojcow**	**2.66**	**118**	*e*Pn		Pn	12 30 07.0	-2.8
OJC				*e*Pg		**Pb**	**12 30 15.2**	**+1.0**
OJC				*e*Sg		**Sg**	**12 30 50.5**	**-0.7**
OJC	**Ojcow**	**2.66**	**118**	*e*Pn		Pn	12 30 07.0	-2.8
GUNZ	**Gunzen**	**2.67**	**246**	*e*Pn		**Pn**	**12 30 09.9**	**-0.1**
GUNZ				*e*Pg		**Pg**	**12 30 16.4**	**-0.5**
GUNZ				*e*Sg		**Sg**	**12 30 49.8**	**-1.7**
GUNZ	**Gunzen**	**2.67**	**246**	Pn		**Pn**	**12 30 09.9**	**-0.1**
WERN	**Wernitzgruen**	**2.68**	**244**	*e*Pn		**Pn**	**12 30 10.4**	**+0.2**
WERN				*e*Pg		**Pg**	**12 30 17.5**	**+0.4**
WERN				*e*Sg		**Sg**	**12 30 51.4**	**-0.5**
WERN	**Wernitzgruen**	**2.68**	**244**	Pn		**Pn**	**12 30 10.4**	**+0.2**
PLN	**Plauen**	**2.72**	**249**	*e*Pn		**Pn**	**12 30 10.1**	**-0.5**
PLN				*e*Pg		**Pg**	**12 30 17.5**	**-0.3**
PLN				*e*Sg		**Sg**	**12 30 52.8**	**-0.3**
PLN	**Plauen**	**2.72**	**249**	Pn		**Pn**	**12 30 10.1**	**-0.5**
ROHR	**Rohrbach**	**2.74**	**243**	*e*Pn		**Pn**	**12 30 10.9**	**0.0**
ROHR				*e*Pg		**Pg**	**12 30 18.4**	**+0.1**
ROHR				*e*Sg		**Sg**	**12 30 53.8**	**+0.1**
ROHR	**Rohrbach**	**2.74**	**243**	Pn		**Pn**	**12 30 10.9**	**0.0**
NEUB	**Neuenburg**	**2.75**	**265**	*e*Pg		**Pg**	**12 30 18.0**	**-0.4**
NEUB				*e*Sg		**Sg**	**12 30 54.8**	**+0.7**
NEUB	**Neuenburg**	**2.75**	**265**	Pg		**Pg**	**12 30 18.0**	**-0.4**
NEUB				Sg		**Sg**	**12 30 54.8**	**+0.7**
TRIB	**Obertriebel**	**2.79**	**247**	*e*Pn		**Pn**	**12 30 11.3**	**-0.3**
TRIB				*e*Sg		**Sg**	**12 30 53.7**	**-1.6**
TRIB	**Obertriebel**	**2.79**	**247**	Pn		**Pn**	**12 30 11.3**	**-0.3**
TRIB				Sg		**Sg**	**12 30 53.7**	**-1.6**
TAUT	**Tautenburg**	**2.83**	**261**	*e*Pg		**Pg**	**12 30 19.5**	**-0.5**
TAUT				*e*Sg		**Sg**	**12 30 57.9**	**+1.2**
TAUT	**Tautenburg**	**2.83**	**261**	Pg		**Pg**	**12 30 19.5**	**-0.5**
TAUT				Sg		**Sg**	**12 30 57.9**	**+1.2**
WIMM	**Wimmelburg**	**2.89**	**272**	Pn		**Pn**	**12 30 13.8**	**+0.8**
WIMM				Sg		**Sg**	**12 30 58.0**	**-0.6**
KHC	**Kasperske Hory**	**2.90**	**215**	*e*PN		**Pn**	**12 30 12.9**	**-0.3**
KHC				*e*PG		**Pb**	**12 30 19.1**	**+0.8**
KHC				*e*SN		**Sn**	**12 30 47.0**	**-1.8**
KHC				*e*SG		**Sb**	**12 30 56.2**	**+1.8**
KHC	**Kasperske Hory**	**2.90**	**215**	Pn		**Pn**	**12 30 12.9**	**-0.3**
MOX	**Moxa**	**2.98**	**255**	*e*Pn		**Pn**	**12 30 13.2**	**-1.1**
MOX				*e*Pg		**Pg**	**12 30 22.0**	**-0.9**
MOX				*e*Sg		**Sg**	**12 31 02.8**	**+1.3**
MOX	**Moxa**	**2.98**	**255**	Pn		**Pn**	**12 30 13.2**	**-1.1**
MOX	**Moxa**	**2.98**	**255**	Pg		**Pg**	**12 30 22.0**	**-0.9**
MOX				Sg		**Sg**	**12 31 02.8**	**+1.3**
ROTZ	**Rotzenmuhle**	**3.06**	**236**	*e*Pn		**Pn**	**12 30 15.3**	**0.0**
ROTZ				*e*Pg		**Pg**	**12 30 24.2**	**-0.1**
ROTZ	**Rotzenmuhle**	**3.06**	**236**	Pn		**Pn**	**12 30 15.3**	**0.0**
GEC2	**GERESS Array S**	**3.10**	**211**	*e*Pn		**Pn**	**12 30 16.5**	**+0.5**
GEC2	**GERESS Array S**	**3.10**	**211**	Pn		**Pn**	**12 30 16.5**	**+0.5**
GERES	**GERESS Array B**	**3.10**	**211**	Pn		**Pn**	**12 30 15.8**	**-0.3**
	comp=Z,1.4nm,0.3s,baz=28,slow=12,SNR=45							
GERES				Pg		**Pb**	**12 30 22.0**	**+0.2**
	comp=Z,3.7nm,0.3s,baz=31,slow=14,SNR=38							
GERES				Sn		**Sn**	**12 30 52.0**	**-1.8**
	comp=Z,3.2nm,0.3s,baz=33,slow=24,SNR=6.5							
GERES				Lg		Lg	12 31 00.8	
	comp=Z,3.4nm,0.3s,baz=38,slow=28,SNR=5.3							
WET	**Wettzell**	**3.17**	**223**	*e*Pn		**Pn**	**12 30 16.6**	**-0.2**
WET	**Wettzell**	**3.17**	**223**	Pn		**Pn**	**12 30 16.6**	**-0.2**
SCHD	**Schmiedefeld**	**3.26**	**254**	*e*Pn		**Pn**	**12 30 17.7**	**-0.5**
SCHD				*e*Pg		**Pg**	**12 30 27.5**	**-0.7**
SCHD				*e*Sg		**Sg**	**12 31 10.4**	**0.0**
SCHD	**Schmiedefeld**	**3.26**	**254**	Pn		**Pn**	**12 30 17.7**	**-0.5**
ZST	**Bratislava**	**3.39**	**169**	*e*SG		**Sg**	**12 31 14.6**	**+0.1**
ZST	**Bratislava**	**3.39**	**169**	*e*Sg		**Sg**	**12 31 14.6**	**+0.1**
NIE	**Niedzica**	**3.40**	**127**	*e*P		**Pg**	**12 30 31.1**	**+0.3**
NIE				*e*S		**Sg**	**12 31 16.1**	**+1.3**
VYHS	**Vyhne**	**3.50**	**149**	*e*PN		**Pn**	**12 30 20.4**	**-0.9**
VYHS				*e*			12 30 33.2	
VYHS	**Vyhne**	**3.50**	**149**	*e*Pn		**Pn**	**12 30 20.4**	**-0.9**
VYHS				*e*Sg		**Sg**	**12 31 17.0**	**-1.0**
CONA	**Conrad Observa**	**3.60**	**183**	⇓*i* Pn		**Pn**	**12 30 22.9**	**0.0**
	comp=Z,1.1nm,0.2s							
CONA				⇑*e*Sg		**Sg**	**12 31 20.9**	**-0.5**
	comp=Z,18nm,0.3s							
CONA	**Conrad Observa**	**3.60**	**183**	Pn		**Pn**	**12 30 22.9**	**0.0**
	comp=Z,1.1nm,0.2s							
CONA				Sg		**Sg**	**12 31 20.9**	**-0.5**
	comp=Z,18nm,0.3s							
GRA1	**Grafenberg Arr**	**3.63**	**242**	Pn		**Pn**	**12 30 23.1**	**0.0**
GRA1				Sg		**Sg**	**12 31 22.1**	**-0.1**
GRF	**Grafenberg Arr**	**3.63**	**242**	*e*Pn		**Pn**	**12 30 23.1**	**0.0**
GRF				*e*Sg		**Sg**	**12 31 22.1**	**-0.1**
MOA	**Molln**	**3.87**	**199**	⇑*i* Pn		**Pn**	**12 30 26.6**	**+0.1**
	comp=Z,3.8nm,0.3s							
MOA				⇑Sg		**Sg**	**12 31 27.9**	**-2.1**
	comp=Z,16nm,0.5s							
MOA	**Molln**	**3.87**	**199**	Pn		**Pn**	**12 30 26.6**	**+0.1**
	comp=Z,3.8nm,0.3s							
MOA				Sg		**Sg**	**12 31 27.9**	**-2.1**
	comp=Z,16nm,0.5s							
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*PN		**Pn**	**12 30 25.9**	**-0.8**
STHS				*e*			12 30 40.9	
STHS	**Stebnicka Huta**	**3.88**	**121**	*e*Pn		**Pn**	**12 30 25.9**	**-0.8**
STHS				*e*Sg		**Sg**	**12 31 31.1**	**+0.7**
KECS	**Kecovo**	**4.14**	**136**	*e*PN		**Pn**	**12 30 28.6**	**-1.5**
KECS				*e*			12 30 45.8	
KECS	**Kecovo**	**4.14**	**136**	*e*Pn		**Pn**	**12 30 28.6**	**-1.5**
KECS				*e*Sg		**Sg**	**12 31 40.5**	**+1.9**
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*PN		**Pn**	**12 30 30.6**	**-1.9**
CRVS				*e*			12 30 46.4	
CRVS	**Cervenica-Dubn**	**4.31**	**125**	*e*Pn		**Pn**	**12 30 30.6**	**-1.9**
CRVS				*e*Sg		**Sg**	**12 31 44.0**	**-0.1**
KOLS	**Kolonicke sedl**	**4.71**	**121**	*e*PN		**Pn**	**12 30 37.0**	**-1.1**
KOLS				*e*			12 30 56.1	
KOLS	**Kolonicke sedl**	**4.71**	**121**	*e*Pn		**Pn**	**12 30 37.0**	**-1.1**
KOLS				*e*Sg		**Sg**	**12 31 54.8**	**-2.3**
KBA	**Koelnbreinsper**	**4.81**	**203**	⇑*e*Pn		**Pn**	**12 30 39.8**	**+0.3**
	comp=Z,1.6nm,0.2s							
KBA				⇑*e*Sg		**Sg**	**12 31 58.4**	**-1.8**
	comp=Z,1.0nm,0.0s							
KBA	**Koelnbreinsper**	**4.81**	**203**	Pn		**Pn**	**12 30 39.8**	**+0.3**
	comp=Z,1.6nm,0.2s							
KBA				Sg		**Sg**	**12 31 58.3**	**-1.8**
	comp=Z,1.0nm,0.0s							
DAVOX	**Davos/Dischmat**	**6.27**	**223**	Pn		**Pn**	**12 30 58.8**	**-0.8**
	comp=Z,0.3nm,0.3s,baz=75,slow=16,SNR=3.0							
DAVOX				Lg		Lg	12 32 36.1	
	comp=Z,0.4nm,0.3s,baz=18,slow=20,SNR=3.0							
HFS	**Hagfors**	**8.74**	**352**	Pn		Pn	12 31 29.9	-3.3
	comp=Z,0.1nm,0.3s,baz=174,slow=15,SNR=5.6							
HFS				Sn		Sn	12 32 60.0	-12
	comp=Z,0.0nm,0.3s,baz=187,slow=33,SNR=2.1							
FINES	**FINESS Array B**	**11.34**	**25**	Pn		Pn	12 32 05.0	-3.8
	comp=Z,0.2nm,0.3s,baz=215,slow=12,SNR=13							
FINES				Sn		Sn	12 34 05.1	-11
	comp=Z,0.3nm,0.3s,baz=212,slow=21,SNR=6.3							
EKA	**Eskdalemuir Ar**	**12.12**	**296**	Pn		Pn	12 32 14.8	-4.6
	baz=99,slow=13,SNR=3.4							
ARCES	**ARCESS Array B**	**18.61**	**10**	Pn		P	12 33 39.7	-4.6
	comp=Z,0.1nm,0.3s,baz=197,slow=11,SNR=5.2							

*CSEM **28** 12:35:07.6±99.0, 46°.00N×14°.32E, h0km, ML0.2, After LJU*

LJU 28 12:35:07.6, 46°.00N×14°.32E, h6km, ML0.2, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CRNS	**Crni Vrh**	**0.09**	**333**	*i* Pg		Pg	12 35 09.7	-0.1
CRNS				*i* Sg		Sg	12 35 11.3	0.0
CRNS								
	comp=Z,1.0nm,0.0s							
VNDS	**Vrh nad Dolski**	**0.28**	**69**	*i* Pg		Pg	12 35 13.3	+0.1
VNDS				*i* Sg		Sg	12 35 17.3	+0.3

*ISK **28** 13:21:47.5, 39°.24N×26°.12E, h8km, MD3.2*
*CSEM **28** 13:21:47.9±0.1, 39°.23N×26°.05E, h10km, ML2.8/3, Error ellipse: s-maj=3.1km s-min=2.3km az=78.0*
*ISCJB **28** 13:21:48.1±0.5, 39°.23N±0°.02×26°.05E±0°.04, h10km±3km, Error ellipse: s-maj=4.7km s-min=4.0km az=174.9*
*DDA **28** 13:21:48.2, 39°.28N×26°.17E, h1km, MD2.8*
*THE **28** 13:21:48.5, 39°.22N×26°.05E, h7km, ML2.8/3, Error ellipse: s-maj=0.9km s-min=0.4km az=170.0*

ISC 28 13:21:48.1±0.8, 39°.22N±0°.02×26°.06E±0°.02, h13km±5km, n47, σ0s38/72, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.16**	**266**	P		**Pg**	**13 21 51.8**	**-0.1**
SIGR				S		**Sg**	**13 21 54.3**	**-0.2**
SIGR	**SIGRI**	**0.16**	**266**	P		**Pg**	**13 21 51.8**	**-0.1**
SIGR				S		**Sg**	**13 21 54.3**	**-0.2**
PRK	**Paraskevi**	**0.17**	**82**	P		**Pg**	**13 21 51.9**	**-0.1**
PRK				S		**Sg**	**13 21 54.8**	**+0.1**
PRK	**Paraskevi**	**0.17**	**82**	P		**Pg**	**13 21 51.9**	**-0.1**
PRK				S		**Sg**	**13 21 54.8**	**+0.1**
AYVA	**Ayvalik**	**0.50**	**80**	*i* P		**Pg**	**13 21 57.8**	**-0.1**
AYVA				*i* S		**Sb**	**13 22 05.3**	**-0.5**
AYVA	**Ayvalik**	**0.50**	**80**	*i* P		**Pg**	**13 21 57.8**	**-0.1**
AYVA				*i* S		**Sb**	**13 22 05.3**	**-0.5**
BOZC	**Bozcaada**	**0.62**	**359**	*i* P		**Pb**	**13 22 00.7**	**-0.1**
BOZC				*i* S		**Sb**	**13 22 09.4**	**0.0**
CHOS	**Chios island**	**0.83**	**180**	P		**Pg**	**13 22 04.0**	**-0.2**
CHOS				S		**Sb**	**13 22 16.3**	**+0.7**
CHOS	**Chios island**	**0.83**	**180**	P		**Pg**	**13 22 04.0**	**-0.2**
CHOS				S		**Sb**	**13 22 16.3**	**+0.7**
LIA	**Limnos Island**	**0.96**	**315**	P		**Pg**	**13 22 06.3**	**-0.3**
LIA	**Limnos Island**	**0.96**	**315**	P		**Pg**	**13 22 06.3**	**-0.3**
URLA	**Izmir**	**0.96**	**154**	*i* P		**Pn**	**13 22 07.1**	**-0.2**
URLA				*i* S		**Sn**	**13 22 20.8**	**0.0**
URLA	**Izmir**	**0.96**	**154**	*i* P		**Pn**	**13 22 07.1**	**-0.2**
URLA				*i* S		**Sn**	**13 22 20.8**	**0.0**
BLCB	**Balcova**	**1.13**	**137**	*e*PN		**Pb**	**13 22 09.2**	**-0.4**
BLCB				*e*SN		**Sn**	**13 22 25.1**	**0.0**
BLCB	**Balcova**	**1.13**	**137**	*e*Pn		**Pb**	**13 22 09.2**	**-0.4**
BLCB				*e*Sn		**Sn**	**13 22 25.1**	**0.0**
GELI	**Tayfur-Gelibol**	**1.22**	**15**	*e*PN		**Pn**	**13 22 10.8**	**0.0**
GELI				*e*SN		**Sn**	**13 22 27.5**	**+0.3**
GELI	**Tayfur-Gelibol**	**1.22**	**15**	*e*Pn		**Pn**	**13 22 10.8**	**0.0**
GELI				*e*Sn		**Sn**	**13 22 27.5**	**+0.3**
IZM	**Izmir**	**1.25**	**131**	*e*PN		**Pb**	**13 22 11.6**	**0.0**
IZM	**Izmir**	**1.25**	**131**	*e*Pn		**Pb**	**13 22 11.6**	**0.0**
LPK	**Lapseki**	**1.27**	**25**	*e*PN		**Pn**	**13 22 11.6**	**0.0**
LPK				*e*SN		**Sg**	**13 22 29.3**	**+0.3**
LPK	**Lapseki**	**1.27**	**25**	*e*Pn		**Pn**	**13 22 11.6**	**0.0**
LPK				*e*Sn		**Sg**	**13 22 29.3**	**+0.3**
BALY	**Balya**	**1.31**	**66**	*i* P		**Pn**	**13 22 12.1**	**-0.1**
BALY				*i* S		**Sg**	**13 22 30.8**	**+0.4**
BALY	**Balya**	**1.31**	**66**	*i* P		**Pn**	**13 22 12.1**	**-0.1**
BALY				*i* S		**Sg**	**13 22 30.8**	**+0.4**
SMTH	**Samothraki Isl**	**1.31**	**342**	P		**Pn**	**13 22 12.4**	**+0.2**
SMTH	**Samothraki Isl**	**1.31**	**342**	P		**Pn**	**13 22 12.4**	**+0.2**
BALB	**Balikesir**	**1.47**	**73**	*e*PN		**Pn**	**13 22 14.3**	**0.0**
BALB				*e*SN		**Sb**	**13 22 33.9**	**0.0**
BALB	**Balikesir**	**1.47**	**73**	*e*Pn		**Pn**	**13 22 14.3**	**0.0**
BALB				*e*Sn		**Sb**	**13 22 33.9**	**0.0**
GONE	**Gonen-Balikesi**	**1.50**	**56**	*e*PN		**Pn**	**13 22 14.8**	**+0.1**
GONE	**Gonen-Balikesi**	**1.50**	**56**	*e*Pn		**Pn**	**13 22 14.8**	**+0.1**
KRBG	**Karabiga-Canak**	**1.51**	**39**	*e*PN		**Pn**	**13 22 14.7**	**-0.1**
KRBG	**Karabiga-Canak**	**1.51**	**39**	*e*Pn		**Pn**	**13 22 14.7**	**-0.1**
ENEZ	**Enez**	**1.51**	**3**	*e*PN		**Pn**	**13 22 15.4**	**+0.5**
ENEZ	**Enez**	**1.51**	**3**	*e*Pn		**Pn**	**13 22 15.4**	**+0.5**
ALN	**Alexandroupoli**	**1.67**	**360**	P		**Pn**	**13 22 16.9**	**-0.2**
ALN	**Alexandroupoli**	**1.67**	**360**	P		**Pn**	**13 22 16.9**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.70**	**30**	*e*PN		**Pn**	**13 22 18.1**	**+0.6**
RKY	**Sarkoy-Tekirda**	**1.70**	**30**	*e*Pn		**Pn**	**13 22 18.1**	**+0.6**
SART	**Tekirdag**	**1.70**	**30**	*i* P		**Pn**	**13 22 17.5**	**0.0**
SART				*i* S		**Sg**	**13 22 42.1**	**-0.7**
SART	**Tekirdag**	**1.70**	**30**	*i* P		**Pn**	**13 22 17.5**	**0.0**
SART				*i* S		**Sg**	**13 22 42.1**	**-0.7**
BNT	**Bandirma**	**1.83**	**51**	*e*PN		**Pn**	**13 22 18.9**	**-0.3**
BNT	**Bandirma**	**1.83**	**51**	*e*Pn		**Pn**	**13 22 18.9**	**-0.3**
DURS	**Dursunbey**	**1.91**	**78**	*i* P		**Pn**	**13 22 20.8**	**+0.4**
DURS				*i* S		**Sg**	**13 22 49.8**	**+0.4**
DURS	**Dursunbey**	**1.91**	**78**	*i* P		**Pn**	**13 22 20.8**	**+0.4**
DEMI	**Demirci**	**2.07**	**94**	*e

	baz=23,SNR=5.7								
X31A	**McDonald Ranch**	**22.67**	**330**	P		**P**		**13 28 26.6**	**+0.6**
	baz=23,SNR=5.7								
WCI	**Wyandotte Cave**	**22.74**	**0**	*e*P		**P**		**13 28 29.1**	**+2.4**
	12nm,1.1s								
425A	**Indio Mountain**	**22.83**	**315**	P		**P**		**13 28 28.8**	**+0.9**
	baz=23								
Z28A	**Tucker Farm, M**	**22.90**	**324**	P		**P**		**13 28 29.3**	**+0.8**
	baz=23								
Y29A	**Porterfield Fa**	**22.93**	**326**	P		**P**		**13 28 29.9**	**+1.1**
	baz=23								
X30A	**Coker Ranch, T**	**22.96**	**328**	P		**P**		**13 28 29.7**	**+0.6**
	baz=23								
226B	**Tecolote Peak,**	**23.12**	**319**	P		**P**		**13 28 32.2**	**+1.4**
	baz=23								
325A	**Bean Ranch, Si**	**23.19**	**316**	P		**P**		**13 28 31.5**	**0.0**
	baz=23								
Z27A	**Tatum**	**23.39**	**323**	P		**P**		**13 28 32.9**	**-0.6**
	baz=24								
324A	**Moseley Ranch,**	**23.57**	**316**	P		**P**		**13 28 35.5**	**+0.2**
	baz=24								
MNTX	**Cornudas Mount**	**23.66**	**317**	*e*P		**P**		**13 28 35.6**	**-0.4**
	3.2nm,0.9s								
BLO	**Bloomington**	**23.68**	**360**	*e*P		**P**		**13 28 36.7**	**+0.6**
	6.8nm,0.8s								
Y27A	**Causey**	**23.77**	**324**	P		**P**		**13 28 37.3**	**+0.1**
	baz=24								
ATAH	**Atahualpa**	**23.78**	**160**	LR		LR		13 36 52.8	
	comp=Z,89nm,18.4s,baz=12,slow=34								
125A	**Gardner Draw,**	**23.82**	**319**	P		**P**		**13 28 38.2**	**+0.6**
	baz=24								
Z25A	**Roswell**	**24.27**	**320**	P		**P**		**13 28 41.7**	**0.0**
	baz=24								
X26A	**CR and CF Fran**	**24.63**	**324**	P		**P**		**13 28 46.3**	**+1.3**
	baz=25								
Y24A	**Capitan**	**25.15**	**321**	P		**P**		**13 28 51.2**	**+1.3**
	baz=25								
U27A	**Thompson Grove**	**25.50**	**328**	P		**P**		**13 28 53.1**	**+0.2**
	baz=26,SNR=5.5								
V26A	**Tequesquite Ra**	**25.53**	**326**	P		**P**		**13 28 54.1**	**+1.0**
	baz=26								
U26A	**Atchley Ranch,**	**25.95**	**327**	P		**P**		**13 28 57.6**	**+0.4**
	baz=26								
S26A	**Kim**	**26.76**	**329**	P		**P**		**13 29 04.7**	**+0.4**
	baz=27,SNR=5.7								
T25A	**Trinidad**	**26.87**	**327**	P		**P**		**13 29 06.0**	**+0.6**
	baz=27								
S25A	**Robets Cordova**	**27.27**	**328**	P		**P**		**13 29 10.6**	**+1.6**
	baz=27								
R25A	**Fountain Ranch**	**27.57**	**329**	P		**P**		**13 29 12.6**	**+1.0**
	baz=28								
SDCO	**Great Sand Dun**	**27.90**	**327**	*e*P		**P**		**13 29 16.4**	**+1.7**
	1.8nm,0.9s								
ECSD	**EROS Data Cent**	**29.53**	**345**	*e*P		**P**		**13 29 26.9**	**-1.9**
	3.8nm,0.8s								
PDAR	**Pinedale Array**	**33.69**	**329**	P		**P**		**13 30 06.4**	**+0.7**
PDAR	**Pinedale Array**	**33.69**	**329**	P		**P**		**13 30 06.4**	**+0.7**
	1.2nm,0.8s,baz=135,slow=10,SNR=7.5								
NVAR	**Mina Array Bea**	**36.18**	**315**	P		**P**		**13 30 30.2**	**+3.0**
NVAR	**Mina Array Bea**	**36.18**	**315**	P		**P**		**13 30 30.2**	**+3.0**
	0.8nm,0.8s,baz=115,slow=8.0,SNR=6.1								
NVAR				LR		LR		13 48 45.3	
	comp=Z,59nm,19.2s,baz=39,slow=42								
LPAZ	**La Paz**	**36.33**	**149**	LR		LR		13 45 50.9	
	comp=Z,58nm,20.9s,baz=110,slow=37								
MCMT	**McKenzie Canyo**	**36.83**	**328**	*e*P		**P**		**13 30 34.3**	**+1.6**
	1.5nm,0.9s								
DLMT	**Dillon**	**37.08**	**329**	P		**P**		**13 30 35.0**	**+0.3**
	3.4nm,0.9s								
LRM	**Limekiln Ridge**	**37.34**	**330**	*e*P		**P**		**13 30 37.1**	**+0.1**
BDFB	**Brasilia**	**48.95**	**127**	LR		LR		13 52 18.7	
	comp=Z,81nm,19.6s,baz=3.0,slow=36								
YKA	**Yellowknife Ar**	**51.04**	**344**	P		**P**		**13 32 24.7**	**-1.4**
YKA	**Yellowknife Ar**	**51.04**	**344**	P		**P**		**13 32 24.7**	**-1.4**
	1.7nm,0.7s,baz=144,slow=7.3,SNR=4.8								
ILAR	**Eielson Array**	**63.73**	**335**	P		**P**		**13 33 54.2**	**-1.3**
ILAR	**Eielson Array**	**63.73**	**335**	P		**P**		**13 33 54.2**	**-1.3**
	0.7nm,0.9s,baz=99,slow=5.6,SNR=5.0								
ESDC	**Sonseca Array**	**74.66**	**53**	P		**P**		**13 35 03.7**	**-0.1**
ESDC	**Sonseca Array**	**74.66**	**53**	P		**P**		**13 35 03.7**	**-0.1**
	0.1nm,0.3s,baz=287,slow=5.3,SNR=3.1								
WRA	**Warramunga Arr**	**140.90**	**257**	PKP		**PKPdf**		**13 42 55.3**	**+0.5**
WRA	**Warramunga Arr**	**140.90**	**257**	PKP		**PKPdf**		**13 42 55.3**	**+0.5**
	0.5nm,0.7s,baz=83,slow=2.0,SNR=6.5								
ASAR	**Alice Springs**	**141.15**	**251**	PKP		**PKPdf**		**13 42 55.5**	**+0.3**
ASAR	**Alice Springs**	**141.15**	**251**	PKP		**PKPdf**		**13 42 55.5**	**+0.3**
	0.6nm,0.7s,baz=88,slow=1.3,SNR=5.3								
CMAR	**Chiang Mai Arr**	**145.93**	**351**	PKPbc		**PKPab**		**13 43 04.2**	**-0.6**
CMAR	**Chiang Mai Arr**	**145.93**	**351**	PKPbc		**PKPab**		**13 43 04.2**	**-0.6**
	1.7nm,0.7s,baz=336,slow=4.2,SNR=7.5								

IDC 28 13:29:15.4±1.8, 24°20S×67°04W, h175km±16km, mb3.1/2, mb1 3.4/6, mb1mx3.3/19, mbtmp3.2/6, Error ellipse: s-maj=23.5km s-min=21.8km az=162.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**2.34**	**312**	P	Pn	13 29 57.2	+0.9
	18nm,0.3s,baz=136,slow=12,SNR=78						
LVC				S	Sn	13 30 27.8	-0.2
	23nm,0.3s,baz=253,slow=20,SNR=55						
LPAZ	**La Paz**	**7.94**	**352**	P	Pn	13 31 09.9	+1.1
	0.8nm,0.3s,baz=181,slow=9.2,SNR=21						
LPAZ				S	Sn	13 32 38.0	-0.5
	0.1nm,0.3s,baz=0.0,slow=20,SNR=4.0						
PLCA	**Paso Flores**	**16.75**	**189**	P	Pn	13 32 59.7	-0.2
	0.1nm,0.3s,baz=24,slow=12,SNR=2.4						
BDFB	**Brasilia**	**19.79**	**68**	P	P	13 33 32.1	-0.5
	0.7nm,0.3s,baz=240,slow=10,SNR=7.1						
TXAR	**Lajitas Array**	**63.82**	**325**	P	P	13 39 29.6	+0.4
	0.1nm,0.7s,baz=146,slow=8.3,SNR=2.6						
TORD	**Torodi Ar. Bea**	**76.67**	**69**	P	P	13 40 47.7	+0.2
	0.7nm,0.5s,baz=252,slow=5.9,SNR=13						
ASAR	**Alice Springs**	**128.26**	**205**	PKP	PKPdf	13 48 00.7	-1.0
	0.4nm,0.6s,baz=140,slow=1.6,SNR=4.3						
WRA	**Warramunga Arr**	**131.43**	**207**	PKP	PKPdf	13 48 07.5	-0.2
	0.3nm,0.6s,baz=159,slow=1.7,SNR=12						
ZALV	**Zalesovo Beam**	**143.59**	**28**	PKP	PKPbc	13 48 27.3	+0.5
	0.9nm,0.6s,baz=304,slow=3.7,SNR=5.0						
MKAR	**Makanchi Array**	**146.70**	**40**	PKPbc	PKPdf	13 48 35.3	+0.7
	1.2nm,0.6s,baz=312,slow=2.3,SNR=19						

*IDC **28** 13:31:37.8±0.8, 1°.19N×97°.02E, h0km, mb4.3/17, mb1 4.4/19, mb1mx4.2/28, mbtmp4.3/19, ML3.9/2, MS3.6/5, Ms1 3.7/5, ms1mx3.2/35, Error ellipse: s-maj=23.6km s-min=15.7km az=46.0*

*BJI **28** 13:31:39.3, 1°.04N×97°.20E, h30km, mB4.9/12, mb4.7/25, Ms4.3/10, Ms7 4.1/11*

*ISCJB **28** 13:31:40.8±0.5, 1°.20N±0°.06×97°.06E±0°.05, h25km, mb4.3/22, MS3.8/7, Error ellipse: s-maj=9.8km s-min=5.3km az=28.3*

*DJA **28** 13:31:44.3±1.4, 1°.N±6°×9°.7E±°, h26km±25km, M4.6/10, mb4.7/3, mB4.8/1, MLv4.5/10, Mw(mB)4.0/1*

ISC 28 13:31:42.1±0.6, 1°.22N±0°.06×96°.98E±0°.07, h25km, n62, σ1°38/71, mb4.5/22, MS3.9/7, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**1.35**	**331**	P	**Pn**	**13 32 05.5**	**+0.1**
SNSI				S	**Sn**	**13 32 19.6**	**-2.9**
KCSI	**Kotacane, Aceh**	**2.42**	**19**	P	**Pn**	**13 32 19.6**	**-0.6**
KCSI				S	**Sb**	**13 32 58.7**	**+4.2**
PSI	**Prapat**	**2.50**	**51**	Pn	**Pn**	**13 32 20.2**	**-1.1**
	11nm,0.3s,baz=244,slow=5.7,SNR=71						
PSI				LR	LR	13 33 10.3	
	comp=Z,673nm,20.4s,baz=313,slow=38						
MNSI	**Mandailing Nat**	**2.64**	**99**	P	**Pn**	**13 32 22.7**	**-0.4**
TSI	**Tuntungan**	**2.77**	**35**	P	**Pn**	**13 32 24.8**	**-0.1**
PPI	**Padang Panjang**	**3.81**	**116**	P	**Pn**	**13 32 40.1**	**+0.9**
BKNI	**Bangkinang**	**4.16**	**102**	P	**Pn**	**13 32 44.8**	**+0.7**
FRIM	**Kepong**	**5.06**	**67**	P	**Pn**	**13 32 56.3**	**-0.2**
IPM	**Ipoh**	**5.18**	**51**	P	**Pn**	**13 32 57.8**	**-0.3**
IPM	**Ipoh**	**5.18**	**51**	P	**Pn**	**13 32 57.9**	**-0.2**
KULM	**Kulim**	**5.46**	**42**	P	**Pn**	**13 33 01.5**	**-0.5**
KULM	**Kulim**	**5.46**	**42**	P	**Pn**	**13 33 01.1**	**-0.8**
	97nm,0.9s,822nm0.3nm						
KGM	**Kluang**	**6.39**	**83**	P	**Pn**	**13 33 14.9**	**+0.2**
MYKOM	**Kota Tinggi**	**6.89**	**85**	P	**Pn**	**13 33 21.8**	**+0.2**
MYKOM	**Kota Tinggi**	**6.89**	**85**	P	**Pn**	**13 33 21.6**	**-0.1**
	28nm,0.8s,0.1nm						
KTGM	**Kuala Trenggan**	**7.38**	**56**	P	**Pn**	**13 33 27.9**	**-0.4**
KSI	**Kapahiang**	**7.41**	**131**	P	Pn	13 33 35.4	+6.5
CHBT	**CHBT**	**12.63**	**25**	P	**P**	**13 34 52.0**	**+0.6**
STKI	**Sintang**	**14.54**	**94**	P	**P**	**13 35 14.2**	**+1.4**
SBUM	**Sibu**	**15.29**	**85**	P	**Pn**	**13 35 17.0**	**+0.5**
PBKT	**Sadao Pong**	**15.75**	**14**	P	**Pn**	**13 35 23.5**	**+1.0**
UBPT	**Khong Chiam**	**16.29**	**31**	P	**P**	**13 35 31.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**17.24**	**6**	P	**Pn**	**13 35 39.1**	**-2.3**
	0.3nm,0.3s,baz=190,slow=12,SNR=19						
CMAR				LR	LR	13 42 17.9	
	comp=Z,195nm,19.0s,baz=185,slow=37						
KDM	**Kudat**	**20.59**	**74**	P	**P**	**13 36 19.6**	**0.0**
SDKM	**Sandakan**	**20.65**	**77**	P	**P**	**13 36 20.2**	**-0.1**
MYLDM	**Lahad Datu**	**21.84**	**79**	P	**P**	**13 36 33.1**	**0.0**
KMI	**Kunming**	**24.41**	**13**	P	**P**	**13 37 00.0**	**+1.0**
KMI				pP	**pP**	**13 37 05.8**	**-0.6**
KMI				sP	**sP**	**13 37 09.5**	**0.0**
KMI				pmax	pmax		
	comp=Z,36nm,1.1s						
KMI				pmax	pmax		
	comp=Z,87nm,4.0s						
KMI				LR	LR		
	comp=N,630nm,14.9s						
KMI				LR	LR		
	comp=E,330nm,13.8s						
KMI				LR	LR		
	comp=Z,630nm,13.1s						
ODAN	**Odare**	**27.11**	**341**	*e*P	**P**	**13 37 25.2**	**+1.8**
	comp=Z,47nm,0.8s						
RAMN	**Ramite**	**27.45**	**340**	*e*P	**P**	**13 37 28.9**	**+2.3**
	comp=Z,28nm,0.8s						
TAPN	**Taplejung**	**27.46**	**342**	*e*P	**P**	**13 37 28.6**	**+1.9**
	comp=Z,85nm,0.9s						
PKI	**Pulchoki**	**28.45**	**338**	*e*P	**P**	**13 37 38.6**	**+3.0**
	comp=Z,30nm,1.0s						
PKIN	**Phulchoki**	**28.46**	**338**	*e*P	**P**	**13 37 38.3**	**+2.7**
	comp=Z,29nm,1.2s						
GUN	**Gumba**	**28.59**	**339**	*e*P	**P**	**13 37 38.9**	**+2.1**
	comp=Z,44nm,0.8s						
DMN	**Daman**	**28.60**	**338**	*e*P	**P**	**13 37 39.4**	**+2.6**
	comp=Z,18nm,0.7s						
KKN	**Kakani**	**28.70**	**338**	*e*P	**P**	**13 37 39.2**	**+1.6**
	comp=Z,32nm,0.9s						
LSA	**Lhasa**	**28.86**	**349**	*e*P	**P**	**13 37 40.0**	**+0.7**
KOLN	**Koldanda**	**29.34**	**335**	*e*P	**P**	**13 37 45.3**	**+1.9**
	comp=Z,22nm,0.9s						
DANN	**Dangsing**	**29.79**	**336**	*e*P	**P**	**13 37 49.3**	**+1.9**
	comp=Z,20nm,0.8s						
PYUN	**Piuthan**	**29.89**	**335**	*e*P	**P**	**13 37 49.9**	**+1.7**
	comp=Z,16nm,0.7s						
XAN	**Xi'an**	**34.51**	**18**	P	**P**	**13 38 27.0**	**-1.5**
XAN				pP	**pP**	**13 38 34.3**	**-1.7**
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,6.0nm,3.3s						
XAN				LR	LR		
	comp=N,170nm,14.3s						
XAN				LR	LR		
	comp=Z,93nm,14.3s						
LZH	**Lanzhou**	**35.27**	**10**	*e*P	**P**	**13 38 35.0**	**-0.2**
LZH				pP	**pP**	**13 38 42.5**	**-0.2**
LZH				sP	**sP**	**13 38 45.0**	**-0.7**
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
GTA	**Gaotai**	**38.10**	**4**	P	**P**	**13 38 59.5**	**+0.3**
GTA				pP	**pP**	**13 39 05.3**	**-1.4**
GTA				sP	**sP**	**13 39 08.5**	**-1.3**
GTA				pmax	pmax		
	comp=Z,13nm,0.9s						
GTA				pmax	pmax		
	comp=Z,110nm,5.2s						
GTA				LR	LR		
	comp=N,170nm,12.8s						
GTA				LR	LR		
	comp=E,160nm,13.3s						
GTA				LR	LR		
	comp=Z,140nm,13.8s						
WRA	**Warramunga Arr**	**42.24**	**122**	P	**P**	**13 39 32.4**	**-1.3**
	comp=Z,3.4nm,0.7s,baz=301,slow=9.0,SNR=44						
WMQ	**Urumqi**	**43.22**	**350**	*e*P	**P**	**13 39 42.5**	**+1.2**
WMQ				pP	**pP**	**13 39 53.0**	**+4.1**
WMQ				pmax	pmax		
	comp=Z,13nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.2s						
WMQ				LR	LR		
	comp=Z,98nm,23.5s						
ASAR	**Alice Springs**	**43.59**	**127**	P	**P**	**13 39 44.0**	**-0.6**
	comp=Z,2.9nm,0.9s,baz=294,slow=7.9,SNR=25						
JNU	**Nakatsue**	**44.94**	**42**	P	**P**	**13 39 54.7**	**-0.5**
	comp=Z,8.0nm,0.8s,baz=233,slow=5.1,SNR=5.6						
KSRS	**Korea Array**	**45.96**	**35**	P	**P**	**13 40 02.3**	**-0.9**
	comp=Z,9.1nm,0.9s,baz=222,slow=9.0,SNR=35						
KSRS				LR	LR	13 59 46.5	
	comp=Z,62nm,18.1s,baz=12,slow=37						
SONM	**Songino Array**	**47.14**	**9**	P	**P**	**13 40 12.6**	**+0.1**
	comp=Z,6.5nm,0.8s,baz=189,slow=8.9,SNR=48						
SONM				PcP	**PcP**	**13 41 44.1**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=195,slow=4.3,SNR=3.5						
MKAR	**Makanchi Array**	**47.17**	**346**	P	**P**	**13 40 13.1**	**+0.5**
	comp=Z,4.8nm,0.7s,baz=159,slow=7.7,SNR=57						
MJAR	**Matsushiro Arr**	**51.83**	**42**	P	**P**	**13 40 46.9**	**-1.5**
	comp=Z,1.4nm,0.8s,baz=237,slow=6.3,SNR=5.7						
USRK	**Ussuriysk Arra**	**52.87**	**31**	P	**P**	**13 40 55.5**	**-0.4**
	comp=Z,13nm,0.9s,baz=239,slow=5.3,SNR=24						
ZALV	**Zalesovo Beam**	**53.50**	**351**	P	**P**	**13 41 00.7**	**+0.3**
	comp=Z,11nm,0.7s,baz=179,slow=6.3,SNR=59						
ZALV				LR	LR	14 08 59.7	
	comp=Z,48nm,18.1s,baz=70,slow=42						
STKA	**Stephens Creek**	**53.54**	**132**	P	**P**	**13 41 00.2**	**-0.8**
	comp=Z,4.6nm,0.9s,baz=293,slow=7.7,SNR=4.6						
STKA				LR	LR	14 06 08.1	
	comp=Z,156nm,21.0s,baz=259,slow=39						
KBZ	**Khabaz**	**63.91**	**319**	P	**P**	**13 42 12.5**	**-0.5**
	comp=Z,1.9nm,0.7s,baz=125,slow=8.5,SNR=4.6						
BRTR	**Keskin Array B**	**68.93**	**312**	P	**P**	**13 42 45.8**	**+0.3**
	comp=Z,0.4nm,0.6s,baz=124,slow=7.2,SNR=3.1						
PETK	**Petropavlovsk-**	**71.84**	**34**	P	**P**	**13 43 01.4**	**-1.4**
	comp=Z,2.0nm,0.8s,baz=213,slow=7.7,SNR=5.0						
FINES	**FINESS Array B**	**79.88**	**333**	P	**P**	**13 43 48.4**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=42,slow=3.1,SNR=4.8						
ARCES	**ARCESS Array B**	**82.44**	**340**	P	**P**	**13 44 02.1**	**+0.1**
	comp=Z,2.1nm,0.8s,baz=94,slow=4.7,SNR=5.4						
GERES	**GERESS Array B**	**84.65**	**319**	P	**P**	**13 44 14.4**	**+0.5**
	comp=Z,0.6nm,0.8s,baz=95,slow=4.9,SNR=6.0						
NB2	**NORSAR Subarra**	**86.88**	**331**	P	**P**	**13 44 24.4**	**-0.2**
	comp=Z,0.8nm,0.6s,baz=94,slow=5.1						
NOA	**NORSAR Array B**	**86.88**	**331**	P	**P**	**13 44 24.0**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=94,slow=4.8,SNR=4.5						
TXAR	**Lajitas Array**	**143.77**	**31**	PKP	PKPbc	13 51 13.8	+0.2
	comp=Z,0.6nm,0.9s,baz=319,slow=2.6,SNR=5.0						

MAN 28 13:34:34, 10°.33N×125°.09E, h6km, mb4.7, ML3.6, MS3.6, 3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSLP	**Maasin**	**0.30**	**231**	*e*P	Pb	13 34 41.6	-0.1
MSLP				*e*S	Sb	13 34 49.3	+2.4
OCLP	**Ormoc**	**0.86**	**327**	*e*P	Pg	13 34 50.6	-0.1
OCLP				*e*S	Sn	13 35 06.8	+1.1
LLP	**Lapu-Lapu**	**1.11**	**270**	*e*P	Pg	13 34 55.0	-0.3
LLP				*e*S	Sn	13 35 11.6	-0.2
TBP	**Tagbilaran**	**1.37**	**243**	*e*P	Pb	13 34 60.0	0.0
CGP	**Cagayan de Oro**	**1.90**	**192**	*e*P	Pn	13 35 08.0	+1.0
CGP				*e*S	Sn	13 35 31.8	+0.5
CNP	**Catarman**	**2.21**	**349**	*e*P	Pn	13 35 11.6	+0.3
GUIM	**Jordan**	**2.48**	**277**	*e*P	Pn	13 35 16.5	+1.6
RCP	**Roxas**	**2.61**	**298**	*e*P	Pn	13 35 18.2	+1.5

*ISCJB **28** 13:41:22.5±1.0, 64°.3N±0°.1×40°.2W±0°.2, h10km, mb3.4/6, Error ellipse: s-maj=19.7km s-min=10.5km az=23.7*

*IDC **28** 13:41:22.6±1.1, 64°.12N×40°.09W, h0km, mb3.4/6, mb1 3.7/7, mb1mx3.4/30, mbtmp3.5/7, ML4.2/1, Error ellipse: s-maj=33.1km s-min=24.1km az=10.0*

ISC 28 13:41:24.8±1.0, 64°.4N±0°.1×39°.94W±0°.08, h10km, n9, σ1°34/15, mb3.5/6, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	**Kangerlussuaq**	**5.13**	**305**	*i* P	**Pn**	**13 42 42.0**	**+0.5**
SFJD				*i* S	**Sn**	**13 43 39.7**	**-0.9**
SFJD				*i* S	**Sn**	**13 43 40.5**	**-0.1**
SFJD	**Kangerlussuaq**	**5.13**	**305**	Pn	**Pn**	**13 42 42.9**	**+1.4**
	8.1nm,0.3s,baz=112,slow=11,SNR=28						
SFJD				Pg	**Pb**	**13 42 54.4**	**0.0**
	17nm,0.3s,baz=124,slow=13,SNR=24						
SFJD				Sn	**Sn**	**13 43 40.0**	**-0.7**
	18nm,0.3s,baz=198,slow=20,SNR=8.2						
SFJD				Lg	Lg	13 43 57.0	
	48nm,0.3s,baz=212,slow=22,SNR=16						
SUMG	**Summit**	**8.24**	**3**	*i* P	**Pn**	**13 43 24.9**	**+0.3**
SUMG				*i* S	**Sn**	**13 44 55.1**	**-2.7**
ARCES	**ARCESS Array B**	**24.96**	**49**	P	**P**	**13 46 49.0**	**+1.1**
	1.4nm,0.7s,baz=300,slow=8.9,SNR=4.8						
ILAR	**Eielson Array**	**40.59**	**321**	P	**P**	**13 49 03.9**	**-0.1**
	0.3nm,0.6s,baz=34,slow=6.9,SNR=6.7						
ILAR				PcP	**PcP**	**13 51 05.2**	**-0.4**
	0.6nm,0.6s,baz=15,slow=2.4,SNR=14						
TXAR	**Lajitas Array**	**52.63**	**260**	P	**P**	**13 50 37.5**	**-1.3**
	0.2nm,0.8s,baz=47,slow=7.9,SNR=3.4						
TORD	**Torodi Ar. Bea**	**58.67**	**131**	P	**P**	**13 51 20.6**	**-1.6**
	0.3nm,0.5s,baz=333,slow=8.4,SNR=4.6						
MKAR	**Makanchi Array**	**60.32**	**42**	P	**P**	**13 51 34.2**	**+0.9**
	0.1nm,0.4s,baz=348,slow=5.4,SNR=4.8						
SONM	**Songino Array**	**65.05**	**24**	P	**P**	**13 52 06.9**	**+2.0**
	0.4nm,0.7s,baz=350,slow=6.5,SNR=3.4						

IDC 28 13:49:59.0±1.4, 13°.15N×92°.00E, h0km, mb3.4/5, mb1 3.6/6, mb1mx3.4/27, mbtmp3.3/6, ML3.2/1, Error ellipse: s-maj=50.9km s-min=21.1km az=58.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**8.52**	**51**	Pn	Pn	13 52 05.5	+1.8
	0.1nm,0.3s,baz=238,slow=14,SNR=5.0						
MKAR	**Makanchi Array**	**34.51**	**348**	P	P	13 56 49.0	+0.1
	0.2nm,0.6s,baz=170,slow=8.8,SNR=3.3						
ZALV	**Zalesovo Beam**	**41.09**	**354**	P	P	13 57 42.9	-1.4
	0.4nm,0.5s,baz=189,slow=8.3,SNR=3.0						
WRA	**Warramunga Arr**	**53.08**	**128**	P	P	13 59 17.9	-0.7
	0.3nm,0.6s,baz=309,slow=8.0,SNR=8.9						
ASAR	**Alice Springs**	**54.94**	**132**	P	P	13 59 32.3	+0.2
	0.3nm,0.6s,baz=306,slow=6.8,SNR=10.0						
GERES	**GERESS Array B**	**72.52**	**317**	P	P	14 01 29.0	+1.1
	0.2nm,0.3s,baz=47,slow=4.3,SNR=3.5						

*BJI **28** 14:18:38.3, 0°.75N×122°.51E, h33km, mB5.0/23, mb4.8/42, Ms5.2/34, MS7 5.0/31*

*IDC **28** 14:18:39.2±0.4, 1°.35N×122°.28E, h0km, mb4.7/28, mb1 4.7/31, mb1mx4.7/35, mbtmp4.7/31, ML5.0/3, MS5.1/1, Ms1 4.9/1, ms1mx3.4/21, Error ellipse: s-maj=16.1km s-min=9.1km az=70.0*

*MOS **28** 14:18:42.4±1.0, 1°.38N×122°.34E, h33km, mb5.1/43, Error ellipse: s-maj=12.4km s-min=5.7km az=117.2*

*ISCJB **28** 14:18:43.2±0.2, 1°.41N±0°.02×122°.34E±0°.03, h38km, mb4.8/89, MS5.0/14, Error ellipse: s-maj=3.9km s-min=3.1km az=160.9*

*NEIC **28** 14:18:44.5±0.7, 1°.34N×122°.29E, h35km±6km, mb5.0/35, Error ellipse: s-maj=5.6km s-min=3.4km az=65.0*

*DJA **28** 14:18:46.2±0.3, 1°.N±3°×12°.2E±°, h42km±4km, M5.5/34, mB5.8/27, mb5.0/34, MLv5.8/4, Mw(mB)5.4/27, Mwp5.9/5*

ISC 28 14:18:44.9±0.2, 1°.37N±0°.03×122°.35E±0°.04, h38km, h38km:pP-P, n284, σ1°31/303, mb4.9/89, MS5.0/16, 11C-7D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRSI	**Marisa**	**0.98**	**205**	P	**Pn**	**14 19 02.0**	**-0.1**
GTOI	**Gorontalo**	**0.99**	**138**	P	**Pn**	**14 19 00.8**	**-1.4**
KMSI	**Cibinong**	**1.81**	**116**	P	**Pn**	**14 19 16.3**	**+2.7**
MNI	**Manado**	**2.49**	**88**	P	**Pn**	**14 19 21.9**	**-1.0**
SKSI	**Soroako, Sulaw**	**4.00**	**195**	P	Pn	14 19 46.7	+2.9
TTSI	**Tana Toraja**	**5.06**	**210**	P	**Pn**	**14 20 00.7**	**+2.4**
TSM	**Tawau**	**5.33**	**303**	P	**Pn**	**14 19 59.9**	**-2.0**
MYLDM	**Lahad Datu**	**5.39**	**315**	P	Pn	14 20 24.3	+22
MYLDM	**Lahad Datu**	**5.39**	**315**	P	**Pn**	**14 20 02.8**	**0.0**
	362nm,1.1s,23µm138µm9.3nm						
GAMI	**Galela, Maluku**	**5.46**	**85**	P	**Pn**	**14 20 05.2**	**+1.5**
LBMI	**Labuha**	**5.53**	**111**	P	**Pn**	**14 20 05.5**	**+0.9**
ZMPH	**Zamboanga City**	**5.55**	**357**	*e*P	**Pn**	**14 20 02.4**	**-2.5**
SPSI	**Sidrap Palu**	**5.89**	**206**	P	Pn	14 20 13.1	+3.4
CTBH	**Cotabato--PC H**	**6.11**	**18**	*i* P	**Pn**	**14 20 09.7**	**-2.9

IPM	**Ipoh**	**21.52 279**	P	**P**	**14 23 31.3 +0.5**				
	comp=Z,86nm,1.3s,comp=Z,3µm								
UBPT	**Khong Chiam**	**21.64 311**	P	**P**	**14 23 31.1 -1.0**				
	comp=Z,25nm,1.3s,comp=Z,6µm								
TPUB	**Ta-pu**	**21.86 356**	*e*P	**P**	**14 23 35.0 +0.6**				
	comp=Z,43nm,0.9s								
KULM	**Kulim**	**22.00 281**	*e*P	**P**	**14 23 35.3 -0.7**				
	comp=Z,74nm,1.2s								
KULM	**Kulim**	**22.00 281**	P	**P**	**14 23 35.4 -0.6**				
KULM	**Kulim**	**22.00 281**	P	**P**	**14 23 36.0 0.0**				
	comp=Z,59nm,1.4s,comp=Z,2µm								
SSLB	**Suanglung**	**22.32 357**	P	**P**	**14 23 40.0 +0.6**				
	comp=Z,68nm,1.3s								
MBWA	**Marble Bar**	**22.54 186**	*e*P	**P**	**14 23 39.8 -1.8**				
	comp=Z,22nm,0.6s								
CHBT	**CHBT**	**22.83 301**	P	**P**	**14 23 46.2 +1.4**				
	comp=Z,50nm,1.0s,comp=Z,4µm								
PSI	**Prapat**	**23.45 274**	P	**P**	**14 23 50.7 -0.6**				
PSI	**Prapat**	**23.45 274**	P	**P**	**14 23 50.7 -0.6**				
	comp=Z,86nm,1.1s,baz=87,slow=12,SNR=38								
TSI	**Tuntungan**	**23.85 276**	P	**P**	**14 23 55.8 +0.9**				
	comp=Z,312nm,1.3s,comp=Z,10µm								
WRAB	**Tennant Creek**	**24.23 152**	P	**P**	**14 23 58.0 -0.3**				
	comp=Z,263nm,1.3s,SNR=31								
WRAB	**Tennant Creek**	**24.23 152**	*e*P	**P**	**14 23 58.0 -0.3**				
WRAB			pmax	pmax					
	comp=Z,88nm,1.3s								
WRAB	**Tennant Creek**	**24.23 152**	*e*P	**P**	**14 23 58.0 -0.3**				
	comp=Z,88nm,1.3s								
WRA	**Warramunga Arr**	**24.23 152**	P	**P**	**14 23 57.5 -0.8**				
WRA	**Warramunga Arr**	**24.23 152**	P	**P**	**14 23 57.5 -0.8**				
	comp=Z,12nm,0.5s,baz=329,slow=10,SNR=303								
KCSI	**Kotacane, Aceh**	**24.64 275**	P	**P**	**14 24 01.9 -0.3**				
	comp=Z,117nm,1.1s,comp=Z,3µm								
COEN	**Coen**	**25.65 127**	*e*P	**P**	**14 24 11.1 -0.2**				
	comp=Z,132nm,1.1s								
PBKT	**Sadao Pong**	**25.91 307**	P	**P**	**14 24 13.8 +0.2**				
	comp=Z,9.1nm,1.0s								
PMG	**Port Moresby**	**26.93 114**	*e*P	**P**	**14 24 23.5 +0.6**				
	comp=Z,22nm,0.9s								
PMG	**Port Moresby**	**26.93 114**	P	**P**	**14 24 23.9 +1.0**				
	comp=Z,29nm,1.3s,comp=Z,2µm								
PMG	**Port Moresby**	**26.93 114**	P	**P**	**14 24 23.1 +0.2**				
	comp=Z,16nm,0.7s,baz=314,slow=3.7,SNR=11								
AS31	**Alice Springs**	**27.31 156**	*e*P	**P**	**14 24 27.2 +1.0**				
ASAR	**Alice Springs**	**27.31 156**	P	**P**	**14 24 25.6 -0.6**				
ASAR	**Alice Springs**	**27.31 156**	P	**P**	**14 24 25.6 -0.6**				
	comp=Z,0.5nm,0.4s,baz=317,slow=6.6,SNR=4.2								
CMAR	**Chiang Mai Arr**	**28.56 308**	P	**P**	**14 24 37.4 0.0**				
CMAR	**Chiang Mai Arr**	**28.56 308**	P	**P**	**14 24 37.4 0.0**				
	comp=Z,0.5nm,0.5s,baz=142,slow=7.6,SNR=8.5								
CHTO	**Chiang Mai**	**28.76 309**	*e*P	**P**	**14 24 38.1 -1.0**				
CHTO			pmax	pmax					
	comp=Z,8.0nm,1.3s								
CHTO	**Chiang Mai**	**28.76 309**	*e*P	**P**	**14 24 38.1 -1.0**				
	comp=Z,7.7nm,1.3s								
GYA	**Guiyang**	**29.15 330**⇑	*i*P	**P**	**14 24 45.0 +2.3**				
GYA			pP	**pP**	**14 24 54.3 +1.0**				
GYA			PP	**PnPn**	**14 25 39.8 +3.5**				
GYA			PcP	**PcP**	**14 27 51.3 +1.5**				
GYA			S	**S**	**14 29 33.5 +1.0**				
GYA			ScP	**ScP**	**14 31 29.3 +0.6**				
GYA			ScS	**ScS**	**14 35 22.8 -0.3**				
GYA			pmax	pmax					
	comp=Z,20nm,1.0s								
GYA			pmax	pmax					
	comp=Z,120nm,4.9s								
GYA			LR	LR					
	comp=N,550nm,17.8s								
GYA			LR	LR					
	comp=E,460nm,18.4s								
GYA			LR	LR					
	comp=Z,510nm,17.4s								
KMI	**Kunming**	**30.26 323**	P	P	14 24 57.5 +4.8				
KMI			pmax	pmax					
	comp=Z,10.0nm,1.0s								
NJ2	**Nanjing**	**30.69 354**	*e*P	P	14 24 59.3 +3.2				
NJ2			pP	pP	14 25 08.5 +1.7				
NJ2			sP	sP	14 25 11.5 +0.1				
NJ2			S	**S**	**14 30 00.5 +4.2**				
NJ2			pmax	pmax					
	comp=Z,10.0nm,0.6s								
NJ2			pmax	pmax					
	comp=Z,460nm,7.1s								
NJ2			LR	LR					
	comp=N,3µm,17.9s								
NJ2			LR	LR					
	comp=E,2µm,18.4s								
NJ2			LR	LR					
	comp=Z,12µm,17.4s								
CTA	**Charters Tower**	**31.69 134**	P	**P**	**14 25 06.1 +1.0**				
CTA	**Charters Tower**	**31.69 134**	P	**P**	**14 25 06.1 +1.0**				
	comp=Z,19nm,1.1s,baz=317,slow=11,SNR=19								
CTAO	**Charters Tower**	**31.69 134**	*e*P	**P**	**14 25 05.1 0.0**				
CTAO			pmax	pmax					
	comp=Z,63nm,1.5s								
CTAO	**Charters Tower**	**31.69 134**	*e*P	**P**	**14 25 05.1 0.0**				
	comp=Z,63nm,1.5s								
FORT	**Forrest**	**32.43 171**	*e*P	**P**	**14 25 10.4 -1.0**				
	comp=Z,25nm,0.6s								
CD2	**Chengdu**	**34.25 331**	*e*P	**P**	**14 25 28.0 +0.6**				
CD2			pmax	pmax					
	comp=Z,30nm,1.4s								
CD2			pmax	pmax					
	comp=Z,120nm,4.8s								
NWAO	**Narrogin (SRO)**	**34.45 188**	P	**P**	**14 25 27.8 -1.2**				
NWAO	**Narrogin (SRO)**	**34.45 188**	P	**P**	**14 25 27.8 -1.2**				
	comp=Z,19nm,0.8s,baz=13,slow=9.6,SNR=6.7								
XAN	**Xi'an**	**34.84 340**	P	P	14 25 39.8 +7.4				
XAN			pP	pP	14 25 48.0 +4.8				
XAN			sP	sP	14 25 52.3 +4.5				
XAN			S	S	14 31 07.5 +6.5				
XAN			pmax	pmax					
	comp=Z,2.0nm,1.2s								
XAN			LR	LR					
	comp=N,2µm,19.4s								
XAN			LR	LR					
	comp=E,600nm,17.4s								
XAN			LR	LR					
	comp=Z,1µm,21.5s								
KSAR	**Wonju Array Be**	**36.25 7**	P	**P**	**14 25 44.8 +0.3**				
KSRS	**Korea Array**	**36.27 8**	P	**P**	**14 25 44.8 +0.2**				
	comp=Z,1.8nm,1.0s,baz=185,slow=9.9,SNR=7.7								
STKA	**Stephens Creek**	**37.77 153**	*e*P	**P**	**14 25 57.5 0.0**				
	comp=Z,10nm,1.1s								
STKA	**Stephens Creek**	**37.77 153**	P	**P**	**14 25 57.8 +0.4**				
	comp=Z,27nm,0.8s,baz=332,slow=8.6,SNR=40								
MJAR	**Matsushiro Arr**	**37.95 21**	P	**P**	**14 25 57.4 -1.5**				
MJAR	**Matsushiro Arr**	**37.95 21**	P	**P**	**14 25 57.4 -1.5**				
	comp=Z,5.4nm,0.9s,baz=196,slow=9.0,SNR=20								
EIDS	**Eidsvold**	**38.47 136**	*e*P	**P**	**14 26 02.8 -0.7**				
	comp=Z,28nm,1.3s								
LZH	**Lanzhou**	**38.57 336**	*e*P	P	14 26 07.8 +3.5				
LZH			pP	pP	14 26 16.5 +1.3				
LZH			sP	sP	14 26 21.5 +1.8				
LZH			*e*S	**ScP**	**14 32 02.5 +0.8**				
LZH			sS	sS	14 32 16.0 0.0				
LZH			SS	**SS**	**14 34 48.3 -0.3**				
LZH			pmax	pmax					
	comp=Z,26nm,1.5s								
LZH			pmax	pmax					
	comp=Z,75nm,4.7s								
LZH			LR	LR					
	comp=N,2µm,16.3s								
LZH			LR	LR					
	comp=E,2µm,15.7s								
LZH			LR	LR					
	comp=Z,3µm,17.6s								
BJI	**Beijing**	**38.90 352**	P	**P**	**14 26 08.0 +1.3**				
BJI			S	**S**	**14 32 05.8 +3.4**				
BJI			pmax	pmax					
	comp=Z,11nm,0.7s								
BJI			LR	LR					
	comp=N,850nm,17.2s								
BJI			LR	LR					
	comp=E,2µm,23.2s								
BJI			LR	LR					
	comp=Z,2µm,22.8s								
HHC	**Hu-ho-hao-te**	**40.49 347**	*e*P	**P**	**14 26 22.5 +2.3**				
HHC			pP	**pP**	**14 26 31.8 +0.7**				
HHC			PP	**PnPn**	**14 27 59.0 +1.0**				
HHC			S	**S**	**14 32 30.5 +3.9**				
HHC			sS	**sS**	**14 32 44.5 -0.2**				
HHC			pmax	pmax					
	comp=Z,43nm,0.7s								
HHC			pmax	pmax					
	comp=Z,250nm,5.1s								
HHC			LR	LR					
	comp=N,1µm,14.5s								
HHC			LR	LR					
	comp=E,3µm,16.8s								
HHC			LR	LR					
	comp=Z,2µm,16.7s								
BTO	**Baotou**	**40.62 346**	*e*P	**P**	**14 26 20.8 -0.5**				
LSA	**Lhasa**	**40.91 317**	P	**P**	**14 26 25.8 +1.6**				
LSA			pmax	pmax					
	comp=Z,40nm,1.0s								
LSA	**Lhasa**	**40.91 317**	*e*P	**P**	**14 26 25.3 +1.0**				
LSA			pmax	pmax					
	comp=Z,6.0nm,0.6s								
LSA	**Lhasa**	**40.91 317**	*e*P	**P**	**14 26 25.2 +1.0**				
	comp=Z,6.0nm,0.6s								
ODAN	**Odare**	**42.04 310**	*e*P	**P**	**14 26 33.9 +0.6**				
	comp=Z,131nm,0.8s								
TAPN	**Taplejung**	**42.06 311**	*e*P	**P**	**14 26 34.1 +0.6**				
	comp=Z,148nm,1.2s								
ARMA	**Armidale**	**42.16 141**	*e*P	**P**	**14 26 35.4 +1.4**				
	comp=Z,20nm,0.8s								
CN2	**Changchun**	**42.34 3**	*e*P	P	14 26 38.5 +3.4				
CN2			*e*pP	pP	14 26 48.5 +2.4				
CN2			*e*S	**S**	**14 32 58.8 +5.2**				
CN2			pmax	pmax					
	comp=Z,10.0nm,1.0s								
CN2			pmax	pmax					
	comp=Z,200nm,4.0s								
CN2			LR	LR					
	comp=N,1µm,17.0s								
CN2			LR	LR					
	comp=E,1µm,17.0s								
CN2			LR	LR					
	comp=Z,1µm,19.0s								
RAMN	**Ramite**	**42.70 310**	*e*P	**P**	**14 26 39.6 +1.0**				
	comp=Z,511nm,1.4s								
GTA	**Gaotai**	**43.08 334**	P	**P**	**14 26 42.5 +1.1**				
GTA			pP	**pP**	**14 26 50.5 -1.9**				
GTA			sP	**sP**	**14 26 54.3 -2.6**				
GTA			S	**S**	**14 33 08.5 +3.5**				
GTA			sS	**sS**	**14 33 22.0 -1.1**				
GTA			SS	**SS**	**14 36 16.3 -2.1**				
GTA			pmax	pmax					
	comp=Z,7.0nm,1.1s								
GTA			pmax	pmax					
	comp=Z,48nm,4.7s								
GTA			LR	LR					
	comp=N,1µm,17.6s								
GTA			LR	LR					
	comp=E,1µm,16.1s								
GTA			LR	LR					
	comp=Z,2µm,17.1s								
USRK	**Ussuriysk Arra**	**43.50 10**	P	**P**	**14 26 44.4 -0.1**				
	comp=Z,1.9nm,0.7s,baz=199,slow=10,SNR=5.0								
MDJ	**Mudanjiang**	**43.54 8**	P	**P**	**14 26 44.0 -0.8**				
MDJ			pmax	pmax					
	comp=Z,11nm,1.8s								
MDJ			pmax	pmax					
	comp=Z,59nm,5.2s								
MDJ	**Mudanjiang**	**43.54 8**	*e*P	**P**	**14 26 44.5 -0.3**				
	comp=Z,13nm,1.1s								
GUN	**Gumba**	**43.73 310**	*e*P	**P**	**14 26 47.8 +0.7**				
	comp=Z,326nm,1.1s								
PKI	**Pulchoki**	**43.92 310**	*e*P	**P**	**14 26 48.9 +0.3**				
	comp=Z,89nm,0.9s								
PKIN	**Phulchoki**	**43.94 310**	*e*P	**P**	**14 26 48.7 0.0**				
	comp=Z,69nm,1.4s								
KKN	**Kakani**	**44.13 310**	*e*P	**P**	**14 26 50.7 +0.5**				
	comp=Z,115nm,0.9s								
DMN	**Daman**	**44.17 310**	*e*P	**P**	**14 26 51.2 +0.6**				
	comp=Z,183nm,1.0s								
CAN	**Canberra**	**44.20 148**	*e*P	**P**	**14 26 51.9 +1.5**				
CAN			pmax	pmax					
	comp=Z,21nm,0.5s								
CAN	**Canberra**	**44.20 148**	*e*P	**P**	**14 26 51.9 +1.5**				
	comp=Z,21nm,0.5s								
ERM	**Erimo**	**44.58 22**	*e*P	**P**	**14 26 54.3 +1.1**				
ERM			pmax	pmax					
	comp=Z,10.0nm,1.0s								
KOLN	**Koldanda**	**45.42 309**	*e*P	**P**	**14 27 01.0 +0.6**				
	comp=Z,83nm,0.9s								
DANN	**Dangsing**	**45.57 310**	*e*P	**P**	**14 27 02.1 +0.3**				
	comp=Z,288nm,1.1s								
HYB	**Hyderabad**	**45.89 293**	*i* P	**P**	**14 27 03.5 -0.6**				
HYB			*e*pP	**pP**	**14 27 13.0 -2.1**				
PYUN	**Piuthan**	**46.05 309**	*e*P	**P**	**14 27 06.1 +0.7**				
	comp=Z,184nm,1.2s								
ASAJ	**Asahikawa**	**46.21 20**	*e*P	**P**	**14 27 06.1 0.0**				
	comp=Z,7.6nm,1.1s								
ASAJ	**Asahikawa**	**46.21 20**	P	**P**	**14 27 06.0 0.0**				
	comp=Z,7.5nm,0.7s,baz=231,slow=16,SNR=11								
HIA	**Hailar**	**47.77 358**	*e*P	**P**	**14 27 18.1 -0.1**				
	comp=Z,31nm,1.3s								
ULN	**Ulaanbaatar**	**48.17 346**	*e*P	**P**	**14 27 22.1 +0.5**				
	comp=Z,17nm,1.1s								
ULN	**Ulaanbaatar**	**48.17 346**	P	**P**	**14 27 22.3 +0.7**				
HABR	**Khabarovsk**	**48.18 11**	*e*P	P	14 27 29.3 +7.9				
HABR			*e*		14 28 46.7				
HABR			*e*PPP	PPP	14 30 00.2				
HABR			*e*S	**S**	**14 34 16.4 -1.5**				
HABR			*e**SS	sS	14 34 33.3 -2.9				
HABR			*e*		14 37 09.7				
HABR			MLR	MLR					
	comp=Z,759nm,15.0s								
SONM	**Songino Array**	**48.30 346**	P	**P**	**14 27 22.9 +0.3**				
SONM	**Songino Array**	**48.30 346**	P	**P**	**14 27 22.9 +0.3**				
	comp=Z,12nm,1.0s,baz=162,slow=7.3,SNR=51								
KLR	**Kul'dur**	**48.35 8**	*e*P	P	14 27 18.8 -3.9				
YSS	**Yuzh-Sakhalins**	**48.76 19**	*e*P	P	14 27 34.5 +8.6				
ZAK	**Zakamensk**	**51.45 344**⇓	*i*P	**P**	**14 27 46.6 +0.2**				
ZAK			pmax	pmax					
	comp=Z,8.0nm,1.2s								
WMQ	**Urumqi**	**52.29 329**	P	**P**	**14 27 54.5 +1.8**				
WMQ			pP	**pP**	**14 28 04.5 +0.6**				
WMQ			sP	**sP**	**14 28 08.5 +0.1**				
WMQ			*e*S	**S**	**14 35 16.0 +0.5**				
WMQ			pmax	pmax					
	comp=Z,17nm,1.4s								
WMQ			pmax	pmax					
	comp=Z,90nm,4.6s								
WMQ			LR	LR					
	comp=N,1µm,16.6s								
WMQ			LR	LR					
	comp=E,1µm,16.4s								
WMQ			LR	LR					
	comp=Z,770nm,17.1s								
TLY	**Talaya**	**52.54 345**⇑	*e*P	**P**	**14 27 55.7 +1.3**				
TLY			*e*S	**S**	**14 35 18.6 +0.1**				
TLY			pmax	pmax					
	comp=Z,13nm,0.6s								
TLY	**Talaya**	**52.54 345**	P	**P**	**14 27 55.9 +1.5**				
	comp=Z,124nm,0.8s,SNR=7.7								
IRK	**Irkutsk**	**52.91 346**	*e*P	**P**	**14 27 57.6 +0.6**				
IRK			pmax	pmax					
	comp=Z,24nm,1.4s								
MOY	**Mondy**	**53.24 344**	*e*P	**P**	**14 28 00.6 +1.0**				
MOY			pmax	pmax					
	comp=Z,42nm,1.3s								
CLNS	**Chul'man**	**55.34 2**	*e*P	**P**	**14 28 14.3 -0.4**				
CLNS			*e**PP	**pP**	**14 28 24.4 -1.6**				
CLNS			*e*PPP	PPP	14 31 30.3				
CLNS			*e*S	**S**	**14 35 57.2 +1.0**				
CLNS			pmax	pmax					
	comp=Z,5.0nm,0.9s								
CLNS			pmax	pmax					
	comp=N,11nm,1.0s								
CLNS			pmax	pmax					
	comp=E,3.0nm,0.8s								
CLNS			pmax	pmax					
	comp=Z,18nm,0.8s								
CLNS			pmax	pmax					
	comp=E,5.0nm,0.9s								
CLNS			pmax	pmax					
	comp=N,8.0nm,0.9s								
CLNS			smax	smax					
	comp=E,81nm,10.8s								
CLNS			smax	smax					
	comp=N,136nm,10.3s								
CLNS			MLR	MLR					
	comp=Z,819nm,17.0s								
CLNS			MLR	MLR					
	comp=E,1µm,17.0s								
CLNS			MLR	MLR					
	comp=N,1µm,21.0s								
KSH	**Kashi**	**56.73 318**	P	**P**	**14 28 26.5 +1.4**				
KSH			*e*pP	**pP**	**14 28 36.8 +0.4**				
KSH			*e*sP	**sP**	**14 28 40.5 -0.4**				
KSH			*e*PcP	**PcP**	**14 29 21.5 +0.6**				
KSH			*e*PP	**PP**	**14 30 36.0 +4.4**				
KSH			*e*S	**S**	**14 36 13.5 -2.0**				
KSH			*e*sS	**sS**	**14 36 32.8 -1.3**				
KSH			pmax	pmax					
	comp=Z,34nm,1.0s								
KSH			pmax	pmax					
	comp=Z,170nm,3.3s								
KSH			LR	LR					
	comp=N,570nm,10.4s								
KSH			LR	LR					
	comp=E,650nm,9.9s								
KSH			LR	LR					
	comp=Z,640nm,9.3s								
MK31	**Makanchi Array**	**57.11 328**	*e*P	**P**	**14 28 28.1 +0.5**				
MK31	**Makanchi Array**	**57.11 328**	*e*P	**P**	**14 28 28.1 +0.5**				
MKAR	**Makanchi Array**	**57.11 328**	P	**P**	**14 28 28.3 +0.7**				
MKAR			pmax	pmax					
	comp=Z,10.0nm,0.8s								
MKAR	**Makanchi Array**	**57.11 328**	P	**P**	**14 28 28.3 +0.7**				
MKAR	**Makanchi Array**	**57.11 328**	P	**P**	**14 28 28.3 +0.7**				
	comp=Z,9.5nm,0.8s,baz=127,slow=8.2,SNR=91								
ULHL	**Ulahol**	**57.95 321**	*i* P	**P**	**14 28 35.4 +1.6**				
ULHL	**Ulahol**	**57.95 321**	P	**P**	**14 28 35.4 +1.6**				
	SNR=8.4								
KZA	**Kyzart**	**58.50 320**	*i* P	**P**	**14 28 39.5 +1.6**				
KZA	**Kyzart**	**58.50 320**	P	**P**	**14 28 39.5 +1.6**				
	SNR=13								
TKM2	**Tokmak 2**	**58.71 321**	*e*P	**P**	**14 28 40.0 +0.9**				
TKM2			pmax	pmax					
	comp=Z,21nm,1.0s								
TKM2	**Tokmak 2**	**58.71 321**	*e*P	**P**	**14 28 40.0 +0.9**				
	comp=Z,21nm,1.0s								
TKM2	**Tokmak 2**	**58.71 321**	P	**P**	**14 28 40.3 +1.1**				
	SNR=20								
KBK	**Karagaybulak**	**58.99 321**	*i* P	**P**	**14 28 42.6 +1.6**				
KBK	**Karagaybulak**	**58.99 321**	P	**P**	**14 28 42.5 +1.6**				
	SNR=12								
AAK	**Ala-Archa**	**59.26 320***c*	*i*P	**P**	**14 28 44.0 +1.1**				
AAK			pmax	pmax					
	comp=Z,49nm,1.2s								
AAK	**Ala-Archa**	**59.26 320**	*e*P	**P**	**14 28 43.5 +0.7**				
	comp=Z,19nm,1.0s								
AAK	**Ala-Archa**	**59.26 320**	P	**P**	**14 28 44.4 +1.5**				
	SNR=6.1								
AAK	**Ala-Archa**	**59.26 320**	P	**P**	**14 28 43.9 +1.0**				
	comp=Z,12nm,0.9s,baz=117,slow=6.1,SNR=25								
CHMS	**Chumysh**	**59.28 321**	*i* P	**P**	**14 28 43.1 +0.3**				
CHMS	**Chumysh**	**59.28 321**	P	**P**	**14 28 43.1 +0.3**				
	SNR=5.2								
FRU	**Bishkek**	**59.29 321**	*e*P	**P**	**14 28 44.0 +1.1**				
PEA0B	**Petropavlovsk-**	**59.30 24**	P	**P**	**14 28 43.6 +0.9**				
PETK	**Petropavlovsk-**	**59.30 24**	P	**P**	**14 28 44.4 +1.7**				
PETK			pmax	pmax					
	comp=Z,3.0nm,0.9s								
PETK	**Petropavlovsk-**	**59.30 24**	P	**P**	**14 28 44.4 +1.7**				
PETK	**Petropavlovsk-**	**59.30 24**	P	**P**	**14 28 44.4 +1.7**				
	comp=Z,3.4nm,0.9s,baz=191,slow=3.3,SNR=7.5								
AML	**Almayashu**	**59.53 320**	*i* P	**P**	**14 28 46.2 +1.2**				
AML	**Almayashu**	**59.53 320**	P	**P**	**14 28 46.2 +1.2**				
	SNR=18								
KBL	**Kabul**	**59.56 310**	*e*P	**P**	**14 28 44.7 -0.5**				
KBL			pmax	pmax					
	comp=Z,40nm,1.0s								
KBL	**Kabul**	**59.56 310**	*e*P	**P**	**14 28 44.7 -0.5**				
	comp=Z,40nm,1.0s								
USP	**Ospenovka**	**59.58 321**	*i* P	**P**	**14 28 45.9 +1.0**				
USP	**Ospenovka**	**59.58 321**	P	**P**	**14 28 45.9 +1.0**				
	SNR=18								
EKS2	**Erkin-Say**	**59.73 320**	*e*P	**P**	**14 28 46.9 +0.8**				
EKS2			pmax	pmax					
	comp=Z,42nm,1.4s								
EKS2	**Erkin-Say**	**59.73 320**	*e*P	**P**	**14 28 46.9 +0.8**				
	comp=Z,42nm,1.4s								
EKS2	**Erkin-Say**	**59.73 320**	P	**P**	**14 28 47.5 +1.4**				
	SNR=12								
YAK	**Yakutsk**	**60.76 4**	*e*P	**P**	**14 28 51.4 -1.1**				
YAK			pmax	pmax					
	comp=Z,12nm,0.7s								
ZAA0	**Zalesovo Array**	**60.80 336**	*e*P	**P**	**14 28 51.8 -1.1**				
ZALV	**Zalesovo Beam**	**60.80 336**	P	**P**	**14 28 52.5 -0.5**				
ZALV			pmax	pmax					
	comp=Z,3.0nm,0.6s								
ZALV	**Zalesovo Beam**	**60.80 336**	P	**P**	**14 28 52.5 -0.5**				
ZALV	**Zalesovo Beam**	**60.80 336**	P	**P**	**14 28 52.5 -0.5**				
	comp=Z,3.0nm,0.6s,baz=132,slow=5.7,SNR=23								
KURBB	**Kurchatov Arra**	**61.46 330**	P	**P**	**14 28 57.4 -0.1**				
	comp=Z,15nm,0.7s,baz=139,slow=6.4,SNR=152								
KURK	**Kurchatov**	**61.47 330**	P	**P**	**14 28 57.4 -0.2**				
KURK			pmax	pmax					
	comp=Z,15nm,0.7s								
KURK	**Kurchatov**	**61.47 330**	P	**P**	**14 28 57.4 -0.2**				
KURK	**Kurchatov**	**61.47 330**	P	**P**	**14 28 56.1 -1.5**				
	comp=Z,257nm,0.9s,SNR=33								
KKAR	**Karatay Array**	**62.05 319**	*e*P	**P**	**14 29 01.9 +0.2**				
KKAR			pmax	pmax					
	comp=Z,14nm,1.1s								
KKAR	**Karatay Array**	**62.05 319**	*e*P	**P**	**14 29 01.9 +0.2**				
	comp=Z,14nm,1.1s								
NVS	**Novosibirsk**	**62.09 336**	*i* P	**P**	**14 29 00.4 -1.2**				
NVS			*e*		14 29 11.0				
NVS			*e*S	**S**	**14 37 19.0 -4.9**				
NVS			pmax	pmax					
	comp=N,12nm,1.7s								
NVS			pmax	pmax					
	comp=Z,26nm,1.7s								
NVS			pmax	pmax					
	comp=E,12nm,1.4s								
NVS			smax	smax					
	comp=E,16nm,1.7s								
RPZ	**Rata Peaks**	**62.48 142**	*e*P	**P**	**14 29 06.0 +1.4**				
	comp=E,272nm,1.2s								
RPZ	**Rata Peaks**	**62.48 142**	P	**P**	**14 29 05.6 +1.1**				
	comp=E,122nm,0.9s,baz=257,slow=1.7,SNR=24								
URZ	**Urewera**	**63.93 134**	P	**P**	**14 29 14.5 +0.3**				
URZ	**Urewera**	**63.93 134**	P	**P**	**14 29 14.5 +0.3**				
	comp=E,8.9nm,0.5s,baz=270,slow=6.6,SNR=7.6		

SBA pmax pmax
comp=Z,23nm,1.3s
SBA Scott Base 82.64 171 eP P 14 31 04.4 +0.6
comp=Z,22nm,1.3s
SOC Sochi 83.71 314 eP P 14 31 08.3 -1.7
SOC eS S 14 41 24.9 -5.3
SOC pmax pmax
comp=Z,8.0nm,0.6s
KMBO Kilima Mbogo 85.12 269 eP P 14 31 18.3 +0.2
comp=Z,19nm,1.3s
KMBO Kilima Mbogo 85.12 269 P P 14 31 18.1 +0.1
comp=Z,6.1nm,0.9s,baz=60,slow=6.5,SNR=8.6
ANN Anapa 85.42 315 eP P 14 31 16.8 -1.8
ANN e*PP pP 14 31 27.6 -2.8
ANN eS S 14 41 38.5 -8.6
ANN pmax pmax
comp=Z,43nm,1.2s
ANN MLR MLR
comp=Z,292nm,19.0s
MOS Moscow 85.89 326 eP P 14 31 16.0 -4.7
COLD Coldfoot 87.75 23 eP P 14 31 30.0 +0.5
comp=Z,3.0nm,0.8s
BRTR Keskin Array B 88.14 310 P P 14 31 30.9 -1.3
BRTR Keskin Array B 88.14 310 P P 14 31 30.9 -1.3
comp=Z,1.5nm,0.9s,baz=108,slow=4.7,SNR=9.5
APA Apatity 88.33 337⇑eP P 14 31 42.0 +10
APA eSS SS 14 48 10.0 +5.8
APA pmax pmax
comp=Z,13nm,1.0s
APA MLR MLR
comp=Z,2μm,19.0s
SYO Syowa Base 88.67 201⇑eX P 14 31 31.8 -2.0
ILAR Eielson Array 89.10 25 P P 14 31 35.5 -0.5
ILAR Eielson Array 89.10 25 P P 14 31 35.5 -0.5
comp=Z,0.2nm,0.7s,baz=269,slow=4.3,SNR=4.3
ARCES ARCESS Array B 91.12 340 P P 14 31 43.6 -1.7
ARCES ARCESS Array B 91.12 340 P P 14 31 43.6 -1.7
comp=Z,1.7nm,0.7s,baz=78,slow=5.6,SNR=4.4
QSPA South Pole Qui 91.30 180 P P 14 31 45.8 -0.5
QSPA South Pole Qui 91.30 180 P P 14 31 45.8 -0.5
comp=Z,15nm,1.1s,baz=319,slow=1.9,SNR=53
BUR08 Bucovina Ar. S 93.82 318 eP P 14 31 57.3 -1.1
LSZ Lusaka 94.37 255 eP P 14 32 00.4 -1.2
comp=Z,18nm,1.1s
KOLS Kolonicke sedl 95.59 319 eP P 14 32 07.2 +0.9
KOLS e 14 32 20.5
KOLS Kolonicke sedl 95.59 319 eP P 14 32 07.2 +0.9
KOLS epP pP 14 32 20.5 +2.2
KOLS e 14 33 01.4
KOLS e 14 49 17.5
UZH Uzhgorod 95.62 319 eP P 14 32 05.7 -0.7
UZH i 14 32 15.3
CRVS Cervenica-Dubn 96.13 319 eP P 14 32 06.4 -2.4
CRVS e 14 32 21.0
CRVS Cervenica-Dubn 96.13 319 eP P 14 32 06.4 -2.4
CRVS epP pP 14 32 21.0 +0.3
CRVS e 14 32 31.0
CRVS e 14 32 55.9
CRVS e 14 49 16.3
BOSA Boshof 96.88 242 LR LR 15 11 03.0
comp=Z,800nm,20.9s,baz=101,slow=32
NB2 NORSAR Subarra 98.90 333 PKP PKKPbc 14 48 42.7 -7.7
comp=Z,8.9nm,0.8s,baz=13,slow=2.9
NOA NORSAR Array B 98.90 333 P P 14 32 19.3 -1.7
NOA NORSAR Array B 98.90 333 P P 14 32 19.3 -1.7
comp=Z,0.9nm,0.9s,baz=66,slow=4.6,SNR=2.5
PGF Pioggiola 106.07 315 eP Pdif 14 32 53.9 +0.5
PGF Pioggiola 106.07 315 eP Pdif 14 32 53.9 +0.5
PGF Pioggiola 106.07 315 eP Pdif 14 32 53.9 +0.5
LPG La Plagne 106.67 319 eP Pdif 14 32 56.3 0.0
LPG La Plagne 106.67 319 eP Pdif 14 32 56.3 0.0
LPG La Plagne 106.67 319 eP Pdif 14 32 56.3 0.0
LPL La Plagne 106.68 319 eP Pdif 14 32 56.1 -0.1
comp=Z,2.5nm,0.7s
LPL La Plagne 106.68 319 eP Pdif 14 32 56.1 -0.1
LPL pmax pmax
comp=Z,3.0nm,0.7s
LPL La Plagne 106.68 319 eP Pdif 14 32 56.1 -0.1
comp=Z,2.5nm,0.7s
MBDF Montbardon 106.92 318 eP Pdif 14 32 57.2 0.0
MBDF Montbardon 106.92 318 eP Pdif 14 32 57.2 0.0
MBDF Montbardon 106.92 318 eP Pdif 14 32 57.2 0.0
PDAR Pinedale Array 115.98 40 PKKPbc PKKPbc 14 47 57.8 +1.3
PDAR Pinedale Array 115.98 40 PKKPbc PKKPbc 14 47 57.8 +1.3
comp=Z,2.1nm,1.0s,baz=107,slow=4.8,SNR=11
PV01 Paradox Valley 118.84 44 ePKPdf PKPdf 14 37 29.6 -0.4
TORD Torodi Ar. Bea 119.42 286 PKP PKPdf 14 37 30.1 -1.2
TORD Torodi Ar. Bea 119.42 286 PKP PKPdf 14 37 30.1 -1.2
comp=Z,1.7nm,0.6s,baz=87,slow=1.1,SNR=11
MNTX Cornudas Mount 124.11 50 ePKPdf PKPdf 14 37 40.2 +0.2
TXAR Lajitas Array 126.49 51 PKP PKPdf 14 37 45.0 +0.3
TXAR PKKP PKKPdf 14 48 00.1 -1.2
TXAR Lajitas Array 126.49 51 PKP PKPdf 14 37 45.0 +0.3
comp=Z,0.5nm,0.9s,baz=270,slow=2.7,SNR=5.0
TXAR PKKP PKKPdf 14 48 00.1 -1.2
comp=Z,0.2nm,0.8s,baz=155,slow=3.0,SNR=3.3
LPAZ La Paz 161.94 146 ePKPdf PKPdf 14 38 44.4 +0.5
LPAZ PKP PKP 14 38 44.7
LPAZ La Paz 161.94 146 PKP PKPdf 14 38 44.7 +0.8
comp=Z,2.2nm,0.9s,baz=213,slow=1.7,SNR=7.9
SAML Samuel 170.68 144 PKPdf PKPdf 14 38 49.8 -0.3

ISCJB **28** *14:19:24.9±0.9, 1.°36N±0.°03×122.°23E±0.°04, h13km±5km, mb5.4/99, MS5.1/179, Error ellipse: s-maj=7.2km s-min=4.2km az=164.9*
IDC **28** *14:19:29.5±1.8, 1.°37N×122.°22E, h33km±13km, mb5.0/32, mb1 5.0/35, mb1mx5.0/36, mbtmp5.0/35, ML5.5/4, MS5.0/8, Ms1 5.0/8, ms1mx4.6/22, Error ellipse: s-maj=13.6km s-min=8.2km az=72.0*
NEIC **28** *14:19:30.0±0.8, 1.°38N×122.°20E, h37km±7km, mb5.5/55, MS5.1/150, MW5.5, Error ellipse: s-maj=6.2km s-min=3.9km az=72.0, Moment Tensor Solution. s33 Moment tensor: Scale 10^17Nm; Mrr0.39; Mθθ-0.30; Mφφ-0.09; Mrθ-1.94; Mθφ-0.54; Mφr-0.34; Best double couple: Mo2.10000×10^17 NP1:φs15.00000°, δ14.00000°, λ26.00000°. NP2:φs259.00000°, δ84.00000°, λ103.00000°. Principal axes: T 2.0200, Plg49.0000°, Azm183.0000°; N 0.1000, Plg12.0000°, Azm78.0000°; P -2.1200, Plg37.0000°, Azm338.0000°;*
NEIC Felt [III] at Gorontalo and Tolitoli.
GCMT **28** *14:19:32.3±0.1, 1.°67N×122.°22E, h26km, MW5.7, Moment Tensor Solution. s89,c164; s47,c49; Moment tensor: Scale 10^17Nm; Mrr2.06±.04; Mθθ-2.13±.03; Mφφ0.06±.03; Mrθ-3.46±.11; Mθφ0.09±.03; Mφr-0.05±.07; Best double couple: Mo4.10000×10^17 NP1:φs95.00000°, δ16.00000°, λ96.00000°. NP2:φs270.00000°, δ74.00000°, λ88.00000°. Principal axes: T 4.0100, Plg61.0000°, Azm177.0000°; N 0.0600, Plg2.0000°, Azm270.0000°; P -4.0800, Plg29.0000°, Azm1.0000°; Data Used: II IU CN IC G. Surface waves: sta=101, comp=200, per= 50.*
ISC 28 14:19:29.1±0.3, 1.°35N±0.°03×122.°28E±0.°05, h30km±1km, h30km:pP-P, n361, σ1.°73/343, mb5.4/99, MS5.1/179, 8C-7D, Minahassa Peninsula, Sulawesi

Code Station Name Δ° AZ° Phase ID (Op ISC) Time (h m s) Res (ISC)
DAV Davao City (W) 6.57 30 ⇑S Pn 14 21 04.9 +1.2
DAV Davao City (W) 6.57 30 eP Pn 14 21 04.7 +1.0
DAV Davao City (W) 6.57 30 Pn Pn 14 21 03.7 0.0
208nm,0.3s,baz=236,slow=7.2,SNR=23
DAV LR LR 14 23 46.7
comp=Z,10μm,21.8s,baz=336,slow=39
KAPI Kappang 6.81 202 eP Pn 14 21 09.4 +2.4
KAPI Kappang 6.81 202 Pn Pn 14 21 08.7 +1.7
28nm,0.3s,baz=21,slow=12,SNR=17
KAPI LR LR 14 24 19.0
comp=Z,19μm,19.4s,baz=258,slow=42
MATI Mati 6.83 35 eP Pn 14 21 02.9 -4.4
DCPH Dipolog City 7.26 8 eS Pn 14 21 13.8 +0.6
CGP Cagayan de Oro 7.46 19 i S Pn 14 21 15.4 -0.5
KKM Kota Kinabalu 7.63 308 eP Pn 14 21 16.8 -1.7
SNPH Sibulan 8.00 7 i S Pn 14 21 14.9 -8.5
LLP Lapu-Lapu 9.06 11 eS Pn 14 21 37.5 -0.4
PPR Puerto Princes 9.08 337⇓eP Pn 14 21 38.0 -0.2
MSLP Maasin 9.10 16 eP Pn 14 21 39.6 +1.2
OCLP Ormoc 9.91 13 eP Pn 14 21 50.3 +0.7
RCP Roxas 10.15 3 eP Pn 14 21 54.2 +1.3
KSM Kuching 11.96 271 eP Pn 14 22 25.2 +7.5
TGY Tagaytay City 12.74 354 Pn Pn 14 22 30.0 +1.6
TGY Tagaytay City 12.74 354 Pn Pn 14 22 30.0 +1.6
48nm,0.3s,baz=195,slow=14,SNR=15
FITZ Fitzroy Crossi 19.61 170 P P 14 23 55.2 +0.1
FITZ Fitzroy Crossi 19.61 170 P P 14 23 55.2 +0.1
7.4nm,0.3s,baz=68,slow=10,SNR=30
XMIS Christmas Isla 20.29 234 eP P 14 24 01.1 -1.6
859nm,1.2s
QIZ Qiongzhong 21.38 326 P P 14 24 14.5 +0.2
QIZ S S 14 28 12.5 +2.2
QIZ LR LR
comp=N,2μm,14.6s
QIZ LR LR
comp=E,720nm,12.7s
QIZ LR LR
comp=Z,4μm,16.3s
QIZ Qiongzhong 21.38 326 eP P 14 24 14.2 -0.1
comp=Z,800nm,1.8s
QIZ LR LR
comp=Z,3μm,21.0s
IPM Ipoh 21.45 279 eP P 14 24 14.8 -0.4
comp=Z,217nm,1.0s
TPUB Ta-pu 21.88 356 eP P 14 24 21.0 +1.3
comp=Z,319nm,1.1s
YULB Yu-li 21.93 358 eP P 14 24 20.0 -0.2
comp=Z,146nm,1.0s
KULM Kulim 21.94 281 eP P 14 24 21.0 +0.7
comp=Z,181nm,1.2s
KULM LR LR
comp=Z,1μm,22.0s
HKC Hong Kong Obse 22.27 340 P P 14 24 24.0 +0.2
SSLB Suanglung 22.34 357 eP P 14 24 22.8 -1.8
comp=Z,267nm,1.1s
MBWA Marble Bar 22.51 186 eP P 14 24 25.0 -1.5
comp=Z,134nm,0.8s
MBWA LR LR
comp=Z,6μm,19.0s
NACB Ninganchiao 22.70 358 eP P 14 24 25.5 -2.9
comp=Z,94nm,1.1s
YHNB Yeheng 23.20 358 eP P 14 24 32.5 -1.1
comp=Z,210nm,1.2s
YHNB LR LR
comp=Z,8μm,19.0s
GZH Guangzhou 23.28 339 P P 14 24 37.0 +2.6
GZH LR LR
comp=N,4μm,18.0s
GZH LR LR
comp=E,3μm,17.2s
GZH LR LR
comp=Z,9μm,20.0s
PSI Prapat 23.38 274 P P 14 24 35.2 -0.4
PSI Prapat 23.38 274 P P 14 24 35.2 -0.4
comp=Z,92nm,1.1s,baz=110,slow=7.0,SNR=9.9
PSI LR LR 14 34 22.2
comp=Z,5μm,21.4s,baz=103,slow=38
QZH Quanzhou 23.72 352⇑iP P 14 24 38.0 -0.6
QZH S S 14 28 50.0 -2.0
QZH pmax pmax
comp=Z,310nm,1.2s
QZH pmax pmax
comp=Z,3μm,8.2s
QZH LR LR
comp=N,5μm,14.1s
QZH LR LR
comp=E,10μm,18.4s
QZH LR LR
comp=Z,9μm,17.2s
WRAB Tennant Creek 24.24 151 P P 14 24 44.0 +0.4
comp=Z,1μm,1.2s,SNR=5.1
WRAB Tennant Creek 24.24 151 eP P 14 24 43.9 +0.4
comp=Z,430nm,1.3s
WRAB LR LR
comp=Z,4μm,21.0s
WRA Warramunga Arr 24.25 151 P P 14 24 43.6 -0.1
WRA ScP ScP 14 31 59.7 -0.6
WRA Warramunga Arr 24.25 151 P P 14 24 43.6 -0.1
comp=Z,166nm,0.8s,baz=334,slow=10.0,SNR=15
WRA ScP ScP 14 31 59.7 -0.6
comp=Z,8.5nm,1.0s,baz=332,slow=3.1,SNR=5.7
WRA LR LR 14 35 13.3
comp=Z,4μm,20.6s,baz=310,slow=39
GUMO Guam 25.45 60 eP P 14 24 51.6 -3.0
comp=Z,266nm,1.4s
GUMO e 14 25 06.6
GUMO LR LR
comp=Z,3μm,22.0s
COEN Coen 25.70 127 eP P 14 24 57.2 +0.4
comp=Z,828nm,1.0s
JOW Kunigami 25.98 12 eP P 14 24 59.3 0.0
comp=Z,41nm,1.2s
PMG Port Moresby 26.99 114 eP P 14 25 09.7 +1.1
comp=Z,125nm,1.0s
PMG LR LR
comp=Z,3μm,21.0s
PMG Port Moresby 26.99 114 P P 14 25 08.4 -0.2
comp=Z,102nm,1.0s,baz=292,slow=8.5,SNR=15
AS31 Alice Springs 27.32 156 eP P 14 25 13.3 +1.8
ASAR Alice Springs 27.32 156 P P 14 25 11.2 -0.2
ASAR PcP PcP 14 28 30.6 0.0
ASAR ScP ScP 14 32 08.1 -1.0
ASAR Alice Springs 27.32 156 P P 14 25 11.2 -0.2
comp=Z,21nm,1.0s,baz=324,slow=6.7,SNR=6.8
ASAR PcP PcP 14 28 30.6 0.0
comp=Z,12nm,0.8s,baz=348,slow=2.0,SNR=6.1
ASAR ScP ScP 14 32 08.1 -1.0
comp=Z,8.2nm,1.1s,baz=316,slow=2.6,SNR=9.1
CMAR Chiang Mai Arr 28.51 308 P P 14 25 22.7 +0.6
CMAR PcP PcP 14 28 34.0 +0.3
CMAR ScP ScP 14 32 12.5 -0.4
CMAR Chiang Mai Arr 28.51 308 P P 14 25 22.7 +0.6
comp=Z,4.3nm,0.9s,baz=136,slow=9.0,SNR=7.0
CMAR PcP PcP 14 28 34.0 +0.3
comp=Z,2.5nm,0.7s,baz=120,slow=1.6,SNR=4.1
CMAR ScP ScP 14 32 12.5 -0.4
comp=Z,0.7nm,0.5s,baz=128,slow=4.1,SNR=4.6
CMAR LR LR 14 38 15.1
comp=Z,4μm,18.7s,baz=125,slow=40
COCO West Island 28.62 241 PFAKE 14 25 30.0 +6.9
COCO LR LR
comp=Z,6μm,22.0s
CHTO Chiang Mai 28.71 309 P P 14 25 21.4 -2.5
comp=Z,37nm,1.1s
CHTO LR LR
comp=Z,4μm,20.0s
GYA Guiyang 29.13 330⇑iP P 14 25 30.0 +2.3
GYA pP pP 14 25 38.0 +1.6
GYA PP PnPn 14 26 24.5 +3.6
GYA PcP PcP 14 28 37.5 +2.4
GYA S S 14 30 19.3 +1.3
GYA SS SnSn 14 31 49.5 +5.7
GYA ScP ScP 14 32 15.5 +0.7
GYA ScS ScS 14 36 09.0 -0.1
GYA pmax pmax
comp=Z,40nm,1.0s
GYA pmax pmax
comp=Z,180nm,4.9s
GYA LR LR
comp=N,2μm,17.5s
GYA LR LR
comp=E,1μm,18.2s
GYA LR LR
comp=Z,2μm,17.9s
SSE Sheshan 29.60 358 eP P 14 25 32.5 +0.9
SSE sP sP 14 25 44.8 +0.7
SSE S S 14 30 29.0 +4.0
SSE pmax pmax
comp=Z,30nm,0.8s
SSE pmax pmax
comp=Z,370nm,6.2s
SSE LR LR
comp=N,4μm,18.3s
SSE LR LR
comp=E,2μm,18.2s
SSE LR LR
comp=Z,5μm,17.7s
WHN Wuhan 29.99 346 ⇓P P 14 25 36.0 +0.9
WHN pP pP 14 25 45.8 +1.9
WHN S S 14 30 36.0 +4.8
WHN LR LR
comp=N,9μm,16.0s
WHN LR LR
comp=E,5μm,19.4s
WHN LR LR
comp=Z,11μm,15.9s
KMI Kunming 30.23 323 P P 14 25 38.5 +0.9
KMI pP pP 14 25 48.8 +2.4
KMI sP sP 14 25 52.5 +2.4
KMI S S 14 30 36.0 +0.4
KMI sS sS 14 30 53.8 +3.7
KMI SS ScP 14 32 16.5 -2.0
KMI pmax pmax
comp=Z,32nm,0.8s
KMI pmax pmax
comp=Z,260nm,4.8s
KMI LR LR
comp=N,2μm,17.5s
KMI LR LR
comp=E,2μm,18.4s
KMI LR LR
comp=Z,2μm,16.7s
NJ2 Nanjing 30.71 354 eP P 14 25 42.8 +1.4
NJ2 pP pP 14 25 49.5 -0.7
NJ2 sP sP 14 25 52.3 -1.5
NJ2 S S 14 30 47.5 +5.1
NJ2 pmax pmax
comp=Z,40nm,0.9s
NJ2 pmax pmax
comp=Z,420nm,7.0s
NJ2 LR LR
comp=N,3μm,16.8s
NJ2 LR LR
comp=E,1μm,13.2s
NJ2 LR LR
comp=Z,3μm,16.3s
ENH Enshi 31.22 338 eP P 14 25 44.3 -1.7
comp=Z,70nm,1.1s
ENH LR LR
comp=Z,4μm,19.0s
CTA Charters Tower 31.73 133 P P 14 25 52.3 +1.7
CTA Charters Tower 31.73 133 P P 14 25 52.3 +1.7
comp=Z,92nm,0.9s,baz=339,slow=7.3,SNR=42
CTAO Charters Tower 31.73 133 eP P 14 25 51.4 +0.8
comp=Z,222nm,1.2s
CTAO LR LR
comp=Z,3μm,19.0s
FORT Forrest 32.42 171 eP P 14 25 55.7 -0.9
comp=Z,202nm,1.0s
JNU Nakatsue 32.62 13 eP P 14 25 58.4 +0.1
comp=Z,29nm,1.4s
JNU Nakatsue 32.62 13 P P 14 25 57.6 -0.7
comp=Z,16nm,0.9s,baz=176,slow=8.2,SNR=5.8
CD2 Chengdu 34.23 331 P P 14 26 12.8 +0.4
CD2 pP pP 14 26 17.3 -3.9
CD2 sP sP 14 26 20.3 -4.6
CD2 PP PnPn 14 27 28.0 +0.9
CD2 PcP PcP 14 28 49.8 +1.1
CD2 S S 14 31 40.0 +2.5
CD2 SS SnSn 14 33 49.0 +1.3
CD2 ScS ScS 14 36 35.0 +0.7
CD2 pmax pmax
comp=Z,110nm,1.2s
CD2 pmax pmax
comp=Z,680nm,8.2s
CD2 LR LR
comp=N,2μm,19.0s
CD2 LR LR
comp=E,3μm,15.6s
CD2 LR LR
comp=Z,2μm,19.0s
NWAO Narrogin (SRO) 34.42 188 eP P 14 26 13.0 -1.0
comp=Z,76nm,0.8s
NWAO LR LR
comp=Z,20.0s
NWAO Narrogin (SRO) 34.42 188 P P 14 26 12.9 -1.1
comp=Z,86nm,0.8s,baz=11,slow=11,SNR=15
XAN Xi'an 34.84 340 P P 14 26 14.3 -3.3
XAN pP pP 14 26 21.3 -5.1
XAN S S 14 31 46.5 -0.2
XAN pmax pmax
comp=Z,82nm,7.4s
XAN LR LR
comp=N,2μm,16.4s
XAN LR LR
comp=E,750nm,19.4s
XAN LR LR
comp=Z,1μm,17.4s
TIA Tai'an 35.01 353 P P 14 26 17.0 -2.0
TIA PP PP 14 27 38.0 -0.8
TIA S S 14 31 49.8 +0.5
TIA LR LR
comp=N,3μm,16.7s
TIA LR LR
comp=E,3μm,15.7s
TIA LR LR
comp=Z,3μm,21.6s
INCN Inchon 36.18 6 PFAKE 14 26 40.0 +11
INCN LR LR
comp=Z,3μm,19.0s
KSAR Wonju Array Be 36.28 8 P P 14 26 30.6 +0.8
KSAR PcP PcP 14 28 55.1 +0.6
KSRS Korea Array 36.30 8 P P 14 26 30.6 +0.6
comp=Z,8.7nm,1.0s,baz=184,slow=9.1,SNR=11
KSRS PcP PcP 14 28 55.1 +0.6
comp=Z,4.4nm,0.9s,baz=191,slow=3.0,SNR=4.1
BBOO Buckleboo 36.39 160 eP P 14 26 30.7 -0.2
comp=Z,2μm,1.0s
TIY Taiyuan 37.30 347 eP P 14 26 38.0 -0.6
TIY S S 14 32 26.0 +1.6
TIY pmax pmax
comp=Z,630nm,4.1s
TIY LR LR
comp=N,2μm,14.3s
TIY LR LR
comp=E,2μm,15.2s
TIY LR LR
comp=Z,4μm,19.7s
DL2 Dalian 37.38 359 P P 14 26 37.5 -1.7
DL2 S S 14 32 23.0 -2.4
DL2 pmax pmax
comp=Z,100nm,1.1s
DL2 pmax pmax
comp=Z,250nm,6.5s
DL2 LR LR
comp=N,1μm,16.5s
DL2 LR LR
comp=Z,2μm,16.2s
STKA Stephens Creek 37.78 153 eP P 14 26 43.5 +0.7
comp=Z,60nm,1.1s
STKA Stephens Creek 37.78 153 P P 14 26 43.6 +0.9
comp=Z,167nm,0.8s,baz=319,slow=9.0,SNR=43
STKA LR LR 14 44 35.3
comp=Z,3μm,20.0s,baz=318,slow=40
MAJO Matsushiro 37.99 21 eP P 14 26 43.8 -0.7
comp=Z,122nm,1.4s
MAJO LR LR
comp=Z,3μm,19.0s
MAT Matsushiro 37.99 21 P P 14 26 43.0 -1.5
MAT S S 14 32 29.6 -5.3
MJAR Matsushiro Arr 37.99 21 P P 14 26 43.0 -1.5
MJAR ScP ScP 14 32 44.3 -1.2
MJAR Matsushiro Arr 37.99 21 P P 14 26 43.0 -1.5
comp=Z,25nm,1.0s,baz=196,slow=9.4,SNR=17
MJAR ScP ScP 14 32 44.3 -1.2
comp=Z,4.8nm,1.1s,baz=212,slow=4.1,SNR=9.3
EIDS Eidsvold 38.51 136 eP P 14 26 49.2 +0.2
comp=Z,100nm,1.3s
LZH Lanzhou 38.56 336 eP P 14 26 50.5 +1.1
LZH pP pP 14 26 56.5 -1.8
LZH sP sP 14 27 00.3 -1.7
LZH PP PnPn 14 28 23.3 +3.2
LZH PcP PcP 14 29 03.0 +1.3
LZH eS S 14 32 44.5 +0.8
LZH sS sS 14 32 56.0 -2.4
LZH SS SnSn 14 35 19.0 -14
LZH pmax pmax
comp=Z,31nm,1.1s
LZH pmax pmax
comp=Z,170nm,4.2s
LZH LR LR
comp=N,2μm,16.3s
LZH LR LR
comp=E,2μm,15.7s
LZH LR LR
comp=Z,3μm,17.6s
BJT Baijiatuau 38.89 353 eP P 14 26 52.1 +0.2
comp=Z,42nm,0.9s
BJT LR LR
comp=Z,2μm,19.0s
BJI Beijing 38.91 353 P P 14 26 51.8 -0.2
BJI pP pP 14 27 00.3 -0.6
BJI sP sP 14 27 03.3 -1.3
BJI PP PnPn 14 28 29.0 +5.0
BJI S ScP 14 32 49.3 +0.5

BJI sS **sS** **14 33 06.0 +2.9**
BJI pmax pmax
comp=Z,34nm,1.1s
BJI pmax pmax
comp=Z,460nm,6.6s
BJI LR LR
comp=N,1µm,20.1s
BJI LR LR
comp=E,2µm,16.6s
BJI LR LR
comp=Z,1µm,24.7s
HNR Honiara 39.02 107 P **P** **14 26 53.6 +0.2**
HNR LR LR
comp=Z,1µm,20.0s
HNR Honiara 39.02 107 P **P** **14 26 53.6 +0.2**
comp=Z,86nm,0.9s,baz=254,slow=3.1,SNR=3.6
SNY Shenyang 40.31 2 ⇑P **P** **14 27 04.0 +0.3**
SNY pP **pP** **14 27 16.5 +3.9**
SNY PP **PP** **14 28 34.5 -2.4**
SNY S S 14 33 02.0 -7.4
SNY SS **SS** **14 36 03.5 -5.3**
SNY pmax pmax
comp=Z,56nm,0.9s
SNY LR LR
comp=N,2µm,18.0s
SNY LR LR
comp=E,3µm,17.4s
SNY LR LR
comp=Z,3µm,19.6s
HHC Hu-ho-hao-te 40.50 347 *i*P **P** **14 27 05.5 +0.1**
HHC sP **sP** **14 27 16.5 -1.5**
HHC PP **PnPn** **14 28 44.0 +1.0**
HHC S **S** **14 33 12.0 -0.5**
HHC sS **sS** **14 33 28.5 +1.2**
HHC SS **SS** **14 36 10.5 -2.3**
HHC ScS **ScS** **14 37 10.0 +0.6**
HHC pmax pmax
comp=Z,140nm,1.0s
HHC pmax pmax
comp=Z,870nm,6.0s
HHC LR LR
comp=N,6µm,17.3s
HHC LR LR
comp=E,5µm,16.9s
HHC LR LR
comp=Z,7µm,16.3s
LSA Lhasa 40.87 317 *e*P **P** **14 27 10.6 +1.4**
comp=Z,35nm,0.8s
LSA LR LR
comp=Z,1µm,19.0s
ARMA Armidale 42.19 141 *e*P **P** **14 27 21.6 +2.1**
comp=Z,173nm,0.9s
CN2 Changchun 42.36 3 *e*P **P** **14 27 20.0 -0.5**
CN2 *es*P **sP** **14 27 30.8 -2.3**
CN2 *e*S **S** **14 33 41.0 +1.1**
CN2 pmax pmax
comp=Z,10.0nm,1.3s
CN2 pmax pmax
comp=Z,200nm,5.0s
CN2 LR LR
comp=N,600nm,15.0s
CN2 LR LR
comp=E,1µm,15.0s
CN2 LR LR
comp=Z,1µm,15.0s
GTA Gaotai 43.07 334 P **P** **14 27 27.0 +0.5**
GTA pP **pP** **14 27 35.0 -0.5**
GTA sP **sP** **14 27 38.8 -0.3**
GTA PP **PP** **14 29 09.3 +2.4**
GTA S **S** **14 33 51.3 +0.6**
GTA sS **sS** **14 34 03.3 -2.2**
GTA SS SS 14 36 54.3 -9.5
GTA pmax pmax
comp=Z,32nm,1.6s
GTA pmax pmax
comp=Z,370nm,5.7s
GTA LR LR
comp=N,2µm,17.6s
GTA LR LR
comp=E,2µm,18.5s
GTA LR LR
comp=Z,3µm,17.1s
USRK Ussuriysk Arra 43.53 10 P **P** **14 27 29.6 -0.4**
comp=Z,24nm,0.9s,baz=194,slow=7.1,SNR=20
MDJ Mudanjiang 43.57 8 P **P** **14 27 30.3 0.0**
MDJ pP **pP** **14 27 35.5 -3.8**
MDJ PP **PP** **14 29 10.0 -2.0**
MDJ PcS **PcS** **14 33 10.8 +0.6**
MDJ S **S** **14 33 57.5 0.0**
MDJ pmax pmax
comp=Z,72nm,1.3s
MDJ pmax pmax
comp=Z,300nm,4.6s
MDJ LR LR
comp=N,1µm,26.1s
MDJ LR LR
comp=E,1µm,23.2s
MDJ LR LR
comp=Z,2µm,20.3s
MDJ Mudanjiang 43.57 8 *e*P **P** **14 27 30.4 +0.1**
comp=Z,119nm,1.3s
MDJ LR LR
comp=Z,2µm,19.0s
CAN Canberra 44.22 148 *e*P **P** **14 27 36.2 +0.5**
comp=Z,142nm,0.8s
CAN LR LR
comp=Z,3µm,19.0s
ERM Erimo 44.63 22 *e*P **P** **14 27 38.0 -0.8**
comp=Z,31nm,1.1s
ERM LR LR
comp=Z,3µm,20.0s
HYB Hyderabad 45.83 293 *i*P **P** **14 27 48.0 -0.8**
HYB *ep*P **pP** **14 27 59.0 +1.1**
HYB *e*S **S** **14 34 32.0 +0.7**
ASAJ Asahikawa 46.25 20 *e*P **P** **14 27 52.0 +0.3**
comp=Z,24nm,1.0s
ASAJ Asahikawa 46.25 20 P **P** **14 27 51.6 -0.1**
comp=Z,46nm,1.0s,baz=233,slow=8.2,SNR=11
WAKE Wake Island 46.95 65 PFAKE 14 28 10.0 +12
WAKE LR LR
comp=Z,800nm,20.0s
HIA Hailar 47.78 358 *e*P **P** **14 28 03.1 -0.5**
comp=Z,74nm,1.1s
HIA LR LR
comp=Z,4µm,19.0s
ULN Ulaanbaatar 48.17 346 *e*P **P** **14 28 07.4 +0.6**
comp=Z,98nm,1.2s
ULN LR LR
comp=Z,4µm,20.0s
SONM Songino Array 48.30 346 P **P** **14 28 07.6 -0.2**
SONM Songino Array 48.30 346 P **P** **14 28 07.6 -0.2**
comp=Z,56nm,0.9s,baz=166,slow=8.3,SNR=28
DZM Mont Dzumac 48.97 121 *e*P **P** **14 28 15.4 +2.1**
comp=Z,90nm,1.1s
DZM *e*LR LR 14 42 32.3
comp=Z,1µm,24.6s
DGAR Diego Garcia 50.46 259 PFAKE 14 28 40.0 +15
DGAR LR LR
comp=Z,2µm,19.0s
TARA Tarawa 50.63 89 PFAKE 14 28 40.0 +14
TARA LR LR
comp=Z,1µm,19.0s
WMQ Urumqi 52.27 329 ⇓*i*P **P** **14 28 38.8 +1.0**
WMQ pP **pP** **14 28 46.5 -0.5**
WMQ sP **sP** **14 28 50.0 -0.6**
WMQ PcP **PcP** **14 29 50.0 +1.1**
WMQ PP **PP** **14 30 38.0 +1.4**
WMQ S **S** **14 36 00.5 -0.6**
WMQ ScS **ScS** **14 38 24.0 -1.8**
WMQ pmax pmax
comp=Z,65nm,1.0s
WMQ pmax pmax
comp=Z,640nm,4.1s
WMQ LR LR
comp=N,2µm,16.4s
WMQ LR LR
comp=E,1µm,19.0s
WMQ LR LR
comp=Z,1µm,23.5s
TLY Talaya 52.54 345 P **P** **14 28 41.5 +1.9**
comp=Z,526nm,0.9s,SNR=8.2
KSH Kashi 56.70 318 P **P** **14 29 11.8 +1.7**
KSH *ep*P **pP** **14 29 19.3 -0.1**
KSH *es*P **sP** **14 29 22.5 -0.4**
KSH *e*PcP **PcP** **14 30 07.5 +1.4**
KSH *e*PP **PP** **14 31 19.0 +2.5**

KSH *e*S **S** **14 36 59.0 -2.0**
KSH *es*S **sS** **14 37 14.0 -2.2**
KSH pmax pmax
comp=Z,59nm,1.2s
KSH pmax pmax
comp=Z,940nm,4.3s
KSH LR LR
comp=N,370nm,6.2s
KSH LR LR
comp=E,410nm,11.2s
KSH LR LR
comp=Z,670nm,12.7s
MK31 Makanchi Array 57.09 328 *e*P **P** **14 29 13.4 +0.8**
MKAR Makanchi Array 57.09 328 P **P** **14 29 13.2 +0.5**
MKAR Makanchi Array 57.09 328 P **P** **14 29 13.2 +0.5**
comp=Z,12nm,0.8s,baz=128,slow=8.3,SNR=11
FUNA Funafuti 57.57 101 PFAKE 14 29 30.0 +13
FUNA LR LR
comp=Z,9µm,19.0s
MSVF Nonsavu 58.08 112 *e*P **P** **14 29 22.4 +2.2**
comp=Z,17nm,0.8s
MSVF LR LR
comp=Z,852nm,20.0s
TKM2 Tokmak 2 58.69 321 *e*P **P** **14 29 25.3 +1.2**
comp=Z,49nm,1.0s
TKM2 LR LR
comp=Z,1µm,20.0s
AAK Ala-Archa 59.23 321 *e*P **P** **14 29 28.5 +0.6**
AAK LR LR
comp=Z,1µm,19.0s
AAK Ala-Archa 59.23 321 P **P** **14 29 28.4 +0.5**
comp=Z,11nm,0.8s,baz=121,slow=5.9,SNR=7.8
AAK LR LR 14 59 15.8
comp=Z,865nm,19.8s,baz=117,slow=40
PEA0B Petropavlovsk- 59.35 24 *e*P **P** **14 29 29.5 +1.2**
PETK Petropavlovsk- 59.35 24 P **P** **14 29 29.4 +1.1**
PETK Petropavlovsk- 59.35 24 P **P** **14 29 29.4 +1.1**
comp=Z,14nm,1.0s,baz=199,slow=4.0,SNR=8.5
KBL Kabul 59.52 310 *e*P **P** **14 29 29.4 -0.7**
comp=Z,51nm,0.8s
EKS2 Erkin-Say 59.70 320 *e*P **P** **14 29 31.8 +0.7**
comp=Z,41nm,1.0s
EKS2 LR LR
comp=Z,1µm,20.0s
ZAA0 Zalesovo Array 60.79 336 *e*P **P** **14 29 37.7 -0.5**
ZALV Zalesovo Beam 60.79 336 P **P** **14 29 37.3 -0.8**
ZALV P'P' 14 58 59.4
ZALV Zalesovo Beam 60.79 336 P **P** **14 29 37.3 -0.8**
comp=Z,12nm,0.8s,baz=124,slow=6.8,SNR=7.1
ZALV PKPPKP **P'P'df** **14 58 59.4 +2.3**
comp=Z,0.6nm,0.3s,baz=306,slow=3.2,SNR=6.7
KURBB Kurchatov Arra 61.44 330 P **P** **14 29 42.4 -0.2**
comp=Z,27nm,0.9s,baz=139,slow=6.4,SNR=12
KURBB PKPPKP **P'P'df** **14 59 00.3 +3.9**
comp=Z,2.5nm,1.0s,baz=297,slow=3.3,SNR=7.5
KURK Kurchatov 61.45 330 P **P** **14 29 42.4 -0.3**
KURK P'P' 14 59 00.3
KURK Kurchatov 61.45 330 P **P** **14 29 42.1 -0.6**
comp=Z,428nm,0.8s,SNR=5.2
KKAR Karatay Array 62.02 319 *e*P **P** **14 29 47.5 +0.7**
comp=Z,12nm,0.8s
RPZ Rata Peaks 62.51 142 *e*P **P** **14 29 51.6 +1.6**
comp=Z,890nm,1.1s
RPZ Rata Peaks 62.51 142 P **P** **14 29 51.5 +1.5**
comp=Z,604nm,0.9s,baz=7.5,slow=1.6,SNR=43
MCQ Macquarie Isla 63.34 157 *e*P **P** **14 29 56.3 +1.1**
comp=Z,26µm,0.9s
KHZ Kahutara 63.42 140 *e*P **P** **14 29 56.6 +0.6**
comp=Z,130nm,1.0s
MIDW Midway 63.42 59 PFAKE 14 30 10.0 +14
MIDW LR LR
comp=Z,673nm,19.0s
SNZO South Karori 63.65 138 *e*P **P** **14 29 57.9 +0.3**
comp=Z,354nm,1.0s
SNZO LR LR
comp=Z,2µm,19.0s
URZ Urewera 63.97 134 *e*P **P** **14 30 00.5 +0.8**
comp=Z,122nm,1.1s
URZ Urewera 63.97 134 P **P** **14 30 00.1 +0.3**
comp=Z,68nm,0.9s,baz=321,slow=5.1,SNR=11
MSEY Mahe Island 67.00 264 PFAKE 14 30 30.0 +10
MSEY LR LR
comp=Z,2µm,20.0s
BRVK Borovoye 67.03 329 *e*P **P** **14 30 19.3 +0.1**
comp=Z,57nm,1.0s
BRVK LR LR
comp=Z,906nm,19.0s
CASY Casey 68.00 185 PFAKE 14 30 40.0 +15
CASY LR LR
comp=Z,2µm,20.0s
DRV Dumont d'Urvil 69.03 173 PP PP 14 33 16.0 +12
DRV S S 14 39 27.0 -7.3
DRV SS SS 14 43 36.0 -25
DRV L L 14 47 00.0
DRV R 14 52 00.0
ABKAR Akbulak array 71.22 322 *e*P **P** **14 30 45.9 +0.6**
comp=Z,28nm,1.0s
BILL Bilibino 73.01 16 PFAKE 14 31 10.0 +14
BILL LR LR
comp=Z,1µm,22.0s
ABPO Ambohimpanom 76.32 250 *e*P **P** **14 31 15.2 -0.9**
comp=Z,43nm,1.1s
ABPO LR LR
comp=Z,2µm,22.0s
UNV Unalaska Valle 77.90 35 *e*P **P** **14 31 24.8 +0.9**
comp=Z,118nm,1.5s
GAMB Gambell 78.38 24 *e*P **P** **14 31 28.2 +1.8**
comp=Z,25nm,1.1s
DGRG David-gareji 79.30 312 P P 14 31 39.8 +7.7
ATD Arta Tunnel 79.37 281 P **P** **14 31 32.6 -0.4**
ATD Arta Tunnel 79.37 281 P **P** **14 31 32.6 -0.4**
comp=Z,6.8nm,0.3s,baz=90,slow=7.1,SNR=3.8
GNI Garni 79.60 310 PFAKE 14 31 50.0 +16
GNI LR LR
comp=Z,377nm,21.0s
TBLG Delisi 79.80 312 P P 14 31 43.2 +8.4
MAW Mawson 80.02 200 P **P** **14 31 34.7 -0.6**
MAW Mawson 80.02 200 P **P** **14 31 34.7 -0.6**
comp=Z,25nm,0.9s,baz=66,slow=9.1,SNR=20
KBZ Khabaz 81.39 314 P **P** **14 31 43.3 +0.1**
KBZ Khabaz 81.39 314 P **P** **14 31 43.3 +0.1**
comp=Z,4.0nm,0.9s,baz=67,slow=5.2,SNR=4.6
VNDA Vanda 81.68 172 *e*P **P** **14 31 43.8 -0.2**
comp=Z,49nm,0.8s
VNDA Vanda 81.68 172 P **P** **14 31 44.0 0.0**
comp=Z,52nm,0.8s,baz=309,slow=5.8,SNR=39
SBA Scott Base 82.64 171 *e*P **P** **14 31 50.1 +1.1**
comp=Z,45nm,0.9s
SBA LR LR
comp=Z,1µm,20.0s
MALT Malatya 84.33 308 PFAKE 14 32 10.0 +11
MALT LR LR
comp=Z,226nm,22.0s
KMBO Kilima Mbogo 85.05 269 *e*P **P** **14 32 03.4 +0.4**
comp=Z,38nm,1.3s
KMBO LR LR
comp=Z,1µm,19.0s
KMBO Kilima Mbogo 85.05 269 P **P** **14 32 03.0 0.0**
comp=Z,15nm,1.0s,baz=78,slow=8.0,SNR=9.3
KDAK Kodiak Island 86.27 32 PFAKE 14 32 20.0 +12
KDAK LR LR
comp=Z,732nm,21.0s
COLD Coldfoot 87.80 23 *e*P **P** **14 32 16.4 +1.3**
comp=Z,14nm,1.1s
BR131 Keskin Array S 88.09 310 *e*P **P** **14 32 16.2 -1.1**
comp=Z,3.0nm,1.0s
BRTR Keskin Array B 88.09 310 P **P** **14 32 16.6 -0.6**
BRTR Keskin Array B 88.09 310 P **P** **14 32 16.6 -0.6**
comp=Z,2.8nm,0.8s,baz=120,slow=7.1,SNR=7.8
CSS Prodhromos 88.37 305 PFAKE 14 32 30.0 +11
CSS LR LR
comp=Z,566nm,21.0s
SML Sawmill 88.53 28 *e*P **P** **14 32 16.8 -2.0**
comp=Z,13nm,1.6s
SYO Syowa Base 88.62 201 ⇓*e*X **P** **14 32 17.0 -1.9**
SYO Syowa Base 88.62 201 ⇑*ep*P pP 14 32 26.4 -2.2
PPT Papeete 88.64 108 LR LR 15 08 50.0
comp=Z,227nm,19.4s,baz=87,slow=33
PPT2 Papeete2 88.64 108 *e*LR LR 15 00 44.7
comp=Z,680nm,28.5s
COLA College 88.73 25 PFAKE 14 32 30.0 +11
COLA LR LR
comp=Z,541nm,21.0s
ANTO Ankara 88.74 310 PFAKE 14 32 30.0 +10
ANTO LR LR
comp=Z,488nm,22.0s

TBI Tubuai 88.93 113 *e*LR LR 15 00 44.1
comp=Z,426nm,30.2s
ILAR Eielson Array 89.15 25 P **P** **14 32 19.9 -1.6**
ILAR PKKP **PKKPdf** **14 49 55.2 -1.1**
ILAR Eielson Array 89.15 25 P **P** **14 32 19.9 -1.6**
comp=Z,0.8nm,0.6s,baz=259,slow=5.4,SNR=8.1
ILAR PKKP **PKKPdf** **14 49 55.2 -1.1**
comp=Z,1.9nm,0.8s,baz=80,slow=1.6,SNR=5.1
ISP Isparta 90.57 308 *e*P **P** **14 32 27.5 -1.4**
comp=Z,7.8nm,0.6s
ISP LR LR
comp=Z,326nm,21.0s
ISP Isparta 90.57 308 ⇓*i*P **P** **14 32 27.3 -1.6**
KEV Kevo 90.57 340 PFAKE 14 32 40.0 +12
KEV LR LR
comp=Z,1µm,20.0s
MENT Mentasta 90.64 27 *e*P **P** **14 32 28.5 0.0**
MENT *e* 14 32 39.8
AKASG Malin Array Be 90.90 321 P **P** **14 32 27.8 -2.2**
AKASG Malin Array Be 90.90 321 P **P** **14 32 27.8 -2.2**
comp=Z,0.7nm,0.5s,baz=80,slow=4.3,SNR=2.7
KIEV Kiev 90.91 321 PFAKE 14 32 40.0 +10
KIEV LR LR
comp=Z,657nm,20.0s
ARCES ARCESS Array B 91.12 340 P **P** **14 32 28.7 -1.9**
ARCES ARCESS Array B 91.12 340 P **P** **14 32 28.7 -1.9**
comp=Z,1.8nm,0.8s,baz=92,slow=6.3,SNR=4.2
QSPA South Pole Qui 91.28 180 P **P** **14 32 30.9 -0.6**
QSPA LR LR
comp=Z,1µm,21.0s
QSPA South Pole Qui 91.28 180 P **P** **14 32 30.9 -0.6**
comp=Z,45nm,0.9s,baz=328,slow=1.6,SNR=25
MICGM Minsk 91.47 324 *e* **P** **14 32 31.0 -1.5**
MBAR Mbarara 91.55 269 PFAKE 14 32 40.0 +6.0
MBAR LR LR
comp=Z,1µm,22.0s
EGAK Eagle 91.59 25 *e*P **P** **14 32 33.4 +0.5**
comp=Z,23nm,1.4s
EGAK LR LR
comp=Z,643nm,20.0s
FINES FINESS Array B 91.79 331 P **P** **14 32 32.9 -1.0**
FINES FINESS Array B 91.79 331 P **P** **14 32 32.9 -1.0**
comp=Z,0.8nm,0.6s,baz=94,slow=5.6,SNR=4.0
CFR Carcaliu 91.97 315 ⇑*i*P P 14 32 44.7 +10
KBS Kingsbay 92.53 350 PFAKE 14 32 50.0 +13
KBS LR LR
comp=Z,1µm,19.0s
TESR Tescani 92.91 317 ⇓*i*P pP 14 32 49.6 +0.5
VRI Vrincioaia 92.91 316 ⇑*i*P pP 14 32 49.4 +0.3
MLR Muntele Rosu 93.49 316 ⇑*i*P **P** **14 32 41.6 -0.7**
BUR08 Bucovina Ar. S 93.78 318 P **P** **14 32 41.6 -2.0**
LSZ Lusaka 94.30 255 *e*P **P** **14 32 45.4 -1.2**
comp=Z,46nm,0.9s
LSZ LR LR
comp=Z,1µm,21.0s
SANT Santorini 94.70 306 PFAKE 14 33 00.0 +12
SANT LR LR
comp=Z,260nm,20.0s
KWP Kalwaria Pacla 95.18 320 PFAKE 14 33 00.0 +10
KWP LR LR
comp=Z,1µm,21.0s
TRPA Tarpa 95.50 318 ⇓*i*P P 14 33 02.6 +11
CRVS Cervenica-Dubn 96.09 319 *ep*P **PKKSbc** **14 53 20.2 -4.8**
STHS Stebnicka Huta 96.15 320 *e* **P** **14 32 56.4 +2.2**
STHS *e* 14 49 15.9
KECS Kecovo 96.80 319 *e* P 14 33 01.8 +4.7
KECS *e* 14 49 21.7
BOSA Boshof 96.81 242 P **P** **14 32 57.6 -0.2**
BOSA Boshof 96.81 242 P **P** **14 32 57.6 -0.2**
comp=Z,8.3nm,1.0s,baz=92,slow=6.2,SNR=4.6
PSZ Piszkesteto 97.29 319 PFAKE 14 33 10.0 +10
PSZ LR LR
comp=Z,523nm,20.0s
VYHS Vyhne 97.88 319 *e*P Pdif 14 33 12.8 +11
OKC Ostrava-Krasne 98.06 321 *ep*P **pP** **14 33 12.2 -0.3**
OKC *ex* x 14 37 17.3
OKC *e*SKS **SKSac** **14 43 33.8 -4.7**
OKC *e*SP **SP** **14 45 57.7 +6.8**
OKC *ex* x 14 51 37.0
OKC AMS AMS 15 28 00.0
comp=Z,400nm,18.2s
TIR Tirane 98.42 312 PFAKE 14 33 20.0 +15
TIR LR LR
comp=Z,461nm,20.0s
NB2 NORSAR Subarra 98.88 333 P Pdif 14 33 10.4 +4.1
comp=Z,7.4nm,1.1s,baz=70,slow=4.4
NB2 NORSAR Subarra 98.88 333 P Pdif 14 33 10.4 +4.1
baz=70,slow=4.4
NOA NORSAR Array B 98.88 333 P **P** **14 33 04.9 -1.4**
NOA NORSAR Array B 98.88 333 P **P** **14 33 04.9 -1.4**
comp=Z,0.6nm,0.9s,baz=73,slow=4.7,SNR=2.2
DAG Danmarks Havn 98.97 352 *i*P Pdif 14 33 16.7 +10
DPC Dobruska-Polom 99.09 321 *e*PDIFF **Pdif** **14 33 07.2 -0.3**
DPC *e*PP **PP** **14 37 09.1 -0.7**
DPC *ex* x 14 37 24.6
DPC *e*SKS **SKSac** **14 43 42.9 -0.9**
DPC *e*S **S** **14 44 37.4 +0.7**
DPC *e*SP **SP** **14 46 02.5 +0.4**
DPC *e*PKKP PKKPbc 14 49 22.9 -12
UPC Upice 99.25 322 *e*PDIFF **Pdif** **14 33 10.4 +2.3**
UPC *ep*P **pP** **14 33 19.9 +2.1**
UPC *e*PKKP PKKPbc 14 49 22.9 -11
TREC Trest 99.86 320 *e*SP SP 14 46 12.7 +2.2
TREC *e*PKKP **PKKPbc** **14 49 28.4 -4.2**
TREC *e*SS **SS** **14 51 36.0 +0.6**
TREC AMS AMS 15 26 20.0
comp=Z,700nm,19.1s
KONO Kongsberg 100.11 332 PFAKE 14 33 20.0 +8.3
KONO LR LR
comp=Z,2µm,21.0s
PVCC Panska Ves 100.14 322 *e*PKKP PKKPbc 14 49 24.9 -6.9
PVCC AMS AMS 15 26 50.0
comp=Z,800nm,17.8s
PRU Pruhonice 100.29 321 *e*PDIFF **Pdif** **14 33 12.6 -0.1**
PRU *ex* x 14 37 32.0
PRU *e*SKS 14 43 45.2
PRU *e*S SKKSac 14 44 44.2 +21
PRU *e*SP **SP** **14 46 14.7 -0.2**
PRU *e*SS **SS** **14 51 34.1 -7.1**
PRU AMS AMS 15 26 40.0
comp=Z,700nm,19.9s
PRA Prague 100.34 321 PDIFF **Pdif** **14 33 13.0 +0.1**
PRA SKS 14 43 45.0
PRA AMS AMS 15 26 30.0
SUR Sutherland 100.41 237 PFAKE 14 33 30.0 +16
SUR LR LR
comp=Z,2µm,20.0s
BRG Berggiesshubel 100.43 322 *e*PKP Pdif 14 33 24.7 +11
comp=Z,15nm,1.7s
BRG PP **PP** **14 37 23.0 +3.2**
BRG SKS 14 43 49.0
BRG SDIF **Sdif** **14 44 48.0 +0.2**
BRG *i* 14 46 07.0
BRG SS SS 14 51 27.0 -16
BRG
comp=N,520nm,17.9s
BRG
comp=E,297nm,16.8s
BRG
comp=Z,716nm,17.7s
BRG Berggiesshubel 100.43 322 *e*P PKKPbc 14 49 24.2 -6.7
comp=Z,4.4nm,0.7s
CLL Collm 100.89 323 *e*PP PP 14 37 21.0 -2.2
CLL *es*PP 14 37 36.0
CLL *e* 14 37 44.0
CLL *e*SKSac **SKSac** **14 43 49.0 -3.4**
CLL *e*Sdif **Sdif** **14 44 56.0 +4.5**
CLL *e*PS **PS** **14 46 17.0 -8.5**
CLL *e*PPS PPS 14 47 15.0
CLL *e* 14 47 49.0
CLL *e*SS **SS** **14 51 48.0 -1.4**
CLL *e*SSS SSS 14 55 36.0
CLL *e*SSSS 14 58 48.0
CLL *e* 14 59 36.0
CLL LmH 15 21 00.0
comp=N,1µm,20.4s
CLL LmH 15 21 00.0
comp=E,500nm,22.0s
CLL LmV 15 25 00.0
comp=N,400nm,20.1s
CLL LmV 15 25 00.0
comp=E,700nm,20.5s
CLL LmV 15 25 00.0
comp=Z,1µm,19.6s

GERES	**GERESS Array B**	**101.11**	**320**	P		**Pdif**	**14 33 15.5**	**-1.1**
GERES	**GERESS Array B**	**101.11**	**320**	P		**Pdif**	**14 33 15.5**	**-1.1**
	comp=Z,0.1nm,0.2s,baz=77,slow=4.2,SNR=3.0							
TIP	**Timpagrande**	**101.14**	**310**	PFAKE			14 33 30.0	+13
TIP				LR	LR			
	comp=Z,570nm,20.0s							
CUC	**Castrocucco**	**101.69**	**311**	PFAKE			14 33 30.0	+11
CUC				LR	LR			
	comp=Z,331nm,20.0s							
CEL	**Celeste**	**101.98**	**309**	PFAKE			14 33 30.0	+9.4
CEL				LR	LR			
	comp=Z,338nm,20.0s							
RKT	**Rikitea**	**102.26**	**113**	*e*LR		LR	15 06 55.1	
	comp=Z,289nm,24.5s							
AQU	**L'Aquila**	**102.94**	**314**	PFAKE			14 33 40.0	+15
AQU				LR	LR			
	comp=Z,595nm,20.0s							
YKA	**Yellowknife Ar**	**103.47**	**24**	PKKPbc	PKKPbc		14 49 17.3	-5.1
YKA	**Yellowknife Ar**	**103.47**	**24**	PKKPbc	PKKPbc		14 49 17.3	-5.1
	comp=Z,9nm,0.8s,baz=115,slow=2.6,SNR=7.9							
WDD	**Wield Dalam**	**103.53**	**307**	PFAKE			14 33 40.0	+13
WDD				LR	LR			
	comp=Z,361nm,20.0s							
TSUM	**Tsumeb**	**104.32**	**251**	PFAKE			14 33 40.0	+8.5
TSUM				LR	LR			
	comp=Z,2μm,21.0s							
VLC	**Villacollemand**	**104.59**	**316**	PFAKE			14 33 40.0	+7.9
VLC				LR	LR			
	comp=Z,535nm,19.0s							
TUE	**Stuetta**	**104.61**	**319**	PFAKE			14 33 40.0	+7.7
TUE				LR	LR			
	comp=Z,602nm,19.0s							
BFO	**Black Forest**	**104.67**	**321**	PFAKE			14 33 40.0	+7.7
BFO				LR	LR			
	comp=Z,805nm,19.0s							
NLWA	**Neilton Lookou**	**104.92**	**40**	PFAKE			14 33 40.0	+6.5
NLWA				LR	LR			
	comp=Z,404nm,19.0s							
ECH	**Echery**	**105.45**	**321**	PFAKE			14 38 00.0	
ECH				LR	LR			
	comp=Z,663nm,20.0s							
WLF	**Walferdange**	**105.56**	**323**	PFAKE			14 38 00.0	
WLF				LR	LR			
	comp=Z,1μm,19.0s							
VSL	**Villasalto**	**106.63**	**312**	PFAKE			14 38 00.0	
VSL				LR	LR			
	comp=Z,340nm,20.0s							
HAWA	**Hanford**	**108.06**	**40**	PFAKE			14 38 10.0	
HAWA				LR	LR			
	comp=Z,471nm,19.0s							
SSB	**Saint Sauveur**	**108.17**	**319**	PFAKE			14 38 10.0	
SSB				LR	LR			
	comp=Z,473nm,20.0s							
ESK	**Eskdalemuir**	**108.21**	**331**	PFAKE			14 38 10.0	
ESK				LR	LR			
	comp=Z,1μm,20.0s							
NEW	**Newport**	**108.82**	**37**	PFAKE			14 38 10.0	
NEW				LR	LR			
	comp=Z,466nm,19.0s							
BORG	**Borgarnes**	**108.91**	**344**	PFAKE			14 38 10.0	
BORG				LR	LR			
	comp=Z,524nm,19.0s							
BMO	**Blue Mountains**	**110.09**	**41**	PFAKE			14 38 10.0	
BMO				LR	LR			
	comp=Z,514nm,19.0s							
WVOR	**Wild Horse Val**	**110.12**	**44**	PFAKE			14 38 10.0	
WVOR				LR	LR			
	comp=Z,410nm,20.0s							
MSO	**Missoula**	**111.39**	**38**	PFAKE			14 38 10.0	
MSO				LR	LR			
	comp=Z,289nm,20.0s							
SFJD	**Kangerlussuaq**	**111.61**	**357**	PFAKE			14 38 10.0	
SFJD				LR	LR			
	comp=Z,487nm,21.0s							
NVAR	**Mina Array Bea**	**111.79**	**47**	PKiKP		**PKiKP**	**14 38 02.6**	**+0.8**
NVAR				PKKPbc		**PKKPbc**	**14 48 54.4**	**-1.5**
NVAR	**Mina Array Bea**	**111.79**	**47**	PKiKP		**PKiKP**	**14 38 02.6**	**+0.8**
	comp=Z,0.9nm,0.7s,baz=267,slow=1.8,SNR=5.7							
NVAR				PKKPbc		**PKKPbc**	**14 48 54.4**	**-1.5**
	comp=Z,1.2nm,0.9s,baz=128,slow=4.0,SNR=6.4							
BMN	**Battle Mountai**	**111.85**	**45**	PFAKE			14 38 10.0	
BMN				LR	LR			
	comp=Z,484nm,20.0s							
TPH	**Tonopah**	**112.71**	**47**	PFAKE			14 38 20.0	
TPH				LR	LR			
	comp=Z,542nm,22.0s							
EGMT	**Eagleton**	**113.30**	**35**	PFAKE			14 38 20.0	
EGMT				LR	LR			
	comp=Z,339nm,20.0s							
FFC	**Flin Flon**	**113.35**	**26**	PFAKE			14 38 20.0	
FFC				LR	LR			
	comp=Z,551nm,21.0s							
BOZ	**Bozeman (W)**	**113.36**	**38**	PFAKE			14 38 20.0	
BOZ				LR	LR			
	comp=Z,292nm,20.0s							
TAM	**Tamanrasset**	**113.97**	**296**	PFAKE			14 38 20.0	
TAM				LR	LR			
	comp=Z,470nm,20.0s							
LKWY	**Lake**	**114.64**	**39**	PFAKE			14 38 20.0	+13
LKWY				LR	LR			
	comp=Z,610nm,19.0s							
PFO	**Pinyon Flat Ob**	**114.84**	**52**	PFAKE			14 38 20.0	+12
PFO				LR	LR			
	comp=Z,654nm,20.0s							
DUG	**Dugway**	**115.04**	**44**	PFAKE			14 38 20.0	+12
DUG				LR	LR			
	comp=Z,433nm,19.0s							
RLMT	**Red Lodge**	**115.06**	**38**	PFAKE			14 38 20.0	+12
RLMT				LR	LR			
	comp=Z,296nm,21.0s							
HWUT	**Hardware Ranch**	**115.27**	**42**	PFAKE			14 38 20.0	+12
HWUT				LR	LR			
	comp=Z,501nm,20.0s							
BW06	**Boulder Array**	**116.05**	**40**	PFAKE			14 38 20.0	+10
BW06				LR	LR			
	comp=Z,370nm,20.0s							
PDAR	**Pinedale Array**	**116.05**	**40**	PKP		**PKPdf**	**14 38 10.4**	**+0.6**
PDAR				PKKPbc		**PKKPbc**	**14 48 39.4**	**-2.3**
PDAR	**Pinedale Array**	**116.05**	**40**	PKP		**PKPdf**	**14 38 10.4**	**+0.6**
	comp=Z,0.4nm,0.7s,baz=253,slow=2.7,SNR=3.4							
PDAR				PKKPbc		**PKKPbc**	**14 48 39.4**	**-2.3**
	comp=Z,5.5nm,0.9s,baz=95,slow=4.0,SNR=7.5							
DGMT	**Dagmar**	**116.15**	**33**	PFAKE			14 38 20.0	+10
DGMT				LR	LR			
	comp=Z,505nm,21.0s							
MVU	**Marysvale**	**116.17**	**45**	PFAKE			14 38 20.0	+10
MVU				LR	LR			
	comp=Z,700nm,22.0s							
ESDC	**Sonseca Array**	**116.18**	**316**	PKKPab	PKKPab		14 48 45.7	+0.8
ESDC	**Sonseca Array**	**116.18**	**316**	PKKPab	PKKPab		14 48 45.7	+0.8
	comp=Z,0.3nm,0.3s,baz=270,slow=3.8,SNR=6.0							
PAB	**San Pablo**	**116.50**	**316**	PFAKE			14 38 20.0	+9.4
PAB				LR	LR			
	comp=Z,498nm,19.0s							
PMSA	**Palmer Station**	**116.55**	**177**	PFAKE			14 38 20.0	+10
PMSA				LR	LR			
	comp=Z,1μm,21.0s							
WUAZ	**Wupatki**	**118.03**	**48**	PFAKE			14 38 30.0	+16
WUAZ				LR	LR			
	comp=Z,496nm,20.0s							
MTE	**Manteigas**	**118.28**	**318**	PFAKE			14 38 30.0	+16
MTE				LR	LR			
	comp=Z,1μm,19.0s							
PV01	**Paradox Valley**	**118.91**	**44**	*e*PKPdf		**PKPdf**	**14 38 15.9**	**+0.4**
TOA0	**Torodi Ar. Sit**	**119.35**	**286**	*e*PKPdf		**PKPdf**	**14 38 15.5**	**-1.1**
TORD	**Torodi Ar. Bea**	**119.35**	**286**	PKP		**PKPdf**	**14 38 15.8**	**-0.8**
TORD				PKKPbc		**PKKPab**	**14 48 31.4**	**+0.3**
TORD	**Torodi Ar. Bea**	**119.35**	**286**	PKP		**PKPdf**	**14 38 15.8**	**-0.8**
	comp=Z,7.6nm,0.7s,baz=61,slow=1.5,SNR=16							
TORD				PKKPbc		**PKKPab**	**14 48 31.4**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=266,slow=3.8,SNR=5.0							
TUC	**Tucson**	**119.75**	**51**	PFAKE			14 38 30.0	+13
TUC				LR	LR			
	comp=Z,443nm,21.0s							
AGMN	**Agassiz Nation**	**120.51**	**29**	PFAKE			14 38 30.0	+12
AGMN				LR	LR			
	comp=Z,632nm,20.0s							
RTC	**Rabat Centre**	**120.74**	**311**	PFAKE			14 38 30.0	+11
RTC				LR	LR			
	comp=Z,383nm,19.0s							
SDCO	**Great Sand Dun**	**121.22**	**43**	PFAKE			14 38 30.0	+10
SDCO				LR	LR			
	comp=Z,451nm,20.0s							
OGNE	**Ogallala**	**121.78**	**38**	PFAKE			14 38 30.0	+9.3
OGNE				LR	LR			
	comp=Z,500nm,19.0s							
ANMO	**Albuquerque**	**121.89**	**47**	PKP		**PKPdf**	**14 38 21.4**	**+0.2**
ANMO				LR	LR			
	comp=Z,369nm,19.0s							
ANMO	**Albuquerque**	**121.89**	**47**	PKP		**PKPdf**	**14 38 21.4**	**+0.2**
	comp=Z,2.2nm,0.8s,baz=234,slow=2.9,SNR=6.5							
EYMN	**Ely**	**122.78**	**26**	PFAKE			14 38 30.0	+7.7
EYMN				LR	LR			
	comp=Z,457nm,19.0s							
ECSD	**EROS Data Cent**	**123.22**	**33**	*e*PKPdf		**PKPdf**	**14 38 22.7**	**-0.6**
ECSD				LR	LR			
	comp=Z,412nm,19.0s							
SCHQ	**Schefferville**	**123.50**	**6**	PKP		**PKPdf**	**14 38 22.9**	**-0.7**
SCHQ	**Schefferville**	**123.50**	**6**	PKP		**PKPdf**	**14 38 22.9**	**-0.7**
	comp=Z,6.2nm,0.8s,baz=354,slow=2.7,SNR=8.7							
MNTX	**Cornudas Mount**	**124.18**	**50**	*e*PKPdf		**PKPdf**	**14 38 26.5**	**+1.0**
MNTX				LR	LR			
	comp=Z,308nm,19.0s							
COWI	**Conover**	**125.23**	**26**	PFAKE			14 38 40.0	+13
COWI				LR	LR			
	comp=Z,506nm,20.0s							
AMTX	**Amarillo**	**125.33**	**44**	PFAKE			14 38 40.0	+12
AMTX				LR	LR			
	comp=Z,453nm,20.0s							
USHA	**Ushuaia**	**125.98**	**172**	PKP		**PKPdf**	**14 38 29.2**	**+1.0**
USHA	**Ushuaia**	**125.98**	**172**	PKP		**PKPdf**	**14 38 29.2**	**+1.0**
	comp=Z,26nm,0.9s,baz=131,slow=1.0,SNR=8.7							
KSU1	**Kansas State U**	**126.21**	**37**	PFAKE			14 38 40.0	+11
KSU1				LR	LR			
	comp=Z,534nm,21.0s							
SCIA	**State Center**	**126.30**	**33**	PFAKE			14 38 40.0	+11
SCIA				LR	LR			
	comp=Z,648nm,21.0s							
TXAR	**Lajitas Array**	**126.56**	**51**	PKP		**PKPdf**	**14 38 29.7**	**-0.5**
TXAR	**Lajitas Array**	**126.56**	**51**	PKP		**PKPdf**	**14 38 29.7**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=163,slow=0.9,SNR=7.9							
DBIC	**Dimbokro**	**126.64**	**279**	PKP		**PKPdf**	**14 38 29.8**	**-0.8**
DBIC	**Dimbokro**	**126.64**	**279**	PKP		**PKPdf**	**14 38 29.8**	**-0.8**
	comp=Z,13nm,0.8s,baz=120,slow=1.2,SNR=6.7							
SHEL	**Horse Pasture**	**126.78**	**251**	PFAKE			14 38 40.0	+9.1
SHEL				LR	LR			
	comp=Z,1μm,20.0s							
JFWS	**Jewell Farm**	**127.11**	**30**	*e*PKPdf		**PKPdf**	**14 38 30.1**	**-0.7**
JFWS				LR	LR			
	comp=Z,418nm,19.0s							
WMOK	**Wichita Mounta**	**127.41**	**43**	PFAKE			14 38 40.0	+8.4
WMOK				LR	LR			
	comp=Z,434nm,22.0s							
GLMI	**Grayling**	**128.17**	**24**	PFAKE			14 38 40.0	+7.3
GLMI				LR	LR			
	comp=Z,743nm,21.0s							
JCT	**Junction City**	**128.96**	**48**	*e*PKPdf		**PKPdf**	**14 38 35.8**	**+1.1**
JCT				LR	LR			
	comp=Z,385nm,20.0s							
HDIL	**Hopedale**	**129.33**	**31**	PFAKE			14 38 50.0	+15
HDIL				LR	LR			
	comp=Z,524nm,21.0s							
MIAR	**Mount Ida**	**130.97**	**40**	*e*PKPdf		**PKPdf**	**14 38 39.9**	**+1.5**
MIAR				LR	LR			
	comp=Z,582nm,20.0s							
LONY	**Lake Ozonia**	**131.82**	**16**	PFAKE			14 38 50.0	+10
LONY				LR	LR			
	comp=Z,611nm,21.0s							
KVTX	**Kingsville**	**131.88**	**50**	PFAKE			14 38 50.0	+10
KVTX				LR	LR			
	comp=Z,622nm,21.0s							
ERPA	**Erie**	**132.28**	**22**	PFAKE			14 38 50.0	+9.4
ERPA				LR	LR			
	comp=Z,574nm,19.0s							
NCB	**Newcomb**	**132.52**	**16**	PFAKE			14 38 50.0	+9.0
NCB				LR	LR			
	comp=Z,928nm,22.0s							
ACSO	**Alum Creek Sta**	**132.62**	**26**	PFAKE			14 38 50.0	+8.7
ACSO				LR	LR			
	comp=Z,478nm,21.0s							
LBNH	**Lisbon**	**132.87**	**14**	PFAKE			14 38 50.0	+8.3
LBNH				LR	LR			
	comp=Z,732nm,22.0s							
BINY	**Binghamton**	**133.61**	**19**	PFAKE			14 38 50.0	+6.9
BINY				LR	LR			
	comp=Z,465nm,21.0s							
VBMS	**Vicksburg**	**134.42**	**40**	PFAKE			14 39 00.0	+15
VBMS				LR	LR			
	comp=Z,435nm,19.0s							
TKL	**Tuckaleechee C**	**135.88**	**31**	PKP		**PKPdf**	**14 38 47.6**	**+0.1**
TKL	**Tuckaleechee C**	**135.88**	**31**	PKP		**PKPdf**	**14 38 47.6**	**+0.1**
	comp=Z,2.3nm,0.7s,baz=157,slow=2.7,SNR=4.8							
LRAL	**Lakeview Retre**	**136.04**	**36**	PFAKE			14 39 00.0	+12
LRAL				LR	LR			
	comp=Z,360nm,20.0s							
BLA	**Blacksburg**	**136.24**	**26**	PFAKE			14 39 00.0	+12
BLA				LR	LR			
	comp=Z,478nm,21.0s							
ASCN	**Ascension**	**136.31**	**260**	PFAKE			14 39 00.0	+11
ASCN				LR	LR			
	comp=Z,284nm,20.0s							
CBN	**Corbin**	**136.66**	**23**	PFAKE			14 39 00.0	+11
CBN				LR	LR			
	comp=Z,600nm,22.0s							
BRAL	**Brewton**	**137.42**	**38**	PFAKE			14 39 00.0	+9.5
BRAL				LR	LR			
	comp=Z,587nm,20.0s							
CNNC	**Cliffs of the**	**139.00**	**25**	PFAKE			14 39 10.0	+17
CNNC				LR	LR			
	comp=Z,590nm,22.0s							
PLCA	**Paso Flores**	**139.11**	**165**	PKP		**PKPdf**	**14 38 53.6**	**+0.1**
PLCA	**Paso Flores**	**139.11**	**165**	PKP		**PKPdf**	**14 38 53.6**	**+0.1**
	comp=Z,7.1nm,0.9s,baz=188,slow=3.1,SNR=6.2							
NHSC	**New Hope**	**139.71**	**30**	PFAKE			14 39 10.0	+15
NHSC				LR	LR			
	comp=Z,631nm,19.0s							
SACV	**Santiago Islan**	**142.55**	**297**	PFAKE			14 39 10.0	+10
SACV				LR	LR			
	comp=Z,341nm,19.0s							
TEIG	**Tepich**	**143.17**	**53**	PKPpre		PKPpre	14 38 57.6	
TEIG				LR	LR			
	comp=Z,295nm,20.0s							
TEIG	**Tepich**	**143.17**	**53**	PKhKP		PKPpre	14 38 57.6	
	comp=Z,6.8nm,0.8s,baz=286,slow=1.9,SNR=4.1							
TRQA	**Tornquist**	**143.26**	**174**	*e*PKPpre		PKPpre	14 38 57.7	
TRQA				LR	LR			
	comp=Z,600nm,21.0s							
BBSR	**BB Station**	**145.82**	**11**	PFAKE			14 39 20.0	+14
BBSR				LR	LR			
	comp=Z,354nm,20.0s							
TGUH	**Tegucigalpa,Un**	**146.97**	**61**	PFAKE			14 39 20.0	+8.8
TGUH				LR	LR			
	comp=Z,355nm,22.0s							
LCO	**Las Campanas**	**149.84**	**157**	*e*PKPbc		**PKPbc**	**14 39 18.0**	**+0.7**
LCO				LR	LR			
	comp=Z,897nm,21.0s							
MTDJ	**Mount Denham**	**152.46**	**44**	PFAKE			14 39 30.0	-3.7
MTDJ				LR	LR			
	comp=Z,381nm,19.0s							
GTBY	**Guantanamo Bay**	**152.83**	**38**	PFAKE			14 39 30.0	-5.0
GTBY				LR	LR			
	comp=Z,426nm,20.0s							
GRTK	**Grand Turk**	**153.77**	**29**	PFAKE			14 39 30.0	+3.8
GRTK				LR	LR			
	comp=Z,478nm,20.0s							
CPUP	**Villa Florida**	**155.16**	**181**	PKP		**PKPdf**	**14 39 20.3**	**+0.2**
CPUP	**Villa Florida**	**155.16**	**181**	PKP		**PKPdf**	**14 39 20.3**	**+0.2**
	comp=Z,11nm,0.8s,baz=175,slow=2.0,SNR=12							
BCIP	**Isla Barro Col**	**155.62**	**64**	PFAKE			14 39 30.0	+8.9
BCIP				LR	LR			
	comp=Z,576nm,22.0s							
SDDR	**Presa de Saban**	**155.79**	**33**	PFAKE			14 39 30.0	+8.8
SDDR				LR	LR			
	comp=Z,534nm,20.0s							
LVC	**Limon Verde**	**156.23**	**154**	*e*PKPdf		**PKPdf**	**14 39 23.3**	**+1.3**
LVC				LR	LR			
	comp=Z,409nm,19.0s							
RCBR	**Riachuelo**	**157.78**	**258**	PFAKE			14 39 30.0	+6.1
RCBR				LR	LR			
	comp=Z,825nm,21.0s							
NNA	**Nana**	**158.29**	**120**	PFAKE			14 39 40.0	+15
NNA				LR	LR			
	comp=Z,498nm,19.0s							
SJG	**San Juan**	**158.96**	**23**	PFAKE			14 39 40.0	+15
SJG				LR	LR			
	comp=Z,614nm,21.0s							
OTAV	**Otavalo**	**159.22**	**86**	*e*PKPdf		**PKPdf**	**14 39 26.7**	**+0.4**
OTAV				LR	LR			
	comp=Z,647nm,21.0s							
LPAZ	**La Paz**	**161.96**	**146**	PKP		**PKPdf**	**14 39 30.2**	**+0.9**
LPAZ				*e*PKPdf		**PKPdf**	**14 39 30.5**	**+1.2**
LPAZ	**La Paz**	**161.96**	**146**	PKP		**PKPdf**	**14 39 30.2**	**+0.9**
	comp=Z,10nm,1.1s,baz=34,slow=3.6,SNR=13							
BDFB	**Brasilia**	**162.87**	**213**	PKP		**PKPdf**	**14 39 29.7**	**+0.2**
BDFB				PKPab		**PKPab**	**14 40 16.9**	**-1.6**
BDFB	**Brasilia**	**162.87**	**213**	PKP		**PKPdf**	**14 39 29.7**	**+0.2**
	comp=Z,8.7nm,0.9s,baz=105,slow=3.3,SNR=9.8							
BDFB				PKPab		**PKPab**	**14 40 16.9**	**-1.6**
	comp=Z,23nm,0.8s,baz=148,slow=2.9,SNR=15							
SDV	**Santo Domingo**	**163.60**	**51**	*e*PKPdf		**PKPdf**	**14 39 30.4**	**0.0**
BBGH	**Gun Hill**	**165.49**	**7**	PFAKE			14 39 40.0	+8.2
BBGH				LR	LR			
	comp=Z,954nm,20.0s							
GRGR	**Grenville**	**166.05**	**16**	PFAKE			14 39 40.0	+7.7
GRGR				LR	LR			
	comp=Z,397nm,21.0s							
SAML	**Samuel**	**170.70**	**144**	*e*PKPdf		**PKPdf**	**14 39 35.6**	**+0.2**
SAML				LR	LR			
	comp=Z,613nm,19.0s							

TIR ***28*** *14:27:02.9±3.4, 41.18N×20.20E, h0km±3.23km, ML3.1*
THE ***28*** *14:27:02.5, 41.21N×20.20E, h10km±12km, ML2.8/2, Error ellipse: s-maj=12.9km s-min=0.7km az=281.0*
PDG ***28*** *14:27:02.8±0.3, 41.19N×20.12E, h13km, ML2.9/8, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
SKO ***28*** *14:27:02.7, 41.20N×20.17E, h12km, M2.2, ML2.7*
CSEM ***28*** *14:27:02.2±0.4, 41.13N×20.07E, h2km, ML2.8/2, Error ellipse: s-maj=10.0km s-min=4.0km az=46.0*

ISC 28 14:27:01.9±1.1, 41.17N±0.03×20.19E±0.02, h8km±9km, n50, σ1.923/86, 8C-8D, Albania

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time	Res
TIR	**Tirane**	**0.30**	**307**	*e*PG			**Pg**	**14 27 07.9**	**0.0**
TIR				*i* SG			**Sb**	**14 27 14.9**	**+0.2**
TIR	**Tirane**	**0.30**	**307**	P			**Pg**	**14 27 08.1**	**+0.2**
TIR	**Tirane**	**0.30**	**307**	*e*Pg			**Pg**	**14 27 07.9**	**0.0**
	SNR=9.0								
PHP	**Peshkopia**	**0.55**	**20**	*e*PG			**Pg**	**14 27 12.3**	**-0.3**
PHP				*i* SG			**Sb**	**14 27 21.5**	**-0.4**
PHP	**Peshkopia**	**0.55**	**20**	P			**Pg**	**14 27 12.4**	**-0.2**
PHP	**Peshkopia**	**0.55**	**20**	P			**Pg**	**14 27 12.4**	**-0.2**
PHP				*i* Sg			**Sb**	**14 27 21.5**	**-0.4**
	SNR=9.0								
KBN	**Korca**	**0.71**	**140**	*e*PG			**Pb**	**14 27 16.9**	**+0.4**
KBN				*i* SG			**Sn**	**14 27 28.6**	**-0.8**
KBN	**Korca**	**0.71**	**140**	P			**Pb**	**14 27 16.8**	**+0.3**
KBN	**Korca**	**0.71**	**140**	P			**Pb**	**14 27 16.8**	**+0.3**
KBN				*i* Sg			**Sn**	**14 27 28.6**	**-0.8**
	SNR=9.0								
BIA	**Bitola**	**0.87**	**99**	*e*Pg			**Pg**	**14 27 17.9**	**-0.7**
BIA				*i* Sg			**Sb**	**14 27 31.3**	**+0.1**
BIA	**Bitola**	**0.87**	**99**	*i* Pg			**Pg**	**14 27 18.0**	**-0.7**
BIA				*i* Sg			**Sb**	**14 27 31.1**	**-0.1**
PUK	**Puka**	**0.90**	**346**	*e*PG			**Pb**	**14 27 19.3**	**-0.5**
PUK				*i* SG			**Sn**	**14 27 33.5**	**-0.7**
PUK	**Puka**	**0.90**	**346**	*e*Pg			**Pb**	**14 27 19.3**	**-0.5**
	SNR=9.0								
PUK				*i* Sg			**Sn**	**14 27 33.5**	**-0.7**
	SNR=9.0								
FNA	**Florina**	**0.98**	**113**	P			**Pg**	**14 27 20.7**	**0.0**
FNA				S			**Sn**	**14 27 35.9**	**-0.1**
FNA	**Florina**	**0.98**	**113**	P			**Pg**	**14 27 20.7**	**0.0**
FNA				S			**Sn**	**14 27 35.9**	**-0.1**
NEST	**Nestorio**	**1.00**	**139**	P			**Pg**	**14 27 21.8**	**+0.8**
NEST				S			**Sn**	**14 27 36.5**	**0.0**
NEST	**Nestorio**	**1.00**	**139**	P			**Pg**	**14 27 21.8**	**+0.8**
NEST				S			**Sn**	**14 27 36.5**	**0.0**
ULC	**Ulcinj**	**1.06**	**319**	⇓*i* Pg			**Pg**	**14 27 21.2**	**-1.1**
ULC				*e*Sg			**Sn**	**14 27 37.9**	**-0.2**
ULC	**Ulcinj**	**1.06**	**319**	⇓*i* Pg			**Pg**	**14 27 21.2**	**-1.1**
ULC				*e*Sg			**Sn**	**14 27 37.9**	**-0.2**
BCI	**Bajram Curri**	**1.20**	**356**	*e*PG			**Pg**	**14 27 27.5**	**+2.5**
BCI				*i* SG			**Sn**	**14 27 46.1**	**+4.6**
BCI	**Bajram Curri**	**1.20**	**356**	*e*Pg			**Pg**	**14 27 27.5**	**+2.5**
	SNR=9.0								
BCI				*i* Sg			**Sn**	**14 27 46.1**	**+4.6**
	SNR=9.0								
SKO	**Skopje**	**1.24**	**49**	*e*Pg			**Pg**	**14 27 25.6**	**-0.1**
SKO				*i* Sg			**Sn**	**14 27 41.4**	**-1.0**
SKO				*e*Lg			Lg	14 27 42.6	
	comp=N,149nm,0.7s								
SKO				*e*Lg			Lg	14 27 43.8	
	comp=E,156nm,0.8s								
SKO	**Skopje**	**1.24**	**49**	*i* Pg			**Pg**	**14 27 25.6**	**-0.1**
SKO				*i* Sg			**Sn**	**14 27 42.4**	**+0.1**
SKO				*i* Lg			Lg	14 27 43.9	
	comp=E,156nm,0.8s								
SKO				*i* Lg			Lg	14 27 43.9	
	comp=N,110nm,0.5s								
PVY	**Plav**	**1.44**	**353**	⇑*i* Pg			**Pg**	**14 27 29.3**	**-0.2**
PVY				*e*Sg			**Sg**	**14 27 50.1**	**+2.0**
PVY	**Plav**	**1.44**	**353**	⇑*i* Pg			**Pg**	**14 27 29.3**	**-0.2**
PVY				*e*Sg			**Sg**	**14 27 50.1**	**+2.0**
PDG	**Podgorica**	**1.44**	**331**	⇑*i* Pg			**Pb**	**14 27 28.1**	**-0.9**
PDG				*e*Sg			**Sg**	**14 27 50.2**	**+1.9**
TTG	**Podgorica**	**1.44**	**331**	⇑*i* Pg			**Pb**	**14 27 28.1**	**-0.9**
TTG				*e*Sg			**Sg**	**14 27 50.2**	**+1.9**
BUM	**Brajici-Budva**	**1.49**	**320**	⇓*i* Pg			**Pb**	**14 27 29.5**	**-0.3**
BUM				*e*Sg			**Sg**	**14 27 50.4**	**+0.6**
BUM	**Brajici-Budva**	**1.49**	**320**	⇓*i* Pg			**Pb**	**14 27 29.5**	**-0.3**
BUM				*e*Sg			**Sg**	**14 27 50.4**	**+0.6**
BEY	**Berane**	**1.72**	**353**	⇓*i* Pn			**Pb**	**14 27 33.6**	**-0.1**
BE

VISS	Visnje	6.05 321	*i* P	Pn	14 29 13.2	+0.2
JAVS	Javornik	6.49 318	*i* P	Pn	14 29 17.3	-1.8
JAVS	Javornik	6.49 318	*i* P	Pn	14 29 17.3	-1.9
PERS	Pernice	6.57 328	*i* P	Pn	14 29 19.9	-0.3
PERS	Pernice	6.57 328	*i* P	Pn	14 29 20.0	-0.3

*DJA **28** 14:27:05.7±1.4, 1°N±13′×12°2E±°, h10km, M4.2/6, mb3.8/1, MLv4.5/6*

*ISCJB **28** 14:28:00.5±0.6, 1°36N±0°06×122°41E±0°09, h38km, mb4.1/10, Error ellipse: s-maj=13.0km s-min=8.2km az=11.5*

*IDC **28** 14:28:02.4±0.7, 1°32N×122°46E, h37km±6km, mb3.8/9, mb1 4.0/11, mb1mx3.7/27, mbtmp3.9/11, ML4.0/2, Error ellipse: s-maj=42.9km s-min=13.4km az=67.0*

ISC 28 14:28:02.4±0.7, 1°30N±0°08×122°43E±0°09, h38km, n20, σ1°20/22, mb4.0/10, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	Gorontalo	0.88	139	P	Pn	14 28 18.1	-0.1
MRSI	Marisa	0.95	211	P	Pn	14 28 18.4	-0.8
MRSI				S	Sn	14 28 29.2	-2.4
KMSI	Cibinong	1.71	115	P	Pn	14 28 36.8	+7.2
LUWI	Luwuk	2.35	172	P	Pn	14 28 42.8	+4.4
SKSI	Soroako, Sulaw	3.96	196	P	Pn	14 29 03.1	+2.5
TTSI	Tana Toraja	5.04	211	P	Pn	14 29 18.0	+2.5
SPSI	Sidrap Palu	5.87	207	P	Pn	14 29 30.3	+3.5
KAPI	Kappang 2.5nm,0.3s,baz=271,slow=8.3,SNR=5.4	6.82	203	Pn	Pn	14 29 39.5	-0.4
FITZ	Fitzroy Crossi 0.4nm,0.3s,baz=356,slow=11,SNR=5.3	19.53	171	P	P	14 32 26.8	0.0
WRA	Warramunga Arr 3.1nm,0.9s,baz=327,slow=11,SNR=6.2	24.12	152	P	P	14 33 15.3	+0.4
ASAR	Alice Springs 0.6nm,0.8s,baz=334,slow=8.2,SNR=2.9	27.21	156	P	P	14 33 44.2	+1.4
STKA	Stephens Creek 3.7nm,0.7s,baz=355,slow=12,SNR=4.0	37.66	153	P	P	14 35 14.2	+0.1
SONM	Songino Array 1.8nm,0.9s,baz=165,slow=7.7,SNR=5.1	48.40	346	P	P	14 36 41.4	+0.7
SONM				pP	pP	14 36 50.5	-1.3
	1.5nm,0.7s,baz=157,slow=8.5,SNR=5.4						
MKAR	Makanchi Array 0.7nm,0.8s,baz=123,slow=8.8,SNR=3.1	57.22	328	P	P	14 37 45.8	-0.1
MKAR				pP	pP	14 37 57.4	+0.2
	1.5nm,0.7s,baz=124,slow=8.6,SNR=6.2						
ZALV	Zalesovo Beam 0.8nm,0.8s,baz=132,slow=8.6,SNR=2.5	60.91	336	P	P	14 38 11.3	+0.1
ZALV				pP	pP	14 38 22.9	+0.4
	2.1nm,0.6s,baz=131,slow=7.6,SNR=5.8						
KURBB	Kurchatov Arra 0.4nm,0.3s,baz=135,slow=6.1,SNR=5.0	61.56	330	P	P	14 38 14.7	-1.0
KURBB				pP	pP	14 38 26.6	-0.6
	2.2nm,0.7s,baz=132,slow=6.9,SNR=4.9						
RPZ	Rata Peaks 16nm,0.9s,baz=308,slow=5.4,SNR=3.7	62.37	142	P	P	14 38 21.0	-0.3
RAR	Rarotonga 20nm,0.5s,baz=220,slow=0.0,SNR=5.9	79.10	112	P	P	14 40 03.2	-0.3
VNDA	Vanda 1.5nm,0.7s,baz=305,slow=7.9,SNR=6.8	81.60	172	P	P	14 40 15.3	-0.6
TORD	Torodi Ar. Bea 0.5nm,0.7s,baz=78,slow=1.8,SNR=4.4	119.52	286	PKP	PKPdf	14 46 50.5	+1.4

IDC 28 14:28:06.4±8.9, 19°11N×108°64W, h0km, mb3.4/3, mb1 3.8/5, mb1mx3.7/23, mbtmp3.4/5, ML3.2/2, MS3.7/2, Ms1 3.7/2, ms1mx3.7/2, Error ellipse: s-maj=149.9km s-min=65.1km az=147.0, Revilla Gigedo Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	Lajitas Array 0.1nm,0.3s,baz=198,slow=14,SNR=9.2	11.14	23	Pn	Pn	14 30 48.1	+1.0
ANMO	Albuquerque 0.1nm,0.3s,baz=189,slow=10.0,SNR=3.6	15.89	7	Pn	Pn	14 31 52.5	+0.8
PFO	Pinyon Flat Ob comp=Z,339nm,21.6s,baz=154,slow=34	16.04	336	LR	LR	14 37 10.2	
TEIG	Tepich comp=Z,169nm,20.8s,baz=39,slow=38	19.21	83	LR	LR	14 40 08.6	
NVAR	Mina Array Bea 1.7nm,0.9s,baz=159,slow=13,SNR=6.9	21.00	338	P	P	14 32 51.5	-0.3
PDAR	Pinedale Array 1.0nm,0.8s,baz=167,slow=8.2,SNR=7.9	23.59	358	P	P	14 33 19.0	-0.1
ILAR	Eielson Array 0.3nm,0.6s,baz=144,slow=7.4,SNR=9.3	52.24	340	P	P	14 37 19.0	-0.1

IDC 28 14:29:22.3±0.4, 29°08S×178°43W, h186km±4km, mb4.0/15, mb1 4.1/15, mb1mx4.0/21, mbtmp4.0/15, 1D, Error ellipse: s-maj=15.0km s-min=12.7km az=89.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island 4μm,0.3s,baz=274,slow=22,SNR=46	0.48	111	P	Pn	14 29 46.2	-1.4
RAO				S	Sn	14 30 09.4	+2.2
	724nm,0.3s,baz=18,slow=20,SNR=6.4						
URZ	Urewera 1.1nm,0.3s,baz=4.1,slow=9.0,SNR=9.6	9.88	201	P	Pn	14 31 36.2	-3.8
URZ				S	Sn	14 33 19.4	-11
	6.3nm,0.3s,baz=144,slow=18,SNR=9.4						
TBI	Tubuai 648nm,24.5s	26.57	84	*e*LR	LR	14 41 35.7	
PPT2	Papeete2 672nm,23.2s	28.78	73	*e*LR	LR	14 42 36.5	
CTA	Charters Tower 4.0nm,0.4s,baz=119,slow=7.0,SNR=20	33.24	278	P	P	14 35 43.2	+1.1
STKA	Stephens Creek 2.7nm,0.5s,baz=94,slow=11,SNR=8.3	34.43	255	P	P	14 35 52.4	+0.1
ASAR	Alice Springs 5.0nm,0.4s,baz=101,slow=6.7,SNR=94	42.82	266	P	P	14 37 01.3	-0.9
ASAR				PcP	PcP	14 38 49.1	-0.8
	1.0nm,0.5s,baz=113,slow=4.0,SNR=9.2						
ASAR				ScP	ScP	14 42 22.7	-0.6
	0.7nm,0.8s,baz=106,slow=4.3,SNR=4.3						
WRA	Warramunga Arr 4.2nm,0.4s,baz=111,slow=6.2,SNR=80	43.69	271	P	P	14 37 08.4	-0.7
WRA				PcP	PcP	14 38 52.1	-0.8
	4.5nm,0.8s,baz=114,slow=3.3,SNR=14						
WRA				ScP	ScP	14 42 25.6	-1.3
	0.9nm,0.8s,baz=102,slow=3.8,SNR=6.7						
VNDA	Vanda 1.4nm,0.6s,baz=5.4,slow=8.5,SNR=12	49.36	186	P	P	14 37 53.4	+1.0
FITZ	Fitzroy Crossi 1.6nm,0.5s,baz=93,slow=7.5,SNR=8.3	52.00	269	P	P	14 38 12.8	-0.1
QSPA	South Pole Qui 3.9nm,0.5s,baz=53,slow=0.6,SNR=19	61.02	180	P	P	14 39 16.7	+0.6
MAW	Mawson 4.9nm,0.6s,baz=102,slow=5.7,SNR=25	73.41	201	P	P	14 40 33.4	-0.2
MJAR	Matsushiro Arr 4.4nm,0.9s,baz=152,slow=5.3,SNR=14	76.95	325	P	P	14 40 54.1	-0.2
SYO	Syowa Base	78.31	193	∥*e*P	P	14 40 59.4	-1.9
ASAJ	Asahikawa 3.5nm,0.9s,baz=162,slow=3.2,SNR=9.3	81.10	333	P	P	14 41 17.9	+1.3
KSRS	Korea Array 3.2nm,1.0s,baz=146,slow=5.9,SNR=9.0	83.11	320	P	P	14 41 28.1	+1.0
PETK	Petropavlovsk- 4.3nm,0.7s,baz=142,slow=7.0,SNR=15	84.45	346	P	P	14 41 34.0	+0.4
USRK	Ussuriysk Arra 3.4nm,0.8s,baz=116,slow=4.5,SNR=6.5	85.86	327	P	P	14 41 41.8	+1.0
NVAR	Mina Array Bea 1.2nm,0.7s,baz=220,slow=6.5,SNR=8.2	87.53	43	P	P	14 41 49.5	+0.1
CMAR	Chiang Mai Arr 0.9nm,0.7s,baz=131,slow=3.8,SNR=7.6	92.61	290	P	P	14 42 13.9	+0.7
MKAR	Makanchi Array 0.5nm,0.4s,baz=225,slow=1.6,SNR=3	116.64	311	PKP	PKPdf	14 47 42.8	-1.3
ZALV	Zalesovo Beam 0.5nm,0.4s,baz=96,slow=1.4,SNR=3.0	116.80	319	PKP	PKPdf	14 47 42.7	-1.4
KURBB	Kurchatov Arra 1.7nm,0.5s,baz=105,slow=1.8,SNR=19	119.91	314	PKP	PKPdf	14 47 49.0	-1.2
BVAR	Borovoye Array 2.7nm,0.5s,baz=95,slow=1.5,SNR=20	125.20	316	PKP	PKPdf	14 47 59.7	-0.6
ARCES	ARCESS Array B 2.5nm,0.9s,baz=63,slow=1.3,SNR=7.7	137.23	348	PKhKP	PKPpre	14 48 11.6	
ARCES				PKP	PKPdf	14 48 22.8	+0.2
	4.0nm,0.9s,baz=29,slow=2.1,SNR=7.7						
JOF	Joensuu 3.0nm,0.6s	141.06	339	*ep*	PKiKP	14 48 31.7	-0.7
KAF	Kangasniemi 2.9nm,0.5s	143.19	341	*ep*	PKPbc	14 48 30.0	-1.1
FINES	FINESS Array B 11nm,0.5s,baz=54,slow=3.3,SNR=129	143.78	340	PKP	PKPab	14 48 31.9	-0.1
KBZ	Khabaz 3.7nm,0.8s,baz=108,slow=3.2,SNR=6.2	144.06	305	PKP	PKPdf	14 48 36.9	+1.3
NOA	NORSAR Array B	147.40	351	PKPbc	PKPbc	14 48 42.8	-0.8
	6.6nm,0.9s,baz=15,slow=3.7,SNR=18						
AKASG	Malin Array Be 6.1nm,0.4s,baz=45,slow=3.3,SNR=22	150.03	324	PKPbc	PKPbc	14 48 49.9	-0.6
BRTR	Keskin Array B 1.2nm,0.5s,baz=130,slow=3.8,SNR=8.6	151.63	300	PKPbc	PKPbc	14 48 54.1	-0.7
BRTR				PKPab	PKPab	14 49 04.2	0.0
	1.7nm,0.6s,baz=100,slow=3.9,SNR=5.1						
EKA	Eskdalemuir Ar 1.8nm,0.7s,baz=348,slow=2.5,SNR=6.8	153.55	6	PKPab	PKPab	14 49 10.7	-0.8
GERES	GERESS Array B 1.1nm,0.6s,baz=27,slow=4.7,SNR=9.2	158.18	338	PKPab	PKPab	14 49 31.9	+0.1
TORD	Torodi Ar. Bea 2.0nm,0.7s,baz=175,slow=3.7,SNR=14	164.14	180	PKPab	PKPab	14 49 57.6	-0.8

MAN 28 14:36:58,18°14N×122°34E, h2km, mb4.7, ML3.6, MS3.6, 2C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	Mt. Cagua	0.30	290	*e*P	Pb	14 37 05.0	-1.0
SGCP				*e*S	Sb	14 37 12.1	+0.6
CVP	Callao Caves	0.66	229	⇑*i*P	Pb	14 37 12.2	0.0
CVP				*e*S	Sb	14 37 22.8	+1.0
PALP	Palanan	1.07	176	*e*P	Pg	14 37 18.8	+0.2
APYP	Conner	1.08	255	*e*P	Pg	14 37 18.8	0.0
CAUP	Cauayan	1.29	203	*e*P	Pn	14 37 23.5	+0.5
ABRA	Dolores	1.63	253	*e*P	Pn	14 37 27.2	-0.5
PIP	Pasuquin	1.65	277	⇑*i*P	Pn	14 37 27.2	-0.8
PIP				*e*S	Sg	14 37 51.3	+0.3
BALP	Baler	2.50	197	*e*P	Pn	14 37 40.6	+1.0
BOLP	Bolinao	2.91	233	*e*P	Pn	14 37 47.4	+2.1

*ISCJB **28** 14:39:42.8±0.5, 1°47N±0°03×122°26E±0°04, h37km±6km, mb4.3/21, Error ellipse: s-maj=7.5km s-min=5.0km az=170.6*

*DJA **28** 14:39:42.3±0.4, 1°N×4°×12°2E±°, h10km, M5.1/7, mB5.4/3, mb5.1/7, MLv5.2/5, Mw(mB)4.8/3*

*NEIC **28** 14:39:45.0±0.3, 1°35N×122°19E, mb4.5/10, Error ellipse: s-maj=11.1km s-min=5.6km az=72.0*

*IDC **28** 14:39:45.1±0.6, 1°40N×122°33E, h37km±5km, mb4.1/15, mb1 4.3/18, mb1mx4.0/32, mbtmp4.3/18, ML4.7/3, MS3.8/1, Ms1 3.8/1, ms1mx3.5/32, Error ellipse: s-maj=23.1km s-min=10.4km az=71.0*

ISC 28 14:39:44.8±0.5, 1°41N±0°06×122°24E±0°06, h35km±5km, h35km:pP-P, n72, σ1°17/84, mb4.4/21, 1C, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	Marisa	0.98	198	P	Pn	14 40 01.0	-1.0
GTOI	Gorontalo	1.09	135	P	Pn	14 40 01.5	-2.1
GTOI				S	Sn	14 40 16.1	-1.3
KMSI	Cibinong	1.93	116	P	Pb	14 40 17.6	-1.7
LUWI	Luwuk	2.49	168	P	Pn	14 40 25.9	+3.0
MNI	Manado	2.60	89	P	Pn	14 40 23.9	-0.4
SKSI	Soroako, Sulaw	4.02	193	P	Pn	14 40 46.3	+2.3
TTSI	Tana Toraja 343nm,0.7s,5μm	5.05	209	P	Pn	14 40 59.9	+1.8
TSM	Tawau	5.22	303	P	Pn	14 40 58.7	-1.7
TSM	Tawau	5.22	303	P	Pn	14 40 58.8	-1.7
MYLDM	Lahad Datu	5.29	315	P	Pn	14 41 02.2	+0.8
MYLDM	Lahad Datu	5.29	315	P	Pn	14 41 02.4	+1.0
MYLDM	Lahad Datu 125nm,1.1s	5.29	315	P	Pn	14 41 02.0	+0.6
LBMI	Labuha 224nm,0.9s,3μm	5.64	111	P	Pn	14 41 07.2	+1.0
SPSI	Sidrap Palu 181nm,0.7s,2μm	5.88	205	P	Pn	14 41 11.4	+1.8
CTBH	Cotabato--PC H	6.11	19	⇑*i*P	Pn	14 41 10.9	-1.7
IPIL	Ipil	6.34	3	*e*P	Pn	14 41 14.5	-1.4
PAGZ	Pagadian	6.49	10	*e*P	Pn	14 41 16.0	-1.9
DAV	Davao City (W)	6.53	31	Pn	Pn	14 41 20.2	+1.7
DAV	Davao City (W) 83nm,0.3s,baz=236,slow=18,SNR=14	6.53	31	Pn	Pn	14 41 20.2	+1.7
MATI	Mati	6.80	36	*e*P	Pn	14 41 21.2	-1.0
KAPI	Kappang 42nm,0.6s	6.85	201	*e*P	Pn	14 41 22.5	-0.4
KAPI	Kappang 86nm,1.0s	6.85	201	P	Pn	14 41 23.4	+0.5
KAPI	Kappang 2.6nm,0.3s,baz=22,slow=11,SNR=16	6.85	201	Pn	Pn	14 41 23.7	+0.8
KAPI				LR	LR	14 43 56.0	
	comp=Z,694nm,20.4s,baz=159,slow=36						
BUKP	Musuan	7.01	24	*e*P	Pn	14 41 24.4	-0.8
BKSI	Bulukumba 98nm,0.8s	7.02	198	P	Pn	14 41 26.7	+1.6
KKM	Kota Kinabalu	7.57	308	*e*P	Pn	14 41 32.7	-0.2
KKM	Kota Kinabalu	7.57	308	P	Pn	14 41 33.0	+0.1
KBKI	Kotabaru	7.67	232	P	Pn	14 41 33.4	-0.7
BSSI	Bau Bau, Buton	7.71	193	P	Pn	14 41 38.0	+3.4
FITZ	Fitzroy Crossi 24nm,1.0s	19.68	170	*e*P	P	14 44 10.1	-0.9
FITZ	Fitzroy Crossi 1.7nm,0.3s,baz=3.1,slow=11,SNR=59	19.68	170	P	P	14 44 10.4	-0.7
MBWA	Marble Bar 6.7nm,0.6s	22.57	186	*e*P	P	14 44 39.2	-3.0
WRAB	Tennant Creek 18nm,1.0s	24.31	151	*e*P	P	14 44 58.6	-0.7
WRA	Warramunga Arr	24.31	151	P	P	14 44 58.0	-1.4
WRA	Warramunga Arr 6.7nm,0.9s,baz=338,slow=8.6,SNR=63	24.31	151	P	P	14 44 58.0	-1.4
COEN	Coen 72nm,0.9s	25.76	127	*e*P	P	14 45 12.3	-0.2
PMG	Port Moresby 10nm,0.9s	27.04	114	P	P	14 45 24.1	0.0
PMG	Port Moresby 8.0nm,0.8s,baz=281,slow=7.6,SNR=4.2	27.04	114	P	P	14 45 23.0	-1.1
AS31	Alice Springs	27.39	156	*e*P	P	14 45 27.1	0.0
ASAR	Alice Springs	27.39	156	P	P	14 45 26.6	-0.5
ASAR				PcP	PcP	14 48 45.6	-0.2
ASAR	Alice Springs 2.5nm,0.6s,baz=330,slow=9.2,SNR=33	27.39	156	P	P	14 45 26.6	-0.5
ASAR				PcP	PcP	14 48 45.6	-0.2
	0.3nm,0.4s,baz=350,slow=2.2,SNR=3.6						
CTA	Charters Tower	31.79	133	P	P	14 46 06.8	+0.6
CTA	Charters Tower 7.9nm,1.0s,baz=324,slow=12,SNR=9.9	31.79	133	P	P	14 46 06.8	+0.6
KSAR	Wonju Array Be	36.23	8	P	P	14 46 44.1	-0.4
KSRS	Korea Array 0.9nm,0.9s,baz=196,slow=8.2,SNR=4.2	36.25	8	P	P	14 46 44.1	-0.5
STKA	Stephens Creek 2.7nm,0.9s	37.85	153	*e*P	P	14 46 57.8	-0.5
STKA	Stephens Creek 13nm,0.8s,baz=336,slow=9.0,SNR=13	37.85	153	P	P	14 46 57.9	-0.5
MJAR	Matsushiro Arr	37.95	21	P	P	14 46 58.2	-1.0
MJAR				pP	pP	14 47 09.1	-0.3
MJAR	Matsushiro Arr 3.0nm,0.8s,baz=195,slow=7.9,SNR=12	37.95	21	P	P	14 46 58.2	-1.0
MJAR				pP	pP	14 47 09.1	-0.3
	3.0nm,0.9s,baz=192,slow=9.5,SNR=4.5						
CAN	Canberra 6.7nm,0.7s	44.28	148	*e*P	P	14 47 52.4	+1.0
ASAJ	Asahikawa	46.21	20	P	P	14 48 05.9	-0.5
ASAJ	Asahikawa 4.6nm,0.8s,baz=269,slow=9.7,SNR=4.8	46.21	20	P	P	14 48 05.9	-0.5
ULN	Ulaanbaatar 5.4nm,0.9s	48.11	346	*e*P	P	14 48 22.2	+0.8
SONM	Songino Array	48.24	346	P	P	14 48 23.2	+0.9
SONM	Songino Array 4.6nm,0.9s,baz=163,slow=8.6,SNR=32	48.24	346	P	P	14 48 23.2	+0.9
MK31	Makanchi Array	57.02	328	*e*P	P	14 49 28.0	+0.7
MKAR	Makanchi Array	57.02	328	P	P	14 49 28.1	+0.8
MKAR				pP	pP	14 49 39.6	+1.8
MKAR	Makanchi Array 1.1nm,0.7s,baz=133,slow=8.3,SNR=11	57.02	328	P	P	14 49 28.1	+0.8
MKAR				pP	pP	14 49 39.6	+1.8
	3.5nm,0.9s,baz=129,slow=8.0,SNR=12						
TKM2	Tokmak 2 2.0nm,0.6s	58.62	321	*e*P	P	14 49 38.9	+0.1
ZAA0	Zalesovo Array	60.72	336	P	P	14 49 50.3	-2.4
ZALV	Zalesovo Beam	60.72	336	P	P	14 49 52.8	0.0
ZALV				pP	pP	14 50 04.5	+1.1
ZALV	Zalesovo Beam 0.7nm,0.5s,baz=134,slow=6.2,SNR=5.8	60.72	336	P	P	14 49 52.8	0.0
ZALV				pP	pP	14 50 04.5	+1.1
	5.1nm,0.8s,baz=135,slow=6.4,SNR=10						
KURBB	Kurchatov Arra 2.2nm,0.9s,baz=117,slow=7.9,SNR=16	61.37	330	P	P	14 49 57.5	+0.3
KURBB				pP	pP	14 50 09.7	+1.8
	8.3nm,0.9s,baz=127,slow=6.3,SNR=18						
KURK	Kurchatov	61.38	330	P	P	14 49 57.5	+0.2
KURK				pP	pP	14 50 09.7	+1.7
RPZ	Rata Peaks	62.58	142	P	P	14 50 05.9	+0.4
RPZ	Rata Peaks 37nm,0.9s,baz=38,slow=5.7,SNR=6.9	62.58	142	P	P	14 50 05.9	+0.4
BVAR	Borovoye Array	66.89	329	P	P	14 50 33.2	-0.2
BVAR				pP	pP	14 50 43.5	-0.7
BVAR	Borovoye Array 0.4nm,0.5s,baz=130,slow=8.5,SNR=4.0	66.89	329	P	P	14 50 33.2	-0.2
BVAR				pP	pP	14 50 43.5	-0.7
	4.9nm,0.9s,baz=138,slow=8.9,SNR=12						
VNDA	Vanda 3.1nm,0.9s	81.74	172	*e*P	P	14 51 58.5	-0.8
VNDA	Vanda 2.8nm,0.6s,baz=314,slow=6.1,SNR=38	81.74	172	P	P	14 51 58.5	-0.8
TORD	Torodi Ar. Bea	119.30	286	PKP	PKPdf	14 58 32.2	+0.7
TORD	Torodi Ar. Bea 0.3nm,0.5s,baz=98,slow=1.7,SNR=5.1	119.30	286	PKP	PKPdf	14 58 32.2	+0.7

WEL 28 14:45:00.3±0.3, 38°47S×178°65E, h33km, ML3.6/8, 1C-3D, Error ellipse: s-maj=2.8km s-min=1.2km az=90.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNGZ	Carnagh Statio	0.35	267	⇓P*	Pb	14 45 08.8	0.0
CNGZ				S*	Sb	14 45 14.0	-0.5
PUZ	Puketiti	0.50	321	⇓PN	Pb	14 45 10.0	-0.9
PUZ				SN	Sb	14 45 17.7	-0.6
PUZ				AML	AML	14 45 20.4	
PRGZ	Paritu Road	0.76	233	PN	Pn	14 45 14.1	-0.6
PRGZ				SN	Sn	14 45 24.1	-1.0
MWZ	Matawai	0.89	278	⇓PN	Pn	14 45 15.7	-0.9
MWZ				SN	Sn	14 45 27.3	-1.2
MWZ				AML	AML	14 45 27.9	
MWZ				AML	AML	14 45 28.1	
MWZ				AML	AML	14 45 28.2	
MHGZ	Mahia Peninsul	0.90	220	PN	Pn	14 45 15.9	-0.8
MHGZ				SN	Sn	14 45 28.6	+0.1
MXZ	Matakaoa Point	0.94	343	⇑PN	Pn	14 45 16.8	-0.4
MXZ				AML	AML	14 45 30.5	
MXZ				AML	AML	14 45 30.5	
MXZ				AML	AML	14 45 30.5	
MXZ				AML	AML	14 45 30.6	
KNZ	Kokohu	0.95	234	PN	Pn	14 45 16.4	-0.8
URZ	Urewera	1.23	279	PN	Pn	14 45 20.9	-0.3
URZ				AML	AML	14 45 40.1	
URZ				AML	AML	14 45 40.7	
RAHZ	Arahi	1.31	249	PN	Pn	14 45 21.8	-0.5
RAHZ				SN	Sn	14 45 38.5	-0.1
NMHZ	Naumai	1.58	246	PN	Pn	14 45 25.8	-0.3
TARZ	Mount Tarawera	1.70	277	PN	Pn	14 45 27.8	-0.1
BKZ	Black Stump Fm	1.83	247	PN	Pn	14 45 28.9	-0.6
BKZ				AML	AML	14 45 52.2	
BKZ				AML	AML	14 45 52.8	
RITZ	Rihia Road	2.25	256	PN	Pn	14 45 34.7	-0.5
PNHZ	Pukenui	2.39	232	PN	Pn	14 45 35.4	-1.9
MOVZ	Moawhango	2.45	247	PN	Pn	14 45 37.3	-0.8
WNVZ	Wahianoa	2.54	249	PN	Pn	14 45 38.6	-0.7
WNVZ				AML	AML	14 46 17.6	
WNVZ				AML	AML	14 47 06.0	
FWVZ	Far West T-bar	2.55	251	PN	Pn	14 45 38.3	-1.3
FWVZ				AML	AML	14 46 00.8	
FWVZ				AML	AML	14 46 15.9	
MRZ	Mangatainoka R	3.23	226	AML	AML	14 46 24.2	
MRZ				AML	AML	14 46 28.8	
CTZ	Chatham Island	6.36	147	PN	Pn	14 46 30.5	-1.1

*ISK **28** 14:49:40.9, 37°23N×28°22E, h18km, MD2.5*

*DDA **28** 14:49:41.8, 37°24N×28°23E, h7km, MD2.8*

*CSEM **28** 14:49:41.7±0.1, 37°20N×28°19E, h15km, MD2.5, Error ellipse: s-maj=3.5km s-min=2.3km az=42.0*

*ISCJB **28** 14:49:42.0±0.6, 37°18N±0°04×28°18E±0°05, h16km±8km, Error ellipse: s-maj=8.5km s-min=5.6km az=45.0*

ISC 28 14:49:41.7±1.0, 37°22N±0°03×28°21E±0°03, h15km±7km, n16, σ0°32/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.10	144	*e*PG	Pg	14 49 44.8	-0.3
YER				*e*SG	Sb	14 49 47.9	0.0
YER	Yerkesik	0.10	144	*e*Pg	Pg	14 49 44.8	-0.3
YER				*e*Sg	Sb	14 49 47.9	0.0
MLSB	Milas	0.35	283	*e*PG	Pg	14 49 48.7	-0.3
MLSB				*e*SG	Sg	14 49 54.6	+0.7
MLSB	Milas	0.35	283	*e*Pg	Pg	14 49 48.7	-0.3
MLSB				*e*Sg	Sg	14 49 54.6	+0.7
TURN	Turunc	0.47	137	*i* P	Pg	14 49 50.9	-0.2
TURN				*i* S	Sb	14 49 58.1	-0.2
TURN	Turunc	0.47	137	*i* P	Pg	14 49 50.9	-0.2
TURN				*i* S	Sb	14 49 58.1	-0.2
AYDN	Tasoluk	0.51	330	*i* P	Pg	14 49 51.9	-0.1
AYDN				*i* S	Sb	14 49 59.4	-0.4
AYDN	Tasoluk	0.51	330	*i* P	Pg	14 49 51.9	-0.1
AYDN				*i* S	Sb	14 49 59.4	-0.4
DALY	Dalyan (Mu¨la	0.54	138	*e*PG	Pg	14 49 52.3	0.0
DALY	Dalyan (Mu¨la	0.54	138	*e*Pg	Pg	14 49 52.3	0.0
DAT	Datca	0.70	226	*e*PG	Pg	14 49 55.2	-0.2
DAT	Datca	0.70	226	*e*Pg	Pg	14 49 55.2	-0.2
BODT	Bodrum	0.73	258	*e*PG	Pg	14 49 55.9	-0.1
BODT	Bodrum	0.73	258	*e*Pg	Pg	14 49 55.9	-0.1
MANT	Manisa	1.30	12	*i* P	Pn	14 50 05.6	0.0
MANT				*i* S	Sg	14 50 24.2	+0.4
MANT	Manisa	1.30	12	*i* P	Pn	14 50 05.6	0.0
MANT				*i* S	Sg	14 50 24.2	+0.4

**NNC 28 14:55:40.6±2.8, 42°

FITZ	**Fitzroy Crossi**	**10.46**	**168**	P		Pn	15 19 54.6	+0.9
	0.5nm,0.3s,baz=358,slow=12,SNR=18							
FITZ				S		Sn	15 21 47.3	-2.7
	0.4nm,0.3s,baz=198,slow=20,SNR=4.4							
WRA	**Warramunga Arr**	**16.10**	**140**	P		Pn	15 21 05.2	+0.5
	0.4nm,0.3s,baz=314,slow=12,SNR=28							
WRA				S		S	15 23 59.2	-4.1
	0.2nm,0.3s,baz=315,slow=24,SNR=4.7							
ASAR	**Alice Springs**	**18.74**	**148**	P		P	15 21 34.6	+1.1
	0.5nm,0.3s,baz=320,slow=10,SNR=40							
ASAR				S		S	15 24 58.1	+0.5
	0.1nm,0.3s,baz=330,slow=19,SNR=4.1							
MKAR	**Makanchi Array**	**65.46**	**330**	P		P	15 27 51.6	-0.3
	0.1nm,0.6s,baz=142,slow=7.3,SNR=2.7							

*KNET **28** 15:33:13.8±0.4, 42.17N×74.01E, h7km±6km, ml2.4, Error ellipse: s-maj=2.6km s-min=1.4km az=172.0*
*ISCJB **28** 15:33:14.0±0.8, 42.14N±0.05×73.92E±0.04, h19km±6km, Error ellipse: s-maj=8.0km s-min=5.2km az=3.1*
*NNC **28** 15:33:16.7±1.6, 42.51N×73.93E, h0km, mb3.4, mpv3.2, Error ellipse: s-maj=28.3km s-min=6.1km az=175.0*

ISC 28 15:33:14.1±1.1, 42.25N±0.08×73.98E±0.03, h6km±13km, n18, σ0 63/25, 17C-12D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
AML	**Almayashu**	**0.24**	**240**	⇑P		**Pg**	**15 33 19.1**	**+0.2**
	284nm,0.1s,SNR=1451							
AML				⇓S		**Sg**	**15 33 22.5**	**+0.3**
	8µm,0.3s							
UCH	**Uchtor**	**0.40**	**93**	P		**Pg**	**15 33 22.1**	**+0.1**
	19nm,0.1s,SNR=17							
UCH				⇓S		**Sg**	**15 33 27.8**	**+0.4**
	242nm,0.1s							
EKS2	**Erkin-Say**	**0.44**	**340**	⇓P		**Pb**	**15 33 24.6**	**+0.3**
	38nm,0.1s,SNR=51							
EKS2				⇑S		**Sb**	**15 33 31.9**	**+0.7**
	165nm,0.1s							
AAK	**Ala-Archa**	**0.54**	**45**	⇑P		**Pb**	**15 33 26.1**	**-0.1**
	32nm,0.2s,SNR=30							
AAK				⇓S		**Sb**	**15 33 34.5**	**+0.2**
	45nm,0.1s							
KBK	**Karagaybulak**	**0.82**	**60**	⇑P		**Pb**	**15 33 30.8**	**-0.2**
	47nm,0.1s,SNR=27							
KBK				⇑S		**Sb**	**15 33 43.0**	**+0.5**
	118nm,0.3s							
CHMS	**Chumysh**	**0.94**	**37**	⇑P		**Pb**	**15 33 33.4**	**+0.5**
	15nm,0.1s,SNR=25							
CHMS				⇓S		**Sn**	**15 33 47.0**	**-0.8**
	48nm,0.2s							
KZA	**Kyzart**	**0.96**	**100**	⇓P		**Pg**	**15 33 32.0**	**-0.6**
	27nm,0.1s,SNR=133							
KZA				⇑S		**Sg**	**15 33 45.1**	**0.0**
	103nm,0.2s							
USP	**Ospenovka**	**1.09**	**21**	⇓P		**Pn**	**15 33 36.3**	**+0.3**
	25nm,0.3s,SNR=7.4							
USP				⇑S		**Sn**	**15 33 52.0**	**+0.6**
	54nm,0.2s							
TKM2	**Tokmak 2**	**1.37**	**60**	⇓P		**Pb**	**15 33 40.3**	**0.0**
	8.8nm,0.3s							
TKM2				⇑S		**Sn**	**15 33 59.2**	**+0.5**
	19nm,0.5s							
TKM2	**Tokmak 2**	**1.37**	**60**	⇑P		**Pb**	**15 33 40.5**	**+0.1**
	19nm,0.1s,SNR=36							
ULHL	**Ulahol**	**1.68**	**89**	⇓P		**Pn**	**15 33 44.7**	**+0.3**
	20nm,0.2s,SNR=25							
KNDC	**Almaty**	**2.41**	**65**	⇑Pn		**Pb**	**15 33 58.7**	**+0.9**
	17nm,0.5s							
KNDC				⇑Lg		Lg	15 34 31.8	
	28nm,0.4s							
KK31	**Karatay Array**	**2.69**	**290**	Pn		**Pb**	**15 34 02.6**	**-0.1**
	3.6nm,0.3s,baz=112,slow=12,SNR=64							
KK31				⇑Lg		Lg	15 34 39.1	
	14nm,0.4s,baz=118,slow=26,SNR=12							
MK31	**Makanchi Array**	**7.48**	**50**	Pn		Pn	15 35 07.0	+3.3
	0.4nm,0.4s,baz=231,slow=14,SNR=9.0							
MK31				⇓Lg		Lg	15 37 07.0	
	0.7nm,0.6s,baz=232,slow=28,SNR=3.5							
KURBB	**Kurchatov Arra**	**8.94**	**19**	⇑Pn		**Pn**	**15 35 22.7**	**-1.1**
	1.0nm,0.7s							
KURBB				⇑Lg		Lg	15 37 55.5	
	4.8nm,0.6s							
VOSK	**Vostochnaya**	**10.67**	**350**	⇓Lg		Lg	15 38 47.6	
	3.4nm,1.1s							
ZRNK	**Zerenda**	**11.22**	**344**	⇑Lg		Lg	15 39 05.2	
AB31	**Akbulak array**	**12.04**	**310**	⇑Pn		**Pn**	**15 36 04.9**	**-1.3**
	0.2nm,0.5s							
AB31				⇓Sn		**Sn**	**15 38 21.9**	**+1.3**
	baz=298,slow=1.6,SNR=3.6							

IDC 28 15:33:21.4±1.1, 1.48N×122.73E, h0km, mb3.3/4, mb1 3.6/5, mb1mx3.4/24, mbtmp3.4/5, ML3.9/1, Error ellipse: s-maj=115.3km s-min=19.4km az=68.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**19.66**	**172**	P		P	15 37 51.9	-0.3
	0.3nm,0.3s,baz=9.3,slow=11,SNR=12							
WRA	**Warramunga Arr**	**24.14**	**152**	P		P	15 38 39.6	+0.2
	0.5nm,0.4s,baz=328,slow=11,SNR=14							
ASAR	**Alice Springs**	**27.25**	**157**	P		P	15 39 07.7	+0.1
	0.2nm,0.5s,baz=327,slow=8.7,SNR=4.4							
SONM	**Songino Array**	**48.30**	**345**	P		P	15 42 03.7	-0.9
	0.3nm,0.5s,baz=156,slow=7.4,SNR=3.3							
MKAR	**Makanchi Array**	**57.23**	**328**	P		P	15 43 11.1	+0.5
	0.3nm,0.9s,baz=134,slow=8.3,SNR=2.9							
MKAR				pP		PcP	15 43 21.6	-44
	0.2nm,0.4s,baz=126,slow=8.3,SNR=2.8							

OTT 28 15:39:38.1±1.7, 73.00N×71.16W, h18km, ML2.6/3, Baffin Bay Seismic Zone. 227km east from Pond Inlet, Nu, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
GIFN	**Gifford Fjord,**	**4.50**	**233**	PN		Pn	15 40 44.9	-0.3
GIFN				SN		Sn	15 41 32.9	-4.0
GIFN				Trac			15 41 39.0	
	comp=Z,2.4nm,0.5s							
ILON	**Igloolik, Nuna**	**5.01**	**229**	SN		Sn	15 41 46.9	-2.8
ILON				Trac			15 41 48.9	
	comp=Z,1.0nm,0.2s							
AP3N	**Apex site 3 Nu**	**5.56**	**237**	SN		Sn	15 41 60.0	-3.4
AP3N				Trac			15 42 02.0	
	comp=Z,2.0nm,0.5s							
LAIN	**Lailor River,**	**5.60**	**232**	PN		Pn	15 40 58.8	-1.7
LAIN				SN		Sn	15 42 01.1	-3.2
QILN	**Qililugaq Expl**	**8.23**	**227**	PN		Pn	15 41 34.4	-2.0
QILN				SN		Sn	15 43 02.2	-6.5

TAP 28 15:44:43.8, 24.19N×121.76E, h14km, ML3.1, 8C-1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.12**	**353**	*e*P		Pg	15 44 46.9	-0.2
	baz=356							
EHP				S		Sg	15 44 49.7	+0.3
	baz=356							
TWD	**Chiawan**	**0.18**	**232**	⇑*i*P		Pg	15 44 48.1	+0.1
	baz=239							
TWD				*i* S		Sg	15 44 51.5	+0.5
	baz=239							
ENA	**Nanau**	**0.23**	**357**	⇑*i*P		Pg	15 44 49.0	+0.1
	baz=358							
ENA				*i* S		Sg	15 44 52.8	+0.5
	baz=358							
HWA	**Hwalien**	**0.26**	**213**	P		Pb	15 44 49.8	-0.4
	baz=222							
HWA				S		Sb	15 44 54.3	-0.2
	baz=222							
TWC	**Suao**	**0.42**	**12**	*i* P		Pg	15 44 52.5	+0.2
	baz=5.0							
TWC				*e*S		Sb	15 44 58.7	-0.7
	baz=5.0							
NNS	**Nan Shan**	**0.43**	**305**	⇑*i*P		Pg	15 44 52.6	+0.1
	baz=305							
WHF	**Hehuan Shan**	**0.45**	**264**	⇑*i*P		Pg	15 44 53.1	-0.3
	baz=265							
ESL	**Shilin**	**0.48**	**218**	⇑*i*P		Pg	15 44 53.3	0.0
	baz=225							
TWE	**Neicheng**	**0.53**	**351**	⇑*i*P		Pg	15 44 54.4	+0.2
	baz=352							
TWE				S		Sb	15 45 02.1	-0.4
	baz=352							
TWT	**Tachien**	**0.53**	**276**	⇑*i*P		Pb	15 44 55.1	-0.1
	baz=277							
ILA	**Ilan**	**0.57**	**359**	*e*P		Pg	15 44 54.5	-0.5
	baz=352							
NSK	**Sanguang**	**0.60**	**323**	⇑*i*P		Pg	15 44 55.9	+0.2
	baz=323							
NSK				*i* S		Sg	15 45 04.2	+0.4
	baz=323							
EHY	**Hungye**	**0.79**	**210**	*e*P		Pg	15 44 59.0	-0.3
	baz=224							
NSTT	**Nanjuang**	**0.81**	**302**	*e*P		Pb	15 45 00.1	+0.3
	baz=302							
NSTT				S		Sb	15 45 10.8	+0.1
	baz=302							
TWB1	**Santiao Chiao**	**0.84**	**15**	*e*P		Pg	15 44 59.1	-0.9
	baz=13							
TWB1				*e*S		Sg	15 45 11.2	+0.1
	baz=13							
SMLT	**Sun Moon Lake**	**0.84**	**249**	*e*P		Pg	15 44 60.0	-0.3
	baz=249							
SMLT				*e*S		Sb	15 45 11.8	0.0
	baz=249							
TYC	**Yuchr**	**0.87**	**251**	*e*P		Pg	15 45 00.4	-0.3
	baz=245							
TYC				*e*S		Sg	15 45 11.9	-0.2
	baz=245							
NWF	**Wu-fen Shan**	**0.87**	**1**	*e*P		Pg	15 45 01.2	+0.3
	baz=353							
NWF				*e*S		Sg	15 45 12.4	0.0
	baz=353							
TWQ1	**Liyutan**	**0.91**	**280**	*e*P		Pn	15 45 02.7	+0.5
	baz=280							
NSY	**Sanyi**	**0.93**	**284**	*e*P		Pn	15 45 02.5	-0.1
	baz=284							
NSY				*e*S		Sn	15 45 16.5	+0.7
	baz=284							
TWF1	**Yuli**	**0.94**	**207**	*e*P		Pb	15 45 01.1	-0.8
	baz=219							
TWF1				*e*S		Sg	15 45 14.7	+0.4
	baz=219							
TWS1	**Kuangyinshan**	**0.95**	**341**	*e*P		Pn	15 45 02.6	-0.3
	baz=348							
TWS1				*e*S		Sn	15 45 16.8	+0.5
	baz=348							
TCU	**Taichung**	**0.99**	**268**	*e*P		Pn	15 45 03.9	+0.6
	baz=268							
TCU				*e*S		Sn	15 45 17.6	+0.5
	baz=268							
YUS	**Yu-Shan**	**1.02**	**227**	*e*P		Pb	15 45 03.1	-0.7
	baz=216							
YUS				*e*S		Sb	15 45 17.4	-0.2
	baz=216							
WNT	**Mingjian**	**1.03**	**252**	*e*P		Pn	15 45 04.4	+0.5
	baz=245							
ALS	**Alishan**	**1.10**	**232**	⇓*i*P		Pb	15 45 04.9	-0.2
	baz=234							
CHKT	**Chengkung**	**1.15**	**198**	*e*P		Pb	15 45 04.7	-0.7
	baz=191							
CHN5	**Tsauling**	**1.15**	**239**	*e*P		Pg	15 45 06.2	+0.1
	baz=241							
CHN5				*e*S		Sn	15 45 22.5	+1.1
	baz=241							
YOJ	**Yonaguni jima**	**1.18**	**77**	*e*P		Pn	15 45 05.5	-0.4
	baz=65							
WGK	**Gukeng**	**1.20**	**245**	*e*P		Pg	15 45 07.1	+0.1
	baz=247							
ELDTW	**Lidau**	**1.21**	**214**	*e*P		Pn	15 45 05.5	-0.9
	baz=216							
WTP	**Ta-pu**	**1.41**	**228**	*e*P		Pb	15 45 09.9	-0.1
	baz=230							
WTP				*e*S		Sg	15 45 29.8	+0.4
	baz=230							
TWK	**Hsinying**	**1.48**	**232**	*e*P		Pb	15 45 10.9	-0.4
	baz=233							
TWK				*e*S		Sg	15 45 31.0	-0.8
	baz=233							
TWG	**Pinlang**	**1.50**	**205**	*e*P		Pn	15 45 07.9	-2.6
	baz=191							
CHN1	**Nanshi**	**1.51**	**229**	*e*P		Pb	15 45 11.5	-0.1
	baz=230							
WSF	**Szhu**	**1.51**	**249**	*e*P		Pn	15 45 10.4	-0.1
	baz=251							
ECL	**Taimali**	**1.75**	**205**	*e*P		Pb	15 45 15.3	-0.4
	baz=193							
TWM1	**Shoushan**	**1.83**	**222**	*e*P		Pb	15 45 16.7	-0.5
	baz=223							
EAST	**Anshuo**	**1.99**	**205**	*e*P		Pn	15 45 15.3	-1.8
	baz=194							
PNG	**Penghu**	**2.11**	**253**	*e*P		Pn	15 45 19.5	+0.8
	baz=256							

TAP 28 15:44:50.4, 24.20N×121.73E, h15km, ML3.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.11**	**7**	P		Pb	15 44 54.3	+0.1
	baz=11							
EHP				S		Sb	15 44 57.1	+0.3
	baz=11							
TWD	**Chiawan**	**0.17**	**225**	P		Pb	15 44 55.2	0.0
	baz=222							
TWD				S		Sb	15 44 58.4	-0.1
	baz=222							
ENA	**Nanau**	**0.23**	**3**	*e*P		Pb	15 44 56.4	+0.1
	baz=5.0							
ENA				*i* S		Sb	15 45 00.2	+0.1
	baz=5.0							
HWA	**Hwalien**	**0.25**	**206**	*e*P		Pb	15 44 57.2	+0.6
	baz=204							
HWA				*e*S		Sb	15 45 01.6	+0.9
	baz=204							
NNS	**Nan Shan**	**0.40**	**307**	*e*P		Pg	15 44 58.9	+0.2
	baz=306							
NNS				S		Sb	15 45 05.5	+0.1
	baz=306							
TWC	**Suao**	**0.42**	**15**	*e*P		Pb	15 44 59.8	+0.3
	baz=16							
TWC				*e*S		Sb	15 45 06.2	+0.5
	baz=16							
WHF	**Hehuan Shan**	**0.42**	**263**	*e*P		Pg	15 44 59.7	+0.2
	baz=262							
WHF				*e*S		Sg	15 45 05.9	+0.1
	baz=262							
ESL	**Shilin**	**0.47**	**215**	*e*P		Pb	15 45 00.3	-0.1
	baz=213							
ESL				*e*S		Sb	15 45 07.5	+0.4
	baz=213							
TWT	**Tachien**	**0.51**	**276**	*e*P		Pb	15 45 02.1	+0.9
	baz=275							
TWT				*e*S		Sb	15 45 09.3	+0.7
	baz=275							
TWE	**Neicheng**	**0.52**	**354**	*e*P		Pb	15 45 01.2	0.0
	baz=355							
TWE				*e*S		Sb	15 45 09.2	+0.6
	baz=355							
NSK	**Sanguang**	**0.58**	**325**	*e*P		Pb	15 45 02.5	+0.1
	baz=325							
NSK				*e*S		Sb	15 45 10.9	+0.5
	baz=325							

*CSEM **28** 15:55:52.8±0.2, 42.09N×15.67E, h5km, ML3.6/16, Error ellipse: s-maj=4.4km s-min=2.6km az=38.0*
*ROM **28** 15:55:53.6±0.2, 42.03N×15.63E, h2km±1km, Md2.7/35, Ml2.6/25, Error ellipse: s-maj=2.6km s-min=1.1km az=47.0*
*ISCJB **28** 15:55:54.2±0.6, 42.10N±0.03×15.68E±0.03, h18km±8km, Error ellipse: s-maj=5.6km s-min=3.0km az=37.4*

ISC 28 15:55:53.4±1.2, 42.07N±0.03×15.65E±0.02, h8km±9km, n83, σ0 53/129, Adriatic Sea

Code	Station Name	Δ°	AZ°	Phase	Op	ISC	Time h m s	Res ISC
SGRT	**San Giovanni R**	**0.32**	**167**		Pg	**Pb**	**15 56 00.5**	**-1.0**
SGRT					Sg	**Sg**	**15 56 05.1**	**+1.1**
	279nm,0.3s							
SGRT	**San Giovanni R**	**0.32**	**167**		Pg	**Pb**	**15 56 00.5**	**-1.0**
SGRT					Sg	**Sg**	**15 56 05.1**	**+1.1**
	279nm,0.3s							
MSAG	**Monte S. Angel**	**0.40**	**151**		Pg	**Pb**	**15 56 02.1**	**-0.8**
MSAG					Sg	**Sb**	**15 56 08.5**	**-0.8**
	398nm,0.2s							
MSAG	**Monte S. Angel**	**0.40**	**151**		Pg	**Pb**	**15 56 02.1**	**-0.8**
MSAG					Sg	**Sb**	**15 56 08.5**	**-0.8**
	398nm,0.2s							

MS1	**Monte Sant'Ang**	**0.42**	**148**	*e*Pg		**Pb**	**15 56 02.7**	**-0.5**
MS1				*e*Sg		**Sb**	**15 56 08.6**	**-1.2**
FG2	**Serracapriola**	**0.45**	**235**	Pg		**Pg**	**15 56 02.0**	**-0.1**
	275nm,0.2s							
FG2	**Serracapriola**	**0.45**	**235**	Pg		**Pg**	**15 56 02.0**	**-0.1**
	275nm,0.2s							
CIGN	**Sant'Elia a Pi**	**0.69**	**234**	Pg		**Pb**	**15 56 07.4**	**-0.3**
CIGN				Sg		**Sb**	**15 56 17.4**	**0.0**
	49nm,0.4s							
CIGN	**Sant'Elia a Pi**	**0.69**	**234**	Pg		**Pb**	**15 56 07.4**	**-0.3**
CIGN				Sg		**Sb**	**15 56 17.4**	**0.0**
	49nm,0.4s							
FRES	**Fresagrandinar**	**0.73**	**263**	Pg		**Pb**	**15 56 08.3**	**-0.2**
	218nm,0.2s							
FRES	**Fresagrandinar**	**0.73**	**263**	Pg		**Pb**	**15 56 08.3**	**-0.2**
	218nm,0.2s							
FG5	**Orsara di Pugl**	**0.83**	**200**	Pg		**Pb**	**15 56 10.3**	**+0.1**
	81nm,0.3s							
FG5	**Orsara di Pugl**	**0.83**	**200**	Pg		**Pb**	**15 56 10.3**	**+0.1**
	81nm,0.3s							
BSSO	**Busso**	**0.94**	**237**	Pg		**Pb**	**15 56 12.2**	**+0.1**
BSSO				Sg		**Sb**	**15 56 25.1**	**+0.3**
	53nm,0.3s							
BSSO	**Busso**	**0.94**	**237**	Pg		**Pb**	**15 56 12.2**	**+0.1**
BSSO				Sg		**Sb**	**15 56 25.1**	**+0.3**
	53nm,0.3s							
SGTA	**Sant Agata di**	**0.95**	**193**	Pg		**Pg**	**15 56 11.6**	**-0.1**
SGTA				Sg		**Sb**	**15 56 25.1**	**0.0**
	186nm,0.7s							
SGTA	**Sant Agata di**	**0.95**	**193**	Pg		**Pg**	**15 56 11.6**	**-0.1**
SGTA				Sg		**Sb**	**15 56 25.1**	**0.0**
	186nm,0.7s							
SACR	**S. Croce Del S**	**0.97**	**227**	Pg		**Pb**	**15 56 12.4**	**-0.2**
SACR	**S. Croce Del S**	**0.97**	**227**	Pg		**Pb**	**15 56 12.4**	**-0.2**
CAFR	**Castel Frentan**	**0.98**	**280**	Pg		**Pn**	**15 56 13.5**	**-0.1**
CAFR				Sg		**Sn**	**15 56 27.9**	**+0.3**
	312nm,0.2s							
CAFR	**Castel Frentan**	**0.98**	**280**	Pg		**Pn**	**15 56 13.5**	**-0.1**
CAFR				Sg		**Sn**	**15 56 27.9**	**+0.3**
	312nm,0.2s							
PSB1	**Pescosannita**	**1.05**	**217**	Pg		**Pg**	**15 56 13.2**	**-0.4**
PSB1				Sg		**Sb**	**15 56 27.9**	**+0.1**
PSB1	**Pescosannita**	**1.05**	**217**	Pg		**Pg**	**15 56 13.2**	**-0.4**
PSB1				Sg		**Sb**	**15 56 27.9**	**+0.1**
MRB1	**Monte Rocchett**	**1.06**	**209**	Pg		**Pb**	**15 56 14.4**	**+0.2**
MRB1				Sg		**Sb**	**15 56 29.2**	**+0.9**
MRB1	**Monte Rocchett**	**1.06**	**209**	Pg		**Pb**	**15 56 14.4**	**+0.2**
MRB1				Sg		**Sb**	**15 56 29.2**	**+0.9**
CAFE	**Carife**	**1.08**	**197**	Pg		**Pb**	**15 56 14.6**	**+0.1**
CAFE				Sg		**Sb**	**15 56 29.1**	**+0.3**
	159nm,0.3s							
CAFE	**Carife**	**1.08**	**197**	Pg		**Pb**	**15 56 14.6**	**+0.1**
CAFE				Sg		**Sb**	**15 56 29.1**	**+0.3**
	159nm,0.3s							
MRVN	**Minervino Murg**	**1.08**	**157**	Pg		**Pg**	**15 56 14.1**	**-0.2**
MRVN				Sg		**Sb**	**15 56 28.7**	**-0.1**
	85nm,0.5s							
MRVN	**Minervino Murg**	**1.08**	**157**	Pg		**Pg**	**15 56 14.1**	**-0.2**
MRVN				Sg		**Sb**	**15 56 28.7**	**-0.1**
	85nm,0.5s							
LPEL	**Lama dei Pelig**	**1.09**	**270**	Pg		**Pb**	**15 56 14.6**	**0.0**
LPEL				Sg		**Sn**	**15 56 30.6**	**+0.1**
	152nm,0.2s							
LPEL	**Lama dei Pelig**	**1.09**	**270**	Pg		**Pb**	**15 56 14.6**	**0.0**
LPEL				Sg		**Sn**	**15 56 30.6**	**+0.1**
	152nm,0.2s							
PTRJ	**Pietraroja**	**1.09**	**230**	Pg		**Pg**	**15 56 13.7**	**-0.7**
PTRJ				Sg		**Sg**	**15 56 28.7**	**+0.2**
PTRJ	**Pietraroja**	**1.09**	**230**	Pg		**Pg**	**15 56 13.7**	**-0.7**
PTRJ				Sg		**Sg**	**15 56 28.7**	**+0.2**
VULT	**Monte Vulture**	**1.11**	**181**	Pg		**Pb**	**15 56 15.2**	**+0.2**
VULT				Sg		**Sb**	**15 56 30.4**	**+0.8**
	264nm,0.3s							
VULT	**Monte Vulture**	**1.11**	**181**	Pg		**Pb**	**15 56 15.2**	**+0.2**
VULT				Sg		**Sb**	**15 56 30.4**	**+0.8**
	264nm,0.3s							
MIDA	**Miranda**	**1.12**	**248**	Pg		**Pg**	**15 56 14.7**	**-0.3**
MIDA				Sg		**Sb**	**15 56 30.1**	**+0.1**
	52nm,0.3s							
MIDA	**Miranda**	**1.12**	**248**	Pg		**Pg**	**15 56 14.7**	**-0.3**
MIDA				Sg		**Sb**	**15 56 30.1**	**+0.1**
	52nm,0.3s							
PALZ	**Palazzo San Ge**	**1.14**	**168**	Pg		**Pb**	**15 56 15.5**	**0.0**
PALZ				Sg		**Sb**	**15 56 31.1**	**+0.6**
	107nm,0.6s							
PALZ	**Palazzo San Ge**	**1.14**	**168**	Pg		**Pb**	**15 56 15.5**	**0.0**
PALZ				Sg		**Sb**	**15 56 31.1**	**+0.6**
	107nm,0.6s							
RNI2	**Rionero Sannit**	**1.17**	**253**	Pg		**Pg**	**15 56 15.7**	**-0.3**
RNI2				Sg		**Sb**	**15 56 32.0**	**+0.6**
RNI2	**Rionero Sannit**	**1.17**	**253**	Pg		**Pg**	**15 56 15.7**	**-0.3**
RNI2				Sg		**Sb**	**15 56 32.0**	**+0.6**
SNAL	**S. Angelo Dei**	**1.19**	**196**	Pg		**Pg**	**15 56 15.9**	**-0.3**
SNAL				Sg		**Sb**	**15 56 32.1**	**+0.3**
SNAL	**S. Angelo Dei**	**1.19**	**196**	Pg		**Pg**	**15 56 15.9**	**-0.3**
SNAL				Sg		**Sb**	**15 56 32.1**	**+0.3**
VAGA	**Valle Agricola**	**1.24**	**239**	Pg		**Pg**	**15 56 16.5**	**-0.7**
	61nm,0.3s							
VAGA	**Valle Agricola**	**1.24**	**239**	Pg		**Pg**	**15 56 16.5**	**-0.7**
	61nm,0.3s							
CSSN	**Cassano Irpino**	**1.29**	**201**	Pg		**Pn**	**15 56 17.1**	**-0.8**
	24nm,0.3s							
CSSN	**Cassano Irpino**	**1.29**	**201**	Pg		**Pn**	**15 56 17.1**	**-0.8**
	24nm,0.3s							
ACER	**Acerenza**	**1.30**	**170**	Pg		**Pg**	**15 56 18.0**	**-0.3**
ACER	**Acerenza**	**1.30**	**170**	Pg		**Pg**	**15 56 18.0**	**-0.3**
INTR	**Introdacqua**	**1.30**	**268**	Pg		**Pn**	**15 56 17.6**	**-0.4**
INTR				Sg		**Sn**	**15 56 36.0**	**+0.4**
	161nm,0.6s							
INTR	**Introdacqua**	**1.30**	**268**	Pg		**Pn**	**15 56 17.6**	**-0.4**
INTR				Sg		**Sn**	**15 56 36.0**	**+0.4**
	161nm,0.6s							
CERA	**Filignano**	**1.30**	**250**	Pg		**Pg**	**15 56 19.0**	**+0.6**
	39nm,0.4s							
CERA	**Filignano**	**1.30**	**250**	Pg		**Pg**	**15 56 19.0**	**+0.6**
	39nm,0.4s							
MRLC	**Muro Lucano**	**1.31**	**185**	Pg		**Pg**	**15 56 18.5**	**-0.1**
MRLC				Sg		**Sg**	**15 56 35.0**	**-0.6**
	97nm,0.6s							
MRLC	**Muro Lucano**	**1.31**	**185**	Pg		**Pg**	**15 56 18.5**	**-0.1**
MRLC				Sg		**Sg**	**15 56 35.0**	**-0.6**
	97nm,0.6s							
BAI	**Bari**	**1.33**	**136**	*e*Pg		**Pg**	**15 56 19.9**	**+0.9**
BAI				*e*Sg		**Sn**	**15 56 37.9**	**+1.7**

	192nm,0.4s							
CRAC	**Craco**	**1.80**	**160**	Pg	**Pb**	**15 56 27.1**	**+0.4**
	192nm,0.4s							
PE1	**Pezze di Greco**	**1.83**	**133**	*e*Pn	**Pg**	**15 56 28.5**	**-0.1**
NVLJ	**Novalja**	**2.56**	**347**	*e*Pn	**Pn**	**15 56 35.0**	**-0.3**
NVLJ				Sn	**Sn**	**15 57 06.2**	**-0.4**
NVLJ	**Novalja**	**2.56**	**347**	*e*Pn	**Pn**	**15 56 35.0**	**-0.3**
NVLJ				Sn	**Sn**	**15 57 06.2**	**-0.4**
SKDS	**Skadanscina**	**3.67**	**342**	*i* Pn	**Pn**	**15 56 49.9**	**-0.7**
SKDS	**Skadanscina**	**3.67**	**342**	*i* Pn	**Pn**	**15 56 49.9**	**-0.7**
VISS	**Visnje**	**3.78**	**351**	*i* Pn	**Pn**	**15 56 52.9**	**+0.8**
VISS	**Visnje**	**3.78**	**351**	*i* Pn	**Pn**	**15 56 52.9**	**+0.8**

GUC 28 16:14:53.8±0.7, 20.79S×70.21W, h68km±7km, ML3.5, 1C-4D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HMBC	**Humberstone**	**0.59**	**30**	*e*P	Pn	16 15 08.0	+0.4
HMBC				*e*S	Sn	16 15 18.1	+0.4
HMBC				AML	AML	16 15 18.8	
	comp=N,4μm,0.2s						
PB07	**Plate Boundary**	**0.98**	**162**	⇓*i*P	Pn	16 15 12.9	+0.7
PB07				AML	AML	16 15 27.3	
	comp=E,2μm,0.1s						
PSGC	**Pisagua**	**1.19**	**4**	⇓*i*P	Pn	16 15 15.2	+0.4
PSGC				AML	AML	16 15 30.9	
	comp=E,823nm,0.3s						
MACH	**Maria Elena**	**1.46**	**163**	⇑*i*P	Pn	16 15 19.1	+0.6
PB04	**Plate Boundary**	**1.61**	**156**	⇓*i*P	Pn	16 15 19.8	-0.4
PB04				AML	AML	16 15 43.1	
	comp=N,897nm,0.1s						
MNMC	**Minimini**	**1.75**	**19**	⇓*i*P	Pn	16 15 23.0	+0.5
MNMC				*i* S	Sn	16 15 45.6	+1.5
MNMC				AML	AML	16 15 47.6	
	comp=E,2μm,0.2s						
LVC	**Limon Verde**	**2.17**	**147**	*e*P	Pn	16 15 29.0	+0.9
LVC				*i* S	Sn	16 15 56.1	+1.8

*JMA **28** 16:15:03.5±0.4, 24.15N×121.65E, h56km, M3.4*
*TAP **28** 16:15:03.9, 24.20N×121.76E, h15km, ML4.0, B*
*ISCJB **28** 16:15:04.2±0.3, 24.18N±0.02×121.82E±0.02, h15km±4km, mb3.5/7, MS3.2/1, Error ellipse: s-maj=3.3km s-min=2.1km az=37.7*
*IDC **28** 16:15:15.4±6.3, 24.25N×121.96E, h134km±65km, mb3.2/7, mb1 3.3/8, mb1mx3.1/26, mbtmp3.2/8, MS3.3/1, Ms1 3.3/1, ms1mx2.3/15, Error ellipse: s-maj=35.8km s-min=15.9km az=65.0*

ISC 28 16:15:03.6±0.8, 24.19N±0.02×121.79E±0.02, h17km±5km, n78, σ0.78/123, mb3.5/7, 10C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.13**	**339**	*i* P	**Pg**	**16 15 07.4**	**-0.1**
	baz=352						
EHP				*i* S	**Sg**	**16 15 10.1**	**+0.1**
	baz=352						
TWD	**Chiawan**	**0.21**	**238**	⇑*i*P	**Pg**	**16 15 08.6**	**0.0**
	baz=239						
TWD				*i* S	**Sg**	**16 15 12.0**	**+0.1**
	baz=239						
ENA	**Nanau**	**0.24**	**349**	⇑*i*P	**Pg**	**16 15 09.2**	**+0.1**
	baz=355						
ENA				S	**Sg**	**16 15 13.1**	**+0.3**
	baz=355						
HWA	**Hwalien**	**0.27**	**219**	P	**Pb**	**16 15 10.4**	**+0.3**
	baz=222						
ESF	**Shoufeng Towns**	**0.41**	**219**	*e*P	**Pg**	**16 15 12.3**	**+0.3**
	baz=224						
ESF				*e*S	**Sb**	**16 15 18.6**	**+0.1**
	baz=224						
TWC	**Suao**	**0.42**	**7**	⇑*i*P	**Pb**	**16 15 12.6**	**-0.1**
	baz=7.0						
TWC				*e*S	**Sb**	**16 15 18.5**	**-0.3**
	baz=7.0						
NNS	**Nan Shan**	**0.46**	**303**	⇑*i*P	**Pg**	**16 15 12.9**	**0.0**
	baz=304						
NNS				S	**Sg**	**16 15 18.8**	**-0.3**
	baz=304						
WHF	**Hehuan Shan**	**0.48**	**265**	⇑*i*P	**Pg**	**16 15 13.5**	**0.0**
	baz=264						
WHF				*e*S	**Sg**	**16 15 19.4**	**-0.8**
	baz=264						
ESL	**Shilin**	**0.50**	**221**	⇑*i*P	**Pg**	**16 15 13.7**	**+0.1**
	baz=225						
ESL				*e*S	**Sb**	**16 15 21.8**	**+0.8**
	baz=225						
TEGC	**Jichi Village**	**0.53**	**206**	*e*P	**Pb**	**16 15 15.5**	**+0.9**
	baz=196						
TWE	**Neicheng**	**0.54**	**348**	⇑*i*P	**Pg**	**16 15 14.6**	**+0.2**
	baz=350						
TWE				*i* S	**Sb**	**16 15 22.0**	**-0.2**
	baz=350						
TWT	**Tachien**	**0.57**	**276**	⇑*i*P	**Pb**	**16 15 15.4**	**+0.1**
	baz=276						
TWT				*i* S	**Sg**	**16 15 22.9**	**+0.3**
	baz=276						
ILA	**Ilan**	**0.57**	**356**	P	**Pb**	**16 15 15.6**	**+0.3**
	baz=353						
ILA				*e*S	**Sb**	**16 15 23.3**	**+0.1**
	baz=353						
NSK	**Sanguang**	**0.62**	**321**	⇑*i*P	**Pg**	**16 15 16.0**	**0.0**
	baz=322						
NSK				*i* S	**Sg**	**16 15 24.4**	**0.0**
	baz=322						
EHY	**Hungye**	**0.81**	**212**	⇓*e*P	**Pb**	**16 15 18.1**	**-1.2**
	baz=224						
TWA	**Mucha**	**0.81**	**346**	*e*P	**Pn**	**16 15 20.2**	**-0.1**
	baz=337						
TWA				S	**Sg**	**16 15 30.7**	**+0.6**
	baz=337						
TWB1	**Santiao Chiao**	**0.83**	**12**	P	**Pg**	**16 15 20.1**	**+0.2**
	baz=12						
TWB1				*e*S	**Sb**	**16 15 30.7**	**+0.1**
	baz=12						
NSTT	**Nanjuang**	**0.84**	**301**	P	**Pg**	**16 15 20.1**	**0.0**
	baz=302						
NSTT				*e*S	**Sg**	**16 15 31.1**	**-0.1**
	baz=302						
SMLT	**Sun Moon Lake**	**0.87**	**250**	⇓*i*P	**Pb**	**16 15 20.4**	**0.0**
	baz=249						
SMLT				*e*S	**Sb**	**16 15 31.6**	**-0.2**
	baz=249						
NWF	**Wu-fen Shan**	**0.88**	**359**	*e*P	**Pn**	**16 15 21.3**	**-0.1**
	baz=352						
NWF				S	**Sg**	**16 15 32.7**	**+0.4**
	baz=352						
TAP1	**Taipei**	**0.88**	**344**	*e*P	**Pn**	**16 15 21.5**	**+0.2**
	baz=343						
TAP1				*e*S	**Sg**	**16 15 32.1**	**-0.2**
	baz=343						
TAP	**Taipei**	**0.88**	**343**	*e*P	**Pb**	**16 15 20.4**	**-0.2**
	baz=343						
TAP				*e*S	**Sn**	**16 15 33.4**	**-0.4**
	baz=343						
TYC	**Yuchr**	**0.90**	**252**	⇓*i*P	**Pb**	**16 15 20.8**	**-0.1**
	baz=252						
TYC				*e*S	**Sb**	**16 15 32.6**	**0.0**
	baz=252						
TWQ1	**Liyutan**	**0.94**	**280**	P	**Pn**	**16 15 22.4**	**+0.2**
	baz=280						
TWF1	**Yuli**	**0.95**	**209**	⇓*e*P	**Pb**	**16 15 20.3**	**-1.4**
	baz=222						
NCU	**National Centr**	**0.95**	**325**	P	**Pn**	**16 15 22.9**	**+0.6**
	baz=324						
NCU				S	**Sn**	**16 15 36.9**	**+1.4**
	baz=324						
HSN	**Hsinchu**	**0.96**	**309**	*e*P	**Pn**	**16 15 22.8**	**+0.3**
	baz=304						
HSN				*e*S	**Sn**	**16 15 36.4**	**+0.5**
	baz=304						
NSY	**Sanyi**	**0.97**	**284**	P	**Pn**	**16 15 23.3**	**+0.8**
	baz=284						
NSY				*e*S	**Sn**	**16 15 35.9**	**0.0**
	baz=284						
TWS1	**Kuangyinshan**	**0.97**	**339**	P	**Pn**	**16 15 23.0**	**+0.5**
	baz=339						
TWS1				*e*S	**Sn**	**16 15 37.1**	**+1.2**
	baz=339						
TCU	**Taichung**	**1.02**	**268**	*e*P	**Pg**	**16 15 24.2**	**+0.8**
	baz=268						
TCU				S	**Sn**	**16 15 38.7**	**+1.5**
	baz=268						
YUS	**Yu-Shan**	**1.04**	**228**	⇓*i*P	**Pb**	**16 15 23.5**	**0.0**
	baz=218						
YUS				*e*S	**Sn**	**16 15 39.1**	**+0.8**
	baz=218						
WNT	**Mingjian**	**1.06**	**253**	P	**Pg**	**16 15 24.6**	**+0.5**
	baz=250						
WNT				S	**Sn**	**16 15 40.2**	**+2.0**
	baz=250						
TWY	**Chenhua**	**1.09**	**351**	*e*P	**Pg**	**16 15 25.2**	**+0.3**
	baz=335						
ALS	**Alishan**	**1.13**	**233**	⇓*i*P	**Pn**	**16 15 25.1**	**+0.1**
	baz=233						
YOJ	**Yonaguni jima**	**1.14**	**76**	⇓*i*P	**Pg**	**16 15 25.5**	**-0.3**
	baz=95						
YOJ				*e*S	**Sg**	**16 15 41.4**	**+0.7**
	baz=95						
YOJ	**Yonaguni jima**	**1.14**	**76**	P	**Pg**	**16 15 25.5**	**-0.3**
YOJ				S	**Sg**	**16 15 41.6**	**+0.9**
CHKT	**Chengkung**	**1.16**	**200**	*e*P	**Pn**	**16 15 24.2**	**-0.8**
	baz=187						
CHN5	**Tsauling**	**1.18**	**240**	⇓P	**Pb**	**16 15 26.0**	**+0.3**
	baz=241						
CHN5				*e*S	**Sg**	**16 15 43.1**	**+1.3**
	baz=241						
ELDTW	**Lidau**	**1.22**	**216**	*e*P	**Pn**	**16 15 24.6**	**-1.6**
	baz=202						
WGK	**Gukeng**	**1.23**	**246**	*e*P	**Pg**	**16 15 27.1**	**-0.3**
	baz=247						
WGK				*e*S	**Sg**	**16 15 44.8**	**+1.3**
	baz=247						
WTCT	**Ta-ch'eng**	**1.42**	**257**	*e*P	**Pb**	**16 15 29.6**	**-0.1**
	baz=258						
WTCT				*e*S	**Sg**	**16 15 49.5**	**0.0**
	baz=258						
CHY	**Chiayi**	**1.43**	**241**	*e*P	**Pb**	**16 15 30.3**	**+0.4**
	baz=242						
WTP	**Ta-pu**	**1.43**	**229**	⇓*i*P	**Pb**	**16 15 29.9**	**-0.1**
	baz=229						
WTP				*e*S	**Sg**	**16 15 50.3**	**+0.4**
	baz=229						
PCYT	**Pengchaiyu**	**1.46**	**10**	*e*P	**Pb**	**16 15 30.1**	**-0.2**
	baz=7.0						
TWK	**Hsinying**	**1.51**	**233**	*e*P	**Pb**	**16 15 31.4**	**+0.1**
	baz=233						
TWK				*e*S	**Sg**	**16 15 52.2**	**-0.1**
	baz=233						
TWG	**Pinlang**	**1.52**	**206**	*e*P	**Pn**	**16 15 28.6**	**-1.5**
	baz=192						
CHN1	**Nanshi**	**1.53**	**229**	P	**Pb**	**16 15 31.7**	**+0.1**
	baz=230						
CHN1				*e*S	**Sg**	**16 15 54.5**	**+1.4**
	baz=230						
WSF	**Szhu**	**1.54**	**249**	*e*P	**Pb**	**16 15 31.6**	**-0.1**
	baz=239						
WSF				*e*S	**Sg**	**16 15 53.3**	**0.0**
	baz=239						
TTN	**Taitung**	**1.55**	**203**	*e*P	**Pb**	**16 15 31.6**	**-0.2**
	baz=203						
SGST	**Jiashian**	**1.56**	**225**	*e*P	**Pb**	**16 15 32.2**	**0.0**
	baz=225						
CHN8	**Yiju**	**1.68**	**240**	*e*P	**Pb**	**16 15 33.3**	**-0.8**
	baz=225						
CHN8				*e*S	**Sg**	**16 15 57.8**	**+0.1**
	baz=225						
CHN3	**Shinhua**	**1.72**	**230**	*e*P	**Pb**	**16 15 35.2**	**+0.5**
	baz=230						
CHN3				*e*S	**Sg**	**16 16 00.2**	**+1.2**
	baz=230						
ECL	**Taimali**	**1.76**	**206**	*e*P	**Pn**	**16 15 32.6**	**-0.9**
	baz=193						
IRIF	**Iriomote-Funau**	**1.77**	**85**	P	**Pn**	**16 15 34.0**	**+0.4**
IRIF				S	**Sn**	**16 15 56.2**	**+0.4**
SCLT	**Jiali**	**1.78**	**236**	*e*P	**Pb**	**16 15 35.4**	**-0.5**
	baz=236						
HATJ	**Hateruma jima**	**1.84**	**94**	P	**Pn**	**16 15 35.1**	**+0.5**
HATJ				*e*S	**Sb**	**16 15 59.2**	**-0.6**
TWM1	**Shoushan**	**1.85**	**223**	*e*P	**Pb**	**16 15 37.4**	**+0.3**
	baz=222						
SGLT	**Jiouru**	**1.89**	**220**	*e*P	**Pb**	**16 15 38.4**	**+0.7**
	baz=204						
EAST	**Anshuo**	**2.00**	**206**	*e*P	**Pn**	**16 15 37.4**	**+0.7**
	baz=195						
TAW	**Tawu**	**2.00**	**204**	*e*P	**Pn**	**16 15 37.6**	**+0.9**
	baz=193						
JKRS	**Kuro-shima**	**2.02**	**88**	P	**Pn**	**16 15 38.3**	**+1.3**
JKRS				S	**Sb**	**16 16 04.9**	**-0.1**
SCZT	**Fangliau**	**2.11**	**211**	*e*P	**Pn**	**16 15 39.6**	**+1.4**
	baz=194						
PNG	**Penghu**	**2.14**	**254**	*e*P	**Pn**	**16 15 38.5**	**-0.1**
	baz=256						
PNG				*e*S	**Sb**	**16 16 06.6**	**-1.6**
	baz=256						
JIJ	**Ishigaki jima**	**2.15**	**85**	P	**Pn**	**16 15 39.3**	**+0.5**
JIJ				S	**Sn**	**16 16 05.8**	**+0.7**
LAY	**Lan-yu**	**2.15**	**186**	*e*P	**Pn**	**16 15 37.6**	**-1.2**
	baz=187						
TWK1	**Hengchun**	**2.42**	**202**	*e*P	**Pn**	**16 15 43.4**	**+1.0**
	baz=190						
JTJ	**Tarama**	**2.69**	**80**	P	**Pn**	**16 15 47.8**	**+1.6**
JTJ				*e*S	**Sn**	**16 16 19.6**	**+1.2**
QZH	**Quanzhou**	**3.01**	**285**	⇑*i*Pn	**Pn**	**16 15 50.5**	**-0.1**
QZH				Sn	**Sn**	**16 16 25.5**	**-0.8**
QZH				smax	smax		
	comp=N,290nm,0.9s						
QZH				smax	smax		
	comp=E,290nm,0.9s						
KNM	**Kinmen**	**3.07**	**275**	*e*P	**Pn**	**16 15 52.2**	**+0.8**
	baz=275						
WHN	**Wuhan**	**9.15**	**315**	*e*P	Pn	16 17 27.8	+13
WHN				S	**Sn**	**16 18 58.0**	**+0.4**
WHN				LR	LR		
	comp=N,540nm,11.8s						
WHN				LR	LR		
	comp=E,390nm,12.1s						
KSRS	**Korea Array**	**14.22**	**20**	P	**P**	**16 18 30.3**	**-1.3**
	comp=E,0.1nm,0.3s,baz=202,slow=12,SNR=11						
CMAR	**Chiang Mai Arr**	**22.02**	**259**	P	**P**	**16 20 00.8**	**+3.4**
	comp=E,0.5nm,0.9s,baz=61,slow=8.4,SNR=4.8						
SONM	**Songino Array**	**26.58**	**336**	P	**P**	**16 20 40.6**	**-0.5**
	comp=E,1.2nm,1.0s,baz=142,slow=7.3,SNR=5.8						
SONM				LR	LR	16 32 36.6	
	comp=E,70nm,20.1s,baz=342,slow=39						
MKAR	**Makanchi Array**	**38.72**	**316**	P	**P**	**16 22 27.4**	**+0.5**
	comp=E,0.7nm,0.7s,baz=99,slow=9.8,SNR=8.9						
ZALV	**Zalesovo Beam**	**40.54**	**327**	P	**P**	**16 22 40.4**	**-1.4**
	comp=E,1.4nm,0.7s,baz=120,slow=8.5,SNR=7.3						
WRA	**Warramunga Arr**	**45.54**	**163**	P	**P**	**16 23 21.3**	**-1.4**
	comp=E,0.6nm,0.6s,baz=344,slow=8.7,SNR=7.5						
ASAR	**Alice Springs**	**49.00**	**165**	P	**P**	**16 23 49.1**	**-0.6**
	comp=E,0.3nm,0.6s,baz=348,slow=7.1,SNR=9.3						
BRTR	**Keskin Array B**	**73.61**	**307**	P	**P**	**16 26 35.8**	**-0.8**
	comp=E,0.6nm,0.8s,baz=91,slow=6.2,SNR=4.5						

*ISCJB **28** 16:17:38.6±0.4, 24.17N±0.01×121.83E±0.02, h5km±3km, Error ellipse: s-maj=2.9km s-min=2.1km az=40.0*
*JMA **28** 16:17:39.1±0.2, 24.41N×121.69E, h79km, M2.7*
*TAP **28** 16:17:39.2, 24.19N×121.76E, h14km, ML3.7, B*

ISC 28 16:17:38.9±0.9, 24.17N±0.02×121.80E±0.02, h14km±6km, n57, σ0.65/94, 7C-4D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.15**	**338**	*i* P	**Pg**	**16 17 42.6**	**-0.1**
	baz=354						
EHP				*i* S	**Sg**	**16 17 45.5**	**+0.1**
	baz=354						
TWD	**Chiawan**	**0.21**	**245**	⇑*i*P	**Pg**	**16 17 43.7**	**+0.1**
	baz=240						
TWD				*i* S	**Sg**	**16 17 47.1**	**+0.4**
	baz=240						
HWA	**Hwalien**	**0.26**	**224**	*e*P	**Pb**	**16 17 45.5**	**+0.1**
	baz=222						
ENA	**Nanau**	**0.27**	**348**	⇑*i*P	**Pg**	**16 17 44.5**	**0.0**
	baz=356						
ENA				S	**Sg**	**16 17 48.2**	**-0.1**
	baz=356						
TWC	**Suao**	**0.44**	**5**	⇑*i*P	**Pb**	**16 17 48.0**	**-0.6**
	baz=7.0						
TWC				*i* S	**Sb**	**16 17 54.1**	**-0.9**
	baz=7.0						
NNS	**Nan Shan**	**0.48**	**305**	⇑*i*P	**Pg**	**16 17 48.1**	**-0.3**
	baz=305						
NNS				S	**Sg**	**16 17 54.1**	**-0.8**
	baz=305						
ESL	**Shilin**	**0.49**	**224**	P	**Pg**	**16 17 48.8**	**+0.3**
	baz=225						
WHF	**Hehuan Shan**	**0.49**	**268**	⇑*i*P	**Pg**	**16 17 48.7**	**-0.1**
	baz=265						
WHF				*i* S	**Sg**	**16 17 55.1**	**-0.3**
	baz=265						
TWE	**Neicheng**	**0.56**	**347**	⇑*i*P	**Pg**	**16 17 50.0**	**0.0**
	baz=351						
TWE				*i* S	**Sg**	**16 17 57.4**	**-0.1**
	baz=351						
TWT	**Tachien**	**0.58**	**279**	⇑*i*P	**Pb**	**16 17 50.7**	**-0.3**
	baz=277						
TWT				*i* S	**Sg**	**16 17 58.1**	**0.0**
	baz=277						
ILA	**Ilan**	**0.60**	**355**	P	**Pb**	**16 17 51.0**	**-0.2**
	baz=353						
ILA				*e*S	**Sg**	**16 17 58.5**	**-0.1**
	baz=353						
NSK	**Sanguang**	**0.65**	**321**	*i* P	**Pg**	**16 17 51.3**	**-0.3**
	baz=322						
NSK				*i* S	**Sg**	**16 17 59.8**	**-0.4**
	baz=322						
EHY	**Hungye**	**0.79**	**214**	*e*P	**Pg**	**16 17 53.0**	**-1.3**
	baz=224						
TWA	**Mucha**	**0.83**	**346**	*e*P	**Pb**	**16 17 55.4**	**+0.2**
	baz=347						
TWA				S	**Sb**	**16 18 06.0**	**-0.4**
	baz=347						
TWB1	**Santiao Chiao**	**0.85**	**11**	P	**Pb**	**16 17 55.5**	**-0.1**
	baz=13						
TWB1				S	**Sg**	**16 18 06.4**	**-0.2**
	baz=13						
NSTT	**Nanjuang**	**0.86**	**302**	P	**Pb**	**16 17 55.4**	**-0.4**
	baz=302						
NSTT				*i* S	**Sg**	**16 18 06.5**	**-0.6**
	baz=302						
SMLT	**Sun Moon Lake**	**0.87**	**251**	*i* P	**Pg**	**16 17 55.6**	**-0.2**
	baz=250						
SMLT				*i* S	**Sb**	**16 18 07.7**	**+0.1**
	baz=250						
NWF	**Wu-fen Shan**	**0.90**	**359**	*e*P	**Pb**	**16 17 56.6**	**+0.2**
	baz=352						
NWF				*e*S	**Sg**	**16 18 08.0**	**-0.2**
	baz=352						
TYC	**Yuchr**	**0.90**	**253**	⇓*i*P	**Pg**	**16 17 56.0**	**-0.4**
	baz=252						
TYC				*e*S	**Sg**	**16 18 07.8**	**-0.5**
	baz=252						
TAP1	**Taipei**	**0.91**	**344**	*e*P	**Pn**	**16 17 56.9**	**-0.4**
	baz=343						
TAP1				*e*S	**Sb**	**16 18 08.1**	**-0.3**
	baz=343						
TAP	**Taipei**	**0.91**	**343**	*e*P	**Pn**	**16 17 56.8**	**-0.6**
	baz=343						
TAP				*e*S	**Sb**	**16 18 08.1**	**-0.4**
	baz=343						
TWF1	**Yuli**	**0.94**	**210**	*e*P	**Pg**	**16 17 55.8**	**-1.2**
	baz=219						
TWF1				*e*S	**Sn**	**16 18 10.8**	**-0.1**
	baz=219						
TWQ1	**Liyutan**	**0.96**	**281**	*e*P	**Pg**	**16 17 57.4**	**0.0**
	baz=280						
TWQ1				*e*S	**Sn**	**16 18 10.6**	**-0.9**
	baz=280						
NCU	**National Centr**	**0.98**	**325**	P	**Pg**	**16 17 57.6**	**-0.2**
	baz=324						
NCU				S	**Sn**	**16 18 12.0**	**+0.1**
	baz=324						
NSY	**Sanyi**	**0.98**	**285**	⇓*i*P	**Pn**	**16 17 58.7**	**+0.4**
	baz=284						
NSY				*e*S	**Sn**	**16 18 11.3**	**-0.8**
	baz=284						
HSN	**Hsinchu**	**0.99**	**310**	P	**Pn**	**16 17 58.9**	**+0.5**
	baz=304						
HSN				*e*S	**Sn**	**16 18 12.2**	**0.0**
	baz=304						
TWS1	**Kuangyinshan**	**0.99**	**339**	P	**Pn**	**16 17 58.2**	**-0.3**
	baz=340						
TWS1				S	**Sn**	**16 18 12.4**	**+0.1**
	baz=340						
TCU	**Taichung**	**1.03**	**269**	*e*P	**Pn**	**16 17 59.8**	**+0.8**
	baz=268						
TCU				S	**Sn**	**16 18 14.3**	**+1.0**
	baz=268						
YUS	**Yu-Shan**	**1.03**	**229**	⇓*i*P	**Pb**	**16 17 58.6**	**-0.2**
	baz=216						
YUS				*e*S	**Sb**	**16 18 12.9**	**+0.4**
	baz=216						
WNT	**Mingjian**	**1.06**	**255**	P	**Pn**	**16 18 00.1**	**+0.7**
	baz=251						
WNT				*e*S	**Sn**	**16 18 15.5**	**+1.4**
	baz=251						
TWY	**Chenhua**	**1.12**	**351**	*e*P	**Pg**	**16 18 01.3**	**+0.8**
	baz=335						
ALS	**Alishan**	**1.12**	**235**	⇓*i*P	**Pb**	**16 18 00.3**	**0.0**
	baz=233						
CHKT	**Chengkung**	**1.14**	**201**	*e*P	**Pb**	**16 18 00.0**	**-0.4**
	baz=193						
CHKT				S	**Sn**	**16 18 16.8**	**+1.0**
	baz=193						
YOJ	**Yonaguni jima**	**1.14**	**75**	*e*P	**Pn**	**16 18 00.7**	**+0.2**
	baz=65						
YOJ	**Yonaguni jima**	**1.14**	**75**	P	**Pg**	**16 18 00.8**	**-0.1**
YOJ				S	**Sn**	**16 18 16.9**	**+0.9**
CHN5	**Tsauling**	**1.18**	**241**	P	**Pg**	**16 18 01.5**	**-0.1**
	baz=241						
CHN5				S	**Sn**	**16 18 18.4**	**+1.4**
	baz=241						
ELDTW	**Lidau**	**1.21**	**217**	*e*P	**Pn**	**16 17 59.7**	**-1.9**
	baz=201						
WGK	**Gukeng**	**1.23**	**247**	*e*P	**Pb**	**16 18 02.1**	**+0.1**
	baz=247						
WGK				*e*S	**Sg**	**16 18 20.5**	**+1.8**
	baz=247						
WTCT	**Ta-ch'eng**	**1.43**	**258**	*e*P	**Pb**	**16 18 04.9**	**-0.3**
	baz=258						
WTCT				*e*S	**Sg**	**16 18 24.8**	**0.0**
	baz=258						
WTP	**Ta-pu**	**1.43**	**230**	*e*P	**Pb**	**16 18 04.9**	**-0.4**
	baz=229						
WTP				*e*S	**Sg**	**16 18 25.7**	**+0.9**
	baz=229						
CHY	**Chiayi**	**1.43**	**242**	*e*P	**Pg**	**16 18 05.8**	**-0.6**
	baz=242						
PCYT	**Pengchaiyu**	**1.48**	**9**	*e*P	**Pn**	**16 18 05.2**	**+0.1**
	baz=7.0						
TWG	**Pinlang**	**1.50**	**207**	*e*P	**Pn**	**16 18 03.1**	**-2.3**
	baz=191						
TWK	**Hsinying**	**1.50**	**234**	*e*P	**Pn**	**16 18 05.7**	**+0.2**
	baz=233						
CHN1	**Nanshi**	**1.52**	**230**	*e*P	**Pb**	**16 18 07.1**	**+0.1**
	baz=230						
WSF	**Szhu**	**1.54**	**250**	*e*P	**Pn**	**16 18 06.5**	**+0.5**
	baz=239						
WSF				*e*S	**Sb**	**16 18 27.1**	**+0.5**
	baz=239						
CHN8	**Yiju**	**1.67**	**241**	*e*P	**Pn**	**16 18 08.5**	**+0.7**
	baz=241						
CHN3	**Shinhua**	**1.71**	**231**	*e*P	**Pg**	**16 18 10.8**	**-0.9**
	baz=229						
ECL	**Taimali**	**1.75**	**207**	*e*P	**Pn**	**16 18 09.0**	**+0.2**
	baz=193						
IRIF	**Iriomote-Funau**	**1.77**	**84**	P	**Pn**	**16 18 09.6**	**+0.5**
IRIF				*e*S	**Sn**	**16 18 32.0**	**+0.6**
HATJ	**Hateruma jima**	**1.83**	**93**	*e*S	**Sb**	**16 18 34.8**	**-0.3**
TWM1	**Shoushan**	**1.84**	**224**	*e*P	**Pn**	**16 18 10.8**	**+0.6**
	baz=223						
JKRS	**Kuro-shima**	**2.02**	**88**	P	**Pn**	**16 18 13.0**	**+0.5**
JKRS				*e*S	**Sb**	**16 18 39.9**	**-0.4**
SCZT	**Fangliau**	**2.09**	**212**	*e*P	**Pn**	**16 18 13.3**	**-0.3**
	baz=194						
PNG	**Penghu**	**2.14**	**254**	*e*P	**Pn**	**16 18 15.2**	**+0.9**
	baz=255						
JIJ	**Ishigaki jima**	**2.14**	**84**	P	**Pn**	**16 18 14.6**	**+0.3**
JIJ

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.80**	**99**	P		**Pg**	**16 18 09.2 +0.4**
PYL				S		**Sb**	**16 18 20.6 -0.1**
PYL	**PYLOS**	**0.80**	**99**	*e*PB		**Pg**	**16 18 09.3 +0.4**
PYL				*e*SB		**Sb**	**16 18 21.1 +0.4**
PYL	**PYLOS**	**0.80**	**99**	*e*Pb		**Pg**	**16 18 09.3 +0.4**
PYL				S		**Sb**	**16 18 20.6 -0.1**
PYL				*e*Sb		**Sb**	**16 18 21.1 +0.4**
AMT	**Artemida-Makis**	**0.91**	**56**	P		**Pg**	**16 18 10.8 -0.2**
AMT	**Artemida-Makis**	**0.91**	**56**	*e*PB		**Pg**	**16 18 11.2 +0.2**
AMT				*e*SB		**Sb**	**16 18 24.9 +0.9**
AMT	**Artemida-Makis**	**0.91**	**56**	*e*Pb		**Pg**	**16 18 11.2 +0.2**
AMT				S		**Sg**	**16 18 23.6 +0.8**
AMT				*e*Sb		**Sb**	**16 18 24.9 +0.9**
ITM	**Ithomi**	**0.95**	**80**	P		**Pg**	**16 18 11.1 -0.6**
ITM				S		**Sb**	**16 18 25.1 +0.1**
ITM	**Ithomi**	**0.95**	**80**	*e*PG		**Pg**	**16 18 11.0 -0.6**
ITM				*e*SB		**Sb**	**16 18 24.9 -0.1**
ITM	**Ithomi**	**0.95**	**80**	*e*Pg		**Pg**	**16 18 11.0 -0.6**
ITM				S		**Sg**	**16 18 23.2 -0.8**
ITM				*e*Sb		**Sb**	**16 18 24.9 -0.1**
KFL	**Anninata**	**1.08**	**1**	P		**Pg**	**16 18 13.6 -0.6**
KFL				S		**Sb**	**16 18 28.9 +0.2**
KFL	**Anninata**	**1.08**	**1**	P		**Pg**	**16 18 13.6 -0.6**
KFL				S		**Sb**	**16 18 29.0 +0.2**
VLS	**Valsamata**	**1.16**	**354**	P		**Pg**	**16 18 14.6 -1.0**
VLS				S		**Sb**	**16 18 31.3 +0.4**
VLS	**Valsamata**	**1.16**	**354**	*e*PB		**Pg**	**16 18 15.3 -0.3**
VLS				*e*SB		**Sb**	**16 18 31.5 +0.6**
VLS	**Valsamata**	**1.16**	**354**	P		**Pg**	**16 18 14.6 -1.0**
VLS	**Valsamata**	**1.16**	**354**	*e*Pb		**Pg**	**16 18 15.3 -0.3**
VLS				*e*Sb		**Sb**	**16 18 31.5 +0.6**
RLS	**Riolos of Patr**	**1.17**	**29**	P		**Pg**	**16 18 15.3 -0.7**
RLS				S		**Sb**	**16 18 31.6 +0.2**
RLS	**Riolos of Patr**	**1.17**	**29**	*e*PG		**Pg**	**16 18 15.4 -0.6**
RLS				*e*SB		**Sn**	**16 18 32.5 0.0**
RLS	**Riolos of Patr**	**1.17**	**29**	*e*Pg		**Pg**	**16 18 15.4 -0.6**
RLS				S		**Sb**	**16 18 31.6 +0.2**
RLS				*e*Sb		**Sn**	**16 18 32.5 0.0**
AXS	**Araxos**	**1.27**	**23**	P		**Pn**	**16 18 17.1 -0.4**
AXS				S		**Sn**	**16 18 34.9 +0.1**
AXS	**Araxos**	**1.27**	**23**	P		**Pn**	**16 18 17.1 -0.4**
AXS				S		**Sn**	**16 18 34.9 +0.1**
DYR	**Agios Nikonas**	**1.29**	**101**	P		**Pn**	**16 18 17.9 +0.1**
DYR				S		**Sn**	**16 18 37.0 +1.5**
DYR	**Agios Nikonas**	**1.29**	**101**	*e*PB		**Pn**	**16 18 18.0 +0.1**
DYR				*e*SB		**Sn**	**16 18 36.7 +1.2**
DYR	**Agios Nikonas**	**1.29**	**101**	P		**Pn**	**16 18 17.3 -0.6**
DYR	**Agios Nikonas**	**1.29**	**101**	*e*Pb		**Pn**	**16 18 18.0 +0.1**
DYR				S		**Sb**	**16 18 35.6 +0.7**
DYR				*e*Sb		**Sn**	**16 18 36.7 +1.2**
VLX	**Vlachokerasia**	**1.34**	**75**	P		**Pn**	**16 18 18.3 -0.3**
VLX	**Vlachokerasia**	**1.34**	**75**	*e*PG		**Pn**	**16 18 18.3 -0.3**
VLX	**Vlachokerasia**	**1.34**	**75**	P		**Pn**	**16 18 18.3 -0.3**
KLV	**Kalavryta, Ach**	**1.50**	**47**	P		**Pn**	**16 18 20.6 -0.2**
KLV	**Kalavryta, Ach**	**1.50**	**47**	*e*PN		**Pn**	**16 18 20.4 -0.4**
KLV				*e*SB		**Sg**	**16 18 43.3 +1.5**
KLV	**Kalavryta, Ach**	**1.50**	**47**	*e*Pn		**Pn**	**16 18 20.4 -0.4**
KLV				S		**Sb**	**16 18 41.8 +0.8**
KLV				*e*Sb		**Sg**	**16 18 43.3 +1.5**
LAKA	**Lakka**	**1.55**	**38**	P		**Pn**	**16 18 21.4 -0.1**
LAKA	**Lakka**	**1.55**	**38**	*e*PG		**Pn**	**16 18 22.0 +0.5**
LAKA				*e*SB		**Sg**	**16 18 45.1 +1.8**
LAKA	**Lakka**	**1.55**	**38**	P		**Pn**	**16 18 21.4 -0.1**
LAKA	**Lakka**	**1.55**	**38**	*e*Pg		**Pn**	**16 18 22.0 +0.5**
LAKA				*e*Sb		**Sg**	**16 18 45.1 +1.8**
GUR	**Goura**	**1.56**	**54**	P		**Pn**	**16 18 21.0 -0.6**
GUR				S		**Sn**	**16 18 42.9 +0.8**
GUR	**Goura**	**1.56**	**54**	P		**Pn**	**16 18 20.7 -0.9**
GUR				S		**Sb**	**16 18 43.4 +0.9**
EFP	**Efpalio**	**1.67**	**33**	P		**Pb**	**16 18 24.0 -0.5**
EFP	**Efpalio**	**1.67**	**33**	P		**Pb**	**16 18 24.0 -0.5**
TRIZ	**Trizonia**	**1.70**	**38**	P		**Pb**	**16 18 24.4 -0.5**
TRIZ	**Trizonia**	**1.70**	**38**	*e*PG		**Pb**	**16 18 24.4 -0.5**
TRIZ	**Trizonia**	**1.70**	**38**	P		**Pb**	**16 18 24.4 -0.5**
KALE	**Kalithea**	**1.75**	**38**	P		**Pb**	**16 18 25.3 -0.6**
KALE	**Kalithea**	**1.75**	**38**	*e*PG		**Pb**	**16 18 25.2 -0.6**
KALE				*e*SN		**Sg**	**16 18 51.1 +1.4**
KALE	**Kalithea**	**1.75**	**38**	P		**Pb**	**16 18 25.3 -0.6**
KALE				*e*Sn		**Sg**	**16 18 51.1 +1.4**
LKD2	**Lefkada island**	**1.76**	**358**	P		**Pb**	**16 18 25.6 -0.4**
LKD2	**Lefkada island**	**1.76**	**358**	*e*PG		**Pb**	**16 18 25.7 -0.3**
LKD2				*e*SN		**Sg**	**16 18 51.0 +1.0**
LKD2	**Lefkada island**	**1.76**	**358**	*e*Pg		**Pb**	**16 18 25.7 -0.3**
LKD2				*e*Sn		**Sg**	**16 18 51.0 +1.0**
VLI	**Veliai**	**1.78**	**99**	P		**Pg**	**16 18 27.3 -0.2**
VLI	**Veliai**	**1.78**	**99**	*e*PN		**Pg**	**16 18 27.3 -0.2**
VLI				*e*SN		**Sg**	**16 18 51.4 +0.9**
VLI	**Veliai**	**1.78**	**99**	P		**Pg**	**16 18 27.3 -0.2**
VLI				*e*Sn		**Sg**	**16 18 51.4 +0.9**
THAL	**Thalero**	**1.82**	**56**	P		**Pb**	**16 18 27.2 +0.1**
THAL	**Thalero**	**1.82**	**56**	P		**Pb**	**16 18 27.2 +0.1**
KYTH	**Kithira**	**1.98**	**111**	*e*PG		**Pb**	**16 18 30.6 +0.8**
KYTH	**Kithira**	**1.98**	**111**	*e*Pg		**Pb**	**16 18 30.6 +0.8**
LTK	**Loutraki**	**2.02**	**60**	P		**Pn**	**16 18 29.2 +1.3**
LTK	**Loutraki**	**2.02**	**60**	P		**Pn**	**16 18 29.2 +1.3**
DID	**Didima**	**2.04**	**76**	P		**Pb**	**16 18 29.8 -1.0**
DID	**Didima**	**2.04**	**76**	*e*PN		**Pb**	**16 18 29.8 -1.0**
DID				*e*SN		**Sb**	**16 18 57.9 +1.6**
DID	**Didima**	**2.04**	**76**	P		**Pb**	**16 18 29.8 -1.0**
DID				*e*Sn		**Sb**	**16 18 57.9 +1.6**
EVR	**Evrytania**	**2.06**	**24**	*e*PG		**Pb**	**16 18 31.4 +0.2**
EVR	**Evrytania**	**2.06**	**24**	*e*Pg		**Pb**	**16 18 31.4 +0.2**
AXAR	**Agios Charalam**	**2.30**	**40**	P		**Pb**	**16 18 34.0 -1.2**
AXAR	**Agios Charalam**	**2.30**	**40**	P		**Pb**	**16 18 34.0 -1.2**
AGG	**Agios Georgios**	**2.35**	**32**	P		**Pb**	**16 18 35.0 -1.1**
AGG	**Agios Georgios**	**2.35**	**32**	*e*PN		**Pb**	**16 18 34.9 -1.1**
AGG	**Agios Georgios**	**2.35**	**32**	*e*Pn		**Pb**	**16 18 34.9 -1.1**
ANKY	**Antikythira Is**	**2.36**	**119**	*e*PN		**Pb**	**16 18 35.8 -0.4**
ANKY	**Antikythira Is**	**2.36**	**119**	*e*Pn		**Pb**	**16 18 35.8 -0.4**
LKR	**Lokris**	**2.41**	**47**	*e*PB		**Pn**	**16 18 34.8 +1.6**
LKR	**Lokris**	**2.41**	**47**	*e*Pb		**Pn**	**16 18 34.8 +1.6**
IGT	**Igoumenitsa**	**2.52**	**353**	P		**Pn**	**16 18 36.2 +1.4**
IGT	**Igoumenitsa**	**2.52**	**353**	P		**Pn**	**16 18 36.2 +1.4**
THL	**Klokotos Trika**	**2.72**	**21**	P		**Pn**	**16 18 39.7 +2.2**
THL	**Klokotos Trika**	**2.72**	**21**	P		**Pn**	**16 18 39.7 +2.2**
SRN	**Sarande**	**2.91**	**348**	*e*PN		**Pn**	**16 18 40.2 +0.1**
SRN				*i* SN		Sg	16 19 40.0 +13
SRN	**Sarande**	**2.91**	**348**	*e*Pn		**Pn**	**16 18 40.2 +0.1**
NEO	**Neokhori**	**2.99**	**40**	*e*PN		**Pn**	**16 18 42.7 +1.4**
NEO	**Neokhori**	**2.99**	**40**	*e*Pn		**Pn**	**16 18 42.7 +1.4**
KBN	**Korca**	**3.59**	**0**	*e*PN		Pn	16 18 52.8 +3.3
KBN				*i* SN		**Sn**	**16 19 34.7 +2.5**
KBN	**Korca**	**3.59**	**0**	*e*Pn		Pn	16 18 52.8 +3.3
KBN				*i* Sn		**Sn**	**16 19 34.7 +2.5**
BIA	**Bitola**	**4.01**	**6**	*i* Pn		**Pn**	**16 18 56.5 +1.2**
VAY	**Valandovo**	**4.51**	**18**	*i* Pn		**Pn**	**16 19 02.4 +0.2**
MMB	**Musomiste**	**5.11**	**26**	*e*P		**Pn**	**16 19 10.8 +0.5**
MMB	**Musomiste**	**5.11**	**26**	*e*P		**Pn**	**16 19 10.8 +0.5**
RZN	**Rozhen**	**5.58**	**32**	*e*P		**Pn**	**16 19 16.7 -0.2**
VTS	**Vitosha**	**5.87**	**18**	*e*P		**Pn**	**16 19 21.8 +0.9**
VTS	**Vitosha**	**5.87**	**18**	*i*P		**Pn**	**16 19 23.6 +2.7**
MPEP	**Malo Peshtene**	**6.72**	**19**	*e*P		**Pn**	**16 19 33.7 +1.2**
GZR	**Gura Zlata**	**8.49**	**10**	*i*P		**Pn**	**16 19 56.9 0.0**
LOT	**Lotru**	**8.71**	**14**	*i*P		**Pn**	**16 19 58.2 -1.7**
VOIR		**9.00**	**20**	*i*P		**Pn**	**16 20 03.3 -0.5**
KEST	**Kesra**	**9.29**	**265**	Pn		Pn	16 20 11.6 +3.7
	0.1nm,0.3s,baz=264,slow=8.1,SNR=3.5						
KEST						**Sn**	**16 21 55.2 +2.6**
	0.1nm,0.3s,baz=47,slow=18,SNR=3.6						
PKSM	**Moragy**	**9.31**	**351**	*i*P		**Pn**	**16 20 07.6 -0.4**
MLR	**Muntele Rosu**	**9.31**	**23**	*i*P		**Pn**	**16 20 05.2 -2.9**
MLR	**Muntele Rosu**	**9.31**	**23**	Pn		**Pn**	**16 20 08.7 +0.5**
	0.0nm,0.3s,baz=184,slow=13,SNR=3.1						
BOJS	**Bojanci**	**9.42**	**336**	*i* Pn		**Pn**	**16 20 09.9 +0.4**
BOJS				*i* Sn		**Sn**	**16 21 52.2 -3.5**
SKDS	**Skadanscina**	**9.90**	**331**	*i* Pn		**Pn**	**16 20 16.1 0.0**
SKDS				*i* Sn		**Sn**	**16 22 02.4 -5.1**
JAVS	**Javornik**	**10.18**	**333**	*i* Pn		**Pn**	**16 20 21.7 +1.8**
JAVS				*i* Sn		**Sn**	**16 22 09.3 -5.0**
BRTR	**Keskin Array B**	**10.47**	**71**	Pn		Pn	16 20 19.6 -4.4
	0.1nm,0.3s,baz=269,slow=16,SNR=2.7						
PERS	**Pernice**	**10.48**	**338**	*i* Pn		**Pn**	**16 20 23.2 -0.8**
PERS				*i* Sn		**Sn**	**16 22 15.9 -5.7**
VYHS	**Vyhne**	**11.55**	**354**	*e*PN		**Pn**	**16 20 37.6 -1.0**
CRVS	**Cervenica-Dubn**	**11.88**	**2**	*e*PN		**Pn**	**16 20 41.4 -1.8**
GERES	**GERESS Array B**	**12.88**	**339**	Pn		**Pn**	**16 20 57.1 +0.2**
	0.1nm,0.3s,baz=160,slow=12,SNR=3.9						
AKASG	**Malin Array Be**	**14.96**	**21**	Pn		**P**	**16 21 28.4 -2.4**
	1.5nm,0.3s,baz=209,slow=9.8,SNR=4.2						
HFS	**Hagfors**	**23.56**	**351**	P		**P**	**16 23 03.1 -1.2**
	2.5nm,0.5s,baz=158,slow=9.6,SNR=19						
EKA	**Eskdalemuir Ar**	**24.48**	**326**	P		**P**	**16 23 14.3 +1.4**
	1.0nm,0.5s,baz=123,slow=8.8,SNR=14						
FINES	**FINESS Array B**	**24.67**	**6**	P		**P**	**16 23 14.6 0.0**
	1.3nm,0.6s,baz=193,slow=9.7,SNR=11						
NB2	**NORSAR Subarra**	**24.78**	**349**	P		**P**	**16 23 15.1 -0.5**
	comp=Z,0.9nm,0.6s,baz=158,slow=9.3						
NB2	**NORSAR Subarra**	**24.78**	**349**	P		**P**	**16 23 15.1 -0.5**
	comp=Z,0.9nm,0.6s,SNR=5.9						
NOA	**NORSAR Array B**	**24.78**	**349**	P		**P**	**16 23 15.1 -0.5**
	comp=Z,1.1nm,0.6s,baz=157,slow=9.0,SNR=6.5						
TORD	**Torodi Ar. Bea**	**29.27**	**221**	P		**P**	**16 23 58.5 +2.3**
	comp=Z,0.7nm,0.6s,baz=32,slow=8.7,SNR=6.0						
ARCES	**ARCESS Array B**	**32.67**	**3**	P		**P**	**16 24 25.0 -0.8**
	comp=Z,1.2nm,0.7s,baz=186,slow=8.2,SNR=12						
MKAR	**Makanchi Array**	**45.75**	**57**	P		**P**	**16 26 14.1 -1.3**
	comp=Z,0.3nm,0.5s,baz=271,slow=7.8,SNR=8.4						
ZALV	**Zalesovo Beam**	**46.33**	**47**	P		**P**	**16 26 18.0 -1.7**
	comp=Z,0.7nm,0.4s,baz=276,slow=8.1,SNR=5.0						
ASAR	**Alice Springs**	**121.86**	**97**	PKP		**PKPdf**	**16 36 50.0 +1.4**
	comp=Z,0.4nm,1.0s,baz=325,slow=1.6,SNR=2.7						

NIED ***28*** *16:20:00,38°.90N×142°.50E,h65km,Mw3.6 Best double couple: M₀2.91000×10¹⁴ NP1:φ₉125.00000°,δ77.00000°, λ130.00000°. NP2:φ₉229.00000°,δ42.00000°,λ19.00000°.*

JMA 28 16:20:33.3±0.1,38°.90N×142°.51E,h38km±2km,M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.68**	**286**	P		Pn	16 20 46.6 +0.1
OFUJ				S		Sn	16 20 55.8 0.0
MIYJ	**Miyakonagasawa**	**0.86**	**322**	P		Pn	16 20 49.0 +0.1
MIYJ				S		Sn	16 21 00.5 +0.1
JMK	**Ichinoseki**	**1.01**	**273**	P		Pn	16 20 51.3 +0.4
JMK				S		Sn	16 21 04.4 +0.6
JIO	**Ouri**	**1.01**	**244**	P		Pn	16 20 50.9 0.0
JIO				S		Sn	16 21 03.4 -0.5
JOM	**Ohasama**	**1.11**	**302**	P		Pn	16 20 52.9 +0.7
JOM				S		Sn	16 21 06.9 +0.6
JTH	**Tanohata**	**1.15**	**334**	P		Pn	16 20 53.0 +0.1
JTH				S		Sn	16 21 08.1 +0.7
JOU	**Okura**	**1.54**	**250**	P		Pn	16 20 59.0 +0.7
JRG	**Rokugo**	**1.54**	**289**	P		Pn	16 20 59.3 +1.1
JANG	**Nango**	**1.66**	**333**	P		Pn	16 21 00.6 +0.7
JYK	**Kaneyama**	**1.68**	**271**	P		Pn	16 21 01.2 +1.1
JMM	**Marumori**	**1.70**	**233**	P		Pn	16 21 00.5 +0.1
JMM				*e*S		Sn	16 21 21.2 +0.3
MAT	**Matsushiro**	**4.14**	**237**	P		Pn	16 21 36.9 +2.9
MAT				*e*S		Sn	16 22 28.4 +7.1

KRSC 28 16:35:50.8±1.2,50°.32N×157°.21E,h5km±5km,ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.79**	**298**	*e*P		Pb	16 36 06.5 -0.4
SKR				*e*S		Sb	16 36 18.2 +0.3
PAU	**Pauzhetka**	**1.18**	**348**	*e*P		Pb	16 36 13.5 -0.1
PAU				*e*S		Sn	16 36 30.3 0.0
MIPR	**Malaya Ipel'ka**	**1.98**	**352**	P		Pn	16 36 25.3 +0.3
ASAK	**Asacha**	**2.11**	**12**	*e*P		Pn	16 36 28.2 +1.3
ASAK				S		Sb	16 36 55.7 -0.5
MTVR	**Mutnovka**	**2.25**	**15**	*e*P		Pn	16 36 30.0 +1.1
MTVR				*e*S		Sn	16 36 58.4 +1.3
RUS	**Russkaya**	**2.27**	**21**	*e*P		Pn	16 36 29.5 +0.6
RUS				*e*S		Sn	16 36 57.7 +0.5
PET	**Petropavlovsk**	**2.85**	**18**	S		Sb	16 37 15.3 -2.0
UGLR	**Uglovaya**	**3.06**	**18**	P		Pn	16 36 42.3 +2.3
AVH	**Avacha**	**3.10**	**17**	P		Pn	16 36 42.7 +2.3
KOK	**Koryaka**	**3.10**	**16**	P		Pn	16 36 43.0 +2.4
SMAR	**Somma**	**3.11**	**18**	P		Pn	16 36 42.3 +1.5
SDLR	**Sedlovina**	**3.14**	**19**	P		Pn	16 36 43.0 +1.9
SPN	**Mys Shipunski**	**3.29**	**31**	P		Pn	16 36 44.3 +1.4
SPN				S		Sn	16 37 23.9 +1.6
GNL	**Ganaly**	**3.41**	**7**	P		Pn	16 36 46.6 +1.8
MKZ	**Mys Kozlova**	**5.06**	**31**	P		Pn	16 37 09.1 +1.8

MEX 28 16:36:48.0±0.6,18°.04N×100°.63W,h55km±5km,MD3.5, Guerrero

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARIG	**Puente Sto Nin**	**0.36**	**48**	*i* P		Pn	16 36 56.3 -1.8
ARIG				*i* S		Sn	16 37 03.6 -1.8
ZIIG	**Zihuatanejo**	**0.91**	**242**	*e*P		Pn	16 37 03.2 -1.4
ZIIG				*i* S		Sn	16 37 15.2 -1.7
MEIG	**Mezcala**	**0.97**	**97**	*i* P		Pn	16 37 03.9 -1.6
MEIG				*i* S		Sn	16 37 16.6 -1.9
CAIG	**El Cayaco**	**1.04**	**161**	*i* P		Pn	16 37 04.7 -1.8
CAIG				*i* S		Sn	16 37 18.2 -1.9
PLIG	**Platanillo**	**1.13**	**72**	*e*P		Pn	16 37 06.2 -1.5
PLIG				*i* S		Sn	16 37 20.8 -1.5
YAIG	**Yautepec**	**1.69**	**61**	*i* P		Pn	16 37 13.9 -1.5
YAIG				*i* S		Sn	16 37 34.1 -2.1

JMA ***28*** *16:40:16.1±0.5,24°.09N×121°.61E,h37km,M2.3*
ISCJB ***28*** *16:40:17.5±0.4,24°.18N±0°.01×121°.81E±0°.02,h9km±2km, Error ellipse: s-maj=3.0km s-min=2.0km az=34.7*
TAP ***28*** *16:40:17.7,24°.20N×121°.76E,h14km,ML3.1,B*

ISC 28 16:40:17.6±0.8,24°.18N±0°.02×121°.78E±0°.02,h14km±6km, n49,σ0s53/92,7C,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.13**	**343**	P		**Pg**	**16 40 20.9 -0.3**
	baz=354						
EHP				*e*S		**Sg**	**16 40 23.9 +0.3**
	baz=354						
TWD	**Chiawan**	**0.20**	**239**	*i*P		**Pg**	**16 40 22.2 +0.1**
	baz=239						
TWD				*i* S		**Sg**	**16 40 25.6 +0.4**
	baz=239						
ENA	**Nanau**	**0.25**	**351**	*i*P		**Pg**	**16 40 23.0 0.0**
	baz=356						
ENA				*i* S		**Sg**	**16 40 26.8 +0.2**
	baz=356						
HWA	**Hwalien**	**0.26**	**219**	*e*P		**Pb**	**16 40 23.8 -0.3**
	baz=222						
HWA				*e*S		**Sb**	**16 40 28.6 +0.1**
	baz=222						
TWC	**Suao**	**0.43**	**8**	*i*P		**Pg**	**16 40 26.4 +0.1**
	baz=8.0						
TWC				S		**Sg**	**16 40 32.3 +0.3**
	baz=8.0						
NNS	**Nan Shan**	**0.45**	**305**	*i*P		**Pg**	**16 40 26.6 -0.1**
	baz=305						
NNS				*i* S		**Sg**	**16 40 32.6 -0.2**
	baz=305						
WHF	**Hehuan Shan**	**0.47**	**266**	*i*P		**Pg**	**16 40 27.1 0.0**
	baz=264						
WHF				*i* S		**Sg**	**16 40 33.6 -0.1**
	baz=264						
ESL	**Shilin**	**0.49**	**221**	*i* P		**Pg**	**16 40 27.5 +0.2**
	baz=225						
ESL				*e*S		**Sb**	**16 40 35.1 +0.1**
	baz=225						
TWE	**Neicheng**	**0.55**	**349**	*i* P		**Pg**	**16 40 28.5 +0.1**
	baz=351						
TWE				S		**Sg**	**16 40 36.1 +0.4**
	baz=351						
TWT	**Tachien**	**0.56**	**277**	*i*P		**Pg**	**16 40 29.1 +0.4**
	baz=276						
TWT				S		**Sg**	**16 40 36.6 +0.4**
	baz=276						
ILA	**Ilan**	**0.58**	**357**	*e*P		**Pg**	**16 40 29.3 +0.2**
	baz=353						
ILA				*e*S		**Sb**	**16 40 37.4 -0.4**
	baz=353						
NSK	**Sanguang**	**0.63**	**322**	*i*P		**Pg**	**16 40 29.7 -0.2**
	baz=322						
NSK				S		**Sg**	**16 40 38.2 -0.1**
	baz=322						
EHY	**Hungye**	**0.79**	**212**	*e*P		**Pg**	**16 40 32.5 -0.6**
	baz=222						
EHY				*e*S		**Sn**	**16 40 45.3 -0.8**
	baz=222						
TWA	**Mucha**	**0.82**	**347**	*e*P		**Pb**	**16 40 33.7 +0.1**
	baz=347						
TWA				*e*S		**Sg**	**16 40 44.2 0.0**
	baz=347						
NSTT	**Nanjuang**	**0.84**	**302**	P		**Pg**	**16 40 33.7 -0.2**
	baz=302						
NSTT				S		**Sg**	**16 40 44.8 -0.2**
	baz=302						
TWB1	**Santiao Chiao**	**0.84**	**13**	*e*P		**Pg**	**16 40 33.8 -0.2**
	baz=13						
TWB1				*e*S		**Sg**	**16 40 44.7 -0.4**
	baz=13						
SMLT	**Sun Moon Lake**	**0.86**	**250**	P		**Pb**	**16 40 34.2 -0.3**
	baz=249						
SMLT				S		**Sg**	**16 40 45.6 0.0**
	baz=249						
NWF	**Wu-fen Shan**	**0.89**	**360**	*e*P		**Pg**	**16 40 35.2 +0.4**
	baz=353						
NWF				*e*S		**Sg**	**16 40 46.8 +0.3**
	baz=353						
TAP1	**Taipei**	**0.89**	**345**	*e*P		**Pg**	**16 40 34.9 +0.1**
	baz=343						
TAP1				*e*S		**Sg**	**16 40 46.5 +0.1**
	baz=343						
TYC	**Yuchr**	**0.89**	**252**	P		**Pb**	**16 40 34.4 -0.5**
	baz=252						
TYC				*e*S		**Sb**	**16 40 46.5 -0.1**
	baz=252						
TWQ1	**Liyutan**	**0.94**	**280**	*e*P		**Pn**	**16 40 36.4 0.0**
	baz=280						
TWQ1				*e*S		**Sb**	**16 40 48.0 0.0**
	baz=280						
TWF1	**Yuli**	**0.94**	**208**	*e*P		**Pb**	**16 40 33.9 -1.9**
	baz=219						
TWF1				*e*S		**Sn**	**16 40 49.5 -0.2**
	baz=219						
NCU	**National Centr**	**0.95**	**325**	*e*P		**Pg**	**16 40 36.0 -0.1**
	baz=325						
NCU				*e*S		**Sn**	**16 40 49.5 -0.6**
	baz=325						
NSY	**Sanyi**	**0.96**	**284**	*e*P		**Pn**	**16 40 36.6 -0.2**
	baz=284						
NSY				*e*S		**Sg**	**16 40 48.8 0.0**
	baz=284						
HSN	**Hsinchu**	**0.96**	**310**	*e*P		**Pb**	**16 40 35.6 -0.6**
	baz=304						
HSN				*e*S		**Sg**	**16 40 49.3 +0.4**
	baz=304						
TWS1	**Kuangyinshan**	**0.97**	**340**	P		**Pg**	**16 40 36.5 +0.1**
	baz=340						
TWS1				*e*S		**Sn**	**16 40 50.0 -0.6**
	baz=340						
TCU	**Taichung**	**1.01**	**268**	P		**Pn**	**16 40 38.5 +1.0**
	baz=268						
TCU				*e*S		**Sg**	**16 40 50.5 +0.1**
	baz=268						
YUS	**Yu-Shan**	**1.03**	**228**	P		**Pb**	**16 40 37.3 -0.2**
	baz=216						
YUS				*e*S		**Sb**	**16 40 51.3 +0.3**
	baz=216						
WNT	**Mingjian**	**1.05**	**253**	*e*P		**Pb**	**16 40 37.3 -0.3**
	baz=250						
WNT				*e*S		**Sn**	**16 40 53.5 +1.1**
	baz=250						
ALS	**Alishan**	**1.12**	**233**	*i* P		**Pb**	**16 40 38.8 -0.2**
	baz=234						
ALS				*e*S		**Sg**	**16 40 54.4 +0.6**
	baz=234						
CHKT	**Chengkung**	**1.14**	**200**	*e*P		**Pb**	**16 40 38.1 -1.1**
	baz=193						
CHKT				*e*S		**Sg**	**16 40 55.3 +0.7**
	baz=193						
YOJ	**Yonaguni jima**	**1.15**	**76**	*e*P		**Pn**	**16 40 39.3 -0.1**
	baz=65						
YOJ	**Yonaguni jima**	**1.15**	**76**	P		**Pn**	**16 40 38.9 -0.5**
YOJ				S		**Sg**	**16 40 56.1 +1.1**
CHN5	**Tsauling**	**1.17**	**240**	*e*P		**Pb**	**16 40 39.9 +0.2**
	baz=241						
CHN5				*e*S		**Sg**	**16 40 56.7 +1.3**
	baz=241						
ELDTW	**Lidau**	**1.21**	**216**	*e*P		**Pn**	**16 40 38.6 -1.7**
	baz=201						
WGK	**Gukeng**	**1.22**	**246**	*e*P		**Pg**	**16 40 41.0 -0.2**
	baz=247						
WGK				*e*S		**Sg**	**16 40 56.9 -0.2**
	baz=247						
WTCT

RLS					S	Sn	16 41 03.8	-0.1
RLS					*e*Sb	Sn	16 41 05.0	+1.1
VLS	**Valsamata**	**1.12**	**351**	P		Pg	16 40 47.4	-0.7
VLS					S	Sn	16 41 03.6	-0.4
VLS	**Valsamata**	**1.12**	**351**	*e*PB		Pg	16 40 47.3	-0.8
VLS					*e*SB	Sn	16 41 04.6	+0.6
VLS	**Valsamata**	**1.12**	**351**	*e*Pb		Pg	16 40 47.3	-0.8
VLS					S	Sn	16 41 03.6	-0.4
VLS					*e*Sb	Sn	16 41 04.6	+0.6
AXS	**Araxos**	**1.21**	**22**	P		Pb	16 40 49.0	-0.7
AXS	**Araxos**	**1.21**	**22**	P		Pb	16 40 49.0	-0.7
DYR	**Agios Nikonas**	**1.27**	**104**	P		Pn	16 40 50.2	-0.3
DYR					S	Sn	16 41 08.5	+0.9
DYR	**Agios Nikonas**	**1.27**	**104**	*e*PB		Pn	16 40 49.9	-0.6
DYR	**Agios Nikonas**	**1.27**	**104**	*e*Pb		Pn	16 40 49.9	-0.6
DYR	**Agios Nikonas**	**1.27**	**104**	P		Pn	16 40 50.2	-0.3
DYR					S	Sn	16 41 08.5	+0.9
VLX	**Vlachokerasia**	**1.29**	**76**	P		Pn	16 40 50.8	-0.1
VLX					S	Sn	16 41 09.3	+0.9
VLX	**Vlachokerasia**	**1.29**	**76**	*e*PG		Pn	16 40 50.8	-0.1
VLX	**Vlachokerasia**	**1.29**	**76**	P		Pn	16 40 50.8	-0.1
VLX					S	Sn	16 41 09.3	+0.9
KLV	**Kalavryta, Ach**	**1.45**	**47**	P		Pn	16 40 52.8	-0.2
KLV	**Kalavryta, Ach**	**1.45**	**47**	*e*PN		Pn	16 40 52.8	-0.2
KLV	**Kalavryta, Ach**	**1.45**	**47**	P		Pn	16 40 52.8	-0.2
GUR	**Goura**	**1.50**	**54**	P		Pn	16 40 53.1	-0.7
GUR					S	Sb	16 41 14.1	+0.3
GUR	**Goura**	**1.50**	**54**	*e*PN		Pn	16 40 53.1	-0.7
GUR	**Goura**	**1.50**	**54**	P		Pn	16 40 53.1	-0.7
GUR					S	Sb	16 41 14.1	+0.3
LKD2	**Lefkada island**	**1.72**	**356**	P		Pb	16 40 57.7	-0.7
LKD2	**Lefkada island**	**1.72**	**356**	*e*PG		Pb	16 40 58.2	-0.2
LKD2					*e*SN	Sg	16 41 23.7	+1.8
LKD2	**Lefkada island**	**1.72**	**356**	P		Pb	16 40 57.7	-0.7
LKD2	**Lefkada island**	**1.72**	**356**	*e*Pg		Pb	16 40 58.2	-0.2
LKD2					*e*Sn	Sg	16 41 23.7	+1.8
VLI	**Veliai**	**1.75**	**101**	P		Pb	16 40 59.2	+0.4
VLI	**Veliai**	**1.75**	**101**	*e*PN		Pb	16 40 59.0	+0.2
VLI	**Veliai**	**1.75**	**101**	*e*Pn		Pb	16 40 59.0	+0.2
KYTH	**Kithira**	**1.96**	**113**	*e*PG		Pb	16 41 02.5	0.0
KYTH	**Kithira**	**1.96**	**113**	*e*Pg		Pb	16 41 02.5	0.0
DIDY	**Didyma**	**1.96**	**77**	P		Pb	16 41 01.7	-0.9
DIDY	**Didyma**	**1.96**	**77**	P		Pb	16 41 01.7	-0.9
LTK	**Loutraki**	**1.96**	**60**	P		Pb	16 41 01.5	-1.1
LTK	**Loutraki**	**1.96**	**60**	*e*PN		Pb	16 41 01.5	-1.1
LTK	**Loutraki**	**1.96**	**60**	P		Pb	16 41 01.5	-1.1
DID	**Didima**	**1.99**	**77**	P		Pb	16 41 01.9	-1.1
DID	**Didima**	**1.99**	**77**	*e*PN		Pb	16 41 01.8	-1.2
DID	**Didima**	**1.99**	**77**	*e*Pn		Pb	16 41 01.8	-1.2
EVR	**Evrytania**	**2.01**	**23**	*e*PG		Pb	16 41 04.0	+0.7
EVR	**Evrytania**	**2.01**	**23**	*e*Pg		Pb	16 41 04.0	+0.7
AGG	**Agios Georgios**	**2.29**	**31**	*e*PN		Pb	16 41 07.0	-1.2
AGG	**Agios Georgios**	**2.29**	**31**	*e*Pn		Pb	16 41 07.0	-1.2
ANKY	**Antikythira Is**	**2.34**	**120**	*e*PN		Pb	16 41 07.5	-1.5
ANKY	**Antikythira Is**	**2.34**	**120**	*e*Pn		Pb	16 41 07.5	-1.5
LKR	**Lokris**	**2.35**	**47**	*e*PB		Pn	16 41 07.1	+1.8
LKR	**Lokris**	**2.35**	**47**	*e*Pb		Pn	16 41 07.1	+1.8
KEK	**Kerkira**	**2.75**	**344**	P		Pg	16 41 24.0	+4.6
BIA	**Bitola**	**3.96**	**6**	*i* Pn		Pn	16 41 28.4	+0.8
BARS	**Barje**	**5.79**	**7**	*e*Pn		Pn	16 41 52.9	+0.2
SJES	**Sjenica**	**6.22**	**354**	*e*Pn		Pn	16 41 58.4	-0.2
MLR	**Muntele Rosu**	**9.26**	**23**	Pn		Pn	16 42 42.4	+2.1
	0.1nm,0.3s,baz=324,slow=7.1,SNR=3.8							
HFS	**Hagfors**	**23.53**	**351**	P		**P**	16 45 35.8	-0.9
	1.7nm,0.5s,baz=165,slow=13,SNR=13							
EKA	**Eskdalemuir Ar**	**24.46**	**326**	P		**P**	16 45 45.1	-0.6
	1.2nm,0.6s,baz=124,slow=9.4,SNR=10							
FINES	**FINESS Array B**	**24.62**	**6**	P		**P**	16 45 45.7	-1.3
	0.8nm,0.6s,baz=183,slow=8.1,SNR=7.2							
NB2	**NORSAR Subarra**	**24.75**	**349**	P		**P**	16 45 47.9	-0.3
	comp=Z,0.5nm,0.5s,baz=157,slow=10							
NB2	**NORSAR Subarra**	**24.75**	**349**	P		**P**	16 45 47.9	-0.3
	comp=Z,0.5nm,0.5s,SNR=3.7							
NOA	**NORSAR Array B**	**24.75**	**349**	P		**P**	16 45 46.9	-1.3
	comp=Z,1.2nm,0.8s,baz=158,slow=9.2,SNR=4.9							
TORD	**Torodi Ar. Bea**	**29.32**	**221**	P		**P**	16 46 31.0	+1.3
	comp=Z,0.3nm,0.4s,baz=32,slow=9.2,SNR=7.0							
ATD	**Arta Tunnel**	**32.24**	**136**	LR	LR		17 01 50.5	
	comp=Z,62nm,19.5s,baz=118,slow=40							
ARCES	**ARCESS Array B**	**32.62**	**3**	P		**P**	16 46 56.8	-1.5
	comp=Z,0.6nm,0.5s,baz=185,slow=8.1,SNR=5.8							
KURBB	**Kurchatov Arra**	**42.72**	**53**	P		**P**	16 48 24.2	+0.4
	comp=Z,1.0nm,0.2s,baz=275,slow=8.3,SNR=3.1							
MKAR	**Makanchi Array**	**45.70**	**58**	P		**P**	16 48 46.6	-1.1
	comp=Z,0.2nm,0.3s,baz=264,slow=7.4,SNR=3.7							
ZALV	**Zalesovo Beam**	**46.27**	**47**	P		**P**	16 48 51.5	-0.6
	comp=Z,0.5nm,0.4s,baz=287,slow=10,SNR=2.7							
ASAR	**Alice Springs**	**121.82**	**97**	PKP		**PKPdf**	16 59 23.2	+1.8
	comp=Z,0.6nm,1.1s,baz=307,slow=1.5,SNR=3.0							

IDC 28 16:43:56.2±1.1, 1°30.0N×122°13.1E, h0km, mb3.3/5, mb1 3.4/5, mb1mx3.3/24, mbtmp3.3/5, Error ellipse: s-maj=150.4km s-min=20.1km az=65.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.27**	**151**	P	P	16 49 13.9	-1.6
	0.2nm,0.5s,baz=324,slow=10,SNR=4.9						
ASAR	**Alice Springs**	**27.33**	**156**	P	P	16 49 44.7	+1.6
	0.2nm,0.8s,baz=340,slow=14,SNR=3.6						
SONM	**Songino Array**	**48.32**	**346**	P	P	16 52 39.3	-0.3
	0.5nm,0.9s,baz=156,slow=7.7,SNR=3.8						
MKAR	**Makanchi Array**	**57.05**	**328**	P	P	16 53 44.8	+0.6
	0.2nm,0.4s,baz=131,slow=7.6,SNR=4.1						
KURBB	**Kurchatov Arra**	**61.41**	**330**	P	P	16 54 13.6	-0.6
	0.3nm,0.3s,baz=121,slow=6.6,SNR=4.1						

*NIED **28** 17:02:00.24°.30N×121°.60E, h35km, Mw4.6 Best double couple: M0 9.33000×10^15 NP1:φs=66.00000°, δ74.00000°, λ110.00000°. NP2:φs=194.00000°, δ25.00000°, λ41.00000°.*
*IDC **28** 17:02:07.1±0.6,24°.23N×121°.92E, h0km, mb4.0/17, mb1 4.0/18, mb1mx3.9/30, mbtmp3.9/18, ML3.4/1, MS3.8/16, Ms1 3.8/16, ms1mx3.6/39, Error ellipse: s-maj=22.4km s-min=13.9km az=66.0*
*BJI **28** 17:02:08.6,24°.16N×121°.84E, h18km, mB4.7/12, mb4.2/17, ML4.3/7, Ms4.6/20, Ms7 4.3/18*
*NEIC **28** 17:02:09.3±0.9,24°.15N×121°.79E, h15km±5km, mb4.3/4, ML4.5(TAP), Error ellipse: s-maj=9.1km s-min=5.7km az=94.0*
NEIC Recorded [4 TAP] in Hua-lien and I-lan; [3 TAP] in Nan-t'ou; [2 TAP] in T'ai-chung; [1 TAP] in Hsin-chu, T'ai-pei and T'ao-yuan.
*JMA **28** 17:02:09.7±0.3,24°.31N×121°.63E, h76km, M4.7*
*ISCJB **28** 17:02:10.3±0.2,24°.17N±0°.02×121°.79E±0°.02, h23km±2km, mb4.0/23, MS3.8/14, Error ellipse: s-maj=3.0km s-min=2.1km az=41.4*
*TAP **28** 17:02:10.2,24°.17N×121°.75E, h13km, ML4.5, B*

ISC 28 17:02:10.4±0.5, 24°.16N±0°.02×121°.78E±0°.02, h19km±1km, n147, σ1$28/197, mb4.0/23, MS3.8/14, 14C-17D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.15**	**348**	⇓*i*P	**Pg**	**17 02 13.9**	**-1.0**
	baz=359						
EHP				*i* S	**Sg**	**17 02 16.7**	**-1.2**
	baz=359						
NACB	**Ninganchiao**	**0.17**	**275**	*e*Pg	**Pg**	**17 02 13.4**	**-1.6**
NACB				*e*Sg	**Sg**	**17 02 16.0**	**-2.1**
TWD	**Chiawan**	**0.18**	**244**	⇑*i*P	**Pg**	**17 02 14.4**	**-0.9**
	baz=244						
TWD				*i* S	**Sg**	**17 02 17.3**	**-1.1**
	baz=244						
HWA	**Hwalien**	**0.24**	**221**	⇑P	**Pb**	**17 02 16.3**	**+0.4**
	baz=224						
ENA	**Nanau**	**0.27**	**353**	⇑*i*P	**Pg**	**17 02 15.8**	**-0.8**
	baz=359						
ESF	**Shoufeng Towns**	**0.38**	**221**	*e*P	**Pg**	**17 02 18.0**	**-0.3**
	baz=225						
TWC	**Suao**	**0.45**	**8**	⇑*i*P	**Pg**	**17 02 19.3**	**-0.5**
	baz=9.0						
NNS	**Nan Shan**	**0.46**	**307**	⇑*i*P	**Pg**	**17 02 19.1**	**-0.8**
	baz=308						
NNS				*e*S	**Sg**	**17 02 25.3**	**-1.1**
	baz=308						
ESL	**Shilin**	**0.47**	**222**	⇑*i*P	**Pg**	**17 02 19.4**	**-0.6**
	baz=226						
WHF	**Hehuan Shan**	**0.47**	**268**	⇑*i*P	**Pg**	**17 02 19.3**	**-0.8**
	baz=268						
TEGC	**Jichi Village**	**0.50**	**206**	*e*P	**Pb**	**17 02 21.0**	**+0.4**
	baz=195						
TWT	**Tachien**	**0.56**	**280**	⇑*i*P	**Pg**	**17 02 21.5**	**-0.2**
	baz=279						
TWT				S	**Sg**	**17 02 28.7**	**-0.5**
	baz=279						
TWE	**Neicheng**	**0.57**	**350**	⇑*i*P	**Pg**	**17 02 21.4**	**-0.5**
	baz=352						
TWE				S	**Sg**	**17 02 29.1**	**-0.4**
	baz=352						
ILA	**Ilan**	**0.60**	**358**	P	**Pg**	**17 02 22.2**	**-0.3**
	baz=354						
ILA				*e*S	**Sb**	**17 02 30.8**	**+0.3**
	baz=354						
YHNB	**Yeheng**	**0.63**	**324**	*e*Pg	**Pg**	**17 02 22.0**	**-1.0**
YHNB				*e*Sg	**Sg**	**17 02 30.0**	**-1.4**
NSK	**Sanguang**	**0.64**	**324**	⇑*i*P	**Pg**	**17 02 22.5**	**-0.7**
	baz=325						
NSK				S	**Sg**	**17 02 30.9**	**-0.9**
	baz=325						
EHY	**Hungye**	**0.77**	**213**	⇓*e*P	**Pb**	**17 02 24.3**	**-1.0**
	baz=223						
TWA	**Mucha**	**0.84**	**348**	*e*P	**Pb**	**17 02 26.1**	**-0.3**
	baz=349						
SSLB	**Suanglung**	**0.84**	**244**	*e*Pg	**Pb**	**17 02 25.7**	**-0.7**
SSLB				*e*Sg	**Sb**	**17 02 37.7**	**+0.4**
SMLT	**Sun Moon Lake**	**0.85**	**251**	⇓*i*P	**Pb**	**17 02 26.5**	**-0.1**
	baz=251						
SMLT				S	**Sb**	**17 02 37.5**	**-0.1**
	baz=251						
NSTT	**Nanjuang**	**0.85**	**304**	⇑P	**Pb**	**17 02 26.5**	**-0.1**
	baz=304						
NSTT				*e*S	**Sb**	**17 02 37.0**	**-0.6**
	baz=304						
TWB1	**Santiao Chiao**	**0.87**	**13**	⇑P	**Pb**	**17 02 27.0**	**0.0**
	baz=5.0						
TWB1				S	**Sb**	**17 02 38.0**	**-0.1**
	baz=5.0						
TYC	**Yuchr**	**0.88**	**253**	⇓*i*P	**Pb**	**17 02 26.9**	**-0.2**
	baz=253						
TYC				*e*S	**Sb**	**17 02 38.0**	**-0.4**
	baz=253						
YULB	**Yu-li**	**0.88**	**210**	*e*Pg	**Pb**	**17 02 25.9**	**-1.3**
YULB				*e*Sg	**Sb**	**17 02 36.8**	**-1.7**
TAP1	**Taipei**	**0.91**	**345**	⇓*e*P	**Pg**	**17 02 28.1**	**0.0**
	baz=345						
TAP1				*e*S	**Sb**	**17 02 38.5**	**-0.7**
	baz=345						
NWF	**Wu-fen Shan**	**0.91**	**0**	⇓P	**Pb**	**17 02 28.1**	**+0.4**
	baz=352						
NWF				*e*S	**Sb**	**17 02 39.3**	**-0.1**
	baz=352						
TAP	**Taipei**	**0.91**	**344**	*e*P	**Pg**	**17 02 28.1**	**-0.1**
	baz=345						
TAP				*e*S	**Sb**	**17 02 39.6**	**+0.3**
	baz=345						
TWF1	**Yuli**	**0.92**	**209**	⇓*e*P	**Pb**	**17 02 26.4**	**-1.3**
	baz=223						
TWQ1	**Liyutan**	**0.93**	**282**	⇑*i*P	**Pg**	**17 02 28.8**	**+0.1**
	baz=282						
TWQ1				*e*S	**Sn**	**17 02 43.7**	**+2.2**
	baz=282						
NSY	**Sanyi**	**0.96**	**286**	*e*P	**Pn**	**17 02 29.5**	**+0.6**
	baz=285						
NCU	**National Centr**	**0.97**	**327**	P	**Pn**	**17 02 29.5**	**+0.4**
	baz=326						
NCU				S	**Sn**	**17 02 43.8**	**+1.5**
	baz=326						
HSN	**Hsinchu**	**0.97**	**311**	*e*P	**Pn**	**17 02 29.4**	**+0.2**
	baz=314						
HSN				*e*S	**Sn**	**17 02 44.1**	**+1.7**
	baz=314						
TWS1	**Kuangyinshan**	**0.99**	**341**	*e*P	**Pb**	**17 02 29.3**	**+0.3**
	baz=349						
TWS1				*e*S	**Sn**	**17 02 44.4**	**+1.5**
	baz=349						
TCU	**Taichung**	**1.00**	**270**	⇓P	**Pg**	**17 02 30.5**	**+0.5**
	baz=270						
TCU				*e*S	**Sg**	**17 02 43.0**	**-0.3**
	baz=270						
YUS	**Yu-Shan**	**1.01**	**229**	⇓P	**Pb**	**17 02 29.6**	**0.0**
	baz=229						
WNT	**Mingjian**	**1.04**	**255**	*e*P	**Pg**	**17 02 30.6**	**0.0**
	baz=252						
WNT				*e*S	**Sn**	**17 02 45.9**	**+1.9**
	baz=252						
ALS	**Alishan**	**1.10**	**234**	⇓*i*P	**Pb**	**17 02 31.2**	**+0.2**
	baz=235						
CHKT	**Chengkung**	**1.12**	**200**	*e*P	**Pn**	**17 02 30.0**	**-1.1**
	baz=192						
TWY	**Chenhua**	**1.12**	**352**	*e*P	**Pg**	**17 02 32.2**	**-0.1**
	baz=337						
CHN5	**Tsauling**	**1.15**	**241**	⇓*e*P	**Pb**	**17 02 32.2**	**+0.4**
	baz=242						
YOJ	**Yonaguni jima**	**1.17**	**75**	⇓*i*P	**Pb**	**17 02 32.3**	**+0.3**
	baz=74						
YOJ				*e*S	**Sg**	**17 02 48.9**	**+0.5**
	baz=74						
YOJ	**Yonaguni jima**	**1.17**	**75**	P	**Pn**	**17 02 32.2**	**+0.4**
YOJ				S	**Sg**	**17 02 48.6**	**+0.2**
ELDTW	**Lidau**	**1.19**	**216**	*e*P	**Pn**	**17 02 30.8**	**-1.4**
	baz=216						
WGK	**Gukeng**	**1.21**	**247**	*e*P	**Pb**	**17 02 33.2**	**+0.5**
	baz=248						
TPUB	**Ta-pu**	**1.35**	**231**	*e*Pn	**Pn**	**17 02 35.1**	**+0.8**
TPUB				*e*Sn	**Sn**	**17 02 52.5**	**+0.6**
WTCT	**Ta-ch'eng**	**1.40**	**258**	*e*P	**Pb**	**17 02 35.9**	**0.0**
	baz=259						
WTCT				*e*S	**Sg**	**17 02 55.6**	**-0.1**
	baz=259						
WTP	**Ta-pu**	**1.40**	**230**	⇓*e*P	**Pb**	**17 02 35.9**	**-0.1**
	baz=230						
CHY	**Chiayi**	**1.40**	**242**	⇓*e*P	**Pb**	**17 02 36.4**	**+0.4**
	baz=243						
CHY				*e*S	**Sg**	**17 02 57.9**	**+2.1**
	baz=243						
TWK	**Hsinying**	**1.48**	**233**	*e*P	**Pb**	**17 02 37.6**	**+0.2**
	baz=233						
TWK				*e*S	**Sg**	**17 02 57.6**	**-0.7**
	baz=233						
TWG	**Pinlang**	**1.48**	**206**	*e*P	**Pn**	**17 02 34.0**	**-2.1**
	baz=207						
TWG	**Pinlang**	**1.48**	**206**	*e*Pn	**Pn**	**17 02 34.5**	**-1.5**
TWG				*e*Sn	**Sn**	**17 02 55.2**	**+0.2**
PCYT	**Pengchaiyu**	**1.49**	**10**	⇓P	**Pn**	**17 02 37.1**	**+0.9**
	baz=8.0						
CHN1	**Nanshi**	**1.50**	**230**	*e*P	**Pb**	**17 02 37.8**	**+0.1**
	baz=222						
CHN1				*e*S	**Sg**	**17 02 59.4**	**+0.5**
	baz=222						
TTN	**Taitung**	**1.51**	**203**	*e*P	**Pn**	**17 02 36.1**	**-0.4**
	baz=203						
WSF	**Szhu**	**1.51**	**250**	⇑P	**Pb**	**17 02 38.1**	**+0.2**
	baz=252						
WSF				*e*S	**Sg**	**17 02 59.8**	**+0.4**
	baz=252						
SGST	**Jiashian**	**1.53**	**226**	⇓*e*P	**Pb**	**17 02 38.4**	**+0.1**
	baz=226						
CHN8	**Yiju**	**1.65**	**241**	*e*P	**Pn**	**17 02 39.6**	**+1.3**
	baz=242						
CHN3	**Shinhua**	**1.68**	**230**	*e*P	**Pb**	**17 02 41.1**	**+0.3**
	baz=230						
ECL	**Taimali**	**1.73**	**206**	*e*P	**Pn**	**17 02 38.2**	**-1.2**
	baz=193						
SCLT	**Jiali**	**1.75**	**236**	*e*P	**Pb**	**17 02 41.6**	**-0.3**
	baz=237						
SCLT				*e*S	**Sb**	**17 03 05.2**	**+1.7**
	baz=237						
IRIF	**Iriomote-Funau**	**1.79**	**84**	P	**Pn**	**17 02 40.6**	**+0.2**
IRIF				S	**Sb**	**17 03 04.3**	**-0.5**
TAI1	**Yung-k'ang**	**1.80**	**232**	*e*P	**Pn**	**17 02 42.0**	**+1.6**
	baz=232						
TWM1	**Shoushan**	**1.82**	**223**	*e*P	**Pb**	**17 02 43.0**	**-0.2**
	baz=224						
SGLT	**Jiouru**	**1.85**	**220**	*e*P	**Pb**	**17 02 43.7**	**0.0**
	baz=210						
HATJ	**Hateruma jima**	**1.86**	**93**	P	**Pn**	**17 02 41.9**	**+0.6**
HATJ				*e*S	**Sb**	**17 03 06.5**	**-0.1**
TAW	**Tawu**	**1.97**	**204**	*e*P	**Pb**	**17 02 45.0**	**-0.7**
	baz=193						
JKRS	**Kuro-shima**	**2.04**	**87**	P	**Pn**	**17 02 44.7**	**+0.9**
JKRS				S	**Sb**	**17 03 11.6**	**-0.3**
SCZT	**Fangliau**	**2.07**	**211**	*e*P	**Pn**	**17 02 45.7**	**+1.5**
	baz=194						
KAU	**Kaohsiung**	**2.08**	**221**	*e*P	**Pn**	**17 02 44.9**	**+0.6**
	baz=239						
PNG	**Penghu**	**2.12**	**254**	*e*P	**Pn**	**17 02 45.4**	**+0.6**
	baz=258						
PNG				*e*S	**Sn**	**17 03 11.3**	**+0.7**
	baz=258						
LAY	**Lan-yu**	**2.12**	**186**	*e*P	**Pn**	**17 02 43.8**	**-1.1**
	baz=187						
JIJ	**Ishigaki jima**	**2.17**	**84**	P	**Pn**	**17 02 45.8**	**+0.2**
JIJ				S	**Sn**	**17 03 12.2**	**+0.3**
TWP	**Hsiaoliuchiu**	**2.22**	**216**	*e*P	**Pn**	**17 02 48.2**	**+1.9**
	baz=235						
HEN	**Hengchun**	**2.35**	**204**	*e*P	**Pb**	**17 02 51.2**	**-0.9**
	baz=195						
TWK1	**Hengchun**	**2.38**	**202**	*e*P	**Pn**	**17 02 49.5**	**+1.0**
	baz=190						
TSEB	**Hengchuen, Pin**	**2.39**	**200**	*e*P	**Pn**	**17 02 50.7**	**+2.1**
	baz=191						
JTJ	**Tarama**	**2.71**	**79**	P	**Pn**	**17 02 53.8**	**+0.8**
JTJ				S	**Sn**	**17 03 27.2**	**+1.9**
QZH	**Quanzhou**	**3.00**	**286**	⇓*i*Pn	**Pn**	**17 02 57.0**	**0.0**
QZH				Sn	**Sn**	**17 03 30.0**	**-2.5**
QZH				smax	smax		
	comp=N,2μm,0.9s						
QZH				smax	smax		
	comp=E,600nm,1.1s						
KNM	**Kinmen**	**3.06**	**275**	*e*P	**Pn**	**17 02 59.0**	**+1.2**
	baz=276						
JMJ	**Miyako jima 2**	**3.27**	**78**	S	**Sn**	**17 03 40.9**	**+1.8**
JOGS	**Gusukube**	**3.36**	**79**	P	**Pn**	**17 03 04.3**	**+2.3**
JOGS				S	**Sn**	**17 03 42.1**	**+0.7**
JKE	**Kume jima 2**	**5.02**	**64**	P	**Pn**	**17 03 26.3**	**+1.5**
JOW	**Kunigami**	**6.45**	**64**	P	**Pn**	**17 03 44.2**	**-0.2**
JTK	**Tokunoshima**	**7.40**	**59**	P	**Pn**	**17 03 57.3**	**-0.1**
JAMN	**Amaminishikomi**	**7.79**	**57**	P	**Pn**	**17 04 02.3**	**-0.5**
JAM	**Amami Oshima**	**8.20**	**57**	P	**Pn**	**17 04 08.1**	**-0.4**
NJ2	**Nanjing**	**8.28**	**342**	*e*P	**Pn**	**17 04 08.8**	**-0.6**
NJ2				pP	Pb	17 04 13.0	-20
NJ2				sP		17 04 15.5	
NJ2				S	**Sn**	**17 05 38.8**	**-3.6**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				smax	smax		
	comp=N,190nm,1.0s						
NJ2				smax	smax		
	comp=E,150nm,1.0s						
NJ2				LR	LR		
	comp=N,2μm,11.5s						
NJ2				LR	LR		
	comp=E,1μm,11.3s						
NJ2				LR	LR		
	comp=Z,2μm,11.4s						
JMZ	**Minamidaito 2**	**8.73**	**77**	P	Pn	17 04 12.3	-3.4
WHN	**Wuhan**	**9.16**	**316**	P	**Pn**	**17 04 21.5**	**-0.1**
WHN				S	**Sn**	**17 06 01.3**	**-3.0**
WHN				LR	LR		
	comp=N,4μm,9.9s						
WHN				LR	LR		
	comp=E,5μm,8.2s						
TIA	**Tai'an**	**12.66**	**343**	*e*P	**P**	**17 05 21.5**	**+0.7**
TIA				S	Sn	17 07 55.0	+25
TIA				LR	LR		
	comp=N,1μm,10.8s						
TIA				LR	LR		
	comp=E,840nm,10.3s						
TIA				LR	LR		
	comp=Z,2μm,10.8s						
GYA	**Guiyang**	**13.86**	**283**	P	**Pn**	**17 05 27.0**	**+0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSAR	**Wonju Array Be**	**14.24**	**20**	Pn	**Pn**	**17 05 33.3**	**+2.3**
KSRS	**Korea Array**	**14.26**	**20**	Pn	**Pn**	**17 05 33.3**	**+2.0**
	comp=Z,0.1nm,0.3s,baz=208,slow=14,SNR=3.3						
KSRS				LR	LR	17 11 38.5	
	comp=Z,201nm,19.6s,baz=210,slow=40						
XAN	**Xi'an**	**14.93**	**314**	P	**P**	**17 05 47.8**	**+1.8**
XAN				pP	Pn	17 05 55.3	+15
XAN				S	S	17 09 04.3	+21
XAN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
XAN				LR	LR		
	comp=N,500nm,9.4s						
XAN				LR	LR		
	comp=E,170nm,9.0s						
XAN				LR	LR		
	comp=Z,510nm,10.3s						
JHJ	**Hachijo jima 2**	**18.13**	**56**	LR	LR	17 13 02.4	
	comp=Z,389nm,18.4s,baz=90,slow=36						
HHC	**Hu-ho-hao-te**	**18.71**	**335**	*e*P	P	17 06 22.3	-5.7
HHC				sP	sP	17 06 29.3	-6.5
HHC				PP	**PnPn**	**17 06 38.8**	**-1.8**
HHC				S	**Sn**	**17 09 51.0**	**-6.3**
HHC				sS	**S**	**17 09 56.5**	**-3.9**
HHC				SS	**SnSn**	**17 10 15.3**	**+3.9**
HHC				pmax	pmax		
	comp=Z,49nm,0.8s						
HHC				pmax	pmax		
	comp=Z,140nm,6.3s						
HHC				LR	LR		
	comp=N,1μm,12.6s						
HHC				LR	LR		
	comp=E,590nm,12.9s						
HHC				LR	LR		
	comp=Z,1μm,12.3s						
MJAR	**Matsushiro Arr**	**18.77**	**45**	P	**P**	**17 06 28.1**	**-0.4**
MJAR	**Matsushiro Arr**	**18.77**	**45**	P	**P**	**17 06 28.1**	**-0.4**
	comp=Z,0.1nm,0.3s,baz=238,slow=12,SNR=3.0						
MJAR				LR	LR	17 14 27.5	
	comp=Z,267nm,20.4s,baz=205,slow=40						
LZH	**Lanzhou**	**19.50**	**312**	*e*P	**Pn**	**17 06 41.5**	**+3.5**
LZH				pP	**pP**	**17 06 45.0**	**+2.9**
LZH				sP	**sP**	**17 06 47.5**	**+2.9**

MKAR	**Makanchi Array**	**38.73**	**316**	P		**P**	**17 09 33.3**	**-0.1**
	comp=Z,1.3nm,0.5s,baz=103,slow=8.5,SNR=32							
MKAR				LR		LR	17 26 42.8	
	comp=Z,177nm,18.9s,baz=92,slow=38							
PETK	**Petropavlovsk-**	**39.59**	**34**	LR		LR	17 25 42.2	
	comp=Z,92nm,21.1s,baz=129,slow=36							
ZAA0	**Zalesovo Array**	**40.56**	**327**	*eP*		**P**	**17 09 46.7**	**-1.7**
ZALV	**Zalesovo Beam**	**40.56**	**327**	P		**P**	**17 09 47.7**	**-0.8**
ZALV	**Zalesovo Beam**	**40.56**	**327**	P		**P**	**17 09 47.7**	**-0.8**
	comp=Z,3.8nm,0.7s,baz=114,slow=8.3,SNR=17							
ZALV				LR		LR	17 27 35.4	
	comp=Z,143nm,19.9s,baz=70,slow=38							
PMG	**Port Moresby**	**41.56**	**140**	LR		LR	17 26 26.9	
	comp=Z,129nm,21.6s,baz=21,slow=35							
COEN	**Coen**	**43.27**	**149**	*eP*		**P**	**17 10 10.2**	**-0.9**
	comp=Z,48nm,1.0s							
WRA	**Warramunga Arr**	**45.51**	**163**	P		**P**	**17 10 27.7**	**-1.2**
WRA	**Warramunga Arr**	**45.51**	**163**	P		**P**	**17 10 27.7**	**-1.2**
	comp=Z,1.9nm,0.5s,baz=345,slow=8.7,SNR=38							
BVAR	**Borovoye Array**	**48.03**	**321**	P		**P**	**17 10 48.2**	**-0.1**
BVAR	**Borovoye Array**	**48.03**	**321**	P		**P**	**17 10 48.2**	**-0.1**
	comp=Z,1.2nm,0.5s,baz=102,slow=9.3,SNR=10.0							
BVAR				LR		LR	17 31 30.6	
	comp=Z,28nm,19.2s,baz=114,slow=37							
ASAR	**Alice Springs**	**48.98**	**165**	P		**P**	**17 10 56.2**	**+0.3**
ASAR	**Alice Springs**	**48.98**	**165**	P		**P**	**17 10 56.2**	**+0.3**
	comp=Z,0.8nm,0.7s,baz=348,slow=6.8,SNR=31							
CTA	**Charters Tower**	**50.03**	**149**	P		**P**	**17 11 03.9**	**-0.1**
CTA	**Charters Tower**	**50.03**	**149**	P		**P**	**17 11 03.9**	**-0.1**
	comp=Z,1.9nm,0.9s,baz=339,slow=8.6,SNR=2.5							
ABKAR	**Akbulak array**	**53.84**	**314**	*eP*		**P**	**17 11 31.9**	**-0.2**
	comp=Z,2.5nm,0.6s							
AKTO	**Aktyubinsk**	**55.17**	**316**	LR		LR	17 37 07.7	
	comp=Z,80nm,20.1s,baz=114,slow=38							
STKA	**Stephens Creek**	**58.85**	**160**	P		**P**	**17 12 07.5**	**-0.5**
STKA	**Stephens Creek**	**58.85**	**160**	P		**P**	**17 12 07.5**	**-0.5**
	comp=Z,2.1nm,0.9s,baz=330,slow=6.6,SNR=3.1							
KBZ	**Khabaz**	**65.92**	**309**	LR		LR	17 45 44.3	
	comp=Z,85nm,18.2s,baz=333,slow=40							
ILAR	**Eielson Array**	**68.99**	**27**	P		**P**	**17 13 13.8**	**-0.5**
ILAR	**Eielson Array**	**68.99**	**27**	P		**P**	**17 13 13.8**	**-0.5**
	comp=Z,0.3nm,0.5s,baz=271,slow=4.5,SNR=2.8							
FINES	**FINESS Array B**	**71.74**	**330**	P		**P**	**17 13 30.9**	**-0.2**
FINES	**FINESS Array B**	**71.74**	**330**	P		**P**	**17 13 30.9**	**-0.2**
	comp=Z,2.4nm,0.8s,baz=58,slow=5.2,SNR=9.6							
FINES				LR		LR	17 47 59.7	
	comp=Z,175nm,18.4s,baz=32,slow=38							
AKASG	**Malin Array Be**	**73.25**	**318**	P		**P**	**17 13 39.7**	**-0.6**
AKASG	**Malin Array Be**	**73.25**	**318**	P		**P**	**17 13 39.7**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=55,slow=6.8,SNR=4.5							
BRTR	**Keskin Array B**	**73.62**	**307**	P		**P**	**17 13 43.2**	**+0.2**
BRTR	**Keskin Array B**	**73.62**	**307**	P		**P**	**17 13 43.2**	**+0.2**
	comp=Z,0.9nm,0.7s,baz=115,slow=5.3,SNR=5.7							
HFS	**Hagfors**	**77.85**	**331**	P		**P**	**17 14 06.0**	**-0.5**
HFS	**Hagfors**	**77.85**	**331**	P		**P**	**17 14 06.0**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=46,slow=8.3,SNR=3.3							
NB2	**NORSAR Subarra**	**78.50**	**332**	P		**P**	**17 14 09.1**	**-1.1**
	comp=Z,0.9nm,0.6s,baz=58,slow=5.6							
NOA	**NORSAR Array B**	**78.50**	**332**	P		**P**	**17 14 09.3**	**-0.9**
NOA	**NORSAR Array B**	**78.50**	**332**	P		**P**	**17 14 09.3**	**-0.9**
	comp=Z,0.9nm,0.7s,baz=58,slow=5.4,SNR=5.4							
NOA				LR		LR	17 52 01.7	
	comp=Z,115nm,19.4s,baz=65,slow=38							
YKA	**Yellowknife Ar**	**82.78**	**23**	P		**P**	**17 14 31.9**	**-1.2**
YKA	**Yellowknife Ar**	**82.78**	**23**	P		**P**	**17 14 31.9**	**-1.2**
	comp=Z,1.2nm,0.5s,baz=310,slow=4.8,SNR=9.3							
YKA				LR		LR	17 54 13.6	
	comp=Z,5.7nm,18.8s,baz=235,slow=38							

TAP 28 17:02:19.0, 24.°18N×121.°73E, h4km±2km, ML4.5, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.13**	**7**	P	Pg	17 02 21.6	0.0
	baz=13						
EHP				S	Sg	17 02 24.8	+1.4
	baz=13						
TWD	**Chiawan**	**0.16**	**229**	P	Pg	17 02 22.4	+0.3
	baz=235						
TWD				*e*S	Sg	17 02 25.2	+1.1
	baz=235						
ENA	**Nanau**	**0.24**	**3**	*e*P	Pg	17 02 24.2	+0.4
	baz=6.0						
ENA				*e*S	Sg	17 02 28.2	+1.2
	baz=6.0						
NNS	**Nan Shan**	**0.41**	**309**	*e*P	Pg	17 02 27.5	+0.3
	baz=309						
NNS				*e*S	Sg	17 02 33.6	+1.0
	baz=309						

TAP 28 17:02:36.8, 24.°23N×121.°73E, h15km±1km, ML4.2, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.09**	**10**	P	Pg	17 02 39.9	-0.1
	baz=14						
EHP				S	Sg	17 02 42.9	+0.9
	baz=14						
TWD	**Chiawan**	**0.19**	**219**	*e*P	Pb	17 02 42.6	+0.7
	baz=217						
ENA	**Nanau**	**0.20**	**4**	*i* P	Pb	17 02 42.0	-0.2
	baz=6.0						
ENA				S	Sb	17 02 46.1	+0.3
	baz=6.0						
NNS	**Nan Shan**	**0.39**	**304**	*e*P	Pb	17 02 45.4	-0.1
	baz=303						
NNS				*e*S	Sb	17 02 51.3	-0.1
	baz=303						
TWC	**Suao**	**0.40**	**16**	*e*P	Pb	17 02 45.5	0.0
	baz=17						
TWC				*e*S	Sb	17 02 51.8	+0.3
	baz=17						
WHF	**Hehuan Shan**	**0.43**	**259**	*e*P	Pg	17 02 46.1	+0.1
	baz=258						
TWE	**Neicheng**	**0.50**	**354**	*e*P	Pg	17 02 46.9	+0.2
	baz=355						
TWE				*e*S	Sb	17 02 55.2	+0.9
	baz=355						
TWT	**Tachien**	**0.50**	**273**	*e*P	Pb	17 02 48.0	+0.4
	baz=272						
TWT				S	Sb	17 02 54.7	-0.1
	baz=272						
NSK	**Sanguang**	**0.56**	**323**	*e*P	Pb	17 02 48.4	0.0
	baz=323						
NSK				*e*S	Sb	17 02 56.9	+0.6
	baz=323						

*JMA **28** 17:07:03.9±0.4, 24.°07N×121.°62E, h38km, M3.1*
*ISCJB **28** 17:07:04.5±0.4, 24.°16N±0.°01×121.°82E±0.°02, h4km±2km, Error ellipse: s-maj=2.8km s-min=2.0km az=39.3*
*TAP **28** 17:07:05.1, 24.°18N×121.°75E, h14km, ML3.8, B*
ISC 28 17:07:05.0±0.9, 24.°15N±0.°02×121.°78E±0.°02, h11km±6km, n61, σ0°77/103, 9C-9D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.17**	**347**	*i* P	**Pg**	**17 07 08.7**	**-0.1**
	baz=358						
EHP				*i* S	**Sg**	**17 07 11.5**	**+0.1**
	baz=358						
TWD	**Chiawan**	**0.18**	**248**	⇑*i* P	**Pg**	**17 07 09.3**	**+0.3**
	baz=242						
TWD				*i* S	**Sg**	**17 07 12.5**	**+0.7**
	baz=242						
HWA	**Hwalien**	**0.23**	**223**	*i* P	**Pb**	**17 07 10.9**	**-0.3**
	baz=223						
ENA	**Nanau**	**0.28**	**353**	⇓*i* P	**Pg**	**17 07 10.6**	**-0.2**
	baz=358						
ENA				*e*S	**Sg**	**17 07 14.6**	**-0.1**
	baz=358						
ESF	**Shoufeng Towns**	**0.37**	**222**	*e*P	**Pg**	**17 07 12.8**	**+0.3**
	baz=224						
ESL	**Shilin**	**0.46**	**224**	⇑*i* P	**Pg**	**17 07 14.3**	**+0.3**
	baz=226						
ESL				*e*S	**Sb**	**17 07 22.7**	**+0.8**
	baz=226						
TWC	**Suao**	**0.46**	**8**	⇓*i* P	**Pg**	**17 07 14.1**	**-0.1**
	baz=5.0						
TWC				*i* S	**Sg**	**17 07 20.4**	**+0.1**
	baz=5.0						
WHF	**Hehuan Shan**	**0.47**	**270**	⇑*i* P	**Pg**	**17 07 14.3**	**-0.1**
	baz=266						
WHF				S	**Sg**	**17 07 20.7**	**0.0**
	baz=266						
NNS	**Nan Shan**	**0.47**	**308**	⇑*i* P	**Pg**	**17 07 13.9**	**-0.4**
	baz=307						
NNS				*i* S	**Sg**	**17 07 19.9**	**-0.7**
	baz=307						
TWT	**Tachien**	**0.56**	**281**	⇑*i* P	**Pg**	**17 07 16.4**	**+0.3**
	baz=278						
TWT				*i* S	**Sg**	**17 07 23.8**	**+0.3**
	baz=278						
TWE	**Neicheng**	**0.58**	**350**	*i* P	**Pg**	**17 07 16.1**	**-0.2**
	baz=352						
TWE				S	**Sg**	**17 07 23.7**	**-0.3**
	baz=352						
ILA	**Ilan**	**0.61**	**357**	*e*P	**Pg**	**17 07 17.0**	**0.0**
	baz=354						
ILA				*e*S	**Sg**	**17 07 25.5**	**+0.4**
	baz=354						
NSK	**Sanguang**	**0.65**	**324**	⇑*i* P	**Pg**	**17 07 17.2**	**-0.5**
	baz=324						
NSK				S	**Sg**	**17 07 25.6**	**-0.7**
	baz=324						
EHY	**Hungye**	**0.77**	**213**	⇓*e*P	**Pg**	**17 07 19.0**	**-0.9**
	baz=223						
EHY				*e*S	**Sn**	**17 07 32.5**	**-0.7**
	baz=223						
TWA	**Mucha**	**0.85**	**348**	*e*P	**Pb**	**17 07 21.8**	**+0.1**
	baz=348						
TWA				*e*S	**Sg**	**17 07 32.1**	**-0.4**
	baz=348						
SMLT	**Sun Moon Lake**	**0.85**	**252**	⇓*i* P	**Pg**	**17 07 21.3**	**-0.1**
	baz=250						
SMLT				*e*S	**Sg**	**17 07 31.9**	**-0.6**
	baz=250						
NSTT	**Nanjuang**	**0.86**	**304**	⇑*i* P	**Pg**	**17 07 21.2**	**-0.4**
	baz=303						
NSTT				S	**Sg**	**17 07 32.0**	**-0.8**
	baz=303						
TWB1	**Santiao Chiao**	**0.88**	**12**	P	**Pg**	**17 07 21.4**	**-0.6**
	baz=5.0						
TWB1				*e*S	**Sg**	**17 07 32.4**	**-1.0**
	baz=5.0						
TYC	**Yuchr**	**0.88**	**254**	⇓P	**Pg**	**17 07 21.6**	**-0.4**
	baz=253						
TYC				*e*S	**Sg**	**17 07 33.1**	**-0.4**
	baz=253						
TWF1	**Yuli**	**0.91**	**209**	*e*P	**Pb**	**17 07 21.1**	**-1.7**
	baz=219						
TWF1				*e*S	**Sn**	**17 07 36.8**	**0.0**
	baz=219						
TAP1	**Taipei**	**0.92**	**345**	*e*P	**Pg**	**17 07 23.0**	**+0.2**
	baz=345						
NWF	**Wu-fen Shan**	**0.92**	**360**	*e*P	**Pb**	**17 07 22.7**	**-0.3**
	baz=352						
NWF				*e*S	**Sg**	**17 07 34.5**	**-0.2**
	baz=352						
TAP	**Taipei**	**0.92**	**344**	*e*P	**Pn**	**17 07 23.8**	**0.0**
	baz=345						
TWQ1	**Liyutan**	**0.94**	**282**	⇑P	**Pg**	**17 07 23.5**	**+0.3**
	baz=281						
TWQ1				*e*S	**Sn**	**17 07 36.3**	**-1.3**
	baz=281						
NSY	**Sanyi**	**0.97**	**286**	⇑*i* P	**Pn**	**17 07 24.4**	**-0.2**
	baz=285						
NSY				*e*S	**Sn**	**17 07 38.6**	**+0.4**
	baz=285						
NCU	**National Centr**	**0.98**	**327**	P	**Pb**	**17 07 23.7**	**-0.3**
	baz=326						
NCU				S	**Sn**	**17 07 38.0**	**-0.6**
	baz=326						
HSN	**Hsinchu**	**0.98**	**312**	*e*P	**Pg**	**17 07 23.9**	**-0.1**
	baz=305						
HSN				*e*S	**Sn**	**17 07 38.6**	**0.0**
	baz=305						
TWS1	**Kuangyinshan**	**1.00**	**341**	*e*P	**Pb**	**17 07 23.9**	**-0.5**
	baz=348						
TWS1				*e*S	**Sn**	**17 07 39.0**	**-0.2**
	baz=348						
YUS	**Yu-Shan**	**1.00**	**229**	⇓*i* P	**Pb**	**17 07 24.3**	**-0.3**
	baz=228						
TCU	**Taichung**	**1.01**	**270**	*e*P	**Pn**	**17 07 25.5**	**+0.5**
	baz=269						
TCU				*e*S	**Sn**	**17 07 39.6**	**+0.4**
	baz=269						
WNT	**Mingjian**	**1.04**	**255**	P	**Pn**	**17 07 25.6**	**+0.1**
	baz=251						
WNT				*e*S	**Sn**	**17 07 39.8**	**-0.1**
	baz=251						
ALS	**Alishan**	**1.10**	**235**	⇓*i* P	**Pb**	**17 07 25.9**	**-0.2**
	baz=234						
CHKT	**Chengkung**	**1.11**	**200**	*e*P	**Pb**	**17 07 25.1**	**-1.1**
	baz=193						
CHKT				*e*S	**Sn**	**17 07 42.1**	**+0.3**
	baz=193						
TWY	**Chenhua**	**1.13**	**352**	*e*P	**Pg**	**17 07 27.7**	**+0.8**
	baz=352						
CHN5	**Tsauling**	**1.15**	**242**	⇓*i* P	**Pg**	**17 07 27.4**	**+0.2**
	baz=241						
CHN5				S	**Sn**	**17 07 44.3**	**+1.5**
	baz=241						
YOJ	**Yonaguni jima**	**1.16**	**74**	⇓*i* P	**Pn**	**17 07 26.7**	**-0.5**
	baz=65						
YOJ	**Yonaguni jima**	**1.16**	**74**	P	**Pn**	**17 07 26.7**	**-0.5**
YOJ				S	**Sn**	**17 07 43.2**	**+0.1**
ELDTW	**Lidau**	**1.19**	**216**	*e*P	**Pn**	**17 07 25.6**	**-2.0**
	baz=216						
WGK	**Gukeng**	**1.21**	**248**	*e*P	**Pn**	**17 07 27.5**	**-0.3**
	baz=247						
WTP	**Ta-pu**	**1.40**	**230**	*e*P	**Pb**	**17 07 30.8**	**-0.3**
	baz=229						
WTP				*e*S	**Sg**	**17 07 51.2**	**+1.2**
	baz=229						
WTCT	**Ta-ch'eng**	**1.40**	**259**	*e*P	**Pb**	**17 07 30.8**	**-0.4**
	baz=259						
WTCT				*e*S	**Sg**	**17 07 50.4**	**+0.3**
	baz=259						
CHY	**Chiayi**	**1.40**	**243**	*e*P	**Pb**	**17 07 31.4**	**+0.3**
	baz=243						
CHY				*e*S	**Sg**	**17 07 51.2**	**+1.1**
	baz=243						
TWG	**Pinlang**	**1.47**	**206**	*e*P	**Pn**	**17 07 29.2**	**-2.2**
	baz=190						
TWK	**Hsinying**	**1.48**	**234**	P	**Pb**	**17 07 32.2**	**-0.2**
	baz=233						
TWK				*e*S	**Sg**	**17 07 52.1**	**-0.4**
	baz=233						
CHN1	**Nanshi**	**1.50**	**230**	P	**Pb**	**17 07 32.7**	**-0.1**
	baz=221						
CHN1				*e*S	**Sg**	**17 07 55.0**	**+1.8**
	baz=221						
TTN	**Taitung**	**1.50**	**203**	*e*P	**Pn**	**17 07 30.2**	**-1.7**
	baz=202						
WSF	**Szhu**	**1.52**	**251**	*e*P	**Pn**	**17 07 31.8**	**-0.2**
	baz=251						
WSF				*e*S	**Sg**	**17 07 52.9**	**-0.9**
	baz=251						
CHN8	**Yiju**	**1.65**	**241**	*e*P	**Pn**	**17 07 34.4**	**+0.6**
	baz=225						
CHN8				*e*S	**Sg**	**17 07 57.9**	**-0.1**
	baz=225						
CHN3	**Shinhua**	**1.68**	**231**	*e*P	**Pb**	**17 07 35.5**	**-0.4**
	baz=229						
ECL	**Taimali**	**1.72**	**206**	*e*P	**Pn**	**17 07 33.3**	**-1.6**
	baz=193						
IRIF	**Iriomote-Funau**	**1.79**	**84**	P	**Pn**	**17 07 35.3**	**-0.5**
IRIF				S	**Sn**	**17 07 58.4**	**-0.1**
TWM1	**Shoushan**	**1.82**	**224**	*e*P	**Pb**	**17 07 37.9**	**-0.3**
	baz=223						
SGLT	**Jiouru**	**1.85**	**220**	*e*P	**Pb**	**17 07 38.3**	**-0.5**
	baz=210						
HATJ	**Hateruma jima**	**1.85**	**92**	P	**Pn**	**17 07 36.3**	**-0.3**
HATJ				*e*S	**Sn**	**17 08 01.0**	**+1.0**
EAST	**Anshuo**	**1.96**	**206**	*e*P	**Pn**	**17 07 35.8**	**-2.3**
	baz=194						
JKRS	**Kuro-shima**	**2.04**	**87**	P	**Pn**	**17 07 39.3**	**+0.1**
JKRS				S	**Sn**	**17 08 06.2**	**+1.6**
SCZT	**Fangliau**	**2.07**	**211**	*e*P	**Pn**	**17 07 40.0**	**+0.4**
	baz=208						
SCZT				*e*S	**Sb**	**17 08 09.8**	**+1.6**
	baz=208						
PNG	**Penghu**	**2.12**	**255**	*e*P	**Pn**	**17 07 39.6**	**-0.7**
	baz=255						
JIJ	**Ishigaki jima**	**2.17**	**84**	P	**Pn**	**17 07 40.6**	**-0.4**
JIJ				S	**Sn**	**17 08 06.9**	**-0.9**
TWK1	**Hengchun**	**2.37**	**202**	*e*P	**Pn**	**17 07 45.3**	**+1.5**
	baz=190						
JTJ	**Tarama**	**2.71**	**79**	P	**Pn**	**17 07 49.5**	**+1.1**
JTJ				*e*S	**Sn**	**17 08 22.2**	**+1.0**

IDC 28 17:08:13.6±1.3, 7.°28S×123.°93E, h555km±19km, mb3.0/6, mb1 3.3/10, mb1mx3.0/24, mbtmp3.1/10, Error ellipse: s-maj=27.7km s-min=10.2km az=73.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KAPI	**Kappang**	**4.72**	**298**	P	P	17 09 41.3	-0.2
	1.9nm,0.3s,baz=164,slow=6.1,SNR=9.7						
FITZ	**Fitzroy Crossi**	**10.88**	**171**	P	P	17 10 40.7	+0.1
	4.2nm,0.3s,baz=17,slow=8.7,SNR=273						
FITZ				S	S	17 12 39.5	-2.0
	0.3nm,0.3s,baz=1.9,slow=12,SNR=4.9						
WRA	**Warramunga Arr**	**16.14**	**142**	P	P	17 11 33.8	-0.6
	1.5nm,0.3s,baz=317,slow=10,SNR=37						
WRA				S	S	17 14 17.0	-1.1
	0.1nm,0.3s,baz=316,slow=18,SNR=7.0						
ASAR	**Alice Springs**	**18.90**	**151**	P	P	17 11 59.8	+0.2
	1.0nm,0.3s,baz=324,slow=8.3,SNR=34						
ASAR				S	S	17 15 02.9	-0.2
	0.0nm,0.3s,baz=342,slow=23,SNR=6.5						
NWAO	**Narrogin (SRO)**	**26.26**	**193**	P	P	17 13 05.1	-0.1
	24nm,1.1s,baz=31,slow=5.9,SNR=3.2						
STKA	**Stephens Creek**	**29.50**	**148**	P	P	17 13 34.1	+0.6
	1.8nm,0.3s,baz=308,slow=9.6,SNR=17						
MJAR	**Matsushiro Arr**	**45.61**	**16**	P	P	17 15 44.0	-0.6
	0.5nm,0.6s,baz=203,slow=9.0,SNR=3.4						
USRK	**Ussuriysk Arra**	**51.76**	**7**	P	P	17 16 29.6	-0.4
	0.6nm,0.5s,baz=213,slow=8.4,SNR=4.1						
MKAR	**Makanchi Array**	**65.30**	**330**	P	P	17 18 01.1	0.0
	0.3nm,0.4s,baz=134,slow=4.9,SNR=2.8						
PETK	**Petropavlovsk-**	**66.63**	**21**	P	P	17 18 09.7	+0.4
	5.3nm,1.3s,baz=201,slow=7.5,SNR=5.7						
TORD	**Torodi Ar. Bea**	**122.95**	**281**	PKP	PKPdf	17 26 07.9	-0.3
	0.6nm,1.1s,baz=142,slow=2.5,SNR=2.6						

*NIED **28** 17:10:00, 24.°20N×121.°60E, h5km, Mw4.5 Best double couple: M0 6.13000×10^15 NP1:φs 64.00000°, δ 79.00000°, λ 90.00000°. NP2:φs 245.00000°, δ 11.00000°, λ 92.00000°.*
*JMA **28** 17:10:00.7±0.3, 24.°20N×121.°57E, h57km, M3.7*
*BJI **28** 17:10:01.7, 24.°20N×121.°73E, h16km, mB4.4/1, mb4.1/4, ML4.1/6, Ms4.0/4, Ms7 3.7/5*
*TAP **28** 17:10:01.9, 24.°18N×121.°74E, h12km, ML4.3, B*
*ISCJB **28** 17:10:02.3±0.3, 24.°18N±0.°02×121.°79E±0.°02, h16km±3km, mb3.7/11, Error ellipse: s-maj=3.2km s-min=2.0km az=39.1*
*IDC **28** 17:10:06.0±5.2, 24.°09N×121.°77E, h53km±48km, mb3.5/11, mb1 3.7/12, mb1mx3.5/27, mbtmp3.6/12, ML3.4/1, Error ellipse: s-maj=27.6km s-min=16.2km az=70.0*
ISC 28 17:10:01.5±0.8, 24.°17N±0.°02×121.°76E±0.°02, h15km±5km, n87, σ0°93/133, mb3.8/11, 13C-5D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.14**	**351**	*i* P	**Pg**	**17 10 05.3**	**-0.1**
	baz=5.0						
EHP				*i* S	**Sb**	**17 10 08.1**	**-0.6**
	baz=5.0						
TWD	**Chiawan**	**0.18**	**239**	⇑*i* P	**Pg**	**17 10 05.8**	**-0.1**
	baz=239						
TWD				*i* S	**Sg**	**17 10 08.6**	**-0.2**
	baz=239						
HWA	**Hwalien**	**0.24**	**217**	⇑*i* P	**Pb**	**17 10 07.5**	**-0.1**
	baz=221						
ENA	**Nanau**	**0.26**	**355**	⇑*i* P	**Pg**	**17 10 07.3**	**+0.2**
	baz=2.0						
ENA				*e*S	**Sg**	**17 10 11.1**	**+0.2**
	baz=2.0						
ESF	**Shoufeng Towns**	**0.38**	**218**	*e*P	**Pg**	**17 10 09.5**	**+0.2**
	baz=223						
ESF				*e*S	**Sb**	**17 10 15.9**	**+0.2**
	baz=223						
TWC	**Suao**	**0.44**	**10**	*i* P	**Pb**	**17 10 10.8**	**-0.2**
	baz=7.0						
TWC				S	**Sb**	**17 10 16.9**	**-0.5**
	baz=7.0						
NNS	**Nan Shan**	**0.45**	**307**	⇑*i* P	**Pg**	**17 10 10.6**	**0.0**
	baz=308						
NNS				S	**Sg**	**17 10 16.5**	**-0.1**
	baz=308						
WHF	**Hehuan Shan**	**0.46**	**267**	⇑*i* P	**Pg**	**17 10 10.8**	**-0.1**
	baz=267						
ESL	**Shilin**	**0.47**	**220**	⇑*i* P	**Pg**	**17 10 10.9**	**0.0**
	baz=225						
ESL				*e*S	**Sb**	**17 10 18.3**	**+0.1**
	baz=225						
TEGC	**Jichi Village**	**0.51**	**204**	*e*P	**Pn**	**17 10 13.4**	**-0.8**
	baz=192						
TWT	**Tachien**	**0.54**	**279**	⇑*i* P	**Pb**	**17 10 12.9**	**+0.1**
	baz=278						
TWT				S	**Sg**	**17 10 20.0**	**+0.3**
	baz=278						
TWE	**Neicheng**	**0.55**	**351**	⇑*i* P	**Pb**	**17 10 12.9**	**0.0**
	baz=354						
TWE				*i* S	**Sb**	**17 10 20.4**	**-0.3**
	baz=354						
ILA	**Ilan**	**0.59**	**359**	⇑*i* P	**Pb**	**17 10 13.9**	**+0.3**
	baz=1.0						
ILA				S	**Sb**	**17 10 22.3**	**+0.5**
	baz=1.0						
NSK	**Sanguang**	**0.62**	**324**	⇑*i* P	**Pb**	**17 10 14.0**	**-0.1**
	baz=325						
NSK				*i* S	**Sg**	**17 10 22.2**	**0.0**
	baz=325						
EHY	**Hungye**	**0.78**	**211**	⇓*e*P	**Pg**	**17 10 15.8**	**-0.9**
	baz=223						
TWA	**Mucha**	**0.82**	**348**	*e*P	**Pb**	**17 10 17.9**	**+0.3**
	baz=350						
NSTT	**Nanjuang**	**0.83**	**303**	⇑*i* P	**Pg**	**17 10 18.0**	**+0.3**
	baz=304						
NSTT				*i* S	**Sb**	**17 10 28.6**	**0.0**
	baz=304						
SMLT	**Sun Moon Lake**	**0.84**	**250**	P	**Pb**	**17 10 17.9**	**0.0**
	baz=250						
SMLT				*e*S	**Sb**	**17 10 28.4**	**-0.6**
	baz=250						
TWB1	**Santiao Chiao**	**0.86**	**14**	*e*P	**Pg**	**17 10 18.4**	**+0.2**
	baz=8.0						
TWB1				*e*S	**Sg**	**17 10 29.4**	**-0.1**
	baz=8.0						
TYC	**Yuchr**	**0.87**	**252**	*e*P	**Pb**	**17 10 18.1**	**-0.2**
	baz=245						
TYC				*e*S	**Sb**	**17 10 28.9**	**-0.9**
	baz=245						
TAP1	**Taipei**	**0.89**	**346**	*e*P	**Pn**	**17 10 19.0**	**-0.4**
	baz=346						
TAP1				*e*S	**Sg**	**17 10 30.1**	**-0.4**
	baz=346						
NWF	**Wu-fen Shan**	**0.89**	**1**	⇑*e*P	**Pn**	**17 10 19.4**	**-0.2**
	baz=353						
NWF				*e*S	**Sg**	**17 10 31.1**	**+0.3**
	baz=353						
TAP	**Taipei**	**0.89**	**345**	*e*P	**Pn**	**17 10 19.5

WNT				*e*S		**Sn**	17 10 37.2 +1.7
	baz=251						
ALS	**Alishan**	**1.10 233**	⇓	*i*P		**Pb**	17 10 22.7 +0.3
	baz=234						
ALS				*e*S		**Sn**	17 10 38.2 +0.5
	baz=234						
TWY	**Chenhua**	**1.11 352**		*e*P		**Pg**	17 10 23.7 +0.7
	baz=4.0						
CHKT	**Chengkung**	**1.13 199**		*e*P		**Pb**	17 10 21.6 -1.2
	baz=185						
CHN5	**Tsauling**	**1.15 240**		*e*P		**Pg**	17 10 24.1 +0.4
	baz=242						
CHN5				*e*S		**Sg**	17 10 40.6 +1.8
	baz=242						
YOJ	**Yonaguni jima**	**1.17 76**		*e*P		**Pb**	17 10 23.7 +0.1
	baz=67						
YOJ				*e*S		**Sg**	17 10 40.5 +0.9
	baz=67						
YOJ	**Yonaguni jima**	**1.17 76**		P		**Pb**	17 10 23.6 +0.1
YOJ				S		**Sg**	17 10 40.6 +1.1
ELDTW	**Lidau**	**1.20 215**		*e*P		**Pn**	17 10 22.7 -1.1
	baz=217						
WGK	**Gukeng**	**1.20 246**		*e*P		**Pg**	17 10 24.7 0.0
	baz=248						
WTCT	**Ta-ch'eng**	**1.39 258**		*e*P		**Pb**	17 10 27.2 0.0
	baz=259						
WTCT				S		**Sg**	17 10 47.4 +1.0
	baz=259						
CHY	**Chiayi**	**1.40 242**		*e*P		**Pg**	17 10 28.1 -0.4
	baz=244						
CHY				*e*S		**Sg**	17 10 49.3 +2.6
	baz=244						
WTP	**Ta-pu**	**1.40 229**		*e*P		**Pb**	17 10 28.0 +0.6
	baz=220						
WTP				*e*S		**Sg**	17 10 47.8 +1.0
	baz=220						
PCYT	**Pengchaiyu**	**1.48 11**		*e*P		**Pb**	17 10 28.5 -0.2
	baz=9.0						
TWK	**Hsinying**	**1.48 233**		P		**Pb**	17 10 29.3 +0.6
	baz=228						
TWK				*e*S		**Sg**	17 10 49.5 +0.3
	baz=228						
TWG	**Pinlang**	**1.49 205**		*e*P		**Pn**	17 10 25.7 -2.1
	baz=191						
CHN1	**Nanshi**	**1.50 229**		*i* P		**Pb**	17 10 29.6 +0.5
	baz=227						
CHN1				S		**Sg**	17 10 51.7 +1.8
	baz=227						
WSF	**Szhu**	**1.51 250**		*e*P		**Pb**	17 10 29.4 +0.2
	baz=251						
WSF				*e*S		**Sg**	17 10 50.5 +0.3
	baz=251						
TTN	**Taitung**	**1.52 202**		*e*P		**Pn**	17 10 27.9 -0.3
	baz=204						
SGST	**Jiashian**	**1.53 225**	⇓	*e*P		**Pb**	17 10 29.8 +0.1
	baz=228						
CHN8	**Yiju**	**1.64 240**		*e*P		**Pb**	17 10 31.1 -0.4
	baz=228						
CHN8				*e*S		**Sg**	17 10 55.2 +0.6
	baz=228						
CHN3	**Shinhua**	**1.69 230**		*e*P		**Pb**	17 10 33.0 +0.8
	baz=234						
CHN3				*e*S		**Sg**	17 10 57.9 +2.0
	baz=234						
ECL	**Taimali**	**1.74 206**		*e*P		**Pb**	17 10 33.1 0.0
	baz=193						
SCLT	**Jiali**	**1.75 236**		*e*P		**Pn**	17 10 31.5 +0.2
	baz=239						
IRIF	**Iriomote-Funau**	**1.80 84**		P		**Pn**	17 10 32.4 +0.4
IRIF				S		**Sb**	17 10 56.9 +0.3
TAI1	**Yung-k'ang**	**1.81 232**		*e*P		**Pb**	17 10 33.6 -0.6
	baz=235						
TWM1	**Shoushan**	**1.82 223**		*e*P		**Pb**	17 10 35.2 +0.6
	baz=225						
SGLT	**Jiouru**	**1.86 219**		*e*P		**Pb**	17 10 35.6 +0.4
	baz=211						
HATJ	**Hateruma jima**	**1.87 93**		P		**Pn**	17 10 33.5 +0.6
HATJ				*e*S		**Sb**	17 10 58.4 -0.1
EAST	**Anshuo**	**1.97 205**		*e*P		**Pb**	17 10 36.6 -0.6
	baz=195						
TAW	**Tawu**	**1.98 204**		*e*P		**Pb**	17 10 37.5 +0.3
	baz=194						
JKRS	**Kuro-shima**	**2.05 88**		P		**Pn**	17 10 36.5 +1.1
JKRS				S		**Sb**	17 11 02.7 -1.1
SCZT	**Fangliau**	**2.08 211**		*e*P		**Pn**	17 10 37.6 +1.7
	baz=196						
PNG	**Penghu**	**2.11 254**		*e*P		**Pn**	17 10 37.1 +0.9
	baz=257						
LAY	**Lan-yu**	**2.13 185**		*e*P		**Pn**	17 10 34.9 -1.8
	baz=188						
JIJ	**Ishigaki jima**	**2.18 85**		P		**Pn**	17 10 37.6 +0.4
JIJ				S		**Sn**	17 11 04.6 +0.7
HEN	**Hengchun**	**2.35 204**		*e*P		**Pn**	17 10 41.5 +1.9
	baz=196						
TWK1	**Hengchun**	**2.39 202**		*e*P		**Pn**	17 10 41.6 +1.5
	baz=194						
TSEB	**Hengchuen, Pin**	**2.40 200**		*e*P		**Pn**	17 10 42.3 +2.1
	baz=193						
JTJ	**Tarama**	**2.72 80**		P		**Pn**	17 10 45.7 +1.1
JTJ				*e*S		**Sn**	17 11 17.2 0.0
QZH	**Quanzhou**	**2.99 286**		Pn		**Pn**	17 10 48.5 +0.2
QZH				Sn		**Sn**	17 11 22.3 -1.6
QZH				smax	smax		
	comp=N,1μm,0.8s						
QZH				smax	smax		
	comp=E,670nm,0.3s						
JMJ	**Miyako jima 2**	**3.28 78**		*e*S		**Sn**	17 11 32.4 +1.3
JOGS	**Gusukube**	**3.37 79**		P		**Pn**	17 10 55.7 +2.1
JOGS				*e*S		**Sn**	17 11 34.7 +1.4
NJ2	**Nanjing**	**8.26 343**		*e*P		**Pn**	17 12 01.5 +0.7
NJ2				pP		Pb	17 12 05.5 -19
NJ2				sP			17 12 08.5
NJ2				S		**Sn**	**17 13 33.5 -0.3**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				smax	smax		
	comp=N,150nm,0.9s						
NJ2				smax	smax		
	comp=E,90nm,1.0s						
NJ2				LR	LR		
	comp=N,290nm,7.6s						
NJ2				LR	LR		
	comp=E,370nm,6.0s						
NJ2				LR	LR		
	comp=Z,3μm,8.3s						
WHN	**Wuhan**	**9.15 316**		*e*P		Pn	17 12 08.5 -4.4
WHN				S		**Sn**	**17 13 53.0 -2.6**
WHN				LR	LR		
	comp=N,1μm,10.9s						
WHN				LR	LR		
	comp=E,1μm,8.3s						
KSRS	**Korea Array**	**14.25 20**		P		**P**	**17 13 27.0 -3.0**
	comp=E,0.2nm,0.3s,baz=197,slow=12,SNR=18						
CMAR	**Chiang Mai Arr**	**22.00 259**		P		**P**	**17 14 56.9 +1.6**
	comp=E,0.8nm,0.8s,baz=49,slow=8.2,SNR=7.8						
CMAR				PcP		**PcP**	**17 18 54.4 +0.8**
	comp=E,0.5nm,0.9s,baz=48,slow=1.3,SNR=4.3						
SONM	**Songino Array**	**26.59 336**		P		**P**	**17 15 39.3 +0.2**
	comp=E,2.4nm,1.0s,baz=156,slow=9.3,SNR=14						
MKAR	**Makanchi Array**	**38.72 316**		P		**P**	**17 17 25.1 +0.2**
	comp=E,1.4nm,0.8s,baz=115,slow=9.6,SNR=11						
ZALV	**Zalesovo Beam**	**40.54 327**		P		**P**	**17 17 40.2 +0.3**
	comp=E,1.8nm,0.6s,baz=117,slow=8.1,SNR=9.8						
WRA	**Warramunga Arr**	**45.53 163**		P		**P**	**17 18 19.0 -1.7**
	comp=E,1.2nm,0.7s,baz=345,slow=8.6,SNR=9.9						
BVAR	**Borovoye Array**	**48.02 321**		P		**P**	**17 18 39.9 0.0**
	comp=E,0.5nm,0.6s,baz=115,slow=6.7,SNR=4.1						
ASAR	**Alice Springs**	**48.99 165**		P		**P**	**17 18 46.8 -0.9**
	comp=E,0.7nm,0.8s,baz=338,slow=7.3,SNR=8.9						
ILAR	**Eielson Array**	**68.98 27**		P		**P**	**17 21 07.2 +1.3**
	comp=E,0.2nm,0.6s,baz=285,slow=7.2,SNR=3.3						
FINES	**FINESS Array B**	**71.72 330**		P		**P**	**17 21 22.2 -0.4**
	comp=E,2.7nm,1.0s,baz=90,slow=7.6,SNR=6.5						
BRTR	**Keskin Array B**	**73.61 307**		P		**P**	**17 21 34.2 -0.3**
	comp=E,1.3nm,1.0s,baz=110,slow=7.2,SNR=5.8						
YKA	**Yellowknife Ar**	**82.77 23**		P		**P**	**17 22 24.1 -0.5**
	comp=E,1.2nm,0.8s,baz=320,slow=4.5,SNR=4.1						

*ISCJB **28** 17:12:57.9±0.5, 37.01N±0.03×36.09E±0.03, h2km±5km, Error ellipse: s-maj=5.0km s-min=3.7km az=178.1*
*ISK **28** 17:12:57.8, 37.04N×36.08E, h10km, MD3.0*
*DDA **28** 17:12:58.1, 37.01N×36.12E, h12km, MD2.9*
*CSEM **28** 17:12:58.3±0.2, 37.02N×36.06E, h5km, MD3.0, Error ellipse: s-maj=5.0km s-min=3.8km az=171.0*
ISC 28 17:12:58.5±0.9, **37.02N**±0.03×**36.07E**±0.02, **h11**km±8km,
n38,σ0868/55, **Turkey**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
CEYT	**Ceyhan**	**0.26**	**268**	*e*PG		**Pg**		**17 13 03.6**	**-0.2**
CEYT				*e*SG		**Sg**		**17 13 08.3**	**+0.9**
CEYT	**Ceyhan**	**0.26**	**268**	*e*Pg		**Pg**		**17 13 03.6**	**-0.2**
CEYT				*e*Sg		**Sg**		**17 13 08.3**	**+0.9**
KOZT	**Kozan**	**0.50**	**337**	*e*PG		**Pg**		**17 13 08.2**	**-0.1**
KOZT				*e*SG		**Sg**		**17 13 15.0**	**+0.1**
KOZT	**Kozan**	**0.50**	**337**	*e*Pg		**Pg**		**17 13 08.2**	**-0.1**
KOZT				*e*Sg		**Sg**		**17 13 15.0**	**+0.1**
KRTS	**Karatas**	**0.71**	**232**	*e*PG		**Pg**		**17 13 12.2**	**-0.1**
KRTS	**Karatas**	**0.71**	**232**	*e*Pg		**Pg**		**17 13 12.2**	**-0.1**
KMRS	**Kahramanmaras**	**0.82**	**54**	*e*PG		**Pg**		**17 13 13.9**	**-0.4**
KMRS				*e*SG		**Sg**		**17 13 25.3**	**+0.3**
KMRS	**Kahramanmaras**	**0.82**	**54**	*e*Pg		**Pg**		**17 13 13.9**	**-0.4**
KMRS				*e*Sg		**Sg**		**17 13 25.3**	**+0.3**
KUZU	**Kuzuini**	**0.84**	**107**	*i* P		**Pg**		**17 13 13.7**	**-1.0**
KUZU				*i* S		**Sg**		**17 13 25.5**	**-0.2**
KUZU	**Kuzuini**	**0.84**	**107**	*i* P		**Pg**		**17 13 13.7**	**-1.0**
KUZU				*i* S		**Sg**		**17 13 25.5**	**-0.2**
KARA	**Karaisali**	**0.85**	**287**	*e*PG		**Pg**		**17 13 14.1**	**-0.7**
KARA	**Karaisali**	**0.85**	**287**	*e*Pg		**Pg**		**17 13 14.1**	**-0.7**
HTY	**Hatay**	**0.90**	**177**	*e*PG		**Pg**		**17 13 15.9**	**+0.1**
HTY	**Hatay**	**0.90**	**177**	*e*Pg		**Pg**		**17 13 15.9**	**+0.1**
GAZ	**Gaziantep**	**0.92**	**80**	*e*PG		**Pg**		**17 13 15.9**	**-0.4**
GAZ	**Gaziantep**	**0.92**	**80**	*e*Pg		**Pg**		**17 13 15.9**	**-0.4**
YAYL	**Yayladag**	**0.98**	**178**	*i* P		**Pg**		**17 13 17.0**	**-0.4**
YAYL				*i* S		**Sb**		**17 13 31.1**	**+0.5**
YAYL	**Yayladag**	**0.98**	**178**	*i* P		**Pg**		**17 13 17.0**	**-0.4**
YAYL				*i* S		**Sb**		**17 13 31.1**	**+0.5**
GULE	**Gulek**	**1.07**	**285**	*i* P		**Pb**		**17 13 17.0**	**-2.1**
GULE				*i* S		**Sn**		**17 13 35.6**	**+1.1**
GULE	**Gulek**	**1.07**	**285**	*i* P		**Pb**		**17 13 17.0**	**-2.1**
GULE				*i* S		**Sn**		**17 13 35.6**	**+1.1**
GZT	**Gaziantep**	**1.24**	**74**	*i* P		**Pn**		**17 13 21.5**	**-0.4**
GZT				*i* S		**Sn**		**17 13 38.9**	**+0.2**
NIG	**Nigde**	**1.59**	**314**	*e*PN		**Pn**		**17 13 26.6**	**-0.2**
NIG	**Nigde**	**1.59**	**314**	*e*Pn		**Pn**		**17 13 26.6**	**-0.2**
ATAB	**Bozova**	**1.83**	**75**	*i* P		**Pb**		**17 13 31.8**	**-0.2**
ATAB				*i* S		**Sn**		**17 13 52.4**	**-0.7**
ATAB	**Bozova**	**1.83**	**75**	*i* P		**Pb**		**17 13 31.8**	**-0.2**
ATAB				*i* S		**Sn**		**17 13 52.4**	**-0.7**
BNN	**Bunyan**	**1.84**	**355**	*e*PN		**Pn**		**17 13 30.1**	**0.0**
BNN	**Bunyan**	**1.84**	**355**	*e*Pn		**Pn**		**17 13 30.1**	**0.0**
DARE	**Darende-Malaty**	**1.91**	**35**	*e*PN		**Pn**		**17 13 31.4**	**+0.3**
AKCD	**Akcadag**	**1.94**	**49**	*i* P		**Pb**		**17 13 34.1**	**+0.1**
AKCD				*i* S		**Sb**		**17 13 59.0**	**+0.7**
AKCD	**Akcadag**	**1.94**	**49**	*i* P		**Pb**		**17 13 34.1**	**+0.1**
AKCD				*i* S		**Sb**		**17 13 59.0**	**+0.7**
IKL	**Isikli**	**2.07**	**249**	*e*PN		**Pn**		**17 13 33.7**	**+0.5**
IKL	**Isikli**	**2.07**	**249**	*e*Pn		**Pn**		**17 13 33.7**	**+0.5**
URFA	**Urfa**	**2.23**	**78**	*e*PN		**Pn**		**17 13 36.1**	**+0.6**
URFA	**Urfa**	**2.23**	**78**	*e*Pn		**Pn**		**17 13 36.1**	**+0.6**
MYA	**Malataya**	**2.28**	**54**	*e*PN		**Pn**		**17 13 36.0**	**-0.1**
MYA	**Malataya**	**2.28**	**54**	*e*Pn		**Pn**		**17 13 36.0**	**-0.1**
ILIC	**ilic-Erzincan**	**3.12**	**38**	*e*PN		**Pn**		**17 13 48.8**	**+1.0**
ILIC	**ilic-Erzincan**	**3.12**	**38**	*e*Pn		**Pn**		**17 13 48.8**	**+1.0**

TAP 28 17:13:53.3, 24.18N×121.75E, h13km, ML3.6, 7C-2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.13**	**357**	P		Pg		17 13 56.8	+0.1
	baz=359								
EHP				S		Sg		17 13 59.5	+0.5
	baz=359								
TWD	**Chiawan**	**0.17**	**234**	⇑	*i*P	Pg		17 13 57.5	+0.2
	baz=241								
TWD					*i* S	Sg		17 14 00.5	+0.5
	baz=241								
HWA	**Hwalien**	**0.24**	**213**	P		Pb		17 13 59.2	-0.4
	baz=223								
ENA	**Nanau**	**0.25**	**358**	⇑	*i*P	Pg		17 13 58.7	+0.1
	baz=359								
ENA				S		Sg		17 14 02.5	+0.4
	baz=359								
ESF	**Shoufeng Towns**	**0.38**	**216**	*e*P		Pb		17 14 02.0	0.0
	baz=217								
NNS	**Nan Shan**	**0.43**	**307**	⇑	*i*P	Pg		17 14 02.1	0.0
	baz=307								
NNS				S		Sg		17 14 08.4	+0.4
	baz=307								
TWC	**Suao**	**0.44**	**12**	*i* P		Pg		17 14 02.2	+0.2
	baz=6.0								
TWC					*i* S	Sg		17 14 08.5	+0.6
	baz=6.0								
WHF	**Hehuan Shan**	**0.44**	**265**	⇑	*i*P	Pg		17 14 02.4	-0.3
	baz=266								
WHF				S		Sg		17 14 08.7	-0.4
	baz=266								
ESL	**Shilin**	**0.47**	**218**	*e*P		Pg		17 14 02.5	0.0
	baz=228								
TWT	**Tachien**	**0.53**	**278**	⇑	*i*P	Pb		17 14 04.6	-0.2
	baz=278								
TWT					*i* S	Sb		17 14 11.8	-0.6
	baz=278								
TWE	**Neicheng**	**0.54**	**352**	⇑	*i*P	Pb		17 14 04.4	-0.4
	baz=353								
TWE				S		Sb		17 14 12.0	-0.5
	baz=353								
NSK	**Sanguang**	**0.61**	**324**	P		Pg		17 14 05.4	+0.1
	baz=324								
NSK				S		Sg		17 14 13.6	+0.1
	baz=324								
EHY	**Hungye**	**0.78**	**210**	*e*P		Pg		17 14 07.3	-1.1
	baz=223								
TWA	**Mucha**	**0.81**	**349**	*e*P		Pb		17 14 09.4	+0.1
	baz=349								
NSTT	**Nanjuang**	**0.82**	**303**	*e*P		Pg		17 14 09.2	0.0
	baz=303								
NSTT				*e*S		Sb		17 14 20.5	+0.1
	baz=303								
SMLT	**Sun Moon Lake**	**0.83**	**249**	⇓	P	Pg		17 14 09.5	-0.1
	baz=250								
SMLT				S		Sg		17 14 20.6	0.0
	baz=250								
TWB1	**Santiao Chiao**	**0.85**	**15**	*e*P		Pn		17 14 10.7	-0.4
	baz=14								
TWB1				*e*S		Sg		17 14 20.9	-0.2
	baz=14								
TYC	**Yuchr**	**0.86**	**251**	*e*P		Pg		17 14 09.7	-0.3
	baz=246								
TYC				*e*S		Sb		17 14 21.6	0.0
	baz=246								
TAP1	**Taipei**	**0.88**	**347**	*e*P		Pb		17 14 10.7	+0.3
	baz=345								
TAP	**Taipei**	**0.88**	**346**	*e*P		Pn		17 14 11.6	+0.1
	baz=345								
TAP				*e*S		Sb		17 14 22.8	+0.5
	baz=345								
NWF	**Wu-fen Shan**	**0.89**	**2**	*e*P		Pb		17 14 11.0	+0.2
	baz=354								
NWF				*e*S		Sb		17 14 23.0	+0.3
	baz=354								
TWQ1	**Liyutan**	**0.91**	**281**	*e*P		Pn		17 14 12.2	+0.4
	baz=281								
TWQ1				*e*S		Sn		17 14 24.8	-0.1
	baz=281								
TWF1	**Yuli**	**0.92**	**207**	*e*P		Pg		17 14 10.3	-0.9
	baz=223								
NSY	**Sanyi**	**0.93**	**285**	P		Pn		17 14 12.3	+0.1
	baz=285								
NSY				*e*S		Sn		17 14 25.3	-0.2
	baz=285								
NCU	**National Centr**	**0.94**	**327**	*e*P		Pb		17 14 11.9	+0.4
	baz=327								
NCU				S		Sn		17 14 26.6	+1.0
	baz=327								
HSN	**Hsinchu**	**0.94**	**311**	*e*P		Pn		17 14 12.1	-0.2
	baz=314								
HSN				*e*S		Sn		17 14 25.4	-0.3
	baz=314								
TWS1	**Kuangyinshan**	**0.96**	**342**	*e*P		Pn		17 14 12.4	-0.3
	baz=349								
TWS1				*e*S		Sn		17 14 26.7	+0.4
	baz=349								
TCU	**Taichung**	**0.98**	**268**	⇑	*e*P	Pn		17 14 13.9	+1.1
	baz=269								
TCU				*e*S		Sn		17 14 28.1	+1.5
	baz=269								
YUS	**Yu-Shan**	**1.00**	**227**	*e*P		Pb		17 14 12.6	-0.7
	baz=229								
YUS				*e*S		Sb		17 14 25.8	-1.1
	baz=229								
WNT	**Mingjian**	**1.02**	**253**	P		Pn		17 14 14.0	+0.6
	baz=251								
WNT				S		Sn		17 14 28.9	+1.3
	baz=251								
ALS	**Alishan**	**1.09**	**233**	*e*P		Pb		17 14 14.1	-0.4
	baz=241								
TWY	**Chenhua**	**1.10**	**353**	*e*P		Pg		17 14 15.2	+0.7
	baz=352								
CHKT	**Chengkung**	**1.13**	**198**	*e*P		Pb		17 14 14.0	-0.8
	baz=191								
CHN5	**Tsauling**	**1.14**	**240**	P		Pg		17 14 15.6	+0.2
	baz=242								
CHN5				*e*S		Sn		17 14 32.1	+1.3
	baz=242								
YOJ	**Yonaguni jima**	**1.19**	**76**	⇓	*e*P	Pn		17 14 15.1	-0.6
	baz=64								
WGK	**Gukeng**	**1.19**	**246**		*e*P	Pb		17 14 15.9	+0.1
	baz=248								
ELDTW	**Lidau**	**1.19**	**214**		*e*P	Pn		17 14 14.8	-1.2
	baz=216								
WTCT	**Ta-ch'eng**	**1.38**	**257**		*e*P	Pb		17 14 19.3	+0.3
	baz=259								
WTCT				*e*S		Sg		17 14 39.4	+1.6
	baz=259								
CHY	**Chiayi**	**1.39**	**241**		*e*P	Pg		17 14 20.1	0.0
	baz=244								
CHY				*e*S		Sg		17 14 39.4	+1.2
	baz=244								
WTP	**Ta-pu**	**1.40**	**228**		*e*P	Pb		17 14 19.6	+0.2
	baz=220								
WTP				*e*S		Sg		17 14 39.0	+0.5
	baz=220								
TWK	**Hsinying**	**1.47**	**232**		*e*P	Pn		17 14 20.1	+0.4
	baz=234								
TWG	**Pinlang**	**1.49**	**205**		*e*P	Pn		17 14 19.1	-0.8
	baz=191								
CHN1	**Nanshi**	**1.50**	**229**		*e*P	Pb		17 14 20.9	-0.1
	baz=227								
CHN1				*e*S		Sg		17 14 41.8	+0.2
	baz=227								
WSF	**Szhu**	**1.50**	**249**		*e*P	Pb		17 14 21.0	-0.1
	baz=252								
WSF				*e*S		Sg		17 14 42.6	+1.0
	baz=252								
CHN8	**Yiju**	**1.64**	**240**		*e*P	Pb		17 14 23.0	-0.4
	baz=243								
ECL	**Taimali**	**1.74**	**205**		*e*P	Pn		17 14 22.8	-0.5
	baz=193								
TWM1	**Shoushan**	**1.82**	**222**		*e*P	Pb		17 14 27.2	+0.6
	baz=224								
EAST	**Anshuo**	**1.97**	**205**		*e*P	Pn		17 14 27.4	+0.8
	baz=195								
SCZT	**Fangliau**	**2.08**	**210**		*e*P	Pb		17 14 30.6	-0.3
	baz=214								
PNG	**Penghu**	**2.10**	**254**		*e*P	Pn		17 14 28.6	+0.4
	baz=256								

IDC 28 17:17:17.2±2.7, 22.22N×145.11E, h0km, mb3.5/8, mb1 3.6/9, mb1mx3.5/27, mbtmp3.5/9, ML3.0/1, Error ellipse: s-maj=113.7km s-min=21.9km az=78.0, North Pacific Ocean

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**15.48**	**339**			Pn		17 20 55.9	-0.9
	0.1nm,0.3s,baz=158,slow=12,SNR=4.2								
KSRS	**Korea Array**	**21.23**	**319**	P		P		17 22 05.8	+1.1
	0.4nm,0.8s,baz=144,slow=8.2,SNR=2.7								
SONM	**Songino Array**	**40.10**	**319**	P		P		17 24 54.5	-0.2
	0.2nm,0.5s,baz=136,slow=9.7,SNR=4.6								
WRA	**Warrmunga Arr**	**43.21**	**195**	P		P		17 25 20.3	+0.1
	0.2nm,0.8s,baz=15,slow=9.6,SNR=4.1								
ASAR	**Alice Springs**	**46.90**	**194**	P		P		17 25 49.2	-0.3
	0.4nm,1.1s,baz=11,slow=6.9,SNR=3.3								
ZALV	**Zalesovo Beam**	**54.92**	**321**	P		P		17 26 49.6	0.0
	0.5nm,0.3s,baz=103,slow=6.4,SNR=3.9								
MKAR	**Makanchi Array**	**55.67**	**312**	P		P		17 26 54.5	-0.7
	0.2nm,0.4s,baz=98,slow=8.2,SNR=3.7								
BVAR	**Borovoye Array**	**63.44**	**319**	P		P		17 27 48.7	0.0
	1.5nm,0.5s,baz=93,slow=6.3,SNR=12								
FINES	**FINESS Array B**	**83.47**	**335**	P		P		17 29 46.7	+0.2
	0.7nm,0.5s,baz=74,slow=5.4,SNR=12								

*NIED **28** 17:26:00, 24.20N×121.60E, h20km, Mw4.4 Best double couple: M0 4.13000×10^15 NP1:φ=56.00000°, δ=66.00000°, λ=88.00000° NP2:φ=242.00000°, δ=24.00000°, λ=95.00000°.*
*BJI **28** 17:26:29.7, 24.18N×121.88E, h17km, mB4.6/8, mb4.3/12, ML4.2/8, Ms4.2/16, Ms7 4.0/15*
*JMA **28** 17:26:31.6±0.4, 24.16N×121.59E, h53km, M3.8*
*TAP **28** 17:26:32.7, 24.19N×121.75E, h14km, ML4.4, B*
*ISCJB **28** 17:26:33.0±0.3, 24.18N±0.01×121.81E±0.02, h20km±2km, mb3.8/15, MS3.7/8, Error ellipse: s-maj=3.0km s-min=2.0km az=31.8*
*IDC **28** 17:26:39.3±5.5, 24.11N×121.72E, h75km±52km, mb3.6/14, mb1 3.7/15, mb1mx3.6/29, mbtmp3.6/15, ML3.0/1, MS3.7/7, Ms1 3.7/7, ms1mx3.1/40, Error ellipse: s-maj=25.5km s-min=15.4km az=67.0*
ISC 28 17:26:32.6±0.6, **24.17N**±0.02×**121.79E**±0.02, **h16**km±3km, **n96**,σ1824/144, **mb3.9**/15, **MS3.7**/8, **12C-17D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase	ID	Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.15**	**343**	P		**Pb**		**17 26 36.2**	**-0.7**
	baz=357								
EHP				S		**Sg**		**17 26 39.0**	**-0.2**
	baz=357								
TWD	**Chiawan**	**0.20**	**243**	⇑	*i*P	**Pb**		**17 26 37.0**	**-0.8**
	baz=240								
TWD					*i* S	**Sg**		**17 26 40.3**	**-0.1**
	baz=240								
HWA	**Hwalien**	**0.25**	**221**	⇑	*i*P	**Pb**		**17 26 38.9**	**+0.1**
	baz=222								

NSTT				S		Sb	17 26 59.8	-0.4
	baz=303							
TWB1	**Santiao Chiao**	**0.85**	**12**	*eP*		**Pn**	**17 26 49.3**	**-0.7**
	baz=4.0							
TWB1				S		**Sn**	**17 27 00.7**	**-1.5**
	baz=4.0							
SMLT	**Sun Moon Lake**	**0.86**	**251**	⇓*iP*		**Pn**	**17 26 48.9**	**-1.2**
	baz=250							
SMLT				S		**Sb**	**17 27 00.5**	**0.0**
	baz=250							
TYC	**Yuchr**	**0.89**	**253**	⇓*iP*		**Pn**	**17 26 49.3**	**-1.2**
	baz=252							
TYC				*eS*		**Sg**	**17 26 60.0**	**-1.7**
	baz=252							
NWF	**Wu-fen Shan**	**0.90**	**360**	*eP*		**Pn**	**17 26 50.4**	**-0.3**
	baz=353							
NWF				*eS*		**Sn**	**17 27 01.9**	**-1.5**
	baz=353							
TAP1	**Taipei**	**0.90**	**344**	*eP*		**Pn**	**17 26 50.4**	**-0.2**
	baz=344							
TAP1				*eS*		**Sn**	**17 27 01.2**	**-2.1**
	baz=344							
TAP	**Taipei**	**0.90**	**344**	*eP*		**Pn**	**17 26 50.2**	**-0.4**
	baz=344							
TAP				*eS*		**Sn**	**17 27 02.1**	**-1.2**
	baz=344							
TWF1	**Yuli**	**0.93**	**209**	⇓*eP*		**Pg**	**17 26 48.8**	**-1.8**
	baz=222							
TWQ1	**Liyutan**	**0.94**	**281**	*eP*		**Pn**	**17 26 51.4**	**+0.2**
	baz=281							
NCU	**National Centr**	**0.97**	**326**	*eP*		**Pn**	**17 26 52.0**	**+0.4**
	baz=326							
NCU				*eS*		**Sn**	**17 27 05.6**	**+0.7**
	baz=326							
NSY	**Sanyi**	**0.97**	**285**	*eP*		**Pn**	**17 26 52.0**	**+0.5**
	baz=285							
NSY				*eS*		**Sn**	**17 27 05.2**	**+0.2**
	baz=285							
HSN	**Hsinchu**	**0.98**	**310**	*eP*		**Pn**	**17 26 52.0**	**+0.3**
	baz=305							
HSN				*eS*		**Sn**	**17 27 05.9**	**+0.8**
	baz=305							
TWS1	**Kuangyinshan**	**0.99**	**340**	⇓*eP*		**Pn**	**17 26 51.9**	**+0.1**
	baz=348							
TWS1				*eS*		**Sn**	**17 27 06.6**	**+1.2**
	baz=348							
TCU	**Taichung**	**1.02**	**269**	⇓*iP*		**Pn**	**17 26 53.0**	**+0.8**
	baz=269							
TCU				*eS*		**Sn**	**17 27 06.2**	**+0.1**
	baz=269							
YUS	**Yu-Shan**	**1.02**	**229**	⇓*eP*		**Pn**	**17 26 52.0**	**-0.7**
	baz=216							
YUS				*eS*		**Sn**	**17 27 06.0**	**-0.9**
	baz=216							
WNT	**Mingjian**	**1.05**	**254**	⇓*P*		**Pn**	**17 26 53.2**	**+0.5**
	baz=251							
WNT				*eS*		**Sn**	**17 27 08.8**	**+1.8**
	baz=251							
ALS	**Alishan**	**1.11**	**234**	⇓*iP*		**Pg**	**17 26 53.7**	**-0.4**
	baz=220							
ALS				*eS*		**Sn**	**17 27 10.3**	**+1.3**
	baz=220							
TWY	**Chenhua**	**1.11**	**351**	⇓*eP*		**Pn**	**17 26 54.6**	**+1.1**
	baz=336							
CHKT	**Chengkung**	**1.13**	**200**	*eP*		**Pb**	**17 26 52.6**	**-1.2**
	baz=187							
YOJ	**Yonaguni jima**	**1.15**	**75**	*iP*		**Pg**	**17 26 54.5**	**-0.4**
	baz=65							
YOJ	**Yonaguni jima**	**1.15**	**75**	P		**Pg**	**17 26 54.3**	**-0.6**
YOJ				S		**Sn**	**17 27 11.0**	**+1.5**
CHN5	**Tsauling**	**1.17**	**241**	⇓*iP*		**Pg**	**17 26 54.9**	**-0.2**
	baz=241							
CHN5				*eS*		**Sn**	**17 27 11.5**	**+1.5**
	baz=241							
ELDTW	**Lidau**	**1.21**	**216**	*eP*		**Pn**	**17 26 54.2**	**-0.7**
	baz=201							
WGK	**Gukeng**	**1.22**	**247**	⇓*P*		**Pg**	**17 26 55.9**	**-0.2**
	baz=247							
WTCT	**Ta-ch'eng**	**1.41**	**258**	⇓*eP*		**Pg**	**17 26 58.5**	**-1.2**
	baz=259							
WTCT				*eS*		**Sg**	**17 27 18.5**	**+0.4**
	baz=259							
WTP	**Ta-pu**	**1.42**	**230**	⇓*iP*		**Pg**	**17 26 58.4**	**-1.5**
	baz=229							
WTP				*eS*		**Sg**	**17 27 18.4**	**+0.1**
	baz=229							
CHY	**Chiayi**	**1.42**	**242**	*eP*		**Pg**	**17 26 59.1**	**-0.7**
	baz=243							
CHY				*eS*		**Sg**	**17 27 19.4**	**+1.1**
	baz=243							
PCYT	**Pengchaiyu**	**1.48**	**10**	*eP*		**Pg**	**17 26 59.2**	**-1.8**
	baz=7.0							
TWK	**Hsinying**	**1.49**	**233**	*eP*		**Pg**	**17 27 00.1**	**-1.2**
	baz=233							
TWK				*eS*		**Sg**	**17 27 20.3**	**-0.4**
	baz=233							
TWG	**Pinlang**	**1.50**	**206**	⇑*eP*		**Pn**	**17 26 57.1**	**-1.7**
	baz=190							
CHN1	**Nanshi**	**1.52**	**230**	⇓*P*		**Pb**	**17 26 59.9**	**-0.4**
	baz=221							
CHN1				*eS*		**Sg**	**17 27 23.3**	**+1.8**
	baz=221							
TTN	**Taitung**	**1.53**	**203**	*eP*		**Pn**	**17 26 59.0**	**-0.2**
	baz=203							
WSF	**Szhu**	**1.53**	**250**	⇓*eP*		**Pg**	**17 27 00.6**	**-1.4**
	baz=251							
WSF				*eS*		**Sg**	**17 27 20.5**	**-1.4**
	baz=251							
SGST	**Jiashian**	**1.55**	**226**	⇓*eP*		**Pg**	**17 27 00.9**	**-1.5**
	baz=226							
CHN8	**Yiju**	**1.66**	**241**	*eP*		**Pg**	**17 27 02.6**	**-1.9**
	baz=225							
CHN8				*eS*		**Sg**	**17 27 24.7**	**-1.5**
	baz=225							
CHN3	**Shinhua**	**1.70**	**230**	*eP*		**Pg**	**17 27 04.0**	**-1.2**
	baz=230							
ECL	**Taimali**	**1.74**	**206**	*eP*		**Pn**	**17 27 01.4**	**-0.8**
	baz=193							
SCLT	**Jiali**	**1.77**	**236**	*eP*		**Pb**	**17 27 03.7**	**-0.9**
	baz=237							
SCLT				*eS*		**Sg**	**17 27 28.1**	**-1.4**
	baz=237							
IRIF	**Iriomote-Funau**	**1.78**	**84**	P		**Pn**	**17 27 02.8**	**+0.1**
IRIF				*eS*		**Sb**	**17 27 26.6**	**-0.3**
TAI1	**Yung-k'ang**	**1.82**	**232**	*eP*		**Pb**	**17 27 04.0**	**-1.5**
	baz=232							
TWM1	**Shoushan**	**1.83**	**223**	*eP*		**Pg**	**17 27 06.1**	**-1.8**
	baz=223							
HATJ	**Hateruma jima**	**1.85**	**93**	P		**Pb**	**17 27 04.3**	**-1.7**
SGLT	**Jiouru**	**1.87**	**220**	*eP*		**Pb**	**17 27 06.1**	**-0.2**
	baz=210							
EAST	**Anshuo**	**1.98**	**206**	*eP*		**Pn**	**17 27 04.3**	**-1.2**
	baz=195							
TAW	**Tawu**	**1.98**	**205**	*eP*		**Pb**	**17 27 07.2**	**-1.1**
	baz=192							
JKRS	**Kuro-shima**	**2.03**	**88**	P		**Pb**	**17 27 07.0**	**-2.1**
JKRS				*eS*		**Sb**	**17 27 33.3**	**-0.8**
SCZT	**Fangliau**	**2.09**	**211**	*eP*		**Pb**	**17 27 08.7**	**-1.4**
	baz=195							
PNG	**Penghu**	**2.13**	**254**	*eP*		**Pn**	**17 27 07.5**	**0.0**
	baz=255							
LAY	**Lan-yu**	**2.13**	**186**	*eP*		**Pn**	**17 27 05.6**	**-2.0**
	baz=187							
JIJ	**Ishigaki jima**	**2.16**	**84**	P		**Pn**	**17 27 08.0**	**+0.1**
JIJ				S		**Sn**	**17 27 35.1**	**+0.8**
HEN	**Hengchun**	**2.36**	**204**	*eP*		**Pb**	**17 27 12.2**	**-2.5**
	baz=195							
TWK1	**Hengchun**	**2.39**	**202**	*eP*		**Pn**	**17 27 11.8**	**+0.6**
	baz=190							
TSEB	**Hengchuen, Pin**	**2.40**	**200**	*eP*		**Pn**	**17 27 11.4**	**+0.2**
	baz=190							
JTJ	**Tarama**	**2.70**	**79**	P		**Pn**	**17 27 16.3**	**+1.0**
JTJ				*eS*		**Sn**	**17 27 48.8**	**+1.1**
QZH	**Quanzhou**	**3.01**	**285**	⇓*iPn*		**Pn**	**17 27 19.5**	**-0.1**
QZH				Sn		**Sn**	**17 27 53.5**	**-1.9**
QZH				smax	smax			
	comp=N,1μm,0.9s							
QZH				smax	smax			
	comp=E,730nm,0.9s							
KNM	**Kinmen**	**3.07**	**275**	*eP*		**Pn**	**17 27 22.1**	**+1.6**
	baz=275							
JOGS	**Gusukube**	**3.35**	**79**	P		**Pn**	**17 27 26.4**	**+2.1**
NJ2	**Nanjing**	**8.27**	**342**	*eP*		**Pn**	**17 28 32.8**	**+0.9**
NJ2				pP			17 28 37.5	
NJ2				sP			17 28 39.0	
NJ2				S		**Sn**	**17 30 07.3**	**+2.3**
NJ2				sS			17 30 11.5	
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
NJ2				smax	smax			
	comp=N,120nm,0.9s							
NJ2				smax	smax			
	comp=E,80nm,1.0s							
NJ2				LR	LR			
	comp=N,650nm,8.4s							
NJ2				LR	LR			
	comp=E,1μm,10.4s							
NJ2				LR	LR			
	comp=Z,750nm,10.7s							
WHN	**Wuhan**		**9.16**	**315**	P	**Pn**	**17 28 45.5**	**+1.3**
WHN					S	**Sn**	**17 30 22.8**	**-4.2**
WHN					LR	LR		
	comp=N,2μm,8.3s							
WHN					LR	LR		
	comp=E,2μm,9.2s							
KSRS	**Korea Array**		**14.25**	**20**	P	P	17 29 57.7	-3.2
	comp=E,0.1nm,0.3s,baz=193,slow=15,SNR=5.9							
XAN	**Xi'an**		**14.93**	**314**	P	P	17 30 12.3	+3.7
XAN					pP	Pn	17 30 17.0	+14
XAN					pmax	pmax		
	comp=Z,2.0nm,1.0s							
XAN					LR	LR		
	comp=N,89nm,9.0s							
XAN					LR	LR		
	comp=E,170nm,12.1s							
XAN					LR	LR		
	comp=Z,180nm,11.6s							
HHC	**Hu-ho-hao-te**		**18.71**	**335**	*eP*	**Pn**	**17 30 51.0**	**+0.1**
HHC					sP	**sP**	**17 30 58.0**	**+0.9**
HHC					PP	**PnPn**	**17 31 07.5**	**+4.5**
HHC					S	**Sn**	**17 34 20.0**	**+0.1**
HHC					sS	**S**	**17 34 25.5**	**+2.4**
HHC					SS	SnSn	17 34 44.5	+11
HHC					pmax	pmax		
	comp=Z,58nm,0.9s							
HHC					pmax	pmax		
	comp=Z,160nm,5.5s							
HHC					LR	LR		
	comp=N,560nm,12.1s							
HHC					LR	LR		
	comp=E,430nm,13.1s							
HHC					LR	LR		
	comp=Z,380nm,13.4s							
LZH	**Lanzhou**		**19.51**	**312**	*eP*	Pn	17 31 08.0	+7.4
LZH					pP	pP	17 31 11.0	+7.2
LZH					sP	sP	17 31 13.5	+7.6
LZH					PP	PnPn	17 31 27.5	+13
LZH					*eS*	**S**	**17 34 42.3**	**+3.0**
LZH					sS	sS	17 34 46.5	0.0
LZH					SS	SnSn	17 35 11.3	+18
LZH					pmax	pmax		
	comp=Z,15nm,1.1s							
LZH					pmax	pmax		
	comp=Z,84nm,4.2s							
LZH					LR	LR		
	comp=N,400nm,12.0s							
LZH					LR	LR		
	comp=E,410nm,10.4s							
LZH					LR	LR		
	comp=Z,600nm,11.8s							
CMAR	**Chiang Mai Arr**		**22.02**	**259**	P	**P**	**17 31 27.4**	**+1.0**
	comp=Z,1.4nm,0.9s,baz=55,slow=8.1,SNR=8.7							
CMAR					LR	LR	17 40 18.3	
	comp=Z,83nm,20.0s,baz=80,slow=37							
GTA	**Gaotai**		**23.99**	**315**	*eP*	**P**	**17 31 46.5**	**-0.1**
GTA					pP	**pP**	**17 31 53.0**	**+1.6**
GTA					sP	sP	17 31 56.8	+3.4
GTA					S	**S**	**17 36 05.5**	**+2.5**
GTA					sS	**sS**	**17 36 11.3**	**+0.4**
GTA					pmax	pmax		
	comp=Z,2.0nm,0.8s							
GTA					pmax	pmax		
	comp=Z,91nm,3.5s							
GTA					LR	LR		
	comp=N,140nm,12.4s							
GTA					LR	LR		
	comp=E,350nm,12.4s							
GTA					LR	LR		
	comp=Z,440nm,12.4s							
SONM	**Songino Array**		**26.60**	**336**	P	**P**	**17 32 11.0**	**+0.8**
	comp=Z,3.8nm,1.0s,baz=154,slow=9.4,SNR=18							
SONM					LR	LR	17 44 07.4	
	comp=Z,158nm,18.0s,baz=64,slow=39							
MKAR	**Makanchi Array**		**38.73**	**316**	P	**P**	**17 33 56.1**	**+0.1**
	comp=Z,1.6nm,0.7s,baz=107,slow=11,SNR=7.4							
MKAR					LR	LR	17 51 05.1	
	comp=Z,72nm,18.5s,baz=275,slow=38							
ZALV	**Zalesovo Beam**		**40.56**	**327**	P	**P**	**17 34 10.8**	**-0.3**
	comp=Z,3.2nm,0.9s,baz=116,slow=8.4,SNR=11							
ZALV					LR	LR	17 52 25.6	
	comp=Z,68nm,21.2s,baz=70,slow=38							
FITZ	**Fitzroy Crossi**		**42.18**	**175**	LR	LR	17 53 56.0	
	comp=Z,342nm,19.0s,baz=36,slow=39							
KURBB	**Kurchatov Arra**		**42.48**	**320**	P	**P**	**17 34 26.7**	**-0.1**
	comp=Z,2.4nm,1.0s,baz=117,slow=7.5,SNR=9.5							
WRA	**Warramunga Arr**		**45.52**	**163**	P	**P**	**17 34 50.6**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=345,slow=8.7,SNR=8.1							
BVAR	**Borovoye Array**		**48.03**	**321**	P	**P**	**17 35 10.9**	**-0.1**
	comp=Z,1.1nm,0.8s,baz=108,slow=9.4,SNR=7.5							
ASAR	**Alice Springs**		**48.98**	**165**	P	**P**	**17 35 18.3**	**-0.2**
	comp=Z,0.5nm,0.6s,baz=337,slow=6.6,SNR=8.1							
AKTO	**Aktyubinsk**		**55.17**	**316**	P	**P**	**17 36 04.7**	**+0.3**
	comp=Z,1.3nm,0.8s,baz=74,slow=7.4,SNR=5.3							
ILAR	**Eielson Array**		**68.97**	**27**	P	**P**	**17 37 37.8**	**+1.0**
	comp=Z,0.3nm,0.7s,baz=304,slow=4.7,SNR=3.3							
FINES	**FINESS Array B**		**71.74**	**330**	P	**P**	**17 37 53.0**	**-0.8**
	comp=Z,2.4nm,0.9s,baz=58,slow=7.2,SNR=6.1							
BRTR	**Keskin Array B**		**73.62**	**307**	P	**P**	**17 38 05.4**	**-0.2**
	comp=Z,1.1nm,0.9s,baz=92,slow=6.2,SNR=7.5							
HFS	**Hagfors**		**77.85**	**331**	LR	LR	18 14 52.3	
	comp=Z,61nm,18.9s,baz=102,slow=37							
NOA	**NORSAR Array B**		**78.49**	**332**	P	**P**	**17 38 31.8**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=58,slow=5.0,SNR=2.7							
NOA					LR	LR	18 16 00.8	
	comp=Z,37nm,20.1s,baz=90,slow=38							
YKA	**Yellowknife Ar**		**82.77**	**23**	P	**P**	**17 38 55.1**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=316,slow=4.0,SNR=4.6							
TWE					*eS*	**Sg**	**17 30 27.4**	**+0.1**
	baz=351							
ILA	**Ilan**	**0.62**	**357**	*eP*		**Pb**	**17 30 20.6**	**-0.1**
	baz=351							
NSK	**Sanguang**	**0.65**	**324**	⇑*P*		**Pg**	**17 30 21.2**	**+0.2**
	baz=323							
EHY	**Hungye**	**0.76**	**213**	*eP*		**Pg**	**17 30 22.8**	**-0.2**
	baz=223							
SMLT	**Sun Moon Lake**	**0.85**	**252**	⇓*P*		**Pg**	**17 30 24.9**	**+0.3**
	baz=250							
TWA	**Mucha**	**0.85**	**348**	*eP*		**Pb**	**17 30 24.7**	**0.0**
	baz=348							
NSTT	**Nanjuang**	**0.86**	**304**	*eP*		**Pg**	**17 30 25.1**	**+0.3**
	baz=303							
TYC	**Yuchr**	**0.88**	**254**	⇓*eP*		**Pg**	**17 30 25.4**	**+0.1**
	baz=253							
TWB1	**Santiao Chiao**	**0.88**	**12**	*eP*		**Pb**	**17 30 25.3**	**+0.1**
	baz=8.0							
TWF1	**Yuli**	**0.91**	**209**	*eP*		**Pb**	**17 30 25.0**	**-0.6**
	baz=223							
TAP1	**Taipei**	**0.92**	**345**	*eP*		**Pg**	**17 30 26.2**	**+0.2**
	baz=336							
NWF	**Wu-fen Shan**	**0.92**	**0**	*eP*		**Pg**	**17 30 26.2**	**+0.2**
	baz=359							
TAP	**Taipei**	**0.92**	**344**	*eP*		**Pn**	**17 30 26.7**	**+0.1**
	baz=336							
TWQ1	**Liyutan**	**0.94**	**283**	*eP*		**Pn**	**17 30 27.5**	**+0.6**
	baz=281							
NSY	**Sanyi**	**0.97**	**286**	*eP*		**Pn**	**17 30 28.1**	**+0.9**
	baz=285							
NCU	**National Centr**	**0.98**	**327**	*eP*		**Pn**	**17 30 27.6**	**+0.1**
	baz=325							
NCU				*eS*		**Sn**	**17 30 41.6**	**+0.5**
	baz=325							
HSN	**Hsinchu**	**0.99**	**312**	*eP*		**Pn**	**17 30 27.9**	**+0.4**
	baz=313							
YUS	**Yu-Shan**	**1.00**	**229**	*eP*		**Pb**	**17 30 28.1**	**+0.5**
	baz=229							
TWS1	**Kuangyinshan**	**1.01**	**341**	*eP*		**Pn**	**17 30 27.9**	**+0.1**
	baz=340							
TWS1				*eS*		**Sn**	**17 30 41.8**	**+0.1**
	baz=340							
TCU	**Taichung**	**1.01**	**270**	⇑*P*		**Pn**	**17 30 29.6**	**+1.8**
	baz=269							
TCU				*eS*		**Sn**	**17 30 43.0**	**+1.2**
	baz=269							
WNT	**Mingjian**	**1.04**	**255**	*eP*		**Pg**	**17 30 29.5**	**+1.2**
	baz=251							
WNT				*eS*		**Sn**	**17 30 44.5**	**+2.1**
	baz=251							
ALS	**Alishan**	**1.09**	**235**	*eP*		**Pn**	**17 30 29.7**	**+0.4**
	baz=223							
CHKT	**Chengkung**	**1.11**	**200**	*eP*		**Pn**	**17 30 29.4**	**+0.2**
	baz=192							
TWY	**Chenhua**	**1.14**	**352**	*eP*		**Pg**	**17 30 30.4**	**+0.3**
	baz=336							
CHN5	**Tsauling**	**1.15**	**242**	⇑*eP*		**Pg**	**17 30 31.3**	**+0.9**
	baz=241							
YOJ	**Yonaguni jima**	**1.17**	**74**	P		**Pb**	**17 30 30.3**	**+0.3**
	baz=65							
YOJ	**Yonaguni jima**	**1.17**	**74**	P		**Pb**	**17 30 30.4**	**+0.3**
YOJ				*eS*		**Sg**	**17 30 46.4**	**+0.5**
ELDTW	**Lidau**	**1.18**	**216**	*eP*		**Pn**	**17 30 29.4**	**-0.9**
	baz=201							
WTP	**Ta-pu**	**1.40**	**230**	*eP*		**Pb**	**17 30 34.7**	**+0.7**
	baz=230							
CHY	**Chiayi**	**1.40**	**243**	*eP*		**Pg**	**17 30 35.5**	**+0.4**
	baz=242							
WTCT	**Ta-ch'eng**	**1.40**	**259**	*eP*		**Pg**	**17 30 35.2**	**0.0**
	baz=258							
TWG	**Pinlang**	**1.47**	**206**	*eP*		**Pn**	**17 30 33.5**	**-0.7**
	baz=197							
TWK	**Hsinying**	**1.47**	**234**	*eP*		**Pb**	**17 30 35.6**	**+0.3**
	baz=233							
CHN1	**Nanshi**	**1.50**	**230**	*eP*		**Pb**	**17 30 35.7**	**+0.1**
	baz=230							
PCYT	**Pengchaiyu**	**1.50**	**10**	*eP*		**Pn**	**17 30 35.1**	**+0.6**
	baz=7.0							
WSF	**Szhu**	**1.51**	**251**	*eP*		**Pb**	**17 30 36.1**	**+0.2**
	baz=250							
CHN8	**Yiju**	**1.64**	**241**	*eP*		**Pb**	**17 30 38.2**	**0.0**
	baz=241							
CHN3	**Shinhua**	**1.68**	**231**	*eP*		**Pb**	**17 30 39.3**	**+0.5**
	baz=230							
ECL	**Taimali**	**1.72**	**206**	*eP*		**Pb**	**17 30 39.0**	**-0.5**
	baz=194							
IRIF	**Iriomote-Funau**	**1.79**	**84**	P		**Pn**	**17 30 39.0**	**+0.5**
IRIF				*eS*		**Sb**	**17 31 02.5**	**-0.4**
TWM1	**Shoushan**	**1.81**	**224**	*eP*		**Pg**	**17 30 42.4**	**-0.6**
	baz=223							
HATJ	**Hateruma jima**	**1.85**	**92**	*eS*		**Sn**	**17 31 03.8**	**+1.2**
JKRS	**Kuro-shima**	**2.04**	**87**	P		**Pn**	**17 30 43.2**	**+1.3**
JKRS				*eS*		**Sn**	**17 31 08.5**	**+1.4**
SCZT	**Fangliau**	**2.06**	**211**	*eP*		**Pb**	**17 30 44.3**	**-1.0**
	baz=195							
JIJ	**Ishigaki jima**	**2.17**	**84**	P		**Pn**	**17 30 44.4**	**+0.7**
JIJ				S		**Sn**	**17 31 10.6**	**+0.3**
JTJ	**Tarama**	**2.71**	**79**	P		**Pn**	**17 30 52.3**	**+1.1**
QZH	**Quanzhou**	**3.01**	**286**	⇓*iPn*		**Pn**	**17 30 55.5**	**+0.2**
QZH				Sn		**Sn**	**17 31 29.5**	**-1.6**
QZH				smax	smax			
	comp=N,320nm,0.7s							
QZH				smax	smax			
	comp=E,240nm,1.1s							
KSRS	**Korea Array**		**14.27**	**20**	Pn	**P**	**17 33 35.2**	**-1.7**
	comp=E,0.1nm,0.3s,baz=198,slow=13,SNR=5.6							
SONM	**Songino Array**		**26.62**	**336**	P	**P**	**17 35 46.9**	**+0.8**
	comp=E,0.8nm,1.0s,baz=145,slow=9.6,SNR=3.8							
MKAR	**Makanchi Array**		**38.74**	**316**	P	**P**	**17 37 30.9**	**-1.0**
	comp=E,0.3nm,0.6s,baz=112,slow=9.1,SNR=3.2							
ZALV	**Zalesovo Beam**		**40.57**	**327**	P	**P**	**17 37 46.9**	**0.0**
	comp=E,0.2nm,0.3s,baz=112,slow=6.7,SNR=3.6							
WRA	**Warramunga Arr**		**45.50**	**163**	P	**P**	**17 38 27.1**	**0.0**
	comp=E,0.6nm,0.7s,baz=344,slow=8.6,SNR=5.5							
ASAR	**Alice Springs**		**48.96**	**165**	P	**P**	**17 38 53.9**	**-0.2**
	comp=E,0.3nm,0.7s,baz=345,slow=6.8,SNR=4.7							

IDC ***28*** *17:30:06.5±1.2,23°.90N×121°.21E,h0km,mb3.4/5, mb1 3.6/6,mb1mx3.4/26,mbtmp3.5/6,ML3.2/1,Error ellipse: s-maj=71.4km s-min=19.6km az=68.0*
ISCJB ***28*** *17:30:09.0±0.3,24°.15N±0°.02×121°.80E±0°.02,h16km±4km, mb3.3/5,Error ellipse: s-maj=4.2km s-min=2.9km az=43.0*
JMA ***28*** *17:30:08.8±0.3,24°.25N×121°.67E,h64km,M3.2*
TAP ***28*** *17:30:08.6,24°.18N×121°.76E,h14km,ML3.9,B*

ISC 28 17:30:08.2±0.9,24°.15N±0°.02×121°.78E±0°.02,h15km±6km, n63,σ0°69/78,mb3.4/5,9C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.17**	**348**	P	**Pg**	**17 30 12.3**	**-0.1**
	baz=353						
EHP				S	**Sg**	**17 30 15.0**	**-0.1**
	baz=353						
TWD	**Chiawan**	**0.18**	**249**	⇑*iP*	**Pb**	**17 30 13.1**	**-0.1**
	baz=244						
TWD				*eS*	**Sb**	**17 30 16.4**	**-0.2**
	baz=244						
HWA	**Hwalien**	**0.23**	**224**	*eP*	**Pb**	**17 30 15.2**	**+1.1**
	baz=225						
ENA	**Nanau**	**0.28**	**353**	⇑*P*	**Pg**	**17 30 14.1**	**-0.1**
	baz=356						
ESF	**Shoufeng Towns**	**0.37**	**222**	*eP*	**Pb**	**17 30 16.6**	**+0.2**
	baz=226						
ESL	**Shilin**	**0.46**	**224**	*eP*	**Pb**	**17 30 18.2**	**+0.2**
	baz=229						
TWC	**Suao**	**0.47**	**8**	P	**Pg**	**17 30 17.6**	**+0.1**
	baz=4.0						
TWC				*eS*	**Sg**	**17 30 23.9**	**+0.1**
	baz=4.0						
WHF	**Hehuan Shan**	**0.47**	**270**	⇑*iP*	**Pg**	**17 30 18.1**	**+0.4**
	baz=267						
NNS	**Nan Shan**	**0.47**	**308**	⇑*iP*	**Pg**	**17 30 17.7**	**0.0**
	baz=306						
NNS				*eS*	**Sg**	**17 30 24.0**	**-0.1**
	baz=306						
TWT	**Tachien**	**0.56**	**281**	⇑*iP*	**Pb**	**17 30 20.1**	**+0.3**
	baz=278						
TWT				S	**Sg**	**17 30 27.5**	**+0.7**
	baz=278						
TWE	**Neicheng**	**0.58**	**350**	⇑*P*	**Pg**	**17 30 19.7**	**+0.1**
	baz=351						

TAP 28 17:30:12.9,24°.20N×121°.75E,h14km,ML4.2,1C,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.11**	**354**	*eP*	Pg	17 30 16.2	-0.1
	baz=357						
EHP				S	Sg	17 30 18.9	+0.4
	baz=357						
TWD	**Chiawan**	**0.18**	**231**	*eP*	Pg	17 30 16.9	-0.2
	baz=238						
TWD				*eS*	Sg	17

SIGR					S		**Sg**	**17 32 14.8**	**-0.2**
SIGR	**SIGRI**	**0.16**	**257**		P		**Pg**	**17 32 12.2**	**-0.2**
SIGR					S		**Sg**	**17 32 14.8**	**-0.2**
PRK	**Paraskevi**	**0.17**	**91**		P		**Pg**	**17 32 12.2**	**-0.3**
PRK					S		**Sg**	**17 32 15.2**	**-0.1**
PRK	**Paraskevi**	**0.17**	**91**		P		**Pg**	**17 32 12.2**	**-0.3**
PRK					S		**Sg**	**17 32 15.2**	**-0.1**
AYVA	**Ayvalik**	**0.50**	**83**	*i*	P		**Pg**	**17 32 17.3**	**-1.0**
AYVA				*i*	S		**Sg**	**17 32 25.0**	**+0.1**
AYVA	**Ayvalik**	**0.50**	**83**	*i*	P		**Pg**	**17 32 17.3**	**-1.0**
AYVA				*i*	S		**Sg**	**17 32 25.0**	**+0.1**
BOZC	**Bozcaada**	**0.59**	**360**	*i*	P		**Pb**	**17 32 20.5**	**-0.1**
BOZC				*i*	S		**Sb**	**17 32 30.2**	**+1.4**
EZN	**Ezine**	**0.61**	**20**	*e*	PG		**Pg**	**17 32 19.8**	**-0.7**
EZN				*e*	SG		**Sg**	**17 32 28.7**	**+0.1**
EZN	**Ezine**	**0.61**	**20**	*e*	Pg		**Pg**	**17 32 19.8**	**-0.7**
EZN				*e*	Sg		**Sg**	**17 32 28.7**	**+0.1**
CHOS	**Chios island**	**0.86**	**180**		P		**Pg**	**17 32 24.7**	**-0.4**
CHOS					S		**Sb**	**17 32 37.5**	**+1.0**
CHOS	**Chios island**	**0.86**	**180**		P		**Pg**	**17 32 24.7**	**-0.4**
CHOS					S		**Sb**	**17 32 37.5**	**+1.0**
LIA	**Limnos Island**	**0.94**	**314**		P		**Pg**	**17 32 25.2**	**-1.3**
LIA					S		**Sg**	**17 32 38.6**	**-0.2**
LIA	**Limnos Island**	**0.94**	**314**		P		**Pg**	**17 32 25.2**	**-1.3**
LIA					S		**Sg**	**17 32 38.6**	**-0.2**
URLA	**Izmir**	**0.98**	**154**	*i*	P		**Pg**	**17 32 25.3**	**-2.1**
URLA				*i*	S		**Sg**	**17 32 40.5**	**+0.2**
URLA	**Izmir**	**0.98**	**154**	*i*	P		**Pg**	**17 32 25.3**	**-2.1**
URLA				*i*	S		**Sg**	**17 32 40.5**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.19**	**16**	*e*	PN		**Pb**	**17 32 30.4**	**-0.4**
GELI				*e*	SN		**Sn**	**17 32 46.8**	**+0.2**
GELI	**Tayfur-Gelibol**	**1.19**	**16**	*e*	Pn		**Pb**	**17 32 30.4**	**-0.4**
GELI				*e*	Sn		**Sn**	**17 32 46.8**	**+0.2**
LPK	**Lapseki**	**1.25**	**26**	*e*	PN		**Pn**	**17 32 31.6**	**+0.2**
LPK				*e*	SN		**Sn**	**17 32 48.5**	**+0.5**
LPK	**Lapseki**	**1.25**	**26**	*e*	Pn		**Pn**	**17 32 31.6**	**+0.2**
LPK				*e*	Sn		**Sn**	**17 32 48.5**	**+0.5**
BALY	**Balya**	**1.31**	**67**	*i*	P		**Pn**	**17 32 31.6**	**-0.6**
BALY				*i*	S		**Sn**	**17 32 50.5**	**+1.0**
BALY	**Balya**	**1.31**	**67**	*i*	P		**Pn**	**17 32 31.6**	**-0.6**
BALY				*i*	S		**Sn**	**17 32 50.5**	**+1.0**
ENEZ	**Enez**	**1.49**	**3**	*e*	PN		**Pg**	**17 32 36.6**	**-0.4**
ENEZ	**Enez**	**1.49**	**3**	*e*	Pn		**Pg**	**17 32 36.6**	**-0.4**
GONE	**Gonen-Balikesi**	**1.49**	**57**	*e*	PN		**Pb**	**17 32 36.4**	**+0.6**
GONE	**Gonen-Balikesi**	**1.49**	**57**	*e*	Pn		**Pb**	**17 32 36.4**	**+0.6**
KRBG	**Karabiga-Canak**	**1.49**	**40**	*e*	PN		**Pn**	**17 32 35.1**	**+0.4**
KRBG	**Karabiga-Canak**	**1.49**	**40**	*e*	Pn		**Pn**	**17 32 35.1**	**+0.4**
RKY	**Sarkoy-Tekirda**	**1.68**	**31**	*e*	PN		**Pb**	**17 32 38.6**	**-0.5**
RKY	**Sarkoy-Tekirda**	**1.68**	**31**	*e*	Pn		**Pb**	**17 32 38.6**	**-0.5**
SART	**Tekirdag**	**1.68**	**31**	*i*	P		**Pn**	**17 32 37.6**	**+0.2**
SART				*i*	S		**Sg**	**17 33 01.3**	**-1.2**
SART	**Tekirdag**	**1.68**	**31**	*i*	P		**Pn**	**17 32 37.6**	**+0.2**
SART				*i*	S		**Sg**	**17 33 01.3**	**-1.2**
MFT	**Murefte**	**1.80**	**31**	*e*	PN		**Pb**	**17 32 41.1**	**-0.1**
MFT	**Murefte**	**1.80**	**31**	*e*	Pn		**Pb**	**17 32 41.1**	**-0.1**

BJI ***28*** *17:41:47.7,5.˝80S×133.˝85E,h37km,mB5.0/18,mb4.8/26, Ms4.7/13,Ms7 4.2/13*

ISCJB ***28*** *17:41:47.9±0.3,5.˝55S±0.˝03×133.˝79E±0.˝04,h28km, mb4.5/43,MS4.0/12,Error ellipse: s-maj=5.4km s-min=4.6km az=147.2*

IDC ***28*** *17:41:47.1±0.6,5.˝31S×133.˝74E,h0km,mb4.3/13, mb1 4.3/16,mb1mx4.3/20,mbtmp4.3/16,ML3.7/3,MS4.0/7, Ms1 4.0/7,ms1mx3.6/24,Error ellipse: s-maj=24.9km s-min=14.4km az=69.0*

MOS ***28*** *17:41:48.5±0.9,5.˝55S×133.˝81E,h33km,mb4.9/10,Error ellipse: s-maj=18.3km s-min=8.0km az=105.4*

NEIC ***28*** *17:41:50.4±0.3,5.˝57S×133.˝75E,h35km,mb4.6/11,Error ellipse: s-maj=7.7km s-min=5.1km az=73.0*

DJA ***28*** *17:41:55.3±0.3,5.˚S±3.˚×13.˚4E±.˚,h52km±7km,M4.8/21, mB5.2/9,mb5.0/21,MLv5.0/6,Mw(mB)4.6/9*

ISC 28 17:41:50.9±0.4,5.˚48S±0.˚05×133.˚81E±0.˚05,h28km,n122, σ1§**78**/136,**mb4.5**/43,**MS4.0**/12,**2C-3D,Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FAKI	**Fak Fak**	**2.98**	**328**	P	**Pn**	**17 42 33.2**	**-3.1**
FAKI				S	Sn	17 43 04.7	-6.5
RKPI	**Ransiki, Papua**	**3.96**	**5**	P	**Pn**	**17 42 49.5**	**-0.3**
RKPI				S	**Sn**	**17 43 29.9**	**-5.4**
BNDI	**Bandanaira**	**4.01**	**283**	P	**Pn**	**17 42 49.3**	**-1.2**
BNDI				S	**Sn**	**17 43 33.4**	**-3.1**
SRPI	**Serui, Papua**	**4.32**	**34**	P	**Pn**	**17 42 55.1**	**+0.3**
BAKI	**Biak**	**4.83**	**28**	P	**Pn**	**17 43 01.1**	**-0.7**
MSAI	**Masohi**	**5.31**	**293**	P	**Pn**	**17 43 07.2**	**-1.2**
LBMI	**Labuha** 186nm,0.8s,2μm0.6nm	**7.92**	**307**	P	**Pn**	**17 43 42.3**	**-2.0**
LBMI	186nm,0.8s,2μm0.6nm			S	Sn	17 45 06.7	-6.4
TNTI	**Ternate** 65nm,1.0s	**8.94**	**314**	P	**Pn**	**17 43 56.3**	**-2.0**
GAMI	**Galela, Maluku**	**9.43**	**320**	P	Pn	17 44 11.6	+6.6
BBSI	**Bau Bau** 81nm,1.1s	**11.19**	**269**	P	**Pn**	**17 44 31.8**	**+2.7**
MNI	**Manado** 116nm,0.9s,1μm	**11.29**	**307**	P	**Pn**	**17 44 29.0**	**-1.6**
KMSI	**Cibinong** 256nm,1.0s,2μm	**11.51**	**301**	P	**Pn**	**17 44 31.8**	**-1.7**
LUWI	**Luwuk** 108nm,1.0s,1μm	**11.87**	**291**	P	Pn	17 44 33.5	-4.9
MMRI	**Maumere** 82nm,1.1s	**11.91**	**254**	P	**Pn**	**17 44 40.8**	**+1.8**
GTOI	**Gorontalo** 108nm,0.9s,963nm	**12.38**	**299**	P	**Pn**	**17 44 44.6**	**-0.8**
COEN	**Coen**	**12.49**	**133**	*e*	Pn	**17 44 46.4**	**-0.5**
SKSI	**Soroako, Sulaw** 31nm,1.1s	**12.79**	**283**	P	**Pn**	**17 44 52.1**	**+1.1**
MRSI	**Marisa** 51nm,0.8s,2μm	**13.25**	**296**	P	**Pn**	**17 44 56.0**	**-1.3**
BSSI	**Bau Bau, Buton**	**13.27**	**266**	P	P	17 45 11.9	+4.8
BKSI	**Bulukumba** 48nm,1.0s,435nm	**13.63**	**270**	P	**Pn**	**17 45 02.4**	**-0.1**
PMG	**Port Moresby**	**13.80**	**107**	*e*	Pn	**17 45 03.1**	**-1.7**
PMG	**Port Moresby** 20nm,1.0s	**13.80**	**107**	P	**P**	**17 45 13.6**	**+0.7**
PMG	**Port Moresby** 0.5nm,0.3s,baz=305,slow=15,SNR=3.1	**13.80**	**107**	Pn	**Pn**	**17 45 05.4**	**+0.7**
KAPI	**Kappang**	**14.01**	**271**	*e*	Pn	**17 45 05.9**	**-1.8**
KAPI	**Kappang**	**14.01**	**271**	P	**Pn**	**17 45 10.8**	**+3.1**
KAPI	**Kappang** 1.4nm,0.3s,baz=112,slow=15,SNR=18	**14.01**	**271**	Pn	**Pn**	**17 45 07.6**	**-0.1**
TTSI	**Tana Toraja** 25nm,1.0s	**14.16**	**279**	P	**Pn**	**17 45 09.9**	**+0.1**
WRAB	**Tennant Creek**	**14.38**	**178**	*e*	**Pn**	**17 45 10.4**	**-2.3**
WRAB	comp=Z,21nm,0.6s			pmax	pmax		
WRAB	**Tennant Creek** comp=Z,21nm,0.6s	**14.38**	**178**	*e*	**Pn**	**17 45 10.4**	**-2.3**
WRA	**Warramunga Arr**	**14.39**	**178**	Pn	Pn	17 45 09.5	-3.3
WRA				Sn	Sn	17 47 42.7	-9.0
WRA	**Warramunga Arr** comp=Z,1.6nm,0.3s,baz=354,slow=14,SNR=80	**14.39**	**178**	Pn	Pn	17 45 09.5	-3.3
WRA				Sn	Sn	17 47 42.7	-9.0
	comp=Z,0.9nm,0.3s,baz=352,slow=24,SNR=4.3						
FITZ	**Fitzroy Crossi**	**14.88**	**212**	Pn	Pn	17 45 15.0	-4.4
FITZ				Sn	Sn	17 47 51.0	-12
FITZ	**Fitzroy Crossi** comp=Z,6.7nm,0.3s,baz=41,slow=11,SNR=97	**14.88**	**212**	Pn	Pn	17 45 15.0	-4.4
FITZ				Sn	Sn	17 47 51.0	-12
	comp=Z,2.0nm,0.3s,baz=194,slow=16,SNR=8.5						
WBSI	**Waikabubak, Su** comp=Z,102nm,0.8s,comp=Z,1μm	**14.88**	**253**	P	**Pn**	**17 45 20.3**	**+0.7**
CTBH	**Cotabato--PC H**	**15.82**	**323**	*i*	P	**Pn**	**17 45 31.5**	**-0.3**
AS31	**Alice Springs**	**18.09**	**180**	*e*	Pn	**17 45 58.5**	**-1.7**
ASAR	**Alice Springs**	**18.09**	**180**	P	**Pn**	**17 45 58.2**	**-2.1**
ASAR				S	Sn	17 49 11.6	-10
ASAR	**Alice Springs** comp=Z,1.2nm,0.3s,baz=357,slow=13,SNR=121	**18.09**	**180**	P	**Pn**	**17 45 58.2**	**-2.1**
ASAR	baz=2.1,slow=28,SNR=4.7			S	Sn	17 49 11.6	-10
ASAR	comp=Z,436nm,21.5s,baz=357,slow=38			LR	LR	17 53 20.3	
MYLDM	**Lahad Datu**	**18.60**	**304**	P	Pn	17 46 13.0	+6.5
CTA	**Charters Tower**	**18.90**	**141**	P	**Pn**	**17 46 12.6**	**+2.3**
CTA	**Charters Tower** comp=Z,0.2nm,0.3s,baz=319,slow=13,SNR=8.1	**18.90**	**141**	P	**Pn**	**17 46 12.6**	**+2.3**
CTAO	**Charters Tower**	**18.90**	**141**	*e*	**P**	**17 46 08.2**	**-1.3**
CTAO	**Charters Tower**	**18.90**	**141**	*e*	Pn	**17 46 08.2**	**-1.3**
MBWA	**Marble Bar**	**20.73**	**220**	*e*	**P**	**17 46 26.0**	**-3.4**
	comp=Z,33nm,0.8s						
GUMO	**Guam** comp=Z,172nm,1.2s	**21.89**	**30**	*e*	**P**	**17 46 40.9**	**-1.0**
SJI	**Sawahan**	**22.01**	**263**	P	P	17 46 54.9	+12
SBUM	**Sibu** comp=Z,12nm,1.4s,comp=Z,440nm	**22.96**	**290**	P	**P**	**17 46 53.7**	**+0.4**
FORT	**Forrest** comp=Z,64nm,0.8s	**25.75**	**191**	*e*	**P**	**17 47 17.3**	**-1.9**
EIDS	**Eidsvold** comp=Z,19nm,1.1s	**25.79**	**142**	*e*	**P**	**17 47 17.1**	**-2.6**
STKA	**Stephens Creek**	**27.26**	**165**	*e*	**P**	**17 47 32.8**	**-0.1**
STKA	**Stephens Creek** comp=Z,3.1nm,0.6s,baz=335,slow=9.2,SNR=9.4	**27.26**	**165**	P	**P**	**17 47 34.5**	**+1.6**
STKA	comp=Z,135nm,18.4s,baz=167,slow=38			LR	LR	17 59 10.9	
PPBI	**Pangkal Pinang**	**27.81**	**276**	P	P	17 47 50.4	+12
PPI	**Padang Panjang**	**33.73**	**277**	P	**P**	**17 48 30.2**	**-0.1**
QIZ	**Qiongzhong**	**33.92**	**316**	P	**P**	**17 48 31.0**	**-0.8**
QIZ				S	**S**	**17 53 55.5**	**+0.5**
QIZ	comp=Z,19nm,1.5s			pmax	pmax		
IPM	**Ipoh** comp=Z,12nm,0.9s	**34.21**	**286**	*e*	**P**	**17 48 32.1**	**-2.3**
IPM	**Ipoh**	**34.21**	**286**	P	**P**	**17 48 37.3**	**+2.9**
PSI	**Prapat**	**35.81**	**282**	P	**P**	**17 48 46.9**	**-1.5**
PSI	**Prapat** comp=Z,5.4nm,0.7s,baz=99,slow=11,SNR=4.0	**35.81**	**282**	P	**P**	**17 48 46.9**	**-1.5**
JNU	**Nakatsue**	**38.49**	**356**	P	**P**	**17 49 10.6**	**-0.2**
JNU	**Nakatsue** comp=Z,27nm,0.9s,baz=190,slow=8.4,SNR=9.3	**38.49**	**356**	P	**P**	**17 49 10.6**	**-0.2**
NJ2	**Nanjing**	**39.95**	**340**	*e*	**P**	**17 49 23.3**	**+0.4**
NJ2	comp=Z,20nm,1.4s			pmax	pmax		
GYA	**Guiyang**	**41.23**	**322**	*e*	**P**	**17 49 33.0**	**-0.8**
GYA	comp=Z,10.0nm,1.0s			pmax	pmax		
CMAR	**Chiang Mai Arr**	**41.80**	**306**	P	**P**	**17 49 37.0**	**-1.5**
CMAR	**Chiang Mai Arr** comp=Z,1.3nm,0.8s,baz=133,slow=6.8,SNR=11	**41.80**	**306**	P	**P**	**17 49 37.0**	**-1.5**
CHTO	**Chiang Mai**	**41.99**	**306**	*e*	**P**	**17 49 39.1**	**-0.9**
CHTO	comp=Z,8.0nm,1.1s			pmax	pmax		
CHTO	**Chiang Mai** comp=Z,7.6nm,1.1s	**41.99**	**306**	*e*	**P**	**17 49 39.1**	**-0.9**
MJAR	**Matsushiro Arr**	**42.00**	**5**	P	**P**	**17 49 38.5**	**-1.3**
MJAR	**Matsushiro Arr** comp=Z,3.1nm,0.9s,baz=179,slow=9.3,SNR=10	**42.00**	**5**	P	**P**	**17 49 38.5**	**-1.3**
KMI	**Kunming**	**42.87**	**317**	P	**P**	**17 49 47.0**	**-0.3**
KMI				*e*P	**pP**	**17 49 57.3**	**+1.6**
KMI				*e*S	**sP**	**17 50 01.5**	**+2.4**
KMI				S	**S**	**17 56 11.3**	**+0.7**
KMI				*e*S	**sS**	**17 56 26.5**	**+2.0**
KMI				SS	**SS**	**17 59 16.3**	**-6.4**
KMI	comp=Z,6.0nm,0.6s			pmax	pmax		
KMI	comp=Z,110nm,4.3s			pmax	pmax		
KMI	comp=N,120nm,16.0s			LR	LR		
KMI	comp=E,130nm,16.0s			LR	LR		
KMI	comp=Z,120nm,19.2s			LR	LR		
KSAR	**Wonju Array Be**	**43.05**	**353**	P	P	**17 49 47.8**	**-0.5**
KSRS	**Korea Array** comp=Z,2.9nm,1.0s,baz=172,slow=9.1,SNR=7.7	**43.06**	**353**	P	**P**	**17 49 47.8**	**-0.5**
XAN	**Xi'an**	**45.81**	**331**	P	**P**	**17 50 09.0**	**-1.5**
XAN				*e*P	**pP**	**17 50 18.3**	**-0.7**
XAN	comp=Z,14nm,5.0s			pmax	pmax		
BJI	**Beijing**	**48.12**	**342**	P	**P**	**17 50 28.0**	**-0.3**
BJI				S	**S**	**17 57 28.8**	**+3.4**
BJI	comp=Z,13nm,0.9s			pmax	pmax		
BJI	comp=N,80nm,18.6s			LR	LR		
BJI	comp=E,96nm,18.6s			LR	LR		
BJI	comp=Z,43nm,20.2s			LR	LR		
USRK	**Ussuriysk Arra** comp=Z,4.6nm,0.9s,baz=168,slow=7.5,SNR=9.2	**49.47**	**358**	P	**P**	**17 50 38.1**	**-0.5**
CN2	**Changchun**	**49.63**	**352**	*e*	**P**	**17 50 43.0**	**+3.1**
CN2	comp=Z,10.0nm,0.7s			pmax	pmax		
MDJ	**Mudanjiang**	**50.01**	**356**	P	**P**	**17 50 43.0**	**+0.3**
MDJ	comp=Z,7.0nm,2.3s			pmax	pmax		
MDJ	comp=Z,35nm,3.5s			pmax	pmax		
HHC	**Hu-ho-hao-te**	**50.42**	**338**	*e*	**P**	**17 50 46.0**	**-0.1**
HHC				*e*P	**pP**	**17 50 57.5**	**+2.9**
HHC				*e*S	**sP**	**17 51 01.0**	**+3.0**
HHC				PcS	**PcS**	**17 56 01.5**	**+0.1**
HHC				S	**S**	**17 57 58.0**	**+0.1**
HHC				*e*S	**sS**	**17 58 12.0**	**0.0**
HHC				ScS	**ScS**	**18 00 35.0**	**-0.4**
HHC				SS	**SS**	**18 01 31.3**	**-0.9**
HHC	comp=Z,26nm,0.8s			pmax	pmax		
HHC	comp=Z,140nm,7.4s			pmax	pmax		
HHC	comp=N,180nm,16.0s			LR	LR		
HHC	comp=E,190nm,15.1s			LR	LR		
HHC	comp=Z,220nm,16.2s			LR	LR		
GTA	**Gaotai**	**54.59**	**328**	*e*	**P**	**17 51 17.0**	**-0.1**
GTA				*e*P	**pP**	**17 51 27.8**	**+2.1**
GTA				*e*S	**sP**	**17 51 33.0**	**+4.0**
GTA				PP	**PP**	**17 53 23.5**	**+3.8**
GTA				S	**S**	**17 58 57.0**	**+1.9**
GTA				sS	sS	17 59 14.5	+5.2
GTA	comp=Z,5.0nm,0.9s			pmax	pmax		
GTA	comp=Z,100nm,4.3s			pmax	pmax		
GTA	comp=N,85nm,17.1s			LR	LR		
GTA	comp=E,79nm,16.2s			LR	LR		
GTA	comp=Z,66nm,15.7s			LR	LR		
ULN	**Ulaanbaatar** comp=Z,4.5nm,1.3s	**58.10**	**339**	*e*	**P**	**17 51 40.1**	**-1.9**
SONM	**Songino Array**	**58.31**	**339**	P	**P**	**17 51 42.8**	**-0.6**
SONM	**Songino Array** comp=Z,1.7nm,1.0s,baz=148,slow=7.6,SNR=8.8	**58.31**	**339**	P	**P**	**17 51 42.8**	**-0.6**
ZAK	**Zakamensk**	**61.57**	**338**	*e*	**P**	**17 52 04.7**	**-1.0**
ZAK	comp=Z,2.0nm,1.4s			pmax	pmax		
PETK	**Petropavlovsk-**	**61.76**	**16**	P	**P**	**17 52 06.2**	**-0.6**
PETK	**Petropavlovsk-**	**61.76**	**16**	P	**P**	**17 52 06.2**	**-0.6**
PETK	**Petropavlovsk-** comp=Z,1.8nm,0.8s,baz=157,slow=8.0,SNR=4.8	**61.76**	**16**	P	**P**	**17 52 06.2**	**-0.6**
FX1	**Attu Island--F** comp=Z,72nm,20.3s,baz=252,slow=35	**66.98**	**25**	LR	LR	18 20 45.0	
YAK	**Yakutsk**	**67.39**	**358**	*e*	**P**	**17 52 43.3**	**0.0**
YAK	comp=N,8.0nm,1.1s			pmax	pmax		
YAK	comp=Z,29nm,1.0s			pmax	pmax		
YAK	comp=E,3.0nm,1.3s			pmax	pmax		
MK31	**Makanchi Array**	**69.10**	**325**	*e*	**P**	**17 52 52.9**	**-1.6**
MK31	**Makanchi Array**	**69.10**	**325**	*e*	**P**	**17 52 52.9**	**-1.6**
MKAR	**Makanchi Array**	**69.10**	**325**	P	**P**	**17 52 54.2**	**-0.3**
MKAR	**Makanchi Array**	**69.10**	**325**	P	**P**	**17 52 54.2**	**-0.3**
MKAR	**Makanchi Array** comp=E,3.3nm,0.7s,baz=120,slow=7.5,SNR=26	**69.10**	**325**	P	**P**	**17 52 54.2**	**-0.3**
MKAR	comp=E,46nm,20.2s,baz=166,slow=38			LR	LR	18 25 13.8	
KSH	**Kashi**	**69.52**	**316**	*e*	**P**	**17 52 58.5**	**+1.1**
KSH				*e*pP	**pP**	**17 53 08.8**	**+2.6**
KSH				*e*sP	**sP**	**17 53 13.0**	**+3.5**
KSH				*e*PcP	**PcP**	**17 53 20.5**	**0.0**
KSH				*e*PP	**PP**	**17 55 34.5**	**+3.1**
KSH				*e*S	**S**	**18 02 02.0**	**-1.7**
KSH				*e*sS	**sS**	**18 02 20.5**	**+2.2**
KSH	comp=Z,6.0nm,0.5s			pmax	pmax		
KSH	comp=Z,120nm,4.5s			pmax	pmax		
KSH				LR	LR		
KSH	comp=N,200nm,4.7s			LR	LR		
KSH	comp=E,130nm,5.4s			LR	LR		
KSH	comp=Z,220nm,6.5s			LR	LR		
AAK	**Ala-Archa**	**71.89**	**318**	*c*	**P**	**17 53 12.3**	**+0.5**
AAK	comp=Z,10.0nm,1.2s			pmax	pmax		
ZAA0	**Zalesovo Array**	**71.96**	**332**	*e*	**P**	**17 53 10.2**	**-1.5**
ZALV	**Zalesovo Beam**	**71.96**	**332**	P	**P**	**17 53 11.0**	**-0.7**
ZALV	**Zalesovo Beam**	**71.96**	**332**	P	**P**	**17 53 11.0**	**-0.7**
ZALV	**Zalesovo Beam** comp=Z,4.9nm,0.9s,baz=104,slow=6.1,SNR=21	**71.96**	**332**	P	**P**	**17 53 11.0**	**-0.7**
EKS2	**Erkin-Say**	**72.38**	**318**	*e*	**P**	**17 53 14.4**	**-0.3**
EKS2	comp=Z,6.0nm,1.2s			pmax	pmax		
EKS2	**Erkin-Say** comp=Z,5.7nm,1.2s	**72.38**	**318**	*e*	**P**	**17 53 14.4**	**-0.3**
NVS	**Novosibirsk**	**73.24**	**332**	*e*	**P**	**17 53 18.4**	**-0.9**
NVS	comp=Z,14nm,1.2s			pmax	pmax		
NVS	comp=N,7.0nm,1.3s			pmax	pmax		
NVS	comp=E,7.0nm,1.2s			pmax	pmax		
VNDA	**Vanda**	**73.52**	**174**	P	**P**	**17 53 22.1**	**+1.5**
VNDA	**Vanda** comp=E,0.7nm,0.9s,baz=353,slow=5.8,SNR=4.8	**73.52**	**174**	P	**P**	**17 53 22.1**	**+1.5**
VNDA	comp=E,159nm,18.7s,baz=350,slow=36			LR	LR	18 26 35.6	
BILL	**Bilibino**	**76.81**	**12**	*e*	**P**	**17 53 40.2**	**+0.5**
BILL				*e*		17 56 31.5	
BILL				*e*S	**S**	**18 03 26.8**	**+1.7**
BILL	comp=Z,2.0nm,1.2s			pmax	pmax		
BILL	comp=Z,100nm,18.0s			MLR	MLR		
TIXI	**Tiksi**	**77.04**	**358**	*e*	**P**	**17 53 40.5**	**-0.4**
TIXI	comp=Z,6.0nm,1.0s			pmax	pmax		
BRVK	**Borovoye**	**78.92**	**327**	*e*	**P**	**17 53 49.0**	**-2.7**
BRVK	comp=Z,12nm,1.0s			pmax	pmax		
BRVK	**Borovoye** comp=Z,12nm,1.0s	**78.92**	**327**	*e*	**P**	**17 53 49.0**	**-2.7**
ABKAR	**Akbulak array** comp=Z,1.1nm,0.6s	**83.71**	**321**	*e*	**P**	**17 54 15.4**	**-1.9**
QSPA	**South Pole Qui** comp=Z,138nm,18.3s,baz=15,slow=36	**84.49**	**180**	LR	LR	18 32 25.9	
SVE	**Sverdlovsk** comp=Z,10.0nm,1.1s	**85.46**	**328**	*e*	**P**	**17 54 25.4**	**-0.5**
SVE				pmax	pmax		
ARU	**Arti**	**86.45**	**327**	*c*	**P**	**17 54 29.8**	**-1.0**
ARU				S	S	18 04 52.9	-12
ARU	comp=Z,4.0nm,1.0s			pmax	pmax		
COLD	**Coldfoot** comp=Z,1.2nm,0.5s	**89.62**	**22**	*e*	**P**	**17 54 45.2**	**-0.5**
ILAR	**Eielson Array**	**90.37**	**25**	P	**P**	**17 54 47.5**	**-1.8**
ILAR	**Eielson Array** comp=Z,1.0nm,1.1s,baz=252,slow=4.8,SNR=5.8	**90.37**	**25**	P	**P**	**17 54 47.5**	**-1.8**
KMBO	**Kilima Mbogo** comp=Z,102nm,19.6s,baz=95,slow=34	**96.42**	**268**	LR	LR	18 37 13.1	
OBN	**Obninsk**	**98.61**	**325**	*e*	P	Pdif	17 55 27.2	0.0
OBN	comp=Z,4.0nm,0.8s			pmax	pmax		
OBN	comp=Z,100nm,17.0s			MLR	MLR		
TORD	**Torodi Ar. Bea**	**132.21**	**283**	PKP		**PKPdf**	**18 01 04.8**	**+1.5**
TORD	**Torodi Ar. Bea** comp=Z,0.5nm,0.8s,baz=95,slow=1.7,SNR=2.9	**132.21**	**283**	PKP		**PKPdf**	**18 01 04.8**	**+1.5**
CPUP	**Villa Florida**	**146.59**	**162**	PKPbc		**PKPbc**	**18 01 31.1**	**+0.5**
CPUP	**Villa Florida** comp=Z,1.1nm,0.4s,baz=199,slow=1.8,SNR=7.8	**146.59**	**162**	PKPbc		**PKPbc**	**18 01 31.1**	**+0.5**
LPAZ	**La Paz**	**149.36**	**135**	*e*	PKPbc	**PKPbc**	**18 01 37.3**	**-1.7**
LPAZ	**La Paz** comp=Z,6.7nm,1.1s,baz=270,slow=1.7,SNR=14	**149.36**	**135**	PKPbc		**PKPbc**	**18 01 40.2**	**+1.2**

LDG ***28*** *17:57:27.5±0.1,44.˝27N×9.˝90E,h5km,Md3.3/2,Ml3.6/29, Error ellipse: s-maj=2.2km s-min=1.4km az=23.0*

ISCJB ***28*** *17:57:27.4±0.2,44.˝25N±0.˝02×9.˝93E±0.˝01,h9km±1km, mb3.3/4,Error ellipse: s-maj=2.7km s-min=1.6km az=179.7*

CSEM ***28*** *17:57:27.9±0.1,44.˝25N×9.˝93E,h2km,ML3.7/12,Error ellipse: s-maj=2.5km s-min=1.5km az=3.0*

ROM ***28*** *17:57:28.0±0.1,44.˝30N×9.˝94E,h12km,Ml3.3/10,Error ellipse: s-maj=1.2km s-min=0.8km az=58.0*

GEN ***28*** *17:57:28.1,44.˝31N×9.˝96E,h4km,ML3.3*

IDC ***28*** *17:57:29.5±1.1,44.˝44N×9.˝87E,h0km,mb3.3/4, mb1 3.5/10,mb1mx3.4/31,mbtmp3.3/10,ML3.6/6,MS2.5/1, Ms1 2.5/1,ms1mx2.0/31,Error ellipse: s-maj=30.8km s-min=12.8km az=114.0*

PRU ***28*** *17:57:30.6,44.˝24N×10.˚19E,h10km*

STR ***28*** *17:57:35.8±0.6,44.˝40N×9.˝35E,h10km,Ml3.4,Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 28 17:57:28.2±0.9,44.˚26N±0.˚02×9.˚91E±0.˚01,h6km±6km, n267,σ1§**37**/352,**mb3.5**/4,**14C-12D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BACM	**Baccana**	**0.12**	**79**	P	**Pg**	**17 57 30.1**	**-0.6**
BACM				S	**Sg**	**17 57 31.8**	**-0.6**
CODM	**Codolo**	**0.14**	**343**	P	**Pg**	**17 57 30.5**	**-0.6**
CODM				S	**Sg**	**17 57 32.3**	**-0.8**
VINC	**Vinca**	**0.21**	**123**	P	**Pg**	**17 57 32.5**	**+0.2**
VINC				S	**Sg**	**17 57 35.9**	**+0.8**
GRAM	**Graiana**	**0.26**	**26**	P	**Pg**	**17 57 32.2**	**-1.1**
GRAM				S	**Sg**	**17 57 35.0**	**-1.8**
VALM	**Valbona**	**0.26**	**69**	P	**Pg**	**17 57 32.4**	**-0.9**
VALM				S	**Sg**	**17 57 35.5**	**-1.3**
MSSA	**Maissana**	**0.29**	**282**	Pg	**Pg**	**17 57 34.6**	**+0.8**
MSSA	4μm,0.6s			Sg	**Sg**	**17 57 39.3**	**+1.7**
MSSA	**Maissana**	**0.29**	**282**	Pg	**Pg**	**17 57 34.6**	**+0.8**
MSSA	4μm,0.6s			Sg	**Sg**	**17 57 39.3**	**+1.7**
SC2M	**Scurtabo**	**0.31**	**299**	Pg	**Pg**	**17 57 34.6**	**+0.4**
SC

PZZT	**Monte Pizzetto**	**0.70**	**100**	Pg	**Pg**	**17 57 40.9**	**-0.7**
PZZT				Sg	**Sg**	**17 57 51.8**	**+1.1**
	1µm,0.5s						
PZZT	**Monte Pizzetto**	**0.70**	**100**	Pg	**Pg**	**17 57 40.9**	**-0.7**
PZZT				Sg	**Sg**	**17 57 51.8**	**+1.1**
	1µm,0.5s						
GROG	**Isola di Gorgo**	**0.83**	**181**	Pg	**Pg**	**17 57 44.7**	**+0.6**
	767nm,0.4s						
GROG	**Isola di Gorgo**	**0.83**	**181**	Pg	**Pg**	**17 57 44.7**	**+0.6**
	767nm,0.4s						
FNVD	**Fontana Vidola**	**0.88**	**95**	Pg	**Pg**	**17 57 44.4**	**-0.6**
	1µm,0.7s						
FNVD	**Fontana Vidola**	**0.88**	**95**	Pg	**Pg**	**17 57 44.4**	**-0.6**
	1µm,0.7s						
CRMI	**Carmignano**	**0.90**	**121**	Pg	**Pg**	**17 57 45.5**	**+0.1**
CRMI	**Carmignano**	**0.90**	**121**	Pg	**Pg**	**17 57 45.5**	**+0.1**
PCP	**Piancastagn**	**1.02**	**287**	Pg	**Pg**	**17 57 47.7**	**0.0**
PCP				Sg	**Sg**	**17 58 00.9**	**0.0**
PCP	**Piancastagn**	**1.02**	**287**	P	**Pg**	**17 57 47.4**	**-0.3**
PCP	**Piancastagn**	**1.02**	**287**	Pg	**Pg**	**17 57 47.7**	**0.0**
PCP				Sg	**Sg**	**17 58 00.9**	**0.0**
SEI	**Scarperia**	**1.06**	**100**	Pg	**Pg**	**17 57 47.9**	**-0.6**
SEI	**Scarperia**	**1.06**	**100**	Pg	**Pg**	**17 57 47.9**	**-0.6**
QLNO	**Quiliano**	**1.12**	**274**	Pg	**Pb**	**17 57 49.5**	**-0.5**
QLNO				Sg	**Sg**	**17 58 05.3**	**+1.0**
QLNO	**Quiliano**	**1.12**	**274**	Pg	**Pb**	**17 57 49.5**	**-0.5**
QLNO				Sg	**Sg**	**17 58 05.3**	**+1.0**
FINB	**Finale Ligure**	**1.14**	**267**	Pg	**Pb**	**17 57 49.9**	**-0.4**
FINB				Sg	**Sb**	**17 58 04.9**	**-0.4**
FINB	**Finale Ligure**	**1.14**	**267**	Pg	**Pb**	**17 57 49.9**	**-0.4**
FINB				Sg	**Sb**	**17 58 04.9**	**-0.4**
VMG	**Vicchio**	**1.22**	**103**	Pg	**Pn**	**17 57 51.3**	**-0.4**
VMG	**Vicchio**	**1.22**	**103**	Pg	**Pn**	**17 57 51.3**	**-0.4**
RORO	**Rocca Rossa**	**1.33**	**264**	Pg	**Pn**	**17 57 52.3**	**-1.0**
RORO	**Rocca Rossa**	**1.33**	**264**	P	**Pn**	**17 57 51.9**	**-1.4**
RORO	**Rocca Rossa**	**1.33**	**264**	Pg	**Pn**	**17 57 52.3**	**-1.0**
GRFL	**Gerfalco**	**1.35**	**145**	Pg	**Pn**	**17 57 53.5**	**-0.2**
GRFL	**Gerfalco**	**1.35**	**145**	Pg	**Pn**	**17 57 53.5**	**-0.2**
ASQU	**Asqua**	**1.43**	**108**	Pg	**Pn**	**17 57 53.8**	**-1.0**
ASQU	**Asqua**	**1.43**	**108**	Pg	**Pn**	**17 57 53.8**	**-1.0**
SFI	**Santa Sofia**	**1.44**	**103**	Pg	**Pn**	**17 57 53.8**	**-1.1**
SFI	**Santa Sofia**	**1.44**	**103**	Pg	**Pn**	**17 57 53.8**	**-1.1**
MDI	**Monti di Nese**	**1.53**	**355**	Pg	**Pn**	**17 57 56.0**	**-0.1**
MDI	**Monti di Nese**	**1.53**	**355**	Pg	**Pn**	**17 57 56.0**	**-0.1**
CRE	**Caprese Michel**	**1.61**	**113**	Pg	**Pn**	**17 57 56.1**	**-1.1**
CRE	**Caprese Michel**	**1.61**	**113**	Pg	**Pn**	**17 57 56.1**	**-1.1**
NEGI	**Seborga**	**1.64**	**256**	P	**Pn**	**17 57 56.5**	**-1.1**
TEOL	**Teolo**	**1.67**	**48**⇑	*e*Pn	**Pn**	**17 57 57.3**	**-0.7**
TEOL	**Teolo**	**1.67**	**48**⇑	*e*Pg	**Pn**	**17 57 57.3**	**-0.7**
SAOF	**Saorge**	**1.71**	**262**	Pn	**Pn**	**17 57 58.4**	**-0.2**
SAOF				Sg	**Sn**	**17 58 19.5**	**-1.4**
SAOF	**Saorge**	**1.71**	**262**	Pn	**Pn**	**17 57 58.4**	**-0.2**
SAOF				Sg	**Sn**	**17 58 19.5**	**-1.4**
RNI	**Roncone**	**1.80**	**17**⇓	*e*Pn	**Pn**	**17 57 59.7**	**-0.2**
RNI				*e*Sn	**Sb**	**17 58 23.5**	**-1.1**
RNI	**Roncone**	**1.80**	**17**⇓	*e*Pn	**Pn**	**17 57 59.7**	**-0.2**
RNI				*e*Sn	**Sb**	**17 58 23.5**	**-1.1**
AUTN	**L'Aution**	**1.81**	**263**	Pn	**Pn**	**17 58 00.5**	**+0.5**
AUTN				Sg	**Sn**	**17 58 22.9**	**-0.5**
AUTN	**L'Aution**	**1.81**	**263**	Pn	**Pn**	**17 58 00.5**	**+0.5**
AUTN				Sg	**Sn**	**17 58 22.9**	**-0.5**
ARCI	**Arcidosso**	**1.81**	**140**	Pg	**Pn**	**17 57 59.2**	**-0.8**
ARCI	**Arcidosso**	**1.81**	**140**	Pg	**Pn**	**17 57 59.2**	**-0.8**
SBF	**Sospel**	**1.82**	**258**	*e*P	**Pn**	**17 57 59.7**	**-0.5**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**17 58 20.1**	**-3.5**
	477nm,0.4s,SNR=1.0						
SBF	**Sospel**	**1.82**	**258**	*e*P	**Pn**	**17 57 59.7**	**-0.5**
	SNR=1.0						
SBF				*e*Sn	**Sn**	**17 58 20.1**	**-3.5**
	239nm,0.4s,SNR=1.0						
PGF	**Pioggiola**	**1.83**	**201**	*e*P	**Pn**	**17 57 59.6**	**-0.7**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**17 58 20.8**	**-3.0**
	63nm,0.3s						
PGF	**Pioggiola**	**1.83**	**201**	*e*P	**Pn**	**17 57 59.6**	**-0.7**
	SNR=1.0						
PGF				*e*Sn	**Sn**	**17 58 20.8**	**-3.0**
	31nm,0.3s						
BADI	**Badiali**	**1.85**	**113**	Pg	**Pn**	**17 58 00.1**	**-0.3**
BADI	**Badiali**	**1.85**	**113**	Pg	**Pn**	**17 58 00.1**	**-0.3**
REVF	**Revere**	**1.90**	**255**	Pn	**Pn**	**17 58 01.5**	**+0.3**
REVF	**Revere**	**1.90**	**255**	Pn	**Pn**	**17 58 01.5**	**+0.3**
DOI	**San Damiano**	**1.92**	**278**	Pg	**Pn**	**17 58 00.9**	**-0.7**
DOI	**San Damiano**	**1.92**	**278**	Pg	**Pn**	**17 58 00.9**	**-0.7**
TOUF	**Mont Tournerai**	**1.93**	**264**	Pn	**Pn**	**17 58 01.9**	**+0.2**
TOUF				Sg	**Sn**	**17 58 26.4**	**0.0**
TOUF	**Mont Tournerai**	**1.93**	**264**	Pn	**Pn**	**17 58 01.9**	**+0.2**
TOUF				Sg	**Sn**	**17 58 26.4**	**0.0**
MVIF	**Mont Vial**	**2.02**	**261**	Pn	**Pn**	**17 58 03.6**	**+0.7**
MVIF	**Mont Vial**	**2.02**	**261**	Pn	**Pn**	**17 58 03.6**	**+0.7**
PANI	**Panarotta**	**2.05**	**28**⇓	*e*Pn	**Pn**	**17 58 03.1**	**-0.3**
PANI	**Panarotta**	**2.05**	**28**⇓	*e*Pn	**Pn**	**17 58 03.1**	**-0.3**
CGRP	**Cima Grappa**	**2.11**	**39**	*e*Pn	**Pn**	**17 58 32.4**	**-0.4**
CGRP				*e*Sn	**Sb**	**17 58 32.4**	**-0.9**
CGRP	**Cima Grappa**	**2.11**	**39**	*e*Pn	**Pn**	**17 58 03.7**	**-0.4**
CGRP				*e*Sn	**Sb**	**17 58 32.4**	**-0.9**
SURF	**Saint Ours**	**2.23**	**277**	Pn	**Pn**	**17 58 05.3**	**-0.6**
SURF	**Saint Ours**	**2.23**	**277**	Pn	**Pn**	**17 58 05.3**	**-0.6**
CALN	**Calern**	**2.23**	**258**	Pn	**Pn**	**17 58 06.0**	**+0.1**
CALN	**Calern**	**2.23**	**258**	Pn	**Pn**	**17 58 06.0**	**+0.1**
MBDF	**Montbardon**	**2.29**	**283**	*e*P	**Pn**	**17 58 06.1**	**-0.6**
	SNR=1.0						
MBDF				*e*Sg	**Sb**	**17 58 40.0**	**+1.3**
	224nm,0.5s						
MBDF	**Montbardon**	**2.29**	**283**	*e*P	**Pn**	**17 58 06.1**	**-0.6**
	SNR=1.0						
MBDF				*e*Sg	**Sb**	**17 58 40.0**	**+1.3**
	112nm,0.5s						
VARN	**Col Varnada, M**	**2.33**	**41**	*e*Pn	**Pn**	**17 58 07.0**	**-0.1**
VARN	**Col Varnada, M**	**2.33**	**41**	*e*Pn	**Pn**	**17 58 07.0**	**-0.1**
MOSI	**Grossmontoni**	**2.40**	**11**	*e*Pn	**Pn**	**17 58 09.7**	**+1.4**
KOSI	**Kohlern**	**2.44**	**25**⇓	*e*Pn	**Pn**	**17 58 08.9**	**+0.2**
FAU	**Forcella Aurin**	**2.46**	**36**	*e*Pn	**Pn**	**17 58 07.5**	**-1.4**
FAU	**Forcella Aurin**	**2.46**	**36**	*e*Pn	**Pn**	**17 58 07.5**	**-1.4**
FRF	**La Foret Royal**	**2.46**	**255**	*e*P	**Pn**	**17 58 08.4**	**-0.4**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**17 58 35.6**	**-3.5**
	93nm,0.2s,SNR=1.0						
FRF	**La Foret Royal**	**2.46**	**255**	*e*P	**Pn**	**17 58 08.4**	**-0.4**
	SNR=1.0						
FRF				*e*Sn	**Sn**	**17 58 35.6**	**-3.5**
	46nm,0.2s,SNR=1.0						
DAVOX	**Davos/Dischmat**	**2.52**	**360**	Pn	**Pn**	**17 58 10.9**	**+0.9**
	5.6nm,0.3s,baz=340,slow=10,SNR=36						
DAVOX				Sn	**Sn**	**17 58 41.5**	**+0.4**
	11nm,0.3s,baz=325,slow=23,SNR=6.5						
AGOR	**Agordo**	**2.53**	**36**⇑	*e*Pn	**Pn**	**17 58 10.5**	**+0.7**
LPG	**La Plagne**	**2.56**	**300**	*e*P	**Pn**	**17 58 11.1**	**+0.6**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**17 58 37.5**	**-4.7**
	90nm,0.5s						
LPG	**La Plagne**	**2.56**	**300**	*e*P	**Pn**	**17 58 11.1**	**+0.6**
	SNR=1.0						
LPG				*e*Sn	**Sn**	**17 58 37.5**	**-4.7**
	45nm,0.5s						
LPL	**La Plagne**	**2.58**	**300**	*e*P	**Pn**	**17 58 11.7**	**+0.9**
	SNR=1.0						
LPL				*e*Sn	**Sn**	**17 58 37.9**	**-4.7**
	92nm,0.4s,SNR=1.0						
LPL	**La Plagne**	**2.58**	**300**	*e*P	**Pn**	**17 58 11.7**	**+0.9**
	SNR=1.0						
LMR	**La Mourre**	**2.63**	**251**	*e*P	**Pn**	**17 58 10.6**	**-0.5**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**17 58 40.0**	**-3.3**
	62nm,0.3s,SNR=1.0						
LMR	**La Mourre**	**2.63**	**251**	*e*P	**Pn**	**17 58 10.6**	**-0.5**
	SNR=1.0						
LMR				*e*Sn	**Sn**	**17 58 40.0**	**-3.3**
	31nm,0.3s,SNR=1.0						
CIMO	**Cimolais**	**2.72**	**40**	*e*Pn	**Pn**	**17 58 12.5**	**0.0**
CIMO	**Cimolais**	**2.72**	**40**	*e*Pn	**Pn**	**17 58 12.5**	**0.0**
RSL	**Roselend**	**2.73**	**303**	Pn	**Pn**	**17 58 15.0**	**+2.2**
RSL				Sg	**Sb**	**17 58 50.6**	**-0.8**
RSL	**Roselend**	**2.73**	**303**	Pn	**Pn**	**17 58 15.0**	**+2.2**
OG25	**Le Caire**	**2.75**	**274**	Pn	**Pn**	**17 58 14.1**	**+1.1**
OG25	**Le Caire**	**2.75**	**274**	Pn	**Pn**	**17 58 14.1**	**+1.1**
GDM	**Grand'Maison**	**2.86**	**291**	Pn	**Pn**	**17 58 16.2**	**+1.7**
GDM	**Grand'Maison**	**2.86**	**291**	Pn	**Pn**	**17 58 16.2**	**+1.7**
ROSI	**Rosskopf**	**2.87**	**21**⇑	*e*Pn	**Pn**	**17 58 16.0**	**+1.3**
ORIF	**Oris-en-Rattie**	**2.95**	**284**	*e*P	**Pn**	**17 58 17.4**	**+1.7**
	SNR=1.0						
ORIF				*e*Sn	**Sn**	**17 58 46.6**	**-4.9**
	53nm,0.5s						
ORIF	**Oris-en-Rattie**	**2.95**	**284**	*e*P	**Pn**	**17 58 17.4**	**+1.7**
	SNR=1.0						
CSMI	**Casera Mimoias**	**2.97**	**40**	*e*Pn	**Pn**	**17 58 16.7**	**+0.7**
CSMI	**Casera Mimoias**	**2.97**	**40**	*e*Pn	**Pn**	**17 58 16.7**	**+0.7**
DAVA	**Damuels**	**3.03**	**360**⇑	*i*Pn	**Pn**	**17 58 18.8**	**+1.9**
	8.2nm,0.2s,SNR=40						
DAVA				⇓*i*Sn	**Sn**	**17 58 54.1**	**+0.6**
	198nm,0.7s						
DAVA	**Damuels**	**3.03**	**360**	Pn	**Pn**	**17 58 18.8**	**+1.9**
	8.2nm,0.2s,SNR=40						
DAVA				Sn	**Sn**	**17 58 54.1**	**+0.6**
	198nm,0.7s						
FUSE	**Fusea**	**3.07**	**44**⇓	*e*Pn	**Pn**	**17 58 17.4**	**+0.2**
FUSE	**Fusea**	**3.07**	**44**⇓	*e*Pn	**Pn**	**17 58 17.4**	**+0.2**
OG01	**Vacheresse**	**3.08**	**313**	Pn	**Pn**	**17 58 19.8**	**+2.4**
OG01	**Vacheresse**	**3.08**	**313**	Pn	**Pn**	**17 58 19.8**	**+2.4**
ABTA	**Abfaltersbach**	**3.09**	**35**	Pn	**Pn**	**17 58 18.9**	**+1.3**
ABTA	**Abfaltersbach**	**3.09**	**35**⇑	*i*Pn	**Pn**	**17 58 19.0**	**+1.4**
	20nm,0.3s,SNR=50						
ABTA	**Abfaltersbach**	**3.09**	**35**	Pn	**Pn**	**17 58 18.9**	**+1.3**
RISI	**Rein**	**3.09**	**29**⇑	*e*Pn	**Pn**	**17 58 18.7**	**+1.0**
RISI				*e*Sn	**Sn**	**17 58 56.0**	**+0.9**
TRI	**Trieste**	**3.10**	**61**	*e*Pn	**Pn**	**17 58 16.5**	**-1.1**
TRI	**Trieste**	**3.10**	**61**	*e*Pn	**Pn**	**17 58 16.5**	**-1.1**
VINO	**Villanova**	**3.11**	**49**	*e*Pn	**Pn**	**17 58 17.0**	**-0.8**
VINO	**Villanova**	**3.11**	**49**	*e*Pn	**Pn**	**17 58 17.0**	**-0.8**
GRN	**Grenoble**	**3.12**	**290**	Pn	**Pn**	**17 58 19.2**	**+1.1**
GRN	**Grenoble**	**3.12**	**290**	Pn	**Pn**	**17 58 19.2**	**+1.1**
SABO	**M.te Sabotino**	**3.13**	**55**⇓	*e*Pn	**Pn**	**17 58 17.6**	**-0.5**
SABO				*e*Sn	**Sn**	**17 58 55.2**	**-0.6**
SABO	**M.te Sabotino**	**3.13**	**55**⇓	*e*Pn	**Pn**	**17 58 17.6**	**-0.5**
SABO				*e*Sn	**Sn**	**17 58 55.2**	**-0.6**
SMRF	**Simiane la Rot**	**3.13**	**266**	*e*P	**Pn**	**17 58 18.9**	**+0.8**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**17 59 06.8**	**-2.0**
	75nm,0.4s						
SMRF	**Simiane la Rot**	**3.13**	**266**	*e*P	**Pn**	**17 58 18.9**	**+0.8**
	SNR=1.0						
SMRF				*e*Sg	**Sg**	**17 59 06.8**	**-2.0**
	38nm,0.4s						
ZOU	**Zoufplan**	**3.15**	**42**	*e*Pn	**Pn**	**17 58 19.1**	**+0.5**
SKDS	**Skadanscina**	**3.19**	**65**	*i* Pn	**Pn**	**17 58 17.6**	**-1.3**
SKDS				*i* Sn	**Sn**	**17 58 54.8**	**-2.5**
SKDS	**Skadanscina**	**3.19**	**65**	*i* Pn	**Pn**	**17 58 17.6**	**-1.3**
SKDS				*i* Sn	**Sn**	**17 58 54.8**	**-2.5**
MOTA	**Moosalm**	**3.20**	**15**⇑	*i*Pn	**Pn**	**17 58 21.0**	**+1.8**
	5.8nm,0.3s,SNR=54						
MOTA	**Moosalm**	**3.20**	**15**	Pn	**Pn**	**17 58 21.0**	**+1.8**
	5.8nm,0.3s,SNR=54						
WTTA	**Wattenberg**	**3.24**	**21**⇑	*i*Pn	**Pn**	**17 58 21.2**	**+1.4**
	21nm,0.3s,SNR=16						
WTTA				⇑*i*Sn	**Sn**	**17 59 00.2**	**+1.4**
	26nm,0.4s						
WTTA	**Wattenberg**	**3.24**	**21**	Pn	**Pn**	**17 58 21.2**	**+1.4**
	21nm,0.3s,SNR=16						
WTTA				Sn	**Sn**	**17 59 00.2**	**+1.4**
	26nm,0.4s						
OG26	**St.-Nazaire-De**	**3.31**	**277**	Pn	**Pn**	**17 58 21.5**	**+0.8**
OG26	**St.-Nazaire-De**	**3.31**	**277**	Pn	**Pn**	**17 58 21.5**	**+0.8**
VOJS	**Vojsko**	**3.33**	**56**	*i* Pn	**Pn**	**17 58 19.9**	**-0.9**
VOJS				*i* Sn	**Sn**	**17 59 00.5**	**-0.2**
VOJS	**Vojsko**	**3.33**	**56**	*i* Pn	**Pn**	**17 58 19.9**	**-0.9**
VOJS				*i* Sn	**Sn**	**17 59 00.5**	**-0.2**
ACOM	**Acomizza, Ital**	**3.42**	**47**	*e*Pn	**Pn**	**17 58 23.2**	**+1.0**
ACOM	**Acomizza, Ital**	**3.42**	**47**	*e*Pn	**Pn**	**17 58 23.2**	**+1.0**
CEY	**Cerknica**	**3.53**	**64**	*i* Pn	**Pn**	**17 58 22.3**	**-1.3**
CEY				*i* Sn	**Sn**	**17 59 05.4**	**-0.3**
OG35	**Corcelles**	**3.55**	**302**	Pn	**Pn**	**17 58 25.4**	**+1.5**
NVLJ	**Novalja**	**3.57**	**83**	*e*Pn	**Pn**	**17 58 24.7**	**+0.6**
NVLJ				Sn	**Sn**	**17 59 05.7**	**-0.9**
NVLJ	**Novalja**	**3.57**	**83**	*e*Pn	**Pn**	**17 58 24.7**	**+0.6**
NVLJ				Sn	**Sn**	**17 59 05.6**	**-0.9**
CABF	**La Chapelle**	**3.57**	**313**	*e*P	**Pn**	**17 58 25.7**	**+1.5**
	SNR=1.0						
CABF				*e*Sn	**Sn**	**17 59 01.4**	**-5.4**
	40nm,0.5s						
CABF	**La Chapelle**	**3.57**	**313**	*e*P	**Pn**	**17 58 25.7**	**+1.5**
	SNR=1.0						
BBS	**Basel-Blauen**	**3.62**	**333**	Pn	**Pn**	**17 58 25.3**	**+0.5**
LOMF	**Lomont**	**3.77**	**326**	Pn	**Pn**	**17 58 28.2**	**+1.3**
LOMF	**Lomont**	**3.77**	**326**	Pn	**Pn**	**17 58 28.2**	**+1.3**
VIVF	**Saint-Julien-l**	**3.79**	**281**	*e*P	**Pn**	**17 58 27.2**	**+0.1**
	SNR=1.0						
VIVF				*e*Sn	**Sn**	**17 59 07.1**	**-5.0**
	12nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	**3.79**	**281**	*e*P	**Pn**	**17 58 27.2**	**+0.1**
	SNR=1.0						
FELD	**Feldberg im Sc**	**3.85**	**341**	Pn	**Pn**	**17 58 28.4**	**+0.3**
SPAK	**Spaichingen-Ko**	**3.92**	**349**	Pn	**Pn**	**17 58 30.4**	**+1.4**
SSB	**Saint Sauveur**	**3.96**	**287**	Pn	**Pn**	**17 58 30.0**	**+0.6**
SSB	**Saint Sauveur**	**3.96**	**287**	Pn	**Pn**	**17 58 30.0**	**+0.6**
BOJS	**Bojanci**	**4.00**	**70**	*i* Pn	**Pn**	**17 58 29.8**	**-0.2**
BOJS				*i* Sn	**Sn**	**17 59 16.9**	**-0.3**
BOJS	**Bojanci**	**4.00**	**70**	*i* Pn	**Pn**	**17 58 29.8**	**-0.2**
BOJS				*i* Sn	**Sn**	**17 59 16.9**	**-0.3**
MOF	**Molkenrain**	**4.08**	**333**	Pn	**Pn**	**17 58 31.5**	**+0.3**
MOF	**Molkenrain**	**4.08**	**333**	Pn	**Pn**	**17 58 31.5**	**+0.3**
HINF	**Hinteralfeld**	**4.15**	**330**	*e*P	**Pn**	**17 58 33.0**	**+0.9**
	SNR=1.0						
HINF				*e*Sn	**Sn**	**17 59 14.2**	**-6.7**
	69nm,0.5s						
HINF	**Hinteralfeld**	**4.15**	**330**	*e*P	**Pn**	**17 58 33.0**	**+0.9**
	SNR=1.0						
UDBI	**Udbina**	**4.21**	**84**	*i* Pn	**Pn**	**17 58 34.9**	**+1.9**
UDBI				Sn	**Sn**	**17 59 21.8**	**-0.6**
UDBI	**Udbina**	**4.21**	**84**	*i* Pn	**Pn**	**17 58 34.8**	**+1.9**
UDBI				Sn	**Sn**	**17 59 21.8**	**-0.6**
LASF	**Ste Croix**	**4.36**	**270**	*e*P	**Pn**	**17 58 34.4**	**-0.5**
	SNR=1.0						
LASF				*e*Sn	**Sn**	**17 59 20.4**	**-5.6**
	6.4nm,0.2s,SNR=1.0						
LASF	**Ste Croix**	**4.36**	**270**	*e*P	**Pn**	**17 58 34.4**	**-0.5**
	SNR=1.0						
ECH	**Echery**	**4.39**	**335**	Pn	**Pn**	**17 58 35.7**	**+0.2**
ECH	**Echery**	**4.39**	**335**	Pn	**Pn**	**17 58 35.7**	**+0.2**
HAU	**Haudompre**	**4.49**	**328**	*e*P	**Pn**	**17 58 37.0**	**+0.2**
	SNR=1.0						
HAU				*e*Sn	**Sn**	**17 59 22.3**	**-7.1**
	76nm,0.3s						
HAU	**Haudompre**	**4.49**	**328**	*e*P	**Pn**	**17 58 37.0**	**+0.2**
	SNR=1.0						
CDF	**Champ du Feu**	**4.54**	**337**	*e*P	**Pn**	**17 58 37.0**	**-0.5**
	SNR=1.0						
CDF				*e*Sn	**Sn**	**17 59 23.7**	**-6.9**
	35nm,0.4s						
CDF	**Champ du Feu**	**4.54**	**337**	*e*P	**Pn**	**17 58 37.0**	**-0.5**
	SNR=1.0						
MOA	**Molln**	**4.70**	**39**⇓	*i*Pn	**Pn**	**17 58 40.9**	**+1.2**
	1.8nm,0.1s						
MOA				⇓*i*Sn	**Sn**	**17 59 35.2**	**+0.7**
	8.8nm,0.3s						
MOA	**Molln**	**4.70**	**39**	Pn	**Pn**	**17 58 40.9**	**+1.2**
	1.8nm,0.1s						
MOA				Sn	**Sn**	**17 59 35.2**	**+0.7**
	8.8nm,0.3s						
PLDF	**La Plantade**	**4.77**	**293**	Pn	**Pn**	**17 58 40.8**	**+0.2**
PLDF	**La Plantade**	**4.77**	**293**	Pn	**Pn**	**17 58 40.8**	**+0.2**
THEF	**They Montfort**	**4.81**	**327**	Pn	**Pn**	**17 58 42.2**	**+1.0**
THEF	**They Montfort**	**4.81**	**327**	Pn	**Pn**	**17 58 42.2**	**+1.0**
LBL	**Lubilhac**	**4.84**	**284**	Pn	**Pn**	**17 58 41.5**	**-0.2**
LBL	**Lubilhac**	**4.84**	**284**	Pn	**Pn**	**17 58 41.5**	**-0.2**
SMF	**Signal de Mont**	**4.89**	**301**	*e*P	**Pn**	**17 58 43.1**	**+0.8**
	SNR=1.0						
SMF				*e*Sn	**Sn**	**17 59 32.7**	**-6.5**
	27nm,0.4s,SNR=1.0						
SMF	**Signal de Mont**	**4.89**	**301**	*e*P	**Pn**	**17 58 43.1**	**+0.8**
	SNR=1.0						
ARSA	**Arzberg**	**4.94**	**51**⇑	*e*Pn	**Pn**	**17 58 43.0**	**+0.1**
	2.1nm,0.2s,SNR=7.6						
ARSA	**Arzberg**	**4.94**	**51**	Pn	**Pn**	**17 58 43.0**	**+0.1**
	2.1nm,0.2s,SNR=7.6						
LANF	**Langenberg**	**4.94**	**344**	Pn	**Pn**	**17 58 43.1**	**+0.1**
LANF	**Langenberg**	**4.94**	**344**	Pn	**Pn**	**17 58 43.1**	**+0.1**
PYM	**Petit Puy Mans**	**5.12**	**289**	Pn	**Pn**	**17 58 45.8**	**+0.4**
PYM	**Petit Puy Mans**	**5.12**	**289**	Pn	**Pn**	**17 58 45.8**	**+0.4**
AGO	**Saint Agoulin**	**5.12**	**293**	Pn	**Pn**	**17 58 45.5**	**+0.1**
AGO	**Saint Agoulin**	**5.12**	**293**	Pn	**Pn**	**17 58 45.5**	**+0.1**
PAGF	**Fort de Pagny**	**5.18**	**328**	*e*P	**Pn**	**17 58 47.2**	**+1.0**
	baz=144						
PAGF				*e*Sn	**Sn**	**17 59 38.4**	**-7.9**
	8.8nm,0.5s						
PAGF	**Fort de Pagny**	**5.18**	**328**	*e*P	**Pn**	**17 58 47.2**	**+1.0**
	baz=144						
LOR	**Lormes**	**5.19**	**308**	*e*P	**Pn**	**17 58 46.0**	**-0.4**
	baz=128,SNR=1.0						
LOR				*e*Sn	**Sn**	**17 59 39.6**	**-7.0**
	29nm,0.4s						
LOR	**Lormes**	**5.19**	**308**	*e*P	**Pn**	**17 58 46.0**	**-0.4**
	baz=128,SNR=1.0						
SFTF	**Sexfontaines**	**5.20**	**321**	*e*P	**Pn**	**17 58 47.5**	**+1.1**
	baz=141						
SFTF	**Sexfontaines**	**5.20**	**321**	*e*P	**Pn**	**17 58 47.5**	**+1.1**
	baz=141						
AVF	**Avril sur Loir**	**5.26**	**301**	*e*P	**Pn**	**17 58 48.1**	**+0.9**
	SNR=1.0						
AVF				*e*Sn	**Sn**	**17 59 41.3**	**-6.8**
	6.0nm,0.3s,SNR=1.0						
AVF	**Avril sur Loir**	**5.26**	**301**	*e*P	**Pn**	**17 58 48.1**	**+0.9**
	SNR=1.0						
GERES	**GERESS Array B**	**5.28**	**28**	Pn	**Pn**	**17 58 47.0**	**-0.8**
	1.6nm,0.3s,baz=205,slow=13,SNR=45						
GERES				Sn	**Sn**	**17 59 46.4**	**-2.6**
	5.2nm,0.3s,baz=214,slow=23,SNR=11						
SSF	**Saint Saulge**	**5.29**	**304**	*e*P	**Pn**	**17 58 49.0**	**+1.3**
	SNR=1.0						
SSF				*e*Sn	**Sn**	**17 59 42.0**	**-7.0**
	15nm,0.5s,SNR=1.0						
SSF	**Saint Saulge**	**5.29**	**304**	*e*P	**Pn**	**17 58 49.0**	**+1.3**
	SNR=1.0						
MEZF	**Maizieres J'vi**	**5.41**	**323**	*e*P	**Pn**	**17 58 50.5**	**+1.1**
	baz=146,SNR=1.0						
MEZF	**Maizieres J'vi**	**5.41**	**323**	*e*P	**Pn**	**17 58 50.5**	**+1.1**
	baz=146,SNR=1.0						
BGF	**Bois d'Agland**	**5.48**	**297**	*e*P	**Pn**	**17 58 51.0**	**+0.7**
	SNR=1.0						
BGF				*e*Sn	**Sn**	**17 59 46.6**	**-7.0**
	34nm,0.4s						
BGF	**Bois d'Agland**	**5.48**	**297**	*e*P	**Pn**	**17 58 51.0**	**+0.7**
	SNR=1.0						
KHC	**Kasperske Hory**	**5.49**	**26**	*e*PN	**Pn**	**17 58 49.5**	**-1.0**
KHC				*ex*	x	17 59 06.0	
KHC				*e*SN	**Sn**	**17 59 50.5**	**-3.5**
KHC				*ex*	x	18 00 10.5	
KHC	**Kasperske Hory**	**5.49**	**26**	Pn	**Pn**	**17 58 49.5**	**-1.0**
CONA	**Conrad Observa**	**5.53**	**46**⇑	*i*Pn	**Pn**	**17 58 51.6**	**+0.4**
	3.1nm,0.3s,SNR=9.2						
CONA				⇑

RDWB				S	Sn	18 12 24.6	-0.8	
SPU	Mount Spurr	0.51	351	P	Pn	18 12 13.9	-0.3	
NCT	North Crescent	0.52	258	P	Pn	18 12 13.9	-0.5	
CKL	Chakachamna La	0.56	338	P	Pn	18 12 14.5	-0.3	
BGL	Barrier Glacie	0.64	338	P	Pn	18 12 15.2	-0.2	
NNL	Ninilchik	0.70	155	P	Pn	18 12 16.5	+0.6	
ILIM	Iliamna	0.80	222	P	Pn	18 12 16.5	-0.4	
STLK	Strandline Lak	0.82	2	P	Pn	18 12 17.2	0.0	
STLK				S	Sn	18 12 30.6	+0.1	
SLKM	Skilak Lake	0.84	101	P	Pn	18 12 17.2	-0.1	
SUA	Susitna One	0.97	35	P	Pn	18 12 19.2	+0.4	
CNPM	China Poot	1.20	164	P	Pn	18 12 21.2	-0.2	
CNPM				S	Sn	18 12 38.2	+0.1	
OPT	Oil Point	1.23	214	P	Pn	18 12 21.7	0.0	
SKT	Skwentna	1.32	7	P	Pn	18 12 22.7	-0.1	
AUL	Augustine Lava	1.51	211	P	Pn	18 12 25.2	0.0	
AUNW	Augustine NWes	1.53	212	P	Pn	18 12 25.5	+0.1	
AUW	Augustine West	1.53	212	P	Pn	18 12 25.6	+0.2	
AUI	Augustine Isla	1.55	210	P	Pn	18 12 26.0	+0.3	
PMR	Palmer	1.62	54	P	Pn	18 12 26.3	-0.4	
PMR				S	Sn	18 12 46.6	-0.7	
SVW2	Sparrevohn	1.85	285	P	Pn	18 12 28.5	-1.1	
SML	Sawmill	2.06	55	P	Pn	18 12 32.0	-0.3	
SML				S	Sn	18 12 56.7	-0.8	
FOSS	Fourpeaked Sta	2.09	207	P	Pn	18 12 32.9	+0.1	
PPLA	Purkeypile	2.23	357	P	Pn	18 12 35.0	+0.3	
KAPH	Katmai Pasha	2.43	212	P	Pn	18 12 37.4	+0.1	
CAST	Castle Rocks	2.75	358	P	Pn	18 12 41.4	-0.1	
VLZ	Valdez	2.76	78	P	Pn	18 12 40.6	-0.9	
KAKN	Katmai Knife C	2.88	215	P	Pn	18 12 43.1	-0.3	
KDAK	Kodiak Island	2.92	187	P	Pn	18 12 42.2	-1.6	
KDAK				P	Pn	18 12 42.2	-1.6	
KDAK				S	Sn	18 13 15.9	-2.1	
KDAK	Kodiak Island	2.92	187	P	Pn	18 12 42.2	-1.6	
	17nm,0.3s,baz=39,slow=9.5,SNR=38							
KDAK				S	Sn	18 13 15.9	-2.1	
	12nm,0.3s,baz=158,slow=19,SNR=9.8							
KABU	Katmai Buttres	2.97	217	P	Pn	18 12 44.6	+0.1	
TT01	Tatalina	2.97	321	P	Pn	18 12 44.2	-0.3	
KLU	Klutina	3.02	72	P	Pn	18 12 44.3	-0.8	
DIV	Divide	3.03	79	P	Pn	18 12 44.1	-1.2	
MID	Middleton Isla	3.06	112	P	Pn	18 12 45.7	+0.2	
ANCK	Angle Creek	3.09	218	P	Pn	18 12 46.2	+0.1	
CNTC	Contact Creek	3.16	222	P	Pn	18 12 47.1	0.0	
DHY	Denali Highway	3.22	40	P	Pn	18 12 48.5	+0.6	
CHUM	Lake Minchumin	3.22	357	P	Pn	18 12 47.7	-0.1	
OHAK	Old Harbor	3.54	192	P	Pn	18 12 50.3	-1.8	
HARP	HAARP	3.66	59	P	Pn	18 12 54.5	+0.7	
BWN	Browne	3.69	17	P	Pn	18 12 55.1	+1.0	
PAX	Paxson	3.82	50	P	Pn	18 12 56.4	+0.5	
NEA	Nenana	4.12	17	P	Pn	18 12 59.7	-0.3	
VRDI	Verde Repeater	4.15	79	P	Pn	18 12 59.5	-1.1	
WRH	Wood River Hil	4.19	23	P	Pn	18 13 01.3	+0.4	
MLY	Manley	4.40	6	P	Pn	18 13 04.4	+0.6	
CCB	Clear Creek Bu	4.41	24	P	Pn	18 13 03.9	+0.1	
MENT	Mentasta	4.49	56	eP	Pn	18 13 04.1	-0.9	
COLA	College	4.60	22	P	Pn	18 13 06.8	+0.4	
MDM	Murphy Dome	4.61	20	P	Pn	18 13 06.9	+0.3	
PTPK	Patty Peak	4.63	80	P	Pn	18 13 06.3	-0.7	
BARK	Barkley Ridge	4.65	89	P	Pn	18 13 07.8	+0.6	
KIAG	Kiagna River	4.68	83	P	Pn	18 13 06.4	-1.3	
GCSA	Galena City Sc	4.68	333	P	Pn	18 13 07.6	+0.1	
BALM	Baldy	4.68	81	P	Pn	18 13 06.6	-1.1	
IL1	Eielson Array	4.71	27	P	Pn	18 13 07.8	-0.1	
ILAR	Eielson Array	4.71	27	P	Pn	18 13 07.4	-0.5	
ILAR				S	Sn	18 13 57.4	-3.8	
ILAR	Eielson Array	4.71	27	P	Pn	18 13 07.4	-0.5	
	4.9nm,0.3s,baz=216,slow=13,SNR=91							
ILAR				S	Sn	18 13 57.4	-3.8	
	4.3nm,0.3s,baz=216,slow=24,SNR=8.4							
DOT	Dot Lake	4.73	48	ePn	Pn	18 13 08.2	0.0	
MESA	MESA	4.95	91	P	Pn	18 13 11.4	0.0	
GRNC	Granite Creek	4.98	85	P	Pn	18 13 11.3	-0.5	
BARN	Barnard Glacie	5.02	81	P	Pn	18 13 12.5	+0.2	
IM3	Indian Mountai	5.39	352	P	Pn	18 13 16.4	-0.8	
CHGN	Chignik	5.56	221	ePn	Pn	18 13 16.6	-2.9	
PNL	Peninsula	6.32	94	P	Pn	18 13 29.9	+0.1	
COLD	Coldfoot	6.62	6	P	Pn	18 13 33.8	0.0	
COLD				ePn	Pn	18 13 34.0	+0.1	
BM3	Burnt Mountain	7.48	22	P	Pn	18 13 45.0	-0.6	
INK	Inuvik	10.96	38	P	Pn	18 14 33.4	+0.5	
INK	Inuvik	10.96	38	P	Pn	18 14 33.4	+0.5	
	0.1nm,0.3s,baz=231,slow=13,SNR=2.8							
INK				LR	LR	18 19 42.0		
	comp=Z,43nm,19.7s,baz=31,slow=42							
YKA	Yellowknife Ar	17.68	68	P	Pn	18 15 59.6	+0.2	
YKA	Yellowknife Ar	17.68	68	P	Pn	18 15 59.6	+0.2	
	0.3nm,0.3s,baz=279,slow=10.0,SNR=7.7							
NVAR	Mina Array Bea	30.59	121	P	P	18 18 05.7	+1.1	
NVAR	Mina Array Bea	30.59	121	P	P	18 18 05.7	+1.1	
	0.3nm,0.7s,baz=305,slow=11,SNR=3.3							
TXAR	Lajitas Array	44.72	112	P	P	18 20 04.7	+1.2	
TXAR	Lajitas Array	44.72	112	P	P	18 20 04.7	+1.2	
	0.3nm,0.6s,baz=305,slow=6.5,SNR=4.2							
SONM	Songino Array	54.84	306	P	P	18 21 20.2	+0.3	
SONM	Songino Array	54.84	306	P	P	18 21 20.2	+0.3	
	0.4nm,0.5s,baz=40,slow=8.0,SNR=4.8							

IDC 28 18:23:39.0±1.9, 54°.64S×144°.37E, h0km, mb3.7/4, mb1 3.9/4, mb1mx3.7/15, mbtmp3.7/4, Error ellipse: s-maj=221.1km s-min=20.1km az=79.0, West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	23.82	171	P	P	18 28 53.0	-0.1
	0.6nm,0.7s,baz=331,slow=6.9,SNR=3.3						
ASAR	Alice Springs	31.90	342	P	P	18 30 05.9	-0.1
	0.5nm,0.7s,baz=166,slow=9.1,SNR=8.0						
WRA	Warramunga Arr	35.47	344	P	P	18 30 37.0	0.0
	1.4nm,0.6s,baz=168,slow=7.9,SNR=26						
QSPA	South Pole Qui	35.47	180	P	P	18 30 36.8	0.0
	2.6nm,1.1s,baz=22,slow=5.9,SNR=7.1						

IDC 28 18:24:27.4±13.0, 31°.69S×179°.34E, h563km±143km, mb3.1/5, mb1 3.2/5, mb1mx3.0/19, mbtmp3.1/5, Error ellipse: s-maj=99.7km s-min=20.4km az=57.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	31.81	283	P	P	18 30 07.0	+0.2
	1.8nm,0.5s,baz=103,slow=14,SNR=4.5						
STKA	Stephens Creek	31.98	260	P	P	18 30 07.8	-0.3
	2.6nm,0.9s,baz=100,slow=12,SNR=4.5						
ASAR	Alice Springs	40.79	270	P	P	18 31 20.6	-0.1
	0.9nm,0.6s,baz=105,slow=7.5,SNR=26						
WRA	Warramunga Arr	41.90	275	P	P	18 31 29.0	-0.4
	1.3nm,0.4s,baz=115,slow=7.6,SNR=49						
QSPA	South Pole Qui	58.42	180	P	P	18 33 29.4	-0.1
	3.4nm,0.6s,baz=18,slow=2.2,SNR=23						
JOF	Joensuu	142.73	336	ep	PKPdf	18 42 53.0	-3.2
	0.2nm,0.3s						
KAF	Kangasniemi	144.95	338	ep	PKPdf	18 43 00.0	-0.1
	0.6nm,0.3s						
FINES	FINESS Array B	145.52	338	PKPbc	PKPdf	18 43 01.6	+0.5
	3.1nm,0.7s,baz=60,slow=3.4,SNR=18						
NB2	NORSAR Subarra	149.62	349	PKP	PKPbc	18 43 12.1	-1.1
	comp=Z,0.1nm,0.6s,baz=31,slow=2.9						
NOA	NORSAR Array B	149.62	349	PKPbc	PKPbc	18 43 12.8	-0.5
	comp=Z,0.8nm,0.7s,baz=16,slow=4.2,SNR=4.7						
BRTR	Keskin Array B	151.15	296	PKPbc	PKPbc	18 43 17.7	+0.1
	comp=Z,0.6nm,0.5s,baz=134,slow=3.3,SNR=4.8						

ISCJB ***28*** *18:56:15.8±0.4, 24°.15N±0°.02×121°.83E±0°.02, h6km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=136.7*
JMA ***28*** *18:56:16.1±0.2, 24°.24N×121°.66E, h69km, M2.8*
TAP ***28*** *18:56:16.4, 24°.18N×121°.76E, h14km, ML3.6, B*
ISC 28 18:56:16.4±0.9, 24°.16N±0°.02×121°.81E±0°.02, h11km±7km, n62, σ0s74/96, 8C-8D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.16	339	*i* P	Pg	18 56 20.0	0.0
	baz=356						
EHP				*i* S	Sg	18 56 22.9	+0.3
	baz=356						
TWD	Chiawan	0.21	248	⇑*i* P	Pg	18 56 20.7	-0.1
	baz=243						
TWD				*i* S	Sg	18 56 23.8	+0.1
	baz=243						
HWA	Hwalien	0.26	226	*e* P	Pg	18 56 22.2	+0.6
	baz=224						
ENA	Nanau	0.28	348	⇑*i* P	Pg	18 56 22.0	-0.1
	baz=357						
ENA				S	Sg	18 56 25.9	0.0
	baz=357						
ESF	Shoufeng Towns	0.39	224	*e* P	Pg	18 56 24.7	+0.5
	baz=225						
TWC	Suao	0.45	5	*i* P	Pg	18 56 25.4	+0.1
	baz=5.0						
TWC				*i* S	Sg	18 56 31.6	+0.3
	baz=5.0						
ESL	Shilin	0.48	225	⇑*i* P	Pg	18 56 25.7	-0.1
	baz=226						
ESL				*e* S	Sb	18 56 34.1	+0.1
	baz=226						
NNS	Nan Shan	0.48	306	⇑*i* P	Pg	18 56 25.3	-0.6
	baz=307						
NNS				S	Sg	18 56 31.6	-0.8
	baz=307						
WHF	Hehuan Shan	0.49	269	⇑*i* P	Pg	18 56 25.6	-0.6
	baz=267						
WHF				S	Sg	18 56 31.8	-0.9
	baz=267						
TWE	Neicheng	0.58	347	⇑*i* P	Pg	18 56 27.5	-0.2
	baz=351						
TWE				*i* S	Sg	18 56 35.1	-0.2
	baz=351						
TWT	Tachien	0.58	280	⇑*i* P	Pg	18 56 27.7	-0.1
	baz=278						
TWT				*i* S	Sg	18 56 35.2	-0.3
	baz=278						
ILA	Ilan	0.61	355	*e* P	Pg	18 56 27.8	-0.5
	baz=352						
NSK	Sanguang	0.66	322	⇑*i* P	Pg	18 56 28.6	-0.6
	baz=324						
NSK				*i* S	Sg	18 56 37.1	-0.8
	baz=324						
EHY	Hungye	0.78	214	⇓P	Pg	18 56 30.3	-1.3
	baz=223						
TWA	Mucha	0.84	346	*e* P	Pg	18 56 32.5	-0.2
	baz=348						
TWA				*e* S	Sg	18 56 43.9	+0.1
	baz=348						
TWB1	Santiao Chiao	0.86	11	*e* P	Pg	18 56 31.9	-1.3
	baz=8.0						
SMLT	Sun Moon Lake	0.87	252	⇓*i* P	Pg	18 56 32.6	-0.7
	baz=250						
SMLT				*e* S	Sg	18 56 43.8	-0.8
	baz=250						
NSTT	Nanjuang	0.87	303	⇓*i* P	Pg	18 56 33.0	-0.3
	baz=303						
NSTT				S	Sg	18 56 43.7	-0.9
	baz=303						
TYC	Yuchr	0.90	254	⇓*i* P	Pg	18 56 33.0	-0.8
	baz=253						
NWF	Wu-fen Shan	0.91	359	*e* P	Pg	18 56 34.1	+0.1
	baz=353						
NWF				*e* S	Sg	18 56 45.6	-0.4
	baz=353						
TAP1	Taipei	0.92	344	*e* P	Pg	18 56 34.1	0.0
	baz=336						
TAP	Taipei	0.92	343	*e* P	Pb	18 56 34.7	+0.3
	baz=336						
TWF1	Yuli	0.93	210	*e* P	Pg	18 56 32.4	-1.9
	baz=222						
TWQ1	Liyutan	0.96	282	*e* P	Pg	18 56 35.0	0.0
	baz=281						
TWQ1				*e* S	Sg	18 56 47.6	+0.1
	baz=281						
NCU	National Centr	0.99	325	*e* P	Pg	18 56 34.3	-1.1
	baz=326						
NCU				*e* S	Sb	18 56 49.0	+0.4
	baz=326						
NSY	Sanyi	0.99	285	P	Pg	18 56 35.5	+0.1
	baz=285						
NSY				*e* S	Sb	18 56 49.5	+0.8
	baz=285						
HSN	Hsinchu	1.00	310	*e* P	Pg	18 56 35.6	0.0
	baz=305						
HSN				*e* S	Sn	18 56 50.3	-0.2
	baz=305						
TWS1	Kuangyinshan	1.00	340	*e* P	Pg	18 56 35.4	-0.4
	baz=348						
TWS1				*e* S	Sb	18 56 49.1	0.0
	baz=348						
YUS	Yu-Shan	1.02	230	⇓*i* P	Pg	18 56 35.6	-0.6
	baz=218						
YUS				*e* S	Sg	18 56 50.7	+1.1
	baz=218						
TCU	Taichung	1.03	270	*e* P	Pb	18 56 36.7	+0.4
	baz=269						
TCU				*e* S	Sb	18 56 50.7	+0.8
	baz=269						
WNT	Mingjian	1.06	255	P	Pg	18 56 36.9	+0.1
	baz=251						
WNT				S	Sb	18 56 52.0	+1.2
	baz=251						
ALS	Alishan	1.12	235	⇓*i* P	Pb	18 56 37.3	-0.7
	baz=234						
CHKT	Chengkung	1.13	201	*e* P	Pb	18 56 36.2	-1.7
	baz=187						
TWY	Chenhua	1.13	351	*e* P	Pn	18 56 38.7	+0.4
	baz=336						
YOJ	Yonaguni jima	1.14	74	⇓*i* P	Pb	18 56 38.0	-0.2
	baz=93						
YOJ				*e* S	Sb	18 56 53.8	+0.8
	baz=93						
YOJ	Yonaguni jima	1.14	74	P	Pb	18 56 38.0	-0.2
YOJ				S	Sn	18 56 54.4	+0.4
CHN5	Tsauling	1.17	242	*e* P	Pb	18 56 38.1	-0.6
	baz=241						
CHN5				S	Sn	18 56 55.9	+1.0
	baz=241						
ELDTW	Lidau	1.20	217	*e* P	Pn	18 56 36.9	-2.4
	baz=202						
WGK	Gukeng	1.23	248	*e* P	Pn	18 56 38.8	-0.8
	baz=247						
WTP	Ta-pu	1.42	231	⇓*i* P	Pn	18 56 42.2	-0.1
	baz=229						
WTP				*e* S	Sn	18 57 00.8	-0.2
	baz=229						
WTCT	Ta-ch'eng	1.42	259	*e* P	Pn	18 56 42.1	-0.2
	baz=259						
WTCT				*e* S	Sg	18 57 02.6	+0.3
	baz=259						
CHY	Chiayi	1.43	243	*e* P	Pn	18 56 42.8	+0.6
	baz=242						
PCYT	Pengchaiyu	1.49	9	*e* P	Pn	18 56 42.9	-0.2
	baz=7.0						
TWG	Pinlang	1.49	207	*e* P	Pn	18 56 40.3	-2.9
	baz=190						
TWK	Hsinying	1.50	234	*e* P	Pn	18 56 43.4	+0.1
	baz=232						
TWK				*e* S	Sb	18 57 04.8	+1.4
	baz=232						
CHN1	Nanshi	1.52	231	P	Pn	18 56 44.1	+0.5
	baz=221						
CHN1				*e* S	Sg	18 57 06.4	+1.1
	baz=221						
WSF	Szhu	1.54	251	*e* P	Pn	18 56 43.9	0.0
	baz=251						
WSF				*e* S	Sn	18 57 04.5	+0.7
	baz=251						
CHN8	Yiju	1.67	241	*e* P	Pn	18 56 45.9	+0.3
	baz=241						
CHN3	Shinhua	1.70	231	*e* P	Pn	18 56 46.5	+0.4
	baz=229						
ECL	Taimali	1.74	207	*e* P	Pn	18 56 46.9	+0.3
	baz=193						
IRIF	Iriomote-Funau	1.77	84	P	Pn	18 56 46.6	-0.4
IRIF				S	Sn	18 57 09.3	-0.1
HATJ	Hateruma jima	1.83	93	P	Pn	18 56 47.8	0.0
HATJ				*e* S	Sn	18 57 11.5	+0.5
TWM1	Shoushan	1.84	224	*e* P	Pn	18 56 48.6	+0.7
	baz=222						
SGLT	Jiouru	1.87	221	*e* P	Pn	18 56 50.1	+1.7
	baz=210						
EAST	Anshuo	1.97	207	*e* P	Pn	18 56 50.1	+0.2
	baz=194						
JKRS	Kuro-shima	2.01	87	P	Pn	18 56 50.6	+0.2
JKRS				*e* S	Sn	18 57 16.8	+1.2
SCZT	Fangliau	2.08	212	*e* P	Pn	18 56 51.7	+0.4
	baz=194						
PNG	Penghu	2.14	255	*e* P	Pn	18 56 50.7	-1.5
	baz=255						
JIJ	Ishigaki jima	2.14	84	P	Pn	18 56 51.8	-0.4
JIJ				S	Sn	18 57 18.2	-0.6
TWK1	Hengchun	2.39	203	*e* P	Pn	18 56 57.8	+2.2
	baz=190						
JTJ	Tarama	2.69	79	P	Pn	18 56 59.8	+0.2
JTJ				*e* S	Sn	18 57 32.2	+0.1
KNM	Kinmen	3.09	276	*e* P	Pn	18 57 04.8	-0.4
	baz=275						

NIED ***28*** *19:10:00, 24°.20N×121°.60E, h5km, Mw4.3 Best double couple: M0 2.75000×10^15 NP1:φs=64.00000°, δ80.00000°, λ87.00000°. NP2:φs=260.00000°, δ10.00000°, λ105.00000°.*
JMA ***28*** *19:10:52.6±0.3, 24°.20N×121°.65E, h66km, M3.5*
BJI ***28*** *19:10:52.4, 24°.18N×121°.85E, h9km, mB3.9/2, mb4.1/6, ML4.2/6, Ms3.5/4, Ms7 3.5/3*
ISCJB ***28*** *19:10:53.2±0.3, 24°.18N±0°.01×121°.81E±0°.02, h20km±2km, mb3.7/9, MS2.8/1, Error ellipse: s-maj=3.1km s-min=2.1km az=32.9*
TAP ***28*** *19:10:53.0, 24°.18N×121°.74E, h13km, ML4.2, B*
IDC ***28*** *19:11:02.3±6.0, 24°.13N×121°.67E, h107km±58km, mb3.4/8, mb1 3.5/9, mb1mx3.3/26, mbtmp3.4/9, MS2.6/2, Ms1 2.6/2, ms1mx2.4/23, Error ellipse: s-maj=30.6km s-min=15.0km az=71.0*
ISC 28 19:10:52.6±0.8, 24°.16N±0°.02×121°.78E±0°.02, h16km±5km, n81, σ0s76/124, mb3.8/9, 13C-11D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	Heping Village	0.15	348	*i* P	Pg	19 10 56.6	0.0
	baz=3.0						
EHP				*i* S	Sg	19 10 59.4	+0.1
	baz=3.0						
TWD	Chiawan	0.18	244	⇑*i* P	Pg	19 10 57.0	0.0
	baz=240						
TWD				*i* S	Sg	19 11 00.0	+0.1
	baz=240						
HWA	Hwalien	0.24	220	⇑*i* P	Pb	19 10 58.8	+0.2
	baz=222						
HWA				*e* S	Sb	19 11 03.8	+1.2
	baz=222						
ENA	Nanau	0.27	353	⇑*i* P	Pg	19 10 58.5	+0.1
	baz=1.0						
ENA				*e* S	Sg	19 11 02.4	0.0
	baz=1.0						
ESF	Shoufeng Towns	0.38	220	*e* P	Pg	19 11 00.5	+0.2
	baz=224						
ESF				*e* S	Sb	19 11 07.8	+1.2
	baz=224						
TWC	Suao	0.45	9	⇑*i* P	Pg	19 11 02.0	+0.4
	baz=7.0						
TWC				*i* S	Sb	19 11 08.3	-0.4
	baz=7.0						
NNS	Nan Shan	0.46	307	⇑*i* P	Pg	19 11 01.8	-0.1
	baz=308						
NNS				S	Sg	19 11 07.7	-0.4
	baz=308						
ESL	Shilin	0.47	222	⇑*i* P	Pg	19 11 02.1	+0.2
	baz=225						
ESL				*e* S	Sb	19 11 10.0	+0.9
	baz=225						
WHF	Hehuan Shan	0.47	268	⇑*i* P	Pg	19 11 02.0	-0.1
	baz=266						
WHF				*e* S	Sg	19 11 08.1	-0.4
	baz=266						
TEGC	Jichi Village	0.50	206	*e* P	Pb	19 11 03.6	+0.6
	baz=195						
TEGC				*e* S	Sn	19 11 13.7	+0.4
	baz=195						
TWT	Tachien	0.56	280	⇑*i* P	Pb	19 11 04.1	+0.1
	baz=278						
TWT				S	Sg	19 11 11.3	+0.3
	baz=278						
TWE	Neicheng	0.57	350	⇑*i* P	Pg	19 11 04.0	+0.2
	baz=353						
TWE				S	Sg	19 11 11.7	+0.3
	baz=353						
ILA	Ilan	0.60	358	*e* P	Pb	19 11 04.8	0.0
	baz=355						
ILA				S	Sb	19 11 13.7	+0.7
	baz=355						
NSK	Sanguang	0.64	324	⇑*i* P	Pg	19 11 05.1	0.0
	baz=325						
NSK				*i* S	Sg	19 11 13.6	-0.1
	baz=325						
EHY	Hungye	0.77	213	⇓*e* P	Pb	19 11 06.8	-0.8
	baz=223						
EHY				*e* S	Sn	19 11 19.6	-0.5
	baz=223						
TWA	Mucha	0.83	348	*e* P	Pb	19 11 08.8	0.0
	baz=350						
NSTT	Nanjuang	0.85	304	⇑*i* P	Pg	19 11 09.2	+0.1
	baz=304						
NSTT				*i* S	Sb	19 11 19.8	-0.3
	baz=304						
SMLT	Sun Moon Lake	0.85	251	⇓*i* P	Pb	19 11 09.1	+0.1
	baz=250						
SMLT				*e* S	Sb	19 11 20.4	+0.2
	baz=250						
TWB1	Santiao Chiao	0.87	13	*e* P	Pg	19 11 09.6	+0.2
	baz=9.0						
TYC	Yuchr	0.88	253	⇓*i* P	Pb	19 11 09.4	0.0
	baz=245						
TYC				S	Sb	19 11 20.7	-0.2
	baz=245						
TAP1	Taipei	0.90	345	*e* P	Pn	19 11 10.5	-0.1
	baz=345						
TAP1				*e* S	Sg	19 11 22.1	+0.1
	baz=345						
NWF	Wu-fen Shan	0.91	0	P	Pg	19 11 10.5	+0.3
	baz=352						
NWF				S	Sb	19 11 21.8	-0.1
	baz=352						
TAP	Taipei	0.91	344	P	Pn	19 11 10.7	0.0
	baz=345						
TAP				S	Sg	19 11 22.5	+0.3
	baz=345						
TWF1	Yuli	0.92	209	⇓*e* P	Pb	19 11 08.9	-1.2
	baz=218						
TWF1				*e* S	Sn	19 11 25.0	+1.3
	baz=218						
TWQ1	Liyutan	0.93	282	P	Pn	19 11 11.3	+0.2
	baz=281						
TWQ1				*e* S	Sn	19 11 24.2	+0.1
	baz=281						
NSY	Sanyi	0.96	286	*i* P	Pn	19 11 12.1	+0.7
	baz=285						
NSY				*e* S	Sn	19 11 25.7	+0.9
	baz=285						
NCU	National Centr	0.97	327	*i* P	Pn	19 11 12.0	+0.5
	baz=327						
NCU				S	Sn	19 11 25.5	+0.6
	baz=327						
HSN	Hsinchu	0.97	311	*e* P	Pg	19 11 11.8	+0.4
	baz=314						
HSN				*e* S	Sn	19 11 27.0	+2.0
	baz=314						
TWS1	Kuangyinshan	0.99	341	P	Pg	19 11 12.1	+0.4
	baz=349						
TWS1				*e* S	Sn	19 11 27.0	+1.5
	baz=349						
TCU	Taichung	1.00	269	⇓*i* P	Pg	19 11 13.0	+1.0
	baz=269						
TCU				*i* S	Sn	19 11 27.4	+1.5
	baz=269						
YUS	Yu-Shan	1.01	229	⇓*i* P	Pb	19 11 12.2	+0.3
	baz=218						
YUS				S	Sg	19 11 26.5	+1.1
	baz=218						
WNT	Mingjian	1.04	254	*e* P	Pg	19 11 13.2	+0.6
	baz=251						

YOJ	**Yonaguni jima**	**1.17**	**75**	⇓*i*P		**Pb**	**19 11 14.7**	**+0.4**
	baz=67								
YOJ				*e*S		**Sg**	**19 11 31.1**	**+0.7**
	baz=67								
YOJ	**Yonaguni jima**	**1.17**	**75**	P		**Pb**	**19 11 14.7**	**+0.4**
YOJ				S		**Sg**	**19 11 31.3**	**+1.0**
ELDTW	**Lidau**	**1.19**	**216**	⇑*e*P		**Pn**	**19 11 13.4**	**-1.3**
	baz=216								
WGK	**Gukeng**	**1.21**	**247**	*e*P		**Pb**	**19 11 15.6**	**+0.5**
	baz=247								
WTCT	**Ta-ch'eng**	**1.40**	**258**	*e*P		**Pn**	**19 11 17.1**	**-0.3**
	baz=259								
WTP	**Ta-pu**	**1.40**	**230**	⇓*e*P		**Pb**	**19 11 18.5**	**+0.1**
	baz=219								
WTP				*e*S		**Sg**	**19 11 38.3**	**+0.5**
	baz=219								
CHY	**Chiayi**	**1.40**	**242**	*e*P		**Pb**	**19 11 18.6**	**+0.2**
	baz=243								
CHY				*e*S		**Sg**	**19 11 39.1**	**+1.3**
	baz=243								
TWK	**Hsinying**	**1.48**	**233**	*e*P		**Pb**	**19 11 20.1**	**+0.4**
	baz=234								
TWK				*e*S		**Sg**	**19 11 39.9**	**-0.4**
	baz=234								
TWG	**Pinlang**	**1.48**	**206**	*e*P		**Pn**	**19 11 16.9**	**-1.7**
	baz=206								
CHN1	**Nanshi**	**1.50**	**230**	*e*P		**Pb**	**19 11 20.2**	**+0.1**
	baz=231								
TTN	**Taitung**	**1.51**	**203**	*e*P		**Pn**	**19 11 17.1**	**-1.9**
	baz=203								
WSF	**Szhu**	**1.51**	**250**	⇓P		**Pb**	**19 11 20.4**	**+0.2**
	baz=252								
WSF				*e*S		**Sg**	**19 11 41.0**	**-0.4**
	baz=252								
CHN8	**Yiju**	**1.65**	**241**	*e*P		**Pb**	**19 11 21.9**	**-0.6**
	baz=226								
CHN8				*e*S		**Sg**	**19 11 45.4**	**-0.3**
	baz=226								
CHN3	**Shinhua**	**1.69**	**230**	*e*P		**Pb**	**19 11 23.6**	**+0.4**
	baz=230								
CHN3				*e*S		**Sg**	**19 11 47.9**	**+1.0**
	baz=230								
ECL	**Taimali**	**1.73**	**206**	*e*P		**Pn**	**19 11 21.0**	**-1.0**
	baz=192								
SCLT	**Jiali**	**1.75**	**236**	*e*P		**Pn**	**19 11 22.7**	**+0.4**
	baz=237								
IRIF	**Iriomote-Funau**	**1.79**	**84**	P		**Pn**	**19 11 23.3**	**+0.5**
IRIF				S		**Sb**	**19 11 46.8**	**-0.5**
TAI1	**Yung-k'ang**	**1.81**	**232**	*e*P		**Pb**	**19 11 24.8**	**-0.5**
	baz=233								
TWM1	**Shoushan**	**1.82**	**223**	*e*P		**Pb**	**19 11 25.8**	**+0.2**
	baz=223								
SGLT	**Jiouru**	**1.85**	**220**	*e*P		**Pb**	**19 11 26.2**	**+0.1**
	baz=210								
HATJ	**Hateruma jima**	**1.86**	**93**	P		**Pn**	**19 11 24.5**	**+0.8**
HATJ				S		**Sn**	**19 11 47.3**	**+0.4**
TAW	**Tawu**	**1.97**	**204**	*e*P		**Pb**	**19 11 28.4**	**+0.3**
	baz=192								
JKRS	**Kuro-shima**	**2.04**	**87**	P		**Pn**	**19 11 27.4**	**+1.1**
SCZT	**Fangliau**	**2.07**	**211**	*e*P		**Pn**	**19 11 28.3**	**+1.6**
	baz=195								
PNG	**Penghu**	**2.12**	**254**	*e*P		**Pn**	**19 11 27.1**	**-0.2**
	baz=256								
LAY	**Lan-yu**	**2.12**	**186**	*e*P		**Pn**	**19 11 25.8**	**-1.6**
	baz=187								
JIJ	**Ishigaki jima**	**2.17**	**84**	P		**Pn**	**19 11 28.5**	**+0.4**
JIJ				S		**Sn**	**19 11 55.1**	**+0.5**
HEN	**Hengchun**	**2.35**	**204**	*e*P		**Pb**	**19 11 34.5**	**0.0**
	baz=195								
TWK1	**Hengchun**	**2.38**	**202**	*e*P		**Pn**	**19 11 31.7**	**+0.7**
	baz=189								
JTJ	**Tarama**	**2.71**	**79**	P		**Pn**	**19 11 36.3**	**+0.8**
JTJ				*e*S		**Sn**	**19 12 09.1**	**+1.1**
QZH	**Quanzhou**	**3.00**	**286**	⇑*i*Pn		Pn	19 11 29.3	-10
QZH				Sn		**Sn**	**19 12 13.3**	**-1.9**
QZH				smax	smax			
	comp=N,690nm,0.8s							
QZH				smax	smax			
	comp=E,390nm,0.8s							
KNM	**Kinmen**	**3.06**	**275**	*e*P		**Pn**	**19 11 41.7**	**+1.4**
	baz=275								
NJ2	**Nanjing**	**8.27**	**342**	*e*P		Pn	19 12 59.8	+7.9
NJ2				pP		Pb	19 13 03.3	-12
NJ2				sP			19 13 06.3	
NJ2				S		**Sn**	**19 14 26.0**	**+0.9**
NJ2				pmax	pmax			
	comp=Z,10.0nm,0.6s							
NJ2				smax	smax			
	comp=N,60nm,0.9s							
NJ2				smax	smax			
	comp=E,110nm,1.1s							
NJ2				LR	LR			
	comp=N,150nm,9.5s							
NJ2				LR	LR			
	comp=E,20nm,8.4s							
NJ2				LR	LR			
	comp=Z,210nm,11.4s							
WHN	**Wuhan**	**9.16**	**316**	*e*P		Pn	19 12 56.5	-7.6
WHN				S		Sn	19 14 38.3	-8.6
WHN				LR	LR			
	comp=N,600nm,10.2s							
WHN				LR	LR			
	comp=E,450nm,9.8s							
KSRS	**Korea Array**	**14.26**	**20**	P		**P**	**19 14 20.2**	**-0.8**
	comp=E,0.3nm,0.3s,baz=199,slow=12,SNR=16								
JHJ	**Hachijo jima 2**	**18.13**	**56**	LR		LR	19 22 24.3	
	comp=E,9.2nm,19.6s,baz=320,slow=37								
CMAR	**Chiang Mai Arr**	**22.00**	**259**	P		**P**	**19 15 47.1**	**+0.8**
	comp=E,1.0nm,1.0s,baz=60,slow=6.9,SNR=6.0								
GTA	**Gaotai**	**23.99**	**315**	*e*P		**P**	**19 16 07.0**	**+0.4**
GTA				pP		pP	19 16 17.5	+6.1
GTA				pmax	pmax			
	comp=Z,2.0nm,1.0s							
SONM	**Songino Array**	**26.60**	**336**	P		**P**	**19 16 30.2**	**0.0**
	comp=Z,2.5nm,1.0s,baz=146,slow=9.2,SNR=14								
SONM				LR		LR	19 27 25.9	
	comp=Z,23nm,19.2s,baz=70,slow=37								
MKAR	**Makanchi Array**	**38.73**	**316**	P		**P**	**19 18 15.5**	**-0.5**
	comp=Z,0.7nm,0.5s,baz=98,slow=9.9,SNR=12								
ZALV	**Zalesovo Beam**	**40.56**	**327**	P		**P**	**19 18 30.6**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=116,slow=7.8,SNR=9.3								
WRA	**Warramunga Arr**	**45.51**	**163**	P		**P**	**19 19 10.8**	**-0.8**
	comp=Z,1.0nm,0.7s,baz=344,slow=8.7,SNR=14								
ASAR	**Alice Springs**	**48.98**	**165**	P		**P**	**19 19 38.4**	**-0.1**
	comp=Z,0.5nm,0.7s,baz=340,slow=7.0,SNR=11								
FINES	**FINESS Array B**	**71.74**	**330**	P		**P**	**19 22 12.8**	**-0.9**
	comp=Z,1.1nm,0.8s,baz=60,slow=8.2,SNR=4.1								
YKA	**Yellowknife Ar**	**82.78**	**23**	P		**P**	**19 23 14.6**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=312,slow=5.2,SNR=4.1								

TAP 28 19:14:42.9,24.22N×121.75E,h12km,ML2.7,3C,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.20**	**224**	*e*P	Pg	19 14 47.7	+0.6
	baz=222						
ENA	**Nanau**	**0.20**	**359**	⇑*i*P	Pb	19 14 48.1	-0.5
	baz=1.0						
HWA	**Hwalien**	**0.28**	**208**	*e*P	Pb	19 14 49.7	-0.1
	baz=205						
TWC	**Suao**	**0.40**	**14**	*i*P	Pb	19 14 51.5	-0.4
	baz=15						
TWC				*e*S	Sb	19 14 57.4	-0.5
	baz=15						
NNS	**Nan Shan**	**0.40**	**303**	⇑*i*P	Pb	19 14 51.8	-0.3
	baz=302						
NNS				*e*S	Sb	19 14 57.8	-0.6
	baz=302						
WHF	**Hehuan Shan**	**0.45**	**260**	⇑*i*P	Pg	19 14 52.5	+0.2
	baz=259						
WHF				S	Sg	19 14 58.8	+0.3
	baz=259						
ESL	**Shilin**	**0.50**	**215**	*e*P	Pg	19 14 52.9	+0.2
	baz=214						
ESL				*e*S	Sb	19 15 00.6	-0.2
	baz=214						
TWE	**Neicheng**	**0.50**	**352**	P	Pb	19 14 53.6	-0.1
	baz=353						
TWE				*e*S	Sb	19 15 00.8	-0.2
	baz=353						
TWT	**Tachien**	**0.52**	**273**	P	Pb	19 14 54.3	+0.1
	baz=272						
TWT				S	Sb	19 15 01.9	0.0
	baz=272						
NSK	**Sanguang**	**0.57**	**322**	*e*P	Pb	19 14 55.0	0.0
	baz=322						
NSK				*e*S	Sb	19 15 03.1	-0.1
	baz=322						
NSTT	**Nanjuang**	**0.79**	**301**	*e*P	Pb	19 14 59.0	+0.4
	baz=301						
NSTT				*e*S	Sb	19 15 09.4	+0.1
	baz=301						
EHY	**Hungye**	**0.81**	**209**	*e*P	Pb	19 14 59.0	0.0
	baz=208						
TWB1	**Santiao Chiao**	**0.81**	**16**	*e*P	Pb	19 14 59.5	+0.6
	baz=16						
SMLT	**Sun Moon Lake**	**0.84**	**247**	*e*P	Pb	19 15 00.1	+0.5
	baz=246						
SMLT				*e*S	Sb	19 15 11.6	+0.6
	baz=246						
TYC	**Yuchr**	**0.87**	**249**	*e*P	Pn	19 15 00.9	-0.1
	baz=248						
TYC				*e*S	Sb	19 15 12.2	+0.6
	baz=248						
TWQ1	**Liyutan**	**0.90**	**278**	*e*P	Pb	19 15 00.8	+0.4
	baz=277						
TWF1	**Yuli**	**0.96**	**205**	*e*P	Pn	19 15 01.9	-0.3
	baz=204						
YUS	**Yu-Shan**	**1.03**	**225**	*e*P	Pb	19 15 03.2	-0.2
	baz=224						
ALS	**Alishan**	**1.11**	**231**	*e*P	Pg	19 15 04.8	+0.1
	baz=230						
CHN5	**Tsauling**	**1.16**	**238**	*e*P	Pn	19 15 05.1	0.0
	baz=237						
ELDTW	**Lidau**	**1.23**	**213**	*e*P	Pg	19 15 07.1	+0.5
	baz=212						
CHN1	**Nanshi**	**1.52**	**227**	*e*P	Pb	19 15 11.5	+0.4
	baz=227						

TAP 28 19:14:46.1,24.20N×121.72E,h10km±1km,ML2.7,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan**	**0.17**	**224**	P	Pb	19 14 50.6	-0.6
	baz=221						
TWD				S	Sg	19 14 53.3	+1.1
	baz=221						
ENA	**Nanau**	**0.23**	**5**	P	Pb	19 14 51.7	-0.7
	baz=6.0						
ENA				*i*S	Sg	19 14 55.8	+1.7
	baz=6.0						
NNS	**Nan Shan**	**0.40**	**307**	P	Pb	19 14 55.0	-0.5
	baz=307						
WHF	**Hehuan Shan**	**0.42**	**263**	P	Pg	19 14 55.3	+0.4
	baz=262						
TWC	**Suao**	**0.42**	**16**	*e*P	Pb	19 14 55.4	-0.4
	baz=17						
TWC				*e*S	Sb	19 15 01.7	-0.5
	baz=17						
TWT	**Tachien**	**0.50**	**276**	*e*P	Pb	19 14 56.9	-0.4
	baz=275						
TWT				*e*S	Sb	19 15 04.8	0.0
	baz=275						
TWE	**Neicheng**	**0.52**	**355**	P	Pb	19 14 57.3	-0.1
	baz=356						
TWE				*e*S	Sb	19 15 05.1	+0.1
	baz=356						
NSK	**Sanguang**	**0.58**	**325**	*e*P	Pb	19 14 58.2	-0.2
	baz=325						
NSK				*e*S	Sb	19 15 06.8	0.0
	baz=325						

GUC 28 19:32:09.1±0.5,21.18S×70.18W,h32km±2km,ML3.8, 4C-3D,Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB07	**Plate Boundary**	**0.61**	**153**	⇑*i*P	Pb	19 32 21.1	-0.7
PB07				*e*S	Sb	19 32 30.0	-0.5
PB07				AML	AML	19 32 31.3	
	comp=E,10μm,0.3s						
PB01	**Plate Boundary**	**0.66**	**79**	⇓*i*P	Pn	19 32 21.7	-0.7
PB01				*i*S	Sb	19 32 31.1	-0.5
PB01				AML	AML	19 32 32.8	
	comp=E,6μm,0.3s						
HMBC	**Humberstone**	**0.94**	**17**	⇓*i*P	Pn	19 32 24.6	-1.6
HMBC				*i*S	Sn	19 32 37.3	-1.3
HMBC				AML	AML	19 32 41.3	
	comp=N,5μm,0.6s						
PB09	**Plate Boundary**	**1.07**	**125**	⇓*i*P	Pn	19 32 28.6	+0.5
PB09				*i*S	Sb	19 32 43.0	-0.3
PB04	**Plate Boundary**	**1.26**	**149**	⇑*i*P	Pn	19 32 28.6	-1.9
PB04				*i*S	Sn	19 32 44.0	-2.3
PB04				AML	AML	19 32 48.3	
	comp=N,9μm,0.6s						
PSGC	**Pisagua**	**1.57**	**2**	*e*P	Pn	19 32 34.1	-0.9
PSGC				*i*S	Sn	19 32 54.6	+0.3
PSGC				AML	AML	19 32 57.1	
	comp=N,1μm,0.3s						
LVC	**Limon Verde**	**1.85**	**141**	⇑*i*P	Pb	19 32 40.9	-1.8
LVC				*i*S	Sb	19 33 05.5	-0.3
MNMC	**Minimini**	**2.11**	**15**	⇑*i*P	Pn	19 32 42.5	-0.1
MNMC				*i*S	Sn	19 33 09.6	+1.7

*JMA **28** 20:11:31.4±0.3,23.92N×121.71E,h15km,M3.0*
*ISCJB **28** 20:11:32.0±0.4,24.18N±0.02×121.79E±0.02,h1km±3km, Error ellipse: s-maj=3.6km s-min=2.2km az=43.9*
*TAP **28** 20:11:32.7,24.20N×121.73E,h9km,ML3.6,B*
ISC 28 20:11:32.5±0.8,24.19N±0.02×121.75E±0.02,h11km±6km, n57,σ0.81/88,8C-2D,Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.12**	**358**	*i*P	Pg	**20 11 35.7**	**+0.1**
	baz=11						
EHP				*i*S	Sg	**20 11 37.9**	**+0.2**
	baz=11						
TWD	**Chiawan**	**0.18**	**231**	⇓*i*P	Pg	**20 11 36.4**	**0.0**
	baz=224						
TWD				*i*S	Sg	**20 11 39.2**	**+0.1**
	baz=224						
ENA	**Nanau**	**0.23**	**359**	⇑*i*P	Pg	**20 11 37.6**	**+0.2**
	baz=5.0						
ENA				S	Sg	**20 11 40.9**	**+0.2**
	baz=5.0						
HWA	**Hwalien**	**0.25**	**211**	*e*P	Pg	**20 11 38.6**	**+0.9**
	baz=217						
ESF	**Shoufeng Towns**	**0.39**	**214**	*e*P	Pb	**20 11 40.8**	**-0.5**
	baz=224						
NNS	**Nan Shan**	**0.42**	**306**	⇑*i*P	Pb	**20 11 41.1**	**-0.9**
	baz=307						
NNS				S	Sg	**20 11 46.5**	**0.0**
	baz=307						
TWC	**Suao**	**0.43**	**13**	⇑*i*P	Pb	**20 11 41.2**	**-0.8**
	baz=9.0						
TWC				*e*S	Sg	**20 11 46.5**	**-0.1**
	baz=9.0						
WHF	**Hehuan Shan**	**0.44**	**264**	⇑*i*P	Pg	**20 11 41.5**	**+0.1**
	baz=263						
WHF				*i*S	Sg	**20 11 47.2**	**-0.1**
	baz=263						
ESL	**Shilin**	**0.47**	**217**	*e*P	Pg	**20 11 41.6**	**-0.1**
	baz=225						
TWT	**Tachien**	**0.52**	**277**	⇑*i*P	Pb	**20 11 43.6**	**-0.3**
	baz=276						
TWT				S	Sb	**20 11 50.3**	**-1.2**
	baz=276						
TWE	**Neicheng**	**0.53**	**352**	⇑*i*P	Pb	**20 11 43.4**	**-0.5**
	baz=3.0						
TWE				*i*S	Sb	**20 11 50.5**	**-1.1**
	baz=3.0						
ILA	**Ilan**	**0.57**	**0**	*e*P	Pb	**20 11 44.4**	**-0.2**
	baz=2.0						
ILA				*e*S	Sb	**20 11 52.2**	**-0.5**
	baz=2.0						
NSK	**Sanguang**	**0.60**	**324**	⇑*i*P	Pb	**20 11 44.6**	**-0.4**
	baz=325						
NSK				*e*S	Sb	**20 11 52.2**	**-1.3**
	baz=325						
EHY	**Hungye**	**0.79**	**210**	*e*P	Pb	**20 11 47.4**	**-0.7**
	baz=210						
TWA	**Mucha**	**0.80**	**349**	*e*P	Pb	**20 11 48.4**	**0.0**
	baz=351						
NSTT	**Nanjuang**	**0.81**	**303**	*e*P	Pb	**20 11 48.4**	**-0.2**
	baz=304						
SMLT	**Sun Moon Lake**	**0.83**	**248**	*i*P	Pb	**20 11 48.7**	**-0.3**
	baz=239						
SMLT				*i*S	Sb	**20 11 59.5**	**-0.8**
	baz=239						
TWB1	**Santiao Chiao**	**0.84**	**15**	*e*P	Pb	**20 11 48.8**	**-0.4**
	baz=9.0						
TWB1				*e*S	Sg	**20 11 59.6**	**-0.2**
	baz=9.0						
TYC	**Yuchr**	**0.86**	**251**	⇓*i*P	Pb	**20 11 49.1**	**-0.4**
	baz=241						
TYC				S	Sg	**20 11 59.5**	**-0.9**
	baz=241						
TAP1	**Taipei**	**0.87**	**347**	*e*P	Pn	**20 11 49.9**	**-0.8**
	baz=346						
TAP1				*e*S	Sb	**20 12 00.8**	**-0.4**
	baz=346						
TAP	**Taipei**	**0.87**	**346**	*e*P	Pn	**20 11 50.3**	**-0.4**
	baz=346						
TAP				*e*S	Sb	**20 12 01.3**	**0.0**
	baz=346						
NWF	**Wu-fen Shan**	**0.88**	**2**	P	Pb	**20 11 49.9**	**+0.1**
	baz=354						
NWF				S	Sg	**20 12 00.3**	**-0.6**
	baz=354						
TWQ1	**Liyutan**	**0.90**	**280**	*e*P	Pn	**20 11 50.2**	**-0.9**
	baz=280						
NSY	**Sanyi**	**0.93**	**284**	*e*P	Pn	**20 11 51.5**	**+0.1**
	baz=284						
NCU	**National Centr**	**0.93**	**327**	*e*P	Pn	**20 11 51.7**	**+0.2**
	baz=327						
NCU				*e*S	Sn	**20 12 06.1**	**+1.3**
	baz=327						
TWF1	**Yuli**	**0.93**	**206**	*e*P	Pg	**20 11 49.9**	**-0.5**
	baz=219						
HSN	**Hsinchu**	**0.93**	**311**	*e*P	Pn	**20 11 51.5**	**-0.1**
	baz=314						
TWS1	**Kuangyinshan**	**0.95**	**342**	*e*P	Pn	**20 11 52.0**	**+0.1**
	baz=343						
TCU	**Taichung**	**0.98**	**268**	*e*P	Pn	**20 11 52.8**	**+0.6**
	baz=267						
TCU				*e*S	Sn	**20 12 08.4**	**+2.4**
	baz=267						
YUS	**Yu-Shan**	**1.01**	**226**	*e*P	Pb	**20 11 52.2**	**0.0**
	baz=237						
WNT	**Mingjian**	**1.02**	**252**	*e*P	Pn	**20 11 52.9**	**+0.1**
	baz=247						
WNT				*e*S	Sn	**20 12 06.8**	**-0.3**
	baz=247						
TWY	**Chenhua**	**1.09**	**353**	*e*P	Pn	**20 11 54.6**	**+1.0**
	baz=6.0						
ALS	**Alishan**	**1.10**	**232**	*e*P	Pn	**20 11 53.6**	**-0.5**
	baz=233						
CHKT	**Chengkung**	**1.14**	**198**	*e*P	Pb	**20 11 53.6**	**-0.6**
	baz=185						
CHN5	**Tsauling**	**1.14**	**239**	*i*P	Pn	**20 11 55.2**	**+0.7**
	baz=239						
CHN5				*e*S	Sn	**20 12 11.5**	**+1.3**
	baz=239						
YOJ	**Yonaguni jima**	**1.19**	**77**	⇑*i*P	Pg	**20 11 55.1**	**-0.2**
	baz=67						
YOJ				*e*S	Sn	**20 12 12.1**	**+1.0**
	baz=67						
YOJ	**Yonaguni jima**	**1.19**	**77**	P	Pg	**20 11 55.1**	**-0.2**
YOJ				*e*S	Sn	**20 12 12.3**	**+1.2**
WGK	**Gukeng**	**1.20**	**245**	*e*P	Pg	**20 11 55.7**	**+0.2**
	baz=246						
WGK				*e*S	Sn	**20 12 12.9**	**+1.6**
	baz=246						
ELDTW	**Lidau**	**1.20**	**214**	*e*P	Pb	**20 11 54.5**	**-0.8**
	baz=216						
CHY	**Chiayi**	**1.39**	**241**	*e*P	Pb	**20 11 58.2**	**-0.4**
	baz=242						
WTP	**Ta-pu**	**1.40**	**228**	*e*P	Pg	**20 11 58.8**	**-0.7**
	baz=218						
WTP				*e*S	Sg	**20 12 19.8**	**+2.1**
	baz=218						
TWK	**Hsinying**	**1.48**	**232**	*e*P	Pg	**20 12 00.8**	**-0.1**
	baz=233						
TWK				*e*S	Sg	**20 12 20.2**	**+0.2**
	baz=233						
TWG	**Pinlang**	**1.50**	**205**	*e*P	Pn	**20 11 59.0**	**-0.4**
	baz=216						
CHN1	**Nanshi**	**1.50**	**228**	*e*P	Pg	**20 12 00.9**	**-0.4**
	baz=220						
CHN1				*e*S	Sg	**20 12 23.0**	**+2.2**
	baz=220						
WSF	**Szhu**	**1.50**	**249**	*e*P	Pn	**20 12 00.5**	**-0.8**
	baz=249						
CHN8	**Yiju**	**1.64**	**239**	*e*P	Pn	**20 12 00.9**	**-0.3**
	baz=226						
CHN3	**Shinhua**	**1.69**	**229**	*e*P	Pg	**20 12 05.2**	**+0.3**
	baz=233						
ECL	**Taimali**	**1.75**	**205**	*e*P	Pn	**20 12 02.7**	**0.0**
	baz=194						
IRIF	**Iriomote-Funau**	**1.82**	**85**	P	Pn	**20 12 03.7**	**0.0**
IRIF				S	Sn	**20 12 27.8**	**+1.1**
TWM1	**Shoushan**	**1.82**	**222**	*e*P	Pb	**20 12 05.4**	**-0.5**
	baz=226						
HATJ	**Hateruma jima**	**1.89**	**94**	P	Pn	**20 12 04.4**	**-0.2**
HATJ				*e*S	Sn	**20 12 27.7**	**-0.7**
JKRS	**Kuro-shima**	**2.07**	**88**	P	Pn	**20 12 07.9**	**+0.8**
JKRS				*e*S	Sn	**20 12 34.0**	**+1.1**
SCZT	**Fangliau**	**2.09**	**210**	*e*P	Pb	**20 12 09.6**	**-0.8**
	baz=198						
PNG	**Penghu**	**2.10**	**253**	*e*P	Pb	**20 12 08.9**	**-1.7**
	baz=255						
PNG				*e*S	Sb	**20 12 37.3**	**+0.6**
	baz=255						
JIJ	**Ishigaki jima**	**2.19**	**85**	P	Pn	**20 12 09.1**	**+0.2**
JIJ				S	Sn	**20 12 36.3**	**+0.3**
TWK1	**Hengchun**	**2.40**	**201**	*e*P	Pb	**20 12 13.8**	**-1.9**
	baz=194						
JTJ	**Tarama**	**2.73**	**80**	P	Pn	**20 12 17.7**	**+1.4**

*ISCJB **28** 20:40:24.8±0.6,1.45N±0.05×122.5E±0.1,h38km,mb3.7/8, MS3.4/2,Error ellipse: s-maj=21.3km s-min=7.2km az=4.8*
*IDC **28** 20:40:27.1±5.2,1.40N×122.52E,h35km±44km,mb3.5/8, mb1 3.8/11,mb1mx3.6/26,mbtmp3.7/11,ML4.0/3,MS3.3/3, Ms1 3.3/3,ms1mx2.8/28,Error ellipse: s-maj=39.0km s-min=14.4km az=79.0*
ISC 28 20:40:26.9±0.7,1.41N±0.07×122.4E±0.2,h38km,n17, σ1.25/16,mb3.8/8,1C,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**6.07**	**18**	⇑*i*P	Pn	**20 41 51.9**	**-2.3**
IPIL	**Ipil**	**6.34**	**2**	*e*P	Pn	**20 41 56.6**	**-1.2**
DAV	**Davao City (W)**	**6.47**	**30**	Pn	Pn	**20 42 00.1**	**+0.4**
	6.8nm,0.3s,baz=157,slow=5.8,SNR=5.0						
PAGZ	**Pagadian**	**6.47**	**9**	*e*P	Pn	**20 41 58.3**	**-1.4**
PAGZ				*e*S	Pn	20 42 08.6	+8.9
KAPI	**Kappang**	**6.89**	**202**	Pn	Pn	**20 42 05.8**	**+0.3**
	1.2nm,0.3s,baz=29,slow=11,SNR=7.7						
KAPI				Sn	Sn	**20 43 20.8**	**-1.9**
	baz=184,slow=19,SNR=2.0						
KAPI				LR	LR	20 45 17.2	
	comp=Z,155nm,19.4s,baz=259,slow=42						
BUKP	**Musuan**	**6.97**	**23**	*e*P	Pn	**20 42 05.3**	**-1.3**
BUKP				*e*S	Sn	20 43 32.3	+7.7
FITZ	**Fitzroy Crossi**	**19.66**	**171**	P	**P**	**20 44 52.5**	**-0.2**
	0.5nm,0.3s,baz=9.1,slow=10,SNR=17						
WRA	**Warramunga Arr**	**24.26**	**152**	P	**P**	**20 45 40.0**	**-0.7**
	0.9nm,0.4s,baz=326,slow=11,SNR=44						
ASAR	**Alice Springs**	**27.34**	**156**	P	**P**	**20 46 08.4**	**-0.2**
	0.2nm,0.3s,baz=333,slow=8.6,SNR=4.6						
STKA	**Stephens Creek**	**37.80**	**153**	P	**P**	**20 47 40.4**	**+0.6**
	2.2nm,0.7s,baz=338,slow=10,SNR=4.1						
MJAR	**Matsushiro Arr**	**37.91**	**21**	P	**P**	**20 47 39.9**	**-0.8**
	1.6nm,0.9s,baz=193,slow=10,SNR=4.2						
SONM	**Songino Array**	**48.27**	**346**	P	**P**	**20 49 05.2**	**+0.9**
	1.8nm,1.1s,baz=168,slow=8.1,SNR=8.8						
MKAR	**Makanchi Array**	**57.08**	**328**	P	**P**	**20 50 10.

MOVZ	**Moawhango**	**1.27**	**153**	PN	Pn	20 42 48.0 +0.2
MOVZ				SN	S	20 43 12.7 -0.4
BHHZ	**Black Hill Sta**	**1.47**	**146**	PN	Pn	20 42 49.2 -0.2
BHHZ				SN	S	20 43 14.2 -1.6
BKZ	**Black Stump Fm**	**1.47**	**128**	⇓PN	Pn	20 42 49.4 0.0
BKZ				SN	S	20 43 15.1 -0.7
URZ	**Urewera**	**1.66**	**90**	⇓PN	Pn	20 42 50.9 -0.2
URZ				SN	S	20 43 18.2 -0.3
RAHZ	**Arahi**	**1.76**	**112**	PN	Pn	20 42 52.1 +0.2
MCHZ	**McNeill Hill**	**1.77**	**132**	PN	Pn	20 42 52.3 +0.3
MCHZ				SN	S	20 43 20.5 +0.1
PNHZ	**Pukenui**	**1.88**	**151**	PN	Pn	20 42 52.4 -0.8
WPHZ	**Waipukurau**	**2.11**	**148**	SN	S	20 43 24.0 -2.5
MRZ	**Mangatainoka R**	**2.42**	**169**	PN	Pn	20 42 56.5 -2.2
MRZ				AML	AML	20 43 29.1
MRZ				AML	AML	20 43 30.4
OGWZ	**Otaki Gorge**	**2.54**	**177**	PN	Pn	20 42 57.8 -2.1
KIW	**Kapiti Island**	**2.58**	**181**	PN	Pn	20 42 58.0 -2.4
KIW				AML	AML	20 43 21.8
HOWZ	**Holdsworth Sta**	**2.65**	**171**	PN	Pn	20 42 58.2 -3.0
TCW	**Tory Channel**	**2.98**	**191**	PN	Pn	20 43 02.4 -2.6
TCW				AML	AML	20 43 30.3
MSWZ	**Moikau Station**	**3.14**	**177**	PN	Pn	20 43 03.1 -3.8
QRZ	**Quartz Range**	**3.18**	**216**	PN	Pn	20 43 04.7 -2.6
NNZ	**Nelson**	**3.19**	**203**	PN	Pn	20 43 04.5 -2.9
TUWZ	**Tuamarina**	**3.25**	**194**	PN	Pn	20 43 05.1 -3.0
TUWZ				AML	AML	20 43 05.6
BSWZ	**Blackbirch Sta**	**3.54**	**194**	PN	Pn	20 43 08.4 -3.2
THZ	**Tophouse**	**3.83**	**204**	PN	Pn	20 43 11.7 -3.5
KHZ	**Kahutara**	**4.28**	**195**	PN	Pn	20 43 16.4 -4.2
LTZ	**Lake Taylor**	**4.96**	**204**	PN	Pn	20 43 24.4 -4.8

IDC 28 20:49:20.9±7.7, 20°52S×178°39W, h542km±82km, mb3.0/8, mb1 3.3/8, mb1mx3.0/20, mbtmp3.0/8, Error ellipse: s-maj=63.0km s-min=34.0km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.12**	**264**	P	P	20 55 12.9	+0.2
	2.0nm,0.5s,baz=84,slow=12,SNR=5.0						
ASAR	**Alice Springs**	**44.16**	**257**	P	P	20 56 42.0	0.0
	1.4nm,0.6s,baz=96,slow=7.4,SNR=28						
WRA	**Warramunga Arr**	**44.24**	**262**	P	P	20 56 42.0	-0.6
	0.6nm,0.3s,baz=97,slow=7.4,SNR=48						
FITZ	**Fitzroy Crossi**	**52.66**	**262**	P	P	20 57 44.9	-0.3
	1.3nm,0.7s,baz=64,slow=4.6,SNR=8.2						
MJAR	**Matsushiro Arr**	**70.01**	**324**	P	P	20 59 38.3	0.0
	0.8nm,0.5s,baz=153,slow=6.9,SNR=3.3						
ILAR	**Eielson Array**	**88.41**	**13**	P	P	21 01 13.8	-1.0
	0.3nm,0.6s,baz=222,slow=5.5,SNR=4.5						
PDAR	**Pinedale Array**	**89.22**	**43**	P	P	21 01 19.8	+0.4
	0.4nm,0.7s,baz=256,slow=3.6,SNR=3.0						
CMAR	**Chiang Mai Arr**	**89.78**	**290**	P	P	21 01 22.5	+0.3
	0.3nm,0.7s,baz=99,slow=4.5,SNR=4.1						
AKASG	**Malin Array Be**	**142.85**	**331**	PKhKP	PKPpre	21 07 48.1	
	1.7nm,0.4s,baz=41,slow=4.5,SNR=7.6						
BRTR	**Keskin Array B**	**146.58**	**312**	PKPbc	PKPbc	21 08 01.5	-0.6
	0.4nm,0.6s,baz=95,slow=3.3,SNR=3.5						
GERES	**GERESS Array B**	**150.12**	**344**	PKPbc	PKPbc	21 08 10.1	-0.6
	0.3nm,0.5s,baz=11,slow=1.4,SNR=3.4						

*JMA **28** 20:50:39.4±0.5, 23°.99N×121°.66E, h32km, M2.6*
*TAP **28** 20:50:40.5, 24°.17N×121°.74E, h14km, ML3.5, B*
ISC 28 20:50:40.4±0.9, 24°.15N±0°.02×121°.77E±0°.02, h14km±6km, n52, σ0°72/84, 9C-1D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village**	**0.16**	**350**	P	**Pg**	**20 50 44.2**	**-0.2**
	baz=2.0						
EHP				*i* S	**Sg**	**20 50 47.0**	**0.0**
	baz=2.0						
TWD	**Chiawan**	**0.17**	**246**	⇑*i* P	**Pg**	**20 50 44.5**	**+0.1**
	baz=242						
TWD				*i* S	**Sg**	**20 50 47.5**	**+0.2**
	baz=242						
HWA	**Hwalien**	**0.23**	**221**	*e*P	**Pg**	**20 50 46.2**	**+0.8**
	baz=222						
ENA	**Nanau**	**0.28**	**354**	⇑*i* P	**Pg**	**20 50 46.0**	**-0.2**
ENA				*e*S	**Sg**	**20 50 49.8**	**-0.4**
ESF	**Shoufeng Towns**	**0.37**	**221**	*e*P	**Pg**	**20 50 47.9**	**+0.1**
	baz=224						
ESL	**Shilin**	**0.46**	**223**	⇑*i* P	**Pg**	**20 50 49.5**	**+0.1**
	baz=225						
TWC	**Suao**	**0.46**	**9**	*i* P	**Pg**	**20 50 49.6**	**0.0**
	baz=6.0						
TWC				S	**Sg**	**20 50 55.9**	**+0.1**
	baz=6.0						
WHF	**Hehuan Shan**	**0.46**	**269**	⇑*i* P	**Pg**	**20 50 49.4**	**-0.2**
	baz=267						
WHF				S	**Sg**	**20 50 55.7**	**-0.3**
	baz=267						
NNS	**Nan Shan**	**0.46**	**309**	⇑*i* P	**Pg**	**20 50 49.3**	**-0.3**
	baz=308						
NNS				S	**Sg**	**20 50 55.2**	**-0.7**
	baz=308						
TWT	**Tachien**	**0.55**	**281**	⇑*i* P	**Pb**	**20 50 51.6**	**-0.4**
	baz=279						
TWT				S	**Sb**	**20 50 59.0**	**-0.9**
	baz=279						
TWE	**Neicheng**	**0.58**	**351**	⇑*i* P	**Pg**	**20 50 51.5**	**-0.2**
	baz=353						
TWE				*e*S	**Sg**	**20 50 59.2**	**-0.1**
	baz=353						
ILA	**Ilan**	**0.61**	**358**	*e*P	**Pg**	**20 50 52.3**	**-0.1**
	baz=355						
ILA				*e*S	**Sb**	**20 51 01.1**	**-0.3**
	baz=355						
NSK	**Sanguang**	**0.64**	**324**	⇑*i* P	**Pg**	**20 50 52.7**	**-0.3**
	baz=325						
NSK				S	**Sb**	**20 51 01.4**	**-1.0**
	baz=325						
EHY	**Hungye**	**0.76**	**213**	*e*P	**Pg**	**20 50 54.3**	**-0.9**
	baz=223						
EHY				*e*S	**Sn**	**20 51 07.6**	**-0.5**
	baz=223						
SMLT	**Sun Moon Lake**	**0.84**	**252**	*e*P	**Pb**	**20 50 56.7**	**-0.2**
	baz=250						
SMLT				S	**Sb**	**20 51 07.3**	**-0.8**
	baz=250						
TWA	**Mucha**	**0.84**	**348**	*e*P	**Pg**	**20 50 56.3**	**-0.5**
	baz=350						
NSTT	**Nanjuang**	**0.85**	**304**	⇑P	**Pb**	**20 50 56.6**	**-0.4**
	baz=304						
NSTT				S	**Sb**	**20 51 07.4**	**-0.9**
	baz=304						
TYC	**Yuchr**	**0.87**	**254**	*e*P	**Pg**	**20 50 56.7**	**-0.5**
	baz=253						
TYC				*e*S	**Sb**	**20 51 08.0**	**-0.8**
	baz=253						
TWB1	**Santiao Chiao**	**0.88**	**13**	*e*P	**Pb**	**20 50 57.4**	**0.0**
	baz=9.0						
TWF1	**Yuli**	**0.91**	**209**	*e*P	**Pb**	**20 50 56.5**	**-1.4**
	baz=221						
TAP1	**Taipei**	**0.91**	**346**	*e*P	**Pg**	**20 50 58.2**	**+0.1**
	baz=345						
NWF	**Wu-fen Shan**	**0.92**	**1**	*e*P	**Pb**	**20 50 58.1**	**-0.1**
	baz=1.0						
TAP	**Taipei**	**0.92**	**345**	*e*P	**Pb**	**20 50 58.1**	**0.0**
	baz=345						
TWQ1	**Liyutan**	**0.93**	**282**	*e*P	**Pn**	**20 50 58.9**	**-0.2**
	baz=282						
TWQ1				*e*S	**Sn**	**20 51 13.0**	**+0.6**
	baz=282						
NSY	**Sanyi**	**0.96**	**286**	*e*P	**Pn**	**20 50 59.7**	**+0.2**
	baz=286						
NSY				*e*S	**Sn**	**20 51 13.7**	**+0.7**
	baz=286						
NCU	**National Centr**	**0.97**	**327**	*e*P	**Pn**	**20 50 59.9**	**+0.2**
	baz=327						
NCU				*e*S	**Sn**	**20 51 14.0**	**+0.6**
	baz=327						
HSN	**Hsinchu**	**0.98**	**312**	*e*P	**Pn**	**20 51 00.4**	**+0.6**
	baz=306						
HSN				*e*S	**Sn**	**20 51 14.4**	**+1.0**
	baz=306						
YUS	**Yu-Shan**	**1.00**	**229**	P	**Pb**	**20 50 59.7**	**-0.1**
	baz=218						
YUS				*e*S	**Sn**	**20 51 14.0**	**-0.6**
	baz=218						
TWS1	**Kuangyinshan**	**1.00**	**341**	*e*P	**Pb**	**20 50 59.5**	**-0.1**
	baz=349						
TWS1				*e*S	**Sn**	**20 51 14.3**	**+0.3**
	baz=349						
TCU	**Taichung**	**1.00**	**270**	*e*P	**Pn**	**20 51 00.8**	**+0.8**
	baz=270						
TCU				S	**Sn**	**20 51 14.8**	**+0.9**
	baz=270						
ALS	**Alishan**	**1.09**	**234**	⇓*i* P	**Pb**	**20 51 01.4**	**+0.1**
	baz=234						
ALS				*e*S	**Sn**	**20 51 16.6**	**-0.1**
	baz=234						
CHKT	**Chengkung**	**1.11**	**200**	*e*P	**Pb**	**20 51 00.6**	**-0.8**
	baz=191						
CHN5	**Tsauling**	**1.14**	**241**	*e*P	**Pg**	**20 51 02.6**	**+0.2**
	baz=241						
CHN5				S	**Sn**	**20 51 19.6**	**+1.9**
	baz=241						
YOJ	**Yonaguni jima**	**1.17**	**74**	P	**Pn**	**20 51 02.2**	**-0.2**
	baz=65						
YOJ	**Yonaguni jima**	**1.17**	**74**	P	**Pn**	**20 51 02.3**	**-0.2**
YOJ				*e*S	**Sb**	**20 51 19.1**	**+1.5**
ELDTW	**Lidau**	**1.18**	**216**	*e*P	**Pn**	**20 51 01.2**	**-1.5**
	baz=216						
WGK	**Gukeng**	**1.20**	**248**	*e*P	**Pn**	**20 51 02.8**	**0.0**
	baz=247						
WTCT	**Ta-ch'eng**	**1.39**	**258**	*e*P	**Pb**	**20 51 06.1**	**-0.1**
	baz=259						
WTCT				*e*S	**Sg**	**20 51 26.2**	**+0.9**
	baz=259						
WTP	**Ta-pu**	**1.39**	**230**	*e*P	**Pn**	**20 51 06.0**	**+0.5**
	baz=219						
WTP				*e*S	**Sg**	**20 51 26.5**	**+1.2**
	baz=219						
CHY	**Chiayi**	**1.39**	**242**	*e*P	**Pg**	**20 51 06.9**	**-0.3**
	baz=243						
CHY				*e*S	**Sg**	**20 51 27.3**	**+2.0**
	baz=243						
TWK	**Hsinying**	**1.47**	**233**	*e*P	**Pb**	**20 51 07.8**	**+0.2**
	baz=233						
TWK				*e*S	**Sg**	**20 51 28.9**	**+1.2**
	baz=233						
TWG	**Pinlang**	**1.47**	**206**	*e*P	**Pn**	**20 51 04.5**	**-2.0**
	baz=206						
CHN1	**Nanshi**	**1.49**	**230**	*e*P	**Pb**	**20 51 08.0**	**+0.1**
	baz=226						
CHN1				*e*S	**Sg**	**20 51 29.2**	**+0.7**
	baz=226						
WSF	**Szhu**	**1.51**	**251**	*e*P	**Pb**	**20 51 08.0**	**-0.2**
	baz=252						
WSF				*e*S	**Sg**	**20 51 29.0**	**0.0**
	baz=252						
ECL	**Taimali**	**1.72**	**206**	*e*P	**Pn**	**20 51 09.9**	**0.0**
	baz=192						
IRIF	**Iriomote-Funau**	**1.80**	**84**	P	**Pn**	**20 51 10.9**	**-0.1**
IRIF				*e*S	**Sn**	**20 51 34.8**	**+1.1**
TWM1	**Shoushan**	**1.81**	**223**	*e*P	**Pb**	**20 51 13.4**	**0.0**
	baz=223						
HATJ	**Hateruma jima**	**1.86**	**92**	*e*S	**Sn**	**20 51 34.8**	**-0.5**
JKRS	**Kuro-shima**	**2.05**	**87**	P	**Pn**	**20 51 15.1**	**+0.6**
SCZT	**Fangliau**	**2.06**	**211**	*e*P	**Pn**	**20 51 16.4**	**+1.7**
	baz=195						
PNG	**Penghu**	**2.11**	**254**	*e*P	**Pn**	**20 51 14.8**	**-0.6**
	baz=256						
JIJ	**Ishigaki jima**	**2.18**	**84**	P	**Pn**	**20 51 16.2**	**0.0**
JIJ				S	**Sn**	**20 51 42.6**	**-0.4**

IDC 28 20:53:17.8±7.0, 18°.50N×146°.99E, h75km±65km, mb3.6/15, mb1 3.7/16, mb1mx3.7/26, mbtmp3.6/16, ML4.0/1, Error ellipse: s-maj=26.3km s-min=13.5km az=94.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**19.57**	**338**	P	P	20 57 40.4	+0.8
	0.4nm,0.3s,baz=162,slow=10,SNR=6.5						
KSRS	**Korea Array**	**25.21**	**322**	P	P	20 58 36.0	-0.5
	1.8nm,0.8s,baz=147,slow=8.7,SNR=7.7						
USRK	**Ussuriysk Arra**	**28.54**	**337**	P	P	20 59 07.3	+1.0
	0.8nm,0.5s,baz=147,slow=8.6,SNR=4.4						
PETK	**Petropavlovsk-**	**35.53**	**11**	P	P	21 00 05.9	-1.5
	1.1nm,0.9s,baz=178,slow=8.2,SNR=3.0						
WRA	**Warramunga Arr**	**40.17**	**199**	P	P	21 00 46.6	-0.2
	0.5nm,0.3s,baz=19,slow=8.6,SNR=12						
FITZ	**Fitzroy Crossi**	**42.00**	**211**	P	P	21 01 01.1	-0.8
	1.1nm,0.8s,baz=42,slow=9.7,SNR=7.0						
ASAR	**Alice Springs**	**43.82**	**197**	P	P	21 01 16.9	+0.3
	0.5nm,0.5s,baz=22,slow=6.7,SNR=16						
SONM	**Songino Array**	**44.06**	**321**	P	P	21 01 18.7	+0.2
	2.2nm,0.7s,baz=136,slow=8.9,SNR=19						
ZALV	**Zalesovo Beam**	**58.92**	**322**	P	P	21 03 08.9	-0.1
	3.3nm,0.7s,baz=100,slow=7.5,SNR=16						
MKAR	**Makanchi Array**	**59.48**	**314**	P	P	21 03 13.3	+0.2
	0.6nm,0.6s,baz=87,slow=8.0,SNR=11						
ILAR	**Eielson Array**	**63.28**	**26**	P	P	21 03 37.9	-0.5
	0.5nm,1.0s,baz=258,slow=4.9,SNR=4.3						
YKA	**Yellowknife Ar**	**77.59**	**28**	P	P	21 05 06.2	+0.7
	0.6nm,0.7s,baz=285,slow=5.5,SNR=2.7						
NVAR	**Mina Array Bea**	**82.29**	**52**	P	P	21 05 33.2	+1.5
	0.3nm,0.6s,baz=269,slow=6.2,SNR=2.6						
ARCES	**ARCESS Array B**	**83.05**	**342**	P	P	21 05 35.0	+0.3
	2.0nm,0.7s,baz=59,slow=7.5,SNR=9.7						
PDAR	**Pinedale Array**	**87.08**	**46**	P	P	21 05 54.6	-1.2
	0.2nm,0.3s,baz=287,slow=4.8,SNR=2.4						
FINES	**FINESS Array B**	**87.57**	**336**	P	P	21 05 56.4	-1.0
	1.4nm,0.5s,baz=66,slow=5.3,SNR=17						

IDC 28 21:01:28.7±5.0, 18°.26S×177°.76W, h596km±58km, mb2.8/8, mb1 3.2/8, mb1mx3.0/19, mbtmp2.8/8, Error ellipse: s-maj=28.6km s-min=21.4km az=157.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**45.18**	**260**	P	P	21 08 53.8	-0.2
	0.6nm,0.4s,baz=97,slow=7.4,SNR=31						
WRA				PcP	PcP	21 10 20.8	-0.6
	0.3nm,0.6s,baz=100,slow=3.1,SNR=4.3						
ASAR	**Alice Springs**	**45.29**	**255**	P	P	21 08 54.6	-0.2
	1.0nm,0.5s,baz=92,slow=7.6,SNR=25						
ASAR				PcP	PcP	21 10 21.2	-0.5
	0.5nm,0.5s,baz=101,slow=3.9,SNR=7.8						
VNDA	**Vanda**	**60.15**	**185**	P	P	21 10 39.5	+0.1
	0.3nm,0.6s,baz=11,slow=7.6,SNR=3.8						
NVAR	**Mina Array Bea**	**79.25**	**44**	P	P	21 12 34.2	+0.6
	0.3nm,0.5s,baz=214,slow=7.9,SNR=3.8						
TXAR	**Lajitas Array**	**85.66**	**57**	P	P	21 13 05.0	-0.9
	0.9nm,0.7s,baz=218,slow=7.0,SNR=8.4						
ILAR	**Eielson Array**	**86.09**	**13**	P	P	21 13 06.2	-0.6
	0.3nm,0.4s,baz=222,slow=4.6,SNR=6.1						
PDAR	**Pinedale Array**	**87.18**	**43**	P	P	21 13 13.2	+0.4
	0.2nm,0.5s,baz=242,slow=4.2,SNR=2.3						
CMAR	**Chiang Mai Arr**	**89.58**	**289**	P	P	21 13 24.6	+0.3
	0.2nm,0.3s,baz=106,slow=5.0,SNR=2.5						
ARCES	**ARCESS Array B**	**126.77**	**350**	PKP	PKPdf	21 19 23.8	-0.9
	1.2nm,0.8s,baz=2.7,slow=2.6,SNR=5.6						
FINES	**FINESS Array B**	**133.69**	**344**	PKP	PKPdf	21 19 37.8	-0.2
	0.9nm,0.9s,baz=93,slow=3.8,SNR=4.6						
BRTR	**Keskin Array B**	**145.47**	**315**	PKPbc	PKPbc	21 20 01.1	-0.5
	0.6nm,0.7s,baz=96,slow=4.5,SNR=5.0						
GERES	**GERESS Array B**	**148.10**	**346**	PKPbc	PKPbc	21 20 08.3	+0.1
	0.5nm,0.6s,baz=349,slow=3.0,SNR=5.3						

*NEIC **28** 21:12:51.5±1.9, 33°.67N×141°.18E, h38km±15km, mb4.3/8, Error ellipse: s-maj=19.5km s-min=15.9km az=150.0*
NEIC Recorded [2 JMA] in Chiba, Kanagawa and Tokyo; [1 JMA] in Shizuoka, Tochigi and Yamanashi. Also recorded [1 JMA] on O-shima.
*NIED **28** 21:13:00, 35°.20N×139°.90E, h125km, Mw4.1 Best double couple: $M_0$1.41000×10^{15} NP1:ϕ_s177.00000°, δ80.00000°, λ-102.00000°. NP2:ϕ_s47.00000°, δ16.00000°, λ-41.00000°.*
*ISCJB **28** 21:13:11.8±0.3, 35°.15N±0°.04×139°.95E±0°.04, h121km±1km, mb4.0/24, Error ellipse: s-maj=7.0km s-min=4.8km az=135.8*
*JMA **28** 21:13:12.4±0.2, 35°.20N×139°.95E, h117km±2km, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s203.00000°, δ72.00000°, λ-73.00000°. NP2: ϕ_s339.00000°, δ25.00000°, λ-132.00000°. Principal axes: T Plg25.0000°, Azm280.0000°; N Plg16.0000°, Azm18.0000°; P Plg60.0000°, Azm138.0000°;*
JMA Felt II J1.
*IDC **28** 21:13:13.1±0.5, 35°.11N×139°.88E, h117km±5km, mb3.6/17, mb1 3.8/19, mb1mx3.7/28, mbtmp3.6/19 Error ellipse: s-maj=12.2km s-min=5.7km az=72.0*
ISC 28 21:13:12.7±0.5, 35°.20N±0°.04×139°.94E±0°.04, h116km±4km, n66, σ1°13/86, mb3.9/24, 4C-10D, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATJ	**Tateyama 2**	**0.17**	**195**	P	**Pn**	**21 13 28.9**	**+0.1**
TATJ				S	**Sn**	**21 13 41.1**	**+0.3**
JYO	**Yokosk**	**0.23**	**277**	⇓P	**Pn**	**21 13 29.1**	**+0.2**
JYO				S	**Sn**	**21 13 41.6**	**+0.6**
JCN	**Nagara**	**0.31**	**44**	⇓P	**Pn**	**21 13 29.9**	**+0.7**
KTR	**Katsuura**	**0.31**	**99**	⇑P	**Pn**	**21 13 29.1**	**-0.1**
KTR				*e*S	**Sn**	**21 13 41.1**	**-0.4**
BSO4	**Boso 4**	**0.38**	**122**	⇑P	**Pn**	**21 13 29.8**	**+0.4**
BSO4				S	**Sn**	**21 13 43.6**	**+1.7**
BSO3	**Boso 3**	**0.61**	**130**	⇑P	**Pn**	**21 13 30.6**	**0.0**
BSO3				S	**Sn**	**21 13 44.3**	**+0.2**
JIM2	**Oshima 3**	**0.64**	**222**	⇓P	**Pn**	**21 13 30.5**	**-0.7**
JIM2				S	**Sn**	**21 13 43.6**	**-1.5**
JOD2	**Odawara 2**	**0.70**	**276**	⇓P	**Pn**	**21 13 31.2**	**-0.5**
JOD2				S	**Sn**	**21 13 44.9**	**-1.1**
JIZS	**Izushimoda**	**0.99**	**242**	⇓P	**Pn**	**21 13 34.2**	**-0.1**
JIZS				S	**Sn**	**21 13 51.0**	**+0.4**
BSO1	**Boso 1**	**1.01**	**122**	⇑P	**Pn**	**21 13 33.6**	**-0.3**
BSO1				S	**Sn**	**21 13 50.5**	**+0.6**
JMY	**Miyakejima3**	**1.18**	**198**	⇓P	**Pn**	**21 13 35.9**	**-0.4**
JRY	**Ryogami san**	**1.18**	**314**	⇓P	**Pn**	**21 13 36.7**	**+0.4**
JRY				S	**Sn**	**21 13 54.9**	**+0.7**
JYN	**Shimob**	**1.18**	**285**	⇓P	**Pn**	**21 13 36.7**	**+0.3**
JYN				S	**Sn**	**21 13 54.9**	**+0.6**
JAG	**Ashikaga**	**1.29**	**342**	⇓P	**Pn**	**21 13 37.2**	**-0.3**
JAG				S	**Sn**	**21 13 55.7**	**-0.6**
SHZ3	**Shizuoka 3**	**1.43**	**265**	⇓P	**Pn**	**21 13 39.7**	**+0.6**
MJAR	**Matsushiro Arr**	**1.95**	**314**	P	**Pn**	**21 13 45.6**	**+0.3**
	31nm,0.3s,baz=144,slow=11,SNR=338						
MJAR				S	**Sn**	**21 14 11.0**	**+0.8**
	57nm,0.3s,baz=149,slow=24,SNR=16						
MAJO	**Matsushiro**	**1.95**	**314**	*e*Pn	**Pn**	**21 13 47.1**	**+1.8**
MAJO				*e*S	**Sn**	**21 14 12.3**	**+2.0**
MAT	**Matsushiro**	**1.95**	**314**	P	**Pn**	**21 13 45.7**	**+0.4**
MAT				S	**Sn**	**21 14 11.1**	**+0.8**
JHJ	**Hachijo jima 2**	**2.08**	**184**	P	**Pn**	**21 13 46.5**	**-0.4**
	174nm,0.3s,baz=341,slow=2.1,SNR=96						
JHJ				S	**Sn**	**21 14 12.2**	**-0.9**
	334nm,0.3s,baz=262,slow=23,SNR=21						
ERM	**Erimo**	**7.26**	**19**	*e*Pn	Pn	21 14 52.2	-3.8
JNU	**Nakatsue**	**7.79**	**257**	P	**Pn**	**21 15 04.5**	**+1.1**
	1.0nm,0.3s,baz=76,slow=6.0,SNR=7.4						
ASAJ	**Asahikawa**	**9.14**	**12**	*e*Pn	**Pn**	**21 15 18.6**	**-2.9**
ASAJ	**Asahikawa**	**9.14**	**12**	P	Pn	21 15 18.2	-3.3
	2.3nm,0.3s,baz=228,slow=11,SNR=31						
ASAJ				S	**Sn**	**21 16 56.8**	**-5.7**
	0.9nm,0.3s,baz=192,slow=20,SNR=3.6						
KSRS	**Korea Array**	**9.96**	**287**	P	**Pn**	**21 15 35.4**	**+2.8**
	0.2nm,0.3s,baz=102,slow=14,SNR=17						
USRK	**Ussuriysk Arra**	**10.87**	**328**	P	**Pn**	**21 15 45.1**	**+0.2**
	0.1nm,0.3s,baz=139,slow=13,SNR=2.4						
MDJ	**Mudanjiang**	**12.30**	**323**	*e*Pn	**P**	**21 16 09.4**	**-1.9**
BJT	**Baijiatuan**	**19.42**	**291**	*e*P	**P**	**21 17 29.9**	**0.0**
ENH	**Enshi**	**26.03**	**268**	*e*P	P	21 18 30.3	-4.8
	30nm,0.6s						
ULN	**Ulaanbaatar**	**27.46**	**308**	*e*P	**P**	**21 18 48.4**	**+0.4**
	2.0nm,0.8s						
SONM	**Songino Array**	**27.89**	**307**	P	**P**	**21 18 52.0**	**+0.3**
	3.0nm,0.7s,baz=105,slow=8.4,SNR=20						
FX1	**Attu Island--F**	**29.35**	**43**	P	**P**	**21 19 04.1**	**-0.3**
	3.3nm,0.5s,baz=270,slow=1.0,SNR=2.9						
CMAR	**Chiang Mai Arr**	**39.82**	**256**	P	**P**	**21 20 33.9**	**-1.6**
	1.0nm,0.7s,baz=47,slow=8.3,SNR=7.3						
LSA	**Lhasa**	**41.21**	**277**	*e*P	**P**	**21 20 44.3**	**-2.4**
	2.7nm,0.6s						
ZALV	**Zalesovo Beam**	**42.30**	**314**	P	**P**	**21 20 55.2**	**+0.5**
	1.7nm,0.3s,baz=103,slow=7.2,SNR=14						
ZALV				pP	**pP**	**21 21 21.1**	**0.0**
	0.4nm,0.4s,baz=102,slow=8.8,SNR=1.6						
ZALV				PcP	**PcP**	**21 22 46.2**	**+0.1**
	0.6nm,0.5s,baz=76,slow=2.7,SNR=3.6						
MK31	**Makanchi Array**	**44.11**	**303**	*e*P	**P**	**21 21 09.7**	**+0.3**
MKAR	**Makanchi Array**	**44.11**	**303**	*e*P	**P**	**21 21 10.2**	**+0.8**
MKAR	**Makanchi Array**	**44.11**	**303**	P	**P**	**21 21 10.1**	**+0.6**
	3.8nm,0.6s,baz=89,slow=9.3,SNR=34						
MKAR				pP	**pP**	**21 21 35.5**	**-0.5**
	0.8nm,0.6s,baz=54,slow=9.7,SNR=3.4						
TAPN	**Taplejung**	**44.90**	**275**	*e*P	**P**	**21 21 16.2**	**0.0**
	7.9nm,0.4s						
ODAN	**Odare**	**45.35**	**275**	*e*P	**P**	**21 21 19.5**	**-0.3**
	7.7nm,0.4s						
RAMN	**Ramite**	**45.96**	**275**	*e*P	**P**	**21 21 24.7**	**+0.1**
	34nm,0.7s						
GUN	**Gumba**	**46.17**	**277**	*e*P	**P**	**21 21 27.1**	**+0.8**
	25nm,0.8s						
PKI	**Pulchoki**	**46.68**	**276**	*e*P	**P**	**21 21 30.5**	**+0.2**
	11nm,0.6s						
PKIN	**Phulchoki**	**46.69**	**276**	*e*P	**P**	**21 21 30.2**	**-0.1**
	6.4nm,0.5s						
KKN	**Kakani**	**46.70**	**277**	*e*P	**P**	**21 21 30.9**	**+0.6**
	8.6nm,0.7s						
DMN	**Daman**	**46.91**	**277**	*e*P	**P**	**21 21 32.1**	**+0.1**
	12nm,0.8s					

OKSP	**Okmok Steeple**	**0.63**	**303**	P	**Pn**	**21 42 31.1**	**-0.4**
OKSO	**Okmok South**	**0.64**	**315**	P	**Pn**	**21 42 30.4**	**-1.1**
OKSO				S	**Sn**	**21 42 40.3**	**-0.3**
OKCE	**Okmok Cone E**	**0.69**	**319**	P	**Pn**	**21 42 32.0**	**-0.3**
OKCE				S	**Sn**	**21 42 43.6**	**+1.7**
NIKH	**Nikolski High**	**0.88**	**275**	P	**Pn**	**21 42 33.6**	**-1.2**
NIKH				S	**Sn**	**21 42 46.0**	**-0.2**
MGOD	**Makushin Gods**	**0.95**	**20**	P	**Pn**	**21 42 34.8**	**-1.0**
MREP	**Makushin Rep't**	**0.99**	**24**	P	**Pn**	**21 42 35.9**	**-0.5**
UNV	**Unalaska Valle**	**1.09**	**30**	P	**Pn**	**21 42 36.7**	**-0.9**
MCIR	**Makushin Cirqu**	**1.09**	**16**	P	**Pn**	**21 42 37.7**	**-0.1**
MTBL	**Makushin Table**	**1.15**	**22**	P	**Pn**	**21 42 38.0**	**-0.6**
AKRB	**Akutan Reef Bi**	**1.46**	**33**	P	**Pn**	**21 42 42.6**	**-0.2**
ZRO	**Akutan Zero**	**1.46**	**35**	P	**Pn**	**21 42 42.4**	**-0.4**
LVA	**Lava Point**	**1.50**	**33**	P	**Pn**	**21 42 43.9**	**+0.6**
AKLV	**Akutan Long Va**	**1.53**	**34**	P	**Pn**	**21 42 44.7**	**+1.0**
AKGG	**Akutan Green G**	**1.55**	**33**	P	**Pn**	**21 42 43.9**	**0.0**
AKUT	**Akutan**	**1.57**	**38**	P	**Pn**	**21 42 43.9**	**-0.4**
WESN	**West Dahl Nort**	**2.37**	**44**	P	**Pn**	**21 42 55.3**	**+0.1**
KOFP	**Korovin Flat P**	**4.13**	**264**	P	**Pn**	**21 43 20.2**	**+0.8**
FX1	**Attu Island--F**	**11.73**	**278**	Pn	**Pn**	**21 45 06.2**	**+2.7**
	1.0nm,0.3s,baz=268,slow=22,SNR=7.1						
PETK	**Petropavlovsk-**	**20.88**	**285**	P	**P**	**21 46 58.1**	**+1.0**
	1.2nm,0.4s,baz=90,slow=11,SNR=9.3						
PETK				LR	LR	21 53 21.0	
	comp=Z,26nm,18.9s,baz=248,slow=32						
MDJ	**Mudanjiang**	**41.12**	**285**	P	**P**	**21 49 58.5**	**0.0**
MDJ				pmax	pmax		
	comp=Z,8.0nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,58nm,4.1s						
TXAR	**Lajitas Array**	**51.55**	**91**	P	**P**	**21 51 21.2**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=301,slow=5.3,SNR=4.7						
MKAR	**Makanchi Array**	**64.29**	**314**	P	**P**	**21 52 48.3**	**-1.3**
	comp=Z,0.3nm,0.7s,baz=33,slow=3.4,SNR=3.3						
FINES	**FINESS Array B**	**65.49**	**353**	P	**P**	**21 52 55.8**	**-1.3**
	comp=Z,0.4nm,0.6s,baz=14,slow=8.5,SNR=5.0						
AKASG	**Malin Array Be**	**75.81**	**349**	P	**P**	**21 53 59.2**	**-0.9**
	comp=Z,1.3nm,0.6s,baz=6.2,slow=4.8,SNR=3.3						
CMAR	**Chiang Mai Arr**	**77.65**	**284**	P	**P**	**21 54 11.0**	**+0.1**
	comp=Z,1.8nm,1.1s,baz=20,slow=5.3,SNR=6.7						
GERES	**GERESS Array B**	**78.62**	**359**	P	**P**	**21 54 15.7**	**-0.2**
	comp=Z,0.1nm,0.4s,baz=5.7,slow=5.8,SNR=3.7						
BRTR	**Keskin Array B**	**85.95**	**344**	P	**P**	**21 54 55.0**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=15,slow=3.2,SNR=6.8						

*IDC **28** 21:45:58.2±0.7, 30.°09S×177.°48W, h0km, mb4.2/11, mb1 4.4/11, mb1mx4.3/18, mbtmp4.2/11, MS3.5/4, Ms1 3.5/4, ms1mx3.1/29, Error ellipse: s-maj=24.0km s-min=15.9km az=81.0*
*ISCJB **28** 21:46:01.9±0.6, 30.°35S±0.°05×177.°7W±0.°1, h35km, mb4.4/17, MS3.5/3, Error ellipse: s-maj=13.1km s-min=6.4km az=8.3*
*NEIC **28** 21:46:03.0±0.4, 30.°30S×177.°59W, h35km, mb4.6/9, Error ellipse: s-maj=10.2km s-min=6.8km az=97.0*

ISC 28 21:46:03.3±0.5, 30°23S±0.°05×177°7W±0.°1, h35km, n74, σ1§16/72, mb4.5/17, MS3.3/3, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.00**	**346**	Pn	**Pn**	**21 46 19.7**	**-1.2**
RAO				*e*Sn	**Sn**	**21 46 31.5**	**-2.3**
RAO				Sn	Sn	21 46 32.1	-1.7
RAO	**Raoul Island**	**1.00**	**346**	**Pn**	**Pn**	**21 46 19.7**	**-1.2**
	2μm,0.3s,baz=96,slow=10.0,SNR=34						
RAO				Sn	**Sn**	**21 46 32.1**	**-1.7**
	5μm,0.3s,baz=99,slow=19,SNR=16						
RAO				LR	LR	21 46 35.5	
	comp=Z,2μm,19.7s,baz=193,slow=40						
URZ	**Urewera**	**9.11**	**207**	Pn	**Pn**	**21 48 10.4**	**-1.8**
URZ				Sn	**Sn**	**21 49 51.7**	**-1.7**
URZ	**Urewera**	**9.11**	**207**	Pn	**Pn**	**21 48 10.4**	**-1.8**
	1.0nm,0.3s,baz=49,slow=20,SNR=5.7						
URZ				Sn	**Sn**	**21 49 51.7**	**-1.7**
	6.8nm,0.3s,baz=148,slow=14,SNR=9.9						
SNZO	**South Karori**	**12.67**	**207**	*e*P	**Pn**	**21 48 59.5**	**-1.4**
MSVF	**Nonsavu**	**13.04**	**342**	*e*P	**Pn**	**21 49 07.2**	**+0.9**
RPZ	**Rata Peaks**	**16.18**	**211**	Pn	**Pn**	**21 49 45.0**	**-3.0**
RPZ	**Rata Peaks**	**16.18**	**211**	Pn	**Pn**	**21 49 45.0**	**-3.0**
	0.8nm,0.3s,baz=230,slow=12,SNR=2.3						
DZM	**Mont Dzumac**	**16.42**	**296**	*e*LR	LR	21 53 38.9	
	226nm,23.8s						
DZM	**Mont Dzumac**	**16.42**	**296**	*e*Pn	**Pn**	**21 49 52.2**	**+1.0**
	8.8nm,0.6s						
DZM	**Mont Dzumac**	**16.42**	**296**	LR	LR	21 54 54.4	
	comp=Z,187nm,21.6s,baz=360,slow=32						
TBI	**Tubuai**	**26.04**	**82**	*e*LR	LR	21 57 42.1	
	118nm,27.8s						
ARMA	**Armidale**	**26.48**	**262**	*e*P	**P**	**21 51 37.3**	**-0.2**
PPT2	**Papeete2**	**28.50**	**70**	*e*LR	LR	21 59 01.7	
	124nm,26.2s						
HNR	**Honiara**	**29.42**	**310**	LR	LR	22 01 27.0	
	comp=Z,69nm,18.3s,baz=116,slow=32						
CTAO	**Charters Tower**	**34.07**	**279**	*e*P	**P**	**21 52 46.1**	**+1.6**
	11nm,0.8s						
STKA	**Stephens Creek**	**34.81**	**257**	*e*P	**P**	**21 52 52.3**	**+1.4**
	0.7nm,0.3s						
STKA	**Stephens Creek**	**34.81**	**257**	P	**P**	**21 52 53.8**	**+2.9**
	6.5nm,0.4s,baz=99,slow=11,SNR=52						
PMG	**Port Moresby**	**38.81**	**295**	LR	LR	22 05 05.5	
	comp=Z,40nm,20.1s,baz=63,slow=30						
COEN	**Coen**	**39.52**	**285**	*e*P	**P**	**21 53 31.3**	**+0.3**
	11nm,0.7s						
AS31	**Alice Springs**	**43.42**	**267**	*e*P	**P**	**21 54 03.1**	**+0.1**
ASAR	**Alice Springs**	**43.42**	**267**	P	**P**	**21 54 03.5**	**+0.5**
ASAR				PcP	**PcP**	**21 55 50.4**	**-0.6**
ASAR	**Alice Springs**	**43.42**	**267**	P	**P**	**21 54 03.5**	**+0.5**
	1.8nm,0.3s,baz=105,slow=7.4,SNR=21						
ASAR				PcP	**PcP**	**21 55 50.4**	**-0.6**
	0.9nm,0.6s,baz=122,slow=3.8,SNR=4.3						
ASAR				LR	LR	22 12 17.5	
	comp=Z,157nm,20.2s,baz=193,slow=36						
WRAB	**Tennant Creek**	**44.39**	**272**	*e*P	**P**	**21 54 10.3**	**-0.4**
	5.7nm,0.6s						
WRA	**Warramunga Arr**	**44.39**	**272**	P	**P**	**21 54 11.2**	**+0.5**
WRA	**Warramunga Arr**	**44.39**	**272**	P	**P**	**21 54 11.3**	**+0.5**
	5.9nm,0.6s,baz=112,slow=7.8,SNR=24						
VNDA	**Vanda**	**48.29**	**186**	*e*P	**P**	**21 54 40.1**	**-0.5**
	0.8nm,0.7s						
VNDA	**Vanda**	**48.29**	**186**	P	**P**	**21 54 43.5**	**+3.0**
	0.8nm,0.8s,baz=3.0,slow=7.9,SNR=7.2						
CASY	**Casey**	**55.43**	**208**	*e*P	**P**	**21 55 33.3**	**-0.6**
	11nm,0.7s						
MBWA	**Marble Bar**	**56.54**	**263**	*e*P	**P**	**21 55 42.5**	**-0.1**
	21nm,1.2s						
QSPA	**South Pole Qui**	**59.88**	**180**	*e*P	**P**	**21 56 07.0**	**+1.6**
	3.7nm,0.6s						
MAW	**Mawson**	**72.57**	**200**	P	**P**	**21 57 27.6**	**+1.1**
	1.9nm,0.6s,baz=39,slow=7.1,SNR=3.6						
MJAR	**Matsushiro Arr**	**78.28**	**325**	P	**P**	**21 58 00.1**	**+0.5**
MJAR	**Matsushiro Arr**	**78.28**	**325**	P	**P**	**21 58 00.1**	**+0.5**
	1.2nm,0.8s,baz=151,slow=6.6,SNR=3.1						
KSRS	**Korea Array**	**84.42**	**319**	P	**P**	**21 58 33.6**	**+1.6**
	0.3nm,0.4s,baz=135,slow=6.9,SNR=2.6						
KSAR	**Wonju Array Be**	**84.43**	**319**	P	**P**	**21 58 33.6**	**+1.5**
PETK	**Petropavlovsk-**	**85.72**	**345**	P	**P**	**21 58 38.2**	**-0.1**
PETK	**Petropavlovsk-**	**85.72**	**345**	P	**P**	**21 58 38.2**	**-0.1**
	4.4nm,0.8s,baz=134,slow=6.2,SNR=9.0						
USRK	**Ussuriysk Arra**	**87.18**	**326**	P	**P**	**21 58 47.3**	**+1.8**
	0.8nm,0.7s,baz=158,slow=5.0,SNR=3.2						
NVAR	**Mina Array Bea**	**87.91**	**43**	P	**P**	**21 58 50.0**	**+0.5**
NVAR	**Mina Array Bea**	**87.91**	**43**	P	**P**	**21 58 50.0**	**+0.5**
	0.8nm,1.0s,baz=226,slow=6.2,SNR=3.5						
TRQA	**Tornquist**	**89.34**	**135**	*e*P	**P**	**21 58 55.4**	**-0.9**
PDAR	**Pinedale Array**	**95.80**	**43**	P	**P**	**21 59 25.7**	**-0.4**
PDAR	**Pinedale Array**	**95.80**	**43**	P	**P**	**21 59 25.7**	**-0.4**
	0.5nm,0.7s,baz=240,slow=10,SNR=3.7						
MKAR	**Makanchi Array**	**117.90**	**310**	PKP	**PKPdf**	**22 04 45.0**	**-0.9**
MKAR	**Makanchi Array**	**117.90**	**310**	PKP	**PKPdf**	**22 04 45.0**	**-0.9**
	0.2nm,0.6s,baz=228,slow=1.8,SNR=4.3						
KKAR	**Karatay Array**	**125.23**	**304**	*e*PKPdf	**PKPdf**	**22 04 59.8**	**-0.4**
ARCES	**ARCESS Array B**	**138.49**	**348**	PKP	**PKPdf**	**22 05 24.1**	**-0.2**
ARCES	**ARCESS Array B**	**138.49**	**348**	PKP	**PKPdf**	**22 05 24.1**	**-0.2**
	1.0nm,0.8s,baz=44,slow=2.7,SNR=4.4						
JOF	**Joensuu**	**142.37**	**339**	*e*p	PKPdf	22 05 41.9	+10
	1.5nm,0.5s						
KAF	**Kangasniemi**	**144.49**	**341**	*e*p	PKPdf	22 05 41.2	+6.0
	2.2nm,0.5s						
FIA1	**FINESS Array S**	**145.09**	**340**	*e*PKPbc	**PKPbc**	**22 05 34.7**	**-1.1**
FINES	**FINESS Array B**	**145.09**	**340**	PKP	**PKPbc**	**22 05 35.4**	**-0.3**
FINES	**FINESS Array B**	**145.09**	**340**	PKP	**PKPbc**	**22 05 35.4**	**-0.3**
	7.2nm,0.7s,baz=63,slow=3.0,SNR=67						
KBZ	**Khabaz**	**145.27**	**304**	PKP	**PKPbc**	**22 05 36.6**	**-0.3**
	2.1nm,0.8s,baz=68,slow=5.7,SNR=4.2						
NB2	**NORSAR Subarra**	**148.63**	**352**	PKP	**PKPbc**	**22 05 45.8**	**-0.2**
	comp=Z,0.9nm,0.6s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**148.63**	**352**	PKPbc	**PKPbc**	**22 05 45.3**	**-0.7**
NOA	**NORSAR Array B**	**148.63**	**352**	PKPbc	**PKPbc**	**22 05 45.3**	**-0.7**
	comp=Z,1.4nm,0.7s,baz=16,slow=4.3,SNR=7.0						
ZALF	**Zalf**	**150.16**	**284**	*e*P	**PKPbc**	**22 05 50.8**	**+0.1**
SALA	**Sala**	**150.64**	**284**	*e*P	**PKPbc**	**22 05 53.4**	**+1.4**
TCHB	**Talchebab**	**151.28**	**284**	*e*P	**PKPbc**	**22 05 54.0**	**+0.7**
BRBR	**Barbar**	**151.34**	**285**	*e*P	**PKPbc**	**22 05 54.7**	**+1.0**
AKASG	**Malin Array Be**	**151.35**	**323**	PKPbc	**PKPbc**	**22 05 52.4**	**-0.5**
AKASG	**Malin Array Be**	**151.35**	**323**	PKPbc	**PKPbc**	**22 05 52.4**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=46,slow=3.1,SNR=4.2						
AK02	**Malin Array Si**	**151.38**	**323**	*e*PKPdf	**PKPbc**	**22 05 52.3**	**-0.6**
BR131	**Keskin Array S**	**152.78**	**299**	*e*PKPdf	**PKPdf**	**22 05 49.5**	**0.0**
BRTR	**Keskin Array B**	**152.78**	**299**	PKPbc	**PKPbc**	**22 05 56.0**	**-0.7**
BRTR	**Keskin Array B**	**152.78**	**299**	PKPbc	**PKPbc**	**22 05 56.0**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=139,slow=4.7,SNR=9.0						
BRG	**Berggiesshubel**	**157.63**	**340**	*e*P	**PKPab**	**22 06 28.2**	**+0.4**
	comp=Z,9.9nm,1.6s						
GERES	**GERESS Array B**	**159.49**	**338**	PKPab	**PKPab**	**22 06 35.7**	**-0.3**
GERES	**GERESS Array B**	**159.49**	**338**	PKPab	**PKPab**	**22 06 35.7**	**-0.3**
	comp=Z,0.4nm,0.6s,baz=52,slow=2.2,SNR=5.4						
TORD	**Torodi Ar. Bea**	**162.99**	**178**	PKPab	**PKPab**	**22 06 52.4**	**+0.4**
TORD	**Torodi Ar. Bea**	**162.99**	**178**	PKPab	**PKPab**	**22 06 52.4**	**+0.4**
	comp=Z,0.4nm,0.8s,baz=172,slow=3.4,SNR=5.2						

*IDC **28** 21:56:06.9±1.5, 43.°63N×127.°02W, h0km, mb3.3/3, mb1 3.7/7, mb1mx3.4/31, mbtmp3.4/7, ML3.9/3, MS3.1/2, Ms1 3.1/2, ms1mx2.5/23, Error ellipse: s-maj=28.3km s-min=14.3km az=46.0*
*ISCJB **28** 21:56:08.0±0.9, 43.°63N±0.°05×127.°05W±0.°10, h14km, mb3.5/5, MS3.1/1, Error ellipse: s-maj=10.8km s-min=6.5km az=155.3*
*NEIC **28** 21:56:08.6±1.2, 43.°67N×126.°92W, h10km, mb3.8/1, Error ellipse: s-maj=16.8km s-min=9.8km az=66.0*

ISC 28 21:56:09.0±1.2, 43.°64N±0.°06×127.°00W±0.°09, h14km, n42, σ1§75/40, mb3.8/5, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**2.09**	**111**	*e*Pn	**Pn**	**21 56 41.4**	**-2.3**
KEBM				*e*Sn	**Sn**	**21 57 08.8**	**-0.7**
RNO	**Roman Nose**	**2.37**	**82**	P	**Pn**	**21 56 47.8**	**+0.2**
KBO	**Bosley Butte**	**2.48**	**124**	*e*Pn	**Pn**	**21 56 46.4**	**-2.7**
MPOR	**Mary's Peak**	**2.63**	**70**	P	**Pn**	**21 56 51.6**	**+0.5**
DBO	**Dodson Butte**	**2.78**	**99**	P	**Pn**	**21 56 52.5**	**-0.7**
COR	**Corvallis**	**2.82**	**69**	*e*Pn	**Pn**	**21 56 52.3**	**-1.3**
EUO	**Eugene**	**2.87**	**81**	P	**Pn**	**21 56 55.4**	**+1.2**
BROR	**Big Rock Looko**	**3.34**	**78**	P	**Pn**	**21 57 02.5**	**+1.7**
IRO	**Indian Ridge**	**3.45**	**82**	P	**Pn**	**21 57 03.8**	**+1.3**
SSOR	**Sweet Springs**	**3.48**	**68**	P	**Pn**	**21 57 05.2**	**+2.4**
H04A	**Detroit Lake**	**3.61**	**72**	P	**Pn**	**21 57 06.3**	**+1.7**
YBH	**Yreka Blue Hor**	**3.69**	**120**	*e*Pn	**Pn**	**21 57 05.8**	**+0.2**
YBH				Sn	**Sn**	**21 57 51.8**	**+2.8**
YBH	**Yreka Blue Hor**	**3.69**	**120**	Pn	**Pn**	**21 57 05.4**	**-0.2**
	0.9nm,0.3s,baz=296,slow=12,SNR=21						
YBH				Sn	**Sn**	**21 57 51.8**	**+2.8**
	0.3nm,0.3s,baz=90,slow=20,SNR=2.6						
MOON	**Moon Mountain**	**3.88**	**82**	P	**Pn**	**21 57 10.4**	**+2.3**
BMW	**Boistfort Moun**	**3.89**	**42**	P	**Pn**	**21 57 10.1**	**+1.6**
RVW	**Rose Valley**	**3.93**	**49**	P	**Pn**	**21 57 11.3**	**+2.4**
MTMW	**Mount Mitchell**	**4.16**	**53**	P	**Pn**	**21 57 14.7**	**+2.6**
FL2	**Flat Top 2**	**4.17**	**51**	P	Pn	21 57 15.0	+2.7
NLWA	**Neilton Lookou**	**4.35**	**29**	Pn	**Pn**	**21 57 13.9**	**-0.8**
LON	**Longmire**	**4.81**	**48**	*e*Pn	Pn	21 57 18.6	-2.3
LON				S	**Sn**	**21 58 16.3**	**-0.2**
MOD	**Modoc**	**5.22**	**107**	*e*Pn	Pn	21 57 17.3	-10
	7.8nm,1.0s						
PGC	**Sidney**	**5.58**	**25**	*e*Pn	**Pn**	**21 57 32.1**	**+0.6**
HAWA	**Hanford**	**5.96**	**60**	*e*Pn	**Pn**	**21 57 35.1**	**-1.7**
BMO	**Blue Mountains**	**7.06**	**77**	*e*Pn	**Pn**	**21 57 49.8**	**-2.2**
	4.9nm,0.6s						
CMB	**Columbia Colle**	**7.51**	**136**	*e*Pn	**Pn**	**21 57 59.6**	**+1.5**
	4.7nm,0.9s						
NEW	**Newport**	**8.29**	**53**	*e*Pn	**Pn**	**21 58 07.7**	**-1.1**
	2.8nm,0.5s						
NEW	**Newport**	**8.29**	**53**	Pn	**Pn**	**21 58 11.2**	**+2.5**
	1.0nm,0.3s,baz=255,slow=12,SNR=9.8						
NEW				LR	LR	22 01 30.1	
	comp=Z,92nm,19.6s,baz=206,slow=39						
NVAR	**Mina Array Bea**	**8.38**	**125**	Pn	**Pn**	**21 58 12.6**	**+2.4**
NVAR	**Mina Array Bea**	**8.38**	**125**	Pn	**Pn**	**21 58 12.6**	**+2.4**
	0.1nm,0.3s,baz=302,slow=13,SNR=4.4						
MSO	**Missoula**	**9.75**	**66**	*e*Pn	**Pn**	**21 58 27.6**	**-1.2**
	3.4nm,0.9s						
MCMT	**McKenzie Canyo**	**10.22**	**78**	*e*Pn	Pn	21 58 32.8	-2.7
	0.7nm,0.7s						
PDAR	**Pinedale Array**	**12.76**	**88**	Pn	**Pn**	**21 59 12.8**	**+2.6**
PDAR	**Pinedale Array**	**12.76**	**88**	Pn	**Pn**	**21 59 12.8**	**+2.6**
	0.1nm,0.3s,baz=278,slow=13,SNR=5.6						
TXAR	**Lajitas Array**	**23.47**	**120**	P	**P**	**22 01 18.9**	**+0.7**
TXAR	**Lajitas Array**	**23.47**	**120**	P	**P**	**22 01 18.9**	**+0.7**
	0.4nm,0.9s,baz=307,slow=8.9,SNR=4.2						
WMOK	**Wichita Mounta**	**23.52**	**103**	P	**P**	**22 01 18.4**	**-0.1**
	2.8nm,0.9s						
ILAR	**Eielson Array**	**23.95**	**339**	P	**P**	**22 01 22.1**	**-0.3**
ILAR	**Eielson Array**	**23.95**	**339**	P	**P**	**22 01 22.1**	**-0.3**
	0.5nm,0.8s,baz=154,slow=9.2,SNR=7.6						
SADO	**Sadowa**	**32.93**	**71**	LR	LR	22 16 02.5	
	comp=Z,40nm,19.7s,baz=34,slow=35						
MDJ	**Mudanjiang**	**68.83**	**312**	P	P	22 07 09.3	-3.4
MDJ				pmax	pmax		
	comp=Z,12nm,2.4s						
MDJ				pmax	pmax		
	comp=Z,41nm,3.2s						
ZALV	**Zalesovo Beam**	**79.05**	**341**	P	**P**	**22 08 12.6**	**+0.3**
ZALV	**Zalesovo Beam**	**79.05**	**341**	P	**P**	**22 08 12.6**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=35,slow=7.8,SNR=2.4						

*IDC **28** 22:00:02.4±2.6, 36.°12N×141.°30E, h0km, mb3.4/2, mb1 3.4/3, mb1mx3.1/26, mbtmp3.2/3, ML3.1/1, Error ellipse: s-maj=55.6km s-min=27.6km az=48.0*
*ISCJB **28** 22:00:03.4±1.7, 36.°62N±0.°05×141.°38E±0.°10, h18km±9km, mb3.2/2, Error ellipse: s-maj=14.0km s-min=7.3km az=26.0*
*JMA **28** 22:00:05.1±0.1, 36.°64N×141.°26E, h46km±2km, M3.2*

ISC 28 22:00:02.5±2.8, 36.°61N±0.°06×141.°44E±0.°09, h16km±15km, n11, σ1§60/20, 1C-5D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.70**	**270**	↓P	**Pb**	**22 00 16.7**	**+0.3**
JHO				S	**Sb**	**22 00 25.1**	**-0.7**
ONAJ	**Iwakimizuishiy**	**0.71**	**314**	↓P	**Pb**	**22 00 17.0**	**+0.4**
ONAJ				S	**Sg**	**22 00 25.7**	**-0.2**
JFK	**Kawauchi**	**0.88**	**329**	↓P	**Pb**	**22 00 19.6**	**+0.2**
JFK				*e*S	**Sb**	**22 00 29.9**	**-1.1**
JYT	**Yasato**	**1.08**	**250**	↑P	**Pb**	**22 00 22.2**	**-0.5**
JYT				*e*S	**Sb**	**22 00 34.6**	**-2.0**
JFT	**Otama**	**1.27**	**316**	↓P	**Pn**	**22 00 25.9**	**+0.4**
JFT				S	**Sb**	**22 00 40.8**	**-1.2**
JMM	**Marumori**	**1.36**	**338**	↓P	**Pn**	**22 00 26.4**	**-0.3**
JMM				S	**Sn**	**22 00 42.3**	**-2.1**
JAG	**Ashikaga**	**1.61**	**264**	P	**Pn**	**22 00 30.0**	**-0.3**
JAG				S	**Sn**	**22 00 48.3**	**-2.5**
MJAR	**Matsushiro Arr**	**2.60**	**269**	Pn	**Pn**	**22 00 44.5**	**+0.6**
	4.1nm,0.3s,baz=80,slow=8.7,SNR=28						
MJAR				Sn	**Sn**	**22 01 16.2**	**+0.9**
	4.4nm,0.3s,baz=99,slow=26,SNR=8.2						
MAT	**Matsushiro**	**2.61**	**269**	P	**Pn**	**22 00 45.2**	**+1.2**
MAT				S	**Sn**	**22 01 16.8**	**+1.5**
SONM	**Songino Array**	**28.04**	**305**	P	**P**	**22 05 57.0**	**+4.0**
	0.4nm,0.7s,baz=107,slow=7.1,SNR=4.2						
WRA	**Warramunga Arr**	**56.65**	**188**	P	**P**	**22 09 43.8**	**-1.1**
	0.1nm,0.4s,baz=6.4,slow=7.5,SNR=4.1						

IDC 28 22:00:04.0±4.4, 20.°70S×139.°42E, h0km, mb1 3.2/3, mb1mx3.1/15, mbtmp3.0/3, ML2.5/3, Error ellipse: s-maj=39.5km s-min=26.8km az=33.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**4.83**	**278**	Pn	Pn	22 01 18.4	+0.5
	0.1nm,0.3s,baz=94,slow=13,SNR=4.4						
WRA				Sn	Sn	22 02 13.2	-1.5
	0.5nm,0.3s,baz=101,slow=21,SNR=5.8						
WRA				Lg	Lg	22 02 35.3	
	1.0nm,0.3s,baz=108,slow=28,SNR=8.0						
ASAR	**Alice Springs**	**5.90**	**239**	Pn	Pn	22 01 34.8	+2.0
	0.2nm,0.3s,baz=53,slow=14,SNR=6.9						
ASAR				Sn	Sn	22 02 42.4	+1.2
	0.6nm,0.3s,baz=65,slow=24,SNR=15						
ASAR				Lg	Lg	22 03 11.8	
	0.5nm,0.3s,baz=54,slow=30,SNR=7.1						
STKA	**Stephens Creek**	**11.30**	**171**	Pn	Pn	22 02 45.4	-1.4
	0.0nm,0.3s,baz=329,slow=12,SNR=3.5						

*DDA **28** 22:06:32.9, 39.°10N×28.°19E, h29km, MD2.9*
*CSEM **28** 22:06:33.9±0.4, 39.°20N×27.°91E, h19km, MD2.9, Error ellipse: s-maj=8.7km s-min=5.6km az=75.0*

ISK 28 22:06:33.4, 39.°20N×27.°88E, h10km, MD2.7, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.33**	**189**	*i* P	Pb	22 06 42.0	+0.6
AKHS				*i* S	Sb	22 06 49.0	+2.2
AKHS	**Akhisar**	**0.33**	**189**	*i* P	Pb	22 06 42.0	+0.6
AKHS				*i* S	Sb	22 06 49.0	+2.2
BALB	**Balikesir**	**0.43**	**360**	*e*PG	Pb	22 06 43.1	-0.1
BALB				*e*SG	Sb	22 06 49.1	-0.7
BALB	**Balikesir**	**0.43**	**360**	*e*Pg	Pb	22 06 43.1	-0.1
BALY	**Balya**	**0.57**	**339**	*i* P	Pg	22 06 44.9	+0.3
BALY				*i* S	Sb	22 06 53.9	0.0
BALY	**Balya**	**0.57**	**339**	*i* P	Pg	22 06 44.9	+0.3
BALY				*i* S	Sb	22 06 53.9	0.0
DURS	**Dursunbey**	**0.61**	**49**	*i* P	Pg	22 06 44.1	-1.3
DURS				*i* S	Sg	22 06 53.4	-0.1
DURS	**Dursunbey**	**0.61**	**49**	*i* P	Pg	22 06 44.1	-1.2
DURS				*i* S	Sg	22 06 53.4	0.0
DEMI	**Demirci**	**0.67**	**104**	*i* P	Pb	22 06 47.0	-0.3
DEMI				*i* S	Sg	22 06 55.7	+0.3
DEMI	**Demirci**	**0.67**	**104**	*i* P	Pb	22 06 47.0	-0.3
DEMI				*i* S	Sg	22 06 55.7	+0.4
GONE	**Gonen-Balikesi**	**0.85**	**350**	*e*PG	Pb	22 06 50.5	+0.1
GONE				*e*SG	Sb	22 07 01.8	-0.1
GONE	**Gonen-Balikesi**	**0.85**	**350**	*e*Pg	Pb	22 06 50.5	+0.1
GONE				*e*Sg	Sb	22 07 01.8	-0.1
KULA	**Kula-Manisa**	**0.92**	**138**	*e*PG	Pb	22 06 51.5	-0.1
KULA				*e*SG	Sb	22 07 04.5	+0.6
KULA	**Kula-Manisa**	**0.92**	**138**	*e*Pg	Pb	22 06 51.5	-0.1
KULA				*e*Sg	Sb	22 07 04.5	+0.6
IZM	**Izmir**	**0.94**	**211**	*e*PG	Pb	22 06 51.7	-0.1
BLCB	**Balcova**	**1.05**	**219**	*e*PG	Pn	22 06 53.9	-0.2
BLCB	**Balcova**	**1.05**	**219**	*e*Pg	Pn	22 06 53.9	-0.3
KCTX	**Karacabey (Bur**	**1.12**	**19**	*e*PN	Pn	22 06 55.8	+0.6
KCTX	**Karacabey (Bur**	**1.12**	**19**	*e*Pn	Pn	22 06 55.

IDC 28 22:33:45.7±28.0, 20°38S×173°49W, h0km, mb4.1/4, mb1 4.2/4, mb1mx3.7/21, mbtmp4.1/4, Error ellipse: s-maj=515.6km s-min=164.3km az=76.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**37.71**	**263**	P	P	22 41 04.3	+1.0
	1.4nm,0.5s,baz=119,slow=10,SNR=4.5						
STKA	**Stephens Creek**	**41.66**	**245**	P	P	22 41 35.5	-0.6
	1.3nm,0.5s,baz=57,slow=12,SNR=3.3						
ASAR	**Alice Springs**	**48.66**	**256**	P	P	22 42 31.6	-0.4
	2.2nm,0.8s,baz=91,slow=8.4,SNR=20						
WRA	**Warramunga Arr**	**48.80**	**261**	P	P	22 42 32.7	-0.4
	0.7nm,0.3s,baz=96,slow=8.4,SNR=48						

IDC 28 22:38:49.1±1.7, 22.80S×139.13E, h0km, mb3.7/4, mb1 4.0/5, mb1mx3.6/18, mbtmp3.8/5, ML3.7/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/22, Error ellipse: s-maj=64.8km s-min=26.6km az=86.0, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**17.67**	**195**	P	Pn	22 42 56.1	-0.7
	0.3nm,0.3s,baz=16,slow=12,SNR=15						
WRA				S	Sn	22 46 03.5	-11
	0.0nm,0.3s,baz=12,slow=22,SNR=3.0						
FITZ	**Fitzroy Crossi**	**20.15**	**220**	P	P	22 43 25.3	+0.2
	3.1nm,0.7s,baz=42,slow=16,SNR=8.2						
FITZ				S	S	22 47 06.4	-5.9
	3.3nm,0.9s,baz=150,slow=14,SNR=3.4						
FITZ				LR	LR	22 52 02.8	
	comp=Z,121nm,21.9s,baz=319,slow=39						
ASAR	**Alice Springs**	**21.35**	**193**	P	P	22 43 38.3	+0.2
	0.8nm,0.4s,baz=22,slow=10,SNR=17						
ASAR				S	S	22 47 27.5	-8.7
	0.4nm,0.8s,baz=8.3,slow=26,SNR=4.2						
MKAR	**Makanchi Array**	**70.11**	**322**	P	P	22 50 03.2	-0.1
	0.4nm,0.6s,baz=111,slow=8.0,SNR=6.1						
VNDA	**Vanda**	**75.65**	**175**	P	P	22 50 35.6	-0.1
	1.1nm,0.7s,baz=334,slow=7.7,SNR=11						
TORD	**Torodi Ar. Bea**	**136.68**	**286**	PKP	PKPdf	22 58 15.2	+0.6
	0.7nm,1.1s,baz=82,slow=1.8,SNR=3.1						

IDC 28 23:01:06.2±1.9, 1.69N×125.94E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/21, mbtmp3.3/3, MS3.2/3, Ms1 3.2/3, ms1mx2.7/17, Error ellipse: s-maj=168.5km s-min=24.5km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	**Kappang**	**9.09**	**223**	LR	LR	23 07 06.5	
	comp=Z,54nm,20.2s,baz=328,slow=40						
WRA	**Warramunga Arr**	**23.03**	**159**	P	P	23 06 12.8	-0.3
	0.2nm,0.3s,baz=337,slow=12,SNR=16						
PMG	**Port Moresby**	**23.85**	**118**	LR	LR	23 15 52.4	
	comp=Z,112nm,21.3s,baz=300,slow=37						
ASAR	**Alice Springs**	**26.37**	**163**	P	P	23 06 45.0	+0.6
	0.4nm,0.4s,baz=353,slow=8.1,SNR=6.9						
HNR	**Honiara**	**35.64**	**109**	LR	LR	23 21 17.6	
	comp=Z,44nm,20.5s,baz=338,slow=34						
MKAR	**Makanchi Array**	**58.78**	**326**	P	P	23 11 06.0	-0.3
	0.4nm,0.5s,baz=119,slow=8.7,SNR=3.4						

IDC 28 23:07:14.0±0.9, 2.69S×138.82E, h0km, mb3.8/6, mb1 4.1/9, mb1mx3.9/20, mbtmp3.9/9, ML3.7/3, MS3.6/5, Ms1 3.6/5, ms1mx3.1/35, Error ellipse: s-maj=37.2km s-min=20.0km az=81.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**10.64**	**129**	Pn	Pn	23 09 48.8	+0.9
	0.5nm,0.3s,baz=317,slow=8.9,SNR=6.0						
WRA	**Warramunga Arr**	**17.70**	**194**	P	Pn	23 11 20.8	-1.4
	0.5nm,0.3s,baz=16,slow=11,SNR=28						
WRA				S	Sn	23 14 30.0	-10
	0.1nm,0.3s,baz=13,slow=21,SNR=4.0						
CTA	**Charters Tower**	**18.76**	**158**	P	Pn	23 11 35.6	+0.4
	0.3nm,0.3s,baz=327,slow=10,SNR=4.2						
FITZ	**Fitzroy Crossi**	**20.04**	**219**	P	Pn	23 11 49.9	-0.7
	3.8nm,0.7s,baz=35,slow=9.6,SNR=9.2						
FITZ				LR	LR	23 20 28.7	
	comp=Z,234nm,18.9s,baz=12,slow=40						
ASAR	**Alice Springs**	**21.39**	**192**	P	P	23 12 03.0	-0.6
	2.9nm,0.6s,baz=23,slow=10,SNR=23						
ASAR				S	S	23 15 57.2	-4.7
	0.7nm,0.7s,baz=5.5,slow=14,SNR=3.1						
ASAR				LR	LR	23 20 53.1	
	comp=Z,256nm,19.0s,baz=8.8,slow=38						
STKA	**Stephens Creek**	**29.15**	**175**	LR	LR	23 25 58.1	
	comp=Z,197nm,20.3s,baz=199,slow=39						
URZ	**Urewera**	**49.77**	**140**	LR	LR	23 35 32.7	
	comp=Z,152nm,19.8s,baz=58,slow=34						
MKAR	**Makanchi Array**	**69.84**	**322**	P	P	23 18 27.7	+1.0
	0.8nm,0.8s,baz=123,slow=6.4,SNR=5.3						
ZALV	**Zalesovo Beam**	**71.97**	**330**	P	P	23 18 38.5	-0.9
	0.2nm,0.4s,baz=117,slow=5.4,SNR=2.4						
VNDA	**Vanda**	**75.79**	**175**	P	P	23 19 00.6	-0.8
	1.4nm,0.8s,baz=320,slow=6.1,SNR=11						
ILAR	**Eielson Array**	**85.77**	**24**	P	P	23 19 54.0	-1.0
	0.6nm,1.0s,baz=271,slow=4.2,SNR=3.4						
YKA	**Yellowknife Ar**	**100.00**	**27**	LR	LR	00 03 20.1	
	comp=Z,3.6nm,18.8s,baz=225,slow=34						
TORD	**Torodi Ar. Bea**	**136.35**	**286**	PKP	PKPdf	23 26 38.0	-0.9
	0.4nm,0.8s,baz=77,slow=2.7,SNR=3.1						
CPUP	**Villa Florida**	**147.20**	**153**	PKPbc	PKPab	23 27 01.4	-0.3
	0.8nm,0.7s,baz=211,slow=20,SNR=3.9						

IDC 28 23:12:41.6±1.2, 4.93N×125.86E, h0km, mb3.8/7, mb1 4.0/7, mb1mx3.7/23, mbtmp3.8/7, 1D, Error ellipse: s-maj=188.9km s-min=18.5km az=68.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**2.78**	**325**	⇓ *i* P	Pg	23 13 38.3	+3.4
WRA	**Warramunga Arr**	**26.09**	**162**	P	P	23 18 16.9	-0.3
	3.4nm,0.8s,baz=347,slow=9.8,SNR=5.0						
ASAR	**Alice Springs**	**29.49**	**165**	P	P	23 18 49.2	+1.6
	0.7nm,0.7s,baz=344,slow=6.9,SNR=3.7						
STKA	**Stephens Creek**	**39.56**	**159**	P	P	23 20 13.3	-1.3
	2.8nm,0.8s,baz=347,slow=14,SNR=3.5						
SONM	**Songino Array**	**45.89**	**342**	P	P	23 21 06.0	0.0
	0.3nm,0.5s,baz=170,slow=8.8,SNR=2.9						
MKAR	**Makanchi Array**	**56.08**	**325**	P	P	23 22 22.4	-0.1
	0.3nm,0.5s,baz=117,slow=7.7,SNR=5.9						
ZALV	**Zalesovo Beam**	**59.13**	**333**	P	P	23 22 44.5	+0.6
	0.3nm,0.4s,baz=116,slow=6.6,SNR=3.0						
ARCES	**ARCESS Array B**	**89.03**	**340**	P	P	23 25 38.3	+0.1
	2.0nm,0.8s,baz=76,slow=10,SNR=4.1						
TORD	**Torodi Ar. Bea**	**121.71**	**289**	PKP	PKPdf	23 31 37.0	-1.6
	0.3nm,0.8s,baz=76,slow=2.5,SNR=3.0						

IDC 28 23:18:02.6±0.6, 5.38N×127.50E, h0km, mb3.9/13, mb1 4.0/14, mb1mx3.9/26, mbtmp3.9/14, ML4.2/1, MS3.5/11, Ms1 3.5/11, ms1mx3.1/36, 1C, Error ellipse: s-maj=38.1km s-min=13.5km az=74.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**2.54**	**311**	Pn	Pn	23 18 46.7	+1.6
	46nm,0.3s,baz=148,slow=19,SNR=3.0						
CTBH	**Cotabato--PC H**	**3.71**	**300**	⇑ *i* P	Pn	23 18 59.5	-1.7
KAPI	**Kappang**	**12.90**	**217**	LR	LR	23 26 18.2	
	comp=Z,145nm,20.4s,baz=239,slow=38						
FITZ	**Fitzroy Crossi**	**23.41**	**184**	P	P	23 23 12.5	-0.9
	4.8nm,1.0s,baz=7.9,slow=16,SNR=4.0						
PMG	**Port Moresby**	**24.49**	**127**	LR	LR	23 32 32.2	
	comp=Z,119nm,20.6s,baz=253,slow=36						
WRA	**Warramunga Arr**	**26.05**	**165**	P	P	23 23 37.1	-0.8
	5.1nm,0.8s,baz=344,slow=9.8,SNR=22						
JNU	**Nakatsue**	**27.78**	**6**	LR	LR	23 33 54.4	
	comp=Z,70nm,21.2s,baz=180,slow=34						
ASAR	**Alice Springs**	**29.54**	**168**	P	P	23 24 09.0	-0.2
	0.9nm,0.6s,baz=350,slow=7.5,SNR=4.6						
KSRS	**Korea Array**	**31.92**	**1**	LR	LR	23 38 42.6	
	comp=Z,74nm,18.7s,baz=344,slow=39						
MJAR	**Matsushiro Arr**	**32.53**	**16**	LR	LR	23 35 36.1	
	comp=Z,69nm,21.1s,baz=215,slow=32						
STKA	**Stephens Creek**	**39.41**	**161**	P	P	23 25 34.9	+0.5
	8.9nm,0.8s,baz=341,slow=8.1,SNR=6.8						
ASAJ	**Asahikawa**	**40.80**	**17**	LR	LR	23 41 22.5	
	comp=Z,58nm,18.4s,baz=206,slow=34						
SONM	**Songino Array**	**46.00**	**340**	P	P	23 26 27.2	-0.7
	0.2nm,0.5s,baz=162,slow=6.1,SNR=2.6						
PETK	**Petropavlovsk-**	**53.62**	**22**	P	P	23 27 24.2	-1.5
	1.0nm,0.8s,baz=224,slow=7.3,SNR=2.2						
MKAR	**Makanchi Array**	**56.66**	**324**	P	P	23 27 46.8	-1.0
	0.7nm,0.5s,baz=118,slow=8.1,SNR=7.9						
MKAR				LR	LR	23 52 46.0	
	comp=Z,54nm,19.1s,baz=347,slow=37						
ZALV	**Zalesovo Beam**	**59.48**	**332**	P	P	23 28 07.6	+0.2
	0.6nm,0.5s,baz=128,slow=9.7,SNR=4.3						
BVAR	**Borovoye Array**	**66.37**	**326**	P	P	23 28 54.0	+0.7
	0.8nm,0.7s,baz=116,slow=9.8,SNR=4.1						
KBZ	**Khabaz**	**82.41**	**313**	LR	LR	00 12 52.7	
	comp=Z,58nm,18.3s,baz=38,slow=40						
ILAR	**Eielson Array**	**83.29**	**25**	P	P	23 30 33.0	+1.9
	0.2nm,0.6s,baz=260,slow=5.4,SNR=2.6						
VNDA	**Vanda**	**84.96**	**173**	P	P	23 30 40.8	+1.5
	1.0nm,1.0s,baz=322,slow=7.2,SNR=4.9						
ARCES	**ARCESS Array B**	**89.17**	**340**	P	P	23 31 00.2	+0.3
	1.4nm,0.7s,baz=78,slow=5.9,SNR=5.6						
FINES	**FINESS Array B**	**90.75**	**332**	P	P	23 31 06.0	-1.3
	1.1nm,0.8s,baz=76,slow=5.1,SNR=4.9						
MLR	**Muntele Rosu**	**94.24**	**316**	LR	LR	00 19 07.8	
	comp=Z,10.0nm,18.6s,baz=228,slow=39						
NOA	**NORSAR Array B**	**97.65**	**334**	LR	LR	00 19 00.4	
	comp=Z,36nm,20.3s,baz=80,slow=38						
VRAC	**Vranov**	**99.33**	**322**	LR	LR	00 21 58.2	
	comp=Z,30nm,18.3s,baz=204,slow=39						
TORD	**Torodi Ar. Bea**	**123.11**	**289**	PKP	PKPdf	23 37 01.7	-0.6
	0.5nm,0.9s,baz=84,slow=2.2,SNR=4.3						

*IDC **28** 23:22:22.2±1.2, 0.62N×124.21E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.7/23, mbtmp3.9/5, ML3.9/1, Error ellipse: s-maj=116.1km s-min=19.4km az=65.0*
*ISCJB **28** 23:22:38.2±0.6, 0.03S±0.08×123.56E±0.08, h150km, mb3.8/4, Error ellipse: s-maj=11.0km s-min=10.8km az=5.2*
*DJA **28** 23:22:40.2±1.2, 0°S±5°×12°4E±°, h121km±15km, M3.8/6, MLv3.8/6*

ISC 28 23:22:39.6±0.9, 0.05S±0.08×123.59E±0.07, h150km, n13, σ1§61/15, mb3.9/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**0.73**	**32**	P	Pn	23 23 00.1	-2.3
GTOI	**Gorontalo**	**0.90**	**319**	P	Pn	23 23 03.9	+0.3
LUWI	**Luwuk**	**1.28**	**220**	P	Pn	23 23 05.9	-1.1
LUWI				S	Sn	23 23 25.0	-2.9
MRSI	**Marisa**	**1.73**	**288**	P	Pn	23 23 10.6	-1.1
MNI	**Manado**	**1.94**	**40**	P	Pn	23 23 12.8	-1.3
LBMI	**Labuha**	**3.95**	**99**	P	Pn	23 23 38.3	-1.0
NLAI	**Namlea**	**4.73**	**132**	P	Pn	23 23 48.3	-1.2
FITZ	**Fitzroy Crossi**	**18.05**	**174**	P	Pn	23 26 40.7	-0.5
	0.3nm,0.3s,baz=354,slow=11,SNR=11						
WRA	**Warramunga Arr**	**22.40**	**153**	P	P	23 27 26.2	+0.3
	3.1nm,0.7s,baz=335,slow=10,SNR=21						
ASAR	**Alice Springs**	**25.52**	**158**	P	P	23 27 56.7	+2.2
	0.7nm,0.3s,baz=344,slow=11,SNR=14						
STKA	**Stephens Creek**	**35.95**	**153**	P	P	23 29 27.7	+1.8
	1.1nm,0.4s,baz=323,slow=12,SNR=2.9						
MKAR	**Makanchi Array**	**58.97**	**328**	P	P	23 32 22.9	-0.5
	0.8nm,0.6s,baz=123,slow=8.2,SNR=11						
MKAR				PcP	PcP	23 33 11.4	+0.5
	0.5nm,0.6s,baz=158,slow=4.2,SNR=5.0						
TORD	**Torodi Ar. Bea**	**120.99**	**285**	PKP	PKPdf	23 41 16.7	+1.3
	0.4nm,1.1s,baz=51,slow=2.8,SNR=2.3						

*IDC **28** 23:24:56.0±0.7, 29.88S×177.46W, h0km, mb4.4/13, mb1 4.5/15, mb1mx4.4/23, mbtmp4.4/15, ML4.0/2, Error ellipse: s-maj=20.7km s-min=12.7km az=73.0*
*NEIC **28** 23:24:59.6±3.5, 29.87S×177.49W, h24km±23km, mb4.7/4, Error ellipse: s-maj=15.6km s-min=9.2km az=79.0*
*ISCJB **28** 23:25:01.0±0.6, 30.03S±0.04×177.8W±0.1, h33km, mb4.4/15, Error ellipse: s-maj=15.5km s-min=6.0km az=5.6*

ISC 28 23:25:01.5±0.6, 29.94S±0.06×177.6W±0.1, h35km, n80, σ1§08/79, mb4.6/15, 1C-1D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**0.75**	**337**	*e*Pn	Pn	23 25 14.8	-0.8
RAO				Sn	Sn	23 25 26.6	+0.8
RAO	**Raoul Island**	**0.75**	**337**	Pn	Pn	23 25 15.2	-0.4
	2μm,0.3s,baz=269,slow=3.8,SNR=22						
RAO				Sn	Sn	23 25 26.5	+0.8
	8μm,0.3s,baz=30,slow=20,SNR=42						
URZ	**Urewera**	**9.39**	**207**	Pn	Pn	23 27 13.9	-0.4
URZ				Sn	Sn	23 28 56.5	-2.1
URZ	**Urewera**	**9.39**	**207**	Pn	Pn	23 27 13.9	-0.4
	0.5nm,0.3s,baz=18,slow=17,SNR=3.6						
URZ				Sn	Sn	23 28 56.5	-2.1
	3.9nm,0.3s,baz=111,slow=23,SNR=9.4						
KHZ	**Kahutara**	**14.35**	**207**	*e*Pn	Pn	23 28 21.4	-0.7
DZM	**Mont Dzumac**	**16.35**	**295**	*e*LR	LR	23 32 36.4	
	222nm,24.0s						
DZM	**Mont Dzumac**	**16.35**	**295**	*e*Pn	Pn	23 28 48.1	-0.4
RPZ	**Rata Peaks**	**16.46**	**210**	Pn	Pn	23 28 49.1	-0.7
RPZ	**Rata Peaks**	**16.46**	**210**	Pn	Pn	23 28 49.1	-0.7
	1.5nm,0.3s,baz=242,slow=21,SNR=5.4						
TBI	**Tubuai**	**25.94**	**82**	*e*LR	LR	23 37 00.5	
	160nm,26.0s						
PPT2	**Papeete2**	**28.35**	**71**	*e*LR	LR	23 38 01.1	
	140nm,25.5s						
CTA	**Charters Tower**	**34.09**	**278**	P	P	23 31 44.7	+1.8
CTA	**Charters Tower**	**34.09**	**278**	P	P	23 31 44.7	+1.8
	5.7nm,0.5s,baz=110,slow=11,SNR=11						
CTAO	**Charters Tower**	**34.09**	**278**	*e*P	P	23 31 44.1	+1.1
	6.6nm,0.6s						
STKA	**Stephens Creek**	**34.93**	**256**	*e*P	P	23 31 52.4	+2.2
STKA	**Stephens Creek**	**34.93**	**256**	P	P	23 31 51.9	+1.8
	4.1nm,0.5s,baz=103,slow=11,SNR=9.1						
AS31	**Alice Springs**	**43.49**	**266**	*e*P	P	23 33 01.6	-0.2
ASAR	**Alice Springs**	**43.49**	**266**	P	P	23 33 01.4	-0.4
ASAR	**Alice Springs**	**43.49**	**266**	P	P	23 33 01.4	-0.4
	5.2nm,0.6s,baz=106,slow=7.5,SNR=38						
WRAB	**Tennant Creek**	**44.44**	**271**	*e*P	P	23 33 08.8	-0.6
	9.7nm,0.8s						
WRA	**Warramunga Arr**	**44.44**	**271**	P	P	23 33 09.0	-0.4
WRA	**Warramunga Arr**	**44.44**	**271**	P	P	23 33 09.0	-0.4
	6.3nm,0.6s,baz=110,slow=8.2,SNR=104						
SBA	**Scott Base**	**48.52**	**184**	*e*P	P	23 33 43.4	+2.9
	7.1nm,1.0s						
VNDA	**Vanda**	**48.59**	**186**	P	P	23 33 42.4	+1.3
VNDA	**Vanda**	**48.59**	**186**	P	P	23 33 42.4	+1.3
	0.9nm,0.6s,baz=32,slow=5.3,SNR=12						
FITZ	**Fitzroy Crossi**	**52.72**	**269**	P	P	23 34 12.1	-1.0
FITZ	**Fitzroy Crossi**	**52.72**	**269**	P	P	23 34 12.1	-1.0
	3.0nm,0.8s,baz=124,slow=7.3,SNR=4.7						
QSPA	**South Pole Qui**	**60.17**	**180**	P	P	23 35 06.6	+1.0
QSPA	**South Pole Qui**	**60.17**	**180**	P	P	23 35 06.6	+1.0
	3.2nm,0.9s,baz=19,slow=1.8,SNR=17						
MAW	**Mawson**	**72.86**	**200**	P	P	23 36 27.4	+1.0
MAW	**Mawson**	**72.86**	**200**	P	P	23 36 27.4	+1.0
	4.0nm,0.6s,baz=129,slow=4.8,SNR=8.5						
SYO	**Syowa Base**	**77.64**	**193**	⇑ *e*P	P	23 36 57.1	+3.2
MJAR	**Matsushiro Arr**	**78.07**	**325**	P	P	23 36 54.8	-1.9
MJAR	**Matsushiro Arr**	**78.07**	**325**	P	P	23 36 54.8	-1.9
	1.3nm,0.8s,baz=163,slow=5.9,SNR=4.7						
KSRS	**Korea Array**	**84.23**	**319**	P	P	23 37 30.7	+1.3
	0.5nm,0.4s,baz=139,slow=5.5,SNR=2.7						
KSAR	**Wonju Array Be**	**84.25**	**319**	P	P	23 37 30.7	+1.3
PETK	**Petropavlovsk-**	**85.46**	**345**	P	P	23 37 35.5	+0.3
PETK	**Petropavlovsk-**	**85.46**	**345**	P	P	23 37 35.5	+0.3
	2.4nm,0.6s,baz=141,slow=8.0,SNR=7.4						
LDFC	**Landfair**	**87.43**	**47**	*e*PcP	PcP	23 37 46.5	-0.9
	5.4nm,0.8s						
NVAR	**Mina Array Bea**	**87.66**	**43**	P	P	23 37 47.0	+0.4
NVAR	**Mina Array Bea**	**87.66**	**43**	P	P	23 37 47.0	+0.4
	2.9nm,0.8s,baz=220,slow=8.2,SNR=22						
NV11	**Mina Array Sit**	**87.75**	**43**	*e*PcP	P	23 37 47.0	+0.1
CMAR	**Chiang Mai Arr**	**93.59**	**289**	P	P	23 38 13.8	-0.7
CMAR	**Chiang Mai Arr**	**93.59**	**289**	P	P	23 38 13.8	-0.7
	0.2nm,0.3s,baz=111,slow=4.9,SNR=2.9						
MKAR	**Makanchi Array**	**117.75**	**310**	PKP	PKPdf	23 43 42.8	-1.1
MKAR	**Makanchi Array**	**117.75**	**310**	PKP	PKPdf	23 43 42.8	-1.1
	0.2nm,0.4s,baz=90,slow=2.2,SNR=4.0						
KEV	**Kevo**	**137.75**	**348**	*ep*	PKPdf	23 44 23.6	+2.5
	4.4nm,0.8s						
ARCES	**ARCESS Array B**	**138.22**	**348**	PKPpre	PKPpre	23 44 13.2	
ARCES				PKP	PKPdf	23 44 21.7	-0.3
ARCES	**ARCESS Array B**	**138.22**	**348**	PKhKP	PKPpre	23 44 13.2	
	0.8nm,0.8s,baz=46,slow=3.5,SNR=3.7						
ARCES				PKP	PKPdf	23 44 21.7	-0.3
	0.8nm,0.6s,baz=64,slow=2.8,SNR=7.2						
JOF	**Joensuu**	**142.12**	**339**	*ep*	PKPdf	23 44 30.9	+1.7
	1.0nm,0.3s						
KAF	**Kangasniemi**	**144.24**	**341**	*ep*	PKPab	23 44 30.0	-0.9
	3.3nm,0.4s						
FIA1	**FINESS Array S**	**144.84**	**340**	*e*PKPdf	PKPab	23 44 31.9	-1.2
FINES	**FINESS Array B**	**144.84**	**340**	PKP	PKPab	23 44 32.2	-0.9
FINES	**FINESS Array B**	**144.84**	**340**	PKP	PKPab	23 44 32.2	-0.9
	17nm,0.7s,baz=49,slow=4.0,SNR=121						
KBZ	**Khabaz**	**145.15**	**305**	PKPbc	PKPbc	23 44 34.5	-0.2
KBZ	**Khabaz**	**145.15**	**305**	PKPbc	PKPbc	23 44 34.5	-0.2
	2.3nm,0.8s,baz=55,slow=3.4,SNR=4.9						
NB2	**NORSAR Subarra1**	**148.35**	**352**	PKP	PKPbc	23 44 42.5	-1.1
	comp=Z,2.6nm,0.8s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	**148.35**	**352**	PKPbc	PKPbc	23 44 42.7	-0.9
NOA	**NORSAR Array B**	**148.35**	**352**	PKPbc	PKPbc	23 44 42.7	-0.9
	comp=Z,2.5nm,0.7s,baz=16,slow=4.4,SNR=11						
MALT	**Malatya**	**149.19**	**295**	*e*PKPab	PKPab	23 44 58.1	+7.1
KONO	**Kongsberg**	**149.90**	**353**	*e*PKPbc	PKPbc	23 44 46.7	-0.7
ZALF	**Zalf**	**150.14**	**285**	*e*P	PKPbc	23 44 48.8	-0.1
SALA	**Sala**	**150.63**	**284**	*e*P	PKPbc	23 44 50.7	+0.4
AKASG	**Malin Array Be**	**151.15**	**324**	PKPbc	PKPbc	23 44 49.8	-0.9
AKASG	**Malin Array Be**	**151.15**	**324**	PKPbc	PKPbc	23 44 49.8	-0.9
	comp=Z,1.7nm,0.5s,baz=45,slow=5.3,SNR=6.8						
TCHB	**Talchebab**	**151.27**	**284**	*e*P	PKPbc	23 44 52.1	+0.5
BRBR	**Barbar**	**151.32**	**286**	*e*P	PKPbc	23 44 49.8	-2.1
BR131	**Keskin Array S**	**152.69**	**299**	*e*PKPbc	PKPbc	23 44 53.8	-0.9
BRTR	**Keskin Array B**	**152.69**	**299**	PKPbc	PKPbc	23 44 54.0	-0.8
BRTR	**Keskin Array B**	**152.69**	**299**	PKPbc	PKPbc	23 44 54.0	-0.8
	comp=Z,1.5nm,0.8s,baz=128,slow=4.4,SNR=12						
KWP	**Kalwaria Pacla**	**155.05**	**328**	*e*PKPab	PKPab	23 45 14.6	-0.5
UPC	**Upice**	**157.06**	**337**	*e*PKPAB	PKPab	23 45 23.8	+0.2
DPC	**Dobruska-Polom**	**157.08**	**337**	*e*PKPAB	PKPab	23 45 23.7	0.0
CLL	**Collm**	**157.24**	**343**	⇓ *i* PKPab	PKPab	23 45 23.8	-0.5
	comp=Z,5.0nm,0.9s						
CLL				*e*		23 45 37.0	
PVCC	**Panska Ves**	**157.50**	**339**	*e*PKPAB	PKPab	23 45 25.4	0.0
KHC	**Kasperske Hory**	**159.03**	**339**	*e*PKPAB	PKPab	23 45 31.5	-0.7
GERES	**GERESS Array B**	**159.25**	**339**	PKPab	PKPab	23 45 32.9	-0.3
GERES	**GERESS Array B**	**159.25**	**339**	PKPab	PKPab	23 45 32.9	-0.3
	comp=Z,1.0nm,0.7s,baz=27,slow=3.6,SNR=11						
TORD	**Torodi Ar. Bea**	**163.27**	**178**	PKPab	PKPab	23 45 51.0	-0.4
TORD	**Torodi Ar. Bea**	**163.27**	**178**	PKPab	PKPab	23 45 51.0	-0.4
	comp=Z,0.6nm,0.6s,baz=179,slow=3.8,SNR=10						

IDC 28 23:38:35.7±1.3, 42.68S×72.67W, h0km, mb3.7/6, mb1 3.9/7, mb1mx3.8/20, mbtmp3.8/7, ML4.0/1, MS2.9/1, Ms1 2.9/1, ms1mx2.6/24, Error ellipse: s-maj=56.2km s-min=18.7km az=106.0, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLCA	**Paso Flores**	**2.51**	**40**	Pn	Pn	23 39 19.5	+1.6
	7.4nm,0.3s,baz=218,slow=15,SNR=90						
PLCA				Sn	Sg	23 39 55.5	-1.0
	30nm,0.3s,baz=298,slow=20,SNR=18						
PLCA				LR	LR	23 40 30.1	
	comp=Z,223nm,19.7s,baz=223,slow=46						
LVC	**Limon Verde**	**20.25**	**10**	P	P	23 43 12.8	-0.1
	3.0nm,0.8s,baz=177,slow=8.7,SNR=3.8						
CPUP	**Villa Florida**	**20.58**	**42**	P	P	23 43 15.9	-0.2
	0.3nm,0.3s,baz=219,slow=6.5,SNR=2.8						
LPAZ	**La Paz**	**26.59**	**10**	P	P	23 44 16.8	+0.4
	9.5nm,0.3s,baz=207,slow=6.8,SNR=2.4						
SIV	**San Ignacio**	**28.39**	**24**	P	P	23 44 30.3	-1.5
	0.3nm,0.4s,baz=217,slow=13,SNR=4.2						
QSPA	**South Pole Qui**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**0.47**	**350**	*e*P	Pn	23 43 20.8	-1.1
PCIG				*i* S	Sn	23 43 31.7	-1.4
THIG		**0.90**	**111**	*i* P	Pn	23 43 24.3	-1.4
THIG				*i* S	Sn	23 43 37.7	-2.2
CCIG	**Comitan**	**1.42**	**42**	*i* P	Pn	23 43 31.3	-0.6
CCIG				*i* S	Sn	23 43 49.6	-1.4
TGIG		**1.54**	**0**	*i* P	Pn	23 43 31.6	-1.7
TGIG				*i* S	Sn	23 43 50.9	-2.5

DDA ***28*** *23:43:23.9, 39˚.33N×25˚.79E, h3km, MD2.8*
ISCJB ***28*** *23:43:29.8±1.4, 39˚.27N±0˚.04×26˚.00E±0˚.09, h10km±6km, Error ellipse: s-maj=12.3km s-min=5.9km az=175.1*
CSEM ***28*** *23:43:29.9±0.4, 39˚.25N×26˚.00E, h10km, MD2.8, Error ellipse: s-maj=8.4km s-min=3.9km az=85.0*
ISK ***28*** *23:43:31.9, 39˚.32N×26˚.28E, h6km, MD2.8*
ISC 28 23:43:29.0±1.8, 39˚.28N±0˚.03×25˚.96E±0˚.08, h8km±13km, n22, σ0s60/34, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYVA	**Ayvalik**	**0.57**	**86**	*i* P	**Pg**	**23 43 40.4**	**+0.4**
AYVA				*i* S	**Sg**	**23 43 47.7**	**+0.2**
AYVA	**Ayvalik**	**0.57**	**86**	*i* P	**Pg**	**23 43 40.4**	**+0.4**
AYVA				*i* S	**Sg**	**23 43 47.7**	**+0.2**
EZN	**Ezine**	**0.62**	**27**	*e*PG	**Pb**	**23 43 42.1**	**0.0**
EZN				*e*SG	**Sb**	**23 43 50.2**	**-0.8**
EZN	**Ezine**	**0.62**	**27**	*e*Pg	**Pb**	**23 43 42.1**	**0.0**
EZN				*e*Sg	**Sb**	**23 43 50.2**	**-0.8**
URLA	**Izmir**	**1.04**	**151**	*i* P	**Pg**	**23 43 48.5**	**-0.5**
URLA				*i* S	**Sg**	**23 44 02.3**	**-0.2**
URLA	**Izmir**	**1.04**	**151**	*i* P	**Pg**	**23 43 48.5**	**-0.5**
URLA				*i* S	**Sg**	**23 44 02.3**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.19**	**19**	*e*PN	**Pn**	**23 43 53.0**	**+1.0**
GELI				*e*SN	**Sn**	**23 44 08.2**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.19**	**19**	*e*Pn	**Pn**	**23 43 53.0**	**+1.0**
GELI				*e*Sn	**Sn**	**23 44 08.2**	**-0.2**
BLCB	**Balcova**	**1.23**	**136**	*e*PN	**Pn**	**23 43 53.2**	**+0.7**
BLCB	**Balcova**	**1.23**	**136**	*e*Pn	**Pn**	**23 43 53.2**	**+0.7**
LPK	**Lapseki**	**1.26**	**29**	*e*PN	**Pn**	**23 43 53.6**	**+0.7**
LPK				*e*SN	**Sg**	**23 44 08.9**	**-0.6**
LPK	**Lapseki**	**1.26**	**29**	*e*Pn	**Pn**	**23 43 53.6**	**+0.7**
LPK				*e*Sn	**Sg**	**23 44 08.9**	**-0.6**
BALY	**Balya**	**1.37**	**70**	*i* P	**Pn**	**23 43 54.2**	**-0.3**
BALY				*i* S	**Sg**	**23 44 12.5**	**-0.5**
BALY	**Balya**	**1.37**	**70**	*i* P	**Pn**	**23 43 54.2**	**-0.3**
BALY				*i* S	**Sg**	**23 44 12.5**	**-0.5**
KRBG	**Karabiga-Canak**	**1.52**	**42**	*e*PN	**Pn**	**23 43 56.8**	**+0.3**
KRBG	**Karabiga-Canak**	**1.52**	**42**	*e*Pn	**Pn**	**23 43 56.8**	**+0.3**
BALB	**Balikesir**	**1.53**	**76**	*e*PN	**Pn**	**23 43 56.9**	**+0.2**
BALB	**Balikesir**	**1.53**	**76**	*e*Pn	**Pn**	**23 43 56.9**	**+0.2**
GONE	**Gonen-Balikesi**	**1.54**	**59**	*e*PN	**Pb**	**23 43 58.0**	**+0.2**
GONE	**Gonen-Balikesi**	**1.54**	**59**	*e*Pn	**Pb**	**23 43 58.0**	**+0.2**
KCTX	**Karacabey (Bur**	**2.10**	**61**	*e*PN	**Pn**	**23 44 05.7**	**+1.2**
KCTX	**Karacabey (Bur**	**2.10**	**61**	*e*Pn	**Pn**	**23 44 05.7**	**+1.2**

ISCJB ***28*** *23:59:14.5±0.3, 18˚.27N±0˚.03×101˚.03W±0˚.03, h68km±5km, mb3.8/6, Error ellipse: s-maj=5.0km s-min=3.7km az=28.4*
MEX ***28*** *23:59:17.1±0.8, 18˚.29N×101˚.04W, h55km±9km, MD4.4*
NEIC ***28*** *23:59:17.1, 18˚.29N×101˚.04W, h55km, MD4.4(MEX), After MEX.*
IDC ***28*** *23:59:17.8±5.4, 18˚.42N×100˚.72W, h84km±45km, mb3.6/6, mb1 3.9/8, mb1mx3.6/26, mbtmp3.6/8, ML3.4/2, Error ellipse: s-maj=43.5km s-min=25.5km az=45.0*
ISC 28 23:59:15.4±0.6, 18˚.28N±0˚.03×101˚.03W±0˚.03, h65km±6km, n211, σ1s19/232, mb3.9/6, 97C-69D, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.65**	**90**	*i* P	**Pn**	**23 59 28.6**	**-0.9**
ARIG				*i* S	**Sn**	**23 59 39.2**	**-0.7**
ZIIG	**Zihuatanejo**	**0.79**	**211**	*i* P	**Pn**	**23 59 30.3**	**-0.8**
ZIIG				*i* S	**Sn**	**23 59 41.6**	**-1.0**
ZIIG	**Zihuatanejo**	**0.79**	**211**	*i* P	**Pn**	**23 59 30.3**	**-0.8**
ZIIG				*i* S	**Sn**	**23 59 41.6**	**-1.0**
MEIG	**Mezcala**	**1.39**	**105**	*i* P	**Pn**	**23 59 39.2**	**+0.3**
MEIG				*i* S	**Sn**	**23 59 56.1**	**-0.4**
MEIG	**Mezcala**	**1.39**	**105**	*i* P	**Pn**	**23 59 39.2**	**+0.3**
MEIG				*i* S	**Sn**	**23 59 56.1**	**-0.4**
MOIG	**Morelia**	**1.39**	**354**	*e*P	**Pn**	**23 59 38.3**	**-0.8**
MOIG				*i* S	**Sn**	**23 59 55.2**	**-1.6**
MOIG	**Morelia**	**1.39**	**354**	*e*P	**Pn**	**23 59 38.3**	**-0.8**
MOIG				*i* S	**Sn**	**23 59 55.2**	**-1.6**
CAIG	**El Cayaco**	**1.43**	**149**	*i* P	**Pn**	**23 59 39.0**	**-0.4**
CAIG				*i* S	**Sn**	**23 59 55.7**	**-1.6**
CAIG	**El Cayaco**	**1.43**	**149**	*i* P	**Pn**	**23 59 39.0**	**-0.4**
CAIG				*i* S	**Sn**	**23 59 55.7**	**-1.6**
PLIG	**Platanillo**	**1.46**	**86**	*i* P	**Pn**	**23 59 40.2**	**+0.4**
PLIG				*i* S	**Sn**	**23 59 58.2**	**0.0**
PLIG	**Platanillo**	**1.46**	**86**	*i* P	**Pn**	**23 59 40.2**	**+0.4**
PLIG				*i* S	**Sn**	**23 59 58.2**	**0.0**
URUA	**Uruapan**	**1.50**	**319**	*i* P	**Pn**	**23 59 40.4**	**-0.1**
URUA				*i* S	**Sn**	**23 59 58.3**	**-1.0**
ACX	**Acapulco**	**1.80**	**141**	*i* P	**Pn**	**23 59 44.4**	**+0.1**
ACX				*i* S	**Sn**	**00 00 04.8**	**-1.4**
ACX	**Acapulco**	**1.80**	**141**	*i* P	**Pn**	**23 59 44.4**	**+0.1**
ACX				*i* S	**Sn**	**00 00 04.8**	**-1.4**
YAIG	**Yautepec**	**1.95**	**73**	*i* P	**Pn**	**23 59 47.0**	**+0.5**
YAIG				*i* S	**Sn**	**00 00 09.4**	**-0.7**
YAIG	**Yautepec**	**1.95**	**73**	*i* P	**Pn**	**23 59 47.0**	**+0.5**
YAIG				*i* S	**Sn**	**00 00 09.4**	**-0.7**
UNM	**Universidad Na**	**2.04**	**59**	*i* P	**Pn**	**23 59 47.4**	**-0.4**
UNM				*i* S	**Sn**	**00 00 12.6**	**+0.1**
UNM	**Universidad Na**	**2.04**	**59**	*i* P	**Pn**	**23 59 47.4**	**-0.4**
UNM				*i* S	**Sn**	**00 00 12.6**	**+0.1**
MMIG	**Aquila**	**2.20**	**270**	*i* P	**Pn**	**23 59 50.2**	**+0.6**
MMIG				*i* S	**Sn**	**00 00 16.2**	**+0.4**
MMIG	**Aquila**	**2.20**	**270**	*i* P	**Pn**	**23 59 50.2**	**+0.6**
MMIG				*i* S	**Sn**	**00 00 16.2**	**+0.4**
PPM	**Popocatepetl**	**2.41**	**71**	*i* P	**Pn**	**23 59 53.9**	**+0.9**
PPM				*i* S	**Sn**	**00 00 21.5**	**-0.3**
PPM	**Popocatepetl**	**2.41**	**71**	*i* P	**Pn**	**23 59 53.9**	**+0.9**
PPM				*i* S	**Sn**	**00 00 21.5**	**-0.3**
IGIG	**Irapuato, Guan**	**2.47**	**354**	*i* P	**Pn**	**23 59 52.9**	**-0.8**
IGIG				*i* S	**Sn**	**00 00 22.0**	**-0.9**
DEIG	**Demacu**	**2.75**	**43**	*e*P	**Pn**	**23 59 57.0**	**-0.5**
DEIG				*i* S	**Sn**	**00 00 28.7**	**-1.1**
DEIG	**Demacu**	**2.75**	**43**	*e*P	**Pn**	**23 59 57.0**	**-0.5**
DEIG				*i* S	**Sn**	**00 00 28.7**	**-1.1**
UTMO	**Huajuapan**	**3.11**	**98**	*i* P	**Pn**	**00 00 02.9**	**+0.6**
UTMO				*i* S	**Sn**	**00 00 38.2**	**-0.1**
UTMO	**Huajuapan**	**3.11**	**98**	*i* P	**Pn**	**00 00 02.9**	**+0.6**
UTMO				*i* S	**Sn**	**00 00 38.2**	**-0.1**
PNIG	**Pinotepa**	**3.35**	**124**	*i* P	**Pn**	**00 00 06.2**	**+0.7**
PNIG				*i* S	**Sn**	**00 00 43.8**	**-0.4**
PNIG	**Pinotepa**	**3.35**	**124**	*i* P	**Pn**	**00 00 06.2**	**+0.7**
PNIG				*i* S	**Sn**	**00 00 43.8**	**-0.4**
TPIG	**Tehuac#an**	**3.49**	**87**	*e*P	**Pn**	**00 00 08.5**	**+1.1**
TPIG				*i* S	**Sn**	**00 00 48.2**	**+0.5**
TPIG	**Tehuac#an**	**3.49**	**87**	*e*P	**Pn**	**00 00 08.5**	**+1.1**
TPIG				*i* S	**Sn**	**00 00 48.2**	**+0.5**
HUIG	**Huatulco**	**5.33**	**117**	*i* P	**Pn**	**00 00 33.9**	**+1.3**
HUIG				*i* S	**Sn**	**00 01 33.1**	**+0.4**
HUIG	**Huatulco**	**5.33**	**117**	*i* P	**Pn**	**00 00 33.9**	**+1.3**
HUIG				*i* S	**Sn**	**00 01 33.1**	**+0.4**
732A	**Laxson Ranch,** baz=10	**10.44**	**5**	⇑P	**Pn**	**00 01 44.3**	**+1.9**
631A	**Perdido Creek** baz=11	**11.09**	**2**	⇓P	**Pn**	**00 01 52.9**	**+1.7**
632A	**Uvalde** baz=11	**11.23**	**6**	⇑P	**Pn**	**00 01 54.7**	**+1.5**
TXAR	**Lajitas Array** 0.1nm,0.3s,baz=162,slow=13,SNR=14	**11.26**	**348**	P	**Pn**	**00 01 55.3**	**+1.6**
628A	**Black Gap, Mar** baz=11	**11.28**	**352**	⇓P	Pn	00 01 57.4	+3.5
627A	**Terlingua Ranc** baz=11	**11.32**	**349**	⇑P	Pn	00 01 58.9	+4.3
626A	**Big Bend Ranch** baz=12	**11.57**	**346**	⇓P	Pn	00 02 02.6	+4.7
530A	**J-C Ranch, Com** baz=12	**11.82**	**359**	⇑P	**Pn**	**00 02 03.3**	**+2.1**
531A	**Rocksprings** baz=12	**11.84**	**2**	⇑P	**Pn**	**00 02 02.6**	**+1.2**
532A	**Rocksprings** baz=12,SNR=6.3	**11.84**	**5**	⇑P	**Pn**	**00 02 02.3**	**+0.8**
529A	**Stev Forest Ra** baz=12	**11.84**	**355**	⇑P	Pn	00 02 04.8	+3.3
528A	**Cox Ranch, San** baz=12	**11.93**	**353**	⇓P	Pn	00 02 06.3	+3.4
527A	**Woodward Ranch** baz=12	**12.04**	**349**	⇓P	Pn	00 02 08.2	+3.8
526A	**Mary Lane Ranc** baz=12,SNR=5.2	**12.05**	**347**	⇓P	Pn	00 02 08.8	+4.3
JCT	**Junction City** 5.6nm,0.9s	**12.19**	**5**	*e*Pn	**Pn**	**00 02 07.9**	**+1.6**
JCT	**Junction City** baz=12	**12.19**	**5**	⇑P	**Pn**	**00 02 07.1**	**+0.8**
429A	**Davenport Ranc** baz=12	**12.31**	**357**	⇑P	**Pn**	**00 02 10.4**	**+2.4**
431A	**Sonora** baz=12	**12.35**	**2**	⇑P	**Pn**	**00 02 09.8**	**+1.3**
430A	**Baggett Ranch,** baz=12,SNR=6.6	**12.45**	**359**	⇓P	**Pn**	**00 02 12.1**	**+2.2**
428A	**Kincaid Ranch,** baz=12	**12.48**	**353**	⇓P	Pn	00 02 13.3	+3.0
432A	**Menard** baz=13	**12.59**	**5**	⇓P	**Pn**	**00 02 12.8**	**+1.1**
426A	**McDonald Obser** baz=13	**12.63**	**348**	⇑P	Pn	00 02 16.9	+4.5
427A	**Hayter Ranch,** baz=13	**12.69**	**351**	⇓P	Pn	00 02 17.2	+3.9
425A	**Indio Mountain** baz=13	**12.95**	**345**	⇑P	**Pn**	**00 02 19.6**	**+2.8**
331A	**San Angelo** baz=13	**12.98**	**2**	⇓P	**Pn**	**00 02 18.2**	**+1.2**
330A	**Mertzon** baz=13	**13.07**	**359**	⇓P	**Pn**	**00 02 19.6**	**+1.4**
332A	**Millersview** baz=13	**13.10**	**5**	⇑P	**Pn**	**00 02 18.8**	**+0.2**
328A	**Wristen Ranch,** baz=13	**13.14**	**353**	⇓P	**Pn**	**00 02 18.4**	**-0.8**
329A	**Wagon Wheel Ra** baz=13	**13.17**	**356**	⇑P	**Pn**	**00 02 20.0**	**+0.3**
326A	**Caldwell Ranch** baz=13	**13.25**	**349**	⇑P	**Pn**	**00 02 23.5**	**+2.8**
325A	**Bean Ranch, Si** baz=14,SNR=8.9	**13.51**	**345**	⇑P	**Pn**	**00 02 26.7**	**+2.4**
230A	**Sterling City** baz=14	**13.55**	**360**	⇑P	**Pn**	**00 02 25.8**	**+1.1**
232A	**Coleman** baz=14,SNR=5.5	**13.60**	**5**	⇑P	**Pn**	**00 02 25.1**	**-0.4**
231A	**Bronte** baz=14	**13.61**	**3**	⇑P	**Pn**	**00 02 25.1**	**-0.4**
229A	**Bryant Ranch,** baz=14	**13.64**	**357**	⇓P	**Pn**	**00 02 27.7**	**+1.7**
324A	**Moseley Ranch,** baz=14,SNR=16	**13.71**	**344**	⇓P	Pn	00 02 30.1	+3.2
227A	**Bennet, Jal** baz=14	**13.82**	**352**	⇓P	**Pn**	**00 02 30.9**	**+2.5**
228A	**UT Block 9, Go** baz=14	**13.85**	**354**	⇑P	**Pn**	**00 02 30.4**	**+1.6**
MNTX	**Comudas Mount** 11nm,1.2s	**13.92**	**344**	*e*Pn	**Pn**	**00 02 30.6**	**+0.9**
226B	**Tecolote Peak,** baz=14,SNR=8.3	**14.02**	**349**	⇓P	**Pn**	**00 02 33.3**	**+2.2**
WHTX	**Lake Whitney** baz=14	**14.03**	**13**	⇑P	**Pn**	**00 02 28.8**	**-2.2**
225A	**Deer Hill, Car** baz=14,SNR=9.7	**14.19**	**347**	⇑P	**Pn**	**00 02 35.6**	**+2.3**
130A	**Snyder** baz=14	**14.25**	**0**	⇑P	**Pn**	**00 02 34.5**	**+0.4**
129A	**Stewart Farms,** baz=14	**14.31**	**357**	⇑P	**Pn**	**00 02 35.9**	**+1.2**
ABTX	**Abilene, Hawle** baz=14	**14.33**	**5**	⇓P	**Pn**	**00 02 34.3**	**-0.8**
128A	**Castleberry Fa** baz=14	**14.34**	**355**	⇓P	**Pn**	**00 02 36.0**	**+0.9**
131A	**Roby** baz=14	**14.34**	**2**	⇓P	**Pn**	**00 02 35.0**	**-0.2**
127A	**Arkansas Junct** baz=14	**14.48**	**352**	⇑P	**Pn**	**00 02 38.5**	**+1.4**
126A	**Clayton Basin,** baz=15	**14.55**	**350**	⇑P	**Pn**	**00 02 39.6**	**+1.6**
320A	**Kipp Ranch, An** baz=15	**14.66**	**334**	⇓P	**P**	**00 02 44.7**	**+0.6**
125A	**Gardner Draw,** baz=15,SNR=19	**14.68**	**348**	⇑P	**Pn**	**00 02 41.7**	**+2.0**
222A	**Williams Famil** baz=15	**14.81**	**339**	⇓P	**P**	**00 02 45.2**	**-0.6**
124A	**Stringfield Ra** baz=15,SNR=19	**14.90**	**345**	⇓P	**P**	**00 02 45.3**	**-1.5**
Z29A	**Hungry Hill Ra** baz=15,SNR=13	**14.93**	**358**	⇑P	**Pn**	**00 02 42.8**	**0.0**
Z30A	**Sanderson Ranc** baz=15,SNR=7.6	**14.94**	**360**	⇓P	**Pn**	**00 02 42.3**	**-0.7**
Z28A	**Tucker Farm, M** baz=15	**14.99**	**356**	⇑P	**Pn**	**00 02 44.2**	**+0.5**
Z31A	**Sharp Cattle R** baz=15	**14.99**	**3**	⇑P	**Pn**	**00 02 42.4**	**-1.2**
319A	**Douglas** baz=15	**15.02**	**332**	⇓P	**P**	**00 02 49.5**	**+1.4**
Z32A	**Haskell** baz=15	**15.03**	**5**	⇓P	**Pn**	**00 02 42.8**	**-1.2**
Z27A	**Tatum** baz=15	**15.10**	**353**	⇓P	**Pn**	**00 02 45.6**	**+0.5**
220A	**Playas Peak, P** baz=15	**15.16**	**335**	⇑P	**P**	**00 02 50.5**	**+0.9**
Z26A	**Caprock** baz=15,SNR=12	**15.16**	**351**	⇓P	**Pn**	**00 02 47.4**	**+1.6**
Z25A	**Roswell** baz=15	**15.29**	**348**	⇑P	**Pn**	**00 02 49.5**	**+1.9**
122A	**Conniff Cattle** baz=15	**15.33**	**341**	⇑P	**P**	**00 02 51.2**	**-0.3**
121A	**Cookes Peak, D** baz=16	**15.44**	**338**	⇓P	**P**	**00 02 53.0**	**+0.3**
Z24A	**Sheeppen Canyo** baz=16,SNR=8.9	**15.48**	**346**	⇑P	**P**	**00 02 52.7**	**-0.6**
Y29A	**Porterfield Fa** baz=16,SNR=8.4	**15.52**	**358**	⇑P	**Pn**	**00 02 50.7**	**+0.2**
Y28A	**McKinney Farm,** baz=16,SNR=7.5	**15.60**	**356**	⇑P	**Pn**	**00 02 51.9**	**+0.4**
Z23A	**Rita Site, Whi** baz=16	**15.63**	**344**	⇓P	**P**	**00 02 54.6**	**-0.2**
Y31A	**Rekieta Farm,** baz=16	**15.63**	**2**	⇓P	**Pn**	**00 02 50.3**	**-1.5**
Y27A	**Causey** baz=16,SNR=5.6	**15.65**	**353**	⇑P	**Pn**	**00 02 51.9**	**-0.2**
MSTX	**Muleshoe** baz=16,SNR=8.1	**15.70**	**355**	⇑P	**Pn**	**00 02 52.3**	**-0.4**
Y32A	**R-V Farms, Ver** baz=16	**15.72**	**5**	⇑P	**Pn**	**00 02 51.1**	**-1.8**
120A	**U Bar Ranch, L** baz=16	**15.77**	**336**	⇓P	**P**	**00 02 58.2**	**+1.8**
Y26A	**Elida** baz=16,SNR=8.8	**15.77**	**351**	⇓P	**P**	**00 02 55.4**	**-1.1**
Z22A	**Elephant Butte** baz=16	**15.83**	**341**	⇓P	**P**	**00 02 57.9**	**+0.8**
Y25A	**Mesa, Roswell** baz=16	**15.91**	**349**	⇑P	**P**	**00 02 57.3**	**-0.7**
Y24A	**Capitan** baz=16	**16.07**	**347**	⇑P	**P**	**00 02 59.7**	**0.0**
X30A	**Coker Ranch, T** baz=16,SNR=6.1	**16.10**	**0**	⇓P	**Pn**	**00 02 57.0**	**-0.7**
Z21A	**St. Cloud Mine** baz=16	**16.10**	**340**	⇓P	**P**	**00 03 01.5**	**+1.3**
X29A	**Tulia** baz=16,SNR=12	**16.11**	**358**	⇑P	**Pn**	**00 02 57.7**	**-0.2**
Y23A	**Lovelace Mesa,** baz=16,SNR=12	**16.22**	**345**	⇑P	**P**	**00 03 02.1**	**+0.7**
Z20A	**Nine Sixteen R** baz=16	**16.25**	**337**	⇑P	**P**	**00 03 03.9**	**+2.1**
X31A	**McDonald Ranch** baz=16	**16.31**	**3**	⇓P	**Pn**	**00 02 58.9**	**-1.4**
X26A	**CR and CF Fran** baz=16	**16.39**	**352**	⇑P	**Pn**	**00 03 02.4**	**+0.9**
X27A	**F and S Farms,** baz=16	**16.40**	**354**	⇑P	**Pn**	**00 03 02.3**	**+0.7**
Y22A	**Socorro** baz=16	**16.47**	**342**	⇑P	**P**	**00 03 05.1**	**+0.9**
TUC	**Tucson**	**16.50**	**330**	*e*Pn	**Pn**	**00 03 02.7**	**-0.2**
Y22D	**IRIS PASSCAL I** baz=17	**16.58**	**343**	⇑P	**P**	**00 03 07.1**	**+1.8**
X24A	**Lazy VL Ranch,** baz=17	**16.68**	**347**	⇓P	**P**	**00 03 07.0**	**+0.4**
Y21A	**Point of Rocks** baz=17	**16.75**	**341**	⇓P	**P**	**00 03 08.5**	**+1.2**
W29A	**Amraillo** baz=17	**16.78**	**358**	⇑P	**Pn**	**00 03 05.6**	**-0.7**
W27A	**Bowe Ranch, En** baz=17	**16.81**	**354**	⇑P	**Pn**	**00 03 06.9**	**+0.3**
W30A	**Crocket Farms** baz=17	**16.84**	**1**	⇑P	**Pn**	**00 03 06.1**	**-0.8**
W31A	**Holland Ranch,** baz=17	**16.86**	**3**	⇓P	**Pn**	**00 03 05.7**	**-1.5**
X23A	**Hourglass Bar** baz=17	**16.87**	**345**	⇓P	**P**	**00 03 09.2**	**+0.6**
Y20A	**Horse Springs,** baz=17	**16.89**	**339**	⇓P	**P**	**00 03 11.0**	**+2.1**
W26A	**Owens Ranch, T** baz=17	**16.91**	**352**	⇑P	**Pn**	**00 03 07.8**	**-0.1**
W28A	**Vega** baz=17	**16.94**	**357**	⇑P	**Pn**	**00 03 08.0**	**-0.2**
X22A	**Bernardo** baz=17	**17.01**	**343**	⇓P	**P**	**00 03 11.2**	**+1.0**
W25A	**X Bar L Ranch,** baz=17	**17.14**	**350**	⇓P	**Pn**	**00 03 11.2**	**+0.4**
X21A	**Alamocita Cree** baz=17	**17.19**	**341**	⇑P	**P**	**00 03 13.4**	**+1.2**
ANMO	**Albuquerque** 0.1nm,0.3s,baz=150,slow=12,SNR=13	**17.28**	**345**	P	**P**	**00 03 14.3**	**+1.2**
V30A	**Spur Ranch, Mi** baz=18	**17.41**	**1**	⇑P	**Pn**	**00 03 11.5**	**-2.5**
W23A	**Warner Place,** baz=18	**17.41**	**346**	⇓P	**P**	**00 03 14.8**	**+0.1**
V31A	**Spring Creek L** baz=18	**17.45**	**3**	⇓P	**Pn**	**00 03 11.9**	**-2.6**
V27A	**Dan Oppiter Fa** baz=18	**17.48**	**355**	⇑P	**Pn**	**00 03 14.6**	**-0.3**
V26A	**Tequesquite Ra** baz=18,SNR=5.4	**17.61**	**353**	⇓P	**Pn**	**00 03 16.8**	**+0.3**
W21A	**San Fidel** baz=18	**17.77**	**342**	⇓P	**Pn**	**00 03 20.3**	**+1.7**
V25A	**Rancho No Teng** baz=18	**17.77**	**350**	⇑P	**P**	**00 03 18.6**	**0.0**
V24A	**Rampart Ranch,** baz=18	**17.77**	**349**	⇓P	**P**	**00 03 18.6**	**-0.1**
V23A	**Ortiz Mt. (NFS** baz=18	**17.98**	**346**	⇑P	**Pn**	**00 03 21.7**	**+0.5**
X18A	**Snowflake** baz=18	**18.03**	**336**	⇑P	**Pn**	**00 03 23.9**	**+2.2**
W20A	**Ramah** baz=18	**18.04**	**340**	⇑P	**Pn**	**00 03 23.4**	**+1.5**
U28A	**Mallet** baz=18	**18.06**	**357**	⇓P	**P**	**00 03 21.1**	**-0.5**
U27A	**Thompson Grove** baz=18	**18.14**	**355**	⇑P	**P**	**00 03 22.0**	**-0.5**
TUL1	**Tulsa** baz=18,SNR=5.8	**18.16**	**14**	⇑P	**P**	**00 03 18.5**	**-4.2**
U26A	**Atchley Ranch,** baz=18	**18.20**	**353**	⇓P	**P**	**00 03 23.2**	**-0.1**
U25A	**Circle Dot Ran** baz=18	**18.29**	**351**	⇑P	**P**	**00 03 24.4**	**+0.1**
V22A	**San Miguel Ran** baz=18	**18.32**	**345**	⇓P	**Pn**	**00 03 25.6**	**+0.4**
Z14A	**Wintersburg** baz=18	**18.43**	**327**	⇑P	**Pn**	**00 03 28.0**	**+1.7**
U24A	**Moreno Valley** baz=18	**18.44**	**349**	⇓P	**P**	**00 03 25.8**	**-0.2**
U23A	**El Rito** baz=19,SNR=6.9	**18.54**	**347**	⇑P	**Pn**	**00 03 27.8**	**-0.2**
X16A	**Lo Mia Camp, P** baz=19	**18.56**	**332**	⇑P	**Pn**	**00 03 30.7**	**+2.6**
V20A	**Brimhall** baz=19	**18.65**	**341**	⇑P	**Pn**	**00 03 30.8**	**+1.6**
T27A	**Campo** baz=19	**18.77**	**356**	⇑P	**P**	**00 03 29.7**	**+0.3**
T31A	**Randall Ranch,** baz=19	**18.78**	**3**	⇑P	**P**	**00 03 28.2**	**-1.3**
T28A	**Walsh** baz=19	**18.79**	**357**	⇓P	**P**	**00 03 29.5**	**-0.1**
Y14A	**Wickenburg** baz=19	**18.91**	**328**	⇓P	**Pn**	**00 03 32.5**	**+0.3**
T26A	**Comanche Natio** baz=19	**18.95**	**354**	⇑P	**P**	**00 03 31.2**	**-0.3**
U21A	**Nageezi** baz=19	**19.00**	**343**	⇑P	**Pn**	**00 03 33.4**	**0.0**
T23A	**Casias Ranch,** baz=19	**19.19**	**348**	⇑P	**P**	**00 03 35.1**	**+0.8**
S28A	**Manter** baz=19	**19.25**	**358**	⇑P	**P**	**00 03 33.6**	**-1.0**
T21A	**Navajo Lake** baz=20	**19.50**	**344**	⇓P	**P**	**00 03 38.2**	**+0.8**
Y12C	**Blythe** baz=20	**19.57**	**325**	⇓P	**Pn**	**00 03 42.6**	**+2.7**
DVTC	**Desert V Tower** baz=20	**19.71**	**319**	⇓P	**Pn**	**00 03 43.9**	**+2.1**
S23A	**Nye Farm, Mont** baz=20	**19.83**	**348**	⇓P	**P**	**00 03 41.1**	**-0.1**
R27A	**Eads** baz=20	**19.99**	**356**	⇓P	**P**	**00 03 43.6**	**+0.9**
R25A	**Fountain Ranch** baz=20	**19.99**	**352**	⇑P	Pn	00 03 44.5	-0.6
S22A	**4UR Ranch, Cre** baz=20,SNR=7.5	**20.04**	**346**	⇑P	**P**	**00 03 43.3**	**-0.2**
S21A	**Coal Bank Pass** baz=20,SNR=8.8	**20.20**	**344**	⇑P	**P**	**00 03 45.3**	**+0.1**
IRM	**Iron Mountain** baz=20	**20.22**	**324**	⇑P	**P**	**00 03 46.2**	**+1.1**
W13A	**Hualapai Mount** baz=20	**20.27**	**328**	⇑P	**P**	**00 03 47.2**	**+1.3**
R23A	**Moffat** baz=20	**20.27**	**349**	⇑P	**P**	**00 03 45.7**	**-0.3**
R22A	**Saguache, Gunn** baz=21,SNR=9.1	**20.49**	**347**	⇓P	**P**	**00 03 49.0**	**+0.7**
109C	**Camp Elliot, M** baz=20	**20.49**	**318**	⇑P	Pn	00 03 52.6	+1.8
S20A	**Disappointment** baz=21,SNR=6.8	**20.50**	**343**	⇓P	**P**	**00 03 49.3**	**+0.9**
TIGA	**Tifton** baz=20	**20.51**	**47**	⇑P	P	00 03 38.8	-9.5
Q29A	**Oakley** baz=21	**20.53**	**0**	⇑P	**P**	**00 03 47.9**	**-0.6**
U15A	**North Rim** baz=21,SNR=6.9	**20.62**	**333**	⇓P	**P**	**00 03 50.9**	**+1.1**
KSCO	**Kaye Shedlock'** baz=21	**20.70**	**356**	⇑P	**P**	**00 03 49.6**	**-0.9**
Q28A	**Sharon Springs** baz=21	**20.72**	**358**	⇑P	**P**	**00 03 47.8**	**-2.7**
R20A	**Redvale** baz=21	**20.84**	**344**	⇑P	**P**	**00 03 51.7**	**-0.4**
Q22A	**Crested Butte,** baz=21	**21.13**	**347**	⇓P	**P**	**00 03 54.7**	**-0.6**
P30A	**Selden** baz=21	**21.20**	**2**	⇑P	**P**	**00 03 52.5**	**-3.2**
Q20A	**Ridgley Place,** baz=22	**21.54**	**344**	⇑P	**P**	**00 03 59.4**	**-0.1**
TUQ	**Turquoise Moun** baz=22	**21.59**	**325**	⇓P	**P**	**00 04 02.5**	**+2.5**
O23A	**Lake Granby, G** baz=22	**22.25**	**350**	⇑P	**P**	**00 04 07.4**

PRU 29 00:01:41.0, 49.80N×18.44E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.19**	**281**	*e*PG	Pg	00 01 44.8	+0.1
OKC				*e*SG	Sg	00 01 48.3	+1.0
	comp=Z,8.0nm,0.5s						
OJC	**Ojcow**	**0.97**	**64**	*e*Pg	Pg	00 01 58.3	-1.4
OJC				*e*Sg	Sg	00 02 10.5	-1.8
DPC	**Dobruska-Polom**	**1.47**	**293**	*e*PG	Pn	00 02 07.7	-1.2
DPC				*e*SG	Sg	00 02 28.1	-0.4
UPC	**Upice**	**1.71**	**295**	*e*SG	Sn	00 02 35.0	+0.2

*ISK **29** 00:03:18.8, 39.25N×25.71E, h7km, MD3.3*
*ATH **29** 00:03:21.1, 39.26N×26.12E, h22km, MD3.1/5*
*ISCJB **29** 00:03:21.9±0.5, 39.24N±0.02×26.03E±0.03, h10km±3km, Error ellipse: s-maj=3.9km s-min=3.3km az=154.5*
*DDA **29** 00:03:21.5, 39.30N×26.05E, h19km, MD3.0*
*CSEM **29** 00:03:21.7±0.1, 39.26N×26.04E, h5km, MD3.1, Error ellipse: s-maj=3.9km s-min=2.8km az=73.0*
*THE **29** 00:03:22.0, 39.24N×26.05E, h10km±1km, ML2.1/5, Error ellipse: s-maj=1.7km s-min=0.9km az=178.0*

ISC 29 00:03:21.7±0.8, 39.25N±0.02×26.06E±0.02, h12km±5km, n65, σ0.83/93, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIGR	**SIGRI**	**0.16**	**258**	P	**Pg**	**00 03 25.5**	**0.0**
SIGR				S	**Sg**	**00 03 28.1**	**0.0**
SIGR	**SIGRI**	**0.16**	**258**	P	**Pg**	**00 03 25.5**	**0.0**
SIGR				S	**Sg**	**00 03 28.1**	**0.0**
PRK	**Paraskevi**	**0.16**	**90**	P	**Pg**	**00 03 25.5**	**0.0**
PRK				S	**Sg**	**00 03 28.5**	**+0.4**
PRK	**Paraskevi**	**0.16**	**90**	*e*PB	**Pg**	**00 03 25.5**	**0.0**
PRK				*e*SB	**Sg**	**00 03 28.6**	**+0.4**
PRK	**Paraskevi**	**0.16**	**90**	P	**Pg**	**00 03 25.5**	**0.0**
PRK				S	**Sg**	**00 03 28.5**	**+0.4**
AYVA	**Ayvalik**	**0.49**	**83**	*i* P	**Pg**	**00 03 31.1**	**-0.3**
AYVA				*i* S	**Sg**	**00 03 38.4**	**+0.4**
AYVA	**Ayvalik**	**0.49**	**83**	*i* P	**Pg**	**00 03 31.1**	**-0.3**
AYVA				*i* S	**Sg**	**00 03 38.4**	**+0.4**
EZN	**Ezine**	**0.61**	**19**	*e*PG	**Sg**	**00 03 33.3**	**-0.4**
EZN				*e*SG	**Sn**	**00 03 44.5**	**-1.5**
EZN	**Ezine**	**0.61**	**19**	*e*Pg	**Pg**	**00 03 33.3**	**-0.4**
EZN				*e*Sg	**Sn**	**00 03 44.5**	**-1.5**
CHOS	**Chios island**	**0.86**	**180**	P	**Pg**	**00 03 37.9**	**-0.4**
CHOS				S	**Sb**	**00 03 50.2**	**+0.2**
CHOS	**Chios island**	**0.86**	**180**	*e*PN	**Pg**	**00 03 37.9**	**-0.4**
CHOS				*e*SN	**Sg**	**00 03 50.1**	**+0.5**
CHOS	**Chios island**	**0.86**	**180**	P	**Pg**	**00 03 37.9**	**-0.4**
CHOS				S	**Sb**	**00 03 50.2**	**+0.2**
LIA	**Limnos Island**	**0.94**	**314**	P	**Pb**	**00 03 40.0**	**+0.1**
LIA				S	**Sb**	**00 03 52.9**	**+0.6**
LIA	**Limnos Island**	**0.94**	**314**	*e*PN	**Pb**	**00 03 40.0**	**+0.1**
LIA				*e*SN	**Sb**	**00 03 52.7**	**+0.4**
LIA	**Limnos Island**	**0.94**	**314**	P	**Pb**	**00 03 40.0**	**+0.1**
LIA				S	**Sb**	**00 03 52.9**	**+0.6**
URLA	**Izmir**	**0.98**	**155**	*i* P	**Pb**	**00 03 40.4**	**-0.2**
URLA				*i* S	**Sb**	**00 03 54.0**	**+0.5**
URLA	**Izmir**	**0.98**	**155**	*i* P	**Pb**	**00 03 40.4**	**-0.2**
URLA				*i* S	**Sb**	**00 03 54.0**	**+0.5**
BLCB	**Balcova**	**1.15**	**138**	*e*PN	**Pg**	**00 03 44.6**	**+0.7**
BLCB	**Balcova**	**1.15**	**138**	*e*Pn	**Pg**	**00 03 44.6**	**+0.7**
GELI	**Tayfur-Gelibol**	**1.19**	**15**	*e*PN	**Pn**	**00 03 44.1**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.19**	**15**	*e*Pn	**Pn**	**00 03 44.1**	**-0.1**
LPK	**Lapseki**	**1.25**	**25**	*e*PN	**Pb**	**00 03 45.2**	**0.0**
LPK	**Lapseki**	**1.25**	**25**	*e*Pn	**Pb**	**00 03 45.2**	**0.0**
IZM	**Izmir**	**1.27**	**132**	*e*PN	**Pg**	**00 03 46.5**	**+0.5**
IZM	**Izmir**	**1.27**	**132**	*e*Pn	**Pg**	**00 03 46.5**	**+0.5**
SMTH	**Samothraki Isl**	**1.29**	**342**	P	**Pb**	**00 03 46.1**	**+0.2**
SMTH				S	**Sb**	**00 04 02.3**	**-0.1**
SMTH	**Samothraki Isl**	**1.29**	**342**	*e*PN	**Pb**	**00 03 46.1**	**+0.2**
SMTH				*e*SN	**Sg**	**00 04 03.6**	**+0.3**
SMTH	**Samothraki Isl**	**1.29**	**342**	P	**Pb**	**00 03 46.1**	**+0.2**
SMTH				S	**Sb**	**00 04 02.3**	**-0.1**
BALY	**Balya**	**1.30**	**67**	*i* P	**Pn**	**00 03 45.9**	**+0.1**
BALY				*i* S	**Sn**	**00 04 03.3**	**+0.2**
BALY	**Balya**	**1.30**	**67**	*i* P	**Pn**	**00 03 45.9**	**+0.1**
BALY				*i* S	**Sn**	**00 04 03.3**	**+0.2**
BALB	**Balikesir**	**1.46**	**74**	*e*PN	**Pg**	**00 03 50.3**	**+0.5**
BALB	**Balikesir**	**1.46**	**74**	*e*Pn	**Pg**	**00 03 50.3**	**+0.5**
GONE	**Gonen-Balikesi**	**1.49**	**57**	*e*PN	**Pb**	**00 03 49.1**	**-0.2**
GONE	**Gonen-Balikesi**	**1.49**	**57**	*e*Pn	**Pb**	**00 03 49.1**	**-0.2**
ENEZ	**Enez**	**1.49**	**3**	*e*PN	**Pn**	**00 03 47.0**	**-1.2**
KRBG	**Karabiga-Canak**	**1.49**	**39**	*e*PN	**Pn**	**00 03 48.2**	**0.0**
KRBG	**Karabiga-Canak**	**1.49**	**39**	*e*Pn	**Pn**	**00 03 48.3**	**0.0**
ALN	**Alexandroupoli**	**1.65**	**360**	P	**Pn**	**00 03 50.6**	**+0.1**
ALN				S	**Sn**	**00 04 11.7**	**+0.2**
ALN	**Alexandroupoli**	**1.65**	**360**	*e*PN	**Pn**	**00 03 50.6**	**+0.1**
ALN				*e*SN	**Sn**	**00 04 11.7**	**+0.2**
ALN	**Alexandroupoli**	**1.65**	**360**	P	**Pn**	**00 03 50.6**	**+0.1**
ALN				S	**Sn**	**00 04 11.7**	**+0.2**
SMG	**Samos**	**1.65**	**158**	*e*PN	**Pb**	**00 03 51.5**	**-0.6**
SMG				*e*SN	**Sb**	**00 04 12.9**	**+0.1**
SMG	**Samos**	**1.65**	**158**	*e*Pn	**Pb**	**00 03 51.5**	**-0.6**
SMG				*e*Sn	**Sb**	**00 04 12.9**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.68**	**30**	*e*PN	**Pn**	**00 03 51.7**	**+0.8**
RKY	**Sarkoy-Tekirda**	**1.68**	**30**	*e*Pn	**Pn**	**00 03 51.7**	**+0.8**
AOS	**Alonnisos**	**1.69**	**268**	P	**Pn**	**00 03 51.1**	**0.0**
AOS	**Alonnisos**	**1.69**	**268**	P	**Pn**	**00 03 51.1**	**0.0**
MFT	**Murefte**	**1.80**	**31**	*e*PN	**Pb**	**00 03 54.2**	**-0.5**
BNT	**Bandirma**	**1.81**	**52**	*e*PN	**Pn**	**00 03 53.1**	**+0.4**
BNT	**Bandirma**	**1.81**	**52**	*e*Pn	**Pn**	**00 03 53.1**	**+0.4**
KCTX	**Karacabey (Bur**	**2.04**	**59**	*e*PN	**Pb**	**00 03 57.6**	**-1.1**
KCTX	**Karacabey (Bur**	**2.04**	**59**	*e*Pn	**Pb**	**00 03 57.7**	**-1.1**
KULA	**Kula-Manisa**	**2.16**	**109**	*e*PN	**Pb**	**00 03 59.8**	**-0.9**
KULA	**Kula-Manisa**	**2.16**	**109**	*e*Pn	**Pb**	**00 03 59.8**	**-0.9**
APE	**Apeiranthos**	**2.21**	**191**	*e*PB	**Pn**	**00 04 58.0**	**-0.3**
ARMT	**Armutlu**	**2.53**	**58**	*e*PN	**Pn**	**00 04 04.8**	**+2.2**
TVSB	**Tavsanli**	**2.65**	**85**	*e*PN	**Pb**	**00 04 07.5**	**-1.6**
TVSB	**Tavsanli**	**2.65**	**85**	*e*Pn	**Pb**	**00 04 07.5**	**-1.6**
EDRB	**Edirne**	**2.65**	**11**	*e*PN	**Pn**	**00 04 03.8**	**-0.4**
EDRB	**Edirne**	**2.65**	**11**	*e*Pn	**Pn**	**00 04 03.8**	**-0.4**
CTKS	**Kestanelik-??a**	**2.73**	**43**	*e*PN	**Pn**	**00 04 07.2**	**+1.9**
CTKS	**Kestanelik-??a**	**2.73**	**43**	*e*Pn	**Pn**	**00 04 07.2**	**+1.9**
YLV	**Yalova**	**2.87**	**62**	*e*PN	**Pb**	**00 04 10.5**	**-2.4**
KLYT	**Kilyos**	**3.04**	**48**	*e*PN	**Pn**	**00 04 11.9**	**+2.4**
KLYT	**Kilyos**	**3.04**	**48**	*e*Pn	**Pn**	**00 04 11.9**	**+2.4**
ADVT	**Abdulvahap**	**3.07**	**66**	*e*PN	**Pb**	**00 04 13.2**	**-3.0**

*IDC **29** 00:04:31.9±1.4, 32.85N×47.62E, h0km, mb3.5/9, mb1 3.6/11, mb1mx3.4/29, mbtmp3.5/11, ML3.0/2, Error ellipse: s-maj=36.2km s-min=17.4km az=160.0*
*TEH **29** 00:04:34.7, 32.83N×47.68E, h4km, ML3.5*
*CSEM **29** 00:04:34.8±0.2, 32.86N×47.67E, h10km, ML3.5, Error ellipse: s-maj=7.4km s-min=4.7km az=86.0*
*KISR **29** 00:04:35.2±0.5, 32.44N×47.69E, h34km±999km, ML3.1*

ISC 29 00:04:36.5±1.3, 32.89N±0.03×47.63E±0.04, h30km±10km, n66, σ0.99/74, mb3.5/12, 2C-5D, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHGR	**Shooshtar-Gavs**	**1.25**	**128**	*e*Pg	**Pb**	**00 05 00.5**	**+1.0**
IKOM	**Komasi**	**1.29**	**355**	*e*Pg	**Pn**	**00 04 58.5**	**-0.1**
IKOM				*e*Sg	**Sb**	**00 05 17.4**	**+0.9**
IKOM				*e*		00 05 22.9	
	comp=Z,11μm,0.2s						
IKOM	**Komasi**	**1.29**	**355**	*e*Pg	**Pn**	**00 04 58.5**	**-0.1**
IKOM				*e*Sg	**Sb**	**00 05 17.4**	**+0.9**
IGHG	**Ghaleghazi**	**1.69**	**329**	*e*		00 05 40.5	
	comp=Z,7μm,0.2s						
IGHG				*e*Pn	**Pb**	**00 05 05.9**	**-1.2**
IVIS	**Veis**	**1.76**	**338**	*e*Pn	**Pb**	**00 05 07.3**	**-0.9**
IVIS	**Veis**	**1.76**	**338**	*e*Pn	**Pb**	**00 05 07.3**	**-0.9**
IDHR	**Dehrash**	**2.09**	**331**	*e*Pn	**Pn**	**00 05 11.1**	**+1.5**
IDHR				*e*		00 05 47.2	
	comp=Z,6μm,0.2s						
IDHR	**Dehrash**	**2.09**	**331**	*e*Pn	**Pn**	**00 05 11.1**	**+1.5**
ILIN	**Lien**	**2.10**	**345**	*e*Pn	**Pn**	**00 05 11.5**	**+1.6**
ILIN	**Lien**	**2.10**	**345**	*e*Pn	**Pn**	**00 05 11.5**	**+1.6**
KHMZ	**Khomeyn**	**2.13**	**66**	*e*Pg	**Pb**	**00 05 11.9**	**-2.6**
SNGE	**Sanandaj**	**2.21**	**354**	*e*Pg	**Pb**	**00 05 14.3**	**-1.7**
ASAO	**Ashtian**	**2.59**	**50**	*e*Pn	**Pn**	**00 05 17.7**	**+1.1**
IPIR	**Pirpir**	**2.75**	**93**	*e*Pn	**Pn**	**00 05 19.5**	**+0.6**
IPIR				*e*		00 06 01.3	
	comp=Z,1μm,0.2s						
IPIR	**Pirpir**	**2.75**	**93**	*e*Pn	**Pn**	**00 05 19.5**	**+0.6**
MIB	**Mutribah**	**3.08**	**185**	*e*P	**Pn**	**00 05 23.2**	**+0.1**
MIB	**Mutribah**	**3.08**	**185**	*e*P	**Pn**	**00 05 23.2**	**+0.1**
IRAZ	**Razeghan**	**3.15**	**37**	*e*Pn	**Pn**	**00 05 25.3**	**+1.0**
IRAZ				*e*		00 05 34.6	
	comp=Z,1μm,0.2s						
IRAZ	**Razeghan**	**3.15**	**37**	*e*Pn	**Pn**	**00 05 25.3**	**+1.0**
UMR	**Umm Al-Rimmam**	**3.32**	**179**	*e*P	**Pn**	**00 05 26.3**	**-0.1**
UMR				*e*S	**Sn**	**00 06 04.5**	**-0.4**
UMR				AML	AML	00 06 09.8	
	comp=Z,58nm,0.4s						
UMR	**Umm Al-Rimmam**	**3.32**	**179**	*e*P	**Pn**	**00 05 26.3**	**-0.1**
UMR				*e*S	**Sn**	**00 06 04.5**	**-0.4**
IKLH	**Kolahrood**	**3.34**	**81**	*e*Pn	**Pn**	**00 05 27.1**	**+0.2**
IKLH				*e*		00 05 29.7	
	comp=Z,2μm,0.1s						
IKLH	**Kolahrood**	**3.34**	**81**	*e*Pn	**Pn**	**00 05 27.1**	**+0.2**
NAY	**Al-Naaiem**	**3.64**	**185**	*e*P	**Pn**	**00 05 30.6**	**-0.2**
NAY				*e*S	**Sn**	**00 06 12.6**	**-0.2**
NAY	**Al-Naaiem**	**3.64**	**185**	*e*P	**Pn**	**00 05 30.6**	**-0.2**
NAY				*e*S	**Sn**	**00 06 12.6**	**-0.2**
KBD	**Kabd**	**3.70**	**179**	*e*P	**Pn**	**00 05 31.5**	**-0.1**
KBD				*e*S	**Sn**	**00 06 13.8**	**-0.4**
KBD	**Kabd**	**3.70**	**179**	*e*P	**Pn**	**00 05 31.5**	**-0.1**
KBD				*e*S	**Sn**	**00 06 13.8**	**-0.4**
IGAR	**Gharneh**	**3.75**	**96**	*e*Pn	**Pn**	**00 05 32.5**	**0.0**
IGAR				*e*		00 06 32.9	
	comp=Z,772nm,0.1s						
IR3	**Iran Long-Peri**	**3.82**	**46**	*e*Pn	**Pn**	**00 05 33.8**	**+0.5**
IR3				*e*Sg	Sb	00 06 34.0	+5.0
IR3	**Iran Long-Peri**	**3.82**	**46**	*e*Pn	**Pn**	**00 05 33.8**	**+0.5**
RDF	**Al-Radifah**	**3.95**	**181**	*e*P	**Pn**	**00 05 35.1**	**+0.1**
RDF	**Al-Radifah**	**3.95**	**181**	*e*P	**Pn**	**00 05 35.1**	**+0.1**
IZEF	**Zefreh**	**3.95**	**89**	*e*Pn	**Pn**	**00 05 35.2**	**-0.1**
IZEF				*e*		00 05 47.1	
	comp=Z,369nm,0.1s						
IZEF	**Zefreh**	**3.95**	**89**	*e*Pn	**Pn**	**00 05 35.2**	**-0.1**
IVRN	**Varamin**	**4.00**	**57**	*e*Pn	**Pn**	**00 05 35.4**	**-0.4**
IVRN				*e*		00 05 40.7	
	comp=Z,515nm,0.1s						
IVRN	**Varamin**	**4.00**	**57**	*e*Pn	**Pn**	**00 05 35.4**	**-0.4**
IFIR	**Firoozkooh**	**5.05**	**56**	*e*Pn	**Pn**	**00 05 50.6**	**+0.1**
IFIR				*e*		00 05 55.0	
	comp=Z,375nm,0.1s						
IFIR	**Firoozkooh**	**5.05**	**56**	*e*Pn	**Pn**	**00 05 50.6**	**+0.1**
ASF	**Jabal al Asfar**	**9.09**	**268**	Pn	**Pn**	**00 06 44.6**	**-1.2**
BRTR	**Keskin Array B**	**13.18**	**305**	Pn	**Pn**	**00 07 42.6**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=123,slow=9.0,SNR=3.8						
AKTO	**Aktyubinsk**	**19.14**	**21**	P	**Pn**	**00 08 58.0**	**-0.1**
	comp=Z,0.2nm,0.3s,baz=199,slow=14,SNR=4.4						
MLR	**Muntele Rosu**	**20.92**	**313**	*i*P	Pn	00 09 20.9	+1.5
TESR	**Tescani**	**21.03**	**316**	*i*P	**P**	**00 09 21.5**	**+3.8**
VOIR		**21.45**	**312**	*i*P	**P**	**00 09 23.6**	**+1.3**
ARR	**Arges**	**21.68**	**312**	*i*P	**P**	**00 09 27.2**	**+2.5**
LOT	**Lotru**	**22.26**	**311**	*i*P	**P**	**00 09 33.5**	**+2.5**
BURAR	**Bucovina Array**	**22.45**	**318**	*i*P	**P**	**00 09 33.3**	**+0.2**
DRGR		**23.52**	**313**	*i*P	**P**	**00 09 42.4**	**-1.6**
BVAR	**Borovoye Array**	**25.93**	**32**	P	**P**	**00 10 05.8**	**-0.2**
	comp=Z,0.5nm,0.5s,baz=222,slow=7.5,SNR=4.9						
BVAR				PcP	**PcP**	**00 13 33.4**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=199,slow=4.1,SNR=4.3						
KURBB	**Kurchatov Arra**	**28.78**	**43**	P	**P**	**00 10 31.9**	**+0.4**
	comp=Z,0.5nm,0.7s,baz=247,slow=9.2,SNR=4.3						
MKAR	**Makanchi Array**	**29.75**	**52**	P	**P**	**00 10 40.1**	**-0.1**
	comp=Z,0.2nm,0.4s,baz=248,slow=11,SNR=4.2						
FINES	**FINESS Array B**	**31.80**	**340**	P	**P**	**00 10 57.3**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=152,slow=8.0,SNR=7.4						
SBF	**Sospel**	**33.07**	**301**	*e*P	**P**	**00 11 09.2**	**-0.3**
MBDF	**Montbardon**	**33.63**	**303**	*e*P	**P**	**00 11 13.8**	**-0.7**
ZALV	**Zalesovo Beam**	**33.68**	**40**	P	**P**	**00 11 14.1**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=278,slow=11,SNR=2.8						
LPG	**La Plagne**	**33.74**	**304**	*e*P	**P**	**00 11 15.6**	**0.0**
	comp=Z,4.5nm,0.6s						
LPL	**La Plagne**	**33.75**	**304**	*e*P	**P**	**00 11 15.3**	**-0.3**
	comp=Z,4.4nm,0.6s						
ORIF	**Oris-en-Rattie**	**34.28**	**303**	*e*P	**P**	**00 11 20.0**	**-0.1**
CABF	**La Chapelle**	**34.35**	**306**	*e*P	**P**	**00 11 20.0**	**-0.6**
SMF	**Signal de Mont**	**35.89**	**306**	*e*P	**P**	**00 11 33.1**	**-0.7**
	comp=Z,2.4nm,0.4s						
AVF	**Avril sur Loir**	**36.24**	**306**	*e*P	**P**	**00 11 36.1**	**-0.7**
ARCES	**ARCESS Array B**	**38.74**	**348**	P	**P**	**00 11 57.6**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=158,slow=9.1,SNR=13						
ESDC	**Sonseca Array**	**41.67**	**295**	P	**P**	**00 12 22.4**	**+0.1**
	comp=Z,0.3nm,0.4s,baz=72,slow=8.5,SNR=7.3						
SONM	**Songino Array**	**46.11**	**53**	P	**P**	**00 12 58.6**	**+0.6**
	comp=Z,0.2nm,0.5s,baz=240,slow=7.6,SNR=2.1						
TORD	**Torodi Ar. Bea**	**46.20**	**256**	P	**P**	**00 12 57.8**	**-1.1**
	comp=Z,0.4nm,0.9s,baz=67,slow=7.8,SNR=4.2						
LPAZ	**La Paz**	**120.12**	**269**	PKP	**PKPdf**	**00 23 26.9**	**+1.2**
	comp=Z,1.0nm,0.3s,baz=7.7,slow=11,SNR=6.0						

*GUC **29** 00:08:32.3±0.6, 38.12S×74.10W, h17km±4km, ML4.9*
*ISCJB **29** 00:08:33.9±0.3, 38.15S±0.03×73.65W±0.07, h10km, mb4.5/25, MS4.2/9, Error ellipse: s-maj=7.7km s-min=3.8km az=178.4*
*IDC **29** 00:08:33.5±0.6, 38.09S×73.45W, h0km, mb4.1/9, mb1 4.2/14, mb1mx4.2/19, mbtmp4.1/14, ML3.7/5, MS4.2/12, Ms1 4.1/12, ms1mx3.9/23, Error ellipse: s-maj=21.2km s-min=13.0km az=79.0*
*NEIC **29** 00:08:38.9±0.4, 38.14S×73.38W, h35km, mb4.8/16, ML4.9(GUC), Error ellipse: s-maj=11.3km s-min=6.3km az=85.0*
NEIC Felt [II] at Los Angeles and Puerto Saavedra. Also felt at Angol, Concepcion, Talcahuano and Temuco.
*BJI **29** 00:08:40.5, 37.24S×71.79W, h35km, mB4.8/4, Ms4.9/2, Ms7 4.6/2*

ISC 29 00:08:34.9±0.4, 38.16S±0.03×73.68W±0.06, h10km, n97, σ1.58/98, mb4.7/25, MS4.3/9, 3C-4D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TMU	**Temuco**	**1.02**	**124**	*e*P	**Pb**	**00 08 55.4**	**+0.8**
TMU				*i* S	**Sn**	**00 09 12.1**	**+2.4**
TMU	**Temuco**	**1.02**	**124**	*e*P	**Pb**	**00 08 55.4**	**+0.8**
TMU				*i* S	**Sn**	**00 09 12.1**	**+2.4**
VLCH	**Valdivia**	**1.68**	**168**	*e*P	**Pn**	**00 09 02.6**	**-1.6**
VLCH				*i* S	**Sn**	**00 09 26.0**	**+0.2**
VLCH	**Valdivia**	**1.68**	**168**	*e*P	**Pn**	**00 09 02.6**	**-1.6**
VLCH				*i* S	**Sn**	**00 09 26.0**	**+0.2**
VLCH				AML	AML	00 09 39.4	
	comp=E,20μm,0.6s						
CCHI	**Chillan**	**2.01**	**40**	*e*P	**Pn**	**00 09 09.3**	**+0.5**
CCHI				*i* S	**Sb**	**00 09 37.2**	**+0.5**
CCHI	**Chillan**	**2.01**	**40**	*e*P	**Pn**	**00 09 09.3**	**+0.5**
CCHI				*i* S	**Sb**	**00 09 37.2**	**+0.5**
CCHI				AML	AML	00 09 56.3	
	comp=N,2μm,0.7s						
COCH	**Cobquecura**	**2.15**	**20**	*i*P	**Pn**	**00 09 09.3**	**-1.4**
COCH				*i* S	**Sb**	**00 09 38.2**	**-2.4**
COCH	**Cobquecura**	**2.15**	**20**	*i*P	**Pn**	**00 09 09.3**	**-1.4**
COCH				*i* S	**Sb**	**00 09 38.2**	**-2.4**
PUYE	**Entre Lagos**	**2.65**	**162**	*i*P	**Pn**	**00 09 17.3**	**-0.3**
PUYE				*i* S	**Sn**	**00 09 51.6**	**+1.7**
PUYE	**Entre Lagos**	**2.65**	**162**	*i*P	**Pn**	**00 09 17.3**	**-0.3**
PUYE				*i* S	**Sn**	**00 09 51.6**	**+1.7**
PUYE				AML	AML	00 10 23.5	
	comp=E,12μm,0.7s						
TALC	**Talca**	**3.21**	**31**	*i*P	**Pn**	**00 09 24.8**	**-0.6**
TALC				*i* S	**Sn**	**00 10 04.8**	**+1.2**
TALC	**Talca**	**3.21**	**31**	*i*P	**Pn**	**00 09 24.8**	**-0.6**
TALC				*i* S	**Sn**	**00 10 04.8**	**+1.2**
TALC				AML	AML	00 10 25.9	
	comp=N,4μm,0.5s						
PLCA	**Paso Flores**	**3.53**	**138**	*e*Pn	**Pn**	**00 09 30.2**	**+0.4**
PLCA				*e*Sn	**Sn**	**00 10 11.8**	**+0.1**
PLCA				Lg	Lg	00 10 25.1	
PLCA	**Paso Flores**	**3.53**	**138**	Pn	**Pn**	**00 09 30.4**	**+0.6**
	comp=N,1.2nm,0.3s,baz=307,slow=14,SNR=23						
PLCA				Pg	**Pb**	**00 09 35.6**	**-1.8**
	comp=N,11nm,0.3s,baz=309,slow=15,SNR=46						
PLCA				Lg	Lg	00 10 25.1	
	comp=N,30nm,0.3s,baz=221,slow=21,SNR=5.6						
PLCA				LR	LR	00 11 14.1	
	comp=N,3μm,19.2s,baz=314,slow=46						
LMEL	**Las Melosas**	**5.15**	**34**	*i* P	**Pn**	**00 09 51.6**	**-0.6**
LMEL				*i* S	**Pn**	**00 09 52.3**	**+0.2**
LMEL	**Las Melosas**	**5.15**	**34**	*i* P	**Pn**	**00 09 51.6**	**-0.6**
LMEL				*i* S	**Sn**	**00 10 52.3**	**+0.6**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan**	**7.92**	**36**	Pn	**Pn**	**00 10 28.1**	**-2.0**
CFAA				Lg	Lg	00 12 41.9	
CFAA	**Coronel Fontan**	**7.92**	**36**	Pn	**Pn**	**00 10 28.1**	**-2.0**
	comp=N,0.4nm,0.3s,baz=210,slow=12,SNR=41						
CFAA				Lg	Lg	00 12 41.9	
	baz=114,slow=22,SNR=2.6						
TRQA	**Tornquist**	**9.22**	**93**	*e*Pn	**Pn**	**00 10 47.0**	**-1.0**
LCO	**Las Campanas**	**9.46**	**16**	*e*Pn	**Pn**	**00 10 48.6**	**-2.9**
LCO				*e*Sn	**Sn**	**00 12 33.5**	**-4.4**
LVC	**Limon Verde**	**16.03**	**16**	Pn	**Pn**	**00 12 20.5**	**-0.2**
LVC	**Limon Verde**	**16.03**	**16**	Pn	**Pn**	**00 12 20.5**	**-0.2**
	comp=N,0.5nm,0.3s,baz=222,slow=5.4,SNR=3.9						
LVC				LR	LR	00 18 07.5	
	comp=N,479nm,19.9s,baz=195,slow=36						
USHA	**Ushuaia**	**17.05**	**170**	P	**P**	**00 12 35.2**	**+0.3**
USHA	**Ushuaia**	**17.05**	**170**	P	**P**	**00 12 35.2**	**+0.3**
	comp=N,0.1nm,0.3s,baz=343,slow=12,SNR=3.2						
CPUP	**Villa Florida**	**18.15**	**54**	*e*Pn	Pn	00 12 39.9	-7.0
CPUP	**Villa Florida**	**18.15**	**54**	P	**Pn**	**00 12 45.2**	**-1.7**
	comp=N,0.2nm,0.3s,baz=222,slow=9.0,SNR=11						
CPUP				LR	LR	00 20 30.4	
	comp=N,2μm,18.3s,baz=212,slow=40						
LPAZ	**La Paz**	**22.33**	**14**	*e*P	**P**	**00 13 33.9**	**+0.5**
	comp=N,78nm,2.0s						
LPAZ	**La Paz**	**22.33**	**14**	P	**P**	**00 13 34.2**	**+0.7**
	comp=N,7.6nm,1.1s,baz=159,slow=9.7,SNR=16						
PMSA	**Palmer Station**	**27.25**	**171**	LR	LR	00 24 02.4	
	comp=N,360nm,18.4s,baz=125,slow=34						
SAML	**Samuel**	**30.59**	**21**	*e*P	**P**	**00 14 47.1**	**-1.9**
BDFB	**Brasilia**	**31.86**	**52**	P	P	00 15 03.6	+3.4
BDFB	**Brasilia**	**31.86**	**52**	P	P	00 15 03.6	+3.4
	comp=N,4.9nm,1.0s,baz=230,slow=9.7,SNR=3.8						
BDFB				LR	LR	00 28 43.6	
	comp=N,378nm,21.2s,baz=30,slow=38						
OTAV	**Otavalo**	**38.46**	**352**	P	**P**	**00 15 57.4**	**-0.2**
	comp=N,38nm,1.5s						
OTAV				*e*		00 16 05.3	
OTAV				*e*		00 16 18.2	
SNAA	**Sanae**	**48.27**	**156**	*e*P	**P**	**00 17 14.8**	**-0.9**
	comp=N,12nm,1.1s						
QSPA	**South Pole Qui**	**52.08**	**180**	P	**P**	**00 17 45.0**	**+0.2**
QSPA	**South Pole Qui**	**52.08**	**180**	P	**P**	**00 17 45.0**	**+0.2**
	comp=N,3.5nm,1.0s,baz=117,slow=3.5,SNR=7.1						
RKT	**Rikitea**	**53.93**	**267**	*e*LR	LR	00 33 51.8	
	comp=N,359nm,25.5s						
VNDA	**Vanda**	**59.77**	**192**	P	**P**	**00 18 41.8**	**+2.4**
VNDA	**Vanda**	**59.77**	**192**	P	**P**	**00 18 41.8**	**+2.4**
	comp=N,1.8nm,1.1s,baz=218,slow=7.7,SNR=2.3						
TBI	**Tubuai**	**65.14**	**259**	*e*LR	LR	00 38 55.5	
	comp=N,235nm,24.0s						
PPT2	**Papeete2**	**68.41**	**264**	*e*S	S	00 28 53.0	+14

CD2				PP	PP	00 34 09.3	+10
CD2				SKKS		00 40 50.3	
CD2				SS	**SS**	**00 55 14.3**	**+4.3**
CD2				AMB	AMB		
	comp=Z,100nm,10.2s						
CD2				LR	LR		
	comp=N,120nm,22.4s						
CD2				LR	LR		
	comp=Z,140nm,22.6s						
GTA	**Gaotai**	**174.77**	**74**	*e*P	PKPdf	00 28 53.5	+8.6
HHC	**Hu-ho-hao-te**	**175.14**	**305**	*e*PKP	**PKPdf**	**00 28 46.3**	**+1.4**
HHC				pPKP	pPKPdf	00 28 57.0	+8.6
HHC				sPKP		00 29 01.0	
HHC				PKS	**PKSdf**	**00 32 16.5**	**-0.6**
HHC				PP	PP	00 34 18.5	+5.0
HHC				SKS	**SKSdf**	**00 35 43.5**	**-4.5**
HHC				SKKS	**SKKSac**	**00 41 01.3**	**+1.6**
HHC				SS	**SS**	**00 55 41.3**	**+3.4**
HHC				AMB	AMB		
	comp=Z,87nm,9.7s						
HHC				LR	LR		
	comp=N,200nm,19.4s						
HHC				LR	LR		
	comp=E,160nm,20.3s						
HHC				LR	LR		
	comp=Z,130nm,21.8s						
LZH	**Lanzhou**	**177.13**	**136**	*e*PKP	**PKPdf**	**00 28 49.0**	**+3.4**
LZH				pPKP	pPKPdf	00 28 59.5	+10
LZH				sPKP		00 29 03.5	

*ISCJB **29** 00:13:48.8±0.4,24.˝18N±0.˝02×121.˝84E±0.˝02,h5km±3km, Error ellipse: s-maj=3.0km s-min=2.2km az=43.2*
*TAP **29** 00:13:49.4,24.˝20N×121.˝77E,h15km,ML3.7,B*
*JMA **29** 00:13:49.8±0.3,24.˝09N×121.˝77E,h27km,M3.0*
ISC 29 00:13:49.3±0.9,24.˝19N±0.˝02×121.˝79E±0.˝02,h13km±6km, n54,σ0ş65/90,10C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.13**	**339**	*i* P	**Pg**	**00 13 52.6**	**-0.2**
	baz=350						
EHP				*i* S	**Sg**	**00 13 55.4**	**+0.3**
	baz=350						
TWD	**Chiawan**	**0.21**	**239**	⇑*i*P	**Pg**	**00 13 54.0**	**+0.1**
	baz=238						
TWD				*i* S	**Sg**	**00 13 57.6**	**+0.6**
	baz=238						
ENA	**Nanau**	**0.24**	**349**	⇑*i*P	**Pg**	**00 13 54.5**	**-0.1**
	baz=355						
ENA				*i* S	**Sg**	**00 13 58.2**	**+0.1**
	baz=355						
HWA	**Hwalien**	**0.27**	**219**	*e*P	**Pb**	**00 13 56.1**	**0.0**
	baz=222						
ESF	**Shoufeng Towns**	**0.41**	**220**	*e*P	**Pg**	**00 13 57.5**	**0.0**
	baz=224						
TWC	**Suao**	**0.42**	**7**	⇑*i*P	**Pg**	**00 13 57.9**	**+0.1**
	baz=14						
NNS	**Nan Shan**	**0.46**	**304**	⇑*i*P	**Pg**	**00 13 58.2**	**-0.3**
	baz=303						
NNS				S	**Sg**	**00 14 04.4**	**-0.2**
	baz=303						
WHF	**Hehuan Shan**	**0.48**	**265**	⇑*i*P	**Pg**	**00 13 58.9**	**-0.1**
	baz=264						
WHF				*i* S	**Sg**	**00 14 05.5**	**0.0**
	baz=264						
ESL	**Shilin**	**0.49**	**222**	⇓*i*P	**Pg**	**00 13 59.2**	**+0.1**
	baz=225						
ESL				*e*S	**Sb**	**00 14 06.7**	**-0.4**
	baz=225						
TWE	**Neicheng**	**0.54**	**348**	⇑*i*P	**Pg**	**00 14 00.1**	**+0.1**
	baz=350						
TWE				S	**Sg**	**00 14 07.2**	**-0.1**
	baz=350						
TWT	**Tachien**	**0.57**	**277**	⇑*i*P	**Pb**	**00 14 00.8**	**-0.4**
	baz=276						
TWT				*i* S	**Sb**	**00 14 08.5**	**-0.8**
	baz=276						
ILA	**Ilan**	**0.58**	**356**	*e*P	**Pb**	**00 14 01.2**	**-0.1**
	baz=352						
ILA				*e*S	**Sb**	**00 14 09.0**	**-0.5**
	baz=352						
NSK	**Sanguang**	**0.63**	**321**	⇑*i*P	**Pg**	**00 14 01.4**	**-0.2**
	baz=321						
NSK				*i* S	**Sg**	**00 14 09.6**	**-0.3**
	baz=321						
EHY	**Hungye**	**0.80**	**212**	*e*P	**Pg**	**00 14 03.9**	**-1.0**
	baz=224						
TWA	**Mucha**	**0.81**	**347**	*e*P	**Pg**	**00 14 05.4**	**+0.2**
	baz=337						
TWA				*e*S	**Sb**	**00 14 16.0**	**-0.3**
	baz=337						
TWB1	**Santiao Chiao**	**0.84**	**12**	*e*P	**Pb**	**00 14 05.4**	**-0.4**
	baz=12						
TWB1				*e*S	**Sg**	**00 14 16.5**	**-0.1**
	baz=12						
NSTT	**Nanjuang**	**0.85**	**302**	*e*P	**Pb**	**00 14 05.8**	**-0.1**
	baz=301						
NSTT				S	**Sb**	**00 14 16.7**	**-0.5**
	baz=301						
SMLT	**Sun Moon Lake**	**0.87**	**250**	P	**Pb**	**00 14 06.0**	**-0.5**
	baz=249						
SMLT				S	**Sg**	**00 14 17.7**	**+0.1**
	baz=249						
NWF	**Wu-fen Shan**	**0.88**	**359**	*e*P	**Pb**	**00 14 06.4**	**-0.2**
	baz=352						
NWF				*e*S	**Sb**	**00 14 18.1**	**-0.2**
	baz=352						
TAP1	**Taipei**	**0.88**	**344**	*e*P	**Pn**	**00 14 07.1**	**-0.4**
	baz=343						
TAP1				*e*S	**Sg**	**00 14 18.3**	**+0.3**
	baz=343						
TAP	**Taipei**	**0.89**	**343**	*e*P	**Pg**	**00 14 06.9**	**+0.4**
	baz=335						
TYC	**Yuchr**	**0.90**	**252**	*e*P	**Pb**	**00 14 06.2**	**-0.7**
	baz=251						
TYC				*e*S	**Sb**	**00 14 18.1**	**-0.6**
	baz=251						
TWQ1	**Liyutan**	**0.94**	**280**	P	**Pn**	**00 14 08.0**	**-0.4**
	baz=280						
TWQ1				*e*S	**Sn**	**00 14 21.4**	**-0.3**
	baz=280						
TWF1	**Yuli**	**0.95**	**209**	*e*P	**Pb**	**00 14 06.7**	**-1.0**
	baz=222						
NCU	**National Centr**	**0.95**	**325**	*e*P	**Pn**	**00 14 08.3**	**-0.2**
	baz=324						
NCU				*e*S	**Sn**	**00 14 22.2**	**+0.2**
	baz=324						
HSN	**Hsinchu**	**0.97**	**309**	*e*P	**Pn**	**00 14 08.7**	**0.0**
	baz=304						
HSN				*e*S	**Sn**	**00 14 22.0**	**-0.3**
	baz=304						
NSY	**Sanyi**	**0.97**	**284**	*e*P	**Pn**	**00 14 08.6**	**-0.1**
	baz=283						
NSY				*e*S	**Sn**	**00 14 22.8**	**+0.4**
	baz=283						
TWS1	**Kuangyinshan**	**0.97**	**340**	*e*P	**Pg**	**00 14 08.3**	**+0.2**
	baz=339						
TWS1				*e*S	**Sn**	**00 14 21.8**	**-0.6**
	baz=339						
TCU	**Taichung**	**1.02**	**268**	⇑*i*P	**Pn**	**00 14 10.3**	**+1.0**
	baz=268						
TCU				S	**Sn**	**00 14 24.7**	**+1.1**
	baz=268						
YUS	**Yu-Shan**	**1.04**	**228**	⇓*i*P	**Pb**	**00 14 09.0**	**-0.5**
	baz=217						
YUS				*e*S	**Sn**	**00 14 24.9**	**+0.2**
	baz=217						
WNT	**Mingjian**	**1.06**	**253**	*e*P	**Pg**	**00 14 10.4**	**+0.6**
	baz=244						
TWY	**Chenhua**	**1.10**	**351**	*e*P	**Pg**	**00 14 10.8**	**+0.3**
	baz=335						
ALS	**Alishan**	**1.13**	**234**	⇓*i*P	**Pb**	**00 14 10.6**	**-0.3**
	baz=233						
YOJ	**Yonaguni jima**	**1.15**	**76**	*e*P	**Pn**	**00 14 10.7**	**-0.4**
	baz=64						
YOJ				*e*S	**Sn**	**00 14 27.2**	**+0.5**
	baz=64						
YOJ	**Yonaguni jima**	**1.15**	**76**	P	**Pn**	**00 14 10.9**	**-0.2**
YOJ				*e*S	**Sb**	**00 14 25.9**	**+0.1**
CHKT	**Chengkung**	**1.15**	**200**	*e*P	**Pn**	**00 14 10.0**	**-1.2**
	baz=183						
CHN5	**Tsauling**	**1.18**	**240**	*e*P	**Pb**	**00 14 11.7**	**+0.1**
	baz=241						
CHN5				*e*S	**Sg**	**00 14 29.9**	**+2.5**
	baz=241						
ELDTW	**Lidau**	**1.22**	**216**	*e*P	**Pn**	**00 14 10.8**	**-1.5**
	baz=202						
WGK	**Gukeng**	**1.23**	**246**	*e*P	**Pb**	**00 14 12.4**	**-0.1**
	baz=246						
CHY	**Chiayi**	**1.43**	**242**	*e*P	**Pg**	**00 14 16.5**	**-0.3**
	baz=243						
CHY				*e*S	**Sg**	**00 14 37.4**	**+2.0**
	baz=243						
WTP	**Ta-pu**	**1.43**	**229**	⇑*i*P	**Pb**	**00 14 15.7**	**-0.2**
	baz=230						
WTP				*e*S	**Sg**	**00 14 36.0**	**+0.6**
	baz=230						
PCYT	**Pengchaiyu**	**1.46**	**10**	*e*P	**Pn**	**00 14 15.7**	**+0.2**
	baz=7.0						
TWK	**Hsinying**	**1.51**	**233**	*e*P	**Pb**	**00 14 16.8**	**-0.4**
	baz=233						
TWK				*e*S	**Sg**	**00 14 37.8**	**-0.1**
	baz=233						
CHN1	**Nanshi**	**1.53**	**230**	*e*P	**Pn**	**00 14 16.8**	**+0.4**
	baz=221						
CHN1				*e*S	**Sg**	**00 14 39.5**	**+0.9**
	baz=221						
IRIF	**Iriomote-Funau**	**1.77**	**85**	P	**Pn**	**00 14 20.1**	**+0.3**
IRIF				*e*S	**Sn**	**00 14 42.8**	**+0.6**
HATJ	**Hateruma jima**	**1.84**	**94**	P	**Pn**	**00 14 20.8**	**+0.1**
HATJ				*e*S	**Sn**	**00 14 43.6**	**-0.3**
TWM1	**Shoushan**	**1.85**	**223**	*e*P	**Pb**	**00 14 22.1**	**-0.9**
	baz=223						
JKRS	**Kuro-shima**	**2.02**	**88**	P	**Pn**	**00 14 23.6**	**+0.4**
JKRS				*e*S	**Sn**	**00 14 49.7**	**+1.3**
SCZT	**Fangliau**	**2.10**	**211**	*e*P	**Pn**	**00 14 25.8**	**+1.5**
	baz=195						
PNG	**Penghu**	**2.14**	**254**	*e*P	**Pn**	**00 14 24.5**	**-0.3**
	baz=255						
JIJ	**Ishigaki jima**	**2.15**	**85**	P	**Pn**	**00 14 24.8**	**-0.2**
JIJ				*e*S	**Sn**	**00 14 50.7**	**-0.9**
TWK1	**Hengchun**	**2.41**	**202**	*e*P	**Pn**	**00 14 28.0**	**-0.6**
	baz=192						
JTJ	**Tarama**	**2.69**	**80**	P	**Pn**	**00 14 33.6**	**+1.2**
JTJ				*e*S	**Sn**	**00 15 04.9**	**0.0**
KNM	**Kinmen**	**3.07**	**275**	*e*P	**Pn**	**00 14 39.0**	**+1.3**
	baz=275						

*NEIC **29** 00:50:28.8,19.˝24N×64.˝79W,h19km,MD3.5(RSPR), After RSPR.*
RSPR 29 00:50:28.8,19.˝24N×64.˝79W,h19km±7km,MD3.5/7, 26C-6D,Virgin Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBVI	**Tortola**	**0.83**	**169**	⇑*e*P	**Pb**	**00 50 42.6**	**-2.1**
TBVI				*e*S	**Sb**	**00 50 53.5**	**-2.0**
TBVI	**Tortola**	**0.83**	**169**	⇑*e*P	**Pb**	**00 50 42.6**	**-2.1**
TBVI				*e*S	**Sb**	**00 50 53.5**	**-2.0**
TBVI	**Tortola**	**0.83**	**169**	⇑*e*P	**Pb**	**00 50 42.6**	**-2.1**
TBVI				*e*S	**Sb**	**00 50 53.5**	**-2.0**
STVI	**Saint Thomas**	**0.90**	**190**	⇑*e*P	**Pb**	**00 50 43.6**	**-2.2**
STVI	**Saint Thomas**	**0.90**	**190**	⇑*e*P	**Pb**	**00 50 43.6**	**-2.2**
STVI				*e*S	**Sb**	**00 50 55.2**	**-2.2**
STVI	**Saint Thomas**	**0.90**	**190**	⇑*e*P	**Pb**	**00 50 43.6**	**-2.2**
STVI				*e*S	**Sb**	**00 50 55.2**	**-2.2**
MTP	**Monte Pirata**	**1.35**	**213**	⇓*e*P	**Pn**	**00 50 50.1**	**-2.6**
MTP	**Monte Pirata**	**1.35**	**213**	⇓*e*P	**Pn**	**00 50 50.1**	**-2.6**
MTP				*e*S	**Sn**	**00 51 06.2**	**-3.9**
MTP	**Monte Pirata**	**1.35**	**213**	⇓*e*P	**Pn**	**00 50 50.1**	**-2.6**
MTP				*e*S	**Sn**	**00 51 06.2**	**-3.9**
CBYP	**Canovanas**	**1.40**	**227**	⇑*e*P	**Pn**	**00 50 50.5**	**-2.9**
CBYP	**Canovanas**	**1.40**	**227**	⇑*e*P	**Pn**	**00 50 50.5**	**-2.9**
CBYP				*e*S	**Sn**	**00 51 07.9**	**-3.6**
CBYP	**Canovanas**	**1.40**	**227**	⇑*e*P	**Pn**	**00 50 50.5**	**-2.9**
CBYP				*e*S	**Sn**	**00 51 07.9**	**-3.6**
CDVI	**St. Croix**	**1.48**	**179**	*e*Pn	**Pn**	**00 50 52.5**	**-2.0**
CDVI				*e*Sn	**Sn**	**00 51 11.2**	**-2.1**
HUMP	**Col San Antoni**	**1.49**	**223**	⇓*e*P	**Pn**	**00 50 51.9**	**-2.7**
HUMP	**Col San Antoni**	**1.49**	**223**	⇓*e*P	**Pn**	**00 50 51.9**	**-2.7**
HUMP				*e*S	**Sn**	**00 51 10.1**	**-3.4**
HUMP	**Col San Antoni**	**1.49**	**223**	⇓*e*P	**Pn**	**00 50 51.9**	**-2.7**
HUMP				*e*S	**Sn**	**00 51 10.1**	**-3.4**
CPD	**Cerro la Pandu**	**1.61**	**222**	⇓*e*P	**Pn**	**00 50 53.7**	**-2.5**
CPD	**Cerro la Pandu**	**1.61**	**222**	⇓*e*P	**Pn**	**00 50 53.7**	**-2.5**
CPD	**Cerro la Pandu**	**1.61**	**222**	⇓*e*P	**Pn**	**00 50 53.7**	**-2.5**
SJG	**San Juan**	**1.71**	**229**	⇑*e*P	**Pn**	**00 50 54.9**	**-2.8**
SJG	**San Juan**	**1.71**	**229**	⇑*e*P	**Pn**	**00 50 54.9**	**-2.7**
SJG	**San Juan**	**1.71**	**229**	⇑*e*P	**Pn**	**00 50 54.9**	**-2.8**
SJG	**San Juan**	**1.71**	**229**	⇑*e*P	**Pn**	**00 50 54.9**	**-2.7**
SJG				*e*S	**Sn**	**00 51 15.4**	**-3.7**
SJG	**San Juan**	**1.71**	**229**	⇑*e*P	**Pn**	**00 50 54.9**	**-2.7**
SJG				*e*S	**Sn**	**00 51 15.4**	**-3.7**
CELP	**Cerrillos**	**2.06**	**236**	⇑*e*P	**Pn**	**00 51 00.2**	**-2.3**
CELP	**Cerrillos**	**2.06**	**236**	⇑*e*P	**Pn**	**00 51 00.2**	**-2.3**
CELP	**Cerrillos**	**2.06**	**236**	⇑*e*P	**Pn**	**00 51 00.2**	**-2.3**
AOPR	**Arecibo Observ**	**2.07**	**245**	⇑*e*P	**Pn**	**00 50 60.0**	**-2.6**
AOPR	**Arecibo Observ**	**2.07**	**245**	⇑*e*P	**Pn**	**00 50 60.0**	**-2.6**
AOPR	**Arecibo Observ**	**2.07**	**245**	⇑*e*P	**Pn**	**00 50 60.0**	**-2.6**
AGPR	**Aguadilla, PR**	**2.33**	**251**	*e*Pn	**Pn**	**00 51 04.0**	**-2.2**
CRPR	**Cabo Rojo, PR**	**2.52**	**241**	⇑*e*P	**Pn**	**00 51 06.6**	**-2.2**
CRPR	**Cabo Rojo, PR**	**2.52**	**241**	⇑*e*P	**Pn**	**00 51 06.6**	**-2.2**
CRPR	**Cabo Rojo, PR**	**2.52**	**241**	⇑*e*P	**Pn**	**00 51 06.6**	**-2.2**

*ISCJB **29** 00:57:40.6±0.5,13.˝46N±0.˝05×119.˝84E±0.˝06,h16km, mb4.1/10,MS2.8/1,Error ellipse: s-maj=8.4km s-min=7.4km az=174.4*
*MAN **29** 00:57:43,13.˝49N×120.˝05E,h11km,mb4.9,ML3.8,MS3.8*
*IDC **29** 00:57:47.6±1.8,13.˝65N×120.˝47E,h64km±18km,mb3.7/11, mb1 3.9/11,mb1mx3.6/26,mbtmp3.7/11,MS3.1/2, Ms1 3.1/2,ms1mx2.7/33,Error ellipse: s-maj=43.6km s-min=13.8km az=65.0*
ISC 29 00:57:42.2±0.7,13.˝51N±0.˝05×119.˝98E±0.˝06,h16km,n26, σ1ş28/26,mb4.0/10,1C-2D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**1.10**	**58**	⇑*i*P	**Pn**	**00 58 02.7**	**-0.2**
TGY				*i* S	**Sg**	**00 58 20.5**	**+2.7**
TGY	**Tagaytay City**	**1.10**	**58**	P	**Pn**	**00 58 02.3**	**-0.7**
	1μm,0.3s,baz=258,slow=1.9,SNR=87						
TGY				S	**Sg**	**00 58 19.9**	**+2.1**
	2μm,0.3s,baz=32,slow=18,SNR=12						
SJMP	**San Jose**	**1.52**	**133**	*e*P	**Pn**	**00 58 09.2**	**+0.5**
SJMP				*e*S	**Sn**	**00 58 19.3**	**-9.0**
LQP	**Lukban**	**1.63**	**68**	*e*P	**Pn**	**00 58 10.2**	**-0.1**
SCZP	**Santa Cruz**	**2.25**	**358**	*e*P	**Pn**	**00 58 17.9**	**-0.9**
OTRP	**Odiongan**	**2.29**	**120**	*e*P	**Pn**	**00 58 19.9**	**+0.5**
ENPP	**El Nido**	**2.35**	**193**	*e*P	**Pn**	**00 58 21.9**	**+1.7**
BALP	**Baler**	**2.70**	**35**	*e*P	**Pn**	**00 58 26.2**	**+1.3**
CUYO	**Cuyo Island**	**2.83**	**159**	*e*P	**Pn**	**00 58 27.4**	**+0.6**
BOLP	**Bolinao**	**2.85**	**359**	*e*P	**Pn**	**00 58 29.6**	**+2.5**
PPR	**Puerto Princes**	**3.91**	**198**	⇓*i*P	**Sn**	**00 59 27.8**	**+0.6**
DAV	**Davao City (W)**	**8.44**	**139**	LR	LR	01 03 46.4	
	comp=Z,185nm,18.4s,baz=213,slow=44						
CMAR	**Chiang Mai Arr**	**20.81**	**286**	P	Pn	01 02 28.1	+2.6
	1.0nm,0.3s,baz=97,slow=8.0,SNR=5.5						
KSRS	**Korea Array**	**24.88**	**15**	LR	LR	01 13 05.2	
	comp=Z,26nm,19.6s,baz=195,slow=37						
SONM	**Songino Array**	**36.05**	**344**	P	**P**	**01 04 43.0**	**0.0**
	0.6nm,0.4s,baz=168,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**36.12**	**157**	P	**P**	**01 04 42.8**	**-1.0**
	11nm,0.7s,baz=336,slow=9.5,SNR=144						
ASAR	**Alice Springs**	**39.38**	**160**	P	**P**	**01 05 11.1**	**-0.2**
	4.7nm,0.7s,baz=340,slow=6.9,SNR=64						
MKAR	**Makanchi Array**	**45.77**	**324**	P	**P**	**01 06 04.2**	**+1.2**
	0.2nm,0.5s,baz=128,slow=8.9,SNR=4.0						
MKAR				PcP	**PcP**	**01 07 40.5**	**-0.1**
	0.9nm,0.8s,baz=118,slow=4.3,SNR=4.7						
ZALV	**Zalesovo Beam**	**48.91**	**333**	P	**P**	**01 06 26.8**	**-0.4**
	0.6nm,0.5s,baz=72,slow=4.8,SNR=3.6						
STKA	**Stephens Creek**	**49.66**	**156**	P	**P**	**01 06 32.5**	**-0.8**
	0.8nm,0.4s,baz=315,slow=16,SNR=2.8						
KURBB	**Kurchatov Arra**	**49.96**	**327**	P	**P**	**01 06 36.4**	**+1.1**
	0.6nm,0.4s,baz=122,slow=8.8,SNR=20						
ARCES	**ARCESS Array B**	**79.01**	**339**	P	**P**	**01 09 44.5**	**-0.5**
	2.6nm,0.8s,baz=75,slow=7.1,SNR=19						
FINES	**FINESS Array B**	**80.11**	**331**	P	**P**	**01 09 51.2**	**0.0**
	0.6nm,0.6s,baz=45,slow=3.0,SNR=4.6						
NB2	**NORSAR Subarra**	**87.10**	**333**	P	**P**	**01 10 25.3**	**-1.9**
	comp=Z,1.5nm,0.7s,baz=67,slow=4.3						
NB2	**NORSAR Subarra**	**87.10**	**333**	P	**P**	**01 10 25.3**	**-1.9**
	baz=67,slow=4.3						
NOA	**NORSAR Array B**	**87.10**	**333**	P	**P**	**01 10 26.0**	**-1.2**
	comp=Z,1.3nm,0.8s,baz=66,slow=4.6,SNR=6.1						

*JMA **29** 01:06:06.7±0.5,24.˝04N×121.˝72E,h27km,M2.9*
*TAP **29** 01:06:06.8,24.˝21N×121.˝75E,h10km,ML3.6,B*
ISC 29 01:06:06.3±0.9,24.˝20N±0.˝02×121.˝79E±0.˝02,h14km±6km, n48,σ0ş95/73,5C-3D,Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EHP	**Heping Village**	**0.12**	**339**	P	**Pb**	**01 06 09.6**	**-0.9**
EHP				S	**Sg**	**01 06 11.9**	**-0.1**
TWD	**Chiawan**	**0.21**	**237**	⇑*i*P	**Pg**	**01 06 11.1**	**+0.1**
	baz=233						
TWD				*i* S	**Sg**	**01 06 14.2**	**0.0**
	baz=233						
ENA	**Nanau**	**0.24**	**349**	⇑*i*P	**Pb**	**01 06 11.6**	**-0.7**
	baz=360						
ENA				S	**Sb**	**01 06 14.8**	**-1.6**
	baz=360						
HWA	**Hwalien**	**0.27**	**218**	*e*P	**Pg**	**01 06 13.2**	**+1.1**
	baz=219						
TWC	**Suao**	**0.42**	**8**	⇑*i*P	**Pg**	**01 06 15.1**	**+0.4**
	baz=7.0						
TWC				S	**Sg**	**01 06 20.6**	**+0.3**
	baz=7.0						
NNS	**Nan Shan**	**0.45**	**303**	⇑*i*P	**Pg**	**01 06 15.5**	**+0.1**
	baz=304						
NNS				S	**Sg**	**01 06 20.9**	**-0.6**
	baz=304						
WHF	**Hehuan Shan**	**0.48**	**264**	⇑*i*P	**Pg**	**01 06 16.1**	**+0.1**
	baz=262						
WHF				S	**Sg**	**01 06 22.1**	**-0.3**
	baz=262						
ESL	**Shilin**	**0.50**	**221**	*e*P	**Pb**	**01 06 16.6**	**-0.2**
	baz=225						
ESL				*e*S	**Sb**	**01 06 23.7**	**-0.3**
	baz=225						
TWE	**Neicheng**	**0.54**	**348**	*i* P	**Pg**	**01 06 17.4**	**+0.5**
	baz=353						
TWE				S	**Sb**	**01 06 24.2**	**-0.9**
	baz=353						
TWT	**Tachien**	**0.56**	**276**	*e*P	**Pb**	**01 06 17.6**	**-0.5**
	baz=275						
ILA	**Ilan**	**0.57**	**356**	*e*P	**Pn**	**01 06 19.1**	**-0.9**
	baz=351						
NSK	**Sanguang**	**0.62**	**321**	⇓*i*P	**Pg**	**01 06 18.8**	**+0.4**
	baz=323						
NSK				*e*S	**Sb**	**01 06 26.1**	**-1.4**
	baz=323						
TWA	**Mucha**	**0.80**	**347**	*e*P	**Pn**	**01 06 23.3**	**+0.1**
	baz=339						
EHY	**Hungye**	**0.81**	**212**	*e*P	**Pg**	**01 06 21.8**	**-0.2**
	baz=210						
TWB1	**Santiao Chiao**	**0.83**	**13**	*e*P	**Pn**	**01 06 23.3**	**-0.2**
	baz=15						
TWB1				*e*S	**Sb**	**01 06 33.7**	**+0.2**
	baz=15						
NSTT	**Nanjuang**	**0.84**	**301**	*e*P	**Pn**	**01 06 23.4**	**-0.3**
	baz=302						
NSTT				*e*S	**Sg**	**01 06 33.7**	**+0.1**
	baz=302						
SMLT	**Sun Moon Lake**	**0.87**	**249**	⇓P	**Pn**	**01 06 23.6**	**-0.6**
	baz=239						
SMLT				*e*S	**Sb**	**01 06 33.3**	**-1.5**
	baz=239						
NWF	**Wu-fen Shan**	**0.87**	**360**	*e*P	**Pn**	**01 06 24.0**	**-0.2**
	baz=353						
NWF				*e*S	**Sb**	**01 06 35.1**	**+0.3**
	baz=353						
TAP1	**Taipei**	**0.88**	**344**	*e*P	**Pn**	**01 06 24.1**	**0.0**
	baz=346						
TAP	**Taipei**	**0.88**	**343**	*e*P	**Pn**	**01 06 24.7**	**+0.4**
	baz=346						
TYC	**Yuchr**	**0.90**	**251**	*e*P	**Pn**	**01 06 23.7**	**-0.8**
	baz=241						
TYC				*e*S	**Sb**	**01 06 34.8**	**-0.7**
	baz=241						
TWQ1	**Liyutan**	**0.94**	**280**	*e*P	**Pg**	**01 06 26.1**	**+1.6**
	baz=280						
NCU	**National Centr**	**0.95**	**325**	*e*P	**Pg**	**01 06 26.5**	**+1.9**
	baz=321						
TWF1	**Yuli**	**0.95**	**208**	*e*P	**Pb**	**01 06 23.7**	**-0.8**
	baz=218						
HSN	**Hsinchu**	**0.96**	**309**	*e*P	**Pg**	**01 06 25.9**	**+1.0**
	baz=313						
NSY	**Sanyi**	**0.96**	**283**	*e*P	**Pg**	**01 06 25.9**	**+1.0**
	baz=283						
NSY				*e*S	**Sn**	**01 06 38.4**	**-0.5**
	baz=283						
TWS1	**Kuangyinshan**	**0.96**	**340**	*e*P	**Pg**	**01 06 25.6**	**+0.7**
	baz=350						
TWS1				*e*S	**Sn**	**01 06 39.9**	**+1.0**
	baz=350						
TCU	**Taichung**	**1.02**	**268**	*e*P	**Pg**	**01 06 27.8**	**+1.8**
	baz=267						
TCU				*e*S	**Sg**	**01 06 41.4**	**+2.1**
	baz=267						
YUS	**Yu-Shan**	**1.04**	**228**	*e*P	**Pg**	**01 06 26.8**	**+0.3**
	baz=227						
WNT	**Mingjian**	**1.06**	**253**	*e*P	**Pg**	**01 06 28.0**	**+1.3**
	baz=247						
WNT				*e*S	**Sg**	**01 06 42.8**	**+2.3**
	baz=247						
TWY	**Chenhua**	**1.09**	**351**	*e*P	**Pg**	**01 06 27.9**	**+0.6**
	baz=353						
ALS	**Alishan**	**1.13**	**233**	*e*P	**Pg**	**01 06 28.5**	**+0.4**
	baz=233						
YOJ	**Yonaguni jima**	**1.15**	**76**	⇓*i*P	**Pg**	**01 06 28.9**	**+0.5**
	baz=65						
YOJ	**Yonaguni jima**	**1.15**	**76**	P	**Pg**	**01 06 28.9**	**+0.5**
YOJ				*e*S	**Sg**	**01 06 44.7**	**+1.3**
CHN5	**Tsauling**	**1.18**	**240**	P	**Pg**	**01 06 29.9**	**+0.9**
	baz=240						
CHN5				S	**Sg**	**01 06 46.1**	**+1.8**
	baz=240						
ELDTW	**Lidau**	**1.23**	**215**	*e*P	**Pb**	**01 06 28.7**	**-0.6**
	baz=216						
CHY	**Chiayi**	**1.43**	**241**	*e*P	**Pg**	**01 06 33.8**	**0.0**
	baz=242						

ZKR				S	**Sn**	01 23 07.3	+3.2			
ZKR	**Zakros**	**1.25**	**268**	*e*PB	**Pn**	01 22 47.0	+0.2			
ZKR				*e*SN	**Sn**	01 23 06.4	+2.3			
ZKR	**Zakros**	**1.25**	**268**	P	**Pn**	01 22 46.9	+0.2			
ZKR				*e*Sn	**Sn**	01 23 06.4	+2.3			
ZKR				S	**Sn**	01 23 07.3	+3.2			
NIS1	**Nisyros Isl.**	**1.50**	**342**	P	**Pb**	01 22 49.8	-0.9			
NIS1	**Nisyros Isl.**	**1.50**	**342**	*e*PN	**Pg**	01 22 49.9	-1.0			
NIS1	**Nisyros Isl.**	**1.50**	**342**	P	**Pb**	01 22 49.8	-0.9			
DAT	**Datca**	**1.56**	**355**	*e*PN	**Pb**	01 22 50.8	-0.9			
DAT	**Datca**	**1.56**	**355**	*e*Pn	**Pb**	01 22 50.8	-0.9			
NPS	**Neapolis**	**1.75**	**273**	P	**Pg**	01 22 56.0	+0.3			
NPS				S	**Sg**	01 23 20.4	+2.0			
NPS	**Neapolis**	**1.75**	**273**	*e*PN	**Pg**	01 22 56.5	+0.8			
NPS	**Neapolis**	**1.75**	**273**	P	**Pg**	01 22 56.0	+0.3			
NPS	**Neapolis**	**1.75**	**273**	*e*Pn	**Pg**	01 22 56.5	+0.8			
NPS				S	**Sg**	01 23 20.4	+2.0			
DALY	**Dalyan (Mu˘la**	**1.79**	**24**	*e*PN	**Pb**	01 22 55.4	-0.3			
DALY				*e*SN	**Sg**	01 23 21.6	+1.8			
DALY	**Dalyan (Mu˘la**	**1.79**	**24**	*e*Pn	**Pb**	01 22 55.4	-0.3			
DALY				*e*Sn	**Sg**	01 23 21.6	+1.8			
FETY	**Fethiye**	**1.82**	**36**	*e*PN	**Pb**	01 22 55.3	-0.8			
FETY	**Fethiye**	**1.82**	**36**	*e*Pn	**Pb**	01 22 55.3	-0.8			
TURN	**Turunc**	**1.83**	**22**	*i* P	**Pn**	01 22 53.0	-1.6			
TURN				*i* S	**Sn**	01 23 17.3	-1.0			
TURN	**Turunc**	**1.83**	**22**	*i* P	**Pn**	01 22 53.0	-1.6			
TURN				*i* S	**Sn**	01 23 17.3	-1.0			
AKAS	**Kas**	**1.84**	**55**	*i* P	**Pb**	01 22 56.7	0.0			
AKAS				*i* S	**Sg**	01 23 23.3	+1.9			
AKAS	**Kas**	**1.84**	**55**	*i* P	**Pb**	01 22 56.7	0.0			
AKAS				*i* S	**Sg**	01 23 23.3	+1.9			
LAST	**Lasithi**	**1.86**	**270**	P	**Pg**	01 22 57.9	+0.2			
LAST				S	**Sg**	01 22 58.9	+1.0			
LAST	**Lasithi**	**1.86**	**270**	*e*PN	**Pg**	01 22 58.0	+0.2			
LAST	**Lasithi**	**1.86**	**270**	P	**Pg**	01 22 57.9	+0.2			
LAST				S	**Sg**	01 23 22.9	+1.0			
BODT	**Bodrum**	**1.92**	**349**	*e*PN	**Pb**	01 22 56.4	-1.4			
BODT	**Bodrum**	**1.92**	**349**	*e*Pn	**Pb**	01 22 56.4	-1.4			
YER	**Yerkesik**	**2.00**	**12**	*e*PN	**Pb**	01 22 58.5	-0.8			
YER	**Yerkesik**	**2.00**	**12**	*e*Pn	**Pb**	01 22 58.5	-0.8			
MLSB	**Milas**	**2.12**	**1**	*e*PN	**Pb**	01 22 59.5	-1.7			
MLSB	**Milas**	**2.12**	**1**	*e*Pn	**Pb**	01 22 59.5	-1.7			
SANT	**Santorini**	**2.21**	**303**	P	**Pb**	01 23 01.3	-1.5			
SANT	**Santorini**	**2.21**	**303**	P	**Pb**	01 23 01.3	-1.5			
THR1	**Thera Island**	**2.21**	**303**	P	**Pb**	01 23 00.9	-1.9			
THR1	**Thera Island**	**2.21**	**303**	P	**Pb**	01 23 00.9	-1.9			
THR2	**Thira island,**	**2.27**	**305**	P	**Pb**	01 23 02.0	-1.8			
THR2	**Thira island,**	**2.27**	**305**	P	**Pb**	01 23 02.0	-1.8			
THR3	**Thira Island,**	**2.27**	**304**	P	**Pb**	01 23 01.8	-2.0			
THR3	**Thira Island,**	**2.27**	**304**	P	**Pb**	01 23 01.8	-2.0			
IDI	**Anoyia**	**2.34**	**274**	P	**Pb**	01 23 04.6	-0.6			
IDI	**Anoyia**	**2.34**	**274**	*e*PN	**Pb**	01 23 04.5	-0.6			
IDI	**Anoyia**	**2.34**	**274**	*e*Pn	**Pb**	01 23 04.5	-0.6			
ELL	**Elmali**	**2.35**	**48**	*e*PN	**Pn**	01 23 02.5	+0.6			
ELL	**Elmali**	**2.35**	**48**	*e*Pn	**Pn**	01 23 02.5	+0.6			
SIVA	**Sivas**	**2.41**	**267**	P	**Pg**	01 23 06.7	-1.7			
SIVA				S	**Sb**	01 23 35.8	-0.7			
SIVA	**Sivas**	**2.41**	**267**	*e*PB	**Pb**	01 23 06.0	-0.3			
SIVA	**Sivas**	**2.41**	**267**	*e*Pb	**Pb**	01 23 06.0	-0.3			
SIVA	**Sivas**	**2.41**	**267**	P	**Pg**	01 23 06.7	-1.7			
SIVA				S	**Sb**	01 23 35.8	-0.7			
AYDN	**Tasoluk**	**2.48**	**2**	*i* P	**Pn**	01 23 04.5	+0.9			
AYDN				*i* S	**Sn**	01 23 35.7	+1.2			
AYDN	**Tasoluk**	**2.48**	**2**	*i* P	**Pn**	01 23 04.5	+0.9			
AYDN				*i* S	**Sn**	01 23 35.7	+1.2			
APE	**Apeiranthos**	**2.61**	**317**	*e*PN	**Pn**	01 23 04.4	-0.9			
APE	**Apeiranthos**	**2.61**	**317**	P	**Pn**	01 23 05.4	+0.1			
APE				S	**Sn**	01 23 35.3	-2.2			
APE	**Apeiranthos**	**2.61**	**317**	*e*PN	**Pn**	01 23 05.2	-0.1			
APE	**Apeiranthos**	**2.61**	**317**	P	**Pn**	01 23 05.4	+0.1			
SMG	**Samos**	**2.63**	**344**	*e*PN	**Pn**	01 23 05.8	+0.2			
SMG	**Samos**	**2.63**	**344**	*e*Pn	**Pn**	01 23 05.8	+0.2			
DNZL	**Cakiroluk**	**2.72**	**22**	*i* P	**Pn**	01 23 08.6	+1.6			
DNZL				*i* S	**Sg**	01 23 52.2	+2.7			
DNZL	**Cakiroluk**	**2.72**	**22**	*i* P	**Pn**	01 23 08.6	+1.6			
DENT	**Denizli**	**2.77**	**22**	*e*PN	**Pn**	01 23 09.2	+1.6			
DENT	**Denizli**	**2.77**	**22**	*e*Pn	**Pn**	01 23 09.2	+1.6			
VAM	**Vamos**	**2.91**	**276**	P	**Pb**	01 23 12.9	-1.9			
VAM	**Vamos**	**2.91**	**276**	*e*PN	**Pb**	01 23 12.7	-2.1			
VAM	**Vamos**	**2.91**	**276**	*e*Pn	**Pb**	01 23 12.7	-2.1			
ANTB	**Antalya**	**2.92**	**53**	*e*PN	**Pn**	01 23 10.2	+0.7			
ANTB	**Antalya**	**2.92**	**53**	*e*Pn	**Pn**	01 23 10.2	+0.7			
BCK	**Bucak**	**3.23**	**44**	*e*PN	**Pn**	01 23 15.3	+1.3			
BCK	**Bucak**	**3.23**	**44**	*e*Pn	**Pn**	01 23 15.3	+1.3			
IZM	**Izmir**	**3.24**	**353**	*e*PN	**Pn**	01 23 15.7	+1.7			
IZM	**Izmir**	**3.24**	**353**	*e*Pn	**Pn**	01 23 15.7	+1.7			
BLCB	**Balcova**	**3.25**	**350**	*e*PN	**Pn**	01 23 15.6	+1.4			
BLCB	**Balcova**	**3.25**	**350**	*e*Pn	**Pn**	01 23 15.6	+1.4			
KULA	**Kula-Manisa**	**3.41**	**12**	*e*PN	**Pn**	01 23 18.8	+2.4			
KULA	**Kula-Manisa**	**3.41**	**12**	*e*Pn	**Pn**	01 23 18.8	+2.4			
KHL	**Karahalli**	**3.45**	**24**	*e*PN	**Pn**	01 23 19.0	+2.1			
KHL	**Karahalli**	**3.45**	**24**	*e*Pn	**Pn**	01 23 19.0	+2.1			
CHOS	**Chios island**	**3.48**	**338**	*e*PN	**Pn**	01 23 19.1	+1.7			
CHOS	**Chios island**	**3.48**	**338**	*e*Pn	**Pn**	01 23 19.1	+1.7			
SUTC	**Sutluce-Ispart**	**3.49**	**48**	*e*PN	**Pn**	01 23 18.8	+1.3			
SUTC	**Sutluce-Ispart**	**3.49**	**48**	*e*Pn	**Pn**	01 23 18.8	+1.3			
SHUT	**Suhut-Afyon**	**4.05**	**33**	*e*PN	**Pn**	01 23 27.3	+2.0			
SHUT	**Suhut-Afyon**	**4.05**	**33**	*e*Pn	**Pn**	01 23 27.3	+2.0			
HDMB	**Hadim**	**4.23**	**64**	*e*PN	**Pn**	01 23 27.3	-0.6			
HDMB	**Hadim**	**4.23**	**64**	*e*Pn	**Pn**	01 23 27.3	-0.6			
ALT	**Altintas**	**4.31**	**25**	*e*PN	**Pn**	01 23 31.4	+2.6			
ALT	**Altintas**	**4.31**	**25**	*e*Pn	**Pn**	01 23 31.4	+2.6			
CSS	**Prodhromos**	**4.58**	**91**	*e*PN	**Pn**	01 23 30.8	-2.3			
CSS	**Prodhromos**	**4.58**	**91**	*e*Pn	**Pn**	01 23 30.2	-2.3			
KONT	**Konya--Tatoy**	**4.63**	**52**	*e*PN	**Pn**	01 23 34.5	+1.4			
KONT	**Konya--Tatoy**	**4.63**	**52**	*e*Pn	**Pn**	01 23 34.5	+1.4			
LADK	**Ladik-KONYA**	**4.78**	**50**	*e*PN	**Pn**	01 23 36.8	+1.5			
LADK	**Ladik-KONYA**	**4.78**	**50**	*e*Pn	**Pn**	01 23 36.8	+1.5			
IKL	**Isikli**	**4.95**	**76**	*e*PN	**Pn**	01 23 36.2	-1.2			
IKL	**Isikli**	**4.95**	**76**	*e*Pn	**Pn**	01 23 36.2	-1.2			
KIZT	**Kizilcal**	**4.96**	**41**	*e*PN	**Pn**	01 23 39.9	+2.2			
KIZT	**Kizilcal**	**4.96**	**41**	*e*Pn	**Pn**	01 23 39.9	+2.2			

TAP 29 01:37:13.3, 24°20N×121°72E, h10km, ML3.8, 11C-1D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EHP	**Heping Village** baz=15	**0.11**	**11**	*i* P	Pg	01 37 16.2	+0.2
EHP				*i* S	Sg	01 37 18.4	+0.5
TWD	**Chiawan** baz=221	**0.17**	**223**	⇑*i* P	Pg	01 37 17.1	+0.2
TWD				*i* S	Sg	01 37 19.8	+0.5
ENA	**Nanau** baz=7.0	**0.23**	**5**	⇑*i* P	Pg	01 37 18.2	+0.3
ENA				*i* S	Sg	01 37 21.3	+0.2
HWA	**Hwalien** baz=206	**0.25**	**205**	*e*P	Pg	01 37 18.8	+0.5
NNS	**Nan Shan** baz=307	**0.39**	**307**	⇑*i* P	Pg	01 37 21.5	+0.2
NNS				S	Sg	01 37 27.1	+0.4
WHF	**Hehuan Shan** baz=262	**0.42**	**262**	⇑*i* P	Pg	01 37 21.9	-0.1
WHF				S	Sg	01 37 27.6	-0.4
TWC	**Suao** baz=10.0	**0.42**	**16**	⇑*i* P	Pg	01 37 21.8	+0.2
TWC				*e*S	Sg	01 37 26.7	-0.5
ESL	**Shilin** baz=223	**0.47**	**214**	⇑P	Pg	01 37 22.2	-0.2
TWT	**Tachien** baz=275	**0.50**	**276**	⇑*i* P	Pb	01 37 23.9	-0.4
TWT				*i* S	Sg	01 37 30.5	+0.5
TWE	**Neicheng** baz=4.0	**0.52**	**355**	⇑*i* P	Pg	01 37 23.9	+0.5
TWE				S	Sb	01 37 31.2	-0.9
NSK	**Sanguang** baz=325	**0.57**	**325**	⇓*i* P	Pg	01 37 24.9	+0.3
NSK				*i* S	Sg	01 37 32.6	+0.3
NSTT	**Nanjuang** baz=303	**0.78**	**303**	P	Pb	01 37 29.2	+0.2
NSTT				S	Sb	01 37 39.2	-0.5
baz=303							
EHY	**Hungye** baz=208	**0.78**	**208**	*e*P	Pg	01 37 27.6	-0.8
TWA	**Mucha** baz=351	**0.78**	**351**	⇑*i* P	Pg	01 37 29.2	+0.1
SMLT	**Sun Moon Lake** baz=238	**0.81**	**247**	⇑*i* P	Pg	01 37 29.2	0.0
SMLT				S	Sb	01 37 40.5	-0.4
TWB1	**Santiao Chiao** baz=10.0	**0.84**	**17**	*e*P	Pg	01 37 29.2	-0.2
TYC	**Yuchr** baz=240	**0.84**	**249**	⇑P	Pg	01 37 29.5	0.0
TYC				*e*S	Sg	01 37 40.5	0.0
TAP1	**Taipei** baz=347	**0.85**	**348**	*e*P	Pb	01 37 30.4	+0.3
TAP1				*e*S	Sb	01 37 41.3	-0.4
TAP	**Taipei** baz=347	**0.85**	**347**	*e*P	Pb	01 37 30.8	+0.6
NWF	**Wu-fen Shan** baz=354	**0.87**	**4**	*e*P	Pg	01 37 30.3	+0.2
NWF				*e*S	Sg	01 37 41.8	+0.3
TWQ1	**Liyutan** baz=280	**0.88**	**280**	*e*P	Pn	01 37 31.3	-0.4
TWQ1				*e*S	Sn	01 37 45.1	+0.5
NSY	**Sanyi** baz=284	**0.90**	**284**	*e*P	Pn	01 37 32.1	+0.1
NSY				*e*S	Sn	01 37 45.1	-0.1
NCU	**National Centr** baz=328	**0.90**	**328**	*e*P	Pn	01 37 32.1	0.0
NCU				*e*S	Sn	01 37 45.3	+0.1
HSN	**Hsinchu** baz=314	**0.91**	**311**	*e*P	Pn	01 37 31.8	-0.4
HSN				*e*S	Sn	01 37 45.1	-0.1
TWF1	**Yuli** baz=217	**0.93**	**205**	*e*P	Pg	01 37 29.7	-1.5
TWS1	**Kuangyinshan** baz=351	**0.94**	**343**	*e*P	Pn	01 37 32.1	-0.4
TWS1				*e*S	Sn	01 37 45.6	-0.3
TCU	**Taichung** baz=267	**0.95**	**267**	*e*P	Pn	01 37 33.7	+0.9
TCU				*e*S	Sn	01 37 46.6	+0.2
YUS	**Yu-Shan** baz=236	**1.00**	**225**	*e*P	Pg	01 37 32.4	-0.7
WNT	**Mingjian** baz=247	**1.00**	**251**	*e*P	Pn	01 37 33.9	+0.5
WNT				*e*S	Sn	01 37 47.9	+0.3
TWY	**Chenhua** baz=354	**1.07**	**354**	*e*P	Pn	01 37 36.1	+1.7
ALS	**Alishan** baz=231	**1.08**	**231**	⇑*e*P	Pg	01 37 34.2	-0.3
ALS				*e*S	Sn	01 37 50.0	-0.3
CHN5	**Tsauling** baz=239	**1.13**	**238**	P	Pn	01 37 35.7	+0.4
CHN5				S	Sn	01 37 52.3	+1.4
CHKT	**Chengkung** baz=183	**1.15**	**197**	*e*P	Pb	01 37 33.6	-1.6
WGK	**Gukeng** baz=245	**1.18**	**244**	*e*P	Pg	01 37 36.8	+0.9
ELDTW	**Lidau** baz=214	**1.20**	**213**	*e*P	Pb	01 37 34.8	-1.5
YOJ	**Yonaguni jima** baz=70	**1.21**	**77**	P	Pn	01 37 35.6	-0.7
YOJ				*e*S	Sn	01 37 54.2	+1.5
WTCT	**Ta-ch'eng** baz=256	**1.36**	**256**	*e*P	Pg	01 37 39.2	-0.1
CHY	**Chiayi** baz=240	**1.38**	**240**	*e*P	Pg	01 37 39.7	0.0
CHY				*e*S	Sg	01 37 59.2	+1.6
WTP	**Ta-pu** baz=228	**1.39**	**227**	*e*P	Pb	01 37 39.7	+0.3
PCYT	**Pengchaiyu** baz=12	**1.46**	**13**	*e*P	Pn	01 37 38.0	-1.7
TWK	**Hsinying** baz=243	**1.46**	**231**	*e*P	Pb	01 37 40.4	-0.3
TWK				*e*S	Sg	01 38 02.0	+1.4
CHN1	**Nanshi** baz=219	**1.49**	**227**	*e*P	Pb	01 37 41.5	+0.4
CHN1				*e*S	Sg	01 38 03.2	+1.9
TWG	**Pinlang** baz=214	**1.50**	**203**	*e*P	Pn	01 37 39.7	-0.6
TWM1	**Shoushan** baz=224	**1.82**	**221**	*e*P	Pb	01 37 47.2	+0.5
PNG	**Penghu** baz=253	**2.08**	**253**	*e*P	Pn	01 37 48.5	+0.3
SCZT	**Fangliau** baz=197	**2.08**	**209**	*e*P	Pn	01 37 49.7	+1.4
TWK1	**Hengchun** baz=193	**2.40**	**201**	*e*P	Pn	01 37 52.4	-0.3
KNM	**Kinmen** baz=274	**3.00**	**275**	*e*P	Pn	01 38 01.5	+0.5

IDC 29 01:42:38.9±4.0, 6°67S×129°72E, h168km±38km, mb3.6/4, mb1 3.7/7, mb1mx3.4/21, mbtmp3.6/7, Error ellipse: s-maj=36.9km s-min=18.1km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi** 0.4nm,0.3s,baz=27,slow=11,SNR=19	**12.04**	**199**	P	Pn	01 45 26.8	+1.5
FITZ				S	Sn	01 47 37.8	-1.1
WRA	**Warramunga Arr** 1.2nm,0.3s,baz=337,slow=13,SNR=47	**13.94**	**162**	P	Pn	01 45 48.1	-1.3
WRA				S	Sn	01 48 14.6	-10
ASAR	**Alice Springs** 1.0nm,0.3s,baz=347,slow=10,SNR=38	**17.38**	**167**	P	Pn	01 46 31.8	+0.4
ASAR				S	S	01 49 41.4	-1.2
CTA	**Charters Tower** 3.3nm,0.7s,baz=307,slow=10,SNR=6.1	**20.87**	**131**	P	P	01 47 07.1	-0.9
STKA	**Stephens Creek** 2.2nm,0.4s,baz=335,slow=9.7,SNR=7.1	**27.43**	**158**	P	P	01 48 08.9	-0.1
MKAR	**Makanchi Array** 1.2nm,0.6s,baz=131,slow=6.9,SNR=10	**67.80**	**327**	P	P	01 53 18.4	-0.3
VNDA	**Vanda** 0.6nm,0.6s,baz=323,slow=8.7,SNR=7.8	**72.81**	**173**	P	P	01 53 49.3	+0.7

IDC 29 01:54:13.8±1.6, 23°28S×179°97W, h534km±16km, mb3.5/11, mb1 3.7/11, mb1mx3.5/21, mbtmp3.5/11, Error ellipse: s-maj=21.0km s-min=12.9km az=164.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower** 22nm,0.4s,baz=97,slow=11,SNR=38	**31.50**	**269**	P	P	01 59 53.0	+0.8
PMG	**Port Moresby** 17nm,0.6s,baz=125,slow=2.8,SNR=7.5	**34.32**	**288**	P	P	02 00 16.8	+0.7
STKA	**Stephens Creek** 2.7nm,0.4s,baz=95,slow=11,SNR=9.8	**34.98**	**247**	P	P	02 00 21.6	+0.2
ASAR	**Alice Springs** 5.0nm,0.5s,baz=99,slow=6.9,SNR=60	**42.16**	**260**	P	P	02 01 19.5	-0.3
ASAR				ScP	ScP	02 06 03.6	+2.1
	1.2nm,0.9s,baz=123,slow=3.5,SNR=6.0						
ASAR				S	S	02 07 00.1	-1.2
	0.5nm,0.7s,baz=100,slow=14,SNR=5.7						
WRA	**Warramunga Arr** 4.4nm,0.2s,baz=90,slow=5.8,SNR=337	**42.48**	**265**	P	P	02 01 21.4	-0.8
WRA				ScP	ScP	02 06 04.7	+1.9
	0.9nm,0.9s,baz=99,slow=3.8,SNR=4.6						
WRA				S	S	02 07 02.0	-3.8
	0.8nm,0.9s,baz=100,slow=14,SNR=3.3						
VNDA	**Vanda** 0.8nm,0.7s,baz=15,slow=7.1,SNR=9.9	**55.00**	**185**	P	P	02 02 54.2	+0.1
NVAR	**Mina Array Bea** 0.4nm,0.5s,baz=218,slow=11,SNR=5.3	**84.29**	**44**	P	P	02 05 49.9	+0.2
TXAR	**Lajitas Array** 1.2nm,0.8s,baz=210,slow=7.0,SNR=9.4	**90.08**	**58**	P	P	02 06 17.4	+0.3
ANMO	**Albuquerque** 0.5nm,0.5s,baz=26,slow=16,SNR=3.9	**90.56**	**52**	P	P	02 06 19.6	+0.3
ILAR	**Eielson Array** 0.3nm,0.9s,baz=223,slow=5.9,SNR=4.2	**91.42**	**14**	P	P	02 06 21.2	-1.0
PDAR	**Pinedale Array** 0.6nm,0.6s,baz=242,slow=2.9,SNR=4.9	**92.23**	**44**	P	P	02 06 26.4	-0.4
BVAR	**Borovoye Array** 0.5nm,0.5s,baz=337,slow=2.2,SNR=3.3	**119.99**	**319**	PKP	PKPdf	02 12 02.4	-0.9
ARCES	**ARCESS Array B** 1.5nm,0.8s,baz=38,slow=6.1,SNR=4.1	**131.29**	**348**	PKP	PKPdf	02 12 22.4	-2.0
FINES	**FINESS Array B** 1.1nm,0.9s,baz=336,slow=4.2,SNR=4.1	**137.87**	**342**	PKhKP	PKPpre	02 12 30.9	
FINES				PKP	PKPdf	02 12 36.4	-0.5
	0.5nm,0.7s,baz=90,slow=3.8,SNR=3.8						
FINES				SKPbc	SKPbc	02 15 19.1	-1.6
	1.2nm,0.9s,baz=46,slow=5.5,SNR=4.4						
NOA	**NORSAR Array B** 0.6nm,0.6s,baz=15,slow=4.6,SNR=4.2	**141.47**	**351**	PKhKP	PKPpre	02 12 38.4	
AKASG	**Malin Array Be** 1.6nm,0.4s,baz=47,slow=3.8,SNR=7.3	**144.46**	**328**	PKP	PKPbc	02 12 47.8	-1.2
BRTR	**Keskin Array B** 0.5nm,0.7s,baz=151,slow=5.4,SNR=4.3	**147.22**	**308**	PKPbc	PKPbc	02 12 56.8	-0.7
CLL	**Collm** comp=Z,5.0nm,0.8s	**150.27**	**343**	*i* PKP	PKPbc	02 13 03.9	-0.4
CLL				*e*		02 13 26.0	
BRG	**Berggiesshubel** comp=Z,3.7nm,0.7s	**150.41**	**342**	*e*PKP	PKPbc	02 13 04.5	-0.2
TORD	**Torodi Ar. Bea** comp=Z,0.4nm,0.6s,baz=170,slow=3.5,SNR=5.4	**169.80**	**189**	PKPab	PKPab	02 14 37.6	-1.1

ISK 29 01:57:35.8, 39°08N×40°31E, h8km, MD2.9
CSEM 29 01:57:36.4±0.3, 39°10N×40°27E, h8km, MD2.9, Error ellipse: s-maj=5.9km s-min=5.0km az=63.0
DDA 29 01:57:37.3, 39°08N×40°16E, h5km, MD3.0
ISC 29 01:57:36.2±1.0, 39°09N±0°03×40°30E±0°03, h15km±8km, n24, σ1°22/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BINT	**Bingol**	**0.25**	**145**	*i* Pg	**Pg**	**01 57 42.1**	**+0.3**
BINT				*i* Sg	**Sg**	**01 57 46.9**	**+1.3**
BNGB	**Bing˘¶l**	**0.31**	**108**	PG	**Pb**	**01 57 42.1**	**-1.4**
BNGB				SG	**Sb**	**01 57 46.9**	**-1.5**
ERZN	**Erzincan**	**0.67**	**318**	*e*PG	**Pb**	**01 57 49.7**	**-0.1**
PTK	**Pertek**	**0.74**	**255**	*e*PG	**Pg**	**01 57 49.8**	**-0.8**
PTK				*e*SG	**Sb**	**01 58 01.0**	**+0.1**
PTK	**Pertek**	**0.74**	**255**	*e*Pg	**Pg**	**01 57 49.8**	**-0.8**
PTK				*e*Sg	**Sb**	**01 58 01.0**	**+0.1**
EZC	**Erzincan**	**0.99**	**312**	*e*PG	**Pn**	**01 57 55.6**	**-0.2**
EZC	**Erzincan**	**0.99**	**312**	*e*Pg	**Pn**	**01 57 55.6**	**-0.2**
SVRC	**Sivrice-ELAZID**	**1.05**	**228**	*e*PG	**Pn**	**01 57 56.8**	**+0.2**
SVRC	**Sivrice-ELAZID**	**1.05**	**228**	*e*Pg	**Pn**	**01 57 56.8**	**+0.2**
EZM	**Erzurum**	**1.16**	**45**	*e*PN	**Pn**	**01 57 58.1**	**0.0**
DIYA	**Diyarbakir**	**1.17**	**187**	*i* P	**Pn**	**01 57 58.6**	**+0.5**
DIYA				*i* S	**Sn**	**01 58 15.4**	**+1.6**
DIYA	**Diyarbakir**	**1.17**	**187**	*i* P	**Pn**	**01 57 58.6**	**+0.5**
DIYA				*i* S	**Sn**	**01 58 15.4**	**+1.6**
ELZG	**Elazig**	**1.19**	**241**	*i* P	**Pb**	**01 57 57.2**	**-1.3**
ELZG				*i* S	**Sn**	**01 58 16.3**	**+1.9**
ELZG	**Elazig**	**1.19**	**241**	*i* P	**Pb**	**01 57 57.2**	**-1.3**
ELZG				*i* S	**Sn**	**01 58 16.3**	**+1.9**
KELT	**Kelkit**	**1.34**	**323**	*i* P	**Pg**	**01 58 01.1**	**-0.9**
KELT				*i* S	**Sg**	**01 58 23.0**	**+3.6**
KELT	**Kelkit**	**1.34**	**323**	*i* P	**Pg**	**01 58 01.1**	**-0.9**
ILIC	**ilic-Erzincan**	**1.40**	**286**	*e*PN	**Pb**	**01 58 01.6**	**-0.5**
ILIC	**ilic-Erzincan**	**1.40**	**286**	*e*Pn	**Pb**	**01 58 01.6**	**-0.5**
KEMA	**Kemaliye**	**1.42**	**278**	*i* P	**Pb**	**01 58 02.1**	**-0.4**
KEMA				*i* S	**Sg**	**01 58 21.4**	**-0.6**
KEMA	**Kemaliye**	**1.42**	**278**	*i* P	**Pb**	**01 58 02.1**	**-0.4**
KEMA				*i* S	**Sg**	**01 58 21.4**	**-0.6**
GUMT	**Gumushane**	**1.51**	**335**	*e*PN	**Pg**	**01 58 04.3**	**-1.1**
GUMT	**Gumushane**	**1.51**	**335**	*e*Pn	**Pg**	**01 58 04.3**	**-1.1**
MYA	**Malataya**	**1.65**	**243**	*e*PN	**Pg**	**01 58 06.5**	**-1.5**
MYA	**Malataya**	**1.65**	**243**	*e*Pn	**Pg**	**01 58 06.5**	**-1.5**

DDA 29 02:55:25.6, 37°28N×36°91E, h7km, MD3.0
ISCJB 29 02:55:26.4±0.6, 37°28N±0°04×36°92E±0°03, h4km±6km, Error ellipse: s-maj=6.6km s-min=4.3km az=176.5
ISK 29 02:55:26.3, 37°30N×36°92E, h6km, MD2.9
CSEM 29 02:55:26.7±0.1, 37°30N×36°93E, h5km, MD2.9, Error ellipse: s-maj=4.4km s-min=2.8km az=167.0
ISC 29 02:55:26.8±1.0, 37°31N±0°03×36°93E±0°02, h8km±8km, n31, σ0°51/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYKD	**Aykdinkavak**	**0.15**	**318**	*i* P	**Pg**	**02 55 29.1**	**-0.8**
AYKD				*i* S	**Sg**	**02 55 32.3**	**+0.1**
KMRS	**Kahramanmaras**	**0.20**	**353**	*e*PG	**Pg**	**02 55 30.9**	**0.0**
KMRS				*e*SG	**Sg**	**02 55 34.4**	**+0.7**
KMRS	**Kahramanmaras**	**0.20**	**353**	*e*Pg	**Pg**	**02 55 30.9**	**0.0**
KMRS				*e*Sg	**Sg**	**02 55 34.4**	**+0.7**
GAZ	**Gaziantep**	**0.26**	**121**	*e*PG	**Pg**	**02 55 31.7**	**-0.3**
GAZ	**Gaziantep**	**0.26**	**121**	*e*Pg	**Pg**	**02 55 31.7**	**-0.3**
GZT	**Gaziantep**	**0.51**	**84**	*i* P	**Pg**	**02 55 36.0**	**-0.7**
GZT				*i* S	**Sg**	**02 55 44.5**	**+1.2**
KOZT	**Kozan**	**0.90**	**282**	*e*PG	**Pg**	**02 55 43.8**	**-0.2**
KOZT				*e*SG	**Sb**	**02 55 56.8**	**+0.1**
KOZT	**Kozan**

XAN	**Xi'an**	**4.71**	**56**	Pn	**Pn**	**03 05 36.3 +1.9**			
XAN				Pg	**Pg**	**03 05 54.5 +0.5**			
XAN				Sn	**Sn**	**03 06 24.8 -4.1**			
XAN				Sg	**Sg**	**03 06 51.5 -3.5**			
XAN				smax	smax				
	comp=N,200nm,0.7s								
XAN				smax	smax				
	comp=E,130nm,0.7s								
XAN				LR	LR				
	comp=N,150nm,5.9s								
XAN				LR	LR				
	comp=E,39nm,6.9s								
XAN				LR	LR				
	comp=Z,62nm,8.9s								
GYA	**Guiyang**	**5.45**	**156**	Pn	Pn	03 05 50.5 +5.8			
GYA				Pg	Pg	03 06 12.8 +4.6			
GYA				Sn	**Sn**	**03 06 49.5 +2.1**			
GYA				Sg	**Sg**	**03 07 15.3 -3.6**			
GYA				smax	smax				
	comp=N,100nm,0.9s								
GYA				smax	smax				
	comp=E,100nm,0.9s								
CMAR	**Chiang Mai Arr**	**13.82**	**201**	Pn	**Pn**	**03 07 41.1 +1.8**			
	comp=E,1.0nm,0.3s,baz=8.0,slow=9.1,SNR=6.0								
SONM	**Songino Array**	**16.41**	**5**	Pn	**Pn**	**03 08 13.8 +0.1**			
	comp=E,0.1nm,0.3s,baz=185,slow=15,SNR=4.8								
KSRS	**Korea Array**	**20.41**	**67**	P	**P**	**03 09 00.5 +0.2**			
	comp=E,1.9nm,0.7s,baz=249,slow=9.7,SNR=5.9								
CN2	**Changchun**	**20.76**	**48**	*e*P	Pn	03 09 07.3 +0.8			
CN2				pmax	pmax				
	comp=Z,20nm,0.8s								
MKAR	**Makanchi Array**	**22.75**	**318**	P	**P**	**03 09 25.5 +0.1**			
	comp=E,1.1nm,1.1s,baz=181,slow=8.5,SNR=4.3								
ZALV	**Zalesovo Beam**	**26.42**	**334**	P	**P**	**03 09 60.0 +0.2**			
	comp=E,1.9nm,0.7s,baz=123,slow=11,SNR=6.4								
KURBB	**Kurchatov Arra**	**26.99**	**323**	P	**P**	**03 10 04.7 -0.3**			
	comp=E,0.4nm,0.6s,baz=129,slow=8.9,SNR=8.9								
ARCES	**ARCESS Array B**	**56.95**	**336**	P	**P**	**03 14 07.7 -0.5**			
	comp=E,1.6nm,0.8s,baz=83,slow=10,SNR=4.4								
ARCES				PcP	**PcP**	**03 15 02.8 -0.6**			
	comp=E,1.5nm,0.8s,baz=53,slow=8.1,SNR=5.2								
FINES	**FINESS Array B**	**57.30**	**326**	P	**P**	**03 14 10.2 -0.5**			
	comp=E,1.0nm,0.6s,baz=99,slow=9.8,SNR=5.3								
WRA	**Warramunga Arr**	**58.74**	**146**	P	**P**	**03 14 22.1 +0.8**			
	comp=E,1.7nm,0.6s,baz=339,slow=7.7,SNR=47								
ASAR	**Alice Springs**	**61.77**	**149**	P	**P**	**03 14 43.0 +0.9**			
	comp=E,0.3nm,0.4s,baz=341,slow=6.9,SNR=7.4								
NOA	**NORSAR Array B**	**64.38**	**327**	P	**P**	**03 14 57.5 -1.5**			
	comp=Z,0.8nm,0.8s,baz=71,slow=6.7,SNR=3.4								
ILAR	**Eielson Array**	**69.45**	**26**	P	**P**	**03 15 30.6 -0.5**			
	comp=Z,0.6nm,0.5s,baz=288,slow=4.4,SNR=13								
YKA	**Yellowknife Ar**	**81.30**	**17**	P	**P**	**03 16 39.6 +0.4**			
	comp=Z,0.7nm,0.5s,baz=327,slow=5.1,SNR=15								

*IDC **29** 03:07:28.9±0.5, 45.6°S×76.6°E, h0km, mb4.5/18, mb1 4.6/20, mb1mx4.6/22, mbtmp4.5/20, ML4.1/2, MS4.9/18, Ms1 4.9/18, ms1mx4.8/23, Error ellipse: s-maj=22.4km s-min=11.9km az=93.0*

*NEIC **29** 03:07:30.9±0.3, 45.6°S×76.5°E, h10km, mb5.2/40, Error ellipse: s-maj=12.6km s-min=7.2km az=80.0*

NEIC Felt at Coihaique.

*ISCJB **29** 03:07:30.8±0.3, 45.6°S±0.0°S×76.5°W±0.1, h17km, mb5.0/51, MS5.0/20, Error ellipse: s-maj=11.5km s-min=6.6km az=167.0*

*BJI **29** 03:07:31.3, 45.6°S×76.6°E, 60W, h10km, mB5.1/10, Ms5.3/11, Ms7 5.0/11*

*GCMT **29** 03:07:31.6±0.2, 45.6°S×77.1°E, 54W, h17km, MW5.3, Moment Tensor Solution. s62,c93; s88,c161; Moment tensor: Scale 10^17Nm; Mrr0.00; Mθθ0.00; Mϕϕ0.00; Mrθ0.00; Mθϕ0.00; Mϕr0.00; Best double couple: M0 1.20000×10^17 NP1:ϕs79.00000°, δ67.00000°, λ-171.00000°. NP2:ϕs346.00000°, δ81.00000°, λ-23.00000°. Principal axes: T 1.2600, Plg10.0000°, Azm34.0000°; N -0.2000, Plg65.0000°, Azm147.0000°; P -1.0700, Plg22.0000°, Azm300.0000°; Data Used: II IU G CN IC.*

*MOS **29** 03:07:33.6±1.4, 45.5°S×76.5°E, 55W, h33km, mb5.4/19 Error ellipse: s-maj=18.9km s-min=10.5km az=87.2*

ISC 29 03:07:32.5±0.3, 45.58S±0.06×76.62W±0.08, h17km, n392, σ1.952/395, mb5.0/51, MS5.0/20, 112C-109D, Off coast of southern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**6.57**	**45**	Pn	**Pn**	**03 09 06.7**	**-1.6**
PLCA				*e*Pn	**Pn**	**03 09 07.8**	**-0.6**
PLCA	**Paso Flores**	**6.57**	**45**	Pn	**Pn**	**03 09 06.7**	**-1.6**
	1.4nm,0.3s,baz=229,slow=14,SNR=30						
PLCA				LR	LR	03 11 43.5	
	comp=Z,22μm,19.4s,baz=213,slow=39						
USHA	**Ushuaia**	**10.64**	**153**	Pn	**Pn**	**03 10 01.9**	**-2.1**
USHA	**Ushuaia**	**10.64**	**153**	Pn	**Pn**	**03 10 01.9**	**-2.1**
	0.6nm,0.3s,baz=294,slow=10,SNR=8.3						
USHA				LR	LR	03 13 51.1	
	comp=Z,5μm,19.3s,baz=302,slow=36						
EFI	**East Falkland**	**13.69**	**123**	P	Pn	03 10 46.9	+1.3
EFI				pmax	pmax		
	comp=Z,639nm,1.5s						
EFI	**East Falkland**	**13.69**	**123**	Pn	Pn	03 10 46.9	+1.3
	comp=Z,640nm,1.5s						
CFAA	**Coronel Fontan**	**15.40**	**28**	Pn	Pn	03 11 04.8	-4.2
CFAA	**Coronel Fontan**	**15.40**	**28**	Pn	Pn	03 11 04.8	-4.2
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=4.4						
CFAA				LR	LR	03 17 17.6	
	comp=Z,1μm,18.4s,baz=197,slow=38						
LPA	**La Plata**	**17.77**	**60**	*de*P	**P**	**03 11 44.0**	**+4.4**
LPA				S	**S**	**03 15 05.0**	**+1.8**
LPA				S(2)		03 15 20.0	
LPA				SSS	SSS	03 15 24.0	
LPA				SSS(2)		03 16 29.0	
LPA				SCS	**ScS**	**03 23 33.0**	**+2.6**
PMSA	**Palmer Station**	**20.46**	**165**	*e*P	**P**	**03 12 06.6**	**-2.2**
	comp=Z,205nm,1.5s						
PMSA	**Palmer Station**	**20.46**	**165**	P	**P**	**03 12 07.3**	**-1.5**
	comp=Z,18nm,0.9s,baz=295,slow=17,SNR=2.9						
PMSA				LR	LR	03 18 15.9	
	comp=Z,2μm,19.8s,baz=328,slow=32						
LVC	**Limon Verde**	**23.76**	**18**	*e*P	**P**	**03 12 44.2**	**0.0**
	comp=Z,429nm,2.2s						
LVC	**Limon Verde**	**23.76**	**18**	P	**P**	**03 12 43.0**	**-1.2**
	comp=Z,13nm,0.7s,baz=196,slow=9.3,SNR=16						
LVC				LR	LR	03 22 39.7	
	comp=Z,2μm,19.8s,baz=191,slow=38						
CPUP	**Villa Florida**	**24.64**	**45**	P	**P**	**03 12 51.0**	**-1.0**
CPUP	**Villa Florida**	**24.64**	**45**	P	**P**	**03 12 51.0**	**-1.0**
	comp=Z,16nm,0.5s,baz=208,slow=9.5,SNR=26						
CPUP				LR	LR	03 23 14.6	
	comp=Z,7μm,18.6s,baz=201,slow=38						
LPAZ	**La Paz**	**30.06**	**16**	*e*P	**P**	**03 13 41.1**	**-0.3**
	comp=Z,25nm,1.4s						
LPAZ	**La Paz**	**30.06**	**16**	P	**P**	**03 13 41.0**	**-0.3**
	comp=Z,3.1nm,0.9s,baz=174,slow=6.5,SNR=11						
SAML	**Samuel**	**38.29**	**22**	*e*P	**P**	**03 14 51.2**	**-0.8**
	comp=Z,32nm,1.3s						
BDFB	**Brasilia**	**38.30**	**48**	P	**P**	**03 14 50.6**	**-1.7**
BDFB	**Brasilia**	**38.30**	**48**	P	**P**	**03 14 50.6**	**-1.7**
	comp=Z,5.2nm,0.9s,baz=226,slow=7.4,SNR=7.4						
BDFB				LR	LR	03 32 06.1	
	comp=Z,9μm,18.8s,baz=203,slow=38						
ATAH	**Atahualpa**	**38.33**	**357**	P	**P**	**03 14 53.4**	**+0.6**
ATAH	**Atahualpa**	**38.33**	**357**	P	**P**	**03 14 53.4**	**+0.6**
	comp=Z,12nm,0.5s,baz=186,slow=17,SNR=4.4						
ATAH				LR	LR	03 27 00.1	
	comp=Z,2μm,18.7s,baz=183,slow=30						
SNAA	**Sanae**	**42.50**	**153**	*e*P	**P**	**03 15 25.8**	**-0.5**
	comp=Z,62nm,1.3s						
SNAA	**Sanae**	**42.50**	**153**	P	**P**	**03 15 25.2**	**-1.2**
	comp=Z,7.3nm,1.0s,baz=268,slow=7.0,SNR=22						
QSPA	**South Pole Qui**	**44.67**	**180**	*e*P	**P**	**03 15 42.9**	**-1.2**
	comp=Z,286nm,2.8s						
QSPA	**South Pole Qui**	**44.67**	**180**	P	**P**	**03 15 42.5**	**-1.6**
	comp=Z,9.9nm,0.9s,baz=125,slow=2.9,SNR=19						
OTAV	**Otavalo**	**45.65**	**357**	*e*P	**P**	**03 15 53.4**	**+0.8**
	comp=Z,19nm,1.2s						
OTAV				*e*		03 17 31.3	
ROSC	**El Rosal**	**50.25**	**3**	*e*P	P	03 16 31.9	+3.7
ROSC	**El Rosal**	**50.25**	**3**	P	**P**	**03 16 27.2**	**-1.0**
	comp=Z,1.9nm,0.4s,baz=214,slow=3.6,SNR=3.0						
ROSC				LR	LR	03 36 05.3	
	comp=Z,2μm,18.1s,baz=186,slow=34						
SBA	**Scott Base**	**51.02**	**194**	*e*P	**P**	**03 16 32.0**	**-0.9**
SBA				pmax	pmax		
	comp=Z,128nm,2.3s						
SBA	**Scott Base**	**51.02**	**194**	*e*P	**P**	**03 16 32.0**	**-0.9**
	comp=Z,128nm,2.3s						
RKT	**Rikitea**	**51.89**	**275**	*e*LQ	LQ	03 29 17.7	
	comp=Z,753nm,34.8s						
RKT				*e*LR	LR	03 31 33.7	
	comp=Z,704nm,28.2s						
VNDA	**Vanda**	**52.05**	**194**	*e*P	**P**	**03 16 39.8**	**-0.8**
	comp=Z,12nm,1.1s						
VNDA	**Vanda**	**52.05**	**194**	P	**P**	**03 16 40.5**	**-0.2**
	comp=Z,5.0nm,0.9s,baz=123,slow=5.2,SNR=20						
VNDA				LR	LR	03 34 37.9	
	comp=Z,595nm,19.7s,baz=132,slow=31						
SYO	**Syowa Base**	**56.48**	**157**	*e*P	**P**	**03 17 11.8**	**-1.1**
TGUH	**Tegucigalpa,Un**	**60.13**	**348**	P	**P**	**03 17 39.7**	**+0.8**
	comp=Z,15nm,0.6s						
TBI	**Tubuai**	**61.90**	**265**	*e*LQ	LQ	03 33 37.6	
	comp=Z,1μm,33.5s						
TBI				*e*LR	LR	03 36 10.9	
	comp=Z,446nm,27.2s						
MAW	**Mawson**	**63.07**	**164**	P	**P**	**03 17 58.7**	**+0.4**
MAW	**Mawson**	**63.07**	**164**	P	**P**	**03 17 58.7**	**+0.4**
	comp=Z,9.9nm,1.0s,baz=212,slow=7.6,SNR=9.5						
MAW				LR	LR	03 44 16.3	
	comp=Z,2μm,21.3s,baz=206,slow=35						
CELP	**Cerrillos**	**64.00**	**11**	P	**P**	**03 18 03.3**	**-1.6**
DRV	**Dumont d'Urvil**	**64.63**	**195**	S	S	03 26 28.0	-19
PPT2	**Papeete2**	**65.78**	**269**	*e*S	**S**	**03 26 59.5**	**-3.3**
	comp=Z,491nm,26.5s						
PPT2	**Papeete2**	**65.78**	**269**	*e*LR	LR	03 37 57.4	
	comp=Z,237nm,21.8s						
CASY	**Casey**	**68.34**	**183**	P	**P**	**03 18 32.8**	**+0.6**
	comp=Z,22nm,0.9s						
RAR	**Rarotonga**	**70.48**	**259**	LR	LR	03 41 15.6	
	comp=Z,547nm,18.4s,baz=45,slow=29						
RPZ	**Rata Peaks**	**72.74**	**225**	LR	LR	03 43 00.4	
	comp=Z,2μm,19.4s,baz=65,slow=29						
URZ	**Urewera**	**73.50**	**232**	LR	LR	03 41 45.3	
	comp=Z,654nm,20.6s,baz=319,slow=28						
TIGA	**Tifton**	**76.91**	**354**	⇑P	**P**	**03 19 23.9**	**+0.4**
	baz=77						
732A	**Laxson Ranch,**	**76.94**	**339**	⇑P	**P**	**03 19 24.4**	**+0.7**
	baz=77,SNR=11						
632A	**Uvalde**	**77.64**	**339**	⇓P	**P**	**03 19 28.7**	**+1.1**
	baz=78						
631A	**Perdido Creek**	**77.75**	**339**	⇓P	**P**	**03 19 28.7**	**+0.4**
	baz=78						
BOSA	**Boshof**	**77.76**	**118**	*e*P	**P**	**03 19 29.9**	**+1.1**
BOSA	**Boshof**	**77.76**	**118**	P	**P**	**03 19 28.7**	**-0.1**
	comp=Z,11nm,1.1s,baz=250,slow=2.6,SNR=5.4						
BOSA				LR	LR	03 51 02.4	
	comp=Z,477nm,18.0s,baz=210,slow=34						
532A	**Rocksprings**	**78.26**	**340**	⇓P	**P**	**03 19 32.0**	**+0.9**
	baz=79,SNR=7.1						
628A	**Black Gap, Mar**	**78.43**	**337**	⇓P	**P**	**03 19 32.9**	**+0.8**
	baz=79,SNR=9.5						
531A	**Rocksprings**	**78.46**	**339**	⇓P	**P**	**03 19 33.3**	**+1.1**
	baz=79,SNR=16						
TXAR	**Lajitas Array**	**78.51**	**336**	P	**P**	**03 19 32.7**	**+0.1**
TXAR	**Lajitas Array**	**78.51**	**336**	P	**P**	**03 19 32.7**	**+0.1**
	comp=Z,4.0nm,1.1s,baz=152,slow=5.7,SNR=15						
627A	**Terlingua Ranc**	**78.54**	**336**	⇓P	**P**	**03 19 33.9**	**+1.1**
	baz=79						
JCT	**Junction City**	**78.57**	**340**	⇓P	**P**	**03 19 33.6**	**+0.8**
	baz=79,SNR=6.4						
530A	**J-C Ranch, Com**	**78.64**	**338**	⇑P	**P**	**03 19 34.4**	**+1.1**
	baz=79,SNR=7.4						
LRAL	**Lakeview Retre**	**78.81**	**351**	*e*P	**P**	**03 19 34.1**	**+0.2**
	comp=Z,14nm,1.3s						
626A	**Big Bend Ranch**	**78.85**	**336**	⇑P	**P**	**03 19 35.4**	**+1.0**
	baz=79,SNR=6.1						
529A	**Stev Forest Ra**	**78.85**	**338**	⇑P	**P**	**03 19 35.3**	**+0.8**
	baz=79						
GOGA	**Godfrey**	**78.86**	**354**	*e*P	**P**	**03 19 33.1**	**-1.2**
GOGA				pmax	pmax		
	comp=Z,25nm,1.1s						
GOGA	**Godfrey**	**78.86**	**354**	*e*P	**P**	**03 19 33.1**	**-1.2**
	comp=Z,24nm,1.1s						
432A	**Menard**	**78.95**	**340**	⇓P	**P**	**03 19 35.1**	**+0.2**
	baz=79,SNR=7.0						
431A	**Sonora**	**78.97**	**339**	⇓P	**P**	**03 19 35.8**	**+0.8**
	baz=79,SNR=11						
528A	**Cox Ranch, San**	**79.04**	**337**	⇑P	**P**	**03 19 36.2**	**+0.6**
	baz=80,SNR=5.8						
430A	**Baggett Ranch,**	**79.22**	**339**	⇓P	**P**	**03 19 37.3**	**+0.9**
	baz=80,SNR=8.7						
429A	**Davenport Ranc**	**79.24**	**338**	⇑P	**P**	**03 19 37.4**	**+0.8**
	baz=80,SNR=8.4						
527A	**Woodward Ranch**	**79.26**	**336**	⇑P	**P**	**03 19 37.7**	**+1.0**
	baz=80,SNR=11						
526A	**Mary Lane Ranc**	**79.31**	**336**	⇑P	**P**	**03 19 38.0**	**+0.9**
	baz=80,SNR=6.6						
TSUM	**Tsumeb**	**79.39**	**106**	*e*P	**P**	**03 19 39.0**	**+1.1**
	comp=Z,65nm,1.9s						
332A	**Millersview**	**79.42**	**340**	⇓P	**P**	**03 19 37.8**	**+0.3**
	baz=80						
WHTX	**Lake Whitney**	**79.49**	**342**	⇓P	**P**	**03 19 38.0**	**+0.3**
	baz=80						
331A	**San Angelo**	**79.52**	**339**	⇑P	**P**	**03 19 38.7**	**+0.7**
	baz=80,SNR=7.6						
428A	**Kincaid Ranch,**	**79.55**	**337**	⇑P	**P**	**03 19 38.4**	**+0.2**
	baz=80						
330A	**Merzon**	**79.80**	**339**	⇑P	**P**	**03 19 39.7**	**+0.1**
	baz=80,SNR=8.7						
427A	**Hayter Ranch,**	**79.86**	**337**	⇓P	**P**	**03 19 40.4**	**+0.4**
	baz=80						
426A	**McDonald Obser**	**79.87**	**336**	⇑P	**P**	**03 19 40.7**	**+0.6**
	baz=80,SNR=6.8						
232A	**Coleman**	**79.88**	**340**	⇑P	**P**	**03 19 40.3**	**+0.3**
	baz=80						
329A	**Wagon Wheel Ra**	**80.08**	**338**	⇑P	**P**	**03 19 41.8**	**+0.7**
	baz=80,SNR=7.4						
231A	**Bronte**	**80.09**	**340**	⇓P	**P**	**03 19 41.5**	**+0.4**
	baz=80						
328A	**Wristen Ranch,**	**80.20**	**337**	⇑P	**P**	**03 19 42.1**	**+0.3**
	baz=81						
230A	**Sterling City**	**80.24**	**339**	⇓P	**P**	**03 19 42.4**	**+0.5**
	baz=81						
KMSC	**Kings Mountain**	**80.46**	**356**	⇑P	**P**	**03 19 43.5**	**+0.6**
	baz=81						
326A	**Caldwell Ranch**	**80.46**	**336**	⇓P	**P**	**03 19 43.6**	**+0.4**
	baz=81						
229A	**Bryant Ranch,**	**80.50**	**338**	⇓P	**P**	**03 19 43.8**	**+0.5**
	baz=81						
LBTB	**Lobatse**	**80.53**	**116**	*e*P	**P**	**03 19 44.9**	**+0.9**
	comp=Z,165nm,2.0s						
ABTX	**Abilene, Hawle**	**80.59**	**340**	⇑P	**P**	**03 19 44.1**	**+0.3**
	baz=81						
325A	**Bean Ranch, Si**	**80.80**	**336**	⇓P	**P**	**03 19 45.2**	**+0.2**
	baz=81						
131A	**Roby**	**80.81**	**340**	⇓P	**P**	**03 19 45.7**	**+0.8**
	baz=81						
228A	**UT Block 9, Go**	**80.84**	**338**	⇓P	**P**	**03 19 46.0**	**+0.8**
	baz=81						
130A	**Snyder**	**80.88**	**339**	⇓P	**P**	**03 19 46.6**	**+1.3**
	baz=81						
227A	**Bennet, Jal**	**80.93**	**337**	⇓P	**P**	**03 19 46.8**	**+1.2**
	baz=81						
CPCT	**Cooper Cave**	**80.97**	**353**	*e*P	**P**	**03 19 45.0**	**-0.7**
324A	**Moseley Ranch,**	**81.01**	**335**	⇓P	**P**	**03 19 46.6**	**+0.4**
	baz=81						
129A	**Stewart Farms,**	**81.14**	**339**	⇓P	**P**	**03 19 47.6**	**+0.9**
	baz=82						
Z32A	**Haskell**	**81.20**	**341**	⇓P	**P**	**03 19 48.2**	**+1.2**
	baz=82						
MIAR	**Mount Ida**	**81.21**	**346**	*e*P	**P**	**03 19 48.1**	**+1.2**
MIAR				pmax	pmax		
	comp=Z,40nm,2.0s						
MIAR	**Mount Ida**	**81.21**	**346**	*e*P	**P**	**03 19 48.1**	**+1.2**
	comp=Z,40nm,2.0s						
MNTX	**Cornudas Mount**	**81.22**	**335**	*e*P	**P**	**03 19 48.1**	**+1.0**
	comp=Z,6.1nm,1.3s						
226B	**Tecolote Peak,**	**81.23**	**337**	⇓P	**P**	**03 19 48.2**	**+0.9**
	baz=82,SNR=5.9						
128A	**Castleberry Fa**	**81.29**	**338**	⇓P	**P**	**03 19 48.5**	**+0.9**
	baz=82						
Z31A	**Sharp Cattle R**	**81.37**	**340**	⇑P	**P**	**03 19 49.0**	**+1.1**
	baz=82						
225A	**Deer Hill, Car**	**81.45**	**336**	⇑P	**P**	**03 19 49.0**	**+0.5**
	baz=82						
127A	**Arkansas Junct**	**81.57**	**337**	⇓P	**P**	**03 19 49.6**	**+0.5**
	baz=82						
Z30A	**Sanderson Ranc**	**81.58**	**339**	⇓P	**P**	**03 19 49.7**	**+0.6**
	baz=82						
Z29A	**Hungry Hill Ra**	**81.70**	**339**	⇑P	**P**	**03 19 50.0**	**+0.4**
	baz=82,SNR=8.8						
126A	**Clayton Basin,**	**81.73**	**337**	⇓P	**P**	**03 19 50.2**	**+0.3**
	baz=82						
320A	**Kipp Ranch, An**	**81.85**	**333**	⇑P	**P**	**03 19 51.4**	**+0.7**
	baz=82						
Y32A	**R-V Farms, Ver**	**81.86**	**341**	⇓P	**P**	**03 19 51.2**	**+0.7**
	baz=82						
Z28A	**Tucker Farm, M**	**81.90**	**338**	⇓P	**P**	**03 19 51.2**	**+0.4**
	baz=82						
125A	**Gardner Draw,**	**81.92**	**336**	⇓P	**P**	**03 19 51.5**	**+0.6**
	baz=82						
WVT	**Waverly**	**81.96**	**351**	*e*P	**P**	**03 19 50.8**	**-0.1**
WVT				pmax	pmax		
	comp=Z,24nm,1.4s						
WVT	**Waverly**	**81.96**	**351**	*e*P	**P**	**03 19 50.8**	**-0.1**
	comp=Z,24nm,1.4s						
Y31A	**Rekieta Farm,**	**82.01**	**340**	⇑P	**P**	**03 19 52.2**	**+1.0**
	baz=82						
Y30A	**Stafford Cattl**	**82.08**	**340**	⇓P	**P**	**03 19 52.6**	**+0.9**
	baz=82						
222A	**Williams Famil**	**82.11**	**334**	⇑P	**P**	**03 19 52.8**	**+0.8**
	baz=82						
319A	**Douglas**	**82.13**	**332**	⇑P	**P**	**03 19 52.2**	**+0.1**
	baz=82						
Z27A	**Tatum**	**82.14**	**338**	⇓P	**P**	**03 19 52.8**	**+0.8**
	baz=83,SNR=7.0						
DBIC	**Dimbokro**	**82.17**	**72**	P	**P**	**03 19 52.8**	**+0.3**
	comp=Z,22nm,1.3s						
DBIC	**Dimbokro**	**82.17**	**72**	P	**P**	**03 19 52.4**	**-0.2**
	comp=Z,8.3nm,1.0s,baz=236,slow=3.2,SNR=3.6						
DBIC				LR	LR	03 53 35.4	
	comp=Z,331nm,18.7s,baz=199,slow=34						
124A	**Stringfield Ra**	**82.18**	**336**	⇓P	**P**	**03 19 53.3**	**+0.8**
	baz=83,SNR=8.6						
Y29A	**Porterfield Fa**	**82.26**	**339**	⇑P	**P**	**03 19 53.4**	**+0.7**
	baz=83						
Z26A	**Caprock**	**82.31**	**337**	⇓P	**P**	**03 19 53.3**	**+0.4**
	baz=83,SNR=7.5						
220A	**Playas Peak, P**	**82.37**	**333**	⇓P	**P**	**03 19 54.3**	**+1.0**
	baz=83						
WMOK	**Wichita Mounta**	**82.42**	**342**	*e*P	**P**	**03 19 51.7**	**-1.6**
WMOK				pmax	pmax		
	comp=Z,14nm,1.2s						
WMOK	**Wichita Mounta**	**82.42**	**342**	*e*P	**P**	**03 19 51.7**	**-1.6**
	comp=Z,14nm,1.2s						
Y28A	**McKinney Farm,**	**82.45**	**339**	⇑P	**P**	**03 19 54.5**	**+0.8**
	baz=83						
Z25A	**Roswell**	**82.52**	**337**	⇑P	**P**	**03 19 54.8**	**+0.7**
	baz=83,SNR=5.8						
X31A	**McDonald Ranch**	**82.59**	**341**	⇑P	**P**	**03 19 55.1**	**+0.8**
	baz=83						
X30A	**Coker Ranch, T**	**82.62**	**340**	⇑P	**P**	**03 19 55.4**	**+0.9**
	baz=83						
MSTX	**Muleshoe**	**82.64**	**338**	⇓P	**P**	**03 19 54.7**	**+0.1**
	baz=83,SNR=7.6						
Y27A	**Causey**	**82.66**	**338**	⇑P	**P**	**03 19 55.4**	**+0.6**
	baz=83						
121A	**Cookes Peak, D**	**82.72**	**334**	⇓P	**P**	**03 19 55.9**	**+0.7**
	baz=83						
Z24A	**Sheeppen Canyo**	**82.75**	**336**	⇓P	**P**	**03 19 56.5**	**+1.1**
	baz=83						
X29A	**Tulia**	**82.82**	**339**	⇑P	**P**	**03 19 56.5**	**+1.0**
	baz=83						
Y26A	**Elida**	**82.88**	**337**	⇑P	**P**	**03 19 56.8**	**+0.9**
	baz=83						
Z23A	**Rita Site, Whi**	**82.93**	**335**	⇑P	**P**	**03 19 57.0**	**+0.8**
	baz=83						
TUL1	**Tulsa**	**82.94**	**344**	⇑P	**P**	**03 19 56.1**	**+0.1**
	baz=83						
120A	**U Bar Ranch, L**	**83.00**	**333**	⇓P	**P**	**03 19 57.5**	**+0.9**
	baz=83						
X28A	**Dimmitt**	**83.02**	**339**	⇑P	**P**	**03 19 57.0**	**+0.4**
	baz=84						
W31A	**Holland Ranch,**	**83.11**	**341**	⇑P	**P**	**03 19 58.5**	**+1.6**
	baz=84						
Y25A	**Mesa, Roswell**	**83.11**	**337**	⇓P	**P**	**03 19 58.0**	**+0.8**
	baz=84						
Z22A	**Elephant Butte**	**83.14**	**335**	⇑P	**P**	**03 19 58.4**	**+1.0**
	baz=84						
Y24A	**Capitan**	**83.33**	**336**	⇓P	**P**	**03 19 58.7**	**+0.4**
	baz=84,SNR=9.5						
Z21A	**St. Cloud Mine**	**83.41**	**334**	⇑P	**P**	**03 19 60.0**	**+1.2**
	baz=84						
W29A	**Amraillo**	**83.45**	**340**	⇑P	**P**	**03 20 00.1**	**+1.3**
	baz=84						
TUC	**Tucson**	**83.48**	**331**	*e*P	**P**	**03 20 01.2**	**+2.2**
TUC				pmax	pmax		
	comp=Z,67nm,1.6s						
TUC	**Tucson**	**83.48**	**331**	*e*P	**P**	**03 20 01.2**	**+2.2**
	comp=Z,67nm,1.6s						
Y23A	**Lovelace Mesa,**	**83.51**	**336**	⇑P	**P**	**03 20 00.4**	**+1.1**
	baz=84,SNR=8.2						
Z20A	**Nine Sixteen R**	**83.51**	**333**	⇑P	**P**	**03 20 00.6**	**+1.4**
	baz=84						
V31A	**Spring Creek L**	**83.65**	**341**	⇑P	**P**	**03 20 00.9**	**+1.2**
	baz=84						
X25A	**Clemmons Ranch**	**83.67**	**337**	⇑P	**P**	**03 20 00.9**	**+0.8**
	baz=84						
SIUC	**Southern Illin**	**83.69**	**350**	*e*P

U25A	Circle Dot Ran	85.37	338	⇓P		P	03 20 09.9	+1.3		
	baz=86,SNR=7.1									
T28A	Walsh	85.47	340	⇓P		P	03 20 09.9	+0.9		
	baz=86									
S30A	Montezuma	85.58	341	⇑P		P	03 20 10.8	+1.4		
	baz=86									
V22A	San Miguel Ran	85.61	336	⇓P		P	03 20 11.4	+1.5		
	baz=86,SNR=8.5									
U24A	Moreno Valley	85.61	337	⇓P		P	03 20 11.5	+1.5		
	baz=86									
X16A	Lo Mia Camp, P	85.63	332	⇑P		P	03 20 11.5	+1.5		
	baz=86									
U23A	El Rito	85.79	336	⇓P		P	03 20 12.2	+1.4		
	baz=86,SNR=14									
T26A	Comanche Natio	85.89	339	⇑P		P	03 20 12.3	+1.2		
	baz=86									
R31A	Burdett	85.99	342	⇑P		P	03 20 12.3	+0.8		
	baz=86									
U22A	Llaves	86.02	336	⇑P		P	03 20 12.3	+0.4		
	baz=86									
T25A	Trinidad	86.07	338	⇑P		P	03 20 13.5	+1.4		
	baz=86,SNR=13									
S26A	Kim	86.28	339	⇓P		P	03 20 14.3	+1.2		
	baz=87,SNR=12									
U21A	Nageezi	86.30	335	⇑P		P	03 20 14.5	+1.2		
	baz=87									
BC3	Big Chuckawall	86.35	328	⇑P		P	03 20 15.1	+1.6		
	baz=87									
T23A	Casias Ranch,	86.41	337	⇓P		P	03 20 15.1	+1.3		
	baz=87									
R29A	Marienthal	86.48	341	⇓P		P	03 20 15.7	+1.7		
	baz=87									
HDIL	Hopedale	86.50	350	*e*P		P	03 20 13.8	-0.1		
	comp=Z,14nm,0.9s									
R28A	Tribune	86.56	340	⇓P		P	03 20 15.7	+1.3		
	baz=87									
S25A	Robets Cordova	86.56	338	⇑P		P	03 20 15.9	+1.4		
	baz=87,SNR=10									
T22A	Edith	86.63	336	⇑P		P	03 20 16.4	+1.5		
	baz=87,SNR=12									
PFO	Pinyon Flat Ob	86.68	328	*e*P		P	03 20 15.2	+0.1		
	comp=Z,11nm,1.1s									
PFO	Pinyon Flat Ob	86.68	328	⇓P		P	03 20 16.4	+1.3		
	baz=87									
R27A	Eads	86.74	340	⇑P		P	03 20 16.5	+1.3		
	baz=87									
S24A	Houchin Ranch,	86.75	338	⇓P		P	03 20 16.9	+1.4		
	baz=87,SNR=7.3									
T21A	Navajo Lake	86.79	336	⇓P		P	03 20 16.6	+0.9		
	baz=87									
R26A	Arlington	86.92	339	⇑P		P	03 20 17.4	+1.3		
	baz=87,SNR=6.9									
SDCO	Great Sand Dun	86.93	337	*e*P		P	03 20 16.7	+0.3		
	comp=Z,5.4nm,1.2s									
R25A	Fountain Ranch	86.98	338	⇑P		P	03 20 17.7	+1.2		
	baz=87									
W13A	Hualapai Mount	87.08	330	⇑P		P	03 20 18.2	+1.0		
	baz=88									
Q28A	Sharon Springs	87.25	341	⇓P		P	03 20 18.9	+1.2		
	baz=88									
R24A	Sanders Place,	87.28	338	⇑P		P	03 20 19.7	+1.7		
	baz=88,SNR=14									
S22A	4UR Ranch, Cre	87.29	336	⇑P		P	03 20 19.4	+1.2		
	baz=88,SNR=9.3									
P30A	Selden	87.35	342	⇑P		P	03 20 19.9	+1.8		
	baz=88									
GMRC	Granite Mounta	87.43	329	⇓P		P	03 20 19.8	+1.1		
	baz=88									
R23A	Moffat	87.43	337	⇓P		P	03 20 20.1	+1.2		
	baz=88									
S21A	Coal Bank Pass	87.49	336	⇑P		P	03 20 20.6	+1.4		
	baz=88									
LDFC	Landfair	87.50	329	*e*P		P	03 20 19.3	+0.3		
	comp=Z,23nm,1.2s									
Q26A	Hugo	87.53	339	⇓P		P	03 20 20.9	+1.8		
	baz=88									
BFSC	Mount Baldy Ra	87.69	327	⇓P		P	03 20 21.3	+1.3		
	baz=88									
Q25A	Bedland, Calha	87.70	339	⇓P		P	03 20 21.4	+1.3		
	baz=88									
P28A	Saint Francis	87.72	341	⇓P		P	03 20 21.6	+1.7		
	baz=88									
HEC	Hector,Ludlow	87.72	328	⇑P		P	03 20 21.4	+1.4		
	baz=88									
R22A	Saguache, Gunn	87.72	337	⇑P		P	03 20 21.6	+1.3		
	baz=88									
U15A	North Rim	87.75	332	⇑P		P	03 20 21.5	+1.1		
	baz=88									
S20A	Disappointment	87.81	335	⇓P		P	03 20 22.0	+1.3		
	baz=88									
Q24A	Divide	87.98	338	⇑P		P	03 20 23.3	+1.8		
	baz=88									
R21A	Cimarron	88.08	336	⇑P		P	03 20 23.5	+1.6		
	baz=88									
TUQ	Turquoise Moun	88.11	329	⇓P		P	03 20 23.3	+1.3		
	baz=88									
R20A	Redvale	88.15	335	⇑P		P	03 20 23.8	+1.6		
	baz=89									
PV01	Paradox Valley	88.15	335	*e*P		P	03 20 23.4	+1.2		
	comp=Z,2μm,1.8s									
GSC	Goldstone	88.32	328	*e*P		P	03 20 24.4	+1.5		
GSC				pmax		pmax				
	comp=Z,87nm,2.5s									
GSC	Goldstone	88.32	328	*e*P		P	03 20 24.4	+1.5		
	comp=Z,87nm,2.5s									
GSC	Goldstone	88.32	328	⇓P		P	03 20 23.9	+1.0		
	baz=89									
Q22A	Crested Butte,	88.36	337	⇑P		P	03 20 24.6	+1.3		
	baz=89									
EDW2	Edwards Air Fo	88.39	327	⇑P		P	03 20 24.6	+1.4		
	baz=89									
O27A	Beecher Island	88.48	340	⇑P		P	03 20 24.8	+1.3		
	baz=89									
PV04	Paradox Valley	88.49	335	*e*P		P	03 20 25.0	+1.3		
Q21A	Lamborn Mesa,	88.52	336	⇑P		P	03 20 25.1	+1.2		
	baz=89									
P23A	Jefferson	88.55	338	⇓P		P	03 20 25.5	+1.3		
	baz=89									
SMCO	Snowmass	88.67	337	*e*P		P	03 20 25.8	+1.0		
	comp=Z,19nm,1.4s									
SHPR	Sheep Range	88.80	330	*e*P		P	03 20 27.6	+2.4		
JFWS	Jewell Farm	88.94	350	*e*P		P	03 20 24.5	-1.0		
JFWS				pmax		pmax				
	comp=Z,31nm,1.1s									
JFWS	Jewell Farm	88.94	350	*e*P		P	03 20 24.5	-1.0		
	comp=Z,31nm,1.1s									
CCUT	Cedar City	89.12	332	*e*P		P	03 20 27.7	+0.9		
	comp=Z,26nm,1.4s									
MPMC	Manual Prospec	89.24	328	⇓P		P	03 20 28.8	+1.5		
	baz=90									
LSZ	Lusaka	89.25	111	*e*P		P	03 20 28.1	+0.1		
	comp=Z,119nm,2.6s									
ISA	Isabella	89.26	327	⇑P		P	03 20 28.8	+1.5		
	baz=90									
O23A	Lake Granby, G	89.35	338	⇓P		P	03 20 29.2	+1.4		
	baz=90,SNR=6.1									
FURC	Furnace Creek,	89.38	329	⇓P		P	03 20 29.2	+1.5		
	baz=90									
O22A	Kremmling	89.47	338	⇑P		P	03 20 29.8	+1.3		
	baz=90									
MVU	Marysvale	89.61	333	P		P	03 20 29.9	+0.8		
	comp=Z,56nm,2.4s									
SRU	San Rafael	89.64	334	⇓P		P	03 20 30.6	+1.5		
	baz=90									
VES	Vestal, Richgr	89.66	327	⇑P		P	03 20 30.6	+1.6		
	baz=90									
Q16A	Castle Valley	89.66	334	⇓P		P	03 20 30.9	+1.6		
	baz=90									
L29A	Maesberg Ranch	89.82	342	⇓P		P	03 20 31.8	+2.1		
	baz=90									
N23A	Red Feather La	90.00	338	⇓P		P	03 20 31.8	+0.9		
	baz=90,SNR=6.5									
M25A	Palm-Egli Farm	90.03	340	⇑P		P	03 20 31.9	+1.1		
	baz=90									
GRAC	Grapevine Rang	90.03	328	⇓P		P	03 20 32.0	+1.2		
	baz=90									
N22A	Wattenberg Ran	90.05	338	⇑P		P	03 20 32.4	+1.3		
	baz=90									
M24A	Cheyenne	90.25	339	⇑P		P	03 20 33.4	+1.5		
	baz=91									
N21A	Black Mountain	90.30	337	⇑P		P	03 20 33.5	+1.3		
	baz=91									
N20A	Spence Gulch,	90.57	337	⇓P		P	03 20 35.0	+1.5		
	baz=91									
R11A	Troy Canyon, C	90.60	330	⇓P		P	03 20 35.1	+1.4		
	baz=91									
ECSD	EROS Data Cent	90.68	346	*e*P		P	03 20 32.2	-1.4		
	comp=Z,11nm,0.9s									
L23A	Garrett	91.08	339	⇓P		P	03 20 37.2	+1.3		
	baz=92									
L22A	Ellis Ranch, M	91.19	338	⇑P		P	03 20 37.7	+1.4		
	baz=92									
TORD	Torodi Ar. Bea	91.28	73	P		P	03 20 36.5	-0.7		
TORD	Torodi Ar. Bea	91.28	73	P		P	03 20 36.5	-0.7		
	comp=Z,2.1nm,1.2s,baz=232,slow=4.4,SNR=5.8									
TORD				LR		LR	03 58 56.3			
	comp=Z,265nm,18.8s,baz=175,slow=34									
DUG	Dugway	91.34	333	*e*P		P	03 20 41.9	+4.9		
DUG				pmax		pmax				
	comp=Z,6.0nm,1.3s									
DUG	Dugway	91.34	333	*e*P		P	03 20 41.9	+4.9		
	comp=Z,5.7nm,1.3s									
DUG	Dugway	91.34	333	⇓P		P	03 20 38.2	+1.2		
	baz=92									
L21A	Rawlins	91.38	338	⇓P		P	03 20 38.5	+1.3		
	baz=92									
NVAR	Mina Array Bea	91.64	328	P		P	03 20 38.2	-0.3		
NVAR	Mina Array Bea	91.64	328	P		P	03 20 38.2	-0.3		
	comp=Z,0.6nm,0.9s,baz=185,slow=5.1,SNR=2.5									
K23A	Bowen Ranch, D	91.67	339	⇓P		P	03 20 39.6	+1.2		
	baz=92									
DZM	Mont Dzumac	91.67	236	*e*LR		LR	03 50 03.8			
	comp=Z,1μm,30.2s									
K22A	Casper	91.80	338	⇓P		P	03 20 39.7	+0.7		
	baz=92,SNR=8.0									
J24A	Dixon Ranch, L	91.97	340	⇓P		P	03 20 41.8	+2.0		
	baz=92									
L19A	Farson	92.05	336	⇑P		P	03 20 41.9	+1.6		
	baz=92									
HWUT	Hardware Ranch	92.24	335	*e*P		P	03 20 42.1	+1.0		
	comp=Z,9.8nm,1.3s									
J22A	Midwest	92.50	339	⇓P		P	03 20 43.9	+1.7		
	baz=93									
J21A	Lysite	92.69	338	⇓P		P	03 20 45.0	+1.9		
	baz=93									
PDAR	Pinedale Array	92.72	336	P		P	03 20 42.2	-1.2		
PDAR	Pinedale Array	92.72	336	P		P	03 20 42.2	-1.2		
	comp=Z,0.7nm,1.0s,baz=127,slow=2.4,SNR=4.3									
J20A	Shoshoni	92.86	338	⇓P		P	03 20 45.6	+1.7		
	baz=93									
I22A	9 Mile Ranch,	92.95	339	⇑P		P	03 20 45.8	+1.5		
	baz=93									
I21A	Big Trails, Te	93.08	338	⇑P		P	03 20 45.1	+0.2		
	baz=94,SNR=6.9									
H24A	Dirks Ranch, A	93.28	340	⇑P		P	03 20 46.8	+1.0		
	baz=94									
I20A	Worland	93.43	338	⇓P		P	03 20 47.0	+0.5		
	baz=94									
H22A	Clearmont	93.57	339	⇓P		P	03 20 48.3	+1.1		
	baz=94									
STKA	Stephens Creek	95.47	212	P		P	03 20 54.2	-2.1		
STKA	Stephens Creek	95.47	212	P		P	03 20 54.2	-2.1		
	comp=Z,2.8nm,0.9s,baz=127,slow=12,SNR=2.9									
STKA				LR		LR	03 54 57.7			
	comp=Z,736nm,20.6s,baz=95,slow=30									
D17A	Six Diamond Ra	97.08	337	⇑P		Pdif	03 21 04.6	+1.4		
	baz=98									
GERES	GERESS Array B	122.48	52	PKP		PKPdf	03 26 24.7	-1.5		
GERES	GERESS Array B	122.48	52	PKP		PKPdf	03 26 24.7	-1.5		
	comp=Z,1.3nm,0.8s,baz=192,slow=1.2,SNR=8.7									
ILAR	Eielson Array	122.79	331	PKP		PKPdf	03 26 24.9	-1.3		
ILAR	Eielson Array	122.79	331	PKP		PKPdf	03 26 24.9	-1.3		
	comp=Z,0.6nm,0.8s,baz=152,slow=3.1,SNR=5.1									
CLL	Collm	123.45	49	*e*PKIKP		PKPdf	03 26 28.0	+0.2		
CLL				*e*			03 28 14.0			
CLL	Collm	123.45	49	*e*PKiKP		PKPdf	03 26 28.0	+0.2		
CLL				*e*PP		PP	03 28 14.0	+4.0		
CLL				*e*PS		PS	03 38 12.0	+5.6		
CLL				*e*PPS		PPS	03 39 42.0			
CLL				*e*SS		SS	03 44 55.0	-1.1		
CLL				*e*SSS		SSS	03 49 22.0			
CLL				*e*			03 54 00.0			
PRU	Pruhonice	123.56	51	AMS		AMS	04 23 10.0			
	comp=Z,500nm,17.0s									
TREC	Trest	123.71	52	AMS		AMS	04 16 50.0			
	comp=Z,500nm,22.9s									
BRG	Berggiesshubel	123.72	50	*e*(P)		PKPdf	03 26 33.1	+4.7		
	comp=Z,1.3nm,0.7s									
PVCC	Panska Ves	123.87	50	AMS		AMS	04 15 40.0			
	comp=Z,500nm,21.2s									
DPC	Dobruska-Polom	124.73	51	*e*PKIKP		PKPdf	03 26 32.3	+1.9		
DPC	Dobruska-Polom	124.73	51	*e*PKPdf		PKPdf	03 26 32.3	+1.9		
VYHS	Vyhne	125.17	54	*e*PKIKP		PKPdf	03 26 32.1	+0.9		
VYHS	Vyhne	125.17	54	*e*PKP		PKPdf	03 26 32.1	+0.9		
OKC	Ostrava-Krasne	125.47	52	AMS		AMS	04 23 40.0			
	comp=Z,300nm,17.1s									
CRVS	Cervenica-Dubn	126.87	55	*e*PKIKP		PKPdf	03 26 30.0	-4.5		
CRVS	Cervenica-Dubn	126.87	55	*e*PKP		PKPdf	03 26 30.0	-4.5		
ARR	Arges	126.98	60	⇑*i*P		PKPdf	03 26 35.2	+0.3		
STHS	Stebnicka Huta	127.00	54	*e*PKIKP		PKPdf	03 26 38.3	+3.6		
STHS	Stebnicka Huta	127.00	54	*e*PKP		PKPdf	03 26 38.3	+3.6		
VOIR		127.27	60	⇓PKIKP		PKPdf	03 26 36.2	+0.7		
VOIR		127.27	60	⇓*i*P		PKPdf	03 26 36.2	+0.7		
KOLS	Kolonicke sedl	127.35	55	*e*PKIKP		PKPdf	03 26 39.3	+3.9		
KOLS	Kolonicke sedl	127.35	55	*e*PKP		PKPdf	03 26 39.3	+3.9		
NOA	NORSAR Array B	127.51	38	PKP		PKPdf	03 26 35.1	-0.2		
NOA	NORSAR Array B	127.51	38	PKP		PKPdf	03 26 35.1	-0.2		
	comp=Z,1.4nm,0.9s,baz=239,slow=2.0,SNR=3.3									
MLR	Muntele Rosu	127.84	60	⇑*i*P		PKPdf	03 26 36.2	-0.4		
KWP	Kalwaria Pacla	127.94	54	⇓PKIKP		PKPdf	03 26 37.7	+1.2		
KWP	Kalwaria Pacla	127.94	54	⇓*i*P		PKPdf	03 26 37.7	+1.2		
BURAR	Bucovina Array	128.44	58	⇑*i*P		PKPdf	03 26 33.5	-4.1		
PLOR	Plostina	128.45	60	⇑PKIKP		PKPdf	03 26 36.2	-1.4		
PLOR	Plostina	128.45	60	⇑*i*P		PKPdf	03 26 36.2	-1.4		
VRI	Vrincioaia	128.50	60	⇑PKIKP		PKPdf	03 26 37.2	-0.5		
VRI	Vrincioaia	128.50	60	⇑*i*P		PKPdf	03 26 37.2	-0.5		
TESR	Tesoani	128.77	60	⇓*i*P		PKPdf	03 26 37.8	-0.4		
CFR	Carcaliu	129.03	62	⇑PKIKP		PKPdf	03 26 37.8	-0.9		
CFR	Carcaliu	129.03	62	⇑*i*P		PKPdf	03 26 37.8	-0.9		
BRTR	Keskin Array B	129.84	70	PKP		PKPdf	03 26 40.5	-0.1		
BRTR	Keskin Array B	129.84	70	PKP		PKPdf	03 26 40.5	-0.1		
	comp=Z,0.8nm,0.9s,baz=224,slow=3.4,SNR=5.7									
ANN	Anapa	134.72	66	*e*PKIKP		PKPdf	03 26 48.4	-1.0		
OBN	Obninsk	137.86	52	*i* PKIKP		PKPdf	03 26 54.8	-0.1		
OBN				*i*			03 29 40.1			
OBN				pmax		pmax				
	comp=Z,7.0nm,1.5s									
OBN				MLR		MLR				
	comp=Z,200nm,17.0s									
GOF	Gofitskoye	138.46	68	*e*PKHKP		PKPpre	03 26 35.8			
APA	Apatity	138.56	33	⇓*i*PKIKP		PKPdf	03 26 53.0	-2.9		
APA				pmax		pmax				
	comp=Z,27nm,1.4s									
MAK	Makhachkala	140.59	73	*e*PKIKP		PKPdf	03 27 02.4	+2.1		
BILL	Bilibino	141.25	328	⇑*i*PKIKP		PKPdf	03 26 59.7	-1.1		
BILL				*i*			03 27 08.8			
BILL				*i*			03 34 07.3			
BILL				pmax		pmax				
	comp=Z,15nm,1.3s									
PETK	Petropavlovsk-	144.58	302	PKIKP		PKPab	03 27 04.6	-1.1		
PETK	Petropavlovsk-	144.58	302	PKP		PKPab	03 27 04.6	-1.1		
PETK	Petropavlovsk-	144.58	302	PKP		PKPab	03 27 04.6	-1.1		
	comp=Z,2.8nm,0.9s,baz=152,slow=6.7,SNR=4.7									
HYB	Hyderabad	145.12	135	*i* PKP		PKPab	03 27 08.0	-0.7		
SOKR	Solikamsk	149.14	46	⇑*i*PKIKP		PKPdf	03 27 16.1	+1.6		
SOKR				pmax		pmax				
	comp=Z,30nm,1.2s									
ARU	Arti	150.30	52	*i* PKIKP		PKPbc	03 27 21.6	-0.1		
ARU							03 30 56.2			
ABKAR	Akbulak array	150.68	67	*e*PKPbc		PKPbc	03 27 22.3	-0.5		
MJAR	Matsushiro Arr	152.41	263	PKPbc		PKPbc	03 27 25.7	-1.5		
MJAR	Matsushiro Arr	152.41	263	PKPbc		PKPbc	03 27 25.7	-1.5		
	comp=Z,1.0nm,0.8s,baz=140,slow=4.8,SNR=4.2									
CMAR	Chiang Mai Arr	152.71	171	PKPbc		PKPbc	03 27 26.6	-1.8		
CMAR	Chiang Mai Arr	152.71	171	PKPbc		PKPbc	03 27 26.6	-1.8		
	comp=Z,2.1nm,0.8s,baz=233,slow=3.5,SNR=11									
CHTO	Chiang Mai	153.06	171	*e*PKIKP		PKPdf	03 27 21.2	-0.7		
CHTO							03 27 29.0			
CHTO				*e*			03 27 40.2			
CHTO	Chiang Mai	153.06	171	*e*PKPdf		PKPdf	03 27 21.1	-0.7		
CHTO				PKPbc		PKPbc	03 27 29.0	-0.1		
CHTO				*e*PKPab		PKPab	03 27 40.2	-0.3		
KKAR	Karatay Array	156.45	84	*e*PKIKP		PKPdf	03 27 24.8	-1.0		
KKAR	Karatay Array	156.45	84	*e*PKPdf		PKPdf	03 27 24.8	-1.0		
KKAR				*e*PKPab		PKPab	03 27 55.2	+0.7		
KSH	Kashi	158.98	97	*e*PKPbc		PKPab	03 28 04.8	-0.9		
AAK	Ala-Archa	159.10	88	PKIKP		PKPdf	03 27 26.4	-2.9		
AAK	Ala-Archa	159.10	88	PKP		PKPdf	03 27 26.4	-2.9		
AAK	Ala-Archa	159.10	88	PKP		PKPdf	03 27 26.4	-2.9		
	comp=Z,1.3nm,0.3s,baz=293,slow=7.7,SNR=3.3									
GYA	Guiyang	160.74	189	PKP		PKPdf	03 27 31.0	-0.6		
GYA				PKPab		PKPab	03 28 16.0	+2.5		
GYA				SKKS			03 38 44.5			
GYA				SS		SS	03 52 09.8	+2.8		
GYA				AMB		AMB				
	comp=Z,140nm,8.0s									
GYA				LR		LR				
	comp=N,180nm,22.5s									
GYA				LR		LR				
	comp=E,130nm,24.2s									
GYA				LR		LR				
	comp=Z,190nm,22.9s									
MDJ	Mudanjiang	161.49	276	PKP		PKPdf	03 27 32.5	+0.9		
NJ2	Nanjing	161.94	227	*e*PKP		PKPdf	03 27 33.3	+0.8		
KURBB	Kurchatov Arra	162.69	64	PKP		PKPdf	03 27 31.4	-1.3		
	comp=Z,1.3nm,0.9s,baz=280,slow=1.0,SNR=6.9									
KURBB				PKPab		PKPab	03 28 20.5	-0.9		
	comp=Z,2.5nm,1.0s,baz=283,slow=4.7,SNR=7.5									
KURK	Kurchatov	162.73	64	PKIKP		PKPdf	03 27 31.4	-1.3		
KURK							03 28 20.5			
KURK	Kurchatov	162.73	64	PKP		PKPdf	03 27 31.4	-1.3		
KURK				PKPab		PKPab	03 28 20.5	-1.1		
NVS	Novosibirsk	164.17	47	*e*PKIKP		PKPdf	03 27 32.8	-1.1		
NVS				*e*			03 28 24.9			
NVS				pmax		pmax				
	comp=Z,25nm,2.1s									
CN2	Changchun	164.21	271	*e*PKP		PKPdf	03 27 32.0	-2.3		
CN2				PP		PP	03 32 15.0	+0.1		
CN2				LR		LR				
	comp=N,200nm,19.0s									
CN2				LR		LR				
	comp=E,200nm,19.0s									
CN2				LR		LR				
	comp=Z,200nm,19.0s									
MKAR	Makanchi Array	165.34	78	PKP2		PKPab	03 28 32.9	-0.4		
MKAR	Makanchi Array	165.34	78	PKPab		PKPab	03 28 32.9	-0.4		
MKAR	Makanchi Array	165.34	78	PKPab		PKPab	03 28 32.9	-0.4		
	comp=Z,2.3nm,1.0s,baz=260,slow=3.6,SNR=6.4									
CD2	Chengdu	165.35	181	*e*PKP		PKPdf	03 27 36.5	+0.7		
CD2				PKPab		PKPab	03 28 36.5	+3.0		
CD2				PP		PP	03 32 24.3	+4.7		
CD2				SKS		SKSdf	03 34 39.0	-0.2		
CD2				SKKS		SKKSac	03 39 09.8	+2.7		
CD2				SS		SS	03 52 58.0	+3.5		
CD2				AMB		AMB				
	comp=Z,180nm,10.2s									
CD2				LR		LR				
	comp=N,270nm,19.0s									
CD2				LR		LR				
	comp=E,260nm,16.7s									
CD2				LR		LR				
	comp=Z,260nm,19.0s									
ZAA0	Zalesovo Array	165.41	48	PKPdf		PKPdf	03 27 32.6	-2.4		
ZALV	Zalesovo Beam	165.41	48	PKIKP		PKPdf	03 27 32.0	-3.0		
ZALV	Zalesovo Beam	165.41	48	PKP		PKPdf	03 27 31.9	-3.0		
ZALV	Zalesovo Beam	165.41	48	PKP		PKPdf	03 27 31.9	-3.0		
	comp=Z,5.0nm,1.0s,baz=280,slow=2.7,SNR=11									
BJI	Beijing	169.10	244	PKP		PKPdf	03 27 41.0	+2.9		
BJI				LR		LR				
	comp=N,260nm,21.9s									
BJI				LR		LR				
	comp=E,190nm,21.9s									
BJI				LR		LR				
	comp=Z,280nm,28.3s									
LZH	Lanzhou	170.51	182	*e*PKP		PKPdf	03 27 34.0	-5.4		
LZH				pPKP		pPKPdf	03 27 38.3	-6.9		
LZH				sPKP			03 27 40.5			
LZH				LR		LR				
	comp=N,410nm,19.8s									
LZH				LR		LR				
	comp=E,220nm,16.1s									
LZH				LR		LR				
	comp=Z,500nm,19.9s									
HHC	Hu-ho-hao-te	172.38	235	*e*PKP		PKPdf	03 27 41.5	+1.4		
HHC				PKS		PKSdf	03 31 15.0	+2.6		
HHC				PP		PP	03 32 58.0	+1.8		
HHC				SKS		SKSdf	03 34 42.5	+0.1		
HHC				SKKS		SKKSac	03 39 48.5	+6.7		
HHC				SS		SS	03 54 09.5	+3

FNA	**Florina**	**1.39**	**60**	*e*PN	**Pn**	**03 25 37.6**	**-2.0**
FNA				*e*SN	**Sn**	**03 25 59.8**	**+1.4**
FNA	**Florina**	**1.39**	**60**	P	**Pn**	**03 25 37.8**	**-1.8**
FNA				S	**Sn**	**03 25 59.0**	**+0.6**
LKD2	**Lefkada island**	**1.47**	**153**	P	**Pb**	**03 25 41.5**	**+0.3**
LKD2				S	**Sg**	**03 26 02.2**	**+1.6**
LKD2	**Lefkada island**	**1.47**	**153**	*e*PN	**Pn**	**03 25 39.9**	**-0.7**
LKD2				*e*SN	**Sg**	**03 26 01.9**	**+1.3**
LKD2	**Lefkada island**	**1.47**	**153**	*e*Pn	**Pn**	**03 25 39.9**	**-0.7**
LKD2	**Lefkada island**	**1.47**	**153**	P	**Pb**	**03 25 41.5**	**+0.3**
LKD2				*e*Sn	**Sg**	**03 26 01.9**	**+1.3**
BIA	**Bitola**	**1.49**	**51**	P	**Pn**	**03 25 39.0**	**-1.9**
BIA				S	**Sg**	**03 26 02.1**	**+0.9**
BIA	**Bitola**	**1.49**	**51**	*i* Pg	**Pn**	**03 25 39.2**	**-1.7**
BIA				*i* Sg	**Sg**	**03 26 01.2**	**0.0**
BIA	**Bitola**	**1.49**	**51**	P	**Pn**	**03 25 39.0**	**-1.9**
BIA				S	**Sg**	**03 26 02.1**	**+0.9**
KZN	**Kozani**	**1.53**	**81**	P	**Pn**	**03 25 40.8**	**-0.7**
KZN				S	**Sb**	**03 26 02.0**	**-0.1**
KZN	**Kozani**	**1.53**	**81**	*e*PN	**Pn**	**03 25 41.0**	**-0.5**
KZN				*e*SN	**Sg**	**03 26 04.2**	**+1.6**
KZN	**Kozani**	**1.53**	**81**	*e*Pn	**Pn**	**03 25 41.0**	**-0.5**
KZN				S	**Sb**	**03 26 02.0**	**-0.1**
KZN				*e*Sn	**Sg**	**03 26 04.2**	**+1.6**
PHP	**Peshkopia**	**1.66**	**17**	*e*PN	**Pb**	**03 25 43.9**	**-0.6**
PHP				*i* SN	**Sg**	**03 26 09.5**	**+2.7**
PHP	**Peshkopia**	**1.66**	**17**	P	**Pn**	**03 25 42.4**	**-0.9**
PHP				S	**Sb**	**03 26 05.8**	**0.0**
PHP	**Peshkopia**	**1.66**	**17**	P	**Pn**	**03 25 42.4**	**-0.9**
PHP				S	**Sb**	**03 26 05.8**	**0.0**
THL	**Klokotos Trika**	**1.79**	**107**	P	**Pn**	**03 25 45.0**	**0.0**
THL				S	**Sn**	**03 26 08.2**	**0.0**
THL	**Klokotos Trika**	**1.79**	**107**	*e*PN	**Pn**	**03 25 45.0**	**0.0**
THL				*e*SN	**Sg**	**03 26 10.9**	**-0.1**
THL	**Klokotos Trika**	**1.79**	**107**	P	**Pn**	**03 25 45.0**	**0.0**
THL				S	**Sn**	**03 26 08.2**	**0.0**
THL				*e*Sn	**Sg**	**03 26 10.9**	**-0.1**
ULC	**Ulcinj**	**1.91**	**348**	⇑*i* Pn	**Pb**	**03 25 48.9**	**+0.1**
ULC				*e*Sn	**Sg**	**03 26 15.0**	**+0.2**
ULC	**Ulcinj**	**1.91**	**348**	⇑*i* Pn	**Pb**	**03 25 48.9**	**+0.1**
ULC				*e*Sn	**Sg**	**03 26 15.0**	**+0.2**
PUK	**Puka**	**1.95**	**2**	*e*PN	**Pn**	**03 25 46.7**	**-0.5**
PUK				*i* SN	**Sg**	**03 26 17.2**	**+1.3**
EVR	**Evrytania**	**1.96**	**126**	P	**Pn**	**03 25 48.0**	**+0.6**
EVR				S	**Sn**	**03 26 13.0**	**+0.7**
EVR	**Evrytania**	**1.96**	**126**	*e*PN	**Pn**	**03 25 48.2**	**+0.8**
EVR				*e*SN	**Sb**	**03 26 15.1**	**+0.8**
EVR	**Evrytania**	**1.96**	**126**	P	**Pn**	**03 25 48.0**	**+0.6**
EVR				S	**Sn**	**03 26 13.0**	**+0.7**
EVR				*e*Sn	**Sb**	**03 26 15.1**	**+0.8**
TAR1	**Taranto**	**1.96**	**283**	*e*Pn	**Pg**	**03 25 52.5**	**+1.5**
MAKR	**Makrakomi, Fth**	**2.11**	**120**	P	**Pn**	**03 25 50.6**	**+1.2**
MAKR				S	**Sn**	**03 26 17.1**	**+1.1**
MAKR	**Makrakomi, Fth**	**2.11**	**120**	P	**Pn**	**03 25 50.6**	**+1.2**
MAKR				S	**Sn**	**03 26 17.1**	**+1.1**
GRG	**Griva**	**2.17**	**66**	P	**Pn**	**03 25 49.8**	**-0.4**
GRG	**Griva**	**2.17**	**66**	P	**Pn**	**03 25 49.8**	**-0.4**
AGG	**Agios Georgios**	**2.24**	**118**	P	**Pn**	**03 25 51.5**	**+0.4**
AGG				S	**Sb**	**03 26 21.2**	**-1.1**
AGG	**Agios Georgios**	**2.24**	**118**	*e*PB	**Pn**	**03 25 51.6**	**+0.4**
AGG				*e*SN	**Sb**	**03 26 21.0**	**-1.3**
AGG	**Agios Georgios**	**2.24**	**118**	P	**Pn**	**03 25 51.5**	**+0.4**
AGG				*e*Sn	**Sb**	**03 26 21.0**	**-1.3**
SKO	**Skopje**	**2.25**	**33**	*i* Pn	**Pn**	**03 25 52.8**	**+1.5**
SKO				*e*Sg	**Sn**	**03 26 20.7**	**+1.2**
SKO				*e*Lg	Lg	03 26 25.9	
	comp=N,64nm,0.5s						
SKO				*e*Lg	Lg	03 26 26.4	
	comp=E,103nm,0.7s						
BCI	**Bajram Curri**	**2.28**	**5**	*e*PN	**Pn**	**03 25 52.2**	**+0.5**
BCI				*i* SN	**Sg**	**03 26 27.8**	**+1.2**
BUM	**Brajici-Budva**	**2.30**	**343**	⇑*i* Pn	**Pn**	**03 25 53.4**	**+1.3**
BUM				*e*Sn	**Sb**	**03 26 24.5**	**+0.2**
BUM	**Brajici-Budva**	**2.30**	**343**	⇑*i* Pn	**Pn**	**03 25 53.4**	**+1.3**
BUM				*e*Sn	**Sb**	**03 26 24.5**	**+0.2**
EFP	**Efpalio**	**2.34**	**135**	*e*PB	**Pn**	**03 25 53.0**	**+0.5**
EFP	**Efpalio**	**2.34**	**135**	*e*Pb	**Pn**	**03 25 53.0**	**+0.5**
PDG	**Podgorica**	**2.37**	**350**	⇑*i* Pn	**Pn**	**03 25 54.6**	**+1.7**
PDG				*e*Sn	**Sb**	**03 26 26.0**	**0.0**
TTG	**Podgorica**	**2.37**	**350**	⇑*i* Pn	**Pn**	**03 25 54.6**	**+1.7**
TTG				*e*Sn	**Sb**	**03 26 26.0**	**0.0**
BAI	**Bari**	**2.44**	**295**	*e*Pn	**Pn**	**03 25 53.0**	**-0.8**
VAY	**Valandovo**	**2.44**	**59**	*e*Pn	**Pn**	**03 25 53.7**	**-0.2**
VAY				*e*Sg	**Sn**	**03 26 24.5**	**+0.3**
VAY				*e*Lg	Lg	03 26 31.2	
	comp=N,91nm,1.0s						
VAY				*e*Lg	Lg	03 26 36.2	
	comp=E,38nm,0.7s						
KALE	**Kalithea**	**2.50**	**132**	*e*PB	**Pn**	**03 25 55.3**	**+0.6**
KALE	**Kalithea**	**2.50**	**132**	*e*Pb	**Pn**	**03 25 55.3**	**+0.6**
PVY	**Plav**	**2.50**	**3**	⇑*i* Pn	**Pn**	**03 25 55.6**	**+0.7**
PVY				*e*Sn	**Sb**	**03 26 28.6**	**-1.4**
PVY	**Plav**	**2.50**	**3**	⇑*i* Pn	**Pn**	**03 25 55.6**	**+0.7**
PVY				*e*Sn	**Sb**	**03 26 28.6**	**-1.4**
TIP	**Timpagrande**	**2.51**	**250**	P	**Pn**	**03 25 54.0**	**-0.2**
TIP	**Timpagrande**	**2.51**	**250**	P	**Pn**	**03 25 54.8**	**-0.2**
LAKA	**Lakka**	**2.52**	**137**	*e*PN	**Pn**	**03 25 55.3**	**+0.3**
LAKA	**Lakka**	**2.52**	**137**	*e*Pn	**Pn**	**03 25 55.3**	**+0.3**
HCY	**Herceg Novi**	**2.54**	**338**	⇓*i* Pn	**Pb**	**03 25 58.9**	**-0.6**
HCY				*e*Sn	**Sb**	**03 26 30.5**	**-0.7**
HCY	**Herceg Novi**	**2.54**	**338**	⇓*i* Pn	**Pb**	**03 25 58.9**	**-0.6**
HCY				*e*Sn	**Sb**	**03 26 30.5**	**-0.7**
KNT	**Kendrikon**	**2.59**	**65**	P	**Pn**	**03 25 55.7**	**-0.3**
KNT	**Kendrikon**	**2.59**	**65**	P	**Pn**	**03 25 55.7**	**-0.3**
XOR	**Xorichti**	**2.72**	**104**	P	**Pn**	**03 25 57.2**	**-0.6**
XOR				S	**Sn**	**03 26 31.6**	**+0.4**
XOR	**Xorichti**	**2.72**	**104**	P	**Pn**	**03 25 57.2**	**-0.6**
XOR				S	**Sn**	**03 26 31.6**	**+0.4**
BEY	**Berane**	**2.77**	**2**	⇑*i* Pn	**Pn**	**03 25 59.9**	**+1.3**
BEY				*e*Sn	**Sn**	**03 26 35.1**	**+2.6**
IVA	**Berane**	**2.77**	**2**	⇑*i* Pn	**Pn**	**03 25 59.9**	**+1.3**
IVA				*e*Sn	**Sn**	**03 26 35.1**	**+2.6**
NKY	**Niksic**	**2.78**	**348**	⇑*i* Pn	**Pn**	**03 25 59.6**	**+0.9**
NKY				*e*Sn	**Sb**	**03 26 35.9**	**-2.1**
NKY	**Niksic**	**2.78**	**348**	⇑*i* Pn	**Pn**	**03 25 59.6**	**+0.9**
NKY				*e*Sn	**Sb**	**03 26 35.9**	**-2.1**
BRY	**Bratogost**	**2.96**	**342**	⇑*i* Pn	**Pn**	**03 26 02.9**	**+1.7**
BRY				*e*Sn	**Sn**	**03 26 40.0**	**+2.9**
BRY	**Bratogost**	**2.96**	**342**	⇑*i* Pn	**Pn**	**03 26 02.9**	**+1.7**
BRY				*e*Sn	**Sn**	**03 26 40.0**	**+2.9**
KKB	**Krupnik**	**3.06**	**54**	P	**Pn**	**03 26 03.0**	**+0.6**
KKB	**Krupnik**	**3.06**	**54**	P	**Pn**	**03 26 03.0**	**+0.6**
UPM	**Unac-Piva**	**3.17**	**348**	⇓*i* Pn	**Pn**	**03 26 05.4**	**+1.2**
UPM				*e*Sn	**Sn**	**03 26 45.3**	**+2.8**
UPM	**Unac-Piva**	**3.17**	**348**	⇓*i* Pn	**Pn**	**03 26 05.4**	**+1.2**
UPM				*e*Sn	**Sn**	**03 26 45.3**	**+2.8**
STON	**Ston**	**3.19**	**331**	*i* Pn	**Pn**	**03 26 02.1**	**-2.0**
STON				*e*Sn	**Sn**	**03 26 39.0**	**-3.5**
STON	**Ston**	**3.19**	**331**	*i* Pn	**Pn**	**03 26 02.1**	**-2.0**
PLE	**Pljevlja**	**3.25**	**355**	⇓*i* Pn	**Pn**	**03 26 06.1**	**+1.0**
PLE				*e*Sn	**Sn**	**03 26 46.9**	**+2.7**
PLE	**Pljevlja**	**3.25**	**355**	⇓*i* Pn	**Pn**	**03 26 06.1**	**+1.0**
PLE				*e*Sn	**Sn**	**03 26 46.9**	**+2.7**
VTS	**Vitosha**	**3.58**	**45**	P	**Pn**	**03 26 12.1**	**+2.3**
VTS	**Vitosha**	**3.58**	**45**	⇑*i* P	**Pn**	**03 26 09.7**	**-0.1**
VTS	**Vitosha**	**3.58**	**45**	⇑*i* P	**Pn**	**03 26 09.7**	**-0.1**
BBLS	**Lazići**	**3.78**	**356**	*e*Pn	Pb	03 26 17.0	-3.6
DIVS	**Divibare**	**4.00**	**2**	*e*Pn	Pb	03 26 20.9	-3.5
RZN	**Rozhen**	**4.06**	**65**	P	**Pn**	**03 26 18.6**	**+2.3**
RZN	**Rozhen**	**4.06**	**65**	P	**Pn**	**03 26 18.6**	**+2.3**
PGB	**Panagyurishte**	**4.11**	**52**	P	Pn	03 26 07.2	-10
MPEP	**Malo Peshtene**	**4.40**	**41**	*e*P	**Pb**	**03 26 34.1**	**+3.0**
UDBI	**Udbina**	**5.34**	**327**	*e*Pn	**Pn**	**03 26 31.3**	**-2.6**
UDBI				Sn	**Sn**	**03 27 33.5**	**-2.2**
UDBI	**Udbina**	**5.34**	**327**	*e*Pn	**Pn**	**03 26 31.2**	**-2.6**
UDBI				Sn	**Sn**	**03 27 33.5**	**-2.2**
NVLJ	**Novalja**	**5.76**	**322**	*e*Pn	**Pn**	**03 26 37.6**	**-2.0**
NVLJ				Sn	**Sn**	**03 27 42.5**	**-3.5**
STHS	**Stebnicka Huta**	**9.38**	**6**	*e*PN	**Pn**	**03 27 27.7**	**-1.5**

*ISCJB **29** 03:25:17.3±0.5,37°.25N±0°.03×36°.89E±0°.03, h4km±4km, Error ellipse: s-maj=4.6km s-min=3.5km az=169.3*
*DDA **29** 03:25:17.5,37°.29N×36°.91E, h8km, MD3.3*
*ISK **29** 03:25:17.0,37°.27N×36°.87E, h9km, MD3.3*
*CSEM **29** 03:25:17.5±0.1,37°.25N×36°.89E, h5km, MD3.3, Error ellipse: s-maj=3.9km s-min=2.6km az=154.0*
ISC 29 03:25:17.8±0.9,**37°.26N**±0°.02×**36°.90E**±0°.02,**h9**km±7km,
n48,σ0**88**/68,**1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AYKD	**Aykdinkavak**	**0.17**	**334**	*i* P	**Pg**	**03 25 21.1**	**-0.4**
AYKD				*i* S	**Sg**	**03 25 23.7**	**-0.4**
KMRS	**Kahramanmaras**	**0.25**	**359**	*e*PG	**Pg**	**03 25 22.1**	**-0.7**
KMRS				*e*SG	**Sg**	**03 25 26.0**	**-0.2**
KMRS	**Kahramanmaras**	**0.25**	**359**	*e*Pg	**Pg**	**03 25 22.1**	**-0.7**
KMRS				*e*Sg	**Sg**	**03 25 26.0**	**-0.2**
GAZ	**Gaziantep**	**0.26**	**109**	*e*PG	**Pg**	**03 25 23.4**	**+0.3**
GAZ				*e*SG	**Sg**	**03 25 27.2**	**+0.6**
GAZ	**Gaziantep**	**0.26**	**109**	*e*Pg	**Pg**	**03 25 23.4**	**+0.3**
GAZ				*e*Sg	**Sg**	**03 25 27.2**	**+0.6**
GZT	**Gaziantep**	**0.54**	**79**	*i* P	**Pg**	**03 25 27.5**	**-0.8**
GZT				*i* S	**Sg**	**03 25 35.7**	**+0.4**
KOZT	**Kozan**	**0.89**	**285**	*e*PG	**Pg**	**03 25 34.8**	**0.0**
KOZT				*e*SG	**Sg**	**03 25 46.4**	**+0.1**
KOZT	**Kozan**	**0.89**	**285**	*e*Pg	**Pg**	**03 25 34.8**	**0.0**
KOZT				*e*Sg	**Sg**	**03 25 46.4**	**+0.1**
CEYT	**Ceyhan**	**0.96**	**255**	*e*PG	**Pg**	**03 25 35.5**	**-0.7**
CEYT	**Ceyhan**	**0.96**	**255**	*e*Pg	**Pg**	**03 25 35.5**	**-0.7**
YURE	**YUREGIR**	**1.10**	**247**	*i* P	**Pb**	**03 25 39.4**	**+0.4**
YURE				*i* S	**Sn**	**03 25 56.6**	**+1.8**
YURE	**YUREGIR**	**1.10**	**247**	*i* P	**Pb**	**03 25 39.4**	**+0.4**
YURE				*i* S	**Sn**	**03 25 56.6**	**+1.8**
ATAB	**Bozova**	**1.13**	**79**	*i* P	**Pg**	**03 25 39.1**	**-0.4**
ATAB				*i* S	**Sg**	**03 25 54.0**	**-0.1**
ATAB	**Bozova**	**1.13**	**79**	*i* P	**Pg**	**03 25 39.1**	**-0.4**
ATAB				*i* S	**Sg**	**03 25 54.0**	**-0.1**
HTY	**Hatay**	**1.29**	**209**	*e*PN	**Pg**	**03 25 41.5**	**-1.1**
HTY	**Hatay**	**1.29**	**209**	*e*Pn	**Pg**	**03 25 41.5**	**-1.1**
AKCD	**Akcadag**	**1.31**	**38**	*i* P	**Pn**	**03 25 42.4**	**0.0**
AKCD				*i* S	**Sg**	**03 26 00.0**	**-0.1**
AKCD	**Akcadag**	**1.31**	**38**	*i* P	**Pn**	**03 25 42.4**	**0.0**
AKCD				*i* S	**Sg**	**03 26 00.0**	**-0.1**
YAYL	**Yayladag**	**1.38**	**208**	*i* P	**Pn**	**03 25 42.8**	**-0.5**
YAYL				*i* S	**Sg**	**03 26 02.2**	**0.0**
YAYL	**Yayladag**	**1.38**	**208**	*i* P	**Pn**	**03 25 42.8**	**-0.5**
YAYL				*i* S	**Sg**	**03 26 02.2**	**0.0**
DARE	**Darende-Malaty**	**1.39**	**19**	*e*PN	**Pn**	**03 25 43.2**	**-0.1**
KRTS	**Karatas**	**1.40**	**241**	*e*PN	**Pn**	**03 25 42.3**	**-1.2**
KRTS	**Karatas**	**1.40**	**241**	*e*Pn	**Pn**	**03 25 42.3**	**-1.2**
PINB	**Pinarbasi**	**1.47**	**345**	*i* P	**Pn**	**03 25 44.7**	**0.0**
PINB				*i* S	**Sg**	**03 26 06.7**	**+1.6**
PINB	**Pinarbasi**	**1.47**	**345**	*i* P	**Pn**	**03 25 44.7**	**0.0**
PINB				*i* S	**Sg**	**03 26 06.7**	**+1.6**
KARA	**Karaisali**	**1.48**	**271**	*e*PN	**Pn**	**03 25 44.0**	**-0.5**
KARA	**Karaisali**	**1.48**	**271**	*e*Pn	**Pn**	**03 25 44.0**	**-0.5**
URFA	**Urfa**	**1.54**	**83**	*e*PN	**Pn**	**03 25 45.9**	**+0.4**
URFA	**Urfa**	**1.54**	**83**	*e*Pn	**Pn**	**03 25 45.9**	**+0.4**
MALT	**Malatya**	**1.60**	**48**	⇓*i* P	**Sn**	**03 26 02.5**	**-4.7**
MYA	**Malataya**	**1.61**	**48**	*e*PN	**Pn**	**03 25 47.0**	**+0.6**
MYA	**Malataya**	**1.61**	**48**	*e*Pn	**Pn**	**03 25 47.0**	**+0.6**
GULE	**Gulek**	**1.70**	**271**	*i* P	**Pb**	**03 25 49.5**	**+0.3**
GULE				*i* S	**Sb**	**03 26 11.2**	**+0.5**
GULE	**Gulek**	**1.70**	**271**	*i* P	**Pb**	**03 25 49.5**	**+0.3**
GULE				*i* S	**Sb**	**03 26 11.2**	**+0.5**
BNN	**Bunyan**	**1.80**	**333**	*e*PN	**Pn**	**03 25 48.6**	**-0.4**
BNN	**Bunyan**	**1.80**	**333**	*e*Pn	**Pn**	**03 25 48.6**	**-0.4**
ILIC	**ilic-Erzincan**	**2.55**	**30**	*e*PN	**Pn**	**03 25 59.5**	**+0.2**
ILIC	**ilic-Erzincan**	**2.55**	**30**	*e*Pn	**Pn**	**03 25 59.6**	**+0.2**
PTK	**Pertek**	**2.55**	**50**	*e*PN	**Pn**	**03 26 00.7**	**+1.1**
PTK	**Pertek**	**2.55**	**50**	*e*Pn	**Pn**	**03 26 00.6**	**+1.1**
SVSK	**Karacayir**	**2.66**	**2**	*e*PN	**Pn**	**03 26 00.9**	**+0.2**
SVSK	**Karacayir**	**2.66**	**2**	*e*Pn	**Pn**	**03 26 00.9**	**+0.2**
IKL	**Isikli**	**2.78**	**249**	*e*PN	**Pn**	**03 26 01.9**	**-0.5**
IKL	**Isikli**	**2.78**	**249**	*e*Pn	**Pn**	**03 26 01.9**	**-0.5**
CORM	**Corum**	**3.41**	**329**	*e*PN	**Pn**	**03 26 11.3**	**0.0**
CORM	**Corum**	**3.41**	**329**	*e*Pn	**Pn**	**03 26 11.3**	**0.0**
HDMB	**Hadim**	**3.54**	**267**	*e*PN	**Pn**	**03 26 13.4**	**+0.3**
HDMB	**Hadim**	**3.54**	**267**	*e*Pn	**Pn**	**03 26 13.4**	**+0.3**

*ATH **29** 03:28:16.5,37°.95N×21°.78E, h30km±1km, MD2.8/6*
*THE **29** 03:28:17.9,37°.93N×21°.78E, h16km±1km, ML1.7/3, Error ellipse: s-maj=1.6km s-min=0.7km az=112.0*
*CSEM **29** 03:28:17.3±0.2,37°.92N×21°.80E, h20km, MD2.8, Error ellipse: s-maj=4.1km s-min=3.2km az=136.0*
ISC 29 03:28:16.6±3.2,**37°.94N**±0°.02×**21°.79E**±0°.02,**h12**km±25km,
n32,σ0**62**/57,**Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RLS	**Riolos of Patr**	**0.28**	**295**	P	**Pb**	**03 28 23.6**	**-0.1**
RLS	**Riolos of Patr**	**0.28**	**295**	*e*PB	**Pb**	**03 28 23.5**	**-0.1**
RLS				*e*SB	**Sb**	**03 28 28.8**	**+0.4**
RLS	**Riolos of Patr**	**0.28**	**295**	*e*Pb	**Pb**	**03 28 23.5**	**-0.1**
RLS				*e*Sb	**Sb**	**03 28 28.8**	**+0.4**
KLV	**Kalavryta, Ach**	**0.30**	**69**	P	**Pb**	**03 28 24.0**	**0.0**
KLV	**Kalavryta, Ach**	**0.30**	**69**	*e*PB	**Pb**	**03 28 24.0**	**0.0**
KLV				*e*SB	**Sb**	**03 28 29.7**	**+0.7**
KLV	**Kalavryta, Ach**	**0.30**	**69**	P	**Pb**	**03 28 24.0**	**0.0**
KLV				*e*Sb	**Sb**	**03 28 29.7**	**+0.7**
LAKA	**Lakka**	**0.34**	**26**	P	**Pb**	**03 28 24.6**	**0.0**
LAKA				S	**Sb**	**03 28 30.7**	**+0.7**
LAKA	**Lakka**	**0.34**	**26**	*e*PB	**Pb**	**03 28 24.7**	**+0.1**
LAKA				*e*SB	**Sb**	**03 28 30.5**	**+0.5**
LAKA	**Lakka**	**0.34**	**26**	*e*Pb	**Pb**	**03 28 24.7**	**+0.1**
LAKA				S	**Sb**	**03 28 30.7**	**+0.7**
AMT	**Artemida-Makis**	**0.41**	**189**	P	**Pb**	**03 28 25.8**	**0.0**
AMT				S	**Sb**	**03 28 33.0**	**+1.0**
AMT	**Artemida-Makis**	**0.41**	**189**	*e*PB	**Pb**	**03 28 25.9**	**+0.1**
AMT				*e*SB	**Sb**	**03 28 33.3**	**+1.3**
AMT	**Artemida-Makis**	**0.41**	**189**	P	**Pb**	**03 28 25.8**	**0.0**
AMT				S	**Sb**	**03 28 33.0**	**+1.0**
GUR	**Goura**	**0.43**	**90**	P	**Pb**	**03 28 25.9**	**-0.4**
GUR				S	**Sb**	**03 28 33.2**	**+0.4**
GUR	**Goura**	**0.43**	**90**	*e*PB	**Pb**	**03 28 25.9**	**-0.4**
GUR				*e*SB	**Sb**	**03 28 33.0**	**+0.2**
GUR	**Goura**	**0.43**	**90**	P	**Pb**	**03 28 25.9**	**-0.4**
GUR				*e*Sb	**Sb**	**03 28 33.0**	**+0.2**
TRIZ	**Trizonia**	**0.48**	**27**	P	**Pb**	**03 28 27.1**	**+0.1**
TRIZ				S	**Sb**	**03 28 35.5**	**+1.4**
TRIZ	**Trizonia**	**0.48**	**27**	*e*PB	**Pb**	**03 28 27.1**	**+0.1**
TRIZ				*e*SB	**Sb**	**03 28 34.2**	**+0.1**
TRIZ	**Trizonia**	**0.48**	**27**	P	**Pb**	**03 28 27.1**	**+0.1**
TRIZ				*e*Sb	**Sb**	**03 28 34.2**	**+0.1**
TRIZ				S	**Sb**	**03 28 35.5**	**+1.4**
EFP	**Efpalio**	**0.50**	**10**	P	**Pb**	**03 28 27.2**	**-0.1**
EFP				S	**Sb**	**03 28 35.9**	**+1.3**
EFP	**Efpalio**	**0.50**	**10**	*e*PB	**Pb**	**03 28 27.2**	**-0.1**
EFP	**Efpalio**	**0.50**	**10**	P	**Pb**	**03 28 27.2**	**-0.1**
EFP				S	**Sb**	**03 28 35.9**	**+1.3**
KALE	**Kalithea**	**0.53**	**31**	P	**Pb**	**03 28 27.9**	**0.0**
KALE				S	**Sb**	**03 28 36.7**	**+1.1**
KALE	**Kalithea**	**0.53**	**31**	*e*PN	**Pb**	**03 28 27.9**	**0.0**
KALE	**Kalithea**	**0.53**	**31**	P	**Pb**	**03 28 27.9**	**0.0**
KALE				S	**Sb**	**03 28 36.7**	**+1.1**
DSF	**Desfina**	**0.75**	**50**	P	**Pn**	**03 28 32.6**	**-0.5**
DSF				S	**Sn**	**03 28 44.0**	**-0.4**
DSF	**Desfina**	**0.75**	**50**	P	**Pn**	**03 28 32.6**	**-0.5**
DSF				S	**Sn**	**03 28 44.0**	**-0.4**
VLS	**Valsamata**	**0.98**	**285**	P	**Pn**	**03 28 36.2**	**0.0**
VLS				S	**Sn**	**03 28 49.8**	**-0.2**
VLS	**Valsamata**	**0.98**	**285**	P	**Pn**	**03 28 36.2**	**0.0**
VLS				S	**Sn**	**03 28 49.8**	**-0.2**
PYL	**PYLOS**	**1.04**	**182**	*e*PN	**Pn**	**03 28 36.5**	**-0.5**
PYL	**PYLOS**	**1.04**	**182**	*e*Pn	**Pn**	**03 28 36.5**	**-0.5**
LKD2	**Lefkada island**	**1.23**	**314**	P	**Pb**	**03 28 39.0**	**-0.9**
LKD2	**Lefkada island**	**1.23**	**314**	P	**Pb**	**03 28 39.0**	**-0.9**

*SKO **29** 03:44:41.1,41°.24N×22°.69E, h15km, M1.1, ML1.6*
*ATH **29** 03:44:42.2,41°.39N×22°.72E, h38km, MD2.9/3*
*ISCJB **29** 03:44:42.3±0.5,41°.27N±0°.02×22°.70E±0°.03, h6km±4km, Error ellipse: s-maj=4.6km s-min=3.7km az=139.9*
*THE **29** 03:44:42.4,41°.30N×22°.69E, h5km±1km, ML1.8/4, Error ellipse: s-maj=1.9km s-min=0.7km az=199.0*
*CSEM **29** 03:44:42.1±0.2,41°.26N×22°.68E, h5km, ML1.7, Error ellipse: s-maj=3.7km s-min=3.3km az=57.0*
*BEO **29** 03:44:43.9±1.2,41°.29N×22°.53E, h0km, ML1.7/4*
ISC 29 03:44:42.3±1.0,**41°.28N**±0°.02×**22°.69E**±0°.02,**h3**km±9km,
n32,σ0**61**/55,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VAY	**Valandovo**	**0.10**	**293**	P	**Pg**	**03 44 43.7**	**-0.5**
VAY				S	**Sg**	**03 44 45.9**	**+0.3**
VAY	**Valandovo**	**0.10**	**293**	*e*Pg	**Pg**	**03 44 44.0**	**-0.2**
VAY				*e*Sg	**Sg**	**03 44 45.8**	**+0.3**
VAY	**Valandovo**	**0.10**	**293**	*i* Pg	**Pg**	**03 44 44.0**	**-0.2**
VAY				*i* Sg	**Sg**	**03 44 45.8**	**+0.3**
VAY				*i* Lg	Lg	03 44 45.9	
	comp=E,502nm,0.3s						
VAY				*i* Lg	Lg	03 44 45.9	
	comp=N,343nm,0.4s						
VAY	**Valandovo**	**0.10**	**293**	P	**Pg**	**03 44 43.7**	**-0.5**
VAY	**Valandovo**	**0.10**	**293**	*e*Pg	**Pg**	**03 44 44.0**	**-0.2**
VAY				*e*Sg	**Sg**	**03 44 45.8**	**+0.3**
KNT	**Kendrikon**	**0.20**	**127**	P	**Pg**	**03 44 46.8**	**+0.7**
KNT				S	**Sg**	**03 44 49.9**	**+1.2**
KNT	**Kendrikon**	**0.20**	**127**	P	**Pg**	**03 44 46.8**	**+0.7**
KNT				S	**Sg**	**03 44 49.9**	**+1.2**
GRG	**Griva**	**0.39**	**214**	P	**Pg**	**03 44 50.3**	**+0.5**
GRG	**Griva**	**0.39**	**214**	P	**Pg**	**03 44 50.3**	**+0.5**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**03 44 55.6**	**-0.1**
SRS				S	**Sb**	**03 45 06.1**	**-1.1**
SRS	**Serrai**	**0.70**	**103**	P	**Pg**	**03 44 55.6**	**-0.1**
SRS				S	**Sb**	**03 45 06.1**	**-1.1**
HORT	**Hortiatis**	**0.75**	**155**	P	**Pg**	**03 44 56.9**	**+0.2**
HORT				S	**Sb**	**03 45 07.7**	**-1.0**
HORT	**Hortiatis**	**0.75**	**155**	P	**Pg**	**03 44 56.9**	**+0.2**
HORT				S	**Sb**	**03 45 07.7**	**-1.0**
NVR	**Nevrokopi**	**0.89**	**85**	P	**Pg**	**03 44 59.3**	**0.0**
NVR				S	**Sb**	**03 45 11.8**	**-0.8**
NVR	**Nevrokopi**	**0.89**	**85**	*e*PN	**Pb**	**03 44 59.9**	**-0.4**
NVR				*e*SN	**Sg**	**03 45 11.0**	**+0.2**
NVR	**Nevrokopi**	**0.89**	**85**	P	**Pg**	**03 44 59.3**	**0.0**
NVR	**Nevrokopi**	**0.89**	**85**	*e*Pn	**Pb**	**03 44 59.9**	**-0.4**
NVR				*e*Sn	**Sg**	**03 45 11.0**	**+0.2**
PLG	**Polygyros**	**1.07**	**147**	*e*PN	**Pg**	**03 45 03.0**	**+0.2**
PLG				*e*SN	**Sb**	**03 45 18.4**	**+0.4**
PLG	**Polygyros**	**1.07**	**147**	*e*Pn	**Pg**	**03 45 03.0**	**+0.2**
PLG				*e*Sn	**Sb**	**03 45 18.4**	**+0.4**
FNA	**Florina**	**1.11**	**244**	P	**Pg**	**03 45

CMCH				*i* S		**Sn**	**04 09 04.7**	**+0.9**
CMCH				AML	AML		04 09 07.6	
	comp=N,23μm,0.7s							
PTCH	**Petorca**	**0.85**	**134**	*i* P		**Pn**	**04 08 53.7**	**-1.2**
PTCH				*i* S		**Sn**	**04 09 04.3**	**-1.9**
PTCH	**Petorca**	**0.85**	**134**	*i* P		**Pn**	**04 08 53.7**	**-1.2**
PTCH				*i* S		**Sn**	**04 09 04.3**	**-1.9**
PTCH				AML	AML		04 09 05.3	
	comp=N,25μm,0.1s							
IHA	**Instituto Hidr**	**1.35**	**180**	*i* P		**Pn**	**04 09 01.1**	**-0.7**
IHA				*i* S		**Sn**	**04 09 17.4**	**-1.0**
IHA	**Instituto Hidr**	**1.35**	**180**	*i* P		**Pn**	**04 09 01.1**	**-0.7**
IHA				*i* S		**Sn**	**04 09 17.4**	**-1.0**
ROCH	**El Roble**	**1.40**	**157**	*i* P		**Pn**	**04 09 01.9**	**-0.8**
ROCH				*i* S		**Sn**	**04 09 19.6**	**-0.5**
ROCH				AML	AML		04 09 23.2	
	comp=N,5μm,0.3s							
PEL	**Peldehue**	**1.68**	**151**	*i* P		**Pn**	**04 09 06.4**	**+0.1**
PEL				*i* S		**Sn**	**04 09 27.6**	**+0.9**
PEL				AML	AML		04 09 29.2	
	comp=E,6μm,0.4s							
CLCH	**Cerro Calan**	**1.96**	**152**	*i* P		**Pn**	**04 09 10.7**	**+0.5**
CLCH				*i* S		**Sn**	**04 09 34.7**	**+1.0**
CLCH				AML	AML		04 09 42.8	
	comp=N,4μm,0.5s							
CLCH				AML	AML		04 09 44.8	
	comp=N,5μm,0.7s							
SAN	**Santiago**	**1.96**	**155**	*e*P		**Pn**	**04 09 10.8**	**+0.6**
SAN				S		**Sn**	**04 09 35.8**	**+2.1**
SAN	**Santiago**	**1.96**	**155**	*e*P		**Pn**	**04 09 10.8**	**+0.6**
SAN				*i* S		**Sn**	**04 09 35.8**	**+2.1**
LACH	**Col Las Americ**	**2.01**	**152**	*i* P		**Pn**	**04 09 11.3**	**+0.4**
LACH	**Col Las Americ**	**2.01**	**152**	*i* P		**Pn**	**04 09 11.3**	**+0.4**
LACH				AML	AML		04 09 44.4	
	comp=E,1μm,0.2s							
FSR	**Penalolen**	**2.03**	**153**	*i* P		**Pn**	**04 09 12.5**	**+1.3**
FSR				*i* S		**Sn**	**04 09 37.9**	**+2.3**
FSR	**Penalolen**	**2.03**	**153**	*i* P		**Pn**	**04 09 12.5**	**+1.3**
FSR				*i* S		**Sn**	**04 09 37.9**	**+2.3**
FSR				AML	AML		04 09 45.3	
	comp=N,715nm,0.6s							
TACH	**Talagante**	**2.06**	**163**	*i* P		**Pn**	**04 09 11.8**	**+0.2**
TACH	**Talagante**	**2.06**	**163**	*i* P		**Pn**	**04 09 11.8**	**+0.2**
ANTU	**Antumapu**	**2.08**	**156**	*i* P		**Pn**	**04 09 12.2**	**+0.5**
ANTU				*e*S		**Sn**	**04 09 36.9**	**+0.4**
ANTU	**Antumapu**	**2.08**	**156**	*i* P		**Pn**	**04 09 12.2**	**+0.5**
ANTU				*e*S		**Sn**	**04 09 36.9**	**+0.4**
ANTU				AML	AML		04 09 46.1	
	comp=E,2μm,0.4s							
PCH	**Pirque**	**2.17**	**154**	*i* P		**Pn**	**04 09 13.6**	**+0.5**
PCH	**Pirque**	**2.17**	**154**	*i* P		**Pn**	**04 09 13.6**	**+0.5**
SJCH	**San Jose de Ma**	**2.25**	**151**	AML	AML		04 09 52.6	
	comp=N,1μm,0.2s							
CHCH	**Chadas Angostu**	**2.40**	**160**	*i* P		**Pn**	**04 09 16.9**	**+0.5**
CHCH	**Chadas Angostu**	**2.40**	**160**	*i* P		**Pn**	**04 09 16.9**	**+0.5**
LMEL	**Las Melosas**	**2.49**	**151**	*i* P		**Pn**	**04 09 18.5**	**+0.9**
LMEL				S		**Sn**	**04 09 50.2**	**+3.3**
LMEL	**Las Melosas**	**2.49**	**151**	*i* P		**Pn**	**04 09 18.5**	**+0.9**
LMEL				*i* S		**Sn**	**04 09 50.2**	**+3.3**
LMEL				AML	AML		04 09 57.9	
	comp=N,2μm,0.3s							
CACH	**El Canelo**	**2.59**	**160**	*i* P		**Pn**	**04 09 20.1**	**+1.1**
CACH	**El Canelo**	**2.59**	**160**	*i* P		**Pn**	**04 09 20.1**	**+1.1**
LCO	**Las Campanas**	**2.78**	**17**	*e*Pn		**Pn**	**04 09 23.2**	**+1.5**
LCO				*e*S		**Sb**	**04 10 00.3**	**-1.8**
CFAA	**Coronel Fontan**	**2.91**	**90**	P		Pn	04 09 26.8	+3.5
	comp=N,6.5nm,0.3s,baz=248,slow=11,SNR=186							
CFAA				S		**Sb**	**04 10 04.2**	**-1.5**
	comp=N,12nm,0.3s,baz=105,slow=14,SNR=6.0							
TALC	**Talca**	**3.71**	**180**	*i* P		**Pn**	**04 09 34.2**	**-0.1**
TALC	**Talca**	**3.71**	**180**	*i* P		**Pn**	**04 09 34.2**	**-0.1**
LVC	**Limon Verde**	**9.35**	**16**	*e*Pn		**Pn**	**04 10 50.3**	**-1.6**
LVC				*e*S		Sn	04 12 50.4	+14
TRQA	**Tornquist**	**10.18**	**131**	*e*Pn		**Pn**	**04 11 03.9**	**+0.9**
TRQA				*e*S		**Sn**	**04 12 59.4**	**+3.4**
CPUP	**Villa Florida**	**13.61**	**71**	P		**Pn**	**04 11 49.2**	**-0.8**
	comp=N,0.2nm,0.3s,baz=243,slow=16,SNR=3.6							
LPAZ	**La Paz**	**15.65**	**13**	*e*Pn		**Pn**	**04 12 19.1**	**+1.1**
	comp=N,3.0nm,0.8s							
LPAZ	**La Paz**	**15.65**	**13**	P		**Pn**	**04 12 19.1**	**+1.1**
	comp=N,0.1nm,0.3s,baz=179,slow=6.6,SNR=13							
BDFB	**Brasilia**	**26.81**	**59**	P		**P**	**04 14 14.9**	**-1.7**
	comp=N,1.4nm,0.3s,baz=215,slow=7.2,SNR=5.0							
BDFB				pP		**pP**	**04 14 29.4**	**+3.3**
	comp=N,7.6nm,0.9s,baz=246,slow=6.5,SNR=8.3							
TXAR	**Lajitas Array**	**67.88**	**330**	P		**P**	**04 19 35.1**	**+0.7**
	comp=N,0.4nm,0.7s,baz=139,slow=8.3,SNR=4.7							
DBIC	**Dimbokro**	**74.13**	**72**	P		**P**	**04 20 11.6**	**-1.1**
	comp=N,2.6nm,0.7s,baz=207,slow=2.3,SNR=4.1							
NVAR	**Mina Array Bea**	**82.17**	**325**	P		**P**	**04 20 57.8**	**+0.9**
	comp=N,0.9nm,0.9s,baz=149,slow=5.8,SNR=4.5							
TORD	**Torodi Ar. Bea**	**83.11**	**70**	P		**P**	**04 21 01.2**	**-0.8**
	comp=N,1.5nm,0.8s,baz=251,slow=5.1,SNR=8.2							
TORD				pP		pP	04 21 16.1	+3.6
	comp=N,1.1nm,0.7s,baz=274,slow=5.8,SNR=14							
ULM	**Lac du Bonnet**	**84.35**	**345**	pP		pP	04 21 22.7	+4.7
	comp=N,4.2nm,0.6s,baz=118,slow=6.0,SNR=3.0							
KIS	**Kishinev**	**119.14**	**50**	LRM		MLR	04 26 50.0	
	comp=N,400nm,20.0s							
WRA	**Warramunga Arr**	**122.94**	**209**	PKP		**PKPdf**	**04 27 31.9**	**-0.8**
	comp=N,0.3nm,0.4s,baz=160,slow=1.6,SNR=8.7							
ZALV	**Zalesovo Beam**	**152.07**	**30**	PKPbc		**PKPbc**	**04 28 30.9**	**+0.3**
	comp=N,4.1nm,0.7s,baz=299,slow=3.3,SNR=20							
ZALV				PKPab		**PKPab**	**04 28 39.9**	**-0.3**
	comp=N,3.3nm,0.6s,baz=296,slow=3.2,SNR=11							

*CRAAG **29** 04:29:08.0, 36°.49N×2°.90E, Ml3.6*
*ISCJB **29** 04:29:09.8±0.7, 36°.55N±0°.04×2°.92E±0°.06, h18km, Error ellipse: s-maj=6.7km s-min=5.6km az=153.1*
*MDD **29** 04:29:10.5±0.5, 36°.47N×2°.91E, h0km, mb3.6/2, Error ellipse: s-maj=7.4km s-min=4.8km az=77.0*
*CSEM **29** 04:29:10.0±0.3, 36°.48N×2°.93E, h10km, mb3.6/2, Error ellipse: s-maj=7.7km s-min=6.4km az=54.0*

ISC 29 04:29:09.0±1.0, 36°.42N±0°.04×2°.99E±0°.04, h18km, n33, σ1s57/43, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMHD	**Djebel Mahouad**	**0.22**	**188**	P	**Pb**	**04 29 15.4**	**+1.0**
EMHD	**Djebel Mahouad**	**0.22**	**188**	P	**Pb**	**04 29 15.4**	**+1.0**
EMHD	**Djebel Mahouad**	**0.22**	**188**	P	**Pb**	**04 29 15.4**	**+1.0**
ABA	**Alger-Bouzarea**	**0.38**	**6**	P	**Pg**	**04 29 16.7**	**-0.2**
ABA	**Alger-Bouzarea**	**0.38**	**6**	P	**Pg**	**04 29 16.7**	**-0.2**
ABA	**Alger-Bouzarea**	**0.38**	**6**	P	**Pg**	**04 29 16.7**	**-0.2**
ADJB	**Djebel Djouab**	**0.45**	**126**	P	**Pn**	**04 29 20.6**	**0.0**
ADJB	**Djebel Djouab**	**0.45**	**126**	P	**Pn**	**04 29 20.6**	**0.0**
ADJB	**Djebel Djouab**	**0.45**	**126**	P	**Pn**	**04 29 20.6**	**0.0**
EBNR	**Beni Rached**	**1.19**	**264**	P	**Pg**	**04 29 31.6**	**-0.3**
EBNR	**Beni Rached**	**1.19**	**264**	P	**Pg**	**04 29 31.6**	**-0.3**
ECHA	**Ech Chlef**	**1.34**	**259**	P	**Pn**	**04 29 30.0**	**-2.7**
ECHF	**Ech Chlef**	**1.36**	**259**	P	**Pn**	**04 29 30.0**	**-3.0**
EANR	**'Ain N'Sour**	**1.60**	**253**	P	**Pb**	**04 29 37.6**	**-0.4**
EANR	**'Ain N'Sour**	**1.60**	**253**	P	**Pb**	**04 29 37.6**	**-0.4**
EANR	**'Ain N'Sour**	**1.60**	**253**	P	**Pb**	**04 29 37.6**	**-0.4**
ETRT	**Tiaret**	**1.72**	**234**	P	**Pb**	**04 29 39.8**	**-0.2**
ETRT	**Tiaret**	**1.72**	**234**	P	**Pb**	**04 29 39.8**	**-0.2**
ETRT	**Tiaret**	**1.72**	**234**	P	**Pb**	**04 29 39.8**	**-0.2**
ETOS	**Mallorca**	**3.34**	**358**	P	**Pn**	**04 30 01.5**	**+1.2**
	1.1nm,0.2s,SNR=7.9						
ETOS				S	**Sn**	**04 30 37.3**	**-2.3**
	1.5nm,0.2s,SNR=7.9						
ETOS	**Mallorca**	**3.34**	**358**	P	**Pn**	**04 30 01.5**	**+1.2**
	1.1nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.42**	**313**	P	**Pn**	**04 30 03.3**	**+1.8**
	0.2nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**04 30 40.0**	**-1.6**
	0.8nm,0.2s,SNR=7.9						
EBEN	**Beniarda**	**3.42**	**313**	P	**Pn**	**04 30 03.3**	**+1.8**
	0.2nm,0.2s,SNR=7.9						
EBEN				S	**Sn**	**04 30 40.0**	**-1.6**
	0.8nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**4.23**	**303**	P	**Pn**	**04 30 14.8**	**+2.2**
	1.4nm,0.2s,SNR=11						
ETOB				S	**Sn**	**04 31 01.0**	**-0.6**
	2.1nm,0.2s,SNR=5.4						
ETOB	**Tobarra**	**4.23**	**303**	P	**Pn**	**04 30 14.8**	**+2.2**
	1.4nm,0.2s,SNR=11						
ETOB				S	**Sn**	**04 31 01.0**	**-0.6**
	2.1nm,0.2s,SNR=5.4						
EHUE	**Huescar**	**4.67**	**289**	S	**Sn**	**04 31 13.8**	**+1.3**
	0.7nm,0.2s,SNR=7.9						
EHUE	**Huescar**	**4.67**	**289**	S	**Sn**	**04 31 13.8**	**+1.3**
	0.7nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.78**	**326**	P	**Pn**	**04 30 21.6**	**+1.3**
	0.5nm,0.1s,SNR=8.3						
EMOS				S	**Sn**	**04 31 13.6**	**-1.7**
	1.5nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**4.78**	**326**	P	**Pn**	**04 30 21.6**	**+1.3**
	0.5nm,0.1s,SNR=8.3						
EMOS				S	**Sn**	**04 31 13.6**	**-1.7**
	1.5nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.04**	**288**	P	**Pn**	**04 30 26.7**	**+3.0**
	0.6nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**04 31 21.7**	**+0.2**
	1.5nm,0.2s,SNR=7.9						
EQES	**Quesada**	**5.04**	**288**	P	**Pn**	**04 30 26.7**	**+3.0**
	0.6nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**04 31 21.7**	**+0.2**
	1.5nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.35**	**356**	P	**Pn**	**04 30 29.2**	**+1.2**
	SNR=7.9						
CFON				S	**Sn**	**04 31 25.4**	**-3.7**
	SNR=7.9						
CFON	**Fontmartina**	**5.35**	**356**	P	**Pn**	**04 30 29.2**	**+1.2**
	SNR=7.9						

*SKO **29** 04:32:19.3, 41°.28N×20°.18E, h20km*

TIR 29 04:32:16.6±0.6, 41°.11N×20°.28E, h20km±17km, ML3.4, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TIR	**Tirane**	**0.40**	**308**	*e*PG	Pb	04 32 25.0	0.0
TIR				*i* SG	Sb	04 32 31.8	+1.1
PHP	**Peshkopia**	**0.59**	**12**	*e*PG	Pg	04 32 29.2	+0.6
PHP				*i* SG	Sg	04 32 37.8	+1.2
BIA	**Bitola**	**0.79**	**96**	*e*Pg	Pn	04 32 36.6	+3.8
BIA				*e*Sg	Sn	04 32 48.2	+4.1
PUK	**Puka**	**0.98**	**343**	*e*PG	Pg	04 32 36.0	+0.1
PUK				*i* SG	Sg	04 32 50.3	+1.4
BCI	**Bajram Curri**	**1.27**	**353**	*e*PG	Sn	04 33 01.4	+5.6

*DDA **29** 04:35:00.8, 40°.28N×25°.83E, h7km, MD2.9*
*ISCJB **29** 04:35:01.2±0.7, 40°.35N±0°.03×25°.77E±0°.04, h7km±6km, Error ellipse: s-maj=5.4km s-min=4.7km az=160.0*
*THE **29** 04:35:01.6, 40°.35N×25°.77E, h12km±1km, ML2.0/4, Error ellipse: s-maj=1.4km s-min=0.8km az=335.0*
*CSEM **29** 04:35:01.1±0.1, 40°.36N×25°.77E, h10km, ML2.0/4, Error ellipse: s-maj=3.3km s-min=3.2km az=135.0*

ISC 29 04:35:01.4±0.9, 40°.36N±0°.03×25°.76E±0°.03, h16km±8km, n18, σ0s41/33, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMTH	**Samothraki Isl**	**0.21**	**303**	P	**Pg**	**04 35 06.3**	**0.0**
SMTH				S	**Sg**	**04 35 09.7**	**+0.2**
SMTH	**Samothraki Isl**	**0.21**	**303**	P	**Pg**	**04 35 06.3**	**0.0**
SMTH				S	**Sg**	**04 35 09.7**	**+0.2**
ALN	**Alexandroupoli**	**0.58**	**22**	P	**Pg**	**04 35 12.7**	**-0.2**
ALN				S	**Sg**	**04 35 20.7**	**0.0**
ALN	**Alexandroupoli**	**0.58**	**22**	P	**Pg**	**04 35 12.7**	**-0.2**
ALN				S	**Sg**	**04 35 20.7**	**0.0**
LIA	**Limnos Island**	**0.64**	**224**	P	**Pg**	**04 35 13.8**	**-0.1**
LIA				S	**Sb**	**04 35 22.7**	**0.0**
LIA	**Limnos Island**	**0.64**	**224**	P	**Pg**	**04 35 13.8**	**-0.1**
LIA				S	**Sb**	**04 35 22.7**	**0.0**
SART	**Tekirdag**	**1.14**	**73**	*i* P	**Pb**	**04 35 21.8**	**-0.9**
SART				*i* S	**Sn**	**04 35 38.2**	**+0.3**
SART	**Tekirdag**	**1.14**	**73**	*i* P	**Pb**	**04 35 21.8**	**-0.9**
KAVA	**Kavala**	**1.14**	**304**	P	**Pb**	**04 35 22.8**	**+0.1**
KAVA				S	**Sg**	**04 35 38.4**	**+0.1**
KAVA	**Kavala**	**1.14**	**304**	P	**Pb**	**04 35 22.8**	**+0.1**
KAVA				S	**Sg**	**04 35 38.4**	**+0.1**
SIGR	**SIGRI**	**1.15**	**176**	P	**Pb**	**04 35 22.8**	**0.0**
SIGR				S	**Sg**	**04 35 37.9**	**-0.6**
SIGR	**SIGRI**	**1.15**	**176**	P	**Pb**	**04 35 22.8**	**0.0**
SIGR				S	**Sg**	**04 35 37.9**	**-0.6**
OUR	**Ouranopolis**	**1.36**	**270**	P	**Pn**	**04 35 25.2**	**-0.4**
OUR				S	**Sg**	**04 35 44.8**	**-0.4**
OUR	**Ouranopolis**	**1.36**	**270**	P	**Pn**	**04 35 25.2**	**-0.4**
OUR				S	**Sg**	**04 35 44.8**	**-0.4**
BALY	**Balya**	**1.56**	**113**	*i* P	**Pn**	**04 35 29.1**	**+0.6**
BALY				*i* S	**Sb**	**04 35 49.8**	**+0.5**
BALY	**Balya**	**1.56**	**113**	*i* P	**Pn**	**04 35 29.0**	**+0.6**
BALY				*i* S	**Sb**	**04 35 49.8**	**+0.5**
CHOS	**Chios island**	**1.98**	**173**	P	**Pn**	**04 35 34.9**	**+0.6**
CHOS	**Chios island**	**1.98**	**173**	P	**Pn**	**04 35 34.9**	**+0.6**

*ISCJB **29** 04:48:11.2±0.3, 7°.58S±0°.04×127°.84E±0°.05, h142km, mb4.3/29, Error ellipse: s-maj=7.2km s-min=4.6km az=148.4*
*NEIC **29** 04:48:12.7±1.0, 7°.49S×127°.80E, h137km±9km, mb4.5/13, Error ellipse: s-maj=11.4km s-min=5.8km az=57.0*
*IDC **29** 04:48:13.2±2.1, 7°.48S×127°.72E, h140km±19km, mb4.2/16, mb1 4.3/20, mb1mx4.3/23, mbtmp4.2/20, MS3.5/1, Ms1 3.7/1, ms1mx2.6/26, Error ellipse: s-maj=16.8km s-min=9.6km az=70.0*
*BJI **29** 04:48:16.8, 7°.60S×127°.70E, h196km, mB4.6/2, mb4.8/7*
*DJA **29** 04:48:17.2±0.3, 8°.S±3°×12°.8E±°, h117km±7km, M4.6/19, mB5.2/11, mb4.7/19, MLv4.7/11, Mw(mB)4.6/11*

ISC 29 04:48:12.5±0.3, 7.75S±0°.04×127°.92E±0°.05, h142km, n121, σ2s04/119, mb4.4/28, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**3.77**	**32**	P	Pn	04 49 14.8	+5.3
AAI	**Ambon**	**4.05**	**4**	P	**Pn**	**04 49 15.3**	**+2.1**
AAI				S	**Sn**	**04 50 02.9**	**+2.5**
MSAI	**Masohi**	**4.49**	**13**	P	Pn	04 49 24.0	+4.9
NLAI	**Namlea**	**4.56**	**350**	P	Pn	04 49 24.3	+4.4
MMRI	**Maumere**	**5.70**	**261**	P	**Pn**	**04 49 38.1**	**+3.0**
	257nm,0.8s,3μm0.8nm						
MMRI				S	**Sn**	**04 50 42.9**	**+3.3**
	257nm,0.8s,3μm0.8nm						
BBSI	**Bau Bau**	**5.78**	**293**	P	**Pn**	**04 49 39.3**	**+3.2**
	181nm,1.1s,2μm0.6nm						
FAKI	**Fak Fak**	**6.45**	**42**	P	**Pn**	**04 49 48.1**	**+2.9**
	43nm,0.4s,5μm1.1nm						
FAKI				S	**Sn**	**04 50 57.9**	**+0.2**
	43nm,0.4s,5μm1.1nm						
LBMI	**Labuha**	**7.08**	**357**	P	Pn	04 49 58.2	+4.5
	56nm,0.9s,0.3nm						
BSSI	**Bau Bau, Buton**	**7.55**	**282**	P	Pn	04 50 04.6	+4.7
	65nm,0.7s,0.2nm						
BKSI	**Bulukumba**	**8.12**	**287**	P	**Pn**	**04 50 09.6**	**+2.1**
	40nm,0.8s,492nm						
SKSI	**Soako, Sulaw**	**8.37**	**308**	P	**Pn**	**04 50 14.0**	**+3.1**
	26nm,0.8s,403nm						
LUWI	**Luwuk**	**8.41**	**322**	P	Pn	04 50 15.7	+4.2
	108nm,1.5s,1μm						
KAPI	**Kappang**	**8.56**	**288**	P	Pn	04 50 10.4	-3.2
KAPI	**Kappang**	**8.56**	**288**	P	Pn	04 50 17.2	+3.7
	29nm,1.0s						
KAPI	**Kappang**	**8.56**	**288**	P	Pn	04 50 10.4	-3.2
	1.0nm,0.3s,baz=122,slow=9.5,SNR=2.0						
WBSI	**Waikabubak, Su**	**8.64**	**257**	P	Pn	04 50 18.7	+4.1
	70nm,0.7s,3μm						
SPSI	**Sidrap Palu**	**8.94**	**294**	P	**Pn**	**04 50 20.8**	**+2.2**
	19nm,1.5s						
BMNI	**Bima**	**9.17**	**264**	P	Pn	04 50 17.9	-3.8
TTSI	**Tana Toraja**	**9.32**	**300**	P	Pn	04 50 28.7	+5.0
	26nm,1.2s,2μm						
GTOI	**Gorontalo**	**9.67**	**329**	P	Pn	04 50 34.4	+6.1
	42nm,0.9s,627nm						
MRSI	**Marisa**	**10.12**	**324**	P	Pn	04 50 48.6	+14
FITZ	**Fitzroy Crossi**	**10.53**	**192**	P	**Pn**	**04 50 41.6**	**+2.0**
FITZ				S	**Sn**	**04 52 30.9**	**-5.1**
FITZ	**Fitzroy Crossi**	**10.53**	**192**	P	**Pn**	**04 50 41.6**	**+2.0**
	3.4nm,0.3s,baz=31,slow=11,SNR=79						
FITZ				S	**Sn**	**04 52 30.9**	**-5.1**
	2.8nm,0.3s,baz=37,slow=14,SNR=3.0						
WRAB	**Tennant Creek**	**13.62**	**153**	*e*Pn	**P**	**04 51 22.5**	**-1.4**
	215nm,0.8s						
WRAB				*e*S	**Sn**	**04 53 46.8**	**-3.8**
WRA	**Warramunga Arr**	**13.62**	**153**	P	**P**	**04 51 23.1**	**-1.0**
WRA				S	**Sn**	**04 53 47.3**	**-3.4**
WRA	**Warramunga Arr**	**13.62**	**153**	P	**P**	**04 51 23.1**	**-1.0**
	18nm,0.3s,baz=324,slow=14,SNR=620						
WRA				S	**Sn**	**04 53 47.3**	**-3.4**
	10nm,0.3s,baz=326,slow=24,SNR=10.0						
MYLDM	**Lahad Datu**	**15.92**	**324**	P	P	04 51 55.4	+5.9
	22nm,1.2s						
COEN	**Coen**	**16.19**	**114**	*e*Pn	**P**	**04 51 56.5**	**+3.9**
	241nm,0.6s						
COEN				*e*S	**Sn**	**04 54 48.1**	**-4.5**
AS31	**Alice Springs**	**16.83**	**161**	*e*Pn	Pn	04 52 04.6	+4.7
AS31				*e*S	**S**	**04 55 03.8**	**-3.9**
ASAR	**Alice Springs**	**16.83**	**161**	P	Pn	04 52 04.5	+4.6
ASAR				S	**S**	**04 55 07.0**	**-0.7**
ASAR	**Alice Springs**	**16.83**	**161**	P	Pn	04 52 04.5	+4.6
	12nm,0.3s,baz=331,slow=11,SNR=133						
ASAR				S	**S**	**04 55 07.0**	**-0.7**
	3.2nm,0.3s,baz=332,slow=16,SNR=6.6						
SDKM	**Sandakan**	**17.08**	**321**	P	**Pn**	**04 52 07.3**	**+4.5**
BTM	**Bintulu**	**18.37**	**306**	P	**Pn**	**04 52 19.3**	**+1.0**
SBUM	**Sibu**	**18.66**	**302**	P	**Pn**	**04 52 22.0**	**+0.3**
	35nm,0.8s						
PMG	**Port Moresby**	**19.09**	**96**	*e*P	**Pn**	**04 52 31.0**	**+4.3**
	106nm,0.8s						
PMG	**Port Moresby**	**19.09**	**96**	P	Pn	04 52 32.9	+6.2
PMG	**Port Moresby**	**19.09**	**96**	P	**Pn**	**04 52 28.5**	**+1.8**
	5.7nm,0.3s,baz=278,slow=6.9,SNR=32						
KSM	**Kuching**	**19.82**	**297**	*e*P	**P**	**04 52 32.5**	**+0.3**
	37nm,0.8s						
TGY	**Tagaytay City**	**22.79**	**342**	P	**P**	**04 53 02.0**	**-1.2**
TGY	**Tagaytay City**	**22.79**	**342**	P	**P**	**04 53 02.0**	**-1.2**
	197nm,0.4s,baz=177,slow=6.1,SNR=8.6						
STKA	**Stephens Creek**	**27.17**	**154**	*e*P	**P**	**04 53 47.2**	**+4.5**
	0.9nm,0.4s						
STKA	**Stephens Creek**	**27.17**	**154**	P	**P**	**04 53 46.5**	**+3.8**
	4.2nm,0.4s,baz=321,slow=11,SNR=14						
FRIM	**Kepong**	**28.42**	**292**	P	P	04 53 51.2	-2.9
KULM	**Kulim**	**30.14**	**295**	*e*P	**P**	**04 54 08.2**	**-1.0**
	4.0nm,0.4s						
PSI	**Prapat**	**30.77**	**289**	P	**P**	**04 54 13.8**	**-1.2**
PSI	**Prapat**	**30.77**	**289**	P	**P**	**04 54 13.8**	**-1.2**
	31nm,0.8s,baz=107,slow=6.5,SNR=34						
CMAR	**Chiang Mai Arr**	**38.68**	**313**	P	**P**	**04 55 21.3**	**-1.4**
CMAR				PcP	**PcP**	**04 57 29.6**	**-2.4**
CMAR	**Chiang Mai Arr**	**38.68**	**313**	P	**P**	**04 55 21.3**	**-1.4**
	4.6nm,0.6s,baz=144,slow=6.9,SNR=7.7						
CMAR				PcP	**PcP**	**04 57 29.6**	**-2.4**
	2.2nm,0.6s,baz=155,slow=4.9,SNR=7.6						
CMAR				LR	LR	05 13 26.6	
	comp=Z,61nm,19.2s,baz=355,slow=40						
WHN	**Wuhan**	**40.24**	**342**	P	**P**	**04 55 34.5**	**-0.9**
ENH	**Enshi**	**41.75**	**336**	*e*P	**P**	**04 55 46.4**	**-1.4**
	7.3nm,0.4s						
KSAR	**Wonju Array Be**	**44.96**	**360**	P	**P**	**04 56 13.2**	**-0.1**
KSRS	**Korea Array**	**44.97**	**360**	P	**P**	**04 56 13.2**	**-0.2**
	2.4nm,0.4s,baz=177,slow=9.7,SNR=11						
MJAR	**Matsushiro Arr**	**45.11**	**12**	P	**P**	**04 56 12.5**	**-2.1**
MJAR	**Matsushiro Arr**	**45.11**	**12**	P	**P**	**04 56 12.5**	**-2.1**
	1.2nm,0.5s,baz=189,slow=10,SNR=4.5						
XAN	**Xi'an**	**45.30**	**338**	P	**P**	**04 56 14.0**	**-2.2**
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LZH	**Lanzhou**	**49.14**	**334**	*e*P	**P**	**04 56 45.0**	**-1.1**
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
USRK	**Ussuriysk Arra**	**51.84**	**4**	P	**P**	**04 57 04.7**	**-1.3**
	comp=Z,2.3nm,0.5s,baz=187,slow=7.0,SNR=16						
ODAN	**Odare**	**52.22**	**313**	*e*P	**P**	**04 57 08.2**	**-1.2**
	comp=Z,15nm,0.4s						
TAPN	**Taplejung**	**52.28**	**313**	*e*P	**P**	**04 57 08.6**	**-1.3**
	comp=Z,15nm,0.4s						
RAMN	**Ramite**	**52.85**	**312**	*e*P	**P**	**04 57 13.2**	**-0.9**
	comp=Z,41nm,0.6s						
JIRN	**Jiri**	**53.55**	**313**	*e*Pn	**P**	**04 57 18.1**	**-1.3**
	comp=Z,14nm,0.5s						
GTA	**Gaotai**	**53.67**	**333**	*e*P	**P**	**04 57 19.3**	**-0.4**
GTA				pmax	pmax		
	comp=Z,15nm,0.6s						
GUN	**Gum

DBIC	**Dimbokro**	**133.16**	**272**	PKP		**PKPdf**	**05 07 13.5**	**+1.1**
	comp=Z,7.1nm,1.1s,baz=125,slow=11,SNR=4.6							
CPUP	**Villa Florida**	**145.74**	**172**	PKPbc		**PKPab**	**05 07 37.4**	**+1.4**
CPUP	**Villa Florida**	**145.74**	**172**	PKPbc		**PKPab**	**05 07 37.4**	**+1.4**
	comp=Z,4.9nm,0.5s,baz=194,slow=1.3,SNR=23							
LPAZ	**La Paz**	**151.31**	**146**	PKPbc		**PKPbc**	**05 07 53.1**	**+2.0**
LPAZ				PKPab		**PKPab**	**05 08 03.0**	**+3.5**
LPAZ	**La Paz**	**151.31**	**146**	PKPbc		**PKPbc**	**05 07 53.1**	**+2.0**
	comp=Z,3.3nm,0.4s,baz=57,slow=2.7,SNR=23							
LPAZ				PKPab		**PKPab**	**05 08 03.0**	**+3.5**
	comp=Z,9.3nm,0.6s,baz=221,slow=2.4,SNR=22							

*IDC **29** 05:06:54.1±0.6, 14°.41N×56°.35E, h0km, mb3.9/23, mb1 4.1/23, mb1mx4.0/34, mbtmp3.9/23, MS3.5/11, Ms1 3.5/11, ms1mx3.2/40, Error ellipse: s-maj=15.4km s-min=14.0km az=139.0*
*ISCJB **29** 05:06:55.2±0.5, 14°.45N±0'.08×56°.31E±0'.07, h19km, mb4.1/32, MS3.5/10, Error ellipse: s-maj=11.2km s-min=9.9km az=163.3*
*NEIC **29** 05:06:55.6±0.4, 14°.43N×56°.34E, h10km, mb4.7/8, Error ellipse: s-maj=9.8km s-min=9.1km az=153.0*
*CSEM **29** 05:06:55.9±0.2, 14°.47N×56°.31E, h10km, mb4.6/7, Error ellipse: s-maj=9.3km s-min=8.7km az=160.0*

ISC 29 05:06:57.1±0.6, 14°.4N±0'.1×56°.37E±0'.10, h19km, n114, σ0s98/120, mb4.2/32, MS3.4/10, Owen Fracture Zone region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**13.48**	**259**	LR	LR	05 13 53.9	
	comp=Z,170nm,21.4s,baz=66,slow=31						
KMBO	**Kilima Mbogo**	**24.43**	**232**	P	**P**	**05 12 15.2**	**+0.1**
KMBO	**Kilima Mbogo**	**24.43**	**232**	P	**P**	**05 12 15.2**	**+0.1**
	21nm,0.4s,baz=30,slow=20,SNR=27						
KMBO				LR	LR	05 21 59.7	
	comp=Z,222nm,18.4s,baz=98,slow=37						
KMBO	**Kilima Mbogo**	**24.43**	**232**	P	**P**	**05 12 15.2**	**+0.1**
EIL	**Elat**	**24.92**	**311**	LR	LR	05 21 36.3	
	comp=Z,84nm,18.2s,baz=274,slow=35						
BRTR	**Keskin Array B**	**32.14**	**326**	P	**P**	**05 13 24.1**	**+0.3**
BRTR				PcP	**PcP**	**05 16 12.6**	**0.0**
BRTR	**Keskin Array B**	**32.14**	**326**	P	**P**	**05 13 24.1**	**+0.3**
	0.3nm,0.4s,baz=130,slow=7.3,SNR=4.4						
BRTR				PcP	**PcP**	**05 16 12.6**	**0.0**
	0.5nm,0.7s,baz=127,slow=3.8,SNR=3.6						
BRTR	**Keskin Array B**	**32.14**	**326**	P	**P**	**05 13 24.0**	**+0.3**
ABKAR	**Akbulak array**	**34.86**	**4**	*eP*	**P**	**05 13 48.3**	**+1.2**
	4.6nm,1.1s						
ABKAR	**Akbulak array**	**34.86**	**4**	*eP*	**P**	**05 13 48.3**	**+1.2**
	4.6nm,1.1s						
IDI	**Anoyia**	**35.09**	**312**	*eP*	**P**	**05 13 51.6**	**+2.3**
	34nm,1.4s						
AKTO	**Aktyubinsk**	**35.95**	**2**	P	**P**	**05 13 57.1**	**+0.7**
AKTO				PcP	**PcP**	**05 16 23.0**	**0.0**
AKTO	**Aktyubinsk**	**35.95**	**2**	P	**P**	**05 13 57.1**	**+0.7**
	1.4nm,0.6s,baz=144,slow=11,SNR=5.9						
AKTO				PcP	**PcP**	**05 16 23.0**	**0.0**
	1.2nm,0.6s,baz=137,slow=6.1,SNR=4.8						
AKTO				LR	LR	05 30 34.8	
	comp=Z,54nm,18.1s,baz=13,slow=40						
AKTO	**Aktyubinsk**	**35.95**	**2**	P	**P**	**05 13 57.1**	**+0.7**
MKAR	**Makanchi Array**	**38.88**	**29**	P	**P**	**05 14 22.5**	**+1.2**
MKAR				PcP	**PcP**	**05 16 31.8**	**-0.3**
MKAR	**Makanchi Array**	**38.88**	**29**	P	**P**	**05 14 22.5**	**+1.2**
	1.2nm,0.9s,baz=218,slow=9.1,SNR=6.2						
MKAR				PcP	**PcP**	**05 16 31.8**	**-0.3**
	0.4nm,0.8s,baz=180,slow=1.4,SNR=3.8						
MKAR				LR	LR	05 32 03.9	
	comp=Z,52nm,20.7s,baz=168,slow=39						
MKAR	**Makanchi Array**	**38.88**	**29**	P	**P**	**05 14 22.5**	**+1.2**
BVAR	**Borovoye Array**	**40.09**	**13**	P	**P**	**05 14 30.9**	**-0.4**
BVAR				PcP	**PcP**	**05 16 36.4**	**+0.6**
BVAR	**Borovoye Array**	**40.09**	**13**	P	**P**	**05 14 30.9**	**-0.4**
	0.6nm,0.6s,baz=140,slow=7.0,SNR=3.0						
BVAR				PcP	**PcP**	**05 16 36.4**	**+0.6**
	1.3nm,0.8s,baz=122,slow=1.9,SNR=6.1						
BVAR	**Borovoye Array**	**40.09**	**13**	P	**P**	**05 14 30.9**	**-0.4**
MLR	**Muntele Rosu**	**40.22**	**327**	P	**P**	**05 14 33.4**	**+0.8**
MLR	**Muntele Rosu**	**40.22**	**327**	P	**P**	**05 14 33.4**	**+0.8**
	0.5nm,0.6s,baz=209,slow=19,SNR=4.1						
MLR	**Muntele Rosu**	**40.22**	**327**	P	**P**	**05 14 33.4**	**+0.8**
KURBB	**Kurchatov Arra**	**40.33**	**22**	P	**P**	**05 14 34.3**	**+1.0**
	0.9nm,0.6s,baz=221,slow=8.0,SNR=14						
KURK	**Kurchatov**	**40.44**	**22**	P	**P**	**05 14 34.3**	**+0.1**
KURK	**Kurchatov**	**40.44**	**22**	P	**P**	**05 14 34.3**	**+0.1**
CMAR	**Chiang Mai Arr**	**40.97**	**78**	P	**P**	**05 14 40.4**	**+1.3**
CMAR	**Chiang Mai Arr**	**40.97**	**78**	P	**P**	**05 14 40.4**	**+1.3**
	1.0nm,0.3s,baz=278,slow=9.3,SNR=9.8						
CMAR				LR	LR	05 33 56.0	
	comp=Z,56nm,18.6s,baz=290,slow=40						
CMAR	**Chiang Mai Arr**	**40.97**	**78**	P	**P**	**05 14 40.4**	**+1.3**
BARS	**Barje**	**41.00**	**320**	*eP*	**P**	**05 14 39.5**	**+0.5**
AKASG	**Malin Array Be**	**42.33**	**334**	P	**P**	**05 14 49.5**	**-0.2**
AKASG	**Malin Array Be**	**42.33**	**334**	P	**P**	**05 14 49.5**	**-0.2**
	0.5nm,0.4s,baz=141,slow=12,SNR=2.8						
AKASG	**Malin Array Be**	**42.33**	**334**	P	**P**	**05 14 49.5**	**-0.2**
DIVS	**Divibare**	**42.81**	**321**	*eP*	**P**	**05 14 53.0**	**-0.9**
BBLS	**Lazići**	**43.05**	**320**	*eP*	**P**	**05 14 54.6**	**-1.2**
ZALV	**Zalesovo Beam**	**45.32**	**23**	P	**P**	**05 15 14.0**	**+0.2**
ZALV	**Zalesovo Beam**	**45.32**	**23**	P	**P**	**05 15 14.0**	**+0.2**
	1.5nm,0.5s,baz=230,slow=8.1,SNR=7.2						
ZALV				LR	LR	05 33 25.1	
	comp=Z,38nm,19.5s,baz=249,slow=35						
ZALV	**Zalesovo Beam**	**45.32**	**23**	P	**P**	**05 15 14.0**	**+0.2**
GERES	**GERESS Array B**	**48.97**	**324**	P	**P**	**05 15 41.0**	**-1.5**
GERES	**GERESS Array B**	**48.97**	**324**	P	**P**	**05 15 41.0**	**-1.5**
	0.2nm,0.3s,baz=167,slow=6.4,SNR=4.2						
GERES	**GERESS Array B**	**48.97**	**324**	P	**P**	**05 15 41.0**	**-1.5**
LBTB	**Lobatse**	**49.36**	**218**	P	**P**	**05 15 46.5**	**+0.8**
LBTB	**Lobatse**	**49.36**	**218**	P	**P**	**05 15 46.5**	**+0.8**
	5.9nm,0.8s,baz=45,slow=10.0,SNR=6.4						
LBTB	**Lobatse**	**49.36**	**218**	P	**P**	**05 15 46.5**	**+0.8**
FINES	**FINESS Array B**	**51.76**	**342**	P	**P**	**05 16 02.5**	**-0.6**
FINES	**FINESS Array B**	**51.76**	**342**	P	**P**	**05 16 02.5**	**-0.6**
	1.0nm,0.7s,baz=139,slow=9.9,SNR=4.9						
FINES				LR	LR	05 40 01.4	
	comp=Z,28nm,20.5s,baz=186,slow=38						
FINES	**FINESS Array B**	**51.76**	**342**	P	**P**	**05 16 02.5**	**-0.6**
LPG	**La Plagne**	**51.87**	**317**	*eP*	**P**	**05 16 03.7**	**-1.0**
	6.8nm,0.8s						
LPG	**La Plagne**	**51.87**	**317**	*eP*	**P**	**05 16 03.7**	**-1.0**
	6.8nm,0.8s						
LPG	**La Plagne**	**51.87**	**317**	*eP*	**P**	**05 16 03.7**	**-1.0**
	6.8nm,0.8s						
LPL	**La Plagne**	**51.89**	**317**	*eP*	**P**	**05 16 03.8**	**-1.0**
	10nm,0.9s						
LPL	**La Plagne**	**51.89**	**317**	*eP*	**P**	**05 16 03.8**	**-1.0**
	10nm,0.9s						
LPL	**La Plagne**	**51.89**	**317**	*eP*	**P**	**05 16 03.8**	**-1.0**
	10nm,0.9s						
BOSA	**Boshof**	**52.30**	**215**	P	**P**	**05 16 07.6**	**-0.2**
BOSA	**Boshof**	**52.30**	**215**	P	**P**	**05 16 07.6**	**-0.2**
	4.3nm,0.8s,baz=25,slow=5.1,SNR=5.2						
BOSA	**Boshof**	**52.30**	**215**	P	**P**	**05 16 07.6**	**-0.2**
CDF	**Champ du Feu**	**52.61**	**321**	*eP*	**P**	**05 16 08.7**	**-1.2**
	4.2nm,0.7s						
CDF	**Champ du Feu**	**52.61**	**321**	*eP*	**P**	**05 16 08.7**	**-1.2**
	4.2nm,0.7s						
CDF	**Champ du Feu**	**52.61**	**321**	*eP*	**P**	**05 16 08.7**	**-1.2**
	4.2nm,0.7s						
CABF	**La Chapelle**	**52.69**	**318**	*eP*	**P**	**05 16 10.0**	**-0.5**
	5.0nm,0.6s						
CABF	**La Chapelle**	**52.69**	**318**	*eP*	**P**	**05 16 10.0**	**-0.5**
	5.0nm,0.6s						
CABF	**La Chapelle**	**52.69**	**318**	*eP*	**P**	**05 16 10.0**	**-0.5**
	5.0nm,0.6s						
SONM	**Songino Array**	**52.97**	**40**	P	**P**	**05 16 11.8**	**-0.8**
SONM	**Songino Array**	**52.97**	**40**	P	**P**	**05 16 11.8**	**-0.8**
	1.2nm,0.6s,baz=240,slow=7.5,SNR=6.9						
SONM				LR	LR	05 40 58.6	
	comp=Z,38nm,18.1s,baz=52,slow=39						
SONM	**Songino Array**	**52.97**	**40**	P	**P**	**05 16 11.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**53.01**	**276**	P	**P**	**05 16 13.3**	**+0.1**
TORD	**Torodi Ar. Bea**	**53.01**	**276**	P	**P**	**05 16 13.3**	**+0.1**
	0.9nm,0.8s,baz=101,slow=7.1,SNR=7.1						
TORD				LR	LR	05 37 14.4	
	comp=Z,62nm,18.5s,baz=130,slow=34						
TORD	**Torodi Ar. Bea**	**53.01**	**276**	P	**P**	**05 16 13.4**	**+0.1**
SFTF	**Sexfontaines**	**53.92**	**320**	*eP*	**P**	**05 16 18.6**	**-0.8**
SFTF	**Sexfontaines**	**53.92**	**320**	*eP*	**P**	**05 16 18.6**	**-0.8**
SFTF	**Sexfontaines**	**53.92**	**320**	*eP*	**P**	**05 16 18.6**	**-0.8**
LOR	**Lormes**	**54.35**	**318**	*eP*	**P**	**05 16 21.8**	**-0.8**
	8.2nm,0.8s						
LOR	**Lormes**	**54.35**	**318**	*eP*	**P**	**05 16 21.8**	**-0.8**
	8.2nm,0.8s						
SSF	**Saint Saulge**	**54.51**	**318**	*eP*	**P**	**05 16 22.9**	**-0.9**
	5.5nm,0.7s						
SSF	**Saint Saulge**	**54.51**	**318**	*eP*	**P**	**05 16 22.9**	**-0.9**
	5.5nm,0.7s						
SSF	**Saint Saulge**	**54.51**	**318**	*eP*	**P**	**05 16 22.9**	**-0.9**
	5.5nm,0.7s						
HFS	**Hagfors**	**55.20**	**336**	P	**P**	**05 16 28.8**	**+0.3**
HFS	**Hagfors**	**55.20**	**336**	P	**P**	**05 16 28.8**	**+0.3**
	1.2nm,0.8s,baz=108,slow=18,SNR=4.1						
HFS	**Hagfors**	**55.20**	**336**	P	**P**	**05 16 28.8**	**+0.3**
ETSF	**Etsaut**	**56.20**	**312**	*eP*	**P**	**05 16 35.5**	**-0.6**
ETSF	**Etsaut**	**56.20**	**312**	*eP*	**P**	**05 16 35.5**	**-0.6**
ETSF	**Etsaut**	**56.20**	**312**	*eP*	**P**	**05 16 35.5**	**-0.6**
MDT	**Midelt**	**58.05**	**300**	P	**P**	**05 16 49.5**	**+0.1**
MDT	**Midelt**	**58.05**	**300**	P	**P**	**05 16 49.5**	**+0.1**
	2.2nm,1.0s,baz=115,slow=6.0,SNR=5.7						
MDT	**Midelt**	**58.05**	**300**	P	**P**	**05 16 49.5**	**+0.1**
ESDC	**Sonseca Array**	**58.16**	**308**	P	**P**	**05 16 49.5**	**-0.5**
ESDC	**Sonseca Array**	**58.16**	**308**	P	**P**	**05 16 49.5**	**-0.5**
	1.5nm,0.6s,baz=76,slow=6.0,SNR=9.6						
ESDC	**Sonseca Array**	**58.16**	**308**	P	**P**	**05 16 49.5**	**-0.5**
ARCES	**ARCESS Array B**	**58.39**	**348**	P	**P**	**05 16 49.6**	**-1.4**
ARCES	**ARCESS Array B**	**58.39**	**348**	P	**P**	**05 16 49.6**	**-1.4**
	1.0nm,0.6s,baz=152,slow=8.1,SNR=8.2						
ARCES	**ARCESS Array B**	**58.39**	**348**	P	**P**	**05 16 49.6**	**-1.4**
EKA	**Eskdalemuir Ar**	**61.06**	**326**	P	**P**	**05 17 08.0**	**-1.6**
EKA	**Eskdalemuir Ar**	**61.06**	**326**	P	**P**	**05 17 08.0**	**-1.6**
	1.0nm,0.9s,baz=154,slow=16,SNR=3.5						
EKA	**Eskdalemuir Ar**	**61.06**	**326**	P	**P**	**05 17 08.0**	**-1.6**
KSAR	**Wonju Array Be**	**66.78**	**55**	P	**P**	**05 17 47.2**	**-0.4**
KSAR	**Wonju Array Be**	**66.78**	**55**	P	**P**	**05 17 47.2**	**-0.4**
KSRS	**Korea Array**	**66.81**	**55**	P	**P**	**05 17 47.2**	**-0.6**
	1.5nm,0.7s,baz=274,slow=6.9,SNR=8.7						
KSRS				LR	LR	05 48 40.1	
	comp=Z,34nm,18.4s,baz=286,slow=38						
WRA	**Warramunga Arr**	**83.91**	**112**	P	**P**	**05 19 25.6**	**-0.9**
WRA	**Warramunga Arr**	**83.91**	**112**	P	**P**	**05 19 25.6**	**-0.9**
	1.8nm,0.8s,baz=298,slow=4.2,SNR=17						
WRA	**Warramunga Arr**	**83.91**	**112**	P	**P**	**05 19 25.5**	**-0.9**
ASAR	**Alice Springs**	**84.67**	**116**	P	**P**	**05 19 29.4**	**-0.8**
ASAR	**Alice Springs**	**84.67**	**116**	P	**P**	**05 19 29.4**	**-0.8**
	1.4nm,0.8s,baz=299,slow=5.0,SNR=12						
ASAR	**Alice Springs**	**84.67**	**116**	P	**P**	**05 19 29.4**	**-0.8**
PNL	**Peninsula**	**105.07**	**8**	*e*Pdif	**Pdif**	**05 20 58.0**	**-5.6**
PDAR	**Pinedale Array**	**121.65**	**348**	PKP	**PKPdf**	**05 25 50.0**	**-0.3**
PDAR	**Pinedale Array**	**121.65**	**348**	PKP	**PKPdf**	**05 25 50.0**	**-0.3**
	0.9nm,0.6s,baz=57,slow=2.5,SNR=8.1						
PDAR	**Pinedale Array**	**121.65**	**348**	PKIKP	**PKPdf**	**05 25 50.0**	**-0.3**
NVAR	**Mina Array Bea**	**127.19**	**355**	PKP	**PKPdf**	**05 26 02.3**	**+1.2**
NVAR	**Mina Array Bea**	**127.19**	**355**	PKP	**PKPdf**	**05 26 02.3**	**+1.2**
	1.4nm,0.7s,baz=18,slow=1.1,SNR=9.4						
NVAR	**Mina Array Bea**	**127.19**	**355**	PKIKP	**PKPdf**	**05 26 02.3**	**+1.2**
TXAR	**Lajitas Array**	**132.42**	**336**	PKP	**PKPdf**	**05 26 11.3**	**+0.3**
TXAR	**Lajitas Array**	**132.42**	**336**	PKP	**PKPdf**	**05 26 11.3**	**+0.3**
	0.3nm,0.7s,baz=114,slow=1.7,SNR=4.3						
TXAR	**Lajitas Array**	**132.42**	**336**	PKIKP	**PKPdf**	**05 26 11.3**	**+0.3**

IDC 29 05:40:09.3±3.5, 33°.45N×137°.99E, h254km±86km, mb2.6/2, mb1 2.8/3, mb1mx2.6/27, mbtmp2.6/3, Error ellipse: s-maj=186.5km s-min=25.5km az=61.0, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAT	**Matsushiro**	**3.09**	**3**	P	Pn	05 41 03.0	0.0
MJAR	**Matsushiro Arr**	**3.09**	**3**	P	Pn	05 41 02.9	-0.1
	1.4nm,0.3s,baz=179,slow=12,SNR=16						
MKAR	**Makanchi Array**	**43.75**	**305**	P	P	05 47 49.6	-0.2
	0.2nm,0.5s,baz=82,slow=10.0,SNR=2.7						
WRA	**Warramunga Arr**	**53.20**	**184**	P	P	05 49 01.7	-0.1
	0.1nm,0.3s,baz=0.9,slow=7.7,SNR=7.6						

*ISCJB **29** 05:54:33.4±0.3, 42°.45N±0'.02×13°.34E±0'.02, h13km±2km, Error ellipse: s-maj=3.4km s-min=2.6km az=138.7*
*ROM **29** 05:54:33.8±0.1, 42°.46N×13°.37E, h13km±1km, MI3.2/30, Error ellipse: s-maj=0.8km s-min=0.6km az=68.0*
*LDG **29** 05:54:33.5±0.1, 42°.45N×13°.32E, h2km, Ml2.9/6, Error ellipse: s-maj=4.3km s-min=2.7km az=45.0*
*CSEM **29** 05:54:33.8±0.1, 42°.45N×13°.33E, h8km, ML3.7/11, Error ellipse: s-maj=3.1km s-min=2.5km az=52.0*

ISC 29 05:54:33.3±0.8, 42°.46N±0'.02×13°.32E±0'.02, h16km±5km, n87, σ1s26/122, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAMP	**Campotosto**	**0.10**	**40**	Pg	**Pg**	**05 54 36.8**	**-0.2**
CAMP				Sg	**Sg**	**05 54 38.9**	**-0.5**
	17µm,0.4s						
CAMP	**Campotosto**	**0.10**	**40**	Pg	**Pg**	**05 54 36.8**	**-0.2**
CAMP				Sg	**Sg**	**05 54 38.9**	**-0.5**
	17µm,0.4s						
AQU	**L'Aquila**	**0.12**	**149**	Pg	**Pb**	**05 54 37.2**	**-0.1**
AQU				Sg	**Sb**	**05 54 39.7**	**-0.1**
	19µm,0.6s						
AQU	**L'Aquila**	**0.12**	**149**	Pg	**Pb**	**05 54 37.2**	**-0.1**
AQU				Sg	**Sb**	**05 54 39.7**	**-0.1**
	19µm,0.6s						
FIAM	**Fiamignano**	**0.24**	**219**	Pg	**Pb**	**05 54 39.7**	**+0.4**
FIAM				Sg	**Sb**	**05 54 44.0**	**+0.6**
	3µm,0.6s						
FIAM	**Fiamignano**	**0.24**	**219**	Pg	**Pb**	**05 54 39.7**	**+0.4**
FIAM				Sg	**Sb**	**05 54 44.0**	**+0.6**
	3µm,0.6s						
LNSS	**Leonessa**	**0.25**	**306**	Pg	**Pb**	**05 54 39.9**	**+0.3**
LNSS				Sg	**Sb**	**05 54 44.5**	**+0.7**
	3µm,0.3s						
LNSS	**Leonessa**	**0.25**	**306**	Pg	**Pb**	**05 54 39.9**	**+0.3**
LNSS				Sg	**Sb**	**05 54 44.5**	**+0.7**
	3µm,0.3s						
TERO	**Teramo**	**0.27**	**51**	Pg	**Pg**	**05 54 39.0**	**-0.3**
TERO				Sg	**Sg**	**05 54 42.9**	**-0.4**
	8µm,0.5s						
TERO	**Teramo**	**0.27**	**51**	Pg	**Pg**	**05 54 39.0**	**-0.3**
TERO				Sg	**Sg**	**05 54 42.9**	**-0.4**
	8µm,0.5s						
VCEL	**Villa Celiera**	**0.39**	**99**	Pg	**Pg**	**05 54 41.5**	**+0.1**
VCEL				Sg	**Sg**	**05 54 47.0**	**+0.1**
	10µm,0.3s						
VCEL	**Villa Celiera**	**0.39**	**99**	Pg	**Pg**	**05 54 41.5**	**+0.1**
VCEL				Sg	**Sg**	**05 54 47.0**	**+0.1**
	10µm,0.3s						
NRCA	**Norcia**	**0.41**	**338**	Pg	**Pg**	**05 54 42.1**	**+0.4**
NRCA				Sg	**Sb**	**05 54 48.4**	**+0.2**
	2µm,0.1s						
NRCA	**Norcia**	**0.41**	**338**	Pg	**Pg**	**05 54 42.1**	**+0.4**
NRCA				Sg	**Sb**	**05 54 48.4**	**+0.2**
	2µm,0.1s						
PTQR	**Pietraquaria**	**0.44**	**172**	Pg	**Pb**	**05 54 42.6**	**-0.1**
PTQR				Sg	**Sb**	**05 54 49.7**	**+0.7**
PTQR	**Pietraquaria**	**0.44**	**172**	Pg	**Pb**	**05 54 42.6**	**-0.1**
PTQR				Sg	**Sb**	**05 54 49.7**	**+0.7**
OFFI	**Offida**	**0.55**	**29**	Pg	**Pb**	**05 54 44.8**	**+0.2**
	5µm,0.7s						
OFFI	**Offida**	**0.55**	**29**	Pg	**Pb**	**05 54 44.8**	**+0.2**
	5µm,0.7s						
TRTR	**Tortoreto Alta**	**0.56**	**51**	Pg	**Pb**	**05 54 45.3**	**+0.5**
	6µm,0.8s						
TRTR	**Tortoreto Alta**	**0.56**	**51**	Pg	**Pb**	**05 54 45.3**	**+0.5**
	6µm,0.8s						
CERT	**Cerreto**	**0.56**	**206**	Pg	**Pb**	**05 54 44.8**	**-0.1**
	3µm,0.4s						
CERT	**Cerreto**	**0.56**	**206**	Pg	**Pb**	**05 54 44.8**	**-0.1**
	3µm,0.4s						
CESX	**Cesi**	**0.57**	**286**	Pg	**Pb**	**05 54 45.1**	**+0.2**
CESX				Sg	**Sb**	**05 54 53.8**	**+1.1**
	713nm,0.4s						
CESX	**Cesi**	**0.57**	**286**	Pg	**Pb**	**05 54 45.1**	**+0.2**
CESX				Sg	**Sb**	**05 54 53.8**	**+1.1**
	713nm,0.4s						
FDMO	**Fiordimonte**	**0.60**	**344**	Pg	**Pg**	**05 54 45.2**	**-0.1**
FDMO				Sg	**Sb**	**05 54 54.7**	**+0.8**
	450nm,0.4s						
FDMO	**Fiordimonte**	**0.60**	**344**	Pg	**Pg**	**05 54 45.2**	**-0.1**
FDMO				Sg	**Sb**	**05 54 54.7**	**+0.8**
	450nm,0.4s						
MTCE	**Montecelio**	**0.61**	**225**	Pg	**Pb**	**05 54 45.8**	**+0.2**
	628nm,0.6s						
MTCE	**Montecelio**	**0.61**	**225**	Pg	**Pb**	**05 54 45.8**	**+0.2**
	628nm,0.6s						
INTR	**Introdacqua**	**0.62**	**135**	Pg	**Pg**	**05 54 45.1**	**-0.5**
	2µm,0.6s						
INTR	**Introdacqua**	**0.62**	**135**	Pg	**Pg**	**05 54 45.1**	**-0.5**
	2µm,0.6s						
VVLD	**Villa Vallelon**	**0.63**	**159**	Pg	**Pg**	**05 54 45.5**	**-0.2**
	805nm,0.6s						
VVLD	**Villa Vallelon**	**0.63**	**159**	Pg	**Pg**	**05 54 45.5**	**-0.2**
	805nm,0.6s						
CESI	**CESI - Serrava**	**0.63**	**331**	Pg	**Pg**	**05 54 46.0**	**+0.2**
CESI				Sg	**Sb**	**05 54 55.4**	**+0.8**
	262nm,0.5s						
CESI	**CESI - Serrava**	**0.63**	**331**	Pg	**Pg**	**05 54 46.0**	**+0.2**
CESI				Sg	**Sb**	**05 54 55.4**	**+0.8**
	262nm,0.5s						
GUMA	**Gualdo di Mace**	**0.76**	**37**	Pg	**Pg**	**05 54 45.5**	**-2.7**
	3µm,0.5s						
LPEL	**Lama dei Pelig**	**0.76**	**122**	Pg	**Pg**	**05 54 47.3**	**-0.9**
LPEL				Sg	**Sb**	**05 54 58.4**	**+0.1**
	1µm,0.2s						
LPEL	**Lama dei Pelig**	**0.76**	**122**	Pg	**Pg**	**05 54 47.3**	**-0.9**
LPEL				Sg	**Sb**	**05 54 58.4**	**+0.1**
	1µm,0.2s						
ASSB	**Assisi San Ben**	**0.76**	**321**	Pg	**Pb**	**05 54 48.5**	**+0.2**
	717nm,0.7s						
ASSB	**Assisi San Ben**	**0.76**	**321**	Pg	**Pb**	**05 54 48.5**	**+0.2**
	717nm,0.7s						
CAFR	**Castel Frentan**	**0.80**	**106**	Pg	**Pg**	**05 54 48.8**	**0.0**
CAFR	**Castel Frentan**	**0.80**	**106**	Pg	**Pg**	**05 54 48.8**	**0.0**
SDI	**San Donato**	**0.83**	**154**	Pg	**Pg**	**05 54 49.2**	**-0.3**
SDI	**San Donato**	**0.83**	**154**	Pg	**Pg**	**05 54 49.2**	**-0.3**
GIUL	**Giuliano Di Ro**	**0.90**	**183**	Pg	**Pg**	**05 54 51.0**	**+0.2**
	701nm,0.5s						
GIUL	**Giuliano Di Ro**	**0.90**	**183**	Pg	**Pg**	**05 54 51.0**	**+0.2**
	701nm,0.5s						
CING	**Cingoli**	**0.92**	**354**	Pg	**Pb**	**05 54 50.8**	**-0.2**
	744nm,0.6s						
CING	**Cingoli**	**0.92**	**354**	Pg	**Pb**	**05 54 50.8**	**-0.2**
	744nm,0.6s						
RNI2	**Rionero Sannit**	**0.97**	**140**	Pg	**Pb**	**05 54 52.0**	**+0.1**
	590nm,0.5s						
RNI2	**Rionero Sannit**	**0.97**	**140**	Pg	**Pb**	**05 54 52.0**	**+0.1**
	590nm,0.5s						
MURB	**Monte Urbino**	**1.00**	**324**	Pg	**Pg**	**05 54 52.9**	**+0.2**
	675nm,0.5s						
MURB	**Monte Urbino**	**1.00**	**324**	Pg	**Pg**	**05 54 52.9**	**+0.2**
	675nm,0.5s						
MGAB	**Montegabbione**	**1.00**	**298**	Pg	**Pn**	**05 54 53.4**	**+0.7**
MGAB	**Montegabbione**	**1.00**	**298**	Pg	**Pn**	**05 54 53.4**	**+0.7**
CERA	**Filignano**	**1.00**	**148**	Pg	**Pb**	**05 54 51.8**	**-0.5**
	556nm,0.5s						
CERA	**Filignano**	**1.00**	**148**	Pg	**Pb**	**05 54 51.8**	**-0.5**
	556nm,0.5s						
TOLF	**Tolfa**	**1.05**	**249**	Pg	**Pn**	**05 54 54.8**	**+1.4**
	362nm,0.8s						
TOLF	**Tolfa**	**1.05**	**249**	Pg	**Pn**	**05 54 54.8**	**+1.4**
	362nm,0.8s						
MIDA	**Miranda**	**1.07**	**139**	Pg	**Pb**	**05 54 52.8**	**-0.7**
	271nm,0.4s						
MIDA	**Miranda**	**1.07**	**139**	Pg	**Pb**	**05 54 52.8**	**-0.7**
	271nm,0.4s						
ARVD	**Arcevia**	**1.08**	**345**	Pg	**Pb**	**05 54 53.6**	**0.0**
	416nm,0.9s						
ARVD	**Arcevia**	**1.08**	**345**	Pg	**Pb**	**05 54 53.6**	**0.0**
	416nm,0.9s						
SACS	**San Casciano d**	**1.11**	**291**	Pg	**Pg**	**05 54 55.3**	**+0.5**

ILAR	**Eielson Array**	**84.73**	**23**	P	P	06 12 40.7	+0.9
	0.5nm,0.7s,baz=251,slow=4.5,SNR=5.4						
NVAR	**Mina Array Bea**	**95.83**	**52**	P	P	06 13 32.2	-0.9
	1.1nm,0.7s,baz=296,slow=7.8,SNR=4.1						
TORD	**Torodi Ar. Bea**	**146.99**	**285**	PKPbc	PKPbc	06 19 49.2	-0.7
	0.3nm,0.3s,baz=84,slow=2.8,SNR=15						
BDFB	**Brasilia**	**152.69**	**142**	PKPbc	PKPbc	06 20 03.9	-0.2
	1.3nm,0.5s,baz=148,slow=1.5,SNR=3.3						

*ISCJB **29** 06:02:44.9±0.3, 42°.45N±0°.02×13°.35E±0°.03, h14km±3km, Error ellipse: s-maj=3.9km s-min=2.9km az=140.9*
*ROM **29** 06:02:45.3±0.1, 42°.46N×13°.37E, h12km±1km, MI3.0/24, Error ellipse: s-maj=0.9km s-min=0.8km az=78.0*
*CSEM **29** 06:02:45.2±0.1, 42°.46N×13°.36E, h10km, ML3.5/8, Error ellipse: s-maj=3.0km s-min=2.2km az=56.0*

ISC 29 06:02:45.6±0.8, 42°.46N±0°.02×13°.37E±0°.02, h15km±4km, n67, σ=0°.91/95, Central Italy

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
CAMP	**Campotosto**	**0.08**	**21**	Pg		**Pg**	**Pg**	**06 02 48.5**	**-0.3**
CAMP					Sg		**Sg**	**06 02 50.5**	**-0.5**
	584nm,0.3s								
CAMP	**Campotosto**	**0.08**	**21**	Pg		**Pg**	**Pg**	**06 02 48.5**	**-0.3**
CAMP					Sg		**Sg**	**06 02 50.5**	**-0.5**
	584nm,0.3s								
AQU	**L'Aquila**	**0.11**	**167**	Pg		**Pg**	**Pg**	**06 02 48.8**	**-0.2**
AQU					Sg		**Sg**	**06 02 51.2**	**0.0**
	9μm,0.3s								
AQU	**L'Aquila**	**0.11**	**167**	Pg		**Pg**	**Pg**	**06 02 48.8**	**-0.2**
AQU					Sg		**Sg**	**06 02 51.2**	**0.0**
	9μm,0.3s								
TERO	**Teramo**	**0.24**	**46**	Pg		**Pg**	**Pg**	**06 02 50.7**	**-0.2**
TERO					Sg		**Sg**	**06 02 54.5**	**0.0**
	2μm,0.2s								
TERO	**Teramo**	**0.24**	**46**	Pg		**Pg**	**Pg**	**06 02 50.7**	**-0.2**
TERO					Sg		**Sg**	**06 02 54.5**	**0.0**
	2μm,0.2s								
FIAM	**Fiamignano**	**0.27**	**225**	Pg		**Pg**	**Pg**	**06 02 51.3**	**-0.1**
FIAM					Sg		**Sg**	**06 02 56.1**	**+0.8**
	842nm,0.5s								
FIAM	**Fiamignano**	**0.27**	**225**	Pg		**Pg**	**Pg**	**06 02 51.3**	**-0.1**
FIAM					Sg		**Sg**	**06 02 56.1**	**+0.8**
	842nm,0.5s								
LNSS	**Leonessa**	**0.28**	**301**	Pg		**Pg**	**Pg**	**06 02 51.6**	**-0.1**
LNSS					Sg		**Sg**	**06 02 56.1**	**+0.3**
LNSS	**Leonessa**	**0.28**	**301**	Pg		**Pg**	**Pg**	**06 02 51.6**	**-0.1**
LNSS					Sg		**Sg**	**06 02 56.1**	**+0.3**
VCEL	**Villa Celiera**	**0.35**	**100**	Pg		**Pg**	**Pg**	**06 02 52.9**	**0.0**
VCEL					Sg		**Sg**	**06 02 58.6**	**+0.7**
	4μm,0.3s								
VCEL	**Villa Celiera**	**0.35**	**100**	Pg		**Pg**	**Pg**	**06 02 52.9**	**0.0**
VCEL					Sg		**Sg**	**06 02 58.6**	**+0.7**
	4μm,0.3s								
NRCA	**Norcia**	**0.42**	**333**	Pg		**Pg**	**Pg**	**06 02 53.8**	**-0.3**
NRCA					Sg		**Sg**	**06 03 00.2**	**+0.4**
NRCA	**Norcia**	**0.42**	**333**	Pg		**Pg**	**Pg**	**06 02 53.8**	**-0.3**
NRCA					Sg		**Sg**	**06 03 00.2**	**+0.4**
PTQR	**Pietraquaria**	**0.44**	**177**	Pg		**Pg**	**Pg**	**06 02 54.0**	**-0.4**
PTQR					Sg		**Sb**	**06 03 01.1**	**-0.4**
	121nm,0.2s								
PTQR	**Pietraquaria**	**0.44**	**177**	Pg		**Pg**	**Pg**	**06 02 54.0**	**-0.4**
PTQR					Sg		**Sb**	**06 03 01.1**	**-0.4**
	121nm,0.2s								
OFFI	**Offida**	**0.53**	**26**	Pg		**Pg**	**Pg**	**06 02 56.5**	**+0.4**
	1μm,0.6s								
OFFI	**Offida**	**0.53**	**26**	Pg		**Pg**	**Pg**	**06 02 56.5**	**+0.4**
	1μm,0.6s								
TRTR	**Tortoreto Alta**	**0.53**	**49**	Pg		**Pg**	**Pb**	**06 02 56.8**	**+0.1**
TRTR	**Tortoreto Alta**	**0.53**	**49**	Pg		**Pg**	**Pb**	**06 02 56.8**	**+0.1**
CERT	**Cerreto**	**0.58**	**210**	Pg		**Pg**	**Pg**	**06 02 56.7**	**-0.4**
	1μm,0.5s								
CERT	**Cerreto**	**0.58**	**210**	Pg		**Pg**	**Pg**	**06 02 56.7**	**-0.4**
	1μm,0.5s								
INTR	**Introdacqua**	**0.60**	**138**	Pg		**Pg**	**Pg**	**06 02 56.7**	**-0.7**
	982nm,0.5s								
INTR	**Introdacqua**	**0.60**	**138**	Pg		**Pg**	**Pg**	**06 02 56.7**	**-0.7**
	982nm,0.5s								
CESX	**Cesi**	**0.60**	**285**	Pg		**Pg**	**Pg**	**06 02 56.6**	**-0.9**
CESX					Sg		**Sg**	**06 03 05.5**	**0.0**
	460nm,0.4s								
CESX	**Cesi**	**0.60**	**285**	Pg		**Pg**	**Pg**	**06 02 56.6**	**-0.9**
CESX					Sg		**Sg**	**06 03 05.5**	**0.0**
	460nm,0.4s								
FDMO	**Fiordimonte**	**0.61**	**340**	Pg		**Pg**	**Pg**	**06 02 57.0**	**-0.7**
FDMO					Sg		**Sb**	**06 03 06.7**	**+0.1**
	596nm,0.2s								
FDMO	**Fiordimonte**	**0.61**	**340**	Pg		**Pg**	**Pg**	**06 02 57.0**	**-0.7**
FDMO					Sg		**Sb**	**06 03 06.7**	**+0.1**
	596nm,0.2s								
VVLD	**Villa Vallelon**	**0.62**	**162**	Pg		**Pg**	**Pg**	**06 02 57.0**	**-0.7**
	329nm,0.4s								
VVLD	**Villa Vallelon**	**0.62**	**162**	Pg		**Pg**	**Pg**	**06 02 57.0**	**-0.7**
	329nm,0.4s								
CESI	**CESI - Serrava**	**0.65**	**328**	Pg		**Pg**	**Pg**	**06 02 57.5**	**-0.8**
	222nm,0.5s								
CESI	**CESI - Serrava**	**0.65**	**328**	Pg		**Pg**	**Pg**	**06 02 57.5**	**-0.8**
	222nm,0.5s								
LPEL	**Lama dei Pelig**	**0.73**	**124**	Pg		**Pg**	**Pg**	**06 02 58.7**	**-1.2**
LPEL					Sg		**Sg**	**06 03 09.4**	**-0.1**
	762nm,0.2s								
LPEL	**Lama dei Pelig**	**0.73**	**124**	Pg		**Pg**	**Pg**	**06 02 58.7**	**-1.2**
LPEL					Sg		**Sg**	**06 03 09.4**	**-0.1**
	762nm,0.2s								
GUMA	**Gualdo di Mace**	**0.73**	**34**	Pg		**Pg**	**Pg**	**06 02 57.3**	**-2.6**
	1μm,0.2s								
GUMA	**Gualdo di Mace**	**0.73**	**34**	Pg		**Pg**	**Pg**	**06 02 57.3**	**-2.6**
	1μm,0.2s								
CAFR	**Castel Frentan**	**0.76**	**107**	Pg		**Pg**	**Pg**	**06 03 00.2**	**-0.2**
	646nm,0.3s								
CAFR	**Castel Frentan**	**0.76**	**107**	Pg		**Pg**	**Pg**	**06 03 00.2**	**-0.2**
	646nm,0.3s								
ASSB	**Assisi San Ben**	**0.78**	**318**	Pg		**Pg**	**Pg**	**06 03 00.0**	**-0.9**
	402nm,0.4s								
ASSB	**Assisi San Ben**	**0.78**	**318**	Pg		**Pg**	**Pg**	**06 03 00.0**	**-0.9**
	402nm,0.4s								
SDI	**San Donato**	**0.82**	**156**	Pg		**Pg**	**Pg**	**06 03 00.9**	**-0.6**
	150nm,0.3s								
SDI	**San Donato**	**0.82**	**156**	Pg		**Pg**	**Pg**	**06 03 00.9**	**-0.6**
	150nm,0.3s								
SNTG	**Esanatoglia**	**0.86**	**339**	Pg		**Pg**	**Pg**	**06 03 01.3**	**-0.9**
	115nm,0.3s								
SNTG	**Esanatoglia**	**0.86**	**339**	Pg		**Pg**	**Pg**	**06 03 01.3**	**-0.9**
	115nm,0.3s								
CING	**Cingoli**	**0.93**	**352**	Pg		**Pg**	**Pb**	**06 03 02.4**	**-1.0**
	253nm,0.2s								
CING	**Cingoli**	**0.93**	**352**	Pg		**Pg**	**Pb**	**06 03 02.4**	**-1.0**
	253nm,0.2s								
CERA	**Filignano**	**0.99**	**150**	Pg		**Pg**	**Pb**	**06 03 03.2**	**-1.3**
	262nm,0.5s								
CERA	**Filignano**	**0.99**	**150**	Pg		**Pg**	**Pb**	**06 03 03.2**	**-1.3**
	262nm,0.5s								
MURB	**Monte Urbino**	**1.02**	**323**	Pg		**Pg**	**Pb**	**06 03 04.4**	**-0.6**
	534nm,0.3s								
MURB	**Monte Urbino**	**1.02**	**323**	Pg		**Pg**	**Pb**	**06 03 04.4**	**-0.6**
	534nm,0.3s								
MGAB	**Montegabbione**	**1.03**	**297**	Pg		**Pg**	**Pb**	**06 03 04.7**	**-0.5**
MGAB	**Montegabbione**	**1.03**	**297**	Pg		**Pg**	**Pb**	**06 03 04.7**	**-0.5**
MIDA	**Miranda**	**1.05**	**141**	Pg		**Pg**	**Pb**	**06 03 04.5**	**-1.0**
	153nm,0.4s								
MIDA	**Miranda**	**1.05**	**141**	Pg		**Pg**	**Pb**	**06 03 04.5**	**-1.0**
	153nm,0.4s								
ARVD	**Arcevia**	**1.09**	**343**	Pg		**Pg**	**Pb**	**06 03 05.4**	**-0.8**
	116nm,0.4s								
ARVD	**Arcevia**	**1.09**	**343**	Pg		**Pg**	**Pb**	**06 03 05.4**	**-0.8**
	116nm,0.4s								
AOI	**Ancona**	**1.10**	**9**	Pg		**Pg**	**Pb**	**06 03 06.1**	**-0.4**
	112nm,0.4s								
AOI	**Ancona**	**1.10**	**9**	Pg		**Pg**	**Pb**	**06 03 06.1**	**-0.4**
	112nm,0.4s								
SACS	**San Casciano d**	**1.15**	**290**	Pg		**Pg**	**Pb**	**06 03 06.8**	**-0.4**
	89nm,0.8s								
LATE	**Laterza**	**1.17**	**278**	Pg		**Pg**	**Pn**	**06 03 07.4**	**-0.1**
	151nm,0.4s								
LATE	**Laterza**	**1.17**	**278**	Pg		**Pg**	**Pn**	**06 03 07.4**	**-0.1**
	151nm,0.4s								
NVLJ	**Novalja**	**2.37**	**27**	*e*Pn		**Pn**	**Pn**	**06 03 24.6**	**+0.6**
NVLJ					Sn		**Sn**	**06 03 54.5**	**+1.6**
NVLJ	**Novalja**	**2.37**	**27**	*e*Pn		**Pn**	**Pn**	**06 03 24.5**	**+0.6**
NVLJ					Sn		**Sn**	**06 03 54.4**	**+1.6**
UDBI	**Udbina**	**2.71**	**39**	*e*Pn		**Pn**	**Pn**	**06 03 30.6**	**+2.0**
UDBI					Sn		**Sb**	**06 04 04.8**	**-2.1**
UDBI	**Udbina**	**2.71**	**39**	*e*Pn		**Pn**	**Pn**	**06 03 30.6**	**+2.0**
UDBI					Sn		**Sb**	**06 04 04.7**	**-2.1**
STON	**Ston**	**3.22**	**81**	*e*Pn		**Pn**	**Pn**	**06 03 35.4**	**-0.2**
STON					Sn		**Sn**	**06 04 16.3**	**+2.5**
STON	**Ston**	**3.22**	**81**	*e*Pn		**Pn**	**Pn**	**06 03 35.4**	**-0.2**
STON					Sn		**Sn**	**06 04 16.2**	**+2.5**

*NIED **29** 06:02:00, 46°.60N×152°.70E, h44km, Mw4.3 Best double couple: M0=3.36000×10^15 NP1:φs=46.00000°, δ=79.00000°, λ=141.00000°. NP2:φs=145.00000°, δ=52.00000°, λ=14.00000°.*
*BJI **29** 06:02:48.6, 47°.21N×153°.39E, h60km, mB4.7/7, mb4.6/11, Ms4.2/2, Ms7 4.0/2*
*MOS **29** 06:02:52.9±1.1, 46°.68N×152°.52E, h59km, mb4.6/29, Error ellipse: s-maj=8.7km s-min=6.2km az=82.8*
*ISCJB **29** 06:02:52.4±0.6, 46°.57N±0°.05×152°.58E±0°.05, h56km±5km, mb4.3/56, MS3.7/17, Error ellipse: s-maj=8.6km s-min=4.5km az=147.0*
*SKHL **29** 06:02:52.1±1.8, 46°.50N×152°.98E, h80km±10km, mb5.0/7, Ms4.1/2, msh6.0/4*
*IDC **29** 06:02:53.7±0.6, 46°.74N×152°.43E, h48km±6km, mb3.9/25, mb1 4.1/30, mb1mx4.1/34, mbtmp4.0/30, MS3.6/18, Ms1 3.7/18, ms1mx3.4/45, Error ellipse: s-maj=15.9km s-min=10.6km az=153.0*
*JMA **29** 06:02:53.2±0.8, 46°.62N×152°.65E, h30km, M5.0*
*NEIC **29** 06:02:55.0±0.6, 46°.70N×152°.41E, h61km±5km, mb4.7/21, Error ellipse: s-maj=8.5km s-min=4.1km az=144.0*

ISC 29 06:02:53.8±0.6, 46°.60N±0°.06×152°.55E±0°.05, h53km±5km, n406, σ=1°.19/422, mb4.4/68, MS3.7/17, 106C-104D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.54**	**249**	*c*	*i*	P	**Pn**	**06 03 48.6**	**+2.4**
KUR					*i*	S	**Sn**	**06 04 30.2**	**+3.4**
KUR						pmax	pmax		
	comp=Z,130nm,0.6s								
KUR						pmax	pmax		
	comp=E,23nm,0.3s								
KUR						pmax	pmax		
	comp=N,51nm,0.3s								
KUR						smax	smax		
	comp=E,193nm,0.3s								
KUR						smax	smax		
	comp=N,850nm,0.6s								
KUR	**Kuril'sk**	**3.54**	**249**	↑	*i*	P	**Pn**	**06 03 48.6**	**+2.4**
KUR						AMB	AMB	06 03 50.4	
	comp=N,50nm,0.6s								
KUR						AMB	AMB	06 03 50.4	
	comp=N,20nm,0.6s								
KUR						AMB	AMB	06 03 50.4	
	comp=N,130nm,0.6s								
KUR					*i*	S	**Sn**	**06 04 30.3**	**+3.4**
KUR						A	A	06 04 43.3	
	comp=N,2μm,0.5s								
KUR						A	A	06 04 43.3	
	comp=N,1μm,0.5s								
SKR	**Severo-Kuril's**	**4.72**	**29**	*e*		PN	**Pn**	**06 04 01.2**	**-1.1**
SKR						*e*S	**Sn**	**06 04 53.5**	**-2.1**
SKR						pmax	pmax		
	comp=Z,90nm,0.5s								
SKR						pmax	pmax		
	comp=N,100nm,0.3s								
SKR						smax	smax		
	comp=N,610nm,1.0s								
SKR						smax	smax		
	comp=E,560nm,1.0s								
SKR						smax	smax		
	comp=Z,220nm,1.0s								
SKR	**Severo-Kuril's**	**4.72**	**29**	*e*		P	**Pn**	**06 04 01.2**	**-1.1**
SKR						AMB	AMB	06 04 03.0	
	comp=Z,100nm,0.2s								
SKR						AMB	AMB	06 04 03.0	
	comp=Z,90nm,0.5s								
SKR					*e*	S	**Sn**	**06 04 53.5**	**-2.1**
SKR						A	A	06 05 10.5	
	comp=Z,610nm,1.0s								
SKR						A	A	06 05 10.5	
	comp=Z,560nm,1.0s								
SKR						A	A	06 05 10.5	
	comp=Z,220nm,1.0s								
YUK	**Yuzh-Kuril'sk**	**5.37**	**244**	*d*	*i*	PN	Pn	06 04 20.6	+9.3
YUK						pmax	pmax		
	comp=Z,107nm,0.2s								
YUK						pmax	pmax		
	comp=N,247nm,0.4s								
YUK						pmax	pmax		
	comp=E,194nm,0.4s								
YUK						MLR	MLR		
	comp=Z,264nm,13.0s								
YUK	**Yuzh-Kuril'sk**	**5.37**	**244**	↓	*i*	P	Pn	06 04 20.7	+9.4
YUK						AMB	AMB	06 04 23.8	
	comp=Z,250nm,0.2s								
YUK						AMB	AMB	06 04 23.8	
	comp=Z,190nm,0.2s								
YUK						AMB	AMB	06 04 23.8	
	comp=Z,110nm,0.2s								
YUK						A	A	06 05 34.3	
	comp=Z,310nm,0.3s								
YUK						A	A	06 05 34.3	
	comp=Z,340nm,0.3s								
NEM2	**Nemuro 2**	**5.81**	**239**			P	**Pn**	**06 04 17.3**	**0.0**
NEM2						*e*S	**Sn**	**06 05 20.1**	**-2.5**
JRA	**Rausu**	**5.88**	**246**			P	**Pn**	**06 04 21.1**	**+2.8**
JNK	**Nakash**	**6.31**	**244**			P	**Pn**	**06 04 26.2**	**+2.0**
JNK						*e*S	**Sn**	**06 05 35.0**	**+0.1**
JTKR	**Abashiri--Toko**	**6.64**	**250**			P	**Pn**	**06 04 31.7**	**+3.0**
JAK	**Akkeshi**	**6.65**	**240**			P	**Pn**	**06 04 28.9**	**+0.1**
JAK						*e*S	**Sn**	**06 05 40.3**	**-2.9**
YSS	**Yuzh-Sakhalins**	**6.74**	**277**	*e*		PN	Pn	06 04 34.0	+4.0
YSS						*e*S	**Sn**	**06 05 49.0**	**+3.7**
YSS						pmax	pmax		
	comp=E,80nm,0.9s								
YSS						pmax	pmax		
	comp=Z,80nm,0.9s								
YSS						smax	smax		
	comp=N,80nm,0.9s								
YSS						MLR	MLR		
	comp=Z,500nm,16.0s								
YSS	**Yuzh-Sakhalins**	**6.74**	**277**	*e*		P	Pn	06 04 34.0	+4.0
YSS						AMB	AMB	06 04 36.7	
	comp=Z,80nm,0.9s								
YSS						AMB	AMB	06 04 36.7	
	comp=Z,80nm,0.9s								
YSS						*e*S	**Sn**	**06 05 49.0**	**+3.7**
YSS						A	A	06 05 51.0	
	comp=Z,80nm,0.9s								
YSS						AMS	AMS	06 07 02.0	
	comp=Z,500nm,16.0s								
JMP	**Maruseppu**	**6.98**	**251**			P	Pn	06 04 36.8	+3.4
JAR	**Ashorobuto**	**7.05**	**245**			P	**Pn**	**06 04 36.4**	**+2.1**
JOB	**Onbets**	**7.22**	**242**			P	**Pn**	**06 04 37.7**	**+1.1**
JOB						*e*S	**Sn**	**06 05 55.6**	**-1.6**
PEA0B	**Petropavlovsk-**	**7.31**	**25**	*e*		Pn	**Pn**	**06 04 40.0**	**+2.2**
PETK	**Petropavlovsk-**	**7.31**	**25**			PN	**Pn**	**06 04 37.9**	**+0.1**
PETK						pmax	pmax		
	comp=Z,1.0nm,0.3s								
PETK						MLR	MLR		
	comp=Z,104nm,20.8s								
PETK	**Petropavlovsk-**	**7.31**	**25**			P	**Pn**	**06 04 37.9**	**+0.1**
PETK	**Petropavlovsk-**	**7.31**	**25**			P	**Pn**	**06 04 37.9**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=272,slow=31,SNR=5.7								
PETK						LR	LR	06 07 38.2	
	comp=Z,104nm,20.8s,baz=221,slow=39								
ASAJ	**Asahikawa**	**7.44**	**254**	*e*		PN	**Pn**	**06 04 40.1**	**+0.5**
	comp=Z,22nm,0.8s								
ASAJ						*e*Sn	**Sn**	**06 06 02.8**	**+0.2**
ASAJ	**Asahikawa**	**7.44**	**254**			P	Pn	06 04 43.8	+4.2
ASAJ	**Asahikawa**	**7.44**	**254**			P	**Pn**	**06 04 41.0**	**+1.4**
	comp=Z,3.2nm,0.3s,baz=86,slow=16,SNR=19								
ASAJ						LR	LR	06 07 28.1	
	comp=Z,195nm,20.1s,baz=348,slow=37								
UGL	**Uglegorsk**	**7.48**	**293**	*e*		P	Pn	06 04 44.0	+3.9
UGL						AMB	AMB	06 04 45.0	
	comp=Z,164nm,0.9s								
JWK2	**Keihoku**	**7.54**	**264**			P	Pn	06 04 46.9	+6.0
JCH	**Churui**	**7.67**	**242**			P	**Pn**	**06 04 43.3**	**+0.5**
JCH						*e*S	**Sn**	**06 06 05.0**	**-3.3**
TYV	**Tymovskoe**	**7.81**	**307**	*e*		P	Pn	06 04 48.0	+3.4
TYV						AMB	AMB	06 04 49.0	
	comp=Z,11nm,0.8s								
TYV						AMB	AMB	06 04 49.0	
	comp=Z,13nm,0.8s								
TYV						AMB	AMB	06 04 49.0	
	comp=Z,31nm,0.8s								
TYV						AMS	AMS	06 07 38.0	
	comp=Z,800nm,18.0s								
TYV						AMS	AMS	06 07 38.0	
	comp=Z,400nm,20.0s								
TYV						AMS	AMS	06 07 38.0	
	comp=Z,500nm,20.0s								
JEM	**Erimo**	**8.15**	**239**			P	**Pn**	**06 04 51.0**	**+1.7**
JEM						*e*S	**Sn**	**06 06 16.8**	**-3.1**
ERM	**Erimo**	**8.15**	**239**	*c*	*i*	PN	**Pn**	**06 04 50.4**	**+1.1**
ERM	**Erimo**	**8.15**	**239**	*e*		Pn	**Pn**	**06 04 50.1**	**+0.8**
	comp=Z,74nm,0.6s								
ERM						*e*Sn	**Sn**	**06 06 18.9**	**-1.0**
JBT2	**Biratori 2**	**8.20**	**246**			P	**Pn**	**06 04 51.4**	**+1.3**
JNBK	**Urakawa-nobuka**	**8.23**	**242**			P	**Pn**	**06 04 50.7**	**+0.2**
JNBK						*e*S	**Sn**	**06 06 18.0**	**-4.1**
JNB	**Noboribetsu**	**9.20**	**247**			P	**Pn**	**06 05 05.1**	**+1.4**
JNB						*e*S	**Sn**	**06 06 44.4**	**-1.3**
JKB	**Kayabe**	**9.51**	**244**			P	**Pn**	**06 05 06.9**	**-1.1**
JKB						*e*S	Sn	06 06 47.1	-6.3
NKL	**Nikolayevsk**	**10.07**	**315**	*e*		P	**Pn**	**06 05 15.0**	**-0.6**
NKL						AMB	AMB	06 05 18.0	
	comp=Z,40nm,1.0s								
NKL						*e*L	L	06 08 07.0	
NKL						AMS	AMS	06 10 09.0	
	comp=Z,500nm,14.0s								
JTM	**Tenmabayashi**	**10.14**	**239**			*e*S	Sn	06 07 00.4	-8.4
JANG	**Nango**	**10.15**	**236**			*e*S	Sn	06 07 00.3	-8.7
JTH	**Tanohata**	**10.25**	**233**			*e*S	Sn	06 07 01.3	-10
OFUJ	**Ofunato**	**10.96**	**231**			*e*S	Sn	06 07 18.0	-11
JRG	**Rokugo**	**11.31**	**235**			P	**Pn**	**06 05 31.1**	**-1.4**
JRG						*e*S	Sn	06 07 30.4	-6.9
HABR	**Khabarovsk**	**11.98**	**285**	*e*		PN	Pn	06 05 58.5	+17
HABR						MLR	MLR		
	comp=Z,199nm,16.0s								
KLR	**Kul'dur**	**14.19**	**288**	*e*		P	**Pn**	**06 06 12.0**	**+0.3**
USRK	**Ussuriysk Arra**	**14.64**	**268**			P	**Pn**	**06 06 18.4**	**+0.8**
	comp=Z,2.1nm,0.3s,baz=70,slow=11,SNR=24								
MAJO	**Matsushiro**	**14.68**	**232**	*e*		P	**Pn**	**06 06 18.8**	**+0.5**
MAJO						*e*		06 09 03.2	
MAJO	**Matsushiro**	**14.68**	**232**	*e*		Pn	**Pn**	**06 06 18.8**	**+0.5**
MAJO						*e*Sn	**Sn**	**06 09 03.2**	**+3.5**
MJAR	**Matsushiro Arr**	**14.68**	**232**			P	**Pn**	**06 06 17.8**	**-0.6**
MJAR	**Matsushiro Arr**	**14.68**	**232**			P	**Pn**	**06 06 17.7**	**-0.6**
	comp=Z,0.3nm,0.3s,baz=24,slow=14,SNR=4.9								
MJAR						LR	LR	06 12 41.7	
	comp=Z,55nm,18.1s,baz=50,slow=40								
FX1	**Attu Island--F**	**14.71**	**57**			P	**Pn**	**06 06 17.4**	**-1.0**
FX1	**Attu Island--F**	**14.71**	**57**			P	**Pn**	**06 06 17.4**	**-1.0**
	comp=Z,4.1nm,0.3s,baz=77,slow=2.5,SNR=14								
CLNS	**Chul'man**	**19.82**	**311**	*e*		P	**Pn**	**06 07 22.6**	**+0.8**
CLNS						*e*S	**S**	**06 10 57.2**	**-2.9**
CLNS						pmax	pmax		
	comp=Z,4.0nm,0.8s								
CLNS						pmax	pmax		
	comp=N,5.0nm,0.8s								
CLNS						pmax	pmax		
	comp=E,2.0nm,0.9s								
CLNS						pmax	pmax		
	comp=E,4.0nm,0.8s								
CLNS						pmax	pmax		
	comp=Z,8.0nm,1.0s								
CLNS						pmax	pmax		
	comp=N,5.0nm,1.0s								
CLNS						smax	smax		
	comp=N,29nm,13.5s								
CLNS						smax	smax		
	comp=E,49nm,13.0s								
CLNS						MLR	MLR		
	comp=N,91nm,17.0s								
CLNS						MLR	MLR		
	comp=E,302nm,21.0s								
CLNS						MLR	MLR		
	comp=Z,219nm,18.0s								
YAK	**Yakutsk**	**20.24**	**328**	*e*		P	**P**	**06 07 25.4**	**+1.2**
YAK					*e*			06 07 42.2	
YAK					*e*	S	**S**	**06 11 07.6**	**-0.5**
YAK					*e*			06 11 35.9	
YAK					*e*			06 18 54.0	
YAK						pmax	pmax		
	comp=Z,25nm,0.9s								
YAK						pmax	pmax		
	comp=E,7.0nm,1.1s								
YAK						pmax	pmax		
	comp=N,9.0nm,1.3s								
YAK						pmax	pmax		
	comp=Z,43nm,1.3s								
YAK						pmax	pmax		
	comp=N,37nm,1.5s								
YAK						pmax	pmax		
	comp=E,50nm,1.5s								
YAK						smax	smax		
	comp=N,32nm,2.2s								
YAK						smax	smax		
	comp=E,29nm,2.6s								
YAK						MLR	MLR		
	comp=Z,117nm,18.0s								
YAK						MLR	MLR		
	comp=E,83nm,18.0s								
YAK						MLR	MLR		
	comp=N,91nm,17.0s								
KSRS	**Korea Array**	**20.38**	**252**			P	Pn	06 07 28.1	-0.4
	comp=N,9.7nm,0.8s,baz=57,slow=9.6,SNR=18								
KSAR	**Wonju Array Be**	**20.41**	**252**			P	Pn	06 07 28

ZALV	**Zalesovo Beam**	**42.38**	**306**	P		**P**		**06 10 40.6**	**-2.0**
	comp=Z,0.5nm,0.3s,baz=75,slow=6.3,SNR=5.4								
ZALV				PcP		**PcP**		**06 12 35.4**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=73,slow=3.6,SNR=8.9								
ZALV				LR		LR		06 29 30.1	
	comp=Z,161nm,19.8s,baz=249,slow=38								
MK31	**Makanchi Array**	**46.66**	**297**	*e*P		**P**		**06 11 15.8**	**-1.1**
MK31				*e*				06 12 50.4	
MK31	**Makanchi Array**	**46.66**	**297**	*e*PcP		**PcP**		**06 12 50.4**	**+0.6**
MKAR	**Makanchi Array**	**46.66**	**297**	P		**P**		**06 11 15.5**	**-1.3**
MKAR								06 12 50.1	
MKAR				pmax		pmax			
	comp=Z,3.0nm,0.7s								
MKAR				pmax		pmax			
	comp=Z,1.0nm,0.7s								
MKAR				MLR		MLR			
	comp=Z,163nm,18.8s								
MKAR	**Makanchi Array**	**46.66**	**297**	P		**P**		**06 11 15.5**	**-1.3**
MKAR				PcP		**PcP**		**06 12 50.1**	**+0.3**
MKAR	**Makanchi Array**	**46.66**	**297**	P		**P**		**06 11 15.5**	**-1.3**
	comp=Z,2.8nm,0.7s,baz=69,slow=8.0,SNR=20								
MKAR				PcP		**PcP**		**06 12 50.1**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=60,slow=7.2,SNR=5.2								
MKAR				LR		LR		06 32 02.4	
	comp=Z,162nm,18.8s,baz=248,slow=38								
KURK	**Kurchatov**	**47.12**	**304**	P		**P**		**06 11 19.1**	**-1.2**
KURK								06 12 52.0	
KURK				pmax		pmax			
	comp=Z,2.0nm,0.6s								
KURK				pmax		pmax			
	comp=Z,1.0nm,0.6s								
KURK	**Kurchatov**	**47.12**	**304**	P		**P**		**06 11 19.1**	**-1.2**
KURK				PcP		**PcP**		**06 12 52.0**	**+0.7**
KURBB	**Kurchatov Arra**	**47.21**	**303**	P		**P**		**06 11 19.1**	**-1.9**
	comp=Z,2.1nm,0.6s,baz=67,slow=8.5,SNR=12								
KURBB				PcP		**PcP**		**06 12 52.0**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=67,slow=3.8,SNR=5.5								
BVAR	**Borovoye Array**	**50.65**	**309**	P		**P**		**06 11 46.1**	**-1.2**
BVAR								06 13 04.1	
BVAR				pmax		pmax			
	comp=Z,1.0nm,0.6s								
BVAR				pmax		pmax			
	comp=Z,2.0nm,0.5s								
BVAR				MLR		MLR			
	comp=Z,93nm,18.6s								
BVAR	**Borovoye Array**	**50.65**	**309**	P		**P**		**06 11 46.1**	**-1.2**
BVAR				PcP		**PcP**		**06 13 04.1**	**+0.1**
BVAR	**Borovoye Array**	**50.65**	**309**	P		**P**		**06 11 46.1**	**-1.2**
	comp=Z,0.9nm,0.6s,baz=67,slow=11,SNR=4.7								
BVAR				PcP		**PcP**		**06 13 04.1**	**+0.1**
	comp=Z,1.6nm,0.5s,baz=79,slow=3.8,SNR=6.2								
BVAR				LR		LR		06 35 06.5	
	comp=Z,93nm,18.6s,baz=172,slow=38								
BRVK	**Borovoye**	**50.69**	**309**	⇓*e*P		**P**		**06 11 47.6**	**0.0**
BRVK				pmax		pmax			
	comp=Z,2.0nm,0.8s								
RES	**Resolute Bay**	**51.10**	**18**	LR		LR		06 37 29.8	
	comp=Z,41nm,19.7s,baz=56,slow=41								
YKA	**Yellowknife Ar**	**51.27**	**36**	P		**P**		**06 11 51.1**	**-0.7**
YKA				PcP		**PcP**		**06 13 05.6**	**-0.6**
YKA	**Yellowknife Ar**	**51.27**	**36**	P		**P**		**06 11 51.1**	**-0.7**
	comp=Z,0.9nm,0.8s,baz=298,slow=7.5,SNR=7.7								
YKA				PcP		**PcP**		**06 13 05.6**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=302,slow=3.5,SNR=5.7								
CHTO	**Chiang Mai**	**51.71**	**256**	*e*P		**P**		**06 11 56.2**	**+0.6**
CHTO				pmax		pmax			
	comp=Z,3.0nm,0.7s								
CHTO	**Chiang Mai**	**51.71**	**256**	*e*P		**P**		**06 11 56.2**	**+0.6**
	comp=Z,3.1nm,0.7s								
CMAR	**Chiang Mai Arr**	**51.96**	**256**	P		**P**		**06 11 56.4**	**-1.1**
CMAR	**Chiang Mai Arr**	**51.96**	**256**	P		**P**		**06 11 56.4**	**-1.1**
	comp=Z,0.9nm,0.4s,baz=41,slow=7.9,SNR=12								
CMAR				LR		LR		06 36 30.1	
	comp=Z,52nm,18.1s,baz=165,slow=39								
AAK	**Ala-Archa**	**53.55**	**296**	⇓*e*P		**P**		**06 12 10.4**	**+1.2**
AAK				pmax		pmax			
	comp=Z,5.0nm,0.8s								
TAPN	**Taplejung**	**53.72**	**273**	*e*P		**P**		**06 12 12.2**	**+1.4**
	comp=Z,20nm,0.8s								
ODAN	**Odare**	**54.25**	**273**	*e*P		**P**		**06 12 14.9**	**+0.3**
	comp=Z,16nm,0.7s								
JIRN	**Jiri**	**54.57**	**274**	*e*P		**P**		**06 12 18.1**	**+1.0**
	comp=Z,26nm,0.7s								
GUN	**Gumba**	**54.63**	**275**	*e*P		**P**		**06 12 18.2**	**+0.7**
	comp=Z,10nm,0.4s								
RAMN	**Ramite**	**54.74**	**273**	*e*P		**P**		**06 12 18.9**	**+0.7**
	comp=Z,47nm,0.6s								
ARU	**Arti**	**54.86**	**317**	*c i*P		**P**		**06 12 17.6**	**-0.7**
ARU								06 13 19.1	
ARU								06 14 16.4	
ARU				S		**S**		**06 19 54.2**	**-1.1**
ARU				SS		SS		06 23 30.9	-7.6
ARU				pmax		pmax			
	comp=Z,3.0nm,1.0s								
KKN	**Kakani**	**55.11**	**275**	*e*P		**P**		**06 12 21.8**	**+1.0**
	comp=Z,22nm,0.7s								
PKI	**Pulchoki**	**55.16**	**275**	*e*P		**P**		**06 12 21.8**	**+0.5**
	comp=Z,14nm,0.7s								
PKIN	**Phulchoki**	**55.17**	**275**	*e*P		**P**		**06 12 22.3**	**+1.0**
	comp=Z,13nm,0.7s								
DMN	**Daman**	**55.35**	**275**	*e*P		**P**		**06 12 23.4**	**+0.8**
	comp=Z,37nm,0.8s								
GKN	**Gorkha**	**55.42**	**276**	*e*P		**P**		**06 12 23.7**	**+0.7**
	comp=Z,0.2nm,0.2s								
DANN	**Dangsing**	**55.80**	**277**	*e*P		**P**		**06 12 27.0**	**+1.1**
	comp=Z,42nm,0.9s								
KOLN	**Koldanda**	**56.28**	**276**	*e*P		**P**		**06 12 30.1**	**+0.9**
	comp=Z,31nm,0.8s								
DAG	**Danmarks Havn**	**56.77**	**358**	*i* P		**P**		**06 12 30.7**	**-1.0**
DAG				pmax		pmax			
	comp=Z,2.0nm,0.8s								
DAG	**Danmarks Havn**	**56.77**	**358**	*i* P		**P**		**06 12 30.7**	**-1.0**
	comp=Z,2.4nm,0.8s								
ARCES	**ARCESS Array B**	**57.86**	**341**	P		**P**		**06 12 37.8**	**-1.8**
ARCES				PcP		**PcP**		**06 13 31.4**	**0.0**
ARCES	**ARCESS Array B**	**57.86**	**341**	P		**P**		**06 12 37.8**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=28,slow=8.2,SNR=6.3								
ARCES				PcP		**PcP**		**06 13 31.4**	**0.0**
	comp=Z,1.0nm,0.6s,baz=79,slow=6.3,SNR=5.4								
ARCES				LR		LR		06 39 50.7	
	comp=Z,53nm,18.9s,baz=265,slow=38								
ABKAR	**Akbulak array**	**58.22**	**310**	*e*P		**P**		**06 12 41.0**	**-1.3**
	comp=Z,1.4nm,0.5s								
AKTO	**Aktyubinsk**	**58.53**	**312**	LR		LR		06 40 26.6	
	comp=Z,160nm,18.2s,baz=234,slow=39								
A13A	**Flathead Natio**	**58.64**	**50**	⇓P		**P**		**06 12 45.8**	**+0.4**
	baz=58								
C12B	**Naegeli Ranch,**	**58.79**	**52**	⇓P		**P**		**06 12 47.3**	**+1.0**
	baz=59								
B13A	**Whitefish**	**58.94**	**51**	⇑P		**P**		**06 12 48.7**	**+1.3**
	baz=59,SNR=5.4								
A14A	**Double T Ranch**	**59.14**	**50**	⇓P		**P**		**06 12 49.6**	**+0.7**
	baz=59								
C13A	**Hot Springs**	**59.30**	**52**	⇑P		**P**		**06 12 50.7**	**+0.8**
	baz=59								
A15A	**Johnson Ranch,**	**59.50**	**50**	⇑P		**P**		**06 12 51.7**	**+0.3**
	baz=59,SNR=5.8								
E12A	**Beaver Dam Sad**	**59.51**	**53**	⇑P		**P**		**06 12 52.3**	**+0.8**
	baz=59								
B14A	**Marquette Ranc**	**59.59**	**50**	⇑P		**P**		**06 12 53.1**	**+1.1**
	baz=59								
C14A	**Swan Lake**	**59.69**	**51**	⇑P		**P**		**06 12 54.2**	**+1.5**
	baz=60								
D13A	**Huson**	**59.72**	**52**	⇑P		**P**		**06 12 53.6**	**+0.8**
	baz=60								
B15A	**Bradely Ranch,**	**59.99**	**50**	⇓P		**P**		**06 12 55.4**	**+0.6**
	baz=60								
A16A	**West Butte Ran**	**60.11**	**49**	⇓P		**P**		**06 12 56.4**	**+0.9**
	baz=60								
MSO	**Missoula**	**60.16**	**52**	⇓P		**P**		**06 12 56.7**	**+0.9**
	baz=60								
D14A	**Greenough**	**60.24**	**52**	⇑P		**P**		**06 12 57.8**	**+1.3**
	baz=60,SNR=8.5								
C15A	**Salmond Ranch,**	**60.30**	**51**	⇓P		**P**		**06 12 58.4**	**+1.6**
	baz=60,SNR=15								
B16A	**M & M Farms, S**	**60.38**	**50**	⇑P		**P**		**06 12 58.4**	**+1.0**
	baz=60								
G12A	**Big Creek, Yel**	**60.43**	**54**	⇓P		**P**		**06 12 59.2**	**+1.4**
	baz=60								
A17A	**Triple J Farms**	**60.58**	**49**	⇓P		**P**		**06 12 59.2**	**+0.5**
	baz=60,SNR=5.8								
C16A	**Fuhringer Ranc**	**60.74**	**50**	⇑P		**P**		**06 13 01.1**	**+1.3**
	baz=60,SNR=8.5								
D15A	**Lincoln**	**60.80**	**51**	⇓P		**P**		**06 13 01.3**	**+1.1**
	baz=61								
SUMG	**Summit**	**60.87**	**4**	⇑*i*P		**P**		**06 13 00.6**	**-0.1**
SUMG				pmax		pmax			
	comp=Z,13nm,0.9s								
SUMG	**Summit**	**60.87**	**4**	*e*P		**P**		**06 13 00.8**	**+0.1**
	comp=Z,15nm,0.8s								
SUMG	**Summit**	**60.87**	**4**	⇑*i*P		**P**		**06 13 00.6**	**-0.1**
	comp=Z,13nm,0.9s								
B17A	**L&G Farms, Che**	**60.94**	**49**	⇓P		**P**		**06 13 02.1**	**+1.0**
	baz=61								
A18A	**Metzger Ranch,**	**61.04**	**48**	⇑P		**P**		**06 13 02.6**	**+0.8**
	baz=61								
FFC	**Flin Flon**	**61.10**	**40**	*i* P		**P**		**06 13 03.4**	**+1.4**
D16A	**Dana Ranch, Ca**	**61.32**	**51**	⇑P		**P**		**06 13 05.1**	**+1.3**
	baz=61,SNR=5.2								
I12A	**Atlanta**	**61.36**	**56**	⇑P		**P**		**06 13 05.2**	**+1.0**
	baz=61								
C17A	**Wharram Farm,**	**61.37**	**50**	⇓P		**P**		**06 13 05.1**	**+1.1**
	baz=61,SNR=6.4								
B18A	**Beardsley Farm**	**61.40**	**49**	⇓P		**P**		**06 13 05.2**	**+1.0**
	baz=61,SNR=6.0								
F15A	**Butte**	**61.56**	**52**	⇑P		**P**		**06 13 07.1**	**+1.6**
	baz=61								
LRM	**Limekiln Ridge**	**61.59**	**52**	*e*P		**P**		**06 13 07.3**	**+1.5**
	comp=Z,30nm,0.9s								
A19A	**Klindworth Far**	**61.60**	**48**	⇑P		**P**		**06 13 06.7**	**+1.2**
	baz=61								
D17A	**Six Diamond Ra**	**61.71**	**50**	⇓P		**P**		**06 13 07.6**	**+1.2**
	baz=62								
B19A	**Brinkman Farms**	**61.80**	**48**	⇓P		**P**		**06 13 08.0**	**+1.1**
	baz=62,SNR=8.1								
A20A	**Cobblestone Ra**	**62.05**	**47**	⇑P		**P**		**06 13 09.9**	**+1.3**
	baz=62								
E17A	**Martinsdale**	**62.05**	**51**	⇓P		**P**		**06 13 10.6**	**+1.8**
	baz=62,SNR=5.2								
F16A	**Kennard Place,**	**62.06**	**52**	⇑P		**P**		**06 13 10.1**	**+1.3**
	baz=62								
D18A	**Linhart Farms,**	**62.15**	**50**	⇑P		**P**		**06 13 10.7**	**+1.4**
	baz=62								
C19A	**Slack Wire Ran**	**62.20**	**49**	⇑P		**P**		**06 13 11.1**	**+1.5**
	baz=62,SNR=5.6								
I14A	**Mackay**	**62.22**	**55**	⇑P		**P**		**06 13 11.7**	**+1.7**
	baz=62								
A21A	**Bergtoll Ranch**	**62.48**	**47**	⇓P		**P**		**06 13 12.7**	**+1.2**
	baz=62,SNR=7.0								
D19A	**Cripps Ranch,**	**62.65**	**49**	⇑P		**P**		**06 13 14.0**	**+1.4**
	baz=62								
C20A	**Veseth Ranch,**	**62.76**	**49**	⇑P		**P**		**06 13 15.0**	**+1.7**
	baz=62,SNR=10								
G17A	**Pierce Place,**	**62.84**	**52**	⇓P		**P**		**06 13 15.7**	**+1.6**
	baz=63								
H16A	**Russell Place,**	**62.96**	**53**	⇑P		**P**		**06 13 16.3**	**+1.4**
	baz=63								
A22A	**Carney Farms,**	**62.99**	**46**	⇓P		**P**		**06 13 15.8**	**+1.0**
	baz=63,SNR=13								
F18A	**Big Timber**	**63.02**	**51**	⇑P		**P**		**06 13 16.6**	**+1.4**
	baz=63								
C21A	**Desert Coulee**	**63.15**	**48**	⇓P		**P**		**06 13 17.2**	**+1.3**
	baz=63								
E19A	**Rath Farm, Rou**	**63.15**	**50**	⇓P		**P**		**06 13 17.9**	**+1.9**
	baz=63								
F19A	**Roth Farm, Mol**	**63.46**	**51**	⇓P		**P**		**06 13 19.7**	**+1.6**
	baz=63								
E20A	**Meyer Farm, Mu**	**63.47**	**50**	⇑P		**P**		**06 13 20.0**	**+1.9**
	baz=63								
H17A	**Grant Village**	**63.52**	**53**	⇑P		**P**		**06 13 19.8**	**+1.1**
	baz=63								
D21A	**La Casta Ranch**	**63.70**	**49**	⇓P		**P**		**06 13 21.0**	**+1.4**
	baz=64								
B23A	**Brockton**	**63.80**	**46**	⇑P		**P**		**06 13 21.6**	**+1.4**
	baz=64								
A24A	**Westby**	**63.98**	**46**	⇓P		**P**		**06 13 22.3**	**+0.9**
	baz=64								
FINES	**FINESS Array B**	**64.01**	**335**	P		**P**		**06 13 20.6**	**-0.7**
FINES	**FINESS Array B**	**64.01**	**335**	P		**P**		**06 13 20.6**	**-0.7**
	comp=Z,4.5nm,0.5s,baz=36,slow=7.5,SNR=28								
FINES				LR		LR		06 43 55.1	
	comp=Z,52nm,20.8s,baz=9.2,slow=39								
D22A	**Cohagen**	**64.06**	**48**	⇓P		**P**		**06 13 23.6**	**+1.6**
	baz=64								
DGMT	**Dagmar**	**64.19**	**46**	⇑P		**P**		**06 13 23.7**	**+0.9**
	baz=64								
I19A	**Meeteetse**	**64.62**	**52**	⇓P		**P**		**06 13 26.8**	**+0.9**
	baz=64								
F22A	**Rosebud**	**64.93**	**49**	⇑P		**P**		**06 13 28.6**	**+1.0**
	baz=65								
DUG	**Dugway**	**64.98**	**57**	⇑P		**P**		**06 13 29.8**	**+1.6**
	baz=65								
D24A	**Glendive**	**65.03**	**47**	⇓P		**P**		**06 13 29.8**	**+1.5**
	baz=65								
PDAR	**Pinedale Array**	**65.14**	**54**	P		**P**		**06 13 28.8**	**-0.5**
PDAR	**Pinedale Array**	**65.14**	**54**	P		**P**		**06 13 28.8**	**-0.5**
	comp=Z,2.0nm,0.8s,baz=308,slow=1.8,SNR=16								
I20A	**Worland**	**65.15**	**52**	⇑P		**P**		**06 13 30.5**	**+1.3**
	baz=65								
H21A	**Big Horn, Sher**	**65.28**	**51**	⇓P		**P**		**06 13 31.3**	**+1.3**
	baz=65								
G22A	**Birney**	**65.28**	**50**	⇑P		**P**		**06 13 31.2**	**+1.2**
	baz=65								
M17A	**Scullys Gap (B**	**65.38**	**55**	⇑P		**P**		**06 13 32.2**	**+1.4**
	baz=65								
E24A	**Baker**	**65.41**	**48**	⇓P		**P**		**06 13 31.9**	**+1.1**
	baz=65								
F23A	**Volborg**	**65.41**	**49**	⇑P		**P**		**06 13 31.9**	**+1.1**
	baz=65								
K19A	**Absolon Red Bu**	**65.50**	**53**	⇓P		**P**		**06 13 32.0**	**+0.4**
	baz=65								
J20A	**Shoshoni**	**65.57**	**52**	⇓P		**P**		**06 13 33.2**	**+1.2**
	baz=65								
I21A	**Big Trails, Te**	**65.69**	**51**	⇓P		**P**		**06 13 34.0**	**+1.2**
	baz=66								
G23A	**Biddle**	**65.77**	**49**	⇓P		**P**		**06 13 34.2**	**+1.1**
	baz=66								
F24A	**Ekalaka**	**65.83**	**48**	⇑P		**P**		**06 13 34.4**	**+0.9**
	baz=66								
K20A	**Yellowstone Ra**	**65.89**	**53**	⇑P		**P**		**06 13 35.0**	**+1.0**
	baz=66								
J21A	**Lysite**	**65.92**	**52**	⇑P		**P**		**06 13 35.1**	**+0.8**
	baz=66								
I22A	**9 Mile Ranch,**	**66.07**	**51**	⇓P		**P**		**06 13 36.3**	**+1.1**
	baz=66								
BBRC	**Big Bear Solar**	**66.38**	**65**	⇑P		**P**		**06 13 38.4**	**+1.0**
	baz=66								
J22A	**Midwest**	**66.40**	**51**	⇓P		**P**		**06 13 38.4**	**+1.1**
	baz=66								
H24A	**Dirks Ranch, A**	**66.52**	**49**	⇓P		**P**		**06 13 38.5**	**+0.6**
	baz=66								
Q16A	**Castle Valley**	**66.78**	**58**	⇑P		**P**		**06 13 40.8**	**+1.0**
	baz=67								
K22A	**Casper**	**66.89**	**52**	⇓P		**P**		**06 13 41.2**	**+0.8**
	baz=67								
SRU	**San Rafael**	**67.02**	**57**	⇓P		**P**		**06 13 42.6**	**+1.3**
	baz=67								
N20A	**Spence Gulch,**	**67.15**	**54**	⇓P		**P**		**06 13 43.5**	**+1.2**
	baz=67								
O20A	**White River Ci**	**67.64**	**55**	⇑P		**P**		**06 13 45.8**	**+0.5**
	baz=67								
O21A	**Pagoda**	**68.02**	**54**	⇑P		**P**		**06 13 48.3**	**+0.6**
	baz=68								
N22A	**Wzenberg Ran**	**68.18**	**53**	⇑P		**P**		**06 13 49.6**	**+0.8**
	baz=68								
Y12C	**Blythe**	**68.21**	**64**	⇓P		**P**		**06 13 49.7**	**+1.0**
	baz=68								
NB2	**NORSAR Subarra**	**68.24**	**341**	P		**P**		**06 13 47.9**	**-0.6**
	comp=Z,6.8nm,0.7s,baz=27,slow=6.5								
NOA	**NORSAR Array B**	**68.24**	**341**	P		**P**		**06 13 48.0**	**-0.4**
NOA	**NORSAR Array B**	**68.24**	**341**	P		**P**		**06 13 48.0**	**-0.4**
	comp=Z,6.4nm,0.7s,baz=26,slow=6.2,SNR=34								
NOA				LR		LR		06 47 58.3	
	comp=Z,41nm,18.6s,baz=35,slow=40								
WRA	**Warramunga Arr**	**68.25**	**198**	P		**P**		**06 13 49.0**	**+0.1**
WRA				pP		**pP**		**06 14 03.7**	**+0.1**
WRA	**Warramunga Arr**	**68.25**	**198**	P		**P**		**06 13 49.0**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=20,slow=6.6,SNR=6.4								
WRA				pP		**pP**		**06 14 03.7**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=18,slow=6.7,SNR=7.2								
N23A	**Red Feather La**	**68.40**	**53**	⇑P		**P**		**06 13 51.2**	**+1.1**
	baz=68								
O22A	**Kremmling**	**68.57**	**54**	⇑P		**P**		**06 13 52.4**	**+1.1**
	baz=68								
M24A	**Cheyenne**	**68.62**	**52**	⇓P		**P**		**06 13 52.1**	**+0.8**
	baz=68								
R20A	**Redvale**	**68.88**	**57**	⇓P		**P**		**06 13 54.2**	**+1.1**
	baz=69								
O23A	**Lake Granby, G**	**68.89**	**54**	⇑P		**P**		**06 13 54.7**	**+1.5**
	baz=69								
N24A	**Carr**	**69.03**	**52**	⇓P		**P**		**06 13 55.1**	**+1.2**
	baz=69								
S20A	**Disappointment**	**69.14**	**57**	⇑P		**P**		**06 13 55.5**	**+0.8**
	baz=69								
J28A	**Allard Ranch,**	**69.15**	**48**	⇓P		**P**		**06 13 55.6**	**+1.1**
	baz=69								
R21A	**Cimarron**	**69.23**	**56**	⇓P		**P**		**06 13 56.6**	**+1.3**
	baz=69								
Q22A	**Crested Butte,**	**69.26**	**55**	⇑P		**P**		**06 13 56.5**	**+1.0**
	baz=69								
P23A	**Jefferson**	**69.51**	**54**	⇓P		**P**		**06 13 58.4**	**+1.3**
	baz=69								
S21A	**Coal Bank Pass**	**69.58**	**57**	⇓P		**P**		**06 13 58.8**	**+1.2**
	baz=69								
X16A	**Lo Mia Camp, P**	**69.64**	**61**	⇑P		**P**		**06 13 59.3**	**+1.5**
	baz=70								
R22A	**Saguache, Gunn**	**69.78**	**56**	⇑P		**P**		**06 14 00.4**	**+1.6**
	baz=70								
S22A	**4UR Ranch, Cre**	**70.07**	**56**	⇓P		**P**		**06 14 01.7**	**+1.1**
	baz=70								
R23A	**Moffat**	**70.33**	**55**	⇓P		**P**		**06 14 03.5**	**+1.4**
	baz=70								
P25A	**Willow Gulch B**	**70.34**	**53**	⇑P		**P**		**06 14 03.3**	**+1.3**
	baz=70								
T22A	**Edith**	**70.54**	**57**	⇑P		**P**		**06 14 04.5**	**+1.2**
	baz=70								
KBZ	**Khabaz**	**70.68**	**314**	P		**P**		**06 14 04.4**	**+0.7**
KBZ				pmax		pmax			
	comp=Z,5.0nm,0.9s								
KBZ				MLR		MLR			
	comp=Z,92nm,18.1s								
KBZ	**Khabaz**	**70.68**	**314**	P		**P**		**06 14 04.4**	**+0.7**
KBZ	**Khabaz**	**70.68**	**314**	P		**P**		**06 14 04.4**	**+0.7**
	comp=Z,4.9nm,0.9s,baz=21,slow=1.7,SNR=8.3								
KBZ				LR		LR		06 50 23.4	
	comp=Z,92nm,18.1s,baz=274,slow=40								
R24A	**Sanders Place,**	**70.71**	**55**	⇑P		**P**		**06 14 05.8**	**+1.5**
	baz=70								
O27A	**Beecher Island**	**70.78**	**52**	⇓P		**P**		**06 14 05.6**	**+1.0**
	baz=70								
T23A	**Casias Ranch,**	**71.02**	**56**	⇑P		**P**		**06 14 07.7**	**+1.4**
	baz=71								
S24A	**Houchin Ranch,**	**71.07**	**55**	⇑P		**P**		**06 14 08.0**	**+1.4**
	baz=71								
R25A	**Fountain Ranch**	**71.23**	**54**	⇑P		**P**		**06 14 08.3**	**+0.9**
	baz=71								
ECSD	**EROS Data Cent**	**71.26**	**46**	*e*P		**P**		**06 14 07.5**	**+0.1**
	comp=Z,3.2nm,0.8s								
V22A	**San Miguel Ran**	**71.30**	**57**	⇓P		**P**		**06 14 09.2**	**+1.2**
	baz=71								
X20A	**Quemado**	**71.32**	**59**	⇑P		**P**		**06 14 09.3**	**+1.2**
	baz=71								
U23A	**El Rito**	**71.43**	**57**	⇑P		**P**		**06 14 10.0**	**+1.3**
	baz=71								
AKASG	**Malin Array Be**	**71.45**	**326**	*ce*P		**P**		**06 14 07.6**	**-0.7**
AKASG				pmax		pmax			
	comp=Z,3.0nm,0.4s								
AKASG	**Malin Array Be**	**71.45**	**326**	P		**P**		**06 14 07.7**	**-0.6**
AKASG	**Malin Array Be**	**71.45**	**326**	P		**P**		**06 14 07.7**	**-0.6**
	comp=Z,3.1nm,0.4s,baz=32,slow=5.8,SNR=10.0								
AK01	**Malin Array Si**	**71.46**	**326**	*e*P		**P**		**06 14 07.6**	**-0.7**
S25A	**Robets Cordova**	**71.49**	**55**	⇓P		**P**		**06 14 09.7**	**+0.6**
	baz=71								
AK02	**Malin Array Si**	**71.49**	**326**	*e*P		**P**		**06 14 08.0**	**-0.5**
R26A	**Arlington**	**71.59**	**54**	⇓P		**P**		**06 14 10.4**	**+0.8**
	baz=71								
X21A	**Alamocita Cree**	**71.81**	**59**	⇑P		**P**		**06 14 12.4**	**+1.3**
	baz=72								
Y20A	**Horse Springs,**	**71.83**	**60**	⇑P		**P**		**06 14 12.1**	**+0.9**
	baz=72								
V23A	**Ortiz Mt. (NFS**	**71.84**	**57**	⇑P		**P**		**06 14 12.4**	**+1.2**
	baz=72								
T25A	**Trinidad**	**71.87**	**55**	⇑P		**P**		**06 14 12.3**	**+1.0**
	baz=72								
ASAR	**Alice Springs**	**71.95**	**198**	P		**P**		**06 14 13.2**	**+1.6**
ASAR				pP		**pP**		**06 14 26.0**	**-0.3**
ASAR	**Alice Springs**	**71.95**	**198**	P		**P**		**06 14 13.2**	**+1.6**
	comp=Z,0.6nm,0.7s,baz=11,slow=5.0,SNR=7.3								
ASAR				pP		**pP**		**06 14 26.0**	**-0.3**
	comp=Z,0.8nm,0.6s,baz=13,slow=5.6,SNR=4.8							

	comp=Z,9.0nm,0.8s								
Z30A	**Sanderson Ranc**	**76.50**	**56**	⇑P		**P**		**06 14 38.7**	**+0.5**
	baz=76								
129A	**Stewart Farms,**	**76.56**	**57**	⇓P		**P**		**06 14 39.7**	**+1.1**
	baz=76								
426A	**McDonald Obser**	**76.72**	**59**	⇓P		**P**		**06 14 40.6**	**+0.9**
	baz=76								
328A	**Wristen Ranch,**	**76.92**	**58**	⇓P		**P**		**06 14 41.4**	**+0.8**
	baz=77								
427A	**Hayter Ranch,**	**76.96**	**59**	⇓P		**P**		**06 14 41.6**	**+0.7**
	baz=77								
MLR	**Muntele Rosu**	**76.96**	**325**	⇑*i*P		**P**		**06 14 42.1**	**+1.5**
MALT	**Malatya**	**76.97**	**313**	⇑*i*P		pP		06 14 57.1	+1.4
Z31A	**Sharp Cattle R**	**77.04**	**55**	⇑P		**P**		**06 14 41.6**	**+0.4**
	baz=77								
229A	**Bryant Ranch,**	**77.08**	**57**	⇓P		**P**		**06 14 42.4**	**+1.0**
	baz=77								
130A	**Snyder**	**77.10**	**56**	⇑P		**P**		**06 14 42.5**	**+0.9**
	baz=77								
526A	**Mary Lane Ranc**	**77.12**	**60**	⇓P		**P**		**06 14 43.0**	**+1.2**
	baz=77								
329A	**Wagon Wheel Ra**	**77.33**	**58**	⇓P		**P**		**06 14 43.9**	**+1.0**
	baz=77								
527A	**Woodward Ranch**	**77.34**	**60**	⇑P		**P**		**06 14 43.9**	**+0.8**
	baz=77								
VOIR		**77.36**	**325**	⇓P		**P**		**06 14 43.8**	**+1.0**
VOIR		**77.36**	**325**	⇓*i*P		**P**		**06 14 43.8**	**+1.0**
131A	**Roby**	**77.38**	**56**	⇑P		**P**		**06 14 43.7**	**+0.6**
	baz=77								
Z32A	**Haskell**	**77.42**	**55**	⇓P		**P**		**06 14 44.1**	**+0.8**
	baz=77								
626A	**Big Bend Ranch**	**77.46**	**60**	⇑P		**P**		**06 14 44.5**	**+0.8**
	baz=77								
428A	**Kincaid Ranch,**	**77.47**	**59**	⇓P		**P**		**06 14 44.8**	**+1.1**
	baz=77								
330A	**Mertzon**	**77.86**	**57**	⇑P		**P**		**06 14 46.5**	**+0.8**
	baz=78								
TXAR	**Lajitas Array**	**77.90**	**60**	P		**P**		**06 14 47.2**	**+1.0**
TXAR				pP		**pP**		**06 15 00.4**	**-0.6**
TXAR	**Lajitas Array**	**77.90**	**60**	P		**P**		**06 14 47.2**	**+1.0**
	comp=Z,2.2nm,0.7s,baz=296,slow=4.0,SNR=34								
TXAR				pP		**pP**		**06 15 00.4**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=305,slow=6.0,SNR=9.2								
231A	**Bronte**	**77.96**	**56**	⇑P		**P**		**06 14 46.9**	**+0.5**
	baz=78								
627A	**Terlingua Ranc**	**77.98**	**60**	⇓P		**P**		**06 14 47.9**	**+1.3**
	baz=78								
429A	**Davenport Ranc**	**78.01**	**58**	⇓P		**P**		**06 14 47.8**	**+1.1**
	baz=78								
BRTR	**Keskin Array B**	**78.23**	**316**	P		**P**		**06 14 48.5**	**+0.6**
BRTR	**Keskin Array B**	**78.23**	**316**	P		**P**		**06 14 48.5**	**+0.6**
	comp=Z,3.3nm,0.8s,baz=70,slow=4.7,SNR=15								
430A	**Baggett Ranch,**	**78.27**	**58**	⇑P		**P**		**06 14 48.8**	**+0.6**
	baz=78								
331A	**San Angelo**	**78.36**	**57**	⇓P		**P**		**06 14 49.2**	**+0.6**
	baz=78								
232A	**Coleman**	**78.38**	**56**	⇓P		**P**		**06 14 49.2**	**+0.5**
	baz=78								
GERES	**GERESS Array B**	**78.42**	**334**	P		**P**		**06 14 48.4**	**-0.2**
GERES	**GERESS Array B**	**78.42**	**334**	P		**P**		**06 14 48.4**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=35,slow=4.9,SNR=11								
GERES				LR		LR		06 53 39.6	
	comp=Z,50nm,18.2s,baz=207,slow=39								
530A	**J-C Ranch, Com**	**78.68**	**58**	⇑P		**P**		**06 14 51.3**	**+0.9**
	baz=78								
332A	**Millersview**	**78.70**	**56**	⇓P		**P**		**06 14 51.2**	**+0.8**
	baz=78								
431A	**Sonora**	**78.72**	**57**	⇓P		**P**		**06 14 51.4**	**+0.9**
	baz=78								
STKA	**Stephens Creek**	**78.74**	**189**	LR		LR		06 46 15.0	
	comp=Z,85nm,20.4s,baz=26,slow=33								
432A	**Menard**	**79.04**	**57**	⇑P		**P**		**06 14 53.2**	**+0.9**
	baz=79								
531A	**Rocksprings**	**79.13**	**58**	⇓P		**P**		**06 14 54.0**	**+1.1**
	baz=79								
JCT	**Junction City**	**79.33**	**57**	⇑P		**P**		**06 14 54.7**	**+0.8**
	baz=79								
532A	**Rocksprings**	**79.53**	**57**	⇓P		**P**		**06 14 55.9**	**+0.9**
	baz=79								
WHTX	**Lake Whitney**	**79.54**	**54**	⇑P		**P**		**06 14 56.0**	**+1.1**
	baz=79								
631A	**Perdido Creek**	**79.67**	**58**	⇓P		**P**		**06 14 56.4**	**+0.7**
	baz=80								
BAIF	**Baives**	**79.89**	**340**	*e*P		**P**		**06 14 55.8**	**-0.7**
	comp=Z,6.5nm,0.7s								
BAIF	**Baives**	**79.89**	**340**	*e*P		**P**		**06 14 55.8**	**-0.7**
BAIF				pmax		pmax			
	comp=Z,7.0nm,0.6s								
BAIF	**Baives**	**79.89**	**340**	*e*P		**P**		**06 14 55.8**	**-0.7**
	comp=Z,6.5nm,0.6s								
632A	**Uvalde**	**80.06**	**57**	⇓P		**P**		**06 14 59.1**	**+1.3**
	baz=80								
VTS	**Vitosha**	**80.47**	**325**	⇓P		**P**		**06 15 00.8**	**+0.8**
VTS	**Vitosha**	**80.47**	**325**	⇓*i*P		**P**		**06 15 00.8**	**+0.8**
732A	**Laxson Ranch,**	**80.53**	**58**	⇑P		**P**		**06 15 00.9**	**+0.6**
	baz=80								
CDF	**Champ du Feu**	**80.64**	**337**	*e*P		**P**		**06 14 59.9**	**-0.8**
	comp=Z,16nm,1.0s								
CDF	**Champ du Feu**	**80.64**	**337**	*e*P		**P**		**06 14 59.9**	**-0.8**
CDF				pmax		pmax			
	comp=Z,16nm,1.0s								
CDF	**Champ du Feu**	**80.64**	**337**	*e*P		**P**		**06 14 59.9**	**-0.8**
	comp=Z,16nm,1.0s								
PAGF	**Fort de Pagny**	**80.91**	**338**	*e*P		**P**		**06 15 01.6**	**-0.5**
	comp=Z,3.0nm,0.6s								
PAGF	**Fort de Pagny**	**80.91**	**338**	*e*P		**P**		**06 15 01.6**	**-0.5**
	comp=Z,3.0nm,0.6s								
HAU	**Haudompre**	**81.26**	**338**	*e*P		**P**		**06 15 03.0**	**-1.0**
HAU				*e*R					
	comp=Z,60nm,19.8s								
HAU	**Haudompre**	**81.26**	**338**	*e*P		**P**		**06 15 03.0**	**-1.0**
HAU	**Haudompre**	**81.26**	**338**	*e*P		**P**		**06 15 03.0**	**-1.0**
HINF	**Hinteralfeld**	**81.30**	**337**	*e*P		**P**		**06 15 03.1**	**-1.1**
HINF	**Hinteralfeld**	**81.30**	**337**	*e*P		**P**		**06 15 03.1**	**-1.1**
HINF	**Hinteralfeld**	**81.30**	**337**	*e*P		**P**		**06 15 03.1**	**-1.1**
SFTF	**Sexfontaines**	**81.41**	**339**	*e*P		**P**		**06 15 04.0**	**-0.7**
SFTF	**Sexfontaines**	**81.41**	**339**	*e*P		**P**		**06 15 04.0**	**-0.7**
PPT	**Papeete**	**82.39**	**125**	LR		LR		06 49 50.4	
	comp=Z,58nm,18.1s,baz=4.9,slow=34								
LOR	**Lormes**	**82.58**	**339**	*e*P		**P**		**06 15 10.1**	**-0.8**
	comp=Z,11nm,0.8s								
LOR				*e*R					
	comp=Z,90nm,21.5s								
LOR	**Lormes**	**82.58**	**339**	*e*P		**P**		**06 15 10.1**	**-0.8**
	comp=Z,11nm,0.8s								
GRR	**Gorron**	**82.59**	**342**	*e*P		**P**		**06 15 10.2**	**-0.7**
GRR	**Gorron**	**82.59**	**342**	*e*P		**P**		**06 15 10.2**	**-0.7**
GRR	**Gorron**	**82.59**	**342**	*e*P		**P**		**06 15 10.2**	**-0.7**
CABF	**La Chapelle**	**82.62**	**337**	*e*P		**P**		**06 15 10.5**	**-0.7**
	comp=Z,5.9nm,0.7s								
CABF	**La Chapelle**	**82.62**	**337**	*e*P		**P**		**06 15 10.5**	**-0.7**
CABF				pmax		pmax			
	comp=Z,6.0nm,0.7s								
CABF	**La Chapelle**	**82.62**	**337**	*e*P		**P**		**06 15 10.5**	**-0.7**
	comp=Z,5.9nm,0.7s								
SSF	**Saint Saulge**	**82.86**	**339**	*e*P		**P**		**06 15 11.6**	**-0.7**
	comp=Z,10nm,0.8s								
SSF	**Saint Saulge**	**82.86**	**339**	*e*P		**P**		**06 15 11.6**	**-0.7**
SSF				pmax		pmax			
	comp=Z,10.0nm,0.8s								
SSF	**Saint Saulge**	**82.86**	**339**	*e*P		**P**		**06 15 11.6**	**-0.7**
	comp=Z,10nm,0.8s								
AVF	**Avril sur Loir**	**83.15**	**339**	*e*P		**P**		**06 15 13.3**	**-0.5**
	comp=Z,15nm,0.9s								
AVF	**Avril sur Loir**	**83.15**	**339**	*e*P		**P**		**06 15 13.3**	**-0.5**
AVF				pmax		pmax			
	comp=Z,15nm,0.9s								
AVF	**Avril sur Loir**	**83.15**	**339**	*e*P		**P**		**06 15 13.3**	**-0.5**
	comp=Z,15nm,0.9s								
SMF	**Signal de Mont**	**83.16**	**339**	*e*P		**P**		**06 15 13.4**	**-0.5**
	comp=Z,23nm,1.0s								
SMF	**Signal de Mont**	**83.16**	**339**	*e*P		**P**		**06 15 13.4**	**-0.5**
SMF				pmax		pmax			
	comp=Z,23nm,1.0s								
SMF	**Signal de Mont**	**83.16**	**339**	*e*P		**P**		**06 15 13.4**	**-0.5**
	comp=Z,23nm,1.0s								
TCF	**Toulx Ste Croi**	**83.89**	**340**	*e*P		**P**		**06 15 17.3**	**-0.4**
	comp=Z,12nm,1.0s								
TCF	**Toulx Ste Croi**	**83.89**	**340**	*e*P		**P**		**06 15 17.3**	**-0.4**
TCF				pmax		pmax			
	comp=Z,12nm,1.0s								
TCF	**Toulx Ste Croi**	**83.89**	**340**	*e*P		**P**		**06 15 17.3**	**-0.4**
	comp=Z,12nm,1.0s								
ORIF	**Oris-en-Rattie**	**84.24**	**337**	*e*P		**P**		**06 15 19.4**	**-0.1**
ORIF	comp=Z,10nm,0.7s			*e*R					
	comp=Z,70nm,22.2s								
ORIF	**Oris-en-Rattie**	**84.24**	**337**	*e*P		**P**		**06 15 19.4**	**-0.1**
ORIF				pmax		pmax			
	comp=Z,11nm,0.7s								
ORIF	**Oris-en-Rattie**	**84.24**	**337**	*e*P		**P**		**06 15 19.4**	**-0.1**
	comp=Z,10nm,0.7s								
TIGA	**Tifton**	**87.27**	**45**	⇑P		**P**		**06 15 35.2**	**+0.5**
	baz=87								
ESDC	**Sonseca Array**	**91.57**	**342**	P		**P**		**06 15 53.8**	**-1.0**
ESDC	**Sonseca Array**	**91.57**	**342**	P		**P**		**06 15 53.8**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=28,slow=3.4,SNR=4.9								
KEST	**Kesra**	**91.61**	**331**	P		**P**		**06 15 55.5**	**+0.4**
KEST	**Kesra**	**91.61**	**331**	P		**P**		**06 15 55.5**	**+0.4**
	comp=Z,0.7nm,0.6s,baz=303,slow=8.4,SNR=4.1								
KEST				LR		LR		07 01 06.4	
	comp=Z,20nm,18.8s,baz=263,slow=38								
TORD	**Torodi Ar. Bea**	**115.02**	**328**	PKP		**PKPdf**		**06 21 28.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**115.02**	**328**	PKP		**PKPdf**		**06 21 28.4**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=1.6,slow=1.4,SNR=2.9								
BDFB	**Brasilia**	**144.69**	**36**	PKP		PKPbc		06 22 24.0	+0.2
BDFB	**Brasilia**	**144.69**	**36**	PKP		PKPbc		06 22 24.0	+0.2
	comp=Z,2.0nm,0.7s,baz=255,slow=8.0,SNR=3.9								
PLCA	**Paso Flores**	**148.58**	**95**	PKPbc		**PKPbc**		**06 22 35.1**	**+0.8**
PLCA	**Paso Flores**	**148.58**	**95**	PKPbc		**PKPbc**		**06 22 35.1**	**+0.8**
	comp=Z,3.1nm,1.1s,baz=243,slow=22,SNR=3.6								
CPUP	**Villa Florida**	**148.88**	**60**	PKPbc		**PKPbc**		**06 22 36.2**	**+0.8**
CPUP	**Villa Florida**	**148.88**	**60**	PKPbc		**PKPbc**		**06 22 36.2**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=52,slow=1.7,SNR=5.6								

*ISK **29** 06:16:40.5,35˚.11N×30˚.91E,h5km,MD3.6*
*CSEM **29** 06:16:45.9±1.6,35˚.36N×31˚.14E,h10km,Mw3.1,Error ellipse: s-maj=32.9km s-min=14.1km az=68.0*
*NIC **29** 06:16:48.0±0.4,35˚.58N×31˚.32E,h13km,ML3.1,MW3.1*
*ISCJB **29** 06:16:48.5±1.7,35˚.40N±0˚.06×31˚.30E±0˚.05,h13km±12km, Error ellipse: s-maj=10.9km s-min=4.9km az=27.5*
*DDA **29** 06:16:49.0,35˚.57N×31˚.28E,h7km,MD3.3*

ISC 29 06:16:45.7±1.4,35˚.35N±0˚.05×31˚.18E±0˚.04,h9km±11km, n31,σ1s16/41,2C,Cyprus region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
AKMC	**Akamas**	**1.00**	**109**	P		**Pn**	**06 17 06.3**	**+0.4**
AKMC	**Akamas**	**1.00**	**109**	P		**Pn**	**06 17 06.3**	**+0.4**
PPCY	**Paphos**	**1.07**	**116**	P		**Pn**	**06 17 08.8**	**+2.0**
PPCY	**Paphos**	**1.07**	**116**	P		**Pn**	**06 17 08.8**	**+2.0**
ALFC	**Alevga**	**1.18**	**99**	⇑P		**Pg**	**06 17 09.0**	**+0.7**
	6.4nm,0.2s							
ALFC				S		**Sn**	**06 17 25.0**	**+0.4**
ALFC	**Alevga**	**1.18**	**99**	⇑P		**Pg**	**06 17 09.0**	**+0.7**
	6.4nm,0.2s							
ALFC				S		**Sn**	**06 17 25.0**	**+0.4**
GAZI	**Gazipasa**	**1.28**	**46**	*i* P		**Pn**	**06 17 09.4**	**-0.3**
GAZI				*i* S		**Sb**	**06 17 25.6**	**-0.9**
GAZI	**Gazipasa**	**1.28**	**46**	*i* P		**Pn**	**06 17 09.4**	**-0.3**
GAZI				*i* S		**Sb**	**06 17 25.6**	**-0.9**
LEF	**Lefka**	**1.42**	**99**	*e*PN		**Pn**	**06 17 09.8**	**-1.9**
LEF				*e*SN		**Sg**	**06 17 31.5**	**+0.1**
LEF	**Lefka**	**1.42**	**99**	*e*Pn		**Pn**	**06 17 09.8**	**-1.9**
LEF				*e*Sn		**Sg**	**06 17 31.5**	**+0.1**
AKAS	**Kas**	**1.55**	**305**	*e*Pn		Pg	06 17 18.2	+2.7
AKAS				*e*Sn		**Sg**	**06 17 35.5**	**0.0**
KORT	**Korkueli**	**1.77**	**338**	*e*Pn		**Pg**	**06 17 21.8**	**+2.1**
KORT				*e*Sn		**Sg**	**06 17 42.0**	**-0.7**
CSS	**Prodhromos**	**1.81**	**102**	P		**Pb**	**06 17 18.0**	**-0.9**
	0.9nm,0.4s							
CSS				S		**Sn**	**06 17 40.1**	**0.0**
CSS	**Prodhromos**	**1.81**	**102**	*e*PN		**Pn**	**06 17 16.2**	**-0.8**
CSS	**Prodhromos**	**1.81**	**102**	*e*Pn		**Pn**	**06 17 16.2**	**-0.8**
CSS	**Prodhromos**	**1.81**	**102**	P		**Pb**	**06 17 18.0**	**-0.9**
	0.9nm,0.4s							
CSS				S		**Sn**	**06 17 40.1**	**0.0**
ERMK	**Ermenek**	**1.91**	**47**	*e*Pn		**Pb**	**06 17 20.2**	**-0.5**
ERMK				*i* Sn		**Sg**	**06 17 46.6**	**-0.4**
HDMB	**Hadim**	**1.93**	**33**	*e*PN		**Pn**	**06 17 19.3**	**+0.5**
HDMB	**Hadim**	**1.93**	**33**	*e*Pn		**Pn**	**06 17 19.3**	**+0.5**
LFK	**Lefkose**	**1.93**	**92**	*e*PN		**Pn**	**06 17 17.7**	**-1.0**
LFK	**Lefkose**	**1.93**	**92**	*e*Pn		**Pn**	**06 17 17.7**	**-1.0**
IKL	**Isikli**	**2.22**	**66**	*e*PN		**Pn**	**06 17 23.5**	**+0.8**
IKL	**Isikli**	**2.22**	**66**	*e*Pn		**Pn**	**06 17 23.5**	**+0.8**
GOLH	**Golhisar**	**2.29**	**326**	*e*Pn		**Pg**	**06 17 27.5**	**-2.0**
EREN	**Erenkoy**	**2.45**	**85**	*e*PN		**Pn**	**06 17 26.2**	**+0.4**
EREN	**Erenkoy**	**2.45**	**85**	*e*Pn		**Pn**	**06 17 26.2**	**+0.4**
TURN	**Turunc**	**2.58**	**307**	*e*Pn		**Pb**	**06 17 32.1**	**+0.1**
KARA	**Karaisali**	**3.67**	**58**	*e*PN		**Pn**	**06 17 44.1**	**+1.6**
KARA	**Karaisali**	**3.67**	**58**	*e*Pn		**Pn**	**06 17 44.1**	**+1.6**
KOZT	**Kozan**	**4.31**	**59**	*e*PN		**Pn**	**06 17 53.6**	**+2.2**
KOZT	**Kozan**	**4.31**	**59**	*e*Pn		**Pn**	**06 17 53.6**	**+2.2**

IDC 29 06:23:04.8±5.8,7˚.10S×147˚.31E,h127km±55km,mb2.9/2, mb1 2.9/4,mb1mx2.8/19,mbtmp2.7/4,Error ellipse: s-maj=84.9km s-min=50.4km az=130.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
PMG	**Port Moresby**	**2.29**	**184**	P		Pn	06 23 40.5	-1.8
	2.3nm,0.3s,baz=3.3,slow=7.9,SNR=4.7							
PMG				S		Sn	06 24 12.2	+1.1
	2.3nm,0.3s,baz=210,slow=20,SNR=4.9							
WRA	**Warramunga Arr**	**17.93**	**223**	P		P	06 27 04.2	-0.8
	0.0nm,0.3s,baz=51,slow=10,SNR=3.5							
ASAR	**Alice Springs**	**20.91**	**217**	P		P	06 27 37.0	-0.4
	0.3nm,0.4s,baz=51,slow=8.3,SNR=6.6							
FITZ	**Fitzroy Crossi**	**23.78**	**241**	P		P	06 28 05.7	-0.2
	0.5nm,0.4s,baz=49,slow=12,SNR=4.1							
TORD	**Torodi Ar. Bea**	**145.65**	**283**	PKPbc		PKPbc	06 42 29.6	-0.2
	0.4nm,0.9s,baz=71,slow=4.0,SNR=2.6							

*ISCJB **29** 06:24:47.7±0.4,13˚.05N±0˚.06×88˚.66W±0˚.05,h85km±3km, mb4.0/11,Error ellipse: s-maj=11.8km s-min=4.7km az=34.5*
*CASC **29** 06:24:48.8±1.9,12˚.92N×88˚.72W,h34km±55km,MD4.0, ML4.4*
*IDC **29** 06:24:56.1±4.1,13˚.38N×88˚.41W,h138km±32km,mb3.6/11, mb1 3.8/13,mb1mx3.6/28,mbtmp3.6/13,MS3.0/2, Ms1 3.0/2,ms1mx2.5/32,Error ellipse: s-maj=35.3km s-min=25.0km az=32.0*

ISC 29 06:24:48.7±0.9,13˚.12N±0˚.07×88˚.64W±0˚.05,h76km±7km, n39,σ1s56/49,mb4.0/11,3D,El Salvador

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
VSM	**San Miguel**	**0.47**	**49**	⇓*i*P		**Pn**	**06 25 02.0**	**-0.1**
BLLM	**Bellamira**	**0.51**	**50**	*e*P		**Pn**	**06 25 02.0**	**-0.1**
AIES	**Las Flores**	**0.52**	**310**	*e*P		**Pn**	**06 25 01.4**	**-0.8**
AIES				AML		AML	06 25 15.2	
	comp=Z,13μm,0.4s							
SNVI	**San Vicente**	**0.53**	**338**	*e*P		**Pn**	**06 25 02.4**	**-0.1**
LFRS	**El Faro**	**0.65**	**321**	⇓*e*P		**Pn**	**06 25 03.1**	**-0.5**
LBRS	**Las Brisas**	**0.73**	**327**	*e*P		**Pn**	**06 25 04.6**	**+0.2**
CAHU	**Cacacuatique**	**0.77**	**33**	*e*P		**Pn**	**06 25 05.8**	**+0.7**
CAHU				*e*S		**Sn**	**06 25 20.4**	**+3.2**
LFU	**La Fuente**	**0.78**	**324**	*e*P		**Pn**	**06 25 05.1**	**+0.1**
LFU				*e*S		**Sn**	**06 25 17.1**	**0.0**
CNCH	**Conchagua**	**0.80**	**79**	⇓*e*P		**Pn**	**06 25 04.8**	**-0.5**
CNCH				*e*S		**Sn**	**06 25 18.8**	**+1.2**
SNET	**Serv Nac Est T**	**0.81**	**314**	*e*P		**Pn**	**06 25 05.0**	**-0.3**
SNET				*e*S		**Sn**	**06 25 17.4**	**-0.3**
SNET				AML		AML	06 25 21.4	
	comp=Z,10μm,0.2s							
BOQS	**Boqueron**	**0.88**	**315**	*e*P		**Pn**	**06 25 06.2**	**0.0**
SBLS	**San Blas**	**1.20**	**307**	*e*P		**Pn**	**06 25 10.2**	**0.0**
SNJE	**San Jose**	**1.20**	**309**	*e*P		**Pn**	**06 25 10.0**	**-0.2**
SNJE				*e*S		**Sn**	**06 25 26.9**	**+0.6**
RTR	**El Retiro**	**1.25**	**308**	*e*P		**Pn**	**06 25 11.1**	**+0.3**
RTR				*e*S		**Sn**	**06 25 29.2**	**+1.8**
RBDL	**Robledal**	**1.42**	**314**	*e*P		**Pn**	**06 25 13.7**	**+0.7**
MRL	**Marmol**	**2.19**	**332**	*e*P		**Pn**	**06 25 26.1**	**+3.0**
COPN	**Copaltepe**	**2.21**	**115**	*e*P		**Pn**	**06 25 21.4**	**-1.9**
NBG	**Las Nubes**	**2.21**	**312**	*e*P		**Pn**	**06 25 26.2**	**+2.7**
FUG	**Fuego 3**	**2.52**	**302**	*e*P		**Pn**	**06 25 29.3**	**+1.7**
VCR	**Vista de Mar**	**4.19**	**135**	*e*P		**Pn**	**06 25 48.9**	**-1.4**
VCR				*e*S		**Sn**	**06 26 43.5**	**+5.5**
JCR	**Jicaral**	**4.74**	**133**	*e*P		**Pn**	**06 25 57.2**	**-0.6**
JCR				*e*S		Sn	06 27 05.9	+14
CGA2	**Cerro Gallo 2**	**5.12**	**127**	*e*P		**Pn**	**06 26 04.1**	**+1.0**
QCR	**Quepos**	**5.72**	**129**	*e*P		**Pn**	**06 26 11.3**	**+0.3**
BUS	**Buena Vista**	**5.95**	**126**	*e*P		**Pn**	**06 26 15.0**	**+0.3**
BUS				*e*S		**Sn**	**06 27 24.9**	**+3.1**
TEIG	**Tepich**	**7.08**	**3**	P		Pn	06 26 33.7	+4.2
	comp=Z,5.1nm,0.3s,baz=179,slow=3.0,SNR=63							
ROSC	**El Rosal**	**16.33**	**119**	P		**P**	**06 28 36.3**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=285,slow=24,SNR=4.0							
TXAR	**Lajitas Array**	**21.33**	**322**	P		**P**	**06 29 31.7**	**+2.1**
	comp=Z,2.7nm,0.6s,baz=145,slow=9.5,SNR=41							
TXAR				PcP		**PcP**	**06 33 31.4**	**0.0**
	comp=Z,0.2nm,0.5s,baz=114,slow=3.1,SNR=3.8							
TKL	**Tuckaleechee C**	**22.87**	**10**	P		**P**	**06 29 46.1**	**+0.2**
	comp=Z,6.7nm,0.9s,baz=182,slow=10,SNR=9.8							
TKL				LR		LR	06 40 23.5	
	comp=Z,20nm,19.3s,baz=109,slow=41							
ANMO	**Albuquerque**	**27.06**	**326**	P		**P**	**06 30 26.9**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=177,slow=6.4,SNR=4.0							
SADO	**Sadowa**	**32.57**	**13**	P		**P**	**06 31 11.9**	**-0.8**
	comp=Z,2.6nm,0.7s,baz=263,slow=14,SNR=4.0							
PDAR	**Pinedale Array**	**34.64**	**332**	P		**P**	**06 31 30.2**	**-0.8**
	comp=Z,0.7nm,0.6s,baz=129,slow=11,SNR=7.2							
PDAR				PcP		**PcP**	**06 34 02.7**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=176,slow=1.4,SNR=3.5							
NVAR	**Mina Array Bea**	**36.44**	**319**	P		**P**	**06 31 47.3**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=119,slow=7.3,SNR=3.4							
NVAR				PcP		**PcP**	**06 34 10.2**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=139,slow=4.3,SNR=3.7							
ULM	**Lac du Bonnet**	**37.50**	**352**	P		**P**	**06 31 53.2**	**-1.7**
	comp=Z,4.9nm,0.6s,baz=92,slow=3.2,SNR=3.1							
ULM				LR		LR	06 47 26.5	
	comp=Z,49nm,20.6s,baz=335,slow=36							
SCHQ	**Schefferville**	**44.99**	**18**	P		**P**	**06 32 54.8**	**-1.6**
	comp=Z,1.5nm,0.6s,baz=216,slow=11,SNR=4.9							
YKA	**Yellowknife Ar**	**52.67**	**345**	P		**P**	**06 33 54.6**	**-0.3**
	comp=Z,2.8nm,0.6s,baz=151,slow=6.7,SNR=44							
INK	**Inuvik**	**62.23**	**343**	P		**P**	**06 35 00.3**	**-1.7**
	comp=Z,2.1nm,0.8s,baz=142,slow=11,SNR=3.9							
ILAR	**Eielson Array**	**64.94**	**336**	P		**P**	**06 35 18.8**	**-1.3**
	comp=Z,1.3nm,0.7s,baz=167,slow=4.8,SNR=25							
WRA	**Warramunga Arr**	**138.33**	**255**	PKP		**PKPdf**	**06 44 06.1**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=88,slow=2.0,SNR=12							
ASAR	**Alice Springs**	**138.43**	**249**	PKP		**PKPdf**	**06 44 06.8**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=82,slow=1.4,SNR=4.6							

KRSC 29 06:34:20.0±0.7,49.99N×158.78E,h31km±31km,ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.84**	**293**	*e*P		Pn	06 34 49.7	+0.3
SKR				*e*S		Sn	06 35 11.8	+0.2
RUS	**Russkaya**	**2.45**	**356**	*e*P		Pn	06 34 59.5	+1.7
RUS				*e*S		Sn	06 35 27.7	+1.0
ASAK	**Asacha**	**2.46**	**347**	*e*P		Pn	06 35 00.1	+2.0
ASAK				*e*S		Sn	06 35 28.6	+1.5
MTVR	**Mutnovka**	**2.52**	**352**	*e*P		Pn	06 35

baz=210
TWA Mucha 0.82 348 P Pg 06 39 11.5 +0.2
baz=351
NSTT Nanjuang 0.83 303 *e*P Pg 06 39 11.6 +0.1
baz=303
NSTT S Sg 06 39 22.1 -0.3
baz=303
SMLT Sun Moon Lake 0.84 250⇑*i*P Pg 06 39 11.7 -0.1
baz=248
SMLT S Sg 06 39 22.5 -0.3
baz=248
TWB1 Santiao Chiao 0.85 14 P Pg 06 39 11.9 -0.1
baz=9.0
TWB1 S Sg 06 39 22.6 -0.6
baz=9.0
TYC Yuchr 0.87 252⇑*i*P Pg 06 39 11.9 -0.4
baz=244
TYC S Sg 06 39 23.6 -0.2
baz=244
TAP1 Taipei 0.89 346 *e*P Pb 06 39 13.0 +0.3
baz=346
TAP1 *e*S Sg 06 39 23.3 -0.9
baz=346
NWF Wu-fen Shan 0.89 1⇑*i*P Pg 06 39 12.9 +0.2
baz=353
NWF S Sg 06 39 23.9 -0.5
baz=353
TAP Taipei 0.89 345 *e*P Pg 06 39 12.8 +0.1
baz=346
TWQ1 Liyutan 0.92 281 *e*P Pb 06 39 13.7 +0.4
baz=280
TWQ1 *e*S Sb 06 39 26.3 +0.8
baz=280
TWF1 Yuli 0.93 208 *e*P Pg 06 39 12.3 -0.9
baz=216
NSY Sanyi 0.95 285 *e*P Pn 06 39 14.2 -0.3
baz=284
NSY *e*S Sn 06 39 27.5 -0.4
baz=284
NCU National Centr 0.95 327 *e*P Pn 06 39 14.7 +0.2
baz=327
NCU *e*S Sn 06 39 28.0 +0.1
baz=327
HSN Hsinchu 0.95 311 *e*P Pn 06 39 14.8 +0.2
baz=313
HSN *e*S Sn 06 39 27.3 -0.8
baz=313
TWS1 Kuangyinshan 0.97 341 ⇑P Pn 06 39 15.2 +0.4
baz=350
TWS1 *e*S Sg 06 39 27.7 +0.7
baz=350
TCU Taichung 0.99 269 ⇓P Pn 06 39 15.9 +0.8
baz=268
TCU *i* S Sn 06 39 29.2 +0.2
baz=268
YUS Yu-Shan 1.01 228 ⇑P Pb 06 39 15.0 -0.1
baz=217
YUS *e*S Sb 06 39 29.0 +0.5
baz=217
WNT Mingjian 1.03 254 *e*P Pn 06 39 16.2 +0.5
baz=248
WNT S Sn 06 39 30.7 +0.7
baz=248
ALS Alishan 1.10 233 ⇑P Pb 06 39 16.6 +0.1
baz=233
ALS *e*S Sn 06 39 32.0 -0.1
baz=233
TWY Chenhua 1.10 352 *e*P Pg 06 39 16.8 +0.1
baz=338
CHKT Chengkung 1.13 199 *e*P Pb 06 39 16.4 -0.5
baz=184
CHN5 Tsauling 1.15 240⇓*e*P Pg 06 39 17.6 0.0
baz=240
CHN5 *e*S Sn 06 39 34.3 +1.3
baz=240
YOJ Yonaguni jima 1.17 76⇓*i*P Pg 06 39 18.0 -0.1
baz=68
YOJ *e*S Sn 06 39 35.2 +1.8
baz=68
YOJ Yonaguni jima 1.17 76 P Pg 06 39 17.9 -0.1
YOJ *e*S Sg 06 39 33.3 0.0
ELDTW Lidau 1.20 215 *e*P Pn 06 39 17.7 -0.4
baz=216
WGK Gukeng 1.20 246 *e*P Pg 06 39 19.1 +0.5
baz=246
WTCT Ta-ch'eng 1.39 257 *e*P Pb 06 39 21.3 0.0
baz=257
WTCT *e*S Sg 06 39 41.0 +0.8
baz=257
CHY Chiayi 1.40 241 *e*P Pn 06 39 20.9 +0.2
baz=242
CHY *e*S Sg 06 39 41.5 +0.9
baz=242
WTP Ta-pu 1.40 229 P Pg 06 39 22.1 -0.3
baz=231
WTP *e*S Sg 06 39 42.4 +1.7
baz=231
PCYT Pengchaiyu 1.47 11 *e*P Pn 06 39 21.7 -0.1
baz=10.0
TWK Hsinying 1.48 233 *e*P Pb 06 39 23.0 +0.2
baz=235
TWK *e*S Sg 06 39 44.1 +1.0
baz=235
TWG Pinlang 1.49 205 *e*P Pn 06 39 21.1 -0.8
baz=190
CHN1 Nanshi 1.50 229 P Pb 06 39 23.7 +0.5
baz=221
CHN1 *e*S Sg 06 39 44.6 +0.8
baz=221
WSF Szhu 1.51 250 *e*P Pb 06 39 23.5 +0.1
baz=261
WSF *e*S Sg 06 39 44.8 +0.7
baz=261
CHN8 Yiju 1.65 240 *e*P Pb 06 39 25.6 -0.1
baz=228
CHN8 *e*S Sg 06 39 48.7 +0.3
baz=228
CHN3 Shinhua 1.69 230 *e*P Pg 06 39 27.6 -0.2
baz=233
ECL Taimali 1.74 206 *e*P Pb 06 39 27.5 +0.3
baz=193
SCLT Jiali 1.75 236 *e*P Pn 06 39 26.4 +0.9
baz=239
SCLT *e*S Sg 06 39 52.0 +0.2
baz=239
IRIF Iriomote-Funau 1.80 85 P Pn 06 39 26.6 +0.4
IRIF *e*S Sb 06 39 50.8 0.0
TWM1 Shoushan 1.82 223 *e*P Pb 06 39 29.1 +0.4
baz=224
HATJ Hateruma jima 1.87 93 P Pn 06 39 27.9 +0.7
HATJ *e*S Sn 06 39 51.3 +0.7
EAST Anshuo 1.97 205 *e*P Pn 06 39 29.3 +0.7
baz=195
JKRS Kuro-shima 2.05 88 P Pn 06 39 30.5 +0.8
JKRS *e*S Sb 06 39 57.5 -0.5
SCZT Fangliau 2.08 211 *e*P Pb 06 39 32.3 -0.8
baz=195
PNG Penghu 2.11 254 *e*P Pn 06 39 31.2 +0.7
baz=257
PNG *e*S Sn 06 39 57.5 +0.9
baz=257
JIJ Ishigaki jima 2.18 85 P Pn 06 39 31.7 +0.3
JIJ *e*S Sn 06 39 57.1 -1.2
TWP Hsiaoliuchiu 2.23 216 *e*P Pg 06 39 36.9 -1.3
baz=238
HEN Hengchun 2.36 204 *e*P Pb 06 39 35.9 -1.9
baz=196
TWK1 Hengchun 2.39 202 *e*P Pn 06 39 36.0 +1.7
baz=191
TSEB Hengchuen, Pin 2.40 200 *e*P Pn 06 39 34.8 +0.3
baz=192
JTJ Tarama 2.72 80 P Pn 06 39 41.4 +2.6
QZH Quanzhou 2.99 285⇑*i*Pn Pn 06 39 42.5 -0.1
QZH Sn Sn 06 40 16.0 -2.3
QZH smax smax
comp=N,420nm,0.8s
QZH smax smax
comp=E,230nm,0.8s
KNM Kinmen 3.05 275 *e*P Pn 06 39 44.7 +1.3
baz=274
KSRS Korea Array 14.25 20 Pn Pn 06 42 17.6 +0.7
comp=E,0.2nm,0.3s,baz=202,slow=12,SNR=3.0
SONM Songino Array 26.58 336 P P 06 44 34.8 +1.4
comp=E,0.7nm,0.7s,baz=154,slow=8.0,SNR=3.8
MKAR Makanchi Array 38.71 316 P P 06 46 18.9 -0.3
comp=E,0.6nm,0.7s,baz=97,slow=9.9,SNR=4.6
ZALV Zalesovo Beam 40.54 327 P P 06 46 34.9 +0.6
comp=E,0.5nm,0.4s,baz=107,slow=7.7,SNR=3.4

WRA Warramunga Arr 45.53 163 P P 06 47 13.2 -1.9
comp=E,1.1nm,0.5s,baz=345,slow=8.8,SNR=18
ASAR Alice Springs 48.99 165 P P 06 47 42.0 0.0
comp=E,0.3nm,0.6s,baz=333,slow=6.3,SNR=8.0
ILAR Eielson Array 68.98 27 P P 06 50 00.5 +0.2
comp=E,0.2nm,0.6s,baz=299,slow=7.9,SNR=5.5
YKA Yellowknife Ar 82.77 23 P P 06 51 17.3 -1.7
comp=E,0.5nm,0.6s,baz=310,slow=5.1,SNR=8.8

NEIC 29 06:39:14.0, 20.84N×156.28W, h30km, ML3.5(HVO), **After HVO., Hawaiian Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HON	**Honolulu**	**1.68**	**287**	*e*Pn	Pn	06 39 39.2	-2.2
HON				*e*Sn	Sn	06 39 57.6	-4.3
KIP	**Kipapa**	**1.72**	**290**	*e*Pn	Pn	06 39 39.7	-2.2
KIP				*e*Sn	Sn	06 39 58.7	-4.1
PUH	**Pauahi**	**1.77**	**145**	*e*Pn	Pn	06 39 40.3	-2.4
PUH				*e*Sn	Sn	06 40 03.3	-1.0
STCH	**Steam Cracks**	**1.81**	**143**	*e*Pn	Pn	06 39 40.6	-2.6
STCH				*e*Sn	Sn	06 40 00.8	-4.4

IDC 29 06:52:19.1±1.8, 15.69S×172.80W, h0km, mb3.9/4, mb1 4.0/5, mb1mx3.7/23, mbtmp4.0/5, Error ellipse: s-maj=57.9km s-min=25.5km az=124.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.02**	**29**	Pn	Pn	06 52 54.5	-0.1
AFI	92nm,0.3s,baz=181,slow=0.8,SNR=260			Sn	Sn	06 53 17.4	-3.3
URZ	148nm,0.3s,baz=30,slow=21,SNR=11 **Urewera**	**24.18**	**200**	P	P	06 57 37.4	+0.2
STKA	9.4nm,0.4s,baz=134,slow=2.1,SNR=12 **Stephens Creek**	**44.40**	**240**	P	P	07 00 30.9	-0.8
WRA	2.5nm,1.1s,baz=84,slow=10,SNR=2.8 **Warramunga Arr**	**50.35**	**257**	P	P	07 01 18.4	+0.2
ASAR	0.2nm,0.5s,baz=94,slow=6.7,SNR=7.6 **Alice Springs**	**50.58**	**252**	P	P	07 01 19.9	-0.1
	0.7nm,0.5s,baz=88,slow=8.2,SNR=15						

IDC 29 07:13:13.2±1.8, 0.56S×132.80E, h0km, mb3.7/2, mb1 4.0/5, mb1mx3.7/23, mbtmp3.9/5, ML3.8/3, Error ellipse: s-maj=55.6km s-min=25.9km az=73.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**16.78**	**122**	Pn	Pn	07 17 09.6	-0.3
FITZ	0.7nm,0.3s,baz=294,slow=20,SNR=3.1 **Fitzroy Crossi**	**18.80**	**202**	P	P	07 17 34.1	-0.4
WRA	0.3nm,0.3s,baz=18,slow=14,SNR=8.8 **Warramunga Arr**	**19.32**	**176**	P	P	07 17 40.3	+0.1
WRA	0.4nm,0.3s,baz=355,slow=11,SNR=33			S	Sn	07 21 06.8	-12
ASAR	0.2nm,0.3s,baz=358,slow=23,SNR=7.3 **Alice Springs**	**23.00**	**177**	P	P	07 18 20.1	+0.3
MKAR	4.4nm,0.9s,baz=357,slow=11,SNR=21 **Makanchi Array**	**64.54**	**324**	P	P	07 23 52.1	-0.1
	0.4nm,0.7s,baz=120,slow=8.9,SNR=4.4						

*NEIC **29** 07:16:51.1, 15.21N×94.92W, h16km, MD4.0(MEX), After MEX.*
MEX 29 07:16:51.1±0.6, 15.21N×94.92W, h16km±14km, MD4.0, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**1.28**	**296**	*e*P	Pn	07 17 10.9	-3.4
HUIG				*i* S	Sb	07 17 25.3	-5.7
HUIG	**Huatulco**	**1.28**	**296**	*e*P	Pn	07 17 10.9	-3.4
HUIG				*i* S	Sb	07 17 25.3	-5.7
PCIG		**1.71**	**73**	*e*P	Pn	07 17 16.6	-3.7
PCIG				*i* S	Sn	07 17 36.7	-5.1
PCIG		**1.71**	**73**	*e*P	Pn	07 17 16.6	-3.7
PCIG				*i* S	Sn	07 17 36.7	-5.1
TGIG		**2.33**	**48**	*e*P	Pn	07 17 26.5	-2.4
TGIG				*i* S	Sn	07 17 52.9	-4.3
TGIG		**2.33**	**48**	*e*P	Pn	07 17 26.5	-2.4
TGIG				*i* S	Sn	07 17 52.9	-4.3
CCIG	**Comitan**	**2.88**	**68**	*i* P	Pn	07 17 34.2	-2.5
CCIG				*i* S	Sn	07 18 07.2	-4.0
CCIG	**Comitan**	**2.88**	**68**	*i* P	Pn	07 17 34.2	-2.5
CCIG				*i* S	Sn	07 18 07.2	-4.0

*DDA **29** 07:24:49.5, 39.11N×27.53E, h7km, MD2.9*
*ISCJB **29** 07:24:51.6±0.6, 39.14N±0.02×27.67E±0.05, h0km, Error ellipse: s-maj=5.7km s-min=3.5km az=175.3*
*ISK **29** 07:24:51.7, 39.14N×27.75E, h5km, MD2.6*
*CSEM **29** 07:24:51.8±0.4, 39.14N×27.67E, h1km, MD2.9, Error ellipse: s-maj=9.3km s-min=6.0km az=87.0*
ISC 29 07:24:51.3±0.9, 39.13N±0.02×27.69E±0.04, h0km, n16, σ0s.55/30, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKHS	**Akhisar**	**0.27**	**159**	*e*P	Pg	07 24 55.6	-0.8
AKHS				*e*S	Sg	07 25 00.8	+0.9
AKHS	**Akhisar**	**0.27**	**159**	*e*P	Pg	07 24 55.6	-0.8
AKHS				*e*S	Sg	07 25 00.8	+0.9
BALY	**Balya**	**0.61**	**355**	*e*P	Pg	07 25 02.7	-0.3
BALY				*e*S	Sg	07 25 11.2	+0.3
BALY	**Balya**	**0.61**	**355**	*e*P	Pg	07 25 02.7	-0.3
BALY				*e*S	Sg	07 25 11.2	+0.3
DURS	**Dursunbey**	**0.77**	**52**	*e*P	Pb	07 25 07.2	-0.4
DURS				*e*S	Sb	07 25 19.1	+0.4
DURS	**Dursunbey**	**0.77**	**52**	*e*P	Pb	07 25 07.2	-0.4
DURS				*e*S	Sb	07 25 19.1	+0.4
DEMI	**Demirci**	**0.80**	**96**	*e*P	Pb	07 25 08.6	+0.4
DEMI				*e*S	Sb	07 25 20.2	+0.5
DEMI	**Demirci**	**0.80**	**96**	*e*P	Pb	07 25 08.6	+0.4
DEMI				*e*S	Sb	07 25 20.2	+0.5
IZM	**Izmir**	**0.81**	**205**	*e*PG	Pb	07 25 08.4	+0.2
IZM				*e*SG	Sb	07 25 20.0	+0.4
IZM	**Izmir**	**0.81**	**205**	*e*Pg	Pb	07 25 08.4	+0.2
IZM				*e*Sg	Sb	07 25 20.0	+0.4
GONE	**Gonen-Balikesi**	**0.91**	**360**	*e*PG	Pg	07 25 09.2	+0.4
GONE				*e*SG	Sb	07 25 23.0	+0.3
GONE	**Gonen-Balikesi**	**0.91**	**360**	*e*Pg	Pg	07 25 09.2	+0.4
GONE				*e*Sg	Sb	07 25 23.0	+0.3
KULA	**Kula-Manisa**	**0.98**	**129**	*e*PG	Pg	07 25 10.5	+0.5
KULA				*e*SG	Sb	07 25 24.1	-0.5
KULA	**Kula-Manisa**	**0.98**	**129**	*e*Pg	Pg	07 25 10.5	+0.5
KULA				*e*Sg	Sb	07 25 24.1	-0.5
TVSB	**Tavsanli**	**1.41**	**76**	*e*PN	Pn	07 25 17.5	-0.8
TVSB	**Tavsanli**	**1.41**	**76**	*e*Pn	Pn	07 25 17.5	-0.8

*MOS **29** 07:58:18.9±1.1, 12.39N×143.69E, h33km, mb5.3/32, Error ellipse: s-maj=10.3km s-min=6.0km az=103.7*
*BJI **29** 07:58:18.0, 12.20N×143.94E, h38km, mB5.0/30, mb5.0/49, Ms4.5/39, Ms7 4.2/38*
*ISCJB **29** 07:58:20.6±0.8, 12.40N±0.04×143.73E±0.03, h43km±7km, mb4.9/112, MS4.0/42, Error ellipse: s-maj=6.1km s-min=5.4km az=157.0*
*IDC **29** 07:58:21.2±1.6, 12.41N×143.80E, h38km±13km, mb4.6/37, mb1 4.7/37, mb1mx4.6/41, mbtmp4.6/37, MS4.0/25, Ms1 4.0/25, ms1mx3.8/40, Error ellipse: s-maj=14.3km s-min=10.6km az=88.0*
*NEIC **29** 07:58:22.1±0.9, 12.40N×143.74E, h44km±8km, mb4.9/40, Error ellipse: s-maj=5.6km s-min=5.2km az=101.0*
NEIC Felt at Finegayan.
*TEH **29** 07:58:22.0, 12.42N×143.73E, h42km, ML4.9*
*DJA **29** 07:58:24.6±0.7, 13.1N±15.1×14.4E±1.1, h162km±11km, M4.8/10, mB5.7/5, mb4.9/10, MLv4.5/1, Mw(mB)5.3/5*
ISC 29 07:58:22.4±0.4, 12.46N±0.05×143.79E±0.05, h47km±2km, h47km:pP-P, n266, σ1s33/337, mb4.9/112, MS4.0/43, 10C-1D, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**1.54**	**43**	*e*Pn	Pn	07 58 47.7	+0.2
GUMO				*e*Sn	Sn	07 59 07.4	+1.1
GUMO	**Guam**	**1.54**	**43**	LR	LR	07 59 13.7	

comp=Z,40μm,20.0s,baz=45,slow=34
JAY Jayapura 15.19 192 P P 08 02 00.3 +2.1
140nm,0.6s,16μm
GAMI Galela, Maluku 19.04 238 P Pn 08 02 43.4 +1.5
104nm,1.3s,16μm
LBMI Labuha 20.75 232 P Pn 08 03 00.8 -1.4
85nm,1.2s,2μm
JHJ Hachijo jima 2 20.89 351 LR LR 08 09 29.9
comp=Z,482nm,21.1s,baz=284,slow=32
MSAI Masohi 21.55 224 P P 08 03 09.9 +1.9
23nm,1.0s
PMG Port Moresby 21.98 171 *e*P P 08 03 13.4 +0.9
41nm,0.9s
PMG Port Moresby 21.98 171 P P 08 03 21.7 +9.2
51nm,1.2s
PMG Port Moresby 21.98 171 P P 08 03 11.6 -0.9
9.9nm,0.6s,baz=344,slow=7.4,SNR=3.4
GTOI Gorontalo 23.71 242 P P 08 03 35.5 +5.2
104nm,0.8s
JNU Nakatsue 23.72 332 *e*P P 08 03 31.5 +1.3
16nm,0.9s
YULB Yu-li 23.96 300 *e*P P 08 03 33.3 +0.8
14nm,0.9s
SSLB Suanglung 24.41 301 *e*P P 08 03 37.8 +1.2
29nm,0.9s
MJAR Matsushiro Arr 24.50 349 P P 08 03 37.0 -0.3
MJAR ScP **ScP** 08 10 49.9 -0.1
MJAR Matsushiro Arr 24.50 349 P P 08 03 37.0 -0.3
6.3nm,0.8s,baz=166,slow=9.0,SNR=16
MJAR ScP **ScP** 08 10 49.9 -0.1
8.5nm,0.9s,baz=169,slow=2.3,SNR=18
MJAR LR LR 08 12 42.7
comp=Z,543nm,19.0s,baz=175,slow=35
MAJO Matsushiro 24.50 349 *e*P P 08 03 39.0 +1.6
MAJO pmax pmax
comp=Z,26nm,1.1s
MAJO Matsushiro 24.50 349 *e*P P 08 03 39.0 +1.6
comp=Z,26nm,1.1s
MAT Matsushiro 24.50 349 P P 08 03 38.9 +1.6
MAT S S 08 08 03.6 +9.0
MRSI Marisa 24.72 243 P P 08 03 40.8 +1.3
comp=Z,82nm,1.0s,comp=Z,924nm
LUWI Luwuk 24.80 239 P P 08 03 39.5 -0.7
comp=Z,201nm,1.1s,comp=Z,2μm
COEN Coen 26.25 181 *e*P P 08 03 52.4 -1.0
comp=Z,74nm,0.8s
HNR Honiara 27.03 143 LR LR 08 13 50.5
comp=Z,212nm,19.3s,baz=100,slow=34
KSRS Korea Array 28.66 333 P P 08 04 14.1 -0.6
comp=Z,3.1nm,0.6s,baz=139,slow=9.6,SNR=9.9
KSRS PcP **PcP** 08 07 26.1 +1.5
comp=Z,3.3nm,0.9s,baz=167,slow=3.8,SNR=8.4
KSRS ScP **ScP** 08 11 03.7 +1.5
comp=Z,3.3nm,1.0s,baz=160,slow=3.2,SNR=12
KSRS LR LR 08 13 51.7
comp=Z,133nm,21.1s,baz=130,slow=32
KSAR Wonju Array Be 28.66 333 P P 08 04 14.1 -0.7
KSAR PcP **PcP** 08 07 26.1 +1.5
KSAR ScP **ScP** 08 11 03.7 +1.5
ERM Erimo 29.45 359⇑*e*P P 08 04 24.5 +2.8
ERM pmax pmax
comp=Z,18nm,1.2s
NJ2 Nanjing 30.08 314 *e*P P 08 04 28.0 +0.6
NJ2 pmax pmax
comp=Z,10.0nm,0.6s
YUK Yuzh-Kuril'sk 31.52 3*c i*P P 08 04 35.9 -4.0
YUK *i* S S 08 09 51.5 +6.6
YUK *i* SS **SnSn** 08 11 36.1 +2.7
YUK MLR MLR
comp=E,98nm,19.0s
YUK MLR MLR
comp=N,114nm,19.0s
YUK MLR MLR
comp=Z,79nm,19.0s
ASAJ Asahikawa 31.56 358 PcP **PcP** 08 07 32.7 +0.6
ASAJ Asahikawa 31.56 358 PcP **PcP** 08 07 32.7 +0.6
comp=Z,4.8nm,0.6s,baz=146,slow=8.1,SNR=3.7
ASAJ LR LR 08 15 50.2
comp=Z,195nm,22.0s,baz=343,slow=33
CTA Charters Tower 32.43 176 P P 08 04 47.0 -1.2
CTA Charters Tower 32.43 176 P P 08 04 47.0 -1.2
comp=Z,1.1nm,0.4s,baz=358,slow=9.9,SNR=3.8
WHN Wuhan 32.62 308 P P 08 04 50.5 +0.7
WHN S **S** 08 10 02.8 +0.3
WHN LR LR
comp=N,450nm,17.7s
WHN LR LR
comp=E,570nm,21.3s
WHN LR LR
comp=Z,820nm,20.0s
USRK Ussuriysk Arra 33.21 344 P P 08 04 56.6 +1.9
comp=Z,2.1nm,0.7s,baz=175,slow=11,SNR=4.6
USRK PP **PnPn** 08 06 03.4 -2.8
comp=Z,4.0nm,0.7s,baz=168,slow=9.0,SNR=4.8
USRK ScP **ScP** 08 11 17.4 +0.2
comp=Z,2.3nm,0.8s,baz=86,slow=9.2,SNR=5.2
USRK LR LR 08 16 34.3
comp=Z,237nm,21.7s,baz=90,slow=33
QIZ Qiongzhong 33.28 286 P P 08 04 53.0 -2.7
QIZ S **S** 08 10 12.8 -0.2
QIZ pmax pmax
comp=Z,22nm,2.0s
QIZ LR LR
comp=Z,310nm,24.5s
WRAB Tennant Creek 33.50 196 *e*P P 08 04 56.7 -0.8
WRAB pmax pmax
comp=Z,11nm,0.6s
WRAB Tennant Creek 33.50 196 *e*P P 08 04 56.7 -0.8
comp=Z,11nm,0.6s
WRA Warramunga Arr 33.51 196 P P 08 04 56.4 -1.2
WRA Warramunga Arr 33.51 196 P P 08 04 56.4 -1.2
comp=Z,9.1nm,0.6s,baz=21,slow=9.9,SNR=168
WRA LR LR 08 18 40.2
comp=Z,256nm,18.8s,baz=15,slow=36
MDJ Mudanjiang 34.28 342 P P 08 05 04.3 +0.3
MDJ PP **PP** 08 06 23.0 +0.6
MDJ PcP **PcP** 08 07 35.5 -4.1
MDJ S **S** 08 10 30.5 +2.6
MDJ ScP **ScP** 08 11 18.3 -2.6
MDJ PcS **PcS** 08 11 23.3 -2.5
MDJ pmax pmax
comp=Z,14nm,2.2s
MDJ LR LR
comp=N,130nm,21.1s
MDJ LR LR
comp=E,100nm,21.1s
MDJ LR LR
comp=Z,210nm,24.9s
KSM Kuching 34.92 254 *e*P P 08 05 10.3 +0.3
comp=Z,22nm,1.0s
CN2 Changchun 35.00 337 *e*P P 08 05 13.3 +3.0
CN2 *e*S **S** 08 10 41.5 +2.5
CN2 pmax pmax
comp=Z,10.0nm,0.6s
CN2 LR LR
comp=N,200nm,15.0s
CN2 LR LR
comp=E,300nm,15.0s
CN2 LR LR
comp=Z,300nm,17.0s
FITZ Fitzroy Crossi 35.25 211 P P 08 05 11.7 -1.0
FITZ PcP **PcP** 08 07 43.6 +0.8
FITZ Fitzroy Crossi 35.25 211 P P 08 05 11.7 -1.0
comp=Z,3.1nm,1.1s,baz=19,slow=7.5,SNR=3.5
FITZ PcP **PcP** 08 07 43.6 +0.8
comp=Z,2.7nm,0.8s,baz=35,slow=2.1,SNR=3.8
ENH Enshi 36.33 305 *e*P P 08 05 22.9 +0.9
comp=Z,32nm,1.0s
HABR Khabarovsk 36.64 350 *e*P P 08 05 23.0 -1.2
HABR *e* 08 07 44.1
HABR S **S** 08 11 02.8 -1.1
HABR 08 15 32.4
HABR pmax pmax
comp=E,59nm,2.5s
HABR pmax pmax
comp=Z,55nm,2.5s
HABR pmax pmax
comp=N,53nm,2.5s
BJT Baijiatuan 36.69 323 *e*P P 08 05 25.4 +0.7
comp=N,29nm,0.6s
BJI Beijing 36.70 323 P P 08 05 25.3 +0.5
BJI S **S** 08 11 10.0 +5.0
BJI pmax pmax
comp=Z,42nm,0.9s
BJI LR LR
comp=N,170nm,26.6s

BJI LR LR
comp=E,190nm,23.7s
BJI LR LR
comp=Z,170nm,28.1s
AS31 Alice Springs 37.18 195 *e*P **P 08 05 28.6 -0.5**
ASAR Alice Springs 37.18 195 P **P 08 05 28.2 -1.0**
ASAR Alice Springs 37.18 195 P **P 08 05 28.2 -1.0**
comp=Z,3.4nm,0.7s,baz=18,slow=10.0,SNR=50
ASAR LR LR 08 20 43.4
comp=Z,213nm,20.8s,baz=17,slow=36
GYA Guiyang 37.52 297 P **P 08 05 32.3 +0.1**
GYA pP **pP 08 05 44.8 -0.1**
GYA sP **sP 08 05 48.5 -2.0**
GYA PP **PnPn 08 07 01.3 +1.6**
GYA PcP **PcP 08 07 51.5 +1.7**
GYA S **S 08 11 19.0 +0.8**
GYA ScP **ScP 08 11 33.3 -0.1**
GYA ScS **ScS 08 15 40.0 -2.0**
GYA pmax pmax
comp=Z,20nm,0.8s
GYA pmax pmax
comp=Z,110nm,4.9s
GYA LR LR
comp=N,550nm,17.5s
GYA LR LR
comp=E,430nm,18.2s
GYA LR LR
comp=Z,570nm,17.9s
KLR Kul'dur 37.99 347 *e*P **P 08 05 32.6 -3.1**
KLR *e* 08 07 46.2
XAN Xi'an 38.29 310 P **P 08 05 38.8 +0.3**
XAN pP **pP 08 05 51.0 -0.2**
XAN S **S 08 11 28.0 -1.5**
XAN pmax pmax
comp=Z,4.0nm,0.8s
XAN pmax pmax
comp=Z,18nm,6.9s
XAN LR LR
comp=N,210nm,26.5s
XAN LR LR
comp=Z,83nm,20.4s
HHC Hu-ho-hao-te 39.96 321 *e*P **P 08 05 52.8 +0.3**
HHC pP **pP 08 06 05.5 +0.3**
HHC sP **sP 08 06 11.5 +0.7**
HHC S **S 08 11 55.0 +0.4**
HHC sS **sS 08 12 17.8 +1.9**
HHC SS **SS 08 14 50.0 -2.8**
HHC ScS **ScS 08 15 54.0 -1.6**
HHC pmax pmax
comp=Z,48nm,0.8s
HHC pmax pmax
comp=Z,310nm,5.4s
HHC LR LR
comp=N,470nm,15.9s
HHC LR LR
comp=E,600nm,16.9s
HHC LR LR
comp=Z,520nm,16.1s
KMI Kunming 40.69 294 P **P 08 06 00.5 +1.7**
KMI S **S 08 12 05.8 -0.3**
KMI pmax pmax
comp=Z,16nm,1.2s
KMI LR LR
comp=N,170nm,13.0s
KMI LR LR
comp=E,120nm,10.8s
KMI LR LR
comp=Z,120nm,15.6s
CD2 Chengdu 41.20 303 P **P 08 06 03.5 +0.7**
CD2 pP **pP 08 06 15.8 +0.2**
CD2 sP **sP 08 06 21.0 -0.1**
CD2 PP **PnPn 08 07 43.5 +0.2**
CD2 S **S 08 12 13.8 +0.5**
CD2 sS **sS 08 12 34.5 -0.2**
CD2 SS **SS 08 15 13.3 -4.4**
CD2 pmax pmax
comp=Z,100nm,0.8s
CD2 pmax pmax
comp=Z,150nm,4.8s
CD2 LR LR
comp=N,210nm,22.6s
CD2 LR LR
comp=E,370nm,23.8s
CD2 LR LR
comp=Z,260nm,19.0s
PETK Petropavlovsk- 42.05 12 ScP **ScP 08 11 51.7 +1.4**
PETK Petropavlovsk- 42.05 12 ScP **ScP 08 11 51.7 +1.4**
comp=Z,3.7nm,0.9s,baz=191,slow=4.5,SNR=3.9
PETK LR LR 08 23 60.0
comp=Z,91nm,19.4s,baz=192,slow=37
LZH Lanzhou 42.92 310 *e*P **P 08 06 17.5 +0.6**
LZH pP **pP 08 06 28.0 -1.7**
LZH sP **sP 08 06 34.0 -1.3**
LZH S **S 08 12 37.5 -1.3**
LZH sS **sS 08 12 58.5 -1.7**
LZH SS SS 08 15 43.3 -8.4
LZH pmax pmax
comp=Z,36nm,1.0s
LZH pmax pmax
comp=Z,120nm,4.2s
LZH LR LR
comp=N,250nm,13.9s
LZH LR LR
comp=E,340nm,16.9s
LZH LR LR
comp=Z,420nm,18.1s
CMAR Chiang Mai Arr 43.55 284 P **P 08 06 23.5 +1.5**
CMAR Chiang Mai Arr 43.55 284 P **P 08 06 23.5 +1.5**
comp=Z,8.0nm,0.8s,baz=82,slow=5.6,SNR=15
CMAR LR LR 08 24 10.6
comp=Z,140nm,18.8s,baz=115,slow=36
STKA Stephens Creek 44.13 183 P **P 08 06 25.2 -1.1**
STKA Stephens Creek 44.13 183 P **P 08 06 25.2 -1.1**
comp=Z,2.1nm,0.7s,baz=14,slow=15,SNR=4.9
MSVF Nonsavu 45.21 131 *e*P **P 08 06 35.9 +0.6**
MSVF pmax pmax
comp=Z,78nm,1.7s
MSVF Nonsavu 45.21 131 *e*P **P 08 06 35.9 +0.6**
comp=Z,78nm,1.7s
FX1 Attu Island--F 46.66 24 P **P 08 06 46.3 +0.2**
FX1 Attu Island--F 46.66 24 P **P 08 06 46.3 +0.2**
comp=Z,9.3nm,0.5s,baz=242,slow=1.1,SNR=12
ULN Ulaanbaatar 46.72 326 *e*P **P 08 06 47.5 +0.6**
comp=Z,12nm,1.2s
SONM Songino Array 47.06 326 P **P 08 06 50.2 +0.7**
SONM PcP **PcP 08 08 21.6 +0.6**
SONM ScP **ScP 08 12 10.5 -0.6**
SONM Songino Array 47.06 326 P **P 08 06 50.2 +0.7**
comp=Z,3.3nm,0.6s,baz=143,slow=8.8,SNR=21
SONM PcP **PcP 08 08 21.6 +0.6**
comp=Z,6.7nm,0.7s,baz=152,slow=3.8,SNR=11
SONM ScP **ScP 08 12 10.5 -0.6**
comp=Z,1.8nm,0.7s,baz=145,slow=3.8,SNR=7.4
SONM LR LR 08 26 01.4
comp=Z,180nm,20.9s,baz=234,slow=35
GTA Gaotai 47.15 313 ⇑P **P 08 06 51.3 +0.9**
GTA pP **pP 08 07 01.8 -1.5**
GTA sP **sP 08 07 07.0 -1.9**
GTA PcP **PcP 08 08 22.8 +1.3**
GTA ScP **ScP 08 12 12.5 +0.8**
GTA S **S 08 13 41.0 +1.3**
GTA sS **sS 08 14 00.0 -1.4**
GTA SS **SS 08 17 01.5 -5.9**
GTA pmax pmax
comp=Z,26nm,0.7s
GTA pmax pmax
comp=Z,110nm,4.3s
GTA LR LR
comp=N,140nm,16.2s
GTA LR LR
comp=E,170nm,19.5s
GTA LR LR
comp=Z,210nm,21.9s
ZAK Zakamensk 50.20 327 *e*P **P 08 07 13.7 +0.1**
ZAK pmax pmax
comp=Z,9.0nm,1.2s
YAK Yakutsk 50.53 351 *e*P **P 08 07 15.2 -0.5**
YAK *e**PP **pP 08 07 23.8 -5.0**
YAK *e* 08 08 33.1
YAK *e*PPP PPP 08 10 06.1
YAK *e*S **S 08 14 24.3 -2.0**
YAK *e**SS sS 08 14 40.8 -7.4
YAK *e* 08 17 02.7
YAK *e*SS **SS 08 17 58.3 -2.4**
YAK pmax pmax
comp=Z,18nm,0.9s
YAK pmax pmax
comp=E,2.0nm,0.8s
YAK pmax pmax
comp=N,5.0nm,0.9s
YAK smax smax
comp=E,14nm,1.7s
YAK smax smax
comp=N,18nm,1.9s
YAK MLR MLR
comp=N,108nm,17.0s
YAK MLR MLR
comp=E,93nm,20.0s
TLY Talaya 50.76 329 *e*P **P 08 07 18.7 +1.0**
TLY pmax pmax
comp=Z,4.0nm,0.7s
TLY MLR MLR
comp=Z,90nm,17.0s
LSA Lhasa 51.58 298 P **P 08 07 26.3 +1.5**
LSA pmax pmax
comp=Z,30nm,0.7s
LSA Lhasa 51.58 298 *e*P **P 08 07 26.3 +1.5**
LSA pmax pmax
comp=Z,18nm,0.7s
LSA Lhasa 51.58 298 *e*P **P 08 07 26.3 +1.5**
comp=Z,18nm,0.7s
TAPN Taplejung 54.35 295 *e*P **P 08 07 45.4 +0.4**
comp=Z,49nm,0.8s
ODAN Odare 54.60 294 *e*P **P 08 07 47.0 +0.2**
comp=Z,34nm,0.8s
RAMN Ramite 55.31 294 *e*P **P 08 07 52.1 +0.2**
comp=Z,62nm,0.8s
JIRN Jiri 55.72 295 *e*P **P 08 07 55.5 +0.5**
comp=Z,79nm,0.6s
GUN Gumba 56.01 295 *e*P **P 08 07 57.5 +0.5**
comp=Z,136nm,0.7s
PKI Pulchoki 56.41 295 *e*P **P 08 07 59.7 -0.2**
comp=Z,26nm,0.6s
PKIN Phulchoki 56.42 295 *e*P **P 08 08 00.1 +0.2**
comp=Z,24nm,0.7s
KKN Kakani 56.53 295 *e*P **P 08 08 00.7 +0.1**
comp=Z,39nm,0.7s
DMN Daman 56.68 295 *e*P **P 08 08 01.9 +0.2**
comp=Z,64nm,0.8s
GKN Gorkha 57.11 295 *e*P **P 08 08 05.2 +0.5**
comp=Z,0.6nm,0.2s
WMQ Urumqi 57.16 314 P **P 08 08 05.8 +1.2**
WMQ pP **pP 08 08 18.0 +0.1**
WMQ sP **sP 08 08 23.5 +0.2**
WMQ PcP **PcP 08 08 59.0 +0.1**
WMQ PP **PP 08 10 15.0 +3.1**
WMQ *e*S **S 08 15 56.0 -0.7**
WMQ pmax pmax
comp=Z,34nm,1.0s
WMQ pmax pmax
comp=Z,140nm,3.6s
WMQ LR LR
comp=N,330nm,34.0s
WMQ LR LR
comp=E,510nm,33.0s
WMQ LR LR
comp=Z,410nm,22.0s
BILL Bilibino 57.45 10 *e*P **P 08 08 05.4 -0.7**
BILL *i* 08 08 54.5
BILL pmax pmax
comp=Z,4.0nm,0.7s
DANN Dangsing 57.90 296 *e*P **P 08 08 10.6 +0.2**
comp=Z,133nm,0.6s
KOLN Koldanda 58.02 295 *e*P **P 08 08 11.2 +0.1**
comp=Z,49nm,0.7s
PYUN Piuthan 58.57 295 *e*P **P 08 08 14.9 -0.1**
comp=Z,141nm,0.8s
TIXI Tiksi 59.85 355⇓*e*P **P 08 08 22.1 -0.6**
TIXI pmax pmax
comp=Z,7.0nm,2.5s
MK31 Makanchi Array 61.58 317 *e*P **P 08 08 35.7 +0.7**
MK31 Makanchi Array 61.58 317 *e*P **P 08 08 35.7 +0.7**
MKAR Makanchi Array 61.58 317*ce*P **P 08 08 35.5 +0.6**
MKAR pmax pmax
comp=Z,14nm,0.6s
MKAR Makanchi Array 61.58 317 *e*P **P 08 08 35.8 +0.8**
MKAR PcP **PcP 08 09 16.3 -0.1**
MKAR Makanchi Array 61.58 317 P **P 08 08 35.6 +0.6**
comp=Z,14nm,0.6s,baz=92,slow=8.6,SNR=155
MKAR PcP **PcP 08 09 16.3 -0.1**
comp=Z,6.9nm,0.8s,baz=96,slow=6.2,SNR=5.7
MKAR LR LR 08 36 30.5
comp=Z,120nm,19.9s,baz=261,slow=37
ZAA0 Zalesovo Array 61.93 325 *e*P **P 08 08 36.5 -0.6**
ZAA0 *e*PcP **PcP 08 09 17.0 -0.6**
ZALV Zalesovo Beam 61.93 325 P **P 08 08 36.7 -0.5**
ZALV 08 09 17.1
ZALV Zalesovo Beam 61.93 325 *i* P **P 08 08 37.5 +0.3**
ZALV pmax pmax
comp=Z,10.0nm,0.6s
ZALV Zalesovo Beam 61.93 325 P **P 08 08 36.6 -0.5**
ZALV PcP **PcP 08 09 17.1 -0.5**
ZALV Zalesovo Beam 61.93 325 P **P 08 08 36.6 -0.5**
comp=Z,10nm,0.6s,baz=108,slow=7.1,SNR=46
ZALV PcP **PcP 08 09 17.1 -0.5**
comp=Z,15nm,0.6s,baz=117,slow=3.8,SNR=15
ZALV LR LR 08 35 25.1
comp=Z,104nm,19.6s,baz=340,slow=36
NVS Novosibirsk 63.09 326 *e*P **P 08 08 45.0 +0.1**
NVS pmax pmax
comp=Z,29nm,1.4s
NVS pmax pmax
comp=N,8.0nm,0.8s
NVS pmax pmax
comp=E,9.0nm,0.8s
KURK Kurchatov 64.77 320 P **P 08 08 56.4 +0.4**
KURK Kurchatov 64.77 320 P **P 08 08 56.4 +0.4**
KURBB Kurchatov Arra 64.81 320 P **P 08 08 56.4 +0.1**
comp=E,34nm,0.7s,baz=103,slow=6.7,SNR=260
KSH Kashi 65.09 308 P **P 08 09 01.5 +3.0**
KSH *e*pP **pP 08 09 14.5 +2.5**
KSH *e*sP **sP 08 09 19.5 +2.1**
KSH *e*PcP **PcP 08 09 33.8 +2.8**
KSH *e*PP **PP 08 11 27.0 +4.9**
KSH *e*S **S 08 17 39.0 +1.1**
KSH *e*sS **sS 08 18 01.5 +1.0**
KSH pmax pmax
comp=Z,28nm,0.7s
KSH pmax pmax
comp=Z,200nm,5.1s
KSH LR LR
comp=N,740nm,9.7s
KSH LR LR
comp=E,490nm,8.9s
KSH LR LR
comp=Z,250nm,4.9s
KDAK Kodiak Island 65.58 32 P **P 08 09 00.6 -0.5**
KDAK Kodiak Island 65.58 32 P **P 08 09 00.6 -0.5**
comp=Z,4.2nm,0.5s,baz=22,slow=4.3,SNR=9.0
TKM2 Tokmak 2 65.67 312 *e*P **P 08 09 03.0 +0.7**
TKM2 pmax pmax
comp=Z,9.0nm,0.8s
TKM2 Tokmak 2 65.67 312 *e*P **P 08 09 03.0 +0.7**
comp=Z,8.5nm,0.8s
RSO Redoubt South 66.27 29 *e*P **P 08 09 05.5 -0.3**
AAK Ala-Archa 66.45 311⇓*e*P **P 08 09 07.6 +0.3**
AAK pmax pmax
comp=Z,23nm,1.4s
AAK Ala-Archa 66.45 311 P **P 08 09 06.5 -0.7**
AAK Ala-Archa 66.45 311 P **P 08 09 06.5 -0.7**
comp=Z,3.4nm,0.4s,baz=183,slow=4.3,SNR=5.1
EKS2 Erkin-Say 66.98 311 *e*P **P 08 09 11.1 +0.5**
EKS2 Erkin-Say 66.98 311 *e*P **P 08 09 11.1 +0.5**
PMR Palmer 68.28 28 *e*P **P 08 09 17.1 -1.1**
PMR pmax pmax
comp=Z,7.0nm,0.7s
PMR Palmer 68.28 28 *e*P **P 08 09 17.1 -1.1**
comp=Z,7.1nm,0.7s
SML Sawmill 68.70 28 *e*P **P 08 09 20.4 -0.5**
SML Sawmill 68.70 28 *e*P **P 08 09 20.4 -0.5**
COLD Coldfoot 69.39 22 *e*P **P 08 09 25.6 +0.5**
KKAR Karatay Array 69.40 311 *e*P **P 08 09 26.2 +0.6**
KKAR pmax pmax
comp=Z,8.0nm,0.6s
KKAR Karatay Array 69.40 311 *e*P **P 08 09 26.2 +0.6**
comp=Z,7.6nm,0.6s
COLA College 69.66 25 *e*P **P 08 09 26.7 0.0**
COLA College 69.66 25 *e*P **P 08 09 26.7 0.0**
ILAR Eielson Array 70.04 25 P **P 08 09 27.3 -1.8**
ILAR Eielson Array 70.04 25 P **P 08 09 27.3 -1.8**
comp=Z,3.0nm,0.5s,baz=250,slow=5.5,SNR=79
ILAR LR LR 08 36 42.9
comp=Z,119nm,20.0s,baz=284,slow=33
BVAR Borovoye Array 70.16 322 P **P 08 09 30.2 +0.1**
BVAR Borovoye Array 70.16 322 P **P 08 09 30.2 +0.1**
BVAR Borovoye Array 70.16 322 P **P 08 09 30.2 +0.1**
comp=Z,41nm,0.5s,baz=104,slow=8.1,SNR=211
BRVK Borovoye 70.23 322*ce*P **P 08 09 29.9 -0.6**
BRVK pmax pmax
comp=Z,30nm,0.6s
BRVK Borovoye 70.23 322 *e*P **P 08 09 30.5 +0.1**
comp=Z,41nm,0.5s
KBL Kabul 70.54 302 *e*P **P 08 09 33.1 +0.1**
KBL pmax pmax
comp=Z,23nm,1.0s
KBL Kabul 70.54 302 *e*P **P 08 09 33.1 +0.1**
comp=Z,23nm,1.0s
DOT Dot Lake 71.01 27 *e*P **P 08 09 35.0 -0.1**
comp=Z,6.8nm,0.8s
PPT Papeete 72.23 113 LR LR 08 38 24.5
comp=Z,187nm,18.6s,baz=349,slow=33
EGAK Eagle 72.45 26 *e*P **P 08 09 43.1 -0.6**
comp=Z,3.9nm,0.6s
INK Inuvik 75.81 22 P **P 08 10 02.9 -0.3**
INK Inuvik 75.81 22 P **P 08 10 02.9 -0.3**
comp=Z,9.5nm,0.6s,baz=288,slow=5.5,SNR=23
SVE Sverdlovsk 75.93 326⇑*i*P **P 08 10 04.7 +0.6**
SVE pmax pmax
comp=Z,39nm,0.9s
ARU Arti 77.09 325*c i*P **P 08 10 10.7 0.0**
ARU *PP **pP 08 10 24.7 +0.3**
ARU 08 13 02.6
ARU S **S 08 19 57.9 +2.0**
ARU pmax pmax
comp=Z,33nm,0.7s
DLBC Dease Lake 77.50 33 P **P 08 10 13.9 +0.9**
DLBC Dease Lake 77.50 33 P **P 08 10 13.9 +0.9**
comp=Z,6.9nm,0.8s,baz=278,slow=2.3,SNR=7.6
AKTO Aktyubinsk 77.83 319 P **P 08 10 14.7 -0.2**
AKTO Aktyubinsk 77.83 319 P **P 08 10 14.7 -0.2**
AKTO Aktyubinsk 77.83 319 P **P 08 10 14.7 -0.2**
comp=Z,12nm,0.7s,baz=98,slow=8.4,SNR=37
IDAH Dahanechah 78.31 301 *e*P **P 08 10 19.3 +1.0**
IEMG Emamgholi 78.72 306 *e*P **P 08 10 21.3 +0.8**
IAKL Akhelmad 78.73 305 *e*P **P 08 10 20.9 +0.3**
BBB Bella Bella 79.12 39 P **P 08 10 22.9 +0.9**
BBB Bella Bella 79.12 39 P **P 08 10 22.9 +0.9**
comp=Z,18nm,1.1s,baz=263,slow=6.7,SNR=3.9
ISFR Sfrayin 79.28 306 *e*P **P 08 10 24.2 +0.6**
ISHV Shirvan 79.45 306 *e*P **P 08 10 24.0 -0.4**
ICHK Chekchek 82.95 301 *e*P **P 08 10 42.9 -0.2**
JCW Jim Creek 83.66 42 P **P 08 10 47.1 +0.9**
RPW Rockport 83.88 42 P **P 08 10 48.0 +0.7**
LON Longmire 84.03 44 *e*P **P 08 10 49.4 +1.2**
LON pmax pmax
comp=Z,74nm,2.7s
LON Longmire 84.03 44 *e*P **P 08 10 49.4 +1.2**
comp=Z,74nm,2.7s
HUMO Hull Mountain 84.05 48 *e*P **P 08 10 49.9 +1.6**
IDMV Damavand 84.27 305 *e*P **P 08 10 50.0 +0.1**
YKA Yellowknife Ar 84.34 27 P **P 08 10 49.2 0.0**
YKA Yellowknife Ar 84.34 27 P **P 08 10 49.2 0.0**
comp=Z,12nm,0.6s,baz=287,slow=5.0,SNR=158
YKA LR LR 08 45 11.0
comp=Z,15nm,22.0s,baz=70,slow=33
YBH Yreka Blue Hor 84.41 49 *e*P **P 08 10 51.2 +1.0**
comp=Z,8.7nm,1.1s
YBH Yreka Blue Hor 84.41 49 P **P 08 10 50.4 +0.2**
comp=Z,8.6nm,0.8s,baz=307,slow=2.8,SNR=23
IPAR Pars 84.54 299 *e*P **P 08 10 50.0 -1.4**
ISRV Sarvestan 84.57 299 *e*P **P 08 10 50.6 -1.0**
TBM Table Mountain 84.75 43 P **P 08 10 52.7 +0.9**
SPITS Spitsbergen Ar 84.99 351 P **P 08 10 53.0 +0.6**
SPITS Spitsbergen Ar 84.99 351 P **P 08 10 53.0 +0.6**
comp=Z,3.5nm,0.9s,baz=74,slow=6.2,SNR=6.6
IR3 Iran Long-Peri 85.10 305 *e*P **P 08 10 52.7 -1.1**
LBCM Butte Creek Ri 85.60 49 P **P 08 10 57.2 +0.9**
OD2 Odessa Site #2 85.95 42 P **P 08 10 58.1 +0.4**
IRAZ Razeghan 85.99 305 *e*P **P 08 10 57.8 -0.6**
MOD Modoc 86.13 48 *e*P **P 08 10 59.6 +0.7**
comp=Z,4.5nm,0.8s
APA Apatity 86.14 339⇑*i*P **P 08 10 57.3 -0.8**
APA pmax pmax
comp=Z,12nm,0.8s
APA MLR MLR
comp=Z,200nm,20.0s
BEKR Beckworth 86.55 50 *e*P **P 08 11 01.5 +0.4**
comp=Z,6.8nm,1.1s
NEW Newport 86.77 41 *e*P **P 08 11 02.3 +0.6**
comp=Z,23nm,0.8s
NEW Newport 86.77 41 P **P 08 11 02.4 +0.6**
comp=Z,21nm,0.7s,baz=277,slow=3.7,SNR=62
CMB Columbia Colle 86.95 52 *e*P **P 08 11 03.2 +0.3**
CMB pmax pmax
comp=Z,6.0nm,0.9s
CMB Columbia Colle 86.95 52 *e*P **P 08 11 03.2 +0.3**
comp=Z,5.7nm,0.9s
WVOR Wild Horse Val 87.21 47 *e*P **P 08 11 04.4 +0.3**
WVOR pmax pmax
comp=Z,6.0nm,0.8s
WVOR Wild Horse Val 87.21 47 *e*P **P 08 11 04.4 +0.3**
comp=Z,5.6nm,0.8s
KEV Kevo 87.26 342 *e*P **P 08 11 03.1 -0.5**
KEV pmax pmax
comp=Z,7.0nm,0.6s
KEV Kevo 87.26 342 *ep* **P 08 11 03.1 -0.5**
comp=Z,7.0nm,0.6s
PAHR Pah Rah Range 87.32 50 *e*P **P 08 11 06.0 +1.2**
BMO Blue Mountains 87.53 45 *e*P **P 08 11 06.0 +0.4**
BMO pmax pmax
comp=Z,11nm,0.9s
BMO Blue Mountains 87.53 45 *e*P **P 08 11 06.0 +0.4**
comp=Z,11nm,0.9s
PTRM Twissleman Ran 87.64 54 *e*P **P 08 11 07.5 +1.2**
ARCES ARCESS Array B 87.83 342 P **P 08 11 06.3 0.0**
ARCES ARCESS Array B 87.83 342 P **P 08 11 06.3 0.0**
comp=Z,5.6nm,0.6s,baz=68,slow=6.2,SNR=54
ARCES LR LR 08 55 44.4
comp=Z,64nm,19.9s,baz=345,slow=39
ARE0 ARCESS Array S 87.83 342 *e*P **P 08 11 06.2 -0.2**
BSMT Bassoo Peak 88.39 41 *e*P **P 08 11 11.1 +1.3**
NVAR Mina Array Bea 88.45 51 P **P 08 11 11.3 +1.1**
NVAR Mina Array Bea 88.45 51 P **P 08 11 11.3 +1.1**
comp=Z,9.4nm,0.7s,baz=266,slow=5.7,SNR=77
WALA Waterton Lakes 88.59 40 *e*P **P 08 11 12.3 +1.8**
comp=Z,0.2nm,0.9s
BLMT Blacktail Moun 88.62 41 *e*P **P 08 11 11.4 +0.6**
comp=Z,3.5nm,0.4s
MOS Moscow 88.68 327 *e*P P 08 11 05.8 -4.8
MOS pmax pmax
comp=Z,66nm,0.9s
JOF Joensuu 88.87 335 *e*P **P 08 11 10.9 -0.5**
JOF pmax pmax
comp=Z,22nm,0.7s
JOF Joensuu 88.87 335 *ep* **P 08 11 10.9 -0.5**
comp=Z,22nm,0.7s
MFID Camas Ranch 88.94 46 *e*P **P 08 11 12.9 +0.6**
comp=Z,6.5nm,0.6s
KBZ Khabaz 89.20 315 P **P 08 11 12.5 -0.8**
KBZ Khabaz 89.20 315 P **P 08 11 12.5 -0.8**
KBZ Khabaz 89.20 315 P **P 08 11 12.5 -0.8**
comp=Z,5.8nm,0.9s,baz=112,slow=5.1,SNR=8.6
KBZ LR LR 08 56 16.0
comp=Z,78nm,19.3s,baz=243,slow=39
VSR Storozhevoye 89.34 323 *e*P **P 08 11 12.1 -1.7**
VSR pmax pmax
comp=Z,40nm,0.6s
VSR pmax pmax
comp=N,10.0nm,0.8s
VSR pmax pmax
comp=E,20nm,0.8s
VORD Divnogorie 89.34 322 *e*P **P 08 11 12.1 -1.7**
VORD pmax pmax
comp=N,20nm,0.5s
VORD pmax pmax
comp=Z,20nm,0.5s
VORD pmax pmax
comp=E,30nm,1.4s
OBN Obninsk 89.47 327*c i*P **P 08 11 12.9 -1.4**
OBN pmax pmax
comp=Z,46nm,1.0s
OBN MLR MLR
comp=Z,100nm,16.0s
ELK Elko 90.11 48 *e*P **P 08 11 19.4 +1.4**
VNDA Vanda 90.41 176 LR LR 08 52 35.7
comp=Z,80nm,19.9s,baz=85,slow=36

GSC	**Goldstone**	**90.42**	**54**	*e*P	**P**	**08 11 20.2**	**+0.8**
GSC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GSC	**Goldstone**	**90.42**	**54**	*e*P	**P**	**08 11 20.2**	**+0.8**
	comp=Z,9.4nm,0.9s						
LRM	**Limekiln Ridge**	**90.53**	**43**	*e*P	**P**	**08 11 20.4**	**+0.6**
MCMT	**McKenzie Canyo**	**90.58**	**44**	*e*P	**P**	**08 11 21.2**	**+1.1**
	comp=Z,1.0nm,0.9s						
DLMT	**Dillon**	**90.58**	**43**	*e*P	**P**	**08 11 20.9**	**+0.9**
	comp=Z,1.4nm,0.7s						
PFO	**Pinyon Flat Ob**	**91.15**	**55**	P	**P**	**08 11 23.2**	**+0.4**
PFO	**Pinyon Flat Ob**	**91.15**	**55**	P	**P**	**08 11 23.2**	**+0.4**
	comp=Z,4.6nm,0.9s,baz=276,slow=6.1,SNR=4.2						
KAF	**Kangasniemi**	**91.30**	**335**	*e*P	**P**	**08 11 21.4**	**-1.3**
KAF				pmax	pmax		
	comp=Z,17nm,0.7s						
KAF	**Kangasniemi**	**91.30**	**335**	*e*p	**P**	**08 11 21.4**	**-1.3**
	comp=Z,17nm,0.7s						
FIA1	**FINESS Array S**	**91.73**	**335**	*e*P	**P**	**08 11 23.5**	**-1.3**
FINES	**FINESS Array B**	**91.73**	**335**	P	**P**	**08 11 23.5**	**-1.3**
FINES	**FINESS Array B**	**91.73**	**335**	P	**P**	**08 11 23.5**	**-1.3**
	comp=Z,17nm,0.5s,baz=69,slow=4.8,SNR=85						
YMR	**Madison River**	**91.90**	**44**	*e*P	**P**	**08 11 28.2**	**+2.0**
	comp=Z,4.8nm,0.7s						
DUG	**Dugway**	**92.04**	**48**	*e*P	**P**	**08 11 27.7**	**+0.8**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
DUG	**Dugway**	**92.04**	**48**	*e*P	**P**	**08 11 27.7**	**+0.8**
	comp=Z,3.7nm,1.0s						
IMW	**Indian Meadow**	**92.17**	**44**	*e*P	**P**	**08 11 29.2**	**+1.6**
	comp=Z,2.4nm,0.6s						
CCUT	**Cedar City**	**92.44**	**51**	*e*P	**P**	**08 11 30.6**	**+1.7**
HWUT	**Hardware Ranch**	**92.49**	**47**	*e*P	**P**	**08 11 29.8**	**+0.8**
	comp=Z,3.8nm,0.9s						
RAYN	**Ar Rayn**	**92.53**	**295**	*e*P	**P**	**08 11 28.6**	**-0.7**
ANN	**Anapa**	**92.59**	**317**	*e*P	**P**	**08 11 26.9**	**-2.2**
ANN				*e**PP	**pP**	**08 11 43.1**	**0.0**
ANN				*e*		08 21 54.1	
ANN				pmax	pmax		
	comp=Z,26nm,0.7s						
RLMT	**Red Lodge**	**92.88**	**43**	*e*P	**P**	**08 11 31.9**	**+1.2**
	comp=Z,4.9nm,0.7s						
JLU	**Jordanelle**	**92.90**	**47**	*e*P	**P**	**08 11 31.6**	**+0.7**
	comp=Z,1.2nm,0.6s						
FFC	**Flin Flon**	**93.33**	**32**	*i* P	**P**	**08 11 33.0**	**+0.7**
PDAR	**Pinedale Array**	**93.51**	**45**	P	**P**	**08 11 32.7**	**-1.0**
PDAR	**Pinedale Array**	**93.51**	**45**	P	**P**	**08 11 32.7**	**-1.0**
	comp=Z,0.7nm,0.5s,baz=238,slow=2.8,SNR=8.3						
PDAR				LR	LR	08 49 06.5	
	comp=Z,90nm,18.1s,baz=292,slow=33						
AKASG	**Malin Array Be**	**95.32**	**324**	P	**P**	**08 11 40.8**	**-0.7**
AKASG	**Malin Array Be**	**95.32**	**324**	P	**P**	**08 11 40.8**	**-0.7**
AKASG	**Malin Array Be**	**95.32**	**324**	P	**P**	**08 11 40.8**	**-0.7**
	comp=Z,2.2nm,0.5s,baz=51,slow=4.7,SNR=5.2						
AKASG				LR	LR	08 58 33.6	
	comp=Z,108nm,19.1s,baz=55,slow=38						
PV01	**Paradox Valley**	**95.83**	**49**	*e*P	**P**	**08 11 44.7**	**+0.3**
	comp=Z,195nm,1.0s						
BR131	**Keskin Array S**	**97.07**	**313**	*e*P	**P**	**08 11 49.1**	**-0.8**
	comp=Z,2.5nm,0.7s						
BRTR	**Keskin Array B**	**97.07**	**313**	P	**P**	**08 11 48.6**	**-1.3**
BRTR	**Keskin Array B**	**97.07**	**313**	P	**P**	**08 11 48.6**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=72,slow=4.0,SNR=11						
BRTR				LR	LR	08 58 33.8	
	comp=Z,37nm,18.3s,baz=286,slow=37						
HFS	**Hagfors**	**97.43**	**337**	LR	LR	09 00 19.0	
	comp=Z,68nm,18.6s,baz=262,slow=38						
NB2	**NORSAR Subarra**	**97.72**	**339**	P	**P**	**08 11 50.6**	**-1.6**
	comp=Z,2.9nm,0.7s,baz=57,slow=5.1						
NOA	**NORSAR Array B**	**97.72**	**339**	P	**P**	**08 11 50.6**	**-1.6**
NOA	**NORSAR Array B**	**97.72**	**339**	P	**P**	**08 11 50.6**	**-1.6**
	comp=Z,2.8nm,0.7s,baz=49,slow=4.8,SNR=10						
NOA				LR	LR	08 59 32.5	
	comp=Z,65nm,22.0s,baz=55,slow=38						
ANMO	**Albuquerque**	**98.57**	**51**	P	**P**	**08 11 56.8**	**0.0**
ANMO	**Albuquerque**	**98.57**	**51**	P	**P**	**08 11 56.8**	**0.0**
	comp=Z,0.4nm,0.3s,baz=238,slow=15,SNR=2.5						
ULM	**Lac du Bonnet**	**98.77**	**34**	LR	LR	09 01 29.0	
	comp=Z,61nm,18.2s,baz=350,slow=38						
KOLS	**Kolonicke sedl**	**100.11**	**325**	*e*P	**Pdif**	**08 12 03.0**	**-0.1**
KOLS	**Kolonicke sedl**	**100.11**	**325**	PDIF	**Pdif**	**08 12 03.0**	**-0.1**
CRVS	**Cervenica-Dubn**	**100.58**	**325**	*e*P	**Pdif**	**08 12 02.1**	**-3.1**
CRVS	**Cervenica-Dubn**	**100.58**	**325**	PDIF	**Pdif**	**08 12 02.1**	**-3.1**
VYHS	**Vyhne**	**102.25**	**326**	*e*P	**Pdif**	**08 12 12.9**	**+0.2**
VYHS	**Vyhne**	**102.25**	**326**	PDIF	**Pdif**	**08 12 12.9**	**+0.2**
CLL	**Collm**	**103.51**	**331**	*e*P	**Pdif**	**08 12 17.0**	**-1.2**
CLL	**Collm**	**103.51**	**331**	*e*Pdif	**Pdif**	**08 12 17.0**	**-1.2**
CLL				LmV		09 06 00.0	
	comp=Z,100nm,21.0s						
TORD	**Torodi Ar. Bea**	**134.61**	**303**	PKP	**PKPdf**	**08 17 36.8**	**+0.1**
TORD				PP	**PP**	**08 20 06.0**	**-3.5**
TORD				SKPbc	**SKPbc**	**08 21 03.4**	**+0.4**
TORD	**Torodi Ar. Bea**	**134.61**	**303**	PKP	**PKPdf**	**08 17 36.8**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=35,slow=2.4,SNR=13						
TORD				PP	**PP**	**08 20 06.0**	**-3.5**
	comp=Z,1.3nm,1.0s,baz=89,slow=6.3,SNR=3.8						
TORD				SKPbc	**SKPbc**	**08 21 03.4**	**+0.4**
	comp=Z,1.8nm,0.9s,baz=55,slow=2.9,SNR=4.4						
DBIC	**Dimbokro**	**143.49**	**300**	PKP	PKPbc	08 17 50.4	+0.1
DBIC	**Dimbokro**	**143.49**	**300**	PKP	PKPbc	08 17 50.4	+0.1
	comp=Z,8.7nm,0.6s,baz=68,slow=1.9,SNR=19						
LPAZ	**La Paz**	**148.87**	**101**	PKPbc	**PKPbc**	**08 18 05.0**	**-1.6**
LPAZ	**La Paz**	**148.87**	**101**	PKPbc	**PKPbc**	**08 18 05.0**	**-1.6**
	comp=Z,1.5nm,0.5s,baz=284,slow=4.1,SNR=12						
CPUP	**Villa Florida**	**155.82**	**128**	PKPab	**PKPab**	**08 18 39.2**	**+0.5**
CPUP	**Villa Florida**	**155.82**	**128**	PKPab	**PKPab**	**08 18 39.2**	**+0.5**
	comp=Z,0.3nm,0.4s,baz=217,slow=20,SNR=2.4						

*IDC **29** 08:34:46.2±1.4,55°.46N×166°.62E, h0km, mb3.4/3, mb1 3.8/5, mb1mx3.4/29, mbtmp3.4/5, ML3.2/2, MS2.7/1, Ms1 2.7/1, ms1mx2.3/31, Error ellipse: s-maj=25.8km s-min=16.4km az=37.0*

*ISCJB **29** 08:34:47.5±0.6, 55°.38N±0°.05×166°.49E±0°.06, h20km, mb3.4/3, Error ellipse: s-maj=7.7km s-min=5.1km az=175.5*

*KRSC **29** 08:34:48.5±0.9, 55°.32N×166°.32E, h23km±22km, ML3.7*

ISC 29 08:34:48.1±0.9, 55°.34N±0°.07×166°.59E±0°.05, h20km, n30, σ1§36/45, mb3.5/3, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	**Bering**	**0.38**	**250**	*i* P	**Pb**	**08 34 55.6**	**-0.5**
BKI				*i* S	**Sb**	**08 35 01.2**	**-0.3**
MKZ	**Mys Kozlova**	**2.91**	**256**	*e*S	**Sn**	**08 36 06.5**	**-1.1**
BDR	**Baidarnaya**	**3.27**	**294**	P	**Pn**	**08 35 37.8**	**-0.4**
SRKR	**Sorokina**	**3.32**	**296**	P	**Pn**	**08 35 38.3**	**-0.6**
ZLN	**Zelenaya**	**3.35**	**284**	P	**Pn**	**08 35 39.5**	**+0.2**
BZGR	**Bezymyannyi-Gr**	**3.40**	**283**	*e*P	**Pn**	**08 35 40.8**	**+0.8**
BZGR				S	**Sn**	**08 36 19.3**	**-0.4**
BZMR	**Bezymyannaya**	**3.51**	**282**	P	**Pn**	**08 35 42.0**	**+0.4**
BZMR				S	**Sn**	**08 36 22.0**	**-0.6**
BZWR	**Bezymyannyi-We**	**3.51**	**283**	P	**Pn**	**08 35 42.0**	**+0.4**
BZWR				S	**Sn**	**08 36 21.9**	**-0.7**
KRSR	**Krestovskiy**	**3.52**	**287**	P	**Pn**	**08 35 41.1**	**-0.6**
KIRR	**Kirishev**	**3.60**	**282**	P	**Pn**	**08 35 43.3**	**+0.5**
KIRR				S	**Sn**	**08 36 22.3**	**-2.4**
KMNR	**Kamenistaya**	**3.64**	**279**	P	**Pn**	**08 35 44.7**	**+1.4**
KMNR				S	**Sn**	**08 36 24.9**	**-0.7**
KPT	**Kopyto**	**3.67**	**283**	P	**Pn**	**08 35 44.8**	**+1.1**
KPT				S	**Sn**	**08 36 26.0**	**-0.3**
TUMR	**Tumrok**	**3.69**	**272**	P	**Pn**	**08 35 44.5**	**+0.5**
TUMR				S	**Sn**	**08 36 25.1**	**-1.7**
SRDR	**Sredinnyy**	**4.00**	**287**	P	**Pn**	**08 35 48.5**	**+0.2**
SRDR				S	**Sn**	**08 36 33.2**	**-1.3**
SPN	**Mys Shipunski**	**4.46**	**243**	S	**Sn**	**08 36 43.0**	**-2.8**
FX1	**Attu Island--F**	**4.58**	**120**	Pn	**Pn**	**08 35 55.4**	**-0.7**
	3.4nm,0.3s,baz=330,slow=3.8,SNR=21						
FX1				Sn	**Sn**	**08 36 47.0**	**-1.7**
	4.9nm,0.3s,baz=61,slow=23,SNR=12						
SDLR	**Sedlovina**	**4.96**	**249**	*e*P	**Pn**	**08 36 02.8**	**+1.3**
SDLR				S	**Sn**	**08 36 56.1**	**-2.2**
SMAR	**Somma**	**5.01**	**249**	*e*P	**Pn**	**08 36 03.0**	**+0.7**
KRER	**Koryakskii**	**5.02**	**249**	*e*P	**Pn**	**08 36 03.8**	**+1.4**
UGLR	**Uglovaya**	**5.03**	**248**	*e*P	**Pn**	**08 36 03.5**	**+1.1**
UGLR				S	**Sn**	**08 36 57.1**	**-2.8**
AVH	**Avacha**	**5.05**	**249**	*e*P	**Pn**	**08 36 04.1**	**+1.5**
AVH				*e*S	**Sn**	**08 36 58.6**	**-1.7**
KOK	**Koryaka**	**5.09**	**250**	*e*P	**Pn**	**08 36 04.4**	**+1.2**
GNL	**Ganaly**	**5.30**	**255**	*e*P	**Pn**	**08 36 07.7**	**+1.5**
RUS	**Russkaya**	**5.59**	**242**	P	**Pn**	**08 36 11.7**	**+1.6**
PETK	**Petropavlovsk-**	**5.67**	**250**	Pn	**Pn**	**08 36 12.7**	**+1.5**
	0.8nm,0.3s,baz=83,slow=18,SNR=13						
PETK				Sn	**Sn**	**08 37 17.3**	**+1.6**
	0.5nm,0.3s,baz=286,slow=17,SNR=3.7						
PETK				LR	LR	08 38 37.7	
	comp=Z,62nm,18.2s,baz=113,slow=40						
MTVR	**Mutnovka**	**5.73**	**244**	P	**Pn**	**08 36 13.1**	**+1.0**
MTVR				S	**Sn**	**08 37 15.8**	**-1.5**
ASAK	**Asacha**	**5.93**	**244**	P	**Pn**	**08 36 16.9**	**+2.1**
ILAR	**Eielson Array**	**24.49**	**49**	P	**P**	**08 40 04.8**	**-0.8**
	1.1nm,0.9s,baz=262,slow=8.4,SNR=14						
YKA	**Yellowknife Ar**	**38.88**	**47**	P	**P**	**08 42 11.8**	**+0.1**
	0.4nm,0.9s,baz=291,slow=7.2,SNR=3.1						
TXAR	**Lajitas Array**	**66.28**	**73**	P	**P**	**08 45 37.0**	**+2.1**
	0.3nm,0.6s,baz=298,slow=4.8,SNR=5.9						

*KISR **29** 08:48:10.4±0.3, 27°.90N×50°.57E, h34km, ML3.0*

*IDC **29** 08:48:13.4±2.0, 32°.69N×47°.36E, h0km, mb3.8/7, mb1 3.8/8, mb1mx3.5/30, mbtmp3.7/8, ML3.8/1, Error ellipse: s-maj=49.0km s-min=24.0km az=153.0*

*ISCJB **29** 08:48:14.2±0.5, 32°.68N±0°.05×47°.32E±0°.05, h15km, mb3.7/7, Error ellipse: s-maj=7.8km s-min=5.3km az=36.2*

*CSEM **29** 08:48:18.7±0.3, 32°.78N×47°.50E, h2km, ML3.2, Error ellipse: s-maj=9.3km s-min=5.4km az=15.0*

ISC 29 08:48:17.3±0.8, 32°.87N±0°.07×47°.44E±0°.04, h15km, n16, σ1§28/17, mb3.6/7, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IBDR	**Badra**	**1.29**	**281**	*e*Pg	Pg	08 48 50.1	+8.0
IBDR				*e*Sg	**Sb**	**08 48 58.0**	**+0.4**
IBDR				*e*Sb	**Sg**	**08 49 00.0**	**+1.1**
SHGR	**Shooshtar-Gavs**	**1.38**	**123**	*e*Pg	**Pb**	**08 48 43.3**	**+0.6**
SHGR				*e*Sg	**Sb**	**08 49 01.0**	**+0.8**
SNGE	**Sanandaj**	**2.22**	**358**	*e*Pn	**Pb**	**08 48 58.2**	**+1.0**
KHMZ	**Khomeyn**	**2.28**	**67**	*e*Pn	**Pb**	**08 48 57.9**	**-0.4**
KHMZ				*e*Sg	**Sg**	**08 49 30.1**	**-0.6**
ASAO	**Ashtian**	**2.73**	**51**	*e*Pn	**Pb**	**08 49 04.6**	**-1.3**
UMR	**Umm Al-Rimmam**	**3.32**	**176**	*e*P	Pn	08 49 03.0	-5.6
UMR				AML	AML	08 49 42.0	
	comp=Z,44nm,0.4s						
UMR				*e*S	Sn	08 49 42.5	-5.2
GHVR	**GHOM**	**3.59**	**62**	*e*Pn	**Pn**	**08 49 15.5**	**+3.0**
NAY	**Al-Naaiem**	**3.61**	**183**	*e*P	Pn	08 49 06.2	-6.5
AKTO	**Aktyubinsk**	**19.21**	**21**	P	**Pn**	**08 52 42.5**	**+1.0**
	comp=Z,0.3nm,0.3s,baz=16,slow=2.6,SNR=4.0						
BVAR	**Borovoye Array**	**26.03**	**32**	P	**P**	**08 53 50.3**	**+0.7**
	comp=Z,0.7nm,0.4s,baz=222,slow=8.0,SNR=6.0						
KURBB	**Kurchatov Arra**	**28.90**	**43**	P	**P**	**08 54 15.2**	**-0.2**
	comp=Z,0.6nm,0.6s,baz=248,slow=9.2,SNR=3.9						
MKAR	**Makanchi Array**	**29.89**	**52**	P	**P**	**08 54 23.4**	**-0.8**
	comp=Z,0.2nm,0.4s,baz=240,slow=6.6,SNR=3.7						
HFS	**Hagfors**	**35.13**	**331**	P	**P**	**08 55 09.0**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=123,slow=11,SNR=8.0						
ARCES	**ARCESS Array B**	**38.72**	**348**	P	**P**	**08 55 39.4**	**-0.9**
	comp=Z,1.2nm,0.9s,baz=160,slow=7.5,SNR=4.3						
TORD	**Torodi Ar. Bea**	**46.04**	**256**	P	**P**	**08 56 38.4**	**-2.1**
	comp=Z,0.2nm,0.4s,baz=70,slow=7.4,SNR=6.9						
SPITS	**Spitsbergen Ar**	**47.38**	**352**	P	**P**	**08 56 50.1**	**-0.2**
	comp=Z,2.3nm,0.7s,baz=130,slow=11,SNR=4.1						

*IDC **29** 09:23:18.0±0.9, 36°.88N×71°.37E, h0km, mb3.8/11, mb1 4.1/17, mb1mx3.9/32, mbtmp3.9/17, ML4.0/6, MS3.2/3, Ms1 3.2/3, ms1mx2.6/33, Error ellipse: s-maj=16.4km s-min=15.7km az=112.0*

*ISCJB **29** 09:23:21.3±0.4, 36°.95N±0°.03×71°.21E±0°.07, h35km, mb3.6/11, MS3.2/1, Error ellipse: s-maj=8.5km s-min=4.2km az=160.4*

*NNC **29** 09:23:22.6±2.9, 36°.93N×70°.65E, h61km±44km, mb4.2, mpv4.2, Error ellipse: s-maj=20.9km s-min=16.4km az=22.0*

ISC 29 09:23:23.5±0.7, 37°.01N±0°.05×70°.95E±0°.08, h35km, n54, σ2§22/47, mb3.8/11, 10C-3D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.27**	**166**	P	Pn	09 24 17.6	+5.1
CEP				S	Sn	09 25 03.0	+13
CHCP	**Chirah Chowk**	**3.84**	**150**	P	Pn	09 24 27.8	+7.6
THW	**Thamme Wali**	**4.25**	**171**	P	Pn	09 24 29.5	+3.6
AML	**Almayashu**	**5.54**	**22**	P	**Pn**	**09 24 45.0**	**+1.1**
	SNR=77						
THN	**Thein Dam**	**6.02**	**138**	*e*4	**Pn**	**09 24 51.0**	**+0.9**
THN				*e*S	Sn	09 26 22.5	+25
EKS2	**Erkin-Say**	**6.05**	**20**	P	**Pn**	**09 24 52.2**	**+1.6**
	SNR=10.0						
KZA	**Kyzart**	**6.06**	**32**	P	**Pn**	**09 24 51.7**	**+0.8**
	SNR=22						
KK31	**Karatay Array**	**6.10**	**357**	⇑P	**Pn**	**09 24 51.7**	**+0.6**
	6.2nm,0.4s,baz=176,slow=13,SNR=228						
KK31				⇑S	**Sn**	**09 26 00.9**	**+1.2**
	21nm,0.5s,baz=177,slow=22,SNR=5.9						
AAK	**Ala-Archa**	**6.25**	**25**	P	**Pn**	**09 24 55.0**	**+1.7**
	SNR=9.7						
AAK	**Ala-Archa**	**6.25**	**25**	Pn	**Pn**	**09 24 54.9**	**+1.5**
	3.1nm,0.3s,baz=192,slow=5.1,SNR=13						
AAK				Sn	**Sn**	**09 26 06.0**	**+2.5**
	1.0nm,0.3s,baz=215,slow=16,SNR=2.1						
CHMS	**Chumysh**	**6.66**	**25**	P	**Pn**	**09 24 60.0**	**+1.1**
	SNR=10						
USP	**Ospenovka**	**6.82**	**22**	P	**Pn**	**09 25 01.9**	**+0.8**
	SNR=5.2						
TKM2	**Tokmak 2**	**6.90**	**30**	⇑P	**Pn**	**09 25 03.7**	**+1.3**
	13nm,0.5s						
TKM2				⇓S	**Sn**	**09 26 24.6**	**+4.9**
	17nm,1.1s						
TKM2	**Tokmak 2**	**6.90**	**30**	P	**Pn**	**09 25 04.1**	**+1.8**
	SNR=14						
SDNR	**Sundarnagar**	**7.42**	**136**	*e*PKP	**Pn**	**09 25 11.0**	**+1.7**
SDNR				*e*4		09 26 37.0	
SMLA	**Simla**	**7.81**	**137**	*e*PKP	**Pn**	**09 25 15.3**	**+0.7**
SMLA				*e*S	Sn	09 26 35.0	-6.8
SMLA				AML	AML	09 27 23.4	
	comp=E,107nm,1.1s						
SMLA				AML	AML	09 27 31.6	
	comp=N,108nm,0.9s						
BHGR	**Bahadurgarh**	**9.70**	**147**	*e*S	**Sn**	**09 27 26.9**	**-1.4**
AYAN	**Aya Nagar**	**9.96**	**147**	*e*PKP	**Pn**	**09 25 46.0**	**+1.8**
KUDL	**Kundal**	**9.99**	**151**	*e*PKP9	**Pn**	**09 25 45.0**	**+0.4**
KUDL				*e*S	**Sn**	**09 27 31.9**	**-3.6**
KUDL				AML	AML	09 27 36.3	
	comp=E,9.2nm,0.3s						
KUDL				AML	AML	09 27 38.1	
	comp=N,8.7nm,0.8s						
AGRA	**Agra**	**11.40**	**147**	*e*S	Sn	09 27 55.1	-15
AGRA				AML	AML	09 28 17.3	
	comp=N,66nm,0.1s						
AGRA				AML	AML	09 28 20.4	
	comp=E,53nm,0.0s						
MK31	**Makanchi Array**	**12.91**	**37**	⇓P	**Pn**	**09 26 23.6**	**-0.8**
	comp=E,5.2nm,0.8s,baz=224,slow=10,SNR=35						
MKAR	**Makanchi Array**	**12.91**	**37**	Pn	**Pn**	**09 26 23.0**	**-1.5**
	comp=E,0.2nm,0.3s,baz=224,slow=14,SNR=38						
MKAR				LR	LR	09 31 30.7	
	comp=E,86nm,19.7s,baz=262,slow=38						
PYUN	**Piuthan**	**13.48**	**128**	*e*P	Pn	09 26 27.4	-5.1
	comp=E,16nm,0.4s						
DANN	**Dangsing**	**13.81**	**125**	*e*P	Pn	09 26 32.5	-4.5
	comp=E,20nm,0.5s						
AB31	**Akbulak array**	**14.62**	**330**	⇑P	**Pn**	**09 26 46.7**	**-1.0**
	comp=E,2.1nm,0.5s,baz=139,slow=13,SNR=65						
AB31				⇑S	**Sn**	**09 29 23.0**	**-5.5**
	comp=E,12nm,0.8s,baz=155,slow=23,SNR=17						
KURBB	**Kurchatov Arra**	**14.66**	**19**	⇑P	**Pn**	**09 26 47.8**	**-0.4**
	comp=E,4.9nm,0.8s						
KURBB	**Kurchatov Arra**	**14.66**	**19**	Pn	Pn	09 26 43.4	-4.8
	comp=E,0.1nm,0.3s,baz=211,slow=13,SNR=6.2						
DMN	**Daman**	**15.19**	**124**	*e*P	Pn	09 26 50.8	-4.8
	comp=E,14nm,0.6s						
PKIN	**Phulchoki**	**15.40**	**123**	*e*P	Pn	09 26 52.4	-6.1
GUN	**Gumba**	**15.51**	**122**	*e*P	Pn	09 26 53.8	-6.2
	comp=E,34nm,0.8s						
VOSK	**Vostochnaya**	**15.71**	**0**	⇑P	**Pn**	**09 27 01.1**	**-1.0**
	comp=E,1.9nm,0.5s						
JIRN	**Jiri**	**15.88**	**122**	*e*P	Pn	09 26 58.3	-6.5
	comp=E,39nm,0.6s						
ZRNK	**Zerenda**	**16.00**	**356**	⇓P	**Pn**	**09 27 04.3**	**-1.5**
	comp=E,4.6nm,0.8s						
BVA0	**Borovoye Array**	**16.02**	**359**	P	**Pn**	**09 27 05.1**	**-0.9**
	comp=E,5.5nm,1.0s,baz=162,slow=13,SNR=10						
BVAR	**Borovoye Array**	**16.02**	**359**	Pn	**Pn**	**09 27 03.6**	**-2.4**
	comp=E,0.9nm,0.3s,baz=159,slow=13,SNR=8.0						
BVAR				Sn	**Sn**	**09 29 56.9**	**-5.5**
	comp=E,0.3nm,0.3s,baz=42,slow=54,SNR=3.1						
BRVK	**Borovoye**	**16.06**	**359**	⇑P	**Pn**	**09 27 05.4**	**-1.1**
	comp=E,7.2nm,0.6s						
AKTO	**Aktyubinsk**	**16.32**	**329**	⇑P	**Pn**	**09 27 08.3**	**-1.6**
	comp=E,19nm,0.9s						
AKTO				⇑S	**Sn**	**09 30 07.1**	**-2.7**
	comp=E,18nm,1.1s						
AKTO	**Aktyubinsk**	**16.32**	**329**	Pn	**Pn**	**09 27 10.5**	**+0.6**
	comp=E,0.9nm,0.3s,baz=140,slow=9.8,SNR=11						
AKTO				Sn	**Sn**	**09 30 05.2**	**-4.6**
	comp=E,0.3nm,0.3s,baz=102,slow=9.5,SNR=7.1						
RAMN	**Ramite**	**16.62**	**123**	*e*P	Pn	09 27 08.1	-5.9
	comp=E,22nm,0.5s						
TAPN	**Taplejung**	**17.12**	**119**	*e*P	Pn	09 27 15.1	-5.3
ODAN	**Odare**	**17.21**	**121**	*e*P	Pn	09 27 16.1	-5.4
	comp=E,16nm,0.6s						
ZALV	**Zalesovo Beam**	**19.47**	**25**	P	**P**	**09 27 45.4**	**-1.7**
	comp=E,1.0nm,0.3s,baz=223,slow=11,SNR=32						
ZALV				LR	LR	09 35 34.3	
	comp=E,49nm,18.6s,baz=340,slow=38						
KBZ	**Khabaz**	**22.34**	**296**	P	**P**	**09 28 21.1**	**+3.0**
	comp=E,4.2nm,1.1s,baz=94,slow=10,SNR=4.5						
SONM	**Songino Array**	**28.08**	**56**	P	**P**	**09 29 11.3**	**-0.5**
	comp=E,0.3nm,0.3s,baz=250,slow=7.7,SNR=5.9						
SONM				LR	LR	09 41 22.5	
	comp=E,66nm,19.6s,baz=245,slow=39						
BRTR	**Keskin Array B**	**29.25**	**287**	P	P	09 29 25.7	+3.4
	comp=E,0.3nm,0.4s,baz=128,slow=6.0,SNR=3.0						
FINES	**FINESS Array B**	**37.04**	**326**	P	**P**	**09 30 32.1**	**+2.4**
	comp=E,1.0nm,0.6s,baz=96,slow=19,SNR=3.6						
ARCES	**ARCESS Array B**	**40.66**	**337**	P	**P**	**09 31 02.1**	**+2.2**
	comp=E,1.0nm,0.6s,baz=108,slow=7.8,SNR=6.3						
NB2	**NORSAR Subarra**	**43.95**	**323**	P	**P**	**09 31 28.3**	**+1.4**
	comp=Z,2.2nm,0.6s,baz=95,slow=7.9						
NOA	**NORSAR Array B**	**43.95**	**323**	P	**P**	**09 31 28.4**	**+1.5**
	comp=Z,2.4nm,0.7s,baz=96,slow=8.0,SNR=13						
TORD	**Torodi Ar. Bea**	**65.69**	**268**	P	**P**	**09 34 06.4**	**+1.6**
	comp=Z,0.7nm,0.7s,baz=38,slow=5.6,SNR=8.4						
ILAR	**Eielson Array**	**74.30**	**16**	P	**P**	**09 34 55.2**	**-1.7**
	comp=Z,0.5nm,1.0s,baz=350,slow=4.8,SNR=6.2						
YKA	**Yellowknife Ar**	**80.74**	**3**	P	**P**	**09 35 33.6**	**+0.7**
	comp=Z,0.4nm,0.5s,baz=350,slow=5.4,SNR=9.8						
WRA	**Warramunga Arr**	**82.29**	**122**	P	**P**	**09 35 40.5**	**-1.2**
	comp=Z,0.5nm,0.7s,baz=326,slow=5.0,SNR=4.9						
ASAR	**Alice Springs**	**84.58**	**125**	P	**P**	**09 35 51.1**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=313,slow=4.6,SNR=6.2						

*ISK **29** 10:01:51.8, 34°.82N×34°.03E, h27km, MD3.2*

*DDA **29** 10:01:52.4, 34°.89N×33°.80E, h28km, MD3.1*

*ISCJB **29** 10:01:54.6±0.4, 35°.00N±0°.03×33°.85E±0°.04, h61km±5km, Error ellipse: s-maj=6.0km s-min=4.4km az=42.6*

*NIC **29** 10:01:57.0±0.2, 35°.07N×33°.70E, h44km, ML3.2, MW3.3*

*CSEM **29** 10:01:56.0±0.1, 35°.03N×33°.81E, h48km±3km, Mw3.3, Error ellipse: s-maj=4.5km s-min=3.3km az=119.0*

ISC 29 10:01:55.3±1.2, 35°.02N±0°.03×33°.82E±0°.03, h59km±6km, n60, σ1§43/86, 6D, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHNC	**Paralimni**	**0.17**	**96**	⇓P	**Pn**	**10 02 05.3**

n167,σ1s36/281, France

Code	Station Name	Δ°	AZ°	Phase ID	Time	Res
				Op ISC	h m s	ISC
MFF	**Saint Martin d**	**0.77**	**147**	*e*Pg **Pb**	**10 40 50.4**	**+0.5**
MFF	**Saint Martin d**	**0.77**	**147**	*e*Pn **Pn**	**10 40 52.5**	**+1.4**
	SNR=1.0					
MFF				*e*Sg **Sb**	**10 41 01.4**	**+1.3**
	SNR=1.0					
MFF				*e*Sn **Sn**	**10 41 04.5**	**+2.1**
	735nm,0.2s					
MFF	**Saint Martin d**	**0.77**	**147**	*e*Pg **Pb**	**10 40 50.4**	**+0.5**
MFF	**Saint Martin d**	**0.77**	**147**	*e*Pn **Pn**	**10 40 52.5**	**+1.4**
	SNR=1.0					
MFF				*e*Sg **Sb**	**10 41 01.4**	**+1.3**
	SNR=1.0					
GRR	**Gorron**	**1.14**	**357**	*e*Pn **Pb**	**10 40 56.9**	**+0.6**
	SNR=1.0					
GRR	**Gorron**	**1.14**	**357**	*e*Pg **Pn**	**10 40 57.2**	**+0.9**
GRR				*e*Sg **Sg**	**10 41 11.2**	**-0.6**
	SNR=1.0					
GRR				*e*Sn **Sb**	**10 41 11.9**	**+1.0**
	478nm,0.3s,SNR=1.0					
GRR	**Gorron**	**1.14**	**357**	*e*Pn **Pb**	**10 40 56.9**	**+0.6**
	SNR=1.0					
GRR	**Gorron**	**1.14**	**357**	*e*Pg **Pn**	**10 40 57.2**	**+0.9**
GRR				*e*Sg **Sg**	**10 41 11.2**	**-0.6**
	SNR=1.0					
GRR				*e*Sn **Sb**	**10 41 11.9**	**+1.0**
	239nm,0.3s,SNR=1.0					
FLN	**La Foliniere**	**1.53**	**7**	*e*Pn **Pn**	**10 41 02.3**	**+0.8**
	baz=180,SNR=1.0					
FLN	**La Foliniere**	**1.53**	**7**	*e*Pg **Pg**	**10 41 04.5**	**+0.3**
	baz=180					
FLN				*e*Sn **Sn**	**10 41 20.9**	**-0.2**
FLN				*e*Sg **Sg**	**10 41 23.5**	**-0.5**
	358nm,0.2s,SNR=1.0					
FLN	**La Foliniere**	**1.53**	**7**	*e*Pn **Pn**	**10 41 02.3**	**+0.8**
	baz=180,SNR=1.0					
FLN	**La Foliniere**	**1.53**	**7**	*e*Pg **Pg**	**10 41 04.5**	**+0.3**
	baz=180					
FLN				*e*Sn **Sn**	**10 41 20.9**	**-0.2**
FLN				*e*Sg **Sg**	**10 41 23.5**	**-0.5**
	179nm,0.2s,SNR=1.0					
SGMF	**Saint Gilles**	**1.58**	**310**	*e*Pn **Pn**	**10 41 02.7**	**+0.5**
	SNR=1.0					
SGMF	**Saint Gilles**	**1.58**	**310**	*e*Pg **Pb**	**10 41 04.4**	**+0.7**
	SNR=1.0					
SGMF				*e*Sn **Sn**	**10 41 21.4**	**-1.0**
	78nm,0.2s,SNR=1.0					
SGMF	**Saint Gilles**	**1.58**	**310**	*e*Pn **Pn**	**10 41 02.7**	**+0.5**
	SNR=1.0					
SGMF	**Saint Gilles**	**1.58**	**310**	*e*Pg **Pb**	**10 41 04.4**	**+0.7**
	SNR=1.0					
SGMF				*e*Sn **Sn**	**10 41 21.4**	**-1.0**
	39nm,0.2s,SNR=1.0					
QUIF	**Quistinic**	**1.76**	**293**	*e*Pn **Pn**	**10 41 05.2**	**+0.5**
	SNR=1.0					
QUIF	**Quistinic**	**1.76**	**293**	*e*Pg **Pb**	**10 41 07.9**	**+1.1**
QUIF				*e*Sg **Sn**	**10 41 29.5**	**+2.6**
	164nm,0.3s					
QUIF	**Quistinic**	**1.76**	**293**	*e*Pn **Pn**	**10 41 05.2**	**+0.5**
	SNR=1.0					
QUIF	**Quistinic**	**1.76**	**293**	*e*Pg **Pb**	**10 41 07.9**	**+1.1**
QUIF				*e*Sg **Sn**	**10 41 29.5**	**+2.6**
	82nm,0.3s					
ROSF	**Rostrenen**	**2.02**	**304**	*e*Pn **Pn**	**10 41 08.5**	**+0.2**
	SNR=1.0					
ROSF	**Rostrenen**	**2.02**	**304**	*e*Pg **Pb**	**10 41 12.0**	**+0.9**
ROSF				*e*Sn **Sn**	**10 41 31.6**	**-1.6**
ROSF				*e*Sg **Sb**	**10 41 37.7**	**+1.7**
	112nm,0.3s					
ROSF	**Rostrenen**	**2.02**	**304**	*e*Pn **Pn**	**10 41 08.5**	**+0.2**
	SNR=1.0					
ROSF	**Rostrenen**	**2.02**	**304**	*e*Pg **Pb**	**10 41 12.0**	**+0.9**
ROSF				*e*Sg **Sb**	**10 41 37.7**	**+1.7**
	56nm,0.3s					
TCF	**Toulx Ste Croi**	**2.25**	**114**	*e*Pn **Pn**	**10 41 13.5**	**+2.0**
	SNR=1.0					
TCF	**Toulx Ste Croi**	**2.25**	**114**	*e*Pg **Pg**	**10 41 18.4**	**+0.4**
TCF				*e*Sn **Sn**	**10 41 39.7**	**+0.6**
TCF				*e*Sg **Sg**	**10 41 47.7**	**+0.5**
	147nm,0.2s					
TCF	**Toulx Ste Croi**	**2.25**	**114**	*e*Pn **Pn**	**10 41 13.5**	**+2.0**
	SNR=1.0					
TCF	**Toulx Ste Croi**	**2.25**	**114**	*e*Pg **Pg**	**10 41 18.4**	**+0.4**
TCF				*e*Sn **Sn**	**10 41 39.7**	**+0.6**
TCF				*e*Sg **Sg**	**10 41 47.7**	**+0.5**
	73nm,0.2s					
HYF	**Humbligny**	**2.31**	**88**	*e*Pn **Pn**	**10 41 14.6**	**+2.3**
HYF	**Humbligny**	**2.31**	**88**	*e*Pg **Pg**	**10 41 19.3**	**+0.1**
HYF				*e*Sn **Sn**	**10 41 40.8**	**+0.3**
HYF				*e*Sg **Sg**	**10 41 49.5**	**+0.4**
HYF	**Humbligny**	**2.31**	**88**	*e*Pn **Pn**	**10 41 14.6**	**+2.3**
HYF	**Humbligny**	**2.31**	**88**	*e*Pg **Pg**	**10 41 19.3**	**+0.1**
HYF				*e*Sn **Sn**	**10 41 40.8**	**+0.3**
HYF				*e*Sg **Sg**	**10 41 49.5**	**+0.4**
BST	**Brest**	**2.47**	**297**	Pn **Pn**	**10 41 15.2**	**+0.8**
BST				Sg **Sg**	**10 41 54.8**	**+0.7**
BST	**Brest**	**2.47**	**297**	Pn **Pn**	**10 41 15.2**	**+0.8**
BST				Sg **Sg**	**10 41 54.8**	**+0.7**
RJF	**Les Rejaudoux**	**2.50**	**140**	*e*Pn **Pn**	**10 41 15.7**	**+0.8**
	SNR=1.0					
RJF	**Les Rejaudoux**	**2.50**	**140**	*e*Pg **Pg**	**10 41 21.9**	**-0.9**
RJF				*e*Sn **Sn**	**10 41 45.7**	**+0.5**
RJF				*e*Sg **Sg**	**10 41 55.4**	**+0.2**
	110nm,0.2s,SNR=1.0					
RJF	**Les Rejaudoux**	**2.50**	**140**	*e*Pn **Pn**	**10 41 15.7**	**+0.8**
	SNR=1.0					
RJF	**Les Rejaudoux**	**2.50**	**140**	*e*Pg **Pg**	**10 41 21.9**	**-0.9**
RJF				*e*Sn **Sn**	**10 41 45.7**	**+0.5**
RJF				*e*Sg **Sg**	**10 41 55.4**	**+0.2**
	55nm,0.2s,SNR=1.0					
LFF	**La Frestale**	**2.53**	**155**	*e*Pn **Pn**	**10 41 16.7**	**+1.4**
	SNR=1.0					
LFF	**La Frestale**	**2.53**	**155**	*e*Pg **Pg**	**10 41 22.9**	**-0.5**
	SNR=1.0					
LFF				*e*Sn **Sn**	**10 41 45.9**	**0.0**
	SNR=1.0					
LFF				*e*Sg **Sg**	**10 41 56.1**	**-0.1**
	122nm,0.3s,SNR=1.0					
LFF	**La Frestale**	**2.53**	**155**	*e*Pn **Pn**	**10 41 16.7**	**+1.4**
	SNR=1.0					
LFF	**La Frestale**	**2.53**	**155**	*e*Pg **Pg**	**10 41 22.9**	**-0.5**
	SNR=1.0					
LFF				*e*Sn **Sn**	**10 41 45.9**	**0.0**
	SNR=1.0					
LFF				*e*Sg **Sg**	**10 41 56.1**	**-0.1**
	61nm,0.3s,SNR=1.0					
BGF	**Bois d'Agland**	**2.56**	**104**	*e*Pn **Pn**	**10 41 17.7**	**+1.9**
	SNR=1.0					
BGF	**Bois d'Agland**	**2.56**	**104**	*e*Pg **Pg**	**10 41 24.3**	**+0.3**
BGF				*e*Sn **Sn**	**10 41 46.3**	**-0.4**
	SNR=1.0					
BGF				*e*Sg **Sg**	**10 41 57.4**	**+0.2**
	305nm,0.3s,SNR=1.0					
BGF	**Bois d'Agland**	**2.56**	**104**	*e*Pn **Pn**	**10 41 17.7**	**+1.9**
	SNR=1.0					
BGF	**Bois d'Agland**	**2.56**	**104**	*e*Pg **Pg**	**10 41 24.3**	**+0.3**
BGF				*e*Sn **Sn**	**10 41 46.3**	**-0.4**
	SNR=1.0					
BGF				*e*Sg **Sg**	**10 41 57.4**	**+0.2**
	152nm,0.3s,SNR=1.0					
AVF	**Avril sur Loir**	**2.85**	**98**	*e*Pn **Pn**	**10 41 21.1**	**+1.4**
	SNR=1.0					
AVF	**Avril sur Loir**	**2.85**	**98**	*e*Pg **Pg**	**10 41 29.3**	**-0.1**
AVF				*e*Sn **Sn**	**10 41 53.5**	**-0.2**
	38nm,0.2s,SNR=1.0					
AVF				*e*Sg **Sg**	**10 42 06.3**	**0.0**
	37nm,0.2s					
AVF	**Avril sur Loir**	**2.85**	**98**	*e*Pn **Pn**	**10 41 21.1**	**+1.4**
	SNR=1.0					
AVF	**Avril sur Loir**	**2.85**	**98**	*e*Pg **Pg**	**10 41 29.3**	**-0.1**
AVF				*e*Sn **Sn**	**10 41 53.5**	**-0.2**
	19nm,0.2s,SNR=1.0					
AVF				*e*Sg **Sg**	**10 42 06.3**	**0.0**
	18nm,0.2s					
SSF	**Saint Saulge**	**2.91**	**92**	*e*Pn **Pn**	**10 41 22.2**	**+1.6**
	SNR=1.0					
SSF	**Saint Saulge**	**2.91**	**92**	*e*Pg **Pg**	**10 41 30.1**	**-0.6**
SSF				*e*Sn **Sn**	**10 41 54.8**	**-0.5**
	SNR=1.0					
SSF				*e*Sg **Sg**	**10 42 08.4**	**0.0**
	59nm,0.3s,SNR=1.0					
SSF	**Saint Saulge**	**2.91**	**92**	*e*Pn **Pn**	**10 41 22.2**	**+1.6**
	SNR=1.0					
SSF	**Saint Saulge**	**2.91**	**92**	*e*Pg **Pg**	**10 41 30.1**	**-0.6**
SSF				*e*Sn **Sn**	**10 41 54.8**	**-0.5**
	SNR=1.0					
SSF				*e*Sg **Sg**	**10 42 08.4**	**0.0**
	30nm,0.3s,SNR=1.0					
AGO	**Saint Agoulin**	**2.93**	**113**	Pn **Pn**	**10 41 21.8**	**+0.9**
AGO	**Saint Agoulin**	**2.93**	**113**	Pg **Pg**	**10 41 31.8**	**+0.8**
AGO				Sg **Sg**	**10 42 10.8**	**+1.8**
AGO	**Saint Agoulin**	**2.93**	**113**	Pn **Pn**	**10 41 21.8**	**+0.9**
AGO	**Saint Agoulin**	**2.93**	**113**	Pg **Pg**	**10 41 31.8**	**+0.8**
AGO				Sg **Sg**	**10 42 10.8**	**+1.8**
FRNF	**Fournols**	**2.96**	**128**	Pn **Pn**	**10 41 22.0**	**+0.8**
FRNF	**Fournols**	**2.96**	**128**	Pg **Pg**	**10 41 31.4**	**-0.1**
FRNF				Sg **Sg**	**10 42 11.0**	**+1.2**
FRNF	**Fournols**	**2.96**	**128**	Pn **Pn**	**10 41 22.0**	**+0.8**
FRNF	**Fournols**	**2.96**	**128**	Pg **Pg**	**10 41 31.4**	**-0.1**
FRNF				Sg **Sg**	**10 42 11.0**	**+1.2**
PYM	**Petit Puy Mans**	**3.00**	**119**	Pn **Pn**	**10 41 23.6**	**+1.8**
PYM	**Petit Puy Mans**	**3.00**	**119**	Pg **Pg**	**10 41 32.8**	**+0.5**
PYM	**Petit Puy Mans**	**3.00**	**119**	Pn **Pn**	**10 41 23.6**	**+1.8**
PYM	**Petit Puy Mans**	**3.00**	**119**	Pg **Pg**	**10 41 32.8**	**+0.5**
CAF	**Calvac**	**3.04**	**139**	*e*Pn **Pn**	**10 41 23.9**	**+1.5**
	SNR=1.0					
CAF	**Calvac**	**3.04**	**139**	*e*Pg **Pg**	**10 41 32.5**	**-0.6**
CAF				*e*Sn **Sn**	**10 41 57.9**	**-0.6**
	SNR=1.0					
CAF				*e*Sg **Sg**	**10 42 12.2**	**-0.3**
	71nm,0.3s,SNR=1.0					
CAF	**Calvac**	**3.04**	**139**	*e*Pn **Pn**	**10 41 23.9**	**+1.5**
	SNR=1.0					
CAF	**Calvac**	**3.04**	**139**	*e*Pg **Pg**	**10 41 32.5**	**-0.6**
CAF				*e*Sn **Sn**	**10 41 57.9**	**-0.6**
	SNR=1.0					
CAF				*e*Sg **Sg**	**10 42 12.2**	**-0.3**
	36nm,0.3s,SNR=1.0					
LOR	**Lormes**	**3.14**	**88**	*e*Pn **Pn**	**10 41 25.4**	**+1.6**
	baz=268,SNR=1.0					
LOR	**Lormes**	**3.14**	**88**	*e*Pg **Pg**	**10 41 34.8**	**-0.2**
	baz=272					
LOR				*e*Sn **Sn**	**10 42 01.0**	**0.0**
LOR				*e*Sg **Sg**	**10 42 15.7**	**0.0**
	65nm,0.2s					
LOR	**Lormes**	**3.14**	**88**	*e*Pn **Pn**	**10 41 25.4**	**+1.6**
	baz=268,SNR=1.0					
LOR	**Lormes**	**3.14**	**88**	*e*Pg **Pg**	**10 41 34.8**	**-0.2**
	baz=272					
LOR				*e*Sn **Sn**	**10 42 01.0**	**0.0**
LOR				*e*Sg **Sg**	**10 42 15.7**	**0.0**
	32nm,0.2s					
SMF	**Signal de Mont**	**3.21**	**99**	*e*Pn **Pn**	**10 41 26.0**	**+1.4**
SMF	**Signal de Mont**	**3.21**	**99**	*e*Pg **Pg**	**10 41 35.6**	**-0.6**
SMF				*e*Sg **Sg**	**10 42 17.8**	**0.0**
	44nm,0.2s					
SMF	**Signal de Mont**	**3.21**	**99**	*e*Pn **Pn**	**10 41 26.0**	**+1.4**
SMF	**Signal de Mont**	**3.21**	**99**	*e*Pg **Pg**	**10 41 35.6**	**-0.6**
SMF				*e*Sg **Sg**	**10 42 17.8**	**0.0**
	22nm,0.2s					
PLDF	**La Plantade**	**3.28**	**111**	Pn **Pn**	**10 41 26.3**	**+0.7**
PLDF	**La Plantade**	**3.28**	**111**	Pn **Pn**	**10 41 26.3**	**+0.7**
LBL	**Lubilhac**	**3.43**	**125**	Pn **Pn**	**10 41 29.2**	**+1.4**
LBL	**Lubilhac**	**3.43**	**125**	Pg **Pg**	**10 41 41.1**	**+0.5**
LBL				Sg **Sg**	**10 42 26.8**	**+1.8**
LBL	**Lubilhac**	**3.43**	**125**	Pn **Pn**	**10 41 29.2**	**+1.4**
LBL	**Lubilhac**	**3.43**	**125**	Pg **Pg**	**10 41 41.1**	**+0.5**
LBL				Sg **Sg**	**10 42 26.8**	**+1.8**
MENF	**Mencas**	**3.83**	**29**	Pn **Pn**	**10 41 34.2**	**+1.1**
MENF	**Mencas**	**3.83**	**29**	Pn **Pn**	**10 41 34.2**	**+1.1**
SFTF	**Sexfontaines**	**4.03**	**74**	*e*Pn **Pn**	**10 41 36.9**	**+1.0**
SFTF	**Sexfontaines**	**4.03**	**74**	*e*Pg **Pg**	**10 41 51.6**	**-0.3**
	baz=253					
SFTF				*e*Sn **Sn**	**10 42 21.5**	**-1.2**
SFTF				*e*Sg **Sg**	**10 42 42.7**	**-1.4**
	19nm,0.3s					
SFTF	**Sexfontaines**	**4.03**	**74**	*e*Pn **Pn**	**10 41 36.9**	**+1.0**
SFTF	**Sexfontaines**	**4.03**	**74**	*e*Pg **Pg**	**10 41 51.6**	**-0.3**
	baz=253					
SFTF				*e*Sg **Sg**	**10 42 42.7**	**-1.4**
	9.6nm,0.3s					
MEZF	**Maizieres J'vi**	**4.11**	**70**	*e*Pn **Pn**	**10 41 37.9**	**+1.0**
	baz=252,SNR=1.0					
MEZF	**Maizieres J'vi**	**4.11**	**70**	*e*Pg **Pg**	**10 41 52.9**	**-0.5**
	baz=257					
MEZF				*e*Sn **Sn**	**10 42 22.9**	**-1.8**
	SNR=1.0					
MEZF				*e*Sg **Sg**	**10 42 45.0**	**-1.6**
	19nm,0.3s,SNR=1.0					
MEZF	**Maizieres J'vi**	**4.11**	**70**	*e*Pn **Pn**	**10 41 37.9**	**+1.0**
	baz=252,SNR=1.0					
MEZF	**Maizieres J'vi**	**4.11**	**70**	*e*Pg **Pg**	**10 41 52.9**	**-0.5**
	baz=257					
MEZF				*e*Sg **Sg**	**10 42 45.0**	**-1.6**
	9.7nm,0.3s,SNR=1.0					
SJPF	**Ste Jean**	**4.15**	**185**	*e*Pn **Pn**	**10 41 37.9**	**+0.3**
	SNR=1.0					
SJPF	**Ste Jean**	**4.15**	**185**	*e*Pg **Pg**	**10 41 52.1**	**-2.1**
SJPF				*e*Sn **Sn**	**10 42 23.3**	**-2.5**
SJPF				*e*Sg **Sg**	**10 42 46.0**	**-1.9**
	20nm,0.3s					
SJPF	**Ste Jean**	**4.15**	**185**	*e*Pn **Pn**	**10 41 37.9**	**+0.3**
	SNR=1.0					
SJPF	**Ste Jean**	**4.15**	**185**	*e*Pg **Pg**	**10 41 52.1**	**-2.1**
SJPF				*e*Sg **Sg**	**10 42 46.0**	**-1.9**
	9.9nm,0.3s					
ATE	**Arette**	**4.16**	**179**	Pg **Pg**	**10 41 53.7**	**-0.8**
ATE	**Arette**	**4.16**	**179**	Pg **Pg**	**10 41 53.7**	**-0.8**
REYF	**Montagne du Re**	**4.19**	**176**	Pg **Pg**	**10 41 53.7**	**-1.3**
REYF	**Montagne du Re**	**4.19**	**176**	Pg **Pg**	**10 41 53.7**	**-1.3**
LABF	**Labassere**	**4.24**	**172**	Pg **Pg**	**10 41 54.2**	**-1.8**
LABF	**Labassere**	**4.24**	**172**	Pg **Pg**	**10 41 54.2**	**-1.8**
EPF	**Esparros**	**4.29**	**169**	*e*Pn **Pn**	**10 41 39.9**	**+0.4**
	SNR=1.0					
EPF	**Esparros**	**4.29**	**169**	*e*Pg **Pg**	**10 41 55.2**	**-1.7**
EPF				*e*Sn **Sn**	**10 42 27.8**	**-1.5**
EPF				*e*Sg **Sg**	**10 42 50.8**	**-1.6**
	23nm,0.4s					
EPF	**Esparros**	**4.29**	**169**	*e*Pn **Pn**	**10 41 39.9**	**+0.4**
	SNR=1.0					
EPF	**Esparros**	**4.29**	**169**	*e*Pg **Pg**	**10 41 55.2**	**-1.7**
EPF				*e*Sg **Sg**	**10 42 50.8**	**-1.6**
	11nm,0.4s					
BAIF	**Baives**	**4.33**	**48**	*e*Pn **Pn**	**10 41 41.4**	**+1.4**
	SNR=1.0					
BAIF				*e*Sn **Sn**	**10 42 28.1**	**-2.1**
	SNR=1.0					
BAIF				*e*Sg **Sg**	**10 42 51.6**	**-2.1**
	13nm,0.3s					
BAIF	**Baives**	**4.33**	**48**	*e*Pn **Pn**	**10 41 41.4**	**+1.4**
	SNR=1.0					
BAIF				*e*Sg **Sg**	**10 42 51.6**	**-2.1**
	6.7nm,0.3s					
ETSF	**Etsaut**	**4.35**	**178**	*e*Pn **Pn**	**10 41 40.1**	**-0.3**
	SNR=1.0					
ETSF	**Etsaut**	**4.35**	**178**	*e*Pg **Pg**	**10 41 56.8**	**-1.3**
ETSF				*e*Sn **Sn**	**10 42 28.6**	**-2.3**
ETSF				*e*Sg **Sg**	**10 42 52.3**	**-2.2**
	13nm,0.3s					
ETSF	**Etsaut**	**4.35**	**178**	*e*Pn **Pn**	**10 41 40.1**	**-0.3**
	SNR=1.0					
ETSF	**Etsaut**	**4.35**	**178**	*e*Pg **Pg**	**10 41 56.8**	**-1.3**
ETSF				*e*Sg **Sg**	**10 42 52.3**	**-2.2**
	6.5nm,0.3s					
MTLF	**Montolieu**	**4.43**	**151**	*e*Pn **Pn**	**10 41 42.3**	**+0.8**
	SNR=1.0					
MTLF				*e*Sn **Sn**	**10 42 31.3**	**-1.5**
	SNR=1.0					
MTLF				*e*Sg **Sg**	**10 42 55.8**	**-1.3**
	11nm,0.2s,SNR=1.0					
MTLF	**Montolieu**	**4.43**	**151**	*e*Pn **Pn**	**10 41 42.3**	**+0.8**
	SNR=1.0					
MTLF				*e*Sg **Sg**	**10 42 55.8**	**-1.3**
	5.4nm,0.2s,SNR=1.0					
VIVF	**Saint-Julien-l**	**4.47**	**120**	*e*Pn **Pn**	**10 41 43.9**	**+1.9**
	SNR=1.0					
VIVF	**Saint-Julien-l**	**4.47**	**120**	*e*Pg **Pg**	**10 41 59.9**	**-0.5**
VIVF				*e*Sn **Sn**	**10 42 34.7**	**+0.9**
	SNR=1.0					
VIVF				*e*Sg **Sg**	**10 42 56.8**	**-1.5**
	41nm,0.4s,SNR=1.0					
VIVF	**Saint-Julien-l**	**4.47**	**120**	*e*Pn **Pn**	**10 41 43.9**	**+1.9**
	SNR=1.0					
VIVF	**Saint-Julien-l**	**4.47**	**120**	*e*Pg **Pg**	**10 41 59.9**	**-0.5**
VIVF				*e*Sn **Sn**	**10 42 34.7**	**+0.9**
	SNR=1.0					
VIVF				*e*Sg **Sg**	**10 42 56.8**	**-1.5**
	21nm,0.4s,SNR=1.0					
MLS	**Moulis**	**4.49**	**162**	Pg **Pg**	**10 42 00.4**	**-0.3**
MLS	**Moulis**	**4.49**	**162**	Pg **Pg**	**10 42 00.4**	**-0.3**
LASF	**Ste Croix**	**4.53**	**133**	*e*Pn **Pn**	**10 41 44.6**	**+1.8**
	SNR=1.0					
LASF	**Ste Croix**	**4.53**	**133**	*e*Pg **Pg**	**10 42 01.0**	**-0.5**
LASF				*e*Sg **Sg**	**10 42 59.0**	**-1.2**
	38nm,0.5s,SNR=1.0					
LASF	**Ste Croix**	**4.53**	**133**	*e*Pn **Pn**	**10 41 44.6**	**+1.8**
	SNR=1.0					
LASF	**Ste Croix**	**4.53**	**133**	*e*Pg **Pg**	**10 42 01.0**	**-0.5**
LASF				*e*Sg **Sg**	**10 42 59.0**	**-1.2**
	19nm,0.5s,SNR=1.0					
DOU	**Dourbes**	**4.55**	**49**	P **Pn**	**10 41 44.5**	**+1.5**
PAGF	**Fort de Pagny**	**4.55**	**71**	*e*Pn **Pn**	**10 41 44.3**	**+1.2**
	baz=247					
PAGF	**Fort de Pagny**	**4.55**	**71**	*e*Pg **Pg**	**10 42 00.4**	**-1.5**
	baz=252					
PAGF				*e*Sn **Sn**	**10 42 33.7**	**-2.0**
PAGF				*e*Sg **Sg**	**10 42 59.1**	**-1.8**
	7.3nm,0.5s					
PAGF	**Fort de Pagny**	**4.55**	**71**	*e*Pn **Pn**	**10 41 44.3**	**+1.2**
	baz=247					
PAGF	**Fort de Pagny**	**4.55**	**71**	*e*Pg **Pg**	**10 42 00.4**	**-1.5**
	baz=252					
PAGF				*e*Sg **Sg**	**10 42 59.1**	**-1.8**
	3.7nm,0.5s					
THEF	**They Montfort**	**4.65**	**75**	Pn **Pn**	**10 41 44.7**	**+0.2**
THEF	**They Montfort**	**4.65**	**75**	Pn **Pn**	**10 41 44.7**	**+0.2**
GIVF	**Givet**	**4.67**	**50**	*e*Pn **Pn**	**10 41 46.5**	**+1.8**
	SNR=1.0					
GIVF				*e*Sn **Sn**	**10 42 36.2**	**-2.4**
	SNR=1.0					
GIVF				*e*Sg **Sg**	**10 43 01.9**	**-2.8**
	14nm,0.3s,SNR=1.0					
GIVF	**Givet**	**4.67**	**50**	*e*Pn **Pn**	**10 41 46.5**	**+1.8**
	SNR=1.0					
CABF	**La Chapelle**	**4.73**	**95**	*e*Pn **Pn**	**10 41 47.4**	**+1.7**
	SNR=1.0					
CABF				*e*Sn **Sn**	**10 42 38.3**	**-2.0**
	5.8nm,0.4s,SNR=1.0					
CABF				*e*Sg **Sg**	**10 43 05.1**	**-1.6**
	15nm,0.5s					
CABF	**La Chapelle**	**4.73**	**95**	*e*Pn **Pn**	**10 41 47.4**	**+1.7**
	SNR=1.0					
CABF				*e*Sg **Sg**	**10 43 05.1**	**-1.6**
	7.6nm,0.5s					
HAU	**Haudompre**	**4.86**	**78**	*e*Pn **Pn**	**10 41 47.2**	**-0.2**
	SNR=1.0					
HAU	**Haudompre**	**4.86**	**78**	*e*Pg **Pg**	**10 42 06.0**	**-1.9**
HAU				*e*Sg **Sg**	**10 43 08.7**	**-2.2**
	25nm,0.3s,SNR=1.0					
HAU	**Haudompre**	**4.86**	**78**	*e*Pn **Pn**	**10 41 47.2**	**-0.2**
	SNR=1.0					
HAU	**Haudompre**	**4.86**	**78**	*e*Pg **Pg**	**10 42 06.0**	**-1.9**
HAU				*e*Sg **Sg**	**10 43 08.7**	**-2.2**
	12nm,0.3s,SNR=1.0					
ORIF	**Oris-en-Rattie**	**5.17**	**114**	*e*Pn **Pn**	**10 41 54.5**	**+2.8**
	SNR=1.0					
ORIF				*e*Sg **Sg**	**10 43 18.4**	**-2.3**
	4.5nm,0.3s					
ORIF	**Oris-en-Rattie**	**5.17**	**114**	*e*Pn **Pn**	**10 41 54.5**	**+2.8**
	SNR=1.0					
ORIF				*e*Sg **Sg**	**10 43 18.4**	**-2.3**
	2.2nm,0.3s					
HINF	**Hinteralfeld**	**5.19**	**81**	*e*Pn **Pn**	**10 41 51.7**	**-0.1**
	SNR=1.0					
HINF	**Hinteralfeld**	**5.19**	**81**	*e*Pg **Pg**	**10 42 13.1**	**-1.0**
HINF				*e*Sn **Sn**	**10 42 47.9**	**-3.5**
HINF				*e*Sg **Sg**	**10 43 18.9**	**-2.3**
	18nm,0.3s,SNR=1.0					
HINF	**Hinteralfeld**	**5.19**	**81**	*e*Pn **Pn**	**10 41 51.7**	**-0.1**
	SNR=1.0					
HINF	**Hinteralfeld**	**5.19**	**81**	*e*Pg **Pg**	**10 42 13.1**	**-1.0**
HINF				*e*Sg **Sg**	**10 43 18.9**	**-2.3**
	9.1nm,0.3s,SNR=1.0					
MOF	**Molkenrain**	**5.38**	**81**	Pn **Pn**	**10 41 54.2**	**-0.3**
MOF	**Molkenrain**	**5.38**	**81**	Pn **Pn**	**10 41 54.2**	**-0.3**
ECH	**Echery**	**5.43**	**77**	Pn **Pn**	**10 41 55.4**	**+0.3**
ECH	**Echery**	**5.43**	**77**	Pn **Pn**	**10 41 55.4**	**+0.3**
LPL	**La Plagne**	**5.46**	**106**	*e*Pn **Pn**	**10 41 58.8**	**+3.0**
LPL				*e*Sg **Sg**	**10 43 28.9**	**-1.2**
	4.4nm,0.4s					
LPL	**La Plagne**	**5.46**	**106**	*e*Pn **Pn**	**10 41 58.8**	**+3.0**
LPL				*e*Sg **Sg**	**10 43 28.9**	**-1.2**
	2.2nm,0.4s					
LPG	**La Plagne**	**5.48**	**106**	*e*Pn **Pn**	**10 41 59.0**	**+2.9**
	SNR=1.0					
LPG				*e*Sg **Sg**	**10 43 28.8**	**-1.9**
	11nm,0.4s					
LPG	**La Plagne**	**5.48**	**106**	*e*Pn **Pn**	**10 41 59.0**	**+2.9**
	SNR=1.0					
LPG				*e*Sg **Sg**	**10 43 28.8**	**-1.9**
	5.4nm,0.4s					
SMRF	**Simiane la Rot**	**5.51**	**124**	*e*Pn **

TBP				*e*S	Sg	11 06 46.2	+0.7
CTBH	**Cotabato--PC H**	**1.74**	**142**	⇑*i*P	Sn	11 06 56.9	+0.3
GUIM	**Jordan**	**2.09**	**344**	*e*P	Pn	11 06 40.2	+1.1

IDC 29 11:06:54.2±5.8, 6°93S×129°70E, h225km±58km, mb3.0/1, mb1 2.7/4, mb1mx2.6/20, mbtmp2.6/4, MS2.8/1, Ms1 2.8/1, ms1mx2.5/11, Error ellipse: s-maj=76.9km s-min=25.3km az=67.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**11.79**	**199**	P	Pn	11 09 35.4	-0.5
	0.2nm,0.3s,baz=29,slow=11,SNR=15						
FITZ				S	S	11 11 41.7	-4.6
	0.1nm,0.3s,baz=148,slow=14,SNR=2.1						
WRA	**Warramunga Arr**	**13.70**	**161**	P	Pn	11 09 57.7	-2.0
	0.2nm,0.3s,baz=345,slow=13,SNR=14						
WRA				S	S	11 12 25.0	-6.3
	0.1nm,0.3s,baz=339,slow=22,SNR=1.8						
ASAR	**Alice Springs**	**17.13**	**167**	P	Pn	11 10 40.6	-0.2
	0.1nm,0.3s,baz=344,slow=8.9,SNR=6.0						
ASAR				S	S	11 13 44.7	-1.2
	0.0nm,0.3s,baz=346,slow=11,SNR=2.0						
KSRS	**Korea Array**	**44.18**	**358**	LR	LR	11 36 20.1	
	comp=Z,9.5nm,18.2s,baz=145,slow=40						
MKAR	**Makanchi Array**	**68.00**	**327**	P	P	11 17 29.1	-0.1
	0.4nm,0.7s,baz=126,slow=7.3,SNR=3.1						

*IDC **29** 11:16:25.9±3.3, 21°.22S×174°.51E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.5/18, mbtmp3.6/3, Error ellipse: s-maj=232.3km s-min=62.2km az=175.0*

ISC 29 11:17:21.0±4.8, 18°.6S±0°.1×167°.5E±0°.6, h25km, n5, σ1°65/6, mb3.7/3, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**3.63**	**189**	*e*S	**Sn**	**11 18 57.5**	**-0.1**
NOUC	**Port Laguerre**	**3.70**	**197**	*e*P	**Pn**	**11 18 17.0**	**+0.4**
NOUC				*e*S	**Sb**	**11 19 10.0**	**0.0**
WRA	**Warramunga Arr**	**31.28**	**262**	P	**P**	**11 23 41.9**	**+2.6**
	0.2nm,0.3s,baz=99,slow=8.4,SNR=3.3						
ASAR	**Alice Springs**	**31.68**	**255**	P	**P**	**11 23 41.7**	**-1.1**
	0.8nm,0.7s,baz=84,slow=9.6,SNR=11						
FITZ	**Fitzroy Crossi**	**39.65**	**264**	P	**P**	**11 24 51.5**	**+0.4**
	1.1nm,0.7s,baz=102,slow=9.3,SNR=4.1						

DDA 29 11:27:54.1, 42°.57N×42°.01E, h7km, MD2.9, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ARTV	**Artvin**	**1.38**	**183**	*e*P	Pn	11 28 17.7	-2.5
ARTV				*e*S	Sg	11 28 43.3	+4.1
DAGI	**Agillar**	**1.49**	**183**	*i*P	Pg	11 28 24.1	+1.1
DAGI				*i*S	Sg	11 28 44.1	+1.6
DBAD	**Bademkaya**	**1.57**	**189**	*e*P	Pb	11 28 23.8	+0.2
DBAD				*e*S	Sg	11 28 45.4	+0.6
DDEM	**Demirkent**	**1.69**	**187**	*i*P	Pb	11 28 25.8	+0.1
DDEM				*i*S	Sg	11 28 48.2	-0.5

*SZGRF **29** 11:56:31.0, 22°.14S×170°.90E, h163km, Southeast of Loyalty Islands*

*ISCJB **29** 11:56:31.5±0.8, 21°.60S±0°.06×170°.65E±0°.05, h173km±6km, mb4.9/58, Error ellipse: s-maj=9.5km s-min=7.8km az=152.6*

*IDC **29** 11:56:33.1±0.5, 21°.62S×170°.56E, h170km±3km, mb4.5/18, mb1 4.6/21, mb1mx4.5/25, mbtmp4.5/21, MS3.7/5, Ms1 3.8/5, ms1mx3.2/32, Error ellipse: s-maj=10.6km s-min=8.6km az=145.0*

*BJI **29** 11:56:33.7, 21°.15S×170°.65E, h177km, mB4.8/26, mb4.9/39*

*NEIC **29** 11:56:33.2±0.8, 21°.57S×170°.66E, h176km±6km, mb5.1/22, Error ellipse: s-maj=6.8km s-min=5.7km az=152.0*

*MOS **29** 11:56:33.8±1.5, 21°.54S×170°.50E, h185km, mb5.0/17, Error ellipse: s-maj=11.7km s-min=9.6km az=36.2*

*BGS **29** 11:56:35.4±5.9, 21°.57S×170°.66E, h176km, mb5.1(NEIC)*

*DJA **29** 11:56:48.6±6.7, 22°.5S±13°×17°.0E±4°2, h281km±56km, M4.7/9, mB5.2/1, mb4.7/9, Mw(mB)4.6/1, Mwp6.0/1*

ISC 29 11:56:32.7±0.3, 21°.60S±0°.05×170°.64E±0°.05, h174km±2km, h174km:pP-P, n382, σ1°28/467, mb4.9/58, 49C-14D, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BAYA	**Yate Dam**	**3.53**	**260**	*e*P	**Pn**	**11 57 26.1**	**-1.6**
BAYA				*e*S	**Sn**	**11 58 09.8**	**-0.8**
DZM	**Mont Dzumac**	**3.93**	**262**	*e*Pn	**Pn**	**11 57 32.1**	**-0.7**
	105nm,0.3s						
DZM				*e*Sn	**Sn**	**11 58 16.4**	**-3.3**
	251nm,0.3s						
DZM	**Mont Dzumac**	**3.93**	**262**	*e*Pn	**Pn**	**11 57 31.9**	**-0.9**
DZM				S	**Sn**	**11 58 19.3**	**-0.5**
DZM	**Mont Dzumac**	**3.93**	**262**	P	**Pn**	**11 57 32.0**	**-0.9**
	21nm,0.3s,baz=90,slow=23,SNR=210						
DZM				S	**Sn**	**11 58 19.3**	**-0.5**
	85nm,0.3s,baz=286,slow=23,SNR=9.2						
NOUC	**Port Laguerre**	**4.06**	**262**	*e*P	**Pn**	**11 57 34.3**	**-0.1**
NOUC				*e*S	**Sn**	**11 58 25.5**	**+2.8**
MSVF	**Nonsavu**	**7.97**	**62**	Pn	**Pn**	**11 58 27.9**	**+2.1**
	1μm,0.8s,SNR=29						
MSVF	**Nonsavu**	**7.97**	**62**	*e*P	**Pn**	**11 58 27.2**	**+1.4**
MSVF	**Nonsavu**	**7.97**	**62**	*e*Pn	**Pn**	**11 58 27.2**	**+1.4**
HNR	**Honiara**	**15.88**	**318**	*e*Pn	**Pn**	**12 00 06.7**	**-0.3**
	1μm,1.4s						
HNR	**Honiara**	**15.88**	**318**	P	**Pn**	**12 00 06.9**	**-0.1**
	15nm,0.3s,baz=351,slow=0.4,SNR=34						
URZ	**Urewera**	**17.52**	**163**	P	**Pn**	**12 00 26.1**	**-0.2**
URZ	**Urewera**	**17.52**	**163**	P	**Pn**	**12 00 26.1**	**-0.2**
	0.3nm,0.3s,baz=350,slow=6.1,SNR=3.3						
URZ				LR	LR	12 04 59.4	
	comp=Z,278nm,19.5s,baz=207,slow=29						
EIDS	**Eidsvold**	**18.33**	**254**	*e*P	**Pn**	**12 00 35.7**	**-0.4**
	40nm,0.6s						
AFI	**Afiamalu**	**18.40**	**68**	P	**P**	**12 00 33.6**	**-1.3**
AFI	**Afiamalu**	**18.40**	**68**	P	**P**	**12 00 33.6**	**-1.3**
	3.2nm,0.3s,baz=246,slow=17,SNR=3.8						
ARMA	**Armidale**	**19.19**	**239**	*e*P	**Pn**	**12 00 46.4**	**+0.1**
	39nm,0.8s						
RPZ	**Rata Peaks**	**22.06**	**179**	P	**P**	**12 01 14.5**	**+1.0**
RPZ				pP	**pP**	**12 01 44.1**	**0.0**
RPZ	**Rata Peaks**	**22.06**	**179**	P	**P**	**12 01 14.5**	**+1.0**
	18nm,0.8s,baz=58,slow=3.0,SNR=5.8						
RPZ				pP	**pP**	**12 01 44.1**	**0.0**
	13nm,0.8s,baz=342,slow=6.4,SNR=2.6						
CTA	**Charters Tower**	**22.84**	**269**	P	**P**	**12 01 22.0**	**+1.0**
CTA	**Charters Tower**	**22.84**	**269**	P	**P**	**12 01 22.0**	**+1.0**
	24nm,0.7s,baz=94,slow=12,SNR=33						
CTAO	**Charters Tower**	**22.84**	**269**	*e*P	**P**	**12 01 21.4**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,63nm,1.2s						
CTAO	**Charters Tower**	**22.84**	**269**	*e*P	**P**	**12 01 21.4**	**+0.4**
	comp=Z,63nm,1.2s						
TARA	**Tarawa**	**22.92**	**6**	*e*P	**P**	**12 01 21.8**	**0.0**
	comp=Z,208nm,1.4s						
PMG	**Port Moresby**	**25.63**	**295**	*e*P	**P**	**12 01 47.1**	**+0.7**
	comp=Z,87nm,1.0s						
PMG	**Port Moresby**	**25.63**	**295**	P	**P**	**12 01 47.4**	**+1.0**
	comp=Z,87nm,1.1s,comp=Z,954nmcomp=Z,20μm						
PMG	**Port Moresby**	**25.63**	**295**	P	**P**	**12 01 47.1**	**+0.7**
	comp=Z,66nm,0.9s,baz=111,slow=5.1,SNR=18						
COEN	**Coen**	**27.21**	**282**	*e*P	**P**	**12 02 02.2**	**+1.6**
	comp=Z,2μm,1.9s						
RAR	**Rarotonga**	**27.53**	**95**	LR	LR	12 10 56.8	
	comp=Z,116nm,21.6s,baz=135,slow=31						
STKA	**Stephens Creek**	**27.81**	**242**	*e*P	**P**	**12 02 06.7**	**+1.0**
	comp=Z,3.4nm,0.9s						
STKA				pP	**pP**	**12 02 40.4**	**-1.2**
STKA				PcP	**PcP**	**12 05 17.7**	**+0.2**
STKA				ScP	**ScP**	**12 08 44.7**	**+2.7**
STKA	**Stephens Creek**	**27.81**	**242**	P	**P**	**12 02 06.7**	**+1.0**
	comp=Z,12nm,0.8s,baz=67,slow=9.7,SNR=20						
STKA				pP	**pP**	**12 02 40.4**	**-1.2**
	comp=Z,6.1nm,0.8s,baz=78,slow=6.4,SNR=2.0						
STKA				PcP	**PcP**	**12 05 17.7**	**+0.2**
	comp=Z,6.2nm,0.8s,baz=304,slow=2.2,SNR=4.3						
STKA				ScP	**ScP**	**12 08 44.7**	**+2.7**
	comp=Z,7.1nm,1.0s,baz=74,slow=6.7,SNR=4.2						
AS31	**Alice Springs**	**33.91**	**259**	*e*P	**P**	**12 02 59.0**	**-0.5**
ASAR	**Alice Springs**	**33.91**	**259**	P	**P**	**12 02 59.1**	**-0.3**
ASAR				pP	**pP**	**12 03 35.8**	**-0.2**
ASAR				PcP	**PcP**	**12 05 33.6**	**-0.3**
ASAR				S	**S**	**12 08 10.6**	**-0.8**
ASAR				ScP	**ScP**	**12 09 04.8**	**+2.3**
ASAR	**Alice Springs**	**33.91**	**259**	P	**P**	**12 02 59.1**	**-0.3**
	comp=Z,33nm,0.7s,baz=81,slow=9.4,SNR=382						
ASAR				pP	**pP**	**12 03 35.8**	**-0.2**
	comp=Z,11nm,0.8s,baz=85,slow=8.9,SNR=4.8						
ASAR				PcP	**PcP**	**12 05 33.6**	**-0.3**
	comp=Z,5.1nm,0.7s,baz=94,slow=3.2,SNR=9.5						
ASAR				S	**S**	**12 08 10.6**	**-0.8**
	comp=Z,2.5nm,0.9s,baz=86,slow=16,SNR=8.2						
ASAR				ScP	**ScP**	**12 09 04.8**	**+2.3**
	comp=Z,1.7nm,0.8s,baz=108,slow=4.1,SNR=6.1						
WRAB	**Tennant Creek**	**33.93**	**266**	P	**P**	**12 02 58.0**	**-1.6**
	comp=Z,211nm,1.0s,SNR=50						
WRAB	**Tennant Creek**	**33.93**	**266**	*e*P	**P**	**12 02 58.7**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,32nm,0.9s						
WRAB	**Tennant Creek**	**33.93**	**266**	*e*P	**P**	**12 02 58.7**	**-0.9**
	comp=Z,32nm,0.9s						
WRA	**Warramunga Arr**	**33.94**	**266**	P	**P**	**12 02 58.7**	**-1.0**
WRA				PcP	**PcP**	**12 05 34.0**	**0.0**
WRA				S	**S**	**12 08 08.2**	**-3.5**
WRA				ScP	**ScP**	**12 09 05.6**	**+3.0**
WRA	**Warramunga Arr**	**33.94**	**266**	P	**P**	**12 02 58.7**	**-1.0**
	comp=Z,28nm,0.7s,baz=100,slow=7.9,SNR=215						
WRA				PcP	**PcP**	**12 05 34.0**	**0.0**
	comp=Z,5.7nm,0.9s,baz=99,slow=2.5,SNR=6.9						
WRA				S	**S**	**12 08 08.2**	**-3.5**
	comp=Z,2.7nm,0.9s,baz=101,slow=14,SNR=8.3						
WRA				ScP	**ScP**	**12 09 05.6**	**+3.0**
	comp=Z,2.4nm,1.0s,baz=97,slow=3.7,SNR=4.9						
TBI	**Tubuai**	**36.83**	**100**	*e*LR	LR	12 13 30.7	
	comp=Z,114nm,28.2s						
PPT2	**Papeete2**	**37.62**	**91**	*e*LR	LR	12 14 02.3	
	comp=Z,134nm,23.5s						
FITZ	**Fitzroy Crossi**	**42.36**	**266**	P	**P**	**12 04 10.7**	**+0.6**
FITZ				pP	**pP**	**12 04 47.5**	**-0.4**
FITZ	**Fitzroy Crossi**	**42.36**	**266**	P	**P**	**12 04 10.7**	**+0.6**
	comp=Z,78nm,0.8s,baz=121,slow=7.2,SNR=118						
FITZ				pP	**pP**	**12 04 47.5**	**-0.4**
	comp=Z,9.5nm,0.8s,baz=131,slow=9.3,SNR=1.9						
MBWA	**Marble Bar**	**47.23**	**261**	*e*P	**P**	**12 04 48.7**	**+0.2**
	comp=Z,73nm,0.7s						
NWAO	**Narrogin (SRO)**	**48.35**	**245**	P	**P**	**12 04 56.7**	**-0.3**
NWAO				pP	**pP**	**12 05 35.9**	**+0.1**
NWAO	**Narrogin (SRO)**	**48.35**	**245**	P	**P**	**12 04 56.7**	**-0.3**
	comp=Z,55nm,0.7s,baz=93,slow=8.7,SNR=29						
NWAO				pP	**pP**	**12 05 35.9**	**+0.1**
	comp=Z,9.6nm,0.5s,baz=120,slow=17,SNR=1.6						
NWAO				LR	LR	12 26 45.0	
	comp=Z,120nm,21.1s,baz=12,slow=38						
KAPI	**Kappang**	**51.93**	**281**	P	**P**	**12 05 24.2**	**0.0**
	comp=Z,315nm,0.9s,SNR=6.3						
KAPI	**Kappang**	**51.93**	**281**	*e*P	**P**	**12 05 23.6**	**-0.6**
	comp=Z,60nm,1.0s						
KIP	**Kipapa**	**52.58**	**38**	⇓*e*P	**P**	**12 05 26.5**	**-2.2**
KIP				pmax	pmax		
	comp=Z,79nm,1.2s						
VNDA	**Vanda**	**56.13**	**182**	*e*P	**P**	**12 05 53.5**	**-0.1**
	comp=Z,35nm,2.6s						
VNDA	**Vanda**	**56.13**	**182**	P	**P**	**12 05 53.8**	**+0.2**
	comp=Z,1.5nm,0.8s,baz=358,slow=5.8,SNR=11						
VNDA				LR	LR	12 24 35.7	
	comp=Z,90nm,20.0s,baz=354,slow=30						
SBA	**Scott Base**	**56.33**	**181**	*e*P	**P**	**12 05 55.8**	**+0.8**
SBA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SBA	**Scott Base**	**56.33**	**181**	*e*P	**P**	**12 05 55.8**	**+0.8**
	comp=Z,7.9nm,0.8s						
MYLDM	**Lahad Datu**	**57.59**	**291**	P	**P**	**12 06 06.7**	**+1.9**
TSM	**Tawau**	**57.71**	**290**	P	**P**	**12 06 07.1**	**+1.5**
KKM	**Kota Kinabalu**	**59.99**	**291**	P	**P**	**12 06 23.0**	**+1.5**
SBUM	**Sibu**	**61.88**	**285**	P	**P**	**12 06 36.2**	**+2.1**
KSM	**Kuching**	**63.19**	**283**	*e*P	**P**	**12 06 43.8**	**+0.9**
	comp=Z,97nm,0.8s						
KSM	**Kuching**	**63.19**	**283**	P	**P**	**12 06 44.9**	**+2.1**
MJAR	**Matsushiro Arr**	**65.44**	**332**	P	**P**	**12 06 56.9**	**-0.1**
MJAR				pP	**pP**	**12 07 38.8**	**+0.8**
MJAR	**Matsushiro Arr**	**65.44**	**332**	P	**P**	**12 06 56.9**	**-0.1**
	comp=Z,7.6nm,0.6s,baz=172,slow=7.5,SNR=32						
MJAR				pP	**pP**	**12 07 38.8**	**+0.8**
	comp=Z,2.4nm,0.5s,baz=160,slow=6.2,SNR=2.7						
MAJO	**Matsushiro**	**65.45**	**332**	*e*P	**P**	**12 06 57.7**	**+0.7**
MAJO	**Matsushiro**	**65.45**	**332**	*e*P	**P**	**12 06 57.7**	**+0.7**
MAT	**Matsushiro**	**65.45**	**332**	P	**P**	**12 06 57.1**	**+0.1**
NACB	**Ninganchiao**	**65.92**	**311**	*e*P	**P**	**12 07 00.6**	**+0.3**
TPUB	**Ta-pu**	**66.05**	**310**	*e*P	**P**	**12 07 00.5**	**-0.7**
	comp=Z,32nm,0.8s						
SSLB	**Suanglung**	**66.13**	**310**	*e*P	**P**	**12 07 01.4**	**-0.3**
YHNB	**Yeheng**	**66.39**	**311**	*e*P	**P**	**12 07 03.4**	**+0.1**
	comp=Z,76nm,1.1s						
ERM	**Erimo**	**68.21**	**338**	⇓*e*P	**P**	**12 07 13.7**	**-0.6**
ERM				pmax	pmax		
	comp=Z,32nm,1.7s						
MYKOM	**Kota Tinggi**	**69.19**	**281**	P	**P**	**12 07 22.8**	**+1.7**
KGM	**Kluang**	**69.77**	**281**	P	**P**	**12 07 26.3**	**+1.7**
ASAJ	**Asahikawa**	**70.27**	**339**	P	**P**	**12 07 28.6**	**+1.7**
ASAJ				pP	**pP**	**12 08 08.8**	**+0.4**
ASAJ	**Asahikawa**	**70.27**	**339**	P	**P**	**12 07 28.6**	**+1.7**
	comp=Z,7.6nm,0.5s,baz=254,slow=9.5,SNR=15						
ASAJ				pP	**pP**	**12 08 08.8**	**+0.4**
	comp=Z,3.2nm,0.5s,baz=274,slow=7.7,SNR=1.7						
KSRS	**Korea Array**	**71.19**	**325**	P	**P**	**12 07 33.1**	**+0.5**
	comp=Z,5.4nm,0.8s,baz=142,slow=6.2,SNR=30						
KSRS				pP	**pP**	**12 08 14.1**	**-0.2**
	comp=Z,0.9nm,0.7s,baz=134,slow=5.9,SNR=1.5						
KSRS				PP	**PP**	**12 10 08.8**	**-4.3**
	comp=Z,1.5nm,0.9s,baz=148,slow=10,SNR=5.7						
KSAR	**Wonju Array Be**	**71.20**	**325**	P	**P**	**12 07 33.1**	**+0.4**
KSAR				pP	**pP**	**12 08 14.1**	**-0.3**
KSAR				PP	**PP**	**12 10 08.8**	**-4.5**
KTGM	**Kuala Trenggan**	**71.29**	**284**	P	**P**	**12 07 35.6**	**+1.8**
FRIM	**Kepong**	**71.81**	**281**	P	**P**	**12 07 38.0**	**+1.1**
QIZ	**Qiongzhong**	**71.89**	**300**	P	**P**	**12 07 38.8**	**+1.6**
QIZ				S	**S**	**12 16 45.0**	**+0.8**
QIZ				pmax	pmax		
	comp=Z,20nm,1.1s						
NJ2	**Nanjing**	**72.81**	**316**	*e*P	**P**	**12 07 43.5**	**+1.1**
NJ2				pmax	pmax		
	comp=Z,20nm,1.0s						
IPM	**Ipoh**	**72.86**	**282**	*e*P	**P**	**12 07 43.4**	**+0.2**
	comp=Z,55nm,0.7s						
IPM	**Ipoh**	**72.86**	**282**	P	**P**	**12 07 43.9**	**+0.8**
KULM	**Kulim**	**73.53**	**283**	*e*P	**P**	**12 07 47.0**	**-0.1**
	comp=Z,37nm,0.8s						
KULM	**Kulim**	**73.53**	**283**	P	**P**	**12 07 48.0**	**+0.9**
USRK	**Ussuriysk Arra**	**74.42**	**332**	P	**P**	**12 07 52.6**	**+1.1**
	comp=Z,5.4nm,0.8s,baz=131,slow=5.3,SNR=9.0						
WHN	**Wuhan**	**74.90**	**312**	⇓P	**P**	**12 07 55.5**	**+0.9**
PEA0B	**Petropavlovsk-**	**75.24**	**352**	*e*P	**P**	**12 07 56.2**	**+0.1**
PETK	**Petropavlovsk-**	**75.24**	**352**	P	**P**	**12 07 56.7**	**+0.7**
PETK				*PP	**pP**	**12 08 38.7**	**+0.5**
PETK	**Petropavlovsk-**	**75.24**	**352**	P	**P**	**12 07 56.7**	**+0.7**
PETK				pP	**pP**	**12 08 38.6**	**+0.5**
PETK	**Petropavlovsk-**	**75.24**	**352**	P	**P**	**12 07 56.7**	**+0.7**
	comp=Z,14nm,0.9s,baz=154,slow=7.6,SNR=20						
PETK				pP	**pP**	**12 08 38.6**	**+0.5**
	comp=Z,1.6nm,0.7s,baz=143,slow=6.8,SNR=1.4						
MDJ	**Mudanjiang**	**75.82**	**331**	P	**P**	**12 08 02.0**	**+2.5**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,97nm,3.5s						
HABR	**Khabarovsk**	**76.68**	**337**	*ce*P	**P**	**12 08 02.8**	**-1.4**
HABR				*e*		12 08 13.3	
HABR				*e**PP	**pP**	**12 08 46.5**	**0.0**
HABR				*e**SP	**sP**	**12 09 05.8**	**+0.9**
HABR				*e*		12 10 57.4	
HABR				*e*PPP	PPP	12 12 45.1	
HABR				*e*S	**S**	**12 17 34.9**	**-1.5**
HABR				*e*		12 18 01.6	
HABR				SS	**SS**	**12 22 34.7**	**-1.8**
HABR				pmax	pmax		
	comp=E,92nm,2.2s						
HABR				pmax	pmax		
	comp=Z,60nm,2.2s						
HABR				pmax	pmax		
	comp=N,68nm,3.3s						
HABR				MLR	MLR		
	comp=Z,54nm,21.0s						
MAW	**Mawson**	**76.75**	**202**	P	**P**	**12 08 05.5**	**+1.0**
MAW	**Mawson**	**76.75**	**202**	P	**P**	**12 08 05.5**	**+1.0**
	comp=Z,10nm,0.8s,baz=129,slow=7.1,SNR=26						
CN2	**Changchun**	**77.15**	**328**	*e*P	**P**	**12 08 08.0**	**+1.0**
CN2				*e*S	**S**	**12 17 41.0**	**-0.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	**Guiyang**	**78.24**	**305**	⇑*i*P	**P**	**12 08 14.3**	**+0.7**
GYA				pP	pP	12 09 01.5	+5.5
GYA				PP	**PP**	**12 11 16.8**	**+3.6**
GYA				S	**S**	**12 17 53.3**	**-1.1**
GYA				SKS	**SKSac**	**12 18 08.0**	**-4.0**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,5.0s						
KLR	**Kul'dur**	**78.56**	**335**	*e*P	P	12 08 11.2	-3.5
KLR				pmax	pmax		
	comp=Z,30nm,1.2s						
BJI	**Beijing**	**79.59**	**321**	P	**P**	**12 08 20.3**	**-0.2**
BJI				pP	**pP**	**12 09 06.5**	**+3.5**
BJI				S	**S**	**12 18 11.8**	**+3.9**
BJI				pmax	pmax		
	comp=Z,18nm,0.8s						
KMI	**Kunming**	**80.63**	**302**	P	**P**	**12 08 28.3**	**+1.6**
KMI				pmax	pmax		
	comp=Z,31nm,0.8s						
CMAR	**Chiang Mai Arr**	**80.67**	**294**	P	**P**	**12 08 28.6**	**+1.8**
CMAR				pP	**pP**	**12 09 10.0**	**+0.6**
CMAR	**Chiang Mai Arr**	**80.67**	**294**	P	**P**	**12 08 28.6**	**+1.8**
	comp=Z,11nm,0.8s,baz=135,slow=4.0,SNR=47						
CMAR				pP	**pP**	**12 09 10.0**	**+0.6**
	comp=Z,2.3nm,0.5s,baz=115,slow=6.5,SNR=2.3						
XAN	**Xi'an**	**80.67**	**312**	P	**P**	**12 08 27.3**	**+0.8**
XAN				pP	**pP**	**12 09 09.5**	**+0.4**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,22nm,5.5s						
CHTO	**Chiang Mai**	**80.82**	**294**	*e*P	**P**	**12 08 28.9**	**+1.3**
CHTO				pmax	pmax		
	comp=Z,20nm,1.1s						
CHTO	**Chiang Mai**	**80.82**	**294**	*e*P	**P**	**12 08 28.9**	**+1.3**
	comp=Z,20nm,1.1s						
CD2	**Chengdu**	**82.71**	**307**	*e*P	**P**	**12 08 39.0**	**+1.7**
CD2				pP	**pP**	**12 09 22.3**	**+2.2**
CD2				sP	**sP**	**12 09 41.3**	**+2.9**
CD2				PP	**PP**	**12 11 53.5**	**+3.6**
CD2				S	**S**	**12 18 40.8**	**+0.2**
CD2				SS	**SS**	**12 24 00.8**	**-6.6**
CD2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CD2				pmax	pmax		
	comp=Z,30nm,6.2s						
HHC	**Hu-ho-hao-te**	**82.86**	**319**	*e*P	**P**	**12 08 39.3**	**+1.4**
HHC				pP	**pP**	**12 09 22.8**	**+2.1**
HHC				sP	**sP**	**12 09 42.0**	**+3.0**
HHC				PP	**PP**	**12 11 55.5**	**+4.5**
HHC				S	**S**	**12 18 42.0**	**+0.2**
HHC				sS	**sS**	**12 19 58.8**	**+2.6**
HHC				pmax	pmax		
	comp=Z,54nm,1.1s						
HHC				pmax	pmax		
	comp=Z,97nm,6.7s						
HHC				LR	LR		
	comp=N,220nm,18.2s						
HHC				LR	LR		
	comp=E,750nm,18.0s						
HHC				LR	LR		
	comp=Z,160nm,17.3s						
SYO	**Syowa Base**	**83.04**	**196**	⇑*e*P	**P**	**12 08 36.5**	**-1.7**
SYO	**Syowa Base**	**83.04**	**196**	⇓*e*PcP	**PcP**	**12 08 41.5**	**-1.0**
LZH	**Lanzhou**	**85.28**	**312**	*e*P	**P**	**12 08 51.8**	**+1.5**
LZH				pP	**pP**	**12 09 35.5**	**+2.2**
LZH				sP	**sP**	**12 09 54.5**	**+2.9**
LZH				pmax	pmax		
	comp=Z,42nm,1.0s						
LZH				pmax	pmax		
	comp=Z,82nm,6.2s						
GAMB	**Gambell**	**86.21**	**8**	*e*P	**P**	**12 08 54.5**	**+0.5**
	comp=Z,18nm,1.0s						
SNAA	**Sanae**	**86.87**	**182**	*e*P	**P**	**12 08 56.4**	**-1.0**
	comp=Z,5.3nm,1.0s						
CLNS	**Chul'man**	**87.07**	**337**	*e*P	**P**	**12 08 59.6**	**+1.2**
CLNS				pmax	pmax		
	comp=Z,13nm,0.9s						
CLNS				pmax	pmax		
	comp=N,6.0nm,1.1s						
CLNS				pmax	pmax		
	comp=E,2.0nm,1.1s						
NVAR	**Mina Array Bea**	**89.38**	**48**	P	**P**	**12 09 10.9**	**+0.9**
NVAR				pP	**pP**	**12 09 52.5**	**-1.0**
NVAR	**Mina Array Bea**	**89.38**	**48**	P	**P**	**12 09 10.9**	**+0.9**
	comp=E,3.1nm,0.8s,baz=225,slow=8.3,SNR=20						
NVAR				pP	**pP**	**12 09 52.5**	**-1.0**
	comp=E,3.7nm,1.0s,baz=231,slow=8.8,SNR=5.2						
BILL	**Bilibino**	**89.43**	**358**	*c**i*P	**P**	**12 09 09.5**	**+0.3**
BILL				*i*		12 12 48.6	
BILL				pmax	pmax		
	comp=Z,23nm,1.6s						
BILL	**Bilibino**	**89.43**	**358**	*e*P	**P**	**12 09 09.5**	**+0.3**
	comp=Z,28nm,1.5s						
YAK	**Yakutsk**	**89.51**	**342**	*e*

	comp=Z,0.3nm,0.2s,baz=95,slow=2.2,SNR=6.1							
KURBB				PP	PP	12 14 57.7	-5.0	
	comp=Z,1.1nm,0.8s,baz=103,slow=7.2,SNR=4.8							
BVAR	**Borovoye Array**	**113.06 320**		PKiKP	**PKiKP**	**12 14 48.3**	**-0.8**	
BVAR						12 15 31.3		
BVAR	**Borovoye Array**	**113.06 320**		PKiKP	**PKiKP**	**12 14 48.2**	**-0.8**	
BVAR				PP	PP	12 15 31.2	-10	
BVAR	**Borovoye Array**	**113.06 320**		PKiKP	**PKiKP**	**12 14 48.2**	**-0.8**	
	comp=Z,0.5nm,0.4s,baz=106,slow=3.2,SNR=4.3							
BVAR				PP	PP	12 15 31.2	-10	
	comp=Z,0.4nm,0.5s,baz=119,slow=5.1,SNR=2.7							
ARU	**Arti**	**119.91 324**		*i* PKIKP	**PKPdf**	**12 15 00.9**	**-1.1**	
ARU						12 16 25.1		
ARU						12 21 39.1		
BOSA	**Boshof**	**119.94 215**		PKP	**PKPdf**	**12 15 03.5**	**+0.2**	
BOSA	**Boshof**	**119.94 215**		PKP	**PKPdf**	**12 15 03.5**	**+0.2**	
	comp=Z,1.6nm,0.7s,baz=203,slow=16,SNR=3.8							
AKTO	**Aktyubinsk**	**120.69 317**		PKIKP	**PKPdf**	**12 15 03.5**	**-0.3**	
AKTO	**Aktyubinsk**	**120.69 317**		PKP	**PKPdf**	**12 15 03.5**	**-0.3**	
AKTO	**Aktyubinsk**	**120.69 317**		PKP	**PKPdf**	**12 15 03.5**	**-0.3**	
	comp=Z,2.8nm,0.7s,baz=120,slow=1.9,SNR=11							
FFD	**Franklin Falls**	**124.47 51**		*e*PKPdf	**PKPdf**	**12 15 11.0**	**-0.2**	
ARCES	**ARCESS Array B**	**127.67 345**		PKP	**PKPdf**	**12 15 16.1**	**-0.5**	
ARCES				pPKP	**pPKPdf**	**12 15 58.7**	**-3.5**	
ARCES	**ARCESS Array B**	**127.67 345**		PKP	**PKPdf**	**12 15 16.1**	**-0.5**	
	comp=Z,4.0nm,0.7s,baz=67,slow=1.6,SNR=21							
ARCES				pPKP	**pPKPdf**	**12 15 58.7**	**-3.5**	
	comp=Z,1.0nm,0.5s,baz=71,slow=1.4,SNR=2.2							
KMBO	**Kilima Mbogo**	**129.20 250**		PKP	**PKPdf**	**12 15 21.9**	**+0.4**	
KMBO	**Kilima Mbogo**	**129.20 250**		PKP	**PKPdf**	**12 15 21.9**	**+0.4**	
	comp=Z,0.7nm,0.3s,baz=231,slow=24,SNR=4.2							
KBZ	**Khabaz**	**131.69 310**		PKIKP	**PKPdf**	**12 15 26.9**	**+2.0**	
KBZ	**Khabaz**	**131.69 310**		PKP	**PKPdf**	**12 15 26.9**	**+2.0**	
KBZ	**Khabaz**	**131.69 310**		PKP	**PKPdf**	**12 15 26.9**	**+2.0**	
	comp=Z,2.0nm,0.8s,baz=115,slow=9.5,SNR=3.5							
FINES	**FINESS Array B**	**133.26 338**		PKP	**PKPdf**	**12 15 25.6**	**-1.8**	
FINES				SKPbc	**SKPbc**	**12 18 40.1**	**+0.8**	
FINES	**FINESS Array B**	**133.26 338**		PKP	**PKPdf**	**12 15 25.6**	**-1.8**	
	comp=Z,3.9nm,1.0s,baz=355,slow=9.6,SNR=6.7							
FINES				SKPbc	**SKPbc**	**12 18 40.1**	**+0.8**	
	comp=Z,2.5nm,0.7s,baz=92,slow=5.7,SNR=6.9							
NB2	**NORSAR Subarra**	**138.05 345**		PKPdf	PKPdf	12 15 26.2	-10	
	comp=Z,3.8nm,1.4s,baz=31,slow=1.9							
NOA	**NORSAR Array B**	**138.05 345**		PKPpre	PKPpre	12 15 30.2		
NOA				PKP	**PKPdf**	**12 15 37.2**	**+0.9**	
NOA				SKPbc	**SKPbc**	**12 18 54.2**	**-0.1**	
NOA	**NORSAR Array B**	**138.05 345**		PKhKP	PKPpre	12 15 30.2		
	comp=Z,0.7nm,0.8s,baz=33,slow=2.6,SNR=3.5							
NOA				PKP	**PKPdf**	**12 15 37.2**	**+0.9**	
	comp=Z,1.4nm,0.7s,baz=30,slow=2.0,SNR=6.3							
NOA				SKPbc	**SKPbc**	**12 18 54.2**	**-0.1**	
	comp=Z,1.1nm,0.8s,baz=19,slow=4.4,SNR=3.8							
AKASG	**Malin Array Be**	**138.17 324**		PKHKP	PKPpre	12 15 30.6		
AKASG						12 15 36.7		
AKASG	**Malin Array Be**	**138.17 324**		PKPpre	PKPpre	12 15 30.6		
AKASG				PKP	**PKPdf**	**12 15 36.7**	**-0.1**	
AKASG	**Malin Array Be**	**138.17 324**		PKhKP	PKPpre	12 15 30.6		
	comp=Z,1.1nm,0.5s,baz=69,slow=2.7,SNR=3.2							
AKASG				PKP	**PKPdf**	**12 15 36.7**	**-0.1**	
	comp=Z,2.6nm,0.7s,baz=64,slow=2.2,SNR=8.2							
BRTR	**Keskin Array B**	**139.28 306**		PKPpre	PKPpre	12 15 30.5		
BRTR	**Keskin Array B**	**139.28 306**		PKhKP	PKPpre	12 15 30.5		
	comp=Z,1.8nm,0.8s,baz=132,slow=1.8,SNR=8.8							
LVV	**L'vov**	**141.46 325**		*e*PKIKP	**PKPdf**	**12 15 42.0**	**-0.9**	
VRI	**Vrincioaia**	**141.94 318**	⇓	PKIKP	**PKPdf**	**12 15 46.9**	**+3.0**	
VRI	**Vrincioaia**	**141.94 318**	⇓	*i*P	**PKPdf**	**12 15 46.9**	**+3.0**	
MLR	**Muntele Rosu**	**142.60 326**		*i*P	**PKPdf**	**12 15 42.4**	**-2.8**	
KOLS	**Kolonicke sedl**	**142.91 325**		*e*PKIKP	**PKPdf**	**12 15 43.1**	**-2.4**	
KOLS	**Kolonicke sedl**	**142.91 325**		*e*PKP	**PKPdf**	**12 15 43.1**	**-2.4**	
UZH	**Uzhgorod**	**143.07 325**	⇑	*i*PKIKP	PKPbc	12 15 43.7	+0.6	
UZH				*e*		12 15 46.3		
VOIR		**143.18 318**	⇑⇑	PKIKP	PKPbc	12 15 44.2	+0.5	
VOIR		**143.18 318**	⇑	*i*P	PKPbc	12 15 44.2	+0.5	
TRPA	**Tarpa**	**143.23 324**	⇑	*i*P	PKPbc	12 15 44.6	+1.0	
TRPA	**Tarpa**	**143.23 324**	⇓	*e*	PKPbc	12 15 44.3	+0.7	
CRVS	**Cervenica-Dubn**	**143.36 325**		*e*PKHKP	PKPab	12 15 41.6	-1.1	
CRVS	**Cervenica-Dubn**	**143.36 325**		*e*PKP	PKPab	12 15 41.6	-1.1	
ARR	**Arges**	**143.47 319**	⇓	*i*P	PKPbc	12 15 45.4	+1.0	
HUMR	**Humele**	**143.65 317**	⇓	*i*P	PKPbc	12 15 45.2	+0.3	
DRGR		**143.88 322**	⇑⇑	PKIKP	PKPbc	12 15 46.3	+0.7	
DRGR		**143.88 322**	⇑	*i*P	PKPbc	12 15 46.3	+0.7	
LOT	**Lotru**	**143.96 319**	⇓	*i*P	PKPbc	12 15 46.5	+0.6	
KAC	**Achnashellach**	**144.02 356**		*e*P	**PKPab**	**12 15 44.8**	**-0.2**	
KAC	**Achnashellach**	**144.02 356**		P	**PKPab**	**12 15 44.8**	**-0.2**	
KECS	**Kecovo**	**144.12 326**		*e*PKIKP	**PKPdf**	**12 15 47.1**	**-0.5**	
KECS	**Kecovo**	**144.12 326**		*e*PKP	**PKPdf**	**12 15 47.1**	**-0.5**	
KPL	**Plockton**	**144.20 357**		*e*P	**PKPab**	**12 15 44.9**	**-0.8**	
KPL				AMB	AMB	12 15 46.5		
	comp=Z,22nm,1.6s							
KPL	**Plockton**	**144.20 357**		P	**PKPab**	**12 15 44.9**	**-0.8**	
KPL				AMB	AMB	12 15 46.5		
	comp=Z,22nm,1.6s							
BSEG	**Bad Segeberg**	**144.42 340**		*e*PKPbc	PKPbc	12 15 47.3	+0.5	
BSEG	**Bad Segeberg**	**144.42 340**		*e*PKIKP	PKPbc	12 15 47.3	+0.5	
OKC	**Ostrava-Krasne**	**144.43 329**		*i*PKIKP	PKPbc	12 15 47.4	+0.4	
OKC	**Ostrava-Krasne**	**144.43 329**		*i*PKP	PKPbc	12 15 47.4	+0.4	
KSP	**Ksiaz**	**144.58 332**	⇑	*i*PKIKP	**PKPdf**	**12 15 48.1**	**-0.3**	
KSP	**Ksiaz**	**144.58 332**		*e*PKP	**PKPdf**	**12 15 48.0**	**-0.3**	
KSP				*e*		12 16 30.6		
GZR	**Gura Zlata**	**144.59 320**	⇑	PKHKP	PKPbc	12 15 48.2	+0.4	
GZR	**Gura Zlata**	**144.59 320**	⇑	*i*P	PKPbc	12 15 48.2	+0.4	
RDO	**Rodhopi**	**144.72 312**		*e*P	PKPbc	12 15 48.3	+0.1	
MORC	**Moravsky Berou**	**144.76 329**		*e*PKIKP	**PKPab**	**12 15 48.1**	**0.0**	
MORC	**Moravsky Berou**	**144.76 329**		*e*PKPbc	**PKPab**	**12 15 48.1**	**0.0**	
PSZ	**Piszkesteto**	**144.78 325**	⇑⇑	PKIKP	**PKPdf**	**12 15 49.2**	**+0.3**	
PSZ	**Piszkesteto**	**144.78 325**		*e*PKPbc	**PKPdf**	**12 15 48.8**	**-0.1**	
PSZ	**Piszkesteto**	**144.78 325**	⇑	*i*P	**PKPdf**	**12 15 49.2**	**+0.3**	
PSZ	**Piszkesteto**	**144.78 325**	⇑	*e*	**PKPdf**	**12 15 49.0**	**+0.1**	
PRK	**Paraskevi**	**144.88 308**		*e*P	**PKPdf**	**12 15 49.1**	**-0.1**	
DPC	**Dobruska-Polom**	**144.92 331**		*i*PKIKP	**PKPdf**	**12 15 49.5**	**+0.5**	
DPC	**Dobruska-Polom**	**144.92 331**		*i*PKP	**PKPdf**	**12 15 49.5**	**+0.5**	
DPC				*ex*	x	12 16 31.6		
SMG	**Samos**	**144.94 305**		*e*P	**PKPab**	**12 15 49.2**	**0.0**	
UPC	**Upice**	**144.94 332**		*i*PKIKP	**PKPdf**	**12 15 49.3**	**+0.3**	
UPC	**Upice**	**144.94 332**		*i*PKP	**PKPdf**	**12 15 49.3**	**+0.3**	
UPC				*e*pPKP	**pPKPdf**	**12 16 31.8**	**-2.8**	
VYHS	**Vyhne**	**144.97 327**		*e*PKIKP	**PKPdf**	**12 15 49.6**	**+0.5**	
VYHS	**Vyhne**	**144.97 327**		*e*PKP	**PKPdf**	**12 15 49.6**	**+0.5**	
SMTH	**Samothraki Isl**	**144.98 310**		*e*P	**PKPbc**	**12 15 48.9**	**-0.2**	
BZS	**Buzias**	**145.16 321**	⇑⇑	PKIKP	**PKPab**	**12 15 50.0**	**+0.3**	
BZS	**Buzias**	**145.16 321**	⇑	*i*P	**PKPab**	**12 15 50.0**	**+0.3**	
EAB	**Aberfoyle**	**145.26 355**	⇑	*e*P	**PKPdf**	**12 15 49.2**	**-0.1**	
EAB	**Aberfoyle**	**145.26 355**		P	**PKPdf**	**12 15 49.2**	**-0.1**	
ESY	**Stoneypath**	**145.36 353**	⇑	*e*P	**PKPdf**	**12 15 49.4**	**-0.2**	
ESY	**Stoneypath**	**145.36 353**		P	**PKPdf**	**12 15 49.4**	**-0.2**	
LIA	**Limnos Island**	**145.44 310**		*e*P	**PKPdf**	**12 15 50.1**	**0.0**	
BUD	**Budapest**	**145.51 325**	⇑	*e*	**PKPab**	**12 15 51.3**	**+0.4**	
EAU	**Auchinoon**	**145.52 354**	⇑	*e*P	**PKPdf**	**12 15 50.0**	**+0.2**	
EAU	**Auchinoon**	**145.52 354**		P	**PKPdf**	**12 15 50.0**	**+0.2**	
PVCC	**Panska Ves**	**145.56 333**		*i*PKP2	**PKPab**	**12 15 51.4**	**+0.4**	
PVCC	**Panska Ves**	**145.56 333**		*i*PKP	**PKPab**	**12 15 51.4**	**+0.4**	
PVCC				*ep*PKP	**pPKPdf**	**12 16 33.9**	**-1.7**	
BRG	**Berggiesshubel**	**145.56 334**		*e*PKPbc	**PKPab**	**12 15 51.2**	**+0.2**	
BRG				*ep*PKPbc	pPKPbc	12 16 33.5	-1.9	
CLL	**Collm**	**145.60 335**		*e*PKPbc	**PKPab**	**12 15 51.1**	**0.0**	
CLL				*ep*PKPbc	pPKPbc	12 16 33.5	-2.0	
CLL	**Collm**	**145.60 335**	⇑	*i*PKP2	**PKPbc**	**12 15 50.9**	**+0.3**	
CLL				*i*		12 15 52.9		
CLL				pmax	pmax			
	comp=Z,92nm,1.4s							
CLL	**Collm**	**145.60 335**	⇑	*i*PKPbc	**PKPbc**	**12 15 50.9**	**+0.3**	
	comp=Z,92nm,1.4s							
CLL				*i* pPKPdf	**pPKPdf**	**12 16 33.3**	**-2.4**	
SMOL	**Smolenice**	**145.67 328**		*e*PKP2	**PKPab**	**12 15 52.9**	**+1.4**	
SMOL	**Smolenice**	**145.67 328**		*e*PKP	**PKPab**	**12 15 52.9**	**+1.4**	
VTS	**Vitosha**	**145.69 315**	⇓	PKP2	**PKPab**	**12 15 51.9**	**-0.1**	
VTS	**Vitosha**	**145.69 315**	⇓	*i*P	**PKPab**	**12 15 51.9**	**-0.1**	
NVR	**Nevrokopi**	**145.79 313**		*e*P	**PKPbc**	**12 15 51.6**	**0.0**	
PKSG		**145.91 326**	⇑	*e*	**PKPbc**	**12 15 52.1**	**+0.4**	
PRA	**Prague**	**145.96 332**		PKP	**PKPbc**	**12 15 52.0**	**+0.3**	
PRA				pPKP	**pPKPdf**	**12 16 35.0**	**-1.3**	
PRU	**Pruhonice**	**145.97 332**		*i*PKP2	**PKPab**	**12 15 52.3**	**-0.3**	
PRU	**Pruhonice**	**145.97 332**		*i*PKP	**PKPab**	**12 15 52.3**	**-0.3**	
PRU				*ep*PKP	**pPKPdf**	**12 16 34.6**	**-1.7**	
ESK	**Eskdalemuir**	**146.02 354**		*e*P	**PKPbc**	**12 15 51.5**	**-0.3**	
ESK				AMB	AMB	12 15 52.4		
	comp=Z,17nm,0.9s							
ESK	**Eskdalemuir**	**146.02 354**		P	**PKPbc**	**12 15 51.5**	**-0.3**	
ESK				AMB	AMB	12 15 52.4		
	comp=Z,17nm,0.9s							
ESK	**Eskdalemuir**	**146.02 354**		*e*PKIKP	**PKPdf**	**12 15 51.2**	**+0.6**	
ESK	**Eskdalemuir**	**146.02 354**		*e*PKPdf	**PKPdf**	**12 15 51.2**	**+0.6**	
TREC	**Trest**	**146.05 330**		*i*PKP2	**PKPab**	**12 15 52.7**	**-0.3**	
TREC	**Trest**	**146.05 330**		*i*PKP	**PKPab**	**12 15 52.7**	**-0.3**	
APE	**Apeiranthos**	**146.12 305**	⇑	PKIKP	**PKPdf**	**12 15 51.6**	**+0.1**	
APE	**Apeiranthos**	**146.12 305**	⇑	*i*P	**PKPdf**	**12 15 51.6**	**+0.1**	
ECK	**Cauldkaine Hil**	**146.14 354**	⇑	*e*P	**PKPdf**	**12 15 51.2**	**+0.3**	
ECK	**Cauldkaine Hil**	**146.14 354**		P	**PKPdf**	**12 15 51.2**	**+0.3**	
CLZ	**Clausthal**	**146.15 338**		*e*PKPbc	**PKPab**	**12 15 53.1**	**-0.2**	
CLZ	**Clausthal**	**146.15 338**		*e*PKP2	**PKPab**	**12 15 53.1**	**-0.2**	
NEUB	**Neuenburg**	**146.16 336**		*e*PKPbc	**PKPab**	**12 15 52.9**	**-0.4**	
NEUB				*ep*PKPbc	pPKPbc	12 16 35.5	-1.7	
PKST	**T"s**	**146.18 326**	⇓	*e*	**PKPbc**	**12 15 52.6**	**+0.1**	
SANT	**Santorini**	**146.38 304**		*e*PKPdf	**PKPdf**	**12 15 52.4**	**+0.4**	
PKSM	**Moragy**	**146.51 324**	⇑	PKP2	**PKPbc**	**12 15 53.8**	**+0.3**	
PKSM	**Moragy**	**146.51 324**	⇑	*i*P	**PKPbc**	**12 15 53.8**	**+0.3**	
PKSM	**Moragy**	**146.51 324**	⇑	*e*	**PKPbc**	**12 15 53.9**	**+0.4**	
TANN	**Tannenbergstha**	**146.51 334**		*e*PKPbc	**PKPbc**	**12 15 54.0**	**+0.5**	
TANN				*ep*PKPbc	pPKPbc	12 16 35.8	-2.6	
NPS	**Neapolis**	**146.56 302**		*e*P	**PKPbc**	**12 15 54.5**	**+0.5**	
PLN	**Plauen**	**146.58 335**		*e*PKPbc	**PKPbc**	**12 15 54.1**	**+0.5**	
GUNZ	**Gunzen**	**146.61 335**		*e*PKPbc	**PKPbc**	**12 15 54.4**	**+0.7**	
GUNZ				*ep*PKPbc	pPKPbc	12 16 36.9	-1.8	
IBBN	**Ibbenburen**	**146.61 341**		*e*PKPbc	**PKPbc**	**12 15 54.1**	**+0.5**	
WERN	**Wernitzgruen**	**146.65 334**		*e*PKPbc	**PKPbc**	**12 15 54.6**	**+0.8**	
WERN				*ep*PKPdf	**pPKPdf**	**12 16 37.1**	**-0.4**	
SOP	**Sopron**	**146.66 328**	⇓	*e*	PKPab	12 16 06.4	+11	
MOX	**Moxa**	**146.67 335**		*e*PKPbc	**PKPbc**	**12 15 54.4**	**+0.6**	
MOX	**Moxa**	**146.67 335**		*e*PKP2	**PKPbc**	**12 15 54.4**	**+0.6**	
KESW	**Keswick, Cumbr**	**146.72 353**		*e*P	**PKPbc**	**12 15 53.7**	**-0.1**	
KESW				AMB	AMB	12 15 56.4		
	comp=Z,21nm,1.6s							
KESW	**Keswick, Cumbr**	**146.72 353**		P	**PKPbc**	**12 15 53.7**	**-0.1**	
KESW				AMB	AMB	12 15 56.4		
	comp=Z,21nm,1.6s							
CONA	**Conrad Observa**	**146.83 328**	⇑	*i*PKPab	**PKPbc**	**12 15 55.2**	**+0.7**	
	comp=Z,42nm,1.5s,SNR=16							
MANZ	**Manzenberg**	**146.99 334**		*e*PKPbc	**PKPbc**	**12 15 55.4**	**+0.6**	
KHC	**Kasperske Hory**	**147.03 332**		*e*PKP2	**PKPbc**	**12 15 55.0**	**+0.1**	
KHC	**Kasperske Hory**	**147.03 332**		*e*PKP	**PKPbc**	**12 15 55.0**	**+0.1**	
KHC				*ex*	x	12 16 10.0		
KHC				*ep*PKP	**pPKPdf**	**12 16 36.0**	**-2.2**	
PTL	**Penteli**	**147.06 307**		*e*P	**PKPbc**	**12 15 54.6**	**-0.8**	
NEO	**Neokhori**	**147.07 310**		*e*P	**PKPbc**	**12 15 54.5**	**-0.8**	
IDI	**Anoyia**	**147.12 302**		*e*PKPdf	**PKPdf**	**12 15 54.0**	**+0.7**	
ROTZ	**Rotzenmuhle**	**147.12 334**		*e*PKPbc	**PKPbc**	**12 15 55.9**	**+0.8**	
ROTZ				*ep*PKPdf	**pPKPdf**	**12 16 37.1**	**-1.2**	
UBBA	**Unterbreizbach**	**147.13 337**		*e*PKPbc	**PKPbc**	**12 15 55.4**	**+0.5**	
GEC2	**GERESS Array S**	**147.18 331**		*e*PKPbc	**PKPbc**	**12 15 55.8**	**+0.4**	
GEC2				*ep*PKPbc	**pPKPbc**	**12 16 38.3**	**-2.2**	
GEC2	**GERESS Array S**	**147.18 331**		*e*PKP2	**PKPbc**	**12 15 55.8**	**+0.4**	
GERES	**GERESS Array B**	**147.18 331**		PKPbc	**PKPbc**	**12 15 55.6**	**+0.2**	
GERES				pPKPbc	**pPKPbc**	**12 16 38.0**	**-2.5**	
GERES	**GERESS Array B**	**147.18 331**		PKPbc	**PKPbc**	**12 15 55.6**	**+0.2**	
	comp=Z,16nm,0.7s,baz=37,slow=3.3,SNR=92							
GERES				pPKPbc	**pPKPbc**	**12 16 38.0**	**-2.5**	
	comp=Z,4.8nm,0.6s,baz=35,slow=3.1,SNR=5.0							
WTSB	**Winterswijk**	**147.20 341**		*e*PKP	**PKPbc**	**12 15 55.0**	**-0.2**	
	comp=Z,16nm,0.4s							
WET	**Wettzell**	**147.32 333**		*e*PKPbc	**PKPbc**	**12 15 56.2**	**+0.5**	
WET	**Wettzell**	**147.32 333**		*e*PKP2	**PKPbc**	**12 15 56.2**	**+0.5**	
BEHE	**Becsehely**	**147.35 326**	⇑	*e*	**PKPbc**	**12 15 56.4**	**+0.6**	
VAM	**Vamos**	**147.63 302**		*e*P	**PKPbc**	**12 15 58.0**	**+1.0**	
LTK	**Loutraki**	**147.73 308**		*e*P	**PKPbc**	**12 15 56.2**	**-1.0**	
KBI1	**Birley Grange**	**147.83 351**	⇑	*e*P	**PKPbc**	**12 15 56.5**	**-0.4**	
KBI1	**Birley Grange**	**147.83 351**		P	**PKPbc**	**12 15 56.5**	**-0.4**	
WME	**Myndd Eilian**	**148.02 354**	⇑	*e*P	**PKPbc**	**12 15 56.8**	**-0.6**	
WME	**Myndd Eilian**	**148.02 354**		P	**PKPbc**	**12 15 56.8**	**-0.6**	
PERS	**Pernice**	**148.09 327**		*i*PKPbc	**PKPbc**	**12 15 57.7**	**-0.2**	
PERS				*i* pPKPbc	**pPKPbc**	**12 16 40.0**	**-3.0**	
WPM1	**Penmaenmawr**	**148.12 354**	⇑	*e*P	**PKPbc**	**12 15 56.8**	**-0.9**	
WPM1	**Penmaenmawr**	**148.12 354**		P	**PKPbc**	**12 15 56.8**	**-0.9**	
WLF1	**Llynfaes**	**148.14 354**		*e*P	**PKPbc**	**12 15 57.0**	**-0.7**	
WLF1				AMB	AMB	12 15 58.0		
	comp=Z,43nm,0.9s							
WLF1	**Llynfaes**	**148.14 354**		P	**PKPbc**	**12 15 57.0**	**-0.7**	
WLF1				AMB	AMB	12 15 58.0		
	comp=Z,43nm,0.9s							
TNS	**Taunus Mts**	**148.17 338**		*e*PKPbc	**PKPbc**	**12 15 58.5**	**+0.5**	
TNS	**Taunus Mts**	**148.17 338**		*e*PKP2	**PKPbc**	**12 15 58.5**	**+0.5**	
YRC	**Rhoscolyn**	**148.19 355**	⇑	*e*P	**PKPbc**	**12 15 57.2**	**-0.5**	
YRC	**Rhoscolyn**	**148.19 355**		P	**PKPbc**	**12 15 57.2**	**-0.5**	
ANKY	**Antikythira Is**	**148.20 304**		*e*P	**PKPbc**	**12 15 58.9**	**+0.5**	
KALE	**Kalithea**	**148.20 309**		*e*P	**PKPbc**	**12 15 58.1**	**-0.4**	
VLI	**Veliai**	**148.21 305**		*e*P	**PKPbc**	**12 15 57.8**	**-0.6**	
GUR	**Goura**	**148.22 308**		*e*P	**PKPbc**	**12 15 58.1**	**-0.5**	
EVR	**Evrytania**	**148.23 310**		*e*P	**PKPbc**	**12 15 58.8**	**+0.2**	
YLL	**Llanberis**	**148.26 354**	⇑	*e*P	**PKPbc**	**12 15 57.4**	**-0.6**	
YLL	**Llanberis**	**148.26 354**		P	**PKPbc**	**12 15 57.4**	**-0.6**	
KLV	**Kalavryta, Ach**	**148.33 308**		*e*P	**PKPbc**	**12 15 58.2**	**0.0**	
LAKA	**Lakka**	**148.38 309**		*e*P	**PKPbc**	**12 15 59.5**	**+0.6**	
VLX	**Vlachokerasia**	**148.40 307**		*e*P	**PKPbc**	**12 15 59.2**	**+0.1**	
FOEL	**Foel Wylfa**	**148.41 353**		*e*P	**PKPbc**	**12 15 58.4**	**-0.1**	
FOEL				AMB	AMB	12 15 59.0		
	comp=Z,64nm,1.0s							
FOEL	**Foel Wylfa**	**148.41 353**		P	**PKPbc**	**12 15 58.4**	**-0.1**	
FOEL				AMB	AMB	12 15 59.0		
	comp=Z,64nm,1.0s							
RJOB	**Jochberg**	**148.41 331**		*e*PKPbc	**PKPbc**	**12 15 58.7**	**0.0**	
OBKA	**Obir**	**148.46 328**	⇑	*i*PKPbc	**PKPbc**	**12 15 58.6**	**-0.3**	
	comp=Z,12nm,1.0s,SNR=5.8							
CRES	**Cresnjev**	**148.46 326**		*i*PKPbc	**PKPbc**	**12 15 59.1**	**+0.3**	
CRES				*i* pPKPbc	**pPKPbc**	**12 16 41.3**	**-2.7**	
TIR	**Tirane**	**148.47 315**		*e*PKIKP	**PKPdf**	**12 15 54.7**	**-0.5**	
TIR				*e*		12 15 59.0		
TIR	**Tirane**	**148.47 315**		*e*PKPdf	**PKPdf**	**12 15 54.7**	**-0.5**	
TIR				*e*PKPbc	**PKPbc**	**12 15 59.0**	**+0.1**	
HGN	**Heimansgroeve**	**148.52 341**		*e*PKP	**PKPbc**	**12 15 58.4**	**-0.3**	
	comp=Z,29nm,1.1s							
TOD	**Tromm**	**148.56 337**		PKP2	**PKPbc**	**12 15 59.1**	**+0.1**	
TOD	**Tromm**	**148.56 337**		PKP	**PKPbc**	**12 15 59.1**	**+0.1**	
KBA	**Koelnbreinsper**	**148.64 330**	⇑	*i*PKPbc	**PKPbc**	**12 15 58.8**	**-0.6**	
	comp=Z,20nm,0.7s,SNR=12							
ABH	**Alteburg**	**148.77 339**		PKP	**PKPbc**	**12 16 00.1**	**+0.6**	
BOJS	**Bojanci**	**148.78 326**		*i*PKPdf	**PKPdf**	**12 15 55.2**	**-0.4**	
BOJS				*i* PKPbc	**PKPbc**	**12 16 00.3**	**+0.5**	
BOJS				*i* pPKPbc	**pPKPbc**	**12 16 42.5**	**-2.4**	
LJU	**Ljubljana**	**148.79 327**		*i*PKPbc	**PKPbc**	**12 15 59.9**	**+0.3**	
LJU				*i* pPKPbc	**pPKPbc**	**12 16 42.3**	**-2.6**	
VISS	**Visnje**	**148.80 326**		*i*PKPdf	**PKPdf**	**12 15 55.4**	**-0.2**	
VISS				*i* PKPbc	**PKPbc**	**12 15 59.9**	**+0.2**	
VISS				*i* pPKPbc	**pPKPbc**	**12 16 42.1**	**-2.7**	
MYKA	**Terra Mystica**	**148.82 329**	⇑	*i*PKPbc	**PKPbc**	**12 15 59.3**	**-0.5**	
	comp=Z,16nm,0.6s							
CADS	**Cadrg**	**149.06 328**		*i*PKPbc	**PKPbc**	**12 15 59.7**	**-0.6**	
KTD	**Kalmit**	**149.06 338**		PKP2	**PKPbc**	**12 16 00.7**	**+0.5**	
KTD	**Kalmit**	**149.06 338**		PKP	**PKPbc**	**12 16 00.7**	**+0.5**	
RUP	**Ruppelstein**	**149.09 339**		PKP2	**PKPbc**	**12 16 00.9**	**+0.6**	
RUP	**Ruppelstein**	**149.09 339**		PKP	**PKPbc**	**12 16 00.9**	**+0.6**	
STU	**Stuttgart**	**149.11 336**		*e*PKPbc	**PKPbc**	**12 16 00.8**	**+0.5**	
STU	**Stuttgart**	**149.11 336**		*e*PKP2	**PKPbc**	**12 16 00.2**	**-0.1**	
STU	**Stuttgart**	**149.11 336**		*e*PKPbc	**PKPbc**	**12 16 00.2**	**-0.1**	
VOY	**Vojsko**	**149.12 328**		*i*PKPbc	**PKPbc**	**12 15 59.4**	**-1.2**	
VOY				*e*		12 16 41.5		
MCH1	**Michaelchurch**	**149.26 352**	⇑	*e*P	**PKPbc**	**12 15 59.9**	**-0.7**	
MCH1				AMB	AMB	12 16 01.3		
	comp=Z,56nm,1.4s							
MCH1	**Michaelchurch**	**149.26 352**		P	**PKPbc**	**12 15 59.9**	**-0.7**	
MCH1				AMB	AMB	12 16 01.3		
	comp=Z,56nm,1.4s							
ABTA	**Abfaltersbach**	**149.27 330**	⇑	*i*PKPbc	**PKPbc**	**12 16 00.5**	**-0.5**	
	comp=Z,25nm,0.7s,SNR=12							
KEK	**Kerkira**	**149.29 313**		*e*P	**PKPbc**	**12 16 00.6**	**-0.5**	
WLF	**Walferdange**	**149.42 340**		*e*PKPbc	**PKPbc**	**12 16 02.0**	**+1.0**	
WLF	**Walferdange**	**149.42 340**		*e*PKP2	**PKPbc**	**12 16 01.4**	**+0.3**	
WLF	**Walferdange**	**149.42 340**		*e*PKPbc	**PKPbc**	**12 16 01.4**	**+0.3**	
LANF	**Langenberg**	**149.45 338**		PKP2	**PKPbc**	**12 16 01.6**	**+0.4**	
LANF	**Langenberg**	**149.45 338**		PKP	**PKPbc**	**12 16 01.6**	**+0.4**	
LANF	**Langenberg**	**149.45 338**		PKP	**PKPbc**

HSN				*e*S		**Sn**	**12 12 44.9**	**-0.4**
	baz=314								
TWS1	**Kuangyinshan**	**0.99**	**342**	*e*P		**Pn**	**12 12 32.1**	**+0.2**
	baz=351								
TWS1				*e*S		**Sn**	**12 12 45.2**	**-0.7**
	baz=351								
TCU	**Taichung**	**0.99**	**270**	*e*P		**Pn**	**12 12 32.8**	**+0.8**
	baz=268								
TCU				*e*S		**Sn**	**12 12 46.0**	**0.0**
	baz=268								
YUS	**Yu-Shan**	**1.00**	**228**	⇑P		**Pn**	**12 12 32.1**	**-0.4**
	baz=227								
YUS				*e*S		**Sn**	**12 12 46.1**	**-0.7**
	baz=227								
WNT	**Mingjian**	**1.03**	**254**	P		**Pn**	**12 12 33.5**	**+1.1**
	baz=248								
WNT				*e*S		**Sn**	**12 12 47.6**	**+0.8**
	baz=248								
ALS	**Alishan**	**1.09**	**234**	⇓*e*P		**Pn**	**12 12 33.7**	**+0.2**
	baz=234								
CHKT	**Chengkung**	**1.11**	**199**	*e*P		**Pn**	**12 12 33.6**	**-0.1**
	baz=191								
CHKT				*e*S		**Sn**	**12 12 50.0**	**+1.1**
	baz=191								
TWY	**Chenhua**	**1.12**	**352**	*e*P		**Pn**	**12 12 34.2**	**+0.4**
	baz=353								
CHN5	**Tsauling**	**1.14**	**241**	⇓P		**Pn**	**12 12 35.1**	**+1.0**
	baz=240								
CHN5				S		**Sn**	**12 12 51.5**	**+1.7**
	baz=240								
YOJ	**Yonaguni jima**	**1.18**	**75**	⇑*i*P		**Pg**	**12 12 35.3**	**+0.5**
	baz=67								
YOJ				*e*S		**Sn**	**12 12 52.2**	**+1.6**
	baz=67								
ELDTW	**Lidau**	**1.18**	**216**	*e*P		**Pb**	**12 12 33.8**	**-0.8**
	baz=217								
WGK	**Gukeng**	**1.20**	**247**	*e*P		**Pg**	**12 12 36.2**	**+1.1**
	baz=246								
WGK				*e*S		**Sn**	**12 12 53.1**	**+2.1**
	baz=246								
WTCT	**Ta-ch'eng**	**1.39**	**258**	*e*P		**Pg**	**12 12 38.8**	**0.0**
	baz=257								
WTCT				*e*S		**Sg**	**12 12 57.5**	**+0.8**
	baz=257								
CHY	**Chiayi**	**1.39**	**242**	*e*P		**Pg**	**12 12 38.8**	**-0.1**
	baz=242								
CHY				*e*S		**Sg**	**12 12 58.1**	**+1.1**
	baz=242								
WTP	**Ta-pu**	**1.39**	**229**	*e*P		**Pg**	**12 12 38.9**	**0.0**
	baz=231								
TWK	**Hsinying**	**1.47**	**233**	P		**Pg**	**12 12 40.5**	**+0.2**
	baz=244								
TWK				*e*S		**Sg**	**12 13 00.8**	**+1.4**
	baz=244								
TWG	**Pinlang**	**1.48**	**206**	*e*P		**Pb**	**12 12 39.5**	**-0.1**
	baz=217								
CHN1	**Nanshi**	**1.49**	**230**	*e*P		**Pg**	**12 12 40.8**	**+0.1**
	baz=221								
CHN1				*e*S		**Sg**	**12 13 01.8**	**+1.7**
	baz=221								
PCYT	**Pengchaiyu**	**1.49**	**11**	*e*P		**Pb**	**12 12 39.5**	**-0.4**
	baz=11								
WSF	**Szhu**	**1.50**	**250**	*e*P		**Pg**	**12 12 40.4**	**-0.6**
	baz=238								
WSF				*e*S		**Sg**	**12 13 01.2**	**+0.7**
	baz=238								
CHN8	**Yiju**	**1.64**	**241**	*e*P		**Pb**	**12 12 41.7**	**-0.6**
	baz=241								
CHN8				*e*S		**Sg**	**12 13 05.8**	**+1.0**
	baz=241								
CHN3	**Shinhua**	**1.68**	**230**	*e*P		**Pg**	**12 12 43.6**	**-0.7**
	baz=234								
ECL	**Taimali**	**1.72**	**206**	*e*P		**Pb**	**12 12 44.0**	**+0.2**
	baz=194								
SCLT	**Jiali**	**1.74**	**236**	*e*P		**Pb**	**12 12 43.3**	**-0.8**
	baz=238								
SCLT				*e*S		**Sg**	**12 13 08.8**	**+0.7**
	baz=238								
TWM1	**Shoushan**	**1.81**	**223**	*e*P		**Pg**	**12 12 46.7**	**-0.2**
	baz=227								
SGLT	**Jiouru**	**1.84**	**220**	*e*P		**Pg**	**12 12 47.2**	**-0.3**
	baz=213								
EAST	**Anshuo**	**1.96**	**206**	*e*P		**Pn**	**12 12 45.9**	**+0.6**
	baz=197								
TAW	**Tawu**	**1.96**	**204**	*e*P		**Pb**	**12 12 46.3**	**-1.5**
	baz=196								
SCZT	**Fangliau**	**2.06**	**211**	*e*P		**Pb**	**12 12 49.4**	**-0.2**
	baz=198								
PNG	**Penghu**	**2.11**	**254**	*e*P		**Pb**	**12 12 48.9**	**-1.4**
	baz=255								
PNG				*e*S		**Sb**	**12 13 15.3**	**-1.1**
	baz=255								
TWK1	**Hengchun**	**2.37**	**202**	*e*P		**Pn**	**12 12 52.4**	**+1.4**
	baz=194								
TSEB	**Hengchuen, Pin**	**2.38**	**200**	*e*P		**Pb**	**12 12 53.4**	**-1.6**
	baz=195								
KNM	**Kinmen**	**3.05**	**276**	*e*P		**Pn**	**12 13 01.9**	**+1.6**
	baz=274								
KSRS	**Korea Array**	**14.27**	**20**	Pn		**P**	**12 15 41.6**	**+0.3**
	0.1nm,0.3s,baz=202,slow=12,SNR=6.5								
SONM	**Songino Array**	**26.60**	**336**	P		**P**	**12 17 51.3**	**+0.7**
	0.4nm,0.7s,baz=145,slow=5.3,SNR=3.1								
MKAR	**Makanchi Array**	**38.73**	**316**	P		**P**	**12 19 36.0**	**-0.2**
	0.3nm,0.5s,baz=124,slow=7.7,SNR=4.1								
ZALV	**Zalesovo Beam**	**40.55**	**327**	P		**P**	**12 19 50.7**	**-0.6**
	0.6nm,0.5s,baz=126,slow=9.1,SNR=2.8								
WRA	**Warramunga Arr**	**45.51**	**163**	P		**P**	**12 20 30.2**	**-1.6**
	0.3nm,0.6s,baz=345,slow=8.6,SNR=4.3								
ASAR	**Alice Springs**	**48.98**	**165**	P		**P**	**12 20 59.0**	**+0.1**
	0.4nm,0.9s,baz=345,slow=7.0,SNR=4.5								

IDC 29 12:13:32.2±1.7, 21°.14N×92°.47E, h0km, mb3.7/4, mb1 3.9/5, mb1mx3.5/27, mbtmp3.6/5, ML3.8/1, 1C, Error ellipse: s-maj=89.0km s-min=21.8km az=55.0, Myanmar-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
IMP	**Imphal**	**3.87**	**20**	*e*PKP	Pn	12 14 31.0		-2.1
IMP				*e*S	Sn	12 14 54.0		-25
SHL	**Shillong**	**4.44**	**353**	⇑*i*PN	Pb	12 14 50.0		-1.3
SHL				*i* SN	Sn	12 15 32.0		-1.6
CMAR	**Chiang Mai Arr**	**6.65**	**113**	Pn	Pn	12 15 13.5		+2.2
	0.5nm,0.3s,baz=294,slow=13,SNR=7.8							
CMAR				Pg	Pb	12 15 30.9		+2.0
	0.3nm,0.3s,baz=303,slow=15,SNR=4.2							
CMAR				Lg	Lg	12 16 57.9		
	0.4nm,0.3s,baz=293,slow=32,SNR=4.3							
MKAR	**Makanchi Array**	**26.90**	**344**	P	P	12 19 15.4		+0.5
	0.4nm,0.5s,baz=146,slow=10,SNR=4.3							
WRA	**Warramunga Arr**	**57.83**	**132**	P	P	12 23 24.9		-1.1
	0.4nm,0.4s,baz=322,slow=7.4,SNR=26							
ASAR	**Alice Springs**	**60.09**	**136**	P	P	12 23 42.0		+0.4
	0.3nm,0.4s,baz=323,slow=7.3,SNR=15							
ARCES	**ARCESS Array B**	**62.34**	**339**	P	P	12 23 56.0		-0.2
	2.4nm,1.0s,baz=98,slow=6.8,SNR=3.8							

*NIED **29** 12:37:00, 32°.30N×138°.00E, h380km, Mw4.1 Best double couple: M0 1.62000×10^15 NP1:φ=306.00000°, δ=85.00000°, λ=-63.00000°. NP2:φ=46.00000°, δ=27.00000°, λ=-169.00000°.*

*JMA **29** 12:37:25.3±0.5, 32°.29N×138°.00E, h417km±5km, M3.5*

*ISCJB **29** 12:37:26.8±0.4, 32°.32N±0°.06×137°.86E±0°.06, h401km±2km, mb3.6/17, Error ellipse: s-maj=9.4km s-min=6.9km az=153.3*

*IDC **29** 12:37:27.1±0.6, 32°.22N×137°.77E, h389km±6km, mb3.4/17, mb1 3.5/21, mb1mx3.5/32, mbtmp3.4/21, Error ellipse: s-maj=12.5km s-min=10.6km az=103.0*

ISC 29 12:37:27.9±0.7, 32°.35N±0°.08×137°.88E±0°.06, h396km±6km, n55, σ1 8°.13/68, mb3.6/17, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
TK01	**Tokai 1**	**1.43**	**350**	*e*S	**S**	**12 39 03.2**		**+1.3**
TTO2	**TONANKAI O.B.S**	**1.55**	**333**	P	**Pn**	**12 38 21.6**		**+1.2**
TTO2				*e*S	**S**	**12 39 05.1**		**+2.1**
TTO3	**TONANKAI O.B.S**	**1.56**	**345**	P	**Pn**	**12 38 21.8**		**+1.2**
TK02	**Tokai 2**	**1.59**	**356**	P	**Pn**	**12 38 21.6**		**+0.9**
TTO4	**TONANKAI O.B.S**	**1.68**	**350**	P	**Pn**	**12 38 22.0**		**+0.9**
JHCJ	**Hachijojimakas**	**1.77**	**66**	P	**Pn**	**12 38 21.4**		**-0.6**
JHCJ				*e*S	**S**	**12 39 05.6**		**-0.2**
JHJ	**Hachijo jima 2**	**1.78**	**64**	P	**Pn**	**12 38 21.9**		**-0.2**
	62nm,0.3s,baz=42,slow=10.0,SNR=21							
JHJ				S	**S**	**12 39 05.7**		**-0.2**
	13nm,0.3s,baz=60,slow=20,SNR=3.4							
JHJ2	**Mitsune**	**1.80**	**65**	P	**Pn**	**12 38 21.8**		**-0.4**
JHJ2				*e*S	**S**	**12 39 06.5**		**+0.4**
JWZ	**Kozaga**	**2.17**	**303**	P	**Pn**	**12 38 24.1**		**-0.3**
JWZ				*e*S	**S**	**12 39 09.2**		**-1.0**
JIE	**Ise**	**2.26**	**335**	P	**Pn**	**12 38 25.5**		**+0.5**
JIE				*e*S	**S**	**12 39 11.2**		**-0.1**
JWY	**Kouya**	**2.67**	**315**	P	**Pn**	**12 38 28.5**		**+0.4**
JWY				*e*S	**S**	**12 39 16.4**		**-0.5**
JOD2	**Odawara 2**	**3.08**	**19**	P	**Pn**	**12 38 30.9**		**-0.4**
JYN	**Shimob**	**3.19**	**10**	P	**Pn**	**12 38 32.8**		**+0.5**
JAI	**Aioi**	**3.21**	**297**	P	**Pn**	**12 38 32.3**		**-0.2**
BSO1	**Boso 1**	**3.46**	**48**	P	**Pn**	**12 38 32.5**		**-1.5**
BSO1				S	**S**	**12 39 24.7**		**-3.0**
JGM	**Miyama**	**3.48**	**344**	P	**Pn**	**12 38 35.5**		**+0.7**
JRY	**Ryogami san**	**3.75**	**13**	P	**Pn**	**12 38 37.3**		**0.0**
JRY				S	**S**	**12 39 32.6**		**-1.0**
MJAR	**Matsushiro Arr**	**4.19**	**4**	P	**Pn**	**12 38 40.6**		**-0.8**
	3.9nm,0.3s,baz=176,slow=11,SNR=46							
MJAR				S	**S**	**12 39 39.4**		**-1.8**
	1.9nm,0.3s,baz=162,slow=12,SNR=4.1							
MAT	**Matsushiro**	**4.19**	**4**	P	**Pn**	**12 38 41.2**		**-0.2**
MAT				S	**S**	**12 39 38.9**		**-2.3**
JTO	**Tosashimizu**	**4.31**	**278**	P	**Pn**	**12 38 42.4**		**-0.3**
JHS	**Saijyo**	**4.77**	**305**	P	**Pn**	**12 38 47.7**		**+0.5**
JMK	**Ichinoseki**	**7.12**	**22**	P	**Pn**	**12 39 12.3**		**-0.4**
JMK				*e*S	**S**	**12 40 33.5**		**-4.9**
KSRS	**Korea Array**	**9.63**	**305**	P	**Pn**	**12 39 41.9**		**+0.5**
	1.5nm,0.3s,baz=121,slow=10,SNR=41							
ASAJ	**Asahikawa**	**12.31**	**16**	P	**Pn**	**12 40 12.9**		**+0.4**
	2.8nm,0.3s,baz=231,slow=14,SNR=26							
ASAJ				S	**S**	**12 42 26.0**		**+0.2**
	0.6nm,0.3s,baz=132,slow=14,SNR=3.7							
USRK	**Ussuriysk Arra**	**12.69**	**340**	P	**P**	**12 40 15.2**		**+0.2**
	0.1nm,0.3s,baz=143,slow=8.2,SNR=3.7							
PETK	**Petropavlovsk-**	**25.19**	**29**	P	**P**	**12 42 20.7**		**+1.6**
	0.9nm,0.5s,baz=230,slow=6.9,SNR=4.2							
SONM	**Songino Array**	**28.38**	**312**	P	**P**	**12 42 47.8**		**+0.2**
	0.9nm,0.5s,baz=113,slow=7.9,SNR=9.5							
CMAR	**Chiang Mai Arr**	**37.58**	**258**	P	**P**	**12 44 05.5**		**-1.0**
	2.4nm,0.6s,baz=49,slow=7.5,SNR=14							
ZALV	**Zalesovo Beam**	**43.09**	**316**	P	**P**	**12 44 50.0**		**-0.6**
	0.8nm,0.4s,baz=88,slow=8.5,SNR=3.7							
TAPN	**Taplejung**	**43.48**	**277**	*e*P	**P**	**12 44 53.9**		**-0.5**
ODAN	**Odare**	**43.91**	**276**	*e*P	**P**	**12 44 56.7**		**-1.1**
	22nm,0.5s							
MKAR	**Makanchi Array**	**44.31**	**306**	P	**P**	**12 45 00.1**		**-0.2**
	2.5nm,0.6s,baz=86,slow=10,SNR=19							
RAMN	**Ramite**	**44.55**	**277**	*e*P	**P**	**12 45 02.3**		**-0.4**
	38nm,0.7s							
JIRN	**Jiri**	**44.65**	**278**	*e*P	**P**	**12 45 03.5**		**-0.2**
	37nm,0.5s							
GUN	**Gumba**	**44.83**	**278**	*e*P	**P**	**12 45 04.1**		**-1.0**
	25nm,0.7s							
PKI	**Pulchoki**	**45.34**	**278**	*e*P	**P**	**12 45 08.2**		**-0.8**
	3.6nm,0.3s							
PKIN	**Phulchoki**	**45.35**	**278**	*e*P	**P**	**12 45 08.7**		**-0.3**
	7.0nm,0.6s							
KKN	**Kakani**	**45.37**	**279**	*e*P	**P**	**12 45 08.9**		**-0.2**
	29nm,0.9s							
DMN	**Daman**	**45.58**	**278**	*e*P	**P**	**12 45 09.9**		**-0.9**
	5.0nm,0.3s							
GKN	**Gorkha**	**45.84**	**279**	*e*P	**P**	**12 45 12.0**		**-0.7**
	0.6nm,0.3s							
DANN	**Dangsing**	**46.46**	**280**	*e*P	**P**	**12 45 17.0**		**-0.6**
	13nm,0.4s							
KOLN	**Koldanda**	**46.79**	**279**	*e*P	**P**	**12 45 19.4**		**-0.6**
	9.9nm,0.8s							
PYUN	**Piuthan**	**47.19**	**280**	*e*P	**P**	**12 45 22.6**		**-0.4**
	21nm,0.5s							
WRA	**Warramunga Arr**	**52.11**	**184**	P	**P**	**12 45 57.7**		**-1.6**
	1.0nm,0.3s,baz=0.1,slow=7.7,SNR=53							
ILAR	**Eielson Array**	**55.00**	**30**	P	**P**	**12 46 19.8**		**+0.2**
	1.2nm,0.7s,baz=271,slow=5.7,SNR=22							
ASAR	**Alice Springs**	**55.83**	**184**	P	**P**	**12 46 24.8**		**-1.1**
	0.7nm,0.6s,baz=11,slow=9.7,SNR=19							
AKTO	**Aktyubinsk**	**59.69**	**313**	P	**P**	**12 46 51.9**		**-0.2**
	1.6nm,0.6s,baz=70,slow=14,SNR=5.9							
SPITS	**Spitsbergen Ar**	**64.54**	**349**	P	**P**	**12 47 24.2**		**+0.7**
	11nm,1.2s,baz=64,slow=4.5,SNR=2.7							
ARCES	**ARCESS Array B**	**67.34**	**339**	P	**P**	**12 47 41.2**		**0.0**
	0.8nm,0.7s,baz=65,slow=9.5,SNR=3.9							
RES	**Resolute Bay**	**67.83**	**13**	P	**P**	**12 47 45.2**		**+1.1**
	4.1nm,0.6s,baz=323,slow=6.4,SNR=4.6							
YKA	**Yellowknife Ar**	**69.31**	**28**	P	**P**	**12 47 54.0**		**+0.6**
	1.3nm,0.6s,baz=304,slow=6.2,SNR=9.5							
BRTR	**Keskin Array B**	**79.72**	**311**	P	**P**	**12 48 52.4**		**-0.8**
	0.7nm,0.5s,baz=101,slow=3.9,SNR=4.3							
NVAR	**Mina Array Bea**	**80.16**	**51**	P	**P**	**12 48 57.1**		**+1.4**
	1.0nm,0.8s,baz=298,slow=5.5,SNR=8.7							
PDAR	**Pinedale Array**	**83.04**	**43**	P	**P**	**12 49 11.6**		**+1.1**
	0.9nm,0.7s,baz=294,slow=1.5,SNR=6.4							
TXAR	**Lajitas Array**	**95.31**	**50**	P	**P**	**12 50 09.8**		**+1.4**
	0.5nm,0.7s,baz=302,slow=3.6,SNR=6.2							

*IDC **29** 12:44:07.6±1.4, 36°.10N×25°.42E, h0km, mb3.6/5, mb1 3.9/9, mb1mx3.7/31, mbtmp3.7/9, ML4.2/2, MS2.5/2, Ms1 2.6/2, ms1mx2.1/36, Error ellipse: s-maj=30.5km s-min=19.8km az=166.0*

*ISCJB **29** 12:44:08.0±1.0, 36°.56N±0°.03×25°.48E±0°.03, h11km±7km, mb3.4/5, MS2.4/1, Error ellipse: s-maj=4.5km s-min=4.1km az=42.4*

*CSEM **29** 12:44:08.3, 36°.55N×25°.48E, h28km, MD3.5, After ATH*

*ATH **29** 12:44:08.3, 36°.55N×25°.48E, h28km, MD3.5/2, ML3.7*

ISC 29 12:44:08.2±1.8, 36°.54N±0°.03×25°.49E±0°.03, h8km±13km, n89, σ0 8°.50/84, mb3.6/5, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
APE	**Apeiranthos**	**0.53**	**3**	*e*PG	**Pg**	**12 44 18.5**		**+0.1**
APE	**Apeiranthos**	**0.53**	**3**	*e*PN	**Pb**	**12 44 19.2**		**-0.5**
APE				*e*SN	**Sb**	**12 44 27.7**		**+0.2**
APE	**Apeiranthos**	**0.53**	**3**	*e*Pn	**Pn**	**12 44 19.2**		**-0.5**
APE				*e*Sn	**Sb**	**12 44 27.7**		**+0.2**
NPS	**Neapolis**	**1.28**	**176**	*e*PN	**Pn**	**12 44 31.9**		**-0.4**
NPS				*e*SN	**Sn**	**12 44 49.0**		**-0.6**
NPS	**Neapolis**	**1.28**	**176**	*e*Pn	**Pn**	**12 44 31.9**		**-0.4**
NPS				*e*Sn	**Sn**	**12 44 49.0**		**-0.6**
IDI	**Anoyia**	**1.34**	**202**	*e*PN	**Pn**	**12 44 33.1**		**-0.1**
IDI				*e*SN	**Sn**	**12 44 51.2**		**-0.1**
IDI	**Anoyia**	**1.34**	**202**	*e*Pn	**Pn**	**12 44 33.1**		**-0.1**
IDI				*e*Sn	**Sn**	**12 44 51.2**		**-0.1**
LAST	**Lasithi**	**1.38**	**180**	*e*PN	**Pn**	**12 44 33.2**		**-0.5**
LAST				*e*SN	**Sn**	**12 44 52.4**		**+0.3**
LAST	**Lasithi**	**1.38**	**180**	*e*Pn	**Pn**	**12 44 33.2**		**-0.5**
LAST				*e*Sn	**Sn**	**12 44 52.4**		**+0.3**
VAM	**Vamos**	**1.54**	**223**	*e*PN	**Pn**	**12 44 36.1**		**+0.2**
VAM				*e*SN	**Sn**	**12 44 56.2**		**+0.1**
VAM	**Vamos**	**1.54**	**223**	*e*Pn	**Pn**	**12 44 36.1**		**+0.2**
VAM				*e*Sn	**Sn**	**12 44 56.2**		**+0.1**
BODT	**Bodrum**	**1.55**	**70**	*e*PN	**Pn**	**12 44 35.6**		**-0.4**
SMG	**Samos**	**1.59**	**42**	*e*PN	**Pn**	**12 44 36.3**		**-0.3**
SMG	**Samos**	**1.59**	**42**	*e*Pn	**Pn**	**12 44 36.3**		**-0.3**
SIVA	**Sivas**	**1.62**	**200**	*e*PN	**Pn**	**12 44 37.2**		**+0.3**
SIVA				*e*SN	**Sn**	**12 44 58.5**		**+0.6**
SIVA	**Sivas**	**1.62**	**200**	*e*Pn	**Pn**	**12 44 37.2**		**+0.3**
SIVA				*e*Sn	**Sn**	**12 44 58.5**		**+0.6**
XRY	**Khrisi**	**1.67**	**174**	*e*PB	**Pn**	**12 44 37.2**		**-0.5**
XRY	**Khrisi**	**1.67**	**174**	*e*Pb	**Pn**	**12 44 37.2**		**-0.5**
KARP	**Karpathos**	**1.68**	**126**	*e*PN	**Pn**	**12 44 37.8**		**0.0**
KARP				*e*SN	**Sn**	**12 44 59.8**		**+0.3**
KARP	**Karpathos**	**1.68**	**126**	*e*Pn	**Pn**	**12 44 37.8**		**0.0**
KARP				*e*Sn	**Sn**	**12 44 59.8**		**+0.3**
DAT	**Datca**	**1.69**	**83**	*e*PN	**Pn**	**12 44 38.4**		**+0.4**
ANKY	**Antikythira Is**	**1.89**	**250**	*e*PB	**Pn**	**12 44 40.9**		**+0.1**
ANKY	**Antikythira Is**	**1.89**	**250**	*e*Pb	**Pn**	**12 44 40.9**		**+0.1**
MLSB	**Milas**	**1.98**	**67**	*e*PN	**Pn**	**12 44 41.2**		**-0.8**
PTL	**Penteli**	**1.99**	**320**	*e*PN	**Pn**	**12 44 41.4**		**-0.7**
PTL	**Penteli**	**1.99**	**320**	*e*Pn	**Pn**	**12 44 41.4**		**-0.7**
KYTH	**Kithira**	**2.00**	**263**	*e*PN	**Pn**	**12 44 42.3**		**+0.1**
KYTH	**Kithira**	**2.00**	**263**	*e*Pn	**Pn**	**12 44 42.3**		**+0.1**
NAIG	**Nisos Aigina**	**2.01**	**308**	*e*PN	**Pn**	**12 44 41.9**		**-0.5**
NAIG	**Nisos Aigina**	**2.01**	**308**	*e*Pn	**Pn**	**12 44 41.9**		**-0.5**
ATH	**Athens Observa**	**2.01**	**316**	*e*PB	**Pn**	**12 44 42.9**		**+0.5**
ATH	**Athens Observa**	**2.01**	**316**	*e*Pb	**Pn**	**12 44 42.9**		**+0.5**
DID	**Didima**	**2.05**	**299**	*e*PB	**Pn**	**12 44 43.2**		**+0.3**
DID	**Didima**	**2.05**	**299**	*e*Pb	**Pn**	**12 44 43.2**		**+0.3**
VLI	**Veliai**	**2.06**	**276**	*e*PN	**Pn**	**12 44 42.6**		**-0.5**
VLI				*e*SN	**Sn**	**12 45 08.3**		**-0.7**
VLI	**Veliai**	**2.06**	**276**	*e*Pn	**Pn**	**12 44 42.6**		**-0.5**
VLI				*e*Sn	**Sn**	**12 45 08.3**		**-0.7**
ARG	**Arkhangelos**	**2.15**	**98**	*e*PN	**Pn**	**12 44 44.8**		**+0.5**
ARG	**Arkhangelos**	**2.15**	**98**	*e*Pn	**Pn**	**12 44 44.8**		**+0.5**
BLCB	**Balcova**	**2.22**	**33**	*e*PN	Pn	12 44 39.3		-5.9
YER	**Yerkesik**	**2.32**	**74**	*e*PN	**Pn**	**12 44 46.6**		**0.0**
IZM	**Izmir**	**2.33**	**37**	*e*PN	Pn	12 44 40.4		-6.4
LTK	**Loutraki**	**2.50**	**307**	*e*PN	**Pn**	**12 44 49.2**		**+0.1**
LTK	**Loutraki**	**2.50**	**307**	*e*Pn	**Pn**	**12 44 49.2**		**+0.1**
DYR	**Agios Nikonas**	**2.55**	**276**	*e*PN	**Pn**	**12 44 50.6**		**+0.8**
DYR	**Agios Nikonas**	**2.55**	**276**	*e*Pn	**Pn**	**12 44 50.6**		**+0.8**
DALY	**Dalyan (Mu˘la**	**2.56**	**83**	*e*PN	**Pn**	**12 44 51.7**		**+1.9**
VLX	**Vlachokerasia**	**2.63**	**289**	*e*PN	**Pn**	**12 44 51.3**		**+0.4**
VLX	**Vlachokerasia**	**2.63**	**289**	*e*Pn	**Pn**	**12 44 51.3**		**+0.4**
PRK	**Paraskevi**	**2.77**	**13**	*e*PN	**Pn**	**12 44 52.4**		**-0.4**
PRK	**Paraskevi**	**2.77**	**13**	*e*Pn	**Pn**	**12 44 52.4**		**-0.4**
GUR	**Goura**	**2.87**	**300**	*e*PN	**Pn**	**12 44 54.7**		**+0.4**
GUR	**Goura**	**2.87**	**300**	*e*Pn	**Pn**	**12 44 54.7**		**+0.4**
LKR	**Lokris**	**2.89**	**318**	*e*PN	**Pn**	**12 44 54.6**		**+0.1**
LKR	**Lokris**	**2.89**	**318**	*e*Pn	**Pn**	**12 44 54.6**		**+0.1**
ITM	**Ithomi**	**2.93**	**284**	*e*PN	**Pn**	**12 44 55.3**		**+0.3**
ITM	**Ithomi**	**2.93**	**284**	*e*Pn	**Pn**	**12 44 55.3**		**+0.3**
PYL	**PYLOS**	**3.03**	**278**	*e*PN	Pn	12 44 57.2		+0.8
PYL	**PYLOS**	**3.03**	**278**	*e*Pn	Pn	12 44 57.2		+0.8
KLV	**Kalavryta, Ach**	**3.06**	**300**	*e*PN	**Pn**	**12 44 57.1**		**+0.3**
KLV	**Kalavryta, Ach**	**3.06**	**300**	*e*Pn	**Pn**	**12 44 57.1**		**+0.3**
KALE	**Kalithea**	**3.24**	**306**	*e*PN	**Pn**	**12 45 00.0**		**+0.6**
KALE	**Kalithea**	**3.24**	**306**	*e*Pn	**Pn**	**12 45 00.0**		**+0.6**
LAKA	**Lakka**	**3.27**	**302**	*e*PN	**Pn**	**12 45 00.4**		**+0.6**
LAKA	**Lakka**	**3.27**	**302**	*e*Pn	**Pn**	**12 45 00.4**		**+0.6**
TRIZ	**Trizonia**	**3.27**	**305**	*e*PN	Pn	12 45 00.7		+1.0
TRIZ	**Trizonia**	**3.27**	**305**	*e*Pn	Pn	12 45 00.7		+1.0
NEO	**Neokhori**	**3.29**	**328**	*e*PN	Pn	12 45 01.0		+1.0
NEO	**Neokhori**	**3.29**	**328**	*e*Pn	Pn	12 45 01.0		+1.0
LIA	**Limnos Island**	**3.36**	**356**	*e*PN	**Pn**	**12 45 01.0**		**+0.1**
LIA	**Limnos Island**	**3.36**	**356**	*e*Pn	**Pn**	**12 45 01.0**		**+0.1**
RLS	**Riolos of Patr**	**3.55**	**296**	*e*PN	Pn	12 45 04.3		+0.8
RLS	**Riolos of Patr**	**3.55**	**296**	*e*Pn	Pn	12 45 04.3		+0.8
EVR	**Evrytania**	**3.76**	**310**	*e*PN	**Pn**	**12 45 07.0**		**+0.4**
EVR	**Evrytania**	**3.76**	**310**	*e*Pn	**Pn**	**12 45 07.0**		**+0.4**
GONE	**Gonen-Balikesi**	**3.90**	**26**	*e*P	Pn	12 45 01.5		-6.9
THL	**Klokotos Trika**	**4.08**	**319**	*e*PN	Pn	12 45 11.6		+0.8
THL	**Klokotos Trika**	**4.08**	**319**	*e*Pn	Pn	12 45 11.6		+0.8
BRTR	**Keskin Array B**	**7.17**	**61**	Pn	Pn	12 46 00.6		+7.3
	0.2nm,0.3s,baz=227,slow=13,SNR=9.2							
KEST	**Kesra**	**13.08**	**271**	Pn	**Pn**	**12 47 14.7**		**+0.4**
	0.1nm,0.3s,baz=133,slow=18,SNR=2.9							
VRAC	**Vranov**	**14.31**	**336**	Pn	P	12 47 38.8		+0.5
	0.5nm,0.3s,baz=134,slow=9.1,SNR=4.9							
VRAC				LR	LR	12 52 39.5		
	comp=Z,20nm,20.4s,baz=189,slow=35							
AKASG

σ1§86/170, mb4.7/47, MS4.5/28, 2C-5D, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.46**	**231**	*eP*	**Pn**	**Pn**	**13 01 38.3**	**+1.0**
PMG					Sn	**Sn**	**13 02 39.2**	**+0.3**
PMG	**Port Moresby**	**5.46**	**231**		Pn	**Pn**	**13 01 37.7**	**+0.4**
	25nm,0.3s,baz=53,slow=7.2,SNR=62							
PMG					Sn	**Sn**	**13 02 39.2**	**+0.3**
	40nm,0.3s,baz=178,slow=11,SNR=8.6							
HNR	**Honiara**	**9.05**	**113**	*eP*	**Pn**	**Pn**	**13 02 26.2**	**-0.4**
HNR					Sn	**Sn**	**13 04 07.1**	**-0.2**
HNR	**Honiara**	**9.05**	**113**		Pn	**Pn**	**13 02 25.7**	**-0.9**
	7.7nm,0.3s,baz=238,slow=6.3,SNR=8.8							
HNR					Sn	**Sn**	**13 04 07.1**	**-0.2**
	baz=61,slow=19,SNR=1.8							
HNR					LR	LR	13 05 30.6	
	comp=Z,2μm,21.8s,baz=114,slow=35							
COEN	**Coen**	**11.38**	**225**	P		**Pn**	**13 02 59.7**	**+1.3**
	118nm,0.2s							
CTA	**Charters Tower**	**14.90**	**199**	Pn		**P**	**13 03 49.5**	**-1.9**
CTA	**Charters Tower**	**14.90**	**199**	Pn		**P**	**13 03 49.5**	**-1.9**
	0.3nm,0.3s,baz=27,slow=8.9,SNR=6.2							
CTAO	**Charters Tower**	**14.90**	**199**	*eP*		**P**	**13 03 49.3**	**-2.1**
CTAO					pmax	pmax		
	comp=Z,38nm,1.3s							
CTAO	**Charters Tower**	**14.90**	**199**	*eP*		**P**	**13 03 49.3**	**-2.1**
	comp=Z,38nm,1.3s							
EIDS	**Eidsvold**	**19.27**	**181**	*eP*		**P**	**13 04 37.4**	**-2.2**
	comp=Z,36nm,1.3s							
GUMO	**Guam**	**20.54**	**341**	*eP*		**P**	**13 04 52.1**	**-1.3**
	comp=Z,487nm,1.4s							
DZM	**Mont Dzumac**	**21.55**	**139**	*e*LQ		LQ	13 09 24.0	
	comp=Z,2μm,26.3s							
DZM				*e*LR		LR	13 10 20.2	
	comp=Z,3μm,22.8s							
WRAB	**Tennant Creek**	**21.66**	**229**	*eP*		**P**	**13 05 04.6**	**-1.0**
WRAB					pmax	pmax		
	comp=Z,77nm,1.0s							
WRAB	**Tennant Creek**	**21.66**	**229**	*eP*		**P**	**13 05 04.6**	**-1.0**
	comp=Z,77nm,1.0s							
WRA	**Warramunga Arr**	**21.68**	**229**	P		**P**	**13 05 04.7**	**-1.1**
WRA				S		**S**	**13 09 03.4**	**-0.3**
WRA				ScP		**ScP**	**13 12 45.6**	**+5.4**
WRA	**Warramunga Arr**	**21.68**	**229**	P		**P**	**13 05 04.7**	**-1.1**
	comp=Z,8.9nm,0.8s,baz=54,slow=10,SNR=73							
WRA				S		**S**	**13 09 03.4**	**-0.3**
	comp=Z,9.0nm,1.2s,baz=52,slow=20,SNR=8.3							
WRA				ScP		**ScP**	**13 12 45.6**	**+5.4**
	comp=Z,2.7nm,1.1s,baz=52,slow=2.5,SNR=4.6							
AS31	**Alice Springs**	**24.39**	**222**	*eP*		**P**	**13 05 32.2**	**-0.8**
ASAR	**Alice Springs**	**24.39**	**222**	P		**P**	**13 05 32.5**	**-0.5**
ASAR				S		S	13 09 58.4	+8.2
ASAR				ScP		**ScP**	**13 12 53.2**	**+5.9**
ASAR	**Alice Springs**	**24.39**	**222**	P		**P**	**13 05 32.5**	**-0.5**
	comp=Z,18nm,0.7s,baz=44,slow=9.6,SNR=98							
ASAR				S		S	13 09 58.4	+8.2
	comp=Z,4.5nm,1.1s,baz=42,slow=17,SNR=4.3							
ASAR				ScP		**ScP**	**13 12 53.2**	**+5.9**
	comp=Z,2.4nm,1.1s,baz=35,slow=3.9,SNR=6.0							
STKA	**Stephens Creek**	**27.36**	**199**	*eP*		**P**	**13 05 59.5**	**-0.2**
STKA	**Stephens Creek**	**27.36**	**199**	P		**P**	**13 05 58.1**	**-1.6**
	comp=Z,6.9nm,0.7s,baz=47,slow=9.3,SNR=9.2							
STKA					LR	LR	13 16 26.6	
	comp=Z,826nm,19.1s,baz=23,slow=36							
FITZ	**Fitzroy Crossi**	**27.95**	**242**	P		**P**	**13 06 04.4**	**-0.7**
FITZ	**Fitzroy Crossi**	**27.95**	**242**	P		**P**	**13 06 04.4**	**-0.7**
	comp=Z,15nm,0.7s,baz=57,slow=7.9,SNR=67							
FITZ					LR	LR	13 17 33.7	
	comp=Z,412nm,19.7s,baz=69,slow=37							
MSVF	**Nonsavu**	**28.45**	**117**	*eP*		**P**	**13 06 11.7**	**+2.0**
MSVF	**Nonsavu**	**28.45**	**117**	*eP*		**P**	**13 06 11.7**	**+2.0**
MBWA	**Marble Bar**	**34.25**	**241**	*eP*		**P**	**13 07 00.6**	**0.0**
	comp=Z,93nm,1.6s							
URZ	**Urewera**	**39.65**	**148**	LR		LR	13 20 36.8	
	comp=Z,355nm,18.5s,baz=134,slow=31							
SSLB	**Suanglung**	**42.00**	**316**	*eP*		**P**	**13 08 05.9**	**0.0**
	comp=Z,26nm,1.1s							
YHNB	**Yeheng**	**42.29**	**317**	*eP*		**P**	**13 08 08.9**	**+0.6**
	comp=Z,125nm,1.4s							
JNU	**Nakatsue**	**43.55**	**335**	LR		LR	13 24 48.2	
	comp=Z,307nm,19.4s,baz=306,slow=34							
MJAR	**Matsushiro Arr**	**44.10**	**345**	P		**P**	**13 08 23.7**	**+1.0**
MJAR				PcP		**PP**	**13 10 06.4**	**+0.3**
MJAR	**Matsushiro Arr**	**44.10**	**345**	P		**P**	**13 08 23.7**	**+1.0**
	comp=Z,1.3nm,0.7s,baz=162,slow=12,SNR=5.5							
MJAR				PcP		**PP**	**13 10 06.4**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=164,slow=3.6,SNR=4.4							
MJAR					LR	LR	13 25 39.0	
	comp=Z,585nm,18.0s,baz=170,slow=35							
QIZ	**Qiongzhong**	**47.97**	**302**	P		**P**	**13 08 52.8**	**-0.6**
QIZ				pP		**pP**	**13 09 06.0**	**+0.9**
QIZ				PP		**PP**	**13 10 47.3**	**+1.5**
QIZ				S		**S**	**13 15 48.0**	**-0.7**
QIZ				pmax		pmax		
	comp=Z,16nm,2.3s							
QIZ					LR	LR		
	comp=E,200nm,19.9s							
QIZ					LR	LR		
	comp=Z,520nm,17.0s							
KSRS	**Korea Array**	**48.49**	**335**	P		**P**	**13 08 56.5**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=136,slow=7.4,SNR=3.8							
KSAR	**Wonju Array Be**	**48.50**	**335**	P		**P**	**13 08 56.5**	**-0.6**
NJ2	**Nanjing**	**48.97**	**323**	*eP*		**P**	**13 09 01.0**	**+0.1**
NJ2					pmax	pmax		
	comp=Z,10.0nm,0.5s							
RAR	**Rarotonga**	**49.51**	**113**	LR		LR	13 26 10.0	
	comp=Z,199nm,20.4s,baz=135,slow=31							
YUK	**Yuzh-Kuril'sk**	**50.06**	**355**	*d iP*		P	13 09 04.6	-4.3
YUK				*i* S		**S**	**13 16 12.1**	**-5.1**
YUK				MLR		MLR		
	comp=E,130nm,14.0s							
YUK				MLR		MLR		
	comp=Z,176nm,14.0s							
YUK				MLR		MLR		
	comp=N,86nm,14.0s							
ASAJ	**Asahikawa**	**50.52**	**352**	P		**P**	**13 09 13.9**	**+1.4**
ASAJ	**Asahikawa**	**50.52**	**352**	P		**P**	**13 09 13.9**	**+1.4**
	comp=N,5.9nm,0.7s,baz=181,slow=10,SNR=5.8							
WHN	**Wuhan**	**50.83**	**318**	P		**P**	**13 09 15.5**	**+0.5**
WHN				LR		LR		
	comp=N,2μm,23.8s							
WHN				LR		LR		
	comp=E,560nm,14.6s							
WHN				LR		LR		
	comp=Z,870nm,18.9s							
USRK	**Ussuriysk Arra**	**52.96**	**343**	LR		LR	13 30 16.0	
	comp=Z,246nm,19.6s,baz=112,slow=34							
GYA	**Guiyang**	**54.09**	**309**	P		**P**	**13 09 41.8**	**+2.3**
GYA				pP		**pP**	**13 09 55.5**	**+4.2**
GYA				ScP		**ScP**	**13 14 36.5**	**-2.6**
GYA				PcS		**PcS**	**13 14 43.8**	**+0.1**
GYA				S		**S**	**13 17 12.0**	**-1.5**
GYA				pmax		pmax		
	comp=Z,10.0nm,1.0s							
GYA				pmax		pmax		
	comp=Z,90nm,5.3s							
CN2	**Changchun**	**54.87**	**337**	*eP*		**P**	**13 09 47.5**	**+2.9**
CN2				*e*S		**S**	**13 17 23.5**	**+0.5**
CN2				SS		**SS**	**13 21 08.0**	**+0.9**
CN2				pmax		pmax		
	comp=Z,10.0nm,0.8s							
CN2				pmax		pmax		
	comp=Z,200nm,4.0s							
CN2				LR		LR		
	comp=N,300nm,16.0s							
CN2				LR		LR		
	comp=E,400nm,16.0s							
CN2				LR		LR		
	comp=Z,300nm,18.0s							
BJI	**Beijing**	**56.18**	**328**	P		**P**	**13 09 53.3**	**-0.8**
BJI				sP		**sP**	**13 10 13.8**	**+3.1**
BJI				S		**S**	**13 17 40.5**	**-0.1**
BJI				sS		**sS**	**13 18 01.5**	**+1.1**
BJI				pmax		pmax		
	comp=Z,9.0nm,0.7s							
BJI				LR		LR		
	comp=N,400nm,16.1s							
BJI				LR		LR		
	comp=E,300nm,18.2s							
BJI				LR		LR		
	comp=Z,310nm,17.5s							
KMI	**Kunming**	**56.58**	**305**	P		**P**	**13 09 57.0**	**-0.6**
KMI				S		**S**	**13 17 44.3**	**-2.8**
KMI				SS		**SS**	**13 21 34.0**	**-1.3**
KMI				pmax		pmax		
	comp=Z,150nm,7.1s							
KMI				LR		LR		
	comp=N,210nm,15.2s							
KMI				LR		LR		
	comp=E,160nm,16.2s							
KMI				LR		LR		
	comp=Z,280nm,18.8s							
XAN	**Xi'an**	**56.60**	**318**	P		**P**	**13 09 55.5**	**-1.8**
XAN				S		**S**	**13 17 44.3**	**-2.3**
XAN				ScS		**ScS**	**13 19 40.8**	**-2.8**
XAN				pmax		pmax		
	comp=Z,2.0nm,1.4s							
XAN				pmax		pmax		
	comp=Z,30nm,5.9s							
XAN				LR		LR		
	comp=N,240nm,17.4s							
XAN				LR		LR		
	comp=E,96nm,17.4s							
XAN				LR		LR		
	comp=Z,130nm,19.4s							
CMAR	**Chiang Mai Arr**	**57.21**	**296**	P		**P**	**13 10 00.5**	**-1.4**
CMAR	**Chiang Mai Arr**	**57.21**	**296**	P		**P**	**13 10 00.5**	**-1.4**
	comp=Z,0.8nm,0.6s,baz=111,slow=5.2,SNR=4.9							
CHTO	**Chiang Mai**	**57.34**	**297**	*eP*		**P**	**13 10 01.8**	**-1.0**
CHTO					pmax	pmax		
	comp=Z,8.0nm,1.3s							
CHTO	**Chiang Mai**	**57.34**	**297**	*eP*		**P**	**13 10 01.8**	**-1.0**
	comp=Z,8.2nm,1.3s							
KLR	**Kul'dur**	**57.63**	**345**	*eP*		P	13 09 58.3	-5.9
PPT2	**Papeete2**	**58.62**	**107**	*e*S		**S**	**13 18 13.7**	**-0.1**
	comp=Z,99nm,24.8s							
PPT2				*e*LR		LR	13 27 20.6	
	comp=Z,181nm,24.2s							
PET	**Petropavlovsk**	**59.11**	**5**	*eP*		**P**	**13 10 13.0**	**-1.4**
PET				*e*S		**S**	**13 18 21.2**	**+2.6**
PET				pmax		pmax		
	comp=Z,8.0nm,1.6s							
PET				pmax		pmax		
	comp=Z,200nm,3.6s							
PET				pmax		pmax		
	comp=Z,100nm,11.3s							
PET				MLR		MLR		
	comp=Z,300nm,18.0s							
PET				MLR		MLR		
	comp=Z,300nm,16.0s							
PETK	**Petropavlovsk-**	**59.11**	**4**	P		**P**	**13 10 12.9**	**-1.6**
PETK	**Petropavlovsk-**	**59.11**	**4**	P		**P**	**13 10 12.9**	**-1.6**
PETK	**Petropavlovsk-**	**59.11**	**4**	P		**P**	**13 10 12.9**	**-1.6**
	comp=Z,3.6nm,0.6s,baz=176,slow=8.7,SNR=5.6							
HHC	**Hu-ho-hao-te**	**59.27**	**326**	*eP*		**P**	**13 10 15.5**	**-0.5**
HHC				pP		**pP**	**13 10 32.5**	**+4.6**
HHC				PP		**PP**	**13 12 29.0**	**+1.7**
HHC				PcS		**PcS**	**13 15 05.5**	**-0.4**
HHC				S		**S**	**13 18 18.5**	**-2.9**
HHC				ScS		**ScS**	**13 19 57.0**	**-6.0**
HHC				SS		**SS**	**13 22 14.8**	**-1.9**
HHC				pmax		pmax		
	comp=Z,45nm,0.9s							
HHC				pmax		pmax		
	comp=Z,300nm,7.3s							
HHC				LR		LR		
	comp=N,670nm,15.7s							
HHC				LR		LR		
	comp=E,650nm,17.6s							
HHC				LR		LR		
	comp=Z,1μm,16.2s							
TBI	**Tubuai**	**59.27**	**114**	*e*S		**S**	**13 18 22.5**	**+0.6**
	comp=Z,298nm,24.8s							
TBI				*e*LR		LR	13 27 48.0	
	comp=Z,404nm,35.2s							
LZH	**Lanzhou**	**61.19**	**317**	*eP*		**P**	**13 10 30.0**	**+0.7**
LZH				pP		**pP**	**13 10 45.0**	**+3.7**
LZH				sP		sP	13 10 51.5	+5.5
LZH				S		**S**	**13 18 44.3**	**-2.0**
LZH				sS		**sS**	**13 19 08.5**	**+2.3**
LZH				SS		**SS**	**13 22 45.5**	**-1.6**
LZH				pmax		pmax		
	comp=Z,14nm,1.0s							
LZH				pmax		pmax		
	comp=Z,86nm,5.6s							
LZH				LR		LR		
	comp=N,250nm,14.0s							
LZH				LR		LR		
	comp=E,290nm,15.8s							
LZH				LR		LR		
	comp=Z,360nm,17.6s							
GTA	**Gaotai**	**65.65**	**318**	*eP*		**P**	**13 10 58.8**	**+0.1**
GTA				pP		**pP**	**13 11 11.5**	**+0.7**
GTA				sP		**sP**	**13 11 17.5**	**+2.0**
GTA				PP		**PP**	**13 13 26.3**	**+2.6**
GTA				S		**S**	**13 19 43.0**	**+1.2**
GTA				pmax		pmax		
	comp=Z,4.0nm,1.5s							
GTA				pmax		pmax		
	comp=Z,150nm,9.0s							
GTA				LR		LR		
	comp=N,230nm,15.2s							
GTA				LR		LR		
	comp=E,250nm,17.1s							
GTA				LR		LR		
	comp=Z,280nm,20.0s							
ULN	**Ulaanbaatar**	**66.33**	**329**	*eP*		**P**	**13 11 02.4**	**-0.5**
	comp=Z,6.0nm,1.0s							
SONM	**Songino Array**	**66.64**	**329**	P		**P**	**13 11 04.1**	**-0.8**
SONM	**Songino Array**	**66.64**	**329**	P		**P**	**13 11 04.1**	**-0.8**
	comp=Z,1.1nm,0.5s,baz=142,slow=4.5,SNR=12							
SONM					LR	LR	13 41 13.1	
	comp=Z,303nm,18.4s,baz=149,slow=37							
ZAK	**Zakamensk**	**69.84**	**329**	*i P*		**P**	**13 11 23.6**	**-1.2**
ZAK					pmax	pmax		
	comp=Z,7.0nm,1.1s							
VNDA	**Vanda**	**71.69**	**178**	*eP*		**P**	**13 11 35.4**	**-0.1**
	comp=Z,9.2nm,1.1s							
VNDA	**Vanda**	**71.69**	**178**	P		**P**	**13 11 35.5**	**-0.1**
	comp=Z,4.3nm,1.0s,baz=337,slow=6.0,SNR=12							
VNDA					LR	LR	13 42 45.1	
	comp=Z,248nm,18.2s,baz=335,slow=36							
MOY	**Mondy**	**71.77**	**330**	*eP*		**P**	**13 11 36.3**	**-0.2**
MIR	**Mirnyy**	**72.35**	**201**	*eP*		P	13 11 44.0	+4.4
MIR				*e*			13 11 53.0	
MIR				*e*			13 12 04.0	
MIR				pmax		pmax		
	comp=Z,42nm,1.0s							
BILL	**Bilibino**	**74.60**	**6**	*i P*		**P**	**13 11 52.9**	**+0.2**
BILL				*i*			13 12 06.8	
BILL				pmax		pmax		
	comp=Z,5.0nm,1.0s							
WMQ	**Urumqi**	**75.74**	**318**	*eP*		P	13 12 05.5	+5.6
WMQ				*e*S		**S**	**13 21 43.0**	**+4.1**
WMQ				pmax		pmax		
	comp=Z,39nm,0.7s							
WMQ				pmax		pmax		
	comp=Z,120nm,6.2s							
WMQ				LR		LR		
	comp=N,200nm,13.4s							
WMQ				LR		LR		
	comp=E,320nm,23.6s							
WMQ				LR		LR		
	comp=Z,290nm,20.0s							
KDAK	**Kodiak Island**	**77.83**	**27**	P		**P**	**13 12 12.3**	**+1.0**
KDAK	**Kodiak Island**	**77.83**	**27**	P		**P**	**13 12 12.3**	**+1.0**
	comp=Z,7.3nm,0.9s,baz=239,slow=5.9,SNR=3.5							
TIXI	**Tiksi**	**78.91**	**353**	*eP*		**P**	**13 12 16.3**	**-0.7**
TIXI					pmax	pmax		
	comp=Z,8.0nm,2.5s							
MKAR	**Makanchi Array**	**80.37**	**319**	P		**P**	**13 12 24.9**	**-0.6**
MKAR	**Makanchi Array**	**80.37**	**319**	P		**P**	**13 12 24.9**	**-0.6**
MKAR	**Makanchi Array**	**80.37**	**319**	P		**P**	**13 12 24.9**	**-0.6**
	comp=Z,0.9nm,0.8s,baz=108,slow=4.0,SNR=5.7							
MKAR					LR	LR	13 50 32.3	
	comp=Z,162nm,18.3s,baz=159,slow=38							
ZAA0	**Zalesovo Array**	**81.42**	**327**	*eP*		**P**	**13 12 28.6**	**-2.3**
ZALV	**Zalesovo Beam**	**81.42**	**327**	P		**P**	**13 12 28.7**	**-2.2**
ZALV	**Zalesovo Beam**	**81.42**	**327**	P		**P**	**13 12 28.7**	**-2.2**
ZALV	**Zalesovo Beam**	**81.42**	**327**	P		**P**	**13 12 28.7**	**-2.2**
	comp=Z,1.8nm,0.6s,baz=112,slow=5.7,SNR=11							
ZALV					LR	LR	13 51 34.0	
	comp=Z,284nm,18.2s,baz=69,slow=38							
SML	**Sawmill**	**81.75**	**25**	*eP*		**P**	**13 12 31.9**	**-0.6**
SML					pmax	pmax		
	comp=Z,4.0nm,0.8s							
SML	**Sawmill**	**81.75**	**25**	*eP*		**P**	**13 12 31.9**	**-0.6**
	comp=Z,3.6nm,0.8s							
COLA	**College**	**83.44**	**22**	*eP*		**P**	**13 12 39.6**	**-1.6**
COLA					pmax	pmax		
	comp=Z,8.0nm,0.8s							
COLA	**College**	**83.44**	**22**	*eP*		**P**	**13 12 39.6**	**-1.6**
	comp=Z,8.5nm,0.8s							
ILAR	**Eielson Array**	**83.75**	**22**	P		**P**	**13 12 40.7**	**-2.1**
ILAR	**Eielson Array**	**83.75**	**22**	P		**P**	**13 12 40.7**	**-2.1**
	comp=Z,6.8nm,0.7s,baz=246,slow=5.1,SNR=100							
ILAR					LR	LR	13 45 05.2	
	comp=Z,275nm,21.1s,baz=145,slow=32							
COLD	**Coldfoot**	**83.81**	**19**	*eP*		**P**	**13 12 42.9**	**-0.1**
	comp=Z,82nm,2.2s							
KURK	**Kurchatov**	**83.90**	**322**	P		**P**	**13 12 42.0**	**-1.9**
KURK	**Kurchatov**	**83.90**	**322**	P		**P**	**13 12 42.0**	**-1.9**
KURBB	**Kurchatov Arra**	**83.93**	**322**	P		**P**	**13 12 42.0**	**-2.1**
	comp=Z,1.4nm,0.8s,baz=107,slow=4.2,SNR=10.0							
MAW	**Mawson**	**83.97**	**203**	P		**P**	**13 12 43.1**	**-0.8**
MAW	**Mawson**	**83.97**	**203**	P		**P**	**13 12 43.1**	**-0.8**
	comp=Z,2.9nm,0.6s,baz=88,slow=7.2,SNR=14							
MAW					LR	LR	13 50 02.5	
	comp=Z,251nm,18.4s,baz=107,slow=36							
MENT	**Mentasta**	**84.18**	**25**	*eP*		**P**	**13 12 44.8**	**-0.3**
DOT	**Dot Lake**	**84.34**	**24**	*eP*		**P**	**13 12 45.4**	**-0.5**
	comp=Z,8.5nm,0.8s							
AAK	**Ala-Archa**	**84.54**	**314**	*eP*		**P**	**13 12 47.1**	**-0.4**
AAK					pmax	pmax		
	comp=Z,37nm,2.5s							
EKS2	**Erkin-Say**	**85.06**	**314**	P		**P**	**13 12 50.0**	**-0.1**
EKS2					pmax	pmax		
	comp=Z,14nm,1.3s							
EKS2	**Erkin-Say**	**85.06**	**314**	P		**P**	**13 12 50.0**	**-0.1**
	comp=Z,14nm,1.3s							
EGAK	**Eagle**	**85.97**	**23**	*eP*		**P**	**13 12 53.9**	**-0.1**
	comp=Z,8.2nm,0.8s							
KKAR	**Karatay Array**	**87.50**	**314**	*eP*		**P**	**13 13 00.0**	**-1.9**
KKAR	**Karatay Array**	**87.50**	**314**	*eP*		**P**	**13 13 00.0**	**-1.9**
SYO	**Syowa Base**	**92.11**	**200**	*e P*		**P**	**13 13 24.8**	**+1.8**
SYO	**Syowa Base**	**92.11**	**200**	*e pP*		pP	13 13 39.0	+3.5
NVAR	**Mina Array Bea**	**93.85**	**52**	P		**P**	**13 13 31.6**	**-0.4**
NVAR	**Mina Array Bea**	**93.85**	**52**	P		**P**	**13 13 31.6**	**-0.4**
	comp=Z,1.6nm,0.7s,baz=263,slow=6.3,SNR=13							
NVAR					LR	LR	13 51 49.5	
	comp=Z,522nm,19.0s,baz=256,slow=33							
YKA	**Yellowknife Ar**	**97.09**	**28**	P		**P**	**13 13 45.3**	**-0.5**
YKA	**Yellowknife Ar**	**97.09**	**28**	P		**P**	**13 13 45.3**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=268,slow=4.9,SNR=8.8							
YKA					LR	LR	13 51 31.5	
	comp=Z,23nm,20.3s,baz=185,slow=32							
PDAR	**Pinedale Array**	**100.62**	**48**	P		**Pdif**	**13 14 02.0**	**-0.4**
PDAR	**Pinedale Array**	**100.62**	**48**	P		**Pdif**	**13 14 02.0**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=194,slow=5.5,SNR=3.9							
BRTR	**Keskin Array B**	**115.11**	**311**	PKP		**PKPdf**	**13 18 55.2**	**-0.5**
BRTR	**Keskin Array B**	**115.11**	**311**	PKP		**PKPdf**	**13 18 55.2**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=166,slow=3.0,SNR=2.9							
NOA	**NORSAR Array B**	**117.58**	**339**	PKP		**PKPdf**	**13 18 58.4**	**-1.3**
NOA	**NORSAR Array B**	**117.58**	**339**	PKP		**PKPdf**	**13 18 58.4**	**-1.3**
	comp=Z,0.3nm,0.5s,baz=45,slow=2.0,SNR=2.5							
KOLS	**Kolonicke sedl**	**119.51**	**324**	*e*PKIKP		**PKPdf**	**13 19 04.6**	**+0.9**
KOLS	**Kolonicke sedl**	**119.51**	**324**	*e*PKP		**PKPdf**	**13 19 04.6**	**+0.9**
CRVS	**Cervenica-Dubn**	**120.00**	**324**	*e*PKIKP		**PKPdf**	**13 19 05.1**	**+0.4**
CRVS	**Cervenica-Dubn**	**120.00**	**324**	*e*PKP		**PKPdf**	**13 19 05.0**	**+0.4**
DPC	**Dobruska-Polom**	**122.11**	**328**	*e*PKIKP		**PKPdf**	**13 19 05.7**	**-3.0**
DPC	**Dobruska-Polom**	**122.11**	**328**	*e*PKPdf		**PKPdf**	**13 19 05.7**	**-3.0**
BRG	**Berggiesshubel**	**123.04**	**329**	*e*(P)		**PKPdf**	**13 19 11.2**	**+0.9**
	comp=Z,2.7nm,0.8s							
CLL	**Collm**	**123.24**	**330**	*e*PKIKP		**PKPdf**	**13 19 13.0**	**+2.2**
CLL				*e*			13 20 51.0	
CLL	**Collm**	**123.24**	**330**	*e*(PKPdf)		**PKPdf**	**13 19 13.0**	**+2.2**
CLL				*e*PP		**PP**	**13 20 51.0**	**+0.2**
CLL				*e*PS		**PS**	**13 30 44.0**	**-4.2**
CLL				*e*PPS		PPS	13 32 07.0	
CLL				*e*SS		SS	13 37 48.0	+15
CLL				*e*SSS		SSS	13 42 06.0	
CLL				*e*(SSSS)			13 46 12.0	
CLL				Lm		MLR	14 14 00.0	
	comp=Z,100nm,21.2s							
GERES	**GERESS Array B**	**124.37**	**327**	PKP		**PKPdf**	**13 19 12.2**	**-1.0**
GERES	**GERESS Array B**	**124.37**	**327**	PKP		**PKPdf**	**13 19 12.2**	**-1.0**
	comp=Z,0.6nm,0.4s,baz=79,slow=2.9,SNR=7.6							
LPAZ	**La Paz**	**134.98**	**120**	PKP		**PKPdf**	**13 19 32.7**	**-2.2**
LPAZ	**La Paz**	**134.98**	**120**	PKP		**PKPdf**	**13 19 32.7**	**-2.2**
	comp=Z,0.5nm,0.5s,baz=292,slow=5.4,SNR=2.8							
TOA0	**Torodi Ar. Sit**	**149.40**	**286**	*e*PKPbc		**PKPbc**	**13 20 02.8**	**-1.3**
TORD	**Torodi Ar. Bea**	**149.40**	**286**	PKPbc		**PKPbc**	**13 20 02.9**	**-1.1**
TORD	**Torodi Ar. Bea**	**149.40**	**286**	PKPbc		**PKPbc**	**13 20 02.9**	**-1.1**
	comp=Z,6.6nm,0.6s,baz=62,slow=3.4,SNR=30							
BDFB	**Brasilia**	**151.10**	**138**	PKPbc		**PKPbc**	**13 20 09.2**	**+0.9**
BDFB				PKPab		**PKPab**	**13 20 17.8**	**+2.0**
BDFB	**Brasilia**	**151.10**	**138**	PKPbc		**PKPbc**	**13 20 09.2**	**+0.9**
	comp=Z,3.0nm,0.5s,baz=83,slow=2.6,SNR=4.4							
BDFB				PKPab		**PKPab**	**13 20 17.8**	**+2.0**
	comp=Z,2.4nm,0.5s,baz=291,slow=2.3,SNR=4.3							

*ISCJB **29** 13:11:27.8±0.4, 15°.50N±0°.06×121°.82E±0°.07, h26km, mb4.3/22, MS3.8/2, Error ellipse: s-maj=10.6km s-min=6.2km az=144.0*

*NEIC **29** 13:11:31.3±0.3, 15°.56N×121°.70E, mb4.5/3, Error ellipse: s-maj=11.7km s-min=6.9km az=75.0*

NEIC Felt [IV PIVS] at Baler, Dingalan and Gabaldon; [III PIVS] at Baguio, La Trinidad and Palayan City; [I PIVS] at Quezon City.

*IDC **29** 13:11:31.4±0.6, 15°.57N×121°.67E, h38km±5km, mb4.0/18, mb1 4.1/18, mb1mx4.0/26, mbtmp4.0/18,

WRAB	**Tennant Creek**	**37.40**	**160**	*e*P		**P**	**13 18 39.9**	**-1.4**
	3.6nm,0.6s								
WRA	**Warramunga Arr**	**37.41**	**160**	P		**P**	**13 18 40.1**	**-1.2**
WRA	**Warramunga Arr**	**37.41**	**160**	P		**P**	**13 18 40.1**	**-1.2**
	3.3nm,0.6s,baz=343,slow=9.1,SNR=51								
AS31	**Alice Springs**	**40.77**	**163**	*e*P		**P**	**13 19 09.4**	**-0.2**
ASAR	**Alice Springs**	**40.77**	**163**	P		**P**	**13 19 09.6**	**0.0**
ASAR				sP		**sP**	**13 19 24.9**	**+4.4**
ASAR	**Alice Springs**	**40.77**	**163**	P		**P**	**13 19 09.6**	**0.0**
	3.5nm,0.4s,baz=341,slow=7.8,SNR=124								
ASAR				sP		**sP**	**13 19 24.9**	**+4.4**
	1.7nm,0.6s,baz=341,slow=7.3,SNR=4.2								
MKAR	**Makanchi Array**	**45.17**	**322**	P		**P**	**13 19 44.6**	**-0.3**
MKAR				PcP		**PcP**	**13 21 24.5**	**-0.5**
MKAR	**Makanchi Array**	**45.17**	**322**	P		**P**	**13 19 44.6**	**-0.3**
	3.0nm,0.7s,baz=103,slow=8.2,SNR=9.8								
MKAR				PcP		**PcP**	**13 21 24.5**	**-0.5**
	2.9nm,1.0s,baz=121,slow=2.8,SNR=2.9								
PETK	**Petropavlovsk-**	**46.88**	**29**	P		**P**	**13 19 58.6**	**+0.4**
PETK	**Petropavlovsk-**	**46.88**	**29**	P		**P**	**13 19 58.6**	**+0.4**
	4.1nm,0.7s,baz=194,slow=5.5,SNR=7.7								
ZALV	**Zalesovo Beam**	**47.89**	**331**	P		**P**	**13 20 05.0**	**-1.1**
ZALV				PcP		**PcP**	**13 21 33.2**	**-1.1**
ZALV	**Zalesovo Beam**	**47.89**	**331**	P		**P**	**13 20 05.0**	**-1.1**
	5.8nm,0.7s,baz=128,slow=6.6,SNR=13								
ZALV				PcP		**PcP**	**13 21 33.2**	**-1.1**
	0.7nm,0.5s,baz=107,slow=5.0,SNR=2.6								
KURK	**Kurchatov**	**49.23**	**325**	P		**P**	**13 20 16.2**	**-0.2**
KURBB	**Kurchatov Arra**	**49.23**	**325**	P		**P**	**13 20 16.2**	**-0.2**
	32nm,0.6s,baz=123,slow=8.6,SNR=67								
BRVK	**Borovoye**	**54.90**	**325**	*e*P		**P**	**13 20 58.1**	**-0.5**
ABKAR	**Akbulak array**	**60.01**	**318**	*e*P		**P**	**13 21 33.7**	**-1.0**
	1.9nm,0.4s								
ILAR	**Eielson Array**	**76.61**	**26**	P		**P**	**13 23 19.4**	**+1.0**
ILAR	**Eielson Array**	**76.61**	**26**	P		**P**	**13 23 19.4**	**+1.0**
	0.2nm,0.7s,baz=297,slow=4.0,SNR=3.9								
ARCES	**ARCESS Array B**	**77.70**	**339**	P		**P**	**13 23 23.1**	**-1.4**
ARCES				pP		**PcP**	**13 23 35.8**	**+1.3**
ARCES	**ARCESS Array B**	**77.70**	**339**	P		**P**	**13 23 23.1**	**-1.4**
	2.2nm,0.7s,baz=76,slow=6.9,SNR=7.8								
ARCES				pP		**PcP**	**13 23 35.8**	**+1.3**
	0.7nm,0.5s,baz=69,slow=6.6,SNR=1.6								
BRTR	**Keskin Array B**	**78.80**	**308**	P		**P**	**13 23 29.0**	**-2.3**
BRTR	**Keskin Array B**	**78.80**	**308**	P		**P**	**13 23 29.0**	**-2.3**
	0.7nm,0.7s,baz=114,slow=3.6,SNR=3.5								
FINES	**FINESS Array B**	**79.15**	**331**	P		**P**	**13 23 31.3**	**-1.2**
FINES				pP		**pP**	**13 23 43.0**	**+2.1**
FINES	**FINESS Array B**	**79.15**	**331**	P		**P**	**13 23 31.3**	**-1.2**
	1.5nm,0.4s,baz=59,slow=4.9,SNR=11								
FINES				pP		**pP**	**13 23 43.0**	**+2.1**
	2.1nm,0.7s,baz=76,slow=8.0,SNR=4.1								
BUR08	**Bucovina Ar. S**	**82.98**	**317**	*e*P		**P**	**13 23 52.6**	**-0.8**
BUR08				*e*			13 24 04.6		
NB2	**NORSAR Subarra**	**86.07**	**333**	P		**P**	**13 24 06.6**	**-2.1**
	comp=Z,6.3nm,1.0s,baz=66,slow=5.1								
NOA	**NORSAR Array B**	**86.07**	**333**	P		**P**	**13 24 06.4**	**-2.2**
NOA				pP		**pP**	**13 24 19.6**	**+2.5**
NOA	**NORSAR Array B**	**86.07**	**333**	P		**P**	**13 24 06.4**	**-2.2**
	comp=Z,2.8nm,0.8s,baz=65,slow=4.9,SNR=11								
NOA				pP		**pP**	**13 24 19.6**	**+2.5**
	comp=Z,2.1nm,0.9s,baz=65,slow=4.9,SNR=6.5								
NOA				LR		LR	14 05 04.6		
	comp=Z,97nm,21.8s,baz=60,slow=37								
GERES	**GERESS Array B**	**89.83**	**321**	pP		pP	13 24 38.4	+2.9
GERES	**GERESS Array B**	**89.83**	**321**	pP		pP	13 24 38.4	+2.9
	comp=Z,0.3nm,0.2s,baz=84,slow=4.2,SNR=1.8								
YKA	**Yellowknife Ar**	**90.65**	**23**	P		**P**	**13 24 29.6**	**-0.7**
YKA	**Yellowknife Ar**	**90.65**	**23**	P		**P**	**13 24 29.6**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=310,slow=3.9,SNR=3.7								

NNC 29 13:15:24.0±1.3, 50.64N×73.40E, h0km, mb3.5, mpv3.2, 6C-8D, Error ellipse: s-maj=20.0km s-min=5.2km az=29.0, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
VOSK	**Vostochnaya**	**2.57**	**325**	⇓Pn	Pn	13 16 06.8	-0.1
	3.4nm,0.5s						
VOSK				⇑Sn	Sn	13 16 39.3	+0.3
	98nm,0.9s						
BVA0	**Borovoye Array**	**3.03**	**323**	⇓Pn	Pn	13 16 14.2	+1.0
	9.2nm,1.4s,baz=125,slow=15,SNR=15						
BVA0				⇑Sn	Sn	13 16 51.9	+1.6
	41nm,0.9s,baz=126,slow=30,SNR=19						
BRVK	**Borovoye**	**3.10**	**323**	⇓Pn	Pn	13 16 14.2	0.0
	12nm,1.0s						
BRVK				⇑Sn	Sn	13 16 52.9	+1.1
	27nm,0.8s						
KURBB	**Kurchatov Arra**	**3.27**	**88**	⇓Pn	Pn	13 16 14.6	-1.8
	8.5nm,0.9s						
KURBB				⇓Sn	Sn	13 16 58.0	+2.0
	141nm,0.9s						
ZRNK	**Zerenda**	**3.58**	**312**	⇑Pn	Pn	13 16 20.3	-0.4
	6.7nm,1.1s						
ZRNK				⇓Sn	Sn	13 17 05.2	+1.5
	19nm,0.9s						
MK31	**Makanchi Array**	**7.03**	**120**	⇓Pg	Pb	13 17 32.5	+5.5
	0.7nm,0.6s,baz=290,slow=13,SNR=4.9						
MK31				⇑Lg	Lg	13 19 07.2	
	24nm,0.9s,baz=324,slow=26,SNR=3.6						
TKM2	**Tokmak 2**	**7.87**	**168**	⇑Pg	Pb	13 17 47.0	+5.6
	2.6nm,0.9s						
TKM2				⇓Lg	Lg	13 19 33.9	
	29nm,1.0s						

IDC 29 13:27:07.6±2.2, 20.53S×177.61W, h526km±28km, mb3.3/5, mb1 3.5/7, mb1mx3.1/20, mbtmp3.4/7, Error ellipse: s-maj=35.2km s-min=18.8km az=124.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**8.63**	**41**	P	P	13 29 11.2	-0.1
	1.4nm,0.3s,baz=240,slow=20,SNR=2.6						
AFI				S	S	13 30 48.1	-4.6
	1.2nm,0.3s,baz=287,slow=20,SNR=3.4						
URZ	**Urewera**	**18.25**	**193**	P	P	13 30 48.8	0.0
	2.4nm,0.3s,baz=14,slow=14,SNR=11						
STKA	**Stephens Creek**	**38.10**	**244**	P	P	13 33 41.9	+0.5
	1.6nm,0.6s,baz=94,slow=11,SNR=2.6						
ASAR	**Alice Springs**	**44.86**	**257**	P	P	13 34 34.8	-0.4
	4.6nm,0.6s,baz=91,slow=7.3,SNR=128						
ASAR				PcP	PcP	13 36 06.0	+0.3
	0.5nm,0.7s,baz=101,slow=4.3,SNR=4.3						
ASAR				S	S	13 40 30.2	-4.3
	1.2nm,0.8s,baz=96,slow=15,SNR=7.9						
WRA	**Warramunga Arr**	**44.95**	**262**	P	P	13 34 35.1	-0.7
	3.2nm,0.7s,baz=98,slow=8.6,SNR=151						
MJAR	**Matsushiro Arr**	**70.45**	**323**	P	P	13 37 28.4	-0.5
	0.4nm,0.5s,baz=158,slow=5.9,SNR=6.6						
KSRS	**Korea Array**	**77.15**	**318**	P	P	13 38 07.9	+1.0
	0.5nm,0.5s,baz=144,slow=5.3,SNR=3.9						
AKASG	**Malin Array Be**	**143.22**	**331**	PKP	PKPab	13 45 39.0	-0.4
	1.3nm,0.5s,baz=36,slow=4.9,SNR=4.6						
BRTR	**Keskin Array B**	**147.13**	**313**	PKPbc	PKPbc	13 45 51.3	-0.6
	0.7nm,0.7s,baz=119,slow=5.6,SNR=3.8						

*ISCJB **29** 13:30:31.9±0.4, 40.11N±0.02×26.99E±0.02, h1km±4km, Error ellipse: s-maj=3.7km s-min=2.9km az=147.5*
*DDA **29** 13:30:31.8, 40.10N×27.03E, h7km, ML3.3*
*ISK **29** 13:30:32.0, 40.12N×27.01E, h5km, MD2.9*
*CSEM **29** 13:30:32.3±0.1, 40.12N×27.00E, h2km, MD2.9, Error ellipse: s-maj=1.7km s-min=1.5km az=131.0*
*THE **29** 13:30:33.5, 40.08N×26.89E, h1km±3km, ML2.4/1, Error ellipse: s-maj=5.7km s-min=0.8km az=76.0*

ISC 29 13:30:32.5±1.0, 40.11N±0.02×26.99E±0.02, h8km±9km, n61, σ0.48/86, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LPK	**Lapseki**	**0.31**	**326**	*e*PG	**Pg**	**13 30 38.5**	**-0.2**
LPK				*e*SG	**Sg**	**13 30 43.4**	**+0.5**
LPK	**Lapseki**	**0.31**	**326**	*e*Pg	**Pg**	**13 30 38.5**	**-0.2**
LPK				*e*Sg	**Sg**	**13 30 43.4**	**+0.5**
KRBG	**Karabiga-Canak**	**0.36**	**40**	*e*PG	**Pg**	**13 30 39.5**	**-0.1**
KRBG				*e*SG	**Sg**	**13 30 44.4**	**-0.1**
KRBG	**Karabiga-Canak**	**0.36**	**40**	*e*Pg	**Pg**	**13 30 39.5**	**-0.1**
KRBG				*e*Sg	**Sg**	**13 30 44.4**	**-0.1**
GONE	**Gonen-Balikesi**	**0.54**	**97**	*e*PG	**Pg**	**13 30 42.4**	**-0.5**
GONE				*e*SG	**Sg**	**13 30 50.4**	**+0.4**
GONE	**Gonen-Balikesi**	**0.54**	**97**	*e*Pg	**Pg**	**13 30 42.4**	**-0.5**
GONE				*e*Sg	**Sg**	**13 30 50.4**	**+0.4**
EZN	**Ezine**	**0.59**	**241**	*e*PG	**Pg**	**13 30 44.1**	**+0.2**
EZN	**Ezine**	**0.59**	**241**	*e*Pg	**Pg**	**13 30 44.1**	**+0.2**
RKY	**Sarkoy-Tekirda**	**0.59**	**14**	*e*PG	**Pg**	**13 30 43.8**	**-0.2**
RKY	**Sarkoy-Tekirda**	**0.59**	**14**	*e*Pg	**Pg**	**13 30 43.8**	**-0.2**
SART	**Tekirdag**	**0.59**	**14**	*i* P	**Pg**	**13 30 43.6**	**-0.4**
SART				*i* S	**Sg**	**13 30 51.9**	**+0.2**
SART	**Tekirdag**	**0.59**	**14**	*i* P	**Pg**	**13 30 43.6**	**-0.4**
SART				*i* S	**Sg**	**13 30 51.9**	**+0.2**
MFT	**Murefte**	**0.71**	**18**	*e*PG	**Pg**	**13 30 46.1**	**-0.1**
MFT	**Murefte**	**0.71**	**18**	*e*Pg	**Pg**	**13 30 46.1**	**-0.1**
BNT	**Bandirma**	**0.75**	**71**	*e*PG	**Pg**	**13 30 46.1**	**-0.9**
BNT	**Bandirma**	**0.75**	**71**	*e*Pg	**Pg**	**13 30 46.1**	**-0.9**
BOZC	**Bozcaada**	**0.77**	**250**	*i* P	**Pg**	**13 30 47.2**	**-0.2**
BOZC				*i* S	**Sg**	**13 30 57.7**	**+0.3**
BALB	**Balikesir**	**0.83**	**124**	*e*PG	**Pg**	**13 30 48.3**	**-0.2**
BALB	**Balikesir**	**0.83**	**124**	*e*Pg	**Pg**	**13 30 48.3**	**-0.2**
AYVA	**Ayvalik**	**0.84**	**196**	*i* P	**Pb**	**13 30 49.3**	**0.0**
AYVA				*i* S	**Sg**	**13 30 59.7**	**+0.2**
AYVA	**Ayvalik**	**0.84**	**196**	*i* P	**Pb**	**13 30 49.3**	**0.0**
AYVA				*i* S	**Sg**	**13 30 59.7**	**+0.2**
ENEZ	**Enez**	**0.89**	**314**	*e*PG	**Pg**	**13 30 49.7**	**0.0**
ENEZ	**Enez**	**0.89**	**314**	*e*Pg	**Pg**	**13 30 49.7**	**0.0**
TKR	**Tekirdag**	**0.97**	**25**	*e*PG	**Pg**	**13 30 50.6**	**-0.6**
TKR	**Tekirdag**	**0.97**	**25**	*e*Pg	**Pg**	**13 30 50.6**	**-0.6**
PRK	**Paraskevi**	**1.03**	**213**	P	**Pg**	**13 30 52.1**	**-0.2**
PRK				S	**Sg**	**13 31 05.9**	**+0.2**
PRK	**Paraskevi**	**1.03**	**213**	P	**Pg**	**13 30 52.1**	**-0.2**
PRK				S	**Sg**	**13 31 05.9**	**+0.2**
KCTX	**Karacabey (Bur**	**1.06**	**81**	*e*PG	**Pg**	**13 30 52.8**	**0.0**
KCTX	**Karacabey (Bur**	**1.06**	**81**	*e*Pg	**Pg**	**13 30 52.8**	**0.0**
SMTH	**Samothraki Isl**	**1.17**	**288**	P	**Pg**	**13 30 54.1**	**-0.9**
SMTH				S	**Sb**	**13 31 10.8**	**+0.4**
SMTH	**Samothraki Isl**	**1.17**	**288**	P	**Pg**	**13 30 54.1**	**-0.9**
SMTH				S	**Sb**	**13 31 10.8**	**+0.4**
DURS	**Dursunbey**	**1.25**	**114**	*i* P	**Pg**	**13 30 55.8**	**-0.7**
DURS				*i* S	**Sg**	**13 31 12.7**	**0.0**
DURS	**Dursunbey**	**1.25**	**114**	*i* P	**Pg**	**13 30 55.8**	**-0.7**
DURS				*i* S	**Sg**	**13 31 12.7**	**0.0**
SIGR	**SIGRI**	**1.26**	**225**	P	**Pn**	**13 30 55.4**	**-1.0**
SIGR				S	**Sg**	**13 31 12.9**	**-0.1**
SIGR	**SIGRI**	**1.26**	**225**	P	**Pn**	**13 30 55.4**	**-1.0**
SIGR				S	**Sg**	**13 31 12.9**	**-0.1**
AKHS	**Akhisar**	**1.39**	**152**	*i* P	**Pn**	**13 30 57.4**	**-0.8**
AKHS				*i* S	**Sg**	**13 31 17.5**	**+0.4**
AKHS	**Akhisar**	**1.39**	**152**	*i* P	**Pn**	**13 30 57.4**	**-0.8**
AKHS				*i* S	**Sg**	**13 31 17.5**	**+0.4**
LIA	**Limnos Island**	**1.41**	**262**	P	**Pn**	**13 30 58.3**	**-0.1**
LIA				S	**Sb**	**13 31 17.1**	**0.0**
LIA	**Limnos Island**	**1.41**	**262**	P	**Pn**	**13 30 58.3**	**-0.1**
LIA				S	**Sb**	**13 31 17.1**	**0.0**
SLVT	**Silivri**	**1.45**	**39**	*e*PN	**Pb**	**13 30 59.6**	**-0.2**
SLVT	**Silivri**	**1.45**	**39**	*e*Pn	**Pb**	**13 30 59.6**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.47**	**79**	*e*PN	**Pn**	**13 30 59.7**	**+0.4**
MDNY	**Mudanya-Bursa**	**1.47**	**79**	*e*Pn	**Pn**	**13 30 59.7**	**+0.4**
ARMT	**Armutlu**	**1.50**	**72**	*e*PN	**Pb**	**13 31 00.3**	**-0.3**
ARMT	**Armutlu**	**1.50**	**72**	*e*Pn	**Pb**	**13 31 00.3**	**-0.3**
ELBA	**Catalca**	**1.50**	**46**	*i* P	**Pn**	**13 30 59.0**	**-0.8**
ELBA				*i* S	**Sn**	**13 31 19.8**	**+0.2**
ELBA	**Catalca**	**1.50**	**46**	*i* P	**Pn**	**13 30 59.0**	**-0.8**
ELBA				*i* S	**Sn**	**13 31 19.8**	**+0.2**
CTKS	**Kestanelik-??a**	**1.61**	**45**	*e*PN	**Pn**	**13 31 01.3**	**+0.1**
CTKS	**Kestanelik-??a**	**1.61**	**45**	*e*Pn	**Pn**	**13 31 01.3**	**+0.1**
CTYL	**Yal??k??y-??at**	**1.68**	**36**	*e*PN	**Pn**	**13 31 02.8**	**+0.6**
CTYL	**Yal??k??y-??at**	**1.68**	**36**	*e*Pn	**Pn**	**13 31 02.8**	**+0.6**
BGKT	**Bogazkoy**	**1.72**	**51**	*e*PN	**Pn**	**13 31 03.5**	**+0.7**
BGKT	**Bogazkoy**	**1.72**	**51**	*e*Pn	**Pn**	**13 31 03.5**	**+0.7**
BLCB	**Balcova**	**1.73**	**179**	*e*PN	**Pn**	**13 31 03.5**	**+0.6**
BLCB	**Balcova**	**1.73**	**179**	*e*Pn	**Pn**	**13 31 03.5**	**+0.6**
IZM	**Izmir**	**1.73**	**173**	*e*PN	**Pn**	**13 31 03.3**	**+0.4**
IZM	**Izmir**	**1.73**	**173**	*e*Pn	**Pn**	**13 31 03.3**	**+0.4**
TVSB	**Tavsanli**	**2.02**	**108**	*e*PN	**Pn**	**13 31 07.7**	**+0.7**
TVSB	**Tavsanli**	**2.02**	**108**	*e*Pn	**Pn**	**13 31 07.7**	**+0.7**
KULA	**Kula-Manisa**	**2.06**	**140**	*e*PN	**Pn**	**13 31 08.3**	**+0.8**
KULA	**Kula-Manisa**	**2.06**	**140**	*e*Pn	**Pn**	**13 31 08.3**	**+0.8**

IDC 29 13:43:25.6±2.2, 33.05S×178.87W, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.6/18, mbtmp3.6/3, ML3.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.9/21, Error ellipse: s-maj=61.9km s-min=39.5km az=135.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**3.88**	**12**	LR	LR	13 45 08.6	
	comp=Z,402nm,19.5s,baz=36,slow=27						
URZ	**Urewera**	**6.14**	**211**	Pn	Pn	13 44 57.1	-0.4
	1.1nm,0.3s,baz=146,slow=22,SNR=8.1						
URZ				Sn	Sn	13 46 01.9	-6.5
	0.6nm,0.3s,baz=107,slow=15,SNR=3.7						
ASAR	**Alice Springs**	**42.30**	**270**	P	P	13 51 21.6	+0.3
	0.2nm,0.4s,baz=111,slow=7.1,SNR=7.8						
WRA	**Warramunga Arr**	**43.53**	**275**	P	P	13 51 30.8	-0.4
	0.3nm,0.3s,baz=117,slow=8.2,SNR=19						
FINES	**FINESS Array B**	**147.35**	**338**	PKPbc	PKPbc	14 03 09.9	-0.5
	1.3nm,0.6s,baz=46,slow=6.0,SNR=4.9						
NOA	**NORSAR Array B**	**151.24**	**350**	PKPbc	PKPbc	14 03 19.8	-0.5
	0.6nm,0.7s,baz=14,slow=4.1,SNR=3.3						

IDC 29 13:44:48.4±8.0, 5.57S×151.53E, h106km±55km, mb3.3/3, mb1 3.4/4, mb1mx3.1/19, mbtmp3.3/4, Error ellipse: s-maj=94.7km s-min=53.4km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.76**	**228**	P	Pn	13 46 12.0	+0.4
	0.5nm,0.3s,baz=21,slow=14,SNR=2.7						
PMG				S	Sn	13 47 16.9	+0.5
	1.3nm,0.3s,baz=131,slow=20,SNR=6.0						
WRA	**Warramunga Arr**	**21.99**	**228**	P	P	13 49 33.5	-0.5
	0.8nm,0.6s,baz=52,slow=9.9,SNR=15						
ASAR	**Alice Springs**	**24.73**	**222**	P	P	13 50 00.2	+0.1
	0.8nm,0.6s,baz=56,slow=8.6,SNR=19						
FITZ	**Fitzroy Crossi**	**28.18**	**242**	P	P	13 50 31.5	+0.4
	1.3nm,0.7s,baz=49,slow=9.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**149.32**	**286**	PKPbc	PKPbc	14 04 25.2	-0.7
	0.5nm,0.4s,baz=78,slow=2.7,SNR=8.4						

ROM 29 13:51:45.0±0.0, 40.92N×16.64E, h4km, Md1.9/3, Ml1.1/2, Error ellipse: s-maj=0.7km s-min=0.1km az=51.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AMUR	**Altamura**	**0.03**	**245**	Pg	Pg	13 51 46.1	+0.1
AMUR				Sg	Sg	13 51 47.0	+0.3
	2μm,0.2s						
MATE	**Matera**	**0.27**	**169**	Pg	Pg	13 51 51.2	+0.9
MATE				Sg	Sb	13 51 55.8	-1.6
	25nm,0.2s						
MRVN	**Minervino Murg**	**0.36**	**293**	Pg	Pb	13 51 53.2	-0.9
MRVN				Sg	Sb	13 51 59.1	-1.0
	16nm,0.6s						

*DJA **29** 13:54:48.8±9.4, 18°N±68°×14°7E±3°7, h82km±43km, M5.6/6, mB5.5/1, mb5.3/6, MLv5.7/1, Mw(mB)4.9/1*
*BJI **29** 13:54:54.0, 17.40N×146.40E, h106km, mB4.8/16, mb4.6/25*
*NEIC **29** 13:54:55.7±0.1, 17.45N×146.12E, mb4.7/58, Error ellipse: s-maj=6.1km s-min=4.0km az=103.0*
NEIC Felt at Capital Hill, Saipan.
*MOS **29** 13:54:57.2±1.1, 17.44N×146.09E, h137km, mb4.6/30, Error ellipse: s-maj=11.7km s-min=6.2km az=91.1*
*ISCJB **29** 13:54:57.1±1.1, 17.45N±0.04×146.15E±0.05, h131km±10km, mb4.5/105, Error ellipse: s-maj=8.1km s-min=5.9km az=178.1*
*IDC **29** 13:54:58.0±0.6, 17.44N×146.15E, h131km±5km, mb4.1/27, mb1 4.3/27, mb1mx4.2/33, mbtmp4.1/27, MS3.4/9, Ms1 3.4/9, ms1mx3.2/34, Error ellipse: s-maj=12.6km s-min=8.0km az=89.0*

ISC 29 13:54:57.4±0.4, 17.43N±0.04×146.27E±0.06, h125km±3km, h125km:pP-P, n391, σ1.15/438, mb4.6/106, 93C-101D, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**4.05**	**200**	*e*Pn	**Pn**	**13 55 59.2**	**+1.4**
GUMO				*e*Sn	**Sn**	**13 56 45.7**	**+1.1**
MJAR	**Matsushiro Arr**	**20.33**	**341**	P	P	**13 59 23.7**	**0.0**
MJAR	**Matsushiro Arr**	**20.33**	**341**	P	P	**13 59 23.7**	**0.0**
	4.4nm,0.8s,baz=170,slow=9.9,SNR=8.0						
MAJO	**Matsushiro**	**20.33**	**341**	*e*P	Pn	13 59 26.2	-0.8
MAJO	**Matsushiro**	**20.33**	**341**	*e*P	Pn	13 59 26.2	-0.8
MAT	**Matsushiro**	**20.33**	**341**	P	P	**13 59 24.8**	**+1.1**
JAY	**Jayapura**	**20.57**	**196**	P	Pn	13 59 30.5	+0.6
YHNB	**Yeheng**	**24.30**	**291**	P	P	**14 00 05.7**	**+2.2**
FAKI	**Fak Fak**	**24.50**	**216**	P	P	**14 00 05.3**	**+0.1**
SSLB	**Suanglung**	**24.51**	**289**	*e*P	P	**14 00 08.1**	**+2.9**
	11nm,0.8s						
ERM	**Erimo**	**24.65**	**354↑**	*e*P	P	**14 00 04.1**	**-2.1**
ERM				pmax	pmax		
	comp=Z,59nm,2.0s						
KSRS	**Korea Array**	**25.66**	**325**	P	P	**14 00 15.6**	**+0.1**
	comp=Z,1.4nm,0.7s,baz=137,slow=8.8,SNR=7.5						
KSRS				pP	**pP**	**14 00 40.0**	**-2.4**
	comp=Z,5.4nm,0.9s,baz=151,slow=9.3,SNR=5.7						
KSRS				ScP	**ScP**	**14 07 08.2**	**-2.6**
	comp=Z,0.6nm,0.7s,baz=144,slow=4.5,SNR=4.2						
KSRS				LR	LR	14 08 53.4	
	comp=Z,26nm,21.2s,baz=347,slow=33						
KSAR	**Wonju Array Be**	**25.68**	**325**	P	P	**14 00 15.6**	**0.0**
KSAR				pP	**pP**	**14 00 40.0**	**-2.5**
KSAR				ScP	**ScP**	**14 07 08.2**	**-2.7**
LBMI	**Labuha**	**25.77**	**228**	P	P	**14 00 19.9**	**+3.1**
	comp=Z,50nm,0.8s						
YUK	**Yuzh-Kuril'sk**	**26.52**	**359**	*d* iP	P	14 00 18.0	-5.2
YUK				*i* S	**S**	**14 04 50.3**	**+2.2**
YUK				MLR	MLR		
	comp=N,63nm,18.0s						
YUK				MLR	MLR		
	comp=Z,72nm,18.0s						
YUK				MLR	MLR		
	comp=E,149nm,18.0s						
PMG	**Port Moresby**	**26.68**	**178**	*e*P	P	**14 00 24.9**	**+0.1**
	comp=E,82nm,0.9s						
PMG	**Port Moresby**	**26.68**	**178**	P	P	**14 00 25.4**	**+0.6**
	comp=E,88nm,0.8s,comp=E,811nm						
PMG	**Port Moresby**	**26.68**	**178**	P	P	**14 00 25.0**	**+0.1**
	comp=E,62nm,0.7s,baz=357,slow=8.2,SNR=27						
PMG				LR	LR	14 08 52.0	
	comp=E,142nm,20.2s,baz=235,slow=31						
ASAJ	**Asahikawa**	**26.79**	**354**	P	P	**14 00 25.8**	**+0.2**
ASAJ	**Asahikawa**	**26.79**	**354**	P	P	**14 00 25.8**	**+0.2**
	comp=E,13nm,0.9s,baz=188,slow=10,SNR=7.3						
NJ2	**Nanjing**	**28.74**	**306**	*e*P	P	**14 00 44.0**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MRSI	**Marisa**	**29.28**	**237**	P	P	**14 00 49.2**	**+1.2**
	comp=Z,33nm,0.6s						
YSS	**Yuzh-Sakhalins**	**29.59**	**355**	P	P	**14 00 51.0**	**+0.6**
HNR	**Honiara**	**29.92**	**152**	P	P	**14 00 53.9**	**+0.3**
HNR	**Honiara**	**29.92**	**152**	P	P	**14 00 53.9**	**+0.3**
	comp=Z,24nm,0.7s,baz=240,slow=3.0,SNR=5.2						
MDJ	**Mudanjiang**	**30.52**	**336**	P	P	**14 01 00.3**	**+1.6**
MDJ				pmax	pmax		
	comp=Z,11nm,1.9s						
MDJ				pmax	pmax		
	comp=Z,57nm,3.5s						
COEN	**Coen**	**31.34**	**186**	*e*P	P	**14 01 06.3**	**+0.2**
	comp=Z,84nm,0.9s						
CN2	**Changchun**	**31.64**	**331**	*e*P	P	**14 01 10.3**	**+1.8**
TTSI	**Tana Toraja**	**33.09**	**235**	P	P	**14 01 24.1**	**+2.5**
	comp=Z,35nm,0.7s						
BJI	**Beijing**	**34.43**	**317**	P	P	**14 01 34.5**	**+1.7**
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BJI				pmax	pmax		
	comp=Z,53nm,4.6s						
QIZ	**Qiongzhong**	**34.60**	**278**	P	P	**14 01 34.8**	**+0.2**
QIZ				S	S	**14 06 58.5**	**+3.6**
PETK	**Petropavlovsk-**	**36.71**	**12**	P	P	**14 01 53.2**	**+

SONM **Songino Array** 44.47 322 P **P** 14 02 56.3 +0.1
comp=Z,3.0nm,0.6s,baz=136,slow=7.8,SNR=15
SONM ScP **ScP** 14 08 15.5 -2.7
comp=Z,0.3nm,0.6s,baz=114,slow=3.5,SNR=3.1
SONM LR LR 14 20 13.5
comp=Z,56nm,19.0s,baz=315,slow=34
CMAR Chiang Mai Arr 44.94 279 P **P** 14 03 00.9 +0.7
CMAR pP **pP** 14 03 28.5 -0.3
CMAR Chiang Mai Arr 44.94 279 P **P** 14 03 00.9 +0.7
comp=Z,2.0nm,0.7s,baz=73,slow=6.6,SNR=15
CMAR pP **pP** 14 03 28.5 -0.3
comp=Z,4.0nm,0.8s,baz=71,slow=6.4,SNR=6.9
CMAR LR LR 14 21 58.1
comp=Z,45nm,18.5s,baz=190,slow=36
GTA Gaotai 45.76 308 *e*P **P** 14 03 08.8 +2.3
GTA pP **pP** 14 03 32.5 -2.7
GTA sP sP 14 03 44.5 -4.7
GTA pmax pmax
comp=Z,2.0nm,0.7s
YAK Yakutsk 46.06 349 *e*P **P** 14 03 06.9 -1.4
YAK *e* 14 04 40.3
YAK *e* 14 04 52.4
YAK *e*PPP PPP 14 05 40.1
YAK *e*S **S** 14 09 45.3 +1.2
YAK *e* 14 12 54.0
YAK *e*SSS SSS 14 14 22.4
YAK pmax pmax
comp=Z,11nm,0.8s
YAK pmax pmax
comp=E,2.0nm,1.0s
YAK pmax pmax
comp=N,5.0nm,1.1s
YAK pmax pmax
comp=Z,29nm,2.5s
YAK pmax pmax
comp=N,13nm,2.4s
YAK pmax pmax
comp=E,18nm,2.5s
YAK smax smax
comp=E,38nm,3.4s
YAK smax smax
comp=N,13nm,1.7s
ZAK Zakamensk 47.49 324 *e*P **P** 14 03 19.5 -0.3
ZAK pmax pmax
comp=Z,2.0nm,0.9s
STKA Stephens Creek 49.23 185 *e*P **P** 14 03 32.9 -0.2
comp=Z,2.5nm,0.7s
STKA Stephens Creek 49.23 185 P **P** 14 03 33.1 -0.1
comp=Z,14nm,0.8s,baz=356,slow=6.7,SNR=25
BBOO Buckleboo 50.90 191 *e*P **P** 14 03 46.0 +0.3
comp=Z,1µm,0.6s
BILL Bilibino 52.17 9 *e*P **P** 14 03 53.7 -1.1
BILL *i* 14 05 03.0
BILL *e* 14 05 53.3
BILL pmax pmax
comp=Z,11nm,1.0s
CAN Canberra 52.52 177 *e*P **P** 14 03 59.0 +1.2
CAN pmax pmax
comp=Z,42nm,1.3s
CAN Canberra 52.52 177 *e*P **P** 14 03 59.0 +1.2
comp=Z,42nm,1.3s
TIXI Tiksi 55.19 353 *c i*P **P** 14 04 15.0 -1.6
TIXI pmax pmax
comp=Z,5.0nm,1.0s
WMQ Urumqi 55.55 311 *e*P P 14 04 27.8 +7.9
WMQ pP pP 14 04 54.0 +4.5
WMQ sP sP 14 05 07.0 +3.7
WMQ pmax pmax
comp=Z,10.0nm,0.7s
WMQ pmax pmax
comp=Z,130nm,4.6s
ZALV Zalesovo Beam 59.35 323 P **P** 14 04 45.8 -0.4
ZALV Zalesovo Beam 59.35 323 P **P** 14 04 45.8 -0.4
ZALV Zalesovo Beam 59.35 323 P **P** 14 04 45.8 -0.4
comp=Z,5.9nm,0.7s,baz=100,slow=7.1,SNR=28
MKAR Makanchi Array 59.73 314 *c e*P **P** 14 04 50.9 +1.9
MKAR Makanchi Array 59.73 314 P **P** 14 04 48.5 -0.5
MKAR ScP **ScP** 14 09 20.2 -3.8
MKAR Makanchi Array 59.73 314 P **P** 14 04 48.5 -0.5
comp=Z,0.4nm,0.3s,baz=81,slow=9.7,SNR=5.9
MKAR ScP **ScP** 14 09 20.2 -3.8
comp=Z,1.0nm,0.8s,baz=72,slow=7.8,SNR=4.4
KDAK Kodiak Island 60.12 33 P **P** 14 04 52.5 +1.2
KDAK Kodiak Island 60.12 33 P **P** 14 04 52.5 +1.2
comp=Z,4.2nm,0.5s,baz=305,slow=20,SNR=6.3
NVS Novosibirsk 60.45 324 *i*P **P** 14 04 52.7 -1.0
RSO Redoubt South 60.78 30 *e*P **P** 14 04 56.3 +0.2
comp=Z,20nm,0.5s
KURK Kurchatov 62.58 319 P **P** 14 05 07.3 -0.7
KURK Kurchatov 62.58 319 P **P** 14 05 07.3 -0.7
KURBB Kurchatov Arra 62.62 318 P **P** 14 05 07.3 -1.0
comp=Z,7.4nm,0.9s,baz=96,slow=7.1,SNR=33
PMR Palmer 62.78 29 *e*P **P** 14 05 09.0 -0.2
PMR pmax pmax
comp=Z,5.0nm,0.5s
PMR Palmer 62.78 29 *e*P **P** 14 05 08.9 -0.2
comp=Z,5.1nm,0.5s
SML Sawmill 63.21 29 *e*P **P** 14 05 12.4 +0.3
SML pmax pmax
comp=Z,10.0nm,0.8s
SML Sawmill 63.21 29 *e*P **P** 14 05 12.4 +0.3
comp=Z,9.9nm,0.8s
COLD Coldfoot 63.90 23 *e*P **P** 14 05 17.5 +0.9
comp=Z,6.1nm,1.0s
COLA College 64.16 26 *e*P **P** 14 05 18.0 -0.2
COLA pmax pmax
comp=Z,4.0nm,0.8s
COLA College 64.16 26 *e*P **P** 14 05 18.0 -0.2
comp=Z,3.8nm,0.8s
ILAR Eielson Array 64.54 26 P **P** 14 05 19.8 -0.9
ILAR Eielson Array 64.54 26 P **P** 14 05 19.8 -0.9
comp=Z,5.0nm,0.8s,baz=254,slow=4.5,SNR=63
ILAR LR LR 14 32 46.2
comp=Z,32nm,18.9s,baz=296,slow=35
PAX Paxson 64.76 28 *e*P **P** 14 05 22.9 +0.6
PAX pmax pmax
comp=Z,12nm,0.6s
PAX Paxson 64.76 28 *e*P **P** 14 05 22.9 +0.6
comp=Z,12nm,0.6s
AAK Ala-Archa 65.09 309 ⇑*e*P **P** 14 05 24.0 -0.9
AAK pmax pmax
comp=Z,14nm,1.6s
DOT Dot Lake 65.51 27 *e*P **P** 14 05 27.0 -0.1
comp=Z,14nm,0.7s
MENT Mentasta 65.54 28 *e*P **P** 14 05 27.9 +0.6
EGAK Eagle 66.95 26 *e*P **P** 14 05 36.1 -0.1
comp=Z,6.4nm,0.9s
BVAR Borovoye Array 67.80 321 P **P** 14 05 40.6 -1.1
BVAR Borovoye Array 67.80 321 P **P** 14 05 40.6 -1.1
BVAR Borovoye Array 67.80 321 P **P** 14 05 40.6 -1.1
comp=Z,2.8nm,0.5s,baz=99,slow=8.6,SNR=16
BRVK Borovoye 67.86 321 *c i*P **P** 14 05 41.0 -1.1
BRVK pmax pmax
comp=Z,6.0nm,1.2s
KKAR Karatay Array 68.00 310 *e*P **P** 14 05 42.4 -0.8
KKAR Karatay Array 68.00 310 *e*P **P** 14 05 42.4 -0.8
ARU Arti 74.41 325 *c i*P **P** 14 06 20.9 -0.6
ARU 14 09 05.6
ARU S **S** 14 15 47.5 +1.6
ARU pmax pmax
comp=Z,6.0nm,1.0s
ABKAR Akbulak array 74.64 317 *e*P **P** 14 06 21.5 -1.4
comp=Z,0.8nm,0.3s
TDL Tradedollar La 78.62 45 P **P** 14 06 47.3 +1.7
YKA Yellowknife Ar 78.85 28 P **P** 14 06 46.2 -0.1
YKA Yellowknife Ar 78.85 28 P **P** 14 06 46.2 -0.1
comp=Z,5.1nm,0.6s,baz=289,slow=5.4,SNR=26
YKA LR LR 14 39 21.5
comp=Z,5.8nm,19.0s,baz=240,slow=34
ETW Entiat 79.58 43 P **P** 14 06 51.8 +1.0
WTV Waterville 79.80 43 P **P** 14 06 53.0 +1.0
VIPM Ingram Point 80.16 46 P **P** 14 06 55.3 +1.2
VIPM Ingram Point 80.16 46 P **P** 14 06 55.3 +1.2
LBCM Butte Creek Ri 80.57 50 P **P** 14 06 57.7 +1.4
MOD Modoc 81.05 49 *e*P **P** 14 06 59.9 +1.0
comp=Z,13nm,1.1s
NEW Newport 81.48 42 *e*P **P** 14 07 01.3 +0.4
comp=Z,15nm,1.1s
NEW Newport 81.48 42 ⇓P **P** 14 07 01.5 +0.7
baz=81
BEKR Beckworth 81.55 51 *e*P **P** 14 07 02.4 +0.8
comp=Z,7.5nm,0.8s
BEKR *e* **pP** 14 07 34.6 +1.3
CMB Columbia Colle 82.02 53 *e*P **P** 14 07 04.9 +1.0
CMB *e* 14 07 36.8
CMB pmax pmax
comp=Z,10.0nm,0.7s
CMB Columbia Colle 82.02 53 *e*P **P** 14 07 04.9 +1.0
comp=Z,9.8nm,0.7s
CMB *e* **pP** 14 07 36.8 +1.1
WVOR Wild Horse Val 82.10 48 *e*P **P** 14 07 05.4 +1.1
WVOR *e* 14 07 37.2
WVOR pmax pmax
comp=Z,20nm,1.5s
WVOR Wild Horse Val 82.10 48 *e*P **P** 14 07 05.4 +1.1
comp=Z,20nm,1.5s
WVOR *e* **pP** 14 07 37.2 +1.1
A12A Yaak River Ran 82.22 41 ⇓P **P** 14 07 05.8 +1.1
baz=82
BMO Blue Mountains 82.34 45 *e*P **P** 14 07 06.3 +0.8
BMO *e* 14 07 38.5
BMO pmax pmax
comp=Z,15nm,1.2s
BMO Blue Mountains 82.34 45 *e*P **P** 14 07 06.3 +0.8
comp=Z,15nm,1.2s
BMO *e* **pP** 14 07 38.5 +1.2
B12A Libby 82.40 42 ⇓P **P** 14 07 06.7 +1.1
baz=82
E12A Beaver Dam Sad 83.03 44 ⇓P **P** 14 07 10.3 +1.2
baz=83
SMMC Simmler 83.08 55 ⇓P **P** 14 07 09.7 +0.3
baz=83
BSMT Bassoo Peak 83.10 42 *e*P **P** 14 07 10.3 +0.9
comp=Z,12nm,0.9s
BSMT *e* 14 07 38.4
B13A Whitefish 83.14 42 ⇓P **P** 14 07 10.4 +0.9
baz=83,SNR=6.1
C13A Hot Springs 83.29 42 ⇓P **P** 14 07 11.0 +0.7
baz=83
PKM Peak Mountain 83.33 56 ⇓P **P** 14 07 12.3 +1.3
baz=83
JTMT Jette 83.45 42 *e*P **P** 14 07 11.4 +0.2
comp=Z,2.1nm,0.7s
NVAR Mina Array Bea 83.49 52 P **P** 14 07 12.9 +1.2
NVAR pP **pP** 14 07 45.5 +1.9
NVAR Mina Array Bea 83.49 52 P **P** 14 07 12.9 +1.2
comp=Z,12nm,0.7s,baz=262,slow=6.3,SNR=104
NVAR pP **pP** 14 07 45.5 +1.9
comp=Z,11nm,0.7s,baz=263,slow=6.3,SNR=14
D13A Huson 83.55 43 ⇓P **P** 14 07 11.9 +0.3
baz=84
NV11 Mina Array Sit 83.60 52 *e*P **P** 14 07 13.1 +0.9
NV11 *e* **pP** 14 07 45.2 +1.2
A14A Double T Ranch 83.60 41 ⇑P **P** 14 07 12.8 +0.9
baz=84,SNR=8.2
VES Vestal, Richgr 83.64 55 ⇓P **P** 14 07 12.8 +0.6
baz=84
MFID Camas Ranch 83.78 47 *e*P **P** 14 07 13.1 +0.2
comp=Z,8.6nm,0.9s
MFID *e* **pP** 14 07 46.1 +1.3
MFID Camas Ranch 83.78 47 ⇑P **P** 14 07 13.3 +0.3
baz=84
ARCES ARCESS Array B 83.86 342 P **P** 14 07 11.3 -1.4
ARCES pP **pP** 14 07 44.4 -0.2
ARCES PKKPbc **PKKPbc** 14 25 27.1 -2.9
ARCES ARCESS Array B 83.86 342 P **P** 14 07 11.3 -1.4
comp=Z,5.8nm,0.8s,baz=52,slow=7.9,SNR=16
ARCES pP **pP** 14 07 44.4 -0.2
comp=Z,1.5nm,0.6s,baz=68,slow=7.2,SNR=2.1
ARCES PKKPbc **PKKPbc** 14 25 27.1 -2.9
comp=Z,1.0nm,0.8s,baz=248,slow=4.8,SNR=4.3
B14A Marquette Ranc 83.90 41 ⇓P **P** 14 07 14.6 +1.1
baz=84
MSO Missoula 83.97 43 ⇑P **P** 14 07 14.3 +0.5
baz=84
A15A Johnson Ranch, 84.03 41 ⇑P **P** 14 07 14.8 +0.7
baz=84,SNR=9.7
H12A Diamond D Ranc 84.09 45 ⇑P **P** 14 07 15.1 +0.5
baz=84
SLMT Seeley Lake 84.12 42 *e*P **P** 14 07 15.3 +0.6
comp=Z,7.2nm,1.0s
I12A Atlanta 84.14 46 ⇑P **P** 14 07 15.0 +0.2
baz=84
ISA Isabella 84.17 55 *e*P **P** 14 07 15.3 +0.2
ISA pmax pmax
comp=Z,3.0nm,0.8s
ISA Isabella 84.17 55 *e*P **P** 14 07 15.2 +0.2
comp=Z,2.8nm,0.8s
ISA Isabella 84.17 55 ⇓P **P** 14 07 15.2 +0.2
baz=84
D14A Greenough 84.17 43 ⇓P **P** 14 07 15.1 +0.2
baz=84
CWC Cottonwood Cre 84.24 54 ⇑P **P** 14 07 16.0 +0.5
baz=84
B15A Bradely Ranch, 84.36 41 ⇓P **P** 14 07 16.2 +0.5
baz=84,SNR=15
CHMT Chamberlain Mo 84.39 43 *e*P **P** 14 07 15.3 -0.8
comp=Z,2.4nm,0.6s
C15A Salmond Ranch, 84.51 42 ⇑P **P** 14 07 17.0 +0.3
baz=84,SNR=12
GRAC Grapevine Rang 84.62 53 ⇑P **P** 14 07 18.3 +1.1
baz=85
F14A Wisdom 84.68 44 ⇑P **P** 14 07 17.6 0.0
baz=85
EDW2 Edwards Air Fo 84.78 55 ⇑P **P** 14 07 18.3 +0.2
baz=85
MPMC Manual Prospec 84.81 54 ⇓P **P** 14 07 19.2 +0.8
baz=85
D15A Lincoln 84.82 42 ⇓P **P** 14 07 18.5 +0.3
baz=85
LRMC Laurel Mountai 84.83 55 ⇓P **P** 14 07 19.2 +0.8
baz=85
B16A M & M Farms, S 84.86 41 ⇑P **P** 14 07 18.4 +0.1
baz=85,SNR=11
CIS Catalina Islan 84.89 57 ⇓P **P** 14 07 19.3 +0.7
baz=85
SCI San Clemente I 84.90 57 ⇓P **P** 14 07 18.9 +0.3
baz=85
ELK Elko 85.04 49 *e*P **P** 14 07 20.0 +0.5
comp=Z,10nm,1.0s
ELK *e* **pP** 14 07 50.6 -0.8
C16A Fuhringer Ranc 85.05 41 ⇓P **P** 14 07 19.5 +0.3
baz=85,SNR=5.2
FURC Furnace Creek, 85.17 53 ⇓P **P** 14 07 21.1 +1.2
baz=85
BFSC Mount Baldy Ra 85.23 56 ⇓P **P** 14 07 21.2 +0.7
baz=85
F15A Butte 85.25 43 ⇑P **P** 14 07 21.2 +0.8
baz=85,SNR=18
I14A Mackay 85.25 46 ⇑P **P** 14 07 21.5 +1.0
baz=85
LRM Limekiln Ridge 85.28 43 *e*P **P** 14 07 21.2 +0.5
comp=Z,204nm,1.0s
LRM *e* 14 07 49.3
A17A Triple J Farms 85.30 40 ⇓P **P** 14 07 21.0 +0.6
baz=85,SNR=6.0
DLMT Dillon 85.34 44 *e*P **P** 14 07 21.1 +0.3
comp=Z,5.0nm,0.6s
MCMT McKenzie Canyo 85.36 45 *e*P **P** 14 07 21.7 +0.7
comp=Z,3.6nm,1.0s
HRY Holter Researc 85.38 42 *e*P **P** 14 07 21.9 +1.0
comp=Z,19nm,0.8s
D16A Dana Ranch, Ca 85.44 42 ⇓P **P** 14 07 21.9 +0.6
baz=85,SNR=21
B17A L&G Farms, Che 85.47 41 ⇓P **P** 14 07 21.6 +0.3
baz=85,SNR=22
E16A East Helena 85.54 43 ⇑P **P** 14 07 22.1 +0.3
baz=86,SNR=20
DAG Danmarks Havn 85.56 357 *i* P **P** 14 07 20.4 -0.7
DAG pmax pmax
comp=Z,11nm,0.9s
DAG Danmarks Havn 85.56 357 *i* P **P** 14 07 20.4 -0.7
comp=Z,13nm,0.9s
GSC Goldstone 85.57 55 *e*P **P** 14 07 22.9 +0.8
GSC *e* 14 07 54.2
GSC pmax pmax
comp=Z,8.0nm,1.0s
GSC Goldstone 85.57 55 *e*P **P** 14 07 22.9 +0.8
comp=Z,7.9nm,1.0s
GSC *e* **pP** 14 07 54.2 +0.2
GSC Goldstone 85.57 55 ⇑P **P** 14 07 22.9 +0.8
baz=86
C17A Wharram Farm, 85.73 41 ⇑P **P** 14 07 22.7 +0.1
baz=86,SNR=5.7
SHOC Shoshone 85.79 54 ⇑P **P** 14 07 23.9 +0.8
baz=86
A18A Metzger Ranch, 85.83 40 ⇑P **P** 14 07 23.7 +0.7
baz=86
F16A Kennard Place, 85.83 43 ⇑P **P** 14 07 23.7 +0.5
baz=86,SNR=17
BOZ Bozeman (W) 85.88 43 *e*P **P** 14 07 23.8 +0.3
BOZ pmax pmax
comp=Z,8.0nm,0.8s
BOZ Bozeman (W) 85.88 43 *e*P **P** 14 07 23.8 +0.3
comp=Z,8.4nm,0.8s
BOZ *e* 14 07 52.3
D17A Six Diamond Ra 85.95 42 ⇑P **P** 14 07 24.5 +0.7
baz=86,SNR=21
B18A Beardsley Farm 86.07 40 ⇓P **P** 14 07 24.6 +0.4
baz=86,SNR=15
HEC Hector,Ludlow 86.09 55 ⇓P **P** 14 07 25.1 +0.4
baz=86
E17A Martinsdale 86.09 42 ⇑P **P** 14 07 25.3 +0.7
baz=86,SNR=9.9
TUQ Turquoise Moun 86.22 54 ⇑P **P** 14 07 26.2 +0.9
baz=86
EGMT Eagleton 86.22 41 *e*P **P** 14 07 25.5 +0.5
comp=Z,9.3nm,1.1s
EGMT *e* 14 07 53.5
EGMT Eagleton 86.22 41 ⇓P **P** 14 07 25.8 +0.7
baz=86
QLMT Earthquake Lak 86.30 44 *e*P **P** 14 07 27.0 +1.4
comp=Z,1.8nm,0.6s
QLMT *e* 14 07 53.7
PFO Pinyon Flat Ob 86.38 56 ⇓P **P** 14 07 26.5 +0.3
baz=86
F17A Fitzpatrick Pl 86.42 43 ⇑P **P** 14 07 26.7 +0.6
baz=86,SNR=7.0
HVU Hansel Valley 86.45 47 P **P** 14 07 26.7 +0.3
HVU pmax pmax
comp=Z,8.0nm,0.9s
HVU Hansel Valley 86.45 47 P **P** 14 07 26.7 +0.3
comp=Z,8.3nm,0.9s
H16A Russell Place, 86.47 44 ⇑P **P** 14 07 28.0 +1.6
baz=86,SNR=13
D18A Linhart Farms, 86.50 42 ⇓P **P** 14 07 27.4 +1.0
baz=86
B19A Brinkman Farms 86.56 40 ⇓P **P** 14 07 27.0 +0.4
baz=86,SNR=8.8
I16A Newdale 86.60 45 ⇑P **P** 14 07 28.1 +1.1
baz=86
BELC Belle Mtn. Jos 86.61 56 ⇓P **P** 14 07 28.0 +0.7
baz=87
GMRC Granite Mounta 86.63 55 ⇑P **P** 14 07 28.2 +0.8
baz=87
MONP Monument Peak 86.63 57 ⇑P **P** 14 07 28.0 +0.5
baz=87
E18A Harlowton 86.66 42 ⇑P **P** 14 07 27.6 +0.4
baz=87,SNR=8.6
YMR Madison River 86.67 44 *e*P **P** 14 07 29.2 +1.8
comp=Z,30nm,1.0s
C19A Slack Wire Ban 86.77 41 ⇓P **P** 14 07 28.7 +1.0
baz=87
DVTC Desert V Tower 86.96 57 ⇑P **P** 14 07 29.8 +0.9
baz=87
LDFC Landfair 86.96 54 *e*P **P** 14 07 29.5 +0.6
comp=Z,16nm,0.9s
IMW Indian Meadow 86.96 45 *e*P **P** 14 07 30.0 +1.0
comp=Z,12nm,0.8s
IMW *e* 14 07 58.5
DUG Dugway 86.97 49 *e*P **P** 14 07 29.8 +0.9
DUG pmax pmax
comp=Z,6.0nm,0.5s
DUG Dugway 86.97 49 *e*P **P** 14 07 29.8 +0.9
comp=Z,6.3nm,0.5s
DUG Dugway 86.97 49 ⇓P **P** 14 07 29.9 +1.0
baz=87
F18A Big Timber 87.03 43 ⇓P **P** 14 07 29.3 +0.2
baz=87,SNR=5.3
D19A Cripps Ranch, 87.09 41 ⇑P **P** 14 07 29.7 +0.5
baz=87,SNR=5.7
GCMT Greycliff 87.11 43 *e*P **P** 14 07 30.7 +1.2
comp=Z,3.0nm,0.8s
B20A Solberg Farm, 87.13 40 ⇓P **P** 14 07 30.2 +0.8
baz=87
MOOW Moose Ponds 87.15 45 *e*P **P** 14 07 30.7 +0.9
comp=Z,6.2nm,0.9s
MOOW *e* 14 07 59.0
BC3 Big Chuckawall 87.15 56 ⇓P **P** 14 07 30.8 +0.9
baz=87
IRM Iron Mountain 87.23 55 ⇑P **P** 14 07 31.3 +1.1
baz=87
LOHW Long Hollow 87.29 45 *e*P **P** 14 07 30.6 +0.2
comp=Z,2.7nm,0.7s
ARUT Antelope Range 87.33 51 *e*P **P** 14 07 31.1 +0.4
ARUT pmax pmax
comp=Z,15nm,1.0s
ARUT Antelope Range 87.33 51 *e*P **P** 14 07 31.1 +0.4
comp=Z,15nm,1.0s
G18A Lazy EL Ranch, 87.35 43 ⇓P **P** 14 07 31.8 +1.1
baz=87
HWUT Hardware Ranch 87.36 47 *e*P **P** 14 07 31.1 +0.3
comp=Z,12nm,0.8s
HWUT *e* 14 07 59.6
KBZ Khabaz 87.42 315 P **P** 14 07 29.0 -1.7
KBZ Khabaz 87.42 315 P **P** 14 07 29.0 -1.7
KBZ Khabaz 87.42 315 P **P** 14 07 29.0 -1.7
comp=Z,1.2nm,0.6s,baz=72,slow=18,SNR=3.6
C20A Veseth Ranch, 87.43 41 ⇑P **P** 14 07 31.6 +0.8
baz=87,SNR=6.7
CCUT Cedar City 87.47 51 *e*P **P** 14 07 32.3 +0.8
comp=Z,14nm,1.1s
F19A Roth Farm, Mol 87.55 43 ⇑P **P** 14 07 32.5 +0.9
baz=88
A21A Bergtoll Ranch 87.58 39 ⇑P **P** 14 07 32.7 +1.2
baz=88
RLMT Red Lodge 87.62 43 *e*P **P** 14 07 33.2 +1.2
comp=Z,5.5nm,0.6s
B21A Ellsworth Farm 87.75 40 ⇑P **P** 14 07 33.0 +0.7
baz=88
I18A Diamond G Ranc 87.79 45 ⇑P **P** 14 07 34.0 +1.1
baz=88
JLU Jordanelle 87.80 48 *e*P **P** 14 07 33.9 +0.9
comp=Z,4.7nm,0.6s
GLA Glamis 87.85 56 ⇓P **P** 14 07 34.3 +1.2
baz=88
Y12C Blythe 87.86 55 ⇓P **P** 14 07 33.6 +0.5
baz=88
FFC Flin Flon 87.86 33 *i* P **P** 14 07 33.1 +0.4
FFC Flin Flon 87.86 33 *e*P **P** 14 07 32.0 -0.7
comp=Z,8.4nm,1.0s
W13A Hualapai Mount 87.90 54 ⇓P **P** 14 07 34.2 +0.6
baz=88
PDMCI Parker Dam,Lak 87.97 55 ⇑P **P** 14 07 34.8 +1.2
baz=88
MVU Marysvale 87.99 50 *e*P **P** 14 07 35.1 +1.2
comp=Z,7.6nm,1.1s
DAU Daniels Canyon 88.00 48 *e*P **P** 14 07 35.0 +0.9
DAU pmax pmax
comp=Z,4.0nm,0.6s
DAU Daniels Canyon 88.00 48 *e*P **P** 14 07 35.0 +0.9
comp=Z,3.9nm,0.6s
DAU *e* 14 08 03.0
MSU Marysvale 88.01 50 *e*P **P** 14 07 35.2 +1.2
MSU pmax pmax
comp=Z,3.0nm,0.6s
MSU Marysvale 88.01 50 *e*P **P** 14 07 35.2 +1.2
comp=Z,2.7nm,0.6s
M17A Scullys Gap (B 88.03 47 ⇓P **P** 14 07 34.5 +0.4
baz=88
A22A Carney Farms, 88.19 39 ⇓P **P** 14 07 34.7 +0.3
baz=88
I19A Meeteetse 88.22 44 ⇑P **P** 14 07 35.6 +0.8
baz=88
FINES FINESS Array B 88.26 335 P **P** 14 07 32.0 -2.3
FINES FINESS Array B 88.26 335 P **P** 14 07 32.0 -2.3
comp=Z,1.9nm,0.6s,baz=48,slow=4.9,SNR=9.0
G20A Bridger 88.27 43 ⇓P **P** 14 07 36.1 +1.1
baz=88
D21A La Casta Ranch 88.31 41 ⇓P **P** 14 07 35.7 +0.6
baz=88
PDAR Pinedale Array 88.32 46 P **P** 14 07 35.4 0.0
PDAR pP **pP** 14 08 07.8 +0.3
PDAR Pinedale Array 88.32 46 P **P** 14 07 35.4 0.0
comp=Z,1.4nm,0.6s,baz=80,slow=0.1,SNR=15
PDAR pP **pP** 14 08 07.8 +0.3
comp=Z,3.0nm,0.9s,baz=208,slow=0.9,SNR=7.3
B22A Reddig Ranch S 88.42 40 ⇑P **P** 14 07 36.6 +1.0
baz=88
J19A Crowheart 88.47 45 ⇑P **P** 14 07 36.8 +0.7
baz=88,SNR=5.8
E21A Keefer Ranch, 88.48 41 ⇑P **P** 14 07 36.7 +0.9
baz=88
Q16A Castle Valley 88.60 50 ⇓P **P** 14 07 37.8 +1.0
baz=89
U15A North Rim 88.66 52 ⇓P **P** 14 07 38.5 +1.3
baz=89
K19A Absolon Red Bu 88.78 45 ⇑P **P** 14 07 37.5 0.0
baz=89,SNR=8.4

113A	**Mohawk Valley,** baz=89	**88.78**	**56**	⇓P	**P**	**14 07 38.3**	**+0.9**
D22A	**Cohagen** baz=89	**88.79**	**41**	⇓P	**P**	**14 07 37.4**	**+0.1**
I20A	**Worland** baz=89	**88.83**	**44**	⇓P	**P**	**14 07 38.6**	**+1.0**
G21A	**Lodge Grass** baz=89	**88.92**	**43**	⇑P	**P**	**14 07 38.8**	**+0.8**
SRU	**San Rafael**	**89.00**	**49**	*e*P	**P**	**14 07 39.1**	**+0.5**
SRU	comp=Z,15nm,1.0s			pmax	pmax		
SRU	**San Rafael**	**89.00**	**49**	*e*P	**P**	**14 07 39.1**	**+0.5**
	comp=Z,16nm,1.0s						
SRU	**San Rafael** baz=89	**89.00**	**49**	⇑P	**P**	**14 07 39.3**	**+0.7**
J20A	**Shoshoni** baz=89	**89.09**	**45**	⇑P	**P**	**14 07 39.4**	**+0.6**
C23A	**Lambert** baz=89	**89.13**	**40**	⇑P	**P**	**14 07 39.7**	**+0.9**
K20A	**Yellowstone Ra** baz=89	**89.19**	**45**	⇑P	**P**	**14 07 40.0**	**+0.6**
Z14A	**Wintersburg** baz=89	**89.22**	**55**	⇑P	**P**	**14 07 40.4**	**+0.9**
E22A	**Miles City** baz=89	**89.23**	**41**	⇑P	**P**	**14 07 39.8**	**+0.5**
H21A	**Big Horn, Sher** baz=89	**89.27**	**43**	⇓P	**P**	**14 07 40.3**	**+0.6**
I21A	**Big Trails, Te** baz=89	**89.44**	**44**	⇓P	**P**	**14 07 40.9**	**+0.4**
L20A	**Wamsutter** baz=89	**89.44**	**46**	⇓P	**P**	**14 07 41.0**	**+0.3**
J21A	**Lysite** baz=90	**89.52**	**44**	⇓P	**P**	**14 07 41.5**	**+0.5**
O19A	**Miners Draw (B** baz=90	**89.56**	**48**	⇓P	**P**	**14 07 41.5**	**+0.4**
E23A	**Ismay** baz=90	**89.61**	**41**	⇓P	**P**	**14 07 42.2**	**+1.1**
M20A	**Sweetwater, Wa** baz=90,SNR=6.2	**89.75**	**46**	⇓P	**P**	**14 07 42.2**	**+0.1**
214A	**Organ Pipe Nat** baz=90	**89.82**	**57**	⇓P	**P**	**14 07 43.6**	**+1.2**
P19A	**Cripple Cowboy** baz=90	**89.91**	**48**	⇑P	**P**	**14 07 43.9**	**+1.0**
I22A	**9 Mile Ranch,** baz=90	**89.94**	**44**	⇓P	**P**	**14 07 43.6**	**+0.8**
D24A	**Glendive** baz=90	**89.95**	**40**	⇓P	**P**	**14 07 43.3**	**+0.6**
N20A	**Spence Gulch,** baz=90,SNR=6.0	**89.95**	**47**	⇑P	**P**	**14 07 43.5**	**+0.4**
X16A	**Lo Mia Camp, P** baz=90	**90.02**	**54**	⇑P	**P**	**14 07 44.2**	**+0.7**
G23A	**Biddle** baz=90	**90.10**	**42**	⇓P	**P**	**14 07 44.4**	**+0.9**
L21A	**Rawlins** baz=90,SNR=7.6	**90.12**	**46**	⇑P	**P**	**14 07 44.0**	**+0.2**
J22A	**Midwest** baz=90	**90.14**	**44**	⇓P	**P**	**14 07 44.4**	**+0.7**
SUMG	**Summit**	**90.16**	**1**	*e*P	**P**	**14 07 43.3**	**-0.2**
SUMG	comp=Z,3.0nm,0.7s			pmax	pmax		
SUMG	**Summit**	**90.16**	**1**	*e*P	**P**	**14 07 43.3**	**-0.2**
	comp=Z,3.4nm,0.7s						
SUMG	**Summit**	**90.16**	**1**	*i* P	**P**	**14 07 43.4**	**-0.2**
	comp=Z,5.4nm,0.9s						
O20A	**White River Ci** baz=90,SNR=5.2	**90.24**	**48**	⇓P	**P**	**14 07 44.4**	**0.0**
M21A	**Separation Pea** baz=90,SNR=9.9	**90.27**	**46**	⇓P	**P**	**14 07 44.9**	**+0.3**
P20A	**De Beque** baz=90	**90.39**	**48**	⇑P	**P**	**14 07 45.8**	**+0.7**
N21A	**Black Mountain** baz=90,SNR=10	**90.50**	**47**	⇑P	**P**	**14 07 46.1**	**+0.5**
Q20A	**Ridgley Place,** baz=91,SNR=9.2	**90.67**	**49**	⇑P	**P**	**14 07 47.1**	**+0.7**
O21A	**Pagoda** baz=91	**90.75**	**47**	⇓P	**P**	**14 07 47.7**	**+0.8**
PV01	**Paradox Valley** comp=Z,1μm,1.2s	**90.79**	**50**	*e*P	**P**	**14 07 47.5**	**+0.5**
PV01				*e*		14 08 15.8	
R20A	**Redvale** baz=91	**90.91**	**49**	⇓P	**P**	**14 07 48.2**	**+0.6**
S20A	**Disappointment** baz=91	**91.06**	**50**	⇑P	**P**	**14 07 48.8**	**+0.4**
X18A	**Snowflake** baz=91	**91.13**	**53**	⇓P	**P**	**14 07 49.5**	**+0.9**
I24A	**Kuemmerle Ranc** baz=91	**91.17**	**43**	⇓P	**P**	**14 07 48.8**	**+0.3**
L23A	**Garrett** baz=91,SNR=5.1	**91.20**	**45**	⇓P	**P**	**14 07 49.4**	**+0.5**
N22A	**Wattenberg Ran** baz=91	**91.22**	**46**	⇑P	**P**	**14 07 50.0**	**+0.9**
Q21A	**Lamborn Mesa,** baz=91,SNR=6.9	**91.23**	**49**	⇑P	**P**	**14 07 49.8**	**+0.7**
O22A	**Kremmling** baz=91,SNR=11	**91.42**	**47**	⇓P	**P**	**14 07 50.3**	**+0.2**
R21A	**Cimarron** baz=91,SNR=7.1	**91.43**	**49**	⇓P	**P**	**14 07 50.9**	**+0.9**
P22A	**Eagle** baz=92,SNR=5.7	**91.50**	**48**	⇑P	**P**	**14 07 51.2**	**+0.9**
SMCO	**Snowmass** comp=Z,12nm,0.9s	**91.52**	**48**	*e*P	**P**	**14 07 51.4**	**+0.8**
SMCO				*e*		14 08 19.9	
N23A	**Red Feather La** baz=92,SNR=11	**91.54**	**46**	⇓P	**P**	**14 07 51.9**	**+1.4**
S21A	**Coal Bank Pass** baz=92	**91.54**	**50**	⇓P	**P**	**14 07 51.3**	**+0.7**
Q22A	**Crested Butte,** baz=92,SNR=7.1	**91.69**	**48**	⇑P	**P**	**14 07 51.8**	**+0.5**
V20A	**Brimhall** baz=92,SNR=5.1	**91.77**	**52**	⇓P	**P**	**14 07 52.0**	**+0.4**
O23A	**Lake Granby, G** baz=92	**91.84**	**47**	⇓P	**P**	**14 07 52.8**	**+0.9**
J25A	**Sunshine Ranch** baz=92	**91.91**	**43**	⇓P	**P**	**14 07 52.6**	**+0.7**
W20A	**Ramah** baz=92	**92.00**	**52**	⇑P	**P**	**14 07 53.6**	**+0.9**
R22A	**Saguache, Gunn** baz=92	**92.06**	**49**	⇑P	**P**	**14 07 54.4**	**+1.3**
M24A	**Cheyenne** baz=92	**92.06**	**45**	⇑P	**P**	**14 07 53.6**	**+0.8**
U21A	**Nageezi** baz=92,SNR=5.9	**92.12**	**51**	⇓P	**P**	**14 07 53.7**	**+0.4**
S22A	**4UR Ranch, Cre** baz=92	**92.20**	**49**	⇑P	**P**	**14 07 54.9**	**+1.2**
X20A	**Quemado** baz=92,SNR=5.1	**92.23**	**53**	⇓P	**P**	**14 07 55.3**	**+1.5**
P23A	**Jefferson** baz=92,SNR=8.4	**92.25**	**48**	⇑P	**P**	**14 07 55.6**	**+1.7**
N24A	**Carr** baz=92	**92.30**	**46**	⇓P	**P**	**14 07 55.1**	**+1.2**
T22A	**Edith** baz=92	**92.45**	**50**	⇓P	**P**	**14 07 55.5**	**+0.8**
Y20A	**Horse Springs,** baz=92,SNR=6.4	**92.57**	**53**	⇓P	**P**	**14 07 55.9**	**+0.6**
Z20A	**Nine Sixteen R** baz=93,SNR=7.4	**92.71**	**54**	⇑P	**P**	**14 07 57.2**	**+1.2**
U22A	**Llaves** baz=93	**92.74**	**51**	⇑P	**P**	**14 07 57.3**	**+1.2**
R23A	**Moffat** baz=93	**92.75**	**49**	⇓P	**P**	**14 07 57.5**	**+1.4**
X21A	**Alamocita Cree** baz=93	**92.81**	**53**	⇑P	**P**	**14 07 57.6**	**+1.1**
319A	**Douglas** baz=93	**92.83**	**56**	⇓P	**P**	**14 07 57.2**	**+0.8**
120A	**U Bar Ranch, L** baz=93	**92.90**	**55**	⇑P	**P**	**14 07 58.0**	**+1.2**
Y21A	**Point of Rocks** baz=93	**93.07**	**53**	⇓P	**P**	**14 07 58.8**	**+1.1**
SDCO	**Great Sand Dun** comp=Z,5.8nm,1.3s	**93.16**	**49**	*e*P	**P**	**14 07 58.6**	**+0.5**
SDCO				*e*		14 08 26.9	
220A	**Playas Peak, P** baz=93,SNR=5.6	**93.23**	**55**	⇑P	**P**	**14 07 59.4**	**+1.0**
R24A	**Sanders Place,** baz=93	**93.24**	**48**	⇑P	**P**	**14 07 59.3**	**+0.9**
S24A	**Houchin Ranch,** baz=93	**93.42**	**49**	⇓P	**P**	**14 08 00.5**	**+1.2**
Q25A	**Bedland, Calha** baz=94	**93.56**	**47**	⇓P	**P**	**14 08 00.7**	**+0.9**
121A	**Cookes Peak, D** baz=94	**93.56**	**54**	⇓P	**P**	**14 08 01.1**	**+1.2**
R25A	**Fountain Ranch** baz=94	**93.86**	**48**	⇑P	**P**	**14 08 01.5**	**+0.4**
Z22A	**Elephant Butte** baz=94	**93.91**	**54**	⇑P	**P**	**14 08 02.6**	**+1.2**
S25A	**Robets Cordova** baz=94	**93.97**	**49**	⇓P	**P**	**14 08 02.5**	**+0.8**
V24A	**Rampart Ranch,** baz=94	**94.18**	**51**	⇑P	**P**	**14 08 03.5**	**+0.7**
T25A	**Trinidad** baz=94	**94.21**	**49**	⇓P	**P**	**14 08 03.7**	**+0.9**
Y23A	**Lovelace Mesa,** baz=94	**94.33**	**53**	⇓P	**P**	**14 08 04.2**	**+0.8**
R26A	**Arlington** baz=94	**94.39**	**48**	⇑P	**P**	**14 08 04.5**	**+1.0**
Z23A	**Rita Site, Whi** baz=94	**94.47**	**53**	⇓P	**P**	**14 08 04.7**	**+0.7**
U25A	**Circle Dot Ran** baz=94	**94.53**	**50**	⇓P	**P**	**14 08 05.0**	**+0.8**
V25A	**Rancho No Teng** baz=95	**94.61**	**50**	⇑P	**P**	**14 08 05.4**	**+0.8**
S26A	**Kim** baz=95	**94.67**	**48**	⇑P	**P**	**14 08 05.2**	**+0.4**
T26A	**Comanche Natio** baz=95	**94.78**	**49**	⇓P	**P**	**14 08 05.9**	**+0.5**
Y24A	**Capitan** baz=95	**94.80**	**52**	⇓P	**P**	**14 08 06.1**	**+0.5**
W25A	**X Bar L Ranch,** baz=95	**94.99**	**51**	⇓P	**P**	**14 08 07.0**	**+0.7**
U26A	**Atchley Ranch,** baz=95	**95.01**	**50**	⇑P	**P**	**14 08 07.4**	**+0.9**
Z24A	**Sheeppen Canyo** baz=95	**95.10**	**53**	⇓P	**P**	**14 08 07.6**	**+0.6**
VNDA	**Vanda**	**95.19**	**177**	P	**P**	**14 08 06.7**	**+0.7**
VNDA	**Vanda**	**95.19**	**177**	P	**P**	**14 08 06.7**	**+0.7**
	comp=Z,1.7nm,0.9s,baz=342,slow=4.4,SNR=7.6						
V26A	**Tequesquite Ra** baz=95	**95.24**	**50**	⇑P	**P**	**14 08 08.3**	**+0.8**
Y25A	**Mesa, Roswell** baz=95	**95.36**	**52**	⇓P	**P**	**14 08 08.6**	**+0.6**
BRTR	**Keskin Array B**	**95.39**	**314**	P	**P**	**14 08 05.8**	**-2.2**
BRTR	**Keskin Array B**	**95.39**	**314**	P	**P**	**14 08 05.8**	**-2.2**
	comp=Z,0.5nm,0.5s,baz=104,slow=3.2,SNR=3.6						
125A	**Gardner Draw,** baz=96	**95.92**	**53**	⇑P	**P**	**14 08 11.2**	**+0.6**
W27A	**Bowe Ranch, En** baz=96	**96.09**	**51**	⇓P	**P**	**14 08 12.6**	**+1.3**
U28A	**Mallet** baz=96	**96.12**	**49**	⇑P	**P**	**14 08 12.2**	**+0.8**
Z26A	**Caprock** baz=96	**96.18**	**52**	⇑P	**P**	**14 08 12.2**	**+0.4**
325A	**Bean Ranch, Si** baz=96	**96.22**	**55**	⇓P	**P**	**14 08 12.9**	**+0.8**
MSTX	**Muleshoe** baz=97	**96.78**	**51**	⇑P	**P**	**14 08 15.5**	**+1.0**
426A	**McDonald Obser** baz=97	**97.25**	**55**	⇑P	Pdif	14 08 17.6	+0.8
X29A	**Tulia** baz=97	**97.37**	**51**	⇑P	Pdif	14 08 17.6	+0.5
STHS	**Stebnicka Huta**	**97.61**	**327**	*e*P	Pdif	14 08 18.5	+0.7
STHS	**Stebnicka Huta**	**97.61**	**327**	*e*P	Pdif	14 08 18.5	+0.7
Y29A	**Porterfield Fa** baz=98	**97.65**	**51**	⇓P	Pdif	14 08 18.9	+0.5
KECS	**Kecovo**	**98.58**	**327**	*e*P	Pdif	14 08 25.0	+2.9
KECS	**Kecovo**	**98.58**	**327**	PDIF	Pdif	14 08 25.0	+2.9
TORD	**Torodi Ar. Bea**	**133.67**	**309**	PKP	**PKPdf**	**14 13 58.7**	**-1.5**
TORD				SKPbc	**SKPbc**	**14 17 13.8**	**-3.9**
TORD	**Torodi Ar. Bea**	**133.67**	**309**	PKP	**PKPdf**	**14 13 58.7**	**-1.5**
	comp=Z,0.7nm,0.6s,baz=5.4,slow=1.9,SNR=7.7						
TORD				SKPbc	**SKPbc**	**14 17 13.8**	**-3.9**
	comp=Z,1.7nm,1.0s,baz=49,slow=1.8,SNR=5.8						
PLCA	**Paso Flores**	**140.74**	**134**	*e*PKPpre	PKPpre	14 14 10.4	
LVC	**Limon Verde**	**146.59**	**105**	*e*PKPbc	**PKPab**	**14 14 26.8**	**+0.2**
LPAZ	**La Paz**	**147.08**	**93**	*e*PKPdf	**PKPdf**	**14 14 25.4**	**+0.4**
LPAZ				PKPbc	**PKPdf**	**14 14 25.9**	**+0.8**
LPAZ				*e*PKPbc	**PKPab**	**14 14 28.5**	**-0.6**
LPAZ	**La Paz**	**147.08**	**93**	PKPbc	**PKPdf**	**14 14 25.9**	**+0.8**
	comp=Z,15nm,0.7s,baz=295,slow=2.3,SNR=44						
SAML	**Samuel**	**150.14**	**77**	PKPdf	**PKPdf**	**14 14 28.5**	**-0.8**
SAML				*e*PKPbc	**PKPbc**	**14 14 34.5**	**+0.1**
SAML				*e*PKPab	**PKPab**	**14 14 41.0**	**+0.2**
CPUP	**Villa Florida**	**156.41**	**116**	PKPab	**PKPab**	**14 15 08.4**	**+1.4**
CPUP	**Villa Florida**	**156.41**	**116**	PKPab	**PKPab**	**14 15 08.4**	**+1.4**
	comp=Z,4.6nm,0.8s,baz=263,slow=3.2,SNR=8.2						
BDFB	**Brasilia**	**166.18**	**85**	PKPab	**PKPab**	**14 15 50.6**	**+0.4**
BDFB	**Brasilia**	**166.18**	**85**	PKPab	**PKPab**	**14 15 50.6**	**+0.4**
	comp=Z,4.5nm,0.5s,baz=274,slow=3.8,SNR=6.6						

IDC ***29*** *13:55:02.7±2.6,35°.67N×143°.16E,h0km,mb3.4/3, mb1 3.5/6,mb1mx3.4/29,mbtmp3.5/6,ML3.5/3,Error ellipse: s-maj=51.4km s-min=28.5km az=141.0*

ISCJB ***29*** *13:55:05.4±1.8,35°.78N±0°.05×143°.03E±0°.06, h32km±19km,mb3.4/3,Error ellipse: s-maj=10.0km s-min=6.6km az=38.1*

JMA ***29*** *13:55:06.4±0.3,35°.72N×142°.95E,h81km,M3.3*

ISC 29 13:55:04.9±3.6,35°.7N±0°.1×143°.09E±0°.10,h16km±28km, n19,σ0°80/20,mb3.4/3,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	**1.81**	**270**	P	**Pn**	**13 55 35.2**	**-0.3**
CHOJ				*e*S	Sn	13 55 56.3	-1.9
BSO1	**Boso 1**	**2.02**	**239**	P	**Pn**	**13 55 36.9**	**-1.0**
JHO	**Hitachi**	**2.23**	**295**	P	Pn	13 55 40.0	-1.2
JHO				*e*S	Sn	13 56 05.4	-3.0
JFT	**Otama**	**2.86**	**310**	P	**Pn**	**13 55 49.9**	**+0.1**
JFT				*e*S	Sn	13 56 22.1	-1.8
JAG	**Ashikaga**	**3.03**	**285**	P	**Pn**	**13 55 51.9**	**-0.3**
JAG				*e*S	Sn	13 56 25.9	-2.3
JOD2	**Odawara 2**	**3.29**	**263**	P	**Pn**	**13 55 55.4**	**-0.5**
JOD2				*e*S	Sn	13 56 31.5	-3.3
JRY	**Ryogami san**	**3.41**	**276**	P	**Pn**	**13 55 57.8**	**+0.3**
JRY				*e*S	Sn	13 56 36.4	-1.3
JMK	**Ichinoseki**	**3.56**	**336**	P	**Pn**	**13 55 58.5**	**-1.0**
JMK				*e*S	Sn	13 56 38.3	-3.0
JYN	**Shimob**	**3.71**	**268**	P	**Pn**	**13 56 01.9**	**+0.3**
JYN				*e*S	Sn	13 56 42.4	-2.6
JHJ2	**Mitsune**	**3.75**	**227**	P	**Pn**	**13 56 01.5**	**-0.5**
JHJ	**Hachijo jima 2**	**3.76**	**228**	Pn	**Pn**	**13 56 01.4**	**-0.8**
	7.3nm,0.3s,baz=81,slow=21,SNR=7.1						
JHJ				Sn	Sn	13 56 39.5	-6.7
	34nm,0.3s,baz=96,slow=22,SNR=7.3						
JYK	**Kaneyama**	**3.87**	**327**	P	**Pn**	**13 56 03.1**	**-0.7**
JYK				*e*S	Sn	13 56 46.4	-2.6
JOM	**Ohasama**	**4.02**	**340**	P	**Pn**	**13 56 04.8**	**-1.0**
JOM				*e*S	Sn	13 56 49.9	-2.7
MJAR	**Matsushiro Arr**	**4.04**	**283**	Pn	**Pn**	**13 56 06.5**	**+0.4**
	1.4nm,0.3s,baz=43,slow=9.1,SNR=19						
MJAR				Sn	**Sn**	**13 56 52.9**	**-0.1**
	1.2nm,0.3s,baz=129,slow=26,SNR=4.4						
MAT	**Matsushiro**	**4.04**	**283**	P	**Pn**	**13 56 07.8**	**+1.7**
MAT				S	**Sn**	**13 56 52.9**	**-0.2**
ASAJ	**Asahikawa**	**8.41**	**358**	Pn	**Pn**	**13 57 05.3**	**-0.7**
	0.9nm,0.3s,baz=261,slow=33,SNR=13						
ZALV	**Zalesovo Beam**	**43.80**	**313**	P	**P**	**14 03 11.0**	**+1.2**
	0.4nm,0.4s,baz=94,slow=7.4,SNR=2.5						
KURBB	**Kurchatov Arra**	**47.88**	**309**	P	**P**	**14 03 42.5**	**+0.5**
	0.1nm,0.3s,baz=78,slow=7.7,SNR=3.6						
ILAR	**Eielson Array**	**49.90**	**32**	P	**P**	**14 03 57.6**	**+0.3**
	0.4nm,0.9s,baz=253,slow=6.3,SNR=4.7						

ISCJB ***29*** *13:56:23.9±0.7,24°.06S±0°.06×67°.2W±0°.1,h187km±16km, mb3.5/1,Error ellipse: s-maj=17.0km s-min=9.8km az=177.1*

IDC ***29*** *13:56:24.8±2.0,24°.05S×67°.10W,h171km±17km,mb3.4/1, mb1 3.5/5,mb1mx3.3/19,mbtmp3.4/5,Error ellipse: s-maj=38.1km s-min=20.0km az=8.0*

GUC ***29*** *13:56:27.0±0.4,23°.77S×67°.61W,h214km±5km,ML4.3*

ISC 29 13:56:24.2±0.9,24°08S±0°.07×67°.10W±0°.09, h173km±12km,n15,σ1°60/23,3C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LVC	**Limon Verde**	**2.22**	**311**	⇑*i*P	**Pn**	**13 57 05.0**	**+1.5**
LVC				*i* S	**Sn**	**13 57 33.9**	**0.0**
LVC	**Limon Verde**	**2.22**	**311**	P	**Pn**	**13 57 04.7**	**+1.2**
	43nm,0.3s,baz=131,slow=5.6,SNR=455						
LVC				S	**Sn**	**13 57 33.9**	**0.0**
	80nm,0.3s,baz=258,slow=21,SNR=56						
CEN1	**Los Morros**	**2.92**	**283**	⇓*e*P	**Pn**	**13 57 13.4**	**+1.7**
CEN1				*e*S	**Sn**	**13 57 48.5**	**-0.1**
CEN1				AML	AML	13 57 50.9	
	comp=N,271nm,0.6s						
PB09	**Plate Boundary**	**3.01**	**319**	*i* P	**Pn**	**13 57 14.1**	**+1.3**
PB09				*i* S	**Sn**	**13 57 49.4**	**-1.3**
PB09				AML	AML	13 57 51.9	
	comp=N,1μm,0.5s						
ANCH	**Antofagasta**	**3.06**	**277**	⇑*e*P	**Pn**	**13 57 14.1**	**+0.9**
ANCH				*e*S	**Sn**	**13 57 49.8**	**-1.5**
ANCH				AML	AML	13 57 51.8	
	comp=E,677nm,0.1s						
PB07	**Plate Boundary**	**3.48**	**312**	*e*P	**Pn**	**13 57 18.9**	**+0.2**
PB07				*i* S	**Sn**	**13 57 57.9**	**-3.2**
PB07				AML	AML	13 58 00.6	
	comp=N,460nm,0.3s						
PB01	**Plate Boundary**	**3.74**	**323**	⇑*i*P	**Pn**	**13 57 21.9**	**-0.1**
PB01				*i* S	**Sn**	**13 58 04.1**	**-2.9**
CFAA	**Coronel Fontan**	**7.56**	**187**	S	**Sn**	**13 59 33.9**	**-2.8**
	comp=N,0.1nm,0.3s,baz=219,slow=18,SNR=4.7						
LPAZ	**La Paz**	**7.81**	**353**	P	**Pn**	**13 58 16.4**	**+0.6**
	comp=N,0.8nm,0.3s,baz=169,slow=10.0,SNR=15						
LPAZ				S	**Sn**	**13 59 41.2**	**-2.5**
	comp=N,0.1nm,0.3s,baz=355,slow=18,SNR=4.0						
CPUP	**Villa Florida**	**9.13**	**106**	P	**Pn**	**13 58 33.0**	**+0.6**
	comp=N,0.3nm,0.3s,baz=258,slow=14,SNR=3.0						
BDFB	**Brasilia**	**19.80**	**68**	P	**P**	**14 00 42.5**	**+0.9**
	comp=N,1.0nm,0.3s,baz=234,slow=11,SNR=11						
TORD	**Torodi Ar. Bea**	**76.68**	**69**	P	**P**	**14 07 56.7**	**0.0**
	comp=N,0.6nm,0.5s,baz=260,slow=5.7,SNR=8.9						
ASAR	**Alice Springs**	**128.34**	**205**	PKP	**PKPdf**	**14 15 11.3**	**+0.3**
	comp=N,0.2nm,0.5s,baz=144,slow=1.7,SNR=6.6						
WRA	**Warramunga Arr**	**131.51**	**207**	PKP	**PKPdf**	**14 15 17.7**	**+0.7**
	comp=N,0.2nm,0.4s,baz=153,slow=1.9,SNR=8.8						
MKAR	**Makanchi Array**	**146.65**	**40**	PKPbc	**PKPbc**	**14 15 46.4**	**+0.9**
	comp=N,0.3nm,0.7s,baz=330,slow=4.2,SNR=4.4						

IDC 29 14:16:39.0±8.1,5°.44S×151°.42E,h101km±56km,mb3.2/3, mb1 3.3/4,mb1mx3.1/19,mbtmp3.2/4,Error ellipse: s-maj=109.1km s-min=54.3km az=126.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.78**	**227**	P	Pn	14 18 01.6	-0.8
	0.2nm,0.3s,baz=27,slow=16,SNR=3.1						
PMG				S	Sn	14 19 08.7	+1.4
	0.9nm,0.3s,baz=295,slow=19,SNR=4.0						
WRA	**Warramunga Arr**	**22.00**	**228**	P	P	14 21 24.7	-0.5
	0.4nm,0.6s,baz=53,slow=9.9,SNR=8.0						
ASAR	**Alice Springs**	**24.76**	**221**	P	P	14 21 51.0	-0.4
	0.4nm,0.6s,baz=44,slow=9.6,SNR=9.8						
FITZ	**Fitzroy Crossi**	**28.15**	**241**	P	P	14 22 22.3	+0.4
	3.2nm,1.1s,baz=61,slow=10,SNR=3.4						
TORD	**Torodi Ar. Bea**	**149.18**	**287**	PKPbc	PKPbc	14 36 16.5	-0.3
	0.2nm,0.3s,baz=83,slow=1.8,SNR=7.5						

IDC ***29*** *14:39:31.9±1.2,1°.56N×123°.27E,h0km,mb3.4/4, mb1 3.7/5,mb1mx3.4/24,mbtmp3.5/5,ML3.9/2,MS3.2/1, Ms1 3.2/1,ms1mx2.6/16,Error ellipse: s-maj=62.4km s-min=19.9km az=75.0*

ISCJB ***29*** *14:39:36.7±0.8,1°.50N±0°.07×122°.49E±0°.06,h39km, mb3.4/4,MS3.2/1,Error ellipse: s-maj=9.9km s-min=8.6km az=166.8*

DJA ***29*** *14:39:40.2±0.9,1°.N±6°×12°.2E±°,h10km,M4.3/4,mb4.5/1, MLv4.2/4*

ISC 29 14:39:38.6±1.0,1°.42N±0°.09×122°.47E±0°.07,h39km,n14, σ1°86/13,mb3.5/4,Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTOI	**Gorontalo**	**0.95**	**145**	P	**Pn**	**14 39 54.8**	**-0.6**
GTOI				S	**Sn**	**14 40 08.5**	**+0.8**
MRSI	**Marisa**	**1.08**	**210**	P	**Pn**	**14 39 55.7**	**-1.5**
MRSI				S	**Sn**	**14 40 07.2**	**-3.7**
KMSI	**Cibinong**	**1.73**	**119**	P	Pn	14 40 11.9	+5.8
MNI	**Manado**	**2.37**	**89**	P	Pn	14 40 23.8	+8.8
MNI				S	**Sn**	**14 40 40.9**	**-1.9**
LUWI	**Luwuk**	**2.46**	**173**	P	Pn	14 40 20.0	+3.7
SKSI	**Soroako, Sulaw**	**4.08**	**196**	P	**Pn**	**14 39.9**	**+1.3**
TTSI	**Tana Toraja**	**5.17**	**211**	P	**Pn**	**14 40 54.6**	**+1.2**
SPSI	**Sidrap Palu**	**5.99**	**207**	P	**Pn**	**14 41 05.6**	**+0.8**
KAPI	**Kappang**	**6.94**	**203**	Pn	**Pn**	**14 41 20.8**	**+2.9**
	1.6nm,0.3s,baz=67,slow=18,SNR=3.2						
FITZ	**Fitzroy Crossi**	**19.65**	**171**	P	**P**	**14 44 04.1**	**0.0**
	0.3nm,0.3s,baz=1.7,slow=10,SNR=8.5						
WRA	**Warramunga Arr**	**24.21**	**152**	P	P	14 44 46.6	-5.2
	0.1nm,0.3s,baz=328,slow=10,SNR=6.7						
SONM	**Songino Array**	**48.29**	**346**	P	**P**	**14 48 15.3**	**-0.8**
	2.0nm,0.3s,baz=167,slow=7.1,SNR=3.3						
SONM				LR	LR	15 07 43.7	
	comp=Z,24nm,19.2s,baz=51,slow=35						
MKAR	**Makanchi Array**	**57.14**	**328**	P	**P**	**14 49 22.5**	**+1.1**
	0.2nm,0.5s,baz=129,slow=8.6,SNR=3.7						
VNDA	**Vanda**	**81.72**	**172**	P	**P**	**14 51 52.9**	**+0.3**
	0.8nm,0.7s,baz=317,slow=6.9,SNR=5.5						

IDC 29 14:40:18.6±7.9,6°.03S×150°.21E,h91km±43km,mb3.2/2, mb1 3.5/2,mb1mx3.0/17,mbtmp3.2/2,Error ellipse: s-maj=138.1km s-min=53.0km az=111.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**20.72**	**227**	P	P	14 44 51.8	-0.1
	1.6nm,0.6s,baz=53,slow=11,SNR=32						
WRA				ScP	ScP	14 52 26.6	-0.4
	0.2nm,0.6s,baz=56,slow=2.7,SNR=4.9						
ASAR	**Alice Springs**	**23.54**	**220**	P	P	14 45 21.2	+0.3
	0.3nm,0.4s,baz=54,slow=9.2,SNR=12						
TORD	**Torodi Ar. Bea**	**148.19**	**285**	PKPbc	PKPbc	14 59 54.2	-0.9
	0.1nm,0.4s,baz=60,slow=2.4,SNR=3.7						

IDC ***29*** *14:55:55.4±0.9,54°.78S×127°.68W,h0km,mb3.8/5, mb1 4.1/5,mb1mx3.9/16,mbtmp3.8/5,MS4.1/12, Ms1 4.1/12,ms1mx3.9/23,Error ellipse: s-maj=37.4km s-min=27.8km az=118.0*

NEIC ***29*** *14:55:56.6±0.6,54°.79S×127°.33W,h10km,mb4.6/1,Error ellipse: s-maj=29.2km s-min=21.0km az=128.0*

ISC 29 14:55:56.8±0.7,54°.9S±0°.1×127°.0W±0°.2,h10km,n37, σ1°61/23,mb3.9/6,MS4.1/12,Pacific-Antarctic Ridge

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

comp=Z,121nm,19.9s,baz=165,slow=32
PDAR Pinedale Array 98.46 13 LR LR 15 44 58.5
comp=Z,64nm,19.1s,baz=254,slow=30
ILAR Eielson Array 120.35 350 PKP **PKPdf 15 14 47.0 +0.3**
ILAR Eielson Array 120.35 350 PKP **PKPdf 15 14 47.0 +0.3**
0.8nm,0.9s,baz=213,slow=3.0,SNR=7.3
ULN Ulaanbaatar 146.29 281 *eP* **PKPbc 15 15 36.4 -0.5**
SONM Songino Array 146.65 280 PKPbc **PKPbc 15 15 37.6 -0.3**
SONM Songino Array 146.65 280 PKPbc **PKPbc 15 15 37.6 -0.3**
2.2nm,1.1s,baz=176,slow=1.6,SNR=7.4
EKA Eskdalemuir Ar 148.64 66 PKPbc **PKPbc 15 15 43.5 +0.6**
EKA Eskdalemuir Ar 148.64 66 PKPbc **PKPbc 15 15 43.5 +0.6**
2.0nm,0.8s,baz=276,slow=1.5,SNR=4.4
MKAR Makanchi Array 159.91 258 PKPab **PKPab 15 16 35.1 +0.4**
MKAR Makanchi Array 159.91 258 PKPab **PKPab 15 16 35.1 +0.4**
0.3nm,0.5s,baz=115,slow=5.6,SNR=3.8
BRTR Keskin Array B 160.02 132 PKPab **PKPab 15 16 36.6 +1.2**
BRTR Keskin Array B 160.02 132 PKPab **PKPab 15 16 36.6 +1.2**
0.3nm,0.4s,baz=0.0,slow=3.5,SNR=3.2

ISCJB ***29*** *15:03:51.8±0.4,21.°06S±0.°04×68.°55W±0.°06, h133km±5km, mb3.9/9, Error ellipse: s-maj=10.0km s-min=5.9km az=169.2*

GUC ***29*** *15:03:53.0±0.6,21.°07S×68.°71W, h127km±8km, ML4.9*

IDC ***29*** *15:03:53.0±0.6,21.°09S×68.°45W, h128km±5km, mb3.9/10, mb1 4.1/13, mb1mx4.0/20, mbtmp3.9/13, MS3.0/2, Ms1 2.9/2, ms1mx2.7/26, Error ellipse: s-maj=15.8km s-min=8.5km az=99.0*

ISC 29 15:03:52.8±0.6, 21.°06S±0.°04×68.°54W±0.°07, h127km±5km, n33, σ0.°976/42, mb3.8/9, 4C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PB09	**Plate Boundary**	**0.98**	**221**	⇑*iP*	**Pn**	**15 04 16.0**	**+0.4**
PB09				*i* S	**Sn**	**15 04 32.9**	**+0.2**
PB09				AML	AML	15 04 34.6	
	comp=N,41μm,0.6s						
PB07	**Plate Boundary**	**1.42**	**242**	⇑*iP*	**Pn**	**15 04 19.6**	**-0.4**
PB07				*i* S	**Sn**	**15 04 39.2**	**-1.5**
PB07				AML	AML	15 04 42.2	
	comp=E,8μm,0.2s						
HMBC	**Humberstone**	**1.48**	**301**	⇑*iP*	**Pn**	**15 04 20.1**	**-0.6**
HMBC				*i* S	**Sn**	**15 04 40.5**	**-1.3**
HMBC				AML	AML	15 04 41.8	
	comp=N,22μm,0.5s						
PB04	**Plate Boundary**	**1.49**	**216**	⇑*iP*	Pn	15 04 25.8	+5.2
PB04				AML	AML	15 04 52.0	
	comp=E,9μm,0.3s						
LVC	**Limon Verde**	**1.58**	**192**	⇓*iP*	**Pn**	**15 04 22.5**	**+0.5**
LVC	**Limon Verde**	**1.58**	**192**	P	**Pn**	**15 04 22.5**	**+0.5**
	comp=E,87nm,0.3s,baz=18,slow=9.3,SNR=1267						
LVC				S	**Sn**	**15 04 44.1**	**-0.1**
	comp=E,156nm,0.3s,baz=101,slow=23,SNR=147						
MACH	**Maria Elena**	**1.60**	**225**	*eP*	**Pn**	**15 04 22.0**	**-0.2**
MACH				*i* S	**Sn**	**15 04 43.6**	**-0.9**
MNMC	**Minimini**	**2.16**	**333**	*eP*	**Pn**	**15 04 29.1**	**+0.2**
MNMC				*e*S	**Sn**	**15 04 57.1**	**+0.5**
MNMC				AML	AML	15 04 58.8	
	comp=E,14μm,0.5s						
CEN1	**Los Morros**	**2.78**	**213**	AML	AML	15 05 14.3	
	comp=N,2μm,0.7s						
ANCH	**Antofagasta**	**3.13**	**213**	AML	AML	15 05 18.0	
	comp=E,3μm,0.1s						
LPAZ	**La Paz**	**4.76**	**5**	P	**Pn**	**15 05 04.5**	**+1.1**
	comp=E,12nm,0.3s,baz=172,slow=7.5,SNR=217						
LPAZ				S	**Sn**	**15 05 56.6**	**-1.4**
	comp=E,1.2nm,0.3s,baz=193,slow=12,SNR=2.1						
CFAA	**Coronel Fontan**	**10.51**	**179**	P	Pn	15 06 15.2	-4.8
	comp=E,0.4nm,0.3s,baz=0.4,slow=12,SNR=15						
CFAA				S	Sn	15 08 07.1	-8.8
	comp=E,0.3nm,0.3s,baz=192,slow=11,SNR=6.9						
CPUP	**Villa Florida**	**11.53**	**119**	P	**Pn**	**15 06 32.5**	**-1.2**
	comp=E,2.0nm,0.3s,baz=290,slow=12,SNR=11						
CPUP				S	**Sn**	**15 08 40.3**	**-0.5**
	comp=E,0.4nm,0.3s,baz=193,slow=18,SNR=1.9						
PLCA	**Paso Flores**	**19.69**	**185**	P	**P**	**15 08 12.6**	**+0.5**
	comp=E,0.5nm,0.3s,baz=7.1,slow=13,SNR=15						
BDFB	**Brasilia**	**20.21**	**78**	P	**P**	**15 08 17.2**	**-0.8**
	comp=E,25nm,0.4s,baz=250,slow=9.7,SNR=24						
BDFB				LR	LR	15 16 39.0	
	comp=E,74nm,18.1s,baz=206,slow=38						
TXAR	**Lajitas Array**	**60.47**	**325**	P	**P**	**15 13 48.9**	**-0.5**
	comp=E,0.4nm,0.6s,baz=148,slow=8.6,SNR=4.7						
SNAA	**Sanae**	**62.58**	**161**	P	**P**	**15 14 03.5**	**+0.5**
	comp=E,0.7nm,0.6s,baz=276,slow=6.5,SNR=12						
DBIC	**Dimbokro**	**68.28**	**73**	P	**P**	**15 14 39.9**	**-0.6**
	comp=E,7.6nm,0.6s,baz=208,slow=5.1,SNR=7.5						
PDAR	**Pinedale Array**	**73.90**	**330**	P	**P**	**15 15 14.2**	**0.0**
	comp=E,0.5nm,0.6s,baz=116,slow=6.8,SNR=4.1						
NVAR	**Mina Array Bea**	**75.36**	**322**	P	**P**	**15 15 24.0**	**+1.4**
	comp=E,1.9nm,0.8s,baz=162,slow=5.9,SNR=11						
NVAR				pP	**pP**	**15 15 55.2**	**+0.8**
	comp=E,1.1nm,0.9s,baz=148,slow=8.0,SNR=3.8						
SCHQ	**Schefferville**	**75.59**	**1**	P	**P**	**15 15 22.7**	**-0.6**
	comp=E,2.4nm,0.7s,baz=178,slow=6.9,SNR=4.7						
TORD	**Torodi Ar. Bea**	**76.89**	**70**	P	**P**	**15 15 30.8**	**-0.7**
	comp=E,5.3nm,0.4s,baz=254,slow=5.4,SNR=104						
TORD				pP	**pP**	**15 16 03.1**	**-0.3**
	comp=E,0.7nm,0.6s,baz=244,slow=4.5,SNR=0.7						
VNDA	**Vanda**	**77.34**	**190**	P	**P**	**15 15 34.0**	**+1.0**
	comp=E,0.8nm,0.8s,baz=119,slow=5.0,SNR=4.9						
YKA	**Yellowknife Ar**	**90.89**	**340**	P	**P**	**15 16 41.6**	**+0.1**
	comp=E,2.2nm,0.5s,baz=134,slow=4.5,SNR=17						
YKA				pP	**pP**	**15 17 16.0**	**+1.7**
	comp=E,5.0nm,0.9s,baz=132,slow=4.8,SNR=8.8						
YKA				LR	LR	16 00 38.6	
	comp=E,3.6nm,18.5s,baz=345,slow=37						
ASAR	**Alice Springs**	**130.46**	**207**	PKP	**PKPdf**	**15 22 49.0**	**-0.1**
	comp=E,1.0nm,0.8s,baz=132,slow=1.8,SNR=19						
WRA	**Warramunga Arr**	**133.51**	**210**	PKP	**PKPdf**	**15 22 55.1**	**+0.2**
	comp=E,1.1nm,0.6s,baz=155,slow=1.7,SNR=25						
BVAR	**Borovoye Array**	**135.24**	**34**	PKP	**PKPdf**	**15 22 57.6**	**+0.5**
	comp=E,0.2nm,0.5s,baz=219,slow=1.9,SNR=3.5						
ZALV	**Zalesovo Beam**	**141.41**	**25**	PKhKP	PKPpre	15 23 05.3	
	comp=E,1.6nm,0.6s,baz=336,slow=3.2,SNR=4.9						
ZALV				PKP	**PKPdf**	**15 23 08.8**	**+0.4**
	comp=E,1.7nm,0.6s,baz=288,slow=0.3,SNR=6.9						
MKAR	**Makanchi Array**	**145.08**	**36**	PKPbc	**PKPdf**	**15 23 15.4**	**+0.2**
	comp=E,5.2nm,0.7s,baz=319,slow=3.6,SNR=34						
USRK	**Ussuriysk Arra**	**151.31**	**328**	PKPbc	**PKPbc**	**15 23 31.4**	**0.0**
	comp=E,3.1nm,0.7s,baz=45,slow=1.1,SNR=6.5						
MJAR	**Matsushiro Arr**	**152.06**	**309**	PKPbc	**PKPbc**	**15 23 33.3**	**-0.1**
	comp=E,2.3nm,0.9s,baz=84,slow=2.2,SNR=6.5						
SONM	**Songino Array**	**152.97**	**8**	PKP	**PKPdf**	**15 23 28.2**	**+0.3**
	comp=E,0.5nm,0.8s,baz=48,slow=2.2,SNR=4.9						
SONM				PKPbc	**PKiKP**	**15 23 35.5**	**+0.1**
	comp=E,1.0nm,0.7s,baz=304,slow=1.4,SNR=7.6						
SONM				PKPab	**PKPab**	**15 23 46.1**	**-0.8**
	comp=E,0.5nm,0.5s,baz=318,slow=1.5,SNR=3.7						
KSRS	**Korea Array**	**158.30**	**322**	PKPab	**PKPab**	**15 24 10.4**	**+0.6**
	comp=E,0.8nm,0.6s,baz=54,slow=5.7,SNR=6.0						

IDC 29 15:18:20.2±3.3, 22.°62N×11.°92W, h0km, mb3.3/2, mb1 3.7/4, mb1mx3.4/27, mbtmp3.5/4, ML3.5/2, Error ellipse: s-maj=82.4km s-min=33.9km az=92.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TORD	**Torodi Ar. Bea**	**16.01**	**124**	Pn	Pn	15 22 06.4	-0.5
	0.1nm,0.3s,baz=312,slow=12,SNR=3.7						
TORD				Sn	Sn	15 24 59.2	-6.0
	0.1nm,0.3s,baz=304,slow=21,SNR=3.3						
DBIC	**Dimbokro**	**17.26**	**156**	P	Pn	15 22 22.5	-0.2
	0.5nm,0.3s,baz=333,slow=13,SNR=4.9						
DBIC				S	Sn	15 25 20.7	-15
	0.1nm,0.3s,baz=270,slow=13,SNR=2.4						
KEST	**Kesra**	**22.65**	**50**	P	P	15 23 23.6	+0.5
	0.5nm,0.6s,baz=252,slow=8.2,SNR=2.9						
GERES	**GERESS Array B**	**33.13**	**32**	P	P	15 24 57.5	-0.7
	0.6nm,0.6s,baz=226,slow=9.4,SNR=5.3						
ASAR	**Alice Springs**	**148.60**	**99**	PKPbc	PKPbc	15 38 09.6	-0.3
	0.4nm,0.9s,baz=289,slow=2.5,SNR=4.9						

MAN 29 15:33:41,10.°39N×125.°14E, h0km, mb4.2, ML3.0, MS2.7, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.38**	**228**	*eP*	Pb	15 33 50.0	-0.6
MSLP				*e*S	Sb	15 34 00.3	+3.4
PLP	**Palo**	**0.79**	**348**	⇓*eP*	Pb	15 33 57.2	-0.4
PLP				*e*S	Sb	15 34 09.2	+0.3
OCLP	**Ormoc**	**0.84**	**322**	*eP*	Pb	15 33 58.3	-0.2
GUIM	**Jordan**	**2.52**	**276**	*eP*	Pn	15 34 25.0	+1.8

MEX 29 15:42:27.0±1.0, 15.°83N×93.°89W, h80km±16km, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.66**	**101**	*eP*	Pn	15 42 40.5	-1.8
PCIG				*i* S	Sn	15 42 52.3	-1.3
TGIG		**1.20**	**38**	*i* P	Pn	15 42 47.2	-1.3
TGIG				*i* S	Sn	15 43 03.0	-1.8
CCIG	**Comitan**	**1.74**	**75**	*i* P	Pn	15 42 55.3	-0.5
CCIG				*i* S	Sn	15 43 15.3	-2.3

NIED ***29*** *15:55:00, 42.°30N×147.°60E, h11km, Mw3.5 Best double couple: M0 1.94000×10^14 NP1:φ8.91.00000°, δ59.00000°, λ-50.00000°. NP2:φ213.00000°, δ49.00000°, λ-137.00000°.*

JMA 29 15:55:12.5±0.2, 42.°29N×147.°57E, h8km, M3.9, Off southeast coast of Hokkaido

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**1.72**	**309**	P	Pn	15 55 43.1	+0.4
NEM2				*e*S	Sb	15 56 05.8	-0.3
JAK	**Akkeshi**	**2.23**	**289**	P	Pn	15 55 50.6	+0.8
JAK				*e*S	Sn	15 56 18.1	+0.6
JRA	**Rausu**	**2.43**	**313**	P	Pn	15 55 52.9	+0.4
JRA				*e*S	Sn	15 56 23.4	+0.9
JNK	**Nakash**	**2.46**	**303**	P	Pn	15 55 53.4	+0.5
JNK				*e*S	Sn	15 56 23.0	-0.2
JOB	**Onbets**	**2.83**	**284**	P	Pn	15 55 59.3	+1.4
JOB				*e*S	Sn	15 56 33.5	+1.4
JAR	**Ashorobuto**	**2.97**	**291**	P	Pn	15 56 00.9	+0.9
JAR				*e*S	Sn	15 56 36.3	+0.5
JCH	**Churui**	**3.13**	**277**	P	Pn	15 56 03.5	+1.4
JCH				*e*S	Sn	15 56 39.8	+0.1
JTKR	**Abashiri--Toko**	**3.16**	**303**	P	Pn	15 56 04.1	+1.6
JTKR				*e*S	Sn	15 56 41.8	+1.4
JNBK	**Urakawa-nobuka**	**3.57**	**271**	P	Pn	15 56 09.2	+1.0
JNBK				*e*S	Sn	15 56 52.1	+1.5
JFR	**Furan**	**3.77**	**285**	P	Pn	15 56 12.6	+1.7
JFR				*e*S	Sn	15 56 55.9	+0.4
JKK2	**Kamakawa 2**	**3.87**	**296**	*e*S	Sn	15 57 00.4	+2.4
JKB	**Kayabe**	**4.88**	**267**	P	Pn	15 57 26.2	+1.0
JKB				*e*S	Sn	15 57 21.4	-1.4
JANG	**Nango**	**4.94**	**249**	P	Pn	15 56 25.7	-1.4
JANG				*e*S	Sn	15 57 20.4	-4.0
JOT	**Ohata**	**4.96**	**262**	P	Pn	15 56 28.4	+1.2
JOT				*e*S	Sn	15 57 23.1	-1.6

IDC 29 16:04:44.8±1.2, 13.°32N×144.°45E, h0km, mb3.7/8, mb1 3.9/8, mb1mx3.7/25, mbtmp3.7/8, Error ellipse: s-maj=42.8km s-min=20.2km az=82.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MJAR	**Matsushiro Arr**	**23.79**	**347**	P	P	16 09 59.5	+0.3
	1.7nm,0.8s,baz=168,slow=8.6,SNR=6.7						
KSRS	**Korea Array**	**28.20**	**331**	P	P	16 10 40.0	+0.9
	0.5nm,0.5s,baz=138,slow=9.0,SNR=4.4						
WRA	**Warramunga Arr**	**34.52**	**197**	P	P	16 11 35.2	+0.2
	1.1nm,0.7s,baz=21,slow=9.6,SNR=13						
CMAR	**Chiang Mai Arr**	**43.98**	**283**	P	P	16 12 54.2	0.0
	0.4nm,0.5s,baz=80,slow=7.1,SNR=3.9						
STKA	**Stephens Creek**	**45.02**	**183**	P	P	16 13 02.2	0.0
	3.4nm,0.9s,baz=0.0,slow=8.1,SNR=3.2						
SONM	**Songino Array**	**46.72**	**325**	P	P	16 13 15.2	-0.5
	0.2nm,0.4s,baz=126,slow=7.3,SNR=2.9						
MKAR	**Makanchi Array**	**61.40**	**316**	P	P	16 15 02.0	-0.8
	0.3nm,0.5s,baz=90,slow=8.2,SNR=4.2						
NVAR	**Mina Array Bea**	**87.40**	**51**	P	P	16 17 34.5	-0.1
	0.3nm,0.5s,baz=278,slow=5.4,SNR=3.6						
TORD	**Torodi Ar. Bea**	**134.68**	**304**	PKP	PKPdf	16 24 05.0	-1.4
	0.2nm,0.5s,baz=57,slow=4.5,SNR=3.1						

JMA 29 16:20:43.8, 32.°98N×129.°89E, h12km±1km, M1.0, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JUR	**Ureshino**	**0.12**	**24**	P	Pg	16 20 46.8	-0.2
JUR				*e*S	Sg	16 20 48.9	-0.4
NGSJ	**Nagasakinomoza**	**0.35**	**193**	P	Pg	16 20 51.0	+0.1
NGSJ				*e*S	Sg	16 20 56.6	+0.9

NIED ***29*** *16:21:00, 33.°00N×129.°90E, h8km, Mw4.1 Best double couple: M0 1.47000×10^15 NP1:φ296.00000°, δ66.00000°, λ-42.00000°. NP2:φ46.00000°, δ52.00000°, λ-150.00000°.*

ISCJB ***29*** *16:21:16.9±0.6, 32.°98N±0.°03×129.°88E±0.°05, h14km±3km, mb3.6/10, Error ellipse: s-maj=6.8km s-min=4.6km az=157.9*

IDC ***29*** *16:21:16.3±0.8, 32.°99N×129.°87E, h0km, mb3.6/10, mb1 3.8/13, mb1mx3.7/30, mbtmp3.6/13, ML3.1/3, MS3.0/3, Ms1 3.0/3, ms1mx2.7/40, Error ellipse: s-maj=14.9km s-min=9.0km az=4.0*

JMA ***29*** *16:21:17.4, 32.°98N×129.°89E, h13km±1km, M3.9 Broadband fault plane solution: P waves. NP1: φ48.00000°, δ71.00000°, λ-142.00000°. NP2: φ304.00000°, δ55.00000°, λ-24.00000°. Principal axes: T Plg10.0000°, Azm173.0000°; N Plg48.0000°, Azm72.0000°; P Plg40.0000°, Azm271.0000°;*

JMA Felt III J1.

ISC 29 16:21:17.7±1.0, 32.°97N±0.°03×129.°90E±0.°04, h8km±6km, n21, σ0.°977/27, mb3.7/10, 3C-1D, Kyushu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JUR	**Ureshino**	**0.13**	**18**	⇑P	**Pg**	**16 21 20.6**	**+0.1**
JUR				S	**Sg**	**16 21 22.8**	**+0.3**
NGSJ	**Nagasakinomoza**	**0.35**	**194**	⇑P	**Pg**	**16 21 24.4**	**-0.1**
NGSJ				*e*S	**Sg**	**16 21 29.2**	**+0.1**
JTA	**Tamana**	**0.53**	**91**	⇓P	**Pg**	**16 21 27.6**	**-0.4**
JTA				*e*S	**Sg**	**16 21 34.7**	**-0.2**
JII	**Iki**	**0.83**	**350**	⇑P	**Pb**	**16 21 33.2**	**-1.2**
JII				S	**Sg**	**16 21 43.8**	**-0.8**
JNU	**Nakatsue**	**0.83**	**79**	Pg	**Pg**	**16 21 33.0**	**-0.7**
	326nm,0.3s,baz=256,slow=4.5,SNR=100						
JNU				Lg	Lg	16 21 44.5	
	1μm,0.3s,baz=229,slow=13,SNR=65						
JIU2	**Izumi 2**	**0.88**	**119**	P	**Pg**	**16 21 34.1**	**-0.5**
JIU2				*e*S	**Sg**	**16 21 45.6**	**-0.4**
JZO	**Okuchi**	**1.02**	**144**	S	**Sg**	**16 21 50.7**	**+0.3**
KSRS	**Korea Array**	**4.76**	**341**	Pn	**Pn**	**16 22 30.4**	**+0.7**
	2.7nm,0.3s,baz=156,slow=14,SNR=41						
KSRS				Pg	**Pb**	**16 22 41.6**	**+0.3**
	5.2nm,0.3s,baz=149,slow=17,SNR=19						
KSRS				Sn	**Sn**	**16 23 25.2**	**+0.3**
	5.8nm,0.3s,baz=159,slow=26,SNR=6.1						
KSRS				Lg	Lg	16 23 44.0	
	9.1nm,0.3s,baz=158,slow=30,SNR=7.7						
KSRS				LR	LR	16 24 26.9	
	comp=Z,106nm,20.9s,baz=155,slow=40						
MJAR	**Matsushiro Arr**	**7.71**	**60**	Pn	**Pn**	**16 23 11.7**	**+1.5**
	0.3nm,0.3s,baz=244,slow=14,SNR=8.5						
MJAR				Lg	Lg	16 25 18.6	
	0.1nm,0.3s,baz=235,slow=30,SNR=3.7						
MJAR				LR	LR	16 25 52.1	
	comp=Z,97nm,21.2s,baz=250,slow=36						
JHJ	**Hachijo jima 2**	**8.30**	**86**	LR	LR	16 26 20.3	
	comp=Z,216nm,20.3s,baz=261,slow=36						
USRK	**Ussuriysk Arra**	**11.33**	**8**	Pn	**Pn**	**16 24 00.2**	**+0.4**
	0.3nm,0.3s,baz=189,slow=12,SNR=5.2						
SONM	**Songino Array**	**23.13**	**317**	P	**P**	**16 26 24.5**	**+0.2**
	0.3nm,0.4s,baz=119,slow=12,SNR=2.7						
KURBB	**Kurchatov Arra**	**41.25**	**311**	P	**P**	**16 29 03.7**	**+0.6**
	0.5nm,0.7s,baz=98,slow=8.8,SNR=5.9						
WRA	**Warramunga Arr**	**52.79**	**175**	P	**P**	**16 30 32.7**	**-0.7**
	0.9nm,0.8s,baz=354,slow=7.8,SNR=6.5						
ASAR	**Alice Springs**	**56.45**	**176**	P	**P**	**16 30 60.0**	**-0.1**
	0.8nm,0.7s,baz=1.4,slow=6.2,SNR=13						
ILAR	**Eielson Array**	**57.86**	**30**	P	**P**	**16 31 09.2**	**-0.3**
	0.3nm,0.7s,baz=272,slow=6.9,SNR=2.7						
FINES	**FINESS Array B**	**67.76**	**330**	P	**P**	**16 32 14.7**	**-0.8**
	0.9nm,0.6s,baz=76,slow=8.0,SNR=5.9						
AKASG	**Malin Array Be**	**71.40**	**319**	P	**P**	**16 32 37.3**	**-0.8**
	1.3nm,0.5s,baz=54,slow=7.0,SNR=3.2						
NOA	**NORSAR Array B**	**73.93**	**334**	P	**P**	**16 32 51.8**	**-1.3**
	0.3nm,0.6s,baz=46,slow=6.2,SNR=2.7						
BRTR	**Keskin Array B**	**74.09**	**307**	P	**P**	**16 32 54.5**	**-0.1**
	0.4nm,0.6s,baz=90,slow=6.1,SNR=2.8						
NVAR	**Mina Array Bea**	**84.83**	**47**	P	**P**	**16 33 54.9**	**+1.7**
	0.6nm,0.7s,baz=279,slow=5.6,SNR=5.2						

IDC 29 16:27:44.4±2.5, 3.°06N×126.°58E, h0km, mb3.7/3, mb1 4.0/3, mb1mx3.6/23, mbtmp3.7/3, 1C-1D, Error ellipse: s-maj=114.4km s-min=40.1km az=71.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTBH	**Cotabato--PC H**	**4.75**	**331**	⇑*iP*	Pb	16 29 05.2	-3.4
SNPH	**Sibulan**	**7.08**	**332**	⇓*iP*	Pg	16 30 08.2	+8.1
SNPH				*i* S	Sn	16 31 00.3	+10
FITZ	**Fitzroy Crossi**	**21.04**	**182**	P	P	16 32 31.2	+1.2
	1.3nm,0.5s,baz=17,slow=8.4,SNR=11						
WRA	**Warramunga Arr**	**24.09**	**162**	P	P	16 33 01.5	-0.4
	1.8nm,0.5s,baz=339,slow=10,SNR=52						
ASAR	**Alice Springs**	**27.50**	**165**	P	P	16 33 32.6	-0.2
	0.4nm,0.4s,baz=339,slow=7.8,SNR=15						
TORD	**Torodi Ar. Bea**	**122.98**	**288**	PKP	PKPdf	16 46 43.4	-0.5
	0.5nm,0.5s,baz=77,slow=1.4,SNR=3.5						

ISCJB ***29*** *16:29:12.0±0.3, 13.°32N±0.°03×120.°74E±0.°04, h85km±4km, mb4.3/31, Error ellipse: s-maj=6.4km s-min=4.0km az=165.4*

MAN ***29*** *16:29:11, 13.°34N×120.°58E, h59km, mb5.2, ML4.2, MS4.4*

BJI ***29*** *16:29:11.1, 13.°19N×120.°82E, h90km, mb4.8/20, mb4.6/37*

NEIC ***29*** *16:29:12.1±0.4, 13.°33N×120.°85E, mb4.5/7, Error ellipse: s-maj=11.6km s-min=6.8km az=81.0*

NEIC Felt at Calapan.

IDC ***29*** *16:29:15.1±4.0, 13.°41N×120.°88E, h107km±37km, mb3.8/19, mb1 3.9/19, mb1mx3.8/28, mbtmp3.8/19, MS3.4/9, Ms1 3.4/9, ms1mx3.1/37, Error ellipse: s-maj=18.8km s-min=10.6km az=71.0*

ISC 29 16:29:12.7±0.4, 13.°29N±0.°04×120.°70E±0.°04, h80km±3km, h80km:pP-P, n118, σ1.°35/147, mb4.3/31, 3C-2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	**0.84**	**16**	⇑*eP*	**Pn**	**16 29 28.6**	**-1.5**
TGY				*i* S	**Sn**	**16 29 40.8**	**-2.1**
SJMP	**San Jose**	**0.92**	**153**	*eP*	**Pn**	**16 29 30.9**	**+0.1**
BOAC	**Boac**	**1.13**	**81**	*eP*	**Pn**	**16 29 32.4**	**-1.0**
LQP	**Lukban**	**1.16**	**45**	⇓*iP*	**Pn**	**16 29 32.8**	**-1.2**
LQP				*i* S	**Sn**	**16 29 48.0**	**-1.8**
BUSP	**Coron**	**1.36**	**201**	*eP*	**Pn**	**16 29 35.8**	**-0.6**
OTRP	**Odiongan**	**1.58**	**125**	*eP*	**Pn**	**16 29 39.1**	**0.0**
GQP	**Guinayangan**	**1.81**	**70**	⇓*eP*	**Pn**	**16 29 42.0**	**-0.1**
GQP				*i* S	**Sn**	**16 30 05.8**	**+1.4**
AUQP	**San Andres**	**1.93**	**89**	*eP*	**Pn**	**16 29 45.1**	**+1.5**
ENPP	**El Nido**	**2.41**	**211**	*eP*	**Pn**	**16 29 49.9**	**-0.2**
CUYO	**Cuyo Island**	**2.44**	**173**	*eP*	**Pn**	**16 29 50.2**	**-0.4**
BALP	**Baler**	**2.58**	**19**	*eP*	**Pn**	**16 29 52.4**	**-0.1**
SCZP	**Santa Cruz**	**2.59**	**343**	*eP*	**Pn**	**16 29 49.7**	**-2.8**
RCP	**Roxas**	**2.63**	**130**	*eP*	**Pn**	**16 29 53.9**	**+0.8**
RCP				*i* S	**Sn**	**16 30 24.5**	**+0.3**
GUIM	**Jordan**	**3.23**	**145**	*eP*	**Pn**	**16 30 02.3**	**+1.1**
CAUP	**Cauayan**	**3.79**	**16**	*eP*	**Pn**	**16 30 09.3**	**+0.4**
CNP	**Catarman**	**3.94**	**101**	*eP*	**Pn**	**16 30 12.2**	**+1.3**
PALP	**Palanan**	**4.11**	**24**	*eP*	**Pn**	**16 30 13.2**	**0.0**
ABRA	**Dolores**	**4.34**	**0**	*eP*	**Pn**	**16 30 15.4**	**-0.9**
LLP	**Lapu-Lapu**	**4.35**	**132**	*eP*	**Pn**	**16 30 17.4**	**+0.9**
LLP				*e*S	Sn	16 30 56.3	-10
APYP	**Conner**	**4.58**	**7**	*eP*	**Pn**	**16 30 19.8**	**+0.2**
SGCP	**Mt. Cagua**	**5.09**	**15**	*eP*	**Pn**	**16 30 26.4**	**-0.2**
BATP	**Bataraza**	**5.29**	**213**	*eP*	**Pn**	**16 30 28.6**	**-0.7**
DCPH	**Dipolog City**	**5.35**	**151**	⇑*eP*	**Pn**	**16 30 31.7**	**+1.6**
IPIL	**Ipil**	**5.77**	**161**	*eP*	**Pn**	**16 30 37.1**	**+1.3**
PAGZ	**Pagadian**	**6.01**	**154**	*eP*	Pn	16 30 42.9	+3.7
TWG	**Pinlang**	**9.49**	**2**	P	**Pn**	**16 31 25.8**	**-0.8**
	91nm,0.9s						
TPUB	**Ta-pu**	**9.96**	**360**	*eP*	**Pn**	**16 31 34.5**	**+1.5**
	16nm,0.8s						
YULB	**Yu-li**	**10.07**	**3**	*eP*	**Pn**	**16 31 34.7**	**+0.2**
	26nm,1.0s						
SSLB	**Suanglung**	**10.45**	**1**	*eP*	**Pn**	**16 31 41.4**	**+1.7**
	11nm,0.7s	

	comp=E,120nm,11.0s						
LZH				LR	LR		
	comp=Z,210nm,16.4s						
MJAR	**Matsushiro Arr**	**27.98**	**31**	P	**P**	**16 34 54.2**	**-1.8**
MJAR	**Matsushiro Arr**	**27.98**	**31**	P	**P**	**16 34 54.2**	**-1.8**
	comp=Z,0.7nm,0.7s,baz=213,slow=9.2,SNR=3.6						
HHC	**Hu-ho-hao-te**	**28.60**	**345**	*e*P	**P**	**16 35 03.5**	**+2.0**
HHC				pP	**pP**	**16 35 21.0**	**+0.9**
HHC				S	**S**	**16 39 45.5**	**+1.3**
HHC				sS	**sS**	**16 40 16.5**	**+0.1**
HHC				SS	**SnSn**	**16 41 16.5**	**+4.3**
HHC				PcS	**PcS**	**16 41 55.0**	**+1.5**
HHC				pmax	pmax		
	comp=Z,26nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,5.3s						
HHC				LR	LR		
	comp=N,210nm,14.1s						
HHC				LR	LR		
	comp=E,280nm,13.7s						
HHC				LR	LR		
	comp=Z,240nm,12.9s						
SHL	**Shillong**	**29.72**	**299**	*e*PKP	**P**	**16 35 13.0**	**+1.3**
CN2	**Changchun**	**30.68**	**7**	*e*P	**P**	**16 35 21.3**	**+1.6**
FITZ	**Fitzroy Crossi**	**31.57**	**171**	P	**P**	**16 35 27.4**	**-0.3**
FITZ	**Fitzroy Crossi**	**31.57**	**171**	P	**P**	**16 35 27.4**	**-0.3**
	comp=Z,2.5nm,0.9s,baz=353,slow=16,SNR=3.4						
LSA	**Lhasa**	**31.85**	**306**	*e*P	**P**	**16 35 30.9**	**+0.2**
	comp=Z,11nm,0.7s						
GTA	**Gaotai**	**31.89**	**328**	P	**P**	**16 35 31.0**	**+0.4**
GTA				pP	**pP**	**16 35 49.8**	**+0.5**
GTA				S	**S**	**16 40 34.8**	**-1.0**
GTA				pmax	pmax		
	comp=Z,17nm,0.9s						
GTA				pmax	pmax		
	comp=Z,81nm,5.7s						
GTA				LR	LR		
	comp=N,110nm,19.5s						
GTA				LR	LR		
	comp=E,86nm,20.0s						
GTA				LR	LR		
	comp=Z,140nm,23.7s						
USRK	**Ussuriysk Arra**	**32.29**	**15**	P	P	16 35 30.4	-3.5
	comp=Z,1.4nm,0.7s,baz=180,slow=13,SNR=3.0						
USRK				LR	LR	16 48 36.8	
	comp=Z,60nm,19.0s,baz=271,slow=36						
TAPN	**Taplejung**	**33.83**	**300**	*e*P	**P**	**16 35 48.4**	**+0.5**
	comp=Z,68nm,1.1s						
ODAN	**Odare**	**33.95**	**299**	*e*P	**P**	**16 35 49.8**	**+0.9**
	comp=Z,86nm,0.7s						
RAMN	**Ramite**	**34.66**	**298**	*e*P	**P**	**16 35 56.0**	**+1.0**
	comp=Z,76nm,0.8s						
JIRN	**Jiri**	**35.21**	**299**	*e*P	**P**	**16 36 00.9**	**+1.0**
	comp=Z,79nm,0.8s						
GUN	**Gumba**	**35.54**	**300**	*e*P	**P**	**16 36 03.6**	**+0.9**
	comp=Z,82nm,0.8s						
WRAB	**Tennant Creek**	**35.64**	**158**	*e*P	**P**	**16 36 02.9**	**-0.3**
	comp=Z,20nm,0.8s						
WRAB				*e*pP	**pP**	**16 36 21.5**	**-0.6**
WRAB				*e*sP	**sP**	**16 36 29.6**	**-1.8**
WRA	**Warramunga Arr**	**35.65**	**158**	P	**P**	**16 36 03.2**	**0.0**
WRA	**Warramunga Arr**	**35.65**	**158**	P	**P**	**16 36 03.2**	**0.0**
	comp=Z,5.3nm,0.8s,baz=337,slow=9.5,SNR=19						
PKI	**Pulchoki**	**35.85**	**299**	*e*P	**P**	**16 36 05.6**	**+0.3**
	comp=Z,57nm,0.9s						
KKN	**Kakani**	**36.02**	**299**	*e*P	**P**	**16 36 06.9**	**+0.2**
	comp=Z,55nm,1.0s						
DMN	**Daman**	**36.12**	**299**	*e*P	**P**	**16 36 08.1**	**+0.6**
	comp=Z,60nm,1.0s						
ULN	**Ulaanbaatar**	**36.30**	**344**	*e*P	**P**	**16 36 07.8**	**-0.9**
	comp=Z,2.1nm,0.7s						
ULN				*e*pP	**pP**	**16 36 26.8**	**-0.9**
SONM	**Songino Array**	**36.45**	**344**	P	**P**	**16 36 09.2**	**-0.8**
SONM				PcP	**PcP**	**16 38 31.2**	**-1.2**
SONM	**Songino Array**	**36.45**	**344**	P	**P**	**16 36 09.2**	**-0.8**
	comp=Z,3.2nm,0.8s,baz=166,slow=9.2,SNR=13						
SONM				PcP	**PcP**	**16 38 31.2**	**-1.2**
	comp=Z,0.3nm,0.5s,baz=174,slow=4.1,SNR=2.3						
SONM				LR	LR	16 51 14.1	
	comp=Z,75nm,21.7s,baz=340,slow=36						
KOLN	**Koldanda**	**37.45**	**298**	*e*P	**P**	**16 36 19.0**	**+0.2**
	comp=Z,19nm,0.8s						
DANN	**Dangsing**	**37.46**	**299**	*e*P	**P**	**16 36 19.3**	**+0.3**
	comp=Z,66nm,1.1s						
PYUN	**Piuthan**	**38.05**	**299**	*e*P	**P**	**16 36 24.5**	**+0.6**
	comp=Z,73nm,0.9s						
AS31	**Alice Springs**	**38.93**	**161**	*e*P	**P**	**16 36 31.3**	**+0.3**
ASAR	**Alice Springs**	**38.93**	**161**	P	**P**	**16 36 31.4**	**+0.5**
ASAR	**Alice Springs**	**38.93**	**161**	P	**P**	**16 36 31.4**	**+0.5**
	comp=Z,1.6nm,0.6s,baz=339,slow=7.3,SNR=14						
WMQ	**Urumqi**	**41.53**	**324**	*e*P	**P**	**16 36 53.8**	**+1.4**
WMQ				pP	**pP**	**16 37 12.0**	**+0.3**
WMQ				sP	**sP**	**16 37 21.0**	**+0.1**
WMQ				PP	**PnPn**	**16 38 34.0**	**-1.2**
WMQ				*e*S	**S**	**16 43 04.0**	**+1.6**
WMQ				pmax	pmax		
	comp=Z,18nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,100nm,5.3s						
WMQ				LR	LR		
	comp=N,300nm,10.0s						
WMQ				LR	LR		
	comp=E,260nm,11.6s						
WMQ				LR	LR		
	comp=Z,350nm,21.0s						
CTA	**Charters Tower**	**41.62**	**142**	P	**P**	**16 36 53.2**	**-0.1**
CTA	**Charters Tower**	**41.62**	**142**	P	**P**	**16 36 53.2**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=0.0,slow=13,SNR=2.3						
MK31	**Makanchi Array**	**46.36**	**324**	*e*P	**P**	**16 37 31.1**	**+0.2**
MKAR	**Makanchi Array**	**46.36**	**324**	P	**P**	**16 37 31.3**	**+0.3**
MKAR	**Makanchi Array**	**46.36**	**324**	P	**P**	**16 37 31.3**	**+0.3**
	comp=Z,14nm,0.8s,baz=130,slow=8.7,SNR=70						
MKAR				LR	LR	16 57 51.1	
	comp=Z,44nm,21.9s,baz=170,slow=37						
KZA	**Kyzart**	**48.63**	**315**	P	**P**	**16 37 50.5**	**+1.5**
	SNR=6.3						
TKM2	**Tokmak 2**	**48.72**	**316**	P	**P**	**16 37 50.6**	**+1.1**
	SNR=5.2						
KBK	**Karagaybulak**	**49.06**	**316**	P	**P**	**16 37 53.6**	**+1.5**
	SNR=7.2						
CHMS	**Chumysh**	**49.32**	**316**	P	**P**	**16 37 54.4**	**+0.5**
	SNR=6.3						
PETK	**Petropavlovsk-**	**49.39**	**29**	P	**P**	**16 37 53.1**	**-1.1**
PETK	**Petropavlovsk-**	**49.39**	**29**	P	**P**	**16 37 53.1**	**-1.1**
	comp=Z,7.2nm,1.2s,baz=228,slow=5.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**49.42**	**333**	P	**P**	**16 37 52.6**	**-1.8**
ZALV	**Zalesovo Beam**	**49.42**	**333**	P	**P**	**16 37 52.6**	**-1.8**
	comp=Z,2.3nm,0.6s,baz=121,slow=7.4,SNR=11						
ZALV				LR	LR	16 59 38.6	
	comp=Z,33nm,19.8s,baz=339,slow=37						
USP	**Ospenovka**	**49.59**	**316**	P	**P**	**16 37 56.8**	**+0.9**
	SNR=6.1						
AML	**Almayashu**	**49.72**	**315**	P	**P**	**16 37 58.9**	**+1.5**
	SNR=7.6						
KURBB	**Kurchatov Arra**	**50.53**	**326**	P	**P**	**16 38 02.9**	**0.0**
	comp=Z,18nm,0.9s,baz=125,slow=7.8,SNR=137						
KURK	**Kurchatov**	**50.53**	**327**	P	**P**	**16 38 02.9**	**0.0**
KKAR	**Karatay Array**	**52.26**	**315**	*e*P	**P**	**16 38 15.9**	**0.0**
KKAR				*e*pP	**pP**	**16 38 35.0**	**-1.0**
BRVK	**Borovoye**	**56.18**	**326**	*e*P	**P**	**16 38 44.1**	**-0.1**
	comp=Z,23nm,1.4s						
BRVK				pP	**pP**	**16 39 03.8**	**-0.6**
ABKAR	**Akbulak array**	**61.04**	**319**	*e*P	**P**	**16 39 18.0**	**-0.1**
KBZ	**Khabaz**	**72.16**	**312**	P	**P**	**16 40 28.5**	**-0.4**
KBZ	**Khabaz**	**72.16**	**312**	P	**P**	**16 40 28.5**	**-0.4**
	comp=Z,4.3nm,1.0s,baz=135,slow=2.9,SNR=6.0						
ILAR	**Eielson Array**	**79.12**	**26**	P	**P**	**16 41 06.4**	**-2.0**
ILAR	**Eielson Array**	**79.12**	**26**	P	**P**	**16 41 06.4**	**-2.0**
	comp=Z,0.2nm,0.5s,baz=305,slow=6.3,SNR=3.0						
BR131	**Keskin Array S**	**79.40**	**308**	*e*P	**P**	**16 41 10.4**	**-0.2**
	comp=Z,0.5nm,0.4s						
BRTR	**Keskin Array B**	**79.40**	**308**	P	**P**	**16 41 10.1**	**-0.5**
BRTR	**Keskin Array B**	**79.40**	**308**	P	**P**	**16 41 10.1**	**-0.5**
	comp=Z,1.3nm,0.8s,baz=98,slow=2.5,SNR=8.0						
ARCES	**ARCESS Array B**	**79.47**	**339**	P	**P**	**16 41 09.3**	**-0.8**
ARCES	**ARCESS Array B**	**79.47**	**339**	P	**P**	**16 41 09.3**	**-0.8**
	comp=Z,2.1nm,0.9s,baz=79,slow=6.9,SNR=3.9						
FINES	**FINESS Array B**	**80.64**	**331**	P	**P**	**16 41 15.5**	**-1.0**
FINES	**FINESS Array B**	**80.64**	**331**	P	**P**	**16 41 15.5**	**-1.0**
	comp=Z,1.9nm,1.0s,baz=45,slow=5.7,SNR=3.9						
FINES				LR	LR	17 16 38.8	
	comp=Z,44nm,18.9s,baz=79,slow=35						
BUR08	**Bucovina Ar. S**	**83.96**	**317**	*e*P	**P**	**16 41 33.8**	**-0.5**
NB2	**NORSAR Subarra**	**87.62**	**333**	P	**P**	**16 41 49.7**	**-2.4**
	comp=Z,1.4nm,0.7s,baz=71,slow=4.4						
NOA	**NORSAR Array B**	**87.62**	**333**	P	**P**	**16 41 50.0**	**-2.1**

	comp=Z,1.3nm,0.8s,baz=68,slow=4.6,SNR=5.8						
NOA				LR	LR	17 23 30.4	
	comp=Z,17nm,18.5s,baz=65,slow=37						
TORD	**Torodi Ar. Bea**	**114.09**	**291**	PKP	PKPdf	16 47 42.1	-1.7
TORD	**Torodi Ar. Bea**	**114.09**	**291**	PKP	PKPdf	16 47 42.1	-1.7
	comp=Z,0.4nm,0.6s,baz=71,slow=2.1,SNR=2.8						
TXAR	**Lajitas Array**	**119.77**	**45**	PKP	**PKPdf**	**16 47 53.3**	**-1.1**
TXAR	**Lajitas Array**	**119.77**	**45**	PKP	**PKPdf**	**16 47 53.3**	**-1.1**
	comp=Z,0.1nm,0.4s,baz=153,slow=0.4,SNR=6.0						
DBIC	**Dimbokro**	**122.41**	**287**	PKP	**PKPdf**	**16 47 59.0**	**-0.7**
DBIC	**Dimbokro**	**122.41**	**287**	PKP	**PKPdf**	**16 47 59.0**	**-0.7**
	comp=Z,1.8nm,0.8s,baz=61,slow=13,SNR=1.7						

NNC 29 16:32:37.7±4.3, 36.92N×70.41E, h0km, mb4.1, mpv3.5, 2C-4D, Error ellipse: s-maj=34.1km s-min=25.0km az=175.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KK31	**Karatay Array**	**6.18**	**1**	P	Pn	16 34 11.4	+1.1
	2.1nm,0.3s,baz=191,slow=18,SNR=41						
KK31				⇓S	Sn	16 35 23.5	+2.0
	1.1nm,0.3s,baz=188,slow=21,SNR=6.7						
TKM2	**Tokmak 2**	**7.19**	**32**	⇓P	Pn	16 34 24.1	-0.4
	2.3nm,0.8s						
TKM2				⇑S	Sn	16 35 47.2	+0.1
	7.4nm,0.8s						
AB31	**Akbulak array**	**14.49**	**332**	P	Pn	16 36 03.2	-0.8
	3.2nm,0.4s,baz=159,slow=11,SNR=132						
AB31				⇓S	Sn	16 38 44.1	-1.2
	0.5nm,0.4s,baz=154,slow=25,SNR=4.4						
AKTO	**Aktyubinsk**	**16.18**	**330**	⇑P	Pn	16 36 26.7	+0.3
	5.7nm,0.9s						
AKTO				⇓S	Sn	16 39 26.4	-0.1
	7.6nm,1.1s						

*ATH **29** 16:34:48.8, 36.22N×21.70E, h5km±4km, MD3.7/27, ML3.0*
*THE **29** 16:34:51.5, 36.33N×21.85E, h10km, ML3.0/3, Error ellipse: s-maj=1.4km s-min=0.7km az=44.0*
*CSEM **29** 16:34:51.5±0.7, 36.33N×21.85E, h2km, ML3.0/3, Error ellipse: s-maj=11.7km s-min=6.3km az=39.0*

ISC 29 16:34:50.5±1.6, 36.29N±0.05×21.81E±0.05, h2km±11km, n63, σ0.82/83, Southern Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.61**	**355**	P	**Pg**	**16 35 01.9**	**-0.2**
PYL				S	**Sg**	**16 35 10.4**	**+0.3**
PYL	**PYLOS**	**0.61**	**355**	*e*PB	**Pg**	**16 35 02.0**	**-0.2**
PYL				*e*SB	**Sb**	**16 35 11.8**	**-1.1**
PYL	**PYLOS**	**0.61**	**355**	*e*Pb	**Pg**	**16 35 02.0**	**-0.2**
PYL				*e*Sb	**Sb**	**16 35 11.8**	**-1.1**
DYR	**Agios Nikonas**	**0.64**	**42**	P	**Pg**	**16 35 02.6**	**-0.1**
DYR				S	**Sg**	**16 35 11.4**	**+0.5**
DYR	**Agios Nikonas**	**0.64**	**42**	*e*PG	**Pg**	**16 35 03.0**	**+0.3**
DYR				*e*SB	**Sb**	**16 35 13.5**	**-0.2**
DYR	**Agios Nikonas**	**0.64**	**42**	P	**Pg**	**16 35 02.6**	**-0.1**
DYR	**Agios Nikonas**	**0.64**	**42**	*e*Pg	**Pg**	**16 35 03.0**	**+0.3**
DYR				S	**Sg**	**16 35 11.4**	**+0.5**
DYR				*e*Sb	**Sb**	**16 35 13.5**	**-0.2**
ITM	**Ithomi**	**0.90**	**6**	P	**Pg**	**16 35 07.5**	**-0.2**
ITM				S	**Sb**	**16 35 20.4**	**-0.8**
ITM	**Ithomi**	**0.90**	**6**	*e*PB	**Pg**	**16 35 07.4**	**-0.2**
ITM				*e*SB	**Sb**	**16 35 21.8**	**+0.6**
ITM	**Ithomi**	**0.90**	**6**	P	**Pg**	**16 35 07.5**	**-0.2**
ITM				S	**Sb**	**16 35 20.4**	**-0.8**
ITM				*e*Sb	**Sb**	**16 35 21.8**	**+0.6**
KYTH	**Kithira**	**0.99**	**90**	P	**Pg**	**16 35 09.9**	**+0.4**
KYTH	**Kithira**	**0.99**	**90**	*e*PB	**Pg**	**16 35 09.9**	**+0.4**
KYTH	**Kithira**	**0.99**	**90**	P	**Pg**	**16 35 09.9**	**+0.4**
VLI	**Veliai**	**1.01**	**64**	P	**Pg**	**16 35 09.7**	**-0.1**
VLI				S	**Sb**	**16 35 23.5**	**-0.9**
VLI	**Veliai**	**1.01**	**64**	*e*PN	**Pg**	**16 35 09.9**	**+0.1**
VLI				*e*SB	**Sn**	**16 35 26.1**	**-0.3**
VLI	**Veliai**	**1.01**	**64**	P	**Pg**	**16 35 09.7**	**-0.1**
VLI				S	**Sb**	**16 35 23.5**	**-0.9**
VLI				*e*Sb	**Sn**	**16 35 26.1**	**-0.3**
VLX	**Vlachokerasia**	**1.17**	**23**	P	**Pg**	**16 35 12.5**	**-0.5**
VLX				S	**Sb**	**16 35 28.9**	**-0.4**
VLX	**Vlachokerasia**	**1.17**	**23**	*e*PG	**Pg**	**16 35 12.5**	**-0.5**
VLX	**Vlachokerasia**	**1.17**	**23**	P	**Pg**	**16 35 12.5**	**-0.5**
VLX				S	**Sb**	**16 35 28.9**	**-0.4**
AMT	**Artemida-Makis**	**1.25**	**356**	P	**Pg**	**16 35 13.6**	**-0.7**
AMT	**Artemida-Makis**	**1.25**	**356**	*e*PB	**Pg**	**16 35 13.6**	**-0.7**
AMT	**Artemida-Makis**	**1.25**	**356**	P	**Pg**	**16 35 13.6**	**-0.7**
ANKY	**Antikythira Is**	**1.28**	**109**	P	**Pg**	**16 35 14.7**	**-0.3**
ANKY				S	**Sb**	**16 35 32.0**	**-0.2**
ANKY	**Antikythira Is**	**1.28**	**109**	*e*PB	**Pg**	**16 35 14.7**	**-0.3**
ANKY	**Antikythira Is**	**1.28**	**109**	*e*Pb	**Pg**	**16 35 14.7**	**-0.3**
ANKY				S	**Sb**	**16 35 32.0**	**-0.2**
DID	**Didima**	**1.67**	**43**	*e*PG	**Pb**	**16 35 21.7**	**-0.3**
DID	**Didima**	**1.67**	**43**	*e*Pg	**Pb**	**16 35 21.7**	**-0.3**
GUR	**Goura**	**1.70**	**14**	*e*PN	**Pb**	**16 35 22.4**	**-0.1**
GUR	**Goura**	**1.70**	**14**	*e*Pn	**Pb**	**16 35 22.4**	**-0.1**
KLV	**Kalavryta, Ach**	**1.77**	**9**	*e*PG	**Pb**	**16 35 23.1**	**-0.7**
KLV	**Kalavryta, Ach**	**1.77**	**9**	*e*Pg	**Pb**	**16 35 23.1**	**-0.7**
RLS	**Riolos of Patr**	**1.79**	**351**	*e*PN	**Pg**	**16 35 25.0**	**+0.3**
RLS	**Riolos of Patr**	**1.79**	**351**	*e*Pn	**Pg**	**16 35 25.0**	**+0.3**
LAKA	**Lakka**	**1.95**	**4**	*e*PG	**Pb**	**16 35 27.2**	**+0.4**
LAKA	**Lakka**	**1.95**	**4**	*e*Pg	**Pb**	**16 35 27.2**	**+0.4**
LTK	**Loutraki**	**1.96**	**28**	*e*PN	**Pb**	**16 35 26.3**	**-0.7**
LTK	**Loutraki**	**1.96**	**28**	*e*Pn	**Pb**	**16 35 26.3**	**-0.7**
NAIG	**Nisos Aigina**	**1.99**	**42**	*e*PG	**Pg**	**16 35 28.8**	**+0.1**
NAIG	**Nisos Aigina**	**1.99**	**42**	*e*Pg	**Pg**	**16 35 28.8**	**+0.1**
TRIZ	**Trizonia**	**2.08**	**6**	*e*PB	**Pn**	**16 35 26.0**	**-0.4**
TRIZ	**Trizonia**	**2.08**	**6**	*e*Pb	**Pn**	**16 35 26.0**	**-0.4**
KALE	**Kalithea**	**2.12**	**7**	*e*PG	**Pb**	**16 35 29.6**	**0.0**
KALE	**Kalithea**	**2.12**	**7**	*e*Pg	**Pb**	**16 35 29.6**	**0.0**
VLS	**Valsamata**	**2.12**	**333**	*e*PN	**Pn**	**16 35 27.2**	**+0.2**
VLS	**Valsamata**	**2.12**	**333**	*e*Pn	**Pn**	**16 35 27.2**	**+0.2**
EFP	**Efpalio**	**2.14**	**2**	*e*PG	**Pb**	**16 35 30.4**	**+0.5**
EFP	**Efpalio**	**2.14**	**2**	*e*Pg	**Pb**	**16 35 30.4**	**+0.5**
ATH	**Athens Observa**	**2.27**	**42**	*e*PN	**Pb**	**16 35 30.6**	**-1.6**
ATH				*e*SN	**Sb**	**16 36 01.7**	**+1.0**
ATH	**Athens Observa**	**2.27**	**42**	*e*Pn	**Pb**	**16 35 30.6**	**-1.6**
LKR	**Lokris**	**2.54**	**22**	*e*PN	**Pb**	**16 35 35.6**	**-1.2**
LKR	**Lokris**	**2.54**	**22**	*e*Pn	**Pb**	**16 35 35.6**	**-1.2**
EVR	**Evrytania**	**2.62**	**0**	*e*PB	**Pn**	**16 35 34.2**	**+0.2**
EVR	**Evrytania**	**2.62**	**0**	*e*Pb	**Pn**	**16 35 34.2**	**+0.2**
AGG	**Agios Georgios**	**2.76**	**9**	*e*PN	**Pb**	**16 35 38.8**	**-1.8**
AGG	**Agios Georgios**	**2.76**	**9**	*e*Pn	**Pb**	**16 35 38.8**	**-1.8**
APE	**Apeiranthos**	**3.09**	**74**	*e*PB	**Pn**	**16 35 40.9**	**+0.5**
APE	**Apeiranthos**	**3.09**	**74**	*e*Pb	**Pn**	**16 35 40.9**	**+0.5**
THL	**Klokotos Trika**	**3.28**	**3**	*e*PN	**Pn**	**16 35 44.5**	**+1.7**
THL	**Klokotos Trika**	**3.28**	**3**	*e*Pn	**Pn**	**16 35 44.5**	**+1.7**
FNA	**Florina**	**4.50**	**356**	*e*PN	**Pn**	**16 36 01.6**	**+1.9**
FNA	**Florina**	**4.50**	**356**	*e*Pn	**Pn**	**16 36 01.6**	**+1.9**
GRG	**Griva**	**4.69**	**6**	*e*PN	**Pn**	**16 36 04.5**	**+2.3**
GRG	**Griva**	**4.69**	**6**	*e*Pn	**Pn**	**16 36 04.5**	**+2.3**

KRSC 29 16:42:27.2±0.8, 50.55N×157.02E, h36km±35km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.59**	**283**	*e*P	Pn	16 42 38.1	-1.1
SKR				*e*S	Sn	16 42 46.7	-0.8
PAU	**Pauzhetka**	**0.93**	**352**	*e*P	Pn	16 42 45.1	+1.4
PAU				*e*S	Sn	16 42 58.8	+3.0
ASAK	**Asacha**	**1.92**	**16**	P	Pn	16 42 59.5	+2.1
ASAK				S	Sn	16 43 22.7	+2.4
MTVR	**Mutnovka**	**2.07**	**20**	P	Pn	16 43 01.3	+1.8
MTVR				*e*S	Sn	16 43 26.6	+2.4
RUS	**Russkaya**	**2.10**	**26**	P	Pn	16 43 01.1	+1.3
RUS				*e*S	Sn	16 43 26.3	+1.6
APC	**Apacha**	**2.38**	**2**	S	Sn	16 43 35.6	+4.1
PET	**Petropavlovsk**	**2.68**	**22**	S	Sn	16 43 42.3	+3.5
UGLR	**Uglovaya**	**2.89**	**22**	P	Pn	16 43 14.1	+3.3
NLC	**Nalytchevo**	**3.00**	**28**	S	Sn	16 43 48.5	+1.9
SPN	**Mys Shipunski**	**3.16**	**35**	P	Pn	16 43 16.2	+1.9
SPN				S	Sn	16 43 52.3	+1.6
MKZ	**Mys Kozlova**	**4.94**	**34**	P	Pn	16 43 39.7	+1.0

TAP 29 16:57:04.8, 24.19N×121.72E, h13km±2km, ML1.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.16**	**225**	*i* P	Pg	16 57 08.7	+0.1
	baz=223						
TWD				*i* S	Sg	16 57 11.0	-0.2
	baz=223						
ENA	**Nanau**	**0.24**	**5**	P	Pg	16 57 09.5	-0.4
	baz=6.0						
ENA				*i* S	Sg	16 57 13.5	+0.2
	baz=6.0						
NNS	**Nan Shan**	**0.40**	**308**	*e*P	Pg	16 57 12.4	-0.7
	baz=308						
WHF	**Hehuan Shan**	**0.42**	**264**	P	Pg	16 57 12.9	-0.8
	baz=263						

TAP 29 16:57:10.7, 24.22N×121.73E, h15km±1km, ML1.7, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	**0.19**	**220**	*i* P	Pg	16 57 15.1	-0.1
	baz=218						
TWD				*i* S	Sg	16 57 18.1	0.0
	baz=218						
ENA	**Nanau**	**0.20**	**4**	*e*P	Pg	16 57 15.1	-0.4
	baz=5.0						
ENA				*e*S	Sg	16 57 18.6	0.0
	baz=5.0						
NNS	**Nan Shan**	**0.39**	**304**	*e*P	Pg	16 57 18.5	-0.3
	baz=303						
NNS				*e*S	Sg	16 57 24.2	-0.1
	baz=303						
WHF	**Hehuan Shan**	**0.43**	**260**	*e*P	Pg	16 57 18.9	-1.0
	baz=259						
WHF				*e*S	Sg	16 57 24.9	-1.3
	baz=259						

*SZGRF **29** 17:21:25.1, 25.53S×175.14W, h33km, South of Tonga Islands*
*IDC **29** 17:21:43.6±2.4, 23.61S×176.60W, h59km±20km, mb4.3/21, mb1 4.5/23, mb1mx4.4/28, mbtmp4.3/23, ML4.9/2, MS3.5/6, Ms1 3.5/6, ms1mx3.2/29, Error ellipse: s-maj=14.3km s-min=13.5km az=129.0*
*ISCJB **29** 17:21:45.4±0.3, 23.72S±0.07×176.72W±0.06, h86km, mb4.6/59, Error ellipse: s-maj=10.1km s-min=6.4km az=149.0*
*NEIC **29** 17:21:48.6±1.6, 23.72S×176.69W, h104km±13km, mb4.7/33, Error ellipse: s-maj=9.8km s-min=7.0km az=133.0*
*BJI **29** 17:21:49.9, 23.70S×176.70W, h115km, mB4.8/7, mb4.9/14*

ISC 29 17:21:46.5±0.3, 23.71S±0.07×176.61W±0.06, h86km, n361, σ1.04/374, mb4.7/59, 103C-112D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.64**	**192**	S	Sn	17 24 18.1	+6.9
	94nm,0.3s,baz=75,slow=20,SNR=2.6						
MSVF	**Nonsavu**	**7.77**	**319**	*e*Pn	**Pn**	**17 23 39.8**	**+2.8**
AFI	**Afiamalu**	**10.77**	**26**	P	Pn	17 24 09.8	-8.1
AFI				S	Sn	17 26 02.8	-14
AFI	**Afiamalu**	**10.77**	**26**	P	Pn	17 24 09.8	-8.1
	9.6nm,0.3s,baz=332,slow=3.5,SNR=12						
AFI				S	Sn	17 26 02.8	-14
	11nm,0.3s,baz=122,slow=19,SNR=5.1						
AFI				LR	LR	17 27 35.1	
	comp=Z,168nm,20.4s,baz=102,slow=33						
URZ	**Urewera**	**15.46**	**199**	P	**Pn**	**17 25 18.2**	**-1.4**
URZ				S	Sn	17 27 57.7	-12
URZ	**Urewera**	**15.46**	**199**	P	**Pn**	**17 25 18.2**	**-1.4**
	1.9nm,0.3s,baz=138,slow=20,SNR=6.3						
URZ				S	Sn	17 27 57.7	-12
	1.5nm,0.3s,baz=115,slow=18,SNR=4.8						
URZ				LR	LR	17 29 34.5	
	comp=Z,71nm,18.2s,baz=145,slow=30						
RAR	**Rarotonga**	**15.76**	**84**	P	**Pn**	**17 25 20.6**	**-3.0**
RAR				S	Sn	17 27 58.8	-19
RAR	**Rarotonga**	**15.76**	**84**	P	**Pn**	**17 25 20.6**	**-3.0**
	10nm,0.3s,baz=253,slow=8.3,SNR=7.7						
RAR				S	Sn	17 27 58.8	-19
	4.5nm,0.3s,baz=238,slow=19,SNR=7.3						
RPZ	**Rata Peaks**	**22.39**	**204**	P	**P**	**17 26 36.6**	**-1.2**
RPZ	**Rata Peaks**	**22.39**	**204**	P	**P**	**17 26 36.6**	**-1.2**
	3.6nm,0.4s,baz=66,slow=18,SNR=5.0						
TBI	**Tubuai**	**24.88**	**95**	*e*LR	LR	17 32 52.4

PKM Peak Mountain 79.35 44 ⇓P P 17 33 43.8 +0.5
baz=80
PETK Petropavlovsk- 79.69 345 P P 17 33 43.8 -0.7
PETK Petropavlovsk- 79.69 345 P P 17 33 43.8 -0.7
4.8nm,0.8s,baz=133,slow=8.3,SNR=7.0
MURC Murrieta 80.27 47 ⇓P P 17 33 48.7 +0.7
baz=80
BFSC Mount Baldy Ra 80.35 46 ⇓P P 17 33 49.0 +0.4
baz=81
MONP Monument Peak 80.37 48 ⇑P P 17 33 49.5 +0.6
baz=81
VES Vestal, Richgr 80.40 44 ⇓P P 17 33 49.4 +0.8
baz=81
DVTC Desert V Tower 80.45 48 ⇓P P 17 33 49.8 +0.7
baz=81
EDW2 Edwards Air Fo 80.52 45 ⇑P P 17 33 50.1 +0.6
baz=81,SNR=9.5
ISA Isabella 80.68 44 eP P 17 33 50.9 +0.6
13nm,0.9s
ISA Isabella 80.68 44 ⇓P P 17 33 51.1 +0.8
baz=81,SNR=15
PFO Pinyon Flat Ob 80.77 47 ⇑P P 17 33 51.5 +0.6
baz=81
CMB Columbia Colle 80.97 42 eP P 17 33 50.4 -1.3
5.6nm,0.6s
LRMC Laurel Mountai 81.08 45 ⇓P P 17 33 53.2 +0.7
baz=81
BELC Belle Mtn. Jos 81.31 47 ⇑P P 17 33 54.6 +0.8
baz=82,SNR=6.3
BC3 Big Chuckawall 81.48 48 ⇓P P 17 33 55.5 +1.0
baz=82
GSC Goldstone 81.55 46 ⇑P P 17 33 55.5 +0.6
baz=82
GLA Glamis 81.55 48 ⇓P P 17 33 56.2 +1.3
baz=82
MPMC Manual Prospec 81.56 45 ⇑P P 17 33 55.9 +0.8
baz=82,SNR=14
HEC Hector,Ludlow 81.58 46 ⇑P P 17 33 55.5 +0.5
baz=82,SNR=8.3
MTUM Tungsten Hills 81.67 43 eP P 17 33 56.9 +1.3
WAKR Walker 81.84 42 eP P 17 33 57.5 +0.9
IRM Iron Mountain 81.97 47 ⇑P P 17 33 58.2 +1.1
baz=82
GMRC Granite Mounta 82.00 47 ⇓P P 17 33 58.1 +0.8
baz=82
113A Mohawk Valley, 82.12 49 ⇑P P 17 33 58.9 +1.1
baz=82
Y12C Blythe 82.16 48 ⇑P P 17 33 59.0 +1.0
baz=82
GRAC Grapevine Rang 82.20 44 ⇑P P 17 33 59.2 +1.0
baz=82
TUQ Turquoise Moun 82.21 46 ⇑P P 17 33 59.3 +0.9
baz=82
FURC Furnace Creek, 82.21 45 ⇑P P 17 33 59.2 +1.0
baz=82
USRK Ussuriysk Arra 82.33 325 P P 17 33 58.7 +0.1
3.1nm,0.7s,baz=126,slow=5.2,SNR=7.3
NVAR Mina Array Bea 82.49 42 P P 17 34 00.5 +0.6
NVAR Mina Array Bea 82.49 42 P P 17 34 00.5 +0.6
7.7nm,1.0s,baz=223,slow=8.7,SNR=28
PAHR Pah Rah Range 82.63 41 eP P 17 34 01.5 +1.0
9.8nm,0.9s
NEE2 Needles Airpor 82.69 47 ⇓P P 17 34 01.6 +0.8
baz=83
PDMCI Parker Dam,Lak 82.74 48 ⇓P P 17 34 02.1 +1.1
baz=83
Z14A Wintersburg 83.03 49 ⇓P P 17 34 03.5 +1.0
baz=83
Y14A Wickenburg 83.31 49 ⇑P P 17 34 05.0 +1.0
baz=84,SNR=8.1
SHPR Sheep Range 83.33 45 eP P 17 34 05.7 +1.5
QIZ Qiongzhong 83.34 294 P P 17 34 06.0 +1.5
QIZ S S 17 44 17.0 -1.8
QIZ pmax pmax
comp=Z,17nm,1.8s
W13A Hualapai Mount 83.37 47 ⇓P P 17 34 05.4 +0.9
baz=84,SNR=6.8
MOD Modoc 83.48 39 eP P 17 34 04.9 0.0
comp=Z,13nm,1.0s
TUC Tucson 83.97 51 eP P 17 34 07.7 +0.2
comp=Z,40nm,0.9s
319A Douglas 84.55 52 ⇑P P 17 34 11.8 +1.3
baz=85,SNR=6.8
X16A Lo Mia Camp, P 84.65 49 ⇓P P 17 34 12.3 +1.3
baz=85,SNR=14
SNAA Sanae 84.77 178 eP P 17 34 09.1 -1.8
comp=Z,5.6nm,1.0s
SNAA Sanae 84.77 178 P P 17 34 10.7 -0.3
comp=Z,2.0nm,1.0s,baz=214,slow=2.2,SNR=12
WVOR Wild Horse Val 84.78 39 eP P 17 34 12.0 +0.6
comp=Z,14nm,1.0s
IPM Ipoh 84.81 277 eP P 17 34 13.1 +1.0
comp=Z,9.6nm,0.7s
320A Kipp Ranch, An 85.08 53 ⇓P P 17 34 14.6 +1.4
baz=85,SNR=8.0
CCUT Cedar City 85.11 45 eP P 17 34 13.9 +0.6
comp=Z,8.9nm,1.1s
U15A North Rim 85.19 47 ⇑P P 17 34 15.0 +1.2
baz=85,SNR=13
ARUT Antelope Range 85.20 45 eP P 17 34 15.2 +1.5
comp=Z,3.3nm,0.9s
220A Playas Peak, P 85.38 52 ⇓P P 17 34 16.0 +1.4
baz=86,SNR=8.2
CN2 Changchun 85.62 322 eP P 17 34 16.8 +1.4
120A U Bar Ranch, L 85.63 52 ⇓P P 17 34 17.4 +1.4
baz=86,SNR=6.7
X18A Snowflake 85.75 49 ⇑P P 17 34 17.4 +0.9
baz=86
ELK Elko 85.78 42 eP P 17 34 17.2 +0.7
comp=Z,7.1nm,1.4s
Z20A Nine Sixteen R 85.96 51 ⇑P P 17 34 19.1 +1.6
baz=86,SNR=7.5
PLCA Paso Flores 86.14 133 P P 17 34 19.8 +1.4
PLCA Paso Flores 86.14 133 P P 17 34 19.8 +1.4
comp=Z,2.3nm,0.9s,baz=259,slow=6.2,SNR=3.4
121A Cookes Peak, D 86.24 52 ⇓P P 17 34 20.0 +1.0
baz=86
MVU Marysvale 86.40 45 eP P 17 34 18.9 -0.8
comp=Z,5.5nm,1.1s
MSU Marysvale 86.43 45 eP P 17 34 20.2 +0.4
Y20A Horse Springs, 86.53 51 ⇓P P 17 34 21.8 +1.4
baz=87,SNR=12
Z21A St. Cloud Mine 86.72 52 ⇑P P 17 34 22.5 +1.2
baz=87
X20A Quemado 86.77 50 ⇓P P 17 34 22.8 +1.2
baz=87,SNR=8.8
122A Conniff Cattle 86.89 52 ⇓P P 17 34 23.3 +1.2
baz=87
MFID Camas Ranch 87.01 40 ⇓P P 17 34 23.1 +0.7
baz=87
W20A Ramah 87.07 50 ⇑P P 17 34 24.1 +1.1
baz=87,SNR=5.9
Y21A Point of Rocks 87.08 51 ⇓P P 17 34 24.4 +1.3
baz=87,SNR=6.0
Z22A Elephant Butte 87.20 52 ⇓P P 17 34 24.7 +1.1
baz=87,SNR=8.2
X21A Alamocita Cree 87.22 50 ⇓P P 17 34 24.7 +0.9
baz=88
324A Moseley Ranch, 87.37 54 ⇑P P 17 34 24.9 +0.5
baz=88
425A Indio Mountain 87.42 55 ⇓P P 17 34 25.6 +0.9
baz=88
V20A Brimhall 87.45 49 ⇑P P 17 34 25.3 +0.4
baz=88
626A Big Bend Ranch 87.47 56 ⇑P P 17 34 25.7 +0.8
baz=88,SNR=11
TMUT Trail Mountain 87.49 45 eP P 17 34 25.9 +0.9
comp=Z,207nm,1.2s
Y22A Socorro 87.55 51 ⇑P P 17 34 25.8 +0.5
baz=88
I12A Atlanta 87.64 40 ⇑P P 17 34 25.8 +0.3
baz=88
U20A Newcomb 87.72 49 ⇓P P 17 34 26.7 +0.6
baz=88
TXAR Lajitas Array 87.72 57 P P 17 34 27.2 +1.1
TXAR Lajitas Array 87.72 57 P P 17 34 27.2 +1.1
comp=Z,4.8nm,0.9s,baz=216,slow=6.2,SNR=31
325A Bean Ranch, Si 87.72 54 ⇑P P 17 34 26.5 +0.3
baz=88,SNR=6.8
Z23A Rita Site, Whi 87.73 52 ⇑P P 17 34 26.8 +0.7
baz=88
526A Mary Lane Ranc 87.75 56 ⇑P P 17 34 26.9 +0.6
baz=88
X22A Bernardo 87.80 51 ⇑P P 17 34 27.8 +1.3
baz=88
SRU San Rafael 87.83 45 eP P 17 34 26.3 -0.2
comp=Z,12nm,0.9s
SRU San Rafael 87.83 45 ⇓P P 17 34 27.1 +0.5
baz=88
BNM Barren Site 87.89 51 eP P 17 34 27.8 +0.8
comp=Z,5.1nm,1.2s
627A Terlingua Ranc 87.99 57 ⇓P P 17 34 27.9 +0.5
baz=88,SNR=7.1
124A Stringfield Ra 88.02 53 ⇑P P 17 34 28.1 +0.5
baz=88
426A McDonald Obser 88.08 55 ⇓P P 17 34 28.5 +0.5
baz=88,SNR=6.0
527A Woodward Ranch 88.15 56 ⇑P P 17 34 28.6 +0.4
baz=88,SNR=6.7
225A Deer Hill, Car 88.19 54 ⇑P P 17 34 28.9 +0.5
baz=88
Y23A Lovelace Mesa, 88.20 52 ⇑P P 17 34 28.9 +0.5
baz=88,SNR=5.3
H12A Diamond D Ranc 88.25 39 ⇑P P 17 34 28.4 0.0
baz=88
G12A Big Creek, Yel 88.32 38 ⇓P P 17 34 28.9 +0.2
baz=89
U21A Nageezi 88.34 49 ⇓P P 17 34 29.7 +0.7
baz=89,SNR=6.2
628A Black Gap, Mar 88.39 57 ⇑P P 17 34 29.9 +0.7
baz=89,SNR=5.2
Z24A Sheeppen Canyo 88.39 52 ⇑P P 17 34 30.1 +0.7
baz=89
ANMO Albuquerque 88.42 51 eP P 17 34 29.9 +0.4
comp=Z,6.2nm,0.9s
326A Caldwell Ranch 88.43 55 ⇑P P 17 34 29.6 +0.2
baz=89
125A Gardner Draw, 88.58 53 ⇓P P 17 34 30.7 +0.6
baz=89
S20A Disappointment 88.58 47 ⇓P P 17 34 30.5 +0.3
baz=89
V22A San Miguel Ran 88.59 50 ⇓P P 17 34 30.6 +0.3
baz=89
Y24A Capitan 88.64 52 ⇑P P 17 34 31.3 +0.8
baz=89,SNR=15
427A Hayter Ranch, 88.64 55 ⇓P P 17 34 31.2 +0.8
baz=89,SNR=8.7
226B Tecolote Peak, 88.66 54 ⇓P P 17 34 31.0 +0.5
baz=89
I14A Mackay 88.71 40 ⇓P P 17 34 30.8 +0.3
baz=89
528A Cox Ranch, San 88.78 56 ⇑P P 17 34 31.8 +0.6
baz=89
Z25A Roswell 88.84 53 ⇓P P 17 34 32.4 +1.0
baz=89,SNR=5.6
S21A Coal Bank Pass 88.88 48 ⇑P P 17 34 31.7 0.0
baz=89
E12A Beaver Dam Sad 88.95 37 ⇓P P 17 34 31.4 -0.2
baz=89
V23A Ortiz Mt. (NFS 89.02 50 ⇑P P 17 34 32.7 +0.4
baz=89
M17A Scullys Gap (B 89.03 43 ⇑P P 17 34 32.2 0.0
baz=89
BJI Beijing 89.07 315 P P 17 34 32.0 0.0
BJI pmax pmax
comp=Z,6.0nm,0.7s
BJI pmax pmax
comp=Z,70nm,3.9s
428A Kincaid Ranch, 89.13 56 ⇓P P 17 34 33.2 +0.5
baz=89
Y25A Mesa, Roswell 89.17 52 ⇑P P 17 34 33.4 +0.5
baz=89,SNR=9.7
529A Stev Forest Ra 89.20 57 ⇓P P 17 34 33.3 +0.2
baz=89
NEW Newport 89.23 35 ⇑P P 17 34 32.6 -0.1
baz=90
W24A Lazy 6 Ranch, 89.30 51 ⇑P P 17 34 34.2 +0.6
baz=90
328A Wristen Ranch, 89.34 55 ⇑P P 17 34 34.1 +0.5
baz=90
GYA Guiyang 89.34 299 eP P 17 34 33.8 -0.1
GYA pP pP 17 35 05.0 +8.1
GYA sP sP 17 35 18.0 +12
GYA PP PP 17 38 09.5 +3.4
GYA SKS SKSac 17 44 52.8 -3.8
GYA S SKKSac 17 45 11.5 +2.4
GYA pmax pmax
comp=Z,10.0nm,1.0s
Z26A Caprock 89.38 53 ⇓P P 17 34 34.3 +0.4
baz=90,SNR=9.0
O19A Miners Draw (B 89.38 45 ⇑P P 17 34 34.0 +0.2
baz=90
R21A Cimarron 89.41 47 ⇑P P 17 34 34.5 +0.4
baz=90
C11A Tepee Creek (N 89.43 36 ⇑P P 17 34 34.0 +0.3
baz=90,SNR=9.9
D12A Red Ives Fores 89.45 37 ⇓P P 17 34 34.2 +0.4
baz=90
X25A Clemmons Ranch 89.49 52 ⇑P P 17 34 34.8 +0.4
baz=90
127A Arkansas Junct 89.55 54 ⇓P P 17 34 35.2 +0.5
baz=90
MCMT McKenzie Canyo 89.58 40 eP P 17 34 35.0 +0.3
comp=Z,3.4nm,1.1s
S22A 4UR Ranch, Cre 89.58 48 ⇓P P 17 34 35.1 +0.1
baz=90
V24A Rampart Ranch, 89.65 50 ⇑P P 17 34 35.6 +0.4
baz=90
429A Davenport Ranc 89.68 56 ⇓P P 17 34 35.5 +0.2
baz=90,SNR=7.7
Y26A Elib 89.81 53 ⇓P P 17 34 36.1 +0.2
baz=90,SNR=5.4
F14A Wisdom 89.84 39 ⇓P P 17 34 35.9 +0.1
baz=90
PAX Paxson 89.85 14 eP P 17 34 35.2 -0.1
comp=Z,5.3nm,1.0s
O20A White River Ci 89.87 45 ⇑P P 17 34 36.1 0.0
baz=90
R22A Saguache, Gunn 89.88 48 ⇑P P 17 34 36.5 +0.2
baz=90
Z27A Tatum 89.96 53 ⇓P P 17 34 36.9 +0.4
baz=90
D13A Huson 89.97 37 ⇓P P 17 34 36.6 +0.4
baz=90
W25A X Bar L Ranch, 89.97 51 ⇓P P 17 34 36.8 +0.1
baz=90
329A Wagon Wheel Ra 90.02 55 ⇑P P 17 34 37.1 +0.3
baz=90
DLMT Dillon 90.03 39 eP P 17 34 36.4 -0.2
comp=Z,6.0nm,1.0s
MSO Missoula 90.10 38 ⇓P P 17 34 37.3 +0.4
baz=90
631A Perdido Creek 90.14 58 ⇓P P 17 34 37.5 +0.2
baz=90,SNR=5.7
V25A Rancho No Teng 90.17 51 ⇓P P 17 34 37.9 +0.3
baz=90
128A Castleberry Fa 90.17 54 ⇓P P 17 34 38.3 +0.7
baz=90
IMW Indian Meadow 90.19 41 eP P 17 34 38.2 +0.6
comp=Z,7.6nm,1.1s
L19A Farson 90.19 43 ⇓P P 17 34 37.3 -0.2
baz=90
MENT Mentasta 90.21 14 eP P 17 34 37.2 +0.3
N20A Spence Gulch, 90.22 45 ⇑P P 17 34 38.0 +0.3
baz=90
C13A Hot Springs 90.25 37 ⇓P P 17 34 38.4 +0.9
baz=90
430A Baggett Ranch, 90.26 56 ⇑P P 17 34 38.6 +0.6
baz=90
Y27A Causey 90.27 53 ⇓P P 17 34 38.2 +0.2
baz=90,SNR=10.0
732A Laxson Ranch, 90.30 59 ⇑P P 17 34 38.9 +0.8
baz=90
F15A Butte 90.36 39 ⇓P P 17 34 38.4 +0.1
baz=91
W26A Owens Ranch, T 90.41 52 ⇓P P 17 34 39.4 +0.7
baz=91
QLMT Earthquake Lak 90.41 40 eP P 17 34 38.1 -0.4
comp=Z,0.4nm,0.5s
BW06 Boulder Array 90.42 43 eP P 17 34 38.1 -0.6
PDAR Pinedale Array 90.42 43 P P 17 34 38.2 -0.4
PDAR Pinedale Array 90.42 43 P P 17 34 38.2 -0.4
comp=Z,3.1nm,0.9s,baz=204,slow=3.3,SNR=14
H16A Russell Place, 90.45 40 ⇓P P 17 34 39.6 +0.9
baz=91,SNR=6.0
R23A Moffat 90.49 48 ⇑P P 17 34 39.1 -0.1
baz=91
D14A Greenough 90.49 38 ⇓P P 17 34 38.4 -0.4
baz=91,SNR=5.8
531A Rocksprings 90.50 57 ⇑P P 17 34 39.7 +0.6
baz=91
CHMT Chamberlain Mo 90.54 38 eP P 17 34 39.2 +0.1
U25A Circle Dot Ran 90.59 50 ⇓P P 17 34 39.7 +0.2
baz=91
330A Mertzon 90.59 56 ⇓P P 17 34 39.7 +0.2
baz=91
MSTX Muleshoe 90.59 53 ⇑P P 17 34 40.3 +0.8
baz=91
M20A Sweetwater, Wa 90.61 44 ⇑P P 17 34 39.8 +0.2
baz=91
S24A Houchin Ranch, 90.64 49 ⇑P P 17 34 40.4 +0.5
baz=91
N21A Black Mountain 90.67 45 ⇑P P 17 34 40.0 +0.2
baz=91
X27A F and S Farms, 90.68 52 ⇑P P 17 34 40.4 +0.4
baz=91
V26A Tequesquite Ra 90.74 51 ⇓P P 17 34 40.2 +0.1
baz=91
BOZ Bozeman (W) 90.75 39 eP P 17 34 40.2 +0.2
comp=Z,7.7nm,0.9s
DOT Dot Lake 90.75 14 eP P 17 34 37.8 -1.6
comp=Z,8.4nm,0.9s
L20A Wamsutter 90.79 44 ⇓P P 17 34 40.7 +0.3
baz=91
632A Uvalde 90.79 58 ⇑P P 17 34 40.8 +0.4
baz=91
230A Sterling City 90.86 55 ⇑P P 17 34 41.7 +0.9
baz=91
W27A Bowe Ranch, En 90.90 52 ⇓P P 17 34 41.4 +0.4
baz=91
T25A Trinidad 90.95 50 ⇑P P 17 34 41.4 +0.2
baz=91
Y28A McKinney Farm, 90.95 53 ⇓P P 17 34 41.4 +0.2
baz=91
532A Rocksprings 90.98 57 ⇑P P 17 34 41.6 +0.2
baz=91,SNR=7.4
O22A Kremmling 91.00 46 ⇓P P 17 34 41.8 +0.3
baz=91
J19A Crowheart 91.00 42 ⇓P P 17 34 41.5 +0.2
baz=91
D15A Lincoln 91.02 38 ⇓P P 17 34 41.3 0.0
baz=91
Z29A Hungry Hill Ra 91.05 54 ⇑P P 17 34 42.0 +0.4
baz=91
U26A Atchley Ranch, 91.05 50 ⇑P P 17 34 41.7 0.0
baz=91
COLA College 91.06 12 eP P 17 34 40.0 -0.7
comp=Z,4.6nm,0.8s
ILAR Eielson Array 91.16 12 P P 17 34 40.5 -0.7
ILAR Eielson Array 91.16 12 P P 17 34 40.5 -0.7
comp=Z,3.4nm,1.0s,baz=224,slow=5.1,SNR=18
S25A Robets Cordova 91.18 49 ⇑P P 17 34 42.8 +0.5
baz=91
M21A Separation Pea 91.20 45 ⇑P P 17 34 42.9 +0.6
baz=92
E16A East Helena 91.22 39 ⇓P P 17 34 42.5 +0.3
baz=92
JCT Junction City 91.22 57 eP P 17 34 41.9 -0.5
comp=Z,4.5nm,0.8s
JCT Junction City 91.22 57 ⇓P P 17 34 42.7 +0.3
baz=91
Y29A Porterfield Fa 91.35 53 ⇓P P 17 34 43.7 +0.6
baz=92
B14A Marquette Ranc 91.36 37 ⇑P P 17 34 42.5 -0.3
baz=92,SNR=5.8
N22A Wattenberg Ran 91.38 46 ⇓P P 17 34 43.3 +0.1
baz=92
H18A Shoshone NF, C 91.38 41 ⇓P P 17 34 43.0 -0.1
baz=92
C15A Salmond Ranch, 91.39 37 ⇓P P 17 34 43.1 +0.2
baz=92
432A Menard 91.40 57 ⇑P P 17 34 44.4 +1.1
baz=92
I19A Meeteetse 91.45 42 ⇓P P 17 34 43.8 +0.4
baz=92
F17A Fitzpatrick Pl 91.46 40 ⇓P P 17 34 43.8 +0.5
baz=92
231A Bronte 91.48 56 ⇓P P 17 34 44.3 +0.7
baz=92
Z30A Sanderson Ranc 91.49 54 ⇑P P 17 34 43.7 +0.1
baz=92
D16A Dana Ranch, Ca 91.57 38 ⇓P P 17 34 44.1 +0.4
baz=92,SNR=5.6
X29A Tulia 91.60 53 ⇑P P 17 34 44.6 +0.5
baz=92
W28A Vega 91.61 52 ⇑P P 17 34 44.5 +0.3
baz=92
A14A Double T Ranch 91.63 36 ⇑P P 17 34 43.8 -0.1
baz=92
E17A Martinsdale 91.65 39 ⇓P P 17 34 44.4 +0.2
baz=92
J20A Shoshoni 91.65 43 ⇑P P 17 34 44.5 +0.3
baz=92,SNR=5.9
332A Millersview 91.67 56 ⇑P P 17 34 44.6 +0.1
baz=92
U27A Thompson Grove 91.72 51 ⇓P P 17 34 44.5 -0.2
baz=92
131A Roby 91.76 55 ⇑P P 17 34 45.5 +0.6
baz=92
N23A Red Feather La 91.76 46 ⇓P P 17 34 45.0 +0.1
baz=92
G18A Lazy EL Ranch, 91.79 41 ⇑P P 17 34 45.1 +0.2
baz=92
S26A Kim 91.83 49 ⇓P P 17 34 45.8 +0.6
baz=92
C16A Fuhringer Ranc 91.89 38 ⇓P P 17 34 45.5 +0.3
baz=92
Q25A Bedland, Calha 91.92 48 ⇓P P 17 34 45.5 -0.2
baz=92
Y30A Stafford Cattl 91.93 54 ⇓P P 17 34 45.9 +0.2
baz=92
I20A Worland 91.94 42 ⇑P P 17 34 46.0 +0.5
baz=92
W29A Amraillo 91.95 52 ⇓P P 17 34 46.4 +0.6
baz=92
232A Coleman 91.97 56 ⇑P P 17 34 46.0 +0.2
baz=92
A15A Johnson Ranch, 92.00 36 ⇑P P 17 34 45.7 0.0
baz=92
F18A Big Timber 92.01 40 ⇓P P 17 34 45.9 +0.1
baz=92
L22A Ellis Ranch, M 92.02 45 ⇑P P 17 34 46.7 +0.6
baz=92
J21A Lysite 92.05 43 ⇓P P 17 34 46.2 +0.1
baz=92,SNR=5.3
D17A Six Diamond Ra 92.12 39 ⇓P P 17 34 46.7 +0.3
baz=92,SNR=6.5
U28A Mallet 92.12 51 ⇑P P 17 34 47.4 +0.8
baz=92
R26A Arlington 92.18 49 ⇓P P 17 34 47.2 +0.4
baz=92
X30A Coker Ranch, T 92.21 53 ⇓P P 17 34 47.0 +0.1
baz=92
Z31A Sharp Cattle R 92.24 55 ⇑P P 17 34 47.5 +0.4
baz=92
E18A Harlowton 92.25 39 ⇓P P 17 34 47.8 +0.9
baz=92
P25A Willow Gulch B 92.27 48 ⇓P P 17 34 47.4 +0.2
baz=92
H20A Greybull 92.29 42 ⇓P P 17 34 47.4 +0.2
baz=92
ABTX Abilene, Hawle 92.30 55 ⇓P P 17 34 48.1 +0.8
baz=92
C17A Wharram Farm, 92.34 38 ⇓P P 17 34 47.5 +0.2
baz=93
EGAK Eagle 92.37 14 eP P 17 34 47.5 +0.6
comp=Z,6.2nm,1.0s
I21A Big Trails, Te 92.38 43 ⇑P P 17 34 47.4 -0.3
baz=93,SNR=6.9
CMAR Chiang Mai Arr 92.39 289 P P 17 34 49.6 +1.5
CMAR Chiang Mai Arr 92.39 289 P P 17 34 49.6 +1.5
comp=Z,1.8nm,0.8s,baz=134,slow=3.5,SNR=12
Y31A Rekieta Farm, 92.44 54 ⇑P P 17 34 48.7 +0.7
baz=93
F19A Roth Farm, Mol 92.44 40 ⇑P P 17 34 48.4 +0.7
baz=93
HHC Hu-ho-hao-te 92.50 314 eP P 17 34 48.5 +0.3
HHC pP pP 17 35 18.5 +7.2
HHC sP sP 17 35 29.5 +9.0
HHC PP PP 17 38 34.5 +3.6
HHC SKS SKSac 17 45 10.0 -4.0
HHC S S 17 45 41.0 -4.2
HHC sS sS 17 46 31.3 +6.3
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,130nm,6.8s
CHTO Chiang Mai 92.53 289 eP P 17 34 49.7 +1.0
comp=Z,4.3nm,0.8s
A16A West Butte Ran 92.61 37 ⇓P P 17 34 48.2 -0.3
baz=93
Z32A Haskell 92.73 55 ⇓P P 17 34 49.7 +0.4
baz=93
E19A Rath Farm, Rou 92.86 40 ⇓P P 17 34 49.8 +0.2

	baz=93								
K23A	**Bowen Ranch, D**	**92.90**	**44**	⇓P		**P**		**17 34 49.9**	**-0.1**
	baz=93								
I22A	**9 Mile Ranch,**	**92.92**	**43**	⇑P		**P**		**17 34 50.0**	**-0.1**
	baz=93								
X31A	**McDonald Ranch**	**92.95**	**53**	⇑P		**P**		**17 34 50.5**	**+0.2**
	baz=93								
Y32A	**R-V Farms, Ver**	**93.07**	**54**	⇓P		**P**		**17 34 51.7**	**+0.9**
	baz=93								
A17A	**Triple J Farms**	**93.10**	**37**	⇓P		**P**		**17 34 50.9**	**+0.2**
	baz=93								
D19A	**Cripps Ranch,**	**93.17**	**39**	⇓P		**P**		**17 34 51.2**	**+0.2**
	baz=93								
W31A	**Holland Ranch,**	**93.23**	**53**	⇑P		**P**		**17 34 51.7**	**+0.1**
	baz=94								
H22A	**Clearmont**	**93.36**	**42**	⇓P		**P**		**17 34 52.2**	**+0.1**
	baz=94								
C19A	**Slack Wire Ran**	**93.38**	**39**	⇓P		**P**		**17 34 52.4**	**+0.4**
	baz=94								
A18A	**Metzger Ranch,**	**93.56**	**37**	⇓P		**P**		**17 34 53.1**	**+0.3**
	baz=94								
CD2	**Chengdu**	**93.59**	**302**	*e*P		**P**		**17 34 54.0**	**+0.6**
CD2					pmax	pmax			
	comp=Z,10.0nm,0.8s								
CD2					pmax	pmax			
	comp=Z,30nm,6.2s								
B19A	**Brinkman Farms**	**93.82**	**38**	⇑P		**P**		**17 34 54.1**	**+0.2**
	baz=94								
C20A	**Veseth Ranch,**	**93.97**	**39**	⇑P		**P**		**17 34 54.7**	**0.0**
	baz=94								
H24A	**Dirks Ranch, A**	**94.55**	**43**	⇓P		**P**		**17 34 57.5**	**0.0**
	baz=95								
RSSD	**Black Hills**	**94.58**	**44**	*e*P		**P**		**17 34 57.4**	**-0.4**
	comp=Z,6.4nm,0.9s								
LZH	**Lanzhou**	**95.73**	**307**	*e*P		**P**		**17 35 04.5**	**+1.3**
LZH					pP	pP		17 35 35.0	+8.7
LZH					sP	sP		17 35 46.3	+11
LZH					pmax	pmax			
	comp=Z,14nm,1.0s								
WMQ	**Urumqi**	**109.98**	**310**	*e*P		**PKiKP**		**17 40 09.0**	**+1.0**
ZALV	**Zalesovo Beam**	**113.78**	**320**		PKiKP	**PKiKP**		**17 40 13.1**	**-1.7**
ZALV	**Zalesovo Beam**	**113.78**	**320**		PKiKP	**PKiKP**		**17 40 13.1**	**-1.7**
	comp=Z,0.7nm,0.5s,baz=98,slow=1.6,SNR=5.4								
MKAR	**Makanchi Array**	**114.32**	**312**		PKiKP	PKPdf		17 40 14.9	-1.2
MKAR	**Makanchi Array**	**114.32**	**312**		PKiKP	PKPdf		17 40 14.9	-1.2
	comp=Z,0.4nm,0.4s,baz=96,slow=1.4,SNR=11								
ARCES	**ARCESS Array B**	**132.30**	**350**		PKP	**PKPdf**		**17 40 49.5**	**-0.4**
ARCES	**ARCESS Array B**	**132.30**	**350**		PKP	**PKPdf**		**17 40 49.5**	**-0.4**
	comp=Z,2.4nm,0.8s,baz=352,slow=1.3,SNR=8.1								
FINES	**FINESS Array B**	**139.20**	**344**		PKPpre	PKPpre		17 40 53.0	
FINES	**FINESS Array B**	**139.20**	**344**		PKhKP	PKPpre		17 40 53.0	
	comp=Z,0.9nm,0.6s,baz=42,slow=2.3,SNR=3.6								
NOA	**NORSAR Array B**	**142.31**	**354**		PKPpre	PKPpre		17 41 02.5	
NOA	**NORSAR Array B**	**142.31**	**354**		PKhKP	PKPpre		17 41 02.5	
	comp=Z,0.2nm,0.5s,baz=21,slow=4.9,SNR=3.2								
MBAR	**Mbarara**	**144.09**	**232**		PKPpre	PKPpre		17 41 11.5	
MBAR	**Mbarara**	**144.09**	**232**		PKhKP	PKPpre		17 41 11.5	
	comp=Z,1.9nm,0.4s,baz=233,slow=10,SNR=6.3								
SUW	**Suwalki**	**146.29**	**339**	*e*P		**PKPab**		**17 41 17.9**	**+0.2**
SUW	**Suwalki**	**146.29**	**339**	*e*PKP		**PKPab**		**17 41 17.7**	**-0.1**
AKASG	**Malin Array Be**	**146.43**	**330**	PKPbc		**PKPdf**		**17 41 15.8**	**-0.2**
AKASG	**Malin Array Be**	**146.43**	**330**	PKPbc		**PKPdf**		**17 41 15.8**	**-0.2**
	comp=Z,3.2nm,0.4s,baz=43,slow=4.1,SNR=14								
AK01	**Malin Array Si**	**146.44**	**330**	*e*P		**PKPdf**		**17 41 16.5**	**+0.5**
AK02	**Malin Array Si**	**146.47**	**330**	*e*P		**PKPdf**		**17 41 16.6**	**+0.6**
MUD	**Monsted U'grnd**	**147.02**	**354**	*i*P		**PKPbc**		**17 41 18.8**	**-0.1**
	comp=Z,13nm,1.0s								
COP	**Copenhagen**	**147.37**	**350**	*i* P		**PKPab**		**17 41 25.7**	**+3.7**
	comp=Z,6.2nm,0.3s								
BSD	**Bornholm Skovb**	**147.49**	**348**	*i* P		**PKPab**		**17 41 21.6**	**-0.8**
	comp=Z,2.6nm,0.4s								
BSEG	**Bad Segeberg**	**149.37**	**352**	*e*PKPbc		**PKPbc**		**17 41 25.4**	**+0.3**
BRTR	**Keskin Array B**	**149.90**	**309**	PKPbc		**PKPbc**		**17 41 26.8**	**-0.4**
BRTR	**Keskin Array B**	**149.90**	**309**	PKPbc		**PKPbc**		**17 41 26.8**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=122,slow=3.7,SNR=12								
KWP	**Kalwaria Pacla**	**150.02**	**334**	*e*PKP		**PKPbc**		**17 41 27.0**	**0.0**
OJC	**Ojcow**	**150.61**	**338**	*e*PKP		**PKPbc**		**17 41 28.4**	**+0.1**
OJC				*e*				17 41 35.5	
KOLS	**Kolonicke sedl**	**150.75**	**334**	*e*PKP		**PKPbc**		**17 41 29.1**	**+0.4**
KOLS				*e*				17 41 35.9	
STHS	**Stebnicka Huta**	**150.76**	**336**	*e*PKP		**PKPbc**		**17 41 29.2**	**+0.5**
STHS				*e*				17 41 36.9	
CRVS	**Cervenica-Dubn**	**151.10**	**335**	*e*PKP		**PKPbc**		**17 41 27.1**	**-2.4**
CRVS				*e*				17 41 35.0	
KSP	**Ksiaz**	**151.13**	**343**	*e*PKP		**PKPbc**		**17 41 29.9**	**+0.4**
CLZ	**Clausthal**	**151.41**	**351**	*e*PKPbc		**PKPbc**		**17 41 30.5**	**+0.3**
CLL	**Collm**	**151.47**	**347**	*e*PKPbc		**PKPbc**		**17 41 30.3**	**0.0**
CLL	**Collm**	**151.47**	**347**	*i*PKPbc		**PKPbc**		**17 41 30.3**	**0.0**
	comp=Z,17nm,0.9s								
OKC	**Ostrava-Krasne**	**151.48**	**340**	⇑*e*PKP		**PKPbc**		**17 41 30.6**	**+0.3**
OKC				*e*PKPAB		**PKPab**		**17 41 39.2**	**+0.3**
UPC	**Upice**	**151.51**	**343**	⇑*e*PKP		**PKPbc**		**17 41 30.3**	**-0.1**
UPC				*e*PKPAB		**PKPab**		**17 41 39.6**	**+0.6**
DPC	**Dobruska-Polom**	**151.56**	**342**	⇑*e*PKP		**PKPbc**		**17 41 30.9**	**+0.3**
DPC				*e*PKPAB		**PKPab**		**17 41 40.0**	**+0.7**
BRG	**Berggiesshubel**	**151.68**	**346**	*i* PKP		**PKPbc**		**17 41 30.9**	**+0.2**
	comp=Z,12nm,0.6s								
BRG	**Berggiesshubel**	**151.68**	**346**	*e*PKPbc		**PKPbc**		**17 41 31.0**	**+0.2**
FBE	**Freiberg**	**151.76**	**347**	*e*PKPbc		**PKPbc**		**17 41 31.4**	**+0.5**
PVCC	**Panska Ves**	**151.85**	**345**	⇑*e*PKP		**PKPbc**		**17 41 31.7**	**+0.5**
PRU	**Pruhonice**	**152.36**	**344**	⇑*e*PKP		**PKPbc**		**17 41 32.0**	**-0.3**
MOX	**Moxa**	**152.37**	**349**	*e*PKPbc		**PKPbc**		**17 41 32.3**	**0.0**
PLN	**Plauen**	**152.42**	**348**	*e*PKPbc		**PKPbc**		**17 41 32.4**	**-0.1**
MANZ	**Manzenberg**	**152.90**	**348**	*e*PKPbc		**PKPbc**		**17 41 33.6**	**0.0**
GERES	**GERESS Array B**	**153.63**	**345**	PKP		**PKPdf**		**17 41 25.7**	**-1.8**
GERES				PKPbc		**PKPbc**		**17 41 35.2**	**-0.1**
GERES	**GERESS Array B**	**153.63**	**345**	PKP		**PKPdf**		**17 41 25.7**	**-1.8**
	comp=Z,0.1nm,0.3s,baz=343,slow=3.1,SNR=4.2								
GERES				PKPbc		**PKPbc**		**17 41 35.2**	**-0.1**
	comp=Z,1.4nm,0.9s,baz=5.7,slow=1.0,SNR=7.4								
DBIC	**Dimbokro**	**161.29**	**154**	PKPab		**PKPab**		**17 42 22.4**	**+0.5**
DBIC	**Dimbokro**	**161.29**	**154**	PKPab		**PKPab**		**17 42 22.4**	**+0.5**
	comp=Z,3.2nm,0.8s,baz=232,slow=12,SNR=3.0								
ESDC	**Sonseca Array**	**162.91**	**20**	PKPab		**PKPab**		**17 42 28.1**	**-0.4**
ESDC	**Sonseca Array**	**162.91**	**20**	PKPab		**PKPab**		**17 42 28.1**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=328,slow=3.5,SNR=8.0								
TORD	**Torodi Ar. Bea**	**169.37**	**171**	PKP		**PKPdf**		**17 41 43.5**	**-1.1**
TORD				PKPab		**PKPab**		**17 42 57.5**	**+0.1**
TORD	**Torodi Ar. Bea**	**169.37**	**171**	PKP		**PKPdf**		**17 41 43.5**	**-1.1**
	comp=Z,0.5nm,0.7s,baz=321,slow=2.0,SNR=3.2								
TORD				PKPab		**PKPab**		**17 42 57.5**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=186,slow=4.6,SNR=5.5								

MEX 29 17:24:18.0±0.6, 16°.37N×98°.98W, h10km±6km, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.82**	**88**	*e*P	Pg	17 24 31.8	-2.1
PNIG				*i* S	Sg	17 24 42.1	-2.5
ACP2	**Acapulco**	**1.01**	**300**	*e*P	Pg	17 24 33.7	-3.7
ACP2				*i* S	Sg	17 24 47.2	-3.3
CAIG	**El Cayaco**	**1.41**	**299**	*e*P	Pn	17 24 39.9	-3.8
CAIG				*i* S	Sn	17 24 57.8	-4.5
MEIG	**Mezcala**	**1.67**	**339**	*e*P	Pn	17 24 43.8	-3.6
MEIG				*i* S	Sn	17 25 03.4	-5.6
PLIG	**Platanillo**	**2.08**	**346**	*e*P	Pn	17 24 50.3	-2.7
PLIG				*i* S	Sn	17 25 14.4	-4.6
ARIG	**Puente Sto Nin**	**2.31**	**326**	*e*P	Pn	17 24 53.2	-3.0
ARIG				*i* S	Sn	17 25 20.2	-4.4
YAIG	**Yautepec**	**2.48**	**358**	*e*P	Pn	17 24 55.4	-3.3
YAIG				*i* S	Sn	17 25 24.1	-5.2
TPIG	**Tehuac#an**	**2.56**	**37**	*i* P	Pn	17 24 57.2	-2.6
TPIG				*i* S	Sn	17 25 27.8	-3.4
ZIIG	**Zihuatanejo**	**2.68**	**298**	*i* P	Pn	17 24 58.7	-2.5
ZIIG				*i* S	Sn	17 25 30.3	-3.4
HUIG	**Huatulco**	**2.82**	**102**	*i* P	Pn	17 25 01.1	-2.0
HUIG				*i* S	Sn	17 25 33.3	-4.0

KRSC 29 17:47:18.2±0.4, 54°.61N×162°.10E, h30km±19km, ML3.5, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MKZ	**Mys Kozlova**	**0.22**	**256**	*i* P	Pb	17 47 24.6	0.0
MKZ				*i* S	Sb	17 47 29.3	+0.3
TUMR	**Tumrok**	**1.31**	**302**	*e*P	Pn	17 47 40.7	0.0
TUMR				*i* S	Sn	17 47 57.2	-0.1
BZGR	**Bezymyannyi-Gr**	**1.56**	**329**	*e*P	Pn	17 47 44.5	+0.5
BZGR				*i* S	Sn	17 48 03.3	+0.1
KMNR	**Kamenistaya**	**1.57**	**318**	*i* P	Pn	17 47 44.8	+0.7
ZLN	**Zelenaya**	**1.59**	**333**	*i* P	Pn	17 47 45.3	+0.8
ZLN				*i* S	Sn	17 48 05.1	+1.0
BZMR	**Bezymyannaya**	**1.62**	**326**	*e*P	Pn	17 47 45.4	+0.5
BZMR				*e*S	Sn	17 48 05.7	+0.9
BZWR	**Bezymyannyi-We**	**1.64**	**327**	*e*P	Pn	17 47 45.9	+0.7
BZWR				*e*S	Sn	17 48 06.3	+0.9
KII	**Karymskiy**	**1.66**	**251**	*e*P	Pn	17 47 45.4	+0.1
KII				*i* S	Sn	17 48 05.9	+0.3
KIRR	**Kirishev**	**1.68**	**324**	*e*P	Pn	17 47 46.4	+0.7
KIRR				*i* S	Sn	17 48 06.6	+0.2
LGNR	**Loginova**	**1.68**	**332**	*e*P	Pn	17 47 46.7	+0.8
LGNR				*i* S	Sn	17 48 07.3	+0.6
KBG	**Krutoberegovo**	**1.69**	**12**	*e*P	Pn	17 47 46.6	+1.1
KBG				*i* S	Sn	17 48 07.6	+1.5
CIRR	**Tsirk**	**1.69**	**333**	*e*P	Pn	17 47 46.9	+1.0
CIRR				*e*S	Sn	17 48 07.4	+0.7
KPT	**Kopyto**	**1.73**	**322**	*e*P	Pn	17 47 47.3	+0.9
KPT				*i* S	Sn	17 48 08.4	+0.9
KRSR	**Krestovskiy**	**1.83**	**332**	*e*P	Pb	17 47 49.9	-1.3
KRSR				*i* S	Sb	17 48 12.6	-1.2
KLY	**Klyuchi**	**1.90**	**335**	P	Pn	17 47 49.4	+0.9
KLY				*i* S	Sn	17 48 11.5	+0.2
KOZ	**Kozyrevsk**	**1.93**	**320**	*e*P	Pn	17 47 50.3	+1.3
KOZ				*i* S	Sn	17 48 13.8	+1.5
SPN	**Mys Shipunski**	**1.95**	**220**	*e*P	Pn	17 47 49.7	+0.5
SPN				*i* S	Sn	17 48 12.5	-0.2
NLC	**Nalytchevo**	**2.18**	**230**	*e*P	Pn	17 47 52.9	+0.6
NLC				*i* S	Sn	17 48 18.7	+0.5
SRDR	**Sredinnyy**	**2.18**	**323**	*e*P	Pn	17 47 53.1	+0.6
SRDR				*e*S	Sn	17 48 18.0	-0.6
BKI	**Bering**	**2.31**	**74**	*i* P	Pn	17 47 53.4	-0.8
BKI				*i* S	Sn	17 48 19.1	-2.5
SDLR	**Sedlovina**	**2.32**	**236**	*e*P	Pn	17 47 55.5	+1.0
SDLR				*i* S	Sn	17 48 22.8	+0.6
ESO	**Esso**	**2.35**	**305**	*e*P	Pn	17 47 55.9	+1.1
ESO				*i* S	Sn	17 48 23.5	+0.9
SMAR	**Somma**	**2.37**	**237**	*e*P	Pn	17 47 56.1	+0.8
KRER	**Koryakskii**	**2.37**	**238**	*e*P	Pn	17 47 56.5	+1.2
KRER				*i* S	Sn	17 48 24.8	+1.2
UGLR	**Uglovaya**	**2.39**	**235**	*e*P	Pn	17 47 56.1	+0.6
UGLR				*i* S	Sn	17 48 24.1	+0.2
AVH	**Avacha**	**2.40**	**237**	*e*P	Pn	17 47 56.8	+1.3
AVH				*i* S	Sn	17 48 25.0	+1.0
KOK	**Koryaka**	**2.44**	**239**	*e*P	Pn	17 47 57.3	+1.3
KOK				*i* S	Sn	17 48 26.0	+1.1
PET	**Petropavlovsk**	**2.59**	**234**	*e*P	Pn	17 47 59.8	+1.8
PET				*i* S	Sn	17 48 30.4	+2.0
GNL	**Ganaly**	**2.61**	**251**	*e*P	Pn	17 48 00.0	+1.5
RUS	**Russkaya**	**3.06**	**226**	P	Pn	17 48 05.0	+0.6
RUS				*i* S	Sn	17 48 39.9	0.0
MTVR	**Mutnovka**	**3.16**	**229**	*e*P	Pn	17 48 08.0	+1.9
MTVR				*i* S	Sn	17 48 44.3	+1.4
ASAK	**Asacha**	**3.36**	**230**	*e*P	Pn	17 48 11.3	+2.6
ASAK				*i* S	Sn	17 48 50.1	+2.5

WEL 29 17:47:19.9±0.3, 37°.38S×177°.29E, h137km±2km, ML3.7/6, 3C, Error ellipse: s-maj=3.3km s-min=1.9km az=0.0, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPRZ	**Ohinepanea**	**0.74**	**231**	PN	Pn	17 47 41.5	+0.1
OPRZ				SN	Sn	17 47 58.0	+0.4
MXZ	**Matakaoa Point**	**0.83**	**103**	PN	Pn	17 47 41.7	-0.4
MXZ				SN	Sn	17 47 59.4	+0.6
MXZ				AML	AML	17 48 00.1	
URZ	**Urewera**	**0.89**	**189**	⇑PN	Pn	17 47 42.4	-0.1
URZ				SN	Sn	17 47 59.5	-0.2
URZ				AML	AML	17 48 00.6	
MWZ	**Matawai**	**0.97**	**169**	⇑PN	Pn	17 47 43.2	-0.1
MWZ				SN	Sn	17 48 01.4	+0.3
MWZ				AML	AML	17 48 01.9	
MWZ				AML	AML	17 48 02.5	
MWZ				AML	AML	17 48 02.6	
PUZ	**Puketiti**	**1.04**	**132**	⇑PN	Pn	17 47 43.6	-0.2
PUZ				SN	Sn	17 48 01.2	-0.9
PUZ				AML	AML	17 48 02.0	
CNGZ	**Carnagh Statio**	**1.32**	**147**	PN	Pn	17 47 47.0	+0.4
ALRZ	**Allen Road**	**1.40**	**212**	PN	Pn	17 47 47.9	+0.5
BKZ	**Black Stump Fm**	**1.89**	**199**	*e*PN	Pn	17 47 53.5	+0.4
BHHZ	**Black Hill Sta**	**2.32**	**204**	PN	Pn	17 47 57.4	-0.8
WNVZ	**Wahianoa**	**2.36**	**214**	PN	Pn	17 47 58.4	-0.4
MOVZ	**Moawhango**	**2.36**	**210**	PN	Pn	17 47 57.7	-1.0
PXZ	**Pawanui**	**2.67**	**187**	PN	Pn	17 48 01.3	-1.3
PXZ				AML	AML	17 48 24.5	
PXZ				AML	AML	17 48 48.5	
PNHZ	**Pukenui**	**2.67**	**198**	*e*PN	Pn	17 48 01.4	-1.3
MRZ	**Mangatainoka R**	**3.54**	**202**	PN	Pn	17 48 11.0	-2.8
MRZ				AML	AML	17 48 38.1	
HOWZ	**Holdsworth Sta**	**3.78**	**201**	PN	Pn	17 48 13.7	-3.2
OGWZ	**Otaki Gorge**	**3.81**	**205**	PN	Pn	17 48 14.3	-3.0
KIW	**Kapiti Island**	**3.94**	**207**	PN	Pn	17 48 15.9	-3.2
MTW	**Mount Morrison**	**4.02**	**200**	PN	Pn	17 48 16.6	-3.5
CAW	**Cannon Point**	**4.10**	**204**	PN	Pn	17 48 17.6	-3.6
TCW	**Tory Channel**	**4.49**	**210**	PN	Pn	17 48 22.2	-4.0
TUWZ	**Tuamarina**	**4.80**	**212**	PN	Pn	17 48 27.1	-3.9
QRZ	**Quartz Range**	**5.05**	**226**	PN	Pn	17 48 30.1	-3.8
LTZ	**Lake Taylor**	**6.63**	**214**	PN	Pn	17 48 50.0	-5.0

*TRN **29** 17:49:59.4, 18°.70N×64°.29W, h38km*
*NEIC **29** 17:50:00.4, 18°.67N×64°.13W, h34km, MD2.8(RSPR), After RSPR.*

RSPR 29 17:50:00.4, 18°.67N×64°.13W, h34km±1km, MD2.8/3, 5C-12D, Virgin Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ABV	**Anegada**	**0.20**	**288**	*i* P	Pn	17 50 06.6	+0.4
ABV	**Anegada**	**0.20**	**288**	*e*S	Sb	17 50 11.3	-0.5
ABV	**Anegada**	**0.20**	**288**	⇑*i*P	Pn	17 50 06.6	+0.4
ABV	**Anegada**	**0.20**	**288**	⇑*i*P	Pn	17 50 06.6	+0.4
ABV	**Anegada**	**0.20**	**288**	⇑*i*P	Pn	17 50 06.6	+0.4
ABV				*e*S	Sb	17 50 11.3	-0.5
ABVI	**Anegada Island**	**0.20**	**288**	*i* Pu	Pn	17 50 06.6	+0.4
ABVI				*e*S	Sb	17 50 11.3	-0.5
TBVI	**Tortola**	**0.52**	**242**	⇓*e*P	Pn	17 50 10.6	-0.8
TBVI				*e*S	Sb	17 50 17.9	-1.2
TBVI	**Tortola**	**0.52**	**242**	⇓*i*P	Pn	17 50 10.6	-0.8
TBVI				*e*S	Sb	17 50 18.3	-0.8
TBVI	**Tortola**	**0.52**	**242**	⇓*e*P	Pn	17 50 10.6	-0.8
TBVI	**Tortola**	**0.52**	**242**	⇓*i*P	Pn	17 50 10.6	-0.8
TBVI				*e*S	Sb	17 50 17.9	-1.2
TBVI				*e*S	Sn	17 50 18.3	-0.8
TBVI	**Tortola**	**0.52**	**242**	⇓*e*P	Pn	17 50 10.6	-0.8
TBVI				*e*S	Sb	17 50 17.9	-1.2
TBVI				*e*S	Sn	17 50 18.9	-0.8
STVI	**Saint Thomas**	**0.84**	**248**	⇓*e*P	Pn	17 50 14.5	-1.3
STVI	**Saint Thomas**	**0.84**	**248**	⇓*e*P	Pn	17 50 14.6	-1.3
STVI	**Saint Thomas**	**0.84**	**248**	⇓*e*P	Pn	17 50 14.5	-1.3
STVI	**Saint Thomas**	**0.84**	**248**	⇓*e*P	Pn	17 50 14.6	-1.3
STVI				*e*S	Sn	17 50 25.3	-1.7
STVI				*e*S	Sb	17 50 25.6	-2.1
STVI				*e*S		17 50 25.7	
STVI	**Saint Thomas**	**0.84**	**248**	⇓*e*P	Pn	17 50 14.5	-1.3
STVI				*e*S	Sn	17 50 25.3	-1.7
STVI				*e*S	Sb	17 50 25.6	-2.1
MTP	**Monte Pirata**	**1.47**	**248**	⇓*e*P	Pn	17 50 22.9	-1.5
MTP	**Monte Pirata**	**1.47**	**248**	*e*S	Sn	17 50 40.1	-2.4
MTP	**Monte Pirata**	**1.47**	**248**	⇓*e*P	Pn	17 50 22.9	-1.5
MTP	**Monte Pirata**	**1.47**	**248**	⇓*e*P	Pn	17 50 22.9	-1.5
MTP	**Monte Pirata**	**1.47**	**248**	⇓*e*P	Pn	17 50 22.9	-1.5
MTP				*e*S	Sn	17 50 40.6	-1.8
MTP				*e*S	Sb	17 50 40.7	-4.8
MTP	**Monte Pirata**	**1.47**	**248**	⇓*e*P	Pn	17 50 22.9	-1.5
MTP				*e*S	Sn	17 50 40.1	-2.4
MTP				*e*S	Sb	17 50 40.7	-4.8

IDC 29 18:03:21.0±2.5, 5°.40S×131°.77E, h0km, mb4.3/2, mb1 4.6/4, mb1mx4.1/18, mbtmp4.5/4, ML4.5/2, Error ellipse: s-maj=201.8km s-min=25.5km az=70.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.67**	**170**	Pn	Pn	18 06 51.2	+1.2
	1.9nm,0.3s,baz=350,slow=13,SNR=41						
WRA				Sn	Sn	18 09 18.4	-15
	3.6nm,0.3s,baz=342,slow=22,SNR=8.8						
ASAR	**Alice Springs**	**18.28**	**174**	P	Pn	18 07 35.5	-0.7
	2.2nm,0.3s,baz=350,slow=11,SNR=193						
ASAR				S	Sn	18 10 41.7	-19
	1.1nm,0.3s,baz=352,slow=27,SNR=6.5						
STKA	**Stephens Creek**	**27.90**	**162**	P	P	18 09 12.8	-0.1
	1.0nm,0.5s,baz=337,slow=7.7,SNR=4.2						
MKAR	**Makanchi Array**	**67.88**	**326**	P	P	18 14 21.4	+0.1
	3.6nm,0.5s,baz=118,slow=7.9,SNR=8.2						

*BGS **29** 18:03:44.3±2.0, 30°.84N×105°.12E, h10km, mb4.9, MS5.3*
*ISCJB **29** 18:03:48.5±0.6, 31°.46N±0°.02×103°.99E±0°.02, h5km±3km, mb5.2/281, MS5.0/153, Error ellipse: s-maj=2.9km s-min=2.4km az=20.6*
*NEIC **29** 18:03:50.8±0.1, 31°.43N×104°.01E, h10km, mb5.3/123, MS5.0/69, MW5.2, Error ellipse: s-maj=3.6km s-min=2.5km az=210.0, Moment Tensor Solution. s52 Moment tensor: Scale 10^{16}Nm; M_{rr}2.62; $M_{\theta\theta}$-1.35; $M_{\phi\phi}$-1.27; $M_{r\theta}$5.59; $M_{\theta\phi}$-3.80; $M_{\phi r}$2.32; Best double couple: M_o7.50000×10^{16} NP1:ϕ_s69.00000°,δ77.00000°,λ111.00000°. NP2: ϕ_s190.00000°,δ25.00000°,λ33.00000°. Principal axes: T 6.5800, Plg53.0000°, Azm4.0000°; N 1.5800, Plg20.0000°, Azm243.0000°; P -8.1600, Plg28.0000°, Azm141.0000°;*
NEIC Felt [V] at Mianyang and [III] at Chengdu, Deyang and Hanzhong. Also felt at Chongqing, Nanchong, Ya'an and Yancheng.
*BJI **29** 18:03:51.5, 31°.46N×103°.96E, h24km, mB5.4/30, mb5.1/42, ML5.4/19, Ms5.5/69, Ms7 5.4/62*
*IDC **29** 18:03:52.0±1.7, 31°.39N×104°.03E, h18km±10km, mb4.9/33, mb1 5.0/35, mb1mx4.9/36, mbtmp4.9/35, ML4.1/2, MS4.7/28, Ms1 4.7/28, ms1mx4.6/40, Error ellipse: s-maj=9.5km s-min=7.5km az=21.0*
*MOS **29** 18:03:52.4±0.8, 31°.41N×104°.07E, h33km, mb5.4/254, MS4.9/60, Error ellipse: s-maj=5.8km s-min=3.3km az=121.1*
*DJA **29** 18:03:54.3±2.0, 31°N±6°×10°4E±°, h16km±14km, M5.3/45, mB5.8/23, mb5.5/45, Mw(mB)5.3/23*
*GCMT **29** 18:03:54.8±0.1, 31°.31N×104°.15E, h12km, MW5.3, Moment Tensor Solution. s66,c109; s84,c167; Moment tensor: Scale 10^{16}Nm; M_{rr}6.49±.13; $M_{\theta\theta}$-4.53±.12; $M_{\phi\phi}$-1.96±.12; $M_{r\theta}$6.39±.33; $M_{\theta\phi}$-4.54±.10; $M_{\phi r}$1.17±.37; Best double couple: M_o9.80000×10^{16} NP1:ϕ_s212.00000°, δ29.00000°,λ54.00000°. NP2:ϕ_s71.00000°,δ67.00000°, λ108.00000°. Principal axes: T 9.5000, Plg64.0000°, Azm11.0000°; N 0.6000, Plg16.0000°, Azm244.0000°; P -10.1000, Plg20.0000°, Azm148.0000°; Data Used: II IU G CN IC.*
*SZGRF **29** 18:03:56.7, 31°.92N×103°.82E, h28km, mb5.4, MS4.9, Sichuan, China*

ISC 29 18:03:52.9±0.3, 31°.40N±0°.02×104°.05E±0°.03, h23km±2km, h23km:pP-P, n883, σ1s40/943, mb5.3/281, MS5.0/153, 171C-25D, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.55**	**207**	Pg	**Pb**	**18 04 02.3**	**-1.7**
CD2				Sg	**Sb**	**18 04 11.5**	**0.0**
CD2				smax	smax		
	comp=N,145μm,1.1s						
CD2				smax	smax		
	comp=E,113μm,0.8s						
LZH	**Lanzhou**

TIA	comp=E,9μm,11.3s				LR	LR			
	comp=Z,8μm,11.6s								
SHL	**Shillong**	**12.18**	**244**	*e*PKP	**Pn**		**18 06 44.0**	**-1.1**	
	comp=Z,6.5nm,0.6s								
SHL				*ex*	x		18 10 10.0		
NJ2	**Nanjing**	**12.62**	**83**	*e*P	**Pn**		**18 06 50.0**	**-1.0**	
NJ2				pP	**P**		**18 06 59.3**	**-2.9**	
NJ2				sP			18 07 03.5		
NJ2				S	**Sn**		**18 09 06.8**	**-4.0**	
NJ2				sS			18 09 20.3		
NJ2				pmax	pmax				
	comp=Z,30nm,0.8s								
NJ2				pmax	pmax				
	comp=Z,1μm,5.2s								
NJ2				LR	LR				
	comp=N,10μm,7.2s								
NJ2				LR	LR				
	comp=E,21μm,10.6s								
NJ2				LR	LR				
	comp=Z,18μm,10.2s								
HKC	**Hong Kong Obse**	**12.79**	**133**	P	**Pn**		**18 06 52.0**	**-1.3**	
BJT	**Baijiatuan**	**13.06**	**46**	*e*P	**Pn**		**18 06 57.3**	**+0.4**	
	comp=Z,32nm,0.6s								
BJI	**Beijing**	**13.08**	**45**	P	**Pn**		**18 06 57.0**	**-0.1**	
BJI				S	**Sn**		**18 09 25.8**	**+4.0**	
BJI				pmax	pmax				
	comp=Z,35nm,1.0s								
BJI				pmax	pmax				
	comp=Z,440nm,8.5s								
BJI				LR	LR				
	comp=N,11μm,9.5s								
BJI				LR	LR				
	comp=E,9μm,10.9s								
BJI				LR	LR				
	comp=Z,3μm,16.9s								
CHTO	**Chiang Mai**	**13.36**	**201**	*e*P	**Pn**		**18 07 01.8**	**+0.7**	
CHTO	**Chiang Mai**	**13.36**	**201**	*e*Pn	**Pn**		**18 07 01.8**	**+0.7**	
CHTO	**Chiang Mai**	**13.36**	**201**	P	**Pn**		**18 07 02.5**	**+1.4**	
	comp=Z,81nm,1.0s,comp=Z,769nm								
CMMT	**Chiang Mai**	**13.36**	**201**	P	**Pn**		**18 07 01.2**	**+0.1**	
	comp=Z,73nm,1.0s,comp=Z,719nm								
QIZ	**Qiongzhong**	**13.39**	**156**	P	**Pn**		**18 07 01.0**	**-0.5**	
QIZ				S	**Sn**		**18 09 33.3**	**+3.7**	
QIZ				pmax	pmax				
	comp=Z,46nm,0.9s								
QIZ				LR	LR				
	comp=N,13μm,12.5s								
QIZ				LR	LR				
	comp=E,6μm,8.9s								
QIZ				LR	LR				
	comp=Z,21μm,12.9s								
QIZ	**Qiongzhong**	**13.39**	**156**	*e*P	**Pn**		**18 07 00.0**	**-1.5**	
	comp=Z,51nm,0.8s								
CMAR	**Chiang Mai Arr**	**13.69**	**201**	Pn	**Pn**		**18 07 06.9**	**+1.2**	
CMAR				Lg	Lg		18 11 03.5		
CMAR				PcP	**PcP**		**18 12 31.1**	**+1.3**	
CMAR				ScP	**ScP**		**18 16 02.9**	**+1.0**	
CMAR	**Chiang Mai Arr**	**13.69**	**201**	Pn	**Pn**		**18 07 06.9**	**+1.2**	
	comp=Z,0.4nm,0.3s,baz=14,slow=10,SNR=52								
CMAR				Lg	Lg		18 11 03.5		
	baz=24,slow=33,SNR=2.6								
CMAR				PcP	**PcP**		**18 12 31.1**	**+1.3**	
	comp=Z,0.1nm,0.3s,baz=330,slow=3.1,SNR=4.1								
CMAR				LR	LR		18 13 16.8		
	comp=Z,2μm,19.3s,baz=15,slow=41								
CMAR				ScP	**ScP**		**18 16 02.9**	**+1.0**	
	comp=Z,0.1nm,0.3s,baz=323,slow=2.1,SNR=8.4								
QZH	**Quanzhou**	**14.34**	**113**⇑	*i*P	P		18 07 18.0	-3.4	
QZH				S	**Sn**		**18 09 58.5**	**+5.6**	
QZH				LR	LR				
	comp=N,29μm,7.3s								
QZH				LR	LR				
	comp=E,36μm,11.8s								
QZH				LR	LR				
	comp=Z,61μm,9.5s								
SSE	**Sheshan**	**14.66**	**87**	P	**Pn**		**18 07 21.5**	**+2.6**	
SSE				pP	**P**		**18 07 28.0**	**+3.1**	
SSE				S	**Sn**		**18 10 03.0**	**+2.3**	
SSE				sS	S		18 10 11.5	-7.7	
SSE				pmax	pmax				
	comp=Z,48nm,0.8s								
SSE				pmax	pmax				
	comp=Z,240nm,8.1s								
SSE				LR	LR				
	comp=N,22μm,15.4s								
SSE				LR	LR				
	comp=E,5μm,15.4s								
SSE				LR	LR				
	comp=Z,7μm,10.8s								
TAPN	**Taplejung**	**14.81**	**258**	*e*P	**Pn**		**18 07 20.1**	**-1.0**	
	comp=Z,60nm,0.7s								
PBKT	**Sadao Pong**	**15.03**	**191**	P	**Pn**		**18 07 25.2**	**+1.3**	
ODAN	**Odare**	**15.24**	**257**	*e*P	**Pn**		**18 07 25.6**	**-1.3**	
	comp=Z,170nm,0.9s								
RAMN	**Ramite**	**15.87**	**258**	*e*P	**Pn**		**18 07 34.0**	**-1.1**	
	comp=Z,98nm,0.9s								
JIRN	**Jiri**	**15.99**	**261**	*e*P	**Pn**		**18 07 34.6**	**-2.0**	
	comp=Z,109nm,0.7s								
UBPT	**Khong Chiam**	**16.10**	**175**	P	**Pn**		**18 07 38.0**	**+0.2**	
GUN	**Gumba**	**16.17**	**262**	*e*P	**Pn**		**18 07 37.3**	**-1.7**	
	comp=Z,225nm,1.0s								
DL2	**Dalian**	**16.19**	**58**⇑	*i*P	**Pn**		**18 07 38.3**	**-0.5**	
DL2				S	**Sn**		**18 10 40.5**	**+2.8**	
DL2				pmax	pmax				
	comp=Z,150nm,1.3s								
DL2				pmax	pmax				
	comp=Z,500nm,6.0s								
DL2				LR	LR				
	comp=N,3μm,12.4s								
DL2				LR	LR				
	comp=E,5μm,10.2s								
DL2				LR	LR				
	comp=Z,4μm,12.2s								
SONM	**Songino Array**	**16.51**	**6**	Pn	**Pn**		**18 07 42.3**	**-0.6**	
SONM				Lg	Lg		18 12 28.0		
SONM	**Songino Array**	**16.51**	**6**	Pn	**Pn**		**18 07 42.3**	**-0.6**	
	comp=Z,0.3nm,0.3s,baz=188,slow=14,SNR=76								
SONM				Lg	Lg		18 12 28.0		
	comp=Z,0.3nm,0.3s,baz=186,slow=28,SNR=2.8								
SONM				LR	LR		18 15 06.1		
	comp=Z,3μm,20.0s,baz=185,slow=41								
ULN	**Ulaanbaatar**	**16.60**	**7**	*e*Pn	**Pn**		**18 07 43.5**	**-0.6**	
	comp=Z,62nm,0.9s								
ULN	**Ulaanbaatar**	**16.60**	**7**	P	**Pn**		**18 07 42.9**	**-1.2**	
TATO	**Taipei**	**16.65**	**108**	*e*Pn	**P**		**18 07 46.1**	**-0.8**	
	comp=Z,227nm,1.2s								
PKI	**Pulchoki**	**16.67**	**261**	*e*P	**Pn**		**18 07 43.5**	**-1.9**	
	comp=Z,146nm,0.6s								
PKIN	**Phulchoki**	**16.68**	**262**	*e*P	**Pn**		**18 07 43.5**	**-1.9**	
	comp=Z,105nm,0.7s								
YHNB	**Yeheng**	**16.69**	**109**	*e*Pn	**Pn**		**18 07 45.2**	**-0.1**	
	comp=Z,130nm,0.8s								
KKN	**Kakani**	**16.72**	**262**	*e*P	**Pn**		**18 07 43.8**	**-2.0**	
	comp=Z,112nm,0.6s								
TPUB	**Ta-pu**	**16.78**	**115**	*e*Pn	**Pn**		**18 07 46.3**	**-0.2**	
SSLB	**Suanglung**	**16.78**	**113**	*e*Pn	**P**		**18 07 47.6**	**-0.9**	
	comp=Z,134nm,0.8s								
DMN	**Daman**	**16.92**	**262**	*e*P	**Pn**		**18 07 46.4**	**-2.0**	
	comp=Z,154nm,0.8s								
NACB	**Ninganchiao**	**17.10**	**111**	*e*Pn	**P**		**18 07 51.4**	**-0.6**	
	comp=Z,129nm,1.0s								
YULB	**Yu-li**	**17.26**	**113**	*e*Pn	**P**		**18 07 53.4**	**-0.4**	
	comp=Z,60nm,0.9s								
TWG	**Pinlang**	**17.38**	**115**	*e*Pn	**P**		**18 07 56.5**	**+1.3**	
DANN	**Dangsing**	**17.86**	**265**	*e*P	**Pn**		**18 07 57.5**	**-2.6**	
	comp=Z,56nm,0.7s								
WMQ	**Urumqi**	**17.89**	**318**	P	**P**		**18 08 00.5**	**-0.2**	
WMQ				pP	**pP**		**18 08 04.0**	**-3.1**	
WMQ				sP	**sP**		**18 08 08.0**	**-2.2**	
WMQ				PP	**PnPn**		**18 08 15.0**	**+3.9**	
WMQ				S	**Sn**		**18 11 16.0**	**-3.0**	
WMQ				pmax	pmax				
	comp=Z,52nm,0.9s								
WMQ				pmax	pmax				
	comp=Z,3μm,9.6s								
WMQ				LR	LR				
	comp=N,15μm,10.0s								
WMQ				LR	LR				
	comp=E,13μm,9.6s								
WMQ				LR	LR				
	comp=Z,8μm,13.0s								
KOLN	**Koldanda**	**18.15**	**264**	*e*P	**Pn**		**18 08 00.9**	**-2.7**	
	comp=Z,124nm,0.7s								
PYUN	**Piuthan**	**18.58**	**265**	*e*P	**P**		**18 08 06.4**	**-2.1**	
	comp=Z,89nm,0.6s								
CHBT	**CHBT**	**18.63**	**185**	P	**Pn**		**18 08 09.9**	**+0.6**	
SNY	**Shenyang**	**18.77**	**51**	‖P	**Pn**		**18 08 11.8**	**+0.9**	
SNY				S	**Sn**		**18 11 34.3**	**-5.9**	
SNY				pmax	pmax				
	comp=Z,49nm,1.6s								
SNY				pmax	pmax				
	comp=Z,1μm,6.6s								
SNY				LR	LR				
	comp=E,4μm,20.0s								
SNY				LR	LR				
	comp=Z,5μm,16.7s								
ZAK	**Zakamensk**	**18.97**	**358**	*e*P	**Pn**		**18 08 13.5**	**+0.2**	
ZAK				pmax	pmax				
	comp=Z,56nm,1.6s								
INCN	**Inchon**	**19.57**	**66**	*e*P	**P**		**18 08 18.3**	**-0.8**	
	comp=Z,116nm,1.2s								
TLY	**Talaya**	**20.26**	**359**	*c i*P	Pn		18 08 28.1	-0.5	
TLY				*e*S	Sn		18 12 17.2	+1.1	
TLY				*e*SS	**SnSn**		**18 12 37.4**	**+6.7**	
TLY				pmax	pmax				
	comp=Z,83nm,1.7s								
TLY				MLR	MLR				
	comp=Z,9μm,10.0s								
TLY	**Talaya**	**20.26**	**359**	Pn	Pn		18 08 28.1	-0.5	
	comp=Z,229nm,0.9s,SNR=14								
MOY	**Mondy**	**20.37**	**355**	*e*P	Pn		18 08 29.2	-0.8	
MOY				pmax	pmax				
	comp=Z,261nm,2.9s								
KSAR	**Wonju Array Be**	**20.54**	**66**	P	**P**		**18 08 30.4**	**+0.7**	
KSAR				S	**S**		**18 12 20.4**	**+2.1**	
KSAR				Lg	Lg		18 14 44.0		
KSRS	**Korea Array**	**20.57**	**66**	P	**P**		**18 08 30.4**	**+0.4**	
	comp=Z,60nm,0.7s,baz=255,slow=10,SNR=190								
KSRS				S	**S**		**18 12 20.4**	**+1.5**	
	comp=Z,5.7nm,1.0s,baz=265,slow=13,SNR=3.8								
KSRS				Lg	Lg		18 14 44.0		
	comp=Z,3.4nm,0.8s,baz=256,slow=28,SNR=4.1								
KSRS				LR	LR		18 17 16.3		
	comp=Z,1μm,21.5s,baz=263,slow=39								
LGTI	**Lohaghat**	**20.61**	**271**	*ex*	pP		18 08 36.0	-1.0	
IRK	**Irkutsk**	**20.82**	**0**	*e*P	**P**		**18 08 33.5**	**+0.9**	
IRK				pmax	pmax				
	comp=Z,481nm,1.3s								
CN2	**Changchun**	**20.92**	**48**	*e*P	Pn		18 08 35.0	-1.3	
CN2				*ep*P	pP		18 08 44.0	+3.8	
CN2				*es*P	sP		18 08 48.0	+4.8	
CN2				PP	**PnPn**		**18 08 57.3**	**+4.8**	
CN2				*e*S	**S**		**18 12 22.0**	**-3.7**	
CN2				PcP	**PcP**		**18 12 40.5**	**-0.5**	
CN2				pmax	pmax				
	comp=Z,40nm,0.8s								
CN2				LR	LR				
	comp=N,3μm,14.0s								
CN2				LR	LR				
	comp=E,6μm,14.0s								
CN2				LR	LR				
	comp=Z,4μm,14.0s								
HIA	**Hailar**	**21.41**	**29**	*e*P	**P**		**18 08 39.5**	**+0.6**	
	comp=Z,95nm,0.8s								
JOW	**Kunigami**	**21.63**	**96**	*e*P	**P**		**18 08 41.3**	**-0.2**	
CIT	**Chita**	**21.75**	**16**	*e*P	**P**		**18 08 43.7**	**+1.1**	
CIT				*e*			18 09 22.5		
CIT				*e*			18 12 43.9		
CIT				pmax	pmax				
	comp=Z,353nm,1.9s								
DDI	**Dehra Dun**	**22.33**	**274**	*e*PKP	**P**		**18 08 48.5**	**-0.5**	
MK31	**Makanchi Array**	**22.72**	**319**	*e*P	**P**		**18 08 53.4**	**+0.4**	
MK31	**Makanchi Array**	**22.72**	**319**	*e*P	**P**		**18 08 53.4**	**+0.4**	
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**		**18 08 53.7**	**+0.6**	
MKAR				S	**S**		**18 13 01.8**	**+1.5**	
MKAR				pmax	pmax				
	comp=Z,44nm,0.7s								
MKAR				smax	smax				
	comp=N,4.0nm,0.9s								
MKAR				pmax	pmax				
	comp=N,3.0nm,0.8s								
MKAR				MLR	MLR				
	comp=Z,8.0nm,19.1s								
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**		**18 08 53.7**	**+0.6**	
MKAR				S	**S**		**18 13 01.8**	**+1.5**	
MKAR				Lg	Lg		18 16 02.4		
MKAR				ScP	**ScP**		**18 16 21.3**	**+0.4**	
MKAR	**Makanchi Array**	**22.72**	**319**	P	**P**		**18 08 53.7**	**+0.6**	
	comp=Z,44nm,0.7s,baz=121,slow=11,SNR=119								
MKAR				S	**S**		**18 13 01.8**	**+1.5**	
	comp=Z,4.3nm,0.9s,baz=119,slow=12,SNR=2.2								
MKAR				Lg	Lg		18 16 02.4		
	comp=Z,0.7nm,0.8s,baz=103,slow=30,SNR=2.4								
MKAR				ScP	**ScP**		**18 16 21.3**	**+0.4**	
	comp=Z,2.9nm,0.8s,baz=98,slow=3.7,SNR=4.4								
MKAR				LR	LR		18 19 11.6		
	comp=Z,8.0nm,19.1s,baz=123,slow=40								
JNU	**Nakatsue**	**22.73**	**79**	*e*P	**P**		**18 08 53.4**	**+0.1**	
JNU				S	**S**		**18 13 02.8**	**+2.1**	
JNU				Lg	Lg		18 15 49.2		
JNU	**Nakatsue**	**22.73**	**79**	P	**P**		**18 08 53.1**	**-0.2**	
	comp=Z,36nm,0.7s,baz=245,slow=8.9,SNR=6.5								
JNU				S	**S**		**18 13 02.8**	**+2.1**	
	comp=Z,8.1nm,0.5s,baz=338,slow=6.6,SNR=2.1								
JNU				Lg	Lg		18 15 49.2		
	comp=Z,7.0nm,0.5s,baz=259,slow=10,SNR=1.9								
JNU				LR	LR		18 19 30.9		
	comp=Z,3μm,18.9s,baz=274,slow=41								
JBP	**Jabalpur**	**22.88**	**255**‖	*i*P	**P**		**18 08 55.8**	**+1.0**	
JBP				*i* x	x		18 09 03.2		
	comp=Z,73nm,1.3s								
JBP				*e*S	**S**		**18 13 04.9**	**+1.7**	
SMLA	**Simla**	**22.96**	**276**	*i* P	**P**		**18 08 54.5**	**-1.1**	
SMLA				AMb	AMB		18 08 59.4		
	comp=Z,217nm,0.4s								
SMLA				*i* x	x		18 16 09.4		
SDNR	**Sundarnagar**	**23.09**	**277**	*e*PKP	**P**		**18 08 56.0**	**-1.0**	
AGRA	**Agra**	**23.12**	**266**	*e*PKP	**P**		**18 08 55.4**	**-1.9**	
AGRA				AMB	AMB		18 08 58.6		
	comp=Z,59nm,0.7s								
NDI	**New Delhi**	**23.37**	**270**	*e*PKP	**P**		**18 08 58.0**	**-1.8**	
NDI				*e*S	**S**		**18 13 12.0**	**+0.6**	
AYAN	**Aya Nagar**	**23.49**	**270**	*e*PKP	**P**		**18 08 59.3**	**-1.7**	
MDJ	**Mudanjiang**	**23.95**	**49**	P	**P**		**18 09 05.0**	**-0.2**	
MDJ				pP	**pP**		**18 09 07.8**	**-4.3**	
MDJ				PcP	**PcP**		**18 12 46.8**	**-0.3**	
MDJ				S	**S**		**18 13 21.0**	**+0.6**	
MDJ				ScP	**ScP**		**18 16 25.3**	**+1.2**	
MDJ				PcS	**PcS**		**18 16 26.8**	**+0.2**	
MDJ				ScS	**ScS**		**18 20 12.8**	**+1.9**	
MDJ				pmax	pmax				
	comp=Z,190nm,1.2s								
MDJ				pmax	pmax				
	comp=Z,830nm,5.6s								
MDJ				LR	LR				
	comp=N,1μm,15.5s								
MDJ				LR	LR				
	comp=E,3μm,13.1s								
MDJ				LR	LR				
	comp=Z,4μm,12.2s								
MDJ	**Mudanjiang**	**23.95**	**49**	*e*P	**P**		**18 09 05.6**	**+0.4**	
	comp=Z,471nm,1.4s								
THN	**Thein Dam**	**24.05**	**280**	*e*PKP	**P**		**18 09 06.5**	**+0.3**	
KUDL	**Kundal**	**24.12**	**269**	*e*PKP	**P**		**18 09 05.9**	**-1.1**	
KUDL				AMB	AMB		18 09 13.8		
	comp=Z,36nm,1.1s								
KUDL				*e*S	**S**		**18 13 24.7**	**+1.3**	
KSH	**Kashi**	**24.19**	**297**	P	**P**		**18 09 11.0**	**+3.3**	
KSH				*ep*P	**pP**		**18 09 15.0**	**+0.3**	
KSH				*es*P	**sP**		**18 09 18.0**	**+0.4**	
KSH				*e*PP	PnPn		18 09 47.0	+10	
KSH				*e*PcP	**PcP**		**18 12 49.8**	**+1.9**	
KSH				*e*S	**S**		**18 13 27.5**	**+2.8**	
KSH				*es*S	**sS**		**18 13 35.5**	**-0.6**	
KSH				pmax	pmax				
	comp=Z,66nm,0.9s								
KSH				pmax	pmax				
	comp=Z,1μm,5.3s								
KSH				LR	LR				
	comp=N,5μm,8.7s								
KSH				LR	LR				
	comp=E,6μm,9.4s								
KSH				LR	LR				
	comp=Z,7μm,9.2s								
AAA	**Alma-Ata**	**24.48**	**307**	*i* P	**P**		**18 09 09.9**	**-0.3**	
AAA				pmax	pmax				
	comp=Z,2μm,3.2s								
AAA				MLR	MLR				
	comp=Z,3μm,7.0s								
VLA	**Vladivostok**	**24.94**	**54**	*c i*P	**P**		**18 09 14.1**	**-0.2**	
VLA				pmax	pmax				
	comp=Z,327nm,1.7s								
TKM2	**Tokmak 2**	**25.30**	**305**	*e*P	**P**		**18 09 18.0**	**+0.2**	
TKM2				pmax	pmax				
	comp=Z,41nm,0.9s								
TKM2	**Tokmak 2**	**25.30**	**305**	*e*P	**P**		**18 09 18.0**	**+0.2**	
	comp=Z,41nm,0.9s								
TKM2	**Tokmak 2**	**25.30**	**305**	P	**P**		**18 09 19.1**	**+1.2**	
	SNR=8.5								
KZA	**Kyzart**	**25.31**	**303**	*i* P	**P**		**18 09 20.1**	**+2.0**	
KZA	**Kyzart**	**25.31**	**303**	P	**P**		**18 09 20.1**	**+2.0**	
	SNR=28								
USRK	**Ussuriysk Arra**	**25.38**	**52**	P	**P**		**18 09 18.3**	**+0.1**	
	comp=Z,35nm,0.7s,baz=260,slow=8.3,SNR=89								
USRK				S	**S**		**18 13 44.4**	**+1.1**	
	comp=Z,1.6nm,0.8s,baz=240,slow=31,SNR=2.2								
USRK				Lg	Lg		18 17 10.7		
	comp=Z,1.6nm,0.9s,baz=258,slow=29,SNR=3.4								
USRK				LR	LR		18 20 06.0		
	comp=Z,2μm,18.4s,baz=245,slow=38								
KBK	**Karagaybulak**	**25.68**	**304**	*i* P	**P**		**18 09 22.8**	**+1.5**	
KBK	**Karagaybulak**	**25.68**	**304**	P	**P**		**18 09 22.8**	**+1.5**	
	SNR=23								
KRAR	**Krasnoyarsk**	**25.82**	**346**⇑	*e*P	**P**		**18 09 20.7**	**-1.4**	
KRAR				pmax	pmax				
	comp=Z,70nm,1.7s								
FRU	**Bishkek**	**25.97**	**304**	*e*P	**P**		**18 09 24.0**	**+0.3**	
FRU				*i*			18 10 03.0		
FRU				pmax	pmax				
	comp=Z,80nm,2.0s								
AAK	**Ala-Archa**	**26.00**	**304**	P	**P**		**18 09 25.2**	**+1.1**	
	comp=Z,124nm,0.7s,SNR=5.0								
AAK	**Ala-Archa**	**26.00**	**304**	*c i*P	**P**		**18 09 25.1**	**+1.0**	
AAK				pmax	pmax				
	comp=Z,35nm,0.8s								
AAK	**Ala-Archa**	**26.00**	**304**	*e*P	**P**		**18 09 24.9**	**+0.8**	
AAK				S	S		18 14 11.8	+18	
AAK				Lg	Lg		18 17 56.7		
AAK	**Ala-Archa**	**26.00**	**304**	P	**P**		**18 09 25.5**	**+1.5**	
	SNR=6.9								
AAK	**Ala-Archa**	**26.00**	**304**	P	**P**		**18 09 25.6**	**+1.5**	
	comp=Z,13nm,0.9s,baz=84,slow=5.9,SNR=15								
AAK				S	S		18 14 11.8	+18	
	comp=Z,1.7nm,0.5s,baz=140,slow=7.9,SNR=1.7								
AAK				Lg	Lg		18 17 56.7		
	comp=Z,1.2nm,0.3s,baz=14,slow=4.2,SNR=1.6								
AAK				LR	LR		18 21 20.7		
	comp=Z,4μm,18.6s,baz=349,slow=40								
AJM	**Ajmer**	**26.16**	**267**	*e*PKP	**P**		**18 09 24.0**	**-1.5**	
USP	**Ospenovka**	**26.17**	**305**	*i* P	**P**		**18 09 26.6**	**+1.0**	
USP	**Ospenovka**	**26.17**	**305**	P	**P**		**18 09 26.6**	**+1.0**	
	SNR=28								
KULM	**Kulim**	**26.17**	**188**	*e*P	**P**		**18 09 25.2**	**-0.4**	
	comp=Z,23nm,0.8s								
KULM				LR	LR				
	comp=Z,6μm,20.0s								
KULM	**Kulim**	**26.17**	**188**	P	**P**		**18 09 25.4**	**-0.2**	
	comp=Z,26nm,0.9s								
ZAA0	**Zalesovo Array**	**26.43**	**334**	*e*P	**P**		**18 09 27.9**	**+0.2**	
ZALV	**Zalesovo Beam**	**26.43**	**334**	P	**P**		**18 09 28.1**	**+0.4**	
ZALV				pmax	pmax				
	comp=Z,135nm,0.8s								
ZALV				MLR	MLR				
	comp=Z,3μm,21.1s								
ZALV	**Zalesovo Beam**	**26.43**	**334**	P	**P**		**18 09 28.1**	**+0.4**	
ZALV				S	S		18 14 15.7	+16	
ZALV				Lg	Lg		18 17 56.0		
ZALV	**Zalesovo Beam**	**26.43**	**334**	P	**P**		**18 09 28.1**	**+0.4**	
	comp=Z,135nm,0.8s,baz=133,slow=9.2,SNR=550								
ZALV				S	S		18 14 15.7	+16	
	comp=Z,2.1nm,0.8s,baz=140,slow=7.5,SNR=2.0								
ZALV				Lg	Lg		18 17 56.0		
	comp=Z,0.3nm,0.3s,baz=152,slow=38,SNR=2.8								
ZALV				LR	LR		18 20 09.7		
	comp=Z,3μm,21.1s,baz=250,slow=37								
AML	**Almayashu**	**26.44**	**302**	*i* P	**P**		**18 09 29.9**	**+1.6**	
AML	**Almayashu**	**26.44**	**302**	P	**P**		**18 09 30.0**	**+1.6**	
	SNR=13								
EKS2	**Erkin-Say**	**26.51**	**304**	*e*P	**P**		**18 09 29.1**	**+0.4**	
EKS2				pmax	pmax				
	comp=Z,32nm,1.1s								
EKS2				MLR	MLR				
	comp=Z,4μm,20.0s								
EKS2	**Erkin-Say**	**26.51**	**304**	*e*P	**P**		**18 09 29.1**	**+0.4**	
	comp=Z,32nm,1.1s								
EKS2				LR	LR				
	comp=Z,4μm,20.0s								
IPM	**Ipoh**	**26.93**	**187**	*e*P	**P**		**18 09 29.4**	**-3.1**	
	comp=Z,29nm,0.8s								
IPM	**Ipoh**	**26.93**	**187**	P	**P**		**18 09 31.4**	**-1.1**	
	comp=Z,40nm,1.0s								
KURBB	**Kurchatov Arra**	**26.97**	**323**	P	**P**		**18 09 33.1**	**+0.5**	
	comp=Z,64nm,0.8s,baz=130,slow=9.0,SNR=588								
KURK	**Kurchatov**	**26.98**	**323**	P	**P**		**18 09 33.1**	**+0.5**	
KURK				pmax	pmax				
	comp=Z,64nm,0.8s								
KURK	**Kurchatov**	**26.98**	**323**	P	**P**		**18 09 33.1**	**+0.5**	
KURK	**Kurchatov**	**26.98**	**323**	P	**P**		**18 09 31.5**	**-1.1**	
	comp=Z,539nm,1.1s,SNR=60								
HYB	**Hyderabad**	**26.99**	**245**	*i* P	P		18 09 38.0	+4.9	
HYB				*e*S	S		18 14 20.0	+11	
BSI	**Banda Aceh**	**27.05**	**199**	P	**P**		**18 09 33.1**	**-0.5**	
	comp=Z,45nm,2.1s								
KLR	**Kul'dur**	**27.39**	**41**	*e*P	**P**		**18 09 33.7**	**-2.7**	
KLR				*e*S	**S**		**18 14 13.5**	**-1.6**	
KLR				pmax	pmax				
	comp=E,130nm,1.6s								
KLR				pmax	pmax				
	comp=Z,260nm,1.6s								
KKM	**Kota Kinabalu**	**27.68**	**153**	PFAKE			18 09 50.0	+11	
KKM				LR	LR				
	comp=Z,1μm,19.0s								
NVS	**Novosibirsk**	**27.71**	**334**⇑	*i*P	**P**		**18 09 38.8**	**-0.4**	
NVS				pmax	pmax				
	comp=Z,120nm,2.0s								
NVS				pmax	pmax

HABR eS **S** **18 14 38.5 -1.6**
HABR e*SS **sS** **18 14 53.2 +1.5**
HABR eSS **SnSn** **18 16 01.3 -2.5**
HABR e 18 20 28.8
HABR pmax pmax
comp=Z,170nm,2.3s
HABR pmax pmax
comp=E,163nm,2.3s
HABR pmax pmax
comp=N,41nm,2.3s
HABR MLR MLR
comp=N,2μm,13.0s
HABR MLR MLR
comp=Z,5μm,13.0s
HABR MLR MLR
comp=E,4μm,13.0s
CLNS Chul'man 29.26 24 eP **P** **18 09 53.7 +0.7**
CLNS e*PP **pP** **18 10 02.4 +2.3**
CLNS e 18 10 48.6
CLNS e 18 12 56.4
CLNS eS **S** **18 14 47.8 +3.3**
CLNS eSS **SnSn** **18 16 08.9 -1.7**
CLNS e 18 16 40.8
CLNS pmax pmax
comp=Z,21nm,0.7s
CLNS pmax pmax
comp=E,10.0nm,0.8s
CLNS pmax pmax
comp=N,15nm,0.8s
CLNS pmax pmax
comp=Z,11nm,1.1s
CLNS pmax pmax
comp=N,11nm,1.0s
CLNS pmax pmax
comp=E,8.0nm,1.1s
CLNS smax smax
comp=N,171nm,13.1s
CLNS smax smax
comp=E,118nm,12.3s
CLNS MLR MLR
comp=N,3μm,11.0s
CLNS MLR MLR
comp=E,5μm,13.0s
CLNS MLR MLR
comp=Z,6μm,12.0s
MYLDM Lahad Datu 29.40 150 P **P** **18 09 56.7 +2.1**
comp=Z,71nm,1.1s
KBL Kabul 29.45 286 eP **P** **18 09 55.2 +0.1**
KBL pmax pmax
comp=Z,12nm,0.6s
KBL Kabul 29.45 286 eP **P** **18 09 55.2 +0.1**
comp=Z,12nm,0.6s
MYKOM Kota Tinggi 29.46 180 P P 18 09 58.9 +3.9
comp=Z,47nm,1.1s
SBUM Sibu 29.81 163 P **P** **18 10 00.7 +2.5**
comp=Z,40nm,1.1s,comp=Z,536nm
KSM Kuching 30.35 168 eP **P** **18 10 02.8 -0.2**
comp=Z,19nm,0.8s
KSM LR LR
comp=Z,1μm,22.0s
KSM Kuching 30.35 168 P **P** **18 10 04.3 +1.3**
comp=Z,26nm,0.9s
BKNI Bangkinang 31.04 186 P P 18 10 13.7 +4.7
comp=Z,167nm,1.2s,comp=Z,2μm
DAV Davao City (W) 31.48 136 S S 18 15 25.9 +6.1
DAV Davao City (W) 31.48 136 S S 18 15 26.0 +6.1
comp=Z,103nm,0.3s,baz=278,slow=12,SNR=1.5
DAV LR LR 18 25 07.7
comp=Z,995nm,18.8s,baz=192,slow=40
STKI Sintang 31.95 166 P **P** **18 10 19.5 +2.4**
comp=Z,41nm,0.9s,comp=Z,3μm
VOSK Vostochnaya 32.07 321 P **P** **18 10 17.9 +0.1**
VOSK pmax pmax
comp=Z,35nm,0.9s
BVA0 Borovoye Array 32.53 321 *i* P **P** **18 10 21.7 -0.1**
BVA0 pmax pmax
comp=Z,85nm,1.6s
BVAR Borovoye Array 32.53 321 P **P** **18 10 22.3 +0.5**
BVAR 18 13 07.7
BVAR pmax pmax
comp=Z,13nm,0.5s
BVAR pmax pmax
comp=Z,11nm,0.9s
BVAR Borovoye Array 32.53 321 P **P** **18 10 22.3 +0.5**
BVAR PcP **PcP** **18 13 07.7 -0.3**
BVAR S S 18 15 44.9 +9.3
BVAR Borovoye Array 32.53 321 P **P** **18 10 22.3 +0.5**
comp=Z,13nm,0.5s,baz=115,slow=10.0,SNR=92
BVAR PcP **PcP** **18 13 07.7 -0.3**
comp=Z,11nm,0.9s,baz=135,slow=4.6,SNR=4.9
BVAR S S 18 15 44.9 +9.3
comp=Z,1.5nm,0.7s,baz=120,slow=8.8,SNR=2.0
BRVK Borovoye 32.60 321 P **P** **18 10 23.2 +0.8**
comp=Z,210nm,0.6s,SNR=26
BRVK Borovoye 32.60 321 eP **P** **18 10 22.6 +0.2**
BRVK pmax pmax
comp=Z,32nm,0.8s
BRVK MLR MLR
comp=Z,5μm,20.0s
BRVK Borovoye 32.60 321 eP **P** **18 10 22.6 +0.2**
comp=Z,32nm,0.8s
BRVK LR LR
comp=Z,5μm,20.0s
ASAJ Asahikawa 32.72 56 eP **P** **18 10 21.5 -2.0**
ASAJ S S 18 15 31.4 -7.2
ASAJ Asahikawa 32.72 56 P **P** **18 10 23.4 -0.1**
comp=Z,8.7nm,0.7s,baz=264,slow=11,SNR=8.5
ASAJ S S 18 15 31.4 -7.2
comp=Z,9.9nm,1.1s,baz=243,slow=16,SNR=1.8
ERM Erimo 32.84 60 *c* *i*P **P** **18 10 25.0 +0.4**
ERM pmax pmax
comp=Z,56nm,1.7s
ERM Erimo 32.84 60 PFAKE 18 10 40.0 +15
ERM LR LR
comp=Z,721nm,19.0s
ZRNK Zerenda 33.24 321 P **P** **18 10 27.7 -0.3**
ZRNK pmax pmax
comp=Z,77nm,1.3s
YSS Yuzh-Sakhalins 33.40 51 ⇑ *i*P **P** **18 10 30.0 +0.5**
YSS e 18 10 36.0
YSS e 18 11 44.0
YSS e 18 13 10.0
YSS eS **S** **18 15 50.0 +0.8**
YSS eSS **SS** **18 18 14.0 +0.5**
YSS pmax pmax
comp=Z,90nm,1.0s
YSS smax smax
comp=N,900nm,10.0s
YSS MLR MLR
comp=Z,2μm,16.0s
YSS MLR MLR
comp=N,2μm,14.0s
YSS MLR MLR
comp=E,2μm,14.0s
PPBI Pangkal Pinang 33.44 176 P **P** **18 10 31.7 +1.6**
comp=E,53nm,1.2s,comp=E,701nm
PBKI Pangkalan Bun 34.69 167 P **P** **18 10 43.8 +2.9**
comp=E,154nm,1.0s,comp=E,1μm
YAK Yakutsk 34.84 21 *c* *i*P **P** **18 10 41.4 -0.4**
YAK e*PP **pP** **18 10 51.1 +2.3**
YAK e 18 11 59.6
YAK ePPP PPP 18 12 13.4
YAK e 18 13 13.1
YAK eS **S** **18 16 12.2 +1.1**
YAK e*SS **sS** **18 16 27.3 +4.5**
YAK e 18 20 59.3
YAK pmax pmax
comp=Z,24nm,0.8s
YAK pmax pmax
comp=N,7.0nm,0.9s
YAK pmax pmax
comp=E,17nm,1.3s
YAK pmax pmax
comp=Z,13nm,1.0s
YAK pmax pmax
comp=N,4.0nm,0.9s
YAK pmax pmax
comp=E,4.0nm,0.9s
YAK smax smax
comp=N,65nm,2.5s
YAK smax smax
comp=E,54nm,1.4s
YAK MLR MLR
comp=N,1μm,11.0s
YAK MLR MLR
comp=Z,2μm,11.0s
YAK MLR MLR
comp=E,1μm,11.0s
KSI Kapahiang 34.89 183 P **P** **18 10 44.8 +2.1**
comp=E,148nm,0.9s
YUK Yuzh-Kuril'sk 35.03 57 *d* *i*P **P** **18 10 40.7 -3.0**
YUK *i* PPP PPP 18 12 07.7
YUK *i* 18 13 14.9
YUK *i* S **S** **18 16 11.2 -3.3**
YUK *i* SS **SnSn** **18 18 24.0 -6.9**
YUK pmax pmax
comp=N,140nm,2.0s
YUK pmax pmax
comp=Z,398nm,2.0s
YUK pmax pmax
comp=E,180nm,2.0s
YUK pmax pmax
comp=Z,736nm,1.8s
YUK MLR MLR
comp=N,136nm,15.0s
YUK MLR MLR
comp=Z,483nm,16.0s
YUK MLR MLR
comp=E,360nm,16.0s
MRSI Marisa 35.12 148 P P 18 10 49.3 +4.7
comp=E,39nm,0.8s,comp=E,920nm
GTOI Gorontalo 35.48 146 P **P** **18 10 48.2 +0.5**
MNI Manado 35.70 143 P P 18 10 55.5 +5.8
comp=E,96nm,0.9s,comp=E,5μm
KMSI Cibinong 36.00 145 P **P** **18 10 55.2 +2.9**
comp=E,188nm,0.9s,comp=E,3μm
LWLI Liwa 36.22 180 P **P** **18 10 56.7 +2.5**
comp=E,90nm,0.7s
KUR Kuril'sk 36.59 55 *d* *i*P **P** **18 10 54.7 -2.3**
KUR *e* 18 12 21.1
KUR *i* S **S** **18 16 35.7 -2.7**
KUR pmax pmax
comp=Z,171nm,1.1s
KUR pmax pmax
comp=E,19nm,1.1s
KUR pmax pmax
comp=N,23nm,1.1s
KUR pmax pmax
comp=Z,469nm,1.9s
KUR MLR MLR
comp=N,826nm,16.0s
KUR MLR MLR
comp=E,670nm,16.0s
KUR MLR MLR
comp=Z,714nm,16.0s
KASI Kota Agung 36.72 179 P **P** **18 11 00.8 +2.5**
comp=Z,59nm,0.9s
LUWI Luwuk 36.84 148 P **P** **18 11 01.0 +1.6**
comp=Z,124nm,1.1s,comp=Z,1μm
GAMI Galela, Maluku 36.98 138 P P 18 11 10.3 +10
TTSI Tana Toraja 37.40 153 P **P** **18 11 05.5 +1.3**
comp=Z,70nm,0.8s,comp=Z,907nm
AB31 Akbulak array 37.44 311 *i* P **P** **18 11 04.3 +0.1**
AB31 pmax pmax
comp=Z,11nm,0.6s
ABKAR Akbulak array 37.44 311 *e*P **P** **18 11 04.5 +0.4**
comp=Z,11nm,0.6s
SKSI Soroako, Sulaw 37.54 151 P **P** **18 11 07.4 +2.0**
comp=Z,33nm,1.0s,comp=Z,350nm
TNTI Ternate 37.62 140 P P 18 11 15.3 +9.3
DBJI Dramaga 37.83 176 P P 18 11 12.9 +5.1
comp=Z,65nm,1.0s
ABKT Ailbek 38.03 293 P **P** **18 11 11.2 +1.8**
comp=Z,208nm,0.6s,SNR=11
LEM Lembang 38.17 174 P **P** **18 11 13.5 +2.7**
comp=Z,147nm,0.8s
TGJI Tegal 38.36 172 P P 18 11 18.3 +6.1
comp=Z,71nm,1.1s
LBMI Labuha 38.86 141 P P 18 11 26.2 +10
BJII Banjamegara 38.90 171 P P 18 11 22.2 +5.4
comp=Z,114nm,0.9s
AKTO Aktyubinsk 38.90 313 P **P** **18 11 16.9 +0.4**
AKTO 18 13 26.0
AKTO S S 18 17 20.9 +7.6
AKTO pmax pmax
comp=Z,8.0nm,0.5s
AKTO pmax pmax
comp=Z,4.0nm,0.7s
AKTO Aktyubinsk 38.90 313 P **P** **18 11 16.9 +0.4**
AKTO PcP **PcP** **18 13 26.0 -1.0**
AKTO S S 18 17 20.9 +7.6
AKTO Aktyubinsk 38.90 313 P **P** **18 11 16.9 +0.4**
comp=Z,7.8nm,0.5s,baz=90,slow=12,SNR=39
AKTO PcP **PcP** **18 13 26.0 -1.0**
comp=Z,4.4nm,0.7s,baz=73,slow=11,SNR=2.3
AKTO S S 18 17 20.9 +7.6
comp=Z,0.3nm,0.3s,baz=19,slow=17,SNR=2.1
KAPI Kappang 39.19 155 P **P** **18 11 18.1 -1.1**
comp=Z,413nm,0.9s,SNR=6.6
KAPI Kappang 39.19 155 *e*P **P** **18 11 18.5 -0.7**
comp=Z,61nm,0.9s
KAPI S **S** **18 17 15.2 -3.0**
KAPI LR LR
comp=Z,497nm,20.0s
KAPI Kappang 39.19 155 P **P** **18 11 19.1 -0.1**
comp=Z,75nm,0.9s,comp=Z,876nm
KAPI Kappang 39.19 155 P **P** **18 11 18.7 -0.5**
comp=Z,58nm,0.9s,baz=1.0,slow=5.5,SNR=9.0
KAPI S **S** **18 17 15.2 -3.0**
comp=Z,6.5nm,0.9s,baz=294,slow=20,SNR=2.3
SVE Sverdlovsk 39.23 323 *d* *i*P **P** **18 11 20.3 +1.1**
SVE *e* 18 12 51.6
SVE *e*S **S** **18 17 17.7 -0.4**
SVE pmax pmax
comp=Z,99nm,1.1s
SVE MLR MLR
comp=Z,2μm,12.0s
SJI Sawahan 39.61 168 P **P** **18 11 25.6 +2.8**
comp=Z,123nm,0.8s
BKSI Bulukumba 39.61 154 P **P** **18 11 25.0 +2.3**
comp=Z,69nm,0.8s,comp=Z,651nm
PWJI Pagerwojo 39.90 168 P P 18 11 30.3 +5.2
comp=Z,64nm,0.9s
ARU Arti 40.17 322 *c* *i*P **P** **18 11 27.5 +0.6**
ARU 18 13 03.2
ARU PPP PPP 18 13 23.3
ARU S **S** **18 17 34.2 +2.1**
ARU SSS SSS 18 21 00.6
ARU pmax pmax
comp=Z,96nm,0.8s
ARU MLR MLR
comp=Z,1μm,12.0s
ARU Arti 40.17 322 P **P** **18 11 27.2 +0.3**
comp=Z,840nm,0.6s,SNR=55
KHKI Kahang-Kahang 41.06 162 P P 18 11 39.8 +5.1
comp=Z,87nm,0.8s,comp=Z,1μm
GUMO Guam 41.39 106 *e*P **P** **18 11 37.5 0.0**
comp=Z,88nm,1.1s
GUMO LR LR
comp=Z,808nm,19.0s
SOKR Solikamsk 42.12 326 *c* *i*P **P** **18 11 43.8 +0.9**
SOKR S S 18 18 09.7 +8.7
SOKR SS **SS** **18 21 08.3 -0.4**
SOKR pmax pmax
comp=Z,130nm,0.9s
SOKR MLR MLR
comp=Z,3μm,15.0s
TIXI Tiksi 42.47 11 *c* *i*P **P** **18 11 44.1 -1.5**
TIXI pmax pmax
comp=Z,44nm,1.7s
WBSI Waikabubak, Su 43.38 158 P **P** **18 11 52.7 -1.0**
comp=Z,202nm,0.8s,comp=Z,2μm
MMRI Maumere 43.45 153 P **P** **18 11 55.1 +0.9**
comp=Z,124nm,0.9s,comp=Z,2μm
COCO West Island 43.89 190 PFAKE 18 12 10.0 +12
COCO LR LR
comp=Z,2μm,20.0s
PEA0B Petropavlovsk- 44.01 44 eP **P** **18 11 57.7 -0.6**
PETK Petropavlovsk- 44.01 44 P **P** **18 11 58.1 -0.3**
PETK pmax pmax
comp=Z,13nm,0.7s
PETK MLR MLR
comp=Z,771nm,18.6s
PETK Petropavlovsk- 44.01 44 P **P** **18 11 58.0 -0.3**
PETK Petropavlovsk- 44.01 44 P **P** **18 11 58.0 -0.3**
comp=Z,12nm,0.7s,baz=210,slow=6.8,SNR=25
PETK LR LR 18 32 35.5
comp=Z,771nm,18.6s,baz=138,slow=39
PET Petropavlovsk 44.57 45 eP **P** **18 12 01.0 -1.8**
PET *e* 18 13 45.7
PET *e*S **S** **18 18 34.3 -2.7**
PET ePS **S** **18 18 38.3 +1.3**
PET *e* 18 21 53.4
PET pmax pmax
comp=Z,300nm,3.7s
PET pmax pmax
comp=Z,30nm,1.3s
PET pmax pmax
comp=Z,200nm,9.6s
PET MLR MLR
comp=Z,900nm,20.0s
PET MLR MLR
comp=Z,800nm,19.0s
MAK Makhachkala 45.72 301 eP **P** **18 12 10.7 -1.4**
MAK eS **S** **18 18 54.2 +0.2**
MAK eSS **ScS** **18 22 05.7 -1.1**
MAK pmax pmax
comp=Z,427nm,1.4s
MAK MLR MLR
comp=Z,1μm,14.0s
DGRG David-gareji 47.46 299 P **P** **18 12 27.4 +1.5**
TBLG Delisi 47.90 300 eP P 18 12 33.2 +4.0
TBLG Delisi 47.90 300 P P 18 12 33.2 +4.0
GNI Garni 48.12 298 eP **P** **18 12 32.2 +1.1**
comp=Z,14nm,0.8s
GNI LR LR
comp=Z,626nm,19.0s
MIB Mutribah 48.37 284 eP **P** **18 12 32.7 -0.3**
MIB AMb AMB 18 12 43.0
comp=Z,95nm,1.2s
RDF Al-Radifah 48.45 282 eP **P** **18 12 33.4 -0.2**
RDF AMb AMB 18 12 36.8
comp=Z,90nm,0.8s
JAY Jayapura 48.49 127 P sP 18 12 45.8 +1.6
NAY Al-Naaiem 48.61 283 eP **P** **18 12 34.4 -0.4**
NAY AMb AMB 18 12 35.9
comp=Z,72nm,0.7s
ONI Oni 48.73 301 P **P** **18 12 37.2 +1.5**
AKH Akhalkalaki 48.87 300 P **P** **18 12 38.5 +1.6**
KBZ Khabaz 48.99 303 P **P** **18 12 37.0 -0.5**
KBZ pmax pmax
comp=Z,3.0nm,0.6s
KBZ MLR MLR
comp=Z,313nm,19.4s
KBZ Khabaz 48.99 303 P **P** **18 12 37.0 -0.5**
KBZ Khabaz 48.99 303 P **P** **18 12 37.0 -0.5**
comp=Z,3.4nm,0.6s,baz=119,slow=5.8,SNR=9.4
KBZ LR LR 18 35 14.3
comp=Z,313nm,19.4s,baz=81,slow=38
DGAR Diego Garcia 49.02 223 ⇑ eP **P** **18 12 36.7 -1.3**
CHVG Ch'k'valeri 49.71 301 P **P** **18 12 42.1 -1.0**
VORD Divnogorie 50.78 312 eP P 18 12 56.8 +5.8
VORD pmax pmax
comp=Z,20nm,0.7s
VORD pmax pmax
comp=N,70nm,0.6s
VORD pmax pmax
comp=E,220nm,0.8s
VORD MLR MLR
comp=Z,960nm,18.0s
VORD MLR MLR
comp=N,540nm,16.0s
VORD MLR MLR
comp=E,880nm,15.0s
VSR Storozhevoye 50.85 313 eP **P** **18 12 50.8 -0.7**
VSR eS **S** **18 20 01.9 -4.3**
VSR pmax pmax
comp=Z,30nm,0.8s
VSR pmax pmax
comp=N,9.0nm,1.0s
VSR pmax pmax
comp=E,40nm,0.9s
VSR smax smax
comp=Z,180nm,6.5s
VSR smax smax
comp=N,80nm,4.7s
VSR smax smax
comp=E,130nm,4.4s
VSR MLR MLR
comp=Z,1μm,18.0s
VSR MLR MLR
comp=N,290nm,11.0s
VSR MLR MLR
comp=E,640nm,13.0s
BILL Bilibino 50.92 25 *c* *i*P **P** **18 12 51.4 -0.5**
BILL pmax pmax
comp=Z,80nm,1.6s
BILL MLR MLR
comp=Z,300nm,15.0s
SOC Sochi 51.29 303 *c* *i*P **P** **18 12 54.7 -0.3**
SOC *e* 18 14 07.8
SOC *e* 18 14 48.1
SOC eS **S** **18 20 09.7 -2.9**
SOC pmax pmax
comp=Z,24nm,1.0s
SOC MLR MLR
comp=Z,1μm,15.0s
MOS Moscow 51.61 319 eP P 18 12 53.2 -4.0
MOS *e* 18 13 09.1
MOS *e* 18 14 50.3
MOS eS **S** **18 20 11.0 -5.6**
MOS pmax pmax
comp=Z,103nm,0.7s
MOS pmax pmax
comp=Z,100nm,0.6s
MOS MLR MLR
comp=Z,2μm,14.0s
RAYN Ar Rayn 52.02 277 P **P** **18 13 00.0 -0.8**
comp=Z,134nm,0.6s,SNR=12
OBN Obninsk 52.23 318 *c* *i*P **P** **18 13 01.2 -0.6**
OBN *i* 18 14 12.6
OBN *e* 18 14 56.6
OBN *i* S **S** **18 20 27.6 +2.6**
OBN pmax pmax
comp=Z,108nm,2.5s
OBN MLR MLR
comp=Z,600nm,16.0s
ANN Anapa 52.72 305 eP **P** **18 13 04.2 -1.4**
ANN *e* 18 13 16.5
ANN eS **S** **18 20 32.7 +0.6**
ANN pmax pmax
comp=Z,29nm,1.3s
ANN MLR MLR
comp=E,462nm,16.0s
ANN MLR MLR
comp=Z,667nm,16.0s
MALT Malatya 53.29 297 PFAKE 18 13 20.0 +10
MALT LR LR
comp=Z,674nm,21.0s
MALT Malatya 53.29 297 ‖ *i*P P 18 13 25.5 +15
FX1 Attu Island--F 53.33 45 eP **P** **18 13 09.6 -0.4**
FITZ Fitzroy Crossi 53.41 154 P **P** **18 13 10.8 -0.1**
FITZ Fitzroy Crossi 53.41 154 P **P** **18 13 10.8 -0.1**
comp=Z,29nm,0.9s,baz=239,slow=1.3,SNR=12
LVZ Lovozero 53.57 334 *c* *i*P **P** **18 13 11.1 -0.5**
LVZ pmax pmax
comp=Z,38nm,0.8s
LVZ Lovozero 53.57 334 P **P** **18 13 11.4 -0.2**
comp=Z,250nm,0.6s,SNR=5.2
APA Apatity 54.02 333 ⇑ *i*P **P** **18 13 15.0 +0.2**
APA *i* 18 13 21.0
APA *e* 18 14 16.0
APA *i* 18 15 18.6
APA eS **S** **18 20 50.0 +0.9**
APA ePS **PnS** **18 21 08.0 +8.0**
APA pmax pmax
comp=Z,29nm,1.0s
APA pmax pmax
comp=Z,400nm,10.0s
APA MLR MLR
comp=Z,12μm,14.0s
MBWA Marble Bar 54.38 162 eP **P** **18 13 18.2 +0.2**
comp=Z,18nm,0.8s
JOF Joensuu 54.75 328 eP **P** **18 13 21.0 +0.8**
JOF pmax pmax
comp=Z,56nm,0.6s
JOF Joensuu 54.75 328 ep **P** **18 13 21.0 +0.8**
comp=Z,56nm,0.6s
SIM Simferopol' 55.01 305 *c* *i*P **P** **18 13 22.0 -0.4**
SIM *e* 18 15 26.0
SIM ePPP PPP 18 16 39.0
SIM eS **S** **18 21 05.0 +1.8**
SIM pmax pmax
comp=Z,11nm,0.6s
SIM MLR MLR
comp=Z,410nm,15.2s

KEV	**Kevo**	**56.44 336**	*eP*	**P**	**18 13 32.3 +0.1**
KEV			pmax	pmax	
	comp=Z,68nm,0.7s				
KEV	**Kevo**	**56.44 336**	*ep*	**P**	**18 13 32.3 +0.1**
	comp=Z,68nm,0.7s				
KEV	**Kevo**	**56.44 336**	*eP*	**P**	**18 13 32.3 +0.1**
	comp=Z,60nm,0.8s				
KEV			LR	LR	
	comp=Z,1μm,20.0s				
BR131	**Keskin Array S**	**56.55 299**	*eP*	**P**	**18 13 33.2 -0.5**
	comp=Z,2.3nm,0.6s				
BRTR	**Keskin Array B**	**56.55 299**	P	**P**	**18 13 33.4 -0.4**
BRTR	**Keskin Array B**	**56.55 299**	P	**P**	**18 13 33.4 -0.4**
	comp=Z,4.1nm,0.9s,baz=91,slow=6.3,SNR=24				
BRTR			LR	LR	18 42 39.8
	comp=Z,231nm,21.6s,baz=206,slow=41				
ARCES	**ARCESS Array B**	**56.97 336**	P	**P**	**18 13 36.1 +0.1**
ARCES	**ARCESS Array B**	**56.97 336**	P	**P**	**18 13 36.1 +0.1**
	comp=Z,36nm,0.7s,baz=82,slow=6.4,SNR=118				
ARCES			LR	LR	18 39 55.3
	comp=Z,1μm,18.6s,baz=91,slow=38				
ARE0	**ARCESS Array S**	**56.97 336**	⇑*iP*	**P**	**18 13 35.9 0.0**
ARE0			*eS*	**S**	**18 21 30.8 +2.3**
ARE0	**ARCESS Array S**	**56.97 336**	*eP*	**P**	**18 13 36.0 0.0**
KAF	**Kangasniemi**	**57.11 327**	*eP*	**P**	**18 13 37.0 -0.1**
KAF			pmax	pmax	
	comp=Z,48nm,0.6s				
KAF	**Kangasniemi**	**57.11 327**	*ep*	**P**	**18 13 37.0 -0.1**
	comp=Z,48nm,0.6s				
ANTO	**Ankara**	**57.14 300**	*eP*	**P**	**18 13 37.3 -0.5**
ANTO			pmax	pmax	
	comp=Z,17nm,1.0s				
ANTO			MLR	MLR	
	comp=Z,442nm,19.0s				
ANTO	**Ankara**	**57.14 300**	*eP*	**P**	**18 13 37.3 -0.5**
	comp=Z,17nm,1.0s				
ANTO			LR	LR	
	comp=Z,442nm,19.0s				
AKASG	**Malin Array Be**	**57.15 313**	P	**P**	**18 13 37.0 -0.5**
AKASG			pmax	pmax	
	comp=Z,10.0nm,0.7s				
AKASG			MLR	MLR	
	comp=Z,1μm,19.4s				
AKASG	**Malin Array Be**	**57.15 313**	P	**P**	**18 13 37.0 -0.5**
AKASG	**Malin Array Be**	**57.15 313**	P	**P**	**18 13 37.0 -0.5**
	comp=Z,9.5nm,0.7s,baz=72,slow=6.1,SNR=20				
AKASG			LR	LR	18 39 22.7
	comp=Z,1μm,19.4s,baz=55,slow=37				
AK01	**Malin Array Si**	**57.16 313**	*eP*	**P**	**18 13 37.1 -0.5**
KIEV	**Kiev**	**57.16 313**	*eP*	**P**	**18 13 36.8 -0.8**
KIEV			pmax	pmax	
	comp=Z,10.0nm,0.8s				
KIEV			MLR	MLR	
	comp=Z,1μm,19.0s				
KIEV	**Kiev**	**57.16 313**	*eP*	**P**	**18 13 36.8 -0.8**
	comp=Z,10nm,0.8s				
KIEV			LR	LR	
	comp=Z,1μm,19.0s				
AK02	**Malin Array Si**	**57.17 313**	*eP*	**P**	**18 13 36.8 -0.9**
AMKA	**Amchitka**	**57.28 46**	*eP*	**P**	**18 13 37.5 -1.0**
	comp=Z,50nm,0.8s				
MICGM	**Minsk**	**57.29 318**	*e*	**P**	**18 13 37.0 -1.5**
FIA1	**FINESS Array S**	**57.29 326**	*eP*	**P**	**18 13 38.0 -0.4**
FINES	**FINESS Array B**	**57.29 326**	P	**P**	**18 13 38.4 0.0**
FINES	**FINESS Array B**	**57.29 326**	P	**P**	**18 13 38.4 0.0**
	comp=Z,52nm,0.6s,baz=91,slow=7.8,SNR=157				
FINES			LR	LR	18 39 51.9
	comp=Z,1μm,18.7s,baz=80,slow=38				
MNK	**Minsk**	**57.32 318**	*eP*	**P**	**18 13 37.0 -1.7**
KTK1	**Kautokeino**	**57.80 335**	⇑*iP*	**P**	**18 13 42.0 +0.1**
KTK1			AMB	AMB	18 13 43.4
	comp=Z,316nm,0.6s				
NACGM	**Naroch**	**57.85 318**	*eP*	**P**	**18 13 40.0 -2.4**
PMG	**Port Moresby**	**57.88 127**	*eP*	**P**	**18 13 44.1 +1.1**
	comp=Z,43nm,1.0s				
PMG	**Port Moresby**	**57.88 127**	P	**P**	**18 13 44.6 +1.5**
	comp=Z,56nm,1.0s,comp=Z,892nm				
CSS	**Prodhromos**	**58.15 294**	*eP*	**P**	**18 13 44.5 -0.4**
	comp=Z,20nm,0.8s				
CSS			LR	LR	
	comp=Z,542nm,22.0s				
KIS	**Kishinev**	**58.18 309**	*eP*	**P**	**18 13 43.0 -1.9**
KIS			*e*		18 17 16.0
KIS			MLR	MLR	
	comp=Z,1μm,13.0s				
KIS			MLR	MLR	
	comp=Z,1μm,14.0s				
KIS	**Kishinev**	**58.18 309**	*eP*	**P**	**18 13 43.0 -1.9**
KIS			LRM	MLR	18 39 56.0
	comp=Z,1μm,14.0s				
TLCR		**58.62 307**	⇑*iP*	**P**	**18 13 48.3 +0.3**
TLCR		**58.62 307**	⇑*iP*	**P**	**18 13 48.3 +0.3**
BJO	**Bjornoya**	**58.67 342**	AMS	AMS	18 43 34.9
	comp=Z,3μm,18.8s				
COEN	**Coen**	**58.69 134**	*eP*	**P**	**18 13 49.3 +0.5**
	comp=Z,188nm,0.6s				
WRAB	**Tennant Creek**	**58.75 146**	P	**P**	**18 13 49.0 -0.1**
	comp=Z,715nm,0.6s,SNR=24				
WRAB	**Tennant Creek**	**58.75 146**	*eP*	**P**	**18 13 49.7 +0.7**
WRAB	**Tennant Creek**	**58.75 146**	*eP*	**P**	**18 13 49.7 +0.7**
WRA	**Warramunga Arr**	**58.75 146**	P	**P**	**18 13 49.5 +0.4**
WRA			S	**S**	**18 21 50.6 -2.2**
WRA			⇑*e*		18 43 27.0
WRA	**Warramunga Arr**	**58.75 146**	P	**P**	**18 13 49.5 +0.4**
	comp=Z,62nm,0.9s,baz=336,slow=7.6,SNR=37				
WRA			S	**S**	**18 21 50.6 -2.2**
	comp=Z,1.1nm,0.8s,baz=336,slow=12,SNR=5.6				
WRA			PKP2bc		18 43 27.0
	comp=Z,0.7nm,0.9s,baz=145,slow=2.2,SNR=5.6				
SPA0	**Spitsbergen Ar**	**59.03 346**	*eP*	**P**	**18 13 50.3 -0.1**
SPA0			*eS*	**S**	**18 21 56.7 +1.3**
TIRR	**Tirgusor**	**59.08 306**	⇓P	**P**	**18 13 51.4 +0.2**
TIRR	**Tirgusor**	**59.08 306**	*eP*	**P**	**18 13 50.1 -1.0**
	comp=Z,8.2nm,0.9s				
TIRR	**Tirgusor**	**59.08 306**	⇓*iP*	**P**	**18 13 51.4 +0.2**
CFR	**Carcaliu**	**59.09 307**	⇑P	**P**	**18 13 51.0 -0.2**
CFR	**Carcaliu**	**59.09 307**	⇑*iP*	**P**	**18 13 51.0 -0.2**
TRO	**Tromso**	**59.26 336**	⇑*iP*	**P**	**18 13 51.7 -0.3**
TRO			AMB	AMB	18 13 57.9
	comp=Z,50nm,3.1s				
TRO			AMS	AMS	18 41 17.2
	comp=Z,2μm,11.3s				
HARR	**Harsova**	**59.35 306**	⇑P	**P**	**18 13 54.9 +1.8**
HARR	**Harsova**	**59.35 306**	⇑*iP*	**P**	**18 13 54.9 +1.8**
ISP	**Isparta**	**59.43 298**	*eP*	**P**	**18 13 53.5 -0.3**
ISP			pmax	pmax	
	comp=Z,21nm,0.8s				
ISP			MLR	MLR	
	comp=Z,437nm,21.0s				
ISP	**Isparta**	**59.43 298**	*eP*	**P**	**18 13 53.5 -0.3**
	comp=Z,21nm,0.8s				
ISP			LR	LR	
	comp=Z,437nm,21.0s				
TESR	**Tescani**	**59.75 309**	⇓*iP*	**P**	**18 13 55.3 -0.5**
KBS	**Kingsbay**	**59.82 347**	⇑*iP*	**P**	**18 13 55.0 -0.8**
KBS			*eS*	**S**	**18 22 06.3 +0.8**
KBS			AMS	AMS	18 44 52.9
	comp=Z,1μm,14.1s				
KBS	**Kingsbay**	**59.82 347**	*de*P	**P**	**18 13 55.7 -0.1**
KBS			pmax	pmax	
	comp=Z,17nm,1.2s				
KBS	**Kingsbay**	**59.82 347**	PFAKE		18 14 10.0 +14
KBS			LR	LR	
	comp=Z,953nm,19.0s				
VRI	**Vrincioaia**	**59.86 308**	⇑P	**P**	**18 13 57.5 +0.9**
VRI	**Vrincioaia**	**59.86 308**	⇑*iP*	**P**	**18 13 57.5 +0.9**
PLOR	**Plostina**	**59.92 308**	⇓P	**P**	**18 13 57.9 +0.9**
PLOR	**Plostina**	**59.92 308**	⇓*iP*	**P**	**18 13 57.9 +0.9**
SUW	**Suwalki**	**60.09 318**	*eP*	**P**	**18 13 57.9 -0.1**
SUW			pmax	pmax	
	comp=Z,69nm,0.8s				
SUW	**Suwalki**	**60.09 318**	*eP*	**P**	**18 13 57.9 -0.1**
	comp=Z,69nm,0.8s				
SUW	**Suwalki**	**60.09 318**	*eP*	**P**	**18 13 57.6 -0.4**
BURAR	**Bucovina Array**	**60.41 310**	⇓*iP*	**P**	**18 14 00.8 +0.4**
BUR08	**Bucovina Ar. S**	**60.41 310**	*eP*	**P**	**18 13 59.6 -0.8**
MLR	**Muntele Rosu**	**60.49 308**	⇓*iP*	**P**	**18 14 01.8 +0.7**
LVV	**L'vov**	**60.59 313**	*eP*	**P**	**18 14 01.2 -0.3**
LVV			*e*		18 14 45.6
LVV			*eS*	**S**	**18 22 16.2 +0.1**
LVV			MLR	MLR	
	comp=N,300nm,13.0s				
LVV			MLR	MLR	
	comp=Z,500nm,13.0s				
LVV			MLR	MLR	
	comp=E,600nm,12.0s				
VOIR		**61.11 308**	⇓P	**P**	**18 14 04.6 -0.6**
VOIR		**61.11 308**	⇓*iP*	**P**	**18 14 04.6 -0.6**
ARR	**Arges**	**61.41 308**	⇑*iP*	**P**	**18 14 07.4 +0.1**
HUMR	**Humele**	**61.42 307**	⇑*iP*	**P**	**18 14 07.0 -0.2**
KWP	**Kalwaria Pacla**	**61.47 313**	PFAKE		18 14 20.0 +13
KWP			LR	LR	
	comp=Z,1μm,19.0s				
KWP	**Kalwaria Pacla**	**61.47 313**	*eP*	**P**	**18 14 08.0 +0.5**
MOR8	**Moi Rana**	**61.56 332**	⇑*iP*	**P**	**18 14 06.2 -1.7**
MOR8			AMB	AMB	18 14 07.0
	comp=Z,58nm,0.7s				
ASAR	**Alice Springs**	**61.77 149**	P	**P**	**18 14 10.4 +0.7**
ASAR			S	**S**	**18 22 29.9 -1.7**
ASAR			⇑*e*		18 43 21.7
ASAR	**Alice Springs**	**61.77 149**	P	**P**	**18 14 10.4 +0.7**
	comp=Z,14nm,0.8s,baz=327,slow=5.9,SNR=24				
ASAR			S	**S**	**18 22 29.9 -1.7**
	comp=Z,1.1nm,0.9s,baz=320,slow=11,SNR=6.3				
ASAR			PKP2bc		18 43 21.7
	comp=Z,1.1nm,0.9s,baz=154,slow=2.0,SNR=6.4				
ALN	**Alexandroupoli**	**61.78 303**	P	**P**	**18 14 09.1 -0.6**
KOLS	**Kolonicke sedl**	**61.94 312**	*eP*	**P**	**18 14 10.4 -0.2**
KOLS			pmax	pmax	
	comp=Z,13nm,1.2s				
KOLS	**Kolonicke sedl**	**61.94 312**	*eP*	**P**	**18 14 10.4 -0.2**
LOT	**Lotru**	**61.97 308**	⇓*iP*	**P**	**18 14 11.6 +0.5**
TRPA	**Tarpa**	**62.00 311**	⇑*iP*	**P**	**18 14 11.2 +0.2**
TRPA	**Tarpa**	**62.00 311**	⇑*eP*	**P**	**18 14 11.4 +0.4**
UZH	**Uzhgorod**	**62.01 312**	*eP*	**P**	**18 14 10.2 -0.9**
UZH			*e*		18 16 26.8
UZH			*eS*	**S**	**18 22 30.0 -4.2**
UZH			*ePS*	**PnS**	**18 22 45.6 -4.7**
UZH			MLR	MLR	
	comp=N,250nm,14.0s				
UZH			MLR	MLR	
	comp=E,900nm,14.0s				
UZH			MLR	MLR	
	comp=Z,350nm,14.0s				
BEL	**Belsk**	**62.03 316**	*eP*	**P**	**18 14 11.6 +0.4**
SMG	**Samos**	**62.23 299**	P	**P**	**18 14 12.7 -0.1**
SMG	**Samos**	**62.23 299**	*ePN*	**P**	**18 14 12.8 -0.1**
DRGR		**62.28 310**	⇑P	**P**	**18 14 13.7 +0.7**
DRGR		**62.28 310**	⇑*iP*	**P**	**18 14 13.7 +0.7**
SMTH	**Samothraki Isl**	**62.28 302**	P	**P**	**18 14 12.4 -0.7**
SMTH	**Samothraki Isl**	**62.28 302**	*ePN*	**P**	**18 14 12.5 -0.7**
STHS	**Stebnicka Huta**	**62.45 313**	*eP*	**P**	**18 14 14.2 +0.1**
STHS			pmax	pmax	
	comp=Z,8.0nm,1.2s				
STHS	**Stebnicka Huta**	**62.45 313**	*eP*	**P**	**18 14 14.2 +0.1**
CRVS	**Cervenica-Dubn**	**62.46 312**	*eP*	**P**	**18 14 12.6 -1.5**
CRVS			pmax	pmax	
	comp=Z,9.0nm,1.4s				
CRVS	**Cervenica-Dubn**	**62.46 312**	*eP*	**P**	**18 14 12.6 -1.5**
CRVS			*eS*	**S**	**18 22 38.3 -1.6**
CHOS	**Chios island**	**62.59 300**	P	**P**	**18 14 14.7 -0.6**
GZR	**Gura Zlata**	**62.66 308**	⇓P	P	18 14 18.9 +3.3
GZR	**Gura Zlata**	**62.66 308**	⇓*iP*	P	18 14 18.9 +3.3
KARP	**Karpathos**	**62.72 297**	P	**P**	**18 14 15.7 -0.4**
KARP	**Karpathos**	**62.72 297**	*ePB*	**P**	**18 14 15.8 -0.4**
LIA	**Limnos Island**	**62.72 302**	P	**P**	**18 14 15.2 -0.8**
LIA	**Limnos Island**	**62.72 302**	*ePN*	**P**	**18 14 15.7 -0.3**
KAVA	**Kavala**	**62.84 303**	P	**P**	**18 14 16.7 -0.1**
NIE	**Niedzica**	**63.02 313**	⇑*eP*	**P**	**18 14 19.7 +1.8**
NIE	**Niedzica**	**63.02 313**	*eP*	**P**	**18 14 19.7 +1.8**
NIE			*eP*	**pP**	**18 14 22.8 -2.6**
OJC	**Ojcow**	**63.10 314**	⇑*iP*	**P**	**18 14 18.5 +0.1**
OJC			*e*		18 14 55.3
OJC			*eS*	**S**	**18 22 49.6 +1.7**
OJC			MLR	MLR	
	comp=Z,2μm,19.0s				
OJC	**Ojcow**	**63.10 314**	*i* P	**P**	**18 14 18.5 +0.1**
OJC			*ep*P	**pP**	**18 14 21.3 -4.5**
OJC			*ePcP*	**PcP**	**18 14 55.3 -0.6**
OJC			*eS*	**S**	**18 22 49.6 +1.7**
OJC			L	L	18 42 46.8
	comp=Z,2μm,19.0s				
NVR	**Nevrokopi**	**63.19 304**	P	**P**	**18 14 18.5 -0.7**
KECS	**Kecovo**	**63.20 312**	*eP*	**P**	**18 14 19.5 +0.4**
KECS			pmax	pmax	
	comp=Z,3.0nm,0.9s				
KECS	**Kecovo**	**63.20 312**	*eP*	**P**	**18 14 19.5 +0.4**
VTS	**Vitosha**	**63.25 305**	⇓P	**P**	**18 14 20.3 +0.6**
VTS	**Vitosha**	**63.25 305**	⇓*iP*	**P**	**18 14 20.3 +0.6**
BZS	**Buzias**	**63.36 309**	⇓P	**P**	**18 14 20.3 +0.1**
BZS	**Buzias**	**63.36 309**	⇓*iP*	**P**	**18 14 20.3 +0.1**
OUR	**Ouranopolis**	**63.45 303**	P	**P**	**18 14 20.4 -0.4**
SRS	**Serrai**	**63.46 304**	P	**P**	**18 14 20.0 -1.0**
ZKR	**Zakros**	**63.60 297**	*ePB*	**P**	**18 14 21.9 0.0**
GKP	**Gorka Klasztor**	**63.70 318**	*eP*	**P**	**18 14 22.3 +0.1**
SANT	**Santorini**	**63.73 298**	*eP*	**P**	**18 14 20.7 -2.1**
	comp=Z,45nm,1.0s				
PSZ	**Piszkesteto**	**63.75 312**	P	**P**	**18 14 23.5 +0.7**
PSZ			pmax	pmax	
	comp=Z,11nm,1.0s				
PSZ	**Piszkesteto**	**63.75 312**	P	**P**	**18 14 23.5 +0.7**
	comp=Z,11nm,1.0s				
PSZ	**Piszkesteto**	**63.75 312**	⇑*eP*	**P**	**18 14 23.0 +0.2**
AOS	**Alonnisos**	**63.92 301**	P	**P**	**18 14 23.6 -0.4**
KNT	**Kendrikon**	**63.94 304**	P	**P**	**18 14 23.5 -0.6**
TBLU	**Trondheim**	**64.10 330**	*eP*	**P**	**18 14 22.3 -2.5**
TBLU			AMS	AMS	18 44 17.4
	comp=Z,3μm,14.5s				
LAST	**Lasithi**	**64.15 297**	*ePB*	**P**	**18 14 25.3 -0.3**
SKIA	**Skiathos**	**64.22 302**	P	**P**	**18 14 25.5 -0.5**
OKC	**Ostrava-Krasne**	**64.23 314**	*eP*	**P**	**18 14 26.2 +0.4**
OKC			*e*		18 16 48.3
OKC			*eS*	**S**	**18 23 05.5 +3.6**
OKC			MLR	MLR	
	comp=Z,2μm,14.6s				
OKC	**Ostrava-Krasne**	**64.23 314**	⇑*eP*	**P**	**18 14 26.2 +0.4**
OKC			*ePP*	**PP**	**18 16 47.9 +1.0**
OKC			*eS*	**S**	**18 23 05.5 +3.6**
OKC			AMS	AMS	18 43 20.0
	comp=Z,2μm,14.6s				
VYHS	**Vyhne**	**64.24 313**	*eP*	**P**	**18 14 26.2 +0.3**
VYHS			pmax	pmax	
	comp=Z,13nm,1.2s				
VYHS	**Vyhne**	**64.24 313**	*eP*	**P**	**18 14 26.2 +0.3**
VYHS			*eS*	**S**	**18 23 03.9 +1.8**
PTL	**Penteli**	**64.32 300**	P	**P**	**18 14 25.2 -1.5**
NC602	**NORSAR Array S**	**64.33 327**	⇑*iP*	**P**	**18 14 25.4 -0.9**
NC602			*eS*	**S**	**18 23 02.1 -0.7**
XOR	**Xorichti**	**64.35 302**	P	**P**	**18 14 25.5 -1.3**
GRG	**Griva**	**64.36 304**	P	**P**	**18 14 26.2 -0.7**
NB2	**NORSAR Subarra**	**64.38 327**	P	**P**	**18 14 26.0 -0.7**
	comp=Z,20nm,0.6s,baz=73,slow=6.9				
NB2	**NORSAR Subarra**	**64.38 327**	P	**P**	**18 14 26.0 -0.7**
	baz=73,slow=6.9				
NOA	**NORSAR Array B**	**64.38 327**	P	**P**	**18 14 25.9 -0.8**
NOA			PP	PP	18 16 42.0 -5.9
NOA	**NORSAR Array B**	**64.38 327**	P	**P**	**18 14 25.9 -0.8**
	comp=Z,23nm,0.7s,baz=73,slow=6.7,SNR=120				
NOA			PP	PP	18 16 42.0 -5.9
	comp=Z,2.6nm,0.7s,baz=73,slow=9.5,SNR=2.6				
NOA			LR	LR	18 44 25.2
	comp=Z,828nm,20.6s,baz=80,slow=38				
BSD	**Bornholm Skovb**	**64.42 320**	*i* P	**P**	**18 14 28.2 +1.3**
BSD			pmax	pmax	
	comp=Z,23nm,0.9s				
BSD	**Bornholm Skovb**	**64.42 320**	*i* P	**P**	**18 14 28.2 +1.3**
	comp=Z,23nm,0.9s				
BUD	**Budapest**	**64.45 312**	⇑*eP*	**P**	**18 14 26.0 -1.3**
IDI	**Anoyia**	**64.55 297**	*eP*	**P**	**18 14 26.4 -1.9**
	comp=Z,16nm,0.7s				
NAO01	**NORSAR Array S**	**64.60 327**	*eP*	**P**	**18 14 27.1 -1.0**
	comp=Z,16nm,0.7s				
LIT	**Litokhoron**	**64.60 303**	P	**P**	**18 14 27.2 -1.3**
MORC	**Moravsky Berou**	**64.62 314**	*eP*	**P**	**18 14 27.7 -0.8**
MORC			pmax	pmax	
	comp=Z,19nm,0.9s				
MORC	**Moravsky Berou**	**64.62 314**	*eP*	**P**	**18 14 27.7 -0.8**
	comp=Z,19nm,0.9s				
AXAR	**Agios Charalam**	**64.95 301**	P	**P**	**18 14 29.7 -1.1**
KSP	**Ksiaz**	**65.03 316**	⇑*eP*	**P**	**18 14 31.2 +0.2**
KSP			*eS*	**S**	**18 23 08.0 -3.7**
KSP			*eSS*	**SS**	**18 27 22.0 -1.3**
KSP			MLR	MLR	
	comp=Z,5μm,19.7s				
KSP	**Ksiaz**	**65.03 316**	*eP*	**P**	**18 14 31.0 0.0**
AGG	**Agios Georgios**	**65.10 302**	P	**P**	**18 14 30.2 -1.5**
SMOL	**Smolenice**	**65.11 313**	*eP*	**P**	**18 14 33.0 +1.4**
SMOL	**Smolenice**	**65.11 313**	*eP*	**P**	**18 14 33.0 +1.4**
PKSM	**Moragy**	**65.12 310**	⇑P	**P**	**18 14 32.0 +0.3**
PKSM	**Moragy**	**65.12 310**	⇑*iP*	**P**	**18 14 32.0 +0.3**
PKSM	**Moragy**	**65.12 310**	⇑*eP*	**P**	**18 14 31.6 -0.1**
FNA	**Florina**	**65.15 304**	P	**P**	**18 14 30.6 -1.5**
PKST	**T''s**	**65.16 312**	⇑*eP*	**P**	**18 14 31.8 -0.2**
DPC	**Dobruska-Polom**	**65.17 315**	⇑*iP*	**P**	**18 14 32.6 +0.5**
DPC	**Dobruska-Polom**	**65.17 315**	⇑*iP*	**P**	**18 14 32.6 +0.5**
DPC			*ep*P	**pP**	**18 14 36.5 -3.0**
NWAO	**Narrogin (SRO)**	**65.19 168**	LR	LR	18 42 21.1
	comp=Z,883nm,18.5s,baz=355,slow=35				
PKS9	**Tamasi**	**65.23 311**	⇑*eP*	**P**	**18 14 32.4 0.0**
CTAO	**Charters Tower**	**65.27 136**	*eP*	**P**	**18 14 33.6 +0.7**
CTAO			pmax	pmax	
	comp=Z,26nm,1.0s				
CTAO			MLR	MLR	
	comp=Z,386nm,21.0s				
CTAO	**Charters Tower**	**65.27 136**	*eP*	**P**	**18 14 33.6 +0.7**
	comp=Z,26nm,1.0s				
CTAO			LR	LR	
	comp=Z,386nm,21.0s				
UPC	**Upice**	**65.31 315**	*eP*	**P**	**18 14 33.2 +0.3**
UPC			*e*		18 14 39.8
UPC	**Upice**	**65.31 315**	⇑*eP*	**P**	**18 14 33.2 +0.3**
UPC			*ep*P	**pP**	**18 14 39.8 -0.5**
MOL	**Molde**	**65.50 330**	⇑*iP*	**P**	**18 14 33.2 -0.6**
MOL			AMB	AMB	18 14 45.2
	comp=Z,48nm,2.0s				
EVR	**Evrytania**	**65.52 302**	P	**P**	**18 14 33.1 -1.4**
NEST	**Nestorio**	**65.52 304**	P	**P**	**18 14 32.7 -1.8**
COP	**Copenhagen**	**65.56 322**	*i* P	**P**	**18 14 34.6 +0.2**
COP			pmax	pmax	
	comp=Z,33nm,0.7s				
COP			MLR	MLR	
	comp=Z,770nm,13.0s				
COP	**Copenhagen**	**65.56 322**	*i* P	**P**	**18 14 34.6 +0.2**
	comp=Z,33nm,0.7s				
COP					
	comp=Z,770nm,13.0s				
KLV	**Kalavryta, Ach**	**65.58 301**	P	**P**	**18 14 32.8 -2.1**
KONO	**Kongsberg**	**65.61 326**	⇑*iP*	**P**	**18 14 33.5 -1.1**
KONO			AMB	AMB	18 14 45.5
	comp=Z,26nm,0.3s				
KONO			*eS*	**S**	**18 23 19.5 +1.0**
KONO			*eSS*	SS	18 27 39.1 +7.2
KONO			AMS	AMS	18 45 32.0
	comp=Z,1μm,14.9s				
KONO	**Kongsberg**	**65.61 326**	*eP*	**P**	**18 14 33.7 -0.9**
KONO			pmax	pmax	
	comp=Z,19nm,0.6s				
KONO	**Kongsberg**	**65.61 326**	*eP*	**P**	**18 14 33.7 -0.9**
	comp=Z,19nm,0.6s				
LLD	**Lille Linde**	**65.80 321**	*i* P	**P**	**18 14 36.6 +0.7**
LLD			pmax	pmax	
	comp=Z,50nm,0.8s				
LLD	**Lille Linde**	**65.80 321**	*i* P	**P**	**18 14 36.6 +0.7**
	comp=Z,50nm,0.8s				
TREC	**Trest**	**66.05 314**	*eP*	**P**	**18 14 38.7 +1.0**
TREC			*e*		18 14 46.1
TREC			*eS*	**S**	**18 23 27.9 +3.6**
TREC			MLR	MLR	
	comp=Z,2μm,15.5s				
TREC	**Trest**	**66.05 314**	⇑*eP*	**P**	**18 14 38.7 +1.0**
TREC			*ex*	x	18 14 46.1
TREC			*eS*	**S**	**18 23 27.9 +3.6**
TREC			AMS	AMS	18 44 30.0
	comp=Z,2μm,15.5s				
ALE	**Alert**	**66.12 358**	P	**P**	**18 14 38.6 +1.0**
	comp=Z,180nm,0.7s,SNR=7.1				
PVCC	**Panska Ves**	**66.16 316**	⇑AMS	AMS	18 44 30.0
	comp=Z,2μm,14.6s				
BEHE	**Becsehely**	**66.24 311**	⇑*eP*	**P**	**18 14 39.5 +0.5**
CONA	**Conrad Observa**	**66.30 313**	⇑*ipP*	**P**	**18 14 39.8 +0.4**
	comp=Z,18nm,1.3s,SNR=7.4				
PRU	**Pruhonice**	**66.37 315**	⇑*iP*	**P**	**18 14 40.0 +0.3**
PRU			*e*		18 17 08.3
PRU			*e*		18 18 40.7
PRU			*eS*	**S**	**18 23 27.1 -1.1**
PRU			MLR	MLR	
	comp=Z,2μm,15.8s				
PRU	**Pruhonice**	**66.37 315**	⇑*iP*	**P**	**18 14 40.0 +0.3**
PRU			*ep*P	**pP**	**18 14 44.5 -2.7**
PRU			*ePP*	**PP**	**18 17 08.3 +2.7**
PRU			*ex*	x	18 18 40.7
PRU			*eS*	**S**	**18 23 27.1 -1.1**
PRU			AMS	AMS	18 44 40.0
	comp=Z,2μm,15.8s				
PRA	**Prague**	**66.41 315**	⇑P	**P**	**18 14 40.0 +0.1**
PRA			AMS	AMS	18 45 00.0
BRG	**Berggiesshubel**	**66.41 316**	*eP*	**P**	**18 14 40.0 +0.1**
	comp=Z,14nm,0.8s				
BRG			*i*		18 14 47.5
	comp=Z,22nm,0.9s				
BRG			PP	**PP**	**18 17 10.0 +4.1**
BRG			S	**S**	**18 23 32.0 +3.4**
BRG			SS	**SS**	**18 27 49.0 +4.2**
BRG					
	comp=N,776nm,17.0s				
BRG					
	comp=E,1μm,14.5s				
BRG					
	comp=Z,2μm,15.8s				
BRG	**Berggiesshubel**	**66.41 316**	*eP*	**P**	**18 14 40.1 +0.1**
	comp=Z,22nm,0.9s				
DAG	**Danmarks Havn**	**66.53 348**	⇑*iP*	**P**	**18 14 39.2 -1.1**
DAG			pmax	pmax	
	comp=Z,7.0nm,0.7s				
DAG			MLR	MLR	
	comp=Z,1μm,19.0s				
DAG	**Danmarks Havn**	**66.53 348**	⇑*iP*	**P**	**18 14 39.2 -1.1**
	comp=Z,10nm,0.7s				
DAG					
	comp=Z,970nm,19.0s				
KOGS	**Kog**	**66.59 311**	*i* P	**P**	**18 14 40.9 -0.2**
HYA	**Hoyanger**	**66.62 328**	*eP*	**P**	**18 14 40.8 -0.3**
FBE	**Freiberg**	**66.74 316**	*eP*	**P**	**18 14 42.5 +0.5**
	comp=Z,23nm,1.0s				
FBE			*ep*P	**pP**	**18 14 50.3 +0.8**
CLL	**Collm**	**66.81 317**	*eP*	**P**	**18 14 42.2 -0.2**
	comp=Z,15nm,0.9s				
CLL	**Collm**	**66.81 317**	⇑*iP*	**P**	**18 14 42.1 -0.3**
CLL			*eS*	**S**	**18 23 33.0 -0.4**
CLL			pmax	pmax	
	comp=Z,15nm,1.1s				
CLL			MLR	MLR	
	comp=Z,900nm,19.0s				
CLL	**Collm**	**66.81 317**	⇑

GERES **GERESS Array B** 67.30 314 P **P** 18 14 46.0 +0.2
GERES **GERESS Array B** 67.30 314 P **P** 18 14 46.0 +0.2
comp=Z,3,8nm,0.7s,baz=71,slow=5.8,SNR=37
GERES LR LR 18 45 48.0
comp=Z,2μm,20.9s,baz=81,slow=37
BER Bergen 67.31 328 *e*P **P** 18 14 43.4 -2.1
BER *e*S **S** 18 23 40.3 +1.2
BER AMS AMS 18 46 22.7
comp=Z,1μm,11.7s
BSEG Bad Segeberg 67.34 320 *e*P **P** 18 14 46.6 +0.8
comp=Z,90nm,0.9s
BSEG *e*pP **pP** 18 14 54.3 +1.0
BSEG Bad Segeberg 67.34 320 *e*P **P** 18 14 46.6 +0.8
BSEG *e**PP **pP** 18 14 54.3 +1.0
BSEG pmax pmax
comp=Z,83nm,0.9s
TANN Tannenbergstha 67.46 316 *e*P **P** 18 14 46.8 +0.1
comp=Z,15nm,0.9s
JMIC Jan Mayen 67.52 341 *e*P **P** 18 14 45.9 -0.7
JMIC AMS AMS 18 47 49.2
comp=Z,753nm,14.7s
WERD Werda 67.54 316 *e*P **P** 18 14 47.2 0.0
comp=Z,15nm,0.9s
WERD *e*pP **pP** 18 14 54.9 +0.2
GUNZ Gunzen 67.56 316 *e*P **P** 18 14 47.6 +0.3
comp=Z,24nm,0.9s
GUNZ *e*pP **pP** 18 14 55.4 +0.6
WERN Wernitzgruen 67.56 316 *e*P **P** 18 14 47.5 +0.2
comp=Z,22nm,1.1s
NEUB Neuenburg 67.56 317 *e*P **P** 18 14 47.3 +0.1
comp=Z,29nm,1.0s
BOJS Bojanci 67.59 310 *i* P **P** 18 14 47.8 +0.3
BOJS *e*S **S** 18 23 46.9 +3.9
PLN Plauen 67.61 316 *e*P **P** 18 14 47.6 0.0
comp=Z,53nm,0.9s
PLN *e*pP **pP** 18 14 55.6 +0.5
OBKA Obir 67.66 312⇑ *i*P **P** 18 14 48.1 0.0
comp=Z,13nm,1.4s
WET Wettzell 67.69 315 *e*P **P** 18 14 48.5 +0.3
comp=Z,11nm,1.0s
WET Wettzell 67.69 315 *e*P **P** 18 14 48.5 +0.3
WET pmax pmax
comp=Z,20nm,1.0s
SDPT Sand Point 67.73 38 *e*P **P** 18 14 46.2 -1.9
comp=Z,33nm,0.7s
MANZ Manzenberg 67.83 316 *e*P **P** 18 14 49.2 +0.2
comp=Z,22nm,1.2s
ROTZ Rotzenmuhle 67.86 316 *e*P **P** 18 14 49.9 +0.7
comp=Z,27nm,0.9s
MOX Moxa 67.87 317 *e*P **P** 18 14 49.2 0.0
comp=Z,17nm,1.3s
MOX *e*L L 18 45 49.9
comp=Z,600nm,20.5s
MOX Moxa 67.87 317 *e*P **P** 18 14 49.2 0.0
MOX MLR MLR
comp=Z,17μm,20.5s
CEY Cerknica 68.03 311 *i* P **P** 18 14 50.3 -0.1
CLZ Clausthal 68.12 318 *e*P **P** 18 14 51.5 +0.6
comp=Z,38nm,0.9s
CLZ Clausthal 68.12 318 *e*P **P** 18 14 51.4 +0.6
CLZ pmax pmax
comp=Z,4.0nm,0.9s
KBA Koelnbreinsper 68.20 313⇑ *i*P **P** 18 14 51.5 -0.1
comp=Z,20nm,1.1s
RJOB Jochberg 68.29 313 *e*P **P** 18 14 52.2 +0.2
comp=Z,20nm,1.4s
CHGN Chignik 68.41 36 *e*P **P** 18 14 51.4 -1.1
GRF Grafenberg Arr 68.48 316 *e*P **P** 18 14 53.7 +0.6
comp=Z,44nm,0.9s
GRF *e*L L 18 45 59.1
comp=Z,1μm,21.1s
GRF Grafenberg Arr 68.48 316 *e*P **P** 18 14 53.7 +0.6
GRF MLR MLR
comp=Z,44μm,21.1s
GRFO Grafenberg 68.48 316 *e*P **P** 18 14 53.5 +0.4
GRFO pmax pmax
comp=Z,32nm,0.9s
GRFO Grafenberg 68.48 316 *e*P **P** 18 14 53.5 +0.4
comp=Z,32nm,0.9s
UBBA Unterbreizbach 68.74 317 *e*P **P** 18 14 54.5 0.0
comp=Z,26nm,1.8s
TIP Timpagrande 69.04 304 *e*P **P** 18 14 56.1 -0.8
comp=Z,24nm,1.1s
FUR Furstenfeldbru 69.05 314 *e*P **P** 18 14 57.5 +0.8
comp=Z,61nm,0.8s
FUR Furstenfeldbru 69.05 314 *e*P **P** 18 14 57.5 +0.8
FUR pmax pmax
comp=Z,41nm,0.8s
COLA College 69.18 26 *e*P **P** 18 14 57.2 +0.1
COLA pmax pmax
comp=Z,84nm,0.8s
COLA MLR MLR
comp=Z,996nm,20.0s
COLA College 69.18 26 *e*P **P** 18 14 57.2 +0.1
comp=Z,84nm,0.8s
COLA LR LR
comp=Z,996nm,20.0s
WTTA Wattenberg 69.20 313⇑ *i*P **P** 18 14 57.5 -0.3
comp=Z,19nm,1.1s
RSO Redoubt South 69.29 31 *e*P **P** 18 14 57.9 -0.2
comp=Z,132nm,0.8s
CUC Castrocucco 69.38 305 *e*P **P** 18 14 58.4 -0.5
comp=Z,18nm,1.0s
CUC LR LR
comp=Z,439nm,22.0s
MOTA Moosalm 69.50 314⇑ *i*P **P** 18 14 59.0 -0.6
comp=Z,38nm,1.3s
ILAR Eielson Array 69.59 26 P **P** 18 14 58.7 -1.0
ILAR PP **PP** 18 17 28.4 -4.7
ILAR Eielson Array 69.59 26 P **P** 18 14 58.7 -1.0
comp=Z,8.6nm,0.6s,baz=292,slow=3.7,SNR=108
ILAR PP **PP** 18 17 28.4 -4.7
comp=Z,1.8nm,0.9s,baz=311,slow=6.9,SNR=2.9
ILAR LR LR 18 47 59.7
comp=Z,848nm,21.0s,baz=324,slow=38
FETA Feichten 69.86 313⇑ *i*P **P** 18 15 01.6 -0.3
comp=Z,22nm,0.8s,SNR=9.0
TNS Taunus Mts 69.89 317 *e*P **P** 18 15 01.8 -0.1
comp=Z,13nm,0.8s
TNS Taunus Mts 69.89 317 *e*P **P** 18 15 01.8 -0.1
TNS pmax pmax
comp=Z,26nm,0.8s
TOD Tromm 69.94 316 *e*P **P** 18 15 02.2 0.0
TOD Tromm 69.94 316 *e*P **P** 18 15 02.2 0.0
CEL Celeste 70.04 303 *e*P **P** 18 15 01.6 -1.4
comp=Z,35nm,1.0s
CEL LR LR
comp=Z,345nm,22.0s
BUG Bochum--Univer 70.05 319 *e*P **P** 18 15 02.8 +0.1
comp=Z,26nm,1.3s
AQU L'Aquila 70.07 308 *e*P **P** 18 15 03.0 -0.1
comp=Z,33nm,1.0s
AQU LR LR
comp=Z,1μm,20.0s
DAVA Damuels 70.28 314⇓ *i*P **P** 18 15 03.9 -0.5
comp=Z,15nm,0.9s
PMR Palmer 70.30 29 *e*P **P** 18 15 03.5 -0.5
PMR pmax pmax
comp=Z,55nm,0.8s
PMR Palmer 70.30 29 *e*P **P** 18 15 03.5 -0.5
comp=Z,55nm,0.8s
LRW Lerwick 70.33 329 *e*P **P** 18 15 03.8 -0.5
LRW AMB AMB 18 15 04.9
comp=Z,25nm,0.9s
LRW AMS AMS 18 48 26.7
comp=Z,1μm,14.4s
LRW Lerwick 70.33 329 P **P** 18 15 03.8 -0.5
LRW AMB AMB 18 15 04.9
comp=Z,25nm,0.9s
LRW AMS AMS 18 48 26.7
comp=Z,1μm,14.4s
SML Sawmill 70.52 29 *e*P **P** 18 15 05.5 0.0
SML pmax pmax
comp=Z,22nm,0.8s
SML Sawmill 70.52 29 *e*P **P** 18 15 05.5 0.0
comp=Z,22nm,0.8s
OHAK Old Harbor 70.54 34 *e*P **P** 18 15 05.6 0.0
comp=Z,56nm,0.7s
SPAK Spaichingen-Ko 70.60 315 *e*P **P** 18 15 06.4 +0.1
KDAK Kodiak Island 70.61 34 P **P** 18 15 06.0 0.0
comp=Z,511nm,0.7s,SNR=17
KDAK Kodiak Island 70.61 34 *e*P **P** 18 15 06.0 0.0
comp=Z,37nm,0.6s
KDAK LR LR
comp=Z,659nm,20.0s
BFO Black Forest 70.77 315 P **P** 18 15 07.0 -0.2
comp=Z,114nm,0.9s,SNR=6.1
BFO Black Forest 70.77 315 *e*P **P** 18 15 07.1 -0.2
BFO *e*pP **pP** 18 15 15.0 +0.2
BFO Black Forest 70.77 315 *e*P **P** 18 15 07.1 -0.2
BFO *e**PP **pP** 18 15 15.0 +0.2
BFO Black Forest 70.77 315 *e*P **P** 18 15 06.3 -0.9
comp=Z,23nm,1.0s
BFO LR LR
comp=Z,1μm,21.0s
LANF Langenberg 70.80 316 *e*P **P** 18 15 07.5 +0.1
LANF Langenberg 70.80 316 *e*P **P** 18 15 07.5 +0.1
LANF Langenberg 70.80 316 *e*P **P** 18 15 07.5 +0.1
RUP Ruppelstein 70.93 317 *e*P **P** 18 15 08.6 +0.4
RUP Ruppelstein 70.93 317 *e*P **P** 18 15 08.6 +0.4
KMBO Kilima Mbogo 70.93 256 P **P** 18 15 07.8 -1.2
KMBO Kilima Mbogo 70.93 256 P **P** 18 15 07.8 -1.2
comp=Z,7.4nm,0.7s,baz=55,slow=9.1,SNR=12
KMBO LR LR 18 47 35.6
comp=Z,153nm,18.1s,baz=95,slow=37
TUE Stuetta 70.96 313 *e*P **P** 18 15 07.7 -0.9
comp=Z,18nm,0.6s
PAX Paxson 71.06 27 *e*P **P** 18 15 08.3 -0.5
PAX pmax pmax
comp=Z,17nm,0.7s
PAX Paxson 71.06 27 *e*P **P** 18 15 08.3 -0.5
comp=Z,17nm,0.7s
MEM Membach 71.13 318 P **P** 18 15 09.9 +0.6
comp=Z,8.5nm,1.3s
FELD Feldberg im Sc 71.17 315 *e*P **P** 18 15 09.2 -0.6
DOT Dot Lake 71.23 26 *e*P **P** 18 15 08.8 -1.0
comp=Z,43nm,0.7s
CDF Champ du Feu 71.37 316⇑ *i*P **P** 18 15 10.8 -0.2
comp=Z,45nm,0.9s
CDF Champ du Feu 71.37 316⇑ *i*P **P** 18 15 10.8 -0.2
CDF pmax pmax
comp=Z,45nm,0.9s
CDF Champ du Feu 71.37 316⇑ *i*P **P** 18 15 10.8 -0.2
comp=Z,45nm,0.9s
SCO Scoresbysund 71.37 343⇑ *i*P **P** 18 15 10.9 +0.5
SCO pmax pmax
comp=Z,11nm,0.9s
SCO MLR MLR
comp=Z,680nm,20.0s
SCO Scoresbysund 71.37 343⇑ *i*P **P** 18 15 10.9 +0.5
comp=Z,11nm,0.9s
SCO
comp=Z,670nm,20.0s
WLF Walferdange 71.47 317 P **P** 18 15 12.1 +0.7
comp=Z,34nm,1.0s
WLF Walferdange 71.47 317 *e*P **P** 18 15 12.2 +0.7
comp=Z,65nm,1.0s
WLF Walferdange 71.47 317 *e*P **P** 18 15 12.0 +0.6
WLF pmax pmax
comp=Z,61nm,0.9s
WLF Walferdange 71.47 317 *e*P **P** 18 15 12.0 +0.6
comp=Z,61nm,0.9s
ECH Echery 71.53 316 *e*P **P** 18 15 10.8 -1.0
ECH pmax pmax
comp=Z,15nm,0.9s
ECH MLR MLR
comp=Z,1μm,22.0s
ECH Echery 71.53 316 *e*P **P** 18 15 10.8 -1.0
comp=Z,15nm,0.9s
ECH LR LR
comp=Z,1μm,22.0s
ECH Echery 71.53 316 *e*P **P** 18 15 11.5 -0.3
BCLA Clavier 71.62 318 P **P** 18 15 12.8 +0.5
comp=Z,16nm,1.6s
EGAK Eagle 71.65 24 PFAKE 18 15 20.0 +7.8
EGAK LR LR
comp=Z,1μm,19.0s
BBS Basel-Blauen 71.65 315 *e*P **P** 18 15 12.3 -0.3
BBS Basel-Blauen 71.65 315 *e*P **P** 18 15 12.3 -0.3
MOF Molkenrain 71.70 315 *e*P **P** 18 15 12.7 -0.3
MOF Molkenrain 71.70 315 *e*P **P** 18 15 12.7 -0.3
MOF Molkenrain 71.70 315 *e*P **P** 18 15 12.7 -0.3
MENT Mentasta 71.75 26 *e*P **P** 18 15 12.7 -0.3
HINF Hinteralfeld 71.89 315⇑ *i*P **P** 18 15 13.6 -0.4
comp=Z,35nm,0.9s
HINF Hinteralfeld 71.89 315⇑ *i*P **P** 18 15 13.6 -0.4
HINF pmax pmax
comp=Z,35nm,0.9s
HINF Hinteralfeld 71.89 315⇑ *i*P **P** 18 15 13.6 -0.4
comp=Z,35nm,0.9s
DIV Divide 71.93 29 *e*P **P** 18 15 14.2 +0.2
comp=Z,46nm,1.0s
GIVF Givet 72.04 318⇑ *i*P **P** 18 15 14.9 +0.1
comp=Z,35nm,0.8s
GIVF Givet 72.04 318⇑ *i*P **P** 18 15 14.9 +0.1
GIVF pmax pmax
comp=Z,35nm,0.8s
GIVF Givet 72.04 318⇑ *i*P **P** 18 15 14.9 +0.1
comp=Z,35nm,0.8s
HAU Haudompre 72.11 316⇑ *i*P **P** 18 15 15.0 -0.3
comp=Z,25nm,0.9s
HAU *e*R
comp=Z,1μm,20.0s
HAU Haudompre 72.11 316⇑ *i*P **P** 18 15 15.0 -0.3
HAU pmax pmax
comp=Z,25nm,0.9s
HAU Haudompre 72.11 316⇑ *i*P **P** 18 15 15.0 -0.3
comp=Z,25nm,0.9s
LOMF Lomont 72.11 315 *e*P **P** 18 15 13.8 -1.7
LOMF Lomont 72.11 315 *e*P **P** 18 15 13.8 -1.7
LOMF Lomont 72.11 315 *e*P **P** 18 15 13.8 -1.7
EIDS Eidsvold 72.16 136 *e*P **P** 18 15 16.6 +0.8
comp=Z,65nm,1.5s
DOU Dourbes 72.17 318 P **P** 18 15 16.1 +0.5
comp=Z,8.1nm,1.6s
THEF They Montfort 72.22 316 *e*P **P** 18 15 15.8 -0.2
THEF They Montfort 72.22 316 *e*P **P** 18 15 15.8 -0.2
THEF They Montfort 72.22 316 *e*P **P** 18 15 15.8 -0.2
PAGF Fort de Pagny 72.22 316⇑ *i*P **P** 18 15 16.2 +0.2
comp=Z,14nm,0.9s
PAGF Fort de Pagny 72.22 316⇑ *i*P **P** 18 15 16.2 +0.2
comp=Z,14nm,0.9s
STKA Stephens Creek 72.28 147 *e*P **P** 18 15 16.6 +0.2
comp=Z,2.0nm,0.7s
STKA Stephens Creek 72.28 147 P **P** 18 15 16.4 0.0
comp=Z,14nm,0.7s,baz=311,slow=6.4,SNR=20
BAIF Baives 72.41 318⇑ *i*P **P** 18 15 17.3 +0.3
comp=Z,48nm,1.2s
BAIF Baives 72.41 318⇑ *i*P **P** 18 15 17.3 +0.3
BAIF pmax pmax
comp=Z,48nm,1.2s
BAIF Baives 72.41 318⇑ *i*P **P** 18 15 17.3 +0.3
comp=Z,48nm,1.2s
DRUM Mains of Drumt 72.54 327 *e*P **P** 18 15 17.1 -0.6
DRUM AMB AMB 18 15 18.1
comp=Z,31nm,2.7s
DRUM Mains of Drumt 72.54 327 P **P** 18 15 17.1 -0.6
DRUM AMB AMB 18 15 18.1
comp=Z,31nm,2.7s
MCD Coleburn Disti 72.55 327 *e*P **P** 18 15 17.4 -0.3
MCD Coleburn Disti 72.55 327 P **P** 18 15 17.4 -0.3
MME1 Meikle Cairn 72.56 327 *e*P **P** 18 15 17.3 -0.5
MME1 Meikle Cairn 72.56 327 P **P** 18 15 17.3 -0.5
OG01 Vacheresse 72.67 314 *e*P **P** 18 15 18.6 -0.2
OG01 Vacheresse 72.67 314 *e*P **P** 18 15 18.6 -0.2
SFTF Sexfontaines 72.79 316⇑ *i*P **P** 18 15 19.1 -0.3
comp=Z,39nm,0.8s
SFTF Sexfontaines 72.79 316⇑ *i*P **P** 18 15 19.1 -0.3
comp=Z,39nm,0.8s
MVH1 Achvaich 72.80 328 *e*P **P** 18 15 18.5 -0.6
MVH1 Achvaich 72.80 328 P **P** 18 15 18.5 -0.6
CABF La Chapelle 72.91 314⇑ *i*P **P** 18 15 20.0 -0.2
comp=Z,31nm,1.0s
CABF La Chapelle 72.91 314⇑ *i*P **P** 18 15 20.0 -0.2
CABF pmax pmax
comp=Z,31nm,1.0s
CABF La Chapelle 72.91 314⇑ *i*P **P** 18 15 20.0 -0.2
comp=Z,31nm,1.0s
PGF Pioggiola 72.92 310⇑ *i*P **P** 18 15 20.6 +0.2
comp=Z,88nm,1.1s
PGF Pioggiola 72.92 310⇑ *i*P **P** 18 15 20.6 +0.2
PGF pmax pmax
comp=Z,88nm,1.1s
PGF Pioggiola 72.92 310⇑ *i*P **P** 18 15 20.6 +0.2
comp=Z,88nm,1.1s
RSL Roselend 73.00 313 *e*P **P** 18 15 20.8 -0.1
RSL Roselend 73.00 313 *e*P **P** 18 15 20.8 -0.1
RSL Roselend 73.00 313 *e*P **P** 18 15 20.8 -0.1
LPG La Plagne 73.01 313⇑ *i*P **P** 18 15 21.5 +0.4
comp=Z,115nm,0.8s
LPG La Plagne 73.01 313⇑ *i*P **P** 18 15 21.5 +0.4
LPG pmax pmax
comp=Z,115nm,0.8s
LPL La Plagne 73.01 313⇑ *i*P **P** 18 15 21.3 +0.3
comp=Z,98nm,0.8s
LPL La Plagne 73.01 313⇑ *i*P **P** 18 15 21.3 +0.3
LPL pmax pmax
comp=Z,98nm,0.8s
LPL La Plagne 73.01 313⇑ *i*P **P** 18 15 21.3 +0.3
comp=Z,98nm,0.8s
ESY Stoneypath 73.11 326 *e*P **P** 18 15 21.1 0.0
ESY Stoneypath 73.11 326 P **P** 18 15 21.1 0.0
MDO Dochfour 73.13 328 *e*P **P** 18 15 20.6 -0.7
MDO Dochfour 73.13 328 P **P** 18 15 20.6 -0.7
SUMG Summit 73.14 349⇑ *i*P **P** 18 15 21.4 -0.1
SUMG pmax pmax
comp=Z,18nm,0.8s
SUMG MLR MLR
comp=Z,950nm,18.0s
SUMG Summit 73.14 349 *e*P **P** 18 15 21.3 -0.2
comp=Z,41nm,1.1s
SUMG Summit 73.14 349⇑ *i*P **P** 18 15 21.4 -0.1
comp=Z,18nm,0.8s
SUMG
comp=Z,940nm,18.0s
SAOF Saorge 73.20 311 *e*P **P** 18 15 21.5 -0.4
SAOF Saorge 73.20 311 *e*P **P** 18 15 21.5 -0.4
SAOF Saorge 73.20 311 *e*P **P** 18 15 21.5 -0.4
AUTN L'Aution 73.28 312 *e*P **P** 18 15 22.1 -0.5
AUTN L'Aution 73.28 312 *e*P **P** 18 15 22.1 -0.5
AUTN L'Aution 73.28 312 *e*P **P** 18 15 22.1 -0.5
SBF Sospel 73.33 311⇑ *i*P **P** 18 15 22.5 -0.2
comp=Z,65nm,0.8s
SBF Sospel 73.33 311⇑ *i*P **P** 18 15 22.5 -0.2
SBF pmax pmax
comp=Z,65nm,0.8s
SBF Sospel 73.33 311⇑ *i*P **P** 18 15 22.5 -0.2
comp=Z,65nm,0.8s
MBDF Montbardon 73.36 312 *e*P **P** 18 15 24.9 +1.9
comp=Z,28nm,0.8s
MBDF Montbardon 73.36 312 *e*P **P** 18 15 24.9 +1.9
MBDF pmax pmax
comp=Z,28nm,0.8s
MBDF Montbardon 73.36 312 *e*P **P** 18 15 24.9 +1.9
comp=Z,28nm,0.8s
TOUF Mont Tournerai 73.38 312 *e*P **P** 18 15 22.6 -0.6
TOUF Mont Tournerai 73.38 312 *e*P **P** 18 15 22.6 -0.6
TOUF Mont Tournerai 73.38 312 *e*P **P** 18 15 22.6 -0.6
EDI Edinburgh 73.38 326 AMS AMS 18 52 43.0
comp=Z,708nm,15.4s
REVF Revere 73.43 311 *e*P **P** 18 15 22.5 -0.8
REVF Revere 73.43 311 *e*P **P** 18 15 22.5 -0.8
REVF Revere 73.43 311 *e*P **P** 18 15 22.5 -0.8
OG35 Corcelles 73.49 314 *e*P **P** 18 15 23.2 -0.4
EAU Auchinoon 73.55 326 *e*P **P** 18 15 23.6 -0.1
EAU Auchinoon 73.55 326 P **P** 18 15 23.6 -0.1
ELSH Elham, Standar 73.60 320 AMS AMS 18 50 40.4
comp=Z,1μm,12.5s
HPK Haverah Park 73.63 324 AMS AMS 18 50 30.9
comp=Z,946nm,14.0s
ESK Eskdalemuir 73.71 325 *e*P **P** 18 15 23.3 -1.4
ESK AMB AMB 18 15 24.9
comp=Z,23nm,2.9s
ESK Eskdalemuir 73.71 325 P **P** 18 15 23.3 -1.4
ESK AMB AMB 18 15 24.9
comp=Z,23nm,2.9s
ESK Eskdalemuir 73.71 325 *e*P **P** 18 15 23.7 -1.0
ESK pmax pmax
comp=Z,16nm,0.9s
ESK MLR MLR
comp=Z,887nm,20.0s
ESK Eskdalemuir 73.71 325 *e*P **P** 18 15 23.6 -1.0
comp=Z,16nm,0.9s
ESK LR LR
comp=Z,887nm,20.0s
KPL Plockton 73.78 328 AMS AMS 18 49 53.9
comp=Z,1μm,15.6s
ORIF Oris-en-Rattie 73.83 313⇑ *i*P **P** 18 15 25.7 0.0
comp=Z,53nm,0.9s
ORIF *e*R
comp=Z,2μm,19.5s
ORIF Oris-en-Rattie 73.83 313⇑ *i*P **P** 18 15 25.7 0.0
ORIF pmax pmax
comp=Z,53nm,0.9s
ORIF Oris-en-Rattie 73.83 313⇑ *i*P **P** 18 15 25.7 0.0
comp=Z,53nm,0.9s
LOR Lormes 73.94 316⇑ *i*P **P** 18 15 25.4 -0.8
comp=Z,19nm,0.8s
LOR *e*R
comp=Z,1μm,20.0s
LOR Lormes 73.94 316⇑ *i*P **P** 18 15 25.4 -0.8
comp=Z,19nm,0.8s
KESW Keswick, Cumbr 74.05 325 AMB AMB 18 15 36.6
comp=Z,30nm,1.3s
KESW AMS AMS 18 51 16.4
comp=Z,941nm,13.5s
PGBU Glenifferbraes 74.06 326 *e*P **P** 18 15 25.3 -1.4
PGBU AMB AMB 18 15 30.8
comp=Z,28nm,2.0s
PGBU AMS AMS 18 52 03.1
comp=Z,898nm,13.9s
PGBU Glenifferbraes 74.06 326 P **P** 18 15 25.3 -1.4
PGBU AMB AMB 18 15 30.8
comp=Z,28nm,2.0s
PGBU AMS AMS 18 52 03.1
comp=Z,898nm,13.9s
LMR La Mourre 74.17 311⇑ *i*P **P** 18 15 27.5 -0.1
comp=Z,18nm,0.8s
LMR La Mourre 74.17 311⇑ *i*P **P** 18 15 27.5 -0.1
LMR pmax pmax
comp=Z,18nm,0.8s
LMR La Mourre 74.17 311⇑ *i*P **P** 18 15 27.5 -0.1
comp=Z,18nm,0.8s
SMF Signal de Mont 74.25 315⇑ *i*P **P** 18 15 27.7 -0.3
comp=Z,70nm,0.9s
SMF Signal de Mont 74.25 315⇑ *i*P **P** 18 15 27.7 -0.3
SMF pmax pmax
comp=Z,70nm,0.9s
SMF Signal de Mont 74.25 315⇑ *i*P **P** 18 15 27.7 -0.3
comp=Z,70nm,0.9s
AVF Avril sur Loir 74.47 316⇑ *i*P **P** 18 15 29.0 -0.3
comp=Z,63nm,1.0s
AVF Avril sur Loir 74.47 316⇑ *i*P **P** 18 15 29.0 -0.3
AVF pmax pmax
comp=Z,63nm,1.0s
AVF Avril sur Loir 74.47 316⇑ *i*P **P** 18 15 29.0 -0.3
comp=Z,63nm,1.0s
SSB Saint Sauveur 74.49 314 *e*P **P** 18 15 29.1 -0.4
SSB pmax pmax
comp=Z,11nm,1.0s
SSB Saint Sauveur 74.49 314 *e*P **P** 18 15 29.1 -0.4
comp=Z,11nm,1.0s
VIVF Saint-Julien-l 74.61 313⇑ *i*P **P** 18 15 30.0 -0.1
comp=Z,34nm,1.0s
VIVF Saint-Julien-l 74.61 313⇑ *i*P **P** 18 15 30.0 -0.1
VIVF pmax pmax
comp=Z,34nm,1.0s
VIVF Saint-Julien-l 74.61 313⇑ *i*P **P** 18 15 30.0 -0.1
comp=Z,34nm,1.0s
GAL1 Galloway 74.69 325 AMS AMS 18 53 03.4
comp=Z,819nm,13.3s
BGF Bois d'Agland 74.89 315 *e*P **P** 18 15 31.4 -0.3
comp=Z,32nm,1.0s
BGF Bois d'Agland 74.89 315 *e*P **P** 18 15 31.4 -0.3
BGF pmax pmax
comp=Z,32nm,1.0s
BGF Bois d'Agland 74.89 315 *e*P **P** 18 15 31.4 -0.3
comp=Z,32nm,1.0s
AGO Saint Agoulin 74.97 315 *e*P **P** 18 15 32.4 +0.2
AGO Saint Agoulin 74.97 315 *e*P **P** 18 15 32.4 +0.2
FOEL Foel Wylfa 75.00 323 *e*P **P** 18 15 31.8 -0.4
FOEL AMB AMB 18 15 32.0
comp=Z,22nm,3.7s
FOEL AMS AMS 18 51 32.4
comp=Z,1μm,14.6s
FOEL Foel Wylfa 75.00 323 P **P** 18 15 31.8 -0.4
FOEL AMB AMB 18 15 32.0
comp=Z,22nm,3.7s
FOEL AMS AMS 18 51 32.4
comp=Z,1μm,14.6s
HLM1 Long Mynd 75.03 323 *e*P **P** 18 15 31.8 -0.6
HLM1 AMB AMB 18 15 32.8
comp=Z,23nm,2.5s
HLM1 Long Mynd 75.03 323 P **P** 18 15 31.8 -0.6
HLM1 AMB AMB 18 15 32.8
comp=Z,23nm,2.5s
BORG Borgarnes 75.17 339 P **P** 18 15 35.6 +2.7

comp=Z,223nm,0.9s,SNR=5.6
BORG Borgarnes 75.17 339 *e*P **P 18 15 34.3 +1.4**
comp=Z,22nm,0.8s
BORG LR LR
comp=Z,840nm,19.0s
PYM Petit Puy Mans 75.19 315 *e*P **P 18 15 33.4 -0.2**
PYM Petit Puy Mans 75.19 315 *e*P **P 18 15 33.4 -0.2**
PYM Petit Puy Mans 75.19 315 *e*P **P 18 15 33.4 -0.2**
LBL Lubilhac 75.31 314 *e*P **P 18 15 34.0 -0.2**
LBL Lubilhac 75.31 314 *e*P **P 18 15 34.0 -0.2**
LBL Lubilhac 75.31 314 *e*P **P 18 15 34.0 -0.2**
PNL Peninsula 75.36 28 *e*P **P 18 15 34.2 0.0**
comp=Z,68nm,0.9s
MCH1 Michaelchurch 75.37 322 *e*P **P 18 15 33.2 -1.1**
MCH1 AMB AMB 18 15 39.1
comp=Z,23nm,2.2s
MCH1 AMS AMS 18 51 38.7
comp=Z,1µm,16.7s
MCH1 Michaelchurch 75.37 322 P **P 18 15 33.2 -1.1**
MCH1 AMB AMB 18 15 39.1
comp=Z,23nm,2.2s
MCH1 AMS AMS 18 51 38.7
comp=Z,1µm,16.7s
WLF1 Llynfaes 75.39 324 *e*P **P 18 15 33.5 -0.8**
WLF1 AMB AMB 18 15 40.6
comp=Z,25nm,0.8s
WLF1 AMS AMS 18 51 41.6
comp=Z,671nm,14.8s
WLF1 Llynfaes 75.39 324 P **P 18 15 33.5 -0.8**
WLF1 AMB AMB 18 15 40.6
comp=Z,25nm,0.8s
WLF1 AMS AMS 18 51 41.6
comp=Z,671nm,14.8s
TCF Toulx Ste Croi 75.41 315⇑*i*P **P 18 15 34.7 0.0**
comp=Z,43nm,0.9s
TCF Toulx Ste Croi 75.41 315⇑P **P 18 15 34.7 0.0**
TCF pmax pmax
comp=Z,43nm,0.9s
TCF Toulx Ste Croi 75.41 315⇑*i*P **P 18 15 34.7 0.0**
comp=Z,43nm,0.9s
LASF Ste Croix 75.50 313⇑*i*P **P 18 15 35.5 +0.2**
comp=Z,34nm,1.0s
LASF Ste Croix 75.50 313⇑P **P 18 15 35.5 +0.2**
comp=Z,34nm,1.0s
KEST Kesra 75.85 303 *e*P **P 18 15 36.8 -0.8**
KEST Kesra 75.85 303 P **P 18 15 37.7 +0.2**
comp=Z,2.3nm,0.9s,baz=353,slow=7.2,SNR=5.9
KEST LR LR 18 57 21.1
comp=Z,116nm,18.5s,baz=220,slow=42
MBAR Mbarara 76.11 261 PFAKE 18 15 50.0 +11
MBAR LR LR
comp=Z,1µm,22.0s
GRR Gorron 76.12 318⇑P **P 18 15 38.6 -0.1**
comp=Z,44nm,0.8s
GRR Gorron 76.12 318⇑*i*P **P 18 15 38.6 -0.1**
GRR pmax pmax
comp=Z,44nm,0.8s
GRR Gorron 76.12 318⇑*i*P **P 18 15 38.6 -0.1**
comp=Z,44nm,0.8s
CAF Calviac 76.18 314⇑*i*P **P 18 15 39.6 +0.4**
comp=Z,28nm,0.8s
CAF Calviac 76.18 314⇑*i*P **P 18 15 39.6 +0.4**
CAF pmax pmax
comp=Z,28nm,0.8s
CAF Calviac 76.18 314⇑*i*P **P 18 15 39.6 +0.4**
comp=Z,28nm,0.8s
RJF Les Rejaudoux 76.33 315⇑*i*P **P 18 15 40.4 +0.5**
comp=Z,41nm,1.0s
RJF *e*R
comp=Z,1µm,21.0s
RJF Les Rejaudoux 76.33 315⇑*i*P **P 18 15 40.4 +0.5**
RJF pmax pmax
comp=Z,41nm,1.0s
RJF Les Rejaudoux 76.33 315⇑*i*P **P 18 15 40.4 +0.5**
comp=Z,41nm,1.0s
MFF Saint Martin d 76.64 317⇑*i*P **P 18 15 41.8 +0.1**
comp=Z,31nm,0.8s
MFF Saint Martin d 76.64 317⇑*i*P **P 18 15 41.8 +0.1**
MFF pmax pmax
comp=Z,31nm,0.8s
MFF Saint Martin d 76.64 317⇑*i*P **P 18 15 41.8 +0.1**
comp=Z,31nm,0.8s
HTL Hartland 76.70 322 AMS AMS 18 52 31.0
comp=Z,1µm,13.6s
MTLF Montolieu 76.90 313⇑*i*P **P 18 15 43.3 +0.1**
comp=Z,14nm,0.9s
MTLF Montolieu 76.90 313⇑*i*P **P 18 15 43.3 +0.1**
MTLF pmax pmax
comp=Z,14nm,0.9s
MTLF Montolieu 76.90 313⇑*i*P **P 18 15 43.3 +0.1**
comp=Z,14nm,0.9s
LRDF Laroque-de-Fa 76.90 312 *e*P **P 18 15 42.8 -0.5**
LRDF Laroque-de-Fa 76.90 312 *e*P **P 18 15 42.8 -0.5**
LFF La Frestale 76.98 315⇑*i*P **P 18 15 44.1 +0.5**
comp=Z,29nm,0.9s
LFF La Frestale 76.98 315⇑*i*P **P 18 15 44.1 +0.5**
LFF pmax pmax
comp=Z,29nm,0.9s
LFF La Frestale 76.98 315⇑*i*P **P 18 15 44.1 +0.5**
comp=Z,29nm,0.9s
SKAG Skagway 77.09 27 *e*P **P 18 15 45.0 +1.0**
comp=Z,43nm,0.7s
SGMF Saint Gilles 77.15 319 *e*P **P 18 15 44.8 +0.3**
comp=Z,69nm,1.0s
SGMF Saint Gilles 77.15 319 *e*P **P 18 15 44.8 +0.3**
SGMF pmax pmax
comp=Z,69nm,1.0s
SGMF Saint Gilles 77.15 319 *e*P **P 18 15 44.8 +0.3**
comp=Z,69nm,1.0s
CARF Carcanieres 77.29 312 *e*P **P 18 15 45.3 -0.3**
CARF Carcanieres 77.29 312 *e*P **P 18 15 45.3 -0.3**
VALF Valcebollere 77.51 312 *e*P **P 18 15 47.0 +0.1**
VALF Valcebollere 77.51 312 *e*P **P 18 15 47.0 +0.1**
ROSF Rostrenen 77.51 319 *e*P **P 18 15 46.7 +0.2**
comp=Z,39nm,1.0s
ROSF Rostrenen 77.51 319 *e*P **P 18 15 46.7 +0.2**
ROSF pmax pmax
comp=Z,39nm,1.0s
ROSF Rostrenen 77.51 319 *e*P **P 18 15 46.7 +0.2**
comp=Z,39nm,1.0s
QUIF Quistinic 77.68 319⇑*i*P **P 18 15 47.6 +0.1**
comp=Z,60nm,1.2s
QUIF Quistinic 77.68 319⇑*i*P **P 18 15 47.6 +0.1**
QUIF pmax pmax
comp=Z,60nm,1.2s
QUIF Quistinic 77.68 319⇑*i*P **P 18 15 47.6 +0.1**
comp=Z,60nm,1.2s
MLS Moulis 77.80 313 *e*P **P 18 15 48.0 -0.3**
MLS Moulis 77.80 313 *e*P **P 18 15 48.0 -0.3**
EPF Esparros 78.23 313 *e*P **P 18 15 50.1 -0.6**
comp=Z,7.2nm,0.8s
EPF Esparros 78.23 313 *e*P **P 18 15 50.1 -0.6**
EPF pmax pmax
comp=Z,7.0nm,0.8s
EPF Esparros 78.23 313 *e*P **P 18 15 50.1 -0.6**
comp=Z,7.2nm,0.8s
RESF Ens 78.35 313 *e*P **P 18 15 52.1 +0.6**
RESF Ens 78.35 313 *e*P **P 18 15 52.1 +0.6**
ETSF Etsaut 78.86 314⇑P **P 18 15 54.7 +0.5**
comp=Z,16nm,0.9s
ETSF Etsaut 78.86 314⇑*i*P **P 18 15 54.7 +0.5**
ETSF pmax pmax
comp=Z,16nm,0.9s
ETSF Etsaut 78.86 314⇑*i*P **P 18 15 54.7 +0.5**
comp=Z,16nm,0.9s
SJPF Ste Jean 79.16 314⇑*i*P **P 18 15 56.6 +0.8**
comp=Z,20nm,0.7s
SJPF Ste Jean 79.16 314⇑*i*P **P 18 15 56.6 +0.8**
SJPF pmax pmax
comp=Z,20nm,0.7s
SJPF Ste Jean 79.16 314⇑*i*P **P 18 15 56.6 +0.8**
comp=Z,20nm,0.7s
DZM Mont Dzumac 79.99 123 *e*LR LR 18 40 52.1
comp=Z,406nm,21.9s
SFJD Kangerlussuaq 80.03 350 *e*P **P 18 15 58.7 -1.3**
comp=Z,49nm,0.7s
SFJD Kangerlussuaq 80.03 350⇑*i*P **P 18 16 00.0 0.0**
comp=Z,50nm,0.8s
SFJD
comp=Z,790nm,17.0s
EMHD Djebel Mahouad 80.11 306 P **P 18 16 03.5 +2.3**
WRAK Wrangell Islan 80.32 28 *e*P **P 18 16 01.6 -0.1**
comp=Z,14nm,0.8s
EBNR Beni Rached 81.04 307 P **P 18 16 07.2 +1.1**
ECHA Ech Chlef 81.22 307 P **P 18 16 09.1 +2.1**
YKW3 Yellowknife Ar 81.36 17 *e*P **P 18 16 07.3 +0.1**
comp=Z,1.3nm,1.6s
YKA Yellowknife Ar 81.42 17 P **P 18 16 07.7 +0.1**
YKA Yellowknife Ar 81.42 17 P **P 18 16 07.6 +0.1**
comp=Z,14nm,0.7s,baz=330,slow=5.2,SNR=49
YKA LR LR 18 55 19.8
comp=Z,45nm,21.1s,baz=285,slow=38
EANR 'Aïn N'Sour 81.51 307 P **P 18 16 11.2 +2.6**
ETRT Tiaret 81.68 306 P P 18 16 17.0 +7.4
FUNA Funafuti 81.93 105 PFAKE 18 16 20.0 +9.0
FUNA LR LR
comp=Z,5µm,20.0s
ESDC Sonseca Array 82.78 312 P **P 18 16 15.4 +0.2**
ESDC Sonseca Array 82.78 312 P **P 18 16 15.4 +0.2**
comp=Z,1.3nm,0.6s,baz=37,slow=4.9,SNR=12
ESDC LR LR 18 55 43.5
comp=Z,489nm,19.3s,baz=75,slow=38
MVO Moncorvo 83.81 315 *e*P **P 18 16 21.3 +0.8**
comp=Z,19nm,1.4s
MVO *e*SKS **S 18 26 46.7 +4.2**
MVO *e*LQ LQ 18 50 03.8
MVO *e*LR LR 18 53 04.6
comp=Z,326nm,15.7s
PGAV Gavieira, Arco 84.07 316 *e*P **P 18 16 23.2 +1.3**
PGAV *e*LQ LQ 18 53 02.5
PGAV *e*LR LR 18 53 48.9
comp=Z,408nm,15.7s
POLO Lamas de Olo 84.15 315 *i* SKS S 18 26 55.6 +10
PVRL Vila Real 84.16 315 *e*P **P 18 16 24.9 +2.6**
MTE Manteigas 84.58 314 *e*P **P 18 16 25.8 +1.3**
comp=Z,33nm,1.4s
MTE *e*SKS **S 18 26 54.8 +4.6**
MTE *e*LQ LQ 18 50 32.1
MTE *e*LR LR 18 52 52.0
comp=Z,480nm,23.6s
PMRV Marv??o 85.07 314 *e*P **P 18 16 27.7 +0.8**
PMRV *e*LQ LQ 18 50 26.8
PMRV *e*LR LR 18 53 07.8
comp=Z,467nm,15.7s
TAM Tamanrasset 85.25 294 *e*P **P 18 16 28.5 +0.2**
TAM pmax pmax
comp=Z,6.0nm,0.9s
TAM Tamanrasset 85.25 294 *e*P **P 18 16 28.5 +0.2**
comp=Z,6.4nm,0.9s
PESTR Estremoz 85.53 313 *e*SKS S 18 26 53.1 -6.5
PBAR Barrancos 85.60 312 *e*P **P 18 16 30.2 +0.7**
comp=Z,18nm,1.4s
PBAR *e*SKS S 18 27 24.2 +24
EVO Evora 86.00 313 *e*P **P 18 16 31.9 +0.4**
comp=Z,21nm,1.5s
EVO Evora 86.00 313⇑*i*P **P 18 16 30.9 -0.6**
comp=Z,9.9nm,0.8s
EVO *e*R
comp=Z,776nm,20.5s
EVOP Sao Brissos 86.07 313⇑*i*P **P 18 16 30.9 -0.9**
EVOP pmax pmax
comp=Z,10.0nm,0.8s
EVOP Sao Brissos 86.07 313⇑*i*P **P 18 16 30.9 -0.9**
comp=Z,9.9nm,0.8s
MSVF Nonsavu 86.12 113 *e*P **P 18 16 33.4 +1.0**
MSVF pmax pmax
comp=Z,36nm,1.5s
MSVF Nonsavu 86.12 113 *e*P **P 18 16 33.4 +1.0**
comp=Z,36nm,1.5s
PBEJ Beja 86.21 313 *e*P **P 18 16 33.5 +0.9**
comp=Z,18nm,1.6s
LSZ Lusaka 86.23 250 *e*P **P 18 16 32.6 -0.4**
comp=Z,16nm,1.0s
PVAQ Vaqueiros 86.50 312 *e*LQ LQ 18 51 25.6
PVAQ *e*LR LR 18 55 51.7
comp=Z,465nm,19.7s
PMAFR Mafra 86.52 314 *e*SKS **S 18 27 04.5 -4.8**
PCVE Castro Verde 86.56 313 *i* SKS **SKSac 18 26 59.0 -0.6**
PNCL Nicolau / Gran 86.58 313 *e*P **P 18 16 35.2 +0.9**
comp=Z,24nm,1.5s
PNCL *e*SKS S 18 27 01.2 -8.6
PBDV Barranco-do-Ve 86.73 312 *e*P **P 18 16 36.5 +1.4**
MORF Marmelete 87.14 313 *e*P P 18 16 44.8 +7.6
MORF *i* SKS **S 18 27 16.2 +0.8**
PFVI Vila Bisbo 87.36 313 *e*SKS S 18 27 07.7 -10
FFC Flin Flon 91.34 15 P **P 18 16 56.9 +0.4**
comp=Z,104nm,0.8s,SNR=6.6
FFC Flin Flon 91.34 15 *e*P **P 18 16 55.4 -1.1**
FFC pmax pmax
comp=Z,9.0nm,0.8s
FFC MLR MLR
comp=Z,489nm,21.0s
FFC Flin Flon 91.34 15 *e*P **P 18 16 55.4 -1.1**
comp=Z,9.2nm,0.8s
FFC LR LR
comp=Z,489nm,21.0s
AFI Afiamalu 92.27 105 LR LR 18 51 25.6
comp=Z,253nm,20.9s,baz=96,slow=31
NEW Newport 92.54 26 *e*P **P 18 17 03.4 +1.1**
comp=Z,4.9nm,0.8s
WALA Warton Lakes 93.03 24 *e*P **P 18 17 05.3 +0.6**
comp=Z,0.2nm,0.9s
HAWA Hanford 93.12 29 PFAKE 18 17 20.0 +15
HAWA LR LR
comp=Z,540nm,22.0s
TOA0 Torodi Ar. Sit 93.50 288 *e*P **P 18 17 06.3 -0.9**
TORD Torodi Ar. Bea 93.50 288 P **P 18 17 06.8 -0.5**
TORD Torodi Ar. Bea 93.50 288 P **P 18 17 06.8 -0.5**
comp=Z,3.3nm,0.8s,baz=44,slow=3.5,SNR=15
BSMT Bassoo Peak 93.75 25 *e*P **P 18 17 09.4 +1.3**
comp=Z,4.5nm,0.7s
SCHQ Schefferville 93.76 355 *e*P **P 18 17 07.0 -0.7**
comp=Z,9.6nm,0.9s
SCHQ Schefferville 93.76 355 P **P 18 17 07.6 -0.1**
comp=Z,6.6nm,0.8s,baz=46,slow=4.8,SNR=7.8
YBMT Yellow Bay 94.01 25 *e*P **P 18 17 10.3 +1.1**
comp=Z,3.8nm,0.8s
SWMT Swartz Lake 94.32 25 *e*P **P 18 17 11.7 +1.2**
SLMT Seeley Lake 94.73 25 *e*P **P 18 17 13.1 +0.6**
comp=Z,6.4nm,0.7s
MSO Missoula 94.92 25 *e*P **P 18 17 13.4 +0.1**
comp=Z,3.5nm,0.8s
MSO LR LR
comp=Z,352nm,19.0s
CHMT Chamberlain Mo 95.09 25 *e*P **P 18 17 14.5 +0.2**
comp=Z,1.7nm,0.8s
BMO Blue Mountains 95.28 28 *e*P **P 18 17 15.4 +0.4**
BMO pmax pmax
comp=Z,3.0nm,0.9s
BMO MLR MLR
comp=Z,410nm,22.0s
BMO Blue Mountains 95.28 28 *e*P **P 18 17 15.4 +0.4**
comp=Z,3.4nm,0.9s
BMO LR LR
comp=Z,410nm,22.0s
EGMT Eagleton 95.32 22 PFAKE
EGMT LR LR 18 17 30.0 +15
comp=Z,518nm,22.0s
PMOZ Porto Moniz, M 95.38 314 *e*LR LR 18 56 01.8
comp=Z,114nm,27.6s
BOSA Boshof 95.79 240 P **P 18 17 15.8 -1.6**
BOSA Boshof 95.79 240 P **P 18 17 15.8 -1.6**
comp=Z,2.3nm,0.6s,baz=95,slow=7.3,SNR=7.2
BOSA LR LR 18 57 32.7
comp=Z,245nm,20.5s,baz=255,slow=34
DGMT Dagmar 96.56 18 PFAKE 18 17 30.0 +9.3
DGMT LR LR
comp=Z,735nm,19.0s
BOZ Bozeman (W) 96.76 24 *e*P **P 18 17 21.8 0.0**
BOZ pmax pmax
comp=Z,2.0nm,0.9s
BOZ MLR MLR
comp=Z,431nm,21.0s
BOZ Bozeman (W) 96.76 24 *e*P **P 18 17 21.8 0.0**
comp=Z,2.0nm,0.9s
BOZ LR LR
comp=Z,431nm,21.0s
ULM Lac du Bonnet 96.81 13 LR LR 19 06 37.1
comp=Z,505nm,18.1s,baz=351,slow=39
MCMT McKenzie Canyo 97.02 25 *e*P **P 18 17 21.5 -1.6**
comp=Z,2.0nm,1.1s
URZ Urewera 97.10 131 LR LR 19 04 54.4
comp=Z,265nm,18.1s,baz=43,slow=38
CASY Casey 97.50 177 PFAKE 18 17 40.0 +16
CASY LR LR
comp=Z,555nm,21.0s
LKWY Lake 98.13 24 PFAKE 18 17 40.0 +12
LKWY LR LR
comp=Z,727nm,19.0s
IMW Indian Meadow 98.52 25 P **P 18 17 29.8 -0.1**
comp=Z,2.5nm,0.7s
AGMN Agassiz Nation 98.68 13 PFAKE 18 17 40.0 +10
AGMN LR LR
comp=Z,632nm,21.0s
BMN Battle Mountai 98.95 31 PFAKE 18 17 40.0 +8.2
BMN LR LR
comp=Z,153nm,19.0s
EYMN Ely 99.79 11 PFAKE 18 17 50.0 +15
EYMN LR LR
comp=Z,476nm,20.0s
BW06 Boulder Array 100.00 24 PFAKE 18 17 50.0 +14
BW06 LR LR
comp=Z,583nm,19.0s
PDAR Pinedale Array 100.00 24 P **Pdif 18 17 36.6 +0.2**
PDAR Pinedale Array 100.00 24 P **Pdif 18 17 36.6 +0.2**
comp=Z,0.4nm,0.7s,baz=354,slow=3.0,SNR=4.1
NVAR Mina Array Bea 100.10 33 P **Pdif 18 17 38.7 +1.7**
NVAR Mina Array Bea 100.10 33 P **Pdif 18 17 38.7 +1.7**
comp=Z,0.2nm,0.6s,baz=289,slow=5.6,SNR=2.8
HWUT Hardware Ranch 100.27 26 PFAKE 18 17 50.0 +12
HWUT LR LR
comp=Z,410nm,20.0s
RSSD Black Hills 100.58 20 *e*P **Pdif 18 17 39.4 +0.4**
RSSD pmax pmax
comp=Z,5.0nm,0.8s
RSSD Black Hills 100.58 20 *e*Pdif **Pdif 18 17 39.4 +0.4**
comp=Z,5.1nm,0.8s
DUG Dugway 100.99 28 PFAKE 18 17 50.0 +9.2
DUG LR LR
comp=Z,269nm,19.0s
DRV Dumont d'Urvil 101.53 166 SS SS 18 36 11.0 -12
COWI Conover 101.94 9 PFAKE 18 18 00.0 +15
COWI LR LR
comp=Z,567nm,20.0s
DBIC Dimbokro 102.44 286 P **Pdif 18 17 46.0 -1.5**
DBIC Dimbokro 102.44 286 P **Pdif 18 17 46.0 -1.5**
comp=Z,1.9nm,0.7s,baz=144,slow=14,SNR=2.4
ECSD EROS Data Cent 102.87 15 PFAKE 18 18 00.0 +11
ECSD LR LR
comp=Z,803nm,19.0s
GLMI Grayling 103.72 6 PFAKE 18 18 00.0 +7.3
GLMI LR LR
comp=Z,682nm,20.0s
LBNH Lisbon 104.63 357 PFAKE 18 18 10.0 +13
LBNH LR LR
comp=Z,499nm,20.0s
JFWS Jewell Farm 104.89 11 PFAKE 18 18 10.0 +12
JFWS LR LR
comp=Z,466nm,19.0s
ERPA Erie 106.75 3 PFAKE 18 22 30.0
ERPA LR LR
comp=Z,455nm,19.0s
BINY Binghamton 106.76 0 PFAKE 18 22 30.0
BINY LR LR
comp=Z,379nm,19.0s
HDIL Hopedale 107.34 11 PFAKE 18 22 30.0
HDIL LR LR
comp=Z,743nm,19.0s
ANMO Albuquerque 108.03 26 PFAKE 18 22 30.0
ANMO LR LR
comp=Z,527nm,20.0s
ACSO Alum Creek Sta 108.43 6 PFAKE 18 22 30.0
ACSO LR LR
comp=Z,398nm,21.0s
AMTX Amarillo 109.76 22 PFAKE 18 22 30.0
AMTX LR LR
comp=Z,427nm,22.0s
CBN Corbin 110.74 1 PFAKE 18 22 40.0
CBN LR LR
comp=Z,474nm,20.0s
MNTX Cornudas Mount 111.33 27 PFAKE 18 22 40.0
MNTX LR LR
comp=Z,373nm,20.0s
BLA Blacksburg 111.61 4 PFAKE 18 22 40.0
BLA LR LR
comp=Z,466nm,19.0s
PPT2 Papeete2 112.68 97 *e*SP SP 18 32 44.1 -3.5
comp=Z,138nm,25.0s
PPT2 Papeete2 112.68 97 *e*LR LR 18 55 58.0
comp=Z,426nm,25.2s
CNNC Cliffs of the 113.68 2 PFAKE 18 22 40.0
CNNC LR LR
comp=Z,442nm,19.0s
VNDA Vanda 114.02 168 PKP PKPdf 18 22 28.9 +0.1
VNDA PP **PP 18 23 25.3 +1.6**
VNDA PKKPbc **PKKPbc 18 33 09.6 -2.8**
VNDA Vanda 114.02 168 PKP PKPdf 18 22 28.9 +0.1
comp=Z,0.8nm,0.9s,baz=310,slow=5.8,SNR=4.7
VNDA PP **PP 18 23 25.3 +1.6**
comp=Z,1.3nm,1.1s,baz=332,slow=6.8,SNR=4.0
VNDA PKKPbc **PKKPbc 18 33 09.6 -2.8**
comp=Z,0.7nm,0.8s,baz=172,slow=3.2,SNR=5.8
TXAR Lajitas Array 114.09 26 PKP PKPdf 18 22 29.8 -0.9
TXAR PP **PP 18 23 25.0 +1.0**
TXAR PKKPbc **PKKPbc 18 33 08.6 -2.6**
TXAR Lajitas Array 114.09 26 PKP PKPdf 18 22 29.8 -0.9
comp=Z,0.6nm,0.6s,baz=254,slow=0.9,SNR=5.8
TXAR PP **PP 18 23 25.0 +1.0**
comp=Z,0.2nm,0.6s,baz=322,slow=5.7,SNR=3.3
TXAR PKKPbc **PKKPbc 18 33 08.6 -2.6**
comp=Z,0.6nm,0.9s,baz=142,slow=6.3,SNR=4.6
JCT Junction City 114.42 23 *e*PKIKP PKPdf 18 22 30.9 -0.3
JCT MLR MLR
comp=Z,706nm,19.0s
JCT Junction City 114.42 23 *e*PKiKP **PKiKP 18 22 30.9 -0.3**
JCT LR LR
comp=Z,706nm,19.0s
LRAL Lakeview Retre 115.06 10 PFAKE 18 22 40.0 +7.7
LRAL LR LR
comp=Z,529nm,20.0s
TBI Tubuai 115.30 103 *e*LR LR 18 57 25.6
comp=Z,185nm,23.8s
SNAA Sanae 124.78 202 *e*PKPdf **PKPdf 18 22 46.4 -3.4**
GRTK Grand Turk 127.18 354 PFAKE 18 23 10.0 +14
GRTK LR LR
comp=Z,397nm,20.0s
RKT Rikitea 127.42 96 *e*LR LR 19 02 59.4
comp=Z,249nm,35.0s
GTBY Guantanamo Bay 128.96 359 PFAKE 18 23 10.0 +11
GTBY LR LR
comp=Z,399nm,19.0s
ANWB Willy Bob 129.35 342 PFAKE 18 23 10.0 +10
ANWB LR LR
comp=Z,220nm,20.0s
GRGR Grenville 134.59 340 PFAKE 18 23 20.0 +10
GRGR LR LR
comp=Z,325nm,20.0s
BCIP Isla Barro Col 139.49 6 PFAKE 18 23 30.0 +11
BCIP LR LR
comp=Z,212nm,20.0s
ROSC El Rosal 143.91 357 PKP PKPbc 18 23 25.2 -0.1
ROSC *e*PKPdf PKPab 18 23 25.7 +1.1
ROSC El Rosal 143.91 357 PKP PKPbc 18 23 25.2 -0.1
comp=Z,12nm,0.7s,baz=81,slow=21,SNR=11
OTAV Otavalo 148.44 5 *e*PKPdf **PKPdf 18 23 36.7 +1.4**
BDFB Brasilia 150.08 295 PKPbc **PKPbc 18 23 40.7 -1.7**
BDFB Brasilia 150.08 295 PKPbc **PKPbc 18 23 40.7 -1.7**
comp=Z,2.9nm,0.4s,baz=37,slow=5.1,SNR=4.5
SAML Samuel 154.69 329 *e*PKPdf **PKPdf 18 23 43.4 -0.7**
LPAZ La Paz 163.35 333 *e*PKPdf **PKPdf 18 23 54.0 -1.0**
LPAZ PKP **PKPdf 18 23 54.5 -0.5**
LPAZ PKPab **PKPab 18 24 44.0 -1.5**
LPAZ La Paz 163.35 333 PKP **PKPdf 18 23 54.5 -0.5**
comp=Z,2.2nm,1.0s,baz=66,slow=5.7,SNR=5.6
LPAZ PKPab **PKPab 18 24 44.0 -1.5**
comp=Z,3.3nm,0.8s,baz=43,slow=4.3,SNR=5.4
PLCA Paso Flores 169.72 204 PKP **PKPdf 18 23 58.9 +0.4**
PLCA PKPab **PKPab 18 25 11.9 -0.5**
PLCA Paso Flores 169.72 204 PKP **PKPdf 18 23 58.9 +0.4**
comp=Z,0.6nm,0.4s,baz=214,slow=7.3,SNR=2.4
PLCA PKPab **PKPab 18 25 11.9 -0.5**
comp=Z,1.6nm,0.8s,baz=230,slow=8.1,SNR=3.5

NEIC ***29*** *18:14:39.4, 19°.29N×66°.34W, h25km, MD3.2(RSPR), After RSPR.*

RSPR 29 18:14:39.4, 19°.29N×66°.34W, h25km±14km**, MD3.2**/10**, 13C-8D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase	ID Op	ID ISC	Time h m s	Res ISC
AOPR	**Arecibo Observ**	**1.02**	**203**	⇓*i*P		Pn	18 14 55.6	-2.6
AOPR	**Arecibo Observ**	**1.02**	**203**	*e*S		Sb	18 15 08.6	-2.9
AOPR	**Arecibo Observ**	**1.02**	**203**	⇓*i*P		Pn	18 14 55.6	-2.6
AOPR				*e*S		Sb	18 15 08.6	-2.9
AGPR	**Aguadilla, PR**	**1.10**	**222**	*e*P		Pn	18 14 57.6	-1.6
LRS	**Lares**	**1.10**	**206**	⇑*e*P		Pn	18 14 56.7	-2.7

LRS				*e*S	Sn	18 15 10.7	-3.1	
LRS	**Lares**	**1.10**	**206**	*e*P	Pn	18 14 56.7	-2.7	
LRS				*e*S	Sn	18 15 10.7	-3.1	
CBYP	**Canovanas**	**1.11**	**156**	⇓*e*P	Pn	18 14 57.1	-2.4	
CBYP	**Canovanas**	**1.11**	**156**	*e*S	Sn	18 15 11.0	-3.0	
CBYP	**Canovanas**	**1.11**	**156**	⇓*e*P	Pn	18 14 57.1	-2.4	
CBYP				*e*S	Sn	18 15 11.0	-3.0	
SJG	**San Juan**	**1.19**	**171**	⇑*e*P	Pn	18 14 58.3	-2.1	
SJG	**San Juan**	**1.19**	**171**	*e*S	Sn	18 15 12.7	-3.0	
SJG	**San Juan**	**1.19**	**171**	⇑*e*P	Pn	18 14 58.3	-2.1	
SJG	**San Juan**	**1.19**	**171**	⇑*e*P	Pn	18 14 58.3	-2.1	
SJG				*e*S	Sn	18 15 12.7	-3.0	
CELP	**Cerrillos**	**1.23**	**191**	⇑*e*P	Pn	18 14 58.8	-2.2	
CELP				*e*S	Sn	18 15 13.4	-3.5	
CELP	**Cerrillos**	**1.23**	**191**	⇑*e*P	Pn	18 14 58.8	-2.2	
CELP				*e*S	Sn	18 15 13.4	-3.5	
HUMP	**Col San Antoni**	**1.23**	**158**	⇓*i*P	Pn	18 14 58.9	-2.2	
HUMP	**Col San Antoni**	**1.23**	**158**	*e*S	Sn	18 15 13.9	-3.0	
HUMP	**Col San Antoni**	**1.23**	**158**	⇓*i*P	Pn	18 14 58.9	-2.2	
HUMP				*e*S	Sn	18 15 13.9	-3.0	
OBIP	**Obispado Ponce**	**1.27**	**192**	⇑*e*P	Pn	18 14 59.5	-2.0	
OBIP	**Obispado Ponce**	**1.27**	**192**	*e*S	Sn	18 15 14.9	-2.9	
OBIP	**Obispado Ponce**	**1.27**	**192**	⇑*e*P	Pn	18 14 59.5	-2.0	
OBIP				*e*S	Sn	18 15 14.9	-2.9	
CPD	**Cerro la Pandu**	**1.31**	**162**	⇑*e*P	Pn	18 14 60.0	-2.2	
CPD	**Cerro la Pandu**	**1.31**	**162**	*e*S	Sn	18 15 15.9	-3.0	
CPD	**Cerro la Pandu**	**1.31**	**162**	⇑*e*P	Pn	18 14 60.0	-2.2	
CPD				*e*S	Sn	18 15 15.9	-3.0	
LSP	**Las Mesas**	**1.32**	**213**	⇑*i*P	Pn	18 15 00.1	-2.2	
LSP				*e*S	Sn	18 15 16.2	-2.9	
LSP	**Las Mesas**	**1.32**	**213**	*i* Pu	Pn	18 15 00.1	-2.2	
LSP				*e*S	Sn	18 15 16.2	-2.9	
MTP	**Monte Pirata**	**1.40**	**148**	⇑*e*P	Pn	18 15 00.9	-2.5	
MTP	**Monte Pirata**	**1.40**	**148**	*e*S	Sn	18 15 17.9	-3.1	
MTP	**Monte Pirata**	**1.40**	**148**	⇑*e*P	Pn	18 15 00.9	-2.5	
MTP				*e*S	Sn	18 15 17.9	-3.1	
CRPR	**Cabo Rojo, PR**	**1.47**	**210**	⇓*e*P	Pn	18 15 02.5	-1.9	
CRPR	**Cabo Rojo, PR**	**1.47**	**210**	⇓*e*P	Pn	18 15 02.5	-1.9	
STVI	**Saint Thomas**	**1.61**	**125**	*e*P	Pn	18 15 04.5	-1.7	
SDDR	**Presa de Saban**	**4.69**	**267**	*e*P	Pn	18 15 51.1	+2.3	

*CSEM **29** 18:30:24.9±0.8, 36.°05N×21.°53E, h8km, ML2.7/3, Error ellipse: s-maj=16.7km s-min=8.8km az=54.0*
*ATH **29** 18:30:26.1, 36.°10N×21.°60E, h21km±4km, MD3.5/13*
*THE **29** 18:30:27.4, 36.°15N×21.°62E, h6km±1km, ML2.7/3, Error ellipse: s-maj=1.6km s-min=0.8km az=243.0*

ISC 29 18:30:26.1±2.1, 36.°11N±0.°07×21.°60E±0.°08, h5km±11km, n37, σ0°49/52, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PYL	**PYLOS**	**0.79**	**8**	P	**Pg**	**18 30 41.6**	**+0.3**
PYL				S	**Sg**	**18 30 52.4**	**+0.8**
PYL	**PYLOS**	**0.79**	**8**	*e*PN	**Pb**	**18 30 42.1**	**-0.3**
PYL				*e*SN	**Sb**	**18 30 53.2**	**-0.2**
PYL	**PYLOS**	**0.79**	**8**	P	**Pg**	**18 30 41.6**	**+0.3**
PYL	**PYLOS**	**0.79**	**8**	*e*Pn	**Pb**	**18 30 42.1**	**-0.3**
PYL				S	**Sg**	**18 30 52.4**	**+0.8**
PYL				*e*Sn	**Sb**	**18 30 53.2**	**-0.2**
DYR	**Agios Nikonas**	**0.88**	**42**	P	**Pg**	**18 30 43.0**	**0.0**
DYR				S	**Sb**	**18 30 55.4**	**-0.6**
DYR	**Agios Nikonas**	**0.88**	**42**	*e*PB	**Pg**	**18 30 42.6**	**-0.4**
DYR				*e*SN	**Sb**	**18 30 55.3**	**-0.7**
DYR	**Agios Nikonas**	**0.88**	**42**	*e*Pb	**Pg**	**18 30 42.6**	**-0.4**
DYR	**Agios Nikonas**	**0.88**	**42**	P	**Pg**	**18 30 43.0**	**0.0**
DYR				S	**Sb**	**18 30 55.4**	**-0.6**
ITM	**Ithomi**	**1.10**	**14**	P	**Pg**	**18 30 46.8**	**-0.4**
ITM	**Ithomi**	**1.10**	**14**	*e*PN	**Pg**	**18 30 47.0**	**-0.2**
ITM				*e*SN	**Sb**	**18 31 02.3**	**0.0**
ITM	**Ithomi**	**1.10**	**14**	*e*Pn	**Pg**	**18 30 47.0**	**-0.2**
ITM				*e*Sn	**Sb**	**18 31 02.3**	**0.0**
KYTH	**Kithira**	**1.18**	**81**	P	**Pb**	**18 30 49.1**	**+0.1**
KYTH	**Kithira**	**1.18**	**81**	*e*PN	**Pn**	**18 30 49.2**	**-0.1**
KYTH	**Kithira**	**1.18**	**81**	P	**Pb**	**18 30 49.1**	**+0.1**
VLI	**Veliai**	**1.24**	**60**	P	**Pg**	**18 30 49.5**	**-0.4**
VLI				S	**Sn**	**18 31 08.0**	**+0.8**
VLI	**Veliai**	**1.24**	**60**	*e*PN	**Pg**	**18 30 49.5**	**-0.4**
VLI	**Veliai**	**1.24**	**60**	P	**Pg**	**18 30 49.5**	**-0.4**
VLI				S	**Sn**	**18 31 08.0**	**+0.8**
ANKY	**Antikythira Is**	**1.40**	**100**	P	**Pn**	**18 30 52.5**	**+0.1**
ANKY				S	**Sg**	**18 31 11.7**	**+0.5**
ANKY	**Antikythira Is**	**1.40**	**100**	*e*PN	**Pn**	**18 30 52.5**	**+0.1**
ANKY	**Antikythira Is**	**1.40**	**100**	P	**Pn**	**18 30 52.5**	**+0.1**
ANKY				S	**Sg**	**18 31 11.7**	**+0.5**
VLX	**Vlachokerasia**	**1.40**	**26**	P	**Pn**	**18 30 52.2**	**-0.3**
VLX				S	**Sb**	**18 31 11.0**	**-0.2**
VLX	**Vlachokerasia**	**1.40**	**26**	*e*PN	**Pn**	**18 30 52.4**	**-0.1**
VLX	**Vlachokerasia**	**1.40**	**26**	P	**Pn**	**18 30 52.2**	**-0.3**
VLX				S	**Sb**	**18 31 11.0**	**-0.2**
AMT	**Artemida-Makis**	**1.42**	**4**	P	**Pn**	**18 30 52.8**	**+0.1**
AMT	**Artemida-Makis**	**1.42**	**4**	*e*PN	**Pn**	**18 30 52.1**	**-0.6**
AMT	**Artemida-Makis**	**1.42**	**4**	*e*Pn	**Pn**	**18 30 52.1**	**-0.6**
AMT	**Artemida-Makis**	**1.42**	**4**	P	**Pn**	**18 30 52.8**	**+0.1**
DID	**Didima**	**1.92**	**43**	*e*PN	**Pb**	**18 31 00.9**	**-0.7**
DID	**Didima**	**1.92**	**43**	*e*Pn	**Pb**	**18 31 00.9**	**-0.7**
GUR	**Goura**	**1.92**	**18**	*e*PN	**Pn**	**18 31 00.1**	**+0.6**
GUR	**Goura**	**1.92**	**18**	*e*Pn	**Pn**	**18 31 00.1**	**+0.6**
KLV	**Kalavryta, Ach**	**1.98**	**13**	*e*PN	**Pb**	**18 31 02.9**	**+0.2**
KLV	**Kalavryta, Ach**	**1.98**	**13**	*e*Pn	**Pb**	**18 31 02.9**	**+0.2**
VAM	**Vamos**	**2.23**	**108**	*e*PB	**Pn**	**18 31 03.5**	**-0.2**
VAM	**Vamos**	**2.23**	**108**	*e*Pb	**Pn**	**18 31 03.5**	**-0.2**
KALE	**Kalithea**	**2.32**	**11**	*e*PB	**Pb**	**18 31 07.2**	**-1.2**
KALE	**Kalithea**	**2.32**	**11**	*e*Pb	**Pb**	**18 31 07.2**	**-1.2**

WEL 29 18:39:17.4±0.2, 39.°77S×174.°22E, h135km±2km, ML3.6/11, 6C-2D, Error ellipse: s-maj=1.2km s-min=0.7km az=90.0, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DFE	**Dawson Falls**	**0.45**	**349**	PN	Pn	18 39 36.5	-0.5
RAEZ	**Rainy Point**	**0.50**	**16**	PN	Pn	18 39 36.8	-0.3
NEZ	**North Egmont**	**0.50**	**349**	PN	Pn	18 39 36.8	-0.4
NWEZ	**Newall Road**	**0.56**	**331**	PN	Pn	18 39 38.3	+0.9
WAZ	**Wanganui**	**0.59**	**89**	⇓PN	Pn	18 39 37.8	+0.1
PKE	**Pukeiti**	**0.60**	**343**	PN	Pn	18 39 37.6	-0.1
PKE				SN	Sn	18 39 52.7	-0.3
MHEZ	**Mangahewa**	**0.69**	**7**	PN	Pn	18 39 38.3	0.0
MHEZ				SN	Sn	18 39 53.8	-0.3
VRZ	**Vera Road**	**0.77**	**33**	⇓PN	Pn	18 39 38.3	-0.5
VRZ				SN	Sn	18 39 53.9	-1.1
DUWZ	**D'Urville Isla**	**1.06**	**192**	⇑PN	Pn	18 39 41.2	-0.1
DUWZ				SN	Sn	18 39 59.1	-0.5
TRVZ	**Turoa**	**1.13**	**66**	PN	Pn	18 39 42.3	0.0
DRZ	**Dome Shelter**	**1.15**	**65**	PN	Pn	18 39 42.8	+0.2
FWVZ	**Far West T-bar**	**1.15**	**64**	PN	Pn	18 39 42.1	-0.5
WNVZ	**Wahianoa**	**1.15**	**68**	PN	Pn	18 39 42.1	-0.3
KIW	**Kapiti Island**	**1.22**	**154**	PN	Pn	18 39 42.7	-0.1
KIW				AML	AML	18 40 01.8	
KIW				AML	AML	18 40 01.8	
TUVZ	**Tukino**	**1.22**	**66**	PN	Pn	18 39 42.8	-0.2
MOVZ	**Moawhango**	**1.24**	**74**	PN	Pn	18 39 42.6	-0.6
OTVZ	**Oturere**	**1.27**	**62**	PN	Pn	18 39 43.5	-0.1
OTVZ				SN	Sn	18 40 02.6	-1.0
OGWZ	**Otaki Gorge**	**1.28**	**146**	PN	Pn	18 39 43.6	+0.2
OGWZ				SN	Sn	18 40 01.6	-1.7
POWZ	**Post Office Ro**	**1.34**	**118**	PN	Pn	18 39 44.1	-0.1
HIZ	**Hauiti**	**1.35**	**22**	PN	Pn	18 39 43.8	-0.4
MRZ	**Mangatainoka R**	**1.37**	**131**	PN	Pn	18 39 44.3	-0.2
MRZ				AML	AML	18 40 07.1	
TCW	**Tory Channel**	**1.45**	**178**	PN	Pn	18 39 45.3	+0.1
TCW				AML	AML	18 40 06.3	
TCW				AML	AML	18 40 07.7	
BHHZ	**Black Hill Sta**	**1.45**	**80**	PN	Pn	18 39 44.4	-1.1
CAW	**Cannon Point**	**1.49**	**154**	PN	Pn	18 39 45.8	0.0
CAW				AML	AML	18 40 07.7	
CAW				AML	AML	18 40 08.5	
HOWZ	**Holdsworth Sta**	**1.50**	**139**	PN	Pn	18 39 45.7	-0.2
PNHZ	**Pukenui**	**1.53**	**96**	PN	Pn	18 39 46.1	-0.1
NNZ	**Nelson**	**1.58**	**204**	PN	Pn	18 39 46.6	-0.1
SNZO	**South Karori**	**1.58**	**167**	PN	Pn	18 39 46.6	-0.1
SNZO				AML	AML	18 40 09.1	
SNZO				AML	AML	18 40 09.2	
DVHZ	**Dannevirke**	**1.59**	**110**	PN	Pn	18 39 46.5	-0.4
TIWZ	**Tintock**	**1.63**	**129**	⇑PN	Pn	18 39 47.2	-0.1
QRZ	**Quartz Range**	**1.67**	**230**	⇑PN	Pn	18 39 47.1	-0.7
TUWZ	**Tuamarina**	**1.68**	**187**	PN	Pn	18 39 47.7	-0.1
TUWZ				AML	AML	18 40 11.5	
TUWZ				AML	AML	18 40 11.7	
HATZ	**Hinemaiaia**	**1.70**	**60**	PN	Pn	18 39 47.8	-0.3
MTW	**Mount Morrison**	**1.70**	**145**	PN	Pn	18 39 47.8	-0.3
MTW				SN	Sn	18 40 10.7	-1.0
MTW				AML	AML	18 40 11.1	
WPHZ	**Waipukurau**	**1.73**	**101**	*e*PN	Pn	18 39 48.4	-0.1
BFZ	**Birch Farm**	**1.80**	**121**	⇑PN	Pn	18 39 49.0	-0.3
MSWZ	**Moikau Station**	**1.82**	**155**	PN	Pn	18 39 49.3	-0.2
MSWZ				SN	Sn	18 40 12.9	-1.3
MSWZ				AML	AML	18 40 13.4	
PAWZ	**Paruwai Farm**	**1.86**	**151**	⇑PN	Pn	18 39 49.7	-0.2
PAWZ				AML	AML	18 40 14.1	
PAWZ				AML	AML	18 40 14.2	
PRHZ	**Porangahau**	**1.92**	**106**	PN	Pn	18 39 50.7	0.0
BSWZ	**Blackbirch Sta**	**1.96**	**187**	PN	Pn	18 39 51.3	+0.1
PLWZ	**Palliser**	**1.97**	**157**	PN	Pn	18 39 50.8	-0.5
TRWZ	**Traveller**	**1.98**	**146**	PN	Pn	18 39 51.0	-0.4
TRWZ				AML	AML	18 40 18.8	
PXZ	**Pawanui**	**2.05**	**98**	PN	Pn	18 39 52.0	-0.2
PXZ				AML	AML	18 40 19.2	
PXZ				AML	AML	18 40 24.9	
PXZ				AML	AML	18 40 24.9	
PXZ				AML	AML	18 40 41.6	
THZ	**Tophouse**	**2.23**	**206**	PN	Pn	18 39 54.1	-0.4
THZ				SN	Sn	18 40 22.6	-0.5
DSZ	**Denniston Nort**	**2.70**	**222**	PN	Pn	18 39 59.9	-0.5
KHZ	**Kahutara**	**2.70**	**191**	⇑PN	Pn	18 39 59.8	-0.5
LTZ	**Lake Taylor**	**3.35**	**205**	PN	Pn	18 40 07.2	-1.6
MQZ	**McQueen's Vall**	**4.11**	**196**	PN	Pn	18 40 15.7	-2.9
WVZ	**Waitaha Valley**	**4.22**	**217**	PN	Pn	18 40 18.5	-1.6
FOZ	**Fox Glacier**	**5.09**	**220**	PN	Pn	18 40 29.1	-2.5
ODZ	**Otahua Downs**	**5.90**	**205**	PN	Pn	18 40 40.8	-1.7
JCZ	**Jackson Bay**	**5.92**	**222**	PN	Pn	18 40 41.2	-1.8

IDC 29 18:40:49.4±60.0, 17.°08S×178.°62E, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/18, mbtmp3.7/3, Error ellipse: s-maj=1076.0km s-min=150.4km az=77.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**36.58**	**239**	P	P	18 47 57.6	+0.4
	0.9nm,0.5s,baz=88,slow=7.7,SNR=3.8						
WRA	**Warramunga Arr**	**42.00**	**259**	P	P	18 48 42.5	-0.3
	0.1nm,0.3s,baz=94,slow=7.8,SNR=8.6						
ASAR	**Alice Springs**	**42.30**	**253**	P	P	18 48 44.9	-0.3
	2.1nm,0.7s,baz=89,slow=7.9,SNR=44						

*ISCJB **29** 18:53:37.7±0.5, 31.°42N±0.°06×104.°28E±0.°08, h14km, mb3.8/8, MS3.8/1, Error ellipse: s-maj=11.7km s-min=5.6km az=40.3*
*IDC **29** 18:53:37.9±0.9, 31.°51N×104.°32E, h0km, mb3.8/9, mb1 3.8/11, mb1mx3.6/30, mbtmp3.7/11, ML3.4/1, MS3.8/1, Ms1 3.6/1, ms1mx2.8/35, Error ellipse: s-maj=32.0km s-min=16.6km az=59.0*
*BJI **29** 18:53:40.4, 31.°47N×103.°97E, h22km, mb3.9/1, ML3.4/9, Ms3.5/2, Ms7 3.4/1*

ISC 29 18:53:39.8±0.7, 31.°45N±0.°05×104.°22E±0.°06, h14km, n16, σ2°12/20, mb3.9/8, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.67**	**217**	Pg	**Pg**	**18 53 51.0**	**-1.9**
CD2				Sg	**Sg**	**18 53 59.5**	**-2.3**
CD2				*s*max	*s*max		
	comp=N,800nm,0.7s						
CD2				*s*max	*s*max		
	comp=E,730nm,1.5s						
LZH	**Lanzhou**	**4.64**	**356**	Pg	**Pg**	**18 55 06.5**	**-2.1**
LZH				Sn	**Sn**	**18 55 47.5**	**+4.2**
LZH				Sg	**Sg**	**18 56 06.8**	**-1.9**
LZH				*s*max	*s*max		
	comp=N,160nm,1.0s						
LZH				*s*max	*s*max		
	comp=E,78nm,0.9s						
LZH				LR	LR		
	comp=N,400nm,5.2s						
LZH				LR	LR		
	comp=E,390nm,6.6s						
LZH				LR	LR		
	comp=Z,290nm,6.8s						
XAN	**Xi'an**	**4.73**	**56**	Pn	**Pn**	**18 54 52.8**	**+2.1**
XAN				Pg	**Pg**	**18 55 11.5**	**+1.2**
XAN				Sn	**Sn**	**18 55 41.8**	**-3.6**
XAN				Sg	**Sg**	**18 56 08.0**	**-3.6**
XAN				*s*max	*s*max		
	comp=N,120nm,0.7s						
XAN				*s*max	*s*max		
	comp=E,79nm,0.8s						
CMAR	**Chiang Mai Arr**	**13.79**	**201**	Pn	**Pn**	**18 56 57.8**	**+2.8**
	comp=E,0.1nm,0.3s,baz=8.4,slow=8.7,SNR=3.1						
SONM	**Songino Array**	**16.45**	**5**	Pn	**Pn**	**18 57 29.4**	**-0.9**
	baz=185,slow=16,SNR=2.7						
KSRS	**Korea Array**	**20.42**	**66**	P	**P**	**18 58 16.2**	**-0.3**
	comp=E,1.4nm,0.8s,baz=248,slow=11,SNR=7.1						
CN2	**Changchun**	**20.78**	**48**	*e*P	Pn	18 58 23.3	+0.5
MKAR	**Makanchi Array**	**22.79**	**319**	P	**P**	**18 58 42.7**	**+0.7**
	comp=E,2.7nm,1.1s,baz=134,slow=8.8,SNR=5.8						
ZALV	**Zalesovo Beam**	**26.46**	**334**	P	**P**	**18 59 16.5**	**+0.3**
	comp=E,2.8nm,0.6s,baz=134,slow=9.4,SNR=15						
KURBB	**Kurchatov Arra**	**27.02**	**323**	P	**P**	**18 59 21.5**	**+0.2**
	comp=E,1.4nm,0.9s,baz=129,slow=9.0,SNR=18						
KBZ	**Khabaz**	**49.09**	**303**	LR	LR	19 24 34.9	
	comp=E,86nm,18.4s,baz=300,slow=38						
ARCES	**ARCESS Array B**	**56.99**	**336**	P	**P**	**19 03 24.7**	**+0.1**
	comp=E,1.4nm,0.7s,baz=92,slow=8.5,SNR=3.8						
FINES	**FINESS Array B**	**57.34**	**326**	P	**P**	**19 03 26.8**	**-0.3**
	comp=E,1.3nm,0.7s,baz=159,slow=12,SNR=4.8						
WRA	**Warramunga Arr**	**58.70**	**146**	P	**P**	**19 03 37.9**	**+0.8**
	comp=E,1.2nm,0.7s,baz=339,slow=7.7,SNR=8.2						
ASAR	**Alice Springs**	**61.73**	**149**	P	**P**	**19 03 57.3**	**-0.6**
	comp=E,0.7nm,1.0s,baz=338,slow=6.8,SNR=4.0						
ILAR	**Eielson Array**	**69.48**	**26**	P	**P**	**19 04 46.8**	**-0.6**
	comp=E,0.4nm,0.6s,baz=290,slow=5.8,SNR=5.4						

*NEIC **29** 19:00:23.7, 32.°06N×115.°50W, h6km, ML3.6(ECX), ML3.3(PAS), After PAS.*

ECX 29 19:00:24.1±0.7, 32.°06N×115.°48W, h5km, MD3.4, ML3.6, 9C-6D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EMX	**El Mayor**	**0.22**	**109**	⇑*e*P	Pg	19 00 26.5	-1.8
EMX	**El Mayor**	**0.22**	**109**	⇑*e*P	Pg	19 00 26.5	-1.8
EMX				*e*S	Sg	19 00 29.5	-1.7
EMX				⇓*e*		19 00 29.9	
	comp=E,7μm,0.2s						
CPBX	**Cerro Prieto**	**0.39**	**23**	⇓*e*P	Pg	19 00 12.9	-19
CPBX				*e*S	Sg	19 00 18.5	-18
CPBX				*e*		19 00 20.5	
	comp=N,17μm,0.4s						
RDX	**Rancho Dawling**	**0.41**	**252**	⇑*i*P	Pg	19 00 31.3	-1.0
RDX	**Rancho Dawling**	**0.41**	**252**	⇑*i*P	Pg	19 00 31.3	-1.0
RDX				*e*S	Sg	19 00 37.0	-0.9
RDX				⇓*e*		19 00 37.7	
	comp=N,3μm,0.5s						
ECBX	**El Chinero**	**0.69**	**148**	⇑*e*P	Pg	19 00 35.1	-2.3
ECBX				*e*S	Sg	19 00 44.2	-2.1
RMX	**La Rumorosa**	**0.74**	**317**	⇓*e*P	Pg	19 00 37.1	-1.4
RMX				*e*S	Sg	19 00 47.1	-1.2
RMX				⇑*e*		19 00 48.8	
	comp=N,2μm,0.3s						
SPX	**San Pedro Mart**	**1.01**	**179**	⇓*e*P	Pg	19 00 41.8	-2.2
SPX				*e*S	Sg	19 00 55.8	-1.6
SPX				⇓*e*		19 00 59.0	
	comp=E,936nm,0.5s						
ECNX	**Esteban Cantu**	**1.03**	**247**	⇑*e*P	Pg	19 00 42.4	-1.7
ECNX				*e*S	Sg	19 00 56.0	-1.5
CBX	**Cerro Bola**	**1.03**	**284**	⇑*e*P	Pg	19 00 42.3	-1.8
CBX				*e*S	Sg	19 00 56.0	-1.7
PBX	**Punta Banda**	**1.10**	**254**	⇑*e*P	Pg	19 00 43.7	-1.6
PBX				*e*S	Sg	19 00 58.3	-1.4
GLA	**Glamis**	**1.13**	**29**	*e*Pn	Pg	19 00 42.3	-3.7
BAR	**Barrett**	**1.18**	**302**	*e*Pn	Pg	19 00 42.2	-4.6
BAR				*e*Sg	Sg	19 00 59.5	-2.7
LDFC	**Landfair**	**3.03**	**6**	*e*Pn	Pb	19 01 18.4	-0.2
MWC	**Mount Wilson**	**3.05**	**316**	*e*Pn	Pn	19 01 13.3	0.0
GSC	**Goldstone**	**3.42**	**342**	Pn	Pn	19 01 13.2	-5.0
TUC	**Tucson**	**3.99**	**85**	*e*Pg	Pg	19 01 38.3	-2.4
ISA	**Isabella**	**4.37**	**326**	*e*P	Pn	19 01 29.9	-1.4

*ISCJB **29** 19:47:30.6±0.7, 27.°36S±0.°04×70.°7W±0.°1, h63km±6km, mb3.8/1, Error ellipse: s-maj=15.9km s-min=6.3km az=0.8*
*IDC **29** 19:47:31.1±1.3, 27.°39S×70.°92W, h53km±6km, mb3.6/1, mb1 3.7/4, mb1mx3.4/19, mbtmp3.7/4, Error ellipse: s-maj=37.9km s-min=12.8km az=83.0*
*GUC **29** 19:47:32.1±0.6, 27.°39S×70.°65W, h50km±8km, ML4.4*
*NEIC **29** 19:47:32.1, 27.°39S×70.°65W, h50km, MG4.4(GUC), After GUC.*
NEIC Felt [II] at Copiapo.

ISC 29 19:47:32.1±0.8, 27.°39S±0.°04×70.°68W±0.°08, h51km±6km, n19, σ1°13/32, 4C-2D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPCH	**Copiapo**	**0.29**	**83**	⇑*i*P	**Pn**	**19 47 41.0**	**-0.4**
CPCH				*i* S	**Sn**	**19 47 48.0**	**+0.1**
CPCH	**Copiapo**	**0.29**	**83**	⇑*i*P	**Pn**	**19 47 41.0**	**-0.4**
CPCH				*i* S	**Sn**	**19 47 48.0**	**+0.1**
CPCH				AML	AML	19 47 48.6	
	comp=E,107μm,0.1s						
CDCH	**Caldera**	**0.35**	**339**	⇓*i*P	**Pn**	**19 47 42.0**	**+0.2**
CDCH				*i* S	**Sn**	**19 47 49.2**	**+0.5**
CDCH	**Caldera**	**0.35**	**339**	⇓*i*P	**Pn**	**19 47 42.0**	**+0.2**
CDCH				*i* S	**Sn**	**19 47 49.2**	**+0.5**
LCO	**Las Campanas**	**1.61**	**181**	*e*P	**Pn**	**19 47 58.1**	**-0.4**
TLL	**Tololo Astrono**	**2.77**	**182**	⇑*i*P	**Pn**	**19 48 15.2**	**+0.9**
TLL				*i* S	**Sn**	**19 48 48.2**	**+1.6**
TLL	**Tololo Astrono**	**2.77**	**182**	⇑*i*P	**Pn**	**19 48 15.2**	**+0.9**
TLL				*i* S	**Sn**	**19 48 48.2**	**+1.6**
TLL				AML	AML	19 48 58.1	
	comp=E,781nm,0.5s						
CMCH	**Combarbala**	**3.78**	**184**	*e*P	**Pn**	**19 48 27.1**	**-0.9**
CMCH				*e*S	**Sn**	**19 49 09.7**	**-1.5**
CMCH	**Combarbala**	**3.78**	**184**	*e*P	**Pn**	**19 48 27.1**	**-0.9**
CMCH				*e*S	**Sn**	**19 49 09.7**	**-1.5**
CFAA	**Coronel Fontan**	**4.71**	**154**	P	**Pn**	**19 48 41.4**	**+0.7**
	comp=E,0.9nm,0.3s,baz=333,slow=11,SNR=40						
CFAA				S	**Sn**	**19 49 36.0**	**+2.0**
	comp=E,2.1nm,0.3s,baz=258,slow=20,SNR=7.5						
LVC	**Limon Verde**	**5.02**	**19**	*e*P	**Pn**	**19 48 44.3**	**-1.0**
	comp=E,57nm,0.4s						
LVC	**Limon Verde**	**5.02**	**19**	P	**Pn**	**19 48 44.8**	**-0.4**
	comp=E,1.6nm,0.3s,baz=218,slow=8.8,SNR=30						
LVC				S	**Sn**	**19 49 44.6**	**+2.5**
	comp=E,8.7nm,0.3s,baz=135,slow=19,SNR=3.0						
LPAZ	**La Paz**	**11.30**	**13**	P	**Pn**	**19 50 09.3**	**-2.3**
	comp=E,0.2nm,0.3s,baz=218,slow=3.5,SNR=4.3						
TRQA	**Tornquist**	**12.90**	**148**	*e*P	**Pn**	**19 50 32.9**	**+0.1**
	comp=E,8.0nm,1.0s						
SIV	**San Ignacio**	**14.43**	**40**	P	Pn	19 50 49.1	-4.4
	comp=E,0.3nm,0.3s,baz=276,slow=9.4,SNR=4.1						
TORD	**Torodi Ar. Bea**	**80.86**	**70**	P	**P**	**19 59 40.6**	**-0.6**
	comp=E,0.7nm,0.6s,baz=246,slow=5.5,SNR=12						
TORD				pP	**pP**	**19 59 56.6**	**+0.8**
	comp=E,1.4nm,0.8s,baz=242,slow=3.1,SNR=2.9						
TORD				sP	**sP**	**20 00 01.7**	**+0.2**
	comp=E,1.2nm,0.6s,baz=265,slow=5.4,SNR=6.6						
KURBB	**Kurchatov Arra**	**147.07**	**37**	PKPbc	**PKPdf**	**20 07 07.6**	**+0.7**
	comp=E,0.4nm,0.8s,baz=291,slow=2.8,SNR=4.8						
ZALV	**Zalesovo Beam**	**147.93**	**27**	PKPbc	**PKPdf**	**20 07 08.7**	**+0.5**
	comp=E,0.9nm,0.5s,baz=305,slow=4.7,SNR=6.2						
ZALV				pPKPbc	**pPKPbc**	**20 07 24.8**	**-1.8**
	comp=E,1.2nm,0.8s,baz=270,slow=4.3,SNR=4.0						
MKAR	**Makanchi Array**	**151.25**	**40**	PKPbc	**PKPbc**	**20 07 19.5**	**-0.3

HHC	Hu-ho-hao-te	11.13	30	*e*P		Pn		19 53 40.8	+0.4
HHC				PP		PnPn		19 53 49.5	+1.3
HHC				S		Sn		19 55 47.5	+2.7
HHC				SS		SnSn		19 56 00.8	+3.9
HHC				LR	LR				
	comp=N,280nm,9.2s								
HHC				LR	LR				
	comp=E,330nm,7.9s								
HHC				LR	LR				
	comp=Z,230nm,8.3s								
CMAR	Chiang Mai Arr	13.75	202	Pn		Pn		19 54 17.9	+1.8
CMAR	Chiang Mai Arr	13.75	202	Pn		Pn		19 54 17.9	+1.8
	comp=Z,0.1nm,0.3s,baz=13,slow=12,SNR=5.2								
SONM	Songino Array	16.49	5	Pn		Pn		19 54 50.0	-2.5
SONM	Songino Array	16.49	5	Pn		Pn		19 54 50.0	-2.5
	comp=Z,0.2nm,0.3s,baz=186,slow=12,SNR=4.9								
KSAR	Wonju Array Be	20.41	66	P		Pn		19 55 40.4	0.0
KSRS	Korea Array	20.44	66	P		Pn		19 55 40.4	-0.3
	comp=Z,3.1nm,0.9s,baz=259,slow=9.7,SNR=12								
KSRS				LR		LR		20 03 59.8	
	comp=Z,26nm,19.3s,baz=220,slow=38								
CN2	Changchun	20.82	48	*e*P		Pn		19 55 45.3	+0.3
MK31	Makanchi Array	22.81	319	*e*P		P		19 56 04.5	+0.6
MKAR	Makanchi Array	22.81	319	P		P		19 56 04.4	+0.5
MKAR	Makanchi Array	22.81	319	P		P		19 56 04.4	+0.5
	comp=Z,1.3nm,0.5s,baz=115,slow=12,SNR=17								
USRK	Ussuriysk Arra	25.27	52	P		P		19 56 28.9	+1.7
	comp=Z,1.1nm,0.4s,baz=254,slow=7.9,SNR=10.0								
ZAA0	Zalesovo Array	26.49	334	*e*P		P		19 56 38.4	+0.2
ZALV	Zalesovo Beam	26.49	334	P		P		19 56 38.4	+0.2
ZALV	Zalesovo Beam	26.49	334	P		P		19 56 38.4	+0.2
	comp=Z,6.7nm,0.6s,baz=133,slow=9.7,SNR=38								
KURBB	Kurchatov Arra	27.05	323	P		P		19 56 43.5	+0.2
	comp=Z,2.8nm,0.7s,baz=127,slow=9.0,SNR=43								
KURK	Kurchatov	27.06	323	P		P		19 56 43.5	+0.1
ARCES	ARCESS Array B	57.02	336	P		P		20 00 46.1	-0.4
ARCES	ARCESS Array B	57.02	336	P		P		20 00 46.2	-0.4
	comp=Z,1.6nm,0.6s,baz=86,slow=8.0,SNR=14								
AKASG	Malin Array Be	57.24	313	P		P		20 00 48.6	+0.3
AKASG	Malin Array Be	57.24	313	P		P		20 00 48.6	+0.3
	comp=Z,0.4nm,0.3s,baz=75,slow=7.5,SNR=3.9								
FINES	FINESS Array B	57.36	326	P		P		20 00 48.9	-0.2
FINES	FINESS Array B	57.36	326	P		P		20 00 48.9	-0.2
	comp=Z,2.6nm,0.7s,baz=102,slow=7.7,SNR=19								
WRAB	Tennant Creek	58.67	146	*e*P		P		20 00 59.4	+0.7
	comp=Z,9.2nm,1.0s								
WRA	Warramunga Arr	58.68	146	P		P		20 00 59.8	+1.1
WRA	Warramunga Arr	58.68	146	P		P		20 00 59.8	+1.1
	comp=Z,3.0nm,0.7s,baz=339,slow=7.8,SNR=29								
ASAR	Alice Springs	61.71	149	P		P		20 01 20.6	+1.1
ASAR	Alice Springs	61.71	149	P		P		20 01 20.6	+1.1
	comp=Z,1.6nm,1.0s,baz=339,slow=7.0,SNR=5.6								
NB2	NORSAR Subarra	64.45	327	P		P		20 01 36.1	-1.2
	comp=Z,0.9nm,0.5s,baz=73,slow=6.9								
NOA	NORSAR Array B	64.45	327	P		P		20 01 35.9	-1.4
NOA	NORSAR Array B	64.45	327	P		P		20 01 35.9	-1.4
	comp=Z,0.7nm,0.5s,baz=74,slow=7.0,SNR=8.6								
VRAC	Vranov	65.46	314	LR		LR		20 30 07.3	
	comp=Z,28nm,19.2s,baz=330,slow=36								
ILAR	Eielson Array	69.52	26	P		P		20 02 09.2	-0.3
ILAR	Eielson Array	69.52	26	P		P		20 02 09.2	-0.3
	comp=Z,0.5nm,0.5s,baz=276,slow=6.3,SNR=6.1								
PAGF	Fort de Pagny	72.31	316	*e*P		P		20 02 26.5	-0.2
PAGF	Fort de Pagny	72.31	316	*e*P		P		20 02 26.5	-0.2
BAIF	Baives	72.49	318	*e*P		P		20 02 27.5	-0.2
BAIF	Baives	72.49	318	*e*P		P		20 02 27.5	-0.2
CABF	La Chapelle	73.00	314	*e*P		P		20 02 30.5	-0.4
CABF	La Chapelle	73.00	314	*e*P		P		20 02 30.5	-0.4
PGF	Pioggiola	73.02	310	*e*P		P		20 02 30.9	-0.2
PGF	Pioggiola	73.02	310	*e*P		P		20 02 30.9	-0.2
LPG	La Plagne	73.11	313	*e*P		P		20 02 31.7	-0.1
	comp=Z,3.5nm,0.6s								
LPG	La Plagne	73.11	313	*e*P		P		20 02 31.7	-0.2
	comp=Z,3.5nm,0.6s								
LPL	La Plagne	73.11	313	*e*P		P		20 02 31.6	-0.2
	comp=Z,6.6nm,0.9s								
LPL	La Plagne	73.11	313	*e*P		P		20 02 31.6	-0.2
	comp=Z,6.6nm,0.9s								
SBF	Sospel	73.43	311	*e*P		P		20 02 32.7	-0.8
SBF	Sospel	73.43	311	*e*P		P		20 02 32.7	-0.8
LASF	Ste Croix	75.60	313	*e*P		P		20 02 46.3	+0.3
LASF	Ste Croix	75.60	313	*e*P		P		20 02 46.3	+0.3
MFF	Saint Martin d	76.73	317	*e*P		P		20 02 52.0	-0.4
MFF	Saint Martin d	76.73	317	*e*P		P		20 02 52.0	-0.4
YKA	Yellowknife Ar	81.37	17	P		P		20 03 16.0	-1.5
YKA	Yellowknife Ar	81.37	17	P		P		20 03 16.0	-1.5
	comp=Z,0.9nm,0.7s,baz=328,slow=4.7,SNR=2.7								

MAN 29 19:58:23,17˚.80N×120˚.90E,h32km,mb4.0,ML2.8,MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ABRA	Dolores	0.23	231	*e*P		Pn	19 58 31.8	+1.6
ABRA				*e*S		Sn	19 58 36.1	+1.3
APYP	Conner	0.33	78	*e*P		Pn	19 58 32.9	+1.3
SGCP	Mt. Cagua	1.18	68	*e*P		Pn	19 58 43.8	+0.5

IDC 29 20:05:10.2±3.7,4˚.78S×152˚.30E,h0km,mb3.0/2, mb1 3.3/2,mb1mx3.2/18,mbtmpg3.1/2,Error ellipse: s-maj=161.2km s-min=47.4km az=120.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
WRA	Warramunga Arr	23.09	228	P		P	20 10 17.9	0.0
	0.3nm,0.6s,baz=52,slow=9.7,SNR=3.8							
ASAR	Alice Springs	25.83	222	P		P	20 10 43.5	0.0
	0.2nm,0.4s,baz=56,slow=9.5,SNR=5.0							
TORD	Torodi Ar. Bea	149.83	288	PKPbc		PKPbc	20 25 03.0	-0.5
	0.4nm,0.7s,baz=87,slow=2.4,SNR=5.4							

*DJA **29** 20:12:40.2±1.0,15˚S±14˚×17˚5W±1˚6,h10km,M5.2/11, mB5.8/1,mb5.2/11,Mw(mB)5.3/1*
*SZGRF **29** 20:13:23.0,15˚.94S×177˚.34W,h300km,Fiji Islands region*
*IDC **29** 20:13:30.5±1.9,14˚.92S×177˚.71W,h345km±18km, mb4.1/21,mb1 4.2/22,mb1mx4.2/26,mbtmp4.1/22,Error ellipse: s-maj=13.9km s-min=9.5km az=138.0*
*MOS **29** 20:13:31.2±1.4,14˚.82S×177˚.78W,h360km,mb4.5/10, Error ellipse: s-maj=13.2km s-min=10.1km az=152.6*
*BJI **29** 20:13:31.7,14˚.58S×176˚.82W,h386km,mB4.8/7, mb4.6/11*
*NEIC **29** 20:13:32.1±0.7,14˚.86S×177˚.74W,h361km±6km,mb4.5/24, Error ellipse: s-maj=10.9km s-min=5.9km az=145.0*
*ISCJB **29** 20:13:33.1±0.4,14˚.83S±0˚.07×177˚.88W±0˚.07,h379km, mb4.5/49,Error ellipse: s-maj=11.9km s-min=6.5km az=137.9*

ISC 29 20:13:33.8±0.4,14˚.87S±0˚.07×177˚.79W±0˚.08,h379km, n363,σ1§02/337,mb4.5/49,33C-25D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
MSVF	Nonsavu	4.90	234	*e*P		Pn	20 14 53.9	0.0
MSVF	Nonsavu	4.90	234	*e*P		Pn	20 14 53.9	0.0
AFI	Afiamalu	5.91	81	*e*P		Pn	20 14 59.1	-5.7
	137nm,0.8s							
AFI				S		S	20 16 08.1	-11
AFI	Afiamalu	5.91	81	P		Pn	20 14 59.3	-5.5
	15nm,0.3s,baz=97,slow=3.1,SNR=14							
AFI				S		S	20 16 08.1	-11
	baz=162,slow=20,SNR=2.4							
FUNA	Funafuti	6.96	335	*e*P		Pn	20 15 14.8	-1.8
	254nm,0.8s							
DZM	Mont Dzumac	16.57	242	*e*P		P	20 17 05.0	+0.7
DZM	Mont Dzumac	16.57	242	*e*P		P	20 17 05.7	+1.5
	130nm,0.8s							
NOUC	Port Laguerre	16.70	242	*e*P		P	20 17 06.3	+0.7
URZ	Urewera	23.73	190	P		P	20 18 08.4	-5.0
URZ	Urewera	23.73	190	P		P	20 18 08.4	-5.0
	41nm,0.5s,baz=352,slow=13,SNR=13							
RPZ	Rata Peaks	30.29	196	*e*P		P	20 19 07.9	-3.6
RPZ	Rata Peaks	30.29	196	P		P	20 19 08.8	-2.7
	12nm,0.7s,baz=27,slow=14,SNR=8.2							
EIDS	Eidsvold	30.96	245	*e*P		P	20 19 17.1	-0.6
	25nm,0.8s							
ARMA	Armidale	32.05	236	*e*P		P	20 19 27.4	+0.2
	14nm,0.7s							
CTA	Charters Tower	34.64	256	P		P	20 19 49.4	+0.1
CTA				PcP		PcP	20 22 14.9	+1.1
CTA	Charters Tower	34.64	256	P		P	20 19 49.4	+0.1
	32nm,0.7s,baz=91,slow=11,SNR=29							
CTA				PcP		PcP	20 22 14.9	+1.1
	7.6nm,0.9s,baz=112,slow=3.1,SNR=4.2							
CTAO	Charters Tower	34.64	256	*e*P		P	20 19 49.2	-0.1
CTAO				pmax		pmax		
	comp=Z,31nm,0.8s							
CTAO	Charters Tower	34.64	256	*e*P		P	20 19 49.2	-0.1
	comp=Z,31nm,0.8s							
PMG	Port Moresby	34.66	275	P		P	20 19 50.8	+1.3
PMG	Port Moresby	34.66	275	P		P	20 19 50.8	+1.3
	comp=Z,41nm,1.1s							
PMG	Port Moresby	34.66	275	P		P	20 19 50.8	+1.3
	comp=Z,22nm,0.8s,baz=94,slow=9.0,SNR=6.7							
COEN	Coen	37.78	266	*e*P		P	20 20 16.9	+1.3
	comp=Z,183nm,1.0s							
STKA	Stephens Creek	40.66	238	*e*P		P	20 20 39.0	0.0
	comp=Z,7.4nm,1.2s							
STKA				PcP		PcP	20 22 33.4	+1.0
STKA	Stephens Creek	40.66	238	P		P	20 20 38.9	0.0
	comp=Z,17nm,0.9s,baz=63,slow=9.0,SNR=14							
STKA				PcP		PcP	20 22 33.4	+1.0
	comp=Z,8.1nm,1.1s,baz=90,slow=1.0,SNR=2.9							
BBOO	Buckleboo	45.44	238	*e*P		P	20 21 16.1	-0.7
	comp=Z,1μm,1.1s							
WRAB	Tennant Creek	45.83	257	*e*P		P	20 21 19.3	-0.6
WRAB				pmax		pmax		
	comp=Z,15nm,0.8s							
WRAB	Tennant Creek	45.83	257	*e*P		P	20 21 19.3	-0.6
	comp=Z,15nm,0.8s							
WRA	Warramunga Arr	45.84	257	P		P	20 21 19.2	-0.8
WRA				PcP		PcP	20 22 51.0	+0.7
WRA				S		S	20 27 34.9	-0.2
WRA	Warramunga Arr	45.84	257	P		P	20 21 19.2	-0.8
	comp=Z,14nm,0.8s,baz=92,slow=7.5,SNR=111							
WRA				PcP		PcP	20 22 51.0	+0.7
	comp=Z,4.3nm,0.7s,baz=82,slow=3.7,SNR=6.7							
WRA				S		S	20 27 34.9	-0.2
	comp=Z,0.6nm,0.7s,baz=89,slow=14,SNR=4.5							
AS31	Alice Springs	46.25	251	*e*P		P	20 21 23.1	-0.1
ASAR	Alice Springs	46.25	251	P		P	20 21 23.2	0.0
ASAR				PcP		PcP	20 22 51.3	-0.4
ASAR				S		S	20 27 38.6	-2.3
ASAR	Alice Springs	46.25	251	P		P	20 21 23.2	0.0
	comp=Z,90nm,0.5s,baz=85,slow=8.5,SNR=1399							
ASAR				PcP		PcP	20 22 51.3	-0.4
	comp=Z,6.1nm,0.7s,baz=94,slow=5.3,SNR=4.7							
ASAR				S		S	20 27 38.6	-2.3
	comp=Z,3.2nm,0.8s,baz=86,slow=16,SNR=14							
FORT	Forrest	51.88	242	*e*P		P	20 22 04.7	-0.6
	comp=Z,104nm,0.6s							
FITZ	Fitzroy Crossi	54.16	258	*e*P		P	20 22 22.6	+0.6
	comp=Z,9.6nm,0.6s							
FITZ	Fitzroy Crossi	54.16	258	P		P	20 22 22.5	+0.6
	comp=Z,7.5nm,0.7s,baz=83,slow=6.4,SNR=14							
NWAO	Narrogin (SRO)	61.18	240	P		P	20 23 09.0	-1.0
NWAO	Narrogin (SRO)	61.18	240	P		P	20 23 09.0	-1.0
	comp=Z,11nm,0.7s,baz=91,slow=7.9,SNR=5.4							
KAPI	Kappang	62.12	272	P		P	20 23 15.8	-0.7
KAPI	Kappang	62.12	272	P		P	20 23 15.8	-0.7
	comp=Z,6nm,0.7s,baz=121,slow=5.9,SNR=5.3							
SBA	Scott Base	63.47	184	*e*P		P	20 23 25.8	+1.6
SBA				pmax		pmax		
	comp=Z,49nm,1.1s							
SBA	Scott Base	63.47	184	*e*P		P	20 23 25.8	+1.6
	comp=Z,49nm,1.1s							
VNDA	Vanda	63.50	185	P		P	20 23 25.1	+0.7
VNDA	Vanda	63.50	185	P		P	20 23 25.1	+0.7
	comp=Z,7.4nm,0.5s,baz=4.0,slow=6.8,SNR=81							
MJAR	Matsushiro Arr	65.86	322	P		P	20 23 39.9	-0.3
MJAR	Matsushiro Arr	65.86	322	P		P	20 23 39.9	-0.3
	comp=Z,6.0nm,0.8s,baz=152,slow=6.5,SNR=21							
MAT	Matsushiro	65.86	322	P		P	20 23 40.1	-0.1
MYLDM	Lahad Datu	66.19	283	P		P	20 23 45.4	+2.7
	comp=Z,23nm,1.3s							
FX1	Attu Island--F	67.92	354	*e*P		P	20 23 52.3	-0.3
PETK	Petropavlovsk-	70.92	345	P		P	20 24 11.1	+0.3
PETK	Petropavlovsk-	70.92	345	P		P	20 24 11.1	+0.3
PETK	Petropavlovsk-	70.92	345	P		P	20 24 11.1	+0.3
	comp=Z,12nm,0.7s,baz=120,slow=5.7,SNR=19							
TPUB	Ta-pu	71.17	301	*e*P		P	20 24 12.3	-0.6
	comp=Z,69nm,1.4s							
KSRS	Korea Array	72.86	317	P		P	20 24 23.9	+1.5
	comp=Z,3.4nm,1.0s,baz=134,slow=6.6,SNR=13							
KSAR	Wonju Array Be	72.88	317	P		P	20 24 23.9	+1.3
KSM	Kuching	72.91	276	P		P	20 24 24.8	+1.4
	comp=Z,17nm,1.2s							
PKM	Peak Mountain	73.96	46	P		P	20 24 29.8	+0.6
	baz=74							
USRK	Ussuriysk Arra	74.47	325	P		P	20 24 32.9	+1.3
	comp=Z,4.8nm,1.0s,baz=122,slow=7.3,SNR=6.4							
EDW2	Edwards Air Fo	75.25	47	P		P	20 24 36.8	+0.4
	baz=75							
ISA	Isabella	75.30	46	P		P	20 24 37.3	+0.6
	baz=75							
MONP	Monument Peak	75.41	50	P		P	20 24 37.9	+0.4
	baz=76							
DVTC	Desert V Tower	75.53	50	P		P	20 24 38.7	+0.6
	baz=76							
HABR	Khabarovsk	75.69	330	*e*P		P	20 24 37.6	-0.8
HABR				*e*			20 24 48.5	
HABR				*e**PP		pP	20 26 00.4	-2.9
HABR				*e**SP		sP	20 26 39.7	-3.7
HABR				*e*			20 27 32.9	
HABR				*e*S		S	20 33 48.4	+0.5
HABR				*e*			20 34 16.2	
HABR				*e*SS		SS	20 38 49.6	+0.3
HABR				pmax		pmax		
	comp=E,46nm,1.9s							
HABR				pmax		pmax		
	comp=Z,89nm,2.0s							
HABR				pmax		pmax		
	comp=N,68nm,2.5s							
HABR				MLR		MLR		
	comp=Z,41nm,21.0s							
MIR	Mirnyy	76.16	204	⇑*i*P		P	20 24 42.0	+1.2
MIR				pmax		pmax		
	comp=Z,56nm,1.5s							
MPMC	Manual Prospec	76.19	46	P		P	20 24 42.4	+0.6
	baz=76							
GSC	Goldstone	76.30	47	P		P	20 24 42.7	+0.4
	baz=76							
GRAC	Grapevine Rang	76.75	46	P		P	20 24 45.5	+0.8
	baz=77							
FURC	Furnace Creek,	76.84	46	P		P	20 24 45.6	+0.5
	baz=77							
NVAR	Mina Array Bea	76.84	44	P		P	20 24 45.5	+0.1
NVAR	Mina Array Bea	76.84	44	P		P	20 24 45.5	+0.1
	comp=Z,3.9nm,0.9s,baz=230,slow=8.1,SNR=14							
GMRC	Granite Mounta	76.87	48	P		P	20 24 45.8	+0.3
	baz=77							
113A	Mohawk Valley,	77.33	51	P		P	20 24 48.5	+0.7
	baz=77							
PDMCI	Parker Dam,Lak	77.75	49	P		P	20 24 51.0	+0.8
	baz=78							
CN2	Changchun	78.00	322	*e*P		P	20 24 42.0	-9.3
CN2				pmax		pmax		
	comp=Z,10.0nm,0.5s							
W13A	Hualapai Mount	78.30	49	P		P	20 24 54.0	+0.5
	baz=78							
Y14A	Wickenburg	78.42	50	⇑P		P	20 24 54.2	+0.2
	baz=78							
TUC	Tucson	79.39	52	*e*P		P	20 25 00.5	+1.3
TUC				pmax		pmax		
	comp=Z,12nm,1.3s							
TUC	Tucson	79.39	52	*e*P		P	20 25 00.5	+1.3
	comp=Z,12nm,1.3s							
X16A	Lo Mia Camp, P	79.80	50	P		P	20 25 02.0	+0.6
	baz=80							
CCUT	Cedar City	79.81	47	*e*P		P	20 25 02.4	+0.9
	comp=Z,2.3nm,0.7s							
U15A	North Rim	80.06	48	P		P	20 25 03.5	+0.6
	baz=80							
320A	Kipp Ranch, An	80.74	54	⇑P		P	20 25 08.1	+1.7
	baz=81,SNR=6.7							
TRF	Thorofare Moun	80.94	12	*e*P		P	20 25 05.5	-1.2
	comp=Z,7.7nm,0.8s							
220A	Playas Peak, P	80.97	54	⇑P		P	20 25 08.7	+1.1
	baz=81,SNR=6.0							
120A	U Bar Ranch, L	81.14	53	P		P	20 25 09.1	+0.5
	baz=81							
Z20A	Nine Sixteen R	81.40	53	⇑P		P	20 25 10.8	+0.9
	baz=82,SNR=6.8							
MCK	McKinley	81.47	13	*e*P		P	20 25 09.1	-0.2
MCK				pmax		pmax		
	comp=Z,7.0nm,0.9s							
MCK	McKinley	81.47	13	*e*P		P	20 25 09.1	-0.2
	comp=Z,7.1nm,0.9s							
121A	Cookes Peak, D	81.79	53	P		P	20 25 13.1	+1.2
	baz=82							
Y20A	Horse Springs,	81.89	52	⇓P		P	20 25 13.3	+0.8
	baz=82,SNR=6.4							
G12A	Big Creek, Yel	82.17	39	P		P	20 25 14.3	+0.7
	baz=82							
H12A	Diamond D Ranc	82.17	40	P		P	20 25 14.3	+0.7
	baz=82							
Z21A	St. Cloud Mine	82.19	53	⇑P		P	20 25 15.3	+1.2
	baz=82							
Y21A	Point of Rocks	82.46	52	P		P	20 25 16.5	+1.0
	baz=82							
SRU	San Rafael	82.50	46	*e*P		P	20 25 16.0	+0.5
SRU				pmax		pmax		
	comp=Z,4.0nm,0.9s							
SRU	San Rafael	82.50	46	*e*P		P	20 25 16.0	+0.5
	comp=Z,4.0nm,0.9s							
SRU	San Rafael	82.50	46	P		P	20 25 16.2	+0.7
	baz=83							
X21A	Alamocita Cree	82.55	52	⇓P		P	20 25 16.8	+1.0
	baz=83							
Z22A	Elephant Butte	82.71	53	⇓P		P	20 25 17.6	+1.0
	baz=83							
ILAR	Eielson Array	82.81	13	P		P	20 25 15.5	-0.7
ILAR	Eielson Array	82.81	13	P		P	20 25 15.5	-0.7
	comp=Z,6.0nm,0.9s,baz=230,slow=6.1,SNR=44							
324A	Moseley Ranch,	83.18	55	⇓P		P	20 25 19.3	+0.3
	baz=83							
425A	Indio Mountain	83.33	56	⇓P		P	20 25 20.6	+0.8
	baz=83,SNR=9.8							
MNTX	Cornudas Mount	83.36	55	*e*P		P	20 25 20.5	+0.8
	comp=Z,1.0nm,0.8s							
U21A	Nageezi	83.44	50	⇑P		P	20 25 20.9	+0.5
	baz=84							
BILL	Bilibino	83.49	354	*d*/*i*P		P	20 25 19.4	-0.1
BILL				*e**PP		pP	20 26 45.1	-1.2
BILL				pmax		pmax		
	comp=Z,16nm,1.6s							
BILL	Bilibino	83.49	354	*e*P		P	20 25 19.5	0.0
	comp=Z,2.9nm,0.5s							
S20A	Disappointment	83.50	48	P		P	20 25 21.0	+0.4
	baz=84							
325A	Bean Ranch, Si	83.56	55	⇑P		P	20 25 21.5	+0.5
	baz=84,SNR=5.8							
626A	Big Bend Ranch	83.58	57	⇑P		P	20 25 22.0	+1.0
	baz=84,SNR=6.6							
124A	Stringfield Ra	83.67	54	P		P	20 25 22.3	+0.7
	baz=84							
Y23A	Lovelace Mesa,	83.67	53	P		P	20 25 22.1	+0.6
	baz=84							
ANMO	Albuquerque	83.76	52	*e*P		P	20 25 22.7	+0.8
	comp=Z,3.4nm,1.0s							
526A	Mary Lane Ranc	83.79	57	⇑P		P	20 25 22.9	+0.8
	baz=84							
S21A	Coal Bank Pass	83.84	49	P		P	20 25 23.1	+0.7
	baz=84							
TXAR	Lajitas Array	83.88	58	P		P	20 25 23.5	+1.0
TXAR	Lajitas Array	83.88	58	P		P	20 25 23.5	+1.0
	comp=Z,5.0nm,0.9s,baz=225,slow=7.3,SNR=28							
426A	McDonald Obser	84.06	56	⇑P		P	20 25 24.2	+0.7
	baz=84,SNR=6.2							
EGAK	Eagle	84.14	15	*e*P		P	20 25 23.2	+0.4
	comp=Z,4.0nm,0.5s							
Y24A	Capitan	84.15	53	P		P	20 25 24.4	+0.5
	baz=84							
627A	Terlingua Ranc	84.15	58	⇓P		P	20 25 25.1	+1.3
	baz=84,SNR=7.3							
527A	Woodward Ranch	84.21	57	⇑P		P	20 25 25.0	+0.7
	baz=84							
PSI	Prapat	84.23	274	P		P	20 25 24.6	0.0
PSI	Prapat	84.23	274	P		P	20 25 24.6	0.0
	comp=Z,4.1nm,0.5s,baz=168,slow=19,SNR=6.1							
R21A	Cimarron	84.30	48	P		P	20 25 25.9	+1.3
	baz=84							
COLD	Coldfoot	84.34	10	*e*P		P	20 25 24.8	+1.0
	comp=Z,8.0nm,1.1s							
628A	Black Gap, Mar	84.57	58	⇓P		P	20 25 26.9	+1.0
	baz=85,SNR=6.6							
S22A	4UR Ranch, Cre	84.58	49	P		P	20 25 26.7	+0.6
	baz=85							
427A	Hayter Ranch,	84.63	56	⇑P		P	20 25 27.2	+1.0
	baz=85							
PDAR	Pinedale Array	84.75	43	P		P	20 25 26.6	-0.1
PDAR	Pinedale Array	84.75	43	P		P	20 25 26.6	-0.1
	comp=Z,1.6nm,0.9s,baz=242,slow=3.8,SNR=7.6							
528A	Cox Ranch, San	84.88	57	⇑P		P	20 25 28.5	+1.0
	baz=85							
B14A	Marquette Ranc	84.99	37	P		P	20 25 28.4	+0.8
	baz=85							
429A	Davenport Ranc	85.77	57	⇓P		P	20 25 32.8	+1.0
	baz=86,SNR=6.0							
D17A	Six Diamond Ra	85.97	39	P		P	20 25 33.1	+0.7
	baz=86							
F18A	Big Timber	86.01	40	P		P	20 25 33.2	+0.5
	baz=86							
C17A	Wharram Farm,	86.14	39	P		P	20 25 33.6	+0.4
	baz=86							
S25A	Robets Cordova	86.30	50	P		P	20 25 34.4	+0.1
	baz=86							
W27A	Bowe Ranch, En

KOLS	Kolonicke sedl	142.25 338	eP	KIP	PKPdf	20 32 18.3	-3.4		
KOLS	Kolonicke sedl	142.25 338	e		PKPdf	20 32 18.3	-3.4		
KOLS	Kolonicke sedl	142.25 338	eP	KP	PKPdf	20 32 22.8	+1.1		
CLL	Collm	142.63 349	i	PKPpre	PKPdf	20 32 18.4	-3.9		
	comp=Z,2.0nm,0.5s								
CLL			i	(PKPdf)	PKiKP	20 32 20.4	-5.1		
	comp=Z,3.0nm,0.7s								
CLL			i	PKiKP	PKiKP	20 32 25.6	+0.1		
CFR	Carcaliu	142.69 329	⇓	PKiKP	PKPdf	20 32 21.0	-1.6		
CFR	Carcaliu	142.69 329	⇓	iP	PKPdf	20 32 21.0	-1.6		
UPC	Upice	142.74 345	i	PKiKP	PKPdf	20 32 19.6	-2.9		
UPC	Upice	142.74 345	i	PKP	PKPdf	20 32 19.6	-2.9		
DPC	Dobruska-Polom	142.80 345	i	PKiKP	PKPdf	20 32 21.0	-1.7		
DPC	Dobruska-Polom	142.80 345	i	PKP	PKPdf	20 32 21.0	-1.7		
DPC			ex		x	20 32 25.1			
BRG	Berggiesshubel	142.86 348	eP		PKPdf	20 32 26.3	+3.5		
	comp=Z,4.4nm,0.7s								
VRI	Vrincioaia	142.86 331	⇑	PKiKP	PKPdf	20 32 25.8	+2.9		
VRI	Vrincioaia	142.86 331	⇑	iP	PKPdf	20 32 25.8	+2.9		
TSUM	Tsumeb	142.91 205	eP	KPdf	PKPdf	20 32 21.9	-2.1		
KRLC	Kraliky	142.94 344	i	PKiKP	PKPdf	20 32 20.6	-2.4		
KRLC	Kraliky	142.94 344	i	PKP	PKPdf	20 32 20.6	-2.4		
BR131	Keskin Array S	143.00 318	eP	KPdf	PKPbc	20 32 21.4	+0.3		
BRTR	Keskin Array B	143.00 318		PKPpre	PKPpre	20 32 21.1			
BRTR	Keskin Array B	143.00 318		PKhKP	PKPpre	20 32 21.1			
	comp=Z,11nm,0.9s,baz=115,slow=1.5,SNR=50								
KECS	Kecovo	143.25 340	eP	KIKP	PKPbc	20 32 21.9	+0.5		
KECS	Kecovo	143.25 340	eP	KP	PKPbc	20 32 21.9	+0.5		
ZALF	Zalf	143.43 306	eP		PKPdf	20 32 23.6	-0.7		
ANTO	Ankara	143.46 319	eP	KIKP	PKPbc	20 32 22.5	+0.1		
ANTO	Ankara	143.46 319	eP	KPdf	PKPbc	20 32 22.5	+0.1		
PRU	Pruhonice	143.56 347	i	PKiKP	PKPbc	20 32 22.5	+0.3		
PRU	Pruhonice	143.56 347	i	PKP	PKPbc	20 32 22.5	+0.3		
VRAC	Vranov	143.69 344		PKP	PKPab	20 32 22.5	+0.2		
VRAC	Vranov	143.69 344		PKP	PKPab	20 32 22.5	+0.2		
	comp=Z,7.1nm,0.9s,baz=58,slow=3.4,SNR=13								
VYHS	Vyhne	143.78 341	eP	KIKP	PKPbc	20 32 23.1	+0.1		
VYHS	Vyhne	143.78 341	eP	KP	PKPbc	20 32 23.1	+0.1		
DRGR		143.86 336	⇑	PKiKP	PKPbc	20 32 23.9	+0.5		
DRGR		143.86 336	⇑	iP	PKPbc	20 32 23.9	+0.5		
PSZ	Piszkesteto	143.94 340	⇓	PKiKP	PKPbc	20 32 23.8	+0.2		
PSZ	Piszkesteto	143.94 340	eP	KPdf	PKPab	20 32 23.2	-0.2		
PSZ	Piszkesteto	143.94 340	⇓	iP	PKPbc	20 32 23.8	+0.2		
PSZ	Piszkesteto	143.94 340	⇓	e	PKPab	20 32 23.4	+0.1		
VOIR		143.95 332	⇑	PKiKP	PKPdf	20 32 24.6	-0.3		
VOIR		143.95 332	⇑	iP	PKPdf	20 32 24.6	-0.3		
SMOL	Smolenice	144.18 343	eP	KIKP	PKPdf	20 32 25.3	+0.2		
SMOL	Smolenice	144.18 343	eP	KP	PKPdf	20 32 25.3	+0.2		
ARR	Arges	144.19 333	⇓	iP	PKPdf	20 32 25.7	+0.4		
MEM	Membach	144.22 356		PKP	PKPbc	20 32 24.6	+0.4		
ROTZ	Rotzenmuhle	144.25 349	eP	KPbc	PKPbc	20 32 24.8	+0.4		
TNS	Taunus Mts	144.38 353	eP	KPbc	PKPab	20 32 25.0	+0.1		
TNS	Taunus Mts	144.38 353	eP	KIKP	PKPab	20 32 25.0	+0.1		
BCLA	Clavier	144.46 357		PKP	PKPab	20 32 25.2	+0.1		
GRF	Grafenberg Arr	144.50 350	eP	KPbc	PKPab	20 32 25.5	+0.2		
GRF	Grafenberg Arr	144.50 350	eP	KIKP	PKPab	20 32 25.5	+0.2		
GRFO	Grafenberg	144.50 350	eP	KIKP	PKPdf	20 32 25.8	+0.2		
GRFO	Grafenberg	144.50 350	eP	KPdf	PKPdf	20 32 25.8	+0.2		
ZST	Bratislava	144.56 343	eP	KIKP	PKPdf	20 32 25.8	0.0		
ZST	Bratislava	144.56 343	eP	KP	PKPdf	20 32 25.8	0.0		
KHC	Kasperske Hory	144.58 347	eP	KIKP	PKPdf	20 32 26.0	+0.2		
KHC	Kasperske Hory	144.58 347	eP	KP	PKPdf	20 32 26.0	+0.2		
TCHB	Talchebab	144.59 306	eP		PKPdf	20 32 27.6	+1.3		
HUMR	Humele	144.68 331	⇑	iP	PKPbc	20 32 26.0	+0.1		
WET	Wettzell	144.72 348	eP	KPbc	PKPab	20 32 26.4	+0.2		
WET	Wettzell	144.72 348	eP	KIKP	PKPab	20 32 26.4	+0.2		
ABH	Alteburg	144.81 354		PKP	PKPbc	20 32 26.4	+0.2		
DOU	Dourbes	144.82 357		PKP	PKPbc	20 32 26.2	+0.1		
GEC2	GERESS Array S	144.83 347	eP	KPbc	PKPbc	20 32 26.5	+0.1		
GEC2	GERESS Array S	144.83 347	eP	KIKP	PKPbc	20 32 26.5	+0.1		
GERES	GERESS Array B	144.83 347		PKP	PKPdf	20 32 26.1	-0.3		
GERES	GERESS Array B	144.83 347		PKP	PKPdf	20 32 26.1	-0.3		
	comp=Z,8.4nm,0.9s,baz=23,slow=3.2,SNR=65								
PKSG		144.89 341	⇓	e	PKPab	20 32 27.1	+0.3		
MMAI	Mount Meron Ar	144.90 307		PKP	PKPab	20 32 28.5	+1.0		
MMAI	Mount Meron Ar	144.90 307		PKP	PKPab	20 32 28.5	+1.0		
	comp=Z,20nm,0.6s,baz=49,slow=4.4,SNR=46								
TOD	Tromm	144.94 353		PKIKP	PKPbc	20 32 26.7	+0.1		
TOD	Tromm	144.94 353		PKP	PKPbc	20 32 26.7	+0.1		
RUP	Ruppelstein	145.04 354		PKIKP	PKPab	20 32 27.4	0.0		
RUP	Ruppelstein	145.04 354		PKP	PKPab	20 32 27.4	0.0		
CONA	Conrad Observa	145.15 344	i	PKPab	PKPab	20 32 28.2	+0.2		
	comp=Z,35nm,1.7s,SNR=15								
WLF	Walferdange	145.15 356		PKP	PKPab	20 32 28.0	+0.3		
WLF	Walferdange	145.15 356	eP	KPbc	PKPab	20 32 28.0	+0.3		
WLF	Walferdange	145.15 356	eP	KP2	PKPab	20 32 28.0	+0.3		
WLF	Walferdange	145.15 356	eP	KPdf	PKPab	20 32 27.9	+0.3		
BZS	Buzias	145.26 336	⇑	PKiKP	PKPbc	20 32 27.5	-0.1		
BZS	Buzias	145.26 336	⇑	iP	PKPbc	20 32 27.5	-0.1		
KTD	Kalmit	145.31 353		PKP2	PKPab	20 32 28.2	-0.2		
KTD	Kalmit	145.31 353		PKP	PKPab	20 32 28.2	-0.2		
CSS	Prodhromos	145.62 311	eP	KPdf	PKPbc	20 32 29.6	+0.5		
PKS9	Tamasi	145.64 340	⇑	e	PKPbc	20 32 29.1	+0.4		
LANF	Langenberg	145.68 353		PKIKP	PKPdf	20 32 28.2	+0.5		
LANF	Langenberg	145.68 353		PKP	PKPdf	20 32 28.2	+0.5		
LANF	Langenberg	145.68 353		PKP	PKPdf	20 32 28.2	+0.5		
PKSM	Moragy	145.85 340	⇓	PKIKP	PKPdf	20 32 28.5	+0.5		
PKSM	Moragy	145.85 340	⇓	iP	PKPdf	20 32 28.5	+0.5		
PKSM	Moragy	145.85 340	⇓	e	PKPbc	20 32 29.4	+0.1		
ARSA	Arzberg	145.86 344	⇓	iPKPab	PKPbc	20 32 29.6	+0.1		
	comp=Z,12nm,1.2s,SNR=7.3								
FUR	Furstenfeldbru	145.96 349	eP	KPbc	PKPbc	20 32 30.3	+0.6		
FUR	Furstenfeldbru	145.96 349	eP	KP2	PKPbc	20 32 30.3	+0.6		
RJOB	Jochberg	146.07 347	eP	KPbc	PKPbc	20 32 30.3	+0.2		
BEHE	Becsehely	146.22 342	⇓	e	PKPbc	20 32 30.8	+0.4		
BFO	Black Forest	146.25 353	eP	KPbc	PKPbc	20 32 30.5	0.0		
BFO	Black Forest	146.25 353	eP	KP2	PKPbc	20 32 30.5	0.0		
BFO	Black Forest	146.25 353	eP	KPbc	PKPbc	20 32 30.4	-0.2		
KOGS	Kog	146.39 342	i	PKPbc	PKPbc	20 32 30.8	-0.1		
SPAK	Spaichingen-Ko	146.42 352		PKP	PKPbc	20 32 31.2	+0.1		
EIL	Elat	146.45 302		PKPbc	PKPbc	20 32 31.0	-0.7		
EIL	Elat	146.45 302		PKPbc	PKPbc	20 32 31.0	-0.7		
	comp=Z,12nm,0.8s,baz=135,slow=1.4,SNR=9.6								
ECH	Echery	146.50 354		PKP2	PKPbc	20 32 31.4	+0.2		
ECH	Echery	146.50 354		PKP	PKPbc	20 32 31.4	+0.2		
ECH	Echery	146.50 354		PKP	PKPbc	20 32 31.4	+0.2		
SOKA	Soboth	146.52 344	⇑	iPKPbc	PKPbc	20 32 31.2	-0.2		
	comp=Z,12nm,0.8s								
PERS	Pernice	146.54 344	i	PKPbc	PKPbc	20 32 31.2	-0.2		
KBA	Koelnbreinsper	146.57 346	⇑	iPKPbc	PKPbc	20 32 31.3	-0.4		
	comp=Z,9.1nm,0.6s,SNR=7.4								
THEF	They Montfort	146.59 355		PKP2	PKPbc	20 32 31.7	+0.3		
THEF	They Montfort	146.59 355		PKP	PKPbc	20 32 31.7	+0.3		
THEF	They Montfort	146.59 355		PKP	PKPbc	20 32 31.7	+0.3		
RETA	Reutte	146.71 349	⇓	iPKPab	PKPbc	20 32 32.1	+0.2		
	comp=Z,12nm,0.9s								
FELD	Feldberg im Sc	146.74 353		PKP	PKPbc	20 32 31.4	-0.6		
WTTA	Wattenberg	146.76 348	⇑	iPKPbc	PKPbc	20 32 32.2	+0.1		
	comp=Z,20nm,0.7s								
MOTA	Mooasalm	146.79 349	⇓	iPKPbc	PKPbc	20 32 32.0	-0.2		
	comp=Z,13nm,0.9s								
OBKA	Obir	146.81 344	⇓	iPKPbc	PKPbc	20 32 31.6	-0.6		
	comp=Z,10nm,1.3s								
MOF	Molkenrain	146.86 354		PKP2	PKPbc	20 32 32.5	+0.2		
MOF	Molkenrain	146.86 354		PKP	PKPbc	20 32 32.5	+0.2		
MOF	Molkenrain	146.86 354		PKP	PKPbc	20 32 32.5	+0.2		
MYKA	Terra Mystica	146.92 346	⇓	iPKPbc	PKPbc	20 32 31.8	-0.7		
	comp=Z,10nm,0.7s								
VTS	Vitosha	146.99 331	⇑	PKP2	PKPbc	20 32 33.0	+0.1		
VTS	Vitosha	146.99 331	⇑	iP	PKPbc	20 32 33.0	+0.1		
ABTA	Abfaltersbach	147.07 347	⇓	iPKPbc	PKPbc	20 32 32.5	-0.4		
	comp=Z,16nm,0.8s,SNR=12								
LJU	Ljubljana	147.24 344	i	PKPbc	PKPbc	20 32 33.4	+0.1		
CRNS	Crni Vrh	147.28 344	i	PKPbc	PKPbc	20 32 33.0	-0.4		
LOMF	Lomont	147.39 354		PKIKP	PKPbc	20 32 32.5	-1.2		
LOMF	Lomont	147.39 354		PKP	PKPbc	20 32 32.5	-1.2		
LOMF	Lomont	147.39 354		PKP	PKPbc	20 32 32.5	-1.2		
BOJS	Bojanci	147.54 343	i	PKPbc	PKPbc	20 32 34.5	+0.4		
DAVOX	Davos/Dischmat	147.55 350		PKPbc	PKPbc	20 32 34.9	+0.6		
DAVOX	Davos/Dischmat	147.55 350		PKPbc	PKPbc	20 32 34.9	+0.6		
	comp=Z,16nm,0.8s,baz=17,slow=3.7,SNR=22								
NVR	Nevrokopi	147.61 329	eP		PKPbc	20 32 34.4	-0.1		
MBAR	Mbarara	147.86 244		PKPbc	PKPbc	20 32 35.8	-0.3		
MBAR	Mbarara	147.86 244		PKPbc	PKPbc	20 32 35.8	-0.3		
	comp=Z,16nm,1.1s,baz=297,slow=1.0,SNR=13								
TUE	Stuetta	147.93 351	eP	KPbc	PKPbc	20 32 35.7	+0.4		
AGO	Saint Agoulin	148.91 359		PKP	PKPbc	20 32 37.6	0.0		
AGO	Saint Agoulin	148.91 359		PKP	PKPbc	20 32 37.6	0.0		
PYM	Petit Puy Mans	149.21 359		PKP2	PKPbc	20 32 38.6	+0.2		
PYM	Petit Puy Mans	149.21 359		PKP	PKPbc	20 32 38.6	+0.2		
PYM	Petit Puy Mans	149.21 359		PKP	PKPbc	20 32 38.6	+0.2		
NEO	Neokhori	149.45 327	eP		PKPbc	20 32 38.3	-0.8		
SSB	Saint Sauveur	149.62 357	eP	KP2	PKPbc	20 32 39.9	+0.5		
SSB	Saint Sauveur	149.62 357	eP	KPbc	PKPbc	20 32 39.9	+0.5		
LBL	Lubilhac	149.72 359		PKP2	PKPbc	20 32 40.5	+0.9		
LBL	Lubilhac	149.72 359		PKP	PKPbc	20 32 40.5	+0.9		
LBL	Lubilhac	149.72 359		PKP	PKPbc	20 32 40.5	+0.9		
THL	Klokotos Trika	149.88 329	eP		PKPbc	20 32 38.7	-1.4		
PTL	Penteli	150.00 324	eP		PKPbc	20 32 39.3	-1.2		
SANT	Santorini	150.18 320	eP		PKPbc	20 32 39.9	-1.1		
ZKR	Zakros	150.48 317	eP		PKPbc	20 32 41.7	0.0		
EVR	Evrytania	150.48 328	eP		PKPbc	20 32 41.8	+0.1		
LTK	Loutraki	150.52 325	eP		PKPbc	20 32 40.7	-1.0		
SAOF	Saorge	150.62 352		PKIKP	PKPbc	20 32 42.2	+0.4		
SAOF	Saorge	150.62 352		PKP	PKPbc	20 32 42.2	+0.4		
SAOF	Saorge	150.62 352		PKP	PKPbc	20 32 42.2	+0.4		
AUTN	L'Aution	150.63 352		PKIKP	PKPbc	20 32 42.1	+0.1		
AUTN	L'Aution	150.63 352		PKP	PKPbc	20 32 42.1	+0.1		
AUTN	L'Aution	150.63 352		PKP	PKPbc	20 32 42.1	+0.1		
TOUF	Mont Tournerai	150.64 353		PKIKP	PKPbc	20 32 41.7	-0.3		
TOUF	Mont Tournerai	150.64 353		PKP	PKPbc	20 32 41.7	-0.3		
TOUF	Mont Tournerai	150.64 353		PKP	PKPbc	20 32 41.7	-0.3		
KALE	Kalithea	150.70 327	eP		PKPbc	20 32 40.8	-1.3		
MVIF	Mont Vial	150.76 353		PKIKP	PKPbc	20 32 42.6	+0.4		
MVIF	Mont Vial	150.76 353		PKP	PKPbc	20 32 42.6	+0.4		
MVIF	Mont Vial	150.76 353		PKP	PKPbc	20 32 42.6	+0.4		
EFP	Efpalio	150.79 327	eP		PKPbc	20 32 42.8	+0.5		
KEK	Kerkira	150.84 331	eP		PKPbc	20 32 41.8	-0.5		
REVF	Revere	150.89 352		PKIKP	PKPbc	20 32 42.1	-0.3		
REVF	Revere	150.89 352		PKP	PKPbc	20 32 42.1	-0.3		
REVF	Revere	150.89 352		PKP	PKPbc	20 32 42.1	-0.3		
GUR	Goura	150.92 326	eP		PKPbc	20 32 42.3	-0.4		
LAST	Lasithi	150.93 318	eP		PKPbc	20 32 42.8	0.0		
CALN	Calern	150.94 353		PKIKP	PKPbc	20 32 42.6	0.0		
CALN	Calern	150.94 353		PKP	PKPbc	20 32 42.6	0.0		
CALN	Calern	150.94 353		PKP	PKPbc	20 32 42.6	0.0		
KLV	Kalavryta, Ach	150.95 326	eP		PKPbc	20 32 42.5	-0.2		
RLS	Riolos of Patr	151.30 327	eP		PKPbc	20 32 43.3	-0.1		
VLX	Vlachokerasia	151.31 325	eP		PKPbc	20 32 43.0	-0.6		
SIVA	Sivas	151.45 319	eP		PKPbc	20 32 44.5	+0.6		
VAM	Vamos	151.58 320	eP		PKPbc	20 32 45.0	+0.8		
ITM	Ithomi	151.70 325	eP		PKPbc	20 32 44.2	-0.2		
KEST	Kesra	158.26 344		PKPab	PKPab	20 33 22.7	-0.3		
KEST	Kesra	158.26 344		PKPab	PKPab	20 33 22.7	-0.3		
	comp=Z,1.2nm,0.9s,baz=0.0,slow=4.0,SNR=3.8								
MDT	Midelt	161.09 18		PKPab	PKPab	20 33 36.6	+1.2		
MDT	Midelt	161.09 18		PKPab	PKPab	20 33 36.6	+1.2		
	comp=Z,1.3nm,0.9s,baz=341,slow=10,SNR=4.0								
TORD	Torodi Ar. Bea	178.22 164		PKP	PKPdf	20 32 59.3	-1.1		
TORD	Torodi Ar. Bea	178.22 164		PKP	PKPdf	20 32 59.3	-1.1		
	comp=Z,2.3nm,1.1s,baz=207,slow=1.6,SNR=8.1								

*ISCJB **29** 20:21:01.5±0.2, 38.30N±0.01×22.07E±0.01, h5km±2km, mb3.6/5, MS3.5/2, Error ellipse: s-maj=1.9km s-min=1.8km az=171.2*
*IDC **29** 20:21:01.9±1.3, 38.31N×21.94E, h0km, mb3.6/6, mb1 3.7/9, mb1mx3.6/33, mbtmp3.6/9, ML3.4/3, MS3.5/2, Ms1 3.4/2, ms1mx2.4/43, Error ellipse: s-maj=23.8km s-min=18.7km az=130.0*
*THE **29** 20:21:01.8, 38.31N×22.05E, h3km, ML3.5/11, Error ellipse: s-maj=0.7km s-min=0.3km az=266.0*
*ATH **29** 20:21:01.1, 38.31N×22.06E, h13km, MD3.6/33, ML3.3*
*CSEM **29** 20:21:01.7±0.1, 38.31N×22.08E, h2km, MD3.6, Error ellipse: s-maj=2.1km s-min=1.9km az=69.0*

ISC 29 20:21:02.4±0.7, 38.31N±0.01×22.07E±0.01, h6km±4km, n217, σ1=02/298, mb3.8/5, 1C-4D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time h m s	Res ISC
				Op	ISC		
TRIZ	Trizonia	0.06	2	P	Pg	20 21 03.3	-0.6
TRIZ				S	Sg	20 21 04.6	-0.4
TRIZ	Trizonia	0.06	2	ePG	Pg	20 21 03.4	-0.5
TRIZ				eSG	Sg	20 21 05.1	+0.1
TRIZ	Trizonia	0.06	2	P	Pg	20 21 03.3	-0.6
TRIZ				S	Sg	20 21 04.2	-0.8
TRIZ				eSg	Sg	20 21 05.1	+0.1
LAKA	Lakka	0.10	227	P	Pg	20 21 03.8	-0.7
LAKA				S	Sg	20 21 05.3	-0.7
LAKA	Lakka	0.10	227	ePG	Pg	20 21 04.0	-0.6
LAKA				eSG	Sg	20 21 06.0	0.0
LAKA	Lakka	0.10	227	P	Pg	20 21 03.9	-0.6
LAKA				S	Sg	20 21 05.3	-0.7
LAKA				eSg	Sg	20 21 06.0	-0.1
KALE	Kalithea	0.10	33	P	Pg	20 21 04.3	-0.3
KALE				S	Sg	20 21 05.8	-0.4
KALE	Kalithea	0.10	33	ePG	Pg	20 21 04.4	-0.2
KALE				eSG	Sg	20 21 06.5	+0.3
KALE	Kalithea	0.10	33	P	Pg	20 21 04.3	-0.3
KALE				S	Sg	20 21 05.8	-0.4
KALE				eSg	Sg	20 21 06.5	+0.2
PSA1	Psathopyrgos	0.15	277	ePG	Pg	20 21 04.6	-0.8
PSA1				eSG	Sg	20 21 07.2	-0.2
EFP	Efpalio	0.18	313	P	Pg	20 21 04.1	-0.8
EFP				S	Sg	20 21 07.5	-0.8
EFP	Efpalio	0.18	313	ePG	Pg	20 21 05.2	-0.7
EFP				eSG	Sg	20 21 08.1	-0.2
EFP	Efpalio	0.18	313	P	Pg	20 21 05.1	-0.8
EFP				S	Sg	20 21 07.5	-0.8
EFP				eSg	Sg	20 21 08.1	-0.2
UPR	University Cam	0.22	264	P	Pg	20 21 06.2	-0.6
UPR				S	Sg	20 21 09.4	-0.4
KLV	Kalavryta, Ach	0.27	166	P	Pg	20 21 07.0	-0.6
KLV				S	Sg	20 21 11.5	+0.2
KLV	Kalavryta, Ach	0.27	166	ePG	Pg	20 21 07.1	-0.6
KLV				eSG	Sg	20 21 11.2	-0.1
KLV	Kalavryta, Ach	0.27	166	ePg	Pg	20 21 07.1	-0.6
KLV				S	Sg	20 21 11.1	-0.2
DSF	Desfina	0.37	74	P	Pg	20 21 09.2	-0.5
DSF				S	Sg	20 21 15.3	+0.7
DSF	Desfina	0.37	74	P	Pg	20 21 09.2	-0.5
DSF				S	Sg	20 21 14.6	0.0
GUR	Goura	0.43	150	P	Pg	20 21 09.8	-0.9
GUR				S	Sg	20 21 16.3	0.0
GUR	Goura	0.43	150	ePB	Pg	20 21 09.9	-0.8
GUR				eSB	Sg	20 21 16.1	-0.2
GUR	Goura	0.43	150	ePb	Pg	20 21 09.9	-0.8
GUR				eSb	Sg	20 21 16.1	-0.2
RLS	Riolos of Patr	0.54	243	P	Pg	20 21 11.8	-0.9
RLS				S	Sg	20 21 18.9	-0.8
RLS	Riolos of Patr	0.54	243	ePB	Pg	20 21 11.8	-0.9
RLS				eSB	Sg	20 21 19.6	-0.1
RLS	Riolos of Patr	0.54	243	P	Pg	20 21 11.8	-0.9
RLS				S	Sg	20 21 18.9	-0.8
RLS				eSb	Sg	20 21 19.6	-0.1
THAL	Thalero	0.54	120	P	Pg	20 21 12.5	-0.3
THAL				S	Sg	20 21 20.2	+0.4
THAL	Thalero	0.54	120	P	Pg	20 21 12.5	-0.3
THAL				S	Sg	20 21 20.1	+0.4
AXS	Araxos	0.56	259	P	Pg	20 21 12.1	-1.0
AXS				S	Sg	20 21 19.9	-0.5
AXS	Araxos	0.56	259	P	Pg	20 21 12.1	-1.0
AXS				S	Sg	20 21 19.9	-0.5
EVR	Evrytania	0.64	341	P	Pg	20 21 13.7	-1.0
EVR				S	Sg	20 21 23.8	+0.7
EVR	Evrytania	0.64	341	ePB	Pg	20 21 13.5	-1.2
EVR				eSB	Sg	20 21 22.1	-1.0
EVR	Evrytania	0.64	341	P	Pg	20 21 13.7	-1.0
EVR				eSb	Sg	20 21 22.1	-1.0
EVR				S	Sb	20 21 23.1	-2.2
AXAR	Agios Charalam	0.65	45	P	Pg	20 21 14.1	-0.8
AXAR				S	Sg	20 21 23.4	0.0
AXAR	Agios Charalam	0.65	45	P	Pg	20 21 14.1	-0.8
AXAR				S	Sg	20 21 23.4	0.0
MAKR	Makrakomi, Fth	0.71	4	P	Pg	20 21 15.5	-0.5
MAKR				S	Sg	20 21 25.7	+0.5
MAKR	Makrakomi, Fth	0.71	4	P	Pg	20 21 15.5	-0.5
MAKR				S	Sg	20 21 25.7	+0.5
AGG	Agios Georgios	0.74	16	P	Pg	20 21 15.0	-1.7
AGG				S	Sg	20 21 26.5	+0.2
AGG	Agios Georgios	0.74	16	ePG	Pg	20 21 14.9	-1.7
AGG				eSB	Sg	20 21 25.8	-0.5
AGG	Agios Georgios	0.74	16	P	Pg	20 21 15.0	-1.7
AGG				eSb	Sg	20 21 25.8	-0.5
LTK	Loutraki	0.76	112	P	Pg	20 21 16.6	-0.4
LTK				S	Sb	20 21 27.5	-1.2
LTK	Loutraki	0.76	112	ePB	Pg	20 21 16.0	-1.0
LTK				eSB	Sg	20 21 26.4	-0.5
LTK	Loutraki	0.76	112	ePb	Pg	20 21 16.0	-1.0
LTK	Loutraki	0.76	112	P	Pg	20 21 16.4	-0.6
LTK				eSb	Sg	20 21 26.4	-0.5
LTK				S	Sb	20 21 27.5	-1.2
LKR	Lokris	0.81	65	ePB	Pg	20 21 16.4	-1.4
LKR				eSB	Sg	20 21 27.8	-0.5
LKR	Lokris	0.81	65	ePb	Pg	20 21 16.4	-1.4
LKR				eSb	Sg	20 21 27.8	-0.5
AMT	Artemida-Makis	0.82	200	P	Pg	20 21 17.2	-1.0
AMT				S	Sb	20 21 29.5	-1.0
AMT	Artemida-Makis	0.82	200	ePB	Pg	20 21 17.0	-1.2
AMT				eSB	Sg	20 21 28.6	-0.3
AMT	Artemida-Makis	0.82	200	P	Pg	20 21 17.2	-1.0
AMT				eSb	Sg	20 21 28.6	-0.3
AMT				S	Sb	20 21 29.5	-1.0
VIL2	Platees	0.95	95	P	Pg	20 21 20.3	-0.3
VLX	Vlachokerasia	0.97	165	P	Pg	20 21 19.7	-1.2
VLX				S	Sb	20 21 33.7	-0.9
VLX	Vlachokerasia	0.97	165	ePB	Pg	20 21 19.5	-1.4
VLX				eSN	Sb	20 21 33.4	-1.2
VLX	Vlachokerasia	0.97	165	P	Pg	20 21 19.7	-1.2
VLX				S	Sb	20 21 33.7	-0.9
KFL	Anninata	1.03	259	P	Pg	20 21 20.9	-1.2
KFL	Anninata	1.03	259	P	Pg	20 21 20.9	-1.2
KFL				S	Sb	20 21 36.5	+0.2
SMIA	Simia	1.06	57	P	Pg	20 21 21.9	-0.8
SMIA	Simia	1.06	57	P	Pg	20 21 21.9	-0.8
SMIA				S	Sb	20 21 37.0	-0.2
ITM	Ithomi	1.13	186	P	Pg	20 21 22.4	-1.7
ITM				S	Sb	20 21 39.0	-0.3
ITM	Ithomi	1.13	186	ePG	Pg	20 21 22.2	-1.9
ITM				eSB	Sb	20 21 38.5	-0.8
ITM	Ithomi	1.13	186	P	Pg	20 21 22.4	-1.7
ITM				eSb	Sb	20 21 38.5	-0.8
ITM				S	Sb	20 21 39.0	-0.3
VLS	Valsamata	1.17	264	P	Pg	20 21 22.9	-2.0
VLS				S	Sb	20 21 40.8	+

SIGR	SIGRI	3.09	72	P	Pn	20 21 51.4	-0.3
SIGR	SIGRI	3.09	72	P	Pn	20 21 51.4	-0.3
CHOS	Chios island	3.13	87	P	Pn	20 21 52.2	-0.1
CHOS	Chios island	3.13	87	*e*PN	Pn	20 21 52.6	+0.2
CHOS	Chios island	3.13	87	P	Pn	20 21 52.2	-0.1
CHOS	Chios island	3.13	87	*e*Pn	Pn	20 21 52.6	+0.2
NVR	Nevrokopi	3.34	24	P	Pn	20 21 55.5	+0.4
NVR	Nevrokopi	3.34	24	P	Pn	20 21 55.5	+0.4
VAM	Vamos	3.36	149	P	Pn	20 21 55.1	-0.3
VAM	Vamos	3.36	149	P	Pn	20 21 55.1	-0.3
PRK	Paraskevi	3.42	73	P	Pn	20 21 55.8	-0.3
PRK	Paraskevi	3.42	73	P	Pn	20 21 55.8	-0.3
TIR	Tirane	3.48	331	*e*PN	Pb	20 22 02.7	-1.6
MMB	Musomiste	3.52	21	P	Pn	20 21 56.6	-1.0
MMB	Musomiste	3.52	21	P	Pn	20 21 56.6	-1.0
PHP	Peshkopia	3.60	340	*e*PN	Pb	20 22 02.6	-3.8
KKB	Krupnik	3.64	12	P	Pn	20 22 00.6	+1.4
KKB	Krupnik	3.64	12	P	Pn	20 22 00.6	+1.4
IDI	Anoyia	3.77	142	*e*PN	Pn	20 22 01.3	+0.2
IDI	Anoyia	3.77	142	*e*Pn	Pn	20 22 01.3	+0.2
SMG	Samos	3.81	98	*e*PN	Pn	20 22 01.8	+0.2
SMG	Samos	3.81	98	*e*Pn	Pn	20 22 01.8	+0.2
PUK	Puka	4.09	337	*e*PN	Pn	20 22 07.6	+2.2
PUK	Puka	4.09	337	*e*Pn	Pn	20 22 07.6	+2.2
NPS	Neapolis	4.16	136	*e*PN	Pn	20 22 07.4	+1.0
NPS	Neapolis	4.16	136	*e*Pn	Pn	20 22 07.4	+1.0
LAST	Lasithi	4.17	138	*e*PN	Pn	20 22 07.2	+0.7
LAST	Lasithi	4.17	138	*e*Pn	Pn	20 22 07.2	+0.7
BCI	Bajram Curri	4.33	340	*e*PN	Pn	20 22 11.6	+2.8
VTS	Vitosha	4.37	11	P	Pn	20 22 10.3	+0.9
VTS	Vitosha	4.37	11	P	Pn	20 22 10.3	+0.9
ZKR	Zakros	4.61	132	*e*PN	Pn	20 22 13.6	+1.0
ZKR	Zakros	4.61	132	*e*Pn	Pn	20 22 13.6	+1.0
MPEP	Malo Peshtene	5.20	14	P	Pn	20 22 25.9	+5.2
BBLS	Lazići	5.91	341	*e*Pn	Pn	20 22 31.4	+1.0
DIVS	Divibare	5.99	346	*e*Pn	Pn	20 22 32.4	+0.8
VOIR		7.46	16	⇓*i*P	Pn	20 22 55.8	+4.0
MLR	Muntele Rosu	7.74	21	⇓*i*P	Pn	20 22 58.6	+3.0
MLR	Muntele Rosu 0.1nm,0.3s,baz=202,slow=16,SNR=12	7.74	21	Pn	Pn	20 22 57.8	+2.2
PLOR	Plostina	8.27	23	⇓*i*P	Pn	20 23 05.0	+2.2
PLOR	Plostina	8.27	23	⇓*i*P	Pn	20 23 05.0	+2.2
VRI	Vrincioaia	8.31	23	⇓*i*P	Pn	20 23 06.7	+3.4
BRTR	Keskin Array B 0.1nm,0.3s,baz=262,slow=12,SNR=8.0	9.12	77	Pn	Pn	20 23 16.9	+2.3
GERES	GERESS Array B 0.3nm,0.3s,baz=158,slow=16,SNR=8.3	12.15	333	Pn	Pn	20 23 59.0	+3.1
SMF	Signal de Mont 2.7nm,0.6s	15.79	308	*e*P	P	20 24 48.8	-0.4
MTLF	Montolieu 16nm,1.5s	15.84	295	*e*P	Pn	20 24 47.1	+1.3
AVF	Avril sur Loir 15nm,1.1s	16.16	308	*e*P	P	20 24 53.6	+0.4
BGF	Bois d'Agland 20nm,1.1s	16.38	306	*e*P	P	20 24 56.8	+1.1
MFF	Saint Martin d 4.5nm,0.8s	18.33	304	*e*P	P	20 25 20.0	+2.8
ESDC	Sonseca Array 2.8nm,0.8s,baz=76,slow=11,SNR=15	20.26	282	P	P	20 25 37.5	-1.0
HFS	Hagfors 0.9nm,0.6s,baz=150,slow=12,SNR=4.7	22.48	349	P	P	20 26 02.3	+0.2
NB2	NORSAR Subarra comp=Z,3.2nm,1.1s,baz=160,slow=11	23.75	347	P	P	20 26 13.5	-1.7
NB2	NORSAR Subarra comp=Z,3.2nm,1.1s,SNR=4.4	23.75	347	P	P	20 26 13.5	-1.7
NOA	NORSAR Array B comp=Z,0.8nm,0.7s,baz=159,slow=11,SNR=4.2	23.75	347	P	P	20 26 14.0	-1.2
EKA	Eskdalemuir Ar comp=Z,2.9nm,0.8s,baz=128,slow=9.3,SNR=15	24.04	323	P	P	20 26 17.0	-0.9
TORD	Torodi Ar. Bea comp=Z,0.9nm,0.6s,baz=30,slow=9.0,SNR=15	30.91	221	P	P	20 27 20.4	+0.5
ARCES	ARCESS Array B comp=Z,24nm,21.8s,baz=84,slow=38	31.34	2	LR	LR	20 40 54.5	
KURBB	Kurchatov Arra comp=Z,1.0nm,0.7s,baz=286,slow=8.8,SNR=5.6	41.17	132	P	P	20 28 48.0	+0.6
KSRS	Korea Array comp=Z,90nm,19.0s,baz=162,slow=39	78.30	51	LR	LR	21 12 22.6	

*ISCJB **29** 20:25:23.6±0.7, 40°.93N±0°.05×75°.03E±0°.08, h7km, mb3.6/4, Error ellipse: s-maj=9.1km s-min=6.3km az=34.3*
*IDC **29** 20:25:26.2±1.6, 41°.06N×75°.13E, h0km, mb3.8/4, mb1 3.5/8, mb1mx3.3/33, mbtmp3.4/8, ML3.0/4, Error ellipse: s-maj=21.6km s-min=18.5km az=95.0*
*NNC **29** 20:25:27.9±0.8, 41°.12N×75°.12E, h0km, mb4.0, mpv3.7, Error ellipse: s-maj=7.1km s-min=4.1km az=147.0*
ISC 29 20:25:25.6±1.1, 40°.97N±0°.08×75°.23E±0°.07, h7km, n38, σ1$49/42, mb3.8/4, 14C-11D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KZA	Kyzart	1.10	1	P	Pg	20 25 44.7	-2.2
	SNR=481						
UCH	Uchtor	1.36	337	P	Pn	20 25 50.0	-1.5
	SNR=37						
ULHL	Ulahol	1.48	30	P	Pn	20 25 51.4	-1.5
	SNR=113						
AML	Almayashu	1.64	316	P	Pn	20 25 55.2	0.0
	SNR=84						
KBK	Karagaybulak	1.69	353	P	Pn	20 25 55.8	0.0
	SNR=163						
AAK	Ala-Archa	1.75	342	P	Pn	20 25 56.9	+0.3
	SNR=112						
AAK	Ala-Archa	1.75	342	Pg	Pn	20 25 56.4	-0.1
	54nm,0.3s,baz=153,slow=12,SNR=146						
AAK				Lg	Lg	20 26 22.8	
	126nm,0.3s,baz=322,slow=18,SNR=38						
TKM2	Tokmak 2	1.96	8	⇓Pn	Pn	20 26 00.1	+0.5
	32nm,0.4s						
TKM2				⇓Sn	Sn	20 26 25.7	+1.1
	274nm,0.5s						
TKM2	Tokmak 2	1.96	8	P	Pn	20 26 00.3	+0.7
	SNR=60						
EKS2	Erkin-Say	2.01	328	P	Pb	20 26 01.9	-0.6
	SNR=70						
CHMS	Chumysh	2.06	350	P	Pn	20 26 02.1	+1.5
	SNR=122						
USP	Ospenovka	2.36	347	P	Pb	20 26 07.2	-1.2
	SNR=344						
KNDC	Almaty	2.59	29	⇑Pn	Pn	20 26 10.4	+2.5
	409nm,0.7s						
KNDC				⇑Sn	Sb	20 26 43.0	-1.4
	923nm,0.7s						
KK31	Karatay Array	4.11	303	⇑Pn	Pn	20 26 30.2	+1.4
	0.2nm,0.2s,baz=122,slow=12,SNR=154						
KK31				⇓Pg	Pb	20 26 40.2	+1.9
	14nm,0.6s,baz=130,slow=13,SNR=101						
KK31				⇑Lg	Lg	20 27 34.1	
	44nm,0.7s,baz=126,slow=30,SNR=9.2						
MK31	Makanchi Array	7.73	39	⇓Pn	Pn	20 27 20.0	+1.4
	8.0nm,1.4s,baz=218,slow=14,SNR=4.1						
MK31				⇑Lg	Lg	20 29 31.6	
	6.0nm,0.7s,baz=220,slow=29,SNR=3.5						
MKAR	Makanchi Array	7.73	39	P	Pn	20 27 20.0	+1.4
MKAR	Makanchi Array	7.73	39	Pn	Pn	20 27 19.9	+1.4
	0.1nm,0.3s,baz=219,slow=15,SNR=4.3						
MKAR				Lg	Lg	20 29 24.1	
	0.8nm,0.3s,baz=220,slow=30,SNR=4.2						
KURBB	Kurchatov Arra	9.92	12	⇑Pn	Pn	20 27 50.9	+2.4
	1.3nm,0.5s						
KURBB				⇑Lg	Lg	20 30 38.2	
	64nm,0.8s						
KURBB	Kurchatov Arra	9.92	12	Pn	Pn	20 27 48.6	+0.1
	0.0nm,0.3s,baz=201,slow=12,SNR=3.7						
KURBB				Pg		20 28 26.6	
	0.1nm,0.3s,baz=200,slow=16,SNR=6.6						
KURBB				Lg	Lg	20 30 33.5	
	0.2nm,0.3s,baz=193,slow=29,SNR=9.8						
VOSK	Vostochnaya	12.11	348	⇑Pn	Pn	20 28 19.0	+0.5
	2.8nm,0.9s						
VOSK				⇑Sn	Sn	20 30 35.2	+1.5
	3.7nm,1.3s						
VOSK				⇓Lg	Lg	20 31 47.5	
	26nm,1.1s						
BVA0	Borovoye Array	12.50	346	Pn	Pn	20 28 24.5	+0.8
	0.9nm,0.5s,baz=154,slow=14,SNR=5.2						
BVA0				⇓Sn	Sn	20 30 45.3	+2.2
BVA0				⇓Lg	Lg	20 31 59.7	
	17nm,1.4s,baz=0.0,slow=0.1,SNR=4.4						
BVAR	Borovoye Array	12.50	346	Pn	Pn	20 28 22.8	-0.9
	0.2nm,0.3s,baz=161,slow=14,SNR=4.8						
BVAR				Lg	Lg	20 32 01.7	
	0.3nm,0.3s,baz=144,slow=27,SNR=6.8						
BRVK	Borovoye	12.55	346	⇑Pn	Pn	20 28 25.5	+1.1
	3.9nm,0.7s						
BRVK				⇑Sn	Sn	20 30 45.7	+1.3
	5.7nm,1.1s						
BRVK				⇑Lg	Lg	20 32 00.6	
	13nm,0.8s						
ZRNK	Zerenda	12.71	343	⇓Pn	Pn	20 28 28.4	+1.7
	1.5nm,0.7s						
ZRNK				⇑Sn	Sn	20 30 47.9	-0.4
	2.5nm,0.9s						
ZRNK				⇓Lg	Lg	20 32 05.2	
	10nm,0.9s						
AB31	Akbulak array	13.59	313	⇓Pn	Pn	20 28 40.2	+1.6
	1.1nm,0.7s,baz=122,slow=14,SNR=5.5						
ZALV	Zalesovo Beam	14.49	23	Pn	Pn	20 28 51.1	+0.1
	0.1nm,0.3s,baz=206,slow=13,SNR=2.1						
MLR	Muntele Rosu	35.74	294	⇓*i*P	P	20 32 23.2	-1.8
BURAR	Bucovina Array	35.89	298	⇑*i*P	P	20 32 23.4	-2.8
RDO	Rodhopi	37.06	287	*e*P	P	20 32 32.4	-3.7
PRK	Paraskevi	37.10	284	*e*P	P	20 32 34.9	-1.6
SMG	Samos	37.20	281	*e*P	P	20 32 36.4	-1.0
SMTH	Samothraki Isl	37.26	286	*e*P	P	20 32 33.1	-4.8
LIA	Limnos Island	37.69	285	*e*P	P	20 32 35.2	-6.3
KARP	Karpathos	37.75	278	*e*P	P	20 32 39.7	-2.5
ARCES	ARCESS Array B 1.4nm,0.7s,baz=113,slow=8.2,SNR=4.3	38.41	334	P	P	20 32 48.4	+1.1
HFS	Hagfors 0.8nm,0.6s,baz=108,slow=9.3,SNR=3.6	41.75	319	P	P	20 33 17.5	+2.4
TORD	Torodi Ar. Bea 0.5nm,0.7s,baz=53,slow=5.4,SNR=4.4	69.11	269	P	P	20 36 33.0	+0.3
ILAR	Eielson Array 0.5nm,0.7s,baz=331,slow=5.0,SNR=6.1	69.55	18	P	P	20 36 34.7	+0.1

*CSEM **29** 20:26:27.8, 38°.32N×22°.06E, h9km, MD3.0, After ATH*
ATH 29 20:26:27.8, 38°.32N×22°.06E, h9km, MD3.0/14, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.05	12	*e*PG	Pg	20 26 29.7	+0.1
TRIZ				*e*SG	Sg	20 26 31.1	+0.2
TRIZ	Trizonia	0.05	12	*e*Pg	Pg	20 26 29.7	+0.1
TRIZ				*e*Sg	Sg	20 26 31.1	+0.2
KALE	Kalithea	0.10	41	*e*PG	Pg	20 26 30.6	+0.3
KALE				*e*SG	Sg	20 26 32.2	+0.1
KALE	Kalithea	0.10	41	*e*Pg	Pg	20 26 30.6	+0.3
KALE				*e*Sg	Sg	20 26 32.2	+0.1
LAKA	Lakka	0.10	219	*e*PG	Pg	20 26 30.4	0.0
LAKA				*e*SG	Sg	20 26 32.3	+0.1
LAKA	Lakka	0.10	219	*e*Pg	Pg	20 26 30.4	0.0
LAKA				*e*Sg	Sg	20 26 32.3	+0.1
PSA1	Psathopyrgos	0.14	272	*e*PG	Pg	20 26 30.9	0.0
PSA1				*e*SG	Sg	20 26 33.3	+0.3
EFP	Efpalio	0.16	311	*e*PG	Pg	20 26 31.4	+0.1
EFP				*e*SG	Sg	20 26 34.3	+0.6
EFP	Efpalio	0.16	311	*e*Pg	Pg	20 26 31.4	+0.1
EFP				*e*Sg	Sg	20 26 34.3	+0.6
KLV	Kalavryta, Ach	0.28	165	*e*PG	Pg	20 26 33.4	-0.2
KLV				*e*SG	Sg	20 26 37.8	+0.3
KLV	Kalavryta, Ach	0.28	165	*e*Pg	Pg	20 26 33.4	-0.2
KLV				*e*Sg	Sg	20 26 37.8	+0.3
GUR	Goura	0.44	150	*e*PG	Pg	20 26 36.2	-0.4
GUR				*e*SB	Sg	20 26 42.8	+0.2
GUR	Goura	0.44	150	*e*Pg	Pg	20 26 36.2	-0.4
GUR				*e*Sb	Sg	20 26 42.8	+0.2
RLS	Riolos of Patr	0.54	241	*e*PG	Pg	20 26 38.0	-0.2
RLS	Riolos of Patr	0.54	241	*e*Pg	Pg	20 26 38.0	-0.2
EVR	Evrytania	0.63	342	*e*PG	Pg	20 26 39.7	-0.4
EVR				*e*SB	Sg	20 26 48.8	+0.3
EVR	Evrytania	0.63	342	*e*Pg	Pg	20 26 39.7	-0.4
EVR				*e*Sb	Sg	20 26 48.8	+0.3
AGG	Agios Georgios	0.73	17	*e*PG	Pg	20 26 41.6	-0.4
AGG	Agios Georgios	0.73	17	*e*Pg	Pg	20 26 41.6	-0.4
LKR	Lokris	0.81	66	*e*PB	Pg	20 26 43.3	-0.1
LKR	Lokris	0.81	66	*e*Pb	Pg	20 26 43.3	-0.1
AMT	Artemida-Makis	0.83	200	*e*PB	Pg	20 26 44.0	+0.1
AMT	Artemida-Makis	0.83	200	*e*Pb	Pg	20 26 44.0	+0.1
DID	Didima	1.23	131	*e*PN	Pn	20 26 50.5	-0.8
DID	Didima	1.23	131	*e*Pn	Pn	20 26 50.5	-0.8
THL	Klokotos Trika	1.24	358	*e*PB	Pg	20 26 51.8	+0.1
THL	Klokotos Trika	1.24	358	*e*Pb	Pg	20 26 51.8	+0.1

*ISCJB **29** 20:30:12.5±0.3, 38°.32N±0°.02×22°.05E±0°.02, h8km±2km, Error ellipse: s-maj=3.3km s-min=2.9km az=9.1*
*THE **29** 20:30:12.8, 38°.31N×22°.05E, h2km±2km, ML1.9/7, Error ellipse: s-maj=2.2km s-min=0.3km az=294.0*
*ATH **29** 20:30:12.7, 38°.32N×22°.03E, h10km±1km, MD3.1/19*
*CSEM **29** 20:30:12.4±0.1, 38°.31N×22°.04E, h5km, MD3.1, Error ellipse: s-maj=2.6km s-min=2.2km az=89.0*
ISC 29 20:30:12.7±0.8, 38°.32N±0°.01×22°.04E±0°.02, h8km±4km, n69, σ0$56/109, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TRIZ	Trizonia	0.05	24	P	Pg	20 30 14.3	-0.1
TRIZ				S	Sg	20 30 15.3	-0.4
TRIZ	Trizonia	0.05	24	*e*PG	Pg	20 30 14.3	-0.1
TRIZ				*e*SG	Sg	20 30 15.7	0.0
TRIZ	Trizonia	0.05	24	P	Pg	20 30 14.3	-0.1
TRIZ				S	Sg	20 30 15.3	-0.4
LAKA	Lakka	0.09	214	P	Pg	20 30 15.0	+0.1
LAKA				S	Sg	20 30 16.6	+0.1
LAKA	Lakka	0.09	214	*e*PG	Pg	20 30 15.1	+0.1
LAKA				*e*SG	Sg	20 30 16.9	+0.4
LAKA	Lakka	0.09	214	P	Pg	20 30 15.0	+0.1
LAKA				S	Sg	20 30 16.6	+0.1
KALE	Kalithea	0.11	45	P	Pg	20 30 15.2	0.0
KALE				S	Sg	20 30 16.6	-0.4
KALE	Kalithea	0.11	45	*e*PG	Pg	20 30 15.2	0.0
KALE				*e*SG	Sg	20 30 17.7	+0.7
KALE	Kalithea	0.11	45	P	Pg	20 30 15.2	0.0
KALE				S	Sg	20 30 16.6	-0.4
KALE				*e*Sg	Sg	20 30 17.7	+0.6
PSA1	Psathopyrgos	0.13	274	*e*PG	Pg	20 30 15.4	-0.1
PSA1				*e*SG	Sg	20 30 17.9	+0.5
EFP	Efpalio	0.15	315	P	Pg	20 30 16.0	0.0
EFP				S	Sg	20 30 18.3	+0.1
EFP	Efpalio	0.15	315	*e*PG	Pg	20 30 16.0	0.0
EFP				*e*SG	Sg	20 30 19.2	+1.0
EFP	Efpalio	0.15	315	P	Pg	20 30 16.0	0.0
EFP				S	Sg	20 30 18.3	+0.1
EFP				*e*Sg	Sg	20 30 19.2	+1.0
KLV	Kalavryta, Ach	0.28	163	P	Pg	20 30 18.1	-0.3
KLV				S	Sg	20 30 22.6	+0.4
KLV	Kalavryta, Ach	0.28	163	*e*PG	Pg	20 30 18.1	-0.3
KLV				*e*SG	Sg	20 30 22.8	+0.6
KLV	Kalavryta, Ach	0.28	163	P	Pg	20 30 18.1	-0.3
KLV				S	Sg	20 30 22.6	+0.4
DSF	Desfina	0.39	76	P	Pg	20 30 19.9	-0.5
DSF				S	Sg	20 30 26.0	+0.5
DSF	Desfina	0.39	76	P	Pg	20 30 19.9	-0.5
DSF				S	Sg	20 30 26.0	+0.5
GUR	Goura	0.45	148	P	Pg	20 30 21.0	-0.3
GUR				S	Sg	20 30 27.6	+0.3
GUR	Goura	0.45	148	*e*PB	Pg	20 30 21.1	-0.3
GUR				*e*SB	Sg	20 30 28.0	+0.7
GUR	Goura	0.45	148	*e*Pb	Pg	20 30 21.1	-0.3
GUR				S	Sg	20 30 27.6	+0.3
GUR				*e*Sb	Sg	20 30 28.0	+0.7
RLS	Riolos of Patr	0.52	241	P	Pg	20 30 22.7	-0.1
RLS				S	Sg	20 30 30.1	+0.4
RLS	Riolos of Patr	0.52	241	P	Pg	20 30 22.7	-0.1
RLS				S	Sg	20 30 30.1	+0.4
AXS	Araxos	0.54	257	P	Pg	20 30 23.2	+0.1
AXS				S	Sg	20 30 30.9	+0.7
AXS	Araxos	0.54	257	P	Pg	20 30 23.2	+0.1
AXS				S	Sg	20 30 30.9	+0.7
EVR	Evrytania	0.63	343	P	Pg	20 30 24.5	-0.3
EVR				S	Sb	20 30 34.5	-0.5
EVR	Evrytania	0.63	343	*e*PB	Pg	20 30 24.6	-0.3
EVR	Evrytania	0.63	343	*e*Pb	Pg	20 30 24.6	-0.3
EVR				S	Sb	20 30 34.5	-0.5
AXAR	Agios Charalam	0.66	47	P	Pg	20 30 25.3	-0.1
AXAR				S	Sg	20 30 34.8	+0.8
AXAR	Agios Charalam	0.66	47	P	Pg	20 30 25.3	-0.1
AXAR				S	Sg	20 30 34.8	+0.8
MAKR	Makrakomi, Fth	0.70	6	P	Pg	20 30 26.1	-0.1
MAKR	Makrakomi, Fth	0.70	6	P	Pg	20 30 26.1	-0.1
AGG	Agios Georgios	0.74	18	P	Pg	20 30 26.0	-0.9
AGG				S	Sg	20 30 37.4	+0.8
AGG	Agios Georgios	0.74	18	*e*PB	Pg	20 30 26.1	-0.9
AGG	Agios Georgios	0.74	18	*e*Pb	Pg	20 30 26.1	-0.9
AGG				S	Sg	20 30 37.4	+0.8
LTK	Loutraki	0.78	112	P	Pg	20 30 27.4	-0.4
LTK	Loutraki	0.78	112	*e*PB	Pg	20 30 28.0	+0.2
LTK				*e*SB	Sb	20 30 39.3	-0.1
LTK	Loutraki	0.78	112	P	Pg	20 30 27.4	-0.4
LTK	Loutraki	0.78	112	*e*Pb	Pg	20 30 28.0	+0.2
LTK				*e*Sb	Sb	20 30 39.3	-0.1
AMT	Artemida-Makis	0.83	199	P	Pg	20 30 28.4	-0.1
AMT	Artemida-Makis	0.83	199	*e*PB	Pg	20 30 28.5	-0.1
AMT	Artemida-Makis	0.83	199	*e*Pb	Pg	20 30 28.5	-0.1
VLX	Vlachokerasia	0.98	164	P	Pg	20 30 30.5	-1.0
VLX				S	Sb	20 30 45.2	0.0
VLX	Vlachokerasia	0.98	164	*e*PG	Pg	20 30 30.6	-1.0
VLX				*e*SB	Sb	20 30 46.0	+0.8
VLX	Vlachokerasia	0.98	164	*e*Pg	Pg	20 30 30.6	-1.0
VLX				S	Sb	20 30 45.2	0.0
VLX				*e*Sb	Sb	20 30 46.0	+0.8
ITM	Ithomi	1.14	185	P	Pg	20 30 33.6	-1.0
ITM	Ithomi	1.14	185	*e*PB	Pg	20 30 33.2	-1.4
ITM	Ithomi	1.14	185	*e*Pb	Pg	20 30 33.2	-1.4
ITM	Ithomi	1.14	185	P	Pg	20 30 33.6	-1.0
VLS	Valsamata	1.15	264	P	Pg	20 30 33.7	-1.2
VLS	Valsamata	1.15	264	P	Pg	20 30 33.7	-1.2
DID	Didima	1.24	130	P	Pg	20 30 35.9	-0.6
DID				S	Sb	20 30 53.2	+0.6
DID	Didima	1.24	130	*e*PB	Pb	20 30 36.7	+0.3
DID	Didima	1.24	130	P	Pg	20 30 35.9	-0.6
DID	Didima	1.24	130	*e*Pb	Pb	20 30 36.7	+0.3
DID				S	Sb	20 30 53.2	+0.6
THL	Klokotos Trika	1.25	359	*e*PB	Pn	20 30 37.0	+0.5
THL	Klokotos Trika	1.25	359	*e*Pb	Pn	20 30 37.0	+0.5
XOR	Xorichti	1.38	40	P	Pn	20 30 38.2	-0.1
XOR	Xorichti	1.38	40	P	Pn	20 30 38.2	-0.1
PTL	Penteli	1.46	100	*e*PG	Pb	20 30 40.5	+0.4
PTL	Penteli	1.46	100	*e*Pg	Pb	20 30 40.5	+0.4
AOS	Alonnisos	1.67	59	*e*PN	Pn	20 30 42.0	-0.3
AOS	Alonnisos	1.67	59	*e*Pn	Pn	20 30 42.0	-0.3
VLI	Veliai	1.75	156	P	Pn	20 30 43.6	+0.3
VLI	Veliai	1.75	156	*e*PN	Pn	20 30 44.1	+0.8
VLI	Veliai	1.75	156	P	Pn	20 30 43.6	+0.3
VLI	Veliai	1.75	156	*e*Pn	Pn	20 30 44.1	+0.8
KYTH	Kithira	2.18	158	*e*PN	Pb	20 30 51.2	-1.2
KYTH	Kithira	2.18	158	*e*Pn	Pb	20 30 51.2	-1.2

*IDC **29** 20:33:32.2±2.1, 23°.99N×92°.53E, h0km, mb3.5/5, mb1 3.6/6, mb1mx3.4/28, mbtmp3.4/6, ML3.1/1, Error ellipse: s-maj=87.9km s-min=19.9km az=66.0*
*ISCJB **29** 20:33:37.0±0.9, 24°.09N±0°.07×93°.04E±0°.08, h33km, mb3.5/5, Error ellipse: s-maj=12.4km s-min=8.8km az=138.9*
ISC 29 20:33:40.0±1.0, 24°.2N±0°.1×93°.14E±0°.08, h35km, n8, σ1$49/10, mb3.5/5, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMP	Imphal	0.92	52	*i* P	Pn	20 33 57.0	+0.5
IMP				*i* S	Sn	20 34 09.0	+0.5
SHL	Shillong	1.76	320	*e*PN	Pn	20 34 10.0	+1.8
SHL				*i* x	x	20 34 18.0	
SHL				*i* SN	Sn	20 34 29.0	-0.5
SHL				*i* SG		20 34 34.0	
CMAR	Chiang Mai Arr 0.1nm,0.3s,baz=309,slow=14,SNR=2.5	7.88	136	Pn	Pn	20 35 33.4	+1.3
MKAR	Makanchi Array 0.8nm,0.8s,baz=162,slow=9.4,SNR=4.7	24.15	342	P	P	20 38 50.2	-2.6
SONM	Songino Array 0.7nm,0.6s,baz=205,slow=11,SNR=3.6	25.82	21	P	P	20 39 08.4	+0.4
ZALV	Zalesovo Beam 0.2nm,0.2s,baz=164,slow=7.0,SNR=3.6	30.34	350	P	P	20 39 47.6	-0.6
WRA	Warramunga Arr 0.4nm,0.4s,baz=317,slow=7.9,SNR=26	59.47	134	P	P	20 43 38.4	-1.3
ASAR	Alice Springs 0.4nm,0.4s,baz=317,slow=6.9,SNR=7.7	61.88	137	P	P	20 43 55.1	-1.0

*CSEM **29** 20:37:53.1, 41°.84N×13°.56E, h8km, After ROM*
ROM 29 20:37:53.1±0.2, 41°.84N×13°.56E, h8km±1km, Ml1.5/1, Error ellipse: s-maj=2.5km s-min=1.5km az=58.0, Southern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VVLD	Villa Vallelon	0.06	53	Pg	Pg	20 37 55.5	+0.4
VVLD				Sg	Sg	20 37 56.8	+0.2
VVLD	Villa Vallelon	0.06	53	Pg	Pg	20 37 55.5	+0.4
VVLD				Sg	Sg	20 37 56.8	+0.2
POFI	Posta Fibreno	0.17	136	Pg	Pg

THR3	**Thira Island,**	**2.23**	**52**	P		**Pn**	**20 40 28.1**	**0.0**
THR3	**Thira Island,**	**2.23**	**52**	P		**Pn**	**20 40 28.1**	**0.0**
THR1	**Thera Island**	**2.24**	**53**	P		**Pn**	**20 40 28.2**	**-0.2**
THR1	**Thera Island**	**2.24**	**53**	P		**Pn**	**20 40 28.2**	**-0.2**
ITM	**Ithomi**	**2.37**	**334**	P		**Pn**	**20 40 31.1**	**+1.0**
ITM	**Ithomi**	**2.37**	**334**	*eP*		**Pn**	**20 40 30.5**	**+0.4**
ITM	**Ithomi**	**2.37**	**334**	*eP*		**Pn**	**20 40 30.5**	**+0.4**
VLX	**Vlachokerasia**	**2.41**	**344**	P		**Pn**	**20 40 32.0**	**+1.2**
VLX	**Vlachokerasia**	**2.41**	**344**	P		**Pn**	**20 40 32.0**	**+1.2**
DIDY	**Didyma**	**2.42**	**360**	P		**Pn**	**20 40 31.4**	**+0.5**
DIDY	**Didyma**	**2.42**	**360**	P		**Pn**	**20 40 31.4**	**+0.5**
DID	**Didima**	**2.45**	**0**	P		**Pn**	**20 40 31.3**	**+0.1**
DID	**Didima**	**2.45**	**0**	*eP*		**Pn**	**20 40 31.5**	**+0.3**
DID	**Didima**	**2.45**	**0**	*eP*		**Pn**	**20 40 31.5**	**+0.3**
APE	**Apeiranthos**	**2.74**	**42**	P		**Pn**	**20 40 34.5**	**-0.7**
APE	**Apeiranthos**	**2.74**	**42**	P		**Pn**	**20 40 34.5**	**-0.7**
ATH	**Athens Observa**	**2.94**	**8**	*eP*		**Pn**	**20 40 38.1**	**+0.2**
ATH	**Athens Observa**	**2.94**	**8**	*eP*		**Pn**	**20 40 38.1**	**+0.2**
GUR	**Goura**	**2.96**	**346**	P		**Pn**	**20 40 39.9**	**+1.6**
GUR	**Goura**	**2.96**	**346**	*eP*		**Pn**	**20 40 40.1**	**+1.8**
GUR	**Goura**	**2.96**	**346**	*eP*		**Pn**	**20 40 40.1**	**+1.8**
LTK	**Loutraki**	**2.97**	**356**	P		**Pn**	**20 40 39.2**	**+0.9**
LTK	**Loutraki**	**2.97**	**356**	*eP*		**Pn**	**20 40 39.3**	**+0.9**
LTK	**Loutraki**	**2.97**	**356**	*eP*		**Pn**	**20 40 39.3**	**+0.9**
PTL	**Penteli**	**3.03**	**10**	P		**Pn**	**20 40 39.6**	**+0.4**
PTL	**Penteli**	**3.03**	**10**	*eP*		**Pn**	**20 40 40.0**	**+0.8**
PTL	**Penteli**	**3.03**	**10**	P		**Pn**	**20 40 39.6**	**+0.4**
KLV	**Kalavryta, Ach**	**3.11**	**344**	P		**Pn**	**20 40 41.4**	**+1.2**
KLV	**Kalavryta, Ach**	**3.11**	**344**	*eP*		**Pn**	**20 40 42.3**	**+2.1**
KLV	**Kalavryta, Ach**	**3.11**	**344**	*eP*		**Pn**	**20 40 42.3**	**+2.1**
KARP	**Karpathos**	**3.25**	**80**	P		**Pn**	**20 40 42.5**	**+0.3**
KARP				S		**Sn**	**20 41 19.3**	**-0.5**
KARP	**Karpathos**	**3.25**	**80**	*eP*		**Pn**	**20 40 42.6**	**+0.3**
KARP	**Karpathos**	**3.25**	**80**	*eP*		**Pn**	**20 40 42.6**	**+0.3**
KARP				S		**Sn**	**20 41 19.3**	**-0.5**
RLS	**Riolos of Patr**	**3.32**	**335**	P		**Pn**	**20 40 44.4**	**+1.4**
RLS	**Riolos of Patr**	**3.32**	**335**	*eP*		**Pn**	**20 40 43.4**	**+0.4**
RLS	**Riolos of Patr**	**3.32**	**335**	*eP*		**Pn**	**20 40 43.4**	**+0.4**
LAKA	**Lakka**	**3.33**	**343**	P		**Pn**	**20 40 44.4**	**+1.1**
LAKA	**Lakka**	**3.33**	**343**	*eP*		**Pn**	**20 40 45.7**	**+2.4**
LAKA	**Lakka**	**3.33**	**343**	P		**Pn**	**20 40 44.4**	**+1.1**
DSF	**Desfina**	**3.40**	**351**	P		**Pn**	**20 40 44.9**	**+0.7**
DSF	**Desfina**	**3.40**	**351**	P		**Pn**	**20 40 44.9**	**+0.7**
TRIZ	**Trizonia**	**3.43**	**345**	*eP*		**Pn**	**20 40 44.4**	**-0.2**
TRIZ	**Trizonia**	**3.43**	**345**	*eP*		**Pn**	**20 40 44.4**	**-0.2**
KALE	**Kalithea**	**3.44**	**346**	P		**Pn**	**20 40 45.5**	**+0.7**
KALE	**Kalithea**	**3.44**	**346**	*eP*		**Pn**	**20 40 45.6**	**+0.7**
KALE	**Kalithea**	**3.44**	**346**	*eP*		**Pn**	**20 40 45.6**	**+0.7**
EFP	**Efpalio**	**3.53**	**343**	*eP*		**Pn**	**20 40 44.7**	**-1.2**
EFP	**Efpalio**	**3.53**	**343**	*eP*		**Pn**	**20 40 44.7**	**-1.2**
LKR	**Lokris**	**3.59**	**357**	*eP*		**Pn**	**20 40 48.3**	**+1.5**
LKR	**Lokris**	**3.59**	**357**	*eP*		**Pn**	**20 40 48.3**	**+1.5**
AXAR	**Agios Charalam**	**3.73**	**353**	P		**Pn**	**20 40 49.7**	**+0.9**
AXAR	**Agios Charalam**	**3.73**	**353**	P		**Pn**	**20 40 49.7**	**+0.9**
VLS	**Valsamata**	**3.77**	**327**	*eP*		**Pn**	**20 40 48.8**	**-0.5**
VLS	**Valsamata**	**3.77**	**327**	*eP*		**Pn**	**20 40 48.8**	**-0.5**
SMIA	**Simia**	**3.82**	**360**	P		**Pn**	**20 40 50.6**	**+0.7**
SMIA	**Simia**	**3.82**	**360**	P		**Pn**	**20 40 50.6**	**+0.7**
EVR	**Evrytania**	**4.02**	**344**	P		**Pn**	**20 40 53.8**	**+1.0**
EVR	**Evrytania**	**4.02**	**344**	*eP*		**Pn**	**20 40 54.7**	**+1.9**
EVR	**Evrytania**	**4.02**	**344**	*eP*		**Pn**	**20 40 54.7**	**+1.9**
AGG	**Agios Georgios**	**4.03**	**350**	P		**Pn**	**20 40 53.7**	**+0.9**
AGG	**Agios Georgios**	**4.03**	**350**	*eP*		**Pn**	**20 40 53.7**	**+0.9**
AGG	**Agios Georgios**	**4.03**	**350**	P		**Pn**	**20 40 53.7**	**+0.9**
CHOS	**Chios island**	**4.03**	**33**	P		**Pn**	**20 40 52.6**	**-0.2**
CHOS	**Chios island**	**4.03**	**33**	P		**Pn**	**20 40 52.6**	**-0.2**
MAKR	**Makrakomi, Fth**	**4.05**	**348**	P		**Pn**	**20 40 54.3**	**+1.2**
MAKR	**Makrakomi, Fth**	**4.05**	**348**	P		**Pn**	**20 40 54.3**	**+1.2**
AOS	**Alonnisos**	**4.14**	**7**	*eP*		**Pn**	**20 40 54.3**	**0.0**
AOS	**Alonnisos**	**4.14**	**7**	*eP*		**Pn**	**20 40 54.3**	**0.0**
ARG	**Arkhangelos**	**4.15**	**72**	*eP*		**Pn**	**20 40 54.5**	**0.0**
ARG	**Arkhangelos**	**4.15**	**72**	*eP*		**Pn**	**20 40 54.5**	**0.0**
NEO	**Neokhori**	**4.25**	**360**	P		**Pn**	**20 40 56.3**	**+0.5**
NEO	**Neokhori**	**4.25**	**360**	*eP*		**Pn**	**20 40 56.4**	**+0.6**
NEO	**Neokhori**	**4.25**	**360**	P		**Pn**	**20 40 56.3**	**+0.5**
LKD2	**Lefkada island**	**4.26**	**332**	*eP*		**Pn**	**20 40 56.5**	**+0.5**
LKD2	**Lefkada island**	**4.26**	**332**	*eP*		**Pn**	**20 40 56.5**	**+0.5**
XOR	**Xorichti**	**4.30**	**360**	P		**Pn**	**20 40 57.3**	**+0.7**
XOR	**Xorichti**	**4.30**	**360**	P		**Pn**	**20 40 57.3**	**+0.7**
THL	**Klokotos Trika**	**4.61**	**348**	*eP*		**Pn**	**20 41 01.2**	**+0.5**
THL				*eS*		**Sn**	**20 41 53.4**	**+0.6**
THL	**Klokotos Trika**	**4.61**	**348**	*eP*		**Pn**	**20 41 01.2**	**+0.5**
THL				*eS*		**Sn**	**20 41 53.4**	**+0.6**
JAN	**Janina**	**4.97**	**338**	*eP*		**Pn**	**20 41 04.6**	**-1.1**
JAN	**Janina**	**4.97**	**338**	*eP*		**Pn**	**20 41 04.6**	**-1.1**
KEK	**Kerkira**	**5.39**	**331**	*eP*		**Pn**	**20 41 11.2**	**-0.3**
KEK	**Kerkira**	**5.39**	**331**	*eP*		**Pn**	**20 41 11.2**	**-0.3**
FNA	**Florina**	**5.91**	**346**	*eP*		**Pn**	**20 41 18.0**	**-0.5**
FNA	**Florina**	**5.91**	**346**	*eP*		**Pn**	**20 41 18.0**	**-0.5**
NVR	**Nevrokopi**	**6.31**	**4**	*eP*		**Pn**	**20 41 24.1**	**+0.1**
NVR	**Nevrokopi**	**6.31**	**4**	*eP*		**Pn**	**20 41 24.1**	**+0.1**
BRTR	**Keskin Array B**	**9.50**	**58**	P		**Pn**	**20 42 08.8**	**+1.0**
	0.1nm,0.3s,baz=240,slow=12,SNR=3.6							
MLR	**Muntele Rosu**	**10.63**	**10**	P		**Pn**	**20 42 23.2**	**0.0**
	0.0nm,0.3s,baz=135,slow=20,SNR=3.1							
VRAC	**Vranov**	**15.06**	**343**	P		**Pn**	**20 43 21.5**	**-1.1**
	0.2nm,0.3s,baz=146,slow=16,SNR=2.9							
GERES	**GERESS Array B**	**15.48**	**336**	P		**Pn**	**20 43 25.3**	**-2.8**
	0.1nm,0.3s,baz=157,slow=13,SNR=3.5							
AKASG	**Malin Array Be**	**16.23**	**14**	P		**P**	**20 43 39.9**	**+0.1**
	1.4nm,0.3s,baz=203,slow=10,SNR=4.4							
HFS	**Hagfors**	**25.85**	**349**	P		**P**	**20 45 18.7**	**-0.5**
	0.9nm,0.4s,baz=146,slow=10,SNR=9.6							
FINES	**FINESS Array B**	**26.47**	**3**	P		**P**	**20 45 23.6**	**-1.1**
	1.3nm,1.0s,baz=187,slow=9.5,SNR=3.9							
NOA	**NORSAR Array B**	**27.12**	**347**	P		**P**	**20 45 30.4**	**-0.3**
	0.4nm,0.5s,baz=152,slow=10,SNR=3.7							
TORD	**Torodi Ar. Bea**	**29.23**	**227**	P		**P**	**20 45 51.0**	**+1.1**
	0.3nm,0.7s,baz=32,slow=9.0,SNR=4.0							
KMBO	**Kilima Mbogo**	**38.31**	**157**	LR		LR	21 03 27.8	
	comp=Z,70nm,18.4s,baz=94,slow=37							
KURBB	**Kurchatov Arra**	**42.42**	**51**	P		**P**	**20 47 41.8**	**-0.3**
	0.4nm,0.5s,baz=272,slow=8.7,SNR=6.6							
MKAR	**Makanchi Array**	**45.15**	**56**	P		**P**	**20 48 03.9**	**-0.2**
	0.3nm,0.3s,baz=270,slow=6.4,SNR=8.4							
ZALV	**Zalesovo Beam**	**46.22**	**46**	P		**P**	**20 48 11.9**	**-0.5**
	1.0nm,0.4s,baz=267,slow=9.9,SNR=6.6							
SONM	**Songino Array**	**60.77**	**50**	P		**P**	**20 49 59.6**	**+0.3**
	0.3nm,0.4s,baz=275,slow=6.8,SNR=3.4							
USRK	**Ussuriysk Arra**	**78.03**	**44**	P		**P**	**20 51 45.9**	**+0.3**
	0.7nm,0.5s,baz=298,slow=4.1,SNR=4.7							

*NSSC **29** 20:56:17.8±0.8, 32°.88N×35°.13E, h6km±4km, MD1.3, ML2.1*
*ISCJB **29** 20:56:19.6±0.4, 32°.87N±0°.02×35°.18E±0°.04, h21km±3km, Error ellipse: s-maj=6.2km s-min=3.2km az=24.1*
*CSEM **29** 20:56:19.8±0.1, 32°.87N×35°.22E, h20km, ML3.0, Error ellipse: s-maj=3.9km s-min=1.9km az=108.0*
*GRAL **29** 20:56:22.3±0.5, 32°.98N×35°.28E, h11km±4km, MD3.0*

ISC 29 20:56:19.8±1.1, 32°.87N±0°.03×35°.21E±0°.04, h20km±2km, n35, σ0862/56, Dead Sea region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
BLGI	**Bet Lehem HaGe**	**0.14**	**185**		Pg	**Pg**	**20 56 23.9**	**-0.2**
BLGI					Sg	**Sg**	**20 56 26.8**	**-0.2**
HNTI	**Hanita**	**0.21**	**353**		Pg	**Pg**	**20 56 25.8**	**+0.6**
HNTI					Sg	**Sg**	**20 56 30.0**	**+1.1**
MMA0	**Mount Meron ar**	**0.22**	**49**		Pg	**Pg**	**20 56 25.5**	**+0.1**
MMA0					Sg	**Sg**	**20 56 29.7**	**+0.6**
NAQL	**Naqoura**	**0.25**	**348**	*eP*		**Pg**	**20 56 25.9**	**+0.1**
KSDI	**Kefar Szold**	**0.50**	**50**		Pg	**Pb**	**20 56 29.6**	**-0.4**
KSDI					Sg	**Sg**	**20 56 37.6**	**+0.8**
KSHT	**Keshet**	**0.52**	**77**		Pg	**Pg**	**20 56 30.5**	**+0.1**
SLTI	**Sal'it**	**0.64**	**193**		Pg	**Pb**	**20 56 31.4**	**-1.0**
SLTI					Sg	**Sb**	**20 56 40.9**	**0.0**
HMDT	**Nahal Hemdat**	**0.67**	**156**		Pg	**Pb**	**20 56 32.0**	**-0.9**
HMDT					Sg	**Sb**	**20 56 41.4**	**-0.3**
TCHB	**Talchebab**	**0.67**	**107**	*eP*		**Pb**	**20 56 32.5**	**-0.4**
TCHB				*eS*		**Sg**	**20 56 42.3**	**+0.1**
TCHB					AML	AML	20 56 42.9	
	comp=Z,52nm,0.2s							
TCHB					AML	AML	20 56 45.5	
	comp=N,97nm,0.2s							
TCHB					AML	AML	20 56 50.1	
	comp=E,66nm,0.3s							
TCHB	**Talchebab**	**0.67**	**107**	*eP*		**Pb**	**20 56 32.5**	**-0.4**
	SNR=72							
TCHB				*eS*		**Sg**	**20 56 42.3**	**+0.1**
	comp=E,66nm,0.3s,SNR=92							
RCY	**Rachaya**	**0.82**	**40**	*eP*		**Pb**	**20 56 34.5**	**-1.0**
RCY				*eS*		**Sb**	**20 56 44.2**	**-2.0**
BRBR	**Barbar**	**0.83**	**49**	*eP*		**Pb**	**20 56 34.5**	**-1.2**
BRBR				*eS*		**Sb**	**20 56 46.7**	**+0.2**
BRBR					AML	AML	20 56 47.6	
	comp=E,76nm,0.2s							
BRBR					AML	AML	20 56 51.3	
	comp=N,118nm,0.3s							
BRBR					AML	AML	20 56 51.3	
	comp=Z,68nm,0.2s							
BRBR	**Barbar**	**0.83**	**49**	*eP*		**Pb**	**20 56 34.5**	**-1.2**
	SNR=72							
BRBR				*eS*		**Sb**	**20 56 46.7**	**+0.2**
	comp=Z,68nm,0.2s,SNR=92							
BHL	**Bhannes**	**1.10**	**20**	*eP*		**Pn**	**20 56 39.7**	**-0.5**
BHL	**Bhannes**	**1.10**	**20**	*eP*		**Pn**	**20 56 39.7**	**-0.5**
QASN	**Qassioun**	**1.12**	**53**	*eP*		**Pn**	**20 56 39.9**	**-0.6**
QASN					AML	AML	20 56 58.1	
	comp=Z,82nm,0.4s							
QASN	**Qassioun**	**1.12**	**53**	*eP*		**Pn**	**20 56 39.9**	**-0.6**
	SNR=61							
TOTH	**TOTAH**	**1.14**	**64**	*eP*		**Pn**	**20 56 40.3**	**-0.4**
TOTH				*eS*		**Sn**	**20 56 55.8**	**0.0**
TOTH					AML	AML	20 56 56.2	
	comp=Z,55nm,0.6s							
TOTH					AML	AML	20 56 56.3	
	comp=E,158nm,0.4s							
TOTH					AML	AML	20 56 56.4	
	comp=N,195nm,0.2s							
TOTH	**TOTAH**	**1.14**	**64**	*eP*		**Pn**	**20 56 40.3**	**-0.4**
	SNR=61							
TOTH				*eS*		**Sn**	**20 56 55.8**	**0.0**
	comp=N,195nm,0.2s,SNR=62							
SALA	**Sala**	**1.30**	**97**	*eP*		**Pn**	**20 56 42.8**	**-0.2**
SALA				*eS*		**Sb**	**20 57 00.3**	**+0.4**
SALA					AML	AML	20 57 01.5	
	comp=N,81nm,0.5s							
SALA					AML	AML	20 57 01.6	
	comp=Z,89nm,0.4s							
SALA					AML	AML	20 57 03.9	
	comp=E,5.1nm,0.4s							
SALA	**Sala**	**1.30**	**97**	*eP*		**Pn**	**20 56 42.8**	**-0.2**
	SNR=61							
SALA				*eS*		**Sb**	**20 57 00.3**	**+0.4**
	comp=E,5.1nm,0.4s,SNR=62							
DSI	**Dead Sea**	**1.30**	**173**	Pg		**Pn**	**20 56 41.9**	**-1.0**
DSI				Sg		**Sn**	**20 56 59.6**	**-0.2**
YTIR	**Yattir**	**1.50**	**183**	Pn		**Pn**	**20 56 46.4**	**+0.6**
HWQ	**Hawqa**	**1.54**	**24**	*eP*		**Pn**	**20 56 46.5**	**+0.2**
HWQ	**Hawqa**	**1.54**	**24**	*eP*		**Pn**	**20 56 46.5**	**+0.2**
MZDA	**Masada**	**1.56**	**175**	Pn		**Pn**	**20 56 46.2**	**-0.2**
MZDA				Sn		**Sn**	**20 57 06.2**	**+0.2**
FKH	**Fakeheh**	**1.70**	**36**	*eP*		**Pn**	**20 56 49.3**	**+0.7**
ZALF	**Zalf**	**1.79**	**88**	*eP*		**Pn**	**20 56 50.3**	**+0.6**
ZALF				*eS*		**Sb**	**20 57 14.3**	**+0.2**
ZALF					AML	AML	20 57 15.0	
	comp=E,44nm,0.5s							
ZALF					AML	AML	20 57 16.7	
	comp=N,35nm,0.5s							
ZALF					AML	AML	20 57 17.5	
	comp=Z,19nm,0.7s							
ZALF	**Zalf**	**1.79**	**88**	*eP*		**Pn**	**20 56 50.3**	**+0.6**
	SNR=47							
ZALF				*eS*		**Sb**	**20 57 14.3**	**+0.2**
	comp=Z,19nm,0.7s,SNR=49							
RTMI	**Retamim**	**1.86**	**194**	Pn		**Pn**	**20 56 50.8**	**+0.2**
RTMI				Sn		**Sn**	**20 57 14.1**	**+0.6**
KZIT	**Kziot**	**2.07**	**200**	Pn		**Pn**	**20 56 53.7**	**+0.2**
ZFRI	**Zfri**	**2.31**	**181**	Pn		**Pn**	**20 56 57.3**	**+0.6**
ZFRI				Sn		**Sn**	**20 57 25.3**	**+0.8**
PRNI	**Paran**	**2.52**	**184**	Pn		**Pn**	**20 56 59.8**	**+0.2**
HRFI	**Mount Harif**	**2.83**	**183**	Pn		**Pn**	**20 57 04.1**	**+0.2**
MBRI	**Mt Berech**	**3.08**	**185**	Pn		**Pn**	**20 57 08.3**	**+0.9**

*ISCJB **29** 20:59:54.6±0.5, 9°.51S±0°.06×118°.89E±0°.04, h46km, mb4.0/6, MS2.7/1, Error ellipse: s-maj=8.2km s-min=5.0km az=19.2*
*DJA **29** 20:59:57.3±0.3, 9°.5S±4°×11°.9E±°, h65km±5km, M4.5/16, mb4.4/11, mB4.7/2, MLv4.5/16, Mw(mB)3.9/2*
*IDC **29** 20:59:57.2±2.7, 9°.34S×118°.99E, h95km±24km, mb3.6/7, mb1 3.7/10, mb1mx3.5/25, mbtmp3.6/10, MS2.9/1, Ms1 2.9/1, ms1mx2.0/33, Error ellipse: s-maj=43.7km s-min=10.9km az=52.0*

ISC 29 20:59:55.8±0.9, 9°.44S±0°.06×118°.94E±0°.06, h46km, n31, σ2817/25, mb4.0/6, Sumbawa region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
WBSI	**Waikabubak, Su**	**0.49**	**115**		P	Pn	21 00 10.9	+4.1
WBSI					S	Sn	21 00 21.6	+7.0
BMNI	**Bima**	**0.92**	**345**		P	Pn	21 00 17.2	+4.8
WSI	**Waingapu**	**1.36**	**100**		P	**Pn**	**21 00 19.5**	**+1.1**
WSI					S	**Sn**	**21 00 37.9**	**+2.6**
BASI	**Baing, Sumba**	**1.79**	**116**		P	**Pn**	**21 00 25.0**	**+0.7**
MMRI	**Maumere**	**3.35**	**77**		P	**Pn**	**21 00 48.1**	**+2.3**
KHKI	**Kahang-Kahang**	**3.46**	**288**		P	**Pn**	**21 00 46.5**	**-0.7**
BSSI	**Bau Bau, Buton**	**3.62**	**25**		P	**Pn**	**21 00 50.1**	**+0.7**
DNP	**Denpasar**	**3.76**	**281**		P	Pn	21 00 49.1	-2.2
IGBI	**Denpasar**	**3.79**	**279**		P	**Pn**	**21 00 54.3**	**+2.5**
BKSI	**Bulukumba**	**4.25**	**16**		P	**Pn**	**21 00 58.5**	**+0.4**
KAPI	**Kappang**	**4.47**	**10**		P	**Pn**	**21 01 01.9**	**+0.9**
KAPI	**Kappang**	**4.47**	**10**		P	**Pn**	**21 01 01.4**	**+0.3**
	7.6nm,0.3s,baz=192,slow=6.9,SNR=60							
KAPI					S	**Sn**	**21 01 48.2**	**-3.6**
	18nm,0.3s,baz=98,slow=23,SNR=4.0							
BBSI	**Bau Bau**	**5.33**	**43**		P	**Pn**	**21 01 13.9**	**+1.0**
	104nm,0.9s,757nm0.3nm							
BLJI	**Banyuglugur**	**5.54**	**287**		P	**Pn**	**21 01 17.8**	**+2.0**
	87nm,1.5s,0.3nm							
GMJI	**Gumukmas**	**5.55**	**282**		P	**Pn**	**21 01 17.1**	**+1.2**
	50nm,1.0s,0.3nm							
TTSI	**Tana Toraja**	**6.41**	**8**		P	**Pn**	**21 01 30.1**	**+2.4**
	25nm,1.1s,532nm0.2nm							
KBKI	**Kotabaru**	**6.69**	**336**		P	**Pn**	**21 01 33.0**	**+1.4**
	27nm,1.1s							
PWJI	**Pagerwojo**	**7.19**	**281**		P	**Pn**	**21 01 38.3**	**-0.2**
	34nm,1.8s,0.3nm							
BBKI	**Banjar Baru**	**7.20**	**325**		P	**Pn**	**21 01 41.7**	**+3.2**
	71nm,1.2s,0.3nm							
PCJI	**Pacitan**	**7.77**	**279**		P	**Pn**	**21 01 48.0**	**+1.6**
	68nm,1.2s,0.4nm							
FITZ	**Fitzroy Crossi**	**10.79**	**144**		P	**Pn**	**21 02 27.5**	**-0.3**
	0.8nm,0.3s,baz=336,slow=8.0,SNR=77							
FITZ					S	Sn	21 04 20.2	-7.1
	1.8nm,0.3s,baz=194,slow=19,SNR=12							
KASI	**Kota Agung**	**14.83**	**284**		P	**Pn**	**21 03 25.0**	**+2.2**
WRA	**Warramunga Arr**	**18.18**	**127**		P	**P**	**21 04 04.4**	**-0.4**
	0.2nm,0.3s,baz=301,slow=13,SNR=17							
WRA					S	Sn	21 07 11.8	-15
	0.1nm,0.3s,baz=306,slow=24,SNR=3.3							
ASAR	**Alice Springs**	**20.12**	**137**		P	**P**	**21 04 26.1**	**0.0**
	1.4nm,0.6s,baz=316,slow=9.6,SNR=24							
ASAR					S	**S**	**21 08 04.6**	**-5.1**
	2.1nm,0.9s,baz=304,slow=21,SNR=6.6							
PSI	**Prapat**	**23.36**	**300**		P	P	21 04 57.0	-3.6
	3.1nm,0.4s,baz=131,slow=11,SNR=7.5							
PSI					LR	LR	21 16 32.7	
	comp=Z,28nm,18.7s,baz=36,slow=43							
CMAR	**Chiang Mai Arr**	**34.02**	**325**		P	P	21 06 30.8	-4.9
	0.4nm,0.4s,baz=151,slow=6.8,SNR=4.5							
SONM	**Songino Array**	**58.09**	**350**		P	P	21 09 40.6	-4.0
	1.4nm,0.6s,baz=170,slow=8.7,SNR=9.6							
MKAR	**Makanchi Array**	**64.81**	**333**		P	P	21 10 25.8	-4.1
	0.5nm,0.4s,baz=143,slow=6.3,SNR=15							
ZALV	**Zalesovo Beam**	**69.42**	**339**		P	P	21 10 53.3	-5.6
	0.9nm,0.4s,baz=138,slow=6.2,SNR=7.0							
AKTO	**Aktyubinsk**	**79.55**	**325**		P	P	21 11 53.4	-4.5
	1.3nm,0.6s,baz=90,slow=5.1,SNR=4.7							
TORD	**Torodi Ar. Bea**	**118.47**	**280**	PKP		**PKPdf**	**21 18 36.3**	**-3.2**
	0.2nm,0.5s,baz=37,slow=2.3,SNR=8.6							

*ISCJB **29** 21:08:18.6±0.2, 38°.30N±0°.01×22°.06E±0°.02, h8km±2km, mb3.6/5, Error ellipse: s-maj=2.2km s-min=2.1km az=172.0*
*CSEM **29** 21:08:18.7±0.1, 38°.30N×22°.05E, h5km, MD3.5, Error ellipse: s-maj=1.9km s-min=1.7km az=78.0*
*ATH **29** 21:08:18.1, 38°.30N×22°.05E, h14km, MD3.5/27, ML3.2*
*THE **29** 21:08:18.8, 38°.30N×22°.05E, h0km, ML3.3/11, Error ellipse: s-maj=0.8km s-min=0.3km az=291.0*
*IDC **29** 21:08:25.9±3.4, 38°.35N×22°.12E, h65km±35km, mb3.4/6, mb1 3.4/8, mb1mx3.2/29, mbtmp3.3/8, ML3.0/2, Error ellipse: s-maj=28.2km s-min=18.9km az=157.0*

ISC 29 21:08:19.0±0.7, 38°.30N±0°.01×22°.06E±0°.01, h8km±4km, n170, σ0864/233, mb3.8/5, 3C-1D, Greece

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
					Op	ISC	h m s	ISC
TRIZ	**Trizonia**	**0.06**	**10**		P	**Pg**	**21 08 20.5**	**-0.3**
TRIZ					S	**Sg**	**21 08 21.8**	**-0.4**
TRIZ	**Trizonia**	**0.06**	**10**	*e*	PG	**Pg**	**21 08 20.6**	**-0.3**
TRIZ				*e*	SG	**Sg**	**21 08 22.4**	**+0.2**
TRIZ	**Trizonia**	**0.06**	**10**	*e*	Pg	**Pg**	**21 08 20.6**	**-0.3**
TRIZ					S	**Sg**	**21 08 21.8**	**-0.4**
TRIZ				*e*	Sg	Sg	21 08 22.4	+0.2
LAKA	**Lakka**	**0.09**	**225**		P	**Pg**	**21 08 21.1**	**-0.1**
LAKA					S	**Sg**	**21 08 22.6**	**-0.2**
LAKA	**Lakka**	**0.09**	**225**	*e*	PG	**Pg**	**21 08 21.1**	**-0.1**
LAKA				*e*	SG	**Sg**	**21 08 23.0**	**+0.2**
LAKA	**Lakka**	**0.09**	**225**		P	**Pg**	**21 08 21.1**	**-0.1**
LAKA					S	**Sg**	**21 08 22.6**	**-0.2**
LAKA				*e*	Sg	Sg	21 08 23.0	+0.2
KALE	**Kalithea**	**0.11**	**36**		P	**Pg**	**21 08 21.5**	**-0.1**
KALE					S	**Sg**	**21 08 23.4**	**+0.1**
KALE	**Kalithea**	**0.11**	**36**	*e*	PG	**Pg**	**21 08 21.5**	**-0.1**
KALE				*e*	SG	**Sg**	**21 08 23.8**	**+0.4**
KALE	**Kalithea**	**0.11**	**36**		P	**Pg**	**21 08 21.5**	**-0.1**
KALE					S	**Sg**	**21 08 23.5**	**+0.1**
PSA1	**Psathopyrgos**	**0.14**	**279**	*e*	PG	**Pg**	**21 08 21.8**	**-0.2**
PSA1				*e*	SG	**Sg**	**21 08 24.2**	**+0.2**
EFP	**Efpalio**	**0.17**	**316**		P	**Pg**	**21 08 22.4**	**-0.1**
EFP					S	**Sg**	**21 08 24.9**	**-0.1**
EFP	**Efpalio**	**0.17**	**316**	*e*	PG	**Pg**	**21 08 22.4**	**-0.1**
EFP				*e*	SG	**Sg**	**21 08 25.4**	**+0.4**
EFP	**Efpalio**	**0.17**	**316**		P	**Pg**	**21 08 22.4**	**-0.1**
EFP					S	**Sg**	**21 08 25.1**	**+0.1**
UPR	**University Cam**	**0.21**	**265**		P	**Pg**	**21 08 23.3**	**0.0**
UPR					S	**Sg**	**21 08 25.7**	**-0.5**
KLV	**Kalavryta, Ach**	**0.27**	**164**		P	**Pg**	**21 08 24.1**	**-0.2**
KLV					S	**Sg**	**21 08 28.2**	**+0.2**
KLV	**Kalavryta, Ach**	**0.27**	**164**	*e*	PG	**Pg**	**21 08 24.2**	**-0.1**
KLV				*e*	SG	**Sg**	**21 08 28.1**	**+0.1**
KLV	**Kalavryta, Ach**	**0.27**	**164**		P	**Pg**	**21 08 24.2**	**-0.1**
KLV					S	**Sg**	**

PYL	**PYLOS**	**1.43**	**190**	P	**Pn**	**21 08 44.8**	**-0.4**
PYL				S	**Sg**	**21 09 05.4**	**+0.5**
PYL	**PYLOS**	**1.43**	**190**	*e*PG	**Pn**	**21 08 44.7**	**-0.4**
PYL	**PYLOS**	**1.43**	**190**	*e*PG	**Pn**	**21 08 44.7**	**-0.4**
PYL	**PYLOS**	**1.43**	**190**	P	**Pn**	**21 08 44.8**	**-0.4**
PYL				S	**Sg**	**21 09 05.4**	**+0.5**
PTL	**Penteli**	**1.45**	**100**	P	**Pn**	**21 08 45.6**	**+0.1**
PTL	**Penteli**	**1.45**	**100**	*e*PG	**Pn**	**21 08 45.7**	**+0.2**
PTL	**Penteli**	**1.45**	**100**	P	**Pn**	**21 08 45.6**	**+0.1**
DYR	**Agios Nikonas**	**1.55**	**172**	P	**Pn**	**21 08 46.7**	**-0.2**
DYR	**Agios Nikonas**	**1.55**	**172**	*e*PG	**Pn**	**21 08 46.6**	**-0.3**
DYR	**Agios Nikonas**	**1.55**	**172**	*e*Pg	**Pn**	**21 08 46.6**	**-0.3**
JAN	**Janina**	**1.65**	**326**	P	**Pn**	**21 08 48.2**	**0.0**
JAN	**Janina**	**1.65**	**326**	*e*PB	**Pn**	**21 08 48.6**	**+0.4**
JAN	**Janina**	**1.65**	**326**	P	**Pn**	**21 08 48.2**	**0.0**
JAN	**Janina**	**1.65**	**326**	*e*Pb	**Pn**	**21 08 48.6**	**+0.4**
AOS	**Alonnisos**	**1.67**	**58**	P	**Pn**	**21 08 47.9**	**-0.6**
AOS	**Alonnisos**	**1.67**	**58**	P	**Pn**	**21 08 47.9**	**-0.6**
VLI	**Veliai**	**1.73**	**156**	P	**Pn**	**21 08 49.5**	**+0.2**
VLI				S	**Sb**	**21 09 13.2**	**+0.3**
VLI	**Veliai**	**1.73**	**156**	*e*PN	**Pn**	**21 08 49.9**	**+0.6**
VLI	**Veliai**	**1.73**	**156**	P	**Pn**	**21 08 49.5**	**+0.2**
VLI	**Veliai**	**1.73**	**156**	*e*Pn	**Pn**	**21 08 49.9**	**+0.6**
VLI				S	**Sb**	**21 09 13.2**	**+0.3**
IGT	**Igoumenitsa**	**1.82**	**313**	P	**Pn**	**21 08 51.0**	**+0.4**
IGT	**Igoumenitsa**	**1.82**	**313**	P	**Pn**	**21 08 51.0**	**+0.4**
MRMA	**Marmari**	**1.85**	**97**	P	**Pn**	**21 08 51.4**	**+0.5**
MRMA	**Marmari**	**1.85**	**97**	P	**Pn**	**21 08 51.4**	**+0.5**
KZN	**Kozani**	**2.01**	**354**	P	**Pn**	**21 08 53.9**	**+0.6**
KZN	**Kozani**	**2.01**	**354**	*e*PN	**Pn**	**21 08 53.8**	**+0.5**
KZN	**Kozani**	**2.01**	**354**	*e*Pn	**Pn**	**21 08 53.8**	**+0.5**
KYTH	**Kithira**	**2.17**	**159**	*e*PN	**Pn**	**21 08 56.7**	**+1.4**
KYTH	**Kithira**	**2.17**	**159**	*e*Pn	**Pn**	**21 08 56.7**	**+1.4**
SRN	**Sarande**	**2.25**	**315**	*e*PN	**Pg**	**21 09 00.9**	**-1.1**
SRN	**Sarande**	**2.25**	**315**	*e*Pn	**Pg**	**21 09 00.9**	**-1.1**
KEK	**Kerkira**	**2.25**	**309**	P	**Pn**	**21 08 57.2**	**+0.7**
KEK	**Kerkira**	**2.25**	**309**	P	**Pn**	**21 08 57.2**	**+0.7**
PLG	**Polygyros**	**2.33**	**27**	P	**Pn**	**21 08 57.5**	**-0.1**
PLG	**Polygyros**	**2.33**	**27**	*e*PB	**Pn**	**21 08 57.0**	**-0.6**
PLG	**Polygyros**	**2.33**	**27**	P	**Pn**	**21 08 57.5**	**-0.1**
KBN	**Korca**	**2.52**	**337**	*e*PN	**Pg**	**21 09 07.2**	**0.0**
OUR	**Ouranopolis**	**2.52**	**36**	P	**Pn**	**21 09 00.2**	**0.0**
OUR	**Ouranopolis**	**2.52**	**36**	P	**Pn**	**21 09 00.2**	**0.0**
ANKY	**Antikythira Is**	**2.63**	**157**	P	**Pn**	**21 09 02.3**	**+0.6**
ANKY	**Antikythira Is**	**2.63**	**157**	*e*PN	**Pn**	**21 09 02.6**	**+0.9**
ANKY	**Antikythira Is**	**2.63**	**157**	*e*Pn	**Pn**	**21 09 02.6**	**+0.9**
BIA	**Bitola**	**2.77**	**348**	*e*Pn	**Pb**	**21 09 08.7**	**0.0**
LIA	**Limnos Island**	**2.91**	**56**	*e*PN	**Pn**	**21 09 05.5**	**0.0**
LIA	**Limnos Island**	**2.91**	**56**	*e*Pn	**Pn**	**21 09 05.5**	**0.0**
KNT	**Kendrikon**	**2.93**	**13**	P	**Pn**	**21 09 06.3**	**+0.5**
KNT	**Kendrikon**	**2.93**	**13**	P	**Pn**	**21 09 06.3**	**+0.5**
APE	**Apeiranthos**	**3.02**	**113**	P	**Pn**	**21 09 07.7**	**+0.6**
APE	**Apeiranthos**	**3.02**	**113**	*e*PN	**Pn**	**21 09 07.7**	**+0.6**
APE	**Apeiranthos**	**3.02**	**113**	P	**Pn**	**21 09 07.7**	**+0.6**
VAY	**Valandovo**	**3.04**	**7**	*e*Pn	**Pn**	**21 09 07.4**	**+0.1**
SRS	**Serrai**	**3.05**	**22**	P	**Pn**	**21 09 07.7**	**+0.2**
SRS	**Serrai**	**3.05**	**22**	P	**Pn**	**21 09 07.7**	**+0.2**
CHOS	**Chios island**	**3.14**	**87**	P	**Pn**	**21 09 09.3**	**+0.5**
NVR	**Nevrokopi**	**3.34**	**24**	P	**Pn**	**21 09 12.2**	**+0.6**
NVR	**Nevrokopi**	**3.34**	**24**	*e*PN	**Pn**	**21 09 11.8**	**+0.2**
NVR	**Nevrokopi**	**3.34**	**24**	*e*Pn	**Pn**	**21 09 11.8**	**+0.2**
NVR	**Nevrokopi**	**3.34**	**24**	P	**Pn**	**21 09 12.2**	**+0.6**
VAM	**Vamos**	**3.36**	**149**	*e*PN	**Pn**	**21 09 12.2**	**+0.4**
VAM	**Vamos**	**3.36**	**149**	*e*Pn	**Pn**	**21 09 12.2**	**+0.4**
TIR	**Tirane**	**3.48**	**332**	*e*PN	**Pg**	**21 09 26.5**	**+0.9**
PHP	**Peshkopia**	**3.60**	**340**	*e*PN	**Pb**	**21 09 21.5**	**-1.4**
IDI	**Anoyia**	**3.77**	**142**	*e*PN	**Pn**	**21 09 18.2**	**+0.7**
IDI	**Anoyia**	**3.77**	**142**	*e*Pn	**Pn**	**21 09 18.2**	**+0.7**
SMG	**Samos**	**3.82**	**97**	*e*PN	**Pn**	**21 09 18.7**	**+0.6**
SMG	**Samos**	**3.82**	**97**	*e*Pn	**Pn**	**21 09 18.7**	**+0.6**
PUK	**Puka**	**4.09**	**337**	*e*PN	**Pb**	**21 09 28.1**	**-3.1**
LAST	**Lasithi**	**4.17**	**138**	*e*PN	**Pn**	**21 09 23.6**	**+0.6**
LAST	**Lasithi**	**4.17**	**138**	*e*Pn	**Pn**	**21 09 23.6**	**+0.6**
BCI	**Bajram Curri**	**4.33**	**340**	*e*PN	Pb	21 09 30.7	-4.7
ZKR	**Zakros**	**4.61**	**132**	*e*PN	**Pn**	**21 09 30.9**	**+1.9**
ZKR	**Zakros**	**4.61**	**132**	*e*Pn	**Pn**	**21 09 30.9**	**+1.9**
VOIR		**7.47**	**16**	⇑*i*P	Pn	21 10 13.1	+4.8
MLR	**Muntele Rosu**	**7.74**	**21**	⇑*i*P	Pn	21 10 16.8	+4.7
MLR	**Muntele Rosu** 0.1nm,0.3s,baz=144,slow=8.9,SNR=5.8	**7.74**	**21**	P	Pn	21 10 15.8	+3.7
PLOR	**Plostina**	**8.28**	**23**	⇓*i*P	Pn	21 10 23.3	+4.0
VRI	**Vrincioaia**	**8.31**	**23**	⇑*i*P	Pn	21 10 24.3	+4.5
BRTR	**Keskin Array B** 0.2nm,0.3s,baz=261,slow=13,SNR=6.9	**9.13**	**77**	P	**Pn**	**21 10 33.7**	**+2.6**
ESDC	**Sonseca Array** 0.2nm,0.3s,baz=76,slow=10,SNR=10	**20.25**	**282**	P	Pn	21 12 56.1	-0.7
NOA	**NORSAR Array B** 0.6nm,0.8s,baz=158,slow=10,SNR=3.7	**23.75**	**347**	P	**P**	**21 13 32.1**	**+0.6**
EKA	**Eskdalemuir Ar** 1.7nm,0.7s,baz=124,slow=10,SNR=10.0	**24.04**	**323**	P	**P**	**21 13 34.5**	**+0.3**
TORD	**Torodi Ar. Bea** 1.1nm,0.6s,baz=27,slow=9.1,SNR=9.9	**30.91**	**221**	P	**P**	**21 14 37.3**	**+1.1**
MKAR	**Makanchi Array** 1.0nm,0.6s,baz=279,slow=6.5,SNR=8.4	**44.20**	**59**	P	**P**	**21 16 27.7**	**-0.7**
ZALV	**Zalesovo Beam** 0.7nm,0.4s,baz=282,slow=7.2,SNR=3.4	**44.70**	**48**	P	**P**	**21 16 31.6**	**-0.6**

TAP 29 21:11:54.0,24°.18N×121°.75E,h8km±1km,ML1.8,D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=234	**0.17**	**236**	*e*P	Pg	21 11 57.3	-0.3
TWD				*e*S	Sg	21 11 59.9	-0.1
ENA	**Nanau** baz=359	**0.25**	**357**	P	Pg	21 11 59.2	+0.1
ENA				S	Sg	21 12 02.5	0.0
TWC	**Suao** baz=12	**0.44**	**11**	*e*P	Pg	21 12 02.7	+0.2
TWC				*e*S	Sg	21 12 08.3	0.0
WHF	**Hehuan Shan** baz=265	**0.45**	**266**	*e*P	Pb	21 12 04.2	-0.5
WHF				*e*S	Sg	21 12 10.1	+0.6
TWE	**Neicheng** baz=353	**0.55**	**352**	*e*P	Pg	21 12 04.7	0.0
NSK	**Sanguang** baz=324	**0.61**	**324**	*e*P	Pg	21 12 05.7	-0.2

TAP 29 21:12:02.1,24°.21N×121°.74E,h14km±1km,ML1.9,C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWD	**Chiawan** baz=224	**0.18**	**224**	P	Pg	21 12 06.2	-0.1
TWD				S	Sg	21 12 09.8	+0.5
ENA	**Nanau** baz=2.0	**0.21**	**1**	*i* P	Pg	21 12 07.0	+0.1
ENA				S	Sg	21 12 10.5	+0.4
NNS	**Nan Shan** baz=305	**0.40**	**304**	*e*P	Pb	21 12 11.2	0.0
TWC	**Suao** baz=8.0	**0.41**	**14**	*e*P	Pg	21 12 10.3	0.0
TWC				*e*S	Sg	21 12 15.3	-0.5
WHF	**Hehuan Shan** baz=262	**0.44**	**261**	*e*P	Pg	21 12 11.1	-0.3
WHF				S	Sg	21 12 17.9	+0.2
TWE	**Neicheng** baz=353	**0.51**	**353**	*e*P	Pg	21 12 12.4	+0.2
TWE				*e*S	Sb	21 12 19.8	-0.3
NSK	**Sanguang** baz=323	**0.58**	**323**	*e*P	Pb	21 12 14.5	+0.4
NSK				*e*S	Sb	21 12 22.7	+0.5

NIED ***29*** *21:18:00,30°.90N×130°.40E,h125km,Mw4.0 Best double couple: M0 1.13000×10^15 NP1:φs 32.00000°, δ 77.00000°, λ 108.00000°. NP2:φs 156.00000°, δ 22.00000°, λ 37.00000°.*

ISCJB ***29*** *21:18:13.1±0.3,30°.90N±0°.04×130°.40E±0°.06, h140km±2km, mb4.0/14, Error ellipse: s-maj=8.7km s-min=5.0km az=27.1*

NEIC ***29*** *21:18:15.0±0.6,30°.93N×130°.35E, h142km±6km, mb4.0/2, Error ellipse: s-maj=8.8km s-min=5.9km az=120.0*

JMA ***29*** *21:18:15.5±0.1,30°.92N×130°.38E, h125km±1km, M3.5*

JMA Felt I J1.

IDC ***29*** *21:18:15.1±1.5,30°.99N×130°.36E, h141km±12km, mb3.8/11, mb1 3.7/15, mb1mx3.6/31, mbtmp3.7/15, Error ellipse: s-maj=21.5km s-min=14.1km az=77.0*

ISC 29 21:18:14.3±0.6, 30°.91N±0°.05×130°.38E±0°.06, h134km±5km, n49, σ 0°.83/63, mb4.1/14, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JKC	**Kuchinoerabu**	**0.47**	**200**	P	**Pn**	**21 18 34.0**	**+0.3**
JKC				*e*S	**Sn**	**21 18 48.1**	**-0.3**
JTSR	**Tashiro 2**	**0.53**	**61**	P	**Pn**	**21 18 34.1**	**+0.1**
JTSR				S	**Sn**	**21 18 48.3**	**-0.7**
JTN	**Tanegashima 3**	**0.57**	**116**	P	**Pn**	**21 18 34.7**	**+0.4**
JTN				*e*S	**Sn**	**21 18 49.7**	**+0.3**
JSU	**Suzuyama**	**0.60**	**6**	P	**Pn**	**21 18 34.8**	**+0.3**
JSU				*e*S	**Sn**	**21 18 49.1**	**-0.7**
JSJ	**Shimokoshiki**	**0.96**	**323**	P	**Pn**	**21 18 37.4**	**+0.2**
JSJ				S	**Sn**	**21 18 53.8**	**-0.8**
JNAR	**Kushima--Naru**	**0.98**	**51**	P	**Pn**	**21 18 38.0**	**+0.7**
JNAR				S	**Sn**	**21 18 55.4**	**+0.5**
JNN	**Nakanoshima**	**1.15**	**203**	P	**Pn**	**21 18 39.7**	**+0.6**
JNN				*e*S	**Sn**	**21 18 58.4**	**+0.5**
JTZ	**Takazaki**	**1.16**	**31**	P	**Pn**	**21 18 39.7**	**+0.6**
JTZ				S	**Sn**	**21 18 58.1**	**+0.1**
JZO	**Okuchi**	**1.24**	**8**	P	**Pn**	**21 18 40.5**	**+0.6**
JZO				*e*S	**Sn**	**21 19 00.0**	**+0.5**
JIU2	**Izumi 2**	**1.67**	**13**	P	**Pn**	**21 18 45.7**	**+1.1**
JIU2				S	**Sn**	**21 19 08.8**	**+1.0**
JNU	**Nakatsue**	**2.25**	**11**	*e*Pn	**Pn**	**21 18 52.3**	**+0.8**
JNU				*e*Sn	**Sn**	**21 19 19.8**	**-0.4**
JNU	**Nakatsue** 20nm,0.3s,baz=220,slow=1.1,SNR=20	**2.25**	**11**	P	**Pn**	**21 18 52.5**	**+1.0**
JNU				S	**Sn**	**21 19 20.1**	**-0.1**
JOW	**Kunigami** 32nm,0.3s,baz=14,slow=17,SNR=13	**4.46**	**205**	*e*Pn	**Pn**	**21 19 19.9**	**-0.4**
JOW				*e*Sn	Sn	21 20 03.3	-8.3
KSAR	**Wonju Array Be**	**6.84**	**343**	P	**Pn**	**21 19 53.7**	**+1.7**
KSRS	**Korea Array** 0.6nm,0.3s,baz=162,slow=14,SNR=12	**6.84**	**343**	P	**Pn**	**21 19 53.7**	**+1.7**
MAJO	**Matsushiro**	**8.60**	**47**	*e*Pn	**Pn**	**21 20 16.5**	**+0.7**
MAJO				*e*Sn	**Sn**	**21 21 50.7**	**-0.4**
MJAR	**Matsushiro Arr**	**8.60**	**47**	P	**Pn**	**21 20 17.3**	**+1.6**
MJAR				S	**Sn**	**21 21 49.1**	**-2.0**
MJAR	**Matsushiro Arr** 0.9nm,0.3s,baz=239,slow=12,SNR=11	**8.60**	**47**	P	**Pn**	**21 20 17.3**	**+1.6**
MJAR				S	**Sn**	**21 21 49.1**	**-2.0**
YULB	**Yu-li** 0.5nm,0.3s,baz=228,slow=17,SNR=4.7	**11.02**	**229**	*e*Pn	**Pn**	**21 20 49.1**	**+0.9**
BJT	**Baijiatuan**	**14.71**	**312**	*e*P	**Pn**	**21 21 35.6**	**-0.1**
ASAJ	**Asahikawa**	**16.34**	**33**	*e*P	**Pn**	**21 21 55.2**	**-0.6**
ASAJ	**Asahikawa** 0.6nm,0.3s,baz=217,slow=10,SNR=4.3	**16.34**	**33**	P	**Pn**	**21 21 54.5**	**-1.3**
ENH	**Enshi**	**18.00**	**273**	*e*P	**P**	**21 22 14.4**	**-0.3**
SONM	**Songino Array**	**24.94**	**319**	P	**P**	**21 23 25.2**	**+0.1**
SONM	**Songino Array** 2.9nm,0.7s,baz=136,slow=10,SNR=18	**24.94**	**319**	P	**P**	**21 23 25.2**	**+0.1**
CHTO	**Chiang Mai**	**30.86**	**254**	*e*P	**P**	**21 24 17.7**	**-0.2**
BILL	**Bilibino** 1.1nm,0.3s	**42.65**	**19**	*e*P	**P**	21 25 55.1	-1.9
WRAB	**Tennant Creek** 3.7nm,1.1s	**50.69**	**175**	*e*P	**P**	**21 27 00.5**	**+0.3**
WRA	**Warramunga Arr**	**50.70**	**175**	P	**P**	**21 27 00.7**	**+0.4**
WRA	**Warramunga Arr** 0.7nm,0.7s,baz=355,slow=8.2,SNR=10	**50.70**	**175**	P	**P**	**21 27 00.7**	**+0.4**
KBL	**Kabul** 47nm,0.6s	**51.04**	**291**	*e*P	**P**	**21 27 02.3**	**-0.7**
ASAR	**Alice Springs**	**54.37**	**176**	P	**P**	**21 27 28.0**	**+0.7**
ASAR	**Alice Springs** 0.5nm,0.6s,baz=8.0,slow=14,SNR=10	**54.37**	**176**	P	**P**	**21 27 28.0**	**+0.7**
ILAR	**Eielson Array**	**59.44**	**30**	P	**P**	**21 28 03.5**	**+1.1**
ILAR	**Eielson Array** 0.4nm,0.7s,baz=276,slow=7.6,SNR=5.6	**59.44**	**30**	P	**P**	**21 28 03.5**	**+1.1**
SPITS	**Spitsbergen Ar**	**64.66**	**348**	P	**P**	**21 28 36.7**	**-0.4**
SPITS	**Spitsbergen Ar** 1.6nm,0.4s,baz=72,slow=6.3,SNR=9.8	**64.66**	**348**	P	**P**	**21 28 36.7**	**-0.4**
FINES	**FINESS Array B**	**69.74**	**330**	P	**P**	**21 29 08.7**	**-0.6**
FINES	**FINESS Array B** 6.4nm,0.5s,baz=64,slow=5.6,SNR=19	**69.74**	**330**	P	**P**	**21 29 08.7**	**-0.6**
AKASG	**Malin Array Be**	**73.22**	**319**	P	**P**	**21 29 29.9**	**-0.5**
AKASG	**Malin Array Be** 2.4nm,0.4s,baz=57,slow=6.5,SNR=4.6	**73.22**	**319**	P	**P**	**21 29 29.9**	**-0.5**
YKA	**Yellowknife Ar**	**73.50**	**26**	P	**P**	**21 29 32.2**	**+0.4**
YKA	**Yellowknife Ar** 0.6nm,0.6s,baz=305,slow=6.0,SNR=3.3	**73.50**	**26**	P	**P**	**21 29 32.2**	**+0.4**
HFS	**Hagfors**	**75.56**	**332**	P	**P**	**21 29 42.8**	**-1.0**
HFS	**Hagfors** 2.3nm,0.4s,baz=77,slow=6.5,SNR=6.1	**75.56**	**332**	P	**P**	**21 29 42.8**	**-1.0**
BRTR	**Keskin Array B**	**75.67**	**308**	P	**P**	**21 29 45.0**	**-0.1**
BRTR	**Keskin Array B** 2.4nm,0.7s,baz=108,slow=4.7,SNR=4.0	**75.67**	**308**	P	**P**	**21 29 45.0**	**-0.1**
NOA	**NORSAR Array B**	**75.96**	**334**	P	**P**	**21 29 45.2**	**-0.9**
NOA	**NORSAR Array B** 2.1nm,0.6s,baz=50,slow=5.6,SNR=6.6	**75.96**	**334**	P	**P**	**21 29 45.2**	**-0.9**

ISCJB ***29*** *21:21:59.8±0.9,43°.35N±0°.03×66°.39E±0°.02, h6km±5km, mb4.6/114, MS3.8/27, Error ellipse: s-maj=4.5km s-min=2.3km az=13.8*

IDC ***29*** *21:22:00.0±0.4,43°.12N×66°.32E, h0km, mb4.4/26, mb1 4.6/34, mb1mx4.5/41, mbtmp4.5/34, ML4.5/7, MS3.4/16, Ms1 3.4/16, ms1mx3.2/49, Error ellipse: s-maj=9.7km s-min=6.5km az=176.0*

NEIC ***29*** *21:22:00.5±2.0,43°.26N×66°.34E, h1km±13km, mb4.8/51, Error ellipse: s-maj=6.1km s-min=3.7km az=191.0*

NEIC Felt at Dzhusaly and Shieli. Felt [II] at Tashkent, Uzbekistan.

BJI ***29*** *21:22:01.7,43°.51N×66°.47E, h10km, mB4.7/18, mb4.7/30, Ms4.2/23, Ms7 4.0/22*

MOS ***29*** *21:22:03.9±0.9,43°.40N×66°.40E, h33km, mb4.8/63, Error ellipse: s-maj=6.4km s-min=3.8km az=36.2*

NNC ***29*** *21:22:06.4±0.9,43°.50N×66°.49E, h34km±10km, mb5.1, mpv4.6, Error ellipse: s-maj=7.0km s-min=2.6km az=35.0*

SZGRF ***29*** *21:22:19.6,43°.22N×63°.78E, h20km, mb4.7, Western Kazakhstan*

ISC 29 21:22:03.0±0.4, 43°.30N±0°.04×66°.34E±0°.03, h19km±1km, h19km: pP-P, n436, σ 1°.49/506, mb4.7/116, MS3.7/28, 94C-22D, Central Kazakhstan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KK31	**Karatay Array** 38nm,0.2s,baz=272,slow=15,SNR=5490	**3.06**	**92**	⇓Pn	**Pn**	**21 22 51.3**	**+1.1**
KK31				⇓Sn	**Sn**	**21 23 25.8**	**-0.5**
KKAR	**Karatay Array** 247nm,0.5s,baz=162,slow=108,SNR=6.1	**3.06**	**92**	*e*Pn	**Pn**	**21 22 51.3**	**+1.0**
KK31				⇓Lg	Lg	21 23 40.3	
KKAR				*e*		21 23 28.1	
KKAR	**Karatay Array**	**3.06**	**92**	*e*Pn	**Pn**	**21 22 51.3**	**+1.0**
KKAR				*e*Sn	**Sn**	**21 23 28.1**	**+1.9**
EKS2	**Erkin-Say**	**5.49**	**94**	*e*PN	**Pn**	**21 23 24.8**	**+1.0**
EKS2				*e*		21 24 27.8	
EKS2	**Erkin-Say**	**5.49**	**94**	*e*Pn	**Pn**	**21 23 24.8**	**+1.0**
EKS2				*e*Sn	**Sn**	**21 24 27.8**	**+1.3**
EKS2	**Erkin-Say** SNR=32	**5.49**	**94**	P	**Pn**	**21 23 25.0**	**+1.2**
AML	**Almayashu**	**5.54**	**100**	*i* PN	**Pn**	**21 23 26.5**	**+1.7**
AML	**Almayashu** SNR=22	**5.54**	**100**	P	**Pn**	**21 23 26.5**	**+1.7**
USP	**Ospenovka**	**5.96**	**88**	*i* PN	**Pn**	**21 23 30.8**	**+0.7**
USP	**Ospenovka** SNR=108	**5.96**	**88**	P	**Pn**	**21 23 30.8**	**+0.7**
AAK	**Ala-Archa**	**6.02**	**94**	*e*PN	**Pn**	**21 23 32.6**	**+1.5**
AAK						21 25 09.5	
AAK	**Ala-Archa**	**6.02**	**94**	*e*Pn	**Pn**	**21 23 32.5**	**+1.5**
AAK				*e*Sn	**Sn**	**21 24 39.0**	**-0.5**
AAK				Lg	Lg	21 25 09.5	
AAK	**Ala-Archa** SNR=30	**6.02**	**94**	P	**Pn**	**21 23 32.7**	**+1.6**
AAK	**Ala-Archa** 12nm,0.3s,baz=265,slow=1.9,SNR=40	**6.02**	**94**	Pn	**Pn**	**21 23 32.7**	**+1.5**
AAK				Lg	Lg	21 25 09.5	
FRU	**Bishkek** 32nm,0.3s,baz=342,slow=20,SNR=5.0	**6.08**	**92**	*e*PN	**Pn**	**21 23 32.0**	**+0.2**
FRU				MLR	MLR		
CHMS	**Chumysh** comp=Z,2μm,11.0s	**6.16**	**90**	*i* PN	**Pn**	**21 23 33.8**	**+0.9**
CHMS	**Chumysh** SNR=32	**6.16**	**90**	P	**Pn**	**21 23 33.8**	**+0.9**
KBK	**Karagaybulak**	**6.35**	**93**	*i* PN	**Pn**	**21 23 36.9**	**+1.3**
KBK	**Karagaybulak** SNR=17	**6.35**	**93**	P	**Pn**	**21 23 36.9**	**+1.3**
KZA	**Kyzart**	**6.68**	**98**	*i* PN	**Pn**	**21 23 41.6**	**+1.2**
KZA	**Kyzart** SNR=16	**6.68**	**98**	P	**Pn**	**21 23 41.6**	**+1.2**
TKM2	**Tokmak 2** comp=Z,13nm,0.3s	**6.79**	**90**	⇑Pn	**Pn**	**21 23 42.4**	**+0.8**
TKM2				⇑Lg	Lg	21 25 38.3	
TKM2	**Tokmak 2** comp=Z,241nm,0.7s	**6.79**	**90**	*e*PN	**Pn**	**21 23 42.2**	**+0.5**
TKM2	**Tokmak 2**	**6.79**	**90**	*e*Pn	**Pn**	**21 23 42.2**	**+0.5**
TKM2				Sn	**Sn**	**21 24 58.5**	**+0.1**
TKM2	**Tokmak 2** SNR=14	**6.79**	**90**	P	**Pn**	**21 23 42.6**	**+0.9**
ULHL	**Ulahol**	**7.36**	**95**	*i* P	**Pn**	**21 23 51.6**	**+2.0**
ULHL	**Ulahol** SNR=11	**7.36**	**95**	P	**Pn**	**21 23 51.6**	**+2.0**
AB31	**Akbulak array** comp=Z,13nm,0.4s,baz=159,slow=11,SNR=657	**7.42**	**326**	Pn	**Pn**	**21 23 50.2**	**+0.1**
AB31	comp=Z,82nm,0.7s,baz=151,slow=24,SNR=2.9			⇑Sn	**Sn**	**21 25 12.8**	**-0.9**
AB31	comp=Z,201nm,0.7s,baz=150,slow=28			⇑Lg	Lg	21 25 58.7	
ABKAR	**Akbulak array**	**7.42**	**326**	*e*Pn	**Pn**	**21 23 50.1**	**0.0**
ABKAR				*e*Sn	**Sn**	**21 25 11.8**	**-1.9**
KNDC	**Almaty** comp=Z,41nm,0.5s	**7.76**	**87**	⇑Pg	Pb	21 24 26.1	+9.2
KNDC	comp=Z,600nm,0.7s			⇓Lg	Lg	21 26 08.8	
KSH	**Kashi**	**8.17**	**114**	P	**Pn**	**21 23 59.5**	**-1.0**
KSH				*e*S	**Sn**	**21 25 28.5**	**-3.8**
KSH	comp=Z,68nm,0.4s			pmax	pmax		
KSH	comp=Z,4μm,10.7s			LR	LR		
KBL	**Kabul**	**9.00**	**166**	*e*P	**Pn**	**21 24 11.5**	**-0.6**
KBL						21 25 48.8	
KBL	**Kabul**	**9.00**	**166**	*e*Pn	**Pn**	**21 24 11.4**	**-0.6**
KBL				Sn	**Sn**	**21 25 48.8**	**-4.1**
AKTO	**Aktyubinsk** comp=Z,22nm,0.8s	**9.13**	**324**	⇓Pn	**Pn**	**21 24 13.9**	**+0.3**
AKTO	comp=Z,77nm,0.8s			⇓Sn	**Sn**	**21 25 55.1**	**-0.6**
AKTO	comp=Z,338nm,1.1s			⇑Lg	Lg	21 26 54.2	
AKTO	**Aktyubinsk**	**9.13**	**324**	P	**Pn**	**21 24 14.1**	**+0.6**
AKTO						21 25 53.8	
AKTO	comp=Z,1.0nm,0.3s			pmax	pmax		
AKTO	comp=N,5.0nm,0.3s			smax	smax		
AKTO	comp=Z,191nm,19.7s			MLR	MLR		
AKTO	**Aktyubinsk**	**9.13**	**324**	Pn	**Pn**	**21 24 14.1**	**+0.6**
AKTO				Sn	**Sn**	**21 25 53.8**	**-1.9**
AKTO				Lg	Lg	21 26 54.1	
AKTO	**Aktyubinsk** comp=Z,1.2nm,0.3s,baz=136,slow=12,SNR=43	**9.13**	**324**	Pn	**Pn**	**21 24 14.1**	**+0.6**
AKTO	comp=Z,5.1nm,0.3s,baz=117,slow=16,SNR=3.7			Sn	**Sn**	**21 25 53.8**	**-1.9**
AKTO	comp=Z,4.1nm,0.3s,baz=29,slow=19,SNR=4.4			Lg	Lg	21 26 54.1	
AKTO				LR	LR	21 28 20.4	
ZRNK	**Zerenda** comp=Z,191nm,19.7s,baz=144,slow=41 comp=Z,36nm,0.8s	**9.82**	**9**	⇓Pn	**Pn**	**21 24 22.7**	**-0.3**
ZRNK	comp=Z,45nm,0.7s			⇑Sn	**Sn**	**21 26 08.9**	**-3.7**
ZRNK	comp=Z,376nm,1.2s			⇑Lg	Lg	21 27 10.5	
VOSK	**Vostochnaya** comp=Z,27nm,0.5s	**9.92**	**17**	⇓Pn	**Pn**	**21 24 24.2**	**-0.3**
VOSK	comp=Z,24nm,0.4s			⇑Sn	**Sn**	**21 26 12.1**	**-3.1**
VOSK	comp=Z,221nm,0.9s			⇑Lg	Lg	21 27 14.8	
BVA0	**Borovoye Array** comp=Z,52nm,0.7s,baz=183,slow=13,SNR=313	**10.10**	**14**	⇑Pn	**Pn**	**21 24 26.6**	**-0.2**
BVA0	comp=Z,96nm,0.7s,baz=202,slow=23,SNR=7.5			⇓Sn	**Sn**	**21 26 16.0**	**-3.4**
BVA0	comp=Z,292nm,1.1s			⇓Lg	Lg	21 27 19.5	
BVAR	**Borovoye Array**	**10.10**	**14**	P	**Pn**	**21 24 27.5**	**+0.7**
BVAR						21 26 15.9	
BVAR	comp=Z,7.0nm,0.3s			pmax	pmax		
BVAR	comp=N,12nm,0.3s			smax	smax		
BVAR	comp=Z,396nm,18.8s			MLR	MLR		
BVAR	**Borovoye Array**	**10.10**	**14**	Pn	**Pn**	**21 24 27.5**	**+0.7**
BVAR				Sn	**Sn**	**21 26 15.9**	**-3.5**
BVAR				Lg	Lg	21 27 30.8	
BVAR	**Borovoye Array** comp=Z,6.8nm,0.3s,baz=184,slow=14,SNR=315	**10.10**	**14**	Pn	**Pn**	**21 24 27.5**	**+0.7**
BVAR	comp=Z,12nm,0.3s,baz=194,slow=23,SNR=4.8			Sn	**Sn**	**21 26 15.9**	**-3.5**
BVAR	comp=Z,3.9nm,0.3s,baz=196,slow=29,SNR=3.3			Lg	Lg	21 27 30.8	
BVAR	comp=Z,396nm,18.8s,baz=338,slow=39			LR	LR	21 28 42.9	
BRVK

MAK pmax pmax
comp=Z,230nm,1.8s
MAK MLR MLR
comp=Z,187nm,10.0s
SVE Sverdlovsk 14.02 347 || *e*P **Pn 21 25 18.8 -1.6**
SVE *e*S Sn 21 27 48.0 -7.2
SVE pmax pmax
comp=Z,38nm,0.8s
SVE MLR MLR
comp=Z,1μm,11.0s
ARU Arti 14.05 342 *d i*P **Pn 21 25 19.2 -1.6**
ARU S **Sn 21 27 55.3 -0.8**
ARU pmax pmax
comp=Z,18nm,0.7s
ARU MLR MLR
comp=Z,214nm,7.0s
SDNR Sundarnagar 14.48 141 *e*4 21 25 22.0
SDNR *e*S **Sn 21 28 06.0 -0.8**
SMLA Simla 14.88 141 *ex* x 21 25 27.4
SMLA AMB AMB 21 25 37.6
comp=Z,19nm,0.0s
SMLA *i* 4 21 28 00.0
WMQ Urumqi 15.49 81 P **Pn 21 25 39.5 -0.8**
WMQ pP **P 21 25 42.8 -1.8**
WMQ sP sP 21 25 46.0 -6.6
WMQ PP **pP 21 25 52.0 +1.9**
WMQ *e*S **Sn 21 28 31.0 -0.3**
WMQ pmax pmax
comp=Z,17nm,0.6s
WMQ pmax pmax
comp=Z,130nm,4.2s
WMQ LR LR
comp=N,550nm,9.5s
WMQ LR LR
comp=E,710nm,15.2s
WMQ LR LR
comp=Z,530nm,16.3s
DGRG David-gareji 15.61 270 P **Pn 21 25 39.8 -2.0**
NVS Novosibirsk 15.94 38 *e*P **Pn 21 25 44.2 -1.8**
NVS *e*S Sn 21 28 32.6 -9.5
NVS pmax pmax
comp=Z,14nm,0.9s
NVS pmax pmax
comp=N,5.0nm,0.7s
NVS pmax pmax
comp=E,7.0nm,0.9s
NVS smax smax
comp=N,3.0nm,0.4s
NVS smax smax
comp=E,23nm,0.7s
DDI Dehra Dun 15.97 140 *e*PKP **Pn 21 25 47.9 +1.2**
DDI *e*4 21 28 30.0
TBLG Delisi 16.00 272 *e*P **Pn 21 25 44.8 -2.1**
TBLG Delisi 16.00 272 P **Pn 21 25 44.8 -2.1**
ZAA0 Zalesovo Array 16.15 42 *e*Pn **Pn 21 25 48.1 -0.7**
ZAA0 *e*Sn Sn 21 28 35.5 -12
ZALV Zalesovo Beam 16.15 42 P **Pn 21 25 48.4 -0.3**
ZALV pmax pmax
comp=Z,1.0nm,0.3s
ZALV MLR MLR
comp=Z,128nm,19.4s
ZALV Zalesovo Beam 16.15 42 Pn **Pn 21 25 48.4 -0.3**
ZALV Sn **S 21 28 56.7 -3.5**
ZALV Zalesovo Beam 16.15 42 Pn **Pn 21 25 48.4 -0.3**
comp=Z,1.1nm,0.3s,baz=241,slow=12,SNR=18
ZALV Sn **S 21 28 56.7 -3.5**
comp=Z,1.7nm,0.3s,baz=240,slow=23,SNR=8.0
ZALV LR LR 21 32 43.5
comp=Z,128nm,19.4s,baz=251,slow=40
GNI Garni 16.43 266 *e*Pn **Pn 21 25 50.0 -2.5**
comp=Z,27nm,0.8s
GNI Garni 16.43 266 Pn **Pn 21 25 50.7 -1.8**
comp=Z,2.1nm,0.3s,baz=26,slow=8.0,SNR=15
GNI LR LR 21 33 19.4
comp=Z,72nm,20.5s,baz=75,slow=41
ONI Oni 16.77 275 P **Pn 21 25 55.7 -1.0**
GOF Gofitskoye 16.80 284 *e*P **Pn 21 25 57.3 +0.3**
GOF *e*S **Sn 21 28 58.2 -4.9**
GOF pmax pmax
comp=Z,70nm,1.1s
GOF smax smax
comp=E,40nm,0.8s
GOF smax smax
comp=N,80nm,1.0s
AKH Akhalkalaki 16.99 271 P **Pn 21 25 58.5 -1.1**
KBZ Khabaz 17.00 280 P **Pn 21 25 56.8 -2.8**
KBZ pmax pmax
comp=Z,2.0nm,0.3s
KBZ MLR MLR
comp=Z,87nm,19.2s
KBZ Khabaz 17.00 280 Pn **Pn 21 25 56.8 -2.8**
KBZ Khabaz 17.00 280 Pn **Pn 21 25 56.8 -2.8**
comp=Z,2.1nm,0.3s,baz=92,slow=9.5,SNR=47
KBZ LR LR 21 34 07.7
comp=Z,87nm,19.2s,baz=276,slow=43
SOKR Solikamsk 17.31 344 *c i*P **P 21 26 04.1 -0.5**
SOKR S Sn 21 29 05.2 -10
SOKR pmax pmax
comp=Z,20nm,1.2s
SOKR MLR MLR
comp=Z,340nm,16.0s
SOC Sochi 19.31 280 *e*P **P 21 26 27.5 +0.7**
SOC *e* 21 30 01.6
SOC pmax pmax
comp=Z,28nm,1.0s
SOC MLR MLR
comp=Z,130nm,15.0s
VORD Divnogorie 19.85 302 *e*P **P 21 26 32.9 +0.3**
VORD pmax pmax
comp=Z,20nm,0.9s
VORD pmax pmax
comp=N,10.0nm,0.6s
VORD pmax pmax
comp=E,40nm,0.8s
VORD MLR MLR
comp=Z,100nm,11.0s
VORD MLR MLR
comp=N,150nm,17.0s
VORD MLR MLR
comp=E,90nm,12.0s
VSR Storozhevoye 19.98 303 *e*P **P 21 26 33.6 -0.4**
VSR *e*S S 21 30 10.7 -7.1
VSR pmax pmax
comp=Z,20nm,0.8s
VSR pmax pmax
comp=N,8.0nm,0.9s
VSR pmax pmax
comp=E,30nm,0.9s
VSR smax smax
comp=Z,60nm,3.2s
VSR smax smax
comp=N,160nm,2.7s
VSR smax smax
comp=E,90nm,3.0s
VSR MLR MLR
comp=Z,270nm,14.0s
VSR MLR MLR
comp=N,60nm,12.0s
VSR MLR MLR
comp=E,190nm,15.0s
PYUN Piuthan 20.26 133 *e*P **P 21 26 36.4 -1.1**
comp=E,155nm,0.6s
DANN Dangsing 20.48 131 *e*P **P 21 26 39.7 -0.2**
comp=E,106nm,0.5s
KBD Kabd 20.55 233 *e*P **P 21 26 40.5 +0.1**
KBD AMb AMB 21 26 41.9
comp=Z,86nm,0.8s
NAY Al-Naaiem 20.76 234 *e*P **P 21 26 42.6 0.0**
NAY AMb AMB 21 26 44.1
comp=Z,45nm,1.0s
ANN Anapa 20.79 284 *e*P **P 21 26 42.9 +0.1**
ANN *e*S **S 21 30 35.1 +1.3**
ANN pmax pmax
comp=Z,27nm,0.8s
ANN MLR MLR
comp=N,217nm,16.0s
ANN MLR MLR
comp=E,141nm,16.0s
ANN MLR MLR
comp=Z,199nm,16.0s
RDF Al-Radifah 20.82 233 *e*P **P 21 26 43.7 +0.4**
RDF AMb AMB 21 26 44.9
comp=Z,95nm,0.7s
KOLN Koldanda 20.85 132 *e*P **P 21 26 43.1 -0.7**
comp=Z,86nm,0.5s
MALT Malatya 21.66 266 *e*P P 21 27 09.2 +17

KKN Kakani 21.76 129 *e*P **P 21 26 53.5 -0.2**
comp=Z,51nm,0.6s
DMN Daman 21.81 130 *e*P **P 21 26 53.7 -0.5**
comp=Z,33nm,0.5s
PKIN Phulchoki 21.99 129 *e*P **P 21 26 55.9 -0.3**
comp=Z,68nm,0.6s
PKI Pulchoki 22.00 129 *e*P **P 21 26 56.6 +0.2**
comp=Z,93nm,0.6s
BHPL Bhopal 22.01 152 *e*PKP **P** 21 26 54.9 -1.2
BHPL AMB AMB 21 26 59.5
comp=Z,20nm,0.4s
BHPL *e*S **S 21 30 53.0 -5.2**
GUN Gumba 22.02 128 *e*P **P 21 26 56.7 +0.2**
comp=Z,179nm,0.9s
MOS Moscow 22.22 314 *e*P **P 21 26 53.9 -4.2**
MOS *e*S **S 21 30 55.1 -6.6**
MOS pmax pmax
comp=Z,62nm,1.0s
MOS pmax pmax
comp=Z,113nm,1.3s
JIRN Jiri 22.38 128 *e*P **P 21 27 00.0 -0.5**
comp=Z,94nm,0.4s
OBN Obninsk 22.57 312 *c i*P **P 21 27 02.3 +0.5**
OBN *i* 21 27 06.8
OBN pmax pmax
comp=Z,99nm,1.3s
OBN MLR MLR
comp=Z,100nm,16.0s
SIM Simferopol' 23.11 285 *c i*P **P 21 27 07.0 -0.6**
SIM pmax pmax
comp=Z,31nm,1.2s
SIM MLR MLR
comp=Z,62μm,17.6s
RAMN Ramite 23.16 128 *e*P **P 21 27 07.7 -0.8**
comp=Z,91nm,0.6s
TAPN Taplejung 23.51 126 *e*P **P 21 27 12.4 +0.4**
comp=Z,60nm,0.8s
ODAN Odare 23.68 127 *e*P **P 21 27 13.9 +0.2**
comp=Z,64nm,0.9s
LSA Lhasa 24.01 116 *e*P **P 21 27 18.7 +1.6**
LSA pmax pmax
comp=Z,17nm,0.7s
LSA Lhasa 24.01 116 *e*P **P 21 27 18.7 +1.6**
comp=Z,17nm,0.7s
BR131 Keskin Array S 24.66 273 *e*P **P 21 27 23.1 +0.5**
comp=Z,14nm,0.8s
BRTR Keskin Array B 24.66 273 P **P 21 27 23.1 +0.5**
BRTR Keskin Array B 24.66 273 P **P 21 27 23.1 +0.5**
comp=Z,18nm,0.9s,baz=85,slow=8.6,SNR=74
MOY Mondy 24.67 58 *e*P **P 21 27 25.1 +2.6**
ZALF Zalf 24.95 255 *e*P **P 21 27 26.8 +1.7**
ANTO Ankara 25.23 274 ||P **P 21 27 28.9 +1.3**
ANTO Ankara 25.23 274 *e*P **P 21 27 28.7 +1.1**
comp=Z,20nm,0.8s
ANTO Ankara 25.23 274 ||*i*P **P 21 27 28.9 +1.3**
BOK Bokaro 25.26 134 *e*PKP **P 21 27 29.8 +1.8**
BOK AMB AMB 21 27 32.9
comp=Z,28nm,1.0s
BOK *e*4 21 32 54.8
GTA Gaotai 25.32 87 *e*P **P 21 27 29.3 +0.8**
GTA pP **pP 21 27 34.5 +0.1**
GTA sP **sP 21 27 37.0 +0.2**
GTA S **S 21 31 54.8 +1.0**
GTA sS **sS 21 32 03.3 -0.2**
GTA pmax pmax
comp=Z,3.0nm,0.8s
GTA LR LR
comp=N,120nm,18.1s
GTA LR LR
comp=E,160nm,14.7s
GTA LR LR
comp=Z,160nm,13.3s
TOTH TOTAH 25.36 257 *e*P **P 21 27 32.0 +3.2**
SALA Sala 25.49 255 *e*P **P 21 27 32.4 +2.3**
BRBR Barbar 25.67 258 *e*P **P 21 27 33.5 +1.7**
ZAK Zakamensk 26.03 61 *e*P **P 21 27 36.2 +1.4**
ZAK pmax pmax
comp=Z,3.0nm,1.0s
TCHB Talchebab 26.05 256 *e*P **P 21 27 36.8 +1.7**
AKASG Malin Array Be 26.15 299 P **P 21 27 35.8 0.0**
AKASG pmax pmax
comp=Z,11nm,0.7s
AKASG Malin Array Be 26.15 299 P **P 21 27 35.8 0.0**
AKASG Malin Array Be 26.15 299 P **P 21 27 35.8 0.0**
comp=Z,11nm,0.7s,baz=79,slow=8.3,SNR=34
AK02 Malin Array Si 26.16 299 *e*P **P 21 27 36.0 +0.1**
KIEV Kiev 26.16 299 *e*P **P 21 27 36.2 +0.4**
KIEV pmax pmax
comp=Z,14nm,0.7s
KIEV Kiev 26.16 299 *e*P **P 21 27 36.2 +0.4**
comp=Z,14nm,0.7s
RAYN Ar Rayn 26.17 228 *e*P **P 21 27 36.6 +0.3**
comp=Z,7.0nm,0.8s
MMAI Mount Meron Ar 26.27 257 P **P 21 27 37.5 +0.4**
MMAI Mount Meron Ar 26.27 257 P **P 21 27 37.5 +0.4**
comp=Z,7.9nm,1.0s,baz=65,slow=8.3,SNR=5.3
TLY Talaya 26.32 58 *e*P **P 21 27 37.6 +0.3**
TLY pmax pmax
comp=Z,5.0nm,0.8s
TLY MLR MLR
comp=Z,91nm,12.0s
CFR Carcaliu 27.27 287 ⇑P **P 21 27 46.7 +0.8**
CFR Carcaliu 27.27 287 ⇑*i*P **P 21 27 46.7 +0.8**
SHL Shillong 27.34 122 *e*PKP **P 21 27 50.6 +3.7**
VRI Vrincioaia 28.13 289 ||P **P 21 27 55.5 +1.9**
VRI Vrincioaia 28.13 289 ||*i*P **P 21 27 55.5 +1.9**
SONM Songino Array 28.18 67 P **P 21 27 55.1 +0.9**
SONM Songino Array 28.18 67 P **P 21 27 55.1 +0.9**
comp=Z,1.2nm,0.7s,baz=273,slow=9.2,SNR=8.1
PLOR Plostina 28.19 289 ⇑P **P 21 27 56.0 +1.8**
PLOR Plostina 28.19 289 ⇑*i*P **P 21 27 56.0 +1.8**
JOF Joensuu 28.21 326 *e*P **P 21 27 55.2 +1.1**
JOF Joensuu 28.21 326 *ep* **P 21 27 55.2 +1.1**
ULN Ulaanbaatar 28.61 67 *e*P **P 21 27 58.8 +0.7**
comp=Z,11nm,0.7s
MLR Muntele Rosu 28.74 289 P **P 21 28 01.2 +2.1**
MLR Muntele Rosu 28.74 289 ⇑*i*P **P 21 28 01.1 +1.9**
MLR Muntele Rosu 28.74 289 P **P 21 28 01.2 +2.1**
comp=Z,1.2nm,0.7s
MLR LR LR 21 41 52.1
comp=Z,45nm,19.0s,baz=64,slow=41
BURAR Bucovina Array 28.92 293 ⇑*i*P **P 21 28 02.4 +1.7**
BUR08 Bucovina Ar. S 28.93 293 *e*P **P 21 28 01.6 +0.8**
VOIR 29.37 289 ||P **P 21 28 05.6 +0.9**
VOIR 29.37 289 ||*i*P **P 21 28 05.6 +0.9**
LVV L'vov 29.50 298 *e*P **P 21 28 06.2 +0.5**
LZH Lanzhou 29.55 91 *e*P **P 21 28 06.3 -0.2**
LZH pP **pP 21 28 10.0 -2.5**
LZH sP **sP 21 28 13.3 -1.6**
LZH pmax pmax
comp=Z,14nm,1.0s
LZH LR LR
comp=N,150nm,10.2s
LZH LR LR
comp=E,290nm,17.7s
LZH LR LR
comp=Z,140nm,12.2s
ARR Arges 29.67 289 ⇑*i*P **P 21 28 08.9 +1.6**
FIA1 FINESS Array S 29.89 321 *e*P **P 21 28 08.2 -0.8**
FINES FINESS Array B 29.89 321 P **P 21 28 09.2 +0.2**
FINES FINESS Array B 29.89 321 P **P 21 28 09.2 +0.2**
comp=Z,2.9nm,0.8s,baz=127,slow=8.8,SNR=13
FINES LR LR 21 40 36.0
comp=Z,164nm,18.0s,baz=98,slow=37
APA Apatity 29.98 335 ||*e*P **P 21 28 10.3 +0.6**
APA MLR MLR
comp=Z,300nm,9.0s
SUW Suwalki 30.01 306 *e*P **P 21 28 11.0 +0.9**
KAF Kangasniemi 30.01 323 *e*P **P 21 28 09.6 -0.5**
KAF Kangasniemi 30.01 323 *ep* **P 21 28 09.6 -0.5**
LOT Lotru 30.25 289 ⇑*i*P **P 21 28 13.6 +1.1**
KWP Kalwaria Pacla 30.37 297 ⇑P **P 21 28 15.3 +1.8**
KWP Kalwaria Pacla 30.37 297 *e*P **P 21 28 13.5 0.0**
comp=Z,18nm,1.0s
KWP Kalwaria Pacla 30.37 297 ⇑*i*P **P 21 28 15.3 +1.8**
KWP Kalwaria Pacla 30.37 297 *e*P **P 21 28 15.1 +1.6**
TRPA Tarpa 30.64 295 ||*i*P **P 21 28 17.7 +1.9**
KOLS Kolonicke sedl 30.72 296 *e*P **P 21 28 18.0 +1.4**
KOLS pmax pmax
comp=Z,4.0nm,1.0s
KOLS Kolonicke sedl 30.72 296 *e*P **P 21 28 18.0 +1.4**
CRVS Cervenica-Dubn 31.26 296 *e*P **P 21 28 19.4 -1.9**
CRVS pmax pmax
comp=Z,2.0nm,0.7s
CRVS Cervenica-Dubn 31.26 296 *e*P **P 21 28 19.4 -1.9**

VTS Vitosha 31.32 284 ⇑P **P 21 28 23.5 +1.4**
VTS Vitosha 31.32 284 ⇑*i*P **P 21 28 23.5 +1.4**
STHS Stebnicka Huta 31.34 297 *e*P **P 21 28 22.8 +0.8**
STHS pmax pmax
comp=Z,3.0nm,0.9s
STHS Stebnicka Huta 31.34 297 *e*P **P 21 28 22.8 +0.8**
APE Apeiranthos 31.56 273 ⇑P **P 21 28 24.7 +0.6**
APE Apeiranthos 31.56 273 *e*P **P 21 28 24.7 +0.6**
APE Apeiranthos 31.56 273 ⇑*i*P **P 21 28 24.7 +0.6**
BZS Buzias 31.70 290 ⇑P **P 21 28 25.3 +0.1**
BZS Buzias 31.70 290 ⇑*i*P **P 21 28 25.3 +0.1**
PLG Polygyros 31.84 280 *e*P **P 21 28 27.6 +1.1**
ZKR Zakros 31.90 269 *e*P **P 21 28 27.6 +0.5**
NIE Niedzica 31.94 297 *e*P **P 21 28 30.1 +2.8**
NIE Niedzica 31.94 297 *e*P **P 21 28 30.1 +2.8**
KECS Kecovo 31.95 296 *e*P **P 21 28 29.5 +2.1**
KECS pmax pmax
comp=Z,3.0nm,0.8s
KECS Kecovo 31.95 296 *e*P **P 21 28 29.5 +2.1**
CD2 Chengdu 32.04 100 *e*P P 21 28 32.8 +4.4
CD2 pP pP 21 28 37.0 +2.7
CD2 sP sP 21 28 39.8 +3.1
CD2 PP **PP 21 29 39.0 -1.8**
CD2 S **S 21 33 42.8 +3.5**
CD2 sS sS 21 33 50.0 +0.9
CD2 pmax pmax
comp=Z,10.0nm,0.6s
CD2 pmax pmax
comp=Z,40nm,4.8s
CD2 LR LR
comp=E,290nm,14.3s
CD2 LR LR
comp=Z,160nm,14.4s
OJC Ojcow 32.19 299 ⇑*i*P **P 21 28 30.5 +1.1**
OJC Ojcow 32.19 299 *i* P **P 21 28 30.5 +1.1**
OJC *ep*P **pP 21 28 33.4 -2.0**
LAST Lasithi 32.42 269 *e*P **P 21 28 31.8 +0.1**
SIVA Sivas 32.97 270 *e*P **P 21 28 37.1 +0.7**
VYHS Vyhne 33.04 296 *e*P **P 21 28 38.6 +1.7**
VYHS pmax pmax
comp=Z,5.0nm,1.2s
VYHS Vyhne 33.04 296 *e*P **P 21 28 38.6 +1.7**
OKC Ostrava-Krasne 33.29 298 *e*P **P 21 28 40.6 +1.5**
OKC MLR MLR
comp=Z,100nm,15.1s
OKC Ostrava-Krasne 33.29 298 *e*P **P 21 28 40.6 +1.5**
OKC AMS AMS 21 45 20.0
comp=Z,100nm,15.1s
HHC Hu-ho-hao-te 33.35 78 *e*P **P 21 28 40.0 +0.2**
HHC pP **pP 21 28 44.8 -0.9**
HHC PP **PnPn 21 29 51.3 +0.9**
HHC S **S 21 33 59.8 +0.2**
HHC sS **sS 21 34 09.5 +0.1**
HHC PcS **PcS 21 35 05.5 -1.5**
HHC SS **SnSn 21 36 00.0 -0.7**
HHC ScS **ScS 21 39 06.8 +1.4**
HHC pmax pmax
comp=Z,26nm,0.9s
HHC pmax pmax
comp=Z,160nm,5.8s
HHC LR LR
comp=N,350nm,12.4s
HHC LR LR
comp=E,440nm,13.7s
HHC LR LR
comp=Z,300nm,13.2s
ARCES ARCESS Array B 33.49 335 P **P 21 28 41.8 +1.2**
ARCES ARCESS Array B 33.49 335 P **P 21 28 41.8 +1.2**
comp=Z,2.3nm,0.6s,baz=108,slow=8.6,SNR=20
ARCES LR LR 21 42 53.0
comp=Z,124nm,20.7s,baz=329,slow=37
GKP Gorka Klasztor 33.54 305 *e*P **P 21 28 42.7 +1.5**
MORC Moravsky Berou 33.69 298 *e*P **P 21 28 43.8 +1.2**
MORC pmax pmax
comp=Z,8.0nm,1.0s
MORC Moravsky Berou 33.69 298 *e*P **P 21 28 43.8 +1.2**
comp=Z,7.7nm,1.0s
KRLC Kraliky 34.13 299 *e*P **P 21 28 48.0 +1.5**
KRLC Kraliky 34.13 299 *e*P **P 21 28 48.0 +1.5**
ZST Bratislava 34.23 296 *e*P **P 21 28 48.8 +1.6**
ZST Bratislava 34.23 296 *e*P **P 21 28 48.8 +1.6**
KSP Ksiaz 34.34 301 *e*P **P 21 28 49.7 +1.5**
KSP *e**PP **pP 21 28 54.8 +0.7**
VRAC Vranov 34.37 298 P **P 21 28 50.0 +1.5**
VRAC Vranov 34.37 298 P **P 21 28 50.0 +1.5**
comp=Z,2.6nm,0.9s,baz=91,slow=12,SNR=8.3
VRAC LR LR 21 45 40.7
comp=Z,106nm,18.8s,baz=78,slow=41
DPC Dobruska-Polom 34.39 300 *e*P **P 21 28 50.5 +1.8**
DPC Dobruska-Polom 34.39 300 *e*P **P 21 28 50.5 +1.8**
DPC *ex* x 21 28 55.4
UPC Upice 34.56 300 *e*P **P 21 28 51.8 +1.7**
UPC Upice 34.56 300 *e*P **P 21 28 51.8 +1.7**
UPC *ex* x 21 28 56.1
TREC Trest 35.08 298 AMS AMS 21 46 40.0
comp=Z,100nm,14.0s
CONA Conrad Observa 35.09 296 *i* sP sP 21 28 56.6 -6.6
comp=Z,11nm,1.0s,SNR=9.9
PVCC Panska Ves 35.47 300 *e*P **P 21 28 59.9 +2.0**
PVCC *e* 21 29 05.0
PVCC Panska Ves 35.47 300 *e*P **P 21 28 59.9 +2.0**
PVCC *ex* x 21 29 05.0
PRU Pruhonice 35.57 299 *e*P **P 21 29 00.8 +2.0**
PRU MLR MLR
comp=Z,100nm,13.6s
PRU Pruhonice 35.57 299 *e*P **P 21 29 00.8 +2.0**
PRU *ex* x 21 29 05.6
PRU AMS AMS 21 45 10.0
comp=Z,100nm,13.6s
HFS Hagfors 35.58 317 P **P 21 28 59.3 +0.6**
HFS Hagfors 35.58 317 P **P 21 28 59.3 +0.6**
comp=Z,26nm,0.5s,baz=98,slow=10,SNR=262
HFS LR LR 21 44 47.1
comp=Z,60nm,21.2s,baz=277,slow=38
GROS Grobnik 35.66 293 *i* P **P 21 29 00.5 +0.8**
RGN Rugen 35.78 307 *ep*P pP 21 29 07.6 +1.2
BRG Berggiesshubel 35.81 301 *e*P **P 21 29 02.4 +1.6**
comp=Z,9.9nm,0.7s
BRG *i* 21 29 07.7
comp=Z,8.5nm,0.7s
BRG
comp=N,127nm,13.6s
BRG
comp=E,122nm,20.3s
BRG
comp=Z,161nm,21.1s
BRG Berggiesshubel 35.81 301 *e*P **P 21 29 02.4 +1.6**
comp=Z,10.0nm,0.7s
BRG *ep*P **pP 21 29 07.7 +0.9**
SOKA Soboth 35.92 294 ⇑*i*sP sP 21 29 03.1 -7.2
comp=Z,9.7nm,1.1s
BOJS Bojanci 36.07 292 *e*P **P 21 29 04.4 +1.2**
FBE Freiberg 36.17 301 *e*P **P 21 29 05.8 +1.9**
comp=Z,21nm,1.2s
FBE *ep*P **pP 21 29 11.1 +1.2**
VISS Visnje 36.27 292 *i* P **P 21 29 05.9 +1.1**
GEC2 GERESS Array S 36.32 298 *e*P **P 21 29 07.0 +1.6**
comp=Z,16nm,1.0s
GEC2 GERESS Array S 36.32 298 *e*P **P 21 29 07.0 +1.6**
GEC2 pmax pmax
comp=Z,16nm,1.0s
GEC2 GERESS Array S 36.32 298 *e*P **P 21 29 07.5 +2.2**
GERES GERESS Array B 36.32 298 P **P 21 29 06.9 +1.6**
GERES GERESS Array B 36.32 298 P **P 21 29 06.9 +1.6**
comp=Z,7.5nm,0.8s,baz=74,slow=8.3,SNR=62
GERES LR LR 21 46 50.2
comp=Z,85nm,18.6s,baz=271,slow=41
CLL Collm 36.33 302 *e*P **P 21 29 06.5 +1.1**
comp=Z,11nm,1.1s
CLL *ep*P **pP 21 29 11.6 +0.4**
CLL *e*PP PnPn 21 30 16.2 -11
CLL Collm 36.33 302 ⇑*i*P **P 21 29 06.4 +1.1**
CLL *i* *PP **pP 21 29 11.4 +0.2**
CLL pmax pmax
comp=Z,12nm,1.1s
CLL Collm 36.33 302 ⇑*i*P **P 21 29 06.4 +1.1**
comp=Z,12nm,1.1s
CLL *i* pP **pP 21 29 11.4 +0.2**
CLL Lm MLR 21 46 00.0
CLL Lm MLR 21 46 00.0
comp=E,100nm,19.6s
CLL Lm MLR 21 46 00.0
comp=Z,100nm,19.7s
CLL Collm 36.33 302 *i* P PP 21 30 16.1 -12

	comp=Z,9.0nm,0.6s							
KHC	**Kasperske Hory**	**36.34**	**298**	*e*P		**P**	**21 29 07.0**	**+1.5**
KHC				*e*			21 29 12.5	
KHC	**Kasperske Hory**	**36.34**	**298**	*e*P		**P**	**21 29 07.0**	**+1.5**
KHC				*ex*		x	21 29 12.5	
LJU	**Ljubljana**	**36.42**	**293**	*i* P		**P**	**21 29 07.7**	**+1.6**
GYA	**Guiyang**	**36.70**	**104**	P		**P**	**21 29 11.0**	**+2.2**
GYA				PP		**PP**	**21 30 34.5**	**+2.1**
GYA				S		**S**	**21 34 52.0**	**+0.6**
GYA				ScP		**ScP**	**21 35 19.0**	**+2.2**
GYA				ScS		**ScS**	**21 39 24.5**	**+0.6**
GYA				pmax		pmax		
	comp=Z,10.0nm,0.8s							
GYA				pmax		pmax		
	comp=Z,90nm,4.8s							
GYA				LR		LR		
	comp=N,450nm,17.8s							
GYA				LR		LR		
	comp=E,330nm,18.0s							
GYA				LR		LR		
	comp=Z,470nm,17.8s							
CHTO	**Chiang Mai**	**36.72**	**121**	*e*P		**P**	**21 29 10.9**	**+2.0**
CHTO				pmax		pmax		
	comp=Z,3.0nm,0.9s							
CHTO	**Chiang Mai**	**36.72**	**121**	*e*P		**P**	**21 29 10.9**	**+2.0**
	comp=Z,3.2nm,0.9s							
WET	**Wettzell**	**36.79**	**298**	*e*P		**P**	**21 29 10.7**	**+1.4**
	comp=Z,12nm,1.1s							
WET				*e*pP		**pP**	**21 29 16.5**	**+1.2**
WET	**Wettzell**	**36.79**	**298**	*e*P		**P**	**21 29 10.7**	**+1.4**
WET				*e**PP		**pP**	**21 29 16.5**	**+1.2**
WET				pmax		pmax		
	comp=Z,11nm,1.1s							
TANN	**Tannenbergstha**	**36.82**	**300**	*e*P		**P**	**21 29 11.1**	**+1.6**
	comp=Z,12nm,1.2s							
TANN				*e*pP		**pP**	**21 29 16.6**	**+1.1**
NB2	**NORSAR Subarra**	**36.85**	**318**	P		**P**	**21 29 10.1**	**+0.4**
	comp=Z,12nm,0.6s,baz=95,slow=9.3							
NOA	**NORSAR Array B**	**36.85**	**318**	P		**P**	**21 29 09.9**	**+0.2**
NOA	**NORSAR Array B**	**36.85**	**318**	P		**P**	**21 29 09.9**	**+0.2**
	comp=Z,13nm,0.7s,baz=97,slow=8.8,SNR=26							
NOA				LR		LR	21 44 22.2	
	comp=Z,49nm,18.3s,baz=85,slow=36							
CADS	**Cadrg**	**36.90**	**293**	*e*P		**P**	**21 29 10.8**	**+0.5**
CADS				*i* PP		**PP**	**21 30 29.8**	**-4.5**
GUNZ	**Gunzen**	**36.91**	**300**	*e*P		**P**	**21 29 11.9**	**+1.6**
	comp=Z,9.0nm,1.0s							
WERD	**Werda**	**36.91**	**300**	*e*P		**P**	**21 29 11.8**	**+1.5**
	comp=Z,8.0nm,1.1s							
WERD				*e*pP		**pP**	**21 29 17.0**	**+0.8**
BJI	**Beijing**	**36.92**	**78**	P		**P**	**21 29 09.3**	**-1.2**
BJI				pmax		pmax		
	comp=Z,17nm,0.5s							
BJI				LR		LR		
	comp=N,130nm,18.9s							
BJI				LR		LR		
	comp=E,130nm,14.6s							
BJI				LR		LR		
	comp=Z,58nm,20.7s							
KBA	**Koelnbreinsper**	**36.95**	**295**	⇑*i*sP		**P**	**21 29 11.8**	**+1.0**
	comp=Z,10nm,1.3s							
CMAR	**Chiang Mai Arr**	**36.98**	**122**	P		**P**	**21 29 10.3**	**-0.9**
CMAR				PcP		**PcP**	**21 31 32.4**	**+0.3**
CMAR	**Chiang Mai Arr**	**36.98**	**122**	P		**P**	**21 29 10.3**	**-0.9**
	comp=Z,1.4nm,0.6s,baz=313,slow=8.7,SNR=7.0							
CMAR				PcP		**PcP**	**21 31 32.4**	**+0.3**
	comp=Z,1.4nm,0.9s,baz=320,slow=4.1,SNR=5.2							
PLN	**Plauen**	**36.99**	**301**	*e*P		**P**	**21 29 12.3**	**+1.3**
	comp=Z,21nm,0.9s							
NAO01	**NORSAR Array S**	**37.01**	**318**	*e*P		**P**	**21 29 11.0**	**0.0**
	comp=Z,8.5nm,0.6s							
NEUB	**Neuenburg**	**37.11**	**302**	*e*P		**P**	**21 29 13.4**	**+1.5**
	comp=Z,10.0nm,0.8s							
NEUB				*e*pP		**pP**	**21 29 18.7**	**+0.8**
MOX	**Moxa**	**37.31**	**301**	*e*P		**P**	**21 29 15.0**	**+1.4**
	comp=Z,8.0nm,1.1s							
MOX				*e*pP		**pP**	**21 29 20.7**	**+1.1**
MOX	**Moxa**	**37.31**	**301**	*e*P		**P**	**21 29 15.0**	**+1.4**
MOX				*e**PP		**pP**	**21 29 20.7**	**+1.1**
MOX				pmax		pmax		
	comp=Z,1.0nm,1.1s							
CUC	**Castrocucco**	**37.44**	**283**	*e*P		**P**	**21 29 16.9**	**+2.0**
	comp=Z,7.3nm,0.8s							
BSEG	**Bad Segeberg**	**37.59**	**307**	*e*P		**P**	**21 29 17.9**	**+2.0**
	comp=Z,28nm,1.3s							
BSEG				*e*pP		**pP**	**21 29 23.5**	**+1.6**
BSEG	**Bad Segeberg**	**37.59**	**307**	*e*P		**P**	**21 29 17.9**	**+2.0**
BSEG				*e**PP		**pP**	**21 29 23.5**	**+1.6**
BSEG				pmax		pmax		
	comp=Z,90nm,1.3s							
KONO	**Kongsberg**	**37.62**	**316**	*e*P		**P**	**21 29 16.5**	**+0.3**
KONO				pmax		pmax		
	comp=Z,5.0nm,0.7s							
KONO	**Kongsberg**	**37.62**	**316**	*e*P		**P**	**21 29 16.5**	**+0.3**
	comp=Z,4.5nm,0.7s							
GRF	**Grafenberg Arr**	**37.74**	**299**	*e*P		**P**	**21 29 19.7**	**+2.4**
	comp=Z,19nm,1.1s							
GRF				*e*pP		**pP**	**21 29 24.9**	**+1.6**
GRF	**Grafenberg Arr**	**37.74**	**299**	*e*P		**P**	**21 29 19.7**	**+2.4**
GRF				*e**PP		**pP**	**21 29 24.9**	**+1.6**
GRF				pmax		pmax		
	comp=Z,1.0nm,1.1s							
GRFO	**Grafenberg**	**37.74**	**299**	*e*P		**P**	**21 29 20.0**	**+2.7**
GRFO				pmax		pmax		
	comp=Z,12nm,0.8s							
GRFO	**Grafenberg**	**37.74**	**299**	*e*P		**P**	**21 29 20.0**	**+2.7**
	comp=Z,12nm,0.8s							
GRFO				*e*			21 29 24.6	
MOTA	**Moosalm**	**38.36**	**296**	⇑*i*sP		sP	21 29 23.1	-8.0
	comp=Z,7.8nm,0.9s,SNR=5.8							
DAVA	**Damuels**	**39.18**	**296**	⇑*i*sP		**P**	**21 29 30.5**	**+0.9**
	comp=Z,15nm,1.1s							
DAVOX	**Davos/Dischmat**	**39.32**	**295**	LR		LR	21 50 11.6	
	comp=Z,56nm,18.1s,baz=81,slow=43							
BFO	**Black Forest**	**39.91**	**298**	*e*P		**P**	**21 29 37.0**	**+1.5**
	comp=Z,7.0nm,1.0s							
BFO	**Black Forest**	**39.91**	**298**	*e*P		**P**	**21 29 36.1**	**+0.6**
BFO				pmax		pmax		
	comp=Z,5.0nm,0.8s							
BFO	**Black Forest**	**39.91**	**298**	*e*P		**P**	**21 29 36.1**	**+0.6**
	comp=Z,5.2nm,0.8s							
SPITS	**Spitsbergen Ar**	**40.05**	**346**	P		**P**	**21 29 38.3**	**+2.0**
SPITS	**Spitsbergen Ar**	**40.05**	**346**	P		**P**	**21 29 38.3**	**+2.0**
	comp=Z,3.8nm,0.4s,baz=120,slow=12,SNR=24							
CDF	**Champ du Feu**	**40.56**	**299**	⇑*i*P		**P**	**21 29 41.6**	**+0.6**
	comp=Z,15nm,1.1s							
CDF	**Champ du Feu**	**40.56**	**299**	⇑*i*P		**P**	**21 29 41.6**	**+0.6**
CDF				pmax		pmax		
	comp=Z,15nm,1.1s							
CDF	**Champ du Feu**	**40.56**	**299**	⇑*i*P		**P**	**21 29 41.6**	**+0.6**
	comp=Z,15nm,1.1s							
YAK	**Yakutsk**	**40.79**	**40**	*e*P		**P**	**21 29 42.5**	**0.0**
YAK				*e**PP		**pP**	**21 29 48.3**	**-0.3**
YAK				*e*			21 31 18.4	
YAK				*e*S		**S**	**21 35 53.3**	**+1.3**
YAK				*e**SS		sS	21 36 11.7	+10
YAK				*e*SS		SS	21 38 40.0	-13
YAK				*e*SSS		SSS	21 39 24.2	
YAK				pmax		pmax		
	comp=Z,27nm,1.0s							
YAK				pmax		pmax		
	comp=E,10.0nm,1.2s							
YAK				pmax		pmax		
	comp=N,1.0nm,0.9s							
YAK				pmax		pmax		
	comp=Z,5.0nm,0.6s							
YAK				pmax		pmax		
	comp=N,4.0nm,0.9s							
YAK				pmax		pmax		
	comp=E,5.0nm,1.0s							
YAK				smax		smax		
	comp=N,15nm,1.7s							
YAK				smax		smax		
	comp=E,34nm,2.6s							
YAK				MLR		MLR		
	comp=Z,171nm,14.0s							
YAK				MLR		MLR		
	comp=E,105nm,14.0s							
HINF	**Hinteralfeld**	**41.00**	**298**	⇑*i*P		**P**	**21 29 45.0**	**+0.4**
	comp=E,6.3nm,0.7s							
HINF	**Hinteralfeld**	**41.00**	**298**	⇑*i*P		**P**	**21 29 45.0**	**+0.4**
HINF				pmax		pmax		
	comp=Z,6.0nm,0.7s							
HINF	**Hinteralfeld**	**41.00**	**298**	⇑*i*P		**P**	**21 29 45.0**	**+0.4**
	comp=Z,6.3nm,0.7s							
SENIN	**Lac Senin/Sane**	**41.14**	**295**	*e*P		**P**	**21 29 46.5**	**+0.5**
	comp=Z,6.1nm,0.8s							
HAU	**Haudompre**	**41.27**	**298**	*e*P		**P**	**21 29 47.4**	**+0.6**
HAU				*e*R				
	comp=Z,72nm,17.8s							
HAU	**Haudompre**	**41.27**	**298**	*e*P		**P**	**21 29 47.4**	**+0.6**
HAU	**Haudompre**	**41.27**	**298**	*e*P		**P**	**21 29 47.4**	**+0.6**
PGF	**Pioggiola**	**41.27**	**289**	*e*P		**P**	**21 29 47.6**	**+0.6**
	comp=Z,24nm,1.2s							
PGF	**Pioggiola**	**41.27**	**289**	*e*P		**P**	**21 29 47.6**	**+0.6**
PGF				pmax		pmax		
	comp=Z,24nm,1.2s							
PGF	**Pioggiola**	**41.27**	**289**	*e*P		**P**	**21 29 47.6**	**+0.6**
	comp=Z,24nm,1.2s							
PAGF	**Fort de Pagny**	**41.52**	**299**	*e*P		**P**	**21 29 50.1**	**+1.3**
	comp=Z,2.7nm,0.8s							
PAGF	**Fort de Pagny**	**41.52**	**299**	*e*P		**P**	**21 29 50.1**	**+1.3**
	comp=Z,2.7nm,0.8s							
LPG	**La Plagne**	**41.78**	**294**	*e*P		**P**	**21 29 52.0**	**+0.7**
	comp=Z,5.1nm,0.6s							
LPG	**La Plagne**	**41.78**	**294**	*e*P		**P**	**21 29 52.0**	**+0.7**
LPG				pmax		pmax		
	comp=Z,5.0nm,0.6s							
LPG	**La Plagne**	**41.78**	**294**	*e*P		**P**	**21 29 52.0**	**+0.7**
	comp=Z,5.1nm,0.6s							
LPL	**La Plagne**	**41.79**	**294**	*e*P		**P**	**21 29 51.9**	**+0.6**
	comp=Z,9.3nm,0.7s							
LPL	**La Plagne**	**41.79**	**294**	*e*P		**P**	**21 29 51.9**	**+0.6**
LPL				pmax		pmax		
	comp=Z,9.0nm,0.7s							
LPL	**La Plagne**	**41.79**	**294**	*e*P		**P**	**21 29 51.9**	**+0.6**
	comp=Z,9.3nm,0.7s							
SBF	**Sospel**	**41.88**	**292**	⇑*i*P		**P**	**21 29 52.5**	**+0.7**
	comp=Z,66nm,1.1s							
SBF	**Sospel**	**41.88**	**292**	⇑*i*P		**P**	**21 29 52.5**	**+0.7**
SBF				pmax		pmax		
	comp=Z,66nm,1.1s							
SBF	**Sospel**	**41.88**	**292**	⇑*i*P		**P**	**21 29 52.5**	**+0.7**
	comp=Z,66nm,1.1s							
MEZF	**Maizieres J'vi**	**41.96**	**299**	*e*P		**P**	**21 29 53.5**	**+1.1**
	comp=Z,15nm,0.8s							
MEZF	**Maizieres J'vi**	**41.96**	**299**	*e*P		**P**	**21 29 53.5**	**+1.1**
	comp=Z,15nm,0.8s							
MBDF	**Montbardon**	**42.02**	**293**	⇑*i*P		**P**	**21 29 54.2**	**+1.1**
	comp=Z,32nm,1.0s							
MBDF	**Montbardon**	**42.02**	**293**	⇑*i*P		**P**	**21 29 54.2**	**+1.1**
MBDF				pmax		pmax		
	comp=Z,32nm,1.0s							
MBDF	**Montbardon**	**42.02**	**293**	⇑*i*P		**P**	**21 29 54.2**	**+1.1**
	comp=Z,32nm,1.0s							
SFTF	**Sexfontaines**	**42.06**	**299**	*e*P		**P**	**21 29 54.1**	**+0.9**
SFTF	**Sexfontaines**	**42.06**	**299**	*e*P		**P**	**21 29 54.1**	**+0.9**
BAIF	**Baives**	**42.06**	**302**	*e*P		**P**	**21 29 54.4**	**+1.2**
	comp=Z,13nm,1.1s							
BAIF	**Baives**	**42.06**	**302**	*e*P		**P**	**21 29 54.4**	**+1.2**
BAIF				pmax		pmax		
	comp=Z,13nm,1.1s							
BAIF	**Baives**	**42.06**	**302**	*e*P		**P**	**21 29 54.4**	**+1.2**
	comp=Z,13nm,1.1s							
NJ2	**Nanjing**	**42.42**	**87**	*e*P		**P**	**21 29 56.8**	**+0.5**
NJ2				pmax		pmax		
	comp=Z,10.0nm,0.6s							
LMR	**La Mourre**	**42.69**	**292**	⇑*i*P		**P**	**21 29 59.9**	**+1.5**
	comp=Z,18nm,1.0s							
LMR	**La Mourre**	**42.69**	**292**	⇑*i*P		**P**	**21 29 59.9**	**+1.5**
LMR				pmax		pmax		
	comp=Z,18nm,1.0s							
LMR	**La Mourre**	**42.69**	**292**	⇑*i*P		**P**	**21 29 59.9**	**+1.5**
	comp=Z,18nm,1.0s							
SMRF	**Simiane la Rot**	**43.09**	**293**	*e*P		**P**	**21 30 02.3**	**+0.6**
SMRF	**Simiane la Rot**	**43.09**	**293**	*e*P		**P**	**21 30 02.3**	**+0.6**
LOR	**Lormes**	**43.10**	**298**	*e*P		**P**	**21 30 02.6**	**+0.9**
	comp=Z,5.7nm,0.8s							
LOR				*e*R				
	comp=Z,72nm,17.2s							
LOR	**Lormes**	**43.10**	**298**	*e*P		**P**	**21 30 02.6**	**+0.9**
	comp=Z,5.7nm,0.8s							
SMF	**Signal de Mont**	**43.32**	**297**	*e*P		**P**	**21 30 03.7**	**+0.3**
SMF	**Signal de Mont**	**43.32**	**297**	*e*P		**P**	**21 30 03.7**	**+0.3**
SMF	**Signal de Mont**	**43.32**	**297**	*e*P		**P**	**21 30 03.7**	**+0.3**
VIVF	**Saint-Julien-l**	**43.38**	**294**	*e*P		**P**	**21 30 04.6**	**+0.6**
	comp=Z,30nm,1.2s							
VIVF	**Saint-Julien-l**	**43.38**	**294**	*e*P		**P**	**21 30 04.6**	**+0.6**
VIVF				pmax		pmax		
	comp=Z,30nm,1.2s							
VIVF	**Saint-Julien-l**	**43.38**	**294**	*e*P		**P**	**21 30 04.6**	**+0.6**
	comp=Z,30nm,1.2s							
AVF	**Avril sur Loir**	**43.59**	**297**	⇑*i*P		**P**	**21 30 05.8**	**+0.2**
	comp=Z,19nm,1.2s							
AVF	**Avril sur Loir**	**43.59**	**297**	⇑*i*P		**P**	**21 30 05.8**	**+0.2**
AVF				pmax		pmax		
	comp=Z,19nm,1.2s							
AVF	**Avril sur Loir**	**43.59**	**297**	⇑*i*P		**P**	**21 30 05.8**	**+0.2**
	comp=Z,19nm,1.2s							
QIZ	**Qiongzhong**	**43.74**	**110**	P		**P**	**21 30 07.0**	**-0.1**
QIZ				S		**S**	**21 36 39.5**	**+2.9**
QIZ				pmax		pmax		
	comp=Z,16nm,1.9s							
LASF	**Ste Croix**	**44.21**	**294**	⇑*i*P		**P**	**21 30 11.6**	**+0.9**
	comp=Z,21nm,1.1s							
LASF	**Ste Croix**	**44.21**	**294**	⇑*i*P		**P**	**21 30 11.6**	**+0.9**
	comp=Z,21nm,1.1s							
TCF	**Toulx Ste Croi**	**44.50**	**297**	⇑*i*P		**P**	**21 30 13.6**	**+0.6**
	comp=Z,24nm,1.2s							
TCF	**Toulx Ste Croi**	**44.50**	**297**	⇑*i*P		**P**	**21 30 13.6**	**+0.6**
TCF				pmax		pmax		
	comp=Z,24nm,1.2s							
TCF	**Toulx Ste Croi**	**44.50**	**297**	⇑*i*P		**P**	**21 30 13.6**	**+0.6**
	comp=Z,24nm,1.2s							
MDJ	**Mudanjiang**	**44.52**	**65**	P		**P**	**21 30 13.5**	**+0.4**
MDJ				pmax		pmax		
	comp=Z,8.0nm,1.3s							
MDJ				pmax		pmax		
	comp=Z,53nm,4.3s							
EKA	**Eskdalemuir Ar**	**45.01**	**311**	P		**P**	**21 30 17.5**	**+0.6**
EKA	**Eskdalemuir Ar**	**45.01**	**311**	P		**P**	**21 30 17.5**	**+0.6**
	comp=Z,10nm,0.7s,baz=82,slow=8.3,SNR=46							
ESK	**Eskdalemuir**	**45.04**	**311**	*e*P		**P**	**21 30 17.9**	**+0.8**
ESK				pmax		pmax		
	comp=Z,7.0nm,0.7s							
ESK	**Eskdalemuir**	**45.04**	**311**	*e*P		**P**	**21 30 17.9**	**+0.8**
	comp=Z,7.2nm,0.7s							
CAF	**Calviac**	**45.08**	**295**	⇑*i*P		**P**	**21 30 18.7**	**+1.1**
	comp=Z,11nm,1.0s							
CAF	**Calviac**	**45.08**	**295**	⇑*i*P		**P**	**21 30 18.7**	**+1.1**
CAF				pmax		pmax		
	comp=Z,11nm,1.0s							
CAF	**Calviac**	**45.08**	**295**	⇑*i*P		**P**	**21 30 18.7**	**+1.1**
	comp=Z,11nm,1.0s							
RJF	**Les Rejaudoux**	**45.30**	**296**	⇑*i*P		**P**	**21 30 20.4**	**+1.0**
	comp=Z,15nm,1.0s							
RJF				*e*R				
	comp=Z,80nm,18.0s							
RJF	**Les Rejaudoux**	**45.30**	**296**	⇑*i*P		**P**	**21 30 20.4**	**+1.0**
RJF				pmax		pmax		
	comp=Z,15nm,1.0s							
RJF	**Les Rejaudoux**	**45.30**	**296**	⇑*i*P		**P**	**21 30 20.4**	**+1.0**
	comp=Z,15nm,1.0s							
FLN	**La Foliniere**	**45.37**	**301**	*e*P		**P**	**21 30 20.0**	**+0.2**
FLN				*e*R				
	comp=Z,122nm,21.8s							
FLN	**La Foliniere**	**45.37**	**301**	*e*P		**P**	**21 30 20.0**	**+0.2**
FLN	**La Foliniere**	**45.37**	**301**	*e*P		**P**	**21 30 20.0**	**+0.2**
MTLF	**Montolieu**	**45.59**	**293**	⇑*i*P		**P**	**21 30 22.4**	**+0.8**
	comp=Z,22nm,1.2s							
MTLF	**Montolieu**	**45.59**	**293**	⇑*i*P		**P**	**21 30 22.4**	**+0.8**
MTLF				pmax		pmax		
	comp=Z,22nm,1.2s							
MTLF	**Montolieu**	**45.59**	**293**	⇑*i*P		**P**	**21 30 22.4**	**+0.8**
	comp=Z,22nm,1.2s							
GRR	**Gorron**	**45.73**	**301**	*e*P		**P**	**21 30 22.6**	**-0.1**
	comp=Z,19nm,1.1s							
GRR	**Gorron**	**45.73**	**301**	*e*P		**P**	**21 30 22.6**	**-0.1**
GRR				pmax		pmax		
	comp=Z,19nm,1.1s							
GRR	**Gorron**	**45.73**	**301**	*e*P		**P**	**21 30 22.6**	**-0.1**
	comp=Z,19nm,1.1s							
MFF	**Saint Martin d**	**45.91**	**298**	⇑*i*P		**P**	**21 30 24.0**	**-0.1**
	comp=Z,6.3nm,0.8s							
MFF	**Saint Martin d**	**45.91**	**298**	⇑*i*P		**P**	**21 30 24.0**	**-0.1**
MFF				pmax		pmax		
	comp=Z,6.0nm,0.8s							
MFF	**Saint Martin d**	**45.91**	**298**	⇑*i*P		**P**	**21 30 24.0**	**-0.1**
	comp=Z,6.3nm,0.8s							
LFF	**La Frestale**	**45.95**	**296**	⇑*i*P		**P**	**21 30 25.3**	**+0.9**
	comp=Z,16nm,0.9s							
LFF	**La Frestale**	**45.95**	**296**	⇑*i*P		**P**	**21 30 25.3**	**+0.9**
	comp=Z,16nm,0.9s							
LFF				pmax		pmax		
	comp=Z,16nm,0.9s							
LFF	**La Frestale**	**45.95**	**296**	⇑*i*P		**P**	**21 30 25.3**	**+0.9**
	comp=Z,16nm,0.9s							
USRK	**Ussuriysk Arra**	**46.27**	**65**	P		**P**	**21 30 27.6**	**+0.7**
	comp=Z,4.7nm,0.5s,baz=290,slow=7.9,SNR=28							
USRK				LR		LR	21 51 12.9	
	comp=Z,78nm,19.7s,baz=228,slow=38							
KSAR	**Wonju Array Be**	**46.32**	**75**	P		**P**	**21 30 27.7**	**+0.3**
KSRS	**Korea Array**	**46.34**	**75**	P		**P**	**21 30 27.7**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=300,slow=5.1,SNR=9.6							
HABR	**Khabarovsk**	**46.65**	**59**	*e*P		**P**	**21 30 29.1**	**-0.7**
HABR				*e**SP		**sP**	**21 30 37.8**	**-0.5**
HABR				*e*			21 32 02.4	
HABR							21 32 18.9	
HABR				*e*PPP		PPP	21 33 01.2	
HABR				*e*S		**S**	**21 37 18.2**	**+0.3**
HABR				*e**SS		**sS**	**21 37 28.9**	**+1.0**
HABR				*e*			21 40 22.8	
HABR				*e*SSS		SSS	21 41 42.7	
HABR				pmax		pmax		
	comp=Z,63nm,1.6s							
HABR				pmax		pmax		
	comp=E,55nm,1.6s							
HABR				pmax		pmax		
	comp=N,73nm,2.7s							
HABR				MLR		MLR		
	comp=Z,82nm,21.0s							
SGMF	**Saint Gilles**	**46.84**	**301**	*e*P		**P**	**21 30 31.6**	**+0.2**
SGMF	**Saint Gilles**	**46.84**	**301**	*e*P		**P**	**21 30 31.6**	**+0.2**
SGMF	**Saint Gilles**	**46.84**	**301**	*e*P		**P**	**21 30 31.6**	**+0.2**
EPF	**Esparros**	**46.97**	**294**	⇑*i*P		**P**	**21 30 32.2**	**-0.4**
	comp=Z,5.3nm,0.7s							
EPF	**Esparros**	**46.97**	**294**	⇑*i*P		**P**	**21 30 32.2**	**-0.4**
EPF				pmax		pmax		
	comp=Z,5.0nm,0.7s							
EPF	**Esparros**	**46.97**	**294**	⇑*i*P		**P**	**21 30 32.2**	**-0.4**
	comp=Z,5.3nm,0.7s							
DAG	**Danmarks Havn**	**47.18**	**342**	⇑*i*P		**P**	**21 30 35.1**	**+1.5**
DAG				pmax		pmax		
	comp=Z,5.0nm,0.9s							
DAG	**Danmarks Havn**	**47.18**	**342**	⇑*i*P		**P**	**21 30 35.1**	**+1.5**
	comp=Z,5.4nm,0.9s							
ROSF	**Rostrenen**	**47.26**	**302**	*e*P		**P**	**21 30 34.9**	**+0.3**
ROSF	**Rostrenen**	**47.26**	**302**	*e*P		**P**	**21 30 34.9**	**+0.3**
ROSF	**Rostrenen**	**47.26**	**302**	*e*P		**P**	**21 30 34.9**	**+0.3**
QUIF	**Quistinic**	**47.34**	**301**	⇑*i*P		**P**	**21 30 35.5**	**+0.2**
	comp=Z,48nm,1.4s							
QUIF	**Quistinic**	**47.34**	**301**	⇑*i*P		**P**	**21 30 35.5**	**+0.2**
QUIF				pmax		pmax		
	comp=Z,48nm,1.4s							
QUIF	**Quistinic**	**47.34**	**301**	⇑*i*P		**P**	**21 30 35.5**	**+0.2**
	comp=Z,48nm,1.4s							
ETSF	**Etsaut**	**47.62**	**294**	⇑*i*P		**P**	**21 30 38.4**	**+0.7**
	comp=Z,10nm,1.0s							
ETSF	**Etsaut**	**47.62**	**294**	⇑*i*P		**P**	**21 30 38.4**	**+0.7**
ETSF				pmax		pmax		
	comp=Z,10.0nm,1.0s							
ETSF	**Etsaut**	**47.62**	**294**	⇑*i*P		**P**	**21 30 38.4**	**+0.7**
	comp=Z,10nm,1.0s							
IPM	**Ipoh**	**49.34**	**132**	*e*P		P	21 30 54.9	+3.8
	comp=Z,18nm,0.8s							
ESDC	**Sonseca Array**	**51.36**	**292**	P		**P**	**21 31 06.5**	**+0.3**
ESDC	**Sonseca Array**	**51.36**	**292**	P		**P**	**21 31 06.5**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=58,slow=8.0,SNR=17							
PAB	**San Pablo**	**51.68**	**292**	*e*P		**P**	**21 31 08.5**	**-0.1**
PAB				pmax		pmax		
	comp=Z,63nm,2.7s							
PAB	**San Pablo**	**51.68**	**292**	*e*P		**P**	**21 31 08.5**	**-0.1**
	comp=Z,63nm,2.7s							
MVO	**Moncorvo**	**52.71**	**295**	*e*P		P	21 31 23.6	+7.4
PCAB	**Cabril**	**53.11**	**296**	*e*P		**P**	**21 31 20.4**	**+1.3**
	comp=Z,33nm,1.2s							
PVRL	**Vila Real**	**53.11**	**295**	*e*P		**P**	**21 31 20.2**	**+1.0**
SUMG	**Summit**	**53.45**	**339**	*e*P		**P**	**21 31 23.8**	**+2.2**
SUMG				pmax		pmax		
	comp=Z,9.0nm,0.7s							
SUMG	**Summit**	**53.45**	**339**	*e*P		**P**	**21 31 23.8**	**+2.2**
	comp=Z,9.4nm,0.7s							
SUMG	**Summit**	**53.45**	**339**	*i* P		**P**	**21 31 24.1**	**+2.5**
	comp=Z,8.6nm,0.8s							
PVIS	**Viseu**	**53.50**	**294**	*e*P		**P**	**21 31 23.5**	**+1.4**
TAM	**Tamanrasset**	**53.72**	**268**	*e*P		**P**	**21 31 24.7**	**+0.7**
TAM				pmax		pmax		
	comp=Z,1.0nm,0.9s							
TAM	**Tamanrasset**	**53.72**	**268**	*e*P		**P**	**21 31 24.7**	**+0.7**
	comp=Z,1.5nm,0.9s							
MAT	**Matsushiro**	**53.98**	**71**	P		**P**	**21 31 25.0**	**-0.5**
MJAR	**Matsushiro Arr**	**53.98**	**71**	P		**P**	**21 31 25.4**	**-0.2**
MJAR	**Matsushiro Arr**	**53.98**	**71**	P		**P**	**21 31 25.4**	**-0.2**
	comp=Z,1.9nm,0.6s,baz=302,slow=8.3,SNR=8.4	

KAPI	**Kappang**	**8.51**	**255**	Pn	Pn	21 28 22.0	+0.3	
	1.9nm,0.3s,baz=134,slow=8.8,SNR=4.1							
KAPI				LR	LR	21 31 45.6		
	comp=Z,187nm,19.3s,baz=109,slow=39							
FITZ	**Fitzroy Crossi**	**15.29**	**189**	Pn	Pn	21 29 55.7	+1.2	
	0.2nm,0.3s,baz=15,slow=11,SNR=6.1							
FITZ				LR	LR	21 35 57.7		
	comp=Z,124nm,20.8s,baz=103,slow=38							
WRA	**Warramunga Arr**	**18.03**	**160**	P	P	21 30 29.9	-0.1	
	0.8nm,0.3s,baz=344,slow=12,SNR=52							
ASAR	**Alice Springs**	**21.42**	**165**	P	P	21 31 06.9	0.0	
	4.6nm,0.5s,baz=344,slow=12,SNR=27							
STKA	**Stephens Creek**	**31.54**	**158**	P	P	21 32 41.0	-0.2	
	2.2nm,0.6s,baz=346,slow=6.8,SNR=4.2							
SONM	**Songino Array**	**53.95**	**342**	P	P	21 35 43.8	+1.0	
	0.5nm,0.6s,baz=165,slow=6.0,SNR=5.5							
MKAR	**Makanchi Array**	**63.73**	**327**	P	P	21 36 50.5	-0.2	
	0.6nm,0.5s,baz=114,slow=8.1,SNR=7.4							
KURBB	**Kurchatov Arra**	**68.00**	**329**	P	P	21 37 17.9	-0.3	
	0.9nm,0.8s,baz=125,slow=5.5,SNR=4.8							
TORD	**Torodi Ar. Bea**	**125.98**	**284**	PKP	PKPdf	21 45 21.4	-1.0	
	0.6nm,0.8s,baz=68,slow=2.1,SNR=3.6							

*ISCJB **29** 21:26:33.9±1.7,38°00.00N±0°04.04×23°26.26E±0°04.04,h11km±13km, Error ellipse: s-maj=5.9km s-min=4.8km az=174.7*
*ATH **29** 21:26:34.3,38°00.00N×23°26.26E,h18km±1km, MD2.9/12, ML1.3*
*CSEM **29** 21:26:34.3,38°00.00N×23°26.26E,h18km, MD2.9, After ATH*

ISC 29 21:26:34.3±0.9, 38°00.00N±0°02.02×23°26.26E±0°02.02, h15km±10km, n41, σ0°62/55, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LTK	**Loutraki**	**0.23**	**275**	*e*PB	**Pg**	**21 26 39.1**	**-0.3**
LTK				*e*SB	**Sb**	**21 26 43.9**	**-0.4**
LTK	**Loutraki**	**0.23**	**275**	*e*Pb	**Pg**	**21 26 39.1**	**-0.3**
LTK				*e*Sb	**Sb**	**21 26 43.9**	**-0.4**
NAIG	**Nisos Aigina**	**0.30**	**143**	*e*PB	**Pg**	**21 26 40.1**	**-0.5**
NAIG	**Nisos Aigina**	**0.30**	**143**	*e*Pb	**Pg**	**21 26 40.1**	**-0.5**
ATH	**Athens Observa**	**0.36**	**95**	*e*PB	**Pg**	**21 26 41.6**	**-0.1**
ATH	**Athens Observa**	**0.36**	**95**	*e*Pb	**Pg**	**21 26 41.6**	**-0.1**
PTL	**Penteli**	**0.48**	**84**	*e*PB	**Pg**	**21 26 43.2**	**-0.6**
PTL				*e*SB	**Sg**	**21 26 50.6**	**+0.3**
PTL	**Penteli**	**0.48**	**84**	*e*Pb	**Pg**	**21 26 43.2**	**-0.6**
PTL				*e*Sb	**Sg**	**21 26 50.6**	**+0.3**
DID	**Didima**	**0.50**	**182**	*e*PB	**Pg**	**21 26 43.5**	**-0.6**
DID				*e*SB	**Sb**	**21 26 51.3**	**-0.5**
DID	**Didima**	**0.50**	**182**	*e*Pb	**Pg**	**21 26 43.5**	**-0.6**
DID				*e*Sb	**Sb**	**21 26 51.3**	**-0.5**
LKR	**Lokris**	**0.68**	**342**	*e*PN	**Pb**	**21 26 47.2**	**-0.7**
LKR				*e*SN	**Sb**	**21 26 56.6**	**-0.5**
LKR	**Lokris**	**0.68**	**342**	*e*Pn	**Pb**	**21 26 47.2**	**-0.7**
LKR				*e*Sn	**Sb**	**21 26 56.6**	**-0.5**
GUR	**Goura**	**0.73**	**265**	*e*PN	**Pb**	**21 26 48.2**	**-0.6**
GUR				*e*SN	**Sg**	**21 26 59.2**	**+1.1**
GUR	**Goura**	**0.73**	**265**	*e*Pn	**Pb**	**21 26 48.2**	**-0.6**
GUR				*e*Sn	**Sg**	**21 26 59.2**	**+1.1**
KLV	**Kalavryta, Ach**	**0.88**	**273**	*e*PN	**Pg**	**21 26 51.5**	**+0.2**
KLV	**Kalavryta, Ach**	**0.88**	**273**	*e*Pn	**Pg**	**21 26 51.5**	**+0.2**
VLX	**Vlachokerasia**	**0.94**	**228**	*e*PN	**Pb**	**21 26 52.2**	**-0.2**
VLX	**Vlachokerasia**	**0.94**	**228**	*e*Pn	**Pb**	**21 26 52.2**	**-0.2**
KALE	**Kalithea**	**0.96**	**294**	*e*PN	**Pb**	**21 26 52.8**	**0.0**
KALE	**Kalithea**	**0.96**	**294**	*e*Pn	**Pb**	**21 26 52.8**	**0.0**
TRIZ	**Trizonia**	**1.00**	**292**	*e*PN	**Pg**	**21 26 53.8**	**+0.1**
TRIZ	**Trizonia**	**1.00**	**292**	*e*Pn	**Pg**	**21 26 53.8**	**+0.1**
LAKA	**Lakka**	**1.04**	**284**	*e*PN	**Pg**	**21 26 54.6**	**+0.2**
LAKA	**Lakka**	**1.04**	**284**	*e*Pn	**Pg**	**21 26 54.6**	**+0.2**
EFP	**Efpalio**	**1.15**	**292**	*e*PN	**Pg**	**21 26 56.1**	**-0.3**
EFP				*e*SN	**Sg**	**21 27 12.1**	**+0.7**
EFP	**Efpalio**	**1.15**	**292**	*e*Pn	**Pg**	**21 26 56.1**	**-0.3**
EFP				*e*Sn	**Sg**	**21 27 12.1**	**+0.7**
AGG	**Agios Georgios**	**1.25**	**325**	*e*PN	**Pg**	**21 26 58.7**	**+0.3**
AGG	**Agios Georgios**	**1.25**	**325**	*e*Pn	**Pg**	**21 26 58.7**	**+0.3**
AOS	**Alonnisos**	**1.26**	**22**	*e*PN	**Pb**	**21 26 58.0**	**+0.1**
AOS				*e*SN	**Sg**	**21 27 15.6**	**+0.5**
AOS	**Alonnisos**	**1.26**	**22**	*e*Pn	**Pb**	**21 26 58.0**	**+0.1**
AOS				*e*Sn	**Sg**	**21 27 15.6**	**+0.5**
VLI	**Veliai**	**1.31**	**191**	*e*PN	**Pb**	**21 26 58.9**	**+0.3**
VLI	**Veliai**	**1.31**	**191**	*e*Pn	**Pb**	**21 26 58.9**	**+0.3**
AMT	**Artemida-Makis**	**1.32**	**250**	*e*PN	**Pg**	**21 26 59.3**	**-0.3**
AMT	**Artemida-Makis**	**1.32**	**250**	*e*Pn	**Pg**	**21 26 59.3**	**-0.3**
ITM	**Ithomi**	**1.34**	**233**	*e*PN	**Pg**	**21 26 59.9**	**-0.2**
ITM	**Ithomi**	**1.34**	**233**	*e*Pn	**Pg**	**21 26 59.9**	**-0.2**
DYR	**Agios Nikonas**	**1.44**	**211**	*e*PN	**Pg**	**21 27 01.8**	**-0.2**
DYR	**Agios Nikonas**	**1.44**	**211**	*e*Pn	**Pg**	**21 27 01.8**	**-0.2**
THL	**Klokotos Trika**	**1.84**	**328**	*e*PN	**Pb**	**21 27 06.9**	**-0.8**
THL	**Klokotos Trika**	**1.84**	**328**	*e*Pn	**Pb**	**21 27 06.9**	**-0.8**
SMG	**Samos**	**2.85**	**95**	*e*P	**Sg**	**21 28 08.6**	**+2.9**

IDC 29 21:39:16.4±2.1, 5°22N×126°91E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/23, mbtmp3.4/3, Error ellipse: s-maj=154.5km s-min=25.4km az=66.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**26.05**	**164**	P	P	21 44 51.0	-0.7
	1.2nm,0.7s,baz=343,slow=10,SNR=12						
ASAR	**Alice Springs**	**29.51**	**167**	P	P	21 45 23.5	+0.8
	0.2nm,0.7s,baz=7.4,slow=9.3,SNR=2.9						
MKAR	**Makanchi Array**	**56.45**	**325**	P	P	21 48 60.0	-0.1
	0.2nm,0.6s,baz=124,slow=8.1,SNR=3.8						

*NEIC **29** 21:40:01.5,32°06N×115°47W,h5km, ML4.2(ECX), ML4.2(PAS), After ECX.*
NEIC Felt [II] at Mexicali. Felt [III] at El Cajon, California. Also felt at Calexico, El Centro and San Diego. Felt at Yuma, Arizona.

ECX 29 21:40:01.5±0.7, 32°05N×115°47W, h5km, MD4.1, ML4.2, 8C-7D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMX	**El Mayor**	**0.21**	**108**	*i* P	Pg	21 40 03.5	-2.0
EMX				*e*S	Sg	21 40 06.4	-1.9
EMX	**El Mayor**	**0.21**	**108**	*i* P	Pg	21 40 03.5	-2.0
EMX				*e*S	Sg	21 40 06.4	-1.9
CPBX	**Cerro Prieto**	**0.39**	**21**	⇓*e*P	Pg	21 40 08.5	-0.6
CPBX				*e*S	Sg	21 40 14.5	+0.2
RDX	**Rancho Dawling**	**0.42**	**253**	*e*P	Pg	21 40 08.8	-1.1
RDX				*e*S	Sg	21 40 14.5	-1.1
RDX	**Rancho Dawling**	**0.42**	**253**	⇑*e*P	Pg	21 40 08.9	-1.0
RDX				*e*S	Sg	21 40 14.5	-1.0
SGL	**Mount Signal**	**0.63**	**340**	⇓*i* P	Pg	21 40 12.4	-1.3
ECBX	**El Chinero**	**0.68**	**148**	⇓*e*P	Pg	21 40 12.1	-2.5
ECBX				*i* S	Sg	21 40 21.2	-2.3
YUH	**Yuha Desert**	**0.70**	**327**	⇓*i* P	Pg	21 40 13.4	-1.6
RMX	**La Rumorosa**	**0.75**	**317**	*e*P	Pg	21 40 14.4	-1.8
RMX	**La Rumorosa**	**0.75**	**317**	⇑*e*P	Pg	21 40 14.4	-1.8
RMX				*e*S	Sg	21 40 25.3	-0.8
RMX				*e*		21 40 26.4	
	comp=E,7μm,0.6s						
COK	**Cook Ranch**	**0.82**	**345**	*e*P	Pg	21 40 16.2	-1.1
COA	**Coachella**	**0.86**	**20**	⇓*i* P	Pg	21 40 16.3	-1.8
YMD	**Yuma Desert**	**0.93**	**57**	⇓*e*P	Pg	21 40 17.2	-2.2
CRR	**Carrizo Plain**	**0.93**	**333**	*i* P	Pg	21 40 17.5	-1.9
SPX	**San Pedro Mart**	**1.00**	**180**	⇓*e*P	Pg	21 40 19.2	-2.1
SPX				*e*S	Sg	21 40 33.3	-1.4
SPX				⇓*e*		21 40 34.8	
	comp=N,6μm,0.4s						
ECNX	**Esteban Cantu**	**1.04**	**248**	⇑*e*P	Pg	21 40 19.9	-1.7
ECNX				*e*S	Sg	21 40 33.7	-1.4
CBX	**Cerro Bola**	**1.04**	**285**	⇑*e*P	Pg	21 40 19.9	-1.8
CBX				*e*S	Sg	21 40 33.9	-1.5
PBX	**Punta Banda**	**1.11**	**254**	*i* P	Pg	21 40 21.2	-1.7
PBX				*e*S	Sg	21 40 35.8	-1.5
PBX	**Punta Banda**	**1.11**	**254**	⇑*i* P	Pg	21 40 21.1	-1.8
PBX				*e*S	Sg	21 40 35.8	-1.5
GLA	**Glamis**	**1.14**	**28**	*e*Pn	Pg	21 40 20.1	-3.3
GLA				*e*Sg	Sg	21 40 33.4	-4.8
BAR	**Barrett**	**1.19**	**302**	*e*P	Pg	21 40 21.7	-2.7
BAR				*e*S	Sg	21 40 37.1	-2.9
PFO	**Pinyon Flat Ob**	**1.76**	**332**	*e*Pn	Pn	21 40 29.3	-3.6
PFO				*e*Sn	Sn	21 40 54.3	-1.5
LDFC	**Landfair**	**3.03**	**6**	*e*Pn	Pn	21 40 49.0	-1.3
LDFC				*e*Pg	Pg	21 40 59.5	-0.3
MWC	**Mount Wilson**	**3.06**	**316**	*e*Pn	Pn	21 40 51.1	+0.2
MWC				*e*Sn	Sn	21 41 27.8	-0.3
PASC	**Pasadena Art C**	**3.11**	**314**	*e*Pn	Pn	21 40 51.0	-0.3
PASC				*e*Pg	Pg	21 41 00.7	-0.4
PASC				*e*Sn	Sn	21 41 28.6	-0.1
GSC	**Goldstone**	**3.43**	**341**	*e*Pn	Pn	21 40 53.8	-2.0
GSC				*e*Sn	Sn	21 41 34.8	-2.0
OSI	**Osito Adit**	**3.73**	**314**	*e*Pn	Pn	21 41 03.1	+3.2
OSI				*e*Sn	Sn	21 41 44.1	-0.2
TUC	**Tucson**	**3.98**	**85**	*e*Pn	Pn	21 41 03.0	-0.4
TUC				*e*Sn	Sb	21 42 00.4	-0.5
ISA	**Isabella**	**4.38**	**326**	*e*Pn	Pn	21 41 08.8	-0.1
ISA				*e*Sn	Sn	21 41 56.3	-4.1
SHPR	**Sheep Range**	**4.45**	**3**	*e*Pn	Pn	21 41 08.9	-1.0
WUAZ	**Wupatki**	**4.86**	**44**	*e*Pn	Pn	21 41 14.0	-1.5
WUAZ				*e*Sg	Sg	21 42 32.2	-5.7
CCUT	**Cedar City**	**5.75**	**17**	*e*Pn	Pn	21 41 27.2	-0.6
CCUT				*e*Sg	Sg	21 43 04.3	-2.5
ARUT	**Antelope Range**	**5.96**	**16**	*e*Pn	Pn	21 41 29.0	-1.6
	comp=N,21nm,0.5s						
ARUT				*e*Sg	Sg	21 43 17.0	+3.7
MSU	**Marysvale**	**6.98**	**22**	*e*Pn	Pn	21 41 42.9	-1.9
WAKR	**Walker**	**7.21**	**334**	*e*Pn	Pn	21 41 44.9	-2.9
WAKR				*e*Sg	Sg	21 43 50.4	-3.0
LAZ	**Ladron**	**7.36**	**69**	*e*Pn	Pn	21 41 48.1	-1.9
	comp=N,2.8nm,0.7s						
LAZ				*e*Sg	Sg	21 43 56.0	-2.5
SRU	**San Rafael**	**8.11**	**28**	*e*Pn	Pn	21 41 59.8	-0.4
SRU				*e*Sg	Sg	21 44 23.2	+0.8
PV04	**Paradox Valley**	**8.30**	**39**	*e*Pn	Pn	21 42 02.0	-0.8
PV04				*e*Pg	Pg	21 42 37.6	-3.1
PV04				*e*Sg	Sg	21 44 27.5	-0.8

*NEIC **29** 21:48:59.3,32°06N×115°47W,h6km, MD3.6(ECX), ML3.2(PAS), After ECX.*

ECX 29 21:48:59.4±0.6, 32°06N×115°47W, h5km, MD3.1, ML3.3, 6C-4D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMX	**El Mayor**	**0.20**	**109**	*e*P	Pg	21 49 02.1	-1.3
EMX				*e*S	Sg	21 49 05.1	-1.0
EMX	**El Mayor**	**0.20**	**109**	⇑*e*P	Pg	21 49 02.1	-1.3
EMX				*e*S	Sg	21 49 05.1	-1.0
EMX				*e*		21 49 05.8	
	comp=E,3μm,0.4s						
CPBX	**Cerro Prieto**	**0.39**	**21**	⇑*e*P	Pg	21 49 06.6	-0.3
CPBX				*e*S	Sg	21 49 11.8	-0.2
CPBX				⇓*e*		21 49 31.8	
	comp=N,7μm,0.6s						
RDX	**Rancho Dawling**	**0.42**	**253**	*e*P	Pg	21 49 06.8	-1.0
RDX				*e*S	Sg	21 49 12.7	-0.8
RDX	**Rancho Dawling**	**0.42**	**253**	⇑*e*P	Pg	21 49 06.8	-1.0
RDX				*e*S	Sg	21 49 12.9	-0.6
RDX				⇓*e*		21 49 13.3	
	comp=N,2μm,0.4s						
SGL	**Mount Signal**	**0.63**	**340**	⇓*i* P	Pg	21 49 10.4	-1.1
ECBX	**El Chinero**	**0.68**	**148**	⇑*e*P	Pg	21 49 10.8	-1.8
ECBX				*e*S	Sg	21 49 19.8	-1.5
ECBX				*e*		21 49 22.0	
	comp=E,1μm,0.5s						
YUH	**Yuha Desert**	**0.70**	**327**	⇓*i* P	Pg	21 49 11.5	-1.4
RMX	**La Rumorosa**	**0.75**	**317**	*e*P	Pg	21 49 12.5	-1.5
RMX				*e*S	Sg	21 49 22.4	-1.5
RMX	**La Rumorosa**	**0.75**	**317**	⇑*e*P	Pg	21 49 12.5	-1.5
RMX				*e*S	Sg	21 49 22.4	-1.5
COA	**Coachella**	**0.86**	**20**	*e*P	Pg	21 49 14.2	-1.6
YMD	**Yuma Desert**	**0.93**	**57**	*e*P	Pg	21 49 15.8	-1.4
CRR	**Carrizo Plain**	**0.93**	**333**	*e*P	Pg	21 49 15.9	-1.3
SPX	**San Pedro Mart**	**1.01**	**180**	*e*P	Pg	21 49 16.0	-2.6
SPX				*e*S	Sg	21 49 32.0	-0.6
SPX				*e*		21 49 34.4	
	comp=E,662nm,0.5s						
ECNX	**Esteban Cantu**	**1.04**	**248**	*e*P	Pg	21 49 17.8	-1.7
ECNX				*e*S	Sg	21 49 31.8	-1.3
CBX	**Cerro Bola**	**1.04**	**285**	⇑*e*P	Pg	21 49 17.8	-1.8
CBX				*e*S	Sg	21 49 31.7	-1.7
PBX	**Punta Banda**	**1.11**	**254**	*e*P	Pg	21 49 19.1	-1.7
PBX				*e*S	Sg	21 49 33.8	-1.5
PBX	**Punta Banda**	**1.11**	**254**	*e*P	Pg	21 49 18.9	-1.9
PBX				*e*S	Sg	21 49 33.8	-1.5
GLA	**Glamis**	**1.13**	**28**	*e*P	Pg	21 49 18.1	-3.1
GLA				*e*S	Sg	21 49 33.6	-2.4
BAR	**Barrett**	**1.19**	**302**	*e*P	Pg	21 49 20.4	-1.9
BAR				*e*S	Sg	21 49 36.6	-1.3
PFO	**Pinyon Flat Ob**	**1.76**	**332**	*e*Pn	Pn	21 49 27.3	-3.4
PFO				*e*Sn	Sn	21 49 50.9	-2.8
LDFC	**Landfair**	**3.03**	**6**	*e*Pg	Pg	21 49 56.0	-1.7
MWC	**Mount Wilson**	**3.06**	**316**	*e*Pn	Pn	21 49 46.9	-1.9
MWC				*e*S	Sg	21 50 35.7	-2.7
TUC	**Tucson**	**3.98**	**85**	*e*Pn	Pn	21 50 00.0	-1.2
TUC				*e*Sg	Sg	21 51 03.5	-4.0

IDC 29 21:53:07.1±1.3, 3°45S×145°52E, h0km, mb3.9/6, mb1 4.2/8, mb1mx3.9/19, mbtmp4.0/8, ML3.8/2, MS3.4/5, Ms1 3.4/5, ms1mx3.1/22, Error ellipse: s-maj=41.4km s-min=18.5km az=100.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.14**	**165**	Pn	Pn	21 54 40.5	+1.4
	1.5nm,0.3s,baz=354,slow=9.2,SNR=3.8						
HNR	**Honiara**	**15.51**	**113**	LR	LR	22 01 08.7	
	comp=Z,58nm,20.4s,baz=315,slow=31						
WRA	**Warramunga Arr**	**19.69**	**213**	P	P	21 57 38.0	-0.2
	1.1nm,0.3s,baz=32,slow=11,SNR=66						
ASAR	**Alice Springs**	**23.02**	**208**	P	P	21 58 14.5	+0.5
	2.6nm,0.8s,baz=32,slow=11,SNR=16						
ASAR				LR	LR	22 08 09.9	
	comp=Z,118nm,19.8s,baz=348,slow=39						
FITZ	**Fitzroy Crossi**	**24.32**	**232**	P	P	21 58 25.5	-1.3
	2.8nm,0.7s,baz=60,slow=10,SNR=8.3						
STKA	**Stephens Creek**	**28.52**	**187**	LR	LR	22 12 27.0	
	comp=Z,119nm,18.6s,baz=203,slow=41						
KSRS	**Korea Array**	**43.86**	**340**	P	P	22 01 15.3	0.0
	0.4nm,0.3s,baz=152,slow=9.7,SNR=2.9						
KSRS				LR	LR	22 17 57.1	
	comp=Z,33nm,20.2s,baz=171,slow=34						
USRK	**Ussuriysk Arra**	**48.96**	**347**	P	P	22 01 55.4	+0.2
	1.2nm,0.7s,baz=168,slow=10.0,SNR=2.9						
CMAR	**Chiang Mai Arr**	**50.77**	**297**	P	P	22 02 10.2	+0.7
	0.6nm,0.3s,baz=114,slow=6.0,SNR=5.6						
ZALV	**Zalesovo Beam**	**76.08**	**328**	LR	LR	22 36 53.3	
	comp=Z,39nm,19.3s,baz=69,slow=34						
ILAR	**Eielson Array**	**83.73**	**23**	P	P	22 05 37.1	-0.7
	0.7nm,0.7s,baz=256,slow=5.2,SNR=7.2						

IDC 29 22:04:28.3±1.0, 2°79N×125°56E, h0km, mb3.8/6, mb1 3.9/6, mb1mx3.7/23, mbtmp3.8/6, Error ellipse: s-maj=92.4km s-min=18.6km az=78.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.76**	**180**	P	Pn	22 09 12.6	-0.6
	0.8nm,0.4s,baz=7.0,slow=12,SNR=3.1						
WRA	**Warramunga Arr**	**24.18**	**159**	P	P	22 09 45.9	-0.7
	1.6nm,0.4s,baz=338,slow=11,SNR=40						
WRA				S	S	22 14 01.4	-4.5
	0.4nm,0.7s,baz=344,slow=18,SNR=4.2						
ASAR	**Alice Springs**	**27.52**	**163**	P	P	22 10 16.9	0.0
	0.4nm,0.5s,baz=346,slow=11,SNR=5.6						
KSRS	**Korea Array**	**34.57**	**3**	P	P	22 11 19.3	+0.5
	1.0nm,0.7s,baz=172,slow=9.8,SNR=5.1						
SONM	**Songino Array**	**47.83**	**343**	P	P	22 13 08.4	+0.5
	0.3nm,0.4s,baz=160,slow=9.2,SNR=2.8						
FINES	**FINESS Array B**	**92.10**	**332**	P	P	22 17 37.9	-1.5
	1.3nm,0.9s,baz=71,slow=6.0,SNR=4.6						
TORD	**Torodi Ar. Bea**	**122.09**	**287**	PKP	PKPdf	22 23 25.6	-0.5
	0.2nm,0.9s,baz=116,slow=1.6,SNR=2.9						

MEX 29 22:05:21.7±0.8, 16°69N×100°63W, h16km±7km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.50**	**45**	*e*P	Pg	22 05 29.3	-2.4
CAIG				*i* S	Sg	22 05 36.4	-2.0
ZIIG	**Zihuatanejo**	**1.21**	**319**	*e*P	Pn	22 05 40.4	-3.5
ZIIG				*e*S	Sb	22 05 54.5	-5.0
ARIG	**Puente Sto Nin**	**1.60**	**10**	*e*P	Pn	22 05 46.1	-3.3
ARIG				*i* S	Sn	22 06 04.9	-4.9
PLIG	**Platanillo**	**2.00**	**32**	*i* P	Pn	22 05 52.6	-2.4
PLIG				*i* S	Sn	22 06 15.8	-4.0
PNIG	**Pinotepa**	**2.42**	**97**	*i* P	Pn	22 05 58.4	-2.3
PNIG				*i* S	Sn	22 06 26.0	-4.0

MEX 29 22:17:43.5±0.7, 17°44N×100°72W, h23km±28km, MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.58**	**131**	*i* P	Pb	22 17 52.2	-2.8
CAIG				*i* S	Sb	22 18 00.8	-2.1
ZIIG	**Zihuatanejo**	**0.73**	**284**	*i* P	Pb	22 17 55.5	-2.0
ZIIG				*i* S	Sb	22 18 03.9	-3.1
ARIG	**Puente Sto Nin**	**0.91**	**23**	*e*P	Pb	22 17 57.4	-3.3
ARIG				*i* S	Sb	22 18 09.4	-3.2
PLIG	**Platanillo**	**1.50**	**51**	*i* P	Pn	22 18 06.7	-2.5
PLIG				*i* S	Sn	22 18 24.9	-3.3
YAIG	**Yautepec**	**2.12**	**48**	*i* P	Pn	22 18 16.1	-1.7
YAIG				*i* S	Sn	22 18 40.4	-3.2
PPM	**Popocatepetl**	**2.57**	**51**	*i* P	Pn	22 18 22.2	-2.2
PPM				*i* S	Sn	22 18 51.7	-3.8
PNIG	**Pinotepa**	**2.69**	**112**	*i* P	Pn	22 18 23.7	-1.8
PNIG				*i* S	Sn	22 18 53.8	-3.7

*NEIC **29** 23:01:07.8, 19°59N×66°00W, h12km, MD3.3(RSPR), After RSPR.*

RSPR 29 23:01:07.7, 19°56N×65°98W, h7km±9km, MD3.2/5, 18C-9D, Puerto Rico region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBYP	**Canovanas**	**1.29**	**175**	⇓*e*P	Pn	23 01 28.7	-3.4
CBYP	**Canovanas**	**1.29**	**175**	⇓*e*P	Pn	23 01 28.8	-3.4
CBYP	**Canovanas**	**1.29**	**175**	⇓*e*P	Pn	23 01 28.7	-3.4
CBYP	**Canovanas**	**1.29**	**175**	⇑*e*P	Pn	23 01 28.8	-3.4
CBYP				*e*S	Sb	23 01 45.5	-3.7
CBYP				*e*S	Sg	23 01 45.5	-3.8
CBYP	**Canovanas**	**1.29**	**175**	⇓*e*P	Pn	23 01 28.7	-3.4
CBYP				*e*S	Sb	23 01 45.5	-3.7
AOPR	**Arecibo Observ**	**1.42**	**211**	⇓*e*P	Pn	23 01 30.3	-3.6
AOPR	**Arecibo Observ**	**1.42**	**211**	⇑*e*P	Pn	23 01 30.5	-3.3
AOPR	**Arecibo Observ**	**1.42**	**211**	*e*S	Sb	23 01 48.5	-4.2
AOPR	**Arecibo Observ**	**1.42**	**211**	⇓*e*P	Pn	23 01 30.3	-3.6
AOPR	**Arecibo Observ**	**1.42**	**211**	⇑*e*P	Pn	23 01 30.5	-3.3
AOPR				*e*S	Sb	23 01 48.2	-4.5
AOPR				*e*S	Sn	23 01 48.5	-4.3
AOPR	**Arecibo Observ**	**1.42**	**211**	⇑*e*P	Pn	23 01 30.5	-3.3
AOPR				*e*S	Sb	23 01 48.5	-4.2
HUMP	**Col San Antoni**	**1.42**	**175**	⇑*e*P	Pn	23 01 30.5	-3.3
HUMP	**Col San Antoni**	**1.42**	**175**	⇑*e*P	Pn	23 01 30.4	-3.5
HUMP	**Col San Antoni**	**1.42**	**175**	⇑*e*P	Pn	23 01 30.4	-3.5
HUMP	**Col San Antoni**	**1.42**	**175**	⇑*e*P	Pn	23 01 30.5	-3.3
HUMP				*e*S	Sb	23 01 48.7	-4.0
HUMP				*e*S	Sn	23 01 48.7	-4.0
HUMP	**Col San Antoni**	**1.42**	**175**	⇑*e*P	Pn	23 01 30.5	-3.3
HUMP				*e*S	Sb	23 01 48.7	-4.0
SJG	**San Juan**	**1.45**	**187**	*e*Pn	Pn	23 01 31.6	-2.7
MTP	**Monte Pirata**	**1.51**	**165**	⇑*e*P	Pn	23 01 32.4	-2.8
MTP	**Monte Pirata**	**1.51**	**165**	⇑*e*P	Pn	23 01 32.3	-2.9
MTP	**Monte Pirata**	**1.51**	**165**	⇑*e*P	Pn	23 01 32.2	-2.9
MTP	**Monte Pirata**	**1.51**	**165**	⇑*e*P	Pn	23 01 32.4	-2.8
MTP	**Monte Pirata**	**1.51**	**165**	⇑*e*P	Pn	23 01 32.3	-2.9
CELP	**Cerrillos**	**1.58**	**201**	⇓*i* P	Pn	23 01 33.0	-3.2
CELP	**Cerrillos**	**1.58**	**201**	⇓*i* P	Pn	23 01 33.0	-3.2
CELP	**Cerrillos**	**1.58**	**201**	⇓*i* P	Pn	23 01 33.0	-3.2
CRPR	**Cabo Rojo, PR**	**1.88**	**215**	⇓*e*P	Pn	23 01 37.5	-2.8
CRPR	**Cabo Rojo, PR**	**1.88**	**215**	⇑*e*P	Pn	23 01 37.5	-2.8
CRPR	**Cabo Rojo, PR**	**1.88**	**215**	*e*S	Sn	23 02 00.4	-3.8
CRPR	**Cabo Rojo, PR**	**1.88**	**215**	⇑*e*P	Pn	23 01 37.5	-2.8
CRPR				*e*S	Sn	23 02 00.4	-3.8

**WEL

NIS1	**Nisyros Isl.**	**1.48**	**86**	*e*Pn	**Pb**	**23 31 40.5 +0.2**
SMG	**Samos**	**1.68**	**45**	*e*PN	**Pb**	**23 31 43.6 -0.1**
SMG				*e*SN	**Sb**	**23 32 05.3 +0.5**
SMG	**Samos**	**1.68**	**45**	*e*Pn	**Pb**	**23 31 43.6 -0.1**
SMG				*e*Sn	**Sb**	**23 32 05.3 +0.5**
KARP	**Karpathos**	**1.77**	**123**	P	**Pn**	**23 31 42.2 -1.0**
KARP	**Karpathos**	**1.77**	**123**	*e*PB	**Pn**	**23 31 43.5 +0.3**
KARP				*e*SN	**Sb**	**23 32 07.9 +0.6**
KARP	**Karpathos**	**1.77**	**123**	P	**Pn**	**23 31 42.2 -1.0**
KARP	**Karpathos**	**1.77**	**123**	*e*Pb	**Pn**	**23 31 43.5 +0.3**
KARP				*e*Sn	**Sb**	**23 32 07.9 +0.6**
KYTH	**Kithira**	**1.87**	**263**	*e*PN	**Pb**	**23 31 47.0 +0.1**
KYTH	**Kithira**	**1.87**	**263**	*e*Pn	**Pb**	**23 31 47.0 +0.1**
VLI	**Veliai**	**1.94**	**276**	*e*PN	**Pb**	**23 31 47.5 -0.6**
VLI	**Veliai**	**1.94**	**276**	*e*Pn	**Pb**	**23 31 47.5 -0.6**

*IDC **29** 23:39:03.7±1.0, 12°.86N× 120°.30E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/24, mbtmp3.6/6, MS3.3/1, Ms1 3.3/1, ms1mx2.5/29, Error ellipse: s-maj=58.4km s-min=19.1km az=64.0*

*ISCJB **29** 23:39:07.2±0.5, 12°.80N±0°.04× 120°.10E±0°.05, h31km, mb3.6/7, MS3.1/1, Error ellipse: s-maj=7.3km s-min=5.1km az=2.6*

*MAN **29** 23:39:07, 12°.78N× 120°.09E, h39km, mb4.5, ML3.3, MS3.2*

ISC 29 23:39:08.3±0.8, 12°.80N±0°.04×120°.14E±0°.06, h31km, n22, σ0§61/22, mb3.6/7, 1C-1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BUSP	**Coron**	**0.79**	**175**	*e*P	**Pn**	**23 39 22.9**	**-0.4**
BUSP				*e*S	**Sn**	**23 39 34.4**	**+0.3**
SJMP	**San Jose**	**1.02**	**109**	*e*P	**Pn**	**23 39 26.1**	**-0.2**
TGY	**Tagaytay City**	**1.51**	**31‖**	*e*P	**Pn**	**23 39 33.3**	**0.0**
TGY				*i* S	**Sb**	**23 39 52.9**	**-1.8**
ENPP	**El Nido**	**1.73**	**204**	*e*P	**Pn**	**23 39 36.0**	**-0.2**
BOAC	**Boac**	**1.79**	**68**	*e*P	**Pn**	**23 39 37.2**	**+0.1**
LQP	**Lukban**	**1.89**	**46**	*e*P	**Pn**	23 39 45.6	+3.4
OTRP	**Odiongan**	**1.89**	**103**	*e*P	**Pn**	**23 39 38.7**	**+0.2**
CUYO	**Cuyo Island**	**2.12**	**156**	*e*P	**Pn**	**23 39 41.4**	**-0.2**
GQP	**Guinayangan**	**2.50**	**64**	*e*P	**Pn**	**23 39 48.0**	**+1.1**
RCP	**Roxas**	**2.83**	**115‖**	*e*P	**Pn**	**23 39 51.8**	**+0.4**
RCP				*e*S	**Sn**	**23 40 24.3**	**-0.2**
SCZP	**Santa Cruz**	**2.97**	**356**	*e*P	**Pn**	**23 39 53.2**	**-0.1**
GUIM	**Jordan**	**3.23**	**132**	*e*P	**Pn**	**23 39 57.2**	**+0.3**
BALP	**Baler**	**3.24**	**25**	*e*P	**Pn**	**23 39 57.4**	**+0.3**
PPR	**Puerto Princes**	**3.30**	**205**	*e*P	**Pn**	**23 39 58.0**	**+0.1**
CMAR	**Chiang Mai Arr** 0.5nm,0.6s,baz=102,slow=8.4,SNR=3.8	**21.16**	**288**	P	**P**	**23 43 51.9**	**+0.8**
PSI	**Prapat** comp=Z,66nm,19.9s,baz=278,slow=32	**23.22**	**246**	LR	LR	23 51 24.1	
WRA	**Warramunga Arr** 0.4nm,0.5s,baz=336,slow=9.8,SNR=7.1	**35.41**	**157**	P	**P**	**23 46 01.2**	**-0.4**
SONM	**Songino Array** 0.5nm,0.5s,baz=165,slow=8.6,SNR=4.3	**36.77**	**344**	P	**P**	**23 46 12.7**	**-0.4**
ASAR	**Alice Springs** 0.6nm,0.6s,baz=338,slow=6.8,SNR=9.2	**38.66**	**160**	P	**P**	**23 46 29.5**	**+0.2**
MKAR	**Makanchi Array** 0.9nm,0.8s,baz=122,slow=7.4,SNR=3.3	**46.44**	**324**	P	P	23 47 38.9	+6.7
ZALV	**Zalesovo Beam** 0.3nm,0.3s,baz=116,slow=6.6,SNR=2.7	**49.61**	**333**	P	**P**	**23 47 57.4**	**+0.9**
ARCES	**ARCESS Array B** 0.9nm,0.9s,baz=61,slow=7.5,SNR=3.5	**79.73**	**339**	P	**P**	**23 51 12.7**	**-0.2**

*IDC **29** 23:54:12.0±1.3, 8°.62S× 111°.84E, h0km, mb4.2/8, mb1 4.3/9, mb1mx4.0/21, mbtmp4.1/9, ML3.9/1, MS3.2/4, Ms1 3.3/4, ms1mx2.7/33, Error ellipse: s-maj=56.7km s-min=16.5km az=53.0*

*ISCJB **29** 23:54:16.4±0.5, 8°.95S±0°.06× 111°.78E±0°.05, h35km, mb4.3/12, MS3.2/2, Error ellipse: s-maj=9.7km s-min=4.9km az=39.6*

*NEIC **29** 23:54:17.3±0.6, 8°.59S× 111°.96E, h35km, mb4.5/5, Error ellipse: s-maj=19.0km s-min=7.7km az=224.0*

*DJA **29** 23:54:20.3±0.4, 9°.5S×111°.2E±°, h30km, M4.4/15, MLv4.4/15*

ISC 29 23:54:17.4±0.6, 8°.82S±0°.08×111°.80E±0°.06, h35km, n46, σ1§57/37, mb4.3/12, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PWJI	**Pagerwojo**	**0.79**	**1**	P	**Pn**	**23 54 33.6**	**+1.5**
PWJI				S	**Sn**	**23 54 43.0**	**+0.4**
PCJI	**Pacitan**	**0.87**	**315**	P	**Pn**	**23 54 34.0**	**+0.9**
PCJI				S	**Sn**	**23 54 46.0**	**+1.4**
SJI	**Sawahan**	**1.08**	**358**	P	**Pn**	**23 54 38.1**	**+2.0**
UGM	**Wanagama**	**1.55**	**305**	P	**Pn**	**23 54 44.6**	**+2.1**
GMJI	**Gumukmas**	**1.72**	**72**	P	**Pn**	**23 54 46.8**	**+2.0**
YOGI	**Yogyakarta**	**1.79**	**304**	P	**Pn**	**23 54 48.5**	**+2.7**
BLJI	**Banyuglugur**	**2.08**	**59**	P	Pn	23 54 53.7	+4.0
SMRI	**Semarang**	**2.21**	**323**	P	Pn	23 54 56.2	+4.6
BJII	**Banjamegara**	**2.54**	**305**	P	Pn	23 55 00.1	+3.9
TGJI	**Tegal**	**3.28**	**306**	P	Pn	23 55 09.8	+3.4
IGBI	**Denpasar**	**3.31**	**90**	P	Pn	23 55 10.3	+3.6
DNP	**Denpasar**	**3.38**	**88**	P	Pn	23 55 11.3	+3.6
SRBI	**Singaraja**	**3.46**	**78**	P	**Pn**	**23 55 11.8**	**+3.0**
KHKI	**Kahang-Kahang**	**3.80**	**83**	P	**Pn**	**23 55 16.2**	**+2.8**
CISI	**Cisompet, Garu**	**4.13**	**287**	P	**Pn**	**23 55 19.7**	**+1.6**
LEM	**Lembang**	**4.59**	**295**	P	Pn	23 55 27.4	+2.9
KAPI	**Kappang**	**8.75**	**65**	*e*Pn	Pn	23 56 17.6	-4.0
MBWA	**Marble Bar**	**14.46**	**149**	*e*Pn	Pn	23 57 33.4	-6.3
MBWA				*e*Sn	Sn	23 59 58.6	-20
FITZ	**Fitzroy Crossi**	**16.31**	**126**	Pn	**Pn**	**23 58 01.9**	**-2.0**
FITZ				Sn	Sn	00 00 50.7	-13
FITZ	**Fitzroy Crossi** 0.3nm,0.3s,baz=308,slow=12,SNR=6.7	**16.31**	**126**	P	**Pn**	**23 58 01.9**	**-2.0**
FITZ	0.2nm,0.3s,baz=127,slow=15,SNR=4.0			Sn	Sn	00 00 50.7	-13
FITZ	comp=Z,50nm,21.4s,baz=288,slow=36			LR	LR	00 04 07.9	
PSI	**Prapat** comp=Z,108nm,20.2s,baz=84,slow=38	**17.26**	**311**	LR	LR	00 05 10.8	
WRA	**Warramunga Arr**	**24.44**	**119**	P	**P**	**23 59 33.6**	**+0.5**
WRA	**Warramunga Arr** 8.3nm,0.7s,baz=292,slow=12,SNR=94	**24.44**	**119**	P	**P**	**23 59 33.6**	**+0.5**
WRAB	**Tennant Creek** 7.7nm,0.7s	**24.45**	**119**	*e*P	**P**	**23 59 33.4**	**+0.2**
AS31	**Alice Springs**	**25.80**	**128**	*e*P	**P**	**23 59 45.4**	**0.0**
ASAR	**Alice Springs**	**25.80**	**128**	P	**P**	**23 59 45.7**	**+0.3**
ASAR	**Alice Springs** 4.2nm,0.6s,baz=302,slow=8.8,SNR=32	**25.80**	**128**	P	**P**	**23 59 45.7**	**+0.3**
ASAR	comp=Z,112nm,19.4s,baz=83,slow=36			LR	LR	00 09 55.7	
CMAR	**Chiang Mai Arr** comp=Z,41nm,18.8s,baz=160,slow=39	**29.92**	**335**	LR	LR	00 13 42.2	
COEN	**Coen** 39nm,0.7s	**31.16**	**102**	*e*P	**P**	**00 00 33.5**	**+0.2**
CTAO	**Charters Tower**	**35.12**	**112**	*e*P	**P**	**00 01 07.9**	**+0.1**
STKA	**Stephens Creek** 1.0nm,0.6s	**35.93**	**134**	*e*P	**P**	**00 01 15.0**	**+0.3**
STKA	**Stephens Creek** 4.1nm,0.4s,baz=333,slow=8.6,SNR=10	**35.93**	**134**	P	**P**	**00 01 15.5**	**+0.9**
MJAR	**Matsushiro Arr**	**51.50**	**27**	P	**P**	**00 03 17.5**	**-2.1**
MJAR	**Matsushiro Arr** 0.7nm,0.4s,baz=211,slow=8.8,SNR=3.2	**51.50**	**27**	P	**P**	**00 03 17.5**	**-2.1**
SONM	**Songino Array**	**56.61**	**356**	P	**P**	**00 03 56.5**	**-0.4**
SONM	**Songino Array** 1.2nm,0.6s,baz=179,slow=8.8,SNR=14	**56.61**	**356**	P	**P**	**00 03 56.5**	**-0.4**
TKM2	**Tokmak 2** 2.9nm,0.9s	**61.15**	**330**	*e*P	**P**	**00 04 26.9**	**-1.7**
MK31	**Makanchi Array**	**61.29**	**337**	*e*P	**P**	**00 04 28.1**	**-1.2**
MKAR	**Makanchi Array**	**61.29**	**337**	P	**P**	**00 04 28.6**	**-0.6**
MKAR	**Makanchi Array** 1.4nm,0.4s,baz=148,slow=7.2,SNR=26	**61.29**	**337**	P	**P**	**00 04 28.6**	**-0.6**
EKS2	**Erkin-Say**	**61.87**	**329**	*e*P	**P**	**00 04 33.3**	**-0.1**
ZALV	**Zalesovo Beam**	**66.56**	**343**	P	**P**	**00 05 01.1**	**-2.7**
ZALV	**Zalesovo Beam** 1.0nm,0.5s,baz=153,slow=6.7,SNR=6.0	**66.56**	**343**	P	**P**	**00 05 01.1**	**-2.7**
ABKAR	**Akbulak array** 7.0nm,0.7s	**73.44**	**327**	*e*P	**P**	**00 05 45.4**	**-0.7**
BRTR	**Keskin Array B**	**86.59**	**311**	P	**P**	**00 06 57.1**	**-0.4**
BRTR	**Keskin Array B** 0.4nm,0.6s,baz=133,slow=8.1,SNR=4.2	**86.59**	**311**	P	**P**	**00 06 57.1**	**-0.4**

*ISCJB **30** 00:24:30.0±0.6, 31°.71S±0°.04×68°.27W±0°.06, h111km±6km, mb3.5/3, Error ellipse: s-maj=9.0km s-min=6.3km az=19.1*

*GUC **30** 00:24:29.5±0.6, 31°.72S×68°.99W, h212km±13km, MD3.3, ML3.4*

*IDC **30** 00:24:29.8±1.4, 31°.72S×68°.47W, h99km±6km, mb3.2/3, mb1 3.2/4, mb1mx3.1/18, mbtmp3.1/4, Error ellipse: s-maj=49.6km s-min=26.4km az=115.0*

ISC 30 00:24:31.2±0.8, 31°.70S±0°.05×68°.31W±0°.06, h107km±7km, n18, σ0§91/29, mb3.3/3, 1C-2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CFAA	**Coronel Fontan** 32nm,0.3s,baz=192,slow=1.7,SNR=5493	**0.12**	**33**	P	**Pn**	**00 24 45.3**	**-0.8**
CFAA	23nm,0.3s,baz=76,slow=23,SNR=125			S	**Sn**	**00 24 56.2**	**-1.1**
JACH	**Jahuel**	**2.17**	**243**	*e*P	**Pn**	**00 25 06.5**	**+0.2**
JACH				*e*S	**Sn**	**00 25 34.4**	**+1.3**
CMCH	**Combarbala**	**2.36**	**282**	*e*P	**Pn**	**00 25 08.4**	**-0.4**
CMCH				*e*S	**Sn**	**00 25 37.6**	**+0.1**
PEL	**Peldehue**	**2.47**	**234**	*e*P	**Pn**	**00 25 09.7**	**-0.4**
PEL				*i* S	**Sn**	**00 25 40.2**	**+0.2**
PEL	comp=E,132nm,0.2s			AML	AML	00 25 43.1	
CLCH	**Cerro Calan**	**2.53**	**227**	*i* P	**Pn**	**00 25 11.0**	**+0.1**
CLCH				*i* S	**Sn**	**00 25 42.7**	**+1.3**
CLCH	comp=E,130nm,0.6s			AML	AML	00 25 48.7	
ROCH	**El Roble**	**2.61**	**240‖**	*i* P	**Pn**	**00 25 11.3**	**-0.9**
ROCH				*i* S	**Sn**	**00 25 43.4**	**-0.3**
ROCH	comp=N,119nm,0.2s			AML	AML	00 25 46.5	
TLL	**Tololo Astrono**	**2.63**	**305**	*e*P	**Pn**	**00 25 12.5**	**0.0**
TLL				*i* S	**Sn**	**00 25 45.0**	**+0.7**
TLL	comp=N,99nm,0.4s			AML	AML	00 25 49.5	
PCH	**Pirque**	**2.67**	**224**	*e*P	**Pn**	**00 25 12.8**	**+0.1**
PCH				*i* S	**Sn**	**00 25 45.8**	**+1.1**
LMEL	**Las Melosas**	**2.67**	**216‖**	*i* P	**Pn**	**00 25 13.4**	**+0.6**
LMEL	comp=N,52nm,0.1s			AML	AML	00 26 00.1	
TACH	**Talagante**	**2.95**	**228**	*e*P	**Pn**	**00 25 15.4**	**-1.0**
TACH				*i* S	**Sn**	**00 25 49.8**	**-1.5**
CACH	**El Canelo**	**3.08**	**218**	*i* P	**Pn**	**00 25 18.3**	**0.0**
CACH				*i* S	**Sn**	**00 25 55.6**	**+0.9**
LCO	**Las Campanas**	**3.38**	**322‖**	*i* P	**Pn**	**00 25 22.5**	**0.0**
LCO				*i* S	**Sn**	**00 26 02.1**	**0.0**
LCO	comp=E,68nm,0.3s			AML	AML	00 26 05.2	
CPUP	**Villa Florida** comp=E,0.3nm,0.3s,baz=222,slow=15,SNR=2.8	**11.00**	**64**	P	**Pn**	**00 27 07.5**	**+2.2**
SNAA	**Sanae** comp=E,0.3nm,0.9s,baz=294,slow=12,SNR=5.3	**52.55**	**159**	P	**P**	**00 33 32.6**	**-0.6**
QSPA	**South Pole Qui** comp=E,0.9nm,0.6s,baz=127,slow=2.4,SNR=8.0	**58.53**	**180**	P	**P**	**00 34 15.9**	**-0.3**
TORD	**Torodi Ar. Bea** comp=E,0.3nm,0.8s,baz=216,slow=6.8,SNR=3.4	**80.46**	**68**	P	**P**	**00 36 31.5**	**0.0**
WRA	**Warramunga Arr** comp=E,0.2nm,0.4s,baz=165,slow=1.6,SNR=6.8	**124.24**	**206**	PKP	**PKPdf**	**00 43 16.2**	**-1.7**
ZALV	**Zalesovo Beam** comp=E,0.4nm,0.3s,baz=329,slow=1.7,SNR=3.0	**150.60**	**33**	PKPbc	**PKPbc**	**00 44 09.7**	**-0.3**

IDC 30 00:31:42.3±0.8, 11°.11N×140°.56E, h0km, mb4.0/13, mb1 4.2/13, mb1mx4.0/26, mbtmp4.0/13, MS3.2/4, Ms1 3.2/4, ms1mx2.9/30, Error ellipse: s-maj=28.5km s-min=19.3km az=86.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr** comp=Z,41nm,18.9s,baz=210,slow=36	**25.41**	**356**	LR	LR	00 46 56.1	
KSRS	**Korea Array** comp=Z,40nm,21.6s,baz=345,slow=31	**28.58**	**339**	LR	LR	00 46 23.9	
WRA	**Warramunga Arr** 1.4nm,0.8s,baz=12,slow=9.1,SNR=6.9	**31.46**	**191**	P	P	00 38 05.3	-0.5
ASAJ	**Asahikawa** comp=Z,40nm,20.1s,baz=159,slow=32	**32.93**	**3**	LR	LR	00 49 23.1	
ASAR	**Alice Springs** 0.8nm,0.6s,baz=18,slow=12,SNR=12	**35.17**	**191**	P	P	00 38 38.4	+0.2
CMAR	**Chiang Mai Arr** 1.2nm,0.3s,baz=93,slow=6.5,SNR=7.4	**40.82**	**285**	P	P	00 39 26.5	+0.5
SONM	**Songino Array** 0.5nm,0.6s,baz=142,slow=8.9,SNR=3.4	**46.48**	**329**	P	P	00 40 12.3	+1.0
SONM	0.6nm,0.6s,baz=145,slow=3.7,SNR=4.1			PcP	PcP	00 41 45.0	-0.9
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=90,slow=9.4,SNR=3.4	**60.41**	**318**	P	P	00 41 53.9	+0.3
ZALV	**Zalesovo Beam** 0.6nm,0.5s,baz=124,slow=7.1,SNR=3.4	**61.24**	**326**	P	P	00 41 58.8	-0.3
KURBB	**Kurchatov Arra** 1.4nm,0.7s,baz=101,slow=6.7,SNR=11	**63.84**	**321**	P	P	00 42 16.3	-0.2
BVAR	**Borovoye Array** 0.9nm,0.5s,baz=103,slow=7.9,SNR=7.7	**69.28**	**323**	P	P	00 42 51.3	-0.1
ILAR	**Eielson Array** 1.1nm,0.6s,baz=246,slow=6.0,SNR=15	**72.59**	**25**	P	P	00 43 10.7	-0.6
YKA	**Yellowknife Ar** 0.6nm,0.6s,baz=287,slow=5.4,SNR=2.7	**86.97**	**27**	P	P	00 44 30.2	+1.0
ARCES	**ARCESS Array B** 1.1nm,0.7s,baz=91,slow=7.3,SNR=4.1	**88.10**	**341**	P	P	00 44 34.0	-0.5
ARCES	comp=Z,19nm,18.1s,baz=73,slow=40			LR	LR	01 30 21.6	
FINES	**FINESS Array B** 0.9nm,0.7s,baz=72,slow=6.2,SNR=8.3	**91.58**	**334**	P	P	00 44 49.2	-1.7
NVAR	**Mina Array Bea** 1.4nm,1.0s,baz=269,slow=7.4,SNR=5.5	**91.74**	**50**	P	P	00 44 53.6	+1.1

*SZGRF **30** 00:38:08.6, 42°.11N×13°.44E, h10km, mb3.7, Central Italy*

*ROM **30** 00:38:10.4±0.1, 42°.57N×13°.19E, h8km, Ml3.5/47, Error ellipse: s-maj=0.8km s-min=0.5km az=54.0*

*IDC **30** 00:38:10.9±1.4, 42°.72N×12°.85E, h0km, mb3.5/4, mb1 3.6/8, mb1mx3.5/29, mbtmp3.4/8, ML3.2/4, MS3.0/2, Ms1 3.0/2, ms1mx2.3/33, Error ellipse: s-maj=23.7km s-min=13.5km az=90.0*

*ISCJB **30** 00:38:10.2±0.2, 42°.571N±0°.009×13°.17E±0°.01, h6km±1km, mb3.6/3, MS3.3/1, Error ellipse: s-maj=1.9km s-min=1.3km az=144.7*

*LDG **30** 00:38:10.3±0.1, 42°.54N×13°.14E, h2km, Ml3.3/9, Error ellipse: s-maj=3.9km s-min=2.3km az=42.0*

*NEIC **30** 00:38:10.0, 42°.57N×13°.20E, h10km, ML3.4(ROM), After ROM.*

NEIC Felt [III] at San Mauro and [II] at Ascoli Piceno, Avezzano, Montorio al Vomano, Spoleto, Teramo and Terni. Also felt at L'Aquila and Poggio Mirteto.

*CSEM **30** 00:38:10.7±0.1, 42°.56N×13°.16E, h2km, ML4.2/35, Error ellipse: s-maj=2.1km s-min=1.4km az=51.0*

*PRU **30** 00:38:12.6, 42°.56N×13°.44E, h10km*

*STR **30** 00:38:20.6±0.7, 43°.15N×12°.76E, h10km, Ml3.3, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

ISC 30 00:38:11.5±0.7, 42°.56N±0°.01×13°.17E±0°.01, h10km±5km, n402, σ1§44/519, mb3.8/3, 3C-1D, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.10**	**293**	Pg	**Pg**	**00 38 13.9**	**-0.4**
LNSS	76µm,0.3s			Sg	**Sg**	**00 38 16.0**	**-0.2**
LNSS	**Leonessa**	**0.10**	**293**	P	**Pg**	**00 38 13.9**	**-0.4**
LNSS	**Leonessa**	**0.10**	**293**	Pg	**Pg**	**00 38 13.9**	**-0.4**
LNSS	76µm,0.3s			Sg	**Sg**	**00 38 16.0**	**-0.2**
CAMP	**Campotosto**	**0.18**	**98**	Pg	**Pg**	**00 38 14.5**	**-0.9**
CAMP	11µm,0.7s			Sg	**Sg**	**00 38 17.4**	**-0.7**
CAMP	**Campotosto**	**0.18**	**98**	P	**Pg**	**00 38 14.5**	**-0.9**
CAMP	**Campotosto**	**0.18**	**98**	Pg	**Pg**	**00 38 14.5**	**-0.9**
CAMP	11µm,0.7s			Sg	**Sg**	**00 38 17.4**	**-0.7**
GAVE	**Gavelli**	**0.24**	**303**	Pg	**Pg**	**00 38 16.2**	**-0.3**
GAVE				Sg	**Sg**	**00 38 20.2**	**+0.3**
GAVE	**Gavelli**	**0.24**	**303**	Pg	**Pg**	**00 38 16.2**	**-0.3**
GAVE				Sg	**Sg**	**00 38 20.2**	**+0.3**
AQU	**L'Aquila**	**0.27**	**140**	Pg	**Pg**	**00 38 16.3**	**-0.7**
AQU	10µm,0.4s			Sg	**Sg**	**00 38 21.3**	**+0.6**
AQU	**L'Aquila**	**0.27**	**140**	*e*P	**Pg**	**00 38 16.3**	**-0.7**
AQU				*e*S	**Sg**	**00 38 19.1**	**-1.6**
AQU	**L'Aquila**	**0.27**	**140**	Pg	**Pg**	**00 38 16.3**	**-0.7**
AQU	10µm,0.4s			Sg	**Sg**	**00 38 21.3**	**+0.6**
NRCA	**Norcia**	**0.28**	**352**	Pg	**Pg**	**00 38 16.3**	**-0.8**
NRCA	8µm,0.5s			Sg	**Sg**	**00 38 20.8**	**-0.1**
NRCA	**Norcia**	**0.28**	**352**	P	**Pg**	**00 38 15.0**	**-2.1**
NRCA	**Norcia**	**0.28**	**352**	P	**Pg**	**00 38 15.0**	**-2.1**
NRCA	**Norcia**	**0.28**	**352**	Pg	**Pg**	**00 38 16.3**	**-0.8**
NRCA	8µm,0.5s			Sg	**Sg**	**00 38 20.8**	**-0.1**
FIAM	**Fiamignano** 13µm,0.8s	**0.30**	**188**	Pg	**Pg**	**00 38 17.1**	**-0.4**
FIAM				Sg	**Sg**	**00 38 22.1**	**+0.6**
FIAM	**Fiamignano**	**0.30**	**188**	P	**Pg**	**00 38 17.1**	**-0.4**
FIAM	**Fiamignano**	**0.30**	**188**	Pg	**Pg**	**00 38 17.1**	**-0.4**
FIAM	13µm,0.8s			Sg	**Sg**	**00 38 22.1**	**+0.6**
TERO	**Teramo**	**0.33**	**79**	Pg	**Pg**	**00 38 16.8**	**-1.3**
TERO	10µm,0.8s			Sg	**Sg**	**00 38 22.2**	**-0.2**
TERO	**Teramo**	**0.33**	**79**	P	**Pg**	**00 38 16.8**	**-1.3**
TERO	**Teramo**	**0.33**	**79**	Pg	**Pg**	**00 38 16.8**	**-1.3**
TERO	10µm,0.8s			Sg	**Sg**	**00 38 22.2**	**-0.2**
MNS	**Montasola**	**0.40**	**244**	Pg	**Pg**	**00 38 19.0**	**-0.4**
MNS	5µm,0.4s			Sg	**Sg**	**00 38 25.6**	**+0.8**
MNS	**Montasola**	**0.40**	**244**	P	**Pg**	**00 38 19.0**	**-0.4**
MNS	**Montasola**	**0.40**	**244**	Pg	**Pg**	**00 38 19.0**	**-0.4**
CESX	**Cesi**	**0.44**	**277**	Pg	**Pg**	**00 38 19.5**	**-0.6**
CESX	5µm,0.4s			Sg	**Sg**	**00 38 26.8**	**+0.9**
CESX	**Cesi**	**0.44**	**277**	P	**Pg**	**00 38 19.1**	**-1.0**
CESX	**Cesi**	**0.44**	**277**	P	**Pg**	**00 38 19.1**	**-1.0**
CESX	**Cesi**	**0.44**	**277**	Pg	**Pg**	**00 38 19.5**	**-0.6**
FDMO	**Fiordimonte**	**0.48**	**353**	Pg	**Pg**	**00 38 19.8**	**-1.1**
FDMO	2µm,0.4s			Sg	**Sg**	**00 38 27.2**	**0.0**
FDMO	**Fiordimonte**	**0.48**	**353**	P	**Pg**	**00 38 19.1**	**-1.8**
FDMO	**Fiordimonte**	**0.48**	**353**	P	**Pg**	**00 38 19.1**	**-1.8**
FDMO	**Fiordimonte**	**0.48**	**353**	Pg	**Pg**	**00 38 19.8**	**-1.1**
FDMO	2µm,0.4s			Sg	**Sg**	**00 38 27.2**	**0.0**
CESI	**CESI - Serrava**	**0.48**	**336**	Pg	**Pg**	**00 38 20.1**	**-0.9**
CESI	930nm,0.4s			Sg	**Sg**	**00 38 27.6**	**+0.2**
CESI	**CESI - Serrava**	**0.48**	**336**	P	**Pg**	**00 38 20.1**	**-0.9**
CESI	**CESI - Serrava**	**0.48**	**336**	Pg	**Pg**	**00 38 20.1**	**-0.9**
CESI	930nm,0.4s			Sg	**Sg**	**00 38 27.6**	**+0.2**
VCEL	**Villa Celiera**	**0.52**	**108**	Pg	**Pg**	**00 38 20.7**	**-1.0**
VCEL	5µm,0.7s			Sg	**Sg**	**00 38 29.5**	**+0.8**
VCEL	**Villa Celiera**	**0.52**	**108**	P	**Pg**	**00 38 20.5**	**-1.2**
VCEL	**Villa Celiera**	**0.52**	**108**	Pg	**Pg**	**00 38 20.7**	**-1.0**
VCEL	5µm,0.7s			Sg	**Sg**	**00 38 29.5**	**+0.8**
OFFI	**Offida**	**0.53**	**45**	Pg	**Pg**	**00 38 21.5**	**-0.4**
OFFI	12µm,0.6s			Sg	**Sg**	**00 38 29.4**	**+0.5**
OFFI	**Offida**	**0.53**	**45**	P	**Pg**	**00 38 21.5**	**-0.4**
OFFI	**Offida**	**0.53**	**45**	Pg	**Pg**	**00 38 21.5**	**-0.4**
OFFI	12µm,0.6s			Sg	**Sg**	**00 38 29.4**	**+0.5**
PTQR	**Pietraquaria**	**0.57**	**162**	Pg	**Pg**	**00 38 21.3**	**-1.2**
PTQR				Sg	**Sg**	**00 38 30.1**	**+0.1**
PTQR	**Pietraquaria**	**0.57**	**162**	P	**Pg**	**00 38 21.3**	**-1.2**
PTQR	**Pietraquaria**	**0.57**	**162**	Pg	**Pg**	**00 38 21.3**	**-1.2**
PTQR				Sg	**Sg**	**00 38 30.1**	**+0.1**
TRTR	**Tortoreto Alta**	**0.60**	**66**	Pg	**Pg**	**00 38 22.8**	**-0.4**
TRTR	**Tortoreto Alta**	**0.60**	**66**	P	**Pg**	**00 38 23.0**	**-0.1**
TRTR	**Tortoreto Alta**	**0.60**	**66**	Pg	**Pg**	**00 38 22.8**	**-0.4**
ASSB	**Assisi San Ben** 2µm,0.5s	**0.61**	**322**	Pg	**Pg**	**00 38 22.4**	**-1.0**
ASSB	**Assisi San Ben**	**0.61**	**322**	P	**Pg**	**00 38 22.4**	**-1.0**
ASSB	**Assisi San Ben** 2µm,0.5s	**0.61**	**322**	Pg	**Pg**	**00 38 22.4**	**-1.0**
MTCE	**Montecelio**	**0.62**	**211**	Pg	**Pg**	**00 38 22.6**	**-1.0**
MTCE	2µm,0.5s			Sg	**Sb**	**00 38 32.8**	**-0.6**
MTCE	**Montecelio**	**0.62**	**211**	P	**Pg**	**00 38 20.7**	**-2.9**
MTCE	**Montecelio**	**0.62**	**211**	P	**Pg**	**00 38 20.7**	**-2.9**
MTCE	**Montecelio**	**0.62**	**211**	Pg	**Pg**	**00 38 22.6**	**-1.0**
CERT	**Cerreto**	**0.63**	**193**	Pg	**Pg**	**00 38 22.5**	**-1.2**
CERT	6µm,0.6s			Sg	**Sg**	**00 38 32.3**	**+0.4**
CERT	**Cerreto**	**0.63**	**193**	P	**Pg**	**00 38 22.5**	**-1.2**
CERT	**Cerreto**	**0.63**	**193**	Pg	**Pg**	**00 38 22.5**	**-1.2**
CERT	6µm,0.6s			Sg	**Sg**	**00 38 32.3**	**+0.4**
SNTG	**Esanatoglia**	**0.71**	**346**	Pg	**Pg**	**00 38 24.0**	**-1.3**
SNTG				Sg	**Sg**	**00 38 35.3**	**+0.7**
SNTG	**Esanatoglia**	**0.71**	**346**	P	**Pg**	**00 38 24.0**	**-1.3**
SNTG	**Esanatoglia**	**0.71**	**346**	Pg	**Pg**	**00 38 24.0**	**-1.3**
SNTG				Sg	**Sg**	**00 38 35.3**	**+0.7**
GUMA	**Gualdo di Mace** 11µm,0.6s	**0.75**	**48**	Pg	Pg	00 38 20.8	-5.3
VVLD	**Villa Vallelon**	**0.77**	**154**	Pg	**Pg**	**00 38 25.8**	**-0.5**
VVLD	1µm,0.6s			Sg	**Sg**	**00 38 36.6**	**+0.2**
VVLD	**Villa Vallelon**	**0.77**	**154**	P	**Pg**	**00 38 25.8**	**-

ARVD	Arcevia	0.95	350	Pg	Pg	00 38 28.0	-1.8
ARVD				Sg	Sg	00 38 42.1	-0.1
	2μm,0.7s						
ARVD	Arcevia	0.95	350	Pg	Pg	00 38 28.0	-1.8
ARVD				Sg	Sg	00 38 42.1	-0.1
	2μm,0.7s						
SACS	San Casciano d	0.97	288	Pg	Pg	00 38 29.4	-0.8
SACS				Sg	Sg	00 38 43.1	+0.2
	1μm,0.8s						
SDI	San Donato	0.98	151	Pg	Pg	00 38 28.7	-1.6
SDI				Sg	Sg	00 38 41.8	-1.2
	734nm,0.8s						
SDI	San Donato	0.98	151	P	Pg	00 38 28.7	-1.6
SDI	San Donato	0.98	151	Pg	Pg	00 38 28.7	-1.6
SDI				Sg	Sg	00 38 41.8	-1.2
	734nm,0.8s						
TOLF	Tolfa	1.00	241	Pg	Pg	00 38 29.4	-1.3
TOLF				Sg	Sg	00 38 43.8	+0.1
TOLF	Tolfa	1.00	241	P	Pg	00 38 29.6	-1.2
TOLF	Tolfa	1.00	241	Pg	Pg	00 38 29.4	-1.3
TOLF				Sg	Sg	00 38 43.8	+0.1
GIUL	Giuliano Di Ro	1.00	176	Pg	Pg	00 38 29.3	-1.5
GIUL				Sg	Sg	00 38 43.5	-0.4
	979nm,0.8s						
GIUL	Giuliano Di Ro	1.00	176	P	Pg	00 38 29.1	-1.7
GIUL				S	Sg	00 38 34.6	-9.2
GIUL	Giuliano Di Ro	1.00	176	Pg	Pg	00 38 29.3	-1.5
GIUL				Sg	Sg	00 38 43.5	-0.4
	979nm,0.8s						
LATE	Laterza	1.01	273	Pg	Pg	00 38 29.9	-1.0
LATE				Sg	Sg	00 38 43.7	-0.4
LATE	Laterza	1.01	273	P	Pg	00 38 30.4	-0.6
LATE	Laterza	1.01	273	Pg	Pg	00 38 29.9	-1.0
LATE	Laterza	1.01	273	P	Pg	00 38 30.4	-0.6
LATE				Sg	Sg	00 38 43.7	-0.4
AOI	Ancona	1.04	18	Pg	Pb	00 38 29.8	-1.8
AOI				Sg	Sg	00 38 44.1	-0.9
	1μm,1.1s						
AOI	Ancona	1.04	18	P	Pb	00 38 29.9	-1.6
AOI	Ancona	1.04	18	P	Pb	00 38 30.0	-1.6
AOI				Sg	Sg	00 38 44.1	-0.9
	1μm,1.1s						
RNI2	Rionero Sannit	1.13	139	Pg	Pb	00 38 32.1	-1.1
	2μm,1.1s						
RNI2	Rionero Sannit	1.13	139	P	Pb	00 38 32.5	-0.7
RNI2	Rionero Sannit	1.13	139	Pg	Pb	00 38 32.1	-1.1
	2μm,1.1s						
RNI2	Rionero Sannit	1.13	139	P	Pb	00 38 32.5	-0.7
CDCA	Citt‘ di Caste	1.13	323	Pg	Pb	00 38 32.0	-1.1
CDCA	Citt‘ di Caste	1.13	323	P	Pn	00 38 35.8	+2.4
CDCA	Citt‘ di Caste	1.13	323	Pg	Pb	00 38 32.0	-1.1
CDCA	Citt‘ di Caste	1.13	323	P	Pn	00 38 35.8	+2.4
CERA	Filignano	1.15	146	Pg	Pb	00 38 31.9	-1.7
	1μm,0.9s						
CERA	Filignano	1.15	146	Pg	Pb	00 38 31.9	-1.7
	1μm,0.9s						
BADI	Badiali	1.17	325	Pg	Pb	00 38 32.6	-1.2
BADI				Sg	Sb	00 38 48.3	-0.7
	1μm,0.6s						
BADI	Badiali	1.17	325	P	Pb	00 38 33.0	-0.8
BADI	Badiali	1.17	325	Pg	Pb	00 38 32.6	-1.2
BADI	Badiali	1.17	325	P	Pb	00 38 33.0	-0.8
BADI				Sg	Sb	00 38 48.3	-0.7
	1μm,0.6s						
FSSB	Fossombrone	1.17	346	Pg	Pb	00 38 31.9	-1.9
FSSB				Sg	Sb	00 38 47.8	-1.2
	2μm,0.4s						
FSSB	Fossombrone	1.17	346	P	Pb	00 38 31.2	-2.6
FSSB	Fossombrone	1.17	346	P	Pb	00 38 31.2	-2.6
FSSB	Fossombrone	1.17	346	Pg	Pb	00 38 31.9	-1.9
FSSB				Sg	Sb	00 38 47.8	-1.2
	2μm,0.4s						
CAFI	Castiglion Fio	1.17	311	Pg	Pb	00 38 32.6	-1.3
CAFI				Sg	Sb	00 38 49.2	+0.1
	497nm,0.6s						
CAFI	Castiglion Fio	1.17	311	Pg	Pb	00 38 32.6	-1.3
CAFI				Sg	Sb	00 38 49.2	+0.1
	497nm,0.6s						
MIDA	Miranda	1.22	138	Pg	Pn	00 38 32.5	-2.3
MIDA				Sg	Sb	00 38 48.6	-2.1
	446nm,0.6s						
MIDA	Miranda	1.22	138	P	Pn	00 38 32.9	-1.9
MIDA	Miranda	1.22	138	Pg	Pn	00 38 32.5	-2.3
MIDA	Miranda	1.22	138	P	Pn	00 38 32.9	-1.9
MIDA				Sg	Sb	00 38 48.6	-2.1
	446nm,0.6s						
FRES	Fresagrandinar	1.26	117	Pg	Pn	00 38 34.2	-1.0
FRES				Sg	Sb	00 38 50.0	-1.6
	907nm,0.7s						
FRES	Fresagrandinar	1.26	117	Pg	Pn	00 38 34.2	-1.0
FRES				Sg	Sb	00 38 50.0	-1.6
	907nm,0.7s						
ARCI	Arcidosso	1.28	284	Pg	Pn	00 38 35.1	-0.5
ARCI				Sg	Sb	00 38 51.7	-0.7
	319nm,1.0s						
ARCI	Arcidosso	1.28	284	Pg	Pn	00 38 35.1	-0.5
ARCI				Sg	Sb	00 38 51.7	-0.7
	319nm,1.0s						
PARC	Parchiule	1.28	328	Pg	Pn	00 38 34.9	-0.7
PARC				Sg	Sb	00 38 51.5	-0.9
	964nm,1.0s						
PARC	Parchiule	1.28	328	P	Pn	00 38 35.4	-0.2
PARC	Parchiule	1.28	328	Pg	Pn	00 38 34.9	-0.7
PARC	Parchiule	1.28	328	P	Pn	00 38 35.4	-0.2
PARC				Sg	Sb	00 38 51.5	-0.9
	964nm,1.0s						
CRE	Caprese Michel	1.38	320	Pg	Pn	00 38 36.1	-0.9
CRE				Sg	Sn	00 38 53.7	-1.8
	163nm,0.6s						
CRE	Caprese Michel	1.38	320	P	Pb	00 38 37.7	+0.2
CRE	Caprese Michel	1.38	320	Pg	Pn	00 38 36.1	-0.9
CRE	Caprese Michel	1.38	320	P	Pb	00 38 37.7	+0.2
CRE				Sg	Sn	00 38 53.7	-1.8
	163nm,0.6s						
VAGA	Valle Agricola	1.39	145	Pg	Pn	00 38 36.8	-0.3
	306nm,0.8s						
VAGA	Valle Agricola	1.39	145	Pg	Pn	00 38 36.8	-0.3
	306nm,0.8s						
PESA	Pesaro	1.40	350	Pg	Pn	00 38 37.0	-0.1
PESA				Sg	Sn	00 38 54.7	-1.0
	1μm,0.6s						
PESA	Pesaro	1.40	350	P	Pb	00 38 37.8	0.0
PESA	Pesaro	1.40	350	Pg	Pn	00 38 37.0	-0.1
PESA	Pesaro	1.40	350	P	Pb	00 38 37.8	0.0
PESA				Sg	Sn	00 38 54.7	-1.0
	1μm,0.6s						
RSM	Repubblica di	1.47	339	Pg	Pn	00 38 37.8	-0.3
RSM				Sg	Sn	00 38 56.3	-1.1
	6.0nm,1.4s						
RSM	Repubblica di	1.47	339	P	Pb	00 38 38.7	-0.2
RSM	Repubblica di	1.47	339	Pg	Pn	00 38 37.8	-0.3
RSM	Repubblica di	1.47	339	P	Pb	00 38 38.7	-0.2
RSM				Sg	Sn	00 38 56.3	-1.1
	6.0nm,1.4s						
MAON	Monte Argentar	1.51	266	Pg	Pn	00 38 37.8	-0.9
MAON				Sg	Sn	00 38 58.2	-0.3
	212nm,0.5s						
MAON	Monte Argentar	1.51	266	P	Pn	00 38 38.0	-0.7
MAON	Monte Argentar	1.51	266	P	Pn	00 38 38.0	-0.7
MAON				Sg	Sn	00 38 58.2	-0.3
	212nm,0.5s						
PTRJ	Pietraroja	1.57	139	Pg	Pn	00 38 39.8	+0.3
	1μm,1.1s						
PTRJ	Pietraroja	1.57	139	Pg	Pn	00 38 39.8	+0.3
	1μm,1.1s						
CIGN	Sant'Elia a Pi	1.58	124	P	Pg	00 38 41.8	0.0
CIGN				S	Sn	00 38 46.6	-14
CIGN	Sant'Elia a Pi	1.58	124	P	Pg	00 38 41.8	0.0
ASQU	Asqua	1.59	321	Pg	Pn	00 38 38.9	-1.0
ASQU				Sg	Sn	00 39 00.1	-0.5
	318nm,0.7s						
ASQU	Asqua	1.59	321	Pg	Pn	00 38 38.9	-1.0
ASQU				Sg	Sn	00 39 00.1	-0.5
	318nm,0.7s						
SFI	Santa Sofia	1.65	325	P	Pn	00 38 40.6	-0.1
SFI	Santa Sofia	1.65	325	P	Pn	00 38 40.6	-0.1
FG2	Serracapriola	1.66	116	P	Pb	00 38 41.8	-0.4
FG2	Serracapriola	1.66	116	P	Pb	00 38 41.8	-0.4
GRFL	Gerfalco	1.71	291	P	Pn	00 38 41.6	+0.1
GRFL	Gerfalco	1.71	291	P	Pn	00 38 41.6	+0.1
VENT	Ventotene	1.78	174	P	Sg	00 39 11.4	+2.9
PSB1	Pescosannita	1.81	137	P	Pg	00 38 47.3	+1.0
PSB1	Pescosannita	1.81	137	P	Pg	00 38 47.3	+1.0
VMG	Vicchio	1.83	320	P	Pn	00 38 43.9	+0.8
VMG	Vicchio	1.83	320	P	Pn	00 38 43.9	+0.8
MRB1	Monte Rocchett	1.97	136	P	Pb	00 38 47.9	+0.4
MRB1	Monte Rocchett	1.97	136	P	Pb	00 38 47.9	+0.4
SEI	Scarperia	1.99	319	P	Pb	00 38 46.8	-1.2
SEI	Scarperia	1.99	319	P	Pb	00 38 46.8	-1.2
FG5	Orsara di Pugl	2.02	129	P	Pn	00 38 44.2	-1.5
FG5	Orsara di Pugl	2.02	129	P	Pn	00 38 44.2	-1.5
SGRT	San Giovanni R	2.08	112	P	Pn	00 38 47.3	+0.8
SGRT	San Giovanni R	2.08	112	P	Pn	00 38 47.3	+0.8
FNVD	Fontana Vidola	2.19	318	P	Pn	00 38 48.8	+0.7
FNVD	Fontana Vidola	2.19	318	P	Pn	00 38 48.8	+0.7
CSSN	Cassano Irpino	2.19	140	P	Pb	00 38 49.6	-1.8
CSSN	Cassano Irpino	2.19	140	P	Pb	00 38 49.6	-1.8
MSAG	Monte S. Angel	2.21	112	P	Pn	00 38 49.2	+0.9
MSAG	Monte S. Angel	2.21	112	P	Pn	00 38 49.2	+0.9
PII	Pisa	2.26	302	P	Pn	00 38 49.6	+0.7
PII	Pisa	2.26	302	P	Pn	00 38 49.6	+0.7
NVLJ	Novalja	2.35	31	*e*Pn	Pn	00 38 49.3	-0.9
NVLJ				Sn	Sn	00 39 18.9	-0.2
MAIM	Mastiano	2.38	306	P	Pn	00 38 51.0	+0.4
ZCCA	Zocca	2.40	319	P	Pb	00 38 55.2	+0.4
ZCCA	Zocca	2.40	319	P	Pb	00 38 55.2	+0.4
BDI	Bagni Di Lucca	2.40	309	P	Pn	00 38 51.6	+0.6
BDI	Bagni Di Lucca	2.40	309	P	Pn	00 38 51.6	+0.6
MRLC	Muro Lucano	2.50	135	P	Pn	00 38 49.3	-3.1
MRLC				S	Pb	00 38 56.3	-0.3
MRLC	Muro Lucano	2.50	135	P	Pn	00 38 49.3	-3.1
SGO	Sicignano	2.56	141	P	Pn	00 38 53.8	+0.6
SGO	Sicignano	2.56	141	P	Pn	00 38 53.8	+0.6
VLC	Villacollemand	2.58	309	*e*Pn	Pn	00 38 52.8	-0.7
VLC				*e*S	Sb	00 39 31.1	+1.4
VLC	Villacollemand	2.58	309	*e*Pn	Pn	00 38 52.8	-0.7
GSCL	Gusciola	2.59	314	P	Pn	00 38 54.6	+1.0
GSCL	Gusciola	2.59	314	P	Pn	00 38 54.6	+1.0
PALZ	Palazzo San Ge	2.64	127	P	Pn	00 38 55.6	+1.4
PALZ	Palazzo San Ge	2.64	127	P	Pn	00 38 55.6	+1.4
UDBI	Udbina	2.72	43	*e*Pn	Pn	00 38 56.4	+0.9
UDBI				Sn	Sn	00 39 28.8	+0.3
UDBI	Udbina	2.72	43	*e*Pn	Pn	00 38 56.3	+0.9
UDBI				Sn	Sn	00 39 28.7	+0.3
ACER	Acerenza	2.73	130	P	Pn	00 38 56.6	+1.1
ACER	Acerenza	2.73	130	P	Pn	00 38 56.6	+1.1
ERBM	Eremo	2.73	314	P	Pb	00 39 00.3	-0.3
ERBM	Eremo	2.73	314	P	Pb	00 39 00.3	-0.3
VALM	Valbona	2.78	311	P	Pn	00 38 56.7	+0.6
BACM	Baccana	2.83	308	P	Pn	00 38 56.5	-0.4
GRAM	Graiana	2.97	312	P	Pn	00 38 59.8	+1.0
MGR	Morigerati	3.01	143	P	Pb	00 39 06.4	+1.1
CODM	Codolo	3.03	308	P	Pn	00 39 00.2	+0.6
SKDS	Skadanscina	3.04	11	*i* Pn	Pn	00 38 59.6	-0.2
SKDS				*i* Sn	Sn	00 39 36.8	+0.5
SKDS	Skadanscina	3.04	11	*i* Pn	Pn	00 38 59.6	-0.2
SKDS				*i* Sn	Sn	00 39 36.8	+0.5
PGF	Pioggiola	3.08	271	*e*P	Pn	00 39 00.5	+0.2
PGF				*e*Sn	Sn	00 39 33.2	-4.1
	18nm,0.5s						
PGF	Pioggiola	3.08	271	*e*P	Pn	00 39 00.5	+0.2
PGF				*e*Sn	Sn	00 39 33.2	-4.1
	8.9nm,0.5s						
MIGL	Miglionico	3.14	127	P	Pn	00 39 02.7	+1.6
MIGL				S	Pb	00 39 06.6	-0.8
MIGL	Miglionico	3.14	127	P	Pn	00 39 02.7	+1.6
TRI	Trieste	3.17	8	P	Pn	00 39 02.1	+0.6
TRI				S	Sn	00 39 38.3	-1.2
TRI	Trieste	3.17	8	P	Pn	00 39 02.1	+0.6
TRI				S	Sn	00 39 38.3	-1.2
GBRS	Gornja Briga	3.19	21	Pn	Pn	00 39 02.3	+0.4
GBRS				*i* Sn	Sn	00 39 38.9	-1.1
SCHR	S. Chirico Rap	3.22	136	P	Pb	00 39 09.7	+0.9
SC2M	Scurtabo	3.22	306	P	Pn	00 39 01.7	-0.6
CUC	Castrocucco	3.25	141	*e*Pn	Pb	00 39 10.2	+0.9
CUC				S	Pg	00 39 16.4	+2.6
BOJS	Bojanci	3.30	26	*i* Pn	Pn	00 39 04.3	+1.0
BOJS				*i* Sn	Sn	00 39 43.9	+1.3
BOJS	Bojanci	3.30	26	*i* Pn	Pn	00 39 04.3	+1.0
BOJS				*i* Sn	Sn	00 39 43.9	+1.3
STON	Ston	3.35	83	*e*Pn	Pn	00 39 03.6	-0.3
STON				Sn	Sn	00 39 43.6	-0.2
STON	Ston	3.35	83	*e*Pn	Pn	00 39 03.6	-0.3
STON				Sn	Sn	00 39 43.6	-0.2
JAVS	Javornik	3.39	11	*i* Pn	Pn	00 39 04.3	-0.3
JAVS				*i* Sn	Sn	00 39 45.1	+0.1
BOB	Bobbio (Coli)	3.48	310	P	Pb	00 39 10.7	-2.6
BOB	Bobbio (Coli)	3.48	310	P	Pb	00 39 10.7	-2.6
VOY	Vojsko	3.51	8	*e*Pn	Pn	00 39 05.8	-0.4
VOY				*e*		00 39 20.3	
VOY				*e*Sn	Sn	00 39 47.3	-0.5
VOY	Vojsko	3.51	8	*e*Pn	Pn	00 39 05.8	-0.4
VOY				*e*Sn	Sn	00 39 47.3	-0.5
BLY	Banja Luka	3.64	52	P	Pn	00 39 11.5	+3.6
BLY	Banja Luka	3.64	52	P	Pn	00 39 11.5	+3.6
CTI	Castel Tesino	3.65	343	P	Pn	00 39 08.7	+0.5
CTI	Castel Tesino	3.65	343	P	Pn	00 39 08.7	+0.5
TDS	Terranova Siba	3.76	139	P	Pb	00 39 18.6	+0.6
PTCC	Patocco-Chiusa	3.84	2	P	Pn	00 39 10.8	0.0
PTCC	Patocco-Chiusa	3.84	2	P	Pn	00 39 10.8	0.0
MABI	Malga Bissina	3.98	332	P	Pn	00 39 13.4	+0.6
MABI	Malga Bissina	3.98	332	P	Pn	00 39 13.4	+0.6
FVI	Forni Avoltri	4.04	356	P	Pn	00 39 15.3	+1.7
FVI	Forni Avoltri	4.04	356	P	Pn	00 39 15.3	+1.7
OBKA	Obir	4.07	14	*e*Pn	Pn	00 39 14.9	+1.0
OBKA	Obir	4.07	14⇑	*i*Pn	Pn	00 39 14.9	+1.0
OBKA	Obir	4.07	14	Pn	Pn	00 39 14.9	+1.0
MYKA	Terra Mystica	4.08	5⇑	*i*Pn	Pn	00 39 13.6	-0.5
MYKA	Terra Mystica	4.08	5	Pn	Pn	00 39 13.6	-0.5
ABTA	Abfaltersbach	4.21	354⇓	*i*Pn	Pn	00 39 16.6	+0.7
	SNR=58						
ABTA	Abfaltersbach	4.21	354	Pn	Pn	00 39 16.6	+0.7
	SNR=58						
SAOF	Saorge	4.34	291	P	Pn	00 39 20.6	+3.0
SAOF	Saorge	4.34	291	P	Pn	00 39 20.6	+3.0
TIP	Timpagrande	4.34	140	*e*Pn	Pn	00 39 15.6	-2.0
TIP	Timpagrande	4.34	140	*e*Pn	Pn	00 39 15.6	-2.0
SBF	Sospel	4.39	289	*e*P	Pn	00 39 19.1	+0.8
SBF				*e*Sn	Sn	00 40 05.3	-4.2
	19nm,0.6s						
SBF	Sospel	4.39	289	*e*P	Pn	00 39 19.1	+0.8
BRMO	Bormio	4.39	334	P	Pn	00 39 19.8	+1.4
BRMO	Bormio	4.39	334	P	Pn	00 39 19.8	+1.4
REVF	Revere	4.41	287	P	Pn	00 39 20.7	+2.2
REVF	Revere	4.41	287	P	Pn	00 39 20.7	+2.2
AUTN	L'Aution	4.43	291	P	Pn	00 39 22.1	+3.1
AUTN	L'Aution	4.43	291	P	Pn	00 39 22.1	+3.1
GRI	Girifalco	4.48	145	P	Pb	00 39 27.5	-2.7
PDG	Podgorica	4.50	90	P	Pn	00 39 21.1	+1.3
PDG	Podgorica	4.50	90	P	Pn	00 39 21.1	+1.3
KBA	Koelnbreinsper	4.52	2	*e*Pn	Pn	00 39 21.6	+1.4
KBA				*e*Sn	Sn	00 40 12.5	-0.3
TOUF	Mont Tournerai	4.56	291	P	Pn	00 39 22.7	+1.9
TOUF	Mont Tournerai	4.56	291	P	Pn	00 39 22.7	+1.9
STV	Sant Anna di V	4.58	294	P	Pn	00 39 22.9	+2.1
STV	Sant Anna di V	4.58	294	P	Pn	00 39 23.0	+2.1
MVIF	Mont Vial	4.59	289	P	Pn	00 39 24.2	+3.0
MVIF	Mont Vial	4.59	289	P	Pn	00 39 24.2	+3.0
DOI	San Damiano	4.72	296	P	Pn	00 39 23.9	+1.0
DOI	San Damiano	4.72	296	P	Pn	00 39 23.9	+1.0
BBLS	Lazići	4.74	72	*e*Pn	Pn	00 39 24.7	+1.6
TUE	Stuetta	4.77	326	*e*Pn	Pn	00 39 21.8	-1.9
TUE				*e*Sn	Sn	00 40 17.4	-1.7
TUE	Stuetta	4.77	326	*e*Pn	Pn	00 39 21.8	-1.9
TUE				*e*Sn	Sn	00 40 17.4	-1.7
DAVOX	Davos/Dischmat	4.83	332	Pn	Pn	00 39 26.4	+2.0
	2.4nm,0.3s,baz=167,slow=21,SNR=18						
DAVOX				Sn	Sn	00 40 21.8	+1.4
	1.7nm,0.3s,baz=108,slow=20,SNR=3.6						
WTTA	Wattenberg	4.83	347	*e*Pn	Pn	00 39 26.9	+2.5
WTTA				*e*Sn	Sn	00 40 23.6	+3.2
MMGO	Monte Magaggia	4.90	182	P	Pn	00 39 29.6	+4.4
MMGO	Monte Magaggia	4.90	182	P	Pn	00 39 29.6	+4.4
LMR	La Mourre	4.95	281	*e*Pn	Pn	00 39 24.7	-1.2
LMR				*e*Sn	Sn	00 40 17.6	-5.6
	2.8nm,0.4s						
LMR	La Mourre	4.95	281	*e*Pn	Pn	00 39 24.7	-1.2
ARSA	Arzberg	4.98	19	*e*Pn	Pn	00 39 26.8	+0.5
ARSA				*e*Sn	Sn	00 40 24.7	+0.8
ARSA	Arzberg	4.98	19⇑	*i*Pn	Pn	00 39 26.0	-0.3
	SNR=5.6						
ARSA	Arzberg	4.98	19	Pn	Pn	00 39 26.0	-0.3
	SNR=5.6						
MBDF	Montbardon	5.12	297	*e*P	Pn	00 39 29.2	+0.8
MBDF				*e*Sn	Sn	00 40 22.1	-5.6
	10nm,0.6s						
MBDF	Montbardon	5.12	297	*e*P	Pn	00 39 29.2	+0.8
TIR	Tirane	5.14	101	P	Pn	00 39 29.6	+1.1
TIR	Tirane	5.14	101	P	Pn	00 39 29.6	+1.1
RJOB	Jochberg	5.18	357	*e*Pn	Pn	00 39 31.1	+1.9
RJOB				*e*Sn	Sn	00 40 31.0	+2.0
DIVS	Divibare	5.21	71	P	Pn	00 39 30.5	+0.9
DIVS	Divibare	5.21	71	P	Pn	00 39 30.5	+0.9
PLONS	Plons/SG	5.23	330	*e*Pn	Pn	00 39 32.2	+2.3
PLONS				*e*Sn	Sn	00 40 32.4	+2.1
OBER	Oberstdorf	5.26	338	*e*Sn	Sn	00 40 33.7	+2.8
DAVA	Damuels	5.27	335	*e*Pn	Pn	00 39 32.6	+2.1
DAVA				*e*Sn	Sn	00 40 35.4	+4.1
MOA	Molln	5.34	8	*e*Sn	Sn	00 40 33.9	+0.9
PHP	Peshkopia	5.48	97	P	Pn	00 39 35.2	+2.0
PHP	Peshkopia	5.48	97	P	Pn	00 39 35.2	+2.0
LPL	La Plagne	5.50	305	*e*P	Pn	00 39 34.7	+1.0
LPL				*e*Sn	Sn	00 40 31.8	-5.3
	6.8nm,0.4s						
LPL	La Plagne	5.50	305	*e*P	Pn	00 39 34.7	+1.0
WILA	Wila	5.72	330	*e*Pn	Pn	00 39 37.3	+0.8
WILA				*e*Sn	Sn	00 40 43.4	+1.2
SMRF	Simiane la Rot	5.72	287	*e*P	Pn	00 39 38.1	+1.5
SMRF	Simiane la Rot	5.72	287	*e*P	Pn	00 39 38.1	+1.5
KEK	Kerkira	5.76	117	*e*P	Pn	00 39 38.5	+1.5
ORIF	Oris-en-Rattie	5.78	297	*e*P	Pn	00 39 40.6	+3.2
SELS	Selova	5.88	81	*e*Pn	Pn	00 39 36.6	-2.1
BALST	Balsthal	6.15	323	*e*Pn	Pn	00 39 42.4	-0.1
BALST				*e*Sn	Sn	00 40 53.2	+0.2
SKO	Skopje	6.16	93	*e*Pn	Pn	00 39 44.7	+2.1
IGT	Igoumenitsa	6.20	117	P	Pn	00 39 44.7	+1.5
IGT	Igoumenitsa	6.20	117	P	Pn	00 39 44.7	+1.5
BIA	Bitola	6.29	101	*e*Pn	Pn	00 39 46.7	+2.4
NEST	Nestorio	6.29	107	P	Pn	00 39 46.8	+2.3
NEST	Nestorio	6.29	107	P	Pn	00 39 46.8	+2.3
GEC2	GERESS Array S	6.29	3	*e*Pn	Pn	00 39 44.7	+0.2
GEC2				*e*Sn	Sn	00 40 55.7	-0.8
GERES	GERESS Array B	6.29	3	Pn	Pn	00 39 44.7	+0.2
	0.3nm,0.3s,baz=176,slow=13,SNR=14						
GERES				Sn	Sn	00 40 53.8	-2.7
	1.4nm,0.3s,baz=166,slow=23,SNR=8.9						
BBS	Basel-Blauen	6.33	323	P	Pn	00 39 45.5	+0.5
BARS	Barje	6.38	85	*e*Pn	Pn	00 39 46.4	+0.9
FELD	Feldberg im Sc	6.44	327	P	Pn	00 39 46.6	0.0
CABF	La Chapelle	6.48	311	*e*Pn	Pn	00 39 44.4	-2.6
CABF				*e*Sn	Sn	00 40 54.2	-6.8
	5.8nm,0.4s						
JAN	Janina	6.49	114	*e*P	Pn	00 39 48.9	+1.8
LOMF	Lomont	6.57	319	P	Pn	00 39 48.5	+0.3
LOMF				S	Sn	00 41 00.6	-2.6
LOMF	Lomont	6.57	319	P	Pn	00 39 48.5	+0.3
VIVF	Saint-Julien-l	6.57	293	*e*P	Pn	00 39 49.8	+1.6
VIVF	Saint-Julien-l	6.57	293	*e*P	Pn	00 39 49.8	+1.6
KHC	Kasperske Hory	6.58	2	*e*PN	Pn	00 39 47.9	-0.4
KHC				*e*x	x	00 39 57.0	
KHC				*e*SN	Sn	00 40 59.9	-3.4
KHC				*e*x	x	00 41 10.5	
KHC	Kasperske Hory	6.58	2	Pn	Pn	00 39 47.9	-0.4
WET	Wettzell	6.59	358	*e*Pn	Pn	00 39 49.3	+0.9
WET				*e*Sn	Sn	00 41 01.5	-2.1
BFO	Black Forest	6.70	331	*e*Pn	Pn	00 39 51.5	+1.6
BFO				*e*Sn	Sn	00 41 04.8	-1.5
BFO	Black Forest	6.70	331	*e*Pn	Pn	00 39 49.5	-0.4
	2.8nm,0.6s						
BFO				*e*Sn	Sn	00 41 04.1	-2.2
BFO	Black Forest	6.70	331	*e*Pn	Pn	00 39 49.5	-0.4
	2.8nm,0.6s						
MOF	Molkenrain	6.79	323	P	Pn	00 39 50.4	-0.9
MOF	Molkenrain	6.79	323	P	Pn	00 39 50.4	-0.9
HINF	Hinteralfeld	6.89	322	*e*Pn	Pn	00 39 50.1	-2.5
HINF				*e*Sn	Sn	00 41 04.8	-6.3
	16nm,0.6s						
TREC	Trest	6.92	13	*e*PN	Pn	00 39 52.4	-0.7
TREC	Trest	6.92	13	Pn	Pn	00 39 52.4	-0.7
LASF	Ste Croix	6.96	286	*e*P	Pn	00 39 53.5	0.0
LASF	Ste Croix	6.96	286	*e*P	Pn	00 39 53.5	0.0
ECH	Echery	7.06	325	*e*Pn	Pn	00 39 52.6	-2.3
	3.2nm,0.5s						
ECH				*e*Sn	Sn	00 41 11.8	-3.4
ECH	Echery	7.06	325	P	Pn	00 39 54.7	-0.2
ECH				S	Sn	00 41 13.9	-1.3
ECH	Echery	7.06	325	*e*Pn	Pn	00 39 52.6	-2.3
	3.2nm,0.5s						
ECH	Echery	7.06	325	P	Pn	00 39 54.7	-0.2
ECH				S	Sn	00 41 13.9	-1.3
VYHS	Vyhne	7.14	32	*e*PN	Pn	00 39 58.2	+2.2
VYHS				*e*SN	Sn	00 41 14.1	-3.1
VYHS	Vyhne	7.14	32	*e*Pn	Pn	00 39 58.2	+2.2
VRAC	Vranov	7.16	18	Pn	Pn	00 39 56.8	+0.6
	0.2nm,0.3s,baz=196,slow=14,SNR=2.8						
VRAC				Sn	Sn	00 41 15.6	-2.0
	0.4nm,0.3s,baz=338,slow=3.3,SNR=4.0						
VLS	Valsamata	7.16	125	*e*P	Pn	00 39 52.5	-3.8
CDF	Champ du Feu	7.17	327	*e*Pn	Pn	00 39 55.9	-0.5
CDF				*e*Sn	Sn	00 41 11.3	-6.6
	6.6nm,0.4s						
CDF	Champ du Feu	7.17	327	*e*Pn	Pn	00 39 55.9	-0.5
ROTZ	Rotzenmuhle	7.24	355	*e*Sn	Sn	00 41 14.7	-4.9
HAU	Haudompre	7.26	321	*e*Pn	Pn	00 39 56.4	-1.3
HAU				*e*Sn	Sn	00 41 13.1	-7.1
	14nm,0.5s						
HAU	Haudompre	7.26	321	*e*Pn	Pn	00 39 56.4	-1.3
THL	Klokotos Trika	7.32	111	*e*P	Pn	00 40 00.7	+2.2
LANF	Langenberg	7.43	332	P	Pn	00 39 59.8	-0.2
LANF	Langenberg	7.43	332	P	Pn	00 39 59.8	-0.2
KEST	Kesra	7.44	205	*e*Pn	Pn	00 39 58.9	-1.3
KEST	Kesra	7.44	205	Pn	Pn	00 40 04.9	+4.7
	0.4nm,0.3s,baz=299,slow=6.6,SNR=13						
KEST	Kesra	7.44	205	*e*Pn	Pn	00 39 58.9	-1.3
PRU	Pruhonice	7.49	7	*e*PN	Pn	00 40 01.4	+0.6
PRU				*e*SN	Sn	00 41 21.5	-4.2
PRU	Pruhonice	7.49	7	Pn	Pn	00 40 01.4	+0.6
EVR	Evrytania	7.50	116	P	Pn	00 40 03.4	+2.3
EVR	Evrytania	7.50	116	*e*P	Pn	00 40 03.9	+2.8
EVR	Evrytania	7.50	116	P	Pn	00 40 03.4	+2.3
THEF	They Montfort	7.59	321	P	Pn	00 40 01.4	-0.8
THEF	They Montfort	7.59	321	P	Pn	00 40 01.4	-0.8
EFP	Efpalio	7.83	119	*e*P	Pn	00 40 07.9	+2.4
KECS	Kecovo	7.84	38	*e*PN	Pn	00 40 07.9	+2.4
KECS	Kecovo	7.84	38	*e*Pn	Pn	00 40 08.0	+2.4
PAGF	Fort de Pagny	7.95	321	*e*Pn	Pn	00 40 04.3	-2.8
NVR	Nevrokopi	8.06	95	P	Pn	00 40 10.0	+1.3
NVR	Nevrokopi	8.06	95	*e*P	Pn	00 40 10.1	+1.3
NVR	Nevrokopi	8.06	95	P	Pn	00 40 10.0	+1.3
LOR	Lormes	8.11	309	*e*P	Pn	00 40 11.7	+2.4
LOR	Lormes	8.11	309	*e*P	Pn	00 40 11.7	+2.4
KLV	Kalavryta, Ach	8.21	120	*e*P	Pn	00 40 13.4	+2.6
CAF	Calviac	8.38	290	*e*P	Pn	00 40 14.4	+1.4
CAF	Calviac	8.38	290	*e*P	Pn	00 40 14.4	+1.4
GUR	Goura	8.40	120	*e*P	Pn	00 40 16.2	+2.8
CLL	Collm	8.75	359	*e*Sn	Sn	00 41 55.0	-1.7
CLL				*e*Sb	Sg	00 42 32.0	-20
CLL				*e*Sg	Sg	00 43 05.0	+13
STHS	Stebnicka Huta	8.86	37	*e*PN	Pn	00 40 23.6	+4.0
MLR	Muntele Rosu	9.66	68	Pn	Pn	00 40 34.5	+3.8
	0.0nm,0.3s,baz=172,slow=9.2,SNR=6.6						
BRTR	Keskin Array B	15.68	94	Pn	P	00 41 58.4	+1.7
	0.1nm,0.3s,baz=262,slow=6.1,SNR=4.6						
HFS	Hagfors	17.60	1	LR	LR	00 49 51.9	
	comp=Z,24nm,18.5s,baz=58,slow=40						
FINES	FINESS Array B	20.44	18	P	P	00 42 49.2	+0.5
	1.1nm,0.6s,baz=201,slow=10,SNR=4.7						
KBZ	Khabaz	21.67	77	P	P	00 43 07.2	+5.0
	1.1nm,0.7s,baz=288,slow=3.4,SNR=4.0						
TORD	Torodi Ar. Bea	30.95	202	P	P	00 44 29.6	+0.9
	1.2nm,0.9s,baz=17,slow=9.1,SNR=5.8						
ZALV	Zalesovo Beam	47.07	50	LR	LR	01 09 13.8	
	comp=Z,30nm,19.2s,baz=160,slow=40						
SONM	Songino Array	61.97	50	P	P	00 48 31.3	-0.3
	0.5nm,0.8s,baz=284,slow=6.0,SNR=3.6						

IDC 30 00:44:32.1±7.7**,23.36N×108.36W,h0km,mb1 3.7**/3**, mb1mx3.5**/25**,mbtmp3.2**/3**,ML3.6**/1**,Error ellipse: s-maj=105.7km s-min=38.2km az=150.0,Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TXAR	Lajitas Array	7.29	34	Pn	Pn	00 46 21.4	+1.4
	0.2nm,0.3s,baz=209,slow=14,SNR=12						

TXAR			Lg	Lg	00 48 21.7	
	0.2nm,0.3s,baz=236,slow=18,SNR=4.6					
NVAR	**Mina Array Bea**	**17.26 333**	P	Pn	00 48 35.3	+0.5
	baz=158,slow=12,SNR=5.9					
PDAR	**Pinedale Array**	**19.38 357**	P	P	00 48 59.3	-0.4
	baz=160,slow=6.4,SNR=1.4					

IDC 30 00:46:16.3±5.2, 3°19S×146°07E, h95km±55km, mb3.6/7, mb1 3.8/8, ms1mx3.6/19, mbtmp3.6/8, ML2.5/1, MS3.4/5, Ms1 3.4/5, ms1mx3.2/17, Error ellipse: s-maj=44.9km s-min=25.5km az=118.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**6.27**	**170**	P	Pn	00 47 46.3	0.0
	0.7nm,0.3s,baz=26,slow=11,SNR=3.3						
PMG				LR	LR	00 50 21.2	
	comp=Z,291nm,19.6s,baz=358,slow=39						
WRA	**Warramunga Arr**	**20.21**	**214**	P	P	00 50 44.0	+0.2
	11nm,0.8s,baz=33,slow=11,SNR=57						
WRA				LR	LR	00 58 36.7	
	comp=Z,100nm,18.5s,baz=85,slow=37						
ASAR	**Alice Springs**	**23.52**	**209**	P	P	00 51 19.1	+1.1
	3.2nm,0.7s,baz=39,slow=8.1,SNR=34						
ASAR				LR	LR	01 01 05.8	
	comp=Z,131nm,18.6s,baz=283,slow=38						
FITZ	**Fitzroy Crossi**	**24.91**	**232**	P	P	00 51 29.0	-1.6
	6.0nm,0.7s,baz=30,slow=11,SNR=5.2						
FITZ				LR	LR	01 02 13.3	
	comp=Z,118nm,19.6s,baz=160,slow=38						
KSRS	**Korea Array**	**43.81**	**339**	LR	LR	01 09 16.5	
	comp=Z,350nm,19.9s,baz=1.4,slow=32						
CMAR	**Chiang Mai Arr**	**51.14**	**297**	P	P	00 55 09.6	-0.4
	0.9nm,0.6s,baz=112,slow=5.6,SNR=5.2						
SONM	**Songino Array**	**61.51**	**331**	P	P	00 56 23.9	+0.6
	0.4nm,0.8s,baz=131,slow=5.9,SNR=2.8						
MKAR	**Makanchi Array**	**74.75**	**320**	P	P	00 57 46.3	+0.3
	1.1nm,1.1s,baz=120,slow=5.2,SNR=2.9						
ILAR	**Eielson Array**	**83.28**	**23**	P	P	00 58 31.4	-0.7
	1.0nm,0.9s,baz=259,slow=5.4,SNR=6.2						
TORD	**Torodi Ar. Bea**	**143.43**	**288**	PKhKP	PKPpre	01 05 36.8	
	0.4nm,1.0s,baz=75,slow=3.5,SNR=3.0						

IDC 30 00:47:34.1±2.2, 6°70S×129°78E, h0km, mb4.0/1, mb1 4.1/4, mb1mx3.7/19, mbtmp3.9/4, ML3.9/3, MS3.4/1, Ms1 3.4/1, ms1mx2.9/17, Error ellipse: s-maj=104.2km s-min=27.2km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**12.03**	**199**	Pn	Pn	00 50 27.4	+0.5
	0.5nm,0.3s,baz=34,slow=15,SNR=16						
FITZ				Sn	Sn	00 52 28.1	-14
	0.4nm,0.3s,baz=336,slow=20,SNR=3.0						
WRA	**Warramunga Arr**	**13.89**	**162**	Pn	Pn	00 50 53.4	+1.0
	0.7nm,0.3s,baz=339,slow=14,SNR=22						
WRA				Sn	Sn	00 53 13.3	-14
	0.9nm,0.3s,baz=337,slow=22,SNR=9.5						
ASAR	**Alice Springs**	**17.33**	**167**	P	Pn	00 51 36.4	-1.3
	0.3nm,0.3s,baz=340,slow=8.9,SNR=7.7						
MKAR	**Makanchi Array**	**67.86**	**327**	P	P	00 58 34.4	0.0
	0.8nm,0.5s,baz=119,slow=7.5,SNR=12						
MKAR				LR	LR	01 28 07.7	
	comp=Z,22nm,18.4s,baz=170,slow=36						

*ISCJB **30** 01:01:05.6±0.9, 37°.58N±0°.05×26°.83E±0°.04, h9km±6km, Error ellipse: s-maj=8.3km s-min=5.9km az=7.3*
*DDA **30** 01:01:05.0, 37°.59N×26°.80E, h7km, MD2.9*
*CSEM **30** 01:01:05.1±0.2, 37°.56N×26°.80E, h5km, ML1.8/1, Error ellipse: s-maj=5.3km s-min=3.5km az=177.0*
*THE **30** 01:01:06.2, 37°.62N×26°.74E, h3km±11km, ML1.8/1, Error ellipse: s-maj=11.4km s-min=0.9km az=109.0*

ISC 30 01:01:05.5±1.1, 37°59N±0°.04×26°81E±0°.03, h11km±8km, n12, σ0°57/24, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.12**	**10**	P	**Pg**	**01 01 08.3**	**-0.2**
SMG				S	**Sg**	**01 01 10.9**	**+0.2**
SMG	**Samos**	**0.12**	**10**	P	**Pg**	**01 01 08.3**	**-0.2**
SMG				S	**Sg**	**01 01 10.9**	**+0.2**
GCAM	**G?zelcaml?**	**0.36**	**71**	*i* P	**Pg**	**01 01 12.7**	**+0.1**
GCAM				*i* S	**Sg**	**01 01 18.3**	**+1.0**
GCAM	**G?zelcaml?**	**0.36**	**71**	*i* P	**Pg**	**01 01 12.7**	**+0.1**
GCAM				*i* S	**Sg**	**01 01 18.3**	**+1.0**
URLA	**Izmir**	**0.79**	**348**	*i* P	**Pg**	**01 01 20.3**	**-0.5**
URLA				*i* S	**Sb**	**01 01 32.7**	**+0.7**
URLA	**Izmir**	**0.79**	**348**	*i* P	**Pg**	**01 01 20.3**	**-0.5**
URLA				*i* S	**Sb**	**01 01 32.7**	**+0.7**
AYDN	**Tasoluk**	**0.85**	**85**	*i* P	**Pg**	**01 01 21.4**	**-0.5**
AYDN				*i* S	**Sg**	**01 01 33.0**	**-0.1**
AYDN	**Tasoluk**	**0.85**	**85**	*i* P	**Pg**	**01 01 21.4**	**-0.5**
AYDN				*i* S	**Sg**	**01 01 33.0**	**-0.1**
CHOS	**Chios island**	**1.00**	**324**	P	**Pg**	**01 01 24.8**	**+0.1**
CHOS				S	**Sg**	**01 01 37.7**	**0.0**
CHOS	**Chios island**	**1.00**	**324**	P	**Pg**	**01 01 24.8**	**+0.1**
CHOS				S	**Sg**	**01 01 37.7**	**0.0**
APE	**Apeiranthos**	**1.14**	**244**	P	**Pb**	**01 01 26.6**	**-0.7**
APE				S	**Sg**	**01 01 43.1**	**+0.8**
APE	**Apeiranthos**	**1.14**	**244**	P	**Pb**	**01 01 26.6**	**-0.7**
APE				S	**Sg**	**01 01 43.1**	**+0.8**

IDC 30 01:02:30.1±1.6, 27°46S×68°56W, h0km, mb3.8/1, mb1 3.6/2, mb1mx3.4/17, mbtmp3.5/2, ML4.1/1, Error ellipse: s-maj=136.7km s-min=46.4km az=164.0, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CPUP	**Villa Florida**	**10.09**	**86**	Pn	Pn	01 04 58.0	+1.7
	0.4nm,0.3s,baz=228,slow=13,SNR=3.3						
TORD	**Torodi Ar. Bea**	**79.12**	**69**	P	P	01 14 36.1	-0.9
	0.6nm,0.6s,baz=258,slow=5.6,SNR=12						
WRA	**Warramunga Arr**	**127.92**	**208**	PKP	PKPdf	01 21 38.2	-0.5
	0.2nm,0.4s,baz=154,slow=2.0,SNR=8.4						
MKAR	**Makanchi Array**	**150.05**	**42**	PKPbc	PKPbc	01 22 23.4	+0.8
	0.5nm,0.7s,baz=303,slow=2.9,SNR=3.3						

MAN 30 01:04:19, 9°64N×122°93E, h52km, mb4.3, ML3.1, MS2.9, 2C-2D, Negros

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TBP	**Tagbilaran**	**0.92**	**87**	*e*P	Pn	01 04 33.4	-2.4
TBP				*e*S	Sn	01 04 43.9	-4.1
GUIM	**Jordan**	**1.03**	**341**	*e*P	Pn	01 04 38.3	+1.1
GUIM				*e*S	Sn	01 04 55.4	+4.7
DCPH	**Dipolog City**	**1.13**	**158**⇓	*i* P	Pn	01 04 36.9	-1.7
LLP	**Lapu-Lapu**	**1.22**	**57**⇑	*e*P	Pn	01 04 39.9	+0.1
LLP				*e*S	Sn	01 04 54.8	-0.5
PAGZ	**Pagadian**	**1.84**	**166**	*e*P	Pn	01 04 49.3	+1.1
RCP	**Roxas**	**1.91**	**355**⇑	*e*P	Pn	01 04 53.6	+4.4
RCP				*i* S	Sn	01 05 20.2	+8.1
MSLP	**Maasin**	**1.96**	**75**	*e*P	Pn	01 04 51.5	+1.6
CGP	**Cagayan de Oro**	**2.11**	**124**⇓	*e*P	Pn	01 04 51.6	-0.2
CGP				*e*S	Sn	01 05 17.4	+0.5
CUYO	**Cuyo Island**	**2.23**	**303**	*e*P	Pn	01 04 56.3	+2.7

*NIED **30** 01:31:00, 25°.00N×122°.00E, h5km, Mw4.0 Best double couple: M0 1.28000×10^15 NP1:φ=69.00000°, δ=62.00000°, λ=-92.00000°. NP2:φ=254.00000°, δ=28.00000°, λ=-86.00000°.*
*JMA **30** 01:31:23.7±0.4, 24°.96N×121°.99E, h25km, M3.5*
*TAP **30** 01:31:24.7, 24°.82N×122°.04E, h2km, ML3.9, C*
*IDC **30** 01:31:24.9±1.1, 24°.42N×121°.24E, h0km, mb3.7/5, mb1 3.8/6, mb1mx3.5/25, mbtmp3.6/6, ML3.0/1, MS3.2/7, Ms1 3.2/7, ms1mx2.9/39, Error ellipse: s-maj=54.2km s-min=19.7km az=76.0*

ISC 30 01:31:25.2±1.0, 24°82N±0°.02×122°09E±0°.02, h7km±7km, n62, σ1°05/86, mb3.7/5, MS3.2/6, 3C-5D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
TWB1	**Santiao Chiao**	**0.20**	**334**⇓	*i* P	**Pg**	**01 31 29.4**	**+0.1**
	baz=347						
TWB1				S	**Sg**	**01 31 32.8**	**+0.7**
	baz=347						
TWC	**Suao**	**0.30**	**225**⇓	*i* P	**Pg**	**01 31 31.0**	**-0.2**
	baz=219						
TWC				*e*S	**Sg**	**01 31 34.5**	**-0.7**
	baz=219						
ILA	**Ilan**	**0.31**	**259**	*e*P	**Pg**	**01 31 31.5**	**+0.1**
	baz=258						
ILA				*e*S	**Sg**	**01 31 36.4**	**+0.9**
	baz=258						
NWF	**Wu-fen Shan**	**0.37**	**312**⇓	*i* P	**Pg**	**01 31 32.8**	**+0.3**
	baz=316						
NWF				*i* S	**Sb**	**01 31 38.9**	**-1.3**
	baz=316						
TWE	**Neicheng**	**0.39**	**255**	*i* P	**Pg**	**01 31 32.7**	**-0.2**
	baz=254						
TWE				*e*S	**Sb**	**01 31 38.9**	**-1.8**
	baz=254						
TWA	**Mucha**	**0.48**	**289**	⇑P	**Pg**	**01 31 34.8**	**+0.2**
	baz=291						
TWA				*e*S	**Sb**	**01 31 40.9**	**-2.4**
	baz=291						
ENA	**Nanau**	**0.50**	**219**	⇓P	**Pg**	**01 31 34.5**	**-0.4**
	baz=228						
ENA				*e*S	**Sg**	**01 31 41.6**	**+0.1**
	baz=228						
TAP1	**Taipei**	**0.55**	**293**	P	**Pb**	**01 31 36.2**	**-1.0**
	baz=294						
TAP1				*e*S	**Sb**	**01 31 43.9**	**-1.4**
	baz=294						
TAP	**Taipei**	**0.57**	**292**	*e*P	**Pg**	**01 31 36.0**	**-0.1**
	baz=296						
EHP	**Heping Village**	**0.60**	**212**	*e*P	**Pg**	**01 31 36.9**	**+0.1**
	baz=191						
TWY	**Chenhua**	**0.63**	**316**	P	**Pg**	**01 31 37.9**	**+0.5**
	baz=320						
TWS1	**Kuangyinshan**	**0.67**	**295**	*e*P	**Pb**	**01 31 38.7**	**-0.4**
	baz=297						
NSK	**Sanguang**	**0.68**	**258**⇑	*i* P	**Pg**	**01 31 37.7**	**-0.6**
	baz=258						
NSK				*e*S	**Sg**	**01 31 46.3**	**-0.8**
	baz=258						
NNS	**Nan Shan**	**0.75**	**240**	*e*P	**Pg**	**01 31 39.2**	**-0.5**
	baz=236						
PCYT	**Pengchaiyu**	**0.80**	**359**	P	**Pg**	**01 31 41.6**	**+0.9**
	baz=6.0						
NCU	**National Centr**	**0.83**	**280**	*e*P	**Pn**	**01 31 42.3**	**-1.0**
	baz=281						
TWD	**Chiawan**	**0.86**	**211**	*e*P	**Pg**	**01 31 41.7**	**-0.1**
	baz=211						
TWD				*e*S	**Sb**	**01 31 53.4**	**-0.9**
	baz=211						
YOJ	**Yonaguni jima**	**0.92**	**113**⇑	*e*P	**Pg**	**01 31 42.6**	**-0.2**
	baz=111						
YOJ				*e*S	**Sg**	**01 31 56.6**	**+1.9**
	baz=111						
YOJ	**Yonaguni jima**	**0.92**	**113**	P	**Pg**	**01 31 42.6**	**-0.2**
YOJ				S	**Sg**	**01 31 56.4**	**+1.7**
HWA	**Hwalien**	**0.95**	**208**	*e*P	**Pg**	**01 31 44.0**	**+0.5**
	baz=202						
NSTT	**Nanjuang**	**1.00**	**259**	*e*P	**Pn**	**01 31 45.1**	**-0.6**
	baz=260						
NSTT				*e*S	**Sn**	**01 31 59.2**	**-0.8**
	baz=260						
TWT	**Tachien**	**1.00**	**236**	*e*P	**Pn**	**01 31 45.3**	**-0.6**
	baz=221						
WHF	**Hehuan Shan**	**1.01**	**228**⇓	*i* P	**Pg**	**01 31 44.5**	**-0.2**
	baz=228						
WHF				*e*S	**Sb**	**01 31 58.4**	**-0.4**
	baz=228						
HSN	**Hsinchu**	**1.01**	**269**	*e*P	**Pn**	**01 31 45.2**	**-0.6**
	baz=284						
ESL	**Shilin**	**1.17**	**211**	*e*P	**Pb**	**01 31 46.6**	**-1.1**
	baz=211						
ESL				*e*S	**Sg**	**01 32 02.4**	**-0.4**
	baz=211						
NSY	**Sanyi**	**1.27**	**252**	*e*P	**Pg**	**01 31 50.6**	**+1.0**
	baz=252						
NSY				*e*S	**Sn**	**01 32 08.4**	**+1.7**
	baz=252						
TWQ1	**Liyutan**	**1.28**	**249**	*e*P	**Pg**	**01 31 50.9**	**+1.0**
	baz=238						
TWQ1				*e*S	**Sn**	**01 32 07.7**	**+0.7**
	baz=238						
SMLT	**Sun Moon Lake**	**1.43**	**229**	P	**Pb**	**01 31 52.2**	**0.0**
	baz=225						
TYC	**Yuchr**	**1.45**	**231**	*e*P	**Pb**	**01 31 52.1**	**-0.3**
	baz=232						
TYC				*e*S	**Sg**	**01 32 12.4**	**+0.7**
	baz=232						
TCU	**Taichung**	**1.45**	**243**	*e*P	**Pg**	**01 31 53.5**	**+0.5**
	baz=244						
TCU				*e*S	**Sg**	**01 32 13.6**	**+1.7**
	baz=244						
EHY	**Hungye**	**1.48**	**208**	*e*P	**Pn**	**01 31 52.0**	**-0.2**
	baz=203						
IRIF	**Iriomote-Funau**	**1.57**	**108**	P	**Pn**	**01 31 52.9**	**-0.6**
IRIF				S	**Sn**	**01 32 13.0**	**-1.1**
WNT	**Mingjian**	**1.59**	**234**	*e*P	**Pg**	**01 31 56.3**	**+0.6**
	baz=219						
TWF1	**Yuli**	**1.63**	**206**	*e*P	**Pn**	**01 31 52.9**	**-1.4**
	baz=214						
YUS	**Yu-Shan**	**1.68**	**218**	*e*P	**Pb**	**01 31 56.8**	**0.0**
	baz=208						
YUS				*e*S	**Sg**	**01 32 21.8**	**+2.4**
	baz=208						
HATJ	**Hateruma jima**	**1.74**	**116**	P	**Pn**	**01 31 54.9**	**-0.9**
HATJ				*e*S	**Sn**	**01 32 19.1**	**+0.8**
ALS	**Alishan**	**1.75**	**222**	*e*P	**Pb**	**01 31 58.0**	**+0.2**
	baz=223						
ALS				*e*S	**Sg**	**01 32 22.1**	**+0.4**
	baz=223						
CHN5	**Tsauling**	**1.77**	**227**	P	**Pg**	**01 31 58.8**	**-0.4**
	baz=228						
CHN5				S	**Sg**	**01 32 23.9**	**+1.6**
	baz=228						
JKRS	**Kuro-shima**	**1.85**	**108**	P	**Pn**	**01 31 56.3**	**-0.9**
JKRS				*e*S	**Sn**	**01 32 18.8**	**-2.0**
ELDTW	**Lidau**	**1.90**	**211**	*e*P	**Pb**	**01 31 59.3**	**-0.9**
	baz=206						
JIJ	**Ishigaki jima**	**1.93**	**103**	P	**Pn**	**01 31 57.5**	**-0.9**
JIJ				*e*S	**Sn**	**01 32 22.5**	**-0.3**
CHY	**Chiayi**	**2.01**	**229**	*e*P	**Pb**	**01 32 00.8**	**-1.3**
	baz=226						
WTP	**Ta-pu**	**2.07**	**221**	*e*P	**Pb**	**01 32 02.8**	**-0.3**
	baz=207						
WTP				*e*S	**Sg**	**01 32 32.1**	**+0.4**
	baz=207						
TWK	**Hsinying**	**2.13**	**224**	*e*P	**Pb**	**01 32 04.0**	**-0.2**
	baz=225						
TWK				*e*S	**Sg**	**01 32 34.1**	**+0.4**
	baz=225						
CHN1	**Nanshi**	**2.17**	**221**	P	**Pb**	**01 32 04.2**	**-0.5**
	baz=224						
CHN1				*e*S	**Sg**	**01 32 34.3**	**-0.5**
	baz=224						
TWG	**Pinlang**	**2.20**	**205**	*e*P	**Pb**	**01 32 04.8**	**-0.5**
	baz=200						
TWM1	**Shoushan**	**2.51**	**218**	*e*P	**Pb**	**01 32 10.2**	**-0.4**
	baz=215						
PNG	**Penghu**	**2.63**	**242**	*e*P	**Pb**	**01 32 10.6**	**-2.0**
	baz=250						
EAST	**Anshuo**	**2.68**	**205**	*e*P	**Pn**	**01 32 10.6**	**+1.8**
	baz=185						
SCZT	**Fangliau**	**2.79**	**209**	*e*P	**Pb**	**01 32 13.4**	**-1.8**
	baz=188						
TWK1	**Hengchun**	**3.10**	**203**	*e*P	**Pn**	**01 32 16.3**	**+1.8**
	baz=205						
TWK1				*e*S	**Sn**	**01 32 54.4**	**+2.6**
	baz=205						
KNM	**Kinmen**	**3.35**	**264**	*e*P	Pb	01 32 21.0	-3.9
	baz=263						
KSRS	**Korea Array**	**13.54**	**20**	Pn	**P**	**01 34 48.3**	**+1.4**
	0.1nm,0.3s,baz=196,slow=12,SNR=2.5						
KSRS				LR	LR	01 39 48.0	
	comp=Z,35nm,18.7s,baz=349,slow=36						
ASAJ	**Asahikawa**	**25.50**	**36**	LR	LR	01 47 19.7	
	comp=Z,31nm,19.1s,baz=250,slow=36						
SONM	**Songino Array**	**26.11**	**336**	P	**P**	**01 37 01.2**	**+1.4**
	2.4nm,0.9s,baz=149,slow=8.3,SNR=8.7						
SONM				LR	LR	01 48 30.6	
	comp=Z,106nm,19.1s,baz=114,slow=39						
PETK	**Petropavlovsk-**	**38.88**	**34**	LR	LR	01 55 44.6	
	comp=Z,23nm,21.2s,baz=204,slow=37						
ZALV	**Zalesovo Beam**	**40.16**	**326**	P	**P**	**01 39 01.8**	**+0.1**
	1.4nm,0.8s,baz=119,slow=5.8,SNR=5.0						
ZALV				LR	LR	01 58 16.1	
	comp=Z,16nm,18.9s,baz=68,slow=40						
WRA	**Warramunga Arr**	**46.07**	**164**	P	**P**	**01 39 48.4**	**-1.4**
	1.1nm,0.8s,baz=346,slow=8.5,SNR=10						
ASAR	**Alice Springs**	**49.55**	**166**	P	**P**	**01 40 17.2**	**+0.3**
	0.4nm,0.8s,baz=336,slow=8.1,SNR=3.5						
ILAR	**Eielson Array**	**68.27**	**27**	P	P	01 42 31.5	+5.1
	0.2nm,0.5s,baz=280,slow=5.3,SNR=2.9						
FINES	**FINESS Array B**	**71.31**	**330**	LR	LR	02 17 33.2	
	comp=Z,42nm,18.2s,baz=225,slow=39						
NOA	**NORSAR Array B**	**78.04**	**332**	LR	LR	02 21 25.7	
	comp=Z,33nm,18.3s,baz=335,slow=38						

*CSEM **30** 01:47:18.9±0.2, 50°.54N×1°.39W, h5km, ML2.6/9, Error ellipse: s-maj=4.7km s-min=2.8km az=82.0*
*BGS **30** 01:47:20.8±1.2, 50°.59N×1°.32W, h5km±8km, ML1.5*
*LDG **30** 01:47:20.1±0.1, 50°.58N×1°.51W, h5km, Ml2.5/9, Error ellipse: s-maj=2.3km s-min=1.6km az=82.0*

ISC 30 01:47:19.4±1.0, 50°58N±0°.01×1°37W±0°.03, h16km±9km, n73, σ1°32/125, United Kingdom

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
SWN1	**Swindon**	**0.97**	**344**	*e*P	**Pg**	**01 47 38.1**	**-0.1**
SWN1				*e*S	**Sb**	**01 47 52.1**	**+1.7**
SWN1				AML	AML	01 47 55.6	
	comp=N,19nm,0.7s						
SWN1				AML	AML	01 47 57.9	
	comp=E,20nm,0.5s						
SWN1	**Swindon**	**0.97**	**344**	P	**Pg**	**01 47 38.1**	**-0.1**
SWN1				S	**Sb**	**01 47 52.1**	**+1.7**
SWN1				AML	AML	01 47 55.6	
	comp=E,19nm,0.7s						
SWN1				AML	AML	01 47 57.9	
	comp=E,20nm,0.5s						
SWN1	**Swindon**	**0.97**	**344**	*e*P	**Pg**	**01 47 38.1**	**-0.1**
SWN1				*e*S	**Sb**	**01 47 52.1**	**+1.7**
SWN1				AML	AML	01 47 55.6	
	comp=N,19nm,0.7s						
SWN1				AML	AML	01 47 57.9	
	comp=E,20nm,0.5s						
SWN1	**Swindon**	**0.97**	**344**	*e*P	**Pg**	**01 47 38.1**	**-0.1**
SWN1				*e*S	**Sb**	**01 47 52.1**	**+1.7**
	comp=E,20nm,0.5s						
SKP1	**Kophill**	**1.19**	**17**	*e*P	**Pb**	**01 47 41.3**	**-0.3**
SKP1				*e*S	**Sg**	**01 47 57.8**	**-0.2**
SKP1	**Kophill**	**1.19**	**17**	P	**Pb**	**01 47 41.3**	**-0.3**
SKP1				S	**Sg**	**01 47 57.8**	**-0.2**
SKP1	**Kophill**	**1.19**	**17**	*e*P	**Pb**	**01 47 41.3**	**-0.3**
SKP1				*e*S	**Sg**	**01 47 57.8**	**-0.2**
SKP1	**Kophill**	**1.19**	**17**	*e*P	**Pb**	**01 47 41.3**	**-0.3**
SKP1				*e*S	**Sg**	**01 47 57.8**	**-0.2**
SSW	**Stow on the Wo**	**1.42**	**348**	*e*P	**Pg**	**01 47 46.4**	**-0.3**
SSW				*e*S	**Sb**	**01 48 04.2**	**+0.9**
SSW	**Stow on the Wo**	**1.42**	**348**	P	**Pg**	**01 47 46.4**	**-0.3**
SSW				S	**Sb**	**01 48 04.2**	**+0.9**
SSW	**Stow on the Wo**	**1.42**	**348**	*e*P	**Pg**	**01 47 46.4**	**-0.3**
SSW				*e*S	**Sb**	**01 48 04.2**	**+0.9**
SSW	**Stow on the Wo**	**1.42**	**348**	*e*P	**Pg**	**01 47 46.4**	**-0.3**
SSW				*e*S	**Sb**	**01 48 04.2**	**+0.9**
JLP	**Les Platons**	**1.42**	**200**	*e*P	**Pn**	**01 47 45.6**	**+1.1**
JLP	**Les Platons**	**1.42**	**200**	P	**Pn**	**01 47 45.6**	**+1.1**
JLP	**Les Platons**	**1.42**	**200**	*e*P	**Pn**	**01 47 45.6**	**+1.1**
JLP	**Les Platons**	**1.42**	**200**	*e*P	**Pn**	**01 47 45.7**	**+1.1**
JQE	**Queens East**	**1.45**	**198**	*e*P	**Pg**	**01 47 47.4**	**+0.1**
JQE	**Queens East**	**1.45**	**198**	P	**Pg**	**01 47 47.4**	**+0.1**
JQE	**Queens East**	**1.45**	**198**	*e*P	**Pg**	**01 47 47.4**	**+0.1**
JRS	**Jersey**	**1.47**	**199**	*e*P	**Pg**	**01 47 47.5**	**-0.1**
JRS				*e*S	**Sb**	**01 48 06.0**	**+1.2**
JRS	**Jersey**	**1.47**	**199**	P	**Pg**	**01 47 47.5**	**-0.1**
JRS				S	**Sb**	**01 48 06.0**	**+1.2**
JRS	**Jersey**	**1.47**	**199**	*e*P	**Pg**	**01 47 47.5**	**-0.1**
JRS				*e*S	**Sb**	**01 48 06.0**	**+1.2**
JRS	**Jersey**	**1.47**	**199**	*e*P	**Pg**	**01 47 47.5**	**-0.1**
JSA	**Saint Aubin**	**1.49**	**201**	*e*P	**Pg**	**01 47 47.9**	**-0.1**
JSA				*e*S	**Sb**	**01 48 06.6**	**+1.3**
JSA				AML	AML	01 48 12.0	
	comp=E,7.9nm,0.3s						
JSA				AML	AML	01 48 12.3	
	comp=N,6.2nm,0.6s						
JSA	**Saint Aubin**	**1.49**	**201**	P	**Pg**	**01 47 47.9**	**-0.1**
JSA				S	**Sb**	**01 48 06.6**	**+1.3**
JSA				AML	AML	01 48 12.0	
	comp=N,7.9nm,0.3s						
JSA				AML	AML	01 48 12.3	
	comp=N,6.2nm,0.6s						
JSA	**Saint Aubin**	**1.49**	**201**	*e*P	**Pg**	**01 47 47.9**	**-0.1**
JSA				*e*S	**Sb**	**01 48 06.6**	**+1.3**
JSA				AML	AML	01 48 12.0	
	comp=E,7.9nm,0.3s						
JSA				AML	AML	01 48 12.3	
	comp=N,6.2nm,0.6s						
DYA	**Yadsworthy**	**1.64**	**266**	*e*P	**Pb**	**01 47 49.1**	**-0.2**
DYA				*e*S	**Sb**	**01 48 10.5**	**+0.8**
DYA				AML	AML	01 48 14.3	
	comp=N,3.6nm,0.6s						
DYA				AML	AML	01 48 15.2	
	comp=E,3.5nm,0.5s						
DYA	**Yadsworthy**	**1.64**	**266**	P	**Pb**	**01 47 49.1**	**-0.2**
DYA				S	**Sb**	**01 48 10.5**	**+0.8**
DYA				AML	AML	01 48 14.3	
	comp=E,3.6nm,0.6s						
DYA				AML	AML	01 48 15.2	
	comp=E,3.5nm,0.5s						
DYA	**Yadsworthy**	**1.64**	**266**	*e*P	**Pb**	**01 47 49.1**	**-0.2**
DYA				*e*S	**Sb**	**01 48 10.5**	**+0.8**
DYA				AML	AML	01 48 14.3	
	comp=N,3.6nm,0.6s						
DYA				AML	AML	01 48 15.2	
	comp=E,3.5nm,0.5s						
ELSH	**Elham, Standar**	**1.69**	**69**	*e*P	**Pn**	**01 47 49.1**	**+0.9**
ELSH	**Elham, Standar**	**1.69**	**69**	P	**Pn**	**01 47 49.1**	**+0.9**
ELSH	**Elham, Standar**	**1.69**	**69**	*e*P	**Pn**	**01 47 49.1**	**+0.9**
ELSH	**Elham, Standar**	**1.69**	**69**	*e*P	**Pn**	**01 47 49.1**	**+0.9**
MCH1	**Michaelchurch**	**1.75**	**325**	*e*P	**Pn**	**01 47 50.7**	**+1.7**
MCH1				*e*S	**Sb**	**01 48 13.2**	**+0.4**
MCH1				AML	AML	01 48 15.5	
	comp=E,5.6nm,0.4s						
MCH1				AML	AML	01 48 15.5	
	comp=N,5.3nm,0.4s						
MCH1	**Michaelchurch**	**1.75**	**325**	P	**

SGMF				*e*Sn		**Sn**	**01 48 26.5**	**-2.0**
SGMF				*e*Sg		**Sb**	**01 48 36.0**	**+2.8**
	comp=N,5.0nm,0.7s							
ROSF	**Rostrenen**	**2.57**	**210**	*e*Pn		**Pn**	**01 48 00.1**	**-0.3**
ROSF	**Rostrenen**	**2.57**	**210**	*e*Pg		**Pb**	**01 48 06.7**	**+1.6**
ROSF				*e*Sn		**Sn**	**01 48 28.8**	**-2.5**
ROSF				*e*Sg		**Sb**	**01 48 39.0**	**+2.6**
	comp=N,3.3nm,0.3s							
ROSF	**Rostrenen**	**2.57**	**210**	*e*Pn		**Pn**	**01 48 00.1**	**-0.3**
ROSF	**Rostrenen**	**2.57**	**210**	*e*Pg		**Pb**	**01 48 06.7**	**+1.6**
ROSF				*e*Sn		**Sn**	**01 48 28.8**	**-2.5**
ROSF				*e*Sg		**Sb**	**01 48 39.0**	**+2.6**
	comp=N,1.6nm,0.3s							
QUIF	**Quistinic**	**2.92**	**204**	*e*Pn		**Pn**	**01 48 04.2**	**-0.9**
QUIF	**Quistinic**	**2.92**	**204**	*e*Pg		**Pb**	**01 48 12.8**	**+1.8**
QUIF				*e*Sn		**Sn**	**01 48 37.3**	**-2.5**
QUIF				*e*Sg		**Sb**	**01 48 49.8**	**+3.4**
	comp=N,3.7nm,0.4s							
QUIF	**Quistinic**	**2.92**	**204**	*e*Pn		**Pn**	**01 48 04.2**	**-0.9**
QUIF	**Quistinic**	**2.92**	**204**	*e*Pg		**Pb**	**01 48 12.8**	**+1.8**
QUIF				*e*Sn		**Sn**	**01 48 37.3**	**-2.5**
QUIF				*e*Sg		**Sb**	**01 48 49.8**	**+3.4**
	comp=N,1.9nm,0.4s							
MFF	**Saint Martin d**	**4.07**	**168**	*e*Pn		**Pn**	**01 48 21.1**	**+0.2**
MFF	**Saint Martin d**	**4.07**	**168**	*e*Pg		**Pg**	**01 48 35.8**	**-1.4**
MFF				*e*Sn		**Sn**	**01 49 05.9**	**-2.3**
MFF				*e*Sg		**Sg**	**01 49 26.9**	**-3.0**
	comp=N,0.9nm,0.3s							
MFF	**Saint Martin d**	**4.07**	**168**	*e*Pn		**Pn**	**01 48 21.1**	**+0.2**
MFF	**Saint Martin d**	**4.07**	**168**	*e*Pg		**Pg**	**01 48 35.8**	**-1.4**
MFF				*e*Sn		**Sn**	**01 49 05.9**	**-2.3**
MFF				*e*Sg		**Sg**	**01 49 26.9**	**-3.0**
	comp=N,0.4nm,0.3s							
LOR	**Lormes**	**4.78**	**132**	*e*Pn		**Pn**	**01 48 31.9**	**+1.1**
LOR	**Lormes**	**4.78**	**132**	*e*Pg		**Pg**	**01 48 50.2**	**-0.8**
LOR				*e*Sg		**Sg**	**01 49 52.6**	**-0.3**
	comp=N,1.3nm,0.3s							
LOR	**Lormes**	**4.78**	**132**	*e*Pn		**Pn**	**01 48 31.9**	**+1.1**
LOR	**Lormes**	**4.78**	**132**	*e*Pg		**Pg**	**01 48 50.2**	**-0.8**
LOR				*e*Sg		**Sg**	**01 49 52.6**	**-0.3**
	comp=N,0.6nm,0.3s							
BGF	**Bois d'Agland**	**4.91**	**144**	*e*Pn		**Pn**	**01 48 33.2**	**+0.7**
BGF	**Bois d'Agland**	**4.91**	**144**	*e*Pg		**Pg**	**01 48 51.7**	**-1.6**
BGF				*e*Sg		**Sg**	**01 49 55.3**	**-1.5**
	comp=N,5.1nm,0.4s							
BGF	**Bois d'Agland**	**4.91**	**144**	*e*Pn		**Pn**	**01 48 33.2**	**+0.7**
BGF	**Bois d'Agland**	**4.91**	**144**	*e*Pg		**Pg**	**01 48 51.7**	**-1.6**
BGF				*e*Sg		**Sg**	**01 49 55.3**	**-1.5**
	comp=N,2.5nm,0.4s							
TCF	**Toulx Ste Croi**	**4.92**	**150**	*e*Pg		**Pg**	**01 48 52.8**	**-0.7**
TCF	**Toulx Ste Croi**	**4.92**	**150**	*e*Pg		**Pg**	**01 48 52.8**	**-0.7**
RJF	**Les Rejaudoux**	**5.63**	**159**	*e*Sn		Sn	01 49 41.7	-5.0
RJF				*e*Sg		**Sg**	**01 50 17.0**	**-2.9**
	comp=N,0.8nm,0.3s							

*VIE **30** 01:49:08.3±0.4,45°.19N×14°.61E,h10^{km}±1^{km},mb1.7/2, ML2.2/2,Error ellipse: s-maj=2.5km s-min=1.3km az=178.0 23 km SE of Rijeka*
*ISCJB **30** 01:49:09.4±0.5,45°.24N±0°.02×14°.61E±0°.04,h5^{km}±6^{km}, Error ellipse: s-maj=5.0km s-min=3.3km az=140.8*
*CSEM **30** 01:49:09.4±0.2,45°.25N×14°.61E,h15^{km},MD2.7,Error ellipse: s-maj=4.3km s-min=2.8km az=50.0*

ISC 30 01:49:09.8±1.0,**45°.24N**±0°.03×**14°.61E**±0°.03,**h8**^{km}±9^{km}, **n30**,σ0≤**82**/59,**9C-6D**,**Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
GBRS	**Gornja Briga**	**0.32**	**26**	*i* Pg	**Pg**	**01**	**49 16.3**	**+0.1**
GBRS				*e*Sg	**Sg**	**01**	**49 21.0**	**+0.5**
KNDS	**Knezji Dol**	**0.33**	**331**	*i* Pg	**Pg**	**01**	**49 15.9**	**-0.4**
KNDS				*e*Sg	**Sg**	**01**	**49 21.3**	**+0.6**
KNDS	**Knezji Dol**	**0.33**	**331**	*i* Pg	**Pg**	**01**	**49 15.9**	**-0.4**
KNDS				*e*Sg	**Sg**	**01**	**49 21.3**	**+0.6**
CEY	**Cerknica**	**0.52**	**346**	*e*Pg	**Pg**	**01**	**49 19.0**	**-0.7**
CEY				*i* Sg	**Sb**	**01**	**49 27.6**	**-1.2**
CEY								
	comp=Z,30nm,0.2s							
CEY	**Cerknica**	**0.52**	**346**	*e*Pg	**Pg**	**01**	**49 19.0**	**-0.7**
CEY				*i* Sg	**Sb**	**01**	**49 27.6**	**-1.2**
	comp=Z,30nm,0.2s							
SKDS	**Skadanscina**	**0.52**	**306**	*i* Pg	**Pg**	**01**	**49 18.9**	**-0.9**
SKDS				*i* Sg	**Sg**	**01**	**49 27.0**	**+0.3**
SKDS	**Skadanscina**	**0.52**	**306**	*i* Pg	**Pg**	**01**	**49 18.9**	**-0.9**
SKDS				*e*Sg	**Sg**	**01**	**49 27.0**	**+0.3**
BOJS	**Bojanci**	**0.53**	**59**	*i* Pg	**Pg**	**01**	**49 19.9**	**0.0**
BOJS				*i* Sg	**Sg**	**01**	**49 27.4**	**+0.6**
BOJS	**Bojanci**	**0.53**	**59**	*i* Pg	**Pg**	**01**	**49 19.9**	**0.0**
BOJS				*i* Sg	**Sg**	**01**	**49 27.4**	**+0.6**
VISS	**Visnje**	**0.59**	**16**	*i* Pg	**Pg**	**01**	**49 20.5**	**-0.6**
VISS				*i* Sg	**Sg**	**01**	**49 29.3**	**+0.5**
VISS	**Visnje**	**0.59**	**16**	*i* Pg	**Pg**	**01**	**49 20.5**	**-0.6**
VISS				*e*Sg	**Sg**	**01**	**49 29.3**	**+0.5**
NVLJ	**Novalja**	**0.70**	**165**	*e*Pg	**Pg**	**01**	**49 23.0**	**-0.2**
NVLJ				Sg	**Sb**	**01**	**49 33.7**	**-0.3**
NVLJ	**Novalja**	**0.70**	**165**	*e*Pg	**Pg**	**01**	**49 23.0**	**-0.2**
NVLJ				Sg	**Sb**	**01**	**49 33.7**	**-0.3**
TRI	**Trieste**	**0.76**	**309⇓**	*e*Pg	**Pg**	**01**	**49 23.6**	**-0.8**
TRI				*e*Sg	**Sg**	**01**	**49 34.6**	**+0.4**
TRI	**Trieste**	**0.76**	**309⇓**	*e*Pg	**Pg**	**01**	**49 23.6**	**-0.8**
TRI				*e*Sg	**Sg**	**01**	**49 34.6**	**+0.4**
VOY	**Vojsko**	**0.94**	**328**	*e*Pg	**Pg**	**01**	**49 26.9**	**-0.9**
VOY				*e*		01	49 28.6	
VOY				*e*Sg	**Sg**	**01**	**49 40.2**	**+0.2**
VOY	**Vojsko**	**0.94**	**328**	*e*Pg	**Pg**	**01**	**49 26.9**	**-0.9**
VOY				*e*Sg	**Sg**	**01**	**49 40.2**	**+0.2**
SABO	**M.te Sabotino**	**1.02**	**317⇓**	*e*Pg	**Pg**	**01**	**49 29.1**	**-0.3**
SABO				*e*Sg	**Sb**	**01**	**49 43.7**	**+0.3**
SABO	**M.te Sabotino**	**1.02**	**317⇓**	*e*Pg	**Pg**	**01**	**49 29.1**	**-0.3**
SABO				*e*Sg	**Sb**	**01**	**49 43.7**	**+0.3**
UDBI	**Udbina**	**1.09**	**130**	*e*Pg	**Pb**	**01**	**49 30.5**	**-0.3**
UDBI				Sg	**Sn**	**01**	**49 47.2**	**+0.6**
UDBI	**Udbina**	**1.09**	**130**	*e*Pg	**Pb**	**01**	**49 30.5**	**-0.3**
UDBI				Sg	**Sn**	**01**	**49 47.2**	**+0.6**
OBKA	**Obir**	**1.27**	**358⇑**	*i*Pn	**Pn**	**01**	**49 33.7**	**-0.2**
OBKA				*i*Sg	**Sn**	**01**	**49 52.3**	**+1.0**
	comp=Z,25nm,0.3s							
OBKA	**Obir**	**1.27**	**358⇑**	*i*Pg	**Pn**	**01**	**49 33.7**	**-0.2**
OBKA				Sg	**Sn**	**01**	**49 52.3**	**+1.0**
	comp=Z,25nm,0.3s							
VINO	**Villanova**	**1.38**	**318⇓**	*e*Pg	**Pg**	**01**	**49 36.2**	**0.0**
VINO				*e*Sg	**Sg**	**01**	**49 56.1**	**+2.1**
VINO	**Villanova**	**1.38**	**318⇓**	*e*Pg	**Pg**	**01**	**49 36.2**	**0.0**
VINO				*e*Sg	**Sg**	**01**	**49 56.2**	**+2.1**
SOKA	**Soboth**	**1.47**	**11⇑**	*i*Pn	**Pn**	**01**	**49 36.1**	**-0.6**
SOKA				⇑*i*Sn	**Sn**	**01**	**49 55.8**	**-0.3**
SOKA	**Soboth**	**1.47**	**11⇑**	*i*Pg	**Pn**	**01**	**49 36.1**	**-0.6**
SOKA				*i* Sg	**Sn**	**01**	**49 55.8**	**-0.3**
ACOM	**Acomizza, Ital**	**1.52**	**330⇑**	*e*Pg	**Pg**	**01**	**49 39.0**	**+0.2**
ACOM				*e*Sg	**Sg**	**01**	**50 01.7**	**+3.2**
ACOM	**Acomizza, Ital**	**1.52**	**330⇑**	*e*Pg	**Pg**	**01**	**49 39.0**	**+0.2**
ZOU	**Zoufplan**	**1.74**	**320⇑**	*e*Pn	**Pb**	**01**	**49 42.2**	**+0.1**
ZOU				*e*Sn	**Sg**	**01**	**50 06.8**	**+1.0**

IDC 30 02:07:02.3±3.1,**5°.76S**×**111°.67E**,**h566**^{km}±41^{km},**mb2.9**/5, **mb1 3.2**/6,**mb1mx2.8**/22,**mbtmp3.0**/6,**Error ellipse: s-maj=40.2km s-min=15.0km az=56.0**,**Java Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
FITZ	**Fitzroy Crossi**	**18.35**	**133**	P	P	02	10 42.2	-0.5
	0.4nm,0.3s,baz=319,slow=9.6,SNR=24							
WRA	**Warramunga Arr**	**26.17**	**125**	P	P	02	11 52.7	0.0
	0.5nm,0.3s,baz=306,slow=9.2,SNR=29							
WRA				S	S	02	15 45.9	+0.4
	0.6nm,1.1s,baz=299,slow=18,SNR=3.4							
ASAR	**Alice Springs**	**27.84**	**132**	P	P	02	12 07.2	-0.2
	1.9nm,0.4s,baz=303,slow=8.4,SNR=40							
STKA	**Stephens Creek**	**38.19**	**137**	P	P	02	13 34.5	+0.2
	1.9nm,0.3s,baz=311,slow=5.2,SNR=6.2							
SONM	**Songino Array**	**53.56**	**356**	P	P	02	15 30.8	-0.1
	0.3nm,0.6s,baz=187,slow=5.8,SNR=2.3							
VNDA	**Vanda**	**76.36**	**170**	P	P	02	17 53.3	0.0
	0.3nm,0.6s,baz=303,slow=7.4,SNR=6.8							

*ISCJB **30** 02:14:22.1±0.2,60°.51N±0°.02×152°.64W±0°.05,h10^{km}, mb3.4/2,Error ellipse: s-maj=3.6km s-min=2.3km az=33.3*
*NEIC **30** 02:14:22.0,60°.51N×152°.67W,h7^{km},ML3.1(AEIC),After AEIC.*

NEIC Felt at Homer.
*IDC **30** 02:14:24.3±1.3,60°.40N×152°.95W,h0^{km},mb3.4/2, mb1 3.7/5,mb1mx3.4/28,mbtmp3.4/5,ML3.1/3,Error ellipse: s-maj=30.2km s-min=16.7km az=103.0*

ISC 30 02:14:23.1±0.6,**60.49N**±0°.02×**152.64W**±0°.03,**h10**^{km},**n60**, σ1≤**34**/77,**Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
REF	**Redoubt East F**	**0.03**	**263**	P	**Pg**	**02**	**14 24.1**	**-1.1**
RDN	**Redoubt North**	**0.07**	**288**	P	**Pg**	**02**	**14 24.3**	**-1.2**
RSO	**Redoubt South**	**0.07**	**242**	*e*Pg	**Pg**	**02**	**14 24.5**	**-1.0**
RED	**Redoubt Volcan**	**0.10**	**222**	P	**Pg**	**02**	**14 25.0**	**-0.9**
DFR	**Drift River**	**0.10**	**346**	P	**Pg**	**02**	**14 24.7**	**-1.1**
RDWB	**Redoubt West**	**0.10**	**267**	P	**Pg**	**02**	**14 24.8**	**-1.1**
RDWB				S	**Sg**	**02**	**14 26.5**	**-1.4**
RDJH	**Redoubt Jeurge**	**0.13**	**320**	P	**Pg**	**02**	**14 25.1**	**-1.1**
RDJH				S	**Sg**	**02**	**14 27.2**	**-1.2**
RDT	**Redoubt**	**0.14**	**54**	P	**Pg**	**02**	**14 25.6**	**-0.8**
NCT	**North Crescent**	**0.16**	**295**	P	**Pg**	**02**	**14 25.6**	**-1.2**
BGRM	**Barrier Glacie**	**0.29**	**22**	P	**Pg**	**02**	**14 27.8**	**-1.2**
ILIM	**Iliamna**	**0.45**	**201**	P	**Pg**	**02**	**14 31.0**	**-0.9**
IVE	**Iliamna Volcan**	**0.52**	**202**	P	**Pg**	**02**	**14 32.1**	**-1.1**
IVE				S	**Sg**	**02**	**14 39.0**	**-1.0**
CKL	**Chakachamna La**	**0.72**	**12**	P	**Pg**	**02**	**14 35.3**	**-1.8**
NKA	**Nikishka**	**0.73**	**69**	P	**Pb**	**02**	**14 38.0**	**0.0**
SPU	**Mount Spurr**	**0.75**	**22**	P	**Pg**	**02**	**14 35.8**	**-1.8**
SPU				S	**Sg**	**02**	**14 45.5**	**-1.8**
BGL	**Barrier Glacie**	**0.78**	**9**	P	**Pg**	**02**	**14 36.5**	**-1.8**
OPT	**Oil Point**	**0.90**	**200**	P	**Pg**	**02**	**14 39.6**	**-0.8**
HOM	**Homer**	**0.97**	**149**	P	**Pg**	**02**	**14 41.2**	**-0.7**
PDB	**Pedro Bay**	**1.05**	**228**	P	**Pg**	**02**	**14 41.5**	**-1.8**
STLK	**Strandline Lak**	**1.08**	**21**	P	**Pg**	**02**	**14 41.7**	**-2.2**
BRLK	**Bradley Lake**	**1.14**	**129**	P	**Pb**	**02**	**14 43.5**	**-1.4**
AUL	**Augustine Lava**	**1.19**	**200**	P	**Pb**	**02**	**14 44.4**	**-1.3**
SLKM	**Skilak Lake**	**1.20**	**88**	P	**Pb**	**02**	**14 43.7**	**-2.2**
AUNW	**Augustine NWes**	**1.20**	**201**	P	**Pn**	**02**	**14 44.9**	**-1.0**
CNPM	**China Poot**	**1.20**	**143**	P	**Pb**	**02**	**14 43.7**	**-2.2**
CNPM				S	**Sb**	**02**	**14 59.7**	**-1.8**
AUW	**Augustine West**	**1.20**	**201**	P	**Pn**	**02**	**14 45.1**	**-0.9**
SUA	**Susitna One**	**1.34**	**43**	P	**Pn**	**02**	**14 46.1**	**-1.9**
SVW2	**Sparrevohn**	**1.57**	**294**	P	**Pn**	**02**	**14 50.1**	**-0.9**
MCNL	**McNeil River**	**1.57**	**214**	P	**Pn**	**02**	**14 50.5**	**-0.5**
SKT	**Skwentna**	**1.58**	**19**	P	**Pn**	**02**	**14 50.5**	**-0.8**
FOSS	**Fourpeaked Sta**	**1.78**	**198**	P	**Pn**	**02**	**14 54.0**	**0.0**
PMR	**Palmer**	**2.03**	**56**	*e*Pn	**Pn**	**02**	**14 56.9**	**-0.5**
PMR				*e*S	**Sn**	**02**	**15 23.2**	**+0.4**
KAPH	**Katmai Pasha**	**2.09**	**205**	P	**Pn**	**02**	**14 58.6**	**+0.3**
PPLA	**Purkeypile**	**2.42**	**5**	*e*Pn	**Pb**	**02**	**15 06.0**	**-0.9**
PPLA				*e*S	**Sb**	**02**	**15 38.3**	**+1.6**
SML	**Sawmill**	**2.47**	**56**	*e*Pn	**Pn**	**02**	**15 04.0**	**+0.5**
SML				*e*S	**Sn**	**02**	**15 33.0**	**-0.6**
KAKN	**Katmai Knife C**	**2.53**	**210**	P	**Pn**	**02**	**15 03.9**	**-0.4**
KDAK	**Kodiak Island**	**2.72**	**179**	*e*Pn	**Pn**	**02**	**15 07.5**	**+0.7**
KDAK				*e*S	**Sb**	**02**	**15 44.6**	**-0.6**
KDAK	**Kodiak Island**	**2.72**	**179**	Pn	**Pn**	**02**	**15 08.0**	**+1.2**
	10nm,0.3s,baz=9.6,slow=8.7,SNR=121							
KDAK				Sn	**Sb**	**02**	**15 43.8**	**-1.3**
	10.0nm,0.3s,baz=150,slow=20,SNR=13							
TT01	**Tatalina**	**2.91**	**328**	P	**Pn**	**02**	**15 09.3**	**-0.1**
VLZ	**Valdez**	**3.15**	**76**	P	**Pn**	**02**	**15 13.1**	**+0.4**
TRF	**Thorofare Moun**	**3.17**	**19**	P	**Pn**	**02**	**15 13.3**	**+0.1**
OHAK	**Old Harbor**	**3.30**	**186**	P	**Pn**	**02**	**15 15.2**	**+0.4**
KLU	**Klutina**	**3.42**	**70**	P	**Pn**	**02**	**15 16.6**	**0.0**
DIV	**Divide**	**3.42**	**76**	*e*Pn	**Pn**	**02**	**15 16.4**	**-0.1**
DIV				*e*S	**Sn**	**02**	**15 57.3**	**+0.1**
MCK	**McKinley**	**3.69**	**27**	*e*Pn	**Pn**	**02**	**15 19.4**	**-0.7**
MCK				*e*S	**Sn**	**02**	**16 02.8**	**-0.9**
PAX	**Paxson**	**4.22**	**51**	*e*Pn	**Pn**	**02**	**15 29.0**	**+1.5**
PAX				*e*S	**Sn**	**02**	**16 17.6**	**+0.8**
VRDI	**Verde Repeater**	**4.55**	**77**	P	**Pn**	**02**	**15 31.7**	**-0.5**
COLA	**College**	**4.92**	**25**	*e*Pn	**Pn**	**02**	**15 37.3**	**+0.4**
COLA				*e*S	**Sg**	**02**	**16 59.8**	**-1.0**
PTPK	**Patty Peak**	**5.02**	**78**	P	**Pn**	**02**	**15 38.6**	**-0.1**
ILAR	**Eielson Array**	**5.04**	**29**	Pn	**Pn**	**02**	**15 39.5**	**+0.8**
ILAR				Sn	**Sn**	**02**	**16 40.2**	**+3.2**
ILAR	**Eielson Array**	**5.04**	**29**	Pn	**Pn**	**02**	**15 39.5**	**+0.8**
	0.2nm,0.3s,baz=218,slow=14,SNR=16							
ILAR				Sn	**Sn**	**02**	**16 40.2**	**+3.2**
	0.5nm,0.3s,baz=219,slow=24,SNR=5.3							
KIAG	**Kiagna River**	**5.07**	**81**	P	**Pn**	**02**	**15 38.6**	**-0.7**
DOT	**Dot Lake**	**5.12**	**48**	*e*Pn	**Pn**	**02**	**15 40.8**	**+1.0**
	9.1nm,0.7s							
DOT				*e*S	**Sb**	**02**	**16 51.3**	**-3.0**
IM3	**Indian Mountai**	**5.54**	**355**	P	**Pn**	**02**	**15 45.6**	**+0.1**
YKA	**Yellowknife Ar**	**18.09**	**67**	P	**P**	**02**	**18 37.1**	**+2.6**
YKA	**Yellowknife Ar**	**18.09**	**67**	P	**P**	**02**	**18 37.1**	**+2.6**
	0.1nm,0.3s,baz=285,slow=11,SNR=4.5							
TXAR	**Lajitas Array**	**44.99**	**111**	P	**P**	**02**	**22 40.0**	**+1.5**
TXAR	**Lajitas Array**	**44.99**	**111**	P	**P**	**02**	**22 40.0**	**+1.5**
	0.3nm,0.8s,baz=328,slow=6.2,SNR=4.1							
SONM	**Songino Array**	**54.65**	**306**	P	**P**	**02**	**23 53.3**	**+1.5**
SONM	**Songino Array**	**54.65**	**306**	P	**P**	**02**	**23 53.3**	**+1.5**
	0.6nm,0.8s,baz=38,slow=7.5,SNR=4.5							

*ISCJB **30** 02:21:42.9±0.9,21°.41S±0°.09×69°.0W±0°.3,h113^{km}±18^{km}, mb3.4/1,Error ellipse: s-maj=50.9km s-min=8.0km az=164.4*
*GUC **30** 02:21:43.5±0.7,21°.42S×69°.06W,h105^{km}±4^{km},ML3.6*
*IDC **30** 02:21:45.9±1.4,21°.60S×68°.62W,h115^{km}±21^{km},mb3.4/2, mb1 3.3/3,mb1mx3.1/17,mbtmp3.2/3,Error ellipse: s-maj=53.3km s-min=25.3km az=93.0*

ISC 30 02:21:43.7±1.2,**21°.45S**±0°.1×**69°.0W**±0°.3,**h108**^{km}±20^{km},**n10**, σ0≤**59**/14,**4C-1D**,**Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
PB09	**Plate Boundary**	**0.45**	**211⇑**	*i*P	**Pn**	**02**	**22 00.2**	**-0.1**
PB09				*i* S	**Sn**	**02**	**22 12.4**	**-0.2**
PB09				AML	AML	02	22 13.3	
	comp=N,6μm,0.2s							
PB01	**Plate Boundary**	**0.59**	**308⇑**	*i*P	**Pn**	**02**	**22 01.0**	**0.0**
PB01				*i* S	**Sn**	**02**	**22 13.8**	**-0.2**
PB01				AML	AML	02	22 14.2	
	comp=N,4μm,0.3s							
PB04	**Plate Boundary**	**0.97**	**208⇑**	*i*P	Pn	02	22 09.4	+5.0
PB04				*i* S	Sn	02	22 28.6	+8.6
PB04				AML	AML	02	22 34.2	
	comp=N,527nm,0.6s							
LVC	**Limon Verde**	**1.20**	**177**	*e*P	**Pn**	**02**	**22 07.6**	**+0.4**
LVC				*i* S	**Sn**	**02**	**22 25.4**	**+0.5**
LVC	**Limon Verde**	**1.20**	**177**	P	**Pn**	**02**	**22 07.7**	**+0.4**
	comp=N,17nm,0.3s,baz=25,slow=8.8,SNR=51							
LVC				S	**Sn**	**02**	**22 25.5**	**+0.5**
	comp=N,47nm,0.3s,baz=281,slow=23,SNR=47							
HMBC	**Humberstone**	**1.40**	**323⇑**	*i*P	**Pn**	**02**	**22 09.5**	**+0.2**
HMBC				*i* S	**Sn**	**02**	**22 28.6**	**-0.1**
HMBC				AML	AML	02	22 34.9	
	comp=N,910nm,0.5s							
MNMC	**Minimini**	**2.33**	**346⇓**	*i*P	**Pn**	**02**	**22 21.7**	**+0.6**
MNMC				*i* S	**Sn**	**02**	**22 50.9**	**+1.0**
MNMC				AML	AML	02	23 00.8	
	comp=E,351nm,0.1s							
LPAZ	**La Paz**	**5.16**	**9**	P	Pn	02	23 03.5	+4.3
	comp=E,0.4nm,0.3s,baz=186,slow=8.1,SNR=9.9							
BDFB	**Brasilia**	**20.69**	**77**	P	**P**	**02**	**26 14.5**	**-1.0**
	comp=E,2.2nm,0.4s,baz=252,slow=8.6,SNR=5.6							
TORD	**Torodi Ar. Bea**	**77.39**	**70**	P	**P**	**02**	**33 27.3**	**-0.1**
	comp=E,0.4nm,0.6s,baz=248,slow=5.4,SNR=8.6							

*ISCJB **30** 02:26:59.5±0.3,24°.16N±0°.02×122°.20E±0°.02, h38^{km}±15^{km},Error ellipse: s-maj=3.7km s-min=2.4km az=154.5*
*JMA **30** 02:26:59.4±0.2,24°.43N×122°.21E,h66^{km}±3^{km},M3.0*
*TAP **30** 02:26:59.3,24°.20N×122°.17E,h46^{km},ML3.7,C*

ISC 30 02:26:60.0±4.6,**24°.18N**±0°.03×**122°.19E**±0°.02,**h38**^{km}±5^{km}, **n54**,σ0≤**81**/98,**3C-2D**,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time		Res
				Op	ISC	h	m s	ISC
EHP	**Heping Village**	**0.43**	**288**	*e*P	**Pn**	**02**	**27 09.4**	**0.0**
	baz=285							
ENA	**Nanau**	**0.48**	**302⇓**	*i*P	**Pn**	**02**	**27 10.0**	**-0.2**
	baz=309							
ENA				*i* S	**Sn**	**02**	**27 17.7**	**+0.2**
	baz=309							
TWC	**Suao**	**0.53**	**325⇓**	*i*P	**Pn**	**02**	**27 10.3**	**-0.8**
	baz=331							
TWC				S	**Sn**	**02**	**27 17.8**	**-1.1**
	baz=331							
TWD	**Chiawan**	**0.55**	**260**	*i* P	**Pn**	**02**	**27 10.6**	**-0.7**
	baz=247							
TWD				*i* S	**Sn**	**02**	**27 19.1**	**-0.2**
	baz=247							
HWA	**Hwalien**	**0.57**	**250**	*e*P	**Pn**	**02**	**27 11.1**	**-0.5**
	baz=246							
HWA				*e*S	**Sn**	**02**	**27 20.2**	**+0.4**
	baz=246							
ILA	**Ilan**	**0.71**	**326**	*e*P	**Pn**	**02**	**27 13.4**	**-0.1**
	baz=318							
TWE	**Neicheng**	**0.72**	**319**	*i* P	**Pn**	**02**	**27 13.3**	**-0.3**
	baz=319							
TWE				*e*S	**Sn**	**02**	**27 23.4**	**0.0**
	baz=319							
TEGC	**Jichi Village**	**0.75**	**232**	*e*P	**Pn**	**02**	**27 14.0**	**0.0**
	baz=221							
ESL	**Shilin**	**0.78**	**243**	P	**Pn**	**02**	**27 13.7**	**-0.7**
	baz=240							
ESL				S	**Sn**	**02**	**27 24.4**	**-0.4**
	baz=240							
NNS	**Nan Shan**	**0.79**	**290**	P	**Pn**	**02**	**27 14.0**	**-0.7**
	baz=288							
NNS				*e*S	**Sn**	**02**	**27 24.8**	**-0.5**
	baz=288							
YOJ	**Yonaguni jima**	**0.81**	**69**	P	**Pn**	**02**	**27 14.5**	**-0.3**
YOJ				S	**Sn**	**02**	**27 25.6**	**0.0**
WHF	**Hehuan Shan**	**0.84**	**268⇑**	*i*P	**Pn**	**02**	**27 15.1**	**-0.6**
	baz=257							
WHF				S	**Sn**	**02**	**27 26.5**	**-0.6**
	baz=257							
TWB1	**Santiao Chiao**	**0.85**	**348**	*e*P	**Pn**	**02**	**27 14.9**	**-0.5**
	baz=349							
TWT	**Tachien**	**0.93**	**275**	*e*P	**Pn**	**02**	**27 16.9**	**+0.2**
	baz=273							
TWT				S	**Sn**	**02**	**27 28.8**	**0.0**
	baz=273							
NWF	**Wu-fen Shan**	**0.96**	**338**	P	**Pn**	**02**	**27 16.9**	**-0.2**
	baz=349							
NWF				S	**Sn**	**02**	**27 29.8**	**+0.2**
	baz=349							
TWA	**Mucha**	**0.97**	**326**	P	**Pn**	**02**	**27 17.1**	**0.0**
	baz=325							
TWA				*e*S	**Sn**	**02**	**27 30.3**	**+0.7**
	baz=325							
EHY	**Hungye**	**1.03**	**230**	*e*P	**Pn**	**02**	**27 17.3**	**-0.6**
	baz=228							
EHY				*e*S	**Sn**	**02**	**27 30.3**	**-0.9**
	baz=228							
TWF1	**Yuli**	**1.16**	**225**	*e*P	**Pn**	**02**	**27 19.0**	**-0.6**
	baz=235							
TWF1				*e*S	**Sn**	**02**	**27 33.2**	**-1.0**
	baz=235							
TWS1	**Kuangyinshan**	**1.16**	**323**	P	**Pn**	**02**	**27 19.5**	**-0.1**
	baz=330							
TWS1				*e*S	**Sn**	**02**	**27 34.4**	**+0.3**
	baz=330							
NSTT	**Nanjuang**	**1.17**	**293**	*

TWK1				*e*S		**Sn**	**02 28 08.8**	**0.0**
	baz=203							
JOGS	**Gusukube**	**2.99**	**78**	*e*S		**Sn**	**02 28 20.5**	**+1.0**
KNM	**Kinmen**	**3.43**	**275**	*e*P		**Pn**	**02 27 50.4**	**-0.5**
	baz=263							

IDC 30 03:28:46.2±7.5, 17°.95S×175°.79E, h0km, mb3.6/3, mb1 3.9/3, mb1mx3.6/18, mbtmp3.6/3, Error ellipse: s-maj=336.8km s-min=38.3km az=145.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**39.19**	**260**	P	P	03 36 16.0	-0.3
	0.1nm,0.5s,baz=91,slow=6.9,SNR=4.8						
ASAR	**Alice Springs**	**39.46**	**254**	P	P	03 36 18.6	-0.1
	1.8nm,0.6s,baz=86,slow=8.0,SNR=20						
ILAR	**Eielson Array**	**87.27**	**15**	P	P	03 41 34.5	+0.1
	0.1nm,0.6s,baz=224,slow=6.3,SNR=4.1						

*DDA **30** 03:40:53.3, 36°.91N×26°.54E, h3km, MD3.4*
*ATH **30** 03:40:54.9, 37°.00N×26°.58E, h31km, MD3.5/17*
*CSEM **30** 03:40:55.5±0.1, 36°.97N×26°.53E, h10km, MD3.4, Error ellipse: s-maj=3.1km s-min=2.6km az=135.0*
*ISK **30** 03:40:55.3, 37°.00N×26°.58E, h5km, MD3.4*
*THE **30** 03:40:56.8, 37°.00N×26°.62E, h19km±2km, ML2.5/2, Error ellipse: s-maj=2.9km s-min=0.6km az=103.0*
*ISCJB **30** 03:40:56.2±0.4, 36°.99N±0°.02×26°.54E±0°.02, h24km±4km, Error ellipse: s-maj=3.2km s-min=2.6km az=28.1*

ISC 30 03:40:55.6±1.0, 37°.00N±0°.02×26°.57E±0°.02, h17km±8km, n138, σ1§05/176, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BODT	**Bodrum**	**0.59**	**84**	*e*PG	**Pb**	**03 41 08.1**	**+0.6**
BODT				*e*SG	**Sb**	**03 41 15.4**	**-0.2**
BODT	**Bodrum**	**0.59**	**84**	*e*Pg	**Pb**	**03 41 08.1**	**+0.6**
BODT				*e*Sg	**Sb**	**03 41 15.4**	**-0.2**
NIS1	**Nisyros Isl.**	**0.63**	**129**	P	**Pg**	**03 41 07.8**	**-0.2**
NIS1	**Nisyros Isl.**	**0.63**	**129**	*e*PN	**Pg**	**03 41 07.7**	**-0.2**
NIS1	**Nisyros Isl.**	**0.63**	**129**	P	**Pg**	**03 41 07.8**	**-0.2**
SMG	**Samos**	**0.74**	**16**	P	**Pb**	**03 41 09.9**	**-0.1**
SMG				S	**Sb**	**03 41 20.3**	**+0.5**
SMG	**Samos**	**0.74**	**16**	*e*PN	**Pg**	**03 41 09.4**	**-0.6**
SMG				*e*SN	**Sb**	**03 41 20.5**	**+0.7**
SMG	**Samos**	**0.74**	**16**	*e*Pn	**Pg**	**03 41 09.4**	**-0.6**
SMG	**Samos**	**0.74**	**16**	P	**Pb**	**03 41 09.9**	**-0.1**
APE	**Apeiranthos**	**0.84**	**275**	*e*PG	**Pn**	**03 41 12.5**	**-0.1**
APE				*e*SG	**Sb**	**03 41 23.5**	**+0.8**
APE	**Apeiranthos**	**0.84**	**275**	P	**Pn**	**03 41 12.4**	**-0.2**
APE	**Apeiranthos**	**0.84**	**275**	*e*PN	**Pb**	**03 41 11.5**	**-0.2**
APE				*e*SN	**Sn**	**03 41 24.2**	**-0.3**
APE	**Apeiranthos**	**0.84**	**275**	*e*Pn	**Pb**	**03 41 11.5**	**-0.2**
APE	**Apeiranthos**	**0.84**	**275**	*e*Pg	**Pn**	**03 41 12.5**	**-0.1**
APE				*e*Sg	**Sb**	**03 41 23.5**	**+0.8**
APE				*e*Sn	**Sn**	**03 41 24.2**	**-0.3**
DAT	**Datca**	**0.85**	**108**	*e*PG	**Pg**	**03 41 12.1**	**-0.1**
DAT				*e*SG	**Sn**	**03 41 24.2**	**-0.7**
DAT	**Datca**	**0.85**	**108**	*e*Pg	**Pg**	**03 41 12.1**	**-0.1**
DAT				*e*Sg	**Sn**	**03 41 24.2**	**-0.7**
GCAM	**G?zelcaml?**	**0.88**	**37**	*i* P	**Pb**	**03 41 12.1**	**-0.2**
GCAM				*i* S	**Sn**	**03 41 25.6**	**+0.2**
GCAM	**G?zelcaml?**	**0.88**	**37**	*i* P	**Pb**	**03 41 12.1**	**-0.2**
MLSB	**Milas**	**1.01**	**73**	*e*PG	**Pb**	**03 41 14.5**	**0.0**
MLSB	**Milas**	**1.01**	**73**	*e*Pg	**Pb**	**03 41 14.5**	**0.0**
THR2	**Thira island,**	**1.07**	**239**	P	**Pg**	**03 41 15.8**	**-0.4**
THR2	**Thira island,**	**1.07**	**239**	P	**Pg**	**03 41 15.8**	**-0.4**
SANT	**Santorini**	**1.09**	**235**	P	**Pb**	**03 41 16.0**	**-0.1**
SANT				S	**Sn**	**03 41 31.6**	**+0.8**
SANT	**Santorini**	**1.09**	**235**	*e*PN	**Pb**	**03 41 15.9**	**-0.1**
SANT				*e*SN	**Sg**	**03 41 30.5**	**-0.6**
SANT	**Santorini**	**1.09**	**235**	P	**Pb**	**03 41 16.0**	**-0.1**
SANT				*e*Sn	**Sg**	**03 41 30.5**	**-0.6**
SANT				S	**Sn**	**03 41 31.6**	**+0.8**
THR1	**Thera Island**	**1.09**	**235**	P	**Pb**	**03 41 16.0**	**0.0**
THR1	**Thera Island**	**1.09**	**235**	P	**Pb**	**03 41 16.0**	**0.0**
THR3	**Thira Island,**	**1.11**	**238**	P	**Pb**	**03 41 16.2**	**-0.1**
THR3	**Thira Island,**	**1.11**	**238**	P	**Pb**	**03 41 16.2**	**-0.1**
AYDN	**Tasoluk**	**1.23**	**57**	*i* P	**Pn**	**03 41 17.9**	**-0.2**
AYDN				*i* S	**Sg**	**03 41 37.2**	**+1.6**
AYDN	**Tasoluk**	**1.23**	**57**	*i* P	**Pn**	**03 41 17.9**	**-0.2**
URLA	**Izmir**	**1.36**	**1**	*i* P	**Pn**	**03 41 19.8**	**0.0**
URLA				*i* S	**Sg**	**03 41 41.1**	**+1.6**
URLA	**Izmir**	**1.36**	**1**	*i* P	**Pn**	**03 41 19.8**	**0.0**
URLA				*i* S	**Sg**	**03 41 41.1**	**+1.6**
YER	**Yerkesik**	**1.37**	**84**	*e*PN	**Pg**	**03 41 21.7**	**-0.4**
YER	**Yerkesik**	**1.37**	**84**	*e*Pn	**Pg**	**03 41 21.7**	**-0.4**
BLCB	**Balcova**	**1.43**	**15**	*e*PN	**Pg**	**03 41 22.8**	**-0.4**
BLCB	**Balcova**	**1.43**	**15**	*e*Pn	**Pg**	**03 41 22.8**	**-0.4**
CHOS	**Chios island**	**1.45**	**344**	P	**Pn**	**03 41 21.0**	**0.0**
CHOS	**Chios island**	**1.45**	**344**	*e*PN	**Pn**	**03 41 20.6**	**-0.4**
CHOS				*e*SN	**Sn**	**03 41 39.5**	**-0.1**
CHOS	**Chios island**	**1.45**	**344**	*e*Pn	**Pn**	**03 41 20.6**	**-0.4**
CHOS	**Chios island**	**1.45**	**344**	P	**Pn**	**03 41 21.0**	**0.0**
CHOS				*e*Sn	**Sn**	**03 41 39.5**	**-0.1**
ARG	**Arkhangelos**	**1.47**	**122**	*e*PN	**Pn**	**03 41 21.6**	**+0.3**
ARG				*e*SN	**Sn**	**03 41 40.3**	**+0.1**
ARG	**Arkhangelos**	**1.47**	**122**	*e*Pn	**Pn**	**03 41 21.6**	**+0.3**
ARG				*e*Sn	**Sn**	**03 41 40.3**	**+0.1**
IZM	**Izmir**	**1.50**	**21**	*e*PN	**Pg**	**03 41 23.8**	**-0.6**
IZM	**Izmir**	**1.50**	**21**	*e*Pn	**Pg**	**03 41 23.8**	**-0.6**
KARP	**Karpathos**	**1.52**	**162**	P	**Pn**	**03 41 22.3**	**+0.2**
KARP	**Karpathos**	**1.52**	**162**	*e*PB	**Pn**	**03 41 21.6**	**-0.5**
KARP				*e*SN	**Sn**	**03 41 41.4**	**-0.1**
KARP	**Karpathos**	**1.52**	**162**	*e*Pb	**Pn**	**03 41 21.6**	**-0.5**
KARP	**Karpathos**	**1.52**	**162**	P	**Pn**	**03 41 22.3**	**+0.2**
TURN	**Turunc**	**1.63**	**94**	*i* P	Pn	03 41 19.4	-4.0
TURN				*i* S	**Sn**	**03 41 39.0**	**-5.0**
TURN	**Turunc**	**1.63**	**94**	*i* P	Pn	03 41 19.4	-4.0
DALY	**Dalyan (Mu˘la**	**1.68**	**96**	*e*PN	**Pb**	**03 41 25.8**	**-0.1**
DALY	**Dalyan (Mu˘la**	**1.68**	**96**	*e*Pn	**Pb**	**03 41 25.8**	**-0.1**
NPS	**Neapolis**	**1.90**	**204**	P	**Pn**	**03 41 26.9**	**-0.3**
NPS				S	**Sn**	**03 41 50.5**	**-0.2**
NPS	**Neapolis**	**1.90**	**204**	*e*PN	**Pn**	**03 41 26.9**	**-0.3**
NPS				*e*SN	**Sn**	**03 41 50.7**	**0.0**
NPS	**Neapolis**	**1.90**	**204**	P	**Pn**	**03 41 26.9**	**-0.3**
NPS				*e*Sn	**Sn**	**03 41 50.7**	**0.0**
ZKR	**Zakros**	**1.90**	**189**	P	**Pn**	**03 41 27.3**	**+0.1**
ZKR	**Zakros**	**1.90**	**189**	*e*PN	**Pn**	**03 41 27.2**	**+0.1**
ZKR				*e*SN	**Sn**	**03 41 51.0**	**+0.2**
ZKR	**Zakros**	**1.90**	**189**	P	**Pn**	**03 41 27.3**	**+0.1**
ZKR				*e*Sn	**Sn**	**03 41 51.0**	**+0.2**
LAST	**Lasithi**	**2.04**	**206**	P	**Pn**	**03 41 29.5**	**+0.4**
LAST	**Lasithi**	**2.04**	**206**	*e*PN	**Pn**	**03 41 28.8**	**-0.3**
LAST				*e*SN	**Sn**	**03 41 54.2**	**0.0**
LAST	**Lasithi**	**2.04**	**206**	*e*Pn	**Pn**	**03 41 28.8**	**-0.3**
LAST	**Lasithi**	**2.04**	**206**	P	**Pn**	**03 41 29.5**	**+0.4**
LAST				*e*Sn	**Sn**	**03 41 54.2**	**0.0**
FETY	**Fethiye**	**2.05**	**99**	*e*PN	**Pb**	**03 41 31.0**	**-1.3**
FETY	**Fethiye**	**2.05**	**99**	*e*Pn	**Pb**	**03 41 31.0**	**-1.3**
DENT	**Denizli**	**2.10**	**68**	*e*PN	**Pb**	**03 41 32.2**	**-1.0**
DENT	**Denizli**	**2.10**	**68**	*e*Pn	**Pb**	**03 41 32.2**	**-1.0**
IDI	**Anoyia**	**2.19**	**219**	P	**Pn**	**03 41 31.0**	**-0.2**
IDI	**Anoyia**	**2.19**	**219**	*e*PN	**Pn**	**03 41 30.9**	**-0.2**
IDI	**Anoyia**	**2.19**	**219**	P	**Pn**	**03 41 31.0**	**-0.2**
KULA	**Kula-Manisa**	**2.24**	**47**	*e*PN	**Pb**	**03 41 34.4**	**-1.2**
KULA	**Kula-Manisa**	**2.24**	**47**	*e*Pn	**Pb**	**03 41 34.4**	**-1.2**
PRK	**Paraskevi**	**2.26**	**354**	P	**Pn**	**03 41 32.4**	**+0.3**
PRK				S	**Sn**	**03 41 59.7**	**+0.2**
PRK	**Paraskevi**	**2.26**	**354**	*e*PN	**Pn**	**03 41 31.8**	**-0.3**
PRK				*e*SN	**Sn**	**03 41 59.4**	**-0.1**
PRK	**Paraskevi**	**2.26**	**354**	*e*Pn	**Pn**	**03 41 31.8**	**-0.3**
PRK	**Paraskevi**	**2.26**	**354**	P	**Pn**	**03 41 32.4**	**+0.3**
PRK				*e*Sn	**Sn**	**03 41 59.4**	**-0.1**
SIGR	**SIGRI**	**2.28**	**346**	P	**Pn**	**03 41 32.8**	**+0.4**
SIGR				S	**Sn**	**03 41 59.9**	**-0.2**
SIGR	**SIGRI**	**2.28**	**346**	P	**Pn**	**03 41 32.8**	**+0.4**
SIGR				S	**Sn**	**03 41 59.9**	**-0.2**
SIVA	**Sivas**	**2.44**	**216**	P	**Pn**	**03 41 35.2**	**+0.6**
SIVA	**Sivas**	**2.44**	**216**	*e*PN	**Pn**	**03 41 34.8**	**+0.2**
SIVA				*e*SN	**Sn**	**03 42 04.1**	**+0.1**
SIVA	**Sivas**	**2.44**	**216**	*e*Pn	**Pn**	**03 41 34.8**	**+0.2**
SIVA	**Sivas**	**2.44**	**216**	P	**Pn**	**03 41 35.2**	**+0.6**
SIVA				*e*Sn	**Sn**	**03 42 04.1**	**+0.1**
VAM	**Vamos**	**2.49**	**231**	*e*PN	**Pn**	**03 41 35.7**	**+0.4**
VAM	**Vamos**	**2.49**	**231**	*e*Pn	**Pn**	**03 41 35.7**	**+0.4**
NAIG	**Nisos Aigina**	**2.57**	**288**	*e*PN	**Pn**	**03 41 36.7**	**+0.3**
NAIG	**Nisos Aigina**	**2.57**	**288**	*e*Pn	**Pn**	**03 41 36.7**	**+0.3**
KHL	**Karahalli**	**2.69**	**60**	*e*PN	**Pb**	**03 41 40.7**	**-2.6**
KHL	**Karahalli**	**2.69**	**60**	*e*Pn	**Pb**	**03 41 40.7**	**-2.6**
DID	**Didima**	**2.71**	**282**	*e*PN	**Pn**	**03 41 38.8**	**+0.5**
DID	**Didima**	**2.71**	**282**	*e*Pn	**Pn**	**03 41 38.8**	**+0.5**
EZN	**Ezine**	**2.83**	**356**	*e*PN	**Pb**	**03 41 43.0**	**-2.6**
EZN	**Ezine**	**2.83**	**356**	*e*Pn	**Pb**	**03 41 43.0**	**-2.6**
BALB	**Balikesir**	**2.83**	**21**	*e*PN	**Pb**	**03 41 43.0**	**-2.6**
BALB	**Balikesir**	**2.83**	**21**	*e*Pn	**Pb**	**03 41 43.0**	**-2.6**
VLI	**Veliai**	**2.93**	**266**	*e*PN	**Pn**	**03 41 42.0**	**+0.7**
VLI	**Veliai**	**2.93**	**266**	*e*Pn	**Pn**	**03 41 42.0**	**+0.7**
KYTH	**Kithira**	**2.93**	**257**	*e*PN	**Pn**	**03 41 41.9**	**+0.5**
KYTH	**Kithira**	**2.93**	**257**	*e*Pn	**Pn**	**03 41 41.9**	**+0.5**
LIA	**Limnos Island**	**3.09**	**340**	*e*PN	**Pn**	**03 41 44.3**	**+0.7**
LIA	**Limnos Island**	**3.09**	**340**	*e*Pn	**Pn**	**03 41 44.3**	**+0.7**
GONE	**Gonen-Balikesi**	**3.17**	**16**	*e*PN	**Pn**	03 41 47.9	+3.3
GONE	**Gonen-Balikesi**	**3.17**	**16**	*e*Pn	Pn	03 41 47.9	+3.3
TVSB	**Tavsanli**	**3.34**	**42**	*e*PN	**Pn**	**03 41 49.5**	**+2.4**
TVSB	**Tavsanli**	**3.34**	**42**	*e*Pn	**Pn**	**03 41 49.5**	**+2.4**
VLX	**Vlachokerasia**	**3.37**	**278**	*e*PN	**Pn**	**03 41 48.4**	**+0.9**
VLX	**Vlachokerasia**	**3.37**	**278**	*e*Pn	**Pn**	**03 41 48.4**	**+0.9**
KRBG	**Karabiga-Canak**	**3.44**	**9**	*e*PN	**Pn**	**03 41 50.2**	**+1.9**
KRBG	**Karabiga-Canak**	**3.44**	**9**	*e*Pn	**Pn**	**03 41 50.2**	**+1.9**
GUR	**Goura**	**3.49**	**287**	*e*PN	**Pn**	**03 41 49.8**	**+0.6**
GUR	**Goura**	**3.49**	**287**	*e*Pn	**Pn**	**03 41 49.8**	**+0.6**
NEO	**Neokhori**	**3.50**	**312**	*e*PN	**Pn**	**03 41 49.9**	**+0.6**
NEO				*e*SN	**Sn**	**03 42 29.8**	**-0.5**
NEO	**Neokhori**	**3.50**	**312**	*e*Pn	**Pn**	**03 41 49.9**	**+0.6**
NEO				*e*Sn	**Sn**	**03 42 29.8**	**-0.5**
BNT	**Bandirma**	**3.51**	**17**	*e*PN	**Pn**	**03 41 52.0**	**+2.7**
BNT	**Bandirma**	**3.51**	**17**	*e*Pn	**Pn**	**03 41 52.1**	**+2.7**
KCTX	**Karacabey (Bur**	**3.55**	**23**	*e*PN	**Pn**	**03 41 52.4**	**+2.6**
KCTX	**Karacabey (Bur**	**3.55**	**23**	*e*Pn	**Pn**	**03 41 52.4**	**+2.6**
SMTH	**Samothraki Isl**	**3.56**	**347**	*e*PN	**Pn**	**03 41 50.2**	**+0.2**
SMTH	**Samothraki Isl**	**3.56**	**347**	*e*Pn	**Pn**	**03 41 50.2**	**+0.2**
KLV	**Kalavryta, Ach**	**3.67**	**288**	*e*PN	**Pn**	**03 41 51.9**	**+0.4**
KLV	**Kalavryta, Ach**	**3.67**	**288**	*e*Pn	**Pn**	**03 41 51.9**	**+0.4**
RKY	**Sarkoy-Tekirda**	**3.71**	**7**	*e*PN	**Pn**	**03 41 54.6**	**+2.4**
RKY	**Sarkoy-Tekirda**	**3.71**	**7**	*e*Pn	**Pn**	**03 41 54.6**	**+2.4**
ENEZ	**Enez**	**3.75**	**355**	*e*PN	**Pn**	**03 41 54.7**	**+2.1**
ENEZ	**Enez**	**3.75**	**355**	*e*Pn	**Pn**	**03 41 54.7**	**+2.1**
KALE	**Kalithea**	**3.78**	**293**	*e*PN	**Pn**	**03 41 53.3**	**+0.2**
KALE	**Kalithea**	**3.78**	**293**	*e*Pn	**Pn**	**03 41 53.3**	**+0.2**
AGG	**Agios Georgios**	**3.91**	**302**	*e*PN	**Pn**	**03 41 55.3**	**+0.4**
AGG	**Agios Georgios**	**3.91**	**302**	*e*Pn	**Pn**	**03 41 55.3**	**+0.4**
ALN	**Alexandroupoli**	**3.91**	**354**	*e*PN	**Pn**	**03 41 55.5**	**+0.7**
ALN				*e*SN	**Sn**	**03 42 39.8**	**-0.6**
ALN	**Alexandroupoli**	**3.91**	**354**	*e*Pn	**Pn**	**03 41 55.5**	**+0.7**
ALN				*e*Sn	**Sn**	**03 42 39.8**	**-0.6**
EFP	**Efpalio**	**3.97**	**292**	*e*PN	**Pn**	**03 41 56.1**	**+0.5**
EFP	**Efpalio**	**3.97**	**292**	*e*Pn	**Pn**	**03 41 56.1**	**+0.5**
ARMT	**Armutlu**	**3.98**	**26**	*e*PN	**Pn**	**03 41 58.7**	**+2.8**
ARMT	**Armutlu**	**3.98**	**26**	*e*Pn	**Pn**	**03 41 58.7**	**+2.8**
RDO	**Rodhopi**	**4.22**	**349**	P	**Pn**	**03 42 00.1**	**+1.1**
RDO	**Rodhopi**	**4.22**	**349**	*e*PN	**Pn**	**03 41 59.7**	**+0.7**
RDO	**Rodhopi**	**4.22**	**349**	*e*Pn	**Pn**	**03 41 59.7**	**+0.7**
RDO	**Rodhopi**	**4.22**	**349**	P	**Pn**	**03 42 00.1**	**+1.1**

MEX 30 03:42:56.8±0.4, 17°.54N×92°.58W, h87km±8km, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		**0.92**	**215**	*i* P	Pn	03 43 12.8	-2.7
TGIG				*i* S	Sn	03 43 27.8	-1.6
CCIG	**Comitan**	**1.32**	**161**	*e*P	Pn	03 43 19.3	-1.1
CCIG				*i* S	Sn	03 43 36.3	-1.8
PCIG		**1.92**	**199**	*i* P	Pn	03 43 26.5	-1.4
PCIG				*i* S	Sn	03 43 49.8	-1.7
SCIG	**Sabancuy**	**1.94**	**43**	*i* P	Pn	03 43 26.7	-1.5
SCIG				*i* S	Sn	03 43 50.4	-1.6

IDC 30 03:47:42.6±1.6, 19°.90S×64°.05W, h0km, mb3.8/1, mb1 3.5/4, mb1mx3.4/20, mbtmp3.4/4, ML3.6/3, Error ellipse: s-maj=39.3km s-min=22.8km az=30.0, Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LVC	**Limon Verde**	**5.28**	**238**	Pn	Pn	03 49 03.4	+0.2
	0.3nm,0.3s,baz=52,slow=12,SNR=3.8						
LPAZ	**La Paz**	**5.29**	**312**	Pn	Pn	03 49 04.1	+0.3
	1.5nm,0.3s,baz=104,slow=7.1,SNR=22						
LPAZ				Pg	Pb	03 49 19.0	+2.1
	3.1nm,0.3s,baz=145,slow=8.8,SNR=20						
LPAZ				Sn	Sn	03 50 04.7	-1.4
	1.7nm,0.3s,baz=23,slow=13,SNR=3.9						
CPUP	**Villa Florida**	**8.90**	**137**	Pn	Pn	03 49 51.7	-0.8
	0.5nm,0.3s,baz=315,slow=12,SNR=9.6						
CPUP				Lg	Lg	03 52 34.0	
	0.3nm,0.3s,baz=213,slow=15,SNR=1.9						
TORD	**Torodi Ar. Bea**	**72.53**	**69**	P	P	03 59 12.2	+0.2
	0.4nm,0.6s,baz=251,slow=6.5,SNR=6.1						

*ISCJB **30** 03:50:23.9±0.5, 50°.07N±0°.04×18°.34E±0°.03, h0km, Error ellipse: s-maj=5.1km s-min=2.9km az=3.5*
*IPEC **30** 03:50:23.9±0.3, 50°.05N×18°.50E, h1km±2km, ML1.5/3, Error ellipse: s-maj=2.3km s-min=2.0km az=116.0*
*WAR **30** 03:50:24.4, 50°.06N×18°.44E*
*CSEM **30** 03:50:24.5±0.6, 50°.06N×18°.39E, h1km, ML2.5/6, Error ellipse: s-maj=8.3km s-min=5.2km az=57.0*
*PRU **30** 03:50:26.3, 50°.03N×18°.32E, h0km*

ISC 30 03:50:24.8±0.9, 50°.06N±0°.04×18°.41E±0°.03, h0km, n22, σ0§85/35, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.14**	**281**	*e*Sg	**Sg**	**03 50 31.5**	**+2.1**
OKC	**Ostrava-Krasne**	**0.28**	**218**	*e*PG	**Pg**	**03 50 30.6**	**+0.5**
OKC				*e*SG	**Sg**	**03 50 33.2**	**-0.5**
	comp=Z,46nm,0.6s						
OKC	**Ostrava-Krasne**	**0.28**	**218**	Pg	**Pg**	**03 50 30.6**	**+0.5**
OKC				Sg	**Sg**	**03 50 33.2**	**-0.5**
	46nm,0.6s						
MORC	**Moravsky Berou**	**0.63**	**244**	*e*Pg	**Pg**	**03 50 36.7**	**-0.1**
MORC				*e*Sg	**Sg**	**03 50 45.2**	**+0.3**
	8.3nm,0.2s,baz=66						
OJC	**Ojcow**	**0.91**	**79**	*e*Pg	**Pg**	**03 50 41.7**	**-0.4**
OJC				*e*Sg	**Sb**	**03 50 54.4**	**-1.6**
KRLC	**Kraliky**	**1.05**	**272**	*e*PG	**Pg**	**03 50 44.0**	**-0.9**
KRLC				*e*SG	**Sg**	**03 50 57.8**	**-0.8**
KRLC	**Kraliky**	**1.05**	**272**	Pg	**Pg**	**03 50 44.0**	**-0.9**
KRLC				Sg	**Sg**	**03 50 57.8**	**-0.8**
DPC	**Dobruska-Polom**	**1.38**	**283**	*e*PG	**Pn**	**03 50 50.3**	**-1.0**
DPC				*e*SG	**Sg**	**03 51 08.7**	**-0.3**
DPC	**Dobruska-Polom**	**1.38**	**283**	Pg	**Pn**	**03 50 50.3**	**-1.0**
DPC				Sg	**Sg**	**03 51 08.7**	**-0.3**
NIE	**Niedzica**	**1.39**	**117**	*e*Pg	**Pb**	**03 50 52.7**	**+1.1**
NIE				*e*Sg	**Sn**	**03 51 12.3**	**+1.8**
VRAC	**Vranov**	**1.40**	**238**	*e*Pg	**Pn**	**03 50 50.5**	**-1.1**
VRAC				*e*Sg	**Sg**	**03 51 09.1**	**-0.6**
	7.9nm,0.2s,baz=58						
KSP	**Ksiaz**	**1.57**	**301**	*e*Pg	**Pg**	**03 50 55.7**	**+0.9**
KSP				*e*Sg	**Sg**	**03 51 15.4**	**+0.2**
UPC	**Upice**	**1.61**	**287**	*e*SG	**Sg**	**03 51 16.4**	**0.0**
UPC	**Upice**	**1.61**	**287**	Sg	**Sg**	**03 51 16.4**	**0.0**
KRUC	**Moravsky**	**1.65**	**234**	*e*Pn	**Pn**	**03 50 54.5**	**-0.5**
	baz=54						
KRUC				*e*Sg	**Sn**	**03 51 16.6**	**-0.3**
	4.1nm,0.2s,baz=54						
TREC	**Trest**	**2.05**	**249**	*e*SG	**Sb**	**03 51 28.8**	**-0.1**
	comp=Z,4.1nm,0.2s						
TREC	**Trest**	**2.05**	**249**	Sg	**Sb**	**03 51 28.8**	**-0.1**
	4.1nm,0.2s						
PRU	**Pruhonice**	**2.50**	**270**	*e*SG	**Sb**	**03 51 42.9**	**+1.1**
PRU	**Pruhonice**	**2.50**	**270**	Sg	**Sb**	**03 51 42.9**	**+1.1**
PVCC	**Panska Ves**	**2.51**	**282**	*e*SG	**Sg**	**03 51 45.3**	**-0.1**
	comp=Z,4.3nm,0.2s						
PVCC	**Panska Ves**	**2.51**	**282**	Sg	**Sg**	**03 51 45.3**	**-0.1**
	4.3nm,0.2s						
KHC	**Kasperske Hory**	**3.28**	**255**	*e*PG	**Pb**	**03 51 24.0**	**+0.2**
KHC				*e*SG	**Sg**	**03 52 09.5**	**-0.6**

IDC 30 04:00:17.3±55.0, 20°.10S×178°.10W, h0km, mb3.9/3, mb1 4.1/3, mb1mx3.7/18, mbtmp3.9/3, Error ellipse: s-maj=1013.0km s-min=165.0km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**37.88**	**244**	P	P	04 07 35.8	-0.5
	2.2nm,0.8s,baz=73,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**44.52**	**256**	P	P	04 08 31.1	0.0
	0.8nm,0.7s,baz=100,slow=7.4,SNR=8.8						
WRA	**Warramunga Arr**	**44.57**	**262**	P	P	04 08 31.4	-0.1
	0.3nm,0.3s,baz=96,slow=7.5,SNR=12						

*AUST **30** 04:14:45.5±1.6, 32°.48S×177°.71W, h2km, Error ellipse: s-maj=1.4km s-min=0.8km az=279.0*
*IDC **30** 04:14:47.8±0.4, 32°.33S×178°.28W, h0km, mb4.6/19, mb1 4.7/20, mb1mx4.7/23, mbtmp4.6/20, ML4.7/1, MS4.8/25, Ms1 4.8/25, ms1mx4.7/33, Error ellipse: s-maj=17.7km s-min=15.4km az=86.0*
*ISCJB **30** 04:14:50.7±0.3, 32°.68S±0°.03×178°.24W±0°.06, h33km, mb5.1/43, MS4.9/39, Error ellipse: s-maj=7.3km s-min=3.6km az=18.0*
*MOS **30** 04:14:52.4±1.0, 32°.31S×178°.36W, h33km, mb5.4/19, MS4.9/11, Error ellipse: s-maj=12.4km s-min=9.8km az=95.7*
*NEIC **30** 04:14:53.1±1.1, 32°.34S×178°.24W, h35km±9km, mb5.2/21, Error ellipse: s-maj=10.1km s-min=7.3km az=115.0*
*GCMT **30** 04:14:54.3±0.2, 32°.40S×178°.00W, h20km, MW5.3, Moment Tensor Solution. s67,c102; s84,c146; Moment tensor: Scale 10^17Nm; M_rr0.00; M_θθ0.00; M_φφ0.00; M_rθ0.00; M_rφ0.00; M_θφ0.00; Best double couple: M_o1.20000×10^17 NP1:φ_s210.00000°, δ25.00000°, λ108.00000°. NP2:φ_s10.00000°, δ66.00000°, λ82.00000°. Principal axes: T 1.1600, Plg68.0000°, Azm265.0000°; N 0.0000, Plg8.0000°, Azm14.0000°; P -1.1500, Plg21.0000°, Azm107.0000°; Data Used: IU II IC G CN.*
*DJA **30** 04:15:27.5±4.8, 33°.52×17°.9W±2°.8, h354km±42km, M4.9/17, mB5.6/3, mb4.9/17, Mw(mB)5.1/3*

ISC 30 04:14:53.0±0.5, 32°.37S±0°.06×178°.05W±0°.07, h32km±2km, h31km:pP-P, n360, σ1§38/260, mb5.1/42, MS5.0/40, 12C-11D, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**3.11**	**2**	*e*Pn	Pn	04 15 38.2	-1.7
RAO				*e*S	**Sn**	**04 16 15.3**	**-0.7**
RAO	**Raoul Island**	**3.11**	**2**	Pn	Pn	04 15 35.1	-4.8
	166nm,0.3s,baz=150,slow=20,SNR=3.1						
RAO				Sn	**Sn**	**04 16 17.2**	**+1.2**
	601nm,0.3s,baz=236,slow=23,SNR=5.2						
RAO				LR	LR	04 16 37.4	
	comp=Z,3μm,19.5s,baz=196,slow=36						
PUZ	**Puketiti**	**6.44**	**207**	PN	Pn	04 16 19.4	-6.1
PUZ				SN	Sn	04 17 32.0	-6.0
CNGZ	**Carnagh Statio**	**6.82**	**206**	PN	Pn	04 16 25.1	-5.7
MWZ	**Matawai**	**6.96**	**210**	PN	Pn	04 16 26.7	-6.1
MWZ				SN	Sn	04 17 45.8	-5.0
URZ

STKA Stephens Creek 34.03 260 P P 04 21 32.0 -2.2
comp=Z,17nm,1.0s,baz=99,slow=7.5,SNR=7.4
STKA LR LR 04 34 26.9
comp=Z,3μm,18.8s,baz=92,slow=35
STKA Stephens Creek 34.03 260 P P 04 21 33.5 -0.7
baz=34,SNR=8.3
CTA Charters Tower 34.12 282 P P 04 21 34.6 -0.4
CTA Charters Tower 34.12 282 P P 04 21 34.6 -0.4
comp=Z,37nm,0.8s,baz=108,slow=11,SNR=41
CTA LR LR 04 33 46.9
comp=Z,2μm,19.0s,baz=30,slow=34
CTAO Charters Tower 34.12 282 *e*P P 04 21 34.7 -0.3
CTAO *e* 04 22 48.3
CTAO pmax pmax
comp=Z,291nm,1.6s
CTAO Charters Tower 34.12 282 *e*P P 04 21 34.7 -0.4
comp=Z,291nm,1.6s
CTAO *e*PP **PnPn** **04 22 48.3 -0.8**
MTSU Mount Surprise 36.66 284 P P 04 21 56.6 -0.3
baz=37,SNR=23
BBOO Buckleboo 38.43 257 P P 04 22 09.1 -2.7
baz=39,SNR=6.3
RKT Rikitea 39.01 87 *e*S **S** **04 28 12.1 -1.6**
comp=Z,412nm,28.4s
RKT *e*LR LR 04 32 45.4
comp=Z,2μm,26.2s,baz=246
PMG Port Moresby 39.44 298 *e*P **P** **04 22 20.7 +0.3**
PMG Port Moresby 39.44 298 P P 04 22 19.9 -0.5
comp=Z,9.1nm,0.6s,baz=136,slow=12,SNR=3.9
PMG LR LR 04 36 07.8
comp=Z,1μm,20.3s,baz=309,slow=33
QIS Mount Isa 39.45 277 P P 04 22 18.8 -1.6
baz=40,SNR=10.0
COEN Coen 39.80 288 *e*P P 04 22 21.6 -1.8
comp=Z,436nm,1.2s
COEN Coen 39.80 288 P P 04 22 22.9 -0.5
baz=40,SNR=12
AS31 Alice Springs 42.99 269 *e*P P 04 22 47.2 -2.4
ASAR Alice Springs 42.99 269 P P 04 22 47.1 -2.4
ASAR Alice Springs 42.99 269 P P 04 22 47.1 -2.4
comp=Z,22nm,0.7s,baz=105,slow=7.1,SNR=152
ASAR LR LR 04 40 32.9
comp=Z,2μm,18.1s,baz=119,slow=36
WRAB Tennant Creek 44.16 274 P P 04 22 56.0 -2.9
comp=Z,393nm,0.8s,SNR=83
WRAB Tennant Creek 44.16 274 *e*P P 04 22 56.4 -2.5
WRAB pmax pmax
comp=Z,129nm,1.2s
WRAB Tennant Creek 44.16 274 *e*P P 04 22 56.4 -2.5
comp=Z,129nm,1.2s
WRA Warramunga Arr 44.16 274 P P 04 22 56.5 -2.5
WRA ScP **ScP** **04 28 33.4 +0.2**
WRA Warramunga Arr 44.16 274 P P 04 22 56.5 -2.5
comp=Z,59nm,0.8s,baz=113,slow=8.0,SNR=263
WRA ScP **ScP** **04 28 33.4 +0.2**
comp=Z,2.9nm,0.9s,baz=116,slow=4.2,SNR=6.0
WRA LR LR 04 40 25.9
comp=Z,2μm,18.8s,baz=105,slow=35
FORT Forrest 45.53 257 *e*P P 04 23 06.3 -3.4
comp=Z,133nm,0.7s
FORT Forrest 45.53 257 P P 04 23 06.7 -3.0
baz=46,SNR=19
SBA Scott Base 46.07 184 *e*P **P** **04 23 15.3 +2.0**
SBA *e* 04 24 48.8
SBA pmax pmax
comp=Z,138nm,1.7s
SBA Scott Base 46.07 184 *e*P **P** **04 23 15.3 +2.0**
comp=Z,138nm,1.7s
SBA *e*PcP **PcP** **04 24 48.8 -0.4**
VNDA Vanda 46.13 186 *e*P **P** **04 23 15.0 +1.1**
comp=Z,17nm,1.4s
VNDA *e*PcP **PcP** **04 24 50.1 +0.7**
VNDA Vanda 46.13 186 P **P** **04 23 15.0 +1.1**
comp=Z,2.3nm,0.9s,baz=12,slow=7.5,SNR=8.0
VNDA LR LR 04 38 46.8
comp=Z,718nm,20.0s,baz=15,slow=31
JAY Jayapura 48.78 299 P P 04 23 34.0 -1.3
baz=49,SNR=7.8
KDU Kakadu 49.24 282 P P 04 23 36.2 -2.6
baz=50,SNR=13
MTN Manton Dam 50.27 281 P P 04 23 44.1 -2.5
baz=51,SNR=15
KMBL Kambalda 50.41 254 P P 04 23 44.4 -3.2
baz=51,SNR=8.0
KNRA Kununurra 50.84 276 P P 04 23 48.8 -2.1
baz=51,SNR=17
FITZ Fitzroy Crossi 52.34 271 LR LR 04 45 43.1
comp=Z,3μm,18.9s,baz=112,slow=36
CASY Casey 53.38 209 *e*P P 04 24 07.3 -1.8
comp=Z,48nm,0.9s
NWAO Narrogin (SRO) 53.68 251 LR LR 04 47 40.9
comp=Z,1μm,18.0s,baz=79,slow=37
KLBR Kellerberrin 53.69 252 P P 04 24 09.2 -2.8
baz=54,SNR=6.4
MEEK Meekatharra 54.72 258 P P 04 24 15.8 -3.7
baz=55,SNR=7.5
FAKI Fak Fak 55.00 292 P P 04 24 19.1 -2.5
comp=Z,85nm,1.1s
FAKI Fak Fak 55.00 292 P P 04 24 20.9 -0.7
baz=55,SNR=3.0
MORW Morawa 55.95 255 P P 04 24 24.8 -3.5
baz=56,SNR=7.3
MBWA Marble Bar 55.98 265 *e*P P 04 24 24.8 -3.8
comp=Z,55nm,1.2s
QSPA South Pole Qui 57.74 180 *e*P **P** **04 24 41.1 +0.5**
comp=Z,69nm,0.8s
QSPA South Pole Qui 57.74 180 P **P** **04 24 41.2 +0.5**
comp=Z,7.9nm,1.0s,baz=30,slow=4.7,SNR=44
PALU Palau 60.02 302 P P 04 24 52.7 -4.2
baz=60,SNR=4.6
MIR Mirnyy 60.35 207 ||*i* P **P** **04 24 59.0 +0.5**
MIR *i* 04 25 06.0
MIR *i* 04 25 14.0
MIR pmax pmax
comp=Z,105nm,1.0s
KAPI Kappang 63.93 281 LR LR 04 53 57.4
comp=Z,2μm,18.3s,baz=141,slow=37
GTOI Gorontalo 64.48 288 P P 04 25 24.4 -2.5
DAV Davao City (W) 66.42 296 LR LR 04 53 42.1
comp=Z,304nm,19.5s,baz=171,slow=35
MAW Mawson 70.45 201 P P 04 26 02.7 -1.0
MAW Mawson 70.45 201 P P 04 26 02.7 -1.0
comp=Z,14nm,1.0s,baz=90,slow=7.2,SNR=5.7
MAW LR LR 04 57 54.2
comp=Z,882nm,18.1s,baz=114,slow=37
MAW Mawson 70.45 201 P **P** **04 26 03.4 -0.4**
baz=70,SNR=8.6
SYO Syowa Base 75.19 193 ||*i* P P 04 26 29.4 -2.4
SYO Syowa Base 75.19 193 ||*e*pP pP 04 26 42.8 +1.0
KSM Kuching 75.35 281 P P 04 26 31.4 -2.3
baz=76,SNR=3.4
SNAA Sanae 76.19 178 *e*P P 04 26 36.9 -0.8
SNAA Sanae 76.19 178 *e*PcP P 04 26 46.0 +8.3
SNAA Sanae 76.19 178 *e*P P 04 26 36.9 -0.8
comp=Z,61nm,1.1s
VNA1 Neumayer--Stat 77.01 177 *e*P **P** **04 26 42.0 -0.2**
VNA1 Neumayer--Stat 77.01 177 *e*PcP **PcP** **04 26 51.9 -1.2**
MJAR Matsushiro Arr 79.83 326 P **P** **04 26 58.3 +0.1**
MJAR Matsushiro Arr 79.83 326 P **P** **04 26 58.3 +0.1**
comp=Z,0.5nm,0.3s,baz=141,slow=4.7,SNR=3.8
MJAR LR LR 05 01 10.0
comp=Z,355nm,18.8s,baz=185,slow=35
PLCA Paso Flores 81.20 133 *e*P **P** **04 27 07.8 +1.9**
comp=Z,26nm,1.5s
PLCA Paso Flores 81.20 133 P **P** **04 27 07.5 +1.6**
comp=Z,7.0nm,1.0s,baz=217,slow=11,SNR=2.9
PLCA LR LR 04 56 58.1
comp=Z,395nm,18.2s,baz=230,slow=31
YUK Yuzh-Kuril'sk 82.87 335 *d* /*i* P 04 27 13.1 -0.9
YUK *i* PPP PPP 04 32 16.9
YUK *e*S S 04 37 25.2 -4.9
YUK *i* SS **SS** **04 42 59.1 +4.7**
YUK *i* SSS SSS 04 46 13.9
YUK MLR MLR
comp=N,166nm,22.0s
YUK MLR MLR
comp=E,273nm,22.0s
YUK MLR MLR
comp=Z,471nm,22.0s
KUR Kuril'sk 83.21 337 *e*P P 04 27 09.7 -6.1
KUR MLR MLR
comp=N,452nm,18.0s
KUR MLR MLR
comp=E,280nm,18.0s
KUR MLR MLR
comp=Z,492nm,18.0s
ASAJ Asahikawa 84.17 333 P P 04 27 19.4 -1.4
comp=Z,7.7nm,0.6s,baz=150,slow=8.1,SNR=4.2
FX1 Attu Island--F 85.24 355 P P 04 27 24.9 -1.0
FX1 Attu Island--F 85.24 355 P P 04 27 24.9 -1.0
comp=Z,5.6nm,0.6s,baz=281,slow=5.2,SNR=5.4
PSI Prapat 85.59 276 LR LR 05 05 12.9
comp=Z,1μm,21.7s,baz=138,slow=35
QIZ Qiongzhong 85.80 295 P P 04 27 28.5 -1.0
QIZ pP pP 04 27 39.8 +0.2
QIZ sP sP 04 27 42.3 -1.0
QIZ Qiongzhong 85.80 295 S **S** **04 37 59.3 -1.2**
QIZ Qiongzhong 85.80 295 sS **ScS** **04 38 14.0 +4.1**
QIZ pmax pmax
comp=Z,17nm,1.7s
QIZ LR LR
comp=Z,250nm,36.6s
QIZ Qiongzhong 85.80 295 P P 04 27 28.5 -1.0
QIZ pP pP 04 27 39.8 +0.2
QIZ sP sP 04 27 42.3 -1.0
QIZ Qiongzhong 85.80 295 S **S** **04 37 59.3 -1.2**
QIZ Qiongzhong 85.80 295 sS **ScS** **04 38 14.0 +4.1**
QIZ pmax pmax
comp=Z,17nm,1.7s
QIZ LR LR
comp=Z,250nm,36.6s
KSRS Korea Array 85.82 320 P P 04 27 27.8 -1.4
comp=Z,2.0nm,0.7s,baz=145,slow=5.8,SNR=8.5
KSRS LR LR 05 03 02.5
comp=Z,253nm,19.6s,baz=139,slow=34
KSAR Wonju Array Be 85.83 320 P P 04 27 27.8 -1.5
YSS Yuzh-Sakhalins 86.50 334 ||*e*P **P** **04 27 33.0 +0.7**
YSS *e**PP pP 04 27 44.7 +2.3
YSS *e**SP sP 04 27 49.0 +2.9
YSS *e*S **SKKSac** **04 38 04.0 -0.2**
YSS pmax pmax
comp=Z,30nm,0.8s
YSS MLR MLR
comp=N,500nm,18.0s
YSS MLR MLR
comp=E,400nm,18.0s
YSS MLR MLR
comp=Z,500nm,18.0s
PET Petropavlovsk 87.43 346 *e*P P 04 27 30.5 -6.1
PET *e*S S 04 38 05.5 -9.3
PET pmax pmax
comp=Z,100nm,6.2s
PETK Petropavlovsk- 87.71 346 P P 04 27 36.9 -1.1
PETK Petropavlovsk- 87.71 346 P P 04 27 36.9 -1.1
PETK Petropavlovsk- 87.71 346 P P 04 27 36.9 -1.1
comp=Z,5.6nm,0.7s,baz=121,slow=7.1,SNR=11
PETK LR LR 05 04 02.9
comp=Z,245nm,18.4s,baz=157,slow=34
ISA Isabella 87.73 45 *e*P **P** **04 27 39.9 +1.2**
ISA pmax pmax
comp=Z,23nm,1.7s
ISA Isabella 87.73 45 *e*P **P** **04 27 39.9 +1.2**
comp=Z,23nm,1.7s
CMB Columbia Colle 88.26 42 *e*P **P** **04 27 41.6 +0.5**
CMB pmax pmax
comp=Z,8.0nm,1.4s
CMB Columbia Colle 88.26 42 *e*P **P** **04 27 41.6 +0.5**
comp=Z,8.4nm,1.4s
GSC Goldstone 88.49 46 *e*P P 04 27 41.1 -1.2
GSC pmax pmax
comp=Z,1.0nm,0.6s
GSC Goldstone 88.49 46 *e*P P 04 27 41.1 -1.2
comp=Z,1.2nm,0.6s
USRK Ussuriysk Arra 88.77 327 P P 04 27 42.5 -0.7
comp=Z,7.9nm,1.1s,baz=172,slow=5.2,SNR=7.4
NVAR Mina Array Bea 89.72 43 P **P** **04 27 48.1 -0.1**
NVAR Mina Array Bea 89.72 43 P **P** **04 27 48.1 -0.1**
comp=Z,0.8nm,0.7s,baz=222,slow=7.9,SNR=6.2
NVAR LR LR 05 03 00.9
comp=Z,917nm,18.6s,baz=128,slow=32
CHGN Chignik 89.90 11 P **P** **04 27 49.5 +1.3**
MDJ Mudanjiang 90.22 326 P **P** **04 27 52.0 +1.9**
MDJ pP **pP** **04 28 00.8 +0.6**
MDJ sP **sP** **04 28 04.5 +0.6**
MDJ Mudanjiang 90.22 326 S **SKKSac** **04 38 30.5 -1.8**
MDJ Mudanjiang 90.22 326 SS SS 04 44 44.5 +2.2
MDJ pmax pmax
comp=Z,14nm,2.5s
MDJ pmax pmax
comp=Z,66nm,4.4s
MDJ LR LR
comp=N,200nm,22.4s
MDJ LR LR
comp=E,190nm,22.4s
MDJ LR LR
comp=Z,380nm,23.6s
MDJ Mudanjiang 90.22 326 P **P** **04 27 52.0 +1.9**
MDJ pP **pP** **04 28 00.8 +0.6**
MDJ sP **sP** **04 28 04.5 +0.6**
MDJ Mudanjiang 90.22 326 S **SKKSac** **04 38 30.5 -1.8**
MDJ Mudanjiang 90.22 326 SS SS 04 44 44.5 +2.2
MDJ pmax pmax
comp=Z,14nm,2.5s
MDJ pmax pmax
comp=Z,66nm,4.4s
MDJ LR LR
comp=N,200nm,22.4s
MDJ LR LR
comp=E,190nm,22.4s
MDJ LR LR
comp=Z,380nm,23.6s
TUC Tucson 90.38 51 *e*P **P** **04 27 53.0 +1.8**
TUC pmax pmax
comp=Z,5.0nm,1.1s
TUC Tucson 90.38 51 *e*P **P** **04 27 53.0 +1.8**
comp=Z,5.3nm,1.1s
HABR Khabarovsk 90.74 331 *e*P P 04 27 51.0 -1.3
HABR *SP sP 04 28 05.0 -1.2
HABR PPP PPP 04 33 23.3
HABR *e*S **SKSac** **04 38 18.5 -2.8**
HABR *e* 04 38 46.7
HABR pmax pmax
comp=Z,86nm,3.1s
HABR pmax pmax
comp=E,58nm,2.3s
HABR pmax pmax
comp=N,83nm,3.1s
HABR MLR MLR
comp=Z,530nm,20.0s
GYA Guiyang 92.49 300 P **P** **04 28 02.3 +1.1**
GYA pP **pP** **04 28 13.0 +1.6**
GYA sP sP 04 28 18.5 +3.5
GYA PP **PP** **04 31 45.8 +2.8**
GYA Guiyang 92.49 300 SKS **SKSac** **04 38 31.5 -1.1**
GYA Guiyang 92.49 300 sS S 04 39 19.0 +16
GYA Guiyang 92.49 300 SS SS 04 45 14.5 -1.3
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,150nm,5.9s
GYA LR LR
comp=N,650nm,20.4s
GYA LR LR
comp=E,530nm,21.0s
GYA LR LR
comp=Z,670nm,20.8s
GYA Guiyang 92.49 300 P **P** **04 28 02.3 +1.1**
GYA pP **pP** **04 28 13.0 +1.6**
GYA sP sP 04 28 18.5 +3.5
GYA PP **PP** **04 31 45.8 +2.8**
GYA Guiyang 92.49 300 SKS **SKSac** **04 38 31.5 -1.1**
GYA Guiyang 92.49 300 sS S 04 39 19.0 +16
GYA Guiyang 92.49 300 SS SS 04 45 14.5 -1.3
GYA pmax pmax
comp=Z,20nm,1.0s
GYA pmax pmax
comp=Z,150nm,5.9s
GYA LR LR
comp=N,650nm,20.4s
GYA LR LR
comp=E,530nm,21.0s
GYA LR LR
comp=Z,670nm,20.8s
KLR Kul'dur 92.71 330 *e*P P 04 27 56.9 -4.6
TXAR Lajitas Array 93.49 57 P **P** **04 28 07.5 +1.8**
TXAR Lajitas Array 93.49 57 P **P** **04 28 07.5 +1.8**
comp=Z,0.4nm,0.8s,baz=216,slow=4.5,SNR=2.8
TXAR LR LR 05 05 15.0
comp=Z,598nm,18.0s,baz=65,slow=32
CMAR Chiang Mai Arr 94.00 289 P **P** **04 28 08.1 -0.2**
CMAR Chiang Mai Arr 94.00 289 P P **04 28 08.1 -0.2**
comp=Z,0.8nm,0.4s,baz=127,slow=5.7,SNR=4.3
BJI Beijing 94.29 315 P P 04 27 58.5 -10
BJI PP **PP** **04 31 58.5 +1.8**
BJI Beijing 94.29 315 SKS **SKSac** **04 38 43.8 +2.2**
BJI Beijing 94.29 315 S S 04 39 29.5 +11
BJI Beijing 94.29 315 SS SS 04 45 52.5 +12
BJI pmax pmax
comp=Z,10.0nm,0.5s
BJI pmax pmax
comp=Z,42nm,6.7s
BJI LR LR
comp=N,280nm,23.8s
BJI LR LR
comp=E,210nm,21.0s
BJI LR LR
comp=Z,250nm,30.2s
BJI Beijing 94.29 315 P P 04 27 58.5 -10
BJI PP **PP** **04 31 58.5 +1.8**
BJI Beijing 94.29 315 SKS **SKSac** **04 38 43.8 +2.2**
BJI Beijing 94.29 315 S S 04 39 29.5 +11
BJI Beijing 94.29 315 SS SS 04 45 52.5 +12
BJI pmax pmax
comp=Z,10.0nm,0.5s
BJI pmax pmax
comp=Z,42nm,6.7s
BJI LR LR
comp=N,280nm,23.8s
BJI LR LR
comp=E,210nm,21.0s
BJI LR LR
comp=Z,250nm,30.2s
CD2 Chengdu 97.09 302 *e*P Pdif 04 28 22.8 +0.6
CD2 pP pP 04 28 32.8 +0.5
CD2 sP sP 04 28 37.5 +1.6
CD2 PP **PP** **04 32 21.5 +2.8**
CD2 Chengdu 97.09 302 SKS **SKSac** **04 38 55.3 -1.7**
CD2 Chengdu 97.09 302 S S 04 39 39.5 -3.6
CD2 Chengdu 97.09 302 sS S 04 39 56.3 +13
CD2 Chengdu 97.09 302 SS SS 04 46 20.0 -1.2
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 pmax pmax
comp=Z,140nm,5.9s
CD2 LR LR
comp=N,330nm,15.6s
CD2 LR LR
comp=Z,150nm,12.0s
CD2 Chengdu 97.09 302 *e*P Pdif 04 28 22.8 +0.6
CD2 pP pP 04 28 32.8 +0.5
CD2 sP sP 04 28 37.5 +1.6
CD2 PP **PP** **04 32 21.5 +2.8**
CD2 Chengdu 97.09 302 SKS **SKSac** **04 38 55.3 -1.7**
CD2 Chengdu 97.09 302 S S 04 39 39.5 -3.6
CD2 Chengdu 97.09 302 sS S 04 39 56.3 +13
CD2 Chengdu 97.09 302 SS SS 04 46 20.0 -1.2
CD2 pmax pmax
comp=Z,20nm,0.8s
CD2 pmax pmax
comp=Z,140nm,5.9s
CD2 LR LR
comp=N,330nm,15.6s
CD2 LR LR
comp=Z,150nm,12.0s
LPAZ La Paz 97.38 114 LR LR 05 02 57.6
comp=Z,186nm,21.4s,baz=164,slow=30
PDAR Pinedale Array 97.59 44 P Pdif 04 28 25.9 +1.6
PDAR Pinedale Array 97.59 44 P Pdif 04 28 26.0 +1.6
comp=Z,0.4nm,0.8s,baz=213,slow=6.5,SNR=2.6
PDAR LR LR 05 08 13.7
comp=Z,524nm,18.3s,baz=242,slow=33
CPUP Villa Florida 98.80 129 LR LR 05 04 31.5
comp=Z,279nm,21.0s,baz=185,slow=30
ILAR Eielson Array 99.85 13 P **Pdif** **04 28 34.9 +1.3**
ILAR PP PP 04 32 36.2 -2.8
ILAR Eielson Array 99.85 13 P **Pdif** **04 28 34.9 +1.3**
comp=Z,0.2nm,0.7s,baz=216,slow=4.5,SNR=3.0
ILAR PP PP 04 32 36.2 -2.8
comp=Z,0.5nm,1.0s,baz=212,slow=7.1,SNR=4.3
LZH Lanzhou 99.86 306 *e*P **Pdif** **04 28 32.8 -1.7**
LZH pP **pP** **04 28 43.8 -0.9**
LZH sP **sP** **04 28 48.0 -0.4**
LZH PP **PP** **04 32 40.3 +0.4**
LZH Lanzhou 99.86 306 *e*S S 04 40 00.3 -6.3
LZH Lanzhou 99.86 306 sS S 04 40 18.8 +12
LZH pmax pmax
comp=Z,18nm,1.5s
LZH pmax pmax
comp=Z,100nm,7.4s
LZH LR LR
comp=N,440nm,17.9s
LZH LR LR
comp=E,500nm,17.2s
LZH LR LR
comp=Z,540nm,19.8s
LZH Lanzhou 99.86 306 *e*P **Pdif** **04 28 32.8 -1.7**
LZH pP **pP** **04 28 43.8 -0.9**
LZH sP **sP** **04 28 48.0 -0.4**
LZH PP **PP** **04 32 40.3 +0.4**
LZH Lanzhou 99.86 306 *e*S S 04 40 00.3 -6.3
LZH Lanzhou 99.86 306 sS S 04 40 18.8 +12
LZH pmax pmax
comp=Z,18nm,1.5s
LZH pmax pmax
comp=Z,100nm,7.4s
LZH LR LR
comp=N,440nm,17.9s
LZH LR LR
comp=E,500nm,17.2s
LZH LR LR
comp=Z,540nm,19.8s
MK31 Makanchi Array 118.99 309 PKIKP **PKPdf** **04 33 36.5 -1.6**
MK31 pmax pmax
comp=Z,6.0nm,0.8s
MK31 Makanchi Array 118.99 309 *e*PKPdf **PKPdf** **04 33 36.6 -1.5**
MKAR Makanchi Array 118.99 309 PKIKP **PKPdf** **04 33 36.7 -1.4**
MKAR Makanchi Array 118.99 309 PKP **PKPdf** **04 33 36.6 -1.4**
MKAR Makanchi Array 118.99 309 PKP **PKPdf** **04 33 36.6 -1.4**
comp=Z,2.9nm,0.7s,baz=77,slow=2.6,SNR=18
ZALV Zalesovo Beam 119.46 318 PKIKP **PKPdf** **04 33 37.0 -1.7**
ZALV Zalesovo Beam 119.46 318 PKP **PKPdf** **04 33 37.0 -1.7**
ZALV Zalesovo Beam 119.46 318 PKP **PKPdf** **04 33 37.0 -1.7**
comp=Z,0.8nm,0.3s,baz=114,slow=1.7,SNR=5.8
NVS Novosibirsk 120.58 318 *i* PKIKP **PKPdf** **04 33 39.3 -1.5**
KSH Kashi 121.19 300 *e*PKPbc **PKPdf** **04 33 42.5 -0.2**
KSH *es*PKP 04 33 56.5
KSH *e*PP PP 04 35 01.0 -13
KSH *e*SKS **SKSdf** **04 40 49.5 -2.9**
KSH *e*SKKS SKKSac 04 42 01.8 -8.7
KSH AMB AMB
comp=Z,180nm,6.0s
KSH LR LR
comp=N,2μm,11.0s
KSH LR LR
comp=E,990nm,8.9s
KSH LR LR
comp=Z,220nm,5.2s
KSH Kashi 121.19 300 *e*PKPbc **PKPdf** **04 33 42.5 -0.2**
KSH *es*PKP 04 33 56.5
KSH *e*PP PP 04 35 01.0 -13
KSH *e*SKS **SKSdf** **04 40 49.5 -2.9**
KSH *e*SKKS SKKSac 04 42 01.8 -8.7
KSH AMB AMB
comp=Z,180nm,6.0s
KSH LR LR
comp=N,2μm,11.0s
KSH LR LR
comp=E,990nm,8.9s
KSH LR LR
comp=Z,220nm,5.2s
KURK Kurchatov 122.37 313 PKIKP **PKPdf** **04 33 43.3 -1.1**
KURK Kurchatov 122.37 313 PKP **PKPdf** **04 33 43.3 -1.1**
KURBB Kurchatov Arra 122.40 313 PKP **PKPdf** **04 33 43.3 -1.2**
comp=Z,9.9nm,0.8s,baz=103,slow=1.9,SNR=78
TKM2 Tokmak 2 122.45 303 PKIKP PKPdf 04 33 42.7 -2.4
TKM2 pmax pmax
comp=Z,13nm,1.1s
TKM2 Tokmak 2 122.45 303 *e*PKPdf **PKPdf** **04 33 43.4 -1.8**
AAK Ala-Archa 123.15 303 *c* /*i* PKIKP **PKPdf** **04 33 45.2 -1.2**
AAK Ala-Archa 123.15 303 PKP **PKPdf** **04 33 45.7 -0.7**
AAK Ala-Archa 123.15 303 PKP **PKPdf** **04 33 45.7 -0.7**
comp=Z,1.4nm,0.4s,baz=198,slow=3.2,SNR=6.1
KK31 Karatay Array 126.11 302 *i* PKIKP **PKPdf** **04 33 51.0 -0.9**
KK31 pmax pmax
comp=Z,15nm,1.1s
KKAR Karatay Array 126.11 302 *e*PKIKP **PKPdf** **04 33 50.8 -1.1**

KKAR	Karatay Array	126.11	302	ePKPdf	PKPdf	04 33 50.8	-1.1	
LSZ	Lusaka	126.37	212	ePKPdf	PKPdf	04 33 52.3	-1.1	
TSUM	Tsumeb	126.58	198	ePKPdf	PKPdf	04 33 54.1	+0.4	
VOSK	Vostochnaya	127.38	314	PKIKP	PKPdf	04 33 52.3	-1.7	
VOSK				pmax	pmax			
	comp=Z,23nm,1.0s							
BVA0	Borovoye Array	127.77	315	*i* PKIKP	PKPdf	04 33 53.6	-1.1	
BVA0				pmax	pmax			
	comp=Z,24nm,1.1s							
BVAR	Borovoye Array	127.77	315	PKIKP	PKPdf	04 33 54.2	-0.5	
BVAR	Borovoye Array	127.77	315	PKP	PKPdf	04 33 54.2	-0.5	
BVAR	Borovoye Array	127.77	315	PKP	PKPdf	04 33 54.2	-0.5	
	comp=Z,11nm,0.8s,baz=132,slow=2.2,SNR=32							
BRVK	Borovoye	127.84	315	*c* iPKIKP	PKPdf	04 33 53.4	-1.4	
BRVK	Borovoye	127.84	315	*e*PKPdf	PKPdf	04 33 53.6	-1.2	
AB31	Akbulak array	134.14	309	*i* PKIKP	PKPdf	04 34 05.9	-1.0	
ABKAR	Akbulak array	134.14	309	*e*PKPdf	PKPdf	04 34 06.0	-0.8	
DAG	Danmarks Havn	134.50	7	*i* P	PKPdf	04 34 04.6	-2.2	
	comp=Z,5.9nm,1.1s							
ARU	Arti	134.57	319	*i* PKIKP	PKPdf	04 34 06.5	-0.9	
ARU						04 36 37.8		
ARU				SS	SS	04 54 22.8	-7.3	
APA	Apatity	140.27	342	⇑*i* PKIKP	PKPdf	04 34 19.0	+1.4	
APA				*i*		04 34 29.7		
APA				pmax	pmax			
	comp=Z,10.0nm,1.0s							
APA				MLR	MLR			
	comp=Z,300nm,19.0s							
ARCES	ARCESS Array B	140.50	347	PKPpre	PKPpre	04 34 09.2		
ARCES				PKP	PKPdf	04 34 19.1	+1.1	
ARCES				SKPbc	SKiKP	04 37 58.9	+4.6	
ARCES	ARCESS Array B	140.50	347	PKhKP	PKPpre	04 34 09.2		
	comp=Z,1.4nm,0.5s,baz=45,slow=1.9,SNR=19							
ARCES				PKP	PKPdf	04 34 19.1	+1.1	
	comp=Z,5.8nm,0.9s,baz=50,slow=1.9,SNR=8.0							
ARCES				SKPbc	SKiKP	04 37 58.9	+4.6	
	comp=Z,1.7nm,0.7s,baz=46,slow=3.5,SNR=4.1							
ARE0	ARCESS Array S	140.50	347	ePKPdf	PKPdf	04 34 13.1	-4.9	
DGRG	David-gareji	144.43	297	P	PKPab	04 34 23.6	-0.6	
BHD	Baghdad	144.51	283	ePKP	PKPab	04 34 16.3	-8.4	
BHD				*e*PPP	PPP	04 39 50.5		
BHD				*e*SKKS		04 41 25.0		
BORG	Borgarnes	144.57	17	ePKPdf	PKPbc	04 34 24.6	+0.5	
TBLG	Delisi	144.90	298	ePKIKP	PKPab	04 34 23.7	-2.2	
TBLG	Delisi	144.90	298	P	PKPab	04 34 23.7	-2.2	
ONI	Oni	145.82	299	P	PKPdf	04 34 28.2	-0.1	
AKH	Akhalkalaki	145.84	297	P	PKPdf	04 34 28.0	-0.6	
MOS	Moscow	145.91	324	*e*PKHKP	PKPpre	04 34 21.0		
MOS				pmax	pmax			
	comp=Z,264nm,1.6s							
KBZ	Khabaz	146.14	301	PKP2	PKPdf	04 34 28.8	+0.1	
KBZ	Khabaz	146.14	301	PKPbc	PKPdf	04 34 28.8	+0.1	
KBZ	Khabaz	146.14	301	PKPbc	PKPdf	04 34 28.8	+0.1	
	comp=Z,15nm,1.0s,baz=129,slow=2.2,SNR=23							
OBN	Obninsk	146.74	323	*d* iPKIKP	PKPdf	04 34 28.8	-0.5	
OBN				*e*		04 34 45.5		
OBN				SS	SS	04 56 53.0	+1.0	
OBN				pmax	pmax			
	comp=Z,222nm,1.8s							
OBN				MLR	MLR			
	comp=Z,300nm,20.0s							
PUL	Pulkovo	146.76	334	*c* iPKP2	PKPdf	04 34 30.1	+0.9	
CHVG	Ch'k'valeri	146.82	300	P	PKPdf	04 34 27.1	-2.8	
VSR	Storozhevoye	146.94	316	ePKIKP	PKPdf	04 34 29.7	-0.1	
VSR				pmax	pmax			
	comp=Z,100nm,1.4s							
VSR				pmax	pmax			
	comp=N,20nm,1.0s							
VSR				pmax	pmax			
	comp=E,50nm,1.2s							
VORD	Divnogorie	146.95	315	ePKIKP	PKPdf	04 34 29.5	-0.3	
VORD				pmax	pmax			
	comp=Z,70nm,1.5s							
VORD				pmax	pmax			
	comp=N,9.0nm,0.8s							
VORD				pmax	pmax			
	comp=E,20nm,0.9s							
FIA1	FINESS Array S	146.97	339	ePKPdf	PKPdf	04 34 30.5	+1.0	
FINES	FINESS Array B	146.97	339	PKPbc	PKPdf	04 34 30.7	+1.2	
FINES	FINESS Array B	146.97	339	PKPbc	PKPdf	04 34 30.7	+1.2	
	comp=E,36nm,0.6s,baz=29,slow=4.4,SNR=93							
SOC	Sochi	148.44	302	*d* iPKIKP	PKPdf	04 34 31.4	-1.2	
SOC				*i*		04 34 37.0		
SOC				*e*		04 38 08.9		
SOC				pmax	pmax			
	comp=Z,39nm,1.0s							
SOC				pmax	pmax			
	comp=Z,37nm,1.1s							
ANN	Anapa	149.85	305	*i* PKHKP	PKPbc	04 34 38.4	-1.2	
ANN				pmax	pmax			
	comp=Z,65nm,1.0s							
ZALF	Zalf	150.28	281	*e*P	PKPbc	04 34 40.5	-0.6	
NB2	NORSAR Subarra	150.69	351	PKP	PKPbc	04 34 40.0	-1.2	
	comp=Z,256nm,2.5s,baz=17,slow=2.6							
NB2	NORSAR Subarra	150.69	351	PKP	PKPbc	04 34 40.0	-1.2	
	baz=17,slow=2.6							
NOA	NORSAR Array B	150.69	351	PKPbc	PKPbc	04 34 40.4	-0.8	
NOA	NORSAR Array B	150.69	351	PKPbc	PKPbc	04 34 40.4	-0.8	
	comp=Z,10nm,0.9s,baz=14,slow=4.1,SNR=40							
SALA	Sala	150.75	280	*e*P	PKPbc	04 34 40.8	-1.6	
SALA				*e*P	PKiKP	04 34 41.5	-1.6	
NAO01	NORSAR Array S	150.92	351	*e*PKPbc	PKPbc	04 34 41.0	-0.7	
TOTH	TOTAH	151.09	281	*e*P	PKPbc	04 34 42.2	-0.9	
HFS	Hagfors	151.16	348	PKPbc	PKPbc	04 34 41.3	-0.9	
HFS	Hagfors	151.16	348	PKPbc	PKPbc	04 34 41.3	-0.9	
	comp=Z,20nm,0.9s,baz=90,slow=1.5,SNR=40							
TCHB	Talchebab	151.38	280	*e*P	PKPdf	04 34 37.4	-0.2	
NACGM	Naroch	151.47	329	*e*	PKPdf	04 34 39.0	+2.0	
BRBR	Barbar	151.50	281	*e*P	PKPdf	04 34 38.7	+0.7	
BRBR				*e*P	PKPbc	04 34 43.2	-1.0	
SIM	Simferopol'	152.11	306	*c* iPKIKP	PKPbc	04 34 44.0	-0.9	
SIM				pmax	pmax			
	comp=Z,50nm,10.5s							
KONO	Kongsberg	152.24	352	*e*PKIKP	PKPbc	04 34 43.6	-1.1	
KONO	Kongsberg	152.24	352	*e*PKPbc	PKPbc	04 34 43.6	-1.1	
AKASG	Malin Array Be	152.81	320	PKIKP	PKPdf	04 34 37.4	-1.7	
AKASG						04 34 45.6		
AKASG	Malin Array Be	152.81	320	PKP	PKPdf	04 34 37.4	-1.7	
AKASG				PKPbc	PKPbc	04 34 45.6	-0.7	
AKASG	Malin Array Be	152.81	320	PKP	PKPdf	04 34 37.4	-1.7	
	comp=Z,1.8nm,0.5s,baz=45,slow=1.6,SNR=6.9							
AKASG				PKPbc	PKPbc	04 34 45.6	-0.7	
	comp=Z,15nm,0.9s,baz=56,slow=2.2,SNR=39							
AK01	Malin Array Si	152.82	320	*e*PKPbc	PKPbc	04 34 45.5	-0.8	
KIEV	Kiev	152.82	320	*e*PKIKP	PKPbc	04 34 45.2	-1.1	
KIEV	Kiev	152.82	320	*e*PKPbc	PKPbc	04 34 45.2	-1.1	
AK02	Malin Array Si	152.84	320	*e*PKPbc	PKPbc	04 34 45.6	-0.8	
BR131	Keskin Array S	153.44	295	*e*PKPbc	PKPbc	04 34 46.8	-1.5	
BRTR	Keskin Array B	153.44	295	PKP	PKPdf	04 34 38.2	-2.4	
BRTR				PKPbc	PKPbc	04 34 46.8	-1.5	
BRTR	Keskin Array B	153.44	295	PKP	PKPdf	04 34 38.2	-2.4	
	comp=Z,0.8nm,0.9s,baz=51,slow=4.0,SNR=7.8							
BRTR				PKPbc	PKPbc	04 34 46.8	-1.5	
	comp=Z,8.1nm,0.8s,baz=134,slow=3.6,SNR=36							
SUW	Suwalki	153.60	331	*e*PKP	PKPbc	04 34 46.9	-1.0	
DBIC	Dimbokro	153.65	165	PKPbc	PKPbc	04 34 49.2	-0.1	
DBIC				PKPab	PKPab	04 35 01.0	-0.7	
DBIC	Dimbokro	153.65	165	PKPbc	PKPbc	04 34 49.2	-0.1	
	comp=Z,5.9nm,0.8s,baz=123,slow=1.5,SNR=5.3							
DBIC				PKPab	PKPab	04 35 01.0	-0.7	
	comp=Z,13nm,0.8s,baz=164,slow=2.9,SNR=8.8							
CSS	Prodhromos	153.81	284	*e*PKPbc	PKPbc	04 34 48.0	-1.0	
ANTO	Ankara	154.07	295	⇓PKIKP	PKPbc	04 34 49.0	-0.5	
ANTO	Ankara	154.07	295	*e*PKPbc	PKPbc	04 34 48.5	-1.0	
KIS	Kishinev	154.84	313	*e*PKIKP	PKPbc	04 34 48.0	-2.8	
KIS				*e*		04 35 04.0		
KIS				*e*		04 35 45.0		
KIS	Kishinev	154.84	313	*e*PKP	PKPbc	04 34 48.0	-2.8	
KIS				LRM	MLR	05 48 20.0		
	comp=Z,400nm,22.0s							
MUD	Monsted U'grnd	155.40	350	*i* P	PKPab	04 35 08.2	+0.1	
	comp=Z,11nm,0.8s							
BSD	Bornholm Skovb	155.49	342	*i* P	PKPab	04 35 03.6	-4.9	
	comp=Z,13nm,1.1s							
COP	Copenhagen	155.56	346	*i* P	PKPab	04 35 06.2	-2.6	
	comp=Z,10.0nm,0.8s							
TIRR	Tirgusor	156.12	308	⇑PKIKP	PKPdf	04 34 39.6	-4.3	
EKA	Eskdalemuir Ar	156.77	7	PKPab	PKPab	04 35 13.4	-0.5	
EKA	Eskdalemuir Ar	156.77	7	PKPab	PKPab	04 35 13.4	-0.5	
	comp=Z,0.8nm,0.7s,baz=340,slow=2.5,SNR=4.0							
KWP	Kalwaria Pacla	156.83	324	*e*PKP	PKPdf	04 34 43.9	-0.8	
KWP				*e*		04 35 11.1		
KOLS	Kolonicke sedl	157.50	323	*e*PKIKP	PKPdf	04 34 44.9	-0.7	
KOLS	Kolonicke sedl	157.50	323	*e*PKP	PKPdf	04 34 44.9	-0.7	
STHS	Stebnicka Huta	157.69	325	*e*PKIKP	PKPdf	04 34 45.7	-0.1	
STHS	Stebnicka Huta	157.69	325	*e*PKP	PKPdf	04 34 45.6	-0.2	
STHS				*e*		04 35 17.4		
OJC	Ojcow	157.79	329	*e*PKIKP	PKPdf	04 34 44.6	-1.3	
OJC	Ojcow	157.79	329	*e*PKPdf	PKPdf	04 34 44.6	-1.3	
CRVS	Cervenica-Dubn	157.92	324	*e*PKIKP	PKPdf	04 34 38.7	-7.4	
CRVS	Cervenica-Dubn	157.92	324	*e*PKP	PKPdf	04 34 38.7	-7.4	
CRVS				*e*		04 34 55.8		
NIE	Niedzica	158.13	326	*e*PKIKP	PKPdf	04 34 46.6	+0.2	
NIE	Niedzica	158.13	326	*e*PKPdf	PKPdf	04 34 46.6	+0.2	
KECS	Kecovo	158.69	324	*e*PKP2	PKPab	04 35 21.3	-1.3	
KECS	Kecovo	158.69	324	*e*PKP	PKPab	04 35 21.3	-1.3	
OKC	Ostrava-Krasne	158.78	330	*e*PKP2	PKPab	04 35 21.9	-1.0	
OKC				MLR	MLR			
	comp=Z,200nm,22.8s							
OKC	Ostrava-Krasne	158.78	330	*e*PKPAB	PKPab	04 35 21.9	-1.0	
OKC				AMS	AMS	05 56 00.0		
	comp=Z,200nm,22.8s							
UPC	Upice	159.10	334	*e*PKIKP	PKPdf	04 34 45.8	-1.7	
UPC				*e*		04 35 23.2		
UPC	Upice	159.10	334	*e*PKPDF	PKPdf	04 34 45.8	-1.7	
UPC				*e*PKPAB	PKPab	04 35 23.2	-1.1	
DPC	Dobruska-Polom	159.11	334	*e*PKIKP	PKPdf	04 34 46.0	-1.5	
DPC				*e*		04 35 23.3		
DPC	Dobruska-Polom	159.11	334	*e*PKPDF	PKPdf	04 34 46.0	-1.5	
DPC				*e*PKPAB	PKPab	04 35 23.3	-1.1	
PSZ	Piszkesteto	159.36	324	⇑PKIKP	PKPdf	04 34 46.4	-1.5	
CLL	Collm	159.41	340	⇓*e*PKIKP	PKPdf	04 34 48.0	+0.2	
CLL				*e*		04 35 01.0		
CLL				*i*		04 35 24.5		
CLL				pmax	pmax			
	comp=Z,50nm,1.7s							
CLL				MLR	MLR			
	comp=Z,200nm,20.8s							
CLL	Collm	159.41	340	*e*PKPdf	PKPdf	04 34 48.0	+0.2	
CLL				*e*PKPdiff	PKPab	04 35 01.0	-25	
CLL				⇓*i* PKPab	PKPab	04 35 24.5	-1.0	
	comp=Z,50nm,1.7s							
CLL				*e*PKPab	pPKPab	04 35 32.0	-3.8	
CLL				*es*PKPab	sPKPab	04 35 40.0	+0.6	
CLL				*e*PP	PP	04 39 02.0	-4.5	
CLL				*e*		04 40 40.0		
CLL				*e*PPP	PPP	04 42 48.0		
CLL				*e*PPPP		04 45 00.0		
CLL				*e*(SKKSac)		04 46 06.0		
CLL				*e*PSKS		04 49 25.0		
CLL				*e*PPS	PPS	04 52 28.0		
CLL				*e*(SS)		04 58 48.0		
CLL				*e*		05 01 11.0		
CLL				*e*SSS	SSS	05 05 18.0		
CLL				*e*SSSS		05 09 42.0		
CLL				*e*SSSrev		05 14 18.0		
CLL				LmH		05 54 00.0		
	comp=N,200nm,19.0s							
CLL				LmH		05 54 00.0		
	comp=E,200nm,19.1s							
CLL				LmH		05 54 00.0		
	comp=Z,200nm,20.8s							
VYHS	Vyhne	159.47	327	*e*PKP2	PKPab	04 35 24.8	-1.2	
VYHS	Vyhne	159.47	327	*e*PKP	PKPab	04 35 24.8	-1.2	
BRG	Berggiesshubel	159.50	338	*e*PKP	PKPdf	04 34 47.7	-0.2	
	comp=Z,27nm,2.4s							
BRG				*e*		04 35 24.7		
	comp=Z,11nm,1.0s							
BRG				SS	SS	04 59 05.0	-6.0	
BRG								
	comp=N,113nm,15.0s							
BRG								
	comp=E,142nm,18.6s							
BRG								
	comp=Z,295nm,21.7s							
BRG	Berggiesshubel	159.50	338	*e*PKIKP	PKPdf	04 34 47.7	-0.2	
BRG				*e*		04 35 24.7		
BRG				SS	SS	04 59 05.0	-6.0	
BRG				pmax	pmax			
	comp=Z,27nm,2.4s							
BRG				pmax	pmax			
	comp=Z,11nm,0.9s							
BRG				MLR	MLR			
	comp=N,113nm,15.0s							
BRG				MLR	MLR			
	comp=E,142nm,18.6s							
BRG				MLR	MLR			
	comp=Z,295nm,21.7s							
PVCC	Panska Ves	159.59	336	*e*PKP2	PKPab	04 35 25.4	-1.0	
PVCC				MLR	MLR			
	comp=Z,400nm,21.3s							
PVCC	Panska Ves	159.59	336	*e*PKPAB	PKPab	04 35 25.4	-1.0	
PVCC				AMS	AMS	05 49 50.0		
	comp=Z,400nm,21.3s							
PRU	Pruhonice	160.06	336	*e*PKP2	PKPab	04 35 27.3	-1.1	
PRU				MLR	MLR			
	comp=Z,400nm,14.2s							
PRU	Pruhonice	160.06	336	*e*PKPAB	PKPab	04 35 27.3	-1.1	
PRU				AMS	AMS	06 00 30.0		
	comp=Z,400nm,14.2s							
APE	Apeiranthos	160.07	290	⇓PKIKP	PKPdf	04 34 46.5	-2.6	
WTSB	Winterswijk	160.10	351	*e*PKP	PKPab	04 35 27.5	-1.0	
	comp=Z,66nm,1.8s							
TREC	Trest	160.29	333	AMS	AMS	06 00 30.0		
	comp=Z,300nm,18.3s							
VTS	Vitosha	160.33	307	⇓PKIKP	PKPdf	04 34 50.0	+0.7	
TOA0	Torodi Ar. Sit	160.86	179	*e*PKPdf	PKPdf	04 34 50.3	-0.2	
TOA0				*e*PKPab	PKPab	04 35 32.1	-0.6	
TORD	Torodi Ar. Bea	160.86	179	PKP	PKPdf	04 34 50.0	-0.5	
TORD				PKPab	PKPab	04 35 32.0	-0.7	
TORD	Torodi Ar. Bea	160.86	179	PKP	PKPdf	04 34 50.0	-0.5	
	comp=Z,3.7nm,1.2s,baz=336,slow=1.1,SNR=9.1							
TORD				PKPab	PKPab	04 35 32.0	-0.7	
	comp=Z,8.8nm,0.8s,baz=182,slow=2.7,SNR=15							
KHC	Kasperske Hory	161.12	336	*e*PKP2	PKPab	04 35 28.5	-4.7	
KHC	Kasperske Hory	161.12	336	*e*PKPAB	PKPab	04 35 28.5	-4.7	
PKSM	Moragy	161.13	322	⇑PKIKP	PKPdf	04 34 49.2	-0.6	
CONA	Conrad Observa	161.22	330	⇑*i* PKPdf	PKPdf	04 34 48.2	-1.8	
	comp=Z,3.8nm,1.4s							
CONA				⇑*i* PKPab	PKPab	04 35 32.1	-1.6	
	comp=Z,6.9nm,0.8s							
GERES	GERESS Array B	161.32	335	PKP	PKPdf	04 34 49.1	-1.0	
GERES				PKPab	PKPab	04 35 32.8	-1.3	
GERES	GERESS Array B	161.32	335	PKP	PKPdf	04 34 49.1	-1.0	
	comp=Z,0.2nm,0.3s,baz=154,slow=25,SNR=4.6							
GERES				PKPab	PKPab	04 35 32.8	-1.3	
	comp=Z,2.1nm,0.7s,baz=35,slow=4.9,SNR=12							
HGN	Heimansgroeve	161.39	352	*e*PKP	PKPab	04 35 33.3	-0.8	
	comp=Z,89nm,2.0s							
MEM	Membach	161.53	352	PKPab	PKPab	04 35 33.8	-1.0	
VISS	Visnje	163.30	327	*i* PKPdf	PKPdf	04 34 50.5	-1.6	
BOJS	Bojanci	163.33	326	*i* PKPdf	PKPdf	04 34 50.8	-1.2	
JAVS	Javornik	163.58	329	*i* PKPdf	PKPdf	04 34 50.4	-2.1	
DAVA	Damuels	163.92	340	⇑*i* PKPab	PKPab	04 35 44.7	-0.9	
	comp=Z,15nm,1.3s							
TAM	Tamanrasset	169.94	199	*e*PKIKP	PKPdf	04 34 57.6	-0.5	
TAM	Tamanrasset	169.94	199	*e*PKPdf	PKPdf	04 34 57.6	-0.5	
ESDC	Sonseca Array	171.29	32	PKP	PKPdf	04 34 57.9	-0.3	
ESDC				PKPab	PKPab	04 36 19.0	+0.7	
ESDC	Sonseca Array	171.29	32	PKP	PKPdf	04 34 57.9	-0.3	
	comp=Z,0.1nm,0.3s,baz=353,slow=2.5,SNR=6.3							
ESDC				PKPab	PKPab	04 36 19.0	+0.7	
	comp=Z,0.1nm,0.3s,baz=331,slow=6.8,SNR=2.5							

IDC 30 04:21:13.4±1.6,31°.40S×178°.75W,h0km,mb4.1/5, mb1 4.3/5,mb1mx3.9/21,mbtmp4.1/5,Error ellipse: s-maj=50.3km s-min=28.8km az=40.0,Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	33.34	281	P	P	04 27 52.2	-1.2
	3.7nm,1.0s,baz=117,slow=8.3,SNR=3.0						
ASAR	Alice Springs	42.42	268	P	P	04 29 09.6	-0.5
	1.2nm,0.6s,baz=109,slow=7.1,SNR=6.2						
WRA	Warramunga Arr	43.50	274	P	P	04 29 19.5	+0.7
	1.6nm,0.4s,baz=113,slow=8.2,SNR=9.5						
FITZ	Fitzroy Crossi	51.72	271	P	P	04 30 23.1	+0.3
	1.2nm,0.7s,baz=119,slow=13,SNR=3.2						
QSPA	South Pole Qui	58.71	180	P	P	04 31 12.5	-0.2
	1.9nm,0.6s,baz=312,slow=5.4,SNR=11						
FINES	FINESS Array B	145.85	339	PKPbc	PKPbc	04 40 53.8	-0.1
	2.0nm,0.6s,baz=40,slow=3.1,SNR=14						
BRTR	Keskin Array B	152.49	297	PKPbc	PKPbc	04 41 11.2	-0.6
	0.3nm,0.4s,baz=66,slow=1.7,SNR=2.7						
TORD	Torodi Ar. Bea	161.83	181	PKPab	PKPab	04 42 01.9	-0.6
	0.4nm,0.8s,baz=153,slow=4.1,SNR=3.1						

NIED ***30*** *04:21:00.37°.00N×141°.00E,h80km,Mw3.5 Best double couple: M0 2.36000×10^14 NP1:φs138.00000°,δ47.00000°, λ-85.00000°. NP2:φs310.00000°,δ43.00000°, λ-95.00000°.*

ISCJB ***30*** *04:21:49.4±0.7,36°.98N±0°.04×141°.14E±0°.07,h94km±4km, mb3.3/5,Error ellipse: s-maj=9.3km s-min=5.8km az=15.8*

IDC ***30*** *04:21:49.9±2.0,36°.97N×141°.14E,h84km±8km,mb3.2/5, mb1 3.4/8,mb1mx3.2/28,mbtmp3.3/8,MS3.0/1,Ms1 3.0/1, ms1mx2.3/18,Error ellipse: s-maj=39.5km s-min=12.2km az=85.0*

JMA ***30*** *04:21:51.4±0.1,37°.00N×141°.01E,h87km±1km,M3.5 Broadband fault plane solution: P waves. NP1: φs310.00000°,δ49.00000°,λ-91.00000°. NP2: φs132.00000°,δ41.00000°,λ-89.00000°. Principal axes: T Plg4.0000°, Azm41.0000°; N Plg1.0000°, Azm311.0000°; P Plg86.0000°, Azm207.0000°;*

JMA Felt I J1.

ISC 30 04:21:50.2±0.9,36°.98N±0°.04×141°.14E±0°.07,h87km±6km, n22,σ0s71/38,mb3.4/5,2D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.30	294	P	Pn	04 22 04.1	+0.8
ONAJ				S	Sn	04 22 13.4	+0.3
JFK	Kawauchi	0.44	331	P	Pn	04 22 04.9	+0.7
JFK				S	Sn	04 22 14.7	+0.1
JHO	Hitachi	0.59	231	⇓P	Pn	04 22 06.0	+0.6
JHO				S	Sn	04 22 16.6	-0.1
JFT	Otama	0.83	310	P	Pn	04 22 08.3	+0.5
JFT				S	Sn	04 22 20.7	-0.3
JMM	Marumori	0.92	343	⇓P	Pn	04 22 09.5	+0.7
JMM				S	Sn	04 22 22.7	0.0
JFY	Yanaizu	1.22	291	P	Pn	04 22 12.4	+0.1
JFY				S	Sn	04 22 28.2	-0.8
JOU	Okura	1.43	345	P	Pn	04 22 15.6	+0.7
JOU				S	Sn	04 22 33.8	+0.2
JAG	Ashikaga	1.46	248	P	Pn	04 22 15.4	+0.1
JIO	Ouri	1.48	6	P	Pn	04 22 16.1	+0.6
JIO				S	Sn	04 22 34.3	-0.3
JYS	Shirataka	1.50	326	P	Pn	04 22 16.3	+0.5
JYS				S	Sn	04 22 35.6	+0.4
JKT	Katashina	1.53	262	P	Pn	04 22 16.9	+0.6
JKT				*e*S	Sn	04 22 36.6	+0.6
JNS	Sasagawa	1.67	300	*e*S	Sn	04 22 38.0	-1.1
JHK	Hiroka	1.71	280	P	Pn	04 22 18.9	+0.3
JHK				S	Sn	04 22 39.3	-0.8
MJAR	Matsushiro Arr	2.39	260	P	Pn	04 22 27.8	+0.3
	16nm,0.3s,baz=82,slow=14,SNR=103						
MJAR				S	Sn	04 22 48.5	-7.6
	9.6nm,0.3s,baz=81,slow=14,SNR=14						
MAT	Matsushiro	2.39	260	P	Pn	04 22 28.3	+0.8
MAT				S	Sn	04 22 58.4	+2.3
JHJ	Hachijo jima 2	4.01	196	P	Pn	04 22 49.7	+0.4
	25nm,0.3s,baz=17,slow=19,SNR=6.2						
JHJ				S	Sn	04 23 34.3	-0.9
	34nm,0.3s,baz=258,slow=24,SNR=8.6						
KSRS	Korea Array	10.55	277	P	Pn	04 24 18.6	+0.2
	0.1nm,0.3s,baz=94,slow=14,SNR=5.2						
KSRS				LR	LR	04 28 02.7	
	comp=Z,82nm,20.9s,baz=346,slow=35						
SONM	Songino Array	27.63	304	P	P	04 27 29.9	+0.4
	0.3nm,0.7s,baz=86,slow=4.8,SNR=2.3						
ZALV	Zalesovo Beam	41.78	312	P	P	04 29 30.3	-0.6
	0.7nm,0.4s,baz=71,slow=14,SNR=3.1						
MKAR	Makanchi Array	43.96	302	P	P	04 29 48.3	-0.2
	0.2nm,0.5s,baz=99,slow=8.9,SNR=2.8						
MKAR				pP	pP	04 30 09.0	-0.3
	0.4nm,0.8s,baz=79,slow=8.9,SNR=2.3						
KURBB	Kurchatov Arra	45.86	308	P	P	04 30 03.5	0.0
	0.2nm,0.4s,baz=85,slow=7.6,SNR=4.6						
KURBB				pP	pP	04 30 22.9	-1.6
	0.4nm,0.4s,baz=84,slow=7.9,SNR=4.1						
KURBB				sP	sP	04 30 34.1	-0.2
	0.5nm,0.7s,baz=83,slow=8.3,SNR=2.7						
WRA	Warramunga Arr	56.98	188	P	P	04 31 27.0	+0.3
	0.3nm,0.5s,baz=6.0,slow=7.6,SNR=5.7						

CSEM ***30*** *04:27:19.7±0.3,36°.19N

EQUE	**Quentar**	**1.83**	**305**	P		**Pn**	**04 27 51.7**	**+0.9**
	8.0nm,0.3s,SNR=8.4							
EQUE				S		**Sn**	**04 28 13.1**	**-0.6**
	28nm,0.4s,SNR=12							
EHUE	**Huescar**	**1.83**	**334**	P		**Pn**	**04 27 51.5**	**+0.7**
	0.5nm,0.2s,SNR=7.9							
EHUE	**Huescar**	**1.83**	**334**	P		**Pn**	**04 27 51.5**	**+0.7**
	0.5nm,0.2s,SNR=7.9							
ECOG	**Cogollos-Vega**	**1.95**	**305**	P		**Pn**	**04 27 54.1**	**+1.6**
	22nm,0.3s,SNR=9.7							
ECOG				S		**Sn**	**04 28 17.4**	**+0.5**
	40nm,0.4s,SNR=10							
ECOG	**Cogollos-Vega**	**1.95**	**305**	P		**Pn**	**04 27 54.1**	**+1.6**
	22nm,0.3s,SNR=9.7							
ECOG				S		**Sn**	**04 28 17.4**	**+0.5**
	40nm,0.4s,SNR=10							
ERON	**Agron**	**1.99**	**296**	P		**Pn**	**04 27 53.1**	**+0.1**
	8.1nm,0.4s,SNR=7.9							
ERON				S		**Sn**	**04 28 18.1**	**+0.2**
	28nm,0.3s,SNR=7.9							
ERON	**Agron**	**1.99**	**296**	P		**Pn**	**04 27 53.1**	**+0.1**
	8.1nm,0.4s,SNR=7.9							
ERON				S		**Sn**	**04 28 18.1**	**+0.2**
	28nm,0.3s,SNR=7.9							
EQES	**Quesada**	**2.02**	**324**	P		**Pn**	**04 27 54.5**	**+1.0**
	5.9nm,0.3s,SNR=40							
EQES				S		**Sn**	**04 28 18.5**	**-0.2**
	26nm,0.3s							
EQES	**Quesada**	**2.02**	**324**	P		**Pn**	**04 27 54.5**	**+1.0**
	5.9nm,0.3s,SNR=40							
EQES				S		**Sn**	**04 28 18.5**	**-0.2**
	26nm,0.3s							
EANR	**'Ain N'Sour**	**2.17**	**95**	P		Pg	04 28 13.0	+12
EANR	**'Ain N'Sour**	**2.17**	**95**	P		Pg	04 28 13.0	+12
EANR	**'Ain N'Sour**	**2.17**	**95**	P		Pg	04 28 13.0	+12
ELOJ	**Sierra Loja**	**2.30**	**296**	P		**Pn**	**04 27 57.9**	**+0.7**
	6.2nm,0.3s,SNR=4.0							
ELOJ				S		**Sn**	**04 28 25.4**	**0.0**
	9.7nm,0.4s,SNR=6.0							
ELOJ	**Sierra Loja**	**2.30**	**296**	P		**Pn**	**04 27 57.9**	**+0.7**
	6.2nm,0.3s,SNR=4.0							
ELOJ				S		**Sn**	**04 28 25.4**	**0.0**
	9.7nm,0.4s,SNR=6.0							
ECHF	**Ech Chlef**	**2.35**	**90**	P		Pg	04 28 15.2	+11
ECHF	**Ech Chlef**	**2.35**	**90**	P		Pg	04 28 15.2	+11
ECHA	**Ech Chlef**	**2.37**	**90**	P		Pg	04 28 15.2	+10
ETRT	**Tiaret**	**2.46**	**108**	P		Pb	04 28 07.0	+3.4
ETRT	**Tiaret**	**2.46**	**108**	P		Pb	04 28 07.0	+3.4
ETRT	**Tiaret**	**2.46**	**108**	P		Pb	04 28 07.0	+3.4
ETOB	**Tobarra**	**2.47**	**0**	⇓P		**Pn**	**04 27 59.9**	**+0.4**
	6.9nm,0.3s,SNR=18							
ETOB				S		**Sn**	**04 28 28.3**	**-1.2**
	9.1nm,0.3s							
ETOB	**Tobarra**	**2.47**	**0**	P		**Pn**	**04 27 59.9**	**+0.4**
	6.9nm,0.3s,SNR=18							
ETOB				S		**Sn**	**04 28 28.3**	**-1.2**
	9.1nm,0.3s							
EBNR	**Beni Rached**	**2.50**	**86**	P		Pg	04 28 17.0	+9.4
ELUQ	**Luque**	**2.57**	**303**	S		**Sn**	**04 28 32.3**	**+0.2**
	18nm,0.5s,SNR=7.9							
ELUQ	**Luque**	**2.57**	**303**	S		**Sn**	**04 28 32.3**	**+0.2**
	18nm,0.5s,SNR=7.9							
EVIA	**Vianos**	**2.57**	**343**	P		**Pn**	**04 28 01.4**	**+0.4**
	12nm,0.4s,SNR=7.1							
EVIA				S		**Sn**	**04 28 31.1**	**-1.1**
	26nm,0.4s,SNR=4.5							
EVIA	**Vianos**	**2.57**	**343**	P		**Pn**	**04 28 01.4**	**+0.4**
	12nm,0.4s,SNR=7.1							
EVIA				S		**Sn**	**04 28 31.1**	**-1.1**
	26nm,0.4s,SNR=4.5							
EBEN	**Beniarda**	**2.74**	**22**	P		Pn	04 28 01.8	-1.5
	1.2nm,0.4s,SNR=6.8							
EBEN				S		**Sn**	**04 28 35.6**	**-0.7**
	3.6nm,0.5s							
EBEN	**Beniarda**	**2.74**	**22**	P		Pn	04 28 01.8	-1.5
	1.2nm,0.4s,SNR=6.8							
EBEN				S		**Sn**	**04 28 35.6**	**-0.7**
	3.6nm,0.5s							
TZK	**Tazeka**	**2.99**	**227**	P		**Pb**	**04 28 14.0**	**+1.2**
TZK				S		**Sn**	**04 28 44.0**	**+1.4**
TZK	**Tazeka**	**2.99**	**227**	P		**Pb**	**04 28 14.0**	**+1.2**
TZK				S		**Sn**	**04 28 44.0**	**+1.4**
EADA	**Adamuz**	**3.12**	**310**	P		**Pn**	**04 28 08.9**	**+0.4**
	2.3nm,0.3s,SNR=12							
EADA				S		**Sn**	**04 28 45.8**	**+0.1**
	5.5nm,0.5s,SNR=5.1							
EADA	**Adamuz**	**3.12**	**310**	P		**Pn**	**04 28 08.9**	**+0.4**
	2.3nm,0.3s,SNR=12							
EADA				S		**Sn**	**04 28 45.8**	**+0.1**
	5.5nm,0.5s,SNR=5.1							
LIJA	**Lijar**	**3.18**	**284**	P		**Pb**	**04 28 18.0**	**+2.1**
LIJA				S		**Sn**	**04 28 45.0**	**-2.1**
LIJA	**Lijar**	**3.18**	**284**	P		**Pb**	**04 28 18.0**	**+2.1**
LIJA				S		**Sn**	**04 28 45.0**	**-2.1**
EMHD	**Djebel Mahouad**	**3.65**	**88**	P		Pn	04 28 22.0	+6.1
EMHD	**Djebel Mahouad**	**3.65**	**88**	P		Pn	04 28 22.0	+6.1
EMHD	**Djebel Mahouad**	**3.65**	**88**	P		Pn	04 28 22.0	+6.1
EMOS	**Mosqueruela**	**4.27**	**11**	P		**Pn**	**04 28 25.8**	**+1.4**
	5.1nm,0.5s,SNR=13							
EMOS				S		**Sn**	**04 29 11.7**	**-2.5**
	6.9nm,1.0s							
EMOS	**Mosqueruela**	**4.27**	**11**	P		**Pn**	**04 28 25.8**	**+1.4**
	5.1nm,0.5s,SNR=13							
EMOS				S		**Sn**	**04 29 11.7**	**-2.5**
	6.9nm,1.0s							
EMIN	**Mina Concepcio**	**4.39**	**293**	P		**Pn**	**04 28 26.4**	**+0.5**
	0.7nm,0.4s,SNR=7.9							
EMIN				S		**Sn**	**04 29 14.8**	**-2.1**
	5.5nm,1.2s,SNR=7.9							
EMIN	**Mina Concepcio**	**4.39**	**293**	P		**Pn**	**04 28 26.4**	**+0.5**
	0.7nm,0.4s,SNR=7.9							
EMIN				S		**Sn**	**04 29 14.8**	**-2.1**
	5.5nm,1.2s,SNR=7.9							
PBAR	**Barrancos**	**4.81**	**296**	*e*Pn		**Pn**	**04 28 31.8**	**+0.2**
PBAR				*e*Sn		**Sn**	**04 29 24.5**	**-2.6**
PBAR				A		A	04 29 28.4	
	1.7nm,0.8s							
PBAR	**Barrancos**	**4.81**	**296**	P		**Pn**	**04 28 31.8**	**+0.2**
PBAR				S		**Sn**	**04 29 24.5**	**-2.6**
	1.7nm,0.8s							
PBAR	**Barrancos**	**4.81**	**296**	P		**Pn**	**04 28 31.8**	**+0.2**
PBAR				S		**Sn**	**04 29 24.5**	**-2.6**
	1.7nm,0.8s							
GUD	**Guadarrama**	**4.90**	**336**	P		**Pn**	**04 28 34.2**	**+1.1**
	1.0nm,0.4s,SNR=7.9							
GUD				S		**Sn**	**04 29 27.0**	**-2.7**
	6.5nm,1.0s,SNR=4.0							
GUD	**Guadarrama**	**4.90**	**336**	P		**Pn**	**04 28 34.2**	**+1.1**
	1.0nm,0.4s,SNR=7.9							
GUD				S		**Sn**	**04 29 27.0**	**-2.7**
	6.5nm,1.0s,SNR=4.0							
EGRO	**El Granado**	**4.94**	**288**	P		**Pn**	**04 28 33.6**	**+0.2**
	0.6nm,0.2s,SNR=7.9							
EGRO				S		**Sn**	**04 29 26.6**	**-3.7**
	1.9nm,0.5s,SNR=7.9							
EGRO	**El Granado**	**4.94**	**288**	P		**Pn**	**04 28 33.6**	**+0.2**
	0.6nm,0.2s,SNR=7.9							
EGRO				S		**Sn**	**04 29 26.6**	**-3.7**
	1.9nm,0.5s,SNR=7.9							
ETOS	**Mallorca**	**4.98**	**43**	P		**Pn**	**04 28 34.0**	**-0.1**
	0.9nm,0.2s,SNR=5.1							
ETOS				S		Sn	04 29 27.8	-3.7
	8.0nm,1.1s							
ETOS	**Mallorca**	**4.98**	**43**	P		**Pn**	**04 28 34.0**	**-0.1**
	0.9nm,0.2s,SNR=5.1							
ETOS				S		Sn	04 29 27.8	-3.7
	8.0nm,1.1s							
ERTA	**Horta de San J**	**5.00**	**17**	P		**Pn**	**04 28 35.0**	**+0.7**
	0.2nm,0.4s,SNR=7.9							
ERTA				S		**Sn**	**04 29 28.9**	**-3.1**
	1.4nm,0.3s,SNR=7.9							
ERTA	**Horta de San J**	**5.00**	**17**	P		**Pn**	**04 28 35.0**	**+0.7**
	0.2nm,0.4s,SNR=7.9							
ERTA				S		**Sn**	**04 29 28.9**	**-3.1**
	1.4nm,0.3s,SNR=7.9							
EBAD	**Badajoz**	**5.04**	**302**	P		**Pn**	**04 28 34.8**	**-0.1**
	3.9nm,0.7s							
EBAD				S		**Sn**	**04 29 30.3**	**-2.6**
	1.9nm,0.3s,SNR=4.8							
EBAD	**Badajoz**	**5.04**	**302**	P		**Pn**	**04 28 34.8**	**-0.1**
	3.9nm,0.7s							
EBAD				S		**Sn**	**04 29 30.3**	**-2.6**
	1.9nm,0.3s,SNR=4.8							
PVAQ	**Vaqueiros**	**5.09**	**286**	*e*Pn		**Pn**	**04 28 35.8**	**+0.3**
PVAQ				*e*Sn		**Sn**	**04 29 30.9**	**-3.2**
PVAQ				A		A	04 29 32.8	
	2.9nm,0.5s							
PVAQ	**Vaqueiros**	**5.09**	**286**	P		**Pn**	**04 28 35.8**	**+0.3**
PVAQ				S		**Sn**	**04 29 30.9**	**-3.2**
	2.9nm,0.5s							
PBDV	**Barranco-do-Ve**	**5.23**	**284**	*e*Pn		**Pn**	**04 28 37.8**	**+0.4**
PBDV	**Barranco-do-Ve**	**5.23**	**284**	P		**Pn**	**04 28 37.8**	**+0.4**
PBDV	**Barranco-do-Ve**	**5.23**	**284**	P		**Pn**	**04 28 37.8**	**+0.4**
EPLA	**Plasencia**	**5.27**	**319**	P		**Pn**	**04 28 38.8**	**+0.8**
	0.8nm,0.2s,SNR=7.9							
EPLA				S		**Sn**	**04 29 35.9**	**-2.7**
	6.3nm,1.0s,SNR=4.0							
EPLA	**Plasencia**	**5.27**	**319**	P		**Pn**	**04 28 38.8**	**+0.8**
	0.8nm,0.2s,SNR=7.9							
EPLA				S		**Sn**	**04 29 35.9**	**-2.7**
	6.3nm,1.0s,SNR=4.0							
PBEJ	**Beja**	**5.37**	**292**	*e*Pn		**Pn**	**04 28 39.6**	**+0.3**
PBEJ	**Beja**	**5.37**	**292**	P		**Pn**	**04 28 39.6**	**+0.3**
PBEJ	**Beja**	**5.37**	**292**	P		**Pn**	**04 28 39.6**	**+0.3**
PCVE	**Castro Verde**	**5.39**	**288**	*e*Pn		**Pn**	**04 28 39.9**	**+0.3**
PCVE	**Castro Verde**	**5.39**	**288**	P		**Pn**	**04 28 39.9**	**+0.3**
PCVE	**Castro Verde**	**5.39**	**288**	P		**Pn**	**04 28 39.9**	**+0.3**
EVO	**Evora**	**5.65**	**297**	*e*Pn		**Pn**	**04 28 44.1**	**+0.9**
EVO	**Evora**	**5.65**	**297**	P		**Pn**	**04 28 44.1**	**+0.9**
EVO	**Evora**	**5.65**	**297**	P		**Pn**	**04 28 44.1**	**+0.9**
PNCL	**Nicolau / Gran**	**5.89**	**291**	*e*Pn		**Pn**	**04 28 46.1**	**-0.4**
PNCL	**Nicolau / Gran**	**5.89**	**291**	*e*Pn		**Pn**	**04 28 46.1**	**-0.4**
PFVI	**Vila Bisbo**	**5.92**	**281**	*e*Pn		**Pn**	**04 28 47.9**	**+1.0**
PFVI	**Vila Bisbo**	**5.92**	**281**	P		**Pn**	**04 28 47.3**	**+0.4**
	8.9nm,0.9s,SNR=7.1							
PFVI				S		**Sn**	**04 29 51.0**	**-3.5**
	1.0nm,0.5s,SNR=7.9							
PFVI	**Vila Bisbo**	**5.92**	**281**	P		**Pn**	**04 28 47.3**	**+0.4**
	8.3nm,0.9s,SNR=7.1							
PFVI	**Vila Bisbo**	**5.92**	**281**	*e*Pn		**Pn**	**04 28 47.9**	**+1.0**
PFVI				S		**Sn**	**04 29 51.0**	**-3.5**
	1.0nm,0.5s,SNR=7.9							
PCBR	**Castelo Branco**	**5.93**	**310**	*e*Pn		**Pn**	**04 28 47.9**	**+0.8**
PCBR	**Castelo Branco**	**5.93**	**310**	P		**Pn**	**04 28 47.9**	**+0.8**
PCBR	**Castelo Branco**	**5.93**	**310**	P		**Pn**	**04 28 47.9**	**+0.8**
MVO	**Moncorvo**	**6.56**	**321**	*e*Pn		**Pn**	**04 28 58.3**	**+2.5**
MVO	**Moncorvo**	**6.56**	**321**	P		**Pn**	**04 28 58.1**	**+2.3**
	0.6nm,0.3s,SNR=6.6							
MVO				S		**Sn**	**04 30 06.9**	**-3.6**
	1.9nm,0.5s							
MVO	**Moncorvo**	**6.56**	**321**	P		**Pn**	**04 28 58.1**	**+2.3**
	0.6nm,0.3s,SNR=6.6							
MVO				S		**Sn**	**04 30 06.9**	**-3.6**
	1.9nm,0.5s							
POLO	**Lamas de Olo**	**7.12**	**319**	*e*Pn		**Pn**	**04 29 05.1**	**+1.7**
POLO	**Lamas de Olo**	**7.12**	**319**	*e*Pn		**Pn**	**04 29 05.1**	**+1.7**
EARI	**Arriondas**	**7.65**	**340**	P		**Pn**	**04 29 12.0**	**+1.3**
	0.4nm,0.3s,SNR=4.0							
EARI	**Arriondas**	**7.65**	**340**	P		**Pn**	**04 29 12.0**	**+1.3**
	0.4nm,0.3s,SNR=4.0							

*CSEM **30** 04:31:59.6, 42°.56N × 13°.21E, h9km, MD2.2/17, After ROM*
ROM 30 04:31:59.6±0.1, 42°.56N×13°.21E, h9km±1km, Md2.2/17, MI1.8/9, Error ellipse: s-maj=1.0km s-min=0.9km az=67.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNSS	**Leonessa**	**0.13**	**287**	Pg	Pg	04 32 03.2	+0.4
LNSS				Sg	Sg	04 32 05.6	+0.6
	611nm,0.5s						
LNSS	**Leonessa**	**0.13**	**287**	Pg	Pg	04 32 03.2	+0.4
LNSS				Sg	Sg	04 32 05.6	+0.6
	611nm,0.5s						
CAMP	**Campotosto**	**0.15**	**101**	Pg	Pg	04 32 03.5	+0.5
CAMP				Sg	Sg	04 32 06.1	+0.7
	288nm,0.5s						
CAMP	**Campotosto**	**0.15**	**101**	Pg	Pg	04 32 03.5	+0.5
CAMP				Sg	Sg	04 32 06.1	+0.7
	288nm,0.5s						
AQU	**L'Aquila**	**0.25**	**146**	Pg	Pb	04 32 05.7	-0.7
AQU				Sg	Sb	04 32 10.0	-1.0
	109nm,0.4s						
AQU	**L'Aquila**	**0.25**	**146**	Pg	Pb	04 32 05.7	-0.7
AQU				Sg	Sb	04 32 10.0	-1.0
	109nm,0.4s						
NRCA	**Norcia**	**0.28**	**345**	Pg	Pg	04 32 05.5	+0.1
NRCA				Sg	Sg	04 32 10.0	+0.8
NRCA	**Norcia**	**0.28**	**345**	Pg	Pg	04 32 05.5	+0.1
NRCA				Sg	Sg	04 32 10.0	+0.8
TERO	**Teramo**	**0.29**	**78**	Pg	Pg	04 32 05.7	+0.1
TERO				Sg	Sb	04 32 11.4	-0.8
TERO	**Teramo**	**0.29**	**78**	Pg	Pg	04 32 05.7	+0.1
TERO				Sg	Sb	04 32 11.4	-0.8
FIAM	**Fiamignano**	**0.30**	**194**	Pg	Pg	04 32 06.1	+0.3
FIAM				Sg	Sg	04 32 10.9	+0.9
	119nm,0.6s						
FIAM	**Fiamignano**	**0.30**	**194**	Pg	Pg	04 32 06.1	+0.3
FIAM				Sg	Sg	04 32 10.9	+0.9
	119nm,0.6s						
MNS	**Montasola**	**0.43**	**246**	Pg	Pg	04 32 08.2	+0.1
MNS				Sg	Sg	04 32 14.8	+0.9
	46nm,0.3s						
MNS	**Montasola**	**0.43**	**246**	Pg	Pg	04 32 08.2	+0.1
MNS				Sg	Sg	04 32 14.8	+0.9
	46nm,0.3s						
CESX	**Cesi**	**0.47**	**276**	Pg	Pb	04 32 09.7	-0.4
CESX				Sg	Sb	04 32 17.3	+0.2
CESX	**Cesi**	**0.47**	**276**	Pg	Pb	04 32 09.7	-0.4
CESX				Sg	Sb	04 32 17.3	+0.2
FDMO	**Fiordimonte**	**0.48**	**349**	Pg	Pg	04 32 09.2	+0.1
FDMO				Sg	Sg	04 32 16.2	+0.7
	15nm,0.6s						
FDMO	**Fiordimonte**	**0.48**	**349**	Pg	Pg	04 32 09.2	+0.1
FDMO				Sg	Sg	04 32 16.2	+0.7
	15nm,0.6s						
VCEL	**Villa Celiera**	**0.49**	**110**	Pg	Pg	04 32 09.8	+0.4
VCEL				Sg	Sb	04 32 17.8	-0.3
	96nm,0.4s						
VCEL	**Villa Celiera**	**0.49**	**110**	Pg	Pg	04 32 09.8	+0.4
VCEL				Sg	Sb	04 32 17.8	-0.3
	96nm,0.4s						
CESI	**CESI - Serrava**	**0.50**	**333**	Pg	Pg	04 32 09.4	0.0
CESI				Sg	Sb	04 32 17.2	-0.8
CESI	**CESI - Serrava**	**0.50**	**333**	Pg	Pg	04 32 09.4	0.0
CESI				Sg	Sb	04 32 17.2	-0.8
OFFI	**Offida**	**0.51**	**43**	Pg	Pb	04 32 10.6	-0.1
OFFI				Sg	Sg	04 32 17.0	+0.7
OFFI	**Offida**	**0.51**	**43**	Pg	Pb	04 32 10.6	-0.1
OFFI				Sg	Sg	04 32 17.0	+0.7
ASSB	**Assisi San Ben**	**0.63**	**320**	Pg	Pg	04 32 12.3	+0.4
ASSB				Sg	Sb	04 32 21.1	-0.7
ASSB	**Assisi San Ben**	**0.63**	**320**	Pg	Pg	04 32 12.3	+0.4
ASSB				Sg	Sb	04 32 21.1	-0.7
GUMA	**Gualdo di Mace**	**0.73**	**47**	Pg	Pg	04 32 09.9	-3.9
GUMA				Sg	Sg	04 32 18.1	-5.2
GUMA	**Gualdo di Mace**	**0.73**	**47**	Pg	Pg	04 32 09.9	-3.9
GUMA				Sg	Sg	04 32 18.1	-5.2
CING	**Cingoli**	**0.81**	**359**	Pg	Pg	04 32 15.1	-0.2
CING	**Cingoli**	**0.81**	**359**	Pg	Pg	04 32 15.1	-0.2
MURB	**Monte Urbino**	**0.86**	**324**	Pg	Pg	04 32 16.3	-0.1
MURB	**Monte Urbino**	**0.86**	**324**	Pg	Pg	04 32 16.3	-0.1
MGAB	**Montegabbione**	**0.88**	**294**	Pg	Pg	04 32 16.7	0.0
MGAB				Sg	Sb	04 32 28.7	-0.4
	28nm,0.4s						
MGAB	**Montegabbione**	**0.88**	**294**	Pg	Pg	04 32 16.7	0.0
MGAB				Sg	Sb	04 32 28.7	-0.4
	28nm,0.4s						

*NIED **30** 04:35:00, 25°.70N × 142°.60E, h32km, Mw4.3 Best double couple: M0 2.85000×10^15 NP1: φs 124.00000°, δ 77.00000°, λ 158.00000°. NP2: φs 219.00000°, δ 68.00000°, λ 14.00000°.*
*IDC **30** 04:35:22.3±0.6, 25°.84N × 143°.06E, h0km, mb4.1/22, mb1 4.2/24, mb1mx4.2/31, mbtmp4.1/24, ML3.8/2, Error ellipse: s-maj=19.7km s-min=13.6km az=81.0*
*JMA **30** 04:35:24.6, 25°.66N × 142°.63E, h127km, M4.3*
*ISCJB **30** 04:35:25.9±0.5, 26°.03N±0°.04 × 143°.0E±0°.1, h33km, mb4.2/25, MS4.4/1, Error ellipse: s-maj=14.5km s-min=5.1km az=169.3*
*NEIC **30** 04:35:27.6±0.3, 25°.87N × 143°.03E, h35km, mb4.6/2, MW4.2(NIED), Error ellipse: s-maj=11.6km s-min=7.5km az=75.0*
ISC 30 04:35:27.5±0.6, 25°.95N±0°.07 × 143°.2E±0°.1, h35km, n71, σ1§54/80, mb4.2/25, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**1.14**	**306**	P	**Pn**	**04 35 47.9**	**+0.9**
JHHJ				*e*S	**Sn**	**04 36 05.7**	**+4.2**
CBIJ	**Chichi jima**	**1.46**	**321**	P	**Pn**	**04 35 52.6**	**+1.2**
CBIJ				*e*S	**Sn**	**04 36 13.6**	**+4.3**
BSO1	**Boso 1**	**8.88**	**348**	P	**Pn**	**04 37 33.4**	**+0.6**
BSO1				*e*S	**Sn**	**04 39 09.4**	**-2.0**
BSO3	**Boso 3**	**9.12**	**346**	P	**Pn**	**04 37 36.3**	**-0.1**
BSO3				*e*S	**Sn**	**04 39 18.5**	**+0.8**
BSO4	**Boso 4**	**9.34**	**345**	P	**Pn**	**04 37 39.9**	**+0.4**
BSO4				*e*S	**Sn**	**04 39 22.9**	**-0.4**
JOD2	**Odawara 2**	**9.93**	**340**	*e*S	**Sn**	**04 39 37.3**	**-0.7**
JHU	**Hanno**	**10.43**	**342**	*e*S	**Sn**	**04 39 48.3**	**-1.8**
JHO	**Hitachi**	**10.86**	**349**	P	**Pn**	**04 37 59.2**	**-1.2**
JHO				*e*S	**Sn**	**04 39 55.8**	**-4.9**
JAG	**Ashikaga**	**10.92**	**344**	*e*S	**Sn**	**04 39 58.9**	**-3.3**
MJAR	**Matsushiro Arr**	**11.39**	**339**	Pn	**Pn**	**04 38 05.3**	**-2.4**
MJAR				Sn	**Sn**	**04 40 10.8**	**-2.8**
MJAR	**Matsushiro Arr**	**11.39**	**339**	Pn	**Pn**	**04 38 05.3**	**-2.4**
	0.6nm,0.3s,baz=48,slow=11,SNR=3.1						
MJAR				Sn	**Sn**	**04 40 10.8**	**-2.8**
	0.7nm,0.3s,baz=237,slow=31,SNR=3.7						
JFK	**Kawauchi**	**11.55**	**351**	*e*S	**Sn**	**04 40 13.5**	**-4.2**
KSRS	**Korea Array**	**17.31**	**315**	P	**P**	**04 39 26.7**	**-0.8**
	0.3nm,0.3s,baz=123,slow=12,SNR=6.6						
KSAR	**Wonju Array Be**	**17.33**	**315**	P	**P**	**04 39 26.8**	**-1.0**
USRK	**Ussuriysk Array**	**20.35**	**336**	P	Pn	04 40 02.4	-0.5
	1.9nm,0.9s,baz=155,slow=10,SNR=2.9						
SONM	**Songino Array**	**36.17**	**317**	P	**P**	**04 42 26.7**	**0.0**
SONM	**Songino Array**	**36.17**	**317**	P	**P**	**04 42 26.7**	**0.0**
	1.3nm,0.5s,baz=119,slow=8.9,SNR=11						
CMAR	**Chiang Mai Arr**	**41.50**	**269**	P	**P**	**04 43 10.2**	**-1.3**
CMAR	**Chiang Mai Arr**	**41.50**	**269**	P	**P**	**04 43 10.2**	**-1.3**
	0.9nm,0.3s,baz=58,slow=8.4,SNR=4.1						
CTA	**Charters Tower**	**45.86**	**176**	P	**P**	**04 43 45.5**	**-1.0**
CTA	**Charters Tower**	**45.86**	**176**	P	**P**	**04 43 45.5**	**-1.0**
	1.2nm,0.4s,baz=355,slow=12,SNR=3.7						
WRAB	**Tennant Creek**	**46.42**	**192**	*e*P	**P**	**04 43 49.8**	**-1.0**
	32nm,0.9s						
WRA	**Warramunga Arr**	**46.43**	**192**	P	**P**	**04 43 49.8**	**-1.1**
WRA	**Warramunga Arr**	**46.43**	**192**	P	**P**	**04 43 49.8**	**-1.1**
	21nm,0.7s,baz=13,slow=8.5,SNR=160						
FITZ	**Fitzroy Crossi**	**47.00**	**203**	P	**P**	**04 43 54.5**	**-0.9**
FITZ	**Fitzroy Crossi**	**47.00**	**203**	P	**P**	**04 43 54.5**	**-0.9**
	2.8nm,0.7s,baz=22,slow=8.2,SNR=7.7						
WMQ	**Urumqi**	**47.99**	**307**	SKKS		04 44 29.0	
WMQ				AMB	AMB		
	comp=Z,110nm,5.8s						
WMQ				LR	LR		
	comp=N,350nm,20.4s						
WMQ				LR	LR		
	comp=E,280nm,19.6s						
WMQ				LR	LR		
	comp=Z,340nm,19.0s						
WMQ	**Urumqi**	**47.99**	**307**	SKKS		04 44 29.0	
WMQ				AMB	AMB		
	comp=Z,110nm,5.8s						
WMQ				LR	LR		
	comp=N,350nm,20.4s						
WMQ				LR	LR		
	comp=E,280nm,19.6s						
WMQ				LR	LR		
	comp=Z,340nm,19.0s						
ASAR	**Alice Springs**	**50.14**	**191**	P	**P**	**04 44 18.1**	**-1.4**
ASAR	**Alice Springs**	**50.14**	**191**	P	**P**	**04 44 18.1**	**-1.4**
	comp=Z,1.8nm,0.7s,baz=15,slow=11,SNR=21						
ZALV	**Zalesovo Beam**	**50.95**	**320**	P	**P**	**04 44 24.9**	**-0.4**
ZALV				PcP	**PcP**	**04 45 40.9**	**-0.4**
ZALV	**Zalesovo Beam**	**50.95**	**320**	P	**P**	**04 44 24.9**	**-0.4**
	comp=Z,0.8nm,0.4s,baz=117,slow=8.6,SNR=5.3						
ZALV				PcP	**PcP**	**04 45 40.9**	**-0.4**
	comp=Z,1.2nm,0.5s,baz=94,slow=2.1,SNR=4.5						
MK31	**Makanchi Array**	**51.91**	**310**	*e*P	**P**	**04 44 31.7**	**-1.0**
MKAR	**Makanchi Array**	**51.91**	**310**	P	**P**	**04 44 32.4**	**-0.3**
MKAR				PcP	**PcP**	**04 45 45.1**	**+0.1**
MKAR	**Makanchi Array**	**51.91**	**310**	P	**P**	**04 44 32.4**	**-0.3**
	comp=Z,2.7nm,0.8s,baz=94,slow=8.8,SNR=14						
MKAR				PcP	**PcP**	**04 45 45.1**	**+0.1**
	comp=Z,1.6nm,0.8s,baz=81,slow=7.5,SNR=4.4						
**

	baz=277								
JKRS	**Kuro-shima**	**1.18**	**77**	P		**Pb**	**04 38 08.8**	**+0.4**
JKRS				*e*S		**Sg**	**04 38 24.7**	**+0.2**
TWE	**Neicheng**	**1.23**	**307**	*e*P		**Pn**	**04 38 08.0**	**-0.9**
	baz=308								
TWE				*e*S		**Sg**	**04 38 26.5**	**+0.3**
	baz=308								
JIJ	**Ishigaki jima**	**1.33**	**73**	P		**Pn**	**04 38 09.9**	**-0.4**
JIJ				S		**Sn**	**04 38 27.2**	**-0.5**
NNS	**Nan Shan**	**1.34**	**290**	*e*P		**Pn**	**04 38 10.7**	**+0.2**
	baz=291								
WHF	**Hehuan Shan**	**1.37**	**277**	P		**Pn**	**04 38 11.1**	**-0.1**
	baz=278								
WHF				*e*S		**Sn**	**04 38 28.3**	**-0.9**
	baz=278								
EHY	**Hungye**	**1.39**	**250**	*e*P		**Pn**	**04 38 10.7**	**-0.4**
	baz=251								
EHY				*e*S		**Sn**	**04 38 28.9**	**-0.4**
	baz=251								
NWF	**Wu-fen Shan**	**1.40**	**321**	*e*P		**Pn**	**04 38 11.2**	**-0.1**
	baz=321								
NWF				*e*S		**Sn**	**04 38 30.0**	**+0.5**
	baz=321								
NSK	**Sanguang**	**1.44**	**299**	*e*P		**Pn**	**04 38 12.2**	**+0.3**
	baz=299								
NSK				*e*S		**Sb**	**04 38 32.0**	**+0.8**
	baz=299								
TWF1	**Yuli**	**1.47**	**245**	P		**Pn**	**04 38 11.3**	**-0.9**
	baz=246								
TWF1				*e*S		**Sn**	**04 38 29.4**	**-1.8**
	baz=246								
SMLT	**Sun Moon Lake**	**1.69**	**267**	*e*P		**Pn**	**04 38 15.5**	**0.0**
	baz=268								
SMLT				*e*S		**Sn**	**04 38 37.0**	**+0.1**
	baz=268								
YUS	**Yu-Shan**	**1.72**	**254**	*e*P		**Pn**	**04 38 15.9**	**-0.1**
	baz=254								
YUS				*e*S		**Sn**	**04 38 36.8**	**-1.2**
	baz=254								
TYC	**Yuchr**	**1.73**	**268**	*e*P		**Pn**	**04 38 15.9**	**+0.1**
	baz=268								
ELDTW	**Lidau**	**1.77**	**244**	*e*P		**Pn**	**04 38 15.6**	**-0.9**
	baz=244								
ALS	**Alishan**	**1.84**	**256**	*e*P		**Pn**	**04 38 18.9**	**+1.2**
	baz=256								
ALS				*e*S		**Sn**	**04 38 39.5**	**-1.3**
	baz=256								
JTJ	**Tarama**	**1.90**	**69**	P		**Pb**	**04 38 20.6**	**0.0**
JTJ				*e*S		**Sb**	**04 38 44.5**	**+0.4**
CHN5	**Tsauling**	**1.94**	**259**	*e*P		**Pn**	**04 38 18.9**	**+0.1**
	baz=259								
CHN5				*e*S		**Sb**	**04 38 45.0**	**-0.3**
	baz=259								
WTP	**Ta-pu**	**2.09**	**250**	*e*P		**Pn**	**04 38 21.7**	**+0.8**
	baz=250								
WTP				*e*S		**Sn**	**04 38 47.9**	**+1.3**
	baz=250								
CHN1	**Nanshi**	**2.19**	**249**	*e*P		**Pn**	**04 38 23.4**	**+1.2**
	baz=249								
CHN1				*e*S		**Sn**	**04 38 50.6**	**+1.7**
	baz=249								
TWK	**Hsinying**	**2.19**	**251**	*e*P		**Pn**	**04 38 23.4**	**+1.2**
	baz=252								
TWK				*e*S		**Sn**	**04 38 49.6**	**+0.6**
	baz=252								

*IDC **30** 04:51:25.4±0.9, 36°.05N×71°.32E, h0km, mb4.0/11, mb1 4.1/16, mb1mx3.9/31, mbtmp4.0/16, ML4.0/5, MS4.7/2, Ms1 4.7/2, ms1mx3.1/35, Error ellipse: s-maj=19.9km s-min=19.4km az=36.0*

*ISCJB **30** 04:51:40.4±0.3, 36°.56N±0°.02×71°.55E±0°.05, h114km, mb3.8/10, Error ellipse: s-maj=5.7km s-min=3.0km az=164.7*

*NEIC **30** 04:51:41.9±1.0, 36°.53N×71°.42E, h129km±9km, mb4.4/4, Error ellipse: s-maj=13.6km s-min=10.6km az=127.0*

*NNC **30** 04:51:47.7±3.7, 37°.01N×71°.21E, h112km±41km, mb3.7, mpv4.4, Error ellipse: s-maj=29.6km s-min=21.0km az=6.0*

ISC 30 04:51:40.7±0.5, 36°.58N±0°.05×71°.46E±0°.06, h114km, n82, σ2s03/92, mb3.8/10, 6C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
CEP	**Cherat**	**2.77**	**172**	⇑P		Pn	04 52 27.2	+3.2
CEP				S		**Sn**	**04 53 01.0**	**+3.8**
KBL	**Kabul**	**2.83**	**225**	*e*Pn		**Pn**	**04 52 26.6**	**+1.8**
KBL				*e*S		**Sn**	**04 53 00.5**	**+1.8**
CHCP	**Chirah Chowk**	**3.27**	**153**	P		Pn	04 52 34.3	+3.9
THW	**Thamme Wali**	**3.78**	**176**	⇓P		**Pn**	**04 52 39.7**	**+2.5**
SARP	**Sargodha**	**4.75**	**167**	P		**Pn**	**04 52 51.9**	**+1.7**
THN	**Thein Dam**	**5.42**	**138**	*e*PKP		**Pn**	**04 52 58.5**	**-0.8**
THN				*e*S		**Sn**	**04 53 58.6**	**-1.9**
DLH	**Dalhousie**	**5.48**	**136**	*e*PKP		**Pn**	**04 53 02.0**	**+1.7**
DLH				*e*S		**Sn**	**04 54 02.0**	**-0.2**
AML	**Almayashu**	**5.81**	**17**	P		**Pn**	**04 53 07.4**	**+2.6**
	SNR=92							
UCH	**Uchtor**	**6.12**	**22**	P		**Sn**	**04 54 18.5**	**+0.6**
	SNR=12							
KZA	**Kyzart**	**6.23**	**27**	P		**Pn**	**04 53 12.9**	**+2.4**
	SNR=37							
EKS2	**Erkin-Say**	**6.34**	**16**	*e*Pn		**Pn**	**04 53 14.2**	**+2.6**
	9.4nm,0.5s							
EKS2				*e*S		**Sn**	**04 54 23.0**	**+0.3**
EKS2	**Erkin-Say**	**6.34**	**16**	P		**Pn**	**04 53 14.3**	**+2.6**
	SNR=13							
AAK	**Ala-Archa**	**6.49**	**20**	*e*Pn		**Pn**	**04 53 16.5**	**+2.7**
	14nm,0.4s							
AAK				*e*S		**Sn**	**04 54 26.8**	**+0.4**
AAK	**Ala-Archa**	**6.49**	**20**	P		**Pn**	**04 53 16.8**	**+3.0**
	SNR=13							
AAK	**Ala-Archa**	**6.49**	**20**	Pn		**Pn**	**04 53 13.1**	**-0.7**
	6.3nm,0.3s,baz=174,slow=6.7,SNR=19							
AAK						**Sn**	**04 54 26.5**	**0.0**
	3.2nm,0.3s,baz=215,slow=11,SNR=8.3							
KK31	**Karatay Array**	**6.56**	**354**	⇓P		**Pn**	**04 53 16.4**	**+1.8**
	38nm,0.3s,baz=180,slow=13,SNR=740							
KK31				⇓S		**Sn**	**04 54 25.9**	**-2.0**
	7.4nm,0.4s,baz=181,slow=15,SNR=4.9							
KKAR	**Karatay Array**	**6.56**	**354**	*e*Pn		**Pn**	**04 53 16.3**	**+1.7**
	93nm,0.4s							
KKAR				*e*S		**Sn**	**04 54 27.6**	**-0.4**
ULHL	**Ulahol**	**6.76**	**32**	P		**Pn**	**04 53 20.2**	**+2.7**
	SNR=18							
SDNR	**Sundarnagar**	**6.82**	**136**	*e*PKP		**Pn**	**04 53 19.5**	**+1.3**
SDNR				*e*S		**Sn**	**04 54 31.0**	**-3.5**
CHMS	**Chumysh**	**6.90**	**21**	P		**Pn**	**04 53 21.8**	**+2.6**
	SNR=10							
USP	**Ospenovka**	**7.08**	**18**	P		**Pn**	**04 53 24.2**	**+2.5**
	SNR=11							
TKM2	**Tokmak 2**	**7.09**	**25**	⇓P		**Pn**	**04 53 24.1**	**+2.1**
	10nm,0.9s							
TKM2				⇑S		**Sn**	**04 54 40.9**	**-0.2**
	8.5nm,0.8s							
TKM2	**Tokmak 2**	**7.09**	**25**	*e*Pn		**Pn**	**04 53 24.5**	**+2.5**
	7.1nm,0.5s							
TKM2				*e*S		**Sn**	**04 54 44.7**	**+3.5**
TKM2	**Tokmak 2**	**7.09**	**25**	P		**Pn**	**04 53 24.6**	**+2.5**
	SNR=9.4							
SMLA	**Simla**	**7.21**	**137**	*i* P		**Pn**	**04 53 25.5**	**+2.0**
SMLA				*i* S		**Sn**	**04 54 43.3**	**-0.6**
SMLA					AML	AML	04 54 46.0	
	comp=E,1μm,0.2s							
SMLA					AML	AML	04 54 49.2	
	comp=N,1μm,0.3s							
KALG	**Kalgarh**	**9.33**	**137**	*e*PKP	9	Pn	04 53 43.2	-9.1
KALG				*e*S		Sn	04 55 21.4	-14
KALG					AML	AML	04 55 29.7	
	comp=E,31nm,0.5s							
KALG					AML	AML	04 55 32.6	
	comp=Z,34nm,0.3s							
AYAN	**Aya Nagar**	**9.38**	**148**	*e*PKP		**Pn**	**04 53 52.0**	**-0.9**
AYAN				*e*S		**Sn**	**04 55 31.1**	**-5.4**
AYAN					AML	AML	04 55 33.1	
	comp=Z,15nm,0.7s							
PYUN	**Piuthan**	**12.89**	**128**	*e*P		**Pn**	**04 54 38.8**	**-1.1**
	comp=Z,36nm,0.3s							
MK31	**Makanchi Array**	**13.02**	**35**	⇓P		**Pn**	**04 54 42.6**	**+1.3**
	comp=Z,1.7nm,0.6s,baz=225,slow=14,SNR=4.5							
MK31	**Makanchi Array**	**13.02**	**35**	*e*Pn		**Pn**	**04 54 42.7**	**+1.5**
MKAR	**Makanchi Array**	**13.02**	**35**	Pn		**Pn**	**04 54 40.1**	**-1.1**
MKAR	**Makanchi Array**	**13.02**	**35**	Pn		**Pn**	**04 54 40.1**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=228,slow=13,SNR=5.0							
DANN	**Dangsing**	**13.22**	**125**	*e*P		**Pn**	**04 54 43.4**	**-0.9**
	comp=Z,33nm,0.3s							
KOLN	**Koldanda**	**13.51**	**127**	*e*P		**Pn**	**04 54 46.8**	**-1.2**
	comp=Z,25nm,0.4s							
DMN	**Daman**	**14.61**	**124**	*e*P		**Pn**	**04 55 01.3**	**-0.8**
	comp=Z,23nm,0.4s							
KKN	**Kakani**	**14.61**	**123**	*e*P		**Pn**	**04 55 01.1**	**-0.9**
	comp=Z,16nm,0.4s							
PKIN	**Phulchoki**	**14.82**	**123**	*e*P		**Pn**	**04 55 04.2**	**-0.6**
	comp=Z,24nm,0.4s							
PKI	**Pulchoki**	**14.83**	**123**	*e*P		**Pn**	**04 55 04.4**	**-0.6**
	comp=Z,21nm,0.4s							
KURBB	**Kurchatov Arra**	**14.94**	**18**	⇓P		**P**	**04 55 08.8**	**+0.3**
	comp=Z,3.7nm,0.8s							
KURBB	**Kurchatov Arra**	**14.94**	**18**	Pn		**Pn**	**04 55 03.4**	**-2.4**
	comp=Z,0.1nm,0.3s,baz=208,slow=12,SNR=3.7							
GUN	**Gumba**	**14.94**	**121**	*e*P		**Pn**	**04 55 06.3**	**0.0**
	comp=Z,28nm,0.4s							
KURK	**Kurchatov**	**15.04**	**18**	Pn		**Pn**	**04 55 03.4**	**-3.7**
AB31	**Akbulak array**	**15.20**	**330**	P		**Pn**	**04 55 08.8**	**-0.3**
	comp=Z,1.2nm,0.3s,baz=135,slow=13,SNR=105							
AB31				⇑S		Sn	04 57 48.9	-8.2
	comp=Z,1.0nm,0.3s,baz=146,slow=22,SNR=3.0							
ABKAR	**Akbulak array**	**15.20**	**330**	*e*Pn		**Pn**	**04 55 08.6**	**-0.5**
	comp=Z,4.1nm,0.3s							
ABKAR				*e*S		**Sn**	**04 57 50.0**	**-7.0**
JIRN	**Jiri**	**15.31**	**121**	*e*P		**Pn**	**04 55 10.5**	**-0.5**
	comp=Z,32nm,0.3s							
RAMN	**Ramite**	**16.04**	**122**	*e*P		**Pn**	**04 55 18.8**	**-1.2**
	comp=Z,12nm,0.3s							
VOSK	**Vostochnaya**	**16.15**	**359**	⇓P		**P**	**04 55 24.6**	**+2.7**
	comp=Z,3.0nm,0.8s							
ZRNK	**Zerenda**	**16.46**	**355**	⇑P		**P**	**04 55 26.8**	**+1.4**
	comp=Z,2.7nm,0.5s							
BVA0	**Borovoye Array**	**16.47**	**358**	⇑P		**P**	**04 55 27.2**	**+1.8**
	comp=Z,1.6nm,0.4s							
BVAR	**Borovoye Array**	**16.47**	**358**	Pn		**Pn**	**04 55 20.5**	**-4.2**
BVAR	**Borovoye Array**	**16.47**	**358**	Pn		**Pn**	**04 55 20.5**	**-4.2**
	comp=Z,0.9nm,0.3s,baz=162,slow=14,SNR=6.9							
BRVK	**Borovoye**	**16.50**	**358**	⇑P		**P**	**04 55 27.8**	**+1.9**
ODAN	**Odare**	**16.64**	**121**	*e*P		**P**	**04 55 28.1**	**+0.3**
	comp=Z,20nm,0.6s							
AKTO	**Aktyubinsk**	**16.90**	**329**	⇓P		**P**	**04 55 31.4**	**+1.1**
	comp=Z,11nm,0.8s							
AKTO	**Aktyubinsk**	**16.90**	**329**	P		**Pn**	**04 55 28.4**	**-1.8**
AKTO	**Aktyubinsk**	**16.90**	**329**	P		**Pn**	**04 55 28.4**	**-1.8**
	comp=Z,2.5nm,0.3s,baz=145,slow=9.6,SNR=40							
ZALV	**Zalesovo Beam**	**19.70**	**24**	P		**P**	**04 56 01.5**	**+0.7**
ZALV	**Zalesovo Beam**	**19.70**	**24**	P		**P**	**04 56 01.5**	**+0.7**
	comp=Z,5.1nm,0.4s,baz=223,slow=11,SNR=18							
SONM	**Songino Array**	**27.99**	**55**	P		**P**	**04 57 21.9**	**+1.1**
SONM	**Songino Array**	**27.99**	**55**	P		**P**	**04 57 21.9**	**+1.1**
	comp=Z,0.8nm,0.6s,baz=253,slow=9.1,SNR=4.4							
AKASG	**Malin Array Be**	**33.19**	**309**	P		**P**	**04 58 07.0**	**+0.7**
AKASG	**Malin Array Be**	**33.19**	**309**	P		**P**	**04 58 07.0**	**+0.7**
	comp=Z,2.0nm,0.6s,baz=75,slow=7.9,SNR=6.5							
FINES	**FINESS Array B**	**37.63**	**326**	P		**P**	**04 58 45.2**	**+1.1**
FINES	**FINESS Array B**	**37.63**	**326**	P		**P**	**04 58 45.2**	**+1.1**
	comp=Z,1.3nm,0.4s,baz=122,slow=10,SNR=14							
ARCES	**ARCESS Array B**	**41.22**	**337**	P		**P**	**04 59 15.4**	**+1.6**
ARCES	**ARCESS Array B**	**41.22**	**337**	P		**P**	**04 59 15.4**	**+1.6**
	comp=Z,2.8nm,0.8s,baz=115,slow=8.1,SNR=17							
NB2	**NORSAR Subarra**	**44.54**	**323**	P		**P**	**04 59 41.0**	**+0.2**
	comp=Z,4.4nm,0.5s,baz=97,slow=7.9							
NOA	**NORSAR Array B**	**44.54**	**323**	P		**P**	**04 59 41.4**	**+0.6**
NOA	**NORSAR Array B**	**44.54**	**323**	P		**P**	**04 59 41.4**	**+0.6**
	comp=Z,5.0nm,0.6s,baz=96,slow=7.8,SNR=38							
JHJ	**Hachijo jima 2**	**55.10**	**72**	LR		LR	05 24 32.2	
	comp=Z,1μm,19.9s,baz=75,slow=36							
TORD	**Torodi Ar. Bea**	**66.09**	**269**	P		**P**	**05 02 13.2**	**-2.6**
TORD	**Torodi Ar. Bea**	**66.09**	**269**	P		**P**	**05 02 13.2**	**-2.6**
	comp=Z,0.5nm,0.5s,baz=48,slow=6.0,SNR=14							
ILAR	**Eielson Array**	**74.61**	**16**	P		**P**	**05 03 08.0**	**+1.1**
ILAR	**Eielson Array**	**74.61**	**16**	P		**P**	**05 03 08.0**	**+1.1**
	comp=Z,0.3nm,0.8s,baz=315,slow=6.8,SNR=5.9							
DBIC	**Dimbokro**	**75.07**	**267**	LR		LR	05 42 54.6	
	comp=Z,301nm,18.4s,baz=194,slow=41							
YKA	**Yellowknife Ar**	**81.15**	**3**	P		**P**	**05 03 43.5**	**+0.4**
YKA	**Yellowknife Ar**	**81.15**	**3**	P		**P**	**05 03 43.5**	**+0.4**
	comp=Z,1.1nm,0.6s,baz=351,slow=5.4,SNR=9.6							
WRA	**Warramunga Arr**	**81.72**	**122**	P		**P**	**05 03 45.6**	**-1.2**
WRA	**Warramunga Arr**	**81.72**	**122**	P		**P**	**05 03 45.6**	**-1.2**
	comp=Z,0.3nm,0.4s,baz=324,slow=4.8,SNR=10							
WRAB	**Tennant Creek**	**81.72**	**122**	P		**P**	**05 03 45.9**	**-0.9**
ASAR	**Alice Springs**	**84.00**	**125**	P		**P**	**05 03 57.5**	**-1.0**
ASAR	**Alice Springs**	**84.00**	**125**	P		**P**	**05 03 57.5**	**-1.0**
	comp=Z,0.4nm,0.8s,baz=311,slow=6.0,SNR=3.3							

MEX 30 05:00:08.1±0.9, 17°.31N×96°.53W, h72km±26km, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**0.30**	**219**	*i* P			05 01 31.1	
VHO				*i* S			05 01 39.7	
TPIG	**Tehuac#an**	**1.36**	**325**	*i* P		Pn	05 00 30.6	-0.9
TPIG				*i* S		Sn	05 00 47.0	-2.0
HUIG	**Huatulco**	**1.59**	**165**	*e*P		Pn	05 00 33.5	-0.8
HUIG				*i* S		Sn	05 00 51.9	-2.2
PNIG	**Pinotepa**	**1.78**	**239**	*e*P		Pn	05 00 34.8	-2.1
PNIG				*i* S		Sn	05 00 57.5	-1.2
TGIG		**3.30**	**99**	*i* P		Pn	05 00 57.3	-0.3
TGIG				*i* S		Sn	05 01 35.3	-0.5

*ISCJB **30** 05:05:20.9±0.4, 6°.06S±0°.05×154°.40E±0°.05, h61km, mb4.4/23, Error ellipse: s-maj=8.1km s-min=6.7km az=42.2*

*DJA **30** 05:05:21.2±3.6, 6°.S±18°×15°.5E±2°.1, h85km±21km, M4.7/10, mB5.4/1, mb4.7/10, Mw(mB)4.8/1*

*IDC **30** 05:05:21.4±0.9, 6°.07S×154°.44E, h54km±7km, mb4.1/16, mb1 4.4/19, mb1mx4.3/24, mbtmp4.2/19, MS3.8/10, Ms1 3.8/10, ms1mx3.6/30, Error ellipse: s-maj=16.8km s-min=12.5km az=93.0*

*AUST **30** 05:05:24.7, 6°.08S×154°.64E, h100km*

*NEIC **30** 05:05:25.1±1.1, 6°.14S×154°.38E, h88km±10km, mb4.5/11, Error ellipse: s-maj=7.9km s-min=7.3km az=143.0*

ISC 30 05:05:22.4±0.5, 6°.15S±0°.06×154°.57E±0°.08, h61km, n78, σ1s64/74, mb4.4/23, Bougainville - Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time h m s	Res ISC
RABL	**Rabaul**	**3.08**	**309**	P		**Pn**	**05 06 10.3**	**+1.5**
	baz=3.1,SNR=7.9							
RABL				S		**Sn**	**05 06 49.3**	**+4.9**
	baz=3.1,SNR=4.9							
HNR	**Honiara**	**6.25**	**122**	P		Pn	05 06 57.4	+5.3
HNR				S		Sn	05 08 11.0	+8.8
HNR	**Honiara**	**6.25**	**122**	P		Pn	05 06 57.4	+5.3
	11nm,0.3s,baz=234,slow=4.5,SNR=5.3							
HNR				S		Sn	05 08 11.0	+8.8
	11nm,0.3s,baz=90,slow=20,SNR=2.0							
HNR				LR		LR	05 08 48.9	
	comp=Z,102nm,19.1s,baz=313,slow=32							
PMG	**Port Moresby**	**8.02**	**246**	P		**Pn**	**05 07 16.1**	**-0.2**
PMG				S		**Sn**	**05 08 45.6**	**+0.1**
PMG	**Port Moresby**	**8.02**	**246**	P		**Pn**	**05 07 18.1**	**+1.8**
	306nm,0.9s,2μm							
PMG	**Port Moresby**	**8.02**	**246**	P		**Pn**	**05 07 16.1**	**-0.2**
	17nm,0.3s,baz=82,slow=7.6,SNR=32							
PMG				S		**Sn**	**05 08 45.6**	**+0.1**
	15nm,0.3s,baz=32,slow=22,SNR=12							
PMG				LR		LR	05 10 07.3	
	comp=Z,497nm,21.3s,baz=31,slow=36							
COEN	**Coen**	**13.63**	**234**	P		**P**	**05 08 41.7**	**+1.8**
	baz=14,SNR=5.0							
MTSU	**Mount Surprise**	**15.55**	**219**	P		**P**	**05 09 03.5**	**+2.3**
	baz=16,SNR=5.3							
CTA	**Charters Tower**	**16.03**	**209**	P		**Pn**	**05 09 05.5**	**+1.3**
CTA	**Charters Tower**	**16.03**	**209**	P		**Pn**	**05 09 05.5**	**+1.3**
	0.5nm,0.3s,baz=32,slow=14,SNR=6.8							
CTAO	**Charters Tower**	**16.03**	**209**	*e*Pn		**Pn**	**05 09 04.6**	**+0.4**
	25nm,1.4s							
EIDS	**Eidsvold**	**19.40**	**190**	*e*P		**P**	**05 09 44.8**	**+1.2**
	12nm,0.7s							
EIDS	**Eidsvold**	**19.40**	**190**	P		**P**	**05 09 45.3**	**+1.7**
	baz=20,SNR=10.0							
DZM	**Mont Dzumac**	**19.55**	**145**	*e*P		**P**	**05 09 45.3**	**0.0**
	79nm,1.1s							
DZM	**Mont Dzumac**	**19.55**	**145**	P		**P**	**05 09 47.6**	**+2.2**
	1.5nm,0.3s,baz=270,slow=24,SNR=16							
QIS	**Mount Isa**	**20.39**	**224**	P		**P**	**05 09 58.1**	**+3.7**
	baz=21,SNR=6.6							
RMQ	**Roma**	**20.96**	**195**	P		**P**	**05 10 02.4**	**+1.8**
	baz=21,SNR=8.0							
QLP	**Quilpie**	**22.58**	**205**	P		**P**	**05 10 18.1**	**+0.3**
	baz=23,SNR=15							
KDU	**Kakadu**	**22.73**	**252**	P		P	05 10 17.0	-2.5
	baz=23,SNR=7.8							
WRAB	**Tennant Creek**	**23.95**	**233**	*e*P		**P**	**05 10 30.1**	**-1.1**
	14nm,0.8s							
WRA	**Warramunga Arr**	**23.96**	**233**	P		**P**	**05 10 30.2**	**-1.1**
WRA				PcP		**PcP**	**05 14 10.8**	**-1.6**
WRA	**Warramunga Arr**	**23.96**	**233**	P		**P**	**05 10 30.2**	**-1.1**
	6.7nm,0.5s,baz=57,slow=10.0,SNR=170							
WRA				PcP		**PcP**	**05 14 10.8**	**-1.6**
	0.3nm,0.4s,baz=52,slow=2.7,SNR=4.6							
WRA				LR		LR	05 19 03.4	
	comp=Z,226nm,19.1s,baz=40,slow=34							
MTN	**Manton Dam**	**24.03**	**252**	P		**P**	**05 10 31.5**	**-0.5**
	baz=24,SNR=4.9							
PALU	**Palau**	**24.11**	**303**	S		S	05 14 55.9	+9.4
	baz=24,SNR=3.1							
ARMA	**Armidale**	**24.30**	**186**	*e*P		**P**	**05 10 35.0**	**+0.7**
	42nm,1.0s							
ARMA	**Armidale**	**24.30**	**186**	P		**P**	**05 10 35.5**	**+1.2**
	baz=24,SNR=18							
AS31	**Alice Springs**	**26.42**	**227**	*e*P		**P**	**05 10 52.4**	**-1.2**
ASAR	**Alice Springs**	**26.42**	**227**	P		**P**	**05 10 52.5**	**-1.1**
ASAR				PcP		**PcP**	**05 14 16.5**	**-1.4**
ASAR	**Alice Springs**	**26.42**	**227**	P		**P**	**05 10 52.5**	**-1.1**
	7.7nm,0.7s,baz=60,slow=8.7,SNR=59							
ASAR				PcP		**PcP**	**05 14 16.5**	**-1.4**
	1.1nm,0.6s,baz=78,slow=2.0,SNR=6.5							
ASAR				LR		LR	05 21 00.9	
	comp=Z,309nm,18.1s,baz=357,slow=36							
CMSA	**Cobar Meteorol**	**26.59**	**197**	P		**P**	**05 10 55.2**	**+0.2**
	baz=27,SNR=7.8							
KNRA	**Kununurra**	**27.01**	**247**	P		**P**	**05 10 58.0**	**-1.0**
	baz=27,SNR=5.4							
STKA	**Stephens Creek**	**28.32**	**204**	P		**P**	**05 11 10.0**	**-0.5**
STKA	**Stephens Creek**	**28.32**	**204**	P		**P**	**05 11 10.0**	**-0.5**
	10nm,0.7s,baz=26,slow=12,SNR=15							
STKA				LR		LR	05 20 35.7	
	comp=Z,213nm,21.9s,baz=27,slow=32							
STKA	**Stephens Creek**	**28.32**	**204**	P		**P**	**05 11 10.1**	**-0.5**
	baz=28,SNR=8.9							
FITZ	**Fitzroy Crossi**	**30.61**	**245**	*e*P		P	05 11 28.9	-2.1
	10.0nm,0.8s							
FITZ	**Fitzroy Crossi**	**30.61**	**245**	P		P	05 11 29.0	-2.0
	baz=31,SNR=22							
URZ	**Urewera**	**37.95**	**151**	P		**P**	**05 12 35.7**	**+1.5**
URZ	**Urewera**	**37.95**	**151**	P		**P**	**05 12 35.7**	**+1.5**
	12nm,0.8s,baz=338,slow=5.4,SNR=4.6							
KMBL	**Kambalda**	**39.55**	**226**	P		P	05 12 46.9	-0.9
	baz=40,SNR=8.6							
MEEK	**Meekatharra**	**39.83**	**235**	P		P	05 12 48.6	-1.5
	baz=40,SNR=13							
RPZ	**Rata Peaks**	**40.12**	**161**	P		**P**	**05 12 53.4**	**+1.1**
RPZ	**Rata Peaks**	**40.12**	**161**	P		**P**	**05 12 53.4**	**+1.1**
	6.6nm,0.7s,baz=250,slow=7.5,SNR=7.4							
KLBR	**Kellerberrin**	**42.70**	**229**	P		P	05 13 11.7	-1.9
	baz=43,SNR=6.4							
MORW	**Morawa**	**42.91**	**233**	P		P	05 13 13.8	-1.5
	baz=43,SNR=3.8							
KSM	**Kuching**	**44.83**	**278**	P		P	05 13 28.5	-2.4
RAR	**Rarotonga**	**46.63**	**113**	LR		LR	05 30 41.0	
	comp=Z,190nm,18.5s,baz=310,slow=32							
KSRS	**Korea Array**	**50.00**	**332**	P		**P**	**05 14 10.2**	**-0.5**
	1.8nm,0.9s,baz=142,slow=7.9,SNR=6.4							
KSRS				pP		pP	05 14 22.6	-3.9
	1.0nm,0.6s,baz=148,slow=8.4,SNR=3.0							
KSRS				LR		LR	05 33 38.3	
	comp=Z,90nm,18.6s,baz=69,slow=34							
KSAR	**Wonju Array Be**	**50.01**	**332**	P		**P**	**05 14 10.2**	**-0.6**
KSAR				pP		pP	05 14 22.6	-4.0
MNAI	**Manna**	**51.41**	**269**	P		P	05 14 33.7	+12
	baz=52,SNR=3.6							
PETK	**Petropavlovsk-**	**59.10**	**2**	LR		LR	05 36 29.6	
	comp=Z,73nm,19.6s,baz=4.0,slow=32							
CMAR	**Chiang Mai Arr**	**60.04**	**295**	P		**P**	**05 15 22.9**	**-0.7**
CMAR				pP		**pP**	**05 15 37.0**	**-2.8**
CMAR	**Chiang Mai Arr**	**60.04**	**295**	P		**P**	**05 15 22.9**	**-0.7**
	1.5nm,0.6s,baz=118,slow=5.1,SNR=6.9							

GONE				*e*SG	**Sg**	**05 31 36.9**	**-0.3**		
GONE	**Gonen-Balikesi**	**0.86**	**48**	*e*Pg	**Pg**	**05 31 24.7**	**-1.1**		
GONE				*e*Sg	**Sg**	**05 31 36.9**	**-0.3**		
LPK	**Lapseki**	**0.90**	**356**	*e*PG	**Pg**	**05 31 25.4**	**-1.1**		
LPK	**Lapseki**	**0.90**	**356**	*e*Pg	**Pg**	**05 31 25.4**	**-1.1**		
AKHS	**Akhisar**	**0.96**	**128**	*i* P	**Pb**	**05 31 27.8**	**+0.6**		
AKHS				*i* S	**Sn**	**05 31 42.0**	**+1.0**		
AKHS	**Akhisar**	**0.96**	**128**	*i* P	**Pb**	**05 31 27.8**	**+0.6**		
AKHS				*i* S	**Sn**	**05 31 42.0**	**+1.0**		
KRBG	**Karabiga-Canak**	**0.98**	**20**	*e*PG	**Pg**	**05 31 27.3**	**-0.8**		
KRBG	**Karabiga-Canak**	**0.98**	**20**	*e*Pg	**Pg**	**05 31 27.3**	**-0.8**		
BLCB	**Balcova**	**1.10**	**172**	*e*PG	**Pg**	**05 31 27.4**	**-2.8**		
BLCB	**Balcova**	**1.10**	**172**	*e*Pg	**Pg**	**05 31 27.4**	**-2.8**		
BNT	**Bandirma**	**1.21**	**43**	*e*PN	**Pb**	**05 31 30.2**	**-1.3**		
BNT	**Bandirma**	**1.21**	**43**	*e*Pn	**Pb**	**05 31 30.2**	**-1.3**		
RKY	**Sarkoy-Tekirda**	**1.24**	**12**	*e*PN	**Pn**	**05 31 31.5**	**-0.1**		
RKY	**Sarkoy-Tekirda**	**1.24**	**12**	*e*Pn	**Pn**	**05 31 31.5**	**-0.1**		
SART	**Tekirdag**	**1.24**	**12**	*i* P	**Pn**	**05 31 31.6**	**-0.1**		
SART				*i* S	**Sb**	**05 31 48.2**	**+0.3**		
SART	**Tekirdag**	**1.24**	**12**	*i* P	**Pn**	**05 31 31.6**	**-0.1**		
SART				*i* S	**Sb**	**05 31 48.2**	**+0.3**		
CHOS	**Chios island**	**1.25**	**210**	P	**Pn**	**05 31 31.5**	**-0.3**		
CHOS				S	**Sg**	**05 31 48.9**	**-0.4**		
CHOS	**Chios island**	**1.25**	**210**	P	**Pn**	**05 31 31.5**	**-0.3**		
CHOS				S	**Sg**	**05 31 48.9**	**-0.4**		
DURS	**Dursunbey**	**1.27**	**84**	*i* P	**Pn**	**05 31 32.5**	**+0.5**		
DURS				*i* S	**Sn**	**05 31 50.2**	**+1.5**		
DURS	**Dursunbey**	**1.27**	**84**	*i* P	**Pn**	**05 31 32.5**	**+0.5**		
DURS				*i* S	**Sn**	**05 31 50.2**	**+1.5**		
LIA	**Limnos Island**	**1.35**	**289**	P	**Pn**	**05 31 33.6**	**+0.5**		
LIA				S	**Sg**	**05 31 51.7**	**-1.0**		
LIA	**Limnos Island**	**1.35**	**289**	P	**Pn**	**05 31 33.6**	**+0.5**		
LIA				S	**Sg**	**05 31 51.7**	**-1.0**		
MFT	**Murefte**	**1.35**	**14**	*e*PN	**Pn**	**05 31 33.8**	**+0.5**		
MFT	**Murefte**	**1.35**	**14**	*e*Pn	**Pn**	**05 31 33.8**	**+0.5**		
ENEZ	**Enez**	**1.37**	**337**	*e*PN	**Pg**	**05 31 34.6**	**-0.8**		
ENEZ	**Enez**	**1.37**	**337**	*e*Pn	**Pg**	**05 31 34.6**	**-0.8**		
KCTX	**Karacabey (Bur**	**1.41**	**55**	*e*PN	**Pn**	**05 31 34.3**	**+0.4**		
KCTX	**Karacabey (Bur**	**1.41**	**55**	*e*Pn	**Pn**	**05 31 34.3**	**+0.4**		
SMTH	**Samothraki Isl**	**1.42**	**315**	P	**Pn**	**05 31 34.3**	**+0.2**		
SMTH				S	**Sn**	**05 31 53.0**	**+0.5**		
SMTH	**Samothraki Isl**	**1.42**	**315**	P	**Pn**	**05 31 34.3**	**+0.2**		
SMTH				S	**Sn**	**05 31 53.0**	**+0.5**		
ALN	**Alexandroupoli**	**1.55**	**337**	P	**Pb**	**05 31 37.5**	**+0.2**		
ALN				S	**Sb**	**05 31 56.7**	**+0.1**		
ALN	**Alexandroupoli**	**1.55**	**337**	P	**Pb**	**05 31 37.5**	**+0.2**		
ALN				S	**Sb**	**05 31 56.7**	**+0.1**		
KULA	**Kula-Manisa**	**1.71**	**124**	*e*PN	**Pn**	**05 31 38.5**	**+0.4**		
KULA	**Kula-Manisa**	**1.71**	**124**	P	**Pn**	**05 31 39.4**	**+1.3**		
KULA				S	**Sg**	**05 32 03.4**	**-0.6**		
KULA	**Kula-Manisa**	**1.71**	**124**	*e*Pn	**Pn**	**05 31 38.5**	**+0.4**		
KULA	**Kula-Manisa**	**1.71**	**124**	P	**Pn**	**05 31 39.4**	**+1.3**		
KULA				S	**Sg**	**05 32 03.4**	**-0.6**		
ARMT	**Armutlu**	**1.89**	**54**	*e*PN	**Pn**	**05 31 41.4**	**+0.8**		
ARMT	**Armutlu**	**1.89**	**54**	*e*Pn	**Pn**	**05 31 41.4**	**+0.8**		
TVSB	**Tavsanli**	**2.02**	**90**	*e*PN	**Pn**	**05 31 43.0**	**+0.5**		
TVSB	**Tavsanli**	**2.02**	**90**	*e*Pn	**Pn**	**05 31 43.0**	**+0.5**		
YLV	**Yalova**	**2.23**	**60**	*e*PN	**Pn**	**05 31 46.5**	**+1.3**		
YLV	**Yalova**	**2.23**	**60**	*e*Pn	**Pn**	**05 31 46.5**	**+1.3**		
CTYL	**Yal??k??y-??at**	**2.28**	**28**	*e*PN	**Pn**	**05 31 47.6**	**+1.7**		
CTYL	**Yal??k??y-??at**	**2.28**	**28**	*e*Pn	**Pn**	**05 31 47.6**	**+1.7**		
EDRB	**Edirne**	**2.37**	**358**	*e*PN	**Pn**	**05 31 48.7**	**+1.5**		
EDRB	**Edirne**	**2.37**	**358**	*e*Pn	**Pn**	**05 31 48.7**	**+1.5**		
KLYT	**Kilyos**	**2.44**	**43**	*e*PN	**Pn**	**05 31 49.3**	**+1.2**		
KLYT	**Kilyos**	**2.44**	**43**	*e*Pn	**Pn**	**05 31 49.3**	**+1.2**		

IDC ***30*** *05:40:23.5±0.6,31˚.45N×104˚.10E,h0km,mb4.4/21, mb1 4.5/23,mb1mx4.4/32,mbtmp4.3/23,ML4.1/2,MS3.4/7, Ms1 3.4/7,ms1mx3.2/32,Error ellipse: s-maj=18.2km s-min=12.1km az=57.0*

ISCJB ***30*** *05:40:24.0±0.2,31˚.45N±0˚.02×104˚.14E±0˚.04,h14km, mb4.5/58,MS3.6/9,Error ellipse: s-maj=4.6km s-min=3.1km az=176.1*

BJI ***30*** *05:40:24.8,31˚.48N×103˚.98E,h10km,mB4.6/11,mb4.6/17, ML4.4/16,Ms4.2/20,Ms7 4.1/18*

NEIC ***30*** *05:40:25.2±0.2,31˚.46N×104˚.11E,h10km,mb4.9/23,Error ellipse: s-maj=6.1km s-min=4.8km az=82.0*

NEIC Felt at Chengdu and Deyang.

MOS ***30*** *05:40:26.7±0.7,31˚.43N×104˚.11E±0˚.04,***h14**km,***n163,** σ1**s34**/175,**mb4.6**/58,**MS3.5**/9,**13C-3D,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.61**	**210**	Pg	**Pg**	**05 40 36.8**	**-1.1**
CD2				Sg	**Sg**	**05 40 45.5**	**-0.4**
CD2				smax	smax		
	comp=N,70μm,0.8s						
CD2				smax	smax		
	comp=E,29μm,1.0s						
LZH	**Lanzhou**	**4.64**	**357**	Pn	**Pn**	**05 41 37.5**	**+1.7**
LZH				Sn	**Sn**	**05 42 29.0**	**-0.6**
LZH				Sg	**Sg**	**05 42 52.3**	**-2.7**
LZH				smax	smax		
	comp=N,480nm,1.0s						
LZH				smax	smax		
	comp=E,410nm,1.1s						
LZH				LR	LR		
	comp=N,4μm,6.8s						
LZH				LR	LR		
	comp=E,3μm,6.3s						
LZH				LR	LR		
	comp=Z,4μm,8.0s						
XAN	**Xi'an**	**4.81**	**56**	Pn	**Pn**	**05 41 37.8**	**-0.3**
XAN				Pg	Pg	05 41 54.3	-3.9
XAN				Sg	**Sb**	**05 42 53.0**	**+5.0**
XAN				smax	smax		
	comp=N,750nm,0.7s						
XAN				smax	smax		
	comp=E,470nm,0.9s						
XAN				LR	LR		
	comp=N,690nm,6.0s						
XAN				LR	LR		
	comp=E,640nm,7.2s						
XAN				LR	LR		
	comp=Z,640nm,7.0s						
GYA	**Guiyang**	**5.45**	**155**	⇑*i*Pn	**Pn**	**05 41 47.3**	**+0.4**
GYA				Pg	**Pg**	**05 42 07.5**	**-2.8**
GYA				Sn	**Sn**	**05 42 54.8**	**+5.4**
GYA				Sg	Sg	05 43 27.5	+6.6
GYA				smax	smax		
	comp=N,470nm,0.8s						
GYA				smax	smax		
	comp=E,510nm,0.8s						
GYA				LR	LR		
	comp=N,3μm,7.8s						
GYA				LR	LR		
	comp=E,2μm,8.0s						
GYA				LR	LR		
	comp=Z,3μm,7.8s						
KMI	**Kunming**	**6.41**	**191**	Pn	**Pn**	**05 42 00.5**	**+0.3**
KMI				Sn	**Sn**	**05 43 14.8**	**+1.6**
KMI				LR	LR		
	comp=N,1μm,8.2s						
KMI				LR	LR		
	comp=E,1μm,6.4s						
KMI				LR	LR		
	comp=Z,1μm,8.0s						
GTA	**Gaotai**	**8.69**	**337**	*e*P	**Pn**	**05 42 33.5**	**+2.1**
GTA				pP	**pPn**	**05 42 37.5**	**+2.8**
GTA				sP	**sPn**	**05 42 41.3**	**+4.6**
GTA				S	**Sn**	**05 44 10.3**	**+1.1**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,110nm,3.8s						
GTA				LR	LR		
	comp=N,2μm,10.0s						
GTA				LR	LR		
	comp=E,1μm,7.6s						
GTA				LR	LR		
	comp=Z,2μm,10.9s						
WHN	**Wuhan**	**8.84**	**93**	P	Pn	05 42 27.0	-6.3
WHN				S	**Sn**	**05 44 09.3**	**-3.4**
WHN				LR	LR		
	comp=N,2μm,9.1s						
WHN				LR	LR		
	comp=E,2μm,11.6s						
WHN				LR	LR		
	comp=Z,2μm,7.9s						
BTO	**Baotou**	**10.32**	**26**	*e*P	**Pn**	**05 42 53.5**	**-0.2**
BTO				LR	LR		
	comp=N,530nm,9.3s						
BTO				LR	LR		
	comp=E,210nm,10.4s						
BTO				LR	LR		
	comp=Z,460nm,10.2s						
HHC	**Hu-ho-hao-te**	**11.15**	**31**	*e*P	**Pn**	**05 43 03.0**	**-2.1**
HHC				sP		05 43 10.8	
HHC				S	**Sn**	**05 45 07.5**	**-2.1**
HHC				sS		05 45 15.5	
HHC				SS	**SnSn**	**05 45 22.8**	**+1.1**
HHC				pmax	pmax		
	comp=Z,52nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,5.8s						
HHC				LR	LR		
	comp=N,1μm,7.5s						
HHC				LR	LR		
	comp=E,1μm,8.9s						
HHC				LR	LR		
	comp=Z,1μm,9.2s						
NJ2	**Nanjing**	**12.57**	**83**	*e*P	**Pn**	**05 43 25.5**	**+1.1**
NJ2				pP	P	05 43 28.5	-7.5
NJ2				sP		05 43 31.8	
NJ2				PP	**PnPn**	**05 43 35.3**	**+3.1**
NJ2				S	**Sn**	**05 45 45.5**	**+1.3**
NJ2				sS		05 45 53.0	
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,70nm,4.6s						
NJ2				LR	LR		
	comp=N,860nm,14.4s						
NJ2				LR	LR		
	comp=E,650nm,11.3s						
NJ2				LR	LR		
	comp=Z,740nm,11.2s						
QIZ	**Qiongzhong**	**13.40**	**156**	P	**Pn**	**05 43 34.3**	**-1.5**
QIZ				S	**Sn**	**05 46 04.5**	**-0.1**
QIZ				pmax	pmax		
	comp=Z,12nm,0.9s						
QIZ				LR	LR		
	comp=N,500nm,11.7s						
QIZ				LR	LR		
	comp=E,200nm,10.2s						
QIZ				LR	LR		
	comp=Z,680nm,14.2s						
CHTO	**Chiang Mai**	**13.41**	**202**	*e*P	**Pn**	**05 43 37.8**	**+1.9**
CHTO	**Chiang Mai**	**13.41**	**202**	*e*Pn	**Pn**	**05 43 37.8**	**+1.9**
CMAR	**Chiang Mai Arr**	**13.74**	**201**	Pn	**Pn**	**05 43 42.0**	**+1.5**
CMAR	**Chiang Mai Arr**	**13.74**	**201**	Pn	**Pn**	**05 43 42.0**	**+1.5**
	comp=Z,0.8nm,0.3s,baz=12,slow=12,SNR=21						
SONM	**Songino Array**	**16.47**	**5**	Pn	**Pn**	**05 44 16.6**	**-0.1**
SONM				Lg	Lg	05 49 14.5	
SONM	**Songino Array**	**16.47**	**5**	Pn	**Pn**	**05 44 16.6**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=190,slow=15,SNR=19						
SONM				Lg	Lg	05 49 14.5	
	comp=Z,0.1nm,0.3s,baz=179,slow=30,SNR=5.4						
SONM				LR	LR	05 51 39.6	
	comp=Z,149nm,18.8s,baz=138,slow=41						
ULN	**Ulaanbaatar**	**16.56**	**7**	*e*P	**P**	**05 44 24.7**	**+4.3**
	comp=Z,6.6nm,1.0s						
SSLB	**Suanglung**	**16.75**	**113**	*e*Pn	**P**	**05 44 24.9**	**+2.4**
	comp=Z,22nm,1.0s						
ZAK	**Zakamensk**	**18.93**	**358**	*e*P	**Pn**	**05 44 48.0**	**+0.9**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TLY	**Talaya**	**20.23**	**359**	*e*P	Pn	05 45 03.3	+0.8
TLY				pmax	pmax		
	comp=Z,8.0nm,1.6s						
TLY				MLR	MLR		
	comp=Z,341nm,11.0s						
MOY	**Mondy**	**20.34**	**354**	*e*P	Pn	05 45 04.1	+0.1
KSAR	**Wonju Array Be**	**20.48**	**67**	P	**P**	**05 45 04.2**	**+0.8**
KSRS	**Korea Array**	**20.51**	**67**	P	**P**	**05 45 04.2**	**+0.5**
	comp=Z,8.2nm,0.8s,baz=256,slow=10,SNR=32						
KSRS				LR	LR	05 53 09.2	
	comp=Z,50nm,21.1s,baz=360,slow=37						
JNU	**Nakatsue**	**22.68**	**79**	LR	LR	05 56 05.3	
	comp=Z,78nm,18.7s,baz=318,slow=42						
MK31	**Makanchi Array**	**22.73**	**319**	*i* P	**P**	**05 45 27.6**	**+0.1**
MK31				pmax	pmax		
	comp=Z,35nm,1.3s						
MK31	**Makanchi Array**	**22.73**	**319**	*e*P	**P**	**05 45 27.8**	**+0.3**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**05 45 27.7**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,25nm,1.1s						
MKAR				MLR	MLR		
	comp=Z,46nm,18.0s						
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**05 45 27.7**	**+0.2**
MKAR	**Makanchi Array**	**22.73**	**319**	P	**P**	**05 45 27.7**	**+0.2**
	comp=Z,25nm,1.1s,baz=118,slow=10,SNR=56						
MKAR				LR	LR	05 53 57.5	
	comp=Z,46nm,18.0s,baz=145,slow=36						
MDJ	**Mudanjiang**	**23.89**	**49**	P	**P**	**05 45 40.5**	**+1.4**
MDJ				pmax	pmax		
	comp=Z,24nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,57nm,4.1s						
USRK	**Ussuriysk Arra**	**25.32**	**52**	P	**P**	**05 45 52.3**	**+0.2**
	comp=Z,7.0nm,0.7s,baz=258,slow=8.1,SNR=14						
AAK	**Ala-Archa**	**26.02**	**304**	⇓*i*P	**P**	**05 45 59.4**	**+0.7**
AAK				pmax	pmax		
	comp=Z,11nm,1.0s						
AAK	**Ala-Archa**	**26.02**	**304**	LR	LR	05 57 46.0	
	comp=Z,122nm,20.0s,baz=253,slow=40						
KULM	**Kulim**	**26.21**	**188**	*e*P	**P**	**05 45 58.7**	**-1.8**
	comp=Z,60nm,0.8s						
ZALV	**Zalesovo Beam**	**26.42**	**334**	P	**P**	**05 46 02.1**	**+0.1**
ZALV				pmax	pmax		
	comp=Z,21nm,0.7s						
ZALV				MLR	MLR		
	comp=Z,141nm,19.6s						
ZALV	**Zalesovo Beam**	**26.42**	**334**	P	**P**	**05 46 02.1**	**+0.1**
ZALV	**Zalesovo Beam**	**26.42**	**334**	P	**P**	**05 46 02.1**	**+0.1**
	comp=Z,21nm,0.7s,baz=133,slow=9.2,SNR=56						
ZALV				LR	LR	05 57 15.5	
	comp=Z,141nm,19.6s,baz=80,slow=38						
KURBB	**Kurchatov Arra**	**26.97**	**323**	P	**P**	**05 46 07.0**	**0.0**
	comp=Z,9.5nm,0.8s,baz=128,slow=8.8,SNR=50						
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**05 46 07.0**	**-0.1**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURK	**Kurchatov**	**26.98**	**323**	P	**P**	**05 46 07.0**	**-0.1**
KLR	**Kul'dur**	**27.34**	**41**	*e*P	**P**	**05 46 06.7**	**-3.7**
KLR				MLR	MLR		
	comp=E,500nm,11.0s						
KLR				MLR	MLR		
	comp=Z,1μm,11.0s						
PSI	**Prapat**	**28.90**	**191**	P	**P**	**05 46 24.6**	**-0.1**
PSI	**Prapat**	**28.90**	**191**	P	**P**	**05 46 24.6**	**-0.1**
	comp=Z,5.1nm,0.6s,baz=344,slow=10,SNR=8.1						
PSI				LR	LR	05 58 55.1	
	comp=Z,245nm,19.0s,baz=174,slow=38						
KK31	**Karatay Array**	**28.97**	**303**	*i* P	**P**	**05 46 25.0**	**0.0**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KKAR	**Karatay Array**	**28.97**	**303**	*e*P	**P**	**05 46 25.1**	**0.0**
KKAR	**Karatay Array**	**28.97**	**303**	*e*P	**P**	**05 46 25.1**	**0.0**
VOSK	**Vostochnaya**	**32.07**	**321**	P	**P**	**05 46 51.1**	**-1.2**
VOSK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BVA0	**Borovoye Array**	**32.53**	**321**	*i* P	**P**	**05 46 55.6**	**-0.7**
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
BVAR	**Borovoye Array**	**32.53**	**321**	P	**P**	**05 46 56.8**	**+0.5**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BVAR	**Borovoye Array**	**32.53**	**321**	P	**P**	**05 46 56.8**	**+0.5**
BVAR	**Borovoye Array**	**32.53**	**321**	P	**P**	**05 46 56.8**	**+0.5**
	comp=Z,2.6nm,0.5s,baz=112,slow=9.9,SNR=12						
BRVK	**Borovoye**	**32.60**	**321**	*c i*P	**P**	**05 46 57.3**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
AB31	**Akbulak array**	**37.45**	**311**	*i* P	**P**	**05 47 38.9**	**+0.1**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ABKAR	**Akbulak array**	**37.45**	**311**	*e*P	**P**	**05 47 38.8**	**0.0**
AKTO	**Aktyubinsk**	**38.91**	**313**	P	**P**	**05 47 50.1**	**-1.0**
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKTO	**Aktyubinsk**	**38.91**	**313**	P	**P**	**05 47 51.3**	**+0.3**
AKTO	**Aktyubinsk**	**38.91**	**313**	P	**P**	**05 47 51.3**	**+0.3**
	comp=Z,1.4nm,0.5s,baz=89,slow=9.5,SNR=7.8						
SVE	**Sverdlovsk**	**39.23**	**323**	*e*P	**P**	**05 47 54.2**	**+0.6**
SVE				pmax	pmax		
	comp=Z,23nm,1.1s						
ARU	**Arti**	**40.17**	**322**	*c i*P	**P**	**05 48 01.8**	**+0.3**
ARU				PPP	PPP	05 49 59.3	
ARU				S	**S**	**05 54 08.6**	**+1.1**
ARU				SS	**SS**	**05 57 03.5**	**-1.7**
ARU				pmax	pmax		
	comp=Z,29nm,1.2s						
TIXI	**Tiksi**	**42.42**	**11**	*c e*P	**P**	**05 48 18.3**	**-1.5**
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PETK	**Petropavlovsk-**	**43.95**	**44**	P	**P**	**05 48 32.2**	**-0.2**
PETK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PETK	**Petropavlovsk-**	**43.95**	**44**	P	**P**	**05 48 32.2**	**-0.2**
PETK	**Petropavlovsk-**	**43.95**	**44**	P	**P**	**05 48 32.2**	**-0.2**
	comp=Z,2.4nm,0.7s,baz=226,slow=7.8,SNR=3.5						
BILL	**Bilibino**	**50.87**	**25**	⇑*i*P	**P**	**05 49 25.2**	**-0.8**
BILL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BILL				MLR	MLR		
	comp=Z,100nm,19.0s						
OBN	**Obninsk**	**52.23**	**318**	⇑*e*P	**P**	**05 49 36.0**	**-0.3**
OBN						05 50 47.0	
OBN						05 51 33.0	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ANN	**Anapa**	**52.74**	**305**	*e*P	P	05 49 33.1	-7.2
ANN				pmax	pmax		
	comp=Z,15nm,0.9s						
FITZ	**Fitzroy Crossi**	**53.42**	**154**	P	**P**	**05 49 45.1**	**-0.4**
FITZ	**Fitzroy Crossi**	**53.42**	**154**	P	**P**	**05 49 45.1**	**-0.4**
	comp=Z,1.3nm,0.7s,baz=343,slow=7.3,SNR=4.0						
KEV	**Kevo**	**56.43**	**336**	*e*P	**P**	**05 50 06.7**	**0.0**
KEV				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KEV	**Kevo**	**56.43**	**336**	*e*P	**P**	**05 50 06.7**	**0.0**
	comp=Z,10.0nm,0.7s						
BRTR	**Keskin Array B**	**56.58**	**299**	P	**P**	**05 50 08.0**	**-0.5**
BRTR	**Keskin Array B**	**56.58**	**299**	P	**P**	**05 50 08.0**	**-0.5**
	comp=Z,0.4nm,0.5s,baz=90,slow=5.8,SNR=3.4						
ARCES	**ARCESS Array B**	**56.95**	**336**	P	**P**	**05 50 10.2**	**-0.3**
ARCES	**ARCESS Array B**	**56.95**	**336**	P	**P**	**05 50 10.2**	**-0.3**
	comp=Z,5.4nm,0.6s,baz=80,slow=7.9,SNR=38						
ARE0	**ARCESS Array S**	**56.95**	**336**	*e*P	**P**	**05 50 09.7**	**-0.8**
AKASG	**Malin Array Be**	**57.16**	**313**	*c e*P	**P**	**05 50 12.6**	**+0.5**
AKASG	**Malin Array Be**	**57.16**	**313**	P	**P**	**05 50 11.0**	**-1.1**
AKASG	**Malin Array Be**	**57.16**	**313**	P	**P**	**05 50 11.0**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=64,slow=7.5,SNR=4.7						
FIA1	**FINESS Array S**	**57.29**	**326**	*e*P	**P**	**05 50 12.3**	**-0.6**
FINES	**FINESS Array B**	**57.29**	**326**	P	**P**	**05 50 12.7**	**-0.2**
FINES	**FINESS Array B**	**57.29**	**326**	P	**P**	**05 50 12.7**	**-0.2**
	comp=Z,9.3nm,0.6s,baz=87,slow=7.8,SNR=38						
WRAB	**Tennant Creek**	**58.75**	**146**	*e*P	**P**	**05 50 23.6**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,16nm,0.9s						
WRAB	**Tennant Creek**	**58.75**	**146**	*e*P	**P**	**05 50 23.6**	**-0.1**
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**58.75**	**146**	P	**P**	**05 50 23.6**	**-0.1**
WRA	**Warramunga Arr**	**58.75**	**146**	P	**P**	**05 50 23.6**	**-0.1**
	comp=Z,5.8nm,0.5s,baz=339,slow=7.8,SNR=200						
ASAR	**Alice Springs**	**61.78**	**149**	P	**P**	**05 50 44.9**	**+0.5**
ASAR	**Alice Springs**	**61.78**	**149**	P	**P**	**05 50 44.8**	**+0.5**
	comp=Z,0.4nm,0.5s,baz=334,slow=6.5,SNR=15						
NB2	**NORSAR Subarra**	**64.38**	**327**	P	**P**	**05 50 59.9**	**-1.3**
	comp=Z,3.1nm,0.6s,baz=73,slow=6.9						
NOA	**NORSAR Array B**	**64.38**	**327**	P	**P**	**05 51 00.0**	**-1.3**
NOA	**NORSAR Array B**	**64.38**	**327**	P	**P**	**05 51 00.0**	**-1.3**
	comp=Z,3.4nm,0.7s,baz=72,slow=6.8,SNR=23						
CLL	**Collm**	**66.81**	**317**	⇓*i*P	**P**	**05 51 16.8**	**-0.3**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
CLL	**Collm**	**66.81**	**317**	⇓*i*P	**P**	**05 51 16.8**	**-0.3**
	comp=Z,6.0nm,1.2s						
COLD	**Coldfoot**	**67.16**	**24**	*e*P	**P**	**05 51 19.3**	**+0.3**
	comp=Z,9.9nm,0.9s						
GERES	**GERESS Array B**	**67.31**	**314**	P	**P**	**05 51 20.0**	**-0.4**
GERES	**GERESS Array B**	**67.31**	**314**	P	**P**	**05 51 20.0**	**-0.4**
	comp=Z,0.8nm,0.6s,baz=66,slow=4.5,SNR=5.7						
SVW2	**Sparrevohn**	**67.71**	**31**	*e*P	**P**	**05 51 22.5**	**-0.1**
	comp=Z,5.5nm,1.0s						
TRF	**Thorofare Moun**	**68.88**	**28**	*e*P	**P**	**05 51 30.5**	**+0.4**
	comp=Z,41nm,2.2s						
COLA	**College**	**69.12**	**26**	*e*P	**P**	**05 51 31.6**	**+0.2**
COLA				pmax	pmax		
	comp=Z,19nm,0.8s						
COLA	**College**	**69.12**	**26**	*e*P	**P**	**05 51 31.6**	**+0.2**
	comp=Z,18nm,0.8s						
RSO	**Redoubt South**	**69.23**	**31**	*e*P	**P**	**05 51 33.5**	**+1.1**
MCK	**McKinley**	**69.27**	**27**	*e*P	**P**	**05 51 32.6**	**+0.3**
MCK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MCK	**McKinley**	**69.27**	**27**	*e*P	**P**	**05 51 32.6**	**+0.3**
	comp=Z,3.8nm,0.8s						
ILAR	**Eielson Array**	**69.53**	**26**	P	**P**	**05 51 32.1**	**-1.8**
ILAR				PP	**PP**	**05 54 07.3**	**+0.1**
ILAR	**Eielson Array**	**69.53**	**26**	P	**P**	**05 51 32.1**	**-1.8**
	comp=Z,2.3nm,0.6s,baz=296,slow=4.0,SNR=31						
ILAR				PP	**PP**	**05 54 07.3**	**+0.1**
	comp=Z,0.5nm,1.0s,baz=298,slow=7.7,SNR=4.5						
PMR	**Palmer**	**70.25**	**29**	*e*P	**P**	**05 51 37.9**	**-0.4**
PMR				pmax	pmax		
	comp=Z,12nm,0.9s						
PMR	**Palmer**	**70.25**	**29**	*e*P	**P**	**05 51 37.9**	**-0.4**
	comp=Z,12nm,0.9s						
SML	**Sawmill**	**70.47**	**29**	*e*P	**P**	**05 51 39.8**	**0.0**
SML				p

VIVF	Saint-Julien-I	74.62	313	*e*P		P	05 52 04.1	-0.7
VIVF	Saint-Julien-I	74.62	313	*e*P		P	05 52 04.1	-0.7
VIVF	Saint-Julien-I	74.62	313	*e*P		P	05 52 04.1	-0.7
PNL	Peninsula	75.30	28	*e*P		P	05 52 07.3	-1.1
	comp=Z,7.8nm,0.8s							
TCF	Toulx Ste Croi	75.42	315	*e*P		P	05 52 08.8	-0.6
TCF	Toulx Ste Croi	75.42	315	*e*P		P	05 52 08.8	-0.6
TCF	Toulx Ste Croi	75.42	315	*e*P		P	05 52 08.8	-0.6
LASF	Ste Croix	75.51	313	*e*P		P	05 52 09.7	-0.2
LASF	Ste Croix	75.51	313	*e*P		P	05 52 09.7	-0.2
GRR	Gorron	76.12	318	*e*P		P	05 52 12.7	-0.6
GRR	Gorron	76.12	318	*e*P		P	05 52 12.7	-0.6
GRR	Gorron	76.12	318	*e*P		P	05 52 12.7	-0.6
CAF	Calviac	76.19	314	*e*P		P	05 52 13.7	-0.1
CAF	Calviac	76.19	314	*e*P		P	05 52 13.7	-0.1
CAF	Calviac	76.19	314	*e*P		P	05 52 13.7	-0.1
MFF	Saint Martin d	76.65	317	*e*P		P	05 52 15.8	-0.5
	comp=Z,7.6nm,0.8s							
MFF	Saint Martin d	76.65	317	*e*P		P	05 52 15.8	-0.5
MFF				pmax	pmax			
	comp=Z,8.0nm,0.8s							
MFF	Saint Martin d	76.65	317	*e*P		P	05 52 15.8	-0.5
	comp=Z,7.6nm,0.8s							
YKA	Yellowknife Ar	81.37	17	P		P	05 52 41.5	-0.3
YKA	Yellowknife Ar	81.37	17	P		P	05 52 41.5	-0.3
	comp=Z,3.1nm,0.8s,baz=328,slow=5.3,SNR=12							
FFC	Flin Flon	91.29	15	*e*P		P	05 53 30.0	-0.9
FFC				pmax	pmax			
	comp=Z,3.0nm,1.1s							
FFC	Flin Flon	91.29	15	*e*P		P	05 53 30.0	-0.9
	comp=Z,3.4nm,1.1s							
TORD	Torodi Ar. Bea	93.53	288	P		P	05 53 41.5	-0.4
TORD	Torodi Ar. Bea	93.53	288	P		P	05 53 41.5	-0.4
	comp=Z,0.6nm,1.0s,baz=72,slow=4.7,SNR=2.7							
GDL2	Guadalupe Moun	111.21	26	*e*Pdif		Pdif	05 54 53.7	-7.4
TXAR	Lajitas Array	114.04	26	PKP		PKPdf	05 59 04.8	-0.5
TXAR	Lajitas Array	114.04	26	PKP		PKPdf	05 59 04.8	-0.5
	comp=Z,0.3nm,0.9s,baz=249,slow=2.5,SNR=3.0							

*ISCJB **30** 06:12:31.1±0.9,9.11N±0.03×70.82W±0.03,h10km±7km, mb3.4/3,Error ellipse: s-maj=6.0km s-min=4.2km az=26.4*
*FUNV **30** 06:12:31.8,9.12N×70.86W,h4km,MW3.5*
*IDC **30** 06:12:38.2±4.8,9.25N×70.68W,h66km±43km,mb3.2/3, mb1 3.6/4,mb1mx3.2/24,mbtmp3.4/4,ML2.6/1,Error ellipse: s-maj=32.0km s-min=29.7km az=37.0*

ISC 30 06:12:31.4±1.2,9.12N±0.03×70.82W±0.04,h11km±9km, n25,σ1°08/38,mb3.7/3,7C,Venezuela

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VIGV	El Vigia	0.61	243⇑	*e*P	Pg	06 12 42.9	-0.3
VIGV				*e*S	Sg	06 12 51.9	+0.5
SOCV	Socops	0.83	183⇑	*e*P	Pg	06 12 46.6	-0.9
SOCV				*e*S	Sg	06 12 58.5	0.0
QARV	Quebrada Arrib	1.12	15⇑	*e*P	Pb	06 12 52.6	-0.2
QARV				*e*S	Sg	06 13 08.4	+0.9
CURV	Curarigua	1.22	44	*e*S	Sn	06 13 13.2	+2.1
DABV	Dabajuro	1.80	6⇑	*e*P	Pn	06 13 03.0	+0.6
DABV				*e*S	Sb	06 13 26.8	-0.1
TEPV	Terepaima	1.81	62⇑	*e*P	Pn	06 13 03.7	+1.1
TEPV				*e*S	Sb	06 13 26.9	-0.4
SIQV	Siquisique	1.81	33	*e*P	Pn	06 13 04.0	+1.4
SIQV				*e*S	Sb	06 13 27.6	+0.2
CAPV	Capacho	1.94	230	*e*P	Pn	06 13 05.5	+1.1
CAPV				*e*S	Sn	06 13 28.5	-0.4
MAPV	Macapo	2.43	73	*e*P	Pn	06 13 12.9	+1.8
MAPV				*e*S	Sn	06 13 42.3	+1.4
ELOV	Elorza	2.49	148⇑	*e*P	Pn	06 13 13.4	+1.6
ELOV				*e*S	Sn	06 13 43.2	+1.1
BAUV	El Baul	2.75	93	*e*P	Pn	06 13 16.8	+1.3
BAUV				*e*S	Sn	06 13 49.8	+1.2
JACV	Jacura	2.77	45	*e*P	Pn	06 13 16.0	+0.3
MONV	Montecano	2.94	16⇑	*e*P	Pn	06 13 17.9	-0.1
MONV				*e*S	Sn	06 13 52.9	-0.3
TURV	Turiamo	3.22	66	*e*P	Pn	06 13 22.9	+1.0
TURV				*e*S	Sn	06 14 00.6	+0.4
MERV	Las Mercedes	4.47	88	*e*P	Pn	06 13 39.6	+0.5
BIRV	Birongo	4.68	73	*e*P	Pn	06 13 42.4	+0.4
BIRV				*e*S	Sn	06 14 34.7	-1.7
CUPV	Cœpira	5.05	79	*e*P	Pn	06 13 46.8	-0.3
CUPV				*e*S	Sn	06 14 42.6	-2.8
ROSC	El Rosal	5.49	220	P	Pn	06 13 58.5	+5.1
	3.4nm,0.3s,baz=86,slow=15,SNR=13						
ROSC				S	Sb	06 15 06.5	-7.0
	2.1nm,0.3s,baz=270,slow=20,SNR=3.2						
PRGV	PARIAGUAN	6.11	93	*e*P	Pn	06 14 02.0	+0.3
PCRV	Puerto La Cruz	6.18	80	*e*P	Pn	06 14 03.2	+0.5
TXAR	Lajitas Array	36.76	308	P	P	06 19 39.6	+0.4
	0.2nm,0.7s,baz=135,slow=10,SNR=4.4						
PDAR	Pinedale Array	47.64	321	P	P	06 21 08.4	+0.5
	0.3nm,0.4s,baz=127,slow=8.4,SNR=4.0						
TORD	Torodi Ar. Bea	71.06	79	P	P	06 23 49.3	-0.9
	0.3nm,0.5s,baz=291,slow=6.9,SNR=2.6						
ASAR	Alice Springs	152.29	236	PKPbc	PKPbc	06 32 27.2	-1.1
	0.5nm,0.7s,baz=121,slow=2.4,SNR=5.7						
WRA	Warramunga Arr	153.42	243	PKPbc	PKPbc	06 32 30.1	-0.7
	0.5nm,0.3s,baz=106,slow=2.8,SNR=21						

*ISCJB **30** 06:16:51.6±0.6,31.32N±0.04×104.39E±0.05,h10km, mb3.6/4,Error ellipse: s-maj=7.1km s-min=5.4km az=29.2*
*IDC **30** 06:16:52.8±1.3,32.05N×105.19E,h0km,mb3.7/4, mb1 3.7/5,mb1mx3.5/28,mbtmp3.6/5,ML3.1/1,Error ellipse: s-maj=88.9km s-min=22.4km az=57.0*
*BJI **30** 06:16:53.9,31.46N×103.98E,h10km,ML3.5/8,Ms3.5/1*

ISC 30 06:16:53.7±0.8,31.34N±0.04×104.14E±0.06,h10km,n9, σ2°73/16,mb3.7/4,Sichuan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	0.54	217	Pg	Pb	06 17 05.3	0.0
CD2				Sg	Sb	06 17 14.3	+1.1
CD2				smax	smax		
	comp=N,5μm,0.8s						
CD2				smax	smax		
	comp=E,3μm,0.7s						
LZH	Lanzhou	4.74	357	*e*Pn	Pn	06 18 10.0	+4.6
LZH				Pg	Pg	06 18 22.3	-2.2
LZH				Sn	Sn	06 19 03.8	+3.4
LZH				Sg	Sg	06 19 21.8	-4.0
LZH				smax	smax		
	comp=N,74nm,1.2s						
LZH				smax	smax		
	comp=E,91nm,1.1s						
LZH				LR	LR		
	comp=N,380nm,6.8s						
LZH				LR	LR		
	comp=E,310nm,7.0s						
LZH				LR	LR		
	comp=Z,380nm,8.1s						
XAN	Xi'an	4.85	55	Pn	Pn	06 18 08.8	+2.1
XAN				Pg	Pg	06 18 23.8	-2.7
XAN				Sn	Sn	06 18 59.5	-3.4
XAN				Sg	Sb	06 19 22.5	+5.4
XAN				smax	smax		
	comp=N,61nm,1.1s						
XAN				smax	smax		
	comp=E,38nm,0.9s						
GYA	Guiyang	5.35	155	Pn	Pn	06 18 15.0	+1.3
GYA				Sn	Sn	06 19 13.5	-1.9
GYA				Sg	Sg	06 19 44.0	-1.4
SONM	Songino Array	16.56	5	Pn	Pn	06 20 35.7	-10
	comp=E,0.1nm,0.3s,baz=185,slow=14,SNR=2.7						
MKAR	Makanchi Array	22.82	319	P	P	06 21 57.6	+0.9
	comp=E,1.6nm,1.0s,baz=116,slow=11,SNR=8.8						
ZALV	Zalesovo Beam	26.52	334	P	P	06 22 30.6	-0.7
	comp=E,1.0nm,0.4s,baz=128,slow=9.3,SNR=6.3						
KURBB	Kurchatov Arra	27.07	323	P	P	06 22 36.7	+0.5
	comp=E,0.3nm,0.3s,baz=128,slow=9.1,SNR=5.5						
WRA	Warramunga Arr	58.66	146	P	P	06 26 52.7	+1.3
	comp=E,1.8nm,1.0s,baz=339,slow=7.9,SNR=9.8						

*DDA **30** 06:26:17.4,38.74N×35.57E,h15km,MD2.8*
*CSEM **30** 06:26:17.5,38.74N×35.57E,h15km,MD2.8,After DDA*

ISC 30 06:26:17.8±1.1,38.75N±0.05×35.58E±0.04,h12km±11km, n11,σ0°60/20,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNN	Bunyan	0.23	63	*e*PG	Pg	06 26 22.7	-0.1
BNN				*e*SG	Sg	06 26 26.4	+0.2
PINB	Pinarbasi	0.65	96	*i* P	Pg	06 26 30.5	+0.1
PINB				*e*S	Sg	06 26 39.3	+0.3
PINB	Pinarbasi	0.65	96	*i* P	Pg	06 26 30.5	+0.1
PINB				*e*S	Sg	06 26 39.3	+0.3
KOZT	Kozan	1.28	171	*e*PN	Pn	06 26 41.3	-0.2
CDAG	Cicekdag	1.28	313	*e*P	Pb	06 26 41.8	-0.1
CDAG				*i* S	Sg	06 26 59.3	+0.1
CDAG	Cicekdag	1.28	313	*e*P	Pb	06 26 41.8	-0.1
CDAG				*i* S	Sg	06 26 59.3	+0.1
SVSK	Karacayir	1.60	43	*e*PN	Pb	06 26 47.0	-0.3
AYKD	Aykdinkavak	1.65	144	*e*P	Pg	06 26 49.2	-0.2
AYKD				*e*S	Sg	06 27 11.6	+0.8
AYKD	Aykdinkavak	1.65	144	*e*P	Pg	06 26 49.2	-0.2
AYKD				*e*S	Sg	06 27 11.6	+0.8
AKCD	Akcadag	1.89	103	*e*P	Pb	06 26 51.3	-1.1
AKCD				*e*S	Sb	06 27 16.9	+0.9
AKCD	Akcadag	1.89	103	*e*P	Pb	06 26 51.3	-1.1
AKCD				*e*S	Sb	06 27 16.9	+0.9

*SKO **30** 06:45:02.1,41.19N×22.52E,h15km,M1.0,ML1.7*
*CSEM **30** 06:45:04.8±0.1,41.32N×22.68E,h2km,ML1.7,Error ellipse: s-maj=3.3km s-min=2.9km az=124.0*
*THE **30** 06:45:05.2,41.31N×22.68E,h2km±3km,ML1.9/5,Error ellipse: s-maj=3.2km s-min=0.5km az=187.0*
*ATH **30** 06:45:06.9,41.27N×22.67E,h14km±5km,MD2.8/4*
*BEO **30** 06:45:06.3±1.1,41.32N×22.51E,h0km,ML1.7/4*

ISC 30 06:45:05.4±1.2,41.32N±0.03×22.67E±0.02,h1km±11km, n34,σ0°70/60,Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VAY	Valandovo	0.08	271	P	Pg	06 45 06.3	-0.5
VAY				S	Sg	06 45 07.8	-0.1
VAY	Valandovo	0.08	271	*e*Pg	Pg	06 45 06.3	-0.5
VAY				*e*Sg	Sg	06 45 07.9	0.0
VAY	Valandovo	0.08	271	*i* Pg	Pg	06 45 06.4	-0.5
VAY				*i* Sg	Sg	06 45 07.8	-0.1
VAY				*e*Lg	Lg	06 45 07.9	
	comp=N,594nm,0.3s						
VAY				*e*Lg	Lg	06 45 08.1	
	comp=E,364nm,0.3s						
VAY	Valandovo	0.08	271	P	Pg	06 45 06.3	-0.5
VAY				S	Sg	06 45 07.8	-0.1
KNT	Kendrikon	0.23	133	P	Pg	06 45 09.5	-0.3
KNT				S	Sg	06 45 12.8	0.0
KNT	Kendrikon	0.23	133	P	Pg	06 45 09.5	-0.3
KNT				S	Sg	06 45 12.8	0.0
GRG	Griva	0.42	210	P	Pg	06 45 12.7	-0.6
GRG				S	Sg	06 45 19.0	+0.3
GRG	Griva	0.42	210	*e*PB	Pg	06 45 14.6	+1.3
GRG				*e*SB	Sg	06 45 19.7	+1.0
GRG	Griva	0.42	210	P	Pg	06 45 12.7	-0.6
GRG	Griva	0.42	210	*e*Pb	Pg	06 45 14.6	+1.3
GRG				S	Sg	06 45 19.0	+0.3
SRS	Serrai	0.72	106	P	Pg	06 45 18.8	-0.4
SRS				S	Sg	06 45 28.5	-0.1
SRS	Serrai	0.72	106	P	Pg	06 45 18.8	-0.4
SRS				S	Sg	06 45 28.5	-0.1
HORT	Hortiatis	0.79	156	P	Pg	06 45 19.7	-0.8
HORT				S	Sg	06 45 30.7	0.0
HORT	Hortiatis	0.79	156	P	Pg	06 45 19.7	-0.8
HORT				S	Sg	06 45 30.7	0.0
NVR	Nevrokopi	0.90	88	P	Pg	06 45 21.9	-0.6
NVR				S	Sg	06 45 34.3	+0.2
NVR	Nevrokopi	0.90	88	*e*PB	Pg	06 45 24.1	+1.6
NVR				*e*SB	Sb	06 45 36.7	+0.5
NVR	Nevrokopi	0.90	88	P	Pg	06 45 21.9	-0.6
NVR	Nevrokopi	0.90	88	*e*Pn	Pg	06 45 24.1	+1.6
NVR				S	Sg	06 45 34.3	+0.2
NVR				*e*Sn	Sb	06 45 36.7	+0.5
PLG	Polygyros	1.11	148	*e*PB	Pg	06 45 26.5	-0.2
PLG				*e*SB	Sg	06 45 41.4	+0.3
PLG	Polygyros	1.11	148	*e*Pn	Pg	06 45 26.5	-0.2
PLG				*e*Sn	Sg	06 45 41.4	+0.3
FNA	Florina	1.12	242	P	Pg	06 45 25.8	-1.0
FNA				S	Sg	06 45 42.4	+1.2
FNA	Florina	1.12	242	*e*PG	Pg	06 45 27.3	+0.5
FNA				*e*SB	Sb	06 45 42.8	+0.2
FNA	Florina	1.12	242	P	Pg	06 45 25.8	-1.0
FNA	Florina	1.12	242	*e*Pn	Pg	06 45 27.3	+0.5
FNA				S	Sg	06 45 42.4	+1.2
VTS	Vitosha	1.33	17	P	Pn	06 45 30.4	-0.9
VTS	Vitosha	1.33	17	*e*Pg	Pn	06 45 30.9	-0.4
VTS				*e*Sg	Sn	06 45 31.3	+0.6
VTS	Vitosha	1.33	17	P	Pn	06 45 30.4	-0.9
VTS	Vitosha	1.33	17	*e*Pg	Pn	06 45 30.9	-0.4
VTS	Vitosha	1.33	17	*e*Pn	Pn	06 45 31.6	+0.3
VTS				*e*Sn	Sn	06 45 50.4	+0.7
KAVA	Kavala	1.43	102	P	Pn	06 45 31.6	-0.8
KAVA	Kavala	1.43	102	P	Pn	06 45 31.6	-0.8
BARS	Barje	1.63	337	*e*Pg	Pn	06 45 35.2	0.0
BARS				*e*Sg	Sn	06 45 55.7	-1.1
BARS	Barje	1.63	337	*e*Pg	Pn	06 45 35.2	0.0
BARS				*e*Sg	Sn	06 45 55.7	-1.1
ZAPS	Zavoj	1.95	359	*e*Sn	Sn	06 46 06.0	+1.1

MEX 30 06:45:11.8±0.6,18.21N×100.02W,h57km±7km,MD3.6, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARIG	Puente Sto Nin	0.32	283	*e*P	Pn	06 45 20.3	-1.5
ARIG				*e*S	Sn	06 45 27.4	-1.7
MEIG	Mezcala	0.47	127	*e*P	Pn	06 45 21.8	-1.7
MEIG				*e*S	Sn	06 45 29.9	-1.9
PLIG	Platanillo	0.52	70	*e*P	Pn	06 45 22.4	-1.6
PLIG				*e*S	Sn	06 45 31.1	-1.7
YAIG	Yautepec	1.11	54	*i* P	Pn	06 45 30.2	-1.3
YAIG				*e*S	Sn	06 45 44.8	-1.2
CAIG	El Cayaco	1.18	192	*e*P	Pn	06 45 30.4	-1.7
CAIG				*i* S	Sn	06 45 46.0	-1.3
PNIG	Pinotepa	2.56	135	*e*P	Pn	06 45 49.4	-1.5
PNIG				*i* S	Sn	06 46 18.8	-2.1

DDA 30 06:50:18.0,36.71N×33.72E,h7km,MD2.8,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIZK	Mersin	0.41	124	*i* P	Pg	06 50 26.7	+0.7
KIZK				*i* S	Sg	06 50 32.3	+0.9
IKL	Isikli	0.47	183	*e*PG	Pg	06 50 26.4	-0.7
IKL				*e*SG	Sg	06 50 32.4	-0.9
ERMK	Ermenek	0.65	264	*i* P	Pg	06 50 30.1	-0.7
ERMK				*i* S	Sb	06 50 40.7	-0.8
HDMB	Hadim	1.02	285	*e*PG	Pg	06 50 36.4	-1.5
GULE	Gulek	1.02	56	*i* P	Pg	06 50 37.7	-0.2
GULE				*i* S	Sb	06 50 52.2	+0.1
KARA	Karaisali	1.20	63	*e*PN	Pg	06 50 38.7	-2.4

IDC 30 06:56:07.6±2.5,14.82N×144.44E,h0km,mb4.1/10, mb1 4.2/10,mb1mx4.0/27,mbtmp4.1/10,MS3.3/4, Ms1 3.3/4,ms1mx2.9/43,Error ellipse: s-maj=81.1km s-min=18.3km az=88.0,Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNU	Nakatsue	21.99	328	LR	LR	07 07 27.7	
	comp=Z,45nm,21.9s,baz=321,slow=31						
MJAR	Matsushiro Arr	22.34	347	P	P	07 01 07.5	+0.4
	3.0nm,0.6s,baz=164,slow=8.6,SNR=9.0						
MJAR				LR	LR	07 07 55.4	
	comp=Z,71nm,19.5s,baz=200,slow=32						
KSRS	Korea Array	26.89	330	P	P	07 01 49.9	-0.5
	2.2nm,0.8s,baz=138,slow=9.9,SNR=8.7						
KSRS				LR	LR	07 11 59.1	
	comp=Z,21nm,18.4s,baz=140,slow=35						
WRA	Warramunga Arr	35.95	196	P	P	07 03 10.0	-0.2
	3.5nm,0.9s,baz=17,slow=9.6,SNR=18						
FITZ	Fitzroy Crossi	37.60	210	P	P	07 03 24.3	+0.1
	3.5nm,0.9s,baz=39,slow=7.3,SNR=7.9						
CMAR	Chiang Mai Arr	43.66	281	P	P	07 04 14.4	-0.1
	0.8nm,0.4s,baz=92,slow=6.8,SNR=4.6						
SONM	Songino Array	45.49	324	P	P	07 04 29.2	+0.3
	1.6nm,0.9s,baz=145,slow=9.7,SNR=8.4						
MKAR	Makanchi Array	60.32	316	P	P	07 06 18.5	+0.1
	1.9nm,0.8s,baz=89,slow=7.4,SNR=16						
ZALV	Zalesovo Beam	60.39	324	P	P	07 06 18.5	-0.1
	0.5nm,0.3s,baz=138,slow=6.3,SNR=3.8						
KURBB	Kurchatov Arra	63.42	319	P	P	07 06 39.2	+0.1
	5.2nm,0.7s,baz=101,slow=7.4,SNR=9.9						
BVAR	Borovoye Array	68.71	321	P	P	07 07 12.6	-0.6
	2.3nm,0.7s,baz=99,slow=7.7,SNR=10						
YBH	Yreka Blue Hor	82.38	49	LR	LR	07 40 24.3	
	comp=Z,65nm,18.6s,baz=335,slow=32						

*ISCJB **30** 06:56:15.0±0.3,16.80S±0.06×14.37W±0.07,h10km, mb4.6/63,MS4.0/23,Error ellipse: s-maj=11.5km s-min=6.6km az=40.3*
*MOS **30** 06:56:15.0±0.7,16.76S×14.43W,h10km,mb5.2/18,Error ellipse: s-maj=16.4km s-min=6.9km az=74.0*
*IDC **30** 06:56:15.0±0.4,16.84S×14.41W,h0km,mb4.4/25, mb1 4.5/25,mb1mx4.4/31,mbtmp4.4/25,MS3.9/18, Ms1 3.9/18,ms1mx3.8/32,Error ellipse: s-maj=17.4km s-min=11.6km az=126.0*
*NEIC **30** 06:56:16.7±0.2,16.84S×14.40W,h10km,mb5.1/30,Error ellipse: s-maj=7.2km s-min=4.3km az=129.0*
*BJI **30** 06:56:17.1,16.80S×14.50W,h10km,mB5.4/6,Ms5.2/4, Ms7 4.8/5*

ISC 30 06:56:16.6±0.4,16.84S±0.08×14.43W±0.08,h10km,n214, σ0°83/203,mb4.8/62,MS4.1/23,4C-1D,Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	Riachuelo	23.70	295	*e*P	P	07 01 28.4	-0.5
	21nm,0.9s						
RCBR	Riachuelo	23.70	295	P	P	07 01 28.8	-0.1
	17nm,0.8s,baz=112,slow=12,SNR=9.8						
RCBR				LR	LR	07 08 25.3	
	comp=Z,73nm,19.2s,baz=256,slow=31						
LIC	Lamto	24.73	23⇑	*i*P	P	07 01 38.1	-0.3
	44nm,1.1s,baz=213						
LIC				*e*R			
	329nm,19.5s						
LIC	Lamto	24.73	23⇑	*i*P	P	07 01 38.1	-0.3
	44nm,1.1s						
DBIC	Dimbokro	25.21	23	*e*P	P	07 01 42.5	-0.1
	42nm,1.0s						
DBIC	Dimbokro	25.21	23	P	P	07 01 42.5	-0.1
	34nm,1.0s,baz=190,slow=9.7,SNR=15						
DBIC				LR	LR	07 09 20.7	
	comp=Z,242nm,18.2s,baz=182,slow=31						
BBTS	Babate	31.37	356	LR	LR	07 12 02.5	
	comp=Z,103nm,18.8s,baz=11,slow=30						
BDFB	Brasilia	32.24	267	P	P	07 02 46.0	+0.4
BDFB	Brasilia	32.24	267	P	P	07 02 46.0	+0.4
	2.8nm,0.6s,baz=102,slow=9.3,SNR=5.6						
BDFB				LR	LR	07 13 10.1	
	comp=Z,353nm,21.2s,baz=168,slow=32						
TOA0	Torodi Ar. Sit	33.79	29	*e*P	P	07 02 58.4	-0.6
TORD	Torodi Ar. Bea	33.79	29	P	P	07 02 58.6	-0.3
TORD	Torodi Ar. Bea	33.79	29	P	P	07 02 58.6	-0.3
	24nm,1.0s,baz=211,slow=8.6,SNR=73						
TORD				LR	LR	07 14 41.3	
	comp=Z,409nm,18.8s,baz=200,slow=33						
BOSA	Boshof	38.27	115	LR	LR	07 15 42.0	
	comp=Z,188nm,19.7s,baz=165,slow=30						
CPUP	Villa Florida	40.83	249	P	P	07 03 59.1	+0.5
CPUP	Villa Florida	40.83	249	P	P	07 03 59.1	+0.5
	1.3nm,0.6s,baz=75,slow=13,SNR=3.9						
CPUP				LR	LR	07 18 23.2	
	comp=Z,228nm,19.3s,baz=85,slow=32						
LSZ	Lusaka	40.93	94	P	P	07 04 00.4	+0.6
LSZ	Lusaka	40.93	94	P	P	07 04 00.4	+0.6
	6.3nm,1.1s,baz=317,slow=8.3,SNR=4.1						
TAM	Tamanrasset	43.96	27	*e*P	P	07 04 23.7	-0.6
TAM				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TAM	Tamanrasset	43.96	27	*e*P	P	07 04 23.6	-0.6
	comp=Z,6.6nm,1.1s						
SIV	San Ignacio	44.67	264	P	P	07 04 31.2	+1.2
SIV				PcP	PcP	07 06 11.4	-1.3
SIV	San Ignacio	44.67	264	P	P	07 04 31.2	+1.2
	comp=Z,4.2nm,1.0s,baz=115,slow=9.5,SNR=12						
SIV				PcP	PcP	07 06 11.4	-1.3
	comp=Z,2.5nm,0.9s,baz=99,slow=4.6,SNR=5.2						
SAML	Samuel	48.06	273	*e*P	P	07 04 57.7	+1.0
	comp=Z,20nm,1.4s						
CFAA	Coronel Fontan	50.75	243	P	P	07 05 16.4	-0.7
CFAA	Coronel Fontan	50.75	243	P	P	07 05 16.4	-0.7
	comp=Z,0.1nm,0.5s,baz=71,slow=5.2,SNR=4.1						
LPAZ	La Paz	51.34	262	P	P	07 05 22.4	+0.1
LPAZ	La Paz	51.34	262	P	P	07 05 22.4	+0.1
	comp=Z,0.6nm,0.8s,baz=90,slow=10,SNR=4.0						
LPAZ				LR	LR	07 26 18.2	
	comp=Z,180nm,19.2s,baz=127,slow=35						
LVC	Limon Verde	51.38	254	*e*P	P	07 05 22.9	+0.7
KMBO	Kilima Mbogo	53.18	78	LR	LR	07 25 32.3	
	comp=Z,158nm,20.0s,baz=104,slow=33						
PLCA	Paso Flores	53.64	232	LR	LR	07 25 28.5	
	comp=Z,302nm,18.2s,baz=177,slow=33						
PBAR	Barrancos	55.16	7	*e*P	P	07 05 50.6	+1.3
	comp=Z,11nm,1.8s						
SNAA	Sanae	55.25	176	*e*P	P	07 05 49.5	-0.2
SNAA	Sanae	55.25	176	*e*	P	07 05 55.5	+5.8
SNAA	Sanae	55.25	176	*e*P	P	07 05 49.7	0.0
SNAA	Sanae	55.25	176	P	P	07 05 49.5	-0.2
	comp=Z,2.2nm,1.1s,baz=356,slow=6.8,SNR=12						
EVOP	Sao Brissos	55.39	6	*e*P	P	07 05 51.3	+0.4
EVOP				pmax	pmax		
	comp=Z,14nm,1.0s						
EVOP	Sao Brissos	55.39	6	*e*P	P	07 05 51.3	+0.4
	comp=Z,14nm,1.0s						
EVO	Evora	55.41	6	*e*P	P	07 05 51.3	+0.2
	comp=Z,14nm,1.0s						
EVO				*e*

SMRF	Simiane la Rot	63.23	16	*e*P		P	07 06 46.0	+0.9
ATD	Arta Tunnel	63.24	67	LR		LR	07 32 08.9	
	comp=Z,145nm,18.2s,baz=288,slow=34							
CAF	Calviac	63.28	13	*e*P		P	07 06 45.4	0.0
	comp=Z,6.6nm,0.8s							
CAF	Calviac	63.28	13	*e*P		P	07 06 45.4	0.0
CAF				pmax		pmax		
	comp=Z,7.0nm,0.8s							
CAF	Calviac	63.28	13	*e*P		P	07 06 45.4	0.0
	comp=Z,6.6nm,0.8s							
RJF	Les Rejaudoux	63.52	13	*e*P		P	07 06 47.1	+0.1
	comp=Z,29nm,1.2s							
RJF				*e*R				
	comp=Z,109nm,17.8s							
RJF	Les Rejaudoux	63.52	13	*e*P		P	07 06 47.1	+0.1
RJF				pmax		pmax		
	comp=Z,29nm,1.2s							
RJF	Les Rejaudoux	63.52	13	*e*P		P	07 06 47.1	+0.1
	comp=Z,29nm,1.2s							
SBF	Sospel	63.64	17	*e*P		P	07 06 48.0	+0.1
SBF	Sospel	63.64	17	*e*P		P	07 06 48.0	+0.1
SBF	Sospel	63.64	17	*e*P		P	07 06 48.0	+0.1
VIVF	Saint-Julien-l	63.82	15	*e*P		P	07 06 49.5	+0.5
VIVF	Saint-Julien-l	63.82	15	*e*P		P	07 06 49.5	+0.5
VIVF	Saint-Julien-l	63.82	15	*e*P		P	07 06 49.5	+0.5
IDI	Anoyia	63.87	35	*e*P		P	07 06 50.6	+1.0
	comp=Z,14nm,1.0s							
ORIF	Oris-en-Rattie	64.19	16	*e*P		P	07 06 52.1	+0.6
ORIF				*e*R				
	comp=Z,182nm,19.5s							
ORIF	Oris-en-Rattie	64.19	16	*e*P		P	07 06 52.1	+0.6
ORIF	Oris-en-Rattie	64.19	16	*e*P		P	07 06 52.1	+0.6
MBDF	Montbardon	64.25	17	*e*P		P	07 06 52.8	+0.8
	comp=Z,21nm,1.1s							
MBDF	Montbardon	64.25	17	*e*P		P	07 06 52.8	+0.8
MBDF				pmax		pmax		
	comp=Z,21nm,1.1s							
MBDF	Montbardon	64.25	17	*e*P		P	07 06 52.8	+0.8
	comp=Z,21nm,1.1s							
MFF	Saint Martin d	64.45	11	*e*P		P	07 06 53.2	+0.1
	comp=Z,54nm,1.6s							
MFF	Saint Martin d	64.45	11	*e*P		P	07 06 53.2	+0.1
MFF				pmax		pmax		
	comp=Z,54nm,1.6s							
MFF	Saint Martin d	64.45	11	*e*P		P	07 06 53.2	+0.1
	comp=Z,54nm,1.6s							
TCF	Toulx Ste Croi	64.61	13	*e*P		P	07 06 54.6	+0.4
	comp=Z,29nm,1.3s							
TCF	Toulx Ste Croi	64.61	13	*e*P		P	07 06 54.6	+0.4
TCF				pmax		pmax		
	comp=Z,29nm,1.3s							
TCF	Toulx Ste Croi	64.61	13	*e*P		P	07 06 54.6	+0.4
	comp=Z,29nm,1.3s							
LPG	La Plagne	64.95	16	*e*P		P	07 06 57.5	+0.7
	comp=Z,21nm,1.2s							
LPG	La Plagne	64.95	16	*e*P		P	07 06 57.5	+0.7
LPG				pmax		pmax		
	comp=Z,21nm,1.2s							
LPG	La Plagne	64.95	16	*e*P		P	07 06 57.5	+0.7
	comp=Z,21nm,1.2s							
LPL	La Plagne	64.97	16	*e*P		P	07 06 57.4	+0.6
LPL	La Plagne	64.97	16	*e*P		P	07 06 57.4	+0.6
LPL	La Plagne	64.97	16	*e*P		P	07 06 57.4	+0.6
BGF	Bois d'Agland	65.00	13	*e*P		P	07 06 57.0	+0.3
BGF	Bois d'Agland	65.00	13	*e*P		P	07 06 57.0	+0.3
BGF	Bois d'Agland	65.00	13	*e*P		P	07 06 57.0	+0.3
SMF	Signal de Mont	65.31	14	*e*P		P	07 06 58.8	+0.1
SMF	Signal de Mont	65.31	14	*e*P		P	07 06 58.8	+0.1
SMF	Signal de Mont	65.31	14	*e*P		P	07 06 58.8	+0.1
AVF	Avril sur Loir	65.33	13	*e*P		P	07 06 59.0	+0.2
AVF	Avril sur Loir	65.33	13	*e*P		P	07 06 59.0	+0.2
AVF	Avril sur Loir	65.33	13	*e*P		P	07 06 59.0	+0.2
ROSF	Rostrenen	65.64	8	*e*P		P	07 07 01.0	+0.2
	comp=Z,24nm,1.1s							
ROSF	Rostrenen	65.64	8	*e*P		P	07 07 01.0	+0.2
ROSF				pmax		pmax		
	comp=Z,24nm,1.1s							
ROSF	Rostrenen	65.64	8	*e*P		P	07 07 01.0	+0.2
	comp=Z,24nm,1.1s							
SGMF	Saint Gilles	65.66	9	*e*P		P	07 07 00.7	-0.2
SGMF	Saint Gilles	65.66	9	*e*P		P	07 07 00.7	-0.2
SGMF	Saint Gilles	65.66	9	*e*P		P	07 07 00.7	-0.2
CABF	La Chapelle	65.81	15	*e*P		P	07 07 02.0	-0.1
	comp=Z,39nm,1.3s							
CABF	La Chapelle	65.81	15	*e*P		P	07 07 02.0	-0.1
CABF				pmax		pmax		
	comp=Z,39nm,1.3s							
CABF	La Chapelle	65.81	15	*e*P		P	07 07 02.0	-0.1
	comp=Z,39nm,1.3s							
GRR	Gorron	66.06	10	*e*P		P	07 07 03.4	0.0
	comp=Z,39nm,1.4s							
GRR	Gorron	66.06	10	*e*P		P	07 07 03.4	0.0
GRR				pmax		pmax		
	comp=Z,39nm,1.4s							
GRR	Gorron	66.06	10	*e*P		P	07 07 03.4	0.0
	comp=Z,39nm,1.4s							
EIL	Elat	66.37	46	LR		LR	07 31 19.2	
	comp=Z,51nm,20.9s,baz=278,slow=32							
SFTF	Sexfontaines	67.05	14	*e*P		P	07 07 09.9	+0.1
SFTF	Sexfontaines	67.05	14	*e*P		P	07 07 09.9	+0.1
DAVA	Damuels	67.47	18⇑	*i*P		P	07 07 11.8	-0.9
	comp=Z,7.8nm,0.9s							
SOKA	Soboth	68.58	21⇓	*i*P		P	07 07 20.1	+0.5
	comp=Z,5.4nm,0.9s							
BAIF	Baives	68.61	13	*e*P		P	07 07 19.2	-0.4
BAIF	Baives	68.61	13	*e*P		P	07 07 19.2	-0.4
BAIF	Baives	68.61	13	*e*P		P	07 07 19.2	-0.4
MAW	Mawson	69.72	157	P		P	07 07 26.7	+0.3
MAW	Mawson	69.72	157	P		P	07 07 26.7	+0.3
	comp=Z,6.9nm,0.7s,baz=261,slow=7.3,SNR=15							
GERES	GERESS Array B	70.02	19	P		P	07 07 28.0	-0.5
GERES	GERESS Array B	70.02	19	P		P	07 07 28.0	-0.5
	comp=Z,0.9nm,0.7s,baz=201,slow=4.9,SNR=7.8							
GERES				LR		LR	07 37 48.6	
	comp=Z,108nm,18.7s,baz=64,slow=36							
TREC	Trest	70.99	20	AMS		AMS	07 38 50.0	
	comp=Z,100nm,18.3s							
PRU	Pruhonice	71.29	19	*e*P		P	07 07 34.8	-1.3
PRU				MLR		MLR		
	comp=Z,100nm,19.9s							
PRU	Pruhonice	71.29	19	*e*P		P	07 07 34.8	-1.3
PRU				AMS		AMS	07 38 20.0	
	comp=Z,100nm,19.9s							
PRA	Prague	71.32	19	P		P	07 07 35.0	-1.3
VYHS	Vyhne	71.48	23	*e*P		P	07 07 37.3	0.0
VYHS				pmax		pmax		
	comp=Z,4.0nm,1.1s							
VYHS	Vyhne	71.48	23	*e*P		P	07 07 37.3	0.0
BRG	Berggiesshubel	71.88	18	*e*(P)		P	07 07 37.2	-2.4
	comp=Z,6.2nm,1.4s							
BRG	Berggiesshubel	71.88	18	*e*P		P	07 07 37.2	-2.4
BRG				pmax		pmax		
	comp=Z,6.0nm,1.4s							
BR131	Keskin Array S	71.93	37	*e*P		P	07 07 40.8	+0.5
	comp=Z,3.8nm,0.9s							
BRTR	Keskin Array B	71.93	37	P		P	07 07 41.0	+0.7
BRTR	Keskin Array B	71.93	37	P		P	07 07 41.1	+0.7
	comp=Z,5.2nm,1.0s,baz=197,slow=6.3,SNR=22							
MLR	Muntele Rosu	72.03	29	P		P	07 07 40.8	0.0
MLR	Muntele Rosu	72.03	29	P		P	07 07 40.8	0.0
	comp=Z,1.4nm,0.8s,baz=159,slow=7.7,SNR=10.0							
MORC	Moravsky Berou	72.10	21	*e*P		P	07 07 41.0	0.0
MORC	Moravsky Berou	72.10	21	*e*P		P	07 07 41.0	0.0
DPC	Dobruska-Polom	72.17	20	*e*P		P	07 07 41.1	-0.4
DPC	Dobruska-Polom	72.17	20	*e*P		P	07 07 41.1	-0.4
UPC	Upice	72.21	20	*e*P		P	07 07 42.4	+0.8
UPC	Upice	72.21	20	*e*P		P	07 07 42.4	+0.8
OKC	Ostrava-Krasne	72.36	21	AMS		AMS	07 39 00.0	
	comp=Z,100nm,22.6s							
EKA	Eskdalemuir Ar	72.52	7	P		P	07 07 43.6	+0.3
EKA	Eskdalemuir Ar	72.52	7	P		P	07 07 43.6	+0.3
	comp=Z,4.0nm,1.0s,baz=168,slow=5.0,SNR=7.3							
CRVS	Cervenica-Dubn	72.81	24	*e*P		P	07 07 42.0	-3.3
CRVS				pmax		pmax		
	comp=Z,8.0nm,1.5s							
CRVS	Cervenica-Dubn	72.81	24	*e*P		P	07 07 42.0	-3.3
KOLS	Kolonicke sedl	73.15	24	*e*P		P	07 07 53.4	+6.1
KOLS				pmax		pmax		
	comp=Z,4.0nm,1.3s							
KOLS	Kolonicke sedl	73.15	24	*e*pP		P	07 07 53.4	+6.1
QSPA	South Pole Qui	73.33	180	*e*P		P	07 07 49.6	+1.2
	comp=Z,17nm,1.1s							
QSPA	South Pole Qui	73.33	180	LR		LR	07 35 26.9	
	comp=Z,42nm,18.8s,baz=62,slow=32							
AK02	Malin Array Si	77.35	27	*e*P		P	07 08 10.4	-0.9
AK01	Malin Array Si	77.37	27	*e*P		P	07 08 10.4	-1.1
KIEV	Kiev	77.38	27	*e*P		P	07 08 11.2	-0.3
KIEV				pmax		pmax		
	comp=Z,45nm,2.2s							
KIEV	Kiev	77.38	27	*e*P		P	07 08 11.2	-0.3
	comp=Z,45nm,2.2s							
AKASG	Malin Array Be	77.39	27	P		P	07 08 10.9	-0.7
AKASG	Malin Array Be	77.39	27	P		P	07 08 10.9	-0.7
AKASG	Malin Array Be	77.39	27	P		P	07 08 10.9	-0.7
	comp=Z,2.7nm,0.6s,baz=220,slow=5.3,SNR=8.1							
KBZ	Khabaz	79.84	38	P		P	07 08 25.5	+0.3
KBZ	Khabaz	79.84	38	P		P	07 08 25.5	+0.3
KBZ	Khabaz	79.84	38	P		P	07 08 25.5	+0.3
	comp=Z,2.5nm,0.8s,baz=197,slow=6.1,SNR=6.8							
HFS	Hagfors	80.01	14	P		P	07 08 25.7	-0.1
HFS	Hagfors	80.01	14	P		P	07 08 25.7	-0.1
	comp=Z,2.7nm,0.7s,baz=190,slow=7.4,SNR=9.9							
NB2	NORSAR Subarra	80.29	12	P		P	07 08 27.7	+0.3
	comp=Z,2.9nm,0.9s,baz=206,slow=5.9							
NOA	NORSAR Array B	80.29	12	P		P	07 08 27.8	+0.3
NOA	NORSAR Array B	80.29	12	P		P	07 08 27.8	+0.3
	comp=Z,2.1nm,0.9s,baz=204,slow=5.9,SNR=7.2							
SDMD	Soldier's Deli	80.70	316	*e*P		P	07 08 31.3	+1.3
	comp=Z,12nm,1.0s							
FINES	FINESS Array B	84.41	18	P		P	07 08 47.9	-0.9
FINES	FINESS Array B	84.41	18	P		P	07 08 47.9	-0.9
	comp=Z,4.1nm,1.0s,baz=193,slow=5.6,SNR=6.1							
SBA	Scott Base	85.49	180	*e*P		P	07 08 55.1	+0.8
SBA				pmax		pmax		
	comp=Z,13nm,1.0s							
SBA	Scott Base	85.49	180	*e*P		P	07 08 55.1	+0.8
	comp=Z,13nm,1.0s							
VNDA	Vanda	85.80	179	P		P	07 08 56.2	+0.4
VNDA	Vanda	85.80	179	P		P	07 08 56.2	+0.4
	comp=Z,3.1nm,0.9s,baz=214,slow=4.2,SNR=20							
VNDA				LR		LR	07 42 11.7	
	comp=Z,99nm,18.2s,baz=358,slow=32							
WVT	Waverly	86.99	309	*e*P		P	07 09 01.7	-0.6
WVT				pmax		pmax		
	comp=Z,8.0nm,1.0s							
WVT	Waverly	86.99	309	*e*P		P	07 09 01.7	-0.6
	comp=Z,7.6nm,1.0s							
OLIL	Olney	88.21	311	*e*P		P	07 09 08.2	+0.1
	comp=Z,14nm,1.0s							
SIUC	Southern Illin	88.63	310	*e*P		P	07 09 10.0	-0.1
	comp=Z,11nm,0.9s							
ARCES	ARCESS Array B	90.65	13	P		P	07 09 18.8	0.0
ARCES	ARCESS Array B	90.65	13	P		P	07 09 18.8	0.0
	comp=Z,1.7nm,0.9s,baz=203,slow=3.9,SNR=5.3							
JFWS	Jewell Farm	91.32	315	P		P	07 09 22.1	-0.5
JFWS	Jewell Farm	91.32	315	P		P	07 09 22.1	-0.5
JCT	Junction City	94.51	300	*e*P		P	07 09 37.7	+0.1
JCT				pmax		pmax		
	comp=Z,6.0nm,0.9s							
JCT	Junction City	94.51	300	*e*P		P	07 09 37.7	+0.1
	comp=Z,5.9nm,0.9s							
TXAR	Lajitas Array	97.42	298	P		Pdif	07 09 51.2	+0.1
TXAR	Lajitas Array	97.42	298	P		Pdif	07 09 51.2	+0.1
	comp=Z,1.0nm,1.0s,baz=121,slow=4.8,SNR=7.3							
GDL2	Guadalupe Moun	98.73	301	*e*P		P	07 09 55.0	-1.8
KULM	Kulim	115.50	92	*e*PKPdf		PKPdf	07 14 59.2	-0.6
LZH	Lanzhou	122.43	58	*e*PKP		PKPdf	07 15 13.5	+0.7
LZH				sPKP			07 15 18.3	
LZH				*e*PP		PP	07 16 57.5	+8.2
LZH				SKKS			07 23 44.0	
LZH				*e*SS		SS	07 33 32.5	+1.9
LZH				AMB		AMB		
	comp=Z,100nm,8.3s							
LZH				LR		LR		
	comp=N,150nm,18.2s							
LZH				LR		LR		
	comp=E,140nm,18.5s							
LZH				LR		LR		
	comp=Z,190nm,20.1s							
ILAR	Eielson Array	122.49	338	PKP		PKPdf	07 15 10.9	-0.9
ILAR	Eielson Array	122.49	338	PKP		PKPdf	07 15 10.9	-0.9
	comp=Z,1.0nm,0.9s,baz=53,slow=3.5,SNR=12							
SONM	Songino Array	122.92	44	PKP		PKPdf	07 15 12.2	-1.0
SONM	Songino Array	122.92	44	PKP		PKPdf	07 15 12.2	-1.0
	comp=Z,0.6nm,0.7s,baz=270,slow=1.4,SNR=3.3							
GYA	Guiyang	124.82	69	*e*Pdif		Pdif	07 11 52.5	-0.5
GYA				PKP		PKiKP	07 15 17.8	-0.1
GYA				PP		PP	07 17 09.5	+3.9
GYA				PKS		PKSdf	07 18 51.3	-3.1
GYA				SKKS			07 24 01.8	
GYA				SS		SS	07 34 01.8	+0.5
GYA				AMB		AMB		
	comp=Z,120nm,8.0s							
GYA				LR		LR		
	comp=N,150nm,20.8s							
GYA				LR		LR		
	comp=E,130nm,22.0s							
GYA				LR		LR		
	comp=Z,170nm,21.8s							
FITZ	Fitzroy Crossi	127.56	130	PKP		PKPdf	07 15 22.4	-0.4
FITZ	Fitzroy Crossi	127.56	130	PKP		PKPdf	07 15 22.4	-0.4
	comp=Z,4.0nm,0.9s,baz=202,slow=4.1,SNR=6.2							
BILL	Bilibino	128.83	360	*i* PKIKP		PKPdf	07 15 21.3	-2.5
BILL				pmax		pmax		
	comp=Z,28nm,1.1s							
ASAR	Alice Springs	129.23	142	PKP		PKPdf	07 15 25.8	-0.3
ASAR	Alice Springs	129.23	142	PKP		PKPdf	07 15 25.8	-0.3
	comp=Z,1.9nm,0.9s,baz=194,slow=1.5,SNR=12							
BJI	Beijing	131.53	51	PKP		PKPdf	07 15 12.0	-18
WRA	Warramunga Arr	132.28	139	PKP		PKPdf	07 15 30.2	-1.7
WRA	Warramunga Arr	132.28	139	PKP		PKPdf	07 15 30.2	-1.7
	comp=Z,0.9nm,0.8s,baz=238,slow=2.1,SNR=9.1							
MDJ	Mudanjiang	139.03	40	PKP		PKPdf	07 15 41.5	-2.1
MJAR	Matsushiro Arr	148.83	46	PKPbc		PKPbc	07 16 04.0	-0.9
MJAR	Matsushiro Arr	148.83	46	PKPbc		PKPbc	07 16 04.0	-0.9
	comp=Z,3.3nm,0.9s,baz=305,slow=3.6,SNR=5.4							

VIE ***30*** *07:00:48.0±0.4,45°.25N×14°.62E,h9km±1km,mb1.5/1, ML2.3/1, Error ellipse: s-maj=2.4km s-min=1.0km az=0.0 19 km ESE of Rijeka*

CSEM 30 07:00:47.3±0.1,45°.23N×14°.58E,h15km,ML2.4/5,2C-1D, Error ellipse: s-maj=3.5km s-min=2.1km az=62.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
KNDS	Knezji Dol	0.33	335	*i* Pg		Pg	07 00 54.2	-0.1
KNDS				*e*Sg		Sg	07 00 59.4	+0.3
KNDS								
	comp=Z,44nm,0.1s							
KNDS	Knezji Dol	0.33	335	Pg		Pg	07 00 54.2	-0.1
KNDS				*e*Sg		Sg	07 00 59.4	+0.3
	comp=Z,44nm,0.1s							
GBRS	Gornja Briga	0.34	28⇓	*i*Pg		Pg	07 00 54.5	+0.1
GBRS				*i* Sg		Sg	07 00 59.1	-0.2
SKDS	Skadanscina	0.51	309	*i* Pg		Pg	07 00 57.0	-0.4
SKDS				*i* Sg		Sb	07 01 05.2	-0.1
SKDS								
	comp=Z,25nm,0.2s							
SKDS	Skadanscina	0.51	309	*i* Pg		Pg	07 00 57.0	-0.5
SKDS				*i* Sg		Sb	07 01 05.2	-0.1
	comp=Z,25nm,0.2s							
CEY	Cerknica	0.52	348	*i* Pg		Pg	07 00 57.5	-0.2
CEY				*i* Sg		Sb	07 01 05.8	+0.2
CEY								
	comp=Z,22nm,0.1s							
CEY	Cerknica	0.52	348	*i* Pg		Pg	07 00 57.5	-0.2
CEY				*i* Sg		Sb	07 01 05.8	+0.2
	comp=Z,22nm,0.1s							
BOJS	Bojanci	0.55	60	*i* Pg		Pg	07 00 58.2	+0.1
BOJS				*e*Sg		Sg	07 01 05.6	+0.2
BOJS								
	comp=Z,12nm,0.1s							
BOJS	Bojanci	0.55	60	*i* Pg		Pg	07 00 58.2	+0.1
BOJS				*e*Sg		Sg	07 01 05.6	+0.1
	comp=Z,12nm,0.1s							
VISS	Visnje	0.60	17	*i* Pg		Pg	07 00 58.7	-0.5
VISS				*i* Sg		Sg	07 01 07.5	+0.3
VISS	Visnje	0.60	17	*i* Pg		Pg	07 00 58.7	-0.5
VISS				*i* Sg		Sg	07 01 07.5	+0.3
NVLJ	Novalja	0.70	163	*i* Pg		Pg	07 01 00.8	-0.2
NVLJ				Sg		Sn	07 01 12.2	-0.9
NVLJ	Novalja	0.70	163	*i* Pg		Pg	07 01 00.7	-0.2
NVLJ				Sg		Sn	07 01 12.1	-1.0
VOY	Vojsko	0.94	329	*e*Pg		Pg	07 01 05.7	+0.1
VOY				*e*Sg		Sg	07 01 18.4	+0.4
VOY	Vojsko	0.94	329	*e*Pg		Pg	07 01 05.7	+0.1
VOY				*e*Sg		Sg	07 01 18.4	+0.4
UDBI	Udbina	1.10	129	*e*Pg		Pg	07 01 08.6	+0.1
UDBI						Sg	07 01 26.1	+3.0
UDBI	Udbina	1.10	129	*e*Pg		Pg	07 01 08.6	0.0
UDBI						Sg	07 01 26.1	+3.0
OBKA	Obir	1.28	359⇑	*i*Pg		Pg	07 01 12.2	0.0
OBKA			⇑	*i*Sg		Sg	07 01 29.8	+0.9
	comp=Z,12nm,0.3s							
OBKA	Obir	1.28	359	Pg		Pg	07 01 12.2	+0.1
OBKA				Sg		Sg	07 01 29.8	+0.9
	comp=Z,12nm,0.3s							

IDC ***30*** *07:13:05.2±1.1,17°.16N×119°.95E,h0km,mb3.8/5, mb1 4.0/5,mb1mx3.6/26,mbtmp3.8/5,Error ellipse: s-maj=59.2km s-min=20.3km az=71.0*

MAN ***30*** *07:13:07,17°.49N×119°.50E,h21km,mb4.6,ML3.4,MS3.3*

ISCJB ***30*** *07:13:08.7±0.8,17°.29N±0°.06×119°.68E±0°.07,h32km, mb3.7/5,Error ellipse: s-maj=9.4km s-min=7.9km az=5.0*

ISC 30 07:13:10.2±1.0,17°.31N±0°.06×119°.86E±0°.08,h32km,n12, σ1§72/15,mb3.9/5,2C,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
ABRA	Dolores	0.88	67	*e*P		Pb	07 13 27.2	+0.2
BOLP	Bolinao	0.93	177	*e*P		Pb	07 13 26.9	-1.0
BOLP				*e*S		Sb	07 13 44.1	+4.3
BCPH	Baguio City Da	1.15	143⇑	*i*P		Pn	07 13 26.1	-4.2
BCPH				*i* S		Sb	07 13 45.4	-1.0
PIP	Pasuquin	1.24	35⇑	*i*P		Pn	07 13 30.6	-0.8
PIP				*e*S		Sn	07 13 48.1	+1.0
APYP	Conner	1.43	67	*e*P		Pb	07 13 35.5	-0.8
CAUP	Cauayan	1.91	101	*e*P		Pb	07 13 45.8	+1.4
CVP	Callao Caves	1.91	78	*e*P		Pb	07 13 43.7	-0.7
CVP				*i* S		Sb	07 14 09.0	+1.1
KSRS	Korea Array	21.29	18	P		P	07 17 54.5	+0.4
	2.4nm,0.6s,baz=201,slow=11,SNR=9.0							
WRA	Warramunga Arr	39.66	158	P		P	07 20 37.3	-2.1
	1.4nm,0.6s,baz=340,slow=9.0,SNR=13							
MKAR	Makanchi Array	42.69	322	P		P	07 21 05.3	+1.2
	0.3nm,0.7s,baz=141,slow=7.1,SNR=2.4							
ASAR	Alice Springs	42.97	161	P		P	07 21 05.1	-1.5
	1.3nm,0.5s,baz=338,slow=6.8,SNR=23							
KURBB	Kurchatov Arra	46.77	325	P		P	07 21 37.2	+0.6
	0.4nm,0.2s,baz=122,slow=8.4,SNR=3.0							

IDC ***30*** *07:22:19.2±0.4,31°.44N×104°.12E,h0km,mb4.6/33, mb1 4.7/35,mb1mx4.7/40,mbtmp4.6/35,ML3.9/2,MS4.0/19, Ms1 4.0/19,ms1mx3.9/38,Error ellipse: s-maj=13.1km s-min=9.5km az=56.0*

ISCJB ***30*** *07:22:20.9±0.8,31°.44N±0°.02×104°.06E±0°.02,h22km±5km, mb4.8/122,MS4.2/36,Error ellipse: s-maj=3.7km s-min=3.5km az=14.3*

BJI ***30*** *07:22:20.8,31°.46N×103°.98E,h24km,mB4.9/22,mb4.9/38, ML5.1/17,Ms5.0/58,Ms7 4.7/53*

NEIC ***30*** *07:22:21.0±0.2,31°.50N×104°.09E,h10km,mb5.0/65,Error ellipse: s-maj=5.0km s-min=3.8km az=224.0*

NEIC Felt [III] at Mianyang and [II] at Chengdu. Also felt at Deyang.

MOS ***30*** *07:22:22.4±0.8,31°.45N×104°.14E,h33km,mb5.1/71, MS4.1/14,Error ellipse: s-maj=7.2km s-min=4.0km az=117.8*

GCMT ***30*** *07:22:23.9±0.3,31°.37N×104°.20E,h20km,MW4.9, Moment Tensor Solution. s23,c27; s62,c102; Moment tensor: Scale 10^{16}Nm; M_{rr}3.07±.18; $M_{\theta\theta}$-0.78±.10; $M_{\phi\phi}$-2.29±.12; $M_{r\theta}$0.44±.19; $M_{r\phi}$-1.30±.06; $M_{\theta\phi}$0.27±.18; Best double couple: $M_0$3.10000×10^{16} NP1:ϕ_s206.00000°, δ41.00000°,λ83.00000°. NP2:ϕ_s34.00000°,δ49.00000°, λ96.00000°. Principal axes: T 3.1200, Pl84.0000°, Azm346.0000°; N -0.0500, Plg4.0000°, Azm211.0000°; P -3.0700, Plg4.0000°, Azm120.0000°; Data Used: II IU G CN IC.*

DJA ***30*** *07:22:27.9±1.2,31°.5°×10°.4E±1°.1,h66km±15km,M4.7/8, mB4.9/2,mb4.7/8,Mw(mB)4.2/2*

ISC 30 07:22:21.7±0.4,31°.43N±0°.03×104°.18E±0°.03,h16km±2km, h16km:pP-P,n408,σ1§32/428,mb4.9/122,MS4.2/36, 116C-10D,Sichuan

Code	Station Name	Δ°	AZ°	Phase	ID		Time	Res
				Op		ISC	h m s	ISC
CD2	Chengdu	0.63	215	Pg		Pg	07 22 32.3	-1.9
CD2				Sg		Sg	07 22 41.0	-1.6
CD2				smax		smax		
	comp=N,59μm,0.8s							
CD2				smax		smax		
	comp=E,33μm,0.5s							
LZH	Lanzhou	4.65	357	Pn		Pn	07 23 33.3	+1.8
LZH				Pg		Pb	07 23 45.3	+2.3
LZH				Sn		Sn	07 24 28.8	+3.6
LZH				Sg		Sg	07 24 46.8	-4.2
LZH				smax		smax		
	comp=N,2μm,1.1s							
LZH				smax		smax		
	comp=E,3μm,1.1s							
LZH				LR		LR		
	comp=N,17μm,6.9s							
LZH				LR		LR		
	comp=E,17μm,7.3s

BTO					LR	LR			
	comp=N,2μm,9.0s								
BTO					LR	LR			
	comp=E,1μm,10.4s								
HHC	**Hu-ho-hao-te**	**11.13**	**30**	*e*P	**Pn**		**07 24 59.0**	**-1.3**	
HHC				S	**Sn**		**07 27 03.5**	**-0.9**	
HHC				SS	**SnSn**		**07 27 16.8**	**+0.3**	
HHC				pmax	pmax				
	comp=Z,40nm,0.9s								
HHC				pmax	pmax				
	comp=Z,320nm,5.0s								
HHC				LR	LR				
	comp=N,3μm,7.7s								
HHC				LR	LR				
	comp=E,6μm,8.4s								
HHC				LR	LR				
	comp=Z,4μm,7.8s								
LSA	**Lhasa**	**11.36**	**265**	P	**Pn**		**07 25 06.0**	**+2.2**	
LSA				pP			07 25 11.3		
LSA				pmax	pmax				
	comp=Z,10.0nm,0.7s								
LSA				LR	LR				
	comp=N,1μm,10.0s								
LSA				LR	LR				
	comp=E,2μm,8.0s								
LSA				LR	LR				
	comp=Z,3μm,8.0s								
GZH	**Guangzhou**	**11.64**	**133**	P	**Pn**		**07 25 05.0**	**-2.2**	
GZH				S	**Sn**		**07 27 14.0**	**-2.8**	
GZH				LR	LR				
	comp=N,7μm,4.4s								
GZH				LR	LR				
	comp=E,7μm,4.6s								
GZH	**Guangzhou**	**11.64**	**133**	P	**Pn**		**07 25 05.0**	**-2.2**	
GZH				S	**Sn**		**07 27 14.0**	**-2.8**	
GZH				LR	LR				
	comp=N,7μm,4.4s								
GZH				LR	LR				
	comp=E,7μm,4.6s								
TIA	**Tai'an**	**11.77**	**63**	*e*P	**Pn**		**07 25 09.0**	**0.0**	
TIA				S	**Sn**		**07 27 25.0**	**+5.0**	
TIA				pmax	pmax				
	comp=Z,230nm,12.9s								
TIA				LR	LR				
	comp=N,1μm,11.0s								
TIA				LR	LR				
	comp=E,2μm,11.0s								
TIA				LR	LR				
	comp=Z,2μm,11.3s								
NJ2	**Nanjing**	**12.51**	**83**	*e*P	**Pn**		**07 25 20.8**	**+1.7**	
NJ2				PP	**P**		**07 25 31.3**	**+0.6**	
NJ2				S	Sn		07 27 44.5	+6.4	
NJ2				sS			07 27 52.5		
NJ2				pmax	pmax				
	comp=Z,10.0nm,1.0s								
NJ2				pmax	pmax				
	comp=Z,80nm,6.6s								
NJ2				LR	LR				
	comp=N,6μm,10.6s								
NJ2				LR	LR				
	comp=E,5μm,11.1s								
NJ2				LR	LR				
	comp=Z,7μm,13.3s								
BJI	**Beijing**	**12.98**	**45**	P	**Pn**		**07 25 26.0**	**+0.6**	
BJI				S	Sn		07 27 56.8	+7.3	
BJI				pmax	pmax				
	comp=Z,13nm,1.2s								
BJI				pmax	pmax				
	comp=Z,120nm,8.4s								
BJI				LR	LR				
	comp=N,2μm,12.7s								
BJI				LR	LR				
	comp=E,2μm,9.7s								
BJI				LR	LR				
	comp=Z,650nm,15.8s								
QIZ	**Qiongzhong**	**13.37**	**156**	P	Pn		07 25 35.5	+4.6	
QIZ				S	Sn		07 28 07.5	+8.3	
QIZ				pmax	pmax				
	comp=Z,25nm,1.8s								
QIZ				LR	LR				
	comp=N,3μm,8.0s								
QIZ				LR	LR				
	comp=E,1μm,8.5s								
QIZ				LR	LR				
	comp=Z,3μm,12.8s								
CHTO	**Chiang Mai**	**13.43**	**202**	*e*P	Pn		07 25 35.1	+3.4	
CHTO	**Chiang Mai**	**13.43**	**202**	*e*Pn	Pn		07 25 35.1	+3.4	
CHTO	**Chiang Mai**	**13.43**	**202**	P	Pn		07 25 34.9	+3.2	
	comp=Z,25nn,0.9s								
CMAR	**Chiang Mai Arr**	**13.76**	**201**	Pn	**Pn**		**07 25 36.1**	**-0.1**	
CMAR				Sn	**Sn**		**07 28 11.5**	**+2.7**	
CMAR	**Chiang Mai Arr**	**13.76**	**201**	Pn	**Pn**		**07 25 36.1**	**-0.1**	
	comp=Z,0.3nm,0.3s,baz=11,slow=12,SNR=20								
CMAR				Sn	**Sn**		**07 28 11.5**	**+2.7**	
	comp=Z,1.1nm,0.3s,baz=28,slow=10,SNR=4.7								
CMAR				LR	LR		07 31 46.0		
	comp=Z,393nm,19.6s,baz=15,slow=41								
QZH	**Quanzhou**	**14.25**	**113**	*e*P	**P**		**07 25 50.3**	**+0.1**	
QZH				*e*S	S		07 28 32.3	-8.9	
QZH				LR	LR				
	comp=N,7μm,4.8s								
QZH				LR	LR				
	comp=E,5μm,5.0s								
QZH				LR	LR				
	comp=Z,10μm,10.0s								
TAPN	**Taplejung**	**14.92**	**258**	*e*P	**Pn**		**07 25 50.5**	**-1.8**	
	comp=Z,63nm,0.8s								
ODAN	**Odare**	**15.36**	**257**	*e*P	**Pn**		**07 25 55.1**	**-3.0**	
	comp=Z,26nm,0.5s								
RAMN	**Ramite**	**15.98**	**258**	*e*P	**Pn**		**07 26 03.5**	**-2.7**	
	comp=Z,98nm,1.1s								
DL2	**Dalian**	**16.09**	**58**	⇓P	**P**		**07 26 09.8**	**-0.6**	
DL2				S	**S**		**07 29 13.0**	**-5.6**	
DL2				pmax	pmax				
	comp=Z,57nm,1.4s								
DL2				pmax	pmax				
	comp=Z,170nm,9.9s								
DL2				LR	LR				
	comp=E,1μm,10.3s								
DL2				LR	LR				
	comp=Z,1μm,12.1s								
JIRN	**Jiri**	**16.10**	**261**	*e*P	**Pn**		**07 26 04.7**	**-3.1**	
	comp=Z,120nm,1.1s								
UBPT	**Khong Chiam**	**16.12**	**176**	P	**Pn**		**07 26 09.1**	**+1.3**	
	comp=Z,31nm,0.9s								
GUN	**Gumba**	**16.29**	**262**	*e*P	**Pn**		**07 26 07.7**	**-2.5**	
	comp=Z,155nm,0.9s								
SONM	**Songino Array**	**16.47**	**5**	Pn	**Pn**		**07 26 12.0**	**-0.2**	
SONM				Lg	Lg		07 31 03.1		
SONM	**Songino Array**	**16.47**	**5**	Pn	**Pn**		**07 26 12.0**	**-0.2**	
	comp=Z,0.2nm,0.3s,baz=188,slow=14,SNR=73								
SONM				Lg	Lg		07 31 03.1		
	comp=Z,0.1nm,0.3s,baz=192,slow=26,SNR=2.6								
ULN	**Ulaanbaatar**	**16.56**	**7**	*e*P	**Pn**		**07 26 13.3**	**0.0**	
	comp=Z,41nm,1.3s								
ULN	**Ulaanbaatar**	**16.56**	**7**	P	**Pn**		**07 26 13.3**	**0.0**	
	comp=Z,24nm,1.7s,comp=Z,332nm								
YHNB	**Yeheng**	**16.60**	**110**	*e*P	**P**		**07 26 17.3**	**+1.0**	
	comp=Z,42nn,1.0s								
SSLB	**Suanglung**	**16.69**	**113**	*e*P	**P**		**07 26 19.8**	**+2.4**	
	comp=Z,70nn,1.2s								
TPUB	**Ta-pu**	**16.70**	**115**	*e*P	**P**		**07 26 19.2**	**+1.8**	
	comp=Z,50nn,1.1s								
PKI	**Pulchoki**	**16.79**	**262**	*e*P	**Pn**		**07 26 13.7**	**-2.8**	
	comp=Z,290nn,1.3s								
KKN	**Kakani**	**16.83**	**262**	*e*P	**Pn**		**07 26 14.3**	**-2.6**	
	comp=Z,56nn,0.5s								
NACB	**Ninganchiao**	**17.01**	**111**	*e*P	**P**		**07 26 21.1**	**+0.3**	
	comp=Z,77nn,1.2s								
DMN	**Daman**	**17.03**	**262**	*e*P	**Pn**		**07 26 16.8**	**-2.7**	
	comp=Z,196nn,1.1s								
YULB	**Yu-li**	**17.17**	**114**	*e*P	**P**		**07 26 26.0**	**+3.4**	
	comp=Z,14nn,0.7s								
TWG	**Pinlang**	**17.30**	**116**	*e*P	**P**		**07 26 27.7**	**+3.7**	
	comp=Z,70nn,0.3s								
WMQ	**Urumqi**	**17.94**	**318**	P	**Pn**		**07 26 30.3**	**-0.2**	
WMQ				sP	**sP**		**07 26 37.5**	**-0.2**	
WMQ				PP	**PnPn**		**07 26 45.0**	**+3.5**	
WMQ				S	**Sn**		**07 29 46.0**	**-4.3**	
WMQ				sS	**S**		**07 29 57.0**	**+0.5**	
WMQ				pmax	pmax				
	comp=Z,25nm,0.7s								
WMQ				pmax	pmax				
	comp=Z,590nm,4.6s								
WMQ				LR	LR				
	comp=N,2μm,9.6s								
WMQ				LR	LR				
	comp=E,2μm,8.9s								
WMQ				LR	LR				
	comp=Z,1μm,14.4s								
DANN	**Dangsing**	**17.97**	**265**	*e*P	**Pn**		**07 26 27.3**	**-3.9**	
	comp=Z,74nm,0.6s								
KOLN	**Koldanda**	**18.26**	**264**	*e*P	**Pn**		**07 26 30.1**	**-4.6**	
	comp=Z,55nm,0.8s								
SNY	**Shenyang**	**18.67**	**51**	⇓P	**Pn**		**07 26 39.8**	**+0.4**	
SNY				S	**Sn**		**07 30 09.0**	**+1.2**	
SNY				pmax	pmax				
	comp=Z,17nn,2.5s								
SNY				pmax	pmax				
	comp=Z,210nn,7.1s								
SNY				LR	LR				
	comp=N,730nn,11.1s								
SNY				LR	LR				
	comp=E,750nn,15.9s								
SNY				LR	LR				
	comp=Z,1μm,14.9s								
PYUN	**Piuthan**	**18.69**	**265**	*e*P	P		07 26 34.2	-5.4	
	comp=Z,90nn,0.9s								
PHET	**Kaeng Krachan**	**18.91**	**194**	P	**Pn**		**07 26 43.6**	**+1.2**	
	comp=Z,85nn,0.9s								
TLY	**Talaya**	**20.23**	**359**	*c i*P	Pn		07 26 57.6	-0.5	
TLY				*e*SS	**PcP**		**07 31 11.7**	**+2.0**	
TLY				pmax	pmax				
	comp=Z,41nm,1.9s								
TLY				MLR	MLR				
	comp=Z,2μm,11.0s								
TLY	**Talaya**	**20.23**	**359**	Pn	Pn		07 26 58.3	+0.2	
	comp=Z,90nn,1.1s,SNR=5.1								
MOY	**Mondy**	**20.35**	**354**	*e*P	Pn		07 26 58.9	-0.7	
MOY				pmax	pmax				
	comp=Z,73nm,1.9s								
KSAR	**Wonju Array Be**	**20.43**	**66**	P	Pn		07 26 59.6	-0.7	
KSRS	**Korea Array**	**20.46**	**66**	P	**P**		**07 26 59.6**	**+1.1**	
	comp=Z,42nn,0.9s,baz=256,slow=10.0,SNR=63								
KSRS				LR	LR		07 34 49.7		
	comp=Z,355nn,19.8s,baz=261,slow=37								
IRK	**Irkutsk**	**20.80**	**0**	*e*P	Pn		07 27 03.4	-1.2	
IRK				pmax	pmax				
	comp=Z,162nn,2.0s								
CN2	**Changchun**	**20.82**	**48**	⇑P	Pn		07 27 04.0	-0.9	
CN2				*e*S	**S**		**07 30 56.5**	**+2.4**	
CN2				pmax	pmax				
	comp=Z,20nn,0.8s								
CN2				pmax	pmax				
	comp=Z,200nn,4.0s								
CN2				LR	LR				
	comp=N,700nn,16.0s								
CN2				LR	LR				
	comp=E,600nn,16.0s								
CN2				LR	LR				
	comp=Z,1μm,16.0s								
CIT	**Chita**	**21.69**	**16**	*e*P	**P**		**07 27 13.3**	**+1.5**	
JNU	**Nakatsue**	**22.62**	**79**	LR	LR		07 36 43.9		
	comp=Z,474nn,18.3s,baz=250,slow=38								
MK31	**Makanchi Array**	**22.77**	**319**	*e*P	**P**		**07 27 23.1**	**-0.3**	
MK31	**Makanchi Array**	**22.77**	**319**	*e*P	**P**		**07 27 23.1**	**-0.3**	
MKAR	**Makanchi Array**	**22.77**	**319**	*ce*P	**P**		**07 27 23.3**	**-0.1**	
MKAR				pmax	pmax				
	comp=Z,25nn,0.8s								
MKAR	**Makanchi Array**	**22.77**	**319**	*e*P	**P**		**07 27 23.4**	**0.0**	
MKAR	**Makanchi Array**	**22.77**	**319**	P	**P**		**07 27 23.4**	**-0.1**	
	comp=Z,25nn,0.8s,baz=116,slow=11,SNR=127								
MKAR				LR	LR		07 36 07.5		
	comp=Z,199nn,18.6s,baz=125,slow=36								
MDJ	**Mudanjiang**	**23.84**	**49**	P	**P**		**07 27 35.0**	**+0.9**	
MDJ				S	**S**		**07 31 52.3**	**+2.9**	
MDJ				pmax	pmax				
	comp=Z,87nn,1.6s								
MDJ				pmax	pmax				
	comp=Z,210nn,6.1s								
MDJ				LR	LR				
	comp=Z,290nn,17.5s								
KSH	**Kashi**	**24.27**	**297**	*e*P	**P**		**07 27 41.0**	**+2.6**	
KSH				*ep*P	**pP**		**07 27 45.3**	**+2.1**	
KSH				*es*P	**sP**		**07 27 48.3**	**+3.0**	
KSH				*e*PP	**PnPn**		**07 28 15.0**	**+6.8**	
KSH				*e*PcP	**PcP**		**07 31 22.0**	**+3.8**	
KSH				*e*S	**S**		**07 31 57.0**	**+0.4**	
KSH				*es*S	**sS**		**07 32 01.8**	**-2.8**	
KSH				pmax	pmax				
	comp=Z,10.0nn,0.8s								
KSH				pmax	pmax				
	comp=Z,460nn,3.8s								
KSH				LR	LR				
	comp=N,2μm,9.8s								
KSH				LR	LR				
	comp=E,1μm,7.8s								
KSH				LR	LR				
	comp=Z,860nn,8.7s								
AAA	**Alma-Ata**	**24.55**	**306**	*e*P	**P**		**07 27 41.5**	**+0.8**	
AAA				*e*S	**S**		**07 31 59.6**	**-1.3**	
AAA				pmax	pmax				
	comp=Z,400nn,3.4s								
AAA				smax	smax				
	comp=E,1μm,16.2s								
AAA				MLR	MLR				
	comp=Z,600nn,14.0s								
ULHL	**Ulahol**	**24.72**	**304**	*i* P	**P**		**07 27 43.1**	**+0.6**	
ULHL	**Ulahol**	**24.72**	**304**	P	**P**		**07 27 43.1**	**+0.6**	
	SNR=10								
USRK	**Ussuriysk Arra**	**25.27**	**52**	P	**P**		**07 27 47.6**	**+0.4**	
	comp=Z,17nn,0.7s,baz=257,slow=11,SNR=31								
USRK				LR	LR		07 38 35.2		
	comp=Z,322nn,19.9s,baz=48,slow=39								
TKM2	**Tokmak 2**	**25.38**	**305**	P	**P**		**07 27 48.3**	**-0.1**	
TKM2				pmax	pmax				
	comp=Z,13nn,0.9s								
TKM2	**Tokmak 2**	**25.38**	**305**	*e*P	**P**		**07 27 48.4**	**-0.1**	
	comp=Z,63nn,1.9s								
TKM2	**Tokmak 2**	**25.38**	**305**	P	**P**		**07 27 49.0**	**+0.6**	
	SNR=5.7								
KZA	**Kyzart**	**25.38**	**303**	*i* P	**P**		**07 27 50.0**	**+1.3**	
KZA	**Kyzart**	**25.38**	**303**	P	**P**		**07 27 50.0**	**+1.3**	
	SNR=21								
FRU	**Bishkek**	**26.04**	**304**	*e*P	**P**		**07 27 54.0**	**-0.2**	
FRU				*i*			07 28 06.0		
FRU				*i*			07 28 32.0		
AAK	**Ala-Archa**	**26.07**	**304**	P	**P**		**07 27 56.0**	**+1.3**	
AAK				pmax	pmax				
	comp=Z,2.0nn,0.4s								
AAK	**Ala-Archa**	**26.07**	**304**	*e*P	**P**		**07 27 56.1**	**+1.4**	
	comp=Z,5.7nn,0.7s								
AAK	**Ala-Archa**	**26.07**	**304**	P	**P**		**07 27 56.0**	**+1.3**	
	comp=Z,2.4nn,0.4s,baz=115,slow=8.7,SNR=5.6								
USP	**Ospenovka**	**26.25**	**305**	*i* P	**P**		**07 27 56.4**	**+0.3**	
USP	**Ospenovka**	**26.25**	**305**	P	**P**		**07 27 56.4**	**+0.3**	
	SNR=7.7								
ZAA0	**Zalesovo Array**	**26.45**	**334**	*e*P	**P**		**07 27 57.4**	**-0.3**	
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**		**07 27 57.8**	**0.0**	
ZALV				pmax	pmax				
	comp=Z,41nm,0.7s								
ZALV				MLR	MLR				
	comp=Z,316nn,21.4s								
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**		**07 27 57.8**	**0.0**	
ZALV	**Zalesovo Beam**	**26.45**	**334**	P	**P**		**07 27 57.8**	**0.0**	
	comp=Z,41nn,0.7s,baz=133,slow=9.2,SNR=137								
ZALV				LR	LR		07 39 10.2		
	comp=Z,316nn,21.4s,baz=273,slow=38								
AML	**Almayashu**	**26.52**	**302**	*i* P	**P**		**07 27 59.7**	**+0.7**	
AML	**Almayashu**	**26.52**	**302**	P	**P**		**07 27 59.7**	**+0.7**	
	SNR=8.9								
EKS2	**Erkin-Say**	**26.59**	**303**	*e*P	**P**		**07 28 00.0**	**+0.7**	
EKS2				pmax	pmax				
	comp=Z,9.0nn,1.0s								
EKS2	**Erkin-Say**	**26.59**	**303**	*e*P	**P**		**07 28 00.0**	**+0.7**	
	comp=Z,8.9nn,1.0s								
IPM	**Ipoh**	**26.98**	**187**	*e*P	**P**		**07 28 03.6**	**+0.8**	
	comp=Z,10nn,0.7s								
IPM	**Ipoh**	**26.98**	**187**	P	**P**		**07 28 02.6**	**-0.2**	
	comp=Z,15nn,0.9s								
KURBB	**Kurchatov Arra**	**27.01**	**323**	P	**P**		**07 28 03.0**	**+0.1**	
	comp=Z,23nn,0.9s,baz=133,slow=8.2,SNR=148								
KURK	**Kurchatov**	**27.02**	**323**	P	**P**		**07 28 03.0**	**+0.1**	
KURK				pmax	pmax				
	comp=Z,23nn,0.9s								
KURK	**Kurchatov**	**27.02**	**323**	P	**P**		**07 28 03.0**	**+0.1**	
KURK	**Kurchatov**	**27.02**	**323**	P	**P**		**07 28 03.9**	**+1.0**	
	comp=Z,199nn,1.1s,SNR=24								
KLR	**Kul'dur**	**27.30**	**41**	*e*P	**P**		**07 28 02.0**	**-3.5**	
KLR				pmax	pmax				
	comp=E,72nn,1.4s								
KLR				pmax	pmax				
	comp=Z,120nn,1.4s								
KLR				MLR	MLR				
	comp=E,1μm,11.5s								
KLR				MLR	MLR				
	comp=Z,4μm,11.5s								
NVS	**Novosibirsk**	**27.73**	**334**	*e*P	**P**		**07 28 08.3**	**-1.0**	
NVS				pmax	pmax				
	comp=Z,43nn,1.9s								
NVS				pmax	pmax				
	comp=N,27nn,1.9s								
NVS				pmax	pmax				
	comp=E,10.0nn,1.5s								
MJAR	**Matsushiro Arr**	**28.58**	**70**	P	**P**		**07 28 17.6**	**+0.5**	
MJAR	**Matsushiro Arr**	**28.58**	**70**	P	**P**		**07 28 17.6**	**+0.5**	
	comp=E,2.3nn,0.7s,baz=269,slow=10,SNR=5.3								
MJAR				LR	LR		07 40 11.4		
	comp=E,187nn,18.9s,baz=210,slow=37								
HABR	**Khabarovsk**	**28.88**	**45**	*e*P	**P**		**07 28 17.2**	**-2.4**	
HABR				*e*SP	**sP**		**07 28 26.0**	**-0.5**	
HABR				*e*S	**S**		**07 33 07.0**	**-2.1**	
HABR				*e*			07 39 00.6		
HABR				pmax	pmax				
	comp=E,146nn,2.7s								
HABR				pmax	pmax				
	comp=N,85nn,3.9s								
HABR				pmax	pmax				
	comp=Z,86nn,2.0s								
HABR				MLR	MLR				
	comp=Z,455nn,16.0s								
PSI	**Prapat**	**28.91**	**191**	P	**P**		**07 28 21.1**	**+0.9**	
PSI	**Prapat**	**28.91**	**191**	P	**P**		**07 28 21.1**	**+0.9**	
	comp=Z,14nn,0.9s,baz=17,slow=7.6,SNR=13								
PSI				LR	LR		07 41 41.4		
	comp=Z,584nn,19.6s,baz=177,slow=40								
KK31	**Karatay Array**	**29.03**	**303**	*i* P	**P**		**07 28 20.4**	**-0.6**	
KK31				pmax	pmax				
	comp=Z,3.0nn,0.5s								
KKAR	**Karatay Array**	**29.03**	**303**	*e*P	**P**		**07 28 20.4**	**-0.6**	
KKAR	**Karatay Array**	**29.03**	**303**	*e*P	**P**		**07 28 20.4**	**-0.6**	
CLNS	**Chul'man**	**29.19**	**23**	*e*P	**P**		**07 28 23.4**	**+1.1**	
CLNS				*e**PP	**pP**		**07 28 28.5**	**+1.3**	
CLNS				*e*			07 29 16.7		
CLNS				*e*PPP	PPP		07 29 25.4		
CLNS				*e*			07 31 29.1		
CLNS				*e*S	**S**		**07 33 14.9**	**+0.9**	
CLNS				*e*SS	**SnSn**		**07 34 37.3**	**-1.7**	
CLNS				*e*			07 38 54.9		
CLNS				pmax	pmax				
	comp=Z,15nn,0.9s								
CLNS				pmax	pmax				
	comp=E,9.0nn,0.9s								
CLNS				pmax	pmax				
	comp=N,10.0nn,0.9s								
CLNS				pmax	pmax				
	comp=Z,3.0nn,0.9s								
CLNS				pmax	pmax				
	comp=N,6.0nn,0.9s								
CLNS				pmax	pmax				
	comp=E,6.0nn,0.9s								
CLNS				smax	smax				
	comp=N,78nn,17.0s								
CLNS				smax	smax				
	comp=E,64nn,15.1s								
CLNS				MLR	MLR				
	comp=N,593nn,11.0s								
CLNS				MLR	MLR				
	comp=Z,1μm,13.0s								
CLNS				MLR	MLR				
	comp=E,820nn,12.0s								
MYLDM	**Lahad Datu**	**29.37**	**150**	P	P		07 28 28.4	+4.2	
MYKOM	**Kota Tinggi**	**29.49**	**181**	P	**P**		**07 28 25.1**	**-0.1**	
	comp=E,23nn,1.0s								
KBL	**Kabul**	**29.55**	**286**	*e*P	**P**		**07 28 26.4**	**+0.5**	
KBL				pmax	pmax				
	comp=Z,22nn,1.2s								
KBL	**Kabul**	**29.55**	**286**	*e*P	**P**		**07 28 26.4**	**+0.5**	
	comp=Z,22nn,1.2s								
SBUM	**Sibu**	**29.81**	**164**	P	**P**		**07 28 29.6**	**+1.5**	
DAV	**Davao City (W)**	**31.42**	**136**	LR	LR		07 42 51.4		
	comp=Z,209nn,19.1s,baz=206,slow=39								
BVA0	**Borovoye Array**	**32.57**	**321**	*i* P	**P**		**07 28 52.1**	**0.0**	
BVA0				pmax	pmax				
	comp=Z,8.0nn,0.8s								
BVAR	**Borovoye Array**	**32.57**	**321**	P	**P**		**07 28 52.2**	**+0.1**	
BVAR				pmax	pmax				
	comp=Z,5.0nn,0.6s								
BVAR	**Borovoye Array**	**32.57**	**321**	P	**P**		**07 28 52.2**	**+0.1**	
BVAR	**Borovoye Array**	**32.57**	**321**	P	**P**		**07 28 52.2**	**+0.1**	
	comp=Z,5.2nn,0.6s,baz=115,slow=9.4,SNR=26								
ASAJ	**Asahikawa**	**32.61**	**56**	P	**P**		**07 28 53.1**	**+0.6**	
ASAJ	**Asahikawa**	**32.61**	**56**	P	**P**		**07 28 53.1**	**+0.6**	
	comp=Z,7.2nn,0.8s,baz=253,slow=11,SNR=3.0								
ASAJ				LR	LR		07 41 35.5		
	comp=Z,173nn,19.8s,baz=91,slow=35								
BRVK	**Borovoye**	**32.65**	**321**	P	**P**		**07 28 53.9**	**+1.2**	
	comp=Z,87nn,0.9s,SNR=6.2								
BRVK	**Borovoye**	**32.65**	**321**	*e*P	**P**		**07 28 52.5**	**-0.2**	
BRVK				pmax	pmax				
	comp=Z,9.0nn,0.6s								
BRVK	**Borovoye**	**32.65**	**321**	*e*P	**P**		**07 28 52.5**	**-0.2**	
	comp=Z,8.9nn,0.6s								
YSS	**Yuzh-Sakhalins**	**33.30**	**51**	*e*P	**P**		**07 29 00.0**	**+1.5**	
YSS				*e*			07 29 05.0		
YSS				MLR	MLR				
	comp=N,400nn,15.0s								
YSS				MLR	MLR				
	comp=Z,400nn,15.0s								
YAK	**Yakutsk**	**34.78**	**21**	*e*P	**P**		**07 29 10.8**	**-0.3**	
YAK				*e**PP	**pP**		**07 29 16.6**	**+0.5**	
YAK				*e*			07 30 28.7		
YAK				*e*PPP	PPP		07 30 40.0		
YAK				*e*			07 31 42.7		
YAK				*e*S	**S**		**07 34 38.2**	**-2.5**	
YAK				*e*SS	**SnSn**		**07 36 52.0**	**-2.3**	
YAK				pmax	pmax				
	comp=Z,65nn,1.1s								
YAK				pmax	pmax				
	comp=E,24nn,1.4s								
YAK				pmax	pmax				
	comp=N,19nn,1.3s								
YAK				pmax	pmax				
	comp=Z,9.0nn,0.4s								
YAK				pmax	pmax				
	comp=E,2.0nn,0.4s								
YAK				pmax	pmax				
	comp=N,3.0nn,0.4s								
YAK				smax	smax				
	comp=N,12nn,2.0s								
YAK				smax	smax				
	comp=E,25nn,2.2s								
YAK				MLR	MLR				
	comp=N,361nn,11.0s								
YAK				MLR	MLR				
	comp=Z,441nn,10.0s								
YAK				MLR	MLR				
	comp=E,289nn,12.0s								
YUK	**Yuzh-Kuril'sk**	**34.92**	**57**	*c i*P	**P**		**07 29 13.4**	**+0.8**	
YUK				*i*			07 30 24.4		
YUK				*i* PPP	PPP		07 30 47.3		
YUK				*e*S	**S**		**07 34 43.1**	**-0.3**	
YUK				*i* SSS	SSS		07 37 04.1		
YUK				MLR	MLR				
	comp=E,408nn,19.0s								
YUK				MLR	MLR				
	comp=Z,309nn,19.0s								
AB31

ARU 07 31 32.1
ARU S **S** **07 36 05.4 +2.0**
ARU SS **SS** **07 38 57.7 -3.7**
ARU pmax pmax
comp=Z,44nm,1.0s
ARU Arti 40.21 322 P **P** **07 29 57.2 0.0**
comp=Z,284nm,0.8s,SNR=5.2
SOKR Solikamsk 42.16 326*c iP* **P** **07 30 13.7 +0.5**
SOKR pmax pmax
comp=Z,70nm,1.1s
SOKR MLR MLR
comp=Z,470nm,16.0s
TIXI Tiksi 42.42 11 *eP* **P** **07 30 14.1 -1.0**
TIXI pmax pmax
comp=Z,15nm,1.7s
PETK Petropavlovsk- 43.91 44 P **P** **07 30 27.5 0.0**
PETK pmax pmax
comp=Z,7.0nm,0.8s
PETK MLR MLR
comp=Z,238nm,19.0s
PETK Petropavlovsk- 43.91 44 P **P** **07 30 27.5 0.0**
PETK Petropavlovsk- 43.91 44 P **P** **07 30 27.5 0.0**
comp=Z,6.5nm,0.8s,baz=225,slow=4.0,SNR=9.4
PETK LR LR 07 50 46.3
comp=Z,238nm,19.0s,baz=255,slow=39
KBZ Khabaz 49.06 303 P **P** **07 31 08.5 +0.4**
KBZ pmax pmax
comp=Z,1.0nm,0.4s
KBZ Khabaz 49.06 303 P **P** **07 31 08.4 +0.4**
KBZ Khabaz 49.06 303 P **P** **07 31 08.4 +0.4**
comp=Z,0.8nm,0.4s,baz=72,slow=9.6,SNR=3.9
VORD Divnogorie 50.84 312 *eP* **P** **07 31 18.4 -3.0**
VORD pmax pmax
comp=Z,10.0nm,0.8s
VORD pmax pmax
comp=N,40nm,0.9s
VORD pmax pmax
comp=E,120nm,0.8s
BILL Bilibino 50.85 25⇑ *iP* **P** **07 31 21.2 -0.1**
BILL *i* 07 31 26.2
BILL *e* 07 32 38.3
BILL pmax pmax
comp=Z,138nm,0.8s
BILL Bilibino 50.85 25 *eP* **P** **07 31 20.3 -1.0**
comp=Z,60nm,1.5s
VSR Storozhevoye 50.91 313 *eP* **P** **07 31 20.0 -1.9**
VSR pmax pmax
comp=Z,10.0nm,1.1s
VSR pmax pmax
comp=N,9.0nm,0.7s
VSR pmax pmax
comp=E,10.0nm,0.8s
MOS Moscow 51.66 319 *eP* P 07 31 23.1 -4.4
MOS *e* 07 33 20.7
MOS pmax pmax
comp=Z,52nm,0.9s
OBN Obninsk 52.28 318⇓ *iP* **P** **07 31 31.6 -0.5**
OBN *e* 07 31 38.4
OBN S S 07 38 49.0 -7.4
OBN pmax pmax
comp=Z,39nm,1.2s
OBN MLR MLR
comp=Z,300nm,18.0s
ANN Anapa 52.79 305 *eP* **P** **07 31 34.2 -1.9**
ANN pmax pmax
comp=Z,15nm,0.8s
FX1 Attu Island--F 53.23 45 P **P** **07 31 40.0 +0.7**
FX1 Attu Island--F 53.23 45 P **P** **07 31 40.0 +0.7**
comp=Z,8.0nm,0.7s,baz=280,slow=4.2,SNR=7.6
FITZ Fitzroy Crossi 53.39 154 *eP* **P** **07 31 40.5 -0.1**
comp=Z,8.7nm,1.0s
FITZ Fitzroy Crossi 53.39 154 P **P** **07 31 41.5 +0.9**
comp=Z,6.0nm,0.8s,baz=340,slow=8.0,SNR=5.3
LVZ Lovozero 53.59 334*c iP* **P** **07 31 40.6 -1.1**
LVZ pmax pmax
comp=Z,35nm,1.7s
APA Apatity 54.04 333⇑ *iP* **P** **07 31 45.0 +0.1**
APA pmax pmax
comp=Z,18nm,1.0s
APA MLR MLR
comp=Z,2μm,14.0s
KEV Kevo 56.46 336 *eP* **P** **07 32 02.2 -0.1**
KEV pmax pmax
comp=Z,20nm,0.7s
KEV Kevo 56.46 336 *eP* **P** **07 32 02.1 -0.1**
comp=Z,20nm,0.7s
BRTR Keskin Array B 56.63 299 P **P** **07 32 03.4 -0.9**
BRTR Keskin Array B 56.63 299 P **P** **07 32 03.4 -0.9**
comp=Z,1.4nm,0.8s,baz=100,slow=6.8,SNR=6.0
ARCES ARCESS Array B 56.99 336 P **P** **07 32 05.8 -0.3**
ARCES ARCESS Array B 56.99 336 P **P** **07 32 05.8 -0.3**
comp=Z,9.7nm,0.6s,baz=82,slow=8.0,SNR=79
ARE0 ARCESS Array S 56.99 336 *eP* **P** **07 32 05.7 -0.4**
AKASG Malin Array Be 57.21 313 P **P** **07 32 07.5 -0.4**
AKASG pmax pmax
comp=Z,1.0nm,0.4s
AKASG Malin Array Be 57.21 313 P **P** **07 32 07.5 -0.4**
AKASG Malin Array Be 57.21 313 P **P** **07 32 07.5 -0.4**
comp=Z,1.4nm,0.3s,baz=68,slow=6.6,SNR=15
AK01 Malin Array Si 57.22 313 *eP* **P** **07 32 07.6 -0.4**
KIEV Kiev 57.22 313 *eP* **P** **07 32 06.4 -1.6**
KIEV pmax pmax
comp=Z,9.0nm,1.1s
KIEV Kiev 57.22 313 *eP* **P** **07 32 06.4 -1.6**
comp=Z,9.1nm,1.1s
AK02 Malin Array Si 57.23 313 *eP* **P** **07 32 07.1 -1.0**
FIA1 FINESS Array S 57.33 326 *eP* **P** **07 32 07.8 -0.8**
FINES FINESS Array B 57.33 326 P **P** **07 32 08.2 -0.4**
FINES FINESS Array B 57.33 326 P **P** **07 32 08.2 -0.4**
comp=Z,15nm,0.7s,baz=91,slow=7.6,SNR=41
FINES LR LR 07 58 53.0
comp=Z,152nm,18.2s,baz=116,slow=38
MICGM Minsk 57.34 318 *e* P 07 32 03.0 -5.8
MNK Minsk 57.37 318 *eP* P 07 32 03.0 -6.0
NACGM Naroch 57.90 318 *e* P 07 32 09.0 -3.8
COEN Coen 58.63 134 *eP* **P** **07 32 18.9 +0.6**
comp=Z,180nm,0.9s
WRAB Tennant Creek 58.71 146 P **P** **07 32 19.0 +0.3**
comp=Z,379nm,0.8s,SNR=20
WRAB Tennant Creek 58.71 146 *eP* **P** **07 32 19.1 +0.3**
WRAB pmax pmax
comp=Z,45nm,0.8s
WRAB Tennant Creek 58.71 146 *eP* **P** **07 32 19.1 +0.3**
comp=Z,45nm,0.8s
WRA Warramunga Arr 58.71 146 P **P** **07 32 19.2 +0.4**
WRA Warramunga Arr 58.71 146 P **P** **07 32 19.2 +0.4**
comp=Z,31nm,0.9s,baz=339,slow=7.8,SNR=126
SPITS Spitsbergen Ar 59.03 346 P **P** **07 32 20.1 -0.2**
SPITS Spitsbergen Ar 59.03 346 P **P** **07 32 20.1 -0.2**
comp=Z,6.3nm,0.6s,baz=53,slow=7.4,SNR=17
VRI Vrincioaia 59.93 308⇑ *iP* **P** **07 32 27.6 +0.5**
VRI Vrincioaia 59.93 308⇑ *iP* **P** **07 32 27.6 +0.5**
PLOR Plostina 59.99 308⇑ *iP* **P** **07 32 28.3 +0.8**
PLOR Plostina 59.99 308⇑ *iP* **P** **07 32 28.3 +0.8**
SUW Suwalki 60.14 318 *eP* **P** **07 32 27.8 -0.5**
ISR Istrita 60.26 307⇓ *iP* **P** **07 32 30.5 +1.1**
ISR Istrita 60.26 307⇓ *iP* **P** **07 32 30.5 +1.1**
BURAR Bucovina Array 60.47 310⇓ *iP* **P** **07 32 32.0 +1.2**
BUR08 Bucovina Ar. S 60.47 310 *eP* **P** **07 32 29.9 -0.9**
MLR Muntele Rosu 60.56 308⇑ *iP* **P** **07 32 32.3 +0.8**
LVV L'vov 60.65 313 *eP* **P** **07 32 31.0 -0.9**
VOIR 61.18 308⇑ *iP* **P** **07 32 34.2 -1.5**
VOIR 61.18 308⇑ *iP* **P** **07 32 34.2 -1.5**
KWP Kalwaria Pacla 61.53 313⇑ *iP* **P** **07 32 37.2 -0.7**
KWP Kalwaria Pacla 61.53 313 *eP* **P** **07 32 37.4 -0.5**
comp=Z,30nm,1.0s
KWP Kalwaria Pacla 61.53 313⇑ *iP* **P** **07 32 37.2 -0.7**
KWP Kalwaria Pacla 61.53 313 *eP* **P** **07 32 37.6 -0.3**
AS31 Alice Springs 61.74 149 *eP* **P** **07 32 42.6 +3.1**
ASAR Alice Springs 61.74 149 P **P** **07 32 40.0 +0.5**
ASAR Alice Springs 61.74 149 P **P** **07 32 40.0 +0.5**
comp=Z,7.5nm,0.8s,baz=331,slow=6.4,SNR=25
KOLS Kolonicke sedl 62.00 312 *eP* **P** **07 32 40.5 -0.5**
KOLS pmax pmax
comp=Z,5.0nm,1.5s
KOLS Kolonicke sedl 62.00 312 *eP* **P** **07 32 40.5 -0.5**
TRPA Tarpa 62.06 311⇑ *iP* P 07 32 36.1 -5.3
UZH Uzhgorod 62.07 312 *eP* **P** **07 32 43.0 +1.5**
UZH *i* 07 32 51.4
STHS Stebnicka Huta 62.51 313 *eP* **P** **07 32 44.1 -0.3**
STHS pmax pmax
comp=Z,4.0nm,1.3s
STHS Stebnicka Huta 62.51 313 *eP* **P** **07 32 44.1 -0.3**
NIE Niedzica 63.09 313 *eP* **P** **07 32 49.5 +1.2**
OJC Ojcow 63.16 314 *eP* **P** **07 32 48.3 -0.5**

VTS Vitosha 63.32 305⇑ P P 07 32 55.0 +4.9
VTS Vitosha 63.32 305⇑ *iP* P 07 32 55.0 +4.9
OKC Ostrava-Krasne 64.29 314 *eP* **P** **07 32 56.3 +0.1**
OKC *e* 07 33 03.6
OKC MLR MLR
comp=Z,300nm,16.0s
OKC Ostrava-Krasne 64.29 314 *eP* **P** **07 32 56.3 +0.1**
OKC *ex* x 07 33 03.6
OKC AMS AMS 08 01 50.0
comp=Z,300nm,16.0s
VYHS Vyhne 64.30 313 *eP* **P** **07 32 55.7 -0.6**
VYHS pmax pmax
comp=Z,9.0nm,1.4s
VYHS Vyhne 64.30 313 *eP* **P** **07 32 55.7 -0.6**
NB2 NORSAR Subarra 64.42 327 P **P** **07 32 55.6 -1.3**
comp=Z,41nm,1.4s,baz=73,slow=6.9
NB2 NORSAR Subarra 64.42 327 P **P** **07 32 55.6 -1.3**
baz=73,slow=6.9
NOA NORSAR Array B 64.42 327 P **P** **07 32 55.7 -1.3**
NOA NORSAR Array B 64.42 327 P **P** **07 32 55.7 -1.3**
comp=Z,2.6nm,0.4s,baz=62,slow=7.9,SNR=34
NOA LR LR 08 00 04.2
comp=Z,128nm,18.9s,baz=70,slow=35
NAO01 NORSAR Array S 64.63 327 *eP* **P** **07 32 56.9 -1.4**
comp=Z,2.0nm,0.4s
IDI Anoyia 64.63 297 *eP* **P** **07 32 56.8 -2.0**
comp=Z,8.3nm,0.9s
MORC Moravsky Berou 64.68 314 *eP* **P** **07 32 57.7 -1.1**
MORC pmax pmax
comp=Z,8.0nm,1.0s
MORC Moravsky Berou 64.68 314 *eP* **P** **07 32 57.7 -1.1**
comp=Z,8.0nm,1.0s
KSP Ksiaz 65.08 316 *eP* **P** **07 33 01.1 -0.3**
PKSM Moragy 65.19 310⇓ P **P** **07 33 01.7 -0.4**
PKSM Moragy 65.19 310⇓ *iP* **P** **07 33 01.7 -0.4**
NWAO Narrogin (SRO) 65.19 168 LR LR 08 01 24.3
comp=Z,208nm,20.6s,baz=212,slow=36
CTA Charters Tower 65.22 136 P **P** **07 33 03.0 +0.4**
CTA Charters Tower 65.22 136 P **P** **07 33 03.0 +0.4**
comp=Z,7.9nm,0.8s,baz=321,slow=8.6,SNR=6.0
CTAO Charters Tower 65.22 136 *eP* **P** **07 33 03.0 +0.4**
CTAO pmax pmax
comp=Z,13nm,1.0s
CTAO Charters Tower 65.22 136 *eP* **P** **07 33 03.0 +0.4**
comp=Z,13nm,1.0s
DPC Dobruska-Polom 65.23 315 *eP* **P** **07 33 02.0 -0.4**
DPC *e* 07 33 08.7
DPC Dobruska-Polom 65.23 315 *eP* **P** **07 33 02.0 -0.4**
DPC *ep*P **pP** **07 33 08.7 +1.1**
DPC AMS AMS 08 02 20.0
UPC Upice 65.36 315 *eP* **P** **07 33 03.5 +0.3**
UPC *e* 07 33 10.2
UPC Upice 65.36 315 *eP* **P** **07 33 03.5 +0.3**
UPC *ex* x 07 33 10.2
KONO Kongsberg 65.64 326 *eP* **P** **07 33 03.3 -1.5**
KONO pmax pmax
comp=Z,5.0nm,0.8s
KONO Kongsberg 65.64 326 *eP* **P** **07 33 03.3 -1.5**
comp=Z,4.8nm,0.8s
PVCC Panska Ves 66.22 316 AMS AMS 08 03 00.0
comp=Z,400nm,18.2s
CONA Conrad Observa 66.36 313⇑ *iP* **P** **07 33 09.7 -0.1**
comp=Z,10nm,1.4s
PRU Pruhonice 66.43 315 *eP* **P** **07 33 10.3 +0.2**
PRU *e* 07 33 16.4
PRU MLR MLR
comp=Z,400nm,17.8s
PRU Pruhonice 66.43 315 *eP* **P** **07 33 10.3 +0.2**
PRU *ep*P **pP** **07 33 16.4 +1.1**
PRU AMS AMS 08 03 10.0
comp=Z,400nm,17.8s
BRG Berggiesshubel 66.47 316 *eP* **P** **07 33 09.9 -0.4**
comp=Z,7.7nm,0.9s
BRG *e* 07 33 16.2
comp=Z,9.9nm,0.8s
BRG
comp=N,92nm,19.3s
BRG
comp=E,89nm,18.6s
BRG
comp=Z,107nm,14.7s
BRG Berggiesshubel 66.47 316 *eP* **P** **07 33 09.9 -0.4**
BRG *e* 07 33 16.2
BRG pmax pmax
comp=Z,8.0nm,0.9s
BRG pmax pmax
comp=Z,10.0nm,0.8s
BRG MLR MLR
comp=N,92nm,19.3s
BRG MLR MLR
comp=E,89nm,18.6s
BRG MLR MLR
comp=Z,107nm,14.7s
DAG Danmarks Havn 66.53 348⇑ *iP* **P** **07 33 08.8 -1.5**
comp=Z,2.3nm,1.1s
CLL Collm 66.86 317⇑ *iP* **P** **07 33 12.0 -0.8**
CLL *e* 07 33 18.0
CLL pmax pmax
comp=Z,14nm,1.4s
CLL Collm 66.86 317⇑ *iP* **P** **07 33 12.0 -0.8**
comp=Z,14nm,1.4s
CLL *es*P **sP** **07 33 18.0 -1.9**
CLL *eP*cP **PcP** **07 33 40.0 -1.4**
CLL *e*(SS) 07 46 48.0
CLL *e*SSS SSS 07 49 42.0
MUD Monsted U'grnd 67.03 323 *i P* **P** **07 33 13.3 -0.4**
comp=Z,10nm,1.2s
COLD Coldfoot 67.14 24 *eP* **P** **07 33 14.7 +0.3**
comp=Z,38nm,1.0s
SOKA Soboth 67.35 312⇑ *iP* **P** **07 33 15.4 -0.7**
comp=Z,7.7nm,1.2s
GERES GERESS Array B 67.36 314 P **P** **07 33 16.1 -0.1**
GERES GERESS Array B 67.36 314 P **P** **07 33 16.1 -0.1**
comp=Z,1.3nm,0.5s,baz=59,slow=5.1,SNR=18
SVW2 Sparrevohn 67.68 31 *eP* **P** **07 33 18.9 +1.1**
VISS Visnje 67.81 311 *i P* P 07 33 27.7 +8.8
JAVS Javornik 68.27 311 *i P* P 07 33 27.5 +5.6
CHGN Chignik 68.32 36 *eP* **P** **07 33 20.0 -1.8**
TRF Thorofare Moun 68.86 28 *eP* **P** **07 33 24.3 -1.0**
comp=Z,5.8nm,0.8s
ABTA Abfaltersbach 68.92 313⇑ *iP* **P** **07 33 25.4 -0.6**
comp=Z,2.3nm,0.7s
COLA College 69.10 26 *eP* **P** **07 33 26.5 -0.1**
COLA pmax pmax
comp=Z,56nm,1.0s
COLA College 69.10 26 *eP* **P** **07 33 26.5 -0.1**
comp=Z,56nm,1.0s
MCK McKinley 69.25 27 *eP* **P** **07 33 27.4 -0.2**
MCK pmax pmax
comp=Z,13nm,0.9s
MCK McKinley 69.25 27 *eP* **P** **07 33 27.4 -0.2**
comp=Z,13nm,0.9s
ILAR Eielson Array 69.51 26 P **P** **07 33 28.5 -0.7**
ILAR Eielson Array 69.51 26 P **P** **07 33 28.5 -0.7**
comp=Z,13nm,1.0s,baz=285,slow=5.5,SNR=85
FETA Feichten 69.92 313⇑ *iP* **P** **07 33 31.2 -1.1**
comp=Z,12nm,1.4s
PMR Palmer 70.22 29 *eP* **P** **07 33 33.2 -0.4**
PMR pmax pmax
comp=Z,38nm,0.9s
PMR Palmer 70.22 29 *eP* **P** **07 33 33.2 -0.4**
comp=Z,38nm,0.9s
SML Sawmill 70.44 29 *eP* **P** **07 33 35.0 0.0**
SML pmax pmax
comp=Z,16nm,0.9s
SML Sawmill 70.44 29 *eP* **P** **07 33 35.0 0.0**
comp=Z,16nm,0.9s
OHAK Old Harbor 70.45 34 *eP* **P** **07 33 34.9 -0.2**
comp=Z,27nm,0.8s
KDAK Kodiak Island 70.53 34 P **P** **07 33 35.9 +0.4**
comp=Z,198nm,1.0s,SNR=8.5
KDAK Kodiak Island 70.53 34 *eP* **P** **07 33 35.4 -0.1**
comp=Z,52nm,1.3s
KDAK Kodiak Island 70.53 34 P **P** **07 33 35.6 +0.1**
comp=Z,28nm,0.8s,baz=291,slow=3.6,SNR=25
PAX Paxson 70.99 27 *eP* **P** **07 33 37.8 -0.6**
PAX pmax pmax
comp=Z,27nm,1.3s
PAX Paxson 70.99 27 *eP* **P** **07 33 37.8 -0.6**
comp=Z,27nm,1.3s
TUE Stuetta 71.02 313 *eP* **P** **07 33 40.4 +1.4**
comp=Z,9.7nm,1.0s
KMBO Kilima Mbogo 71.05 257 P **P** **07 33 39.3 -0.4**
KMBO Kilima Mbogo 71.05 257 P **P** **07 33 39.3 -0.4**
comp=Z,2.1nm,0.6s,baz=45,slow=4.3,SNR=4.0
KMBO LR LR 08 02 19.6
comp=Z,50nm,18.6s,baz=103,slow=34
DOT Dot Lake 71.16 26 *eP* **P** **07 33 38.5 -0.8**
comp=Z,15nm,0.8s
CDF Champ du Feu 71.42 316 *eP* **P** **07 33 40.5 -0.8**
CDF Champ du Feu 71.42 316 *eP* **P** **07 33 40.5 -0.8**
CDF Champ du Feu 71.42 316 *eP* **P** **07 33 40.5 -0.8**
EGAK Eagle 71.58 24 *eP* **P** **07 33 41.3 -0.5**
comp=Z,15nm,1.1s
MENT Mentasta 71.68 27 *eP* **P** **07 33 42.5 0.0**
DIV Divide 71.85 29 *eP* **P** **07 33 44.4 +0.8**
comp=Z,45nm,1.1s
HINF Hinteralfeld 71.94 315⇑ *iP* **P** **07 33 43.6 -0.8**
HINF Hinteralfeld 71.94 315⇑ *iP* **P** **07 33 43.6 -0.8**
HINF Hinteralfeld 71.94 315⇑ *iP* **P** **07 33 43.6 -0.8**
GIVF Givet 72.09 318⇑ *iP* **P** **07 33 44.6 -0.5**
GIVF Givet 72.09 318⇑ *iP* **P** **07 33 44.6 -0.5**
GIVF Givet 72.09 318⇑ *iP* **P** **07 33 44.6 -0.5**
EIDS Eidsvold 72.11 136 *eP* **P** **07 33 45.9 +0.5**
comp=Z,15nm,1.2s
HAU Haudompre 72.16 316⇑ *iP* **P** **07 33 44.9 -0.7**
HAU *eR*
comp=Z,235nm,19.8s
HAU Haudompre 72.16 316⇑ *iP* **P** **07 33 44.9 -0.7**
HAU Haudompre 72.16 316⇑ *iP* **P** **07 33 44.9 -0.7**
STKA Stephens Creek 72.25 147 P **P** **07 33 46.0 -0.2**
STKA Stephens Creek 72.25 147 P **P** **07 33 46.0 -0.2**
comp=Z,3.7nm,0.7s,baz=18,slow=7.6,SNR=4.7
PAGF Fort de Pagny 72.28 316⇑ *iP* **P** **07 33 46.1 -0.2**
comp=Z,3.1nm,0.6s
PAGF Fort de Pagny 72.28 316⇑ *iP* **P** **07 33 46.1 -0.2**
comp=Z,3.1nm,0.6s
BAIF Baives 72.46 318⇑ *iP* **P** **07 33 47.3 0.0**
BAIF Baives 72.46 318⇑ *iP* **P** **07 33 47.3 0.0**
BAIF Baives 72.46 318⇑ *iP* **P** **07 33 47.3 0.0**
SFTF Sexfontaines 72.85 316⇑ *iP* **P** **07 33 49.0 -0.7**
SFTF Sexfontaines 72.85 316⇑ *iP* **P** **07 33 49.0 -0.7**
CABF La Chapelle 72.96 314⇑ *iP* **P** **07 33 50.0 -0.5**
comp=Z,23nm,1.2s
CABF La Chapelle 72.96 314⇑ *iP* **P** **07 33 50.0 -0.5**
CABF pmax pmax
comp=Z,23nm,1.2s
CABF La Chapelle 72.96 314⇑ *iP* **P** **07 33 50.0 -0.5**
comp=Z,23nm,1.2s
PGF Pioggiola 72.98 310⇑ *iP* **P** **07 33 50.4 -0.3**
comp=Z,29nm,1.0s
PGF Pioggiola 72.98 310⇑ *iP* **P** **07 33 50.4 -0.3**
PGF pmax pmax
comp=Z,29nm,1.0s
PGF Pioggiola 72.98 310⇑ *iP* **P** **07 33 50.4 -0.3**
comp=Z,29nm,1.0s
LPG La Plagne 73.07 313⇑ *iP* **P** **07 33 51.3 -0.1**
comp=Z,24nm,0.7s
LPG La Plagne 73.07 313⇑ *iP* **P** **07 33 51.3 -0.1**
LPG pmax pmax
comp=Z,24nm,0.7s
LPG La Plagne 73.07 313⇑ *iP* **P** **07 33 51.3 -0.1**
comp=Z,24nm,0.7s
LPL La Plagne 73.07 313⇑ *iP* **P** **07 33 51.2 -0.2**
comp=Z,23nm,0.6s
LPL La Plagne 73.07 313⇑ *iP* **P** **07 33 51.2 -0.2**
LPL pmax pmax
comp=Z,23nm,0.6s
LPL La Plagne 73.07 313⇑ *iP* **P** **07 33 51.2 -0.2**
comp=Z,23nm,0.6s
SUMG Summit 73.13 349 *eP* **P** **07 33 50.6 -0.9**
SUMG pmax pmax
comp=Z,22nm,1.0s
SUMG Summit 73.13 349 *eP* **P** **07 33 50.6 -0.9**
comp=Z,22nm,1.0s
SUMG Summit 73.13 349⇑ *iP* **P** **07 33 51.2 -0.2**
comp=Z,14nm,0.9s
SBF Sospel 73.40 311⇑ *iP* **P** **07 33 52.4 -0.7**
comp=Z,30nm,0.8s
SBF Sospel 73.40 311⇑ *iP* **P** **07 33 52.4 -0.7**
SBF pmax pmax
comp=Z,30nm,0.8s
SBF Sospel 73.40 311⇑ *iP* **P** **07 33 52.4 -0.7**
comp=Z,30nm,0.8s
MBDF Montbardon 73.42 312⇑ *iP* **P** **07 33 54.7 +1.4**
comp=Z,11nm,0.7s
MBDF Montbardon 73.42 312⇑ *iP* **P** **07 33 54.7 +1.4**
MBDF pmax pmax
comp=Z,11nm,0.7s
MBDF Montbardon 73.42 312⇑ *iP* **P** **07 33 54.7 +1.4**
comp=Z,11nm,0.7s
ORIF Oris-en-Rattie 73.89 313⇑ *iP* **P** **07 33 55.4 -0.6**
comp=Z,20nm,1.0s
ORIF *eR*
comp=Z,487nm,19.5s
ORIF Oris-en-Rattie 73.89 313⇑ *iP* **P** **07 33 55.4 -0.6**
ORIF pmax pmax
comp=Z,20nm,1.0s
ORIF Oris-en-Rattie 73.89 313⇑ *iP* **P** **07 33 55.4 -0.6**
comp=Z,20nm,1.0s
LOR Lormes 73.99 316⇑ *iP* **P** **07 33 55.3 -1.2**
LOR *eR*
comp=Z,160nm,19.2s
LOR Lormes 73.99 316⇑ *iP* **P** **07 33 55.3 -1.2**
LMR La Mourre 74.24 311⇑ *iP* **P** **07 33 57.1 -0.9**
LMR La Mourre 74.24 311⇑ *iP* **P** **07 33 57.1 -0.9**
LMR La Mourre 74.24 311⇑ *iP* **P** **07 33 57.1 -0.9**
SMF Signal de Mont 74.31 315⇑ *iP* **P** **07 33 57.5 -0.8**
comp=Z,23nm,1.0s
SMF Signal de Mont 74.31 315⇑ *iP* **P** **07 33 57.5 -0.8**
SMF pmax pmax
comp=Z,23nm,1.0s
SMF Signal de Mont 74.31 315⇑ *iP* **P** **07 33 57.5 -0.8**
comp=Z,23nm,1.0s
SMRF Simiane la Rot 74.53 312⇑ *iP* **P** **07 33 59.4 -0.3**
SMRF Simiane la Rot 74.53 312⇑ *iP* **P** **07 33 59.4 -0.3**
AVF Avril sur Loir 74.53 316⇑ *iP* **P** **07 33 58.7 -0.9**
comp=Z,10nm,0.8s
AVF Avril sur Loir 74.53 316⇑ *iP* **P** **07 33 58.7 -0.9**
AVF pmax pmax
comp=Z,10.0nm,0.8s
AVF Avril sur Loir 74.53 316⇑ *iP* **P** **07 33 58.7 -0.9**
comp=Z,10nm,0.8s
VIVF Saint-Julien-l 74.67 313⇑ *iP* **P** **07 33 59.9 -0.6**
comp=Z,5.9nm,0.7s
VIVF Saint-Julien-l 74.67 313⇑ *iP* **P** **07 33 59.9 -0.6**
VIVF pmax pmax
comp=Z,6.0nm,0.7s
VIVF Saint-Julien-l 74.67 313⇑ *iP* **P** **07 33 59.9 -0.6**
comp=Z,5.9nm,0.7s
BORG Borgarnes 75.18 339 *eP* **P** **07 34 04.3 +1.4**
comp=Z,23nm,1.1s
PNL Peninsula 75.28 28 *eP* **P** **07 34 04.5 +0.8**
comp=Z,47nm,1.0s
TCF Toulx Ste Croi 75.46 316⇑ *iP* **P** **07 34 04.5 -0.5**
TCF Toulx Ste Croi 75.46 316⇑ *iP* **P** **07 34 04.5 -0.5**
TCF Toulx Ste Croi 75.46 316⇑ *iP* **P** **07 34 04.5 -0.5**
LASF Ste Croix 75.56 313⇑ *iP* **P** **07 34 05.3 -0.3**
LASF Ste Croix 75.56 313⇑ *iP* **P** **07 34 05.3 -0.3**
GRR Gorron 76.17 318⇑ *iP* **P** **07 34 08.4 -0.6**
comp=Z,13nm,0.8s
GRR Gorron 76.17 318⇑ *iP* **P** **07 34 08.4 -0.6**
GRR pmax pmax
comp=Z,13nm,0.8s
GRR Gorron 76.17 318⇑ *iP* **P** **07 34 08.4 -0.6**
comp=Z,13nm,0.8s
CAF Calviac 76.24 314⇑ *iP* **P** **07 34 09.4 -0.1**
comp=Z,8.5nm,0.8s
CAF Calviac 76.24 314⇑ *iP* **P** **07 34 09.4 -0.1**
CAF pmax pmax
comp=Z,9.0nm,0.8s
CAF Calviac 76.24 314⇑ *iP* **P** **07 34 09.4 -0.1**
comp=Z,8.5nm,0.8s
RJF Les Rejaudoux 76.38 315⇑ *iP* **P** **07 34 10.2 -0.1**
RJF *eR*
comp=Z,205nm,20.0s
RJF Les Rejaudoux 76.38 315⇑ *iP* **P** **07 34 10.2 -0.1**
RJF Les Rejaudoux 76.38 315⇑ *iP* **P** **07 34 10.2 -0.1**
MFF Saint Martin d 76.70 317⇑ *iP* **P** **07 34 11.6 -0.4**
MFF Saint Martin d 76.70 317⇑ *iP* **P** **07 34 11.6 -0.4**
MFF Saint Martin d 76.70 317⇑ *iP* **P** **07 34 11.6 -0.4**
MTLF Montolieu 76.96 313⇑ *iP* **P** **07 34 13.1 -0.5**
MTLF Montolieu 76.96 313⇑ *iP* **P** **07 34 13.1 -0.5**
MTLF Montolieu 76.96 313⇑ *iP* **P** **07 34 13.1 -0.5**
SKAG Skagway 77.02 27 *eP* **P** **07 34 14.1 +0.6**
comp=Z,45nm,1.1s
SGMF Saint Gilles 77.20 319⇑ *iP* **P** **07 34 14.6 -0.2**
SGMF Saint Gilles 77.20 319⇑ *iP* **P** **07 34 14.6 -0.2**
SGMF Saint Gilles 77.20 319⇑ *iP* **P** **07 34 14.6 -0.2**
ROSF Rostrenen 77.56 319⇑ *iP* **P** **07 34 16.6 -0.2**
ROSF Rostrenen 77.56 319⇑ *iP* **P** **07 34 16.6 -0.2**

ROSF	Rostrenen	77.56	319	⇑*i*P		P	07 34 16.6	-0.2	
ETSF	Etsaut	78.92	314	⇑*i*P		P	07 34 24.6	0.0	
ETSF	Etsaut	78.92	314	⇑*i*P		P	07 34 24.6	0.0	
ETSF	Etsaut	78.92	314	⇑*i*P		P	07 34 24.6	0.0	
SJPF	Ste Jean	79.21	314	⇑*i*P		P	07 34 26.5	+0.4	
SJPF	Ste Jean	79.21	314	⇑*i*P		P	07 34 26.5	+0.4	
SJPF	Ste Jean	79.21	314	⇑*i*P		P	07 34 26.5	+0.4	
SFJD	Kangerlussuaq	80.03	350	⇑*i*P		P	07 34 29.5	-0.5	
	comp=Z,14nm,0.9s								
YKA	Yellowknife Ar	81.36	17	P		P	07 34 37.2	0.0	
YKA	Yellowknife Ar	81.36	17	P		P	07 34 37.2	0.0	
	comp=Z,7.5nm,0.9s,baz=323,slow=4.8,SNR=20								
YKA				LR		LR	08 14 09.2		
	comp=Z,9.1nm,18.4s,baz=335,slow=38								
ESDC	Sonseca Array	82.84	312	P		P	07 34 46.1	+0.6	
ESDC	Sonseca Array	82.84	312	P		P	07 34 46.1	+0.6	
	comp=Z,0.5nm,0.3s,baz=55,slow=5.6,SNR=5.1								
LSZ	Lusaka	86.34	250	*e*P		P	07 35 02.2	-1.4	
	comp=Z,7.5nm,1.1s								
FFC	Flin Flon	91.28	15	P		P	07 35 25.2	-1.1	
	comp=Z,57nm,1.2s,SNR=5.6								
FFC	Flin Flon	91.28	15	*e*P		P	07 35 26.1	-0.2	
FFC				pmax		pmax			
	comp=Z,10.0nm,1.1s								
FFC	Flin Flon	91.28	15	*e*P		P	07 35 26.1	-0.2	
	comp=Z,10nm,1.1s								
NEW	Newport	92.46	26	*e*P		P	07 35 32.8	+0.8	
	comp=Z,10nm,1.4s								
TORD	Torodi Ar. Bea	93.59	288	P		P	07 35 36.7	-1.0	
TORD	Torodi Ar. Bea	93.59	288	P		P	07 35 36.7	-1.0	
	comp=Z,2.2nm,1.2s,baz=61,slow=4.5,SNR=3.0								
BSMT	Bassoo Peak	93.67	25	*e*P		P	07 35 38.9	+1.2	
	comp=Z,4.8nm,1.1s								
YBMT	Yellow Bay	93.94	25	*e*P		P	07 35 40.5	+1.6	
	comp=Z,5.4nm,1.2s								
JTMT	Jette	93.94	25	*e*P		P	07 35 39.5	+0.6	
	comp=Z,3.1nm,1.1s								
SWMT	Swartz Lake	94.25	25	*e*P		P	07 35 39.8	-0.5	
	comp=Z,5.2nm,1.2s								
SLMT	Seeley Lake	94.66	25	*e*P		P	07 35 42.4	+0.2	
	comp=Z,9.9nm,1.2s								
MSO	Missoula	94.84	25	*e*P		P	07 35 43.1	+0.1	
	comp=Z,4.9nm,1.2s								
BOSA	Boshof	95.90	240	LR		LR	08 14 26.5		
	comp=Z,149nm,19.5s,baz=165,slow=33								
ULM	Lac du Bonnet	96.75	13	LR		LR	08 24 30.5		
	comp=Z,121nm,18.1s,baz=8.1,slow=39								
PDAR	Pinedale Array	99.93	25	LR		LR	08 24 10.2		
	comp=Z,89nm,20.9s,baz=165,slow=37								
TXAR	Lajitas Array	114.02	27	PKP		PKPdf	07 41 00.3	-0.3	
TXAR	Lajitas Array	114.02	27	PKP		PKPdf	07 41 00.3	-0.3	
	comp=Z,0.2nm,0.5s,baz=166,slow=0.6,SNR=8.4								
QSPA	South Pole Qui	121.21	180	*e*PKPdf		PKPdf	07 41 11.0	-2.1	
QSPA				PKP		PKPdf	07 41 11.8	-1.2	
QSPA	South Pole Qui	121.21	180	PKP		PKPdf	07 41 11.8	-1.2	
	comp=Z,1.7nm,0.5s,baz=244,slow=1.3,SNR=53								
SNAA	Sanae	124.85	202	PKP		PKPdf	07 41 18.8	-1.2	
SNAA	Sanae	124.85	202	PKP		PKPdf	07 41 18.8	-1.2	
	comp=Z,0.4nm,0.7s,baz=28,slow=3.1,SNR=8.3								
ROSC	El Rosal	143.89	357	PKP		PKPbc	07 41 55.9	+0.7	
ROSC	El Rosal	143.89	357	PKP		PKPbc	07 41 55.9	+0.7	
	comp=Z,6.5nm,0.8s,baz=66,slow=5.4,SNR=7.2								
OTAV	Otavalo	148.40	5	*e*PKPdf		PKPdf	07 42 06.3	+1.0	

*ISCJB **30** 07:22:23.6±0.3,35°.53S±0°.07×78°.39E±0°.08, h14km, mb4.7/39, MS4.1/16, Error ellipse: s-maj=9.8km s-min=8.7km az=147.2*
*IDC **30** 07:22:23.1±0.4, 35°.48S×78°.37E, h0km, mb4.5/25, mb1 4.5/25, mb1mx4.5/32, mbtmp4.5/25, MS4.0/13, Ms1 4.0/13, ms1mx3.8/35, Error ellipse: s-maj=15.0km s-min=13.5km az=131.0*
*NEIC **30** 07:22:24.6±0.2, 35°.52S×78°.36E, h10km, mb4.8/17, Error ellipse: s-maj=7.1km s-min=5.9km az=165.0*

ISC 30 07:22:25.3±0.4, 35°.50S±0°.08×78°.34E±0°.08, h14km, n94, σ1°11/93, mb4.7/39, MS4.1/17, 2C, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NWAO	Narrogin (SRO)	32.13	97	*e*P	P	07 28 52.6	+0.4
	92nm,1.4s						
OPO	Ambohidratompo	32.29	293	LR	LR	07 38 21.7	
	comp=Z,396nm,21.9s,baz=221,slow=30						
MAW	Mawson	33.35	191	*e*P	P	07 29 02.1	-0.5
	2.6nm,1.1s						
MAW	Mawson	33.35	191	P	P	07 29 02.5	-0.1
	6.0nm,0.9s,baz=359,slow=11,SNR=10						
MAW				LR	LR	07 39 08.9	
	comp=Z,58nm,20.4s,baz=171,slow=30						
MBWA	Marble Bar	38.84	80	*e*P	P	07 29 50.2	+0.1
	42nm,1.6s						
SYO	Syowa Base	39.77	201	⇑*e*P	P	07 29 56.7	-0.6
SYO	Syowa Base	39.77	201	⇑*es*P	sP	07 30 03.2	-0.2
PSI	Prapat	42.70	31	P	P	07 30 21.1	-0.9
PSI	Prapat	42.70	31	P	P	07 30 21.1	-0.9
	6.7nm,0.7s,baz=186,slow=9.2,SNR=6.3						
BOSA	Boshof	45.06	263	*e*P	P	07 30 41.2	+0.2
	5.8nm,1.0s						
BOSA	Boshof	45.06	263	P	P	07 30 41.2	+0.2
	2.8nm,0.8s,baz=107,slow=10,SNR=4.4						
BOSA				LR	LR	07 45 17.4	
	comp=Z,247nm,20.7s,baz=165,slow=30						
FITZ	Fitzroy Crossi	45.18	80	*e*P	P	07 30 41.8	-0.1
	3.4nm,0.8s						
FITZ	Fitzroy Crossi	45.18	80	P	P	07 30 41.7	-0.1
	3.6nm,0.8s,baz=216,slow=8.2,SNR=8.2						
KULM	Kulim	45.67	32	*e*P	P	07 30 46.8	+1.0
	51nm,1.3s						
LBTB	Lobatse	46.27	268	*e*P	P	07 30 50.2	-0.4
	5.9nm,0.8s						
LBTB	Lobatse	46.27	268	P	P	07 30 50.5	0.0
	4.9nm,1.1s,baz=123,slow=7.6,SNR=7.2						
SUR	Sutherland	47.25	256	P	P	07 30 59.1	+0.8
SUR	Sutherland	47.25	256	P	P	07 30 59.1	+0.8
	5.4nm,0.7s,baz=114,slow=14,SNR=5.9						
KAPI	Kappang	48.71	61	LR	LR	07 47 21.7	
	comp=Z,179nm,20.0s,baz=73,slow=31						
LSZ	Lusaka	49.01	281	*e*P	P	07 31 13.0	+1.0
	27nm,0.9s						
ASAR	Alice Springs	49.17	92	P	P	07 31 12.8	-0.2
ASAR	Alice Springs	49.17	92	P	P	07 31 12.8	-0.2
	6.1nm,0.8s,baz=237,slow=6.7,SNR=32						
AS31	Alice Springs	49.17	92	*e*P	P	07 31 12.9	-0.1
KMBO	Kilima Mbogo	51.23	303	LR	LR	07 47 16.9	
	comp=Z,79nm,21.4s,baz=96,slow=29						
WRA	Warramunga Arr	51.30	88	P	P	07 31 29.1	0.0
WRA	Warramunga Arr	51.30	88	P	P	07 31 29.1	0.0
	8.6nm,0.8s,baz=241,slow=7.6,SNR=36						
STKA	Stephens Creek	51.96	105	*e*P	P	07 31 34.0	0.0
	3.0nm,0.9s						
STKA	Stephens Creek	51.96	105	P	P	07 31 33.8	-0.2
	11nm,0.9s,baz=243,slow=7.4,SNR=7.3						
STKA				LR	LR	07 49 46.0	
	comp=Z,242nm,20.5s,baz=212,slow=32						
HYB	Hyderabad	52.62	0	*i* P	P	07 31 37.5	-1.4
POO	Poona	53.90	355	*ex*	P	07 31 45.0	-3.3
SNAA	Sanae	53.99	203	*e*P	P	07 31 48.0	-0.4
	5.8nm,1.2s						
SNAA	Sanae	53.99	203	P	P	07 31 48.4	0.0
	1.0nm,1.1s,baz=84,slow=8.5,SNR=7.5						
VNDA	Vanda	54.24	165	*e*P	P	07 31 50.7	+0.5
	6.2nm,1.1s						
VNDA	Vanda	54.24	165	P	P	07 31 50.1	0.0
	4.2nm,1.1s,baz=267,slow=7.8,SNR=16						
VNDA				LR	LR	07 53 24.0	
	comp=Z,98nm,18.2s,baz=83,slow=34						
QSPA	South Pole Qui	54.65	180	*e*P	P	07 31 53.2	-0.3
	15nm,1.0s						
QSPA	South Pole Qui	54.65	180	P	P	07 31 53.5	+0.1
	13nm,1.0s,baz=316,slow=5.4,SNR=25						
TSUM	Tsumeb	55.55	270	*e*P	P	07 32 01.8	+1.2
	19nm,1.2s						
CMAR	Chiang Mai Arr	57.11	23	P	P	07 32 11.6	+0.3
CMAR				PcP	PcP	07 33 06.3	+0.2
CMAR	Chiang Mai Arr	57.11	23	P	P	07 32 11.6	+0.3
	2.8nm,0.9s,baz=209,slow=6.8,SNR=8.0						
CMAR				PcP	PcP	07 33 06.3	+0.2
	0.8nm,0.4s,baz=191,slow=4.3,SNR=3.4						
CTA	Charters Tower	60.94	95	P	P	07 32 38.5	+0.3
CTA	Charters Tower	60.94	95	P	P	07 32 38.5	+0.3
	4.0nm,0.8s,baz=236,slow=7.3,SNR=5.9						
QIZ	Qiongzhong	61.91	34	P	P	07 32 41.5	-3.0
QIZ				S	S	07 41 12.3	+4.2
GYA	Guiyang	67.19	27	*e*P	P	07 33 23.0	+4.0
GYA				PP	PP	07 35 53.3	+5.8
GYA				ScP		07 37 52.3	
GYA				S	S	07 42 18.0	+4.7
GYA				SKS	ScS	07 43 16.8	+0.3
GYA	Guiyang	67.19	27	SS	SS	07 46 39.5	+6.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,90nm,5.3s						
GYA				LR	LR		
	comp=N,350nm,18.8s						
GYA				LR	LR		
	comp=E,230nm,19.0s						
GYA				LR	LR		
	comp=Z,370nm,18.4s						
PMG	Port Moresby	67.37	85	LR	LR	07 58 49.4	
	comp=Z,231nm,19.5s,baz=222,slow=32						
KBL	Kabul	70.22	352	*e*P	P	07 33 38.6	+0.7
	comp=Z,14nm,0.8s						
KSH	Kashi	74.68	358	*e*P	P	07 34 01.8	-2.4
KSH				*ep*P	pP	07 34 06.5	-2.3
KSH				*es*P	sP	07 34 08.8	-1.7
KSH				*e*PcP	PcP	07 34 17.5	-0.9
KSH				*e*PP	PP	07 36 48.8	-2.9
KSH				*e*S	SKiKP	07 43 31.5	+2.1
KSH				*es*S	S	07 43 40.3	+0.5
KSH	Kashi	74.68	358	*e*SKS	SKSac	07 44 04.0	-8.1
KSH				pmax	pmax		
	comp=Z,14nm,0.6s						
KSH				pmax	pmax		
	comp=Z,130nm,2.9s						
KSH				LR	LR		
	comp=N,880nm,11.1s						
KSH				LR	LR		
	comp=E,500nm,9.3s						
KSH				LR	LR		
	comp=Z,310nm,6.0s						
XAN	Xi'an	74.86	26	P	P	07 34 05.5	+0.2
XAN				pmax	pmax		
	comp=Z,14nm,0.9s						
HNR	Honiara	77.78	93	LR	LR	08 05 01.1	
	comp=Z,78nm,21.9s,baz=342,slow=33						
AAK	Ala-Archa	77.84	357	P	P	07 34 22.7	+0.6
AAK	Ala-Archa	77.84	357	P	P	07 34 22.7	+0.6
	comp=Z,2.4nm,0.6s,baz=199,slow=5.4,SNR=4.6						
EKS2	Erkin-Say	77.90	357	*e*P	P	07 34 23.4	+0.9
	comp=Z,9.4nm,0.8s						
TKM2	Tokmak 2	78.09	358	*e*P	P	07 34 23.6	-0.1
	comp=Z,3.8nm,0.7s						
KKAR	Karatay Array	78.55	354	*e*P	P	07 34 26.6	+0.6
	comp=Z,24nm,0.9s						
WMQ	Urumqi	79.40	7	*e*P	P	07 34 31.3	+0.6
WMQ				pP	PcP	07 34 42.0	+3.3
WMQ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,96nm,7.4s						
WMQ				LR	LR		
	comp=Z,110nm,27.4s						
MK31	Makanchi Array	82.00	3	*e*P	P	07 34 43.3	-1.2
MKAR	Makanchi Array	82.00	3	*e*P	P	07 34 43.7	-0.7
MKAR	Makanchi Array	82.00	3	P	P	07 34 43.6	-0.7
	comp=Z,3.8nm,0.8s,baz=164,slow=6.0,SNR=12						
BRTR	Keskin Array B	85.45	327	P	P	07 35 02.6	+0.1
BRTR	Keskin Array B	85.45	327	P	P	07 35 02.6	+0.1
	comp=Z,2.6nm,0.8s,baz=148,slow=6.8,SNR=6.5						
KURBB	Kurchatov Arra	85.75	0	P	P	07 35 03.6	+0.1
	comp=Z,13nm,0.8s,baz=194,slow=4.5,SNR=44						
KURK	Kurchatov	85.84	0	P	P	07 35 03.6	-0.3
KSAR	Wonju Array Be	85.90	37	P	P	07 35 04.5	0.0
KSRS	Korea Array	85.93	37	P	P	07 35 04.5	-0.1
	comp=Z,2.4nm,1.0s,baz=191,slow=5.7,SNR=4.7						
SONM	Songino Array	86.68	19	P	P	07 35 08.3	0.0
SONM	Songino Array	86.68	19	P	P	07 35 08.3	0.0
	comp=Z,4.3nm,0.8s,baz=188,slow=5.6,SNR=8.3						
TORD	Torodi Ar. Bea	86.97	288	P	P	07 35 10.7	+0.3
TORD	Torodi Ar. Bea	86.97	288	P	P	07 35 10.7	+0.3
	comp=Z,1.7nm,0.9s,baz=114,slow=5.1,SNR=8.5						
TORD				LR	LR	08 10 50.1	
	comp=Z,196nm,19.0s,baz=125,slow=33						
AKTO	Aktyubinsk	87.43	347	P	P	07 35 11.2	-0.4
AKTO	Aktyubinsk	87.43	347	P	P	07 35 11.2	-0.4
	comp=Z,2.8nm,0.8s,baz=176,slow=2.9,SNR=7.8						
AKTO				LR	LR	08 10 30.6	
	comp=Z,51nm,20.1s,baz=179,slow=33						
DBIC	Dimbokro	88.32	279	LR	LR	08 10 10.4	
	comp=Z,138nm,20.0s,baz=69,slow=32						
BVAR	Borovoye Array	88.43	355	P	P	07 35 16.0	-0.4
BVAR	Borovoye Array	88.43	355	P	P	07 35 16.0	-0.4
	comp=Z,2.4nm,0.7s,baz=152,slow=6.5,SNR=6.8						
ZALV	Zalesovo Beam	89.26	4	P	P	07 35 19.9	-0.3
ZALV	Zalesovo Beam	89.26	4	P	P	07 35 20.0	-0.3
	comp=Z,2.8nm,0.5s,baz=196,slow=3.7,SNR=7.4						
CN2	Changchun	89.81	32	*e*P	P	07 35 22.5	-0.6
MJAR	Matsushiro Arr	90.73	44	P	P	07 35 27.5	-0.2
MJAR	Matsushiro Arr	90.73	44	P	P	07 35 27.5	-0.2
	comp=Z,1.7nm,0.7s,baz=205,slow=4.7,SNR=7.9						
MDJ	Mudanjiang	92.29	34	P	P	07 35 35.5	+0.9
MDJ				pmax	pmax		
	comp=Z,13nm,2.4s						
MDJ				pmax	pmax		
	comp=Z,170nm,17.1s						
MDJ				LR	LR		
	comp=N,50nm,28.1s						
MDJ				LR	LR		
	comp=E,30nm,30.1s						
MDJ				LR	LR		
	comp=Z,53nm,28.1s						
USRK	Ussuriysk Arra	93.09	35	LR	LR	08 18 43.2	
	comp=Z,71nm,19.3s,baz=216,slow=36						
ROSC	El Rosal	140.44	226	*e*PKPdf	PKPdf	07 41 54.7	-0.5
HUMP	Col San Antoni	143.92	251	*e*PKPdf	PKPbc	07 41 59.0	+0.5
AOPR	Arecibo Observ	144.73	250	*e*PKPdf	PKPab	07 42 00.2	-0.7
LRS	Lares	144.77	250	*e*PKPdf	PKPdf	07 42 01.8	-0.5
PNL	Peninsula	145.65	33	*e*PKPdf	PKPbc	07 42 02.9	+0.1
SCHQ	Schefferville	149.21	320	PKPbc	PKPbc	07 42 13.6	+0.8
SCHQ	Schefferville	149.21	320	PKPbc	PKPbc	07 42 13.6	+0.8
	comp=Z,4.4nm,1.0s,baz=104,slow=8.3,SNR=2.9						
YKA	Yellowknife Ar	151.79	13	PKPbc	PKPbc	07 42 18.3	-0.3
YKA	Yellowknife Ar	151.79	13	PKPbc	PKPbc	07 42 18.3	-0.3
	comp=Z,1.7nm,0.8s,baz=7.5,slow=2.7,SNR=5.3						
NVAR	Mina Array Bea	166.37	73	PKPab	PKPab	07 43 31.7	-0.2
NVAR				PP	PP	07 47 26.0	+5.9
NVAR	Mina Array Bea	166.37	73	PKPab	PKPab	07 43 31.7	-0.2
	comp=Z,1.0nm,0.9s,baz=304,slow=3.5,SNR=5.9						
NVAR				PP	PP	07 47 26.0	+5.9
	comp=Z,0.1nm,0.4s,baz=260,slow=8.9,SNR=4.1						
PDAR	Pinedale Array	170.50	38	PKPab	PKPab	07 43 49.2	-0.8
PDAR	Pinedale Array	170.50	38	PKPab	PKPab	07 43 49.2	-0.8
	comp=Z,1.0nm,1.0s,baz=270,slow=1.5,SNR=5.6						

IDC 30 07:43:04.5±1.6, 8°.07S×120°.11E, h196km±13km, mb3.7/6, mb1 3.8/9, mb1mx3.5/24, mbtmp3.7/9, Error ellipse: s-maj=41.2km s-min=8.5km az=56.0, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KAPI	Kappang	3.05	353	P	Pn	07 43 54.6	-0.1
	14nm,0.3s,baz=182,slow=11,SNR=53						
FITZ	Fitzroy Crossi	11.33	152	P	Pn	07 45 39.4	-1.6
	0.8nm,0.3s,baz=338,slow=12,SNR=39						
FITZ				S	Sn	07 47 39.0	-8.4
	1.4nm,0.3s,baz=194,slow=21,SNR=9.8						
WRA	Warramunga Arr	18.14	132	P	P	07 47 02.8	+0.4
	1.1nm,0.3s,baz=303,slow=12,SNR=50						
WRA				S	S	07 50 20.2	+0.2
	0.6nm,0.3s,baz=308,slow=24,SNR=9.6						
WRA				ScP	ScP	07 54 43.2	-0.6
	0.0nm,0.3s,baz=320,slow=2.3,SNR=3.7						
ASAR	Alice Springs	20.38	141	P	P	07 47 26.6	+0.2
	6.5nm,0.4s,baz=315,slow=9.8,SNR=82						
ASAR				S	S	07 51 03.7	-0.2
	2.4nm,1.0s,baz=314,slow=19,SNR=9.9						
ASAR				ScP	ScP	07 54 48.4	-0.5
	0.5nm,0.6s,baz=332,slow=2.5,SNR=4.6						
STKA	Stephens Creek	31.00	143	P	P	07 49 04.7	+1.0
	6.8nm,0.5s,baz=324,slow=9.3,SNR=13						
SONM	Songino Array	56.97	349	P	P	07 52 30.1	+0.5
	0.8nm,0.5s,baz=165,slow=8.3,SNR=5.8						
MKAR	Makanchi Array	64.14	332	P	P	07 53 17.6	-0.5
	1.3nm,0.6s,baz=141,slow=7.7,SNR=14						
ZALV	Zalesovo Beam	68.57	338	P	P	07 53 45.1	-0.8
	2.1nm,0.3s,baz=144,slow=6.9,SNR=7.6						
VNDA	Vanda	72.73	171	P	P	07 54 11.4	+0.6
	0.4nm,0.5s,baz=295,slow=5.0,SNR=6.3						
TORD	Torodi Ar. Bea	119.38	281	PKP	PKPdf	08 01 30.3	-1.3
	0.3nm,0.8s,baz=114,slow=1.3,SNR=4.1						
NVAR	Mina Array Bea	119.58	50	PKP	PKPdf	08 01 33.6	+1.9
	0.6nm,1.0s,baz=208,slow=3.7,SNR=3.8						

*IDC **30** 08:03:36.8±1.2, 32°.41S×178°.25W, h0km, mb4.1/4, mb1 4.3/5, mb1mx3.9/21, mbtmp4.2/5, ML3.8/1, MS3.8/3, Ms1 3.7/3, ms1mx3.3/28, Error ellipse: s-maj=34.7km s-min=29.0km az=49.0*
*ISCJB **30** 08:03:41.6±1.7, 32°.63S±0°.09×178°.6W±0°.3, h33km, mb4.2/6, MS3.8/3, Error ellipse: s-maj=31.0km s-min=12.3km az=6.6*
*NEIC **30** 08:03:42.1±0.8, 32°.47S×178°.27W, h35km, mb4.4/4, Error ellipse: s-maj=20.4km s-min=17.0km az=71.0*

ISC 30 08:03:42.1±1.1, 32°.6S±0°.1×178°.4W±0°.2, h33km, n27, σ1°21/26, mb4.3/6, MS3.7/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	6.79	212	*e*Pn	Pn	08 05 19.8	+0.5
URZ				*e*Sn	Sn	08 06 36.7	+1.2
URZ	Urewera	6.79	212	Pn	Pn	08 05 18.1	-1.2
	1.6nm,0.3s,baz=42,slow=7.7,SNR=16						
URZ				Sn	Sn	08 06 35.2	-0.4
	4.1nm,0.3s,baz=239,slow=22,SNR=11						
OUZ	Omahuta	7.20	246	*e*Pn	Pn	08 05 30.4	+5.4
RPZ	Rata Peaks	13.90	214	Pn	Pn	08 06 54.5	-2.3
RPZ				Sn	Sn	08 09 17.3	-13
RPZ	Rata Peaks	13.90	214	Pn	Pn	08 06 54.5	-2.3
	0.4nm,0.3s,baz=153,slow=2.6,SNR=3.1						
RPZ				Sn	Sn	08 09 17.3	-13
	0.3nm,0.3s,baz=143,slow=20,SNR=5.9						
STKA	Stephens Creek	33.75	260	LR	LR	08 22 26.2	
	comp=Z,130nm,18.6s,baz=205,slow=33						
CTA	Charters Tower	33.90	283	P	P	08 10 23.6	+1.5
CTA	Charters Tower	33.90	283	P	P	08 10 23.6	+1.5
	2.4nm,0.5s,baz=110,slow=8.8,SNR=5.6						
CTAO	Charters Tower	33.90	283	*e*P	P	08 10 23.6	+1.5
	2.7nm,0.6s						
ASAR	Alice Springs	42.73	269	P	P	08 11 36.2	-0.2
ASAR	Alice Springs	42.73	269	P	P	08 11 36.2	-0.2
	1.4nm,0.6s,baz=104,slow=7.3,SNR=23						
WRAB	Tennant Creek	43.91	275	*e*P	P	08 11 45.7	-0.3
	3.6nm,0.6s						
WRA	Warramunga Arr	43.92	275	P	P	08 11 45.9	-0.1
WRA	Warramunga Arr	43.92	275	P	P	08 11 45.9	-0.1
	3.4nm,0.5s,baz=113,slow=8.2,SNR=66						
WRA				LR	LR	08 30 58.0	
	comp=Z,87nm,18.6s,baz=275,slow=37						
FITZ	Fitzroy Crossi	52.08	272	*e*P	P	08 12 49.2	+0.1
	5.9nm,1.3s						
QSPA	South Pole Qui	57.56	180	*e*P	P	08 13 30.3	+2.0
	11nm,1.5s						
QSPA	South Pole Qui	57.56	180	P	P	08 13 30.1	+1.8
	1.1nm,0.9s,baz=36,slow=3.4,SNR=5.7						
MJAR	Matsushiro Arr	79.84	326	LR	LR	08 47 06.6	
	comp=Z,59nm,18.1s,baz=210,slow=33						
MKAR	Makanchi Array	118.91	309	PKP	PKPdf	08 22 25.8	-1.1
MKAR	Makanchi Array	118.91	309	PKP	PKPdf	08 22 25.8	-1.1
	0.2nm,0.3s,baz=90,slow=2.2,SNR=2.8						
FINES	FINESS Array B	147.04	339	PKPbc	PKPbc	08 23 19.6	-1.0
FINES	FINESS Array B	147.04	339	PKPbc	PKPbc	08 23 19.6	-1.0
	3.1nm,0.6s,baz=43,slow=3.8,SNR=29						
NB2	NORSAR Subarra	150.82	350	PKP	PKPbc	08 23 29.6	-0.8
	comp=Z,0.1nm,0.4s,baz=29,slow=2.9						
NOA	NORSAR Array B	150.82	350	PKPbc	PKPbc	08 23 29.6	-0.8
NOA	NORSAR Array B	150.82	350	PKPbc	PKPbc	08 23 29.6	-0.8
	comp=Z,0.6nm,0.5s,baz=16,slow=4.1,SNR=4.3						
TORD	Torodi Ar. Bea	160.69	180	PKPab	PKPab	08 24 20.8	-0.1
TORD	Torodi Ar. Bea	160.69	180	PKPab	PKPab	08 24 20.8	-0.1
	comp=Z,0.4nm,0.6s,baz=169,slow=5.5,SNR=4.6						

*JMA **30** 08:26:43.6±0.2, 23°.29N×122°.97E, h59km, M3.0*
*TAP **30** 08:26:43.9, 23°.25N×122°.90E, h63km±2km, ML3.7, D*

ISC 30 08:26:40.5±1.7, 23°.21N±0°.04×122°.93E±0°.03, h15km±13km, n41, σ1°11/77, 2C, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HATJ	Hateruma jima	1.16	43	P	Pg	08 27 02.8	-0.1
HATJ				*e*S	Sb	08 27 17.0	-0.1
YOJ	Yonaguni jima	1.25	3	P	Pb	08 27 04.1	+0.4
YOJ				*e*S	Sb	08 27 19.1	-0.5
IRIF	Iriomote-Funau	1.33	33	P	Pb	08 27 05.3	+0.1
IRIF				*e*S	Sb	08 27 21.7	-0.4
JKRS	Kuro-shima	1.42	44	P	Pb	08 27 06.7	0.0
JKRS				*e*S	Sn	08 27 23.4	-0.8
TWD	Chi

NSK	**Sanguang**	**2.05**	**316**	*e*P	**Pn**	**08 27 16.0**	**+1.6**
	baz=315							
NSK				*e*S	**Sn**	**08 27 39.0**	**-0.8**
	baz=315							
CHN5	**Tsauling**	**2.10**	**281**	*e*P	**Pb**	**08 27 17.7**	**-0.7**
	baz=284							
CHN5				*e*S	**Sn**	**08 27 42.4**	**+1.2**
	baz=284							
WTP	**Ta-pu**	**2.13**	**271**	*e*P	**Pb**	**08 27 17.9**	**-0.9**
	baz=265							
TWA	**Mucha**	**2.15**	**325**	*e*P	**Pb**	**08 27 18.1**	**-0.9**
	baz=334							
CHN4	**Tsaushan**	**2.15**	**274**	*e*P	**Pb**	**08 27 18.2**	**-0.9**
	baz=267							
JTJ	**Tarama**	**2.16**	**48**	P	**Pn**	**08 27 16.9**	**+1.0**
JTJ				*e*S	**Sn**	**08 27 41.8**	**-0.5**
CHN1	**Nanshi**	**2.21**	**270**	P	**Pb**	**08 27 19.8**	**-0.4**
	baz=262							
CHN1				*e*S	**Sb**	**08 27 46.9**	**-0.5**
	baz=262							
TWK	**Hsinying**	**2.25**	**272**	*e*P	**Pb**	**08 27 20.1**	**-0.7**
	baz=264							
TWK				*e*S	**Sn**	**08 27 47.5**	**+2.8**
	baz=264							
NSTT	**Nanjuang**	**2.26**	**309**	*e*P	**Pn**	**08 27 18.8**	**+1.5**
	baz=308							
NSTT				*e*S	**Sn**	**08 27 45.0**	**0.0**
	baz=308							
TCU	**Taichung**	**2.27**	**295**	*e*P	**Pn**	**08 27 19.3**	**+1.9**
	baz=293							
TCU				*e*S	**Sn**	**08 27 47.8**	**+2.7**
	baz=293							
TWQ1	**Liyutan**	**2.28**	**300**	*e*P	**Pb**	**08 27 21.1**	**-0.2**
	baz=299							
TWQ1				*e*S	**Sb**	**08 27 48.3**	**-1.0**
	baz=299							
TSEB	**Hengchuen, Pin**	**2.29**	**236**	*e*P	**Pb**	**08 27 20.5**	**-0.9**
	baz=233							
TSEB				*e*S	**Sn**	**08 27 47.0**	**+1.4**
	baz=233							
SCZT	**Fangliau**	**2.29**	**249**	*e*P	**Pn**	**08 27 19.1**	**+1.4**
	baz=246							
SCZT				*e*S	**Sn**	**08 27 46.1**	**+0.5**
	baz=246							
TWK1	**Hengchun**	**2.34**	**238**	*e*P	**Pn**	**08 27 20.4**	**+2.1**
	baz=234							
TWK1				*e*S	**Sn**	**08 27 46.4**	**-0.4**
	baz=234							
TWM1	**Shoushan**	**2.34**	**261**	*e*P	**Pb**	**08 27 22.4**	**0.0**
	baz=263							
HEN	**Hengchun**	**2.36**	**240**	*e*P	**Pn**	**08 27 20.3**	**+1.7**
	baz=228							
HEN				*e*S	**Sn**	**08 27 47.4**	**+0.1**
	baz=228							
PNG	**Penghu**	**3.12**	**277**	*e*P	**Pn**	**08 27 31.2**	**+2.0**
	baz=264							

KRSC 30 08:33:41.2±0.7, 50°32N×157°34E, h65km±5km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**0.86**	**295**	P	Pn	08 33 56.2	-1.5
SKR				S	Sn	08 34 06.8	-3.0
MIPR	**Malaya Ipel'ka**	**1.99**	**350**	P	Pn	08 34 14.9	+2.3
MIPR				S	Sn	08 34 39.4	+2.8
ASAK	**Asacha**	**2.10**	**9**	P	Pn	08 34 16.0	+1.9
ASAK				S	Sn	08 34 40.8	+1.6
MTVR	**Mutnovka**	**2.23**	**13**	P	Pn	08 34 17.2	+1.2
MTVR				S	Sn	08 34 43.0	+0.4
RUS	**Russkaya**	**2.24**	**19**	P	Pn	08 34 16.5	+0.6
RUS				S	Sn	08 34 42.7	+0.2
APC	**Apacha**	**2.61**	**358**	P	Pn	08 34 24.0	+3.0
PET	**Petropavlovsk**	**2.83**	**16**	S	Sn	08 34 58.8	+2.0
UGLR	**Uglovaya**	**3.04**	**17**	P	Pn	08 34 29.5	+2.6
UGLR				S	Sn	08 35 05.2	+3.0
AVH	**Avacha**	**3.08**	**16**	P	Pn	08 34 30.1	+2.7
AVH				S	Sn	08 35 05.1	+2.0
KOK	**Koryaka**	**3.08**	**15**	P	Pn	08 34 29.9	+2.3
KOK				S	Sn	08 35 05.0	+1.7
SMAR	**Somma**	**3.08**	**17**	P	Pn	08 34 31.1	+3.4
KRER	**Koryakskii**	**3.11**	**16**	P	Pn	08 34 30.2	+2.1
KRER				S	Sn	08 35 05.3	+1.0
SDLR	**Sedlovina**	**3.11**	**17**	P	Pn	08 34 30.3	+2.3
SDLR				S	Sn	08 35 06.4	+2.3
SPN	**Mys Shipunski**	**3.24**	**30**	P	Pn	08 34 31.5	+1.9
SPN				S	Sn	08 35 08.0	+1.0
GNL	**Ganaly**	**3.40**	**6**	P	Pn	08 34 33.1	+1.2
GNL				S	Sn	08 35 10.2	-0.9
MKZ	**Mys Kozlova**	**5.02**	**31**	P	Pn	08 34 55.6	+1.8
MKZ				S	Sn	08 35 51.2	+0.8

*ISCJB **30** 08:43:53.2±0.5, 37°.27N±0°.03×28°.25E±0°.03, h1km±18km, Error ellipse: s-maj=5.8km s-min=3.7km az=35.2*
*CSEM **30** 08:43:53.6±0.2, 37°.26N×28°.24E, h5km, MD2.6, Error ellipse: s-maj=4.2km s-min=3.0km az=34.0*
*DDA **30** 08:43:53.4, 37°.23N×28°.23E, h7km, MD2.9*
*ISK **30** 08:43:53.3, 37°.23N×28°.19E, h8km, MD2.6*
ISC 30 08:43:53.4±0.9, 37°24N±0°.03×28°25E±0°.02, h12km±6km, n22, σ0s53/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.11**	**165**	*e*PG	**Pg**	**08 43 56.3**	**-0.1**
YER				*e*SG	**Sg**	**08 43 58.7**	**+0.2**
YER	**Yerkesik**	**0.11**	**165**	*e*Pg	**Pg**	**08 43 56.3**	**-0.1**
YER				*e*Sg	**Sg**	**08 43 58.7**	**+0.2**
MLSB	**Milas**	**0.38**	**278**	*e*PG	**Pg**	**08 44 00.4**	**-0.5**
MLSB				*e*SG	**Sg**	**08 44 05.6**	**-0.4**
MLSB	**Milas**	**0.38**	**278**	*e*Pg	**Pg**	**08 44 00.4**	**-0.5**
MLSB				*e*Sg	**Sg**	**08 44 05.6**	**-0.4**
TURN	**Turunc**	**0.47**	**142**	*e*P	**Pg**	**08 44 02.6**	**+0.1**
TURN				*e*S	**Sg**	**08 44 08.8**	**+0.1**
TURN	**Turunc**	**0.47**	**142**	*e*P	**Pg**	**08 44 02.6**	**+0.1**
AYDN	**Tasoluk**	**0.51**	**325**	*i* P	**Pg**	**08 44 03.5**	**+0.1**
AYDN				*i* S	**Sg**	**08 44 10.3**	**+0.2**
AYDN	**Tasoluk**	**0.51**	**325**	*i* P	**Pg**	**08 44 03.5**	**+0.1**
AYDN				*i* S	**Sg**	**08 44 10.3**	**+0.2**
DALY	**Dalyan (Mu¨la**	**0.54**	**142**	*e*PG	**Pb**	**08 44 04.6**	**-0.1**
DALY				*e*SG	**Sb**	**08 44 12.8**	**+0.5**
DALY	**Dalyan (Mu¨la**	**0.54**	**142**	*e*Pg	**Pb**	**08 44 04.6**	**-0.1**
DALY				*e*Sg	**Sb**	**08 44 12.9**	**+0.5**
DAT	**Datca**	**0.74**	**226**	*e*PG	**Pg**	**08 44 07.3**	**-0.4**
DAT	**Datca**	**0.74**	**226**	*e*Pg	**Pg**	**08 44 07.3**	**-0.4**
BODT	**Bodrum**	**0.77**	**257**	*e*PG	**Pg**	**08 44 07.7**	**-0.6**
BODT				*e*SG	**Sg**	**08 44 18.1**	**-0.2**
BODT	**Bodrum**	**0.77**	**257**	*e*Pg	**Pg**	**08 44 07.7**	**-0.6**
BODT				*e*Sg	**Sg**	**08 44 18.1**	**-0.2**
DNZL	**Cakiroluk**	**0.78**	**55**	*e*P	**Pg**	**08 44 08.4**	**-0.1**
DNZL				*e*S	**Sg**	**08 44 17.0**	**-1.7**
DNZL	**Cakiroluk**	**0.78**	**55**	*e*P	**Pg**	**08 44 08.4**	**-0.1**
DNZL				*e*S	**Sg**	**08 44 17.0**	**-1.7**
FETY	**Fethiye**	**0.90**	**132**	*e*PG	**Pn**	**08 44 12.0**	**0.0**
FETY	**Fethiye**	**0.90**	**132**	*e*Pg	**Pn**	**08 44 12.0**	**0.0**
GCAM	**G?zelcaml?**	**0.93**	**300**	*e*P	**Pn**	**08 44 12.2**	**0.0**
GCAM				*e*S	**Sb**	**08 44 24.3**	**+0.7**
GCAM	**G?zelcaml?**	**0.93**	**300**	*e*P	**Pn**	**08 44 12.2**	**0.0**
GCAM				*e*S	**Sb**	**08 44 24.3**	**+0.7**
KULA	**Kula-Manisa**	**1.31**	**14**	*e*PN	**Pb**	**08 44 18.4**	**+0.4**
KULA	**Kula-Manisa**	**1.31**	**14**	*e*Pn	**Pb**	**08 44 18.4**	**+0.4**

*AUST **30** 08:47:48.0, 28°.49S×178°.04W, h450km*
*ISCJB **30** 08:47:57.1±0.5, 29°.84S±0°.05×179°.1W±0°.1, h315km, mb3.8/5, Error ellipse: s-maj=14.9km s-min=5.2km az=17.5*
*IDC **30** 08:47:59.1±0.5, 29°.54S×178°.94W, h313km±5km, mb3.6/5, mb1 3.7/7, mb1mx3.4/21, mbtmp3.7/7, Error ellipse: s-maj=19.5km s-min=17.6km az=105.0*
ISC 30 08:47:56.9±0.7, 29°88S±0°.08×179°0W±0°.1, h315km, n52, σ1s82/60, mb3.8/5, 1D, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.12**	**56**	P	Pn	08 48 42.6	+3.1
	195nm,0.3s,baz=315,slow=18,SNR=7.7						
RAO				S	**S**	**08 49 13.8**	**+0.4**
	603nm,0.3s,baz=342,slow=20,SNR=10						
WCZ	**Waipu Caves**	**8.25**	**221**	‖PN	P	08 50 01.2	+3.1
PUZ	**Puketiti**	**8.49**	**195**	*e*PN	**Pn**	**08 49 57.4**	**+0.9**
PUZ				SN	**S**	**08 51 32.4**	**-1.5**
MWZ	**Matawai**	**8.92**	**198**	PN	**Pn**	**08 50 01.7**	**-0.1**
URZ	**Urewera**	**8.97**	**200**	SN	**S**	**08 51 43.6**	**-0.9**
URZ	**Urewera**	**8.97**	**200**	P	**P**	**08 50 05.3**	**-1.0**
	13nm,0.3s,baz=4.5,slow=0.4,SNR=29						
URZ				S	**S**	**08 51 47.4**	**+3.0**
	11nm,0.3s,baz=281,slow=21,SNR=14						
RAHZ	**Arahi**	**9.59**	**199**	*e*PN	**P**	**08 50 13.0**	**-0.2**
RAHZ				SN	**S**	**08 51 57.7**	**-0.7**
NMHZ	**Naumai**	**9.83**	**200**	PN	**P**	**08 50 15.4**	**-0.6**
BKZ	**Black Stump Fm**	**9.99**	**201**	PN	**Pn**	**08 50 15.1**	**+0.3**
BKZ				SN	**S**	**08 52 05.8**	**-1.7**
WHVZ	**Whangaehu Hut**	**10.39**	**204**	*e*PN	**P**	**08 50 22.2**	**-0.2**
WHVZ				SN	**S**	**08 52 18.8**	**+2.0**
BHHZ	**Black Hill Sta**	**10.42**	**202**	PN	**P**	**08 50 22.1**	**-0.4**
BHHZ				SN	**S**	**08 52 15.5**	**-1.7**
WNVZ	**Wahianoa**	**10.43**	**204**	PN	**P**	**08 50 22.7**	**0.0**
MOVZ	**Moawhango**	**10.45**	**203**	*e*PN	**P**	**08 50 23.4**	**+0.5**
PXZ	**Pawanui**	**10.69**	**197**	PN	**Pn**	**08 50 23.9**	**+0.7**
PNHZ	**Pukenui**	**10.77**	**200**	*e*PN	**P**	**08 50 25.2**	**-1.2**
WPHZ	**Waipukurau**	**10.84**	**199**	PN	**P**	**08 50 28.0**	**+0.9**
WPHZ				SN	**S**	**08 52 26.7**	**+0.3**
TSZ	**Takapari Road**	**10.97**	**201**	PN	**P**	**08 50 29.4**	**+0.7**
DVHZ	**Dannevirke**	**11.13**	**200**	*e*PN	**P**	**08 50 30.2**	**-0.1**
ANWZ	**Angora Road**	**11.19**	**198**	PN	**P**	**08 50 30.5**	**-0.5**
POWZ	**Post Office Ro**	**11.34**	**201**	PN	**P**	**08 50 32.7**	**+0.1**
BFZ	**Birch Farm**	**11.46**	**199**	PN	**P**	**08 50 35.7**	**+1.7**
BFZ				SN	**S**	**08 52 38.2**	**-2.3**
MRZ	**Mangatainoka R**	**11.64**	**201**	PN	**P**	**08 50 35.9**	**0.0**
MRZ				SN	**S**	**08 52 38.8**	**-5.8**
TIWZ	**Tintock**	**11.65**	**200**	PN	**P**	**08 50 36.6**	**+0.4**
HOWZ	**Holdsworth Sta**	**11.88**	**201**	PN	**P**	**08 50 38.0**	**-0.6**
HOWZ				SN	**S**	**08 52 44.3**	**-5.6**
KIW	**Kapiti Island**	**12.04**	**203**	PN	**P**	**08 50 39.7**	**-0.7**
MTW	**Mount Morrison**	**12.12**	**200**	PN	**P**	**08 50 40.8**	**-0.4**
CAW	**Cannon Point**	**12.21**	**202**	PN	**Pn**	**08 50 40.7**	**-0.9**
MSWZ	**Moikau Station**	**12.43**	**201**	PN	**Pn**	**08 50 43.8**	**-0.4**
TCW	**Tory Channel**	**12.57**	**204**	PN	**P**	**08 50 46.3**	**0.0**
PLWZ	**Palliser**	**12.57**	**200**	PN	**P**	**08 50 48.1**	**+1.8**
TUWZ	**Tuamarina**	**12.88**	**205**	PN	**Pn**	**08 50 48.2**	**-1.4**
QRZ	**Quartz Range**	**12.93**	**210**	PN	**Pn**	**08 50 49.3**	**-0.9**
THZ	**Tophouse**	**13.56**	**207**	*e*PN	**P**	**08 50 55.7**	**-1.6**
KHZ	**Kahutara**	**13.89**	**204**	PN	**Pn**	**08 51 01.8**	**+0.3**
DSZ	**Denniston Nort**	**13.99**	**210**	PN	**Pn**	**08 51 03.3**	**+0.4**
LTZ	**Lake Taylor**	**14.67**	**206**	PN	**Pn**	**08 51 10.2**	**-0.7**
OXZ	**Oxford**	**15.22**	**206**	PN	**Pn**	**08 51 16.5**	**-0.8**
RPZ	**Rata Peaks**	**15.94**	**207**	P	**Pn**	**08 51 28.7**	**+3.1**
	1.0nm,0.3s,baz=53,slow=20,SNR=3.0						
RPZ				S	**S**	**08 54 12.3**	**-2.3**
	1.3nm,0.3s,baz=97,slow=17,SNR=8.5						
ODZ	**Otahua Downs**	**17.21**	**206**	PN	**Pn**	**08 51 41.3**	**+0.9**
AFI	**Afiamalu**	**17.23**	**24**	P	**P**	**08 51 36.7**	**-1.0**
	11nm,0.3s,baz=357,slow=8.1,SNR=11						
AFI				S	**S**	**08 54 35.6**	**-5.3**
	3.0nm,0.3s,baz=164,slow=18,SNR=4.6						
LHI	**Lord Howe Isla**	**18.95**	**259**	S	S	08 54 52.1	-22
	baz=20,SNR=3.9						
QLP	**Quilpie**	**32.49**	**267**	S	S	08 58 32.4	-18
	baz=33,SNR=4.3						
CTA	**Charters Tower**	**32.87**	**279**	P	P	08 54 05.6	+3.3
	2.0nm,0.7s,baz=101,slow=12,SNR=4.0						
ASAR	**Alice Springs**	**42.29**	**267**	P	**P**	**08 55 22.5**	**+1.9**
	0.7nm,0.8s,baz=102,slow=6.5,SNR=12						
ASAR				ScP	**ScP**	**09 00 30.7**	**+2.7**
	1.3nm,1.0s,baz=111,slow=4.1,SNR=5.3						
WRA	**Warramunga Arr**	**43.23**	**272**	P	P	08 55 30.4	+2.3
	2.0nm,0.4s,baz=110,slow=7.9,SNR=13						
WRA				S	**S**	**09 01 28.7**	**-2.3**
	0.4nm,0.7s,baz=109,slow=14,SNR=6.1						
QSPA	**South Pole Qui**	**60.23**	**180**	P	P	08 57 37.2	+4.9
	4.7nm,0.6s,baz=134,slow=7.4,SNR=4.6						
PETK	**Petropavlovsk-**	**85.10**	**346**	P	**P**	**08 59 58.9**	**+1.5**
	2.4nm,0.6s,baz=134,slow=7.4,SNR=4.6						
ARCES	**ARCESS Array B**	**137.90**	**347**	PKhKP	PKPpre	09 06 36.2	
	0.5nm,0.5s,baz=96,slow=3.7,SNR=5.9						
ARCES				PKP	**PKiKP**	**09 06 43.5**	**-1.8**
	1.3nm,0.8s,baz=177,slow=1.5,SNR=3.2						
FINES	**FINESS Array B**	**144.36**	**340**	PKP	**PKPdf**	**09 06 55.2**	**+0.3**
	4.8nm,0.3s,baz=50,slow=3.6,SNR=50						
NB2	**NORSAR Subarra**	**148.10**	**351**	PKP	**PKPbc**	**09 07 06.1**	**+1.1**
	comp=Z,1.1nm,0.5s,baz=13,slow=2.8						
NOA	**NORSAR Array B**	**148.10**	**351**	PKPbc	**PKPbc**	**09 07 06.0**	**+1.1**
	comp=Z,1.2nm,0.5s,baz=16,slow=4.3,SNR=8.4						
TORD	**Torodi Ar. Bea**	**163.34**	**182**	PKPab	**PKPab**	**09 08 17.9**	**+2.8**
	comp=Z,1.0nm,0.7s,baz=171,slow=3.7,SNR=13						

*ISCJB **30** 09:12:54.8±0.7, 10°.49N±0°.03×92°.29E±0°.04, h38km±5km, mb4.7/55, MS4.3/40, Error ellipse: s-maj=6.7km s-min=4.9km az=136.3*
*MOS **30** 09:12:54.5±1.0, 10°.57N×92°.29E, h33km, mb4.9/21, MS4.2/8, Error ellipse: s-maj=11.0km s-min=6.5km az=105.2*
*BJI **30** 09:12:54.3, 10°.39N×92°.29E, h46km, mB4.9/32, mb4.7/45, Ms4.5/38, Ms7 4.2/35*
*IDC **30** 09:12:54.9±3.5, 10°.65N×92°.29E, h21km±21km, mb4.4/19, mb1 4.5/21, mb1mx4.4/28, mbtmp4.3/21, ML4.3/2, MS4.2/24, Ms1 4.2/24, ms1mx4.0/45, Error ellipse: s-maj=17.9km s-min=12.7km az=54.0*
*NEIC **30** 09:12:57.0±0.2, 10°.59N×92°.28E, h35km, mb4.8/13, Error ellipse: s-maj=8.3km s-min=5.2km az=52.0*
ISC 30 09:12:56.5±0.4, 10°55N±0°.04×92°27E±0°.04, h33km±1km, h33km:pP-P, n164, σ1s82/225, mb4.6/55, MS4.3/42, 11C-2D, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.20**	**23**	*e*PKP	Pn	09 13 17.3	+0.3
PBA				*e*S	Sn	09 13 32.3	+0.2
PBA				AML	AML	09 13 36.8	
	comp=N,16μm,0.3s						
PBA				AML	AML	09 13 38.8	
	comp=E,23μm,0.5s						
DGPR	**DIGLIPUR**	**2.69**	**14**	*e*PKP	**Pn**	**09 13 38.2**	**+0.7**
DGPR				*e*S	**Sn**	**09 14 10.6**	**+1.6**
DGPR				AML	AML	09 14 28.3	
	comp=N,3μm,0.7s						
DGPR				AML	AML	09 14 34.3	
	comp=E,4μm,0.5s						
PSI	**Prapat**	**10.14**	**139**	Pn	**Pn**	**09 15 21.9**	**+1.9**
PSI				Sn	Sn	09 17 20.1	+7.3
PSI	**Prapat**	**10.14**	**139**	Pn	**Pn**	**09 15 21.9**	**+1.9**
	comp=E,1.5nm,0.3s,baz=320,slow=16,SNR=9.2						
PSI				Sn	Sn	09 17 20.1	+7.3
	comp=E,1.0nm,0.3s,baz=343,slow=17,SNR=2.2						
CMAR	**Chiang Mai Arr**	**10.18**	**39**	Pn	**Pn**	**09 15 19.5**	**-0.9**
CMAR	**Chiang Mai Arr**	**10.18**	**39**	Pn	**Pn**	**09 15 19.5**	**-0.9**
	comp=E,1.0nm,0.3s,baz=233,slow=14,SNR=18						
CMAR				LR	LR	09 20 14.6	
	comp=E,2μm,18.2s,baz=220,slow=44						
CHTO	**Chiang Mai**	**10.45**	**37**	*e*P	**Pn**	**09 15 25.0**	**+0.9**
CHTO				*e*		09 17 18.4	
CHTO	**Chiang Mai**	**10.45**	**37**	*e*Pn	**Pn**	**09 15 25.0**	**+0.9**
CHTO				*e*Sn	**Sn**	**09 17 18.4**	**-1.7**
IPM	**Ipoh**	**10.57**	**124**	*e*Pn	**Pn**	**09 15 24.9**	**-0.8**
IPM				*e*Sn	**Sn**	**09 17 23.2**	**+0.1**
VIS	**Vishakhapatnam**	**11.22**	**310**	*i* P	**Pn**	**09 15 32.8**	**-1.9**
VIS				AMB	AMB	09 15 59.2	
	comp=Z,76nm,0.7s						
VIS				*i* x	x	09 17 27.0	
VIS				*ex*	x	09 17 30.3	
	comp=E,136nm,0.4s						
VIS				*ex*	x	09 17 32.3	
	comp=N,148nm,0.4s						
BOK	**Bokaro**	**14.51**	**336**	*e*PKP	**Pn**	**09 16 17.6**	**-2.0**
BOK				AMB	AMB	09 16 36.0	
	comp=Z,34nm,3.8s						
HYB	**Hyderabad**	**14.95**	**299**	*e*P	**P**	**09 16 32.0**	**+1.2**
HYB	**Hyderabad**	**14.95**	**299**	*i* P	**Pn**	**09 16 25.5**	**-0.2**
HYB				*e*		09 19 26.0	
HYB	**Hyderabad**	**14.95**	**299**	*ex*	x	09 16 21.6	
HYB				AMB	AMB	09 16 23.4	
	comp=Z,43nm,1.5s						
HYB	**Hyderabad**	**14.95**	**299**	*e*P	**P**	**09 16 32.0**	**+1.2**
HYB				S	**S**	**09 19 30.0**	**+2.6**
TRD	**Trivandrum**	**15.23**	**264**	‖*ex*	x	09 20 13.5	
NGP	**Nagpur**	**16.50**	**311**	*e*PKP	**Pn**	**09 16 46.0**	**+0.3**
NGP				AMB	AMB	09 16 54.8	
	comp=Z,30nm,1.6s						
ODAN	**Odare**	**16.87**	**345**	*e*P	**Pn**	**09 16 49.8**	**-0.6**
	comp=Z,46nm,0.5s						
LATR	**Latur**	**17.09**	**299**	*ex*	x	09 16 47.1	
LATR				AMB	AMB	09 17 18.9	
	comp=Z,39nm,2.6s						
RAMN	**Ramite**	**17.17**	**343**	*e*P	**Pn**	**09 16 53.6**	**-0.6**
	comp=Z,52nm,0.4s						
JBP	**Jabalpur**	**17.18**	**318**	*e*PKP	**Pn**	**09 16 51.8**	**-2.3**
JBP				*i* x	x	09 17 07.4	
	comp=Z,16nm,0.4s						
JBP				*ex*	x	09 20 24.0	
TAPN	**Taplejung**	**17.26**	**346**	*e*P	**Pn**	**09 16 55.8**	**+0.4**
	comp=Z,83nm,0.8s						
KMI	**Kunming**	**17.58**	**33**	P	**P**	**09 17 00.5**	**+0.4**
KMI				pP	**pP**	**09 17 07.5**	**-1.2**
KMI				S	**Sn**	**09 20 15.8**	**+1.6**
KMI				pmax	pmax		
	comp=Z,11nm,1.0s						
KMI				pmax	pmax		
	comp=Z,260nm,12.6s						
KMI				LR	LR		
	comp=N,820nm,19.4s						
KMI				LR	LR		
	comp=E,1μm,15.7s						
KMI				LR	LR		
	comp=Z,940nm,16.8s						
AKL	**Akola**	**17.81**	**306**	*e*PKP	**P**	**09 17 02.6**	**+0.2**
JIRN	**Jiri**	**17.96**	**342**	*e*P	**Pn**	**09 17 04.0**	**-0.1**
	comp=Z,45nm,0.5s						
PKI	**Pulchoki**	**18.12**	**340**	*e*P	**P**	**09 17 06.3**	**+0.1**
	comp=Z,30nm,0.4s						
PKIN	**Phulchoki**	**18.14**	**340**	*e*P	**P**	**09 17 06.5**	**+0.2**
	comp=Z,48nm,0.5s						
DMN	**Daman**	**18.26**	**339**	*e*P	**Pn**	**09 17 07.9**	**+0.2**
	comp=Z,70nm,0.7s						
GUN	**Gumba**	**18.29**	**342**	*e*P	**Pn**	**09 17 08.6**	**+0.5**
	comp=Z,34nm,0.5s						
QIZ	**Qiongzhong**	**18.96**	**62**	P	**P**	**09 17 15.0**	**-0.1**
QIZ				pP	**pP**	**09 17 23.3**	**-0.5**
QIZ				sP	**sP**	**09 17 28.8**	**+0.8**
QIZ				S	**Sn**	**09 20 47.5**	**+0.1**
QIZ				pmax	pmax		
	comp=Z,16nm,1.3s						
QIZ				LR	LR		
	comp=N,990nm,16.7s						
QIZ				LR	LR		
	comp=E,240nm,19.7s						
QIZ				LR	LR		
	comp=Z,860nm,18.4s						
KOLN	**Koldanda**	**18.98**	**336**	*e*P	**Pn**	**09 17 16.1**	**-0.2**
	comp=Z,45nm,0.5s						
BHPL	**Bhopal**	**18.98**	**314**	*e*PKP	**Pn**	**09 17 16.4**	**+0.2**
DANN	**Dangsing**	**19.43**	**337**	*e*P	**Pn**	**09 17 22.0**	**+0.2**
	comp=Z,36nm,0.5s						
POO	**Poona**	**19.50**	**296**	*ex*	**Pn**	**09 17 25.0**	**+2.5**
	comp=Z,15nm,1.2s						
PYUN	**Piuthan**	**19.52**	**335**	*e*P	**Pn**	**09 17 23.2**	**+0.4**
	comp=Z,62nm,0.6s						
KSM	**Kuching**	**20.06**	**116**	*e*P	**P**	**09 17 27.8**	**+0.6**
	comp=Z,37nm,0.9s						
GYA	**Guiyang**	**20.87**	**39**	⇑*i*P	**P**	**09 17 35.3**	**-0.7**
GYA				pP	**pP**	**09 17 47.5**	**+2.8**
GYA				PP	**PnPn**	**09 18 02.0**	**+7.0**
GYA				S	**S**	**09 21 25.5**	**-1.6**
GYA				sS	**sS**	**09 21 40.8**	**-0.3**
GYA				SS	**SnSn**	**09 21 58.0**	**+9.3**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,450nm,16.8s						
GYA				LR	LR		
	comp=E,330nm,17.0s						
GYA				LR	LR		
	comp=Z,470nm,16.4s						
CD2	**Chengdu**	**22.90**	**26**	P	**P**	**09 17 57.3**	**-0.3**
CD2				pP	**pP**	**09 18 06.3**	**-0.2**
CD2				sP	**sP**	**09 18 10.3**	**-0.3**
CD2				PP	**PnPn**	**09 18 28.0**	**+5.2**
CD2				S	**S**	**09 22 01.0**	**-4.4**
CD2				sS	**sS**	**09 22 16.0**	**-4.8**
CD2				SS	**SnSn**	**09 22 46.0**	**+7.5**
CD2				pmax	pmax		
	comp=Z,100nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,4.2s						
CD2				LR	LR		
	comp=N,210nm,12.4s						
CD2				LR	LR		
	comp=Z,230nm,13.2s						
DDI	**Dehra Dun**	**23.71**	**328**	*e*PKP	**P**	**09 18 04.1**	**-1.6**
DDI				AMB	AMB	09 18 23.3	
	comp=Z,91nm,1.3s						
SMLA	**Simla**	**24.82**	**328**	*e*PKP	**P**	**09 18 16.5**	**+0.8**
DHRM	**DHARAMSHALA**	**26.15**	**328**	*e*PKP	**P**	**09 18 28.4**	**+0.3**
LZH	**Lanzhou**	**27.51**	**21**	⇑P	**P**	**09 18 40.0**	**-0.2**
LZH				pP	**pP**	**09 18 50.0**	**+0.3**
LZH				sP	**sP**	**09 18 54.0**	**+0.3**
LZH				PP	**PnPn**	**09 19 28.5**	**+2.7**
LZH				S	**S**	**09 23 17.0**	**-2.2**
LZH				SS	**SnSn**	**09 24 37.5**	**+6.3**
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,4.5s						
LZH				LR	LR		
	comp=N,600nm,13.5s						
LZH				LR	LR		
	com

comp=Z,470nm,17.5s
WMQ Urumqi 33.39 354 *e*P **P** **09 19 32.8 +0.8**
WMQ pP **pP** **09 19 42.5 +1.0**
WMQ sP **sP** **09 19 47.0 +1.5**
WMQ PP **PnPn** **09 20 45.0 +1.6**
WMQ SS **SnSn** **09 26 57.0 +3.1**
WMQ pmax pmax
comp=Z,13nm,0.6s
WMQ pmax pmax
comp=Z,100nm,3.7s
WMQ LR LR
comp=N,910nm,20.2s
WMQ LR LR
comp=E,1μm,19.6s
WMQ LR LR
comp=Z,610nm,22.5s
TKM2 Tokmak 2 35.38 339 *e*P **P** **09 19 48.5 -0.9**
TKM2 *e**PP **pP** **09 19 59.8 +0.8**
TKM2 pmax pmax
comp=Z,3.0nm,0.8s
TKM2 Tokmak 2 35.38 339 *e*P **P** **09 19 48.5 -0.9**
comp=Z,2.7nm,0.8s
TKM2 *e*pP **pP** **09 19 59.8 +0.8**
EKS2 Erkin-Say 35.84 336 *e*P **P** **09 19 55.0 +1.7**
EKS2 pmax pmax
comp=Z,5.0nm,0.8s
EKS2 Erkin-Say 35.84 336 *e*P **P** **09 19 55.0 +1.7**
comp=Z,4.5nm,0.8s
BJI Beijing 36.23 32 P **P** **09 19 56.8 +0.4**
BJI S S 09 25 41.0 +6.4
BJI pmax pmax
comp=Z,23nm,1.0s
BJI pmax pmax
comp=Z,110nm,4.1s
BJI LR LR
comp=N,880nm,16.1s
BJI LR LR
comp=E,660nm,17.0s
BJI LR LR
comp=Z,570nm,19.4s
MK31 Makanchi Array 37.11 349 *e*P **P** **09 20 03.6 -0.3**
MK31 Makanchi Array 37.11 349 *e*P **P** **09 20 03.5 -0.3**
MKAR Makanchi Array 37.11 349 *e*P **P** **09 20 03.9 0.0**
MKAR 09 22 23.9
MKAR Makanchi Array 37.11 349 *e*P **P** **09 20 03.9 0.0**
MKAR PcP **PcP** **09 22 23.9 +0.1**
MKAR Makanchi Array 37.11 349 P **P** **09 20 03.8 0.0**
comp=Z,7.5nm,0.6s,baz=169,slow=8.0,SNR=62
MKAR PcP **PcP** **09 22 23.9 +0.1**
comp=Z,0.6nm,0.6s,baz=165,slow=2.8,SNR=2.9
KK31 Karatay Array 37.56 334 P **P** **09 20 08.4 +0.6**
KK31 pmax pmax
comp=Z,4.0nm,0.5s
KKAR Karatay Array 37.56 334 *e*P **P** **09 20 08.2 +0.4**
KKAR pmax pmax
comp=Z,4.0nm,0.5s
KKAR Karatay Array 37.56 334 *e*P **P** **09 20 08.2 +0.4**
comp=Z,4.0nm,0.5s
SONM Songino Array 39.03 15 P **P** **09 20 20.0 -0.2**
SONM Songino Array 39.03 15 P **P** **09 20 20.0 -0.2**
comp=Z,5.1nm,0.6s,baz=198,slow=10.0,SNR=35
SONM LR LR 09 39 47.6
comp=Z,181nm,18.6s,baz=195,slow=41
ULN Ulaanbaatar 39.23 16 *e*P **P** **09 20 22.0 +0.1**
comp=Z,20nm,1.4s
ZAK Zakamensk 40.74 11 *e*P **P** **09 20 34.1 -0.3**
ZAK *e* 09 22 34.3
ZAK pmax pmax
comp=Z,4.0nm,1.4s
KSAR Wonju Array Be 41.73 44 P **P** **09 20 41.6 -0.9**
KSRS Korea Array 41.76 44 P **P** **09 20 41.6 -1.1**
comp=Z,6.0nm,0.8s,baz=248,slow=8.5,SNR=18
KSRS LR LR 09 40 04.6
comp=Z,264nm,19.2s,baz=240,slow=39
TLY Talaya 42.05 11 *e*P **P** **09 20 46.3 +1.3**
TLY pmax pmax
comp=Z,9.0nm,1.1s
TLY MLR MLR
comp=Z,145nm,19.0s
ZALV Zalesovo Beam 43.70 354 *i* P **P** **09 20 58.2 0.0**
ZALV pmax pmax
comp=Z,6.0nm,0.6s
ZALV Zalesovo Beam 43.70 354 P **P** **09 20 57.7 -0.6**
ZALV Zalesovo Beam 43.70 354 P **P** **09 20 57.7 -0.6**
comp=Z,6.3nm,0.6s,baz=169,slow=8.5,SNR=24
ZALV LR LR 09 43 30.4
comp=Z,222nm,19.0s,baz=250,slow=42
CN2 Changchun 43.84 35 ⇑P **P** **09 20 57.8 -1.7**
CN2 *es*P **sP** **09 21 12.8 -0.4**
CN2 SS SS 09 30 33.5 -12
CN2 pmax pmax
comp=Z,20nm,0.6s
CN2 pmax pmax
comp=Z,200nm,4.0s
CN2 LR LR
comp=N,300nm,16.0s
CN2 LR LR
comp=E,200nm,16.0s
CN2 LR LR
comp=Z,500nm,19.0s
NVS Novosibirsk 44.76 353 *e*P **P** **09 21 05.8 -0.9**
BVA0 Borovoye Array 45.88 342 P **P** **09 21 15.4 -0.3**
BVA0 pmax pmax
comp=Z,6.0nm,1.3s
MDJ Mudanjiang 46.71 37 P **P** **09 21 23.0 +0.7**
MDJ pP **pP** **09 21 32.3 +0.2**
MDJ sP **sP** **09 21 37.0 +1.0**
MDJ ScP **ScP** **09 26 47.5 +0.6**
MDJ sS **sS** **09 28 29.0 +3.0**
MDJ pmax pmax
comp=Z,8.0nm,2.1s
MDJ pmax pmax
comp=Z,100nm,6.1s
MDJ LR LR
comp=N,200nm,25.2s
MDJ LR LR
comp=Z,270nm,19.7s
AB31 Akbulak array 47.02 331 *i* P **P** **09 21 25.3 +0.7**
AB31 pmax pmax
comp=Z,2.0nm,0.3s
ABKAR Akbulak array 47.02 331 *e*P **P** **09 21 25.4 +0.7**
comp=Z,2.5nm,0.3s
USRK Ussuriysk Arra 47.91 38 P **P** **09 21 30.8 -0.9**
comp=Z,3.9nm,0.6s,baz=252,slow=6.2,SNR=18
USRK LR LR 09 45 44.7
comp=Z,264nm,18.1s,baz=322,slow=41
MJAR Matsushiro Arr 48.81 50 P **P** **09 21 38.8 0.0**
MJAR Matsushiro Arr 48.81 50 P **P** **09 21 38.8 0.0**
comp=Z,2.9nm,0.7s,baz=250,slow=8.4,SNR=10
NWAO Narrogin (SRO) 49.36 152 LR LR 09 42 00.6
comp=Z,326nm,19.6s,baz=327,slow=35
MAK Makhachkala 50.51 318 *e*P **P** **09 21 51.7 +0.2**
MAK *e* 09 23 06.1
MAK *e* 09 23 42.3
MAK *e*PPP PPP 09 24 43.3
MAK *e*S **S** **09 29 04.4 +1.0**
MAK *e* 09 31 39.9
MAK pmax pmax
comp=Z,30nm,0.3s
WRA Warramunga Arr 51.31 126 P **P** **09 21 57.5 -0.4**
WRA S **S** **09 29 11.1 -4.1**
WRA Warramunga Arr 51.31 126 P **P** **09 21 57.5 -0.4**
comp=Z,19nm,0.5s,baz=306,slow=8.3,SNR=759
WRA S **S** **09 29 11.1 -4.1**
comp=Z,1.9nm,0.9s,baz=296,slow=16,SNR=9.9
WRA LR LR 09 44 40.1
comp=Z,145nm,20.7s,baz=275,slow=37
WRAB Tennant Creek 51.32 126 *e*P **P** **09 21 57.7 -0.3**
WRAB pmax pmax
comp=Z,30nm,0.6s
WRAB Tennant Creek 51.32 126 *e*P **P** **09 21 57.7 -0.3**
comp=Z,30nm,0.6s
HABR Khabarovsk 51.98 35 P **P** **09 21 59.4 -3.0**
HABR *e**SP **sP** **09 22 13.5 -2.8**
HABR *e* 09 23 11.0
HABR *e* 09 23 57.7
HABR *e*S **S** **09 29 21.4 -2.1**
HABR *e**SS **sS** **09 29 38.4 -1.5**
HABR *e* 09 31 46.6
HABR *e*SS **SS** **09 33 00.1 -0.6**
HABR *e*SSS SSS 09 34 42.4
HABR pmax pmax
comp=N,8.0nm,1.1s
HABR pmax pmax
comp=Z,8.0nm,1.1s
HABR pmax pmax
comp=E,8.0nm,1.2s
HABR MLR MLR
comp=Z,378nm,19.0s
ARU Arti 52.73 337 *c i*P **P** **09 22 08.0 +0.1**
ARU 09 24 03.2
ARU S **S** **09 29 35.7 +2.2**
ARU SS **SS** **09 33 06.4 -5.9**
ARU pmax pmax
comp=Z,8.0nm,1.0s
ARU MLR MLR
comp=Z,291nm,19.0s
AS31 Alice Springs 53.04 130 *e*P **P** **09 22 10.4 -0.3**
ASAR Alice Springs 53.04 130 P **P** **09 22 10.5 -0.3**
ASAR S **S** **09 29 35.0 -3.9**
ASAR Alice Springs 53.04 130 P **P** **09 22 10.5 -0.3**
comp=Z,42nm,0.7s,baz=304,slow=7.0,SNR=376
ASAR S **S** **09 29 35.0 -3.9**
comp=Z,1.7nm,1.0s,baz=303,slow=14,SNR=8.4
ASAR LR LR 09 49 51.2
comp=Z,167nm,19.4s,baz=306,slow=42
KBZ Khabaz 53.88 317 P **P** **09 22 16.3 -0.3**
KBZ Khabaz 53.88 317 P **P** **09 22 16.2 -0.3**
KBZ Khabaz 53.88 317 P **P** **09 22 16.2 -0.3**
comp=Z,4.0nm,1.0s,baz=128,slow=5.7,SNR=6.6
YSS Yuzh-Sakhalins 55.87 40⇑ *e*P **P** **09 22 31.9 +1.0**
KMBO Kilima Mbogo 55.94 261 LR LR 09 45 55.0
comp=Z,351nm,18.1s,baz=93,slow=35
YUK Yuzh-Kuril'sk 56.85 44 *c i*P **P** **09 22 46.4 +8.5**
YUK *i* 09 24 38.5
YUK S S 09 30 40.4 +11
YUK *i* SS **SS** **09 34 21.1 +3.4**
YUK MLR MLR
comp=E,647nm,18.0s
YUK MLR MLR
comp=Z,275nm,18.0s
YAK Yakutsk 58.09 20 *e*P **P** **09 22 45.4 -1.0**
YAK *e**PP **pP** **09 22 55.7 -0.7**
YAK *e* 09 24 54.2
YAK *e*S **S** **09 30 45.6 +0.6**
YAK pmax pmax
comp=Z,17nm,1.1s
YAK pmax pmax
comp=N,5.0nm,1.0s
YAK pmax pmax
comp=E,1.0nm,0.9s
YAK pmax pmax
comp=Z,8.0nm,0.8s
YAK pmax pmax
comp=E,2.0nm,0.7s
YAK pmax pmax
comp=N,7.0nm,1.4s
YAK smax smax
comp=N,27nm,2.5s
YAK smax smax
comp=E,13nm,2.0s
YAK MLR MLR
comp=Z,199nm,18.0s
YAK MLR MLR
comp=E,113nm,15.0s
YAK MLR MLR
comp=N,125nm,17.0s
VORD Divnogorie 58.98 324 *e*P **P** **09 22 51.7 -1.1**
VORD pmax pmax
comp=Z,40nm,0.4s
VORD pmax pmax
comp=N,20nm,0.8s
VORD pmax pmax
comp=E,50nm,0.4s
VSR Storozhevoye 59.16 324 *e*P **P** **09 22 52.6 -1.4**
VSR pmax pmax
comp=Z,5.0nm,0.5s
VSR pmax pmax
comp=N,5.0nm,0.4s
VSR pmax pmax
comp=E,5.0nm,0.6s
BRTR Keskin Array B 59.30 310 P **P** **09 22 54.1 -1.3**
BRTR Keskin Array B 59.30 310 P **P** **09 22 54.1 -1.3**
comp=E,0.9nm,0.7s,baz=116,slow=6.7,SNR=4.6
CTAO Charters Tower 61.23 120 *e*P **P** **09 23 09.5 +0.8**
CTAO pmax pmax
comp=Z,17nm,1.1s
CTAO Charters Tower 61.23 120 *e*P **P** **09 23 09.5 +0.8**
comp=Z,17nm,1.1s
OBN Obninsk 62.15 328⇓ *e*P **P** **09 23 14.7 +0.4**
OBN *e* 09 23 28.1
OBN 09 23 54.0
OBN S **S** **09 31 34.0 -3.3**
OBN SSS SSS 09 38 23.7
OBN pmax pmax
comp=Z,12nm,1.2s
OBN MLR MLR
comp=Z,200nm,16.0s
STKA Stephens Creek 63.28 134 *e*P **P** **09 23 23.3 +1.1**
comp=Z,6.3nm,1.0s
STKA Stephens Creek 63.28 134 P **P** **09 23 22.9 +0.7**
comp=Z,31nm,1.0s,baz=306,slow=7.4,SNR=25
STKA LR LR 09 55 29.0
comp=Z,201nm,18.9s,baz=212,slow=40
TIXI Tiksi 65.00 12 *c i*P **P** **09 23 31.9 -1.0**
TIXI pmax pmax
comp=Z,26nm,1.7s
PLOR Plostina 65.56 316⇑ *i*P **P** **09 23 38.1 +1.1**
MLR Muntele Rosu 65.98 315⇑ *i*P **P** **09 23 40.7 +0.8**
BURAR Bucovina Array 66.84 317⇑ *i*P **P** **09 23 46.0 +0.7**
PETK Petropavlovsk- 66.95 37 LR LR 09 58 15.1
comp=Z,180nm,18.4s,baz=8.3,slow=41
APA Apatity 68.71 339⇑ *i*P **P** **09 23 55.5 -1.1**
APA *i* 09 24 21.5
APA pmax pmax
comp=Z,8.0nm,1.0s
APA MLR MLR
comp=Z,300nm,21.0s
FINES FINESS Array B 69.50 332 P **P** **09 24 00.9 -0.7**
FINES FINESS Array B 69.50 332 P **P** **09 24 00.9 -0.7**
comp=Z,3.6nm,0.8s,baz=114,slow=6.2,SNR=7.6
FINES LR LR 10 00 16.5
comp=Z,220nm,19.4s,baz=284,slow=41
ARCES ARCESS Array B 72.14 340 P **P** **09 24 17.7 +0.2**
ARCES ARCESS Array B 72.14 340 P **P** **09 24 17.7 +0.2**
comp=Z,3.1nm,0.6s,baz=102,slow=6.6,SNR=14
ARCES LR LR 09 58 18.7
comp=Z,225nm,20.7s,baz=289,slow=38
DPC Dobruska-Polom 72.99 319 *e*P **P** **09 24 21.5 -1.5**
DPC Dobruska-Polom 72.99 319 *e*P **P** **09 24 21.5 -1.5**
PRU Pruhonice 74.11 319 *e*P **P** **09 24 26.8 -2.7**
PRU MLR MLR
comp=Z,100nm,18.2s
PRU Pruhonice 74.11 319 *e*P **P** **09 24 26.8 -2.7**
PRU AMS AMS 10 06 00.0
comp=Z,100nm,18.2s
GERES GERESS Array B 74.62 318 P **P** **09 24 32.6 -0.1**
GERES GERESS Array B 74.62 318 P **P** **09 24 32.6 -0.1**
comp=Z,0.8nm,0.5s,baz=95,slow=7.0,SNR=7.5
GERES LR LR 09 58 51.9
comp=Z,57nm,21.6s,baz=283,slow=37
BOSA Boshof 75.46 237 P **P** **09 24 39.4 +1.5**
BOSA Boshof 75.46 237 P **P** **09 24 39.4 +1.5**
comp=Z,3.9nm,0.8s,baz=94,slow=6.2,SNR=6.7
BOSA LR LR 09 54 45.0
comp=Z,412nm,19.0s,baz=345,slow=33
FX1 Attu Island--F 76.18 38 *e*P **P** **09 24 42.0 +0.6**
NB2 NORSAR Subarra 76.51 330 P **P** **09 24 42.3 -0.9**
comp=Z,4.4nm,1.1s,baz=92,slow=5.9
NOA NORSAR Array B 76.51 330 P **P** **09 24 42.3 -0.9**
NOA NORSAR Array B 76.51 330 P **P** **09 24 42.3 -0.9**
comp=Z,2.1nm,0.9s,baz=93,slow=5.8,SNR=7.4
NOA LR LR 10 05 01.7
comp=Z,91nm,18.9s,baz=90,slow=41
DAVOX Davos/Dischmat 77.20 316 LR LR 10 07 17.9
comp=Z,92nm,18.4s,baz=83,slow=42
KEST Kesra 78.21 304 P **P** **09 24 53.2 -0.1**
KEST Kesra 78.21 304 P **P** **09 24 53.2 -0.1**
comp=Z,0.9nm,0.9s,baz=90,slow=5.1,SNR=4.1
LPG La Plagne 79.44 314 *e*P **P** **09 24 59.7 -0.3**
comp=Z,6.9nm,0.5s
LPG La Plagne 79.44 314 *e*P **P** **09 24 59.7 -0.3**
LPG pmax pmax
comp=Z,7.0nm,0.5s
LPG La Plagne 79.44 314 *e*P **P** **09 24 59.7 -0.3**
comp=Z,6.9nm,0.5s
LPL La Plagne 79.45 315 *e*P **P** **09 24 59.7 -0.3**
LPL La Plagne 79.45 315 *e*P **P** **09 24 59.7 -0.3**
LPL La Plagne 79.45 315 *e*P **P** **09 24 59.7 -0.3**
MAW Mawson 80.77 191 LR LR 09 57 32.3
comp=Z,95nm,18.4s,baz=145,slow=33
TORD Torodi Ar. Bea 88.19 283 P **P** **09 25 45.0 0.0**
TORD PKKPbc **PKKPbc** **09 43 29.9 +1.1**
TORD Torodi Ar. Bea 88.19 283 P **P** **09 25 45.0 0.0**
comp=Z,1.1nm,1.0s,baz=90,slow=5.8,SNR=4.4
TORD PKKPbc **PKKPbc** **09 43 29.9 +1.1**
comp=Z,0.2nm,0.5s,baz=322,slow=3.5,SNR=4.5
TORD LR LR 10 06 47.4
comp=Z,123nm,19.3s,baz=85,slow=37
MDT Midelt 90.06 303 LR LR 10 10 21.8
comp=Z,135nm,18.2s,baz=99,slow=38
BORG Borgarnes 90.26 337 LR LR 10 08 49.9
comp=Z,95nm,18.0s,baz=33,slow=37
TRF Thorofare Moun 92.36 24 *e*P **P** **09 26 04.2 +0.5**
comp=Z,6.8nm,1.3s
MCK McKinley 92.75 23 *e*P **P** **09 26 05.4 +0.1**
MCK pmax pmax
comp=Z,5.0nm,0.8s
MCK McKinley 92.75 23 *e*P **P** **09 26 05.4 +0.1**
comp=Z,4.5nm,0.8s
ILAR Eielson Array 92.97 22 P **P** **09 26 04.7 -1.6**
ILAR Eielson Array 92.97 22 P **P** **09 26 04.7 -1.6**
comp=Z,1.7nm,0.7s,baz=293,slow=4.3,SNR=22
ILAR LR LR 10 16 12.0
comp=Z,115nm,18.1s,baz=296,slow=41
PMR Palmer 93.75 25 *e*P **P** **09 26 10.0 +0.1**
PMR pmax pmax
comp=Z,14nm,1.6s
PMR Palmer 93.75 25 *e*P **P** **09 26 10.0 +0.1**
comp=Z,14nm,1.6s
DBIC Dimbokro 95.75 278 LR LR 10 10 12.0
comp=Z,96nm,18.2s,baz=257,slow=36
VNDA Vanda 95.90 168 LR LR 10 07 54.7
comp=Z,153nm,18.1s,baz=295,slow=34
PDAR Pinedale Array 123.31 19 PKP **PKPdf** **09 31 50.9 +0.1**
PDAR Pinedale Array 123.31 19 PKP **PKPdf** **09 31 50.9 +0.1**
comp=Z,0.6nm,0.9s,baz=282,slow=0.8,SNR=4.9
NVAR Mina Array Bea 123.53 29 PKP **PKPdf** **09 31 51.8 +0.5**
NVAR Mina Array Bea 123.53 29 PKP **PKPdf** **09 31 51.8 +0.5**
comp=Z,1.2nm,0.8s,baz=289,slow=2.8,SNR=8.4
MVU Marysvale 126.12 24 *e*PKPdf **PKPdf** **09 31 58.1 +1.8**
MSU Marysvale 126.12 24 *e*PKIKP **PKPdf** **09 31 58.2 +1.9**
MSU Marysvale 126.12 24 *e*PKPdf **PKPdf** **09 31 58.2 +1.9**
TXAR Lajitas Array 137.48 21 PKP **PKPdf** **09 32 18.5 +0.7**
TXAR SKPbc **SKPbc** **09 35 49.3 +0.3**
TXAR Lajitas Array 137.48 21 PKP **PKPdf** **09 32 18.5 +0.7**
comp=Z,0.1nm,0.6s,baz=169,slow=0.5,SNR=4.3
TXAR SKPbc **SKPbc** **09 35 49.3 +0.3**
comp=Z,0.5nm,1.0s,baz=248,slow=0.7,SNR=3.9
CELP Cerrillos 144.72 324 *e*PKPdf **PKPdf** **09 32 30.2 -0.7**
PLCA Paso Flores 146.32 204 PKPbc **PKPab** **09 32 35.5 +0.4**
PLCA Paso Flores 146.32 204 PKPbc **PKPab** **09 32 35.5 +0.4**
comp=Z,2.7nm,0.7s,baz=125,slow=6.4,SNR=6.7
SDDR Presa de Saban 146.48 331 *e*PKPdf **PKPdf** **09 32 34.5 +0.5**
SDDR *e*PKPbc **PKPbc** **09 32 35.5 +0.2**
SDDR *e*PKPab **PKPab** **09 32 37.1 +0.9**

*ISCJB **30** 10:33:43.2±0.3, 17.61°S±0.09°×178.75°W±0.06°, h547km, mb4.2/42, Error ellipse: s-maj=13.2km s-min=4.5km az=151.9*
*NEIC **30** 10:33:43.9±0.5, 17.52°S×178.71°W, h542km±6km, mb4.3/30, Error ellipse: s-maj=17.8km s-min=5.4km az=153.0*
*AUST **30** 10:33:43.9±2.1, 17.68°S×178.48°W, h556km, Error ellipse: s-maj=2.0km s-min=1.3km az=255.0*
*IDC **30** 10:33:43.5±1.2, 17.77°S×178.59°W, h546km±14km, mb3.7/14, mb1 4.0/16, mb1mx3.9/23, mbtmp3.8/16, Error ellipse: s-maj=16.4km s-min=9.7km az=135.0*

ISC 30 10:33:43.8±0.4, 17.7°S±0.1°×178.67°W±0.0°, h547km, n337, σ0s 66/339, mb 4.3/42, 123C-120D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**3.13**	**268**	*e*P	**P**	**10 34 58.5**	**-1.0**
AFI	**Afiamalu**	**7.61**	**62**	*e*P	**P**	**10 35 37.3**	**-0.4**
AFI	**Afiamalu**	**7.61**	**62**	P	**P**	**10 35 37.3**	**-0.4**
	13nm,0.3s,baz=355,slow=7.9,SNR=19						
AFI				S	**S**	**10 37 11.4**	**+0.4**
	2.4nm,0.3s,baz=180,slow=19,SNR=2.2						
NIUE	**Niue**	**8.42**	**101**	P	**P**	**10 35 47.5**	**+1.9**
	baz=8.2,SNR=9.2						
DZM	**Mont Dzumac**	**14.68**	**250**	*e*P	**P**	**10 36 51.5**	**+1.4**
	17nm,0.6s						
DZM	**Mont Dzumac**	**14.68**	**250**	P	**P**	**10 36 51.2**	**+1.1**
	3.3nm,0.3s,baz=82,slow=19,SNR=25						
URZ	**Urewera**	**20.86**	**189**	P	**P**	**10 37 45.1**	**-2.5**
	8.7nm,0.3s,baz=2.7,slow=13,SNR=13						
RPZ	**Rata Peaks**	**27.39**	**196**	P	**P**	**10 38 43.2**	**-2.3**
	12nm,0.6s,baz=5.5,slow=1.8,SNR=6.8						
EIDS	**Eidsvold**	**29.12**	**249**	*e*P	**P**	**10 39 01.2**	**+0.3**
	15nm,0.8s						
EIDS	**Eidsvold**	**29.12**	**249**	P	**P**	**10 39 01.1**	**+0.3**
	baz=29,SNR=11						
ARMA	**Armidale**	**29.85**	**239**	*e*P	**P**	**10 39 08.7**	**+1.4**
	19nm,0.6s						
ARMA	**Armidale**	**29.85**	**239**	P	**P**	**10 39 08.6**	**+1.4**
	baz=30,SNR=25						
MGCD	**Mangrove Creek**	**31.24**	**234**	P	**P**	**10 39 20.4**	**+1.5**
	baz=31,SNR=18						
RMQ	**Roma**	**31.37**	**248**	P	**P**	**10 39 21.5**	**+1.3**
	baz=32,SNR=22						
CTAO	**Charters Tower**	**33.24**	**260**	*e*P	**P**	**10 39 35.4**	**-0.8**
	15nm,0.6s						
CNB	**Canberra Magne**	**33.38**	**232**	P	**P**	**10 39 38.6**	**+1.3**
	baz=34,SNR=28						
CNB				S	S	10 44 30.2	+10
	baz=34,SNR=24						
YNG	**Young**	**33.74**	**234**	P	**P**	**10 39 41.4**	**+1.2**
	baz=34,SNR=4.9						
PMG	**Port Moresby**	**34.17**	**279**	*e*P	**P**	**10 39 45.3**	**+1.2**
	47nm,0.9s						
CMSA	**Cobar Meteorol**	**35.06**	**240**	P	**P**	**10 39 52.1**	**+0.8**
	baz=35,SNR=52						
MTSU	**Mount Surprise**	**35.19**	**263**	P	**P**	**10 39 53.0**	**+0.4**
	baz=35,SNR=31						
QLP	**Quilpie**	**35.39**	**249**	P	**P**	**10 39 54.6**	**+0.5**
	baz=36,SNR=48						
COEN	**Coen**	**36.86**	**270**	*e*P	**P**	**10 40 07.6**	**+1.2**
	162nm,0.7s						
COEN	**Coen**	**36.86**	**270**	P	**P**	**10 40 07.6**	**+1.2**
	baz=37,SNR=61						
TOO	**Toolangi**	**37.14**	**230**	P	**P**	**10 40 09.4**	**+1.0**
	baz=37,SNR=20						
STKA	**Stephens Creek**	**38.53**	**241**	*e*P	**P**	**10 40 20.9**	**+1.1**
	10nm,0.9s						
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**	**10 40 20.7**	**+0.9**
	25nm,0.5s,baz=90,slow=9.3,SNR=132						
STKA	**Stephens Creek**	**38.53**	**241**	P	**P**	**10 40 20.9**	**+1.1**
	baz=39,SNR=97						
QIS	**Mount Isa**	**39.46**	**259**	P	**P**	**10 40 28.3**	**+0.8**
	baz=40,SNR=6.7						
ARPS	**Mount Arapiles**	**39.60**	**233**	P	**P**	**10 40 28.9**	**+0.6**
	baz=40,SNR=12						
JAY	**Jayapura**	**42.60**	**286**	P	**P**	**10 40 53.7**	**+1.2**
	baz=43,SNR=8.3						
BBOO	**Buckleboo**	**43.31**	**241**	P	**P**	**10 40 58.2**	**+0.5**
	baz=43,SNR=15						
WRAB	**Tennant Creek**	**44.43**	**259**	*e*P	**P**	**10 41 06.0**	**-0.6**
	12nm,0.5s						
WRA	**Warramunga Arr**	**44.44**	**259**	P	**P**	**10 41 06.1**	**-0.6**
	14nm,0.5s,baz=93,slow=6.9,SNR=558						
WRA				PcP	**PcP**	**10 42 38.1**	**-0.4**
	2.0nm,0.6s,baz=93,slow=3.1,SNR=4.7						
WRA				ScP	**ScP**	**10 45 37.2**	**-1.4**
	1.0nm,0.7s,baz=89,slow=4.0,SNR=4.6						
AS31	**Alice Springs**	**44.62**	**254**	*e*P	**P**	**10 41 08.2**	**+0.1**
ASAR	**Alice Springs**	**44.62**	**254**	P	**P**	**10 41 08.3**	**+0.2**
	135nm,0.6s,baz=88,slow=8.2,SNR=2990						
ASAR				PcP	**PcP**	**10 42 38.2**	**-0.8**
	2.7nm,0.4s,baz=94,slow=4.1,SNR=4.3						
ASAR				ScP	**ScP**	**10 45 39.1**	**-0.3**
	1.4nm,0.7s,baz=105,slow=3.9,SNR=6.0						
KDU	**Kakadu**	**47.32**	**269**	P	**P**	**10 41 28.6**	**0.0**
	baz=48,SNR=29						
MTN	**Manton Dam**	**48.56**	**268**	P	**P**	**10 41 37.8**	**-0.1**
	baz=49,SNR=8.6						
FORT	**Forrest**	**49.89**	**244**	P	**P**	**10 41 47.0**	**-0.4**
	baz=50,SNR=27						
KNRA	**Kununurra**	**50.27**	**264**	P	**P**	**10 41 50.3**	**-0.1**
	baz=50,SNR=74						
FAKI	**Fak Fak**	**50.29**	**281**	P	**P**	**10 41 50.9**	**+0.3**
	baz=50,SNR=4.2						
FITZ	**Fitzroy Crossi**	**52.83**	**260**	P	**P**	**10 42 09.2**	**+0.3**
	baz=53,SNR=16						
MBWA	**Marble Bar**	**57.90**	**256**	*e*P	**P**	**10 42 43.8**	**-0.3**
	18nm,0.9s						
MEEK	**Meekatharra**	**58.29**	**249**	P	**P**	**10 42 45.9**	**-0.8**

baz=58,SNR=20
KLBR Kellerberrin 58.72 243 P P 10 42 48.8 -0.7
baz=59,SNR=26
BLDU Ballidu 59.67 244 P P 10 42 55.2 -0.7
baz=60,SNR=13
MORW Morawa 60.36 246 P P 10 42 59.9 -0.6
baz=60,SNR=10
VNDA Vanda 60.67 185 eP P 10 43 02.3 +0.6
8.6nm,1.8s
VNDA Vanda 60.67 185 P P 10 43 01.6 -0.1
1.6nm,0.8s,baz=350,slow=5.9,SNR=16
JAGI Jajag, Banyuwa 65.80 269 P P 10 43 32.8 -2.9
baz=66,SNR=3.8
MJAR Matsushiro Arr 67.56 323 P P 10 43 45.7 -0.3
1.5nm,0.5s,baz=144,slow=6.7,SNR=5.3
UGM Wanagama 69.41 268 P P 10 43 57.5 -0.2
baz=70,SNR=8.8
KSM Kuching 72.41 277 eP P 10 44 15.9 +0.6
20nm,0.8s
KSM Kuching 72.41 277 P P 10 44 16.4 +1.0
baz=73,SNR=11
KSRS Korea Array 74.35 318 P P 10 44 26.7 +0.8
0.7nm,0.8s,baz=138,slow=7.8,SNR=4.1
PKM Peak Mountain 76.48 46 ⇓P P 10 44 39.0 +0.9
baz=77
SMMC Simmler 76.58 46 ⇓P P 10 44 39.3 +0.8
baz=77
ARVC Arvin 77.29 47 ⇑P P 10 44 42.8 +0.6
baz=77
MWC Mount Wilson 77.35 48 eP P 10 44 43.0 +0.1
VES Vestal, Richgr 77.50 46 ⇑P P 10 44 43.6 +0.3
baz=78
MURC Murrieta 77.64 49 ⇑P P 10 44 44.6 +0.4
baz=78
BFSC Mount Baldy Ra 77.64 48 ⇑P P 10 44 44.3 0.0
baz=78
RCTC Rector, Farmer 77.64 45 ⇑P P 10 44 44.1 0.0
baz=78
EDW2 Edwards Air Fo 77.75 47 ⇑P P 10 44 45.4 +0.7
baz=78
ISA Isabella 77.82 46 eP P 10 44 45.9 +0.7
ISA Isabella 77.82 46 ⇓P P 10 44 45.5 +0.3
baz=78
CMB Columbia Colle 77.83 43 eP P 10 44 45.5 +0.4
MONP Monument Peak 77.84 50 ⇓P P 10 44 46.0 +0.5
baz=78,SNR=6.0
PFO Pinyon Flat Ob 78.18 49 ⇓P P 10 44 47.4 +0.2
baz=78
SWSC Sam W. Stewart 78.32 50 ⇑P P 10 44 48.6 +0.8
baz=78
YBH Yreka Blue Hor 78.49 39 P P 10 44 49.0 +0.4
4.1nm,0.7s,baz=258,slow=1.3,SNR=10
MTUM Tungsten Hills 78.66 45 eP P 10 44 50.6 +0.8
BELC Belle Mtn. Jos 78.70 49 ⇑P P 10 44 50.6 +0.6
baz=79
MPMC Manual Prospec 78.71 46 ⇑P P 10 44 50.4 +0.3
baz=79
TIN Tinemaha 78.73 45 ⇓P P 10 44 50.5 +0.4
baz=79
GSC Goldstone 78.79 47 ⇑P P 10 44 50.9 +0.5
baz=79
HEC Hector,Ludlow 78.89 48 ⇓P P 10 44 51.3 +0.4
baz=79
BC3 Big Chuckawall 78.92 49 ⇑P P 10 44 51.9 +0.8
baz=79
GLA Glamis 79.08 50 ⇑P P 10 44 53.0 +1.1
baz=79
GRAC Grapevine Rang 79.28 46 ⇓P P 10 44 53.7 +0.8
baz=79
GMRC Granite Mounta 79.34 48 ⇑P P 10 44 53.8 +0.4
baz=79
FURC Furnace Creek, 79.36 46 ⇓P P 10 44 53.7 +0.6
baz=80
IRM Iron Mountain 79.39 49 ⇓P P 10 44 54.2 +0.6
baz=80
NVAR Mina Array Bea 79.42 44 P P 10 44 54.0 +0.2
4.8nm,0.7s,baz=224,slow=7.6,SNR=45
SHOC Shoshone 79.47 47 ⇓P P 10 44 54.0 +0.2
baz=80
TUQ Turquoise Moun 79.48 48 ⇑P P 10 44 54.6 +0.5
baz=80
Y12C Blythe 79.64 50 ⇑P P 10 44 55.4 +0.6
baz=80
113A Mohawk Valley, 79.73 51 ⇓P P 10 44 56.2 +0.9
baz=80
LDFC Landfair 79.88 48 eP P 10 44 57.3 +1.1
19nm,1.0s
MOD Modoc 80.05 40 eP P 10 44 57.2 +0.3
6.4nm,0.7s
214A Organ Pipe Nat 80.05 52 ⇓P P 10 44 58.1 +1.1
baz=80
PDMCI Parker Dam,Lak 80.19 49 ⇓P P 10 44 58.5 +0.9
baz=80
Z14A Wintersburg 80.61 51 ⇓P P 10 45 00.9 +1.0
baz=81
Y14A Wickenburg 80.84 50 ⇑P P 10 45 01.6 +0.4
baz=81
WVOR Wild Horse Val 81.38 40 eP P 10 45 04.3 +0.5
4.8nm,0.7s
TUC Tucson 81.74 52 eP P 10 45 06.6 +0.8
29nm,1.0s
CCUT Cedar City 82.32 47 eP P 10 45 09.8 +1.0
4.3nm,0.9s
PMR Palmer 82.42 14 eP P 10 45 07.7 -0.7
13nm,1.4s
319A Douglas 82.48 54 ⇓P P 10 45 10.8 +1.2
baz=83,SNR=5.5
U15A North Rim 82.54 48 ⇓P P 10 45 10.9 +0.9
baz=83
ELK Elko 82.64 43 eP P 10 45 10.9 +0.5
3.6nm,0.9s
WUAZ Wupatki 82.77 49 ⇓P P 10 45 11.7 +0.6
baz=83
320A Kipp Ranch, An 83.04 54 ⇓P P 10 45 13.8 +1.3
baz=83,SNR=9.2
HAWA Hanford 83.05 37 eP P 10 45 12.6 +0.6
6.3nm,0.6s
220A Playas Peak, P 83.28 54 ⇓P P 10 45 14.4 +0.8
baz=83
X18A Snowflake 83.36 51 ⇑P P 10 45 14.6 +0.5
baz=84
120A U Bar Ranch, L 83.48 53 ⇑P P 10 45 16.3 +1.7
baz=84
MVU Marysvale 83.57 46 eP P 10 45 15.7 +0.6
7.6nm,1.4s
MSU Marysvale 83.60 46 eP P 10 45 16.3 +1.1
MFID Camas Ranch 83.64 41 eP P 10 45 15.5 +0.4
5.8nm,1.1s
MFID Camas Ranch 83.64 41 ⇓P P 10 45 14.8 -0.4
baz=84
Z20A Nine Sixteen R 83.75 53 ⇓P P 10 45 17.8 +1.8
baz=84
TRF Thorofare Moun 83.82 12 eP P 10 45 13.8 -1.8
7.5nm,0.8s
DUG Dugway 83.98 45 ⇑P P 10 45 17.1 +0.2
baz=84
MAW Mawson 84.01 200 P P 10 45 16.1 -0.3
4.7nm,0.6s,baz=146,slow=7.8,SNR=20
121A Cookes Peak, D 84.12 53 ⇑P P 10 45 19.0 +1.2
baz=84
Y20A Horse Springs, 84.26 52 ⇑P P 10 45 19.6 +1.0
baz=84
I12A Atlanta 84.27 41 ⇓P P 10 45 18.7 +0.3
baz=84,SNR=6.5
MCK McKinley 84.35 13 eP P 10 45 17.4 -0.7
X20A Quemado 84.44 51 ⇑P P 10 45 20.3 +0.8
baz=84
Z21A St. Cloud Mine 84.54 53 ⇓P P 10 45 20.3 +0.4
baz=85
W20A Ramah 84.69 51 ⇑P P 10 45 21.5 +0.8
baz=85
Y21A Point of Rocks 84.83 52 ⇑P P 10 45 22.5 +1.1
baz=85
H12A Diamond D Ranc 84.83 40 ⇓P P 10 45 20.8 -0.3
baz=85,SNR=6.9
G12A Big Creek, Yel 84.84 39 ⇓P P 10 45 20.9 -0.2
baz=85,SNR=11
X21A Alamocita Cree 84.93 52 ⇓P P 10 45 22.4 +0.6
baz=85
SRU San Rafael 85.02 46 eP P 10 45 22.2 +0.1
4.1nm,0.7s
SRU San Rafael 85.02 46 ⇓P P 10 45 22.7 +0.6
baz=85
Z22A Elephant Butte 85.05 53 ⇓P P 10 45 23.1 +0.7
baz=85
Y22A Socorro 85.33 52 ⇑P P 10 45 23.9 +0.2
baz=85
E12A Beaver Dam Sad 85.36 38 ⇓P P 10 45 22.5 -1.0
baz=86
I14A Mackay 85.39 41 ⇑P P 10 45 24.3 +0.5
baz=86,SNR=7.8
324A Moseley Ranch, 85.45 55 ⇓P P 10 45 24.9 +0.6
baz=86,SNR=5.4
NEW Newport 85.45 36 eP P 10 45 23.2 -0.6
3.0nm,0.8s
NEW Newport 85.45 36 ⇓P P 10 45 23.0 -0.8
baz=86
425A Indio Mountain 85.58 56 ⇓P P 10 45 25.7 +0.7
baz=86,SNR=5.9
MVCO Mesa Verde 85.60 49 ⇑P P 10 45 25.4 +0.3
baz=86
MNTX Cornudas Mount 85.64 55 eP P 10 45 25.7 +0.6
2.6nm,1.0s
ILAR Eielson Array 85.70 13 P P 10 45 23.1 -1.5
0.3nm,0.6s,baz=226,slow=5.5,SNR=4.2
C11A Tepee Creek (N 85.72 37 ⇓P P 10 45 25.0 -0.1
baz=86
626A Big Bend Ranch 85.78 57 ⇓P P 10 45 26.7 +0.8
baz=86,SNR=9.0
D12A Red Ives Fores 85.83 38 ⇓P P 10 45 25.7 0.0
baz=86
325A Bean Ranch, Si 85.83 55 ⇑P P 10 45 26.4 +0.3
baz=86
U21A Nageezi 85.87 50 ⇓P P 10 45 26.7 +0.4
baz=86,SNR=8.8
S20A Disappointment 85.97 48 ⇓P P 10 45 26.8 0.0
baz=86
124A Stringfield Ra 85.98 54 ⇑P P 10 45 27.0 +0.1
baz=86
526A Mary Lane Ranc 86.01 57 ⇑P P 10 45 27.9 +0.9
baz=86,SNR=5.3
M17A Scullys Gap (B 86.02 44 ⇓P P 10 45 26.7 -0.2
baz=86
Y23A Lovelace Mesa, 86.02 53 ⇑P P 10 45 27.5 +0.5
baz=86
TXAR Lajitas Array 86.07 58 P P 10 45 28.3 +1.0
5.0nm,0.7s,baz=213,slow=6.5,SNR=78
C12B Naegeli Ranch, 86.10 37 ⇓P P 10 45 26.5 -0.4
baz=86
R20A Redvale 86.11 48 ⇓P P 10 45 27.7 +0.2
baz=86
ANMO Albuquerque 86.14 52 eP P 10 45 27.3 -0.3
2.9nm,1.1s
ANMO Albuquerque 86.14 52 P P 10 45 27.2 -0.4
2.5nm,1.0s,baz=236,slow=5.9,SNR=5.6
T21A Navajo Lake 86.20 49 ⇓P P 10 45 27.7 -0.2
baz=86
225A Deer Hill, Car 86.23 55 ⇓P P 10 45 28.6 +0.5
baz=86
426A McDonald Obser 86.30 56 ⇓P P 10 45 29.1 +0.7
baz=86,SNR=6.9
Z24A Sheeppen Canyo 86.30 53 ⇓P P 10 45 29.4 +1.0
baz=86
S21A Coal Bank Pass 86.30 49 ⇓P P 10 45 29.1 +0.6
baz=86
P19A Cripple Cowboy 86.33 47 ⇑P P 10 45 28.7 +0.3
baz=86
627A Terlingua Ranc 86.34 58 ⇓P P 10 45 29.6 +1.0
baz=86,SNR=18
D13A Huson 86.37 38 ⇑P P 10 45 27.6 -0.6
baz=86
F14A Wisdom 86.38 40 ⇓P P 10 45 28.6 +0.2
baz=86
527A Woodward Ranch 86.43 57 ⇑P P 10 45 29.6 +0.6
baz=86,SNR=6.8
B12A Libby 86.43 36 ⇓P P 10 45 28.6 +0.2
baz=86
U22A Llaves 86.44 50 ⇓P P 10 45 29.2 +0.1
baz=86
W23A Wagner Place, 86.45 52 ⇑P P 10 45 29.2 +0.1
baz=86
Y24A Capitan 86.49 53 ⇑P P 10 45 29.7 +0.4
baz=87,SNR=9.0
Q20A Ridgley Place, 86.50 47 ⇓P P 10 45 29.2 0.0
baz=87
MSO Missoula 86.54 38 ⇑P P 10 45 29.1 0.0
baz=87
BSMT Bassoo Peak 86.57 37 eP P 10 45 28.9 -0.4
125A Gardner Draw, 86.58 54 ⇓P P 10 45 30.2 +0.5
baz=87
326A Caldwell Ranch 86.59 56 ⇑P P 10 45 29.8 +0.2
baz=87
C13A Hot Springs 86.60 38 ⇑P P 10 45 28.8 -0.5
baz=87
I16A Newdale 86.61 42 ⇓P P 10 45 29.9 +0.3
baz=87,SNR=5.9
DLMT Dillon 86.63 40 eP P 10 45 30.1 +0.6
3.5nm,0.8s
T22A Edie 86.67 50 ⇑P P 10 45 29.9 -0.2
baz=87
V23A Ortiz Mt. (NFS 86.67 51 ⇑P P 10 45 30.4 +0.3
baz=87
P20A De Beque 86.68 47 ⇓P P 10 45 30.2 +0.2
baz=87
226B Tecolote Peak, 86.73 55 ⇑P P 10 45 30.9 +0.6
baz=87
X24A Lazy VL Ranch, 86.75 52 ⇑P P 10 45 30.8 +0.3
baz=87
628A Black Gap, Mar 86.76 58 ⇑P P 10 45 31.1 +0.7
baz=87,SNR=7.1
R21A Cimarron 86.78 48 ⇑P P 10 45 31.1 +0.5
baz=87
Z25A Roswell 86.78 54 ⇑P P 10 45 31.3 +0.7
baz=87
427A Hayter Ranch, 86.86 56 ⇑P P 10 45 31.6 +0.6
baz=87,SNR=7.7
SNOW Snow King Moun 86.88 43 eP P 10 45 31.7 +0.7
7.3nm,1.0s
U23A El Rito 86.90 50 ⇓P P 10 45 31.5 +0.3
baz=87
D14A Greenough 86.93 38 ⇑P P 10 45 30.1 -0.8
baz=87
IMW Indian Meadow 86.97 42 eP P 10 45 32.1 +0.7
5.9nm,0.8s
CHMT Chamberlain Mo 86.99 39 eP P 10 45 31.0 -0.4
B13A Whitefish 87.02 37 ⇓P P 10 45 30.8 -0.4
baz=87
W24A Lazy 6 Ranch, 87.03 52 ⇑P P 10 45 31.8 0.0
baz=87
S22A 4UR Ranch, Cre 87.03 49 ⇑P P 10 45 32.1 +0.2
baz=87
EGAK Eagle 87.04 15 eP P 10 45 30.5 -0.3
1.9nm,0.7s
M19A Rock Springs 87.04 45 ⇑P P 10 45 31.7 0.0
baz=87
LOHW Log Hollow 87.05 42 eP P 10 45 32.2 +0.5
Y25A Mesa, Roswell 87.05 53 ⇓P P 10 45 32.3 +0.5
baz=87
126A Clayton Basin, 87.07 55 ⇓P P 10 45 32.1 +0.2
baz=87
528A Cox Ranch, San 87.09 57 ⇑P P 10 45 32.5 +0.5
baz=87
C14A Swan Lake 87.13 38 ⇑P P 10 45 31.0 -0.8
baz=87
H16A Russell Place, 87.15 41 ⇑P P 10 45 32.6 +0.5
baz=87,SNR=11
L19A Farson 87.17 44 ⇑P P 10 45 32.0 -0.4
baz=87,SNR=5.4
R22A Saguache, Gunn 87.28 49 ⇓P P 10 45 33.7 +0.6
baz=87
A13A Flathead Natio 87.34 36 ⇓P P 10 45 32.4 -0.4
baz=87
V24A Rampart Ranch, 87.34 51 ⇓P P 10 45 33.8 +0.5
baz=87
BW06 Boulder Array 87.34 44 eP P 10 45 32.9 -0.2
1.7nm,0.4s
PDAR Pinedale Array 87.34 44 P P 10 45 32.6 -0.5
2.6nm,0.5s,baz=212,slow=3.2,SNR=29
Z26A Caprock 87.34 54 ⇓P P 10 45 33.2 0.0
baz=87
N20A Spence Gulch, 87.35 46 ⇓P P 10 45 32.9 -0.3
baz=87
F16A Kennard Place, 87.43 40 ⇓P P 10 45 33.3 0.0
baz=88
H17A Grant Village 87.43 42 ⇑P P 10 45 34.2 +0.7
baz=88
Q22A Crested Butte, 87.44 48 ⇑P P 10 45 33.7 -0.1
baz=88
D15A Lincoln 87.49 39 ⇑P P 10 45 33.7 +0.1
baz=88
529A Stev Forest Ra 87.53 57 ⇑P P 10 45 34.6 +0.5
baz=88
I18A Diamond G Ranc 87.60 43 ⇓P P 10 45 34.2 -0.1
baz=88
127A Arkansas Junct 87.60 55 ⇓P P 10 45 34.9 +0.5
baz=88
M20A Sweetwater, Wa 87.69 45 ⇓P P 10 45 35.2 +0.4
baz=88
B14A Marquette Ranc 87.70 37 ⇑P P 10 45 34.2 -0.4
baz=88
Y26A Elida 87.72 53 ⇑P P 10 45 35.3 +0.4
baz=88
W25A X Bar L Ranch, 87.74 52 ⇑P P 10 45 35.0 0.0
baz=88
G17A Pierce Place, 87.76 41 ⇓P P 10 45 36.0 +1.1
baz=88
C15A Salmond Ranch, 87.80 38 ⇑P P 10 45 34.7 -0.3
baz=88
L20A Wamsutter 87.81 45 ⇑P P 10 45 35.6 +0.3
baz=88,SNR=5.4
N21A Black Mountain 87.83 46 ⇑P P 10 45 35.8 +0.4
baz=88
K19A Absolon Red Bu 87.83 44 ⇑P P 10 45 35.1 -0.2
baz=88
V25A Rancho No Teng 87.87 51 ⇓P P 10 45 36.5 +0.8
baz=88
J19A Crowheart 87.89 43 ⇑P P 10 45 35.5 -0.1
baz=88
A14A Double T Ranch 87.92 37 ⇓P P 10 45 35.0 -0.5
baz=88
R23A Moffat 87.94 49 ⇓P P 10 45 36.4 +0.3
baz=88
Z27A Tatum 87.95 54 ⇑P P 10 45 35.9 -0.1
baz=88
429A Davenport Ranc 87.98 57 ⇓P P 10 45 36.5 +0.3
baz=88,SNR=14
228A UT Block 9, Go 87.98 56 ⇑P P 10 45 36.4 +0.2
baz=88
D16A Dana Ranch, Ca 88.07 39 ⇑P P 10 45 36.2 0.0
baz=88
B15A Bradely Ranch, 88.09 38 ⇓P P 10 45 35.1 -1.2
baz=88
K20A Yellowstone Ra 88.09 44 ⇓P P 10 45 36.3 -0.3
baz=88
H18A Shoshone NF, C 88.14 42 ⇓P P 10 45 36.5 -0.3
baz=88
S24A Houchin Ranch, 88.16 50 ⇑P P 10 45 36.6 -0.5
baz=88
Y27A Causey 88.21 54 ⇓P P 10 45 37.1 -0.1
baz=88
329A Wagon Wheel Ra 88.23 56 ⇓P P 10 45 37.7 +0.3
baz=88
O22A Kremmling 88.24 47 ⇑P P 10 45 37.2 -0.3
baz=88,SNR=5.2
U25A Circle Dot Ran 88.25 51 ⇓P P 10 45 37.8 +0.3
baz=88
530A J-C Ranch, Com 88.25 58 ⇓P P 10 45 37.6 +0.1
baz=88
128A Castleberry Fa 88.26 55 ⇓P P 10 45 38.0 +0.6
baz=88
I19A Meeteetse 88.28 43 ⇑P P 10 45 37.5 +0.1
baz=88
M21A Separation Pea 88.29 45 ⇓P P 10 45 37.6 0.0
baz=88
A15A Johnson Ranch, 88.32 37 ⇓P P 10 45 36.5 -0.9
baz=88
C16A Fuhringer Ranc 88.32 38 ⇑P P 10 45 36.7 -0.7
baz=88
L21A Rawlins 88.44 45 ⇑P P 10 45 38.5 +0.2
baz=88
G18A Lazy EL Ranch, 88.49 41 ⇑P P 10 45 38.2 -0.1
baz=89
T25A Trinidad 88.54 50 ⇓P P 10 45 39.1 +0.2
baz=89
229A Bryant Ranch, 88.54 56 ⇑P P 10 45 39.0 +0.3
baz=89
MSTX Muleshoe 88.54 54 ⇑P P 10 45 38.8 0.0
baz=89
430A Baggett Ranch, 88.57 57 ⇓P P 10 45 39.3 +0.4
baz=89
H19A Powell 88.57 42 ⇑P P 10 45 38.5 -0.1
baz=89
CMAR Chiang Mai Arr 88.57 290 P P 10 45 40.0 +0.9
1.2nm,0.4s,baz=109,slow=2.8,SNR=10.0
J20A Shoshoni 88.57 43 ⇓P P 10 45 38.7 0.0
baz=89,SNR=8.6
N22A Wattenberg Ran 88.58 46 ⇓P P 10 45 39.3 +0.3
baz=89,SNR=6.8
631A Perdido Creek 88.60 59 ⇓P P 10 45 39.7 +0.7
baz=89
B16A M & M Farms, S 88.64 38 ⇑P P 10 45 37.9 -0.9
baz=89
D17A Six Diamond Ra 88.65 39 ⇑P P 10 45 38.7 -0.3
baz=89
F18A Big Timber 88.67 41 ⇑P P 10 45 39.0 -0.1
baz=89
O23A Lake Granby, G 88.70 47 ⇑P P 10 45 39.7 +0.1
baz=89
S25A Robets Cordova 88.73 50 ⇑P P 10 45 40.5 +0.8
baz=89
U26A Atchley Ranch, 88.74 51 ⇓P P 10 45 40.0 +0.3
baz=89
I20A Worland 88.80 43 ⇑P P 10 45 39.3 -0.4
baz=89
732A Laxson Ranch, 88.86 59 ⇑P P 10 45 40.7 +0.5
baz=89
531A Rocksprings 88.90 58 ⇓P P 10 45 40.8 +0.3
baz=89,SNR=6.5
N23A Red Feather La 88.97 46 ⇑P P 10 45 41.0 +0.2
baz=89
J21A Lysite 88.98 44 ⇑P P 10 45 41.0 +0.3
baz=89
L22A Ellis Ranch, M 89.10 45 ⇑P P 10 45 41.7 +0.4
baz=89,SNR=6.8
B17A L&G Farms, Che 89.11 38 ⇑P P 10 45 40.5 -0.5
baz=89
F19A Roth Farm, Mol 89.12 41 ⇑P P 10 45 41.1 -0.1
baz=89
632A Uvalde 89.28 59 ⇓P P 10 45 42.7 +0.6
baz=89,SNR=5.4
I21A Big Trails, Te 89.29 43 ⇓P P 10 45 41.7 -0.4
baz=89,SNR=5.8
K22A Casper 89.30 45 ⇑P P 10 45 42.0 -0.2
baz=89
Y29A Porterfield Fa 89.35 54 ⇑P P 10 45 42.4 -0.1
baz=89,SNR=5.1
331A San Angelo 89.40 57 ⇑P P 10 45 42.7 -0.1
baz=90
532A Rocksprings 89.40 58 ⇑P P 10 45 43.2 +0.4
baz=90
S26A Kim 89.42 50 ⇓P P 10 45 42.9 +0.1
baz=90
130A Snyder 89.44 56 ⇓P P 10 45 42.5 -0.4
baz=90
A17A Triple J Farms 89.48 38 ⇓P P 10 45 42.6 -0.1
baz=90
E19A Rath Farm, Rou 89.49 40 ⇑P P 10 45 43.0 +0.2
baz=90
X29A Tulia 89.54 54 ⇓P P 10 45 43.2 -0.2
baz=90
Z30A Sanderson Ranc 89.56 55 ⇓P P 10 45 43.2 -0.3
baz=90
JCT Junction City 89.61 58 ⇓P P 10 45 43.7 0.0
baz=90
L23A Garrett 89.63 45 ⇓P P 10 45 43.8 0.0
baz=90,SNR=5.6
J22A Midwest 89.65 44 ⇓P P 10 45 42.8 -0.9
baz=90
N24A Carr 89.67 47 ⇓P P 10 45 43.9 -0.1
baz=90
R26A Arlington 89.70 50 ⇓P P 10 45 44.6 +0.5
baz=90
231A Bronte 89.71 56 ⇓P P 10 45 43.8 -0.3
baz=90,SNR=8.9
D19A Cripps Ranch, 89.75 40 ⇓P P 10 45 44.5 +0.5
baz=90
432A Menard 89.76 58 ⇑P P 10 45 44.5 +0.1
baz=90,SNR=8.4
B18A Beardsley Farm 89.76 38 ⇑P P 10 45 44.2 +0.2
baz=90
I22A 9 Mile Ranch, 89.85 43 ⇓P P 10 45 44.4 -0.3
baz=90
C19A Slack Wire Ran 89.90 39 ⇑P P 10 45 44.6 -0.1
baz=90
E20A Meyer Farm, Mu 89.92 41 ⇑P P 10 45 44.5 -0.3
baz=90
131A Roby 89.92 56 ⇑P P 10 45 45.0 -0.1
baz=90
Y30A Stafford Cattl 89.96 54 ⇓P P 10 45 45.2 -0.1
baz=90
A18A Metzger Ranch, 89.97 38 ⇑P P 10 45 44.6 -0.4
baz=90
M24A Cheyenne 89.97 46 ⇓P P 10 45 45.5 +0.2
baz=90

332A	**Millersview** baz=90,SNR=8.5	89.98	57	⇑P		P	10 45 45.3	-0.1
R27A	**Eads** baz=90	90.16	50	⇑P		P	10 45 46.5	+0.3
X30A	**Coker Ranch, T** baz=90	90.18	54	⇑P		P	10 45 46.7	+0.4
T28A	**Walsh** baz=90	90.23	51	⇓P		P	10 45 46.6	+0.1
B19A	**Brinkman Farms** baz=90	90.29	39	⇑P		P	10 45 46.0	-0.4
Z31A	**Sharp Cattle R** baz=90	90.34	55	⇓P		P	10 45 46.7	-0.3
Y31A	**Rekieta Farm,** baz=91	90.48	55	⇓P		P	10 45 47.4	-0.3
ABTX	**Abilene, Hawle** baz=91,SNR=6.4	90.49	56	⇑P		P	10 45 47.6	-0.2
C20A	**Veseth Ranch,** baz=91	90.52	40	⇓P		P	10 45 47.8	+0.3
B20A	**Solberg Farm,** baz=91	90.83	39	⇓P		P	10 45 48.9	0.0
Z32A	**Haskell** baz=91,SNR=6.1	90.86	55	⇑P		P	10 45 49.3	-0.1
D21A	**La Casta Ranch** baz=91	90.86	40	⇓P		P	10 45 49.1	-0.1
R28A	**Tribune** baz=91	90.90	50	⇑P		P	10 45 50.3	+0.7
X31A	**McDonald Ranch** baz=91	90.94	54	⇓P		P	10 45 49.9	+0.2
A20A	**Cobblestone Ra** baz=91	91.08	39	⇑P		P	10 45 49.9	-0.2
Y32A	**R-V Farms, Ver** baz=91	91.13	55	⇑P		P	10 45 50.6	0.0
M26A	**McRoberts Ranc** baz=91	91.13	47	⇓P		P	10 45 50.7	+0.1
W31A	**Holland Ranch,** baz=91	91.16	53	⇓P		P	10 45 51.1	+0.3
F23A	**Volborg** baz=91	91.31	42	⇑P		P	10 45 51.6	+0.4
J25A	**Sunshine Ranch** baz=92	91.43	45	⇑P		P	10 45 51.5	-0.4
B21A	**Ellsworth Farm** baz=92	91.43	39	⇑P		P	10 45 51.8	+0.1
V31A	**Spring Creek L** baz=92	91.44	53	⇓P		P	10 45 53.0	+0.9
H24A	**Dirks Ranch, A** baz=92	91.47	43	⇑P		P	10 45 51.6	-0.4
S30A	**Montezuma** baz=92	91.64	51	⇓P		P	10 45 53.0	0.0
C22A	**Vida** baz=92	91.83	40	⇑P		P	10 45 53.5	-0.1
B22A	**Reddig Ranch S** baz=92	92.00	40	⇑P		P	10 45 54.1	-0.3
D23A	**Lindsay** baz=92	92.02	41	⇓P		P	10 45 54.5	0.0
T31A	**Randall Ranch,** baz=92	92.03	52	⇑P		P	10 45 55.0	+0.2
C23A	**Lambert** baz=92	92.29	40	⇑P		P	10 45 56.4	+0.7
P30A	**Selden** baz=93	92.48	49	⇓P		P	10 45 57.8	+1.0
D24A	**Glendive** baz=93	92.55	41	⇑P		P	10 45 57.2	+0.3
B23A	**Brockton** baz=93	92.67	40	⇑P		P	10 45 57.8	+0.3
DGMT	**Dagmar** baz=93	93.16	40	⇑P		P	10 45 59.7	+0.1
A24A	**Westby** baz=94	93.46	40	⇑P		P	10 46 01.2	+0.2
KMSC	**Kings Mountain** baz=106	105.81	58	⇓P			10 50 49.0	
MKAR	**Makanchi Array** 0.3nm,0.5s,baz=86,slow=1.5,SNR=4.1	108.79	314	PKiKP		PKiKP	10 51 09.1	-1.9
BR131	**Keskin Array S**	144.43	315	*e*PKPbc	PKPbc		10 52 18.3	-0.1
BRTR	**Keskin Array B** 1.6nm,0.5s,baz=72,slow=1.8,SNR=12	144.43	315	PKP	PKPbc		10 52 17.6	-0.8

*ISCJB **30** 10:41:57.9±1.0, 15°24'S±0°05'×74°72'W±0°07', h84km±9km, mb4.6/46, Error ellipse: s-maj=13.3km s-min=6.0km az=147.7*

*NEIC **30** 10:41:58.7±0.2, 15°19'S×74°63'W, mb4.8/29, Error ellipse: s-maj=9.8km s-min=4.3km az=59.0*

NEIC Felt [II] at San Juan de Marcona. Also felt at Acari and Coracora.

*IDC **30** 10:41:58.6±0.6, 15°20'S×74°67'W, h75km±4km, mb4.2/14, mb1 4.2/19, mb1mx4.1/24, mbtmp4.0/19, MS3.4/5, Ms1 3.4/5, ms1mx3.1/28, Error ellipse: s-maj=21.5km s-min=10.5km az=60.0*

*BJI **30** 10:42:01.7, 15°30'S×74°60'W, h108km, mB5.1/4*

ISC 30 10:41:58.5±0.4, 15°29'S±0°06'×74°70'W±0°08', h76km±3km, h76km:pP-P, n418, σ0s87/447, mb4.7/46, 159C-151D, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase	Op	ID	ISC	Time h m s	Res ISC
ARE	**Arequipa**	3.30	111	*e*P		Pn		10 42 49.0	+0.9
ARE				*e*S		Sn		10 43 28.0	+1.6
LPAZ	**La Paz**	6.40	100	*e*Pn		Pn		10 43 34.6	+3.8
LPAZ	**La Paz** 1.4nm,0.3s,baz=298,slow=8.2,SNR=28	6.40	100	P		Pn		10 43 35.5	+4.7
ATAH	**Atahualpa**	8.88	336	P		Pn		10 44 03.6	-0.9
ATAH				S		Sn		10 45 44.8	+1.6
ATAH	**Atahualpa** 0.4nm,0.3s,baz=146,slow=7.3,SNR=3.7	8.88	336	P		Pn		10 44 03.6	-0.9
ATAH	2.2nm,0.3s,baz=335,slow=17,SNR=2.4			S		Sn		10 45 44.8	+1.6
LVC	**Limon Verde**	9.11	144	*e*Pn		Pn		10 44 08.9	+1.4
LVC				S		Sn		10 45 44.2	-4.3
LVC				*e*Sn		Sn		10 45 44.8	-3.9
LVC	**Limon Verde** 2.6nm,0.3s,baz=308,slow=13,SNR=62	9.11	144	P		Pn		10 44 09.2	+1.8
LVC	8.0nm,0.3s,baz=83,slow=21,SNR=10			S		Sn		10 45 44.2	-4.3
LVC	comp=Z,250nm,21.9s,baz=350,slow=35			LR		LR		10 47 22.9	
SIV	**San Ignacio**	13.14	95	P		Pn		10 45 00.9	-1.3
SIV	**San Ignacio** 0.4nm,0.3s,baz=287,slow=14,SNR=9.0	13.14	95	P		Pn		10 45 00.9	-1.3
SIV	comp=Z,104nm,18.2s,slow=41			LR		LR		10 50 59.4	
LCO	**Las Campanas**	14.14	166	*e*Pn		Pn		10 45 16.3	+0.9
OTAV	**Otavalo** 78nm,2.0s	15.87	346	*e*Pn		Pn		10 45 38.5	+0.6
CFAA	**Coronel Fontan**	17.28	161	P		Pn		10 45 55.2	+0.3
CFAA	**Coronel Fontan** 0.1nm,0.3s,baz=338,slow=12,SNR=14	17.28	161	P		Pn		10 45 55.2	+0.3
CPUP	**Villa Florida**	19.58	127	P		P		10 46 21.1	+0.6
CPUP	**Villa Florida** 0.2nm,0.3s,baz=281,slow=16,SNR=2.9	19.58	127	P		P		10 46 21.1	+0.6
ROSC	**El Rosal**	20.02	1	*e*P		P		10 46 22.6	-3.2
ROSC	**El Rosal** 1.2nm,0.3s,baz=106,slow=21,SNR=9.0	20.02	1	P		Pn		10 46 30.6	+2.4
ROSC	comp=Z,45nm,21.7s,baz=7.8,slow=41			LR		LR		10 55 43.8	
SDV	**Santo Domingo** 39nm,0.8s	24.36	10	*e*P		P		10 47 10.1	+0.4
BCIP	**Isla Barro Col** 29nm,1.0s	24.83	348	*e*P		P		10 47 15.4	+1.6
PLCA	**Paso Flores**	25.60	173	P		P		10 47 21.2	+0.4
PLCA	**Paso Flores** 2.0nm,0.5s,baz=0.0,slow=11,SNR=9.3	25.60	173	P		P		10 47 21.2	+0.4
BDFB	**Brasilia**	25.71	94	P		P		10 47 22.8	+0.7
BDFB	**Brasilia** 1.4nm,0.4s,baz=266,slow=6.4,SNR=3.4	25.71	94	P		P		10 47 22.8	+0.7
CELP	**Cerrillos**	34.11	14	*e*P		P		10 48 36.0	-0.1
TEIG	**Tepich** 31nm,1.0s	37.73	339	*e*P		P		10 49 07.5	+0.4
TEIG	**Tepich** 23nm,0.9s,baz=157,slow=7.7,SNR=9.3	37.73	339	P		P		10 49 06.3	-0.8
USHA	**Ushuaia**	39.76	174	P		P		10 49 24.2	+0.6
USHA	**Ushuaia** 14nm,1.1s,baz=351,slow=16,SNR=4.8	39.76	174	P		P		10 49 24.2	+0.6
TIGA	**Tifton** baz=47	47.24	350	⇑P		P		10 50 23.6	-0.4
LRAL	**Lakeview Retre** 11nm,0.9s	49.47	346	*e*P		P		10 50 40.3	-0.8
LRAL				*ep*P		pP		10 50 57.8	-2.4
732A	**Laxson Ranch,** baz=50,SNR=6.6	50.13	331	⇑P		P		10 50 46.0	-0.2
632A	**Uvalde** baz=51,SNR=10	50.70	331	⇓P		P		10 50 50.4	-0.1
631A	**Perdido Creek** baz=51	50.98	331	⇓P		P		10 50 52.2	-0.5
532A	**Rocksprings** baz=51	51.28	332	⇓P		P		10 50 54.7	-0.2
CPCT	**Cooper Cave**	51.31	350	*e*P		P		10 50 54.4	-0.6
JCT	**Junction City** baz=52	51.53	332	⇓P		P		10 50 55.9	-0.9
531A	**Rocksprings** baz=52,SNR=11	51.60	331	⇑P		P		10 50 57.2	-0.2
WHTX	**Lake Whitney** baz=52,SNR=5.1	51.83	335	⇑P		P		10 50 58.5	-0.4
432A	**Menard** baz=52,SNR=5.9	51.86	332	⇑P		P		10 50 58.5	-0.8
530A	**J-C Ranch, Com** baz=52,SNR=11	51.96	330	⇓P		P		10 50 59.6	-0.4
431A	**Sonora** baz=52,SNR=12	52.07	331	⇓P		P		10 51 00.4	-0.4
628A	**Black Gap, Mar** baz=52,SNR=13	52.17	329	⇑P		P		10 51 02.0	+0.4
TZTN	**Tazewell** 36nm,1.4s	52.23	351	*e*P		P		10 51 00.9	-0.9
332A	**Millersview** baz=52,SNR=9.5	52.27	333	⇑P		P		10 51 01.8	-0.4
529A	**Stev Forest Ra** baz=52,SNR=17	52.37	330	⇓P		P		10 51 02.9	-0.2
627A	**Terlingua Ranc** baz=53,SNR=7.3	52.40	328	⇓P		P		10 51 03.2	-0.2
430A	**Baggett Ranch,** baz=53,SNR=9.7	52.45	331	⇑P		P		10 51 03.1	-0.5
TXAR	**Lajitas Array**	52.45	328	P		P		10 51 03.4	-0.3
TXAR				pP		pP		10 51 21.9	-1.0
TXAR				sP		sP		10 51 30.6	-0.8
TXAR	**Lajitas Array** 3.8nm,0.7s,baz=149,slow=9.0,SNR=56	52.45	328	P		P		10 51 03.4	-0.3
TXAR	1.1nm,0.7s,baz=145,slow=9.0,SNR=4.8			pP		pP		10 51 21.9	-1.0
TXAR	1.2nm,0.7s,baz=153,slow=9.3,SNR=4.1			sP		sP		10 51 30.6	-0.8
331A	**San Angelo** baz=53	52.51	332	⇑P		P		10 51 03.3	-0.8
429A	**Davenport Ranc** baz=53,SNR=11	52.62	330	⇑P		P		10 51 04.6	-0.3
232A	**Coleman** baz=53	52.66	333	⇓P		P		10 51 04.7	-0.5
528A	**Cox Ranch, San** baz=53,SNR=5.5	52.68	329	⇑P		P		10 51 05.1	-0.3
MIAR	**Mount Ida** 17nm,1.5s	52.71	340	*e*P		P		10 51 05.0	-0.4
626A	**Big Bend Ranch** baz=53,SNR=30	52.87	328	⇑P		P		10 51 07.0	+0.3
330A	**Mertzon** baz=53	52.94	331	⇓P		P		10 51 06.6	-0.6
231A	**Bronte** baz=53	52.99	333	⇑P		P		10 51 07.1	-0.5
527A	**Woodward Ranch** baz=53,SNR=9.7	53.08	328	⇑P		P		10 51 08.0	-0.4
526A	**Mary Lane Ranc** baz=53,SNR=8.4	53.25	328	⇑P		P		10 51 09.6	-0.1
ABTX	**Abilene, Hawle** baz=54,SNR=12	53.29	334	⇓P		P		10 51 09.4	-0.3
230A	**Sterling City** baz=54	53.31	332	⇑P		P		10 51 09.4	-0.6
329A	**Wagon Wheel Ra** baz=54	53.38	331	⇑P		P		10 51 09.9	-0.6
427A	**Hayter Ranch,** baz=54	53.54	329	⇓P		P		10 51 11.4	-0.4
PARMO	**Parma**	53.59	345	*e*P		P		10 51 10.8	-1.1
131A	**Roby** baz=54,SNR=5.9	53.66	333	⇑P		P		10 51 12.0	-0.4
328A	**Wrsten Ranch,** baz=54	53.69	330	⇓P		P		10 51 12.3	-0.4
229A	**Bryant Ranch,** baz=54	53.70	331	⇑P		P		10 51 12.0	-0.8
426A	**McDonald Obser** baz=54,SNR=7.0	53.71	328	⇓P		P		10 51 12.7	-0.4
Z32A	**Haskell** baz=54	53.81	334	⇑P		P		10 51 12.8	-0.7
130A	**Snyder** baz=54	53.84	332	⇓P		P		10 51 13.1	-0.7
Z31A	**Sharp Cattle R** baz=54,SNR=14	54.10	334	⇑P		P		10 51 15.2	-0.4
228A	**UT Block 9, Go** baz=54	54.19	331	⇑P		P		10 51 15.7	-0.8
326A	**Caldwell Ranch** baz=54	54.21	329	⇓P		P		10 51 16.2	-0.4
129A	**Stewart Farms,** baz=54	54.28	332	⇑P		P		10 51 16.4	-0.7
425A	**Indio Mountain** baz=54,SNR=6.9	54.29	328	⇑P		P		10 51 16.8	-0.4
WCI	**Wyandotte Cave** 50nm,0.8s	54.34	349	*e*P		P		10 51 16.2	-1.1
USIN	**University of** 32nm,0.6s	54.36	347	*e*P		P		10 51 16.1	-1.2
Y32A	**R-V Farms, Ver** baz=55,SNR=7.2	54.40	335	⇓P		P		10 51 17.3	-0.5
227A	**Bennet, Jal** baz=55	54.44	330	⇑P		P		10 51 17.6	-0.6
SDMD	**Soldier's Deli** 17nm,0.9s	54.45	358	*e*P		P		10 51 18.8	+0.7
SIUC	**Southern Illin** 6.4nm,0.4s	54.46	346	*e*P		P		10 51 17.1	-1.1
Z30A	**Sanderson Ranc** baz=55,SNR=18	54.50	333	⇓P		P		10 51 18.0	-0.6
128A	**Castleberry Fa** baz=55	54.56	331	⇓P		P		10 51 18.5	-0.6
TUL1	**Tulsa** baz=55,SNR=6.6	54.70	339	⇓P		P		10 51 19.2	-0.7
Y31A	**Rekieta Farm,** baz=55,SNR=12	54.70	334	⇓P		P		10 51 19.5	-0.5
Z29A	**Hungry Hill Ra** baz=55	54.74	332	⇓P		P		10 51 19.7	-0.7
325A	**Bean Ranch, Si** baz=55,SNR=7.8	54.75	328	⇑P		P		10 51 20.1	-0.5
Y30A	**Stafford Catti** baz=55,SNR=5.5	54.90	333	⇓P		P		10 51 20.9	-0.6
226B	**Tecolote Peak,** baz=55	54.92	329	⇓P		P		10 51 21.2	-0.5
127A	**Arkansas Junct** baz=55	55.02	330	⇓P		P		10 51 21.9	-0.5
MVL	**Millersville** 14nm,0.7s	55.02	358	*e*P		P		10 51 23.2	+1.0
Z28A	**Tucker Farm, M** baz=55	55.07	332	⇑P		P		10 51 22.0	-0.7
324A	**Moseley Ranch,** baz=55	55.07	328	⇑P		P		10 51 21.9	-1.0
GDL2	**Guadalupe Moun** 1.1nm,0.2s	55.12	329	*e*P		P		10 51 23.5	+0.4
X31A	**McDonald Ranch** baz=55,SNR=13	55.16	335	⇑P		P		10 51 22.6	-0.7
OLIL	**Olney**	55.19	347	*e*P		P		10 51 22.3	-1.1
Y29A	**Porterfield Fa** baz=55,SNR=7.6	55.23	333	⇑P		P		10 51 23.0	-0.9
225A	**Deer Hill, Car** baz=55	55.27	329	⇑P		P		10 51 24.0	-0.4
126A	**Clayton Basin,** baz=56	55.31	330	⇑P		P		10 51 24.2	-0.3
X30A	**Coker Ranch, T** baz=56	55.38	334	⇑P		P		10 51 24.1	-0.8
Z27A	**Tatum** baz=56,SNR=7.3	55.48	331	⇑P		P		10 51 24.8	-0.9
Y28A	**McKinney Farm,** baz=56	55.52	332	⇓P		P		10 51 25.4	-0.6
W31A	**Holland Ranch,** baz=56	55.62	335	⇑P		P		10 51 25.8	-0.9
125A	**Gardner Draw,** baz=56	55.63	329	⇑P		P		10 51 26.1	-0.8
X29A	**Tulia** baz=56,SNR=5.3	55.73	333	⇓P		P		10 51 26.4	-1.1
ACSO	**Alum Creek Sta** 21nm,0.8s	55.77	352	*e*P		P		10 51 26.5	-1.1
Z26A	**Caprock** baz=56	55.80	330	⇓P		P		10 51 27.2	-0.8
MSTX	**Muleshoe** baz=56	55.81	332	⇓P		P		10 51 27.3	-0.8
Y27A	**Causey** baz=56,SNR=9.6	55.92	331	⇓P		P		10 51 27.9	-1.0
X28A	**Dimmitt** baz=56	56.02	333	⇓P		P		10 51 28.7	-0.9
124A	**Stringfield Ra** baz=56	56.06	329	⇓P		P		10 51 29.7	-0.4
V31A	**Spring Creek L** baz=56	56.09	335	⇑P		P		10 51 29.7	-0.3
Z25A	**Roswell** baz=56,SNR=5.2	56.16	330	⇑P		P		10 51 29.8	-0.9
Y26A	**Elida** baz=56	56.26	331	⇑P		P		10 51 30.3	-1.0
W29A	**Amraillo** baz=56	56.28	333	⇑P		P		10 51 30.6	-0.8
Z24A	**Sheeppen Canyo** baz=57,SNR=12	56.52	329	⇓P		P		10 51 32.8	-0.4
X27A	**F and S Farms,** baz=57	56.53	332	⇑P		P		10 51 32.5	-0.7
SFIN	**Scholer Farm** baz=57	56.57	349	⇑P		P		10 51 31.6	-1.6
320A	**Kipp Ranch, An** baz=57	56.61	325	⇑P		P		10 51 33.8	-0.1
Y25A	**Mesa, Roswell** baz=57	56.67	330	⇑P		P		10 51 33.3	-0.9
X26A	**CR and CF Fran** baz=57	56.77	331	⇑P		P		10 51 33.9	-1.0
W27A	**Bowe Ranch, En** baz=57	56.86	332	⇓P		P		10 51 34.6	-0.9
Y24A	**Capitan** baz=57	57.04	330	⇓P		P		10 51 36.1	-0.8
220A	**Playas Peak, P** baz=57,SNR=6.4	57.04	326	⇓P		P		10 51 37.1	+0.2
319A	**Douglas** baz=57,SNR=5.2	57.06	325	⇓P		P		10 51 37.3	+0.3
V28A	**Channing** baz=57	57.07	333	⇑P		P		10 51 36.6	-0.3
121A	**Cookes Peak, D** baz=57,SNR=5.1	57.13	327	⇑P		P		10 51 38.0	+0.4
T31A	**Randall Ranch,** baz=57	57.18	336	⇓P		P		10 51 37.3	-0.3
HDIL	**Hopedale** 21nm,0.7s	57.19	347	*e*P		P		10 51 36.1	-1.5
Z22A	**Elephant Butte** baz=57,SNR=5.4	57.27	328	⇑P		P		10 51 38.5	0.0
Y23A	**Lovelace Mesa,** baz=58	57.35	329	⇑P		P		10 51 38.9	-0.2
U28A	**Mallet** baz=58	57.60	334	⇓P		P		10 51 40.0	-0.7
W25A	**X Bar L Ranch,** baz=58	57.62	331	⇓P		P		10 51 40.1	-0.9
Z21A	**St. Cloud Mine** baz=58	57.68	327	⇑P		P		10 51 41.1	-0.4
V26A	**Tequesquite Ra** baz=58	57.79	332	⇓P		P		10 51 41.5	-0.6
Y22A	**Socorro** baz=58	57.81	328	⇓P		P		10 51 41.4	-0.9
T29A	**Hugoton** baz=58	57.87	335	⇓P		P		10 51 42.0	-0.6
U27A	**Thompson Grove** baz=58	57.89	333	⇓P		P		10 51 42.3	-0.5
S30A	**Montezuma** baz=58	57.96	336	⇓P		P		10 51 43.2	0.0
Z20A	**Nine Sixteen R** baz=58	58.01	327	⇑P		P		10 51 44.0	+0.3
W24A	**Lazy 6 Ranch,** baz=58	58.06	330	⇓P		P		10 51 43.5	-0.6
R31A	**Burdett** baz=58	58.16	337	⇑P		P		10 51 44.7	+0.1
T28A	**Walsh** baz=58	58.18	334	⇑P		P		10 51 44.2	-0.6
S29A	**Ulysses** baz=58	58.20	335	⇓P		P		10 51 44.5	-0.4
V25A	**Rancho No Teng** baz=58,SNR=7.1	58.21	332	⇓P		P		10 51 44.5	-0.6
Y21A	**Point of Rocks** baz=58	58.23	328	⇓P		P		10 51 45.2	-0.1
LAZ	**Ladron** 4.2nm,1.3s	58.26	329	*e*P		P		10 51 46.2	+0.7
U26A	**Atchley Ranch,** baz=58	58.27	333	⇑P		P		10 51 45.4	-0.2
X22A	**Bernardo** baz=58	58.28	329	⇓P		P		10 51 46.5	+0.9
ANMO	**Albuquerque** 4.7nm,1.2s	58.36	329	*e*P		P		10 51 46.0	-0.2
W23A	**Werner Place,** baz=59	58.38	330	⇓P		P		10 51 46.1	-0.2
T27A	**Campo** baz=59	58.39	334	⇓P		P		10 51 45.7	-0.5
V24A	**Rampart Ranch,** baz=59	58.42	331	⇓P		P		10 51 46.0	-0.7
R30A	**Dighton** baz=59	58.45	337	⇑P		P		10 51 46.3	-0.3
S28A	**Manter** baz=59	58.49	335	⇓P		P		10 51 46.5	-0.5
Y20A	**Horse Springs,** baz=59	58.51	327	⇓P		P		10 51 47.9	+0.6
U25A	**Circle Dot Ran** baz=59	58.58	332	⇑P		P		10 51 47.0	-0.6
X21A	**Alamocita Cree** baz=59	58.62	328	⇓P		P		10 51 48.0	-0.1
W22A	**Albuquerque** baz=59	58.66	329	⇓P		P		10 51 48.0	-0.2
Q31A	**Ellis** baz=59	58.74	338	⇓P		P		10 51 48.2	-0.4
T26A	**Comanche Natio** baz=59,SNR=5.4	58.86	333	⇓P		P		10 51 49.1	-0.5
V23A	**Ortiz Mt. (NFS** baz=59	58.87	330	⇑P		P		10 51 49.2	-0.5
R29A	**Marienthal** baz=59	58.90	336	⇑P		P		10 51 49.0	-0.8
Q30A	**Quinter** baz=59	59.03	337	⇑P		P		10 51 50.1	-0.4
X20A	**Quemado** baz=59	59.07	328	⇓P		P		10 51 51.0	-0.1
W21A	**San Fidel** baz=59	59.08	329	⇓P		P		10 51 51.3	+0.1
R28A	**Tribune** baz=59	59.10	335	⇑P		P		10 51 50.8	-0.3
S26A	**Kim** baz=59,SNR=11	59.18	334	⇑P		P		10 51 51.5	-0.2
T25A	**Trinidad** baz=59	59.19	333	⇓P		P		10 51 51.9	0.0
Q29A	**Oakley** baz=59	59.24	336	⇓P		P		10 51 51.9	-0.1
U23A	**El Rito** baz=60,SNR=5.5	59.34	331	⇑P		P		10 51 53.0	0.0
V22A	**San Miguel Ran** baz=60,SNR=7.9	59.35	330	⇑P		P		10 51 53.0	-0.1
R27A	**Eads** baz=60	59.46	335	⇓P		P		10 51 53.5	-0.1
214A	**Organ Pipe Nat** baz=60	59.51	322	⇓P		P		10 51 53.9	-0.1
W20A	**Ramah** baz=60	59.52	328	⇓P		P		10 51 53.7	-0.6
S25A	**Robets Cordova** baz=60,SNR=5.2	59.63	333	⇓P		P		10 51 54.6	-0.4
U22A	**Llaves** baz=60	59.70	330	⇑P		P		10 51 55.5	0.0
Q28A	**Sharon Springs** baz=60	59.73	336	⇑P		P		10 51 54.9	-0.5
R26A	**Arlington** baz=60	59.74	334	⇓P		P		10 51 55.0	-0.5
T23A	**Casias Ranch,** baz=60	59.84	331	⇓P		P		10 51 56.3	-0.1
S24A	**Houstin Ranch,** baz=60	59.96	332	⇑P		P		10 51 57.5	+0.1
R25A	**Fountain Ranch** baz=60	59.97	333	⇓P		P		10 51 57.5	+0.3
KSCO	**Kaye Shedlock'** baz=60	60.00	335	⇑P		P		10 51 57.9	+0.5
V20A	**Brimhall** baz=60	60.03	329	⇓P		P		10 51 57.8	+0.1
U21A	**Nageezi** baz=60,SNR=5.2	60.13	330	⇑P		P		10 51 58.3	-0.1
SDCO	**Great Sand Dun** 10nm,1.1s	60.18	332	*e*P		P		10 51 58.7	-0.1
SDCO				*ep*P		pP		10 52 17.6	-0.7
SDCO				*es*P		sP		10 52 26.8	0.0
T22A	**Edith** baz=60	60.23	331	⇓P		P		10 51 59.6	+0.5
R24A	**Sanders Place,** baz=61	60.40	333	⇑P		P		10 52 00.3	+0.1
U20A	**Newcomb** baz=61	60.51	329	⇓P		P		10 52 01.0	+0.1
T21A	**Navajo Lake** baz=61	60.52	330	⇑P		P		10 52 00.9	-0.1
Q25A	**Bedland, Calha** baz=61	60.59	334	⇑P		P		10 52 00.7	-0.8
R23A	**Moffat** baz=61	60.69	332	⇑P		P		10 52 01.8	-0.5
S22A	**4UR Ranch, Cre** baz=61,SNR=5.8	60.79	331	⇑P		P		10 52 02.6	-0.4
O27A	**Beecher Island** baz=61	60.95	336	⇓P		P		10 52 04.3	+0.5
Q24A	**Divide** baz=61	61.02	333	⇑P		P		10 52 04.1	-0.5
Y14A	**Wickenburg** baz=61,SNR=5.7	61.06	324	⇑P		P		10 52 04.6	0.0
P25A	**Willow Gulch B** baz=61	61.06	334	⇑P		P		10 52 04.7	0.0
R22A	**Saguache, Gunn** baz=61	61.14	331	⇓P		P		10 52 05.8	+0.4
MVCO	**Mesa Verde** baz=61	61.16	330	⇑P		P		10 52 05.5	+0.2
S21A	**Coal Bank Pass** baz=61	61.17	330	⇓P		P		10 52 06.0	+0.4

WUAZ	**Wupatki** 7.8nm,1.2s	61.33	326	*e*P	P	10	52	07.2	+0.7
WUAZ				*ep*P	pP	10	52	27.6	+1.5
WUAZ	**Wupatki** baz=62	61.33	326	⇑P	P	10	52	07.1	+0.7
S20A	**Disappointment** baz=62,SNR=9.0	61.58	330	⇓P	P	10	52	08.3	+0.1
R21A	**Cimarron** baz=62	61.62	331	⇓P	P	10	52	09.3	+0.8
P23A	**Jefferson** baz=62	61.66	333	⇓P	P	10	52	09.9	+1.0
Q22A	**Crested Butte,** baz=62	61.73	332	⇓P	P	10	52	10.1	+0.8
R20A	**Redvale** baz=62,SNR=8.1	61.87	330	⇑P	P	10	52	10.3	+0.1
PV01	**Paradox Valley** 781nm,1.4s	61.92	330	*e*P	P	10	52	11.1	+0.6
PV01				*ep*P	pP	10	52	29.8	-0.4
SMCO	**Snowmass** 5.5nm,1.0s	62.01	332	*e*P	P	10	52	11.9	+0.5
ECSD	**EROS Data Cent** 17nm,0.8s	62.07	342	*e*P	P	10	52	10.2	-0.9
P22A	**Eagle** baz=62	62.25	332	⇑P	P	10	52	13.2	+0.5
BC3	**Big Chuckawall** baz=62	62.28	322	⇑P	P	10	52	13.6	+0.8
MONP	**Monument Peak** baz=62	62.33	321	⇑P	P	10	52	14.3	+0.9
O23A	**Lake Granby, G** baz=63,SNR=5.8	62.39	333	⇑P	P	10	52	13.6	-0.1
SPMN	**St. Paul** baz=63	62.43	346	⇑P	P	10	52	12.9	-0.6
IRM	**Iron Mountain** baz=63	62.45	323	⇓P	P	10	52	14.6	+0.7
N24A	**Carr** baz=63	62.46	335	⇑P	P	10	52	14.3	+0.3
U15A	**North Rim** baz=63	62.50	326	⇑P	P	10	52	15.3	+0.8
L27A	**T5 Ranch, Ells** baz=63	62.52	337	⇑P	P	10	52	16.0	+1.7
O22A	**Kremmling** baz=63	62.62	333	⇑P	P	10	52	15.2	-0.1
K28A	**Ten Mile Ranch** baz=63	62.71	338	⇑P	P	10	52	16.1	+0.5
BELC	**Belle Mtn. Jos** baz=63	62.84	322	⇓P	P	10	52	16.9	+0.3
PFO	**Pinyon Flat Ob** baz=63	62.85	321	⇑P	P	10	52	17.3	+0.6
P20A	**De Beque** baz=63	62.92	331	⇑P	P	10	52	17.6	+0.5
N23A	**Red Feather La** baz=63	62.97	334	⇑P	P	10	52	17.9	+0.4
M24A	**Cheyenne** baz=63	62.97	335	⇓P	P	10	52	17.6	+0.2
K27A	**Flueckinger Fa** baz=63	63.02	338	⇑P	P	10	52	17.8	+0.2
PHWY	**Pilot Hill** 4.2nm,1.1s	63.10	334	*e*P	P	10	52	18.4	+0.1
N22A	**Wattenberg Ran** baz=63	63.11	333	⇑P	P	10	52	18.7	+0.3
GMRC	**Granite Mounta** baz=63	63.19	323	⇓P	P	10	52	19.2	+0.3
J28A	**Allard Ranch,** baz=64	63.29	339	⇑P	P	10	52	18.9	-0.4
P19A	**Cripple Cowboy** baz=64	63.30	331	⇑P	P	10	52	20.0	+0.3
O20A	**White River Ci** baz=64	63.36	332	⇓P	P	10	52	20.3	+0.3
BRSD	**Miller** baz=64	63.43	341	⇑P	P	10	52	19.5	-0.6
N21A	**Black Mountain** baz=64	63.54	333	⇓P	P	10	52	22.1	+0.9
SRU	**San Rafael**	63.63	329	*e*P	P	10	52	23.0	+1.2
SRU	**San Rafael** baz=64	63.63	329	⇑P	P	10	52	22.6	+0.8
L23A	**Garrett** baz=64	63.87	335	⇑P	P	10	52	23.7	+0.3
CCUT	**Cedar City**	63.91	326	*e*P	P	10	52	25.2	+1.5
N20A	**Spence Gulch,** baz=64	63.93	332	⇓P	P	10	52	23.8	0.0
BFSC	**Mount Baldy Ra** baz=64	64.00	321	⇓P	P	10	52	24.9	+0.6
MSU	**Marysvale**	64.01	328	*e*P	P	10	52	25.2	+0.9
MVU	**Marysvale** 2.5nm,0.9s	64.02	328	*e*P	P	10	52	25.2	+0.8
MVU				*ep*P	pP	10	52	44.2	-0.1
L22A	**Ellis Ranch, M** baz=64	64.11	334	⇓P	P	10	52	25.5	+0.6
ARUT	**Antelope Range** 5.4nm,0.8s	64.12	327	*e*P	P	10	52	26.4	+1.3
SHPR	**Sheep Range**	64.13	324	*e*P	P	10	52	26.0	+0.9
M21A	**Separation Pea** baz=64,SNR=7.1	64.16	333	⇓P	P	10	52	25.1	-0.2
GSC	**Goldstone** baz=64	64.23	322	⇓P	P	10	52	26.1	+0.4
K23A	**Bowen Ranch, D** baz=65	64.38	335	⇓P	P	10	52	26.7	+0.1
M20A	**Sweetwater, Wa** baz=65	64.43	333	⇑P	P	10	52	27.3	+0.3
L21A	**Rawlins** baz=65,SNR=6.5	64.45	333	⇑P	P	10	52	26.7	-0.5
J24A	**Dixon Ranch, L** baz=65	64.48	336	⇑P	P	10	52	27.3	+0.1
EDW2	**Edwards Air Fo** baz=65	64.64	321	⇑P	P	10	52	28.5	+0.2
K22A	**Casper** baz=65	64.66	335	⇑P	P	10	52	28.5	+0.1
EYMN	**Ely**	64.72	348	*e*P	P	10	52	27.6	-0.9
RSSD	**Black Hills**	64.91	337	*e*P	P	10	52	30.0	-0.1
I24A	**Kuemmerle Ranc** baz=65	64.91	337	⇑P	P	10	52	30.4	+0.4
L20A	**Wamsutter** baz=65	64.91	333	⇓P	P	10	52	29.8	-0.3
FURC	**Furnace Creek,** baz=65	65.07	323	⇓P	P	10	52	32.2	+1.2
MPMC	**Manual Prospec** baz=65	65.15	323	⇑P	P	10	52	31.9	+0.1
J22A	**Midwest** baz=66	65.27	335	⇓P	P	10	52	32.3	-0.1
K20A	**Yellowstone Ra** baz=66,SNR=5.3	65.44	333	⇑P	P	10	52	32.9	-0.6
L19A	**Farson** baz=66	65.44	332	⇓P	P	10	52	34.1	+0.6
ISA	**Isabella** baz=66	65.46	322	⇓P	P	10	52	34.4	+0.7
M17A	**Scullys Gap (B** baz=66	65.54	331	⇓P	P	10	52	34.3	+0.1
DUG	**Dugway**	65.60	329	*e*P	P	10	52	35.4	+0.8
DUG	**Dugway** baz=66,SNR=9.8	65.60	329	⇑P	P	10	52	35.0	+0.5
J21A	**Lysite** baz=66,SNR=5.4	65.61	334	⇓P	P	10	52	34.5	-0.2
H24A	**Dirks Ranch, A** baz=66	65.64	337	⇓P	P	10	52	34.3	-0.3
I22A	**9 Mile Ranch,** baz=66,SNR=6.4	65.67	335	⇓P	P	10	52	34.6	-0.3
GRAC	**Grapevine Rang** baz=66	65.73	323	⇓P	P	10	52	36.3	+0.9
CWC	**Cottonwood Cre** baz=66	65.76	323	⇓P	P	10	52	36.3	+0.6
PKM	**Peak Mountain** baz=66	65.77	320	⇓P	P	10	52	36.4	+0.6
K19A	**Absolon Red Bu** baz=66	65.79	333	⇑P	P	10	52	35.3	-0.5
I21A	**Big Trails, Te** baz=66,SNR=6.3	65.93	335	⇑P	P	10	52	36.0	-0.7
AGMN	**Agassiz Nation**	66.06	345	*e*P	P	10	52	36.6	-0.5
PDAR	**Pinedale Array**	66.06	333	P	P	10	52	37.0	-0.5
PDAR	**Pinedale Array** 1.7nm,1.0s,baz=143,slow=6.2,SNR=8.4	66.06	333	P	P	10	52	37.0	-0.5
HWUT	**Hardware Ranch** 2.9nm,0.7s	66.07	331	*e*P	P	10	52	37.6	0.0
G24A	**Alzada** baz=66	66.08	338	⇓P	P	10	52	37.6	+0.1
SMMC	**Simmler** baz=66	66.15	321	⇓P	P	10	52	38.9	+0.9
J19A	**Crowheart** baz=66	66.23	333	⇓P	P	10	52	38.9	+0.3
BGU	**Big Grassy Mou**	66.26	329	*e*P	P	10	52	38.9	+0.1
G23A	**Biddle** baz=66,SNR=5.7	66.34	337	⇓P	P	10	52	38.7	-0.4
RCTC	**Rector, Farmer** baz=66	66.36	322	⇑P	P	10	52	39.5	+0.2
E26A	**Carlson Angus** baz=67,SNR=5.0	66.37	339	⇑P	P	10	52	38.9	-0.4
I20A	**Worland** baz=67	66.39	334	⇓P	P	10	52	39.2	-0.4
H21A	**Big Horn, Sher** baz=67	66.50	335	⇓P	P	10	52	39.5	-0.7
F24A	**Ekalaka** baz=67,SNR=9.4	66.53	338	⇓P	P	10	52	39.9	-0.5
MDND	**Maddock** baz=67,SNR=15	66.68	342	⇑P	P	10	52	41.2	+0.1
G22A	**Birney** baz=67	66.70	336	⇑P	P	10	52	41.2	-0.2
E25A	**Miller Ranch,** baz=67	66.72	339	⇓P	P	10	52	41.4	-0.1
H20A	**Greybull** baz=67,SNR=5.2	66.78	335	⇑P	P	10	52	41.2	-0.8
F23A	**Volborg** baz=67	66.78	337	⇓P	P	10	52	41.7	-0.2
I19A	**Meeteetse** baz=67	66.83	334	⇓P	P	10	52	42.5	+0.1
I18A	**Diamond G Ranc** baz=67	66.92	333	⇑P	P	10	52	43.1	0.0
MLAC	**Mammoth Lakes** baz=67	67.01	323	⇑P	P	10	52	44.3	+0.5
G21A	**Lodge Grass** baz=67	67.06	336	⇓P	P	10	52	43.7	-0.1
E24A	**Baker** baz=67	67.09	338	⇑P	P	10	52	44.2	+0.3
F22A	**Rosebud** baz=67	67.15	337	⇑P	P	10	52	43.9	-0.3
NVAR	**Mina Array Bea**	67.26	324	P	P	10	52	45.8	+0.5
NVAR	**Mina Array Bea** 1.2nm,0.8s,baz=154,slow=6.6,SNR=13	67.26	324	P	P	10	52	45.8	+0.5
H19A	**Powell** baz=68	67.34	334	⇑P	P	10	52	45.7	+0.2
E23A	**Ismay** baz=68,SNR=5.9	67.40	338	⇓P	P	10	52	45.2	-0.6
I17A	**Pilgrim Ck.** baz=68	67.42	333	⇑P	P	10	52	46.7	+0.5
G20A	**Bridger** baz=68	67.47	335	⇓P	P	10	52	45.9	-0.4
D24A	**Glendive** baz=68	67.58	339	⇑P	P	10	52	47.8	+0.9
E22A	**Miles City** baz=68	67.59	337	⇑P	P	10	52	46.7	-0.3
H18A	**Shoshone NF, C** baz=68	67.63	334	⇑P	P	10	52	47.7	+0.2
I16A	**Newdale** baz=68	67.80	332	⇓P	P	10	52	49.3	+0.8
H17A	**Grant Village** baz=68	67.80	333	⇑P	P	10	52	49.7	+1.0
ULM	**Lac du Bonnet**	67.87	346	P	P	10	52	47.3	-1.2
ULM	**Lac du Bonnet** 4.0nm,0.5s,baz=152,slow=5.9,SNR=4.1	67.87	346	P	P	10	52	47.3	-1.2
D23A	**Lindsay** baz=68,SNR=10	67.94	338	⇑P	P	10	52	49.4	+0.2
C24A	**Savage** baz=68	67.97	339	⇓P	P	10	52	49.6	+0.3
G18A	**Lazy EL Ranch,** baz=68,SNR=12	68.10	334	⇑P	P	10	52	50.3	-0.1
E21A	**Keefer Ranch,** baz=68	68.10	337	⇑P	P	10	52	50.6	+0.4
D22A	**Cohagen** baz=68,SNR=17	68.27	337	⇓P	P	10	52	51.7	+0.4
F19A	**Roth Farm, Mol** baz=68,SNR=10	68.28	335	⇑P	P	10	52	51.3	-0.1
H16A	**Russell Place,** baz=68,SNR=8.4	68.34	333	⇓P	P	10	52	52.4	+0.5
C23A	**Lebert** baz=69	68.47	338	⇓P	P	10	52	53.0	+0.6
E20A	**Meyer Farm, Mu** baz=69,SNR=10	68.48	336	⇑P	P	10	52	52.8	+0.2
D21A	**La Casta Ranch** baz=69,SNR=11	68.51	337	⇑P	P	10	52	53.1	+0.4
G17A	**Pierce Place,** baz=69	68.61	334	⇓P	P	10	52	54.0	+0.5
F18A	**Big Timber** baz=69,SNR=15	68.64	335	⇓P	P	10	52	53.7	0.0
C22A	**Vida** baz=69,SNR=8.9	68.67	338	⇑P	P	10	52	53.9	+0.2
DGMT	**Dagmar**	68.69	339	*e*P	P	10	52	54.7	+0.8
DGMT	**Dagmar** baz=69,SNR=5.0	68.69	339	⇓P	P	10	52	54.1	+0.3
E19A	**Rath Farm, Rou** baz=69,SNR=15	68.71	335	⇓P	P	10	52	54.0	-0.1
I14A	**Mackay** baz=69,SNR=7.2	68.74	331	⇑P	P	10	52	54.9	+0.4
PAHR	**Rath Rah Range**	68.75	324	*e*P	P	10	52	55.9	+1.4
B23A	**Brockton** baz=69,SNR=7.4	68.96	339	⇑P	P	10	52	56.1	+0.6
A24A	**Westby** baz=69,SNR=5.5	69.02	340	⇓P	P	10	52	56.4	+0.5
B22A	**Reddig Ranch S** baz=69,SNR=10	69.18	338	⇑P	P	10	52	57.0	+0.2
C21A	**Desert Coulee** baz=69,SNR=9.7	69.18	337	⇑P	P	10	52	56.9	0.0
BOZ	**Bozeman (W)** 14nm,1.8s	69.25	333	*e*P	P	10	52	57.7	+0.2
E18A	**Harlowton** baz=69	69.25	335	⇑P	P	10	52	57.9	+0.4
D19A	**Cripps Ranch,** baz=70,SNR=11	69.32	336	⇓P	P	10	52	57.9	+0.1
A23A	**Redstone** baz=70	69.34	339	⇑P	P	10	52	58.3	+0.4
F16A	**Kennard Place,** baz=70	69.35	333	⇓P	P	10	52	58.1	0.0
C20A	**Veseth Ranch,** baz=70,SNR=5.4	69.43	337	⇓P	P	10	52	58.1	-0.4
I12A	**Atlanta** baz=70	69.44	330	⇑P	P	10	52	59.4	+0.6
MFID	**Camas Ranch** 14nm,1.3s	69.50	329	*e*P	P	10	52	59.8	+0.8
MFID	**Camas Ranch** baz=70,SNR=7.7	69.50	329	⇑P	P	10	52	59.4	+0.3
E17A	**Martinsdale** baz=70	69.56	334	⇓P	P	10	53	00.1	+0.6
B21A	**Ellsworth Farm** baz=70,SNR=5.7	69.65	338	⇑P	P	10	52	59.9	+0.1
D18A	**Linhart Farms,** baz=70	69.71	335	⇓P	P	10	53	00.9	+0.6
A22A	**Carney Farms,** baz=70,SNR=6.7	69.73	339	⇑P	P	10	53	00.4	+0.1
F15A	**Butte** baz=70	69.78	333	⇓P	P	10	53	01.1	+0.3
C19A	**Slack Wire Ran** baz=70,SNR=8.1	69.85	336	⇑P	P	10	53	01.1	+0.1
H12A	**Diamond D Ranc** baz=70	69.87	331	⇑P	P	10	53	02.1	+0.7
E16A	**East Helena** baz=70	69.96	334	⇑P	P	10	53	02.4	+0.5
B20A	**Solberg Farm,** baz=70,SNR=10	70.03	337	⇓P	P	10	53	02.1	0.0
D17A	**Six Diamond Ra** baz=70,SNR=9.6	70.04	335	⇓P	P	10	53	02.4	+0.1
A21A	**Bergtoll Ranch** baz=70	70.09	338	⇓P	P	10	53	02.8	+0.4
SCHQ	**Schefferville**	70.17	5	P	P	10	53	01.8	-0.9
SCHQ	**Schefferville** 11nm,0.9s,baz=196,slow=7.1,SNR=9.6	70.17	5	P	P	10	53	01.8	-0.9
D16A	**Dana Ranch, Ca** baz=70	70.30	334	⇓P	P	10	53	04.7	+0.8
EGMT	**Eagleton**	70.36	336	*e*P	P	10	53	04.6	+0.4
EGMT	**Eagleton** baz=70	70.36	336	⇑P	P	10	53	04.8	+0.6
B19A	**Brinkman Farms** baz=71,SNR=9.4	70.40	337	⇑P	P	10	53	04.3	0.0
G12A	**Big Creek, Yel** baz=71	70.53	331	⇑P	P	10	53	05.8	+0.4
B18A	**Beardsley Farm** baz=71,SNR=5.4	70.67	336	⇓P	P	10	53	06.1	+0.1
A19A	**Klindworth Far** baz=71,SNR=9.3	70.71	337	⇓P	P	10	53	06.1	-0.2
D15A	**Lincoln** baz=71	70.72	334	⇑P	P	10	53	07.4	+0.9
C16A	**Fuhringer Ranc** baz=71,SNR=5.7	70.99	335	⇓P	P	10	53	08.2	+0.1
B17A	**L&G Farms, Che** baz=71	71.00	335	⇓P	P	10	53	08.2	+0.1
A18A	**Metzger Ranch,** baz=71,SNR=6.1	71.12	336	⇑P	P	10	53	08.5	-0.2
MSO	**Missoula** 1.5nm,0.8s	71.18	333	*e*P	P	10	53	10.2	+1.0
MSO	**Missoula** baz=71	71.18	333	⇓P	P	10	53	10.3	+1.1
D14A	**Greenough** baz=71	71.18	333	⇑P	P	10	53	09.6	+0.3
C15A	**Salmond Ranch,** baz=72,SNR=12	71.33	334	⇓P	P	10	53	10.6	+0.5
B16A	**M & M Farms, S** baz=72	71.46	335	⇑P	P	10	53	10.8	0.0
A17A	**Triple J Farms** baz=72,SNR=10	71.48	336	⇓P	P	10	53	10.8	-0.1
E12A	**Beaver Dam Sad** baz=72	71.60	332	⇓P	P	10	53	11.9	+0.1
D13A	**Huson** baz=72	71.61	333	⇑P	P	10	53	12.0	+0.2
B15A	**Bradely Ranch,** baz=72	71.73	334	⇓P	P	10	53	12.1	-0.4
D12A	**Red Ives Fores** baz=72	71.98	332	⇓P	P	10	53	14.2	+0.2
B14A	**Marquette Ranc** baz=72,SNR=6.3	72.07	334	⇑P	P	10	53	14.5	0.0
C13A	**Hot Springs** baz=72,SNR=8.9	72.11	333	⇓P	P	10	53	15.3	+0.6
A15A	**Johnson Ranch,** baz=72	72.32	335	⇑P	P	10	53	16.2	+0.2
BSMT	**Bassoo Peak** 2.6nm,0.9s	72.33	333	*e*P	P	10	53	17.2	+1.0
DBIC	**Dimbokro**	72.54	78	P	P	10	53	17.6	-0.3
DBIC	**Dimbokro** 4.3nm,0.7s,baz=252,slow=6.4,SNR=5.2	72.54	78	P	P	10	53	17.6	-0.3
B13A	**Whitefish** baz=73	72.59	333	⇑P	P	10	53	18.2	+0.7
A14A	**Double T Ranch** baz=73	72.61	334	⇑P	P	10	53	17.7	0.0
C11A	**Tepee Creek (N** baz=73	72.97	332	⇑P	P	10	53	20.5	+0.7
A13A	**Flathead Natio** baz=73	72.99	334	⇓P	P	10	53	21.2	+1.2
B12A	**Libby** baz=73	73.15	333	⇓P	P	10	53	21.8	+1.0
A12A	**Yaak River Ran** baz=74	73.53	333	⇓P	P	10	53	24.0	+0.9
NEW	**Newport** baz=74	73.68	332	⇑P	P	10	53	24.9	+0.9
TOA0	**Torodi Ar. Sit**	80.68	74	*e*P	P	10	54	04.6	+0.8
TOA0				*ep*P	pP	10	54	24.5	+0.1
TOA0				*es*P	sP	10	54	32.9	+0.3
TORD	**Torodi Ar. Bea**	80.68	74	P	P	10	54	04.4	+0.6
TORD				pP	pP	10	54	24.3	-0.1
TORD	**Torodi Ar. Bea** 9.4nm,0.9s,baz=262,slow=5.3,SNR=35	80.68	74	P	P	10	54	04.4	+0.6
TORD				pP	pP	10	54	24.3	-0.1
MORF	**Marmelete** 14nm,1.1s	81.13	48	*e*P	P	10	54	07.8	+2.0
PTEO	**Sao Teotonio** 22nm,2.4s	81.18	47	*e*P	P	10	54	08.6	+2.6
PNCL	**Nicolau / Gran**	81.58	47	*e*P	P	10	54	10.4	+2.3
PCVE	**Castro Verde** 13nm,2.1s	81.71	47	*e*P	P	10	54	11.0	+2.2
VNDA	**Vanda**	81.95	191	P	P	10	54	11.1	+1.7
VNDA	**Vanda** 2.0nm,0.9s,baz=119,slow=3.0,SNR=11	81.95	191	P	P	10	54	11.1	+1.7
VNDA				LR	LR	11	22	24.6	
	comp=Z,49nm,20.8s,baz=334,slow=30								
MDT	**Midelt** comp=Z,38nm,18.0s,baz=134,slow=34	82.22	53	LR	LR	11	27	57.1	
POLO	**Lamas de Olo** 12nm,1.8s	83.55	44	*e*P	P	10	54	10.0	-8.4
YKA	**Yellowknife Ar**	83.59	343	P	P	10	54	17.1	-0.9
YKA	**Yellowknife Ar** 2.6nm,0.8s,baz=136,slow=6.1,SNR=5.9	83.59	343	P	P	10	54	17.0	-0.9
MAW	**Mawson**	91.77	165	P	P	10	54	57.4	0.0
MAW	**Mawson** 1.2nm,0.8s,baz=315,slow=4.3,SNR=4.6	91.77	165	P	P	10	54	57.4	0.0
ABKAR	**Akbulak array**	129.96	37	*e*PKPdf	PKPdf	11	01	01.3	+1.9
ZALV	**Zalesovo Beam**	138.22	18	PKP	PKPdf	11	01	15.5	+0.8
ZALV				pPKP	pPKPdf	11	01	35.7	-0.6
ZALV	**Zalesovo Beam** 1.5nm,0.6s,baz=298,slow=3.1,SNR=6.3	138.22	18	PKP	PKPdf	11	01	15.5	+0.8
ZALV				pPKP	pPKPdf	11	01	35.7	-0.6
KURK	**Kurchatov** 2.2nm,0.8s,baz=270,slow=1.5,SNR=3.8	138.63	26	PKP	PKPdf	11	01	16.6	+1.1
KURK				pPKP	pPKPdf	11	01	37.4	+0.1
KURBB	**Kurchatov Arra** 0.5nm,0.6s,baz=303,slow=1.9,SNR=4.2	138.66	26	PKP	PKPdf	11	01	16.6	+1.0
KURBB				pPKP	pPKPdf	11	01	37.3	+0.1
KSH	**Kashi** 0.9nm,0.8s,baz=307,slow=2.8,SNR=4.3	144.78	41	*e*PKP	PKPdf	11	01	28.0	+0.9
KSH				*ep*PKP	pPKPdf	11	01	53.3	+4.5
KSH				*es*PKP		11	02	04.8	
KSH				*e*SKS	SKSdf	11	08	25.5	-4.4
KSH				*e*SKKS	SKKSac	11	11	24.8	-5.8
KSH	comp=Z,220nm,4.3s			AMB	AMB				
KSH	comp=N,500nm,8.4s			LR	LR				
KSH	comp=E,230nm,6.2s			LR	LR				
KSH	comp=Z,250nm,6.1s			LR	LR				
ULN	**Ulaanbaatar**	147.49	358	*e*PKPdf	PKPdf	11	01	31.8	+0.3
ULN				*e*PKPbc	PKPbc	11	01	34.8	+0.7
ULN				*e*PKPab	PKiKP	11	01	37.1	+0.9
SONM	**Songino Array**	147.54	359	PKPbc	PKPbc	11	01	34.3	+0.1
SONM				pPKPbc	pPKPbc	11	01	54.8	-0.9
SONM				sPKPbc	sPKPbc	11	02	04.0	+0.2
SONM	**Songino Array** comp=Z,3.7nm,0.7s,baz=353,slow=1.3,SNR=22	147.54	359	PKPbc	PKPbc	11	01	34.3	+0.1
SONM				pPKPbc	pPKPbc	11	01	54.8	-0.9
SONM	comp=Z,2.2nm,0.7s,baz=312,slow=1.4,SNR=5.9			sPKPbc	sPKPbc	11	02	04.0	+0.2
	comp=Z,1.9nm,0.7s,baz=282,slow=1.0,SNR=5.2								
WMQ	**Urumqi**	147.85	24	*e*PKPbc	PKPbc	11	01	34.3	-0.8
LZH	**Lanzhou**	159.25	3	*e*PKP	PKPdf	11	01	48.5	-0.2
LZH				LR	LR				
	comp=N,120nm,18.0s								
LZH				LR	LR				
	comp=E,130nm,18.1s								
LZH				LR	LR				
	comp=Z,170nm,20.2s								
GYA	**Guiyang**	168.82	354	*e*PKP	PKPdf	11	01	55.3	-2.2
GYA				pPKP	pPKPdf	11	02	28.5	+9.1
GYA				sPKP		11	02	41.8	
GYA				PKPab	PKPab	11	03	06.5	-1.6
GYA				PKS	PKSdf	11	05	25.0	-5.3
GYA				PP	PP	11	06	58.0	+1.9
GYA				AMB	AMB				
	comp=Z,90nm,8.0s								

IDC 30 10:45:06.9±2.2, 3°91N×127°37E, h0km, mb3.4/3, mb1 3.6/3, mb1mx3.4/23, mbtmp3.4/3, Error ellipse: s-maj=150.6km s-min=27.6km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time			Res
				Op	ISC	h	m	s	ISC
WRA	**Warramunga Arr** 1.1nm,0.7s,baz=344,slow=11,SNR=9.1	24.68	164	P	P	10	50	29.4	-0.3
ASAR	**Alice Springs** 0.3nm,0.7s,baz=334,slow=7.7,SNR=2.6	28.14	167	P	P	10	51	01.4	+0.4
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=111,slow=7.9,SNR=4.3	57.77	325	P	P	10	54	59.8	-0.1

**IDC 30 10:48:45.5±2.9, 32°41S×178°32W, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.8/19, mbtm

baz=7.8,SNR=9.2
KDU Kakadu 7.48 153 P Pn 10 56 20.1 +0.3
baz=8.2,SNR=460
KNRA Kununurra 9.65 182 P **Pn** **10 56 47.4 +0.2**
baz=10,SNR=52
KNRA S **S** **10 58 34.8 -1.2**
baz=10,SNR=8.1
JAY Jayapura 12.11 74 S **S** **10 59 31.7 -1.2**
baz=12,SNR=3.1
FITZ Fitzroy Crossi 12.51 195 P **Pn** **10 57 21.9 -0.7**
0.8nm,0.3s,baz=19,slow=11,SNR=30
FITZ S **S** **10 59 42.3 +0.4**
0.5nm,0.3s,baz=324,slow=19,SNR=2.9
WRA Warramunga Arr 14.81 160 P **P** **10 57 50.6 +0.6**
2.6nm,0.3s,baz=341,slow=11,SNR=67
WRA S **S** **11 00 32.9 -0.7**
1.4nm,0.3s,baz=339,slow=17,SNR=15
COEN Coen 16.00 121 *e*Pdif **P** **10 58 02.6 -0.6**
COEN Coen 16.00 121 P **P** **10 58 03.1 -0.1**
baz=17,SNR=5.0
QIS Mount Isa 17.75 146 P **P** **10 58 22.9 +0.6**
baz=18,SNR=18
ASAR Alice Springs 18.20 166 P **P** **10 58 28.2 +1.1**
3.8nm,0.3s,baz=347,slow=9.8,SNR=158
ASAR S **S** **11 01 40.2 -1.4**
1.4nm,0.3s,baz=347,slow=21,SNR=27
ASAR ScP **ScP** **11 05 52.6 -4.9**
0.1nm,0.3s,baz=337,slow=2.0,SNR=4.8
PMG Port Moresby 18.26 102 P **P** **10 58 28.6 +0.9**
2.5nm,0.3s,baz=250,slow=12,SNR=7.9
MTSU Mount Surprise 19.18 130 P **P** **10 58 37.5 -0.2**
baz=20,SNR=4.9
CTA Charters Tower 21.82 132 P **P** **10 59 04.2 -0.3**
2.0nm,0.4s,baz=298,slow=15,SNR=5.0
STKA Stephens Creek 28.32 157 P P 11 00 02.3 -0.4
4.1nm,0.5s,baz=338,slow=9.7,SNR=12
STKA Stephens Creek 28.32 157 P **P** **11 00 02.6 -0.1**
baz=29,SNR=7.1
CMSA Cobar Meteorol 29.83 151 P **P** **11 00 16.2 +0.2**
baz=31,SNR=11
ARPS Mount Arapiles 32.81 161 P **P** **11 00 42.8 +0.8**
baz=34,SNR=5.2
YNG Young 33.39 150 P **P** **11 00 48.0 +0.9**
baz=34,SNR=8.2
CMAR Chiang Mai Arr 38.36 310 P P 11 01 22.5 -6.8
1.8nm,0.5s,baz=138,slow=7.3,SNR=10
KSRS Korea Array 43.21 359 P P 11 02 01.2 -7.2
1.6nm,0.6s,baz=179,slow=9.3,SNR=5.9
TAPN Taplejung 51.91 312 *e*P P 11 03 08.5 -7.1
9.5nm,0.4s
RAMN Ramite 52.52 311 *e*P P 11 03 13.1 -7.0
27nm,0.5s
GUN Gumba 53.57 311 *e*P P 11 03 20.7 -7.1
12nm,0.4s
KOLN Koldanda 55.23 310 *e*P P 11 03 32.2 -7.3
3.8nm,0.3s
PYUN Piuthan 55.86 310 *e*P P 11 03 37.4 -6.6
16nm,0.6s
SONM Songino Array 57.18 342 P P 11 03 46.4 -6.4
1.7nm,0.9s,baz=154,slow=6.7,SNR=5.2
MKAR Makanchi Array 66.86 327 P P 11 04 50.4 -6.5
4.4nm,0.5s,baz=127,slow=7.4,SNR=19
ZALV Zalesovo Beam 70.25 334 P P 11 05 10.3 -7.3
2.6nm,0.7s,baz=123,slow=6.6,SNR=7.2
KURBB Kurchatov Arra 71.15 329 P P 11 05 16.2 -6.9
3.2nm,0.7s,baz=122,slow=5.4,SNR=33
VNDA Vanda 73.58 173 P P 11 05 34.7 -2.2
0.6nm,0.5s,baz=304,slow=6.3,SNR=8.5
TXAR Lajitas Array 125.19 58 PKP PKPdf 11 12 58.5 -4.5
0.1nm,0.4s,baz=104,slow=2.9,SNR=3.7
CPUP Villa Florida 147.30 169 PKPbc **PKPdf** **11 13 42.9 -0.7**
0.7nm,0.4s,baz=253,slow=2.3,SNR=3.9
LPAZ La Paz 152.10 143 PKPbc **PKPdf** **11 13 55.1 +3.0**
0.5nm,0.4s,baz=360,slow=4.0,SNR=4.1

DJA 30 11:16:52.8±1.2, 1°N±10°×12°2E±°, h10km, M3.8/4, MLv3.8/4, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**0.82**	**211**	P	Pg	11 17 08.1	-0.6
GTOI	**Gorontalo**	**0.85**	**130**	P	Pg	11 17 07.9	-1.4
GTOI				S	Sb	11 17 21.1	-0.1
KMSI	**Cibinong**	**1.73**	**111**	P	Pb	11 17 24.0	-0.7
LUWI	**Luwuk**	**2.25**	**169**	P	Pb	11 17 32.9	-0.7
TTSI	**Tana Toraja**	**4.91**	**211**	P	Pn	11 18 07.5	+0.7

*IDC **30** 11:22:30.9±1.8, 1.53N×126.61E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.4/22, mbtmp3.6/4, Error ellipse: s-maj=180.1km s-min=21.7km az=66.0*

DJA 30 11:22:32.6±0.7, 2°N±8°×12°8E±°, h10km, M3.7/5, MLv3.7/5, Halmahera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GAMI	**Galela, Maluku**	**0.18**	**97**	P	Pg	11 22 35.8	-0.7
GAMI				S	Sg	11 22 38.5	-0.6
TNTI	**Ternate**	**1.11**	**193**	P	Pb	11 22 52.1	-1.8
LBMI	**Labuha**	**2.48**	**183**	P	Pb	11 23 15.8	-1.6
MNI	**Manado**	**2.80**	**262**	P	Pn	11 23 19.6	+2.1
KMSI	**Cibinong**	**3.85**	**251**	P	Pn	11 23 31.4	-0.5
WRA	**Warramunga Arr**	**22.65**	**163**	P	P	11 27 33.8	-0.3
0.7nm,0.7s,baz=339,slow=11,SNR=8.8							
ASAR	**Alice Springs**	**26.10**	**167**	P	P	11 28 05.8	-1.1
0.2nm,0.4s,baz=344,slow=9.3,SNR=4.7							
MKAR	**Makanchi Array**	**59.58**	**325**	P	P	11 32 34.8	-1.9
0.6nm,0.5s,baz=115,slow=8.6,SNR=8.0							
KURBB	**Kurchatov Arra**	**63.78**	**328**	P	P	11 33 02.9	-2.0
0.9nm,0.5s,baz=134,slow=6.7,SNR=6.8							

*ISCJB **30** 11:30:05.5±0.8, 18.40S±0.04×71.33W±0.08, h52km±8km, mb4.0/9, MS3.9/4, Error ellipse: s-maj=13.9km s-min=5.5km az=162.0*
*GUC **30** 11:30:06.3±0.4, 18.50S×71.31W, h76km±20km, ML4.0*
*NEIC **30** 11:30:07.7±1.4, 18.33S×71.32W, h52km±12km, mb4.1/2, Error ellipse: s-maj=18.5km s-min=11.6km az=74.0*
*IDC **30** 11:30:10.3±4.5, 18.27S×71.10W, h72km±39km, mb3.8/8, mb1 4.0/9, mb1mx3.8/18, mbtmp3.8/9, ML4.7/1, MS3.8/6, Ms1 3.8/6, ms1mx3.3/26, Error ellipse: s-maj=28.8km s-min=25.8km az=7.0*

ISC 30 11:30:07.0±1.3, 18°33S±0.04×71°26W±0.09, h45km±12km, n46, σ1°13/49, mb4.2/9, MS4.0/4, 6C, Off coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PSGC	**Pisagua**	**1.66**	**140**	⇑*i*P	**Pn**	**11 30 33.2**	**-0.6**
PSGC				*i* S	**Sn**	**11 30 53.4**	**-0.5**
PSGC				AML	AML	11 31 04.9	
comp=E,792nm,0.6s							
MNMC	**Minimini**	**1.77**	**117**	⇑*i*P	**Pn**	**11 30 35.6**	**+0.2**
MNMC				*i* S	**Sn**	**11 30 58.2**	**+1.3**
MNMC				AML	AML	11 31 07.6	
comp=E,3μm,0.7s							
ARE	**Arequipa**	**1.87**	**353**	⇑*i*P	**Pn**	**11 30 35.1**	**-1.7**
ARE				*e*S	**Sn**	**11 31 00.2**	**+0.8**
HMBC	**Humberstone**	**2.33**	**146**	⇑*i*P	**Pn**	**11 30 42.5**	**-0.5**
HMBC				*i* S	**Sn**	**11 31 09.5**	**-1.1**
HMBC				AML	AML	11 31 25.1	
comp=N,1μm,0.4s							
PB01	**Plate Boundary**	**3.17**	**149**	⇑*i*P	**Pn**	**11 30 53.5**	**-1.1**
PB01				*i* S	**Sn**	**11 31 29.9**	**-1.4**
PB01				AML	AML	11 31 32.9	
comp=N,353nm,0.6s							
LPAZ	**La Paz**	**3.61**	**56**	*e*Pn	Pn	11 31 05.2	+4.1
LPAZ				*e*Sn	**Sn**	**11 31 41.0**	**-1.8**
LPAZ	**La Paz**	**3.61**	**56**	P	Pn	11 31 06.9	+5.8
comp=N,2.5nm,0.3s,baz=232,slow=8.9,SNR=44							
PB07	**Plate Boundary**	**3.62**	**159**	*e*P	**Pn**	**11 30 59.0**	**-1.7**
PB07				*i* S	**Sn**	**11 31 39.8**	**-2.6**
PB07				AML	AML	11 31 49.8	
comp=E,307nm,0.4s							
PB09	**Plate Boundary**	**3.94**	**152**	⇑*i*P	**Pn**	**11 31 04.8**	**-0.3**
PB09				*i* S	**Sn**	**11 31 48.9**	**-1.3**
LVC	**Limon Verde**	**4.80**	**153**	*e*Pn	**Pn**	**11 31 16.5**	**-0.5**
LVC				*e*Sn	**Sn**	**11 32 12.4**	**+0.9**
LVC	**Limon Verde**	**4.80**	**153**	*i* P	**Pn**	**11 31 16.6**	**-0.4**
LVC				*e*S	**Sn**	**11 32 10.6**	**-0.9**
LVC	**Limon Verde**	**4.80**	**153**	P	**Pn**	**11 31 16.9**	**-0.1**
comp=E,8.1nm,0.3s,baz=336,slow=11,SNR=64							
LVC				S	**Sn**	**11 32 12.3**	**+0.9**
comp=E,14nm,0.3s,baz=87,slow=19,SNR=9.7							
LVC				LR	LR	11 33 22.2	
comp=E,502nm,19.5s,baz=323,slow=40							
SIV	**San Ignacio**	**10.01**	**78**	P	**Pn**	**11 32 30.7**	**+2.4**
SIV	**San Ignacio**	**10.01**	**78**	P	**Pn**	**11 32 30.7**	**+2.4**
comp=E,3.5nm,0.3s,baz=281,slow=9.9,SNR=46							
SIV				LR	LR	11 36 53.5	
comp=E,586nm,18.8s,slow=41							
CFAA	**Coronel Fontan**	**13.50**	**169**	LR	LR	11 38 49.8	
comp=E,16nm,18.9s,baz=340,slow=38							
OTAV	**Otavalo**	**19.76**	**338**	P	**P**	**11 34 34.6**	**+0.8**
comp=E,7.4nm,1.0s							
TRQA	**Tornquist**	**21.27**	**159**	*e*P	**P**	**11 34 49.6**	**+0.1**
comp=E,13nm,1.1s							
PLCA	**Paso Flores**	**22.34**	**179**	*e*P	**P**	**11 35 02.9**	**+1.9**
PLCA	**Paso Flores**	**22.34**	**179**	P	**P**	**11 35 02.6**	**+1.5**
comp=E,2.0nm,0.8s,baz=5.5,slow=9.3,SNR=2.8							
BDFB	**Brasilia**	**22.39**	**87**	P	**P**	**11 35 00.5**	**-1.4**
BDFB	**Brasilia**	**22.39**	**87**	P	**P**	**11 35 00.5**	**-1.4**
comp=E,6.7nm,0.5s,baz=251,slow=10,SNR=9.1							
DBIC	**Dimbokro**	**70.03**	**76**	P	**P**	**11 41 13.8**	**-0.8**
DBIC	**Dimbokro**	**70.03**	**76**	P	**P**	**11 41 13.8**	**-0.8**
comp=E,4.8nm,0.6s,baz=209,slow=5.3,SNR=7.5							
DBIC				LR	LR	12 11 19.9	
comp=E,72nm,18.2s,baz=246,slow=35							
PDAR	**Pinedale Array**	**70.28**	**331**	P	**P**	**11 41 15.7**	**-0.2**
PDAR	**Pinedale Array**	**70.28**	**331**	P	**P**	**11 41 15.7**	**-0.2**
comp=E,0.4nm,0.7s,baz=110,slow=7.8,SNR=3.9							
NVAR	**Mina Array Bea**	**71.64**	**323**	P	**P**	**11 41 24.9**	**+0.6**
NVAR	**Mina Array Bea**	**71.64**	**323**	P	**P**	**11 41 24.9**	**+0.6**
comp=E,5.5nm,0.7s,baz=163,slow=7.2,SNR=4.7							
TORD	**Torodi Ar. Bea**	**78.43**	**72**	P	**P**	**11 42 02.8**	**-0.8**
TORD	**Torodi Ar. Bea**	**78.43**	**72**	P	**P**	**11 42 02.8**	**-0.8**
comp=E,3.4nm,0.8s,baz=248,slow=5.7,SNR=19							
TORD				LR	LR	12 15 38.9	
comp=E,96nm,20.1s,baz=315,slow=35							
TSUM	**Tsumeb**	**83.09**	**108**	LR	LR	12 17 17.9	
comp=E,83nm,20.2s,baz=321,slow=34							
ESDC	**Sonseca Array**	**85.17**	**46**	P	**P**	**11 42 38.5**	**-0.2**
ESDC	**Sonseca Array**	**85.17**	**46**	P	**P**	**11 42 38.5**	**-0.2**
comp=E,2.2nm,0.3s,baz=256,slow=5.2,SNR=4.5							
YKA	**Yellowknife Ar**	**87.48**	**341**	P	**P**	**11 42 48.9**	**-0.5**
YKA	**Yellowknife Ar**	**87.48**	**341**	P	**P**	**11 42 48.9**	**-0.5**
comp=E,2.1nm,0.7s,baz=140,slow=5.8,SNR=6.4							
KEST	**Kesra**	**93.19**	**54**	LR	LR	12 25 30.2	
comp=E,19nm,18.7s,baz=291,slow=36							
ASAR	**Alice Springs**	**131.57**	**211**	PKP	**PKPdf**	**11 49 15.4**	**-0.2**
ASAR	**Alice Springs**	**131.57**	**211**	PKP	**PKPdf**	**11 49 15.4**	**-0.2**
comp=E,0.5nm,0.8s,baz=130,slow=1.3,SNR=6.9							
WRA	**Warramunga Arr**	**134.42**	**215**	PKP	**PKPdf**	**11 49 21.4**	**+0.4**
WRA	**Warramunga Arr**	**134.42**	**215**	PKP	**PKPdf**	**11 49 21.4**	**+0.4**
comp=E,0.5nm,0.6s,baz=142,slow=1.8,SNR=8.8							
ZALV	**Zalesovo Beam**	**139.94**	**22**	PKP	**PKPdf**	**11 49 31.3**	**+1.2**
ZALV	**Zalesovo Beam**	**139.94**	**22**	PKP	**PKPdf**	**11 49 31.3**	**+1.2**
comp=E,0.6nm,0.3s,baz=300,slow=2.8,SNR=3.9							
MK31	**Makanchi Array**	**144.24**	**32**	*e*PKPbc	PKPbc	11 49 36.8	+0.5
MKAR	**Makanchi Array**	**144.24**	**32**	PKP	PKPbc	11 49 36.6	+0.3
MKAR	**Makanchi Array**	**144.24**	**32**	PKP	PKPbc	11 49 36.6	+0.3
comp=E,1.3nm,0.6s,baz=331,slow=3.4,SNR=14							
SONM	**Songino Array**	**150.51**	**3**	PKPbc	**PKPbc**	**11 49 54.4**	**+0.5**
SONM	**Songino Array**	**150.51**	**3**	PKPbc	**PKPbc**	**11 49 54.4**	**+0.5**
comp=E,1.8nm,0.8s,baz=313,slow=1.9,SNR=9.3							

IDC 30 11:48:01.7±1.5, 29.56N×98.99E, h0km, mb3.6/5, mb1 3.8/5, mb1mx3.5/27, mbtmp3.6/5, MS3.0/1, Ms1 3.0/1, ms1mx2.4/34, Error ellipse: s-maj=206.1km s-min=19.5km az=58.0, Xizang

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**21.56**	**328**	P	P	11 52 53.3	+0.5
1.2nm,0.8s,baz=34,slow=10,SNR=11							
KURBB	**Kurchatov Arra**	**26.06**	**330**	P	P	11 53 36.6	-0.1
0.8nm,0.5s,baz=142,slow=9.1,SNR=6.5							
ZALV	**Zalesovo Beam**	**26.46**	**341**	P	P	11 53 39.8	-0.5
0.6nm,0.4s,baz=142,slow=8.5,SNR=3.8							
USRK	**Ussuriysk Arra**	**29.94**	**52**	LR	LR	12 06 26.8	
comp=Z,30nm,20.0s,baz=218,slow=37							
WRA	**Warramunga Arr**	**59.86**	**141**	P	P	11 58 09.3	-0.1
1.2nm,0.7s,baz=329,slow=7.5,SNR=22							
ASAR	**Alice Springs**	**62.67**	**144**	P	P	11 58 28.6	+0.2
0.3nm,0.9s,baz=325,slow=6.7,SNR=4.2							

IDC 30 12:43:34.0±4.9, 36.34N×70.96E, h200km±47km, mb3.1/6, mb1 3.1/10, mb1mx2.9/31, mbtmp2.9/10, MS3.1/1, Ms1 3.1/1, ms1mx2.2/19, 3C-1D, Error ellipse: s-maj=35.7km s-min=26.0km az=26.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.63**	**162**	P	Pn	12 44 29.6	+10
CEP				S	Sn	12 45 07.0	+12
CHCP	**Chirah Chowk**	**3.28**	**144**	P	Pn	12 44 36.7	+10
THW	**Thamme Wali**	**3.60**	**169**	P	Pn	12 44 40.6	+10
KK31	**Karatay Array**	**6.76**	**357**	⇑P	Pn	12 45 10.9	-0.1
3.4nm,0.7s,baz=176,slow=12,SNR=21							
KK31				⇑S	Sn	12 46 21.5	-6.6
5.7nm,0.4s,baz=171,slow=15,SNR=19							
AAK	**Ala-Archa**	**6.85**	**22**	P	Pn	12 45 13.0	+0.6
1.5nm,0.3s,baz=172,slow=7.1,SNR=5.7							
AAK				S	Sn	12 46 25.8	-4.7
0.8nm,0.3s,baz=316,slow=23,SNR=13							
TKM2	**Tokmak 2**	**7.48**	**27**	⇑P	Pn	12 45 21.1	+0.4
2.0nm,0.5s							
TKM2				⇓S	Sn	12 46 39.5	-6.0
5.3nm,0.7s							
MKAR	**Makanchi Array**	**13.44**	**36**	P	Pn	12 46 36.8	-0.1
0.1nm,0.3s,baz=228,slow=14,SNR=3.2							
KURBB	**Kurchatov Arra**	**15.28**	**19**	P	Pn	12 46 57.7	-1.7
0.0nm,0.3s,baz=206,slow=11,SNR=3.2							
AKTO	**Aktyubinsk**	**16.90**	**330**	P	Pn	12 47 18.4	-0.4
0.2nm,0.3s,baz=150,slow=13,SNR=3.4							
POO	**Poona**	**17.93**	**171**	*ex*	x	12 48 27.0	
ZALV	**Zalesovo Beam**	**20.07**	**24**	P	P	12 47 51.3	-0.5
0.7nm,0.4s,baz=219,slow=11,SNR=4.0							
SONM	**Songino Array**	**28.45**	**55**	LR	LR	13 01 12.3	
comp=Z,38nm,19.7s,baz=259,slow=37							
FINES	**FINESS Array B**	**37.59**	**326**	P	P	12 50 28.9	0.0
0.4nm,0.4s,baz=120,slow=9.8,SNR=4.9							
ARCES	**ARCESS Array B**	**41.27**	**338**	P	P	12 50 59.4	+0.1
0.6nm,0.6s,baz=107,slow=8.6,SNR=6.3							
NOA	**NORSAR Array B**	**44.48**	**323**	P	P	12 51 24.9	-0.2
0.5nm,0.5s,baz=98,slow=7.6,SNR=2.7							
TORD	**Torodi Ar. Bea**	**65.68**	**269**	P	P	12 53 57.0	-0.2
0.7nm,0.5s,baz=50,slow=6.1,SNR=11							
WRA	**Warramunga Arr**	**81.94**	**122**	P	P	12 55 31.9	+0.4
0.5nm,1.1s,baz=327,slow=4.8,SNR=2.9							

*AUST **30** 13:02:16.9±2.3, 1.94S×125.52E, h128km, Error ellipse: s-maj=2.6km s-min=1.4km az=346.0*
*ISCJB **30** 13:03:19.8±0.6, 6.41S±0.05×128.0E±0.1, h353km, mb3.5/7, Error ellipse: s-maj=15.7km s-min=6.9km az=168.3*
*IDC **30** 13:03:25.7±2.9, 6.61S×127.90E, h411km±37km, mb3.2/7, mb1 3.4/10, mb1mx3.2/21, mbtmp3.3/10, Error ellipse: s-maj=36.5km s-min=11.2km az=72.0*

ISC 30 13:03:20.9±0.8, 6.49S±0.07×128.0E±0.1, h353km, n21, σ1°38/22, mb3.6/7, Banda Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FAKI	**Fak Fak**	**5.50**	**50**	S	**Pn**	**13 04 44.5**	**-1.7**
baz=6.8,SNR=20							
MTN	**Manton Dam**	**7.01**	**154**	P	P	13 05 17.7	+13
baz=12,SNR=4.8							
KDU	**Kakadu**	**7.55**	**145**	P	**P**	**13 05 10.6**	**-0.4**
baz=13,SNR=26							
KNRA	**Kununurra**	**9.15**	**176**	P	**P**	**13 05 29.9**	**-0.9**
baz=14,SNR=24							
FITZ	**Fitzroy Crossi**	**11.78**	**191**	P	**Pn**	**13 06 00.7**	**+0.7**
0.4nm,0.3s,baz=16,slow=11,SNR=14							
FITZ				S	**S**	**13 08 08.7**	**-2.4**
0.2nm,0.3s,baz=293,slow=23,SNR=1.3							
FITZ	**Fitzroy Crossi**	**11.78**	**191**	P	**Pn**	**13 06 00.8**	**+0.9**
baz=16,SNR=8.8							
WRA	**Warramunga Arr**	**14.70**	**156**	P	**Pn**	**13 06 33.5**	**-0.8**
4.2nm,0.3s,baz=339,slow=11,SNR=326							
WRA				S	**S**	**13 09 09.8**	**-1.0**
0.4nm,0.3s,baz=337,slow=21,SNR=9.7							
COEN	**Coen**	**16.63**	**118**	P	**P**	**13 06 54.5**	**+1.4**
baz=21,SNR=123							
QIS	**Mount Isa**	**17.92**	**142**	P	**P**	**13 07 08.7**	**+1.7**
baz=23,SNR=7.4							
ASAR	**Alice Springs**	**17.98**	**162**	P	**P**	**13 07 09.1**	**+1.5**
3.0nm,0.3s,baz=344,slow=12,SNR=166							
ASAR				S	**S**	**13 10 13.5**	**-2.0**
0.3nm,0.3s,baz=341,slow=18,SNR=8.1							
MTSU	**Mount Surprise**	**19.64**	**128**	P	**P**	**13 07 26.2**	**+1.0**
baz=25,SNR=5.8							
CTA	**Charters Tower**	**22.25**	**129**	P	**P**	**13 07 50.5**	**+1.2**
1.5nm,0.5s,baz=294,slow=12,SNR=4.1							
STKA	**Stephens Creek**	**28.25**	**155**	P	**P**	**13 08 44.0**	**+1.1**
2.4nm,0.5s,baz=339,slow=9.3,SNR=12							
STKA	**Stephens Creek**	**28.25**	**155**	P	**P**	**13 08 44.4**	**+1.5**
baz=34,SNR=8.3							
CMSA	**Cobar Meteorol**	**29.89**	**149**	P	**P**	**13 08 59.2**	**+1.9**
baz=35,SNR=8.1							
KSRS	**Korea Array**	**43.72**	**360**	P	**P**	**13 10 52.9**	**+0.5**
1.3nm,0.5s,baz=179,slow=8.9,SNR=5.9							
NFK	**Norfolk Island**	**43.80**	**126**	P	P	13 10 44.5	-8.8
baz=49,SNR=3.8							
USRK	**Ussuriysk Arra**	**50.58**	**4**	P	**P**	**13 11 44.8**	**+0.1**
1.0nm,0.5s,baz=193,slow=7.7,SNR=5.1							
SONM	**Songino Array**	**57.37**	**343**	P	**P**	**13 12 33.4**	**0.0**
0.5nm,0.5s,baz=142,slow=7.5,SNR=4.0							
MKAR	**Makanchi Array**	**66.75**	**328**	P	**P**	**13 13 35.6**	**+0.4**
0.4nm,0.3s,baz=129,slow=8.1,SNR=8.1							
ZALV	**Zalesovo Beam**	**70.28**	**335**	P	**P**	**13 13 55.1**	**-1.5**
0.7nm,0.5s,baz=120,slow=8.5,SNR=3.8							

*JMA **30** 13:26:54.6±0.4, 23.78N×122.49E±0.03, h34km, M2.8*
*TAP **30** 13:26:54.2, 23.80N×122.48E, h35km±1km, ML3.5, D*

ISC 30 13:26:52.9±1.3, 23.74N±0.03×122.49E±0.03, h26km±14km, n46, σ0°91/72, 6C-4D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HWA	**Hwalien**	**0.85**	**287**	*e*P	**Pn**	**13 27 08.5**	**-0.7**
baz=270							
YOJ	**Yonaguni jima**	**0.86**	**33**	*i* P	**Pn**	**13 27 09.4**	**0.0**
baz=36							
YOJ				S	**Sn**	**13 27 19.9**	**-1.2**
baz=36							
YOJ	**Yonaguni jima**	**0.86**	**33**	P	**Pn**	**13 27 09.4**	**0.0**
YOJ				*e*S	**Sn**	**13 27 19.9**	**-1.2**
TWD	**Chiawan**	**0.89**	**293**	⇑*i*P	**Pn**	**13 27 09.3**	**-0.4**
baz=277							
TWD				*e*S	**Sn**	**13 27 20.2**	**-1.7**
baz=277							
ENA	**Nanau**	**0.97**	**315**	*e*P	**Pn**	**13 27 11.2**	**+0.3**
baz=312							
ENA				*e*S	**Sb**	**13 27 24.5**	**+0.9**
baz=312							
ESL	**Shilin**	**0.97**	**275**	*e*P	**Pn**	**13 27 10.1**	**-0.8**
baz=270							
TWC	**Suao**	**1.05**	**326**	*e*P	**Pn**	**13 27 12.3**	**+0.4**
baz=324							
TWC				*e*S	**Sn**	**13 27 25.5**	**-0.3**
baz=324							
EHY	**Hungye**	**1.10**	**258**	⇑P	**Pn**	**13 27 12.7**	**+0.1**
baz=253							
EHY				S	**Sn**	**13 27 26.4**	**-0.6**
baz=253							
TWF1	**Yuli**	**1.16**	**251**	⇓*e*P	**Pn**	**13 27 13.8**	**+0.3**
baz=246							
TWF1				S	**Sn**	**13 27 28.4**	**-0.2**
baz=246							
WHF	**Hehuan Shan**	**1.20**	**290**	⇑P	**Pn**	**13 27 14.2**	**-0.1**
baz=276							
WHF				*e*S	**Sn**	**13 27 29.0**	**-1.0**
baz=276							
CHKT	**Chengkung**	**1.22**	**239**	⇓*e*P	**Pn**	**13 27 14.1**	**-0.1**
baz=225							
CHKT				*e*S	**Sn**	**13 27 27.9**	**-1.9**
baz=225							
TWE	**Neicheng**	**1.24**	**323**	P	**Pn**	**13 27 15.4**	**+0.9**
baz=320							
TWE				*e*S	**Sb**	**13 27 31.9**	**+0.7**
baz=320							
HATJ	**Hateruma jima**	**1.24**	**75**	P	**Pn**	**13 27 15.0**	**+0.4**
HATJ				*e*S	**Sn**	**13 27 30.1**	**-0.4**
NNS	**Nan Shan**	**1.24**	**305**	*e*P	**Pn**	**13 27 15.2**	**+0.5**
baz=301							
NNS				*e*S	**Sn**	**13 27 30.3**	**-0.4**
baz=301							
IRIF	**Iriomote-Funau**	**1.28**	**62**	P	**Pn**	**13 27 16.0**	**+0.9**
IRIF				*e*S	**Sn**	**13 27 31.4**	**0.0**
TWT	**Tachien**	**1.31**	**293**	*e*P	**Pn**	**13 27 16.5**	**+0.8**
baz=289							
TWT				*e*S	**Sn**	**13 27 31.9**	**-0.5**
baz=289							
YUS	**Yu-Shan**	**1.44**	**260**	⇑P	**Pn**	**13 27 18.6**	**+0.9**
baz=256							
YUS				*e*S	**Sn**	**13 27 35.5**	**-0.5**
baz=256							
ELDTW	**Lidau**	**1.46**	**248**	⇓*e*P	**Pn**	**13 27 18.0**	**+0.3**
baz=244							
SMLT	**Sun Moon Lake**	**1.47**	**276**	*i* P	**Pn**	**13 27 18.8**	**+1.0**
baz=272							
SMLT				*e*S	**Sn**	**13 27 36.1**	**-0.2**
baz=272							
JKRS	**Kuro-shima**	**1.47**	**70**	P	**Pn**	**13 27 18.6**	**+0.8**
JKRS				*e*S	**Sn**	**13 27 37.1**	**+0.9**
NWF	**Wu-fen Shan**	**1.48**	**334**	*e*P	**Pb**	**13 27 19.8**	**0.0**
baz=333							
TWA	**Mucha**	**1.49**	**326**	*e*P	**Pb**	**13 27 19.5**	**-0.4**
baz=325							
TYC	**Yuchr**	**1.51**	**277**	⇑*e*P	**Pn**	**13 27 19.2**	**+0.9**
baz=273							
ALS	**Alishan**	**1.56**	**262**	⇑*i*P	**Pn**	**13 27 20.8**	**+1.5**
baz=257							
ALS				*e*S	**Sn**	**13 27 39.3**	**+0.4**
baz=257							
TWG	**Pinlang**	**1.59**	**235**	⇓*e*P	**Pn**	**13 27 19.8**	**+0.3**
baz=224							
NSTT	**Nanjuang**	**1.63**	**303**	P	**

MYLDM **Lahad Datu** **18.85 192** P Pn 13 31 18.8 +7.1

*IDC **30** 13:31:20.6±0.9, 45°.61N×27°.95W, h0km, mb3.8/12, mb1 3.9/13, mb1mx3.8/34, mbtmp3.8/13, ML3.8/1, MS3.4/28, Ms1 3.4/28, ms1mx3.3/61, Error ellipse: s-maj=29.1km s-min=19.6km az=173.0*
*ISCJB **30** 13:31:21.3±0.7, 45°.6N±0°.1×28°.0W±0°.1, h14km, mb3.8/13, MS3.4/28, Error ellipse: s-maj=21.5km s-min=13.9km az=166.2*
*NEIC **30** 13:31:22.5±0.6, 45°.64N×27°.92W, h10km, mb4.6/1, Error ellipse: s-maj=19.0km s-min=12.7km az=158.0*

ISC 30 13:31:22.4±0.8, **45°.5N**±0°.2×**28°.0W**±0°.1, **h14**km, **n58, σ0s68/34, mb3.9/13, MS3.4/28, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
EKA	**Eskdalemuir Ar**	**18.54**	**49**	P	**Pn**	**13 35 38.9**	**+0.5**
EKA	**Eskdalemuir Ar**	**18.54**	**49**	P	**Pn**	**13 35 38.9**	**+0.5**
	baz=251,slow=9.4,SNR=5.6						
ESDC	**Sonseca Array**	**18.58**	**100**	LR	LR	13 41 34.8	
	comp=Z,95nm,18.8s,baz=275,slow=33						
MDT	**Midelt**	**22.00**	**117**	LR	LR	13 42 33.8	
	comp=Z,96nm,21.2s,baz=304,slow=30						
SFJD	**Kangerlussuaq**	**24.68**	**339**	LR	LR	13 44 20.2	
	comp=Z,65nm,18.3s,baz=209,slow=32						
DAVOX	**Davos/Dischmat**	**26.10**	**73**	LR	LR	13 46 17.4	
	comp=Z,97nm,18.1s,baz=265,slow=34						
SCHQ	**Schefferville**	**26.29**	**305**	LR	LR	13 45 16.0	
	comp=Z,104nm,21.1s,baz=92,slow=32						
JMIC	**Jan Mayen**	**27.27**	**14**	LR	LR	13 45 35.3	
	comp=Z,29nm,18.3s,baz=251,slow=32						
NOA	**NORSAR Array B**	**27.59**	**42**	LR	LR	13 46 46.6	
	comp=Z,22nm,19.2s,baz=70,slow=34						
GERES	**GERESS Array B**	**28.27**	**68**	P	**P**	**13 37 16.1**	**+1.0**
GERES	**GERESS Array B**	**28.27**	**68**	P	**P**	**13 37 16.1**	**+1.0**
	0.6nm,0.4s,baz=302,slow=7.7,SNR=5.8						
GERES				LR	LR	13 47 47.6	
	comp=Z,79nm,18.4s,baz=249,slow=35						
HFS	**Hagfors**	**28.56**	**44**	LR	LR	13 46 34.8	
	comp=Z,36nm,20.4s,baz=301,slow=32						
KEST	**Kesra**	**29.73**	**96**	LR	LR	13 48 05.0	
	comp=Z,52nm,21.9s,baz=218,slow=34						
VRAC	**Vranov**	**30.07**	**66**	LR	LR	13 49 03.5	
	comp=Z,119nm,18.8s,baz=287,slow=35						
FINES	**FINESS Array B**	**34.74**	**43**	P	**P**	**13 38 12.6**	**+0.9**
FINES	**FINESS Array B**	**34.74**	**43**	P	**P**	**13 38 12.6**	**+0.9**
	3.0nm,1.1s,baz=165,slow=7.9,SNR=5.0						
FINES				LR	LR	13 50 50.1	
	comp=Z,38nm,21.4s,baz=330,slow=34						
SADO	**Sadowa**	**35.61**	**288**	LR	LR	13 52 04.0	
	comp=Z,83nm,19.8s,baz=4.2,slow=35						
ARCES	**ARCESS Array B**	**35.65**	**29**	LR	LR	13 52 32.7	
	comp=Z,27nm,18.3s,baz=284,slow=36						
MLR	**Muntele Rosu**	**37.19**	**70**	LR	LR	13 53 14.2	
	comp=Z,13nm,19.1s,baz=113,slow=35						
AKASG	**Malin Array Be**	**37.73**	**61**	P	**P**	**13 38 36.5**	**-0.9**
AKASG	**Malin Array Be**	**37.73**	**61**	P	**P**	**13 38 36.5**	**-0.9**
	0.2nm,0.3s,baz=282,slow=8.6,SNR=4.4						
TORD	**Torodi Ar. Bea**	**40.88**	**133**	P	**P**	**13 39 04.5**	**+0.5**
TORD	**Torodi Ar. Bea**	**40.88**	**133**	P	**P**	**13 39 04.5**	**+0.5**
	0.9nm,1.0s,baz=339,slow=7.5,SNR=3.9						
TORD				LR	LR	13 55 00.3	
	comp=Z,94nm,18.4s,baz=5.0,slow=35						
TKL	**Tuckaleechee C**	**42.74**	**277**	LR	LR	13 54 33.1	
	comp=Z,50nm,21.8s,baz=61,slow=33						
DBIC	**Dimbokro**	**43.56**	**146**	LR	LR	13 56 22.7	
	comp=Z,59nm,18.9s,baz=310,slow=34						
BRTR	**Keskin Array B**	**44.73**	**75**	P	**P**	**13 39 35.0**	**-0.3**
BRTR	**Keskin Array B**	**44.73**	**75**	P	**P**	**13 39 35.0**	**-0.3**
	2.1nm,0.9s,baz=287,slow=6.2,SNR=9.1						
YKA	**Yellowknife Ar**	**49.56**	**322**	LR	LR	13 58 26.4	
	comp=Z,4.0nm,20.4s,baz=85,slow=33						
INK	**Inuvik**	**53.87**	**334**	LR	LR	14 00 58.1	
	comp=Z,35nm,18.4s,baz=295,slow=33						
AKTO	**Aktyubinsk**	**54.70**	**51**	LR	LR	14 03 03.0	
	comp=Z,24nm,19.9s,baz=74,slow=35						
PDAR	**Pinedale Array**	**56.18**	**299**	LR	LR	14 03 03.6	
	comp=Z,93nm,21.1s,baz=228,slow=34						
NEW	**Newport**	**57.61**	**308**	LR	LR	14 02 34.9	
	comp=Z,50nm,19.3s,baz=36,slow=33						
DLBC	**Dease Lake**	**58.19**	**323**	LR	LR	14 05 40.5	
	comp=Z,73nm,18.4s,baz=123,slow=36						
ANMO	**Albuquerque**	**58.63**	**289**	LR	LR	14 06 09.9	
	comp=Z,75nm,20.2s,baz=21,slow=36						
BVAR	**Borovoye Array**	**59.69**	**44**	P	**P**	**13 41 25.9**	**-0.2**
BVAR	**Borovoye Array**	**59.69**	**44**	P	**P**	**13 41 25.9**	**-0.2**
	1.6nm,0.8s,baz=289,slow=6.0,SNR=9.0						
TXAR	**Lajitas Array**	**60.12**	**283**	P	**P**	**13 41 30.4**	**+1.0**
TXAR	**Lajitas Array**	**60.12**	**283**	P	**P**	**13 41 30.4**	**+1.0**
	0.5nm,0.8s,baz=74,slow=5.5,SNR=3.9						
TXAR				LR	LR	14 07 21.0	
	comp=Z,110nm,19.2s,baz=175,slow=36						
ILAR	**Eielson Array**	**60.24**	**334**	P	**P**	**13 41 29.7**	**+0.1**
ILAR	**Eielson Array**	**60.24**	**334**	P	**P**	**13 41 29.7**	**+0.1**
	0.3nm,0.8s,baz=43,slow=6.1,SNR=5.0						
BBB	**Bella Bella**	**61.07**	**316**	LR	LR	14 05 16.8	
	comp=Z,49nm,20.2s,baz=66,slow=33						
NVAR	**Mina Array Bea**	**64.11**	**299**	P	**P**	**13 41 55.9**	**-0.3**
NVAR	**Mina Array Bea**	**64.11**	**299**	P	**P**	**13 41 55.9**	**-0.3**
	0.2nm,0.6s,baz=35,slow=9.9,SNR=2.7						
YBH	**Yreka Blue Hor**	**64.67**	**304**	LR	LR	14 06 29.7	
	comp=Z,45nm,20.5s,baz=13,slow=33						
KURK	**Kurchatov**	**65.11**	**42**	P	**P**	**13 42 01.9**	**-0.4**
KURBB	**Kurchatov Arra**	**65.13**	**42**	P	**P**	**13 42 01.9**	**-0.5**
	1.8nm,0.8s,baz=318,slow=6.9,SNR=13						
AAK	**Ala-Archa**	**68.44**	**51**	LR	LR	14 16 21.4	
	comp=Z,38nm,18.8s,baz=110,slow=40						
MKAR	**Makanchi Array**	**69.57**	**43**	P	**P**	**13 42 29.6**	**-1.0**
MKAR	**Makanchi Array**	**69.57**	**43**	P	**P**	**13 42 29.6**	**-1.0**
	0.8nm,0.7s,baz=328,slow=4.3,SNR=5.4						
LPAZ	**La Paz**	**71.44**	**221**	*e*P	P	13 42 46.5	+3.5
	3.8nm,0.8s						
SONM	**Songino Array**	**78.83**	**29**	P	**P**	**13 43 24.4**	**-0.4**
SONM	**Songino Array**	**78.83**	**29**	P	**P**	**13 43 24.4**	**-0.4**
	0.5nm,0.4s,baz=299,slow=6.3,SNR=3.8						
VNDA	**Vanda**	**147.62**	**184**	PKPbc	**PKPab**	**13 51 06.7**	**-0.3**
VNDA	**Vanda**	**147.62**	**184**	PKPbc	**PKPab**	**13 51 06.7**	**-0.3**
	1.7nm,1.0s,baz=270,slow=4.2,SNR=6.7						
WRA	**Warramunga Arr**	**150.63**	**36**	PKPbc	**PKPbc**	**13 51 13.1**	**-1.0**
WRA	**Warramunga Arr**	**150.63**	**36**	PKPbc	**PKPbc**	**13 51 13.1**	**-1.0**
	1.3nm,0.8s,baz=326,slow=2.4,SNR=11						
ASAR	**Alice Springs**	**153.73**	**40**	PKPbc	**PKPbc**	**13 51 20.4**	**-0.6**
ASAR				PKPab	**PKPab**	**13 51 33.7**	**-0.1**
ASAR	**Alice Springs**	**153.73**	**40**	PKPbc	**PKPbc**	**13 51 20.4**	**-0.6**
	0.6nm,0.7s,baz=329,slow=1.4,SNR=5.5						
ASAR				PKPab	**PKPab**	**13 51 33.7**	**-0.1**
	1.2nm,0.8s,baz=333,slow=4.6,SNR=8.4						

*IDC **30** 13:36:21.2±4.2, 36°.29N×70°.44E, h178km±37km, mb3.3/9, mb1 3.3/14, mb1mx3.1/33, mbtmp3.2/14, Error ellipse: s-maj=29.4km s-min=17.0km az=34.0*
*ISCJB **30** 13:36:23.6±0.5, 36°.51N±0°.04×70°.45E±0°.08, h204km, mb3.3/8, Error ellipse: s-maj=9.5km s-min=4.0km az=156.3*

ISC 30 13:36:24.1±0.7, **36°.50N**±0°.06×**70°.50E**±0°.09, **h204**km, **n34, σ1s72/41, mb3.3/8, 3C-2D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CEP	**Cherat**	**2.91**	**156**	⇑P	**Pn**	**13 37 14.7**	**+1.6**
CEP				S	**S**	**13 37 52.0**	**+1.3**
CHCP	**Chirah Chowk**	**3.63**	**141**	P	**Pn**	**13 37 23.8**	**+2.2**
THW	**Thamme Wali**	**3.84**	**164**	⇑P	**Pn**	**13 37 25.1**	**+1.0**
SARP	**Sargodha**	**4.91**	**158**	⇑P	**Pn**	**13 37 38.0**	**+0.5**
DLH	**Dalhousie**	**6.00**	**130**	*e*4		13 37 58.0	
DLH				*e*S	**S**	**13 39 00.0**	**-0.5**
DHRM	**DHARAMSHALA**	**6.40**	**130**	*e*PKP	**Pn**	**13 37 57.7**	**+0.8**
DHRM				*e*S	**S**	**13 39 08.7**	**-1.4**
DHRM				AML	AML	13 39 10.7	
	comp=E,368nm,0.7s						
DHRM				AML	AML	13 39 11.9	
	comp=N,198nm,0.4s						
KK31	**Karatay Array**	**6.60**	**0**	⇓P	**Pn**	**13 37 58.9**	**-0.2**
	comp=N,2.3nm,0.2s,baz=187,slow=12,SNR=38						
KK31				⇓S	**S**	**13 39 08.5**	**-5.8**
	comp=N,14nm,0.8s,baz=192,slow=24,SNR=6.2						
AAK	**Ala-Archa**	**6.86**	**26**	P	**Pn**	**13 38 03.7**	**+1.1**
	comp=N,2.0nm,0.3s,baz=163,slow=5.6,SNR=6.8						
AAK				S	**S**	**13 39 19.3**	**-1.3**
	comp=N,1.9nm,0.3s,baz=350,slow=21,SNR=17						
SMLA	**Simla**	**7.71**	**132**	*e*PKP	**Pn**	**13 38 13.5**	**-0.1**
SMLA				*e*S	**S**	**13 39 37.3**	**-3.4**
SMLA				AML	AML	13 39 40.1	
	comp=N,100nm,0.3s						
SMLA				AML	AML	13 39 42.6	
	comp=E,92nm,0.6s						
NDI	**New Delhi**	**9.63**	**142**	*e*PKP	**Pn**	**13 38 36.5**	**-2.1**
NDI				*e*S	S	13 40 17.0	-10
MKAR	**Makanchi Array**	**13.53**	**37**	P	**P**	**13 39 29.8**	**-0.5**
	comp=E,0.4nm,0.3s,baz=206,slow=8.1,SNR=16						
DANN	**Dangsing**	**13.83**	**122**	*e*P	**Pn**	**13 39 32.6**	**+0.5**
	comp=E,13nm,0.4s						
KOLN	**Koldanda**	**14.10**	**124**	*e*P	**Pn**	**13 39 35.7**	**+0.4**
	comp=E,8.9nm,0.3s						
BHPL	**Bhopal**	**14.51**	**154**	*e*PKP	P	**13 39 41.3**	**-0.1**
BHPL				*e*S	**S**	**13 42 16.6**	**-4.7**
DMN	**Daman**	**15.22**	**121**	*e*P	P	**13 39 50.4**	**+1.0**
	comp=E,13nm,0.4s						
KKN	**Kakani**	**15.22**	**121**	*e*P	P	**13 39 50.1**	**+0.6**
	comp=E,26nm,0.5s						
KURBB	**Kurchatov Arra**	**15.26**	**20**	P	P	**13 39 48.9**	**-0.5**
	comp=E,0.1nm,0.3s,baz=210,slow=10,SNR=9.0						
PKIN	**Phulchoki**	**15.44**	**121**	*e*P	P	**13 39 53.1**	**+1.2**
	comp=E,21nm,0.3s						
PKI	**Pulchoki**	**15.45**	**121**	*e*P	P	**13 39 53.2**	**+1.1**
	comp=E,38nm,0.6s						
GUN	**Gumba**	**15.57**	**119**	*e*P	P	**13 39 54.8**	**+1.4**
	comp=E,29nm,0.5s						
JIRN	**Jiri**	**15.94**	**119**	*e*P	**Pn**	**13 39 59.2**	**+1.3**
	comp=E,58nm,0.6s						
BVAR	**Borovoye Array**	**16.52**	**360**	P	**Pn**	**13 40 05.4**	**+1.1**
	comp=E,0.3nm,0.3s,baz=201,slow=12,SNR=5.9						
AKTO	**Aktyubinsk**	**16.58**	**331**	P	**P**	**13 40 04.2**	**+0.2**
	comp=E,0.6nm,0.3s,baz=166,slow=7.8,SNR=7.1						
AKTO				S	**S**	**13 43 06.3**	**-0.5**
	comp=E,0.1nm,0.3s,baz=304,slow=20,SNR=1.5						
RAMN	**Ramite**	**16.66**	**120**	*e*P	**Pn**	**13 40 07.5**	**+1.0**
	comp=E,25nm,0.5s						
TAPN	**Taplejung**	**17.20**	**117**	*e*P	**Pn**	**13 40 15.0**	**+2.1**
	comp=E,25nm,0.7s						
ZALV	**Zalesovo Beam**	**20.09**	**25**	P	**P**	**13 40 43.3**	**+1.5**
	comp=E,3.3nm,0.4s,baz=214,slow=10,SNR=16						
FINES	**FINESS Array B**	**37.26**	**326**	P	**P**	**13 43 16.8**	**+1.0**
	comp=E,1.0nm,0.3s,baz=71,slow=4.0,SNR=11						
ARCES	**ARCESS Array B**	**40.99**	**338**	P	**P**	**13 43 48.1**	**+1.5**
	comp=E,2.2nm,0.7s,baz=113,slow=8.7,SNR=15						
HFS	**Hagfors**	**42.82**	**322**	P	**P**	**13 44 02.5**	**+1.0**
	comp=E,0.5nm,0.4s,baz=141,slow=9.3,SNR=3.2						
NOA	**NORSAR Array B**	**44.14**	**323**	P	**P**	**13 44 12.7**	**+0.6**
	comp=E,0.8nm,0.8s,baz=90,slow=8.0,SNR=3.2						
TORD	**Torodi Ar. Bea**	**65.31**	**268**	P	**P**	**13 46 43.3**	**-1.3**
	comp=E,0.2nm,0.4s,baz=48,slow=5.5,SNR=7.5						
ILAR	**Eielson Array**	**74.89**	**16**	P	**P**	**13 47 42.7**	**+0.8**
	comp=E,0.3nm,0.9s,baz=323,slow=5.9,SNR=3.7						
WRA	**Warramunga Arr**	**82.33**	**122**	P	**P**	**13 48 22.8**	**-0.4**
	comp=E,0.4nm,0.8s,baz=323,slow=5.1,SNR=6.7						
ASAR	**Alice Springs**	**84.59**	**125**	P	**P**	**13 48 34.0**	**-0.6**
	comp=E,0.3nm,0.6s,baz=326,slow=6.3,SNR=6.1						

*NSSP **30** 13:36:33.5, 41°.13N×43°.63E, h19km, Ms2.9*
*ISCJB **30** 13:36:34.6±0.5, 41°.26N±0°.02×43°.82E±0°.03, h12km±3km, Error ellipse: s-maj=3.9km s-min=3.1km az=33.0*
*TIF **30** 13:36:34.6, 41°.24N×43°.88E, h22km±2km*
*CSEM **30** 13:36:34.2±0.2, 41°.26N×43°.82E, h10km, ML2.9, Error ellipse: s-maj=4.7km s-min=3.8km az=30.0*
*DDA **30** 13:36:35.2, 41°.04N×43°.65E, h7km, MD3.1*

ISC 30 13:36:34.2±0.9, **41°.25N**±0°.02×**43°.84E**±0°.02, **h15**km±8km, **n39, σ1s02/75, 13C-14D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AKH	**Akhalkalaki**	**0.31**	**301**	P	**Pg**	**13 36 40.3**	**-0.4**
AKH				S	**Sg**	**13 36 45.4**	**+0.2**
KAMZ	**Kamo**	**0.43**	**169**	⇓*i*P	**Pb**	**13 36 44.0**	**+0.3**
KAMZ				⇑*i*S	**Sb**	**13 36 50.4**	**+0.3**
KAMZ	**Kamo**	**0.43**	**169**	⇓P	**Pb**	**13 36 44.0**	**+0.3**
KAMZ				S	**Sb**	**13 36 50.4**	**+0.3**
GMRZ	**Gyumri**	**0.44**	**181**	*e*P	**Pb**	**13 36 44.0**	**+0.2**
GMRZ				⇑S	**Sb**	**13 36 51.0**	**+0.7**
GYMZ	**Gyumri**	**0.44**	**181**	⇓*i*P	**Pb**	**13 36 44.1**	**+0.2**
GYMZ				⇓*i*S	**Sb**	**13 36 51.2**	**+0.9**
GYMZ	**Gyumri**	**0.44**	**181**	⇓P	**Pb**	**13 36 44.1**	**+0.2**
GYMZ				S	**Sb**	**13 36 51.2**	**+0.9**
STE	**Stepanavan**	**0.47**	**122**	⇓P	**Pg**	**13 36 42.4**	**-1.3**
STE				S	**Sb**	**13 36 51.0**	**-0.2**
STEZ	**Stepenevan**	**0.49**	**121**	⇓*i*P	**Pg**	**13 36 42.4**	**-1.6**
STEZ				⇓S	**Sg**	**13 36 51.0**	**+0.4**
HARI	**Harich**	**0.66**	**169**	⇓*i*P	**Pg**	**13 36 47.5**	**+0.4**
HARI				⇑*i*S	**Sg**	**13 36 56.4**	**+0.6**
HARI	**Harich**	**0.66**	**169**	⇓P	**Pg**	**13 36 47.5**	**+0.4**
HARI				S	**Sg**	**13 36 56.4**	**+0.6**
HNAZ	**Hnaberd**	**0.66**	**160**	⇑*i*P	**Pb**	**13 36 47.9**	**+0.3**
HNAZ				⇑*i*S	**Sb**	**13 36 57.6**	**+1.0**
HNAZ	**Hnaberd**	**0.66**	**160**	⇑P	**Pb**	**13 36 47.9**	**+0.3**
HNAZ				S	**Sb**	**13 36 57.7**	**+1.1**
LERZ	**Lernakert**	**0.69**	**173**	⇑*i*P	**Pg**	**13 36 48.1**	**+0.4**
LERZ				⇑*i*S	**Sg**	**13 36 57.3**	**+0.4**
LERZ	**Lernakert**	**0.69**	**173**	⇑P	**Pg**	**13 36 48.1**	**+0.4**
LERZ				S	**Sg**	**13 36 57.3**	**+0.4**
NARZ	**Nor Artik**	**0.79**	**187**	⇓*i*P	**Pb**	**13 36 50.1**	**+0.3**
NARZ				⇑*i*S	**Sb**	**13 37 00.7**	**+0.3**
NARZ	**Nor Artik**	**0.79**	**187**	⇓P	**Pb**	**13 36 50.1**	**+0.3**
NARZ				S	**Sb**	**13 37 00.7**	**+0.3**
TBLG	**Delisi**	**0.83**	**54**	P	**Pg**	**13 36 50.2**	**-0.1**
TBLG				S	**Sn**	**13 37 02.4**	**-0.9**
TBLG	**Delisi**	**0.83**	**54**	P	**Pg**	**13 36 50.2**	**-0.1**
TBLG				S	**Sn**	**13 37 02.4**	**-0.9**
DIGO	**Kars**	**0.91**	**203**	*i* P	**Pb**	**13 36 50.1**	**-1.8**
DIGO				*i* S	**Sb**	**13 37 02.1**	**-1.8**
DIGO	**Kars**	**0.91**	**203**	*i* P	**Pb**	**13 36 50.1**	**-1.8**
DIGO				*i* S	**Sb**	**13 37 02.1**	**-1.8**
DGGRG	**David-gareji**	**1.17**	**80**	P	**Pb**	**13 36 56.3**	**+0.1**
DGRG				S	**Sn**	**13 37 11.6**	**-0.3**
ERE	**Yerevan**	**1.18**	**156**	⇓*i*P	Pn	13 36 52.5	-3.8
ERE				⇓*i*S	**Sb**	**13 37 06.5**	**-5.1**
GNI	**Garni**	**1.30**	**148**	⇑*i*P	**Pn**	**13 36 58.1**	**+0.1**
GNI				⇑*i*S	**Sg**	**13 37 16.4**	**+0.3**
GNI	**Garni**	**1.30**	**148**	⇑P	**Pn**	**13 36 58.1**	**+0.1**
GNI				S	**Sg**	**13 37 16.4**	**+0.3**
ONI	**Oni**	**1.37**	**348**	P	**Pg**	**13 37 00.2**	**-0.4**
ONI				S	**Sg**	**13 37 20.2**	**+1.9**
ARTV	**Artvin**	**1.44**	**268**	*i* P	**Pn**	**13 37 00.2**	**+0.1**
ARTV				*i* S	**Sn**	**13 37 19.2**	**+0.3**
ARTV	**Artvin**	**1.44**	**268**	*i* P	**Pn**	**13 37 00.2**	**+0.1**
ARTV				*i* S	**Sn**	**13 37 19.2**	**+0.3**
DAGI	**Agillar**	**1.47**	**264**	*i* P	**Pb**	**13 37 00.8**	**-0.5**
DAGI				*i* S	**Sn**	**13 37 18.4**	**-0.8**
DDEM	**Demirkent**	**1.62**	**258**	*e*P	**Pn**	**13 37 02.4**	**0.0**
DDEM				*e*S	**Sn**	**13 37 23.0**	**-0.1**
DDEM	**Demirkent**	**1.62**	**258**	*e*P	**Pn**	**13 37 02.4**	**0.0**
DDEM				*e*S	**Sn**	**13 37 23.0**	**-0.1**
DBAD	**Bademkaya**	**1.64**	**262**	*i* P	**Pb**	**13 37 03.7**	**-0.5**
DBAD				*i* S	**Sb**	**13 37 24.6**	**-0.1**
DBAD	**Bademkaya**	**1.64**	**262**	*i* P	**Pb**	**13 37 03.7**	**-0.5**
DBAD				*i* S	**Sb**	**13 37 24.6**	**-0.1**
DBOC	**Borcka**	**1.64**	**274**	*e*P	**Pb**	**13 37 03.7**	**-0.5**
DBOC				*e*S	**Sb**	**13 37 25.3**	**+0.6**
DBOC	**Borcka**	**1.64**	**274**	*e*P	**Pb**	**13 37 03.7**	**-0.5**
DBOC				*e*S	**Sb**	**13 37 25.3**	**+0.6**
VADZ	**Vardenis**	**1.81**	**126**	*e*P	**Pb**	**13 37 07.0**	**-0.1**
VADZ				*e*S	**Sg**	**13 37 36.0**	**+3.6**
VADZ	**Vardenis**	**1.81**	**126**	P	**Pb**	**13 37 07.0**	**-0.1**
CHVG	**Ch'k'valeri**	**1.96**	**319**	P	**Sg**	**13 37 38.9**	**+1.5**
TUTA	**Tutak**	**2.01**	**203**	*e*P	**Pn**	**13 37 07.7**	**-0.2**
TUTA				*e*S	**Sn**	**13 37 33.2**	**+0.4**
TUTA	**Tutak**	**2.01**	**203**	*e*P	**Pn**	**13 37 07.7**	**-0.2**
TUTA				*e*S	**Sn**	**13 37 33.2**	**+0.4**

*IDC **30** 13:45:18.0±2.2, 45°.74N×28°.26W, h0km, mb3.6/4, mb1 3.6/4, mb1mx3.4/32, mbtmp3.6/4, MS3.3/15, Ms1 3.3/15, ms1mx2.9/56, Error ellipse: s-maj=67.0km s-min=43.6km az=75.0*

ISC 30 13:45:19.5±2.7, **45°.7N**±0°.3×**28°.3W**±0°.5, **h10**km, **n20, σ0s19/6, mb3.6/4, MS3.2/14, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**18.81**	**100**	LR	LR	13 55 13.6	
	comp=Z,48nm,20.6s,baz=20,slow=32						
MDT	**Midelt**	**22.28**	**117**	LR	LR	13 57 45.4	
	comp=Z,36nm,20.8s,baz=96,slow=34						
SFJD	**Kangerlussuaq**	**24.38**	**339**	LR	LR	13 58 08.5	
	comp=Z,64nm,19.7s,baz=329,slow=32						
SCHQ	**Schefferville**	**25.99**	**305**	LR	LR	13 59 15.0	
	comp=Z,68nm,20.2s,baz=99,slow=32						
DAVOX	**Davos/Dischmat**	**26.22**	**74**	LR	LR	13 59 34.6	
	comp=Z,45nm,20.0s,baz=266,slow=33						
NOA	**NORSAR Array B**	**27.55**	**42**	LR	LR	14 00 23.3	
	comp=Z,16nm,18.7s,baz=90,slow=33						
GERES	**GERESS Array B**	**28.36**	**68**	LR	LR	14 01 55.2	
	comp=Z,38nm,18.9s,baz=275,slow=35						
KEST	**Kesra**	**29.94**	**96**	LR	LR	14 01 29.8	
	comp=Z,22nm,18.9s,baz=344,slow=32						
VRAC	**Vranov**	**30.16**	**67**	LR	LR	14 02 52.3	
	comp=Z,51nm,19.8s,baz=102,slow=35						
SADO	**Sadowa**	**35.35**	**287**	LR	LR	14 06 01.8	
	comp=Z,56nm,19.4s,baz=109,slow=35						
TORD	**Torodi Ar. Bea**	**41.19**	**132**	P	**P**	**13 53 04.3**	**0.0**
	0.8nm,0.9s,baz=333,slow=8.8,SNR=3.3						
TORD				LR	LR	14 08 37.6	
	comp=Z,77nm,18.5s,baz=105,slow=34						
ULM	**Lac du Bonnet**	**44.08**	**301**	LR	LR	14 09 30.4	
	comp=Z,54nm,20.2s,baz=18,slow=33						
BRTR	**Keskin Array B**	**44.86**	**75**	P	**P**	**13 53 33.9**	**-0.1**
	0.9nm,0.9s,baz=285,slow=5.7,SNR=3.8						
TXAR	**Lajitas Array**	**59.88**	**282**	LR	LR	14 20 26.2	
	comp=Z,54nm,20.5s,baz=140,slow=35						
NVAR	**Mina Array Bea**	**63.82**	**299**	LR	LR	14 20 21.4	
	comp=Z,89nm,20.5s,baz=308,slow=33						
KURBB	**Kurchatov Arra**	**65.08**	**42**	P	**P**	**13 56 00.0**	**+0.2**
	0.8nm,0.8s,baz=315,slow=7.0,SNR=7.0						
MKAR	**Makanchi Array**	**69.53**	**43**	P	**P**	**13 56 28.3**	**0.0**
	0.3nm,0.7s,baz=335,slow=6.4,SNR=2.9						
CPUP	**Villa Florida**	**76.44**	**207**	LR	LR	14 26 29.2	
	comp=Z,64nm,18.1s,baz=294,slow=32						
WRA	**Warramunga Arr**	**150.55**	**35**	PKPbc	**PKPbc**	**14 05 11.4**	**-0.3**
	1.0nm,1.1s,baz=318,slow=2.2,SNR=3.9						
ASAR	**Alice Springs**	**153.66**	**39**	PKPbc	**PKPbc**	**14 05 18.8**	**+0.1**
	0.6nm,0.8s,baz=346,slow=1.9,SNR=3.7						

IDC 30 14:17:06.3±1.6, **15°.19N**×**52°.43E**, **h0**km, **mb3.7/9, mb1 3.9/9, mb1mx3.6/28, mbtmp3.7/9, MS3.2/6, Ms1 3.2/6, ms1mx2.9/41, Error ellipse: s-maj=42.1km s-min=25.2km az=46.0, Eastern Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
ATD	**Arta Tunnel**	**10.01**	**250**	LR	LR	14 22 28.1	
	comp=Z,140nm,20.6s,baz=53,slow=32						
KMBO	**Kilima Mbogo**	**22.10**	**224**	LR	LR	14 29 50.8	
	comp=Z,98nm,18.8s,baz=86,slow=35						
GNI	**Garni**	**25.76**	**346**	LR	LR	14 35 16.7	
	comp=Z,50nm,20.5s,baz=238,slow=42						
KBZ	**Khabaz**	**29.59**	**346**	P	P	14 23 14.4	+1.4
	2.8nm,1.1s,baz=200,slow=4.8,SNR=3.9						
KBZ				LR	LR	14 36 57.7	
	comp=Z,47nm,20.5s,baz=284,slow=40						
AKTO	**Aktyubinsk**	**35.44**	**6**	P	P	14 24 05.3	+1.1
	0.8nm,0.6s,baz=196,slow=8.8,SNR=4.4						
MKAR	**Makanchi Array**	**40.14**	**32**	P	P	14 24 43.6	-0.4
	0.7nm,0.6s,baz=214,slow=7.1,SNR=7.5						
MKAR				LR	LR	14 41 51.1	
	comp=Z,27nm,21.7s

comp=E,15µm,0.4s
CMCH Combarbala 2.27 354 *e*P **Pn 14 17 51.5 +0.1**
CMCH Combarbala 2.27 354 *e*P **Pn 14 17 51.5 +0.1**
CFAA Coronel Fontan 2.77 50 P **Pn 14 17 59.4 +1.2**
CFAA S **Sn 14 18 27.4 -3.3**
CFAA Coronel Fontan 2.77 50 P **Pn 14 17 59.4 +1.2**
comp=E,7.7nm,0.3s,baz=223,slow=12,SNR=487
CFAA S **Sn 14 18 27.4 -3.3**
comp=E,5.5nm,0.3s,baz=223,slow=13,SNR=6.9
LCO Las Campanas 4.41 0 *e*P **Pn 14 18 19.9 -0.7**
PLCA Paso Flores 7.29 179 *e*P Pn 14 18 52.1 -7.5
PLCA Paso Flores 7.29 179 P Pn 14 18 52.6 -7.0
comp=E,0.7nm,0.3s,baz=282,slow=14,SNR=8.2
PLCA LR LR 14 22 08.9
comp=E,48nm,19.3s,baz=350,slow=40
TRQA Tornquist 8.46 126 *e*P **Pn 14 19 15.3 -0.4**
LVC Limon Verde 10.89 9 *e*P Pn 14 19 43.8 -5.3
LVC S Sn 14 22 02.1 +13
LVC Limon Verde 10.89 9 P Pn 14 19 44.0 -5.1
comp=E,0.7nm,0.3s,baz=186,slow=9.1,SNR=5.3
LVC S Sn 14 22 02.1 +13
comp=E,1.4nm,0.3s,baz=254,slow=8.8,SNR=2.4
LVC LR LR 14 23 50.4
comp=E,132nm,20.6s,baz=229,slow=36
CPUP Villa Florida 13.59 62 P Pn 14 20 20.7 -4.4
CPUP Villa Florida 13.59 62 P Pn 14 20 20.7 -4.4
comp=E,0.5nm,0.3s,baz=249,slow=10,SNR=3.5
LPAZ La Paz 17.23 8 *e*P **P 14 21 12.3 +0.1**
comp=E,12nm,0.6s
LPAZ La Paz 17.23 8 P **P 14 21 12.6 +0.4**
comp=E,1.0nm,0.3s,baz=175,slow=9.6,SNR=37
SIV San Ignacio 19.43 29 P **P 14 21 35.4 -0.3**
SIV San Ignacio 19.43 29 P **P 14 21 35.4 -0.3**
comp=E,4.9nm,0.3s,baz=210,slow=8.7,SNR=162
SIV LR LR 14 29 36.8
comp=E,54nm,18.3s,slow=38
USHA Ushuaia 21.46 176 P **P 14 21 58.1 +0.9**
USHA Ushuaia 21.46 176 P **P 14 21 58.1 +0.9**
comp=E,13nm,0.6s,baz=352,slow=7.0,SNR=14
BDFB Brasilia 27.10 55 P **P 14 22 50.5 -0.6**
BDFB S S 14 27 16.4 -7.2
BDFB Brasilia 27.10 55 P **P 14 22 50.5 -0.6**
comp=E,11nm,0.8s,baz=217,slow=5.5,SNR=9.8
BDFB S S 14 27 16.4 -7.2
comp=E,7.9nm,0.3s,baz=26,slow=5.7,SNR=9.7
PMSA Palmer Station 31.64 175 P P 14 23 36.1 +5.4
PMSA S S 14 28 24.6 -9.0
PMSA Palmer Station 31.64 175 P P 14 23 36.1 +5.4
comp=E,8.6nm,0.6s,baz=344,slow=20,SNR=6.7
PMSA S S 14 28 24.6 -9.0
comp=E,8.5nm,0.6s,baz=302,slow=9.0,SNR=4.2
SNAA Sanae 51.69 158 *e*P **P 14 26 14.2 +0.2**
comp=E,4.3nm,0.7s
SNAA Sanae 51.69 158 P **P 14 26 14.3 +0.2**
comp=E,1.3nm,0.7s,baz=294,slow=6.1,SNR=35
QSPA South Pole Qui 56.80 180 P **P 14 26 52.2 +0.9**
QSPA pP **pP 14 27 12.8 +0.8**
QSPA South Pole Qui 56.80 180 P **P 14 26 52.2 +0.9**
comp=E,3.1nm,0.9s,baz=154,slow=4.5,SNR=13
QSPA pP **pP 14 27 12.8 +0.8**
comp=E,2.0nm,0.6s,baz=184,slow=1.9,SNR=4.1
TXAR Lajitas Array 69.79 330 P **P 14 28 18.4 +1.0**
TXAR pP **PcP 14 28 39.0 -0.6**
TXAR sP **sP 14 28 47.9 +0.1**
TXAR Lajitas Array 69.79 330 P **P 14 28 18.4 +1.0**
comp=E,0.3nm,0.6s,baz=156,slow=6.9,SNR=2.8
TXAR pP **PcP 14 28 39.0 -0.6**
comp=E,0.4nm,0.5s,baz=157,slow=10,SNR=3.3
TXAR sP **sP 14 28 47.9 +0.1**
comp=E,0.7nm,0.6s,baz=154,slow=8.2,SNR=4.9
DBIC Dimbokro 73.94 71 *e*P **P 14 28 42.5 0.0**
comp=E,2.7nm,0.6s
DBIC Dimbokro 73.94 71 P **P 14 28 43.0 +0.4**
comp=E,3.6nm,0.9s,baz=141,slow=6.5,SNR=3.0
TOA0 Torodi Ar. Sit 82.97 69 *e*P **P 14 29 32.3 +0.1**
TORD Torodi Ar. Bea 82.97 69 P **P 14 29 32.3 +0.1**
TORD pP **pP 14 29 53.9 -0.3**
TORD sP **sP 14 30 00.6 -2.5**
TORD Torodi Ar. Bea 82.97 69 P **P 14 29 32.3 +0.1**
comp=E,2.9nm,0.8s,baz=282,slow=4.6,SNR=14
TORD pP **pP 14 29 53.9 -0.3**
comp=E,0.7nm,0.7s,baz=258,slow=3.6,SNR=2.3
TORD sP **sP 14 30 00.6 -2.5**
comp=E,1.0nm,0.7s,baz=263,slow=4.3,SNR=3.7
PDAR Pinedale Array 83.77 332 P **P 14 29 35.8 -0.2**
PDAR Pinedale Array 83.77 332 P **P 14 29 35.8 -0.2**
comp=E,0.2nm,0.4s,baz=172,slow=2.7,SNR=2.7
NVAR Mina Array Bea 84.06 324 P **P 14 29 38.9 +1.4**
NVAR pP **pP 14 30 01.6 +2.0**
NVAR sP **sP 14 30 08.2 -0.2**
NVAR Mina Array Bea 84.06 324 P **P 14 29 38.9 +1.4**
comp=E,0.4nm,0.8s,baz=133,slow=6.1,SNR=4.1
NVAR pP **pP 14 30 01.6 +2.0**
comp=E,0.5nm,0.7s,baz=151,slow=5.8,SNR=3.7
NVAR sP **sP 14 30 08.2 -0.2**
comp=E,0.3nm,0.4s,baz=157,slow=7.1,SNR=3.3
WRA Warramunga Arr 121.79 208 PKP **PKPdf 14 36 00.1 -0.8**
WRA pPKP **pPKPdf 14 36 22.3 -1.7**
WRA Warramunga Arr 121.79 208 PKP **PKPdf 14 36 00.2 -0.8**
comp=E,0.2nm,0.7s,baz=158,slow=1.8,SNR=3.8
WRA pPKP **pPKPdf 14 36 22.3 -1.7**
comp=E,0.3nm,0.6s,baz=172,slow=1.4,SNR=2.3
ZALV Zalesovo Beam 153.15 33 PKPbc **PKPbc 14 37 03.2 -0.2**
ZALV PKPab **PKPab 14 37 15.7 +0.3**
ZALV pPKPbc **pPKPbc 14 37 25.4 -1.1**
ZALV pPKPab **pPKPab 14 37 37.2 -0.6**
ZALV Zalesovo Beam 153.15 33 PKPbc **PKPbc 14 37 03.2 -0.2**
comp=E,1.2nm,0.4s,baz=1.7,slow=3.0,SNR=6.8
ZALV PKPab **PKPab 14 37 15.7 +0.3**
comp=E,0.5nm,0.4s,baz=289,slow=4.5,SNR=4.0
ZALV pPKPbc **pPKPbc 14 37 25.4 -1.1**
comp=E,1.0nm,0.5s,baz=349,slow=5.9,SNR=2.4
ZALV pPKPab **pPKPab 14 37 37.2 -0.6**
comp=E,1.5nm,0.4s,baz=294,slow=4.8,SNR=3.0
MKAR Makanchi Array 155.55 49 PKPab **PKPab 14 37 25.9 0.0**
MKAR Makanchi Array 155.55 49 PKPab **PKPab 14 37 25.9 0.0**
comp=E,1.3nm,0.7s,baz=303,slow=4.4,SNR=15

KRSC 30 14:23:20.5±1.5, 48°51N×156°38E, h5km±5km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.18**	**356**	P	Pn	14 23 57.4	0.0
SKR				*i* S	Sn	14 24 24.3	-0.5
ASAK	**Asacha**	**4.00**	**13**	P	Pn	14 24 25.2	+2.7
MTVR	**Mutnovka**	**4.14**	**15**	P	Pn	14 24 27.0	+2.5
MTVR				*i* S	Sn	14 25 15.5	+2.0
RUS	**Russkaya**	**4.16**	**18**	P	Pn	14 24 27.0	+2.5
RUS				*i* S	Sn	14 25 15.2	+1.7
PET	**Petropavlovsk**	**4.74**	**17**	P	Pn	14 24 34.7	+2.1
UGLR	**Uglovaya**	**4.95**	**17**	P	Pn	14 24 38.0	+2.4
AVH	**Avacha**	**4.99**	**17**	P	Pn	14 24 39.7	+3.6
KOK	**Koryaka**	**5.00**	**16**	P	Pn	14 24 39.9	+3.7
KRER	**Koryakskii**	**5.03**	**16**	P	Pn	14 24 39.8	+3.0
SDLR	**Sedlovina**	**5.03**	**17**	P	Pn	14 24 39.5	+2.8
SPN	**Mys Shipunski**	**5.14**	**25**	P	Pn	14 24 41.4	+3.3
SPN				*i* S	Sn	14 25 40.8	+3.1
GNL	**Ganaly**	**5.28**	**10**	P	Pn	14 24 43.2	+3.0
MKZ	**Mys Kozlova**	**6.91**	**27**	P	Pn	14 25 04.5	+2.2

IDC 30 14:25:35.8±17.0, 24°24S×179°79E, h534km±204km, mb3.1/7, mb1 3.3/7, mb1mx3.0/20, mbtmp3.1/7, Error ellipse: s-maj=63.4km s-min=34.2km az=79.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**31.28**	**271**	P	P	14 31 12.8	+0.5
	3.8nm,0.4s,baz=98,slow=9.5,SNR=6.6						
STKA	**Stephens Creek**	**34.41**	**249**	P	P	14 31 38.0	-0.7
	7.0nm,1.2s,baz=73,slow=14,SNR=3.7						
ASAR	**Alice Springs**	**41.79**	**261**	P	P	14 32 38.6	-0.2
	0.3nm,0.4s,baz=92,slow=6.8,SNR=15						
WRA	**Warramunga Arr**	**42.19**	**267**	P	P	14 32 41.5	-0.5
	1.1nm,0.3s,baz=98,slow=8.4,SNR=49						
FITZ	**Fitzroy Crossi**	**50.61**	**266**	P	P	14 33 46.0	+0.3
	2.9nm,1.1s,baz=126,slow=8.7,SNR=5.1						
QSPA	**South Pole Qui**	**65.84**	**180**	P	P	14 35 27.9	-0.3
	0.8nm,0.7s,baz=355,slow=4.8,SNR=7.8						
TXAR	**Lajitas Array**	**90.78**	**58**	P	P	14 37 42.5	+0.2
	0.4nm,0.8s,baz=234,slow=6.1,SNR=3.3						

IDC 30 14:34:31.0±1.2, 5.75N×127.32E, h0km, mb3.5/6, mb1 3.7/6, mb1mx3.5/24, mbtmp3.5/6, 1D, Error ellipse: s-maj=67.2km s-min=21.4km az=75.0, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTBH	**Cotabato--PC H**	**3.38**	**296**	*i*P	Pn	14 35 25.0	-0.1
FITZ	**Fitzroy Crossi**	**23.76**	**184**	P	P	14 39 43.5	-1.8
	1.5nm,1.1s,baz=20,slow=15,SNR=4.4						
WRA	**Warramunga Arr**	**26.45**	**165**	P	P	14 40 10.8	+0.9
	0.6nm,0.4s,baz=346,slow=9.8,SNR=13						
ASAR	**Alice Springs**	**29.94**	**168**	P	P	14 40 40.0	-1.1
	0.2nm,0.5s,baz=349,slow=7.5,SNR=4.3						
STKA	**Stephens Creek**	**39.82**	**161**	P	P	14 42 07.7	+1.5
	2.1nm,0.9s,baz=326,slow=11,SNR=3.9						
MKAR	**Makanchi Array**	**56.25**	**324**	P	P	14 44 13.6	+0.3
	0.3nm,0.4s,baz=112,slow=7.2,SNR=7.6						
ILAR	**Eielson Array**	**83.04**	**26**	P	P	14 46 57.2	-0.9
	0.2nm,0.5s,baz=283,slow=4.5,SNR=2.9						

IDC 30 14:36:36.7±2.5, 45.50N×28.04W, h0km, mb3.6/2, mb1 3.6/2, mb1mx3.2/31, mbtmp3.6/2, MS3.1/4, Ms1 3.2/4, ms1mx2.8/34, Error ellipse: s-maj=83.6km s-min=51.5km az=57.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.63**	**100**	LR	LR	14 46 21.6	
	comp=Z,83nm,19.6s,baz=275,slow=31						
SCHQ	**Schefferville**	**26.24**	**305**	LR	LR	14 50 08.9	
	comp=Z,87nm,19.3s,baz=92,slow=31						
NOA	**NORSAR Array B**	**27.62**	**42**	LR	LR	14 51 53.0	
	comp=Z,13nm,18.4s,baz=40,slow=33						
GERES	**GERESS Array B**	**28.32**	**68**	LR	LR	14 52 32.6	
	comp=Z,44nm,18.5s,baz=252,slow=34						
TORD	**Torodi Ar. Bea**	**40.93**	**132**	P	P	14 44 20.8	-0.1
	1.0nm,0.9s,baz=325,slow=7.8,SNR=4.7						
BRTR	**Keskin Array B**	**44.78**	**75**	P	P	14 44 52.2	0.0
	0.3nm,0.5s,baz=309,slow=7.3,SNR=3.0						
WRA	**Warramunga Arr**	**150.65**	**36**	PKPbc	PKPbc	14 56 29.9	-0.9
	0.8nm,1.0s,baz=310,slow=2.9,SNR=4.1						
ASAR	**Alice Springs**	**153.75**	**40**	PKPbc	PKPbc	14 56 38.3	+0.5
	0.3nm,0.9s,baz=5.7,slow=2.0,SNR=4.3						

IDC 30 14:46:33.6±8.2, 5.85N×33.42W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.5/26, mbtmp3.7/3, MS3.5/4, Ms1 3.5/4, ms1mx3.1/25, Error ellipse: s-maj=322.0km s-min=37.9km az=6.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDFB	**Brasilia**	**25.79**	**214**	LR	LR	15 02 08.9	
	comp=Z,77nm,18.1s,baz=226,slow=36						
TORD	**Torodi Ar. Bea**	**35.35**	**76**	P	P	14 53 31.1	-0.1
	0.5nm,1.0s,baz=268,slow=8.9,SNR=4.1						
CPUP	**Villa Florida**	**39.51**	**215**	LR	LR	15 10 20.0	
	comp=Z,102nm,18.8s,baz=218,slow=36						
LPAZ	**La Paz**	**40.78**	**237**	LR	LR	15 11 12.6	
	comp=Z,50nm,18.1s,baz=74,slow=36						
NOA	**NORSAR Array B**	**64.34**	**22**	LR	LR	15 20 09.3	
	comp=Z,27nm,19.5s,baz=225,slow=31						
BRTR	**Keskin Array B**	**68.68**	**50**	P	P	14 57 39.4	0.0
	0.5nm,0.8s,baz=266,slow=4.3,SNR=3.6						
PDAR	**Pinedale Array**	**75.87**	**313**	P	P	14 58 22.5	+0.1
	0.7nm,0.8s,baz=114,slow=8.0,SNR=4.8						

IDC 30 14:51:05.6±1.1, 45.62N×27.95W, h0km, mb3.7/8, mb1 3.8/8, mb1mx3.5/34, mbtmp3.7/8, MS3.8/30, Ms1 3.8/30, ms1mx3.7/38, Error ellipse: s-maj=33.6km s-min=29.1km az=155.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	**Sonseca Array**	**18.59**	**100**	LR	LR	15 01 10.8	
	comp=Z,291nm,19.4s,baz=290,slow=33						
JMIC	**Jan Mayen**	**27.14**	**14**	LR	LR	15 04 46.7	
	comp=Z,75nm,20.5s,baz=249,slow=30						
NOA	**NORSAR Array B**	**27.49**	**42**	LR	LR	15 06 41.6	
	comp=Z,50nm,18.6s,baz=255,slow=34						
GERES	**GERESS Array B**	**28.21**	**68**	LR	LR	15 07 01.6	
	comp=Z,210nm,20.0s,baz=261,slow=34						
KEST	**Kesra**	**29.73**	**96**	LR	LR	15 07 28.4	
	comp=Z,150nm,21.2s,baz=325,slow=33						
FINES	**FINESS Array B**	**34.64**	**43**	LR	LR	15 10 35.1	
	comp=Z,77nm,20.4s,baz=94,slow=34						
ARCES	**ARCESS Array B**	**35.53**	**29**	LR	LR	15 10 31.1	
	comp=Z,62nm,18.3s,baz=282,slow=33						
SPITS	**Spitsbergen Ar**	**36.82**	**14**	LR	LR	15 09 58.5	
	comp=Z,42nm,18.0s,baz=260,slow=31						
AKASG	**Malin Array Se**	**37.66**	**5**	LR	LR	15 14 37.8	
	comp=Z,115nm,18.8s,baz=240,slow=38						
RES	**Resolute Bay**	**40.56**	**338**	LR	LR	15 13 52.9	
	comp=Z,71nm,19.4s,baz=55,slow=34						
TORD	**Torodi Ar. Bea**	**40.96**	**133**	P	P	14 58 50.3	+0.3
	0.9nm,0.8s,baz=333,slow=8.1,SNR=5.3						
TORD				LR	LR	15 14 36.4	
	comp=Z,414nm,18.6s,baz=335,slow=34						
DBIC	**Dimbokro**	**43.66**	**146**	LR	LR	15 15 48.6	
	comp=Z,254nm,19.4s,baz=317,slow=34						
ULM	**Lac du Bonnet**	**44.32**	**302**	LR	LR	15 16 10.4	
	comp=Z,321nm,18.6s,baz=71,slow=34						
BRTR	**Keskin Array B**	**44.69**	**75**	P	P	14 59 21.3	+1.0
	1.0nm,0.8s,baz=298,slow=5.3,SNR=5.4						
BRTR				LR	LR	15 18 35.7	
	comp=Z,68nm,19.3s,baz=300,slow=37						
KBZ	**Khabaz**	**48.88**	**65**	LR	LR	15 20 29.4	
	comp=Z,105nm,21.0s,baz=119,slow=36						
YKA	**Yellowknife Ar**	**49.47**	**322**	LR	LR	15 17 05.4	
	comp=Z,111nm,20.5s,baz=30,slow=32						
AKTO	**Aktyubinsk**	**54.61**	**51**	P	P	15 00 35.2	-0.3
	0.7nm,0.6s,baz=294,slow=10,SNR=3.0						
AKTO				LR	LR	15 23 32.7	
	comp=Z,58nm,18.3s,baz=92,slow=36						
PDAR	**Pinedale Array**	**56.13**	**299**	LR	LR	15 23 31.2	
	comp=Z,267nm,18.9s,baz=78,slow=35						
ROSC	**El Rosal**	**57.15**	**239**	LR	LR	15 20 24.7	
	comp=Z,77nm,19.9s,baz=292,slow=31						
BVAR	**Bosoyoa Array**	**58.59**	**14**	P	P	15 01 11.5	+0.7
	0.9nm,0.8s,baz=355,slow=7.4,SNR=4.8						
BVAR				LR	LR	15 27 15.0	
	comp=Z,52nm,19.2s,baz=86,slow=36						
TXAR	**Lajitas Array**	**60.11**	**283**	P	P	15 01 16.2	+1.3
	0.2nm,0.5s,baz=85,slow=11,SNR=2.9						
ILAR	**Eielson Array**	**60.13**	**334**	LR	LR	15 25 21.9	
	comp=Z,66nm,18.0s,baz=80,slow=34						
BDFB	**Brasilia**	**63.62**	**202**	LR	LR	15 24 39.9	
	comp=Z,123nm,18.3s,baz=24,slow=32						
KURBB	**Kurchatov Arra**	**65.02**	**42**	P	P	15 01 47.1	-0.1
	0.9nm,0.7s,baz=315,slow=6.8,SNR=9.6						
ZALV	**Zalesovo Beam**	**65.55**	**37**	LR	LR	15 30 06.8	
	comp=Z,52nm,20.3s,baz=68,slow=36						
SIV	**San Ignacio**	**68.26**	**214**	LR	LR	15 26 50.8	
	comp=Z,53nm,19.5s,slow=31						
ATAH	**Atahualpa**	**69.17**	**235**	LR	LR	15 31 05.2	
	comp=Z,58nm,20.1s,baz=343,slow=35						
MKAR	**Makanchi Array**	**69.47**	**44**	P	P	15 02 15.0	-0.6
	0.6nm,0.6s,baz=335,slow=5.4,SNR=4.9						
KMBO	**Kilima Mbogo**	**73.72**	**109**	LR	LR	15 35 26.7	
	comp=Z,122nm,18.2s,baz=96,slow=36						
CPUP	**Villa Florida**	**76.43**	**207**	LR	LR	15 34 59.4	
	comp=Z,46nm,19.7s,baz=306,slow=34						
SONM	**Songino Array**	**78.71**	**29**	P	P	15 03 10.1	+0.4
	0.7nm,0.8s,baz=318,slow=3.9,SNR=2.5						
PETK	**Petropavlovsk-**	**81.53**	**357**	LR	LR	15 40 48.5	
	comp=Z,36nm,19.0s,baz=191,slow=37						
BOSA	**Boshof**	**88.27**	**136**	LR	LR	15 41 17.7	
	comp=Z,154nm,18.7s,baz=351,slow=34						
PLCA	**Paso Flores**	**94.04**	**211**	LR	LR	15 42 25.3	
	comp=Z,53nm,21.1s,baz=181,slow=33						
VNDA	**Vanda**	**147.75**	**184**	PKPbc	PKPbc	15 10 49.4	-1.3
	0.3nm,0.6s,baz=113,slow=2.4,SNR=2.3						
WRA	**Warramunga Arr**	**150.52**	**36**	PKPbc	PKPbc	15 10 57.3	-2.1
	0.8nm,1.1s,baz=329,slow=2.3,SNR=5.1						
ASAR	**Alice Springs**	**153.62**	**40**	PKPbc	PKPbc	15 11 05.3	-1.0
	0.4nm,0.7s,baz=346,slow=1.8,SNR=5.6						

*IDC **30** 15:07:23.6±1.9, 31.04N×83.28E, h0km, mb3.6/3, mb1 3.6/5, mb1mx3.3/29, mbtmp3.4/5, ML3.2/2, Error ellipse: s-maj=107.9km s-min=24.2km az=60.0*
*ISCJB **30** 15:07:27.6±0.7, 31.31N±0.08×83.5E±0.2, h33km, mb3.6/3, Error ellipse: s-maj=30.5km s-min=8.2km az=163.3*

*DMN **30** 15:07:38.8±5.7, 30.36N×83.83E, h10km, Error ellipse: s-maj=147.1km s-min=15.7km az=163.0*
ISC 30 15:07:29.2±1.0, 31.3N±0.1×83.4E±0.2, h35km, n12, σ0s73/12, mb3.7/3, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	**Dangsing**	**2.92**	**173**	*e*P	**Pn**	**15 08 14.1**	**+0.6**
	38nm,0.4s						
KOLN	**Koldanda**	**3.48**	**177**	*e*P	**Pn**	**15 08 21.5**	**+0.3**
	17nm,0.5s						
KKN	**Kakani**	**3.84**	**154**	*e*P	**Pn**	**15 08 25.5**	**-0.5**
	17nm,0.7s						
PKIN	**Phulchoki**	**4.07**	**154**	*e*P	**Pn**	**15 08 29.2**	**-0.1**
	10.0nm,0.5s						
PKI	**Pulchoki**	**4.08**	**154**	*e*P	**Pn**	**15 08 29.1**	**-0.4**
	18nm,0.8s						
RAMN	**Ramite**	**5.14**	**146**	*e*P	**Pn**	**15 08 45.1**	**+1.1**
	19nm,0.8s						
ODAN	**Odare**	**5.62**	**140**	*e*P	**Pn**	**15 08 51.5**	**+0.9**
	15nm,0.5s						
MKAR	**Makanchi Array**	**15.54**	**357**	Pn	**Pn**	**15 11 05.9**	**+0.3**
	0.1nm,0.3s,baz=182,slow=11,SNR=3.0						
KURBB	**Kurchatov Arra**	**19.68**	**351**	P	**Pn**	**15 11 56.2**	**-0.6**
	0.0nm,0.3s,baz=174,slow=10,SNR=7.8						
FINES	**FINESS Array B**	**47.53**	**327**	P	**P**	**15 16 01.2**	**+0.5**
	1.2nm,0.8s,baz=101,slow=6.0,SNR=4.1						
WRA	**Warramunga Arr**	**79.50**	**129**	P	**P**	**15 18 40.4**	**-0.8**
	0.5nm,0.7s,baz=324,slow=6.2,SNR=8.1						
ASAR	**Alice Springs**	**72.96**	**132**	P	**P**	**15 18 54.8**	**-0.6**
	0.5nm,1.0s,baz=315,slow=6.3,SNR=4.0						

IDC 30 15:15:58.0±17.0, 17.13S×179.50W, h557km±163km, mb3.2/3, mb1 3.4/3, mb1mx2.8/19, mbtmp3.2/3, Error ellipse: s-maj=147.2km s-min=74.9km az=113.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**38.10**	**240**	P	P	15 22 29.6	-0.3
	5.7nm,1.1s,baz=85,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**43.76**	**259**	P	P	15 23 14.6	-0.4
	0.6nm,0.7s,baz=93,slow=7.7,SNR=21						
WRA				PcP	PcP	15 24 49.1	-0.3
	0.6nm,1.2s,baz=88,slow=3.7,SNR=5.0						
ASAR	**Alice Springs**	**44.01**	**254**	P	P	15 23 17.1	+0.2
	4.5nm,0.5s,baz=90,slow=7.9,SNR=162						
ASAR				PcP	PcP	15 24 49.6	-0.6
	0.4nm,0.4s,baz=101,slow=4.0,SNR=9.4						
BRTR	**Keskin Array B**	**143.50**	**315**	PKP	PKPbc	15 34 29.1	+0.4
	0.5nm,0.6s,baz=103,slow=2.8,SNR=3.6						
GERES	**GERESS Array B**	**146.59**	**344**	PKPbc	PKPbc	15 34 37.0	-0.5
	0.3nm,0.3s,baz=14,slow=2.8,SNR=5.2						

*ISCJB **30** 15:24:12.8±0.4, 40.01N±0.02×28.07E±0.03, h7km±5km, Error ellipse: s-maj=4.4km s-min=3.8km az=3.3*
*ISK **30** 15:24:12.5, 40.00N×28.06E, h11km, MD2.8*
*DDA **30** 15:24:13.3, 39.96N×28.06E, h7km, MD2.9*
*CSEM **30** 15:24:13.0±0.1, 40.00N×28.06E, h10km, MD2.8, Error ellipse: s-maj=1.3km s-min=1.2km az=45.0*
ISC 30 15:24:13.1±0.9, 39.99N±0.02×28.07E±0.02, h12km±8km, n46, σ0s33/60, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GONE	**Gonen-Balikesi**	**0.30**	**280**	PG	**Pg**	**15 24 18.9**	**-0.3**
GONE				*e*SG	**Sg**	**15 24 23.9**	**+0.6**
GONE	**Gonen-Balikesi**	**0.30**	**280**	*i* Pg	**Pg**	**15 24 18.9**	**-0.3**
GONE				*e*Sg	**Sg**	**15 24 23.9**	**+0.6**
KCTX	**Karacabey (Bur**	**0.35**	**39**	*e*PG	**Pg**	**15 24 19.8**	**-0.5**
KCTX				*e*SG	**Sg**	**15 24 25.0**	**0.0**
KCTX	**Karacabey (Bur**	**0.35**	**39**	*e*Pg	**Pg**	**15 24 19.8**	**-0.5**
KCTX				*e*Sg	**Sg**	**15 24 25.0**	**0.0**
BNT	**Bandirma**	**0.38**	**343**	*e*PG	**Pg**	**15 24 20.4**	**-0.3**
BNT				*e*SG	**Sg**	**15 24 26.4**	**+0.5**
BNT	**Bandirma**	**0.38**	**343**	*e*Pg	**Pg**	**15 24 20.4**	**-0.3**
BNT				*e*Sg	**Sg**	**15 24 26.4**	**+0.5**
BALB	**Balikesir**	**0.38**	**202**	*e*PG	**Pg**	**15 24 20.3**	**-0.5**
BALB				*e*SG	**Sg**	**15 24 26.4**	**+0.6**
BALB	**Balikesir**	**0.38**	**202**	*e*Pg	**Pg**	**15 24 20.3**	**-0.5**
BALB				*e*Sg	**Sg**	**15 24 26.5**	**+0.6**
BALY	**Balya**	**0.43**	**234**	*e*P	**Pg**	**15 24 21.4**	**-0.2**
BALY				*e*S	**Sg**	**15 24 27.5**	**+0.2**
BALY	**Balya**	**0.43**	**234**	*e*P	**Pg**	**15 24 21.4**	**-0.2**
BALY				*e*S	**Sg**	**15 24 27.5**	**+0.2**
DURS	**Dursunbey**	**0.50**	**141**	*e*P	**Pg**	**15 24 22.4**	**-0.6**
DURS				*i* S	**Sg**	**15 24 29.5**	**-0.2**
DURS	**Dursunbey**	**0.50**	**141**	*e*P	**Pg**	**15 24 22.4**	**-0.6**
DURS				*i* S	**Sg**	**15 24 29.5**	**-0.2**
KRBG	**Karabiga-Canak**	**0.71**	**304**	*e*PG	**Pg**	**15 24 26.4**	**-0.5**
KRBG	**Karabiga-Canak**	**0.71**	**304**	*e*Pg	**Pg**	**15 24 26.4**	**-0.5**
MDNY	**Mudanya-Bursa**	**0.73**	**59**	*e*PG	**Pg**	**15 24 27.2**	**-0.1**
MDNY	**Mudanya-Bursa**	**0.73**	**59**	*e*Pg	**Pg**	**15 24 27.2**	**-0.1**
ARMT	**Armutlu**	**0.83**	**47**	*e*PG	**Pg**	**15 24 29.3**	**0.0**
ARMT	**Armutlu**	**0.83**	**47**	*e*Pg	**Pg**	**15 24 29.3**	**0.0**
GEMT	**Gemlik**	**0.97**	**62**	*e*PG	**Pg**	**15 24 31.6**	**-0.2**
GEMT	**Gemlik**	**0.97**	**62**	*e*Pg	**Pg**	**15 24 31.6**	**-0.2**
RKY	**Sarkoy-Tekirda**	**0.97**	**316**	*e*PG	**Pg**	**15 24 31.5**	**-0.3**
RKY	**Sarkoy-Tekirda**	**0.97**	**316**	*e*Pg	**Pg**	**15 24 31.5**	**-0.3**
MFT	**Murefte**	**0.99**	**323**	*e*PG	**Pg**	**15 24 31.8**	**-0.5**
MFT	**Murefte**	**0.99**	**323**	*e*Pg	**Pg**	**15 24 31.8**	**-0.5**
LPK	**Lapseki**	**1.07**	**291**	*e*PG	**Pb**	**15 24 33.3**	**-0.3**
LPK

ESL				*e*S	**Sb**	**15 26 13.8**	**-0.9**
	baz=224							
WHF	**Hehuan Shan**	**0.50**	**268**	⇑*i*P	**Pg**	**15 26 06.0**	**0.0**
	baz=263							
WHF				*i* S	**Sg**	**15 26 12.2**	**-0.4**
	baz=263							
TWE	**Neicheng**	**0.57**	**346**	⇑*i*P	**Pg**	**15 26 07.3**	**0.0**
	baz=352							
TWE				S	**Sg**	**15 26 13.3**	**-1.4**
	baz=352							
TWT	**Tachien**	**0.59**	**279**	⇑*i*P	**Pg**	**15 26 07.9**	**+0.3**
	baz=275							
TWT				S	**Sg**	**15 26 15.4**	**+0.1**
	baz=275							
ILA	**Ilan**	**0.60**	**354**	P	**Pg**	**15 26 08.1**	**+0.3**
	baz=354							
ILA				*e*S	**Sg**	**15 26 16.4**	**+0.7**
	baz=354							
NSK	**Sanguang**	**0.66**	**321**	⇑*i*P	**Pg**	**15 26 08.6**	**-0.3**
	baz=322							
NSK				S	**Sg**	**15 26 16.7**	**-0.8**
	baz=322							
EHY	**Hungye**	**0.79**	**215**	*e*P	**Pg**	**15 26 11.4**	**0.0**
	baz=220							
EHY				*e*S	**Sb**	**15 26 23.9**	**+0.6**
	baz=220							
TWA	**Mucha**	**0.84**	**346**	*e*P	**Pg**	**15 26 11.8**	**-0.5**
	baz=348							
TWA				*e*S	**Sg**	**15 26 23.6**	**+0.3**
	baz=348							
TWB1	**Santiao Chiao**	**0.86**	**11**	*e*P	**Pg**	**15 26 12.8**	**+0.1**
	baz=9.0							
NSTT	**Nanjuang**	**0.88**	**302**	*e*P	**Pg**	**15 26 12.5**	**-0.5**
	baz=302							
NSTT				*e*S	**Sg**	**15 26 23.4**	**-1.0**
	baz=302							
SMLT	**Sun Moon Lake**	**0.88**	**252**	*e*P	**Pg**	**15 26 13.2**	**+0.1**
	baz=249							
SMLT				S	**Sg**	**15 26 24.3**	**-0.3**
	baz=249							
NWF	**Wu-fen Shan**	**0.91**	**358**	P	**Pg**	**15 26 13.8**	**+0.2**
	baz=354							
NWF				*e*S	**Sg**	**15 26 25.1**	**-0.3**
	baz=354							
TYC	**Yuchr**	**0.91**	**254**	P	**Pg**	**15 26 13.6**	**-0.1**
	baz=244							
TYC				*e*S	**Sg**	**15 26 25.0**	**-0.6**
	baz=244							
TWF1	**Yuli**	**0.93**	**211**	*e*P	**Pg**	**15 26 13.3**	**-0.8**
	baz=219							
TWF1				*e*S	**Sb**	**15 26 27.9**	**+0.5**
	baz=219							
TWQ1	**Liyutan**	**0.97**	**281**	*e*P	**Pb**	**15 26 15.2**	**-0.2**
	baz=280							
TWQ1				*e*S	**Sg**	**15 26 27.4**	**0.0**
	baz=280							
NCU	**National Centr**	**0.99**	**325**	*e*P	**Pb**	**15 26 15.5**	**-0.2**
	baz=321							
NSY	**Sanyi**	**0.99**	**285**	*e*P	**Pg**	**15 26 15.3**	**0.0**
	baz=284							
NSY				*e*S	**Sb**	**15 26 29.4**	**+0.2**
	baz=284							
HSN	**Hsinchu**	**1.00**	**310**	*e*P	**Pb**	**15 26 16.1**	**+0.2**
	baz=313							
TWS1	**Kuangyinshan**	**1.00**	**339**	*e*P	**Pb**	**15 26 15.9**	**-0.1**
	baz=349							
TWS1				*e*S	**Sb**	**15 26 29.1**	**-0.4**
	baz=349							
YUS	**Yu-Shan**	**1.03**	**230**	P	**Pb**	**15 26 16.3**	**-0.5**
	baz=228							
YUS				*e*S	**Sb**	**15 26 30.6**	**-0.1**
	baz=228							
TCU	**Taichung**	**1.04**	**270**	*e*P	**Pa**	**15 26 17.2**	**0.0**
	baz=268							
WNT	**Mingjian**	**1.07**	**255**	*e*P	**Pg**	**15 26 16.5**	**-0.3**
	baz=250							
WNT				*e*S	**Sn**	**15 26 32.9**	**0.0**
	baz=250							
TWY	**Chenhua**	**1.13**	**350**	*e*P	**Pb**	**15 26 17.9**	**-0.1**
	baz=352							
ALS	**Alishan**	**1.13**	**235**	P	**Pb**	**15 26 17.9**	**-0.3**
	baz=233							
ALS				*e*S	**Sb**	**15 26 33.5**	**+0.2**
	baz=233							
YOJ	**Yonaguni jima**	**1.13**	**74**	⇑*i*P	**Pb**	**15 26 18.4**	**+0.3**
	baz=68							
YOJ				*e*S	**Sb**	**15 26 33.4**	**+0.3**
	baz=68							
YOJ	**Yonaguni jima**	**1.13**	**74**	P	**Pb**	**15 26 18.4**	**+0.3**
YOJ				*e*S	**Sb**	**15 26 33.7**	**+0.6**
CHKT	**Chengkung**	**1.13**	**201**	*e*P	**Pb**	**15 26 17.9**	**-0.3**
	baz=192							
CHKT				*e*S	**Sn**	**15 26 34.8**	**+0.3**
	baz=192							
CHN5	**Tsauling**	**1.18**	**242**	*e*P	**Pn**	**15 26 19.1**	**-0.3**
	baz=241							
CHN5				*e*S	**Sn**	**15 26 36.5**	**+0.7**
	baz=241							
ELDTW	**Lidau**	**1.21**	**217**	*e*P	**Pg**	**15 26 18.3**	**-1.1**
	baz=204							
ELDTW				*e*S	**Sn**	**15 26 36.2**	**-0.3**
	baz=204							
WGK	**Gukeng**	**1.24**	**248**	*e*P	**Pn**	**15 26 20.3**	**+0.3**
	baz=247							
WGK				*e*S	**Sn**	**15 26 38.3**	**+1.2**
	baz=247							
CHN4	**Tsaushan**	**1.38**	**235**	*e*P	**Pn**	**15 26 21.7**	**-0.2**
	baz=234							
CHN4				*e*S	**Sn**	**15 26 42.6**	**+2.1**
	baz=234							
WTP	**Ta-pu**	**1.43**	**231**	*e*P	**Pn**	**15 26 22.7**	**+0.1**
	baz=219							
WTP				*e*S	**Sn**	**15 26 43.8**	**+2.0**
	baz=219							
CHY	**Chiayi**	**1.44**	**243**	*e*P	**Pg**	**15 26 23.4**	**-0.3**
	baz=243							
TWG	**Pinlang**	**1.50**	**207**	*e*P	**Pn**	**15 26 22.9**	**-0.7**
	baz=191							
TWK	**Hsinying**	**1.51**	**234**	*e*P	**Pb**	**15 26 24.3**	**-0.2**
	baz=234							
TWK				*e*S	**Sg**	**15 26 45.1**	**+0.5**
	baz=234							
CHN1	**Nanshi**	**1.53**	**231**	*e*P	**Pb**	**15 26 24.9**	**0.0**
	baz=221							
CHN1				*e*S	**Sg**	**15 26 47.4**	**+2.1**
	baz=221							
IRIF	**Iriomote-Funau**	**1.76**	**84**	P	**Pb**	**15 26 28.3**	**-0.5**
IRIF				*e*S	**Sb**	**15 26 51.3**	**+0.2**
HATJ	**Hateruma jima**	**1.82**	**93**	*e*S	**Sn**	**15 26 50.5**	**-0.9**
JKRS	**Kuro-shima**	**2.00**	**87**	*e*S	**Sn**	**15 26 57.0**	**+1.1**
JIJ	**Ishigaki jima**	**2.13**	**84**	*e*S	**Sn**	**15 26 58.5**	**-0.6**

IDC 30 15:27:07.7±0.8, 16°.49S×69°.78W, h182km±6km, mb3.7/14, mb1 3.8/17, mb1mx3.7/25, mbtmp3.7/17, Error ellipse: s-maj=13.0km s-min=10.8km az=79.0, Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPAZ	**La Paz**	**1.59**	**83**	P	Pn	15 27 42.5	+1.0
	104nm,0.3s,baz=278,slow=7.5,SNR=1634						
LPAZ				S	Sn	15 28 08.1	+0.6
	40nm,0.3s,baz=296,slow=24,SNR=22						
LVC	**Limon Verde**	**6.15**	**173**	P	Pn	15 28 36.6	-0.3
	6.9nm,0.3s,baz=353,slow=9.4,SNR=55						
LVC				S	Sn	15 29 42.4	-5.0
	13nm,0.3s,baz=112,slow=23,SNR=17						
SIV	**San Ignacio**	**8.37**	**88**	P	Pn	15 29 04.2	-1.8
	2.3nm,0.3s,baz=274,slow=12,SNR=18						
SIV				S	Sn	15 30 38.1	-1.8
	0.9nm,0.3s,baz=222,slow=15,SNR=3.7						
CFAA	**Coronel Fontan**	**15.11**	**175**	P	Pn	15 30 32.4	+0.3
	0.1nm,0.3s,baz=20,slow=15,SNR=3.9						
CPUP	**Villa Florida**	**15.16**	**132**	P	Pn	15 30 32.6	0.0
	0.6nm,0.3s,baz=290,slow=12,SNR=3.6						
BDFB	**Brasilia**	**20.93**	**91**	P	P	15 31 35.1	-1.4
	4.0nm,0.5s,baz=265,slow=10,SNR=6.0						
PLCA	**Paso Flores**	**24.17**	**181**	P	P	15 32 08.5	+1.2
	1.8nm,0.8s,baz=4.1,slow=15,SNR=3.5						
RCBR	**Riachuelo**	**34.82**	**76**	P	P	15 33 41.4	-0.2
	2.8nm,0.8s,baz=203,slow=17,SNR=4.1						
TEIG	**Tepich**	**40.76**	**333**	P	P	15 34 30.3	-0.8
	6.9nm,0.8s,baz=331,slow=2.9,SNR=4.2						
TKL	**Tuckaleechee C**	**53.53**	**346**	P	P	15 36 06.3	-3.3
	0.8nm,0.3s,baz=117,slow=9.0,SNR=4.0						
TXAR	**Lajitas Array**	**56.09**	**324**	P	P	15 36 27.5	-0.7
	0.5nm,0.5s,baz=148,slow=9.7,SNR=6.0						

DBIC	**Dimbokro**	**68.20**	**76**	P	P	15 37 47.1	-1.9
	2.4nm,0.4s,baz=238,slow=9.2,SNR=6.7							
PDAR	**Pinedale Array**	**69.39**	**330**	P	P	15 37 55.3	-0.8
	0.6nm,0.4s,baz=129,slow=8.5,SNR=7.0							
ULM	**Lac du Bonnet**	**70.32**	**343**	P	P	15 37 59.4	-1.8
	3.3nm,0.3s,baz=162,slow=6.6,SNR=6.4							
NVAR	**Mina Array Ba**	**71.07**	**322**	P	P	15 38 06.8	+0.5
	2.8nm,0.5s,baz=160,slow=7.0,SNR=4.0							
TORD	**Torodi Ar. Bea**	**76.51**	**72**	P	P	15 38 36.7	-1.5
	4.4nm,0.7s,baz=269,slow=4.9,SNR=41							
VNDA	**Vanda**	**81.62**	**190**	P	P	15 39 05.5	+0.7
	0.3nm,0.6s,baz=97,slow=6.0,SNR=3.3							
YKA	**Yellowknife Ar**	**86.21**	**341**	P	P	15 39 27.6	-0.5
	1.9nm,0.6s,baz=136,slow=5.2,SNR=4.8							
BOSA	**Boshof**	**86.54**	**119**	P	P	15 39 30.9	+0.1
	2.2nm,0.9s,baz=272,slow=4.7,SNR=3.4							
MAW	**Mawson**	**89.34**	**164**	P	P	15 39 44.5	+1.4
	1.8nm,0.7s,baz=173,slow=7.1,SNR=10							
ASAR	**Alice Springs**	**133.87**	**211**	PKP	PKPdf	15 46 03.7	-0.2
	0.2nm,0.3s,baz=123,slow=1.8,SNR=8.5							
ASAR				SKPbc	SKPbc	15 49 15.3	-0.6	
	0.2nm,0.9s,baz=146,slow=3.3,SNR=2.8							
WRA	**Warramunga Arr**	**136.73**	**214**	PKP	PKPdf	15 46 09.3	+0.1	
	0.4nm,0.3s,baz=142,slow=1.7,SNR=25							
WRA				SKPbc	SKPbc	15 49 24.3	-0.7	
	0.3nm,0.8s,baz=165,slow=6.8,SNR=3.9							
ZALV	**Zalesovo Beam**	**137.71**	**22**	PKP	PKPdf	15 46 10.6	+0.6	
	3.6nm,0.6s,baz=287,slow=2.4,SNR=17							
ZALV				SKPbc	SKPbc	15 49 28.4	+1.8	
	0.4nm,0.3s,baz=343,slow=4.6,SNR=3.6							
MKAR	**Makanchi Array**	**141.94**	**31**	PKhKP	PKPpre	15 46 13.4		
	0.2nm,0.4s,baz=338,slow=3.4,SNR=3.1							
MKAR				PKP	PKPdf	15 46 18.6	+0.7	
	0.6nm,0.5s,baz=319,slow=1.8,SNR=7.0							
MKAR				SKPbc	SKiKP	15 49 39.8	-0.1	
	0.1nm,0.4s,baz=260,slow=2.6,SNR=2.8							
USRK	**Ussuriysk Arra**	**146.80**	**331**	PKPbc	PKPbc	15 46 28.9	+0.5	
	3.9nm,0.8s,baz=339,slow=1.5,SNR=8.0							
MJAR	**Matsushiro Arr**	**148.16**	**314**	PKPbc	PKPbc	15 46 32.7	+0.3	
	1.0nm,0.7s,baz=57,slow=1.1,SNR=6.2							
SONM	**Songino Array**	**148.58**	**5**	PKPbc	PKPbc	15 46 33.8	+0.6	
	5.4nm,0.3s,baz=315,slow=1.8,SNR=30							
KSRS	**Korea Array**	**153.92**	**327**	PKPbc	PKPbc	15 46 46.2	+0.5	
	1.4nm,0.8s,baz=46,slow=3.6,SNR=4.4							

IDC 30 15:41:58.1±2.8, 32°.58S×178°.23W, h0km, mb3.5/2, mb1 3.8/3, mb1mx3.6/18, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=67.4km s-min=35.6km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	**Urewera**	**6.82**	**213**	Pn	Pn	15 43 39.8	+0.4
	0.9nm,0.3s,baz=308,slow=20,SNR=7.3						
URZ				Sn	Sn	15 44 56.9	-0.9
	0.4nm,0.3s,baz=169,slow=18,SNR=1.1						
ASAR	**Alice Springs**	**42.84**	**269**	P	P	15 49 58.3	+0.1
	0.2nm,0.3s,baz=109,slow=7.7,SNR=16						
WRA	**Warramunga Arr**	**44.02**	**275**	P	P	15 50 07.5	-0.2
	0.3nm,0.3s,baz=112,slow=8.2,SNR=17						
FINES	**FINESS Array B**	**147.11**	**339**	PKPbc	PKPbc	16 01 41.4	-0.9
	0.8nm,0.4s,baz=32,slow=5.6,SNR=14						

*IDC **30** 16:01:17.7±1.0, 12°.10S×71°.88W, h0km, mb4.3/5, mb1 4.2/8, mb1mx4.0/22, mbtmp4.1/8, ML4.3/3, MS3.9/4, Ms1 3.9/4, ms1mx3.2/35, Error ellipse: s-maj=38.0km s-min=17.9km az=37.0*

*ISCJB **30** 16:01:20.4±0.5, 12°.25S±0°.07×71°.98W±0°.07, h33km, mb4.2/5, MS4.1/3, Error ellipse: s-maj=12.7km s-min=6.5km az=42.8*

*NEIC **30** 16:01:22.6±0.6, 12°.26S±0°.09×71°.97W±0°.09, h35km, n36, σ1s02/36, mb4.3/5, MS4.2/3, Central Peru*

ISC 30 16:01:22.7±0.6, 12°.26S±0°.09×71°.97W±0°.09, h35km, n36, σ1s02/36, mb4.3/5, MS4.2/3, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARE	**Arequipa**	**4.21**	**174**	P	**Pn**	**16 02 25.0**	**+0.4**
NNA	**Nana**	**4.77**	**273**	*e*Pn	**Pn**	**16 02 31.3**	**-0.9**
LPAZ	**La Paz**	**5.47**	**138**	Pn	**Pn**	**16 02 45.1**	**+2.9**
LPAZ				Lg	Lg	16 04 13.5	
LPAZ	**La Paz**	**5.47**	**138**	Pn	**Pn**	**16 02 45.1**	**+2.9**
	0.9nm,0.3s,baz=327,slow=9.9,SNR=16						
LPAZ				Lg	Lg	16 04 13.5	
	7.4nm,0.3s,baz=196,slow=20,SNR=9.3						
ATAH	**Atahualpa**	**8.12**	**308**	Pn	**Pn**	**16 03 18.1**	**-0.5**
ATAH				Sn	**Sn**	**16 04 51.1**	**+1.7**
ATAH	**Atahualpa**	**8.12**	**308**	Pn	**Pn**	**16 03 18.1**	**-0.5**
	1.4nm,0.3s,baz=148,slow=6.6,SNR=10						
ATAH				Sn	**Sn**	**16 04 51.1**	**+1.7**
	2.0nm,0.3s,baz=135,slow=18,SNR=2.7						
SIV	**San Ignacio**	**11.20**	**111**	Pn	**Pn**	**16 04 00.4**	**0.0**
SIV				Lg	Lg	16 07 06.8	
SIV	**San Ignacio**	**11.20**	**111**	Pn	**Pn**	**16 04 00.4**	**0.0**
	1.7nm,0.3s,baz=274,slow=10,SNR=16						
SIV				Lg	Lg	16 07 06.8	
	3.3nm,0.3s,baz=257,slow=19,SNR=5.2						
SIV				LR	LR	16 08 36.0	
	comp=Z,127nm,18.2s,slow=39						
ROSC	**El Rosal**	**17.16**	**352**	P	**Pn**	**16 05 20.4**	**+0.1**
ROSC	**El Rosal**	**17.16**	**352**	P	**Pn**	**16 05 20.4**	**+0.1**
	2.3nm,0.3s,baz=106,slow=20,SNR=2.7						
CFAA	**Coronel Fontan**	**19.56**	**170**	P	**Pn**	**16 05 48.7**	**-0.4**
CFAA	**Coronel Fontan**	**19.56**	**170**	P	**Pn**	**16 05 48.7**	**-0.4**
	0.1nm,0.3s,baz=0.0,slow=12,SNR=2.1						
CFAA				LR	LR	16 13 01.1	
	comp=Z,9.2nm,20.5s,baz=350,slow=36						
CPUP	**Villa Florida**	**19.64**	**138**	P	**P**	**16 05 47.7**	**-0.7**
CPUP	**Villa Florida**	**19.64**	**138**	P	**P**	**16 05 47.7**	**-0.7**
	0.3nm,0.3s,baz=278,slow=15,SNR=3.2						
SDV	**Santo Domingo**	**21.05**	**4**	*e*Pn	**P**	**16 06 04.8**	**+0.8**
BDFB	**Brasilia**	**23.49**	**101**	P	**P**	**16 06 30.1**	**+0.5**
BDFB				Lg	Lg	16 13 43.6	
BDFB	**Brasilia**	**23.49**	**101**	P	**P**	**16 06 30.1**	**+0.5**
	5.9nm,0.6s,baz=266,slow=15,SNR=5.0						
BDFB				Lg	Lg	16 13 43.6	
	2.1nm,0.4s,baz=171,slow=26,SNR=3.2						
BDFB				LR	LR	16 16 25.6	
	comp=Z,129nm,18.1s,baz=79,slow=39						
TXAR	**Lajitas Array**	**51.44**	**324**	P	**P**	**16 10 25.3**	**+0.6**
TXAR	**Lajitas Array**	**51.44**	**324**	P	**P**	**16 10 25.3**	**+0.6**
	0.2nm,0.4s,baz=138,slow=7.2,SNR=1.9						
PFO	**Pinyon Flat Ob**	**62.24**	**319**	LR	LR	16 35 37.7	
	comp=Z,197nm,21.7s,baz=302,slow=33						
ULM	**Lac du Bonnet**	**65.67**	**343**	P	**P**	**16 12 02.0**	**-1.4**
ULM	**Lac du Bonnet**	**65.67**	**343**	P	**P**	**16 12 02.0**	**-1.4**
	4.7nm,0.7s,baz=180,slow=6.1,SNR=4.1						
DBIC	**Dimbokro**	**69.31**	**78**	*e*P	**P**	**16 12 27.2**	**0.0**
	4.7nm,0.4s						
DBIC	**Dimbokro**	**69.31**	**78**	P	**P**	**16 12 27.4**	**+0.3**
	3.7nm,0.4s,baz=221,slow=8.8,SNR=11						
TOA0	**Torodi Ar. Sit**	**77.28**	**73**	*e*P	**P**	**16 13 13.3**	**-0.8**
TORD	**Torodi Ar. Bea**	**77.28**	**73**	P	**P**	**16 13 12.9**	**-1.2**
TORD	**Torodi Ar. Bea**	**77.28**	**73**	P	**P**	**16 13 12.9**	**-1.2**
	1.4nm,0.5s,baz=261,slow=4.6,SNR=30						
RAO	**Raoul Island**	**97.59**	**238**	LR	LR	16 48 15.5	
	comp=Z,268nm,21.9s,baz=260,slow=29						
ZALV	**Zalesovo Beam**	**134.52**	**19**	PKP	**PKPdf**	**16 20 37.0**	**-0.2**
ZALV	**Zalesovo Beam**	**134.52**	**19**	PKP	**PKPdf**	**16 20 37.0**	**-0.2**
	0.7nm,0.5s,baz=290,slow=3.3,SNR=5.1						
ASAR	**Alice Springs**	**136.24**	**215**	PKP	**PKPdf**	**16 20 41.3**	**-0.1**
ASAR	**Alice Springs**	**136.24**	**215**	PKP	**PKPdf**	**16 20 41.3**	**-0.1**
	0.3nm,0.7s,baz=136,slow=2.7,SNR=4.9						
WRA	**Warramunga Arr**	**138.83**	**219**	PKPpre	PKPpre	16 20 40.8	
WRA				PKP	**PKiKP**	**16 20 48.2**	**-0.2**
WRA	**Warramunga Arr**	**138.83**	**219**	PKhKP	PKPpre	16 20 40.8	
	0.2nm,0.9s,baz=131,slow=2.8,SNR=2.8						
WRA				PKP	**PKiKP**	**16 20 48.2**	**-0.2**
	0.3nm,0.6s,baz=140,slow=1.9,SNR=7.6						
KSRS	**Korea Array**	**149.23**	**328**	PKPbc	**PKPbc**	**16 21 08.1**	**+0.1**
	0.7nm,0.5s,baz=33,slow=2.6,SNR=4.2						
KSAR	**Wonju Array Be**	**149.26**	**328**	PKPbc	**PKPbc**	**16 21 08.1**	**0.0**

*MOS **30** 16:22:27.9±0.7, 15°.46N×86°.29W, h10km, mb5.1/30, MS4.0/11, Error ellipse: s-maj=9.9km s-min=5.9km az=102.7*

*IDC **30** 16:22:28.1±0.6, 15°.51N×86°.25W, h0km, mb4.5/20, mb1 4.7/20, mb1mx4.6/25, mbtmp4.5/20, ML5.5/1, MS4.1/25, Ms1 4.1/25, ms1mx4.0/33, Error ellipse: s-maj=21.4km s-min=12.5km az=61.0*

*CASC **30** 16:22:29.8±2.7, 15°.71N×86°.39W, h36km±113km, ML4.6, mb5.0(NEIC)*

*ISCJB **30** 16:22:31.5±0.2, 15°.51N±0°.02×86°.36W±0°.03, h33km, mb4.8/104, MS4.2/32, Error ellipse: s-maj=3.6km s-min=2.9km az=12.9*

*GCMT **30** 16:22:33.1±0.2, 15°.72N×86°.32W, h12km, MW5.0. Moment Tensor Solution. s40,c51; s73,c107; Moment tensor: Scale 10^{16}Nm; M_{rr}=3.48±.11; $M_{\theta\theta}$1.11±.09; $M_{\phi\phi}$2.37±.12; $M_{r\theta}$0.88±.32; $M_{\theta\phi}$2.05±.10; $M_{\phi r}$0.11±.34; Best double couple: $M_0$3.80000×10^{16} NP1:ϕ_s25.00000°, δ41.00000°,λ-107.00000°. NP2:ϕ_s227.00000°, δ51.00000°,λ-76.00000°. Principal axes: T 3.9400, Plg5.0000°, Azm307.0000°; N -0.2800, Plg11.0000°, Azm38.0000°; P -3.6600, Plg78.0000°, Azm194.0000°; Data Used: CN IC IU II G.*

*BJI **30** 16:22:33.8, 15°.50N×86°.40W, h35km, mB5.3/5, Ms5.0/6, Ms7 4.6/5*

*NEIC **30** 16:22:33.1±0.2, 15°.44N×86°.40W, h35km, mb5.0/85, Error ellipse: s-maj=5.1km s-min=3.9km az=31.0*

NEIC Felt [III] at La Ceiba, Roatan and Sandy Bay: [II] at San Pedro Sula and Tegucigalpa. Also felt at Arizona, French Harbor, Lomitas and Utila. Felt at Belize City, Belize.

ISC 30 16:22:32.9±1.3, 15°.57N±0°.03×86°.46W±0°.04, h32km±9km, n721, σ1s14/703, mb4.9/103, MS4.2/33, 202C-201D, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	**1.70**	**208**	*e*P	**Pn**	**16 22 59.3**	**-1.1**
TGUH				*e*S	**Sn**	**16 23 21.4**	**+0.4**
TGUH	**Tegucigalpa,Un**	**1.70**	**208**	*e*Pn	**Pn**	**16 22 58.1**	**-2.3**
TGUH				*e*Sn	**Sn**	**16 23 21.0**	**-0.1**
CAHU	**Cacacuatique**	**2.47**	**224**	*e*P	**Pn**	**16 23 10.2**	**-1.0**
CAHU				*e*S	**Sn**	**16 23 41.4**	**+1.1**
CNCH	**Conchagua**	**2.64**	**211**	*e*P	**Pn**	**16 23 13.0**	**-0.5**
CNGN	**Cerro Negro**	**3.06**	**184**	*e*P	**Pn**	**16 23 20.6**	**+1.4**
CNGN				*e*S	**Sb**	**16 24 01.0**	**-2.7**
LFU	**La Fuente**	**3.15**	**235**	*e*P	**Pn**	**16 23 18.9**	**-1.4**
LFRS	**El Faro**	**3.18**	**233**	*e*P	**Pn**	**16 23 19.4**	**-1.5**
HUEN		**3.23**	**175**	*e*P	**Pn**	**16 23 22.9**	**+1.5**
SNET	**Serv Nac Est T**	**3.28**	**235**	AML	AML	16 24 21.9	
	comp=Z,3μm,0.7s						
SNET				AML	AML	16 24 22.0	
	comp=Z,3μm,0.8s						
RBDL	**Robledal**	**3.44**	**246**	*e*P	**Pn**	**16 23 23.1**	**-1.5**
SNJE	**San Jose**	**3.49**	**241**	*e*P	**Pn**	**16 23 23.6**	**-1.6**
SBLS	**San Blas**	**3.52**	**241**	*e*P	**Pn**	**16 23 24.8**	**-0.8**
TEIG	**Tepich**	**4.94**	**340**	*e*Pn	**Pn**	**16 23 43.7**	**-1.3**
	comp=Z,714nm,0.5s						
TEIG				Sn	**Sn**	**16 24 39.9**	**-1.3**
TEIG				*e*Sn	Sn	16 24 40.3	-0.8
TEIG	**Tepich**	**4.94**	**340**	Pn	**Pn**	**16 23 44.2**	**-0.8**
	comp=Z,172nm,0.3s,baz=147,slow=14,SNR=576						
TEIG				Sn	**Sn**	**16 24 39.9**	**-1.3**
	comp=Z,153nm,0.3s,baz=96,slow=23,SNR=10						
TEIG				LR	LR	16 25 43.2	
	comp=Z,5μm,20.3s,baz=31,slow=38						
VCR	**Vista de Mar**	**5.47**	**171**	*e*P	**Pn**	**16 23 51.2**	**-1.2**
CCIG	**Comitan**	**5.51**	**278**	P	**Pn**	**16 23 53.8**	**+0.8**
SCIG	**Sabancuy**	**5.64**	**307**	P	Pn	16 23 51.2	-3.4
SCIG				S	Sn	16 24 40.5	-18
JCR	**Jicaral**	**5.83**	**167**	*e*P	**Pn**	**16 23 56.7**	**-0.7**
CGA2	**Cerro Gallo 2**	**5.85**	**160**	*e*P	**Pn**	**16 23 55.3**	**-2.3**
URSC	**Urasca**	**6.27**	**155**	*e*P	**Pn**	**16 24 02.4**	**-1.1**
QCR	**Quepos**	**6.50**	**160**	*e*P	Pn	16 24 02.8	-3.7
PCIG		**6.52**	**272**	P	**Pn**	**16 24 04.7**	**-2.0**
TGIG		**6.52**	**282**	P	**Pn**	**16 24 05.7**	**-1.0**
BUS	**Buena Vista**	**6.53**	**156**	*e*P	**Pn**	**16 24 05.1**	**-2.2**
MCJ	**Malvern**	**8.72**	**73**	*i* P	**Pn**	**16 24 37.8**	**+0.8**
MTDJ	**Mount Denham**	**8.94**	**72**	*e*P	**Pn**	**16 24 39.7**	**-0.3**
	comp=Z,84nm,0.7s						
BCIP	**Isla Barro Col**	**9.07**	**134**	*e*P	Pn	16 24 37.9	-3.8
	comp=Z,57nm,0.6s						
PCJ	**Portland Cotta**	**9.17**	**75**	*i* P	**Pn**	**16 24 44.0**	**+0.9**
HUIG	**Huatulco**	**9.30**	**273**	P	Pn	16 24 39.0	-5.8
STH	**Stony Hill**	**9.57**	**74**	*i* P	**Pn**	**16 24 47.5**	**-1.1**
HOJ	**Hope**	**9.61**	**74**	*i* P	**Pn**	**16 24 49.7**	**+0.6**
GWJ	**Greenwich**	**9.64**	**74**	*i* P	**Pn**	**16 24 49.0**	**-0.7**
TPIG	**Tehuac#an**	**10.81**	**287**	P	Pn	16 25 03.6	-2.2
PNIG	**Pinotepa**	**11.26**	**276**	P	Pn	16 25 08.8	-2.9
GTBY	**Guantanamo Bay**	**11.64**	**67**	*e*P	**Pn**	**16 25 17.9**	**+0.9**
	comp=Z,58nm,0.6s						
SDDR	**Presa de Saban**	**14.88**	**75**	P	**Pn**	**16 26 02.8**	**+1.6**
	comp=Z,32nm,0.8s						
BRAL	**Brewton**	**15.38**	**358**	*e*P	**Pn**	**16 26 08.7**	**+1.0**
	comp=Z,149nm,0.6s						
**ROSC

231A **Bronte** 20.61 325 ⇑P P 16 27 10.8 +1.1
baz=21,SNR=26
330A **Mertzon** 20.72 322 ⇓P P 16 27 11.6 +0.8
baz=21,SNR=25
ABTX **Abilene, Hawle** 20.78 327 ⇓P P 16 27 13.1 +1.7
baz=21
627A **Terlingua Ranc** 20.83 314 ⇑P P 16 27 13.8 +1.6
baz=21,SNR=158
528A **Cox Ranch, San** 20.88 317 ⇑P P 16 27 13.5 +1.0
baz=21,SNR=28
TXAR **Lajitas Array** 20.95 314 P P 16 27 16.1 +2.7
TXAR S S 16 31 02.3 -3.1
TXAR **Lajitas Array** 20.95 314 P P 16 27 16.1 +2.7
comp=Z,149nm,1.1s,baz=133,slow=10,SNR=203
TXAR S S 16 31 02.3 -3.1
comp=Z,0.5nm,0.4s,baz=48,slow=32,SNR=3.6
TXAR LR LR 16 38 37.1
comp=Z,575nm,18.2s,baz=180,slow=46
230A **Sterling City** 21.03 323 ⇑P P 16 27 15.0 +0.8
baz=21,SNR=43
TZTN **Tazewell** 21.05 7 eP P 16 27 15.6 +1.3
comp=Z,59nm,0.9s
428A **Kincaid Ranch,** 21.18 318 ⇑P P 16 27 17.0 +1.1
baz=21
131A **Roby** 21.21 326 ⇑P P 16 27 17.0 +0.9
baz=21
Z32A **Haskell** 21.23 329 ⇓P P 16 27 17.9 +1.6
baz=21,SNR=48
329A **Wagon Wheel Ra** 21.26 321 ⇓P P 16 27 17.0 +0.4
baz=21,SNR=25
626A **Big Bend Ranch** 21.41 314 ⇓P P 16 27 20.0 +1.6
baz=22,SNR=184
527A **Woodward Ranch** 21.41 316 ⇑P P 16 27 19.4 +1.0
baz=22,SNR=68
130A **Snyder** 21.47 325 ⇑P P 16 27 19.4 +0.5
baz=22,SNR=18
229A **Bryant Ranch,** 21.50 322 ⇑P P 16 27 19.5 +0.3
baz=22,SNR=21
Z31A **Sharp Cattle R** 21.58 327 ⇓P P 16 27 20.9 +0.8
baz=22,SNR=75
526A **Mary Lane Ranc** 21.69 315 ⇓P P 16 27 22.6 +1.2
baz=22,SNR=87
328A **Wristen Ranch,** 21.70 319 ⇓P P 16 27 21.8 +0.5
baz=22,SNR=108
427A **Hayter Ranch,** 21.72 317 ⇓P P 16 27 22.5 +0.9
baz=22,SNR=42
Y32A **R-V Farms, Ver** 21.77 330 ⇑P P 16 27 23.3 +1.2
baz=22,SNR=22
TUL1 **Tulsa** 21.91 339 ⇑P P 16 27 24.1 +0.6
baz=22,SNR=14
129A **Stewart Farms,** 22.01 323 ⇑P P 16 27 24.8 +0.2
baz=22
426A **McDonald Obser** 22.02 316 ⇓P P 16 27 26.0 +0.9
baz=22,SNR=44
228A **UT Block 9, Go** 22.07 321 ⇓P P 16 27 25.2 -0.2
baz=22,SNR=7.2
WMOK **Wichita Mounta** 22.07 332 eP P 16 27 25.7 +0.4
WMOK pmax pmax
comp=Z,55nm,0.9s
WMOK **Wichita Mounta** 22.07 332 eP P 16 27 25.7 +0.4
comp=Z,55nm,0.9s
Z30A **Sanderson Ranc** 22.08 326 ⇑P P 16 27 25.8 +0.4
baz=22,SNR=48
Y31A **Rekieta Farm,** 22.15 328 ⇑P P 16 27 27.1 +1.0
baz=22,SNR=30
SIUC **Southern Illin** 22.19 354 eP P 16 27 28.0 +1.5
comp=Z,99nm,1.0s
BLA **Blacksburg** 22.21 13 eP P 16 27 28.4 +1.6
BLA pmax pmax
comp=Z,84nm,1.4s
BLA **Blacksburg** 22.21 13 eP P 16 27 28.4 +1.6
comp=Z,84nm,1.4s
USIN **University of** 22.33 357 eP P 16 27 28.7 +0.7
comp=Z,108nm,1.0s
128A **Castleberry Fa** 22.36 322 ⇓P P 16 27 28.5 0.0
baz=22
Z29A **Hungry Hill Ra** 22.38 325 ⇑P P 16 27 28.3 -0.3
baz=23,SNR=24
326A **Caldwell Ranch** 22.40 317 ⇓P P 16 27 29.4 +0.4
baz=23,SNR=60
Y30A **Stafford Cattl** 22.41 327 ⇑P P 16 27 29.2 +0.2
baz=23,SNR=98
227A **Bennet, Jal** 22.43 320 ⇑P P 16 27 29.6 +0.4
baz=23,SNR=20
X31A **McDonald Ranch** 22.54 330 ⇑P P 16 27 30.9 +0.6
baz=23,SNR=34
425A **Indio Mountain** 22.74 315 ⇑P P 16 27 32.4 -0.2
baz=23
Z28A **Tucker Farm, M** 22.78 324 ⇑P P 16 27 32.5 -0.5
baz=23
Y29A **Porterfield Fa** 22.81 326 ⇑P P 16 27 33.5 +0.3
baz=23,SNR=34
X30A **Coker Ranch, T** 22.84 328 ⇓P P 16 27 34.1 +0.5
baz=23,SNR=63
127A **Arkansas Junct** 22.92 321 ⇑P P 16 27 34.0 -0.5
baz=23,SNR=9.8
CLNB **Carlsbad** 22.96 319 eP P 16 27 35.1 +0.3
comp=Z,6.1nm,1.0s
W31A **Holland Ranch,** 22.98 331 ⇓P P 16 27 34.3 -0.6
baz=23
226B **Tecolote Peak,** 23.02 319 ⇑P P 16 27 35.8 +0.4
baz=23,SNR=47
OLIL **Olney** 23.12 357 eP P 16 27 37.4 +1.2
comp=Z,120nm,1.0s
Y28A **McKinney Farm,** 23.16 325 ⇑P P 16 27 36.5 -0.4
baz=23,SNR=12
SLM **Saint Louis** 23.22 352 P P 16 27 39.0 +1.8
SLM pmax pmax
comp=Z,21nm,0.5s
SLM **Saint Louis** 23.22 352 P P 16 27 39.0 +1.8
comp=Z,21nm,0.5s
GDL2 **Guadalupe Moun** 23.23 319 eP P 16 27 38.8 +1.3
comp=Z,4.6nm,0.5s
X29A **Tulia** 23.27 327 ⇓P P 16 27 37.9 0.0
baz=24,SNR=31
W30A **Crocket Farms** 23.28 330 ⇓P P 16 27 38.8 +0.8
baz=24
Z27A **Tatum** 23.28 322 ⇓P P 16 27 37.0 -1.2
baz=24,SNR=56
JSRW **J. Sargeant Re** 23.31 17 eP P 16 27 38.7 +0.6
126A **Clayton Basin,** 23.31 320 ⇑P P 16 27 38.0 -0.3
baz=24,SNR=7.6
V31A **Spring Creek L** 23.41 332 ⇑P P 16 27 39.7 +0.4
baz=24
225A **Deer Hill, Car** 23.46 318 ⇓P P 16 27 40.4 +0.4
baz=24,SNR=44
324A **Moseley Ranch,** 23.48 316 ⇑P P 16 27 39.6 -0.5
baz=24,SNR=85
324A ⇓S S 16 31 57.8 +6.0
baz=24
MSTX **Muleshoe** 23.50 324 ⇓P P 16 27 40.0 -0.3
baz=24
BLO **Bloomington** 23.51 360 eP P 16 27 40.5 +0.4
BLO pmax pmax
comp=Z,121nm,0.6s
BLO **Bloomington** 23.51 360 eP P 16 27 40.5 +0.4
comp=Z,121nm,0.6s
MNTX **Cornudas Mount** 23.57 316 eP P 16 27 40.5 -0.3
comp=Z,50nm,1.0s
X28A **Dimmitt** 23.59 326 ⇑P P 16 27 41.0 -0.1
baz=24,SNR=5.6
AMTX **Amarillo** 23.60 327 eP P 16 27 40.4 -0.7
comp=Z,55nm,0.6s
Y27A **Causey** 23.66 323 ⇓P P 16 27 41.2 -0.6
baz=24,SNR=58
Z26A **Caprock** 23.71 321 ⇑P P 16 27 41.6 -0.7
baz=24,SNR=24
125A **Gardner Draw,** 23.71 319 ⇓P P 16 27 41.9 -0.4
baz=24,SNR=52
W29A **Amrarillo** 23.76 328 ⇓P P 16 27 42.7 0.0
baz=24
V30A **Spur Ranch, Mi** 23.80 330 ⇓P P 16 27 42.9 -0.1
baz=24
U31A **Nine Bar Ranch** 23.91 333 ⇑P P 16 27 44.4 +0.3
baz=24
ATAH **Atahualpa** 23.93 160 P P 16 27 46.5 +1.7
ATAH **Atahualpa** 23.93 160 P P 16 27 46.5 +1.7
comp=Z,10nm,0.9s,baz=4.2,slow=6.1,SNR=8.3
ATAH LR LR 16 36 09.3
comp=Z,2µm,21.2s,baz=176,slow=34
Y26A **Elida** 24.07 323 ⇑P P 16 27 45.5 -0.1
baz=24,SNR=27
W28A **Vega** 24.16 327 ⇑P P 16 27 46.5 +0.1
baz=24
Z25A **Roswell** 24.17 320 ⇓P P 16 27 47.0 +0.4
baz=24,SNR=30
X27A **F and S Farms,** 24.18 325 ⇓P P 16 27 46.8 +0.2
baz=24,SNR=18

124A **Stringfield Ra** 24.25 318 ⇑P P 16 27 48.7 +1.2
baz=24,SNR=87
V29A **Stinnett** 24.29 329 ⇑P P 16 27 48.4 +0.8
baz=24
U30A **WK&E Inc. Balk** 24.40 331 ⇓P P 16 27 49.1 +0.5
baz=25
T31A **Randall Ranch,** 24.44 334 ⇓P P 16 27 48.5 -0.4
baz=25
223A **Chaparral, Ant** 24.46 316 ⇓P P 16 27 49.4 +0.2
baz=25
W27A **Bowe Ranch, En** 24.47 326 ⇑P P 16 27 49.8 +0.6
baz=25,SNR=17
X26A **CR and CF Fran** 24.51 324 ⇑P P 16 27 50.2 +0.5
baz=25,SNR=26
V28A **Channing** 24.55 328 ⇓P P 16 27 50.0 0.0
baz=25
Y25A **Mesa, Roswell** 24.59 321 ⇓P P 16 27 51.7 +1.3
baz=25,SNR=18
Z24A **Sheeppen Canyo** 24.60 319 ⇑P P 16 27 52.0 +1.4
baz=25,SNR=24
U29A **Oasis Ranch, S** 24.63 330 ⇓P P 16 27 51.8 +1.1
baz=25
SFIN **Scholer Farm** 24.72 359 ⇑P P 16 27 51.4 0.0
baz=25
123A **Bell Site, Whi** 24.73 317 ⇑P P 16 27 53.2 +1.5
baz=25
ACSO **Alum Creek Sta** 24.76 6 eP P 16 27 51.5 -0.1
comp=Z,31nm,0.6s
T30A **Plains** 24.78 332 ⇑P P 16 27 52.4 +0.4
baz=25
S31A **Mullinville** 24.81 335 ⇓P P 16 27 51.7 -0.5
baz=25
V27A **Dan Oppiter Fa** 24.87 327 ⇑P P 16 27 53.4 +0.5
baz=25
W26A **Owens Ranch, T** 24.88 325 ⇓P P 16 27 54.0 +1.0
baz=25
222A **Williams Famil** 24.98 315 ⇑P P 16 27 54.0 0.0
baz=25
X25A **Clemmons Ranch** 24.99 322 ⇓P P 16 27 54.6 +0.6
baz=25
HDIL **Hopedale** 25.02 355 eP P 16 27 53.7 -0.3
comp=Z,46nm,1.0s
U28A **Mallet** 25.04 329 ⇑P P 16 27 54.3 -0.1
baz=25
Y24A **Capitan** 25.04 320 ⇑P P 16 27 55.5 +0.9
baz=25,SNR=113
KSU1 **Kansas State U** 25.08 341 eP P 16 27 55.5 +0.9
comp=Z,38nm,0.7s
Z23A **Rita Site, Whi** 25.11 318 ⇓P P 16 27 56.6 +1.5
baz=25,SNR=15
SDMD **Soldier's Deli** 25.20 18 eP P 16 27 57.5 +1.8
comp=Z,12nm,0.7s
T29A **Hugoton** 25.21 331 ⇑P P 16 27 56.3 +0.4
baz=25
S30A **Montezuma** 25.24 333 ⇓P P 16 27 56.0 -0.2
baz=25
122A **Conniff Cattle** 25.27 316 ⇑P P 16 27 58.0 +1.4
baz=25,SNR=18
W25A **X Bar L Ranch,** 25.36 324 ⇓P P 16 27 58.8 +1.4
baz=26
U27A **Thompson Grove** 25.38 328 ⇓P P 16 27 57.9 +0.4
baz=26
R31A **Burdett** 25.40 335 ⇓P P 16 27 57.3 -0.2
baz=26
V26A **Tequesquite Ra** 25.41 326 ⇑P P 16 27 58.5 +0.7
baz=26,SNR=41
Y23A **Lovelace Mesa,** 25.43 319 ⇑P P 16 27 58.8 +0.7
baz=26,SNR=42
X24A **Lazy VL Ranch,** 25.48 321 ⇓P P 16 27 59.0 +0.5
baz=26
S29A **Ulysses** 25.51 332 ⇓P P 16 27 59.1 +0.4
baz=26
320A **Kipp Ranch, An** 25.54 312 ⇑P P 16 28 01.0 +1.9
baz=26,SNR=57
T28A **Walsh** 25.57 330 ⇓P P 16 27 59.4 +0.2
baz=26
Z22A **Elephant Butte** 25.58 317 ⇑P P 16 28 01.5 +2.1
baz=26,SNR=39
121A **Cookes Peak, D** 25.70 315 ⇓P P 16 28 02.5 +2.0
baz=26,SNR=57
R30A **Dighton** 25.70 334 ⇓P P 16 28 00.4 +0.1
baz=26
T27A **Campo** 25.82 329 ⇓P P 16 28 00.9 -0.6
baz=26
U26A **Atchley Ranch,** 25.83 327 ⇑P P 16 28 02.4 +0.6
baz=26
S28A **Manter** 25.84 331 ⇓P P 16 28 02.1 +0.4
baz=26
220A **Playas Peak, P** 25.85 313 ⇓P P 16 28 03.5 +1.6
baz=26,SNR=35
V25A **Rancho No Teng** 25.90 325 ⇓P P 16 28 03.5 +1.2
baz=26
W24A **Lazy 6 Ranch,** 25.91 323 ⇑P P 16 28 03.9 +1.5
baz=26,SNR=38
BNM **Barren Site** 25.93 319 eP P 16 28 04.7 +1.9
comp=Z,20nm,1.3s
X23A **Hourglass Bar** 25.94 320 ⇓P P 16 28 03.6 +0.8
baz=26
Q31A **Ellis** 25.96 337 ⇓P P 16 28 02.9 +0.2
baz=26
Y22A **Socorro** 26.01 318 ⇑P P 16 28 04.9 +1.6
baz=26,SNR=13
LPM **Los Pinos Moun** 26.04 319 eP P 16 28 08.5 +4.9
comp=Z,4.8nm,0.8s
Y22D **IRIS PASSCAL I** 26.07 319 ⇑P P 16 28 05.7 +1.9
baz=26
Z21A **St. Cloud Mine** 26.08 316 ⇑P P 16 28 06.1 +2.1
baz=26,SNR=15
319A **Douglas** 26.11 311 ⇑P P 16 28 05.6 +1.4
baz=26,SNR=9.5
R29A **Marienthal** 26.18 333 ⇓P P 16 28 05.2 +0.4
baz=26
V24A **Rampart Ranch,** 26.19 324 ⇓P P 16 28 06.6 +1.6
baz=26
U25A **Circle Dot Ran** 26.19 326 ⇓P P 16 28 06.1 +1.1
baz=26
Q30A **Quinter** 26.27 335 ⇓P P 16 28 05.2 -0.2
baz=26
120A **U Bar Ranch, L** 26.29 314 ⇓P P 16 28 07.6 +1.7
baz=26,SNR=29
W23A **Werner Place,** 26.31 321 ⇓P P 16 28 08.1 +2.0
baz=26,SNR=11
T26A **Comanche Natio** 26.35 328 ⇓P P 16 28 06.9 +0.6
baz=26
ANMO **Albuquerque** 26.35 321 eP P 16 28 07.8 +1.4
comp=Z,4.5nm,0.7s
ANMO **Albuquerque** 26.35 321 P P 16 28 08.2 +1.8
comp=Z,5.0nm,0.6s,baz=140,slow=12,SNR=11
ANMO LR LR 16 41 03.3
comp=Z,309nm,18.9s,baz=313,slow=42
S27A **Las Animas** 26.40 330 ⇓P P 16 28 07.0 +0.3
baz=27
X22A **Bernardo** 26.41 319 ⇑P P 16 28 08.6 +1.7
baz=27
P31A **Stockton** 26.41 337 ⇓P P 16 28 06.6 -0.1
baz=27
R28A **Tribune** 26.41 332 ⇓P P 16 28 06.6 -0.2
baz=27,SNR=5.3
LAZ **Ladron** 26.42 319 eP P 16 28 09.0 +1.9
comp=Z,7.1nm,1.1s
Q29A **Oakley** 26.51 334 ⇑P P 16 28 08.5 +0.8
baz=27
Y21A **Point of Rocks** 26.51 318 ⇑P P 16 28 10.1 +2.1
baz=27,SNR=30
Z20A **Nine Sixteen R** 26.59 315 ⇓P P 16 28 10.4 +1.9
baz=27,SNR=10
S26A **Kim** 26.63 329 ⇓P P 16 28 09.6 +0.8
baz=27
U24A **Moreno Valley** 26.68 325 ⇓P P 16 28 11.0 +1.5
baz=27
W22A **Albuquerque** 26.69 320 ⇑P P 16 28 09.0 -0.5
baz=27
V23A **Ortiz Mt. (NFS** 26.73 322 ⇓P P 16 28 10.1 +0.3
baz=27
T25A **Trinidad** 26.75 327 ⇑P P 16 28 10.5 +0.5
baz=27
P30A **Selden** 26.76 336 ⇓P P 16 28 10.6 +0.6
baz=27
R27A **Eads** 26.83 331 ⇑P P 16 28 10.5 0.0
baz=27
X21A **Alamocita Cree** 26.86 318 ⇓P P 16 28 13.1 +2.0
baz=27,SNR=18
Y20A **Horse Springs,** 26.91 317 ⇑P P 16 28 13.6 +2.1
baz=27,SNR=26
Q28A **Sharon Springs** 27.02 333 ⇓P P 16 28 12.8 +0.5
baz=27
P29A **Atwood** 27.09 335 ⇓P P 16 28 13.0 +0.1
baz=27

U23A **El Rito** 27.14 323 ⇑P P 16 28 14.7 +1.1
baz=27
R26A **Arlington** 27.15 330 ⇓P P 16 28 14.7 +1.2
baz=27
S25A **Robets Cordova** 27.15 328 ⇑P P 16 28 14.9 +1.3
baz=27
W21A **San Fidel** 27.20 320 ⇓P P 16 28 16.0 +1.9
baz=27
O30A **MW Ranch, Wils** 27.24 337 ⇓P P 16 28 14.1 -0.1
baz=28
V22A **San Miguel Ran** 27.28 322 ⇑P P 16 28 13.8 -1.0
baz=28
KSCO **Kaye Shedlock'** 27.33 332 ⇓P P 16 28 15.8 +0.7
baz=28
X20A **Quemado** 27.38 318 ⇑P P 16 28 18.0 +2.2
baz=28
P28A **Saint Francis** 27.41 334 ⇑P P 16 28 16.6 +0.8
baz=28
JFWS **Jewell Farm** 27.44 354 P P 16 28 17.5 +1.6
JFWS pmax pmax
comp=Z,23nm,0.7s
JFWS **Jewell Farm** 27.44 354 P P 16 28 17.5 +1.6
comp=Z,23nm,0.7s
R25A **Fountain Ranch** 27.44 328 ⇑P P 16 28 17.3 +1.1
baz=28
O29A **4D Ranch, Culb** 27.48 336 ⇓P P 16 28 16.1 -0.2
baz=28
S24A **Houchin Ranch,** 27.54 326 ⇓P P 16 28 19.6 +2.4
baz=28
T23A **Casias Ranch,** 27.55 325 ⇓P P 16 28 19.2 +1.9
baz=28
U22A **Llaves** 27.56 323 ⇓P P 16 28 19.1 +1.7
baz=28,SNR=10
V21A **Milan** 27.64 321 ⇓P P 16 28 19.9 +1.8
baz=28
BGNE **Belgrade** 27.66 341 ⇓P P 16 28 17.5 -0.5
baz=28
Q26A **Hugo** 27.68 330 ⇓P P 16 28 19.4 +1.1
baz=28
TUC **Tucson** 27.68 311 eP P 16 28 19.3 +1.0
TUC pmax pmax
comp=Z,14nm,1.1s
TUC **Tucson** 27.68 311 eP P 16 28 19.2 +1.0
comp=Z,14nm,1.1s
W20A **Ramah** 27.74 319 ⇓P P 16 28 21.1 +2.1
baz=28
P27A **Ficken Ranch,** 27.75 333 ⇑P P 16 28 19.5 +0.6
baz=28
SDCO **Great Sand Dun** 27.77 326 eP P 16 28 20.8 +1.5
comp=Z,14nm,0.8s
N30A **Hueftle Ranch,** 27.79 337 ⇓P P 16 28 19.3 +0.2
baz=28
O28A **Krutsinger Ran** 27.88 334 ⇓P P 16 28 20.6 +0.7
baz=28
R24A **Sanders Place,** 27.93 327 ⇑P P 16 28 22.2 +1.6
baz=28,SNR=14
N29A **Votaw Ranch, W** 28.01 337 ⇓P P 16 28 21.0 -0.1
baz=28
S23A **Nye Farm, Mont** 28.02 326 ⇓P P 16 28 23.2 +1.8
baz=28
Q25A **Bedland, Calha** 28.02 330 ⇓P P 16 28 22.7 +1.3
baz=28
BINY **Binghamton** 28.03 17 eP P 16 28 22.5 +1.3
comp=Z,20nm,0.9s
T22A **Edith** 28.03 323 ⇓P P 16 28 23.4 +1.9
baz=28,SNR=8.5
U21A **Nageezi** 28.07 322 ⇑P P 16 28 23.6 +1.7
baz=28
P26A **Davis Ranch, A** 28.10 332 ⇓P P 16 28 23.1 +1.0
baz=28
V20A **Brimhall** 28.15 320 ⇑P P 16 28 23.1 +0.6
baz=28
O27A **Beecher Island** 28.23 333 ⇑P P 16 28 24.1 +1.0
baz=28
N28A **Pribbeno Ranch** 28.25 335 ⇑P P 16 28 23.3 0.0
baz=28
R23A **Moffat** 28.28 327 ⇑P P 16 28 25.5 +1.8
baz=28
X18A **Snowflake** 28.33 316 ⇓P P 16 28 26.0 +1.8
baz=28
M30A **Dale-Ortello V** 28.36 338 ⇑P P 16 28 25.1 +0.9
baz=29
T21A **Navajo Lake** 28.38 323 ⇓P P 16 28 26.0 +1.4
baz=29
P25A **Willow Gulch B** 28.45 330 ⇓P P 16 28 26.4 +1.2
baz=29,SNR=8.0
S22A **4UR Ranch, Cre** 28.50 325 ⇑P P 16 28 27.4 +1.6
baz=29
Q24A **Divide** 28.50 328 ⇑P P 16 28 27.1 +1.3
baz=29
W18A **Petrified Fore** 28.54 317 ⇓P P 16 28 27.8 +1.8
baz=29
U20A **Newcomb** 28.56 321 ⇓P P 16 28 27.8 +1.6
baz=29
M29A **Burnside Ranch** 28.57 337 ⇑P P 16 28 26.5 +0.4
baz=29
O26A **Horse Wrangler** 28.64 332 ⇑P P 16 28 27.9 +1.1
baz=29
N27A **Anderson Farm,** 28.76 334 ⇓P P 16 28 28.8 +0.9
baz=29
M28A **Bar X Bar Ranc** 28.79 336 ⇓P P 16 28 28.4 +0.3
baz=29
R22A **Saguache, Gunn** 28.81 325 ⇑P P 16 28 30.3 +1.8
baz=29,SNR=17
P24A **Kohler Place,** 28.81 329 ⇓P P 16 28 29.2 +0.8
baz=29
Q23A **Hartsel** 28.81 328 ⇑P P 16 28 29.9 +1.4
baz=29
O25A **Wiggins** 28.90 331 ⇑P P 16 28 30.7 +1.5
baz=29
S21A **Coal Bank Pass** 28.99 323 ⇑P P 16 28 31.2 +1.0
baz=29
214A **Organ Pipe Nat** 29.00 309 ⇓P P 16 28 30.6 +0.6
baz=29
L29A **Maesberg Ranch** 29.04 338 ⇑P P 16 28 30.8 +0.5
baz=29
N26A **Koester Ranch,** 29.08 333 ⇓P P 16 28 31.4 +0.8
baz=29
MVCO **Mesa Verde** 29.09 322 eP P 16 28 32.6 +1.6
comp=Z,14nm,1.0s
P23A **Jefferson** 29.16 328 ⇓P P 16 28 33.2 +1.5
baz=29
X16A **Lo Mia Camp, P** 29.28 314 ⇑P P 16 28 34.1 +1.5
baz=29
M27A **Reverse DX Ran** 29.30 335 ⇑P P 16 28 33.6 +0.9
baz=30
R21A **Cimarron** 29.34 325 ⇑P P 16 28 34.6 +1.4
baz=30
Q22A **Crested Butte,** 29.35 326 ⇑P P 16 28 34.9 +1.6
baz=30
O24A **Longmont** 29.36 330 ⇓P P 16 28 34.6 +1.4
baz=30
ECSD **EROS Data Cent** 29.38 345 eP P 16 28 32.4 -0.7
comp=Z,26nm,0.8s
S20A **Disappointment** 29.43 323 ⇑P P 16 28 34.6 +0.6
baz=30
M26A **McRoberts Ranc** 29.57 334 ⇑P P 16 28 35.3 +0.3
baz=30
K29A **Lazy Trails An** 29.59 339 ⇑P P 16 28 35.8 +0.7
baz=30
SMCO **Snowmass** 29.61 327 eP P 16 28 37.3 +1.6
comp=Z,17nm,1.2s
Q21A **Lamborn Mesa,** 29.69 325 ⇓P P 16 28 37.3 +1.1
baz=30
R20A **Redvale** 29.69 324 ⇑P P 16 28 37.1 +0.9
baz=30
L27A **T5 Ranch, Ells** 29.75 336 ⇑P P 16 28 37.4 +0.8
baz=30
SADO **Sadowa** 29.76 11 P P 16 28 37.1 +0.6
SADO **Sadowa** 29.76 11 P P 16 28 37.1 +0.6
comp=Z,10.0nm,0.7s,baz=252,slow=6.5,SNR=11
SADO LR LR 16 40 55.9
comp=Z,480nm,18.1s,baz=184,slow=37
PV01 **Paradox Valley** 29.76 323 P P 16 28 38.7 +1.8
comp=Z,293nm,0.8s
Z14A **Wintersburg** 29.79 311 ⇑P P 16 28 37.9 +1.0
baz=30
ACCN **Adirondack Com** 29.80 19 eP P 16 28 38.3 +1.4
comp=Z,14nm,0.9s
P22A **Eagle** 29.80 327 ⇓P P 16 28 38.7 +1.5
baz=30
N24A **Carr** 29.82 331 ⇓P P 16 28 39.0 +1.6
baz=30
O23A **Lake Granby, G** 29.84 329 ⇓P P 16 28 38.7 +1.1
baz=30
WUAZ **Wupatki** 29.85 316 eP P 16 28 39.8 +2.1
comp=Z,22nm,1.1s
K28A **Ten Mile Ranch** 29.92 338 ⇑P P 16 28 38.9 +0.8

baz=30
M25A **Palm-Egli Farm** 29.93 333 ⇑P P 16 28 39.5 +1.2
baz=30
L26A **Underwood Farm** 30.01 335 ⇓P P 16 28 39.6 +0.7
baz=30
SPMN **St. Paul** 30.04 351 ⇑P P 16 28 40.7 +1.7
baz=30
O22A **Kremmling** 30.12 328 ⇑P P 16 28 41.0 +0.9
baz=30
Y14A **Wickenburg** 30.12 312 ⇓P P 16 28 40.4 +0.5
baz=30
PV04 **Paradox Valley** 30.13 323 eP P 16 28 41.2 +1.1
Q20A **Ridgley Place,** 30.17 325 ⇓P P 16 28 42.0 +1.6
baz=30
K27A **Flueckinger Fa** 30.24 337 ⇑P P 16 28 41.9 +1.0
baz=30
M24A **Cheyenne** 30.30 332 ⇑P P 16 28 41.6 0.0
baz=30
N23A **Red Feather La** 30.38 330 ⇑P P 16 28 43.2 +0.9
baz=31
J28A **Allard Ranch,** 30.50 339 ⇓P P 16 28 43.3 +0.2
baz=31
N22A **Wattenberg Ran** 30.55 329 ⇓P P 16 28 45.4 +1.5
baz=31,SNR=7.3
P20A **De Beque** 30.61 325 ⇑P P 16 28 45.9 +1.6
baz=31
K26A **Motz Farm, Whi** 30.61 335 ⇓P P 16 28 44.8 +0.6
baz=31
O21A **Pagoda** 30.63 327 ⇓P P 16 28 46.1 +1.6
baz=31
LONY **Lake Ozonia** 30.65 17 eP P 16 28 45.5 +1.1
comp=Z,34nm,0.9s
BRSD **Miller** 30.67 342 ⇓P P 16 28 44.1 -0.5
baz=31
L24A **Wheatland** 30.81 333 ⇑P P 16 28 47.6 +1.6
baz=31
K25A **Mack Ranch, Ha** 30.82 334 ⇓P P 16 28 47.2 +1.1
baz=31
O20A **White River Ci** 30.98 326 ⇑P P 16 28 49.5 +2.0
baz=31
U15A **North Rim** 30.98 317 ⇑P P 16 28 50.2 +2.3
baz=31
GLA **Glamis** 31.02 309 ⇑P P 16 28 48.9 +1.0
baz=31
P19A **Cripple Cowboy** 31.02 325 ⇑P P 16 28 49.6 +1.5
baz=31
N21A **Black Mountain** 31.06 328 ⇓P P 16 28 50.3 +1.9
baz=31
M22A **Cedar Creek Ra** 31.08 330 ⇑P P 16 28 49.8 +1.2
baz=31
PDMCI **Parker Dam,Lak** 31.11 312 ⇑P P 16 28 50.6 +2.0
baz=31
LBNH **Lisbon** 31.13 20 eP P 16 28 50.0 +1.4
LBNH pmax pmax
comp=Z,21nm,1.0s
LBNH **Lisbon** 31.13 20 eP P 16 28 50.0 +1.4
comp=Z,21nm,1.0s
FRNY **Flat Rock** 31.14 18 eP P 16 28 49.8 +1.1
comp=Z,20nm,1.1s
L23A **Garrett** 31.21 332 ⇓P P 16 28 50.5 +0.8
baz=31
K24A **Anderson Ranch** 31.31 333 ⇑P P 16 28 51.2 +0.8
baz=32
W13A **Hualapai Mount** 31.34 313 ⇓P P 16 28 52.1 +1.2
baz=32
J25A **Sunshine Ranch** 31.44 335 ⇑P P 16 28 52.3 +0.8
baz=32
L22A **Ellis Ranch, M** 31.49 331 ⇓P P 16 28 53.3 +1.2
baz=32
N20A **Spence Gulch,** 31.49 327 ⇑P P 16 28 53.6 +1.4
baz=32
SRU **San Rafael** 31.55 323 eP P 16 28 54.1 +1.5
SRU pmax pmax
comp=Z,15nm,1.1s
SRU **San Rafael** 31.55 323 eP P 16 28 54.1 +1.5
comp=Z,15nm,1.1s
O19A **Miners Draw (B** 31.57 326 ⇑P P 16 28 54.1 +1.3
baz=32
M21A **Separation Pea** 31.61 329 ⇑P P 16 28 54.6 +1.3
baz=32
K23A **Bowen Ranch, D** 31.69 333 ⇑P P 16 28 55.5 +1.8
baz=32
NEE2 **Needles Airpor** 31.69 312 ⇓P P 16 28 54.6 +0.9
baz=32
J24A **Dixon Ranch, L** 31.74 334 ⇑P P 16 28 55.4 +1.2
baz=32
BC3 **Big Chuckawall** 31.76 310 ⇑P P 16 28 56.6 +2.1
baz=32
IRM **Iron Mountain** 31.77 311 ⇑P P 16 28 55.4 +0.9
baz=32
Q16A **Castle Valley** 31.80 322 ⇑P P 16 28 56.2 +1.3
baz=32
DVTC **Desert V Tower** 31.81 308 ⇑P P 16 28 55.4 +0.5
baz=32
L21A **Rawlins** 31.88 330 ⇓P P 16 28 56.5 +0.9
baz=32,SNR=15
M20A **Sweetwater, Wa** 31.93 328 ⇓P P 16 28 57.4 +1.3
baz=32,SNR=11
K22A **Casper** 32.01 331 ⇑P P 16 28 57.5 +0.9
baz=32
RSSD **Black Hills** 32.14 336 P P 16 29 00.2 +2.4
RSSD pmax pmax
comp=Z,3.0nm,0.6s
RSSD **Black Hills** 32.14 336 P P 16 29 00.2 +2.4
comp=Z,2.7nm,0.6s
MSU **Marysvale** 32.16 320 eP P 16 29 00.2 +2.1
MSU pmax pmax
comp=Z,11nm,1.2s
MSU **Marysvale** 32.16 320 eP P 16 29 00.2 +2.1
comp=Z,12nm,1.2s
I24A **Kuemmerle Ranc** 32.16 335 ⇓P P 16 28 58.5 +0.6
baz=32
MVU **Marysvale** 32.17 320 eP P 16 29 00.0 +1.8
comp=Z,25nm,1.5s
J23A **Dilts Ranch, B** 32.18 333 ⇓P P 16 28 59.0 +0.9
baz=32
BELC **Belle Mtn. Jos** 32.32 310 ⇑P P 16 29 00.8 +1.4
baz=32
L20A **Wamsutter** 32.40 329 ⇓P P 16 29 01.3 +1.2
baz=33,SNR=8.5
GMRC **Granite Mounta** 32.44 312 ⇓P P 16 29 01.6 +1.1
baz=33
M19A **Rock Springs** 32.44 327 ⇓P P 16 29 01.3 +0.8
baz=33
PFO **Pinyon Flat Ob** 32.49 309 P P 16 29 02.6 +1.7
PFO **Pinyon Flat Ob** 32.49 309 P P 16 29 02.6 +1.7
comp=Z,4.1nm,0.7s,baz=247,slow=5.1,SNR=3.7
PFO **Pinyon Flat Ob** 32.49 309 ⇓P P 16 29 01.9 +1.0
baz=33
ARUT **Antelope Range** 32.52 318 eP P 16 29 03.5 +2.3
ARUT pmax pmax
comp=Z,13nm,0.9s
ARUT **Antelope Range** 32.52 318 eP P 16 29 03.5 +2.3
comp=Z,13nm,0.9s
I23A **Meade Ranch, G** 32.59 334 ⇓P P 16 29 01.7 +0.1
baz=33
J22A **Midwest** 32.59 332 ⇑P P 16 29 02.4 +0.8
baz=33
MPU **Maple Canyon** 32.79 323 eP P 16 29 05.1 +1.6
comp=Z,30nm,1.1s
DAU **Daniels Canyon** 32.83 324 P P 16 29 05.3 +1.3
DAU pmax pmax
comp=Z,45nm,1.3s
DAU **Daniels Canyon** 32.83 324 P P 16 29 05.3 +1.3
comp=Z,45nm,1.3s
H24A **Dirks Ranch, A** 32.87 336 ⇓P P 16 29 03.9 -0.1
baz=33
K20A **Yellowstone Ra** 32.88 330 ⇓P P 16 29 04.9 +0.7
baz=33
TUQ **Turquoise Moun** 32.95 312 ⇓P P 16 29 06.0 +1.1
baz=33
HEC **Hector,Ludlow** 32.95 311 ⇓P P 16 29 05.9 +1.0
baz=33
I22A **9 Mile Ranch,** 32.97 333 ⇑P P 16 29 05.8 +0.8
baz=33
J21A **Lysite** 32.98 331 ⇓P P 16 29 06.3 +1.2
baz=33,SNR=15
L19A **Farson** 32.98 328 ⇑P P 16 29 05.7 +0.6
baz=33
MURC **Murrieta** 33.04 309 ⇑P P 16 29 06.4 +0.8
baz=33
H23A **Clabaugh Cattl** 33.05 335 ⇓P P 16 29 06.5 +0.9
baz=33
BBRC **Big Bear Solar** 33.12 310 ⇑P P 16 29 07.6 +1.0
baz=33
L18A **Fontenelle, Gr** 33.20 327 ⇑P P 16 29 08.0 +0.9
baz=33
M17A **Scullys Gap (B** 33.22 326 ⇓P P 16 29 07.4 +0.1
baz=33
K19A **Absolon Red Bu** 33.25 329 ⇓P P 16 29 07.8 +0.2
baz=33
I21A **Big Trails, Te** 33.27 332 ⇓P P 16 29 07.8 +0.2
baz=34
J20A **Shoshoni** 33.28 331 ⇓P P 16 29 09.2 +1.5
baz=34,SNR=15
G24A **Alzada** 33.30 337 ⇑P P 16 29 08.4 +0.6
baz=34
H22A **Clearmont** 33.48 334 ⇓P P 16 29 10.0 +0.7
baz=34
AGMN **Agassiz Nation** 33.54 349 eP P 16 29 08.7 -1.1
comp=Z,16nm,0.6s
BW06 **Boulder Array** 33.56 328 eP P 16 29 10.7 +0.4
comp=Z,17nm,1.0s
PDAR **Pinedale Array** 33.56 328 P P 16 29 11.3 +1.0
PDAR **Pinedale Array** 33.56 328 P P 16 29 11.3 +1.0
comp=Z,9.2nm,0.7s,baz=128,slow=9.6,SNR=44
PDAR LR LR 16 47 13.2
comp=Z,293nm,19.7s,baz=145,slow=44
G23A **Biddle** 33.58 335 ⇑P P 16 29 10.6 +0.4
baz=34
E26A **Carlson Angus** 33.59 340 ⇑P P 16 29 09.5 -0.7
baz=34
DUG **Dugway** 33.59 322 eP P 16 29 12.4 +1.9
DUG pmax pmax
comp=Z,17nm,1.1s
DUG **Dugway** 33.59 322 eP P 16 29 12.4 +1.9
comp=Z,18nm,1.1s
J19A **Crowheart** 33.68 330 ⇓P P 16 29 11.7 +0.5
baz=34
F24A **Ekalaka** 33.75 337 ⇓P P 16 29 12.1 +0.4
baz=34
I20A **Worland** 33.76 331 ⇑P P 16 29 12.4 +0.6
baz=34
H21A **Big Horn, Sher** 33.80 333 ⇓P P 16 29 12.3 +0.1
baz=34
HWUT **Hardware Ranch** 33.81 325 eP P 16 29 13.3 +0.9
comp=Z,19nm,1.0s
E25A **Miller Ranch,** 33.93 339 ⇓P P 16 29 12.9 -0.3
baz=34
G22A **Birney** 33.96 335 ⇓P P 16 29 13.3 -0.2
baz=34
MDND **Maddock** 33.97 344 ⇑P P 16 29 12.9 -0.6
baz=34,SNR=11
F23A **Volborg** 34.01 336 ⇓P P 16 29 14.2 +0.3
baz=34
H20A **Greybull** 34.11 332 ⇑P P 16 29 15.2 +0.3
baz=34
FURC **Furnace Creek,** 34.12 313 ⇓P P 16 29 15.6 +0.8
baz=34
DECC **Green Verdugo** 34.17 309 ⇑P P 16 29 16.4 +1.0
baz=34
EDW2 **Edwards Air Fo** 34.19 310 ⇓P P 16 29 16.9 +1.3
baz=34
I19A **Meeteetse** 34.23 331 ⇓P P 16 29 16.7 +0.7
baz=34
LRMC **Laurel Mountai** 34.24 311 ⇓P P 16 29 17.7 +1.6
baz=34
E24A **Baker** 34.30 338 ⇓P P 16 29 16.4 -0.1
baz=34
G21A **Lodge Grass** 34.35 334 ⇓P P 16 29 16.9 0.0
baz=35
MPMC **Mauel Prospec** 34.37 312 ⇓P P 16 29 18.9 +1.6
baz=34
I18A **Diamond G Ranc** 34.38 329 ⇑P P 16 29 17.7 +0.4
baz=35
F22A **Rosebud** 34.40 335 ⇑P P 16 29 17.2 -0.1
baz=35
HVU **Hansel Valley** 34.60 324 eP P 16 29 20.7 +1.5
HVU pmax pmax
comp=Z,25nm,1.1s
HVU **Hansel Valley** 34.60 324 eP P 16 29 20.7 +1.5
comp=Z,25nm,1.1s
OSI **Osito Adit** 34.62 309 ⇑P P 16 29 18.2 -1.1
baz=35
E23A **Ismay** 34.62 337 ⇓P P 16 29 19.1 -0.1
baz=35
REDW **Red Top Meadow** 34.65 328 eP P 16 29 20.9 +1.2
comp=Z,1.0nm,1.0s
SNOW **Snow King Moun** 34.67 328 eP P 16 29 21.7 +1.7
comp=Z,52nm,0.9s
LOHW **Long Hollow** 34.70 329 eP P 16 29 21.6 +1.4
comp=Z,14nm,0.9s
H19A **Powell** 34.71 331 ⇓P P 16 29 20.0 -0.1
baz=35
GRAC **Grapevine Rang** 34.73 314 ⇑P P 16 29 21.1 +0.8
baz=35
G20A **Bridger** 34.78 333 ⇑P P 16 29 20.7 0.0
baz=35
D24A **Glendive** 34.78 338 ⇓P P 16 29 20.9 +0.3
baz=35
F21A **Absaloka Mine,** 34.79 334 ⇓P P 16 29 20.9 +0.2
baz=35
TPAW **Teton Pass** 34.79 328 eP P 16 29 22.4 +1.5
comp=Z,66nm,1.0s
E22A **Miles City** 34.82 336 ⇑P P 16 29 20.7 -0.2
baz=35
MOOW **Moose Ponds** 34.87 329 eP P 16 29 22.9 +1.3
comp=Z,12nm,0.7s
RRI2 **Red Ridge** 34.88 328 eP P 16 29 23.6 +1.8
comp=Z,92nm,1.2s
ISA **Isabella** 34.89 311 ⇑P P 16 29 21.9 +0.2
baz=35
I17A **Pilgrim Ck.** 34.91 329 ⇓P P 16 29 23.1 +1.1
baz=35
ARVC **Arvin** 34.92 310 ⇓P P 16 29 22.1 +0.2
baz=35
CWC **Cottonwood Cre** 34.96 312 ⇓P P 16 29 22.9 +0.5
baz=35
H18A **Shoshone NF, C** 35.03 331 ⇑P P 16 29 23.1 +0.2
baz=35
IMW **Indian Meadow** 35.08 329 eP P 16 29 23.8 +0.3
comp=Z,17nm,0.7s
D23A **Lindsay** 35.15 338 ⇑P P 16 29 24.4 +0.7
baz=35
C24A **Savage** 35.17 339 ⇑P P 16 29 24.9 +1.0
baz=35
RLMT **Red Lodge** 35.18 332 eP P 16 29 24.9 +0.7
comp=Z,11nm,0.8s
F20A **Billings** 35.21 333 ⇑P P 16 29 24.8 +0.5
baz=35
H17A **Grant Village** 35.26 330 ⇓P P 16 29 25.1 +0.1
baz=36
I16A **Newdale** 35.34 328 ⇑P P 16 29 26.9 +1.3
baz=36,SNR=7.1
E21A **Keefer Ranch,** 35.35 335 ⇑P P 16 29 25.7 +0.2
baz=36
ELK **Elko** 35.39 321 eP P 16 29 27.3 +1.2
comp=Z,19nm,1.0s
VES **Vestal, Richgr** 35.41 311 ⇑P P 16 29 26.1 0.0
baz=36
ULM **Lac du Bonnet** 35.42 350 P P 16 29 24.6 -1.4
ULM **Lac du Bonnet** 35.42 350 P P 16 29 24.6 -1.4
comp=Z,16nm,0.8s,baz=167,slow=9.2,SNR=9.7
ULM LR LR 16 46 44.8
comp=Z,148nm,19.3s,baz=40,slow=41
G18A **Lazy EL Ranch,** 35.46 331 ⇓P P 16 29 27.1 +0.5
baz=36,SNR=7.2
D22A **Cohagen** 35.49 337 ⇓P P 16 29 27.4 +0.6
baz=36
F19A **Roth Farm, Mol** 35.60 333 ⇑P P 16 29 28.0 +0.4
baz=36,SNR=6.7
YMR **Madison River** 35.65 329 eP P 16 29 30.4 +2.2
comp=Z,20nm,0.8s
C23A **Lambert** 35.67 338 ⇓P P 16 29 28.4 +0.2
baz=36
D21A **La Casta Ranch** 35.74 336 ⇓P P 16 29 29.1 +0.2
baz=36
E20A **Meyer Farm, Mu** 35.75 334 ⇓P P 16 29 29.9 +0.9
baz=36,SNR=7.8
H16A **Russell Place,** 35.81 329 ⇓P P 16 29 30.8 +1.1
baz=36
SMMC **Simmler** 35.86 310 ⇓P P 16 29 30.1 +0.1
baz=36
GCMT **Greycliff** 35.87 332 eP P 16 29 28.4 -1.6
comp=Z,8.3nm,0.7s
C22A **Vida** 35.88 337 ⇑P P 16 29 30.7 +0.7
baz=36
DGMT **Dagmar** 35.91 340 eP P 16 29 31.6 +1.4
comp=Z,25nm,0.7s
F18A **Big Timber** 35.98 332 ⇓P P 16 29 31.7 +0.7
baz=36
QLMT **Earthquake Lak** 35.99 329 eP P 16 29 33.6 +2.4
comp=Z,1.7nm,1.0s
E19A **Rath Farm, Rou** 36.00 333 ⇑P P 16 29 31.6 +0.5
baz=36
G17A **Pierce Place,** 36.02 330 ⇑P P 16 29 32.7 +1.4
baz=36
MLAC **Mammoth Lakes** 36.06 314 ⇓P P 16 29 32.7 +0.8
baz=36
NVAR **Mina Array Bea** 36.09 315 P P 16 29 35.3 +3.2
NVAR PcP PcP 16 31 58.6 +0.8
NVAR **Mina Array Bea** 36.09 315 P P 16 29 35.3 +3.2
comp=Z,15nm,1.0s,baz=124,slow=7.8,SNR=27
NVAR PcP PcP 16 31 58.6 +0.8
comp=Z,1.8nm,0.7s,baz=136,slow=4.3,SNR=6.0
NVAR LR LR 16 47 21.5
comp=Z,744nm,19.1s,baz=34,slow=41
B23A **Brockton** 36.17 339 ⇑P P 16 29 33.3 +0.8
baz=36
A24A **Westby** 36.23 340 ⇑P P 16 29 33.4 +0.3
baz=36
B22A **Reddig Ranch S** 36.39 338 ⇑P P 16 29 35.2 +0.9
baz=37
I14A **Mackay** 36.40 326 ⇓P P 16 29 36.4 +1.7
baz=37
C21A **Desert Coulee** 36.41 336 ⇓P P 16 29 35.4 +0.9
baz=37
F17A **Fitzpatrick Pl** 36.41 331 ⇑P P 16 29 35.7 +1.0
baz=37
BMN **Battle Mountai** 36.44 319 eP P 16 29 37.1 +2.0
BMN pmax pmax
comp=Z,57nm,1.3s
BMN **Battle Mountai** 36.44 319 eP P 16 29 37.1 +2.0
comp=Z,57nm,1.3s
LPAZ **La Paz** 36.46 149 P P 16 29 34.6 -1.3
LPAZ **La Paz** 36.46 149 P P 16 29 34.6 -1.3
comp=Z,4.6nm,1.0s,baz=351,slow=9.7,SNR=11
LPAZ LR LR 16 46 12.5
comp=Z,591nm,19.8s,baz=310,slow=39
A23A **Redstone** 36.56 340 ⇑P P 16 29 36.7 +0.9
baz=37
E18A **Harlowton** 36.58 333 ⇑P P 16 29 36.5 +0.4
baz=37
D19A **Cripps Ranch,** 36.59 334 ⇑P P 16 29 36.7 +0.5
baz=37
C20A **Veseth Ranch,** 36.67 335 ⇑P P 16 29 37.8 +1.1
baz=37
BOZ **Bozeman (W)** 36.68 330 eP P 16 29 38.1 +1.1
BOZ pmax pmax
comp=Z,2.0nm,0.7s
BOZ **Bozeman (W)** 36.68 330 eP P 16 29 38.1 +1.1
comp=Z,1.8nm,0.7s
MCMT **McKenzie Canyo** 36.70 328 eP P 16 29 39.9 +2.6
comp=Z,14nm,0.9s
F16A **Kennard Place,** 36.78 330 ⇑P P 16 29 38.9 +1.1
baz=37
B21A **Ellsworth Farm** 36.87 337 ⇑P P 16 29 38.9 +0.5
baz=37
E17A **Martinsdale** 36.92 332 ⇑P P 16 29 39.0 0.0
baz=37
A22A **Carney Farms,** 36.94 339 ⇑P P 16 29 39.9 +0.9
baz=37
DLMT **Dillon** 36.95 329 eP P 16 29 41.0 +1.7
comp=Z,22nm,0.8s
D18A **Linhart Farms,** 37.01 333 ⇓P P 16 29 40.6 +0.8
baz=37
C19A **Slack Wire Ran** 37.11 335 ⇑P P 16 29 41.3 +0.8
baz=37
I12A **Atlanta** 37.23 325 ⇑P P 16 29 42.6 +0.9
baz=37
F15A **Butte** 37.24 330 ⇑P P 16 29 43.1 +1.2
baz=37,SNR=13
B20A **Solberg Farm,** 37.26 336 ⇓P P 16 29 42.4 +0.6
baz=38
A21A **Bergtoll Ranch** 37.30 338 ⇓P P 16 29 43.2 +1.1
baz=38
E16A **East Helena** 37.35 331 ⇓P P 16 29 43.9 +1.2
baz=38
D17A **Six Diamond Ra** 37.37 333 ⇑P P 16 29 44.0 +1.3
baz=38
MFID **Camas Ranch** 37.37 324 ⇓P P 16 29 44.3 +1.4
baz=38,SNR=9.8
H12A **Diamond D Ranc** 37.57 326 ⇑P P 16 29 45.9 +1.3
baz=38
A20A **Cobblestone Ra** 37.59 337 ⇑P P 16 29 45.6 +1.1
baz=38
EGMT **Eagleton** 37.63 334 eP P 16 29 47.0 +2.1
comp=Z,45nm,0.7s
B19A **Brinkman Farms** 37.64 335 ⇓P P 16 29 45.8 +0.8
baz=38
F14A **Wisdom** 37.65 329 ⇓P P 16 29 45.9 +0.6
baz=38
D16A **Dana Ranch, Ca** 37.66 332 ⇑P P 16 29 46.3 +1.0
baz=38
C17A **Wharram Farm,** 37.76 333 ⇓P P 16 29 46.9 +0.8
baz=38
B18A **Beardsley Farm** 37.93 335 ⇓P P 16 29 48.5 +1.0
baz=38
A19A **Klindworth Far** 37.94 336 ⇑P P 16 29 48.5 +0.9
baz=38
D15A **Lincoln** 38.12 331 ⇑P P 16 29 49.8 +0.6
baz=38
BEKR **Beckworth** 38.19 316 eP P 16 29 52.0 +2.1
comp=Z,7.4nm,1.2s
G12A **Big Creek, Yel** 38.20 326 ⇓P P 16 29 50.8 +0.9
baz=38
B17A **L&G Farms, Che** 38.28 334 ⇓P P 16 29 51.3 +0.9
baz=38
C16A **Fuhringer Ranc** 38.33 332 ⇑P P 16 29 51.9 +1.0
baz=38
A18A **Metzger Ranch,** 38.38 335 ⇑P P 16 29 52.0 +0.8
baz=39
WVOR **Wild Horse Val** 38.45 321 eP P 16 29 53.1 +1.1
WVOR pmax pmax
comp=Z,45nm,1.3s
WVOR **Wild Horse Val** 38.45 321 eP P 16 29 53.0 +1.1
comp=Z,45nm,1.3s
D14A **Greenough** 38.62 330 ⇑P P 16 29 54.0 +0.7
baz=39
C15A **Salmond Ranch,** 38.70 332 ⇑P P 16 29 54.7 +0.7
baz=39
A17A **Triple J Farms** 38.75 334 ⇑P P 16 29 55.2 +0.9
baz=39
B16A **M & M Farms, S** 38.77 333 ⇓P P 16 29 55.3 +0.8
baz=39
B15A **Bradley Ranch,** 39.07 332 ⇓P P 16 29 57.9 +0.8
baz=39
D13A **Huson** 39.09 329 ⇓P P 16 29 57.8 +0.6
baz=39
BMO **Blue Mountains** 39.10 325 eP P 16 29 57.1 -0.2
comp=Z,21nm,1.3s
A16A **West Butte Ran** 39.13 334 ⇑P P 16 29 58.3 +0.8
baz=39
E12A **Beaver Dam Sad** 39.18 328 ⇓P P 16 29 58.9 +0.8
baz=39
MOD **Modoc** 39.19 319 eP P 16 29 58.6 +0.3
comp=Z,9.2nm,1.0s
C14A **Swan Lake** 39.22 331 ⇓P P 16 29 59.7 +1.4
baz=39
B14A **Marquette Ranc** 39.43 332 ⇑P P 16 30 00.5 +0.3
baz=40
D12A **Red Ives Fores** 39.50 329 ⇑P P 16 30 01.4 +0.7
baz=40
C13A **Hot Springs** 39.55 330 ⇑P P 16 30 01.6 +0.5
baz=40
A15A **Johnson Ranch,** 39.64 333 ⇑P P 16 30 02.4 +0.5
baz=40
A14A **Double T Ranch** 39.95 332 ⇑P P 16 30 05.2 +0.8
baz=40
B13A **Whitefish** 39.99 331 ⇑P P 16 30 05.6 +0.9
baz=40
C12B **Naegeli Ranch,** 40.01 329 ⇑P P 16 30 05.5 +0.6
baz=40
A13A **Flathead Natio** 40.37 331 ⇑P P 16 30 08.2 +0.3
baz=41
C11A **Tepee Creek (N** 40.49 329 ⇑P P 16 30 09.6 +0.8
baz=41
B12A **Libby** 40.59 330 ⇓P P 16 30 10.8 +1.1
baz=41
A12A **Yaak River Ran** 40.95 331 ⇑P P 16 30 13.2 +0.6
baz=41
NEW **Newport** 41.20 329 LR LR 16 51 06.5
comp=Z,153nm,18.1s,baz=131,slow=42
HAWA **Hanford** 41.28 325 eP P 16 30 17.3 +2.0
comp=Z,19nm,0.7s
LVC **Limon Verde** 41.66 155 eP P 16 30 19.7 +0.8
comp=Z,124nm,1.6s
SCHQ **Schefferville** 42.03 17 eP P 16 30 21.2 -0.1
comp=Z,21nm,1.0s
SCHQ PcP PcP 16 32 15.5 -0.4
SCHQ **Schefferville** 42.03 17 P P 16 30 21.4 +0.1
comp=Z,15nm,0.9s,baz=207,slow=5.2,SNR=11
SCHQ PcP PcP 16 32 15.5 -0.4
comp=Z,2.9nm,0.6s,baz=270,slow=5.0,SNR=5.2

SCHQ					LR	LR	16 47 56.6		
	comp=Z,273nm,18.2s,baz=85,slow=36								
LON	**Longmire**	**42.76**	**324**	*e*P	**P**		**16 30 28.6**	**+1.1**	
LON				pmax	pmax				
	comp=Z,11nm,0.7s								
LON	**Longmire**	**42.76**	**324**	*e*P	**P**		**16 30 28.6**	**+1.1**	
	comp=Z,11nm,0.7s								
LCO	**Las Campanas**	**46.86**	**161**	P	**P**		**16 30 59.9**	**-0.6**	
	comp=Z,56nm,1.1s								
BDFB	**Brasilia**	**49.02**	**127**	LR	LR		16 53 35.4		
	comp=Z,563nm,18.4s,baz=130,slow=38								
CPUP	**Villa Florida**	**50.37**	**145**	P	**P**		**16 31 25.3**	**-1.9**	
CPUP	**Villa Florida**	**50.37**	**145**	P	**P**		**16 31 25.3**	**-1.9**	
	comp=Z,3.3nm,0.8s,baz=323,slow=7.9,SNR=5.7								
CPUP					LR	LR	16 52 49.1		
	comp=Z,276nm,18.9s,baz=309,slow=36								
YKA	**Yellowknife Ar**	**50.89**	**344**	P	**P**		**16 31 30.8**	**+0.1**	
YKA	**Yellowknife Ar**	**50.89**	**344**	P	**P**		**16 31 30.8**	**+0.1**	
	comp=Z,21nm,0.9s,baz=138,slow=7.7,SNR=22								
YKW3	**Yellowknife Ar**	**50.95**	**344**	*e*P	**P**		**16 31 31.0**	**-0.1**	
	comp=Z,0.4nm,0.8s								
PLCA	**Paso Flores**	**57.93**	**166**	*e*P	**P**		**16 32 22.2**	**0.0**	
	comp=Z,29nm,1.1s								
PLCA	**Paso Flores**	**57.93**	**166**	P	**P**		**16 32 21.7**	**-0.5**	
	comp=Z,16nm,0.9s,baz=349,slow=8.9,SNR=17								
DOT	**Dot Lake**	**62.02**	**335**	*e*P	**P**		**16 32 50.3**	**+0.3**	
	comp=Z,11nm,0.9s								
SUMG	**Summit**	**63.34**	**15**	*e*P	**P**		**16 32 58.6**	**-0.5**	
SUMG				pmax	pmax				
	comp=Z,21nm,1.1s								
SUMG	**Summit**	**63.34**	**15**	*e*P	**P**		**16 32 58.6**	**-0.5**	
	comp=Z,21nm,1.1s								
SUMG	**Summit**	**63.34**	**15**	*i* P	**P**		**16 32 59.0**	**-0.1**	
	comp=Z,8.9nm,0.8s								
ILAR	**Eielson Array**	**63.59**	**335**	P	**P**		**16 33 00.5**	**+0.2**	
ILAR	**Eielson Array**	**63.59**	**335**	P	**P**		**16 33 00.5**	**+0.2**	
	comp=Z,3.9nm,0.8s,baz=126,slow=4.7,SNR=35								
ILAR					LR	LR	17 06 20.2		
	comp=Z,157nm,18.9s,baz=269,slow=41								
TRF	**Thorofare Moun**	**64.58**	**333**	*e*P	**P**		**16 33 06.5**	**-0.6**	
	comp=Z,11nm,0.8s								
DAG	**Danmarks Havn**	**69.91**	**13**	*i* P	**P**		**16 33 39.4**	**-1.0**	
	comp=Z,4.4nm,0.9s								
PPT	**Papeete**	**70.39**	**245**	LR	LR		16 58 52.8		
	comp=Z,254nm,21.9s,baz=61,slow=31								
PPT2	**Papeete2**	**70.40**	**245**	*e*S	**S**		**16 42 56.1**	**+0.6**	
	comp=Z,49nm,22.5s								
PPT2	**Papeete2**	**70.40**	**245**	*e*LR	LR		16 55 12.6		
	comp=Z,181nm,25.0s								
EVOP	**Sao Brissos**	**71.44**	**54**	*e*P	P		16 33 46.8	-3.6	
EVOP				pmax	pmax				
	comp=Z,19nm,1.0s								
EVOP	**Sao Brissos**	**71.44**	**54**	*e*P	P		16 33 46.8	-3.6	
	comp=Z,19nm,1.0s								
EVO	**Evora**	**71.52**	**54**	*e*P	P		16 33 46.8	-4.2	
	comp=Z,19nm,1.0s								
EVO				*e*R					
	comp=Z,170nm,20.0s								
TBI	**Tubuai**	**72.73**	**239**	*e*LR	LR		16 56 17.7		
	comp=Z,119nm,26.5s								
ROSF	**Rostrenen**	**74.04**	**44**	*e*P	**P**		**16 34 05.2**	**-0.5**	
ROSF	**Rostrenen**	**74.04**	**44**	*e*P	**P**		**16 34 05.2**	**-0.5**	
ROSF	**Rostrenen**	**74.04**	**44**	*e*P	**P**		**16 34 05.2**	**-0.5**	
QUIF	**Quistinic**	**74.15**	**44**	*e*P	**P**		**16 34 06.1**	**-0.2**	
	comp=Z,17nm,0.9s								
QUIF	**Quistinic**	**74.15**	**44**	*e*P	**P**		**16 34 06.1**	**-0.2**	
QUIF				pmax	pmax				
	comp=Z,17nm,0.9s								
QUIF	**Quistinic**	**74.15**	**44**	*e*P	**P**		**16 34 06.1**	**-0.2**	
	comp=Z,17nm,0.9s								
SGMF	**Saint Gilles**	**74.52**	**44**	*e*P	**P**		**16 34 07.8**	**-0.7**	
SGMF	**Saint Gilles**	**74.52**	**44**	*e*P	**P**		**16 34 07.8**	**-0.7**	
SGMF	**Saint Gilles**	**74.52**	**44**	*e*P	**P**		**16 34 07.8**	**-0.7**	
ESDC	**Sonseca Array**	**74.53**	**53**	P	**P**		**16 34 09.8**	**+1.0**	
ESDC	**Sonseca Array**	**74.53**	**53**	P	**P**		**16 34 09.8**	**+1.0**	
	comp=Z,2.6nm,0.7s,baz=288,slow=5.4,SNR=12								
GRR	**Gorron**	**75.63**	**43**	*e*P	**P**		**16 34 14.3**	**-0.6**	
GRR	**Gorron**	**75.63**	**43**	*e*P	**P**		**16 34 14.3**	**-0.6**	
GRR	**Gorron**	**75.63**	**43**	*e*P	**P**		**16 34 14.3**	**-0.6**	
FLN	**La Foliniere**	**75.83**	**43**	*e*P	**P**		**16 34 15.6**	**-0.4**	
FLN				*e*R					
	comp=Z,176nm,20.5s								
FLN	**La Foliniere**	**75.83**	**43**	*e*P	**P**		**16 34 15.6**	**-0.4**	
FLN	**La Foliniere**	**75.83**	**43**	*e*P	**P**		**16 34 15.6**	**-0.4**	
SJPF	**Ste Jean**	**76.09**	**49**	*e*P	**P**		**16 34 17.9**	**+0.2**	
	comp=Z,22nm,1.1s								
SJPF	**Ste Jean**	**76.09**	**49**	*e*P	**P**		**16 34 17.9**	**+0.2**	
SJPF				pmax	pmax				
	comp=Z,22nm,1.1s								
SJPF	**Ste Jean**	**76.09**	**49**	*e*P	**P**		**16 34 17.9**	**+0.2**	
	comp=Z,22nm,1.1s								
MFF	**Saint Martin d**	**76.35**	**45**	*e*P	**P**		**16 34 18.6**	**-0.4**	
MFF	**Saint Martin d**	**76.35**	**45**	*e*P	**P**		**16 34 18.6**	**-0.4**	
MFF	**Saint Martin d**	**76.35**	**45**	*e*P	**P**		**16 34 18.6**	**-0.4**	
LFF	**La Frestale**	**77.22**	**47**	*e*P	**P**		**16 34 23.7**	**-0.3**	
LFF	**La Frestale**	**77.22**	**47**	*e*P	**P**		**16 34 23.7**	**-0.3**	
LFF	**La Frestale**	**77.22**	**47**	*e*P	**P**		**16 34 23.7**	**-0.3**	
EPF	**Esparros**	**77.24**	**49**	*e*P	**P**		**16 34 24.3**	**+0.1**	
EPF	**Esparros**	**77.24**	**49**	*e*P	**P**		**16 34 24.3**	**+0.1**	
EPF	**Esparros**	**77.24**	**49**	*e*P	**P**		**16 34 24.3**	**+0.1**	
RJF	**Les Rejaudoux**	**77.70**	**46**	*e*P	**P**		**16 34 26.2**	**-0.5**	
RJF				*e*R					
	comp=Z,140nm,22.0s								
RJF	**Les Rejaudoux**	**77.70**	**46**	*e*P	**P**		**16 34 26.2**	**-0.5**	
RJF	**Les Rejaudoux**	**77.70**	**46**	*e*P	**P**		**16 34 26.2**	**-0.5**	
TCF	**Toulx Ste Croi**	**78.01**	**45**	*e*P	**P**		**16 34 27.6**	**-0.8**	
TCF	**Toulx Ste Croi**	**78.01**	**45**	*e*P	**P**		**16 34 27.6**	**-0.8**	
TCF	**Toulx Ste Croi**	**78.01**	**45**	*e*P	**P**		**16 34 27.6**	**-0.8**	
CAF	**Calviac**	**78.14**	**47**	*e*P	**P**		**16 34 28.7**	**-0.5**	
CAF	**Calviac**	**78.14**	**47**	*e*P	**P**		**16 34 28.7**	**-0.5**	
CAF	**Calviac**	**78.14**	**47**	*e*P	**P**		**16 34 28.7**	**-0.5**	
MTLF	**Montolieu**	**78.54**	**48**	*e*P	**P**		**16 34 31.0**	**-0.4**	
MTLF	**Montolieu**	**78.54**	**48**	*e*P	**P**		**16 34 31.0**	**-0.4**	
MTLF	**Montolieu**	**78.54**	**48**	*e*P	**P**		**16 34 31.0**	**-0.4**	
AVF	**Avril sur Loir**	**78.69**	**44**	*e*P	**P**		**16 34 31.0**	**-1.1**	
AVF	**Avril sur Loir**	**78.69**	**44**	*e*P	**P**		**16 34 31.0**	**-1.1**	
AVF	**Avril sur Loir**	**78.69**	**44**	*e*P	**P**		**16 34 31.0**	**-1.1**	
LOR	**Lormes**	**78.95**	**44**	*e*P	**P**		**16 34 32.6**	**-1.0**	
LOR				*e*R					
	comp=Z,138nm,18.5s								
LOR	**Lormes**	**78.95**	**44**	*e*P	**P**		**16 34 32.6**	**-1.0**	
SFTF	**Sexfontaines**	**79.54**	**43**	*e*P	**P**		**16 34 35.8**	**-1.0**	
SFTF	**Sexfontaines**	**79.54**	**43**	*e*P	**P**		**16 34 35.8**	**-1.0**	
LASF	**Ste Croix**	**79.56**	**47**	*e*P	**P**		**16 34 37.0**	**0.0**	
LASF	**Ste Croix**	**79.56**	**47**	*e*P	**P**		**16 34 37.0**	**0.0**	
PAGF	**Fort de Pagny**	**79.92**	**42**	*e*P	**P**		**16 34 38.0**	**-0.8**	
PAGF	**Fort de Pagny**	**79.92**	**42**	*e*P	**P**		**16 34 38.0**	**-0.8**	
VIVF	**Saint-Julien-l**	**79.98**	**46**	*e*P	**P**		**16 34 39.4**	**+0.1**	
VIVF	**Saint-Julien-l**	**79.98**	**46**	*e*P	**P**		**16 34 39.4**	**+0.1**	
VIVF	**Saint-Julien-l**	**79.98**	**46**	*e*P	**P**		**16 34 39.4**	**+0.1**	
DBIC	**Dimbokro**	**80.17**	**86**	LR	LR		17 02 46.6		
	comp=Z,88nm,21.0s,baz=277,slow=30								
NB2	**NORSAR Subarra**	**80.19**	**29**	P	**P**		**16 34 40.5**	**+0.5**	
	comp=Z,81nm,2.5s,baz=284,slow=5.3								
NB2	**NORSAR Subarra**	**80.19**	**29**	P	**P**		**16 34 40.5**	**+0.5**	
	baz=284,slow=5.3								
NOA	**NORSAR Array B**	**80.19**	**29**	P	**P**		**16 34 39.0**	**-1.1**	
NOA	**NORSAR Array B**	**80.19**	**29**	P	**P**		**16 34 39.0**	**-1.1**	
	comp=Z,0.5nm,0.6s,baz=290,slow=5.7,SNR=7.5								
NOA					LR	LR	17 09 35.8		
	comp=Z,47nm,19.3s,baz=305,slow=35								
MUD	**Monsted U'grnd**	**80.25**	**34**	*i* P	**P**		**16 34 41.5**	**+1.2**	
	comp=Z,3.9nm,1.0s								
HAU	**Haudompre**	**80.44**	**43**	*e*P	**P**		**16 34 40.8**	**-0.9**	
HAU				*e*R					
	comp=Z,107nm,20.2s								
HAU	**Haudompre**	**80.44**	**43**	*e*P	**P**		**16 34 40.8**	**-0.9**	
HAU	**Haudompre**	**80.44**	**43**	*e*P	**P**		**16 34 40.8**	**-0.9**	
CABF	**La Chapelle**	**80.58**	**44**	*e*P	**P**		**16 34 42.0**	**-0.5**	
CABF	**La Chapelle**	**80.58**	**44**	*e*P	**P**		**16 34 42.0**	**-0.5**	
CABF	**La Chapelle**	**80.58**	**44**	*e*P	**P**		**16 34 42.0**	**-0.5**	
SMRF	**Simiane la Rot**	**80.80**	**47**	*e*P	**P**		**16 34 43.8**	**+0.1**	
	comp=Z,9.8nm,1.0s								
SMRF	**Simiane la Rot**	**80.80**	**47**	*e*P	**P**		**16 34 43.8**	**+0.1**	
	comp=Z,9.8nm,1.0s								
ORIF	**Oris-en-Rattie**	**80.80**	**46**	*e*P	**P**		**16 34 43.6**	**-0.2**	
ORIF				*e*R					
	comp=Z,128nm,20.5s								
ORIF	**Oris-en-Rattie**	**80.80**	**46**	*e*P	**P**		**16 34 43.6**	**-0.2**	
ORIF	**Oris-en-Rattie**	**80.80**	**46**	*e*P	**P**		**16 34 43.6**	**-0.2**	
HINF	**Hinteralfeld**	**80.82**	**43**	*e*P	**P**		**16 34 42.6**	**-1.1**	
HINF	**Hinteralfeld**	**80.82**	**43**	*e*P	**P**		**16 34 42.6**	**-1.1**	
HINF	**Hinteralfeld**	**80.82**	**43**	*e*P	**P**		**16 34 42.6**	**-1.1**	
CDF	**Champ du Feu**	**80.96**	**42**	*e*P	**P**		**16 34 43.6**	**-0.9**	
CDF	**Champ du Feu**	**80.96**	**42**	*e*P	**P**		**16 34 43.6**	**-0.9**	
LPL	**La Plagne**	**81.26**	**45**	*e*P	**P**		**16 34 46.1**	**-0.2**	
LPL	**La Plagne**	**81.26**	**45**	*e*P	**P**		**16 34 46.1**	**-0.2**	
LPL	**La Plagne**	**81.26**	**45**	*e*P	**P**		**16 34 46.1**	**-0.2**	
LPG	**La Plagne**	**81.27**	**45**	*e*P	**P**		**16 34 45.7**	**-0.8**	
LPG	**La Plagne**	**81.27**	**45**	*e*P	**P**		**16 34 45.7**	**-0.8**	
LPG	**La Plagne**	**81.27**	**45**	*e*P	**P**		**16 34 45.7**	**-0.8**	
BILL	**Bilibino**	**81.98**	**339**	*i* P	**P**		**16 34 49.5**	**+0.1**	
BILL				pmax	pmax				
	comp=Z,70nm,2.1s								
ARCES	**ARCESS Array B**	**82.94**	**19**	P	**P**		**16 34 54.4**	**0.0**	
ARCES	**ARCESS Array B**	**82.94**	**19**	P	**P**		**16 34 54.4**	**0.0**	
	comp=Z,1.8nm,0.6s,baz=316,slow=5.1,SNR=7.3								
ARCES					LR	LR	17 15 13.5		
	comp=Z,54nm,19.2s,baz=135,slow=38								
CLL	**Collm**	**83.78**	**39**	*i* P	**P**		**16 34 58.9**	**-0.2**	
CLL				pmax	pmax				
	comp=Z,20nm,1.9s								
CLL	**Collm**	**83.78**	**39**	*i* P	**P**		**16 34 58.9**	**-0.2**	
	comp=Z,20nm,1.9s								
CLL				LmV			17 20 00.0		
	comp=Z,100nm,19.4s								
TORD	**Torodi Ar. Bea**	**84.80**	**78**	P	**P**		**16 35 04.1**	**-0.8**	
TORD	**Torodi Ar. Bea**	**84.80**	**78**	P	**P**		**16 35 04.1**	**-0.8**	
	comp=Z,0.7nm,0.6s,baz=294,slow=4.8,SNR=5.0								
TORD					LR	LR	17 07 54.6		
	comp=Z,120nm,19.6s,baz=250,slow=32								
GERES	**GERESS Array B**	**84.95**	**41**	P	**P**		**16 35 04.8**	**-0.4**	
GERES	**GERESS Array B**	**84.95**	**41**	P	**P**		**16 35 04.8**	**-0.4**	
	comp=Z,2.4nm,1.1s,baz=278,slow=3.9,SNR=13								
GERES					LR	LR	17 10 00.4		
	comp=Z,91nm,18.7s,baz=283,slow=34								
PRU	**Pruhonice**	**85.12**	**39**	*e*P	**P**		**16 35 05.8**	**-0.1**	
PRU				MLR	MLR				
	comp=Z,100nm,16.0s								
PRU	**Pruhonice**	**85.12**	**39**	*e*P	**P**		**16 35 05.8**	**-0.1**	
PRU				AMS	AMS		17 18 40.0		
	comp=Z,100nm,16.0s								
KEST	**Kesra**	**85.65**	**54**	P	**P**		**16 35 09.6**	**+0.7**	
KEST	**Kesra**	**85.65**	**54**	P	**P**		**16 35 09.5**	**+0.5**	
	comp=Z,1.8nm,0.9s,baz=117,slow=2.3,SNR=4.8								
UPC	**Upice**	**85.84**	**39**	*e*P	**P**		**16 35 10.0**	**+0.5**	
UPC	**Upice**	**85.84**	**39**	*e*P	**P**		**16 35 10.0**	**+0.5**	
TREC	**Trest**	**85.92**	**40**	AMS	AMS		17 18 50.0		
	comp=Z,100nm,17.0s								
DPC	**Dobruska-Polom**	**86.08**	**39**	*e*P	**P**		**16 35 11.0**	**+0.3**	
DPC	**Dobruska-Polom**	**86.08**	**39**	*e*P	**P**		**16 35 11.0**	**+0.3**	
FINES	**FINESS Array B**	**86.76**	**26**	P	**P**		**16 35 14.3**	**+0.6**	
FINES	**FINESS Array B**	**86.76**	**26**	P	**P**		**16 35 14.3**	**+0.6**	
	comp=Z,1.7nm,0.6s,baz=255,slow=3.0,SNR=10.0								
FINES					LR	LR	17 16 00.1		
	comp=Z,71nm,18.1s,baz=107,slow=37								
OKC	**Ostrava-Krasne**	**87.36**	**39**	AMS	AMS		17 20 00.0		
	comp=Z,100nm,18.0s								
PETK	**Peppavlovsk-**	**92.32**	**327**	LR	LR		17 25 28.3		
	comp=Z,37nm,18.3s,baz=248,slow=41								
AKASG	**Malin Array Be**	**93.42**	**35**	LR	LR		17 16 46.1		
	comp=Z,86nm,18.9s,baz=280,slow=35								
ZALV	**Zalesovo Beam**	**110.36**	**5**	PP	PP		16 41 38.4	+2.5	
ZALV	**Zalesovo Beam**	**110.36**	**5**	PP	PP		16 41 38.4	+2.5	
	comp=Z,0.5nm,0.5s,baz=339,slow=7.9,SNR=4.0								
MDJ	**Mudanjiang**	**111.70**	**333**	Pdif	**Pdif**		**16 37 07.0**	**-0.2**	
MDJ				PP	**PP**		**16 41 48.0**	**+2.1**	
MDJ				AMB	AMB				
	comp=Z,94nm,3.6s								
MDJ				LR	LR				
	comp=N,59nm,32.7s								
MDJ				LR	LR				
	comp=E,43nm,32.7s								
MDJ				LR	LR				
	comp=Z,99nm,29.5s								
CN2	**Changchun**	**114.11**	**335**	*e*PKP	PKPdf		16 41 06.0	-3.2	
MKAR	**Makanchi Array**	**117.10**	**9**	PKIKP	**PKPdf**		**16 41 13.0**	**-2.0**	
MKAR	**Makanchi Array**	**117.10**	**9**	PKP	**PKPdf**		**16 41 13.0**	**-2.0**	
MKAR	**Makanchi Array**	**117.10**	**9**	PKP	**PKPdf**		**16 41 13.0**	**-2.0**	
	comp=Z,0.2nm,0.7s,baz=0,slow=2.4,SNR=2.6								
WMQ	**Urumqi**	**120.66**	**5**	*e*PKP	**PKPdf**		**16 41 22.0**	**0.0**	
WMQ				LR	LR				
	comp=N,170nm,27.0s								
WMQ				LR	LR				
	comp=E,130nm,23.0s								
WMQ				LR	LR				
	comp=Z,110nm,20.9s								
BJI	**Beijing**	**120.80**	**340**	PKP	**PKPdf**		**16 41 20.0**	**-2.2**	
BJI				LR	LR				
	comp=N,87nm,17.4s								
BJI				LR	LR				
	comp=E,110nm,29.2s								
LZH	**Lanzhou**	**127.71**	**349**	*e*PKP	**PKPdf**		**16 41 36.3**	**+0.5**	
LZH				AMB	AMB				
	comp=Z,93nm,8.0s								
LZH				LR	LR				
	comp=N,130nm,18.0s								
LZH				LR	LR				
	comp=E,130nm,18.1s								
LZH				LR	LR				
	comp=Z,170nm,20.3s								
XAN	**Xi'an**	**128.54**	**344**	PKP	**PKPdf**		**16 41 37.5**	**+0.2**	
XAN				LR	LR				
	comp=N,74nm,19.4s								
XAN				LR	LR				
	comp=E,38nm,15.3s								
CD2	**Chengdu**	**132.75**	**348**	*e*PKP	**PKPdf**		**16 41 44.3**	**-1.1**	
CD2				SKS	**SKSdf**		**16 48 53.3**	**-1.5**	
CD2				AMB	AMB				
	comp=Z,140nm,10.2s								
CD2				LR	LR				
	comp=N,210nm,22.1s								
CD2				LR	LR				
	comp=Z,120nm,19.2s								
STKA	**Stephens Creek**	**133.50**	**241**	PKP	**PKPdf**		**16 41 46.5**	**-0.1**	
STKA	**Stephens Creek**	**133.50**	**241**	PKP	**PKPdf**		**16 41 46.5**	**-0.1**	
	comp=Z,3.6nm,0.7s,baz=125,slow=22,SNR=7.8								
GYA	**Guiyang**	**136.32**	**343**	*e*Pdif	**Pdif**		**16 38 55.8**	**-1.4**	
GYA				PKP	**PKPdf**		**16 41 50.5**	**-1.8**	
GYA				sPKP			16 42 06.5		
GYA				PP	**PP**		**16 44 35.0**	**+3.7**	
GYA	**Guiyang**	**136.32**	**343**	SKKS	**SKKSac**		**16 51 21.3**	**-4.5**	
GYA	**Guiyang**	**136.32**	**343**	SS	SS		17 02 30.0	+0.1	
GYA				AMB	AMB				
	comp=Z,110nm,7.8s								
GYA				LR	LR				
	comp=N,130nm,22.8s								
GYA				LR	LR				
	comp=E,110nm,23.0s								
GYA				LR	LR				
	comp=Z,120nm,22.4s								
WRA	**Warramunga Arr**	**140.97**	**257**	PKPpre	PKPpre		16 41 54.2		
WRA				PKP	**PKPdf**		**16 42 01.1**	**+0.3**	
WRA	**Warramunga Arr**	**140.97**	**257**	PKhKP	PKPpre		16 41 54.2		
	comp=Z,0.8nm,0.7s,baz=80,slow=2.9,SNR=10								
WRA				PKP	**PKPdf**		**16 42 01.1**	**+0.3**	
	comp=Z,3.0nm,0.7s,baz=86,slow=1.9,SNR=33								
AS31	**Alice Springs**	**141.24**	**252**	*e*PKPdf	**PKPdf**		**16 42 00.2**	**-1.0**	
ASAR	**Alice Springs**	**141.25**	**252**	PKPpre	PKPpre		16 41 54.0		
ASAR				PKP	**PKPdf**		**16 42 00.8**	**-0.4**	
ASAR	**Alice Springs**	**141.25**	**252**	PKhKP	PKPpre		16 41 54.0		
	comp=Z,1.0nm,1.0s,baz=110,slow=3.6,SNR=8.5								
ASAR				PKP	**PKPdf**		**16 42 00.8**	**-0.4**	
	comp=Z,3.4nm,0.6s,baz=100,slow=1.9,SNR=49								
CHTO	**Chiang Mai**	**145.42**	**351**	*e*PKIKP	**PKPbc**		**16 42 07.7**	**-0.9**	
CHTO	**Chiang Mai**	**145.42**	**351**	*e*PKP	**PKPbc**		**16 42 07.7**	**-0.9**	
CMAR	**Chiang Mai Arr**	**145.77**	**351**	PKPbc	**PKPbc**		**16 42 09.8**	**+0.1**	
CMAR	**Chiang Mai Arr**	**145.77**	**351**	PKPbc	**PKPbc**		**16 42 09.8**	**+0.1**	
	comp=Z,13nm,0.7s,baz=337,slow=3.6,SNR=118								
FITZ	**Fitzroy Crossi**	**149.20**	**261**	PKPbc	**PKPbc**		**16 42 19.2**	**+0.1**	
FITZ	**Fitzroy Crossi**	**149.20**	**261**	PKPbc	**PKPbc**		**16 42 19.2**	**+0.1**	
	comp=Z,4.7nm,0.7s,baz=154,slow=8.8,SNR=18								

IDC ***30*** *16:36:37.2±0.6, 52.84°S×27.47°E, h0km, mb4.1/14, mb1 4.2/14, mb1mx4.0/26, mbtmp4.1/14, MS3.2/3, Ms1 3.2/3, ms1mx2.9/27, Error ellipse: s-maj=23.6km s-min=13.7km az=84.0*

ISCJB ***30*** *16:36:38.1±0.5, 52.78°S±0.07°×27.6°E±0.2, h13km, mb4.1/13, MS3.0/3, Error ellipse: s-maj=18.2km s-min=10.5km az=3.8*

NEIC ***30*** *16:36:38.9±0.4, 52.85°S×27.53E, h10km, mb4.5/1, Error ellipse: s-maj=16.7km s-min=10.1km az=92.0*

ISC 30 16:36:39.3±0.6, 52.83S±0.08×27.6E±0.2, h13km, n36, σ1.9s08/33, mb4.1/14, MS2.9/3, South of Africa

Code	Station Name	Δ°	AZ°	Phase	ID	ISC	Time	Res
					Op		h m s	ISC
SUR	**Sutherland**	**21.01**	**344**	P	**P**		**16 41 24.1**	**+1.5**
SUR	**Sutherland**	**21.01**	**344**	P	**P**		**16 41 24.1**	**+1.5**
	5.0nm,0.9s,baz=152,slow=13,SNR=3.7							
MAW	**Mawson**	**22.49**	**145**	LR	LR		16 48 07.7	
	comp=Z,51nm,21.1s,baz=221,slow=31							
SNAA	**Sanae**	**23.13**	**204**	*e*PKP	**P**		**16 41 46.1**	**+1.3**
SNAA	**Sanae**	**23.13**	**204**	P	**P**		**16 41 46.1**	**+1.3**
SNAA	**Sanae**	**23.13**	**204**	P	**P**		**16 41 46.1**	**+1.3**
	3.0nm,0.8s,baz=59,slow=8.5,SNR=30							
SNAA				LR	LR		16 48 06.6	
	comp=Z,38nm,22.0s,baz=18,slow=30							
VNA1	**Neumayer--Stat**	**24.02**	**209**	*e*PKP	**P**		**16 41 55.6**	**+2.2**
BOSA	**Boshof**	**24.25**	**355**	LR	LR		16 49 26.8	
	comp=Z,140nm,20.6s,baz=165,slow=32							
LBTB	**Lobatse**	**27.82**	**356**	P	**P**		**16 42 28.8**	**+0.6**
LBTB	**Lobatse**	**27.82**	**356**	P	**P**		**16 42 28.8**	**+0.6**
	0.7nm,0.5s,baz=189,slow=13,SNR=2.2							
TSUM	**Tsumeb**	**34.45**	**343**	*e*P	P		16 43 34.6	+7.9
	7.5nm,1.2s							
TSUM	**Tsumeb**	**34.45**	**343**	P	**P**		**16 43 25.6**	**-1.0**
	1.3nm,0.7s,baz=142,slow=11,SNR=3.5							
QSPA	**South Pole Qui**	**37.39**	**180**	P	**P**		**16 43 51.1**	**-0.4**
QSPA	**South Pole Qui**	**37.39**	**180**	P	**P**		**16 43 51.1**	**-0.4**
	3.5nm,0.6s,baz=264,slow=2.1,SNR=57							
LSZ	**Lusaka**	**37.47**	**1**	P	**P**		**16 43 53.0**	**+0.5**
LSZ	**Lusaka**	**37.47**	**1**	P	**P**		**16 43 53.0**	**+0.5**
	1.1nm,0.5s,baz=186,slow=10,SNR=3.3							
RER	**Riviere de l'E**	**38.33**	**45**	*e*P	**P**		**16 43 59.4**	**-0.4**
PMSA	**Palmer Station**	**44.69**	**218**	P	**P**		**16 44 51.9**	**+0.6**
PMSA	**Palmer Station**	**44.69**	**218**	P	**P**		**16 44 51.9**	**+0.6**
	13nm,1.0s,baz=165,slow=16,SNR=2.4							
VNDA	**Vanda**	**46.87**	**168**	P	**P**		**16 45 08.2**	**-0.2**
VNDA	**Vanda**	**46.87**	**168**	P	**P**		**16 45 08.2**	**-0.2**
	0.7nm,0.7s,baz=232,slow=5.9,SNR=8.0							
CPUP	**Villa Florida**	**66.47**	**257**	P	**P**		**16 47 26.8**	**-1.5**
CPUP	**Villa Florida**	**66.47**	**257**	P	**P**		**16 47 26.8**	**-1.5**
	3.9nm,0.7s,baz=130,slow=4.7,SNR=7.8							
TORD	**Torodi Ar. Bea**	**69.38**	**333**	P	**P**		**16 47 46.7**	**+0.1**
TORD	**Torodi Ar. Bea**	**69.38**	**333**	P	**P**		**16 47 46.7**	**+0.1**
	1.3nm,0.6s,baz=176,slow=5.9,SNR=14							
FITZ	**Fitzroy Crossi**	**80.54**	**107**	P	**P**		**16 48 52.0**	**+0.7**
FITZ	**Fitzroy Crossi**	**80.54**	**107**	P	**P**		**16 48 52.0**	**+0.7**
	1.3nm,0.9s,baz=194,slow=8.3,SNR=2.6							
ASAR	**Alice Springs**	**80.75**	**117**	P	**P**		**16 48 53.0**	**+0.5**
ASAR	**Alice Springs**	**80.75**	**117**	P	**P**		**16 48 53.0**	**+0.5**
	1.2nm,

BZMR				*i* S	Sb	16 45 17.9	+0.3			
BZWR	**Bezymyannyi-We**	**1.21**	**302**	P	Pb	16 45 02.4	-0.2			
BZWR				*i* S	Sb	16 45 18.1	+0.1			
TUMR	**Tumrok**	**1.24**	**269**	P	Pn	16 45 02.6	+0.3			
TUMR				*i* S	Sn	16 45 18.1	-0.4			
KMNR	**Kamenistaya**	**1.26**	**291**	P	Pb	16 45 03.0	-0.3			
KMNR				*i* S	Sb	16 45 20.0	+0.9			
KIRR	**Kirishev**	**1.28**	**300**	P	Pb	16 45 03.5	-0.3			
KIRR				*i* S	Sb	16 45 20.2	+0.2			
KRSR	**Krestovskiy**	**1.33**	**313**	P	Pn	16 45 03.7	+0.2			
SMKR	**Semkarok**	**1.34**	**339**	P	Pn	16 45 03.1	-0.5			
SMKR				*i* S	Sn	16 45 19.9	-1.0			
KPT	**Kopyto**	**1.35**	**299**	P	Pb	16 45 04.5	-0.3			
KPT				*i* S	Sb	16 45 22.1	+0.4			
KLY	**Klyuchi**	**1.36**	**317**	P	Pb	16 45 02.6	-1.2			
KLY				*i* S	Sn	16 45 18.3	-2.8			
BDR	**Baidarnaya**	**1.39**	**334**	P	Pn	16 45 04.4	+0.1			
BDR				*i* S	Sn	16 45 22.1	+0.1			
SRKR	**Sorokina**	**1.48**	**334**	P	Pn	16 45 05.3	-0.2			
SRKR				*i* S	Sn	16 45 23.9	-0.3			
KOZ	**Kozyrevsk**	**1.57**	**299**	P	Pb	16 45 08.0	-0.4			
KOZ				*i* S	Sb	16 45 28.1	+0.3			
SRDR	**Sredinnyy**	**1.77**	**305**	P	Pn	16 45 10.7	+1.2			
SRDR				*i* S	Sb	16 45 32.8	-1.0			
BKI	**Bering**	**2.09**	**92**	P	Pn	16 45 12.0	-1.8			
BKI				*i* S	Sn	16 45 35.1	-4.0			
KII	**Karymskiy**	**2.11**	**233**	P	Pn	16 45 15.0	+0.8			
ESO	**Esso**	**2.14**	**288**	P	Pn	16 45 14.6	+0.1			
ESO				*i* S	Sn	16 45 40.1	-0.2			
SPN	**Mys Shipunski**	**2.61**	**212**	P	Pn	16 45 20.2	-0.7			
SPN				*i* S	Sn	16 45 50.0	-1.9			
SDLR	**Sedlovina**	**2.88**	**226**	P	Pn	16 45 26.0	+1.2			
SDLR				*i* S	Sn	16 45 58.9	+0.1			
KRER	**Koryakskii**	**2.92**	**227**	P	Pn	16 45 27.3	+1.9			
SMAR	**Somma**	**2.92**	**226**	P	Pn	16 45 26.0	+0.5			
SMAR				*i* S	Sn	16 45 59.0	-1.1			
AVH	**Avacha**	**2.95**	**227**	P	Pn	16 45 28.5	+2.8			
AVH				*i* S	Sn	16 46 02.7	+2.3			
UGLR	**Uglovaya**	**2.95**	**225**	P	Pn	16 45 26.7	+0.9			
UGLR				*i* S	Sn	16 46 00.4	-0.2			
KOK	**Koryaka**	**2.97**	**228**	P	Pn	16 45 28.1	+2.1			
GNL	**Ganaly**	**3.03**	**239**	P	Pn	16 45 28.0	+1.1			
GNL				*i* S	Sn	16 46 02.2	-0.4			
PET	**Petropavlovsk**	**3.16**	**225**	P	Pn	16 45 30.1	+1.7			
PET				*i* S	Sn	16 46 06.1	+0.7			
RUS	**Russkaya**	**3.67**	**219**	P	Pn	16 45 36.8	+1.3			
RUS				*i* S	Sn	16 46 17.8	-0.3			
MTVR	**Mutnovka**	**3.76**	**222**	P	Pn	16 45 38.0	+1.1			
MTVR				*i* S	Sn	16 46 21.8	+1.3			
APC	**Apacha**	**3.88**	**234**	P	Pn	16 45 40.3	+2.0			
ASAK	**Asacha**	**3.94**	**223**	P	Pn	16 45 42.5	+3.1			
ASAK				*i* S	Sn	16 46 27.9	+2.9			

KRSC 30 17:03:20.3±1.6, 48°42N×156°82E, h5km±5km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.31**	**349**	P	Pn	17 03 58.3	-0.7
SKR				*i* S	Sn	17 04 26.0	-1.8
ASAK	**Asacha**	**4.03**	**9**	P	Pn	17 04 25.6	+2.9
MTVR	**Mutnovka**	**4.16**	**12**	P	Pn	17 04 28.0	+3.4
MTVR				*i* S	Sn	17 05 16.5	+2.8
RUS	**Russkaya**	**4.16**	**14**	P	Pn	17 04 27.4	+3.0
RUS				*i* S	Sn	17 05 15.6	+2.2
UGLR	**Uglovaya**	**4.96**	**14**	P	Pn	17 04 39.4	+3.8
AVH	**Avacha**	**5.00**	**13**	P	Pn	17 04 38.7	+2.6
KOK	**Koryaka**	**5.01**	**13**	P	Pn	17 04 38.7	+2.5
SDLR	**Sedlovina**	**5.04**	**14**	P	Pn	17 04 39.4	+2.8
SPN	**Mys Shipunski**	**5.11**	**22**	P	Pn	17 04 39.7	+2.3
MKZ	**Mys Kozlova**	**6.87**	**25**	P	Pn	17 05 04.1	+2.6

IDC 30 17:07:11.1±3.7, 12°12S×165°90E, h51km±30km, mb3.6/7, mb1 3.8/9, mb1mx3.6/22, mbtmp3.8/9, ML4.3/2, Error ellipse: s-maj=31.3km s-min=17.6km az=61.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.43**	**294**	P	Pn	17 08 43.2	0.0
	18nm,0.3s,baz=118,slow=6.4,SNR=9.6						
HNR				S	Sn	17 09 55.0	-0.4
	3.8nm,0.3s,baz=162,slow=18,SNR=2.2						
DZM	**Mont Dzumac**	**9.91**	**177**	P	Pn	17 09 31.7	+0.6
	0.9nm,0.3s,baz=270,slow=24,SNR=16						
DZM				S	Sn	17 11 20.9	0.0
	0.2nm,0.3s,baz=90,slow=20,SNR=2.4						
CTA	**Charters Tower**	**20.45**	**245**	P	P	17 11 44.7	+0.1
	1.1nm,0.2s,baz=66,slow=10,SNR=3.3						
WRA	**Warramunga Arr**	**31.27**	**252**	P	P	17 13 26.9	+0.5
	1.0nm,0.7s,baz=83,slow=8.8,SNR=17						
ASAR	**Alice Springs**	**32.46**	**245**	P	P	17 13 37.3	+0.5
	0.7nm,0.7s,baz=70,slow=10,SNR=14						
ASAR				PcP	PcP	17 16 22.6	-0.5
	0.5nm,1.0s,baz=57,slow=3.4,SNR=3.5						
VNDA	**Vanda**	**65.43**	**181**	P	P	17 17 47.1	-1.0
	0.9nm,1.1s,baz=357,slow=11,SNR=3.8						
SONM	**Songino Array**	**79.62**	**324**	P	P	17 19 13.1	0.0
	0.5nm,0.4s,baz=132,slow=4.3,SNR=3.7						
ILAR	**Eielson Array**	**84.48**	**18**	P	P	17 19 38.7	+0.6
	0.3nm,0.6s,baz=247,slow=4.7,SNR=3.5						
MKAR	**Makanchi Array**	**94.40**	**317**	P	P	17 20 25.1	-0.5
	1.7nm,0.8s,baz=97,slow=6.3,SNR=19						

IDC 30 17:09:14.3±2.6, 15°50N×86°18W, h0km, mb3.8/3, mb1 4.4/4, mb1mx3.8/24, mbtmp4.1/4, ML4.8/1, MS2.9/2, Ms1 2.9/2, ms1mx2.4/40, Error ellipse: s-maj=67.7km s-min=47.9km az=67.0, Honduras

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEIG	**Tepich**	**5.11**	**337**	Pn	Pn	17 10 30.6	-1.5
	37nm,0.3s,baz=130,slow=4.6,SNR=99						
TEIG				Sn	Sn	17 11 26.1	-5.8
	43nm,0.3s,baz=257,slow=23,SNR=16						
TEIG				LR	LR	17 12 37.1	
	comp=Z,74nm,20.7s,baz=269,slow=40						
TKL	**Tuckaleechee C**	**20.19**	**6**	P	Pn	17 13 51.7	-0.8
	1.8nm,0.3s,baz=130,slow=16,SNR=4.7						
TXAR	**Lajitas Array**	**21.19**	**313**	P	P	17 14 02.4	+0.7
	2.5nm,0.9s,baz=129,slow=9.9,SNR=15						
TXAR				LR	LR	17 23 51.7	
	comp=Z,57nm,19.4s,baz=5.0,slow=41						
YKA	**Yellowknife Ar**	**51.03**	**343**	P	P	17 18 17.4	-0.5
	1.0nm,0.6s,baz=132,slow=9.8,SNR=3.0						
WRA	**Warramunga Arr**	**141.21**	**257**	PKP	PKPdf	17 28 46.6	-1.2
	0.5nm,1.0s,baz=87,slow=2.5,SNR=3.7						
ASAR	**Alice Springs**	**141.47**	**251**	PKhKP	PKPpre	17 28 44.6	
	0.7nm,1.1s,baz=129,slow=1.9,SNR=4.5						
ASAR				PKP	PKPdf	17 28 47.4	-0.8
	0.4nm,0.7s,baz=95,slow=2.5,SNR=5.2						
CMAR	**Chiang Mai Arr**	**145.88**	**351**	PKPbc	PKPdf	17 28 55.7	-0.4
	1.3nm,0.9s,baz=333,slow=3.3,SNR=8.9						

*TAP **30** 17:18:00.6,24°.49N×122°.47E,h80km,ML3.0,C*
*ISCJB **30** 17:18:01.2±0.6,24°.43N±0°.04×122°.49E±0°.02,h65km±9km, Error ellipse: s-maj=6.7km s-min=2.9km az=171.8*
*JMA **30** 17:18:01.6±0.2,24°.67N×122°.58E,h71km,M1.7*

ISC 30 17:18:01.6±1.4, 24°44N±0°.05×122°48E±0°.02, h64km±13km, n31, σ0s69/61, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.48**	**88**	P	**Pn**	**17 18 14.0**	**+0.3**
YOJ				*e*S	**Sn**	**17 18 23.0**	**+0.5**
TWC	**Suao**	**0.60**	**286**	*e*P	**Pn**	**17 18 14.4**	**-0.5**
	baz=287						
TWC				S	**Sn**	**17 18 25.0**	**+0.2**
	baz=287						
ENA	**Nanau**	**0.68**	**269**	*e*P	**Pn**	**17 18 15.8**	**0.0**
	baz=262						
ENA				*e*S	**Sn**	**17 18 27.3**	**+1.1**
	baz=262						
TWB1	**Santiao Chiao**	**0.72**	**321**	*e*P	**Pn**	**17 18 15.0**	**-1.4**
	baz=320						
TWB1				*e*S	**Sn**	**17 18 26.6**	**-0.6**
	baz=320						
TWE	**Neicheng**	**0.79**	**291**	*e*P	**Pn**	**17 18 17.2**	**0.0**
	baz=290						
TWE				*e*S	**Sn**	**17 18 29.0**	**+0.3**
	baz=290						
TWD	**Chiawan**	**0.89**	**246**	*e*P	**Pn**	**17 18 18.1**	**-0.2**
	baz=236						
TWD				*e*S	**Sn**	**17 18 30.8**	**+0.1**
	baz=236						
NWF	**Wu-fen Shan**	**0.90**	**315**	*e*P	**Pn**	**17 18 18.3**	**-0.2**
	baz=306						
NWF				*e*S	**Sn**	**17 18 31.0**	**-0.1**
	baz=306						
HWA	**Hwalien**	**0.93**	**240**	*e*P	**Pn**	**17 18 18.9**	**+0.1**
	baz=237						
NNS	**Nan Shan**	**1.01**	**270**	*e*P	**Pn**	**17 18 20.3**	**+0.2**
	baz=260						
NNS				*e*S	**Sn**	**17 18 33.9**	**+0.1**
	baz=260						
NSK	**Sanguang**	**1.05**	**283**	*e*P	**Pn**	**17 18 20.9**	**+0.4**
	baz=280						
NSK				*e*S	**Sn**	**17 18 34.7**	**+0.1**
	baz=280						
IRIF	**Iriomote-Funau**	**1.14**	**95**	P	**Pn**	**17 18 21.2**	**-0.4**
IRIF				*e*S	**Sn**	**17 18 36.3**	**-0.2**
ESL	**Shilin**	**1.15**	**237**	*e*P	**Pn**	**17 18 21.4**	**-0.3**
	baz=235						
ESL				*e*S	**Sn**	**17 18 36.3**	**-0.4**
	baz=235						
WHF	**Hehuan Shan**	**1.15**	**255**	*e*P	**Pn**	**17 18 22.2**	**+0.1**
	baz=259						
WHF				*e*S	**Sn**	**17 18 37.3**	**-0.1**
	baz=259						
TWT	**Tachien**	**1.21**	**261**	*e*P	**Pn**	**17 18 23.3**	**+0.6**
	baz=255						
TWT				*e*S	**Sn**	**17 18 38.9**	**+0.5**
	baz=255						
HATJ	**Hateruma jima**	**1.27**	**107**	P	**Pn**	**17 18 23.9**	**+0.7**
HATJ				*e*S	**Sn**	**17 18 40.6**	**+1.2**
NSTT	**Nanjuang**	**1.36**	**278**	*e*P	**Pn**	**17 18 23.8**	**-0.8**
	baz=276						
NSTT				*e*S	**Sn**	**17 18 41.6**	**-0.2**
	baz=276						
JKRS	**Kuro-shima**	**1.41**	**98**	P	**Pn**	**17 18 25.3**	**+0.2**
JKRS				*e*S	**Sn**	**17 18 43.1**	**+0.3**
EHY	**Hungye**	**1.41**	**229**	*e*P	**Pn**	**17 18 24.9**	**-0.3**
	baz=227						
EHY				*e*S	**Sn**	**17 18 41.6**	**-1.4**
	baz=227						
JIJ	**Ishigaki jima**	**1.51**	**93**	P	**Pn**	**17 18 26.0**	**-0.6**
JIJ				*e*S	**Sn**	**17 18 44.4**	**-1.0**
TWF1	**Yuli**	**1.54**	**225**	*e*P	**Pn**	**17 18 26.3**	**-0.6**
	baz=232						
TWF1				*e*S	**Sn**	**17 18 44.5**	**-1.4**
	baz=232						
SMLT	**Sun Moon Lake**	**1.55**	**249**	*e*P	**Pn**	**17 18 28.2**	**+1.1**
	baz=243						
SMLT				*e*S	**Sn**	**17 18 46.7**	**+0.2**
	baz=243						
TYC	**Yuchr**	**1.58**	**251**	*e*P	**Pn**	**17 18 27.9**	**+0.5**
	baz=244						
TYC				*e*S	**Sn**	**17 18 47.8**	**+0.8**
	baz=244						
CHKT	**Chengkung**	**1.69**	**218**	*e*P	**Pn**	**17 18 28.7**	**-0.2**
	baz=210						
CHKT				*e*S	**Sn**	**17 18 48.0**	**-1.5**
	baz=210						
YUS	**Yu-Shan**	**1.69**	**236**	*e*P	**Pn**	**17 18 29.4**	**0.0**
	baz=229						
YUS				*e*S	**Sn**	**17 18 50.2**	**-0.2**
	baz=229						
ALS	**Alishan**	**1.79**	**239**	*e*P	**Pn**	**17 18 31.1**	**+0.5**
	baz=231						
ALS				*e*S	**Sn**	**17 18 52.7**	**+0.1**
	baz=231						
ELDTW	**Lidau**	**1.83**	**227**	*e*P	**Pn**	**17 18 30.3**	**-0.6**
	baz=226						
ELDTW				*e*S	**Sn**	**17 18 52.3**	**-1.0**
	baz=226						
CHN5	**Tsauling**	**1.85**	**243**	*e*P	**Pn**	**17 18 32.2**	**+0.9**
	baz=235						
CHN5				*e*S	**Sn**	**17 18 55.2**	**+1.5**
	baz=235						
JTJ	**Tarama**	**2.03**	**84**	P	**Pn**	**17 18 33.4**	**-0.1**
JTJ				*e*S	**Sn**	**17 18 58.1**	**+0.3**
CHN4	**Tsaushan**	**2.04**	**238**	*e*P	**Pn**	**17 18 34.1**	**+0.4**
	baz=238						
CHN4				*e*S	**Sn**	**17 18 59.1**	**+0.9**
	baz=238						
TWG	**Pinlang**	**2.07**	**219**	*e*P	**Pn**	**17 18 33.8**	**-0.2**
	baz=225						
TWG				*e*S	**Sn**	**17 18 57.7**	**-1.1**
	baz=225						
WTP	**Ta-pu**	**2.09**	**236**	*e*P	**Pn**	**17 18 35.5**	**+1.1**
	baz=235						
WTP				*e*S	**Sn**	**17 19 00.1**	**+0.8**
	baz=235						

*DDA **30** 17:21:28.4,39°.98N×27°.01E,h7km,MD2.8*
*ISK **30** 17:21:29.4,40°.08N×26°.97E,h6km,MD2.8*
*CSEM **30** 17:21:29.6±0.3,40°.05N×26°.96E,h5km,MD2.8, Error ellipse: s-maj=5.7km s-min=2.7km az=30.0*

ISC 30 17:21:29.8±1.3, 40°04N±0°.04×26°96E±0°.03, h3km±15km, n27, σ0s70/36, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LPK	**Lapseki**	**0.37**	**336**	*e*PG	**Pg**	**17 21 36.8**	**-0.1**
LPK	**Lapseki**	**0.37**	**336**	*e*Pg	**Pg**	**17 21 36.8**	**-0.1**
KRBG	**Karabiga-Canak**	**0.44**	**36**	*e*PG	**Pg**	**17 21 37.5**	**-0.8**
KRBG				*e*SG	**Sg**	**17 21 43.7**	**-0.3**
KRBG	**Karabiga-Canak**	**0.44**	**36**	*e*Pg	**Pg**	**17 21 37.5**	**-0.8**
KRBG				*e*Sg	**Sg**	**17 21 43.7**	**-0.3**
GELI	**Tayfur-Gelibol**	**0.52**	**315**	*e*PG	**Pg**	**17 21 39.4**	**-0.3**
GELI				*e*SG	**Sg**	**17 21 46.7**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.52**	**315**	*e*Pg	**Pg**	**17 21 39.4**	**-0.3**
GELI				*e*Sg	**Sg**	**17 21 46.7**	**+0.3**
GONE	**Gonen-Balikesi**	**0.56**	**89**	*e*PG	**Pg**	**17 21 40.4**	**-0.1**
GONE	**Gonen-Balikesi**	**0.56**	**89**	*e*Pg	**Pg**	**17 21 40.4**	**-0.1**
RKY	**Sarkoy-Tekirda**	**0.67**	**15**	*e*PG	**Pg**	**17 21 41.9**	**-0.8**
RKY	**Sarkoy-Tekirda**	**0.67**	**15**	*e*Pg	**Pg**	**17 21 41.9**	**-0.8**
SART	**Tekirdag**	**0.68**	**15**	*i* P	**Pg**	**17 21 42.5**	**-0.2**
SART				*e*S	**Sg**	**17 21 53.1**	**+1.6**
SART	**Tekirdag**	**0.68**	**15**	*i* P	**Pg**	**17 21 42.5**	**-0.2**
SART				*e*S	**Sg**	**17 21 53.1**	**+1.6**
BOZC	**Bozcaada**	**0.72**	**255**	*e*P	**Pg**	**17 21 43.0**	**-0.6**
BOZC				*e*S	**Sg**	**17 21 53.7**	**+0.8**
MFT	**Murefte**	**0.79**	**18**	*e*PG	**Pg**	**17 21 44.6**	**-0.3**
MFT	**Murefte**	**0.79**	**18**	*e*Pg	**Pg**	**17 21 44.6**	**-0.3**
BNT	**Bandirma**	**0.81**	**66**	*e*PG	**Pg**	**17 21 44.4**	**-0.8**
BNT	**Bandirma**	**0.81**	**66**	*e*Pg	**Pg**	**17 21 44.4**	**-0.8**
ENEZ	**Enez**	**0.93**	**319**	*e*PG	**Pg**	**17 21 47.0**	**-0.6**
ENEZ	**Enez**	**0.93**	**319**	*e*Pg	**Pg**	**17 21 47.0**	**-0.6**
KCTX	**Karacabey (Bur**	**1.10**	**78**	*e*PG	**Pg**	**17 21 50.5**	**-0.3**
KCTX	**Karacabey (Bur**	**1.10**	**78**	*e*Pg	**Pg**	**17 21 50.5**	**-0.3**
DURS	**Dursunbey**	**1.25**	**110**	*e*P	**Pn**	**17 21 53.5**	**-0.7**
DURS				*e*S	**Sb**	**17 22 11.5**	**+1.0**
DURS	**Dursunbey**	**1.25**	**110**	*e*P	**Pn**	**17 21 53.5**	**-0.7**
DURS				*e*S	**Sb**	**17 22 11.5**	**+1.0**
ARMT	**Armutlu**	**1.55**	**69**	*e*PN	**Pn**	**17 21 58.0**	**-0.3**
ARMT	**Armutlu**	**1.55**	**69**	*e*Pn	**Pn**	**17 21 58.0**	**-0.3**
EDRB	**Edirne**	**1.82**	**355**	*e*PN	**Pn**	**17 22 01.3**	**-0.6**
EDRB	**Edirne**	**1.82**	**355**	*e*Pn	**Pn**	**17 22 01.3**	**-0.6**

*ISCJB **30** 17:22:47.4±0.7,36°.53N±0°.04×140°.51E±0°.06, h106km±4km,mb3.6/3, Error ellipse: s-maj=9.3km s-min=6.1km az=32.0*
*IDC **30** 17:22:48.3±1.1,35°.10N×137°.08E,h0km,mb3.5/3, mb1 3.8/3,mb1mx3.4/26,mbtmp3.5/3, Error ellipse: s-maj=22.3km s-min=12.8km az=116.0*
*JMA **30** 17:22:49.3±0.1,36°.53N×140°.43E,h95km±1km,M3.6*
JMA Felt I J1.

ISC 30 17:22:48.3±1.0, 36°53N±0°.05×140°50E±0°.06, h101km±7km, n17, σ0s56/30, mb3.6/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	**Hitachi**	**0.10**	**34**	P	**Pn**	**17 23 02.7**	**+0.3**
JHO				S	**Sn**	**17 23 12.6**	**-0.4**
JYT	**Yasato**	**0.39**	**219**	P	**Pn**	**17 23 03.7**	**+0.2**
JYT				S	**Sn**	**17 23 14.4**	**-0.5**
JAG	**Ashikaga**	**0.85**	**263**	P	**Pn**	**17 23 07.5**	**+0.2**
JAG				*e*S	**Sn**	**17 23 21.4**	**-0.2**
JFK	**Kawauchi**	**0.89**	**20**	P	**Pn**	**17 23 08.1**	**+0.4**
JFK				*e*S	**Sn**	**17 23 22.1**	**-0.1**
JFT	**Otama**	**0.99**	**352**	P	**Pn**	**17 23 09.3**	**+0.5**
JFT				*e*S	**Sn**	**17 23 24.5**	**+0.3**
JKT	**Katashina**	**1.03**	**283**	P	**Pn**	**17 23 09.6**	**+0.3**
JKT				*e*S	**Sn**	**17 23 25.9**	**+0.8**
JFY	**Yanaizu**	**1.08**	**324**	P	**Pn**	**17 23 10.0**	**+0.2**
JFY				*e*S	**Sn**	**17 23 25.6**	**-0.3**
JMM	**Marumori**	**1.35**	**10**	P	**Pn**	**17 23 13.0**	**+0.2**
JMM				*e*S	**Sn**	**17 23 30.7**	**-0.7**
JHK	**Hiroka**	**1.39**	**301**	P	**Pn**	**17 23 13.6**	**+0.3**
JHK				*e*S	**Sn**	**17 23 32.1**	**-0.1**
JRY	**Ryogami san**	**1.39**	**249**	P	**Pn**	**17 23 13.7**	**+0.4**
JRY				*e*S	**Sn**	**17 23 32.0**	**-0.3**
JNS	**Sasagawa**	**1.59**	**324**	P	**Pn**	**17 23 16.2**	**+0.4**
JNS				*e*S	**Sn**	**17 23 35.1**	**-1.6**
JOD2	**Odawara 2**	**1.71**	**223**	P	**Pn**	**17 23 17.3**	**0.0**
JOD2				S	**Sn**	**17 23 38.6**	**-0.7**
MJAR	**Matsushiro Arr**	**1.85**	**271**	Pg	**Pn**	**17 23 18.9**	**-0.1**
	3.6nm,0.3s,baz=210,slow=19,SNR=64						
MJAR				Lg	Lg	17 23 43.0	
	4.7nm,0.3s,baz=216,slow=33,SNR=9.1						
MAT	**Matsushiro**	**1.85**	**271**	P	**Pn**	**17 23 19.5**	**+0.5**
MAT				S	**Sn**	**17 23 42.7**	**+0.3**
MKAR	**Makanchi Array**	**43.77**	**302**	P	**P**	**17 30 42.9**	**-0.8**
	0.3nm,0.6s,baz=87,slow=11,SNR=5.2						
WRA	**Warramunga Arr**	**56.47**	**187**	P	**P**	**17 32 19.7**	**0.0**
	0.8nm,0.5s,baz=3.0,slow=7.3,SNR=28						
ASAR	**Alice Springs**	**60.20**	**187**	P	**P**	**17 32 46.7**	**+1.1**
	0.4nm,0.7s,baz=19,slow=13,SNR=7.6						

*NEIC **30** 17:25:00.5,52°.08N×171°.05W,h12km,mb4.1/1, ML4.0(AEIC), After AEIC.*
*IDC **30** 17:25:05.8±3.4,52°.44N×171°.33W,h63km±31km,mb3.7/18, mb1 3.9/21,mb1mx3.8/33,mbtmp3.7/21,ML3.7/3,MS3.3/3, Ms1 3.2/3,ms1mx2.8/50, Error ellipse: s-maj=22.6km s-min=11.2km az=172.0*

ISC 30 17:24:59.8±3.9, 52°0N±0°.1×171°15W±0°.05, h17km±23km, n61, σ1s52/64, mb4.1/21, MS4.3/3, Fox Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIKH	**Nikolski High**	**1.69**	**55**	P	**Pn**	**17 25 27.3**	**-1.3**
NIKH				S	**Sn**	**17 25 48.0**	**-1.8**
KOSE	**Korovin Southe**	**1.81**	**281**	P	**Pn**	**17 25 31.9**	**+1.6**
KOFP	**Korovin Flat P**	**1.83**	**279**	P	**Pn**	**17 25 32.2**	**+1.6**
KOKL	**Mount Kliuchef**	**1.90**	**280**	P	**Pn**	**17 25 33.2**	**+1.6**
KOKL				S	**Sb**	**17 25 58.8**	**+1.2**
KOWE	**Korovin West**	**1.94**	**281**	P	**Pn**	**17 25 33.7**	**+1.6**
OKSP	**Okmok Steeple**	**2.12**	**54**	P	**Pn**	**17 25 34.6**	**+0.1**
OKSO	**Okmok South**	**2.25**	**53**	P	**Pn**	**17 25 36.1**	**-0.1**
OKSO				S	**Sn**	**17 26 03.5**	**-0.2**
OKCE	**Okmok Cone E**	**2.29**	**51**	P	**Pn**	**17 25 37.2**	**+0.4**
OKTU	**Okmok Mt. Tuli**	**2.32**	**53**	P	**Pn**	**17 25 37.9**	**+0.6**
OKFG	**Magazine Ridge**	**2.40**	**54**	P	**Pn**	**17 25 38.4**	**+0.1**
OKFG				S	**Sn**	**17 26 07.2**	**-0.1**
MCIR	**Makushin Cirqu**	**3.21**	**52**	P	**Pn**	**17 25 50.6**	**+1.1**
MSW	**Makushin Switc**	**3.24**	**53**	P	**Pn**	**17 25 50.7**	**+0.8**
MSW				S	**Sn**	**17 26 30.4**	**+2.3**
MTBL	**Makushin Table**	**3.32**	**53**	P	**Pn**	**17 25 52.1**	**+1.1**
UNV	**Unalaska Valle**	**3.34**	**55**	P	**Pn**	**17 25 51.5**	**+0.2**
UNV				S	**Sn**	**17 26 31.6**	**+1.0**
AKRB	**Akutan Reef Bi**	**3.71**	**54**	P	**Pn**	**17 25 58.0**	**+1.6**
ZRO	**Akutan Zero**	**3.74**	**55**	P	**Pn**	**17 25 58.1**	**+1.4**
LVA	**Lava Point**	**3.75**	**53**	P	**Pn**	**17 25 58.6**	**+1.7**
AKGG	**Akutan Green G**	**3.79**	**53**	P	**Pn**	**17 25 59.1**	**+1.8**
AKUT	**Akutan**	**3.86**	**55**	P	**Pn**	**17 26 00.1**	**+1.7**
AKSA	**Akutan Strait**	**3.90**	**55**	P	**Pn**	**17 26 00.4**	**+1.5**
WESN	**West Dahl Nort**	**4.68**	**55**	P	**Pn**	**17 26 11.9**	**+2.1**
FALS	**False Pass**	**5.42**	**56**	P	**Pn**	**17 26 21.8**	**+2.0**
CESW	**Semis' Southwe**	**5.75**	**272**	P	Pn	17 26 27.7	+3.4
AMKA	**Amchitka**	**5.97**	**267**	P	**Pn**	**17 26 29.7**	**+2.3**
DTNA	**Dutton South F**	**6.14**	**56**	P	**Pn**	**17 26 30.9**	**+1.1**
LSPA	**Little Sitkin**	**6.35**	**273**	P	Pn	17 26 35.7	+3.1
LSSA	**Little Sitkin**	**6.39**	**273**	P	Pn	17 26 36.5	+3.4
SDPT	**Sand Point**	**7.15**	**58**	P	**Pn**	**17 26 44.4**	**+0.8**
CHGN	**Chignik**	**8.60**	**55**	*e*Pn	**Pn**	**17 27 03.1**	**-0.3**
FX1	**Attu Island--F**	**9.62**	**281**	P	**Pn**	**17 27 17.2**	**-0.1**
	1.4nm,0.3s,baz=213,slow=9.2,SNR=15						
FX1				LR	LR	17 30 41.2	
	comp=Z,104nm,21.0s,baz=184,slow=36						
OHAK	**Old Harbor**	**11.57**	**56**	*e*Pn	**Pn**	**17 27 41.0**	**-3.0**
	6.8nm,0.6s						
KDAK	**Kodiak Island**	**12.11**	**54**	P	**Pn**	**17 27 48.7**	**-2.7**
	1.6nm,0.3s,baz=240,slow=9.2,SNR=10						
RSO	**Redoubt South**	**13.22**	**43**	Pn	**Pn**	**17 28 08.7**	**+2.0**
	30nm,0.8s					

comp=Z,1.9nm,0.7s,baz=26,slow=6.4,SNR=15
WRA Warramunga Arr 85.94 230 P **P 17 37 38.2 -0.7**
comp=Z,1.2nm,0.9s,baz=31,slow=5.6,SNR=9.8
ASAR Alice Springs 89.35 229 P **P 17 37 55.5 +0.3**
comp=Z,2.1nm,0.6s,baz=29,slow=4.9,SNR=51
SNAA Sanae 159.62 169 *e*PKPab **PKPab 17 45 34.0 -0.7**

*IDC **30** 17:27:24.3±2.4,38.56N×123.24W,h0km,mb1 3.7/5, mb1mx3.5/31,mbtmp3.3/5,ML3.5/5, Error ellipse: s-maj=28.1km s-min=11.4km az=62.0*
*ISCJB **30** 17:27:26.8±0.5,38.77N±0.03×122.77W±0.07,h10km, Error ellipse: s-maj=8.3km s-min=4.3km az=159.6*
*NEIC **30** 17:27:27.0,38.81N×122.79W,h4km,MW3.8(BRK),After NCEDC.*
NEIC Felt [III] at Angwin, Hidden Valley Lake and Middletown; [II] at Calistoga, Geyserville, Healdsburg, Napa, Petaluma, Saint Helena, Santa Rosa and Sonoma. Also felt at Kelseyville, Lower Lake, Mountain View, Pope Valley, Sacramento, San Francisco, San Ramon, Windsor and Yountville.
ISC 30 17:27:26.6±1.0,38.76N±0.04×122.96W±0.06,h10km,n29, σ1§33/32,Northern California

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
HOPS	**Hopland**	**0.25**	**339**	*e*Pg	**Pb**	**17 27 33.6**	**+0.3**
MCCM	**Marconi Confer**	**0.61**	**174**	*e*Pg	**Pn**	**17 27 40.9**	**-0.5**
KCPM	**Cahto Peak**	**1.05**	**333**	*e*Pg	**Pn**	**17 27 48.0**	**+0.6**
KIPM	**Iron Peak**	**1.13**	**339**	*e*Pg	**Pn**	**17 27 50.0**	**+1.5**
SAC	**San Andreas**	**1.25**	**160**	*e*Pg	**Pn**	**17 27 50.0**	**-0.1**
SAC				*e*Sg	**Sn**	**17 28 07.6**	**+0.7**
WDC	**Whiskeytown Da**	**1.85**	**10**	*e*Pn	**Pn**	**17 27 58.0**	**-0.4**
CMB	**Columbia Colle**	**2.15**	**109**	*e*Pn	**Pn**	**17 28 01.5**	**-1.0**
KHMM	**Horse Mountain**	**2.20**	**345**	Pn	**Pb**	**17 28 05.9**	**-0.7**
BEKR	**Beckworth**	**2.30**	**60**	*e*Pn	**Pn**	**17 28 04.7**	**-0.1**
SAO	**San Andreas Ge**	**2.32**	**149**	*e*Pn	**Pn**	**17 28 04.4**	**-0.4**
YBH	**Yreka Blue Hor**	**2.98**	**4**	*e*Pn	**Pn**	**17 28 15.1**	**+1.1**
YBH				Lg	Lg	17 29 04.5	
YBH	**Yreka Blue Hor**	**2.98**	**4**	Pn	**Pb**	**17 28 17.6**	**-2.2**
	2.4nm,0.3s,baz=181,slow=11,SNR=16						
YBH				Lg	Lg	17 29 04.5	
	0.3nm,0.3s,baz=248,slow=19,SNR=4.2						
NVAR	**Mina Array Bea**	**3.66**	**94**	Pn	**Pn**	**17 28 23.8**	**+0.3**
NVAR				Pg	**Pb**	**17 28 31.6**	**+0.1**
NVAR				Lg	Lg	17 29 17.7	
NVAR	**Mina Array Bea**	**3.66**	**94**	Pn	**Pn**	**17 28 23.8**	**+0.3**
	1.7nm,0.3s,baz=269,slow=15,SNR=31						
NVAR				Pg	**Pb**	**17 28 31.6**	**+0.1**
	8.3nm,0.3s,baz=264,slow=18,SNR=44						
NVAR				Lg	Lg	17 29 17.7	
	4.8nm,0.3s,baz=263,slow=31,SNR=3.1						
MOD	**Modoc**	**3.74**	**32**	*e*Pn	**Pn**	**17 28 23.0**	**-1.5**
HUMO	**Hull Mountain**	**3.85**	**0**	Pn	**Pn**	**17 28 26.6**	**+0.7**
HUMO				*e*Pg	**Pg**	**17 28 38.8**	**-1.5**
ISA	**Isabella**	**4.73**	**129**	*e*Pn	**Pn**	**17 28 39.2**	**+1.2**
WVOR	**Wild Horse Val**	**4.93**	**40**	Pn	**Pn**	**17 28 42.9**	**+2.0**
WVOR				*e*Pg	**Pb**	**17 28 54.4**	**+1.3**
PASC	**Pasadena Art C**	**5.98**	**139**	*e*Pn	**Pn**	**17 28 52.5**	**-2.6**
	13nm,0.5s						
GSC	**Goldstone**	**6.01**	**123**	*e*Pn	**Pn**	**17 28 55.1**	**-0.6**
	3.5nm,0.4s						
ELK	**Elko**	**6.27**	**69**	*e*Pn	**Pn**	**17 28 56.4**	**-3.0**
	1.9nm,0.8s						
PFO	**Pinyon Flat Ob**	**7.35**	**132**	Pn	**Pn**	**17 29 14.1**	**0.0**
PFO				Lg	Lg	17 31 13.2	
PFO	**Pinyon Flat Ob**	**7.35**	**132**	Pn	**Pn**	**17 29 14.1**	**0.0**
	0.6nm,0.3s,baz=324,slow=15,SNR=4.8						
PFO				Lg	Lg	17 31 13.2	
	0.2nm,0.3s,baz=248,slow=19,SNR=3.6						
DUG	**Dugway**	**7.98**	**76**	*e*Pn	**Pn**	**17 29 21.0**	**-1.7**
	2.1nm,0.6s						
MSU	**Marysvale**	**8.44**	**88**	*e*Pn	**Pn**	**17 29 30.8**	**+1.7**
	1.8nm,0.7s						
PDAR	**Pinedale Array**	**10.92**	**64**	Pn	Pn	17 30 09.1	+5.9
PDAR	**Pinedale Array**	**10.92**	**64**	Pn	Pn	17 30 09.1	+5.9
	0.0nm,0.3s,baz=254,slow=13,SNR=9.2						
TXAR	**Lajitas Array**	**18.51**	**115**	P	**Pn**	**17 31 45.0**	**+1.7**
TXAR	**Lajitas Array**	**18.51**	**115**	P	**Pn**	**17 31 45.0**	**+1.7**
	0.0nm,0.3s,baz=270,slow=5.4,SNR=7.1						

*ISCJB **30** 17:43:20.3±0.9,40.06N±0.05×26.91E±0.05,h5km±8km, Error ellipse: s-maj=9.2km s-min=4.7km az=-36.5*
*CSEM **30** 17:43:20.5±0.3,40.05N×26.92E,h8km,MD2.7, Error ellipse: s-maj=6.8km s-min=3.2km az=36.0*
*DDA **30** 17:43:21.9,40.06N×27.10E,h7km,MD2.8*
*ISK **30** 17:43:21.3,40.15N×26.94E,h9km,MD2.7*
ISC 30 17:43:20.3±1.3,40.05N±0.04×26.94E±0.03,h5km±11km, n22,σ0§35/34,Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KRBG	**Karabiga-Canak**	**0.44**	**38**	*e*PG	**Pg**	**17 43 28.9**	**+0.1**
KRBG				*e*SG	**Sg**	**17 43 34.5**	**-0.1**
KRBG	**Karabiga-Canak**	**0.44**	**38**	*e*Pg	**Pg**	**17 43 28.9**	**+0.1**
KRBG				*e*Sg	**Sg**	**17 43 34.5**	**-0.1**
GELI	**Tayfur-Gelibol**	**0.50**	**314**	*e*PG	**Pg**	**17 43 30.3**	**+0.3**
GELI				*e*SG	**Sg**	**17 43 36.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.50**	**314**	*e*Pg	**Pg**	**17 43 30.3**	**+0.3**
GELI				*e*Sg	**Sg**	**17 43 36.9**	**+0.3**
BALY	**Balya**	**0.60**	**120**	*e*P	**Pg**	**17 43 31.7**	**-0.2**
BALY				*e*S	**Sb**	**17 43 42.5**	**+0.3**
BALY	**Balya**	**0.60**	**120**	*e*P	**Pg**	**17 43 31.7**	**-0.2**
BALY				*e*S	**Sb**	**17 43 42.5**	**+0.3**
SART	**Tekirdag**	**0.67**	**16**	*e*P	**Pg**	**17 43 33.2**	**+0.1**
SART				*e*S	**Sb**	**17 43 43.8**	**-0.3**
SART	**Tekirdag**	**0.67**	**16**	*e*P	**Pg**	**17 43 33.2**	**+0.1**
SART				*e*S	**Sb**	**17 43 43.8**	**-0.3**
ENEZ	**Enez**	**0.92**	**319**	*e*PG	**Pg**	**17 43 37.9**	**0.0**
ENEZ				*e*SG	**Sg**	**17 43 49.8**	**0.0**
ENEZ	**Enez**	**0.92**	**319**	*e*Pg	**Pg**	**17 43 37.9**	**0.0**
ENEZ				*e*Sg	**Sg**	**17 43 49.8**	**0.0**
KCTX	**Karacabey (Bur**	**1.10**	**78**	*e*PG	**Pg**	**17 43 42.1**	**+0.6**
KCTX	**Karacabey (Bur**	**1.10**	**78**	*e*Pg	**Pg**	**17 43 42.1**	**+0.6**
DURS	**Dursunbey**	**1.26**	**110**	*e*P	**Pn**	**17 43 44.2**	**-0.5**
DURS				*e*S	**Sn**	**17 44 02.6**	**+0.6**
DURS	**Dursunbey**	**1.26**	**110**	*e*P	**Pn**	**17 43 44.2**	**-0.5**
DURS				*e*S	**Sn**	**17 44 02.6**	**+0.6**
ARMT	**Armutlu**	**1.56**	**70**	*e*PN	**Pb**	**17 43 49.5**	**-0.1**
ARMT	**Armutlu**	**1.56**	**70**	*e*Pn	**Pb**	**17 43 49.5**	**-0.1**
CTKS	**Kestanelik-??a**	**1.68**	**44**	*e*PN	**Pn**	**17 43 49.7**	**-0.7**
CTKS	**Kestanelik-??a**	**1.68**	**44**	*e*Pn	**Pn**	**17 43 49.7**	**-0.7**
CTYL	**Yal??k??y-??at**	**1.75**	**35**	*e*PN	**Pn**	**17 43 51.4**	**0.0**
CTYL	**Yal??k??y-??at**	**1.75**	**35**	*e*Pn	**Pn**	**17 43 51.4**	**0.0**
EDRB	**Edirne**	**1.81**	**355**	*e*PN	**Pn**	**17 43 51.9**	**-0.2**
EDRB	**Edirne**	**1.81**	**355**	*e*Pn	**Pn**	**17 43 51.9**	**-0.2**

*IDC **30** 17:46:07.3±1.4,6.41S×131.33E,h0km,mb4.0/2, mb1 4.3/6,mb1mx3.9/20,mbtmp4.2/6,ML4.3/4,Error ellipse: s-maj=56.2km s-min=21.9km az=63.0*
*ISCJB **30** 17:46:11.1±0.4,6.51S±0.03×131.49E±0.05,h42km, mb3.9/2,Error ellipse: s-maj=6.6km s-min=4.8km az=176.5*
*AUST **30** 17:46:12.3,6.47S×131.54E,h35km*
*DJA **30** 17:46:14.3±0.4,6°S±6°×13°1E±°,h143km±14km,M5.0/5, mb5.0/5,mB5.7/4,MLv5.0/5,Mw(mB)5.2/4,Mwp7.1/1*
ISC 30 17:46:11.8±0.7,6.47S±0.05×131.32E±0.06,h42km,n25, σ2§23/27,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.40**	**324**	P	Pn	17 46 53.4	+4.9
BNDI				S	**Sn**	**17 47 21.0**	**+4.3**
BNDI	**Bandanaira**	**2.40**	**324**	P	Pn	17 46 53.4	+4.9
	baz=2.5,SNR=22						
FAKI	**Fak Fak**	**3.65**	**15**	P	**Pn**	**17 47 05.6**	**-0.2**
FAKI				S	**Sn**	**17 47 44.3**	**-3.3**
FAKI	**Fak Fak**	**3.65**	**15**	P	**Pn**	**17 47 06.1**	**+0.3**
	baz=3.6,SNR=119						
FAKI				S	**Sn**	**17 47 43.9**	**-3.7**
	baz=3.6,SNR=37						
RKPI	**Ransiki, Papua**	**5.69**	**30**	P	**Pn**	**17 47 34.7**	**+0.8**
	201nm,0.7s,6µm1.7nm						
KDU	**Kakadu**	**6.28**	**170**	P	**Pn**	**17 47 44.9**	**+3.1**
	baz=6.3,SNR=196						
KDU				S	**Sn**	**17 48 51.7**	**-0.7**
	baz=6.3,SNR=13						
MTN	**Manton Dam**	**6.33**	**182**	P	Pn	17 47 47.1	+4.5
	baz=6.4,SNR=177						
MTN				S	**Sn**	**17 48 57.3**	**+3.6**
	baz=6.4,SNR=6.1						
BAKI	**Biak**	**7.09**	**42**	P	**Pn**	**17 47 53.2**	**+0.1**
WAMI	**Wamena**	**7.79**	**71**	P	**Pn**	**17 48 05.2**	**+2.5**
	63nm,0.9s,984nm0.6nm						
WAMI				S	**Sn**	**17 49 29.5**	**-0.3**
	63nm,0.9s,984nm0.6nm						
KNRA	**Kununurra**	**9.48**	**195**	P	Pn	17 48 29.7	+3.9
	baz=9.6,SNR=217						
KNRA				S	**Sn**	**17 50 09.2**	**-2.0**
	baz=9.6,SNR=8.7						
JAY	**Jayapura**	**10.14**	**68**	P	**Pn**	**17 48 35.4**	**+0.4**
	baz=10.0,SNR=3.3						
WSI	**Waingapu**	**11.37**	**253**	P	Pn	17 48 57.0	+5.4
	baz=12,SNR=4.2						
BMNI	**Bima**	**12.69**	**260**	P	**Pn**	**17 49 08.5**	**-1.3**
	2µm,1.0s,55µm						
FITZ	**Fitzroy Crossi**	**12.82**	**205**	Pn	**Pn**	**17 49 13.0**	**+1.5**
	6.2nm,0.3s,baz=29,slow=11,SNR=156						
FITZ				Sn	**Sn**	**17 51 27.6**	**-5.3**
	3.6nm,0.3s,baz=181,slow=17,SNR=12						
FITZ	**Fitzroy Crossi**	**12.82**	**205**	P	**Pn**	**17 49 12.2**	**+0.7**
	baz=13,SNR=150						
WRA	**Warramunga Arr**	**13.71**	**168**	Pn	**Pn**	**17 49 22.0**	**-1.6**
	1.8nm,0.3s,baz=357,slow=13,SNR=64						
WRA				Sn	Sn	17 51 45.7	-8.9
	3.9nm,0.3s,baz=333,slow=22,SNR=12						
COEN	**Coen**	**13.83**	**123**	P	**Pn**	**17 49 23.8**	**-1.5**
	baz=14,SNR=18						
COEN				S	Sn	17 51 46.2	-11
	baz=14,SNR=4.9						
DAV	**Davao City (W)**	**14.62**	**337**	P	**Pn**	**17 49 35.9**	**-0.2**
QIS	**Mount Isa**	**16.14**	**151**	P	**Pn**	**17 49 55.0**	**-0.8**
	baz=16,SNR=11						
QIS				S	Sn	17 52 39.4	-15
	baz=16,SNR=4.8						
MTSU	**Mount Surprise**	**17.17**	**134**	P	**Pn**	**17 50 08.2**	**-0.6**
	baz=17,SNR=24						
ASAR	**Alice Springs**	**17.27**	**172**	Pn	**Pn**	**17 50 09.8**	**-0.2**
	0.5nm,0.3s,baz=350,slow=8.2,SNR=46						
ASAR				Sn	Sn	17 53 12.4	-8.9
	0.9nm,0.3s,baz=354,slow=27,SNR=7.4						
CTA	**Charters Tower**	**19.83**	**134**	P	**Pn**	**17 50 41.5**	**+0.5**
	0.1nm,0.3s,baz=309,slow=14,SNR=7.0						
PPI	**Padang Panjang**	**31.43**	**280**	S	S	17 57 54.4	+20
	baz=32,SNR=6.2						
CMAR	**Chiang Mai Arr**	**40.42**	**308**	P	**P**	**17 53 47.8**	**+1.5**
	0.9nm,0.5s,baz=136,slow=7.3,SNR=11						
MKAR	**Makanchi Array**	**68.52**	**326**	P	**P**	**17 57 10.9**	**+1.0**
	0.9nm,0.3s,baz=117,slow=7.4,SNR=24						

*DJA **30** 17:54:06.5±4.6,5.7N±25.9E±3.5,h10km,M4.6/5, mB5.2/3,mb4.4/5,MLv4.7/3,Mw(mB)4.6/3*
*ISCJB **30** 17:54:11.4±1.9,5.67N±0.08×93.2E±0.1,h37km±17km, mb4.1/25,MS3.7/5,Error ellipse: s-maj=19.9km s-min=8.1km az=145.8*
*IDC **30** 17:54:12.9±0.6,5.71N×93.17E,h33km±4km,mb3.9/24, mb1 4.1/26,mb1mx3.9/36,mbtmp3.9/26,ML4.0/2,MS3.6/6, Ms1 3.6/6,ms1mx3.2/37,Error ellipse: s-maj=21.6km s-min=9.4km az=51.0*
ISC 30 17:54:12.9±0.7,5.69N±0.08×93.10E±0.07,h34km±2km, n45,σ1§29/51,mb4.2/25,MS3.8/5,1C,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
BSI	**Banda Aceh**	**2.20**	**95**	P	**Pn**	**17 54 46.2**	**-0.8**
LHMI	**Lhok Sumawe**	**3.86**	**97**	P	**Pn**	**17 55 08.8**	**-1.1**
PSI	**Prapat**	**6.48**	**116**	Pn	**Pn**	**17 55 46.6**	**+0.6**
	0.7nm,0.3s,baz=313,slow=13,SNR=3.2						
PSI				Sn	**Sn**	**17 56 57.3**	**-1.6**
	2.3nm,0.3s,baz=284,slow=18,SNR=6.8						
PSI				LR	LR	17 58 37.0	
	comp=Z,301nm,19.7s,baz=310,slow=41						
KULM	**Kulm**	**7.53**	**93**	P	**Pn**	**17 56 00.3**	**0.0**
	30nm,1.1s,673nm0.1nm						
CHBT	**CHBT**	**11.50**	**52**	P	**Pn**	**17 56 56.0**	**+1.3**
	24nm,1.4s,660nm						
PBKT	**Sadao Pong**	**13.28**	**35**	P	**P**	**17 57 29.4**	**+1.0**
CMAR	**Chiang Mai Arr**	**13.91**	**24**	Pn	**Pn**	**17 57 28.4**	**+0.6**
	0.6nm,0.3s,baz=218,slow=13,SNR=37						
CHTO	**Chiang Mai**	**14.23**	**23**	P	**Pn**	**17 57 32.7**	**+0.6**
	15nm,1.0s						
CMMT	**Chiang Mai**	**14.23**	**23**	P	**Pn**	**17 57 33.0**	**+0.8**
	14nm,1.0s						
VIS	**Vishakhapatnam**	**15.30**	**322**	*i* P	**Pn**	**17 57 45.4**	**-1.1**
VIS				⇑AMP		17 57 48.4	
VIS				*i* S	Sn	18 00 24.8	-10
VIS				*i* S	Sn	18 00 26.2	-8.7
UBPT	**Khong Chiam**	**15.44**	**51**	P	**Pn**	**17 57 48.5**	**+0.2**
POO	**Poona**	**22.70**	**306**	*e*PKP	**S**	**18 03 12.0**	**-6.3**
KAPI	**Kappang**	**28.66**	**111**	P	**P**	**18 00 05.8**	**-1.0**
	4.5nm,0.8s,baz=230,slow=17,SNR=2.6						
KAPI				LR	LR	18 11 15.2	
	comp=Z,72nm,18.8s,baz=105,slow=36						
GTA	**Gaotai**	**34.11**	**9**	*e*P	P	18 01 01.8	+7.2
GTA				pP	pP	18 01 10.8	+6.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FITZ	**Fitzroy Crossi**	**39.87**	**127**	P	**P**	**18 01 42.3**	**-1.4**
	comp=Z,1.9nm,0.6s,baz=313,slow=9.0,SNR=9.4						
AAK	**Ala-Archa**	**40.31**	**339**	P	**P**	**18 01 49.1**	**+1.8**
	comp=Z,1.1nm,0.3s,baz=158,slow=9.3,SNR=4.2						
MKAR	**Makanchi Array**	**42.00**	**349**	P	**P**	**18 02 01.1**	**+0.3**
	comp=Z,1.1nm,0.6s,baz=171,slow=8.6,SNR=15						
MKAR				pP	**pP**	**18 02 11.6**	**+0.7**
	comp=Z,2.2nm,0.8s,baz=161,slow=7.7,SNR=14						
SONM	**Songino Array**	**43.51**	**13**	P	**P**	**18 02 13.5**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=197,slow=7.6,SNR=2.8						
SONM				pP	**pP**	**18 02 23.0**	**-0.4**
	comp=Z,2.5nm,0.9s,baz=195,slow=8.9,SNR=6.2						
WRA	**Warramunga Arr**	**47.89**	**123**	P	**P**	**18 02 47.2**	**-0.9**
	comp=Z,6.9nm,0.8s,baz=302,slow=8.9,SNR=45						
WRA				pP	**pP**	**18 02 58.0**	**-0.4**
	comp=Z,2.4nm,0.7s,baz=303,slow=8.9,SNR=7.8						
WRA				PcP	**PcP**	**18 04 16.1**	**-0.3**
	comp=Z,1.0nm,0.9s,baz=307,slow=2.7,SNR=3.7						
ZALV	**Zalesovo Beam**	**48.58**	**353**	P	**P**	**18 02 53.5**	**+0.7**
	comp=Z,3.3nm,0.5s,baz=172,slow=6.7,SNR=24						
ZALV				pP	**pP**	**18 03 03.3**	**+0.2**
	comp=Z,2.1nm,0.5s,baz=168,slow=7.6,SNR=5.4						
ASAR	**Alice Springs**	**49.36**	**128**	P	**P**	**18 02 58.5**	**-1.0**
	comp=Z,2.8nm,0.8s,baz=299,slow=7.7,SNR=40						
ASAR				pP	**pP**	**18 03 08.9**	**-0.7**
	comp=Z,1.2nm,0.7s,baz=300,slow=7.6,SNR=6.3						
ASAR				PcP	**PcP**	**18 04 21.6**	**-0.1**
	comp=Z,1.6nm,0.7s,baz=302,slow=3.7,SNR=9.2						
MJAR	**Matsushiro Arr**	**51.39**	**47**	LR	LR	18 27 47.3	
	comp=Z,87nm,19.8s,baz=260,slow=39						
AKTO	**Aktyubinsk**	**53.38**	**333**	P	**P**	**18 03 28.5**	**-0.5**
	comp=Z,1.2nm,0.7s,baz=126,slow=8.7,SNR=6.5						
STKA	**Stephens Creek**	**59.39**	**132**	P	**P**	**18 04 12.1**	**-0.1**
	comp=Z,2.5nm,0.8s,baz=307,slow=5.1,SNR=4.0						
STKA				LR	LR	18 29 27.7	
	comp=Z,89nm,18.6s,baz=204,slow=36						
BRTR	**Keskin Array B**	**63.08**	**312**	P	**P**	**18 04 36.5**	**-0.8**
	comp=Z,1.3nm,0.7s,baz=124,slow=8.0,SNR=7.4						
BRTR				pP	**pP**	**18 04 46.5**	**-1.4**
	comp=Z,0.8nm,0.7s,baz=99,slow=7.6,SNR=3.1						
AKASG	**Malin Array Be**	**69.22**	**322**	P	**P**	**18 05 14.9**	**-1.4**
	comp=Z,0.1nm,0.3s,baz=96,slow=5.1,SNR=5.6						
MLR	**Muntele Rosu**	**70.01**	**316**	P	**P**	**18 05 22.1**	**+0.7**
	comp=Z,0.7nm,0.6s,baz=190,slow=3.9,SNR=6.8						
BOSA	**Boshof**	**73.56**	**238**	LR	LR	18 36 54.6	
	comp=Z,84nm,18.4s,baz=262,slow=35						
FINES	**FINESS Array B**	**74.15**	**333**	P	**P**	**18 05 45.2**	**-0.5**
	comp=Z,1.8nm,0.7s,baz=114,slow=8.5,SNR=7.8						
MAW	**Mawson**	**76.20**	**191**	P	**P**	**18 05 59.5**	**+2.3**
	comp=Z,2.9nm,0.8s,baz=17,slow=7.2,SNR=7.3						
ARCES	**ARCESS Array B**	**76.96**	**341**	P	**P**	**18 06 01.8**	**+0.1**
	comp=Z,3.2nm,0.8s,baz=107,slow=4.1,SNR=10						
GERES	**GERESS Array B**	**78.76**	**319**	P	**P**	**18 06 12.4**	**+0.2**
	comp=Z,2.1nm,0.8s,baz=86,slow=5.5,SNR=17						
GERES				pP	**pP**	**18 06 23.1**	**+0.1**
	comp=Z,0.6nm,0.7s,baz=108,slow=4.3,SNR=3.6						
HFS	**Hagfors**	**79.81**	**330**	P	**P**	**18 06 16.8**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=140,slow=7.5,SNR=4.2						
NOA	**NORSAR Array B**	**81.11**	**331**	LR	LR	18 46 19.1	
	comp=Z,18nm,18.4s,baz=45,slow=38						
DAVOX	**Davos/Dischmat**	**81.24**	**316**	P	**P**	**18 06 26.3**	**+0.5**
	comp=Z,3.7nm,0.6s,baz=337,slow=13,SNR=5.7						
KEST	**Kesra**	**81.64**	**305**	P	**P**	**18 06 28.7**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=97,slow=8.6,SNR=3.4						
EKA	**Eskdalemuir Ar**	**88.92**	**325**	P	**P**	**18 07 03.8**	**0.0**
	comp=Z,1.7nm,0.8s,baz=97,slow=6.0,SNR=5.2						
TORD	**Torodi Ar. Bea**	**90.08**	**283**	P	**P**	**18 07 11.0**	**+0.9**
	comp=Z,0.2nm,0.7s,baz=216,slow=9.0,SNR=2.8						
VNDA	**Vanda**	**91.02**	**168**	P	**P**	**18 07 13.8**	**+0.7**
	comp=Z,0.3nm,0.5s,baz=308,slow=8.1,SNR=3.7						
ESDC	**Sonseca Array**	**91.82**	**310**	P	**P**	**18 07 18.1**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=42,slow=4.6,SNR=4.3						
NVAR	**Mina Array Bea**	**127.31**	**31**	PKP	**PKPdf**	**18 13 16.2**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=287,slow=1.5,SNR=5.9						
PDAR	**Pinedale Array**	**127.56**	**21**	PKP	**PKPdf**	**18 13 15.4**	**+0.3**
	comp=Z,0.7nm,0.8s,baz=64,slow=3.4,SNR=4.9						
TXAR	**Lajitas Array**	**141.63**	**24**	PKP	**PKPdf**	**18 13 43.3**	**+1.7**
	comp=Z,0.4nm,0.4s,baz=270,slow=2.5,SNR=4.2						
CPUP	**Villa Florida**	**145.10**	**231**	PKPbc	**PKPbc**	**18 13 46.6**	**-0.4**
	comp=Z,2.1nm,0.5s,baz=46,slow=4.6,SNR=7.6						
LPAZ	**La Paz**	**158.80**	**239**	PKPab	**PKPab**	**18 14 45.3**	**+0.6**
	comp=Z,0.9nm,0.5s,baz=93,slow=3.7,SNR=3.9						

*ATH **30** 17:57:54.0,37.56N×20.82E,h12km±2km,MD3.3/20, ML3.2*
*CSEM **30** 17:57:54.5±0.4,37.58N×20.88E,h0km,ML3.5/3,Error ellipse: s-maj=7.3km s-min=3.6km az=55.0*
*THE **30** 17:57:55.9,37.60N×20.94E,h0km±4km,ML3.5/3,Error ellipse: s-maj=4.3km s-min=1.2km az=221.0*
ISC 30 17:57:53.9±1.2,37.56N±0.02×20.85E±0.03,h2km±10km, n137,σ1§14/178,Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.55**	**355**	P	**Pb**	**17 58 05.5**	**-0.8**
KFL				S	**Sb**	**17 58 13.8**	**-0.8**
KFL	**Anninata**	**0.55**	**355**	P	**Pb**	**17 58 05.5**	**-0.8**
KFL				S	**Sb**	**17 58 13.8**	**-0.8**
VLS	**Valsamata**	**0.65**	**342**	P	**Pg**	**17 58 07.5**	**+0.8**
VLS				S	**Sb**	**17 58 17.5**	**0.0**
VLS	**Valsamata**	**0.65**	**342**	*e*PB	**Pb**	**17 58 07.4**	**-0.6**
VLS				*e*SB	**Sg**	**17 58 16.0**	**+1.2**
VLS	**Valsamata**	**0.65**	**342**	*e*Pb	**Pb**	**17 58 07.4**	**-0.6**
VLS				*e*Sb	**Sg**	**17 58 16.0**	**+1.2**
VLS				S	**Sb**	**17 58 17.5**	**0.0**
AMT	**Artemida-Makis**	**0.68**	**92**	P	**Pb**	**17 58 07.8**	**-0.7**
AMT				S	**Sb**	**17 58 17.8**	**-0.7**
AMT	**Artemida-Makis**	**0.68**	**92**	*e*PB	**Pb**	**17 58 08.0**	**-0.5**
AMT				*e*SB	**Sb**	**17 58 17.7**	**-0.7**
AMT	**Artemida-Makis**	**0.68**	**92**	*e*Pb	**Pb**	**17 58 08.0**	**-0.5**
AMT				*e*Sb	**Sb**	**17 58 17.7**	**-0.7**
RLS	**Riolos of Patr**	**0.70**	**44**	P	**Pg**	**17 58 07.4**	**+0.2**
RLS				S	**Sg**	**17 58 16.6**	**+0.3**
RLS	**Riolos of Patr**	**0.70**	**44**	*e*PB	**Pg**	**17 58 07.5**	**+0.2**
RLS				*e*SB	**Sg**	**17 58 16.8**	**+0.5**
RLS	**Riolos of Patr**	**0.70**	**44**	*e*Pb	**Pg**	**17 58 07.5**	**+0.2**
RLS				*e*Sb	**Sg**	**17 58 16.8**	**+0.5**
AXS	**Araxos**	**0.76**	**33**	P	**Pg**	**17 58 08.8**	**+0.3**
AXS				S	**Sg**	**17 58 18.1**	**-0.2**
AXS	**Araxos**	**0.76**	**33**	P	**Pg**	**17 58 08.8**	**+0.3**
AXS				S	**Sg**	**17 58 18.1**	**-0.2**
ITM	**Ithomi**	**0.94**	**114**	P	**Pb**	**17 58 12.4**	**-0.5**
ITM	**Ithomi**	**0.94**	**114**	*e*PN	**Pb**	**17 58 12.6**	**-0.3**
ITM	**Ithomi**	**0.94**	**114**	P	**Pb**	**17 58 12.4**	**-0.5**
PYL	**PYLOS**	**0.97**	**133**	P	**Pg**	**17 58 13.1**	**+0.6**
PYL	**PYLOS**	**0.97**	**133**	*e*PN	**Pb**	**17 58 13.2**	**-0.2**
PYL	**PYLOS**	**0.97**	**133**	P	**Pg**	**17 58 13.1**	**+0.6**
PSA1	**Psathopyrgos**	**1.12**	**47**	*e*PG	**Pg**	**17 58 14.5**	**-0.8**
LAKA	**Lakka**	**1.12**	**52**	P	**Pg**	**17 58 14.7**	**-0.7**
LAKA	**Lakka**	**1.12**	**52**	*e*PG	**Pg**	**17 58 15.1**	**-0.3**
**L

PTL	Penteli	2.44	78	ePB	Pn	17 58 35.6	+0.9
PTL	Penteli	2.44	78	ePb	Pn	17 58 35.6	+0.9
MRKA	Markates	2.44	61	P	Pn	17 58 36.2	+1.4
MRKA	Markates	2.44	61	P	Pn	17 58 36.2	+1.4
NEO	Neokhori	2.55	46	P	Pn	17 58 37.3	+1.0
NEO	Neokhori	2.55	46	ePB	Pn	17 58 37.3	+1.0
NEO	Neokhori	2.55	46	ePb	Pn	17 58 37.3	+1.0
XOR	Xorichti	2.57	45	P	Pn	17 58 37.8	+1.2
XOR	Xorichti	2.57	45	P	Pn	17 58 37.8	+1.2
ANKY	Antikythira Is	2.59	130	ePN	Pb	17 58 39.2	-1.9
ANKY	Antikythira Is	2.59	130	ePn	Pb	17 58 39.2	-1.9
KZN	Kozani	2.83	14	ePB	Pn	17 58 41.8	+1.6
KZN	Kozani	2.83	14	ePb	Pn	17 58 41.8	+1.6
MRMA	Marmari	2.84	79	P	Pn	17 58 41.4	+1.2
MRMA	Marmari	2.84	79	P	Pn	17 58 41.4	+1.2
LIT	Litokhoron	2.84	26	P	Pn	17 58 41.1	+0.8
LIT	Litokhoron	2.84	26	ePN	Pn	17 58 41.0	+0.8
LIT	Litokhoron	2.84	26	P	Pn	17 58 41.1	+0.8
AOS	Alonnisos	2.87	55	P	Pn	17 58 41.5	+0.8
AOS	Alonnisos	2.87	55	ePN	Pn	17 58 41.4	+0.8
AOS	Alonnisos	2.87	55	P	Pn	17 58 41.5	+0.8
FNA	Florina	3.25	7	ePN	Pn	17 58 47.2	+1.3
FNA	Florina	3.25	7	ePn	Pn	17 58 47.2	+1.3
VAM	Vamos	3.45	128	ePN	Pn	17 58 49.8	+1.2
VAM	Vamos	3.45	128	ePn	Pn	17 58 49.8	+1.2
PLG	Polygyros	3.46	35	ePN	Pn	17 58 49.1	+0.3
PLG	Polygyros	3.46	35	ePn	Pn	17 58 49.1	+0.3
APE	Apeiranthos	3.76	96	ePN	Pn	17 58 52.8	-0.2
APE	Apeiranthos	3.76	96	ePn	Pn	17 58 52.8	-0.2
IDI	Anoyia	3.97	124	ePN	Pn	17 58 55.3	-0.5
IDI	Anoyia	3.97	124	ePn	Pn	17 58 55.3	-0.5
LIA	Limnos Island	4.11	54	ePN	Pn	17 58 56.9	-0.8
LIA	Limnos Island	4.11	54	ePn	Pn	17 58 56.9	-0.8
CHOS	Chios island	4.19	77	ePN	Pn	17 59 01.5	+2.6
CHOS	Chios island	4.19	77	ePn	Pn	17 59 01.5	+2.6
LAST	Lasithi	4.44	121	ePN	Pn	17 59 00.3	-1.9
LAST	Lasithi	4.44	121	ePn	Pn	17 59 00.3	-1.9
NVR	Nevrokopi	4.44	31	ePN	Pn	17 59 01.4	-0.9
NVR	Nevrokopi	4.44	31	ePn	Pn	17 59 01.4	-0.9
SMTH	Samothraki Isl	4.66	50	ePN	Pn	17 59 05.0	-0.3
SMTH	Samothraki Isl	4.66	50	ePn	Pn	17 59 05.0	-0.3
SMG	Samos	4.75	86	ePN	Pn	17 59 07.9	+1.4
SMG	Samos	4.75	86	ePn	Pn	17 59 07.9	+1.4
RDO	Rodhopi	5.10	44	ePN	Pn	17 59 09.9	-1.4
RDO	Rodhopi	5.10	44	ePn	Pn	17 59 09.9	-1.4
BARS	Barje	5.30	8	ePn	Pn	17 59 14.1	0.0
BBLS	Lazići	6.39	351	ePn	Pn	17 59 28.3	-0.8
DIVS	Divibare	6.56	355	ePn	Pn	17 59 30.7	-0.8

*ISCJB **30** 17:59:29.7±0.9, 36°.98N±0'.04×20°.74E±0'.04, h8km±7km, mb3.4/7, Error ellipse: s-maj=6.8km s-min=4.2km az=33.9*
*IDC **30** 17:59:29.3±1.4, 37°.08N×21°.03E, h0km, mb3.5/7, mb1 3.5/7, mb1mx3.4/28, mbtmp3.5/7, Error ellipse: s-maj=33.6km s-min=24.4km az=121.0*
*ATH **30** 17:59:30.5, 37°.03N×20°.75E, h16km±2km, MD3.5/24, ML3.3*
*THE **30** 17:59:31.9, 37°.07N×20°.83E, h0km±5km, ML3.9/1, Error ellipse: s-maj=6.4km s-min=1.4km az=225.0*
*CSEM **30** 17:59:31.2±0.6, 37°.07N×20°.81E, h2km, ML3.9/1, Error ellipse: s-maj=11.8km s-min=5.3km az=48.0*

ISC 30 17:59:30.9±1.6, 37°.07N±0'.04×20°.82E±0'.04, h4km±11km, n12, σ0≥99/132, mb3.5/7, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
PYL	PYLOS	0.76	103	P	Pg	17 59 46.2	+0.6
PYL				S	Sb	17 59 57.5	0.0
PYL	PYLOS	0.76	103	ePN	Pb	17 59 46.5	-0.3
PYL				eSN	Sb	17 59 57.7	+0.2
PYL	PYLOS	0.76	103	P	Pg	17 59 46.2	+0.6
PYL	PYLOS	0.76	103	ePn	Pb	17 59 46.5	-0.3
PYL				S	Sb	17 59 57.5	0.0
AMT	Artemida-Makis	0.85	57	P	Pg	17 59 47.9	+0.7
AMT				S	Sb	18 00 01.0	+1.0
AMT	Artemida-Makis	0.85	57	ePN	Pb	17 59 48.1	-0.2
AMT				eSN	Sb	18 00 01.2	+1.2
AMT	Artemida-Makis	0.85	57	P	Pg	17 59 47.9	+0.7
AMT				S	Sb	18 00 01.0	+1.0
ITM	Ithomi	0.90	83	P	Pg	17 59 48.0	-0.1
ITM				S	Sb	18 00 01.2	-0.2
ITM	Ithomi	0.90	83	ePB	Pg	17 59 48.1	-0.1
ITM				eSN	Sb	18 00 01.4	0.0
ITM	Ithomi	0.90	83	P	Pg	17 59 48.0	-0.1
ITM				S	Sb	18 00 01.2	-0.2
KFL	Anninata	1.04	359	P	Pg	17 59 50.5	-0.3
KFL	Anninata	1.04	359	P	Pg	17 59 50.5	-0.3
RLS	Riolos of Patr	1.11	28	P	Pg	17 59 52.1	-0.2
RLS	Riolos of Patr	1.11	28	ePB	Pg	17 59 52.0	-0.2
RLS				eSN	Sn	18 00 09.2	+0.1
RLS	Riolos of Patr	1.11	28	P	Pg	17 59 52.1	-0.2
VLS	Valsamata	1.12	351	P	Pg	17 59 51.8	-0.6
VLS				S	Sn	18 00 09.4	+0.1
VLS	Valsamata	1.12	351	ePN	Pg	17 59 52.1	-0.3
VLS				eSN	Sn	18 00 09.5	+0.1
VLS	Valsamata	1.12	351	P	Pg	17 59 51.8	-0.6
VLS	Valsamata	1.12	351	ePn	Pg	17 59 52.1	-0.3
VLS				S	Sn	18 00 09.4	+0.1
AXS	Araxos	1.21	21	P	Pg	17 59 54.0	-0.1
AXS				S	Sn	18 00 12.2	+0.7
AXS	Araxos	1.21	21	P	Pg	17 59 54.0	-0.1
AXS				S	Sn	18 00 12.2	+0.7
DYR	Agios Nikonas	1.25	104	P	Pg	17 59 54.7	-0.3
DYR	Agios Nikonas	1.25	104	ePN	Pg	17 59 55.1	+0.1
DYR	Agios Nikonas	1.25	104	P	Pg	17 59 54.7	-0.3
DYR	Agios Nikonas	1.25	104	ePn	Pg	17 59 55.1	+0.1
VLX	Vlachokerasia	1.28	76	P	Pg	17 59 55.1	-0.5
VLX				S	Sb	18 00 13.4	+0.8
VLX	Vlachokerasia	1.28	76	ePB	Pg	17 59 54.7	-0.9
VLX				eSN	Sn	18 00 14.3	+0.8
VLX	Vlachokerasia	1.28	76	ePb	Pg	17 59 54.7	-0.9
VLX	Vlachokerasia	1.28	76	P	Pg	17 59 55.1	-0.5
VLX				S	Sb	18 00 13.4	+0.8
KLV	Kalavryta, Ach	1.44	47	P	Pn	17 59 57.4	-0.5
KLV	Kalavryta, Ach	1.44	47	ePB	Pn	17 59 57.4	-0.5
KLV				eSN	Sn	18 00 19.9	+2.7
KLV	Kalavryta, Ach	1.44	47	P	Pn	17 59 57.4	-0.5
LAKA	Lakka	1.49	38	P	Pn	17 59 58.6	+0.1
LAKA	Lakka	1.49	38	ePN	Pn	17 59 58.9	+0.4
LAKA	Lakka	1.49	38	P	Pn	17 59 58.6	+0.1
LAKA	Lakka	1.49	38	ePn	Pn	17 59 58.9	+0.4
GUR	Goura	1.49	54	P	Pn	17 59 57.9	-0.7
GUR	Goura	1.49	54	ePB	Pn	17 59 58.0	-0.7
GUR	Goura	1.49	54	P	Pn	17 59 57.9	-0.7
PSA1	Psathopyrgos	1.51	34	ePN	Pn	17 59 59.6	+0.8
EFP	Efpalio	1.60	32	ePN	Pn	18 00 00.8	+0.7
EFP	Efpalio	1.60	32	ePn	Pn	18 00 00.8	+0.7
TRIZ	Trizonia	1.63	37	ePN	Pn	18 00 00.9	+0.5
TRIZ	Trizonia	1.63	37	ePn	Pn	18 00 00.9	+0.5
KALE	Kalithea	1.68	38	P	Pn	18 00 02.2	+0.9
KALE	Kalithea	1.68	38	ePB	Pn	18 00 01.9	-0.3
KALE	Kalithea	1.68	38	ePb	Pn	18 00 01.9	-0.3
KALE	Kalithea	1.68	38	P	Pn	18 00 02.2	+0.9
LKD2	Lefkada island	1.72	356	P	Pn	18 00 02.7	+1.0
LKD2	Lefkada island	1.72	356	ePN	Pb	18 00 03.1	0.0
LKD2	Lefkada island	1.72	356	P	Pn	18 00 02.7	+1.0
LKD2	Lefkada island	1.72	356	ePn	Pb	18 00 03.1	0.0
VLI	Veliai	1.74	101	ePN	Pb	18 00 03.4	0.0
VLI	Veliai	1.74	101	ePn	Pb	18 00 03.4	0.0
KYTH	Kithira	1.95	113	ePN	Pb	18 00 07.1	0.0
KYTH	Kithira	1.95	113	ePn	Pb	18 00 07.1	0.0
LTK	Loutraki	1.96	60	P	Pn	18 00 06.3	+1.4
LTK	Loutraki	1.96	60	ePB	Pn	18 00 05.4	+0.5
LTK	Loutraki	1.96	60	ePb	Pn	18 00 05.4	+0.5
LTK	Loutraki	1.96	60	P	Pn	18 00 06.3	+1.4
DID	Didima	1.98	77	P	Pn	18 00 06.7	+1.4
DID	Didima	1.98	77	ePN	Pb	18 00 07.2	-0.4
DID	Didima	1.98	77	P	Pn	18 00 06.7	+1.4
DID	Didima	1.98	77	ePn	Pb	18 00 07.2	-0.4
EVR	Evrytania	2.00	23	ePN	Pb	18 00 06.5	+0.8
EVR				eSN	Sb	18 00 34.0	+0.7
EVR	Evrytania	2.00	23	ePn	Pn	18 00 06.5	+0.8
EVR				eSn	Sb	18 00 34.0	+0.7
NAIG	Nisos Aigina	2.24	71	ePB	Pn	18 00 09.6	+0.8
NAIG	Nisos Aigina	2.24	71	ePb	Pn	18 00 09.6	+0.8
AGG	Agios Georgios	2.29	31	P	Pb	18 00 11.9	-0.9
AGG	Agios Georgios	2.29	31	ePN	Pn	18 00 11.0	+1.5
AGG	Agios Georgios	2.29	31	ePn	Pn	18 00 11.0	+1.5
AGG	Agios Georgios	2.29	31	P	Pb	18 00 11.9	-0.9
ANKY	Antikythira Is	2.34	120	ePN	Pn	18 00 11.2	+1.1
ANKY	Antikythira Is	2.34	120	ePn	Pn	18 00 11.2	+1.1
LKR	Lokris	2.34	47	ePN	Pn	18 00 11.9	+1.7
LKR	Lokris	2.34	47	ePn	Pn	18 00 11.9	+1.7
ATH	Athens Observa	2.48	68	ePB	Pn	18 00 14.2	+2.1
ATH	Athens Observa	2.48	68	ePb	Pn	18 00 14.2	+2.1
JAN	Janina	2.58	1	ePB	Pn	18 00 15.2	+1.6
JAN	Janina	2.58	1	ePb	Pn	18 00 15.2	+1.6
PTL	Penteli	2.61	67	ePB	Pn	18 00 15.6	+1.6
PTL	Penteli	2.61	67	ePb	Pn	18 00 15.6	+1.6
SMIA	Simia	2.61	46	P	Pn	18 00 15.6	+1.6
SMIA	Simia	2.61	46	P	Pn	18 00 15.6	+1.6
THL	Klokotos Trika	2.66	20	P	Pn	18 00 16.4	+1.8
THL	Klokotos Trika	2.66	20	ePN	Pn	18 00 16.2	+1.6
THL	Klokotos Trika	2.66	20	ePn	Pn	18 00 16.2	+1.6
KEK	Kerkira	2.75	343	ePB	Pn	18 00 18.6	+2.7
KEK	Kerkira	2.75	343	ePb	Pn	18 00 18.6	+2.7
NEO	Neokhori	2.93	40	ePN	Pn	18 00 19.3	+1.0
NEO	Neokhori	2.93	40	ePn	Pn	18 00 19.3	+1.0
AOS	Alonnisos	3.20	48	ePN	Pn	18 00 23.2	+1.2
AOS	Alonnisos	3.20	48	ePn	Pn	18 00 23.2	+1.2
LIT	Litokhoron	3.30	23	ePN	Pn	18 00 24.5	+1.1
LIT	Litokhoron	3.30	23	ePn	Pn	18 00 24.5	+1.1
KZN	Kozani	3.31	13	ePN	Pn	18 00 25.6	+1.9
KZN	Kozani	3.31	13	ePn	Pn	18 00 25.6	+1.9
FNA	Florina	3.73	7	ePN	Pn	18 00 30.1	+0.7
FNA	Florina	3.73	7	ePn	Pn	18 00 30.1	+0.7
APE	Apeiranthos	3.77	89	ePN	Pn	18 00 30.3	+0.4
APE	Apeiranthos	3.77	89	ePn	Pn	18 00 30.3	+0.4
PLG	Polygyros	3.89	31	ePN	Pn	18 00 32.2	+0.7
PLG	Polygyros	3.89	31	ePn	Pn	18 00 32.2	+0.7
CHOS	Chios island	4.36	71	ePN	Pn	18 00 38.8	+0.8
CHOS	Chios island	4.36	71	ePn	Pn	18 00 38.8	+0.8
HFS	Hagfors	23.53	351	P	P	18 04 40.3	-1.6
	1.0nm,0.5s,baz=151,slow=9.5,SNR=8.0						
EKA	Eskdalemuir Ar	24.47	326	P	P	18 04 51.3	+0.4
	0.9nm,0.6s,baz=124,slow=8.2,SNR=5.4						
FINES	FINESS Array B	24.62	6	P	P	18 04 50.9	-1.3
	0.4nm,0.4s,baz=190,slow=9.7,SNR=3.9						
NOA	NORSAR Array B	24.75	349	P	P	18 04 52.6	-0.8
	0.4nm,0.5s,baz=159,slow=9.0,SNR=3.2						
TORD	Torodi Ar. Bea	29.33	221	P	P	18 05 34.7	-0.2
	0.3nm,0.7s,baz=31,slow=8.8,SNR=2.6						
MKAR	Makanchi Array	45.69	58	P	P	18 07 51.2	-1.7
	0.3nm,0.5s,baz=270,slow=8.2,SNR=4.1						
ZALV	Zalesovo Beam	46.26	47	P	P	18 07 54.6	-2.6
	0.5nm,0.4s,baz=281,slow=9.7,SNR=2.7						

IDC 30 18:06:27.1±7.5, 21°.61S×177°.22W, h285km±65km, mb3.0/3, mb1 3.2/4, mb1mx3.0/19, mbtmp3.1/4, Error ellipse: s-maj=44.5km s-min=30.7km az=75.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	17.30	195	P	P	18 10 09.9	-0.1
	1.3nm,0.3s,baz=343,slow=20,SNR=6.4						
URZ				S	S	18 13 14.9	-0.2
	0.3nm,0.3s,baz=351,slow=18,SNR=2.7						
STKA	Stephens Creek	37.98	246	P	P	18 13 18.9	+0.7
	2.3nm,0.8s,baz=60,slow=8.1,SNR=2.8						
ASAR	Alice Springs	44.99	258	P	P	18 14 14.8	-0.2
	0.5nm,0.7s,baz=94,slow=8.1,SNR=10						
ASAR				PcP	PcP	18 15 51.4	+0.5
	0.3nm,0.6s,baz=107,slow=4.2,SNR=5.9						
WRA	Warramunga Arr	45.18	263	P	P	18 14 15.2	-1.3
	0.3nm,0.5s,baz=97,slow=5.3,SNR=6.2						
AKASG	Malin Array Be	144.33	331	PKP	PKPab	18 25 26.9	-1.1
	0.3nm,0.4s,baz=51,slow=3.0,SNR=5.4						
BRTR	Keskin Array B	148.13	312	PKPbc	PKPbc	18 25 39.4	-0.2
	0.3nm,0.5s,baz=48,slow=2.1,SNR=3.1						

*IDC **30** 18:19:10.9±8.3, 28°.81N×138°.73E, h410km±147km, mb2.7/4, mb1 2.8/5, mb1mx2.6/25, mbtmp2.6/5, Error ellipse: s-maj=172.4km s-min=21.6km az=68.0*
*JMA **30** 18:19:10.5±0.2, 29°.20N×139°.90E, h448km, M3.4*

ISC 30 18:19:09.9±0.9, 29°.11N±0'.09×139°.4E±0'.2, h423km, n11, σ1≥89/13, mb2.8/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	3.19	128	P	P	18 20 17.0	+0.6
CBIJ				eS	S	18 21 10.0	-0.4
JHHJ	Haha-jima-NKT	3.50	134	eS	S	18 21 15.5	+0.4
JHU	Hanno	6.72	359	eS	S	18 22 12.3	-1.2
JRY	Ryogami san	6.89	357	P	P	18 20 54.9	+1.8
JAG	Ashikaga	7.29	0	P	P	18 20 57.8	+0.5
JAG				eS	S	18 22 20.6	-4.3
JHO	Hitachi	7.54	7	P	P	18 21 01.5	+1.4
USRK	Ussuriysk Arra	16.17	341	P	P	18 22 36.5	+2.5
	0.1nm,0.3s,baz=156,slow=6.3,SNR=3.4						
MKAR	Makanchi Array	47.28	308	P	P	18 27 03.1	-0.1
	0.1nm,0.4s,baz=82,slow=12,SNR=4.1						
FITZ	Fitzroy Crossi	48.78	197	P	P	18 27 13.7	-1.0
	1.1nm,0.8s,baz=23,slow=7.7,SNR=5.4						
WRA	Warramunga Arr	49.01	186	P	P	18 27 15.3	-1.1
	0.2nm,0.4s,baz=1.8,slow=7.6,SNR=11						
ASAR	Alice Springs	52.74	186	P	P	18 27 42.9	-0.9
	0.4nm,0.8s,baz=7.4,slow=7.6,SNR=5.4						

*IDC **30** 18:32:03.5±1.6, 39°.14N×141°.24E, h0km, mb3.4/3, mb1 3.4/6, mb1mx3.3/27, mbtmp3.3/6, ML2.6/3, Error ellipse: s-maj=35.6km s-min=23.9km az=96.0*
*ISCJB **30** 18:32:06.3±0.5, 39°.03N±0'.03×140°.93E±0'.05, h22km±6km, mb3.3/3, Error ellipse: s-maj=6.5km s-min=5.6km az=166.2*
*JMA **30** 18:32:06.7, 39°.03N×140°.90E, h8km±1km, M3.2*
JMA Felt I J1

ISC 30 18:32:06.2±1.0, 39°.06N±0'.03×140°.98E±0'.04, h15km±8km, n12, σ1≥31/18, mb3.2/3, 2C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JMK	Ichinoseki	0.22	119	⇓P	Pb	18 32 11.8	-0.1
JMK				S	Sg	18 32 15.6	+1.1
JRG	Rokugo	0.43	322	⇓P	Pg	18 32 14.9	0.0
JRG				S	Sg	18 32 21.3	+0.5
JOM	Ohasama	0.48	30	⇑P	Pb	18 32 16.9	+0.5
JOM				S	Sb	18 32 24.3	+0.9
JYK	Kaneyama	0.50	254	⇓P	Pg	18 32 15.3	-0.9
JYK				S	Sg	18 32 21.2	-1.7
JIO	Ouri	0.67	154	⇓P	Pb	18 32 19.2	-0.4
JIO				S	Sb	18 32 28.4	-0.3
JOU	Okura	0.73	200	⇑P	Pb	18 32 19.8	-0.9
JOU				S	Sb	18 32 29.1	-1.4
MJAR	Matsushiro Arr	3.33	222	Pn	Pn	18 32 59.6	+1.8
	0.3nm,0.3s,baz=30,slow=13,SNR=4.3						
MJAR				Pg	Pb	18 33 07.3	+2.3
	0.7nm,0.3s,baz=20,slow=15,SNR=6.2						
MJAR				Lg	Lg	18 33 50.5	
	0.3nm,0.3s,baz=23,slow=23,SNR=3.5						
ASAJ	Asahikawa	5.20	13	Pn	Pn	18 33 21.0	-2.4
	0.1nm,0.3s,baz=202,slow=19,SNR=1.9						
KSRS	Korea Array	10.39	265	Pn	Pn	18 34 38.8	+4.2
	0.2nm,0.3s,baz=82,slow=14,SNR=3.0						
MKAR	Makanchi Array	42.78	300	P	P	18 40 03.1	0.0
	0.2nm,0.7s,baz=67,slow=7.8,SNR=3.2						
WRA	Warramunga Arr	59.02	187	P	P	18 42 05.5	+0.1
	0.5nm,0.5s,baz=3.9,slow=7.1,SNR=7.3						
ASAR	Alice Springs	62.74	187	P	P	18 42 31.5	+0.7
	0.1nm,0.5s,baz=0.8,slow=6.5,SNR=4.4						

*ATH **30** 18:38:49.6, 38°.83N×23°.42E, h27km, MD3.3/21, ML3.6*
*CSEM **30** 18:38:49.7±0.1, 38°.79N×23°.44E, h12km, ML3.6/5, Error ellipse: s-maj=2.2km s-min=1.8km az=95.0*
*ISCJB **30** 18:38:50.0±0.3, 38°.83N±0'.02×23°.45E±0'.02, h19km±3km, Error ellipse: s-maj=3.0km s-min=2.6km az=166.7*
*THE **30** 18:38:50.2, 38°.79N×23°.42E, h11km, ML3.6/5, Error ellipse: s-maj=0.9km s-min=0.6km az=84.0*

ISC 30 18:38:50.1±0.8, 38°.80N±0'.02×23°.42E±0'.02, h16km±5km, n128, σ0≥61/175, Greece

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MRKA	Markates	0.16	126	P	Pg	18 38 54.1	-0.2
MRKA				S	Sg	18 38 56.8	-0.3
MRKA	Markates	0.16	126	P	Pg	18 38 54.1	-0.2
SMIA	Simia	0.18	296	P	Pg	18 38 54.5	-0.1
SMIA				S	Sg	18 38 57.4	-0.3
SMIA	Simia	0.18	296	P	Pg	18 38 54.5	-0.1
LKR	Lokris	0.36	246	ePB	Pg	18 38 57.2	-0.3
LKR				eSB	Sb	18 39 03.4	-0.1
LKR	Lokris	0.36	246	ePb	Pg	18 38 57.2	-0.3
LKR				eSb	Sb	18 39 03.4	-0.1
SKIA	Skiathos	0.37	6	P	Pb	18 38 57.9	-0.4
SKIA	Skiathos	0.37	6	P	Pb	18 38 57.9	-0.4
AOS	Alonnisos	0.52	44	P	Pg	18 39 00.0	-0.4
AOS				S	Sg	18 39 07.2	-0.1
AOS	Alonnisos	0.52	44	ePB	Sg	18 39 00.3	-0.1
AOS				eSB	Sg	18 39 07.4	+0.1
AOS	Alonnisos	0.52	44	P	Pg	18 39 00.0	-0.4
AOS	Alonnisos	0.52	44	ePb	Pg	18 39 00.3	-0.1
AOS				S	Sg	18 39 07.2	-0.1
NEO	Neokhori	0.53	343	P	Pg	18 39 00.5	-0.1
NEO	Neokhori	0.53	343	ePN	Pg	18 39 00.5	-0.1
NEO				eSN	Sg	18 39 07.4	-0.3
NEO	Neokhori	0.53	343	P	Pg	18 39 00.5	-0.1
NEO				eSn	Sg	18 39 07.4	-0.3
XOR	Xorichti	0.59	343	P	Pg	18 39 01.5	-0.3
XOR	Xorichti	0.59	343	P	Pg	18 39 01.5	-0.3
AXAR	Agios Charalam	0.59	267	P	Pb	18 39 01.8	-0.3
AXAR	Agios Charalam	0.59	267	P	Pb	18 39 01.8	-0.3
VIL2	Platees	0.60	191	P	Pg	18 39 01.5	-0.4
DSF	Desfina	0.80	241	P	Pg	18 39 04.3	-1.4
DSF				S	Sb	18 39 16.1	-0.1
DSF	Desfina	0.80	241	P	Pg	18 39 04.3	-1.4
DSF				S	Sb	18 39 16.1	-0.1
PTL	Penteli	0.83	155	P	Pg	18 39 05.6	-0.6
PTL				S	Sb	18 39 17.1	+0.1
PTL	Penteli	0.83	155	ePN	Pb	18 39 06.1	0.0
PTL				eSN	Sb	18 39 17.7	+0.7
PTL	Penteli	0.83	155	P	Pg	18 39 05.6	-0.6
PTL	Penteli	0.83	155	ePn	Pb	18 39 06.1	0.0
PTL				S	Sb	18 39 17.1	+0.1
LTK	Loutraki	0.85	205	P	Pg	18 39 05.8	-0.9
LTK				S	Sb	18 39 18.8	+1.1
LTK	Loutraki	0.85	205	ePB	Pg	18 39 05.9	-0.8
LTK				eSN	Sn	18 39 20.3	+0.7
LTK	Loutraki	0.85	205	P	Pg	18 39 05.8	-0.9
LTK				S	Sb	18 39 18.8	+1.1
LTK				eSn	Sn	18 39 20.3	+0.7
ATH	Athens Observa	0.86	164	P	Pb	18 39 06.3	-0.3
ATH				S	Sn	18 39 19.1	-0.6
ATH	Athens Observa	0.86	164	ePN	Pb	18 39 06.6	0.0
ATH				eSN	Sn	18 39 19.2	-0.5
ATH	Athens Observa	0.86	164	P	Pb	18 39 06.3	-0.3
ATH	Athens Observa	0.86	164	ePn	Pb	18 39 06.6	0.0
ATH				eSn	Sn	18 39 19.2	-0.5
AGG	Agios Georgios	0.88	285	P	Pg	18 39 06.3	-0.9
AGG				S	Sb	18 39 19.6	+1.1
AGG	Agios Georgios	0.88	285	ePN	Pg	18 39 06.4	-0.8
AGG				eSN	Sb	18 39 19.1	+0.6
AGG	Agios Georgios	0.88	285	P	Pg	18 39 06.3	-0.9
AGG				eSn	Sb	18 39 19.1	+0.6
ATHU	Athens Univers	0.88	161	P	Pg	18 39 06.6	-0.6
ATHU				S	Sb	18 39 19.2	+0.7
ATHU	Athens Univers	0.88	161	P	Pg	18 39 06.6	-0.6
ATHU				S	Sb	18 39 19.2	+0.7
THAL	Thalero	0.97	218	P	Pb	18 39 08.3	-0.1
THAL	Thalero	0.97	218	P	Pb	18 39 08.3	-0.1
MAKR	Makrakomi, Fth	1.03	282	P	Pg	18 39 09.4	-0.6
MAKR				S	Sb	18 39 23.8	+1.1
MAKR	Makrakomi, Fth	1.03	282	P	Pg	18 39 09.4	-0.6
MAKR				S	Sb	18 39 23.8	+1.1
MRMA	Marmari	1.06	134	P	Pb	18 39 10.0	0.0
MRMA				S	Sb	18 39 24.0	+0.4
MRMA	Marmari	1.06	134	P	Pb	18 39 10.0	0.0
MRMA				S	Sb	18 39 24.0	+0.4
KALE	Kalithea	1.08	248	P	Pg	18 39 09.7	-1.3
KALE	Kalithea	1.08	248	ePN	Pg	18 39 10.0	-1.0
KALE				eSN	Sn	18 39 25.5	+0.2
KALE	Kalithea	1.08	248	P	Pg	18 39 09.7	-1.3
KALE	Kalithea	1.08	248	ePn	P

FNA	**Florina**	**2.53**	**322**	P	**Pn**	**18 39 31.8**	**+1.3**
NVR	**Nevrokopi**	**2.57**	**7**	*e*PN	**Pn**	**18 39 31.0**	**-0.1**
NVR	**Nevrokopi**	**2.57**	**7**	*e*Pn	**Pn**	**18 39 31.0**	**-0.1**
VAY	**Valandovo**	**2.60**	**346**	*e*Pn	**Pn**	**18 39 31.7**	**+0.3**
VAY	**Valandovo**	**2.60**	**346**	*i* Pn	**Pn**	**18 39 31.7**	**+0.3**
RDO	**Rodhopi**	**2.85**	**34**	P	**Pn**	**18 39 34.7**	**-0.2**
RDO	**Rodhopi**	**2.85**	**34**	P	**Pn**	**18 39 34.7**	**-0.2**
BARS	**Barje**	**4.19**	**344**	*e*Pn	**Pn**	**18 39 54.4**	**+1.1**
BBLS	**Lazići**	**5.89**	**330**	*e*Pn	**Pn**	**18 40 18.1**	**+1.3**
STON	**Ston**	**5.95**	**315**	*e*Pn	**Pn**	**18 40 18.1**	**+0.7**
STON				Sn	**Sn**	**18 41 23.7**	**-1.4**
STON	**Ston**	**5.95**	**315**	*e*Pn	**Pn**	**18 40 18.0**	**+0.7**
STON				Sn	**Sn**	**18 41 23.7**	**-1.4**

IDC 30 18:48:16.0±8.8, 4°.52N×94°.91E, h65km±67km, mb3.2/4, mb1 3.4/6, mb1mx3.1/28, mbtmp3.2/6, ML3.5/2, Error ellipse: s-maj=107.9km s-min=18.6km az=57.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**4.36**	**113**	P	Pn	18 49 20.5	+0.6
	2.0nm,0.3s,baz=308,slow=12,SNR=5.7						
PSI				S	Sn	18 50 10.9	+1.4
	1.7nm,0.3s,baz=174,slow=17,SNR=4.2						
CMAR	**Chiang Mai Arr**	**14.41**	**16**	P	Pn	18 51 37.5	+0.8
	0.1nm,0.3s,baz=206,slow=12,SNR=5.2						
MKAR	**Makanchi Array**	**43.51**	**347**	P	P	18 56 12.8	-0.4
	0.3nm,0.6s,baz=168,slow=7.9,SNR=5.3						
WRA	**Warramunga Arr**	**45.74**	**123**	P	P	18 56 31.1	-0.2
	0.1nm,0.4s,baz=301,slow=9.5,SNR=7.3						
ASAR	**Alice Springs**	**47.22**	**128**	P	P	18 56 43.0	+0.2
	0.2nm,0.3s,baz=300,slow=7.9,SNR=6.9						
ASAR				pP	pP	18 57 01.8	+2.4
	0.4nm,0.5s,baz=298,slow=8.0,SNR=2.2						
ZALV	**Zalesovo Beam**	**49.96**	**352**	P	P	18 57 03.1	-0.2
	0.4nm,0.4s,baz=184,slow=7.1,SNR=2.8						

*BJI **30** 18:52:08.2, 66°.00N×151°.80W, h15km, mB4.8/3, mb4.7/3, Ms4.5/2, Ms7 4.1/2*
*ISCJB **30** 18:52:10.0±0.9, 65°.98N±0°.03×151°.84W±0°.07, h20km±8km, mb4.0/10, MS4.2/2, Error ellipse: s-maj=5.3km s-min=4.4km az=26.5*
*NEIC **30** 18:52:10.2, 66°.00N×151°.81W, h15km, ML4.0(AEIC), MW3.8(SLM), After AEIC.*
NEIC Felt at Fairbanks.
*IDC **30** 18:52:11.6±0.8, 66°.21N×151°.19W, h0km, mb3.6/6, mb1 3.9/10, mb1mx3.7/28, mbtmp3.7/10, ML3.9/3, Error ellipse: s-maj=23.3km s-min=10.1km az=48.0*
ISC 30 18:52:10.7±0.6, 66°.02N±0°.03×151°.70W±0°.03, h14km±3km, n81, σ1°54/103, mb3.9/10, Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IM3	**Indian Mountai**	**0.84**	**268**	P	**Pg**	**18 52 25.1**	**-1.8**
IM3				S	**Sg**	**18 52 35.4**	**-2.5**
MLY	**Manley**	**1.07**	**158**	P	**Pb**	**18 52 30.8**	**-0.3**
COLD	**Coldfoot**	**1.35**	**26**	P	**Pn**	**18 52 34.8**	**-0.3**
COLD				S	**Sg**	**18 52 54.1**	**0.0**
MDM	**Murphy Dome**	**1.80**	**125**	P	**Pn**	**18 52 40.7**	**-0.6**
MDM				S	**Sb**	**18 53 06.0**	**+0.3**
NEA	**Nenana**	**1.82**	**142**	P	**Pn**	**18 52 41.0**	**-0.6**
COLA	**College**	**1.98**	**124**	P	**Pn**	**18 52 43.1**	**-0.6**
COLA				S	**Sb**	**18 53 10.4**	**-0.5**
GLM	**Gilmore Dome**	**2.08**	**118**	P	**Pn**	**18 52 44.8**	**-0.4**
BWN	**Browne**	**2.09**	**152**	P	**Pn**	**18 52 45.1**	**-0.1**
CHUM	**Lake Minchumin**	**2.17**	**187**	P	**Pn**	**18 52 46.0**	**-0.2**
WRH	**Wood River Hil**	**2.18**	**134**	P	**Pn**	**18 52 45.9**	**-0.5**
IL1	**Eielson Array**	**2.37**	**120**	P	**Pn**	**18 52 48.8**	**-0.4**
ILAR	**Eielson Array**	**2.37**	**120**	Pn	**Pn**	**18 52 48.6**	**-0.5**
ILAR				Pg	**Pb**	**18 52 53.0**	**-0.1**
ILAR				Lg	Lg	18 53 24.1	
ILAR	**Eielson Array**	**2.37**	**120**	Pn	**Pn**	**18 52 48.6**	**-0.5**
	7.6nm,0.3s,baz=295,slow=14,SNR=102						
ILAR				Pg	**Pb**	**18 52 53.0**	**-0.1**
	71nm,0.3s,baz=305,slow=18,SNR=220						
ILAR				Lg	Lg	18 53 24.1	
	260nm,0.3s,baz=309,slow=30,SNR=16						
GCSA	**Galena City Sc**	**2.52**	**242**	P	**Pn**	**18 52 50.7**	**-0.4**
MCK	**McKinley**	**2.58**	**152**	P	**Pn**	**18 52 51.9**	**-0.2**
CAST	**Castle Rocks**	**2.62**	**184**	P	**Pn**	**18 52 52.0**	**-0.6**
TRF	**Thorofare Moun**	**2.65**	**166**	P	**Pn**	**18 52 52.3**	**-0.9**
RND	**Reindeer**	**2.90**	**154**	P	**Pn**	**18 52 56.6**	**+0.2**
PPLA	**Purkeypile**	**3.15**	**184**	*e*Pn	**Pn**	**18 52 59.6**	**-0.3**
PPLA				*e*Pg	**Pg**	**18 53 10.1**	**-0.8**
PPLA				*e*Sg	**Sg**	**18 53 52.6**	**+1.1**
BM3	**Burnt Mountain**	**3.15**	**60**	P	**Pn**	**18 52 60.0**	**+0.1**
DHY	**Denali Highway**	**3.50**	**146**	P	**Pn**	**18 53 05.3**	**+0.5**
TT01	**Tatalina**	**3.65**	**213**	P	**Pn**	**18 53 05.6**	**-1.0**
CUT	**Chulitna**	**3.69**	**170**	P	**Pn**	**18 53 07.9**	**+0.7**
DOT	**Dot Lake**	**4.04**	**123**	P	**Pn**	**18 53 11.3**	**-0.8**
SKT	**Skwentna**	**4.06**	**179**	P	**Pn**	**18 53 12.6**	**+0.3**
PAX	**Paxson**	**4.08**	**136**	P	**Pn**	**18 53 13.0**	**+0.3**
SML	**Sawmill**	**4.48**	**159**	P	**Pn**	**18 53 18.1**	**-0.1**
STLK	**Strandline Lak**	**4.54**	**181**	P	**Pn**	**18 53 19.0**	**0.0**
EGAK	**Eagle**	**4.58**	**101**	*e*Pn	**Pn**	**18 53 19.5**	**0.0**
EGAK				*e*Pg	**Pg**	**18 53 36.4**	**-1.9**
EGAK				S	**Sg**	**18 54 33.0**	**-4.5**
PMR	**Palmer**	**4.59**	**164**	P	**Pn**	**18 53 20.2**	**+0.7**
SUA	**Susitna One**	**4.60**	**174**	P	**Pn**	**18 53 20.1**	**+0.3**
SCM	**Sheep Creek Mo**	**4.63**	**153**	P	**Pn**	**18 53 20.3**	**+0.2**
MENT	**Mentasta**	**4.64**	**128**	*e*Pn	**Pn**	**18 53 19.4**	**-0.8**
MENT				*e*Pg	**Pg**	**18 53 38.6**	**-0.7**
MENT				*e*Sg	**Sg**	**18 54 36.0**	**-3.3**
BGL	**Barrier Glacie**	**4.79**	**184**	P	**Pn**	**18 53 23.4**	**+1.0**
CKL	**Chakachamna La**	**4.85**	**184**	P	**Pn**	**18 53 24.3**	**+0.9**
SPU	**Mount Spurr**	**4.86**	**182**	P	**Pn**	**18 53 24.0**	**+0.6**
BCA3	**Beaver Creek A**	**5.20**	**120**	P	**Pn**	**18 53 27.0**	**-1.1**
KLU	**Klutina**	**5.22**	**148**	P	**Pn**	**18 53 30.0**	**+1.7**
SVW2	**Sparrevohn**	**5.24**	**201**	P	**Pn**	**18 53 27.9**	**-0.7**
DFR	**Drift River**	**5.47**	**185**	P	**Pn**	**18 53 32.3**	**+0.5**
DAWY	**Dawson**	**5.57**	**105**	P	**Pn**	**18 53 33.0**	**0.0**
DIV	**Divide**	**5.58**	**149**	*e*Pn	**Pn**	**18 53 31.8**	**-1.4**
	26nm,0.5s						
DIV				S	**Sb**	**18 54 54.9**	**+0.4**
RDWB	**Redoubt West**	**5.58**	**186**	P	**Pn**	**18 53 33.5**	**+0.2**
RSO	**Redoubt South**	**5.60**	**185**	*e*Pn	**Pn**	**18 53 32.7**	**-1.0**
	151nm,0.6s						
RSO				Sn	**Sn**	**18 54 35.2**	**-2.7**
VRDI	**Verde Repeater**	**6.05**	**139**	P	**Pn**	**18 53 40.7**	**+0.9**
PTPK	**Patty Peak**	**6.36**	**135**	P	**Pn**	**18 53 45.6**	**+1.5**
BALM	**Baldy**	**6.52**	**136**	P	**Pn**	**18 53 46.5**	**+0.4**
CNPM	**China Poot**	**6.53**	**178**	P	**Pn**	**18 53 46.4**	**+0.2**
KIAG	**Kiagna River**	**6.61**	**136**	P	**Pn**	**18 53 48.7**	**+1.3**
TNA	**Tin City**	**6.69**	**273**	Pn	**Pn**	**18 53 48.0**	**-0.3**
GRNC	**Granite Creek**	**6.93**	**135**	P	**Pn**	**18 53 52.8**	**+0.8**
INK	**Inuvik**	**7.43**	**64**	Pn	**Pn**	**18 53 58.1**	**-0.3**
INK				Sn	**Sn**	**18 55 20.1**	**-2.3**
INK				Lg	Lg	18 56 02.9	
INK	**Inuvik**	**7.43**	**64**	Pn	**Pn**	**18 53 58.1**	**-0.3**
	2.2nm,0.3s,baz=250,slow=14,SNR=42						
INK				Sn	**Sn**	**18 55 20.1**	**-2.3**
	2.3nm,0.3s,baz=56,slow=15,SNR=5.7						
INK				Lg	Lg	18 56 02.9	
	0.7nm,0.3s,baz=329,slow=27,SNR=3.7						
KELA	**Mount Kelaz**	**7.84**	**196**	P	**Pn**	**18 54 03.9**	**-0.4**
CAHL	**Cahill**	**8.18**	**194**	P	**Pn**	**18 54 09.8**	**+1.0**
KDAK	**Kodiak Island**	**8.28**	**183**	Pn	**Pn**	**18 54 09.9**	**-0.3**
KDAK				Lg	Lg	18 56 32.9	
KDAK	**Kodiak Island**	**8.28**	**183**	Pn	**Pn**	**18 54 09.9**	**-0.3**
	0.3nm,0.3s,baz=331,slow=19,SNR=2.9						
KDAK				Lg	Lg	18 56 32.9	
	0.4nm,0.3s,baz=313,slow=19,SNR=2.4						
PNL	**Peninsula**	**8.49**	**133**	P	**Pn**	**18 54 13.7**	**+0.6**
OHAK	**Old Harbor**	**8.86**	**186**	P	**Pn**	**18 54 18.4**	**+0.2**
DLBC	**Dease Lake**	**12.58**	**117**	Pn	**Pn**	**18 55 11.7**	**+2.6**
DLBC				Lg	Lg	18 58 44.2	
DLBC	**Dease Lake**	**12.58**	**117**	Pn	**Pn**	**18 55 11.7**	**+2.6**
	0.4nm,0.3s,baz=330,slow=3.0,SNR=3.4						
DLBC				Lg	Lg	18 58 44.2	
	0.4nm,0.3s,baz=64,slow=23,SNR=7.9						
YKA	**Yellowknife Ar**	**16.32**	**85**	Pn	**Pn**	**18 55 58.7**	**-0.4**
YKA	**Yellowknife Ar**	**16.32**	**85**	Pn	**Pn**	**18 55 58.7**	**-0.4**
	0.2nm,0.3s,baz=293,slow=14,SNR=3.6						
PDAR	**Pinedale Array**	**32.80**	**114**	P	P	18 58 49.2	+5.8
PDAR	**Pinedale Array**	**32.80**	**114**	P	P	18 58 49.2	+5.8
	0.5nm,0.9s,baz=348,slow=3.9,SNR=2.8						
NVAR	**Mina Array Bea**	**33.60**	**129**	P	**P**	**18 58 52.8**	**+2.3**
NVAR	**Mina Array Bea**	**33.60**	**129**	P	**P**	**18 58 52.8**	**+2.3**
	1.5nm,0.8s,baz=317,slow=7.8,SNR=9.7						
MDJ	**Mudanjiang**	**45.89**	**283**	P	**P**	**19 00 30.5**	**-1.8**
MDJ				pmax	pmax		
	comp=Z,72nm,4.3s						
TXAR	**Lajitas Array**	**46.89**	**117**	P	**P**	**19 00 42.4**	**+2.0**
TXAR	**Lajitas Array**	**46.89**	**117**	P	**P**	**19 00 42.4**	**+2.0**
	comp=Z,0.6nm,0.6s,baz=306,slow=7.7,SNR=3.0						
ZALV	**Zalesovo Beam**	**52.92**	**322**	P	**P**	**19 01 28.8**	**+3.0**
ZALV	**Zalesovo Beam**	**52.92**	**322**	P	**P**	**19 01 28.8**	**+3.0**
	comp=Z,0.4nm,0.3s,baz=14,slow=6.4,SNR=3.7						
HHC	**Hu-ho-hao-te**	**56.06**	**295**	P	**P**	**19 01 47.0**	**-1.9**
HHC				pP	**pP**	**19 01 51.5**	**-1.7**
HHC				sP	**sP**	**19 01 54.0**	**-0.9**
HHC				PP	**PP**	**19 03 53.5**	**0.0**
HHC				S	**S**	**19 09 32.0**	**-4.9**
HHC				SS	**SS**	**19 13 17.8**	**-4.5**
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				LR	LR		
	comp=N,170nm,16.9s						
HHC				LR	LR		
	comp=E,110nm,16.3s						
HHC				LR	LR		
	comp=Z,81nm,15.7s						
MKAR	**Makanchi Array**	**60.13**	**320**	P	**P**	**19 02 20.3**	**+3.1**
MKAR	**Makanchi Array**	**60.13**	**320**	P	**P**	**19 02 20.3**	**+3.1**
	comp=Z,0.2nm,0.6s,baz=48,slow=4.3,SNR=3.4						
LZH	**Lanzhou**	**63.09**	**298**	*e*P	**P**	**19 02 38.5**	**+1.0**
LZH				pP	**pP**	**19 02 43.3**	**+1.4**
LZH				sP	**sP**	**19 02 45.5**	**+2.0**
LZH				*e*PP	**PP**	**19 04 58.3**	**+2.5**
LZH				pmax	pmax		
	comp=Z,15nm,1.5s						
LZH				pmax	pmax		
	comp=Z,48nm,8.4s						
LZH				LR	LR		
	comp=N,140nm,16.5s						
LZH				LR	LR		
	comp=E,130nm,16.1s						
LZH				LR	LR		
	comp=Z,160nm,19.5s						
AKASG	**Malin Array Be**	**63.61**	**359**	P	**P**	**19 02 41.5**	**+1.1**
AKASG	**Malin Array Be**	**63.61**	**359**	P	**P**	**19 02 41.5**	**+1.1**
	comp=Z,0.7nm,0.5s,baz=0.0,slow=7.4,SNR=3.7						
GERES	**GERESS Array B**	**64.92**	**11**	P	**P**	**19 02 50.9**	**+1.7**
GERES	**GERESS Array B**	**64.92**	**11**	P	**P**	**19 02 50.9**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=10,slow=6.1,SNR=3.1						
GYA	**Guiyang**	**70.70**	**292**	*e*P	**P**	**19 03 25.0**	**-1.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						

*IDC **30** 19:25:28.6±0.7, 18°.98N×121°.39E, h0km, mb3.7/13, mb1 3.9/14, mb1mx3.8/27, mbtmp3.7/14, ML3.7/1, MS3.4/2, Ms1 3.4/2, ms1mx2.4/50, Error ellipse: s-maj=22.9km s-min=15.8km az=80.0*
*ISCJB **30** 19:25:35.9±1.1, 19°.09N±0°.09×121°.21E±0°.09, h67km±14km, mb3.5/13, Error ellipse: s-maj=15.4km s-min=13.0km az=23.3*
*MAN **30** 19:25:36, 18°.97N×121°.20E, h15km, mb0.0, ML0.0, MS4.6*
ISC 30 19:25:36.1±1.1, 19°.17N±0°.10×121°.23E±0°.08, h48km±18km, n29, σ1°61/33, mb3.6/13, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PIP	**Pasuquin**	**1.02**	**215**	∥*i*P	Pn	19 25 50.6	-3.6
PIP				*e*S	**Sn**	**19 26 03.6**	**-3.8**
APYP	**Conner**	**1.30**	**179**	*e*P	**Pn**	**19 25 56.7**	**-1.3**
APYP				*e*S	**Sn**	**19 26 13.8**	**-0.4**
SIPP	**Brgy, Tapao**	**1.44**	**211**	∥*e*P	**Pn**	**19 25 59.7**	**-0.1**
SIPP				*i* S	**Sn**	**19 26 22.4**	**+4.9**
CVP	**Callao Caves**	**1.56**	**159**	*e*P	**Pn**	**19 26 01.5**	**0.0**
CVP				*i* S	**Sn**	**19 26 19.9**	**-0.7**
ABRA	**Dolores**	**1.59**	**198**	*e*P	**Pn**	**19 26 00.2**	**-1.7**
CAUP	**Cauayan**	**2.29**	**166**	*e*P	**Pn**	**19 26 13.3**	**+1.9**
PALP	**Palanan**	**2.38**	**151**	*e*P	**Pn**	**19 26 13.6**	**+0.8**
BCPH	**Baguio City Da**	**2.84**	**193**	∥*i*P	**Pn**	**19 26 19.2**	**0.0**
BCPH				*i* S	**Sn**	**19 26 55.4**	**+3.0**
BALP	**Baler**	**3.43**	**174**	*e*P	**Pn**	**19 26 27.7**	**+0.6**
SCZP	**Santa Cruz**	**3.60**	**201**	*e*P	**Pn**	**19 26 30.7**	**+1.2**
GQP	**Guinayangan**	**5.36**	**167**	*e*P	**Pn**	**19 26 54.4**	**+0.7**
DAV	**Davao City (W)**	**12.75**	**160**	LR	LR	19 34 23.1	
	comp=Z,190nm,18.5s,baz=284,slow=43						
KSRS	**Korea Array**	**19.14**	**16**	Pn	**P**	**19 29 55.2**	**0.0**
	0.2nm,0.3s,baz=198,slow=11,SNR=6.9						
CMAR	**Chiang Mai Arr**	**21.11**	**272**	P	**P**	**19 30 16.6**	**-0.3**
	1.1nm,0.8s,baz=72,slow=8.6,SNR=8.1						
CMAR				PcP	**PcP**	**19 34 21.7**	**-0.1**
	0.6nm,0.6s,baz=146,slow=0.7,SNR=6.9						
MJAR	**Matsushiro Arr**	**22.85**	**37**	P	**P**	**19 30 35.2**	**-0.1**
	0.6nm,0.5s,baz=226,slow=9.7,SNR=4.3						
USRK	**Ussuriysk Arra**	**26.54**	**18**	P	**P**	**19 31 10.7**	**+1.4**
	1.5nm,0.7s,baz=198,slow=11,SNR=3.9						
FITZ	**Fitzroy Crossi**	**37.29**	**173**	PcP	**PcP**	**19 35 02.4**	**0.0**
	1.4nm,0.8s,baz=315,slow=7.1,SNR=4.7						
WRA	**Warramunga Arr**	**40.94**	**161**	P	P	19 33 10.3	-3.9
	0.7nm,0.5s,baz=342,slow=9.1,SNR=24						
WRA				PcP	**PcP**	**19 35 13.7**	**-0.2**
	0.9nm,0.6s,baz=344,slow=3.2,SNR=8.2						
MKAR	**Makanchi Array**	**42.07**	**320**	P	**P**	**19 33 24.9**	**+1.6**
	0.5nm,0.7s,baz=109,slow=7.6,SNR=4.8						
MKAR				PcP	**PcP**	**19 35 17.4**	**+0.1**
	0.8nm,0.8s,baz=104,slow=5.1,SNR=4.1						
PETK	**Petropavlovsk-**	**44.05**	**31**	P	**P**	**19 33 39.5**	**+0.4**
	1.6nm,0.7s,baz=228,slow=3.7,SNR=3.5						
ASAR	**Alice Springs**	**44.34**	**163**	P	**P**	**19 33 39.6**	**-2.1**
	1.0nm,0.4s,baz=341,slow=7.1,SNR=36						
ZALV	**Zalesovo Beam**	**44.52**	**330**	P	**P**	**19 33 43.9**	**+1.0**
	0.3nm,0.4s,baz=109,slow=7.8,SNR=2.5						
KURBB	**Kurchatov Arra**	**46.04**	**323**	P	**P**	**19 33 56.1**	**+1.1**
	0.4nm,0.5s,baz=119,slow=7.5,SNR=8.3						
BVAR	**Borovoye Array**	**51.63**	**323**	PcP	**PcP**	**19 35 50.5**	**-0.4**
	0.7nm,0.6s,baz=106,slow=5.3,SNR=4.3						
AKTO	**Aktyubinsk**	**58.44**	**318**	LR	LR	20 00 45.8	
	comp=Z,22nm,18.3s,baz=122,slow=36						
ILAR	**Eielson Array**	**73.64**	**27**	P	**P**	**19 37 02.4**	**-2.0**
	0.4nm,0.6s,baz=264,slow=5.6,SNR=4.7						
ARCES	**ARCESS Array B**	**74.19**	**339**	P	**P**	**19 37 07.6**	**+0.1**
	1.2nm,0.5s,baz=78,slow=7.9,SNR=11						
FINES	**FINESS Array B**	**75.79**	**330**	P	**P**	**19 37 16.9**	**+0.2**
	0.2nm,0.5s,baz=35,slow=12,SNR=3.4						
INK	**Inuvik**	**77.84**	**22**	P	**P**	**19 37 27.4**	**-0.8**
	1.2nm,0.7s,baz=276,slow=3.6,SNR=4.5						

IDC 30 19:34:25.2±2.1, 3°.76N×126°.65E, h0km, mb3.5/4, mb1 3.6/4, mb1mx3.4/24, mbtmp3.5/4, Error ellipse: s-maj=206.9km s-min=22.0km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.73**	**162**	P	P	19 39 46.9	-1.7
	2.8nm,0.8s,baz=342,slow=9.9,SNR=10.0						
ASAR	**Alice Springs**	**28.16**	**166**	P	P	19 40 21.2	+1.7
	0.4nm,0.9s,baz=341,slow=1.1,SNR=3.8						
MKAR	**Makanchi Array**	**57.49**	**325**	P	P	19 44 16.1	-0.2
	0.3nm,0.6s,baz=128,slow=7.8,SNR=4.3						
KURBB	**Kurchatov Arra**	**61.67**	**327**	P	P	19 44 45.0	0.0
	0.3nm,0.6s,baz=127,slow=6.3,SNR=6.7						

IDC 30 19:34:44.0±1.2, 24°.44N×141°.94E, h0km, mb3.4/6, mb1 3.6/6, mb1mx3.4/26, mbtmp3.4/6, MS3.1/1, Ms1 3.1/1, ms1mx2.4/29, Error ellipse: s-maj=46.7km s-min=21.4km az=82.0, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USRK	**Ussuriysk Arra**	**21.32**	**340**	LR	LR	19 46 59.9	
	comp=Z,46nm,19.0s,baz=217,slow=34						
WRA	**Warramunga Arr**	**44.73**	**190**	P	P	19 42 58.9	-0.4
	0.5nm,0.4s,baz=7.4,slow=8.1,SNR=20						
ASAR	**Alice Springs**	**48.45**	**190**	P	P	19 43 28.5	0.0
	0.2nm,0.7s,baz=14,slow=9.3,SNR=3.9						
MKAR	**Makanchi Array**	**52.02**	**311**	P	P	19 43 55.7	+0.4
	0.1nm,0.5s,baz=64,slow=10,SNR=3.5						
KURBB	**Kurchatov Arra**	**54.76**	**316**	P	P	19 44 14.7	-0.6
	0.3nm,0.6s,baz=92,slow=8.4,SNR=5.7						
BVAR	**Borovoye Array**	**59.86**	**319**	P	P	19 44 51.3	-0.1
	0.4nm,0.5s,baz=101,slow=6.0,SNR=3.5						
ILAR	**Eielson Array**	**60.15**	**28**	P	P	19 44 53.1	0.0
	0.4nm,0.9s,baz=278,slow=6.9,SNR=4.3						

*ISCJB **30** 19:35:55.0±1.4, 51°.58N±0°.06×16°.02E±0°.06, h0km, Error ellipse: s-maj=8.9km s-min=4.6km az=22.5*
*PRU **30** 19:35:57.7, 51°.56N×16°.04E, h0km*
*CSEM **30** 19:35:57.3±0.8, 51°.54N×16°.04E, h1km, ML2.7/4, Error ellipse: s-maj=12.9km s-min=6.1km az=5.0*
*WAR **30** 19:35:59.7, 51°.51N×16°.13E*
ISC 30 19:35:57.7±1.8, 51°.59N±0°.09×16°.11E±0°.05, h0km, n15, σ1°04/29, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.75**	**171**	*e*Pg	**Pg**	**19 36 12.2**	**+0.1**
KSP				*e*Sg	**Sg**	**19 36 22.1**	**+0.3**
UPC	**Upice**	**1.08**	**183**	*e*PG	**Pg**	**19 36 18.1**	**-0.3**
UPC				*e*SG	**Sg**	**19 36 30.7**	**-1.7**
	comp=Z,5.6nm,0.3s						
UPC	**Upice**	**1.08**	**183**	Pg	**Pg**	**19 36 18.1**	**-0.3**
UPC				Sg	**Sg**	**19 36 30.7**	**-1.7**
	5.6nm,0.3s						
DPC	**Dobruska-Polom**	**1.24**	**174**	*e*PG	**Pg**	**19 36 20.8**	**-0.7**
DPC				*e*SG	**Sg**	**19 36 36.3**	**-1.3**
DPC	**Dobruska-Polom**	**1.24**	**174**	Pg	**Pg**	**19 36 20.8**	**-0.7**
DPC				Sg	**Sg**	**19 36 36.3**	**-1.3**
PVCC	**Panska Ves**	**1.44**	**223**	*e*PG	**Pn**	**19 36 24.4**	**-0.6**
PVCC				*e*SG	**Sg**	**19 36 42.6**	**-1.3**
	comp=Z,23nm,0.2s						
PVCC	**Panska Ves**	**1.44**	**223**	Pg	**Pn**	**19 36 24.4**	**-0.6**
PVCC				Sg	**Sg**	**19 36 42.6**	**-1.3**
	23nm,0.2s						
PRU	**Pruhonice**	**1.88**	**213**	*e*PG	**Pn**	**19 36 31.9**	**+0.8**
PRU				*e*SG	**Sn**	**19 36 55.7**	**+0.1**
	comp=Z,6.5nm,0.4s						
PRU	**Pruhonice**	**1.88**	**213**	Pg	**Pn**	**19 36 31.9**	**+0.8**
PRU				Sg	**Sn**	**19 36 55.7**	**+0.1**
	6.5nm,0.4s						
CLL	**Collm**	**1.96**	**263**	*e*Pg	**Pn**	**19 36 31.0**	**-1.3**
CLL				*i* Sg	**Sn**	**19 36 58.7**	**+1.1**
	comp=Z,6.0nm,0.5s						
MORC	**Moravsky Berou**	**2.03**	**153**	*e*Sg	**Sb**	**19 37 00.8**	**-0.4**
OKC	**Ostrava-Krasne**	**2.18**	**143**	*e*PG	**Pb**	**19 36 38.7**	**+0.7**
OKC				*e*SG	**Sg**	**19 37 07.0**	**-0.6**
	comp=Z,2.2nm,0.3s						
OKC	**Ostrava-Krasne**	**2.18**	**143**	Pg	**Pb**	**19 36 38.7**	**+0.7**
OKC				Sg	**Sg**	**19 37 07.0**	**-0.6**
	comp=Z,2.2nm,0.3s						
KHC	**Kasperske Hory**	**2.94**	**214**	*e*PG	**Pb**	**19 36 51.5**	**+0.4**
KHC				*e*SG	**Sb**	**19 37 29.5**	**+1.9**
KHC	**Kasperske Hory**	**2.94**	**214**	Pg	**Pb**	**19 36 51.5**	**+0.4**
KHC				Sg	**Sb**	**19 37 29.5**	**+1.9**

*CSEM **30** 19:43:50.1, 37°.02N×20°.74E, h7km, MD3.5, After ATH*
ATH 30 19:43:50.1, 37°.02N×20°.74E, h7km, MD3.5/13, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYL	**PYLOS**	**0.81**	**99**	*e*PB	Pg	19 44 05.7	0.0
PYL				*e*SB	Sb	19 44 17.6	-0.1
PYL	**PYLOS**	**0.81**	**99**	*e*Pb	Pg	19 44 05.7	0.0
PYL				*e*Sb	Sb	19 44 17.6	-0.1
AMT	**Artemida-Makis**	**0.93**	**56**	*e*PG	Pg	19 44 07.3	-0.7
AMT				*e*SB	Sg	19 44 19.6	-0.5
AMT	**Artemida-Makis**	**0.93**	**56**	*e*Pg	Pg	19 44 07.3	-0.7
AMT				*e*Sb	Sg	19 44 19.6	-0.5
ITM	**Ithomi**	**0.96**	**80**	*e*PB	Pg	19 44 08.4	-0.2
ITM				*e*SB	Sg	19 44 20.9	-0.3
ITM	**Ithomi**	**0.96**	**80**	*e*Pb	Pg	19 44 08.4	-0.2
ITM				*e*Sb	Sg	19 44 20.9	-0.3
VLS	**Valsamata**	**1.16**	**354**	*e*PG	Pg	19 44 11.4	-1.1
VLS				*e*SB	S

JAM	**Amami Oshima**	**10.53**	**44**	P	Pn	19 52 29.7	+1.6
QIZ	**Qiongzhong**	**10.93**	**261**	P	Pn	19 52 38.8	+5.1
QIZ				S	**Sn**	**19 54 38.0**	**+2.2**
QIZ				pmax	pmax		
	comp=Z,18nm,0.8s						
QIZ				LR	LR		
	comp=N,2µm,13.2s						
QIZ				LR	LR		
	comp=Z,1µm,20.3s						
NJ2	**Nanjing**	**11.16**	**349**	*e*P	Pn	19 52 45.3	+8.5
NJ2				PP	PnPn	19 52 57.0	+12
NJ2				sP		19 53 11.0	
NJ2				S	Sn	19 54 48.0	+6.6
NJ2				PcP	**PcP**	**19 58 35.5**	**+2.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,210nm,4.0s						
NJ2				LR	LR		
	comp=N,1µm,14.3s						
NJ2				LR	LR		
	comp=E,1µm,18.4s						
NJ2				LR	LR		
	comp=Z,1µm,12.5s						
WHN	**Wuhan**	**11.32**	**328**	⇑P	**Pn**	**19 52 36.0**	**-2.9**
WHN				LR	LR		
	comp=N,2µm,11.5s						
WHN				LR	LR		
	comp=E,3µm,9.9s						
WHN				LR	LR		
	comp=Z,3µm,13.0s						
DAV	**Davao City (W)**	**14.51**	**163**	LR	LR	20 00 29.6	
	comp=Z,730nm,18.6s,baz=28,slow=44						
SDKM	**Sandakan**	**15.82**	**195**	P	**Pn**	**19 53 41.2**	**+1.0**
MYLDM	**Lahad Datu**	**16.01**	**190**	P	**P**	**19 53 43.7**	**-2.1**
UBPT	**Khong Chiam**	**16.07**	**252**	P	**Pn**	**19 53 42.7**	**-0.6**
	comp=Z,20nm,1.5s						
XAN	**Xi'an**	**16.93**	**322**	P	**Pn**	**19 53 52.5**	**-1.6**
XAN				pmax	pmax		
	comp=Z,5.0nm,1.5s						
XAN				pmax	pmax		
	comp=Z,22nm,4.0s						
XAN				LR	LR		
	comp=N,870nm,12.4s						
XAN				LR	LR		
	comp=Z,270nm,12.1s						
TSM	**Tawau**	**16.98**	**192**	P	**P**	**19 53 56.5**	**-0.2**
KSAR	**Wonju Array Be**	**17.31**	**18**	Pn	**P**	**19 54 01.5**	**+1.3**
KSRS	**Korea Array**	**17.33**	**18**	Pn	**P**	**19 54 01.5**	**+1.1**
	comp=Z,0.4nm,0.3s,baz=200,slow=12,SNR=16						
KMI	**Kunming**	**17.52**	**287**	P	**Pn**	**19 53 59.3**	**-2.5**
KMI				pmax	pmax		
	comp=Z,13nm,1.5s						
KMI				LR	LR		
	comp=N,830nm,12.7s						
KMI				LR	LR		
	comp=E,630nm,12.7s						
KMI				LR	LR		
	comp=Z,700nm,12.9s						
BJI	**Beijing**	**19.42**	**348**	P	**Pn**	**19 54 23.5**	**-1.1**
BJI				pmax	pmax		
	comp=Z,25nm,1.8s						
BJI				pmax	pmax		
	comp=Z,170nm,5.7s						
BJI				LR	LR		
	comp=N,730nm,13.1s						
BJI				LR	LR		
	comp=E,950nm,20.2s						
BJI				LR	LR		
	comp=Z,360nm,20.2s						
BTM	**Bintulu**	**19.45**	**205**	P	**P**	**19 54 23.6**	**-0.3**
PBKT	**Sadao Pong**	**19.73**	**260**	P	**Pn**	**19 54 27.6**	**-0.8**
	comp=Z,14nm,1.4s,comp=Z,2µm						
MNI	**Manado**	**19.80**	**169**	P	**Pn**	**19 54 29.8**	**+0.5**
	comp=Z,86nm,1.1s						
CHBT	**CHBT**	**19.90**	**249**	P	**Pn**	**19 54 29.5**	**-1.0**
	comp=Z,27nm,1.7s,comp=Z,739nm						
JHJ	**Hachijo jima 2**	**20.36**	**50**	LR	LR	20 01 37.8	
	comp=Z,456nm,20.4s,baz=33,slow=34						
GTOI	**Gorontalo**	**20.36**	**175**	P	**P**	**19 54 32.9**	**-1.0**
	comp=Z,74nm,1.4s,comp=Z,845nm						
MRSI	**Marisa**	**20.46**	**178**	P	Pn	19 54 36.5	-0.6
	comp=Z,53nm,1.1s,comp=Z,716nm						
SBUM	**Sibu**	**20.49**	**207**	P	Pn	19 54 36.6	-0.8
SNY	**Shenyang**	**20.80**	**5**	⇓P	Pn	19 54 40.8	-0.1
SNY				pmax	pmax		
	comp=Z,77nm,11.2s						
SNY				LR	LR		
	comp=N,470nm,19.2s						
SNY				LR	LR		
	comp=E,770nm,15.6s						
SNY				LR	LR		
	comp=Z,430nm,20.2s						
CMMT	**Chiang Mai**	**21.11**	**268**	P	**P**	**19 54 41.5**	**-0.4**
	comp=Z,18nm,1.3s,comp=Z,411nm						
CHTO	**Chiang Mai**	**21.11**	**268**	*e*P	**P**	**19 54 42.1**	**+0.2**
	comp=Z,27nm,1.3s						
CHTO	**Chiang Mai**	**21.11**	**268**	P	**P**	**19 54 40.9**	**-1.1**
	comp=Z,20nm,1.4s						
CMAR	**Chiang Mai Arr**	**21.17**	**267**	P	**P**	**19 54 43.0**	**+0.4**
CMAR				PcP	**PcP**	**19 58 48.3**	**0.0**
CMAR	**Chiang Mai Arr**	**21.17**	**267**	P	**P**	**19 54 43.0**	**+0.4**
	comp=Z,10nm,0.8s,baz=74,slow=9.3,SNR=97						
CMAR				PcP	**PcP**	**19 58 48.3**	**0.0**
	comp=Z,0.4nm,0.8s,baz=14,slow=1.1,SNR=3.6						
CMAR				LR	LR	20 03 55.4	
	comp=Z,1µm,18.1s,baz=85,slow=40						
MAJO	**Matsushiro**	**21.36**	**40**	*e*P	**P**	**19 54 44.8**	**+0.3**
	comp=Z,69nm,1.6s						
MAT	**Matsushiro**	**21.36**	**40**	P	P	19 54 37.5	-7.0
MAT				S	S	19 58 28.0	-13
MJAR	**Matsushiro Arr**	**21.36**	**40**	P	**P**	**19 54 46.4**	**+1.9**
MJAR	**Matsushiro Arr**	**21.36**	**40**	P	**P**	**19 54 46.4**	**+1.9**
	comp=Z,3.2nm,0.9s,baz=223,slow=8.5,SNR=7.7						
LZH	**Lanzhou**	**21.36**	**318**	*e*P	**P**	**19 54 45.0**	**+0.3**
LZH				pP	**pP**	**19 54 49.5**	**+0.7**
LZH				sP	**sP**	**19 54 52.3**	**+1.7**
LZH				pmax	pmax		
	comp=Z,93nm,1.5s						
LZH				pmax	pmax		
	comp=Z,230nm,5.2s						
LZH				LR	LR		
	comp=N,850nm,11.5s						
LZH				LR	LR		
	comp=E,940nm,12.0s						
LZH				LR	LR		
	comp=Z,1µm,12.5s						
BTO	**Baotou**	**21.72**	**336**	*e*P	P	19 54 42.5	-5.9
LUWI	**Luwuk**	**22.01**	**176**	P	**P**	**19 54 50.3**	**-1.3**
	comp=Z,188nm,1.2s,comp=Z,2µm						
KSM	**Kuching**	**22.21**	**210**	P	**P**	**19 54 53.5**	**-0.2**
STKI	**Sintang**	**22.95**	**206**	P	**P**	**19 55 01.0**	**-0.6**
KTGM	**Kuala Trenggan**	**23.54**	**231**	P	**P**	**19 55 07.4**	**-0.2**
USRK	**Ussuriysk Arra**	**24.74**	**19**	P	**P**	**19 55 19.1**	**+0.6**
	comp=Z,2.7nm,0.9s,baz=181,slow=13,SNR=3.7						
KULM	**Kulim**	**25.41**	**235**	P	**P**	**19 55 24.3**	**-0.6**
MYKOM	**Kota Tinggi**	**25.60**	**224**	P	**P**	**19 55 26.4**	**-0.2**
IPM	**Ipoh**	**25.66**	**233**	P	**P**	**19 55 26.7**	**-0.5**
KGM	**Kluang**	**25.78**	**225**	P	**P**	**19 55 29.2**	**+1.0**
GTA	**Gaotai**	**25.94**	**320**	*e*P	**P**	**19 55 30.0**	**+0.4**
GTA				pP	**pP**	**19 55 36.5**	**+2.6**
GTA				sP	sP	19 55 40.3	+4.6
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,72nm,5.7s						
GTA				LR	LR		
	comp=N,580nm,19.9s						
GTA				LR	LR		
	comp=E,630nm,14.3s						
GTA				LR	LR		
	comp=Z,680nm,13.8s						
KAPI	**Kappang**	**25.95**	**183**	P	**P**	**19 55 30.1**	**+0.4**
KAPI	**Kappang**	**25.95**	**183**	P	**P**	**19 55 30.1**	**+0.4**
	comp=Z,18nm,0.8s,baz=13,slow=8.9,SNR=7.6						
KAPI				LR	LR	20 06 51.6	
	comp=Z,242nm,18.2s,baz=13,slow=39						
FRIM	**Kepong**	**26.06**	**230**	P	**P**	**19 55 30.9**	**+0.1**
SHL	**Shillong**	**27.33**	**285**	*e*PKP	**P**	**19 55 42.0**	**-0.4**
PSI	**Prapat**	**28.33**	**233**	P	**P**	**19 55 51.4**	**+0.1**
PSI	**Prapat**	**28.33**	**233**	P	**P**	**19 55 51.4**	**+0.1**
	comp=Z,13nm,0.8s,baz=285,slow=8.8,SNR=5.4						
PSI				LR	LR	20 07 08.4	
	comp=Z,311nm,18.2s,baz=140,slow=36						
ASAJ	**Asahikawa**	**29.02**	**33**	P	P	19 55 59.8	+2.7
ASAJ	**Asahikawa**	**29.02**	**33**	P	P	19 55 59.8	+2.7
	comp=Z,8.9nm,0.9s,baz=245,slow=14,SNR=3.2						
ASAJ				LR	LR	20 09 51.2	
	comp=Z,343nm,18.4s,baz=85,slow=41						
ULN	**Ulaanbaatar**	**29.11**	**340**	*e*P	**P**	**19 55 57.5**	**-0.5**
	comp=Z,17nm,1.2s						
SONM	**Songino Array**	**29.29**	**339**	P	**P**	**19 55 59.1**	**-0.5**
SONM	**Songino Array**	**29.29**	**339**	P	**P**	**19 55 59.1**	**-0.5**
	comp=Z,6.4nm,0.9s,baz=158,slow=9.3,SNR=9.5						
SONM				LR	LR	20 09 27.5	
	comp=Z,384nm,19.9s,baz=136,slow=40						
TAPN	**Taplejung**	**31.18**	**288**	*e*P	**P**	**19 56 17.2**	**+0.4**
	comp=Z,35nm,1.2s						
ODAN	**Odare**	**31.44**	**287**	*e*P	**P**	**19 56 19.0**	**+0.1**
	comp=Z,29nm,1.1s						
RAMN	**Ramite**	**32.15**	**287**	*e*P	**P**	**19 56 24.7**	**-0.5**
	comp=Z,45nm,1.1s						
JIRN	**Jiri**	**32.55**	**289**	*e*P	**P**	**19 56 28.6**	**-0.3**
	comp=Z,43nm,1.1s						
GUN	**Gumba**	**32.84**	**289**	*e*P	**P**	**19 56 31.1**	**-0.3**
	comp=Z,58nm,1.0s						
PKI	**Pulchoki**	**33.24**	**288**	*e*P	**P**	**19 56 34.2**	**-0.7**
	comp=Z,29nm,1.2s						
PKIN	**Phulchoki**	**33.25**	**288**	*e*P	**P**	**19 56 34.9**	**0.0**
KKN	**Kakani**	**33.37**	**289**	*e*P	**P**	**19 56 35.5**	**-0.3**
	comp=Z,22nm,0.9s						
DMN	**Daman**	**33.51**	**288**	*e*P	**P**	**19 56 36.9**	**-0.2**
	comp=Z,46nm,1.3s						
DANN	**Dangsing**	**34.74**	**290**	*e*P	**P**	**19 56 47.5**	**-0.4**
	comp=Z,70nm,1.1s						
KOLN	**Koldanda**	**34.85**	**289**	*e*P	**P**	**19 56 47.2**	**-1.5**
	comp=Z,17nm,0.8s						
PYUN	**Piuthan**	**35.41**	**289**	*e*P	**P**	**19 56 52.4**	**-1.1**
	comp=Z,234nm,1.7s						
FITZ	**Fitzroy Crossi**	**39.15**	**173**	*e*P	**P**	**19 57 23.4**	**-1.5**
	comp=Z,11nm,1.1s						
PMG	**Port Moresby**	**39.54**	**137**	P	**P**	**19 57 30.3**	**+2.0**
PMG	**Port Moresby**	**39.54**	**137**	P	**P**	**19 57 30.3**	**+2.0**
	comp=Z,18nm,0.9s,baz=13,slow=8.2,SNR=3.9						
MK31	**Makanchi Array**	**40.68**	**318**	*e*P	**P**	**19 57 37.0**	**-0.6**
MKAR	**Makanchi Array**	**40.68**	**318**	P	**P**	**19 57 37.5**	**0.0**
MKAR				ScP	**ScP**	**20 03 29.4**	**+1.0**
MKAR	**Makanchi Array**	**40.68**	**318**	P	**P**	**19 57 37.5**	**0.0**
	comp=Z,3.5nm,0.8s,baz=112,slow=9.3,SNR=20						
MKAR				ScP	**ScP**	**20 03 29.4**	**+1.0**
	comp=Z,0.7nm,1.0s,baz=183,slow=2.9,SNR=4.5						
MKAR				LR	LR	20 16 18.7	
	comp=Z,205nm,18.8s,baz=111,slow=39						
WRAB	**Tennant Creek**	**42.70**	**162**	*e*P	**P**	**19 57 52.9**	**-1.4**
	comp=Z,14nm,0.9s						
WRA	**Warramunga Arr**	**42.70**	**162**	P	**P**	**19 57 52.7**	**-1.6**
WRA	**Warramunga Arr**	**42.70**	**162**	P	**P**	**19 57 52.7**	**-1.6**
	comp=Z,4.3nm,0.7s,baz=343,slow=8.9,SNR=30						
ZAA0	**Zalesovo Array**	**42.93**	**329**	*e*P	**P**	**19 57 55.6**	**-0.2**
ZALV	**Zalesovo Beam**	**42.93**	**329**	P	**P**	**19 57 55.4**	**-0.4**
ZALV	**Zalesovo Beam**	**42.93**	**329**	P	**P**	**19 57 55.4**	**-0.4**
	comp=Z,6.8nm,0.8s,baz=116,slow=6.8,SNR=12						
ZALV				LR	LR	20 16 51.0	
	comp=Z,276nm,20.4s,baz=249,slow=38						
TKM2	**Tokmak 2**	**43.80**	**311**	*e*P	**P**	**19 58 03.8**	**+0.5**
	comp=Z,22nm,1.5s						
AAK	**Ala-Archa**	**44.52**	**310**	LR	LR	20 19 34.5	
	comp=Z,540nm,18.4s,baz=87,slow=40						
AS31	**Alice Springs**	**46.12**	**164**	*e*P	**P**	**19 58 20.3**	**-1.3**
ASAR	**Alice Springs**	**46.12**	**164**	P	**P**	**19 58 21.2**	**-0.4**
ASAR				ScP	**ScP**	**20 03 53.1**	**+2.5**
ASAR	**Alice Springs**	**46.12**	**164**	P	**P**	**19 58 21.2**	**-0.4**
	comp=Z,1.6nm,0.8s,baz=344,slow=7.1,SNR=26						
ASAR				ScP	**ScP**	**20 03 53.1**	**+2.5**
	comp=Z,0.5nm,0.8s,baz=350,slow=4.6,SNR=4.2						
KKAR	**Karatay Array**	**47.48**	**310**	*e*P	**P**	**19 58 32.6**	**+0.5**
CTA	**Charters Tower**	**47.63**	**148**	P	**P**	**19 58 33.8**	**+0.3**
CTA	**Charters Tower**	**47.63**	**148**	P	**P**	**19 58 33.8**	**+0.3**
	comp=Z,5.9nm,0.9s,baz=333,slow=12,SNR=8.8						
CTAO	**Charters Tower**	**47.63**	**148**	*e*P	**P**	**19 58 33.8**	**+0.3**
	comp=Z,39nm,1.6s						
KBL	**Kabul**	**47.64**	**298**	*e*P	**P**	**19 58 34.0**	**+0.3**
	comp=Z,12nm,1.0s						
HNR	**Honiara**	**48.60**	**125**	LR	LR	20 16 08.0	
	comp=Z,153nm,21.2s,baz=299,slow=32						
BVAR	**Bovoye Array**	**50.16**	**322**	P	**P**	**19 58 52.7**	**+0.1**
BVAR	**Borovoye Array**	**50.16**	**322**	P	**P**	**19 58 52.7**	**+0.1**
	baz=82,slow=12						
BVAR				LR	LR	20 22 37.9	
	comp=Z,169nm,18.1s,baz=112,slow=39						
BRVK	**Borovoye**	**50.24**	**322**	*e*P	**P**	**19 58 53.9**	**+0.8**
	comp=Z,10nm,1.1s						
ABKAR	**Akbulak array**	**55.71**	**316**	*e*P	**P**	**19 59 33.9**	**+0.4**
	comp=Z,2.0nm,0.8s						
STKA	**Stephens Creek**	**56.12**	**159**	P	**P**	**19 59 36.1**	**-0.5**
STKA	**Stephens Creek**	**56.12**	**159**	P	**P**	**19 59 36.1**	**-0.5**
	comp=Z,5.0nm,0.8s,baz=346,slow=4.7,SNR=8.1						
AKTO	**Aktyubinsk**	**57.09**	**317**	P	**P**	**19 59 42.2**	**-1.2**
AKTO	**Aktyubinsk**	**57.09**	**317**	P	**P**	**19 59 42.2**	**-1.2**
	comp=Z,0.5nm,0.5s,baz=119,slow=5.4,SNR=3.1						
GNI	**Garni**	**66.66**	**306**	P	**P**	**20 00 48.0**	**-0.2**
GNI	**Garni**	**66.66**	**306**	P	**P**	**20 00 48.0**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=186,slow=23,SNR=3.0						
KBZ	**Khabaz**	**67.52**	**310**	P	**P**	**20 00 55.0**	**+1.7**
KBZ	**Khabaz**	**67.52**	**310**	P	**P**	**20 00 55.0**	**+1.7**
	comp=Z,1.3nm,0.7s,baz=161,slow=4.4,SNR=3.7						
KBZ				LR	LR	20 34 52.3	
	comp=Z,149nm,19.5s,baz=288,slow=40						
PPLA	**Purkeypile**	**69.92**	**29**	*e*P	**P**	**20 01 08.2**	**0.0**
	comp=Z,8.1nm,1.0s						
KDAK	**Kodiak Island**	**70.41**	**35**	P	P	20 01 13.1	+2.0
KDAK	**Kodiak Island**	**70.41**	**35**	P	P	20 01 13.1	+2.0
	comp=Z,2.7nm,0.5s,baz=303,slow=14						
MCK	**McKinley**	**71.25**	**28**	*e*P	**P**	**20 01 15.9**	**-0.2**
	comp=Z,18nm,1.2s						
ILAR	**Eielson Array**	**71.95**	**27**	P	**P**	**20 01 20.4**	**0.0**
ILAR	**Eielson Array**	**71.95**	**27**	P	**P**	**20 01 20.4**	**0.0**
	comp=Z,0.8nm,0.8s,baz=290,slow=6.4,SNR=9.2						
ILAR				LR	LR	20 36 37.6	
	comp=Z,85nm,18.4s,baz=307,slow=39						
ARCES	**ARCESS Array B**	**72.46**	**338**	P	P	20 01 25.7	+2.4
ARCES	**ARCESS Array B**	**72.46**	**338**	P	P	20 01 25.7	+2.4
	comp=Z,3.6nm,0.9s,baz=72,slow=5.8,SNR=4.4						
ARCES				LR	LR	20 38 30.9	
	comp=Z,118nm,18.1s,baz=179,slow=40						
SPITS	**Spitsbergen Ar**	**72.55**	**348**	P	**P**	**20 01 23.5**	**-0.2**
SPITS	**Spitsbergen Ar**	**72.55**	**348**	P	**P**	**20 01 23.5**	**-0.2**
	comp=Z,9.2nm,1.0s,baz=106,slow=12,SNR=2.9						
PAX	**Paxson**	**72.94**	**28**	*e*P	**P**	**20 01 25.3**	**-1.0**
	comp=Z,3.7nm,0.9s						
FINES	**FINESS Array B**	**74.18**	**330**	P	**P**	**20 01 34.0**	**+0.5**
FINES	**FINESS Array B**	**74.18**	**330**	P	**P**	**20 01 34.0**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=46,slow=6.0,SNR=4.3						
FINES				LR	LR	20 37 17.2	
	comp=Z,202nm,20.5s,baz=332,slow=38						
BRTR	**Keskin Array B**	**75.10**	**307**	P	**P**	**20 01 38.2**	**-1.3**
BRTR	**Keskin Array B**	**75.10**	**307**	P	**P**	**20 01 38.2**	**-1.3**
	comp=Z,0.5nm,0.9s,baz=104,slow=6.1,SNR=3.4						
BRTR				LR	LR	20 38 58.8	
	comp=Z,62nm,21.0s,baz=202,slow=39						
AKASG	**Malin Array Be**	**75.26**	**319**	P	**P**	**20 01 40.2**	**+0.2**
AKASG	**Malin Array Be**	**75.26**	**319**	P	**P**	**20 01 40.2**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=67,slow=4.5,SNR=4.9						
AK02	**Malin Array Si**	**75.28**	**319**	P	**P**	**20 01 40.7**	**+0.6**
BUR08	**Bucovina Ar. S**	**78.68**	**317**	*e*P	**P**	**20 02 01.2**	**+1.7**
MLR	**Muntele Rosu**	**78.88**	**314**	P	**P**	**20 02 02.5**	**+1.8**
MLR	**Muntele Rosu**	**78.88**	**314**	P	**P**	**20 02 02.5**	**+1.8**
	comp=Z,0.2nm,0.6s,baz=129,slow=13,SNR=2.5						
RPZ	**Rata Peaks**	**78.97**	**146**	LR	LR	20 34 22.1	
	comp=Z,121nm,18.5s,baz=242,slow=34						
KWP	**Kalwaria Pacla**	**79.58**	**319**	*e*P	**P**	**20 02 03.8**	**-0.5**
	comp=Z,44nm,1.6s						
HFS	**Hagfors**	**80.33**	**331**	P	**P**	**20 02 08.2**	**+0.1**
HFS	**Hagfors**	**80.33**	**331**	P	**P**	**20 02 08.2**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=69,slow=8.3,SNR=3.6						
NB2	**NORSAR Subarra**	**81.02**	**332**	P	**P**	**20 02 14.0**	**+2.2**
	comp=Z,1.1nm,0.8s,baz=61,slow=5.3						
NOA	**NORSAR Array B**	**81.02**	**332**	P	**P**	**20 02 13.7**	**+1.9**
NOA	**NORSAR Array B**	**81.02**	**332**	P	**P**	**20 02 13.7**	**+1.9**
	comp=Z,0.5nm,0.8s,baz=61,slow=5.5,SNR=2.6						
NOA				LR	LR	20 43 57.7	
	comp=Z,142nm,19.0s,baz=60,slow=40						
OKC	**Ostrava-Krasne**	**82.25**	**320**	AMS	AMS	20 40 30.0	
	comp=Z,100nm,13.1s						
TREC	**Trest**	**84.05**	**321**	AMS	AMS	20 43 50.0	
	comp=Z,100nm,14.7s						
BRG	**Bergqiesshubel**	**84.26**	**323**	*e*P	P	20 02 35.9	+7.1
	comp=Z,2.5nm,1.0s						
BRG				*e*		20 02 48.0	
	comp=Z,3.1nm,1.0s						
PRU	**Pruhonice**	**84.31**	**322**	*e*P	**P**	**20 02 29.3**	**+0.2**
PRU				AMS	AMS	20 45 00.0	
	comp=Z,200nm,21.0s						
CLL	**Collm**	**84.59**	**323**	*e*(P)	P	20 02 26.0	-4.5
CLL				*es*P	sP	20 02 34.0	-2.9
CLL				*e*		20 02 44.0	
CLL				*e*SS	**SS**	**20 18 30.0**	**+2.6**
CLL				Lm	MLR	20 46 00.0	
	comp=N,100nm,19.7s						
CLL				Lm	MLR	20 46 00.0	
	comp=E,100nm,19.2s						
KMBO	**Kilima Mbogo**	**84.82**	**267**	LR	LR	20 38 38.3	
	comp=E,132nm,19.7s,baz=91,slow=34						
GERES	**GERESS Array B**	**85.31**	**321**	P	**P**	**20 02 34.6**	**+0.3**
GERES	**GERESS Array B**	**85.31**	**321**	P	**P**	**20 02 34.6**	**+0.3**
	comp=E,0.9nm,0.8s,baz=33,slow=3.2,SNR=7.0						
GERES				LR	LR	20 46 40.2	
	comp=E,136nm,18.2s,baz=320,slow=40						
YKA	**Yellowknife Ar**	**85.81**	**23**	P	**P**	**20 02 37.5**	**+1.1**
YKA	**Yellowknife Ar**	**85.81**	**23**	P	**P**	**20 02 37.4**	**+1.1**
	comp=E,2.2nm,0.8s,baz=320,slow=5.2,SNR=4.6						
YKA				LR	LR	20 49 52.0	
	comp=E,7.0nm,18.2s,baz=30,slow=42						
CASY	**Casey**	**87.44**	**184**	*e*P	**P**	**20 02 41.7**	**-2.3**
	comp=E,14nm,1.0s						

IDC 30 19:50:40.0±1.1, 31°.35S×177°.82W, h0km, mb4.4/4, mb1 4.5/6, mb1mx4.0/21, mbtmpg4.4/6, ML3.8/2, Error ellipse: s-maj=33.0km s-min=22.9km az=122.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**2.09**	**358**	Pn	Pn	19 51 17.0	+0.7
	111nm,0.3s,baz=90,slow=20,SNR=3.6						
RAO				Sn	Sn	19 51 39.0	-4.1
	254nm,0.3s,baz=89,slow=23,SNR=5.9						
URZ	**Urewera**	**8.06**	**210**	Pn	Pn	19 52 39.6	+1.3
	0.3nm,0.3s,baz=330,slow=18,SNR=6.0						
URZ				Sn	Sn	19 54 10.6	+0.6
	1.9nm,0.3s,baz=180,slow=20,SNR=8.2						
CTA	**Charters Tower**	**34.11**	**280**	P	P	19 57 27.1	+0.4
	0.9nm,0.3s,baz=120,slow=8.1,SNR=6.8						
STKA	**Stephens Creek**	**34.43**	**258**	P	P	19 57 30.2	+1.0
	6.5nm,1.0s,baz=107,slow=11,SNR=11						
ASAR	**Alice Springs**	**43.22**	**268**	P	P	19 58 42.2	-0.9
	3.1nm,0.4s,baz=104,slow=7.6,SNR=31						
WRA	**Warramunga Arr**	**44.30**	**273**	P	P	19 58 50.5	-1.4
	2.8nm,0.5s,baz=112,slow=8.0,SNR=13						
KURBB	**Kurchatov Arra**	**121.85**	**313**	PKP	PKPdf	20 09 34.3	-1.4
	0.1nm,0.4s,baz=116,slow=2.0,SNR=4.0						
BVAR	**Borovoye Array**	**127.19**	**315**	PKP	PKPdf	20 09 45.4	-0.5
	0.2nm,0.4s,baz=147,slow=2.9,SNR=2.8						
FINES	**FINESS Array B**	**146.09**	**340**	PKPbc	PKPdf	20 10 20.1	-0.2
	1.6nm,0.5s,baz=54,slow=4.1,SNR=14						
HFS	**Hagfors**	**150.20**	**348**	PKPbc	PKPbc	20 10 31.3	-0.9
	0.5nm,0.4s,baz=77,slow=6.4,SNR=4.3						
BRTR	**Keskin Array B**	**153.18**	**297**	PKPbc	PKPbc	20 10 42.3	+2.4
	0.4nm,0.6s,baz=140,slow=4.6,SNR=3.1						
TORD	**Torodi Ar. Bea**	**161.88**	**178**	PKPab	PKPab	20 11 28.4	-0.8
	0.2nm,0.5s,baz=174,slow=4.6,SNR=3.6						

*ISCJB **30** 20:05:30.8±0.4, 2°.24S±0°.03×79°.92W±0°.04, h83km, mb3.9/10, Error ellipse: s-maj=6.1km s-min=3.9km az=28.3*
*IGQ **30** 20:05:30.6, 2°.19S×79°.85W, h34km±58km, Mb4.6, Ms4.4, Error ellipse: s-maj=1.3km s-min=1.1km az=2.0*
*IDC **30** 20:05:31.1±0.8, 2°.17S×79°.71W, h83km±7km, mb3.7/9, mb1 3.9/11, mb1mx3.7/23, mbtmpg3.7/11, MS3.4/5, Ms1 3.4/5, ms1mx3.1/29, Error ellipse: s-maj=39.0km s-min=10.6km az=68.0*

ISC 30 20:05:31.0±0.6, 2°.21S±0°.04×79°.88W±0°.05, h83km, n70, σ0°.99/66, mb4.0/10, 16C-21D, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
RIOE	**Riobamba**	**1.32**	**70**	⇓S	**Sn**	**20 06 11.3**	**-1.0**
RIOE	**Riobamba**	**1.32**	**70**	⇓P	**Pn**	**20 05 54.6**	**0.0**
PORT	**Chimborazo Vol**	**1.33**	**56**	P	**Pn**	**20 05 55.6**	**+0.7**
ARNL	**Arenillas**	**1.34**	**188**	⇑P	**Pn**	**20 05 54.8**	**+0.3**
ARNL	**Arenillas**	**1.34**	**188**	⇑S	**Sn**	**20 06 12.2**	**+0.2**
IGUA	**Igualata**	**1.43**	**60**	⇓P	**Pn**	**20 05 56.5**	**+0.4**
CHIS	**Cerro-Chispas-**	**1.43**	**324**	⇑P	**Pn**	**20 05 56.8**	**+1.1**
BMAS	**Trigal station**	**1.56**	**63**	⇓S	**Sn**	**20 06 17.6**	**-0.1**
BMAS	**Trigal station**	**1.56**	**63**	⇓P	**Pn**	**20 05 58.3**	**+0.7**
BIL2	**Estacion Bilba**	**1.56**	**61**	P	**Pn**	**20 05 58.6**	**+1.0**
BBIL	**Ulba Tungurahu**	**1.58**	**61**	⇓S

TORD	**Torodi Ar. Bea**	**82.30**	**77**	P	**P**	**20 17 44.7**	**+0.5**
	0.3nm,0.3s,baz=270,slow=5.2,SNR=8.1						
ILAR	**Eielson Array**	**82.38**	**337**	P	**P**	**20 17 43.1**	**-0.6**
	0.5nm,0.8s,baz=126,slow=4.7,SNR=4.2						
VNDA	**Vanda**	**93.76**	**191**	P	**P**	**20 18 38.9**	**+0.7**
	0.6nm,0.9s,baz=125,slow=1.4,SNR=4.3						
ZALV	**Zalesovo Beam**	**126.92**	**11**	PKP	**PKPdf**	**20 24 23.9**	**-1.4**
	1.2nm,0.5s,baz=245,slow=2.8,SNR=6.2						
KURBB	**Kurchatov Arra**	**128.42**	**17**	PKP	**PKPdf**	**20 24 27.7**	**-0.6**
	1.2nm,0.6s,baz=321,slow=2.5,SNR=17						
KURBB				pPKP	**pPKPdf**	**20 24 50.6**	**-0.9**
	0.5nm,0.6s,baz=321,slow=2.7,SNR=2.6						
MKAR	**Makanchi Array**	**132.96**	**17**	PKP	**PKPdf**	**20 24 35.6**	**-1.4**
	0.2nm,0.5s,baz=312,slow=2.0,SNR=8.1						
MKAR				pPKP	**pPKPdf**	**20 24 59.1**	**-1.2**
	0.2nm,0.5s,baz=345,slow=2.6,SNR=2.1						
ASAR	**Alice Springs**	**138.26**	**230**	PKhKP	PKPpre	20 24 39.2	
	0.5nm,0.9s,baz=134,slow=2.9,SNR=3.4						
ASAR				PKP	**PKPdf**	**20 24 46.1**	**-1.5**
	0.4nm,0.7s,baz=114,slow=2.0,SNR=5.5						
WRA	**Warramunga Arr**	**139.85**	**235**	PKhKP	PKPpre	20 24 41.6	
	0.7nm,0.5s,baz=119,slow=2.3,SNR=15						
WRA				PKP	**PKPdf**	**20 24 48.8**	**-1.8**
	0.4nm,0.6s,baz=112,slow=2.2,SNR=14						
CMAR	**Chiang Mai Arr**	**163.81**	**4**	pPKPab	pPKPab	20 26 38.6	-1.8
	0.9nm,0.8s,baz=335,slow=5.1,SNR=7.1						

*CSEM **30** 20:18:28.7±0.1, 42.55N×13.20E, h20km, ML2.8/9, Error ellipse: s-maj=4.2km s-min=3.0km az=60.0*

ROM 30 20:18:28.7±0.1, 42.56N×13.21E, h10km, Ml2.3/18, Error ellipse: s-maj=1.2km s-min=0.8km az=44.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.13**	**290**	Pg	Pg	20 18 32.3	+0.4
LNSS				Sg	Sg	20 18 34.8	+0.6
	3µm,0.2s						
LNSS	**Leonessa**	**0.13**	**290**	Pg	Pg	20 18 32.3	+0.4
LNSS				Sg	Sg	20 18 34.8	+0.6
	3µm,0.2s						
CAMP	**Campotosto**	**0.15**	**99**	Pg	Pg	20 18 32.7	+0.4
CAMP				Sg	Sg	20 18 35.5	+0.8
	625nm,0.5s						
CAMP	**Campotosto**	**0.15**	**99**	Pg	Pg	20 18 32.7	+0.4
CAMP				Sg	Sg	20 18 35.5	+0.8
	625nm,0.5s						
AQU	**L'Aquila**	**0.25**	**145**	Pg	Pg	20 18 34.6	+0.7
AQU				Sg	Sb	20 18 39.3	-0.6
	556nm,1.0s						
AQU	**L'Aquila**	**0.25**	**145**	Pg	Pg	20 18 34.6	+0.7
AQU				Sg	Sb	20 18 39.3	-0.6
	556nm,1.0s						
NRCA	**Norcia**	**0.28**	**346**	Pg	Pg	20 18 34.8	+0.2
NRCA				Sg	Sg	20 18 39.2	+0.7
	790nm,0.1s						
NRCA	**Norcia**	**0.28**	**346**	Pg	Pg	20 18 34.8	+0.2
NRCA				Sg	Sg	20 18 39.2	+0.7
	790nm,0.1s						
FIAM	**Fiamignano**	**0.30**	**193**	Pg	Pg	20 18 35.3	+0.5
FIAM				Sg	Sg	20 18 40.0	+1.0
	173nm,0.3s						
FIAM	**Fiamignano**	**0.30**	**193**	Pg	Pg	20 18 35.3	+0.5
FIAM				Sg	Sg	20 18 40.0	+1.0
	173nm,0.3s						
TERO	**Teramo**	**0.30**	**78**	Pg	Pg	20 18 35.0	+0.2
TERO				Sg	Sg	20 18 39.7	+0.8
	293nm,0.4s						
TERO	**Teramo**	**0.30**	**78**	Pg	Pg	20 18 35.0	+0.2
TERO				Sg	Sg	20 18 39.7	+0.8
	293nm,0.4s						
CESX	**Cesi**	**0.47**	**276**	Pg	Pg	20 18 37.9	0.0
	121nm,0.2s						
CESX	**Cesi**	**0.47**	**276**	Pg	Pg	20 18 37.9	0.0
	121nm,0.2s						
FDMO	**Fiordimonte**	**0.48**	**350**	Pg	Pg	20 18 38.3	0.0
FDMO				Sg	Sb	20 18 46.0	-0.7
	81nm,0.1s						
FDMO	**Fiordimonte**	**0.48**	**350**	Pg	Pg	20 18 38.3	0.0
FDMO				Sg	Sb	20 18 46.0	-0.7
	81nm,0.1s						
VCEL	**Villa Celiera**	**0.50**	**109**	Pg	Pg	20 18 39.0	+0.4
	276nm,0.5s						
VCEL	**Villa Celiera**	**0.50**	**109**	Pg	Pg	20 18 39.0	+0.4
	276nm,0.5s						
CESI	**CESI - Serrava**	**0.50**	**334**	Pg	Pg	20 18 38.9	+0.3
CESI				Sg	Sb	20 18 46.5	-0.6
	47nm,0.2s						
CESI	**CESI - Serrava**	**0.50**	**334**	Pg	Pg	20 18 38.9	+0.3
CESI				Sg	Sb	20 18 46.5	-0.6
	47nm,0.2s						
OFFI	**Offida**	**0.52**	**43**	Pg	Pb	20 18 39.8	-0.1
	537nm,0.6s						
OFFI	**Offida**	**0.52**	**43**	Pg	Pb	20 18 39.8	-0.1
	537nm,0.6s						
PTQR	**Pietraquaria**	**0.56**	**165**	Pg	Pb	20 18 40.3	-0.4
	5.0nm,0.4s						
PTQR	**Pietraquaria**	**0.56**	**165**	Pg	Pb	20 18 40.3	-0.4
	5.0nm,0.4s						
ASSB	**Assisi San Ben**	**0.63**	**320**	Pg	Pg	20 18 41.0	0.0
ASSB				Sg	Sb	20 18 50.5	-0.4
	142nm,0.4s						
ASSB	**Assisi San Ben**	**0.63**	**320**	Pg	Pg	20 18 41.0	0.0
ASSB				Sg	Sb	20 18 50.5	-0.4
	142nm,0.4s						
CERT	**Cerreto**	**0.63**	**195**	Pg	Pg	20 18 41.4	+0.3
	161nm,0.5s						
CERT	**Cerreto**	**0.63**	**195**	Pg	Pg	20 18 41.4	+0.3
	161nm,0.5s						
SNTG	**Esanatoglia**	**0.72**	**344**	Pg	Pg	20 18 43.0	+0.2
	39nm,0.4s						
SNTG	**Esanatoglia**	**0.72**	**344**	Pg	Pg	20 18 43.0	+0.2
	39nm,0.4s						
GUMA	**Gualdo di Mace**	**0.73**	**47**	Pg	Pg	20 18 39.3	-3.7
	479nm,0.4s						
INTR	**Introdacqua**	**0.75**	**136**	Pg	Pg	20 18 43.1	-0.3
	100nm,0.8s						
INTR	**Introdacqua**	**0.75**	**136**	Pg	Pg	20 18 43.1	-0.3
	100nm,0.8s						
CING	**Cingoli**	**0.82**	**359**	Pg	Pg	20 18 44.3	-0.2
	71nm,0.4s						
CING	**Cingoli**	**0.82**	**359**	Pg	Pg	20 18 44.3	-0.2
	71nm,0.4s						
MGAB	**Montegabbione**	**0.88**	**294**	Pg	Pg	20 18 45.6	-0.1
	96nm,0.4s						
MGAB	**Montegabbione**	**0.88**	**294**	Pg	Pg	20 18 45.6	-0.1
	96nm,0.4s						
NVLJ	**Novalja**	**2.34**	**31**	*e*Pn	Pn	20 19 08.3	+1.1
NVLJ				Sn	Sn	20 19 36.8	+0.8
NVLJ	**Novalja**	**2.34**	**31**	*e*Pn	Pn	20 19 08.3	+1.1
NVLJ				Sn	Sn	20 19 36.7	+0.7
UDBI	**Udbina**	**2.71**	**43**	*e*Pn	Pn	20 19 14.5	+2.1
UDBI				Sn	Sn	20 19 47.9	+2.7
UDBI	**Udbina**	**2.71**	**43**	*e*Pn	Pn	20 19 14.5	+2.1
UDBI				Sn	Sn	20 19 47.9	+2.6
STON	**Ston**	**3.33**	**83**	*e*Pg	Pg	20 19 48.4	+16
STON				Sg	Sn	20 19 55.9	-4.4
STON	**Ston**	**3.33**	**83**	Sg	Sn	20 19 55.9	-4.4

PRU 30 21:30:55.5, 49.79N×18.58E, h0km, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.28**	**280**	*e*PG	Pg	21 31 00.7	-0.3
OKC				*e*SG	Sg	21 31 04.8	+0.1
	comp=Z,4.4nm,0.3s						

*CSEM **30** 21:31:44.3±0.1, 42.56N×13.20E, h12km, ML2.5/15, Error ellipse: s-maj=2.1km s-min=1.5km az=60.0*

ROM 30 21:31:44.1±0.1, 42.56N×13.21E, h10km, Ml1.9/18, Error ellipse: s-maj=0.9km s-min=0.6km az=62.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
LNSS	**Leonessa**	**0.13**	**289**	Pg	Pg	21 31 47.7	+0.4
LNSS				Sg	Sg	21 31 50.1	+0.6
	1µm,0.3s						
LNSS	**Leonessa**	**0.13**	**289**	Pg	Pg	21 31 47.7	+0.4
LNSS				Sg	Sg	21 31 50.1	+0.6
	1µm,0.3s						
CAMP	**Campotosto**	**0.15**	**100**	Pg	Pg	21 31 48.1	+0.5
CAMP				Sg	Sg	21 31 50.7	+0.7
	265nm,0.5s						
CAMP	**Campotosto**	**0.15**	**100**	Pg	Pg	21 31 48.1	+0.5
CAMP				Sg	Sg	21 31 50.7	+0.7
	265nm,0.5s						
AQU	**L'Aquila**	**0.25**	**145**	Pg	Pb	21 31 50.3	-0.6
AQU				Sg	Sb	21 31 54.7	-0.7
	296nm,1.1s						
AQU	**L'Aquila**	**0.25**	**145**	Pg	Pb	21 31 50.3	-0.6
AQU				Sg	Sb	21 31 54.7	-0.7
	296nm,1.1s						
NRCA	**Norcia**	**0.28**	**346**	Pg	Pg	21 31 50.1	+0.2
NRCA				Sg	Sg	21 31 54.4	+0.6
	234nm,0.1s						
NRCA	**Norcia**	**0.28**	**346**	Pg	Pg	21 31 50.1	+0.2
NRCA				Sg	Sg	21 31 54.4	+0.6
	234nm,0.1s						
TERO	**Teramo**	**0.30**	**78**	Pg	Pg	21 31 50.3	+0.1
TERO				Sg	Sg	21 31 55.5	+1.2
	104nm,0.4s						
TERO	**Teramo**	**0.30**	**78**	Pg	Pg	21 31 50.3	+0.1
TERO				Sg	Sg	21 31 55.5	+1.2
	104nm,0.4s						
FIAM	**Fiamignano**	**0.30**	**193**	Pg	Pg	21 31 50.7	+0.4
FIAM				Sg	Sg	21 31 55.5	+1.1
	84nm,0.3s						
FIAM	**Fiamignano**	**0.30**	**193**	Pg	Pg	21 31 50.7	+0.4
FIAM				Sg	Sg	21 31 55.5	+1.1
	84nm,0.3s						
MNS	**Montasola**	**0.43**	**246**	Pg	Pg	21 31 52.8	+0.2
MNS				Sg	Sb	21 31 59.4	-1.1
	64nm,0.2s						
MNS	**Montasola**	**0.43**	**246**	Pg	Pg	21 31 52.8	+0.2
MNS				Sg	Sb	21 31 59.4	-1.1
	64nm,0.2s						
CESX	**Cesi**	**0.47**	**276**	Pg	Pg	21 31 53.5	+0.2
CESX				Sg	Sb	21 32 01.5	0.0
	70nm,0.4s						
CESX	**Cesi**	**0.47**	**276**	Pg	Pg	21 31 53.5	+0.2
CESX				Sg	Sb	21 32 01.5	0.0
	70nm,0.4s						
FDMO	**Fiordimonte**	**0.48**	**349**	Pg	Pg	21 31 53.7	+0.1
FDMO				Sg	Sb	21 32 01.2	-0.9
	29nm,0.2s						
FDMO	**Fiordimonte**	**0.48**	**349**	Pg	Pg	21 31 53.7	+0.1
FDMO				Sg	Sb	21 32 01.2	-0.9
	29nm,0.2s						
CESI	**CESI - Serrava**	**0.50**	**333**	Pg	Pg	21 31 54.2	+0.3
CESI				Sg	Sb	21 32 01.6	-0.9
	20nm,0.3s						
CESI	**CESI - Serrava**	**0.50**	**333**	Pg	Pg	21 31 54.2	+0.3
CESI				Sg	Sb	21 32 01.6	-0.9
	20nm,0.3s						
OFFI	**Offida**	**0.51**	**43**	Pg	Pb	21 31 55.0	-0.3
	255nm,0.6s						
OFFI	**Offida**	**0.51**	**43**	Pg	Pb	21 31 55.0	-0.3
	255nm,0.6s						
PTQR	**Pietraquaria**	**0.56**	**165**	Pg	Pg	21 31 55.4	+0.3
PTQR				Sg	Sg	21 32 03.3	+0.8
	1.0nm,0.3s						
PTQR	**Pietraquaria**	**0.56**	**165**	Pg	Pg	21 31 55.4	+0.3
PTQR				Sg	Sg	21 32 03.3	+0.8
	1.0nm,0.3s						
ASSB	**Assisi San Ben**	**0.63**	**320**	Pg	Pg	21 31 56.2	-0.2
ASSB				Sg	Sb	21 32 06.1	-0.2
	60nm,0.2s						
ASSB	**Assisi San Ben**	**0.63**	**320**	Pg	Pg	21 31 56.2	-0.2
ASSB				Sg	Sb	21 32 06.1	-0.2
	60nm,0.2s						
CERT	**Cerreto**	**0.63**	**195**	Pg	Pb	21 31 57.0	-0.4
	69nm,0.5s						
CERT	**Cerreto**	**0.63**	**195**	Pg	Pb	21 31 57.0	-0.4
	69nm,0.5s						
GUMA	**Gualdo di Mace**	**0.73**	**47**	Pg	Pg	21 31 54.5	-3.8
INTR	**Introdacqua**	**0.75**	**136**	Pg	Pg	21 31 58.7	-0.1
INTR				Sg	Sg	21 32 09.3	+0.6
	48nm,0.8s						
INTR	**Introdacqua**	**0.75**	**136**	Pg	Pg	21 31 58.7	-0.1
INTR				Sg	Sg	21 32 09.3	+0.6
	48nm,0.8s						
CING	**Cingoli**	**0.81**	**359**	Pg	Pg	21 31 59.7	-0.2
CING				Sg	Sb	21 32 11.6	0.0
	25nm,0.5s						
CING	**Cingoli**	**0.81**	**359**	Pg	Pg	21 31 59.7	-0.2
CING				Sg	Sb	21 32 11.6	0.0
	25nm,0.5s						
MURB	**Monte Urbino**	**0.86**	**325**	Pg	Pg	21 32 00.7	-0.2
MURB				Sg	Sb	21 32 12.9	-0.2
	59nm,0.3s						
MURB	**Monte Urbino**	**0.86**	**325**	Pg	Pg	21 32 00.7	-0.2
MURB				Sg	Sb	21 32 12.9	-0.2
	59nm,0.3s						
MGAB	**Montegabbione**	**0.88**	**294**	Pg	Pg	21 32 00.7	-0.4
MGAB				Sg	Sg	21 32 12.8	+0.1
	47nm,0.5s						
MGAB	**Montegabbione**	**0.88**	**294**	Pg	Pg	21 32 00.7	-0.4
MGAB				Sg	Sg	21 32 12.8	+0.1
	47nm,0.5s						
SDI	**San Donato**	**0.96**	**152**	Pg	Pg	21 32 01.9	-0.8
	8.0nm,0.6s						
SDI	**San Donato**	**0.96**	**152**	Pg	Pg	21 32 01.9	-0.8
	8.0nm,0.6s						
NVLJ	**Novalja**	**2.34**	**31**	*i* Pn	Pn	21 32 23.2	+0.6
NVLJ				Sn	Sn	21 32 51.9	+0.5
NVLJ	**Novalja**	**2.34**	**31**	*i* Pn	Pn	21 32 23.1	+0.5
NVLJ				Sn	Sn	21 32 51.9	+0.5

IDC 30 21:33:50.3±2.5, 1.71N×124.74E, h274km±26km, mb3.5/8, mb1 3.6/9, mb1mx3.3/24, mbtmp3.4/9, Error ellipse: s-maj=34.8km s-min=8.8km az=75.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**19.71**	**177**	P	P	21 38 00.7	+0.9
	0.4nm,0.3s,baz=357,slow=9.6,SNR=28						
WRA	**Warramunga Arr**	**23.49**	**157**	P	P	21 38 35.2	-0.9
	5.1nm,0.4s,baz=336,slow=10,SNR=87						
WRA				S	S	21 42 30.2	+0.9
	0.6nm,0.8s,baz=340,slow=14,SNR=4.1						
ASAR	**Alice Springs**	**26.75**	**161**	P	P	21 39 04.8	-0.6
	0.4nm,0.3s,baz=332,slow=7.7,SNR=13						
ASAR				PcP	PcP	21 42 22.1	+1.0
	0.3nm,0.7s,baz=350,slow=2.4,SNR=4.2						
MJAR	**Matsushiro Arr**	**36.83**	**18**	P	P	21 40 32.1	-0.6
	0.8nm,0.5s,baz=201,slow=10,SNR=4.8						
STKA	**Stephens Creek**	**37.03**	**156**	P	P	21 40 34.4	-0.1
	4.7nm,1.1s,baz=338,slow=11,SNR=7.7						
USRK	**Ussuriysk Arra**	**42.80**	**8**	P	P	21 41 22.0	+0.5
	1.3nm,0.4s,baz=196,slow=7.4,SNR=13						
SONM	**Songino Array**	**48.61**	**344**	P	P	21 42 08.0	+1.2
	1.3nm,0.6s,baz=161,slow=7.9,SNR=5.3						
MKAR	**Makanchi Array**	**58.11**	**327**	P	P	21 43 14.9	-0.6
	1.8nm,0.4s,baz=123,slow=7.9,SNR=55						
MKAR				PcP	PcP	21 44 04.2	+0.3
	0.5nm,0.6s,baz=130,slow=5.0,SNR=3.7						
ZALV	**Zalesovo Beam**	**61.51**	**334**	P	P	21 43 37.0	-1.4
	0.5nm,0.4s,baz=131,slow=6.1,SNR=4.1						

*NIED **30** 21:38:00, 43.30N×141.90E, h200km, Mw3.7 Best double couple: M0 4.31000×10^14 NP1:ϕs 212.00000°, δ 66.00000°, λ -152.00000°. NP2:ϕs 109.00000°, δ 64.00000°, λ -27.00000°.*

*ISCJB **30** 21:38:22.2±0.5, 43.27N±0.04×141.91E±0.06, h174km±3km, mb3.5/4, Error ellipse: s-maj=7.3km s-min=6.2km az=24.4*

*JMA **30** 21:38:22.8±0.1, 43.28N×141.91E, h175km±1km, M3.5*

*IDC **30** 21:38:23.3±1.6, 43.37N×141.86E, h167km±14km, mb3.2/4, mb1 3.3/5, mb1mx3.0/25, mbtmp3.2/5, Error ellipse: s-maj=60.0km s-min=24.0km az=109.0*

ISC 30 21:38:22.9±0.9, 43.27N±0.05×141.92E±0.05, h173km±6km, n24, σ0 85/39, mb3.5/4, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JAB	**Ashibetsu**	**0.33**	**43**	P	**Pn**	**21 38 46.5**	**+0.2**
JAB				*e*S	**Sn**	**21 39 04.4**	**0.0**
JHR	**Hokuryu**	**0.50**	**344**	P	**Pn**	**21 38 47.4**	**+0.5**
JHR				*e*S	**Sn**	**21 39 06.0**	**+0.5**
JFR	**Furan**	**0.50**	**102**	P	**Pn**	**21 38 47.0**	**0.0**
JFR				*e*S	**Sn**	**21 39 05.5**	**+0.1**
JEW	**Eniwo**	**0.55**	**219**	P	**Pn**	**21 38 47.5**	**+0.3**
JEW				*e*S	**Sn**	**21 39 05.9**	**+0.1**
JKK2	**Kamakawa 2**	**0.85**	**45**	P	**Pn**	**21 38 49.2**	**+0.3**
JKK2				*e*S	**Sn**	**21 39 09.3**	**+0.3**
ASAJ	**Asahikawa**	**0.98**	**30**	P	**Pn**	**21 38 49.8**	**0.0**
	11nm,0.3s,baz=227,slow=9.3,SNR=116						
ASAJ				S	**Sn**	**21 39 09.2**	**-1.4**
	7.9nm,0.3s,baz=97,slow=32,SNR=35						
JSK	**Shakotan**	**1.06**	**275**	P	**Pn**	**21 38 50.2**	**-0.2**
JSK				*e*S	**Sn**	**21 39 10.7**	**-0.8**
JNBK	**Urakawa-nobuka**	**1.16**	**148**	P	**Pn**	**21 38 52.1**	**+0.8**
JNBK				*e*S	**Sn**	**21 39 14.2**	**+1.1**
JYG	**Yagishiri**	**1.21**	**343**	P	**Pn**	**21 38 51.5**	**-0.1**
JYG				*e*S	**Sn**	**21 39 12.8**	**-1.1**
JCH	**Churui**	**1.25**	**121**	P	**Pn**	**21 38 51.3**	**-0.7**
JCH				*e*S	**Sn**	**21 39 12.3**	**-2.0**
JAR	**Ashorobuto**	**1.35**	**88**	P	**Pn**	**21 38 53.4**	**+0.5**
JAR				*e*S	**Sn**	**21 39 16.6**	**+0.5**
JKB	**Kayabe**	**1.53**	**206**	P	**Pn**	**21 38 54.6**	**0.0**
JKB				*e*S	**Sn**	**21 39 17.9**	**-1.1**
JTKR	**Abashiri--Toko**	**1.61**	**63**	P	**Pn**	**21 38 56.0**	**+0.7**
JSE	**Soyaes**	**1.76**	**16**	P	**Pn**	**21 38 56.7**	**-0.2**
JSE				*e*S	**Sn**	**21 39 22.0**	**-1.3**
JOT	**Ohata**	**1.99**	**199**	P	**Pn**	**21 38 59.3**	**-0.2**
JOT				*e*S	**Sn**	**21 39 26.5**	**-1.2**
JWK2	**Keihoku**	**2.05**	**360**	P	**Pn**	**21 39 00.1**	**+0.1**
JAK	**Akkeshi**	**2.05**	**97**	P	**Pn**	**21 38 59.7**	**-0.4**
JAK				*e*S	**Sn**	**21 39 26.4**	**-2.4**
JOSM	**Okushiri--Mats**	**2.16**	**238**	P	**Pn**	**21 39 01.0**	**-0.3**
JRA	**Rausu**	**2.42**	**73**	P	**Pn**	**21 39 04.7**	**+0.4**
MJAR	**Matsushiro Arr**	**7.30**	**204**	P	**Pn**	**21 40 08.0**	**+1.0**
	0.7nm,0.3s,baz=22,slow=12,SNR=7.7						
ZALV	**Zalesovo Beam**	**38.24**	**307**	P	**P**	**21 45 26.4**	**+0.5**
	0.8nm,0.5s,baz=90,slow=5.8,SNR=4.6						
MKAR	**Makanchi Array**	**41.41**	**296**	P	**P**	**21 45 52.3**	**+0.2**
	0.6nm,0.4s,baz=79,slow=9.7,SNR=9.1						
FINES	**FINESS Array B**	**63.52**	**331**	P	**P**	**21 48 33.6**	**-0.6**
	0.3nm,0.4s,baz=42,slow=8.8,SNR=6.4						
NOA	**NORSAR Array B**	**68.61**	**337**	P	**P**	**21 49 07.7**	**+1.0**
	0.3nm,0.6s,baz=34,slow=6.3,SNR=3.1						

*ISK **30** 21:38:23.3, 37.95N×28.96E, h6km, MD2.6*

*DDA **30** 21:38:24.8, 37.92N×29.05E, h7km, MD2.8*

ISC 30 21:38:24.0±1.2, 37.96N±0.04×28.96E±0.06, h9km±12km, n8, σ0 65/13, Turkey

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
DENT	**Denizli**	**0.21**	**164**	*e*PG	**Pg**	**21 38 28.4**	**+0.1**
DENT				*e*SG	**Sg**	**21 38 31.1**	**+0.1**
DNZL	**Cakiroluk**	**0.28**	**165**	*i* P	**Pg**	**21 38 29.6**	**+0.1**
DNZL				*e*S	**Sg**	**21 38 33.7**	**+0.4**
KHL	**Karahalli**	**0.58**	**50**	*e*PG	**Pg**	**21 38 34.9**	**-0.2**
KHL				*e*SG	**Sb**	**21 38 43.5**	**-1.2**
KHAL	**Karahalli**	**0.59**	**45**	*e*P	**Pg**	**21 38 35.5**	**+0.1**
KHAL				*e*S	**Sb**	**21 38 44.7**	**-0.3**
KULA	**Kula-Manisa**	**0.60**	**337**	*e*PG	**Pg**	**21 38 35.6**	**0.0**
AYDN	**Tasoluk**	**0.91**	**251**	*e*P	**Pn**	**21 38 43.2**	**+0.3**
AYDN				*e*S	**Sn**	**21 38 57.1**	**+0.9**
YER	**Yerkesik**	**0.98**	**213**	*e*PG	**Pg**	**21 38 41.8**	**-1.0**
ALT	**Altintas**	**1.42**	**39**	*e*PN	**Pg**	**21 38 51.2**	**0.0**

IDC 30 21:40:14.6±25.0, 29.95S×179.01W, h347km±226km, mb3.5/5, mb1 3.6/5, mb1mx3.2/19, mbtmp3.5/5, Error ellipse: s-maj=133.4km s-min=29.5km az=56.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**32.86**	**279**	P	P	21 46 18.6	+1.3
	4.2nm,0.5s,baz=98,slow=8.3,SNR=6.5						
STKA	**Stephens Creek**	**33.73**	**257**	P	P	21 46 24.3	-0.4
	3.8nm,0.9s,baz=95,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**42.26**	**267**	P	P	21 47 34.8	-0.5
	0.8nm,0.4s,baz=106,slow=7.3,SNR=14						
WRA	**Warramunga Arr**	**43.20**	**272**	P	P	21 47 42.2	-0.7
	1.7nm,0.3s,baz=110,slow=8.2,SNR=70						
QSPA	**South Pole Qui**	**60.16**	**180**	P	P	21 49 45.8	-0.7
	1.4nm,0.7s,baz=15,slow=8.4,SNR=6.2						
FINES	**FINESS Array B**	**144.42**	**340**	PKP	PKPab	21 59 07.4	-1.1
	1.6nm,0.5s,baz=39,slow=2.5,SNR=14						
TORD	**Torodi Ar. Bea**	**163.27**	**182**	PKPab	PKPab	22 00 30.1	+1.1
	0.2nm,0.5s,baz=164,slow=4.1,SNR=3.0						

*ISCJB **30** 21:51:24.9±0.7, 11.13N±0.04×62.11W±0.05, h101km±8km, Error ellipse: s-maj=8.1km s-min=5.7km az=31.9*

*FUNV **30** 21:51:29.7, 10.87N×62.26W, h101km, MW2.9*

*TRN **30** 21:51:30.9, 11.24N×61.76W, h76km, MD3.2*

ISC 30 21:51:22.9±1.6, 11.10N±0.05×62.06W±0.05, h125km±12km, n18, σ 2 53/27, 2C-1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
GUIV	**Guiria**	**0.47**	**199**	*i* P	Pn	21 51 43.3	+2.0
GUIV				*e*S	**Sn**	**21 51 54.1**	**-1.0**
TRN	**Trinidad (W)**	**0.79**	**124**	*e*P	**Pn**	**21 51 46.0**	**+2.5**
TRN				*e*S	**Sn**	**21 51 58.3**	**-0.7**
GRW	**Mount Saint Ca**	**1.13**	**20**	*e*P	**Pn**	**21 51 48.9**	**+2.1**
GRW				*e*S	**Sn**	**21 52 02.2**	**-2.6**
TBH	**Brigand Hill**	**1.15**	**122**	*e*P	**Pn**	**21 51 49.5**	**+2.6**
TBH				*e*S	**Sn**	**21 52 03.5**	**-1.6**
GRHS	**Sauteurs**	**1.19**	**20**	*e*P	**Pn**	**21 51 50.4**	**+3.1**
GRHS				*e*S	**Sn**	**21 52 02.9**	**-2.9**
CRUV	**Carupano**	**1.23**	**250**	*e*P	**Pn**	**21 51 49.7**	**+2.0**
CRUV				*e*S	**Sn**	**21 52 04.0**	**-2.4**
TPR	**Prospect**	**1.27**

THL	**Klokotos Trika**	**0.70**	**174**	*e*PB	**Pg**	**21 54 48.7**	**-0.4**
THL				*e*SB	**Sg**	**21 54 58.7**	**+0.5**
THL	**Klokotos Trika**	**0.70**	**174**	P	**Pg**	**21 54 48.2**	**-0.9**
THL	**Klokotos Trika**	**0.70**	**174**	*e*Pb	**Pg**	**21 54 48.7**	**-0.4**
THL				S	**Sg**	**21 54 58.7**	**+0.5**
GRG	**Griva**	**0.78**	**28**	P	**Pg**	**21 54 50.3**	**-0.2**
GRG	**Griva**	**0.78**	**28**	P	**Pg**	**21 54 50.3**	**-0.2**
BIA	**Bitola**	**0.88**	**329**	P	**Pg**	**21 54 51.9**	**-0.5**
BIA				S	**Sb**	**21 55 05.7**	**-0.1**
BIA	**Bitola**	**0.88**	**329**	*i* Pg	**Pg**	**21 54 51.9**	**-0.5**
BIA				*i* Sg	**Sb**	**21 55 06.0**	**+0.2**
BIA	**Bitola**	**0.88**	**329**	P	**Pg**	**21 54 51.9**	**-0.5**
BIA				S	**Sb**	**21 55 05.7**	**-0.1**
VAY	**Valandovo**	**1.16**	**25**	*i* Pg	**Pg**	**21 54 57.9**	**+0.1**
VAY				*i* Sg	**Sn**	**21 55 14.8**	**-0.4**
VAY				*e*Lg	Lg	21 55 15.9	
	comp=E,24nm,0.7s						
VAY				*e*Lg	Lg	21 55 16.6	
	comp=N,55nm,1.1s						
PLG	**Polygyros**	**1.17**	**84**	*e*PG	**Pg**	**21 54 57.2**	**-0.8**
PLG	**Polygyros**	**1.17**	**84**	*e*Pg	**Pg**	**21 54 57.2**	**-0.8**
MAKR	**Makrakomi, Fth**	**1.26**	**173**	P	**Pg**	**21 54 59.8**	**+0.1**
MAKR	**Makrakomi, Fth**	**1.26**	**173**	P	**Pg**	**21 54 59.8**	**+0.1**
AGG	**Agios Georgios**	**1.28**	**166**	*e*PB	**Pg**	**21 55 00.3**	**+0.2**
AGG	**Agios Georgios**	**1.28**	**166**	*e*Pb	**Pg**	**21 55 00.3**	**+0.2**
XOR	**Xorichti**	**1.33**	**132**	P	**Pn**	**21 55 00.7**	**-0.4**
XOR	**Xorichti**	**1.33**	**132**	P	**Pn**	**21 55 00.7**	**-0.4**
EVR	**Evrytania**	**1.35**	**184**	P	**Pn**	**21 55 01.4**	**-0.1**
EVR				S	**Sn**	**21 55 20.7**	**+0.7**
NEO	**Neokhori**	**1.39**	**133**	*e*PG	**Pn**	**21 55 01.3**	**-0.6**
NEO				*e*SB	**Sn**	**21 55 20.8**	**0.0**
NEO	**Neokhori**	**1.39**	**133**	*e*Pg	**Pn**	**21 55 01.3**	**-0.6**
NEO				*e*Sb	**Sn**	**21 55 20.8**	**0.0**
EFP	**Efpalio**	**1.84**	**180**	*e*PG	**Pb**	**21 55 09.5**	**-0.3**
EFP	**Efpalio**	**1.84**	**180**	*e*Pg	**Pb**	**21 55 09.5**	**-0.3**
BARS	**Barje**	**2.55**	**358**	*e*Pn	**Pn**	**21 55 18.8**	**+0.9**

ISCJB ***30*** *22:45:56.8±0.4, 44°.81N±0°.07×142°.35E±0°.07, h271km±5km, mb3.3/6, Error ellipse: s-maj=10.5km s-min=7.6km az=176.3*

JMA ***30*** *22:45:56.2±0.3, 45°.02N×142°.32E, h271km±2km, M3.4*

IDC ***30*** *22:45:57.8±0.6, 45°.03N×142°.20E, h260km±12km, mb3.1/6, mb1 3.2/10, mb1mx3.0/29, mbtmp3.1/10, Error ellipse: s-maj=35.3km s-min=12.3km az=167.0*

ISC 30 22:45:57.5±0.7, 44°.81N±0°.07×142°.32E±0°.06, h269km±7km, n28, σ1°22/37, mb3.3/6, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
JSE	**Soyaes**	**0.24**	**51**	P	**Pn**	**22 46 31.0**	**-0.9**
JSS	**Shosan**	**0.53**	**220**	P	**Pn**	**22 46 32.4**	**-0.2**
JWK2	**Keihoku**	**0.59**	**330**	P	**Pn**	**22 46 31.4**	**-1.2**
ASAJ	**Asahikawa**	**0.72**	**164**	P	**Pn**	**22 46 33.3**	**0.0**
ASAJ				*e*S	**S**	**22 47 03.1**	**+1.6**
ASAJ	**Asahikawa**	**0.72**	**164**	P	**Pn**	**22 46 33.6**	**+0.3**
	84nm,0.3s,baz=336,slow=4.5,SNR=356						
ASAJ				S	**S**	**22 47 02.3**	**+0.8**
	baz=295,slow=9.5,SNR=1.9						
JYG	**Yagishiri**	**0.74**	**240**	P	**Pn**	**22 46 33.0**	**-0.3**
JYG				*e*S	**S**	**22 47 01.6**	**+0.1**
JKK2	**Kamakawa 2**	**0.98**	**162**	P	**Pn**	**22 46 34.8**	**+0.3**
JMP	**Maruseppu**	**1.09**	**137**	P	**Pn**	**22 46 34.9**	**-0.1**
JHR	**Hokuryu**	**1.15**	**202**	P	**Pn**	**22 46 35.7**	**+0.4**
JAB	**Ashibetsu**	**1.30**	**183**	P	**Pn**	**22 46 36.7**	**+0.4**
JTKR	**Abashiri--Toko**	**1.41**	**126**	P	**Pn**	**22 46 37.0**	**+0.1**
JTKR				*e*S	**S**	**22 47 08.6**	**+0.5**
JAR	**Ashorobuto**	**1.83**	**145**	P	**Pn**	**22 46 40.7**	**+0.6**
JAR				*e*S	**S**	**22 47 15.5**	**+1.6**
JEW	**Eniwo**	**2.07**	**198**	P	**Pn**	**22 46 43.2**	**+1.1**
JCH	**Churui**	**2.32**	**161**	P	**Pn**	**22 46 43.5**	**-0.9**
JCH				*e*S	**S**	**22 47 19.4**	**-2.2**
JAK	**Akkeshi**	**2.49**	**136**	*e*S	**S**	**22 47 22.5**	**-2.0**
JNBK	**Urakawa-nobuka**	**2.55**	**173**	P	**Pn**	**22 46 46.7**	**+0.2**
JNBK				*e*S	**S**	**22 47 25.1**	**-0.4**
NEM2	**Nemuro 2**	**2.85**	**119**	P	**Pn**	**22 46 49.7**	**+0.1**
NEM2				*e*S	**S**	**22 47 28.0**	**-3.0**
JKB	**Kayabe**	**3.07**	**198**	P	**Pn**	**22 46 51.9**	**-0.1**
JKB				*e*S	**S**	**22 47 32.8**	**-2.2**
USRK	**Ussuriysk Arra**	**7.41**	**269**	P	**Pn**	**22 47 43.7**	**+0.4**
	0.7nm,0.3s,baz=83,slow=12,SNR=20						
USRK				S	**S**	**22 49 06.7**	**-2.0**
	0.2nm,0.3s,baz=98,slow=26,SNR=2.4						
MJAR	**Matsushiro Arr**	**8.83**	**202**	P	P	22 48 03.0	-4.6
	0.6nm,0.3s,baz=15,slow=11,SNR=5.1						
PETK	**Petropavlovsk-**	**13.06**	**45**	P	**Pn**	**22 48 54.2**	**+0.8**
	0.2nm,0.3s,baz=215,slow=12,SNR=3.0						
KSRS	**Korea Array**	**13.10**	**241**	P	**P**	**22 48 56.6**	**+1.5**
	0.2nm,0.3s,baz=52,slow=11,SNR=3.0						
FX1	**Attu Island--F**	**21.71**	**57**	P	**P**	**22 50 28.4**	**+1.4**
	2.9nm,0.6s,baz=270,slow=16,SNR=3.7						
SONM	**Songino Array**	**24.86**	**290**	P	**P**	**22 50 56.8**	**+1.0**
	0.6nm,0.5s,baz=82,slow=9.6,SNR=2.8						
MKAR	**Makanchi Array**	**41.01**	**295**	P	**P**	**22 53 14.1**	**-0.4**
	0.6nm,0.5s,baz=82,slow=8.4,SNR=8.6						
ILAR	**Eielson Array**	**42.70**	**37**	P	**P**	**22 53 27.5**	**-0.4**
	0.3nm,0.5s,baz=274,slow=9.4,SNR=4.8						
YKA	**Yellowknife Ar**	**56.82**	**33**	P	**P**	**22 55 13.7**	**+0.1**
	1.2nm,0.6s,baz=307,slow=7.3,SNR=4.2						
FINES	**FINESS Array B**	**62.31**	**331**	P	**P**	**22 55 48.7**	**-2.2**
	0.2nm,0.4s,baz=46,slow=9.0,SNR=4.3						

GUC 30 22:47:25.5±0.7, 32°.26S×71°.77W, h14km±4km, MD3.6, ML3.2, 7C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
CHNG	**Los Chungos**	**0.44**	**31**	↑*i*P	Pg	22 47 34.4	+0.1
CHNG				*i* S	Sb	22 47 41.2	-0.4
CHNG				AML	AML	22 47 42.4	
	comp=N,1μm,0.6s						
ROCH	**El Roble**	**0.95**	**138**	↑*i*P	Pb	22 47 42.8	-1.3
ROCH				*i* S	Sb	22 47 55.7	-1.1
ROCH				AML	AML	22 47 58.8	
	comp=E,948nm,0.8s						
JACH	**Jahuel**	**1.07**	**113**	↑*i*P	Pb	22 47 44.5	-1.6
JACH				*i* S	Sb	22 47 59.3	-0.8
LCCH	**Las Cruces**	**1.22**	**172**	↓*i*P	Pn	22 47 46.7	-1.5
LCCH				*i* S	Sb	22 48 02.8	-1.2
PEL	**Peldehue**	**1.26**	**134**	↑*i*P	Pn	22 47 47.7	-1.2
PEL				*i* S	Sb	22 48 04.4	-1.1
PEL				AML	AML	22 48 05.3	
	comp=E,1μm,0.3s						
CMCH	**Combarbala**	**1.27**	**31**	↑*i*P	Pn	22 47 47.0	-2.0
CMCH				*i* S	Sb	22 48 03.7	-1.9
CMCH				AML	AML	22 48 10.0	
	comp=E,4μm,0.7s						
SAN	**Santiago**	**1.51**	**142**	*e*P	Pn	22 47 51.8	-0.4
SAN				*i* S	Sn	22 48 11.5	-0.3
CLCH	**Cerro Calan**	**1.53**	**138**	↑*i*P	Pn	22 47 52.2	-0.4
CLCH				*i* S	Sn	22 48 11.9	-0.5
CLCH				AML	AML	22 48 23.8	
	comp=E,353nm,0.5s						
TACH	**Talagante**	**1.55**	**154**	*i* S	Sn	22 48 12.6	-0.3
ANTU	**Antumapu**	**1.61**	**144**	*e*S	Sn	22 48 14.3	-0.1
ANTU				AML	AML	22 48 20.6	
	comp=E,334nm,0.5s						
FCH	**Farellones**	**1.63**	**131**	AML	AML	22 48 34.0	
	comp=E,364nm,0.5s						
LNV	**Longovilo**	**1.71**	**170**	↓*i*P	Pn	22 47 54.4	-0.7
PCH	**Pirque**	**1.71**	**142**	↑*i*P	Pn	22 47 55.0	-0.1
PCH				*e*S	Sn	22 48 17.6	+0.6
CHCH	**Chadas Angostu**	**1.91**	**151**	*e*P	Pn	22 47 58.1	+0.3
LMEL	**Las Melosas**	**2.05**	**141**	*e*P	Pn	22 48 00.1	+0.1
LMEL				*e*S	Sn	22 48 26.9	+1.3
LMEL				AML	AML	22 48 34.0	
	comp=N,192nm,0.6s						
TLL	**Tololo Astrono**	**2.25**	**22**	*e*P	Pn	22 48 04.0	+1.3
TLL				*e*S	Sb	22 48 32.6	-1.6
TLL				AML	AML	22 48 38.7	
	comp=N,347nm,0.6s						

WEL 30 22:52:00.5±0.4, 37°.72S×176°.30E, h281km±3km, ML3.9/6, 4C-3D, Error ellipse: s-maj=4.6km s-min=3.7km az=0.0, North Island

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

URZ	**Urewera**	**0.84**	**131**	↑PN	Pn	22 52 37.6	-0.3
URZ				SN	S	22 53 07.1	-0.6
URZ				AML	AML	22 53 07.6	
MWZ	**Matawai**	**1.15**	**123**	↓PN	Pn	22 52 39.7	+0.1
MWZ				SN	S	22 53 10.3	-0.4
MWZ				AML	AML	22 53 12.4	
RAHZ	**Arahi**	**1.35**	**153**	PN	Pn	22 52 41.3	+0.6
HIZ	**Hauiti**	**1.39**	**235**	PN	Pn	22 52 41.2	+0.2
BKZ	**Black Stump Fm**	**1.46**	**174**	↑PN	Pn	22 52 41.5	0.0
BKZ				SN	S	22 53 13.8	-0.2
BKZ				AML	AML	22 53 14.0	
TWVZ	**Taurewa**	**1.52**	**206**	PN	Pn	22 52 41.7	-0.2
OTVZ	**Oturere**	**1.53**	**199**	PN	Pn	22 52 42.1	0.0
WPVZ	**Whakapapa**	**1.60**	**201**	PN	Pn	22 52 42.4	-0.2
TUVZ	**Tukino**	**1.63**	**198**	PN	Pn	22 52 42.7	-0.1
FWVZ	**Far West T-bar**	**1.65**	**201**	PN	Pn	22 52 43.2	+0.2
CNGZ	**Carnagh Statio**	**1.69**	**118**	PN	Pn	22 52 44.1	+1.0
KNZ	**Kokohu**	**1.69**	**141**	PN	Pn	22 52 43.0	0.0
WNVZ	**Wahianoa**	**1.70**	**199**	PN	Pn	22 52 43.2	-0.2
PKVZ	**Pokaka**	**1.74**	**205**	PN	Pn	22 52 43.2	-0.3
MOVZ	**Moawhango**	**1.74**	**194**	PN	Pn	22 52 43.0	-0.5
MCHZ	**McNeill Hill**	**1.75**	**170**	PN	Pn	22 52 44.0	+0.5
BHHZ	**Black Hill Sta**	**1.78**	**186**	↑PN	Pn	22 52 43.6	-0.2
BHHZ				SN	S	22 53 17.3	-1.0
VRZ	**Vera Road**	**1.86**	**220**	PN	Pn	22 52 44.3	0.0
MHGZ	**Mahia Peninsul**	**1.91**	**139**	PN	Pn	22 52 45.2	+0.4
KAHZ	**Kahuranaki**	**2.13**	**168**	PN	Pn	22 52 46.9	+0.3
PNHZ	**Pukenui**	**2.20**	**182**	PN	Pn	22 52 46.8	-0.4
WAZ	**Wanganui**	**2.28**	**206**	PN	Pn	22 52 47.3	-0.6
PKE	**Pukeiti**	**2.34**	**230**	PN	Pn	22 52 48.6	+0.1
WPHZ	**Waipukurau**	**2.35**	**177**	PN	Pn	22 52 48.3	-0.3
PXZ	**Pawanui**	**2.36**	**169**	PN	Pn	22 52 48.5	0.0
PXZ				AML	AML	22 53 15.5	
PXZ				AML	AML	22 53 36.9	
TSZ	**Takapari Road**	**2.36**	**186**	PN	Pn	22 52 47.9	-0.7
POWZ	**Post Office Ro**	**2.71**	**189**	PN	Pn	22 52 50.8	-1.1
BFZ	**Birch Farm**	**2.96**	**181**	PN	Pn	22 52 53.6	-0.8
MRZ	**Mangatainoka R**	**3.00**	**191**	↑PN	Pn	22 52 53.3	-1.5
MRZ				AML	AML	22 53 41.0	
MRZ				AML	AML	22 53 41.3	
TIWZ	**Tintock**	**3.08**	**186**	PN	Pn	22 52 54.1	-1.5
OGWZ	**Otaki Gorge**	**3.22**	**195**	PN	Pn	22 52 55.5	-1.6
HOWZ	**Holdsworth Sta**	**3.24**	**191**	PN	Pn	22 52 55.5	-1.8
TMWZ	**Te Maipa**	**3.40**	**185**	PN	Pn	22 52 57.7	-1.4
MTW	**Mount Morrison**	**3.50**	**190**	↓PN	Pn	22 52 58.1	-1.9
CAW	**Cannon Point**	**3.52**	**195**	PN	Pn	22 52 58.4	-1.9
DUWZ	**D'Urville Sta**	**3.59**	**210**	PN	Pn	22 52 58.8	-2.3
TRWZ	**Traveller**	**3.71**	**187**	PN	Pn	22 53 00.7	-1.6
MSWZ	**Moikau Station**	**3.78**	**192**	PN	Pn	22 53 01.0	-2.2
SNZO	**South Karori**	**3.80**	**198**	PN	Pn	22 53 01.1	-2.2
TCW	**Tory Channel**	**3.83**	**203**	PN	Pn	22 53 01.7	-2.0
BHW	**Baring Head**	**3.85**	**196**	PN	Pn	22 53 01.7	-2.2
PLWZ	**Palliser**	**3.93**	**191**	PN	Pn	22 53 02.6	-2.3
TUWZ	**Tuamarina**	**4.13**	**205**	PN	Pn	22 53 04.7	-2.4
TUWZ				AML	AML	22 53 06.0	
TUWZ				AML	AML	22 53 59.0	
NNZ	**Nelson**	**4.17**	**212**	↓PN	Pn	22 53 04.4	-3.1
QRZ	**Quartz Range**	**4.27**	**222**	PN	Pn	22 53 04.8	-3.9
BSWZ	**Blackbirch Sta**	**4.41**	**204**	PN	Pn	22 53 08.4	-1.9
THZ	**Tophouse**	**4.82**	**212**	PN	Pn	22 53 11.4	-3.7
KHZ	**Kahutara**	**5.15**	**203**	PN	Pn	22 53 16.4	-2.5
DSZ	**Denniston Nort**	**5.31**	**219**	PN	Pn	22 53 16.5	-4.5
LTZ	**Lake Taylor**	**5.93**	**210**	PN	Pn	22 53 24.1	-4.2
JCZ	**Jackson Bay**	**8.54**	**220**	PN	Pn	22 53 55.6	-5.0

IDC 30 23:21:16.2±5.2, 18°.78S×176°.68W, h0km, mb3.7/3, mb1 3.9/3, mb1mx3.6/19, mbtmp3.7/3, MS3.4/1, Ms1 3.4/1, ms1mx2.5/24, Error ellipse: s-maj=127.4km s-min=44.0km az=37.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**46.09**	**260**	P	P	23 29 42.5	0.0
	0.1nm,0.5s,baz=96,slow=7.7,SNR=5.9						
WRA				LR	LR	23 47 04.5	
	comp=Z,46nm,21.3s,baz=145,slow=34						
ASAR	**Alice Springs**	**46.14**	**255**	P	P	23 29 42.6	-0.2
	0.4nm,0.4s,baz=95,slow=7.3,SNR=9.5						
VNDA	**Vanda**	**59.72**	**185**	P	P	23 31 22.2	-0.1
	0.4nm,0.5s,baz=7.3,slow=7.4,SNR=8.7						
AKASG	**Malin Array Be**	**142.09**	**333**	PKP	PKPdf	23 40 49.4	-0.8
	0.9nm,0.5s,baz=45,slow=3.6,SNR=7.1						

ROM 30 23:39:26.2±0.1, 42°.40N×13°.37E, h8km, Md1.4/3, Ml0.6/1, Error ellipse: s-maj=0.5km s-min=0.2km az=122.0, Central Italy

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
AQU	**L'Aquila**	**0.05**	**156**	Pg	Pg	23 39 28.3	+0.2
AQU				Sg	Sg	23 39 29.8	+0.4
CAMP	**Campotosto**	**0.14**	**12**	Pg	Pg	23 39 29.7	+0.3
CAMP				Sg	Sg	23 39 32.2	+0.6
FIAM	**Fiamignano**	**0.23**	**235**	Pg	Pg	23 39 31.6	+0.6
FIAM				Sg	Sg	23 39 35.7	+1.4
	9.0nm,0.4s						

SZGRF ***30*** *23:52:49.2, 19°.77S×179°.16W, h600km, Fiji Islands region*

ISCJB ***30*** *23:52:54.5±0.1, 19°.22S±0°.04×179°.29W±0°.04, h650km, mb4.7/74, Error ellipse: s-maj=6.0km s-min=3.4km az=41.5*

AUST ***30*** *23:52:54.8±1.2, 19°.13S×179°.12W, h636km, Error ellipse: s-maj=1.4km s-min=1.3km az=25.0*

MOS ***30*** *23:52:56.3±0.9, 18°.99S×179°.41W, h664km, mb5.0/19, Error ellipse: s-maj=11.7km s-min=8.1km az=52.5*

IDC ***30*** *23:52:57.0±0.9, 19°.21S×179°.37W, h665km±11km, mb4.1/19, mb1 4.3/22, mb1mx4.2/24, mbtmp4.1/22, Error ellipse: s-maj=10.4km s-min=8.1km az=139.0*

NEIC ***30*** *23:52:57.9±0.4, 19°.19S×179°.35W, h680km±4km, mb4.8/50, Error ellipse: s-maj=7.0km s-min=4.2km az=134.0*

ISC 30 23:52:55.2±0.3, 19°.21S±0°.05×179°.25W±0°.05, h650km, n1046, σ1°11/1121, mb4.8/74, 236C-190D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase	ID	Time	Res
				Op	ISC	h m s	ISC
MSVF	**Nonsavu**	**2.96**	**299**	*e*P	P	23 54 23.6	+5.1
MSVF				*e*S	**S**	**23 55 30.5**	**+4.3**
MSVF	**Nonsavu**	**2.96**	**299**	*e*P	P	23 54 23.6	+5.1
MSVF				*e*S	**S**	**23 55 30.5**	**+4.3**
NIUE	**Niue**	**8.81**	**91**	P	**P**	**23 55 06.0**	**+2.2**
	baz=8.7,SNR=6.1						
NIUE				S	S	23 57 02.9	+14
	baz=8.7,SNR=3.6						
AFI	**Afiamalu**	**8.89**	**55**	*e*P	**P**	**23 55 05.7**	**+1.0**
AFI	**Afiamalu**	**8.89**	**55**	P	**P**	**23 55 05.6**	**+0.8**
	14nm,0.3s,baz=243,slow=6.8,SNR=6.8						
FUNA	**Funafuti**	**10.73**	**352**	*e*P	**P**	**23 55 23.0**	**+0.8**
DZM	**Mont Dzumac**	**13.69**	**256**	*e*P	**P**	**23 55 51.3**	**+1.7**
	31nm,0.6s						
DZM	**Mont Dzumac**	**13.69**	**256**	P	P	23 55 52.3	+2.7
	0.2nm,0.3s,baz=270,slow=24,SNR=9.7						
OUZ	**Omahuta**	**17.16**	**200**	*e*P	**P**	**23 56 24.8**	**+3.8**
URZ	**Urewera**	**19.24**	**189**	P	**P**	**23 56 39.8**	**0.0**
URZ				S	**S**	**23 59 37.0**	**-4.0**
URZ	**Urewera**	**19.24**	**189**	P	**P**	**23 56 39.8**	**0.0**
	2.9nm,0.3s,baz=24,slow=9.8,SNR=8.0						
URZ				S	**S**	**23 59 37.0**	**-4.0**
	0.7nm,0.3s,baz=53,slow=20,SNR=2.7						
TARA	**Tarawa**	**21.84**	**339**	*e*P	**P**	**23 57 04.3**	**+0.9**
	186nm,0.9s						
TCW	**Tory Channel**	**22.62**	**193**	PN	**P**	**23 57 11.4**	**+1.6**
QRZ	**Quartz Range**	**22.67**	**196**	PN	**P**	**23 57 11.9**	**+1.5**
NNZ	**Nelson**	**22.82**	**194**	PN	**P**	**23 57 12.1**	**+0.4**
TUWZ	**Tuamarina**	**22.90**	**193**	PN	**P**	**23 57 14.1**	**+1.7**
THZ	**Tophouse**	**23.45**	**195**	PN	**P**	**23 57 17.4**	**0.0**
KHZ	**Kahutara**	**23.93**	**193**	*e*P	**P**	**23 57 21.3**	**-0.1**
	32nm,0.7s						
KHZ	**Kahutara**	**23.93**	**193**	PN	**P**	**23 57 21.1**	**-0.3**
LTZ	**Lake Taylor**	**24.57**	**195**	PN	**P**	**23 57 26.8**	**-0.4**
OXZ	**Oxford**	**25.14**	**195**	PN	**P**	**23 57 31.7**	**-0.4**
RPZ	**Rata Peaks**	**25.75**	**196**	*e*P	**P**	**23 57 37.0**	**-0.5**
	146nm,1.9s						
RPZ	**Rata Peaks**	**25.75**	**196**	P	**P**	**23 57 37.1**	**-0.5**
	22nm,0.4s,baz=16,slow=7.0,SNR=14						
FOZ	**Fox Glacier**	**26.00**	**199**	↑PN	**P**	**23 57 39.2**	**-0.4**
LBZ	**Lake Benmore**	**26.61**	**197**	PN	**P**	**23 57 44.1**	**-0.9**
JCZ	**Jackson Bay**	**26.75**	**199**	PN	**P**	**23 57 46.8**	**+0.6**

ODZ	**Otahua Downs**	**27.10**	**196**	*e*P	**P**	**23 57 49.2**	**0.0**
	38nm,1.3s							
ODZ	**Otahua Downs**	**27.10**	**196**	PN	**P**	**23 57 49.1**	**-0.1**
WKZ	**Wanaka**	**27.35**	**198**	PN	**P**	**23 57 51.5**	**+0.1**
MLZ	**Mavora Lakes**	**28.08**	**199**	PN	**P**	**23 57 59.3**	**+1.6**
EIDS	**Eidsvold**	**28.09**	**252**	*e*P	**P**	**23 57 59.3**	**+1.2**
	13nm,0.8s							
EIDS	**Eidsvold**	**28.09**	**252**	P	**P**	**23 57 59.2**	**+1.2**
	baz=28,SNR=6.2							
TUZ	**Tuapeka**	**28.21**	**197**	PN	**P**	**23 57 59.9**	**+1.2**
ARMA	**Armidale**	**28.61**	**241**	*e*P	**P**	**23 58 05.3**	**+2.7**
	19nm,0.5s							
ARMA	**Armidale**	**28.61**	**241**	P	**P**	**23 58 05.1**	**+2.5**
	baz=29,SNR=17							
WHZ	**Wether Hill Ro**	**28.64**	**199**	*e*P	**P**	**23 58 03.9**	**+1.4**
	97nm,1.1s							
PYZ	**Puysegur Point**	**29.28**	**200**	PN	**P**	**23 58 07.9**	**-0.1**
MGCD	**Mangrove Creek**	**29.90**	**236**	P	**P**	**23 58 16.4**	**+2.9**
	baz=30,SNR=8.4							
XMAS	**Kiritimati**	**30.09**	**48**	*e*P	**P**	**23 58 16.8**	**+1.4**
	1μm,2.8s							
RMQ	**Roma**	**30.30**	**250**	P	**P**	**23 58 19.3**	**+2.2**
	baz=30,SNR=14							
CNB	**Canberra Magne**	**32.01**	**233**	P	**P**	**23 58 33.8**	**+2.3**
	baz=32,SNR=22							
CAN	**Canberra**	**32.29**	**234**	*e*P	**P**	**23 58 35.4**	**+1.6**
CAN				pmax	pmax			
	comp=Z,32nm,1.0s							
CAN	**Canberra**	**32.29**	**234**	*e*P	**P**	**23 58 35.4**	**+1.6**
	comp=Z,32nm,1.0s							
CTA	**Charters Tower**	**32.47**	**263**	ScP	**ScP**	**00 03 45.8**	**+0.3**
CTA	**Charters Tower**	**32.47**	**263**	ScP	**ScP**	**00 03 45.8**	**+0.3**
	comp=Z,1.6nm,0.4s,baz=102,slow=4.7,SNR=6.3							
CTAO	**Charters Tower**	**32.47**	**263**	*e*P	**P**	**23 58 36.2**	**+0.7**
CTAO				pmax	pmax			
	comp=Z,70nm,0.7s							
CTAO	**Charters Tower**	**32.47**	**263**	*e*P	**P**	**23 58 36.2**	**+0.7**
	comp=Z,70nm,0.7s							
CMSA	**Cobar Meteorol**	**33.83**	**242**	P	**P**	**23 58 48.5**	**+1.9**
	baz=34,SNR=20							
PMG	**Port Moresby**	**33.92**	**282**	*e*P	**P**	**23 58 49.2**	**+1.6**
	comp=Z,120nm,0.8s							
QLP	**Quilpie**	**34.34**	**251**	P	**P**	**23 58 52.4**	**+1.5**
	baz=34,SNR=14							
MTSU	**Mount Surprise**	**34.50**	**266**	P	**P**	**23 58 53.4**	**+1.0**
	baz=35,SNR=13							
MTSU				S	S	00 03 53.3	+16	
	baz=35,SNR=5.8							
TOO	**Toolangi**	**35.74**	**232**	P	**P**	**23 59 04.2**	**+1.8**
	baz=36,SNR=7.2							
COEN	**Coen**	**36.34**	**272**	*e*P	**P**	**23 59 08.5**	**+1.0**
COEN	**Coen**	**36.34**	**272**	P	**P**	**23 59 09.1**	**+1.5**
	baz=36,SNR=8.6							
STKA	**Stephens Creek**	**37.31**	**242**	*e*P	**P**	**23 59 17.2**	**+2.0**
	comp=Z,4.2nm,0.6s							
STKA				PcP	**PcP**	**00 01 16.9**	**+0.6**	
STKA				ScP	**ScP**	**00 04 03.6**	**+0.6**	
STKA	**Stephens Creek**	**37.31**	**242**	P	**P**	**23 59 17.2**	**+2.0**	
	comp=Z,11nm,0.3s,baz=88,slow=8.9,SNR=74							
STKA				PcP	**PcP**	**00 01 16.9**	**+0.6**	
	comp=Z,4.5nm,0.6s,baz=107,slow=23,SNR=3.0							
STKA				ScP	**ScP**	**00 04 03.7**	**+0.6**	
	comp=Z,13nm,1.2s,baz=215,slow=6.1,SNR=3.4							
STKA	**Stephens Creek**	**37.31**	**242**	P	**P**	**23 59 17.2**	**+2.0**	
	baz=37,SNR=59							
QIS	**Mount Isa**	**38.65**	**261**	P	**P**	**23 59 26.7**	**+0.6**	
	baz=39,SNR=12							
BBOO	**Buckleboo**	**42.09**	**242**	P	**P**	**23 59 54.3**	**+1.2**	
	baz=42,SNR=18							
JAY	**Jayapura**	**42.53**	**288**	P	**P**	**23 59 58.1**	**+1.2**	
	baz=43,SNR=60							
JAY				S	**S**	**00 05 36.5**	**+1.8**	
	baz=43,SNR=5.5							
WRAB	**Tennant Creek**	**43.62**	**261**	*e*P	**P**	**00 00 04.9**	**-0.3**	
WRAB				pmax	pmax			
	comp=Z,34nm,0.9s							

baz=78,SNR=6.0
PASC **Pasadena Art C** 78.68 48 *e*P P 00 03 52.5 +0.1
ARVC **Arvin** 78.75 47 ⇑P P 00 03 53.7 +1.0
baz=79
HABR **Khabarovsk** 78.75 331 *e*P P 00 03 50.4 -1.9
HABR *e* 00 03 56.4
HABR *e*S S 00 12 59.9 +1.4
HABR *e* 00 13 16.8
HABR pmax pmax
comp=E,101nm,2.8s
HABR pmax pmax
comp=Z,159nm,2.8s
HABR pmax pmax
comp=N,88nm,2.8s
HABR MLR MLR
comp=Z,56nm,19.0s
109C **Camp Elliot, M** 78.77 49 ⇑P P 00 03 53.9 +1.0
baz=79
MWC **Mount Wilson** 78.80 48 *e*P P 00 03 51.0 -2.2
MWC **Mount Wilson** 78.80 48 *e*P P 00 03 51.0 -2.2
KHMM **Horse Mountain** 78.90 40 *e*P P 00 03 55.5 +2.0
comp=Z,35nm,1.0s
VES **Vestal, Richgr** 78.97 46 ⇓P P 00 03 54.8 +1.0
baz=79
MURC **Murrieta** 79.08 49 ⇑P P 00 03 55.3 +0.8
baz=79
BFSC **Mount Baldy Ra** 79.09 48 ⇑P P 00 03 55.2 +0.5
baz=79,SNR=5.1
OHAK **Old Harbor** 79.18 14 *e*P P 00 03 54.4 +0.1
comp=Z,28nm,1.0s
EDW2 **Edwards Air Fo** 79.20 47 ⇓P P 00 03 56.1 +1.0
baz=79,SNR=18
MONP **Monument Peak** 79.26 50 ⇑P P 00 03 56.8 +1.1
baz=80,SNR=17
ISA **Isabella** 79.29 46 *e*P P 00 03 57.2 +1.6
ISA **Isabella** 79.29 46 *e*P P 00 03 57.1 +1.6
ISA **Isabella** 79.29 46 ⇑P P 00 03 56.7 +1.1
baz=80,SNR=19
CMB **Columbia Colle** 79.33 43 *e*P P 00 03 56.6 +0.9
CMB pmax pmax
comp=Z,29nm,0.8s
CMB **Columbia Colle** 79.33 43 *e*P P 00 03 56.6 +0.9
comp=Z,30nm,0.8s
OHCM **Honcut** 79.37 42 *e*P P 00 03 56.9 +1.1
DVTC **Desert V Tower** 79.38 50 ⇑P P 00 03 57.2 +1.0
baz=80,SNR=5.2
WDC **Whiskeytown Da** 79.45 40 *e*P P 00 03 56.8 +0.6
WDC pmax pmax
comp=Z,38nm,1.2s
WDC **Whiskeytown Da** 79.45 40 *e*P P 00 03 56.8 +0.6
comp=Z,38nm,1.2s
PFO **Pinyon Flat Ob** 79.61 49 *e*P P 00 03 58.0 +0.6
comp=Z,16nm,1.2s
PFO **Pinyon Flat Ob** 79.61 49 ⇓P P 00 03 58.3 +0.9
baz=80
LRMC **Laurel Mountai** 79.73 47 ⇑P P 00 03 58.8 +0.8
baz=80
SWSC **Sam W. Stewart** 79.74 50 ⇑P P 00 03 58.9 +1.0
baz=80,SNR=8.0
KDAK **Kodiak Island** 79.85 14 *e*P P 00 03 57.9 +0.1
RRX **Edison Barstow** 79.89 48 ⇑P P 00 03 59.7 +1.0
baz=80
CWC **Cottonwood Cre** 79.98 46 ⇓P P 00 04 00.0 +0.7
baz=80,SNR=21
YBH **Yreka Blue Hor** 80.03 39 P P 00 04 01.0 +1.6
YBH **Yreka Blue Hor** 80.03 39 P P 00 04 01.0 +1.6
comp=Z,31nm,0.8s,baz=182,slow=2.2,SNR=48
MLAC **Mammoth Lakes** 80.12 44 ⇑P P 00 04 01.3 +1.2
baz=80
BELC **Belle Mtn. Jos** 80.14 49 ⇑P P 00 04 01.0 +0.9
baz=80,SNR=9.5
MTUM **Tungsten Hills** 80.15 45 *e*P P 00 04 01.4 +1.2
MPMC **Manual Prospec** 80.18 46 ⇑P P 00 04 01.4 +1.0
baz=80,SNR=32
TIN **Tinemaha** 80.21 45 ⇓P P 00 04 01.5 +1.1
baz=80,SNR=5.7
WAKR **Walker** 80.21 43 *e*P P 00 04 01.8 +1.3
GSC **Goldstone** 80.25 47 *e*P P 00 04 01.4 +0.8
GSC **Goldstone** 80.25 47 *e*P P 00 04 01.4 +0.8
GSC **Goldstone** 80.25 47 ⇓P P 00 04 01.4 +0.8
baz=80,SNR=18
HEC **Hector,Ludlow** 80.33 48 ⇑P P 00 04 01.9 +0.9
baz=81,SNR=23
BC3 **Big Chuckawall** 80.35 49 ⇑P P 00 04 02.3 +1.0
baz=81,SNR=6.7
HUMO **Hull Mountain** 80.41 39 *e*P P 00 04 02.8 +1.5
GLA **Glamis** 80.50 50 *e*P P 00 04 03.9 +2.0
GLA **Glamis** 80.50 50 *e*P P 00 04 03.9 +2.0
GLA **Glamis** 80.50 50 ⇓P P 00 04 03.3 +1.4
baz=81,SNR=8.3
GRAC **Grapevine Rang** 80.76 46 ⇑P P 00 04 04.3 +1.1
baz=81,SNR=20
GMRC **Granite Mounta** 80.78 48 ⇑P P 00 04 04.3 +0.9
baz=81,SNR=11
IRM **Iron Mountain** 80.82 49 ⇑P P 00 04 04.8 +1.2
baz=81,SNR=14
FURC **Furnace Creek,** 80.82 46 ⇓P P 00 04 04.2 +0.8
baz=81,SNR=11
NVAR **Mina Array Bea** 80.91 44 P P 00 04 05.4 +1.3
NVAR **Mina Array Bea** 80.91 44 P P 00 04 05.4 +1.3
comp=Z,24nm,0.7s,baz=223,slow=8.3,SNR=44
PAHR **Pah Rah Range** 80.92 43 *e*P P 00 04 05.1 +1.1
comp=Z,36nm,1.0s
SHOC **Shoshone** 80.92 47 ⇓P P 00 04 04.8 +0.7
baz=81,SNR=7.2
TUQ **Turquoise Moun** 80.93 48 ⇓P P 00 04 05.0 +0.8
baz=81,SNR=13
Y12C **Blythe** 81.07 50 ⇑P P 00 04 05.9 +1.2
baz=81,SNR=8.4
113A **Mohawk Valley,** 81.13 51 ⇑P P 00 04 06.4 +1.4
baz=81
LDFC **Landfair** 81.32 48 *e*P P 00 04 07.8 +1.6
214A **Organ Pipe Nat** 81.44 52 ⇓P P 00 04 08.1 +1.3
baz=82
NEE2 **Needles Airpor** 81.51 49 ⇓P P 00 04 08.1 +1.2
baz=82,SNR=5.4
MOD **Modoc** 81.59 40 *e*P P 00 04 08.3 +0.9
PDMCI **Parker Dam,Lak** 81.62 49 ⇑P P 00 04 08.8 +1.2
baz=82,SNR=10
BROR **Big Rock Looko** 81.71 37 P P 00 04 08.5 +0.8
SHPR **Sheep Range** 82.01 47 *e*P P 00 04 10.7 +1.0
Z14A **Wintersburg** 82.02 51 ⇓P P 00 04 11.1 +1.5
baz=82,SNR=22
H04A **Detroit Lake** 82.11 37 P P 00 04 10.3 +0.5
BKCOR **Black Crater** 82.16 38 P P 00 04 11.1 +0.9
W13A **Hualapai Mount** 82.20 49 ⇓P P 00 04 12.0 +1.2
baz=82
RSO **Redoubt South** 82.25 13 *e*P P 00 04 09.6 -0.7
Y14A **Wickenburg** 82.26 50 ⇓P P 00 04 12.1 +1.3
baz=82
SVW2 **Sparrevohn** 82.27 11 *e*P P 00 04 09.7 -0.4
comp=Z,14nm,0.6s
MAW **Mawson** 82.37 200 P P 00 04 11.5 +0.8
MAW **Mawson** 82.37 200 P P 00 04 11.5 +0.8
comp=Z,3.3nm,0.5s,baz=121,slow=6.0,SNR=13
MAW **Mawson** 82.37 200 P P 00 04 11.4 +0.7
baz=82,SNR=5.8
BMN **Battle Mountai** 82.70 43 *e*P P 00 04 14.0 +0.9
BMN **Battle Mountai** 82.70 43 *e*P P 00 04 14.0 +0.9
LVP **Lakeview Peak** 82.82 36 P P 00 04 14.2 +0.8
NLWA **Neilton Lookou** 82.83 34 *e*P P 00 04 14.5 +1.1
MID **Middleton Isla** 82.86 16 *e*P P 00 04 13.1 0.0
MID pmax pmax
comp=Z,48nm,0.6s
MID **Middleton Isla** 82.86 16 *e*P P 00 04 13.1 0.0
comp=Z,48nm,0.6s
VIPM **Ingram Point** 82.91 38 P P 00 04 14.9 +0.9
VIPM **Ingram Point** 82.91 38 P P 00 04 14.8 +0.9
SPU **Mount Spurr** 83.05 13 *e*P P 00 04 12.8 -1.4
TDL **Tradedollar La** 83.09 36 P P 00 04 15.8 +1.0
TUC **Tucson** 83.12 53 *e*P P 00 04 16.3 +1.1
TUC pmax pmax
comp=Z,114nm,1.1s
TUC **Tucson** 83.12 53 *e*P P 00 04 16.3 +1.1
comp=Z,114nm,1.1s
HDW **Hoodsport** 83.43 34 P P 00 04 17.5 +1.1
LON **Longmire** 83.56 36 *e*P P 00 04 17.6 +0.6
LON pmax pmax
comp=Z,10.0nm,0.8s
LON **Longmire** 83.56 36 *e*P P 00 04 17.6 +0.6
comp=Z,9.6nm,0.8s
X16A **Lo Mia Camp, P** 83.62 50 ⇓P P 00 04 19.0 +1.2
baz=84,SNR=25
WPW **White Pass** 83.67 36 P P 00 04 18.2 +0.5
CCUT **Cedar City** 83.78 47 *e*P P 00 04 19.8 +1.2
PGC **Sidney** 83.83 33 *e*P P 00 04 19.2 +1.0
319A **Douglas** 83.83 54 ⇑P P 00 04 20.6 +1.8
baz=84
U15A **North Rim** 83.98 48 ⇓P P 00 04 20.9 +1.3
baz=84
TRW **Toppenish Ridg** 83.99 37 P P 00 04 19.9 +0.8
PMR **Palmer** 84.05 14 *e*P P 00 04 18.3 -0.6
PMR pmax pmax
comp=Z,101nm,1.7s
PMR **Palmer** 84.05 14 *e*P P 00 04 18.3 -0.6
comp=Z,101nm,1.7s
ELK **Elko** 84.15 43 *e*P P 00 04 21.1 +0.8
comp=Z,23nm,1.4s
WUAZ **Wupatki** 84.19 49 ⇓P P 00 04 21.5 +1.0
baz=84,SNR=11
320A **Kipp Ranch, An** 84.39 54 ⇓P P 00 04 23.5 +2.0
baz=85
SML **Sawmill** 84.43 14 *e*P P 00 04 20.3 -0.6
SML **Sawmill** 84.43 14 *e*P P 00 04 20.3 -0.6
DIV **Divide** 84.46 16 *e*P P 00 04 21.0 -0.1
HAWA **Hanford** 84.62 37 *e*P P 00 04 23.1 +0.9
comp=Z,37nm,0.9s
220A **Playas Peak, P** 84.64 54 ⇓P P 00 04 24.3 +1.5
baz=85,SNR=12
X18A **Snowflake** 84.77 51 ⇓P P 00 04 24.5 +1.1
baz=85,SNR=8.7
120A **U Bar Ranch, L** 84.85 53 ⇓P P 00 04 25.3 +1.6
baz=85
WRAK **Wrangell Islan** 85.02 24 *e*P P 00 04 24.5 +0.7
comp=Z,139nm,1.2s
MVU **Marysvale** 85.04 46 *e*P P 00 04 25.9 +1.3
comp=Z,6.2nm,0.8s
BMO **Blue Mountains** 85.05 39 *e*P P 00 04 24.1 -0.2
comp=Z,6.3nm,0.7s
MSU **Marysvale** 85.07 46 *e*P P 00 04 26.1 +1.3
MSU **Marysvale** 85.07 46 *e*P P 00 04 26.1 +1.3
Z20A **Nine Sixteen R** 85.13 53 ⇓P P 00 04 26.4 +1.2
baz=85,SNR=20
MFID **Camas Ranch** 85.18 41 *e*P P 00 04 25.4 +0.3
comp=Z,36nm,0.7s
MFID **Camas Ranch** 85.18 41 ⇑P P 00 04 25.8 +0.8
baz=85
W18A **Petrified Fore** 85.19 50 ⇓P P 00 04 26.3 +0.9
baz=85
TRF **Thorofare Moun** 85.45 13 *e*P P 00 04 24.2 -1.7
DUG **Dugway** 85.46 45 *e*P P 00 04 27.2 +0.7
DUG pmax pmax
comp=Z,5.0nm,1.0s
DUG **Dugway** 85.46 45 *e*P P 00 04 27.2 +0.7
comp=Z,5.3nm,1.0s
DUG **Dugway** 85.46 45 ⇑P P 00 04 27.1 +0.7
baz=86
121A **Cookes Peak, D** 85.48 53 ⇑P P 00 04 28.1 +1.2
baz=86,SNR=19
Y20A **Horse Springs,** 85.65 52 ⇑P P 00 04 28.9 +1.3
baz=86,SNR=18
OD2 **Odessa Site #2** 85.65 36 P P 00 04 27.6 +0.5
BGU **Big Grassy Mou** 85.68 44 *e*P P 00 04 28.3 +0.8
comp=Z,11nm,1.5s
I12A **Atlanta** 85.81 41 ⇑P P 00 04 29.3 +1.2
baz=86
222A **Williams Famil** 85.82 54 ⇓P P 00 04 29.6 +1.2
baz=86,SNR=7.1
X20A **Quemado** 85.84 51 ⇓P P 00 04 29.8 +1.3
baz=86
Z21A **St. Cloud Mine** 85.91 53 ⇓P P 00 04 30.2 +1.3
baz=86,SNR=15
Q16A **Castle Valley** 85.95 47 ⇑P P 00 04 30.2 +1.3
baz=86
MCK **McKinley** 85.98 13 *e*P P 00 04 27.3 -1.0
MCK pmax pmax
comp=Z,22nm,1.0s
MCK **McKinley** 85.98 13 *e*P P 00 04 27.3 -1.0
comp=Z,22nm,1.0s
W20A **Ramah** 86.10 51 ⇓P P 00 04 30.9 +1.1
baz=86
TMUT **Trail Mountain** 86.11 46 *e*P P 00 04 31.5 +1.7
comp=Z,18nm,0.8s
122A **Conniff Cattle** 86.15 54 ⇓P P 00 04 31.3 +1.4
baz=86,SNR=5.7
Y21A **Point of Rocks** 86.22 52 ⇑P P 00 04 31.6 +1.3
baz=86,SNR=11
HVU **Hansel Valley** 86.27 43 *e*P P 00 04 31.5 +1.2
HVU **Hansel Valley** 86.27 43 *e*P P 00 04 31.5 +1.2
223A **Chaparral, Ant** 86.30 54 ⇑P P 00 04 31.9 +1.3
baz=86
X21A **Alamocita Cree** 86.32 52 ⇓P P 00 04 31.9 +1.1
baz=86,SNR=13
H12A **Diamond D Ranc** 86.37 40 ⇓P P 00 04 31.4 +0.6
baz=87
G12A **Big Creek, Yel** 86.39 40 ⇓P P 00 04 31.5 +0.7
baz=87
Z22A **Elephant Butte** 86.42 53 ⇓P P 00 04 32.3 +1.0
baz=87,SNR=15
V20A **Brimhall** 86.42 50 ⇑P P 00 04 31.9 +0.6
baz=87
SRU **San Rafael** 86.49 47 *e*P P 00 04 32.3 +0.8
SRU **San Rafael** 86.49 47 *e*P P 00 04 32.2 +0.8
DAU **Daniels Canyon** 86.61 45 *e*P P 00 04 33.4 +1.3
DAU **Daniels Canyon** 86.61 45 *e*P P 00 04 33.4 +1.3
U20A **Newcomb** 86.64 50 ⇓P P 00 04 33.0 +0.8
baz=87
123A **Bell Site, Whi** 86.69 54 ⇓P P 00 04 33.3 +0.9
baz=87
Y22A **Socorro** 86.71 52 ⇑P P 00 04 33.3 +0.7
baz=87,SNR=12
W21A **San Fidel** 86.72 51 ⇑P P 00 04 33.5 +0.9
baz=87
324A **Moseley Ranch,** 86.79 55 ⇓P P 00 04 34.1 +1.1
baz=87
Y22D **IRIS PASSCAL I** 86.81 52 ⇑P P 00 04 34.0 +1.0
baz=87
425A **Indio Mountain** 86.91 56 ⇓P P 00 04 34.7 +1.2
baz=87
I14A **Mackay** 86.92 41 ⇓P P 00 04 34.6 +1.2
baz=87
E12A **Beaver Dam Sad** 86.92 38 ⇓P P 00 04 33.1 -0.1
baz=87
X22A **Bernardo** 86.93 52 ⇓P P 00 04 34.7 +1.1
baz=87
Z23A **Rita Site, Whi** 86.98 53 ⇓P P 00 04 34.7 +0.9
baz=87
DOT **Dot Lake** 87.02 15 *e*P P 00 04 32.8 -0.3
NEW **Newport** 87.03 36 *e*P P 00 04 33.6 +0.1
comp=Z,12nm,0.8s
NEW **Newport** 87.03 36 P P 00 04 34.0 +0.5
comp=Z,9.2nm,0.7s,baz=230,slow=4.2,SNR=15
NEW **Newport** 87.03 36 ⇑P P 00 04 33.7 +0.1
baz=87,SNR=11
V21A **Milan** 87.03 51 ⇓P P 00 04 34.8 +0.7
baz=87
MVCO **Mesa Verde** 87.03 49 ⇓P P 00 04 34.7 +0.6
baz=87
626A **Big Bend Ranch** 87.08 57 ⇓P P 00 04 35.7 +1.4
baz=87,SNR=48
LPM **Los Pinos Moun** 87.12 52 *e*P P 00 04 35.6 +1.1
COLA **College** 87.22 13 *e*P P 00 04 33.1 -0.8
COLA pmax pmax
comp=Z,50nm,0.8s
COLA **College** 87.22 13 *e*P P 00 04 33.1 -0.8
comp=Z,50nm,0.8s
W22A **Albuquerque** 87.28 52 ⇑P P 00 04 36.4 +1.2
baz=88
PV04 **Paradox Valley** 87.28 48 *e*P P 00 04 35.8 +0.7
C11A **Tepee Creek (N** 87.29 37 ⇓P P 00 04 35.7 +0.9
baz=88
U21A **Nageezi** 87.29 50 ⇓P P 00 04 36.0 +0.7
baz=88
526A **Mary Lane Ranc** 87.32 57 ⇓P P 00 04 36.6 +1.2
baz=88,SNR=23
ILAR **Eielson Array** 87.33 13 P P 00 04 33.7 -0.8
ILAR **Eielson Array** 87.33 13 P P 00 04 33.7 -0.8
comp=Z,20nm,0.8s,baz=229,slow=5.6,SNR=194
124A **Stringfield Ra** 87.33 54 ⇓P P 00 04 36.5 +0.9
baz=88,SNR=21
TXAR **Lajitas Array** 87.36 58 P P 00 04 37.4 +1.8
TXAR **Lajitas Array** 87.36 58 P P 00 04 37.4 +1.8
comp=Z,25nm,0.8s,baz=220,slow=6.0,SNR=318
D12A **Red Ives Fores** 87.39 38 ⇓P P 00 04 35.5 +0.2
baz=88
Y23A **Lovelace Mesa,** 87.40 53 ⇓P P 00 04 36.7 +0.9
baz=88
PV01 **Paradox Valley** 87.40 48 *e*P P 00 04 35.8 +0.1
comp=Z,2um,1.4s
S20A **Disappointment** 87.41 48 ⇓P P 00 04 36.7 +0.8
baz=88
M17A **Scullys Gap (B** 87.51 44 ⇑P P 00 04 36.7 +0.5
baz=88
ANMO **Albuquerque** 87.53 52 *e*P P 00 04 36.9 +0.4
comp=Z,20nm,1.2s
R20A **Redvale** 87.56 48 ⇓P P 00 04 37.2 +0.8
baz=88
X23A **Hourglass Bar** 87.57 52 ⇑P P 00 04 37.1 +0.4
baz=88,SNR=10
225A **Deer Hill, Car** 87.58 55 ⇑P P 00 04 37.6 +0.9
baz=88
426A **McDonald Obser** 87.61 56 ⇓P P 00 04 37.9 +1.0
baz=88
V22A **San Miguel Ran** 87.61 51 ⇑P P 00 04 37.4 +0.6
baz=88
T21A **Navajo Lake** 87.63 50 ⇑P P 00 04 37.7 +0.9
baz=88
627A **Terlingua Ranc** 87.63 58 ⇓P P 00 04 38.2 +1.3
baz=88,SNR=51
C12B **Naegeli Ranch,** 87.66 37 ⇑P P 00 04 37.2 +0.7
baz=88
Z24A **Sheeppen Canyo** 87.67 54 ⇓P P 00 04 37.6 +0.5
baz=88,SNR=13
SYO **Syowa Base** 87.71 193 ⇑*e*P P 00 04 33.6 -2.8
527A **Woodward Ranch** 87.73 57 ⇓P P 00 04 38.2 +0.8
baz=88
S21A **Coal Bank Pass** 87.74 49 ⇓P P 00 04 38.2 +0.8
baz=88,SNR=14
P19A **Cripple Cowboy** 87.79 47 ⇑P P 00 04 38.3 +0.8
baz=88
W23A **Werner Place,** 87.84 52 ⇑P P 00 04 38.4 +0.5
baz=88
U22A **Llaves** 87.85 50 ⇑P P 00 04 38.4 +0.4
baz=88
Y24A **Capitan** 87.86 53 ⇑P P 00 04 38.7 +0.8
baz=88
326A **Caldwell Ranch** 87.91 56 ⇓P P 00 04 38.7 +0.6
baz=88,SNR=8.0
F14A **Wisdom** 87.92 40 ⇓P P 00 04 38.2 +0.3
baz=88
D13A **Huson** 87.93 38 ⇑P P 00 04 37.8 0.0
baz=88
125A **Gardner Draw,** 87.93 54 ⇑P P 00 04 39.1 +0.8
baz=88,SNR=17
Q20A **Ridgley Place,** 87.96 48 ⇑P P 00 04 38.8 +0.5
baz=88,SNR=18
GDL2 **Guadalupe Moun** 87.97 55 *e*P P 00 04 36.6 -1.8
RRI2 **Red Ridge** 87.98 43 *e*P P 00 04 39.8 +1.3
comp=Z,49nm,1.0s
O19A **Miners Draw (B** 88.00 46 ⇑P P 00 04 39.2 +0.7
baz=88
B12A **Libby** 88.00 37 ⇓P P 00 04 39.0 +0.9
baz=88
628A **Black Gap, Mar** 88.04 58 ⇓P P 00 04 39.7 +0.9
baz=88,SNR=20
V23A **Ortiz Mt. (NFS** 88.07 51 ⇓P P 00 04 39.9 +0.9
baz=88
226B **Tecolote Peak,** 88.07 55 ⇑P P 00 04 39.6 +0.8
baz=88,SNR=43
T22A **Edith** 88.09 50 ⇓P P 00 04 39.3 +0.3
baz=88,SNR=5.1
MSO **Missoula** 88.09 39 ⇓P P 00 04 38.3 -0.3
baz=88,SNR=10
I16A **Newdale** 88.12 42 ⇑P P 00 04 40.2 +1.3
baz=88
X24A **Lazy VL Ranch,** 88.13 52 ⇓P P 00 04 39.2 0.0
baz=88,SNR=7.8
BSMT **Bassoo Peak** 88.13 37 *e*P P 00 04 38.8 -0.1
L18A **Fontenelle, Gr** 88.14 44 ⇑P P 00 04 39.5 +0.4
baz=88
P20A **De Beque** 88.14 47 ⇑P P 00 04 39.9 +0.8
baz=88
DLMT **Dillon** 88.16 40 *e*P P 00 04 40.0 +0.9
comp=Z,39nm,1.4s
C13A **Hot Springs** 88.16 38 ⇑P P 00 04 38.9 0.0
baz=88
427A **Hayter Ranch,** 88.18 57 ⇓P P 00 04 40.5 +1.1
baz=88,SNR=79
A12A **Yaak River Ran** 88.21 36 ⇓P P 00 04 40.0 +0.9
baz=88
R21A **Cimarron** 88.22 48 ⇑P P 00 04 40.6 +1.0
baz=88
TPAW **Teton Pass** 88.28 43 *e*P P 00 04 40.7 +0.9
comp=Z,24nm,1.0s
REDW **Red Top Meadow** 88.28 43 *e*P P 00 04 41.0 +1.3
comp=Z,0.5nm,1.1s
U23A **El Rito** 88.31 51 ⇓P P 00 04 40.8 +0.7
baz=88
528A **Cox Ranch, San** 88.39 57 ⇑P P 00 04 41.3 +0.9
baz=89,SNR=21
SNOW **Snow King Moun** 88.39 43 *e*P P 00 04 41.3 +1.0
Q21A **Lamborn Mesa,** 88.41 48 ⇓P P 00 04 41.3 +0.8
baz=89
SWMT **Swartz Lake** 88.41 38 *e*P P 00 04 40.4 +0.3
126A **Clayton Basin,** 88.41 55 ⇑P P 00 04 40.8 +0.3
baz=89,SNR=6.4
W24A **Lazy 6 Ranch,** 88.42 52 ⇓P P 00 04 40.8 +0.2
baz=89,SNR=10.0
S22A **4UR Ranch, Cre** 88.46 49 ⇑P P 00 04 41.8 +1.0
baz=89
F15A **Butte** 88.46 40 ⇓P P 00 04 41.1 +0.6
baz=89
D14A **Greenough** 88.48 39 ⇑P P 00 04 40.2 -0.2
baz=89
LRM **Limekiln Ridge** 88.48 40 *e*P P 00 04 41.0 +0.4
IMW **Indian Meadow** 88.48 42 *e*P P 00 04 42.1 +1.4
comp=Z,30nm,0.9s
O20A **White River Ci** 88.52 46 ⇑P P 00 04 41.6 +0.7
baz=89,SNR=18
M19A **Rock Springs** 88.52 45 ⇓P P 00 04 41.3 +0.4
baz=89
MOOW **Moose Ponds** 88.53 42 *e*P P 00 04 41.7 +0.8
comp=Z,13nm,1.2s
CHMT **Chamberlain Mo** 88.55 39 *e*P P 00 04 40.8 0.0
LOHW **Long Hollow** 88.56 43 *e*P P 00 04 41.8 +0.8
comp=Z,11nm,0.8s
SLMT **Seeley Lake** 88.57 38 *e*P P 00 04 40.6 -0.3
CMAR **Chiang Mai Arr** 88.58 290 P P 00 04 43.0 +1.6
CMAR **Chiang Mai Arr** 88.58 290 P P 00 04 43.0 +1.6
comp=Z,4.8nm,0.8s,baz=114,slow=2.6,SNR=27
B13A **Whitefish** 88.59 37 ⇓P P 00 04 40.7 -0.1
baz=89
QLMT **Earthquake Lak** 88.62 41 *e*P P 00 04 42.7 +1.4
L19A **Farson** 88.67 44 ⇑P P 00 04 42.5 +1.0
baz=89
H16A **Russell Place,** 88.67 41 ⇓P P 00 04 42.9 +1.3
baz=89
EGAK **Eagle** 88.68 15 *e*P P 00 04 40.7 0.0
comp=Z,27nm,0.8s
C14A **Swan Lake** 88.69 38 ⇑P P 00 04 41.2 -0.2
baz=89
X25A **Clemmons Ranch** 88.69 53 ⇓P P 00 04 42.1 +0.3
baz=89
428A **Kincaid Ranch,** 88.69 57 ⇓P P 00 04 42.8 +1.0
baz=89
Z26A **Caprock** 88.70 54 ⇓P P 00 04 42.1 +0.3
baz=89,SNR=17
CHTO **Chiang Mai** 88.70 290 *e*P P 00 04 42.9 +0.9
CHTO pmax pmax
comp=Z,8.0nm,0.9s
CHTO **Chiang Mai** 88.70 290 *e*P P 00 04 42.9 +0.9
comp=Z,8.0nm,0.9s
R22A **Saguache, Gunn** 88.72 49 ⇓P P 00 04 43.1 +1.0
baz=89
227A **Bennett, Jal** 88.72 56 ⇓P P 00 04 42.6 +0.7
baz=89
I17A **Pilgrim Ck.** 88.72 42 ⇑P P 00 04 43.0 +1.2
baz=89
T23A **Casias Ranch,** 88.72 50 ⇑P P 00 04 42.7 +0.7
baz=89
V24A **Rampart Ranch,** 88.73 51 ⇑P P 00 04 42.6 +0.5
baz=89,SNR=11
N20A **Spence Gulch,** 88.82 46 ⇑P P 00 04 43.0 +0.6
baz=89
529A **Stev Forest Ra** 88.83 58 ⇑P P 00 04 43.0 +0.6
baz=89
COLD **Coldfoot** 88.84 11 *e*P P 00 04 41.6 +0.2
BW06 **Boulder Array** 88.84 44 *e*P P 00 04 42.0 -0.4
comp=Z,20nm,0.8s
PDAR **Pinedale Array** 88.84 44 P P 00 04 43.1 +0.7
PDAR PP PP 00 08 22.9 -1.8
PDAR PKKPbc PKKPbc 00 22 17.6 -1.3
PDAR **Pinedale Array** 88.84 44 P P 00 04 43.1 +0.7
comp=Z,18nm,0.7s,baz=214,slow=3.0,SNR=146
PDAR PP PP 00 08 22.9 -1.8
comp=Z,2.5nm,1.1s,baz=238,slow=5.1,SNR=8.9
PDAR PKKPbc PKKPbc 00 22 17.6 -1.3
comp=Z,0.4nm,0.6s,baz=83,slow=2.9,SNR=3.6
328A **Wristen Ranch,** 88.85 56 ⇓P P 00 04 42.8 +0.3
baz=89,SNR=17
Q22A **Crested Butte,** 88.89 48 ⇓P P 00 04 43.3 +0.5

baz=89
A13A **Flathead Natio** 88.91 37 ⇑P P 00 04 42.8 +0.5
baz=89
127A **Arkansas Junct** 88.94 55 ⇑P P 00 04 43.4 +0.5
baz=89
H17A **Grant Village** 88.95 42 ⇑P P 00 04 45.2 +2.3
baz=89
F16A **Kennard Place,** 88.96 40 ⇑P P 00 04 43.4 +0.7
baz=89
SMCO **Snowmass** 88.98 48 *e*P P 00 04 43.5 +0.2
S23A **Nye Farm, Mont** 89.03 49 ⇑P P 00 04 43.9 +0.4
baz=89
D15A **Lincoln** 89.04 39 ⇑P P 00 04 43.3 +0.2
baz=89
Y26A **Elida** 89.08 54 ⇓P P 00 04 43.7 +0.1
baz=89,SNR=7.1
O21A **Pagoda** 89.09 47 ⇓P P 00 04 44.0 +0.4
baz=89
I18A **Diamond G Ranc** 89.11 43 ⇓P P 00 04 44.4 +0.8
baz=89
W25A **X Bar L Ranch,** 89.13 52 ⇑P P 00 04 43.9 +0.2
baz=89,SNR=13
M20A **Sweetwater, Wa** 89.17 45 ⇓P P 00 04 44.7 +0.8
baz=89
WALA **Waterton Lakes** 89.25 37 *e*P P 00 04 43.7 -0.3
comp=Z,0.4nm,0.9s
B14A **Marquette Ranc** 89.26 38 ⇓P P 00 04 44.0 -0.1
baz=90
V25A **Rancho No Teng** 89.27 52 ⇑P P 00 04 44.9 +0.4
baz=90
429A **Davenport Ranc** 89.28 57 ⇑P P 00 04 45.1 +0.6
baz=90,SNR=80
G17A **Pierce Place,** 89.29 41 ⇓P P 00 04 45.6 +1.3
baz=90
N21A **Black Mountain** 89.29 46 ⇑P P 00 04 45.4 +0.9
baz=90
L20A **Wamsutter** 89.30 45 ⇓P P 00 04 45.3 +0.8
baz=90
E16A **East Helena** 89.30 40 ⇑P P 00 04 44.7 +0.5
baz=90
Z27A **Tatum** 89.30 54 ⇓P P 00 04 44.6 0.0
baz=90,SNR=6.5
P22A **Eagle** 89.31 47 ⇑P P 00 04 45.2 +0.6
baz=90
228A **UT Block 9, Go** 89.31 56 ⇑P P 00 04 44.9 +0.3
baz=90,SNR=7.8
SNAA **Sanae** 89.32 179 *e*P P 00 04 43.1 -0.8
K19A **Absolon Red Bu** 89.33 44 ⇑P P 00 04 44.6 -0.1
baz=90
X26A **CR and CF Fran** 89.34 53 ⇑P P 00 04 45.5 +0.7
baz=90
C15A **Salmond Ranch,** 89.36 38 ⇓P P 00 04 44.6 +0.1
baz=90
R23A **Moffat** 89.37 49 ⇑P P 00 04 45.7 +0.7
baz=90
J19A **Crowheart** 89.40 43 ⇑P P 00 04 45.5 +0.6
baz=90
A14A **Double T Ranch** 89.49 37 ⇓P P 00 04 45.5 +0.4
baz=90
530A **J-C Ranch, Com** 89.54 58 ⇓P P 00 04 46.2 +0.5
baz=90,SNR=9.9
329A **Wagon Wheel Ra** 89.55 56 ⇑P P 00 04 46.2 +0.5
baz=90,SNR=11
Y27A **Causey** 89.57 54 ⇑P P 00 04 46.1 +0.3
baz=90
S24A **Houchin Ranch,** 89.58 50 ⇓P P 00 04 46.6 +0.6
baz=90,SNR=7.7
K20A **Yellowstone Ra** 89.59 44 ⇓P P 00 04 45.8 0.0
baz=90
128A **Castleberry Fa** 89.59 55 ⇑P P 00 04 46.8 +0.9
baz=90
W26A **Owens Ranch, T** 89.59 53 ⇑P P 00 04 45.9 0.0
baz=90,SNR=5.5
F17A **Fitzpatrick Pl** 89.61 41 ⇓P P 00 04 46.7 +0.9
baz=90
D16A **Dana Ranch, Ca** 89.62 39 ⇓P P 00 04 46.4 +0.7
baz=90
U25A **Circle Dot Ran** 89.65 51 ⇑P P 00 04 46.3 +0.1
baz=90,SNR=11
B15A **Bradely Ranch,** 89.65 38 ⇑P P 00 04 45.3 -0.5
baz=90
H18A **Shoshone NF, C** 89.66 42 ⇑P P 00 04 46.9 +0.7
baz=90
O22A **Kremmling** 89.70 47 ⇓P P 00 04 47.0 +0.5
baz=90,SNR=27
E17A **Martinsdale** 89.76 40 ⇑P P 00 04 47.1 +0.6
baz=90
M21A **Separation Pea** 89.77 45 ⇓P P 00 04 47.3 +0.6
baz=90
I19A **Meeteetse** 89.79 43 ⇑P P 00 04 47.6 +0.9
baz=90
P23A **Jefferson** 89.86 48 ⇓P P 00 04 48.3 +1.0
baz=90
V26A **Tequesquite Ra** 89.86 52 ⇓P P 00 04 47.4 +0.3
baz=90
229A **Bryant Ranch,** 89.86 56 ⇑P P 00 04 47.3 +0.1
baz=90
430A **Baggett Ranch,** 89.87 57 ⇓P P 00 04 47.4 +0.2
baz=90,SNR=6.5
C16A **Fuhringer Ranc** 89.88 39 ⇓P P 00 04 46.8 -0.1
baz=90
631A **Perdido Creek** 89.88 59 ⇓P P 00 04 47.7 +0.4
baz=90,SNR=20
A15A **Johnson Ranch,** 89.88 37 ⇑P P 00 04 46.8 0.0
baz=90
R24A **Sanders Place,** 89.90 49 ⇓P P 00 04 47.9 +0.5
baz=90
X27A **F and S Farms,** 89.92 53 ⇑P P 00 04 48.1 +0.6
baz=90
L21A **Rawlins** 89.93 45 ⇑P P 00 04 47.6 +0.2
baz=90
T25A **Trinidad** 89.95 50 ⇑P P 00 04 47.7 +0.1
baz=90,SNR=8.2
G18A **Lazy EL Ranch,** 90.02 41 ⇓P P 00 04 48.7 +1.0
baz=90
N22A **Wattenberg Ran** 90.04 46 ⇓P P 00 04 49.0 +1.0
baz=90
J20A **Shoshoni** 90.07 44 ⇓P P 00 04 48.6 +0.7
baz=90
129A **Stewart Farms,** 90.08 55 ⇑P P 00 04 48.4 +0.3
baz=90,SNR=10
H19A **Powell** 90.08 42 ⇓P P 00 04 48.7 +0.8
baz=90
W27A **Bowe Ranch, En** 90.11 53 ⇓P P 00 04 48.6 +0.3
baz=90
732A **Laxson Ranch,** 90.11 60 ⇓P P 00 04 48.8 +0.5
baz=90,SNR=7.4
U26A **Atchley Ranch,** 90.14 51 ⇓P P 00 04 48.8 +0.3
baz=90
S25A **Robets Cordova** 90.15 50 ⇓P P 00 04 49.0 +0.5
baz=90
330A **Mertzon** 90.15 57 ⇑P P 00 04 48.5 +0.1
baz=90
O23A **Lake Granby, G** 90.16 47 ⇑P P 00 04 49.4 +0.8
baz=90,SNR=6.3
Q24A **Divide** 90.17 49 ⇓P P 00 04 49.2 +0.5
baz=90
531A **Rocksprings** 90.18 58 ⇓P P 00 04 49.5 +0.8
baz=90
D17A **Six Diamond Ra** 90.19 39 ⇑P P 00 04 49.0 +0.6
baz=90
B16A **M & M Farms, S** 90.19 38 ⇑P P 00 04 48.0 -0.3
baz=90
F18A **Big Timber** 90.20 41 ⇑P P 00 04 49.3 +0.9
baz=90
ISCO **Idaho Springs** 90.20 48 *e*P P 00 04 49.4 +0.6
ISCO pmax pmax
comp=Z,18nm,1.7s
ISCO **Idaho Springs** 90.20 48 *e*P P 00 04 49.4 +0.6
comp=Z,18nm,1.7s
ISCO **Idaho Springs** 90.20 48 ⇓P P 00 04 49.4 +0.6
baz=90
M22A **Cedar Creek Ra** 90.20 46 ⇑P P 00 04 49.3 +0.5
baz=90
Y28A **McKinney Farm,** 90.28 54 ⇑P P 00 04 48.9 -0.2
baz=90
I20A **Worland** 90.31 43 ⇑P P 00 04 49.5 +0.5
baz=90
431A **Sonora** 90.33 58 ⇑P P 00 04 49.2 -0.1
baz=90
C17A **Wharram Farm,** 90.38 39 ⇓P P 00 04 49.5 +0.4
baz=91
230A **Sterling City** 90.38 56 ⇑P P 00 04 49.8 +0.3
baz=91
E18A **Harlowton** 90.38 40 ⇑P P 00 04 50.4 +1.1
baz=91
N23A **Red Feather La** 90.43 47 ⇓P P 00 04 50.5 +0.7
baz=91
Z29A **Hungry Hill Ra** 90.44 55 ⇓P P 00 04 49.8 -0.1
baz=91
R25A **Fountain Ranch** 90.45 50 ⇑P P 00 04 49.9 +0.1
baz=91
J21A **Lysite** 90.48 44 ⇓P P 00 04 50.6 +0.7
baz=91
YAK **Yakutsk** 90.49 338 *e*P P 00 04 47.2 -2.0
YAK pmax pmax
comp=E,6.0nm,1.0s
YAK pmax pmax
comp=Z,26nm,0.8s
YAK pmax pmax
comp=N,5.0nm,1.3s
A16A **West Butte Ran** 90.52 38 ⇓P P 00 04 50.2 +0.4
baz=91
632A **Uvalde** 90.55 59 ⇑P P 00 04 51.1 +0.8
baz=91
X28A **Dimmitt** 90.55 54 ⇑P P 00 04 50.4 0.0
baz=91
T26A **Comanche Natio** 90.56 51 ⇓P P 00 04 50.4 0.0
baz=91
L22A **Ellis Ranch, M** 90.58 45 ⇑P P 00 04 51.4 +1.0
baz=91
H20A **Greybull** 90.63 43 ⇓P P 00 04 50.4 0.0
baz=91
F19A **Roth Farm, Mol** 90.65 41 ⇓P P 00 04 50.8 +0.3
baz=91
B17A **L&G Farms, Che** 90.67 38 ⇑P P 00 04 50.6 +0.1
baz=91
532A **Rocksprings** 90.69 58 ⇓P P 00 04 51.2 +0.2
baz=91,SNR=10
Y29A **Porterfield Fa** 90.70 54 ⇑P P 00 04 51.3 +0.3
baz=91
331A **San Angelo** 90.71 57 ⇑P P 00 04 51.1 +0.1
baz=91
O24A **Longmont** 90.71 48 ⇓P P 00 04 51.6 +0.6
baz=91
D18A **Linhart Farms,** 90.74 40 ⇑P P 00 04 51.9 +1.0
baz=91
130A **Snyder** 90.77 56 ⇓P P 00 04 51.2 -0.1
baz=91,SNR=5.0
I21A **Big Trails, Te** 90.79 44 ⇓P P 00 04 51.4 +0.1
baz=91
K22A **Casper** 90.79 45 ⇓P P 00 04 51.6 +0.3
baz=91
G20A **Bridger** 90.82 42 ⇑P P 00 04 51.7 +0.3
baz=91
U27A **Thompson Grove** 90.83 52 ⇑P P 00 04 51.4 -0.2
baz=91
S26A **Kim** 90.83 50 ⇑P P 00 04 51.5 -0.1
baz=91
W28A **Vega** 90.83 53 ⇓P P 00 04 51.5 -0.1
baz=91
JCT **Junction City** 90.90 58 *e*P P 00 04 52.3 +0.3
JCT **Junction City** 90.90 58 *e*P P 00 04 52.2 +0.3
JCT **Junction City** 90.90 58 ⇓P P 00 04 51.6 -0.3
baz=91
Z30A **Sanderson Ranc** 90.90 55 ⇑P P 00 04 51.8 -0.1
baz=91,SNR=5.7
X29A **Tulia** 90.90 54 ⇓P P 00 04 51.9 -0.1
baz=91
PHWY **Pilot Hill** 90.94 46 *e*P P 00 04 52.4 +0.2
V28A **Channing** 91.01 52 ⇑P P 00 04 52.6 +0.2
baz=91
E19A **Rath Farm, Rou** 91.03 41 ⇑P P 00 04 52.8 +0.6
baz=91
231A **Bronte** 91.03 57 ⇓P P 00 04 52.2 -0.3
baz=91,SNR=14
A17A **Triple J Farms** 91.04 38 ⇑P P 00 04 52.3 +0.2
baz=91
432A **Menard** 91.05 58 ⇑P P 00 04 52.5 -0.1
baz=91,SNR=11
LZH **Lanzhou** 91.06 308 ⇓P P 00 04 52.8 +0.1
LZH pP **pP** 00 07 14.0 +2.7
LZH sP **sP** 00 08 18.5 +3.3
LZH PP PP 00 08 46.8 +4.8
LZH SKS **SKSac** 00 14 23.3 -0.6
LZH **Lanzhou** 91.06 308 S **S** 00 14 55.0 -1.8
LZH **Lanzhou** 91.06 308 sS sS 00 19 05.3 +0.6
LZH pmax pmax
comp=Z,29nm,1.1s
LZH pmax pmax
comp=Z,160nm,8.5s
P25A **Willow Gulch B** 91.09 48 ⇑P P 00 04 52.9 +0.1
baz=91
L23A **Garrett** 91.11 46 ⇑P P 00 04 53.3 +0.5
baz=91
R26A **Arlington** 91.12 50 ⇑P P 00 04 52.8 -0.1
baz=91,SNR=6.2
N24A **Carr** 91.13 47 ⇓P P 00 04 53.6 +0.7
baz=91
T27A **Campo** 91.16 51 ⇑P P 00 04 53.1 0.0
baz=91
EGMT **Eagleton** 91.16 39 ⇓P P 00 04 53.2 +0.5
baz=91
W29A **Arnraillo** 91.20 53 ⇑P P 00 04 53.5 +0.2
baz=91
131A **Roby** 91.25 56 ⇑P P 00 04 53.4 0.0
baz=91,SNR=6.1
U28A **Mallet** 91.26 52 ⇑P P 00 04 53.4 -0.1
baz=92
S27A **Las Animas** 91.27 50 ⇓P P 00 04 53.9 +0.3
baz=92
332A **Millersview** 91.28 57 ⇑P P 00 04 53.6 0.0
baz=92,SNR=16
D19A **Cripps Ranch,** 91.29 40 ⇓P P 00 04 54.1 +0.7
baz=92
Y30A **Stafford Cattl** 91.30 55 ⇑P P 00 04 53.7 -0.1
baz=92
H21A **Big Horn, Sher** 91.31 43 ⇑P P 00 04 54.0 +0.5
baz=92
Q26A **Hugo** 91.32 49 ⇓P P 00 04 54.1 +0.3
baz=92
B18A **Beardsley Farm** 91.32 39 ⇓P P 00 04 53.7 +0.2
baz=92
I22A **9 Mile Ranch,** 91.35 44 ⇓P P 00 04 54.3 +0.5
baz=92
K23A **Bowen Ranch, D** 91.43 45 ⇓P P 00 04 54.9 +0.6
baz=92
M24A **Cheyenne** 91.44 46 ⇑P P 00 04 55.2 +0.8
baz=92
E20A **Meyer Farm, Mu** 91.45 41 ⇓P P 00 04 54.9 +0.7
baz=92
232A **Coleman** 91.54 57 ⇑P P 00 04 54.8 0.0
baz=92,SNR=6.0
R27A **Eads** 91.58 50 ⇓P P 00 04 55.1 +0.1
baz=92
L24A **Wheatland** 91.60 46 ⇓P P 00 04 56.2 +1.2
baz=92
T28A **Walsh** 91.63 51 ⇓P P 00 04 55.3 +0.1
baz=92
Z31A **Sharp Cattle R** 91.68 55 ⇓P P 00 04 55.2 -0.2
baz=92,SNR=7.1
H22A **Clearmont** 91.74 43 ⇓P P 00 04 55.9 +0.3
baz=92
ABTX **Abilene, Hawle** 91.81 56 ⇓P P 00 04 56.2 +0.1
baz=92
Y31A **Rekieta Farm,** 91.83 55 ⇑P P 00 04 55.9 -0.2
baz=92
B19A **Brinkman Farms** 91.84 39 ⇑P P 00 04 56.3 +0.5
baz=92
M25A **Palm-Egli Farm** 91.95 47 ⇑P P 00 04 56.9 +0.3
baz=92
S28A **Manter** 91.97 51 ⇑P P 00 04 56.9 +0.2
baz=92
KSCO **Kaye Shedlock'** 91.99 49 ⇑P P 00 04 57.4 +0.5
baz=92
O26A **Horse Wrangler** 91.99 48 ⇓P P 00 04 57.4 +0.6
baz=92
U29A **Oasis Ranch, S** 91.99 52 ⇑P P 00 04 57.0 +0.1
baz=92
G22A **Birney** 92.04 43 ⇑P P 00 04 57.2 +0.3
baz=92
V30A **Spur Ranch, Mi** 92.17 53 ⇑P P 00 04 58.2 +0.5
baz=92
Z32A **Haskell** 92.19 56 ⇑P P 00 04 58.1 +0.3
baz=92,SNR=6.9
P27A **Ficken Ranch,** 92.24 49 ⇓P P 00 04 58.2 +0.2
baz=92
T29A **Hugoton** 92.24 51 ⇑P P 00 04 57.9 -0.1
baz=92
N26A **Koester Ranch,** 92.28 47 ⇓P P 00 04 58.4 +0.2
baz=92
F22A **Rosebud** 92.30 42 ⇓P P 00 04 58.7 +0.7
baz=92
L25A **Engebretsen Ra** 92.30 46 ⇓P P 00 04 59.0 +0.8
baz=92
J24A **Dixon Ranch, L** 92.31 45 ⇓P P 00 04 58.5 +0.3
baz=92
R28A **Tribune** 92.32 50 ⇑P P 00 04 58.8 +0.4
baz=92
B20A **Solberg Farm,** 92.38 39 ⇑P P 00 04 58.7 +0.4
baz=93
Y32A **R-V Farms, Ver** 92.47 55 ⇓P P 00 04 59.1 0.0
baz=93
W31A **Holland Ranch,** 92.52 54 ⇓P P 00 04 59.1 -0.2
baz=93
I24A **Kuemmerle Ranc** 92.56 44 ⇑P P 00 05 00.4 +1.1
baz=93
O27A **Beecher Island** 92.56 48 ⇑P P 00 04 59.9 +0.5
baz=93
A20A **Cobblestone Ra** 92.63 39 ⇓P P 00 05 00.1 +0.6
baz=93
N27A **Anderson Farm,** 92.75 48 ⇓P P 00 05 00.4 +0.1
baz=93
T30A **Plains** 92.77 52 ⇓P P 00 05 00.4 0.0
baz=93
E22A **Miles City** 92.78 42 ⇓P P 00 05 00.9 +0.7
baz=93
V31A **Spring Creek L** 92.81 53 ⇑P P 00 05 00.9 +0.3
baz=93
R29A **Marienthal** 92.84 50 ⇓P P 00 05 01.1 +0.4
baz=93
J25A **Sunshine Ranch** 92.91 45 ⇑P P 00 05 00.9 0.0
baz=93
H24A **Dirks Ranch, A** 92.97 43 ⇓P P 00 05 01.0 -0.2
baz=93
B21A **Ellsworth Farm** 92.98 39 ⇑P P 00 05 01.5 +0.5
baz=93
U31A **Nine Bar Ranch** 93.03 53 ⇑P P 00 05 01.5 0.0
baz=93
S30A **Montezuma** 93.04 51 ⇓P P 00 05 01.4 -0.2
baz=93
RSSD **Black Hills** 93.05 44 *e*P P 00 05 01.7 0.0
RSSD **Black Hills** 93.05 44 *e*P P 00 05 01.7 0.0
Q29A **Oakley** 93.13 50 ⇑P P 00 05 02.0 0.0
baz=93
M27A **Reverse DX Ran** 93.14 47 ⇑P P 00 05 02.4 +0.4
baz=93
E23A **Ismay** 93.21 42 ⇑P P 00 05 02.6 +0.5
baz=93
A21A **Bergtoll Ranch** 93.27 39 ⇑P P 00 05 02.5 +0.2
baz=94
WHTX **Lake Whitney** 93.31 57 ⇓P P 00 05 02.8 -0.1
baz=94
N28A **Pribbeno Ranch** 93.41 48 ⇑P P 00 05 03.4 +0.1
baz=94
R30A **Dighton** 93.41 51 ⇓P P 00 05 03.4 +0.1
baz=94
T31A **Randall Ranch,** 93.42 52 ⇓P P 00 05 03.8 +0.5
baz=94
P29A **Atwod** 93.43 49 ⇑P P 00 05 04.1 +0.7
baz=94
D23A **Lindsay** 93.55 41 ⇓P P 00 05 05.2 +1.5
baz=94
ULN **Ulaanbaatar** 93.63 320 *e*P P 00 05 04.0 -0.2
Q30A **Quinter** 93.71 50 ⇓P P 00 05 05.1 +0.4
baz=94,SNR=7.6
S31A **Mullinville** 93.75 52 ⇑P P 00 05 05.1 +0.2
baz=94
A22A **Carney Farms,** 93.88 39 ⇑P P 00 05 05.7 +0.5
baz=94
R31A **Burdett** 93.97 51 ⇑P P 00 05 05.8 0.0
baz=94
SONM **Songino Array** 94.02 319 P P 00 05 05.3 -0.6
SONM **Songino Array** 94.02 319 P P 00 05 05.3 -0.6
comp=Z,0.9nm,0.5s,baz=133,slow=6.2,SNR=4.3
D24A **Glendive** 94.07 41 ⇓P P 00 05 06.5 +0.4
baz=94
C24A **Savage** 94.18 41 ⇑P P 00 05 07.5 +1.0
baz=94
B23A **Brockton** 94.21 40 ⇑P P 00 05 07.3 +0.6
baz=94
P31A **Stockton** 94.52 50 ⇑P P 00 05 09.1 +0.8
baz=95
DGMT **Dagmar** 94.70 40 *e*P P 00 05 09.8 +1.0
DGMT **Dagmar** 94.70 40 ⇑P P 00 05 09.7 +0.9
baz=95
E26A **Carlson Angus** 95.00 42 ⇓P P 00 05 10.5 +0.3
baz=95
YKA **Yellowknife Ar** 95.84 25 P P 00 05 13.2 -0.4
YKA **Yellowknife Ar** 95.84 25 P P 00 05 13.1 -0.4
comp=Z,1.4nm,0.5s,baz=238,slow=4.6,SNR=10
TIXI **Tiksi** 97.21 345 *e*P Pdif 00 05 17.4 -2.1
TIXI pmax pmax
comp=Z,3.0nm,1.1s
ECSD **EROS Data Cent** 97.90 47 *e*Pdif Pdif 00 05 23.1 -0.2
ZALV **Zalesovo Beam** 108.76 322 PKiKP **PKiKP** 00 10 10.1 -1.9
ZALV **Zalesovo Beam** 108.76 322 PKiKP **PKiKP** 00 10 10.1 -1.9
comp=Z,3.6nm,0.6s,baz=153,slow=1.1,SNR=25
MK31 **Makanchi Array** 109.47 314 *e*PKiKP **PKiKP** 00 10 11.5 -2.0
MKAR **Makanchi Array** 109.47 314 P **Pdif** 00 06 18.2 +3.5
MKAR **Makanchi Array** 109.47 314 Pdif **Pdif** 00 06 18.1 +3.5
MKAR PKiKP **PKiKP** 00 10 11.8 -1.7
MKAR **Makanchi Array** 109.47 314 Pdiff **Pdif** 00 06 18.1 +3.5
comp=Z,0.3nm,0.6s,baz=92,slow=5.3,SNR=3.6
MKAR PKiKP **PKiKP** 00 10 11.8 -1.7
comp=Z,3.8nm,0.6s,baz=74,slow=0.4,SNR=56
TKM2 **Tokmak 2** 113.80 309 *e*PKiKP **PKiKP** 00 10 20.7 -1.5
TKM2 **Tokmak 2** 113.80 309 *e*PKiKP **PKiKP** 00 10 20.7 -1.5
AAK **Ala-Archa** 114.58 309 *i* PKiKP PKPdf 00 10 20.7 -2.9
BRVK **Borovoye** 117.41 320 *d* PKiKP **PKPdf** 00 10 26.8 -1.7
BRVK pmax pmax
comp=Z,9.0nm,0.7s
BRVK **Borovoye** 117.41 320 *e*PKPdf **PKPdf** 00 10 27.1 -1.4
KK31 **Karatay Array** 117.53 309 *c* PKiKP **PKPdf** 00 10 27.6 -1.5
KK31 pmax pmax
comp=Z,2.0nm,0.4s
KKAR **Karatay Array** 117.53 309 *e*PKiKP **PKPdf** 00 10 27.0 -2.1
KKAR **Karatay Array** 117.53 309 *e*PKPdf **PKPdf** 00 10 26.9 -2.1
KBL **Kabul** 118.24 299 *e*PKiKP **PKPdf** 00 10 30.1 -0.9
KBL **Kabul** 118.24 299 *e*PKPdf **PKPdf** 00 10 30.1 -0.9
SCHQ **Schefferville** 118.38 37 PKP **PKPdf** 00 10 30.0 -0.3
SCHQ **Schefferville** 118.38 37 PKP **PKPdf** 00 10 30.0 -0.3
comp=Z,3.9nm,0.8s,baz=40,slow=5.0,SNR=7.8
BDFB **Brasilia** 120.83 122 PKP **PKPdf** 00 10 35.4 -1.0
BDFB **Brasilia** 120.83 122 PKP **PKPdf** 00 10 35.4 -1.0
comp=Z,4.5nm,0.5s,baz=117,slow=1.7,SNR=7.2
ARU **Arti** 123.48 326 *i* PKiKP **PKPdf** 00 10 38.7 -1.4
ARU 00 12 29.3
AB31 **Akbulak array** 124.35 317 *c* PKiKP **PKPdf** 00 10 40.5 -1.4
AB31 pmax pmax
comp=Z,1.0nm,0.3s
ABKAR **Akbulak array** 124.35 317 *e*PKPdf **PKPdf** 00 10 40.6 -1.3
BOSA **Boshof** 126.88 207 PKP **PKPdf** 00 10 47.9 +0.1
BOSA **Boshof** 126.88 207 PKP **PKPdf** 00 10 47.9 +0.1
comp=Z,4.3nm,0.8s,baz=351,slow=3.2,SNR=7.4
ARCES **ARCESS Array B** 127.45 349 PKPpre PKPpre 00 10 32.1
ARCES PKP **PKPdf** 00 10 46.5 -0.8
ARCES **ARCESS Array B** 127.45 349 PKhKP PKPpre 00 10 32.1
comp=Z,2.7nm,0.9s,baz=20,slow=3.9,SNR=4.3
ARCES PKP **PKPdf** 00 10 46.5 -0.8
comp=Z,9.1nm,0.6s,baz=42,slow=1.2,SNR=3.8
JOF **Joensuu** 131.55 342 *ep* **PKPdf** 00 10 54.6 -0.6
comp=Z,12nm,0.6s
JOF **Joensuu** 131.55 342 *ep* **PP** 00 13 19.7 -5.0
comp=Z,1.2nm,0.5s
KAF **Kangasniemi** 133.60 344 *ep* **PKPdf** 00 10 57.5 -1.6
comp=Z,3.2nm,0.4s,baz=23,slow=1.9
KAF **Kangasniemi** 133.60 344 *ep* **SKPbc** 00 13 26.2 -2.2
FINES **FINESS Array B** 134.21 343 PKPpre PKPpre 00 10 44.5
FINES PKP **PKiKP** 00 11 01.1 -0.7
FINES SKPbc **SKPbc** 00 13 28.2 -2.2
FINES **FINESS Array B** 134.21 343 PKhKP PKPpre 00 10 44.5
comp=Z,0.5nm,0.4s,baz=63,slow=5.1,SNR=9.7
FINES PKP **PKiKP** 00 11 01.1 -0.7
comp=Z,2.2nm,0.5s,baz=34,slow=3.5,SNR=11
FINES SKPbc **SKPbc** 00 13 28.2 -2.2
comp=Z,2.7nm,0.5s,baz=48,slow=3.7,SNR=10
PUL **Pulkovo** 134.27 340 *i* PKiKP **PKPdf** 00 11 00.7 +0.3
VSR **Storozhevoye** 136.06 326 *e*PKiKP **PKPdf** 00 11 03.3 -0.7
VSR pmax pmax
comp=Z,10.0nm,0.5s
VSR pmax pmax
comp=N,3.0nm,0.8s
VSR pmax pmax
comp=E,4.0nm,0.8s
VORD **Divnogorie** 136.12 325 *e*PKiKP **PKPdf** 00 11 03.7 -0.4
VORD pmax pmax
comp=Z,8.0nm,0.9s
VORD pmax pmax
comp=N,10.0nm,0.8s
VORD pmax pmax
comp=E,20nm,0.3s

KBZ	Khabaz	137.16	314		PKIKP	PKPdf	00 11 06.2	-0.1
KBZ	Khabaz	137.16	314		PKP	PKPdf	00 11 06.2	-0.1
KBZ	Khabaz	137.16	314		PKP	PKPdf	00 11 06.2	-0.1
	comp=E,2.5nm,1.0s,baz=186,slow=5.5,SNR=4.1							
NB2	NORSAR Subarra	137.56	352		PKP	PKPab	00 10 55.2	
	comp=Z,3.0nm,0.6s,baz=18,slow=3.7							
NOA	NORSAR Array B	137.56	352		PKPpre	PKPpre	00 10 55.8	
NOA					PKP	PKPdf	00 11 07.6	+1.0
NOA	NORSAR Array B	137.56	352		PKPpre	PKPpre	00 10 55.8	
	comp=Z,3.3nm,0.7s,baz=21,slow=3.9,SNR=17							
NOA					PKP	PKPdf	00 11 07.6	+1.0
	comp=Z,2.8nm,0.6s,baz=15,slow=3.9,SNR=8.0							
KMBO	Kilima Mbogo	138.86	245		PKPpre	PKPpre	00 11 02.9	
KMBO					PKP	PKiKP	00 11 11.9	-1.1
KMBO	Kilima Mbogo	138.86	245		PKhKP	PKPpre	00 11 02.9	
	comp=Z,0.9nm,0.4s,baz=219,slow=1.6,SNR=3.6							
KMBO					PKP	PKiKP	00 11 11.9	-1.1
	comp=Z,0.7nm,0.4s,baz=167,slow=5.0,SNR=3.6							
SUW	Suwalki	141.22	339	*e*	PKHKP	PKPdf	00 11 08.5	-4.8
SUW	Suwalki	141.22	339	*e*	PKPdf	PKPdf	00 11 08.5	-4.8
SUW	Suwalki	141.22	339	*e*	PKP	PKPdf	00 11 08.3	-5.0
AKASG	Malin Array Be	141.33	331		PKHKP	PKPpre	00 11 08.2	
AKASG							00 11 15.5	
AKASG	Malin Array Be	141.33	331		PKPpre	PKPpre	00 11 08.2	
AKASG					PKP	PKiKP	00 11 15.5	-1.1
AKASG	Malin Array Be	141.33	331		PKhKP	PKPpre	00 11 08.2	
	comp=Z,11nm,0.5s,baz=42,slow=4.4,SNR=76							
AKASG					PKP	PKiKP	00 11 15.5	-1.1
	comp=Z,0.4nm,0.3s,baz=42,slow=3.7,SNR=4.3							
AK01	Malin Array Si	141.34	331	*e*	PKPdf	PKPdf	00 11 07.6	-6.0
KIEV	Kiev	141.34	331	*e*	PKHKP	PKPdf	00 11 07.6	-6.0
KIEV	Kiev	141.34	331	*e*	PKPdf	PKPdf	00 11 07.6	-6.0
MALT	Malatya	142.22	308	⇑	PKIKP	PKPdf	00 11 24.9	+9.1
MALT	Malatya	142.22	308	⇑	*i*P	PKPdf	00 11 24.9	+9.1
ERBA	Erbaa	142.54	313	*e*	P	PKPdf	00 11 13.0	-3.1
ERBA	Erbaa	142.54	313	*e*	P	PKPdf	00 11 13.0	-3.1
ATAB	Bozova	142.59	307	*i*	P	PKPdf	00 11 14.1	-2.2
ATAB	Bozova	142.59	307	*i*	P	PKPdf	00 11 14.1	-2.2
AKCD	Akcadag	142.60	308	*e*	P	PKPdf	00 11 14.1	-2.3
AKCD	Akcadag	142.60	308	*e*	P	PKPdf	00 11 14.1	-2.3
RGN	Rugen	143.44	348	*e*	PKPbc	PKPab	00 11 16.0	-0.1
GKP	Gorka Klasztor	143.69	343	*i*	PKPc	PKPbc	00 11 16.5	-0.5
AYKD	Aykdinkavak	143.73	308	*i*	P	PKPbc	00 11 17.4	-0.4
AYKD	Aykdinkavak	143.73	308	*i*	P	PKPbc	00 11 17.4	-0.4
KUZU	Kuzuini	143.74	306	*i*	P	PKPab	00 11 17.8	-0.3
KUZU	Kuzuini	143.74	306	*i*	P	PKPab	00 11 17.8	-0.3
ESK	Eskdalemuir	143.83	4	*e*	PKIKP	PKPbc	00 11 15.9	-1.5
ESK	Eskdalemuir	143.83	4	*e*	PKPbc	PKPbc	00 11 15.9	-1.5
BEL	Belsk	143.84	339	*i*	PKPc	PKPbc	00 11 17.4	-0.1
CTKT	Corum	143.92	314	*e*	P	PKPbc	00 11 18.1	-0.3
CTKT	Corum	143.92	314	*e*	P	PKPbc	00 11 18.1	-0.3
KIS	Kishinev	144.02	327	⇓	*i*PKIKP	PKPbc	00 11 17.0	-1.3
KIS					pmax	pmax		
	comp=Z,200nm,1.0s							
KIS					pmax	pmax		
	comp=Z,200nm,1.0s							
KIS	Kishinev	144.02	327	⇓	*i*P	PKPbc	00 11 17.0	-1.3
	comp=Z,200nm,1.0s							
LVV	L'vov	144.24	334	*e*	PKIKP	PKPbc	00 11 17.9	-0.9
COBT	Iskenderun	144.44	306	*e*	P	PKPdf	00 11 19.8	0.0
COBT	Iskenderun	144.44	306	*e*	P	PKPdf	00 11 19.8	0.0
BALT	Daday	144.44	316	*e*	P	PKPdf	00 11 19.5	-0.1
BALT	Daday	144.44	316	*e*	P	PKPdf	00 11 19.5	-0.1
BSEG	Bad Segeberg	144.57	350	*e*	PKPbc	PKPbc	00 11 19.5	-0.1
LEOM	Leova	144.66	327	⇑	*i*P	PKPdf	00 11 19.8	+0.2
HLG	Helgoland	144.66	353	*e*	PKPbc	PKPbc	00 11 20.0	+0.1
YAYL	Yayladag	144.72	306	*e*	P	PKPbc	00 11 20.6	-0.3
YAYL	Yayladag	144.72	306	*e*	P	PKPbc	00 11 20.6	-0.3
ELDT	Eldivan	144.91	314	*i*	P	PKPbc	00 11 21.3	-0.1
ELDT	Eldivan	144.91	314	*i*	P	PKPbc	00 11 21.3	-0.1
KWP	Kalwaria Pacla	144.93	335	*e*	PKIKP	PKPdf	00 11 19.4	-0.6
KWP	Kalwaria Pacla	144.93	335	*e*	PKPdf	PKPdf	00 11 19.4	-0.6
KWP	Kalwaria Pacla	144.93	335	*i*	PKPc	PKPbc	00 11 20.5	-0.4
FKH	Fakeheh	145.01	303	*e*	P	PKPbc	00 11 22.1	+0.2
BR131	Keskin Array S	145.11	313	*e*	PKPdf	PKPdf	00 11 19.5	-1.3
BRTR	Keskin Array B	145.11	313		PKPbc	PKPbc	00 11 21.5	-0.5
BRTR					SKPbc	SKPbc	00 13 58.8	-1.7
BRTR					SKPab	SKiKP	00 14 21.2	+20
BRTR	Keskin Array B	145.11	313		PKPbc	PKPbc	00 11 21.5	-0.5
	comp=Z,20nm,0.8s,baz=95,slow=2.4,SNR=126							
BRTR					SKPbc	SKPbc	00 13 58.8	-1.7
	comp=Z,2.0nm,0.7s,baz=123,slow=2.6,SNR=7.1							
BRTR					SKPab	SKiKP	00 14 21.2	+20
	comp=Z,2.7nm,0.8s,baz=71,slow=3.8,SNR=6.4							
TLCR		145.19	324	⇑	PKIKP	PKPdf	00 11 20.5	0.0
TLCR		145.19	324	⇑	*i*P	PKPdf	00 11 20.5	0.0
RUE	Ruedersdorf	145.28	346	*e*	PKPbc	PKPbc	00 11 21.5	-0.3
RUE	Ruedersdorf	145.28	346	*e*	PKPdf	PKPbc	00 11 21.1	-0.7
GULE	Gulek	145.29	308	*e*	P	PKPbc	00 11 22.5	-0.1
GULE	Gulek	145.29	308	*e*	P	PKPbc	00 11 22.5	-0.1
BUR08	Bucovina Ar. S	145.36	331	*e*	PKPdf	PKPdf	00 11 21.5	+0.6
BURAR	Bucovina Array	145.37	330	⇑	*i*P	PKPbc	00 11 23.0	+0.6
HWQ	Hawqa	145.37	303	*e*	P	PKPbc	00 11 22.4	-0.5
TESR	Tescani	145.46	328	⇓	*i*P	PKPdf	00 11 21.3	+0.3
OJC	Ojcow	145.54	338	*e*	PKPdf	PKPbc	00 11 22.1	-0.6
OJC				*e*	PKPab	PKPab	00 11 24.5	0.0
BBAL	Bala	145.55	313	*e*	P	PKPbc	00 11 22.3	-0.9
BBAL	Bala	145.55	313	*e*	P	PKPbc	00 11 22.3	-0.9
CFR	Carcaliu	145.56	325	⇓	PKIKP	PKPdf	00 11 20.4	-0.7
CFR	Carcaliu	145.56	325	⇓	*i*P	PKPdf	00 11 20.4	-0.7
ANTO	Ankara	145.63	314	⇓	PKP2	PKPbc	00 11 23.3	-0.1
ANTO	Ankara	145.63	314	*e*	PKPdf	PKPdf	00 11 20.6	-1.0
ANTO	Ankara	145.63	314	⇓	*i*P	PKPbc	00 11 23.3	-0.1
BHL	Bhannes	145.71	302	*e*	P	PKPbc	00 11 23.6	-0.3
VRI	Vrincioaia	145.85	327	⇑	PKIKP	PKPbc	00 11 23.1	-0.6
VRI	Vrincioaia	145.85	327	⇑	*i*P	PKPbc	00 11 23.1	-0.6
TIRR	Tirgusor	145.86	324	⇑	PKIKP	PKPdf	00 11 21.3	-0.4
TIRR	Tirgusor	145.86	324	*e*	PKPdf	PKPdf	00 11 20.7	-1.0
TIRR	Tirgusor	145.86	324	⇑	*i*P	PKPdf	00 11 21.3	-0.4
UZH	Uzhgorod	145.88	334	*c*	PKP2	PKPbc	00 11 23.6	-0.1
PLOR	Plostina	145.91	327	⇓	PKIKP	PKPbc	00 11 23.4	-0.5
PLOR	Plostina	145.91	327	⇓	*i*P	PKPbc	00 11 23.4	-0.5
NIE	Niedzica	146.02	337	*e*	PKPdf	PKPdf	00 11 22.9	+1.0
NIE				*e*	PKPab	PKPab	00 11 25.4	-1.1
BMR	Baia Mare	146.11	332	⇑	PKP2	PKPbc	00 11 24.2	-0.1
BMR	Baia Mare	146.11	332	⇑	*i*P	PKPbc	00 11 24.2	-0.1
KSP	Ksiaz	146.12	342	*i*	PKPc	PKPdf	00 11 24.2	+2.3
MANR	Mangalia	146.16	323	⇑	*i*P	PKPbc	00 11 24.0	-0.6
TRPA	Tarpa	146.17	333	⇓	*i*P	PKPbc	00 11 23.3	-1.2
TRPA	Tarpa	146.17	333	⇑	*e*	PKPbc	00 11 24.1	-0.4
VAL	Valentia	146.22	12	⇓	*i*P	PKPbc	00 11 24.1	-0.3
ISR	Istrita	146.45	326	⇑	PKP2	PKPbc	00 11 25.2	-0.2
ISR	Istrita	146.45	326	⇑	*i*P	PKPbc	00 11 25.2	-0.2
MLR	Muntele Rosu	146.51	327	⇑	*i*P	PKPdf	00 11 23.1	+0.1
IBBN	Ibbenburen	146.52	352	*e*	PKPbc	PKPbc	00 11 24.8	-0.5
IBBN				*e*	PKPab	PKPab	00 11 28.1	-0.2
CLL	Collm	146.54	346	*e*	PKPbc	PKPbc	00 11 25.1	-0.3
CLL				*e*	PKPab	PKPab	00 11 28.2	-0.3
CLL	Collm	146.54	346	*e*	PKPdf	PKPdf	00 11 22.0	-0.6
CLL				⇑	*i*PKPbc	PKPbc	00 11 25.1	-0.3
	comp=Z,87nm,0.9s							
CLL				*i*	PKPab	PKPab	00 11 28.1	-0.4
	comp=Z,40nm,0.7s							
CLL				*e*	SKPdf	SKPdf	00 13 56.0	-0.5
CLL				*e*			00 14 00.0	
CLL				*e*	PP	PP	00 14 52.0	-3.2
CLZ	Clausthal	146.57	349	*e*	PKPbc	PKPbc	00 11 25.4	-0.1
CLZ				*e*	PKPab	PKPab	00 11 28.6	0.0
BRG	Berggiesshubel	146.72	345	*e*	PKP	PKPdf	00 11 22.3	-0.6
	comp=Z,5.0nm,0.8s							
BRG				*e*			00 11 25.6	
	comp=Z,38nm,0.7s							
BRG				*i*			00 11 29.1	
	comp=Z,26nm,0.7s							
BRG				*e*	PKP	pPKPdf	00 13 55.1	+3.4
	comp=Z,5.0nm,1.3s							
BRG	Berggiesshubel	146.72	345	*e*	PKPdf	PKPdf	00 11 22.4	-0.6
BRG				*e*	PKPbc	PKPbc	00 11 25.7	-0.2
BRG				*e*	PKPab	PKPab	00 11 29.3	+0.1
SECR		146.76	326	⇑	*i*P	PKPbc	00 11 25.9	-0.3
FBE	Freiberg	146.82	345	*e*	PKPbc	PKPbc	00 11 26.3	+0.2
NEUB	Neuenburg	146.91	347	*e*	PKPbc	PKPbc	00 11 26.1	-0.2
NEUB				*e*	PKPab	PKPab	00 11 29.3	-0.6
WTSB	Winterswijk	146.97	353	*e*	PKPdf	PKPdf	00 11 22.5	-0.7
	comp=Z,22nm,1.1s							
WTSB				*e*	PKPbc	PKPbc	00 11 26.0	-0.5
	comp=Z,65nm,0.7s							
WTSB				*e*	PKPab	PKPab	00 11 29.2	-0.9
	comp=Z,31nm,0.6s							
VOIR		147.00	328	⇓	PKIKP	PKPdf	00 11 24.5	+0.8
VOIR		147.00	328	⇓	*i*P	PKPdf	00 11 24.5	+0.8
DRGR		147.13	332	⇑	PKIKP	PKPbc	00 11 26.6	-0.6
DRGR		147.13	332	⇑	*i*P	PKPbc	00 11 26.5	-0.6
BORA	Eskisehir	147.20	315	*i*	P	PKPbc	00 11 26.8	-0.8
BORA	Eskisehir	147.20	315	*i*	P	PKPbc	00 11 26.8	-0.8
CSS	Prodhromos	147.21	305	*e*	PKPdf	PKPbc	00 11 26.0	-1.7
PSZ	Piszkesteto	147.41	336	⇑	PKIKP	PKPbc	00 11 27.3	-0.6
PSZ	Piszkesteto	147.41	336	*e*	PKPdf	PKPdf	00 11 24.2	-0.1
PSZ				*e*	PKPbc	PKPbc	00 11 27.4	-0.5
PSZ	Piszkesteto	147.41	336	⇑	*i*P	PKPbc	00 11 27.3	-0.6
PSZ	Piszkesteto	147.41	336	⇓	*e*	PKPbc	00 11 27.4	-0.5
BUG	Bochum--Univer	147.43	352	*e*	PKPbc	PKPbc	00 11 27.1	-0.6
MOX	Moxa	147.47	347	*e*	PKPbc	PKPbc	00 11 27.6	-0.2
MOX				*e*	PKPab	PKPab	00 11 32.1	-0.2
PLN	Plauen	147.50	346	*e*	PKPbc	PKPbc	00 11 27.8	-0.1
PLN				*e*	PKPab	PKPab	00 11 32.3	-0.1
WERD	Werda	147.51	346	*e*	PKPbc	PKPbc	00 11 27.8	-0.2
GUNZ	Gunzen	147.58	346	*e*	PKPdf	PKPdf	00 11 24.1	-0.3
GUNZ				*e*	PKPbc	PKPbc	00 11 28.1	-0.1
GUNZ				*e*	PKPab	PKPab	00 11 32.9	+0.1
UBBA	Unterbreizbach	147.62	349	*e*	PKPbc	PKPbc	00 11 27.7	-0.4
LOT	Lotru	147.63	329	⇓	*i*P	PKPdf	00 11 24.2	-0.6
WERN	Wernitzgruen	147.64	346	*e*	PKPbc	PKPbc	00 11 28.2	-0.1
WERN				*e*	PKPab	PKPab	00 11 33.2	+0.2
MANZ	Manzenberg	147.98	346	*e*	PKPbc	PKPbc	00 11 29.1	-0.1
SZH	Strazhica	148.00	324	*i*	P	PKPbc	00 11 28.4	-1.0
BUD	Budapest	148.10	336	⇓	*e*	PKPbc	00 11 29.0	-0.5
GZR	Gura Zlata	148.15	330	⇑	PKHKP	PKPdf	00 11 29.0	+3.4
GZR	Gura Zlata	148.15	330	⇑	*i*P	PKPdf	00 11 29.0	+3.4
JMB	Yambol	148.15	322	*i*	P	PKPbc	00 11 29.8	0.0
JMB	Yambol	148.15	322	*i*	P	PKPbc	00 11 30.2	+0.4
ROTZ	Rotzenmuhle	148.17	346	*e*	PKPbc	PKPbc	00 11 29.6	0.0
BEBN	Eben Emael	148.25	354		PKPbc	PKPdf	00 11 22.2	-3.2
BEBN					PKPab	PKPab	00 11 35.0	-0.4
HGN	Heimansgroeve	148.25	354	*e*	PKPdf	PKPdf	00 11 24.8	-0.6
	comp=Z,6.0nm,0.9s							
HGN				*e*	PKPbc	PKPbc	00 11 29.2	-0.5
	comp=Z,31nm,1.0s							
HGN				*e*	PKPab	PKPab	00 11 34.1	-1.3
	comp=Z,26nm,0.7s							
MEM	Membach	148.40	354		PKP	PKPdf	00 11 25.3	-0.3
MEM					PKPbc	PKPbc	00 11 29.7	-0.4
MEM					PKPab	PKPab	00 11 36.4	+0.3
PKS7	Kunszentmiklos	148.41	336	⇓	*e*	PKPbc	00 11 29.7	-0.6
PKSG		148.42	337	⇓	*e*	PKPbc	00 11 29.5	-0.8
GRF	Grafenberg Arr	148.46	347	*e*	PKPbc	PKPbc	00 11 30.2	-0.1
GRF				*e*	PKPab	PKPab	00 11 36.5	+0.1
GRFO	Grafenberg	148.46	347	*e*	PKHKP	PKPdf	00 11 29.8	+4.0
GRFO	Grafenberg	148.46	347	*e*	PKPbc	PKPdf	00 11 29.8	+4.0
TNS	Taunus Mts	148.46	351	*e*	PKPbc	PKPbc	00 11 30.2	-0.2
BZS	Buzias	148.51	331	⇑	PKIKP	PKPdf	00 11 25.6	-0.4
BZS	Buzias	148.51	331	⇑	*i*P	PKPdf	00 11 25.6	-0.4
WET	Wettzell	148.58	345	*e*	PKPdf	PKPdf	00 11 25.5	-0.6
WET				*e*	PKPbc	PKPbc	00 11 30.3	-0.4
WET				*e*	PKPab	PKPab	00 11 37.1	+0.2
KHAL	Karahalli	148.60	314	*e*	P	PKPbc	00 11 29.5	-1.7
KHAL	Karahalli	148.60	314	*e*	P	PKPbc	00 11 29.5	-1.7
KORT	Korkueli	148.63	311	*i*	P	PKPbc	00 11 31.5	+0.1
KORT	Korkueli	148.63	311	*i*	P	PKPbc	00 11 31.5	+0.1
GEC2	GERESS Array S	148.65	343	*e*	PKPbc	PKPbc	00 11 30.4	-0.5
GERES	GERESS Array B	148.65	343		PKP	PKPdf	00 11 25.5	-0.8
GERES					PKPbc	PKPbc	00 11 30.8	-0.2
GERES	GERESS Array B	148.65	343		PKP	PKPdf	00 11 25.5	-0.8
	comp=Z,10nm,0.7s,baz=96,slow=1.3,SNR=11							
GERES					PKPbc	PKPbc	00 11 30.7	-0.2
	comp=Z,20nm,0.7s,baz=28,slow=3.1,SNR=167							
SNF	Seneffe	148.65	356		PKPbc	PKPbc	00 11 30.7	0.0
PKST	T``s	148.66	337	⇓	*e*	PKPbc	00 11 30.0	-0.9
DEMI	Demirci	148.78	315	*e*	P	PKPbc	00 11 30.6	-1.0
DEMI	Demirci	148.78	315	*e*	P	PKPbc	00 11 30.6	-1.0
CONA	Conrad Observa	148.83	340	⇑	*i*PKPdf	PKPdf	00 11 26.4	-0.2
	comp=Z,2.5nm,0.8s							
CONA				*i*	PKiKP	PKPbc	00 11 31.2	-0.2
	comp=Z,33nm,0.7s,SNR=23							
PKS2	Kecel	148.85	335	⇓	*e*	PKPbc	00 11 31.0	-0.3
GIVF	Givet	149.01	355	*e*	PKIKP	PKPdf	00 11 26.3	-0.4
GIVF	Givet	149.01	355	*e*	PKIKP	PKPdf	00 11 26.3	-0.4
GIVF	Givet	149.01	355	*e*	PKPdf	PKPdf	00 11 26.3	-0.4
DOU	Dourbes	149.03	355		PKPbc	PKPbc	00 11 31.3	-0.4
DOU					PKPab	PKPab	00 11 37.8	-0.9
BAIF	Baives	149.10	356	*e*	PKIKP	PKPdf	00 11 26.5	-0.3
	comp=Z,5.6nm,0.8s							
BAIF	Baives	149.10	356	*e*	PKIKP	PKPdf	00 11 26.5	-0.3
BAIF	Baives	149.10	356	*e*	PKPdf	PKPdf	00 11 26.5	-0.3
BALY	Balya	149.12	317	*i*	P	PKPbc	00 11 31.3	-1.0
BALY	Balya	149.12	317	*i*	P	PKPbc	00 11 31.3	-1.0
MPEP	Malo Peshtene	149.13	326	*i*	P	PKPbc	00 11 31.7	-0.5
PKS9	Tamasi	149.13	336	⇓	*e*	PKPbc	00 11 31.1	-0.9
MANT	Manisa	149.17	314	*e*	P	PKPbc	00 11 31.2	-1.5
MANT	Manisa	149.17	314	*e*	P	PKPbc	00 11 31.2	-1.5
DNZL	Cakiroluk	149.23	313	*e*	P	PKPbc	00 11 31.9	-1.0
DNZL	Cakiroluk	149.23	313	*e*	P	PKPbc	00 11 31.9	-1.0
PKSM	Moragy	149.30	335	⇑	PKHKP	PKPbc	00 11 32.0	-0.5
PKSM	Moragy	149.30	335	⇑	*i*P	PKPbc	00 11 32.0	-0.5
PKSM	Moragy	149.30	335	⇓	*e*	PKPbc	00 11 31.7	-0.8
WLF	Walferdange	149.31	353		PKP	PKPdf	00 11 27.3	+0.2
WLF					PKPbc	PKPbc	00 11 32.5	+0.2
WLF					PKPab	PKPab	00 11 38.9	-1.0
WLF	Walferdange	149.31	353	*e*	PKPdf	PKPdf	00 11 27.4	+0.2
WLF				*e*	PKPbc	PKPbc	00 11 32.7	+0.3
WLF	Walferdange	149.31	353	*e*	PKIKP	PKPdf	00 11 26.8	-0.4
WLF				*e*			00 11 39.9	
WLF	Walferdange	149.31	353	*e*	PKPdf	PKPdf	00 11 26.8	-0.4
WLF				*e*	PKPbc	PKPbc	00 11 32.6	+0.2
WLF				*e*	PKPab	PKPab	00 11 39.9	0.0
KDZ	Kurdzhali	149.34	322	*i*	P	PKPbc	00 11 31.7	-1.0
MOA	Molln	149.39	342	⇑	*i*PKPdf	PKPdf	00 11 26.9	-0.5
	comp=Z,1.9nm,0.6s							
MOA				*i*	PKPbc	PKPbc	00 11 32.0	-0.7
	comp=Z,10nm,0.6s,SNR=8.1							
ALN	Alexandroupoli	149.43	320		P	PKPbc	00 11 31.6	-1.3
ALN	Alexandroupoli	149.43	320	*e*	P	PKPbc	00 11 31.6	-1.3
PLD	Plovdiv	149.45	324	*i*	P	PKPbc	00 11 31.5	-1.4
AKAS	Kas	149.51	310	*i*	P	PKPbc	00 11 32.3	-1.2
AKAS	Kas	149.51	310	*i*	P	PKPbc	00 11 32.3	-1.2
RDO	Rodhopi	149.58	321		P	PKPbc	00 11 32.3	-1.0
STU	Stuttgart	149.73	349	*e*	PKPbc	PKPbc	00 11 33.1	-0.3
STU				*e*	PKPab	PKPab	00 11 41.3	-0.4
STU	Stuttgart	149.73	349	*e*	PKHKP	PKPdf	00 11 32.8	+4.9
STU	Stuttgart	149.73	349	*e*	PKPdf	PKPdf	00 11 32.8	+4.9
BEHE	Becsehely	149.79	336	⇓	*e*	PKPbc	00 11 32.8	-0.8
FUR	Furstenfeldbru	149.88	346	*e*	PKPbc	PKPbc	00 11 33.3	-0.8
FUR				*e*	PKPab	PKPab	00 11 42.7	+0.3
RJOB	Jochberg	149.90	344	*e*	PKPbc	PKPbc	00 11 33.1	-0.8
RJOB				*e*	PKPab	PKPab	00 11 43.1	+0.6
TURN	Turunc	149.94	312	*e*	P	PKPbc	00 11 34.5	+0.2
TURN	Turunc	149.94	312	*e*	P	PKPbc	00 11 34.5	+0.2
VTS	Vitosha	149.94	326		P	PKPbc	00 11 33.5	-0.8
VTS	Vitosha	149.94	326	⇓	PKHKP	PKPbc	00 11 33.5	-0.8
VTS	Vitosha	149.94	326	*i*	P	PKPbc	00 11 33.0	-1.3
VTS	Vitosha	149.94	326	⇓	*i*P	PKPbc	00 11 33.5	-0.8
KOGS	Kog	149.99	338	*i*	PKPbc	PKPbc	00 11 32.9	-1.2
KOGS				*e*			00 11 42.0	
SMTH	Samothraki Isl	150.00	320		P	PKPbc	00 11 33.0	-1.3
SMTH	Samothraki Isl	150.00	320	*e*	P	PKPbc	00 11 33.0	-1.3
AYDN	Tasoluk	150.05	314	*i*	P	PKPbc	00 11 34.5	-0.1
AYDN	Tasoluk	150.05	314	*i*	P	PKPbc	00 11 34.5	-0.1
BOZC	Bozcaada	150.06	319	*i*	P	PKPbc	00 11 33.1	-1.3
BOZC	Bozcaada	150.06	319	*i*	P	PKPbc	00 11 33.1	-1.3
SOKA	Soboth	150.20	340	⇑	*i*PKPdf	PKPdf	00 11 28.0	-0.8
	comp=Z,3.6nm,1.0s							
SOKA				⇑	*i*PKPbc	PKPbc	00 11 33.6	-1.1
	comp=Z,26nm,1.2s							
PRK	Paraskevi	150.26	318		P	PKPbc	00 11 33.9	-1.0
PRK	Paraskevi	150.26	318	*e*	P	PKPbc	00 11 33.8	-1.1
KAVA	Kavala	150.28	322		P	PKPbc	00 11 34.0	-0.9
BFO	Black Forest	150.31	350	*e*	PKPbc	PKPbc	00 11 34.2	-0.6
BFO	Black Forest	150.31	350	*e*	PKPbc	PKPbc	00 11 34.0	-0.8
MMB	Musomiste	150.34	324	*i*	P	PKPbc	00 11 33.7	-1.4
KBA	Koelnbreinsper	150.36	342	⇓	*i*PKPdf	PKPdf	00 11 28.2	-0.9
	comp=Z,1.1nm,0.5s							
KBA				*i*	PKPbc	PKPbc	00 11 33.7	-1.4
	comp=Z,15nm,0.5s,SNR=18							
CDF	Champ du Feu	150.40	351	*e*	PKIKP	PKPdf	00 11 28.3	-0.7
CDF	Champ du Feu	150.40	351	*e*	PKIKP	PKPdf	00 11 28.3	-0.7
CDF	Champ du Feu	150.40	351	*e*	PKPdf	PKPdf	00 11 28.3	-0.7
DIVS	Divibare	150.42	331		P	PKPbc	00 11 34.6	-0.7
NVR	Nevrokopi	150.42	323	*e*	P	PKPbc	00 11 34.2	-1.1
NVR	Nevrokopi	150.42	323	*e*	P	PKPbc	00 11 34.2	-1.1
PAGF	Fort de Pagny	150.46	353	*e*	PKIKP	PKPdf	00 11 28.8	-0.2
	comp=Z,3.3nm,0.8s							
PAGF	Fort de Pagny	150.46	353	*e*	PKPdf	PKPdf	00 11 28.8	-0.2
GCAM	G?zelcami?	150.47	314	*i*	P	PKPbc	00 11 34.8	-0.6
GCAM	G?zelcami?	150.47	314	*i*	P	PKPbc	00 11 34.8	-0.6
FLN	La Foliniere	150.51	2	*e*	PKIKP	PKPdf	00 11 28.4	-0.6
	comp=Z,13nm,0.7s							
FLN	La Foliniere	150.51	2	*e*	PKIKP	PKPdf	00 11 28.4	-0.6
FLN	La Foliniere	150.51	2	*e*	PKPdf	PKPdf	00 11 28.4	-0.6
KKB	Krupnik	150.51	325	*i*	P	PKPbc	00 11 33.8	-1.7
OBKA	Obir	150.51	340	⇑	*i*PKPbc	PKPbc	00 11 34.0	-1.4
	comp=Z,9.8nm,0.6s							
OBKA				⇑	*i*PKPab	PKPab	00 11 43.4	-1.7
	comp=Z,5.6nm,0.7s	

LTK	**Loutraki**	**153.07**	**319**	*e*P	**PKPbc**	**00**	**11**	**39.4**	**-1.8**
EVR	**Evrytania**	**153.21**	**322**	P	**PKPbc**	**00**	**11**	**40.7**	**-0.9**
EVR	**Evrytania**	**153.21**	**322**	*e*P	**PKPbc**	**00**	**11**	**40.7**	**-0.9**
DID	**Didima**	**153.22**	**318**	P	**PKPbc**	**00**	**11**	**39.3**	**-2.3**
DID	**Didima**	**153.22**	**318**	*e*P	**PKPbc**	**00**	**11**	**39.5**	**-2.1**
JAN	**Janina**	**153.26**	**324**	*e*P	**PKPbc**	**00**	**11**	**41.1**	**-0.5**
LPL	**La Plagne**	**153.31**	**351**	*e*PKIKP	**PKPdf**	**00**	**11**	**33.5**	**-0.1**
LPL	**La Plagne**	**153.31**	**351**	*e*PKIKP	**PKPdf**	**00**	**11**	**33.5**	**-0.1**
LPL	**La Plagne**	**153.31**	**351**	*e*PKPdf	**PKPdf**	**00**	**11**	**33.5**	**-0.1**
LPG	**La Plagne**	**153.32**	**351**	*e*PKIKP	**PKPdf**	**00**	**11**	**33.5**	**-0.2**
LPG	**La Plagne**	**153.32**	**351**	*e*PKIKP	**PKPdf**	**00**	**11**	**33.5**	**-0.2**
LPG	**La Plagne**	**153.32**	**351**	*e*PKPdf	**PKPdf**	**00**	**11**	**33.5**	**-0.2**
IDI	**Anoyia**	**153.33**	**312**	*e*P	**PKPbc**	**00**	**11**	**40.8**	**-1.1**
KALE	**Kalithea**	**153.35**	**320**	P	**PKPbc**	**00**	**11**	**40.7**	**-1.2**
KALE	**Kalithea**	**153.35**	**320**	*e*P	**PKPbc**	**00**	**11**	**40.7**	**-1.2**
TRIZ	**Trizonia**	**153.41**	**320**	P	**PKPbc**	**00**	**11**	**41.0**	**-0.8**
TRIZ	**Trizonia**	**153.41**	**320**	*e*P	**PKPbc**	**00**	**11**	**41.1**	**-0.8**
EFP	**Efpalio**	**153.47**	**321**	*e*P	**PKPbc**	**00**	**11**	**41.8**	**-0.2**
GUR	**Goura**	**153.51**	**319**	P	**PKPbc**	**00**	**11**	**40.9**	**-1.4**
GUR	**Goura**	**153.51**	**319**	*e*P	**PKPbc**	**00**	**11**	**41.2**	**-1.1**
SIVA	**Sivas**	**153.52**	**311**	*e*P	**PKPbc**	**00**	**11**	**41.9**	**-0.4**
LAKA	**Lakka**	**153.54**	**320**	P	**PKPbc**	**00**	**11**	**41.7**	**-0.6**
LAKA	**Lakka**	**153.54**	**320**	*e*P	**PKPbc**	**00**	**11**	**42.1**	**-0.2**
KLV	**Kalavryta, Ach**	**153.56**	**320**	P	**PKPbc**	**00**	**11**	**41.1**	**-1.3**
KLV	**Kalavryta, Ach**	**153.56**	**320**	*e*P	**PKPbc**	**00**	**11**	**41.2**	**-1.2**
VAM	**Vamos**	**153.75**	**313**	*e*P	**PKPbc**	**00**	**11**	**42.6**	**-0.1**
VLX	**Vlachokerasia**	**153.84**	**318**	*e*P	**PKPbc**	**00**	**11**	**42.4**	**-0.6**
VLI	**Veliai**	**153.87**	**316**	*e*P	**PKPbc**	**00**	**11**	**42.1**	**-0.9**
LKD2	**Lefkada island**	**153.96**	**323**	*e*P	**PKPbc**	**00**	**11**	**42.4**	**-0.7**
RLS	**Riolos of Patr**	**153.97**	**320**	*e*P	**PKPbc**	**00**	**11**	**42.6**	**-0.5**
RJF	**Les Rejaudoux**	**153.97**	**359**	*e*PKIKP	**PKPdf**	**00**	**11**	**33.9**	**-0.3**
	comp=Z,10nm,0.8s								
RJF	**Les Rejaudoux**	**153.97**	**359**	*e*PKIKP	**PKPdf**	**00**	**11**	**33.9**	**-0.3**
RJF	**Les Rejaudoux**	**153.97**	**359**	*e*PKPdf	**PKPdf**	**00**	**11**	**33.9**	**-0.3**
ORIF	**Oris-en-Rattie**	**154.01**	**352**	*e*PKIKP	**PKPdf**	**00**	**11**	**34.1**	**-0.3**
ORIF	**Oris-en-Rattie**	**154.01**	**352**	*e*PKIKP	**PKPdf**	**00**	**11**	**34.1**	**-0.3**
ORIF	**Oris-en-Rattie**	**154.01**	**352**	*e*PKPdf	**PKPdf**	**00**	**11**	**34.1**	**-0.3**
KYTH	**Kithira**	**154.06**	**316**	P	**PKPbc**	**00**	**11**	**42.2**	**-1.2**
MBDF	**Montbardon**	**154.07**	**350**	*e*PKIKP	**PKPdf**	**00**	**11**	**34.1**	**-0.5**
MBDF	**Montbardon**	**154.07**	**350**	*e*PKIKP	**PKPdf**	**00**	**11**	**34.1**	**-0.5**
MBDF	**Montbardon**	**154.07**	**350**	*e*PKPdf	**PKPdf**	**00**	**11**	**34.1**	**-0.5**
AMT	**Artemida-Makis**	**154.16**	**319**	*e*P	**PKPbc**	**00**	**11**	**43.4**	**-0.2**
VIVF	**Saint-Julien-l**	**154.22**	**354**	*e*PKIKP	**PKPdf**	**00**	**11**	**34.5**	**-0.1**
VIVF	**Saint-Julien-l**	**154.22**	**354**	*e*PKIKP	**PKPdf**	**00**	**11**	**34.5**	**-0.1**
VIVF	**Saint-Julien-l**	**154.22**	**354**	*e*PKPdf	**PKPdf**	**00**	**11**	**34.5**	**-0.1**
DYR	**Agios Nikonas**	**154.24**	**317**	*e*P	**PKPbc**	**00**	**11**	**42.5**	**-1.3**
ITM	**Ithomi**	**154.24**	**318**	*e*P	**PKPbc**	**00**	**11**	**42.5**	**-1.2**
CAF	**Calviac**	**154.34**	**358**	*e*PKIKP	**PKPdf**	**00**	**11**	**34.5**	**-0.3**
	comp=Z,6.5nm,1.0s								
CAF	**Calviac**	**154.34**	**358**	*e*PKIKP	**PKPdf**	**00**	**11**	**34.5**	**-0.3**
CAF	**Calviac**	**154.34**	**358**	*e*PKPdf	**PKPdf**	**00**	**11**	**34.5**	**-0.3**
LFF	**La Frestale**	**154.35**	**0**	*e*PKIKP	**PKPdf**	**00**	**11**	**35.2**	**+0.5**
	comp=Z,7.9nm,0.7s								
LFF	**La Frestale**	**154.35**	**0**	*e*PKIKP	**PKPdf**	**00**	**11**	**35.2**	**+0.5**
LFF	**La Frestale**	**154.35**	**0**	*e*PKPdf	**PKPdf**	**00**	**11**	**35.2**	**+0.5**
PYL	**PYLOS**	**154.53**	**318**	*e*P	**PKPbc**	**00**	**11**	**42.7**	**-1.6**
SBF	**Sospel**	**154.79**	**349**	*e*PKIKP	**PKPdf**	**00**	**11**	**35.8**	**+0.3**
SBF	**Sospel**	**154.79**	**349**	*e*PKIKP	**PKPdf**	**00**	**11**	**35.8**	**+0.3**
SBF	**Sospel**	**154.79**	**349**	*e*PKPdf	**PKPdf**	**00**	**11**	**35.8**	**+0.3**
SMRF	**Simiane la Rot**	**154.98**	**352**	*e*PKIKP	**PKPdf**	**00**	**11**	**35.8**	**+0.1**
	comp=Z,9.1nm,1.1s								
SMRF	**Simiane la Rot**	**154.98**	**352**	*e*PKPdf	**PKPdf**	**00**	**11**	**35.8**	**+0.1**
LASF	**Ste Croix**	**155.07**	**355**	*e*PKIKP	**PKPdf**	**00**	**11**	**35.7**	**-0.1**
	comp=Z,7.6nm,0.9s								
LASF	**Ste Croix**	**155.07**	**355**	*e*PKPdf	**PKPdf**	**00**	**11**	**35.7**	**-0.1**
LMR	**La Mourre**	**155.47**	**350**	*e*PKIKP	**PKPdf**	**00**	**11**	**35.7**	**-0.6**
LMR	**La Mourre**	**155.47**	**350**	*e*PKIKP	**PKPdf**	**00**	**11**	**35.7**	**-0.6**
LMR	**La Mourre**	**155.47**	**350**	*e*PKPdf	**PKPdf**	**00**	**11**	**35.7**	**-0.6**
PGF	**Pioggiola**	**155.71**	**345**	*e*PKIKP	**PKPdf**	**00**	**11**	**35.8**	**-1.0**
	comp=Z,5.8nm,0.8s								
PGF	**Pioggiola**	**155.71**	**345**	*e*PKIKP	**PKPdf**	**00**	**11**	**35.8**	**-1.0**
PGF	**Pioggiola**	**155.71**	**345**	*e*PKPdf	**PKPdf**	**00**	**11**	**35.8**	**-1.0**
TIP	**Timpagrande**	**155.76**	**329**	*e*PKPdf	**PKPdf**	**00**	**11**	**35.7**	**-1.2**
MTLF	**Montolieu**	**155.91**	**357**	*e*PKIKP	**PKPdf**	**00**	**11**	**36.4**	**-0.5**
	comp=Z,6.4nm,0.9s								
MTLF	**Montolieu**	**155.91**	**357**	*e*PKIKP	**PKPdf**	**00**	**11**	**36.4**	**-0.5**
MTLF	**Montolieu**	**155.91**	**357**	*e*PKPdf	**PKPdf**	**00**	**11**	**36.4**	**-0.5**
SJPF	**Ste Jean**	**156.12**	**4**	*e*PKIKP	**PKPdf**	**00**	**11**	**37.2**	**0.0**
	comp=Z,9.9nm,1.0s								
SJPF	**Ste Jean**	**156.12**	**4**	*e*PKIKP	**PKPdf**	**00**	**11**	**37.2**	**0.0**
SJPF	**Ste Jean**	**156.12**	**4**	*e*PKPdf	**PKPdf**	**00**	**11**	**37.2**	**0.0**
EPF	**Esparros**	**156.25**	**1**	*e*PKIKP	**PKPdf**	**00**	**11**	**37.3**	**-0.1**
	comp=Z,4.1nm,0.8s								
EPF	**Esparros**	**156.25**	**1**	*e*PKIKP	**PKPdf**	**00**	**11**	**37.3**	**-0.1**
EPF	**Esparros**	**156.25**	**1**	*e*PKPdf	**PKPdf**	**00**	**11**	**37.3**	**-0.1**
ETSF	**Etsaut**	**156.36**	**2**	*e*PKIKP	**PKPdf**	**00**	**11**	**37.7**	**+0.1**
	comp=Z,5.3nm,0.6s								
ETSF	**Etsaut**	**156.36**	**2**	*e*PKIKP	**PKPdf**	**00**	**11**	**37.7**	**+0.1**
ETSF	**Etsaut**	**156.36**	**2**	*e*PKPdf	**PKPdf**	**00**	**11**	**37.7**	**+0.1**
ESDC	**Sonseca Array**	**159.21**	**10**	PKP	**PKPdf**	**00**	**11**	**40.3**	**-0.8**
ESDC				PKPab	**PKPab**	**00**	**12**	**22.6**	**-0.1**
ESDC	**Sonseca Array**	**159.21**	**10**	PKP	**PKPdf**	**00**	**11**	**40.3**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=356,slow=2.8,SNR=11								
ESDC				PKPab	**PKPab**	**00**	**12**	**22.6**	**-0.1**
	comp=Z,5.8nm,0.8s,baz=345,slow=4.1,SNR=25								
EVOP	**Sao Brissos**	**159.27**	**20**	*e*PKIKP	**PKPdf**	**00**	**11**	**40.9**	**-0.2**
EVOP	**Sao Brissos**	**159.27**	**20**	*e*PKPdf	**PKPdf**	**00**	**11**	**40.9**	**-0.2**
EVO	**Evora**	**159.30**	**20**	*e*PKIKP	**PKPdf**	**00**	**11**	**40.9**	**-0.2**
	comp=Z,21nm,1.1s								
KEST	**Kesra**	**161.88**	**337**	PKP	**PKPdf**	**00**	**11**	**43.6**	**-0.5**
KEST				PKPab	**PKPab**	**00**	**12**	**34.5**	**0.0**
KEST	**Kesra**	**161.88**	**337**	PKP	**PKPdf**	**00**	**11**	**43.6**	**-0.5**
	comp=Z,0.9nm,0.8s,baz=118,slow=9.7,SNR=4.2								
KEST				PKPab	**PKPab**	**00**	**12**	**34.5**	**0.0**
	comp=Z,3.0nm,0.7s,baz=240,slow=1.7,SNR=15								
DBIC	**Dimbokro**	**166.39**	**156**	PKP	**PKPdf**	**00**	**11**	**47.6**	**-1.0**
DBIC				PKPab	**PKPab**	**00**	**12**	**55.8**	**+1.0**
DBIC	**Dimbokro**	**166.39**	**156**	PKP	**PKPdf**	**00**	**11**	**47.6**	**-1.0**
	comp=Z,3.7nm,0.8s,baz=162,slow=11,SNR=6.0								
DBIC				PKPab	**PKPab**	**00**	**12**	**55.7**	**+1.0**
	comp=Z,3.8nm,0.8s,baz=187,slow=15,SNR=3.2								
TORD	**Torodi Ar. Bea**	**173.90**	**189**	PKP	**PKPdf**	**00**	**11**	**51.2**	**-1.4**
TORD				PKPab	**PKPab**	**00**	**13**	**27.7**	**-0.3**
TORD	**Torodi Ar. Bea**	**173.90**	**189**	PKP	**PKPdf**	**00**	**11**	**51.2**	**-1.4**
	comp=Z,2.5nm,0.8s,baz=349,slow=1.5,SNR=13								
TORD				PKPab	**PKPab**	**00**	**13**	**27.7**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=201,slow=3.1,SNR=3.3								
TAM	**Tamanrasset**	**174.30**	**309**	*e*PKIKP	**PKPdf**	**00**	**11**	**52.6**	**-0.2**
TAM	**Tamanrasset**	**174.30**	**309**	*e*PKPdf	**PKPdf**	**00**	**11**	**52.6**	**-0.2**

MEX 30 23:54:28.5±1.1, 18°33N×103°45W, h49$^{km}_{\pm}$10^{km}, MD3.6,
Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase	ID Op	ISC	Time h	m	s	Res ISC
MMIG	**Aquila**	**0.11**	**113**	*e*P		Pn	23	54	34.2	-2.0
MMIG				*i* S		Sn	23	54	40.4	-1.3
R15V		**0.97**	**329**	*e*P		Pn	23	54	45.0	-1.0
R15V				*i* S		Sn	23	54	55.9	-2.8
EZ5V		**1.15**	**353**	*i* P		Pn	23	54	46.5	-2.1
EZ5V				*i* S		Sn	23	55	01.1	-2.4
ARIG	**Puente Sto Nin**	**2.95**	**91**	*i* P		Pn	23	55	11.8	-1.2
ARIG				*i* S		Sn	23	55	45.6	-1.6